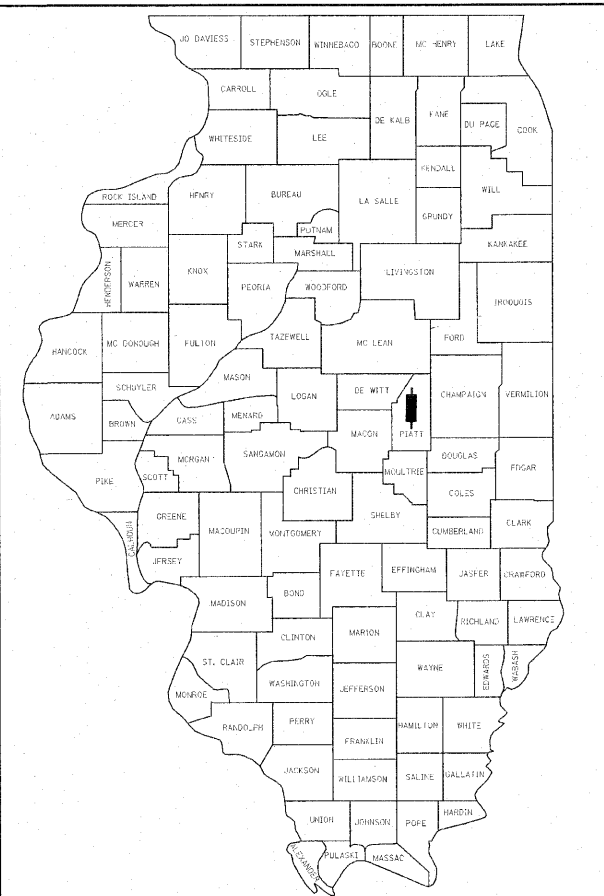


RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
**	*	PIATT	62	1
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
*08-00255-00-BR		**FAS 535		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PLANS FOR PROPOSED
ROADWAY IMPROVEMENTS**

**FAS 535 (SHADY REST ROAD)
SECTION 08-00255-00-BR
BRIDGE REPLACEMENT
PIATT COUNTY
C-95-326-10
PROJECT NO. BRS-RS-0535(103)**



LOCATION OF SECTION INDICATED THUS:

FAS 535
FUNCTIONAL CLASSIFICATION: MAJOR COLLECTOR
ADT: 1000

APPROVED *[Signature]* 20 10
COUNTY ENGINEER

PASSED *[Signature]* 6/7 20 10
DISTRICT FIVE ENGINEER OF LOCAL ROADS & STREETS

RELEASED FOR BID
BASED ON LIMITED
REVIEW *[Signature]* JUNE 8 20 10
DEPUTY DIRECTOR OF HIGHWAYS, REGION THREE ENGINEER

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

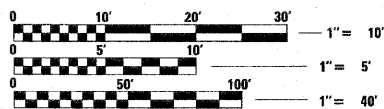
INDEX OF SHEETS

SHEET NO.	DESCRIPTION
ROADWAY PLANS	
1.	COVER SHEET
2.	GENERAL NOTES, STANDARDS, AND LEGEND
3.-4.	SUMMARY OF QUANTITIES
5.-10.	TYPICAL SECTIONS
11.-13.	SCHEDULES OF QUANTITIES
14.	TIES & BENCHMARKS
15.-17.	FAS 535 PLAN AND PROFILE
18.-19.	TEMPORARY ACCESS ROAD PLAN AND PROFILE
20.	FAS 535 EROSION CONTROL AND DRAINAGE PLAN
21.-22.	MISCELLANEOUS DETAILS
23.	BOX CULVERT EXTENSION
24.	TRAFFIC CONTROL AND PROTECTION FOR TEMPORARY DETOUR
STRUCTURE PLANS	
25.	GENERAL PLAN
26.	GENERAL DATA
27.-29.	TOP OF SLAB ELEVATIONS
30.	TOP OF SOUTH APPROACH SLAB ELEVATIONS
31.	TOP OF NORTH APPROACH SLAB ELEVATIONS
32.	SUPERSTRUCTURE
33.	SUPERSTRUCTURE DETAILS
34.-35.	BRIDGE APPROACH SLAB DETAILS
36.	STEEL RAILING, TYPE SM
37.	PREFORMED JOINT STRIP SEAL
38.-39.	STEEL FRAMING PLAN AND DETAILS
40.	BEARING DETAILS
41.	ABUTMENTS
42.	PIERS 1 AND 4
43.	PIER 2
44.	PIER 3
45.	HP PILE DETAILS
46.	BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
47.-49.	SOIL BORING LOGS
CROSS SECTIONS	
50.-62.	FAS 535 CROSS SECTIONS

SCALES

SHEET TYPES	SCALE
PLAN	1"=40'
PROFILE HORIZONTAL	1"=40'
PROFILE VERTICAL	1"=5'
CROSS SECTION HORIZONTAL	1"=10'
CROSS SECTION VERTICAL	1"=5'

ENGLISH RATIOS

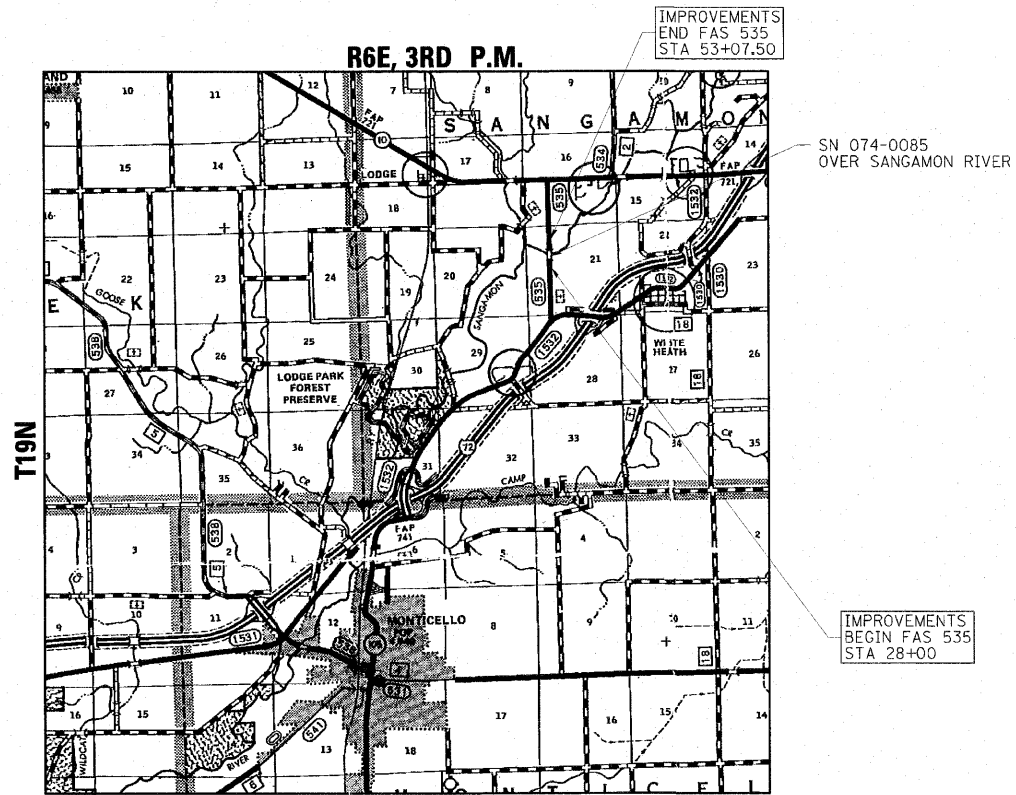
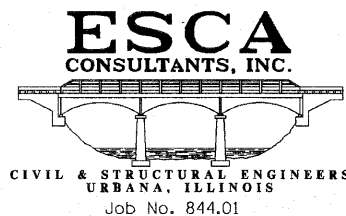


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

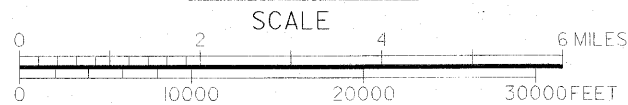
J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123

PIATT COUNTY HIGHWAY DEPARTMENT
(217) 762-9481

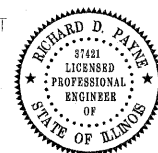
CONTRACT NO. 91436



LOCATION MAP



GROSS LENGTH = 2508 FT. = 0.47 MI.
NET LENGTH = 2508 FT. = 0.47 MI.



Richard D. Payne DATE: 05/21/10
ILLINOIS PROFESSIONAL LICENSE NO. 37421
(EXPIRATION DATE: 11-30-11)

RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
**	*	PIATT	62	2
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

• 08-00255-00-BR
 ** FAS 535

STANDARDS (BEING UTILIZED)

NUMBER	DESCRIPTION
000001-05	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
280001-05	TEMPORARY EROSION CONTROL SYSTEMS
420401-08	BRIDGE APPROACH PAVEMENT CONNECTOR
515001-03	NAME PLATE FOR BRIDGES
542401-01	METAL END SECTION FOR PIPE CULVERTS
542406-01	METAL END SECTION FOR PIPE ARCHES
601101-01	CONCRETE HEADWALL FOR PIPE DRAIN
602306-02	INLET - TYPE B
602601-02	PRECAST REINFORCED CONCRETE FLAT SLAB TOP
604001-03	FRAME AND LIDS TYPE 1
630001-08	STEEL PLATE BEAM GUARDRAIL
630301-05	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631032-05	TRAFFIC BARRIER TERMINAL, TYPE 6A
635006-03	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-02	REFLECTOR MARKER AND MOUNTING DETAILS
701001-02	OFF-ROAD OPERATIONS, 2L, 2W, MORE THAN 15' (4.5m) AWAY
701006-03	OFF-ROAD OPERATIONS, 2L, 2W, TO 24" (600mm) FROM PAVEMENT EDGE
701011-02	OFF-ROAD MOVING OPERATIONS, 2L, 2W, DAY ONLY
701201-03	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS > 45 MPH
701301-03	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701311-03	LANE CLOSURE, 2L, 2W, MOVING OPERATIONS - DAY ONLY
701901-01	TRAFFIC CONTROL DEVICES
780001-02	TYPICAL PAVEMENT MARKINGS
781001-03	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS
B.L.R. 21-8	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS
B.L.R. 24-2	MAILBOX TURNOUT FOR LOCAL ROADS

GENERAL NOTES

- ALL SAWCUTTING OF EXISTING PAVEMENT SHALL BE CONSIDERED INCLUDED IN THE PAY ITEMS INVOLVED. THE MINIMUM SAW DEPTH IN THE PAVEMENT SHALL BE 1/2".
- WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL MONUMENTS UNTIL AN AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING AN AUTHORIZED SURVEYOR REESTABLISH ANY SECTION OR SUBSECTION MONUMENTS DESTROYED BY HIS OPERATIONS.
- BEFORE ORDERING CULVERTS OR PIPE DRAINS, THE CONTRACTOR SHALL CONSULT THE ENGINEER FOR EXACT LENGTHS.
- ANY REFERENCE TO A STANDARD IN THE PLANS SHALL BE INTERPRETED TO MEAN THE EDITION AS INCLUDED IN THE PLANS.
- THE FOLLOWING RATES OF APPLICATION HAVE BEEN USED IN CALCULATING PLAN QUANTITIES:

GRANULAR MATERIALS	2.05 TON/CU YD
BITUMINOUS MATERIALS (PRIME COAT)	0.10 GAL/SQ YD (ON EX PVMT)
BITUMINOUS MATERIALS (PRIME COAT)	0.02 GAL/SQ YD (ON BINDER)
BITUMINOUS MATERIALS (PRIME COAT)	0.40 GAL/SQ YD (ON AGG)
HOT-MIX ASPHALT	112 LBS/SQ YD/INCH
LIME	60 POUNDS/SQ YD
- ABANDONED UNDERGROUND UTILITIES THAT CONFLICT WITH CONSTRUCTION SHALL BE DISPOSED OF OUTSIDE THE LIMITS OF THE RIGHT OF WAY ACCORDING TO ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION.
- THE FINAL TOP 4" OF SOIL IN ANY RIGHT-OF-WAY AREA DISTURBED BY THE CONTRACTOR MUST BE CAPABLE OF SUPPORTING VEGETATION. ALL DISTURBED AREAS WITHIN THE CONSTRUCTION LIMITS SHALL BE FERTILIZED AND SEEDED. SEEDING SHALL BE CLASS 2A (SPECIAL) AND SHALL NOT BE PERMITTED AT ANY TIME WHEN THE GROUND IS FROZEN, WET, OR IN AN UNTILLABLE CONDITION. LOCATIONS TO BE SEEDED WILL BE DETERMINED BY THE ENGINEER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING UTILITY PROPERTY FROM CONSTRUCTION OPERATIONS AS OUTLINED IN ARTICLE 107.31 OF THE STANDARD SPECIFICATIONS. THE CONTRACTOR SHALL CONTACT J.U.L.I.E. AT LEAST 48 HOURS PRIOR TO EXCAVATION TO DETERMINE WHICH UTILITIES ARE IN THE AREA.
- ONLY THOSE TREES DESIGNATED BY THE ENGINEER SHALL BE REMOVED. THE CONTRACTOR SHALL PROTECT ALL REMAINING TREES FROM DAMAGE DUE TO HIS OPERATIONS.
- EXCELSIOR BLANKET SHALL BE USED AT ALL EROSION CONTROL BLANKET LOCATIONS.
- AGGREGATE (PRIME COAT): FA 20 MAY BE USED IN ADDITION TO THE GRADATIONS LISTED IN THE 2ND PARAGRAPH OF ARTICLE 1003.03(c).
- ALL WORK SHALL BE IN ACCORDANCE WITH IDOT'S STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION ADOPTED JANUARY 1, 2007 AND THE SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS ADOPTED JANUARY 1, 2010 UNLESS NOTED IN THE DRAWINGS OR SPECIAL PROVISIONS.
- ALL ELEVATIONS SHOWN IN THE PLANS ARE BASED ON U.S.G.S. NAVD 88 VERTICAL DATUM.
- UTILITY LINES WERE PLOTTED FROM INFORMATION FURNISHED BY THE VARIOUS UTILITY COMPANIES INVOLVED AND THEIR ACCURACY SHOULD BE CONSIDERED APPROXIMATE ONLY. THESE UTILITY COMPANIES MAY BE ADJUSTING THEIR FACILITIES DURING CONSTRUCTION. THE CONTRACTOR SHALL COOPERATE WITH THESE ORGANIZATIONS WHILE THESE ADJUSTMENTS ARE BEING PERFORMED. J.U.L.I.E. - JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS SYSTEM (800) 892-0123. THE FOLLOWING UTILITY OWNERS MARKED WITH AN "*" BELONG TO J.U.L.I.E. :
 - VERTIZON NORTH
 - AMEREN IP
 - MCLEOD USA

GENERAL NOTES (CONT.)

- GRADING SHALL BE DONE BY HAND AROUND LIGHT POLES, UTILITY POLES, SIGN POSTS, SHRUBS, TREES OR OTHER NATURAL OR MAN-MADE OBJECTS WHERE SHALLOW FILLS OR CUTS ARE ADJACENT TO THE ITEMS. IT IS THE INTENT THAT THE LIMITS OF CONSTRUCTION BE SUCH AS TO PRESERVE IN THE ORIGINAL STATE AS MUCH AREA OF TEMPORARY EASEMENTS/RIGHT-OF-WAY AS POSSIBLE. THE DECISION AS TO ITEMS TO REMAIN IN PLACE SHALL BE AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED INCLUDED IN THE CONTRACT UNIT PRICE PER CUBIC YARD FOR EARTH EXCAVATION AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

16. TEMPORARY EROSION CONTROL

THE QUANTITIES ARE ESTIMATES ONLY. ACTUAL QUANTITIES FOR TEMPORARY EROSION CONTROL WILL BE DETERMINED BY THE ENGINEER IN THE FIELD, AND THERE WILL BE NO ADJUSTMENT IN UNIT PRICE DUE TO A CHANGE IN PLAN QUANTITY.

PERIMETER EROSION BARRIER = 2450 FOOT
 TEMPORARY EROSION CONTROL SEEDING = 450 POUND
 TEMPORARY DITCH CHECKS = 6 EACH
 INLET AND PIPE PROTECTION = 4 EACH

- NEITHER CRUSHED CONCRETE NOR MILLED ASPHALT SHALL BE USED FOR AGGREGATE SHOULDERS.

- THE CONTRACTOR SHALL USE GRADE STAKES FOR ALL EARTHWORK LOCATIONS TO BE CHECKED BY THE COUNTY. THE COST SHALL BE INCLUDED IN EARTH EXCAVATION AND NO ADDITIONAL COMPENSATION IS ALLOWED.

-

LOCATION	FAS 535	FAS 535
MIXTURE USE	SURFACE, INCID. HMA SURF.	BINDER COURSE
AC/PG	PG 64-22	PG 64-22
RAP % (MAX.)	15%	25%
DESIGN AIR VOIDS	4.0% @ Ndes=50	4.0% @ Ndes=50
MIX COMP. (GRADATION)	IL 9.5	IL 19.0
FRICTION AGGREGATE	MIX C	NA

- THE COST OF PRECAST REINFORCED CONCRETE FLAT SLAB TOPS ARE INCLUDED IN INLETS.
- PRIOR TO CONSTRUCTING THE PROPOSED EMBANKMENT SIDE SLOPES, THE CONTRACTOR SHALL EXCAVATE BENCHES INTO THE SIDE SLOPES OF THE EXISTING EMBANKMENT AT THE LOCATIONS SHOWN IN THE PLANS. ONE BENCH SHALL BE CONSTRUCTED FOR EACH THREE FOOT CHANGE IN ELEVATION.

LEGEND

- HOT-MIX ASPHALT SURFACE REMOVAL (VARIABLE DEPTH)
- EXISTING MAILBOX
- VEGETATION LINE
- EXISTING RIGHT OF WAY
- PROPOSED RIGHT OF WAY
- PROPOSED TEMPORARY CONSTRUCTION EASEMENT
- AGGREGATE SURFACE COURSE, TYPE B
- INCIDENTAL HMA SURFACING
- PAVEMENT REMOVAL
- AGGREGATE SHOULDERS, TYPE B

ESCA
 CONSULTANTS, INC.

DESIGNED BY:	ELH	01/10
DRAWN BY:	HAS	01/10
CHECKED BY:	ELH	05/10
APPROVED BY:	RDP	05/10

GENERAL NOTES, STANDARDS, AND LEGEND
FAS 535 (SHADY REST ROAD)
SECTION 08-00255-00-BR
PIATT COUNTY

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	TOTAL
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	40
20100210	TREE REMOVAL (OVER 15 UNITS DIAMETER)	UNIT	190
20100500	TREE REMOVAL, ACRES	ACRE	1.2
20200100	EARTH EXCAVATION	CU YD	8050
20400800	FURNISHED EXCAVATION	CU YD	11810
X2070304	POROUS GRANULAR EMBANKMENT, SPECIAL	CU YD	110
20800150	TRENCH BACKFILL	CU YD	10
X2501020	SEEDING, CLASS 2A (SPECIAL)	ACRE	4.5
25100630	EROSION CONTROL BLANKET	SQ YD	1903
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	450
28000305	TEMPORARY DITCH CHECKS	FOOT	72
28000400	PERIMETER EROSION BARRIER	FOOT	2450
28000500	INLET AND PIPE PROTECTION	EACH	4
28100107	STONE RIPRAP, CLASS A4	SQ YD	547
28200200	FILTER FABRIC	SQ YD	547
30200650	PROCESSING MODIFIED SOIL 12"	SQ YD	3800
30201500	LIME	TON	113
31100300	SUB-BASE GRANULAR MATERIAL, TYPE A 4"	SQ YD	104
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	220
40201000	AGGREGATE FOR TEMPORARY ACCESS	TON	1040
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	240
40603080	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	TON	120
40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	108
40701866	HOT-MIX ASPHALT PAVEMENT (FULL-DEPTH), 9/4"	SQ YD	3274
40800010	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	40
40800050	INCIDENTAL HOT-MIX ASPHALT SURFACING	TON	33
42001430	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	SQ YD	40
44000100	PAVEMENT REMOVAL	SQ YD	2490
Z0004548	HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH	SQ YD	167
Z0004638	PAVEMENT BREAKING	SQ YD	620
48101200	AGGREGATE SHOULDERS, TYPE B	TON	490
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	TOTAL
50104400	CONCRETE HEADWALL REMOVAL	EACH	4
50105220	PIPE CULVERT REMOVAL	FOOT	378
50200100	STRUCTURE EXCAVATION	CU YD	355
50300225	CONCRETE STRUCTURES	CU YD	246.6
50300255	CONCRETE SUPERSTRUCTURE	CU YD	509.7
50300260	BRIDGE DECK GROOVING	SQ YD	1752
50300280	CONCRETE ENCASEMENT	CU YD	26.2
50300300	PROTECTIVE COAT	SQ YD	1752
50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1
50500505	STUD SHEAR CONNECTORS	EACH	4086
50800105	REINFORCEMENT BARS	POUND	30
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	158,560
50800515	BAR SPLICERS	EACH	60
* 50901050	STEEL RAILING, TYPE SM	FOOT	995
51201800	FURNISHING STEEL PILES HP14X73	FOOT	3580
51202305	DRIVING PILES	FOOT	3580
51203800	TEST PILE STEEL HP14X73	EACH	6
51500100	NAME PLATES	EACH	1
52000110	PREFORMED JOINT STRIP SEAL	FOOT	60
52100020	ELASTOMERIC BEARING ASSEMBLY, TYPE II	EACH	12
52100520	ANCHOR BOLTS, 1"	EACH	60
52100540	ANCHOR BOLTS, 1 1/2"	EACH	12
54002070	EXPANSION BOLTS 3/4 INCH X 15 INCH	EACH	8
542A0235	PIPE CULVERTS, CLASS A, TYPE 1 30"	FOOT	17
542D0223	PIPE CULVERTS, CLASS D, TYPE 1 18"	FOOT	230
5421D018	PIPE CULVERTS, CLASS D, TYPE 1 18" (TEMPORARY)	FOOT	543
54213453	END SECTIONS 18"	EACH	6
54248510	CONCRETE COLLAR	CU YD	0.5
58700300	CONCRETE SEALER	SQ FT	440
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	60
60100060	CONCRETE HEADWALL FOR PIPE DRAINS	EACH	4

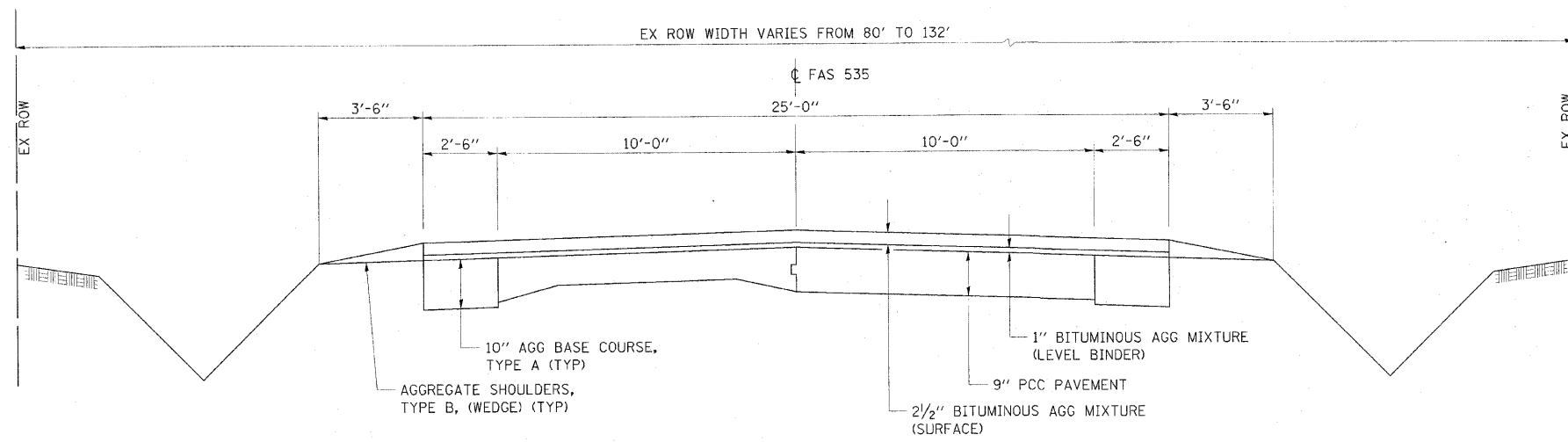
RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
**	*	PIATT	62	3
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
* 08-00255-00-BR				
** FAS 535				

ESCA
CONSULTANTS, INC.

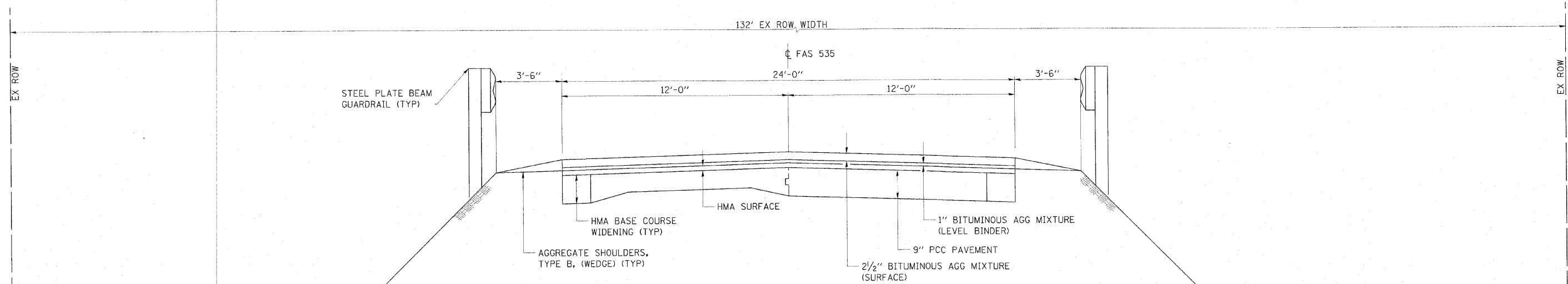
DESIGNED BY:	ELH	01/10
DRAWN BY:	HAS	01/10
CHECKED BY:	ELH	05/10
APPROVED BY:	RDP	05/10

SUMMARY OF QUANTITIES
FAS 535 (SHADY REST ROAD)
SECTION 08-00255-00-BR
PIATT COUNTY

FAS RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
535	*	PIATT	62	5
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
* 08-00255-00-BR				



EXISTING SHADY REST ROAD SECTION
STATION 28+00 TO STATION 38+52.30

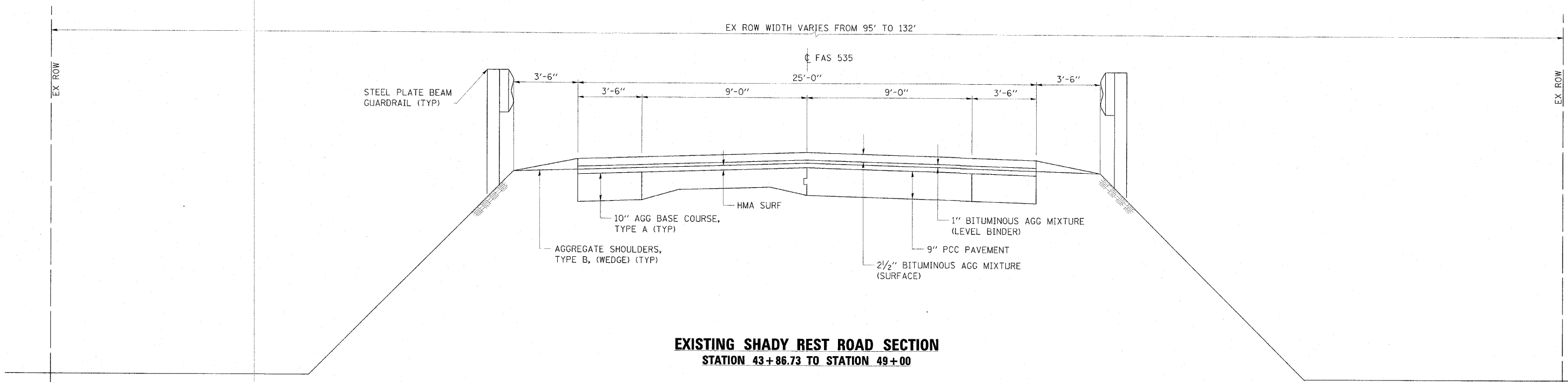
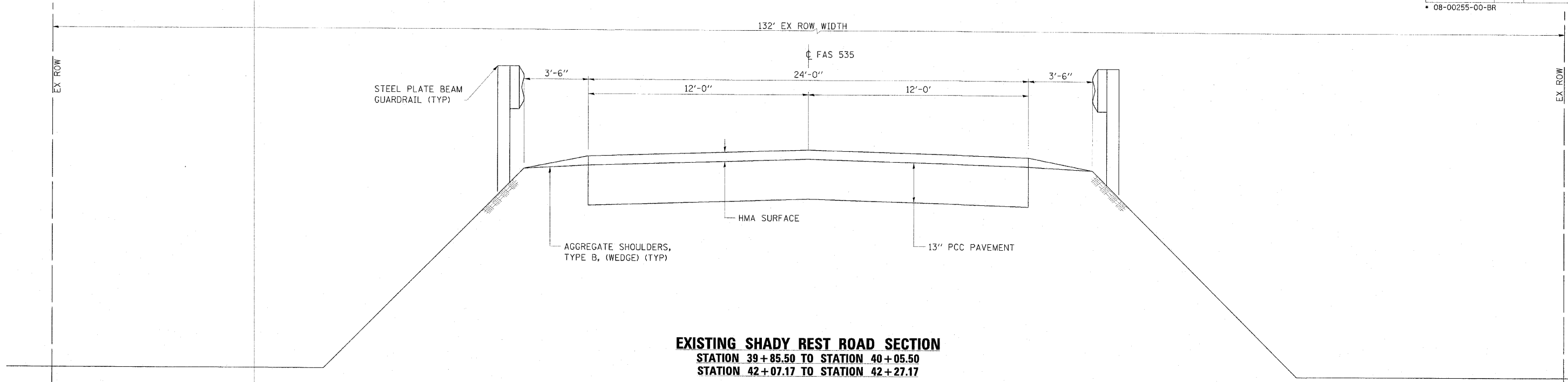


EXISTING SHADY REST ROAD SECTION
STATION 38+52.30 TO STATION 39+85.50
STATION 42+27.17 TO STATION 43+86.73

ESCA		
CONSULTANTS, INC.		
DESIGNED BY:	ELH	01/10
DRAWN BY:	DWH/HAS	01/10
CHECKED BY:	ELH	05/10
APPROVED BY:	RDP	05/10

EXISTING TYPICAL SECTIONS
FAS 535 (SHADY REST ROAD)
SECTION 08-00255-00-BR
PIATT COUNTY

FAS RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
535	*	PIATT	62	6
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
* 08-00255-00-BR				

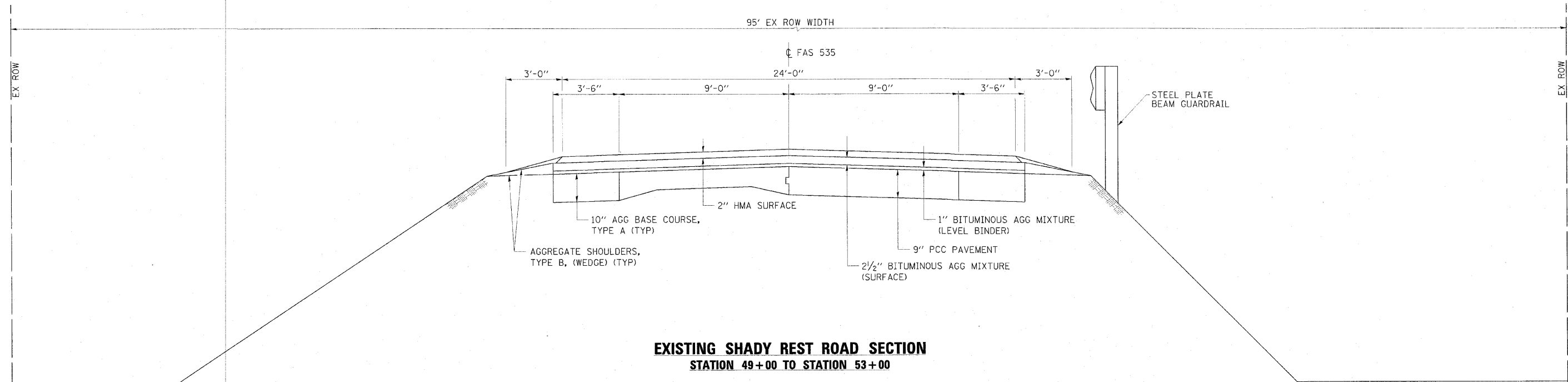


ESCA
CONSULTANTS, INC.

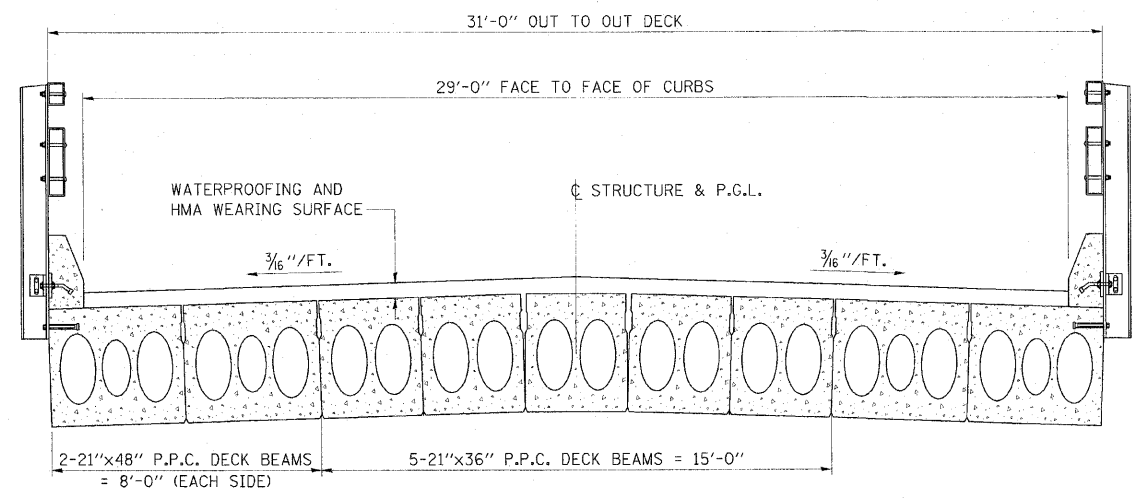
DESIGNED BY:	ELH	01/10
DRAWN BY:	DWH	01/10
CHECKED BY:	ELH	05/10
APPROVED BY:	RDP	05/10

EXISTING TYPICAL SECTIONS
FAS 535 (SHADY REST ROAD)
SECTION 08-00255-00-BR
PIATT COUNTY

FAS RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
535		PIATT	62	7
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
*08-00255-00-BR				



EXISTING SHADY REST ROAD SECTION
STATION 49+00 TO STATION 53+00



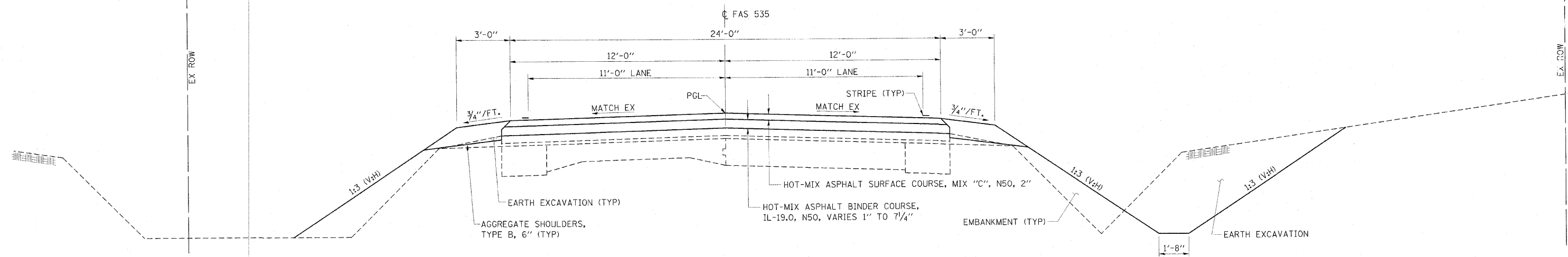
EXISTING SHADY REST BRIDGE SECTION
STATION 40+05.50 TO STATION 42+07.17

ESCA
CONSULTANTS, INC.

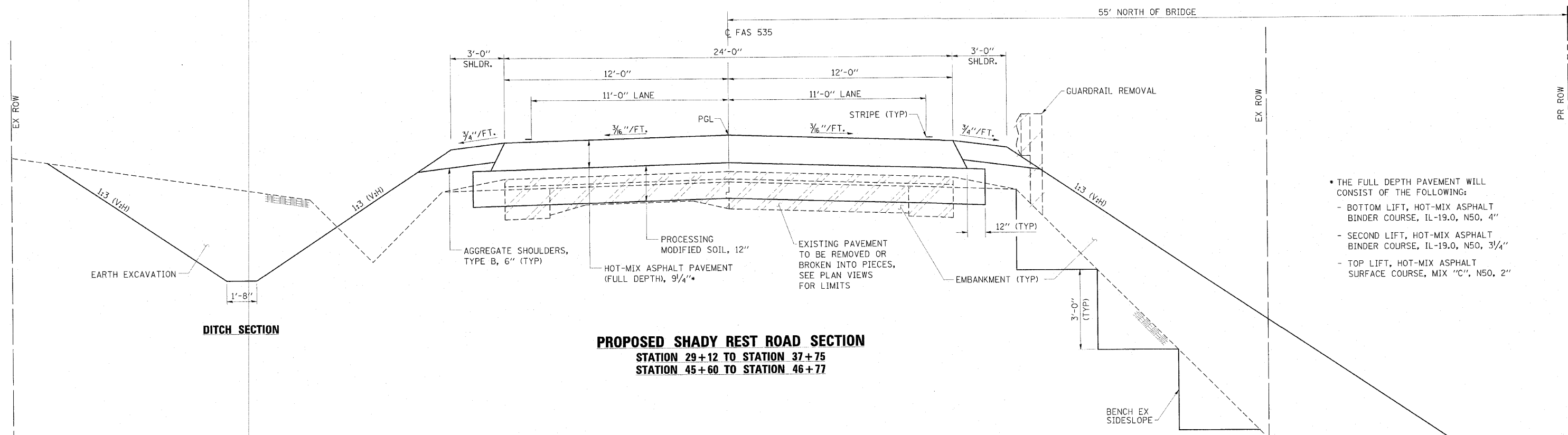
DESIGNED BY:	ELH	01/10
DRAWN BY:	DWH	01/10
CHECKED BY:	ELH	05/10
APPROVED BY:	RDP	05/10

EXISTING TYPICAL SECTIONS
FAS 535 (SHADY REST ROAD)
SECTION 08-00255-00-BR
PIATT COUNTY

FAS RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
535	*	PIATT	62	8
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
*08-00255-00-BR				



PROPOSED SHADY REST ROAD SECTION
STATION 28+00 TO STATION 29+12



PROPOSED SHADY REST ROAD SECTION
STATION 29+12 TO STATION 37+75
STATION 45+60 TO STATION 46+77

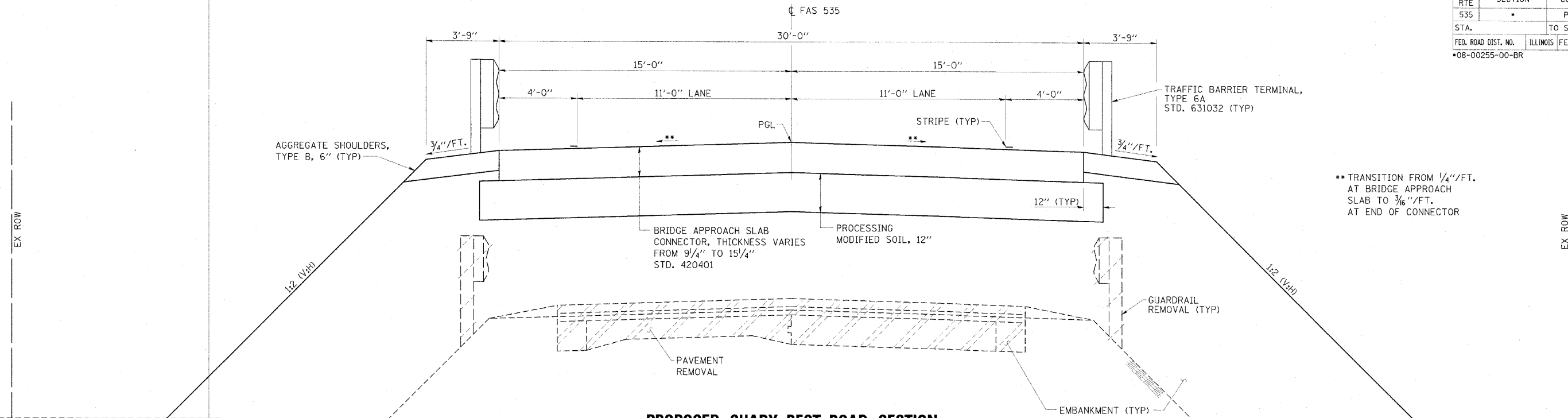
- THE FULL DEPTH PAVEMENT WILL CONSIST OF THE FOLLOWING:
- BOTTOM LIFT, HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50, 4"
- SECOND LIFT, HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50, 3/4"
- TOP LIFT, HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50, 2"

SLOPE SECTION

PROPOSED TYPICAL SECTIONS
FAS 535 (SHADY REST ROAD)
SECTION 08-00255-00-BR
PIATT COUNTY

ESCA		
CONSULTANTS, INC.		
DESIGNED BY:	ELH	01/10
DRAWN BY:	DWH	01/10
CHECKED BY:	ELH	05/10
APPROVED BY:	RDP	05/10

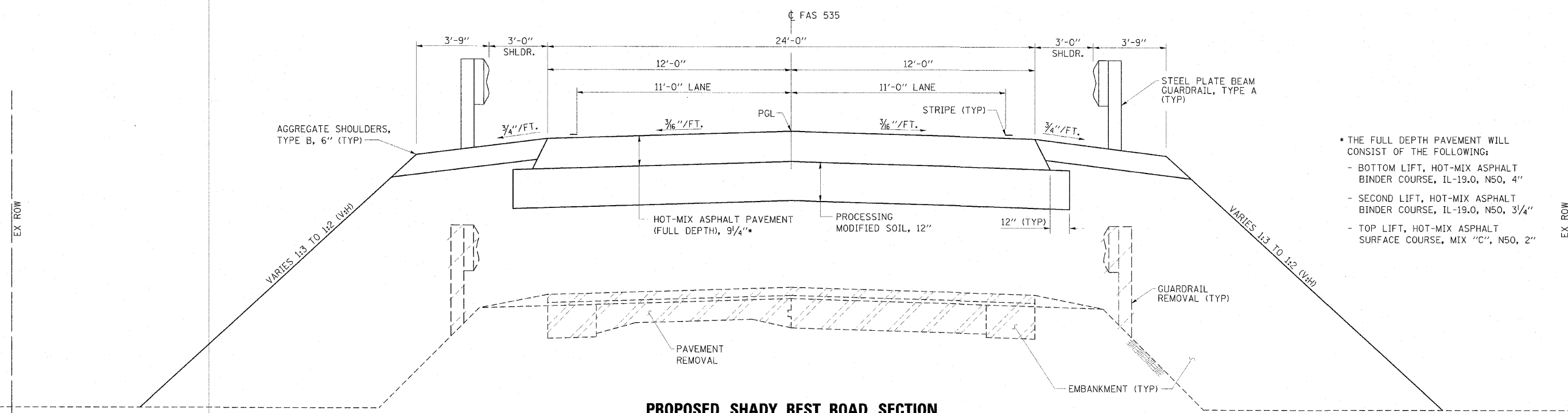
FAS RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
535	*	PIATT	62	9
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
*08-00255-00-BR				



PROPOSED SHADY REST ROAD SECTION

STATION 38+71.25 TO STATION 38+77.25
STATION 44+02.75 TO STATION 44+08.75

** TRANSITION FROM 1/4" / FT. AT BRIDGE APPROACH SLAB TO 3/8" / FT. AT END OF CONNECTOR



PROPOSED SHADY REST ROAD SECTION

STATION 37+75 TO STATION 38+71.25
STATION 44+08.75 TO STATION 45+60

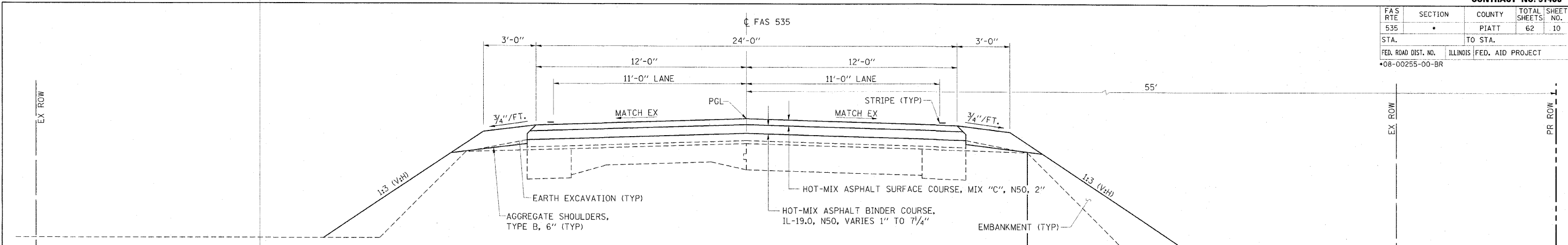
* THE FULL DEPTH PAVEMENT WILL CONSIST OF THE FOLLOWING:
- BOTTOM LIFT, HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50, 4"
- SECOND LIFT, HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50, 3 1/4"
- TOP LIFT, HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50, 2"

ESCA
CONSULTANTS, INC.

