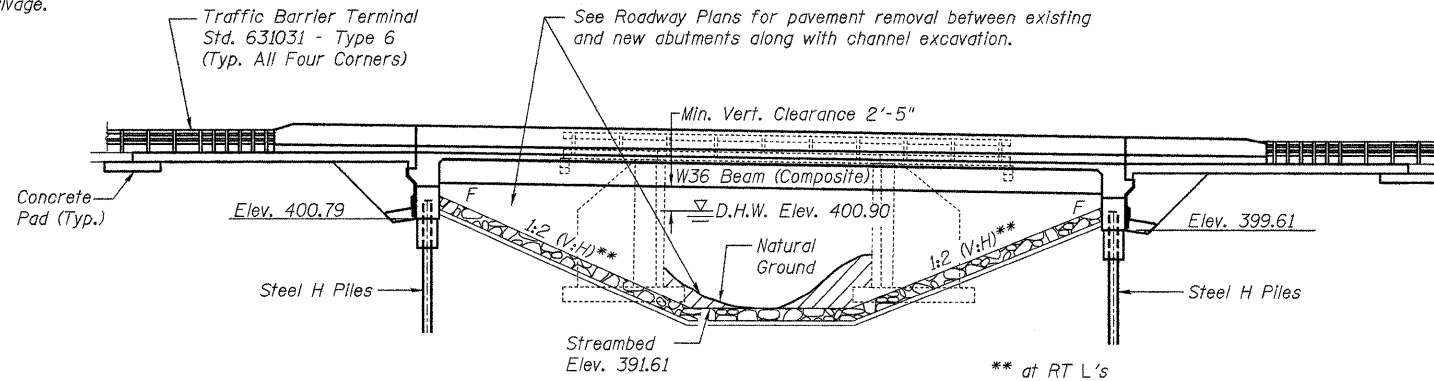


Bench Mark: Chiseled "a" on northeast wingwall of SN 028-0042, Elev. 406.19

Existing Structure: S.N. 028-0042 was built in 1934 as S.B.I. 143, Section 101X-1 at Sta. 45+67.15. In 1980 under FAP 869 (IL 34) Section (101X-1)BY, the superstructure was widened. Existing structure is a single span concrete T-Beam and Prestressed concrete deck beam bridge on closed abutments, 38'-6" bk. to bk. abutments, 35'-4 1/4" out to out with 26°-50' right ahead skew. The Contractor shall remove and replace the existing structure. Staged Construction shall be utilized to maintain one lane of traffic during construction.

No Salvage.

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



ELEVATION

CURVE DATA

(Prop. Curve 4)  
 $\Delta = 1^{\circ}32'53''$   
 $D = 0^{\circ}32'48''$   
 $T = 141.61'$   
 $L = 283.20'$   
 $E = 0.96'$   
 $R = 10481.07'$   
 $SE = N.C.$   
 $P.C. = Sta. 44+40.02$   
 $P.T. = Sta. 47+23.22$   
 $P.I. = Sta. 45+81.63$

INDEX OF SHEETS

1. General Plan
2. General Notes & Details
3. Stage Construction Details
4. Temporary Concrete Barrier
5. Top of Slab Elevations
6. Approach Slab Elevations
7. Superstructure
8. Superstructure Details
9. Bridge Approach Slab Details-1
10. Bridge Approach Slab Details-2
11. Concrete End Diaphragms
12. Framing Plan & Steel Details
13. West Abutment
14. East Abutment
15. Bar Splice Assembly Details
16. Steel Pile Details
17. Soil Borings

SEISMIC DATA

Seismic Performance Zone (SPZ) = 2  
 Design Spectral Acceleration at 1.0 sec. ( $S_{d1}$ ) = 0.239 g  
 Design Spectral Acceleration at 0.2 sec. ( $S_{d5}$ ) = 0.713 g  
 Soil Site Class = C

