

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 11	05-04122-00-BR	JASPER	14	1
CONTRACT NO. 95491		ILLINOIS	PROJECT BROS-079(133)	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

Joint Utility Locating Information for Excavators

JULIE 1-800-892-0123

PLANS FOR PROPOSED
HIGHWAY BRIDGE PROGRAM

SECTION 05-04122-00-BR JASPER COUNTY

PROJECT BROS-079(133)

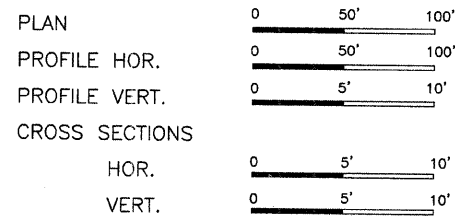
JOB NO. C-97-022-07

T.R. 11

INDEX OF SHEETS

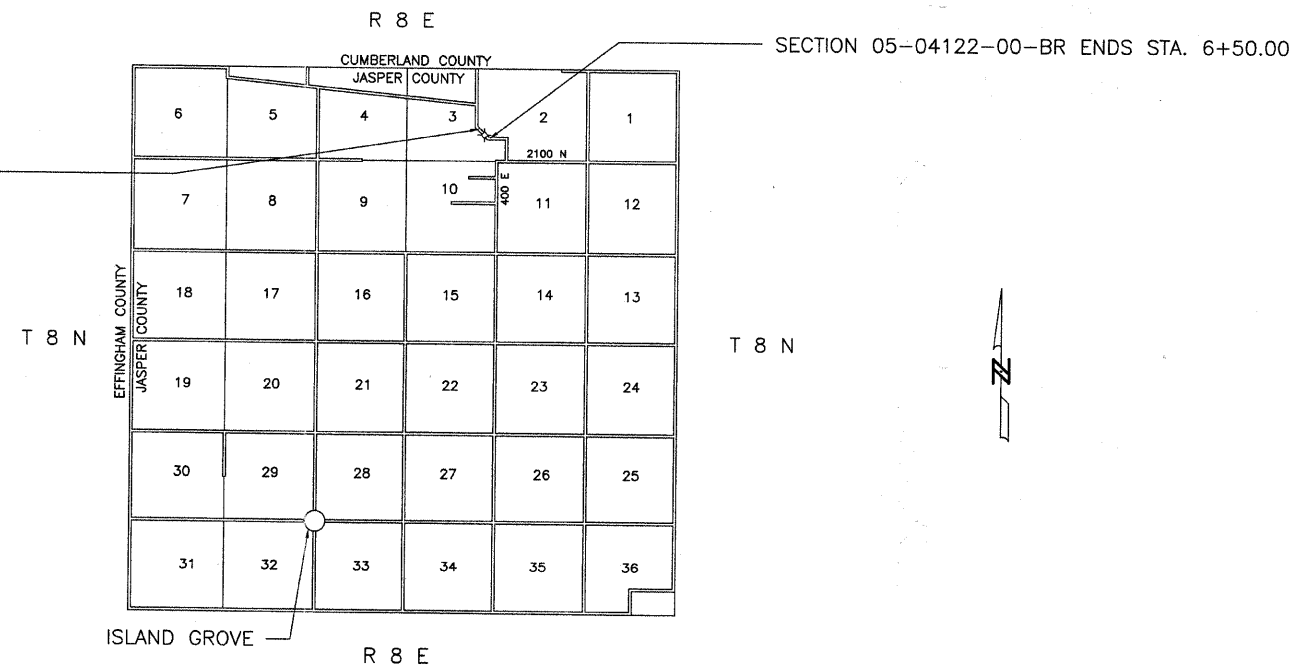
SHEET	ITEM
1	COVER SHEET
2	SUMMARY OF QUANTITIES
3	ROADWAY PLAN AND PROFILE
4	GENERAL PLAN AND ELEVATION
5	SUPERSTRUCTURE
6	SUPERSTRUCTURE DETAILS
7	STEEL RAILING, TYPE S-1
8	WEST ABUTMENT DETAILS
9	EAST ABUTMENT DETAILS
10	PILE DETAILS
11	BORING LOGS
12-14	CROSS SECTIONS

- STANDARD DRAWINGS
- STANDARD 000001-06
 - STANDARD 280001-06
 - STANDARD 630001-10
 - STANDARD 701901-02
 - STANDARD BLR 21-9
 - STANDARD BLR 22-7
 - STANDARD BLR 23-4
 - STANDARD BLR 27-1



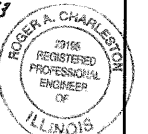
SECTION 05-04122-00-BR BEGINS STA. 1+75.00

SINGLE SPAN PRECAST PRESTRESSED CONCRETE DECK BEAM BRIDGE
76'-6" BK- BK. ABUTMENTS
STEEL PILE / SPILLTHROUGH ABUTMENTS
27' DECK
20' SKEW RT. FORWARD
EXISTING STRUCTURE NO. 040-3158
PROPOSED STRUCTURE NO. 040-3254



Roger A. Charleston
Ill. Reg. Eng. #29195
1/27/12
Lic. Expires 1/30/13

CHARLESTON ENGINEERING INC.
105 N. KITCHELL
P.O. BOX 397
OLNEY, ILLINOIS 62450
PH. 618-392-0736



APPROVED 1-27 2012
Robert A. Patton
COUNTY ENGINEER

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PASSED 2/17 2012
Maurice K. Kestel
DISTRICT SEVEN ENGINEER OF
LOCAL ROADS AND STREETS

Releasing For
Bid Based on
Limited Review
2/17 2012
Ronald D. Mitchell
DEPUTY DIRECTOR OF HIGHWAYS
REGION FOUR ENGINEER

FUNCTIONAL CLASSIFICATION - RURAL LOCAL ROAD CONTRACT NO. 95491
ADT = 150
DESIGN SPEED = 30 MPH

NET LENGTH SECTION 05-04122-00-BR = 475.00 Ft. = 0.090 Mi.

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 11	05-04122-00-BR	JASPER	14	2
CONTRACT NO. 95491		ILLINOIS	PROJECT BROS-079(133)	

DESIGN DATA

RURAL LOCAL ROAD
ADT = 125

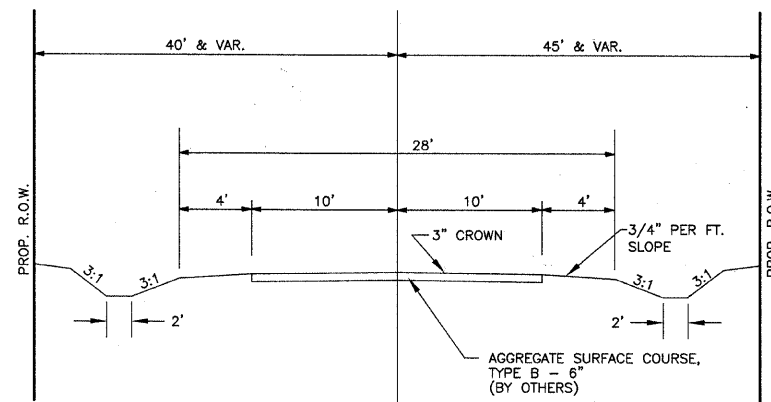
GENERAL NOTES

- SEEDING: THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF SECTION 250 OF THE STANDARD SPECIFICATIONS AND SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR SEEDING CLASS 2 (SPECIAL).
 - SPRING SEEDING SHALL EXTEND FROM JANUARY 1 TO JUNE 30
FALL SEEDING SHALL EXTEND FROM JULY 1 TO DECEMBER 31
 - FERTILIZER NUTRIENTS SHALL BE APPLIED AT THE RATE OF 100 LB/ACRE
 - MULCHING SHALL BE DONE IN ACCORDANCE WITH ARTICLE 251 OF THE STANDARD SPECIFICATIONS AND SHALL BE DONE BY METHOD 2, PROCEDURE 1 AT THE RATE OF 2 TONS PER ACRE.
- NO PAYMENT FOR OVERHAUL WILL BE MADE ON THIS SECTION.

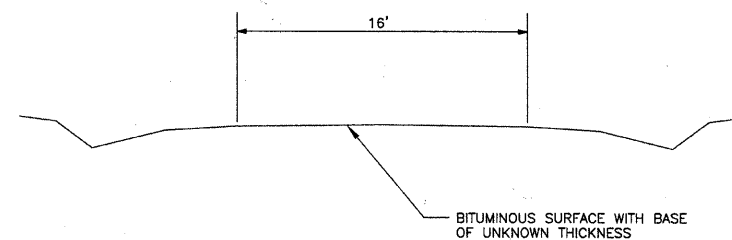
SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	QUANTITY
* LR631020	TRAFFIC BARRIER TERMINAL, TYPE 1	EACH	2
X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.50
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	65
20100210	TREE REMOVAL (OVER 15 UNITS DIAMETER)	UNIT	164
20200100	EARTH EXCAVATION	CU YD	100
20300100	CHANNEL EXCAVATION	CU YD	270
20400800	FURNISHED EXCAVATION	CU YD	1015
28000305	TEMPORARY DITCH CHECKS	FOOT	22
28000400	PERIMETER EROSION BARRIER	FOOT	250
28100807	STONE DUMPED RIPRAP, CLASS A4	TON	250
35101400	AGGREGATE BASE COURSE, TYPE B	TON	60
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50300225	CONCRETE STRUCTURES	CU YD	32.0
50300280	CONCRETE ENCASEMENT	CU YD	3.6
50400605	PRECAST PRESTRESSED CONCRETE DECK BEAMS (33" DEPTH)	SQ FT	2025
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	3120
* 50900205	STEEL RAILING, TYPE S1	FOOT	150
51201400	FURNISHING STEEL PILES HP 10X42	FOOT	270
51202305	DRIVING PILES	FOOT	270
51203400	TEST PILE STEEL HP 10X42	EACH	1
51204650	PILE SHOES	EACH	9
51500100	NAME PLATES	EACH	1
* 63100075	TRAFFIC BARRIER TERMINAL, TYPE 5A	EACH	2
67100100	MOBILIZATION	L. SUM	1

