F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1379	(108-B-1)BR	STARK	43	15
STA. 51+30.00 TO STA.				
	ILLINOIS	IL RTE 91		

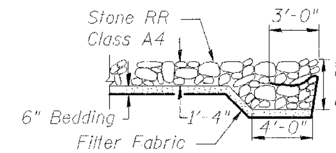
SHEET 1 OF 4

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

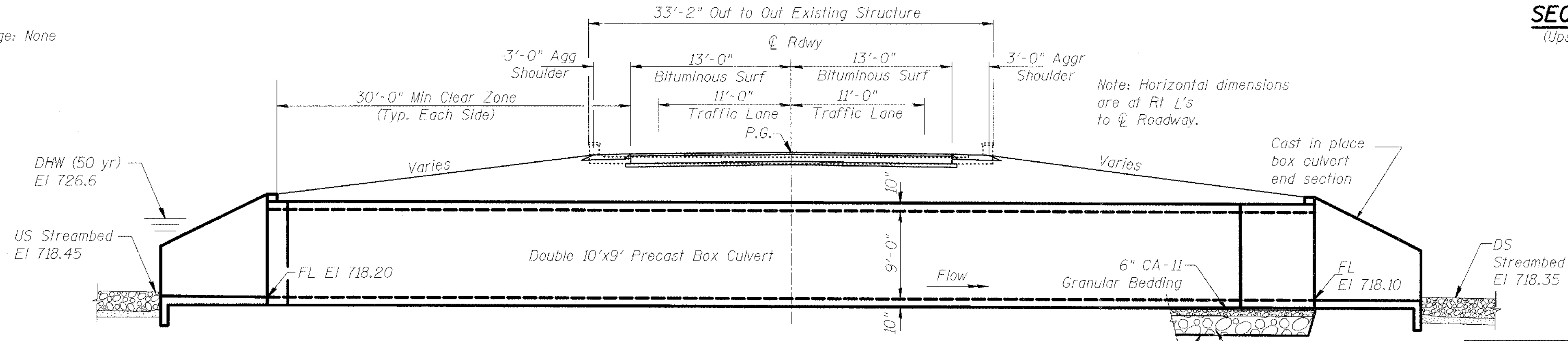
Bench Mark: Sta 60+24± 25'± Rt, Chiseled square in NW wingwall, El 732.81

Existing Structure: S.N. 088-0015, concrete slab 30'-5" Bk to Bk closed abutments on spread footings. Width of bridge 33'-2" Out-to-Out. Built as Section 108-B (1933). The contractor shall remove the existing structure.

Salvage: None

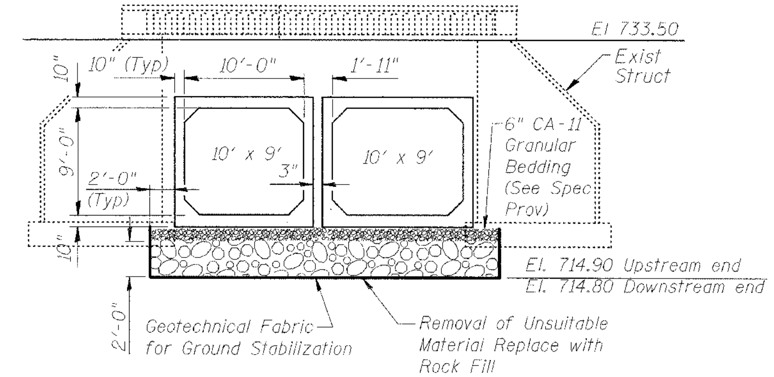


SECTION A-A
(Upstream End)



ELEVATION

Note: Precast culvert sections at the ends of each barrel are to have exposed reinforcing bars to be tied into cast in place portion.



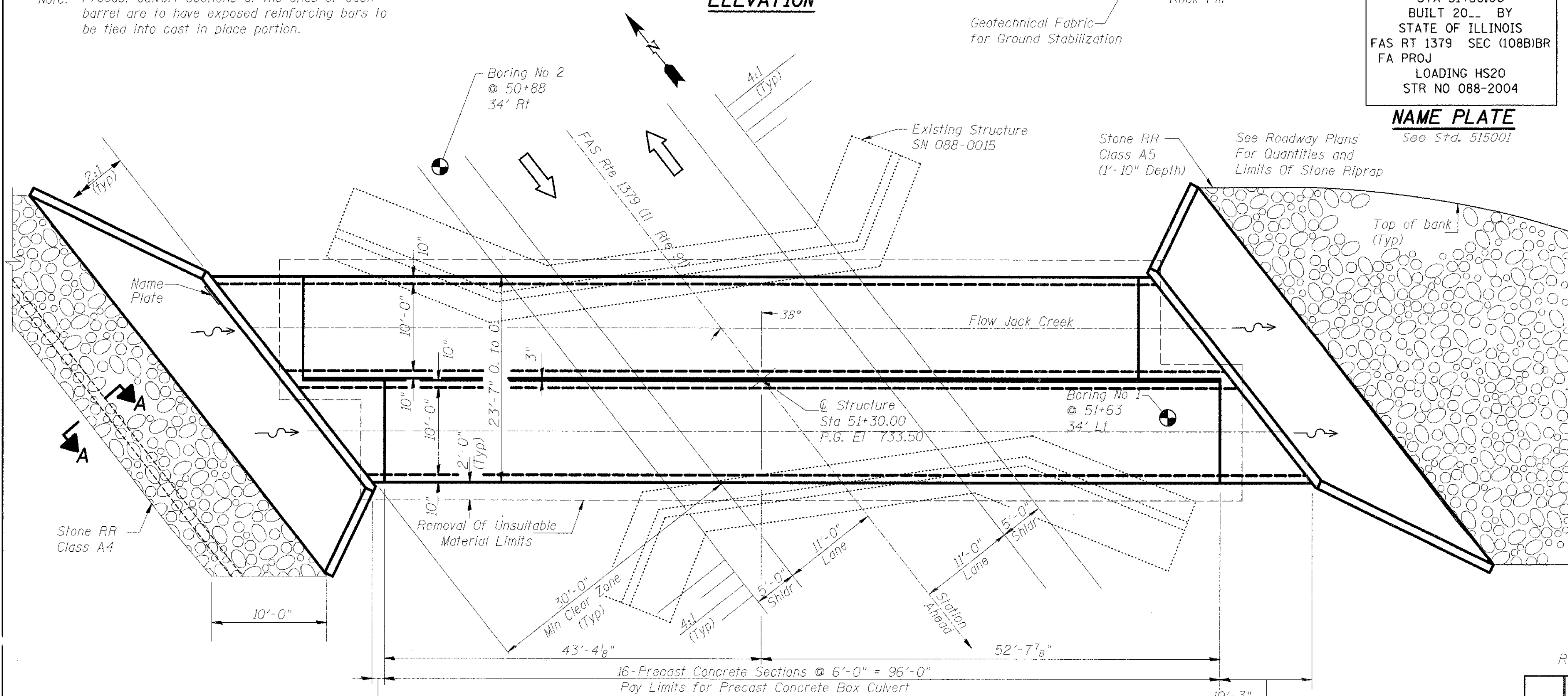
SECTION THRU BARREL

STA 51+30.00
BUILT 20__ BY
STATE OF ILLINOIS
FAS RT 1379 SEC (108B)BR
FA PROJ
LOADING HS20
STR NO 088-2004

NAME PLATE
See Std. 515001

GENERAL NOTES

1. Reinforcement bars shall conform to the requirements of AASHTO M 31, M-42, or M-53 Grade 60.
2. All exposed edges shall have ¾" chamfer.
3. For back filling and embankment see Standard Specifications Art 502
4. This box culvert has a fill height of 5.5 feet. The precast concrete box culvert shall conform to the requirements of AASHTO M 259.
5. Precast end sections are not allowed.
6. Remove existing structure including wings, abutments, and footings. Cut off piles at bottom of unsuitable material excavation.
7. Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.



PLAN

TOTAL BILL OF MATERIAL

	ITEM	UNIT	TOTAL
	Removal and Disposal of Unsuitable Material	Cu Yd	204
	Geotechnical Fabric for Ground Stabilization	Sq Yd	377
	Removal of Existing Structures	Each	1
	Name Plates	Each	1
	Box Culvert End Section, Culvert No 1	Each	2
	Precast Concrete Box Culvert 10' x 9'	Foot	192
*	Rock Fill	Ton	409

* See Special Provisions

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

LICENSED STRUCTURAL ENGINEER JOHN S. PERADOTTI 81-005671 JACKSONVILLE STATE OF ILLINOIS

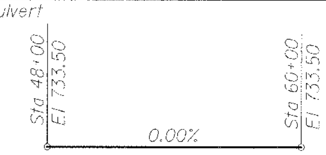
John S. Peradotti 4-25-06
John S. Peradotti
Licensed Structural Engineer
in Illinois No. 081-005671
License Expires 11/30/06

HURST-ROSCHE ENGINEERS, INC.
CONSULTING ENGINEERS & ARCHITECTS
1400 E. TREMONT ST.
HILLSBORO, ILLINOIS 62049

DESIGNED	BWP
CHECKED	JSP
DRAWN	BAD
CHECKED	JSP

WATERWAY INFORMATION

Drainage Area = 4.4 Sq mi			Low Grade El 733.0				@ Sta 51+50		
Flood	Freq Yr	Q cfs	Opening sq ft		Nat HWE	Head - ft		Headwater El	
			Exist	Prop		Exist	Prop	Exist	Prop
Design	50	1250	166	160	726.6	0.8	0.4	727.4	727.0
Base	100	1460	174	166	726.9	1.0	1.0	727.9	727.9
Overtopping									
Max Calc	500	1950	190	178	727.5	1.2	2.8	728.7	730.3



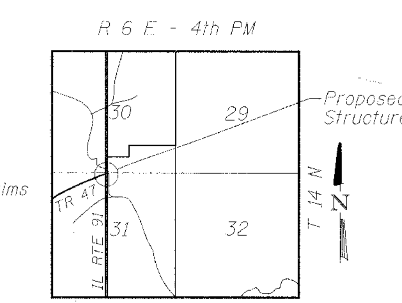
PROFILE GRADE

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

DESIGN SPECIFICATIONS
1996 AASHTO with 1997, 1998, 1999 & 2000 Interims

LOADING HS 20-44
Allow 50 lb/sf for Future Wearing Surface.

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



LOCATION SKETCH

GENERAL PLAN & ELEVATION
FAS 1379 (IL RTE 91) OVER JACK CREEK
SECTION (108B)BR
STARK COUNTY STA 51+30.00
SN 088-2004