

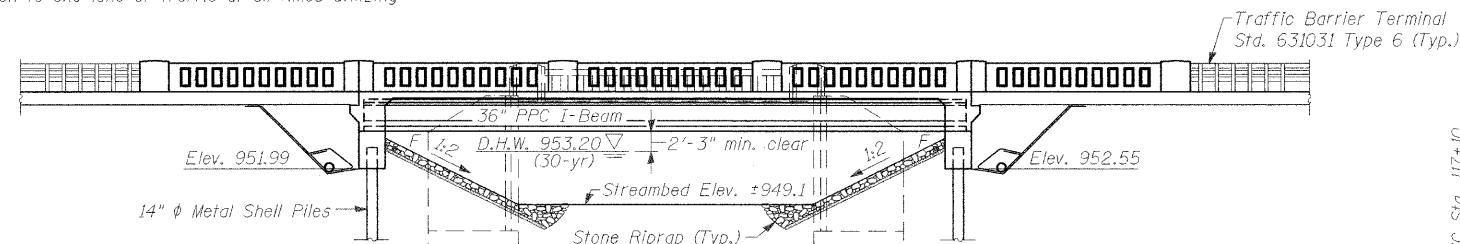
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Existing Structure: No. 056-3005, built in 1939 as F.A.S. Rte. 0026. The existing structure consists of a single-span reinforced concrete slab bridge on closed abutments, 29'-9" back-to-back of abutments and 27'-6" out to out of deck.

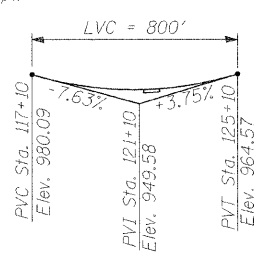
Bench Mark:
Mag nail E. side of Alden across from
N. side of drive of house # 9405 N. of bridge.
Elevation 962.67

Road shall be kept open to one lane of traffic at all times utilizing staged construction.

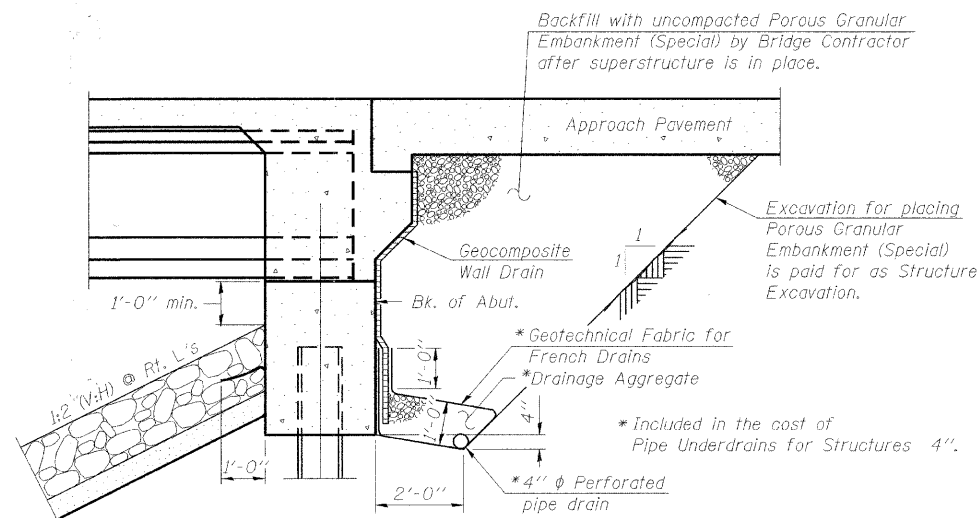
No Salvage.



