

Bench Mark: Chiseled "□" on Southeast parapet wall of SN. 059-0041. Elevation = 643.15

Existing Structure: S.N. 059-0040 (S.B.) and S.N. 059-0041 (N.B.) built in 1973 as F.A.I. Route 55 Section 59-IHB-3 at Station 676+80. The superstructure consists of three span continuous steel girders with reinforced concrete deck. The substructure consists of open stub abutments supported on concrete piles and hammerhead piers supported on timber piles. The structures measure 132'-3" bk-to-bk of abutments (S.B.), 116'-6" bk-to-bk of abutments (N.B.), and 42' out-to-out of deck with a 10 degree skew. Existing concrete decks shall be removed and replaced, existing abutments to be converted to semi-integral abutments, abutments and Pier 2 bearings to be replaced. Pier 1 bearings to be retrofitted with stiffeners.

Traffic to be maintained under stage construction.

No Salvage

STATION 676+80.00
REBUILT 20__ BY
STATE OF ILLINOIS
F.A.I. RT. 55 SEC. (59, 68)RS-3, BR
LOADING HS20-44 & ALT
STR. NO. 059-0040

STATION 676+80.00
REBUILT 20__ BY
STATE OF ILLINOIS
F.A.I. RT. 55 SEC. (59, 68)RS-3, BR
LOADING HS20-44 & ALT
STR. NO. 059-0041

NAME PLATES

See Std. 515001
Existing Name Plate shall be cleaned
and relocated next to new Name Plate.
Cost included with Name Plates

LOADING HS 20-44 & ALT.
Allow 20#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS (NEW CONST.)

2002 AASHTO

DESIGN STRESSES

FIELD UNITS (NEW CONST.)

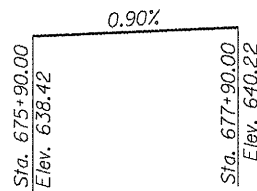
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 36,000 psi (Steel)

FIELD UNITS (EXIST. CONST.)

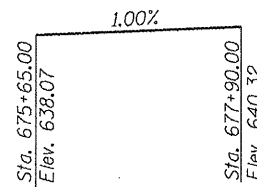
fc = 1,400 psi (Substructure)
fs = 20,000 psi (Reinforcement)
fs = 20,000 psi (Steel)

SEISMIC DATA

Seismic Performance Category (SPC) = B
Bedrock Acceleration Coefficient (A) = 0.072g
Site Coefficient (S) = 1.0



PROFILE GRADE
SN 059-0041 (N.B.)



PROFILE GRADE
SN 059-0040 (S.B.)

