

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2937	116(I-1)	PULASKI	7	1
PROJECT NO.		ILLINOIS		

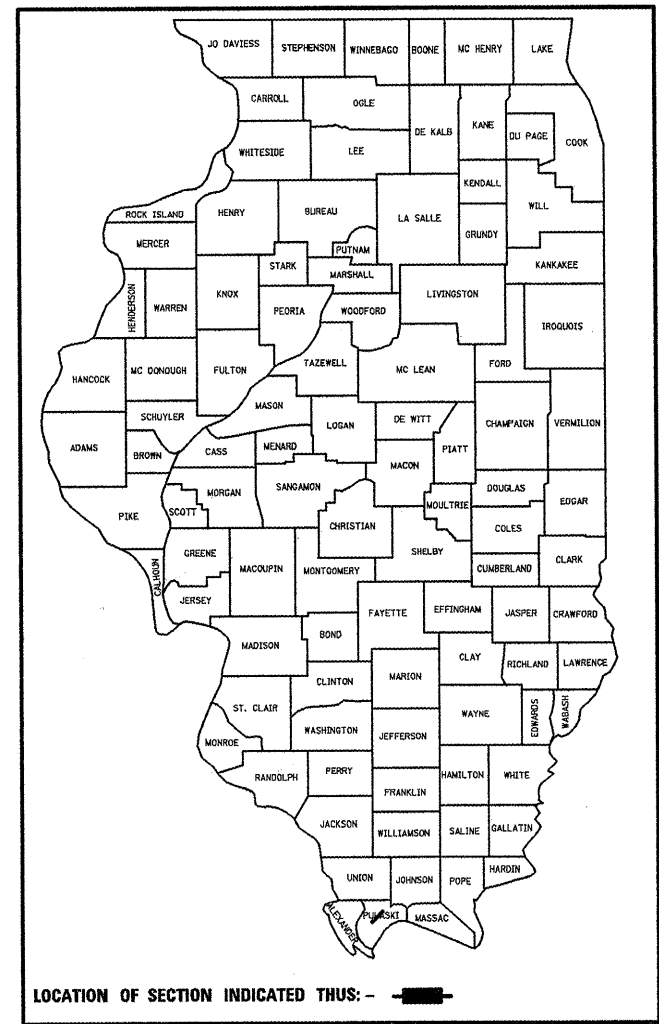
FOR INDEX OF SHEETS, SEE SHEET NO. 2
FOR SUMMARY OF QUANTITIES, SEE SHEET NO. 3

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PROPOSED
HIGHWAY PLANS**

F.A.S. ROUTE 2937 (ILLINOIS ROUTE 169)
PROJECT: CULVERT REPLACEMENT
PULASKI COUNTY
SECTION 116 (I-1)

