

06-10-2016 LETTING ITEM 219

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
557	05-01228-00-BR	WILLIAMSON	34	1
STA 103+50.00 TO STA 114+00.00				
ILLINOIS WEST MARION TOWNSHIP				

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

**PLANS FOR PROPOSED
FEDERAL-AID - S.T.P.-BR. BRIDGE**

TR 557 OVER BNSF RAILROAD
SECTION 05-01228-00-BR
WEST MARION ROAD DISTRICT
WILLIAMSON COUNTY
PROJECT BROS-0199 (022)
JOB C-99-558-05

- INDEX OF SHEETS**
- 1.) COVER SHEET
 - 2.) SUMMARY OF QUANTITIES, SCHEDULES OF QUANTITIES AND REFERENCE TIES
 - 3.) TYPICAL SECTIONS AND GENERAL NOTES
 - 4.) PLAN & PROFILE
 - 5.) DETOUR ROAD AND STORM WATER POLLUTION PREVENTION PLAN
 - 6.) DETOUR ROAD PROFILE AND TRAFFIC CONTROL PLAN
 - 7-17.) BRIDGE PLANS
 - 18.-25.) CROSS SECTIONS - TR 557
 - 26-34.) CROSS SECTIONS - DETOUR RD

SCALES

- PLAN _____ 1"=50'
- PROFILE: _____
- HORIZ. _____ 1"=50'
- VERT. _____ 1"=5'
- CROSS SECTIONS: _____
- HORIZ. _____ 1"=10'
- VERT. _____ 1"=5'

HIGHWAY STANDARDS

- 000001-06
- 001001-02
- 280001-07
- 515001-03
- 630001-10
- 630301-06
- 631031-14
- 666001-01
- 701006-05
- 701901-05
- 725001
- BLR 21-9

DESIGN CLASSIFICATION

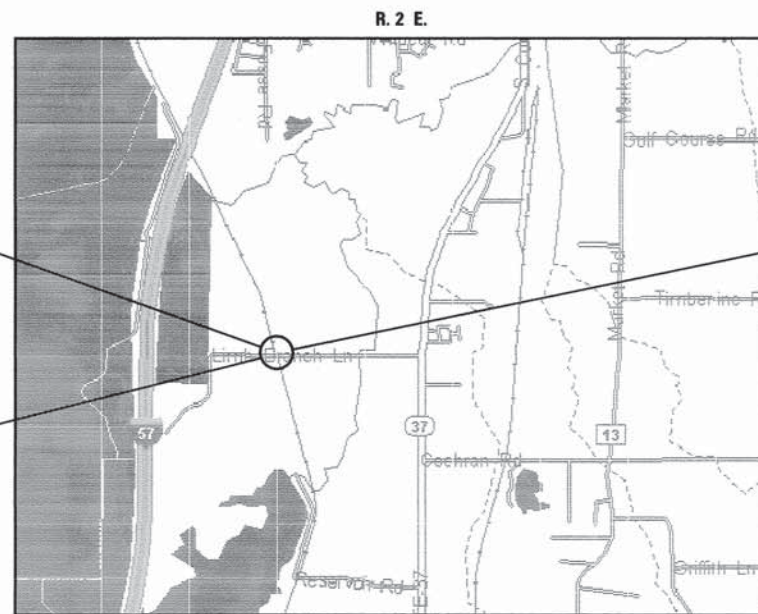
ROADWAY _____ LOCAL ROAD
A.D.T. _____ 150 (2015) 175 (2035)
DESIGN SPEED _____ 30 MPH

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

CONTRACT NO. 99347

HR HURST-ROSCHKE, INC.
CONSULTING ENGINEERS & ARCHITECTS
200 NORTH MARKET STREET
MARION, ILLINOIS 62959

DESIGNED: JLG CHECKED: RVB
DRAWN: UJ CHECKED: RVB



SECTION 05-01228-00-BR INCLUDES THE CONSTRUCTION OF A THREE SPAN PRECAST PRESTRESSED CONCRETE DECK BRIDGE AT STA 107+13.00 (S.N. 100-3183) CARRYING TR 557 OVER BNSF RAILROAD

BEGIN PROJECT
STA 104+10.00
SECTION 05-01228-00 BR

END PROJECT
STA 113+40.00
SECTION 05-01228-00-BR

SECTION 35 TWP 9 S RANGE 2 E
OF THE 3RD PRINCIPAL MERIDIAN
WEST MARION TOWNSHIP

LOCATION MAP

LENGTH OF PROJECT = 930.00 FEET = 0.176 MILES

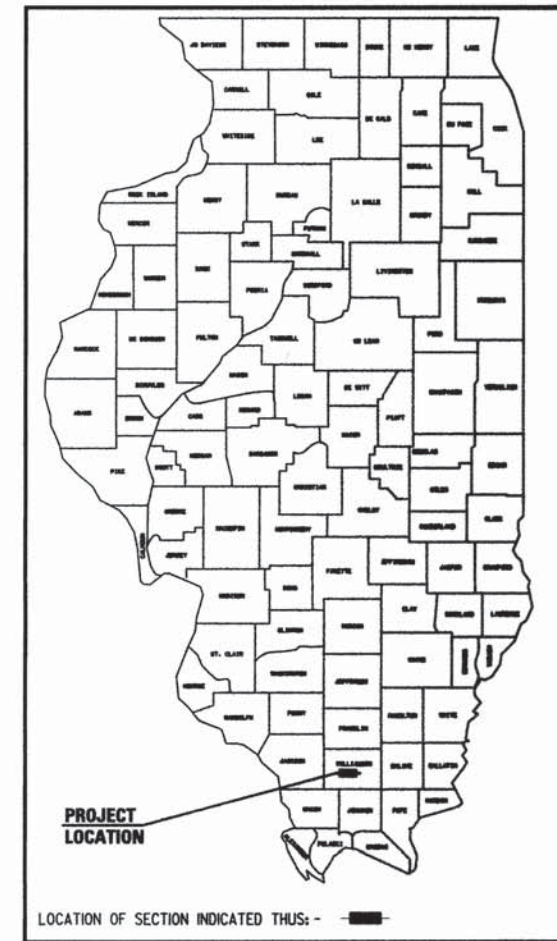


P.E. 062-047531

MARK A. REITZ
LICENSE EXPIRES: 11/30/17

3.10.16
DATE

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS



APPROVED MARCH 10 2016
Jeffrey L. Kern
COUNTY ENGINEER

PASSED MARCH 28 2016
Dani W. Hill
DISTRICT ENGINEER OF LOCAL ROADS AND STREETS

RELEASING FOR BID MARCH 20 2016
BASED ON LIMITED REVIEW
Jeffrey L. Kern
JEFFREY L. KERN, P.E.
REGION FIVE ENGINEER

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	TOTAL	ROADWAY	BRIDGE
				E000 Sta. 104+10 to 113+40	X080 Sta. 107+13
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	60	60	0
20100500	TREE REMOVAL, ACRES	ACRE	0.5	0.5	0
20200100	EARTH EXCAVATION	CU YD	2881	2881	0
20400800	FURNISHED EXCAVATION	CU YD	7800	7800	0
25000200	SEEDING, CLASS 2	ACRE	3.25	3.25	0
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	293	293	0
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	293	293	0
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	293	293	0
25100115	MULCH, METHOD 2	ACRE	1.0	1.0	0
25100630	EROSION CONTROL BLANKET	SO YD	11185	11185	0
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	650	650	0
28000305	TEMPORARY DITCH CHECKS	FOOT	240	240	0
28000400	PERIMETER EROSION BARRIER	FOOT	2025	2025	0
28000500	INLET AND PIPE PROTECTION	EACH	6	6	0
28100807	STONE DUMPED RIPRAP, CLASS A4	TON	382	0	382
35101400	AGGREGATE BASE COURSE, TYPE B	TON	1318	1318	0
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	2070	2070	0
40300200	BITUMINOUS MATERIALS (PRIME COAT)	TON	4.0	4.0	0
40300400	BITUMINOUS MATERIALS (COVER AND SEAL COATS)	TON	7.2	7.2	0
40300500	COVER COAT AGGREGATE	TON	48	48	0
40300600	SEAL COAT AGGREGATE	TON	24	24	0
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1	0	1
50200100	STRUCTURE EXCAVATION	CU YD	409	0	409
50300225	CONCRETE STRUCTURES	CU YD	239.0	0	239
50300255	CONCRETE SUPERSTRUCTURE	CU YD	29.7	0	29.7
50300280	CONCRETE ENCASEMENT	CU YD	7.6	0	7.6
50400405	PRECAST PRESTRESSED CONCRETE DECK BEAMS (21" DEPTH)	SO FT	3897	0	3897
50500505	STUD SHEAR CONNECTORS	EACH	600	0	600
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	43335	0	43335
50800530	MECHANICAL SPLICERS	EACH	72	0	72
50901730	BRIDGE FENCE RAILING	FOOT	225	0	225
51201900	FURNISHING STEEL PILES HP14x89	FOOT	1676	0	1676
51202305	DRIVING PILES	FOOT	1676	0	1676
51203900	TEST PILE STEEL HP14x89	EACH	2	0	2
51500100	NAME PLATES	EACH	1	0	1
52200010	TEMPORARY SHEET PILING	SO FT	1196	1196	0
54210012	PIPE CULVERTS, CLASS D, TYPE I 12" (TEMPORARY)	FOOT	48	48	0
54210024	PIPE CULVERTS, CLASS D, TYPE I 24" (TEMPORARY)	FOOT	74	74	0
54200217	PIPE CULVERTS, CLASS D, TYPE I 12"	FOOT	54	54	0
63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	50.0	50.0	0
63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4	4	0
63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL TANGENT)	EACH	4	4	0
66600105	FURNISHING AND ERECTING RIGHT OF WAY MARKERS	EACH	9	9	0
67100100	MOBILIZATION	L SUM	1	1	0
70101830	TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21	L SUM	1	1	0
78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4	4	0
X6650206	WOVEN WIRE FENCE TO BE REMOVED AND RE-ERECTED	FOOT	538	538	0
Z0026600	TRAVELERS	HOUR	500		
Z0029602	TEMPORARY SIGNING	EACH	3	3	0
Z0076604	TRAVELERS TRAINING PROGRAM GRADUATE	HOUR	500		
Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1	0	1

SPECIALTY ITEMS
Δ ○ ○ 42

FILE NAME =	USER NAME = #USER#	DESIGNED - JLJ	REVISED -
#FILEL#		DRAWN - UJ	REVISED -
#MODELNAME#	PLOT SCALE = #SCALE#	CHECKED - JSP	REVISED -
	PLOT DATE = #DATE#	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAVING SCHEDULE

Begin Station	End Station	Aggregate Base Course, Type B (Ton)	Aggregate Surface Course, Type B (Ton)	Bituminous Mat'ls. (Prime Coat) (Ton)	Bituminous Mat'ls. (Cover and Seal Coats) (Ton)	Cover Coat Aggregate (Ton)	Seal Coat Aggregate (Ton)
TR 557							
104+10.00	to 104+60.00	66.4		0.2	0.4	2.4	1.2
104+60.00	to 105+50.00	136.7		0.4	0.8	5.0	2.5
105+50.00	to 106+47.00	198.9		0.6	1.1	7.3	3.6
107+79.00	to 109+00.00	248.1		0.8	1.4	9.1	4.5
109+00.00	to 113+40.00	668.1		2.0	3.7	24.4	12.2
Entrances							
104+48.00	RT		12.4				
104+67.00	LT		23.3				
105+00.00	RT		28.8				
Detour							
4+78.00	to 26+80.00		1783.2				
Detour Road Maintenance							
4+78.00	to 26+80.00		222.0				
Totals		1318	2070	4.0	7.2	48	24

SEEDING SCHEDULE

Begin Station	End Station	Seeding, Class 2 (Acres)	Mulch, Method 2 (Acres)	Nitrogen Fertilizer Nutrient (Pound)	Phosphorus Fertilizer Nutrient (Pound)	Potassium Fertilizer Nutrient (Pound)	Erosion Control Blanket (Sq Yd)	Temporary Erosion Control Seeding (Pound)
TR 557								
104+10.00	to 113+40.00	1.70	0.12	161	161	161	7613.4	358
Detour								
10+44.00	to 26+80.75	1.41	0.68	132	132	132	3571.4	293
Totals		3.25	1.00	293	293	293	11185	650

GUARDRAIL SCHEDULE

Begin Station	End Station	Slide	Steel Plate Beam Guardrail, Type A, 6 Foot Posts (Foot)	Traffic Barrier Terminal, Type 1 (Special) Tangent (Each)	Traffic Barrier Terminal, Type 6 (Each)	Terminal Markers - Direct Applied (Each)
TR 557						
105+48.52	to 106+42.27	LT		1	1	1
105+57.97	to 106+51.72	RT		1	1	1
107+47.12	to 108+92.87	LT	25.0	1	1	1
107+83.88	to 109+02.63	RT	25.0	1	1	1
Totals			50.0	4	4	4

EARTH EXCAVATION

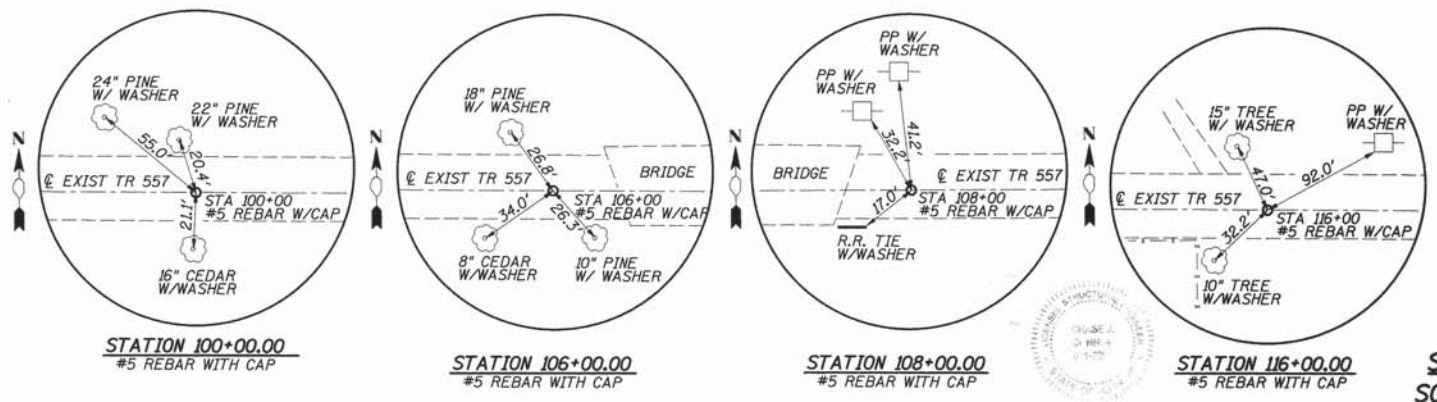
Roadway Section	Location		Earth Excavation	Excavation to be used in Embankment**	Embankment	Earthwork Balance***
	From	To	Cubic Yard	Cubic Yard	Cubic Yard	Cubic Yard
TR 557	104+10	106+50	42	31	1412	-1381
TR 557	107+79	113+40	35	27	5669	-5643
Detour	10+30	27+00	1762	1322	2098	-776
Detour*	10+44	27+00	1042	---	---	---
Total			2881	1380	9179	-7799

FURNISHED EXCAVATION - USE 7800

* Additional Excavation to be Performed Upon Detour Road Removal.
** Adjusted for Shrinkage (25% Shrinkage Assumed)
*** Waste (+) or Shortage (-)

INLET AND PIPE PROTECTION

Station	Side	Offset	Each
TR 557			
104+35.00	RT	15.9	1
104+87.00	RT	19.7	1
Detour			
11+00.00	RT	12.0	1
14+50.00	RT	12.0	1
23+50.00	RT	12.0	1
23+50.00	RT	12.0	1
Total			6



REFERENCE TIES

TREE REMOVAL (6 TO 15 UNITS DIAMETER)

Station	Side	Offset	Size	Units
TR 557				
105+11.65	RT	25.4	7	7
105+55.32	RT	18.6	6	6
105+64.39	RT	19.7	9	9
105+71.94	RT	18.7	8	8
105+99.55	RT	20.2	11	11
106+11.77	RT	37.56	9	9
106+17.55	RT	20	10	10
Total				60

FURNISHING AND ERECTING ROW MARKERS

Station	Side	Offset	Each
TR 557			
104+50.00	LT	20.0	1
104+83.02	RT	28.7	1
105+91.97	LT	53.1	1
106+79.87	RT	60.0	1
107+84.83	RT	60.0	1
108.00.00	LT	55.0	1
108+00.00	RT	60.0	1
113+50.00	LT	20.0	1
113+50.00	RT	20.0	1
Total			9

PERIMETER EROSION BARRIER

Begin Station	End Station	Slide	Length (ft)
TR 557			
104+75.00	to 106+45.00	LT	170
105+25.00	to 106+55.00	RT	130
107+70.00	to 111+75.00	LT	405
107+80.00	to 112+50.00	RT	470
Detour			
10+75.00	to 15+00.00	LT	425
10+75.00	to 15+00.00	RT	425
Total			2025

TEMPORARY DITCH CHECKS

Station	Side	Offset	Length (ft)
TR 557			
105+50.00	RT	30.1	12.0
106+50.00	RT	45.0	12.0
Detour			
15+50.00	LT	12.0	12.0
15+50.00	RT	12.0	12.0
16+50.00	LT	12.0	12.0
16+50.00	RT	12.0	12.0
17+00.00	LT	12.0	12.0
17+00.00	RT	12.0	12.0
18+00.00	LT	12.0	12.0
18+00.00	RT	12.0	12.0
19+00.00	LT	12.0	12.0
19+00.00	RT	12.0	12.0
20+00.00	LT	12.0	12.0
20+00.00	RT	12.0	12.0
21+75.00	LT	12.0	12.0
21+75.00	RT	12.0	12.0
22+25.00	LT	12.0	12.0
22+25.00	RT	12.0	12.0
23+00.00	LT	12.0	12.0
23+00.00	RT	12.0	12.0
24+50.00	LT	12.0	12.0
24+50.00	RT	12.0	12.0
Total			240

WOVEN WIRE FENCE TO BE REMOVED AND RE-ERECTED

Station	to	Station	Side	Foot
TR 557				
108+02.00	to	113+40.00	RT	538
TOTAL				538

CULVERT SCHEDULE

STATION	SIDE	CLASS D, TYPE I		
		TEMPORARY	12"	24"
TR 557				
104+48.00	RT			22
105+00.00	RT			32
Detour				
11+00.00	CR		38	
14+50.00	CR		36	
23+50.00	CR	24		
23+50.00	CR	24		
Total		48	74	54

TREE REMOVAL - ACRES

Area Designation	Area (AC)
TR 557	0.03
Detour Road	0.22
Total	0.5

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES
SCHEDULES OF QUANTITIES AND REFERENCE TIES

SCALE:	SHEET	OF	SHEETS	STA.	TO STA.	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	CONTRACT NO.
	1	OF	1	STA.	TO STA.	557	05-01228-00-BR	WILLIAMSON	34	2	99347

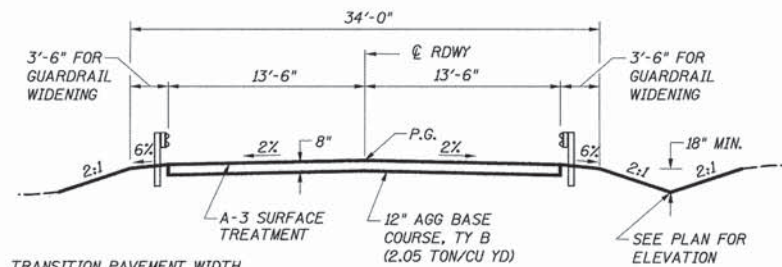
ILLINOIS FED. AID PROJECT

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

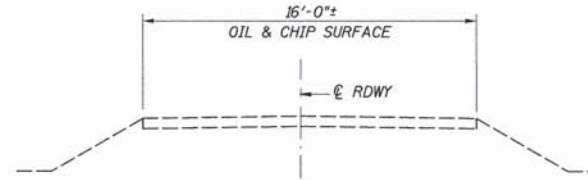
1. THIS SECTION SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PLANS. "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", ADOPTED APRIL 1, 2016, AND THE SPECIAL PROVISIONS.
2. ANY STANDARD NUMBER LISTED SHALL BE INTERPRETED TO MEAN THE COPY OF THE STANDARD LISTED IN THE PLANS.
3. EARTHWORK SHALL BE PAID FOR AS EARTH EXCAVATION AND FURNISHED EXCAVATION, COMPACTION, OVERHAUL AND DISPOSAL AND ALL OTHER ACTIVITIES REQUIRED FOR CONSTRUCTION ARE INCLUDED WITH THE LISTED PAY ITEMS.
4. 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.
5. REQUIRED ADJUSTMENT OF ANY EXISTING PRIVATELY OWNED UTILITIES WILL BE MADE BY THE UTILITY COMPANY INVOLVED. NO ADDITIONAL COMPENSATION WILL BE ALLOWED DUE TO DELAYS OR INCONVENIENCES CAUSED BY SAID UTILITY ADJUSTMENTS.
6. THE PROFILE GRADE ELEVATIONS SHOWN ON THE PLAN AND PROFILE SHEETS AND IN THE STATION CROSS SECTIONS ARE TO THE TOP OF FINISHED SURFACE.
7. 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 563 OF THE STANDARD SPECIFICATIONS, TO VERIFY LOCATIONS OF UNDERGROUND INSTALLATIONS BEFORE STARTING CONSTRUCTION OPERATIONS.
8. 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.
9. 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.
10. ALL ELEVATIONS SHOWN REFER TO THE U.S.G.S. DATUM AT MEAN SEA LEVEL.
11. THE AREA TO BE SEEDED SHALL CONSIST OF ALL DISTURBED EARTH SURFACES WITHIN THE RIGHT OF WAY, AS DIRECTED BY THE ENGINEER.
12. LAYOUT OF SLOPE PROTECTION MAY BE VARIED IN THE FIELD TO SUIT GROUND CONDITIONS AS DIRECTED BY THE COUNTY ENGINEER.
13. KEYWAY SURFACES SHALL BE CLEANED TO REMOVE FORM OIL OR OTHER BAND BREAKING MATERIAL PRIOR TO SHIPMENT OF BEAMS. CLEANING SHALL BE DONE BY SANDBLASTING THE KEYWAY AREA BETWEEN THE TOP OF THE BEAM AND THE BOTTOM EDGE OF THE KEY.
14. PRECAST ELEMENTS SHALL CONFORM TO SECTION 504.06 OF THE STANDARD SPECIFICATIONS.
15. THE FOLLOWING FACTORS WERE USED FOR ESTIMATING PLAN QUANTITIES AND SHALL NOT BE USED FOR BASIS OF FINAL QUANTITIES:

BITUMINOUS MATERIALS (PRIME COAT).....	0.5 GAL/SY
BITUMINOUS MATERIALS (COVER & SEAL COATS).....	0.3 GAL/SY
COVER COAT AGGREGATE.....	0.0125 TON/SY
SEAL COAT AGGREGATE.....	0.0125 TON/SY
AGGREGATE BASE COURSE, TYPE B.....	2.05 TON/CY
AGGREGATE SURFACE COURSE, TYPE A.....	2.05 TON/CY

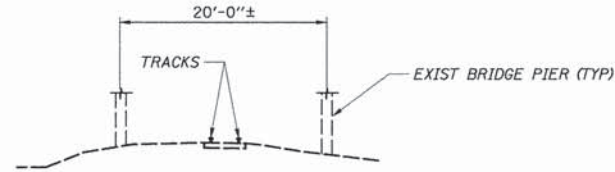


TRANSITION PAVEMENT WIDTH FROM 13'-6" TO 10'-0" AT 6:1 TAPER AT END OF GUARDRAIL.

