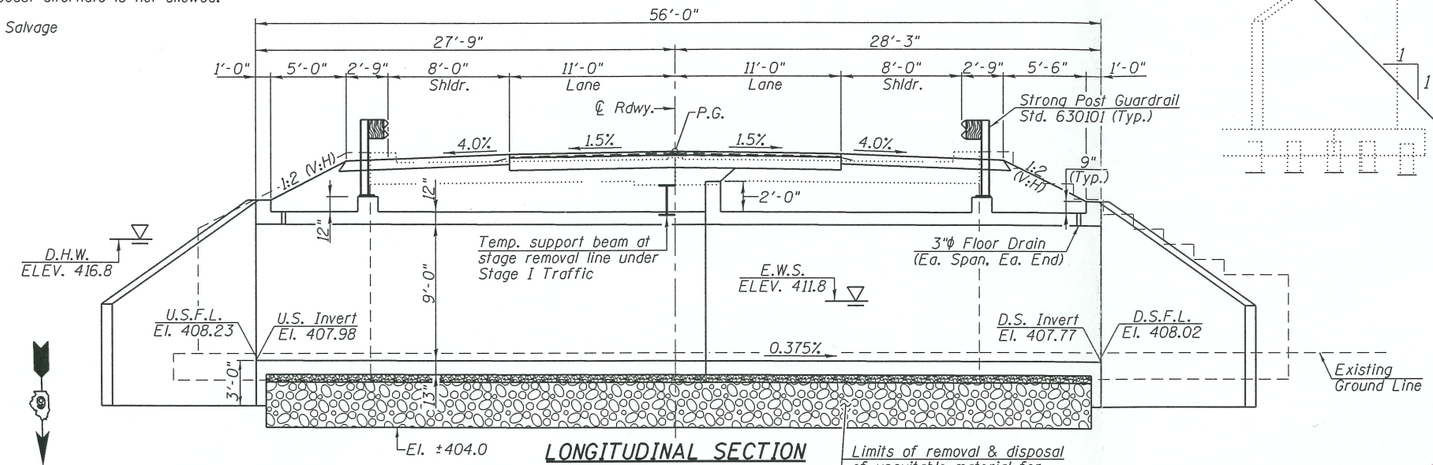
Bench Mark 410035: Cut square "□" on N.E. wingwall of existing bridge. Elev. 421.59

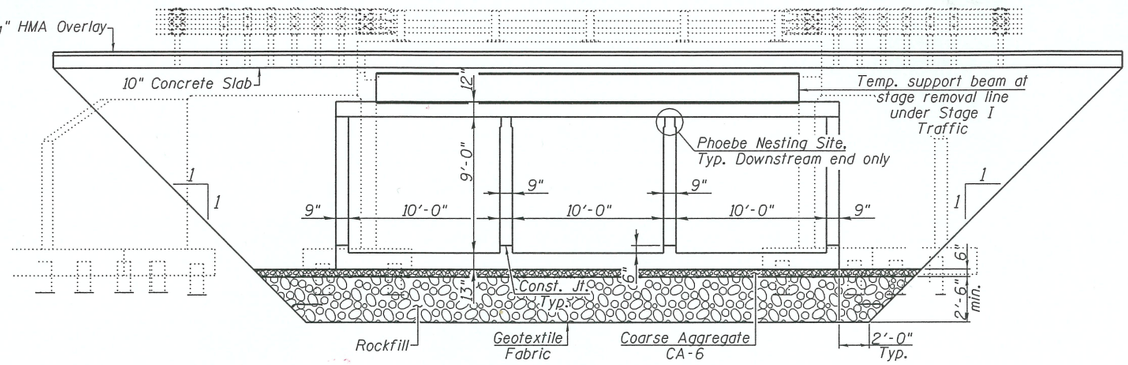
Existing Structure: Structure No. 041-0035(E) was originally constructed in 1922 under SBI Route 37, Section 1D, as a single span reinforced concrete slab bridge on closed abutments. 30'-9" bk. to bk. of abutments on a 0° skew. Clear width is ±36'-9½" between curbs and overall width of ±40'-4". Traffic to be maintained utilizing Stage Construction.