C-99-051-09

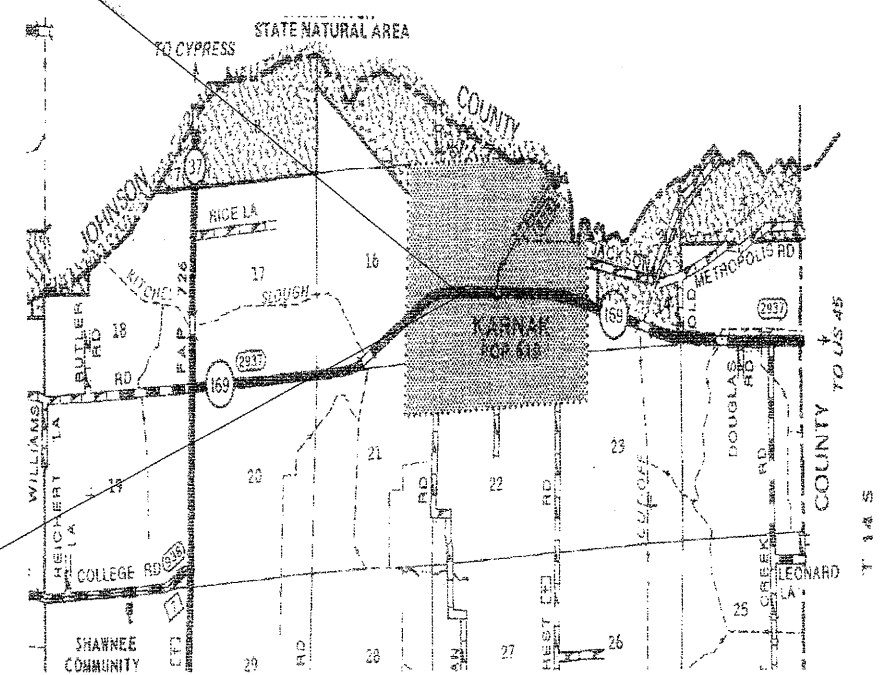


TRAFFIC DATA

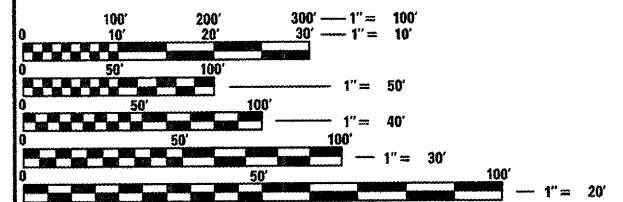
1999 ADT. - 2400 WITH 10.7%

PROJECT BEGINS
STA. 122+76.00

PROJECT ENDS
STA. 123+24.00



TOWNSHIPS
KARNAK



GROSS LENGTH = 48 FT.
NET LENGTH = 48 FT.

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 www.julie1call.com

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED *March 26, 2009*

Mary C. Lomie
DEPUTY DIRECTOR OF HIGHWAYS, REGION 5 ENGINEER

May 8, 2009
Charles J. Ingersoll
ENGINEER OF DESIGN AND ENVIRONMENT

May 8, 2009
Christine M. Reed
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	INDEX OF SHEETS, HIGHWAY STANDARDS, SIGNATURE BLOCK, GENERAL NOTES
3	SUMMARY OF QUANTITIES
4	TYPICAL SECTION
5	PLAN SHEET
6	DETAILS
7	CROSS SECTION

HIGHWAY STANDARDS

000001-05	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
280001-04	TEMPORARY EROSION CONTROL SYSTEMS
420001-07	PAVEMENT JOINTS
442201-03	CLASS C AND D PATCHES
483001-04	PCC SHOULDER
542106-02	REINFORCED CONCRETE END SECTIONS FOR PIPE CULVERT
630001-08	STEEL PLATE BEAM GUARDRAIL
701201-03	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS > 45 MPH
701206-02	LANE CLOSURE, 2L, 2W, NIGHT ONLY, FOR SPEEDS > 45 MPH
701901-01	TRAFFIC CONTROL DEVICES
780001-02	TYPICAL PAVEMENT MARKINGS
BLR 17-4	TRAFFIC CONTROL DEVICES-DAY LABOR CONSTRUCTION
BLR 22-6	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

COMMITMENTS

NONE AT THIS TIME

Prepared By: *Joe G. Blawie*
DISTRICT STUDIES & PLANS ENGINEER

Examined By: *Joe G. Blawie*
DISTRICT LAND ACQUISITION ENGINEER

Examined By: *Carrie Nelson*
DISTRICT PROGRAM DEVELOPMENT ENGINEER

Examined By: *W. H. H. H.*
DISTRICT OPERATIONS ENGINEER

Examined By: *Joe G. Blawie*
DISTRICT CONSTRUCTION ENGINEER

Examined By: *Bruno P. P.*
DISTRICT MATERIALS ENGINEER

Examined By: *Joe G. Blawie*
DISTRICT PROJECT IMPLEMENTATION ENGINEER

Examined By: *Danny Clayton*
ASSISTANT REGIONAL ENGINEER

Approved By: *Mary C. Lammie*
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

March 26 2009
DATE

GENERAL NOTES

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

ALL AGGREGATE
2.05 TONS/CU. YD.

RIPRAP
1.50 TONS/CU. YD.

ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE LEFT IN PLACE UNTIL REMOVAL IS REQUIRED TO CONSTRUCT FINAL GRADE LINES.

AREAS OF EXISTING AGGREGATE SHOULDERS THAT SHALL BE REMOVED FOR CONSTRUCTION SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR PIPE CULVERTS, CLASS A.

PLAN DIMENSIONS AND DETAILS RELATIVE TO THE EXISTING STRUCTURE HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO NOMINAL CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING OF MATERIALS. SUCH VARIATIONS SHALL NOT BE A CAUSE FOR ADDITIONAL COMPENSATION OR A CHANGE IN THE SCOPE OF THE WORK. THE CONTRACTOR, HOWEVER, WILL BE PAID FOR THE ACTUAL QUANTITY FURNISHED AT THE UNIT PRICE BID FOR THE WORK. CONSTRUCTION PLANS ARE AVAILABLE FOR REVIEW AT THE DISTRICT 9 HEADQUARTERS IN CARBONDALE, ILLINOIS.