TYPICAL PROPOSED CROSS SECTION WITH GUARDRAIL



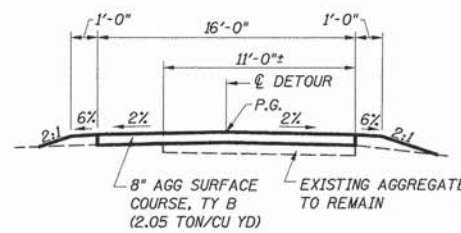
EXISTING TYPICAL CROSS SECTION



EXISTING TYPICAL RAILROAD SECTION

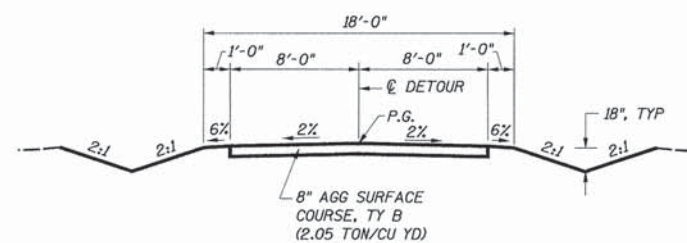


EXISTING TYPICAL BRIDGE SECTION



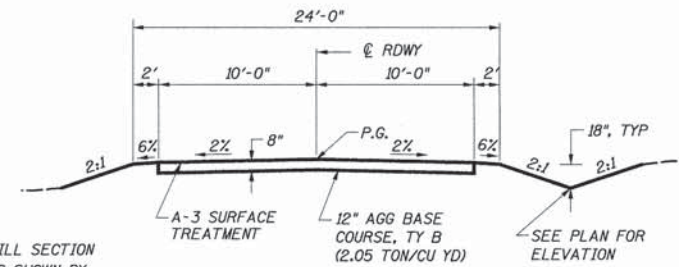
TYPICAL DETOUR CROSS SECTION

STA 4+75.15 TO STA 10+43.86



TYPICAL DETOUR CROSS SECTION

STA 10+43.86 TO STA 13+54.83
STA 14+99.33 TO STA 18+81.38
STA 21+28.12 TO STA 24+52.49
STA 26+09.66 TO STA 26+60.88

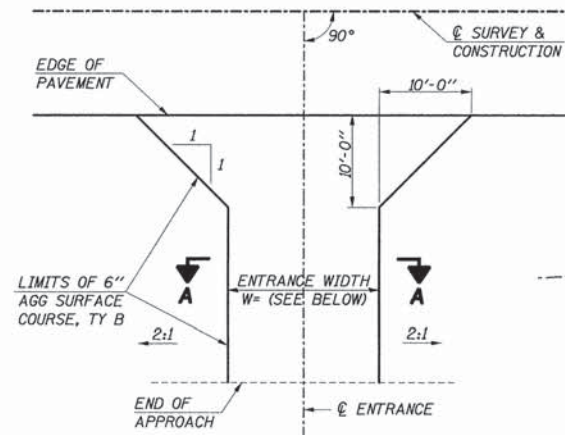


SUGGESTED FILL SECTION CONSTRUCT AS SHOWN BY STATION CROSS SECTIONS

TYPICAL PROPOSED CROSS SECTION

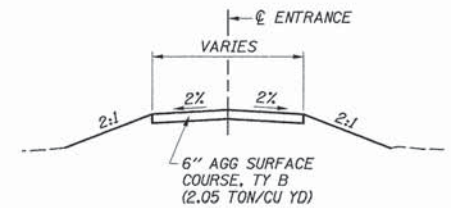
STA 104+10.00 TO STA 106+47.00
STA 107+79.00 TO STA 113+40.00

1. TRANSITION FROM EXISTING ROADWAY TO PROPOSED ROADWAY TO BE CONSTRUCTED FROM STA 104+10.00 TO STA 104+60.00 AND FROM STA 112+90.00 TO STA 113+40.00
2. SEE DETAIL THIS SHEET FOR TYPICAL PROPOSED CROSS SECTION WITH GUARDRAIL

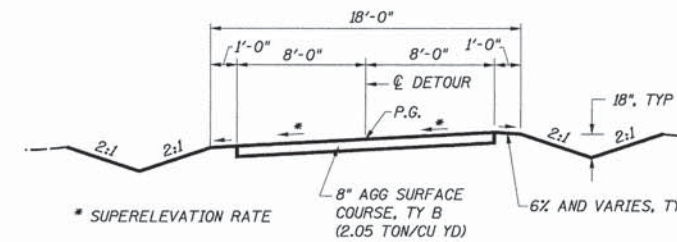


ENTRANCE DETAIL

RT PE STA 104+48.00, W=14'
LT PE STA 104+67.00, W=12'
RT PE STA 105+00.00, W=20'



SECTION A-A



TYPICAL SUPERELEVATED DETOUR CROSS SECTION

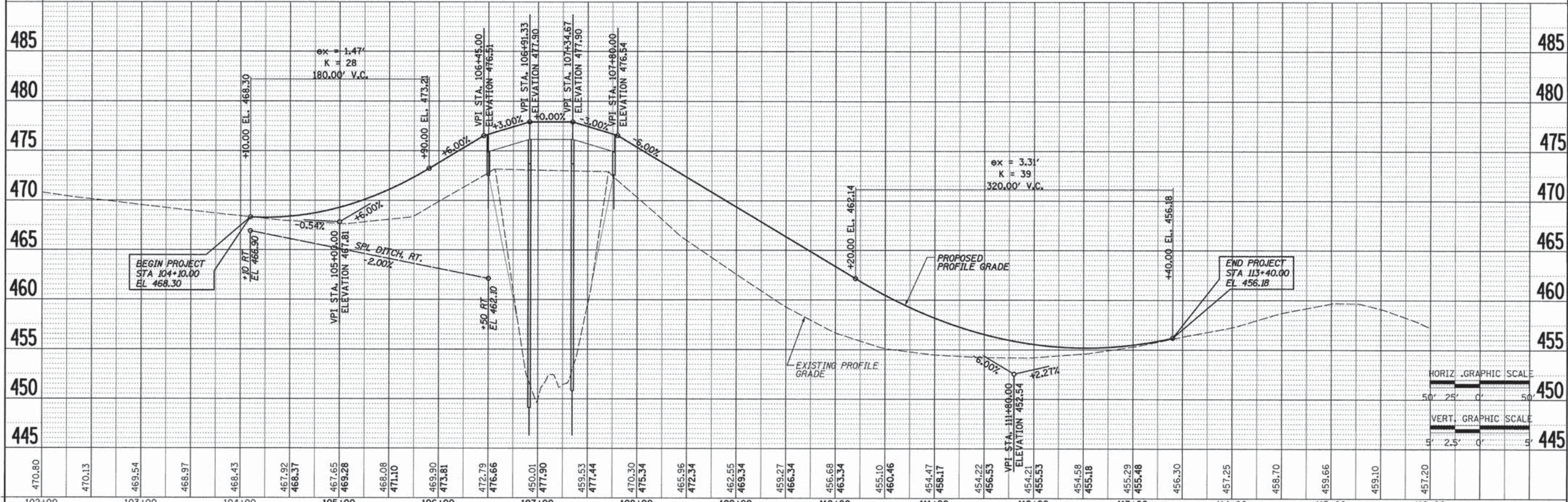
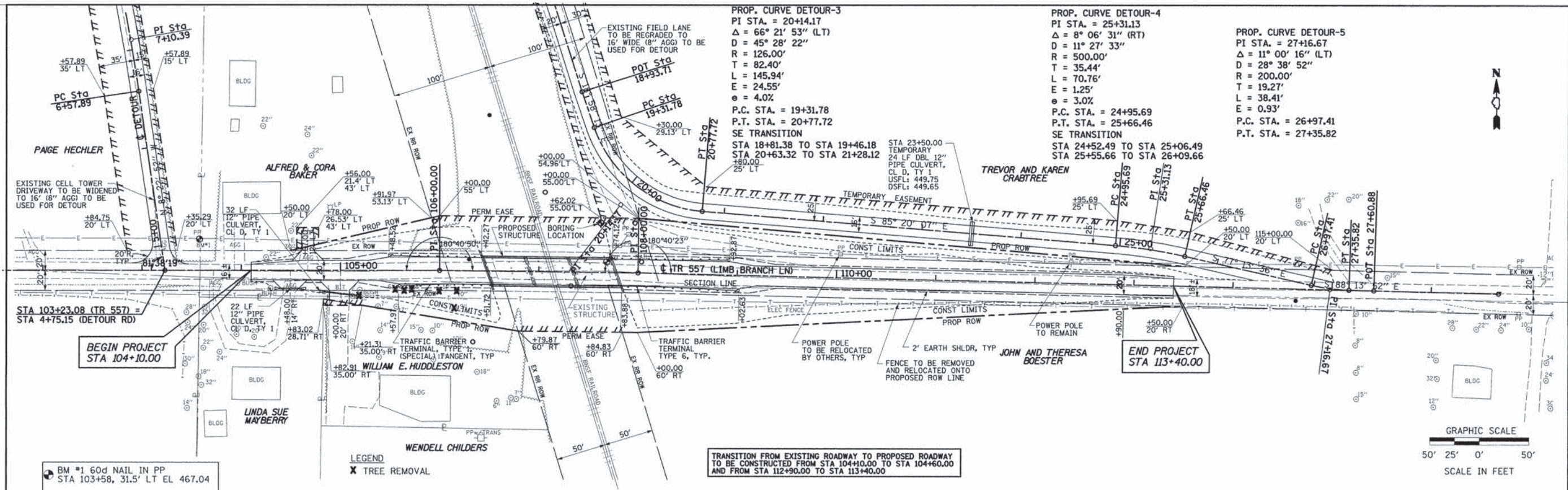
STA 13+54.83 TO STA 14+99.33
STA 18+81.38 TO STA 21+28.12
STA 24+52.49 TO STA 26+09.66

TYPICAL SECTIONS AND GENERAL NOTES

TR 557 OVER
BNSF RAILROAD
WILLIAMSON COUNTY
SECTION 05-01228-00-BR

** THE SHOULDER SHOULD BE SLOPED SO THAT THE ALGEBRAIC DIFFERENCE BETWEEN PAVEMENT AND SHOULDER WILL NOT BE GREATER THAN 8%.

FILE NAME =	USER NAME = #USER#	DESIGNED - JLG	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TYPICAL SECTIONS AND GENERAL NOTES			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
#FILEL#		DRAWN - UJ	REVISED -					557	05-01228-00-BR	WILLIAMSON	34	3
#MODELNAME#	PLOT SCALE = #SCALE#	CHECKED - JSP	REVISED -					CONTRACT NO. 99347				
	PLOT DATE = #DATE#	DATE -	REVISED -					ILLINOIS FED. AID PROJECT				
				SCALE:	SHEET	OF	SHEETS	STA.	TO	STA.		



470.80	470.13	469.54	468.97	468.43	467.92	468.37	467.65	469.28	468.08	471.10	469.90	473.81	472.79	476.66	450.01	477.90	459.53	477.44	470.30	475.34	465.96	472.34	462.55	469.34	459.27	466.34	456.68	463.34	455.10	460.46	454.47	458.17	454.22	456.53	454.21	455.53	454.58	455.18	455.29	455.48	456.30	457.25	458.70	459.66	459.10	457.20
102+00	103+00	104+00	105+00	106+00	107+00	108+00	109+00	110+00	111+00	112+00	113+00	114+00	115+00	116+00																																

FILE NAME =
#FILE#

USER NAME = #USER#

PLOT SCALE = #SCALE#

PLOT DATE = #DATE#

DESIGNED - MAR

DRAWN - UJ

CHECKED - GKM

DATE -

REVISED -

REVISED -

REVISED -

REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

PLAN AND PROFILE

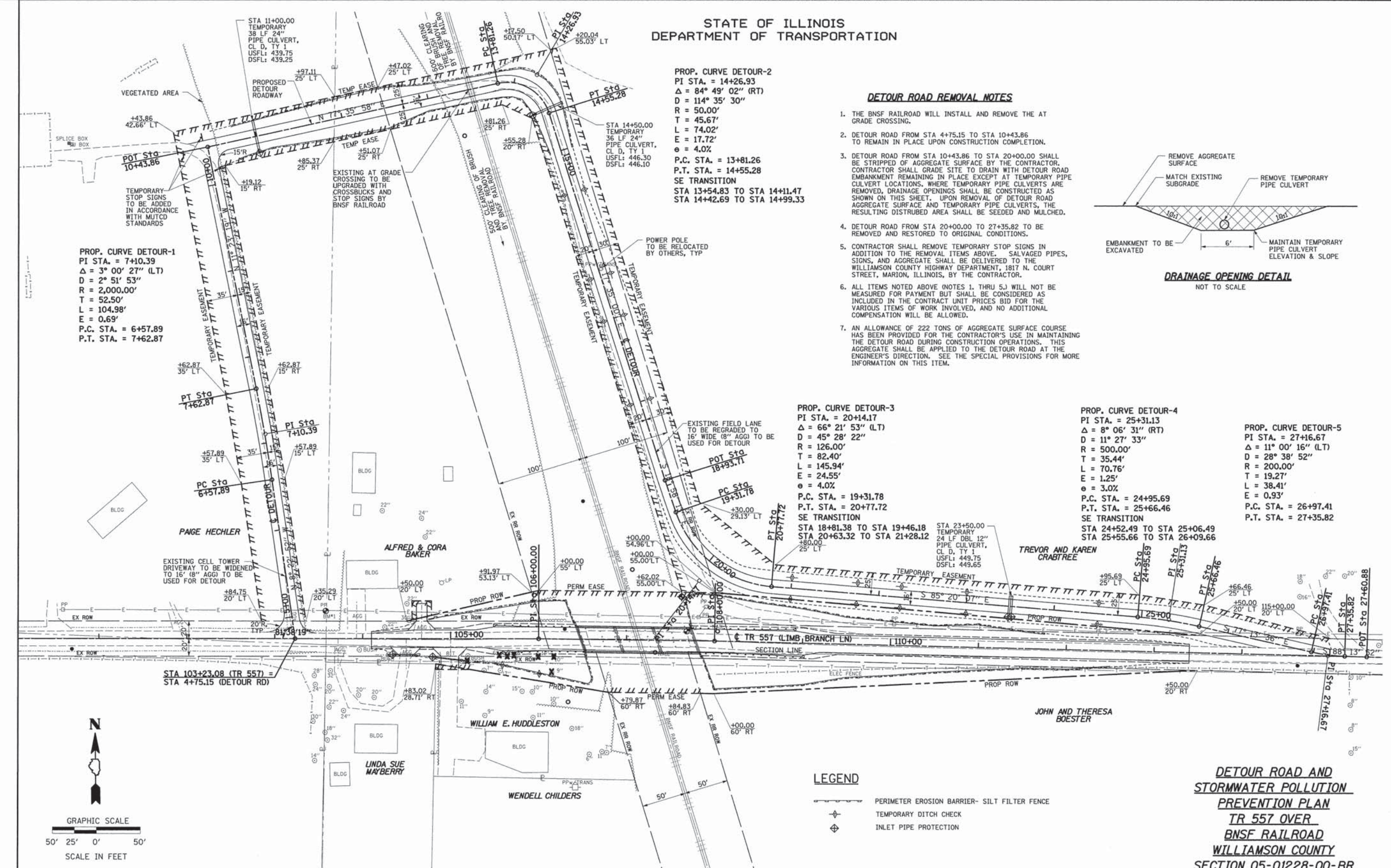
SCALE: 1"=50'

SHEET 1 OF 1 SHEETS STA. 104+10.00 TO STA. 113+40.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
557	05-01228-00-BR	WILLIAMSON	34	4
CONTRACT NO. 99347				
ILLINOIS FED. AID PROJECT				

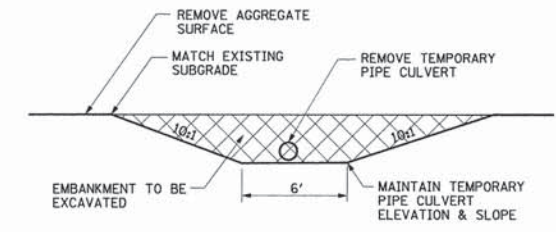
1:05/2016 11:06:48 AM

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



DETOUR ROAD REMOVAL NOTES

1. THE BNSF RAILROAD WILL INSTALL AND REMOVE THE AT GRADE CROSSING.
2. DETOUR ROAD FROM STA 4+75.15 TO STA 10+43.86 TO REMAIN IN PLACE UPON CONSTRUCTION COMPLETION.
3. DETOUR ROAD FROM STA 10+43.86 TO STA 20+00.00 SHALL BE STRIPPED OF AGGREGATE SURFACE BY THE CONTRACTOR. CONTRACTOR SHALL GRADE SITE TO DRAIN WITH DETOUR ROAD EMBANKMENT REMAINING IN PLACE EXCEPT AT TEMPORARY PIPE CULVERT LOCATIONS, WHERE TEMPORARY PIPE CULVERTS ARE REMOVED. DRAINAGE OPENINGS SHALL BE CONSTRUCTED AS SHOWN ON THIS SHEET. UPON REMOVAL OF DETOUR ROAD AGGREGATE SURFACE AND TEMPORARY PIPE CULVERTS, THE RESULTING DISTURBED AREA SHALL BE SEEDED AND MULCHED.
4. DETOUR ROAD FROM STA 20+00.00 TO 27+35.82 TO BE REMOVED AND RESTORED TO ORIGINAL CONDITIONS.
5. CONTRACTOR SHALL REMOVE TEMPORARY STOP SIGNS IN ADDITION TO THE REMOVAL ITEMS ABOVE. SALVAGED PIPES, SIGNS, AND AGGREGATE SHALL BE DELIVERED TO THE WILLIAMSON COUNTY HIGHWAY DEPARTMENT, 1817 N. COURT STREET, MARION, ILLINOIS, BY THE CONTRACTOR.
6. ALL ITEMS NOTED ABOVE (NOTES 1. THRU 5.) WILL NOT BE MEASURED FOR PAYMENT BUT SHALL BE CONSIDERED AS INCLUDED IN THE CONTRACT UNIT PRICES BID FOR THE VARIOUS ITEMS OF WORK INVOLVED, AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
7. AN ALLOWANCE OF 222 TONS OF AGGREGATE SURFACE COURSE HAS BEEN PROVIDED FOR THE CONTRACTOR'S USE IN MAINTAINING THE DETOUR ROAD DURING CONSTRUCTION OPERATIONS. THIS AGGREGATE SHALL BE APPLIED TO THE DETOUR ROAD AT THE ENGINEER'S DIRECTION. SEE THE SPECIAL PROVISIONS FOR MORE INFORMATION ON THIS ITEM.

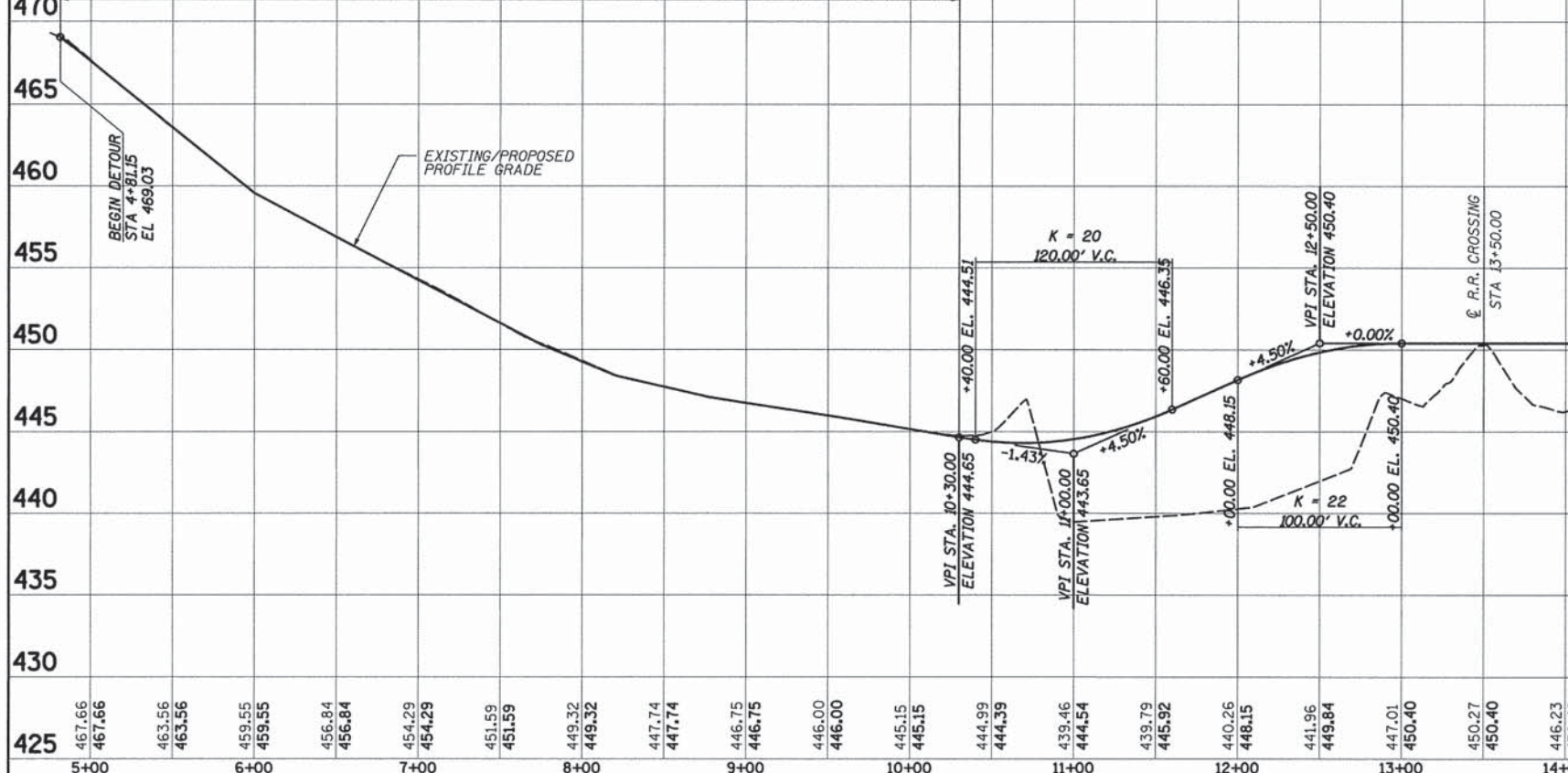
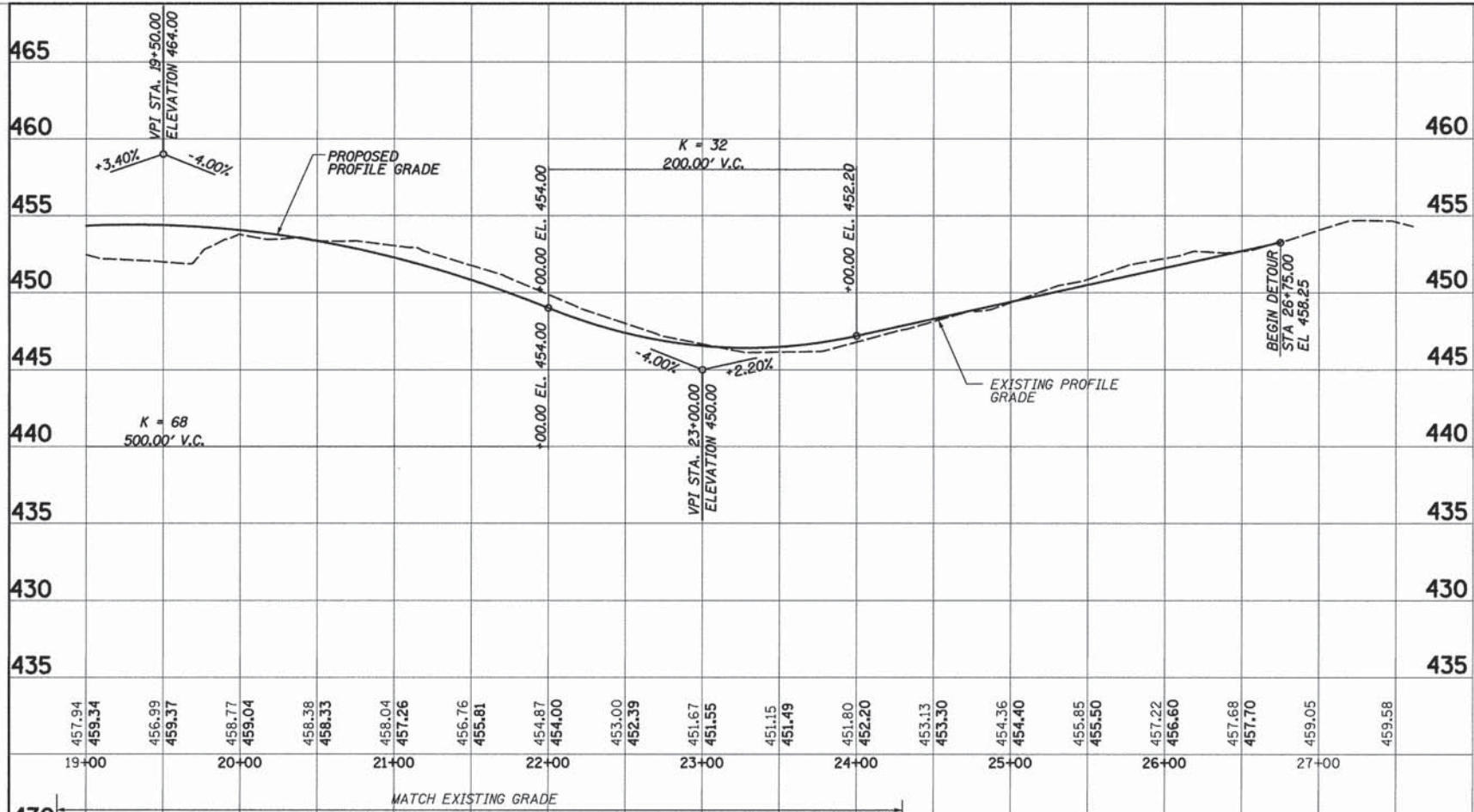


LEGEND

- PERIMETER EROSION BARRIER- SILT FILTER FENCE
- TEMPORARY DITCH CHECK
- INLET PIPE PROTECTION

DETOUR ROAD AND STORM WATER POLLUTION PREVENTION PLAN
TR 557 OVER BNSF RAILROAD
WILLIAMSON COUNTY
SECTION 05-01228-00-BR

FILE NAME = #FILE#	USER NAME = #USER#	DESIGNED - MAR	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DETOUR ROAD AND STORM WATER POLLUTION PREVENTION PLAN	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = #SCALE#	DRAWN - UJ	REVISED -			557	05-01228-00-BR	WILLIAMSON	34	5
#MODELNAME#	PLOT DATE = #DATE#	CHECKED - GKM	REVISED -	SCALE: 1"=50'	SHEET 1 OF 1 SHEETS	STA. 4+75.15 TO STA. 28+00.00		CONTRACT NO. 99347		
						ILLINOIS FED. AID PROJECT				

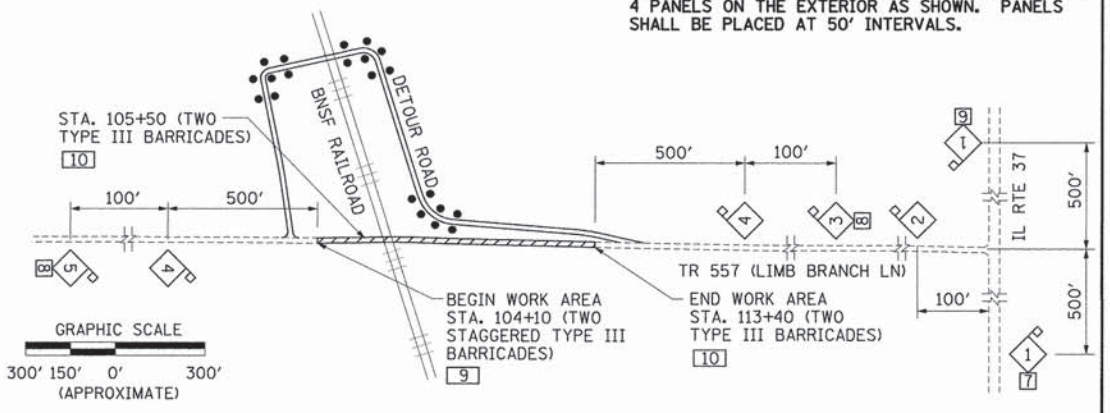


TRAFFIC CONTROL PLAN

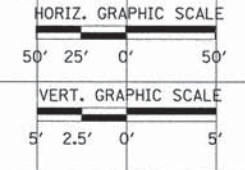
LEGEND

GENERAL NOTES

1. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL ENTRANCES AT ALL TIMES.
2. ALL WARNING SIGNS SHALL BE A MINIMUM OF 48"X48" AND HAVE A BLACK LEGEND ON AN ORANGE REFLECTORIZED BACKGROUND.
3. 12V FLASHING WARNING LIGHTS SHALL BE USED ON EACH APPROACH IN ADVANCE OF THE WORK DURING HOURS OF DARKNESS AND INSTALLED ABOVE THE FIRST TWO SIGNS.
4. DISTANCES MAY BE ADJUSTED TO FIT FIELD CONDITIONS.
5. ALL TYPE III BARRICADES UTILIZED FOR ROAD CLOSURES SHALL HAVE TWO 6V FLASHING LIGHTS MOUNTED ON TOP OF THE BARRICADES.
6. VERTICAL PANELS SHALL BE PLACED AT CHANGES IN DETOUR ROAD ALIGNMENT. THREE PANELS SHALL BE PLACED ON THE INTERIOR OF EACH CURVE, WITH 4 PANELS ON THE EXTERIOR AS SHOWN. PANELS SHALL BE PLACED AT 50' INTERVALS.



