

**INDEX OF SHEETS**

- 1 COVER SHEET
- 2 SUMMARY OF QUANTITIES,  
GENERAL NOTES & TYPICAL SECTIONS
- 3 PLAN & PROFILE
- 4-II BRIDGE PLANS
- 12 BORING LOGS
- 13-16 CROSS SECTIONS

**HIGHWAY STANDARDS**

000001-04  
001001-01  
280001-03  
515001-02

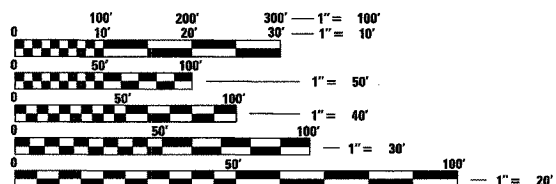
630201-04  
630301-04

702001-06  
BLR 2I-6

**DESIGN CLASSIFICATION**

ROADWAY \_\_\_\_\_ LOCAL ROAD  
A.D.T. \_\_\_\_\_ < 250  
DESIGN SPEED \_\_\_\_\_ 30 MPH

PLAN \_\_\_\_\_ 1"=50'  
PROFILE:  
HORIZ. \_\_\_\_\_ 1"=50'  
VERT. \_\_\_\_\_ 1"=5'  
CROSS SECTIONS:  
HORIZ. \_\_\_\_\_ 1"=5'  
VERT. \_\_\_\_\_ 1"=5'



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.  
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION  
1-800-892-0123

**CONTRACT NO. 99299**

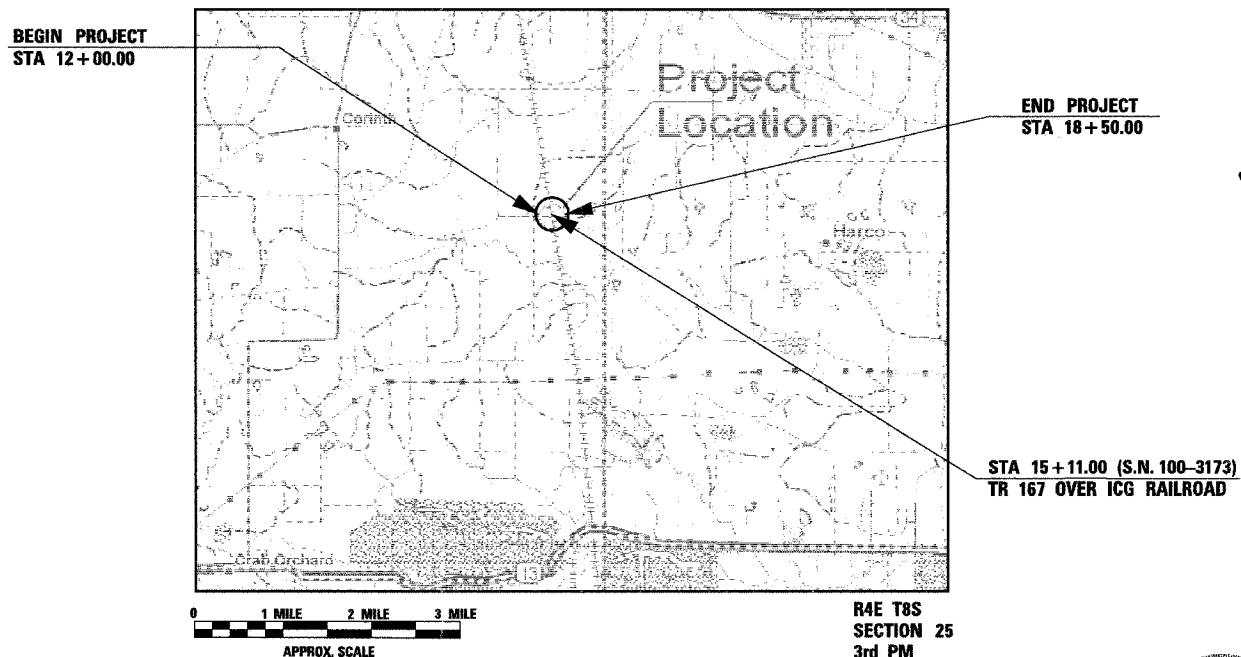
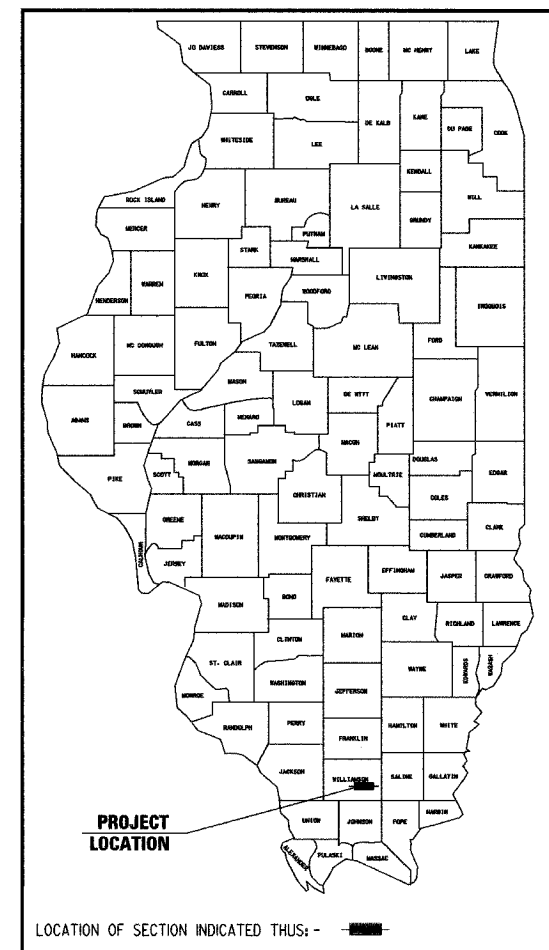
<b>HR</b> HURST-ROSCHKE ENGINEERS, INC. CONSULTING ENGINEERS & ARCHITECTS 1805 INDUSTRIAL PARK DRIVE MARION, ILLINOIS 62559	DESIGNED: MEB	CHECKED: JSP
	DRAWN: DEG	CHECKED: MEB

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS**

**PLANS FOR PROPOSED  
HIGHWAY BRIDGE PROGRAM**

**TR 167 OVER ICG RAILROAD  
SECTION 04-01225-00-BR  
COUNTY UNIT ROAD DISTRICT  
WILLIAMSON COUNTY  
PROJECT BROS-199(20)  
C-99-548-05**

T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
167	04-01225-00-BR	WILLIAMSON	16	1
STA 12+00		TO	STA 18+50	
ROAD DIST.		ILLINOIS		
CONTRACT No. 99299				



**LOCATION MAP**

TOTAL LENGTH OF PROJECT = 650.00 FEET = 0.123 MILES



*John S. Peradotti*  
P.E. 062-050518 JOHN S. PERADOTTI DATE 3-27-07  
LICENSE EXPIRES: 11/30/07

APPROVED *MAR 29 20 07*  
*James J. Webb* COUNTY ENGINEER

PASSED *MARCH 30 20 07*  
*Dennis W. Hillen* DISTRICT 9 ENGINEER OF LOCAL ROADS & STREETS

RELEASING FOR BID  
BASED ON LIMITED REVIEW *April 2 20 07*  
*May C. Lewis* DEPUTY DIRECTOR OF HIGHWAYS, REGION 5 ENGINEER

**PRINTED BY THE AUTHORITY  
OF THE STATE OF ILLINOIS**

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
167	04-01225-00-BR	WILLIAMSON	16	2
STA	12+00	STA	18+50	
ROAD DIST.	ILLINOIS			
CONTRACT No. 99299				

SUMMARY OF QUANTITIES

X181-2A

CODE NO.	ITEM	UNITS	TOTAL
20100500	TREE REMOVAL, ACRES	ACRE	0.03
20200100	EARTH EXCAVATION	CU YD	444
20400800	FURNISHED EXCAVATION	CU YD	1637
25000200	SEEDING, CLASS 2	ACRE	0.2
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	18
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	18
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	18
25100630	EROSION CONTROL BLANKET	SQ YD	841
28000400	PERIMETER EROSION BARRIER	FOOT	616
28000500	INLET AND PIPE PROTECTION	EACH	1
40200100	AGGREGATE SURFACE COURSE, TYPE A	TON	520
40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	58
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50105220	PIPE CULVERT REMOVAL	FOOT	30
50200100	STRUCTURE EXCAVATION	CU YD	268
50200400	ROCK EXCAVATION FOR STRUCTURES	CU YD	17.4
50300225	CONCRETE STRUCTURES	CU YD	154.6
50300280	CONCRETE ENCASMENT	CU YD	4.4
50400505	PRECAST PRESTRESSED CONCRETE DECK BEAMS (27" DEPTH)	SQ FT	3,780
50800105	REINFORCEMENT BARS	POUND	15,180
50900305	STEEL RAILING, TYPE T1	FOOT	280
51201400	FURNISHING STEEL PILES HP10x42	FOOT	175
51202305	DRIVING PILES	FOOT	175
51203400	TEST PILE STEEL HP10x42	EACH	1
51204650	PNEUMATIC SHOES	EACH	7
51500100	NAME PLATES	EACH	1
54201060	PIPE CULVERTS, CLASS D, TYPE 2 15"	FOOT	56
58100200	WATERPROOFING MEMBRANE SYSTEM	SQ YD	391
63000005	*STEEL PLATE BEAM GUARD RAIL, TYPE B	FOOT	250.0
63100075	*TRAFFIC BARRIER TERMINAL, TYPE 5A	EACH	4
63100167	*TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (TANGENT)	EACH	4
67100100	MOBILIZATION	L SUM	1
70101830	TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21	L SUM	1
Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1

\* SPECIALTY ITEMS

• Adjusted for Shrinkage (25% Shrinkage Assumed)  
\*\* Waste (+) or Shortage (-)

EARTH EXCAVATION						
Stage	Location	Earth Excavation	Excavation to be used in Embankment*	Embankment	Earthwork Balance**	
	From To	Cubic Yard	Cubic Yard	Cubic Yard	Cubic Yard	
TR 167	12+00.00 14+40.11	136	102	86	16	
TR 167	15+81.89 18+50.00	7	6	1,885	-1,879	
Slope Wall - East Abutment		301	226	0	226	
TOTAL		444	334	1,971	-1,637	

SCHEDULE OF QUANTITIES

EROSION CONTROL BLANKET				
TR 167	Sta.	Sta.	Side	SQ YD
	12+00.00	to 14+40.11	Lt	84.5
	12+00.00	to 14+40.11	Rt	94.7
	15+81.89	to 18+50.00	Lt	363.2
	15+81.89	to 18+50.00	Rt	298.6
			Total	841

PERIMETER EROSION BARRIER				
TR 167	Sta.	Sta.	Side	FOOT
	14+00.00	to 14+40.11	Lt/Rt	80.2
	15+81.88	to 18+50.00	Lt/Rt	536.2
			Total	616

TRAFFIC BARRIER TERMINAL, TYPE 5A				
TR 167	Sta.	Sta.	Side	EACH
	14+30.11	to 14+41.86	Rt	1
	14+25.71	to 14+37.46	Lt	1
	15+80.17	to 15+91.92	Lt	1
	15+83.95	to 15+96.16	Rt	1
			Total	4

STEEL PLATE BEAM GUARD RAIL, TYPE B				
TR 167	Sta.	Sta.	Side	FOOT
	13+42.61	to 14+30.11	Rt	87.5
	13+88.21	to 14+25.71	Lt	37.5
	15+91.92	to 16+79.42	Lt	87.5
	15+96.16	to 16+33.66	Rt	37.5
			Total	250.0

TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (TANGENT)				
TR 167	Sta.	Sta.	Side	EACH
	12+92.61	to 13+42.61	Rt	1
	13+38.21	to 13+88.21	Lt	1
	15+33.66	to 13+83.66	Rt	1
	16+79.42	to 17+29.42	Lt	1
			Total	4

INLET AND PIPE PROTECTION				
TR 167	Station	Side	Offset (ft)	EACH
	16+86.73	Rt	26.1	1
			Total	1

TREE REMOVAL, ACRES				
TR 167	Sta.	Sta.	Side	ACRE
	12+18.83	to 13+85.20	Rt	0.01
	12+35.43	to 14+74.67	Lt	0.02
			Total	0.03

SEEDING, CLASS 2				
TR 167	Sta.	Sta.	Side	ACRE
	12+00.00	to 14+40.11	Lt	0.03
	12+00.00	to 14+40.11	Rt	0.03
	15+81.89	to 18+50.00	Lt	0.08
	15+81.89	to 18+50.00	Rt	0.06
			Total	0.2

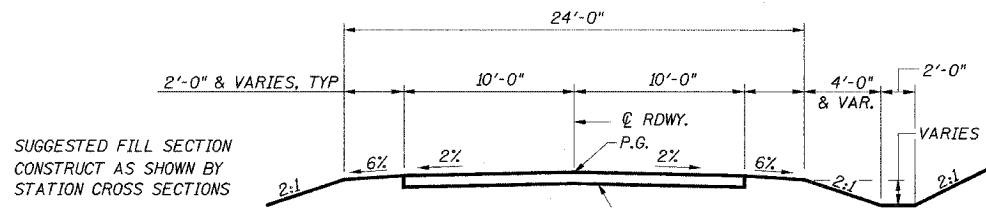
AGGREGATE SURFACE COURSE, TYPE A						
TR 167	Sta.	Sta.	Sq Yd	Depth (ft)	TON	
	12+00.00	to 12+50.00	101.4	0.67	46.2	
	12+50.00	to 14+40.11	422.5	0.67	192.5	
	15+81.88	to 18+00.00	484.7	0.67	220.8	
	18+00.00	to 18+50.00	105.6	0.67	48.1	
Entrance			36.2	0.50	12.4	
					Total	520

