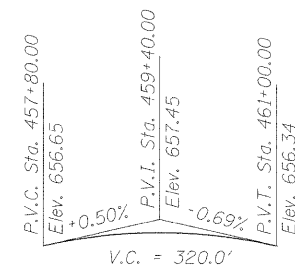
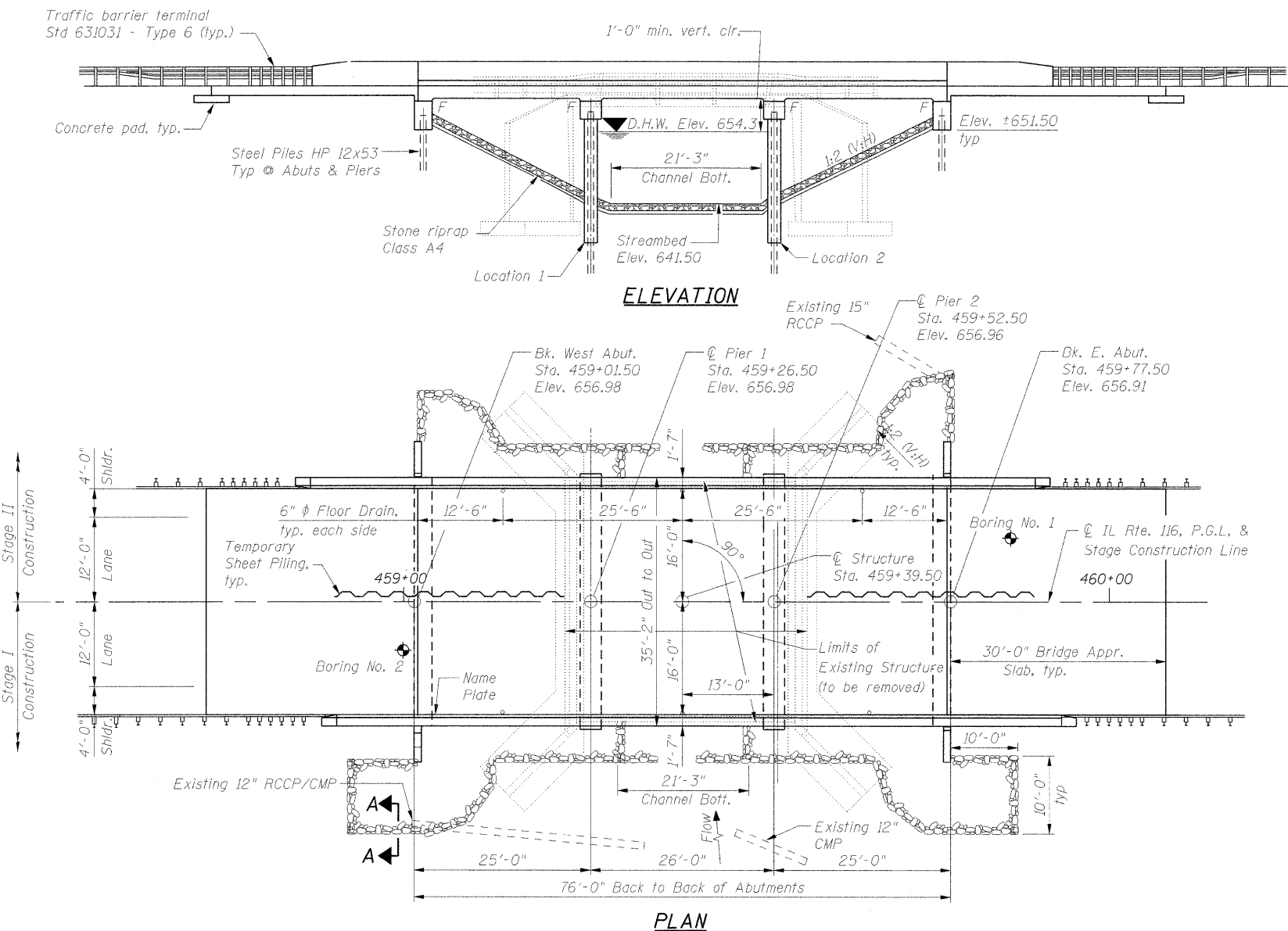


