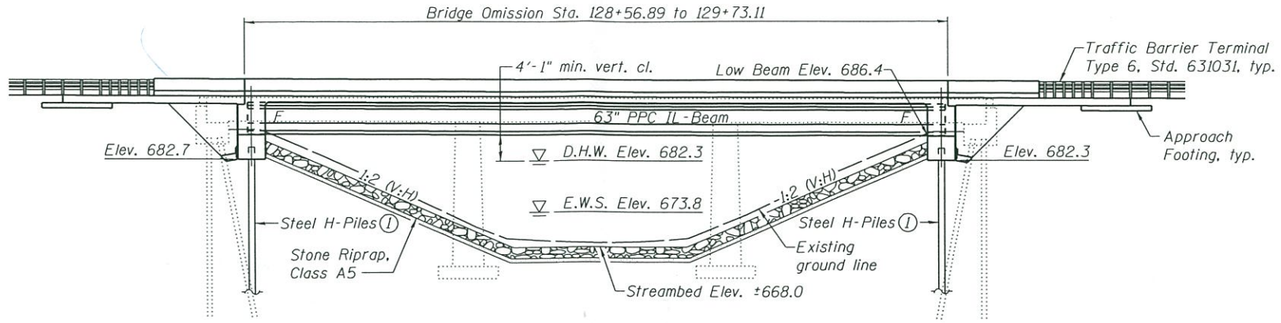
Benchmark: Chiseled square on top of southeast wingwall, Sta. 129+97.80, 23.85' RT, Elev. 694.57.

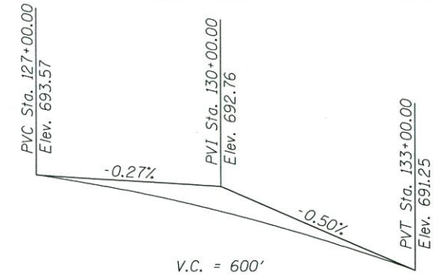
Existing Structure: S.N. 088-0001 was originally built in 1965 as S.B.I. Route 30, Section 14-BR-2. The structure consists of three spans of 36" PPC I-beams with a cast in place concrete deck supported by open abutments founded on steel H-piles and solid wall piers founded on spread footings. The back to back abutment length is 132'-3" and the out to out width is 46'-0". Structure to be removed and replaced.

