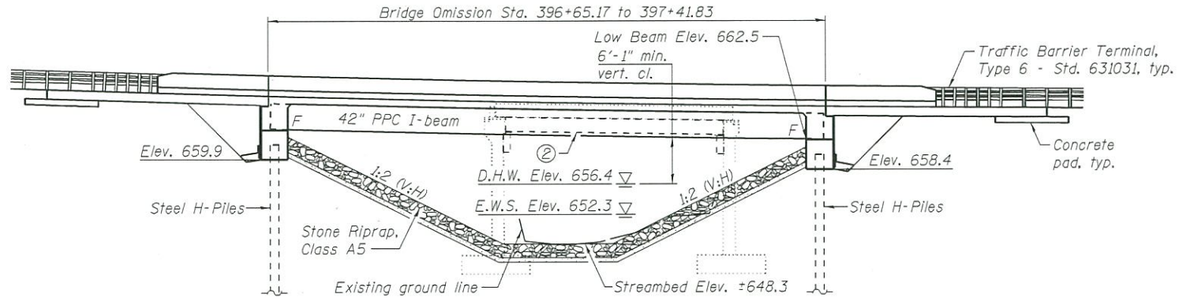
Bench Mark: BM 7 - Chiseled square on southwest corner of the south abutment, Sta. 397+26.76, 16.78' RT. Elev. 664.94.

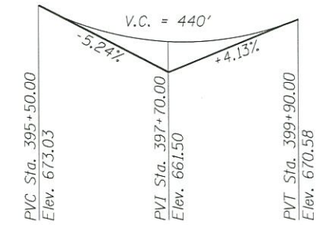
Existing Structure: S.N. 048-0014 was originally built in 1926 as S.B.I. Route 8, Section 42B. In 1980, the superstructure and portions of the substructure were removed and replaced under Section (42B)BR. In 2008 and 2010, temporary steel support beams were installed under three of the beams. The structure consists of a single-span PPC deck beam superstructure supported by closed concrete abutments. The back to back abutment length is 33'-0" and the out to out width is 33'-0". Structure to be removed and replaced.

Traffic Control: One lane of traffic will be maintained utilizing stage construction.

Salvage: The existing steel beams located underneath the existing deck beams shall be carefully removed and salvaged. They shall be transported to a site designated by the Engineer and placed on wood blocking.



ELEVATION



PROFILE GRADE

(Along ℄ Roadway)

DESIGN SPECIFICATIONS

2012 AASHTO LRFD Bridge Design Specifications, 6th Edition with 2013 Interims

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" ϕ low-relax strands)
fpbt = 201,960 psi (½" ϕ low-relax strands)

HIGHWAY CLASSIFICATION

F.A.P. 626 - IL Rte. 97
Functional Class: Minor Arterial (Rural)
ADT: 2,000 (2011); 2,440 (2031)
ADTT: 252 (2011); 307 (2031)
DHV: 244
Design Speed: 55 m.p.h.
Posted Speed: 55 m.p.h.
Two-Way Traffic Directional Distribution: 50:50