DETOUR ROAD VERTICAL ALIGNMENT



FILE NAME =	USER NAME = #USER#	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DETOUR ROAD PROFILE AND TRAFFIC CONTROL PLAN				F.A. RTE. =	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
#FILE#		DRAWN -	REVISED -		SCALE: 1"=50'	SHEET 1	OF 1 SHEETS	STA. 4+81.15	TO STA. 26+75.00	557	05-01228-00-BR	WILLIAMSON	34	6
	PLOT SCALE = #SCALE#	CHECKED -	REVISED -		CONTRACT NO. 99347									
#MODELNAME#	PLOT DATE = #DATE#	DATE -	REVISED -		ILLINOIS FED. AID PROJECT									

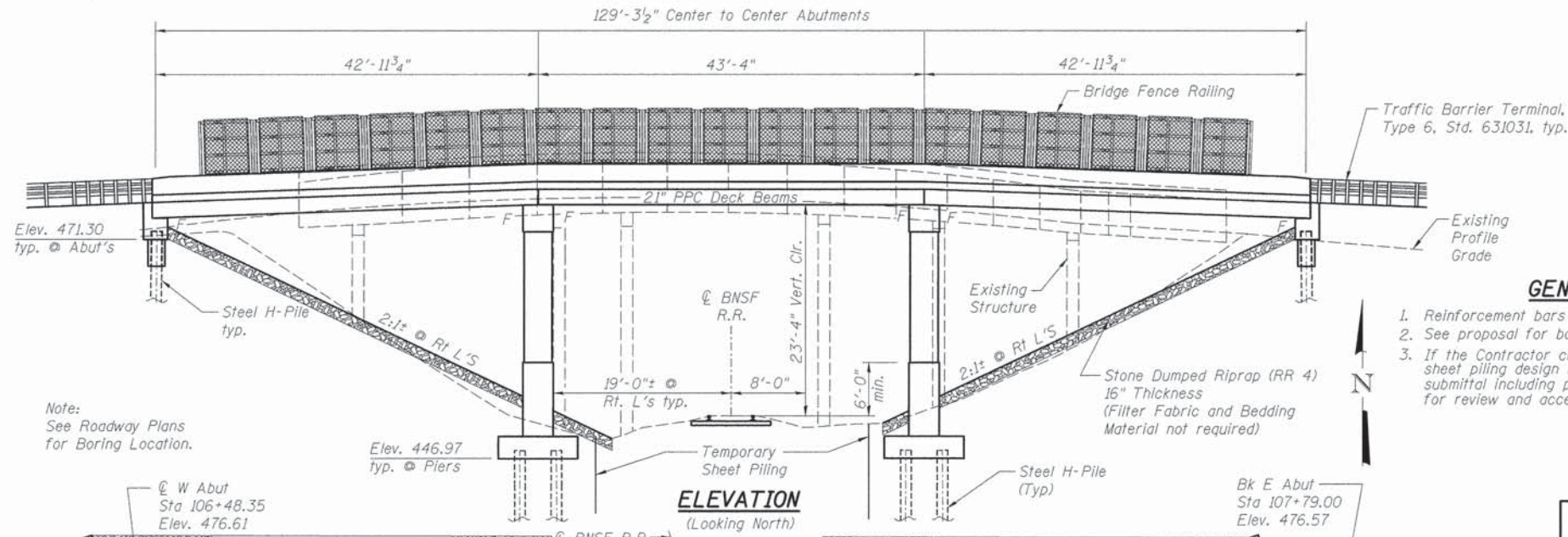
Benchmark: #1 60d Nail in power pole, Station 103+58.00, 31.5' Lt. Elevation 467.04.

Existing Structure: SN 100-9915 is a seven span timber beam bridge on closed timber abutments & timber pile bent piers, 115'-0" bk to bk abutments and 19'-0" out to out deck. The roadway will remain closed to traffic during construction.

No Salvage.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Stone Dumped Riprap, Class A4	Ton	-	382	382
Removal of Existing Structures	Each	1	-	1
Structure Excavation	Cu. Yd.	-	409	409
Concrete Structures	Cu. Yd.	-	239.0	239.0
Concrete Superstructure	Cu. Yd.	29.7	-	29.7
Concrete Encasement	Cu. Yd.	-	7.6	7.6
Precast Prestressed Concrete Deck Beams (21" depth)	Sq. Ft.	3897	-	3897
Stud Shear Connectors	Each	-	600	600
Reinforcement Bars, Epoxy Coated	Pound	3790	39545	43335
Mechanical Splicers	Each	-	72	72
Bridge Fence Railing	Foot	225	-	225
Furnishing Steel Piles HP 14X89	Foot	-	1676	1676
Driving Piles	Foot	-	1676	1676
Test Pile Steel HP 14X89	Each	-	2	2
Name Plates	Each	1	-	1
Temporary Sheet Piling	Sq. Ft.	-	1196	1196



GENERAL NOTES

1. Reinforcement bars designated (E) shall be epoxy coated.
2. See proposal for boring data.
3. If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on plans, a design submittal including plan details and calculations will be required for review and acceptance by the Engineer.

INDEX OF SHEETS

1. General Plan and Elevation
2. Superstructure
3. Superstructure Details
4. Interior 21"x36" PCC Deck Beam
5. Exterior 21"x36" PCC Deck Beam
6. 21"x36" PCC Deck Beam Details
7. Bridge Fence Railing, Parapet Mounted
8. Post Details For Traffic Barrier Terminal, Type 6
9. Abutments
10. Piers
11. HP Pile Details

LOADING HL-93

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

DESIGN SPECIFICATIONS

2012 AASHTO LRFD Bridge Design Specifications, 6th Edition, with 2013 Interims

SEISMIC DATA

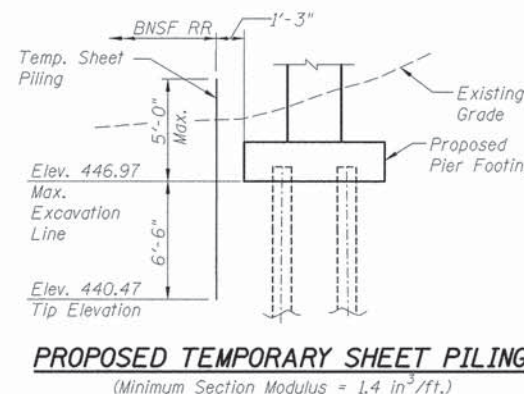
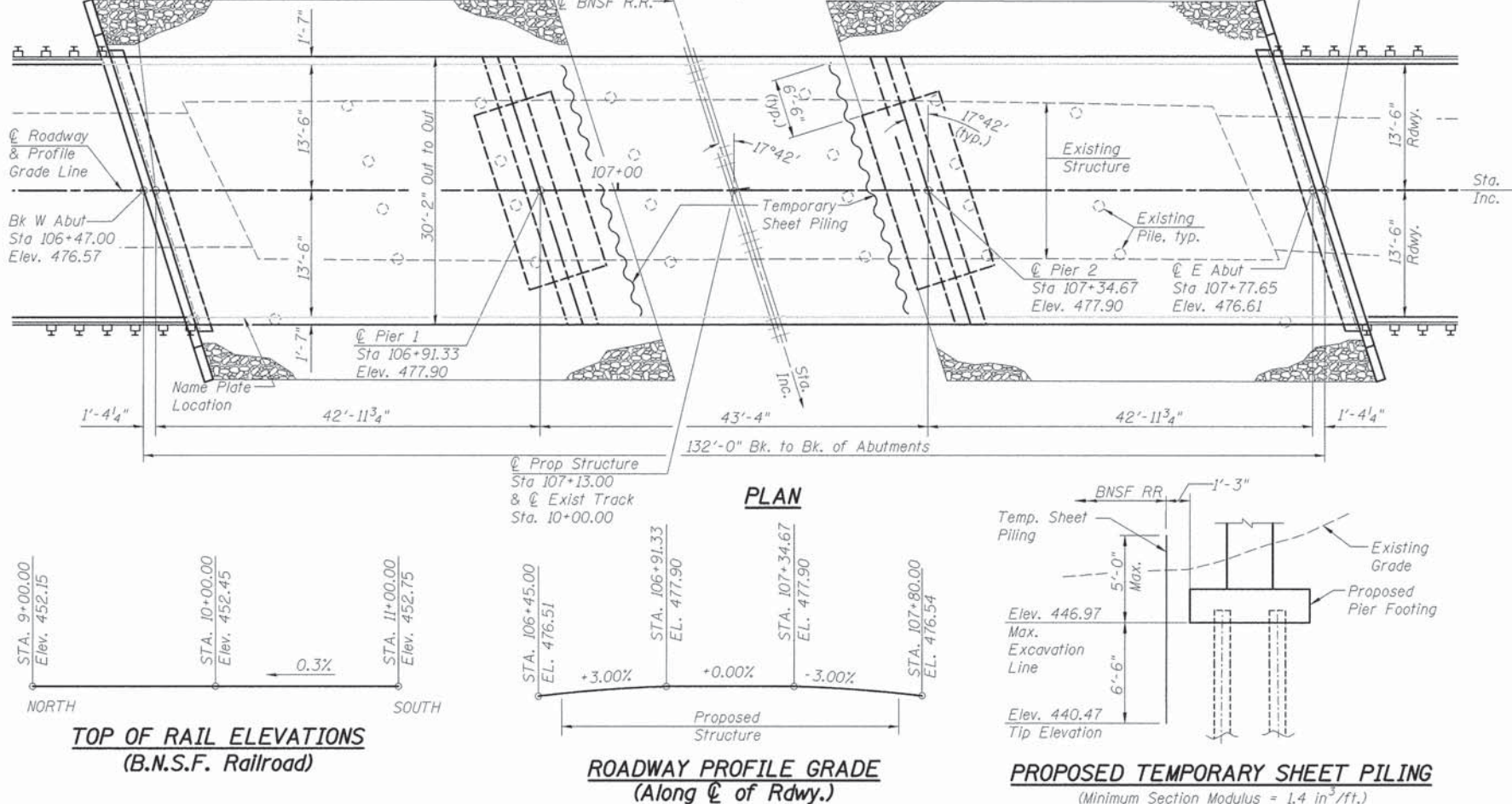
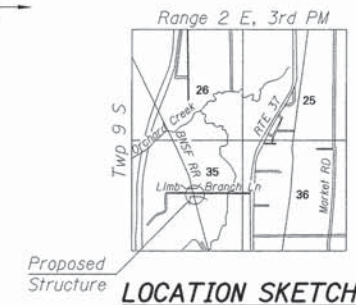
Seismic Performance Zone (SPZ) = 3
 Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.370g
 Design Spectral Acceleration at 0.2 sec. (S_{D5}) = 0.864g
 Soil Site Class = D

DESIGN STRESSES
FIELD UNITS

f'_c = 3,500 psi
 f_y = 60,000 psi (Reinforcement)
PRECAST PRESTRESSED UNITS
 f'_c = 6,000 psi
 f_{pu} = 270,000 psi ($\frac{1}{2}$ " ϕ low lax. strands)
 f_{pbt} = 201,960 psi ($\frac{1}{2}$ " ϕ low lax. strands)

BNSF RAILROAD
 BUILT 20__ BY
 WILLIAMSON COUNTY
 SEC 05-01228-00-BR
 T.R. ROAD 557 STA. 107+13.00
 STR. NO. 100-3183 LOADING HL-93

NAME PLATE
See Std. 515001



Chase J. Connor 3-10-16
 CHASE J. CONNOR, S.E.
 ILLINOIS STRUCTURAL NO. 7200
 EXPIRES: NOVEMBER 30, 2016

GENERAL PLAN AND ELEVATION
TOWNSHIP ROAD 557
OVER BNSF RAILROAD
SECTION 05-01228-00-BR
WILLIAMSON COUNTY, ILLINOIS
STATION 107+13.00
STRUCTURE NO. 100-3183

HURST-ROSCHKE, INC.
 CONSULTING ENGINEERS & ARCHITECTS
 200 NORTH MARKET STREET
 MARION, ILLINOIS 62959

FILE NAME =	USER NAME =	DESIGNED - CJC	REVISED -
	PLOT SCALE =	CHECKED - RVB	REVISED -
	PLOT DATE =	DRAWN - UJ	REVISED -
		CHECKED - RVB	REVISED -

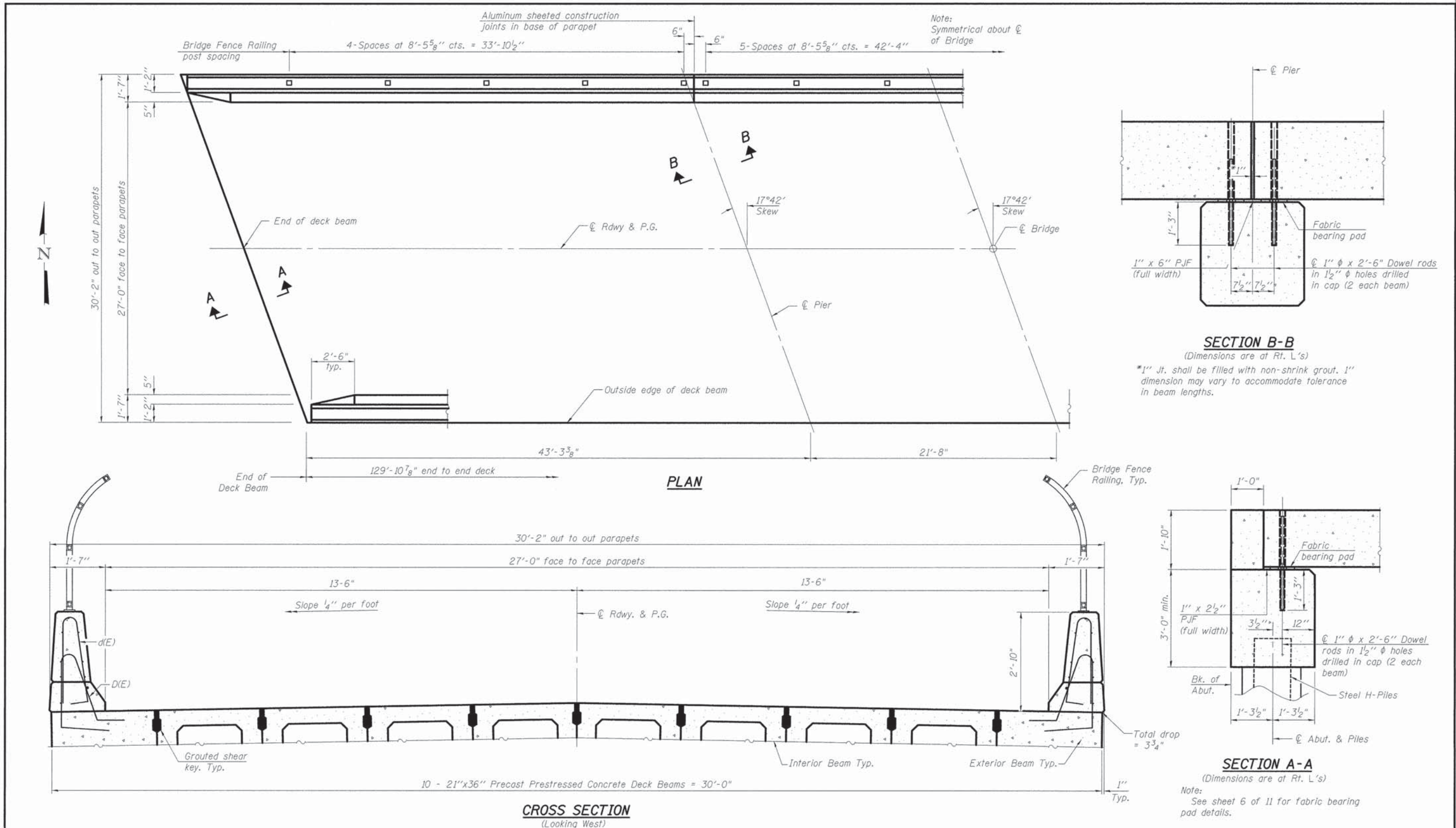
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION
STRUCTURE NO. 100-3183
 SHEET NO. 1 OF 11 SHEETS

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
557	05-01228-00-BR	WILLIAMSON	34	7

CONTRACT NO. 99347
 (ILLINOIS) FED. AID PROJECT

11/10/2016 11:33:44 AM



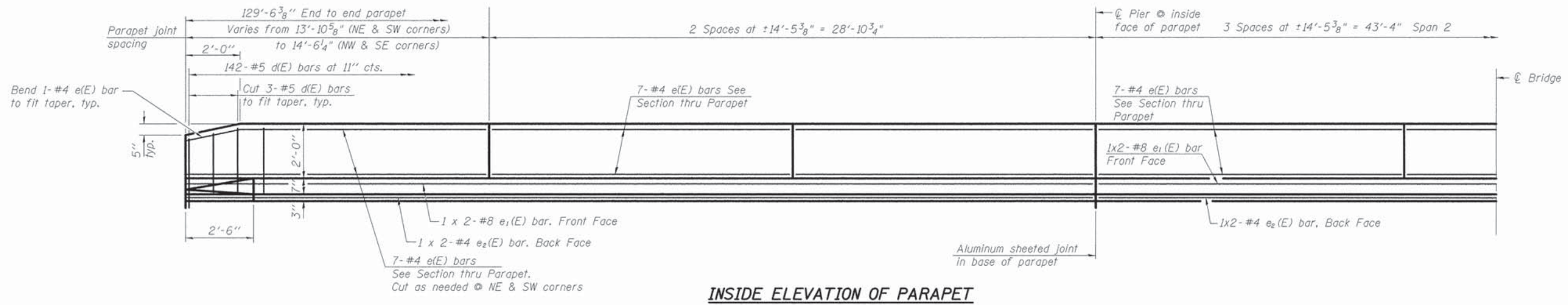
Notes:
 See sheet 3 of 11 for Superstructure Details and Bill of Material.
 See sheet 7 of 11 for Bridge Fence Railing Details.

FILE NAME =	USER NAME =	DESIGNED - CJC	REVISED -
		CHECKED - RVB	REVISED -
PLOT SCALE =		DRAWN - UJ	REVISED -
PLOT DATE =		CHECKED - RVB	REVISED -

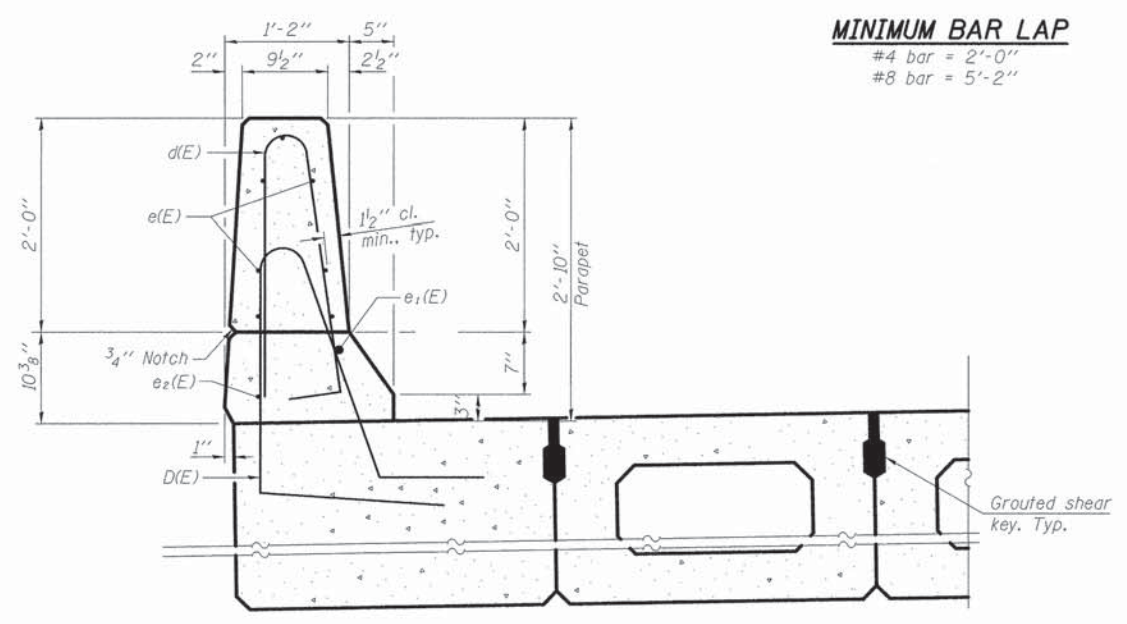
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE
STRUCTURE NO. 100-3183
 SHEET NO. 2 OF 11 SHEETS

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
557	05-01228-00-BR	WILLIAMSON	34	8
CONTRACT NO. 99347			ILLINOIS FED. AID PROJECT	



INSIDE ELEVATION OF PARAPET

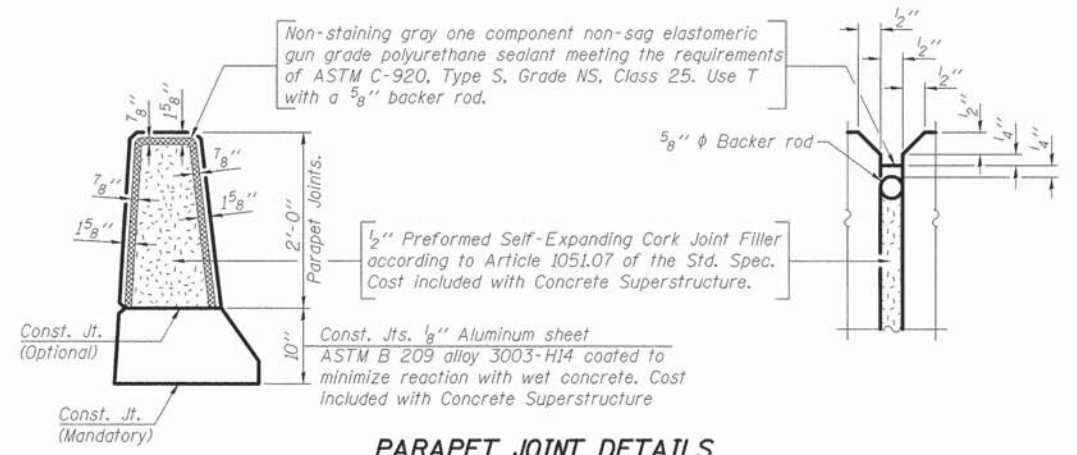


SECTION THRU PARAPET

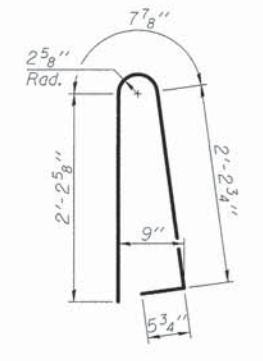
Cost of D(E) bars shall be included with Precast Prestressed Concrete Deck Beams (21" depth)

MINIMUM BAR LAP

#4 bar = 2'-0"
 #8 bar = 5'-2"



PARAPET JOINT DETAILS



BAR d(E)

SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d(E)	284	#5	5'-7"	U
e(E)	126	#4	14'-0"	—
e1(E)	12	#8	24'-2"	—
e2(E)	12	#4	22'-7"	—
Reinforcement Bars, Epoxy Coated		Pound		3790
Concrete Superstructure		Cu. Yd.		29.7

Bars indicated thus 1 x 2-#4 etc. indicates 1 line of bars with 2 lengths per line.

FILE NAME *	USER NAME *	DESIGNED - CJC	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUPERSTRUCTURE DETAILS STRUCTURE NO. 100-3183	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
		CHECKED - RVB	REVISED -			557	05-01228-00-BR	WILLIAMSON	34	9	
PLOT SCALE *		DRAWN - UJ	REVISED -			CONTRACT NO. 99347					
PLOT DATE *		CHECKED - RVB	REVISED -			ILLINOIS FED. AID PROJECT					
SHEET NO. 3 OF 11 SHEETS											

PD-2136-R (MODIFIED)

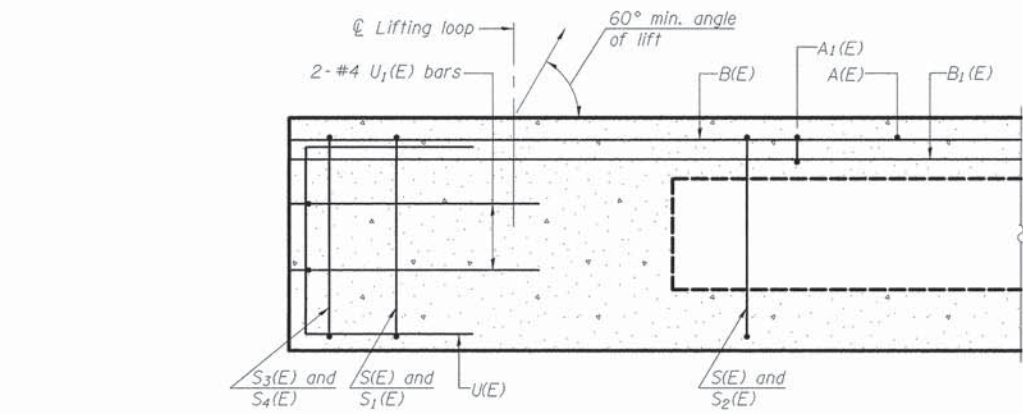
FILE NAME =	USER NAME =	DESIGNED - CJC	REVISED -
		CHECKED - RVB	REVISED -
	PLOT SCALE =	DRAWN - UJ	REVISED -
	PLOT DATE =	CHECKED - RVB	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

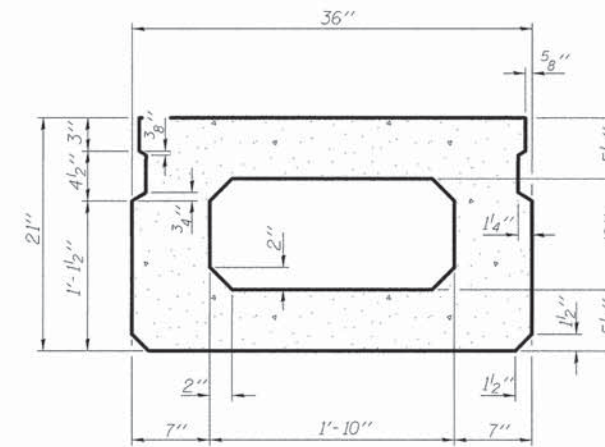
INTERIOR 21" x 36" PPC DECK BEAM
STRUCTURE NO. 100-3183

SHEET NO. 4 OF 11 SHEETS

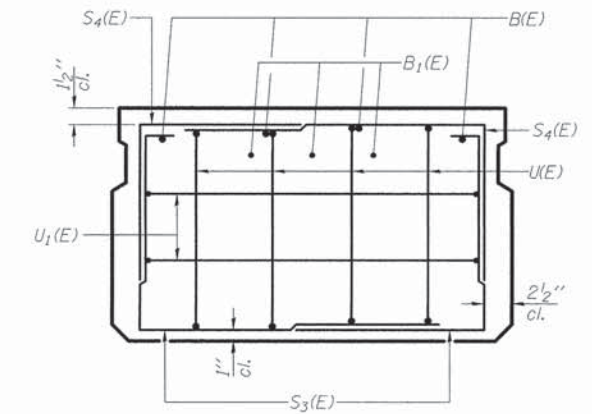
T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
557	05-01228-00-BR	WILLIAMSON	34	10
CONTRACT NO. 99347				
ILLINOIS FED. AID PROJECT				



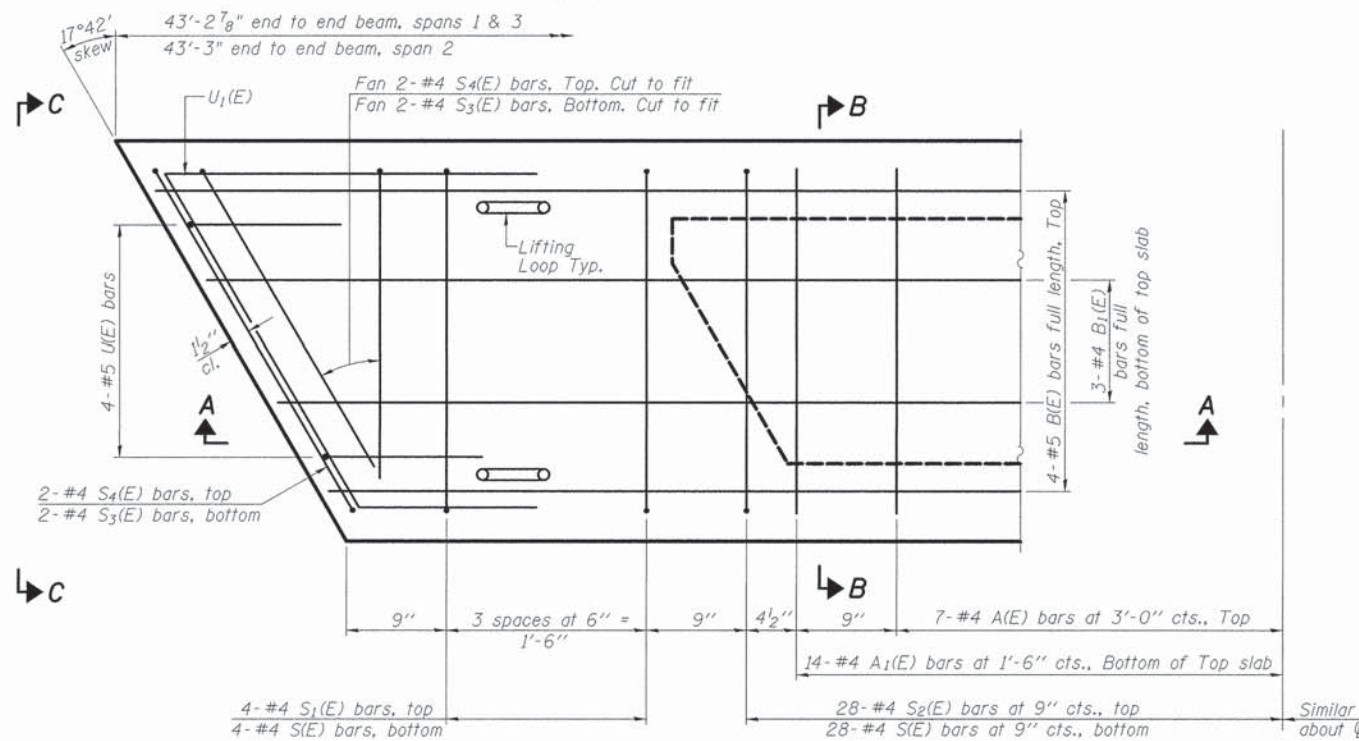
SECTION A-A



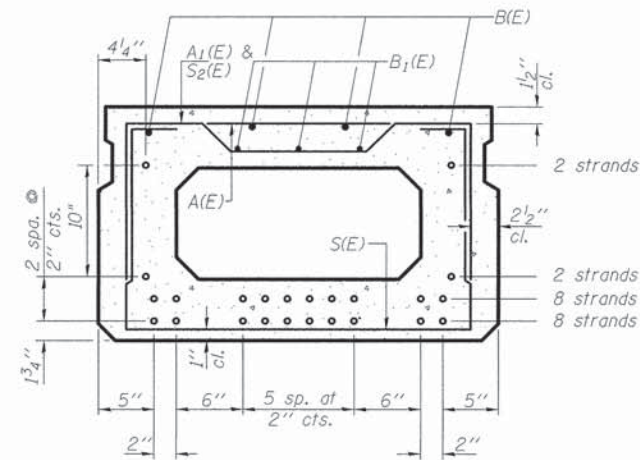
SECTION B-B
(Showing dimensions)



VIEW C-C



PLAN VIEW



SECTION B-B

(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.

