

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
10-00091-00-BT	EFFINGHAM	9	1
CONTRACT NO. 95646			

Joint Utility Locating Information for Excavators  
JULIE 1-800-892-0123

PLANS FOR PROPOSED  
TRANSPORTATION, COMMUNITY, AND SYSTEM PRESERVATION PROJECT  
PEDESTRIAN TRUSS BRIDGE

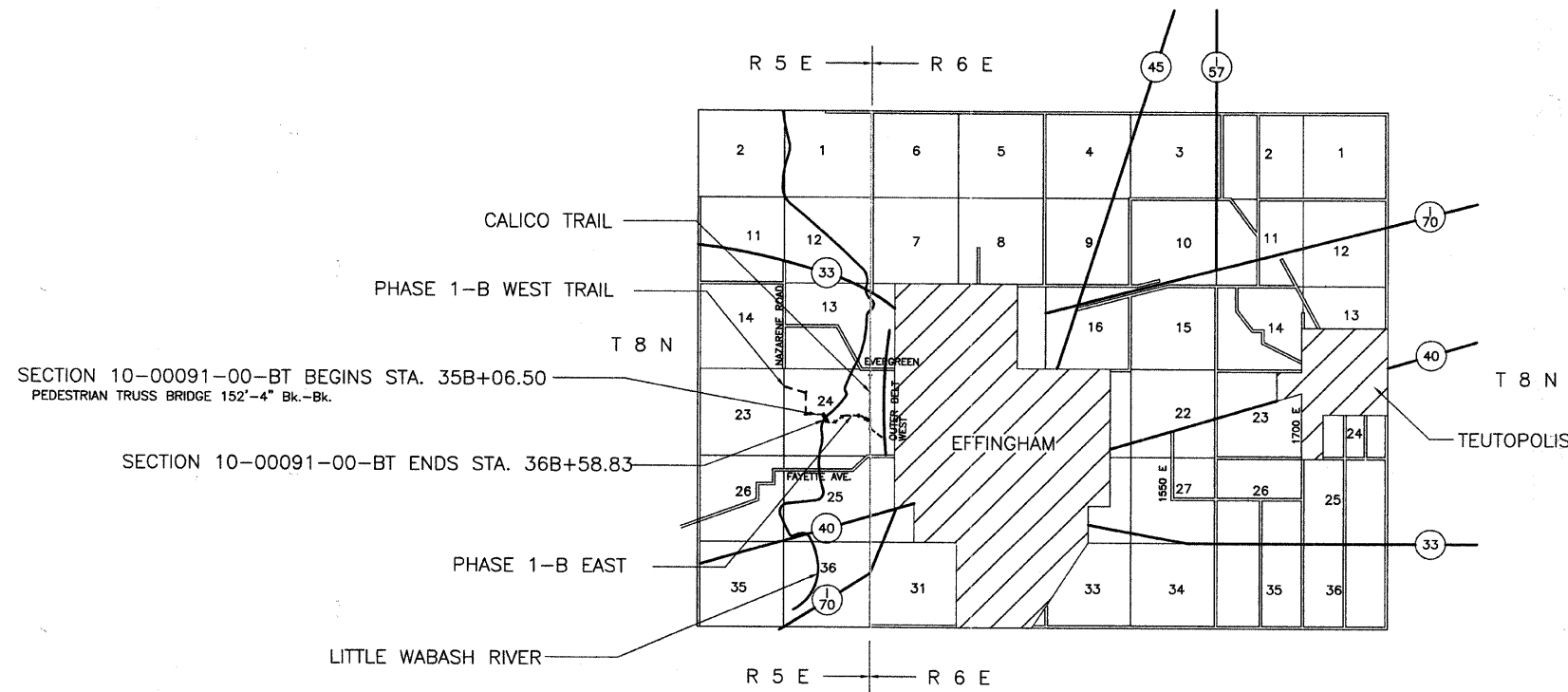
SECTION 10-00091-00-BT  
PROJECT TCSP-IL09(029)  
JOB NO. C-97-033-11  
EFFINGHAM COUNTY

INDEX OF SHEETS

SHEET	ITEM
1	COVER SHEET
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7	ABUTMENT AND WINGWALL PLAN - REINFORCEMENT
8	ABUTMENT AND WINGWALL SECTIONS AND DETAILS
9	CROSS SECTIONS

STANDARD DRAWINGS  
STANDARD 000001-06  
STANDARD 280001-05  
STANDARD 515001-03  
STANDARD 701901-01

PLAN	0 50' 100'
PROFILE HOR.	0 50' 100'
PROFILE VERT.	0 10' 20'
CROSS SECTIONS	
HOR.	0 5' 10'
VERT.	0 5' 10'



NET LENGTH SECTION 10-00091-00-BT = 152.33 Ft. = 0.029 Mi.

*Roger A. Charleston*  
JUL 14 11  
*We Express Hope*  
29186 REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS  
CHARLESTON ENGINEERING INC.  
105 N. KITCHELL  
P.O. BOX 397  
OLNEY, ILLINOIS 62450  
PH. 618-392-0736

APPROVED 4/11 2011  
COUNTY ENGINEER

PASSED 4-18 2011  
*Maurice East*  
DISTRICT SEVEN ENGINEER OF LOCAL ROADS AND STREETS

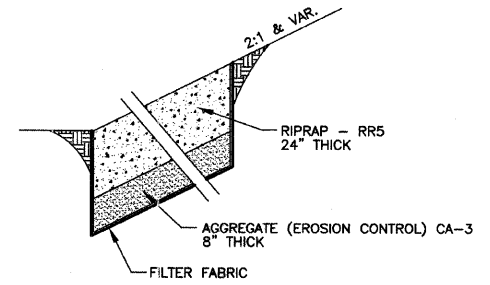
Releasing For Bid Based on Limited Review 4/18 2011  
*Roger L. Diabek*  
DEPUTY DIRECTOR OF HIGHWAYS  
REGION FOUR ENGINEER

SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
10-00091-00-BT	EFFINGHAM	9	2
CONTRACT NO. 95646			

**GENERAL NOTES**

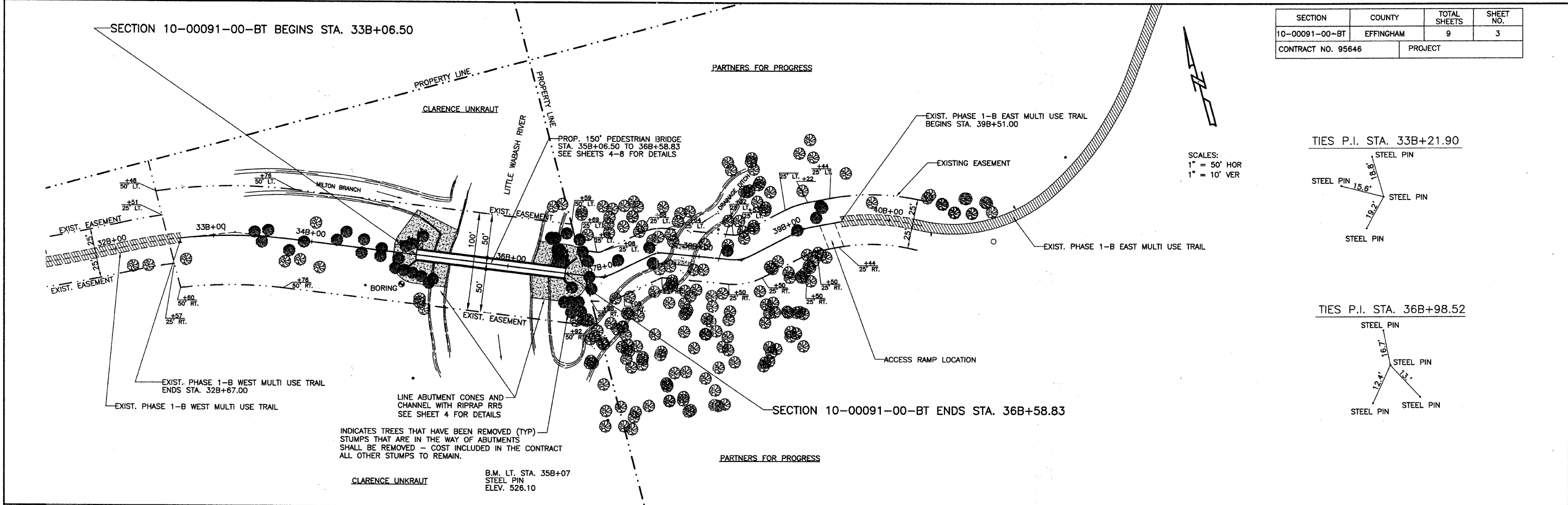
1. SEEDING: THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF SECTION 250 OF THE STANDARD SPECIFICATIONS AND SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR SEEDING.
  - A. FERTILIZER NUTRIENTS SHALL BE APPLIED AT THE RATE OF 100 LB/ACRE
  - B. MULCHING SHALL BE DONE IN ACCORDANCE WITH ARTICLE 251 OF THE STANDARD SPECIFICATIONS AND SHALL BE DONE BY METHOD 2, PROCEDURE 1 AT THE RATE OF 2 TONS PER ACRE.
2. NO PAYMENT FOR OVERHAUL WILL BE MADE ON THIS SECTION.