Precast alternate is not allowed.

No Salvage



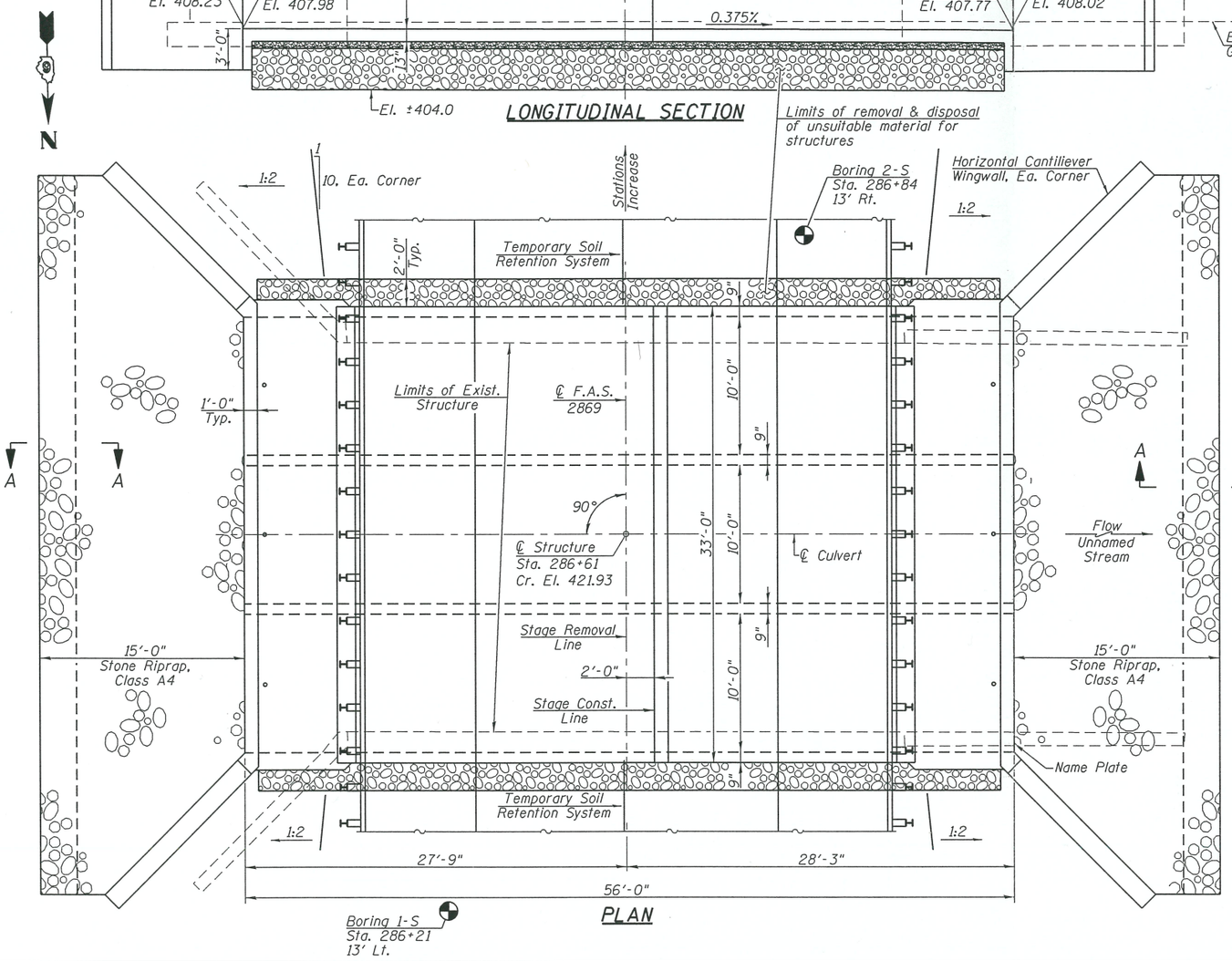
LONGITUDINAL SECTION



SECTION THRU BARREL

(Looking East)

(Culvert top and bottom slab thickness is subject to refinement during final design.)