BAR LIST
ONE BEAM ONLY
(For information only)

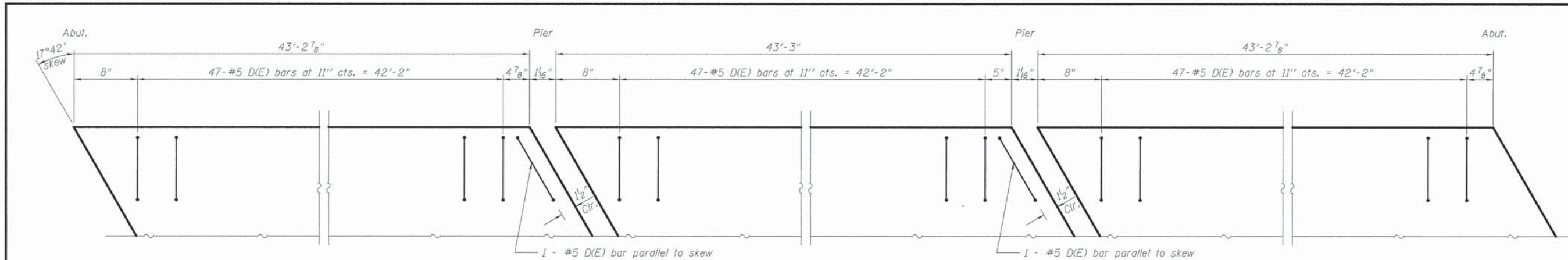
Bar	No.	Size	Length	Shape
A(E)	14	#4	2'-7"	—
A1(E)	28	#4	2'-10"	—
B(E)	4	#5	42'-11"	—
B1(E)	3	#4	42'-11"	—
S(E)	64	#4	6'-5"	U
S1(E)	8	#4	4'-11"	U
S2(E)	56	#4	5'-2"	U
S3(E)	8	#4	4'-6"	U
S4(E)	8	#4	3'-9"	U
U(E)	8	#5	4'-0"	U
U1(E)	4	#4	6'-0"	U

Note: See sheet 6 of 11 for additional details and Bill of Material.

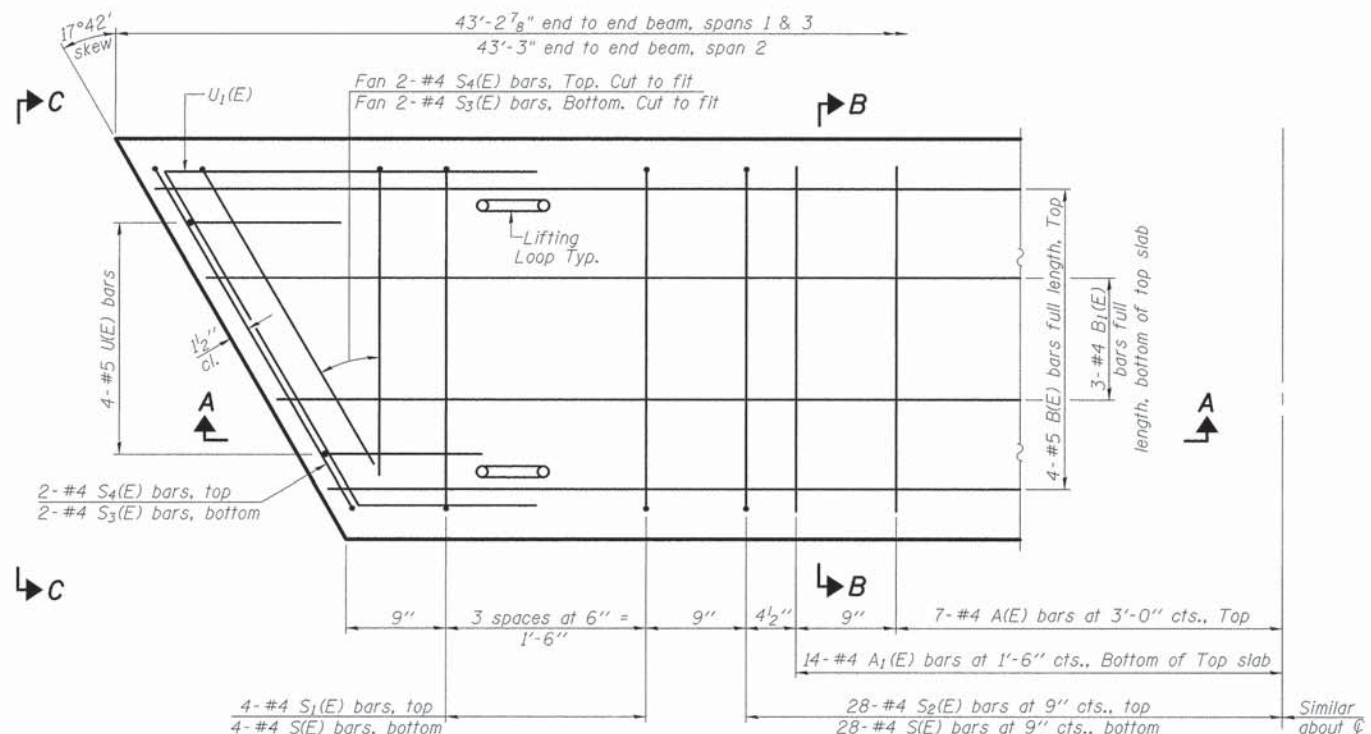
Compressive strength of prestressed concrete at release, f'_{ci} , shall be 5,000 psi for the Interior Beam.

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.

MINIMUM BAR LAP
#4 bar = 2'-0"
#5 bar = 2'-6"

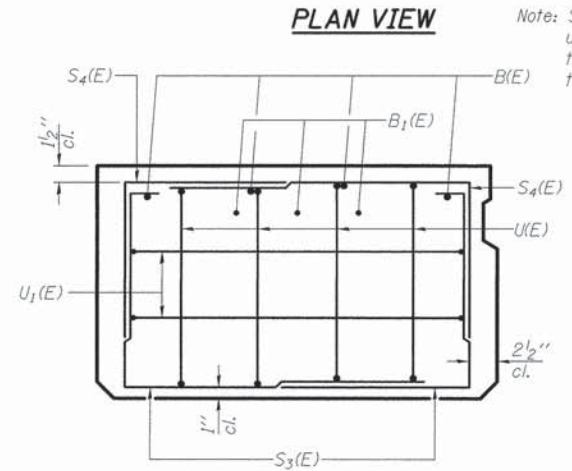


PLAN VIEW SHOWING D(E) BAR LAYOUT



MINIMUM BAR LAP
#4 bar = 2'-0"
#5 bar = 2'-6"

Compressive strength of prestressed concrete at release, f'_{ci} , shall be 6,000 psi for the Exterior Beam.



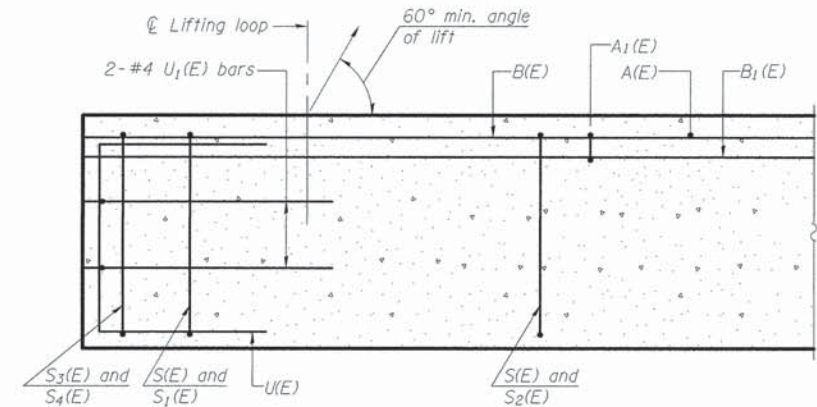
VIEW C-C

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.

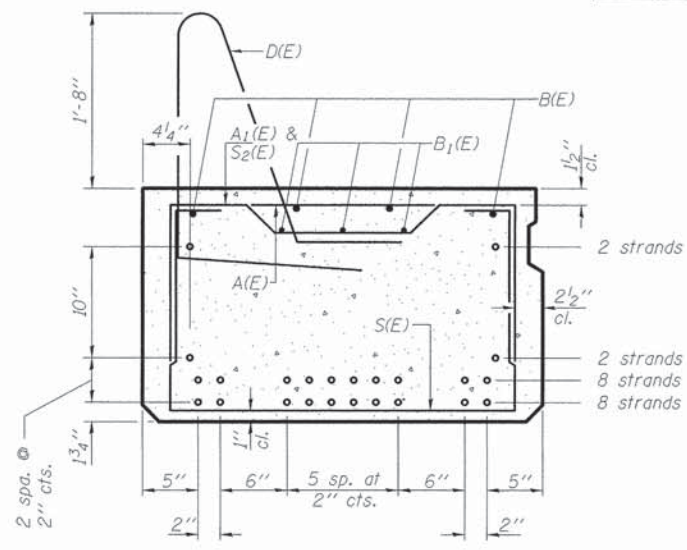
**BAR LIST
ONE BEAM ONLY
(For information only)**

Bar	No.	Size	Length	Shape
A(E)	14	#4	2'-7"	
A1(E)	28	#4	2'-10"	
B(E)	4	#5	42'-11"	
B1(E)	3	#4	42'-11"	
D(E)	48*	#5	6'-11"	
S(E)	64	#4	6'-5"	
S1(E)	8	#4	4'-11"	
S2(E)	56	#4	5'-2"	
S3(E)	8	#4	4'-6"	
S4(E)	8	#4	3'-9"	
U(E)	8	#5	4'-0"	
U1(E)	4	#4	6'-0"	

Note: See sheet 6 of 11 for additional details and Bill of Material.
*47 bars in NE & SW beams.



SECTION A-A

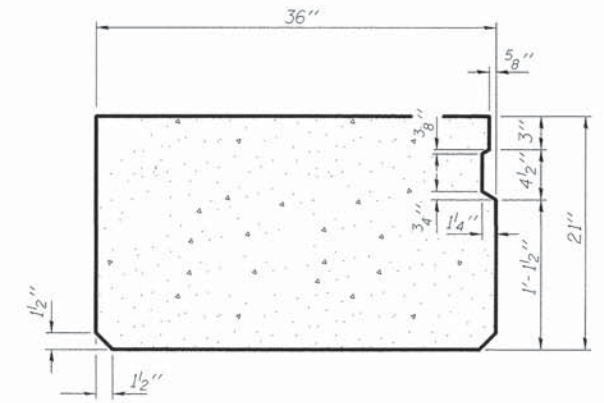


SECTION B-B

Cost of D(E) bars shall be included with Precast Prestressed Concrete Deck Beams (21" depth)

(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.



**SECTION B-B
(Showing dimensions)**

PD-2136-R (MODIFIED)

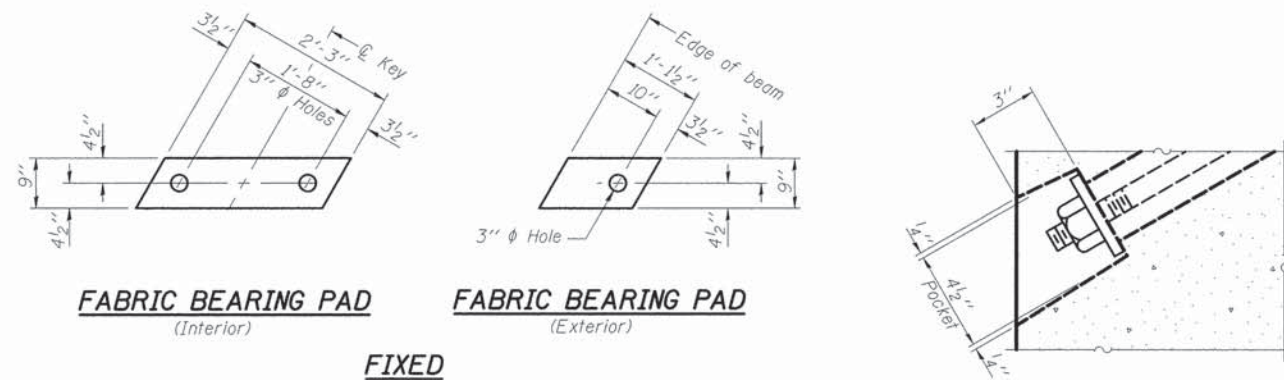
FILE NAME =	USER NAME =	DESIGNED - CJC	REVISED -
		CHECKED - RVB	REVISED -
PLOT SCALE =		DRAWN - UJ	REVISED -
PLOT DATE =		CHECKED - RVB	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**EXTERIOR 21" x 36" PPC DECK BEAM
STRUCTURE NO. 100-3183**

SHEET NO. 5 OF 11 SHEETS

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
557	05-01228-00-BR	WILLIAMSON	34	11
CONTRACT NO. 99347				
ILLINOIS FED. AID PROJECT				

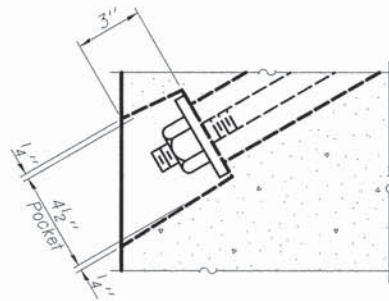


FABRIC BEARING PAD
(Interior)

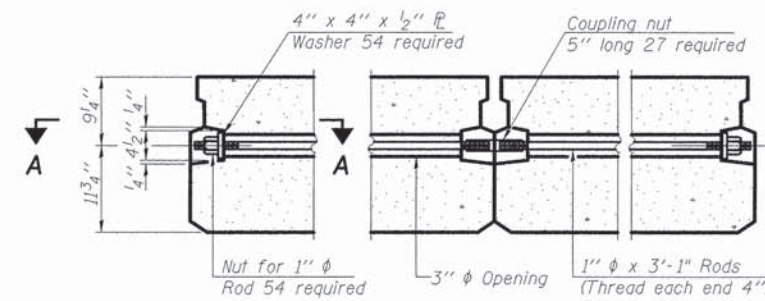
FABRIC BEARING PAD
(Exterior)

FIXED

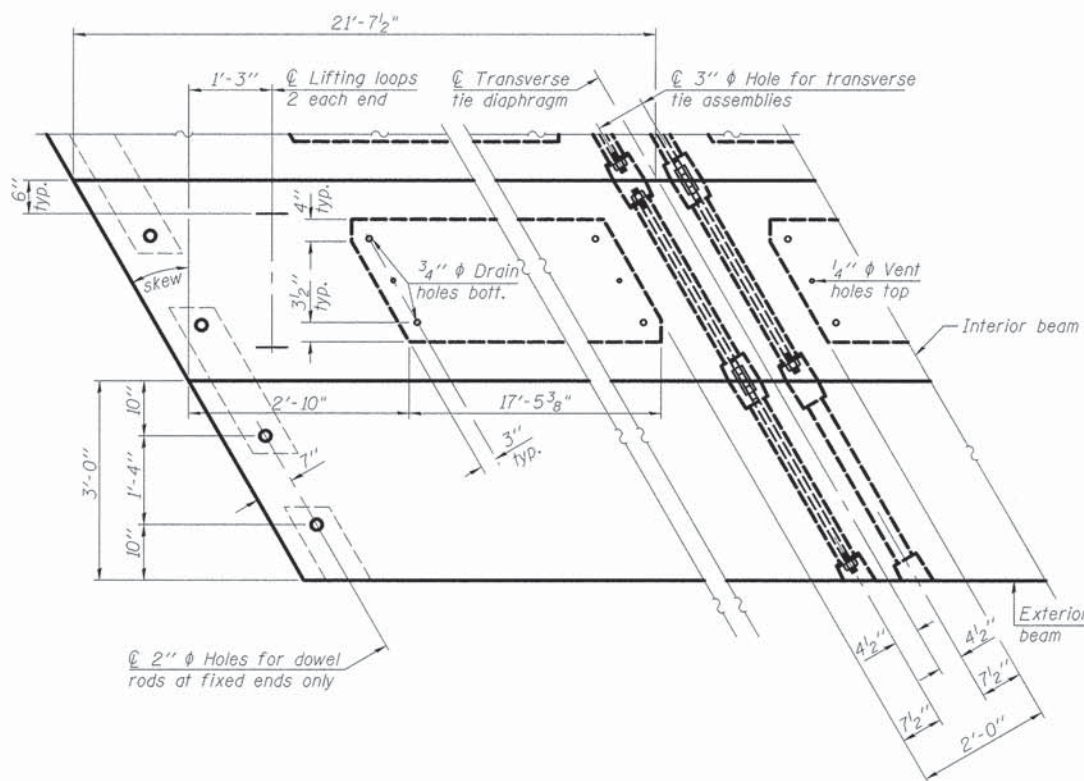
Notes:
All bearing pads shall be 1" thick.



SECTION A-A

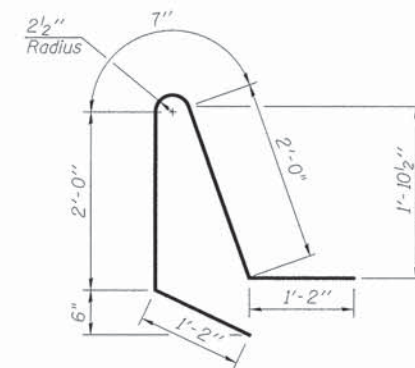


TYPICAL TRANSVERSE TIE ASSEMBLY

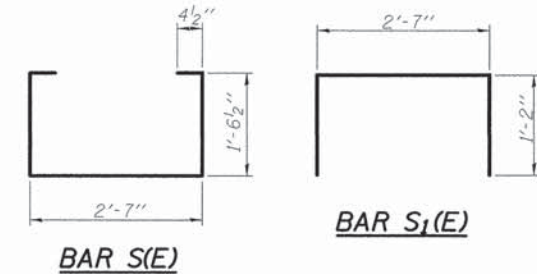


PLAN VIEW

Note: Connect beams in pairs with the transverse tie configuration shown.

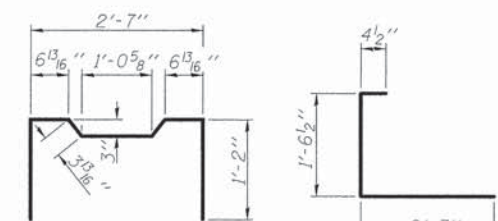


BAR D(E)



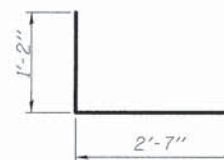
BAR S(E)

BAR S1(E)

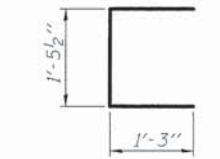


BAR S2(E)

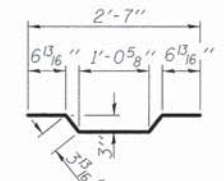
BAR S3(E)



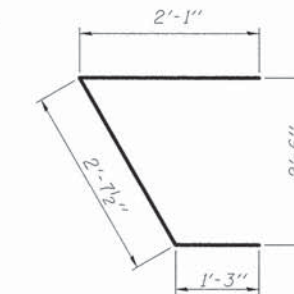
BAR S4(E)



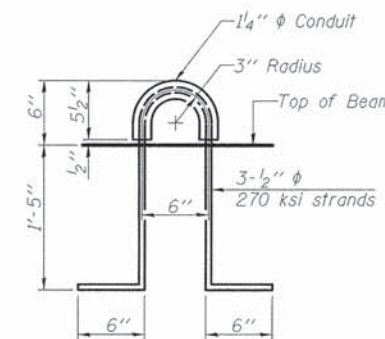
BAR U(E)



BAR A1(E)



BAR U1(E)



LIFTING LOOP DETAIL

BILL OF MATERIAL

Precast Prestressed Conc. Deck Bms. (21" depth)	Sq. Ft.	3897
---	---------	------

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. The 1" diameter rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.
 Reinforcement bars shall conform to ASTM A 706, Grade 60. (See Special Provisions).
 Two 1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
 A minimum 2 1/2" diameter lifting pin shall be used to engage the lifting loops during handling.
 Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
 Compressive strength of prestressed concrete, f'c, shall be 6,000 psi.
 Compressive strength of prestressed concrete at release, f'cl, shall be 5,000 psi (Interior Beam) and 6,000 psi (Exterior Beam).

