

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PROPOSED
HIGHWAY PLANS**

FAP ROUTE 841 (IL 154)
SECTION 108B-1
PERRY COUNTY
CULVERT REPLACEMENT
IL 154 OVER PANTHER CREEK

SN 073-0016 (E)
SN 073-2007 (P)

C-99-044-08

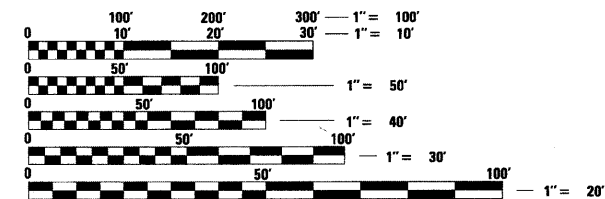
PROJECT: ACBRF-0841(013)

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
841	108B-1	PERRY	27	1
		ILLINOIS	CONTRACT NO. 78059	

FOR INDEX OF SHEETS, SEE SHEET NO. 2

TRAFFIC DATA

2007 ADT = 4810
10.7% TRUCKS
POSTED SPEED = 55 MPH

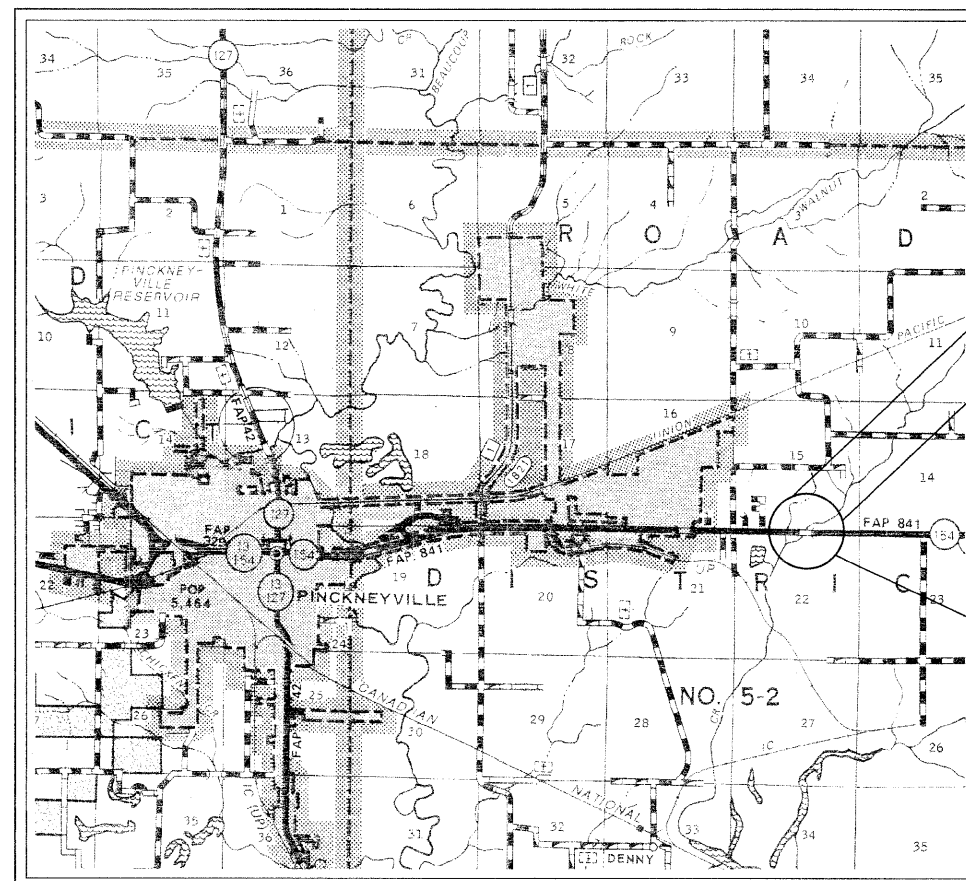


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

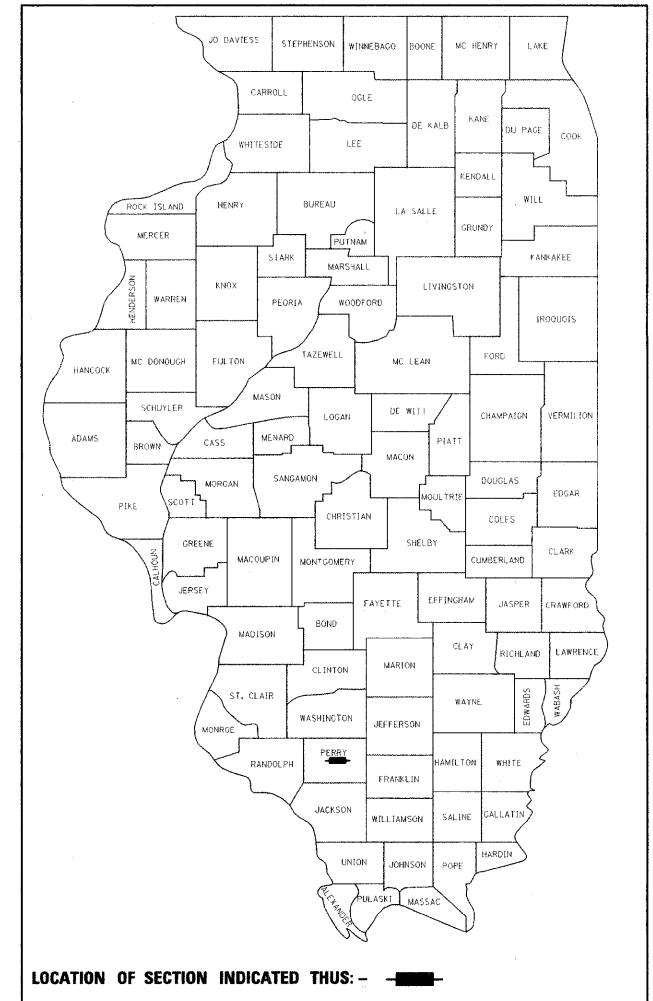
PROJECT ENGINEER: BILL PORTER
PROJECT MANAGER: DAVID PICHE

CONTRACT NO. 78059



GROSS LENGTH = 60 FT.
NET LENGTH = 60 FT.

D-99-029-08



LOCATION OF SECTION INDICATED THUS: - ■ -

PROPOSED PROJECT BEGINS
STA 231+70

PROPOSED PROJECT LOCATION
STA 232+00
SN 073-0016 (E)
SN 073-2007 (P)
IL 154
OVER PANTHER CREEK

PROPOSED PROJECT ENDS
STA 232+30

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED May 6 20 10
Mary C. Lamic
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER
June 25 20 10
Scott E. Stitt, P.E.
ENGINEER OF DESIGN AND ENVIRONMENT
June 25 20 10
Christine M. Reed
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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OF THE STATE OF ILLINOIS

INDEX OF SHEETS

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STANDARDS

000001-05	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAD OF REINFORCEMENT BARS
280001-05	TEMPORARY EROSION CONTROL SYSTEMS
420001-07	PAVEMENT JOINTS
420101-04	24' JOINTED PCC PAVEMENT
482006-03	HOT MIX ASPHALT SHOULDER ADJACENT TO RIGID PAVEMENT
515001-03	NAME PLATE FOR BRIDGES
630001-08	STEEL PLATE BEAM GUARDRAIL
630201-0X	PCC/BITUMINOUS STABILIZATION AT 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, 15' MIN TO EDGE OF PAVEMENT
701006-03	OFF-ROAD OPERATIONS, 2L 2W, 15' TO 24" AWAY
701011-02	OFF-ROAD OPERATIONS, 2L 2W, DAY ONLY
701201-03	LANE CLOSURE, 2L 2W, DAY ONLY, ON-ROAD TO 24" OFF-ROAD, FOR SPEEDS ≥ 45 MPH
701301-03	LANE CLOSURE, 2L 2W, SHORT TIME OPERATIONS
701311-03	LANE CLOSURE, 2L 2W, MOVING OPERATIONS, DAY ONLY
701321-10	LANE CLOSURE, 2L 2W, BRIDGE REPAIR WITH BARRIER
701326-03	LANE CLOSURE, 2L 2W, PAVEMENT WIDENING, FOR SPEEDS ≥ 45 MPH
701901-01	TRAFFIC CONTROL DEVICES
704001-06	TEMPORARY CONCRETE BARRIER
780001-02	TYPICAL PAVEMENT MARKINGS

GENERAL NOTES

THE THICKNESS OF HOT MIX ASPHALT MIXTURE SHOWN ON THE PLANS IS THE NOMINAL THICKNESS. DEVIATIONS FROM THE NOMINAL THICKNESS WILL BE PERMITTED WHEN SUCH DEVIATIONS OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE OR BASE ON WHICH THE HOT MIX ASPHALT MIXTURE IS PLACED.

ALL OBSTRUCTIONS WHICH ARE WITHIN THE CLEAR ZONE SHOWN ON THE TYPICAL SECTION, AND ARE NOT SHIELDED BY THE PROPOSED GUARDRAIL, SHALL BE REMOVED BETWEEN STATION 220+00 AND STATION 234+00.

FACTORS USED FOR ESTIMATING PLAN QUANTITIES ARE AS FOLLOWS AND SHALL NOT BE USED FOR THE BASIS OF FINAL QUANTITIES:

ALL HOT MIX ASPHALT	2.016 TONS/CU YD
ALL AGGREGATE	2.05 TONS/CU YD

TREES SHALL BE PRESERVED THROUGHOUT THIS SECTION AS SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER. GENERALLY, TREES OUTSIDE THE CLEAR ZONE, AND WHICH DO NOT INTERFERE WITH CONSTRUCTION, SHALL NOT BE DISTURBED.

TRIM EDGES OF EXISTING HOT MIX ASPHALT SURFACE FLUSH WITH EXISTING PAVEMENT PRIOR TO CONSTRUCTING HMA SHOULDERS, 10".

THE QUANTITY OF SHORT TERM PAVEMENT MARKING SHOWN IN THE PLANS IS BASED ON ONE APPLICATION.

AT ALL LOCATIONS WHERE THE PROPOSED HOT MIX ASPHALT OR CONCRETE PAVEMENT JOINS AN EXISTING HOT MIX ASPHALT OR CONCRETE PAVEMENT, A FULL DEPTH SAWED JOINT SHALL BE CONSTRUCTED. THE COST OF THIS JOINT WILL BE INCLUDED IN THE COST OF THE TYPE OF PAVEMENT BEING CONSTRUCTED.

PRIOR TO PLACEMENT OF THE FINAL PAVEMENT MARKINGS THE RESIDENT ENGINEER SHOULD CONTACT THE BUREAU OF OPERATIONS AND ARRANGE FOR INSPECTION AND APPROVAL OF THE PAVEMENT MARKING LAYOUT.

THE ADVANCE DETECTOR LOOPS ARE TYPICALLY LOCATED 275 FEET IN ADVANCE OF THE STOP BAR. THE BUREAU OF OPERATIONS SHOULD APPROVE THE LOOP LOCATIONS PRIOR TO INSTALLATION.

THE CENTERLINE PAVEMENT MARKING SHOULD BE REMOVED FROM THE STOP BAR TO THE SAND ATTENUATORS OR DRUMS. EDGE LINE PAVEMENT MARKING SHOULD BE REMOVED IF A 10 FOOT LANE WIDTH CANNOT BE MAINTAINED. TEMPORARY EDGE LINES SHOULD BE INSTALLED WHEN THE EDGE LINES ARE REMOVED.

VERTICAL PANELS SHOWN ON STANDARD 701321 WILL NOT BE REQUIRED ON THE STAGE II NEW STEEL RAILING, TYPE 2399. THE GUARDRAIL MARKERS SHALL BE INSTALLED PRIOR TO OPENING TO TRAFFIC.

ANY TIME THE CONCRETE BARRIER IS NOT IN THE PROPER POSITION, FLAGGERS SHALL BE IN PLACE TO CONTROL TRAFFIC. THE TEMPORARY TRAFFIC SIGNALS SHALL BE SET TO FLASH ALL RED.

MIXTURE REQUIREMENTS

LOCATION(S):	HOT-MIX ASPHALT SHOULDERS
MIXTURE USE(S):	HOT-MIX ASPHALT SHOULDERS
AC/PG:	PG58-22
RAP % (MAX):	50
DESIGN AIR VOIDS:	2.0%, 30 GYRATION DESIGN
MIXTURE COMPOSITION: (GRADATION MIXTURE):	HMA SHOULDERS
FRICTION AGGREGATE:	NONE

Prepared By:	<i>Joe Schaeffer</i> DISTRICT STUDIES & PLANS ENGINEER
Examined By:	<i>Kenneth Travis Emery</i> DISTRICT LAND ACQUISITION ENGINEER
Examined By:	<i>Carmie Nelson</i> DISTRICT PROGRAM DEVELOPMENT ENGINEER
Examined By:	<i>Ken W.D.</i> DISTRICT OPERATIONS ENGINEER
Examined By:	<i>Jim Smith</i> DISTRICT CONSTRUCTION ENGINEER
Examined By:	<i>Bruce Puchalski</i> DISTRICT MATERIALS ENGINEER
Examined By:	<i>Jim Smith</i> DISTRICT PROJECT IMPLEMENTATION ENGINEER
Examined By:	<i>Danny Clayton</i> ASSISTANT REGIONAL ENGINEER
Approved By:	<i>Mary C. Lamin</i> DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER
DATE	May 6 2010

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PLOT DATE = 4/29/2010	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**INDEX OF SHEETS; GENERAL NOTES; STANDARDS; MIX REQUIREMENTS
S.N. 073-0016**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
841	108B-1	PERRY	27	2
CONTRACT NO. 78059				
ILLINOIS FED. AID PROJECT				

SHEET NO. OF SHEETS

SUMMARY OF QUANTITIES

RURAL - PERRY COUNTY HBP FUNDING 80% FEDERAL; 20% STATE CONSTRUCTION TYPE CODE X028-2A SN 073-2007			
CODE NUMBER	ITEM DESCRIPTION	UNIT	QUANTITY
20200100	EARTH EXCAVATION	CU YD	586
20300100	CHANNEL EXCAVATION	CU YD	157
20700110	POROUS GRANULAR EMBANKMENT	TON	753
20800150	TRENCH BACKFILL	CU YD	54
25000200	SEEDING, CLASS 2	ACRE	0.3
25000350	SEEDING, CLASS 7	ACRE	0.3
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	27
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	27
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	27
25000700	AGRICULTURAL GROUND LIMESTONE	TON	0.6
25100115	MULCH, METHOD 2	ACRE	0.06
25100630	EROSION CONTROL BLANKET	SQ YD	695
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	60
28000305	TEMPORARY DITCH CHECKS	FOOT	24
28000400	PERIMETER EROSION BARRIER	FOOT	653
28100109	STONE RIPRAP, CLASS A5	SQ YD	134
28200200	FILTER FABRIC	SQ YD	134
40200500	AGGREGATE SURFACE COURSE, TYPE A 6"	SQ YD	64
42000500	PORTLAND CEMENT CONCRETE PAVEMENT 10"	SQ YD	160
42001300	PROTECTIVE COAT	SQ YD	160
44000100	PAVEMENT REMOVAL	SQ YD	86
44004250	PAVED SHOULDER REMOVAL	SQ YD	313
48203037	HOT - MIX ASPHALT SHOULDERS, 10"	SQ YD	819
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50105220	PIPE CULVERT REMOVAL	FOOT	50
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	35150
50800515	BAR SPLICERS	EACH	174
50900200	STEEL RAILING, TYPE 2399	FOOT	57
51500100	NAME PLATES	EACH	1
54003000	CONCRETE BOX CULVERTS	CU YD	163.1

RURAL - PERRY COUNTY HBP FUNDING 80% FEDERAL; 20% STATE CONSTRUCTION TYPE CODE X028-2A SN 073-2007			
CODE NUMBER	ITEM DESCRIPTION	UNIT	QUANTITY
54215565	METAL END SECTIONS 30"	EACH	2
542D1075	PIPE CULVERTS, CLASS D, TYPE 2 30"	FOOT	50
* 63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6' ^{FOOT} POSTS	FOOT	137.5
* 63100087	TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	4
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	3
63200310	GUARDRAIL REMOVAL	FOOT	463
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	8
67100100	MOBILIZATION	L SUM	1
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	2
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1
70106700	TEMPORARY RUMBLE STRIP	EACH	6
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	1
70300100	SHORT - TERM PAVEMENT MARKING	FOOT	6
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	904
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	304
70400100	TEMPORARY CONCRETE BARRIER	FOOT	275
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	263
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	904
* 78200405	GUARDRAIL MARKERS	EACH	8
* 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4
78300100	PAVEMENT MARKING REMOVAL	SQ FT	302
86200300	UNINTERRUPTIBLE POWER SUPPLY, EXTENDED	EACH	1
X0323988	TEMPORARY SOIL RETENTION SYSTEM	SQ FT	288
X6330103	REMOVE AND RE-ERECT TRAFFIC BARRIER TERMINAL TYPE 1 SPECIAL, TANGENT	EACH	1
X7050167	TEMPORARY TRAFFIC BARRIER TERMINAL, TYPE 1, SPECIAL (TANGENT)	EACH	1
Z0030250	IMPACT ATTENUATORS, TEMP ^{ORARY} (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2
Z0030350	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2

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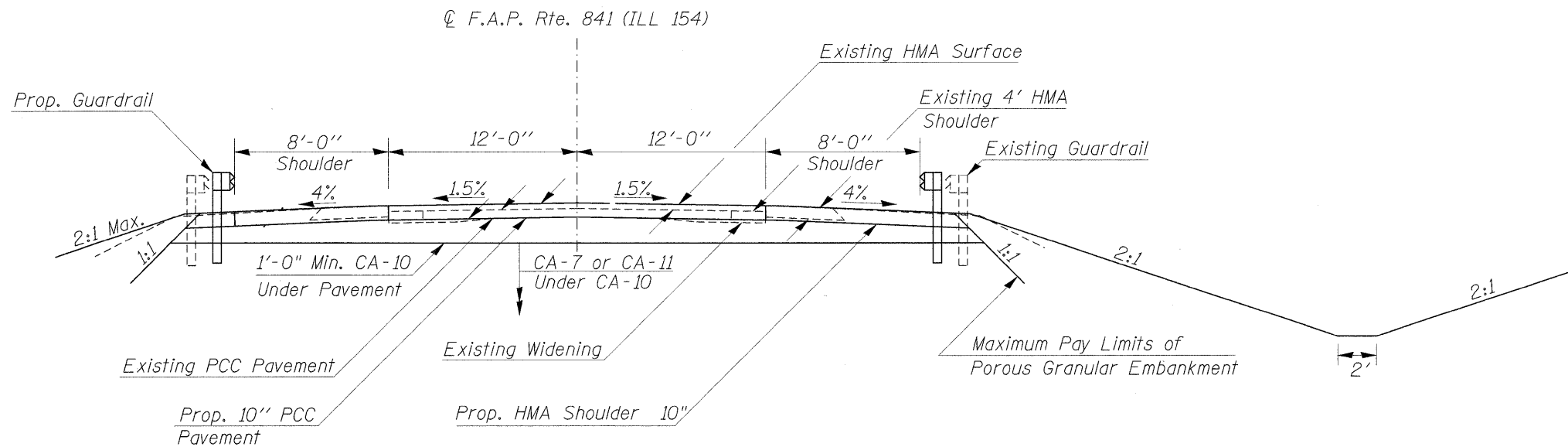
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**SUMMARY OF QUANTITIES
S.N. 073-0016**

