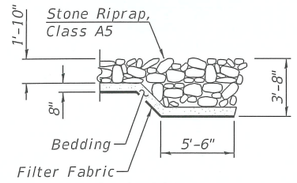
Bench Mark: BM "A", RR spike in power pole, Sta. 28+15.04, 103.35' Rt., Elev. 533.33.

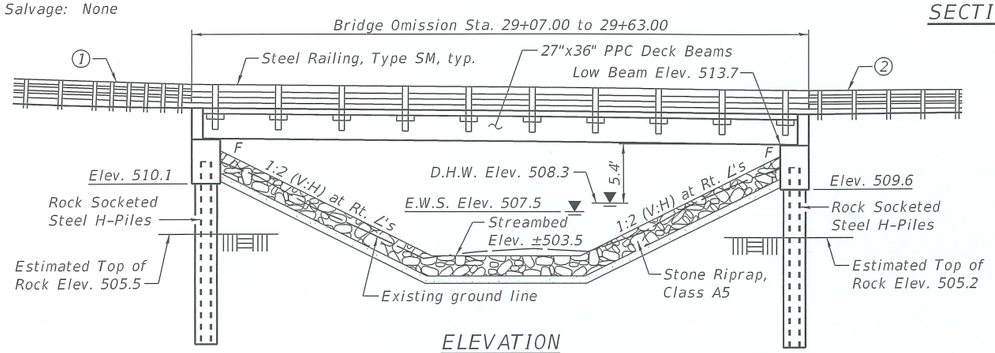
Existing Structure: S.N. 039-0046 was originally built in 1935 and consists of a single span steel wide flange beam superstructure with a timber deck supported by closed timber column abutments founded on timber footings. The back to back abutment length is 30'-0" and the out to out width is 16'-0". Structure to be removed and replaced with a new structure on a new alignment approximately 40' upstream of the existing structure.

Traffic Control: The road will remain open during construction.