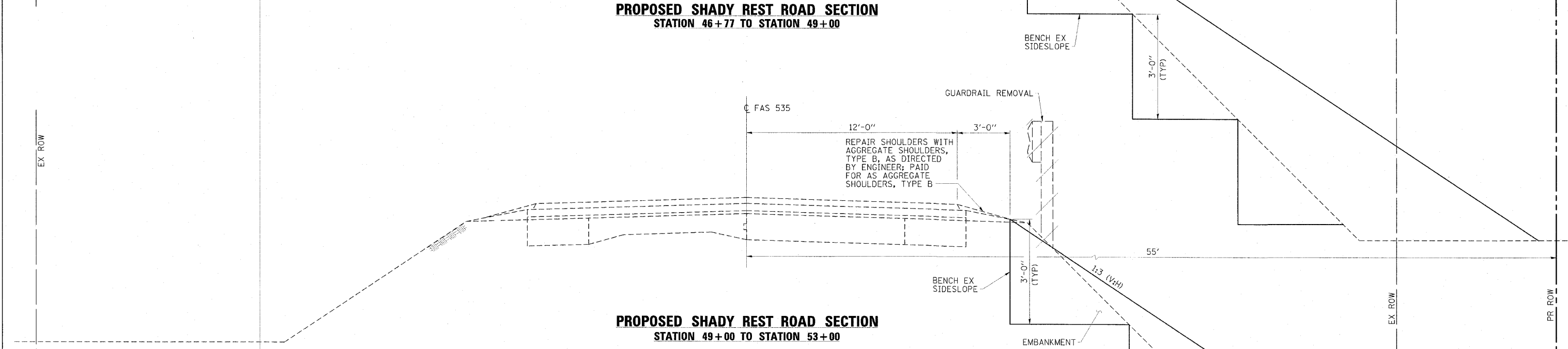
DESIGNED BY:	ELH	01/10
DRAWN BY:	DWH	01/10
CHECKED BY:	ELH	05/10
APPROVED BY:	RDP	05/10

PROPOSED TYPICAL SECTIONS
FAS 535 (SHADY REST ROAD)
SECTION 08-00255-00-BR
PIATT COUNTY

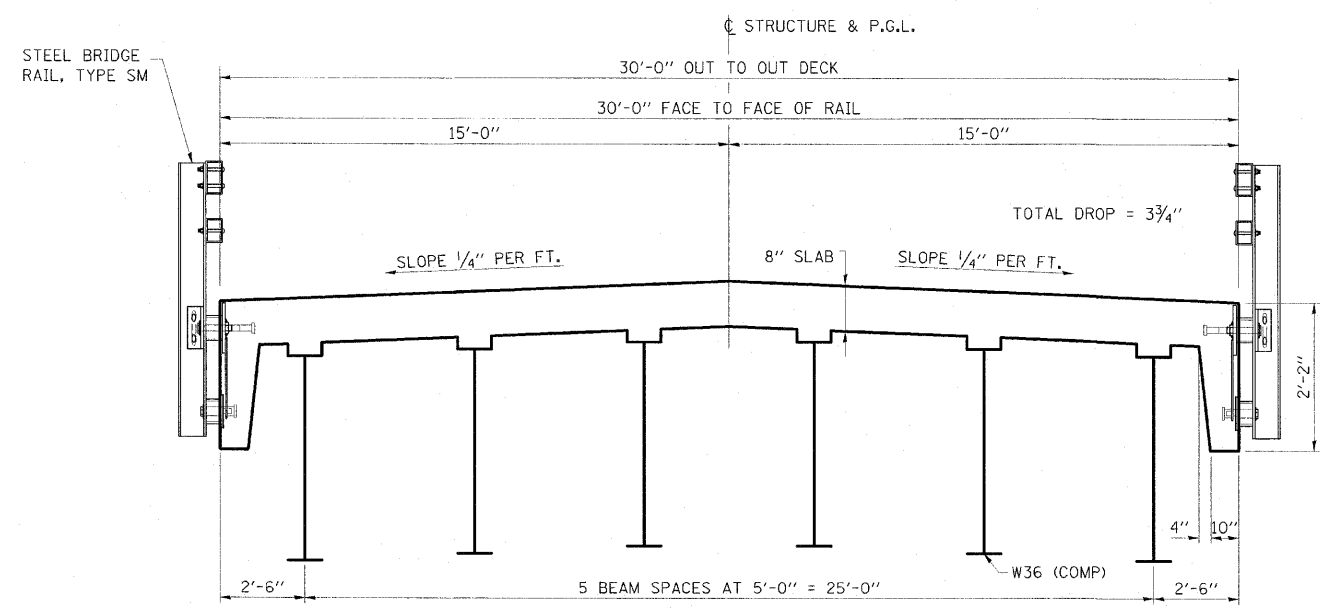
FAS RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
535	*	PIATT	62	10
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
*08-00255-00-BR				



PROPOSED SHADY REST ROAD SECTION
STATION 46+77 TO STATION 49+00



PROPOSED SHADY REST ROAD SECTION
STATION 49+00 TO STATION 53+00



PROPOSED SHADY REST BRIDGE SECTION
STATION 38+77.25 TO STATION 44+02.75

ESCA
CONSULTANTS, INC.

DESIGNED BY:	ELH	01/10
DRAWN BY:	DWH	01/10
CHECKED BY:	ELH	05/10
APPROVED BY:	RDP	05/10

PROPOSED TYPICAL SECTIONS
FAS 535 (SHADY REST ROAD)
SECTION 08-00255-00-BR
PIATT COUNTY

RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
**	*	PIATT	62	12
STA.	TO STA.			
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
* 08-00255-00-BR				
** FAS 535				

LOCATION	BIT. MAT. (PRIME COAT) (40800010)	INC. HMA SURFACE (40800050)	AGG SURF CSE TY B (40200800)	SUB-BSE GRAN MTL TY A 4" (31100300)
	GALLON	TON	TON	SQ YD
PE STA. 31+59 RT	40	33		104
PE STA. 31+88 RT			28	
PE STA. 35+01 RT			50	
PE STA. 37+66 RT			68	
PE STA. 45+65 LT			64	
MBTO STA. 46+19 RT			10	
TOTALS	40	33	220	104

LOCATION	EACH
STA. 28+50 RT	1
STA. 31+29 RT	1
STA. 34+68.5 RT	1
STA. 37+28.5 RT	1
TOTAL	4

LOCATION	FOOT
STA. 35+00 TO 37+00 RT	210
SOUTH FLOODPLAIN	510
NORTH FLOODPLAIN	1070
STA. 46+00 TO 48+50 LT	250
STA. 49+10 TO 53+20	410
TOTAL	2450

LOCATION	SQ YD
NW CORNER	525
NE CORNER	565
SE CORNER	375
SW CORNER	380
PE STA. 31+74 RT	20
PE STA. 35+01 RT	19
PE STA. 37+66 RT	19
TOTAL	1903

LOCATION	FOOT
STA. 30+50 RT	12
STA. 32+50 RT	12
STA. 33+50 RT	12
STA. 34+00 LT	12
STA. 35+50 LT	12
STA. 37+00 LT	12
TOTAL	72

ESCA
CONSULTANTS, INC.

DESIGNED BY:	ELH	01/10
DRAWN BY:	HAS	01/10
CHECKED BY:	ELH	05/10
APPROVED BY:	RDP	05/10

SCHEDULES OF QUANTITIES
FAS 535 (SHADY REST ROAD)
SECTION 08-00255-00-BR
PIATT COUNTY

RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
**	*	PIATT	62	13
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
* 08-00255-00-BR				
** FAS 535				

CULVERT SCHEDULE																						
LOCATION	TEMP INLETS TB TIF OLID PRCFST (X0323236)	CLASS D, TYPE 1		END SECTIONS		TRENCH BACKFILL (20800150)	CLASS A, TYPE 1, 30" (542A0235)	CONCRETE COLLAR (54248510)	REINFORCEMENT BARS (50800105)	EXPANSION BOLTS (54002070)												
		18" (542D0223)	18" (TEMP) (5421D018)	18" (54213453)	18" (TEMP) (X0322938)																	
		EACH	FOOT	FOOT	EACH						EACH	CU YD	FOOT	CU YD	POUND	EACH						
STA. 28+50 RT										1												
STA. 30+00 RT																					265	
STA. 31+18 RT	1																				10	
STA. 31+74 RT																						90
STA. 32+31 RT	1																					10
STA. 33+50 RT																						223
STA. 34+57 RT	1																					10
STA. 35+01 RT																						65
STA. 35+45 RT	1																					25
STA. 37+66 RT																						75
STA. 48+98 RT																						
TOTALS	4																					230
																						543
																						6
																						2
																						10
																						17
																						0.5
																						30
																						8

CULVERT REMOVAL SCHEDULE			
LOCATION	PIPE CULVERT REMOVAL (50105220)	CONCRETE HEADWALL REMOVAL (50104400)	REMOVING INLETS (60500060)
	FOOT	EACH	EACH
STA. 31+20, 20' RT	245		1
PE STA. 31+59 RT	57		
PE STA. 31+88 RT	17	2	
PE STA. 35+01 RT	23		
PE STA. 37+66 RT	36	2	
TOTALS	378	4	1

STONE RIPRAP, CLASS A4 SCHEDULE (28100107)	
LOCATION	SQ YD
NORTH ABUTMENT	265
SOUTH ABUTMENT	265
STA. 53+00, RT	17
TOTAL	547

ESCA
CONSULTANTS, INC.

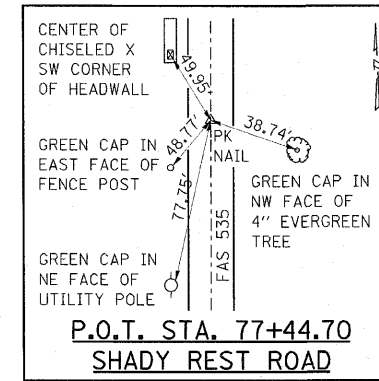
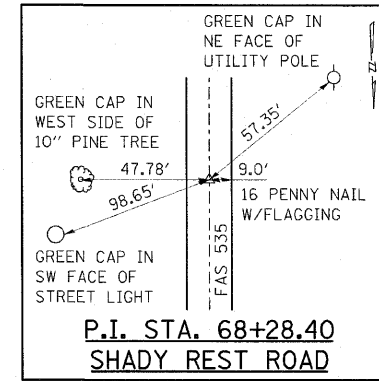
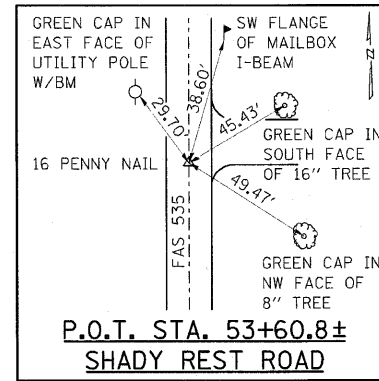
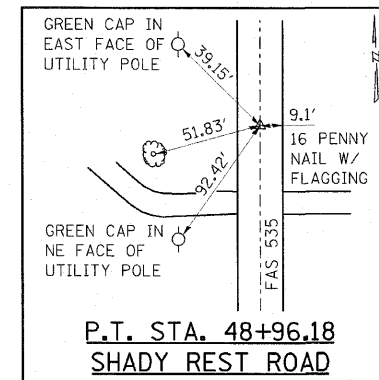
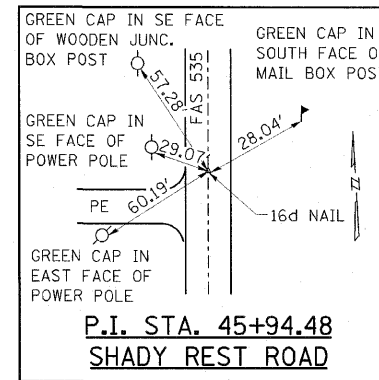
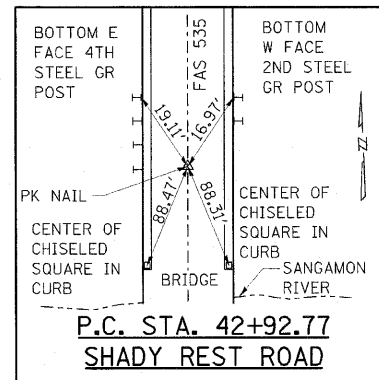
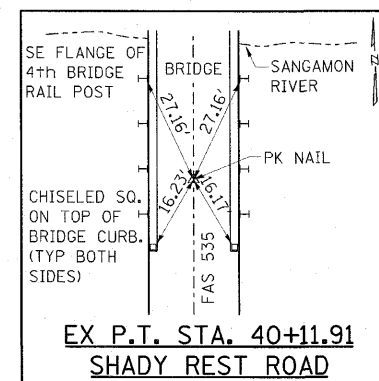
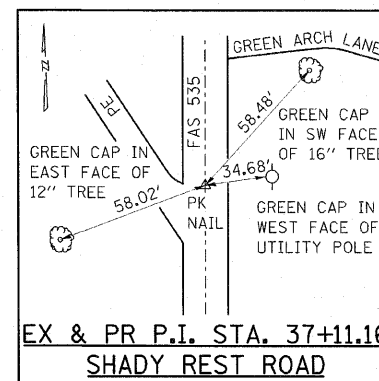
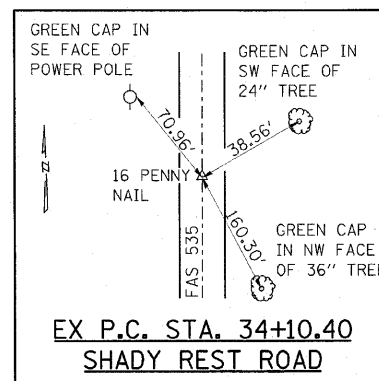
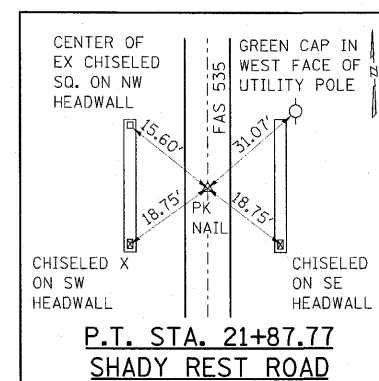
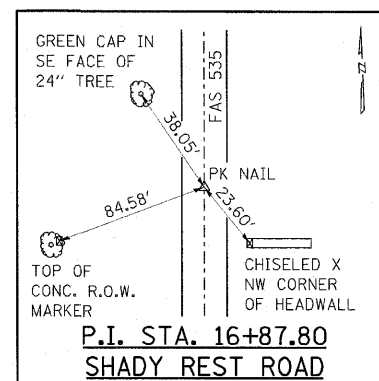
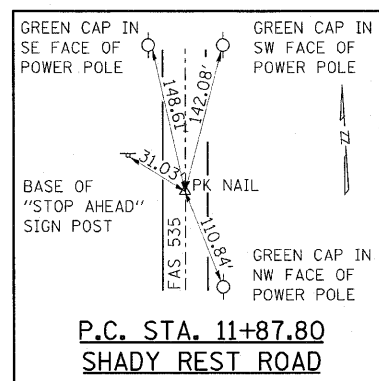
DESIGNED BY:	ELH	01/10
DRAWN BY:	HAS	01/10
CHECKED BY:	ELH	05/10
APPROVED BY:	RDP	05/10

SCHEDULES OF QUANTITIES
FAS 535 (SHADY REST ROAD)
SECTION 08-00255-00-BR
PIATT COUNTY



SHADY REST ROAD BENCHMARKS
(IN ORDER FROM SOUTH TO NORTH)

BM #6	RR SPIKE IN PP NW CORNER INTERSECTION OLD RTE 47 & SHADY REST ROAD, ELEV. 703.58
BM #101	RR SPIKE IN PP E SIDE SHADY REST ROAD 0.1 MI N OLD RTE 47, ELEV. 708.04
BM #102	RR SPIKE IN PP E SIDE SHADY REST ROAD 0.18 MI N OLD RTE 47, ELEV. 703.49
BM #103	RR SPIKE IN PP E SIDE SHADY REST ROAD 0.28 MI N OLD RTE 47, ELEV. 690.57
BM #104	RR SPIKE IN 14" TREE W SIDE SHADY REST ROAD 0.36 MI N OLD RTE 47, ELEV. 672.91
BM #105	RR SPIKE IN PP W SIDE SHADY REST ROAD 0.46 MI N OLD RTE 47, ELEV. 661.45
BM #106	RR SPIKE IN PP W SIDE SHADY REST ROAD 0.51 MI N OLD RTE 47, ELEV. 653.16
BM #114	RR SPIKE IN PP W SIDE SHADY REST ROAD 0.58 MI N OLD RTE 47, ELEV. 649.51
BM #107	CHISELED SQUARE ON T/O HUBGUARD @ SW CORNER OF BRIDGE OVER SANGAMON RIVER, ELEV. 655.85
BM #8	CHISELED SQUARE ON T/O HUBGUARD @ NW CORNER OF BRIDGE OVER SANGAMON RIVER, ELEV. 655.89
BM #108	RR SPIKE IN PP W SIDE SHADY REST ROAD 0.79 MI N OLD RTE 47, ELEV. 654.41
BM #109	RR SPIKE IN PP W SIDE SHADY REST ROAD 0.89 MI N OLD RTE 47, ELEV. 656.07
BM #9	RR SPIKE IN PP W SIDE SHADY REST ROAD 0.92 MI N OLD RTE 47, ELEV. 666.01
BM #110	US ARMY CORPS OF ENGINEERS MONUMENT 1.01 MI N OLD RTE 47, ELEV. 675.57
BM #111	RR SPIKE IN PP E SIDE SHADY REST ROAD 1.1 MI N OLD RTE 47, ELEV. 677.15
BM #112	RR SPIKE IN PP W SIDE SHADY REST ROAD 1.2 MI N OLD RTE 47, ELEV. 682.71
BM #10	RR SPIKE IN PP W SIDE SHADY REST ROAD 1.3 MI N OLD RTE 47, ELEV. 690.04
BM #113	RR SPIKE IN PP W SIDE SHADY REST ROAD 1.4 MI N OLD RTE 47, ELEV. 688.02



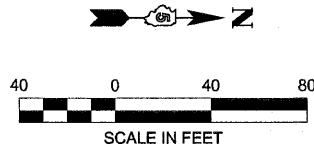
CENTERLINE TIES

RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
**	*	PIATT	62	14
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
* 08-00255-00-BR				
** FAS 535				

ESCA
CONSULTANTS, INC.

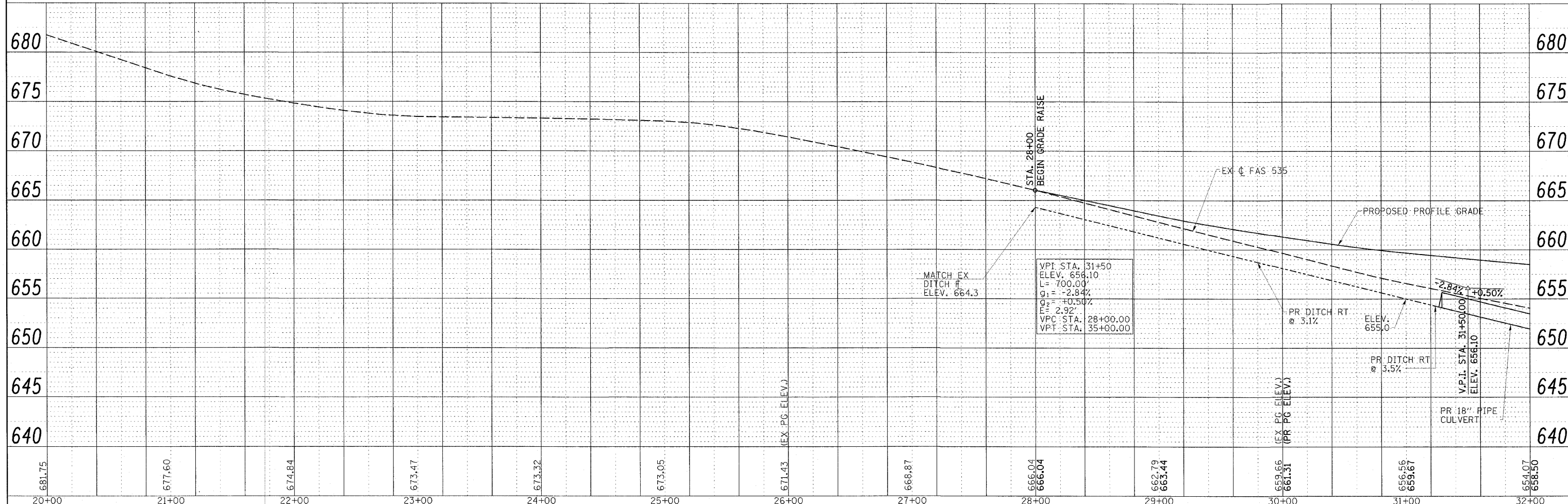
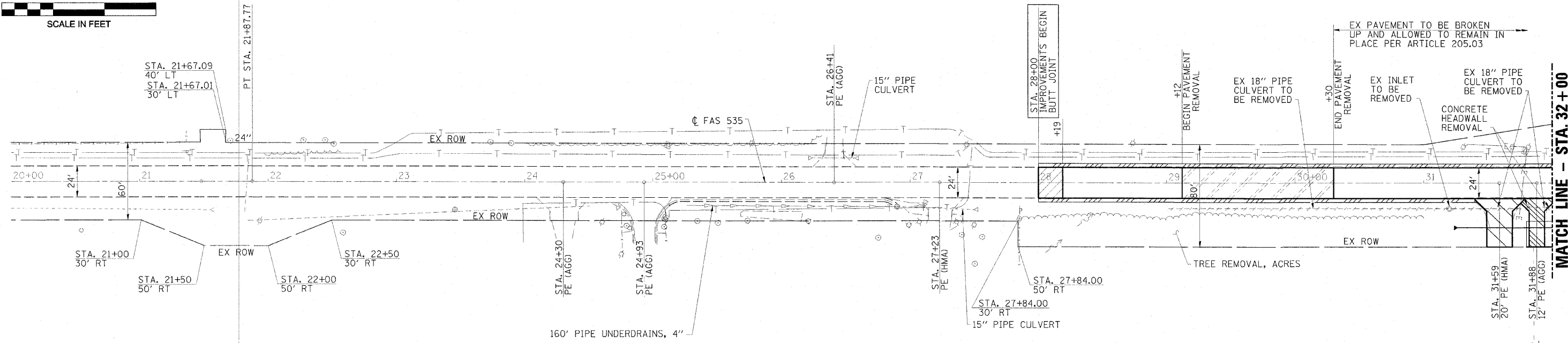
DESIGNED BY:	ELH	01/10
DRAWN BY:	HAS	01/10
CHECKED BY:	ELH	05/10
APPROVED BY:	RDP	05/10

TIES & BENCHMARKS
FAS 535 (SHADY REST ROAD)
SECTION 08-00255-00-BR
PIATT COUNTY



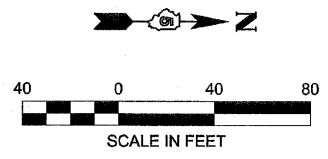
PLAN	SURVEYED	DATE
	PLOTTED	
	NOTES CHECKED	
	DATE	
	BY	
	NO.	

PROFILE	SURVEYED	DATE
	PLOTTED	
	NOTES CHECKED	
	DATE	
	BY	
	NO.	



FILE NAME = Z4401F02.dgn	USER NAME = HAS	DESIGNED - ELH	REVISIONS	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		FAS 535 (SHADY REST ROAD) PLAN & PROFILE		F.A.S. RTE. 535	SECTION 08-00255-00-BR	COUNTY PIATT	TOTAL SHEETS 62	SHEET NO. 15
SCALE: (HORIZ) 1"=40' (VERT) 1"=5'	DATE = 05/12/10	CHECKED - ELH	REVISIONS			SCALE: 1"=40' SHEET NO. 1 OF 3 SHEETS STA. 20+00 TO STA. 32+00		ILLINOIS FED. AID PROJECT		CONTRACT NO. 91436		

MATCH LINE - STA. 32+00
SEE SHT. 16 FOR CONT.

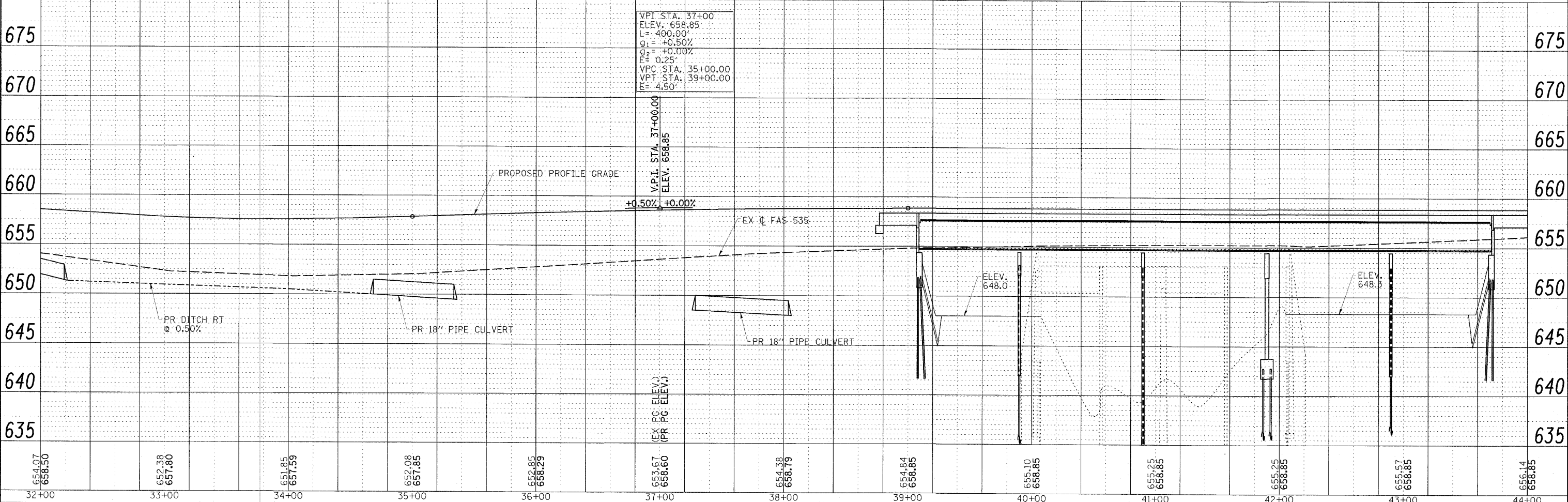
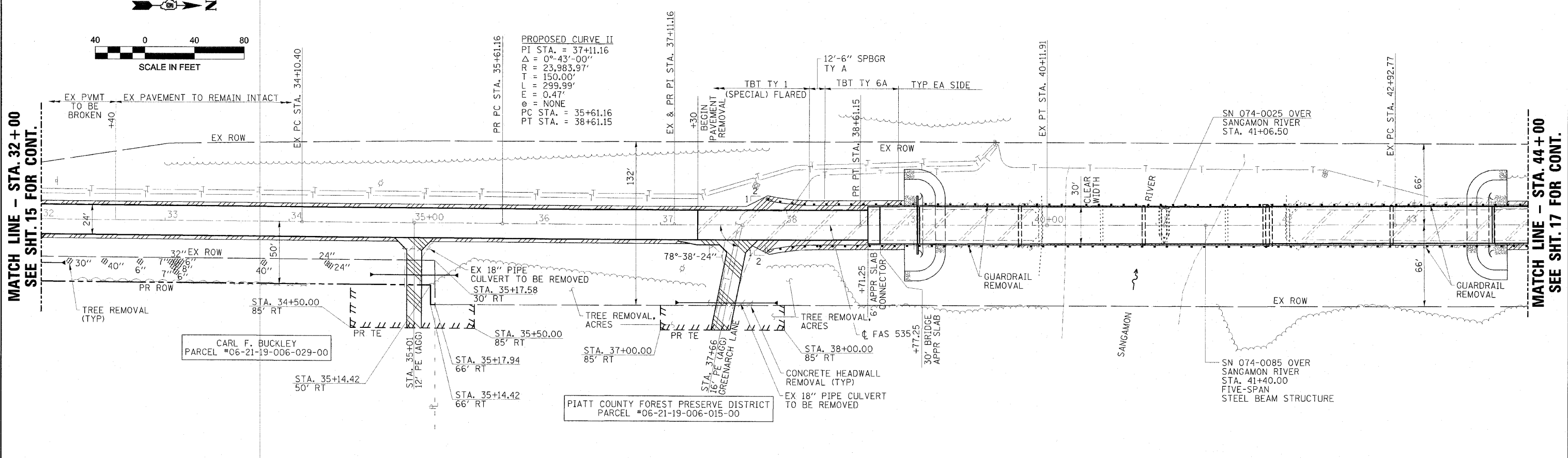


PLAN	SUBMITTED	DATE
NOTE BOOK	PLOTTED	BY
NO.	GRADES CHECKED	NO.
	STRUCTURE NOTATIONS CHECKED	

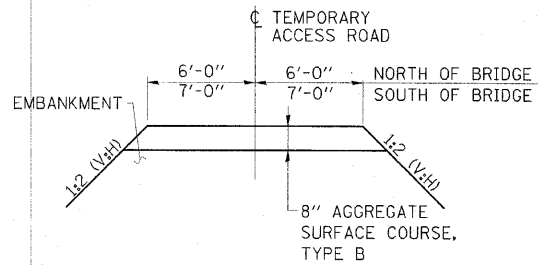
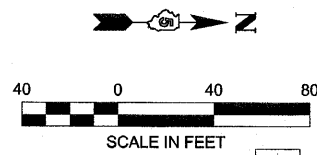
PROFILE	SUBMITTED	DATE
NOTE BOOK	PLOTTED	BY
NO.	GRADES CHECKED	NO.
	STRUCTURE NOTATIONS CHECKED	

MATCH LINE - STA. 32+00
SEE SHT. 15 FOR CONT.

MATCH LINE - STA. 44+00
SEE SHT. 17 FOR CONT.



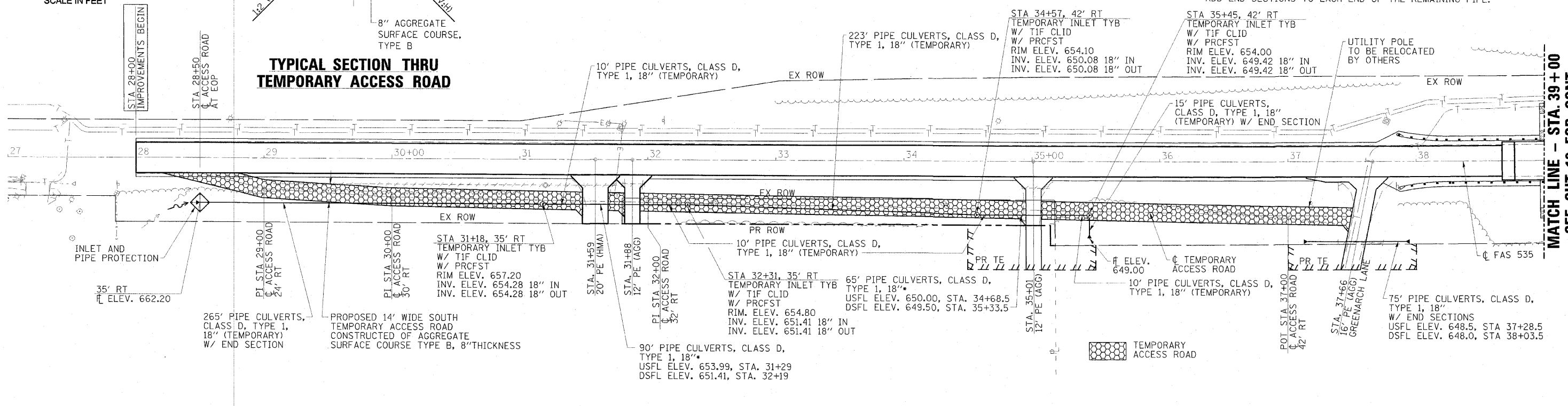
FILE NAME = 24481F02.dgn	USER NAME = HAS	DESIGNED - ELH	REVISIONS	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		FAS 535 (SHADY REST ROAD) PLAN & PROFILE		F.A.S. RTE. = 535	SECTION = 08-00115-01-RS	COUNTY = PIATT	TOTAL SHEETS = 62	SHEET NO. = 16
SCALE: (HORIZ) 1"=40' (VERT) 1"=5'	PLOT DATE = 5/26/2010 7:44:40 AM	CHECKED - ELH	DATE = 05/12/10	SCALE: 1"=40'		SHEET NO. 2 OF 3 SHEETS STA. 32+00 TO STA. 44+00		CONTRACT NO. 91436				



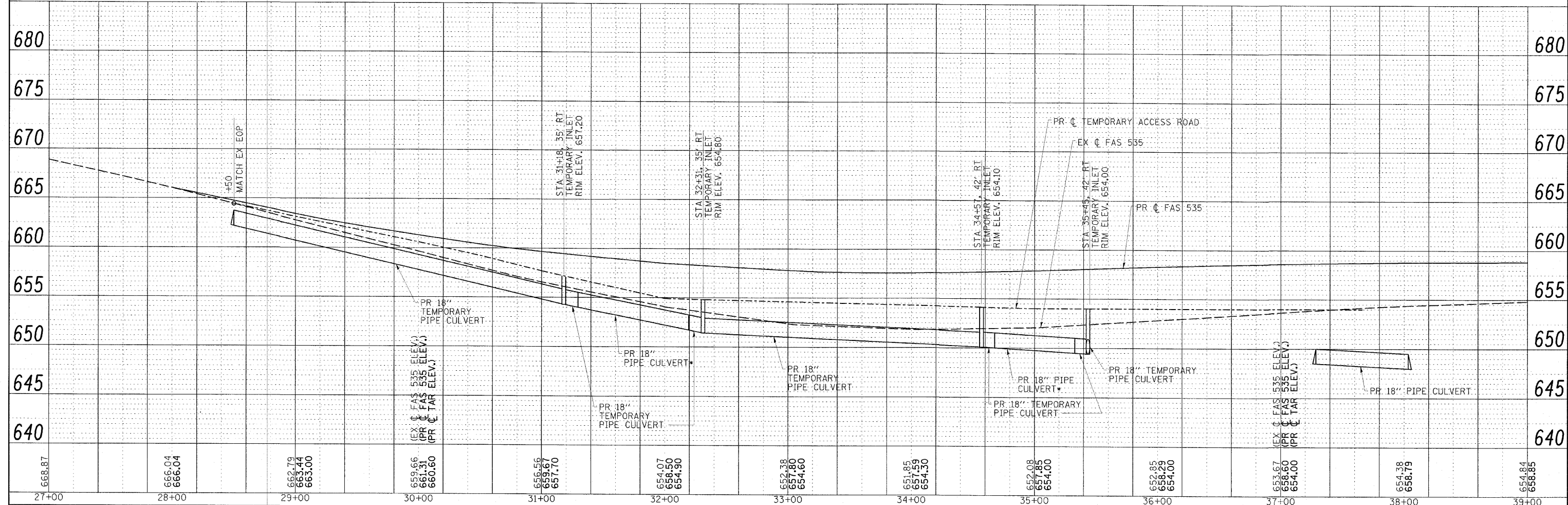
**TYPICAL SECTION THRU
TEMPORARY ACCESS ROAD**

- NOTES**
- MODIFY ELEVATIONS OF THE ACCESS ROAD NEAR THE ENTRANCES AS REQUIRED TO FIT FIELD CONDITIONS.
 - THOSE SECTIONS OF PIPE CULVERTS DENOTED WITH AN ASTERISK WILL REMAIN IN PLACE AFTER THE TEMPORARY ACCESS ROAD AND TEMPORARY PIPE CULVERTS ARE REMOVED. ADD END SECTIONS TO EACH END OF THE REMAINING PIPE.

PLAN	SURVEYED	DATE
	PLOTTED	
	GRADES CHECKED	
	STRUCTURE NOTATION CHKD	

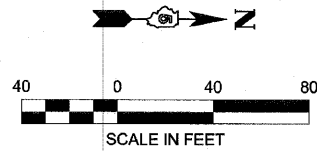


PROFILE	SURVEYED	DATE
	PLOTTED	
	GRADES CHECKED	
	STRUCTURE NOTATION CHKD	



**MATCH LINE - STA. 39+00
SEE SHT. 19 FOR CONT.**

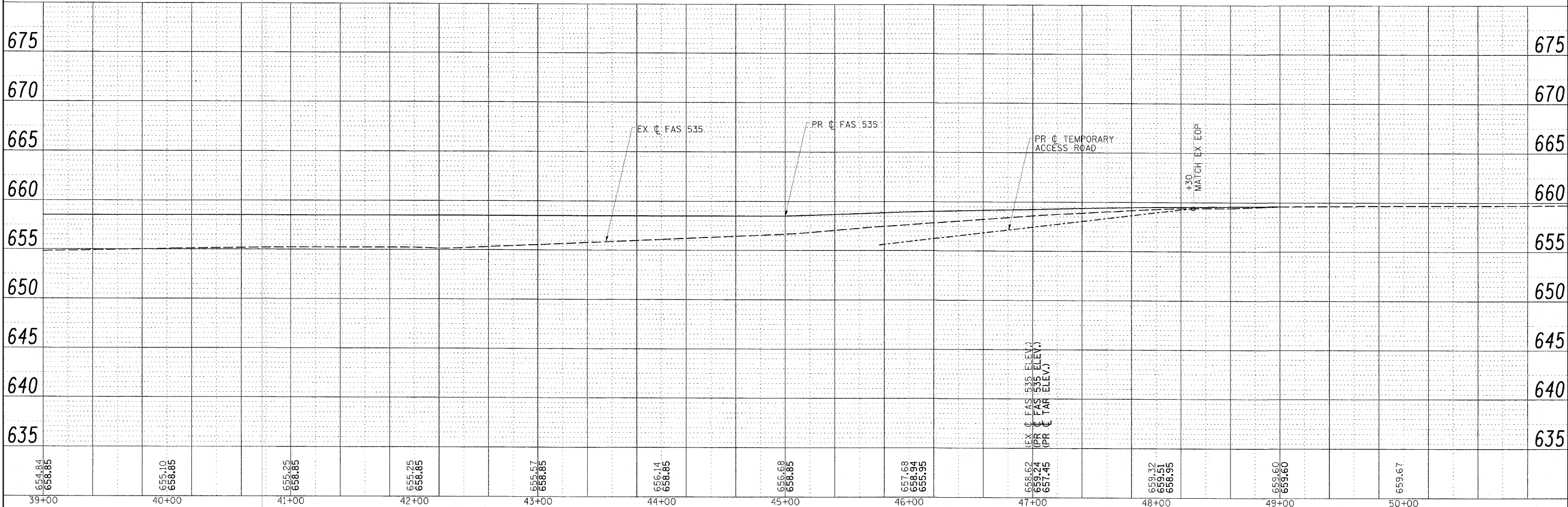
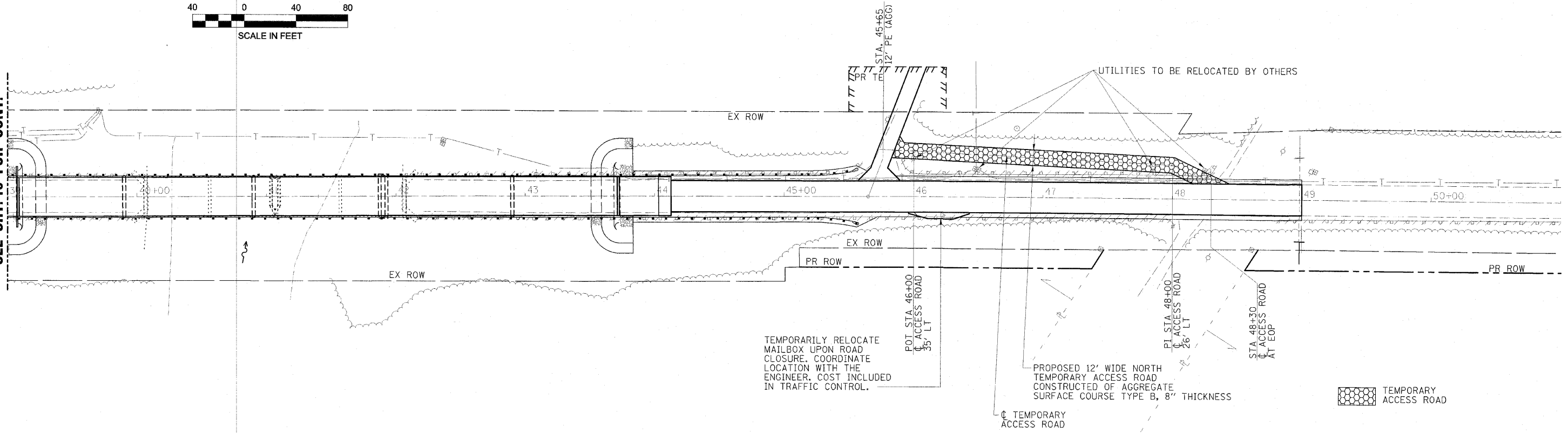
FILE NAME: 24401F03.dgn	USER NAME: HAS	DESIGNED: ELH	REVISED:	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TEMPORARY ACCESS ROAD PLAN & PROFILE	F.A.S. RTE.:	SECTION:	COUNTY:	TOTAL SHEETS:	SHEET NO.:	
SCALE: (HORIZ) 1"=40' (VERT) 1"=5'	PLOT SCALE: 1/32" = 1' IN.	CHECKED: ELH	REVISED:			535	08-00255-00-BR	PIATT	62	18	
	PLOT DATE: 5/26/2010	DATE: 05/12/10	REVISED:			CONTRACT NO. 91436					
						FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					



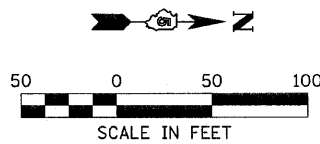
PLAN	SURVEYED	DATE
	PLOTTED	
	CHECKED	
	BY	
	NO. 1	
	NO. 2	
	NO. 3	
	NO. 4	
	NO. 5	

PROFILE	SURVEYED	DATE
	PLOTTED	
	CHECKED	
	BY	
	NO. 1	
	NO. 2	
	NO. 3	
	NO. 4	
	NO. 5	

MATCH LINE - STA. 39+00
SEE SHT. 18 FOR CONT.



FILE NAME = 24401F03.dgn	USER NAME = H45	DESIGNED - ELH	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TEMPORARY ACCESS ROAD PLAN & PROFILE	F.A.S. RTE. 535	SECTION 08-00255-00-BR	COUNTY PIATT	TOTAL SHEETS 62	SHEET NO. 19	
SCALE: (HORZ) 1"=40' (VERT) 1"=5'	PLOT SCALE = 37.7778 1 / IN.	DRAWN - HAS	REVISED -			SCALE: 1"=40'	SHEET NO. 2 OF 2 SHEETS	STA. 39+00 TO STA. 51+00	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT	CONTRACT NO. 91436
	PLOT DATE = 5/26/2010	CHECKED - ELH	REVISED -								
		DATE - 05/12/10	REVISED -								

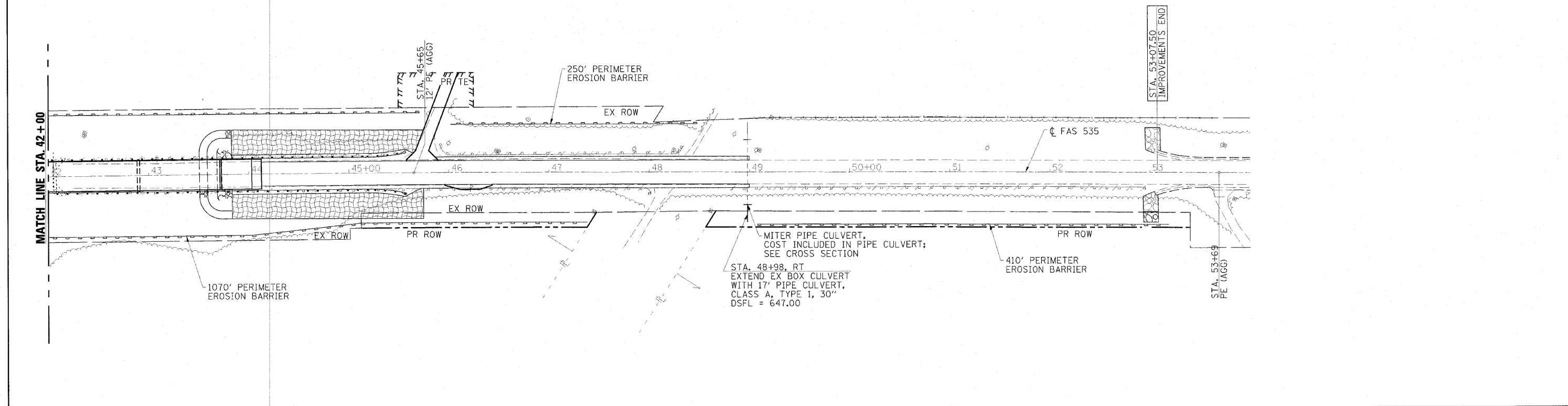
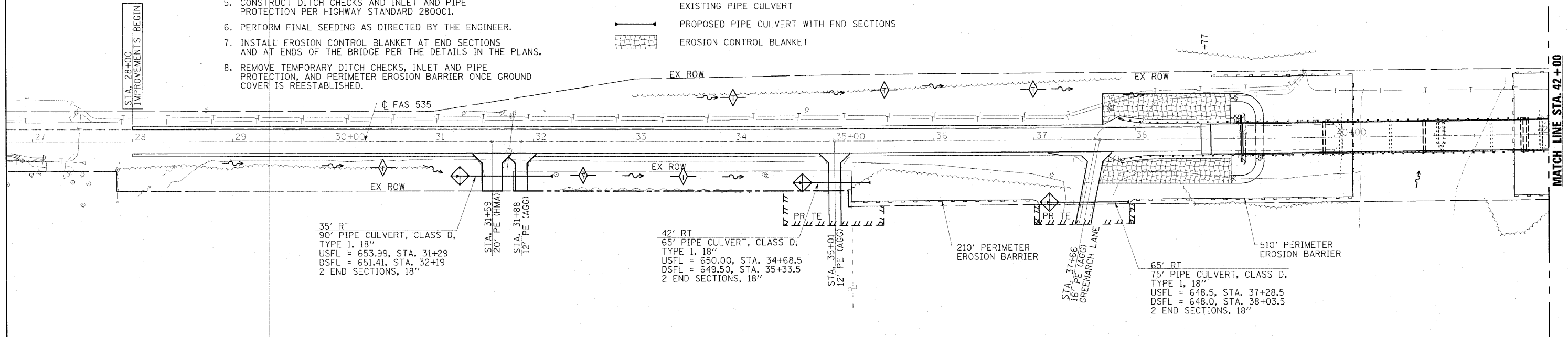


INTENDED SEQUENCE

1. PERIMETER EROSION BARRIER SHALL BE INSTALLED IN ACCORDANCE WITH HIGHWAY STANDARD 280001, PRIOR TO EARTH DISTURBING ACTIVITIES.
2. CONSTRUCT TEMPORARY ACCESS ROAD, TEMPORARY PIPE CULVERTS, AND ROADWAY EMBANKMENT.
3. USE TEMPORARY EROSION CONTROL SEEDING AS DIRECTED BY THE ENGINEER.
4. REMOVE TEMPORARY ACCESS ROAD AND TEMPORARY PIPE CULVERTS. CONSTRUCT DITCHES AND PIPE CULVERTS.
5. CONSTRUCT DITCH CHECKS AND INLET AND PIPE PROTECTION PER HIGHWAY STANDARD 280001.
6. PERFORM FINAL SEEDING AS DIRECTED BY THE ENGINEER.
7. INSTALL EROSION CONTROL BLANKET AT END SECTIONS AND AT ENDS OF THE BRIDGE PER THE DETAILS IN THE PLANS.
8. REMOVE TEMPORARY DITCH CHECKS, INLET AND PIPE PROTECTION, AND PERIMETER EROSION BARRIER ONCE GROUND COVER IS REESTABLISHED.