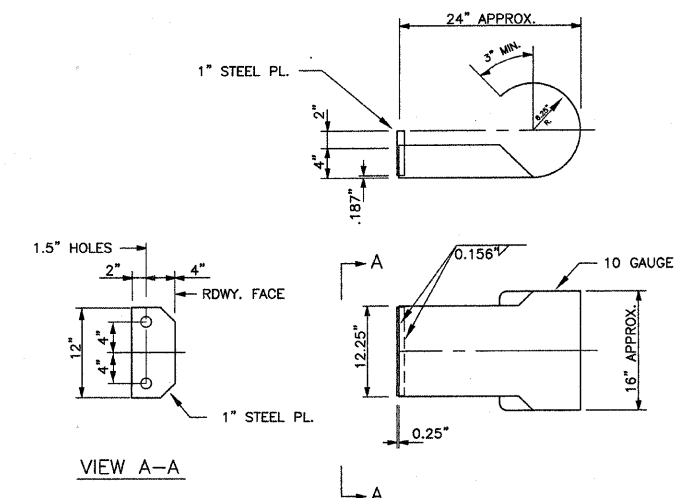
* SPECIALTY ITEMS



TYPICAL SECTION - PROPOSED



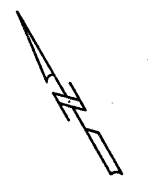
TYPICAL SECTION - EXISTING



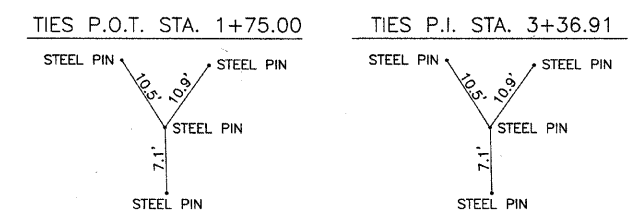
CURLED END SECTION DETAILS

2 REQUIRED - COST INCLUDED IN
"STEEL RAILING, TYPE S-1"

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 11	05-04122-00-BR	JASPER	14	3
CONTRACT NO. 95491		ILLINOIS	PROJECT BROS-079(133)	



SCALES:
 1" = 50' HOR
 1" = 10' VER



STA. 4+00.00 PROPOSED STRUCTURE NO. 040-3254
 SINGLE SPAN PRECAST PRESTRESSED CONCRETE DECK BEAM BRIDGE
 75'-6" BK. - BK. ABUTMENTS
 STEEL PILE SPILLTHROUGH ABUTMENTS
 27' DECK
 20' SKEW - RT. FORWARD

CIRCULAR
 D = 06°32'29"
 Da = 13°05'49"
 Dc = 13°07'32"
 T = 25.00
 R = 437.48
 L = 49.95
 C = 49.92
 E = 0.71
 M = 0.71
 PI Sta = 3+36.91
 S.E. = .04 FT/FT
 ATTAIN S.E. 2+00 TO 3+12
 REMOVE S.E. 3+12 TO 3+62

E J WATER CORPORATION
 DIETERICH, IL 62424
 PH. 217-925-5566

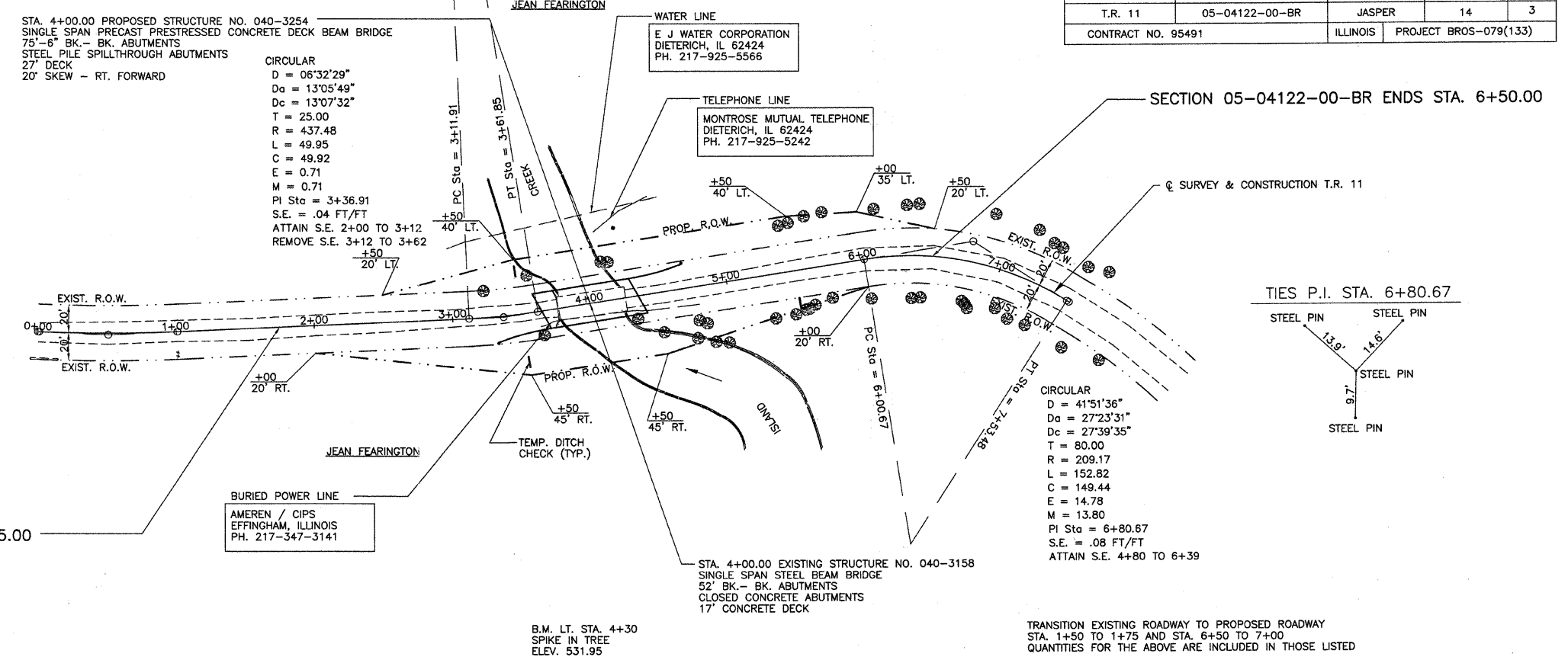
MONTROSE MUTUAL TELEPHONE
 DIETERICH, IL 62424
 PH. 217-925-5242

AMEREN / CIPS
 EFFINGHAM, ILLINOIS
 PH. 217-347-3141

STA. 4+00.00 EXISTING STRUCTURE NO. 040-3158
 SINGLE SPAN STEEL BEAM BRIDGE
 52' BK. - BK. ABUTMENTS
 CLOSED CONCRETE ABUTMENTS
 17" CONCRETE DECK

SECTION 05-04122-00-BR ENDS STA. 6+50.00

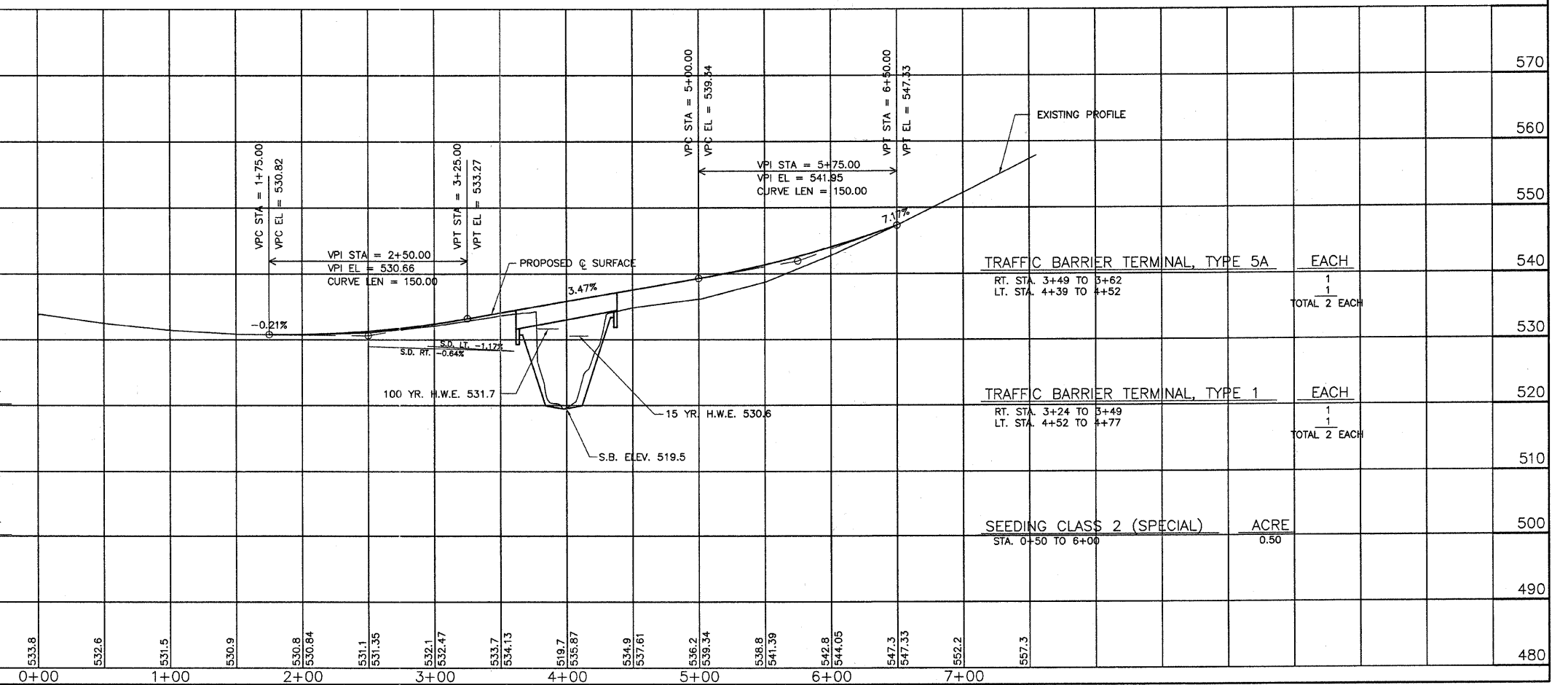
SECTION 05-04122-00-BR BEGINS STA. 1+75.00



TRANSITION EXISTING ROADWAY TO PROPOSED ROADWAY
 STA. 1+50 TO 1+75 AND STA. 6+50 TO 7+00
 QUANTITIES FOR THE ABOVE ARE INCLUDED IN THOSE LISTED

B.M. LT. STA. 4+30
 SPIKE IN TREE
 ELEV. 531.95

STATION	DESCRIPTION	UNIT	QUANTITY
570	EARTHWORK	CU. YD.	570
560	CHANNEL EXCAVATION		270*
560	EARTH EXCAVATION		100
560	EMBANKMENT		1190
560	FURNISHED EXCAVATION		1015
550	* IT IS ESTIMATED THAT 50% OF THE CHANNEL EXCAVATION WILL BE SUITABLE FOR USE IN THE EMBANKMENT. UNSUITABLE MATERIAL SHALL BE DISPOSED OF BY THE CONTRACTOR.		
540	TEMPORARY DITCH CHECKS	FOOT	22
530	TREE REMOVAL (6 TO 15 UNIT DIA.)	UNIT	65
520	TREE REMOVAL (OVER 15 UNIT DIA.)	UNIT	164
510	SEEDING CLASS 2 (SPECIAL)	ACRE	0.50
500	TRAFFIC BARRIER TERMINAL, TYPE 5A	EACH	2
500	TRAFFIC BARRIER TERMINAL, TYPE 1	EACH	2



ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 11	05-04122-00-BR	JASPER	14	4
CONTRACT NO. 95491		ILLINOIS	PROJECT BROS-079(133)	

GENERAL NOTES

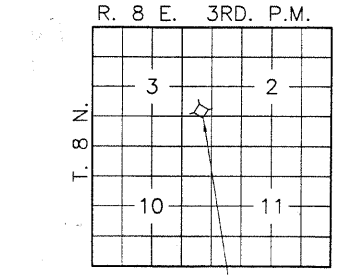
- The Contractor shall drive test pile to 110% of the nominal required bearing specified in production locations at East abutment or approved by the Engineer before ordering the remainder of piles. The test pile shall come equipped with a pile shoe.
- See Bridge Plan Sheet 8 for boring logs.
- A Corrosion inhibitor, as covered in the Special Provisions, shall be used in the concrete for precast prestressed concrete deck beams.
- Concrete sealer shall be applied to exterior face of each fascia beam.
- Reinforcement bars shall conform to the requirements of AASHTO M31 or M322 Grade 60.
- The Steel H-piles shall be according to AASHTO M270 Grade 50.
- Reinforcement bars shall conform to the requirements of ASTM A 706 Fr 60 (IL Modified). See Special Provisions.
- Reinforcement bars designated (E) shall be epoxy coated.
- Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.

TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub.		Total
			Piers	Abuts.	
Removal of Existing Structures	Each				1
Concrete Structures	Cu.Yds.			32.0	32.0
Precast Prestressed Concrete Deck Beams (33" Depth)	Sq.Ft.	2025			2025
Steel Railing, Type S-1	Foot	150			150
Reinforcement Bars	Pound			3120	3120
Furnishing Steel Piles HP 10 X 42	Foot			270	270
Driving Piles	Foot			270	270
Test Pile Steel HP 10 X 42	Each			1	1
Pile Shoes	Each			9	9
Name Plates	Each			1	1
Concrete Encasement	Cu.Yds.			3.6	3.6
Aggregate Base Course, Type B	Tons			60	60
Stone Dumped Riprap, Class A-4	Tons			250	250
Channel Excavation	Cu.Yds.			270	270
Perimeter Erosion Barrier	Foot			250	250

INDEX OF SHEETS

- General Plan & Elevation
- Superstructure
- Superstructure Details
- Steel Railing, Type S-1
- West Abutment Details
- East Abutment Details
- Pile Details
- Boring Logs



PROPOSED BRIDGE LOCATION SKETCH

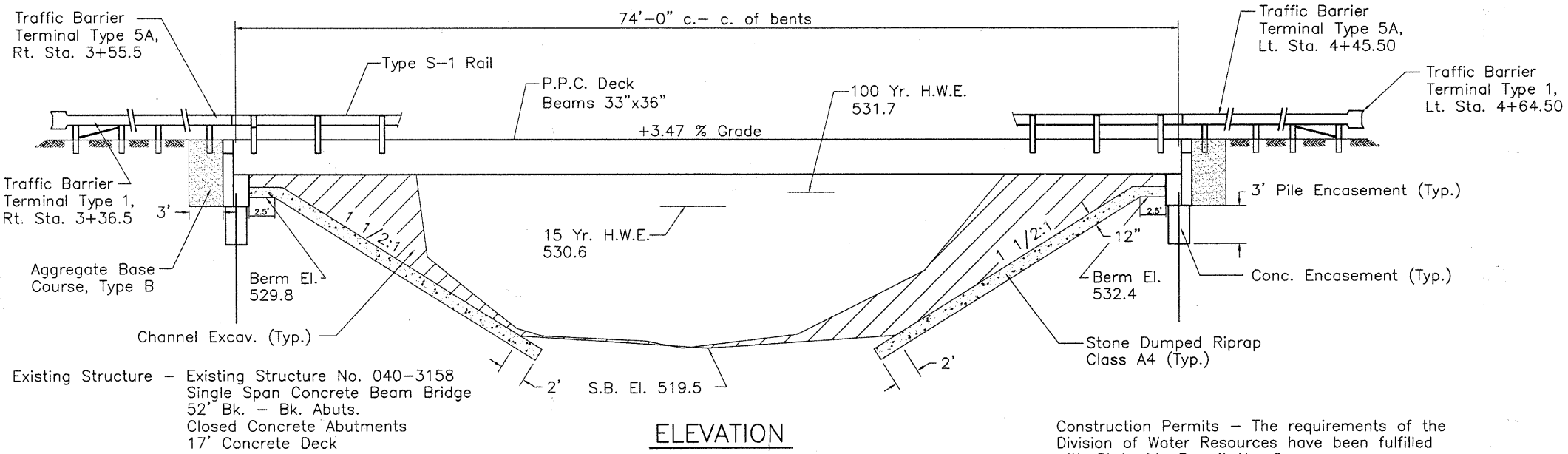
STATION 4+00.00
ISLAND CREEK
SEC. 05-04122-00-BR BUILT 201
JASPER COUNTY
PROJECT BROS-079(133)
LOADING HL93
STR. NO. 040-3254

LETTERING FOR NAME PLATE

Locate Name Plate at S.W. corner
Corner of Bridge (See Std. 515001)

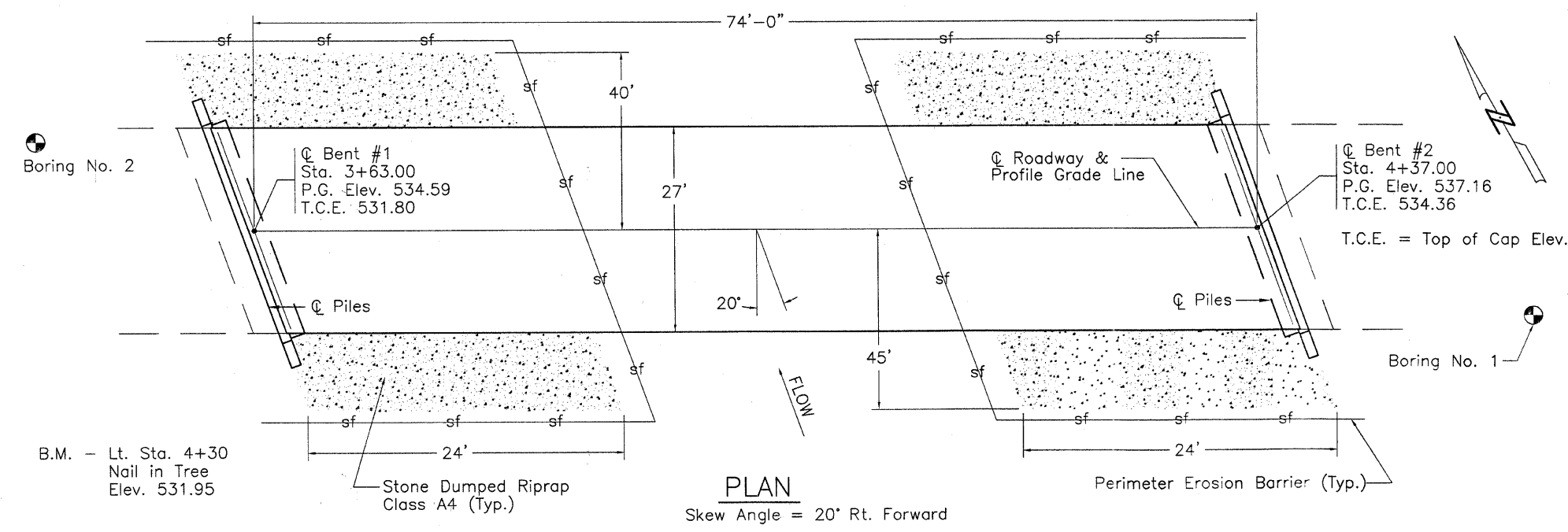
I certify that to the best of knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current AASHTO Standard Specifications for Highway Bridges.

N. Z. Kraddin
12-18-2011



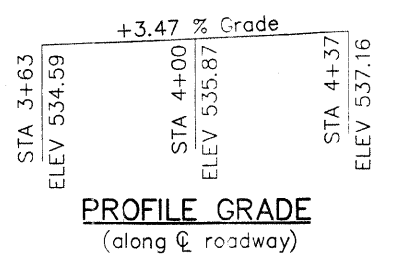
ELEVATION

Construction Permits - The requirements of the Division of Water Resources have been fulfilled with Statewide Permit No. 2.



PLAN

Skew Angle = 20' Rt. Forward



PROFILE GRADE
(along centerline roadway)

Salvage - Any material deemed salvageable by the Engineer shall be stockpiled on the R.O.W. and shall become the property of the Grove Road District Commissioner. The Contractor shall dispose of all remaining material.