SUMMARY OF QUANTITIES			
CODE NO.	ITEM	UNIT	QUANTITY
X0321317	GRANULAR BACKFILL	CU YD	60
X0322508	PEDESTRIAN TRUSS SUPERSTRUCTURE	SQ FT	1500
X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.6
20300100	CHANNEL EXCAVATION	CU YD	130
20400800	FURNISHED EXCAVATION	CU YD	430
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	100
28001000	AGGREGATE (EROSION CONTROL)	TON	320
28100209	STONE RIPRAP, CLASS A5	TON	775
28200200	FILTER FABRIC	SQ YD	775
50300225	CONCRETE STRUCTURES	CU YD	68.0
50800105	REINFORCEMENT BARS	POUND	9680
51200956	FURNISHING METAL SHELL PILES 12" X 0.129"	FOOT	880
51202305	DRIVING PILES	FOOT	880
51203200	TEST PILE METAL SHELLS	EACH	2
51500100	NAME PLATES	EACH	1
67100100	MOBILIZATION	L SUM	1



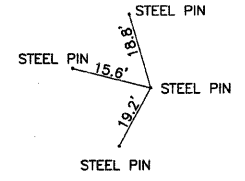
**STONE RIPRAP, CLASS A5 DETAIL**

SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
10-00091-00-BT	EFFINGHAM	9	3
CONTRACT NO. 95646		PROJECT	

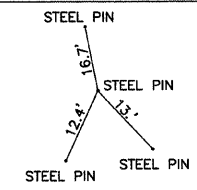


SCALES:  
1" = 50' HOR  
1" = 10' VER

TIES P.I. STA. 33B+21.90

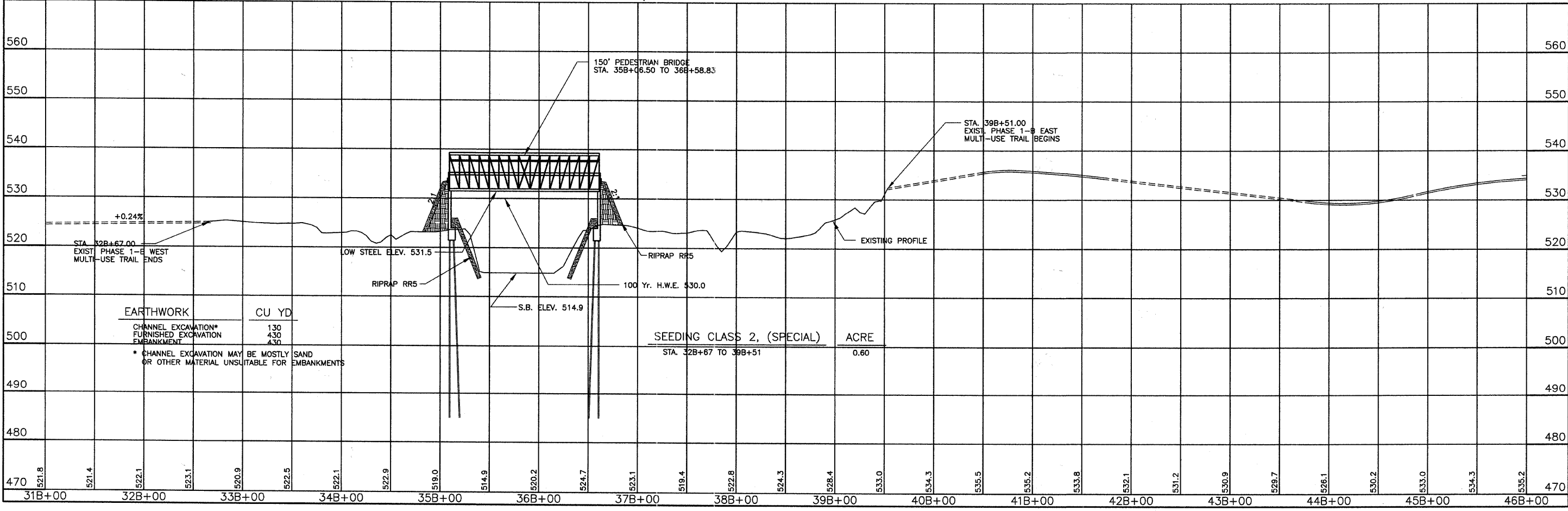


TIES P.I. STA. 36B+98.52

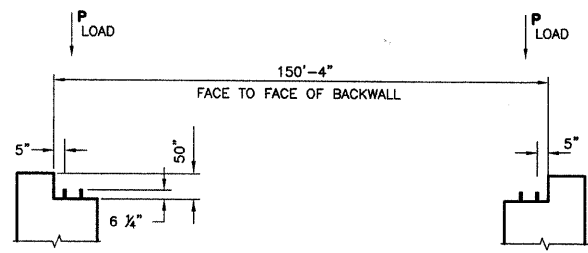


INDICATES TREES THAT HAVE BEEN REMOVED (TYP)  
STUMPS THAT ARE IN THE WAY OF ABUTMENTS  
SHALL BE REMOVED - COST INCLUDED IN THE CONTRACT  
ALL OTHER STUMPS TO REMAIN.