PD-2136-RD (MODIFIED)

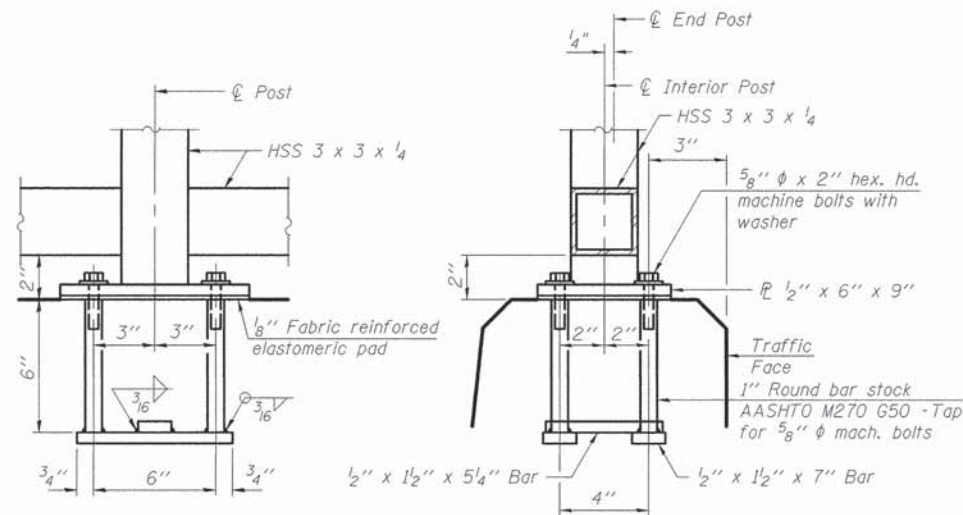
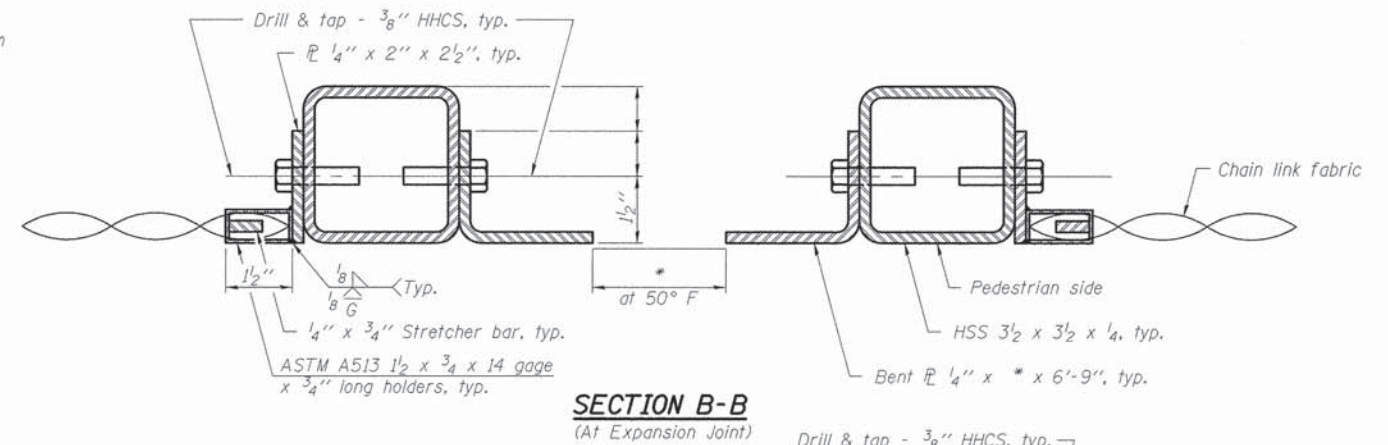
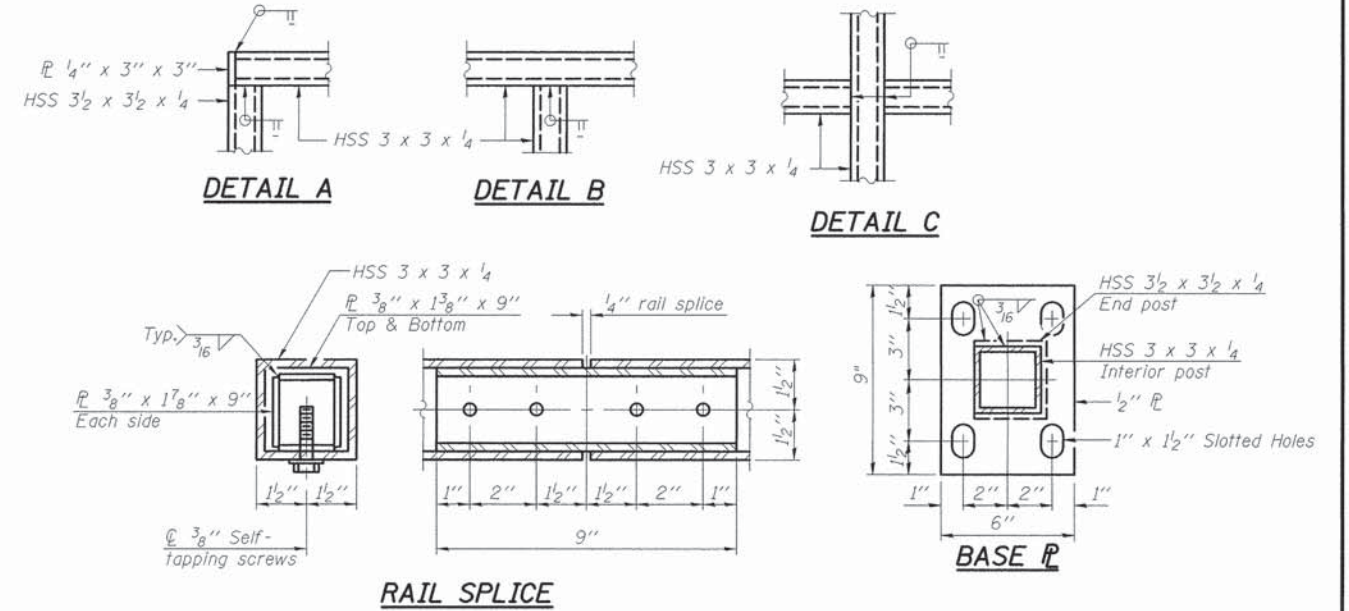
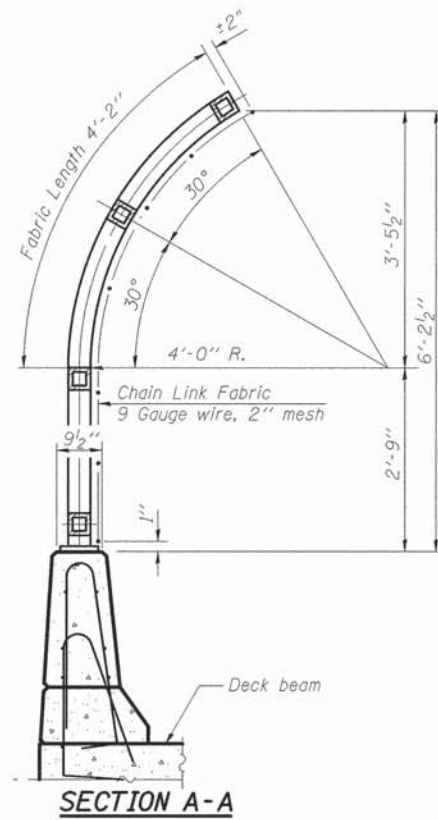
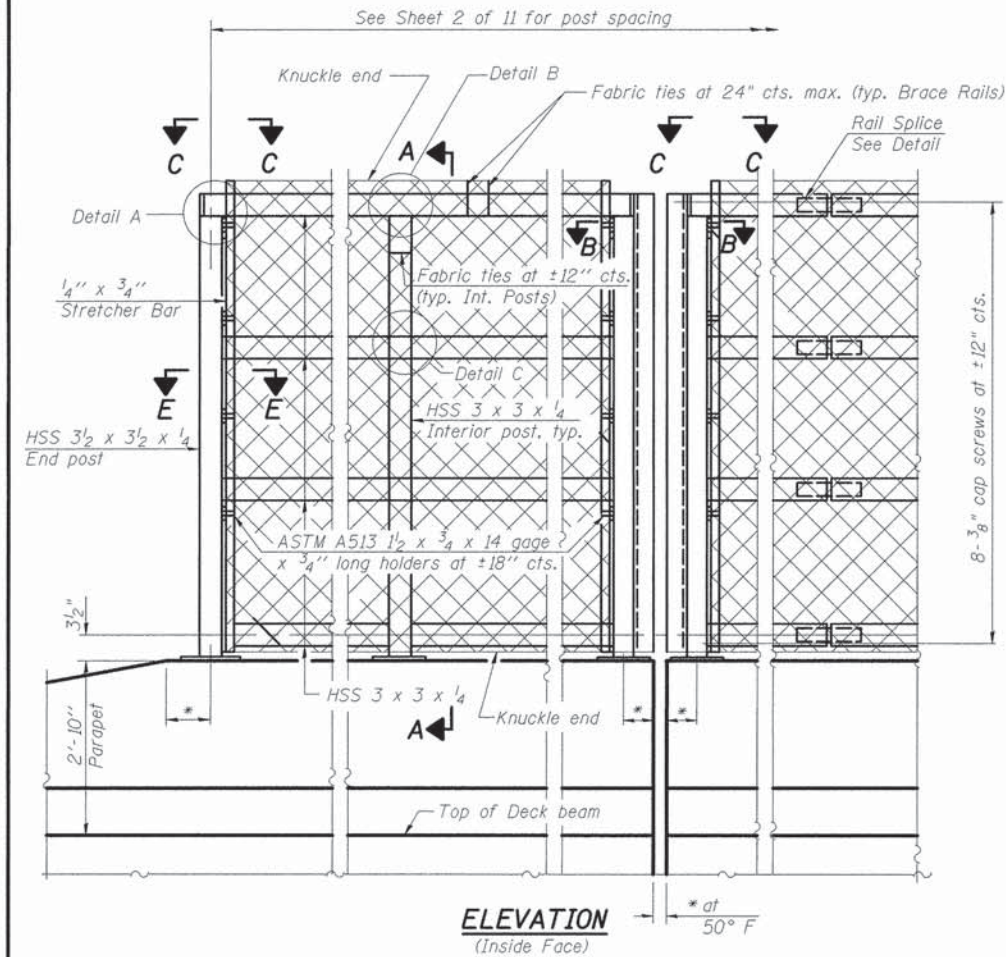
FILE NAME =	USER NAME =	DESIGNED - CJC	REVISED -
		CHECKED - RVB	REVISED -
PLOT SCALE =		DRAWN - UJ	REVISED -
PLOT DATE =		CHECKED - RVB	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**21" x 36" PPC DECK BEAM DETAILS
 STRUCTURE NO. 100-3183**

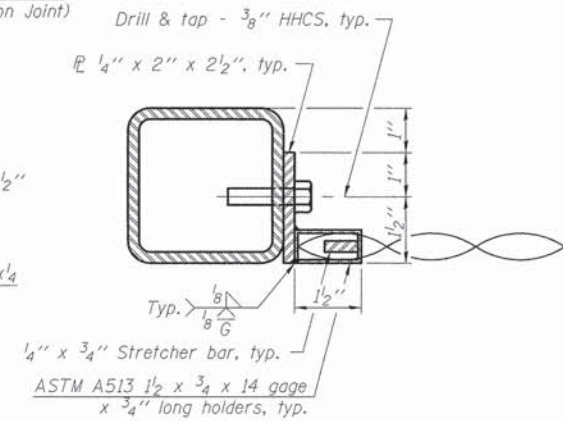
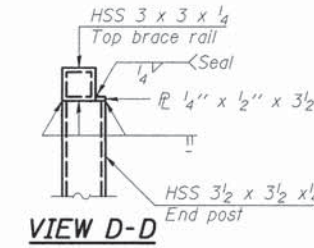
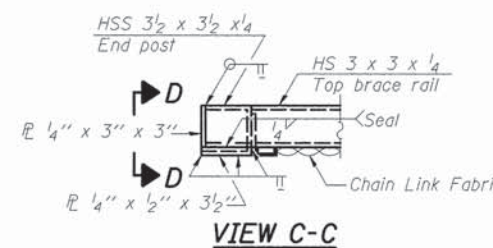
SHEET NO. 6 OF 11 SHEETS

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
557	05-01228-00-BR	WILLIAMSON	34	12
				CONTRACT NO. 99347
ILLINOIS FED. AID PROJECT				



ANCHOR BOLT DETAILS

In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting 5/8" ϕ anchor rods according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.



BILL OF MATERIAL

Item	Unit	Quantity
Bridge Fence Railing	Foot	225

R-32 (MODIFIED)

*Variable - See Plans

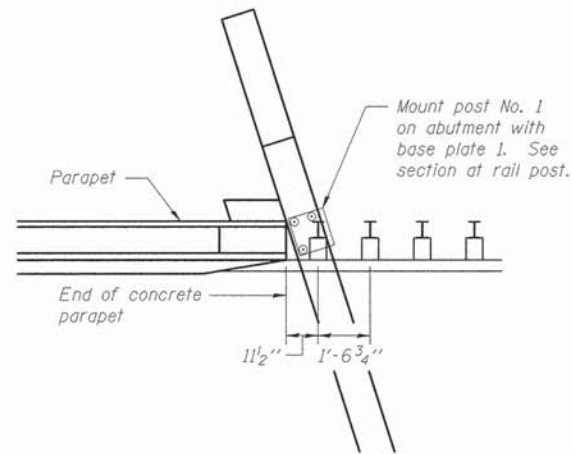
FILE NAME =	USER NAME =	DESIGNED - CJC	REVISED -
		CHECKED - RVB	REVISED -
PLOT SCALE =		DRAWN - UJ	REVISED -
PLOT DATE =		CHECKED - RVB	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

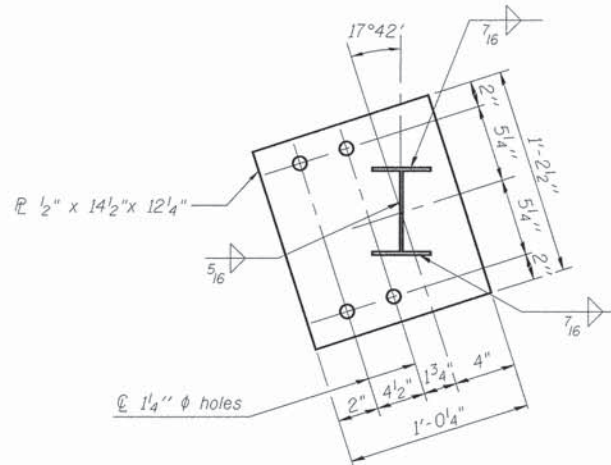
BRIDGE FENCE RAILING, PARAPET MOUNTED
 STRUCTURE NO. 100-3183

SHEET NO. 7 OF 11 SHEETS

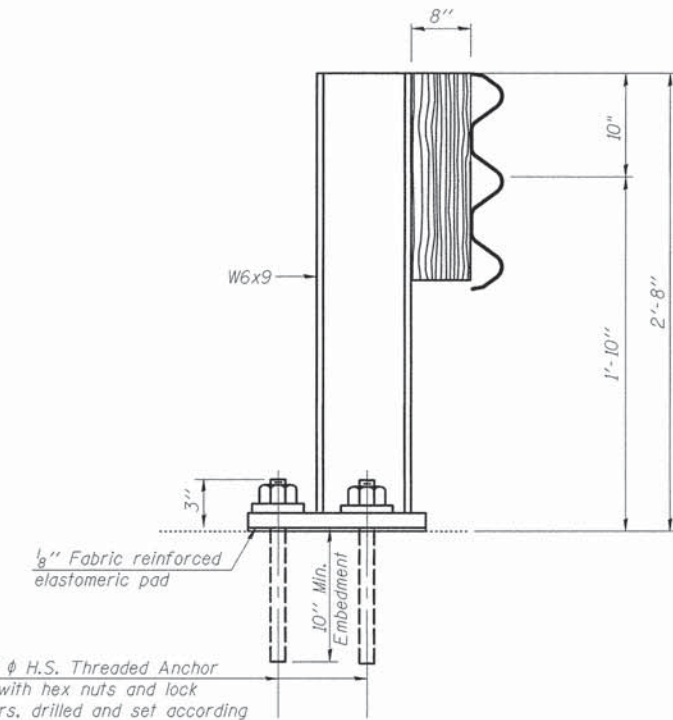
T.R.	SECTION	COUNTY	TOTAL SHEETS
557	05-01228-00-BR	WILLIAMSON	34 13
			CONTRACT NO. 99347
ILLINOIS FED. AID PROJECT			



BASE PLATE PLAN
(NE CORNER SHOWN, SW ROTATED 180°)

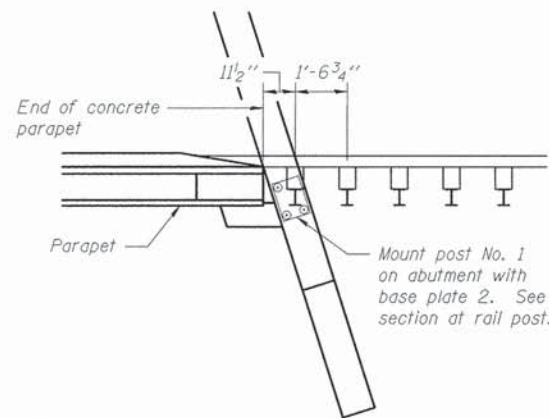


BASE PLATE 1 DETAIL
(NE CORNER SHOWN, SW ROTATED 180°)

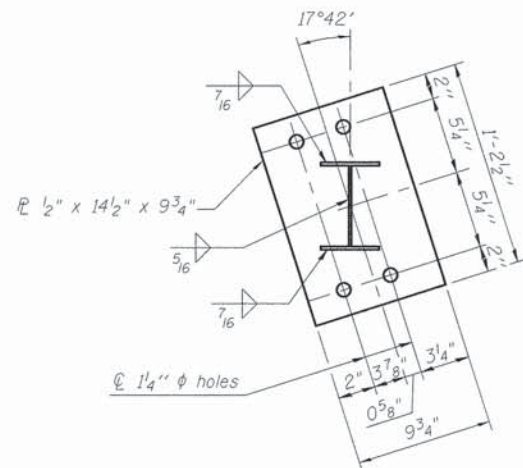


4- 1" φ H.S. Threaded Anchor
Rods with hex nuts and lock
washers, drilled and set according
to Article 509.06 of the Standard
Specifications. Min. Factored
Tensile Capacity = 13.3 kips

SECTION AT RAIL POST



BASE PLATE PLAN
(SE CORNER SHOWN, NW ROTATED 180°)



BASE PLATE 2 DETAIL
(SE CORNER SHOWN, NW ROTATED 180°)

Notes:
See Standard 631031 for details of Traffic Barrier Terminal, Type 6 not shown.
All materials, fabrication, and installation as shown shall be included with
Traffic Barrier Terminal, Type 6.

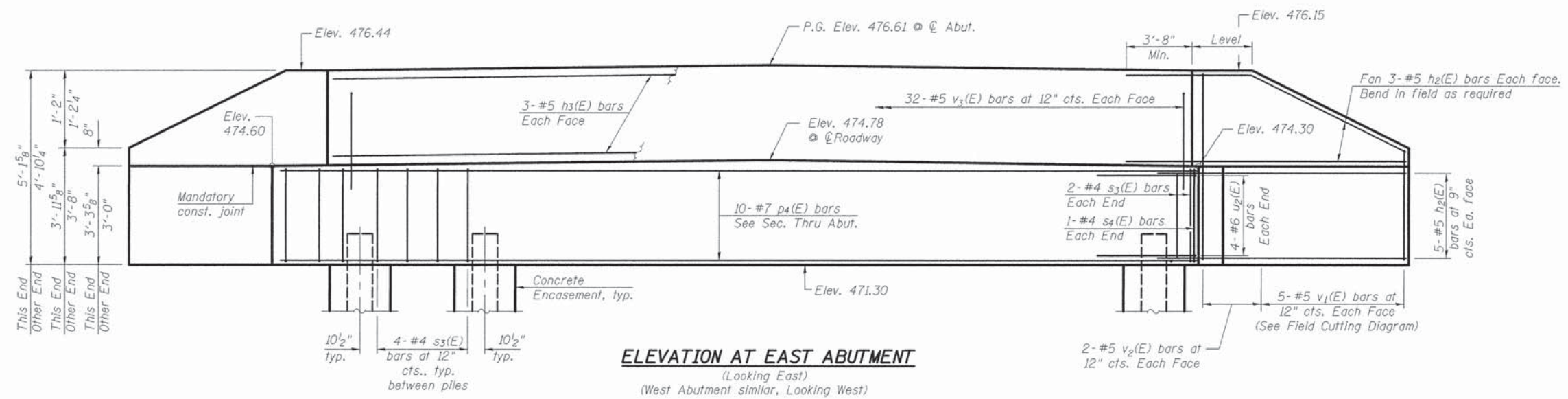
FILE NAME =	USER NAME =	DESIGNED - CJC	REVISED -
		CHECKED - RVB	REVISED -
PLOT SCALE =		DRAWN - CJC	REVISED -
PLOT DATE =		CHECKED - RVB	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

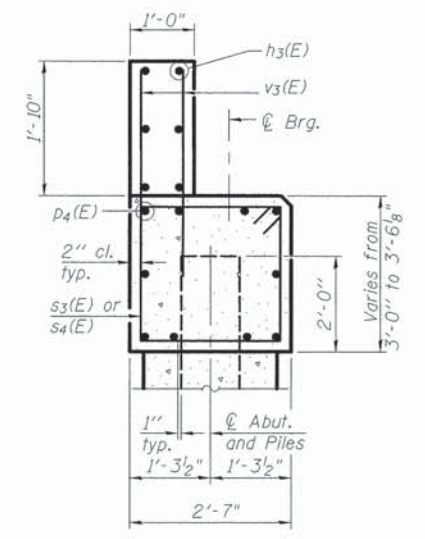
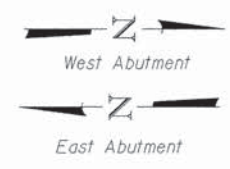
POST DETAILS FOR TRAFFIC BARRIER TERMINAL, TYPE 6
STRUCTURE NO. 100-3183

SHEET NO. 8 OF 11 SHEETS

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
557	05-01228-00-BR	WILLIAMSON	34	14
CONTRACT NO. 99347				
ILLINOIS FED. AID PROJECT				

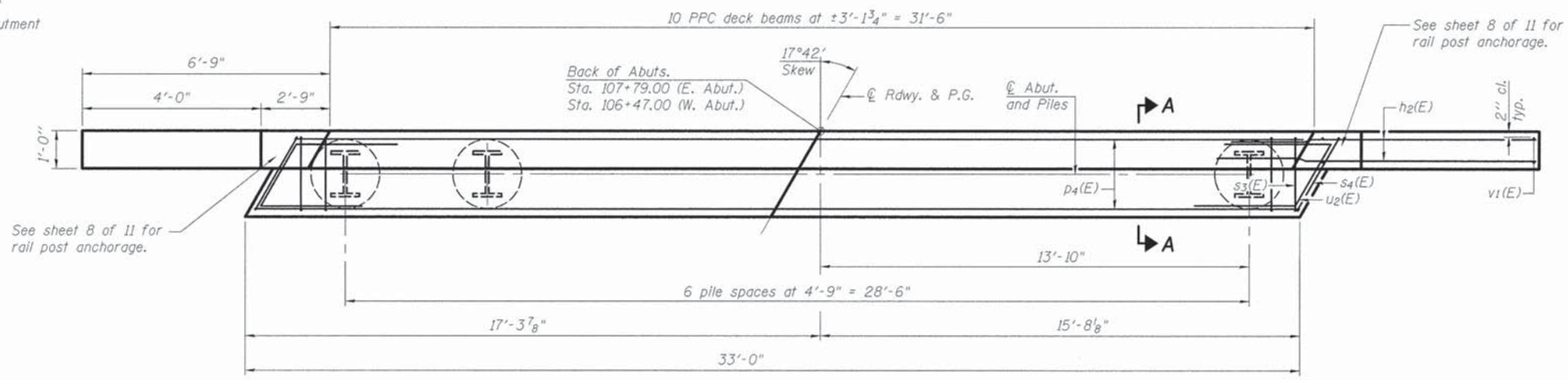


ELEVATION AT EAST ABUTMENT
(Looking East)
(West Abutment similar, Looking West)



SECTION A-A
(Dimensions are at Rt. L's)

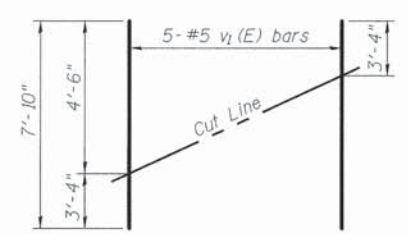
Note: Abutment backwall and portion of the wingwalls above the construction joint shall be poured after the deck beams are in place and keyways have cured.



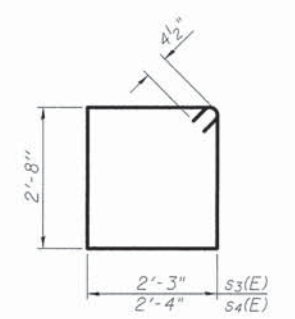
PLAN

PILE DATA

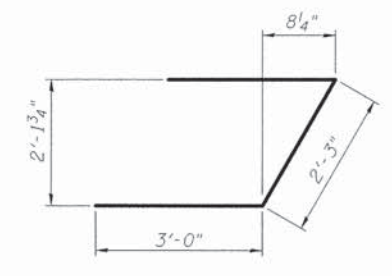
Type: Steel HP 14x89
Nominal Required Bearing: 225 kips
Factored Resistance Available: 124 kips
Est. Length: 32'
No. Production Piles: 13
No. Test Piles: 1 (at East Abut.)



FIELD CUTTING DIAGRAM



BARS s3(E) & s4(E)



BAR u2(E)

BILL OF MATERIAL
TWO ABUTMENTS

Bar	No.	Size	Length	Shape
h2(E)	64	#5	10'-3"	—
h3(E)	12	#5	31'-2"	—
p4(E)	20	#7	32'-8"	—
s3(E)	56	#4	10'-7"	□
s4(E)	4	#4	10'-9"	□
u2(E)	16	#6	8'-3"	∟
v1(E)	20	#5	7'-10"	—
v2(E)	16	#5	4'-6"	—
v3(E)	128	#5	3'-4"	—
Structure Excavation			Cu. Yd.	119
Concrete Structures			Cu. Yd.	29.6
Concrete Encasement			Cu. Yd.	7.6
Stud Shear Connectors			Each	168
Reinforcement Bars, Epoxy Coated			Pound	3,725
Furnishing Steel Piles HP 14X89			Foot	416
Driving Piles			Foot	416
Test Pile Steel HP 14X89			Each	1

For details of piles and Concrete Encasement, see sheet 11 of 11.

HURST-ROSCHKE, INC.
CONSULTING ENGINEERS & ARCHITECTS
200 NORTH MARKET STREET
MARION, ILLINOIS 62959

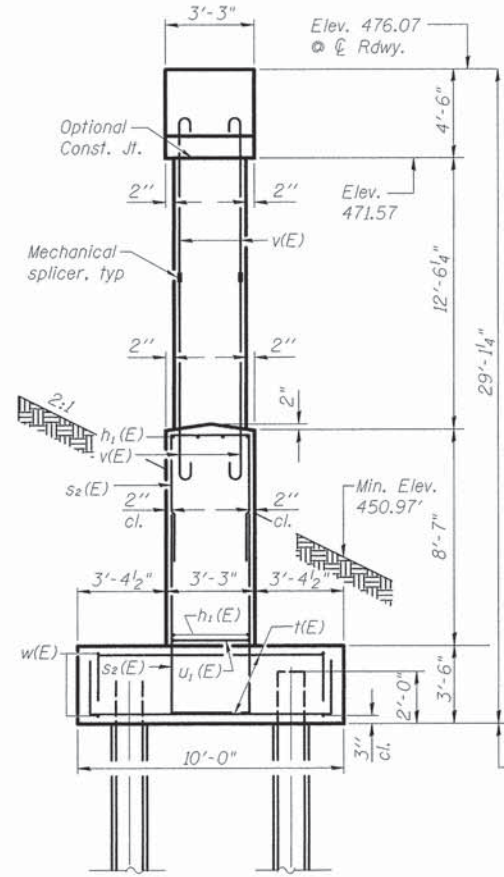
FILE NAME =	USER NAME =	DESIGNED - CJC	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ABUTMENTS STRUCTURE NO. 100-3183	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
		CHECKED - RVB	REVISED -			557	05-01228-00-BR	WILLIAMSON	34	15	
PLOT SCALE =		DRAWN - UJ	REVISED -			CONTRACT NO. 99347					
PLOT DATE =		CHECKED - RVB	REVISED -			ILLINOIS FED. AID PROJECT					
SHEET NO. 9 OF 11 SHEETS											

Note:
For details of piles, see sheet 11 of 11.

When splicing of spiral reinforcement is necessary, the spirals shall be provided with 1/2 extra turns at the ends to be spliced. These additional turns shall either be welded together according to AWS D1.4, or shall terminate with a 135° standard hook.