LEGEND

- PROPOSED DITCH/SWALE TO BE GRADED TO ELEVATIONS SHOWN ON CROSS SECTIONS
- PERIMETER EROSION BARRIER
- INLET AND PIPE PROTECTION
- TEMPORARY DITCH CHECK
- STONE RIPRAP CLASS A4
- EXISTING PIPE CULVERT
- PROPOSED PIPE CULVERT WITH END SECTIONS
- EROSION CONTROL BLANKET



USER NAME = HAS	DESIGNED = ELH	REVISED =
PLOT SCALE = 0.2791" / IN.	DRAWN = HAS	REVISED =
PLOT DATE = 5/26/2018 7:47:41 AM	CHECKED = ELH	REVISED =
	DATE = 05/12/10	REVISED =

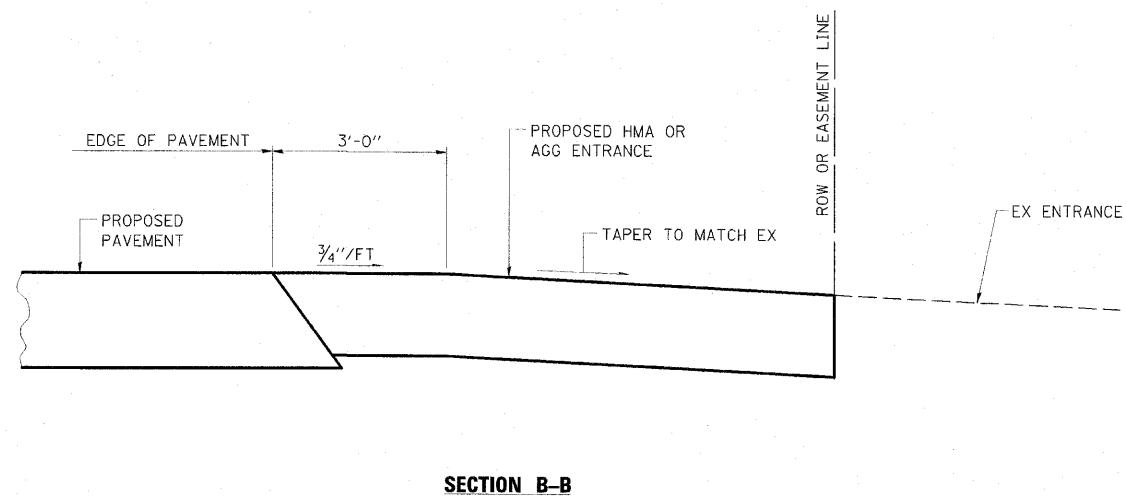
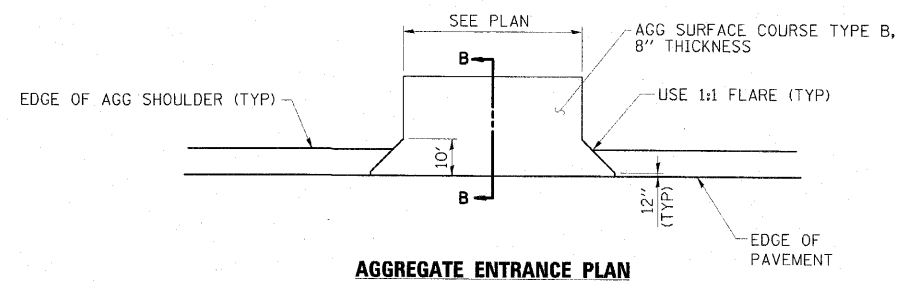
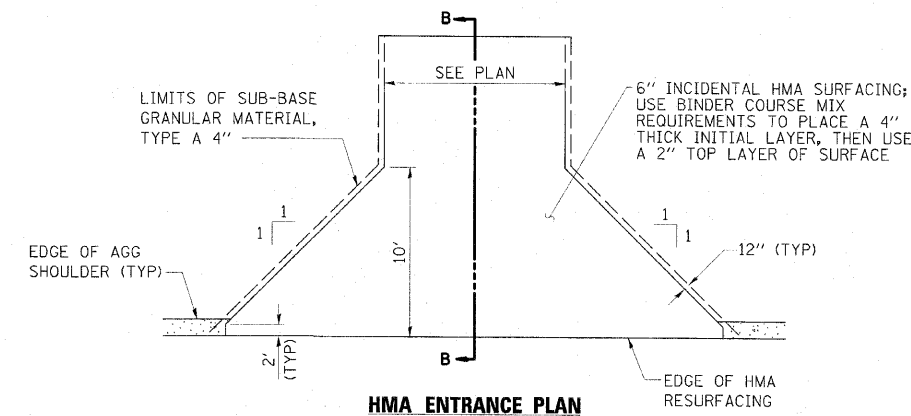
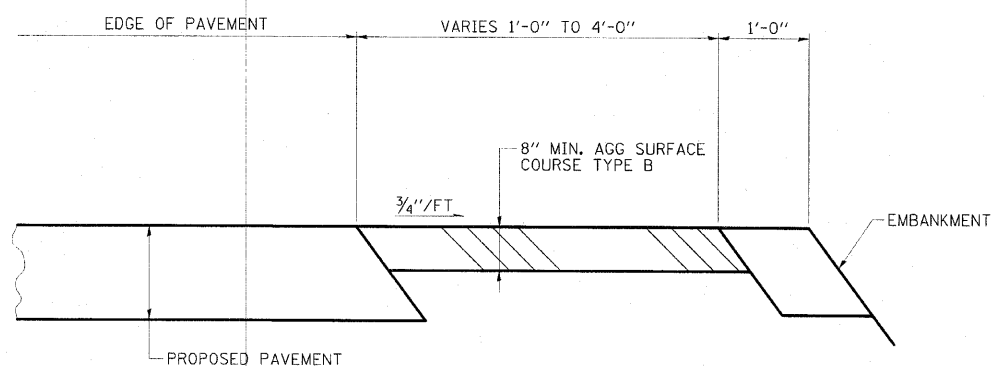
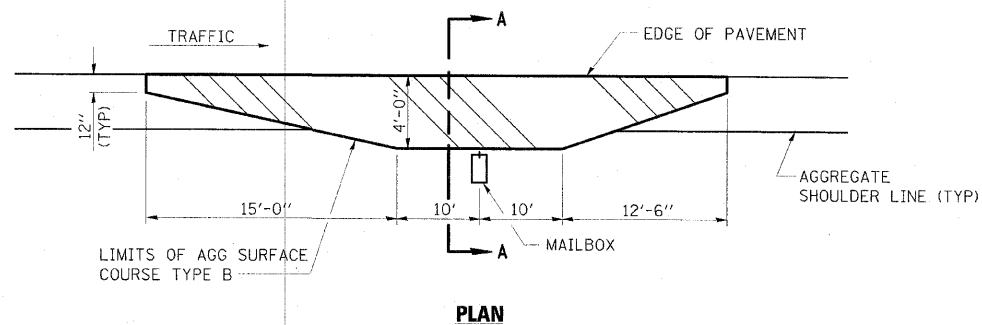
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FAS 535 EROSION CONTROL AND DRAINAGE PLAN

SCALE: 1"=50'-0" SHEET NO. 1 OF 1 SHEETS STA. 27+00 TO STA. 54+00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
535	08-00225-00-BR	PIATT	62	20
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 91436				

RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
**	*	PIATT	62	21
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
* 08-00255-00-BR				
** FAS 535				

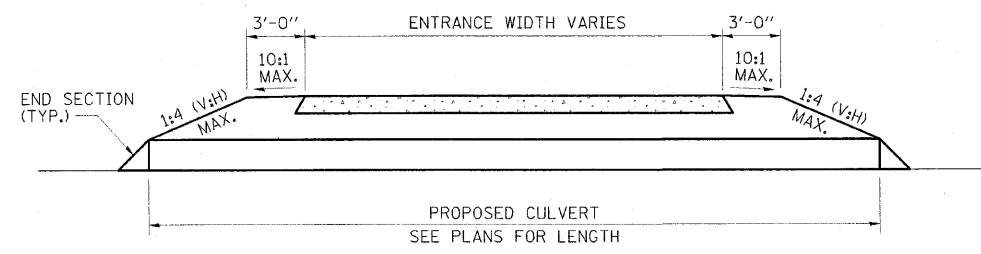


ESCA
CONSULTANTS, INC.

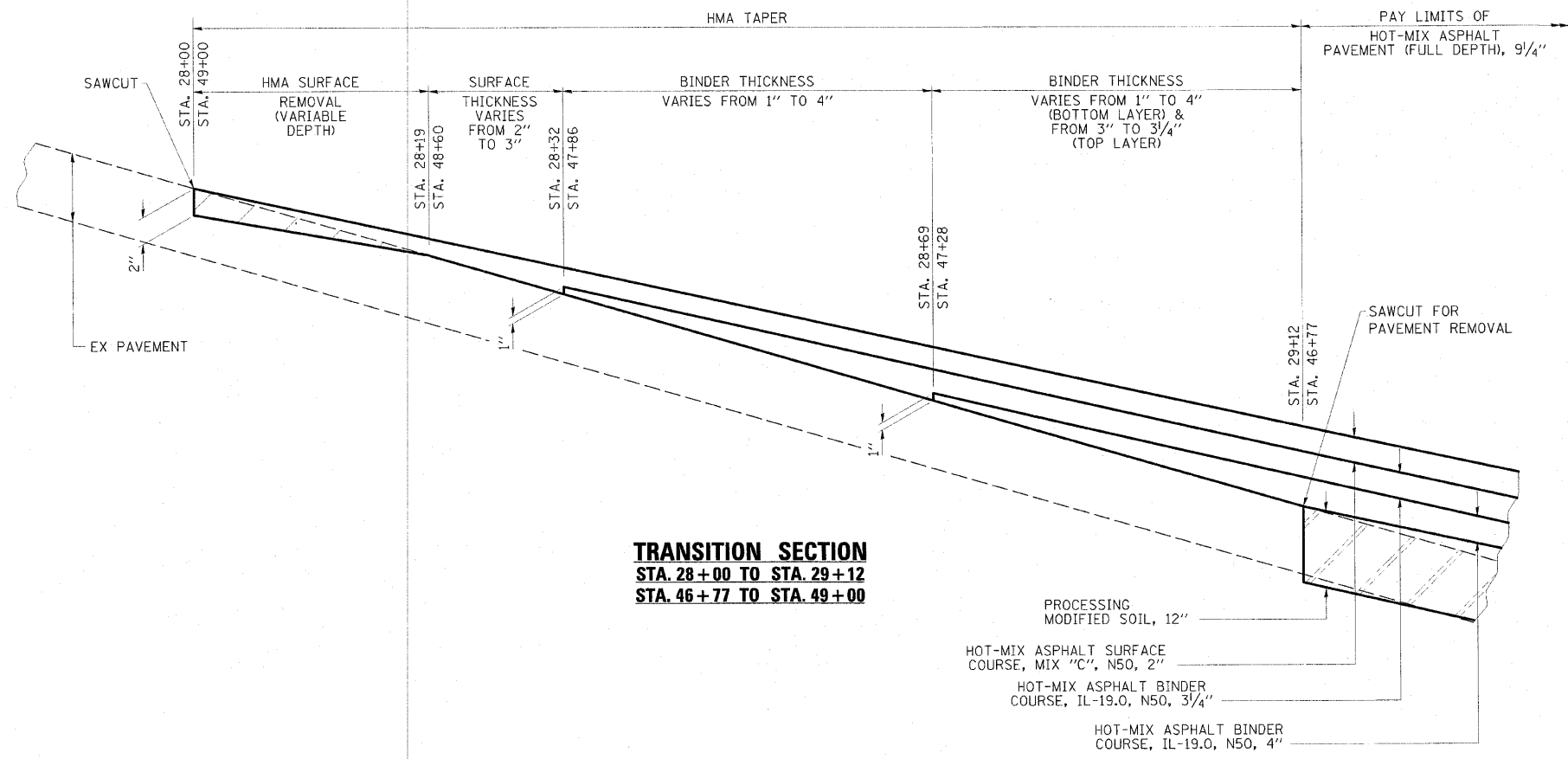
DESIGNED BY:	ELH	01/10
DRAWN BY:	HAS	01/10
CHECKED BY:	ELH	05/10
APPROVED BY:	RDP	05/10

MISCELLANEOUS DETAILS
FAS 535 (SHADY REST ROAD)
SECTION 08-00255-00-BR
PIATT COUNTY

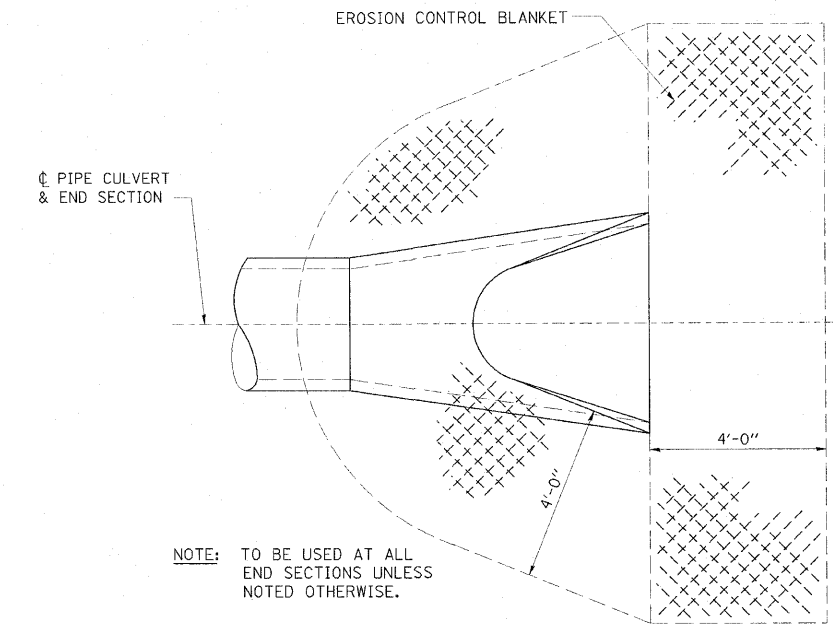
RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
••	•	PIATT	62	22
STA.	TO STA.			
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
• 08-00255-00-BR		•• FAS 535		



TYPICAL SECTION THRU ENTRANCE CULVERT



**TRANSITION SECTION
STA. 28+00 TO STA. 29+12
STA. 46+77 TO STA. 49+00**



DETAIL OF EROSION CONTROL BLANKET LINING AROUND END SECTION

NOTE: TO BE USED AT ALL END SECTIONS UNLESS NOTED OTHERWISE.

- NOTES:
1. PRC FLARED END SECTION SHOWN. TREATMENT SAME FOR OTHER END SECTIONS.

ESCA
CONSULTANTS, INC.

DESIGNED BY:	ELH	01/10
DRAWN BY:	HAS	01/10
CHECKED BY:	ELH	05/10
APPROVED BY:	RDP	05/10

MISCELLANEOUS DETAILS
FAS 535 (SHADY REST ROAD)
SECTION 08-00255-00-BR
PIATT COUNTY

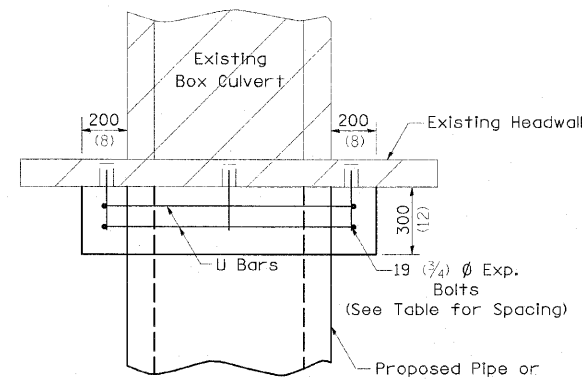
CONCRETE COLLARS FOR PIPE OR BOX CULVERT EXTENSIONS

Bill of Materials

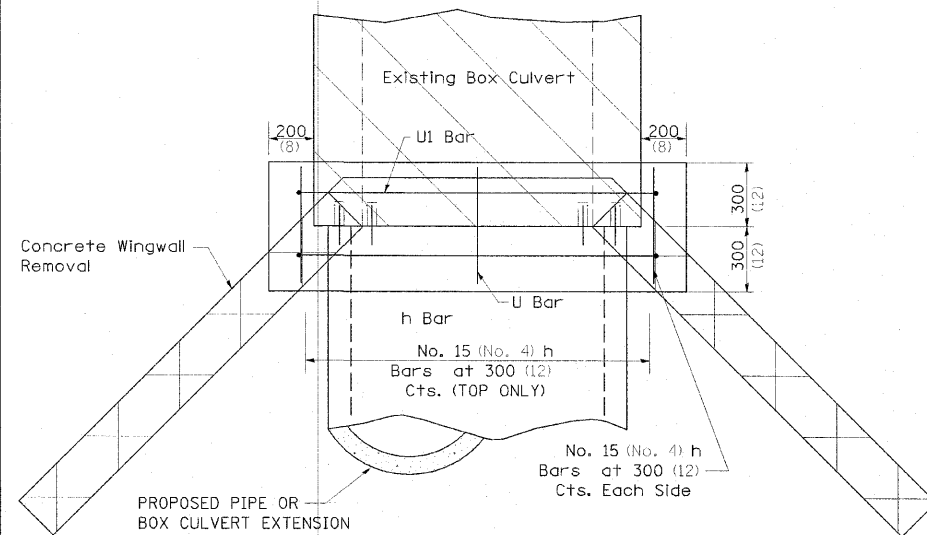
STATION	DIMENSIONS		h Bar	U Bar		EXPANSION BOLTS	CONCRETE COLLAR	REINF. BARS
	X	Y	No.	No.	Length	No.	Cu. Yd	LBS
48+98 RT	3'-6"	2'-5"	0	4	8'-4"	8	0.5	30
All h Bars 450 (18) Long			Totals			8	0.5	30

General Notes

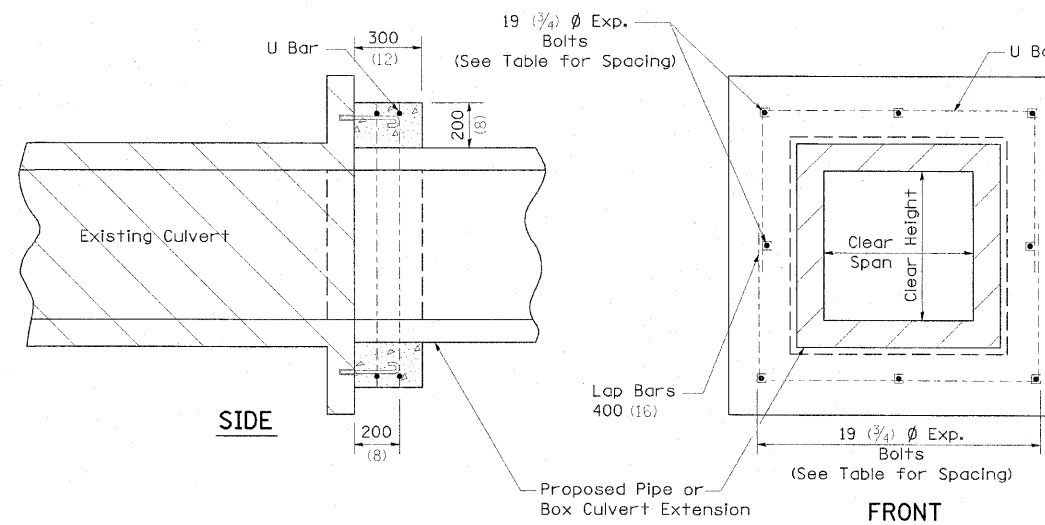
Concrete Collars shall be constructed of Class SI Concrete in accordance with Section 503 of the Standard Specifications. Reinforcement bars shall conform to Section 508 of the Standard Specifications. The concrete will be paid for at the contract unit price per cubic meter (cubic yard) for CONCRETE COLLAR. Reinforcement will be paid for at the contract unit price per kilogram (pound) for REINFORCEMENT BARS. Expansion Bolts, when required, will be paid for at the contract unit price each for EXPANSION BOLTS of the size indicated, which price shall include furnishing, drilling holes, and installing the expansion bolts complete in place. These bolts shall extend at least 200 (8 inches) into the new concrete. Concrete headwall or wingwall removal will not be paid for separately but shall be included in the cost of CONCRETE COLLAR.



PLAN OF CULVERT WITH STRAIGHT HEADWALL

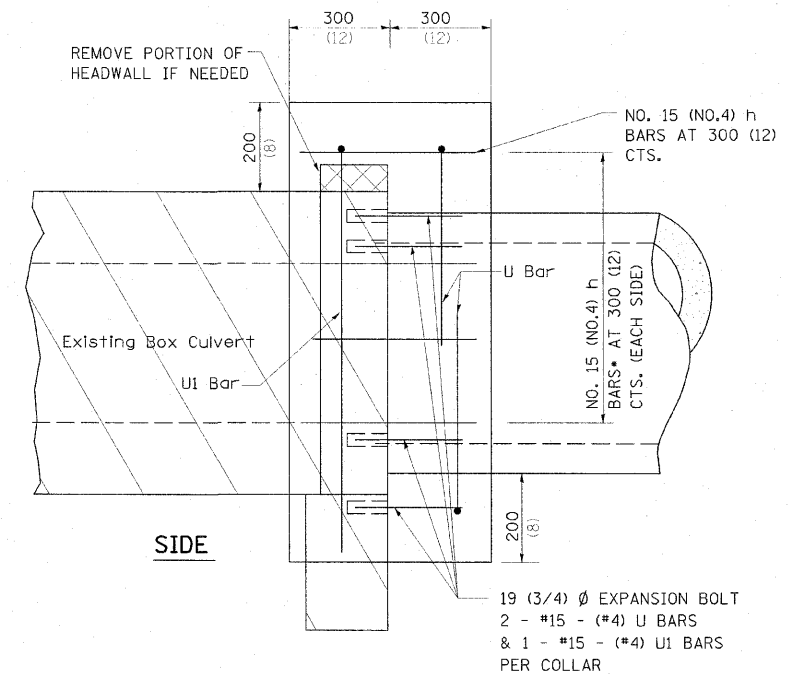


PLAN OF CULVERT WITH ANGLED WING WALLS



SIDE

FRONT

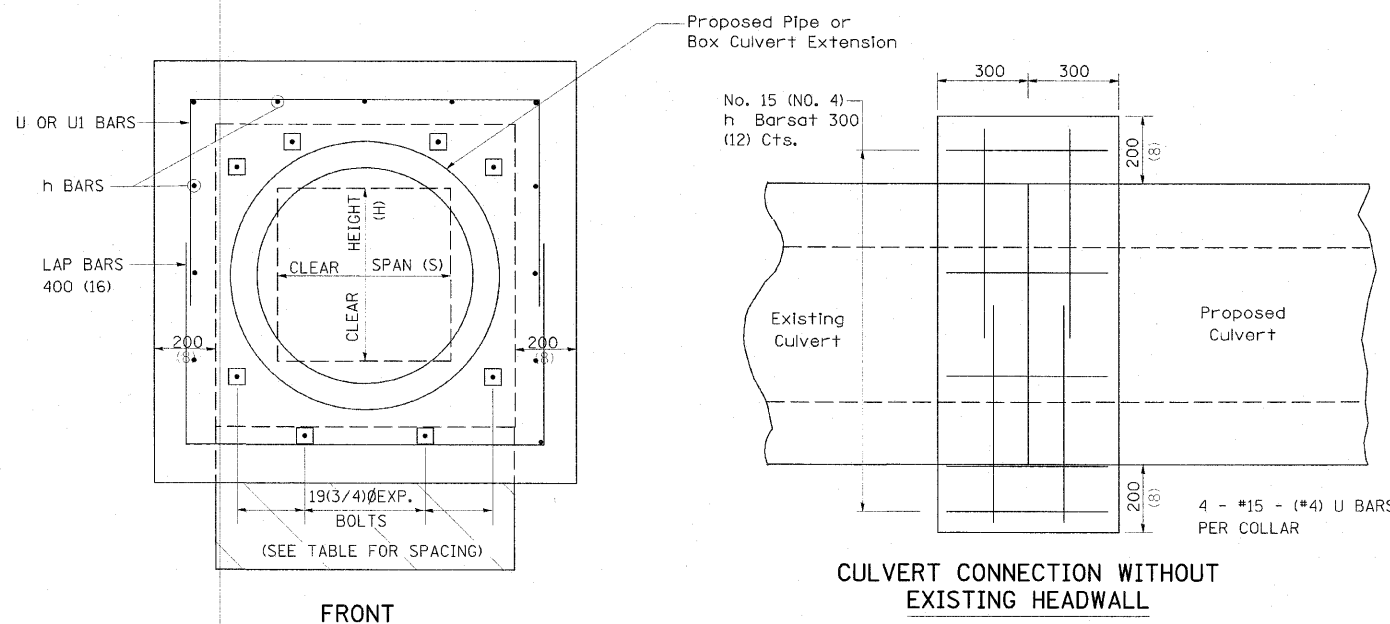


SIDE

PLACEMENT DETAILS FOR EXPANSION BOLTS

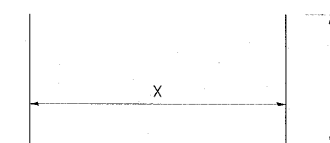
H OR S	NUMBER OF EXPANSION BOLTS REQUIRED PER SIDE			
	EXTENSIONS < 4.57m (15')		EXTENSIONS > 4.57m (15')	
	NUMBER	SPACING	NUMBER	SPACING
600 (24)	*		*	
750 (30)	2	450 (18)	2	450 (18)
900 (36)	2	600 (24)	2	600 (24)
1200 (48)	3	450 (18)	3	450 (18)
1500 (60)	4	400 (16)	3	600 (24)
1800 (72)	5	375 (15)	4	500 (20)
2100 (84)	5	450 (18)	4	600 (24)
2400 (96)	6	375 (15)	5	525 (21)
2700 (108)	6	475 (19)	5	600 (24)
3000 (120)	7	450 (18)	6	525 (21)
3300 (132)	8	425 (17)	6	600 (24)
3600 (144)	8	475 (19)	7	550 (22)

* MINIMUM ONE PER SIDE

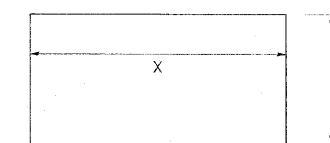


FRONT

CULVERT CONNECTION WITHOUT EXISTING HEADWALL



(#4) U BAR



(#4) U1 BAR

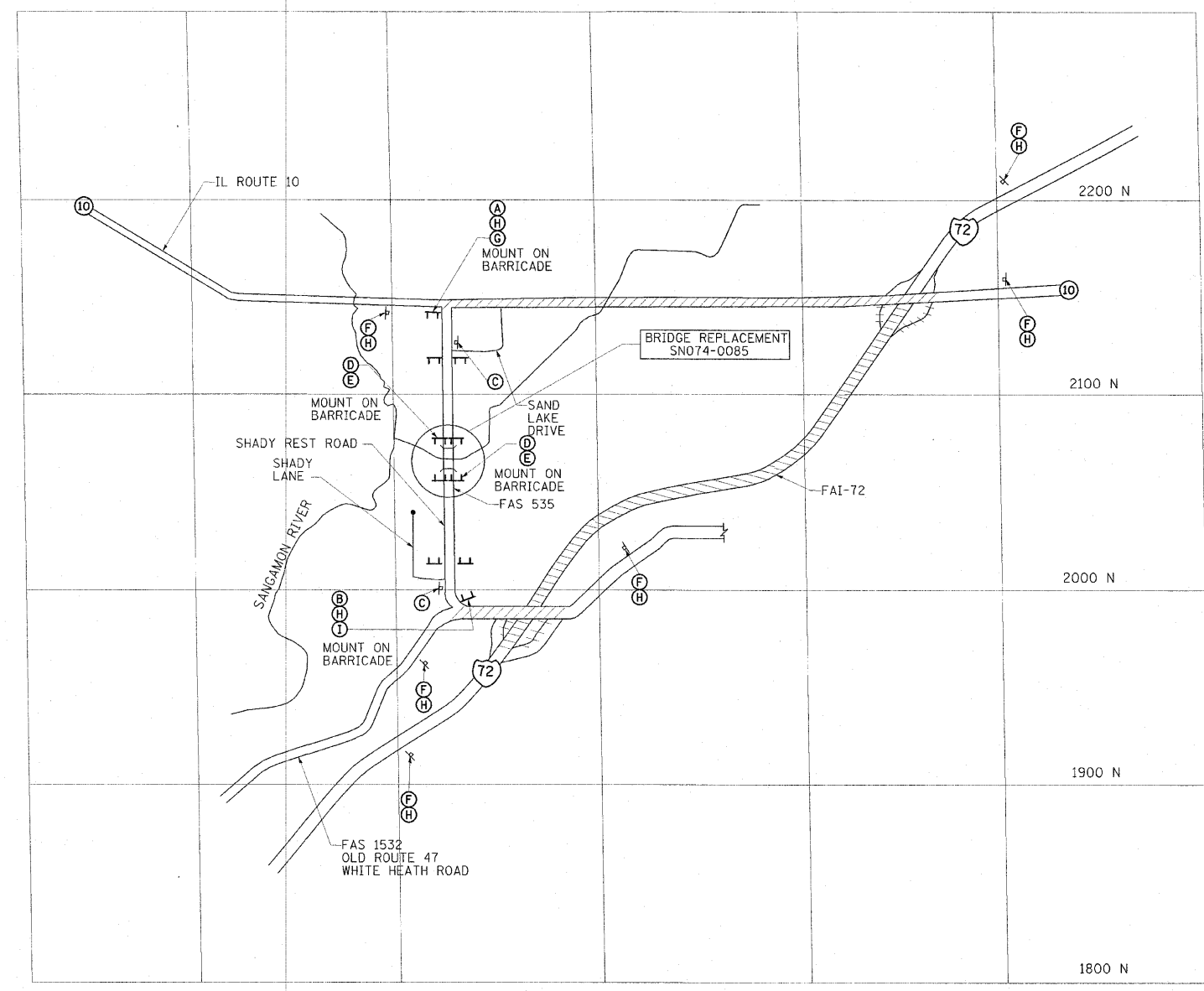
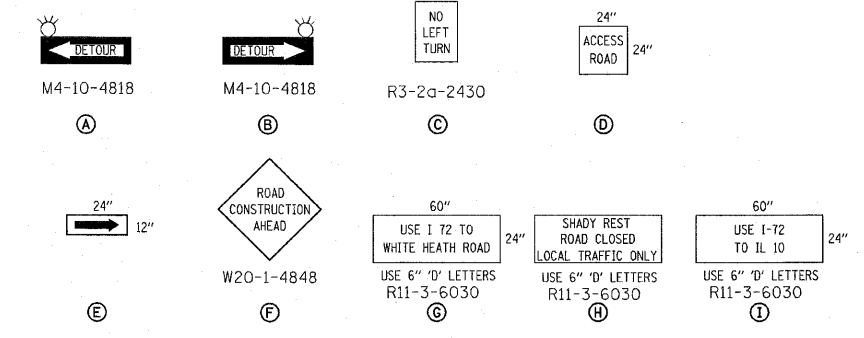
RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
••	•	PIATT	62	24
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
• 08-00255-00-BR		• FAS 535		

LEGEND

- TYPE III BARRICADE WITH 2 FLASHING LIGHTS PER BARRICADE
- SIGNS ON PERMANENT SUPPORTS
- FLASHING LIGHT ABOVE SIGN
- STANDARD 701901 "ROAD CLOSED TO ALL TRAFFIC" APPLICATION
- STANDARD 701901 "ROAD CLOSED TO THRU TRAFFIC" APPLICATION

GENERAL NOTES

1. ALL TRAFFIC CONTROL DEVICES SHALL BE FURNISHED, ERECTED, MAINTAINED, AND REMOVED BY THE CONTRACTOR, UNLESS NOTED OTHERWISE.
2. ALL SIGNS NOT ATTACHED TO BARRICADES SHALL BE POST MOUNTED.
3. LOCATIONS OF TRAFFIC CONTROL DEVICES MAY BE ADJUSTED BY THE ENGINEER.
4. SEE STANDARD B.L.R. 21-8 FOR ADDITIONAL SIGNS REQUIRED.
5. ALL TRAFFIC CONTROL SHOWN ON THIS SHEET SHALL BE PAID FOR PER EACH FOR TRAFFIC CONTROL AND PROTECTION FOR TEMPORARY DETOUR.



DETOUR ROUTE

TEMPORARY DETOUR PLAN
NO SCALE

ESCA
CONSULTANTS, INC.

DESIGNED BY:	ELH	01/10
DRAWN BY:	HAS	01/10
CHECKED BY:	ELH	05/10
APPROVED BY:	RDP	05/10

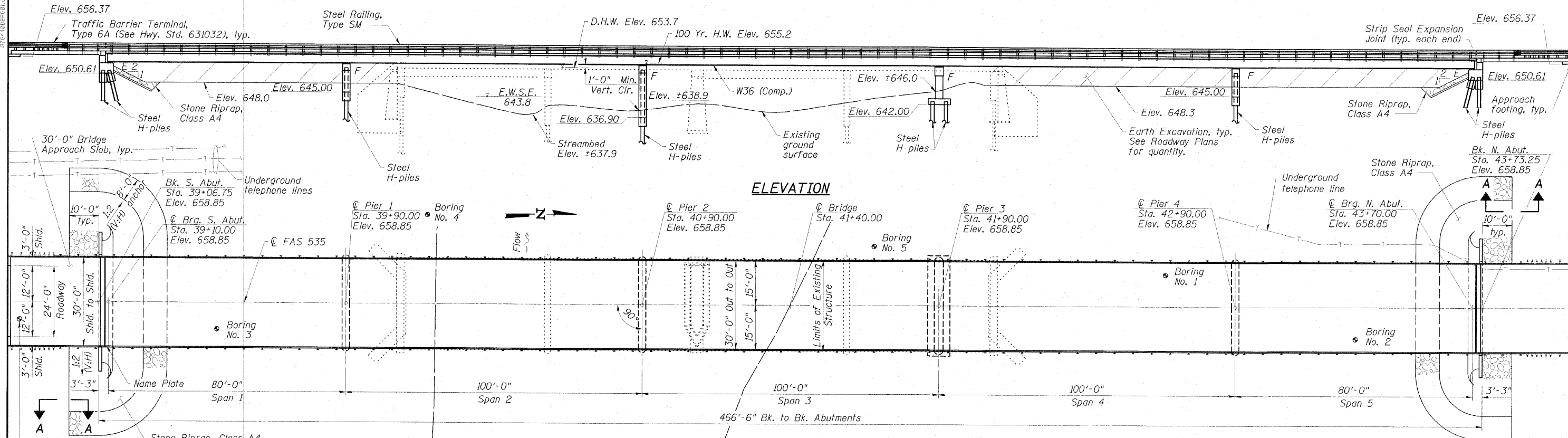
**TRAFFIC CONTROL
AND PROTECTION FOR
TEMPORARY DETOUR
FAS 535 (SHADY REST ROAD)
SECTION 08-00255-00-BR
PIATT COUNTY**

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BENCHMARK: Chiseled Square on 1/4 hubguard at NW corner of bridge over Sangamon River, Elev. 655.89

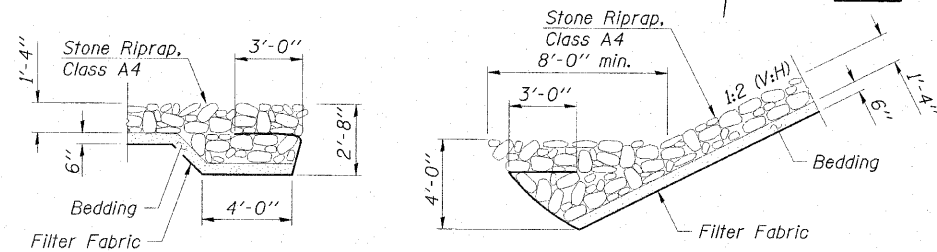
EXISTING STRUCTURE: SN 074-0025 was originally built in 1908 as S.A. Rte. 2 Section J-15D, reconstructed in 1977 as FAS 535 Section J-BR, and reinforced with 3 W33x130 beams in 2007. It is a four span structure consisting of 21" PPC Deck Beams on closed abutments, two pile bent piers and a solid shaft pier. The deck width is 31'-0" and the length is 202'-8" back-to-back of abutments. Traffic shall be detoured during construction.

No salvage.



SANGAMON RIVER
BUILT 20... BY
PIATT COUNTY
SEC. 08-00255-00-BR
F.A.S. RT. 535 STA. 41+40
STR. NO. 074-0085 LOADING HL-93

NAME PLATE
See Std. 515001



DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	S. Abut.	Pier 1	Pier 2	Pier 3	Pier 4	N. Abut.
	650.6	642.0	633.9	642.0	642.0	650.6

WATERWAY INFORMATION

Frequency Year	Q-ft ³ /s	Opening - ft ²		Nat. H.W.E.	Head - ft.		Headwater El.	
		Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Overtop (E)	<5	6000	1716	651.2	0.5	651.7		
Design	10	9950	1999	652.7	0.4	653.1	653.2	
	20	12800	2068	653.7	0.4	654.1	654.3	
Base	50	15920	2068	654.5	0.5	655.0	655.2	
	100	18720	2068	655.2	0.4	655.6	655.9	
Max Calc.	500	25820	2068	656.9	0.2	657.1	657.8	

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

LOADING HL-93

Allow 50 psf for future wearing surface.

DESIGN SPECIFICATIONS

2007 AASHTO LRFD Bridge Design Specifications with 2008 & 2009 Interims

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (M270 Grade 50W)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.14g
Design Spectral Acceleration at 0.2 sec. (S_{D5}) = 0.25g
Soil Site Class = D



EXPIRES 11-30-10

SIGNATURE

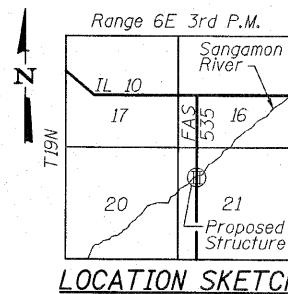
051210
DATE

STRUCTURE INDEX OF SHEETS

General Plan	Sheet No. 1 of 25
General Data	Sheet No. 2 of 25
Top of Slab Elevations	Sheet No. 3-5 of 25
Top of South Approach Slab Elevations	Sheet No. 6 of 25
Top of North Approach Slab Elevations	Sheet No. 7 of 25
Superstructure	Sheet No. 8 of 25
Superstructure Details	Sheet No. 9 of 25
Bridge Approach Slab Details	Sheet No. 10-11 of 25
Steel Railing, Type SM	Sheet No. 12 of 25
Preformed Joint Strip Seal	Sheet No. 13 of 25
Steel Framing Plan and Details	Sheet No. 14-15 of 25
Bearing Details	Sheet No. 16 of 25
Abutments	Sheet No. 17 of 25
Piers 1 and 4	Sheet No. 18 of 25
Pier 2	Sheet No. 19 of 25
Pier 3	Sheet No. 20 of 25
HP Pile Details	Sheet No. 21 of 25
Bar Splicer Assembly and Mechanical Splicer Details	Sheet No. 22 of 25
Soil Boring Logs	Sheet No. 23-25 of 25

GENERAL PLAN

SHADY REST ROAD OVER SANGAMON RIVER
FAS ROUTE 535 - SECTION 08-00255-00-BR
PIATT COUNTY
STATION 41+40.00
STRUCTURE NO. 074-0085



ESCA
CONSULTANTS, INC.

DESIGNED BY: MTD 11/09
DRAWN BY: DWH/HAS 11/09
CHECKED BY: MTD 11/09
APPROVED BY: RDP 05/10

SHEET NO. 1	F.A.S. RTE. 535	SECTION 08-00255-00-BR	COUNTY PIATT	TOTAL SHEETS 62	SHEET NO. 25
25 SHEETS	CONTRACT NO. 91436		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT		

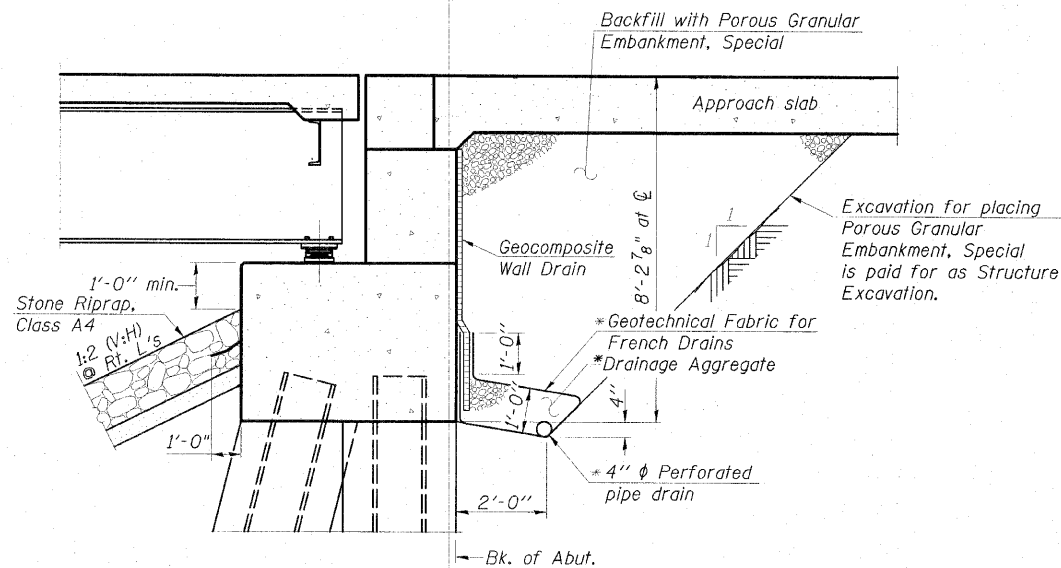
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

- Fasteners shall be AASHTO M164 Type 1, mechanically galvanized bolts in painted areas and M164 Type 3 in unpainted areas. Bolts $\frac{1}{8}$ " ϕ , holes $\frac{15}{16}$ " ϕ , unless otherwise noted.
- Calculated weight of Structural Steel = 559,050 lbs.
- All structural steel shall be AASHTO M 270 Grade 50W except expansion joints which shall be AASHTO M 270 Grade 36. All structural steel shall be cleaned as specified in the Special Provision for "Surface Preparation and Painting Requirements for Weathering Steel".
- No field welding is permitted except as specified in the contract documents.
- Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.
- Reinforcement bars designated (E) shall be epoxy coated.
- Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of $\frac{1}{8}$ " (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.
- Concrete Sealer shall be applied to the designated areas of the abutments.
- All structural steel and exposed surfaces of bearings within a distance of 9 ft. each way from the deck joints shall be painted as specified in the Special Provision for "Surface Preparation and Painting Requirements for Weathering Steel".
- Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
- The embankment configuration shown shall be the minimum that must be placed and compacted prior to construction of the abutments.
- Excavation behind existing abutment walls shall be performed to balance front and back soil pressure before removing the existing superstructure.
- The Contractor is advised that the existing PPC Deck Beams are in a deteriorated condition with reduced load carrying capacity. It is the Contractor's responsibility to account for the condition of the beams when developing construction procedures.
- If the Contractor's procedure for existing deck beam removal or placement of new deck beams involves placement of cranes or other heavy equipment on deck beams, a detailed procedure shall be submitted to the Engineer for approval. The procedure shall include calculations, prepared and sealed by an Illinois Licensed Structural Engineer, verifying that the equipment and procedure used will not overstress the deck beams.
- Temporary support beams are present under two PPC Deck Beams in Span 1 and under one PPC Deck Beam in Span 3. Removal of the support beams shall be included in Removal of Existing Structures.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment, Special	Cu. Yd.		110	110
Stone Riprap, Class A4	Sq. Yd.		530	530
Filter Fabric	Sq. Yd.		530	530
Removal of Existing Structures	Each			1
Structure Excavation	Cu. Yd.		355	355
Concrete Structures	Cu. Yd.		246.6	246.6
Concrete Superstructure	Cu. Yd.	509.7		509.7
Bridge Deck Grooving	Sq. Yd.	1,752		1,752
Concrete Encasement	Cu. Yd.		26.2	26.2
Protective Coat	Sq. Yd.	1,752		1,752
Furnishing and Erecting Structural Steel	L. Sum			1
Stud Shear Connectors	Each	4,086		4,086
Reinforcement Bars, Epoxy Coated	Pound	138,340	20,220	158,560
Bar Splicers	Each	60		60
Steel Railing, Type SM	Foot	995		995
Furnishing Steel Piles HP14x73	Foot		3,580	3,580
Driving Piles	Foot		3,580	3,580
Test Pile Steel HP14x73	Each		6	6
Name Plates	Each	1		1
Preformed Joint Strip Seal	Foot	60		60
Elastomeric Bearing Assembly, Type II	Each	12		12
Anchor Bolts, 1"	Each		60	60
Anchor Bolts, $\frac{1}{2}$ "	Each		12	12
Concrete Sealer	Sq. Ft.		440	440
Geocomposite Wall Drain	Sq. Yd.		60	60
Pipe Underdrains for Structures 4"	Foot		120	120
Underwater Structure Excavation Protection - Location 1	Each		1	1
Asbestos Bearing Pad Removal	Each	36		36

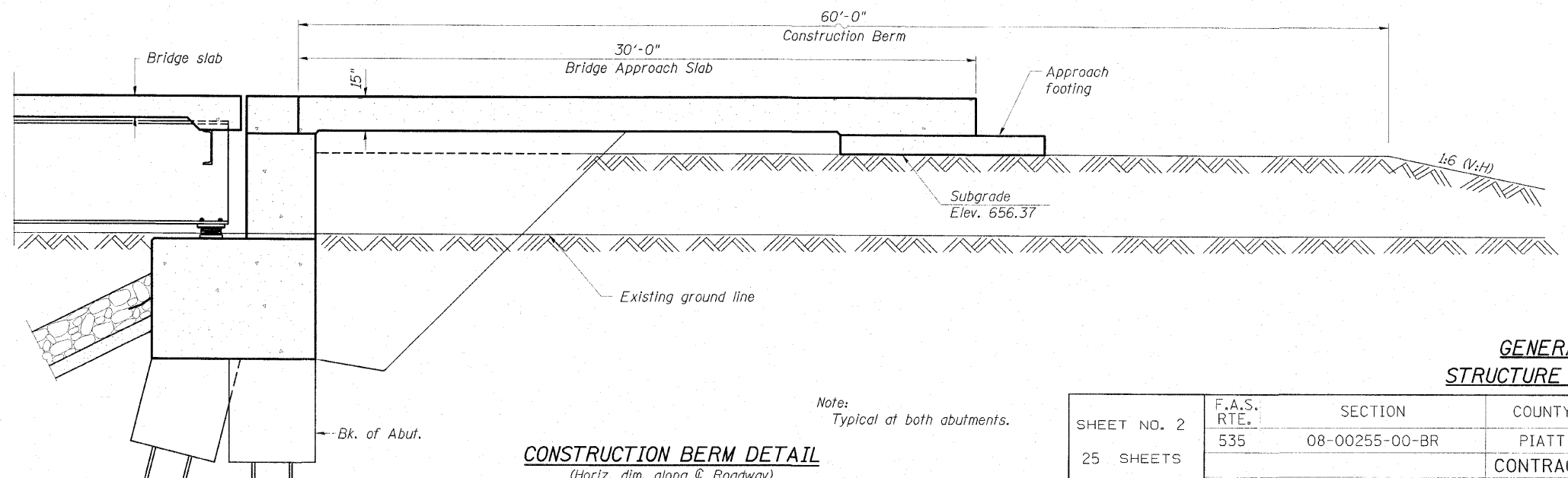


**SECTION THRU PILE SUPPORTED
STUB ABUTMENT**
(Horiz. dim. @ Rt. L's)

*Included in the cost of Pipe Underdrains for Structures.

