

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1381	89-00005-00-BR	PEORIA	29	6
FED. ROAD DIST. NO.	ILLINOIS PROJECT	BR-5-1381 (105)		

CONTRACT: 89066

WATERWAY INFORMATION

Drainage Area	2,112	Acres
Design Discharge (20 Yr. Fl. Freq.)	1,612	C. F. S.
High Water Elevation (Below 20 Yr. Fl. Freq.)	663.7	(U.S.G.S.)
Existing Opening (Below 20 Yr. H. W. E.)	280	Sq. Ft.
Proposed Opening (Below 20 Yr. H. W. E.)	377	Sq. Ft.
Created Head for Design Flood	<.5	Fi.
100 Year Discharge	2,460	C. F. S.
100 Year High Water Elevation	665.1	(U.S.G.S.)
Created Head for 100 Year Flood	<1.0	Fi.
Flow Line Elevation	656.1	(U.S.G.S.)

DESIGN STRESSES

PRESTRESSED BEAMS

f'_c	= 5,000	PSI
f'_{ci}	= 4,000	PSI
f_s	= 270,000	PSI (1/2" ϕ Strands)
f_{si}	= 201,960	PSI (1/2" ϕ Strands)

CAST IN PLACE UNITS

f'_c	= 3,500	PSI
f_y	= 60,000	PSI (Reinfor.)

LOADING HS 20-44
DESIGN SPECIFICATIONS - AASHTO 2002
 Future Wearing Surface (50 PSF)

SEISMIC DATA:

Seismic Performance Category (SPC) = A
 Bed Rock Acceleration Coef. (A) = 4% g
 Site Coefficient (S) = 1.0

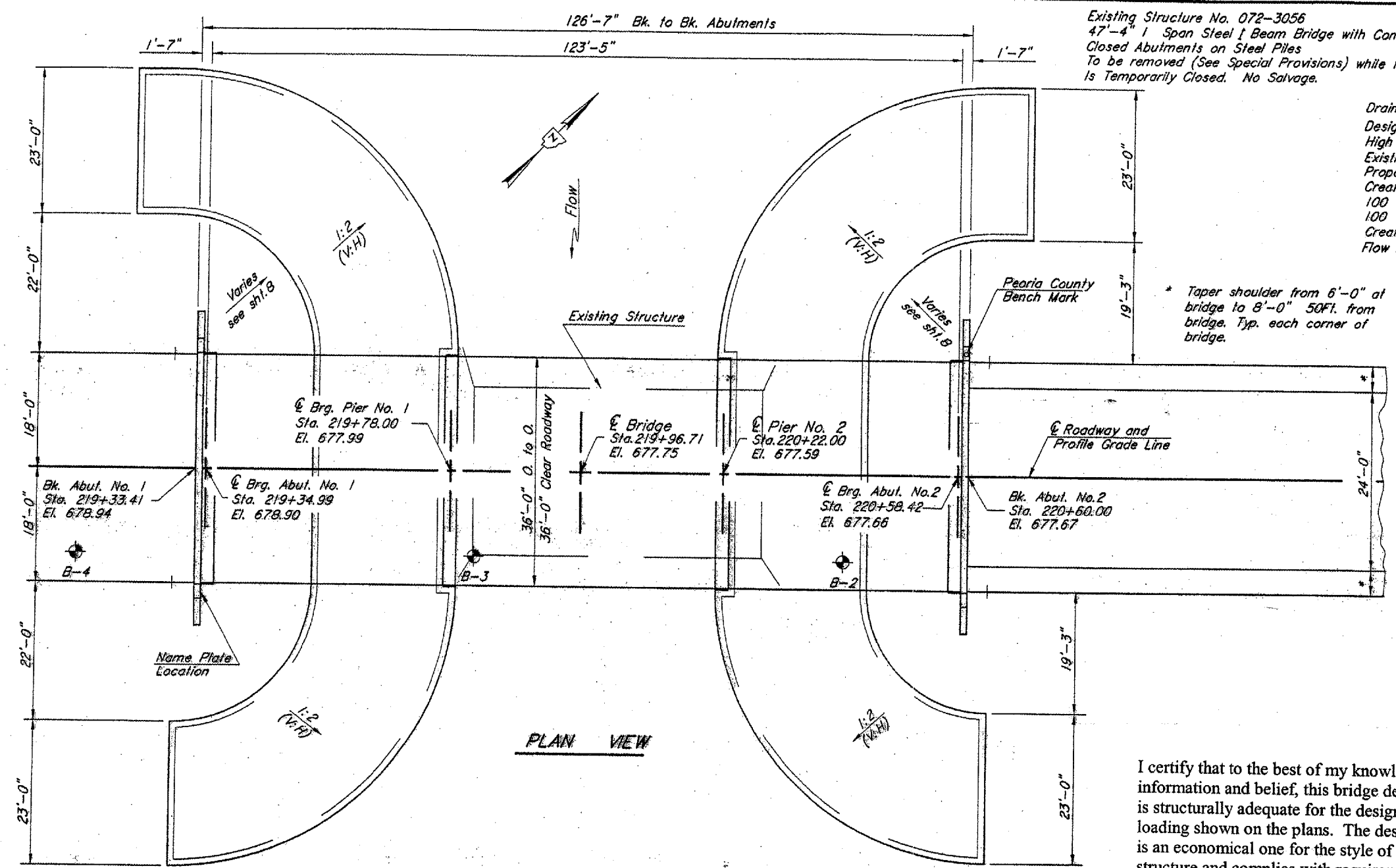
BRIDGE BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Concrete Structures	Cu. Yd.		163.4	163.4
Reinforcement Bars	Pound		14,720	14,720
P.P. Concrete Deck Beams 21" Dp.	Sq. Ft.	4,479		4,479
Driving Steel Piles	Foot		694	694
Test Pile HP 12 x 53	Each		4	4
Furnishing Steel Piles HP 12 x 53	Foot		694	694
Name Plates	Each		1	1
Steel Bridge Rail, Ty. SM	Foot	253.2		253.2
Traffic Barrier Terminal, Type 5A	Each	4		4
P. C. Mortar Fairing Course	Foot	1,369		1,369
Waterproofing Membrane System	Sq. Yd.	506		506
Fabric Formed Conc. Retention Mat	Sq. Yd.		800	800
Polymer BCSC, Superpave "C", N50	Ton	57		57
Mono. Prismatic Barrier Reflector	Each	10		10
Removal of Existing Structures	Each		1	1
Channel Excavation	Cu. Yd.		1,500	1,500
Stone Riprap, Class A3	Sq. Yd.		293	293
Structure Excavation	Cu. Yd.		152	152
Filter Fabric	Sq. Yd.		293	293