DESIGN SPECIFICATIONS

2007 AASHTO LRFD Bridge Design Specifications with 2008 Interims

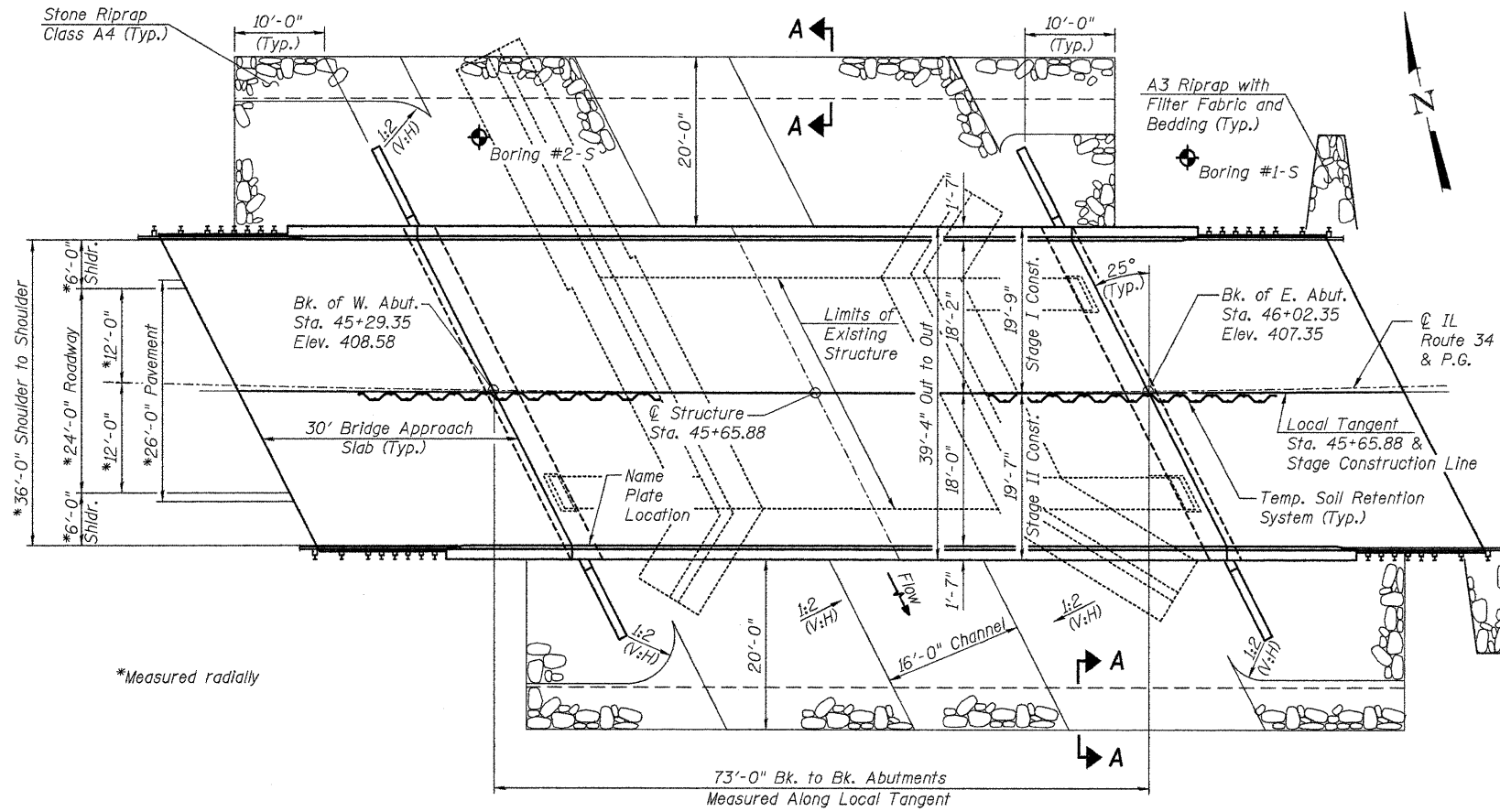
LOADING HL-93

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

DESIGN STRESSES

FIELD UNITS

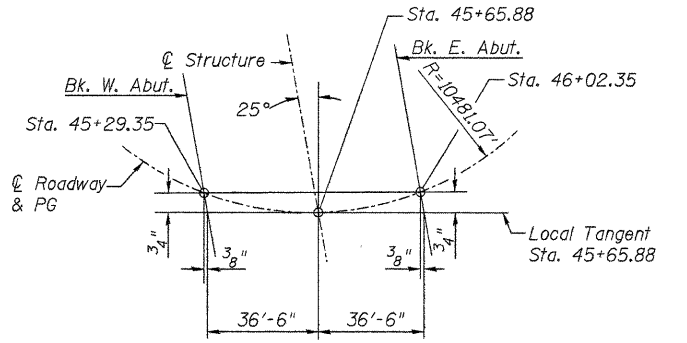
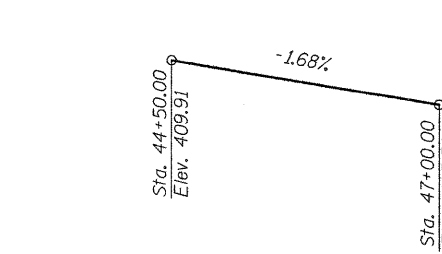
$f'_c = 3,500$  psi  
 $f_y = 60,000$  psi (Reinforcement)  
 $f_y = 50,000$  psi (M270 Grade 50)  
 $f_y = 36,000$  psi (M270 Grade 36)



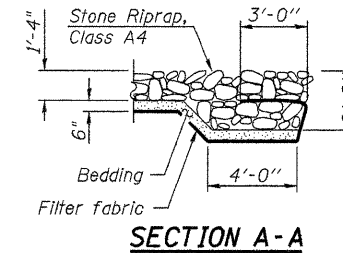
PLAN

PROFILE GRADE

(along IL Rte. 34)



OFFSET SKETCH



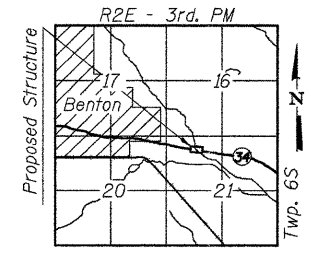
SECTION A-A

WATERWAY INFORMATION

Drainage Area = 3.22 sq. mi. Low Grade Elev. 402.54 ft @ Sta. 60.00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Head - Ft.		Headwater El.			
			Exist.	Prop.	H.W.E. Exist.	H.W.E. Prop.	Exist.	Prop.		
Design	10	962	225.5	258.9	400.0	1.8	0.4	401.8	400.4	
Design	50	2155	253.6	303.9	400.9	2.4	1.3	403.3	402.2	