Note:

All drainage system components shall extend parallel to the abutment back wall until they intersect the wingwalls or 2'-0" from the end of the wingwalls when the wings are parallel to the abutment. The pipe shall extend under the wingwall, if necessary, until intersecting the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 60110).



CONSTRUCTION BERM DETAIL
(Horiz. dim. along ϕ Roadway)

Note:
Typical at both abutments.

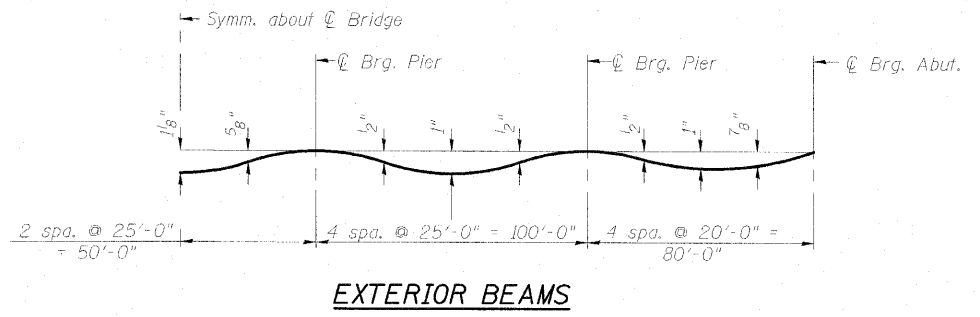
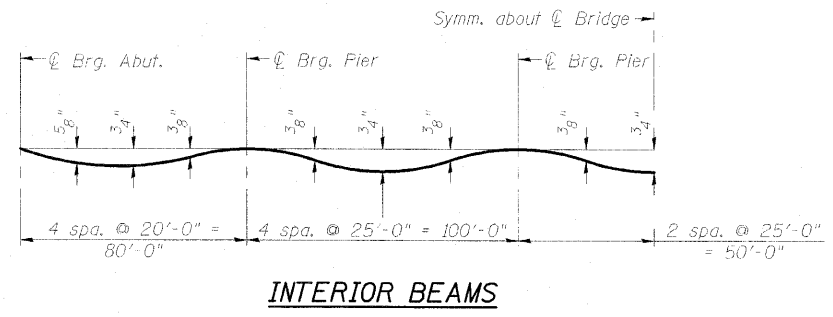
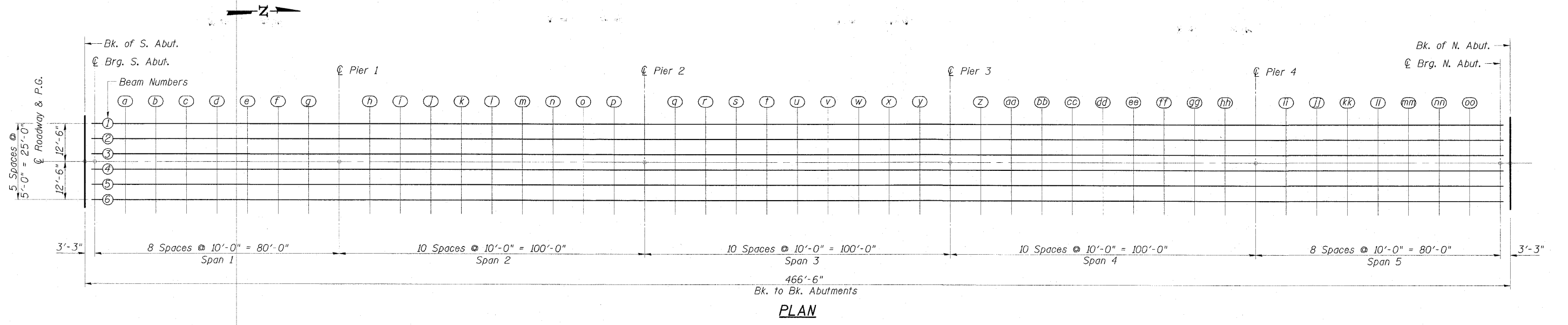
ESCA
CONSULTANTS, INC.

DESIGNED BY:	MTD	11/09
DRAWN BY:	DWH/HAS	11/09
CHECKED BY:	MTD	11/09
APPROVED BY:	RDP	05/10

GENERAL DATA
STRUCTURE NO. 074-0085

SHEET NO. 2 25 SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	535	08-00255-00-BR	PIATT	62	26
FED. ROAD DIST. NO.			ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 91436					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



DEAD LOAD DEFLECTION DIAGRAMS
(Includes weight of concrete only.)

Note:
The above deflections are not to be used in the field if the Engineer is working from the grade elevations adjusted for dead load deflections as shown on sheets 4 & 5 of 25.

ESCA
CONSULTANTS, INC.

DESIGNED BY:	FMA/MTD	10/09
DRAWN BY:	DWH/HAS	11/09
CHECKED BY:	MTD	11/09
APPROVED BY:	RDP	05/10

E-S 11-1-09

(Sheet 1 of 3)
TOP OF SLAB ELEVATIONS
STRUCTURE NO. 074-0085

SHEET NO. 3 25 SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	535	08-00255-00-BR	PIATT	62	27
CONTRACT NO. 91436					
FED. ROAD DIST. NO.		ILLINOIS		FED. AID PROJECT	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BEAM 1

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of S. Abut.	39+06.75	-12.50	658.59	658.59
☉ Brg. S. Abut.	39+10.00	-12.50	658.59	658.59
a	39+20.00	-12.50	658.59	658.63
b	39+30.00	-12.50	658.59	658.66
c	39+40.00	-12.50	658.59	658.68
d	39+50.00	-12.50	658.59	658.67
e	39+60.00	-12.50	658.59	658.65
f	39+70.00	-12.50	658.59	658.63
g	39+80.00	-12.50	658.59	658.60
☉ Pier 1	39+90.00	-12.50	658.59	658.59
h	40+00.00	-12.50	658.59	658.60
i	40+10.00	-12.50	658.59	658.62
j	40+20.00	-12.50	658.59	658.64
k	40+30.00	-12.50	658.59	658.66
l	40+40.00	-12.50	658.59	658.67
m	40+50.00	-12.50	658.59	658.67
n	40+60.00	-12.50	658.59	658.65
o	40+70.00	-12.50	658.59	658.62
p	40+80.00	-12.50	658.59	658.60
☉ Pier 2	40+90.00	-12.50	658.59	658.59
q	41+00.00	-12.50	658.59	658.60
r	41+10.00	-12.50	658.59	658.62
s	41+20.00	-12.50	658.59	658.65
t	41+30.00	-12.50	658.59	658.67
u	41+40.00	-12.50	658.59	658.68
v	41+50.00	-12.50	658.59	658.67
w	41+60.00	-12.50	658.59	658.65
x	41+70.00	-12.50	658.59	658.62
y	41+80.00	-12.50	658.59	658.60
☉ Pier 3	41+90.00	-12.50	658.59	658.59
z	42+00.00	-12.50	658.59	658.60
aa	42+10.00	-12.50	658.59	658.62
bb	42+20.00	-12.50	658.59	658.65
cc	42+30.00	-12.50	658.59	658.67
dd	42+40.00	-12.50	658.59	658.67
ee	42+50.00	-12.50	658.59	658.66
ff	42+60.00	-12.50	658.59	658.64
gg	42+70.00	-12.50	658.59	658.62
hh	42+80.00	-12.50	658.59	658.60
☉ Pier 4	42+90.00	-12.50	658.59	658.59
ii	43+00.00	-12.50	658.59	658.60
jj	43+10.00	-12.50	658.59	658.63
kk	43+20.00	-12.50	658.59	658.65
ll	43+30.00	-12.50	658.59	658.67
mm	43+40.00	-12.50	658.59	658.68
nn	43+50.00	-12.50	658.59	658.66
oo	43+60.00	-12.50	658.59	658.63
☉ Brg. N. Abut.	43+70.00	-12.50	658.59	658.59
Bk. of N. Abut.	43+73.25	-12.50	658.59	658.59

BEAM 2

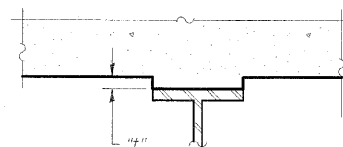
Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of S. Abut.	39+06.75	-7.50	658.69	658.69
☉ Brg. S. Abut.	39+10.00	-7.50	658.69	658.69
a	39+20.00	-7.50	658.69	658.72
b	39+30.00	-7.50	658.69	658.75
c	39+40.00	-7.50	658.69	658.76
d	39+50.00	-7.50	658.69	658.75
e	39+60.00	-7.50	658.69	658.74
f	39+70.00	-7.50	658.69	658.72
g	39+80.00	-7.50	658.69	658.70
☉ Pier 1	39+90.00	-7.50	658.69	658.69
h	40+00.00	-7.50	658.69	658.70
i	40+10.00	-7.50	658.69	658.71
j	40+20.00	-7.50	658.69	658.73
k	40+30.00	-7.50	658.69	658.75
l	40+40.00	-7.50	658.69	658.75
m	40+50.00	-7.50	658.69	658.75
n	40+60.00	-7.50	658.69	658.73
o	40+70.00	-7.50	658.69	658.72
p	40+80.00	-7.50	658.69	658.70
☉ Pier 2	40+90.00	-7.50	658.69	658.69
q	41+00.00	-7.50	658.69	658.69
r	41+10.00	-7.50	658.69	658.72
s	41+20.00	-7.50	658.69	658.74
t	41+30.00	-7.50	658.69	658.75
u	41+40.00	-7.50	658.69	658.76
v	41+50.00	-7.50	658.69	658.75
w	41+60.00	-7.50	658.69	658.74
x	41+70.00	-7.50	658.69	658.72
y	41+80.00	-7.50	658.69	658.70
☉ Pier 3	41+90.00	-7.50	658.69	658.69
z	42+00.00	-7.50	658.69	658.70
aa	42+10.00	-7.50	658.69	658.72
bb	42+20.00	-7.50	658.69	658.73
cc	42+30.00	-7.50	658.69	658.75
dd	42+40.00	-7.50	658.69	658.75
ee	42+50.00	-7.50	658.69	658.75
ff	42+60.00	-7.50	658.69	658.73
gg	42+70.00	-7.50	658.69	658.71
hh	42+80.00	-7.50	658.69	658.70
☉ Pier 4	42+90.00	-7.50	658.69	658.69
ii	43+00.00	-7.50	658.69	658.70
jj	43+10.00	-7.50	658.69	658.72
kk	43+20.00	-7.50	658.69	658.74
ll	43+30.00	-7.50	658.69	658.75
mm	43+40.00	-7.50	658.69	658.76
nn	43+50.00	-7.50	658.69	658.75
oo	43+60.00	-7.50	658.69	658.72
☉ Brg. N. Abut.	43+70.00	-7.50	658.69	658.69
Bk. of N. Abut.	43+73.25	-7.50	658.69	658.69

BEAM 3

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of S. Abut.	39+06.75	-2.50	658.80	658.80
☉ Brg. S. Abut.	39+10.00	-2.50	658.80	658.80
a	39+20.00	-2.50	658.80	658.83
b	39+30.00	-2.50	658.80	658.85
c	39+40.00	-2.50	658.80	658.86
d	39+50.00	-2.50	658.80	658.86
e	39+60.00	-2.50	658.80	658.84
f	39+70.00	-2.50	658.80	658.82
g	39+80.00	-2.50	658.80	658.81
☉ Pier 1	39+90.00	-2.50	658.80	658.80
h	40+00.00	-2.50	658.80	658.80
i	40+10.00	-2.50	658.80	658.82
j	40+20.00	-2.50	658.80	658.84
k	40+30.00	-2.50	658.80	658.85
l	40+40.00	-2.50	658.80	658.86
m	40+50.00	-2.50	658.80	658.85
n	40+60.00	-2.50	658.80	658.84
o	40+70.00	-2.50	658.80	658.82
p	40+80.00	-2.50	658.80	658.80
☉ Pier 2	40+90.00	-2.50	658.80	658.80
q	41+00.00	-2.50	658.80	658.81
r	41+10.00	-2.50	658.80	658.82
s	41+20.00	-2.50	658.80	658.84
t	41+30.00	-2.50	658.80	658.86
u	41+40.00	-2.50	658.80	658.86
v	41+50.00	-2.50	658.80	658.86
w	41+60.00	-2.50	658.80	658.84
x	41+70.00	-2.50	658.80	658.82
y	41+80.00	-2.50	658.80	658.81
☉ Pier 3	41+90.00	-2.50	658.80	658.80
z	42+00.00	-2.50	658.80	658.80
aa	42+10.00	-2.50	658.80	658.82
bb	42+20.00	-2.50	658.80	658.84
cc	42+30.00	-2.50	658.80	658.85
dd	42+40.00	-2.50	658.80	658.86
ee	42+50.00	-2.50	658.80	658.85
ff	42+60.00	-2.50	658.80	658.84
gg	42+70.00	-2.50	658.80	658.82
hh	42+80.00	-2.50	658.80	658.80
☉ Pier 4	42+90.00	-2.50	658.80	658.80
ii	43+00.00	-2.50	658.80	658.81
jj	43+10.00	-2.50	658.80	658.82
kk	43+20.00	-2.50	658.80	658.84
ll	43+30.00	-2.50	658.80	658.86
mm	43+40.00	-2.50	658.80	658.86
nn	43+50.00	-2.50	658.80	658.85
oo	43+60.00	-2.50	658.80	658.83
☉ Brg. N. Abut.	43+70.00	-2.50	658.80	658.80
Bk. of N. Abut.	43+73.25	-2.50	658.80	658.80

☉ ROADWAY & P.G.

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of S. Abut.	39+06.75	0.00	658.85	658.85
☉ Brg. S. Abut.	39+10.00	0.00	658.85	658.85
a	39+20.00	0.00	658.85	658.88
b	39+30.00	0.00	658.85	658.90
c	39+40.00	0.00	658.85	658.91
d	39+50.00	0.00	658.85	658.91
e	39+60.00	0.00	658.85	658.89
f	39+70.00	0.00	658.85	658.88
g	39+80.00	0.00	658.85	658.86
☉ Pier 1	39+90.00	0.00	658.85	658.85
h	40+00.00	0.00	658.85	658.86
i	40+10.00	0.00	658.85	658.87
j	40+20.00	0.00	658.85	658.89
k	40+30.00	0.00	658.85	658.90
l	40+40.00	0.00	658.85	658.91
m	40+50.00	0.00	658.85	658.90
n	40+60.00	0.00	658.85	658.89
o	40+70.00	0.00	658.85	658.87
p	40+80.00	0.00	658.85	658.86
☉ Pier 2	40+90.00	0.00	658.85	658.85
q	41+00.00	0.00	658.85	658.86
r	41+10.00	0.00	658.85	658.87
s	41+20.00	0.00	658.85	658.89
t	41+30.00	0.00	658.85	658.91
u	41+40.00	0.00	658.85	658.91
v	41+50.00	0.00	658.85	658.91
w	41+60.00	0.00	658.85	658.89
x	41+70.00	0.00	658.85	658.87
y	41+80.00	0.00	658.85	658.86
☉ Pier 3	41+90.00	0.00	658.85	658.85
z	42+00.00	0.00	658.85	658.86
aa	42+10.00	0.00	658.85	658.87
bb	42+20.00	0.00	658.85	658.89
cc	42+30.00	0.00	658.85	658.90
dd	42+40.00	0.00	658.85	658.91
ee	42+50.00	0.00	658.85	658.90
ff	42+60.00	0.00	658.85	658.89
gg	42+70.00	0.00	658.85	658.87
hh	42+80.00	0.00	658.85	658.86
☉ Pier 4	42+90.00	0.00	658.85	658.85
ii	43+00.00	0.00	658.85	658.86
jj	43+10.00	0.00	658.85	658.88
kk	43+20.00	0.00	658.85	658.89
ll	43+30.00	0.00	658.85	658.91
mm	43+40.00	0.00	658.85	658.91
nn	43+50.00	0.00	658.85	658.90
oo	43+60.00	0.00	658.85	658.88
☉ Brg. N. Abut.	43+70.00	0.00	658.85	658.85
Bk. of N. Abut.	43+73.25	0.00	658.85	658.85



To determine "f": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown on sheet 3 of 25. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown above and on sheet 5 of 25, minus slab thickness, equals the fillet heights "f" above top flange of beams.

FILLET HEIGHTS

ESCA
CONSULTANTS, INC.

DESIGNED BY:	FMA/MTD	10/09
DRAWN BY:	DWH/HAS	11/09
CHECKED BY:	MTD	11/09
APPROVED BY:	RDP	05/10

E-S 11/10/09

(Sheet 2 of 3)
TOP OF SLAB ELEVATIONS
STRUCTURE NO. 074-0085

SHEET NO. 4 25 SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	535	08-00255-00-BR	PIATT	62	28
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT		
CONTRACT NO. 91436					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BEAM 4

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of S. Abut.	39+06.75	2.50	658.80	658.80
⊕ Brg. S. Abut.	39+10.00	2.50	658.80	658.80
a	39+20.00	2.50	658.80	658.83
b	39+30.00	2.50	658.80	658.85
c	39+40.00	2.50	658.80	658.86
d	39+50.00	2.50	658.80	658.86
e	39+60.00	2.50	658.80	658.84
f	39+70.00	2.50	658.80	658.82
g	39+80.00	2.50	658.80	658.81
⊕ Pier 1	39+90.00	2.50	658.80	658.80
h	40+00.00	2.50	658.80	658.80
i	40+10.00	2.50	658.80	658.82
j	40+20.00	2.50	658.80	658.84
k	40+30.00	2.50	658.80	658.85
l	40+40.00	2.50	658.80	658.86
m	40+50.00	2.50	658.80	658.85
n	40+60.00	2.50	658.80	658.84
o	40+70.00	2.50	658.80	658.82
p	40+80.00	2.50	658.80	658.80
⊕ Pier 2	40+90.00	2.50	658.80	658.80
q	41+00.00	2.50	658.80	658.81
r	41+10.00	2.50	658.80	658.82
s	41+20.00	2.50	658.80	658.84
t	41+30.00	2.50	658.80	658.86
u	41+40.00	2.50	658.80	658.86
v	41+50.00	2.50	658.80	658.86
w	41+60.00	2.50	658.80	658.84
x	41+70.00	2.50	658.80	658.82
y	41+80.00	2.50	658.80	658.81
⊕ Pier 3	41+90.00	2.50	658.80	658.80
z	42+00.00	2.50	658.80	658.80
aa	42+10.00	2.50	658.80	658.82
bb	42+20.00	2.50	658.80	658.84
cc	42+30.00	2.50	658.80	658.85
dd	42+40.00	2.50	658.80	658.86
ee	42+50.00	2.50	658.80	658.85
ff	42+60.00	2.50	658.80	658.84
gg	42+70.00	2.50	658.80	658.82
hh	42+80.00	2.50	658.80	658.80
⊕ Pier 4	42+90.00	2.50	658.80	658.80
ii	43+00.00	2.50	658.80	658.81
jj	43+10.00	2.50	658.80	658.82
kk	43+20.00	2.50	658.80	658.84
ll	43+30.00	2.50	658.80	658.86
mm	43+40.00	2.50	658.80	658.86
nn	43+50.00	2.50	658.80	658.85
oo	43+60.00	2.50	658.80	658.83
⊕ Brg. N. Abut.	43+70.00	2.50	658.80	658.80
Bk. of N. Abut.	43+73.25	2.50	658.80	658.80

BEAM 5

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of S. Abut.	39+06.75	7.50	658.69	658.69
⊕ Brg. S. Abut.	39+10.00	7.50	658.69	658.69
a	39+20.00	7.50	658.69	658.72
b	39+30.00	7.50	658.69	658.75
c	39+40.00	7.50	658.69	658.76
d	39+50.00	7.50	658.69	658.75
e	39+60.00	7.50	658.69	658.74
f	39+70.00	7.50	658.69	658.72
g	39+80.00	7.50	658.69	658.70
⊕ Pier 1	39+90.00	7.50	658.69	658.69
h	40+00.00	7.50	658.69	658.70
i	40+10.00	7.50	658.69	658.71
j	40+20.00	7.50	658.69	658.73
k	40+30.00	7.50	658.69	658.75
l	40+40.00	7.50	658.69	658.75
m	40+50.00	7.50	658.69	658.75
n	40+60.00	7.50	658.69	658.73
o	40+70.00	7.50	658.69	658.72
p	40+80.00	7.50	658.69	658.70
⊕ Pier 2	40+90.00	7.50	658.69	658.69
q	41+00.00	7.50	658.69	658.70
r	41+10.00	7.50	658.69	658.72
s	41+20.00	7.50	658.69	658.74
t	41+30.00	7.50	658.69	658.75
u	41+40.00	7.50	658.69	658.76
v	41+50.00	7.50	658.69	658.75
w	41+60.00	7.50	658.69	658.74
x	41+70.00	7.50	658.69	658.72
y	41+80.00	7.50	658.69	658.70
⊕ Pier 3	41+90.00	7.50	658.69	658.69
z	42+00.00	7.50	658.69	658.70
aa	42+10.00	7.50	658.69	658.72
bb	42+20.00	7.50	658.69	658.73
cc	42+30.00	7.50	658.69	658.75
dd	42+40.00	7.50	658.69	658.75
ee	42+50.00	7.50	658.69	658.75
ff	42+60.00	7.50	658.69	658.73
gg	42+70.00	7.50	658.69	658.71
hh	42+80.00	7.50	658.69	658.70
⊕ Pier 4	42+90.00	7.50	658.69	658.69
ii	43+00.00	7.50	658.69	658.70
jj	43+10.00	7.50	658.69	658.72
kk	43+20.00	7.50	658.69	658.74
ll	43+30.00	7.50	658.69	658.75
mm	43+40.00	7.50	658.69	658.76
nn	43+50.00	7.50	658.69	658.75
oo	43+60.00	7.50	658.69	658.72
⊕ Brg. N. Abut.	43+70.00	7.50	658.69	658.69
Bk. of N. Abut.	43+73.25	7.50	658.69	658.69

BEAM 6

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of S. Abut.	39+06.75	12.50	658.59	658.59
⊕ Brg. S. Abut.	39+10.00	12.50	658.59	658.59
a	39+20.00	12.50	658.59	658.63
b	39+30.00	12.50	658.59	658.66
c	39+40.00	12.50	658.59	658.68
d	39+50.00	12.50	658.59	658.67
e	39+60.00	12.50	658.59	658.65
f	39+70.00	12.50	658.59	658.63
g	39+80.00	12.50	658.59	658.60
⊕ Pier 1	39+90.00	12.50	658.59	658.59
h	40+00.00	12.50	658.59	658.60
i	40+10.00	12.50	658.59	658.62
j	40+20.00	12.50	658.59	658.64
k	40+30.00	12.50	658.59	658.66
l	40+40.00	12.50	658.59	658.67
m	40+50.00	12.50	658.59	658.67
n	40+60.00	12.50	658.59	658.65
o	40+70.00	12.50	658.59	658.62
p	40+80.00	12.50	658.59	658.60
⊕ Pier 2	40+90.00	12.50	658.59	658.59
q	41+00.00	12.50	658.59	658.60
r	41+10.00	12.50	658.59	658.62
s	41+20.00	12.50	658.59	658.65
t	41+30.00	12.50	658.59	658.67
u	41+40.00	12.50	658.59	658.68
v	41+50.00	12.50	658.59	658.67
w	41+60.00	12.50	658.59	658.65
x	41+70.00	12.50	658.59	658.62
y	41+80.00	12.50	658.59	658.60
⊕ Pier 3	41+90.00	12.50	658.59	658.59
z	42+00.00	12.50	658.59	658.60
aa	42+10.00	12.50	658.59	658.62
bb	42+20.00	12.50	658.59	658.65
cc	42+30.00	12.50	658.59	658.67
dd	42+40.00	12.50	658.59	658.67
ee	42+50.00	12.50	658.59	658.66
ff	42+60.00	12.50	658.59	658.64
gg	42+70.00	12.50	658.59	658.62
hh	42+80.00	12.50	658.59	658.60
⊕ Pier 4	42+90.00	12.50	658.59	658.59
ii	43+00.00	12.50	658.59	658.60
jj	43+10.00	12.50	658.59	658.63
kk	43+20.00	12.50	658.59	658.65
ll	43+30.00	12.50	658.59	658.67
mm	43+40.00	12.50	658.59	658.68
nn	43+50.00	12.50	658.59	658.66
oo	43+60.00	12.50	658.59	658.63
⊕ Brg. N. Abut.	43+70.00	12.50	658.59	658.59
Bk. of N. Abut.	43+73.25	12.50	658.59	658.59

(Sheet 3 of 3)

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 074-0085

SHEET NO. 5 25 SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	535	08-00255-00-BR	PIATT	62	29
CONTRACT NO. 91436					
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT			

ESCA
CONSULTANTS, INC.

DESIGNED BY:	FMA/MTD	10/09
DRAWN BY:	DWH/HAS	11/09
CHECKED BY:	MTD	11/09
APPROVED BY:	RDP	05/10

E-S 11-1-09

E:\2010\074-0085\05-11-09\074-0085-03.dwg

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WEST EDGE OF SHOULDER

Location	Station	Offset (ft.)	Theoretical Grade Elevations
S. End South Appr. Slab	38+77.25	-15.00	658.54
A1	38+87.25	-15.00	658.54
A2	38+97.25	-15.00	658.54
N. End South Appr. Slab	39+07.25	-15.00	658.54

WEST EDGE OF PAVEMENT

Location	Station	Offset (ft.)	Theoretical Grade Elevations
S. End South Appr. Slab	38+77.25	-12.00	658.60
A1	38+87.25	-12.00	658.60
A2	38+97.25	-12.00	658.60
N. End South Appr. Slab	39+07.25	-12.00	658.60

℄ ROADWAY & P.G.

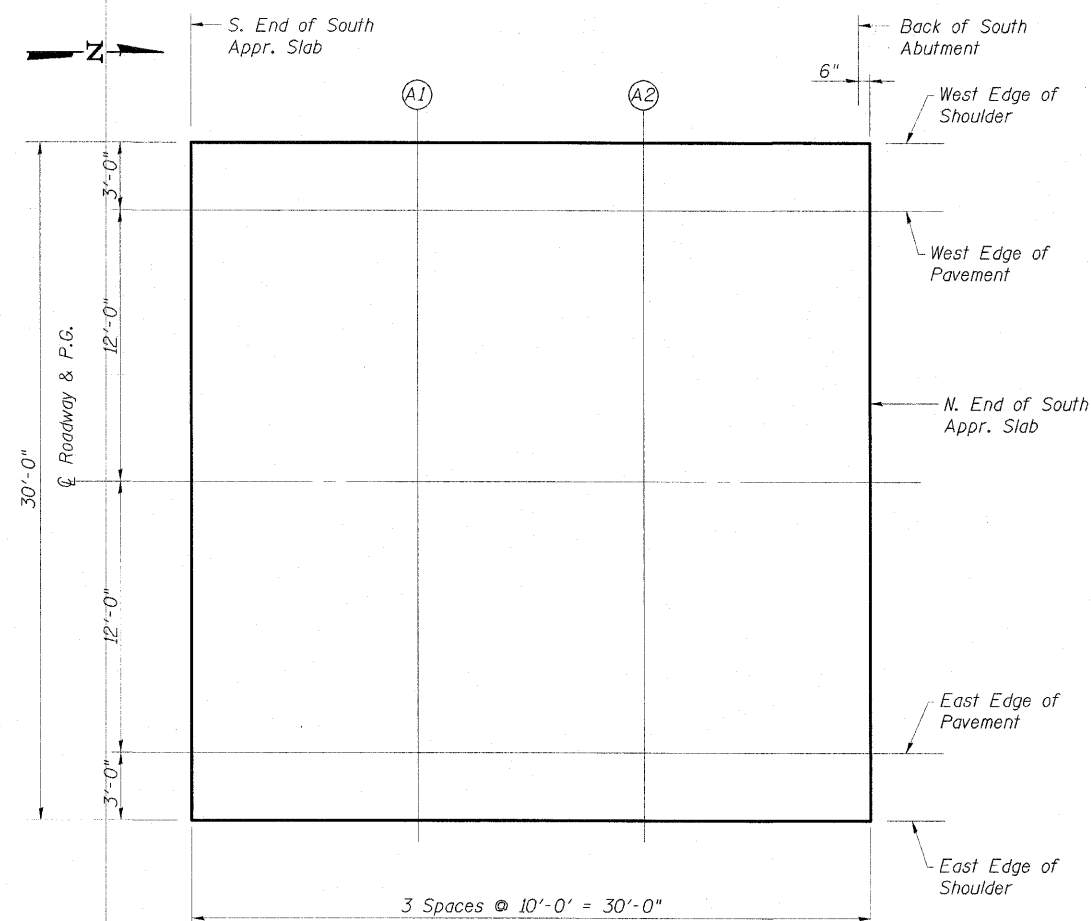
Location	Station	Offset (ft.)	Theoretical Grade Elevations
S. End South Appr. Slab	38+77.25	0.00	658.85
A1	38+87.25	0.00	658.85
A2	38+97.25	0.00	658.85
N. End South Appr. Slab	39+07.25	0.00	658.85

EAST EDGE OF PAVEMENT

Location	Station	Offset (ft.)	Theoretical Grade Elevations
S. End South Appr. Slab	38+77.25	12.00	658.60
A1	38+87.25	12.00	658.60
A2	38+97.25	12.00	658.60
N. End South Appr. Slab	39+07.25	12.00	658.60

EAST EDGE OF SHOULDER

Location	Station	Offset (ft.)	Theoretical Grade Elevations
S. End South Appr. Slab	38+77.25	15.00	658.54
A1	38+87.25	15.00	658.54
A2	38+97.25	15.00	658.54
N. End South Appr. Slab	39+07.25	15.00	658.54



PLAN

TOP OF SOUTH
APPROACH SLAB ELEVATIONS
STRUCTURE NO. 074-0085

ESCA
CONSULTANTS, INC.

DESIGNED BY:	FMA/MTD	10/09
DRAWN BY:	DWH/HAS	11/09
CHECKED BY:	MTD	11/09
APPROVED BY:	RDP	05/10

E-AS 11/1/09

SHEET NO.	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6	535	08-00255-00-BR	PIATT	62	30
CONTRACT NO. 91436					
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WEST EDGE OF SHOULDER

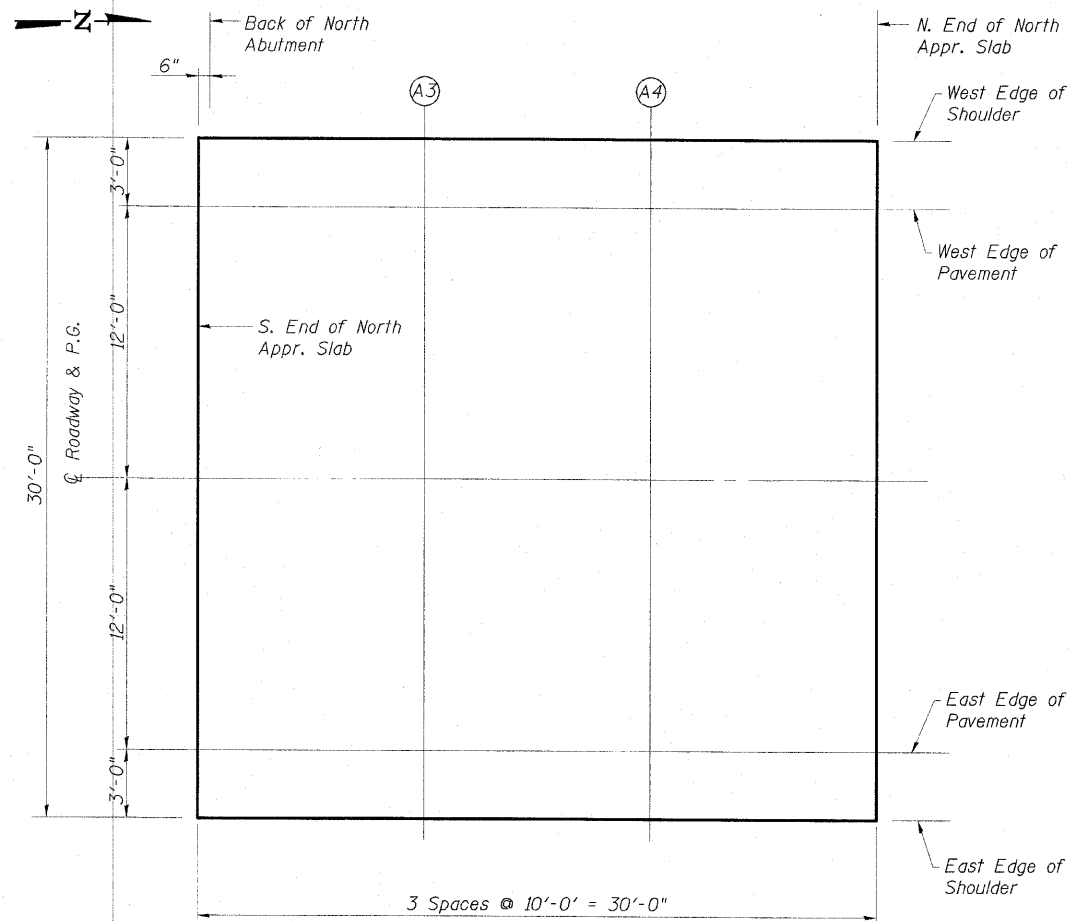
Location	Station	Offset (ft.)	Theoretical Grade Elevations
S. End North Appr. Slab	43+72.75	-15.00	658.54
A3	43+82.75	-15.00	658.54
A4	43+92.75	-15.00	658.54
N. End North Appr. Slab	44+02.75	-15.00	658.54

WEST EDGE OF PAVEMENT

Location	Station	Offset (ft.)	Theoretical Grade Elevations
S. End North Appr. Slab	43+72.75	-12.00	658.60
A3	43+82.75	-12.00	658.60
A4	43+92.75	-12.00	658.60
N. End North Appr. Slab.	44+02.75	-12.00	658.60

CL ROADWAY & P.G.

Location	Station	Offset (ft.)	Theoretical Grade Elevations
S. End North Appr. Slab	43+72.75	0.00	658.85
A3	43+82.75	0.00	658.85
A4	43+92.75	0.00	658.85
N. End North Appr. Slab	44+02.75	0.00	658.85



PLAN

EAST EDGE OF PAVEMENT

Location	Station	Offset (ft.)	Theoretical Grade Elevations
S. End North Appr. Slab	43+72.75	12.00	658.60
A3	43+82.75	12.00	658.60
A4	43+92.75	12.00	658.60
N. End North Appr. Slab	44+02.75	12.00	658.60

EAST EDGE OF SHOULDER

Location	Station	Offset (ft.)	Theoretical Grade Elevations
S. End North Appr. Slab	43+72.75	15.00	658.54
A3	43+82.75	15.00	658.54
A4	43+92.75	15.00	658.54
N. End North Appr. Slab	44+02.75	15.00	658.54

TOP OF NORTH
APPROACH SLAB ELEVATIONS
STRUCTURE NO. 074-0085

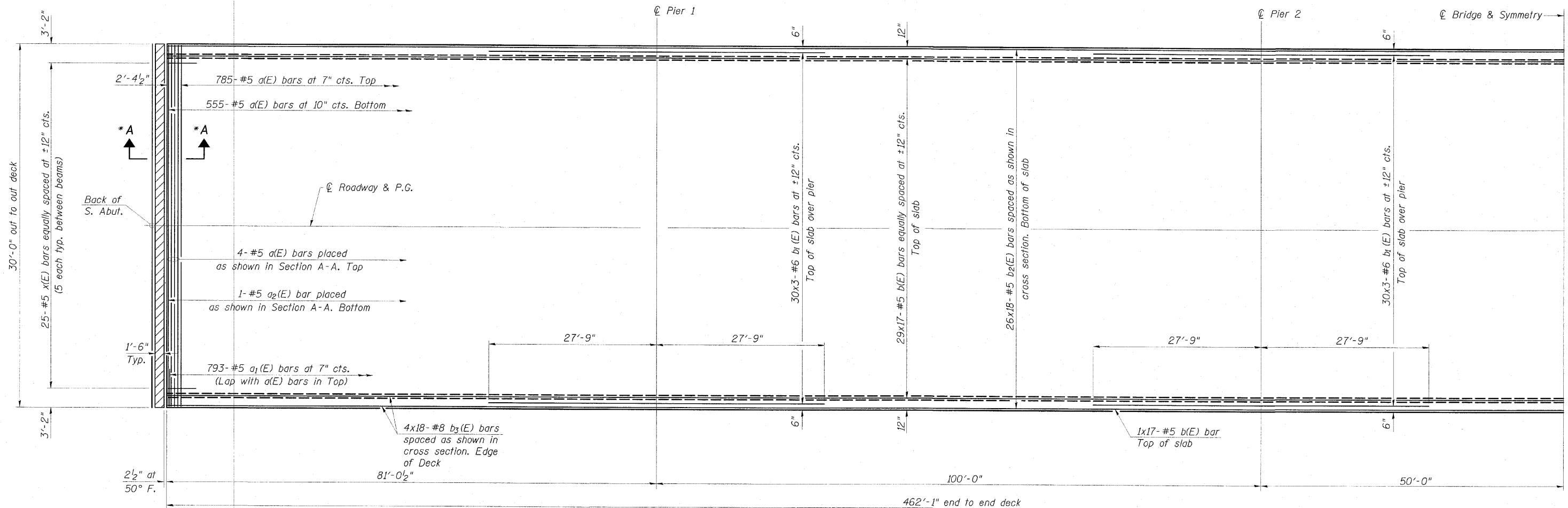
ESCA
CONSULTANTS, INC.

DESIGNED BY:	FMA/MTD	10/09
DRAWN BY:	DWH/HAS	11/09
CHECKED BY:	MTD	11/09
APPROVED BY:	RDP	05/10

E-AS 11-1-09

SHEET NO. 7 25 SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	535	08-00255-00-BR	PIATT	62	31
CONTRACT NO. 91436					
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



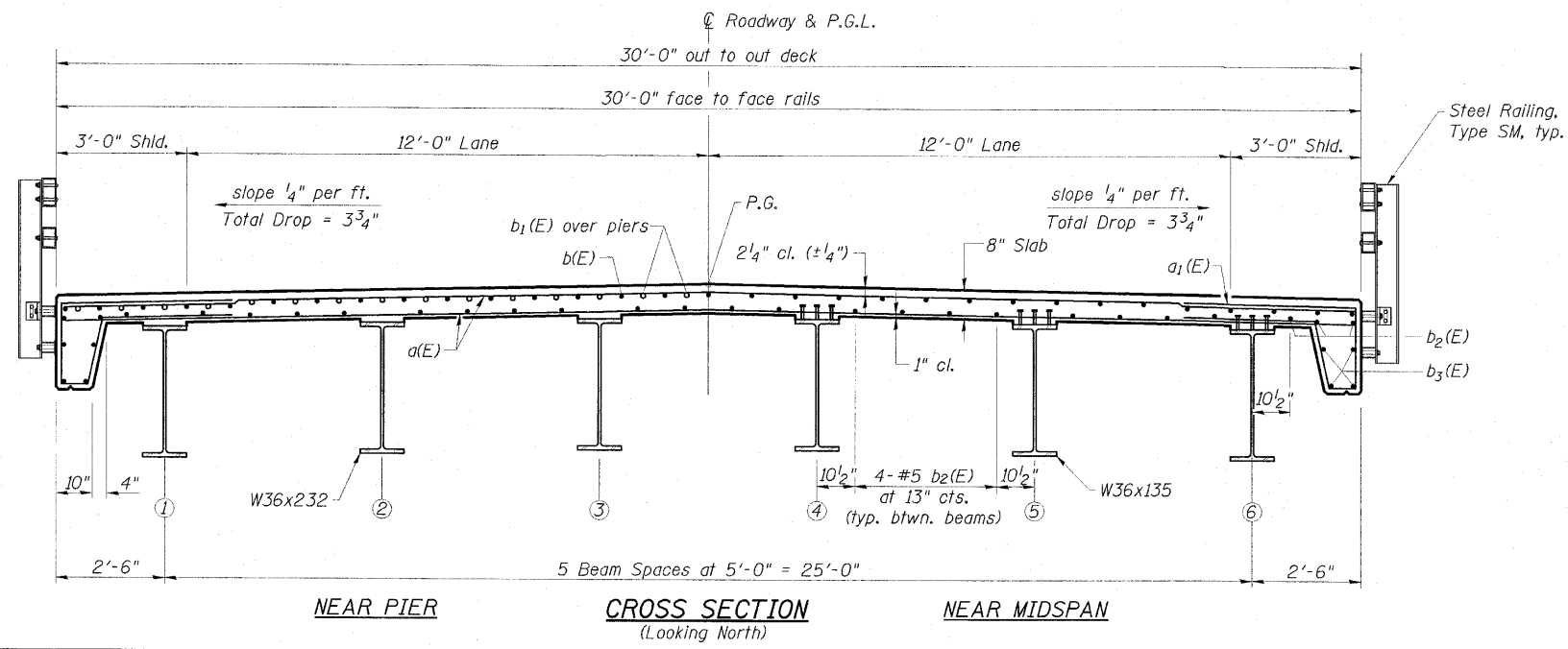
* Section A-A on sheet 9 of 25

PARTIAL PLAN

MINIMUM BAR LAP

- (Slab)
 #5 bar = 3'-3"
 #6 bar = 3'-10"
 #8 bar = 6'-9"

Notes:
 See sheet 9 of 25 for superstructure details and Bill of Material.
 Bars indicated thus 29 x 17-#5 etc. indicates 29 lines of bars with 17 lengths per line.



CROSS SECTION
(Looking North)

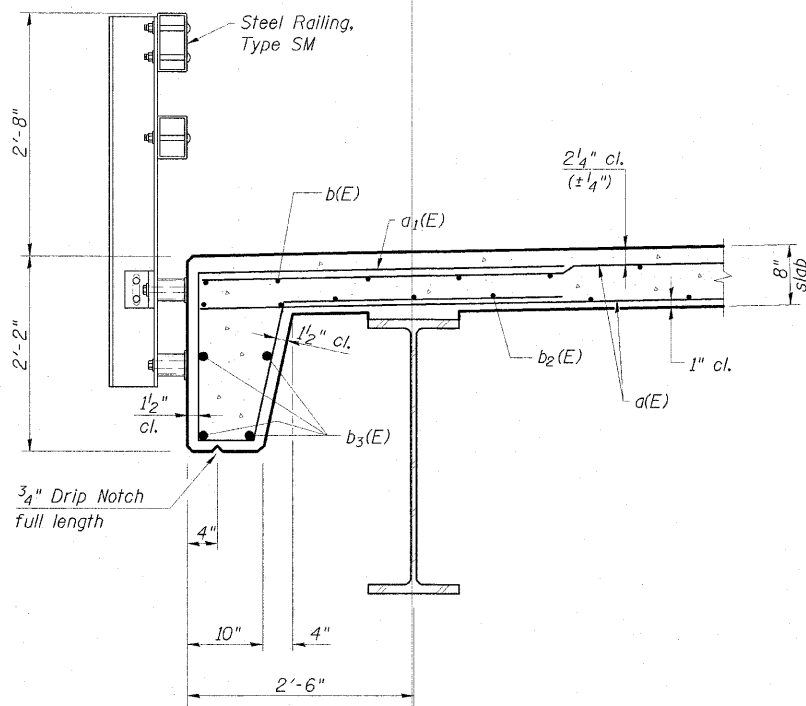
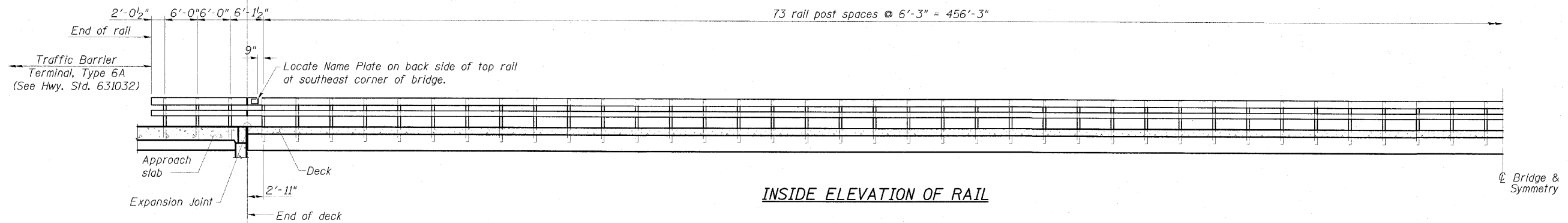
**SUPERSTRUCTURE
STRUCTURE NO. 074-0085**

ESCA
CONSULTANTS, INC.