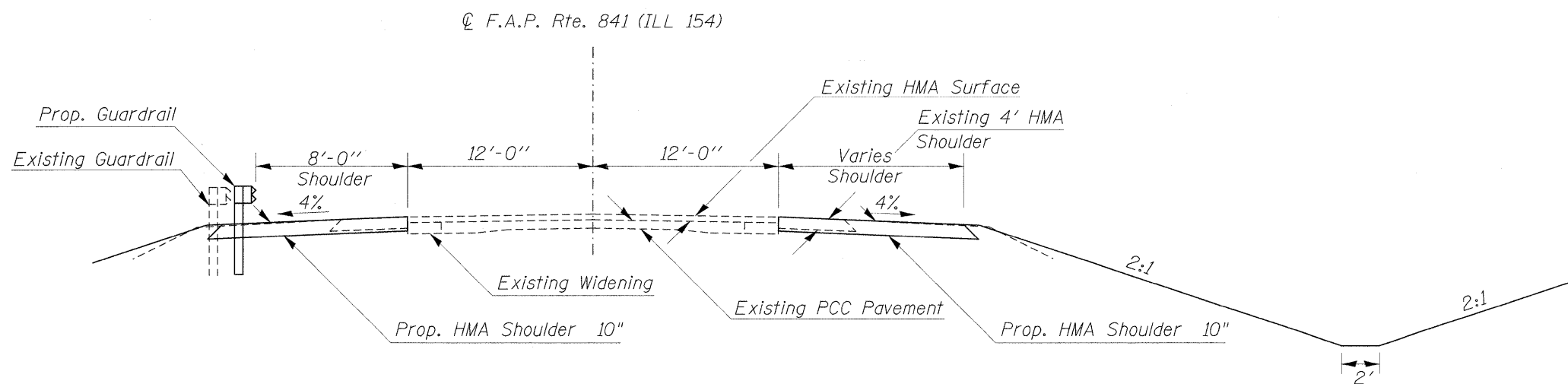
SHEET NO. OF SHEETS

**Specialty Items*

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
841	108B-1	PERRY	27	3
CONTRACT NO. 78059				
ILLINOIS FED. AID PROJECT				



TYPICAL SECTION WITHIN PAVEMENT REMOVAL
(Excludes Pavement Section over Culvert)



TYPICAL SECTION OUTSIDE PAVEMENT REMOVAL

FILE NAME =	USER NAME = cornellm	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TYPICAL SECTIONS			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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PLOT DATE = 4/29/2010		DATE -	REVISED -		FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT					

EARTHWORK SCHEDULE

LOCATION STATION TO STATION	CHANNEL EXCAVATION (UNSUITABLE)	*EARTH EXCAVATION	SHRINKAGE FACTOR FOR EARTH EXCAVATION	EARTH EXCAVATION TO BE USED IN EMBANKMENT, ADJUSTED FOR SHRINKAGE	**EMBANKMENT	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-)
	CU YD	CU YD	%	CU YD	CU YD	CU YD
STA 231+84 TO 232+16	157					
STA 230+00 TO 231+85		224	25	168	38	130
STA 232+14 TO 234+16		362	25	271.5	94	177.5
TOTALS	157	586		439.5	132	307.5

*CUTS FROM CROSS SECTIONS
**FILLS FROM CROSS SECTIONS

SEEDING SCHEDULE

LOCATION STATION TO STATION	TEMPORARY EROSION CONTROL SEEDING	SEEDING CLASS 7	SEEDING CLASS 2	NITROGEN (N)	PHOSPHOROUS (P)	POTASSIUM (K)	AGRICULTURAL GROUND LIMESTONE
	POUND	ACRES	ACRES	POUND	POUND	POUND	TON
NW QUAD	12	0.06	0.06	5	5	5	0.12
NE QUAD	12	0.06	0.06	5	5	5	0.12
SW QUAD	16	0.08	0.08	8	8	8	0.16
SE QUAD	20	0.1	0.1	9	9	9	0.2
TOTALS	60	0.3	0.3	27	27	27	0.6

TERMINALS AND GUARDRAIL SCHEDULE

LOCATION STATION TO STATION	TRAFFIC BARRIER TERMINAL				SBGR TYPE A 6.75 POSTS FOOT	GUARDRAIL REMOVAL FOOT	TERMINAL MARKER DIRECT APPLIED FOOT	GUARDRAIL MARKER EACH
	TYPE 1 SPL TANGENT EACH	TYPE 6A EACH	TEMPORARY TYPE 1 SPL TAN EACH	REMOVE & RE-ERECT EACH				
RT STA 232+64 TO 233+14			1				1	
LT STA 230+92 TO 231+42	1						1	
LT STA 233+33 TO 233+83	1						1	
RT STA 230+30 TO 230+80	1						1	
LT STA 231+42 TO 231+86		1						
LT STA 232+14 TO 232+58		1						
RT STA 231+42 TO 231+86		1						
RT STA 232+14 TO 232+58		1						
RT STA 232+58 TO 233+08				1				
LT STA 232+58 TO 233+33					75			
RT STA 230+80 TO 231+42					62.5			
NW QUAD						75		
NE QUAD						175		
SW QUAD						163		
SE QUAD						50		
LT STA 230+92 TO 231+86								2
LT STA 232+14 TO 233+83								2
RT STA 230+30 TO 231+86								2
RT STA 232+14 TO 233+08								2
TOTALS	3	4	1	1	137.5	463	4	8

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PLOT DATE = 4/29/2010	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**SCHEDULES OF QUANTITIES
S.N. 073-0016**

SHEET NO. OF SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
841	108B-1	PERRY	27	5
CONTRACT NO. 78059				
ILLINOIS FED. AID PROJECT				

EROSION CONTROL

LOCATION STATION TO STATION	PERIMETER EROSION BARRIER	MULCH METHOD 2	EROSION CONTROL BLANKET	TEMPORARY DITCH CHECKS
	FOOT	ACRES	SQ YD	FOOT
NW QUAD	101	0.01	103	
NE QUAD	209	0.02	42	
SW QUAD	165	0.01	166	
SE QUAD	178	0.02	384	24
TOTALS	653	0.06	695	24

REMOVAL SCHEDULE

LOCATION STATION TO STATION	PAVEMENT REMOVAL	PAVED SHOULDER REMOVAL	PIPE CULVERT REMOVAL
	SQ YD	SQ YD	FOOT
STA 231+70 TO 231+86	43		
STA 232+14 TO 232+30	43		
LT STA 230+11 TO 231+83		77	
LT STA 232+17 TO 234+14		85	
RT STA 230+07 TO 231+83		68	
RT STA 232+17 TO 234+00		83	
RT STA 233+12 TO 233+62			50
TOTALS	86	313	50

SHOULDER SCHEDULE

LOCATION STATION TO STATION	HOT-MIX ASPHALT SHOULDERS, 10''	AGGREGATE SURFACE COURSE TYPE A, 6''
	SQ YD	SQ YD
LT STA 230+11 TO 230+87	57	18
LT STA 230+87 TO 231+83	126	
LT STA 232+17 TO 233+94	227	
LT STA 233+94 TO 234+14	19	
RT STA 230+07 TO 230+79	87	
RT STA 230+79 TO 231+83	127	
RT STA 232+17 TO 233+13	115	
RT STA 233+13 TO 233+27	39	46
RT STA 233+27 TO 234+00	22	
TOTALS	819	64

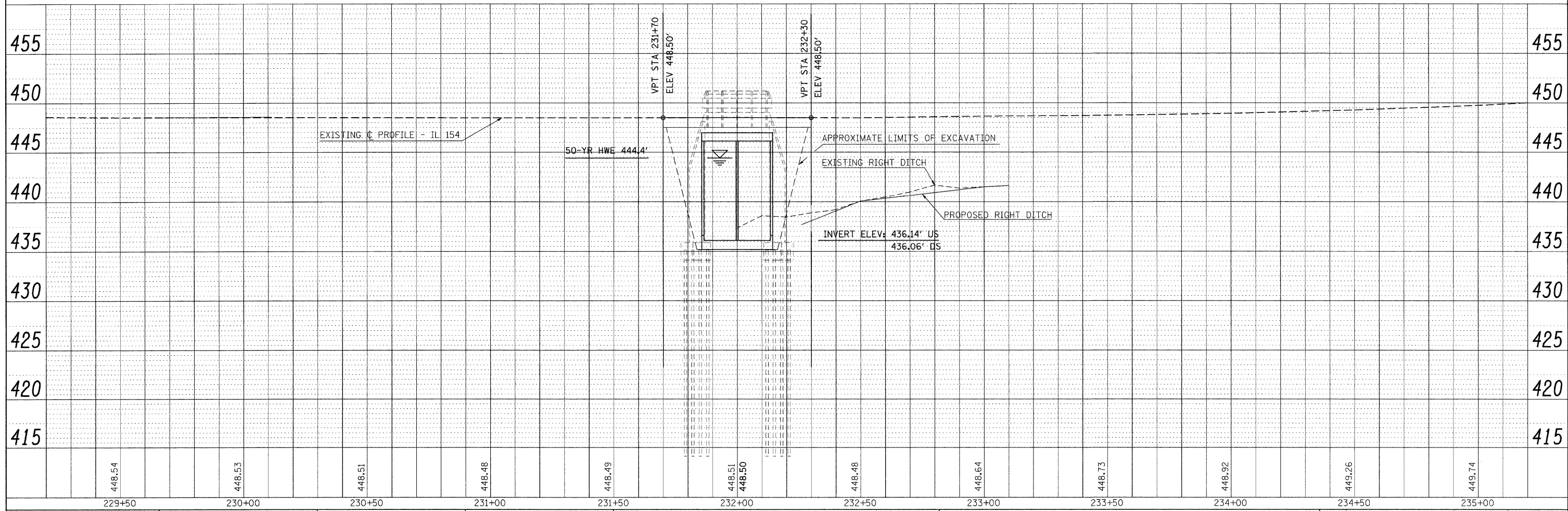
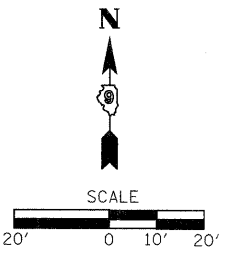
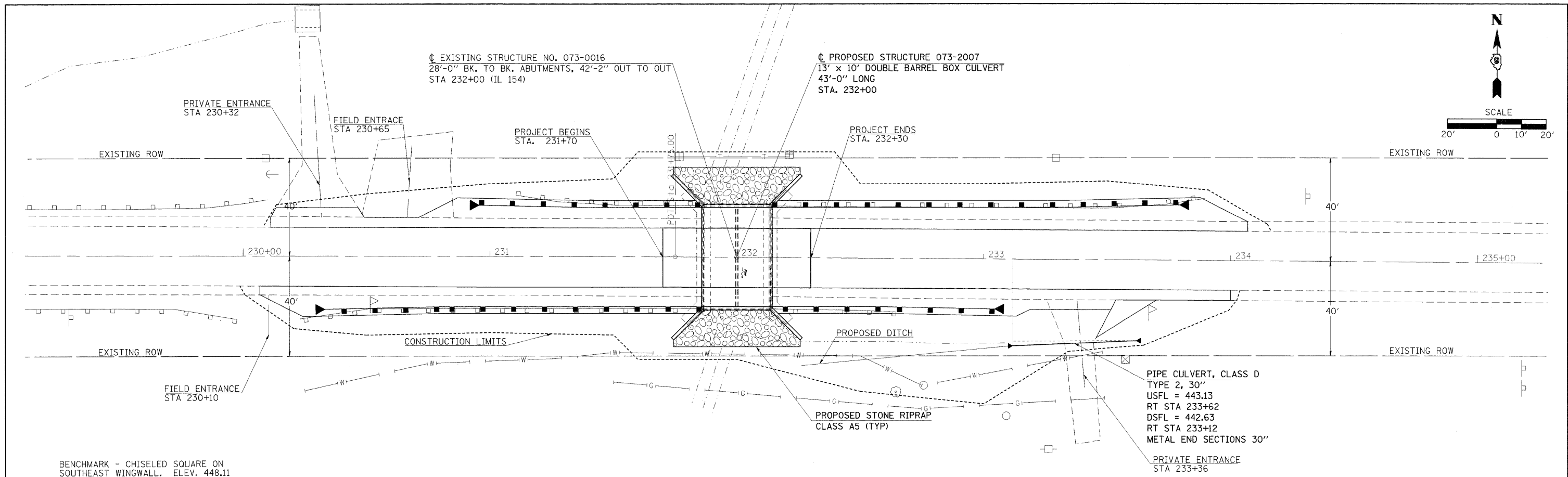
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PLOT DATE = 4/29/2010	CHECKED -	REVISED -			CONTRACT NO. 78059		ILLINOIS FED. AID PROJECT		
	DATE -	REVISED -	SHEET NO. OF SHEETS						

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL 154 OVER PANTHER CREEK PLAN/PROFILE

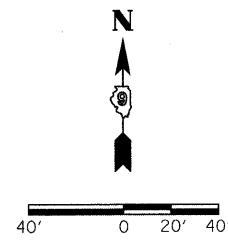
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SHEET NO. 1 OF 1 SHEETS

STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
841	108B-1	PERRY	27	7
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT			CONTRACT NO. 78059	

PARCEL NO.	NAME	PURPOSE	ACREAGE
110	JAMES AND EVA LEE	T.E.	0.023
111	ROGER SEIBERT TRUSTEE	T.E.	0.007
112	ROGER MARLOW	ROW	0.110



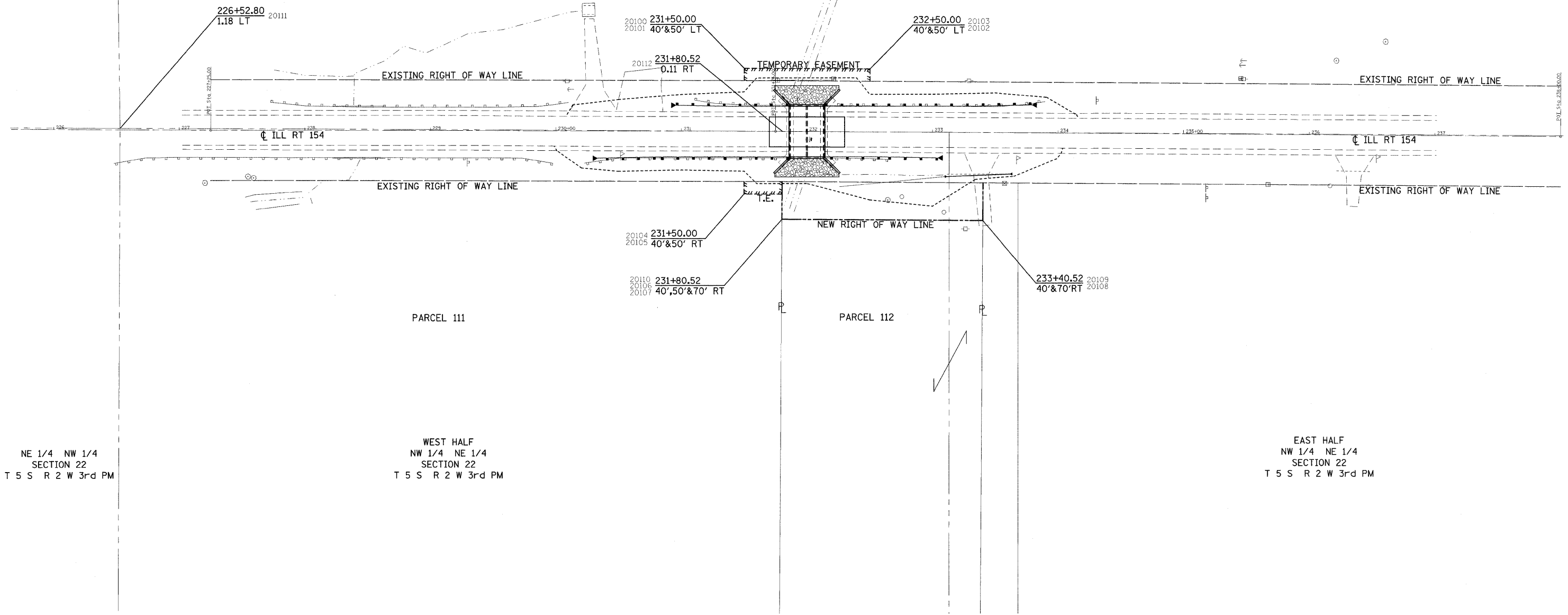
SE 1/4 SW 1/4
SECTION 15
T 5 S R 2 W 3rd PM

SW 1/4 SE 1/4
SECTION 15
T 5 S R 2 W 3rd PM

PARCEL 110

POINT COORDINATES

P+ 20100	N 516762.4883	E 2544809.5042
P+ 20101	N 516772.4883	E 2544809.5317
P+ 20102	N 516771.8886	E 2544909.7459
P+ 20103	N 516761.8888	E 2544909.6752
P+ 20104	N 516682.4886	E 2544809.2847
P+ 20105	N 516672.4887	E 2544809.2573
P+ 20106	N 516672.3840	E 2544839.5619
P+ 20107	N 516652.3826	E 2544839.4205
P+ 20108	N 516651.2518	E 2544999.4165
P+ 20109	N 516681.2511	E 2544999.6286
P+ 20110	N 516682.3822	E 2544839.6326
P+ 20111	N 516725.3515	E 2544312.2070
P+ 20112	N 516722.2687	E 2544839.9146

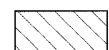





NE 1/4 NW 1/4
SECTION 22
T 5 S R 2 W 3rd PM

WEST HALF
NW 1/4 NE 1/4
SECTION 22
T 5 S R 2 W 3rd PM

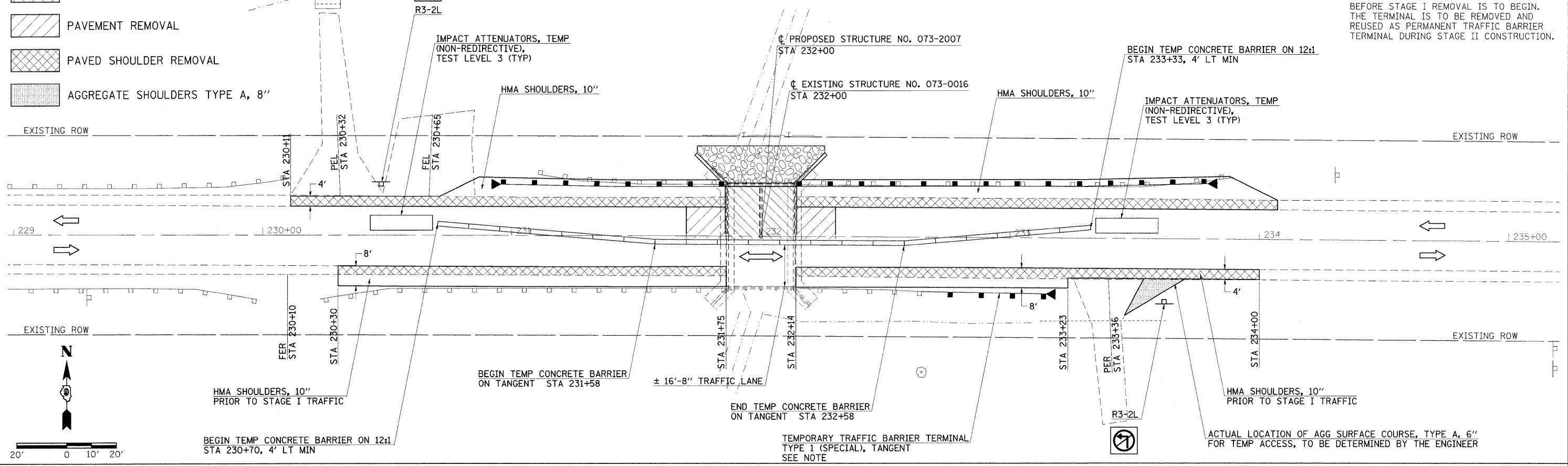
EAST HALF
NW 1/4 NE 1/4
SECTION 22
T 5 S R 2 W 3rd PM

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PLOT SCALE = 40,0000 1/ IN.	CHECKED -	REVISED -	REVISED -		PROJECT SHEET NO. 1 OF 1 SHEETS	JOB NO. R99-015-09	STA. 226+00.00 TO STA. 238+00.00	CONTRACT NO. 98059				
PLOT DATE = 4/29/2010	DATE -	REVISED -	REVISED -		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT							

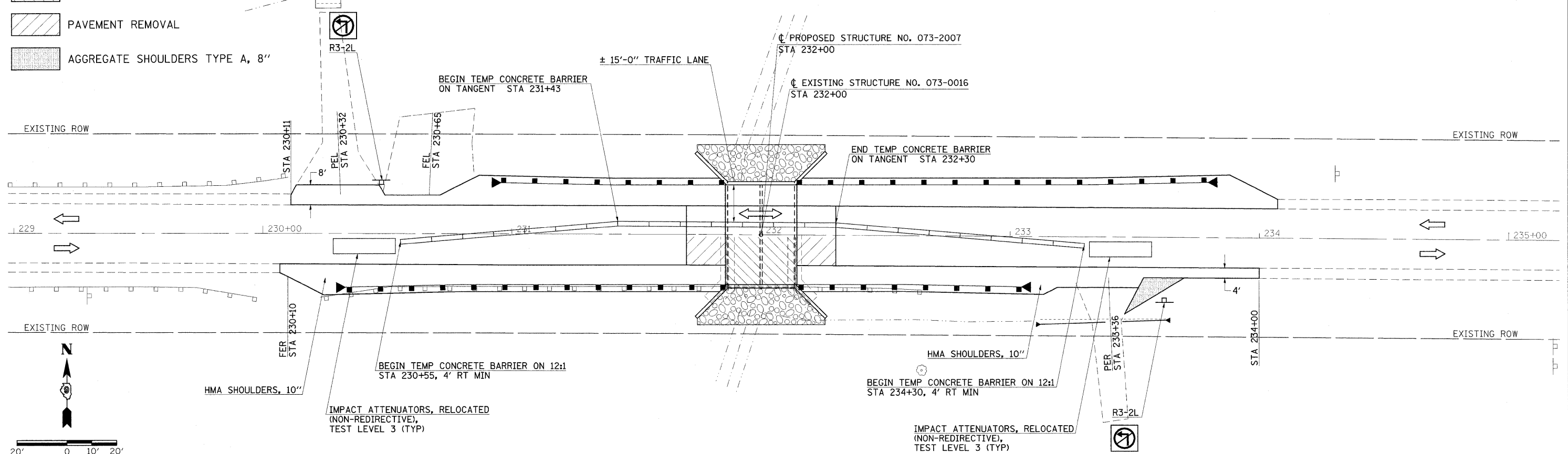
-  STRUCTURE REMOVAL
-  PAVEMENT REMOVAL
-  PAVED SHOULDER REMOVAL
-  AGGREGATE SHOULDERS TYPE A, 8"

NOTE: TEMPORARY TRAFFIC BARRIER TERMINAL TYPE 1 (SPECIAL) TANGENT IS TO BE INSTALLED TO THE EXISTING GUARDRAIL BEFORE STAGE I REMOVAL IS TO BEGIN. THE TERMINAL IS TO BE REMOVED AND REUSED AS PERMANENT TRAFFIC BARRIER TERMINAL DURING STAGE II CONSTRUCTION.