Design	100	2542	259.8	314.4	401.1	2.2	1.7	403.3	402.8	
Overtopping			2225	253.6	303.9	400.9	2.5	1.6	403.4	402.5

Existing 10-yr Velocity = 4.27 ft/s Proposed 10-yr Velocity = 3.72 ft/s



LOCATION SKETCH

GENERAL PLAN  
 IL RT. 34 OVER UNNAMED STREAM  
 F.A.P. RTE. 869 - SEC. 101B-1  
 FRANKLIN COUNTY  
 STATION 45+65.88  
 STRUCTURE NO. 028-0084

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	W. Abut.	E. Abut.
	400.79	399.61

APPROVED  
 FOR STRUCTURAL ADEQUACY ONLY

Michael J. Haley  
 Licensed Structural Engineer  
 State of Illinois No. 81-5991  
 Expires 11/30/2010



Michael J. Haley  
 Michael T. Haley  
 Licensed Structural Engineer  
 State of Illinois No. 81-5991  
 Expires 11/30/2010

LIN ENGINEERING, LTD. Consulting Engineers Chatham, Illinois	SHEET NO. 1	F.A.P. RTE. 869	SECTION 101B-1	COUNTY FRANKLIN	TOTAL SHEETS 40	SHEET NO. 16
	17 SHEETS	FED. ROAD DIST. NO. ILLINOIS		CONTRACT NO. 78086		