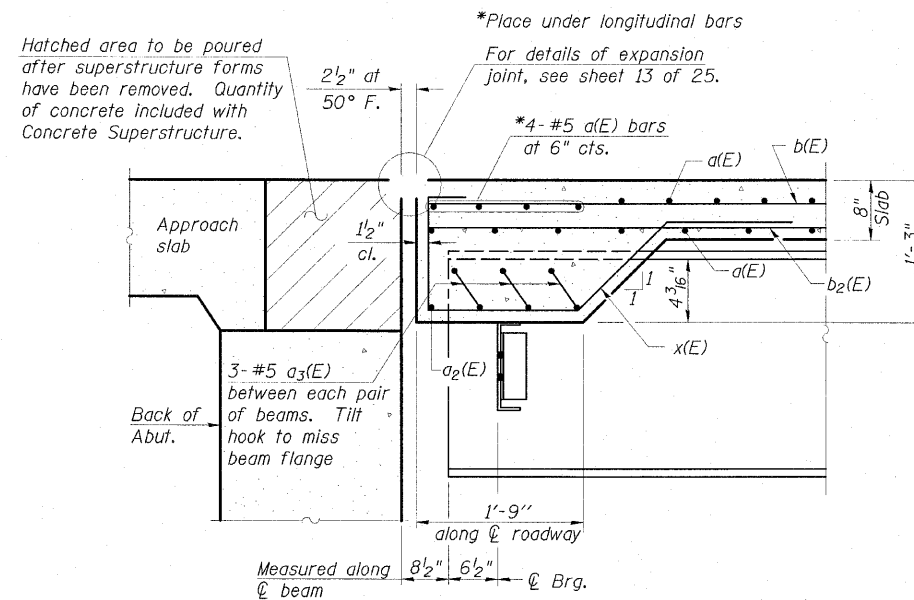
DESIGNED BY:	FMA/MTD	11/09
DRAWN BY:	DWH/HAS	11/09
CHECKED BY:	MTD	11/09
APPROVED BY:	RDP	05/10

SHEET NO. 8 25 SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	535	08-00255-00-BR	PIATT	62	32
CONTRACT NO. 91436					
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					

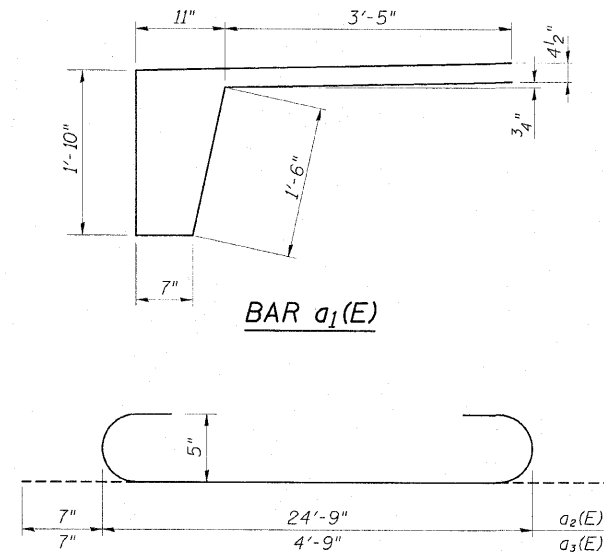
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



SECTION THRU EDGE OF DECK



SECTION A-A



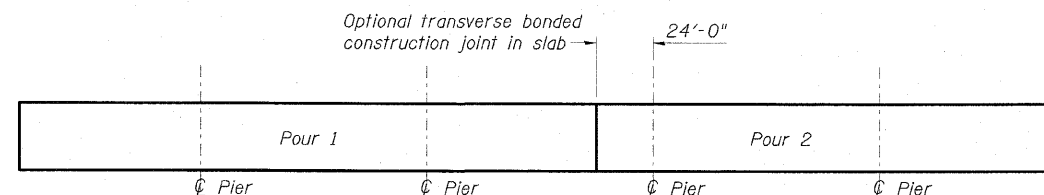
BAR a₁(E)

BARS a₂(E) & a₃(E)

BAR x(E)

SUPERSTRUCTURE
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	1348	#5	29'-8"	—
a ₁ (E)	1586	#5	11'-8"	—
a ₂ (E)	2	#5	25'-11"	—
a ₃ (E)	30	#5	5'-11"	—
b(E)	527	#5	30'-3"	—
b ₁ (E)	360	#6	21'-1"	—
b ₂ (E)	468	#5	28'-9"	—
b ₃ (E)	144	#8	32'-1"	—
x(E)	50	#5	6'-5"	—
Concrete Superstructure			Cu. Yd.	418.1
Reinforcement Bars, Epoxy Coated			Pound	115,980



DECK POURING SEQUENCE

(Pouring sequence may start from either end.)

When the deck pour is stopped for the day at the transverse bonded construction joint in the deck pouring sequence as shown, the next pour shall not be made until both of the following are met:

1. At least 72 hours shall have elapsed from the end of the previous pour.
2. The concrete strength shall have attained a minimum flexural strength of 650 psi or a minimum compressive strength of 3500 psi.

SUPERSTRUCTURE DETAILS
STRUCTURE NO. 074-0085

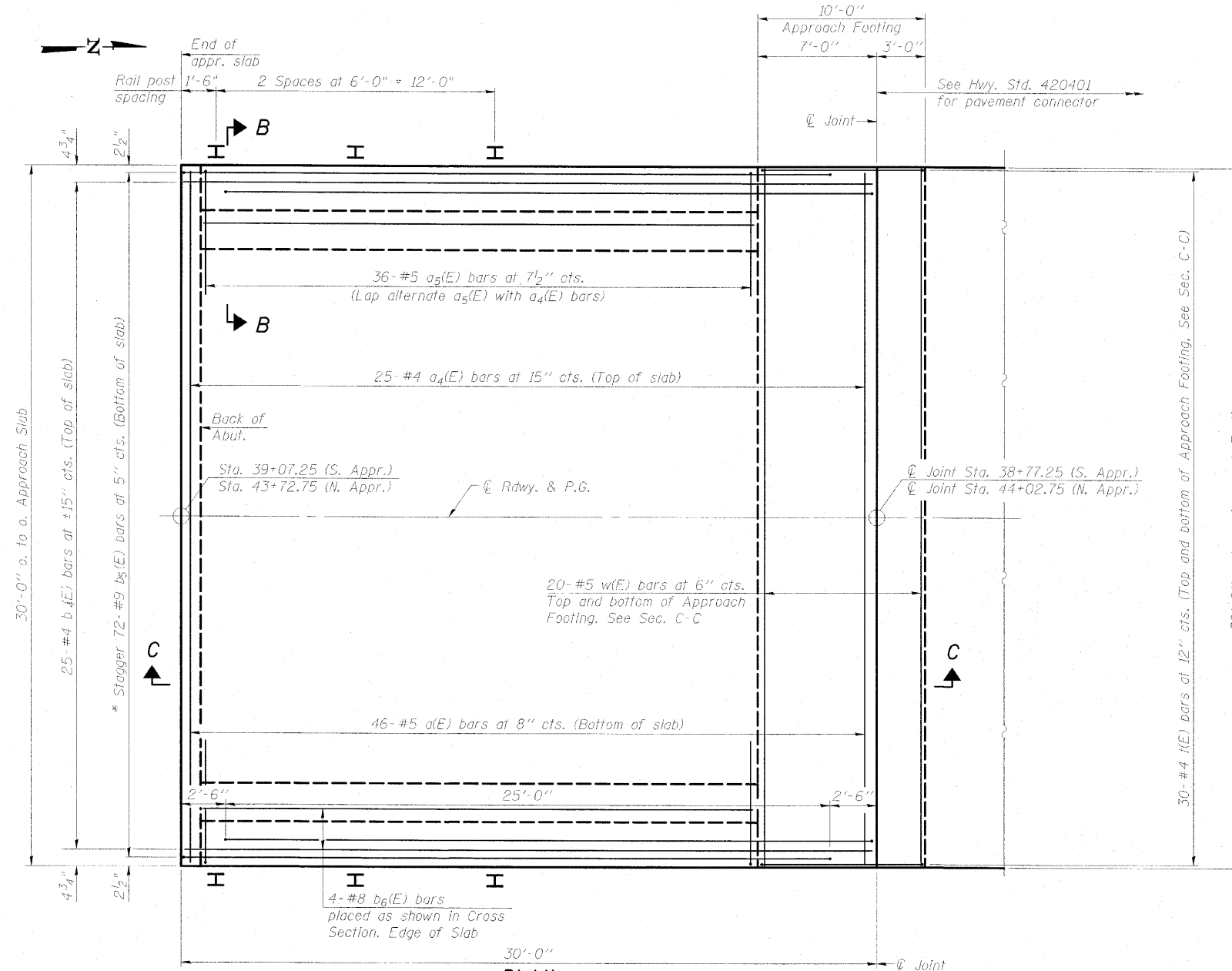
SHEET NO. 9 25 SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	535	08-00255-00-BR	PIATT	62	33
CONTRACT NO. 91436					
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					

ESCA
CONSULTANTS, INC.

DESIGNED BY: MTD 11/09
DRAWN BY: HAS/DWH 11/09
CHECKED BY: MTD 11/09
APPROVED BY: RDP 05/10

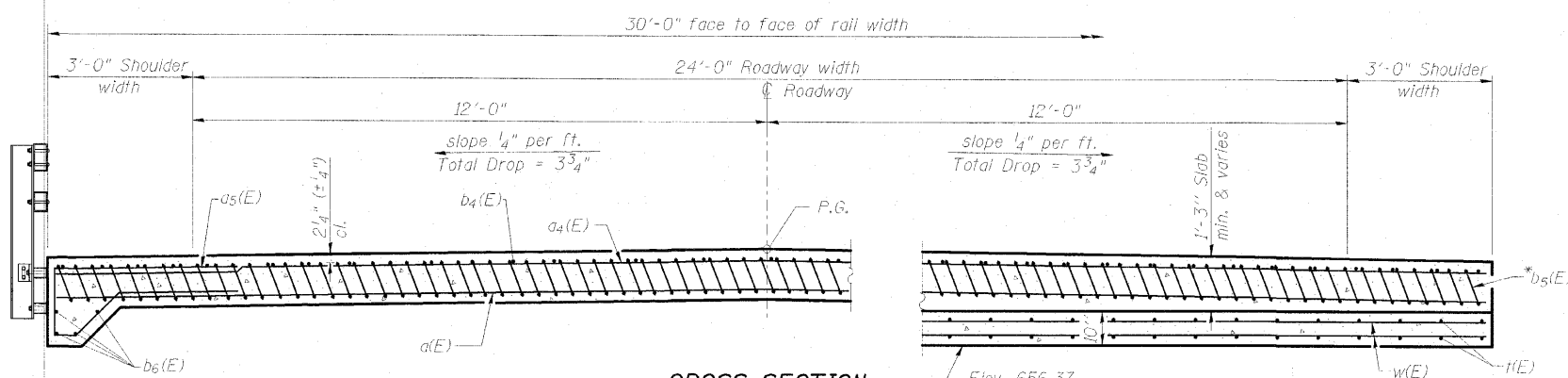
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Notes:
See sheet 11 of 25 for Sections and Bill of Material.
a(E), a₄(E), and a₅(E) bar spacings measured along $\text{\textcircled{C}}$ Rdwy.



* Tilt #9 b₅(E) bars as required to maintain clearance.
(N. Appr. shown, S. Appr. opposite hand)

PLAN



CROSS SECTION

Note:
See Plan for dimensions not shown.

(Sheet 1 of 2)
BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 074-0085

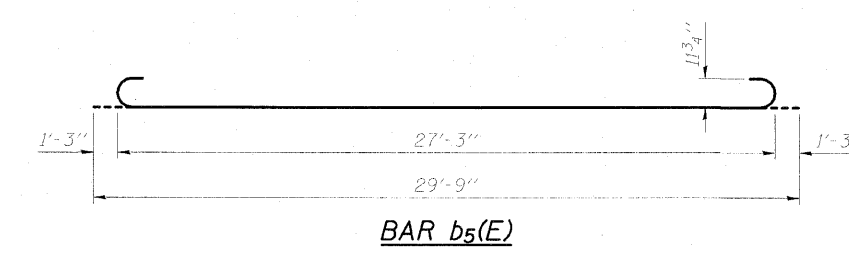
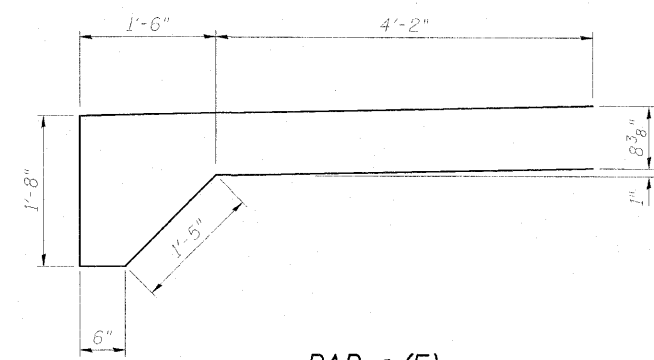
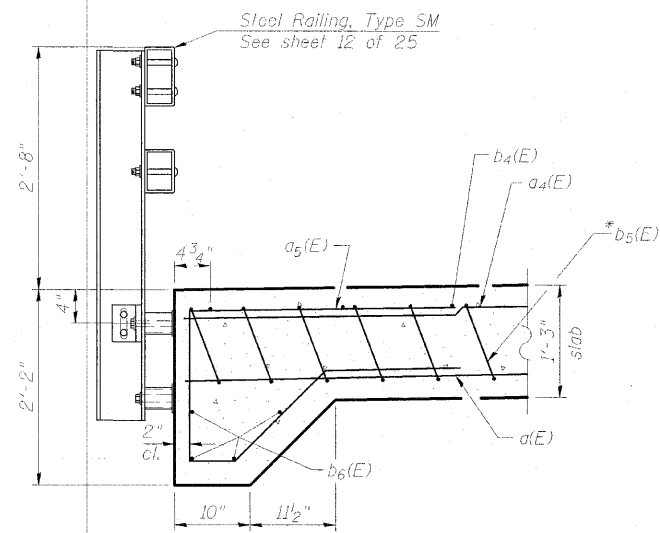
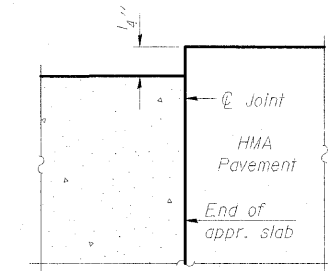
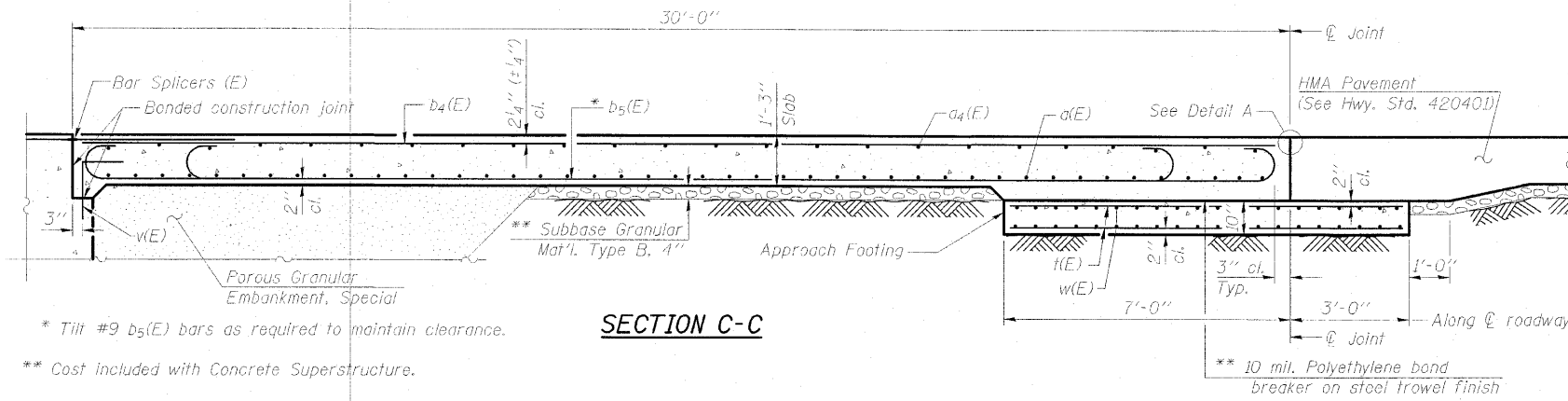
ESCA
CONSULTANTS, INC.

DESIGNED BY:	MTD	11/09
DRAWN BY:	DWH/HAS	11/09
CHECKED BY:	MTD	11/09
APPROVED BY:	RDP	05/10

SHEET NO. 10 25 SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	535	08-00255-00-BR	PIATT	62	34
CONTRACT NO. 91436					
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Notes:
 Approach slab concrete shall be paid for as Concrete Superstructure.
 Approach footing concrete shall be paid for as Concrete Structures.
 Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
 For v(E) bar details, see sheet 17 of 25.
 The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
 For Bar Splicer details, see sheet 22 of 25.
 Cost of excavation for approach footing included with Concrete Structures.
 For Porous Granular Embankment, Special and drainage treatment details, see sheet 2 of 25.



TWO APPROACHES
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a ₁ (E)	92	#5	29'-8"	—
a ₄ (E)	50	#4	29'-8"	—
a ₅ (E)	144	#5	13'-5"	U
b ₄ (E)	50	#4	29'-8"	—
b ₅ (E)	144	#9	29'-9"	U
b ₆ (E)	16	#8	22'-2"	—
l(E)	120	#4	9'-8"	—
w(E)	80	#5	29'-8"	—
Concrete Structures			Cu. Yd.	18.5
Concrete Superstructure			Cu. Yd.	91.6
Reinforcement Bars, Epoxy Coated			Pound	25,610

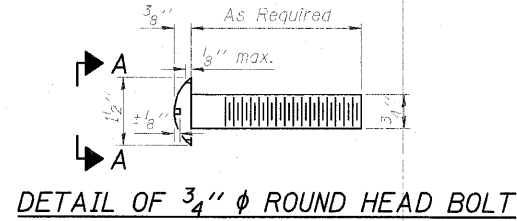
ESCA
CONSULTANTS, INC.
 DESIGNED BY: MTD 11/09
 DRAWN BY: RJT/HAS 11/09
 CHECKED BY: MTD 11/09
 APPROVED BY: RDP 05/10

(Sheet 2 of 2)
BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 074-0085

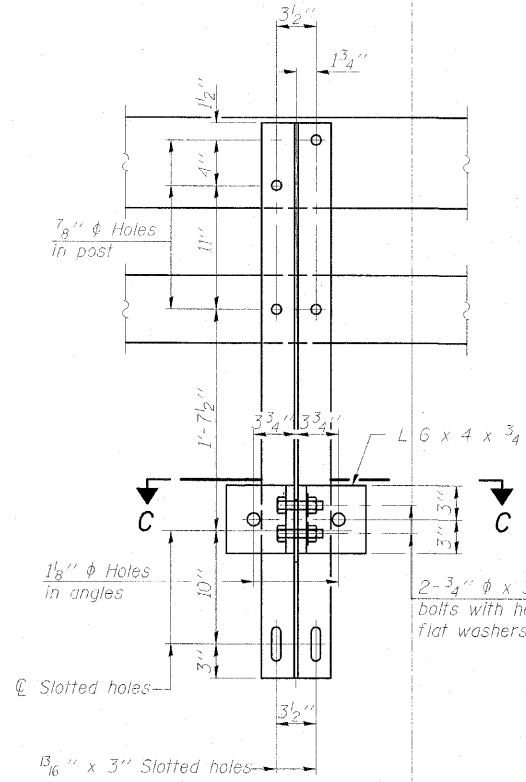
SHEET NO. 11 25 SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	535	08-00255-00-BR	PIATT	62	35
CONTRACT NO. 91436					
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		

0254408B003.dwg 5/26/2010 5:53:45 AM HAS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

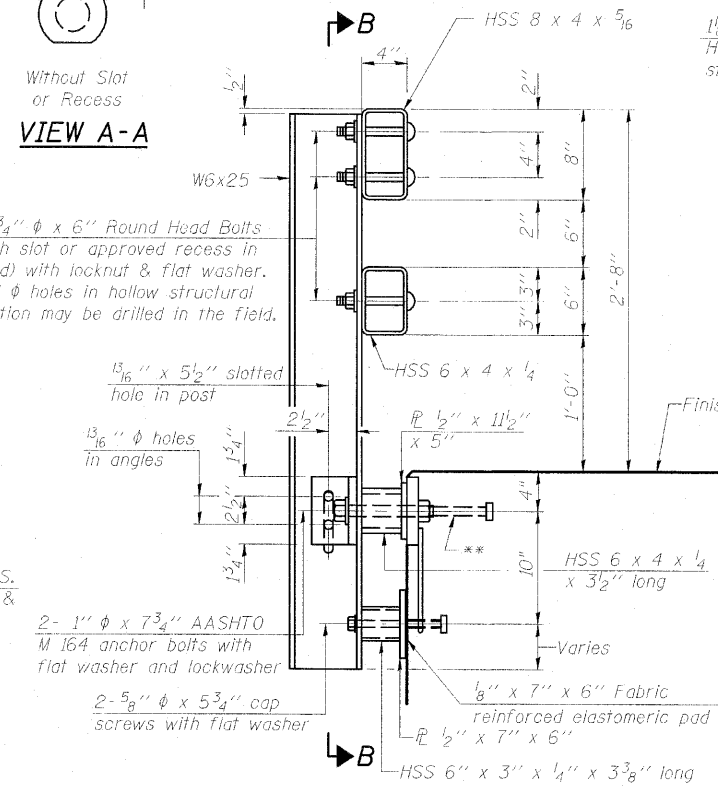


4-3/4" ϕ x 6" Round Head Bolts
(With slot or approved recess in head) with locknut & flat washer.
7/8" ϕ holes in hollow structural section may be drilled in the field.

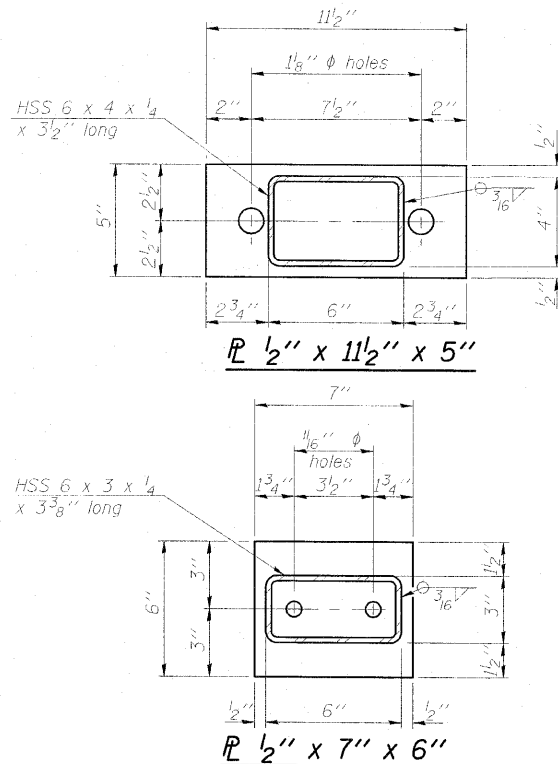


SECTION B-B

SECTION C-C

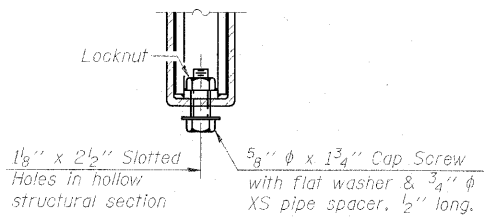


SECTION AT RAIL POST

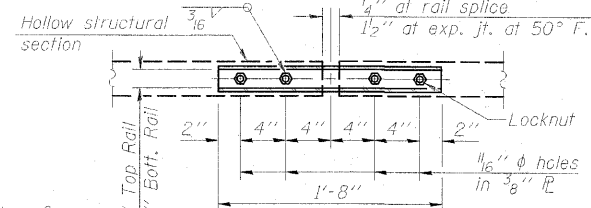


ANCHOR DEVICE

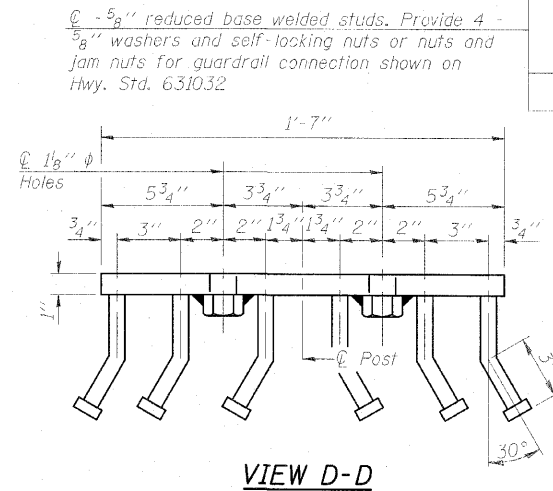
*Threaded areas shall be plugged or blocked off during casting of deck. Galvanized after fabrication.



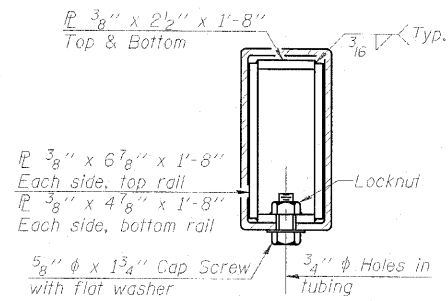
RAIL SPLICE CONNECTION
AT EXPANSION JT.



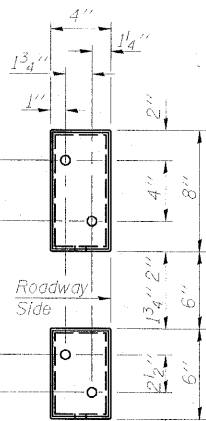
PLAN-BOTT. SPLICE R
TYPICAL



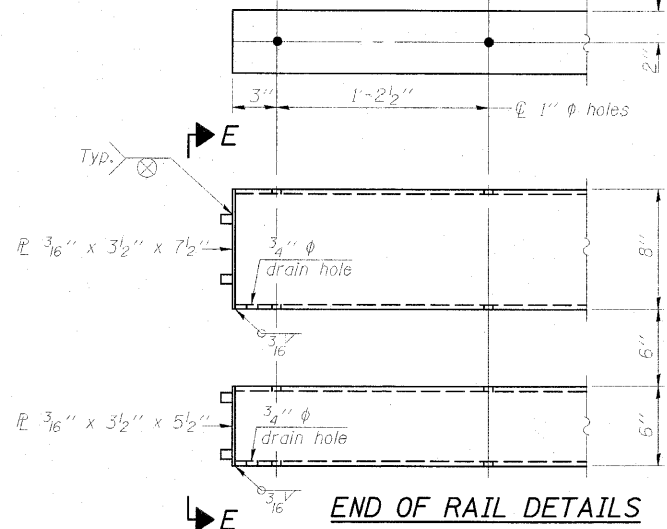
VIEW D-D



SECTION AT
RAIL SPLICE



VIEW E-E



END OF RAIL DETAILS

Notes:
All field drilled holes shall be coated with an approved zinc rich paint before erection.
For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type SM.
Steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.
** The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type SM	Foot	995

STEEL RAILING, TYPE SM
STRUCTURE NO. 074-0085

SHEET NO. 12 25 SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	535	08-00255-00-BR	PIATT	62	36
CONTRACT NO. 91436					
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					

ESCA
CONSULTANTS, INC.

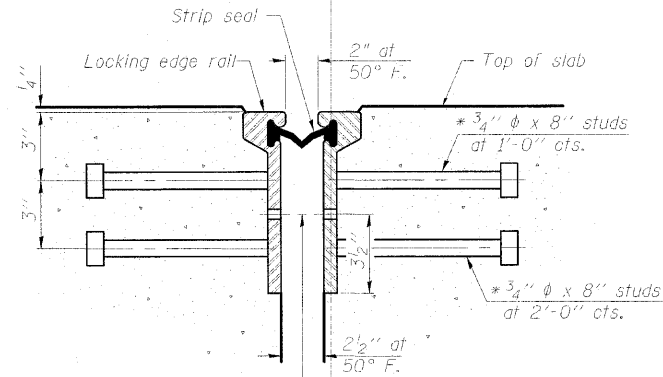
DESIGNED BY:	MTD	11/09
DRAWN BY:	DWH	11/09
CHECKED BY:	MTD	11/09
APPROVED BY:	RDP	05/10

(6'-3" Maximum Post Spacing)

HAS
 8/26/2010 8:34:45 AM
 82E44BBERC13.dgn

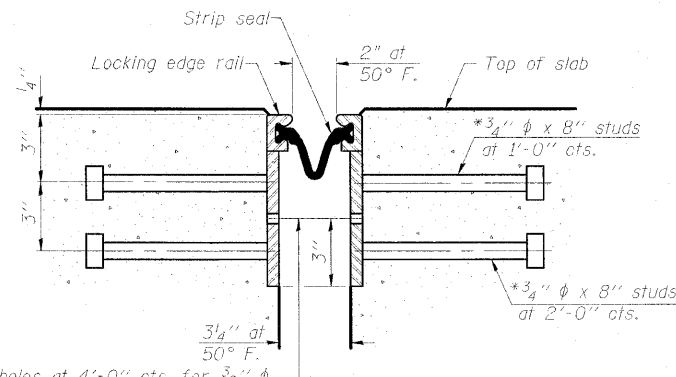
* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



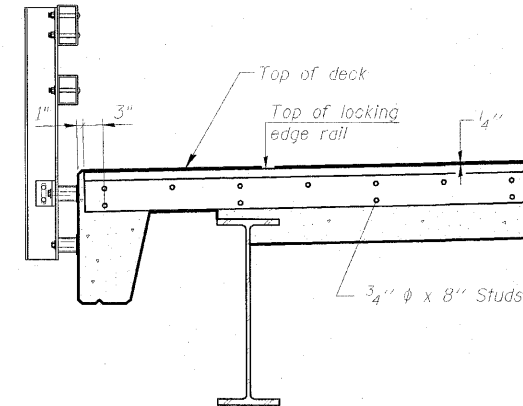
**SECTION THRU
ROLLED RAIL JOINT**

7/16" ϕ holes at 4'-0" cts. for 3/8" ϕ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.



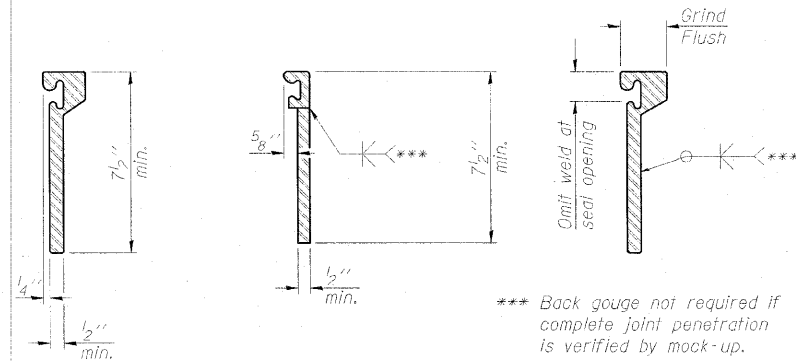
**SECTION THRU
WELDED RAIL JOINT**

7/16" ϕ holes at 4'-0" cts. for 3/8" ϕ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.



TYPICAL END TREATMENT

Shorter plates with a single row of studs at 12" cts. may be necessary on deck overhangs. See manufacturer's recommendation.



**ROLLED
EXTRUDED RAIL**

WELDED RAIL

**LOCKING EDGE
RAIL SPLICE**

The inside of the locking edge rail groove shall be free of weld residue.
Rolled rail shown, welded rail similar.

LOCKING EDGE RAILS

Notes:

The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.

The Locking Edge Rails depicted are conceptual only, except for the minimum dimensions shown. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities.

The manufacturer's recommended installation methods shall be followed. The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.

All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.

Maximum space between rail segments at stage lines shall be 3/16", sealed with a suitable sealant.

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	60

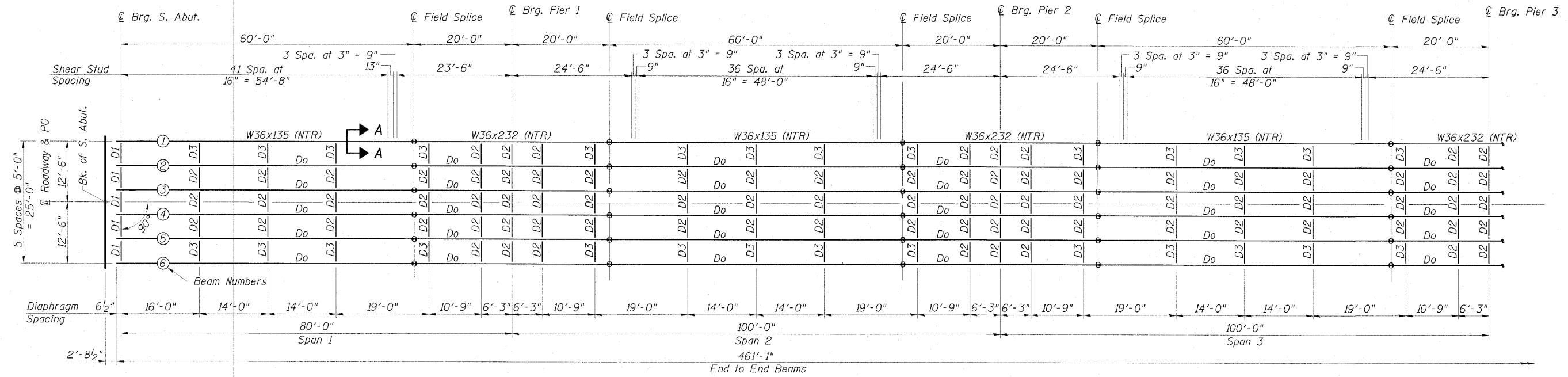
**PREFORMED JOINT STRIP SEAL
STRUCTURE NO. 074-0085**

ESCA
CONSULTANTS, INC.

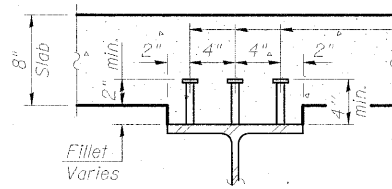
DESIGNED BY:	MTD	11/09
DRAWN BY:	RJT/HAS	11/09
CHECKED BY:	MTD	11/09
APPROVED BY:	RDP	05/10

SHEET NO. 13 25 SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	535	08-00255-00-BR	PIATT	62	37
				CONTRACT NO. 91436	
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

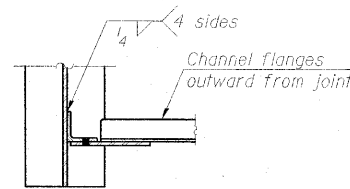


STEEL FRAMING PLAN (SPANS 1, 2 & 3)

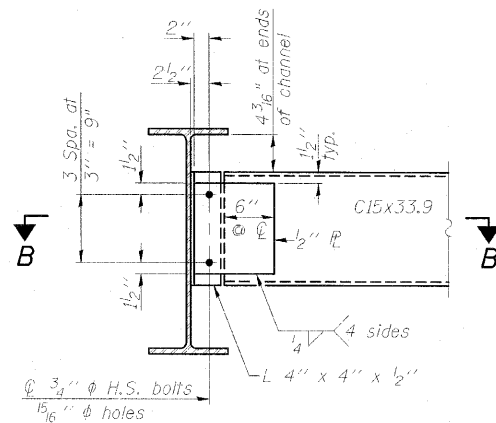


SECTION A-A

3/8" ϕ Granular or solid flux filled headed studs, automatically end welded to flange. (4,086 Required)

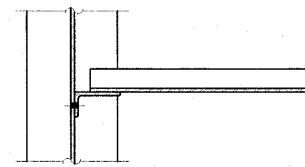


SECTION B-B

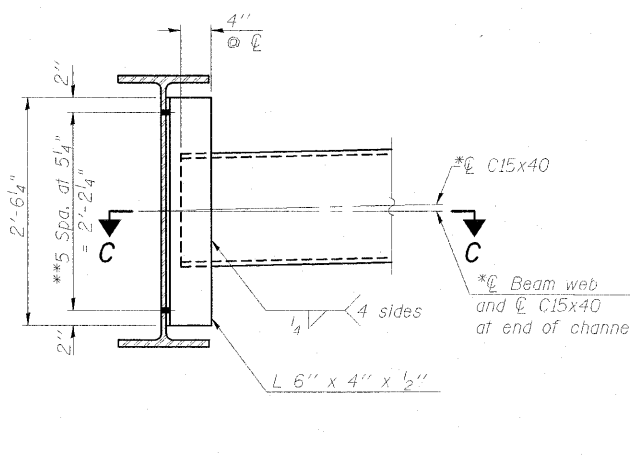


END DIAPHRAGM - D1

Notes:
(10 Required)
Two hardened washers required for each set of oversized holes.

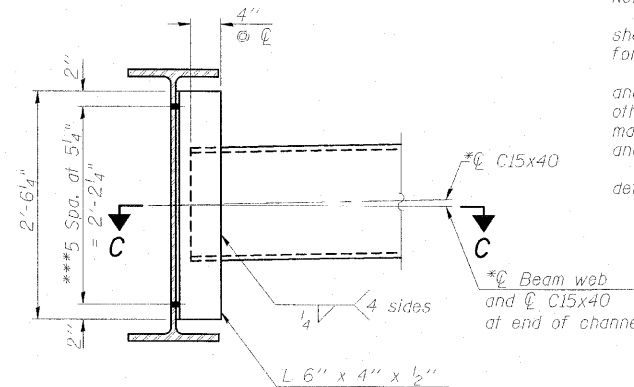


SECTION C-C



INTERIOR DIAPHRAGM - D2

Notes:
(129 Required)
Two hardened washers required for each set of oversized holes.
*Alternate channels (C15x50) are permitted to facilitate material acquisition. Calculated weight of structural steel is based on the lighter section. The alternate, if utilized, shall be provided at no additional cost to the Department.
***3/4" ϕ HS bolts, 15/16" ϕ holes



INTERIOR DIAPHRAGM - D3

Notes:
(46 Required)
Two hardened washers required for each set of oversized or slotted holes.
*Alternate channels (C15x50) are permitted to facilitate material acquisition. Calculated weight of structural steel is based on the lighter section. The alternate, if utilized, shall be provided at no additional cost to the Department.
***3/4" ϕ HS bolts, 15/16" ϕ holes in beam webs and connection angle at interior beam, 15/16" x 2-3/16" vertical long-slotted holes in connection angle at exterior beam.
Slotted holes required to accommodate differential beam deflections. Bolts in slots shall be finger tight until deck pour is complete.

Notes:
Load carrying components designated (NTR) shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.
All diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual diaphragms at supports may be temporarily disconnected to install bearing anchor rods.
See sheet 15 of 25 for Spans 4 & 5 and additional details.

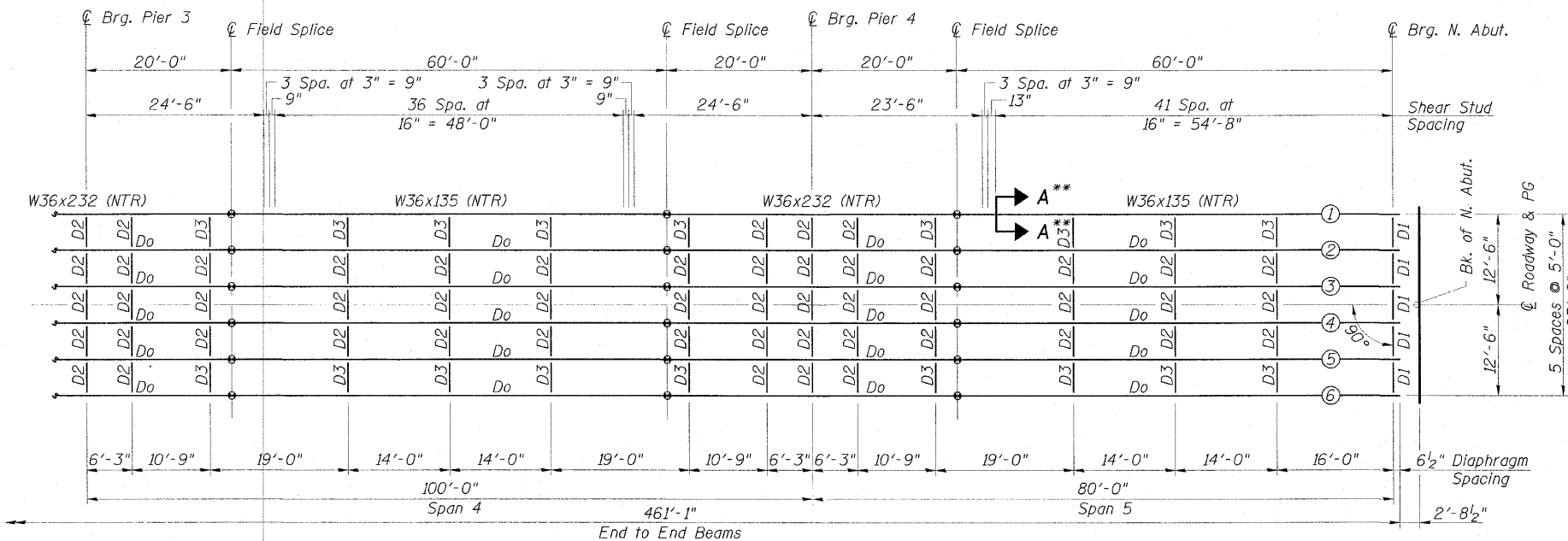
(Sheet 1 of 2)

STEEL FRAMING PLAN AND DETAILS
STRUCTURE NO. 074-0085

ESCA
CONSULTANTS, INC.
DESIGNED BY: MTD 10/09
DRAWN BY: DWH/HAS 11/09
CHECKED BY: MTD 11/09
APPROVED BY: RDP 05/10

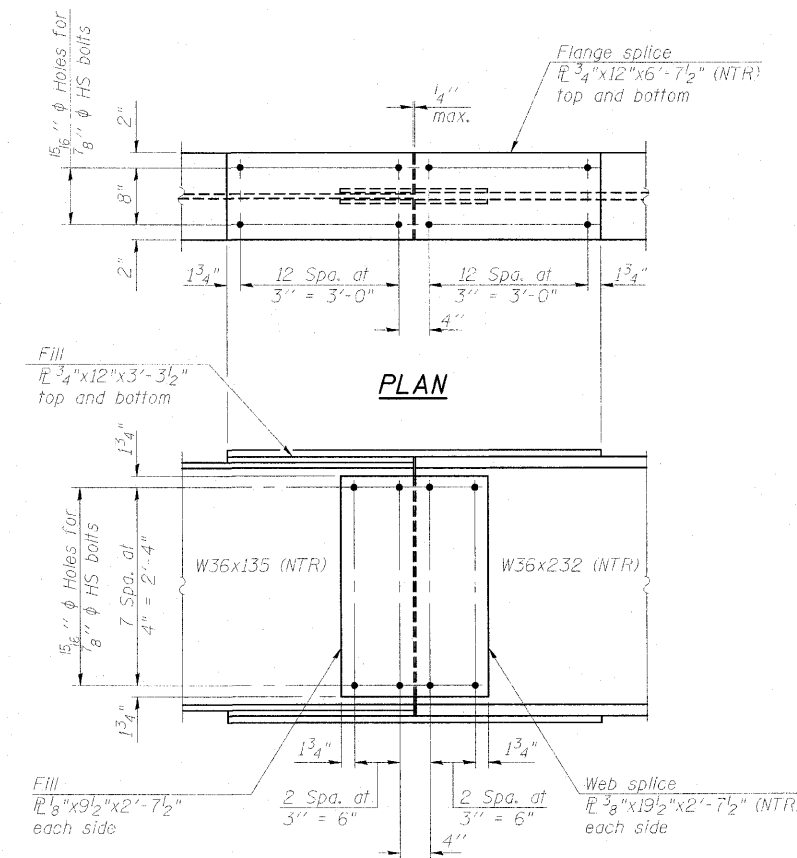
SHEET NO. 14 25 SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	535	08-00255-00-BR	PIATT	62	38
			CONTRACT NO. 91436		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



STEEL FRAMING PLAN (SPANS 4 & 5)

** Section A-A on sheet 14 of 25



ELEVATION
SPLICE DETAIL
(48 Required)

EXTERIOR BEAM MOMENT TABLE					
	0.4 Sp. 1 or 0.6 Sp. 5	Pier 1 or 4	0.5 Sp. 2 or 0.5 Sp. 4	Pier 2 or 3	0.5 Span 3
I_s	(in ⁴) 7,800	15,000	7,800	15,000	7,800
$I_c(n)$	(in ⁴) 18,900	-	18,900	-	18,900
$I_c(3n)$	(in ⁴) 13,730	-	13,730	-	13,730
S_s	(in ³) 439	809	439	809	439
$S_c(n)$	(in ³) 624	-	624	-	624
$S_c(3n)$	(in ³) 559	-	559	-	559
Z	(in ³) -	936	-	936	-
DC1	(k/ft) 0.923	1.005	0.923	1.005	0.923
M _{DC1}	(k) 354.7	886.8	289.4	868.1	298.7
DC2	(k/ft) 0.022	0.022	0.022	0.022	0.022
M _{DC2}	(k) 10.1	17.0	10.2	17.6	9.9
DW	(k/ft) 0.250	0.250	0.250	0.250	0.250
M _{DW}	(k) 114.9	192.7	116.1	200.1	112.4
M _{L + IM}	(k) 1,141.1	1,046.6	1,226.9	1,128.0	1,244.8
M _u (Strength I)	(k) 2,625.4	3,250.3	2,695.8	3,381.3	2,732.7
$\phi_r M_n$, $\phi_r M_{nc}$	(k) 3,185.0	3,900.0	3,185.0	3,900.0	3,185.0
f_s DC1	(ksi) 9.70	15.15	7.91	12.88	8.16
f_s DC2	(ksi) 0.22	0.25	0.22	0.26	0.21
f_s DW	(ksi) 2.47	2.86	2.49	2.97	2.41
f_s 1.3(4+IM)	(ksi) 28.54	20.18	30.68	21.75	31.13
f_s (Service II)	(ksi) 40.53	36.44	41.30	37.86	41.91
V _r	(k) 28.6	-	23.8	-	23.7

* Compact sections

INTERIOR BEAM MOMENT TABLE					
	0.4 Sp. 1 or 0.6 Sp. 5	Pier 1 or 4	0.5 Sp. 2 or 0.5 Sp. 4	Pier 2 or 3	0.5 Span 3
I_s	(in ⁴) 7,800	15,000	7,800	15,000	7,800
$I_c(n)$	(in ⁴) 18,900	-	18,900	-	18,900
$I_c(3n)$	(in ⁴) 13,730	-	13,730	-	13,730
S_s	(in ³) 439	809	439	809	439
$S_c(n)$	(in ³) 624	-	624	-	624
$S_c(3n)$	(in ³) 559	-	559	-	559
Z	(in ³) -	936	-	936	-
DC1	(k/ft) 0.705	0.789	0.705	0.789	0.705
M _{DC1}	(k) 269.4	679.4	220.6	665.8	227.4
DC2	(k/ft) 0.022	0.022	0.022	0.022	0.022
M _{DC2}	(k) 10.1	17.0	10.2	17.6	9.9
DW	(k/ft) 0.250	0.250	0.250	0.250	0.250
M _{DW}	(k) 114.9	192.7	116.1	200.1	112.4
M _{L + IM}	(k) 761.6	711.4	774.9	746.9	786.2
M _u (Strength I)	(k) 1,854.6	2,404.4	1,818.8	2,461.3	1,841.0
$\phi_r M_n$, $\phi_r M_{nc}$	(k) 3,185.0	3,900.0	3,185.0	3,900.0	3,185.0
f_s DC1	(ksi) 7.36	10.08	6.03	9.88	6.22
f_s DC2	(ksi) 0.22	0.25	0.22	0.26	0.21
f_s DW	(ksi) 2.47	2.86	2.49	2.97	2.41
f_s 1.3(4+IM)	(ksi) 19.05	13.72	19.38	14.40	19.66
f_s (Service II)	(ksi) 29.10	26.91	28.12	27.51	28.50
V _r	(k) 24.3	-	20.2	-	20.1

* Compact sections

EXTERIOR BEAM REACTION TABLE			
	Abut.	Pier 1 or 4	Pier 2 or 3
R _{DC1}	(k) 26.3	97.7	95.7
R _{DC2}	(k) 0.7	2.2	2.2
R _{DW}	(k) 7.6	24.8	25.1
R _{L + IM}	(k) 70.8	109.5	113.3
R _{Total}	(k) 105.4	234.2	236.3

TOP OF BEAM ELEVATIONS
(For fabrication only.)