ELEVATION
(Looking West)

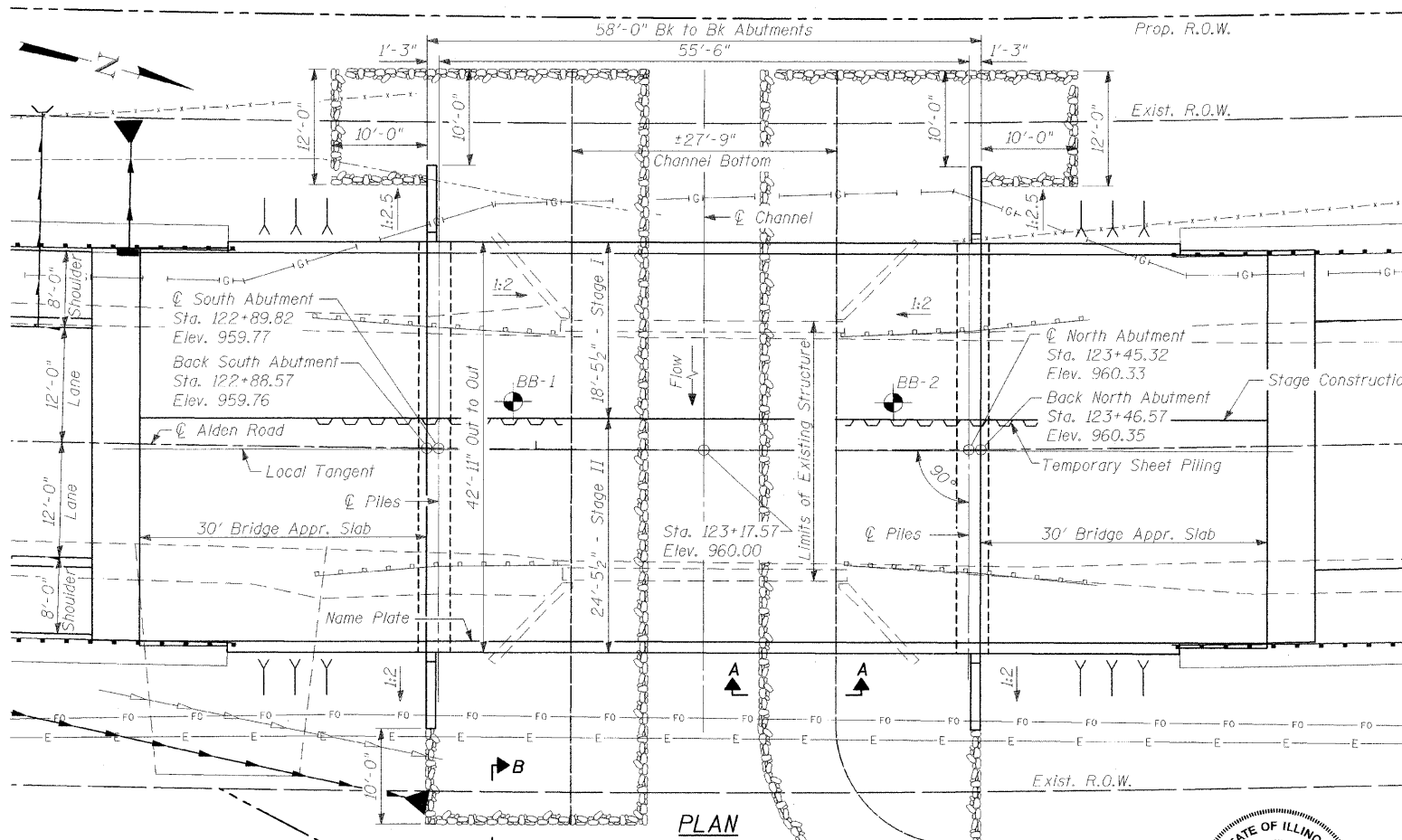


PROFILE GRADE
(Along Center Roadway)



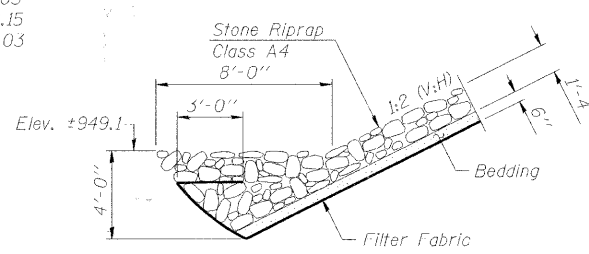
SECTION THRU INTEGRAL ABUTMENT

(Horiz. dim. @ Rt. L's)
All drainage system components shall extend to 2'-0" from the end of each wingwall except the Pipe Underdrains for Structures 4", which should extend beyond the ends of the wingwalls and connect to an outlet pipe. The outlet pipe shall extend until intersecting with the slopes in front of the abutments. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 60110i).