LOADING HL-93

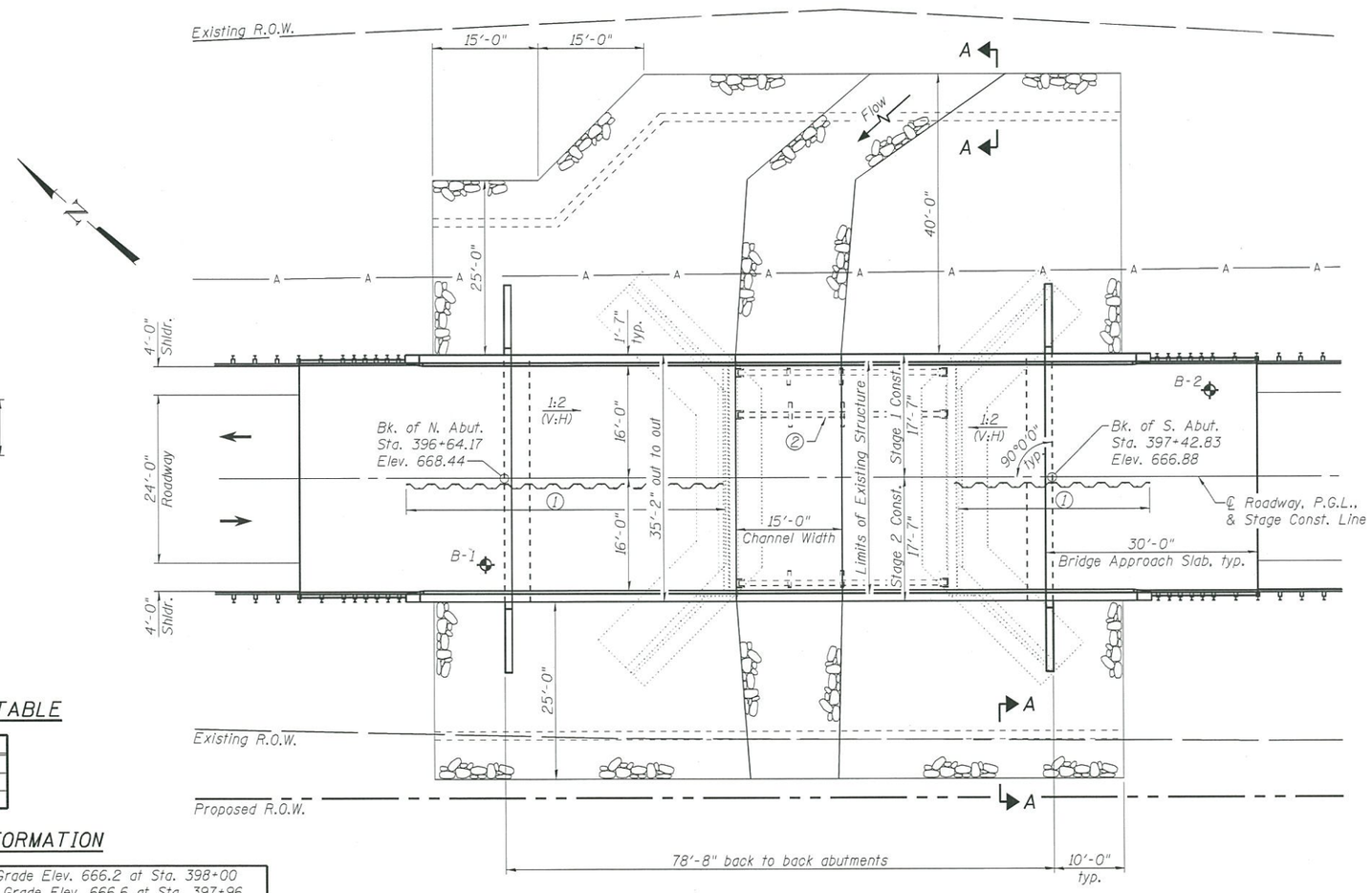
Allow 50#/sq. ft. for future wearing surface.

SEISMIC DATA

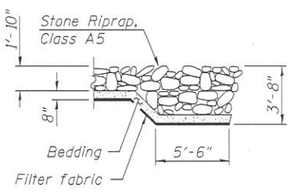
Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (SD1) = 0.07g
Design Spectral Acceleration at 0.2 sec. (SDS) = 0.12g
Soil Site Class = C

Notes:
① Temporary Soil Retention System.
② Existing steel beam, typ.

APPROVED
JUL 02 2014
AS A BASIS FOR
PREPARATION OF DETAILED PLANS



PLAN



SECTION A-A

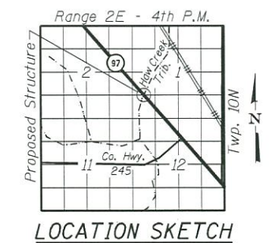
DESIGN SCOUR ELEVATION TABLE

Design Scour Elevations (ft.)		
	N. Abut.	S. Abut.
0100	659.9	658.4
0500	659.9	658.4

WATERWAY INFORMATION

Drainage Area = 2.4 sq. mi.
Existing Low Grade Elev. 666.2 at Sta. 398+00
Proposed Low Grade Elev. 666.6 at Sta. 397+96

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	827	161	203	655.1	0.2	0.1	655.3	655.2
Design	50	1,350	202	267	656.4	0.5	0.1	656.9	656.5
Base	100	1,600	217	292	656.8	0.8	0.2	657.6	657.0
Max. Calc.	500	2,190	246	342	657.8	1.3	0.6	659.1	658.4



LOCATION SKETCH

GENERAL PLAN & ELEVATION
IL RTE. 97 OVER HAW CREEK TRIBUTARY
F.A.P. RTE. 626 - SEC. 42-(B,B-1)BR-1
KNOX COUNTY
STATION 397+03.50
STRUCTURE NO. 048-0098