Beam	Abutments	Splices	Piers
1	657.76	657.82	657.82
2	657.86	657.92	657.92
3	657.96	658.02	658.02
4	657.96	658.02	658.02
5	657.86	657.92	657.92
6	657.76	657.82	657.82

Notes:
Elevations shown do not include deflection and are only intended for use in fabrication of steel beams.
Elevations at splice locations are top of W36x232 flange (not splice plate).

INTERIOR BEAM REACTION TABLE			
	Abut.	Pier 1 or 4	Pier 2 or 3
R _{DC1}	(k) 20.9	75.6	74.1
R _{DC2}	(k) 0.7	2.2	2.2
R _{DW}	(k) 7.6	24.8	25.1
R _{L + IM}	(k) 63.9	98.9	102.3
R _{Total}	(k) 93.1	201.5	203.7

I_s , S_s : Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Service II) due to non-composite dead loads (in⁴ and in³).

$I_c(n)$, $S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Service II) due to short-term composite live loads (in⁴ and in³).

$I_c(3n)$, $S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s (Service II) due to long-term composite (superimposed) dead loads (in⁴ and in³).

Z: Plastic Section Modulus of the steel section in non-composite areas (in³).

DC1: Un-factored non-composite dead load (kips/ft.).

M_{DC1}: Un-factored moment due to non-composite dead load (kip-ft.).

DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).

M_{DC2}: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).

DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).

M_{DW}: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).

M_{L + IM}: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

M_u (Strength I): Factored design moment (kip-ft.).
1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_{L + IM}

$\phi_r M_n$: Compact composite positive moment capacity computed according to Article 6.10.7.1 (kip-ft.).

$\phi_r M_{nc}$: Compact non-composite negative moment capacity computed according to Article A6.1.1 (kip-ft.).

f_s (Service II): Sum of stresses as computed from the moments below (ksi).
M_{DC1} + M_{DC2} + M_{DW} + 1.3 M_{L + IM}

V_r: Maximum factored shear range in composite portion of span computed according to Article 6.10.10.

(Sheet 2 of 2)

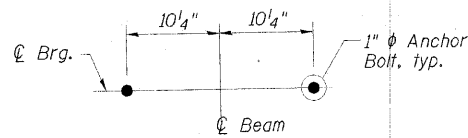
STEEL FRAMING PLAN AND DETAILS
STRUCTURE NO. 074-0085

ESCA
CONSULTANTS, INC.
DESIGNED BY: MTD 10/09
DRAWN BY: DWH/HAS 11/09
CHECKED BY: MTD 11/09
APPROVED BY: RDP 05/10

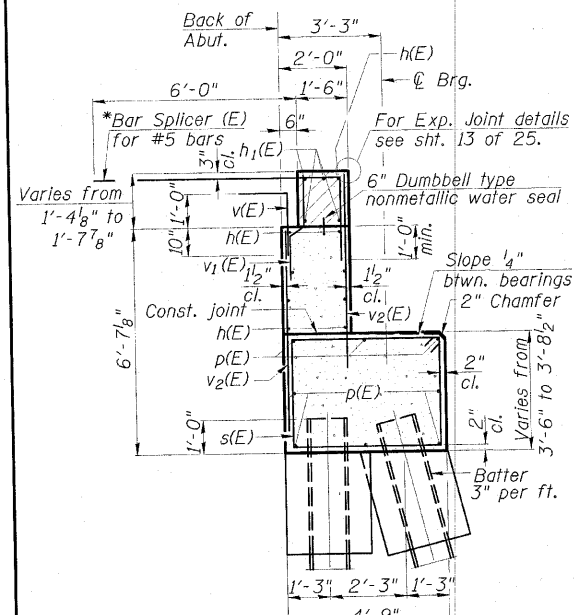
SHEET NO. 15	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	25 SHEETS	535	08-00255-00-BR	PIATT	62
CONTRACT NO. 91436					
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

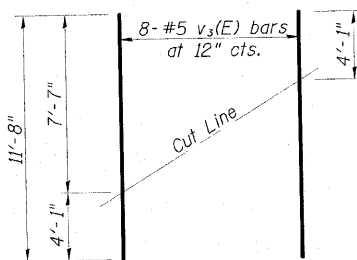
Notes:
Hatched area to be poured after superstructure false work has been removed. Quantity of concrete included with Concrete Superstructure. Space reinforcement in cap to miss anchor bolts. Pour steps monolithically with cap. For details of piles and Concrete Encasement, see sheet 21 of 25. For details of Bar Splicers, see sheet 22 of 25. Concrete Sealer shall be applied to all exposed surfaces of the backwall, bridge seats, and pile cap. For drainage treatment details, see sheet 2 of 25.



ANCHOR BOLT LAYOUT



SEC. THRU ABUT.



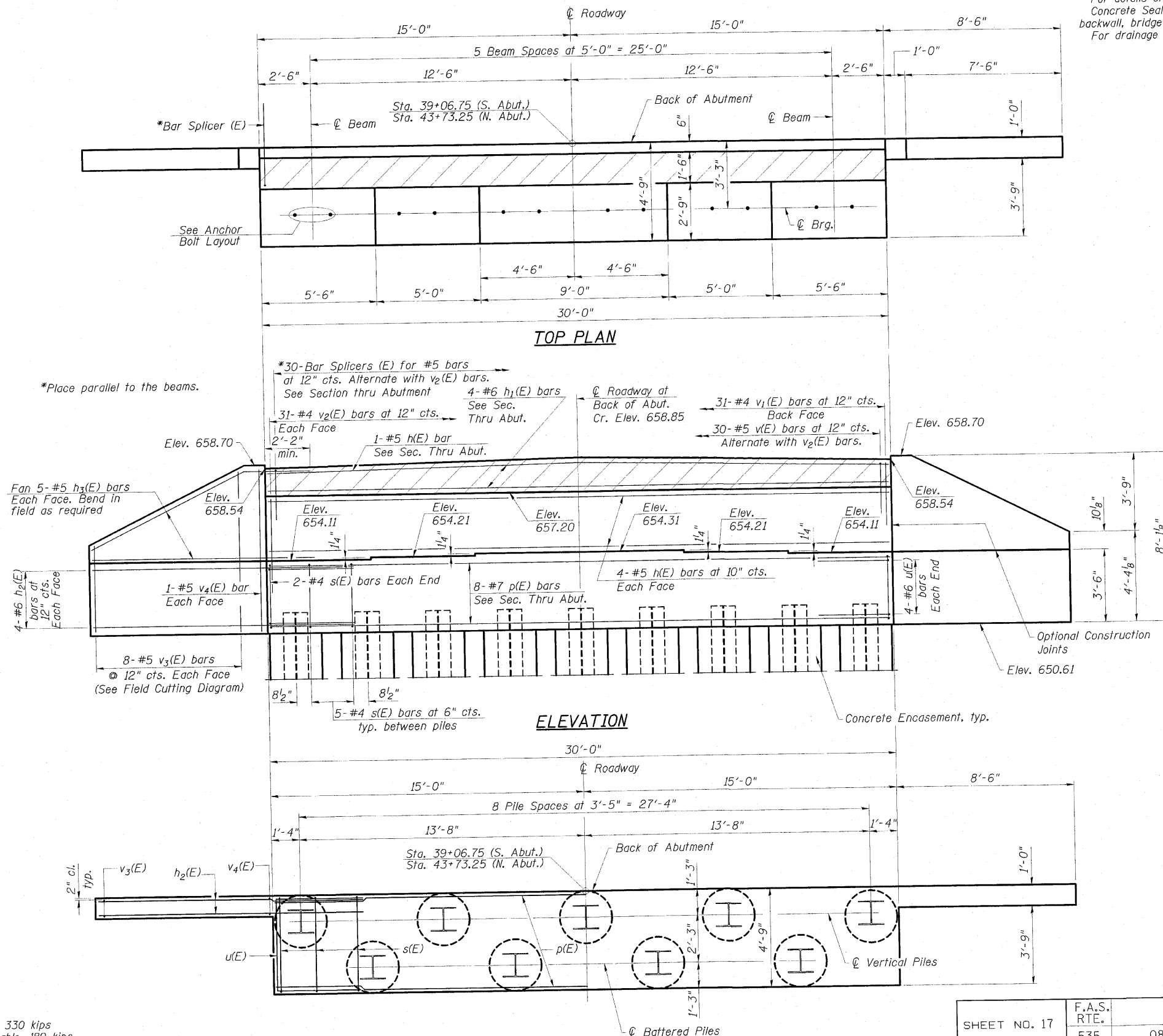
FIELD CUTTING DIAGRAM

Order v3(E) full length. Cut as shown and use remainder of bars in opposite face.

PILE DATA

Type: HP14x73
Nominal Required Bearing: 330 kips
Factored Resistance Available: 180 kips
Est. Length: 45' (S. Abut.), 80' (N. Abut.)
No. Production Piles: 16 (8 each abutment)
No. Test Piles: 2 (1 each abutment)

ESCA
CONSULTANTS, INC.
DESIGNED BY: MTD 11/09
DRAWN BY: DWH/HAS 11/09
CHECKED BY: MTD 11/09
APPROVED BY: RDP 05/10



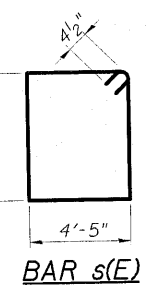
TOP PLAN

ELEVATION

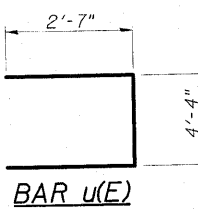
PLAN - PILE CAP

TWO ABUTMENTS
BILL OF MATERIAL

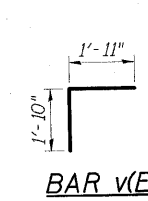
Bar	No.	Size	Length	Shape
h(E)	18	#5	29'-8"	—
h1(E)	8	#6	29'-8"	—
h2(E)	16	#6	10'-11"	—
h3(E)	20	#5	11'-5"	—
p(E)	16	#7	29'-8"	—
s(E)	88	#4	15'-11"	□
u(E)	16	#6	9'-6"	□
v(E)	60	#5	3'-9"	┌
v1(E)	62	#4	3'-4"	┌
v2(E)	124	#4	5'-10"	—
v3(E)	32	#5	11'-8"	—
v4(E)	8	#5	7'-9"	—
Structure Excavation			Cu. Yd.	210
Concrete Structures			Cu. Yd.	59.4
Concrete Encasement			Cu. Yd.	9.8
Reinforcement Bars, Epoxy Coated			Pound	4,860
Furnishing Steel Piles HP14x73			Foot	1,000
Driving Piles			Foot	1,000
Test Pile Steel HP14x73			Each	2
Concrete Sealer			Sq. Ft.	440



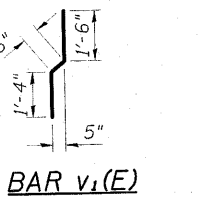
BAR s(E)



BAR u(E)



BAR v(E)



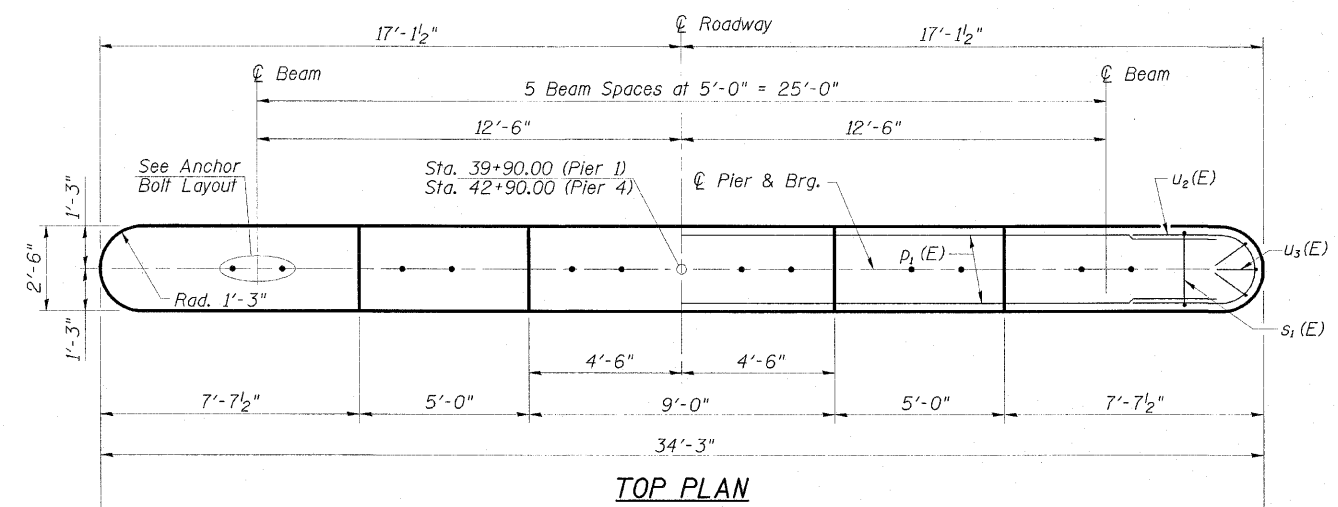
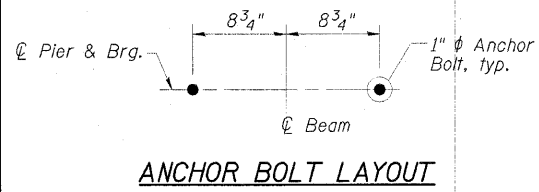
BAR v1(E)

ABUTMENTS
STRUCTURE NO. 074-0085

SHEET NO. 17 25 SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	535	08-00255-00-BR	PIATT	62	41
CONTRACT NO. 91436					
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					

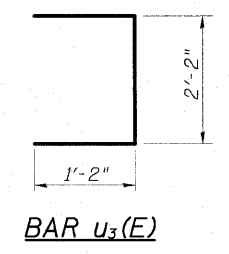
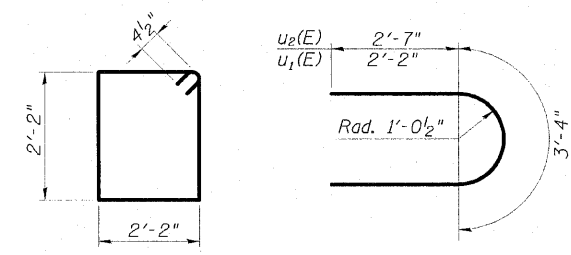
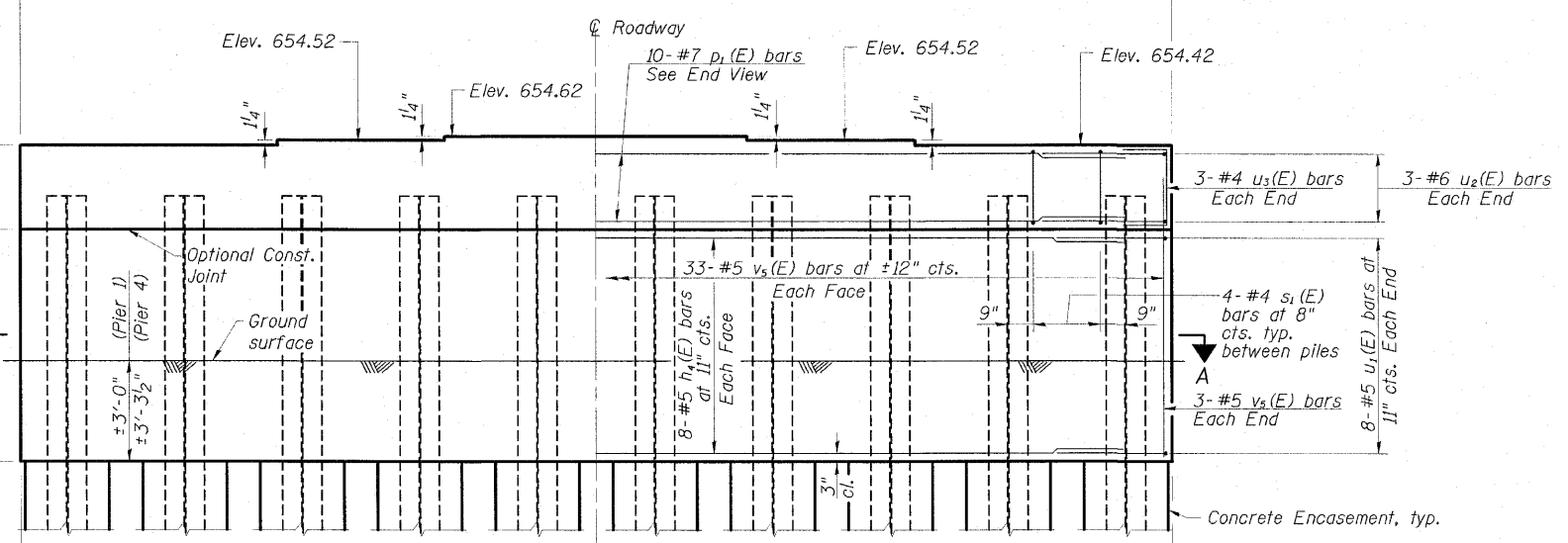
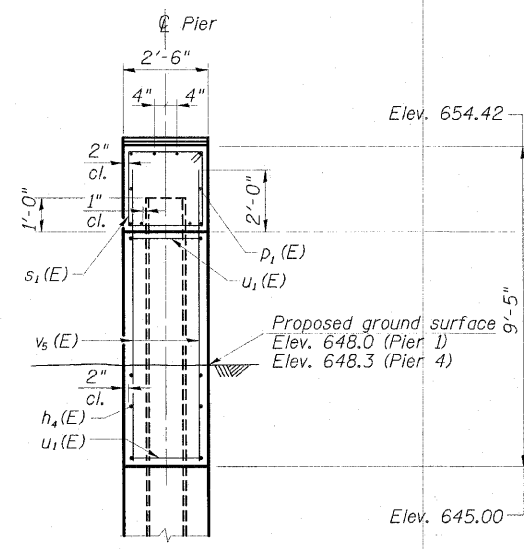
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Notes:
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
For details of piles and Concrete Encasement, see sheet 21 of 25.
If a portion of the pier wall or concrete encasement is under water, reinforcement may be placed underwater into forms. Concrete shall be tremied according to Article 503.08 of the Standard Specifications to an elevation of 1'-0" above the water line at the time of construction.

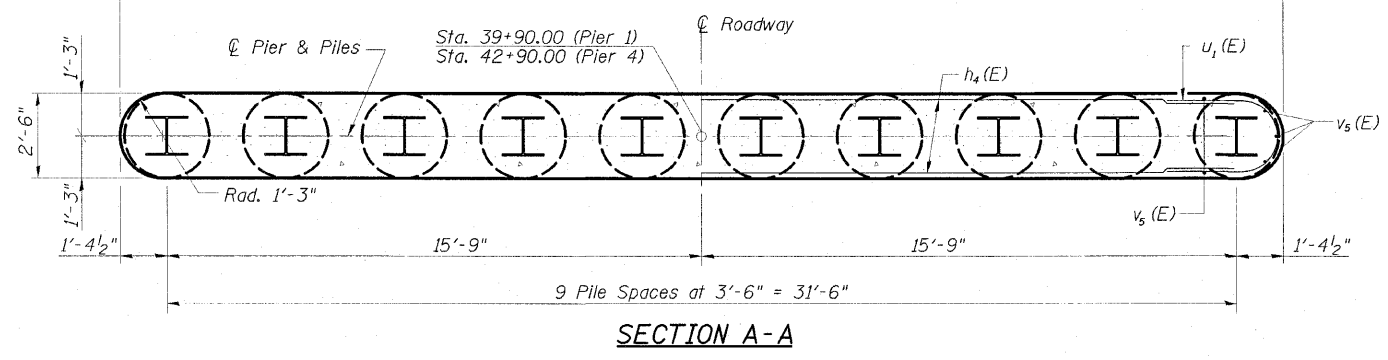


TWO PIERS
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$h_4(E)$	32	#5	31'-9"	—
$p_1(E)$	20	#7	31'-9"	—
$s_1(E)$	72	#4	9'-5"	□
$u_1(E)$	32	#5	7'-8"	U
$u_2(E)$	12	#6	8'-6"	U
$u_3(E)$	12	#4	4'-6"	U
$v_5(E)$	144	#5	8'-8"	—
Structure Excavation		Cu. Yd.	57	
Concrete Structures		Cu. Yd.	59.3	
Concrete Encasement		Cu. Yd.	10.9	
Reinforcement Bars, Epoxy Coated		Pound	4,560	
Furnishing Steel Piles HP14x73		Foot	990	
Driving Piles		Foot	990	
Test Pile Steel HP14x73		Each	2	



PILE DATA
Type: HP14x73
Nominal Required Bearing: 330 kips
Allowable Resistance Available: 180 kips
Estimated Pile Length: 55'
No. of Production Piles: 18 (9 each pier)
No. of Test Piles: 2 (1 each pier)



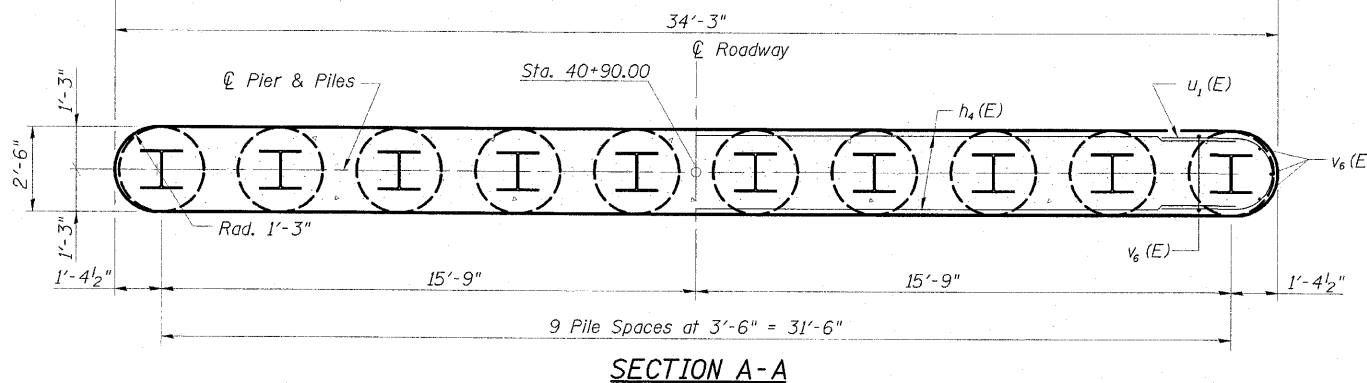
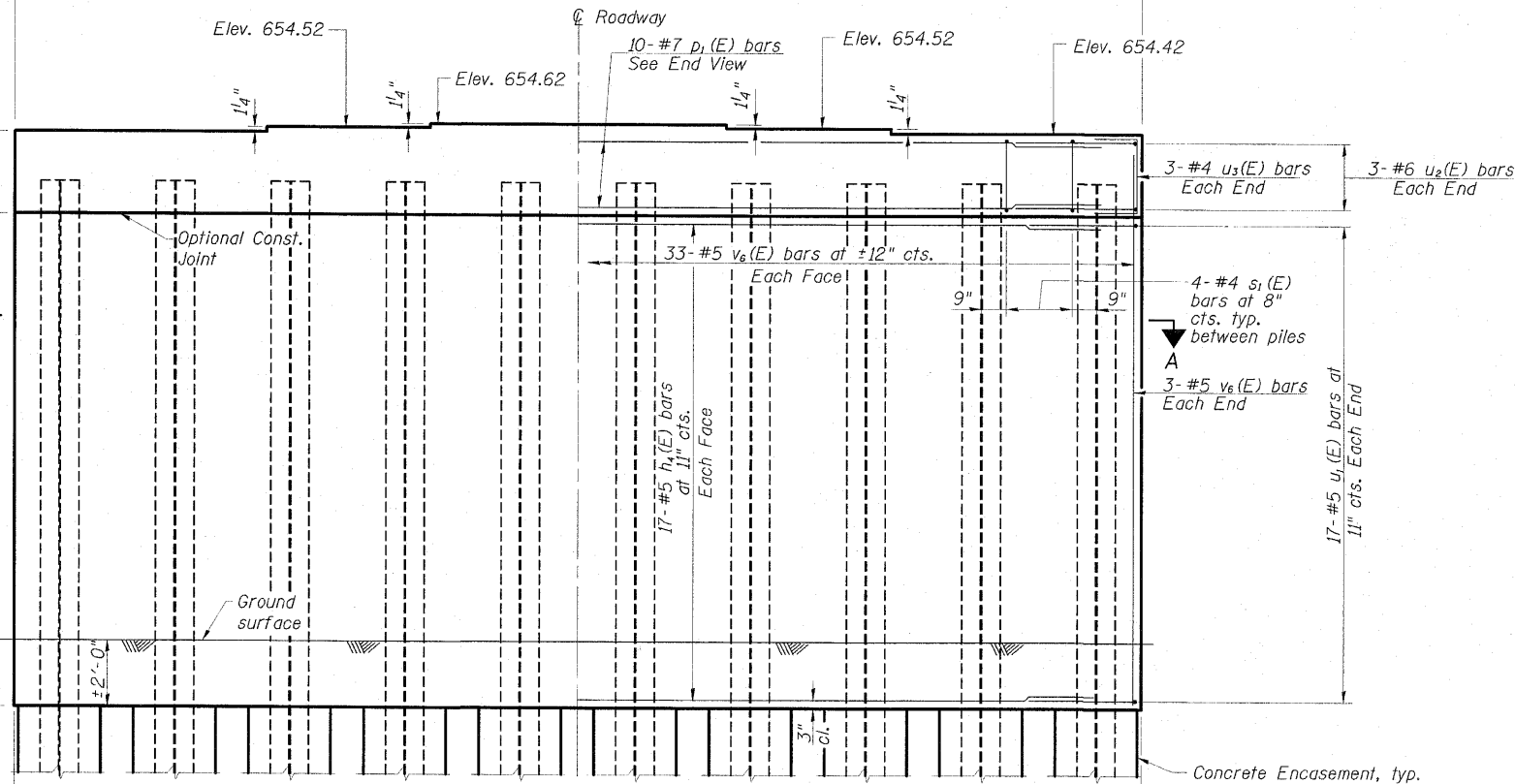
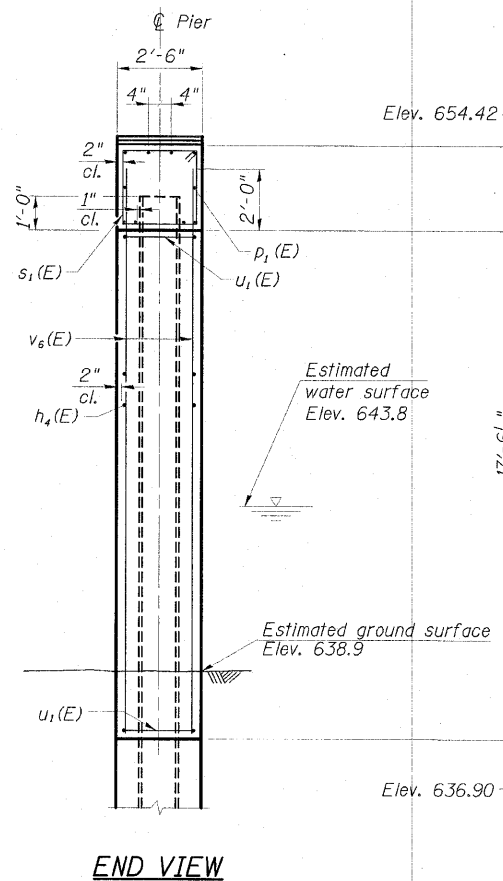
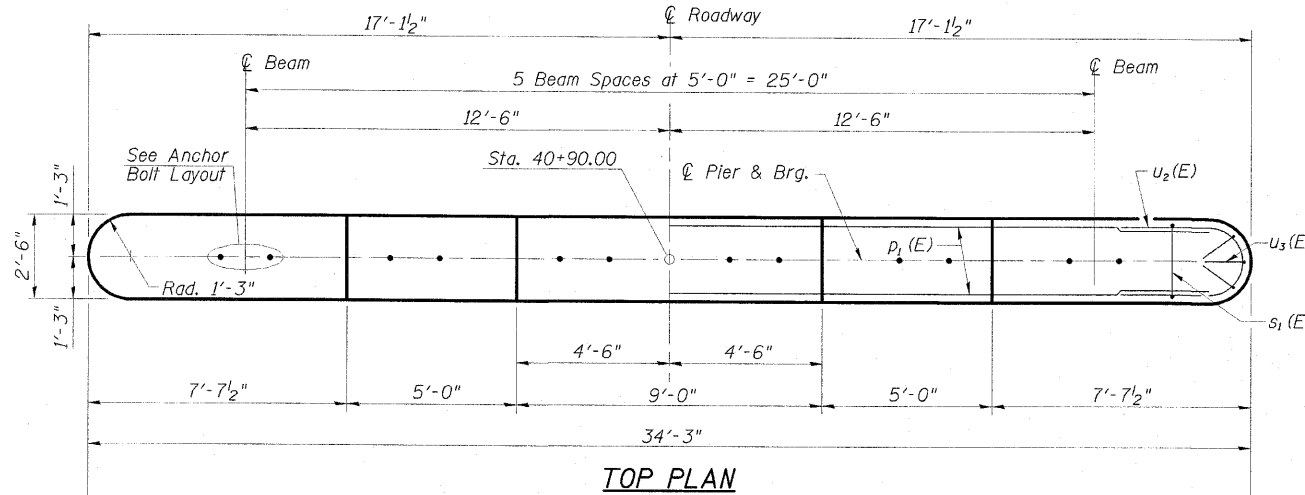
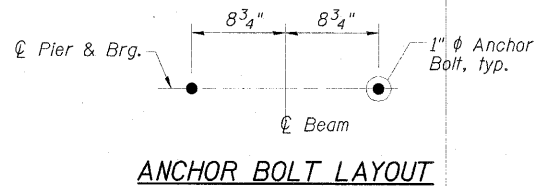
ESCA
CONSULTANTS, INC.

DESIGNED BY:	MTD	11/09
DRAWN BY:	DWH	11/09
CHECKED BY:	MTD	11/09
APPROVED BY:	RDP	05/10

PIERS 1 AND 4
STRUCTURE NO. 074-0085

SHEET NO. 18 25 SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	535	08-00255-00-BR	PIATT	62	42
CONTRACT NO. 91436					
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PILE DATA

Type: HP14x73
Nominal Required Bearing: 365 kips
Allowable Resistance Available: 200 kips
Estimated Pile Length: 85'
No. of Production Piles: 9
No. of Test Piles: 1

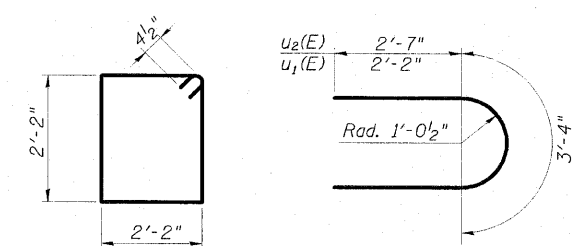
ESCA
CONSULTANTS, INC.

DESIGNED BY: MTD 11/09
DRAWN BY: DWH 11/09
CHECKED BY: MTD 11/09
APPROVED BY: RDP 05/10

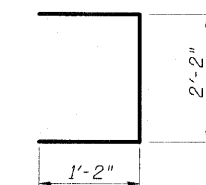
Notes:
Space reinforcement in cap to miss anchor bolts.
Four steps monolithically with cap.
For details of piles and Concrete Encasement, see sheet 21 of 25.
If a portion of the pier wall or concrete encasement is under water, reinforcement may be placed underwater into forms. Concrete shall be tremied according to Article 503.08 of the Standard Specifications to an elevation of 1'-0" above the water line at the time of construction.

PIER 2
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h ₄ (E)	34	#5	31'-9"	—
p ₁ (E)	10	#7	31'-9"	—
s ₁ (E)	36	#4	9'-5"	□
u ₁ (E)	34	#5	7'-8"	U
u ₂ (E)	6	#6	8'-6"	U
u ₃ (E)	6	#4	4'-6"	U
v ₆ (E)	72	#5	16'-9"	—
Structure Excavation		Cu. Yd.	18	
Concrete Structures		Cu. Yd.	55.0	
Concrete Encasement		Cu. Yd.	5.5	
Reinforcement Bars, Epoxy Coated		Pound	3,630	
Furnishing Steel Piles HP14x73		Foot	765	
Driving Piles		Foot	765	
Test Pile Steel HP14x73		Each	1	
Underwater Structure Excavation Protection-Location 1		Each	1	



BAR s₁(E) BARS u₁(E) & u₂(E)



BAR u₃(E)

PIER 2
STRUCTURE NO. 074-0085

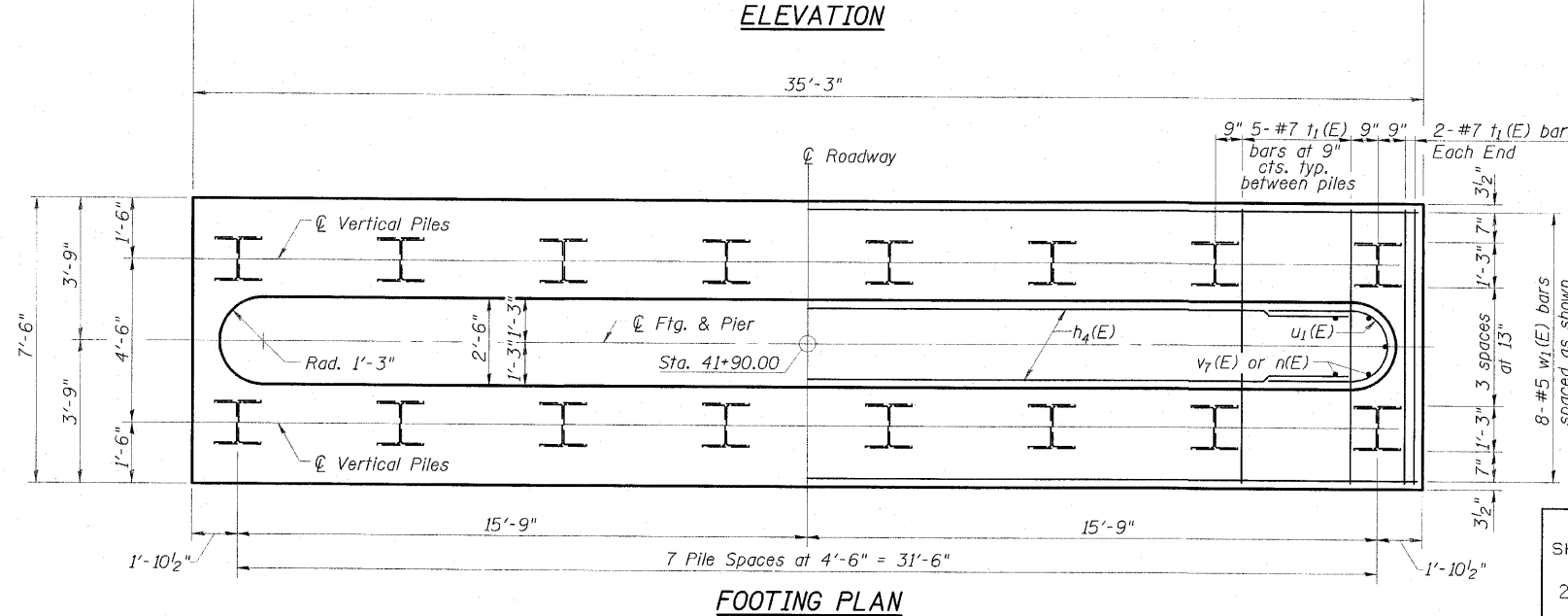
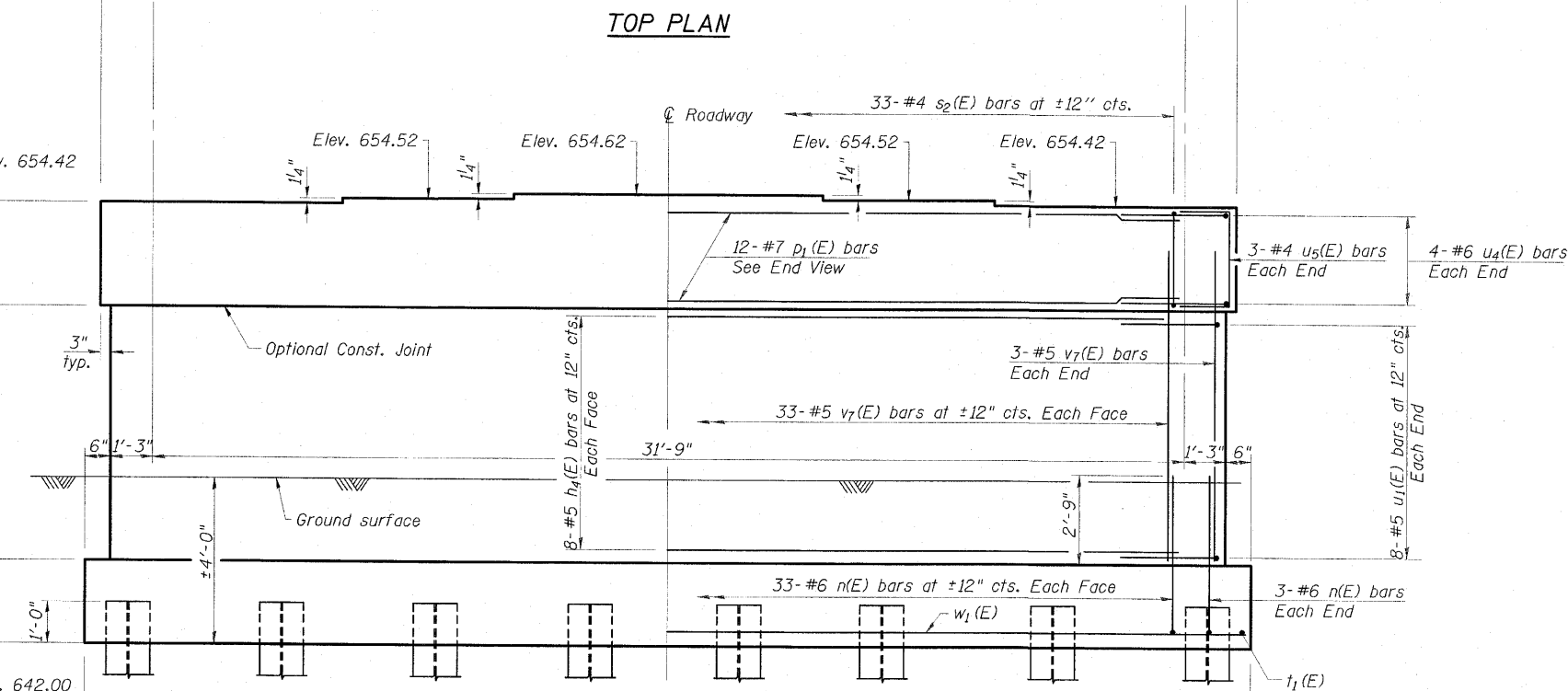
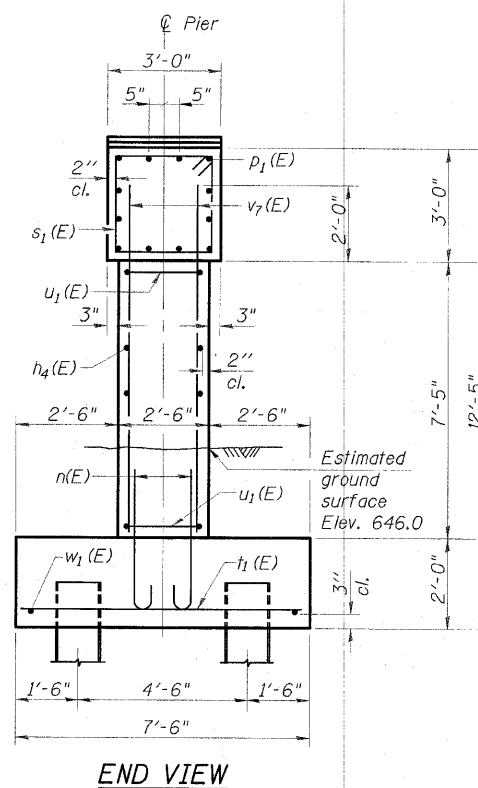
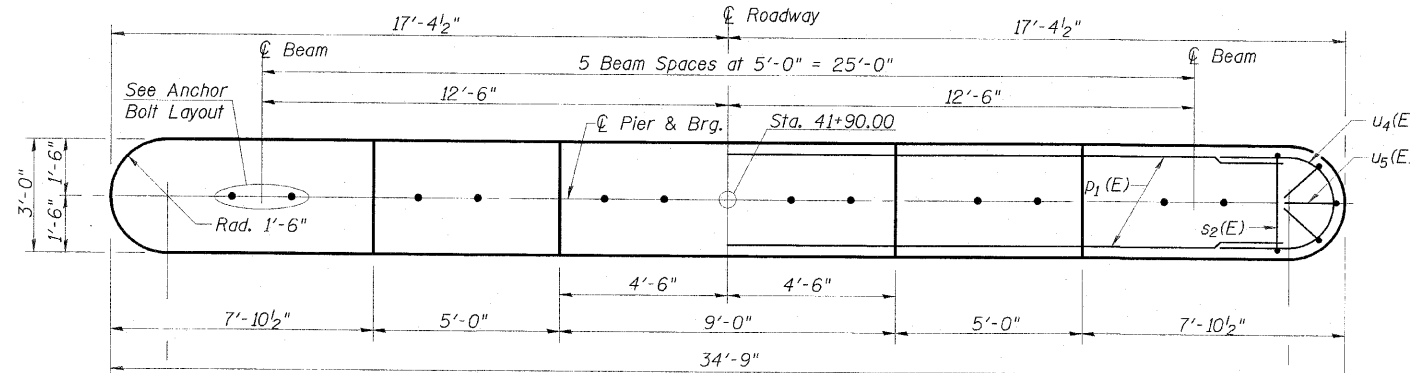
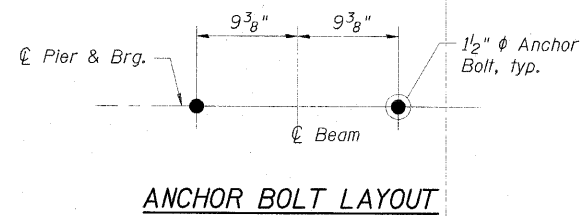
SHEET NO. 19 25 SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	535	08-00255-00-BR	PIATT	62	43
CONTRACT NO. 91436					
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Notes:
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
For details of piles, see sheet 21 of 25.

