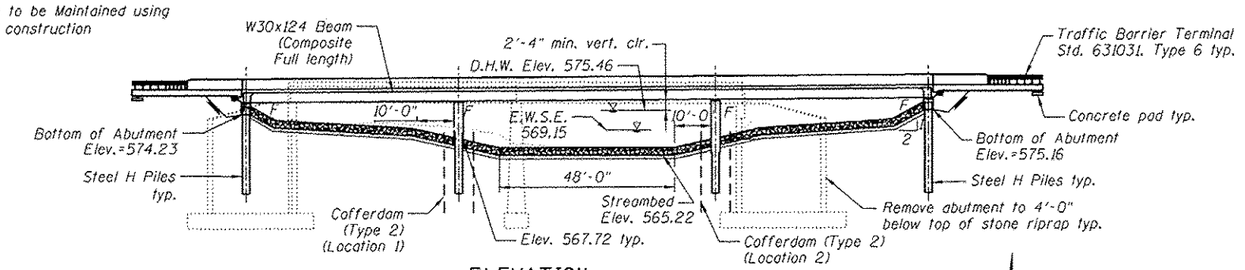
Bench Mark: U.S. Coast and Geodetic Survey brass disk set in the top of the south west wingwall of the State Route 9 bridge over Mud Creek. Elevation = 578.580

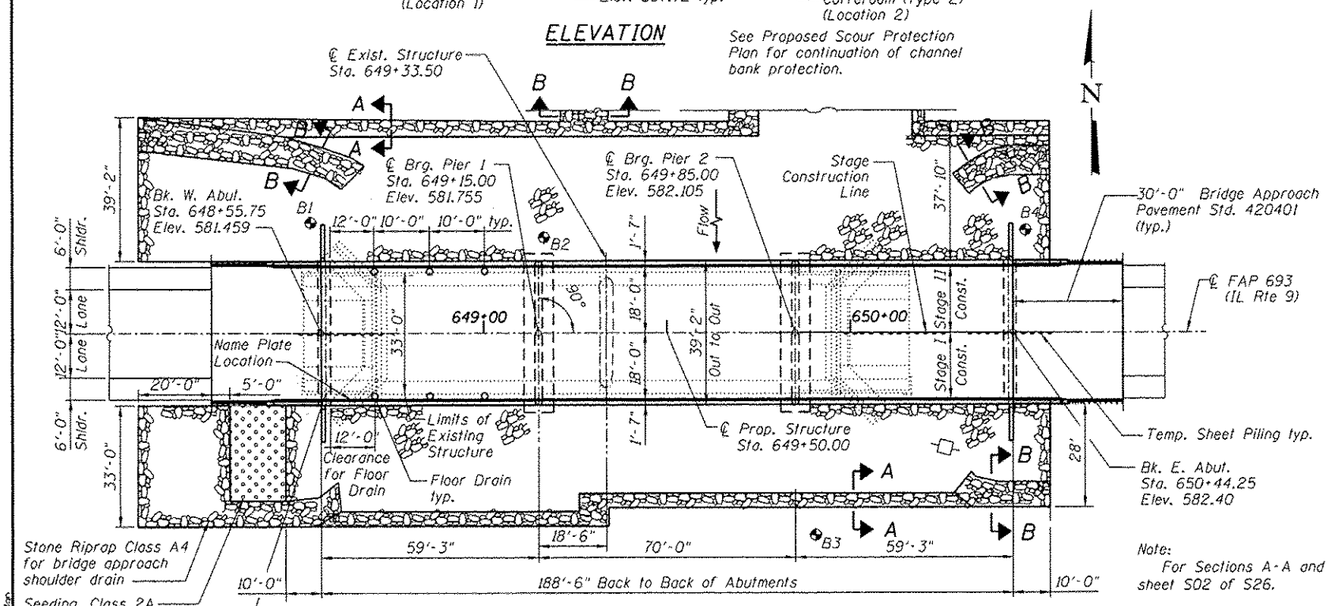
Existing Structure 090-0062: This Structure is a two simple span, precast, prestressed concrete multi-box beam bridge on closed concrete abutments and a concrete pier. It carries IL Route 9 at 0 degree skew over Mud Creek in Tazewell County. The original structure was built in 1928 as S.B.I. Rt 164 Sec 119B. The total length of the Structure is 126.21 feet from back to back of abutments, and it has a width of 33 feet. In 1975, under construction Route SBI Rt. 164, Sec. 119 BR, the original superstructure was removed and replaced with PPC box beams and a bituminous wearing surface. In 2008 temporary support was added at the pier and abutments. Existing structure to be removed. No salvage. (Existing upstream abandoned railroad sub-structure also to be removed). Existing temporary steel beams and supports to be delivered to the E. Peoria IDOT Bridge Yard (call 309-699-3822 to arrange for IDOT to unload when delivered).