GENERAL NOTES

- ALL WASTE OR UNDESIRABLE MATERIAL AS IDENTIFIED BY THE ENGINEER SHALL BE DISPOSED OF OUTSIDE THE LIMITS OF THE RIGHT OF WAY AT THE CONTRACTOR'S EXPENSE.
- ALL EXISTING PRIVATELY OWNED UTILITIES REQUIRING ADJUSTMENT WILL BE MADE BY THE UTILITY COMPANY INVOLVED. WHERE NO PROVISIONS HAVE BEEN MADE FOR ADJUSTMENTS ON THE PLANS, NO ADDITIONAL COMPENSATION WILL BE ALLOWED DUE TO DELAYS OR INCONVENIENCES CAUSED BY SAID UTILITY ADJUSTMENTS.
- THE PROFILE GRADE ELEVATIONS SHOWN ON THE PLAN AND PROFILE SHEETS AND IN THE STATION CROSS SECTIONS ARE TO THE TOP OF FINISHED SURFACE.
- THE LOCATION OF UNDERGROUND UTILITIES SHOWN ON THE PLANS REPRESENTS THE BEST KNOWLEDGE OF THE COUNTY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY AS DETAILED IN SECTION 107 OF THE STANDARD SPECIFICATIONS, TO VERIFY LOCATIONS OF UNDERGROUND INSTALLATIONS BEFORE STARTING CONSTRUCTION OPERATIONS. THE CONTRACTOR SHALL INDEMNIFY THE COUNTY, ITS OFFICERS AND EMPLOYEES AGAINST ALL CLAIMS DUE TO DAMAGE TO CORPORATE OR PRIVATE PROPERTY RESULTING FROM HIS/HER CONSTRUCTION OPERATIONS AS DESCRIBED IN ARTICLE 107.20 AND 107.26 OF THE STANDARD SPECIFICATIONS.
- WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND PRESERVE PROPERTY MARKERS UNTIL THE OWNER, AN AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION.
- ALL ELEVATIONS SHOWN REFER TO THE U.S.G.S. DATUM AT MEAN SEA LEVEL.
- THE AREA TO BE SEEDDED SHALL CONSIST OF ALL DISTURBED EARTH SURFACES WITHIN THE RIGHT OF WAY, AS DIRECTED BY THE ENGINEER.
- THE CONTRACTOR SHALL CONSTRUCT EROSION CONTROL BLANKET IN ACCORDANCE W/ ARTICLE 251 OF THE IDOT STANDARD SPECIFICATIONS. THE EROSION CONTROL BLANKET SHALL BE EXCELSIOR BLANKET.
- ONLY THOSE TREES DESIGNATED BY THE ENGINEER OR LISTED IN THE TREE REMOVAL SCHEDULE SHALL BE REMOVED. THE CONTRACTOR WILL PROTECT ALL REMAINING TREES AND SHRUBS FROM DAMAGE DUE TO HIS OPERATIONS.
- PAVEMENT REMOVAL (OIL & CHIP) WILL BE PAID FOR AS EARTH EXCAVATION AND WILL BE CONSIDERED AS UNSUITABLE MATERIAL.
- THE REMOVAL OF FENCES WITHIN THE CONSTRUCTION LIMITS OF THE PROJECT AND THE RE-ERECTION OF THE FENCES AT THE LOCATION SPECIFIED BY THE ENGINEER SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION.

FACTORS USED FOR QUANTITY CALCULATIONS

HOT-MIX ASPHALT SURFACE COURSE MIX "C", N50	112 LBS/SQ YD/1" DEPTH
NITROGEN FERTILIZER NUTRIENT	90LBS/ACRE
PHOSPHORUS FERTILIZER NUTRIENT	90LBS/ACRE
POTASSIUM FERTILIZER NUTRIENT	90LBS/ACRE



SUGGESTED CUT SECTION  
CONSTRUCT AS SHOWN BY  
STATION CROSS SECTIONS

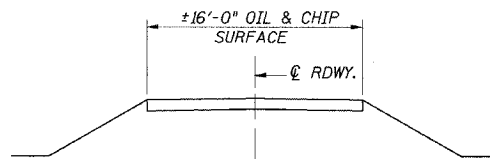
GAP PROPOSED CROSS SECTION FROM  
STA. 14+40.11 TO STA. 15+81.88

SEE HIGHWAY STANDARD 630201  
FOR SHOULDER TRANSITIONS

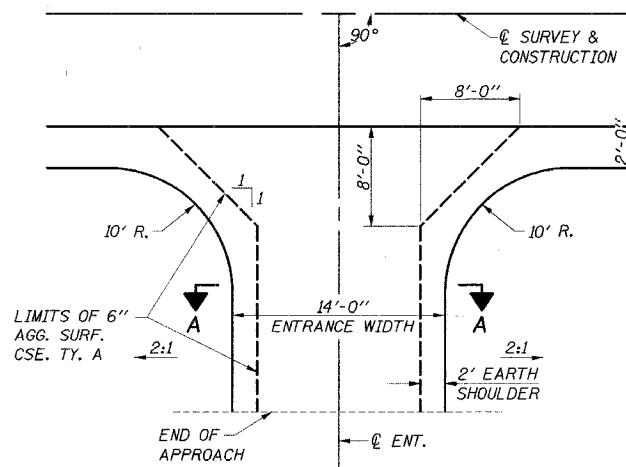
TYPICAL PROPOSED CROSS SECTION  
STA. 12+00.00 TO STA. 18+50.00

ROAD CLASSIFICATION: LOCAL ROAD ADT 0-250  
CURRENT ADT LESS THAN 150

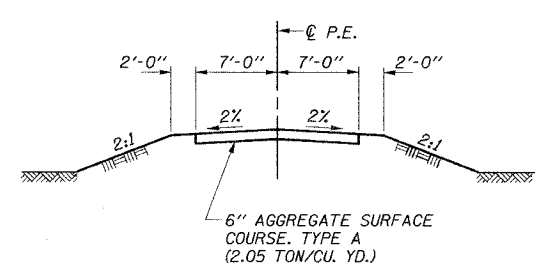
TRANSITION FROM EXISTING ROADWAY TO PROPOSED ROADWAY  
TO BE CONSTRUCTED FROM STA. 12+00 TO STA. 12+50 AND  
FROM STA. 18+00 TO STA. 18+50.



EXISTING TYPICAL CROSS SECTION



PRIVATE ENTRANCE DETAIL  
RT. STA. 18+00



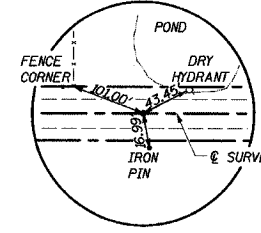
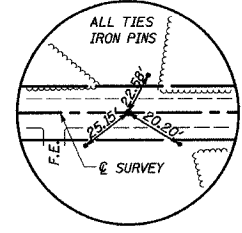
SECTION A-A

SUMMARY & SCHEDULE OF QUANTITIES,  
GENERAL NOTES AND TYPICAL SECTIONS  
TR 167 OVER ICG RAILROAD  
WILLIAMSON COUNTY  
SECTION 04-01225-00-BR

**HAROLD BEERS**  
N.W. 1/4, N.W. 1/4, SEC. 25, T. 8 S., R. 4 E., 3RD P.M.

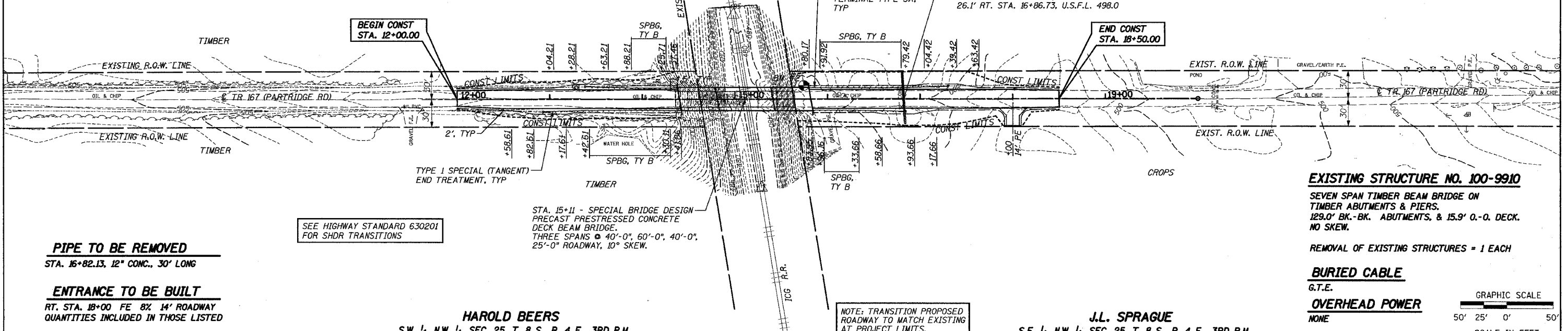
**J.L. SPRAGUE**  
N.E. 1/4, N.W. 1/4, SEC. 25, T. 8 S., R. 4 E., 3RD P.M.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
167	04-01225-00-BR	WILLIAMSON	16	3
STA. 12+00		TO STA. 18+50		
ROAD DIST.		ILLINOIS		
CONTRACT No. 99299				



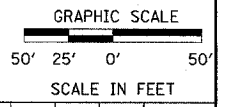
P.O.T. STA. 12+00.00  
IRON PIN (FLUSH)

P.O.T. STA. 19+50.00  
IRON PIN (FLUSH)



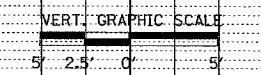
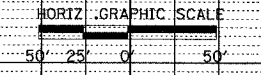
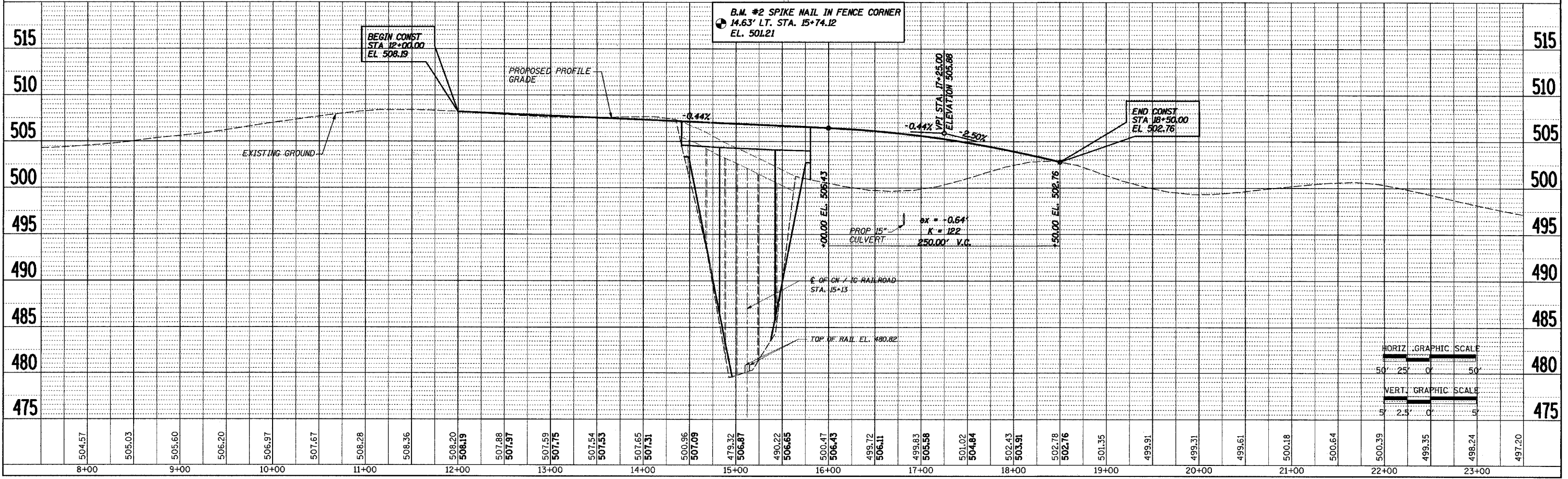
**EXISTING STRUCTURE NO. 100-9910**  
SEVEN SPAN TIMBER BEAM BRIDGE ON TIMBER ABUTMENTS & PIERS. 129.0' BK.-BK. ABUTMENTS, & 15.9' O.-O. DECK. NO SKEW.  
REMOVAL OF EXISTING STRUCTURES = 1 EACH

**BURIED CABLE**  
G.T.E.  
**OVERHEAD POWER**  
NONE



PLAN	SURVEYED	BY	DATE
	DESIGNED		
	CHECKED		
	NOTED		
	NO. OF WAY CHECKED		
	NO. OF FILE CHECKED		
	NO. OF FIELD CHECKED		
	NO. OF FILE NAME		

PROFILE	SURVEYED	BY	DATE
	DESIGNED		
	CHECKED		
	NOTED		
	NO. OF WAY CHECKED		
	NO. OF FILE CHECKED		
	NO. OF FIELD CHECKED		
	NO. OF FILE NAME		



