

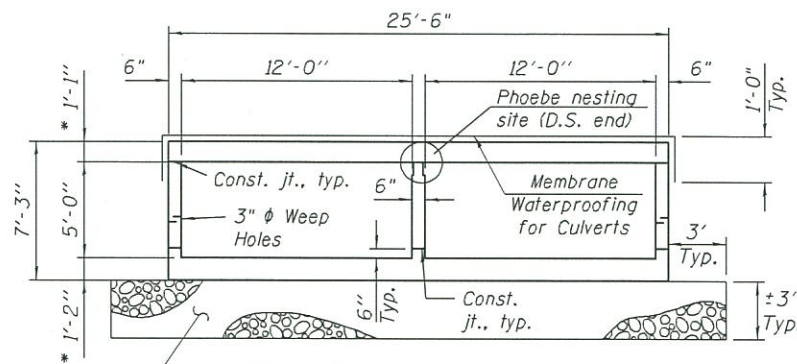
Benchmark: Cut Square on southeast corner of S.N. 051-8000, Station 304+25, Offset 25' Right, Elevation = 453.586

Existing Structure: S.N. 051-8000 slab was built in 1921 as Route 1, Section 18-B. In 1960 the bridge was widened to 46'-4" with new concrete wingwalls. Single span reinforced concrete slab supported on spread footing closed abutment.

Traffic to be maintained utilizing stage construction.

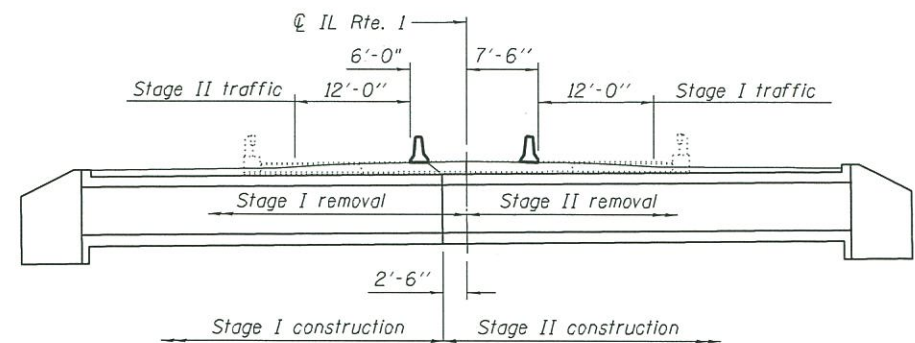
No salvage.

Note:
Precast alternate is not allowed.



CROSS SECTION THRU BARREL
* Slab thickness may be refined in final design

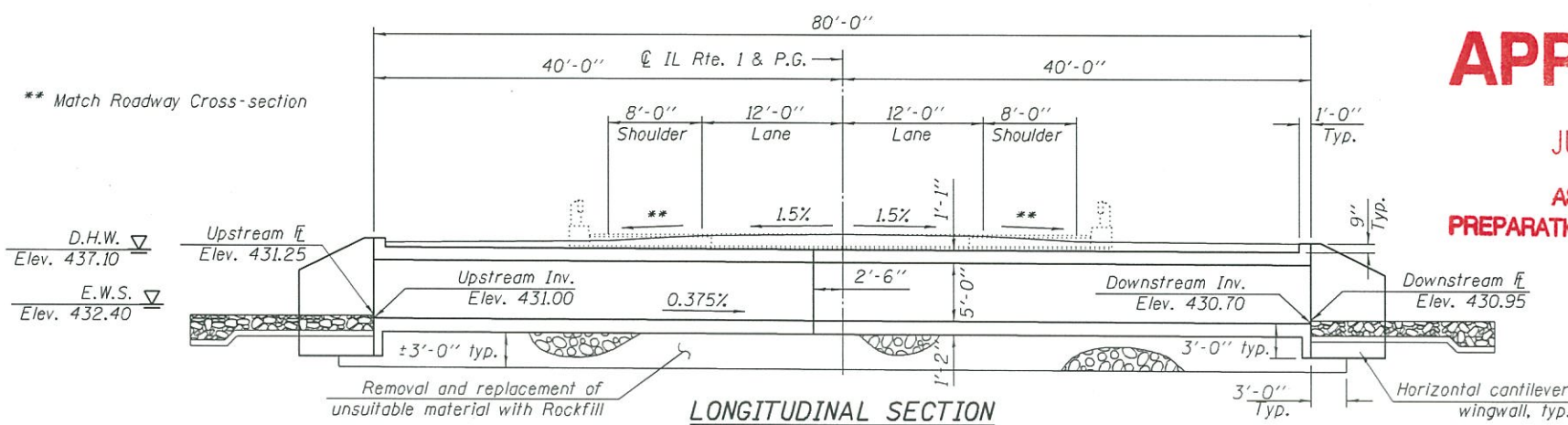
PROFILE GRADE
(Along CL F.A.P. Rte. 332)