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

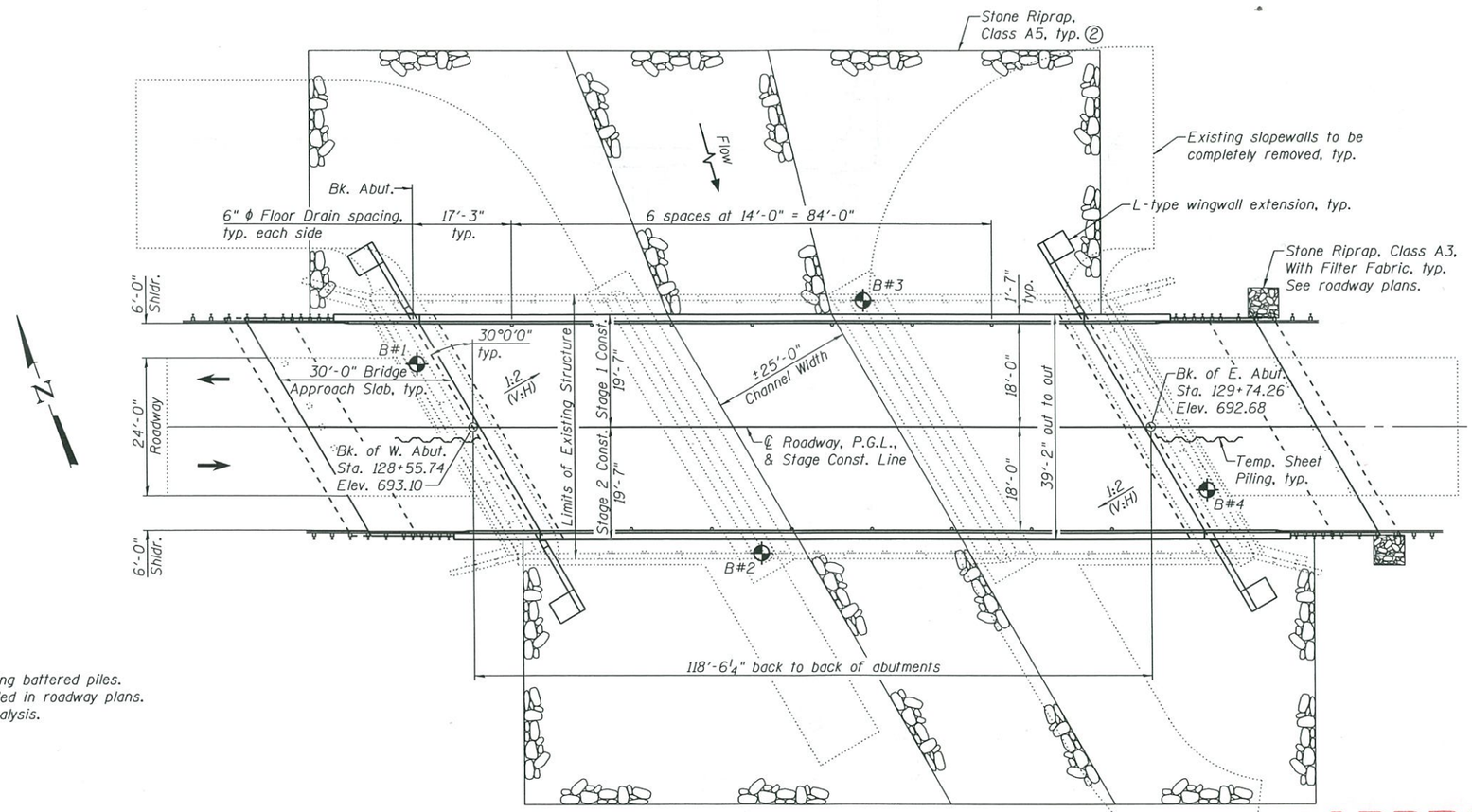
Salvage: None



ELEVATION



PROFILE GRADE
(Along ℄ Roadway)



PLAN

Notes:
(1) Space piles to miss existing battered piles.
(2) Riprap layout to be detailed in roadway plans.
(3) Determined by rational analysis.

DESIGN SPECIFICATIONS

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

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
f'c = 4,000 psi (Superstructure concrete)
fy = 60,000 psi (Reinforcement)

PRECAST PRESTRESSED UNITS

f'c = 8,500 psi
f'ci = 7,000 psi
fpu = 270,000 psi (0.6" ϕ low-relax strands)
fpbt = 202,300 psi (0.6" ϕ low-relax strands)

HIGHWAY CLASSIFICATION

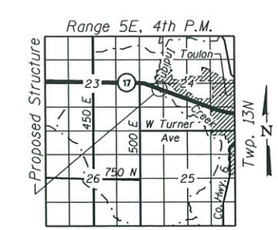
F.A.P. Rte. 643 - IL Rte. 17
Functional Class: Minor Arterial (Rural)
ADT: 1,650 (2013); 2000 (2033)
ADTT: 165 (2013); 200 (2033)
DHV: 165
Design Speed: 55 m.p.h.
Posted Speed: 55 m.p.h.
Two-Way Traffic
Directional Distribution: 50:50

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



LOCATION SKETCH

WATERWAY INFORMATION

Drainage Area = 41.3 sq. mi. Low Grade Elev. 691.6 at Sta. 132+30

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	4,170	549	675	681.0	0.9	0.0	681.9	681.0
Design	50	6,560	637	780	682.3	2.1	0.1	684.4	682.4
Base	100	7,660	672	822	682.8	2.6	0.2	685.4	683.0
Max. Calc.	500	10,300	723	882	683.5	5.0	1.7	688.5	685.2

DESIGN SCOUR ELEVATION TABLE

Event / Limit State	Design Scour Elevations (ft.) W. Abut.	E. Abut.	Item 113 (3)
Q100	682.7	682.3	8
Q200	682.7	682.3	
Design	682.7	682.3	
Check	682.7	682.3	

APPROVED
DEC 04 2015
AS A BASIS FOR PREPARATION OF DETAILED PLANS

GENERAL PLAN & ELEVATION
IL RTE. 17 OVER INDIAN CREEK
F.A.P. RTE. 643 - SEC. 14-BR-3
STARK COUNTY
STATION 129+15.00
STRUCTURE NO. 088-0032

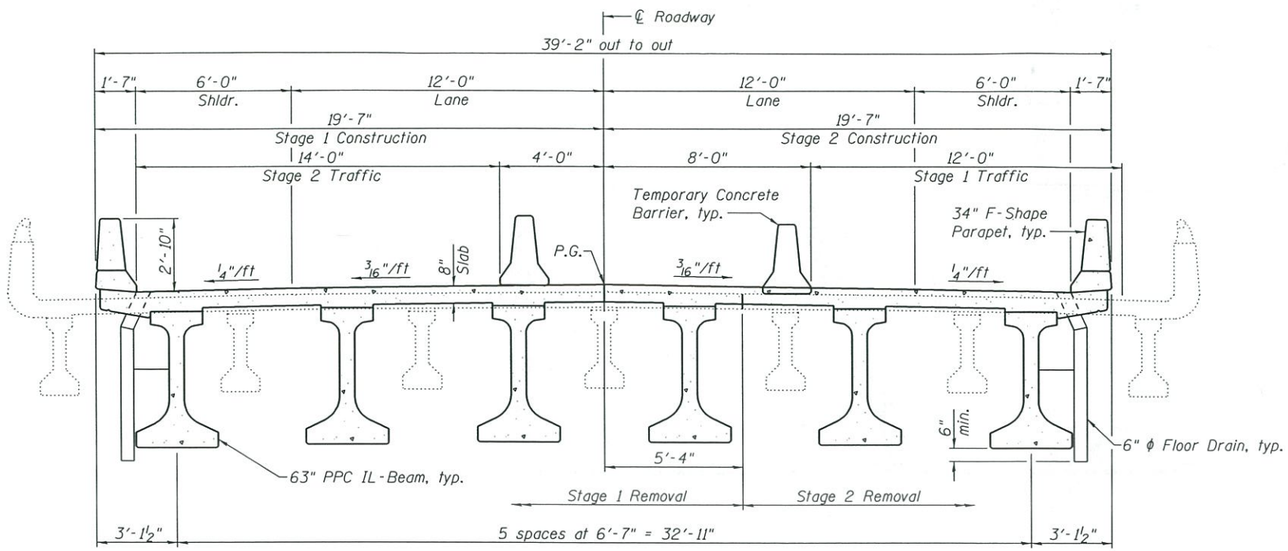
OATES ASSOCIATES Engineering + Architecture	USER NAME =	DESIGNED - JAD	REVISED -
		CHECKED - KBC	REVISED -
	PLOT SCALE =	DRAWN - JAD	REVISED -
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115	PLOT DATE = 11/16/2015	CHECKED - KBC	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