**HAROLD BEERS**  
S.W. 1/4, N.W. 1/4, SEC. 25, T. 8 S., R. 4 E., 3RD P.M.

**J.L. SPRAGUE**  
S.E. 1/4, N.W. 1/4, SEC. 25, T. 8 S., R. 4 E., 3RD P.M.

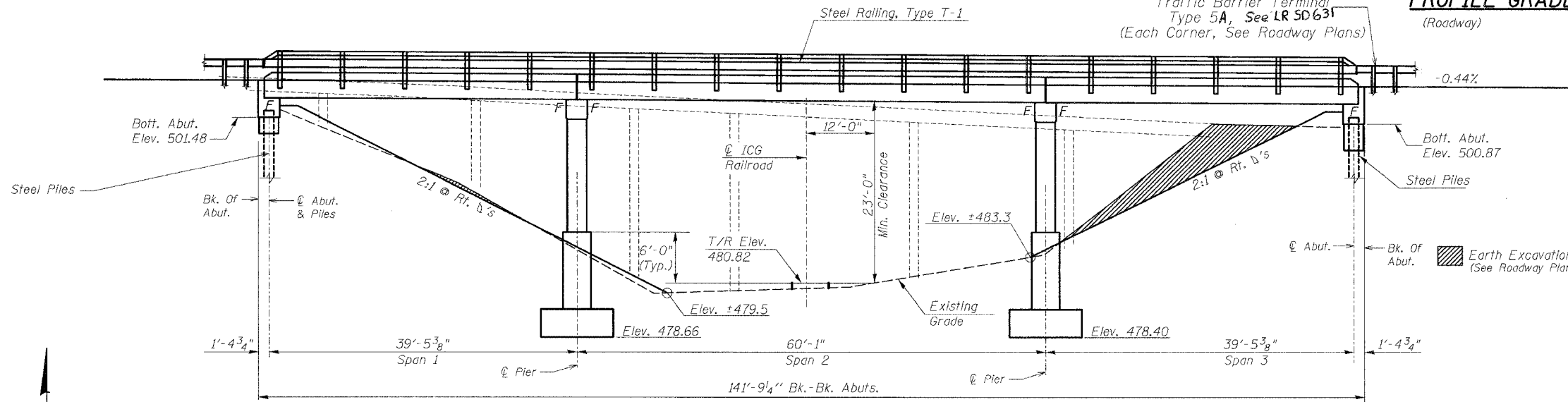
**B.M.**  
Spike Nail in Fence Corner  
14.63' Lt. Sta. 15+74.12  
Elev. 501.21

**EXISTING STRUCTURE:**  
Seven Span Timber Beam Bridge on Closed  
Timber Abutments & Timber Piers  
129.0' Bk to Bk Abutments and 15.9' 0 to 0 Deck

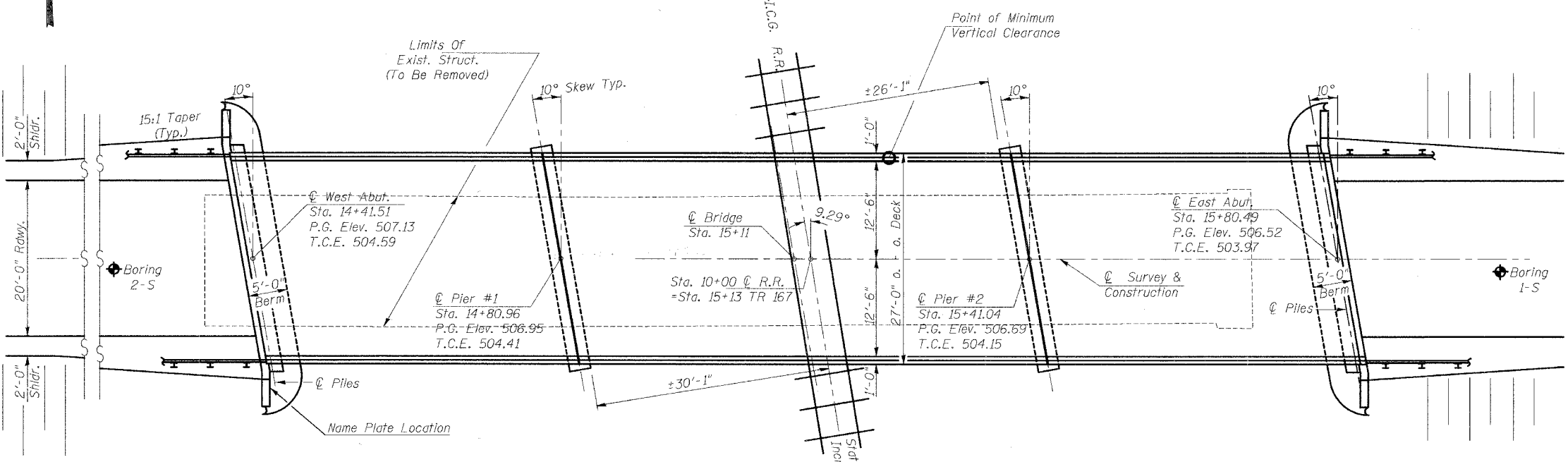
**SALVAGE:**  
None

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
167	04-01225-00-BR	WILLIAMSON	16	4
STA 13+00		STA 18+50		
ROAD DIST.		ILLINOIS		
CONTRACT No. 99299		Sheet 1 of 9		



**ELEVATION**  
(Looking North)



**PLAN**

**DESIGN SPECIFICATIONS**  
2002 AASHTO 17th Edition

**LOADING HS20-44**  
Allow 50#/Sq. Ft. for  
Future Wearing Surface.

**SEISMIC DATA**  
Seismic Performance Category (SPC) = B  
Bedrock Acceleration Coefficient (A) = 0.12  
Site Coefficient (S) = 1.2

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 "A.A.S.H.T.O. Standard Specification for Highway Bridges."

*John S. Peradotti*  
Date: **3-27-07**

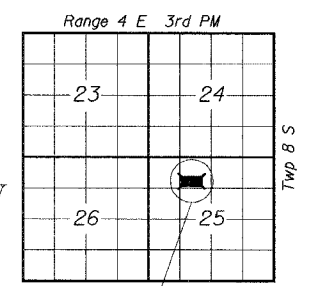
John S. Peradotti  
Licensed Structural Engineer  
in Illinois No. 81-005671  
License expires 11/30/08

**GENERAL NOTES**

1. Reinforcement bars shall conform to the requirement of ASTM A706 Gr 60 (Illinois Modified). See Special Provisions.
2. Reinforcement bars designated (E) shall be epoxy coated.
3. The Contractor shall drive test pile to 110% of the nominal required bearing specified in production locations of substructure specified or approved by the engineer before ordering the remainder of piles.
4. The top surface of the beams shall be finished according to the IDOT Manual for Fabrication of Precast Prestressed Concrete Products.

**TOTAL BILL OF MATERIALS (STRUCTURE)**

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Structures	Each			1
Structure Excavation	Cu. Yd.		268	268
Rock Excavation For Structures	Cu. Yd.		17.4	17.4
Concrete Structures	Cu. Yd.		154.6	154.6
Concrete Encasement	Cu. Yd.		4.4	4.4
Precast Prestressed Concrete Deck Beams (27" Depth)	Sq. Ft.	3,780		3,780
Reinforcement Bars, Epoxy Coated	Pound		15,180	15,180
Steel Railing, Type T-1	Foot	260		260
Furnishing Steel Piles HP 10x42	Foot		175	175
Driving Piles	Foot		175	175
Test Pile Steel HP10x42	Each		1	1
PILE Shoes	Each		7	7
Name Plates	Each		1	1
Waterproofing Membrane System	Sq. Yd.	391.0		391.0
Hot-Mix Asphalt Surface Course, Mix "C", NSO	Tons	58		58



**LOCATION SKETCH**

**GENERAL PLAN & ELEVATION**

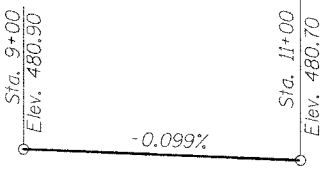
**TR 167 OVER  
ICG RAILROAD  
WILLIAMSON COUNTY  
SECTION 04-01225-00-BR**

STATION 15+11  
SEC. 04-01225-00-BR BUILT 20...  
CORINTH ROAD DISTRICT  
LOADING HS20  
STR. NO. 100-3173

**LETTERING FOR NAME PLATE**

Locate Name Plate at S.W. Wingwall  
Corner of Bridge (See Std 515001-02)

**PROFILE GRADE**  
(Top of Rails)



**HURST-ROSCHKE ENGINEERS, INC.**  
CONSULTING ENGINEERS & ARCHITECTS  
1805 INDUSTRIAL PARK DRIVE  
MARION, ILLINOIS 62959

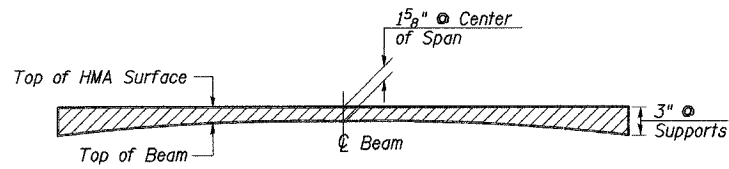
DESIGNED: MEB CHECKED: JSP  
DRAWN: DEG CHECKED: MEB



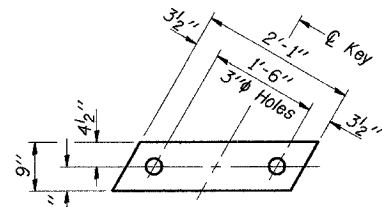


STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

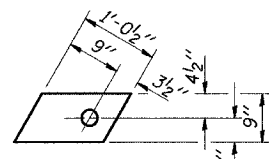
T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
167	04-01225-00-BR	WILLIAMSON	16	7
STA	12+00	STA	18+50	
ROAD DIST.	ILLINOIS			
CONTRACT No. 99299			Sheet 4 of 9	



**PROFILE OF OVERLAY**

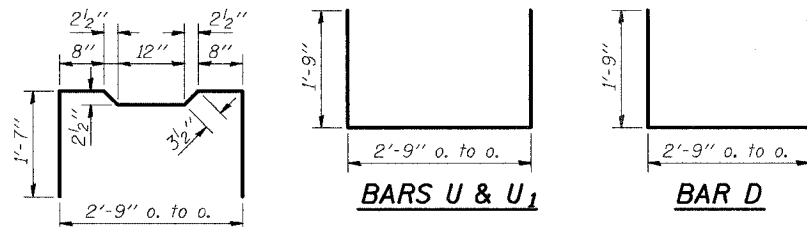


**FABRIC BEARING PAD**  
(Interior)  
14 Required



**FABRIC BEARING PAD**  
(Exterior)  
4 Required

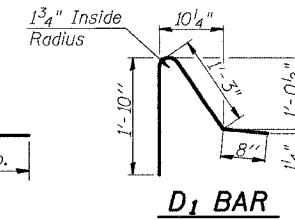
**FIXED**



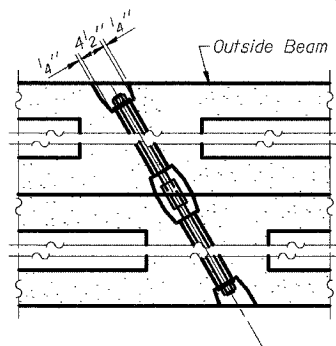
**BAR A<sub>1</sub>**

**BARS U & U<sub>1</sub>**

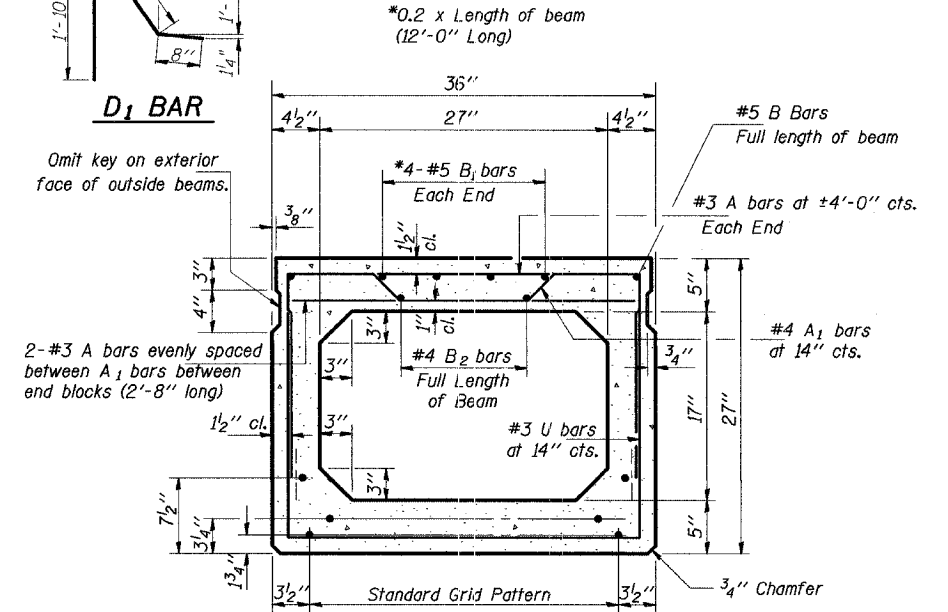
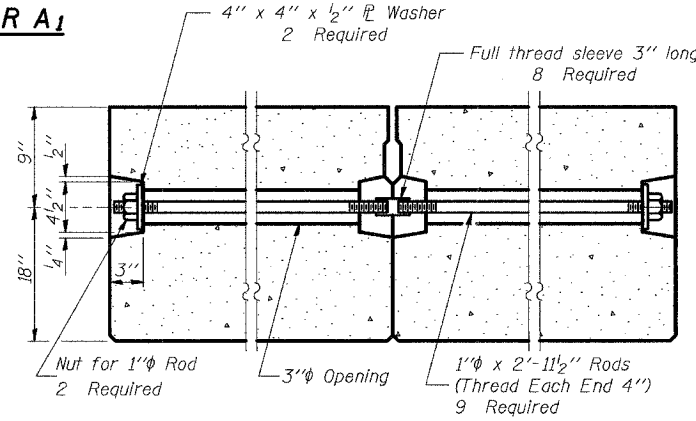
**BAR D**