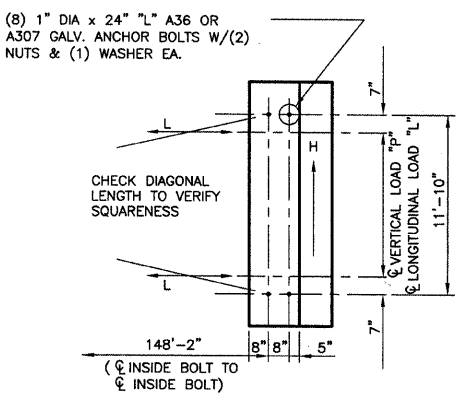
B.M. LT. STA. 35B+07  
STEEL PIN  
ELEV. 526.10







**ANCHOR BOLT ELEVATION**  
NOT TO SCALE



**ANCHOR BOLT PLAN**  
NOTE: ALL DIMENSIONS AND VALUES ARE SUBJECT TO CHANGE AFTER FINAL DESIGN  
BRIDGE LIFTING WEIGHT: 85,000 LBS

**DESIGN LOADINGS**

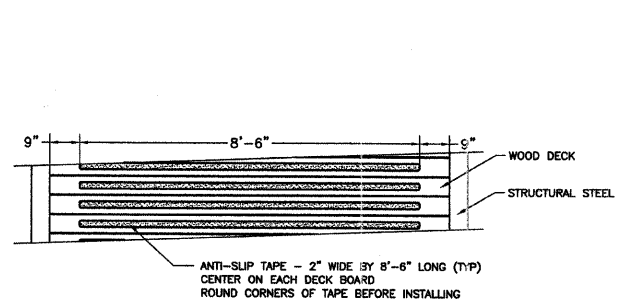
BRIDGE LENGTH = 150.00'  
BRIDGE WIDTH = 10.00'  
LIVE LOAD = 90 psf  
VEHICLE LOAD = 10,000 lb  
WIND LOAD = 35 psf

**REACTIONS**

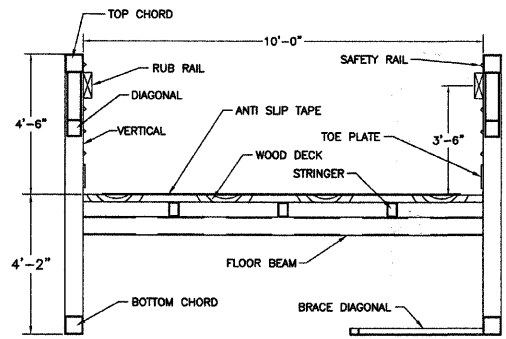
COMBINE REACTIONS AS PER LOCAL OR GOVERNING BUILDING CODES AS REQUIRED

BRIDGE REACTIONS	+ DOWNWARD LOAD		
	P (LBS)	H (LBS)	L (LBS)
DEAD LOAD	21,250		
UNIFORM LIVE LOAD	24,375		
VEHICLE LOAD	5,000		
WIND UPLIFT 20 PSF	-12,750		
WIND	± 12,460	23,625	
THERMAL			3,190

"P" - VERTICAL LOAD EACH BASE PLATE (4 PER BRIDGE)  
"H" - HORIZONTAL LOAD EACH FOOTING (2 PER BRIDGE)  
"L" - LONGITUDINAL LOAD EACH BASE PLATE (4 PER BRIDGE)



**ANTI SLIP TAPE DETAIL**

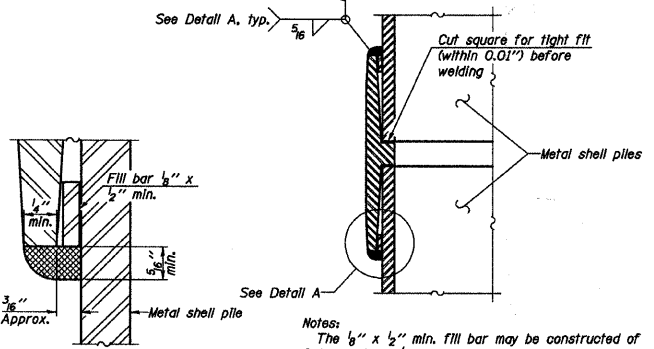


**BRIDGE CROSS-SECTION**

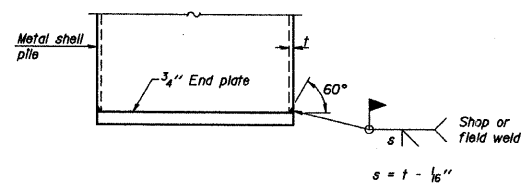


**METAL SHELL PILE TABLE**

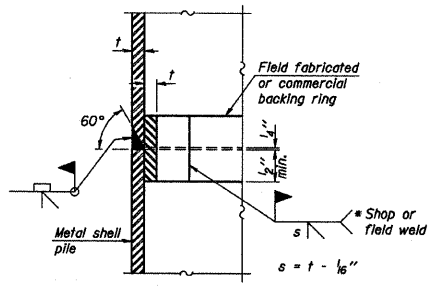
Designation and outside diameter	Wall thickness t	Weight per foot (Lbs./ft.)	Inside volume (yd <sup>3</sup> /ft.)
PP12	0.179"	22.60	0.0274
PP12	0.250"	31.37	0.0267
PP14	0.250"	36.71	0.0368
PP14	0.312"	45.61	0.0361



**WELDED COMMERCIAL SPLICE**

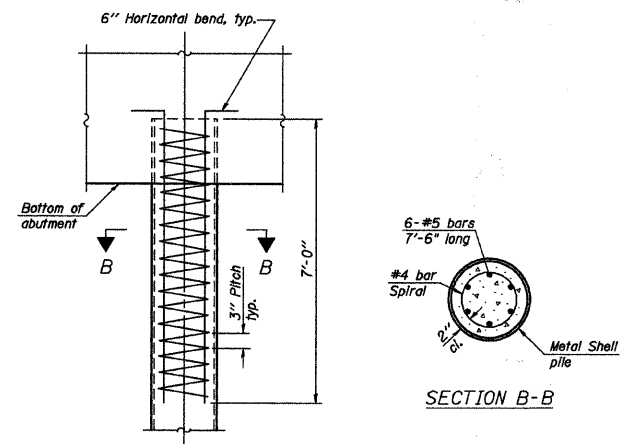


**END PLATE ATTACHMENT**



**COMPLETE PENETRATION WELD SPLICE**

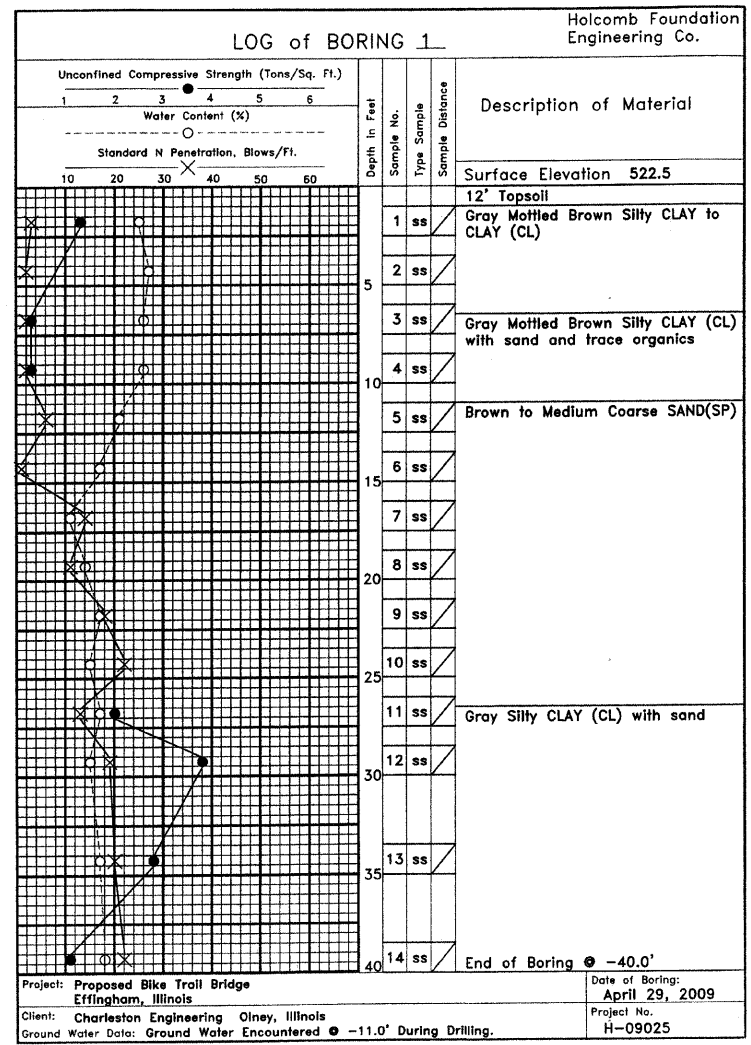
\* Field fabricated backing ring may be made from pile shell by removing segment to allow reducing circumference and vertically rejoin with partial joint penetration weld.