STAGE 1

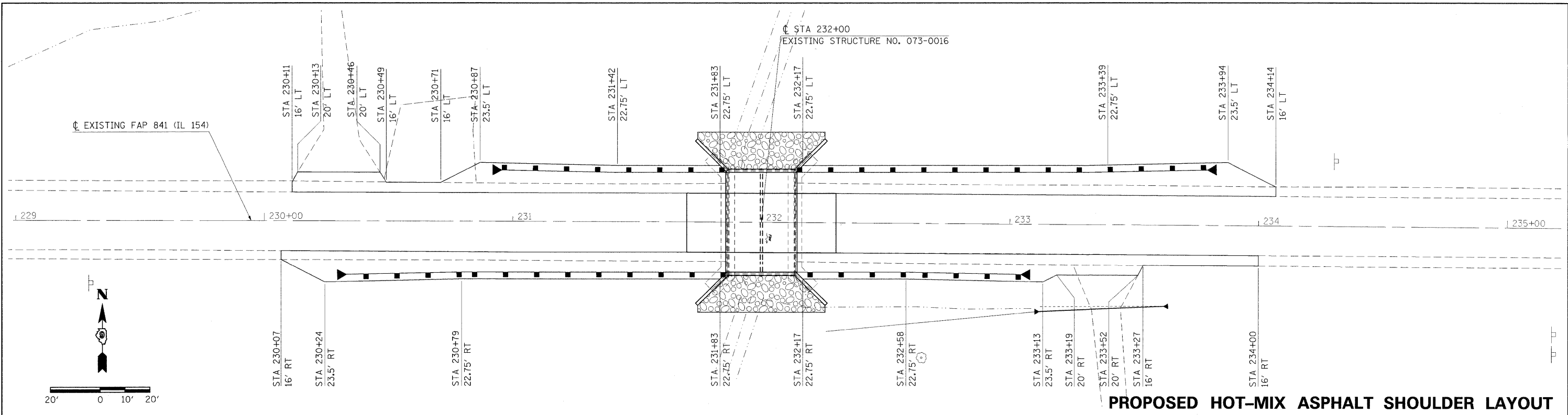


STAGE 2

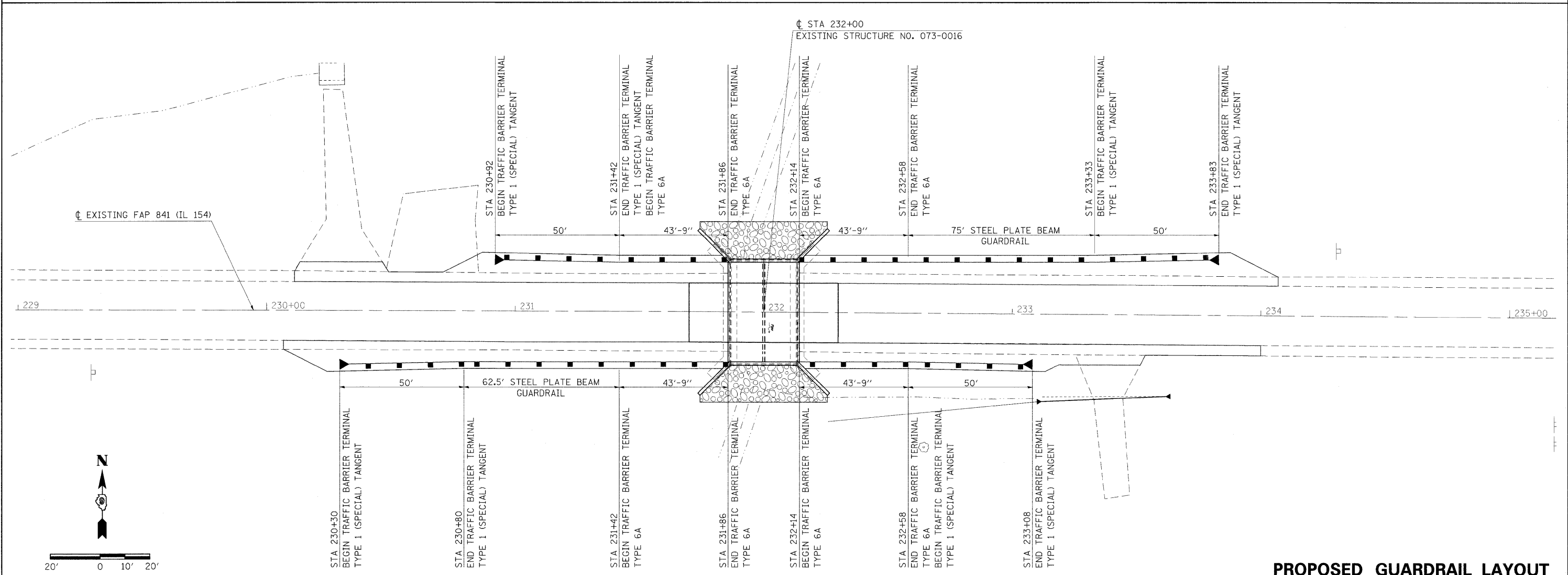


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ca:\pw_work\pvidot\cornellm\dms43827\7859_sht_staging.dgn	PLOT SCALE = 20.0000' / IN.	DRAWN -	REVISED -			841	108B-1	PERRY	27	9	
	PLOT DATE = 4/29/2010	CHECKED -	REVISED -			CONTRACT NO. 78059					
		DATE -	REVISED -			ILLINOIS FED. AID PROJECT					

SCALE: 1"=20' SHEET NO. OF SHEETS STA. 229+00.00 TO STA. 235+00.00



PROPOSED HOT-MIX ASPHALT SHOULDER LAYOUT



PROPOSED GUARDRAIL LAYOUT

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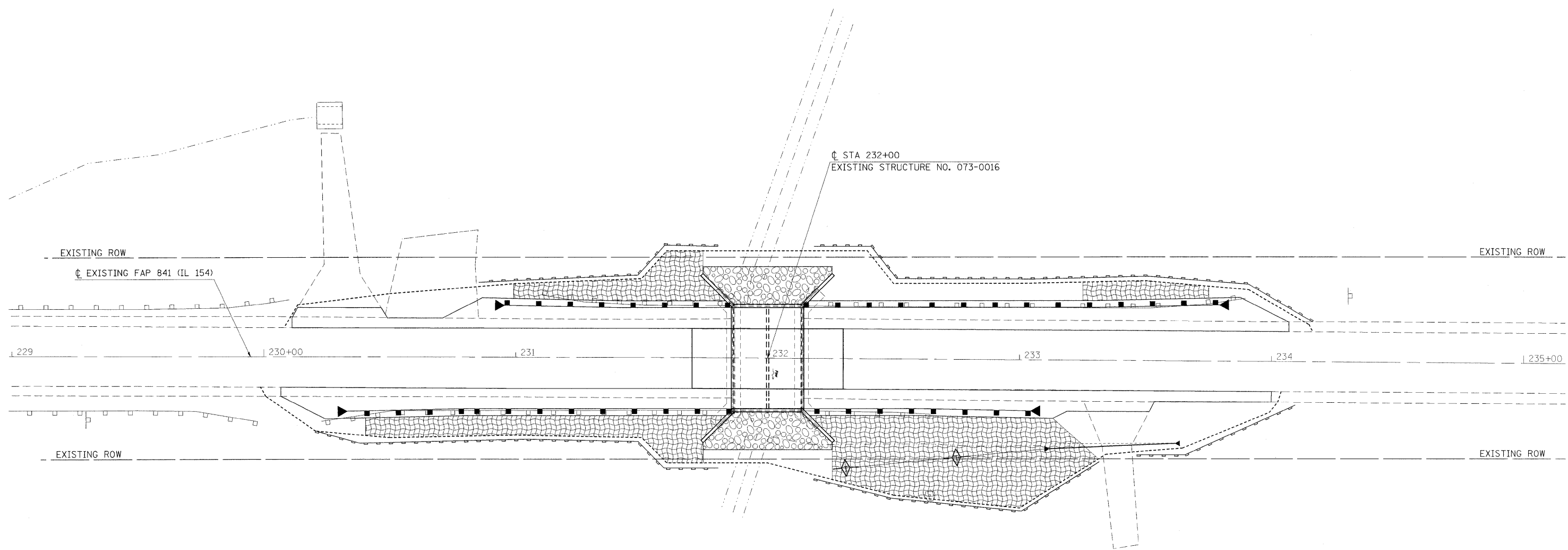
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PLOT DATE = 4/29/2010	CHECKED -	REVISED -
	DATE -	REVISED -





**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

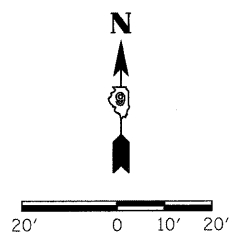
**PROPOSED SHOULDER LAYOUT AND GUARDRAIL LAYOUT
S.N. 073-0016**

SCALE: 1"=20' SHEET NO. OF SHEETS STA. 229+00.00 TO STA. 235+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
841	108B-1	PERRY	27	10
CONTRACT NO. 78059				
ILLINOIS FED. AID PROJECT				



-  PERIMETER EROSION BARRIER
-  STONE RIPRAP, CLASS A5
-  EROSION CONTROL BLANKET
-  TEMPORARY DITCH CHECK

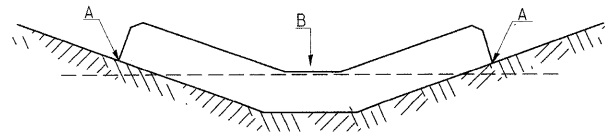


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	PLOT SCALE = 20.0000' / IN.	DRAWN -	REVISED -		SCALE: 1"=20'	SHEET NO. OF SHEETS		STA. 229+00.00 TO STA. 235+00.00		CONTRACT NO. 78059
	PLOT DATE = 4/29/2010	CHECKED -	REVISED -		ILLINOIS FED. AID PROJECT					
		DATE -	REVISED -							

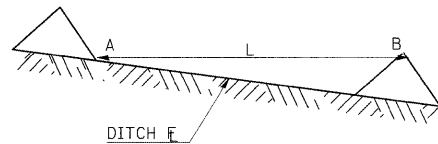
TEMPORARY DITCH CHECKS

PLACEMENT OF TEMPORARY DITCH CHECK IN DRAINAGE WAY



POINTS A SHOULD BE HIGHER THAN POINT B

SPACING BETWEEN TEMPORARY DITCH CHECKS

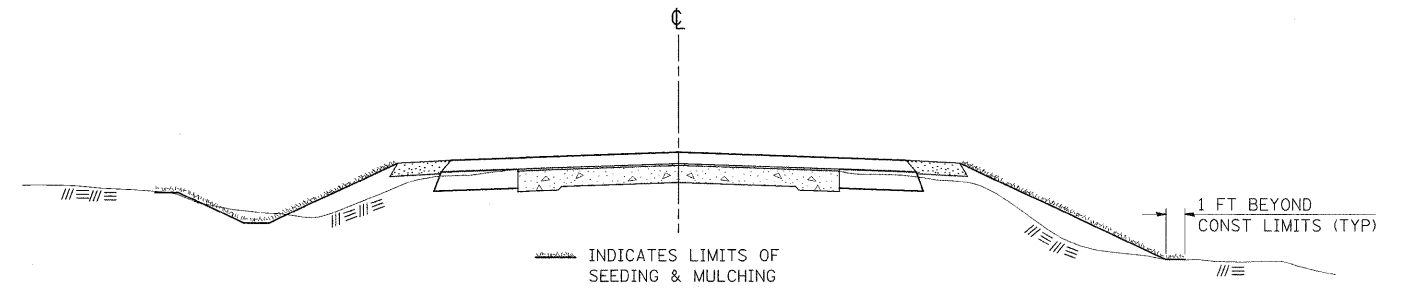


L = THE DISTANCE SUCH THAT POINTS A AND B ARE OF EQUAL ELEVATION
B = THE LOW POINT IN CENTER OF CHECK

REVISIONS	
DRAWN	9-01-99
REVISED	10-3-01
RESIZED	5-8-08
REVISED	05-04-10

STD. 9-108

SEEDING & MULCHING



GENERAL NOTES

IN GENERAL, ALL EARTH SURFACES DISTURBED DURING CONSTRUCTION OPERATIONS SHALL BE SEEDDED AND MULCHED UPON COMPLETION OF ALL GRADING OPERATIONS.

FERTILIZER NUTRIENTS AND LIMESTONE SHALL BE APPLIED TO ALL SEEDDED AREAS.

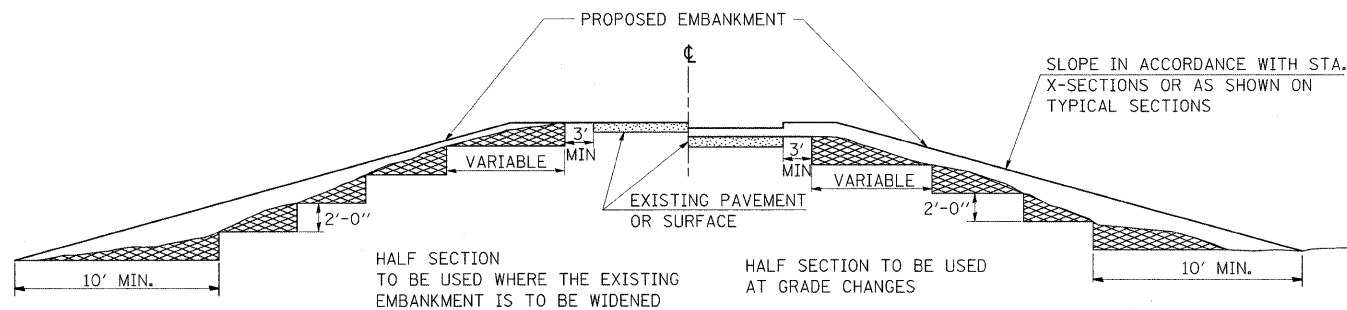
THE RATES OF APPLICATION OF FERTILIZER, MULCH AND LIMESTONE SHALL BE AS SPECIFIED IN THE SPECIAL PROVISIONS.

SECTIONS 250 AND 251 OF THE STANDARD SPECIFICATIONS SHALL GOVERN THIS WORK EXCEPT AS SPECIFIED HEREIN OR AS NOTED IN THE SPECIAL PROVISIONS.

REVISIONS	
REDRAWN	2-15-89
REVISED	8-15-94
REVISED	6-3-99
REVISED	3-27-08

STD. 9-12

TYPICAL CROSS SECTION SHOWING STEP CONSTRUCTION ON EXISTING FILL



HALF SECTION TO BE USED WHERE THE EXISTING EMBANKMENT IS TO BE WIDENED

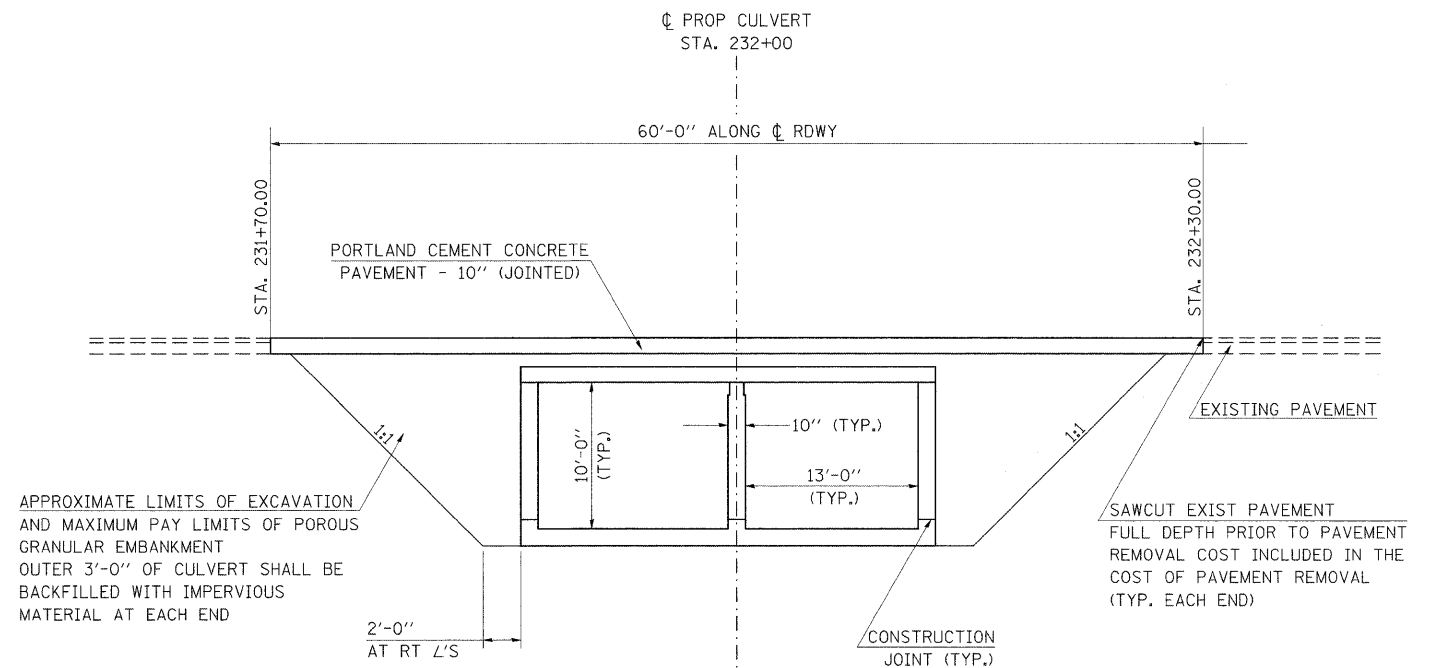
HALF SECTION TO BE USED AT GRADE CHANGES

MATERIAL TO BE REMOVED AND REPLACED IN THE EMBANKMENT IN ACCORDANCE WITH ART. 205.04 OF THE STANDARD SPECIFICATION. COST TO BE INCLUDED IN THE VARIOUS ITEMS OF EXCAVATION AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED BECAUSE OF THIS WORK.

REVISIONS	
REDRAWN	2-15-89
REVISED	8-15-94
CHECKED	6-3-99
RESIZED	5-7-08

STD. 9-16

TYPICAL LIMITS OF POROUS GRANULAR EMBANKMENT AT 073-2007



APPROXIMATE LIMITS OF EXCAVATION AND MAXIMUM PAY LIMITS OF POROUS GRANULAR EMBANKMENT OUTER 3'-0" OF CULVERT SHALL BE BACKFILLED WITH IMPERVIOUS MATERIAL AT EACH END

SAWCUT EXIST PAVEMENT FULL DEPTH PRIOR TO PAVEMENT REMOVAL COST INCLUDED IN THE COST OF PAVEMENT REMOVAL (TYP. EACH END)

NOTE: POROUS GRANULAR EMBANKMENT WILL BE CA7 OR CA11 WITH THE TOP 1' CONSISTING OF CA6 OR CA10.