**D<sub>1</sub> BAR**



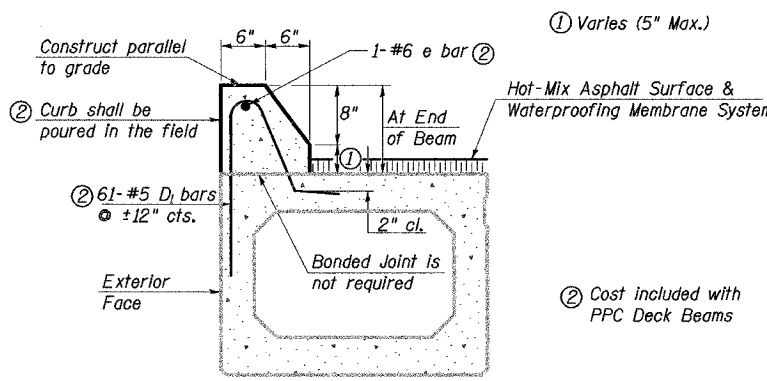
**TYPICAL TRANSVERSE TIE ASSEMBLY**



**TYPICAL SECTION**

15-1/2" Strands Each Strand Stressed to 28,900 Lbs.  
7-Strands 1 3/4" up, 6-Strands 3/4" up & 2 Strands 7/2" up

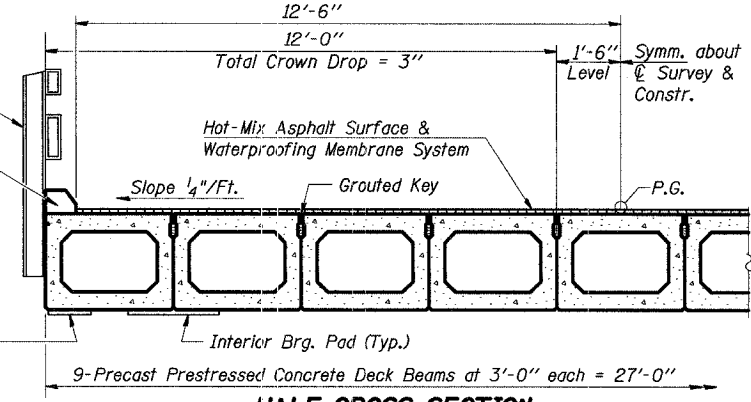
Note: Place strands symmetrically about center of beam.



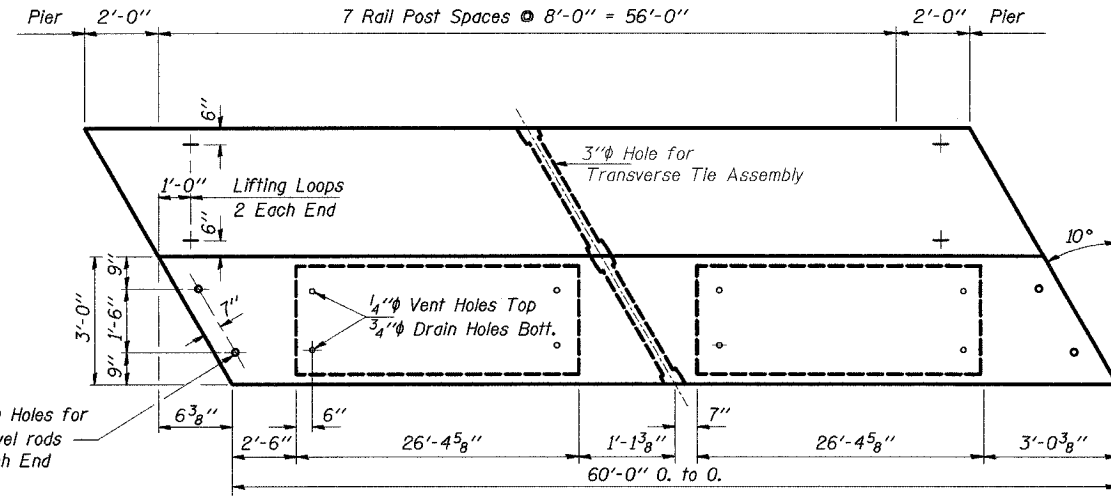
**SECTION THRU EXTERIOR BEAMS**

See Typical Section for strand pattern, dimensions and bar call outs.

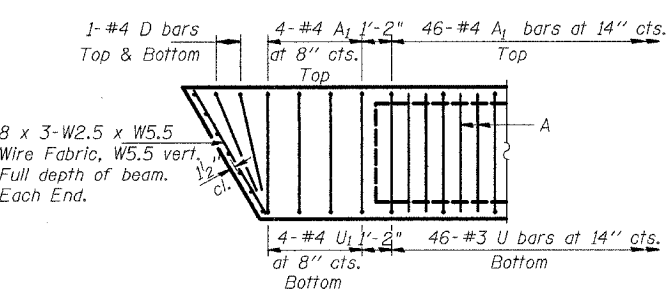
Steel Railing, Type T-1 See Sheet 5  
Concrete Curb Included with P.P.C. deck beams (27" Depth)



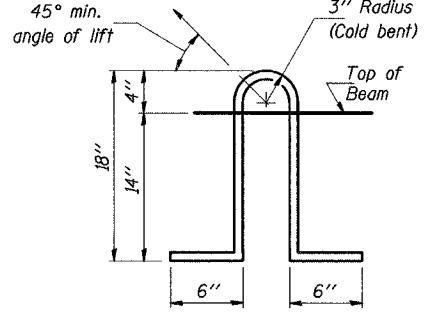
**HALF CROSS SECTION**



**PLAN**



**END PLAN**



**LIFTING LOOP DETAIL**

**NOTES**

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 ASTM A 706 (IL MOD), Grade 60. The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two 1/8" 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 sandblasting the keyway areas between top of the beam and the bottom edge of the key. Corrosion Inhibitor, per Article 1020.05(b)(12) of the Standard Specifications, shall be used in the concrete for precast prestressed concrete beams. Required Release Strength, f'ci, shall be 4,000 p.s.i.

**BILL OF MATERIAL**

Item	Unit	Quantity
Precast Prestressed Concrete Deck Beams (27" Depth)	Sq. Ft.	1,620
Hot-Mix Asphalt Surface Course, Mix "C", N50	Tons	22
Waterproofing Membrane System	Sq. Yds.	167
Estimated Total Weight (One Beam) = 37,420 Pounds		

**SUPERSTRUCTURE**  
**SPAN 2**  
**TR 167 OVER**  
**ICG RAILROAD**  
**WILLIAMSON COUNTY**  
**SECTION 04-01225-00-BR**

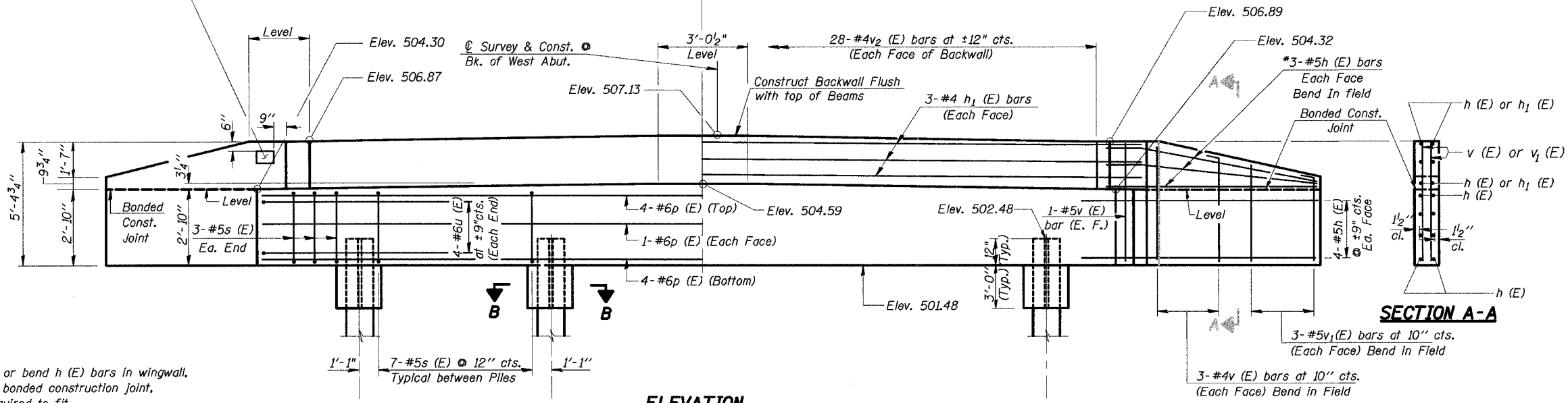
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
167	04-01225-00-BR	WILLIAMSON	16	8
STA 12+00	STA 18+50			
ROAD DIST.	ILLINOIS			
CONTRACT No. 99299				

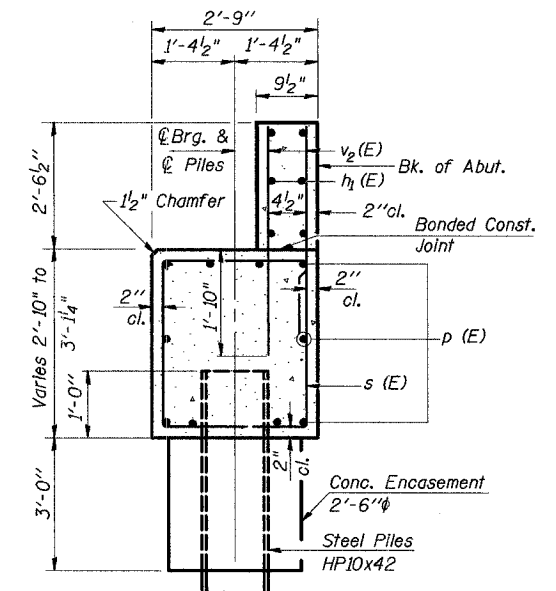
Sheet 5 of 9

Name Plate shall be placed on the outside face of the South Wing.

NOTE: After beams are in place and dowel rods grouted, the backwall and the portions of the wingwall above the bonded construction joint shall be poured.

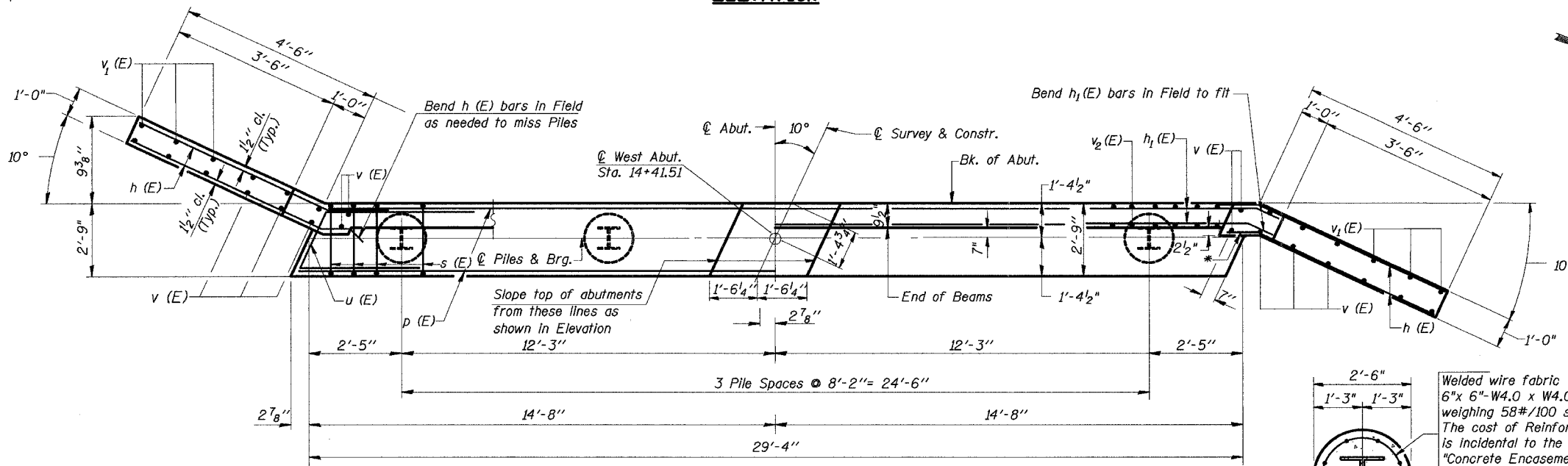


ELEVATION

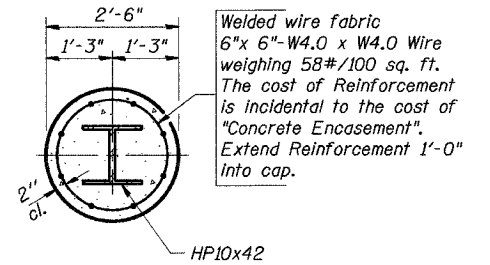


SECTION THRU ABUTMENT  
(At Right Δ's)

\* Cut or bend h (E) bars in wingwall, above bonded construction joint, as required to fit.