**ELEVATION**  
**METAL SHELL REINFORCEMENT AT ABUTMENTS**

**METAL SHELL PILE DETAILS**

Notes:  
The metal shell piles shall be according to ASTM A 252 Grade 3.

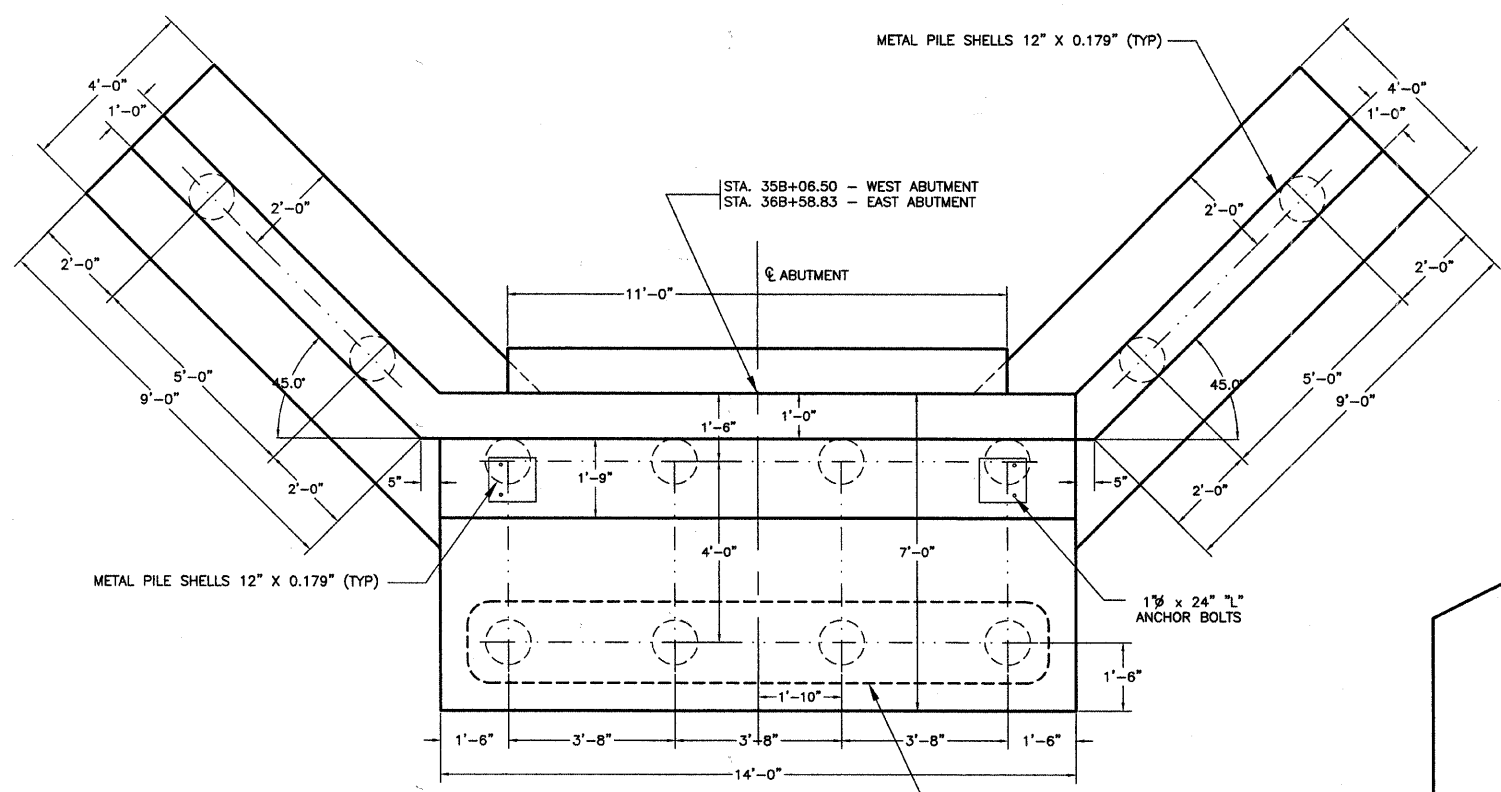


Project: Proposed Bike Trail Bridge Effingham, Illinois  
Date of Boring: April 29, 2009  
Client: Charleston Engineering Olney, Illinois  
Project No. H-09025  
Ground Water Data: Ground Water Encountered @ -11.0' During Drilling.

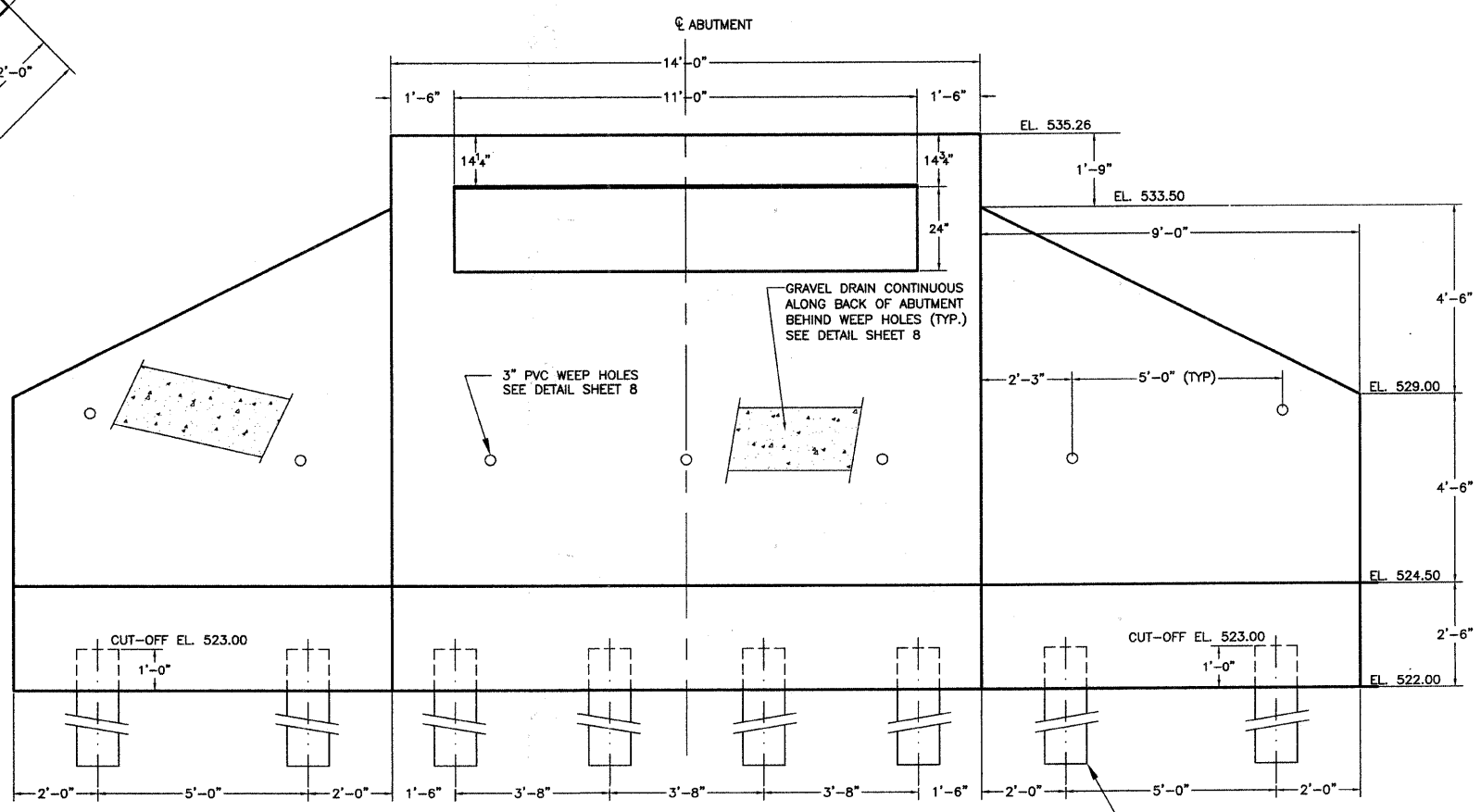
**CHARLESTON ENGINEERING, INC.**  
CONSULTING ENGINEERS  
105 NORTH KITCHELL  
P.O. BOX 387  
OLNEY, ILLINOIS 62450  
(618) 392-0736  
ILLINOIS DEPARTMENT OF PROFESSIONAL REGULATION REGISTRATION #184.003513