STAGE CONSTRUCTION SKETCH

The condition of the existing slab for the duration of Stage I Traffic should be verified during final design. If the condition changes, the proposed staging sequence shall be re-evaluated.

Excavate behind the existing abutments prior to superstructure removal.



LONGITUDINAL SECTION

APPROVED
JUN 19 2017
AS A BASIS FOR
PREPARATION OF DETAILED PLANS

WATERWAY INFORMATION

		Existing Overtopping Elev. 438.16 @ Sta. 304+28		Proposed Overtopping Elev. 438.28 @ Sta. 301+99				
Flood	Freq. Yr.	Discharge C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Head - Ft. Exist. Prop.	Headwater El. Exist. Prop.		
OVT (E)	10	507	82	113	0.7	0.3	437.6	437.2
Design	20	687	82	113	1.6	0.4	438.6	437.4
OVT (P)	50	877	82	113	1.7	0.9	438.8	438.1
Design	60	948	82	113	1.7	1.4	438.9	438.6
Base	100	1050	82	113	1.7	1.4	438.9	438.7
Max. Calc.	200	1235	82	113	1.6	1.4	439.0	438.8

10-Year Outlet Velocity from Existing Structure = 6.2 fps
10-Year Outlet Velocity from Proposed Structure = 4.5 fps

DESIGN SPECIFICATIONS

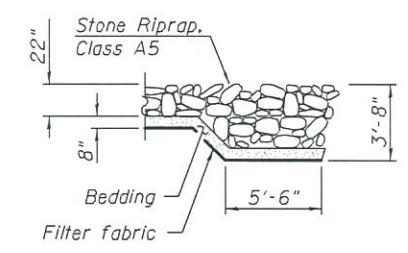
2014 AASHTO LRFD Bridge Design Specifications, 7th Edition with 2015 and 2016 Interims