PLAN



SECTION B-B  
PILE ENCASEMENT DETAIL

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
h (E)	28	#5	6'-1"	—
h <sub>1</sub> (E)	6	#4	29'-0"	—
p (E)	10	#6	29'-0"	—
s (E)	27	#5	10'-9"	□
u (E)	8	#6	12'-5"	—
v (E)	16	#4	5'-0"	—
v <sub>1</sub> (E)	12	#4	4'-0"	—
v <sub>2</sub> (E)	56	#4	4'-3"	—
Concrete Structures			Cu. Yd.	12.6
Reinforcement Bars, Epoxy coated			Pound	1,430
Name Plates			Each	1
Test Piles Steel HP10x42			Each	1
Steel Piles HP10x42			Foot	75
Concrete Encasement			Cu. Yd.	2.2
Structure Excavation			Cu. Yd.	31
Metal Shoes			Each	3

PILE DATA

Type \_\_\_\_\_ Steel HP10x42 with Metal Shoes  
 No. Req'd. \_\_\_\_\_ 4\*\*  
 Capacity \_\_\_\_\_ Drive to Refusal  
 Est. Length \_\_\_\_\_ 25 Feet

\*\* Includes 1 test pile to be driven in a permanent location.

WEST ABUTMENT  
TR 167 OVER  
ICG RAILROAD  
WILLIAMSON COUNTY  
SECTION 04-01225-00-BR

**HURST-ROSCHKE ENGINEERS, INC.**  
CONSULTING ENGINEERS & ARCHITECTS  
1805 INDUSTRIAL PARK DRIVE  
MARION, ILLINOIS 62959

DESIGNED: MEB CHECKED: JSP  
DRAWN: DEC CHECKED: MEB

BAR h (E)

BAR u (E)

BAR s (E)

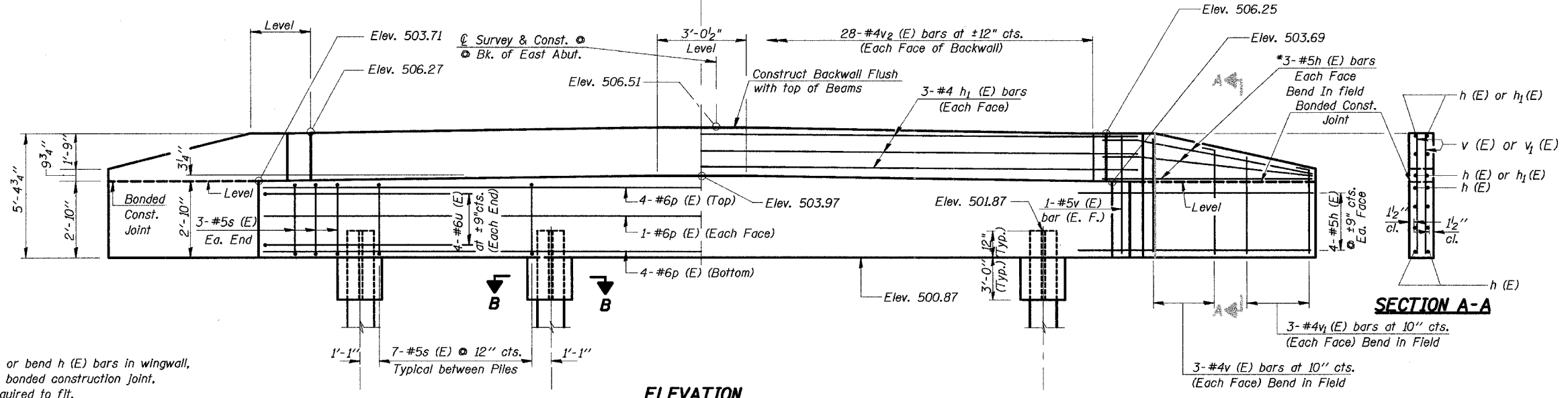


STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

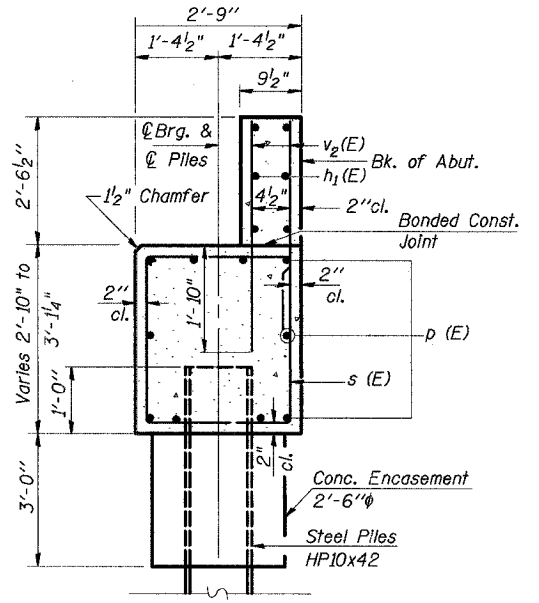
T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
167	04-01225-00-BR	WILLIAMSON	16	9
STA	12+00	STA	18+50	
ROAD DIST.	ILLINOIS			
CONTRACT No. 99299				

Sheet 6 of 9

NOTE: After beams are in place and dowel rods grouted, the backwall and the portions of the wingwall above the bonded construction joint shall be poured.

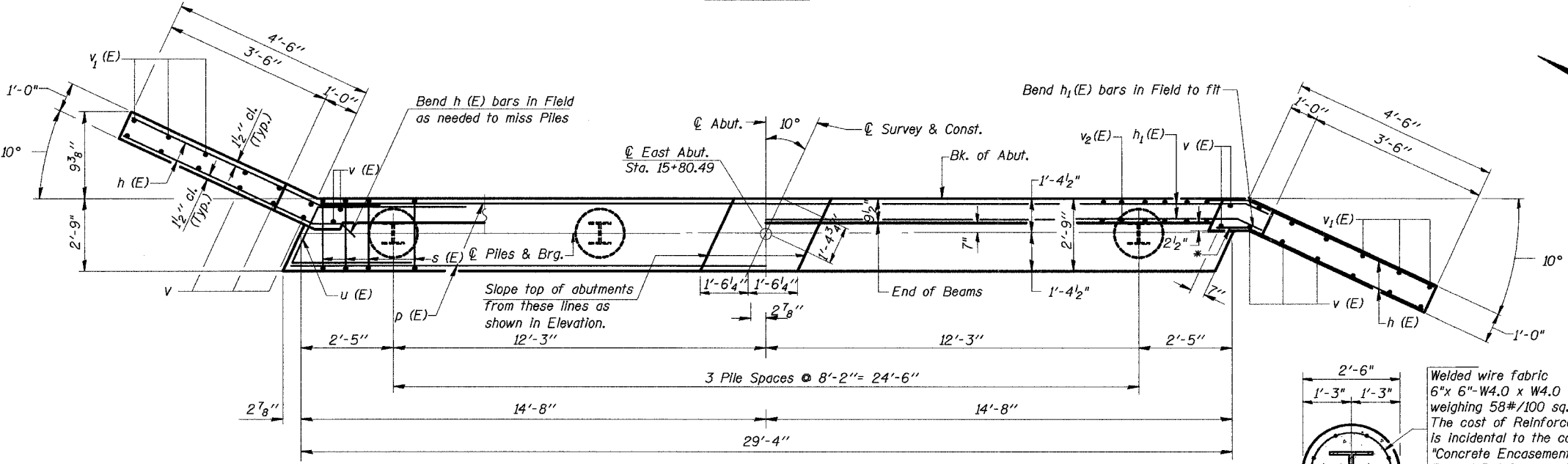


**ELEVATION**

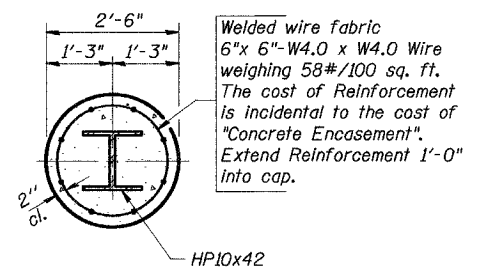


**SECTION THRU ABUTMENT**  
(At Right Δ's)

\* Cut or bend h (E) bars in wingwall, above bonded construction joint, as required to fit.



**PLAN**



**SECTION B-B**  
**PILE ENCASEMENT DETAIL**

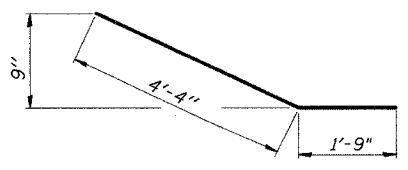
**BILL OF MATERIAL**

BAR	NO.	SIZE	LENGTH	SHAPE
h (E)	28	#5	6'-1"	—
h <sub>1</sub> (E)	6	#4	29'-0"	—
p (E)	10	#6	29'-0"	—
s (E)	27	#5	10'-9"	□
u (E)	8	#6	12'-5"	—
v (E)	16	#4	5'-0"	—
v <sub>1</sub> (E)	12	#4	4'-0"	—
v <sub>2</sub> (E)	56	#4	4'-3"	—
Concrete Structures				Cu. Yd. 12.6
Reinforcement Bars, Epoxy Coated				Pound 1,430
Steel Piles HP10x42				Foot 100
Concrete Encasement				Cu. Yd. 2.2
Structure Excavation				Cu. Yd. 31
Metal Shoes				Each 4

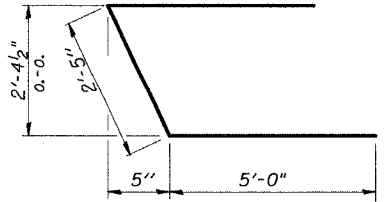
**PILE DATA**

Type \_\_\_\_\_ Steel HP10x42 with Metal Shoes  
 No. Req'd. \_\_\_\_\_ 4  
 Capacity \_\_\_\_\_ Drive to Refusal  
 Est. Length \_\_\_\_\_ 25 Feet

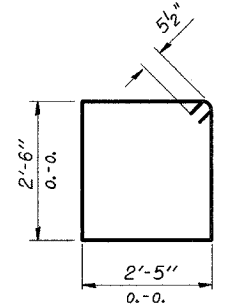
**BAR h (E)**



**BAR u (E)**



**BAR s (E)**



**HURST-ROSCHKE ENGINEERS, INC.**  
 CONSULTING ENGINEERS & ARCHITECTS  
 1805 INDUSTRIAL PARK DRIVE  
 MARION, ILLINOIS 62959

DESIGNED: MEB CHECKED: JSP  
 DRAWN: DEG CHECKED: MEB

**EAST ABUTMENT**  
**TR 167 OVER**  
**ICG RAILROAD**  
**WILLIAMSON COUNTY**  
**SECTION 04-01225-00-BR**

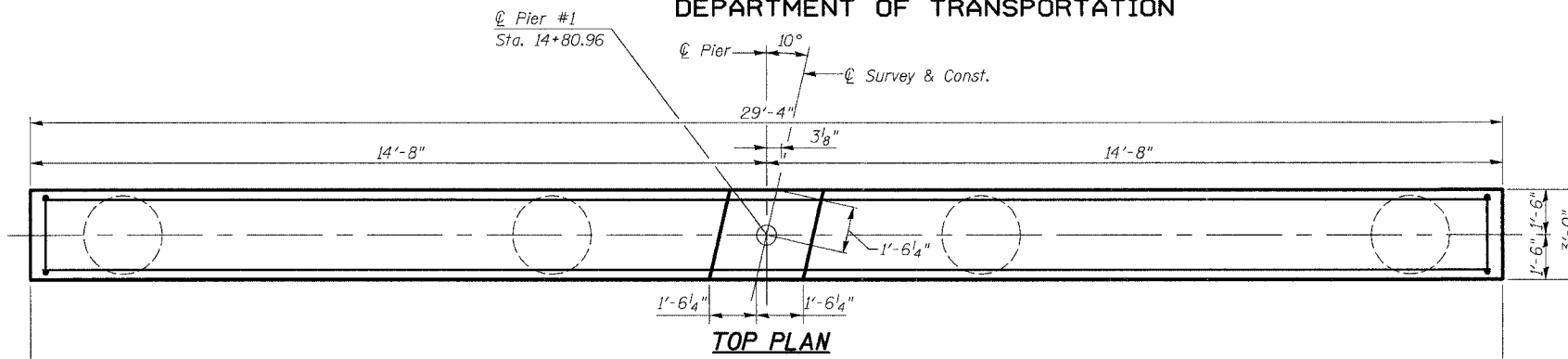
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

Sheet 7 of 9

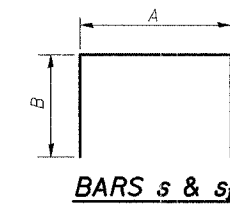
T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
167	04-01225-00-BR	WILLIAMSON	16	10
STA 12+00	STA 18+50			
ROAD DIST.		ILLINOIS		
CONTRACT No. 99299				

MIN. BAR LAP

- #4 - 1'-4"
- #5 - 1'-8"
- #8 - 3'-5"

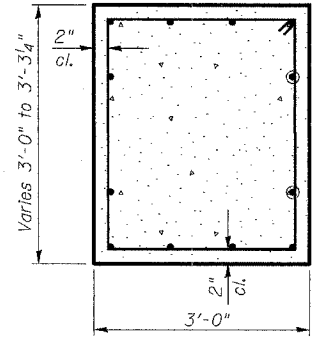


TOP PLAN

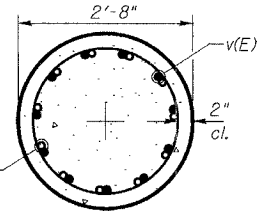
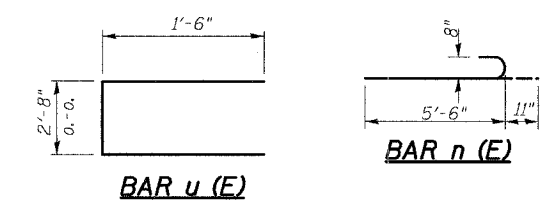