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PLOT DATE = 5/6/2010	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETAILS: TEMP DITCH CHECKS; SEEDING AND MULCHING; STEP CONSTRUCTION ON EXIST FILL; TYP LIMITS OF POROUS GRANULAR EMBANKMENT

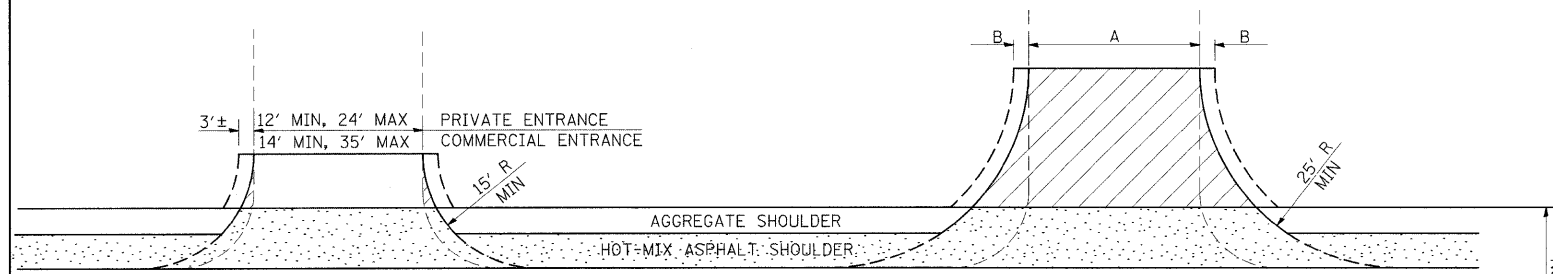
SHEET NO. OF SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
841	108B-1	PERRY	27	12

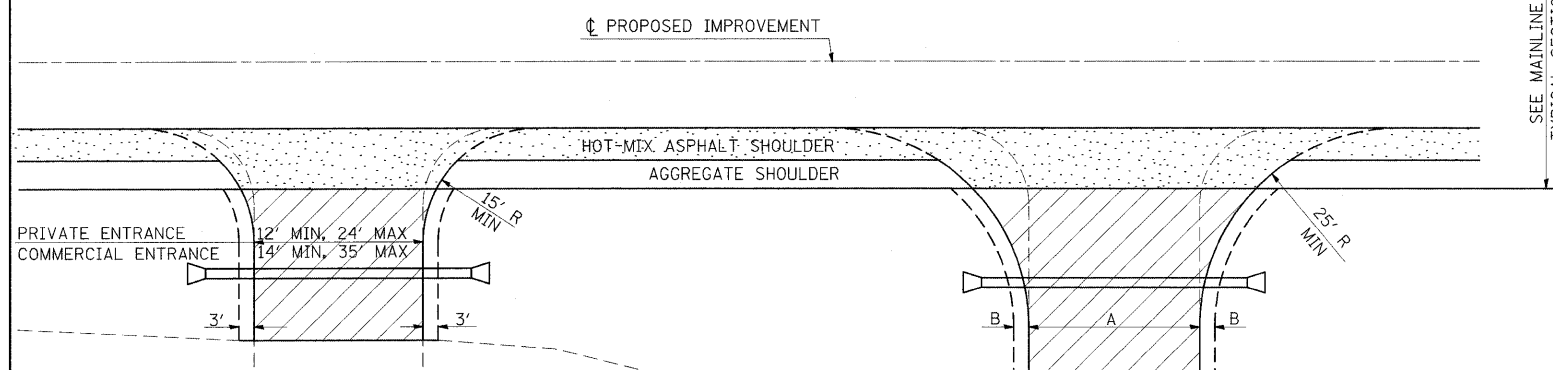
CONTRACT NO. 78059
ILLINOIS FED. AID PROJECT

RURAL SIDE APPROACH DETAILS

PRIVATE AND COMMERCIAL ENTRANCES



SIDEROADS



SIDEROAD DIMENSIONS (MIN.)

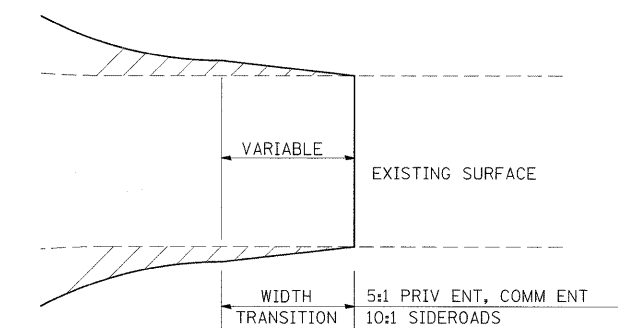
ADT	A (FT)	B (FT)
0 TO 250	18'	2'
250 TO 400	20'	2'
GREATER THAN 400	22'	4'

FIELD ENTRANCE TREATMENT

CONSTRUCT MAINLINE HOT-MIX ASPHALT AND AGGREGATE SHOULDERS THROUGH FIELD ENTRANCES.

IF A PIPE IS REQUIRED, PROVIDE A 22' WIDE EARTH EMBANKMENT WITH 15' RADII AT THE INTERSECTION.

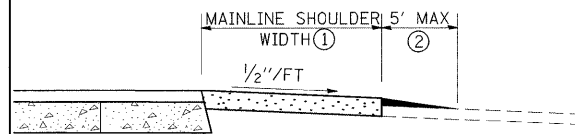
WIDTH TRANSITION DETAIL TO EXISTING (IF APPLICABLE)



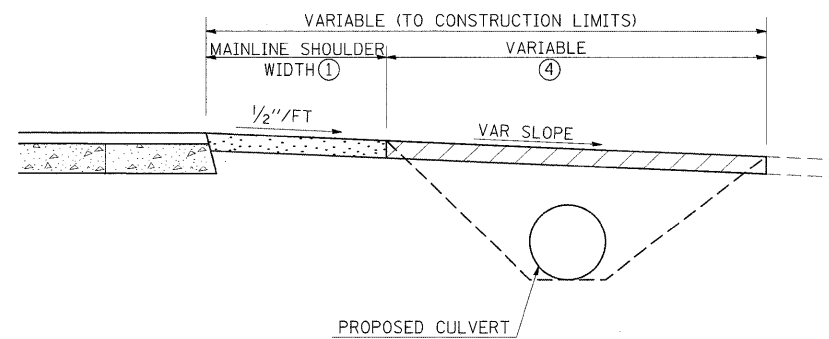
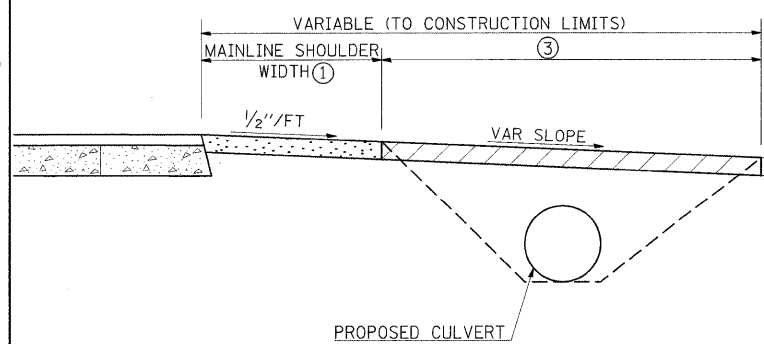
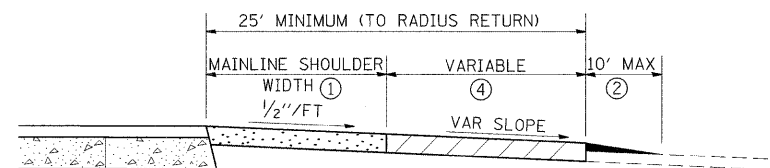
PRIVATE AND COMMERCIAL ENTRANCES (PROPOSED CULVERT)



PRIVATE AND COMMERCIAL ENTRANCES



SIDEROADS



LEGEND

- CONSTRUCT HOT-MIX ASPHALT SHOULDER "FULL SHOULDER WIDTH" THROUGH ENTRANCE/INTERSECTION UNLESS OTHERWISE SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
- IF REQUIRED, AGGREGATE TAPER FOR EXISTING GRAVEL SURFACE; HOT-MIX ASPHALT TAPER FOR EXISTING HIGHER TYPE SURFACES.
- 6" AGGREGATE SURFACE COURSE FOR EXISTING GRAVEL SURFACE; 2" HOT-MIX ASPHALT RESURFACING ON 4" AGGREGATE BASE COURSE FOR EXISTING HOT-MIX ASPHALT SURFACE; PCC DRIVEWAY PAVEMENT (6" - PE; 7" - CE) FOR EXISTING CONCRETE SURFACE.
- 3" MINIMUM HOT-MIX ASPHALT RESURFACING ON 8" MINIMUM AGGREGATE BASE COURSE FOR EXISTING GRAVEL SURFACE OR OIL & CHIP SURFACE; MATCH EXISTING FOR EXISTING HIGHER TYPE SURFACES.

GENERAL NOTES

- ENTRANCE LOCATIONS ARE TO COMPLY WITH IDOT'S POLICY "ACCESS TO STATE HIGHWAYS".
- IN GENERAL, RELOCATED PRIVATE ENTRANCES ARE TO HAVE A 16' WIDE SURFACE WITH 3' WIDE SHOULDERS (22' WIDE EMBANKMENT).
- SEE PLANS FOR PROPOSED PROFILE GRADES AT ENTRANCES/SIDEROADS. THE DESIRABLE MAXIMUM PROFILE GRADE FOR ENTRANCES ARE 12% FOR PE; 10% FOR CE.
- ENTRANCE PIPE CULVERTS ARE TO BE A MINIMUM 15" DIAMETER AND NORMALLY REPLACED IN KIND; SIDEROAD PIPE CULVERTS ARE GENERALLY TO BE CONCRETE (18" MINIMUM DIAMETER).
- THE INTERSECTION RADII OF SIDEROADS CONSTRUCTED TO FULL POLICY STANDARDS SHOULD COMPLY WITH THAT NOTED IN THE BUREAU OF LOCAL ROADS ADMINISTRATIVE POLICIES MANUAL (5-8-13).

STANDARD 9-83

REVISIONS	DATE
DRAWN	3-15-91
REVISED	10-02-91
REVISED	5-15-92
REVISED	1-20-00
REVISED	01-11-07
REVISED	5-7-08

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PLOT DATE = 4/29/2010	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

RURAL SIDE APPROACH DETAILS

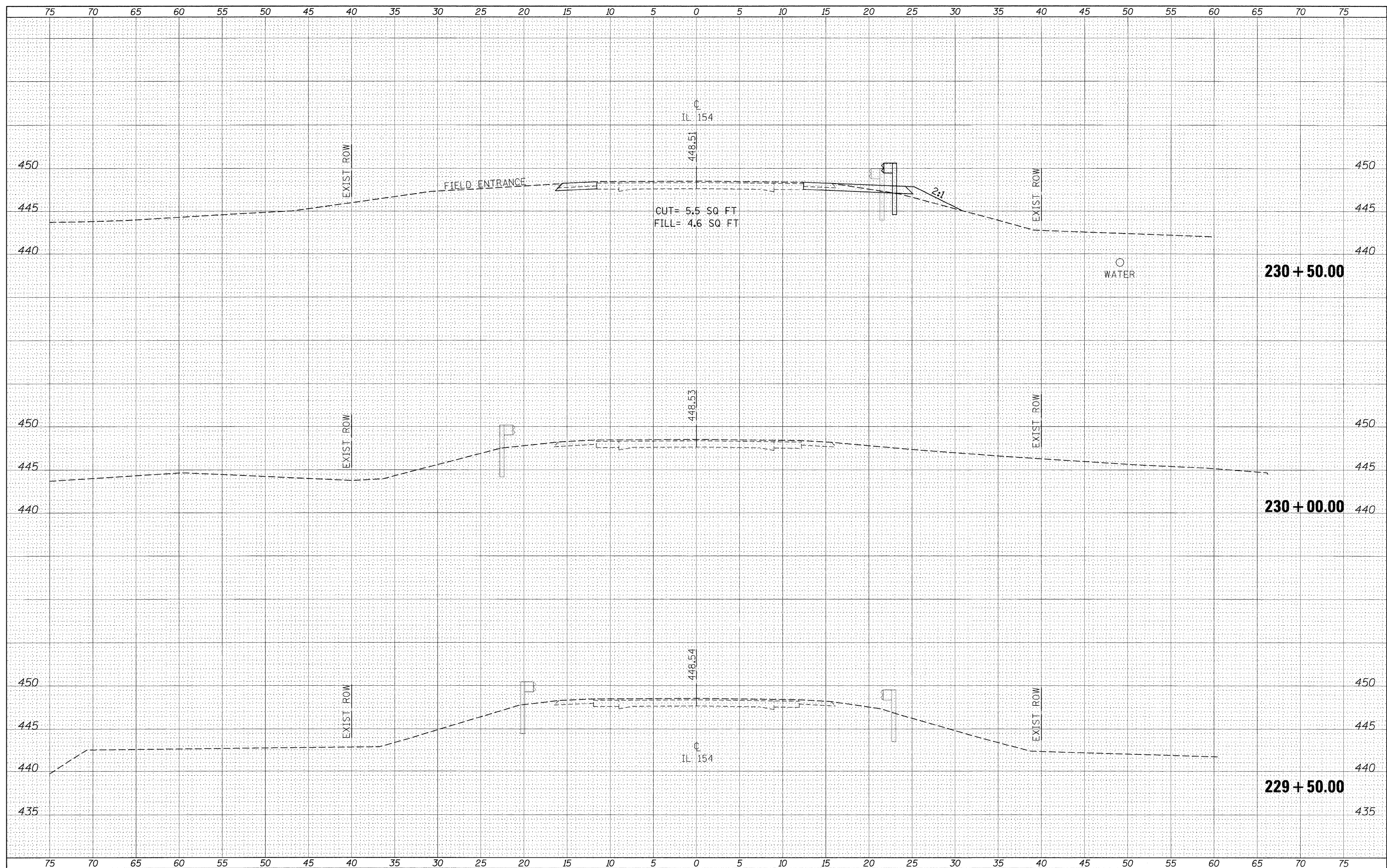
SHEET NO. OF SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
841	108B-1	PERRY	27	13

CONTRACT NO. 78059
ILLINOIS FED. AID PROJECT

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

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



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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

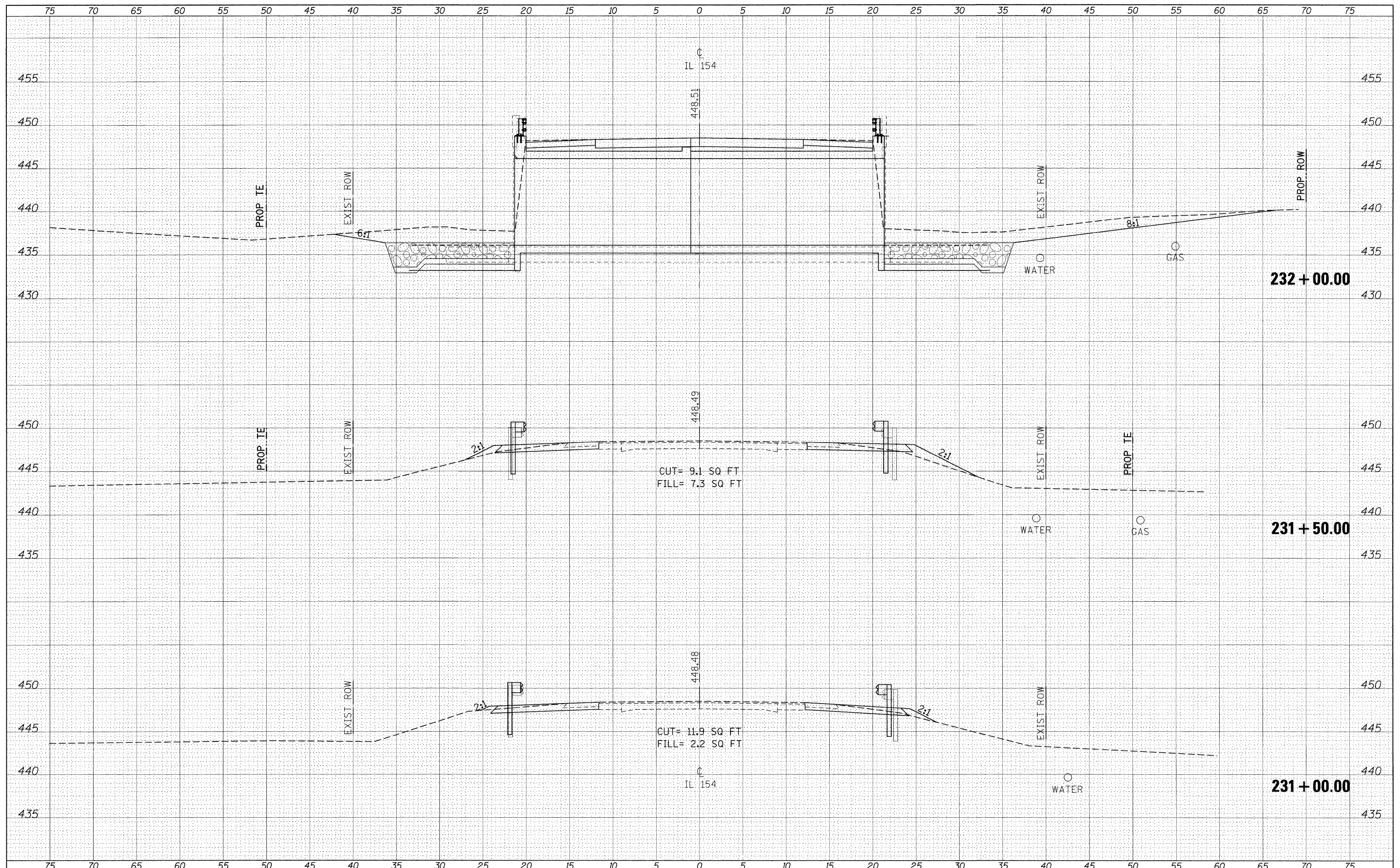
**IL 154
 CROSS SECTIONS**

SCALE: 1"=5' SHEET NO. OF SHEETS STA. 229+50.00 TO STA. 230+50.00

F.A.P. RTE. 841	SECTION 108B-1	COUNTY PERRY	TOTAL SHEETS 27	SHEET NO. 14
CONTRACT NO. 78059				
ILLINOIS FED. AID PROJECT				

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

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



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 DESIGNED -
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 DATE -

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PLOT SCALE = 5.0000' / IN.
 PLOT DATE = 5/6/2010