**BRIDGE DETAILS**  
**PEDESTRIAN BRIDGE**  
**OVER LITTLE WABASH RIVER**

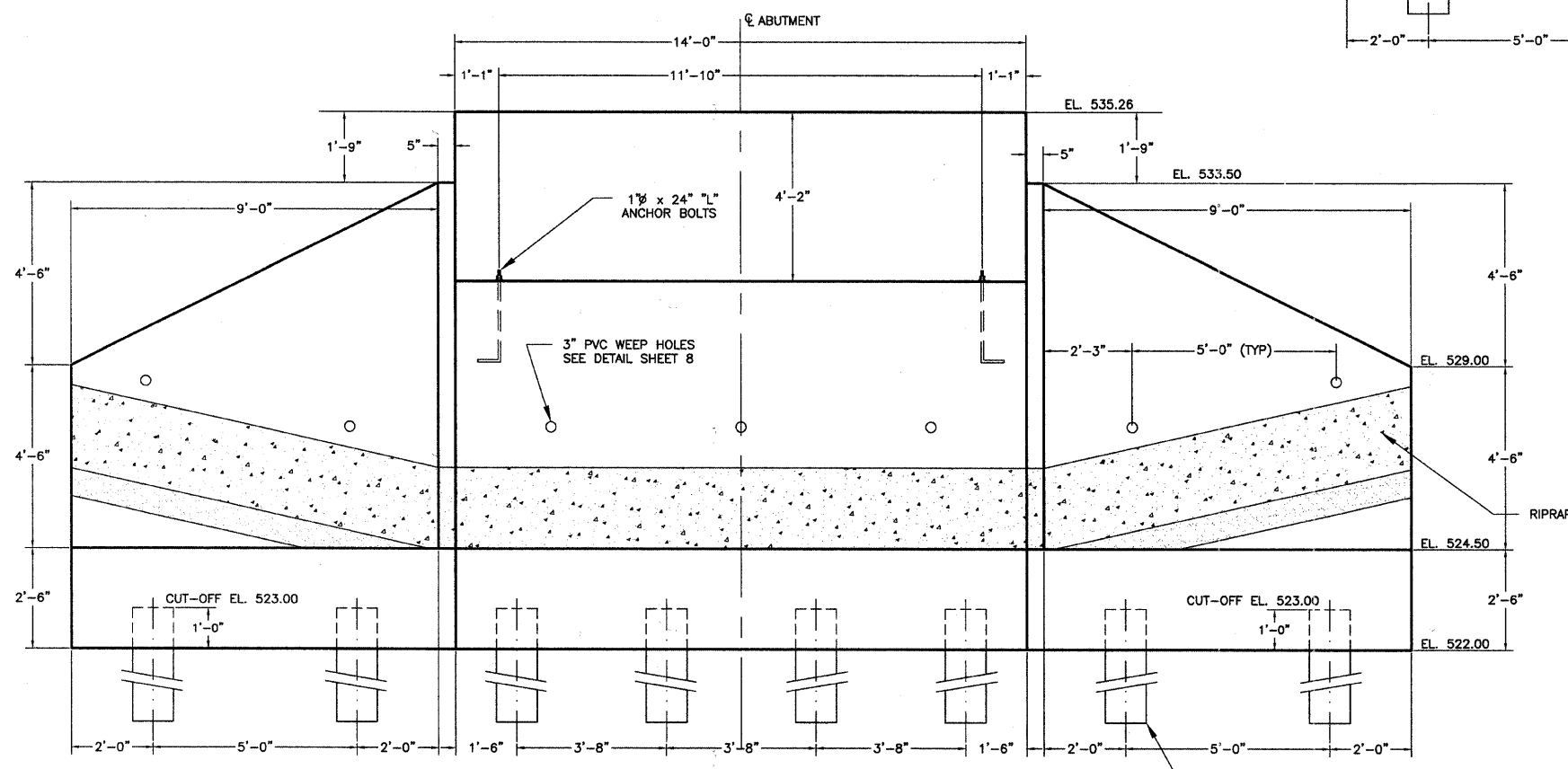
**SEC. 10-00091-00-BT**  
**EFFINGHAM COUNTY**  
**STATION 35B+82.66**



**PLAN VIEW**  
SHOWING DIMENSIONS



**BACK ELEVATION VIEW**  
SHOWING DIMENSIONS



**FRONT ELEVATION VIEW**  
SHOWING DIMENSIONS

NOTES:  
1. Wingwalls are rotated 45° in elevations for clarity.

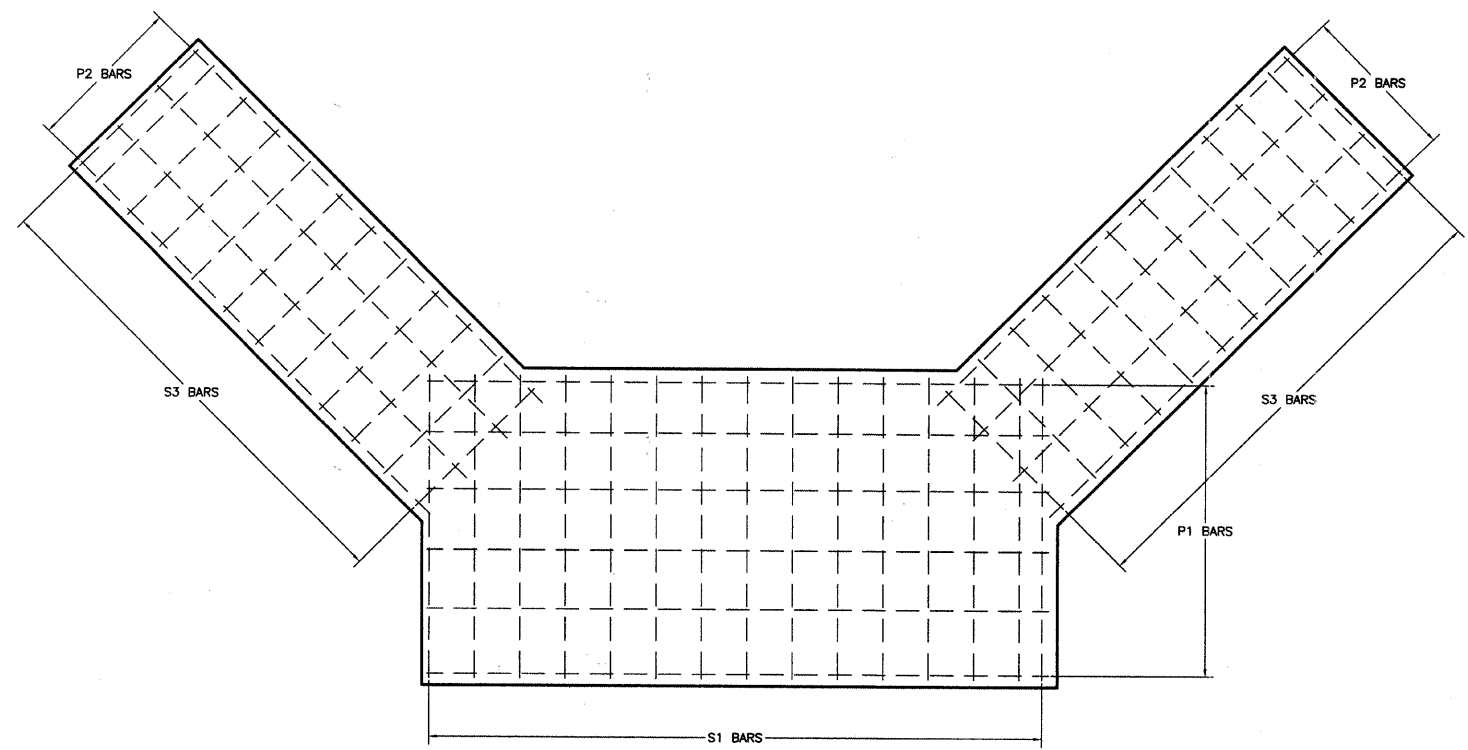
**CHARLESTON ENGINEERING, INC.**  
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**ABUTMENT AND WINGWALL  
PLAN - DIMENSIONS**