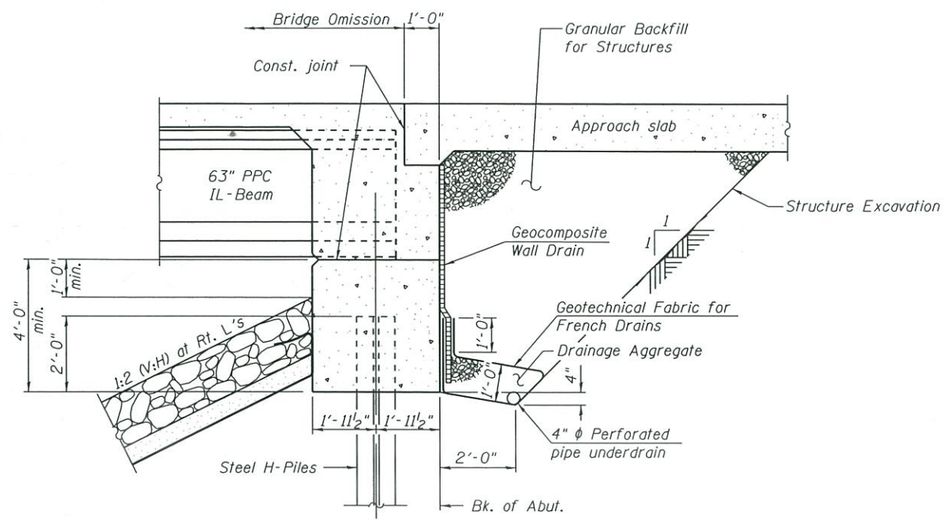
SHEET NO. 1 OF 2 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
643	14-BR-3	STARK		
		CONTRACT NO. 68895		
		ILLINOIS FED. AID PROJECT		

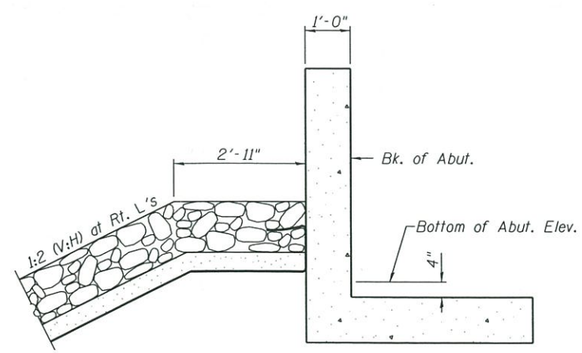
FILE NAME = H:\P\29848\WD 5 SN088-0001 IL 17 over Indian Creek Phase 1\Structural\TSL\Microstation\08808032-68895-001-General Plan & Elevation.dgn



CROSS SECTION
(Looking East)



SECTION THRU INTEGRAL ABUTMENT
(Horiz. dim. at Rt. L's)



SECTION THRU L-TYPE WINGWALL EXTENSION
(Horiz. dim. at Rt. L's)

APPROVED
DEC 04 2015
AS A BASIS FOR PREPARATION OF DETAILED PLANS

DETAILS
IL RTE. 17 OVER INDIAN CREEK
F.A.P. RTE. 643 - SEC. 14-BR-3
STARK COUNTY
STATION 129+15.00
STRUCTURE NO. 088-0032

FILE NAME = H:\P\29848\WO 5 SN088-0001 IL 17 over Indian Creek Phase 1\Structural\TSL\Microstation\0880032-68895-002-Details.dgn

OATES ASSOCIATES Engineering + Architecture	USER NAME =	DESIGNED - JAD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	
		CHECKED - KBC	REVISED -		
	PLOT SCALE =	DRAWN - JAD	REVISED -		
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115	PLOT DATE = 11/16/2015	CHECKED - KBC	REVISED -		SHEET NO. 2 OF 2 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
643	14-BR-3	STARK		
		CONTRACT NO. 68895		
	ILLINOIS	FED. AID PROJECT		