

Bench Mark: Chiseled "□" on corner of Southwest wingwall S.N. 055-0019, Elev. 582.37
 Existing Structure: S.N. 055-0019 was built in 1924 as part of SBI Rte. 9 Sec. 37B at Sta. 564+91.00. In 1975 the bridge was widened and the superstructure was replaced with PPC deck beams. The current structure is 32'-6" wide between railings and spans 33'-0" back to back abutments with no skew. The substructure consists of closed abutments on piles. Structure is to be removed and replaced utilizing stage construction to maintain one lane of traffic during construction.

Salvage: See Special Provisions.

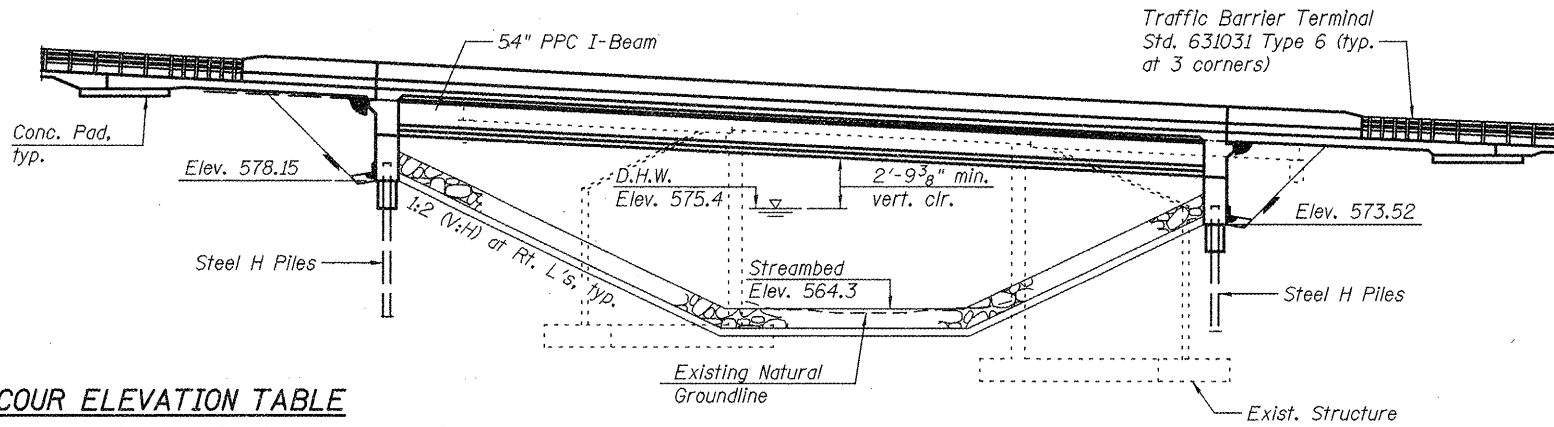
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

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TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu. Yd.		3146	3146
Porous Granular Embankment, Special	Cu. Yd.		169	169
Stone Dumped Riprap, Class A6	Ton		1570	1570
Filter Fabric	Sq. Yd.		1550	1550
Removal of Existing Structures	Each		1	1
Structure Excavation	Cu. Yd.		244	244
Concrete Structures	Cu. Yd.		69.2	69.2
Concrete Superstructure	Cu. Yd.	258.1		258.1
Bridge Deck Grooving	Sq. Yd.	518		518
Concrete Encasement	Cu. Yd.		5.6	5.6
Protective Coat	Sq. Yd.	662		662
Furnishing and Erecting Precast Prestressed Concrete I-Beams, 54 in.	Foot	558.5		558.5
Reinforcement Bars, Epoxy Coated	Pound	51,440	11,510	62,950
Bar Splicers	Each	502	64	566
Furnishing Steel Piles HP12x53	Foot		945	945
Driving Piles	Foot		945	945
Test Pile Steel HP12x53	Each		2	2
Name Plates	Each	1		1
Geocomposite Wall Drain	Sq. Yd.		107	107
Pipe Underdrains for Structures, 4"	Foot		148	148
Temporary Soil Retention System	Sq. Ft.		1200	1200
Asbestos Bearing Pad Removal	Each		22	22



DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	E. Abut.	W. Abut.
	575.15	570.52

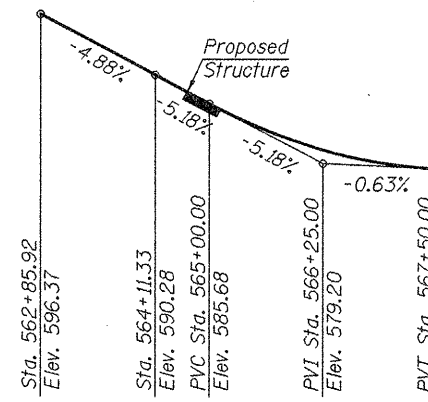
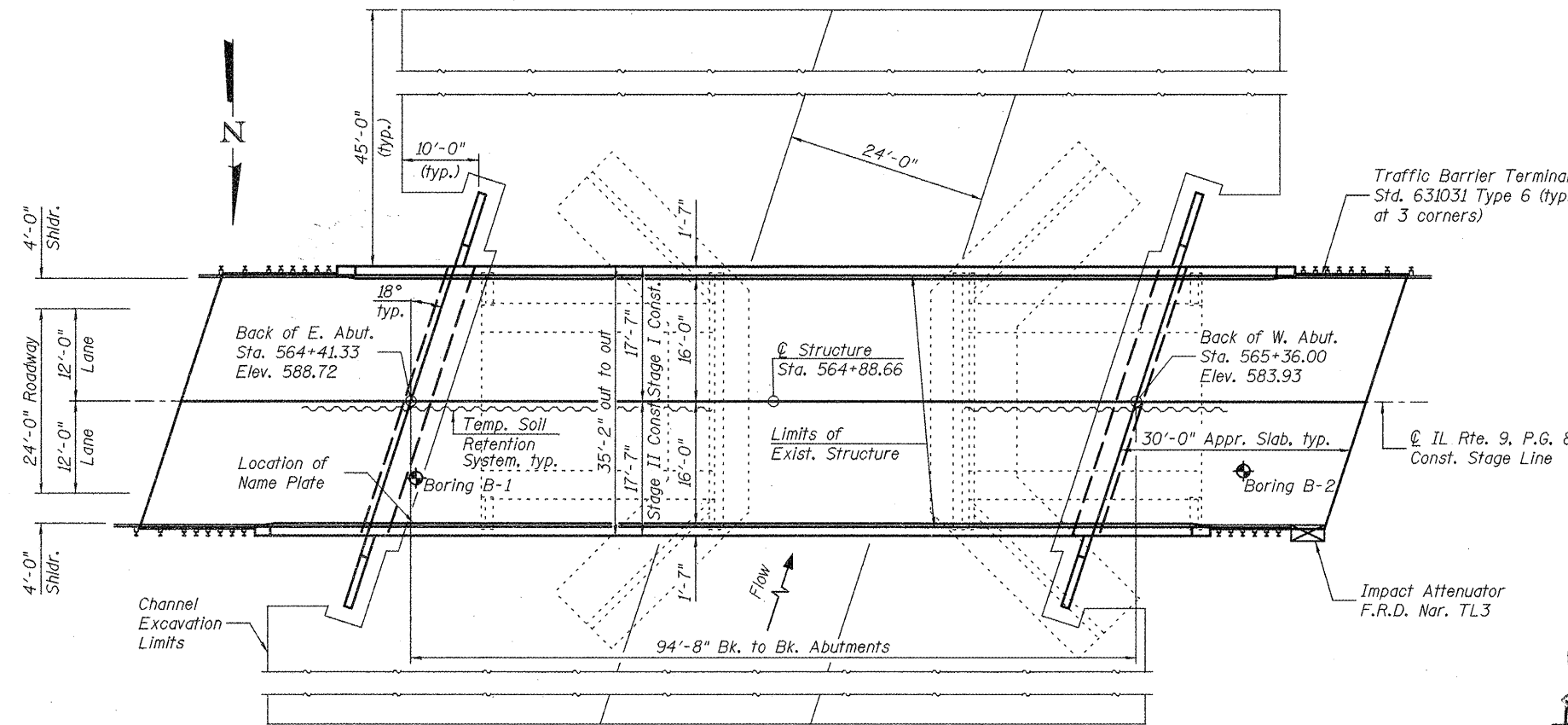
ELEVATION