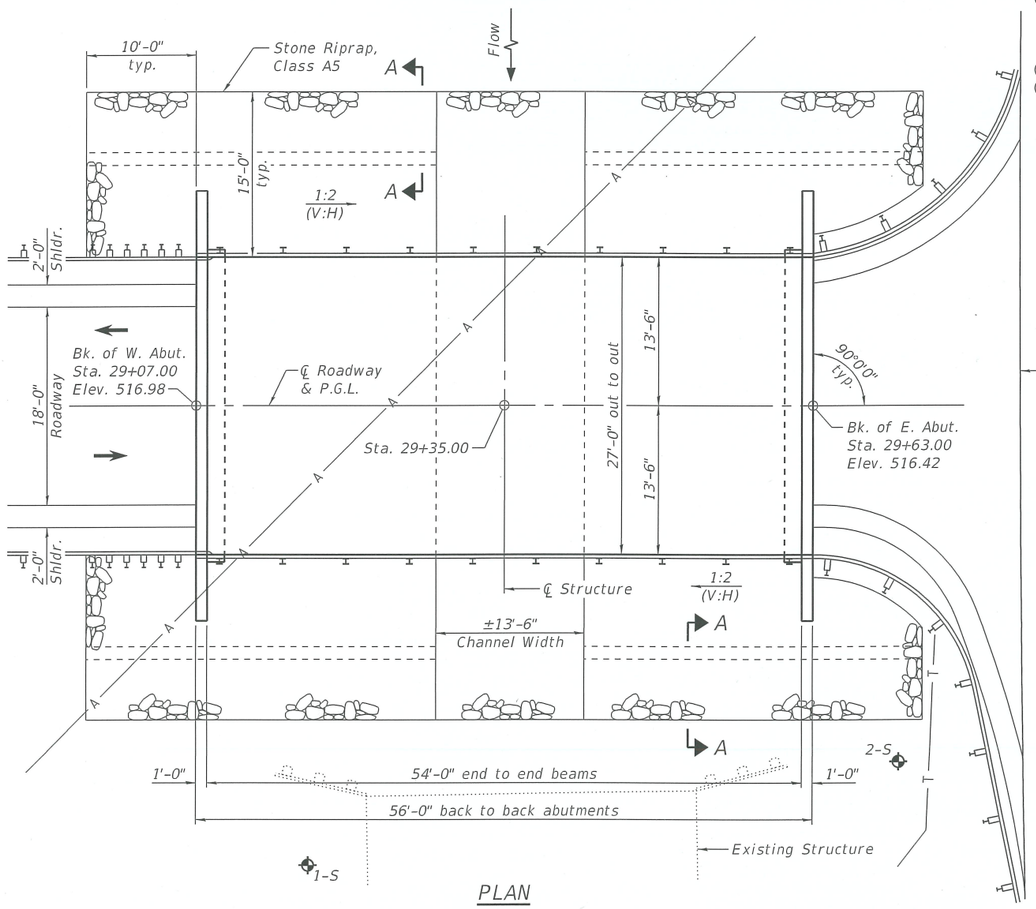
Salvage: None



SECTION A-A



ELEVATION

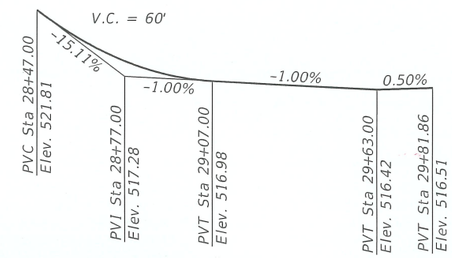


PLAN

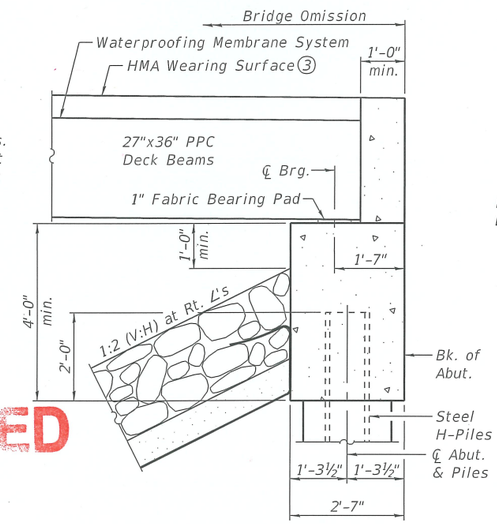
Notes:
① Traffic Barrier Terminal, Type 6A Std. 631032. End of SW terminal shall be curved at private entrance, to be detailed on Roadway plans.
② SPBGR to be detailed on Roadway plans.
③ HMA wearing surface will be 3" thick at abutments and 3" minus beam camber at midspan.

DESIGN SCOUR ELEVATION TABLE

Event / Limit State	Design Scour Elevations (ft.) W. Abut.	E. Abut.	Item 113
Q100	510.1	509.6	8
Q200	510.1	509.6	
Design	510.1	509.6	
Check	510.1	509.6	

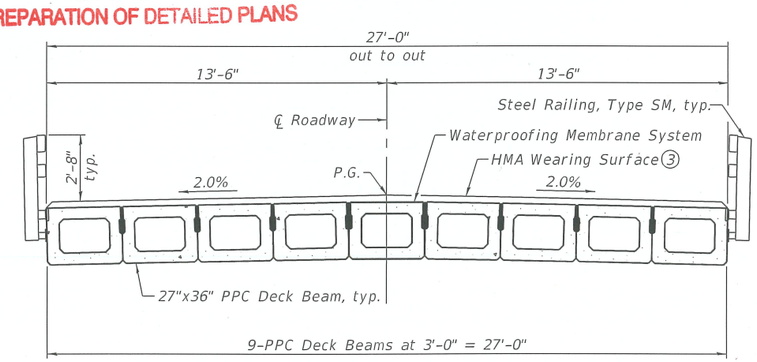


PROFILE GRADE
(Along ℄ Roadway)



SECTION THRU ABUTMENT

APPROVED
MAR 04 2019
AS A BASIS FOR PREPARATION OF DETAILED PLANS



CROSS SECTION

WATERWAY INFORMATION

Drainage Area = 595 acres

Exist. Low Grade Elev. 515.12 at Sta. 19+52
Prop. Low Grade Elev. 516.42 at Sta. 29+63

Flood	Freq. Yr.	Q C.F.S.	Opening Ft² Exist.	Opening Ft² Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	738	104	100	508.0	0.6	0.6	508.6	508.6
Design	15	845	115	110	508.3	0.7	0.6	509.0	508.9
Base	100	1500	165	178	510.1	1.1	0.6	511.2	510.7
Scour Design Check	200	1670	176	195	510.5	1.2	0.6	511.7	511.1
Max. Calc.	500	2140	204	235	511.4	1.5	0.6	512.9	512.0

DESIGN SPECIFICATIONS

2017 AASHTO LRFD Bridge Design Specifications, 8th Edition

LOADING HL-93

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

DESIGN STRESSES

FIELD UNITS

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

PRECAST PRESTRESSED UNITS

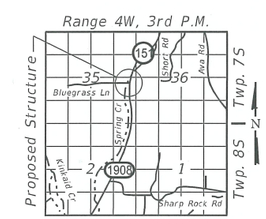
f'c = 6,000 psi
f'ci = 5,000 psi
fpu = 270,000 psi (½" ⊙ low-relax strands)
fpbt = 201,960 psi (½" ⊘ low-relax strands)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 2
Design Spectral Acceleration at 1.0 sec. (SD1) = 0.24g
Design Spectral Acceleration at 0.2 sec. (SDS) = 0.66g
Soil Site Class = C

HIGHWAY CLASSIFICATION

Twp. Road 93A - Bluegrass Lane
Functional Class: Local Road
ADT: 25 (2017); 27 (2032)
ADTT: 0 (2017); 0 (2032)
DHV: 3
Design Speed: 30 m.p.h.
Posted Speed: Unposted
Two-Way Traffic
Directional Distribution: 50:50



LOCATION SKETCH

GENERAL PLAN & ELEVATION
BLUEGRASS LANE (TR 93A)
OVER SPRING CREEK
SEC. 13B-1
JACKSON COUNTY
STATION 29+35.00
STRUCTURE NO. 039-0081

FILE NAME: H:\P\13042\13042.006\Bridge\TSL\Microstation\0390081-78547-001-General Plan & Elevation.dgn

OATES ASSOCIATES
www.oatesassociates.com
ILLINOIS DESIGN FIRM LICENSE NO.: 184.001115

USER NAME =	DESIGNED - JAD	REVISED -	
	CHECKED - MAM	REVISED -	
PLOT SCALE =	DRAWN - JAD	REVISED -	
PLOT DATE = 2/15/2019	CHECKED - MAM	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET 1 OF 1 SHEETS

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
93A	13B-1	JACKSON		

CONTRACT NO. 78547
ILLINOIS | FED. AID PROJECT