Traffic to be Maintained using Staged construction



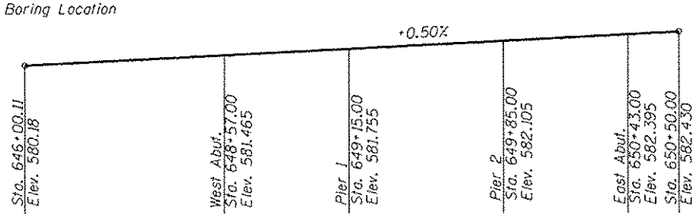
ELEVATION

See Proposed Scour Protection Plan for continuation of channel bank protection.



PLAN

Note: For Sections A-A and B-B see sheet S02 of S26.



PROFILE GRADE
(along ℄ roadway)

INDEX OF SHEETS

S01	General Plan and Elevation
S02	General Notes and Bill of Material
S03	Stage Construction Details
S04	Temporary Concrete Barrier for Stage Construction
S05	Top of Slab Elevation Location Plan
S06-S08	Top of Slab Elevations
S09	Top of West Approach Slab Elevations
S10	Top of East Approach Slab Elevations
S11	Superstructure-Plan and Cross Section
S12	Superstructure Details
S12a	Concrete Parapet Slipforming Option
S13	Integral Abutment Diaphragm Details
S14-S15	Bridge Approach Slab Details
S16	Framing Plan
S17-S18	Steel Details
S19	West Abutment Plan and Elevation
S20	East Abutment Plan and Elevation
S21-S22	Pier Plan and Details
S23	Bar Splicer Assembly Details
S24	Pile Details
S25-S26	Soil Borings

LOADING HL 93

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

DESIGN SPECIFICATIONS

2010 AASHTO LRFD Bridge Design Specifications, 5th Edition, with 2010 Interims

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (M270 Grade 50W)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (Sd1) = 0.084g
Design Spectral Acceleration at 0.2 sec. (Sds) = 0.143g
Soil Site Class = C

STATION 649+50.00
BUILT 20 BY
STATE OF ILLINOIS
F.A.P. RTE. 693
SECTION (119BR) BR
LOADING HL-93
STRUCTURE NO. 090-0178

NAME PLATE

See Std. 515001

LICENSED STRUCTURAL ENGINEER ORWIN P. YOUNGQUIST 081-004892 STATE OF ILLINOIS
1/21/2013

Sheets: S01, S02, S03, S04, S05, S06, S07, S08, S09, S10, S11, S12, S12a, S13, S16, S17, S18, S19, S20, S23, S24, S25, S26

Expires: 11/30/2014

LICENSED STRUCTURAL ENGINEER CORY W. CHAMBERLAIN 081-005382 STATE OF ILLINOIS
1/21/2013

Sheets: S14, S15, S21, S22

Expires: 11/30/2014

APPROVED
For Structural Adequacy Only
Engineer of Bridges & Structures

DESIGN SCOUR ELEVATION TABLE

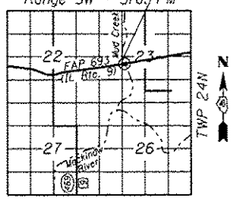
Design Scour Elevation (ft.)	W. Abut.	Pier 1	Pier 2	E. Abut.
	574.36	558.8	558.8	575.31

WATERWAY INFORMATION

Drainage Area = 46.226 Sq.Mi. Low Grade Elev. 577.81 @ Sta. 642+67

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	3700	730	965	574.8	1.3	0.2	576.1	575.0
Design	50	5940	809	1084	575.5	2.7	0.8	578.2	576.3
Base	100	6930	842	1133	575.7	3.2	1.1	579.0	576.9
Overtopping	-	-	-	-	-	-	-	-	-
Max. Calc.	500	9360	917	1247	576.4	4.7	2.0	581.1	578.4

Proposed Structure



LOCATION SKETCH

GENERAL PLAN AND ELEVATION
ILLINOIS ROUTE 9 OVER MUD CREEK
F.A.P. RTE. 693 - SECTION (119BR) BR
TAZEWELL COUNTY
STATION 649+50.00
STRUCTURE NO. 090-0178

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USER NAME = cvm	DESIGNED - OY	REVISED -	
FILE NAME = D468757-001-GP&E.dgn	CHECKED - DA	REVISED -	
PLOT SCALE = 40.00 ' / in.	DRAWN - CM	REVISED -	
PLOT DATE = 1/21/2013	CHECKED - JB	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
STRUCTURE NO. 090 - 0178
SHEET NO. S01 OF S26 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
693	(119BR) BR	TAZEWELL	80	41

CONTRACT NO. 68757
ILLINOIS FED. AID PROJECT

MSTL RT 9 OVER MUD CREEK\C100\CADD Sheets\Structural\Final Plans\Shet\D468757-001-GP&E.dgn