Bench Mark: Chisel square S.W. Corner of S.E. Ret. Wall, Sta. 1898+42.14 18.7' LT. Elev. 676.306.

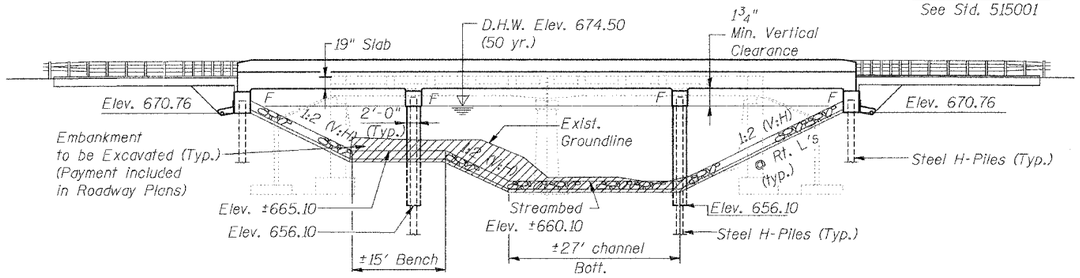
Existing Structure: S.N. 038-0043, Two-32'-3" spans, continuous 14" concrete slab with closed abutments and solid pier on spread footings. Built in 1924 as two span continuous reinf. concrete through girder bridge. Superstructure replaced in 1952 with widened substructure under F.A. Rt. 26 (S.B.I. Rte. 25) Sec. 34-B-Y. 19'-6" west and 15'-6" east of ℄ (Curb to Curb), "Texas T" type bridge rails, 38'-4" bridge width (Out to Out), 67'-10¾" bridge length (Bk. to Bk. abutments). Central 4' of slab width thickened and longitudinal separation joint eliminated in 1988. Existing structure to be removed and replaced. Traffic to be detoured during construction.

No salvage.

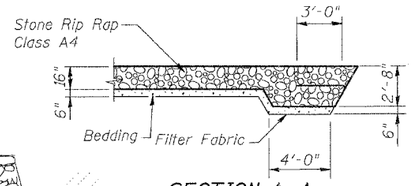
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STATION 1898+10.00
BUILT 200_ BY
STATE OF ILLINOIS
F.A.S. ROUTE 338 (U.S. 45)
SECTION 34 BR-1
LOADING HS20
STR. NO. 38-0212

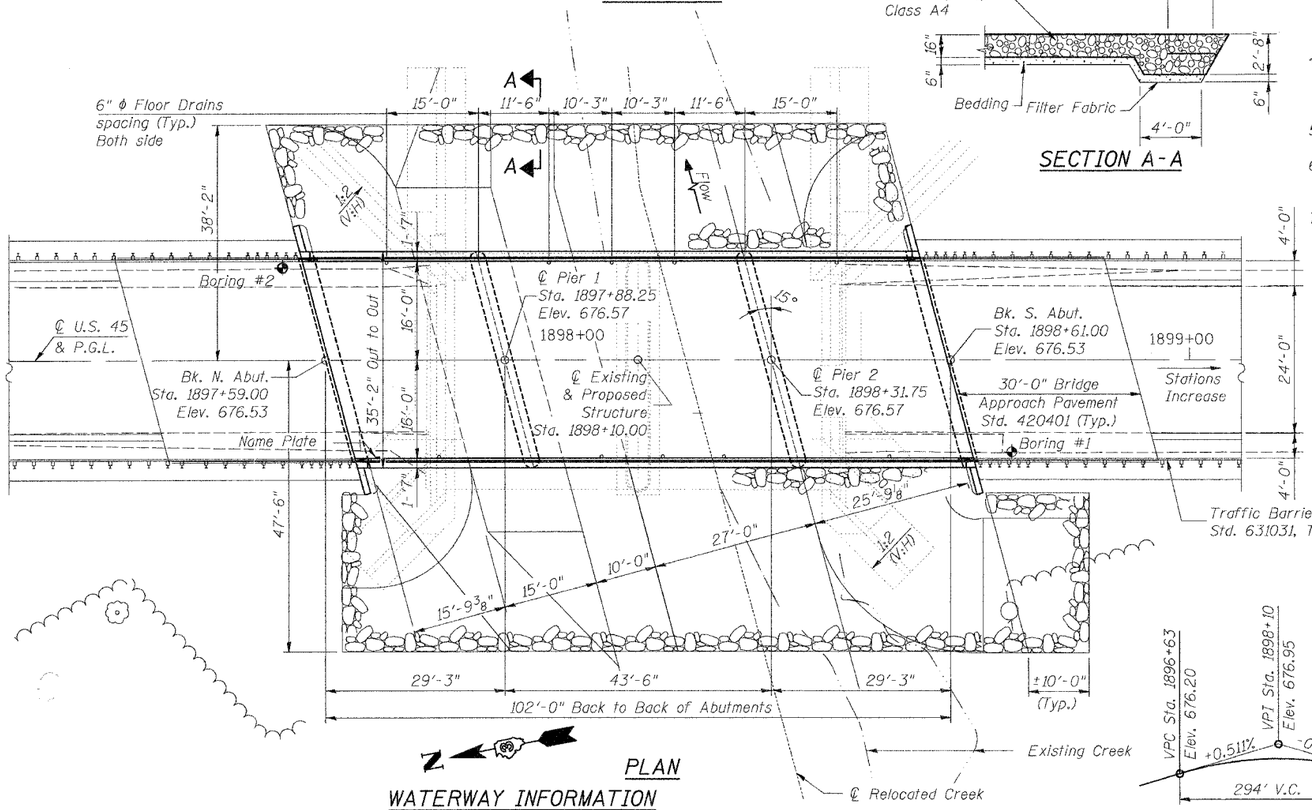
NAME PLATE
See Sid. 515001



ELEVATION



SECTION A-A



PLAN

WATERWAY INFORMATION

Drainage Area = 20.9 mi² Prop. Low Grade Elev. 675.60 ft.* @ Sta. 1903+00

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	2550	581	748	673.0	0.5	0.3	673.5	673.3
Design	50	4075	654	873	674.5	1.0	0.7	675.5	675.2
Base	100	4750	654	873	675.0	1.3	0.9	676.3	675.9
Overtopping	80	4500	654	873	674.8	1.1	0.8	675.9	675.6

* Elevations reduced by 0.4' to get to roadway surevy datum.

DESIGNED	M.R./R.A.
CHECKED	H.T.
DRAWN	J.S.
CHECKED	H.T./M.R.

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

DESIGN SPECIFICATIONS
2002 AASHTO, 17th Edition

DESIGN STRESSES
FIELD UNITS
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)

SEISMIC DATA
Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.045g
Site Coefficient (S) = 1.2

GENERAL NOTES
1. Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60 (IL Modified). See Special Provisions.
2. Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.
3. The Contractor shall make allowance for the deflection of forms, shrinkage and settlement of falsework, in addition to allowance for dead load deflection.
4. The Contractor shall drive One test pile in a permanent location at each abutment & pier as directed by the Engineer before ordering the remainder of piles.
5. All Construction joints shall be bonded.
6. The Steel H-piles shall be according to AASHTO M270 Grade 50.
7. The test pile(s) shall be driven to 110 percent of the Nominal Required Bearing indicated in the pile data information.

Index of Sheets

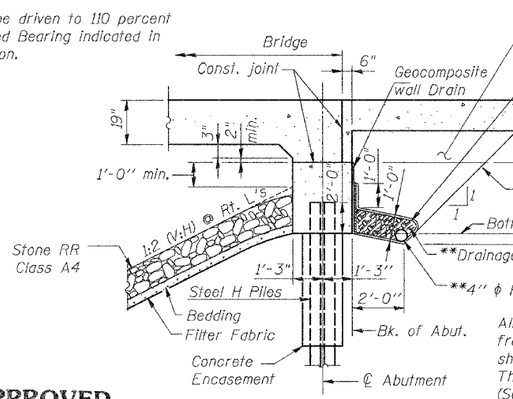
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
U.S. 45	34 BR-1	IROQUIS COUNTY	37	13
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT- CONTRACT # 66411		

SHEET NO. 1
8 SHEETS

TOTAL BILL OF MATERIAL

	ITEM	UNIT	SUPER	SUB	TOTAL
*	Porous Granular Embankment, Special	Cu. Yd.	-	66	66
	Stone Riprap, Class A4	Sq. Yd.	-	1051	1051
	Filter Fabric	Sq. Yd.	-	1051	1051
	Removal of Existing Structures	Each	-	1	1
	Structure Excavation	Cu. Yd.	-	86	86
	Floor Drains	Each	10	-	10
	Concrete Structures	Cu. Yd.	-	108.1	108.1
	Concrete Superstructure	Cu. Yd.	239.0	-	239.0
	Bridge Deck Grooving	Sq. Yd.	348	-	348
	Protective Coat	Sq. Yd.	444	-	444
	Reinforcement Bars, Epoxy Coated	Pound	46530	10550	57080
	Furnishing Steel Piles HP12x53	Foot	-	1869	1869
	Driving Piles	Foot	-	1869	1869
	Test Pile Steel HP12x53	Each	-	4	4
	Name Plates	Each	1	-	1
	Geocomposite Wall Drain	Sq. Yd.	-	31	31
*	Pipe Underdrains For Structures 4"	Foot	-	125	125
*	Underwater Structure Excavation Protection - Location 1	Each	-	1	1
*	Underwater Structure Excavation Protection - Location 2	Each	-	1	1

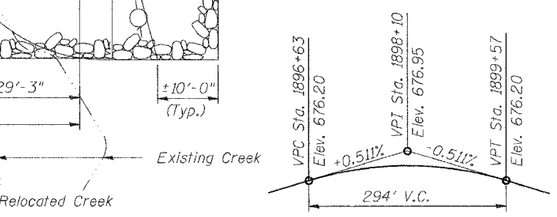
* Special Provision required.



All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).

** Included in the cost of Pipe Underdrains for Structures.

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



PROFILE GRADE
along ℄ U.S. 45

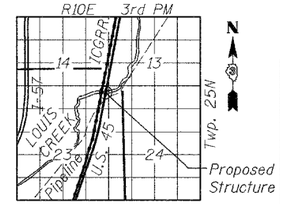
SCOUR ELEVATION TABLE

Design Scour Elevation (ft)	N. Abutment	Pier 1	Pier 2	S. Abutment
	670.76	661.10	656.10	670.76

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Ralph E. Anderson (TMP)
ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS HAKIM H. TALYEBI 081-003266 REGISTERED STRUCTURAL ENGINEER CHICAGO, ILL.

Hakim H. Talyebi
Illinois Licensed Structural Engineer
No. 081-003266
License Exp. 11-30-06



LOCATION SKETCH

GENERAL PLAN AND ELEVATION

U.S. 45 OVER LOUIS CREEK
FAS ROUTE 338 (U.S 45), SECTION 34 BR-1
IROQUOIS COUNTY
STATION 1898+10.00
STRUCTURE NO. 038-0212

SCALE: NONE DATE: OCTOBER, 2006

Soodan

Soodan & Associates, Inc.
100 North LaSalle Street, Suite 1800
Chicago, Illinois 60602