PLAN

WATERWAY INFORMATION

Drainage Area = 1.94 Sq. Mi.

Exist. Overtopping Elevation 421.72 @ Sta. 287+05.5
Prop. Overtopping Elevation 421.72 @ Sta. 287+05.5

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	846	185	225	415.7	0.5	0.0	416.2	415.7
Design	50	1400	216	258	416.8	1.9	1.5	418.7	418.3
Base	100	1640	216	258	416.8	2.5	2.0	419.3	418.8
OVT(E)	351	2110	308		420.1	1.5		421.6	
OVT(P)	400	2155		270	420.3		1.4		421.7

10-Year Outlet Velocity from Existing Structure = 5.9 fps
10-Year Outlet Velocity from Proposed Structure = 3.7 fps

HIGHWAY CLASSIFICATION

F.A.S Rte. 2869 - IL Rte. 37
Functional Class: Major Collector (Non-Urban)
ADT: 4000 (2017); 4933 (2038)
ADTT: 430 (2015); 580 (2036)
DHV: 493
Design Speed: 55 m.p.h.
Posted Speed: 55 m.p.h.

LOADING HL 93

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

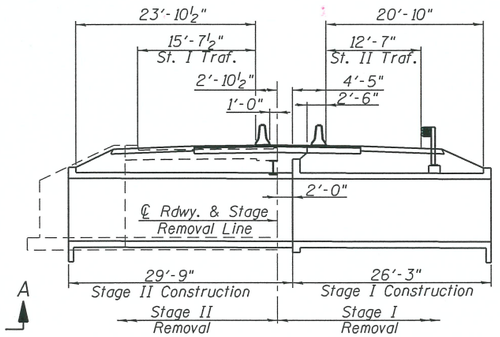
DESIGN SPECIFICATIONS

2017 AASHTO LRFD Bridge Design Specifications, 8th Edition.

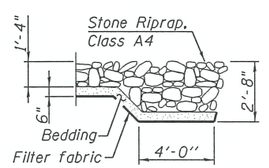
DESIGN STRESSES

FIELD UNITS

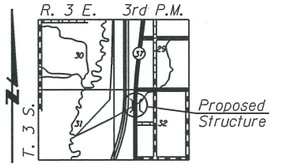
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)



STAGE CONSTRUCTION SKETCH



RIPRAP FLANK DETAIL

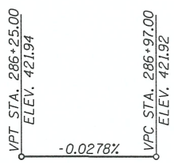


LOCATION SKETCH

STA. 286+61.00
BUILT 20 BY
STATE OF ILLINOIS
F.A.S. ROUTE 2869
SECTION 1B-1
LOADING HL 93
STR. NO. 041-2022

NAME PLATE

(Standard 515001)



PROFILE GRADE

(Along ℄ IL-37 on 2¾" HMA Overlay)

APPROVED

NOV 2 0 2018

AS A BASIS FOR PREPARATION OF DETAILED PLANS

GENERAL PLAN AND ELEVATION
IL ROUTE 37
OVER UNNAMED STREAM
F.A.S. ROUTE 2869
SECTION 1B-1
JEFFERSON COUNTY
STA. 286+61
STRUCTURE NO. 041-2022

V&K Veenstra & Kimm, Inc. Springfield, IL Phone: (217)544-8033

USER NAME = ___	DESIGNED - ___	REVISED - ___	
	CHECKED - ___	REVISED - ___	
PLOT SCALE = ___	DRAWN - ___	REVISED - ___	
PLOT DATE = 11-15-18	CHECKED - ___	REVISED - ___	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
STRUCTURE NO. 041-2022
SHEET NO. 1 OF 1 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2869	1B-1	JEFFERSON	___	___
		CONTRACT NO. 78520		
	ILLINOIS	FED. AID PROJECT		