LOADING HL-93

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

DESIGN SPECIFICATIONS

2007 AASHTO LRFD Bridge Design Specifications - 4th ed.

DESIGN STRESSES

FIELD UNITS
f'c = 3,500 psi
Fy = 60,000 psi (reinforcement)

PRECAST PRESTRESSED UNITS

f'c = 6,000 psi
f'ci = 5,000 psi
F's = 270,000 psi (1/2" low relax. strands)
Fsi = 201,960 psi (1/2" low relax. strands)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 2
Design Spectral Acceleration at 1.0 sec. (SD1) = 0.210g
Design Spectral Acceleration at 0.2 sec. (SD5) = 0.500g
Soil Site Class = D

PILE DATA

Type	HP 10 X 42
Nominal Required Bearing	325 kips
Factored Resistance Available	170 kips
Estimated Pile Length	30 Feet
Number of Production Piles	9
Number of Test Piles	1
Pile Shoes	9

WATERWAY INFORMATION

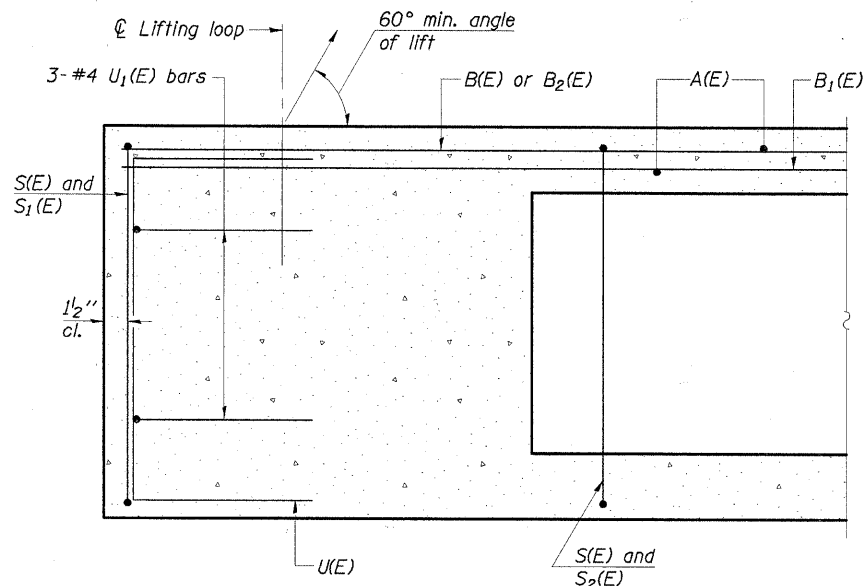
Drainage Area = 15.6 Sq. Mi.		Low Grade Elev. = 530.8 @ Sta. 2+00				
Flood	Freq. Yr.	Q ft ³ /s	Opening ft ²	Nat. H.W.E.	Head - ft	Headwater
			Exist. Prop.	Exist. Prop.	Exist. Prop.	Exist. Prop.
Design	15	1895	370 481	530.6	0.2 0.1	530.8 530.7
Base	100	2990	424 552	531.7	0.4 0.1	532.1 531.8
Overtopping						
Max. Calc.	500					

GENERAL PLAN & ELEVATION

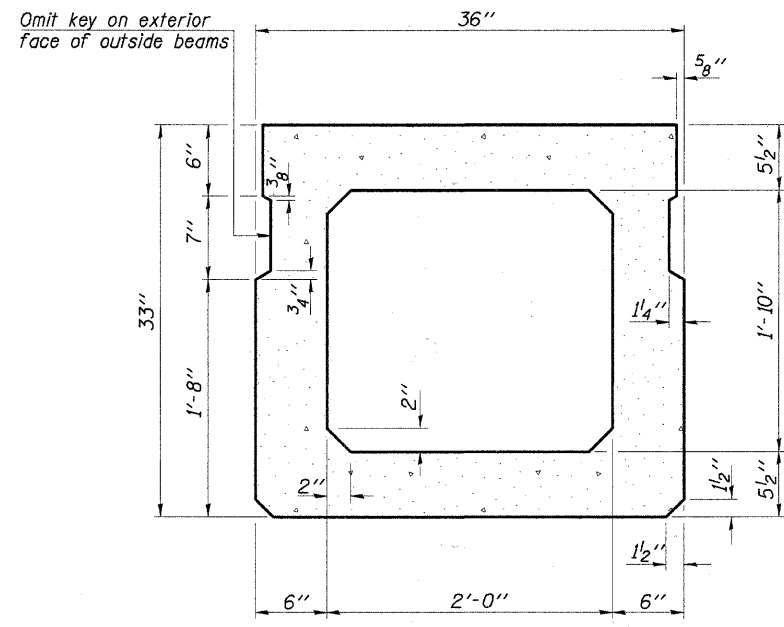
T.R. ROUTE 11
OVER ISLAND CREEK

SECTION 05-04122-00-BR
JASPER COUNTY
STATION 4+00.00

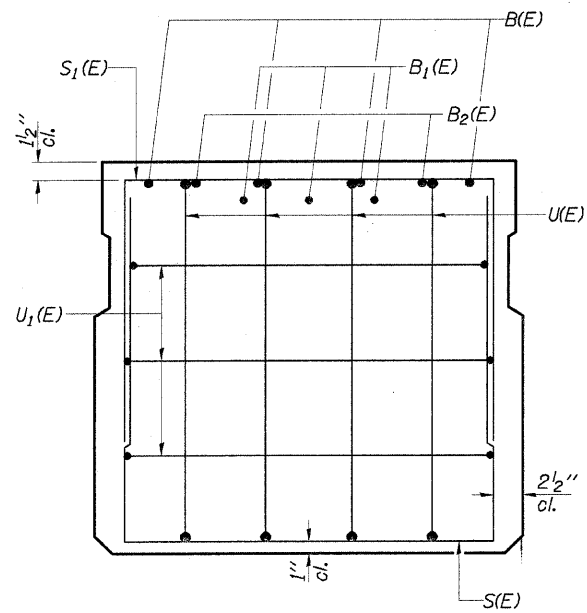
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 11	05-04122-00-BR	JASPER	14	5
CONTRACT NO. 95491		ILLINOIS	PROJECT BROS-079(133)	



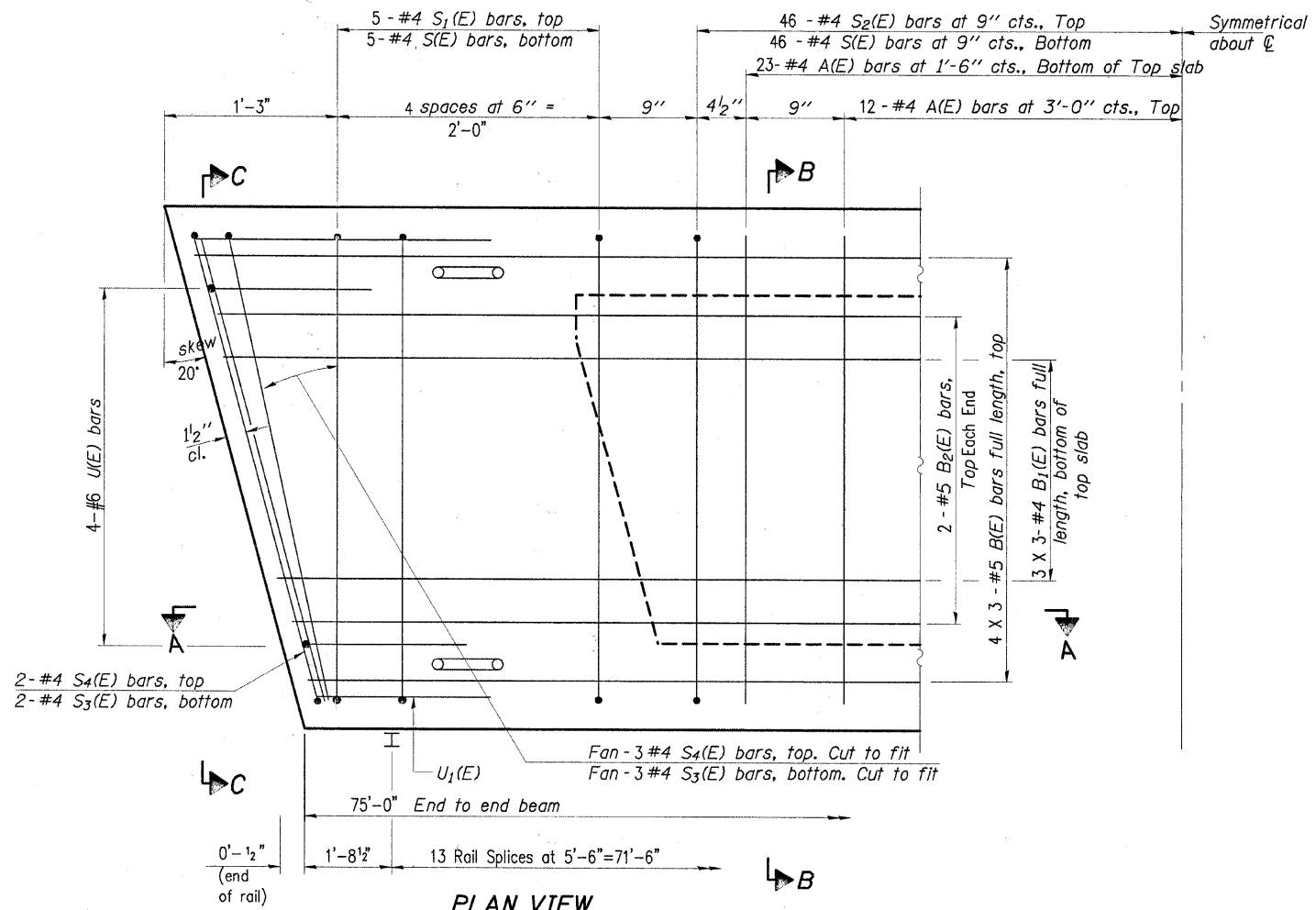
SECTION C-C



SECTION A-A
(Showing dimensions)



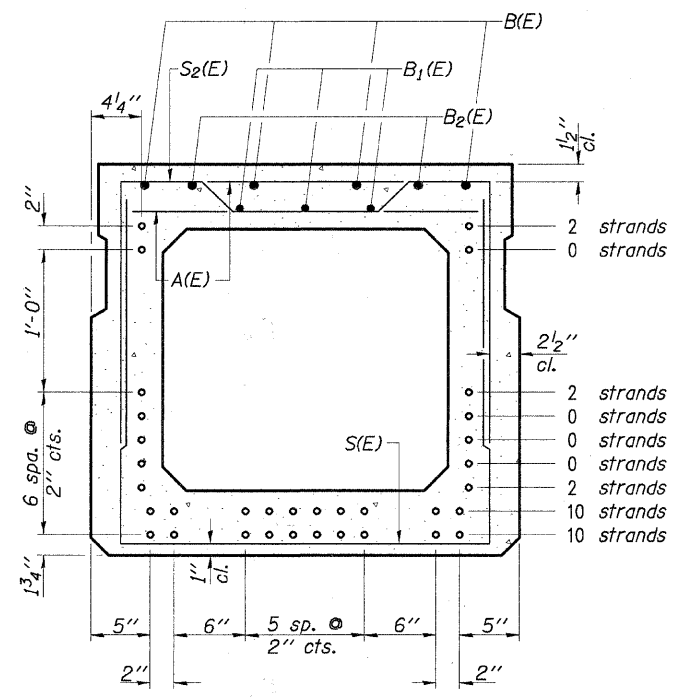
VIEW B-B



PLAN VIEW

Note: Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.

Bars indicated thus 4 X 3-#5 etc. indicates 4 lines of bars with 3 lengths per line.