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

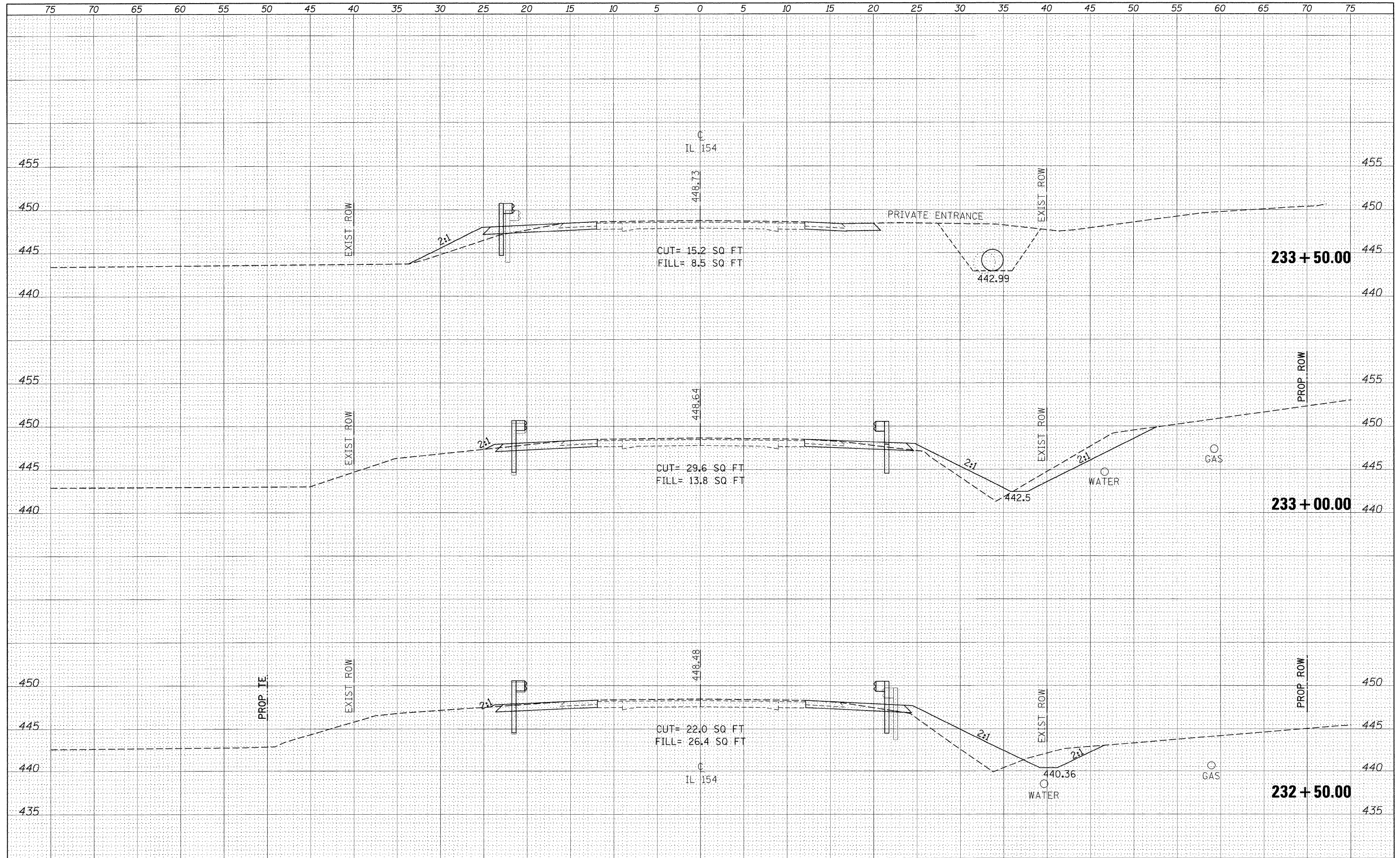
**IL 154
 CROSS SECTIONS**

SCALE: 1"=5' SHEET NO. OF SHEETS STA. 231+00.00 TO STA. 232+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
841	108B-1	PERRY	27	15
CONTRACT NO. 78059			ILLINOIS FED. AID PROJECT	

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

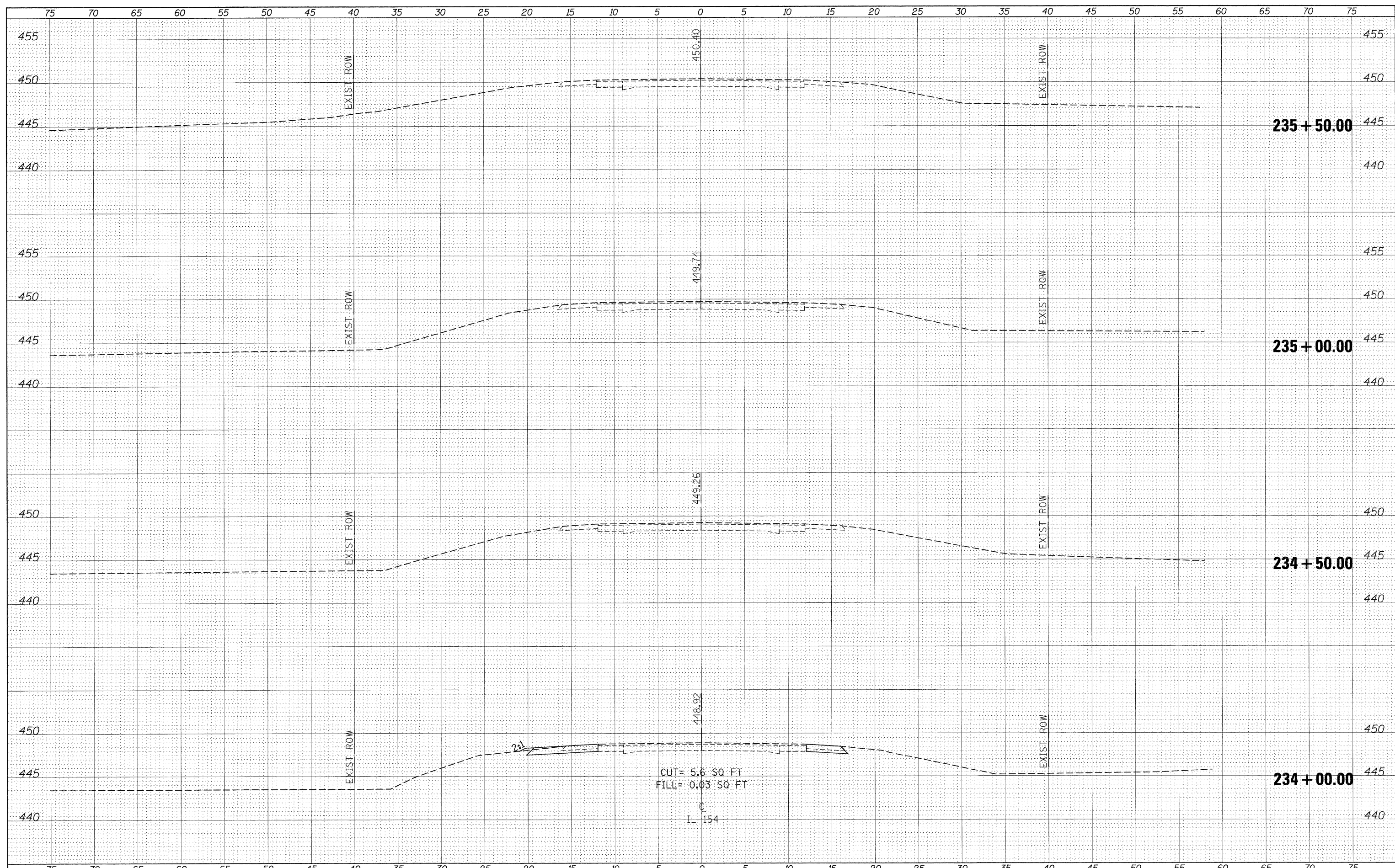
DATE	
BY	
ORIGINAL SURVEY	SUBMITTED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED



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	PLOT DATE = 5/6/2010	CHECKED -	REVISED -			CONTRACT NO. 78059				
		DATE -	REVISED -			ILLINOIS FED. AID PROJECT				
					SCALE: 1"=5'	SHEET NO. OF SHEETS		STA. 232+50.00 TO STA. 233+50.00		

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

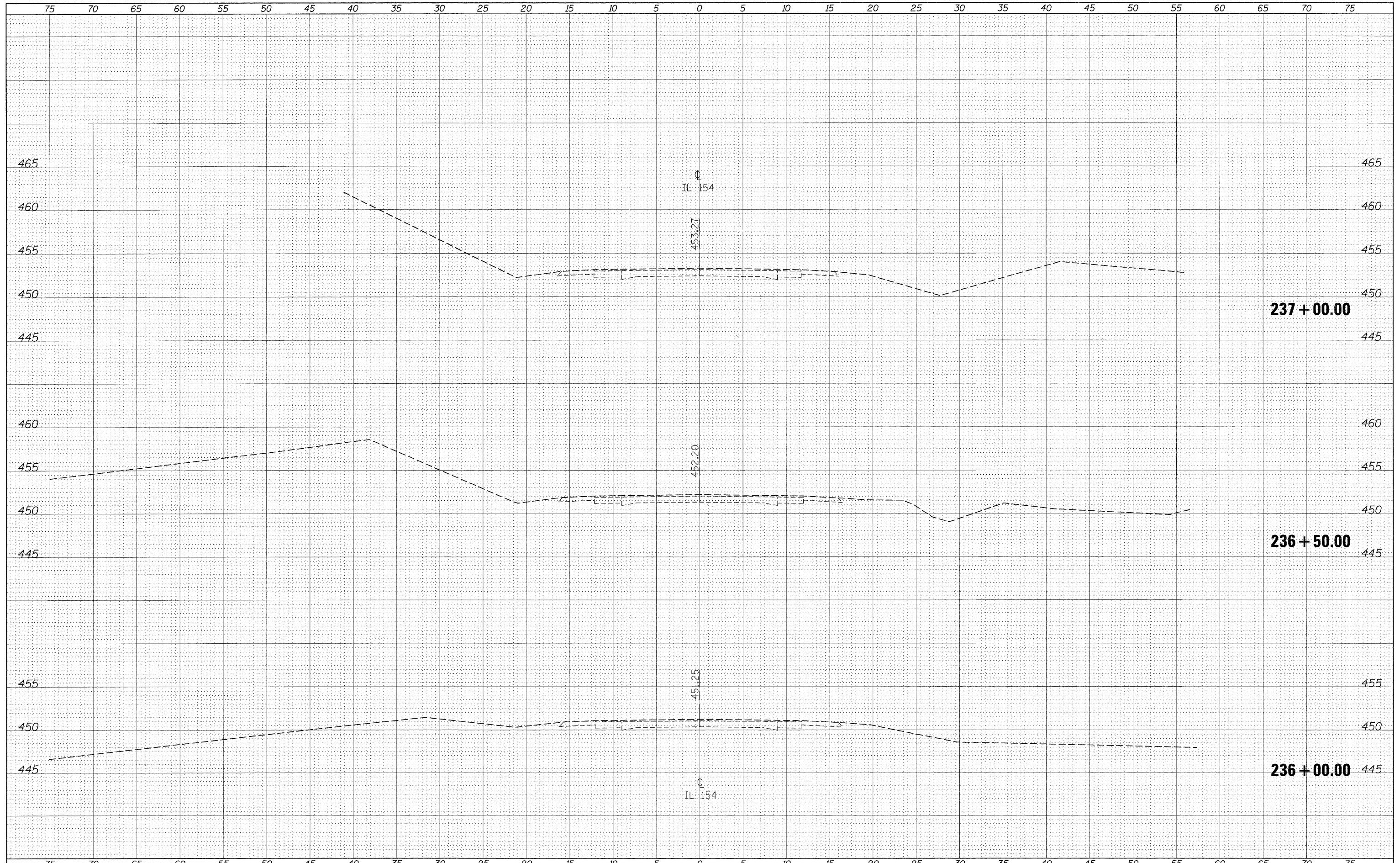
DATE	
BY	
ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS
	CHECKED



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CONTRACT NO. = 78059	SCALE = 1"=5'	DRAWN -	REVISED -		SHEET NO. OF SHEETS STA. 234+00.00 TO STA. 235+50.00			ILLINOIS FED. AID PROJECT				
		CHECKED -	REVISED -									
		DATE -	REVISED -									

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

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



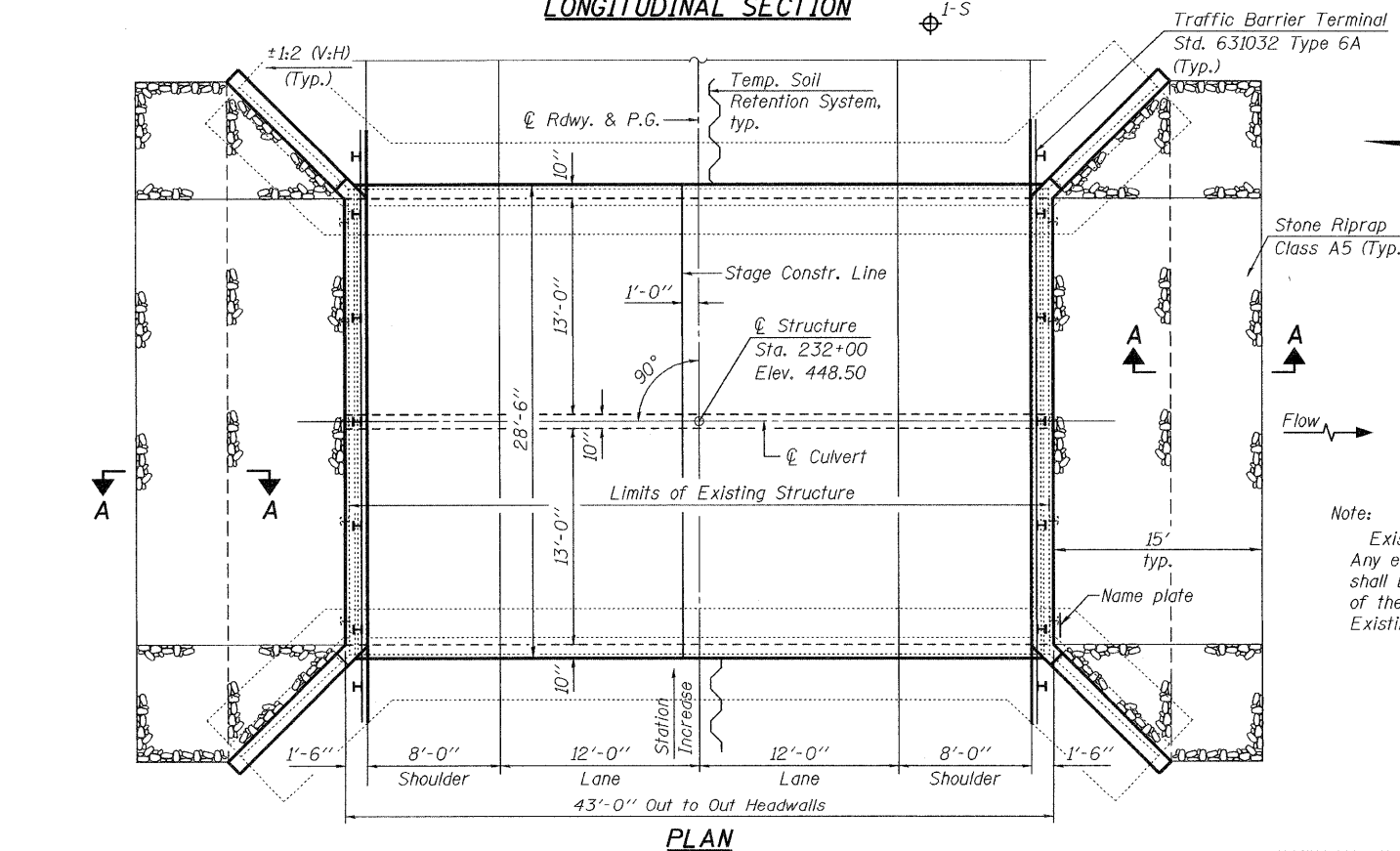
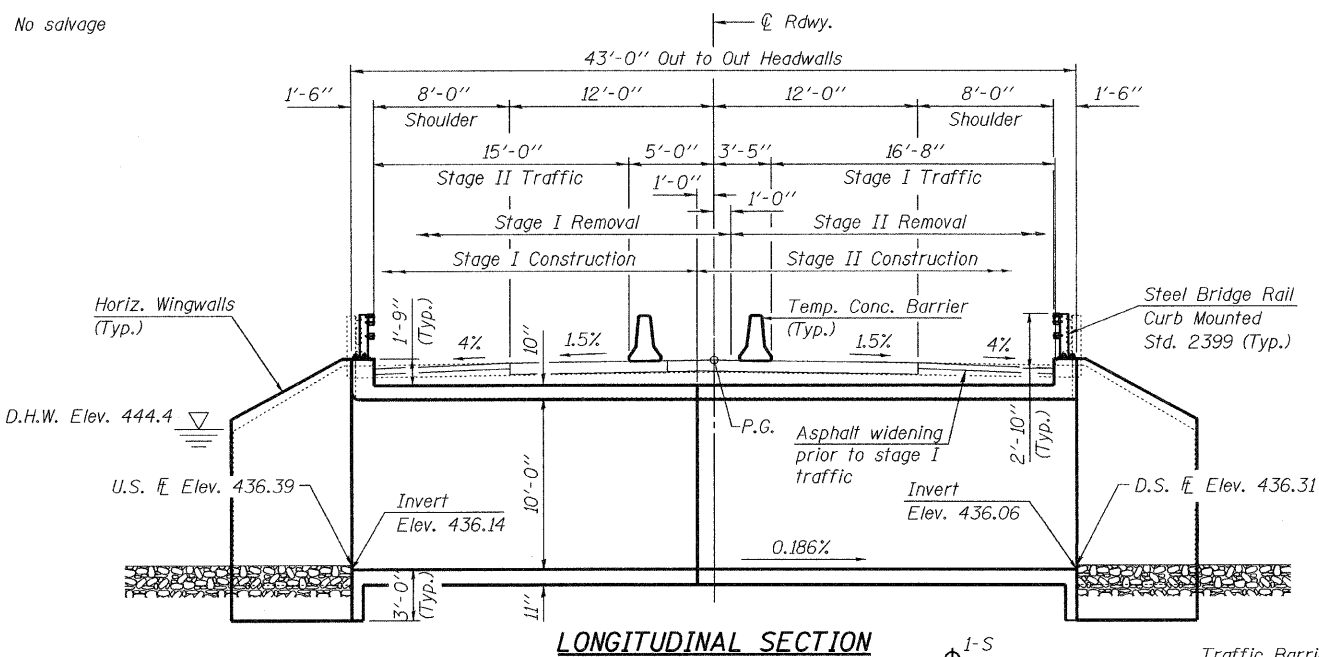
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	PLOT DATE = 5/6/2010	CHECKED -	REVISED -		ILLINOIS FED. AID PROJECT							
		DATE -	REVISED -									

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Bench Mark: Chiseled "□" on S.E. wingwall of S.N. 073-0016. Elevation 448.11.

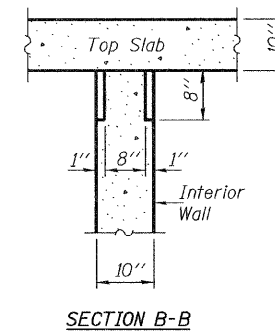
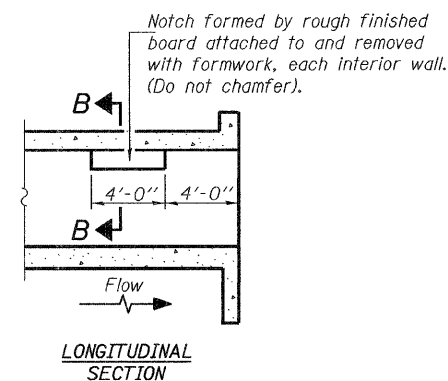
Existing Structure: S.N. 073-0016. Built in 1927 as S.B.I. Route 154, Section 108-B at station 232+00 as a single span reinforced concrete slab bridge on timber pile supported closed abutments. The structure was rehabilitated in 1986 under F.A.P. 841, Section (108-108X)RS-1 with a concrete wearing surface and railing replacement. 28'-0" bk. to bk. abutments, 42'-2" out to out deck. Traffic to be maintained utilizing stage construction.

No salvage



INDEX OF SHEETS

- 1 General Plan & Elevation
- 2 Stage Construction Details & Temporary Soil Retention System
- 3 Temporary Concrete Barrier for Stage Construction
- 4 Steel Railing, Type 2399
- 5-7 Culvert Details
- 8 Bar Splicer Assembly Details
- 9 Soil Boring Logs



PHOEBE NESTING
SITE DETAILS
(Downstream End Only)

Note:
Existing footings shall be completely removed. Any existing piles within the limits of the culvert shall be cut a minimum 1'-0" below the bottom of the culvert. Cost included with Removal of Existing Structures.

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	U.S. Invert	D.S. Invert
	433.14	433.06

WATERWAY INFORMATION

Drainage Area = 3.34 mi² Exist. Low Grade Elev. 448.48 @ Sta. 232+50
Prop. Low Grade Elev. 448.71 @ Sta. 232+50

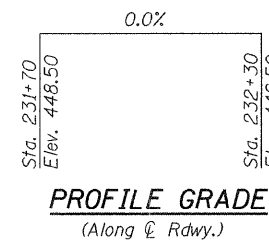
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Prop.	Nat. H.W.E.	Head - Ft. Exist.	Prop.	Headwater El. Exist.	Prop.
Design	50	1690	150.2	204.4	444.0	1.2	0.3	445.2	444.3
Base	100	1980	173.6	227.8	444.4	3.0	1.3	447.4	445.7
Overtopping (E)		1920	184.0	238.2	445.3	3.4	1.7	448.7	447.0
Overtopping (P)		2500	181.4	253.8	445.2	3.4		448.6	
					445.9		2.7		448.6

GENERAL NOTES

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.
Reinforcement bars designated (E) shall be epoxy coated.
Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.
Excavation behind existing abutment walls shall be performed to balance front and back soil pressure before removing the existing superstructure. The Contractor shall sawcut the upper portion of the existing abutment at the stage removal line before Stage I removal to ensure the remaining portion will not be prematurely damaged.
Precast alternate is not allowed.