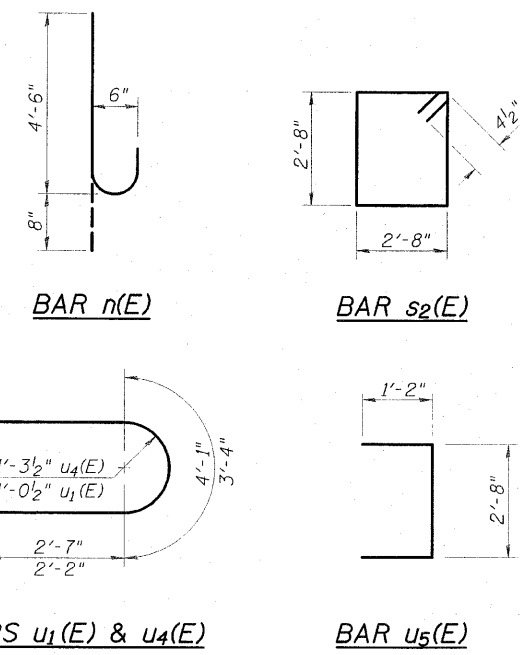
PIER 3
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$h_4(E)$	16	#5	31'-9"	—
$n(E)$	72	#6	5'-2"	⌋
$p_1(E)$	12	#7	31'-9"	—
$s_2(E)$	33	#4	11'-5"	⌋
$t_1(E)$	39	#7	7'-0"	—
$u_1(E)$	16	#5	7'-8"	⌋
$u_4(E)$	8	#6	9'-3"	⌋
$u_5(E)$	6	#4	5'-0"	⌋
$v_7(E)$	72	#5	9'-3"	—
$w_1(E)$	8	#5	34'-9"	—
Structure Excavation		Cu. Yd.	70	
Concrete Structures		Cu. Yd.	54.4	
Reinforcement Bars, Epoxy Coated		Pound	3,920	
Furnishing Steel Piles HP14x73		Foot	825	
Driving Piles Test Pile Steel HP14x73		Each	1	



PILE DATA
Type: HP14x73
Nominal Required Bearing: 330 kips
Factored Resistance Available: 180 kips
Est. Length: 55'
No. Production Piles: 15
No. Test Piles: 1

ESCA
CONSULTANTS, INC.
DESIGNED BY: MTD 11/09
DRAWN BY: DWH 11/09
CHECKED BY: MTD 11/09
APPROVED BY: RDP 05/10

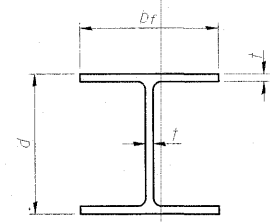


SHEET NO. 20 25 SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	535	08-00255-00-BR	PIATT	62	44
CONTRACT NO. 91436					
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					

PIER 3
STRUCTURE NO. 074-0085

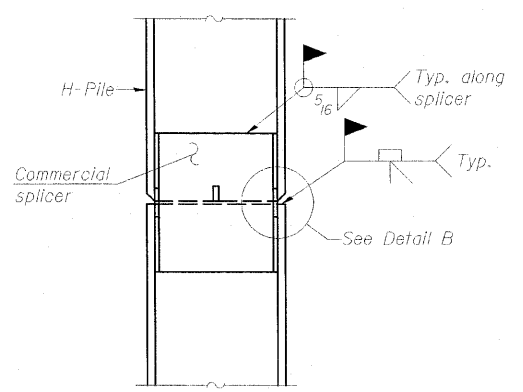
02844889R021.dgn 5/26/2010 8:42:02 AM R45

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

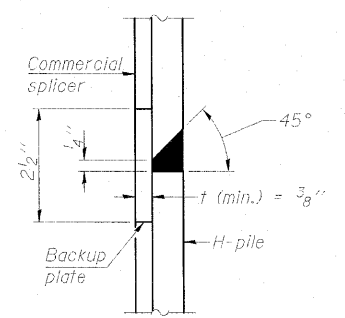


STEEL PILE TABLE

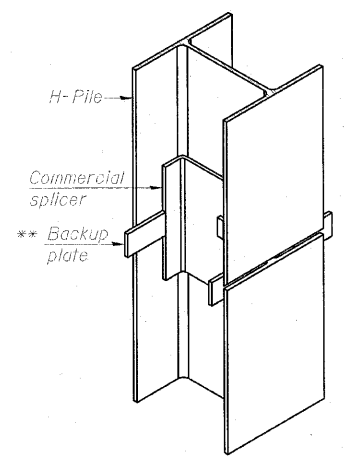
Designation	Depth d	Flange width bf	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	13/16"	30"
x102	14"	14 3/4"	1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11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



ELEVATION

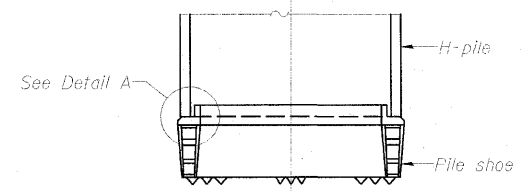


DETAIL "B"

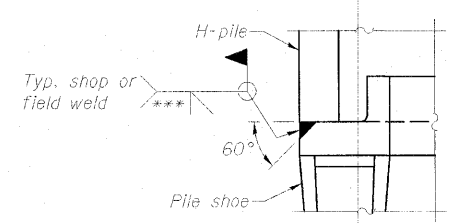


ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE

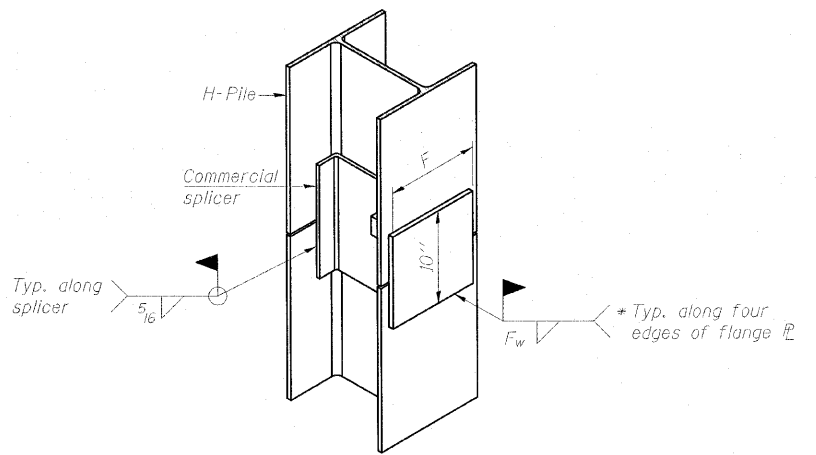


ELEVATION



DETAIL A

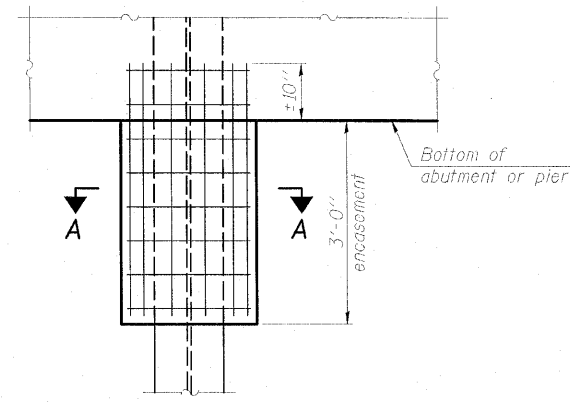
H-PILE SHOE ATTACHMENT



ISOMETRIC VIEW

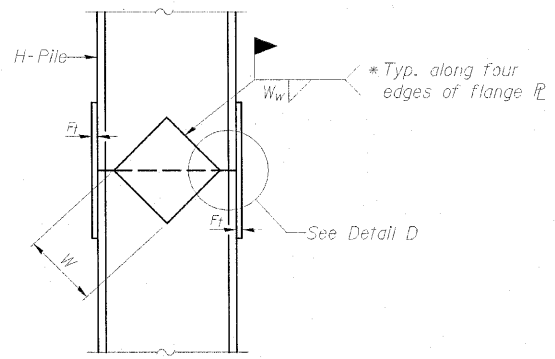
WELDED COMMERCIAL SPLICE ALTERNATE

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



ELEVATION

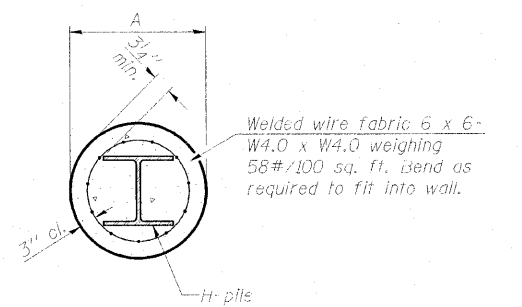
PILE ENCASEMENT



ELEVATION

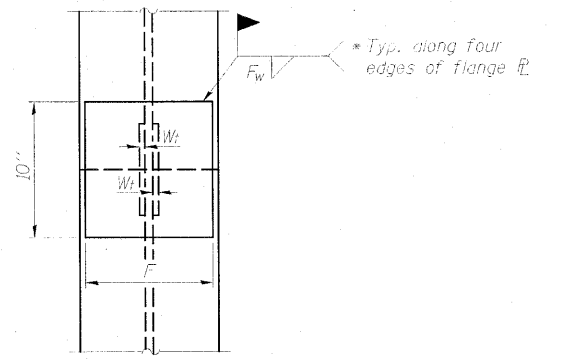
DETAIL D

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 3/8"	1/2"
x89	12 1/2"	3/4"	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"	1/16"	6 1/2"	5 3/8"	1/2"
x74	10"	7/8"	1/16"	6 1/2"	5 3/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	3/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"

ESCA CONSULTANTS, INC.
 DESIGNED BY: MTD 11/09
 DRAWN BY: HAS 11/09
 CHECKED BY: MTD 11/09
 APPROVED BY: RDP 05/10

F-HP 11-1-09

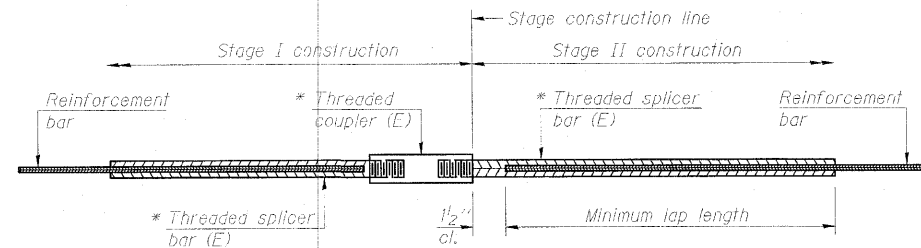
Note:
The steel H-piles shall be according to AASHTO M270 Grade 50.

SHEET NO. 21 25 SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	535	08-00255-00-BR	PIATT	62	45
CONTRACT NO. 91436					
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT			

**HP PILE DETAILS
STRUCTURE NO. 074-0085**

021844085P022.dgn 5/26/2010 8:48:37 AM HAZ

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



STANDARD BAR SPLICER ASSEMBLY

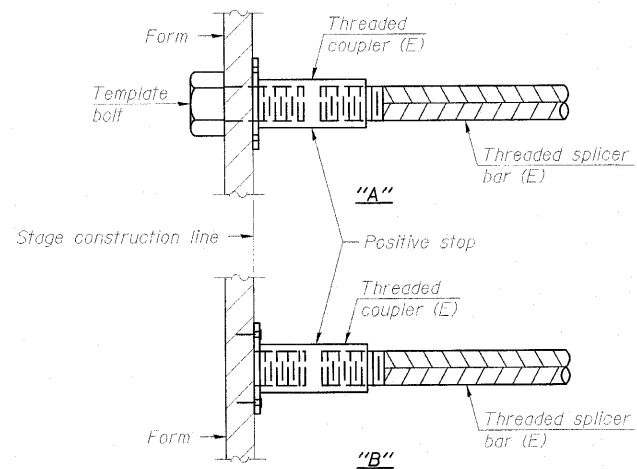
Bar size to be spliced	Minimum Lap Lengths			
	Table 1	Table 2	Table 3	Table 4
3, 4	1'-5"	1'-11"	2'-1"	2'-4"
5	1'-9"	2'-5"	2'-7"	2'-11"
6	2'-1"	2'-11"	3'-1"	3'-6"
7	2'-9"	3'-10"	4'-2"	4'-8"
8	3'-8"	5'-1"	5'-5"	6'-2"
9	4'-7"	6'-5"	6'-10"	7'-9"

Table 1: Black bar, 0.8 Class C
 Table 2: Black bar, Top bar lap, 0.8 Class C
 Table 3: Epoxy bar, 0.8 Class C
 Table 4: Epoxy bar, Top bar lap, 0.8 Class C

Threaded splicer bar length = min. lap length + 1 1/2" + thread length

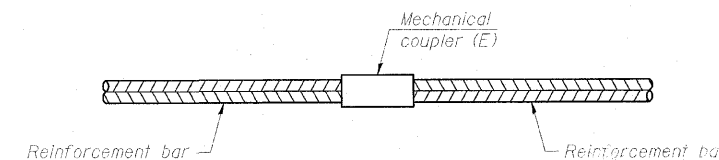
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length



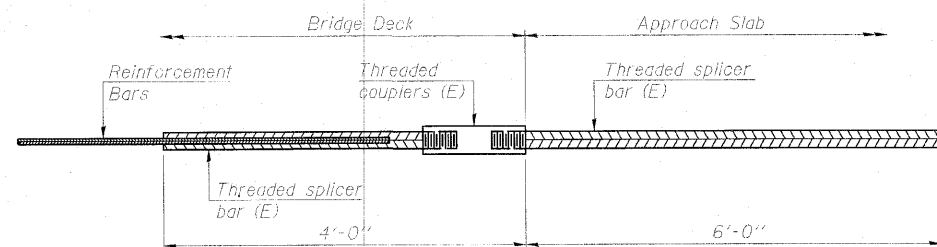
INSTALLATION AND SETTING METHODS

"A": Set bar splicer assembly by means of a template bolt.
 "B": Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
 (E): Indicates epoxy coating.



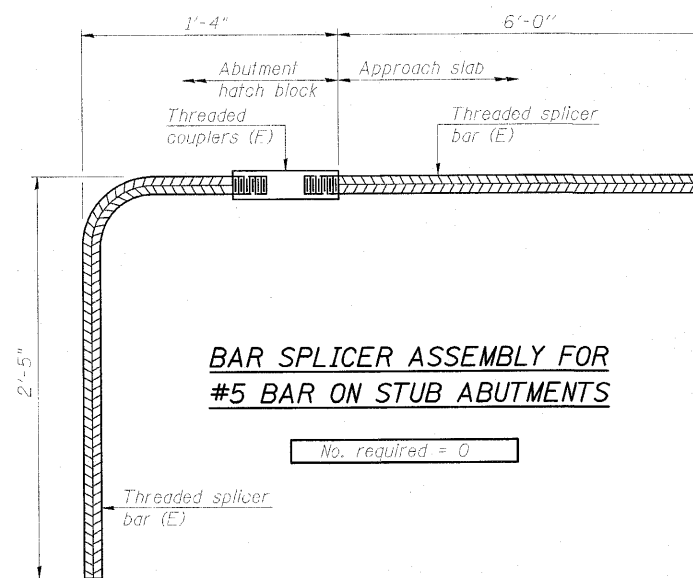
STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

No. required = 0



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required = 0

NOTES

Splicer bars shall be deformed with Threaded ends and have a minimum 60 ksi yield strength.
 All reinforcement shall be lapped and tied to the splicer bars.
 Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.
 See special provision for Mechanical Splicers.
 See approved list of bar splicer assemblies and mechanical splicers for alternatives.

**BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO. 074-0085**

ESCA
CONSULTANTS, INC.

DESIGNED BY: MTD 11/09
 DRAWN BY: HAS 11/09
 CHECKED BY: MTD 11/09
 APPROVED BY: RDP 05/10

BSD-1 11-1-09

SHEET NO. 22	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
25 SHEETS	535	08-00255-00-BR	PIATT	62	46
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT		
CONTRACT NO. 91436					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

02314885022.dgn 5/26/2010 8:46:24 AM HAS



SOIL BORING LOG

Page 1 of 2

ROUTE FAS 535-Shadow Rest Rd. DESCRIPTION Sangamon River Northwest of White Heath LOGGED BY CNA
SECTION (L-BRIBR) LOCATION NW, SEC. 21, TWP. 19N, R1G. 0E, 3rd PM
COUNTY Piatt DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. Station	BORING NO.	Depth (ft)	Blow Count				Soil Description	Soil Elevation (ft)
			(ft)	(ft)	(ft)	(ft)		
074-0025 (001) 40708.57	1 North Plat	0					642.40	
		1				Dark Gray Silty Clay with Organics (Altrivium)	640.10	
		2						
		3						
		4						
		5						
		6						
		7						
		8						
		9						
		10						
		11						
		12						
		13						
		14						
		15						
		16						
		17						
		18						
		19						
		20						
		21						
		22						
		23						
		24						
		25						
		26						
		27						
		28						
		29						
		30						
		31						
		32						
		33						
		34						
		35						
		36						
		37						
		38						
		39						
		40						
		41						
		42						
		43						
		44						
		45						
		46						
		47						
		48						
		49						
		50						
		51						
		52						
		53						
		54						
		55						
		56						
		57						
		58						
		59						
		60						
		61						
		62						
		63						
		64						
		65						
		66						
		67						
		68						
		69						
		70						
		71						
		72						
		73						
		74						
		75						
		76						
		77						
		78						
		79						
		80						
		81						
		82						
		83						
		84						
		85						
		86						
		87						
		88						
		89						
		90						
		91						
		92						
		93						
		94						
		95						
		96						
		97						
		98						
		99						
		100						

An assumed centerline elevation of 100.00 and station of 10+00 is used when this information is not available.
The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Dulga, S-Shear, E-Estimate)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T208)
BBS, from 137 (Rev. 8-98)



SOIL BORING LOG

Page 2 of 2

ROUTE FAS 535-Shadow Rest Rd. DESCRIPTION Sangamon River Northwest of White Heath LOGGED BY CNA
SECTION (L-BRIBR) LOCATION NW, SEC. 21, TWP. 19N, R1G. 0E, 3rd PM
COUNTY Piatt DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. Station	BORING NO.	Depth (ft)	Blow Count				Soil Description	Soil Elevation (ft)
			(ft)	(ft)	(ft)	(ft)		
074-0025 (001) 40708.57	1 North Plat	0					642.40	
		1				Gray Moderately Sorted Medium to Coarse Sand (continued)	640.10	
		2						
		3						
		4						
		5						
		6						
		7						
		8						
		9						
		10						
		11						
		12						
		13						
		14						
		15						
		16						
		17						
		18						
		19						
		20						
		21						
		22						
		23						
		24						
		25						
		26						
		27						
		28						
		29						
		30						
		31						
		32						
		33						
		34						
		35						
		36						
		37						
		38						
		39						
		40						
		41						
		42						
		43						
		44						
		45						
		46						
		47						
		48						
		49						
		50						
		51						
		52						
		53						
		54						
		55						
		56						
		57						
		58						
		59						
		60						
		61						
		62						
		63						
		64						
		65						
		66						
		67						
		68						
		69						
		70						
		71						
		72						
		73						
		74						
		75						
		76						
		77						
		78						
		79						
		80						
		81						
		82						
		83						
		84						
		85						
		86						
		87						
		88						
		89						
		90						
		91						
		92						
		93						
		94						
		95						
		96						
		97						
		98						
		99						
		100						

An assumed centerline elevation of 100.00 and station of 10+00 is used when this information is not available.
The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Dulga, S-Shear, E-Estimate)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T208)
BBS, from 137 (Rev. 8-98)



SOIL BORING LOG

Page 1 of 2

ROUTE FAS 535-Shadow Rest Rd. DESCRIPTION Sangamon River Northwest of White Heath LOGGED BY CNA
SECTION (L-BRIBR) LOCATION NW, SEC. 21, TWP. 19N, R1G. 0E, 3rd PM
COUNTY Piatt DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. Station	BORING NO.	Depth (ft)	Blow Count				Soil Description	Soil Elevation (ft)
			(ft)	(ft)	(ft)	(ft)		
074-0025 (001) 40708.57	2 North Plat	0					642.40	
		1				Gray Moderately Sorted Medium to Coarse Sand with Gravel (continued)	640.10	
		2						
		3						
		4						
		5						

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Illinois Department of Transportation SOIL BORING LOG Page 1 of 2
Date 10/26/09

ROUTE FAS 535-Shady Rest Rd. DESCRIPTION Sangamon River, Northwest of White House LOGGED BY CNA
SECTION U-BRBR LOCATION NW, SEC. 21, TWP. 19N, R. 9E, 3rd PM
COUNTY PIATT DRILLING METHOD Hydro-Slam Auger HAMMER TYPE Automatic

STRUCT. NO. 074-0025 (Exist.) D B U M Surface Water Elev. 842.40 R D B U M
Station 40+08.87 E L C O Stream Bed Elev. 840.10 R P O S I
BORING NO. 3 South Abut. H W S Qu T Groundwater Elev. _____
Station 39+56.5 H S Qu T First Encounter _____
Offset 3.0 R.L. H S Qu T Upon Completion Wash Bore R
Ground Surface Elev. 855.00 ft (ft) (ft) (ft) (ft) (ft) After Hrs. _____

Black to Gray Silty Clay Loam (Embankment)	852.2	1	1.2	24	11	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Black Silty Clay (Embankment)	848.2	1	1.1	28	11	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Black Silty Clay to Silty Clay Loam (Alluvium)	845.5	1	1.0	28	11	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Gray Mottled Silty Clay Loam to Loam (Alluvium)	836.2	1	0.7	24	11	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Clay to Brown Silty Very Coarse Sand with Small to Large Gravel	833.2	1	1.1	28	11	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100

An assumed centerline elevation of 100.00 and station of 10+00 is used when this information is not available.
The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, E-Estimate)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T208)
BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation SOIL BORING LOG Page 2 of 2
Date 10/26/09

ROUTE FAS 535-Shady Rest Rd. DESCRIPTION Sangamon River, Northwest of White House LOGGED BY CNA
SECTION U-BRBR LOCATION NW, SEC. 21, TWP. 19N, R. 9E, 3rd PM
COUNTY PIATT DRILLING METHOD Hydro-Slam Auger HAMMER TYPE Automatic

STRUCT. NO. 074-0025 (Exist.) D B U M Surface Water Elev. 842.40 R D B U M
Station 40+08.87 E L C O Stream Bed Elev. 840.10 R P O S I
BORING NO. 3 South Abut. H W S Qu T Groundwater Elev. _____
Station 39+56.5 H S Qu T First Encounter _____
Offset 3.0 R.L. H S Qu T Upon Completion Wash Bore R
Ground Surface Elev. 855.00 ft (ft) (ft) (ft) (ft) (ft) After Hrs. _____

Gray Silty Very Coarse Sand with Large Gravel (continued)	833.2	1	1.1	28	11	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Gray Moderately Sorted Very Coarse Sand with Gravel	828.2	1	1.1	28	11	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
End of Boring	803.2	1	1.1	28	11	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100

An assumed centerline elevation of 100.00 and station of 10+00 is used when this information is not available.
The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, E-Estimate)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T208)
BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation SOIL BORING LOG Page 1 of 2
Date 10/26/09

ROUTE FAS 535-Shady Rest Rd. DESCRIPTION OVER SANGAMON RIVER LOGGED BY BAKER
SECTION U-BRBR LOCATION NW, SEC. 21, TWP. 19N, R. 9E, 3rd PM
COUNTY PIATT DRILLING METHOD Hydro-Slam Auger HAMMER TYPE Automatic

STRUCT. NO. 074-0025 D B U M Surface Water Elev. _____ R D B U M
Station 40+08.87 E L C O Stream Bed Elev. _____ R P O S I
BORING NO. 4 H W S Qu T Groundwater Elev. _____
Station 40+17.5 H S Qu T First Encounter _____
Offset 0.0 R.L. H S Qu T Upon Completion Wash Bore R
Ground Surface Elev. 857.80 ft (ft) (ft) (ft) (ft) (ft) After Hrs. _____

STIFF MEDIUM BROWN SILTY CLAY ALLUVIUM	857.8	1	1.2	24	11	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
LOOSE TO VERY LOOSE SAND TO SILTY LOAM WITH WATER	841.8	1	1.1	28	11	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
LOOSE DARK GRAY SAND WITH SILT LENS	838.4	1	1.1	28	11	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
LOOSE SAND AND GRAVEL	824.5	1	1.1	28	11	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
MEDIUM BROWN SAND AND GRAVEL	811.8	1	1.1	28	11	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
MEDIUM GRAY-BROWN SAND	808.8	1	1.1	28	11	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100

An assumed centerline elevation of 100.00 and station of 10+00 is used when this information is not available.
The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, E-Estimate)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T208)
BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation SOIL BORING LOG Page 2 of 2
Date 10/26/09

ROUTE FAS 535-Shady Rest Rd. DESCRIPTION OVER SANGAMON RIVER LOGGED BY BAKER
SECTION U-BRBR LOCATION NW, SEC. 21, TWP. 19N, R. 9E, 3rd PM
COUNTY PIATT DRILLING METHOD Hydro-Slam Auger HAMMER TYPE Automatic

STRUCT. NO. 074-0025 D B U M Surface Water Elev. _____ R D B U M
Station 40+08.87 E L C O Stream Bed Elev. _____ R P O S I
BORING NO. 4 H W S Qu T Groundwater Elev. _____
Station 40+17.5 H S Qu T First Encounter _____
Offset 0.0 R.L. H S Qu T Upon Completion Wash Bore R
Ground Surface Elev. 857.80 ft (ft) (ft) (ft) (ft) (ft) After Hrs. _____

MEDIUM GRAY SAND AND GRAVEL (continued)	808.8	1	1.1	28	11	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
SPHOON ON ROCK	807.8	1	1.1	28	11	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
End of Boring	807.8	1	1.1	28	11	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100

An assumed centerline elevation of 100.00 and station of 10+00 is used when this information is not available.
The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, E-Estimate)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T208)
BBS, from 137 (Rev. 8-99)

ESCA
CONSULTANTS, INC.

DESIGNED BY: MTD 11/09
DRAWN BY: DWH 11/09
CHECKED BY: MTD 11/09
APPROVED BY: RDP 05/10

(Sheet 2 of 3)
SOIL BORING LOGS
STRUCTURE NO. 074-0085

SHEET NO. 24 25 SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	535	08-00255-00-BR	PIATT	62	48
FED. ROAD DIST. NO.			ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 91436					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



SOIL BORING LOG

Page 1 of 2

ROUTE FAS 535-Shady Road DESCRIPTION OVER SANDAMON RIVER LOGGED BY BAKER

SECTION U-1-1-1-1-1 LOCATION NW, SEC. 21, TWP. 35N, RNG. 6E, 3rd PM

COUNTY PIATT DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 074-0025 Station 40+58.87

BORING NO. 5 Station 41+63.17 Offset 29.0 ft Ground Surface Elev. 641.50 ft

DEPTH (ft)	SOIL DESCRIPTION	WATER	TEMPERATURE (°F)	MC (%)	Dd (in)	REMARKS
0	Surface Water Elev. _____ ft					
0	Stream Bed Elev. _____ ft					
0	Groundwater Elev. _____ ft					
0	First Encountered _____ ft					
0	Upper Completion _____ ft					
0	After _____ Hrs. _____ ft					
0	Ground Surface Elev. _____ ft					
0	MEEDIUM COARSE SAND WITH FINE GRAVEL (continued) 659.8					
15	MEEDIUM GRAY SAND WITH SOME GRAVEL					
25	MEEDIUM COARSE SAND AND FINE GRAVEL 618.4					
35	MEEDIUM GRAY SAND 619.6					
45	MEEDIUM COARSE SAND WITH FINE GRAVEL 612.4					
55	MEEDIUM GRAVEL 852.9					
65	MEEDIUM GRAY SAND 821.9					
75						
85						
95						
105						
115						
125						
135						
145						
155						
165						
175						
185						
195						
205						

An assumed centerline elevation of 106.00 and station of 10+00 is used when this information is not available.
The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, E-Estimate)
The SPT (N value) is the sum of the last two blow values in each sampling zone (ASTM D 1586)
BBS, from 127 (Rev. 8-99)



SOIL BORING LOG

Page 2 of 2

ROUTE FAS 535-Shady Road DESCRIPTION OVER SANDAMON RIVER LOGGED BY BAKER

SECTION U-1-1-1-1-1 LOCATION NW, SEC. 21, TWP. 35N, RNG. 6E, 3rd PM

COUNTY PIATT DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 074-0025 Station 40+58.87

BORING NO. 5 Station 41+63.17 Offset 29.0 ft Ground Surface Elev. 641.50 ft

DEPTH (ft)	SOIL DESCRIPTION	WATER	TEMPERATURE (°F)	MC (%)	Dd (in)	REMARKS
0	Surface Water Elev. _____ ft					
0	Stream Bed Elev. _____ ft					
0	Groundwater Elev. _____ ft					
0	First Encountered _____ ft					
0	Upper Completion _____ ft					
0	After _____ Hrs. _____ ft					
0	Ground Surface Elev. _____ ft					
0	MEEDIUM COARSE SAND WITH FINE GRAVEL (continued) 659.8					
37	DENSE FINE GRAY SAND					
59	MEEDIUM GRAY SAND AND GRAVEL 591.4					
18	MEEDIUM GRAY SAND AND GRAVEL					
28	MEEDIUM GRAY SAND AND GRAVEL 594.9					
38	MEEDIUM GRAY SAND AND GRAVEL					
48	MEEDIUM GRAY SAND AND GRAVEL					
58	MEEDIUM GRAY SAND AND GRAVEL					
68	MEEDIUM GRAY SAND AND GRAVEL					
78	MEEDIUM GRAY SAND AND GRAVEL					
88	MEEDIUM GRAY SAND AND GRAVEL					
98	MEEDIUM GRAY SAND AND GRAVEL					
108	MEEDIUM GRAY SAND AND GRAVEL					
118	MEEDIUM GRAY SAND AND GRAVEL					
128	MEEDIUM GRAY SAND AND GRAVEL					
138	MEEDIUM GRAY SAND AND GRAVEL					
148	MEEDIUM GRAY SAND AND GRAVEL					
158	MEEDIUM GRAY SAND AND GRAVEL					
168	MEEDIUM GRAY SAND AND GRAVEL					
178	MEEDIUM GRAY SAND AND GRAVEL					
188	MEEDIUM GRAY SAND AND GRAVEL					
198	MEEDIUM GRAY SAND AND GRAVEL					
208	MEEDIUM GRAY SAND AND GRAVEL					

An assumed centerline elevation of 106.00 and station of 10+00 is used when this information is not available.
The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, E-Estimate)
The SPT (N value) is the sum of the last two blow values in each sampling zone (ASTM D 1586)
BBS, from 127 (Rev. 8-99)

SOIL BORING LOG
midwest engineering services, inc.
Project Name: Proposed Bridge Replacement
Location: Shady Road Road
Section 08-00255-00-BR
Piatt County, Illinois

Boring: B-1 (Page 1 of 3)
Project No.: 1-85082
Date of Boring: January 12, 2010
Field Representative: JR Muse

Sta. 38 + 80, 8' E. of C.L.

VISUAL SOIL CLASSIFICATION	GROUND SURFACE ELEVATION: 652.20	Feet	Sample No.	N	Q _p (tsf)	Q _s (tsf)	MC (%)	Dd (in)	Remarks
18' Asphalt			1-AU					17	
3' Crushed Stone			2-SS	5				17	
Black sandy CLAY (SC) Possible FH			3-SS	3				18	
			4-SS	5	0.3			20	
Dark gray silty CLAY (CI)			5-SS	4	0.5			20	
Brown and gray silty CLAY (CL)			6-SS	7	1.5	2.2		21	58
Gray fine SAND (SP)			7-SS	5				26	Drilling 15.5 ft. Completion 15 ft.
Gray coarse SAND (SP)			8-SS	2				18	
			9-SS	9				8	
Gray fine to medium SAND (SP)			10-SS	8				18	
			11-SS	8				24	
Gray sandy SILT (SM)			12-SS	23	1.0	1.4		23	108
Gray fine to medium SAND (SP)			13-SS	28				14	

Lines of Demarcation represent approximate boundary between soil types. Variations may occur between sampling intervals and between borings locations, and the transition may be gradual. Dashed lines are indicative of pocketed soils or unrecorded changes, such as fill to natural soil zone transitions.

SOIL BORING LOG
midwest engineering services, inc.
Project Name: Proposed Bridge Replacement
Location: Shady Road Road
Section 08-00255-00-BR
Piatt County, Illinois

Boring: B-1 (Page 2 of 3)
Project No.: 1-85082
Date of Boring: January 12, 2010
Field Representative: JR Muse

Sta. 38 + 80, 8' E. of C.L.

VISUAL SOIL CLASSIFICATION	GROUND SURFACE ELEVATION: 652.20	Feet	Sample No.	N	Q _p (tsf)	Q _s (tsf)	MC (%)	Dd (in)	Remarks
Gray medium to coarse SAND (SP)			14-SS	62				7	
Gray clayey SILT with sand and small gravel (ML) TL			15-SS	58	1.8	3.3		15	115
Gray silty CLAY with sand and small gravel (CL) TL			16-SS	24	4.5*	3.8		12	131
Gray fine to medium SAND (SP)			17-SS	3				15	
			18-SS	32				21	
Gray medium to coarse SAND (SP)			19-SS	15				14	
			20-SS	24				7	
END OF BORING @ 76.5 feet									

Lines of Demarcation represent approximate boundary between soil types. Variations may occur between sampling intervals and between borings locations, and the transition may be gradual. Dashed lines are indicative of pocketed soils or unrecorded changes, such as fill to natural soil zone transitions.

ESCA
CONSULTANTS, INC.

DESIGNED BY: MTD 11/09
DRAWN BY: DWH 11/09
CHECKED BY: MTD 11/09
APPROVED BY: RDP 05/10

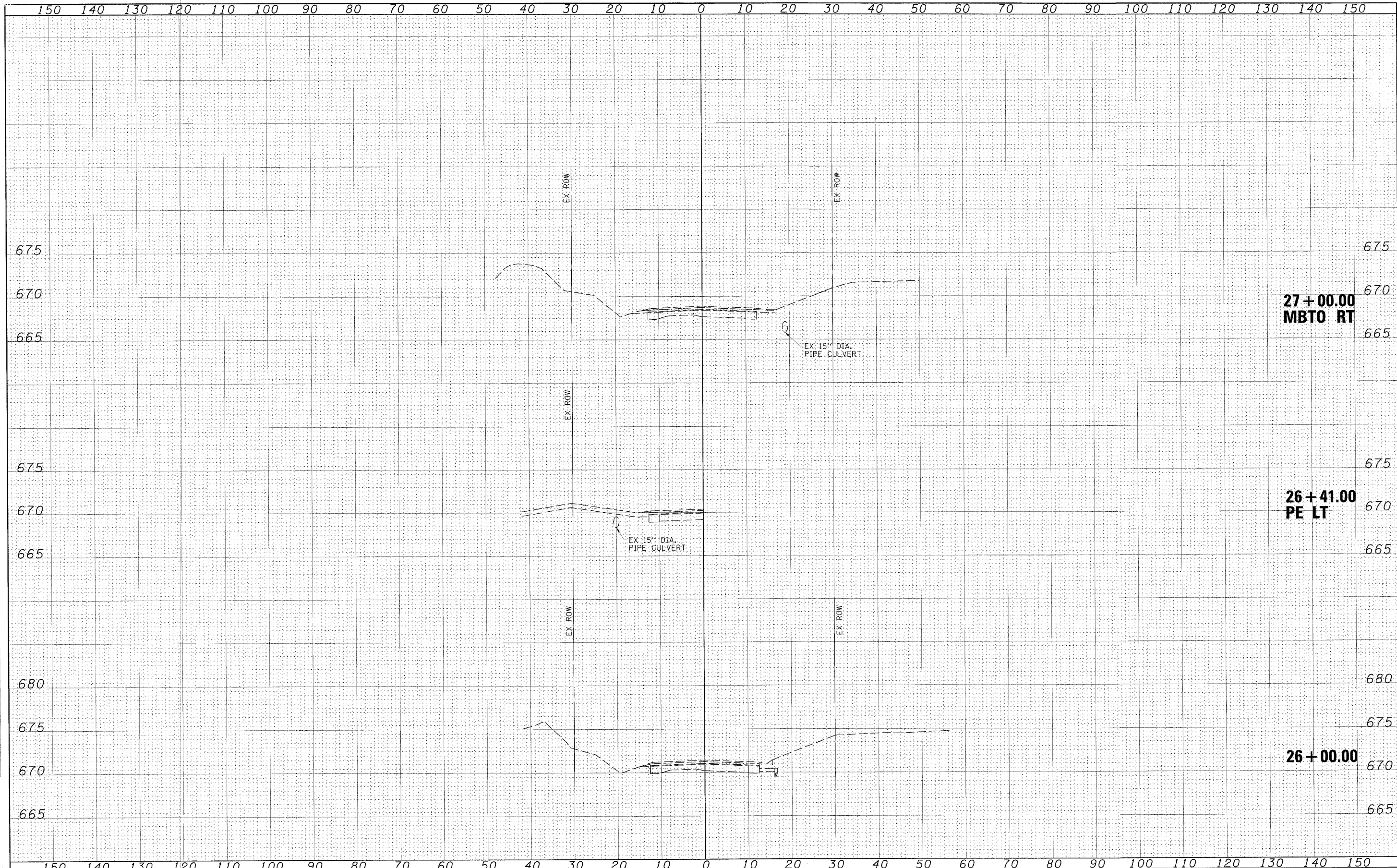
(Sheet 3 of 3)
SOIL BORING LOGS
STRUCTURE NO. 074-0085

SHEET NO. 25	F.A.S. RTE. 535	SECTION 08-00255-00-BR	COUNTY PIATT	TOTAL SHEETS 62	SHEET NO. 49
25 SHEETS	CONTRACT NO. 91436				
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		



FINAL SURVEY	SURVEYED	DATE
NOTE BOOK	PLOTTED	BY
NO.	TEMPLATE	
	AREAS CHECKED	

ORIGINAL SURVEY	SURVEYED	DATE
NOTE BOOK	PLOTTED	BY
NO.	TEMPLATE	
	AREAS CHECKED	

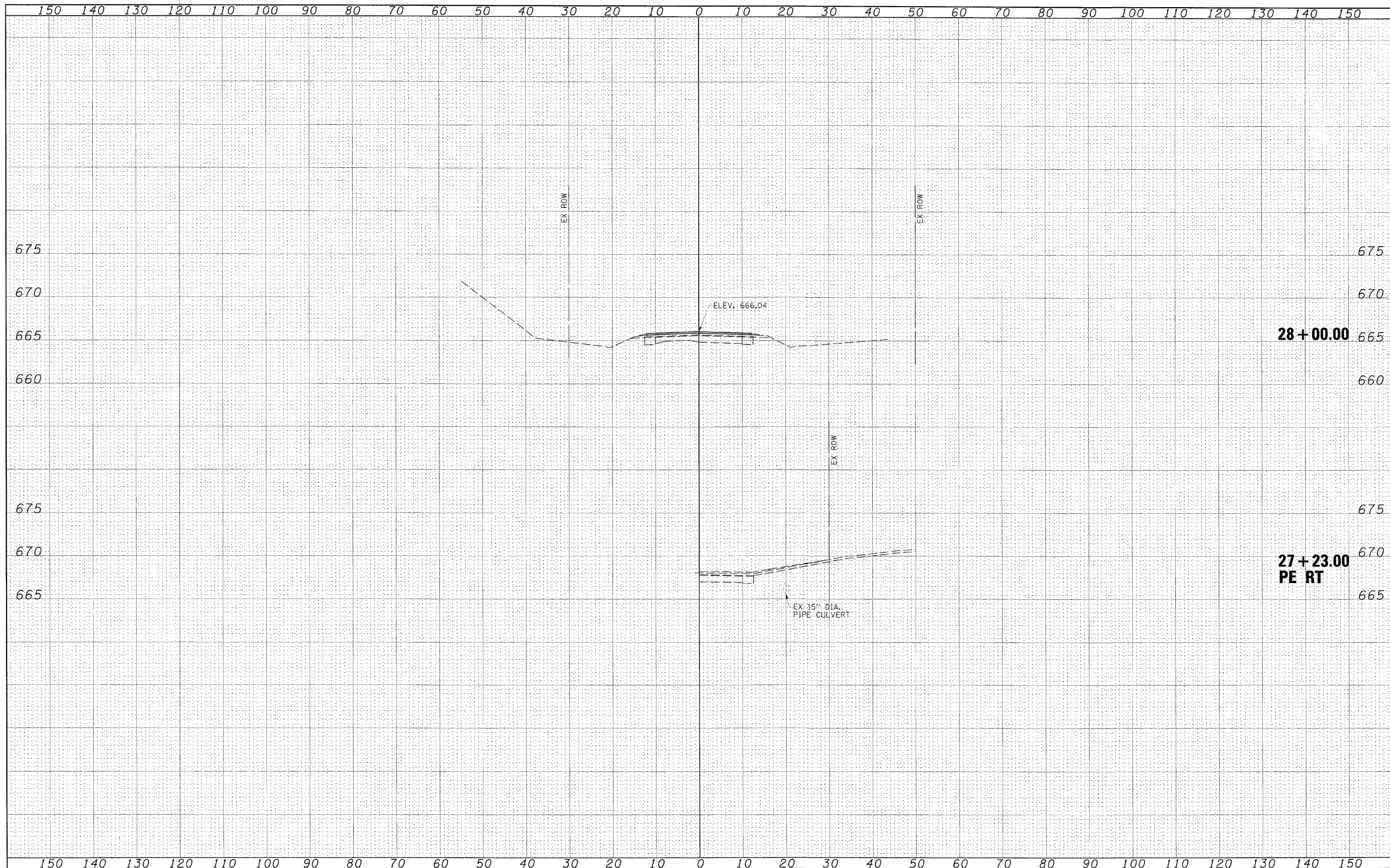


FILE NAME 2440\102.dgn	USER NAME HAG	DESIGNED - ELH	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SHADY REST ROAD CROSS SECTIONS	F.A.S. RTE. 535	SECTION 08-00255-00-BR	COUNTY PIATT	TOTAL SHEETS 62	SHEET NO. 50
SCALE: AS SHOWN	SCALE = 10,000' / IN.	CHECKED - ELH	REVISED -			SHEET NO. 1 OF 13 SHEETS	CONTRACT NO. 91436			
DATE = 05/12/10	DATE = 5/26/2010 10:20:53 AM	DATE -	REVISED -			STA. 26+00.00 TO STA. 27+00.00	FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			
PLT DATE = 5/26/2010										



FINAL	SURVEYED	DATE
SURVEY	PLOTTED	
NOTE BOOK	AREAS	
NO.	CHECKED	

ORIGINAL	SURVEYED	DATE
STRY	PLOTTED	
NOTE BOOK	AREAS	
NO.	CHECKED	



FILE NAME = Z4421X02.dgn
 SCALES: (HORIZ) 1"=40' (VERT) 1"=5'

USER NAME = HAS	DESIGNED - ELH	REVISED -
PLLOT SCALE = 10.0000 "/ IN.	DRAWN - DWH	REVISED -
PLLOT DATE = 5/26/2010 10:21:08 AM	CHECKED - ELH	REVISED -
	DATE - 05/12/10	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

SHADY REST ROAD CROSS SECTIONS

SCALE: AS SHOWN SHEET NO. 2 OF 13 SHEETS STA. 27+23.00 TO STA. 28+00.00

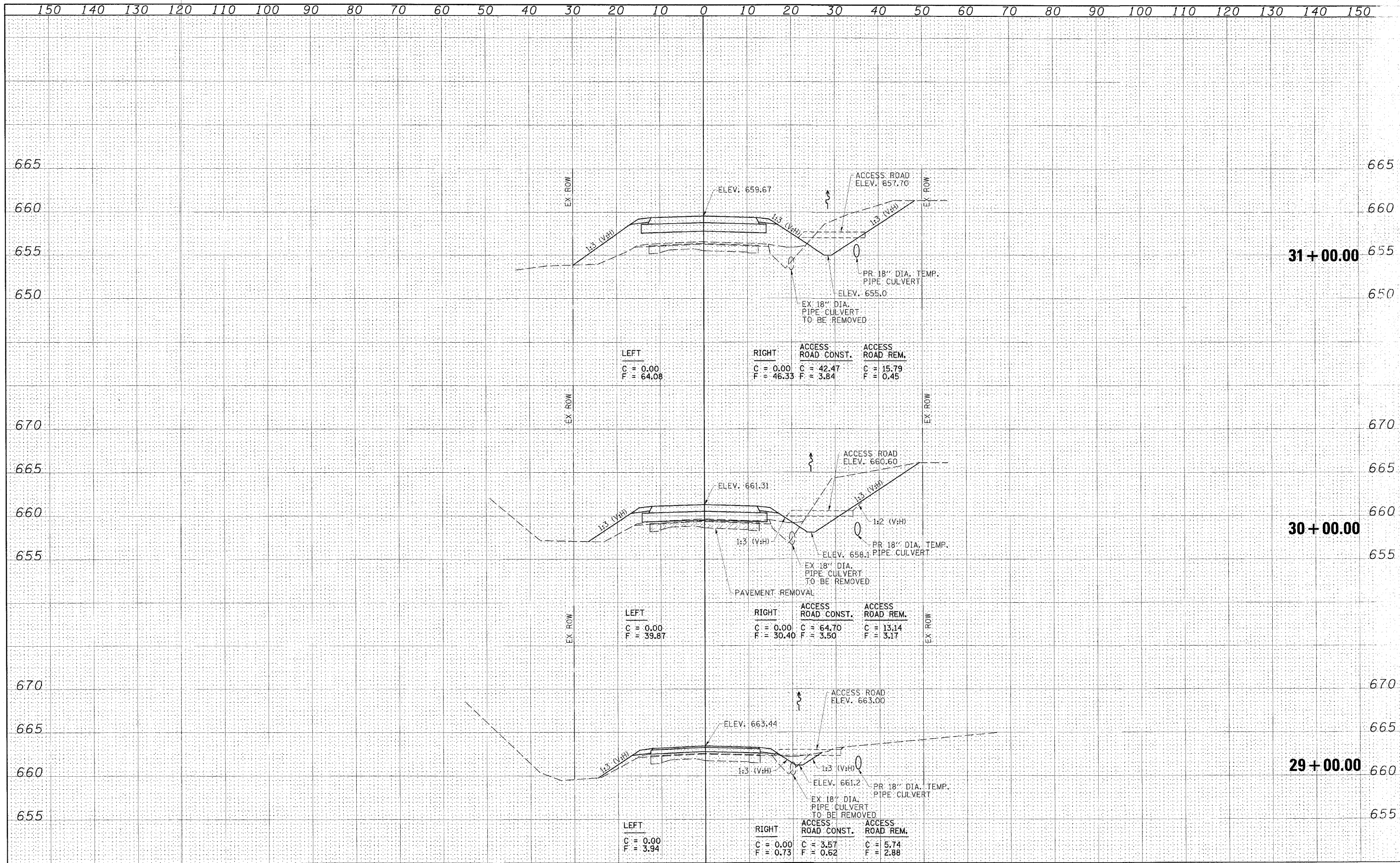
F.A.S. RTE. 535	SECTION 08-00255-00-BR	COUNTY PIATT	TOTAL SHEETS 62	SHEET NO. 51
CONTRACT NO. 91436				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

FINAL SURVEY	DATE
SURVEYED	BY
PLOTTED	DATE
NOTED	BY
AREAS CHECKED	DATE

FINAL SURVEY	DATE
SURVEYED	BY
PLOTTED	DATE
NOTED	BY
AREAS CHECKED	DATE

ORIGINAL SURVEY	DATE
SURVEYED	BY
PLOTTED	DATE
NOTED	BY
AREAS CHECKED	DATE

ORIGINAL SURVEY	DATE
SURVEYED	BY
PLOTTED	DATE
NOTED	BY
AREAS CHECKED	DATE

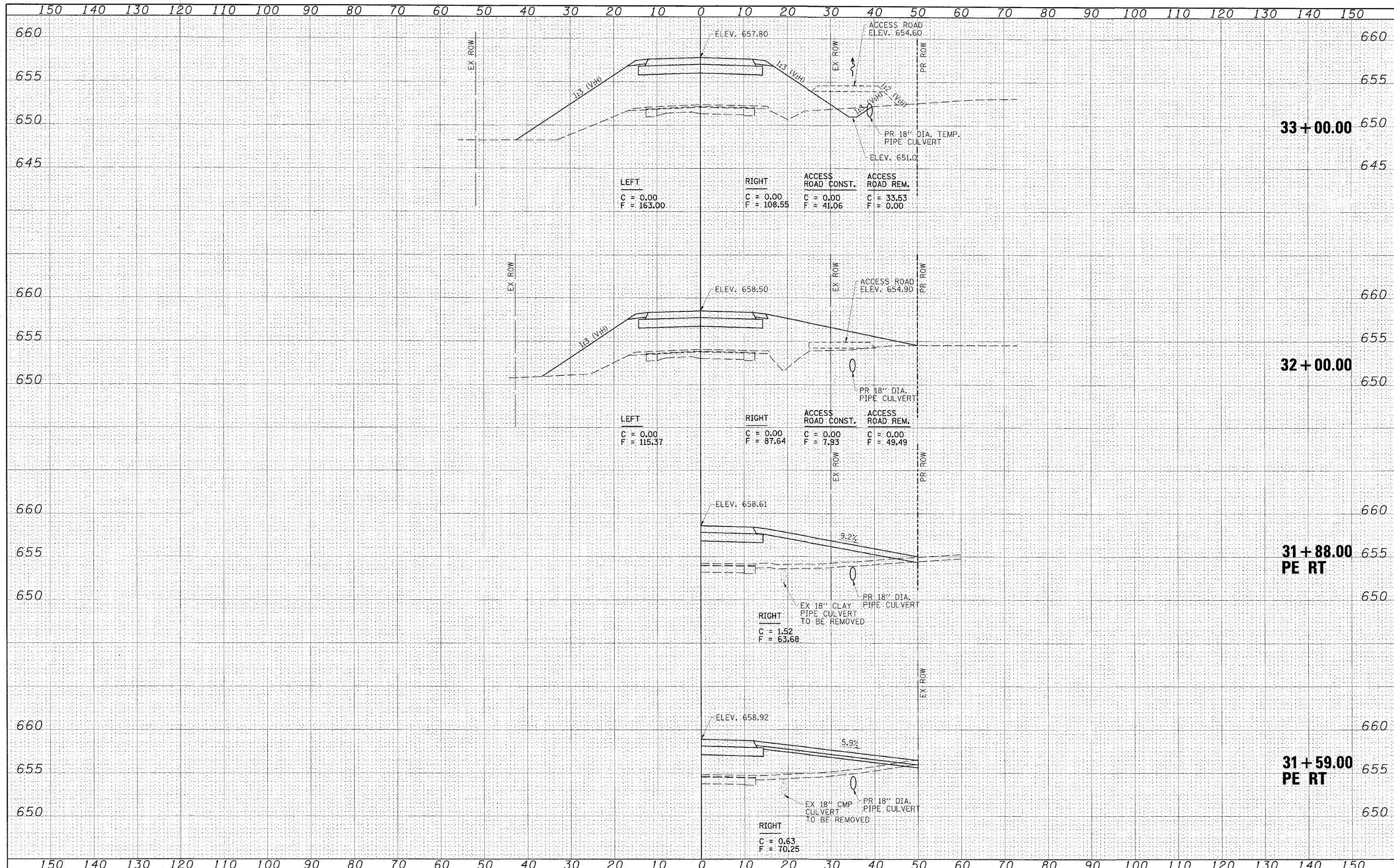


FILE NAME = Z4481XB2.dgn	USER NAME = HAS	DESIGNED - ELH	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SHADY REST ROAD CROSS SECTIONS				F.A.S. RTE. 535	SECTION 08-00255-00-BR	COUNTY PIATT	TOTAL SHEETS 62	SHEET NO. 52
SCALE: (HORIZ) 1"=10' (VERT) 1"=5'	PLOT SCALE = 10.0000 "/ IN.	CHECKED - ELH	REVISED -		SCALE: AS SHOWN	SHEET NO. 3 OF 13 SHEETS	STA. 29+00.00	TO STA. 31+00.00	CONTRACT NO. 91436				
	PLOT DATE = 5/27/2010 8:46:00 AM	DATE - 05/12/10	REVISED -		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT								



DATE	BY	SURVEYED	PLOTTED	IN THE	AREAS	CHECKED
		FINAL SURVEY	NOTE BOOK	NO.		