SECTION A-A

(Showing reinforcement and permissible strand locations)

Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

MIN. BAR LAP

- #4 1'-8"
- #5 2'-2"

BAR LIST
ONE BEAM ONLY
(For information only)

Bar	No.	Size	Length	Shape
A(E)	70	#4	2'-7"	—
B(E)	12	#5	26'-5"	—
B1(E)	9	#4	26'-5"	—
B2(E)	4	#5	10'-0"	—
S(E)	104	#4	7'-5"	┌
S1(E)	12	#4	6'-3"	┌
S2(E)	92	#4	6'-6"	┌
S3(E)	10	#4	5'-9"	┌
S4(E)	10	#4	5'-6"	┌
U(E)	8	#6	5'-0"	┌
U1(E)	6	#4	5'-0"	┌

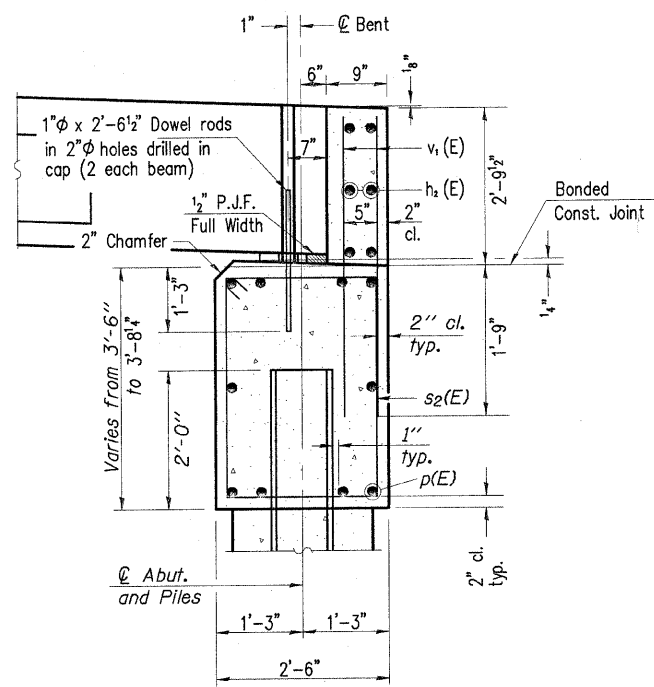
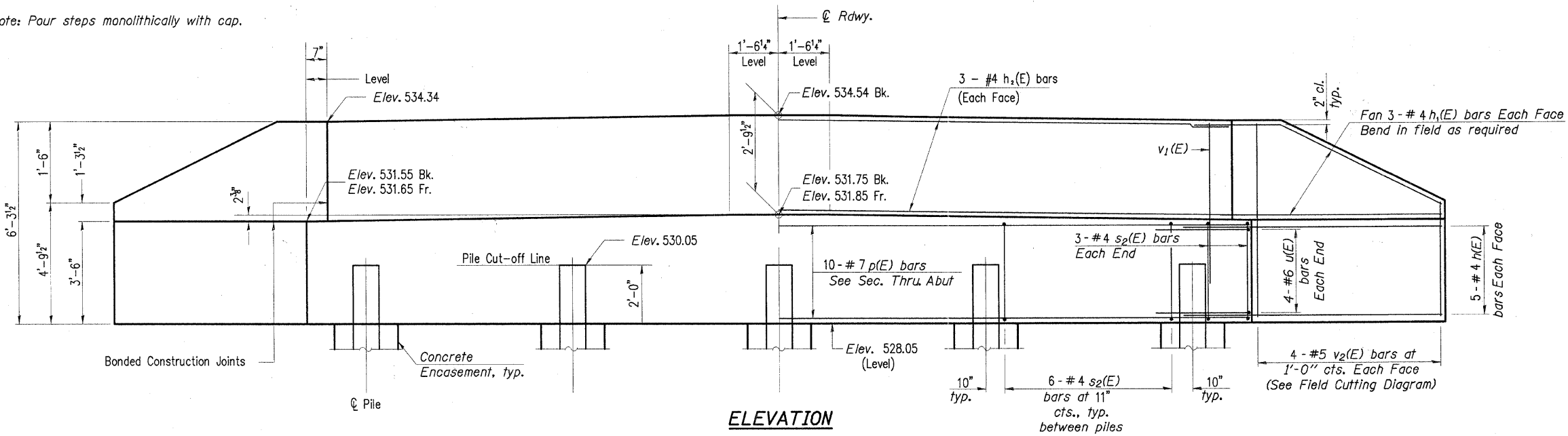
Note: See sheet 6 of 14 for additional details and Bill of Material.

33" x 36" PPC DECK BEAM

CHARLESTON ENGINEERING, INC.
CONSULTING ENGINEERS
105 NORTH KITCHELL
P.O. BOX 387
OLNEY, ILLINOIS 62450
(618) 362-0736
ILLINOIS DEPARTMENT OF PROFESSIONAL REGULATION REGISTRATION #134.003513

SUPERSTRUCTURE
STRUCTURE NO. 040-3254
T.R. 11
OVER ISLAND CREEK
SECTION 05-04122-00-BR
JASPER COUNTY
STATION 4+00.00

Note: Four steps monolithically with cap.



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	20	#4	5'-0"	—
h ₁ (E)	12	#4	5'-3"	—
h ₂ (E)	6	#4	29'-8"	—
p(E)	10	#7	29'-8"	—
s ₂ (E)	30	#4	11'-5"	□
u(E)	8	#6	11'-3"	U
v ₁ (E)	60	#5	4'-5"	—
v ₂ (E)	8	#5	10'-2"	—
Concrete Structures			Cu. Yd.	16.0
Reinforcement Bars, Epoxy Coated			Pound	1560
Furnishing Steel Piles HP 10X42			Foot	150
Driving Piles			Foot	150
Pile Shoes			Each	5
Concrete Encasement			Cu. Yd.	1.8

- Notes:
- The Backwall and the portion of the Wingwalls above the bonded construction joint shall be cast against the in-place beam.
 - Space reinforcement in cap to miss anchor bolts.
 - The test pile shall be driven to 110 percent of the Nominal Required Bearing indicated in the pile data information.

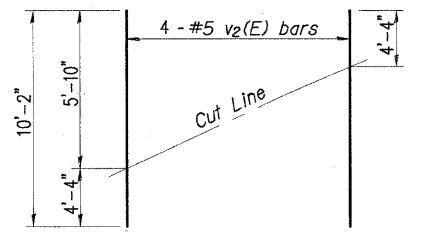
For details of piles and Concrete Encasement, see sheet 10 of 14.

CHARLESTON ENGINEERING, INC.
CONSULTING ENGINEERS
105 NORTH KITCHELL
P.O. BOX 397
OLNEY, ILLINOIS 62450
(618) 352-0735
ILLINOIS DEPARTMENT OF PROFESSIONAL REGULATION REGISTRATION #184-003513

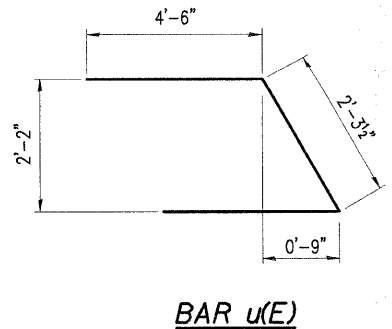
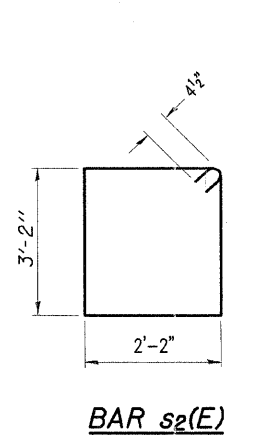
WEST ABUTMENT DETAILS
STRUCTURE NO. 040-3254
T.R. 11
OVER ISLAND CREEK
SECTION 05-04122-00-BR
JASPER COUNTY
STATION 4+00.00

PILE DATA

Type: HP 10X42
Nominal Required Bearing: 325 kips
Factored Resistance Available: 170 kips
Est. Length: 30 Feet
No. Production Piles: 5

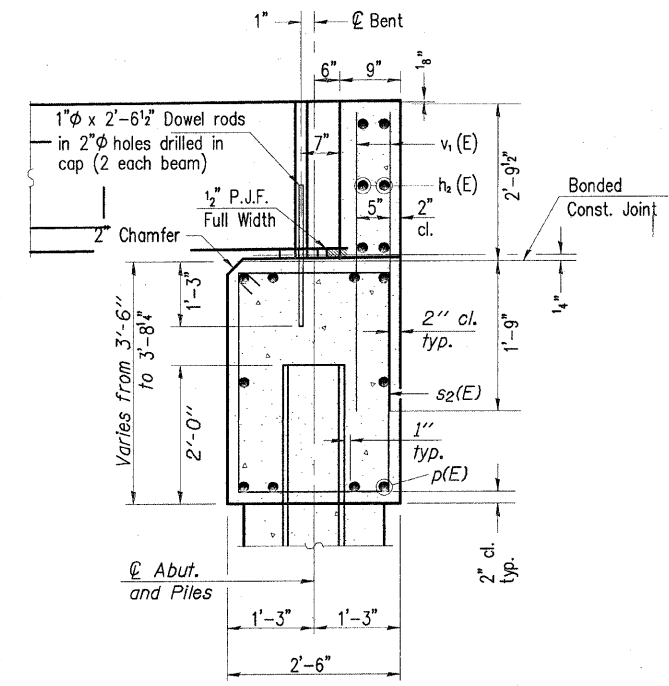
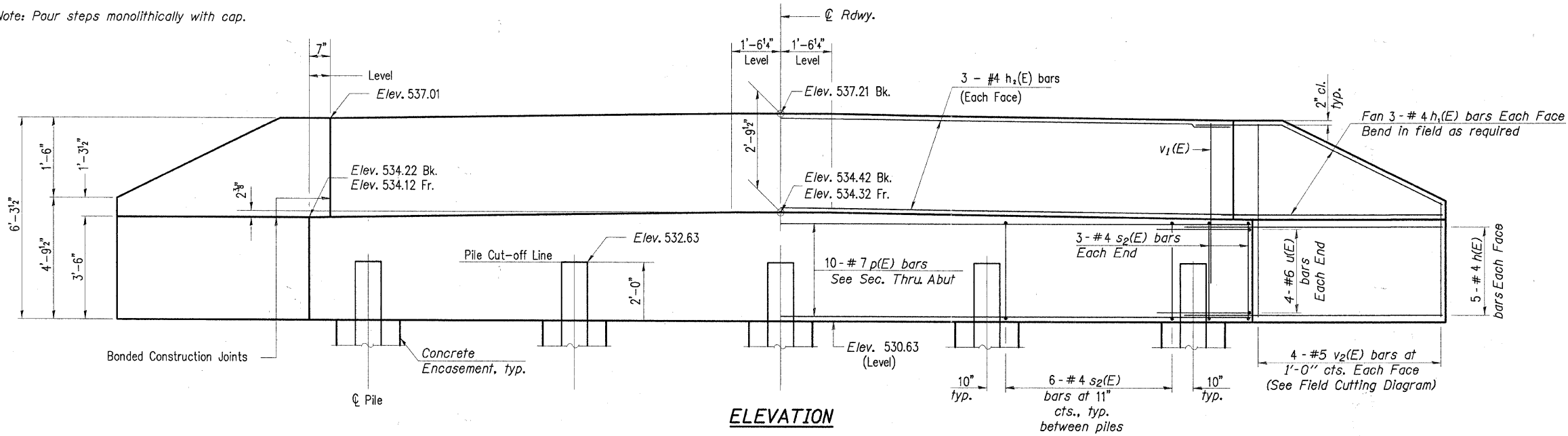


FIELD CUTTING DIAGRAM
Order v₂(E) full length. Cut as shown and use remainder of bars in opposite face.



ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 11	05-04122-00-BR	JASPER	14	9
CONTRACT NO. 95491		ILLINOIS	PROJECT BROS-079(133)	

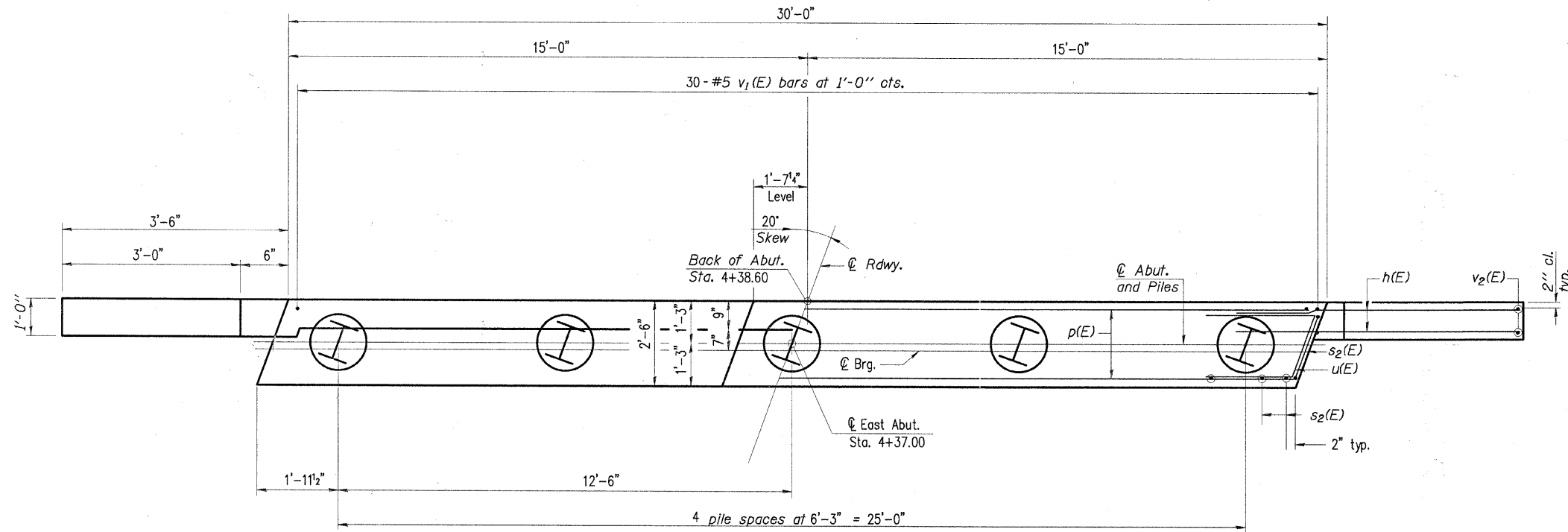
Note: Pour steps monolithically with cap.



SEC. THRU ABUT.

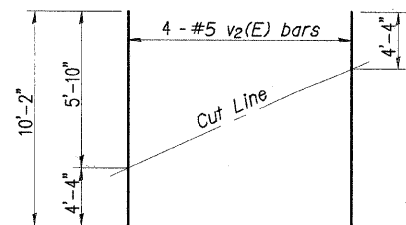
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	20	#4	5'-0"	—
h1(E)	12	#4	5'-3"	—
h2(E)	6	#4	29'-8"	—
p(E)	10	#7	29'-8"	—
s2(E)	30	#4	11'-5"	□
u(E)	8	#6	11'-3"	—
v1(E)	60	#5	4'-5"	—
v2(E)	8	#5	10'-2"	—
Concrete Structures			Cu. Yd.	16.0
Reinforcement Bars, Epoxy Coated			Pound	1560
Furnishing Steel Piles HP 10X42			Foot	120
Driving Piles			Foot	120
Test Pile			Each	1
Concrete Encasement			Cu. Yd.	1.8
Pile Shoes			Each	4

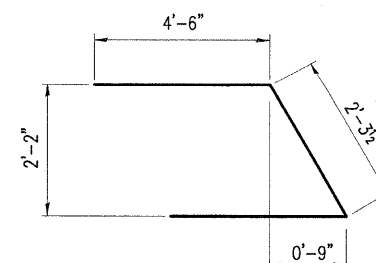
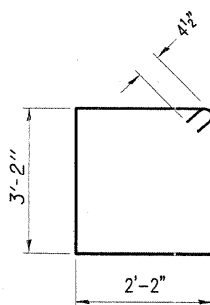


PILE DATA

Type: HP 10X42
 Nominal Required Bearing: 325 kips
 Factored Resistance Available: 170 kips
 Est. Length: 30 Feet
 No. Production Piles: 4
 No. Test Piles: 1



FIELD CUTTING DIAGRAM
 Order v2(E) full length. Cut as shown and use remainder of bars in opposite face.



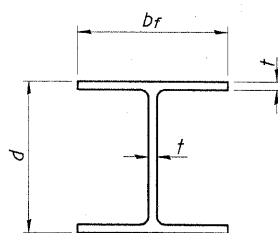
- Notes:
1. The Backwall and the portion of the Wingwalls above the bonded construction joint shall be cast against the in-place beam.
 2. Space reinforcement in cap to miss anchor bolts.
 3. The test pile shall be driven to 110 percent of the Nominal Required Bearing indicated in the pile data information.

ABUTMENTS

For details of piles and Concrete Encasement, see sheet 10 of 14.

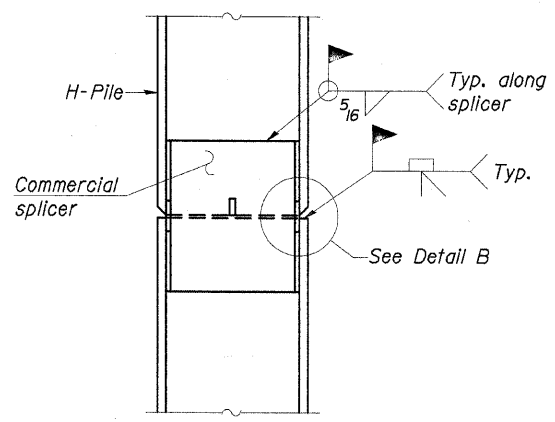
CHARLESTON ENGINEERING, INC.
 CONSULTING ENGINEERS
 105 NORTH KITCHELL
 P.O. BOX 397
 QUINCY, ILLINOIS 62450
 (618) 392-0736
 ILLINOIS DEPARTMENT OF PROFESSIONAL REGULATION REGISTRATION #184.005510

EAST ABUTMENT DETAILS
 STRUCTURE NO. 040-3254
 T.R. 11
 OVER ISLAND CREEK
 SECTION 05-04122-00-BR
 JASPER COUNTY
 STATION 4+00.00

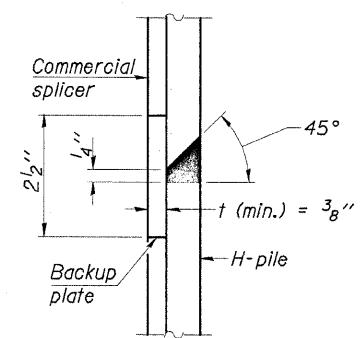


STEEL PILE TABLE

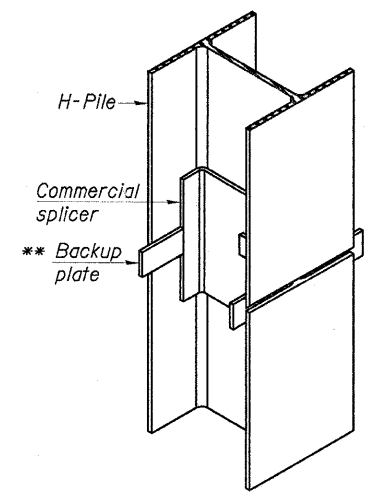
Designation	Depth d	Flange width bf	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	13/16"	30"
x102	14"	14 3/4"	1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11 3/4"	12"	7/16"	24"
HP 10x57	10"	10 1/4"	9/16"	24"
HP 10x42	9 3/4"	10 1/8"	7/16"	24"
HP 8x36	8"	8 1/8"	7/16"	18"



ELEVATION

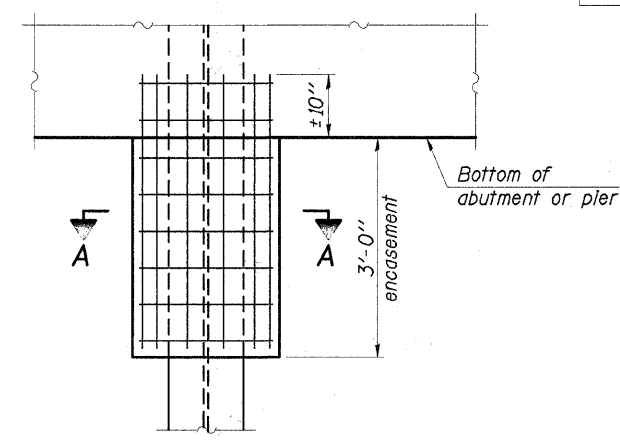


DETAIL "B"