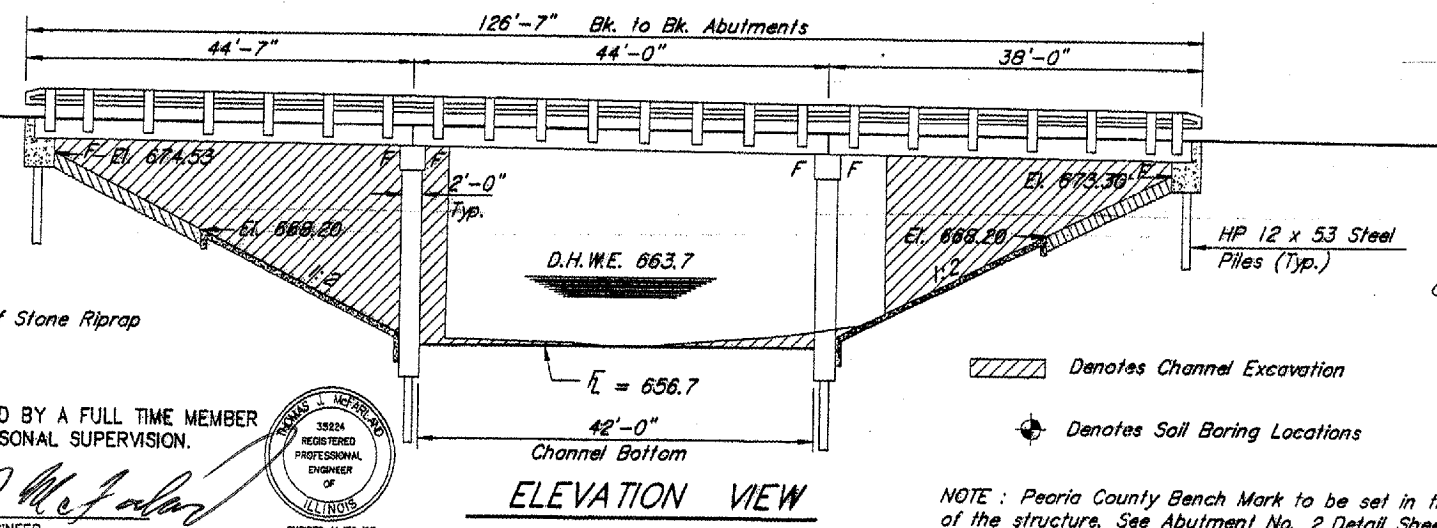
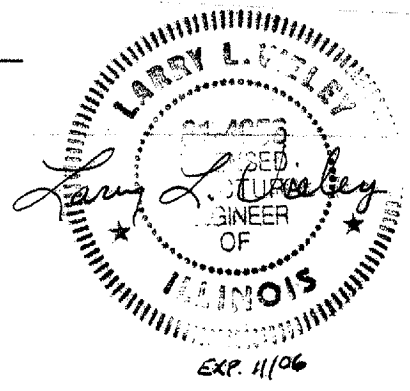
NOTE: See Sheet 7 for General Notes.
 Limits of Channel Excavation is from 50' either side of ϕ Roadway for a total of 100'.

GENERAL PLAN & ELEVATION
STATION 219+96.71
PEORIA COUNTY
STRUCTURE NO. 072-3129

Existing Structure No. 072-3056
 47'-4" Span Steel I Beam Bridge with Conc. Deck
 Closed Abutments on Steel Piles
 To be removed (See Special Provisions) while the road
 is temporarily closed. No Salvage.



I certify that to the best of my knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of the structure and complies with requirements of the current "A.A.S.H.T.O. Standard Specifications For Highway Bridges".



NOTE: Peoria County Bench Mark to be set in the Northwest Corner of the structure. See Abutment No. 2 Detail Sheet. (Cost incidental to Concrete Structures)

THESE PLANS WERE PREPARED BY A FULL TIME MEMBER OF MY STAFF UNDER MY PERSONAL SUPERVISION.

Thomas J. McFarland
 PEORIA COUNTY ENGINEER



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