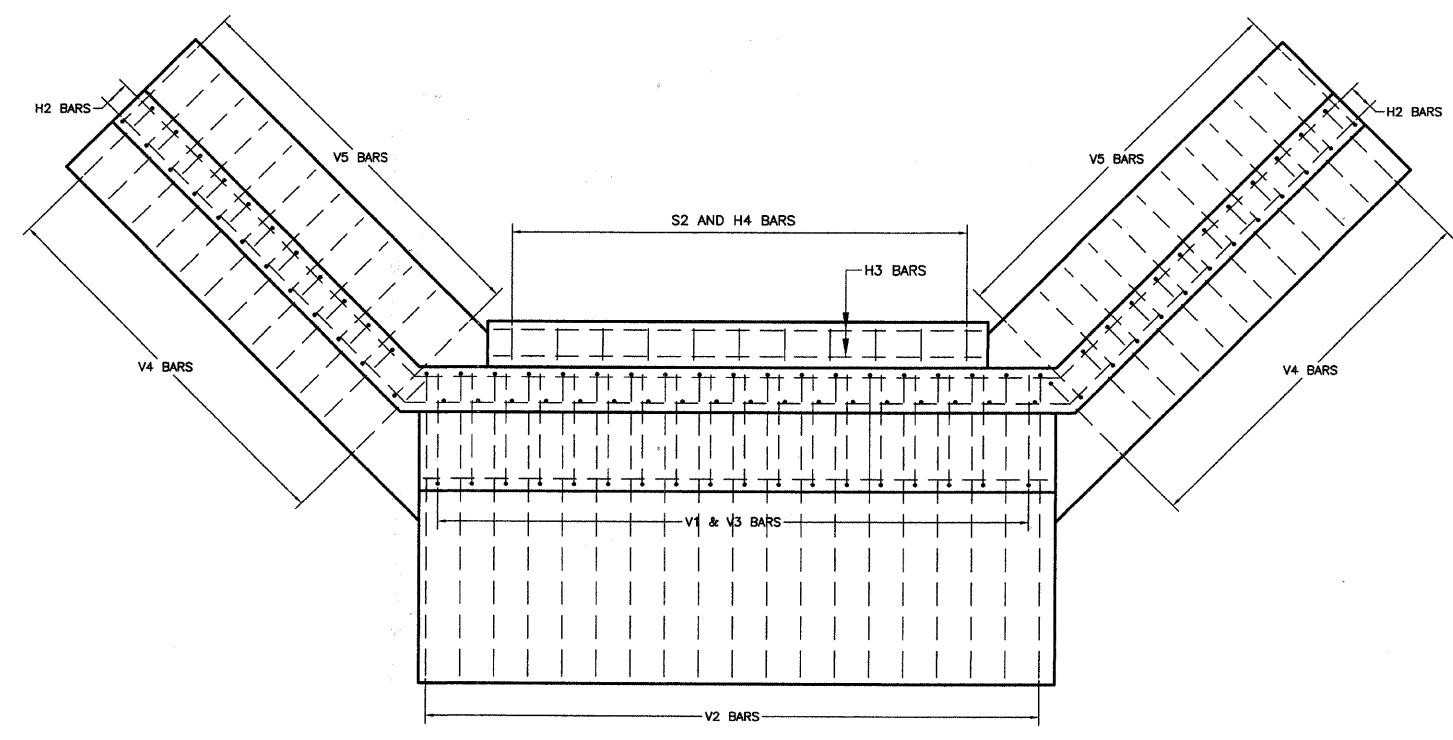
**PEDESTRIAN BRIDGE  
OVER LITTLE WABASH RIVER**

**SEC. 10-00091-00-BT  
EFFINGHAM COUNTY  
STATION 35B+82.66**

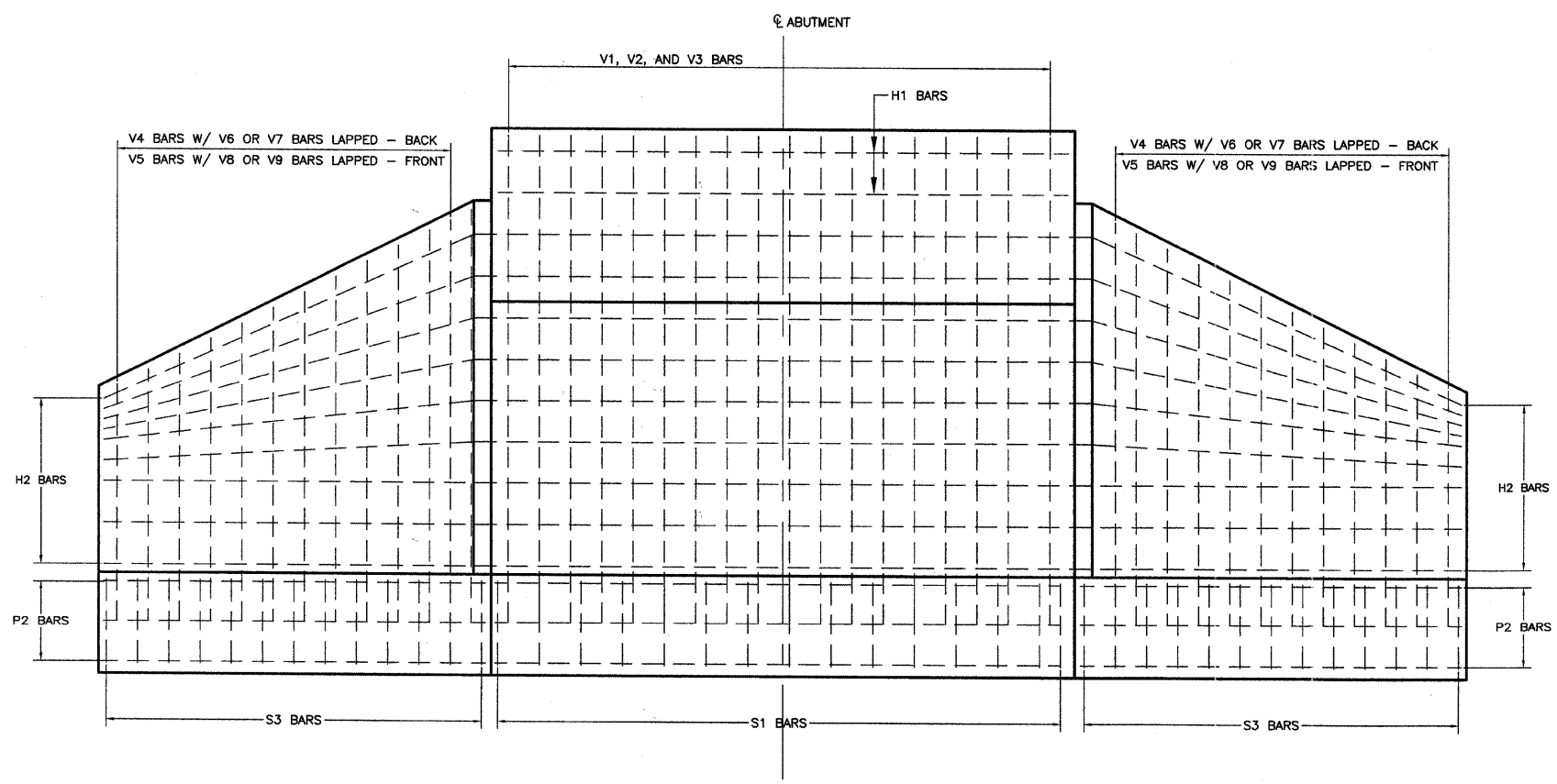
SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
10-00091-00-BT	EFFINGHAM	9	7
CONTRACT NO. 95646			