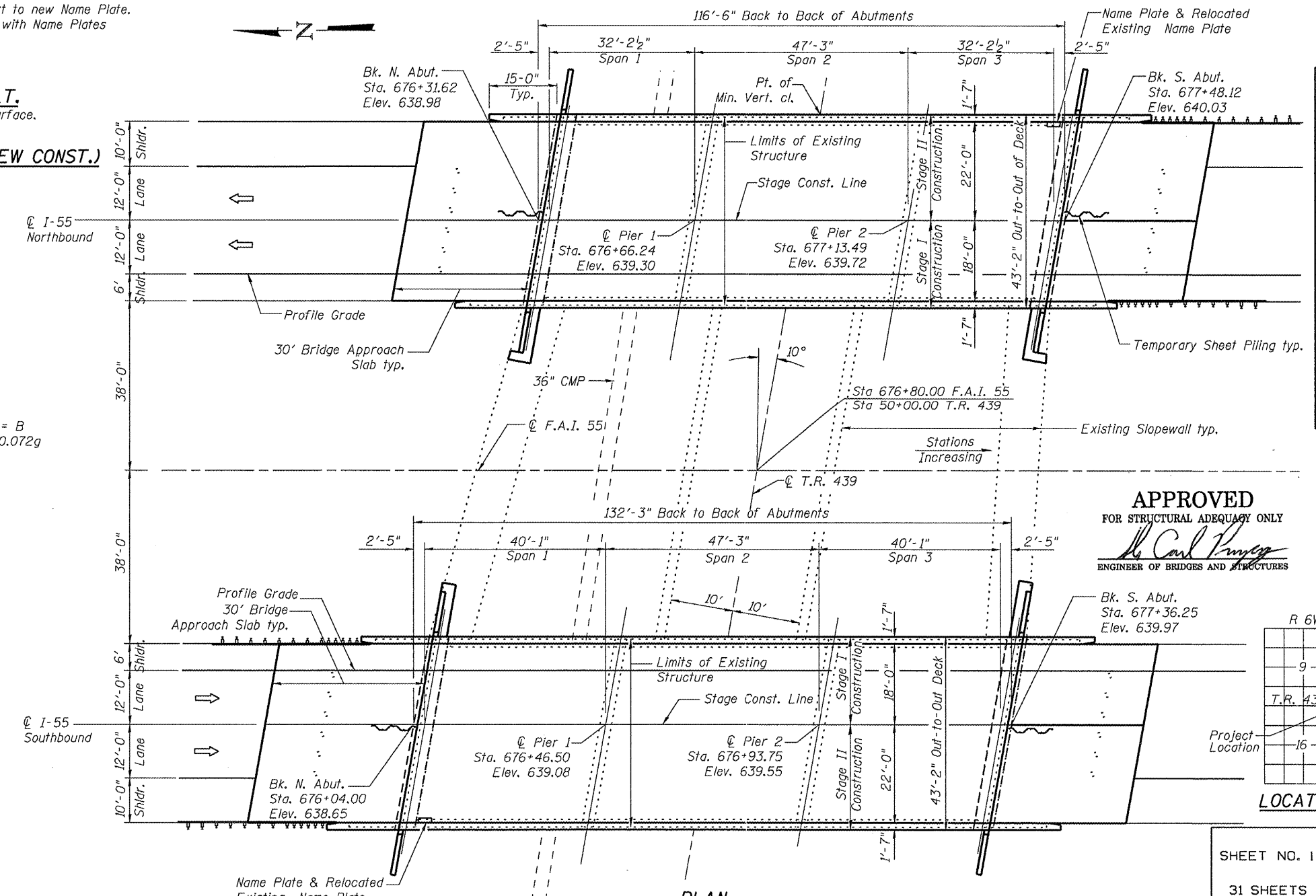
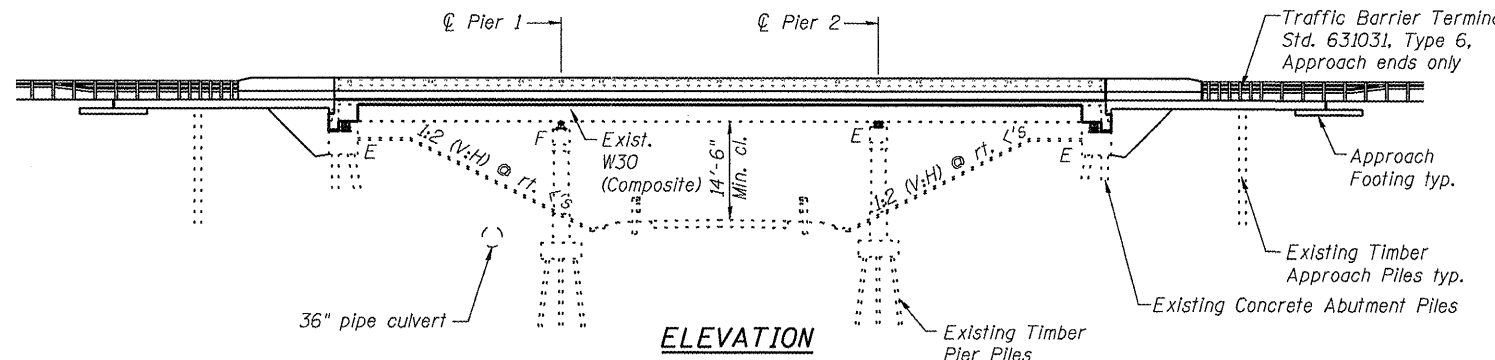
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INDEX OF SHEETS