PILE DATA (TWO PIERS)

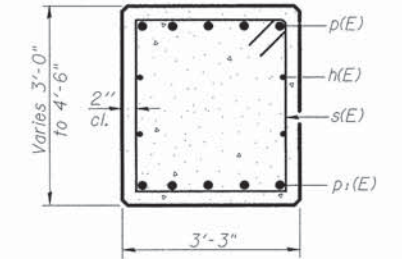
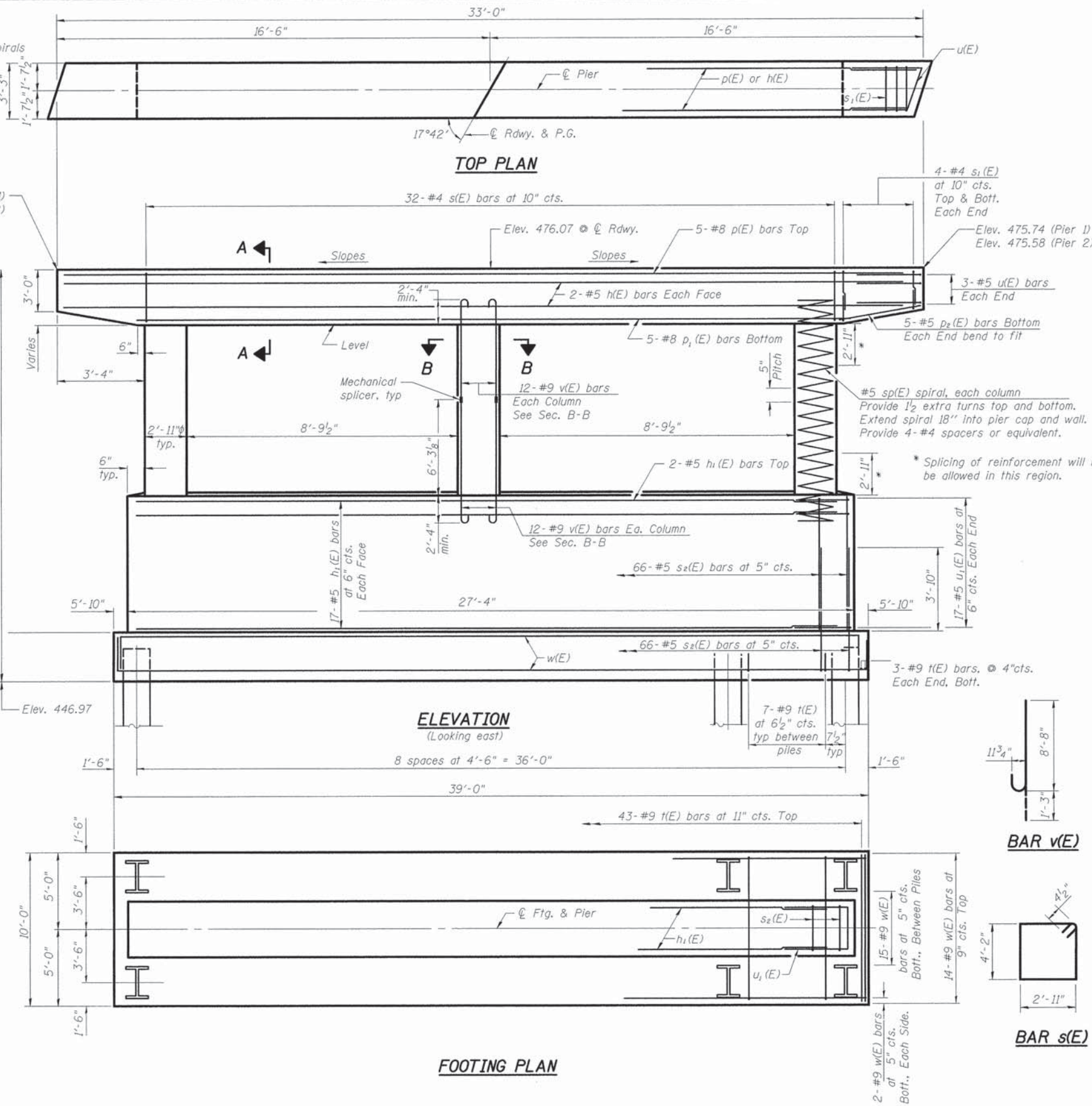
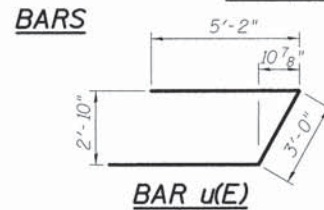
Type: Steel HP 14x89
Nominal Required Bearing: 705 kips
Factored Resistance Available: 388 kips
Est. Length: 36'
No. Production Piles: 35
No. Test Piles: 1 (at Pier 1)
Elev. 475.58 (Pier 1)
Elev. 475.74 (Pier 2)



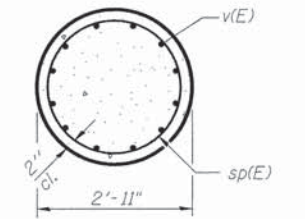
END VIEW
(Dimensions @ right angles)

A & B DIMENSIONS

Bar	A	B
s ₁ (E)	2'-11"	3'-2"
s ₂ (E)	2'-11"	7'-1"
t(E)	9'-8"	1'-7"
u ₁ (E)	2'-10"	3'-0"
w(E)	38'-8"	1'-7"



SEC. A-A



SEC. B-B

MINIMUM BAR LAP

#4 bar = 2'-0"
#5 bar = 2'-6"

**BILL OF MATERIAL
TWO PIERS**

Bar	No.	Size	Length	Shape
h(E)	8	#5	32'-8"	—
h ₁ (E)	72	#5	27'-0"	—
p(E)	10	#8	32'-8"	—
p ₁ (E)	10	#8	27'-4"	—
p ₂ (E)	20	#5	5'-9"	—
s(E)	64	#4	14'-11"	□
s ₁ (E)	32	#4	9'-3"	U
s ₂ (E)	264	#5	17'-1"	U
sp(E)	6	#5	15'-7"	⋈
t(E)	210	#9	12'-10"	┌
u(E)	12	#5	13'-4"	└
u ₁ (E)	68	#5	8'-10"	┌
v(E)	144	#9	9'-11"	└
w(E)	66	#9	41'-10"	┌

Structure Excavation	Cu. Yd.	290
Concrete Structures	Cu. Yd.	209.4
Stud Shear Connectors	Each	432
Reinforcement Bars, Epoxy Coated	Pound	35,820
Mechanical Splicers	Each	72
Furnishing Steel Piles HP 14X89	Foot	1260
Driving Piles	Foot	1260
Test Pile Steel HP 14X89	Each	1

** Length is height of spiral.

HURST-ROSCHKE, INC.
CONSULTING ENGINEERS & ARCHITECTS
200 NORTH MARKET STREET
MARION, ILLINOIS 62959

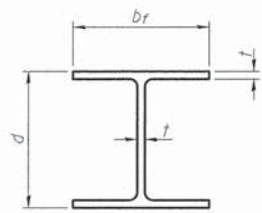
FILE NAME =	USER NAME =	DESIGNED - CJC	REVISED -
		CHECKED - RVB	REVISED -
		DRAWN - UJ	REVISED -
		CHECKED - RVB	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIERS
STRUCTURE NO. 100-3183
SHEET NO. 10 OF 11 SHEETS

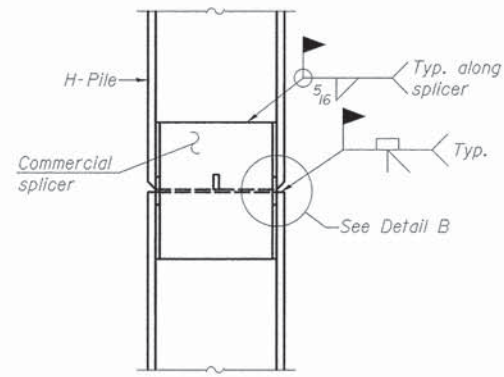
T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
557	05-01228-00-BR	WILLIAMSON	34	16
CONTRACT NO. 99347				
ILLINOIS FED. AID PROJECT				

... 1003176-9347-00-PIE-09P 2/10/2016 10:12:28 AM

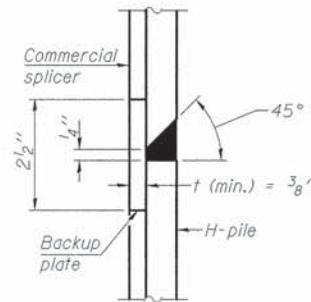


STEEL PILE TABLE

Designation	Depth d	Flange width b _f	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	1 3/16"	30"
x102	14"	14 3/4"	1 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 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"
x42	9 3/4"	10 3/8"	7/16"	24"
HP 8x36	8"	8 1/8"	7/16"	18"

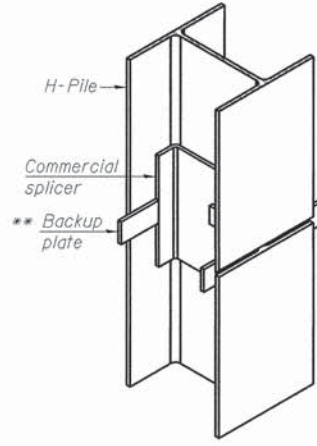


ELEVATION

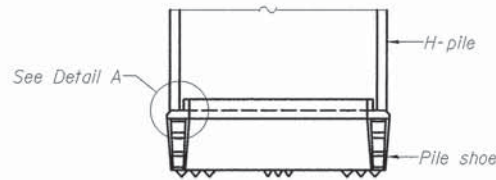


DETAIL "B"

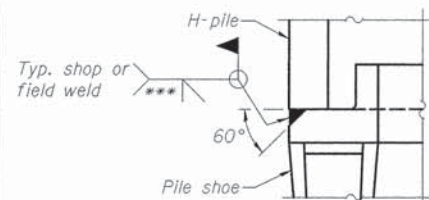
WELDED COMMERCIAL SPLICE



ISOMETRIC VIEW

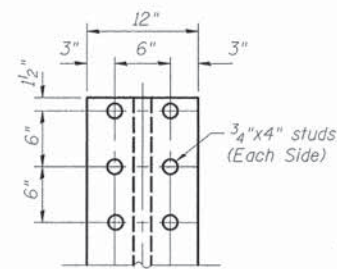


ELEVATION

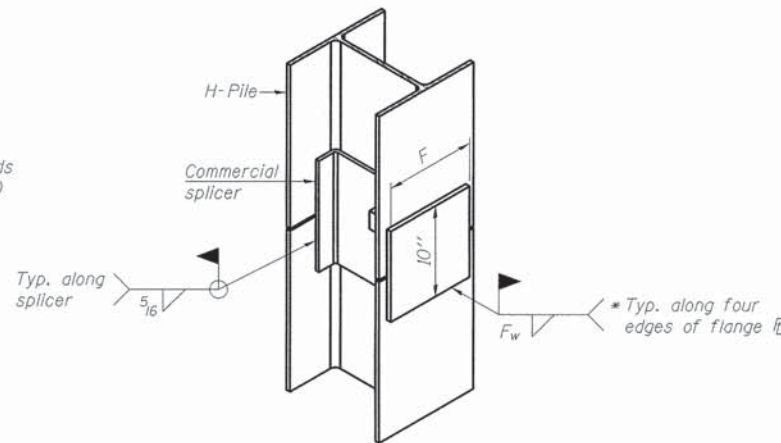


DETAIL A

H-PILE SHOE ATTACHMENT



SHEAR STUD DETAIL

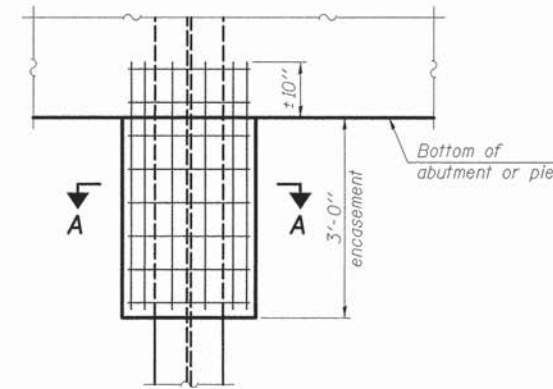


ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

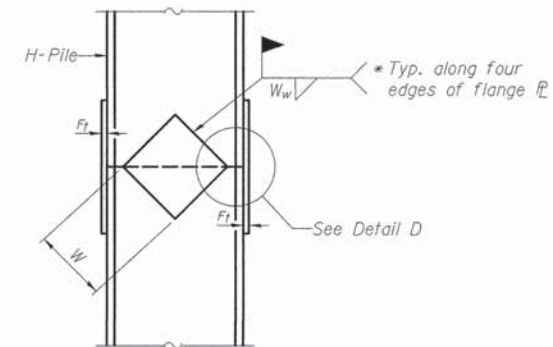
- * Interrupt welds 1/4" from end of web and/or each flange.
- ** Remove portions of backup plates that extend outside the flanges.
- *** Weld size per pile shoe manufacturer (5/16" min.).

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

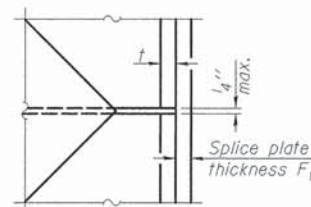


ELEVATION

PILE ENCASEMENT

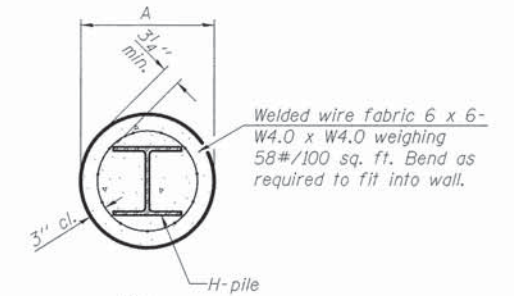


ELEVATION



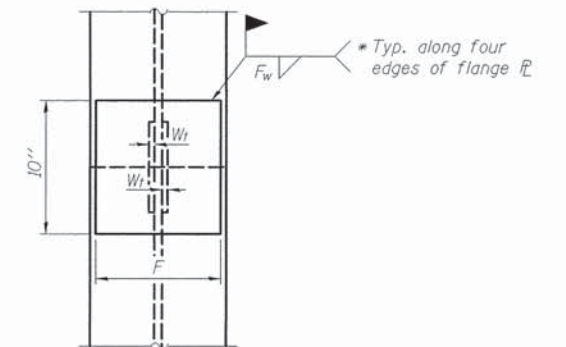
DETAIL D

WELDED PLATE FIELD SPLICE



SECTION A-A

Note:
Forms for encasement may be omitted when soil conditions permit.



END VIEW

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

HURST-ROSCHKE, INC.
CONSULTING ENGINEERS & ARCHITECTS
200 NORTH MARKET STREET
MARION, ILLINOIS 62959

F-HP (MODIFIED)

FILE NAME =	USER NAME =	DESIGNED - CJC	REVISED -
		CHECKED - RVB	REVISED -
		DRAWN - UJ	REVISED -
		CHECKED - RVB	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**HP PILE DETAILS
STRUCTURE NO. 100-3183**

SHEET NO. 11 OF 11 SHEETS

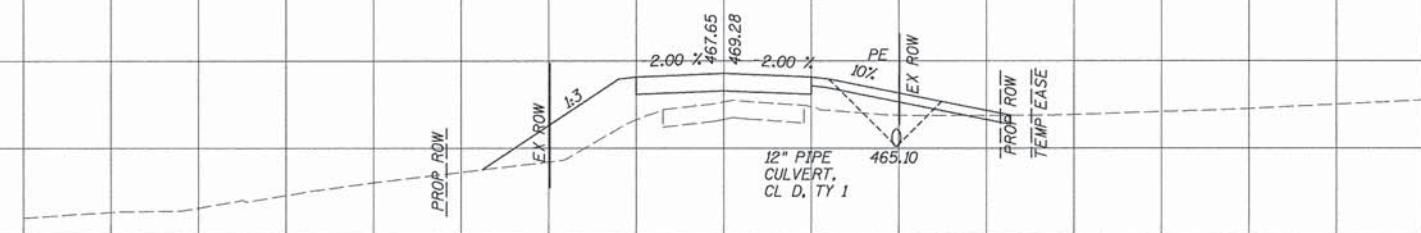
T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
557	05-01228-00-BR	WILLIAMSON	34	17
CONTRACT NO. 99347			ILLINOIS FED. AID PROJECT	

...1003276-99347-01-HP PILE DETAILS-APP. 2/10/2016 8:13:21 AM

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
557	05-01228-00-BR	WILLIAMSON	34	18
STA.		TO STA.		
		ILLINOIS WEST MARION TOWNSHIP		
CONTRACT NO. 99347				

470
465

470
465

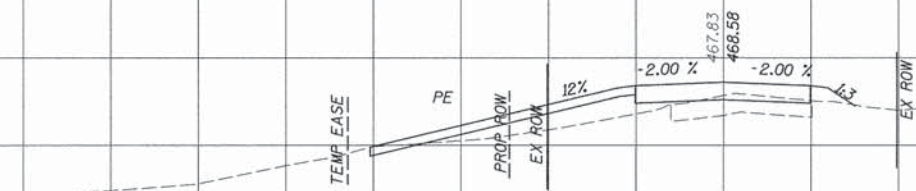


CUT = 1 SF
FILL = 63 SF

105+00.00

465
460

465
460



104+67.00

470
465

470
465



CUT = 11 SF
FILL = 4 SF

104+50.00

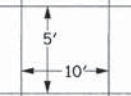
470
465

470
465



BEGIN CONSTRUCTION
TR 557
STA 104+10.00

104+00.00



100

50

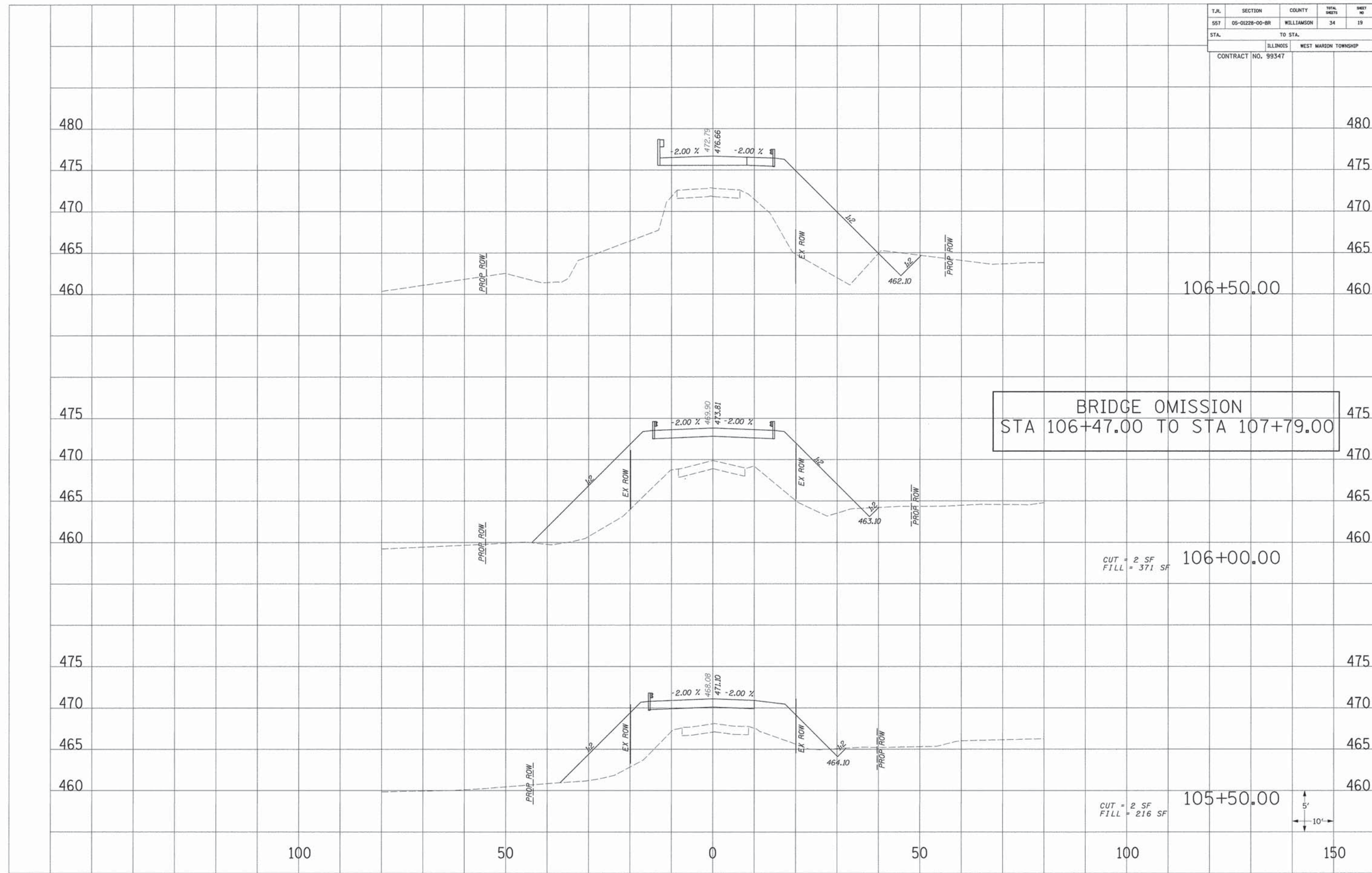
0

50

100

150

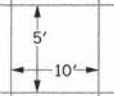
T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
557	05-01228-00-BR	WILLIAMSON	34	19
STA.		TO STA.		
		ILLINOIS WEST MARION TOWNSHIP		
CONTRACT NO. 99347				



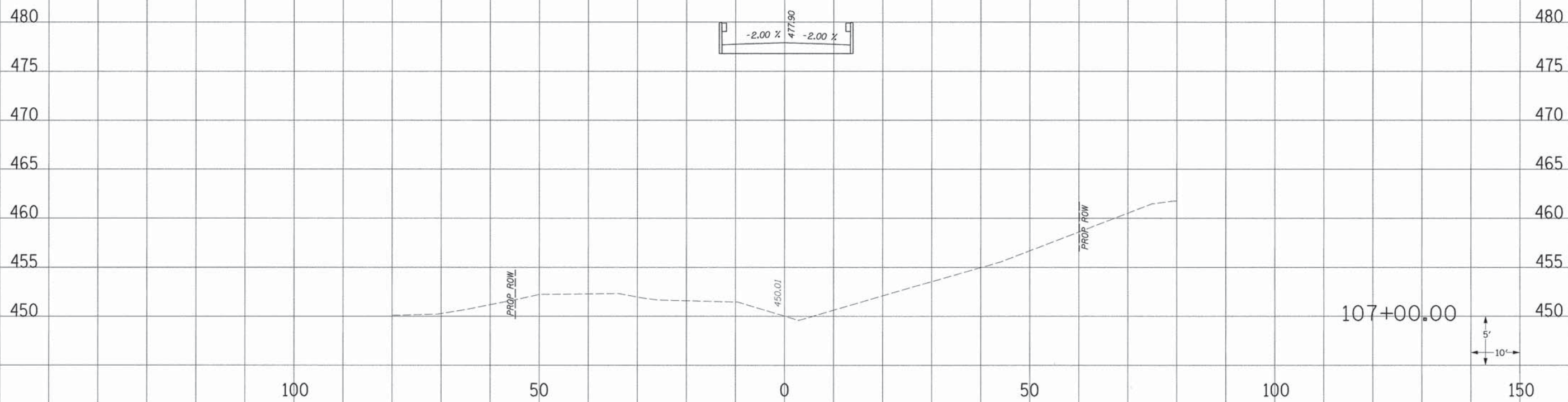
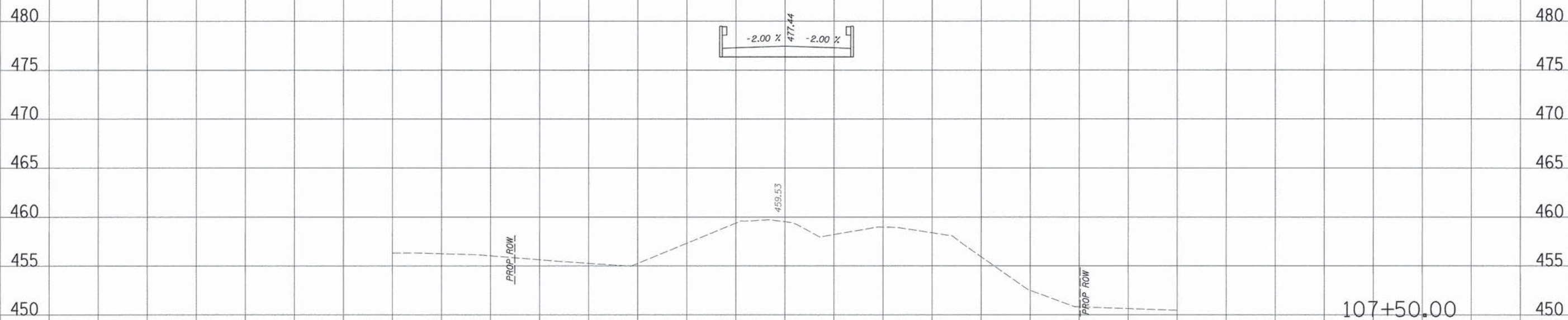
BRIDGE OMISSION
 STA 106+47.00 TO STA 107+79.00

CUT = 2 SF
 FILL = 371 SF

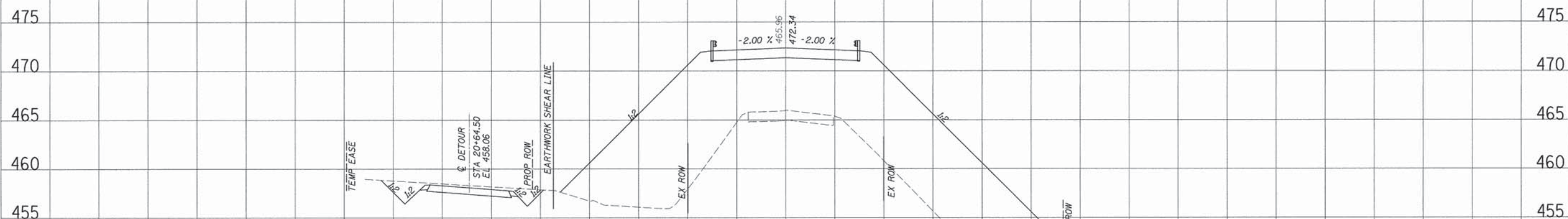
CUT = 2 SF
 FILL = 216 SF



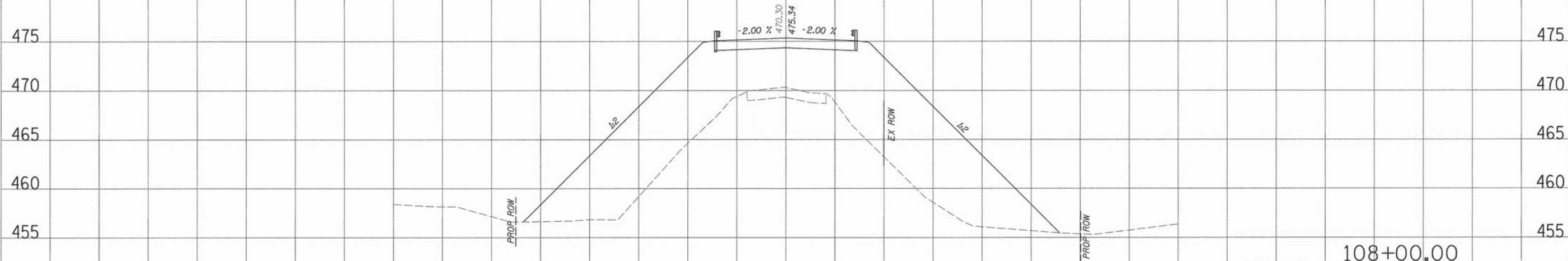
T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
557	05-01228-00-BR	WILLIAMSON	34	20
STA.		TO STA.		
		ILLINOIS WEST MARION TOWNSHIP		
CONTRACT NO. 99347				



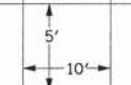
T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
557	05-01228-00-BR	WILLIAMSON	34	21
STA.		TO STA.		
		ILLINOIS WEST MARION TOWNSHIP		
CONTRACT NO. 99347				



CUT = 0 SF
 FILL = 703 SF
 108+50.00

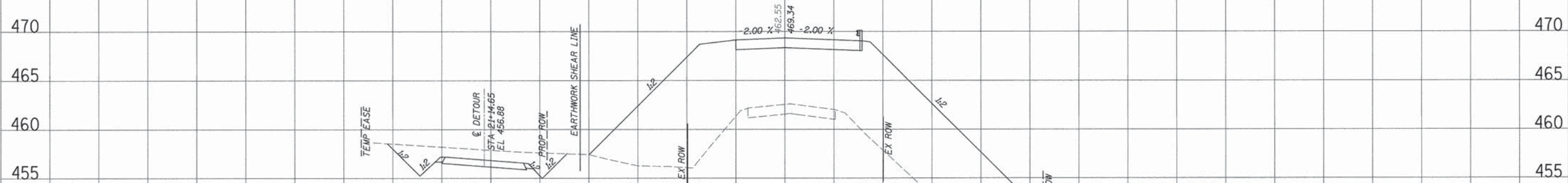
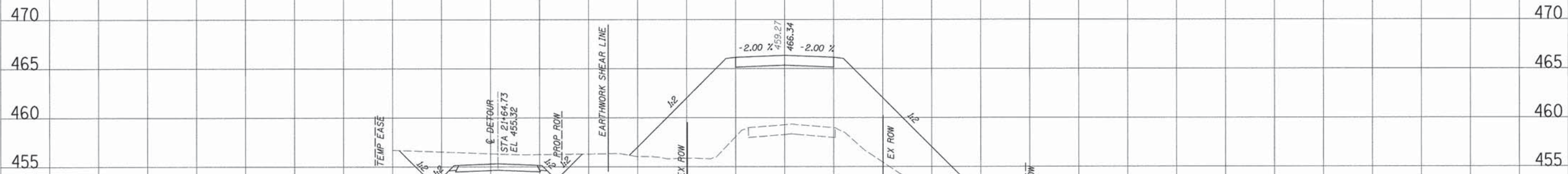