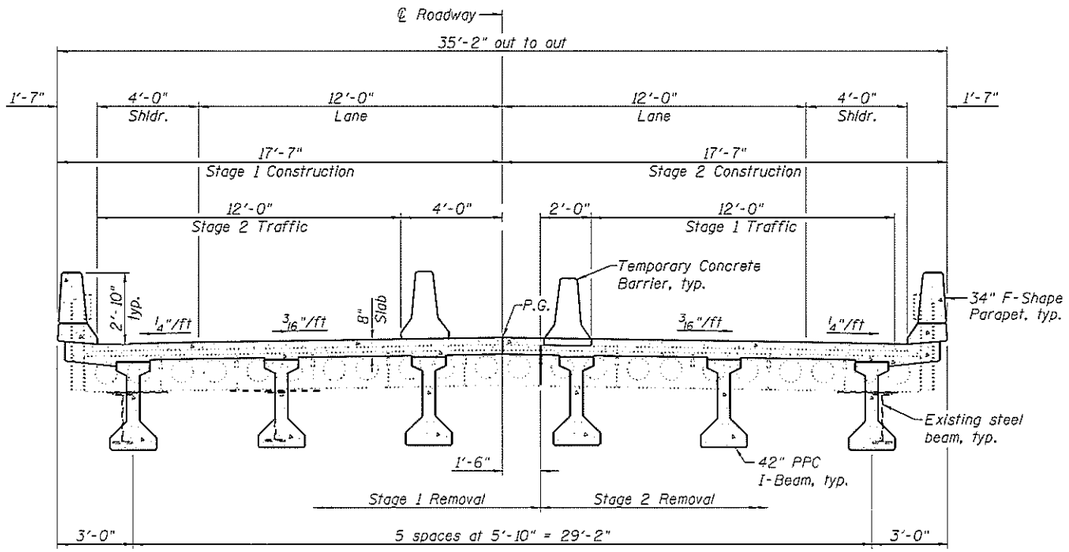
OATES ASSOCIATES
Springfield Business Center 1 1701 Jamie Court, Suite 1 Springfield, IL 62704 Tel: 217.546.2200 Fax: 217.546.5722
Hillsboro Lindley Civic Building 720 E. Ill. Route 16, Suite 103 Hillsboro, MO 63050 Tel: 314.789.4381 Fax: 314.789.4405
www.oatesassociates.com

USER NAME =	DESIGNED - MAG	REVISED	
	CHECKED - SJN	REVISED	
PLOT SCALE =	DRAWN - MAG	REVISED	
PLOT DATE =	CHECKED - SJN	REVISED	

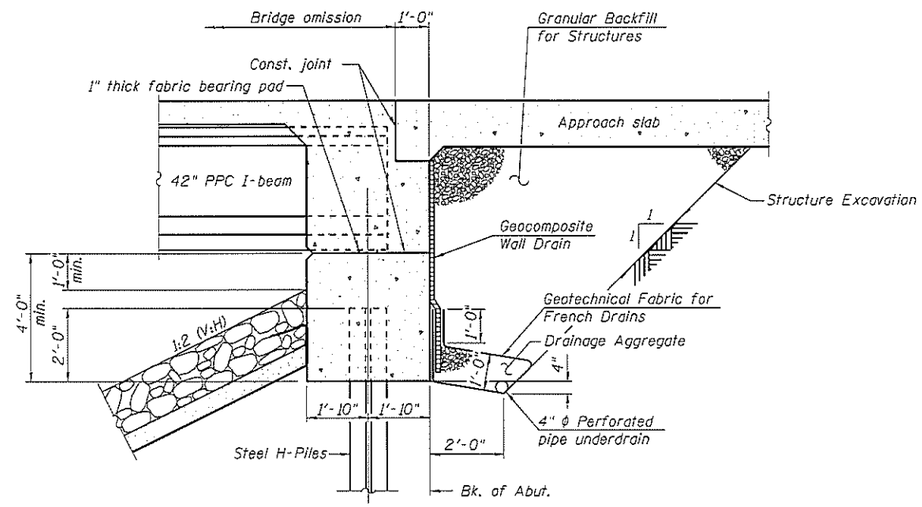
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 1 OF 2 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
626	42-(B,B-1)BR-1	KNOX		
		CONTRACT NO. 68754		
		ILLINOIS FED. AID PROJECT		



CROSS SECTION
(Looking South)



SECTION THRU INTEGRAL ABUTMENT

Notes:
(1) The condition of the existing deck beams for the duration of Stage 1 traffic should be verified during final design. If their condition changes, the proposed staging sequence shall be re-evaluated.

DETAILS
IL RTE. 97 OVER HAW CREEK TRIBUTARY
F.A.P. RTE. 626 - SEC. 42-(B,B-1)BR-1
KNOX COUNTY
STATION 397+03.50
STRUCTURE NO. 048-0098

OATES ASSOCIATES	USER NAME =	DESIGNED - MAG	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED - SJN	REVISED			626	42-(B,B-1)BR-1	KNOX		
	PLOT SCALE =	DRAWN - MAG	REVISED					CONTRACT NO. 68754		
	PLOT DATE =	CHECKED - SJN	REVISED		SHEET NO. 2 OF 2 SHEETS			ILLINOIS FED. AID PROJECT		