WATERWAY INFORMATION

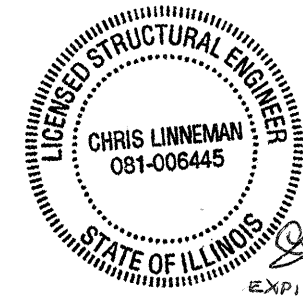
Existing Low Grade Elev. 578.46 @ Sta. 568+00
 Proposed Low Grade Elev. 578.46 @ Sta. 568+00

Flood	Freq. Yr.	Q	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
	10	1600	284	429	574.1	0.4	0.4	574.5	574.5
Design	50	2650	322	517	575.4	1.5	1.3	576.9	576.7
Base	100	3140	337	553	575.9	1.9	1.6	577.8	577.5
Overtopping	-	-	-	-	-	-	-	-	-
Max. Calc.	500	4350	367	627	576.9	3.0	2.1	579.9	579.0

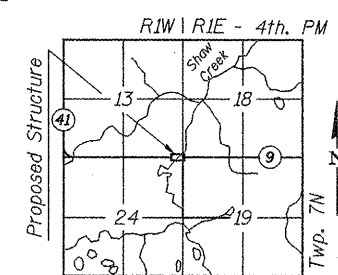
10 Year Velocity through Existing Bridge = 5.5 fps
 10 Year Velocity through Proposed Bridge = 3.5 fps



PROFILE GRADE
 (along roadway)



APPROVED
 For Structural Adequacy Only
Ralph E. Anderson (PE)
 Engineer of Bridges & Structures



LOCATION SKETCH

GENERAL PLAN & ELEVATION
 IL ROUTE 9 OVER SHAW CREEK
 F.A.P. ROUTE 685 SEC. 37BR-1
 MCDONOUGH COUNTY
 STATION 564+88.66
 STRUCTURE NO. 055-0079

DESIGNED SEC
CHECKED CDL
DRAWN SEC
CHECKED CDL

Note: For riprap layout, see sheet 2 of 21.
 For section showing excavation limits, see sheet 4 of 21.

LOADING HL-93
 Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS
 2007 AASHTO LRFD Bridge Design Specifications with 2008 Interims

SEISMIC DATA
 Seismic Performance Zone (SPZ) = 1
 Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.110g
 Design Spectral Acceleration at 0.2 sec. (S_{D5}) = 0.167g
 Soil Site Class = D

DESIGN STRESSES
 FIELD UNITS
 f'_c = 3,500 psi
 f_y = 60,000 psi (Reinforcement)

PRECAST PRESTRESSED UNITS
 f'_c = 6,000 psi
 f_{si} = 5,000 psi
 f_{pu} = 270,000 psi ($1/2$ " ϕ Low Relaxation Strands)
 f_{pot} = 201,960 psi ($1/2$ " ϕ Low Relaxation Strands)

EFK Moen, LLC Civil Engineering Design		331 Salem Place Suite 225 Fairview Heights, IL 62208		Phone 618-206-4250 Fax 618-206-4253	
SHEET NO. 1	F.A.P. RTE. 685	SECTION 37BR-1	COUNTY MCDONOUGH	TOTAL SHEETS 138	SHEET NO. 56
21 SHEETS			CONTRACT NO. 68352		
FED. ROAD DIST. NO.		ILLINOIS		FED. AID PROJECT	