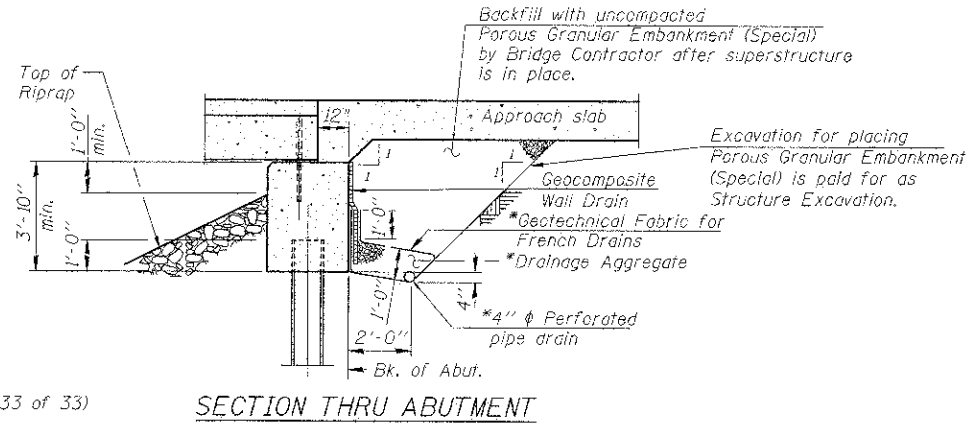
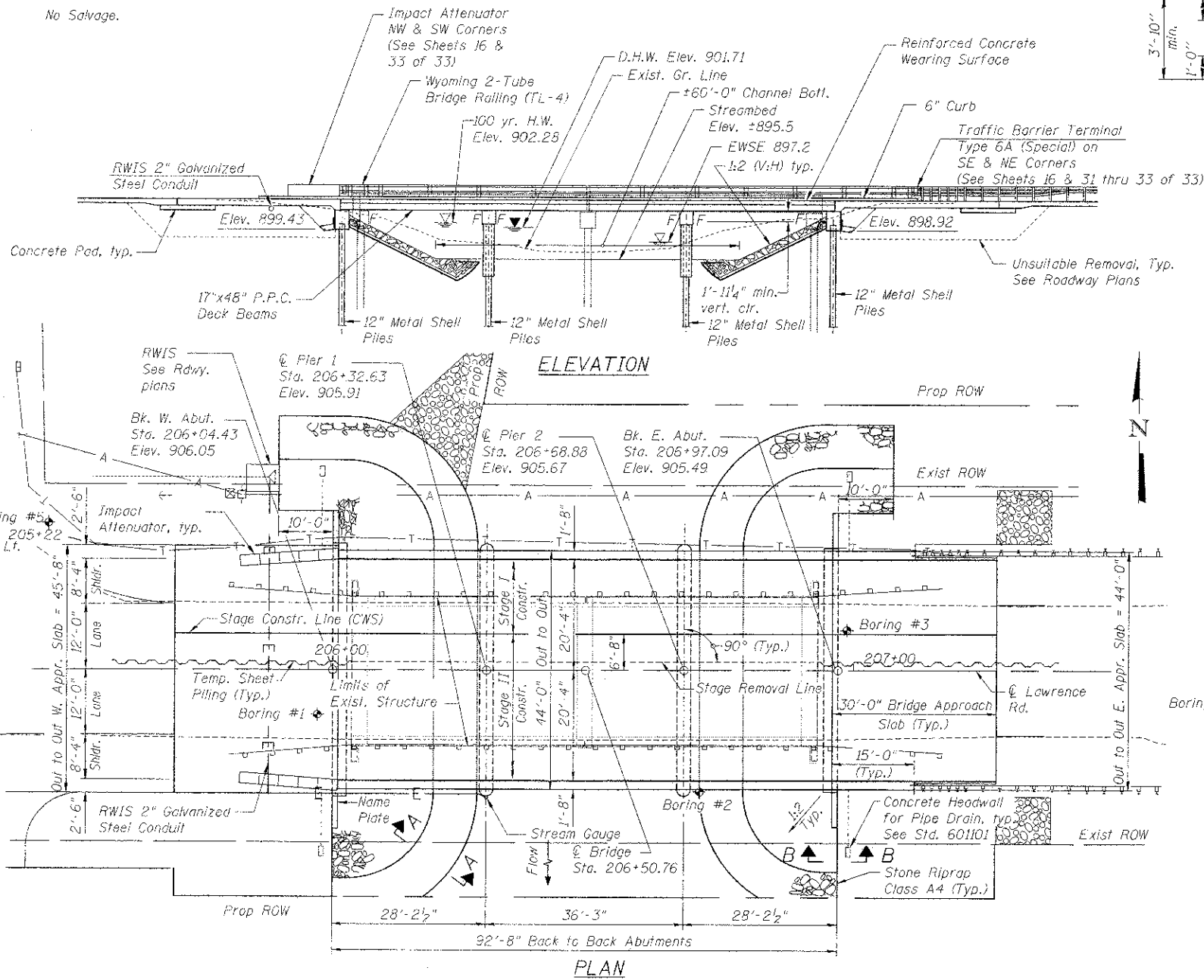


Bench Mark: Railroad spike in southeast face of power pole at northwest corner of Weidner and Lawrence.
Sta. 204+94.33 57.54' Lt. Elevation 903.62.