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Stone Riprap, Class A5	Sq. Yd.	134
Filter Fabric	Sq. Yd.	134
Removal of Existing Structures	Each	1
Reinforcement Bars, Epoxy Coated	Pound	35150
Bar Splicers	Each	174
Steel Railing, Type 2399	Foot	57
Temporary Soil Retention System	Sq. Ft.	288
Name Plates	Each	1
Concrete Box Culverts	Cu. Yd.	163.1



LOADING HS20-44

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

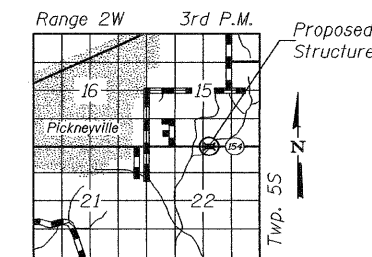
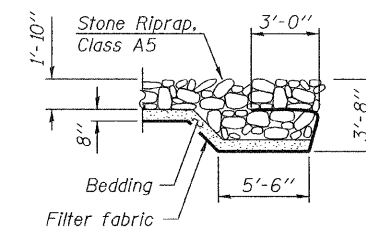
DESIGN SPECIFICATIONS
2002 AASHTO

DESIGN STRESSES

FIELD UNITS
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)

STATION 232+00
BUILT 20 BY
STATE OF ILLINOIS
F.A.P. RTE. 841 SEC. 108B-1
LOADING HS20-44
STRUCTURE NO. 073-2007

NAME PLATE
See Std. 515001



GENERAL PLAN & ELEVATION
IL RTE. 154 OVER PANTHER CREEK
F.A.P. 841 - SEC. 108B-1
PERRY COUNTY
STATION 232+00
STRUCTURE NO. 073-2007

DESIGNED *Jay D. Edwards*
CHECKED *Michael D. Rebe*
DRAWN *h.t. duong*
CHECKED *JDE/MDR*

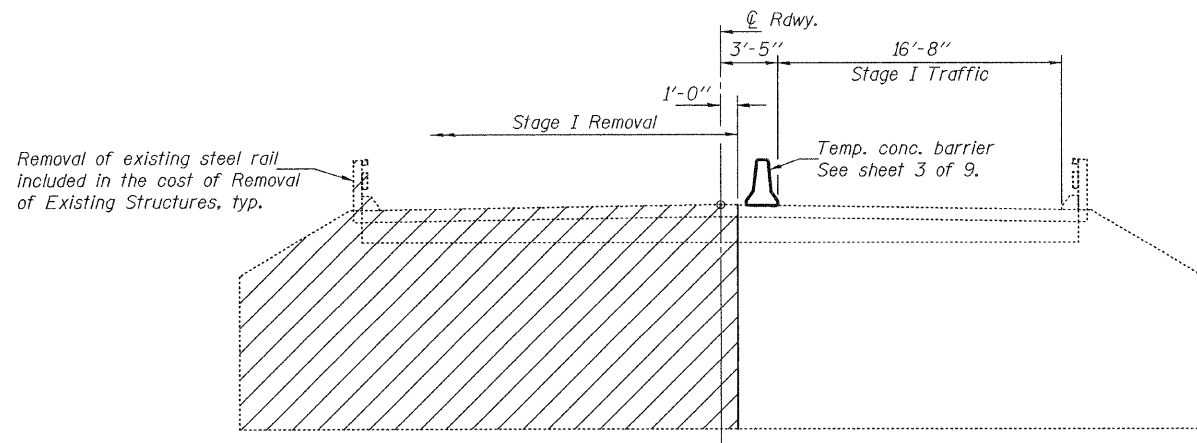
EXAMINED *Thomas J. Demagala*
PASSED *Ralph E. Anderson*



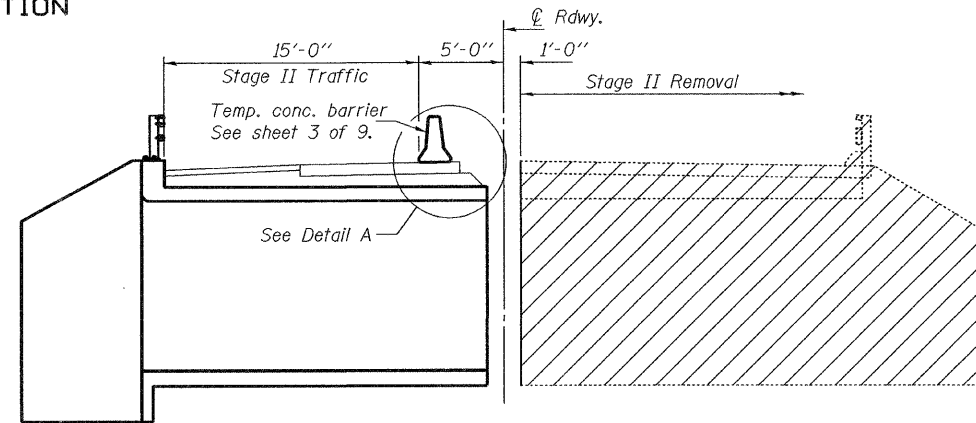
EXPIRES 11-30-2010

SHEET NO. 1	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9 SHEETS	841	108B-1	PERRY	27	19
FED. ROAD DIST. NO. _			ILLINOIS FED. AID PROJECT		

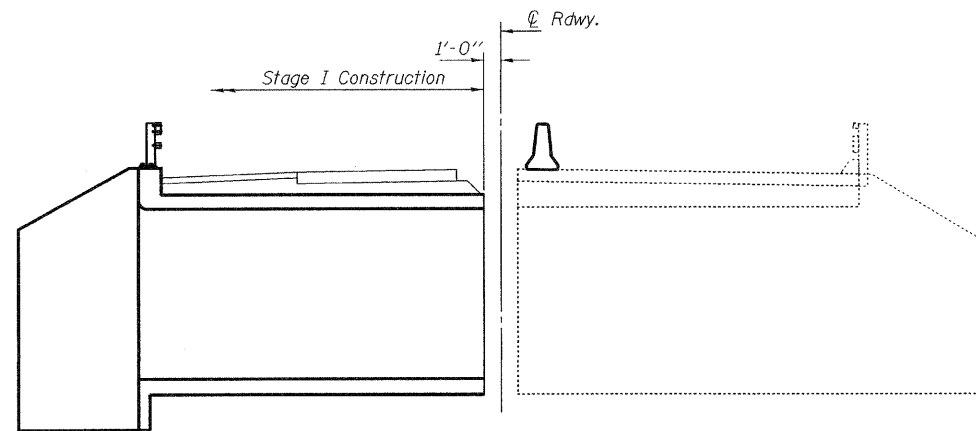
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



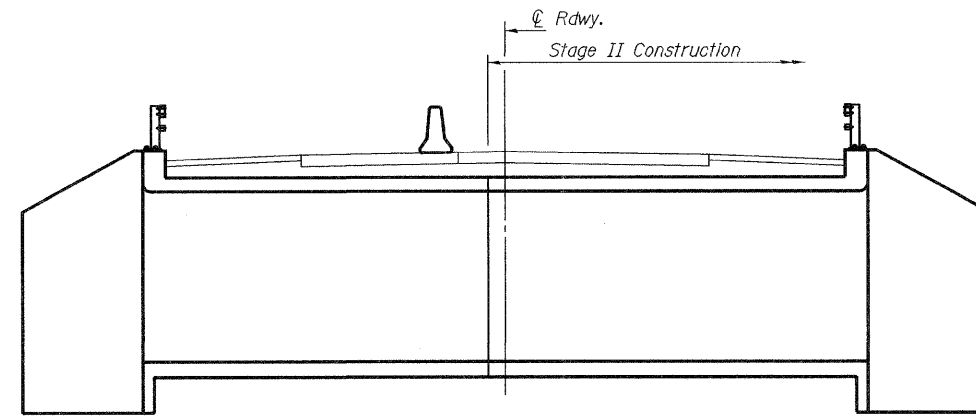
STAGE I REMOVAL



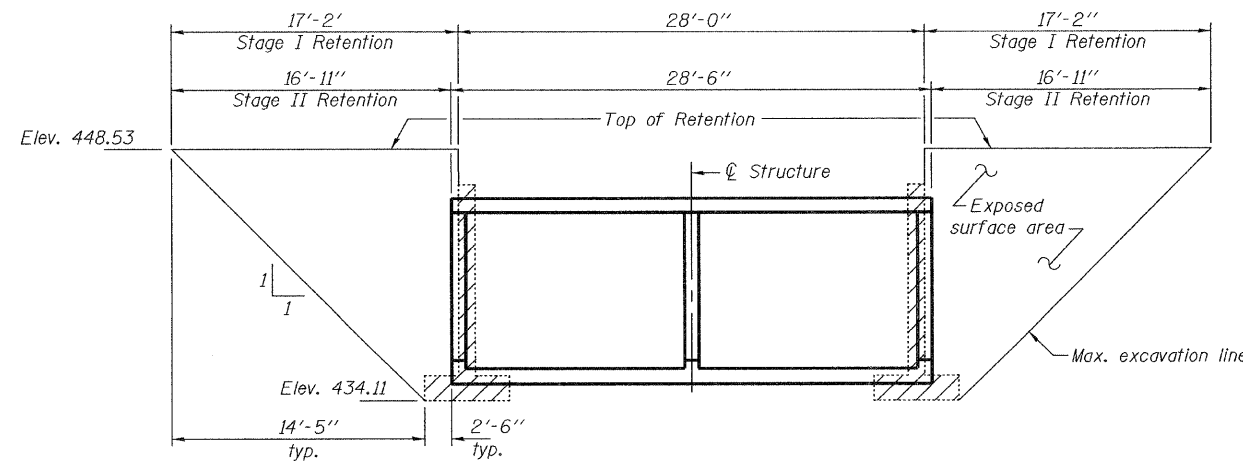
STAGE II REMOVAL



STAGE I CONSTRUCTION

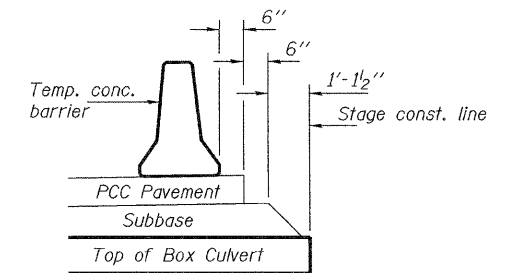


STAGE II CONSTRUCTION



TEMPORARY SOIL RETENTION SYSTEM

A cantilevered sheet piling design does not appear feasible and additional members or other retention systems may be necessary. The Contractor shall submit a temporary soil retention system design including plan details and calculations for review and acceptance by the Engineer.



DETAIL A

**STAGE CONSTRUCTION &
SOIL RETENTION SYSTEM DETAILS
STRUCTURE NO. 073-2007**

DESIGNED	Jay D. Edwards
CHECKED	Michael D. Rolape
DRAWN	h.t. duong
CHECKED	JDE/MDR

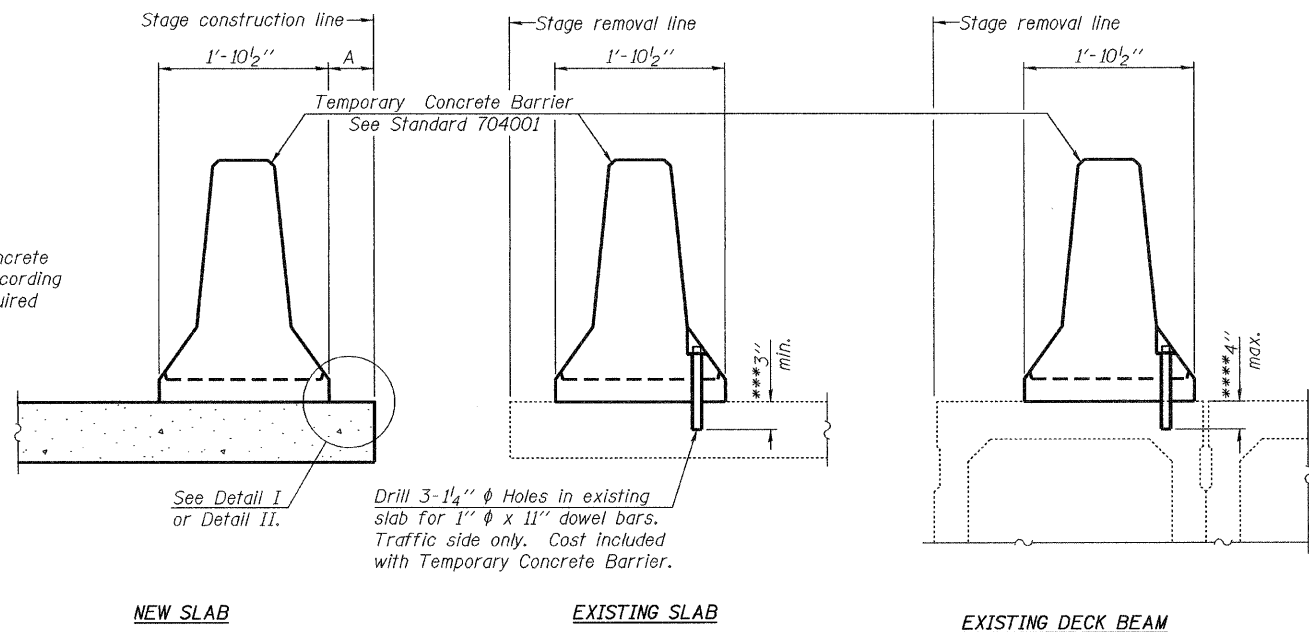
EXAMINED	Thomas J. Damagala ENGINEER OF BRIDGE DESIGN
PASSED	Ralph E. Anderson ENGINEER OF BRIDGES AND STRUCTURES

June 14, 2010

SHEET NO. 2	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	841	108B-1	PERRY	27	20
9 SHEETS	CONTRACT NO. 78059				
FED. ROAD DIST. NO. _ ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

When "A" is 3'-6" or less, the temporary concrete barrier shall be anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 3'-6".



SECTIONS THRU SLAB OR DECK BEAM

NOTES

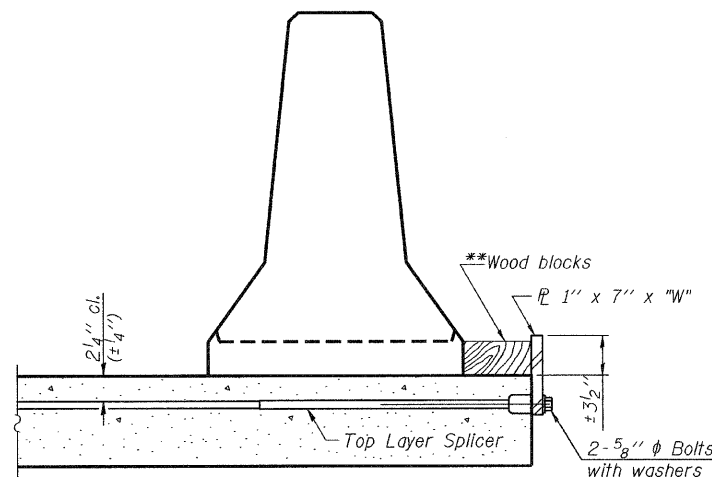
Detail I - With Bar Splicer or Couplers:
Connect one (1) 1"x7"x10" steel \bar{L} to the top layer of couplers with 2-5/8" ϕ bolts screwed to coupler at approximate \bar{C} of each barrier panel.

Detail II - With Extended Reinforcement Bars:
Connect one (1) 1"x7"x10" steel \bar{L} to the concrete slab or concrete wearing surface with 2-5/8" ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate \bar{C} of each barrier panel.

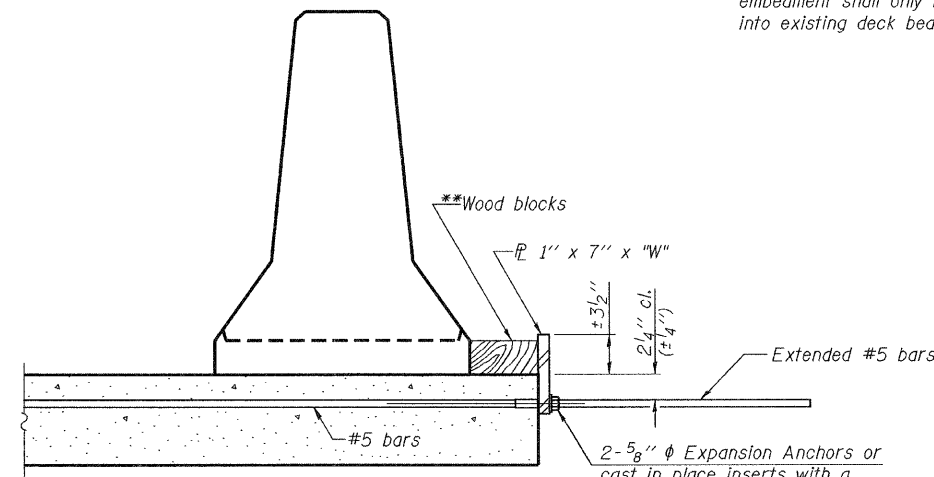
Cost of anchorage is included with Temporary Concrete Barrier. The 1" x 7" x 10" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

*** Dimension shown is minimum required embedment into concrete. If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.

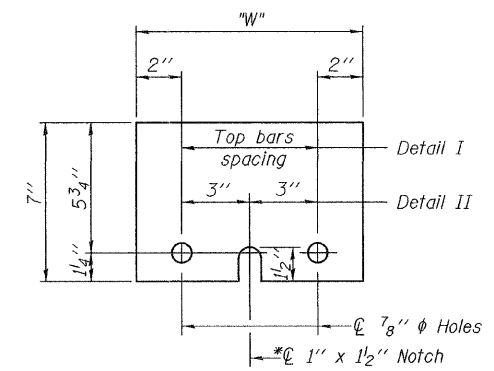
**** If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



DETAIL I



DETAIL II



STEEL RETAINER 1' x 7' x 10'

* Required only with Detail II

** Wood blocks may be omitted when required to provide minimum stage traffic lane width. When the wood blocks are omitted, the concrete barrier shall be in direct contact with the steel retainer plate.