**TYPICAL PLAN VIEW**  
ABUTMENT FOOTING



**TYPICAL PLAN VIEW**  
ABUTMENT WALL AND WINGWALLS



**TYPICAL ELEVATION VIEW**  
SHOWING REINFORCEMENT

**CHARLESTON ENGINEERING, INC.**  
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**ABUTMENT AND WINGWALL  
PLAN - REINFORCEMENT**

**PEDESTRIAN BRIDGE  
OVER LITTLE WABASH RIVER**

**SEC. 10-00091-00-BT  
EFFINGHAM COUNTY  
STATION 35B+82.66**

**BILL OF MATERIAL**  
For One Abutment

Bar	No.	Size	Length	Shape
H	4	#7	13'-8"	—
H1	11	#5	13'-8"	—
H2	20	#5	31'-2"	—
H3	6	#5	10'-8"	—
H4	24	#5	2'-2"	—
P1	18	#6	13'-8"	—
P2	24	#6	11'-0"	—
S1	15	#5	18'-7"	□
S2	12	#4	5'-5"	□
S3	24	#5	12'-7"	□
V1	20	#6	12'-6"	—
V2	20	#7	18'-5"	—
V3	20	#6	5'-6"	—
V4	24	#7	7'-10"	—
V5	24	#6	7'-10"	—
V6	12	#6	7'-3"	—
V7	12	#6	5'-3"	—
V8	12	#5	7'-0"	—
V9	12	#5	5'-0"	—
V10	10	#4	6'-3"	—
Concrete Structures	Cu. Yd.	34.0		
Reinforcement Bars	Pound	4840		

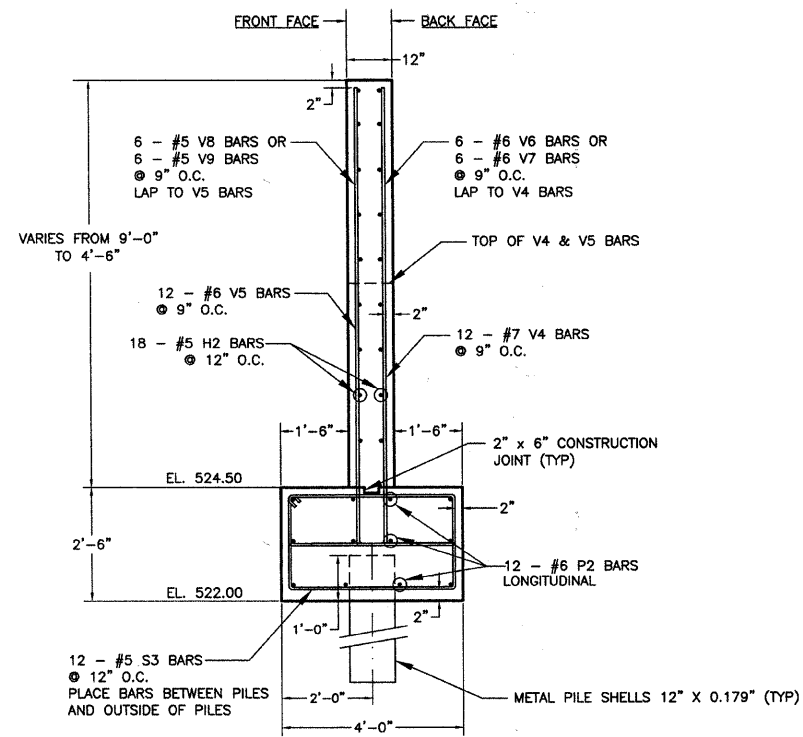
- NOTES:
- All concrete shall be  $f'c = 4000$  psi
  - All reinforcement shall be ASTM A-615, Grade 60.
  - Minimum Bar Laps Are As Follows:  
#5 = 2'-0"  
#6 = 2'-6"  
#7 = 2'-9"
  - Bend H2 Bars In Field As Required

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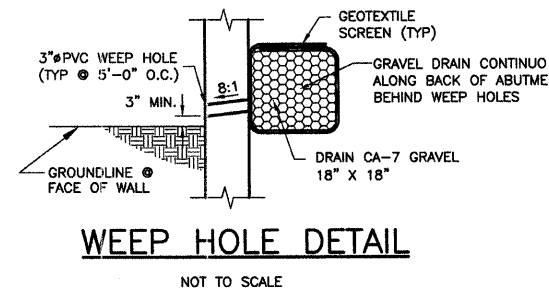
**ABUTMENT AND WINGWALL SECTIONS AND DETAILS**