CUT = 0 SF
 FILL = 703 SF
 108+00.00



100 50 0 50 100 150

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
557	05-01228-00-BR	WILLIAMSON	34	22
STA.		TO STA.		
		ILLINOIS WEST MARION TOWNSHIP		
CONTRACT NO. 99347				



100

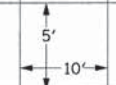
50

0

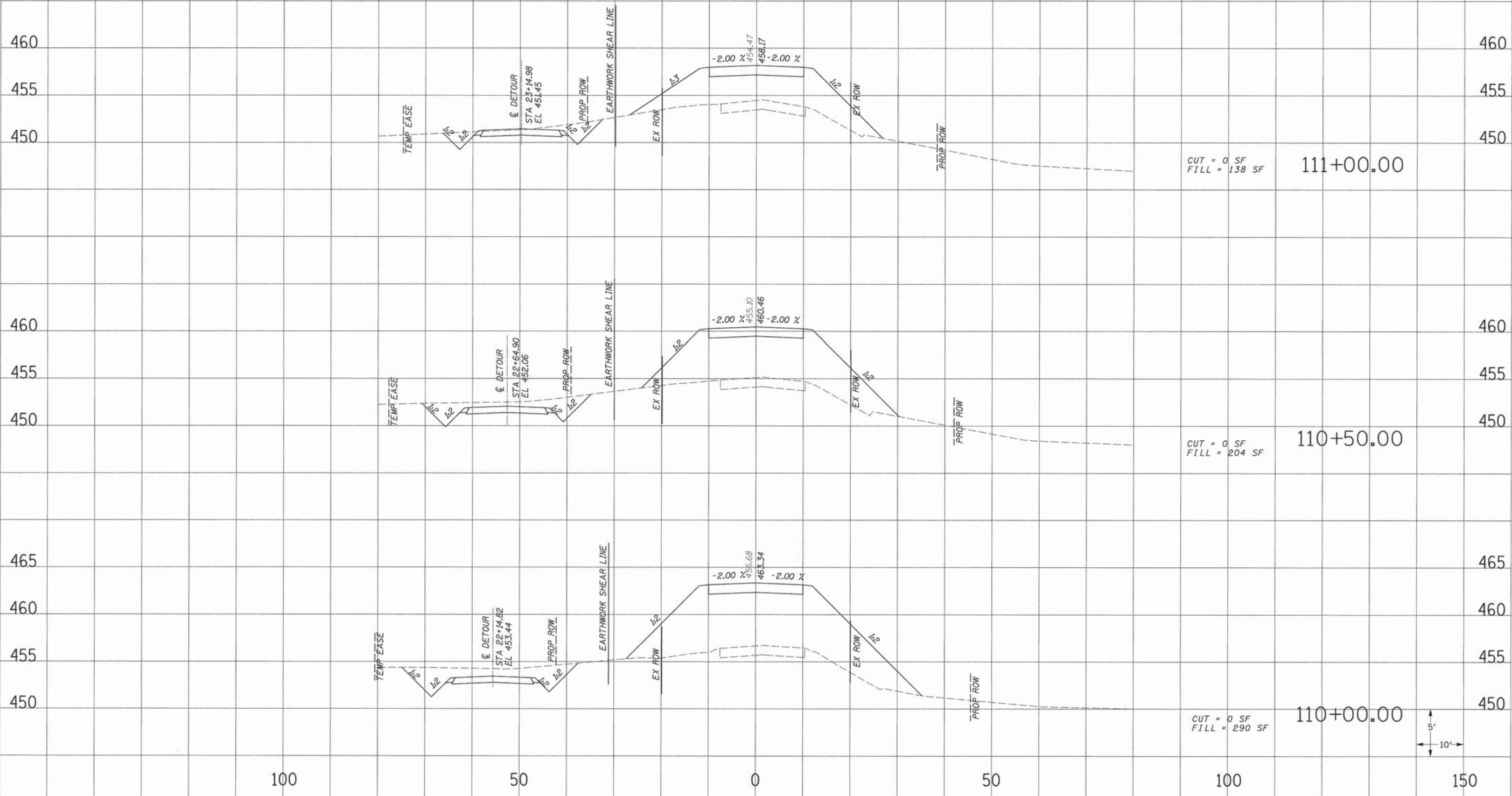
50

100

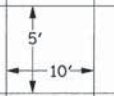
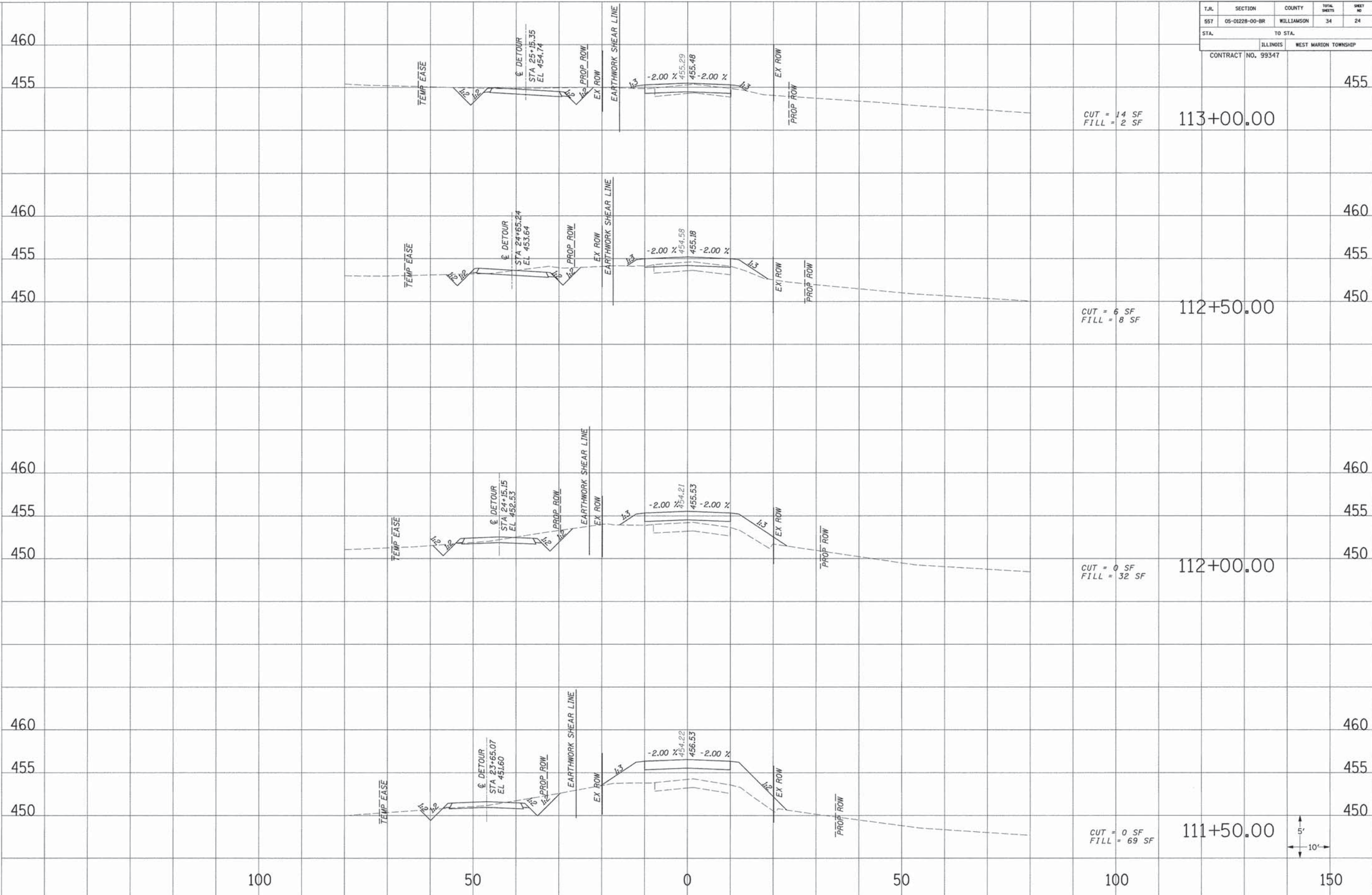
150



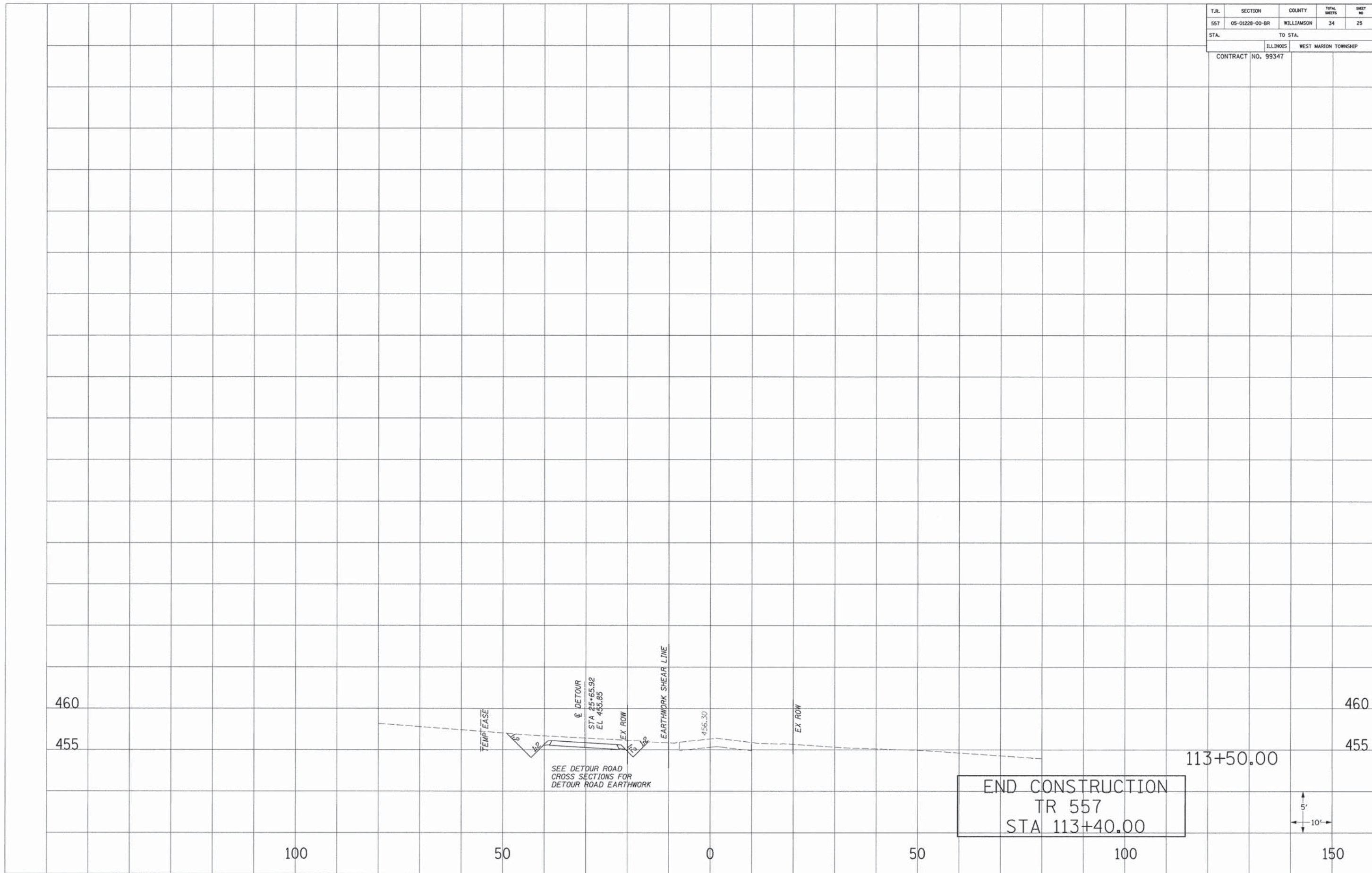
T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
557	05-01228-00-BR	WILLIAMSON	34	23
STA.		TO STA.		
ILLINOIS		WEST MARION TOWNSHIP		
CONTRACT NO. 99347				



T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
557	05-01228-00-BR	WILLIAMSON	34	24
STA.		TO STA.		
		ILLINOIS WEST MARION TOWNSHIP		
CONTRACT NO. 99347				

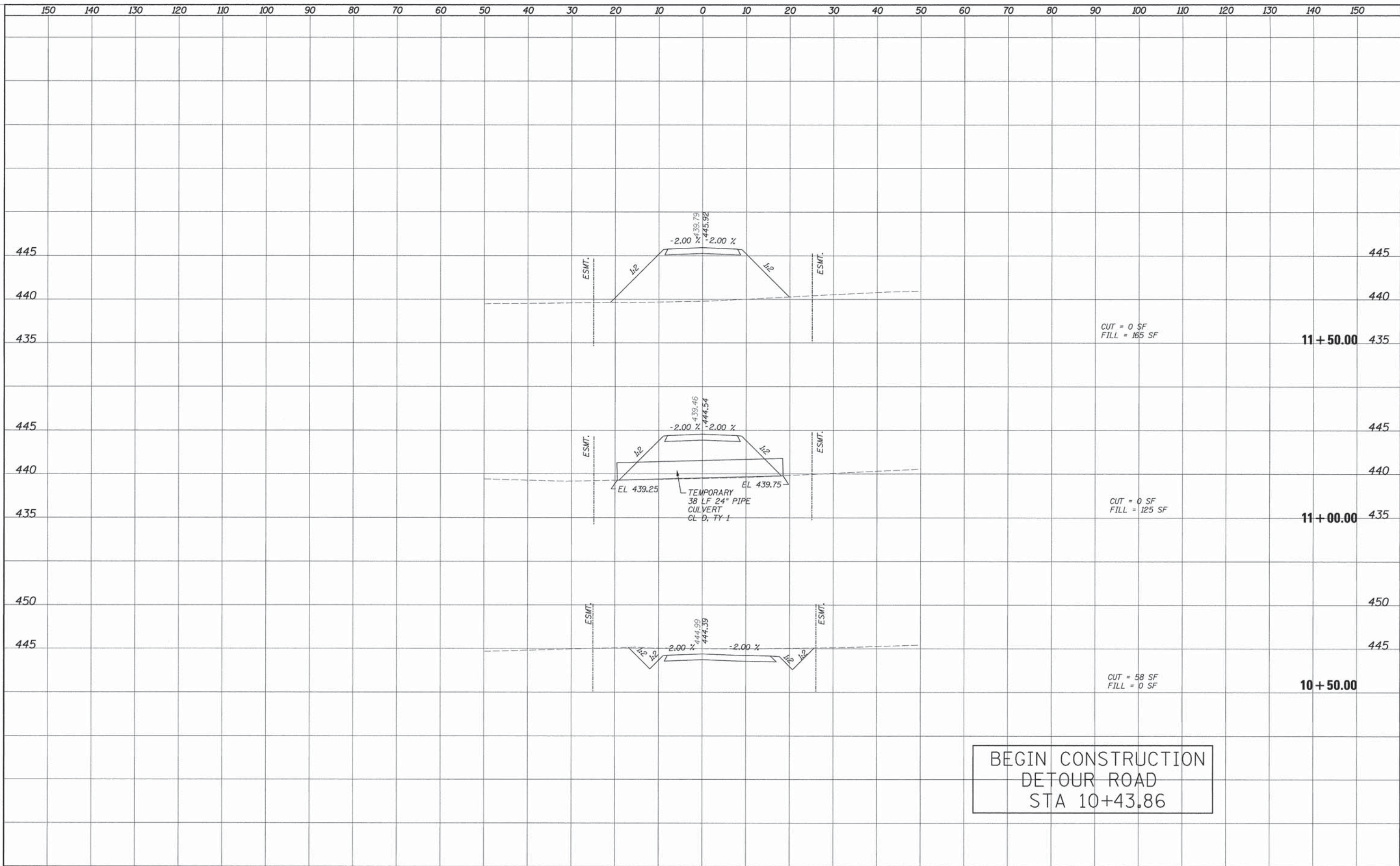


T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
557	05-01228-00-BR	WILLIAMSON	34	25
STA.		TO STA.		
		ILLINOIS	WEST MARION TOWNSHIP	
CONTRACT NO. 99347				



SURVEYED PLOTTED
 NOTE BOOK NO. _____
 AREAS CHECKED _____

SURVEYED PLOTTED
 NOTE BOOK NO. _____
 AREAS CHECKED _____



CUT = 0 SF
 FILL = 165 SF

CUT = 0 SF
 FILL = 125 SF

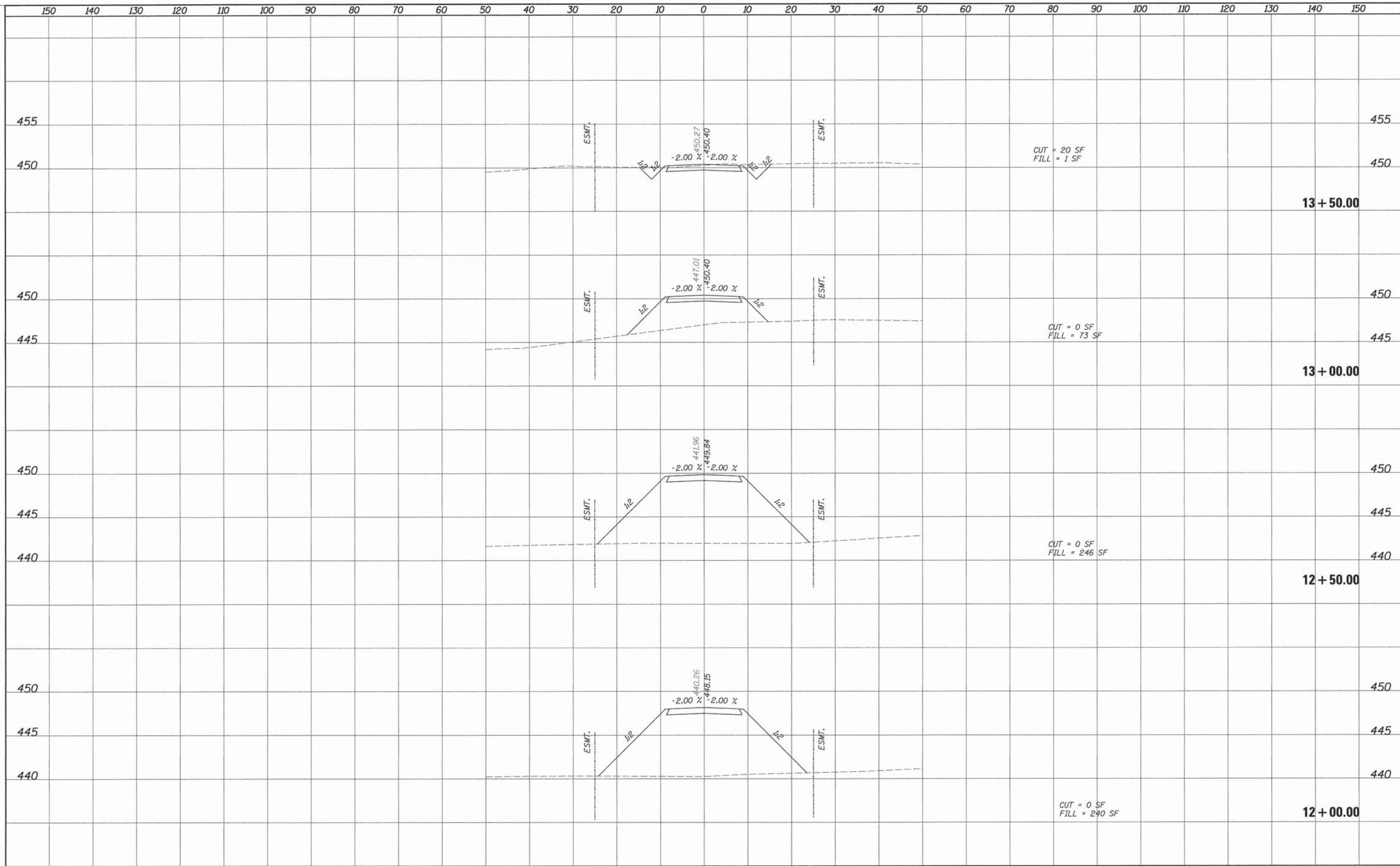
CUT = 58 SF
 FILL = 0 SF

BEGIN CONSTRUCTION
 DETOUR ROAD
 STA 10+43.86

FILE NAME =	USER NAME = #USER#	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DETOUR ROAD CROSS SECTIONS			F.A. RTE. 557	SECTION 05-012228-00-BR	COUNTY WILLIAMSON	TOTAL SHEETS 34	SHEET NO. 26
#FILEL#		DRAWN -	REVISED -		SCALE:	SHEET NO.	OF	SHEETS	STA. 10+00.00	TO STA. 11+50.00	ILLINOIS FED. AID PROJECT	
		CHECKED -	REVISED -									
		DATE -	REVISED -									

SUBMITTED SURVEY PLOTTED AREAS CHECKED
 SURVEY NOTE BOOK TEMPLATE AREAS CHECKED
 NO.

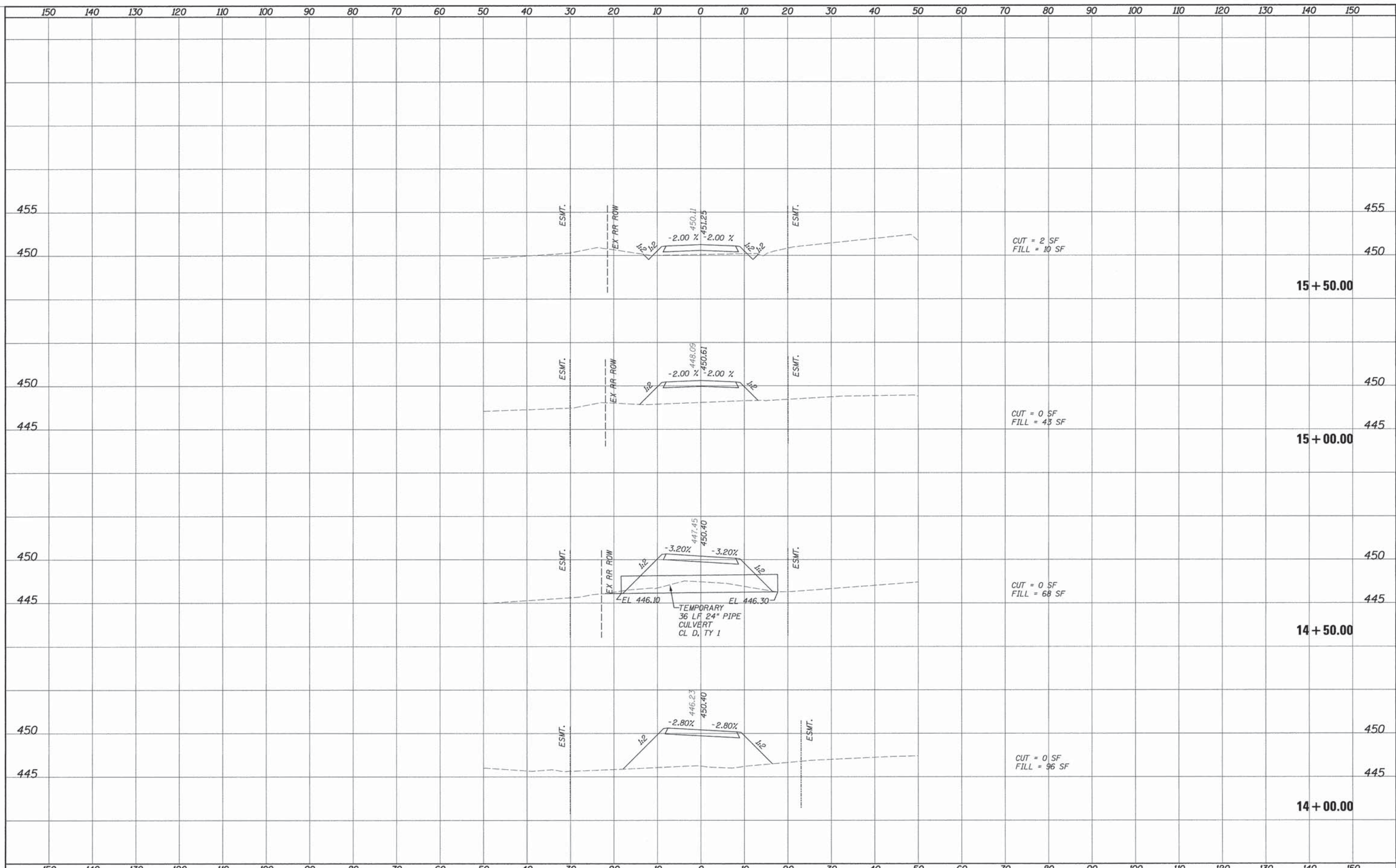
SUBMITTED SURVEY PLOTTED AREAS CHECKED
 SURVEY NOTE BOOK TEMPLATE AREAS CHECKED
 NO.



FILE NAME =	USER NAME = #USER#	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DETOUR ROAD CROSS SECTIONS				F.A. RTE. 557	SECTION 05-012228-00-BR	COUNTY WILLIAMSON	TOTAL SHEETS 34	SHEET NO. 27
#FILE#		DRAWN -	REVISED -		SCALE:	SHEET NO. OF SHEETS	STA. 12+00.00	TO STA. 13+50.00	CONTRACT NO. 99347				
		CHECKED -	REVISED -		ILLINOIS FED. AID PROJECT								
		DATE -	REVISED -										

SURVEYED
PLOTTED
NOTE BOOK
TEMPLATE
AREAS CHECKED
NO.