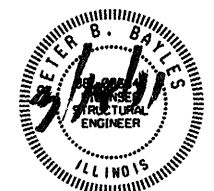
- 1 General Plan and Elevation
- 2 General Data
- 3 Temporary Concrete Barrier
- 4-5 Top of Slab Elevations (SN 059-0040)
- 6 Top of Approach Slab Elevations (SN 059-0040)
- 7-8 Top of Slab Elevations (SN 059-0041)
- 9 Top of Approach Slab Elevations (SN 059-0041)
- 10 Superstructure (SN 059-0040)
- 11 Superstructure Details (SN 059-0040)
- 12 Diaphragm Details (SN 059-0040)
- 13-14 Bridge Approach Slab Details (SN 059-0040)
- 15 Superstructure (SN 059-0041)
- 16 Superstructure Details (SN 059-0041)
- 17 Diaphragm Details (SN 059-0041)
- 18-19 Bridge Approach Slab Details (SN 059-0041)
- 20 Framing Plan & Beam Details (SN 059-0040)
- 21 Framing Plan & Beam Details (SN 059-0041)
- 22 Abutment Bearing Details
- 23 Pier Bearing Details
- 24-25 Concrete Removal (SN 059-0040)
- 26-27 Concrete Removal (SN 059-0041)
- 28 Wingwall and Slopewall Details (SN 059-0040)
- 29 Wingwall and Slopewall Details (SN 059-0041)
- 30 Bar Splicer Assembly and Mechanical Splicer Details
- 31 Concrete Parapet Slipforming Option

TOTAL BILL OF MATERIAL

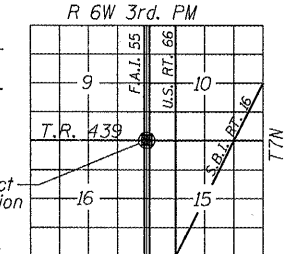
ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment (Special)	Cu. Yd.	-	425	425
Removal of Existing Concrete Deck	Each	2	-	2
Concrete Removal	Cu. Yd.	-	79.7	79.7
Structure Excavation	Cu. Yd.	-	470	470
Concrete Structures	Cu. Yd.	-	77.3	77.3
Concrete Superstructure	Cu. Yd.	658.9	-	658.9
Bridge Deck Grooving	Sq. Yd.	1,543	-	1,543
Protective Coat	Sq. Yd.	1,895	-	1,895
Furnishing and Erecting Structural Steel	Pound	-	9,795	9,795
Stud Shear Connectors	Each	5,232	-	5,232
Jack and Remove Existing Bearings	Each	-	36	36
Reinforcement Bars, Epoxy Coated	Pound	154,990	4,520	159,510
Bar Splicers	Each	1,444	-	1,444
Name Plates	Each	2	-	2
Temporary Sheet Piling	Sq. Ft.	-	447.4	447.4
Elastomeric Bearing Assembly Type I	Each	-	36	36
Anchor Bolts, 1"	Each	-	120	120
Geocomposite Wall Drain	Sq. Yd.	-	212	212
Pipe Underdrains for Structures 4"	Foot	-	318	318
Slopewall Removal	Sq. Yd.	-	20	20
Slopewall, 4 Inch	Sq. Yd.	-	12	12



APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Peter B. Bayles
ENGINEER OF BRIDGES AND STRUCTURES



Peter B. Bayles
Peter B. Bayles, P.E., S.E.
Structural Engineer License No. 081-006042
Expiration Date: 11/30/2012



LOCATION SKETCH

GENERAL PLAN AND ELEVATION
F.A.I. RTE. 55 OVER T.R. 439
SECTION (59, 68)RS-3, BR
MACOUPIN COUNTY
STATION 676+80.00
STRUCTURE NO. 059-0040 (S.B.)
STRUCTURE NO. 059-0041 (N.B.)

SHEET NO. 1 31 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	55	(59, 68)RS-3, BR	Macoupin	137	107
CONTRACT NO. 72921					
FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT					