

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 140	*	JERSEY	8	1
FEDERAL AID PROJECT				
* 05-05112-00-BR				
CONTRACT NO. 97292				

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

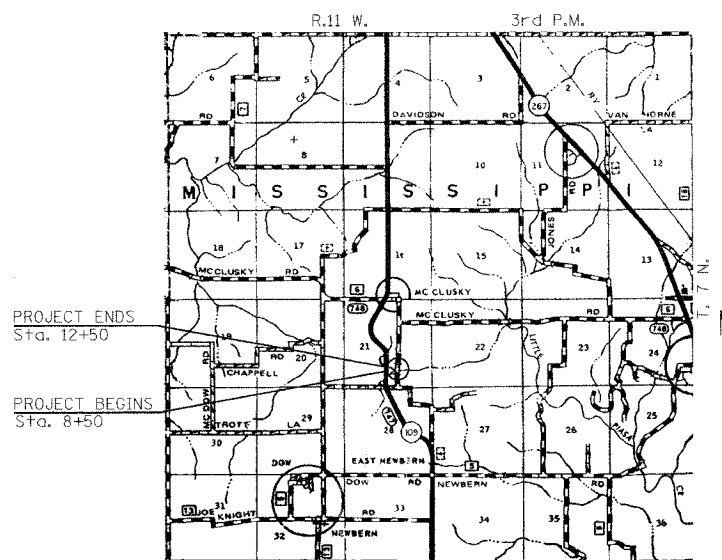
**PLANS FOR PROPOSED
HIGHWAY BRIDGE PROGRAM
PROJECT NO. BROS-083(039)
T.R. 140 OVER BRANCH OF LITTLE PIASA CREEK
SECTION 05-05112-00-BR
JERSEY COUNTY
JOB NO. C-98-354-06**

INDEX OF SHEETS

- 1 - TITLE SHEET
- 2 - SUMMARY OF QUANTITIES, DETAILS, & TYPICAL SECTIONS
- 3 - PLAN & PROFILE
- 4 - GENERAL PLAN & ELEVATION
- 5 - SUPERSTRUCTURE
- 6 - RAILING
- 7 - ABUTMENTS
- 8 - CROSS SECTIONS

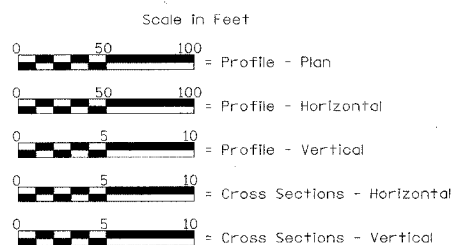
STANDARDS

- STANDARD 515001-02
- STANDARD 635006-02
- STANDARD 702001-06
- STANDARD BLR 21-6
- STANDARD BLR 23-1



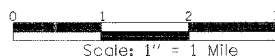
EXISTING STRUCTURE: SINGLE SPAN REINFORCED CONCRETE DECK ON CLOSED CONCRETE ABUTMENTS WITH CONCRETE WINGWALLS AND CONCRETE RAILINGS. ±23'-0" BK.-BK. ABUTMENTS, ±17'-9" CLEAR DECK WIDTH. ±0° SKEW
EXISTING STRUCTURE NO. 042-3075

PROPOSED STRUCTURE: SINGLE SPAN PRECAST PRESTRESSED CONCRETE DECK BEAM BRIDGE (21') ON OPEN CONCRETE ABUTMENTS. 27'-0" OUT.-OUT. DECK, 54'-0" BK.-BK. ABUTMENTS. STEEL RAILING TYPE S1. 15° SKEW LT. FORWARD.
PROPOSED STRUCTURE NO. 042-3140



LOCATION PLAN

Length of Section - 400.00 Feet = 0.076 Miles



Land Section - 21
Land Quarter Section - S.E.
Political Township - Mississippi
Design Designation
Functional Class - Local Road
Design Speed = 30 m.p.h.
ADT: 150 (2002)
ADT: 159 (2029)

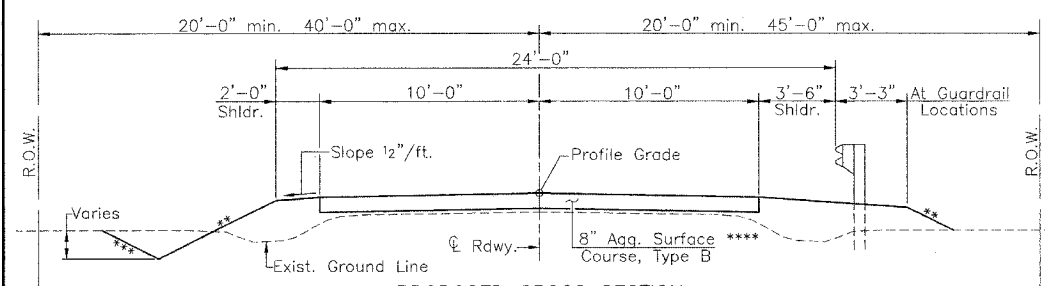


Christopher P. Hollman 12/12/06
Expiration: 11/30/07

ILLINOIS DEPARTMENT OF TRANSPORTATION	
APPROVED	12/18, 2006 <i>Thomas F. Kline</i> JERSEY COUNTY ENGINEER
PASSED	1-2, 2007 <i>James J. Overton</i> DISTRICT ENGINEER OF LOCAL ROADS & STREETS
RELEASING FOR BID BASED ON LIMITED REVIEW	1-2, 2007 <i>Mary C. Lane</i> DEPUTY DIRECTOR OF HIGHWAYS REGION FIVE ENGINEER

FILE NAME: JCI4035 (REV. 12/05/06)

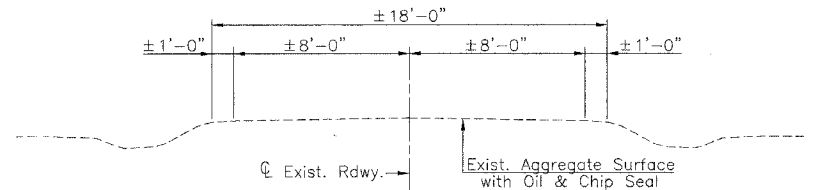
TOLL FREE
"JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS"
WWW.U.L.I. TELEPHONE NUMBER
1-800-892-0123



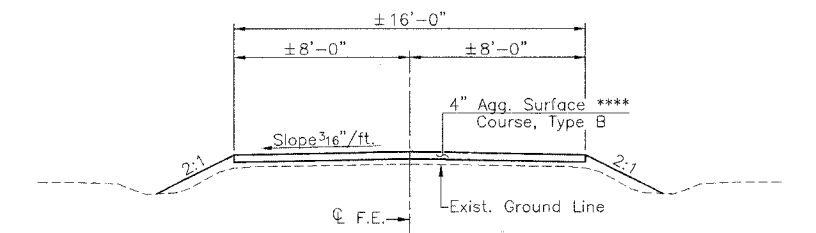
PROPOSED CROSS SECTION
(Sta. 8+90 to Sta. 10+12 & Sta. 10+66 to Sta. 12+10)

** 3:1 < 6'
2:1 ≥ 6' or at Guardrail Locations
*** 3:1 < 10'
2:1 ≥ 10'

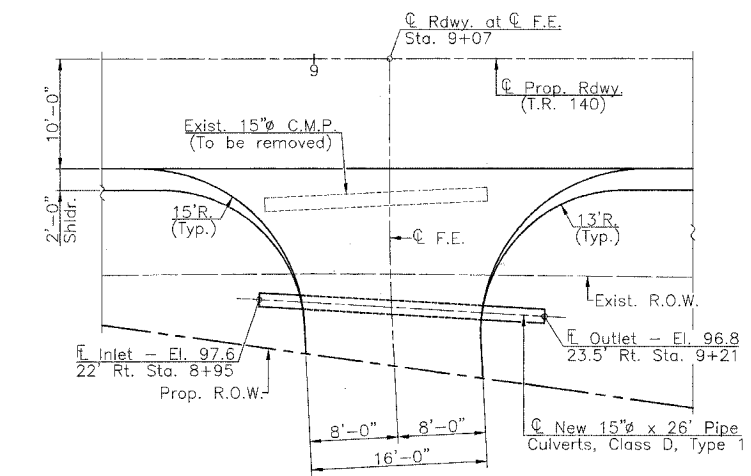
Aggregate Surface Course, Type B - Estimated Quantity 548 Tons to be placed by County Forces.



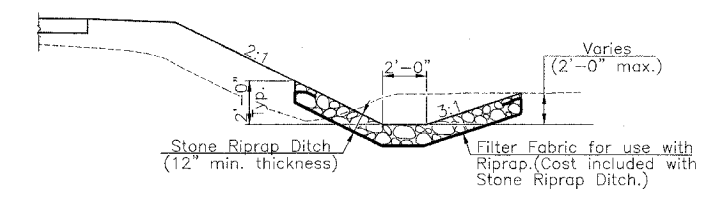
EXISTING CROSS SECTION



TYPICAL FIELD ENTRANCE
(Sta. 9+07 Rt., Sta. 9+52 Lt. & Sta. 11+07 Rt.)



PLAN
(F.E. Sta. 9+07 Rt.)

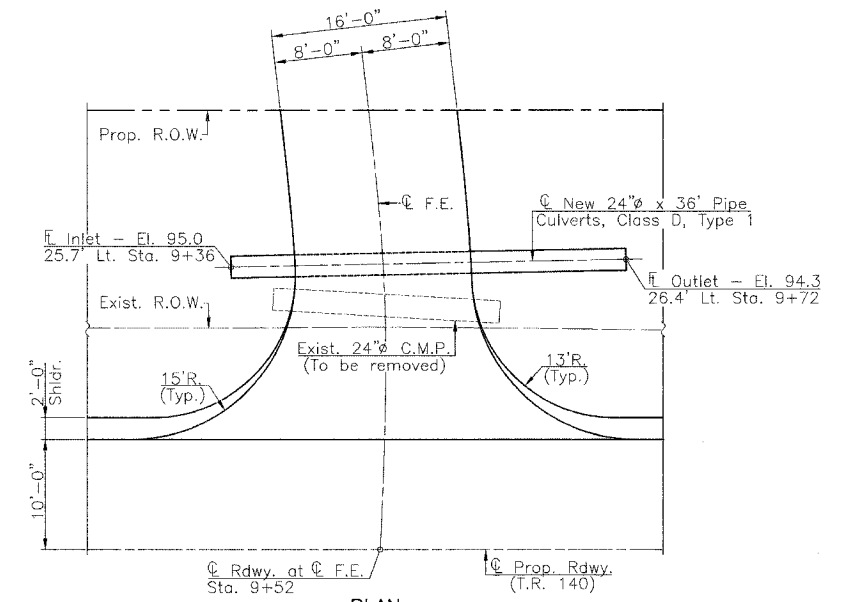


STONE RIPRAP DITCH DETAIL

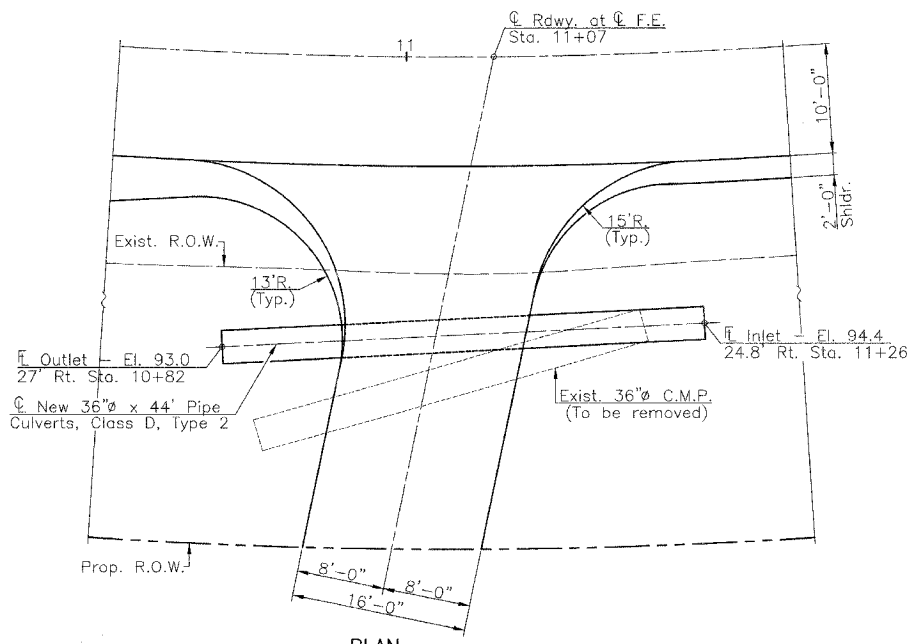
EARTHWORK SCHEDULE

Location	Earth Excavation	Earth Excavation Adjusted For Shrinkage	Embankment	Earthwork Balance Waste (+) or Shortage (-)
	Cubic Yard	Cubic Yard	Cubic Yard	Cubic Yard
Sta. 8+50 to Sta. 9+00	38	29	28	+1
Sta. 9+00 to Sta. 10+00	87	65	168	-103
Sta. 10+00 to Sta. 10+12	3	2	23	-21
Bridge Omission - Sta. 10+12 to Sta. 10+66	-	-	-	-
Sta. 10+66 to Sta. 10+96.50	67	50	42	+8
Sta. 10+96.50 to Sta. 12+00	134	101	99	+2
Sta. 12.00 to Sta. 12+50	10	7	13	-6
Total	339	254	373	-119 *

* Excess Channel Excavation of 119 cu. yds. will be used from Sta. 8+50 to Sta. 10+12. No Furnished Excavation will be required.



PLAN
(F.E. Sta. 9+52 Lt.)



PLAN
(F.E. Sta. 11+07 Rt.)

SUMMARY OF QUANTITIES

CODE NO.	Item	Unit	Quantity
20100110	Tree Removal (6 to 15 Units Diameter)	Unit	135
20100210	Tree Removal (Over 15 Units Diameter)	Unit	108
20200100	Earth Excavation	Cu. Yd.	339
20300100	Channel Excavation	Cu. Yd.	338
25001000	Seeding Class 2 (Special)	Acre	0.40
28100807	Stone Dumped Riprap, Class A4	Ton	297
28102600	Stone Riprap Ditch	Ton	116
28200200	Filter Fabric	Sq. Yd.	512
50100100	Removal of Existing Structures	Each	1
50200100	Structure Excavation	Cu. Yd.	102
50300225	Concrete Structures	Cu. Yd.	34.0
50300280	Concrete Encasement	Cu. Yd.	2.2
50400405	Precast Prestressed Concrete Deck Beams (21" Depth)	Sq. Ft.	1421
50800105	Reinforcement Bars	Pound	3190
50900205	Steel Railing, Type S1	Foot	108
51201400	Furnishing Steel Piles HP10X42	Foot	91
51202305	Driving Piles	Foot	91
51203400	Test Pile Steel HP10X42	Each	1
51500100	Name Plates	Each	1
542D0220	Pipe Culverts, Class D, Type 1 15"	Foot	26
542D0229	Pipe Culverts, Class D, Type 1 24"	Foot	36
542D1081	Pipe Culverts, Class D, Type 2 36"	Foot	44
63100075	Traffic Barrier Terminal, Type 5A	Each	2
63100169	Traffic Barrier Terminal Type 1, Special (Flared)	Each	2
67100100	Mobilization	L. Sum	1
70101830	Traffic Control And Protection, Standard BLR 21	L. Sum	1
78201000	Terminal Marker - Direct Applied	Each	4

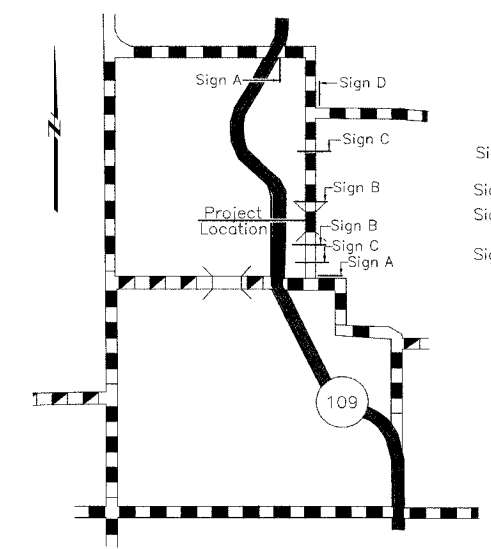
GENERAL NOTES

Where section or subsection stones are encountered, the Engineer shall be notified before such stones are removed. The contractor shall protect and preserve all property markers and monuments until the owner, authorized surveyor, or agent has witnessed or referenced their location.

Seeding: Fertilizer nutrients shall be applied at a ratio of 1:1:1 and at a rate of 90 pounds per acre per nutrient.

Mulch and Agricultural Grade Limestone shall be applied at the rate of 2 tons per acre.

Areas to be seeded shall consist of all disturbed earth surfaces within the right-of-way as directed by the Engineer.



BARRICADE LOCATION PLAN
(Refer to Highway Standards 702001 & BLR 21)

- Legend**
- Sign A - "Road Closed Ahead" W20-3(0) 4848
 - Sign B - BLR Standard 21
 - Sign C - "Road Closed 500 Feet" W20-3(0) 4848
 - Sign D - "Road Closed Ahead" with M4-9L 3024

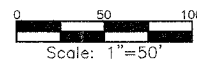
**SUMMARY OF QUANTITIES
DETAILS & TYPICAL SECTIONS
T.R. 140 OVER BRANCH OF
LITTLE PIASA CREEK
SECTION 05-05112-00-BR
JERSEY COUNTY**

SECTION 21 T. 7 N. R. 11 W. 3rd P.M.

DAVID & DIANE WENDELL

STUMPE BROS.

STUMPE BROTHERS
PLAN



---OEI--- Indicates Overhead Electric

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R.140	*	JERSEY	8	3
PROJECT BROS-083(039)				
CONTRACT NO. 97292 * 05-05112-00-BR				

SCHEDULE
TREE REMOVAL 6 TO 15 UNITS

Location	Quantity (Units)
Sta. 10+51 21' Lt.	6
Sta. 10+51 22' Lt.	12
Sta. 10+51 23' Lt.	6
Sta. 10+52 21' Lt.	12
Sta. 10+52 22' Lt.	12
Sta. 10+86 34' Lt.	6
Sta. 10+86 35' Lt.	6
Sta. 11+24 30' Lt.	15
Sta. 11+39 34' Lt.	12
Sta. 10+56 22' Rt.	6
Sta. 10+56 23' Rt.	6
Sta. 10+56 24' Rt.	6
Sta. 11+22 41' Rt.	15
Sta. 11+31 30' Rt.	15
Total	135

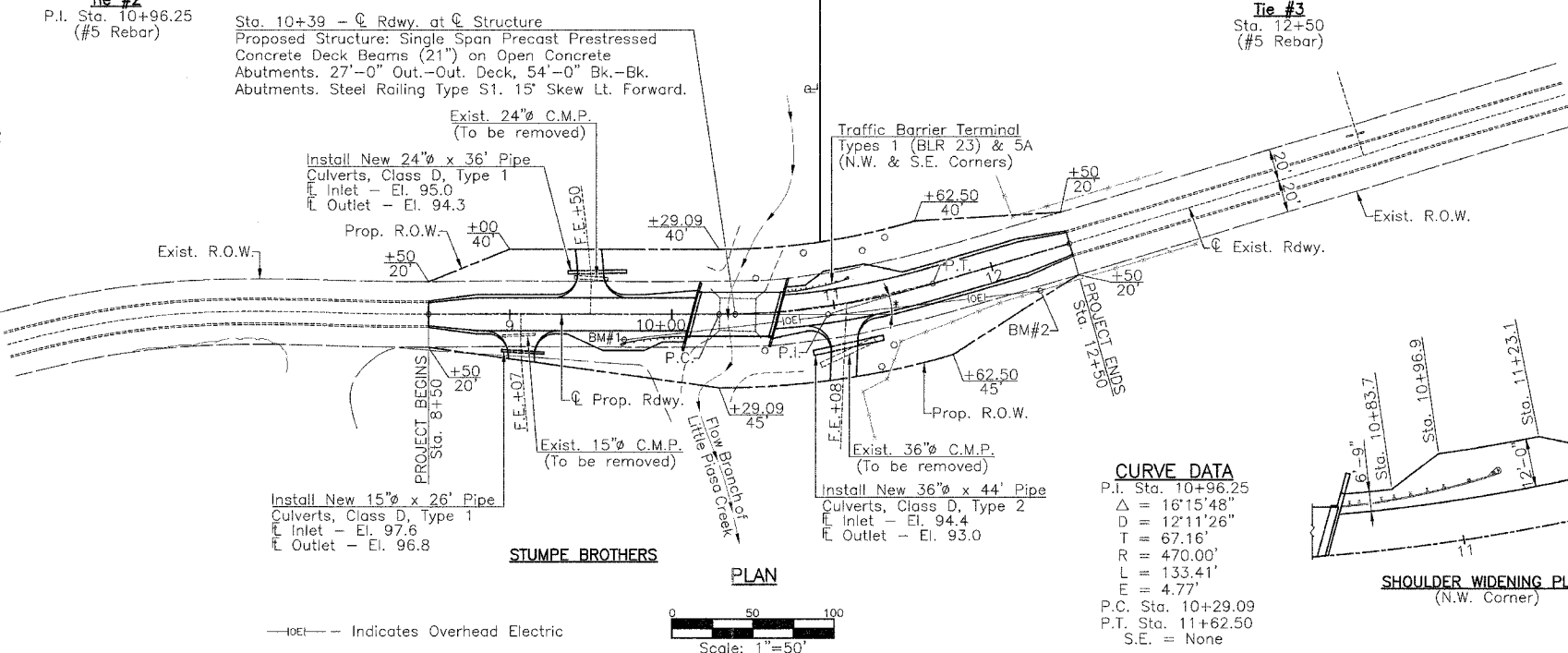
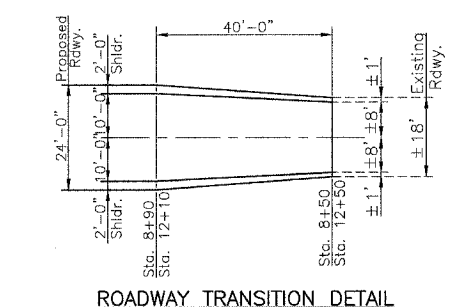
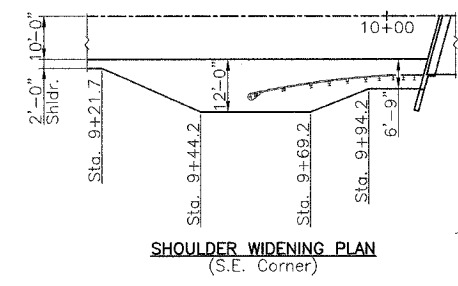
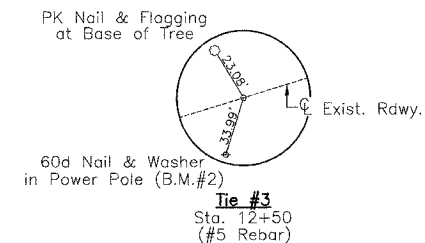
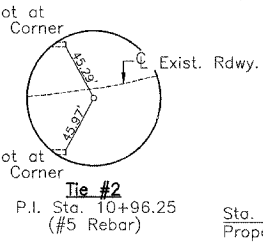
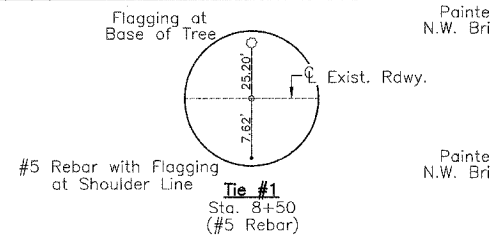
SCHEDULE
TREE REMOVAL OVER 15 UNITS

Location	Quantity (Units)
Sta. 10+85 34' Lt.	24
Sta. 10+86 36' Lt.	30
Sta. 11+21 40' Rt.	30
Sta. 11+22 40' Rt.	24
Total	108

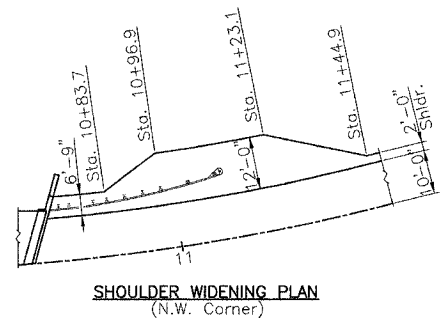
UTILITIES

Frontier Communications
225 N. Broad St.
Carlinville, Illinois 62626
1-217-854-4013
M.J.M. Electric Cooperative, Inc.
P.O. Box 80
Carlinville, Illinois 62626
1-217-854-3137
Jersey County Rural Water
1009 E. Shipman Road
Jerseyville, Illinois 62052
1-618-498-9534

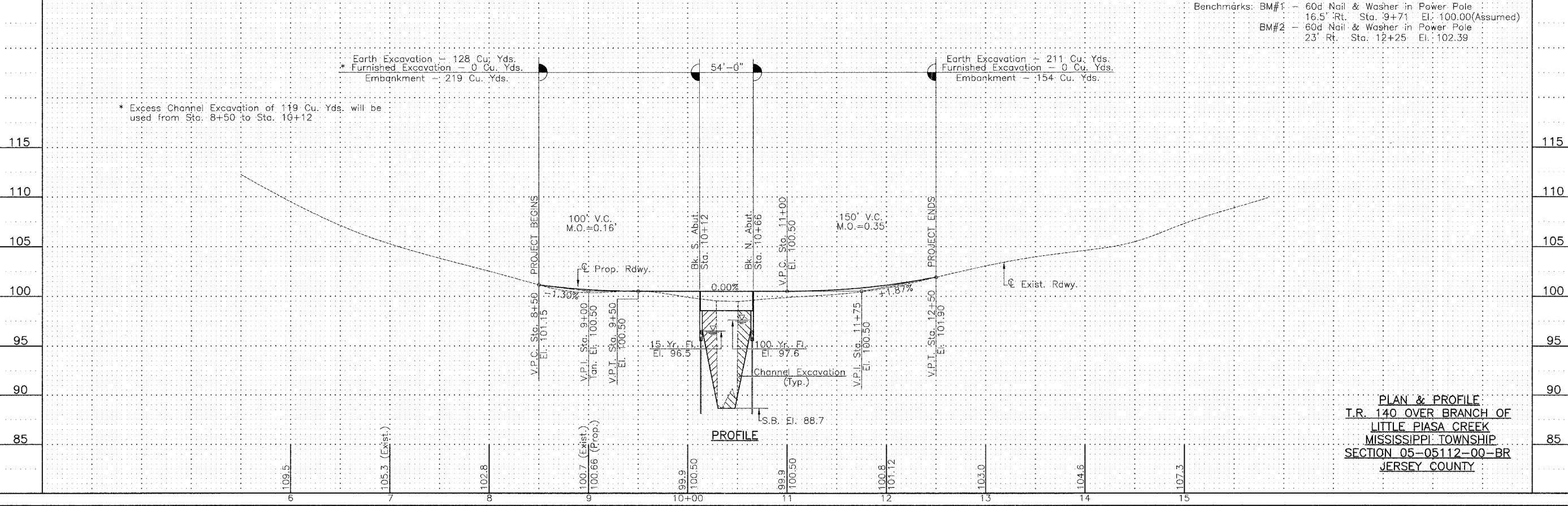
Benchmarks: BM#1 - 60d Nail & Washer in Power Pole
16.5' Rt. Sta. 9+71 El. 100.00(Assumed)
BM#2 - 60d Nail & Washer in Power Pole
23' Rt. Sta. 12+25 El. 102.39



CURVE DATA
P.I. Sta. 10+96.25
Δ = 16°15'48"
D = 12°11'26"
T = 67.16'
R = 470.00'
L = 133.41'
E = 4.77'
P.C. Sta. 10+29.09
P.T. Sta. 11+62.50
S.E. = None



Earth Excavation - 128 Cu. Yds.
* Furnished Excavation - 0 Cu. Yds.
Embankment - 219 Cu. Yds.
* Excess Channel Excavation of 119 Cu. Yds. will be used from Sta. 8+50 to Sta. 10+12
Earth Excavation - 211 Cu. Yds.
Furnished Excavation - 0 Cu. Yds.
Embankment - 154 Cu. Yds.



PLAN & PROFILE
T.R. 140 OVER BRANCH OF
LITTLE PIASSA CREEK
MISSISSIPPI TOWNSHIP
SECTION 05-05112-00-BR
JERSEY COUNTY

FILE NAME: JC-408P (REV. 12/12/06)

Existing Structure: Single Span Reinforced Concrete Deck on Closed Concrete Abutments with Concrete Wingwalls and Concrete Railings. ±23'-0" Bk.-Bk. Abutments, ±16'-9" Clear Deck Width. ±0° Skew. Existing Structure No. 042-3075.

Benchmarks: BM#1 - 60d Nail & Washer in Power Pole
16.5' Rt. Sta. 9+71 El. 100.00(Assumed)
BM#2 - 60d Nail & Washer in Power Pole
23' Rt. Sta. 12+25 El. 102.39

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R.140	*	JERSEY	8	4

PROJECT BROS-083(039)
* 05-05112-00-BR
CONTRACT NO. 97292

TOTAL BILL OF MATERIAL

Item	Super	Sub	Total
Channel Excavation	Cu. Yd.		338
Stone Dumped Riprap, Class A4	Ton		297
Filter Fabric	Sq. Yd.		512
Removal of Existing Structures	Each		1
Structure Excavation	Cu. Yd.		102
Concrete Structures	Cu. Yd.	34	34
Concrete Encasement	Cu. Yd.	2.2	2.2
Precast Prestressed Concrete Deck Beams (21" Depth)	Sq. Ft.	1421	1421
Reinforcement Bars	Pound	3190	3190
Steel Railing, Type S1	Foot	108	108
Furnishing Steel Piles HP 10x42	Foot	91	91
Driving Piles	Foot	91	91
Test Pile, Steel HP 10x42	Each	1	1
Name Plates	Each	1	1

WATERWAY INFORMATION

Drainage Area = 1.61 Sq. Miles		Low Grade Elev. = 100.5		© Sta. 10+00		
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.	Nat. H.W.E.	Head-Ft. Exist. Prop.	Headwater El. Exist. Prop.
Design	15	861	144 265	96.5	0.3 0.0	96.9 96.5
Base	100	1436	169 319	97.6	2.3 0.0	99.9 97.6
Exist. Overtop	200	1615				
Prop. Overtop	Greater than 500 Years					
Max. Calc.	500	1923	188 363	98.2	3.9 0.4	102.2 98.6

DESIGN STRESSES

FIELD UNITS

$f_c = 1400$ psi
 $v_c = 56.2$ psi
 $f_s = 24000$ psi
 $n = 9$

PRECAST PRESTRESSED UNITS

$f'_c = 5000$ psi
 $f'_{ci} = 4000$ psi
 $f'_s = 270000$ psi
 $f'_{si} = 201960$ psi
1/2" Strands

GENERAL NOTES

See Proposal for Boring Data.
Reinforcement bars shall conform to the requirements of ASTM A706 Grade 60 (IL Modified). See "Special Provisions".
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 North Abutment as directed by the Engineer in the field. The Contractor shall drive test piles to 1/10 of the nominal required bearing specified in production locations at the substructures specified or approved by the Engineer before ordering the remainder of piles.

DESIGN SPECIFICATIONS

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

LOADING HS 20-44

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

LITTLE PIASA CREEK
BUILT 200 BY
JERSEY COUNTY
SECTION 05-05112-00-BR
STA. 10+39.00
STR. NO. 042-3140 LOADING HS20

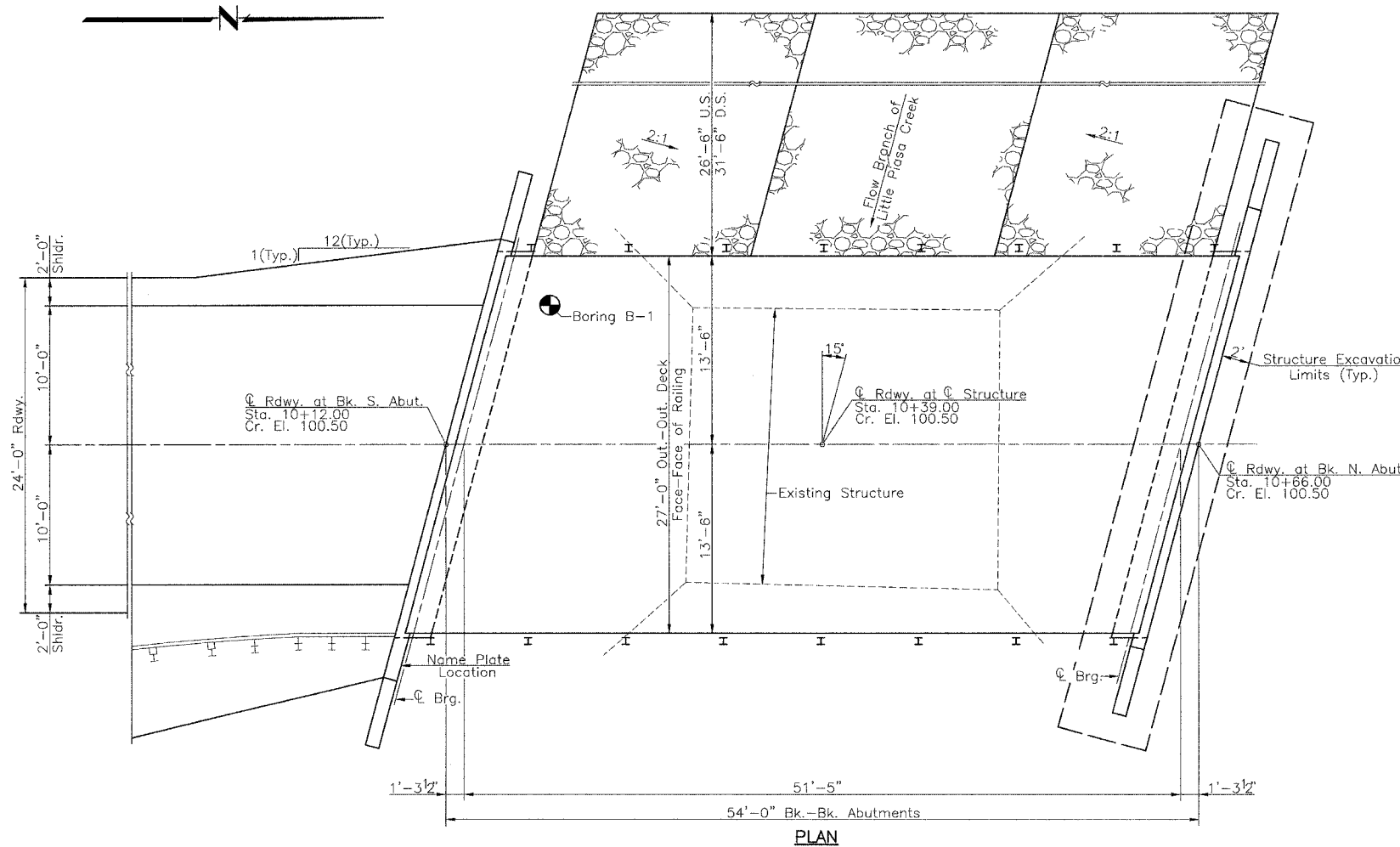
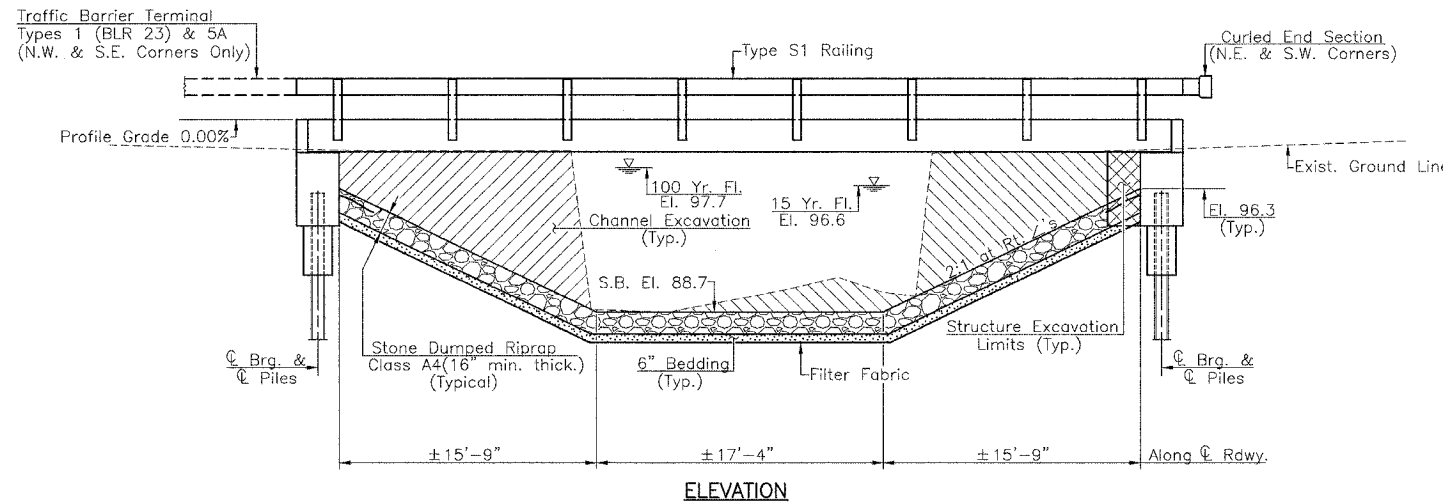
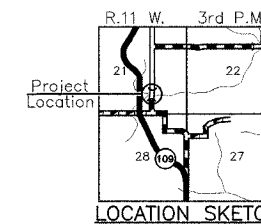
NAME PLATE
(Standard 515001)

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 12/12/2008
Expiration Date 11/30/2008

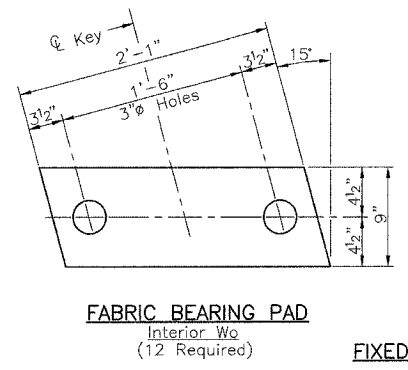


GENERAL PLAN & ELEVATION
T.R. 140 OVER BRANCH OF
LITTLE PIASA CREEK
SECTION 05-05112-00-BR
JERSEY COUNTY

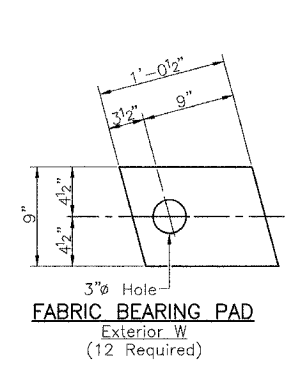


RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R.140	*	JERSEY	8	5
PROJECT BROS-083(039)				

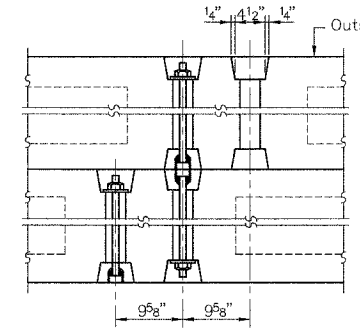
* 05-05112-00-BR
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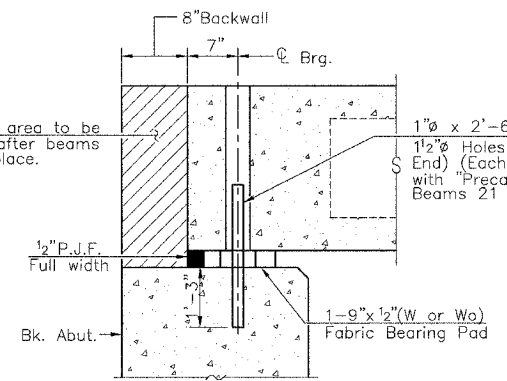
FABRIC BEARING PAD
 Interior Wo
 (12 Required)



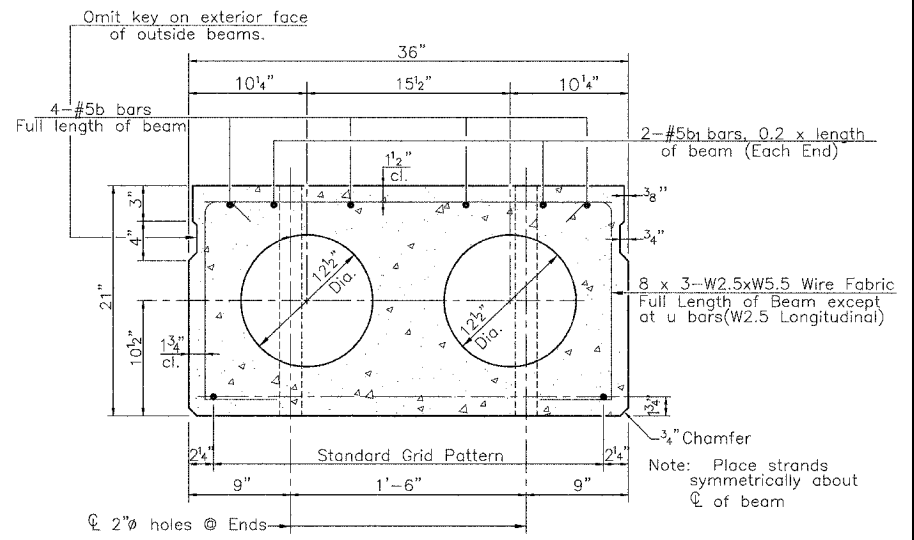
FABRIC BEARING PAD
 Exterior W
 (12 Required)



TYPICAL TRANSVERSE TIE ASSEMBLY

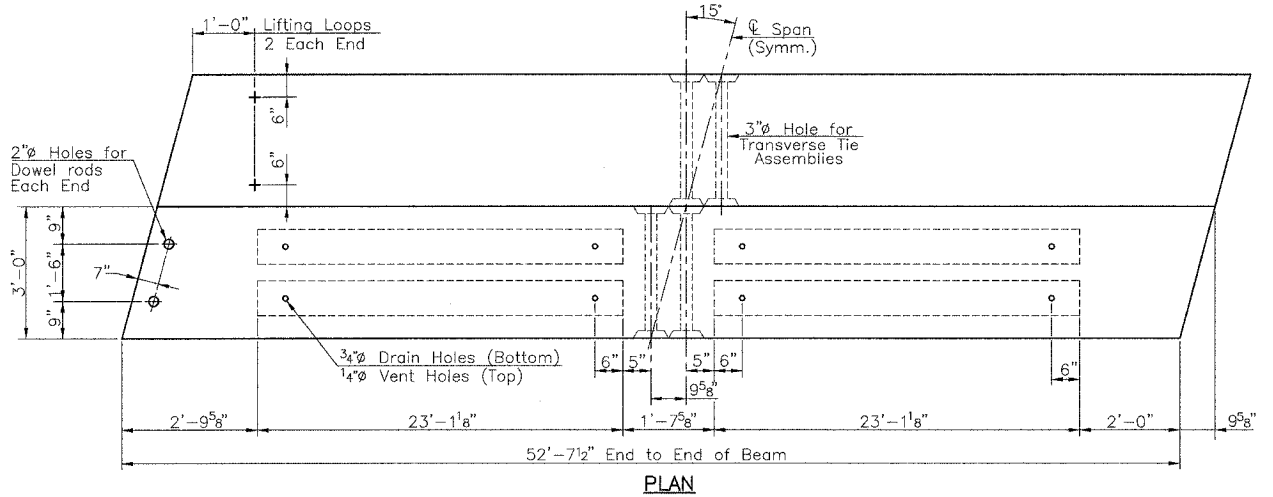


SECTION THRU ABUTMENT
 (Dimensions @ Rt. Angles)

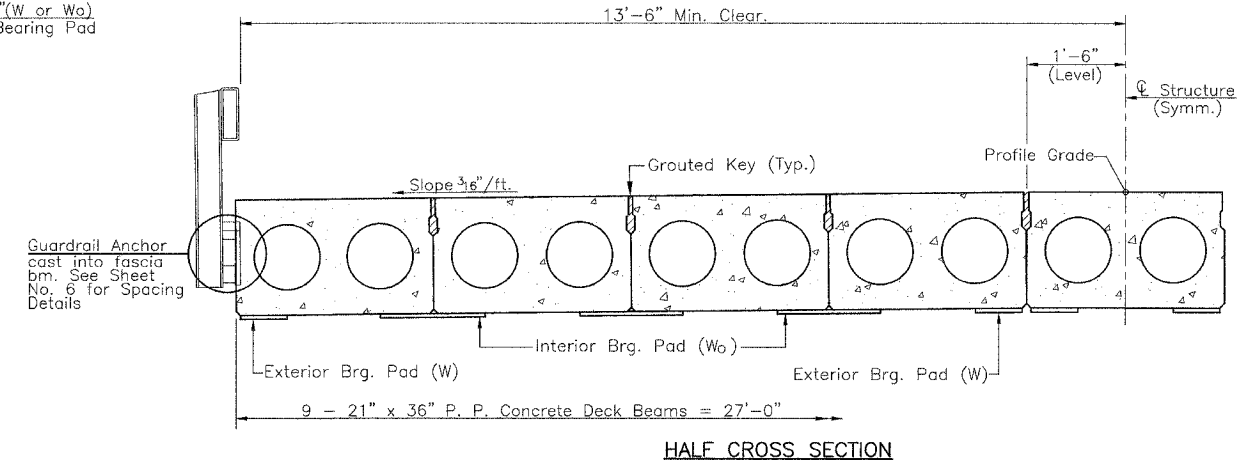


TYPICAL SECTION

1/2" Strands - Each Strand Stressed to 30,900 lbs.
 6 - 1 3/4" up, 8 - 3 1/4" up, 2 - 12" up



PLAN



HALF CROSS SECTION

NOTES

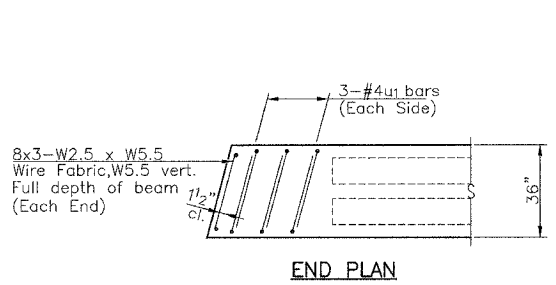
After beams have been erected, holes shall be drilled into substructure and anchor dowels placed. Dowel holes shall be filled with non-shrink grout to top of beam and allowed to cure min. 24 hours prior to the shear keys.
 Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
 The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in.
 Lifting loops shall be 2 - 1/2" - 270 ksi strands as shown.
 The 1" rods in the Transverse Tie Assembly shall be tightened to a snug fit and the threads set. Pockets that receive transverse tie bar on outside shall be filled with grout after transverse tie assembly is in place.
 Non-prestressing steel shall conform to AASHTO M-31 or M-322 Grade 60.
 The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two 1" fabric adjusting shims of the dimensions of the Exterior Bearing Pad shall be provided for each bearing.
 Keyway surfaces shall be cleaned to remove form oil or other bond breaking material prior to shipment of the beams. Cleaning shall be done by sandblasting the keyway areas between top of the beams and the bottom edge of the key.
 A corrosion inhibitor shall be used in the concrete for the precast, prestressed concrete deck beams, according to Article 1020.05(b)(12) of the Standard Specifications.
 Required Release Strength, f'ci, shall be 4000 p.s.i.

BILL OF MATERIAL

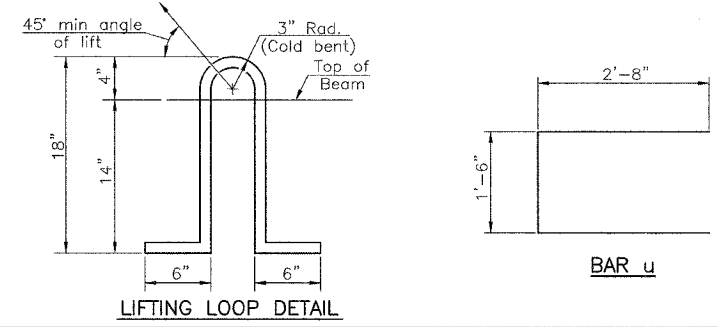
BAR	NO.	SIZE	LENGTH	SHAPE
Precast Prestressed Concrete Deck Beams (21")			Sq. Ft.	1421

SUPERSTRUCTURE
T.R. 140 OVER BRANCH OF
LITTLE PIASA CREEK
SECTION 05-05112-00-BR
JERSEY COUNTY

FILE NAME: JC1403BM (REV. 12/12/00)



END PLAN

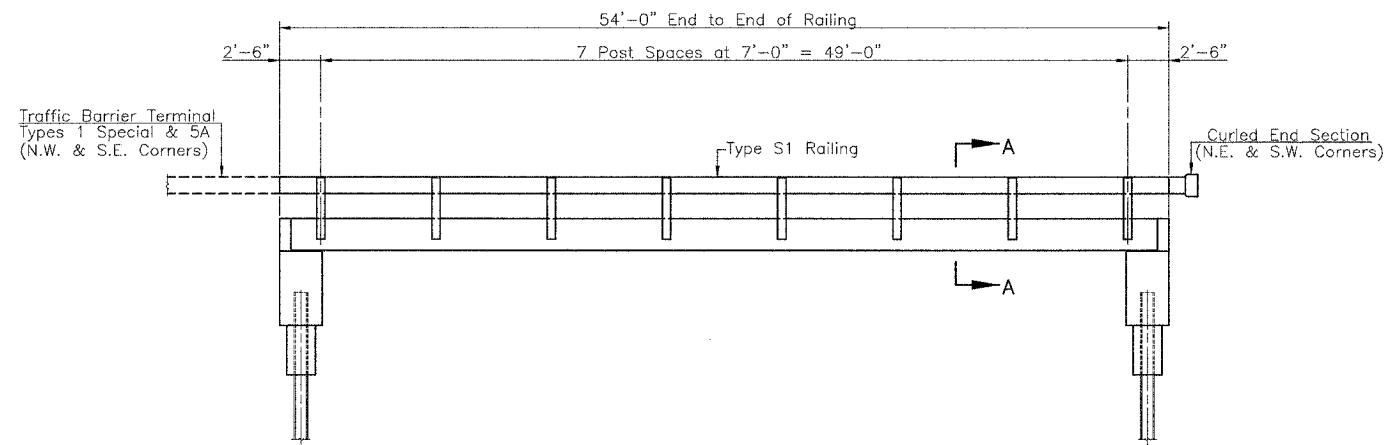


LIFTING LOOP DETAIL

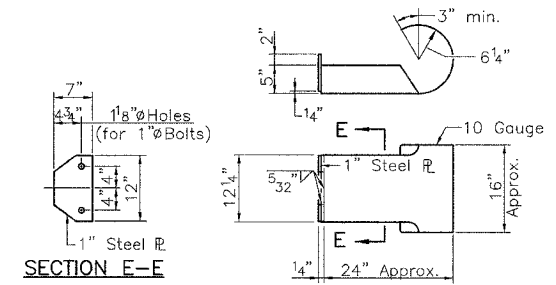
BAR u

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R.140	*	JERSEY	8	6
PROJECT BROS-083(039)				

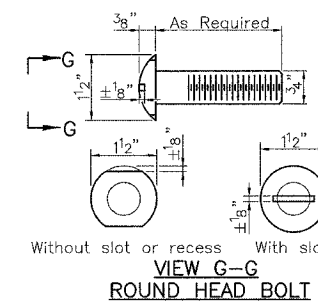
* 05-05112-00-BR
CONTRACT NO. 97292



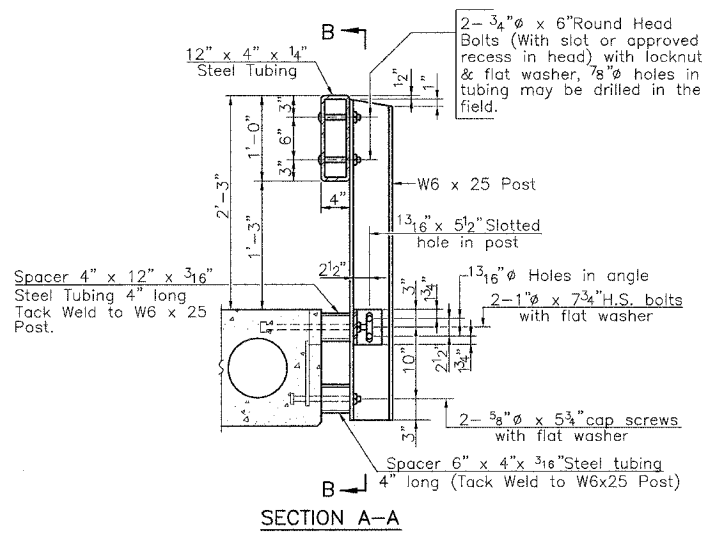
ELEVATION
 (Showing Outside Face of Railing)



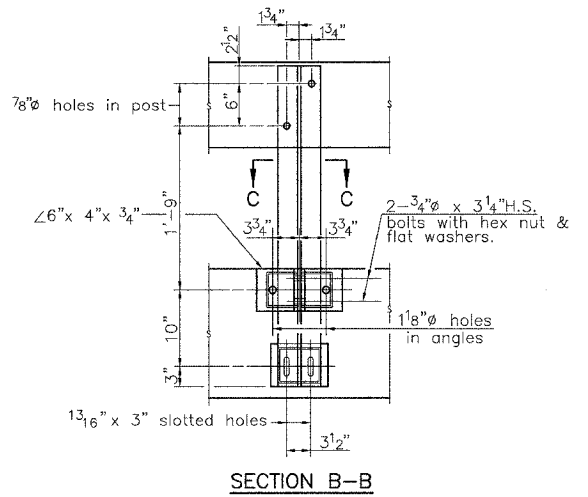
CURLED END SECTION DETAILS (2 Required)



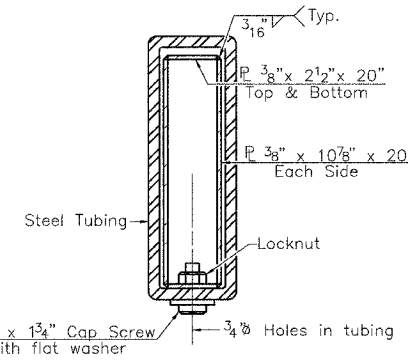
VIEW G-G ROUND HEAD BOLT



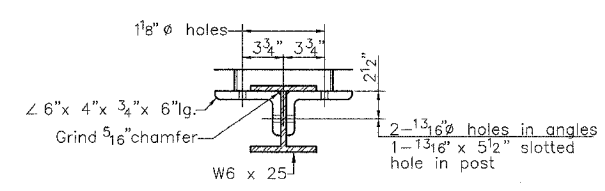
SECTION A-A



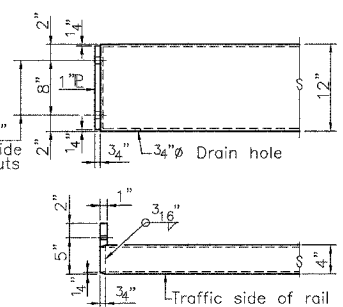
SECTION B-B



SECTION AT RAIL SPLICE

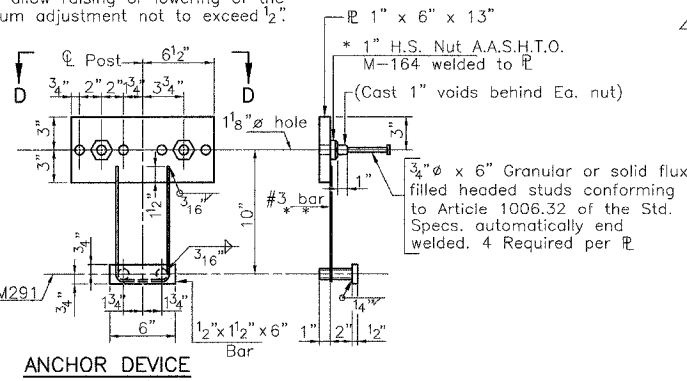


SECTION C-C

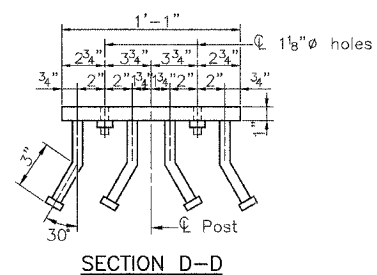


END OF RAIL DETAILS

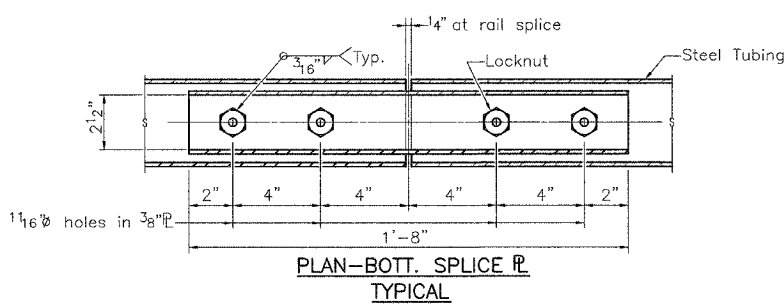
** Whenever the lower insert assemblies interfere with strand locations, the #3 bars shall be cut and adjusted in order to allow raising or lowering of the lower inserts. Maximum adjustment not to exceed 1/2".



ANCHOR DEVICE



SECTION D-D



PLAN-BOTT. SPLICE RAIL TYPICAL

BILL OF MATERIAL

Item	Total
Steel Railing, Type S1	Foot 108

RAILING
 T.R. 140 OVER BRANCH OF
 LITTLE PIASA CREEK
 SECTION 05-05112-00-BR
 JERSEY COUNTY

FILE NAME: UC10081 (REV. 12/8/05)

NOTES

All exposed edges shall have standard 3/4" chamfer.
 Space reinforcement in cap to miss beam anchor dowels.
 Wingwalls and Backwalls may, at the contractor's option,
 be cast monolithically.

PILE DATA

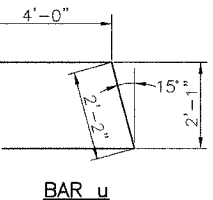
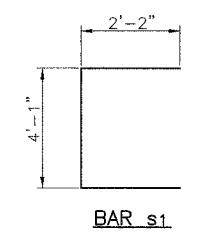
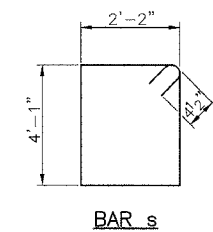
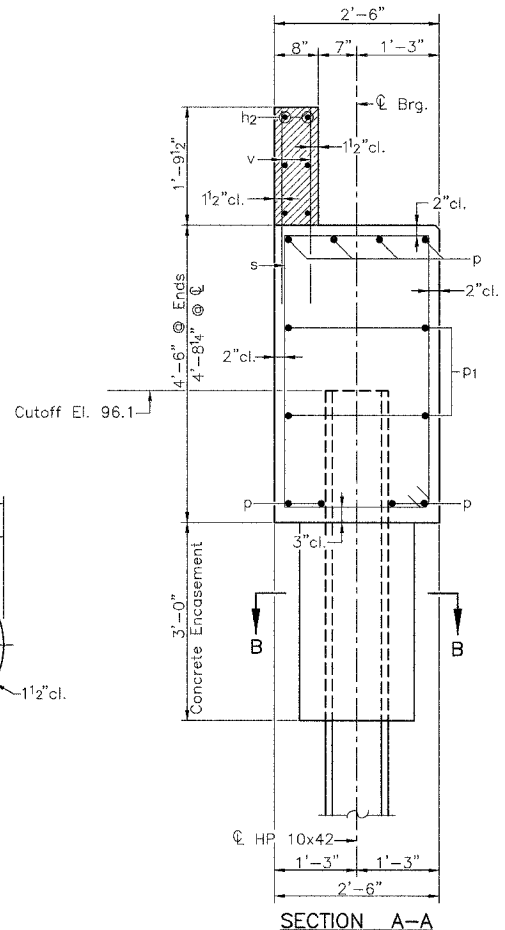
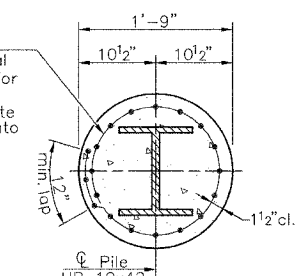
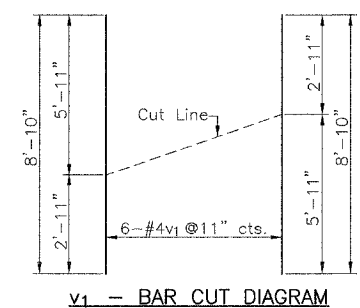
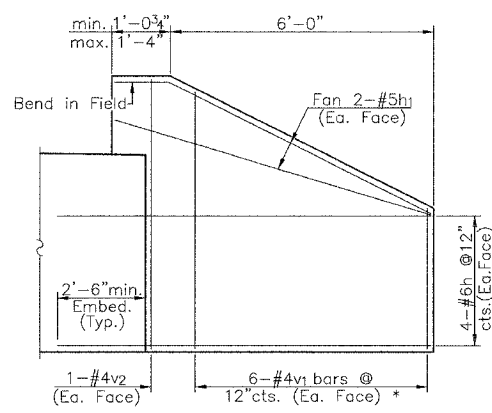
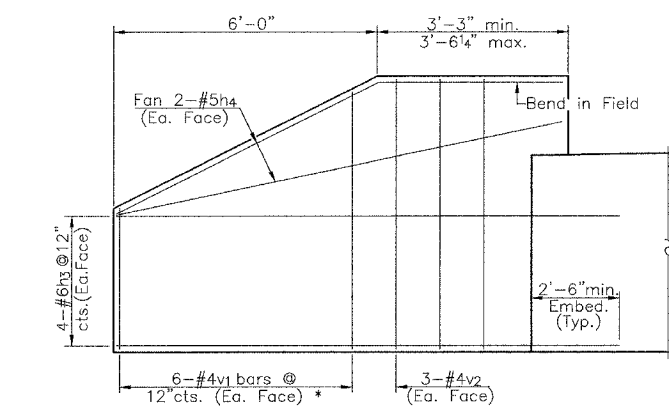
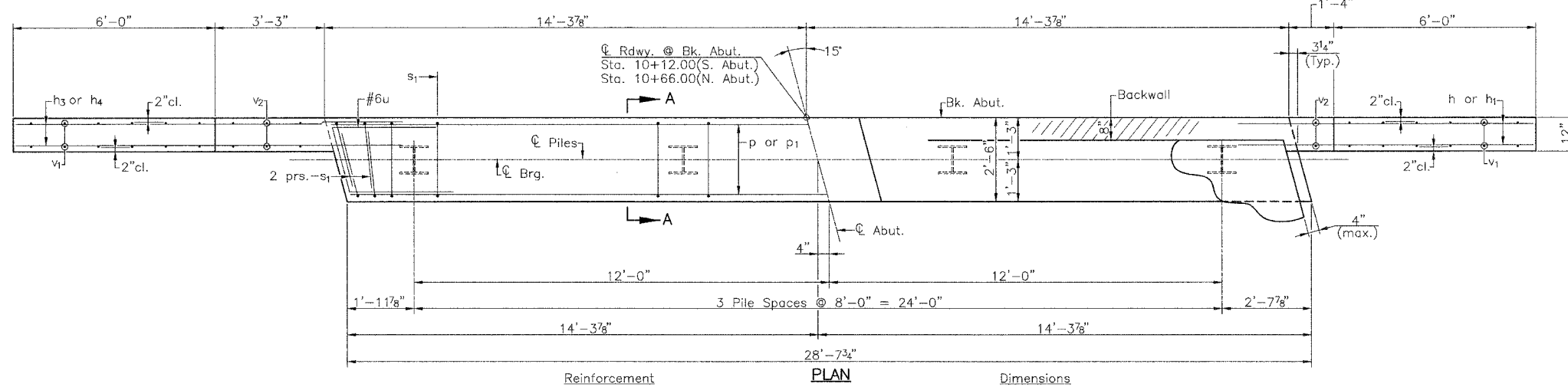
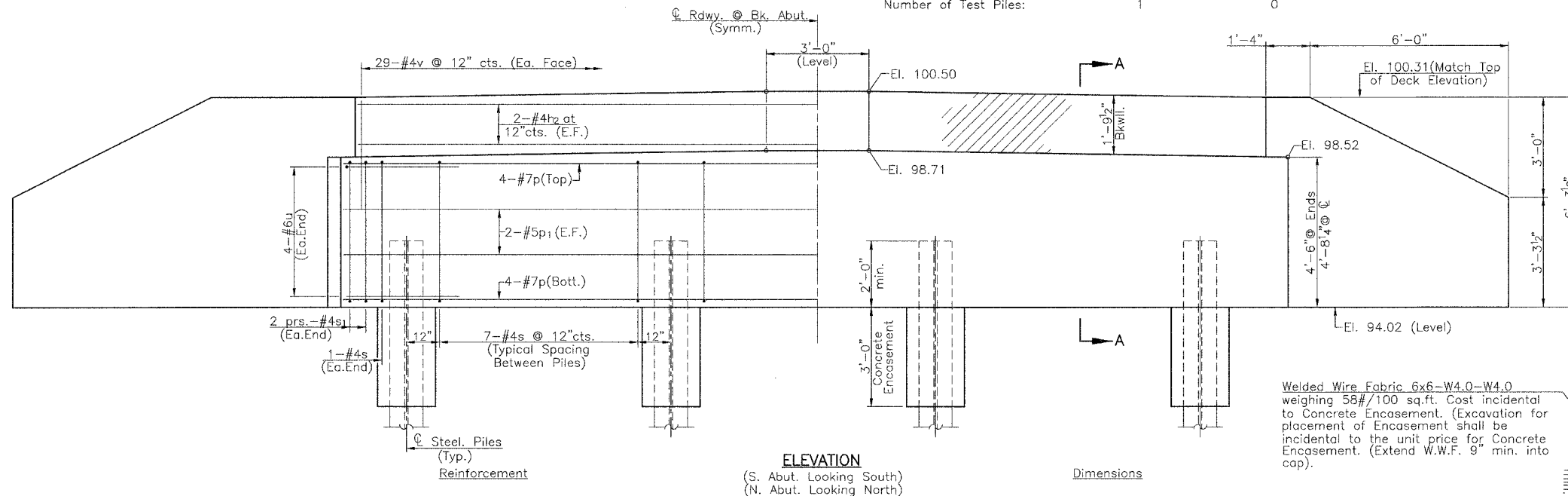
	N. Abut.	S. Abut.
Pile Type & Size:	Steel HP 10x42	Steel HP 10x42
Nominal Required Bearing:	335 kips	335 kips
Allowable Resistance Available:	Driven to Refusal	Driven to Refusal
Estimated Pile Length:	13'	13'
Number of Production:	3	4
Number of Test Piles:	1	0

Note: Hatched area and wingwalls shall be poured after deck beams are anchored in place. Quantity for Concrete Structures is included in Bill of Material, this sheet.

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 142	*	JERSEY	8	7

PROJECT BROS-083(039)
 * 05-05112-00-BR

CONTRACT NO. 97292



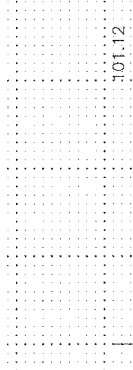
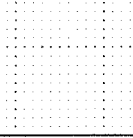
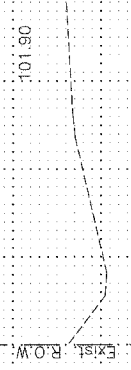
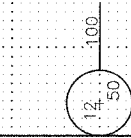
TWO ABUTMENTS BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
h	16	#6	9'-8"	---
h1	8	#5	7'-6"	---
h2	8	#4	32'-0"	---
h3	16	#6	11'-10"	---
h4	8	#5	9'-4"	---
P	16	#7	28'-4"	---
P1	8	#5	28'-4"	---
s	46	#4	13'-3"	□
s1	16	#4	8'-5"	□
u	16	#6	10'-2"	□
v	116	#4	3'-3"	---
v1	24	#4	8'-11"	---
v2	16	#4	5'-11"	---
Concrete Structures				Cu. Yd. 34.0
Reinforcement Bars				Pound 3190
Furnishing Steel Piles, HP10x42				Foot 91
Driving Piles				Foot 91
Test Pile, Steel HP 10x42				Each 1
Concrete Encasement				Cu. Yd. 2.2
Structure Excavation				Cu. Yd. 102

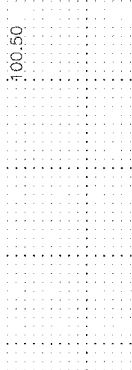
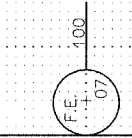
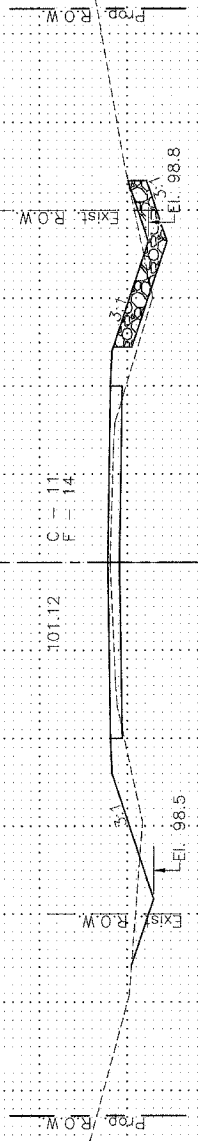
ABUTMENTS
 I.R. 140 OVER BRANCH OF
 LITTLE PIASA CREEK
 SECTION 05-05112-00-BR
 JERSEY COUNTY

FILE NAME: 05-083(039) - 12/19/09

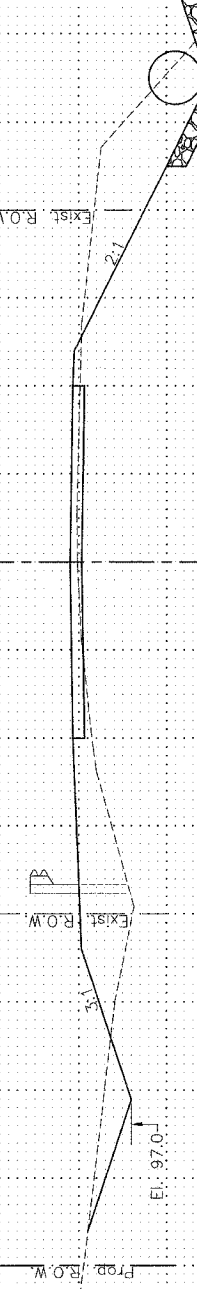
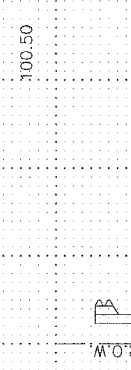
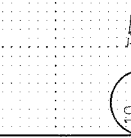
PROJECT ENDS - Sta. 12+50



End Stone Riprap Ditch - Sta. 12+00 Rt.



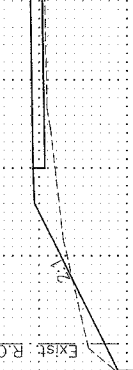
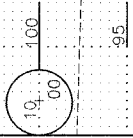
End Traffic Barrier Terminal Types 1(BLR 23) & 5A Sta. 11+06.7



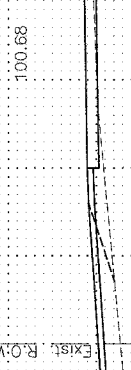
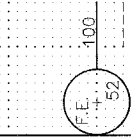
Bk. N. Abut. - Sta. 10+66

Bk. S. Abut. - Sta. 10+12

End Stone Riprap Ditch - Sta. 10+22 Lt.

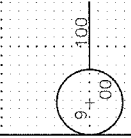


Begin Stone Riprap Ditch - Sta. 10+56 Rt.

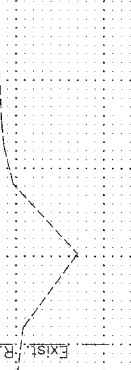
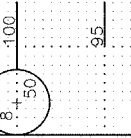


New 24" x 36" Pipe Culverts, Class D, Type 1
Inlet - El. 95.0
Outlet - El. 94.3
(26.4' Lt., Sta. 9+72)
Embankment - 16 Cu. Yds.

Existing 24" C.M.P. (to be removed)



PROJECT BEGINS - Sta. 8+50



New 15" x 26" Pipe Culverts, Class D, Type 1
Inlet - El. 97.6
Outlet - El. 96.8
(23.5' Rt., Sta. 9+21)

Field Entrance - Sta. 9+07 Rt.

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 140	*	JERSEY	8	8
PROJECT BROS-083(039)				
* 05-05112-00-BR				
CONTRACT NO. 97292				

CROSS SECTIONS
T.R. 140 OVER BRANCH OF
LITTLE PIASA CREEK
SECTION 05-05112-00-BR
JERSEY COUNTY