A & B DIMENSIONS

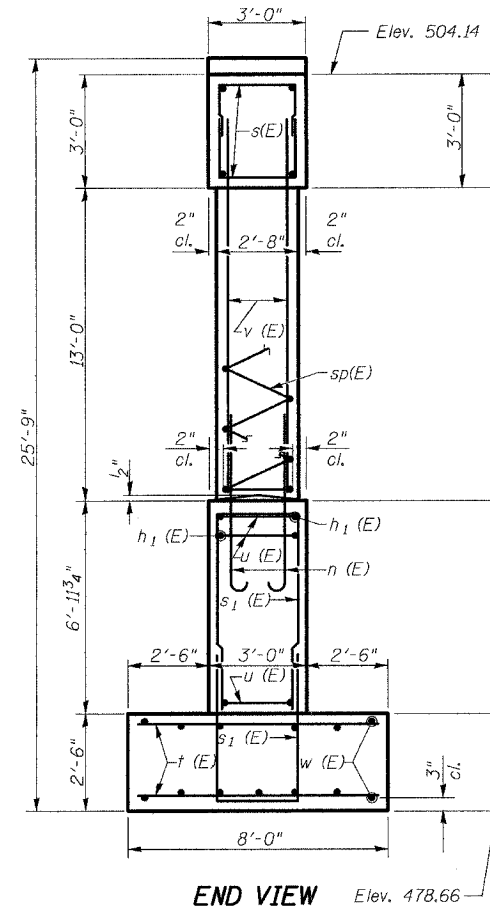
Bar	A	B
s	2'-6"	2'-2"
s1	2'-6"	5'-6"



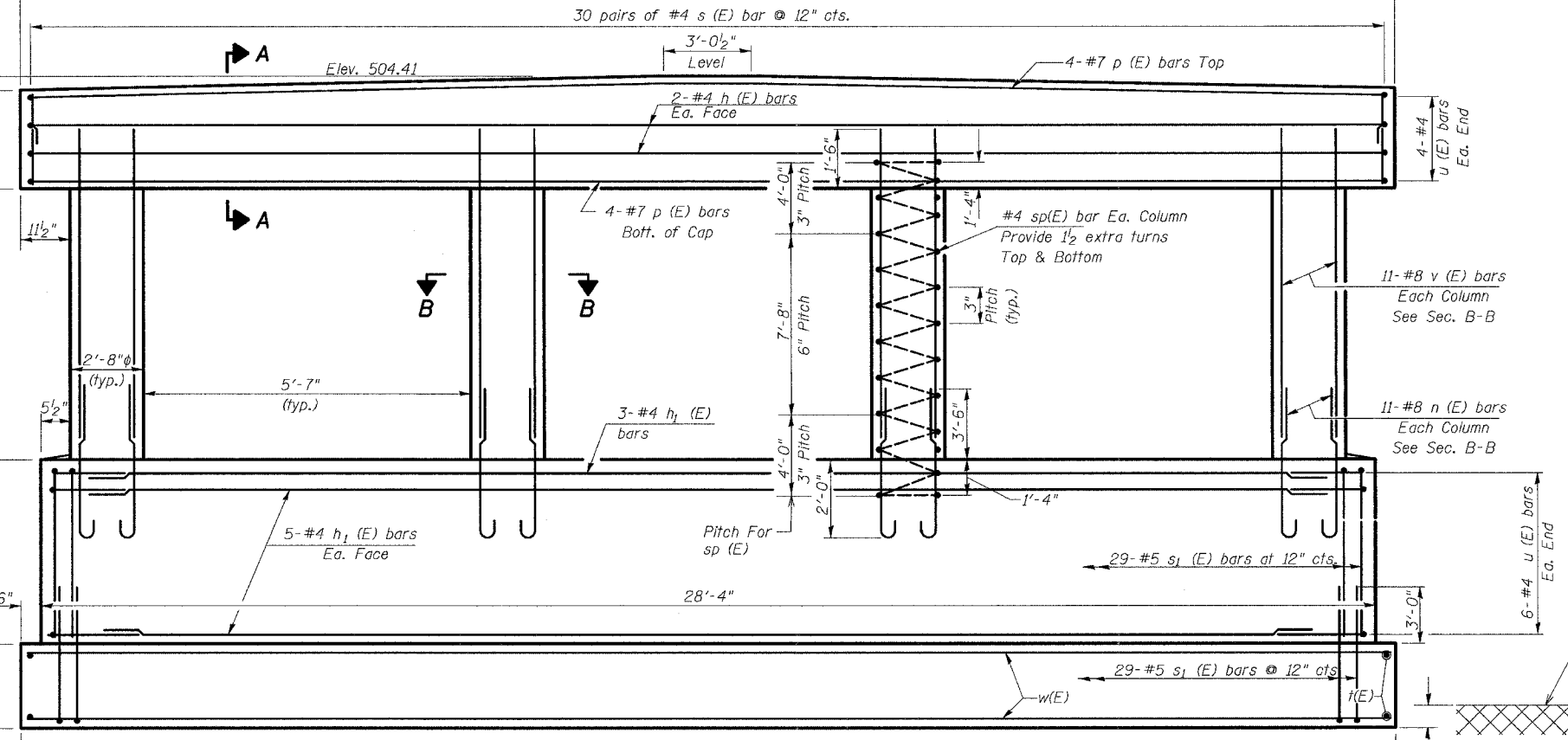
SECTION A-A



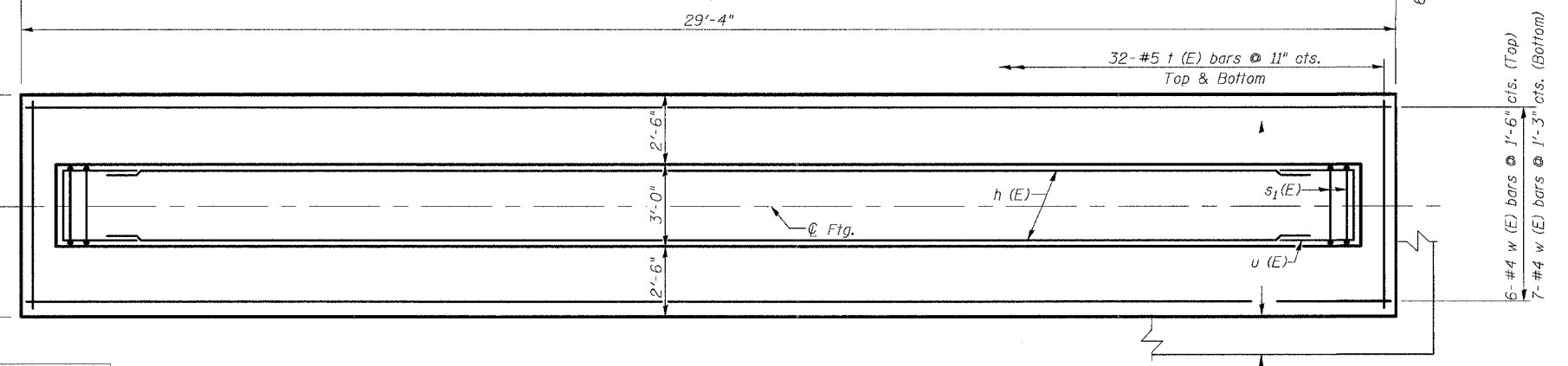
SECTION B-B



END VIEW



ELEVATION  
(Looking East)



FOOTING PLAN

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h (E)	4	#4	29'-0"	—
h1 (E)	13	#4	28'-0"	—
** sp (E)	4	#4	15'-8"	⌘
n (E)	44	#8	6'-5"	⌘
p (E)	8	#7	29'-0"	—
s (E)	60	#4	6'-10"	⌘
s1 (E)	58	#5	13'-6"	⌘
t (E)	64	#5	7'-8"	—
u (E)	20	#4	5'-8"	⌘
v (E)	44	#8	14'-5"	—
w (E)	13	#4	29'-0"	—
Structure Excavation	Cu. Yd.	111		
Concrete Structures	Cu. Yd.	64.7		
Reinforcement Bars, Epoxy Coated	Pound	6,160		
Rock Excavation For Structures	Cu. Yd.	8.7		

Top of Hard Shale ±479.2  
\*\* Length is height of spiral

PIER #1  
TR 167 OVER  
ICG RAILROAD  
WILLIAMSON COUNTY  
SECTION 04-01225-00-BR

T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
167	04-01225-00-BR	WILLIAMSON	16	11

STA 12+00	STA 18+50
-----------	-----------

ROAD DIST. ILLINOIS

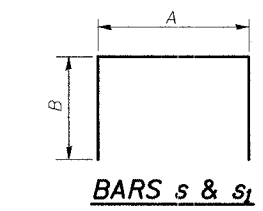
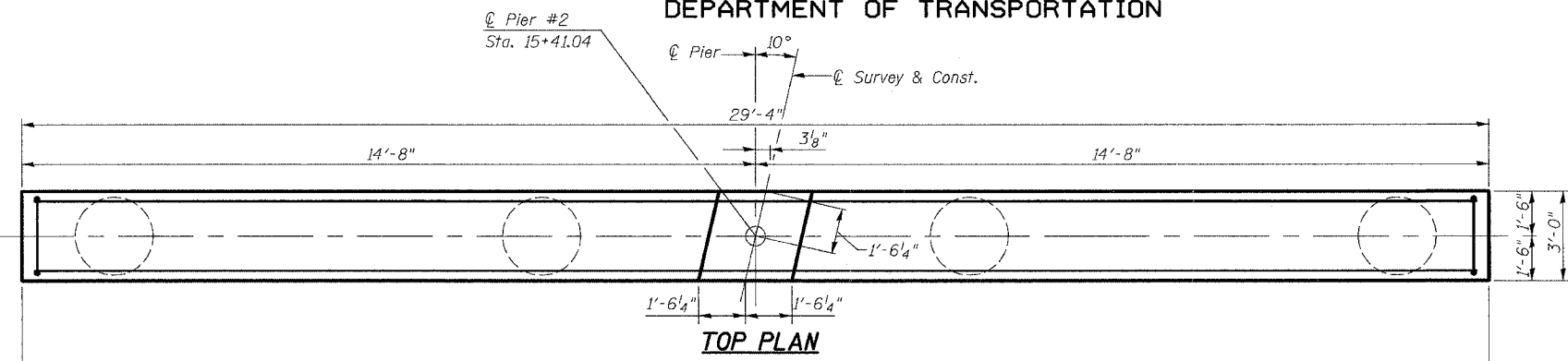
CONTRACT No. 99299

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



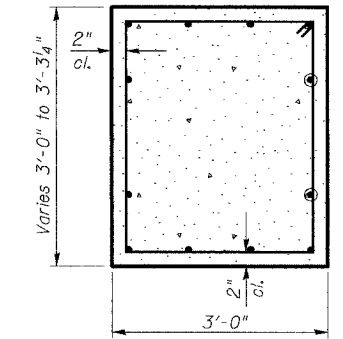
**MIN. BAR LAP**

- #4 - 1'-4"
- #5 - 1'-8"
- #8 - 3'-5"

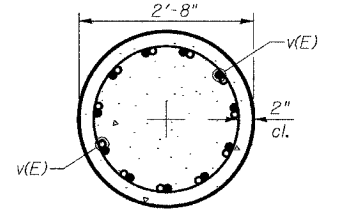
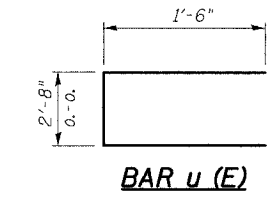


**A & B DIMENSIONS**

Bar	A	B
s	2'-6"	2'-2"
s1	2'-6"	5'-6"