Existing Structure: S.N. 056-3010 built 1958 as S.A. Rte. 19, Section 48-B.
Structure consists of 2-simple span PPC deck beams supported on spill-thru abutments and open concrete pile bent pier. 85'-5" back-to-back abutments, 27'-0" out-to-out deck.
Structure to be removed and replaced using stage construction.

No Salvage.



SECTION THRU ABUTMENT

*Included in the cost of Pipe Underdrains for Structures.

Note:
All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101.)

DESIGN SPECIFICATIONS

2010 AASHTO LRFD Bridge Design Specifications with 2010 Interims

DESIGN STRESSES

FIELD UNITS

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)

PRECAST PRESTRESSED UNITS

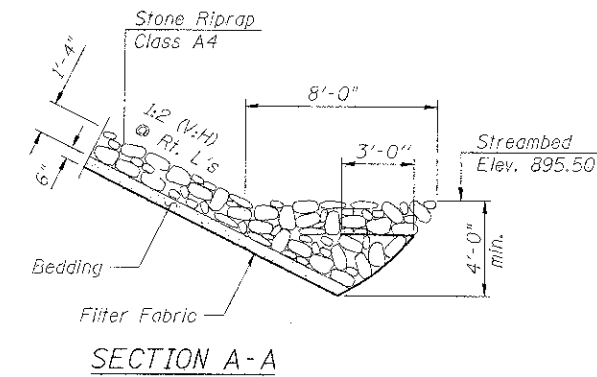
$f'_c = 6,000$ psi
 $f'_ci = 5,000$ psi
 $f_{pu} = 270,000$ psi ($\frac{1}{2}$ ϕ Low Lax. Strands)
 $f_{pbi} = 201,960$ psi ($\frac{1}{2}$ ϕ Low Lax. Strands)

SEISMIC DATA

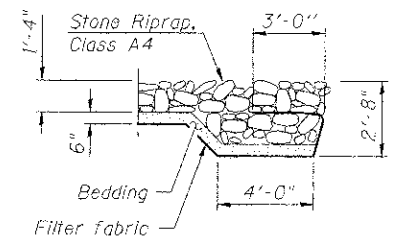
Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{pi}) = 0.09g
Design Spectral Acceleration at 0.2 sec. (S_{ps}) = 0.16g
Soil Site Class = D

LOADING HL-93

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



SECTION A-A

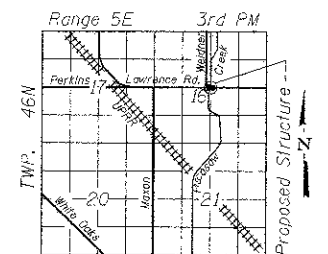


SECTION B-B

PISCASAW CREEK
BUILT 20 BY
McHENRY COUNTY
DIVISION OF TRANSPORTATION
SEC. 08-00355-01-BR
F.A.S. RTE. 28 STATION 206+50.76
STR. NO. 056-3184 LOADING HL-93

NAME PLATE

See Std. 515001
See Sheet 21 of 33
for location on wingwall



LOCATION SKETCH

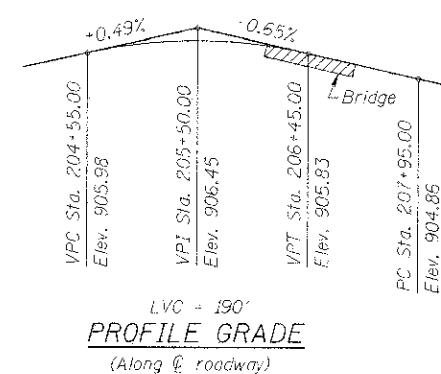
WATERWAY INFORMATION

Drainage Area = 28.3 sq.mi. Existing Low Chord Elevation = 902.80 ft @ Sta. 206+50.76
Proposed Low Chord Elevation = 902.80 ft @ Sta. 206+50.76

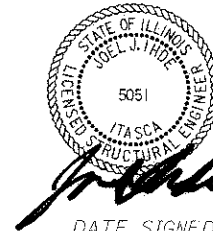
Flood	Frequency Year	Discharge (cfs)	Waterway Opening (sq ft)		Head - (ft.)			Headwater Ei.	
			Existing	Proposed	Natural H.W.E.	Exist. Prop.	Exist. Prop.	Exist. Prop.	
Design	10	1270	181.99	346.25	900.50	1.13	0.94	901.63	901.44
	20	1494	188.10	354.05	900.60	1.36	1.11	901.96	901.71
Base	50	1850	196.13	364.25	900.73	2.23	1.34	902.96	902.07
	100	2080	201.23	370.56	900.81	2.15	1.47	902.96	902.28
Overtopping	-	-	-	-	-	-	-	-	-
Max. Calc.	500	2620	212.17	384.06	900.98	1.98	1.82	902.96	902.80

DESIGN SCOUR ELEVATION TABLE (100 yr.)

Design Scour Elevation (ft.)	W. Abut.	Pier 1	Pier 2	E. Abut.
	899.43	893.95	893.95	898.92



LVC = 190'
PROFILE GRADE
(Along ϕ roadway)



DATE SIGNED: 10-02-12
EXP. DATE: 11-30-12

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 of the style of structure and complies with the requirements of the current AASHTO LRFD Bridge Design Specifications.

GENERAL PLAN & ELEVATION
LAWRENCE ROAD BRIDGE
OVER PISCASAW CREEK
F.A.S. RTE. 28 SEC. 08-00355-01-BR
McHENRY COUNTY
STATION 206+50.76
STRUCTURE NO. 056-3184