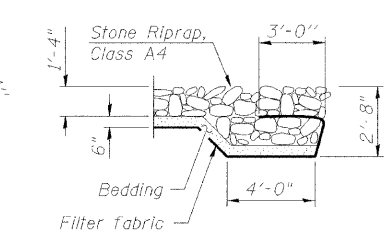


PLAN

CURVE DATA
Δ = 20° 20' 16" (LT)
D = 1° 49' 08"
T = 565.01'
L = 1,118.12'
E = 50.27'
R = 3,150.00'
S.E. = 2.00%
P.C. = Sta. 118+30.03
P.T. = Sta. 129+48.15
P.I. = Sta. 123+95.03



SECTION A-A



SECTION B-B

BRANCH OF THE NIPPERSINK CREEK
BUILT 2009 BY
McHENRY COUNTY
SEC. 02-00269-00-BR
STATION 123+17.57
STR. NO. 056-3174 LOADING HS-20

NAME PLATE
(See Std. 515001)

LOADING HS20-44
Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS
2002 AASHTO "Standard Specifications for Highway Bridges"

SEISMIC DATA
Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.04g
Site Coefficient (S) = 1.0

DESIGN STRESSES
FIELD UNITS
f_c = 3,500 psi
f_y = 60,000 psi (reinforcement)
f_y = 50,000 psi (structural steel)
PRECAST PRESTRESSED UNITS
f_c = 6,000 psi
f_{ci} = 5,000 psi
f_s = 270,000 psi (1/2" φ low relax. strands)
f_{si} = 201,960 psi (1/2" φ low relax. strands)

DESIGN SCOUR ELEVATION TABLE

Design Scour	South Abut.	North Abut.
Elevation (ft.)	951.99	952.55

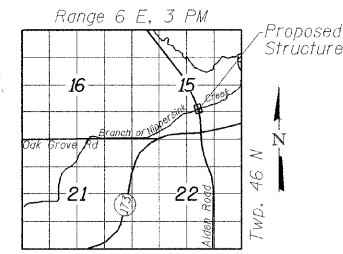
WATERWAY INFORMATION

Drainage Area=4.26 sq mi Low Grade Elev. 959.39 @ Sta. 122+46.39									
Flood Yr.	C.F.S.	Q	Opening Sq. Ft.	Nat. H.W.E.	Head - Ft.	Headwater El.	Exist. Prop.	Exist. Prop.	Exist. Prop.
Design	30	470	112.56 147.40	953.20	0	953.20	953.20	953.20	953.20
Base	100	790	134.96 184.00	954.00	0.01 0.02	954.00	954.02	954.02	954.02
Max. Calc.	500	2550	195.44 263.26	956.16	0.13 3.48	956.29	959.64	959.64	959.64



Sarah L. Czaplucki 05/28/09
SARAH L. CZAPLUCKI, P.E., S.E.
NO. 81-006191
EXP. DATE 11/30/2010

"I certify that to the best of my knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with the requirements of the current 'AASHTO Standard Specifications for Highway Bridges'."



LOCATION SKETCH

GENERAL PLAN AND ELEVATION
ALDEN ROAD (FAS 0026)
OVER A BRANCH OF THE
NIPPERSINK CREEK
F.A.S. RT. 0026 - SEC. 02-00269-00-BR
McHENRY COUNTY
STATION 123+17.57
STRUCTURE NO. 056-3174

DESIGNED	MDS
CHECKED	LAN
DRAWN	LAN
CHECKED	SLC

TranSystems
1051 Perimeter Drive, Suite 1025
Schaumburg, IL 60173-5058
Phone: (847) 605-9600
Fax: (847) 605-9610

SHEET NO. 1	F.A.S. RTE. 0026	SECTION 02-00269-00-BR	COUNTY McHENRY	TOTAL SHEETS 153	SHEET NO. 93
22 SHEETS	CONTRACT NO. 63212		ILLINOIS FED. AID PROJECT		

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