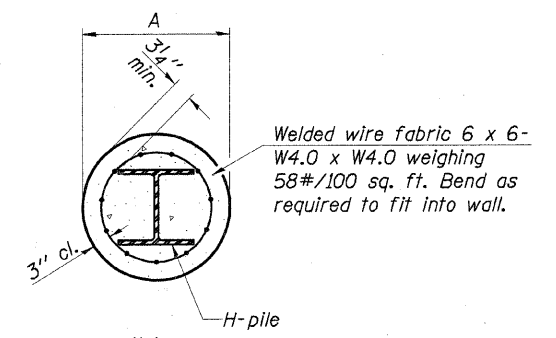


ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE

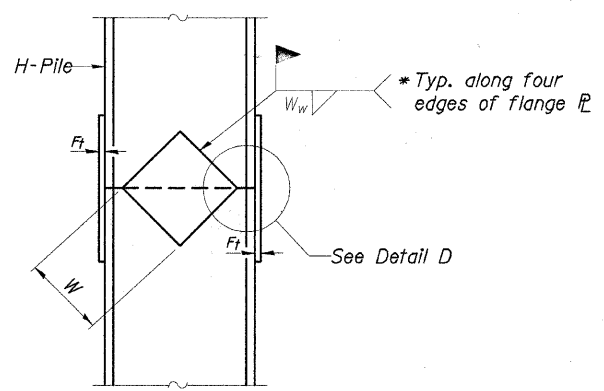


ELEVATION

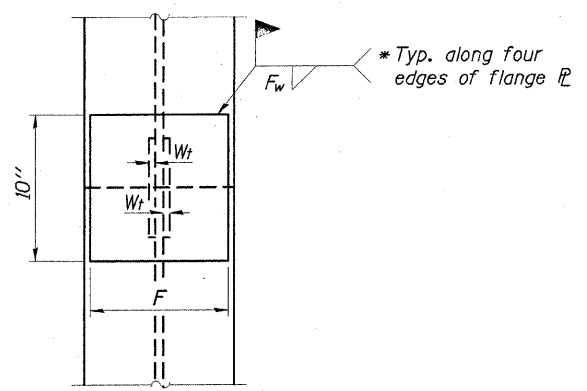


SECTION A-A

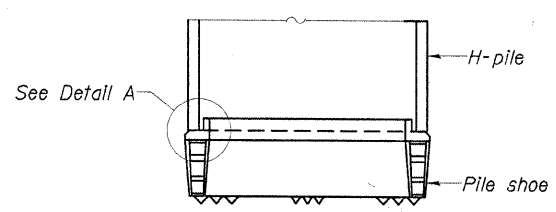
PILE ENCASEMENT



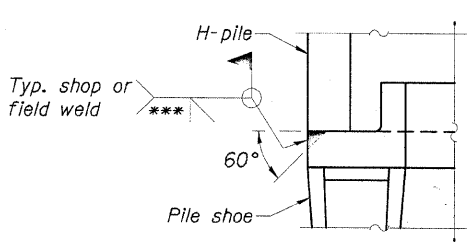
ELEVATION



END VIEW

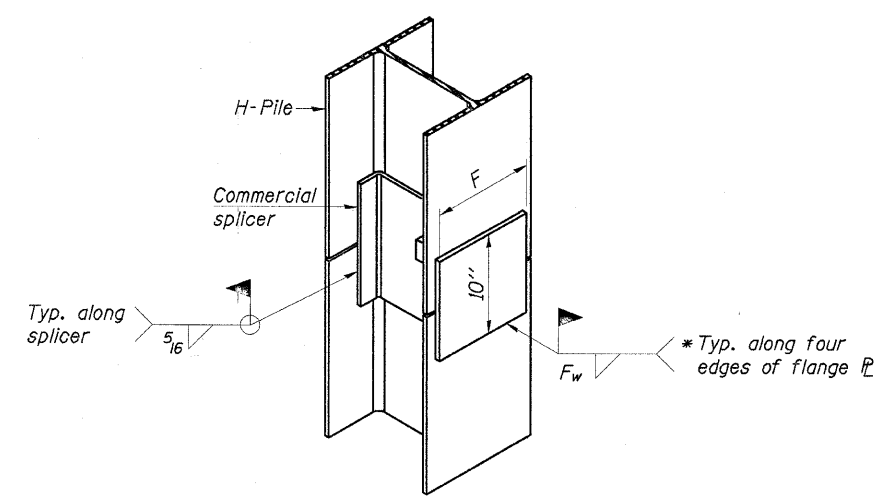


ELEVATION



DETAIL A

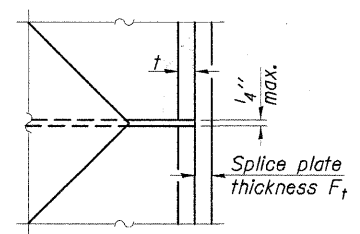
H-PILE SHOE ATTACHMENT



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

- * Interrupt welds 1/4" from end of web and/or each flange.
- ** Remove portions of backup plates that extend outside the flanges.
- *** Weld size per pile shoe manufacturer (5/16" min.).



DETAIL D

WELDED PLATE FIELD SPLICE

Designation	F	Ft	Fw	W	Wt	Ww
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5 1/2"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5 1/2"	1/2"
x89	12 1/2"	3/4"	1/16"	7 3/4"	5 1/2"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5 1/2"	1/2"
HP 12x84	10"	7/8"	1/16"	6 1/2"	5 1/2"	1/2"
x74	10"	7/8"	1/16"	6 1/2"	5 1/2"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
HP 10x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"

Note:
The steel H-piles shall be according to AASHTO M270 Grade 50.

CHARLESTON ENGINEERING, INC.
CONSULTING ENGINEERS
105 NORTH KITCHELL
P.O. BOX 397
OLNEY, ILLINOIS 62450
(618) 392-0736
ILLINOIS DEPARTMENT OF PROFESSIONAL REGULATION REGISTRATION #164-002613

PILE DETAILS
STRUCTURE NO. 040-3254
T.R. 11
OVER ISLAND CREEK
SECTION 05-04122-00-BR
JASPER COUNTY
STATION 4+00.00

HOLCOMB FOUNDATION ENGINEERING INC.
P.O. Box 88 618-529-5262
Carbondale, Il. 62903 618-457-8991 fax

Bridge Foundation Boring Log

Project: H-05156 Bridge over Island Creek Date: 6/29/05
Section: 05-04122-00-BR Station _____ Bored by: D. Russell
Route: _____ Checked By: T. Holcomb
County: Jasper

Boring No. 1	Station: 4+51	Offset: 8' R	Surface Water Elev.			Ground Water Elev.			
			Elevation	N	Qu tsf	Elevation	N	Qu tsf	
								511.1	
								plug	
			534.6	0					
			12" clayey sand and gravel						
			533.6						
			Brown Sandy CLAY (A-6) with pebbles						
				9	0.8S	10			
								510.1	
								Gray Clayey SAND (A-2-4)	
								-25 6 -- 18	
				7	0.6S	11			
								506.1	
								Gray SHALE	
				4	0.7S	16		-30	
								100	
								/2" -- 6	
				4	0.9B	25		100	
								/2" -- 8	
								500.6	
				1	0.7B	21		-35	
								End of Boring @ -34.0'	
			520.1	0	0.8B	30			
			Gray Mottled Brown Silty CLAY (A-6) with trace sand						
								-15	
				5	1.4B	23		-40	
				3	0.8B	26		-20	

N = Standard Penetration Test Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with a 140 lbs. hammer falling 30"
Qu - Unconfined Compressive Strength in tons/sq.ft.
w - Water Content - percentage of oven dry weight - %
B = Bulge Failure
S = Shear Failure
E = Estimated Value
P = Penetrometer

HOLCOMB FOUNDATION ENGINEERING INC.
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Bridge Foundation Boring Log

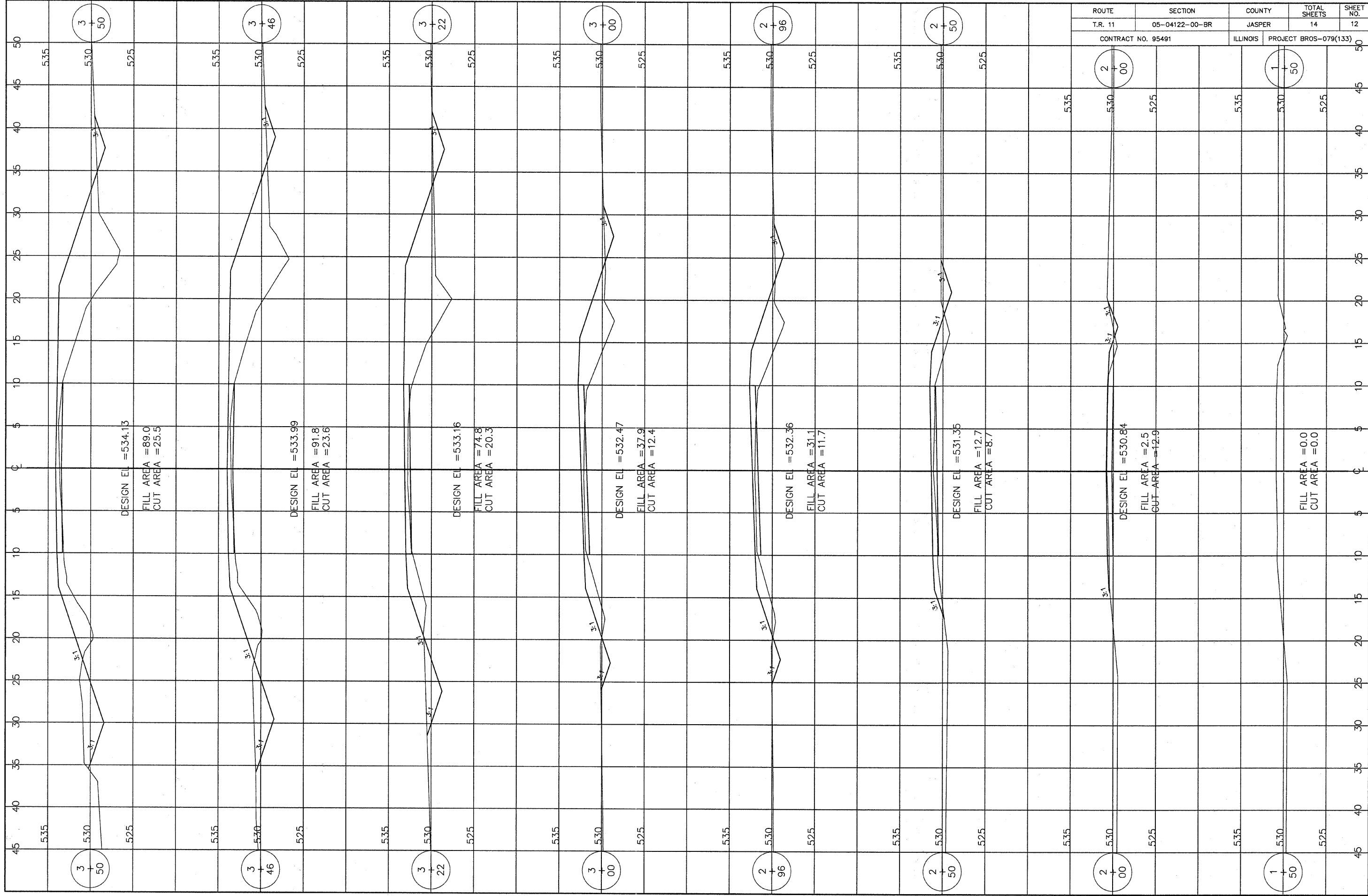
Project: H-05156 Bridge over Island Creek Date: 6/29/05
Section: 05-04122-00-BR Station _____ Bored by: D. Russell
Route: _____ Checked By: T. Holcomb
County: Jasper