"W" = Top bars spacing + 4"

DESIGNED	Joy D. Edwards
CHECKED	Michael D. Rolape
DRAWN	h.t. duong
CHECKED	JDE/MDR

EXAMINED	Thomas J. Damagala ENGINEER OF BRIDGE DESIGN
PASSED	Ralph E. Anderson ENGINEER OF BRIDGES AND STRUCTURES

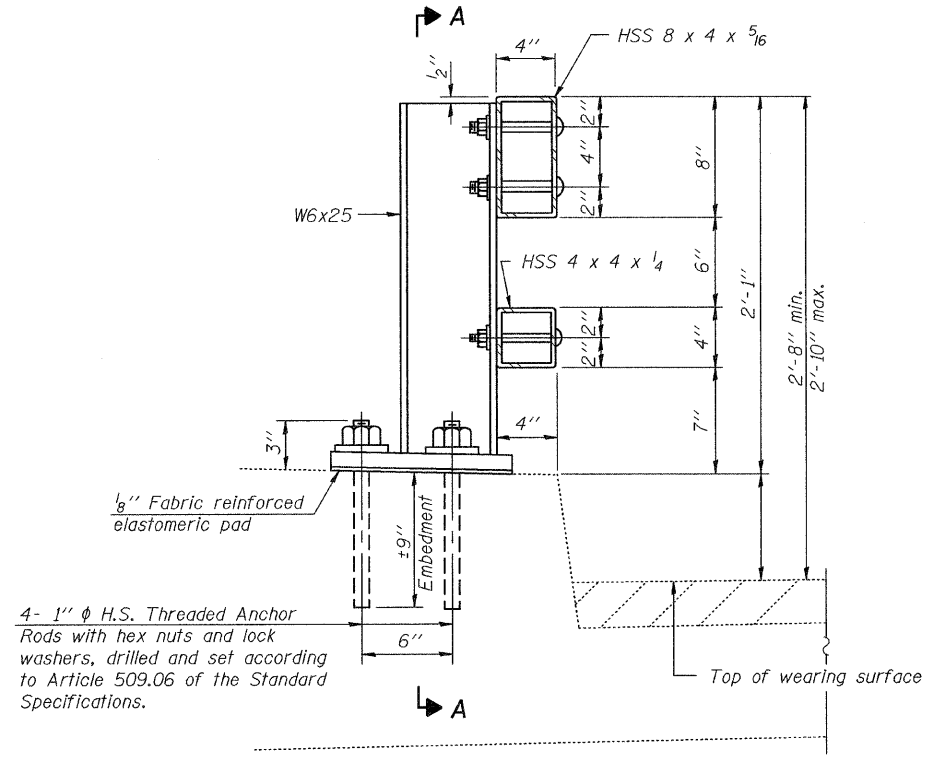
R-27

11-1-09

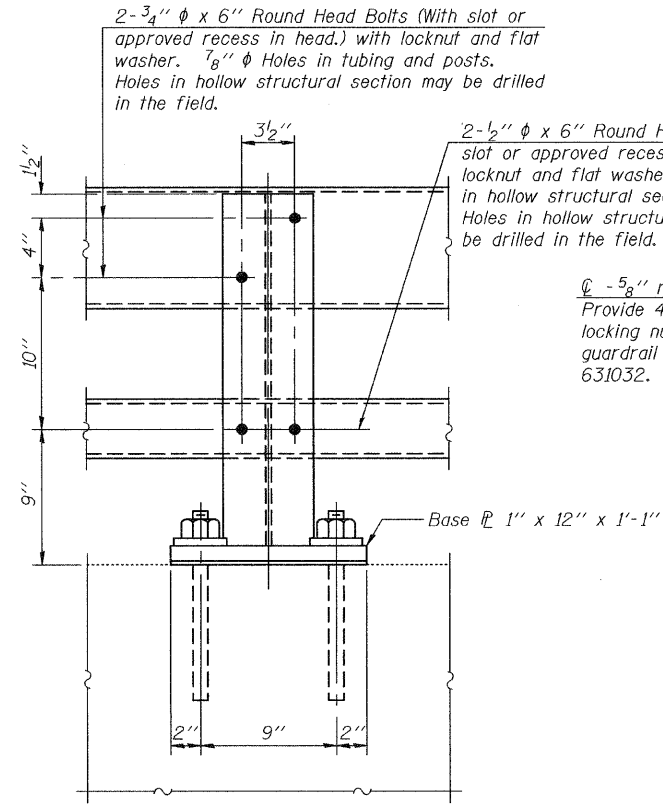
TEMPORARY CONCRETE BARRIER
FOR STAGE CONSTRUCTION
STRUCTURE NO. 073-2007

SHEET NO. 3 9 SHEETS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	841	108B-1	PERRY	27	21
CONTRACT NO. 78059					
FED. ROAD DIST. NO. _ ILLINOIS FED. AID PROJECT					

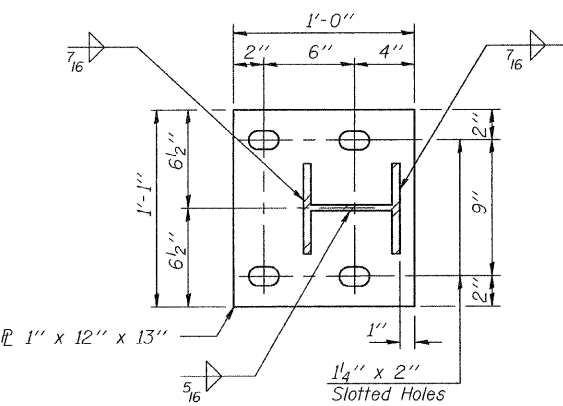
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



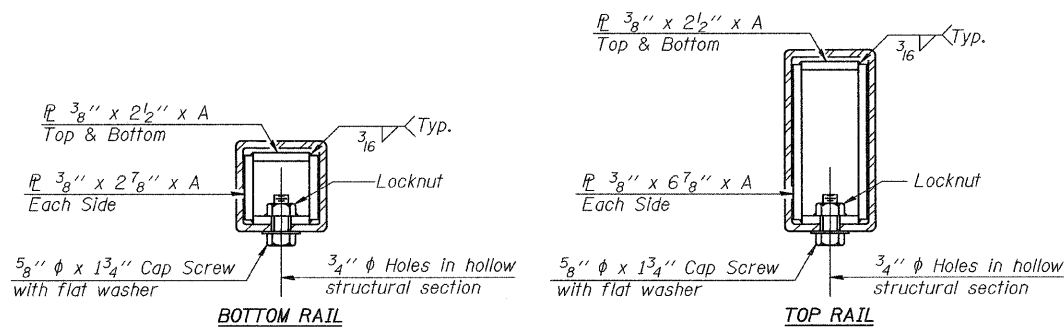
SECTION AT RAIL POST



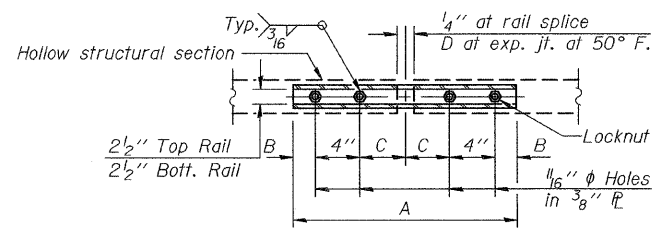
SECTION A-A



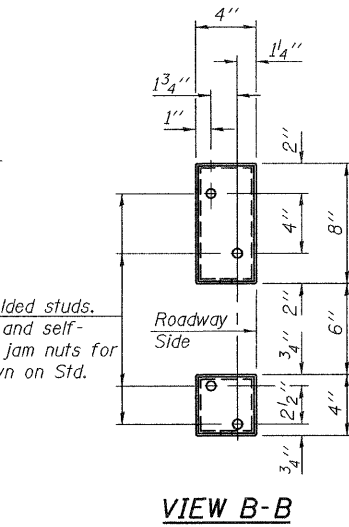
BASE PLATE DETAIL



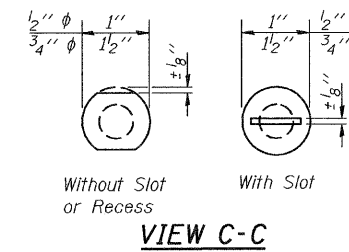
SECTIONS AT RAIL SPLICE



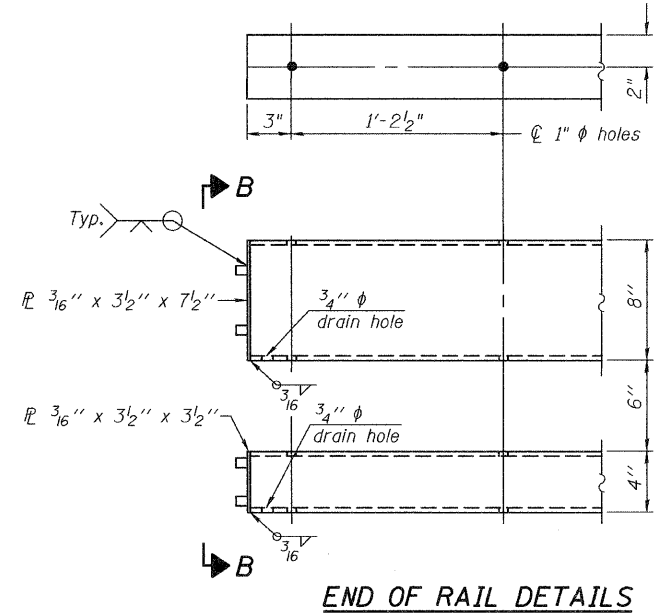
PLAN-BOTT. SPLICE TYPICAL



VIEW B-B

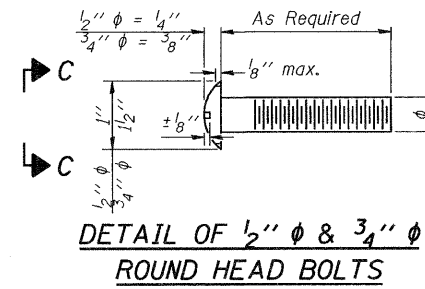


VIEW C-C

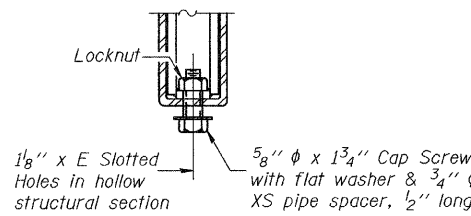


END OF RAIL DETAILS

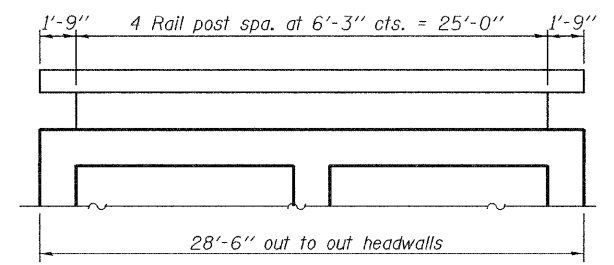
Notes:
All field drilled holes shall be coated with an approved zinc rich paint before erection.
Posts shall not be located closer than 1'-3" to an existing bridge expansion joint or end of bridge.
Steel Bridge Rail expansion joint shall be provided between any two (2) posts which span a bridge expansion joint. Bolts located at expansion joint shall be provided with locknuts and shall be tightened only to a point that will allow railing movement.
Provide one 1/8" and two 1/16" steel shims for 25% of the posts. Shims shall be similar to base plates in size and holes.
All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.



DETAIL OF 1/2" & 3/4" ROUND HEAD BOLTS



RAIL SPLICE CONNECTION AT EXPANSION JT.



RAIL POST SPACING DETAIL

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type 2399	Foot	57

SPLICE DIMENSIONS

T	D	A	B	C	E
≤ 4"	2 1/2"	1'-8"	2"	4"	2 1/2"
> 4" ≤ 6 1/2"	3 3/4"	2'-0"	2 1/2"	5 1/2"	3 1/2"
> 6 1/2" ≤ 9"	5"	2'-4"	3 1/2"	6 1/2"	9"
> 9" ≤ 13"	7"	2'-10"	4 1/2"	8 1/2"	11"
Rail Splice	1/4"	1'-8"	2"	4"	—

T = Total movement at expansion joint as shown on the design plans.

(6'-3" Maximum Post Spacing)

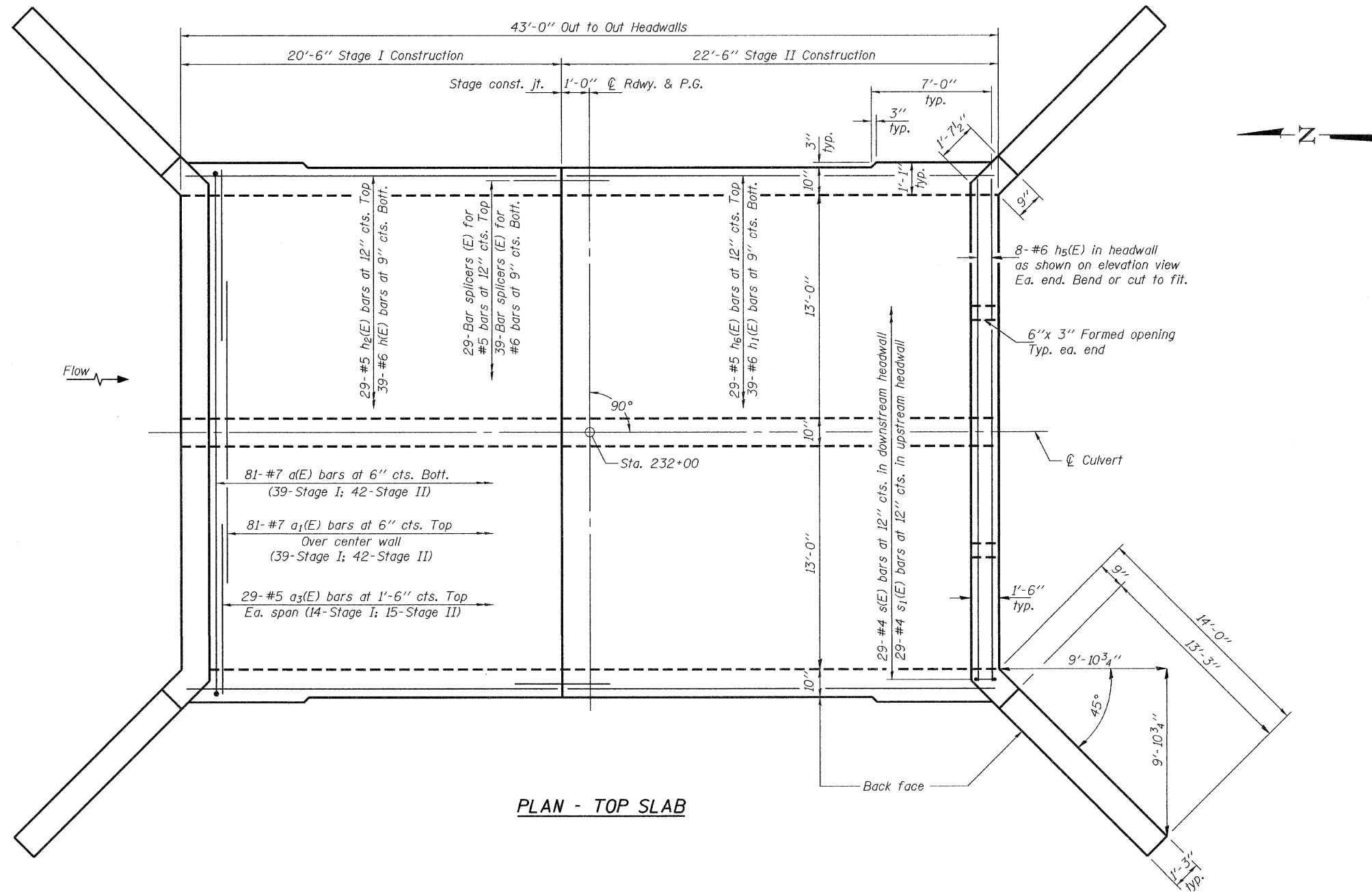
DESIGNED	Jay D. Edwards
CHECKED	Michael D. Rolape
DRAWN	h.t. duong
CHECKED	JDE/MDR

EXAMINED	Thomas J. Damgalak	June 14, 2010
PASSED	Ralph E. Anderson	

STEEL RAILING, TYPE 2399
STRUCTURE NO. 073-2007

SHEET NO. 4 9 SHEETS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	841	108B-1	PERRY	27	22
FED. ROAD DIST. NO. _			ILLINOIS FED. AID PROJECT		
			CONTRACT NO. 78059		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PLAN - TOP SLAB

Notes: A distance of half the length of the wingwall but not less than six feet of the barrel shall be poured monolithically with the wingwalls.
For bar splicer details, see sheet 8 of 9.
Work this sheet with sheets 6 & 7 of 9.
Space s(E) and s1(E) bars in headwall to miss 1" ϕ anchor bolts.

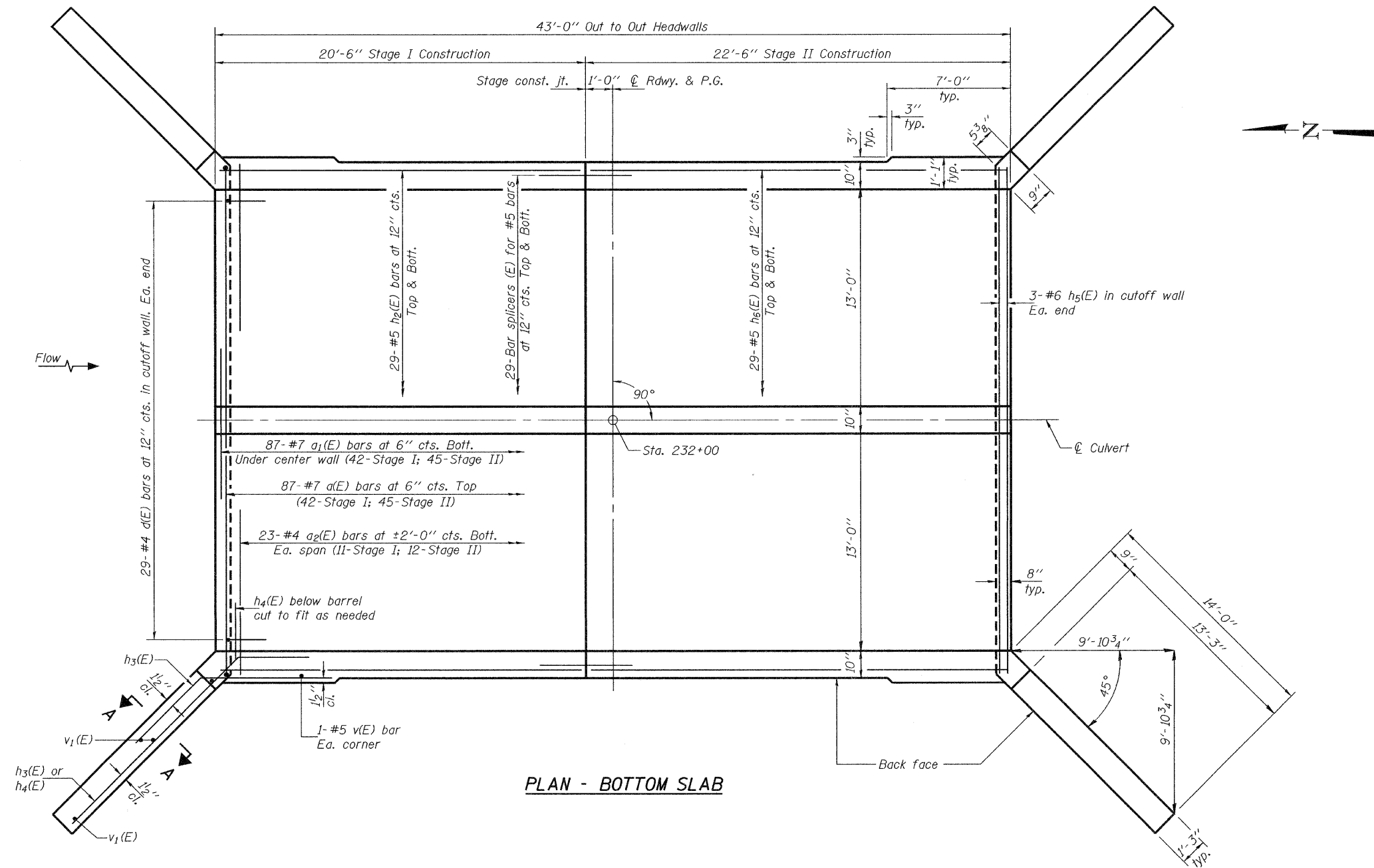
DESIGNED	Jay D. Edwards
CHECKED	Michael D. Rolape
DRAWN	h.t. duong
CHECKED	JDE/MDR

EXAMINED	Thomas J. Damagala ENGINEER OF BRIDGE DESIGN	June 14, 2010
PASSED	Ralph E. Anderson ENGINEER OF BRIDGES AND STRUCTURES	

CULVERT DETAILS
STRUCTURE NO. 073-2007

SHEET NO. 5 9 SHEETS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	841	108B-1	PERRY	27	23
CONTRACT NO. 78059					
FED. ROAD DIST. NO. _ ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PLAN - BOTTOM SLAB

Note: For Section A-A, see sheet 7 of 9.