**PEDESTRIAN BRIDGE OVER LITTLE WABASH RIVER**

SEC. 10-00091-00-BT  
EFFINGHAM COUNTY  
STATION 35B+82.66

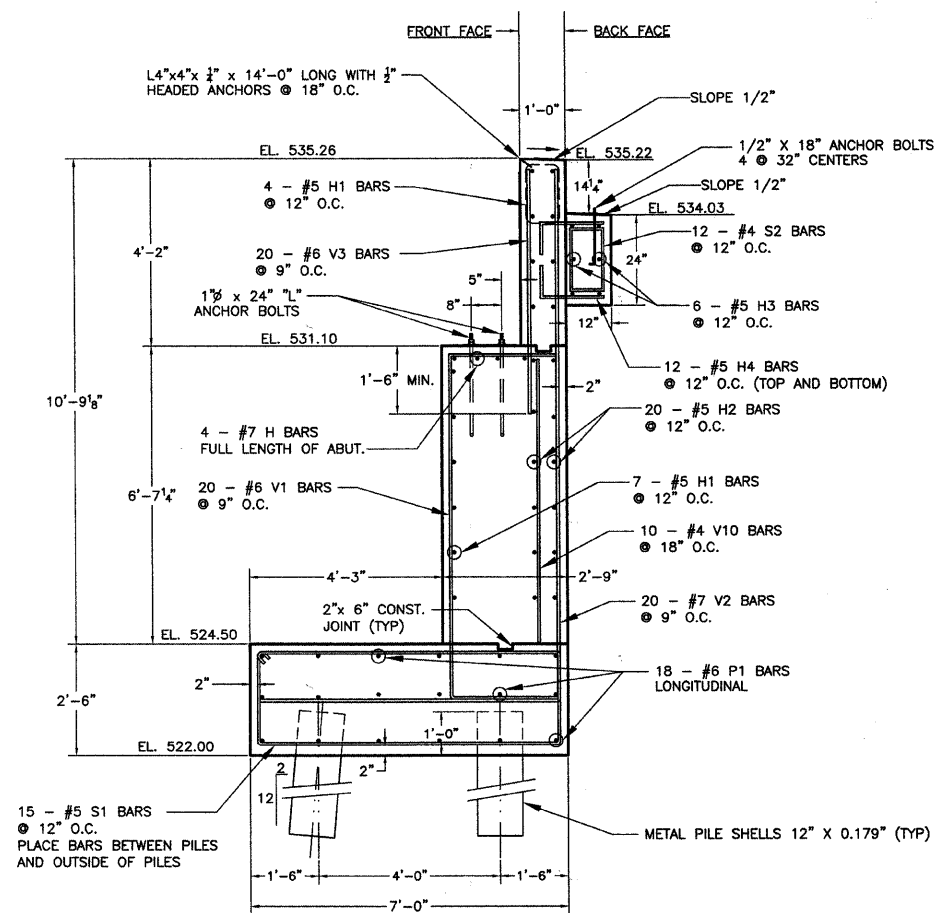


**TYPICAL WINGWALL SECTION**

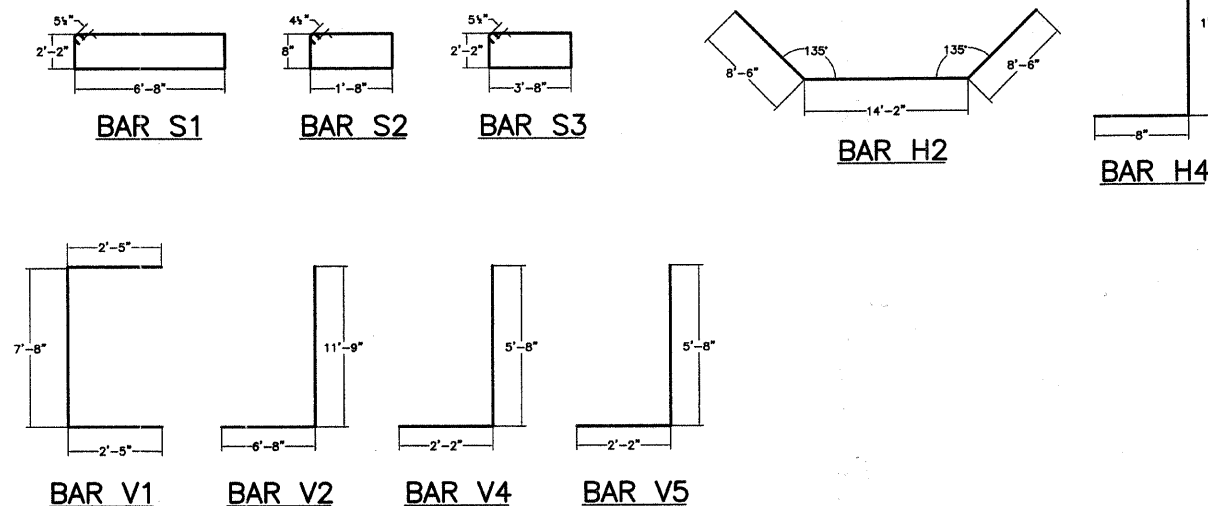


**WEEP HOLE DETAIL**

NOT TO SCALE

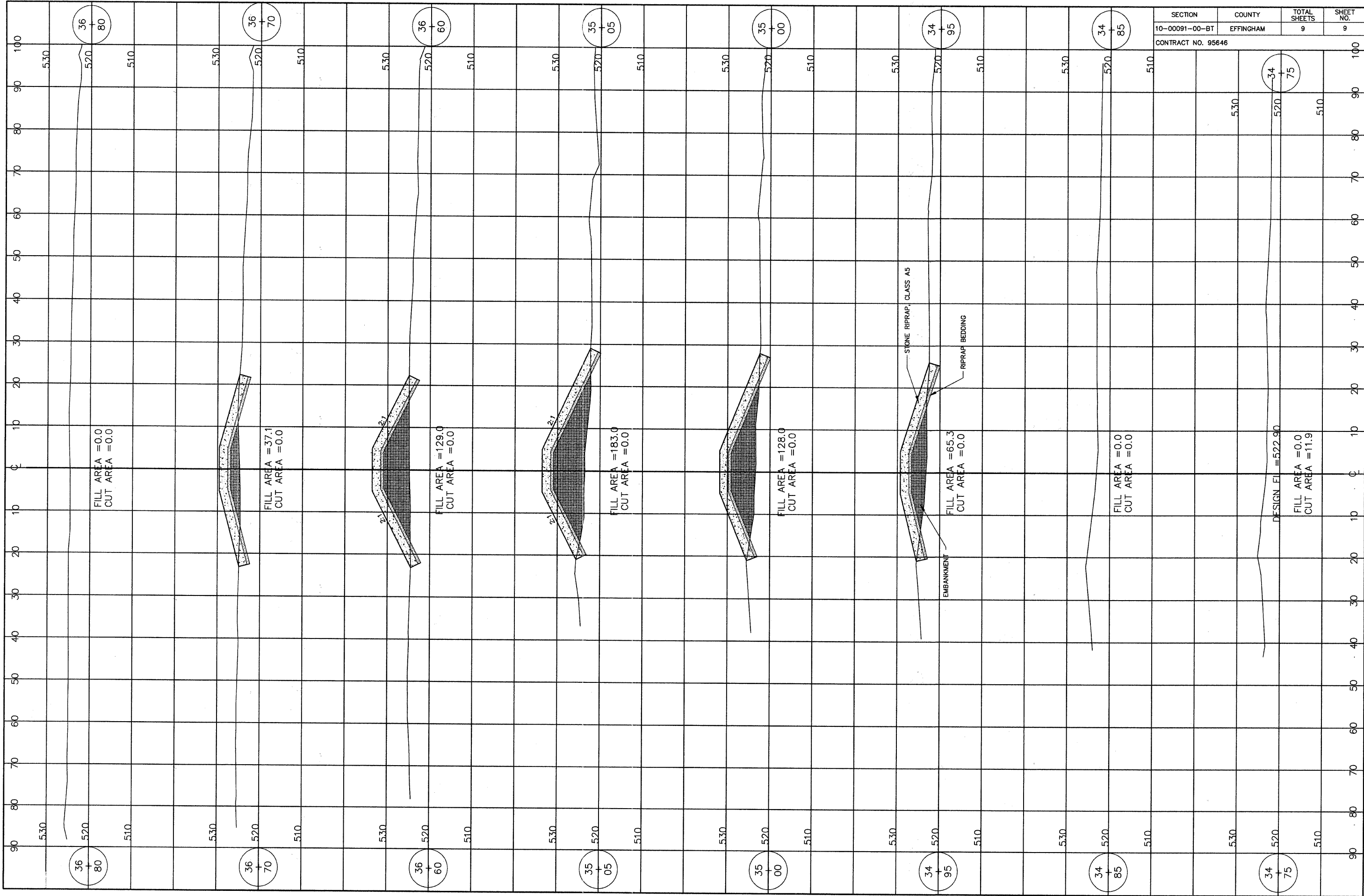


**TYPICAL ABUTMENT SECTION**



**BENT BAR DETAILS**





FILL AREA = 0.0  
CUT AREA = 0.0

FILL AREA = 37.1  
CUT AREA = 0.0

FILL AREA = 129.0  
CUT AREA = 0.0

FILL AREA = 183.0  
CUT AREA = 0.0

FILL AREA = 128.0  
CUT AREA = 0.0

FILL AREA = 65.3  
CUT AREA = 0.0

FILL AREA = 0.0  
CUT AREA = 0.0

DESIGN ELEVATION = 522.90  
FILL AREA = 0.0  
CUT AREA = 11.9

STONE RIPRAP, CLASS A5

RIPRAP BEDDING

EMBANKMENT