Benchmark: BM#3 - Railroad spike in power pole 2948779, northwesterly side of IL167 where the road curves from northeast to east on the north side of Wataga, IL. Station 28+04.60, 67.5' LT., Elev. = 823.29

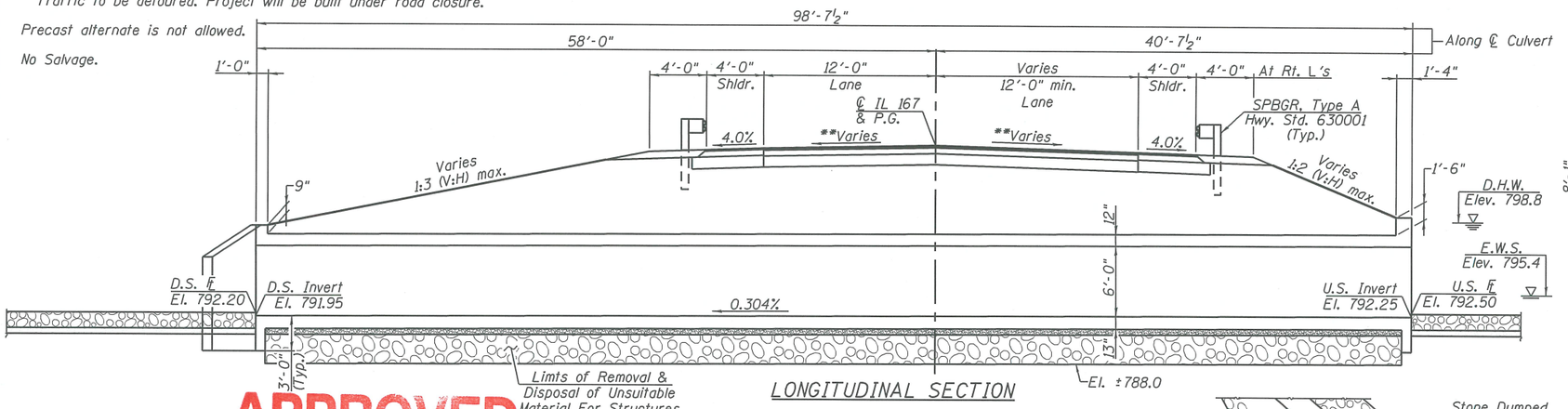
Existing Structure: Cast in place double barrel box culvert (6'-0"H x 5'-0"W) with cast in place wingwalls (SN 048-1002) built in 1928 under Section 101. Traffic to be detoured. Project will be built under road closure.

Precast alternate is not allowed.

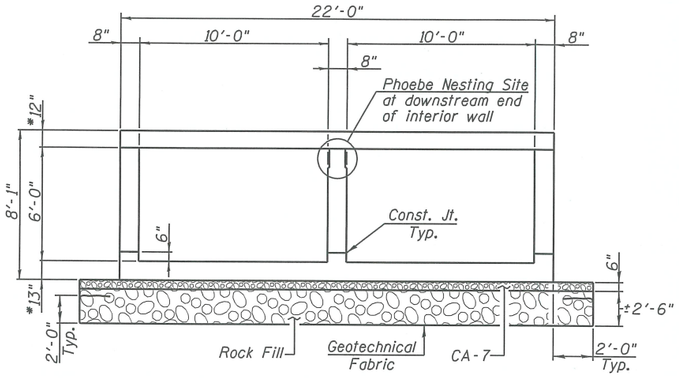
No Salvage.

**See Roadway Plans, Sheet 24

***Note: Boring 2 is not displayed in its correct location. This boring is located 89.0' from the ℄ Culvert Sta. 15+88.00 along ℄ IL 167.



LONGITUDINAL SECTION



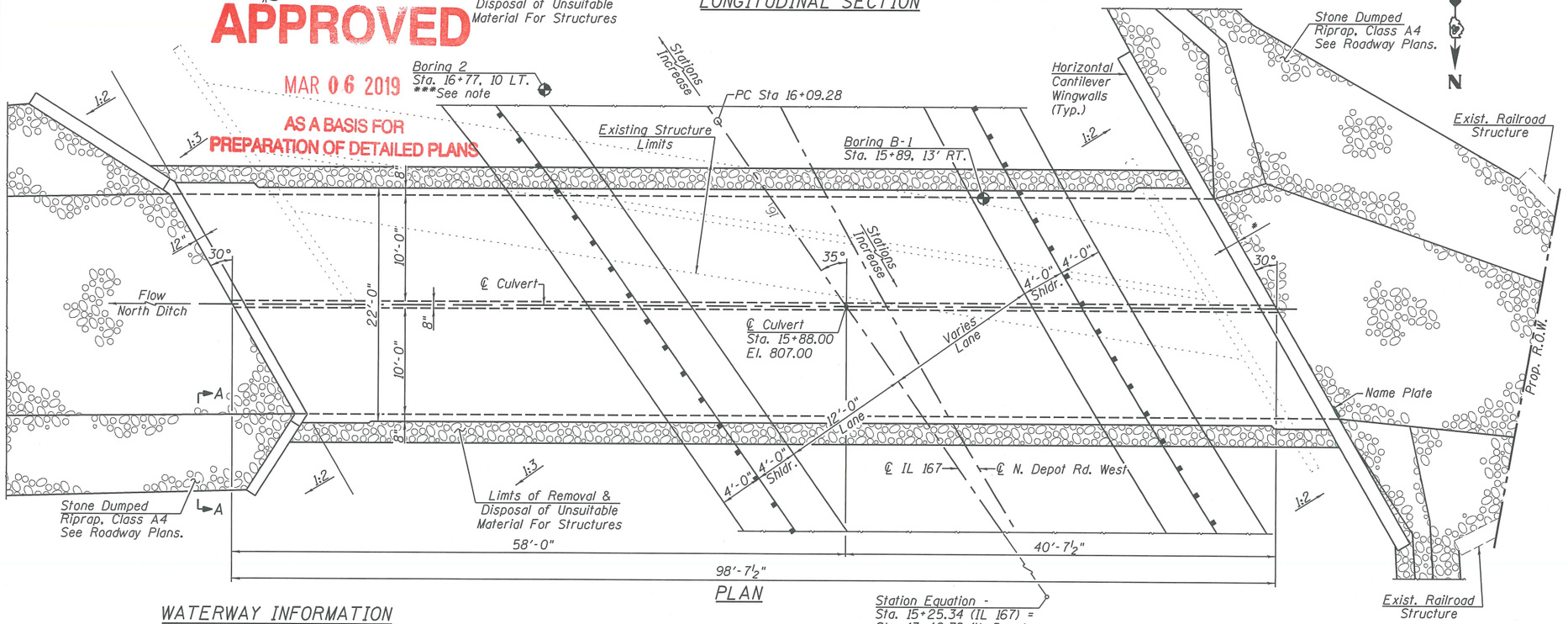
SECTION THRU BARREL

* Thickness may be refined in the final design

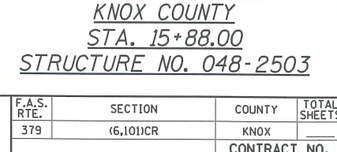
APPROVED

MAR 06 2019

AS A BASIS FOR PREPARATION OF DETAILED PLANS



PLAN



PROFILE GRADE

(Along ℄ IL 167)

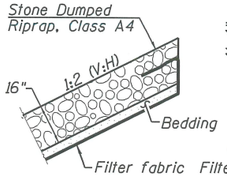
WATERWAY INFORMATION

Drainage Area = 1.27 Sq. Mi.

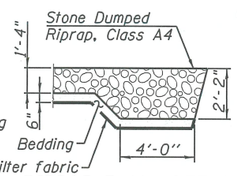
Existing Overtopping Elevation 805.6 @ Sta. 14+56
Proposed Overtopping Elevation 805.6 @ Sta. 14+56

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	471	55	106	797.8	1.3	0.0	799.1	796.0
Design	50	766	60	120	798.8	6.6	0.0	805.4	797.6
Base	100	904	60	120	799.2	6.8	0.0	806.0	798.3
OVT(E)	50	766	60	N/A	798.8	6.6	N/A	805.4	N/A
OVT(P)	>500		N/A	120		N/A		N/A	
Max. Calc.	500	1240	60	120	800.0	6.8	0.8	806.8	800.8

10 Year Outlet Velocity from Existing Structure = 8.9 fps
10 Year Outlet Velocity from Proposed Structure = 4.9 fps



SECTION A-A



RIPRAP FLANK DETAIL

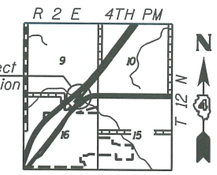
(Downstream End Only)

EXISTING CURVE DATA (IL RTE 167)

PI STA. = 16+43.16
Δ = 16° 45' 44" (LT)
D = 24° 54' 52"
R = 229.97'
T = 33.88'
L = 67.28'
E = 2.48'
P.C. STA. = 16+09.28
P.T. STA. = 16+76.56

EXISTING CURVE DATA (N. DEPOT ROAD)

PI STA. = 10+80.71
Δ = 53° 47' 05" (LT)
D = 9° 26' 07"
R = 607.25'
T = 307.97'
L = 570.04'
E = 73.63'
P.C. STA. = 7+72.74
P.T. STA. = 13+42.78



LOCATION SKETCH

HIGHWAY CLASSIFICATION

F.A.S. 379 - IL Rte. 167
Functional Class: Major Collector (Non-Urban);
Class II Truck Route
ADT: 1,250 (2015); 1,525 (2035)
ADTT: 100 (2015); 122 (2035)
DHV: 153 (2035)
Design Speed: 20 m.p.h.
Posted Speed: 20 m.p.h.
Two-way Traffic Directional Distribution 50:50

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)

GENERAL PLAN & ELEVATION
IL ROUTE 167
OVER NORTH DITCH
F.A.S. ROUTE 379 - SECTION (6,101)CR
KNOX COUNTY
STA. 15+88.00
STRUCTURE NO. 048-2503

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

USER NAME = ___	DESIGNED - KES	REVISED - ___
	CHECKED - MAH	REVISED - ___
PLOT SCALE = ___	DRAWN - JRP	REVISED - ___
PLOT DATE = 2/18/2019	CHECKED - MAH	REVISED - ___

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION
STRUCTURE NO. 048-2503
SHEET NO. 1 OF 1 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
379	(6,101)CR	KNOX	___	___
		CONTRACT NO. 68C65		
	ILLINOIS	FED. AID PROJECT		