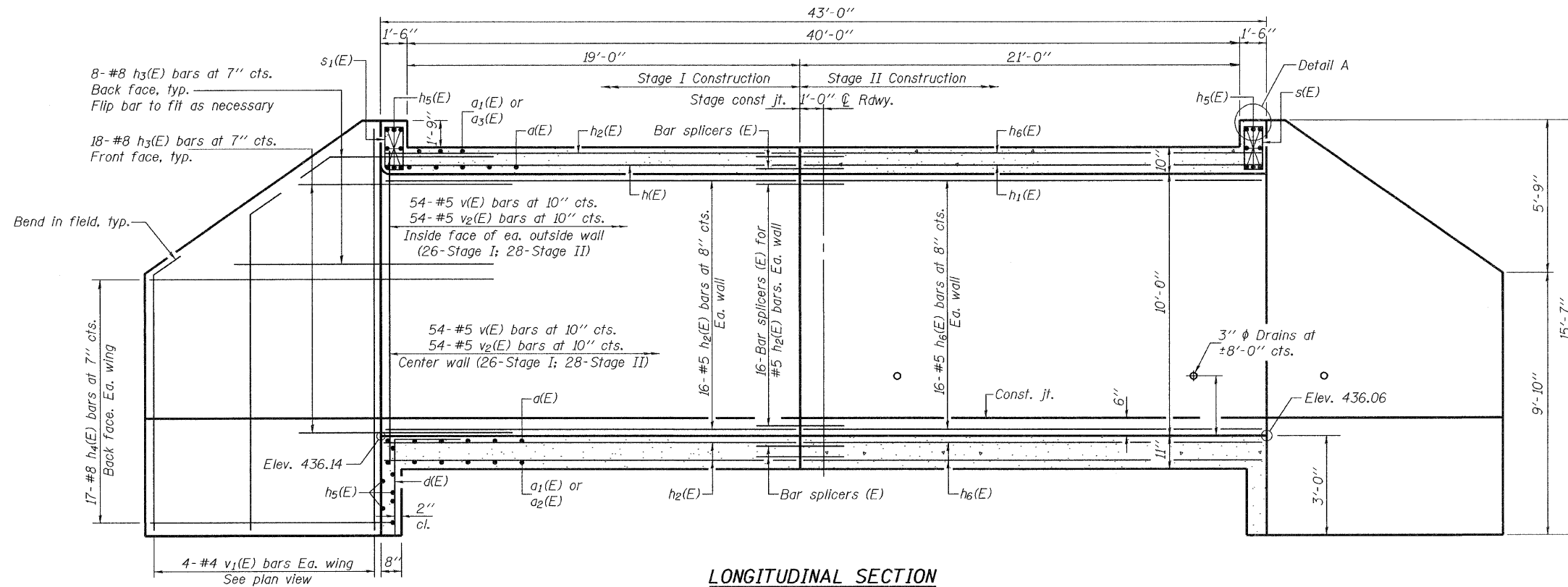
DESIGNED	Jay D. Edwards
CHECKED	Michael D. Rolape
DRAWN	h.t. duong
CHECKED	JDE/MDR

EXAMINED	Thomas J. Damagala	June 14, 2010
PASSED	Ralph E. Anderson	

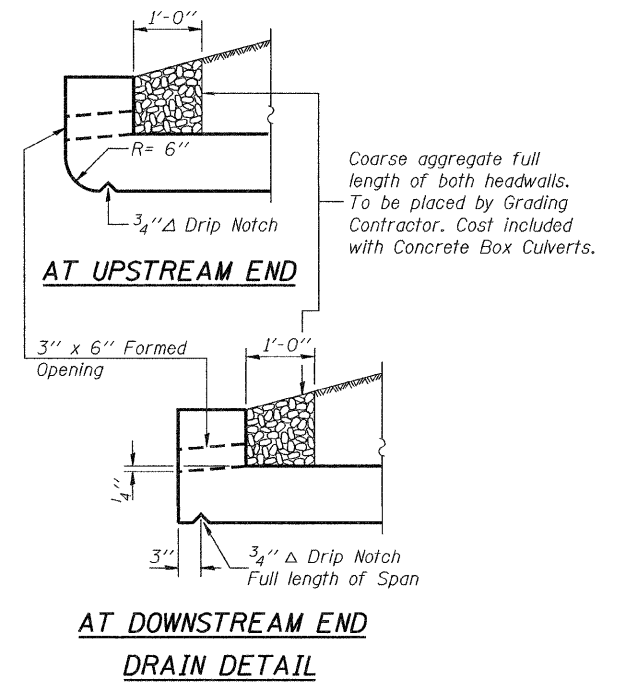
CULVERT DETAILS
STRUCTURE NO. 073-2007

SHEET NO. 6 9 SHEETS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	841	108B-1	PERRY	27	24
CONTRACT NO. 78059					
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



LONGITUDINAL SECTION

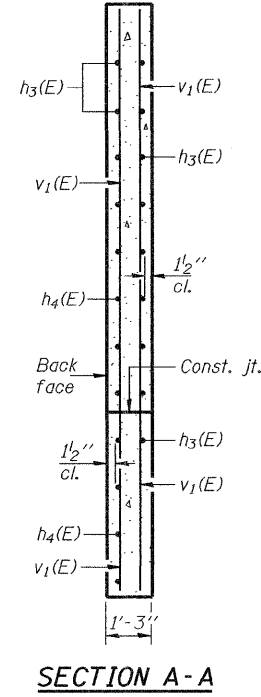
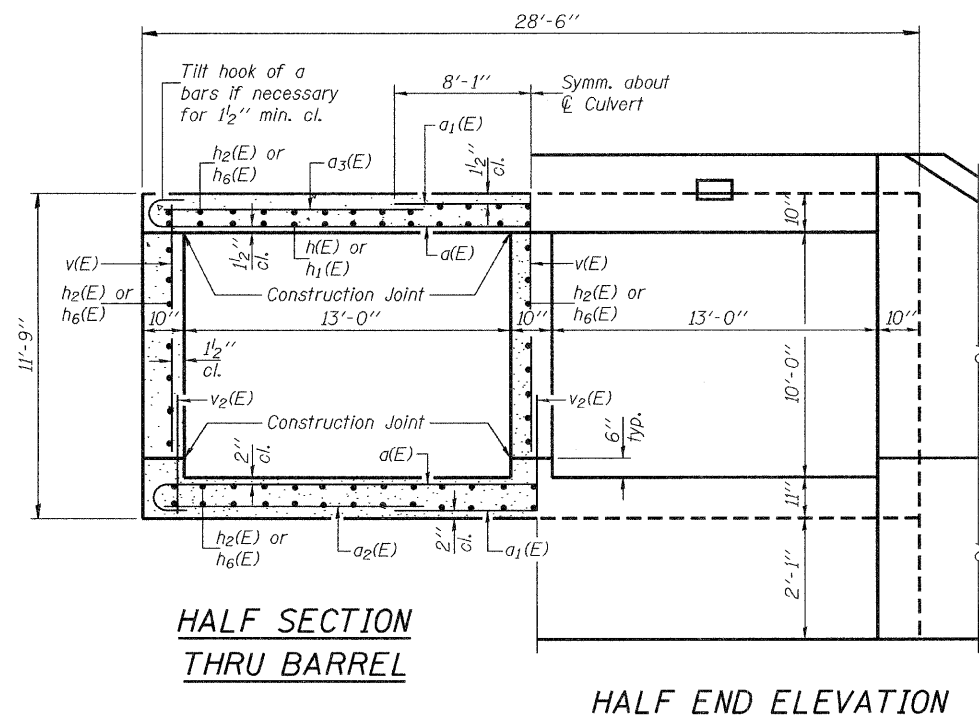
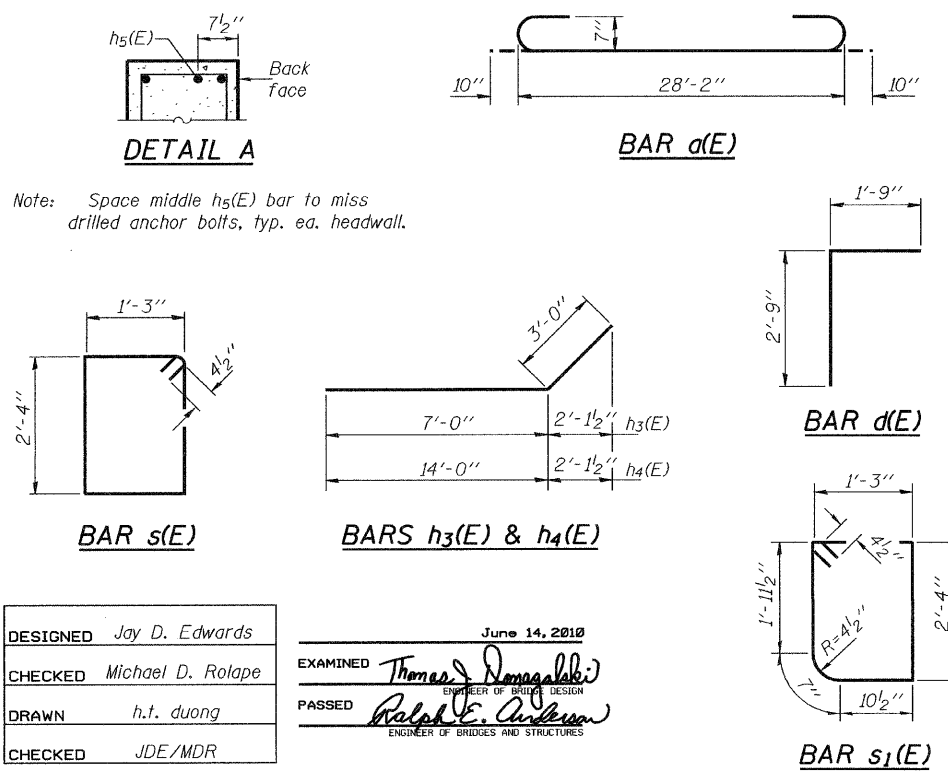


MIN. BAR LAP
#5 bars = 3'-3"

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	168	#7	29'-10"	U
a1(E)	168	#7	16'-2"	U
a2(E)	46	#4	8'-7"	U
a3(E)	58	#5	9'-3"	U
d(E)	58	#4	4'-6"	L
h(E)	39	#6	20'-3"	U
h1(E)	39	#6	22'-3"	U
h2(E)	135	#5	20'-3"	U
h3(E)	104	#8	10'-0"	U
h4(E)	68	#8	17'-0"	U
h5(E)	22	#6	28'-3"	U
h6(E)	135	#5	22'-3"	U
s(E)	29	#4	7'-11"	U
s1(E)	29	#4	7'-9"	U
v(E)	166	#5	10'-0"	U
v1(E)	16	#5	15'-4"	U
v2(E)	162	#5	4'-8"	U
Concrete Box Culverts		Cu. Yd.	163.1	
Reinforcement Bars, Epoxy Coated		Lbs.	35150	

CULVERT DETAILS
STRUCTURE NO. 073-2007



SECTION A-A

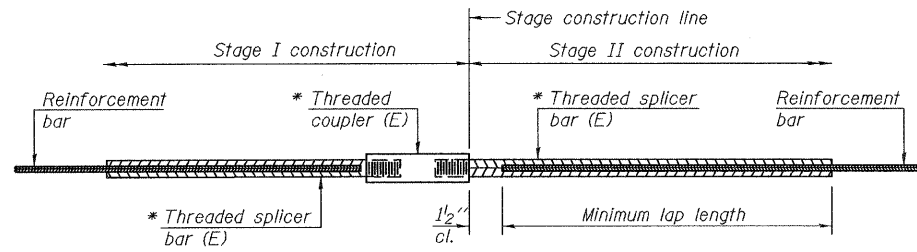
DESIGNED Jay D. Edwards
CHECKED Michael D. Rolape
DRAWN h.t. duong
CHECKED JDE/MDR

EXAMINED *Thomas Damagala*
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

June 14, 2010

SHEET NO. 7 9 SHEETS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	841	108B-1	PERRY	27	25
CONTRACT NO. 78059					
FED. ROAD DIST. NO. _ ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



STANDARD BAR SPLICER ASSEMBLY

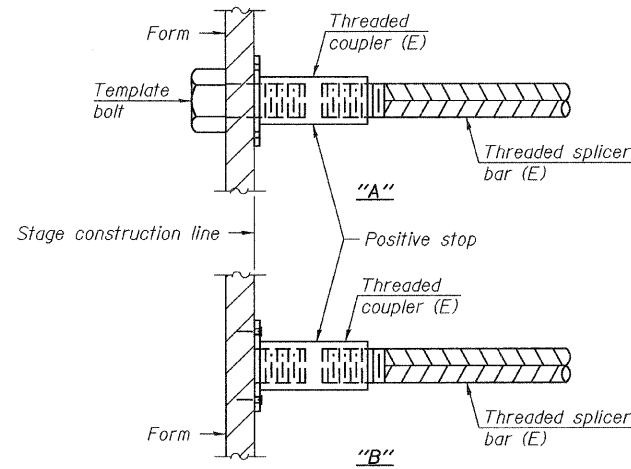
Minimum Lap Lengths				
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4
3, 4	1'-5"	1'-11"	2'-1"	2'-4"
5	1'-9"	2'-5"	2'-7"	2'-11"
6	2'-1"	2'-11"	3'-1"	3'-6"
7	2'-9"	3'-10"	4'-2"	4'-8"
8	3'-8"	5'-1"	5'-5"	6'-2"
9	4'-7"	6'-5"	6'-10"	7'-9"

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

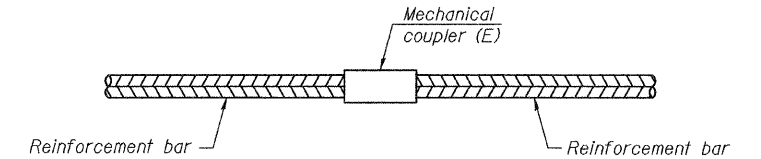
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Culvert walls	#5	48	2'-7"
Top slab	#5	29	2'-7"
Top slab	#6	39	3'-1"
Bottom slab	#5	58	2'-7"



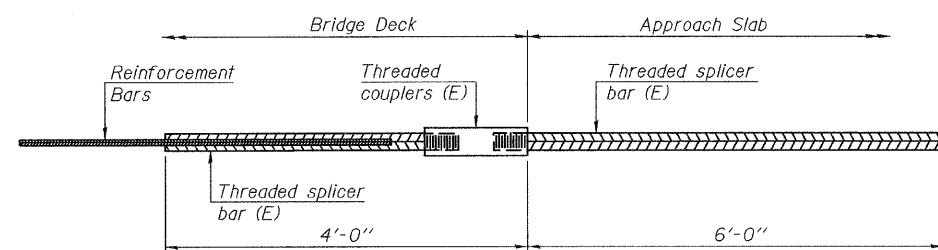
INSTALLATION AND SETTING METHODS

"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.



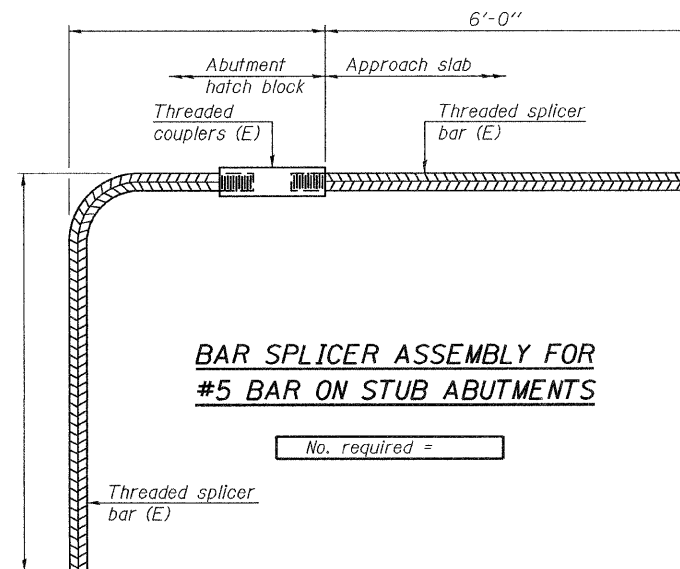
STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



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

No. required =



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required =

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. 073-2007**

DESIGNED Jay D. Edwards
CHECKED Michael D. Rolape
DRAWN h.t. duong
CHECKED JDE/MDR

June 14, 2010
EXAMINED Thomas J. Damagala
PASSED Ralph E. Anderson

BSD-1 11-1-09

SHEET NO. 8 9 SHEETS	F.A.P. RTE. 841	SECTION 108B-1	COUNTY PERRY	TOTAL SHEETS 27	SHEET NO. 26
	CONTRACT NO. 78059			FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



Illinois Department of Transportation
Division of Highways
District Nine Materials

SOIL BORING LOG

Page 1 of 2

Date 6/15/06

ROUTE over IL 154 / Panther Creek LOCATION IL 154 over IL 154 / Panther Creek LOGGED BY Bryan Keller

SECTION LOCATION 3.4 mi. W. of US 51

COUNTY Perry DRILLING METHOD HAMMER TYPE

STRUCT. NO.	STATION	BORING NO.	STATION	OFFSET	GROUND SURFACE ELEV.	DEPTH	BLU	UCS	MOIST	DESCRIPTION	DEPTH	BLU	UCS	MOIST
073-0016	232+00	1-S	232+34	14.00 ft	448.2 ft	(ft)	(6")	(tsf)	(%)		(ft)	(6")	(tsf)	(%)
										Surface Water Elev. 437.4 ft				
										Stream Bed Elev. _____ ft				
										Groundwater Elev.: _____ ft				
										First Encounter 433.70 ft				
										Upon Completion _____ ft				
										After _____ Hrs.				
										Bituminous shoulder				
										447.2				
										Medium, very moist, brown, Silty Clay Loam A-6				
										426.2				
										Very stiff, damp, brown, Silty Clay Loam A-6				
										443.7				
										Medium, very moist, brown, Silty Clay Loam A-6 with some Pea Gravel				
										441.2				
										Soft, very moist, grey, Silty Clay Loam A-6				
										438.7				
										Very soft, very moist, grey, Silty Clay Loam A-6				
										436.2				
										Medium to dense, moist, brown, Sandy Gravel				
										413.7				
										Hard, damp, grey, Clay A7-6				
										413.2				
										Hard, dry, grey, Limestone				
										408.2				
										Hard, damp, grey, Clay Loam A-6 with some Gravel				

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



Illinois Department of Transportation
Division of Highways
District Nine Materials

SOIL BORING LOG

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Date 6/15/06

ROUTE over IL 154 / Panther Creek LOCATION IL 154 over IL 154 / Panther Creek LOGGED BY Bryan Keller

SECTION LOCATION 3.4 mi. W. of US 51

COUNTY Perry DRILLING METHOD HAMMER TYPE

STRUCT. NO.	STATION	BORING NO.	STATION	OFFSET	GROUND SURFACE ELEV.	DEPTH	BLU	UCS	MOIST	DESCRIPTION	DEPTH	BLU	UCS	MOIST
073-0016	232+00	1-S	232+34	14.00 ft	448.2 ft	(ft)	(6")	(tsf)	(%)		(ft)	(6")	(tsf)	(%)
										Surface Water Elev. 437.4 ft				
										Stream Bed Elev. _____ ft				
										Groundwater Elev.: _____ ft				
										First Encounter 433.70 ft				
										Upon Completion _____ ft				
										After _____ Hrs.				
										Cored from 40.0 ft to 45.0 ft				
										403.2				
										Bottom of hole=45.0 ft				
										Free water observed at 14.5 ft				
										Elevation referenced to Center of Existing Structure; Crown of Finished Roadway=448.6 ft				
										To convert "N" values to "N60" values, multiply by 1.25.				

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



Illinois Department of Transportation
Division of Highways
District Nine Materials

SOIL BORING LOG

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Date 6/15/06

ROUTE over IL 154 / Panther Creek LOCATION IL 154 over IL 154 / Panther Creek LOGGED BY Bryan Keller

SECTION LOCATION 3.4 mi. W. of US 51

COUNTY Perry DRILLING METHOD HAMMER TYPE

STRUCT. NO.	STATION	BORING NO.	STATION	OFFSET	GROUND SURFACE ELEV.	DEPTH	BLU	UCS	MOIST	DESCRIPTION	DEPTH	BLU	UCS	MOIST
073-0016	232+00	2-S	231+61	14.00 ft	448.5 ft	(ft)	(6")	(tsf)	(%)		(ft)	(6")	(tsf)	(%)
										Surface Water Elev. 437.4 ft				
										Stream Bed Elev. _____ ft				
										Groundwater Elev.: _____ ft				
										First Encounter 434 ft				
										Upon Completion 422.3 ft				
										After _____ Hrs.				
										Bituminous shoulder				
										446.5				
										Stiff, very moist, brown mottled grey, Silty Clay to Clay A7-6				
										444.0				
										Very stiff, moist, brown mottled grey, Clay A7-6				
										441.5				
										Soft, very moist, grey, Silty Clay Loam A-6				
										439.0				
										Very soft, very moist to wet, grey, Silt Loam A-6				
										436.5				
										Medium, very moist, grey, Silty Clay Loam A-6				
										434.0				
										Stiff, very moist, brown mottled grey, Clay A7-6 with a Sand Layer				
										431.5				
										Hard, moist, brown, Clay Loam A-6				
										429.0				
										Bottom of hole=35.0 ft				
										Free water observed at 14.5 ft				
										Elevation referenced to Center of Existing Structure; Crown of Finished Roadway=448.6 ft				
										To convert "N" values to "N60" values, multiply by 1.25.				

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

SOIL BORING LOGS
STRUCTURE NO. 073-2007

SHEET NO. 9	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9 SHEETS	841	108B-1	PERRY	27	27
			CONTRACT NO. 78059		
FED. ROAD DIST. NO. _ ILLINOIS FED. AID PROJECT					