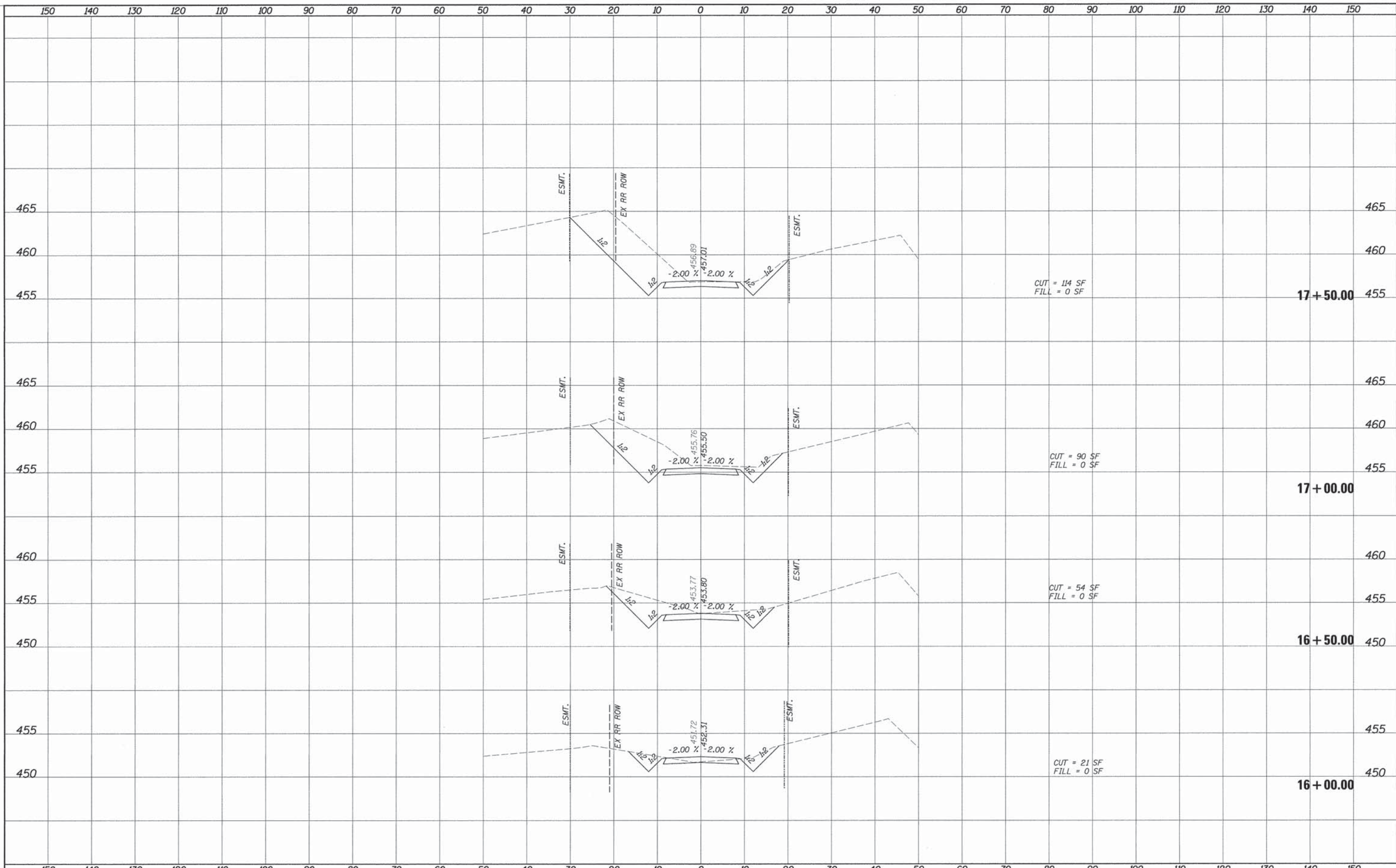
SURVEYED
PLOTTED
NOTE BOOK
TEMPLATE
AREAS CHECKED
NO.



FILE NAME =	USER NAME = #USER#	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DETOUR ROAD CROSS SECTIONS			F.A. RTE. 557	SECTION 05-012228-00-BR	COUNTY WILLIAMSON	TOTAL SHEETS 34	SHEET NO. 28
#FILE#		DRAWN -	REVISED -		SCALE:	SHEET NO.	OF	SHEETS	STA. 14+00.00	TO STA. 15+50.00	CONTRACT NO. 99347	
		CHECKED -	REVISED -		ILLINOIS FED. AID PROJECT							
		DATE -	REVISED -									

SURVEYED PLOTTED
 NOTE BOOK TEMPLATE
 NO. AREAS CHECKED

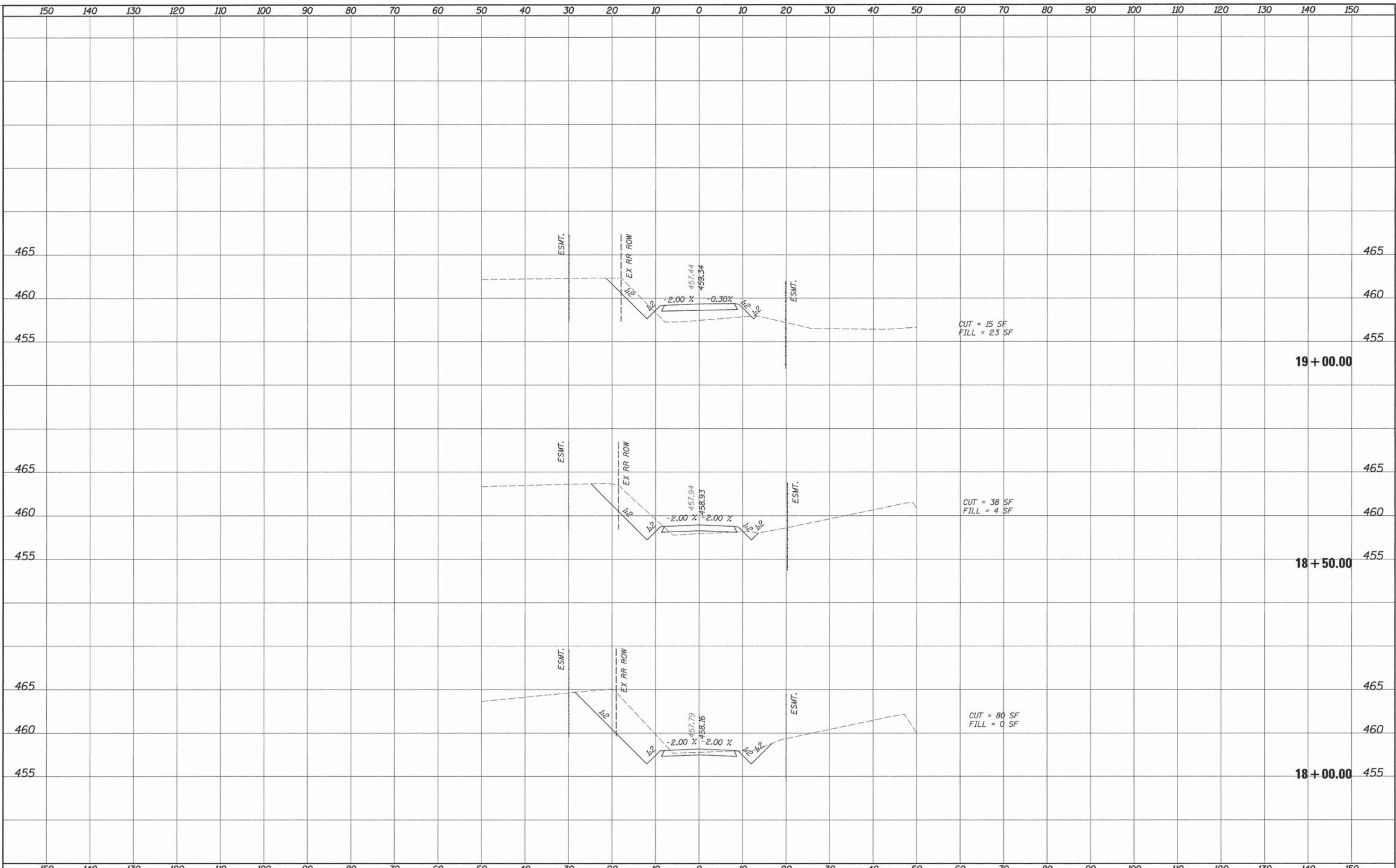
SURVEYED PLOTTED
 NOTE BOOK TEMPLATE
 NO. AREAS CHECKED



FILE NAME =	USER NAME = #USER#	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DETOUR ROAD CROSS SECTIONS				F.A. RTE. 557	SECTION 05-012228-00-BR	COUNTY WILLIAMSON	TOTAL SHEETS 34	SHEET NO. 29
#FILEL#		DRAWN -	REVISED -		SCALE:	SHEET NO. OF	SHEETS	STA. 16+00.00	TO STA. 17+50.00	CONTRACT NO. 99347			
		CHECKED -	REVISED -		ILLINOIS FED. AID PROJECT								
		DATE -	REVISED -										

SURVEY PLOTTED DATE AREAS CHECKED
 NOTE BOOK NO. 7

SURVEY PLOTTED DATE AREAS CHECKED
 NOTE BOOK NO. 7



FILE NAME =
 #FILE#

USER NAME = #USER#
 PLOT SCALE = #SCALE#
 PLOT DATE = #DATE#

DESIGNED -
 DRAWN -
 CHECKED -
 DATE -

REVISED -
 REVISED -
 REVISED -
 REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

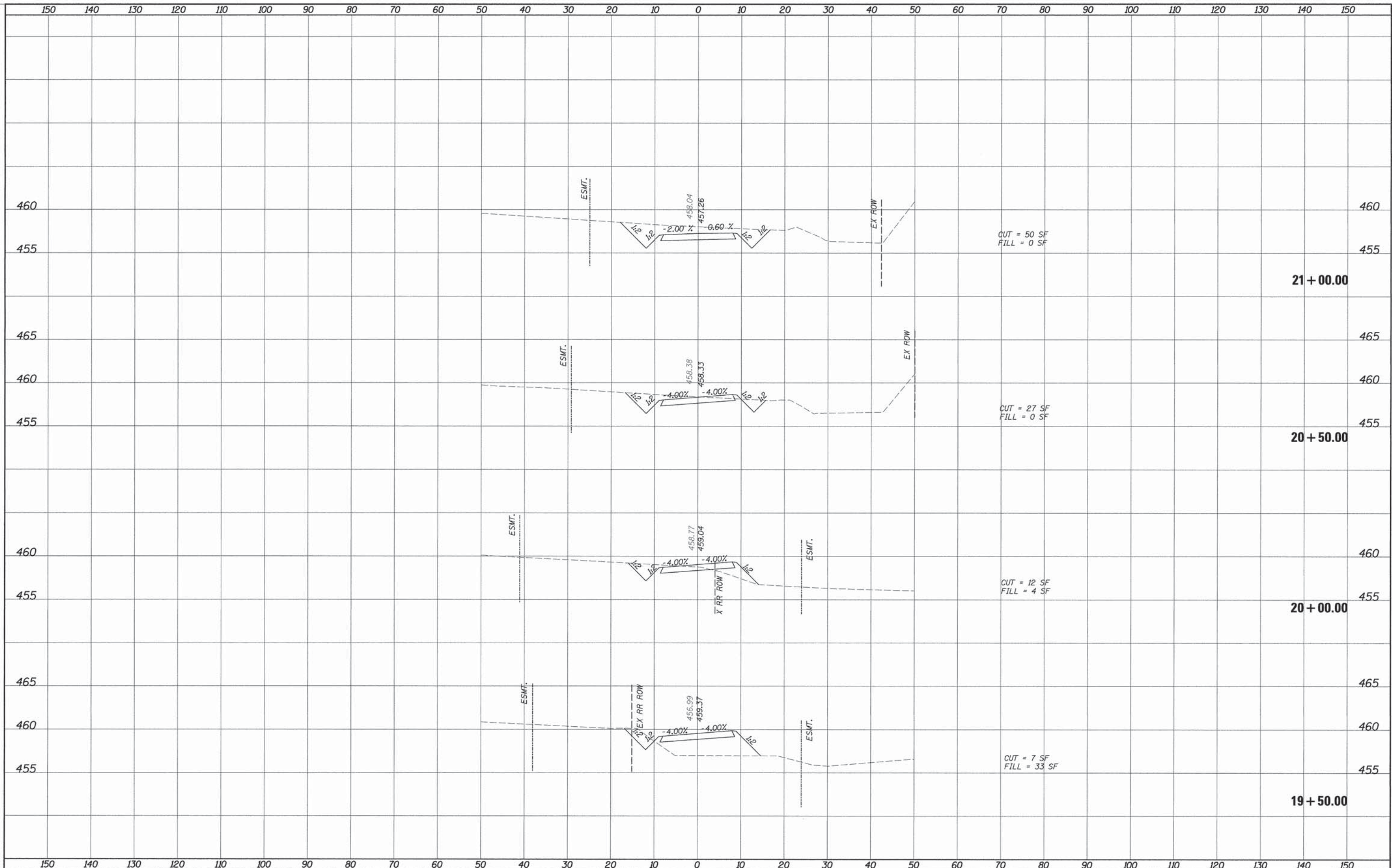
**DETOUR ROAD
 CROSS SECTIONS**

SCALE: SHEET NO. OF SHEETS STA. 18+00.00 TO STA. 19+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
557	05-012228-00-BR	WILLIAMSON	34	30
			CONTRACT NO. 99347	
ILLINOIS FED. AID PROJECT				

SURVEYED _____
 PLOTTED _____
 NOTE BOOK _____
 AREAS _____
 CHECKED _____
 NO. _____

SURVEYED _____
 PLOTTED _____
 NOTE BOOK _____
 AREAS _____
 CHECKED _____
 NO. _____



CUT = 50 SF
FILL = 0 SF

21 + 00.00

CUT = 27 SF
FILL = 0 SF

20 + 50.00

CUT = 12 SF
FILL = 4 SF

20 + 00.00

CUT = 7 SF
FILL = 33 SF

19 + 50.00

FILE NAME = _____
 #FILE# _____

USER NAME = #USER# _____
 DESIGNED - _____
 DRAWN - _____
 PLOT SCALE = #SCALE# _____
 CHECKED - _____
 PLOT DATE = #DATE# _____
 DATE - _____

REVISED - _____
 REVISED - _____
 REVISED - _____
 REVISED - _____

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

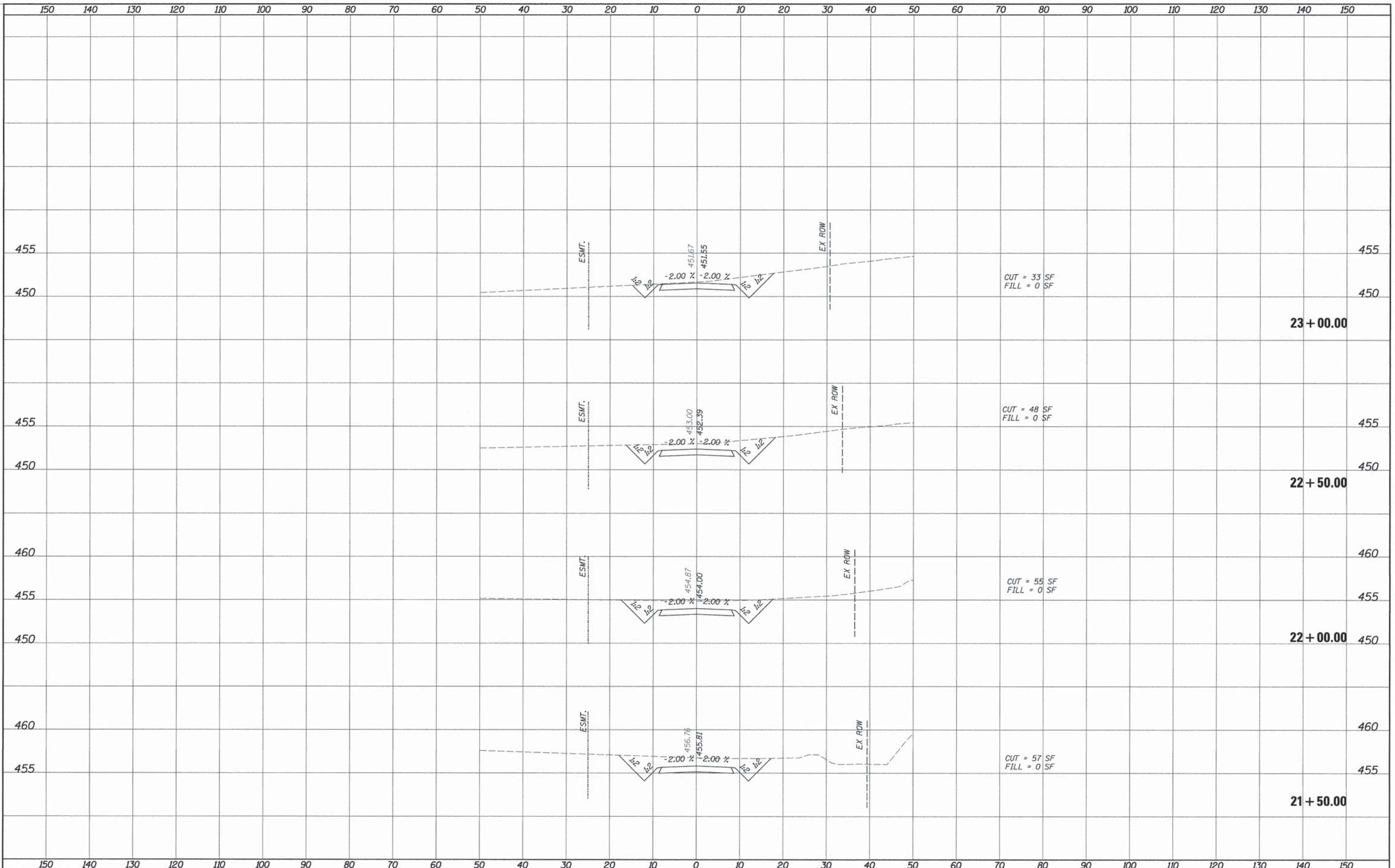
DETOUR ROAD
CROSS SECTIONS

SCALE: _____ SHEET NO. _____ OF _____ SHEETS STA. 19+50.00 TO STA. 21+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
557	05-012228-00-BR	WILLIAMSON	34	31
ILLINOIS FED. AID PROJECT			CONTRACT NO. 99347	

SURVEYED PLOTTED
 SURVEY PLOTTED
 NOTE BOOK NO. _____
 AREAS CHECKED _____

SURVEYED PLOTTED
 SURVEY PLOTTED
 NOTE BOOK NO. _____
 AREAS CHECKED _____

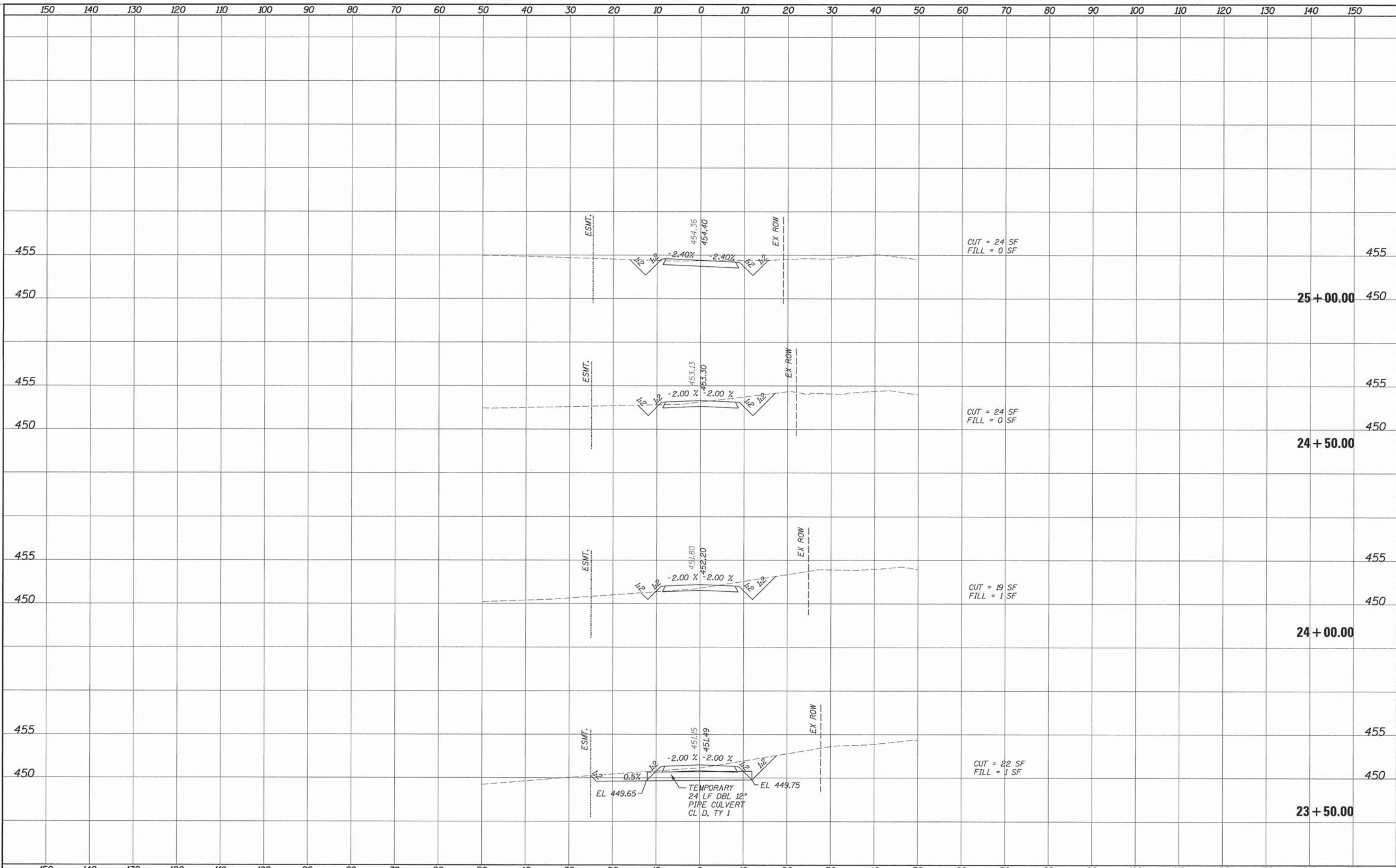


FILE NAME =	USER NAME = #USER#	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DETOUR ROAD CROSS SECTIONS				F.A. RTE. 557	SECTION 05-012228-00-BR	COUNTY WILLIAMSON	TOTAL SHEETS 34	SHEET NO. 32
#FILE#		DRAWN -	REVISED -		SCALE: SHEET NO. OF SHEETS STA. 21+50.00 TO STA. 23+00.00				CONTRACT NO. 99347				
		CHECKED -	REVISED -		ILLINOIS FED. AID PROJECT								
		DATE -	REVISED -										

... ILLINOIS STATE MAP CO. 3/20/2016 9:36:19 AM

SURVEYED _____
 PLOTTED _____
 NOTE BOOK _____
 AREAS CHECKED _____
 NO. _____

SURVEYED _____
 PLOTTED _____
 NOTE BOOK _____
 AREAS CHECKED _____
 NO. _____

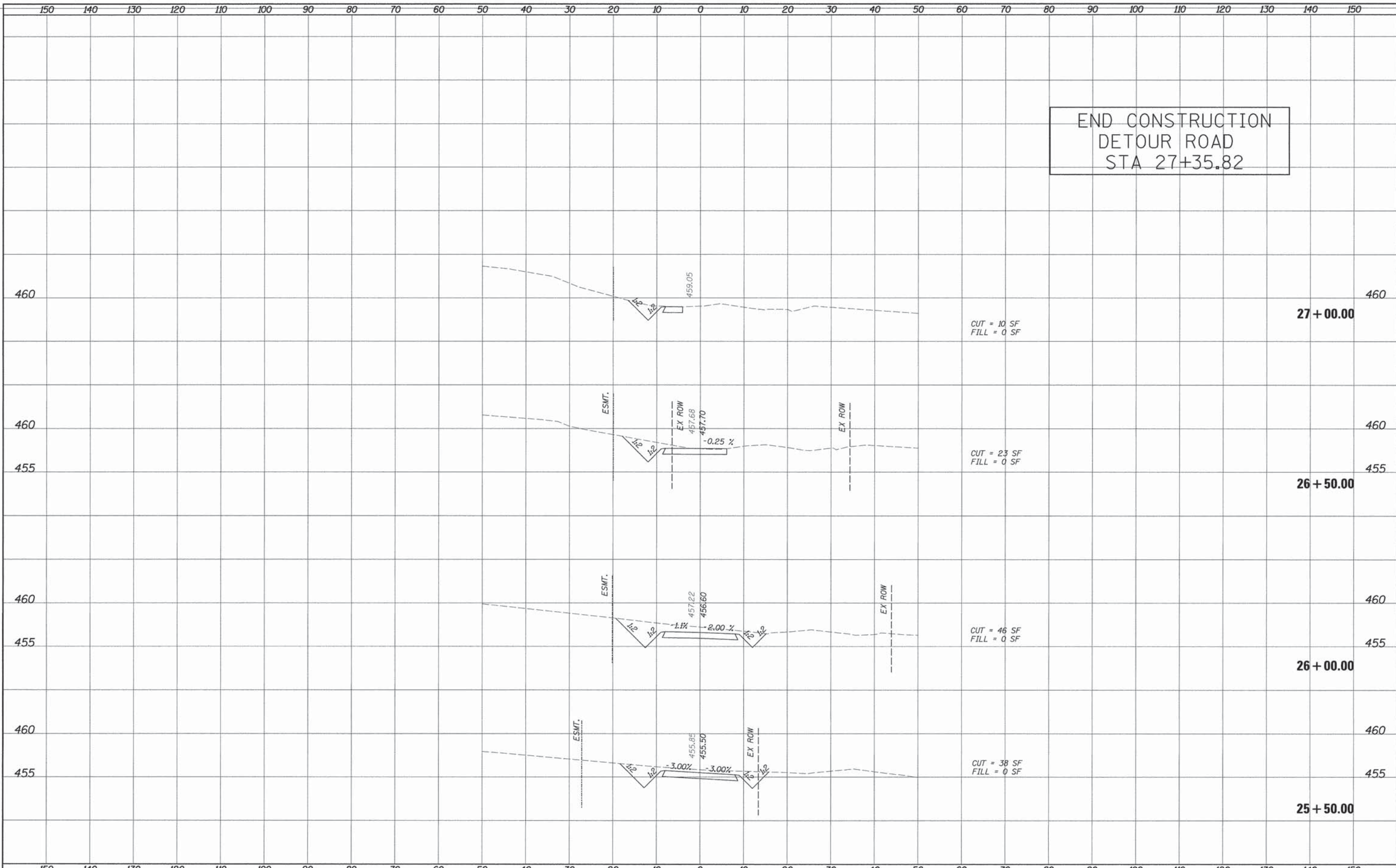


FILE NAME =	USER NAME = #USER#	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DETOUR ROAD CROSS SECTIONS				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
#FILE#		DRAWN -	REVISED -		557	05-012228-00-BR	WILLIAMSON	34	33				
	PLOT SCALE = #SCALE#	CHECKED -	REVISED -		CONTRACT NO. 99347								
	PLOT DATE = #DATE#	DATE -	REVISED -		SCALE:	SHEET NO.	OF	SHEETS	STA. 23+50.00	TO STA. 25+00.00	ILLINOIS FED. AID PROJECT		

SURVEYED PLOTTED
 SURVEY PLOTTED
 NOTE BOOK NO. _____
 AREAS CHECKED _____
 AREAS CHECKED _____

SURVEYED PLOTTED
 SURVEY PLOTTED
 NOTE BOOK NO. _____
 AREAS CHECKED _____
 AREAS CHECKED _____

END CONSTRUCTION
 DETOUR ROAD
 STA 27+35.82



FILE NAME =	USER NAME = #USER#	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DETOUR ROAD CROSS SECTIONS			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
#FILE#		DRAWN -	REVISED -		SCALE:	SHEET NO.	OF	SHEETS	557	05-012228-00-BR	WILLIAMSON	34	34
		CHECKED -	REVISED -		STA. 25+50.00	TO STA. 27+00.00	ILLINOIS FED. AID PROJECT						
		DATE -	REVISED -										