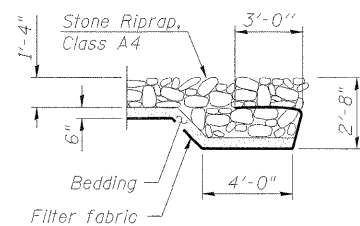
Bench Mark: BM#12 RR spike in PP S. side of road across from entrance to 456 E. State Route 116.
Sta 451+90 40' RT. Elev. 654.83

Existing Structure: Structure 038-0122 over Langan Creek was originally constructed in 1972 as a single-span Precast Prestressed Concrete (PPC) deck beam bridge. It has closed concrete abutments constructed on spread footings. There are eleven PPC beams, each 3' wide and 1'-5" thick. The structure is 33'-0" wide out-to-out (32'-6" clear width between the bridge rails) and it has a span length of 33'-0" back-to-back of abutments. In 2008 the 7 beams on the north side of the bridge were replaced. Traffic to be maintained using stage construction.

No salvage.



PROFILE GRADE
(along \bar{C} IL Rte. 116)



SECTION A-A

LOADING HL-93
Allow 50#/sq. ft. for future wearing surface.

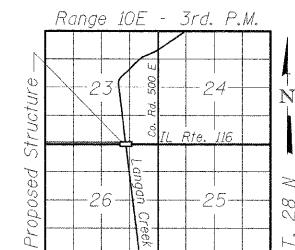
DESIGN SPECIFICATIONS
2007 AASHTO LRFD Bridge Design Specifications with 2008 and 2009 Interims

DESIGN STRESSES
FIELD UNITS
 $f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)

SEISMIC DATA
Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{d1}) = 0.077g
Design Spectral Acceleration at 0.2 sec. (S_{d5}) = 0.132g
Soil Site Class = C

STATION 459+40
BUILT 20__ BY
STATE OF ILLINOIS
F.A.P. RTE. 681 SEC. (117) BR-1
LOADING HL-93
STR. NO. 038-0220

NAME PLATE
See Std. 515001



LOCATION SKETCH

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

[Signature]
ENGINEER OF BRIDGES AND STRUCTURES



EXPIRATION DATE 11-30-2012
DATE 12/10/2010

WATERWAY INFORMATION

Drainage Area = 14.5 sq. mi. Low Grade Elev. 655.65 @ Sta. 463+00

Flood	Freq. Yr.	Q	Opening Sq. Ft.		Nat. H.W.E.		Head - Ft.		Headwater El.	
			Exist.	Prop.	Exist.	Prop.	Exist.	Prop.	Exist.	Prop.
Design	10	633	276	466	653.1	0.0	0.0	653.1	653.1	
Base	100	1100	289	559	654.6	0.1	0.0	654.7	654.6	
Overtopping	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Max. Calc.	500	1428	289	589	655.0	0.3	0.0	655.3	655.0	

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	W. Abut.	Pier 1	Pier 2	E. Abut.
	651.45	641.50	641.50	651.45

benesch
engineers · scientists · planners
Alfred Benesch & Company
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450
Job No. 3938

FILE NAME = ...\\038-0220-66960-001-gpe.dgn	USER NAME = joreisher	DESIGNED - JDC	REVISED -
		CHECKED - JMS	REVISED -
	PLOT SCALE = 1/8"=1'-0"	DRAWN - MRW	REVISED -
	PLOT DATE = 12/09/2010	CHECKED - JDC	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
STRUCTURE NO. 038-0220

SHEET NO. 1 OF 22 SHEETS

GENERAL PLAN AND ELEVATION
ILLINOIS ROUTE 116 OVER
LANGAN CREEK
F.A.P. RTE. 681 - SEC. (117) BR-1
IROQUOIS COUNTY
STATION 459+40
STRUCTURE NO. 038-0220

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(117) BR-1	IROQUOIS	41	12
CONTRACT NO. 66960				
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			