DATE	BY	SURVEYED	PLOTTED	IN THE	AREAS	CHECKED
		ORIGINAL SURVEY	NOTE BOOK	NO.		



FILE NAME = Z:\1101\K02.dgn
 SCALES: (HORIZ) 1"=10' (VERT) 1"=5'

USER NAME = HAS	DESIGNED - ELH	REVISED -
PLOT SCALE = 1/8"=1' IN.	DRAWN - DWH	REVISED -
PLOT DATE = 5/26/2010 10:21:43 AM	CHECKED - ELH	REVISED -
	DATE - 05/12/10	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

SHADY REST ROAD CROSS SECTIONS

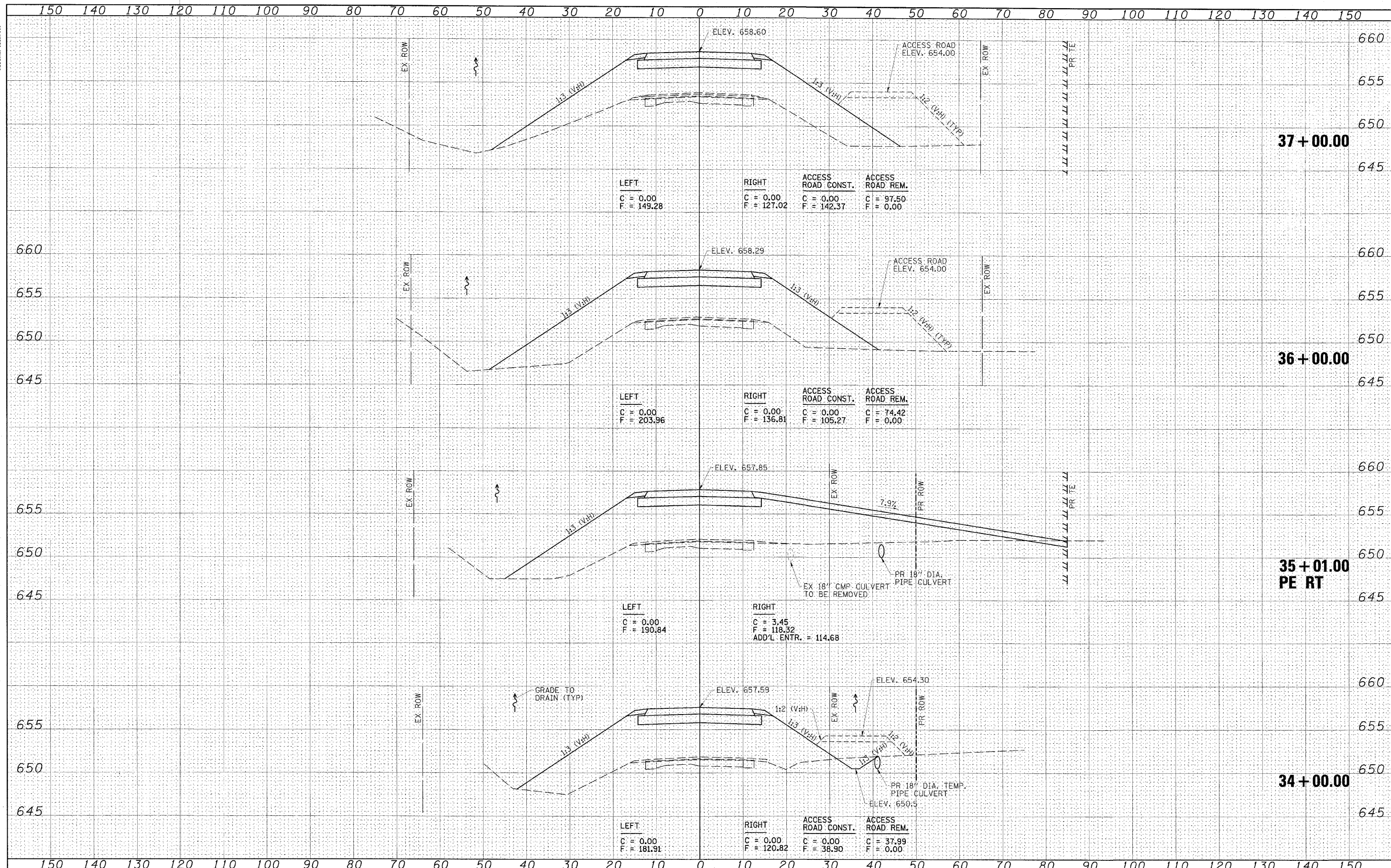
SCALE: AS SHOWN SHEET NO. 4 OF 13 SHEETS STA. 31+59.00 TO STA. 33+00.00

F.A.S. RTE. 535	SECTION 08-00255-00-BR	COUNTY PIATT	TOTAL SHEETS 62	SHEET NO. 53
CONTRACT NO. 91436				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



DATE	
BY	
SURVEYED	
PLOTTED	
NOTE BOOK	
AREAS CHECKED	

DATE	
BY	
SURVEYED	
PLOTTED	
NOTE BOOK	
AREAS CHECKED	



FILE NAME = 24481X02.dgn
 SCALES: (HORIZ) 1"=10' (VERT) 1"=5'

USER NAME = HAS
 DESIGNED - ELH
 DRAWN - DWH
 CHECKED - ELH
 DATE - 05/12/10

REVISED -
 REVISED -
 REVISED -
 REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

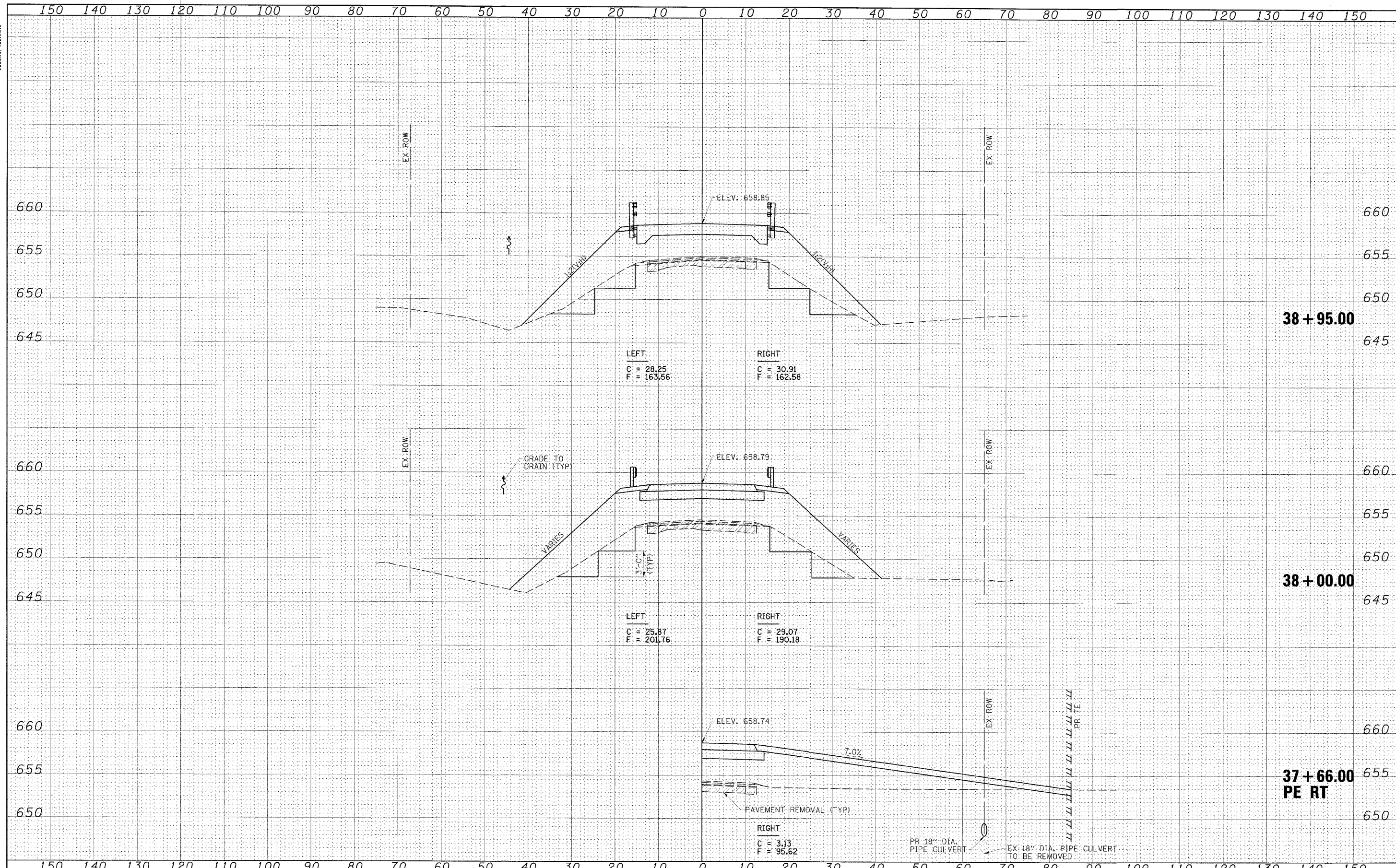
SHADY REST ROAD CROSS SECTIONS
 SCALE: AS SHOWN SHEET NO. 5 OF 13 SHEETS STA. 34+00.00 TO STA. 37+00.00

F.A.S. RTE. 535	SECTION 08-00255-00-BR	COUNTY PIATT	TOTAL SHEETS 62	SHEET NO. 54
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 91436	



DATE	
BY	
APPROVED	
PLOTTED	
DATE	
AREAS CHECKED	
FINAL	
SYMBOLS	
NOTE BOOK	
AREAS CHECKED	
NO.	

DATE	
BY	
APPROVED	
PLOTTED	
DATE	
AREAS CHECKED	
ORIGINAL	
SYMBOLS	
NOTE BOOK	
AREAS CHECKED	
NO.	



FILE NAME = 24481X01.dgn
 USER NAME = HAS
 PLOT SCALE = 10,0000 / IN.
 PLOT DATE = 5/28/2010 10:22:22 AM
 SCALES: (HORIZ) 1"=10' (VERT) 1"=5'

DESIGNED - ELH	REVISED -
DRAWN - DWH	REVISED -
CHECKED - ELH	REVISED -
DATE - 05/12/10	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

SHADY REST ROAD CROSS SECTIONS

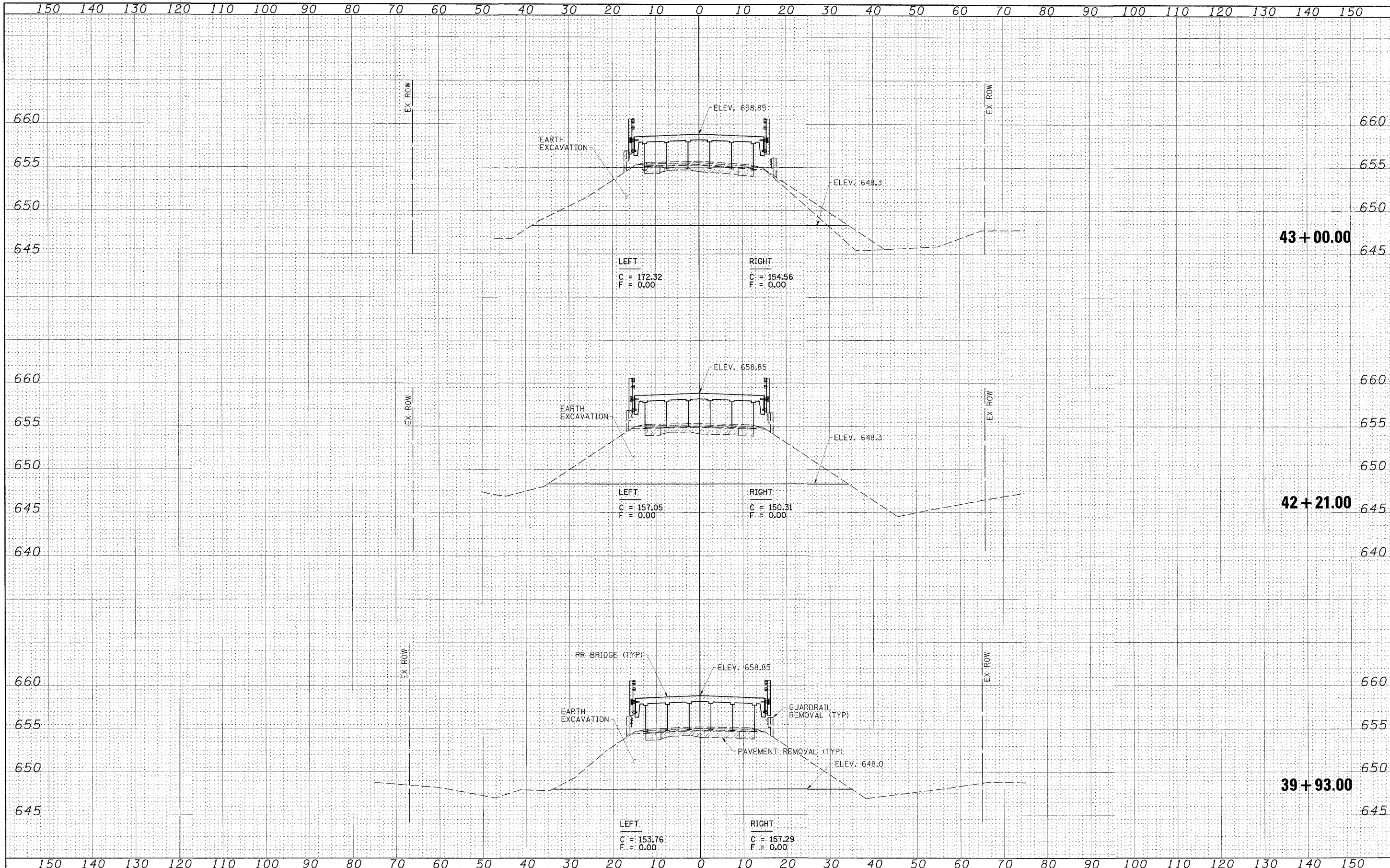
SCALE: AS SHOWN SHEET NO. 6 OF 13 SHEETS STA. 37+66.00 TO STA. 38+95.00

F.A.S. RTE. 535	SECTION 08-00255-00-BR	COUNTY PIATT	TOTAL SHEETS 62	SHEET NO. 55
CONTRACT NO. 91436				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



DATE	
BY	
SURVEYED	
TEMPLATE	
AREAS CHECKED	
NO.	
FINAL	
SURVEY	
NOTE BOOK	
AREAS CHECKED	
NO.	

DATE	
BY	
SURVEYED	
TEMPLATE	
AREAS CHECKED	
NO.	
ORIGINAL	
SURVEY	
NOTE BOOK	
AREAS CHECKED	
NO.	

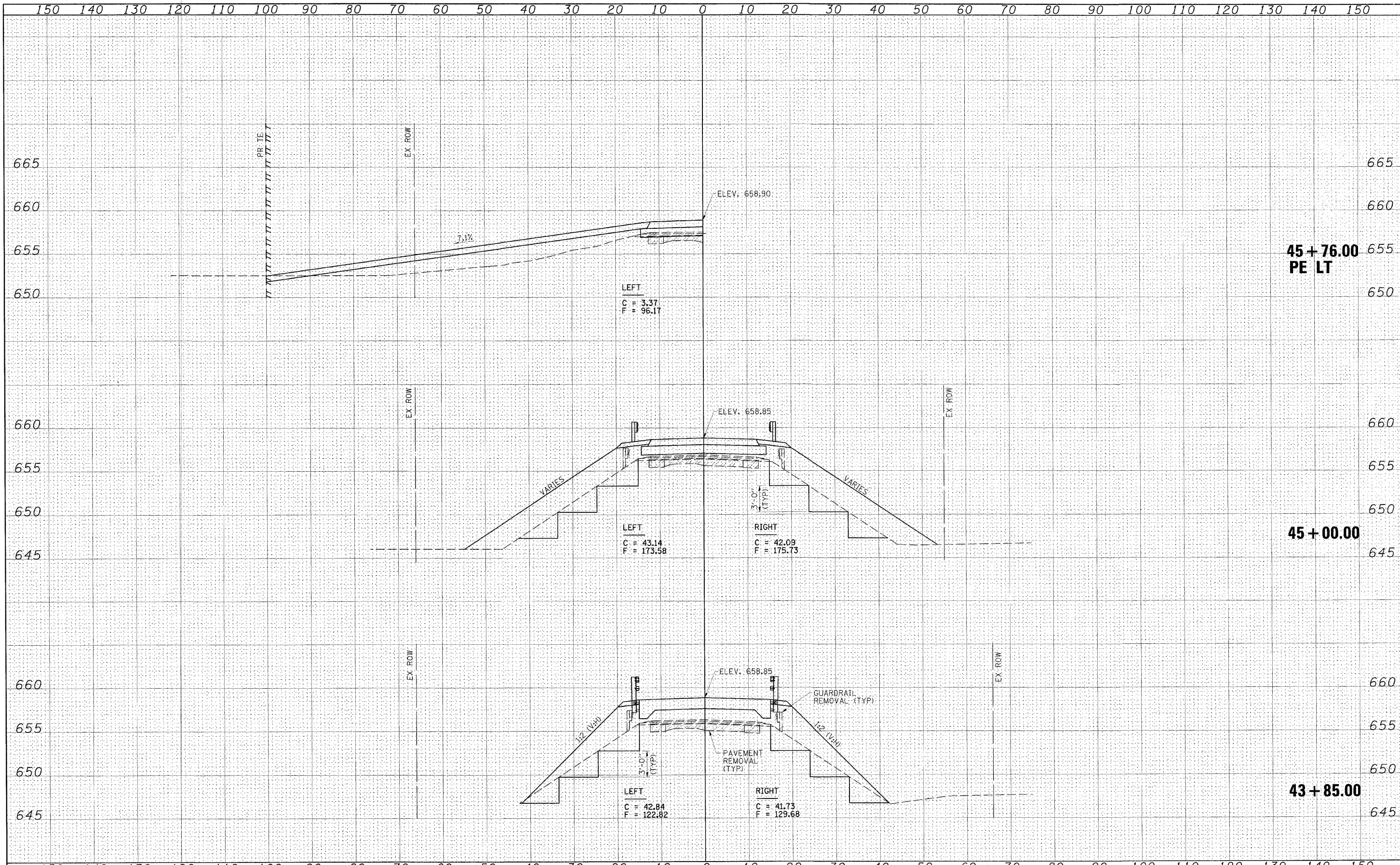


FILE NAME = 24401XB1.dgn	USER NAME = HAS	DESIGNED - ELH	DRAWN - DWH	CHECKED - ELH	DATE - 05/12/10	REVISED -	REVISED -	REVISED -	REVISED -				
SCALES: (HORIZ) 1"=10' (VERT) 1"=5'						STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION				SHADY REST ROAD CROSS SECTIONS			
PLOT SCALE = 10,0000' / IN. PLOT DATE = 5/27/2010 9:45:00 AM						SCALE: AS SHOWN SHEET NO. 7 OF 13 SHEETS STA. 39+93.00 TO STA. 43+00.00				F.A.S. RTE. 535 SECTION 08-00255-00-BR COUNTY PIATT TOTAL SHEETS 62 SHEET NO. 56 CONTRACT NO. 91436			
										FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT			



DATE	
BY	
DESIGNED	
DRAWN	
CHECKED	
DATE	
REVISIONS	
NO.	

DATE	
BY	
DESIGNED	
DRAWN	
CHECKED	
DATE	
REVISIONS	
NO.	

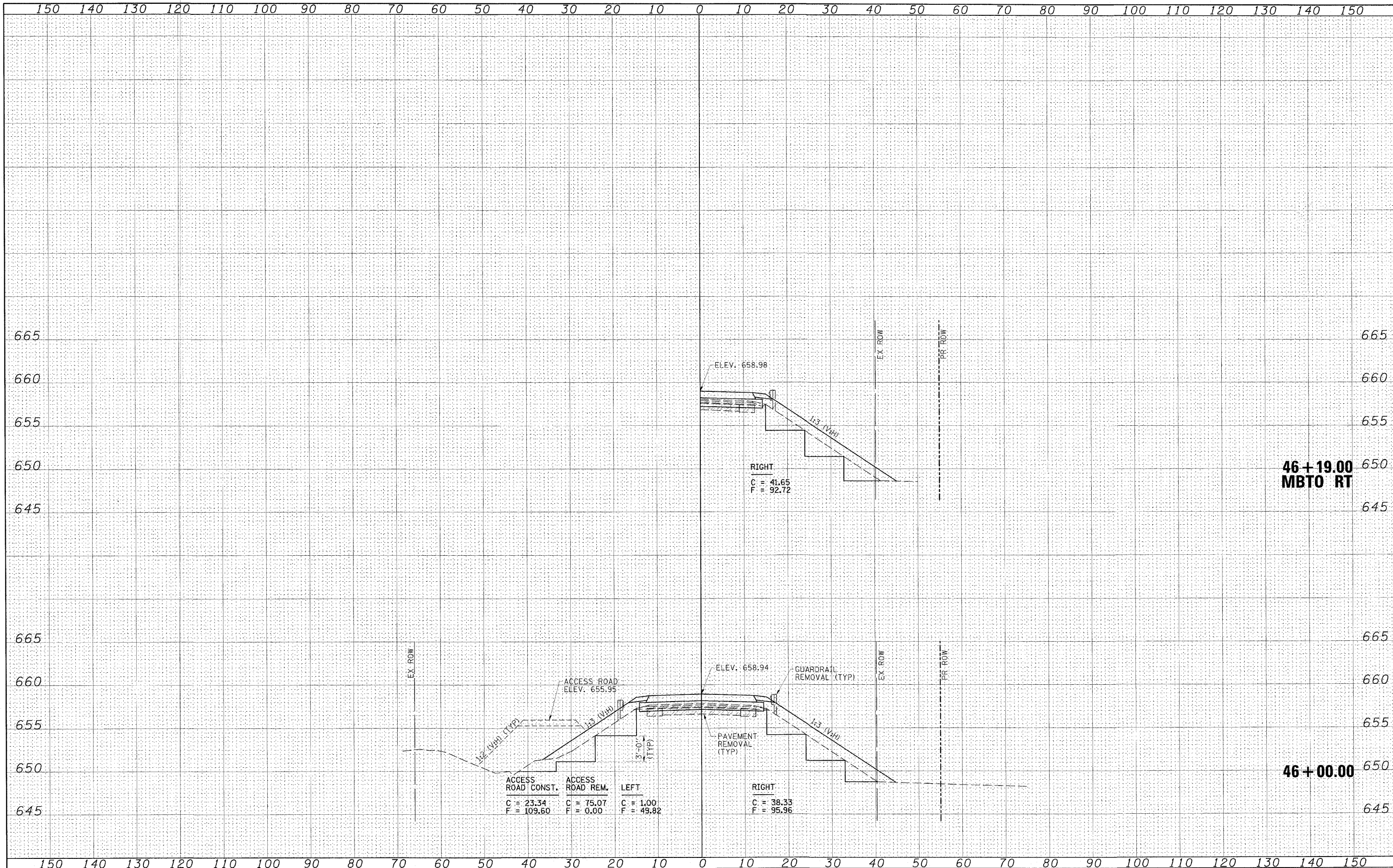


FILE NAME = 24481X01.dgn	USER NAME = HAS	DESIGNED - ELH	REVISIONS -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SHADY REST ROAD CROSS SECTIONS SCALE: AS SHOWN SHEET NO. 8 OF 13 SHEETS STA. 43+85.00 TO STA. 45+76.00	F.A.S. SECTION COUNTY TOTAL SHEET SHEET NO.	
		DRAWN - DWH	REVISIONS -			535 08-00255-00-BR PIATT 62 57	
		CHECKED - ELH	REVISIONS -			CONTRACT NO. 91436	
		DATE - 05/12/10	REVISIONS -			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT	

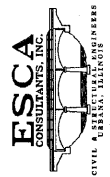


DATE	
BY	
REVIEWED	
SURVEY	
NOTE BOOK	
TEMPLATE	
AREAS	
AREAS CHECKED	
NO.	

DATE	
BY	
REVIEWED	
SURVEY	
NOTE BOOK	
TEMPLATE	
AREAS	
AREAS CHECKED	
NO.	

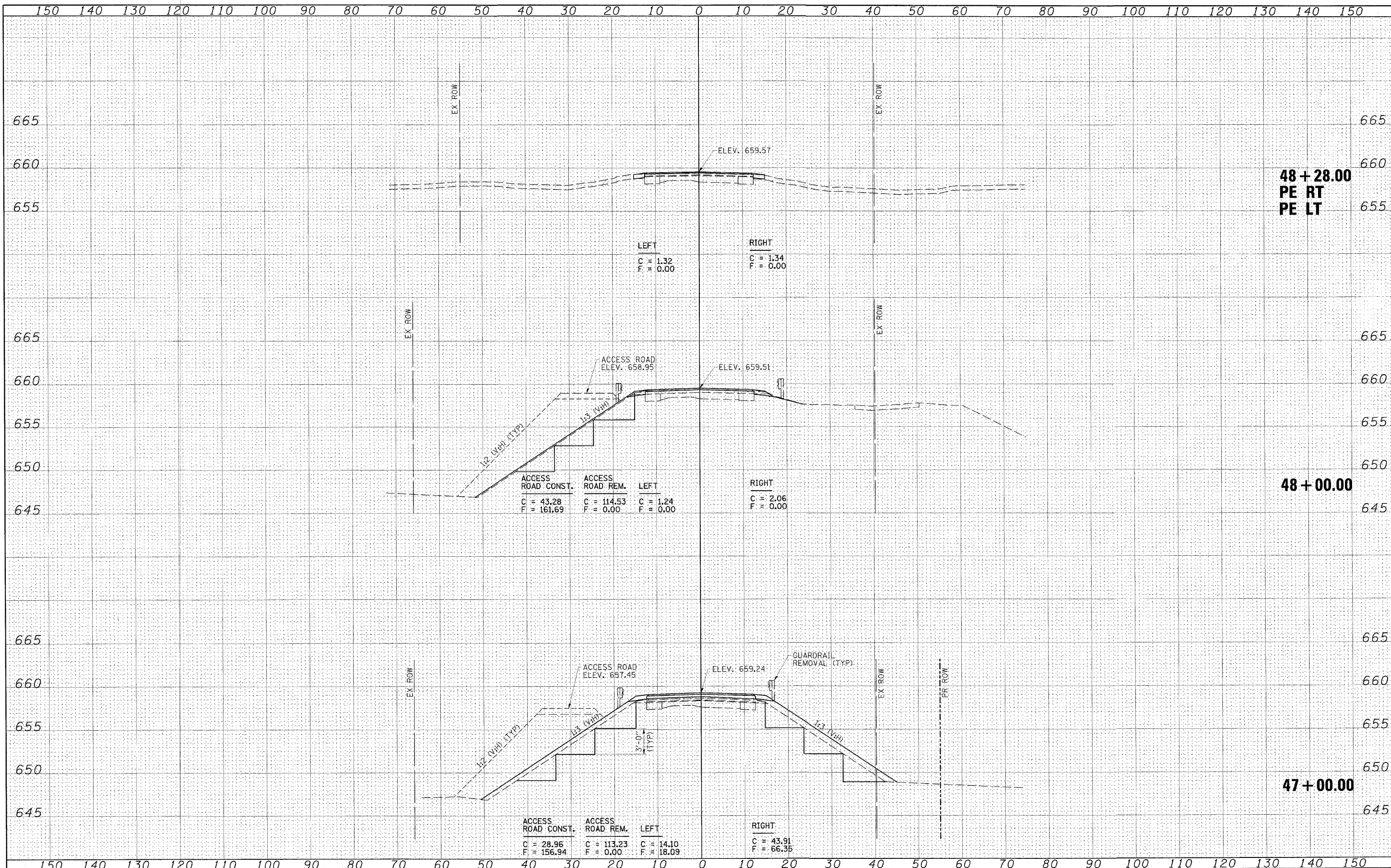


FILE NAME = Z4401X01.dgn	USER NAME = HAS	DESIGNED - ELH	REVISIONS	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SHADY REST ROAD CROSS SECTIONS	F.A.S. RTE. 535	SECTION 08-00255-00-BR	COUNTY PIATT	TOTAL SHEETS 62	SHEET NO. 58	CONTRACT NO. 91436
SCALE: (HORIZ) 1"=10' (VERT) 1"=5'	PLT SCALE = 10.0000' / IN.	CHECKED - ELH	DATE - 05/12/10	SCALE: AS SHOWN	SHEET NO. 9 OF 13 SHEETS	STA. 46+00.00	TO STA. 46+19.00	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT		



DATE	
BY	
FINAL SURVEY	
NOTE BOOK	
AREAS CHECKED	

DATE	
BY	
ORIGINAL SURVEY	
NOTE BOOK	
AREAS CHECKED	



FILE NAME: Z4401AD1.dgn
 USER NAME: HOS
 PLLOT SCALE: 10.0000' / 1"
 PLOT DATE: 5/27/2010 7:51:17 AM

DESIGNED - ELH	REVISED -
DRAWN - DWH	REVISED -
CHECKED - ELH	REVISED -
DATE - 05/12/10	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

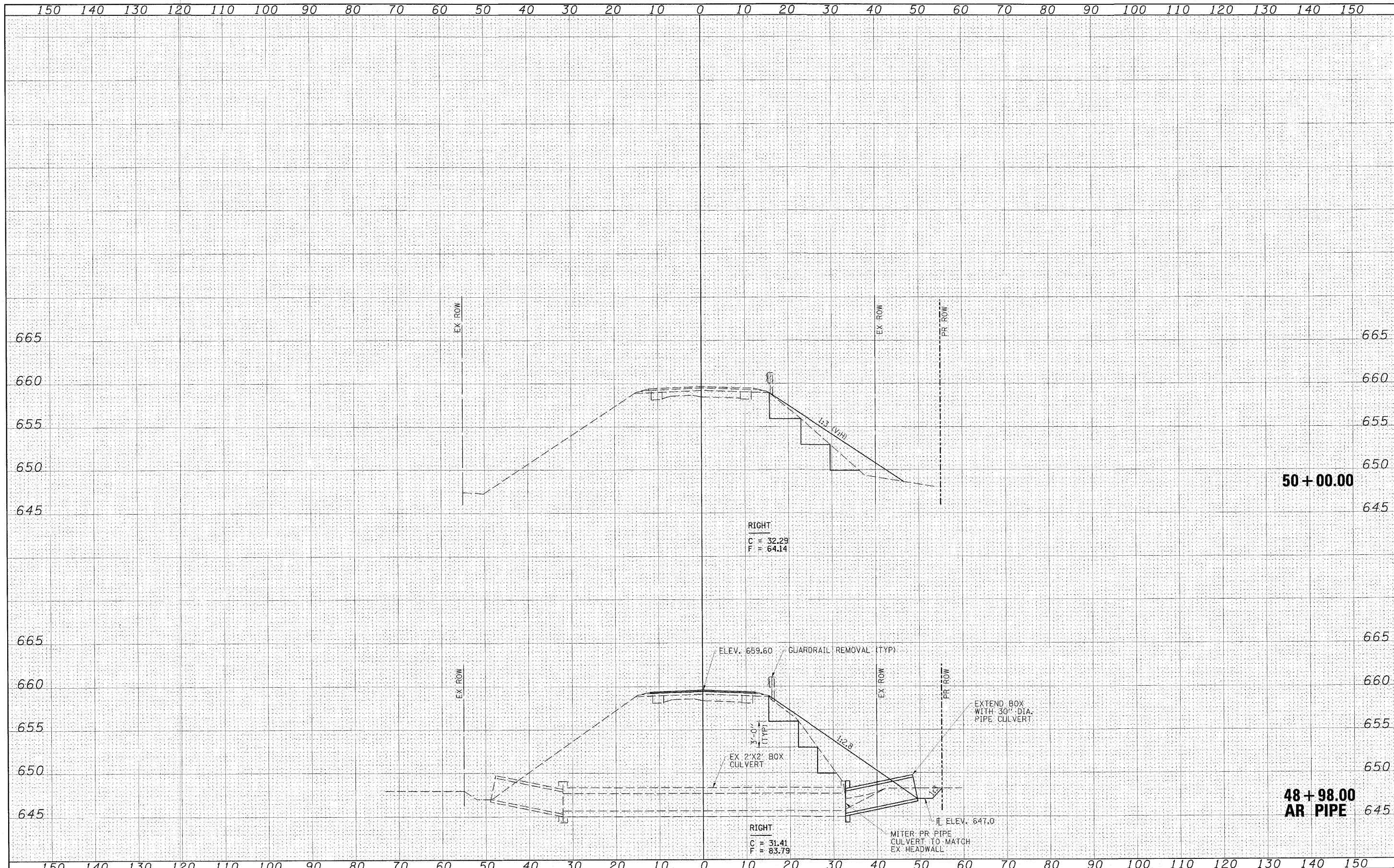
SHADY REST ROAD CROSS SECTIONS
 SCALE: AS SHOWN SHEET NO. 10 OF 13 SHEETS STA. 47+00.00 TO STA. 48+28.00

F.A.S. RTE. 535	SECTION 08-00255-00-BR	COUNTY PIATT	TOTAL SHEETS 62	SHEET NO. 59
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 91436				



FINAL SURVEY	DATE
SURVEYED	BY
PLOTTED	
NOTE BOOK	
AREAS CHECKED	

ORIGINAL SURVEY	DATE
SURVEYED	BY
PLOTTED	
NOTE BOOK	
AREAS CHECKED	



FILE NAME: 74401X02.dgn
 USER NAME: HAD
 PLOT SCALE: 10.0000' / IN.
 PLOT DATE: 5/26/2010

DESIGNED - ELH	REVISED -
DRAWN - DWH	REVISED -
CHECKED - ELH	REVISED -
DATE - 05/12/10	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

SHADY REST ROAD CROSS SECTIONS

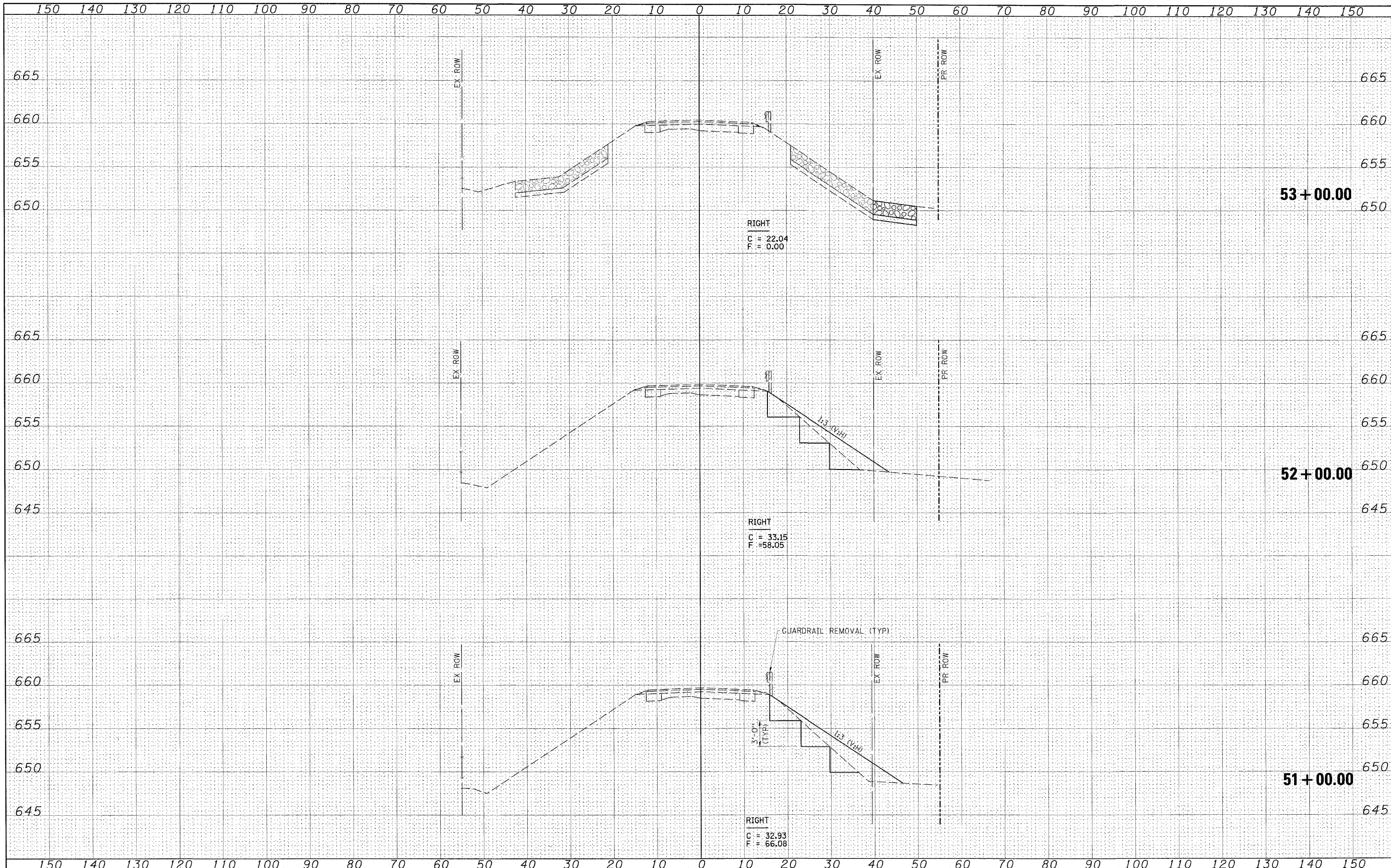
SCALE: AS SHOWN SHEET NO. 11 OF 13 SHEETS STA. 48+98.00 TO STA. 50+00.00

F.A.S. RTE. 535	SECTION 08-00255-00-BR	COUNTY PIATT	TOTAL SHEETS 62	SHEET NO. 60
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 91436	



DATE	
BY	
ORIGINAL SURVEY	
NOTE BOOK	
NO.	
SURVEYED	
TEMPLATE	
AREAS	
CHECKED	

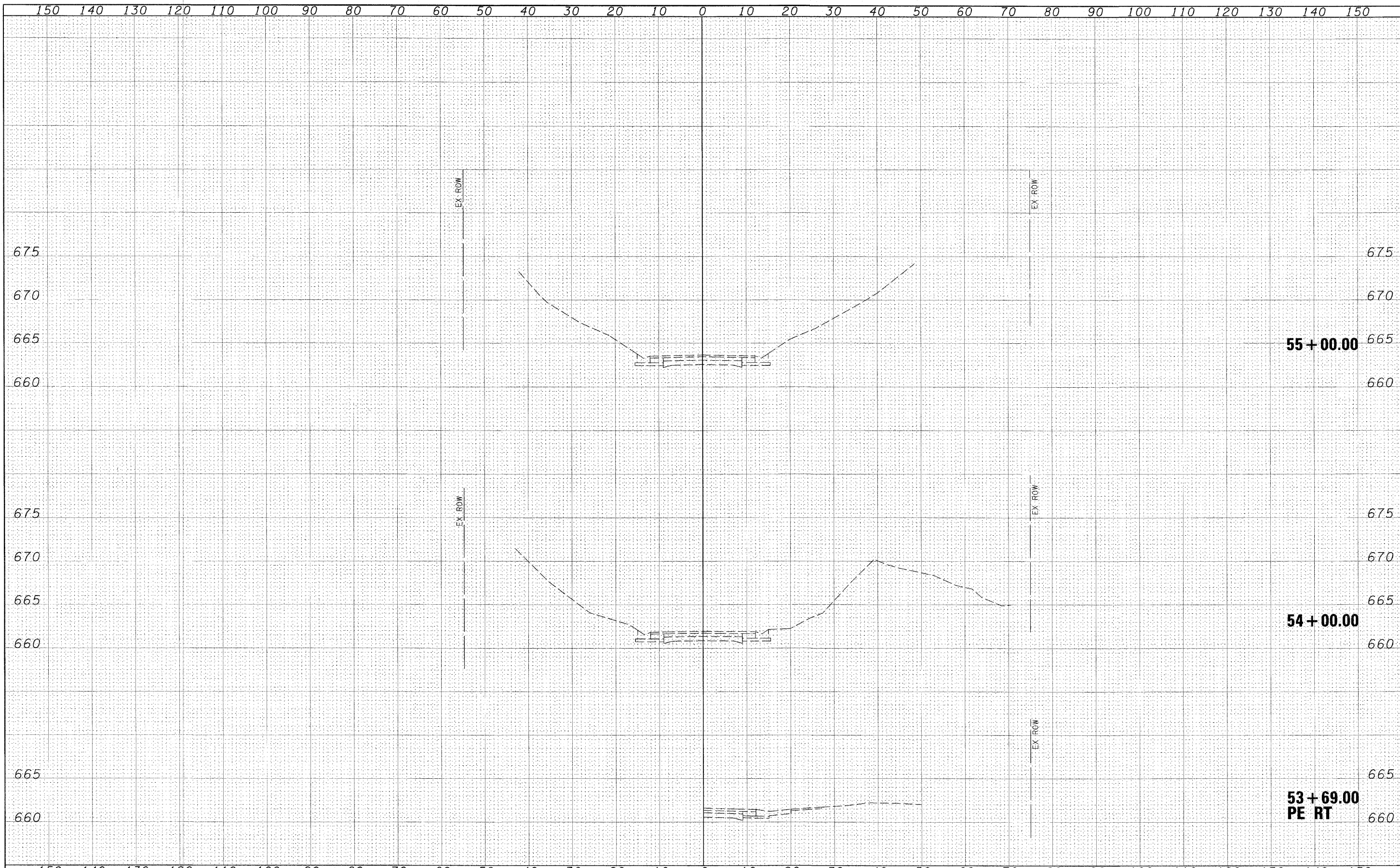
DATE	
BY	
ORIGINAL SURVEY	
NOTE BOOK	
NO.	
SURVEYED	
TEMPLATE	
AREAS	
CHECKED	





DATE	BY	DESIGNED	CHECKED
		ELH	ELH
		DRAWN	DWH
		CHECKED	ELH
		DATE	05/12/10

DATE	BY	DESIGNED	CHECKED
		ELH	ELH
		DRAWN	DWH
		CHECKED	ELH
		DATE	05/12/10



FILE NAME = Z44E1X02.dgn	USER NAME = HIG	DESIGNED - ELH	REVISOR -	F.A.S. RTE. = 535	SECTION = 08-00255-00-BR	COUNTY = PIATT	TOTAL SHEETS = 62	SHEET NO. = 62
SCALE: (HORIZ) 1"=10' (VERT) 1"=5'	PLOT SCALE = 10.0000' / IN.	DRAWN - DWH	REVISOR -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		SHADY REST ROAD CROSS SECTIONS		CONTRACT NO. 91436
	PLOT DATE = 5/26/2010 3:13:00 PM	CHECKED - ELH	REVISOR -	SCALE: AS SHOWN	SHEET NO. 13 OF 13 SHEETS	STA. 53+69.00 TO STA. 55+00.00	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT