

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 137	*	JERSEY	9	4
FEDERAL AID PROJECT BR05-083(038)				
* 04-07118-00-BR				
CONTRACT NO. 97277				

Existing Structure: Single Span Cast In Place Concrete Deck Bridge on Closed Concrete Abutments.  
 ±30'-0" Bk.-Bk. Abutments, ±16'-9" Face to Face of Curb Width. Concrete Railing.  
 ±0' Skew. Existing Structure No. 042-3074.

Benchmarks: BM#1 - 60d Nail & Washer in Power Pole  
 25' Lt. Sta. 2+28.5 El. 99.06  
 BM#2 - 60d Nail & Washer in Power Pole  
 7.5' Lt. Sta. 3+73 El. 100.00(Assumed)

**TOTAL BILL OF MATERIAL**

Item	Super	Sub	Total
Channel Excavation			51
Stone Dumped Riprap, Class A4			314
Filter Fabric			544
Removal of Existing Structures			1
Structure Excavation			67
Concrete Structures		45.5	45.5
Precast Prestressed Concrete Deck Beams (27" Depth)	1312		1312
Reinforcement Bars		3970	3970
Steel Railing Type S1		112	112
Furnishing Steel Piles HP 10x42		222	222
Driving Steel Piles		222	222
Test Pile, Steel HP 10x42		1	1
Name Plates		1	1

**WATERWAY INFORMATION**

Drainage Area = 3.45 Sq. Miles Low Grade Elev. = 95.54 @ Sta. 0+80

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.	Nat. H.W.E.	Head-Ft. Exist.	Head-Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
Design	15	1314	243	34.3	95.3	0.0	0.2	95.3
Base	100	2168	271	39.3	96.3	0.3	0.4	96.6
Exist. Overtop	Greater than 500 years							
Prop. Overtop	Greater than 500 years							
Max. Calc.	500	2887	288	42.3	96.9	0.9	0.5	97.8

**DESIGN STRESSES**

**FIELD UNITS**

f<sub>c</sub> = 1400 psi  
 v<sub>c</sub> = 56.2 psi  
 f<sub>s</sub> = 24000 psi  
 n = 9

**PRECAST PRESTRESSED UNITS**

f<sub>c</sub> = 5000 psi  
 f<sub>ci</sub> = 4000 psi  
 f<sub>s</sub> = 270000 psi  
 f<sub>si</sub> = 189000 psi

**GENERAL NOTES**

See Proposal for Boring Data.  
 Reinforcement bars shall conform to the requirements of A.A.S.H.T.O. M-31, M-42, or M-53, Grade 60.  
 The layout of the riprap slopedwall may be varied to suit conditions in the field as determined by the engineer.  
 The contractor shall drive one test pile in a permanent location at the East Abutment as directed by the Engineer in the field prior to ordering the remainder of piles.

**DESIGN SPECIFICATIONS**

2002 A.A.S.H.T.O. Specifications with 2003 & 2004 Interim Specifications.

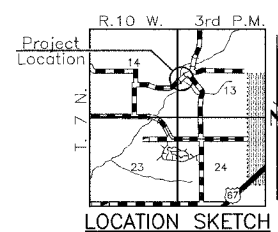
**LOADING HS 20-44**

Allow 50#/sq. ft. for future wearing surface.



PIASA CREEK  
 BUILT 200 BY  
 JERSEY COUNTY  
 SECTION 04-07118-00-BR  
 STA. 4+01.00  
 STR. NO. 042-3139 LOADING HS20

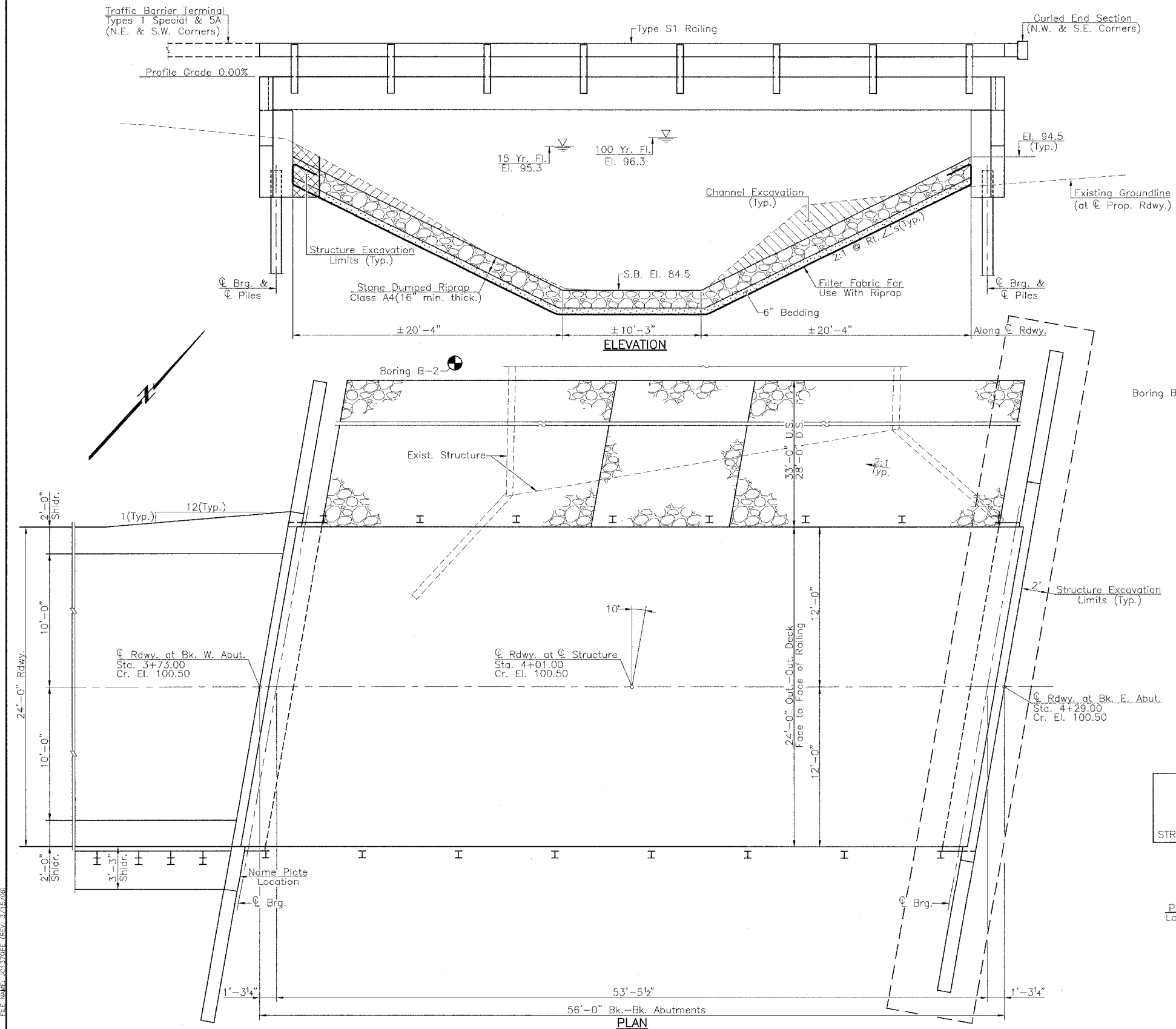
**NAME PLATE**  
 (Standard 515001)



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 requirements of the current "A.A.S.H.T.O. Standard Specifications For Highway Bridges".

*Mark A. Henderson* 3/15/06  
 Expiration Date 11/30/2006

**GENERAL PLAN & ELEVATION**  
 I.R. 137 OVER PIASA CREEK  
 SECTION 04-07118-00-BR  
 JERSEY COUNTY



FILE NAME: JCI13706P (REV. 3/15/06)