**SECTION A-A**



**SECTION B-B**

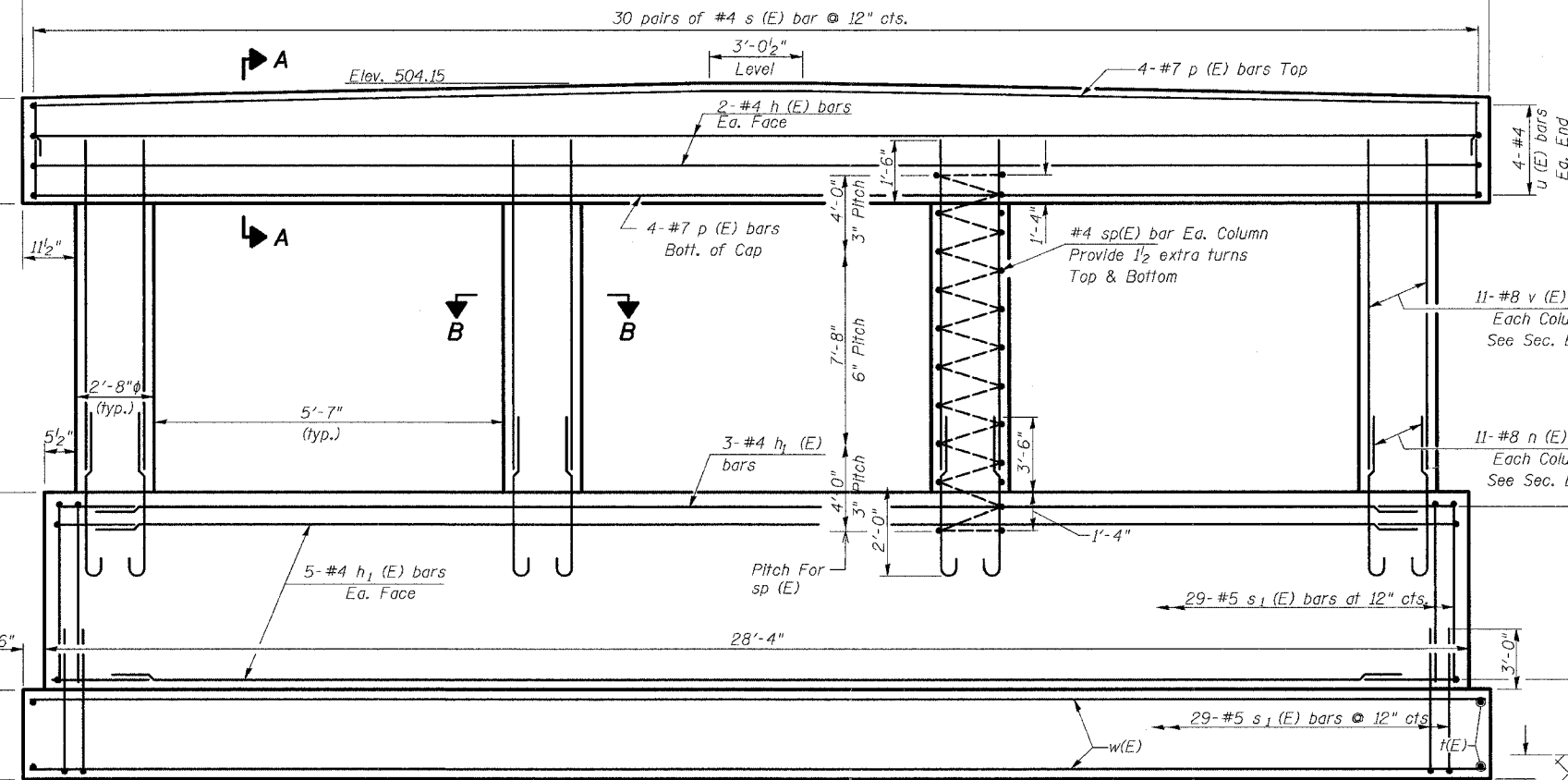
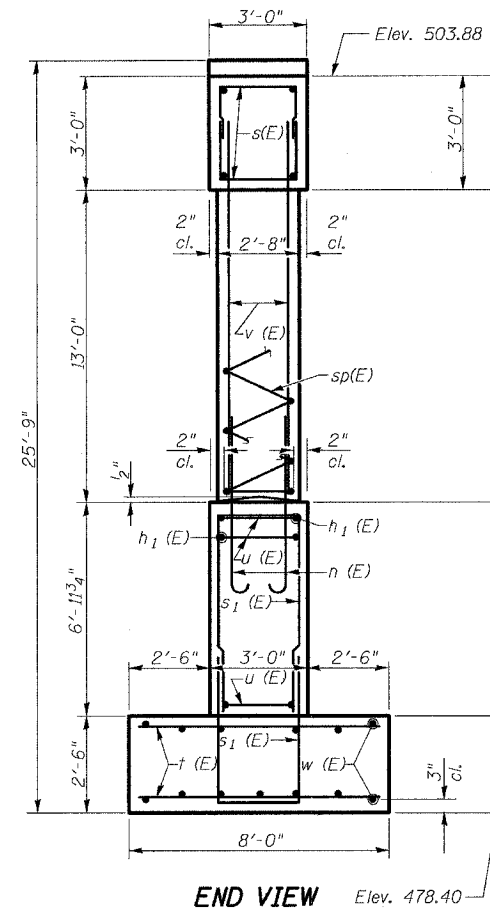
**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h (E)	4	#4	29'-0"	—
h1 (E)	13	#4	28'-0"	—
sp (E)	4	#4	15'-8"	⊘
n (E)	44	#8	6'-5"	—
p (E)	8	#7	29'-0"	—
s (E)	60	#4	6'-10"	—
s1 (E)	58	#5	13'-6"	—
t (E)	64	#5	7'-8"	—
u (E)	20	#4	5'-8"	—
v (E)	44	#8	14'-5"	—
w (E)	13	#4	29'-0"	—

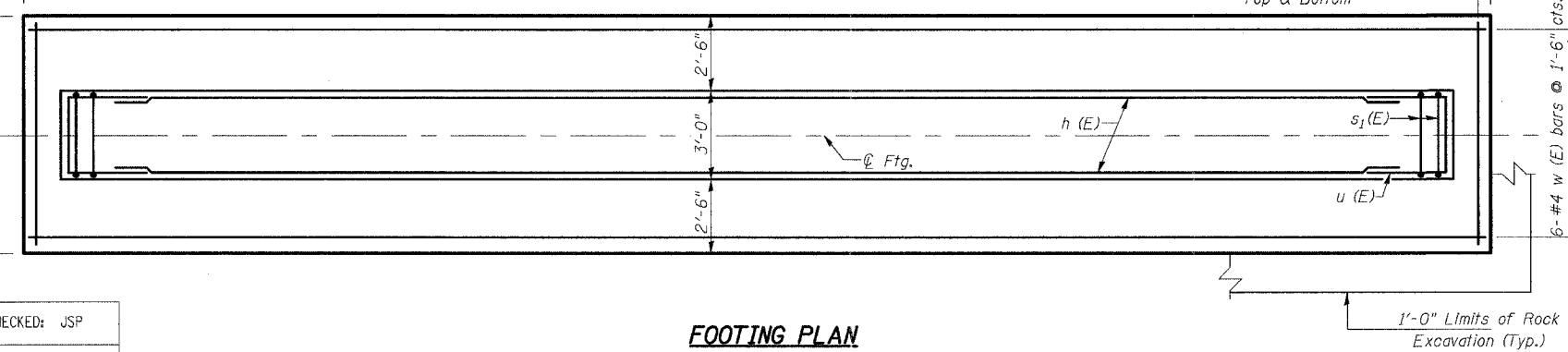
Structure Excavation Cu. Yd. 95  
 Concrete Structures Cu. Yd. 64.7  
 Reinforcement Bars, Epoxy Coated Pound 6,160  
 Rock Excavation For Structures Cu. Yd. 8.7

Reinforcement Bars designated (E) shall be epoxy coated.

**PIER #2**  
**TR 167 OVER**  
**ICG RAILROAD**  
**WILLIAMSON COUNTY**  
**SECTION 04-01225-00-BR**



**ELEVATION**  
**(Looking East)**



**FOOTING PLAN**

**HURST-ROSCHKE ENGINEERS, INC.**  
CONSULTING ENGINEERS & ARCHITECTS  
1805 INDUSTRIAL PARK DRIVE  
MARION, ILLINOIS 62959

DESIGNED: MEB CHECKED: JSP  
DRAWN: DEC CHECKED: MEB

3/27/2007 11:58:19 AM

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
167	04-01225-00-BR	WILLIAMSON	16	12
STA 13+00		STA 18+50		
ROAD DIST.		ILLINOIS		

Sheet 9 of 9



**Illinois Department of Transportation**  
Local Roads  
District 9 Materials

**SOIL BORING LOG**

Page 1 of 1  
Date 08/09/04

ROUTE T.R. 167 DESCRIPTION T.R. 167 (PARTRIDGE ROAD) OVER I.C.G. RAILROAD LOGGED BY B.K.  
SECTION \_\_\_\_\_ LOCATION 1 MILE W. SALINE COUNTY  
COUNTY WILLIAMSON DRILLING METHOD \_\_\_\_\_ HAMMER TYPE \_\_\_\_\_

STRUCT. NO.	BORING NO.	Station	Offset	Ground Surface Elev.	EL	D	B	U	M	Surface Water Elev.	Stream Bed Elev.	Groundwater Elev.:	First Encounter	Upon Completion	After	Hrs.	D	B	U	M	
100-9910	1-S	25' E. OF E. ABUT	1.0' S. of Centerline	96.9		(ft)	(ft)	(Tsf)	(%)	ft	ft	ft	ft	ft	ft		(ft)	(/6")	(Tsf)	(%)	

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)  
BBS, from 137 (Rev. 8-99)



**Illinois Department of Transportation**  
Local Roads  
District 9 Materials

**SOIL BORING LOG**

Page 1 of 1  
Date 08/09/04

ROUTE T.R. 167 DESCRIPTION T.R. 167 (PARTRIDGE ROAD) OVER I.C.G. RAILROAD LOGGED BY B.K.  
SECTION \_\_\_\_\_ LOCATION 1 MILE W. SALINE COUNTY  
COUNTY WILLIAMSON DRILLING METHOD \_\_\_\_\_ HAMMER TYPE \_\_\_\_\_

STRUCT. NO.	BORING NO.	Station	Offset	Ground Surface Elev.	EL	D	B	U	M	Surface Water Elev.	Stream Bed Elev.	Groundwater Elev.:	First Encounter	Upon Completion	After	Hrs.	D	B	U	M	
100-9910	2-S	20' W. OF W. ABUT	2.0' S. of Centerline	103.9		(ft)	(/6")	(Tsf)	(%)	ft	ft	ft	ft	ft	ft		(ft)	(/6")	(Tsf)	(%)	

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)  
BBS, from 137 (Rev. 8-99)

Datum Correlation

Elevation 100.00 = Elevation ±503.6  
(Borings) (Plans)

BORING LOGS  
TR 167 OVER  
ICG RAILROAD  
WILLIAMSON COUNTY  
SECTION 04-01225-00-BR



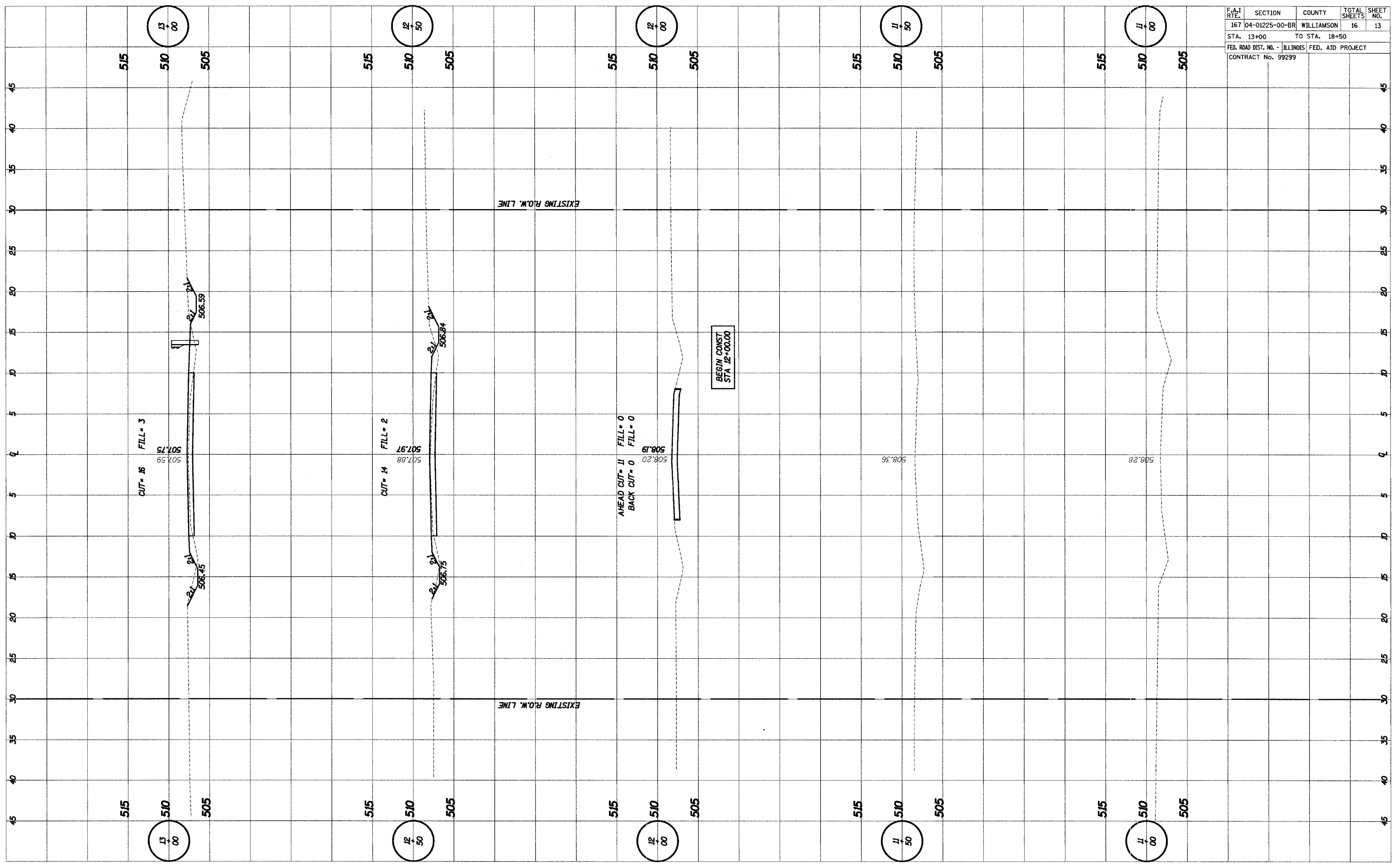
DESIGNED: MEB	CHECKED: JSP
DRAWN: DEG	CHECKED: MEB

11/15/2007 11:15:20 AM

UNIVERSITY OF ILLINOIS  
SURVEYING  
SURVEY  
NOTE BOOK  
TEMPLATE  
AREAS CHECKED

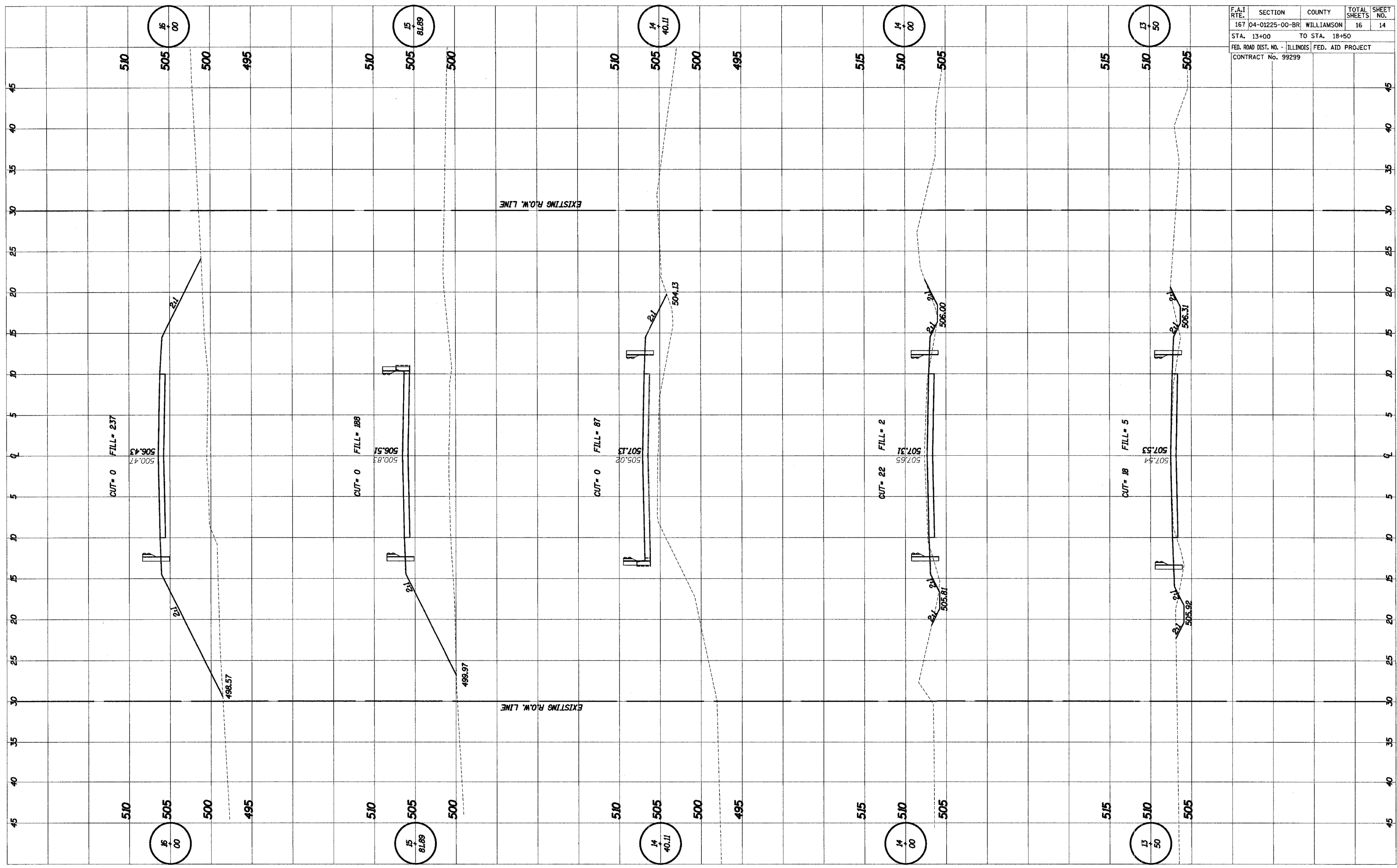
UNIVERSITY OF ILLINOIS  
SURVEYING  
SURVEY  
NOTE BOOK  
TEMPLATE  
AREAS CHECKED

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
167	04-01225-00-BR	WILLIAMSON	16	13
STA. 13+00		TO STA. 18+50		
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT				
CONTRACT No. 99299				



SURVEYED \_\_\_\_\_  
 PLOTTED \_\_\_\_\_  
 NOTE BOOK \_\_\_\_\_  
 AREAS CHECKED \_\_\_\_\_  
 NO. \_\_\_\_\_

SURVEYED \_\_\_\_\_  
 PLOTTED \_\_\_\_\_  
 NOTE BOOK \_\_\_\_\_  
 AREAS CHECKED \_\_\_\_\_  
 NO. \_\_\_\_\_

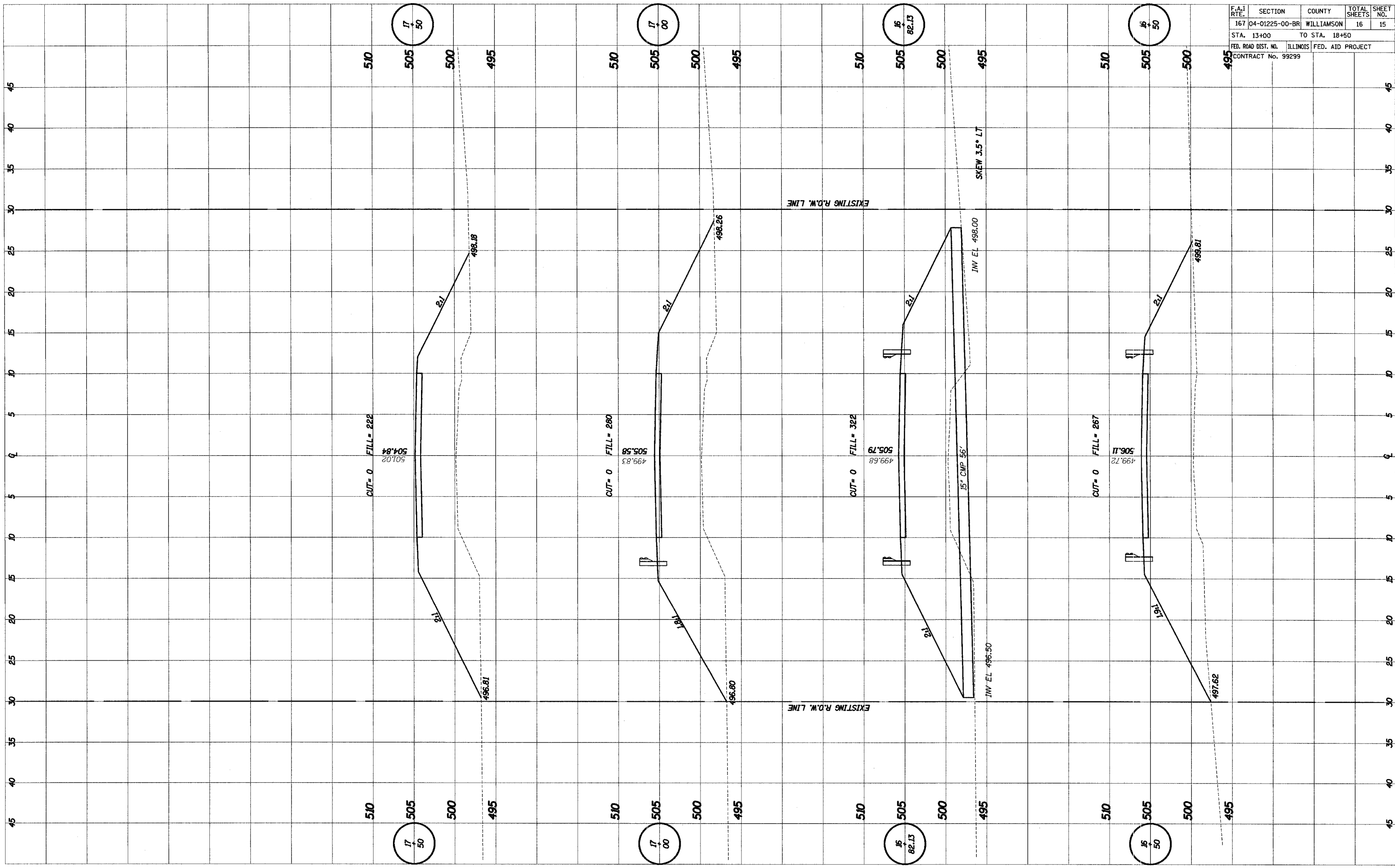


F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
167	04-01225-00-BR	WILLIAMSON	16	14
STA. 13+00		TO STA. 18+50		
FED. ROAD DIST. NO. - ILLINOIS		FED. AID PROJECT		
CONTRACT No. 99299				

SURVEYED \_\_\_\_\_  
 SURVEY \_\_\_\_\_  
 NOTE BOOK \_\_\_\_\_  
 TEMPLATE \_\_\_\_\_  
 AREAS \_\_\_\_\_  
 AREAS CHECKED \_\_\_\_\_  
 NO. \_\_\_\_\_

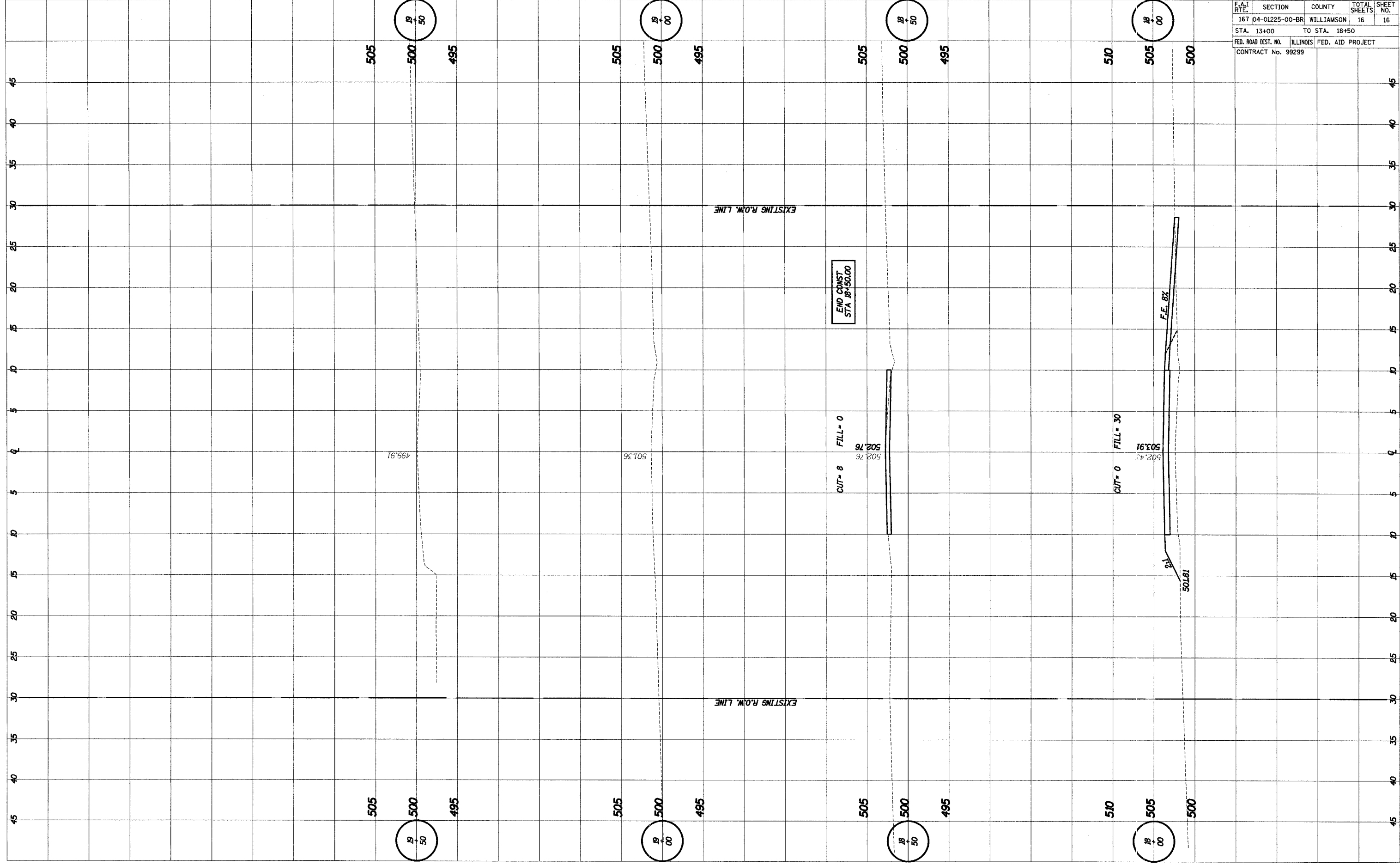
SURVEYED \_\_\_\_\_  
 SURVEY \_\_\_\_\_  
 NOTE BOOK \_\_\_\_\_  
 TEMPLATE \_\_\_\_\_  
 AREAS \_\_\_\_\_  
 AREAS CHECKED \_\_\_\_\_  
 NO. \_\_\_\_\_

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
167	04-01225-00-BR	WILLIAMSON	16	15
STA. 13+00		TO STA. 18+50		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT No. 99299				



SURVEYED  
 PLOTTED  
 NOTE BOOK  
 AREAS CHECKED

SURVEYED  
 PLOTTED  
 NOTE BOOK  
 AREAS CHECKED



F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
167	04-01225-00-BR	WILLIAMSON	16	16
STA. 13+00	TO STA. 18+50			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			
CONTRACT No. 99299				