Boring No. 2	Station: 3+49	Offset: 8' L	Surface Water Elev.			Ground Water Elev.			
			Elevation	N	Qu tsf	Elevation	N	Qu tsf	
								519.8	
								plug	
			533.3	0					
			Brown Silty CLAY (A-6) with sand and gravel						
								509.8	
								Gray SANDSTONE	
								100	
								-25 /6" -- 10	
				8					
								527.3	
								Brown Sandy CLAY (A-6)	
								100	
								-30 /4" -- 10	
				6	1.0S	21			
								523.8	
								Brown Fine SAND (A-2-4)	
								100	
								-10 5 0.3B 4	
								521.8	
								Gray SHALE	
								100	
								-35 /2" -- 7	
								499.8	
								Gray Clayey SAND (A-2-4)	
								498.8	
								End of Boring @ -34.5'	
								-15 1 -- 25	
								516.3	
								Gray Medium SAND (A-2-4)	
								trace sand	
								-40	
				5				514.3	
								Gray Medium SAND (A-2-4)	
								trace sand	
								-20 2 0.6B 34	

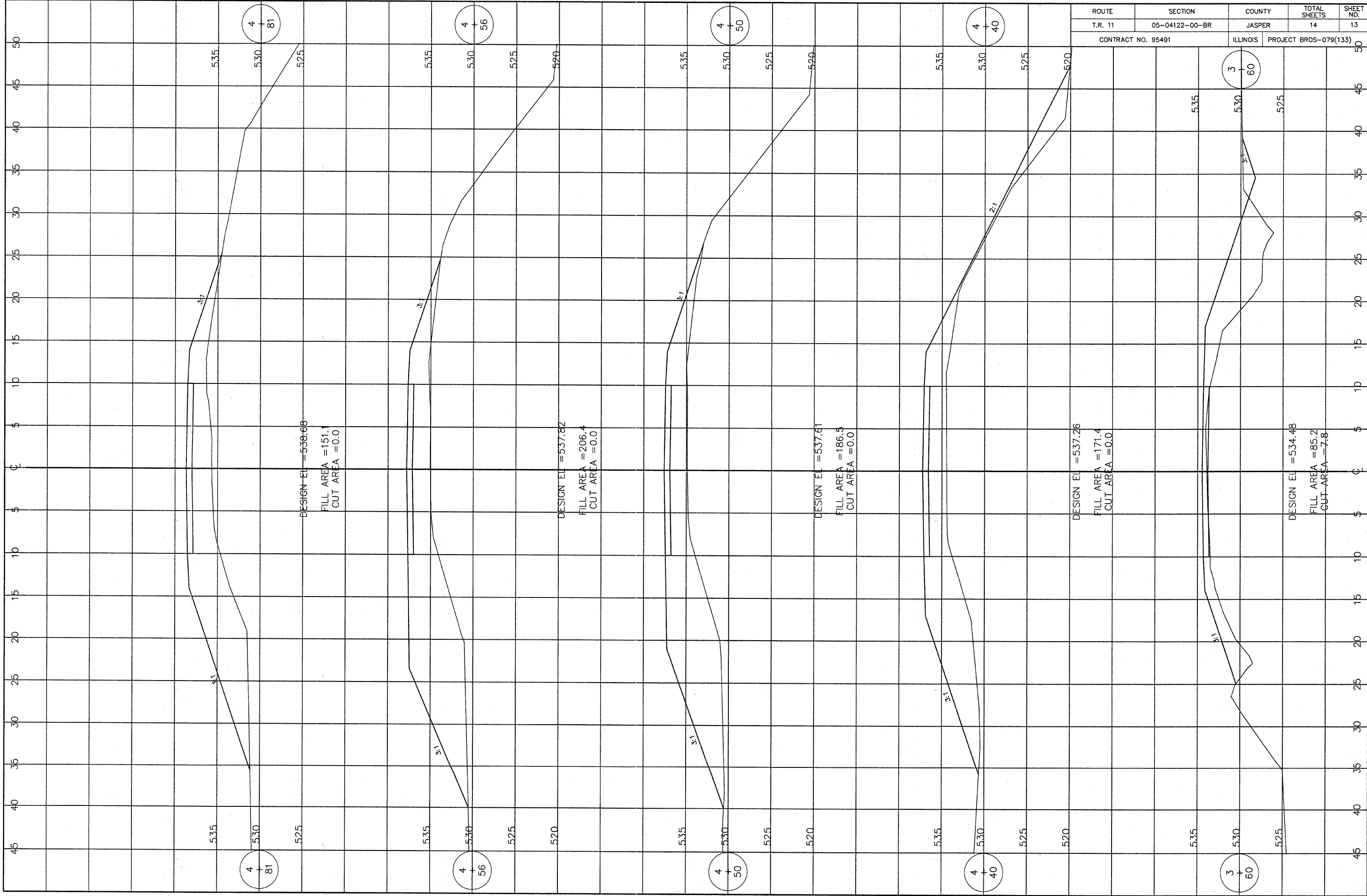
N = Standard Penetration Test Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with a 140 lbs. hammer falling 30"
Qu - Unconfined Compressive Strength in tons/sq.ft.
w - Water Content - percentage of oven dry weight - %
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BORING LOGS
STRUCTURE NO. 040-3254
T.R. 11
OVER ISLAND CREEK
SECTION 05-04122-00-BR
JASPER COUNTY
STATION 4+00.00



ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 11	05-04122-00-BR	JASPER	14	12
CONTRACT NO. 95491		ILLINOIS	PROJECT BROS-079(133)	



ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 11	05-04122-00-BR	JASPER	14	13
CONTRACT NO. 95491		ILLINOIS	PROJECT BROS-079(133)	

DESIGN EL = 538.68
 FILL AREA = 151.1
 CUT AREA = 0.0

DESIGN EL = 537.82
 FILL AREA = 206.4
 CUT AREA = 0.0

DESIGN EL = 537.61
 FILL AREA = 186.5
 CUT AREA = 0.0

DESIGN EL = 537.26
 FILL AREA = 171.4
 CUT AREA = 0.0

DESIGN EL = 534.48
 FILL AREA = 85.2
 CUT AREA = 7.8

4
|
81

4
|
56

4
|
50

4
|
40

3
|
60

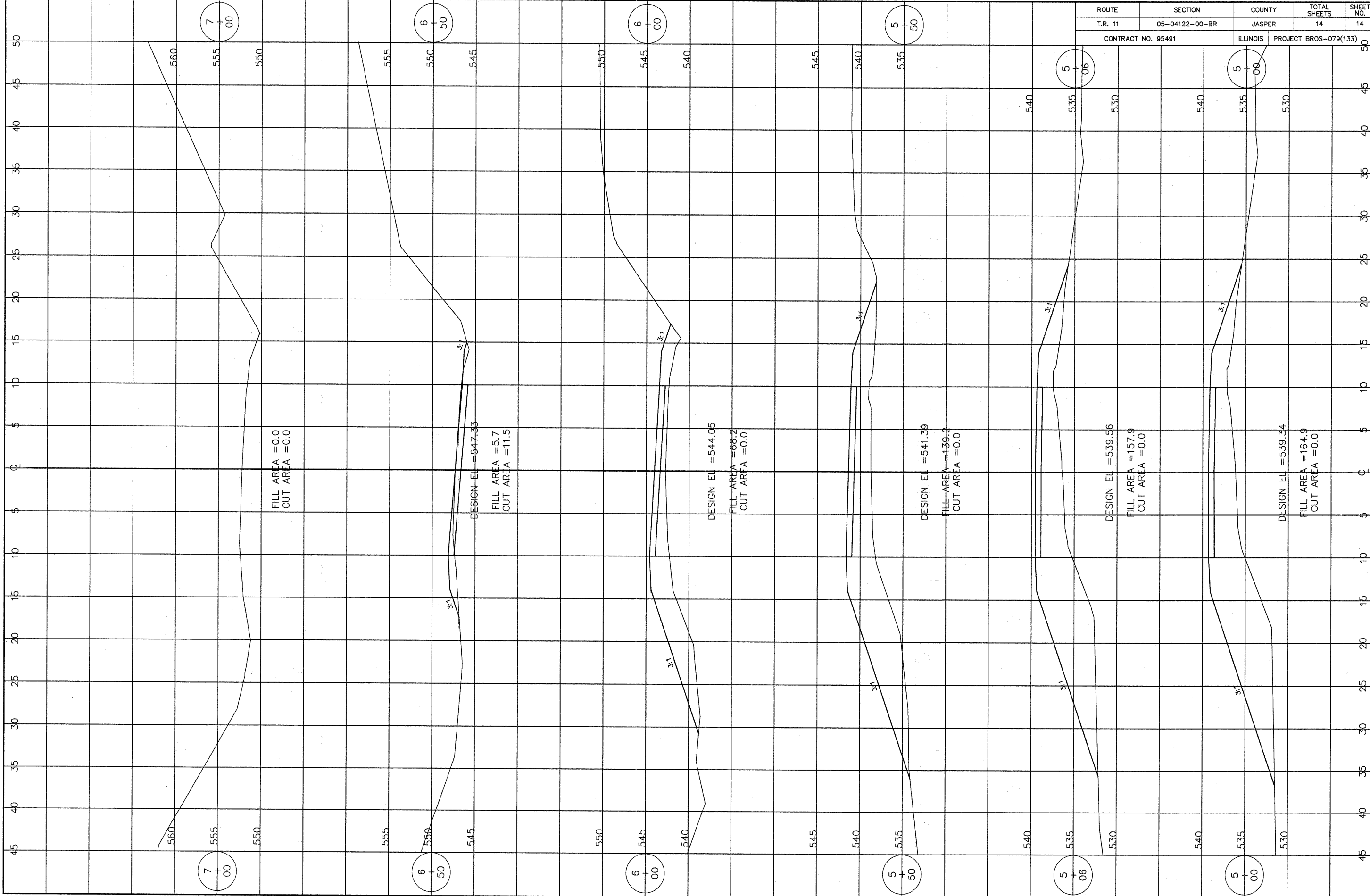
4
|
81

4
|
56

4
|
50

4
|
40

3
|
60



ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 11	05-04122-00-BR	JASPER	14	14
CONTRACT NO. 95491		ILLINOIS	PROJECT BROS-079(133)	

7
+
00

6
+
50

6
+
00

5
+
50

5
+
06

5
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06

7
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5
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5
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06

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