DESIGN STRESSES

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

HIGHWAY CLASSIFICATION

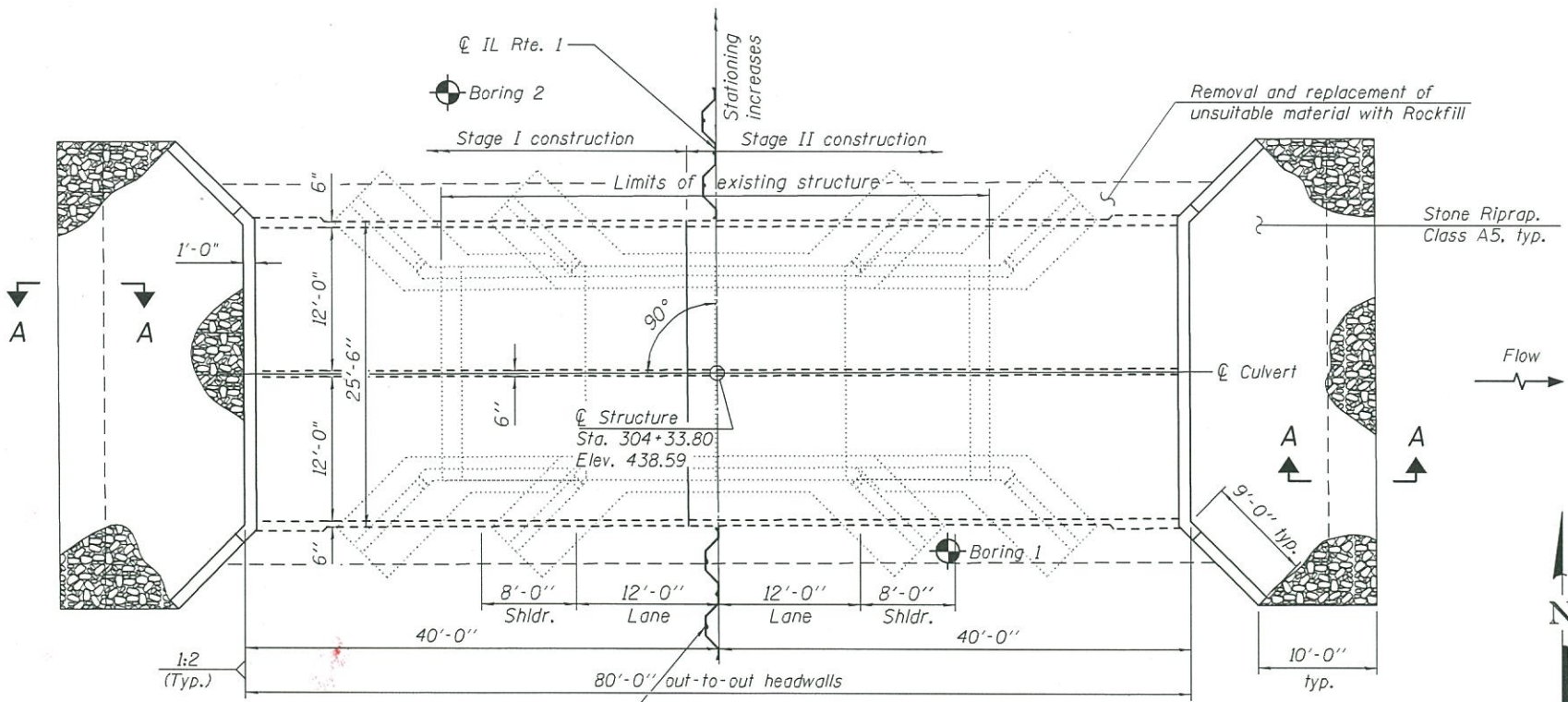
F.A.P. Rte. 332 - IL Rte. 1
Functional Class: Other Principal Arterial
ADT: 4100 (2018); 5000 (2038)
ADTT: 20%
DHV: 439 (2018)
Design Speed: 60 m.p.h.
Posted Speed: 55 m.p.h.
Two-Way Traffic



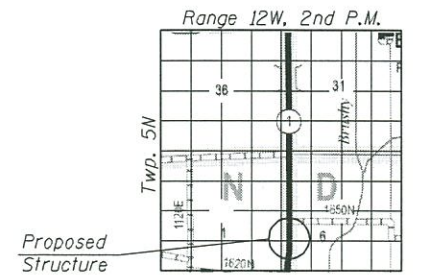
SECTION A-A

LOADING HL-93

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



PLAN



LOCATION SKETCH

GENERAL PLAN & ELEVATION
ILLINOIS ROUTE 1 OVER
UNNAMED CREEK
F.A.P. RTE. 332 - SEC. 18B
LAWRENCE COUNTY
STATION 304+33.80
STRUCTURE NO. 051-2009

DESIGNED -	AL-BARRAE R. SHEBIB
CHECKED -	JERRY M. BISHOFF
DRAWN -	IAN J. ANDREWS
CHECKED -	RICHARD J. CHAPUT

MAY 11, 2017

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 1 OF 1 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	18B	LAWRENCE	1	1
CONTRACT NO. 74619				

ILLINOIS FED. AID PROJECT