ALL EARTH EXCAVATION SHALL BE INCLUDED IN THE COST OF PIPE CULVERTS, CLASS A

SUMMARY OF QUANTITIES

CODE NUMBER	ITEM DESCRIPTION	RURAL - PULASKI COUNTY	
		100% STATE	
		UNIT	TOTAL QUANTITIES
		1000	
20900310	POROUS GRANULAR BACKFILL	TON	806
25000200	SEEDING, CLASS 2	ACRE	0.05
25000350	SEEDING, CLASS 7	ACRE	0.05
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	5
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	5
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	5
25000700	AGRICULTURAL GROUND LIMESTONE	TON	0.1
25100115	MULCH, METHOD 2	ACRE	0.05
28000500	INLET AND PIPE PROTECTION	EACH	1
28100807	STONE ^{DUMPED} RIPRAP, CLASS A4	TON	119
44000100	PAVEMENT REMOVAL	SQ YD	128
44004250	PAVED SHOULDER REMOVAL	SQ YD	40
44201349	CLASS C PATCHES, TYPE I, 10 INCH	SQ YD	171
44213200	SAW CUTS	FOOT	64
48101200	AGGREGATE SHOULDERS, TYPE B	TON	8
50105200	REMOVE EXISTING CULVERTS	EACH	1
542A2773	PIPE CULVERTS, CLASS A, TYPE 4 48"	FOOT	75
54213693	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 48"	EACH	1
54215448	CAST-IN-PLACE REINFORCED CONCRETE END SECTIONS 48"	EACH	1
60801048	FLAP GATE 48"	EACH	1
* 63300115	REMOVAL AND REINSTALLATION OF EXISTING STEEL PLATE BEAM GUARD RAIL, SINGLE RAIL	FOOT	62.5
67100100	MOBILIZATION	L SUM	1
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1
70101835	TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 22	L SUM	1
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	1.5
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	156
Z0075310	TIE BARS 3/4"	EACH	46

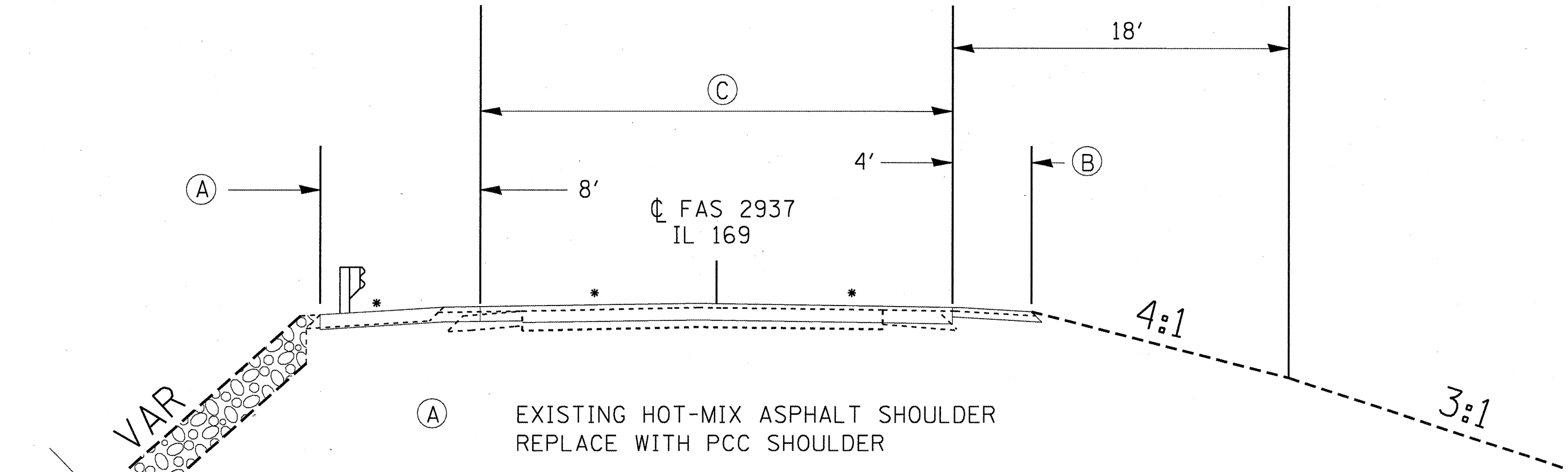
**Specialty Items*

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2937	116(1-1)	PULASKI	7	3
CULVERT REPLACEMENT				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

*MATCH EXISTING SLOPES

TYPICAL SECTION

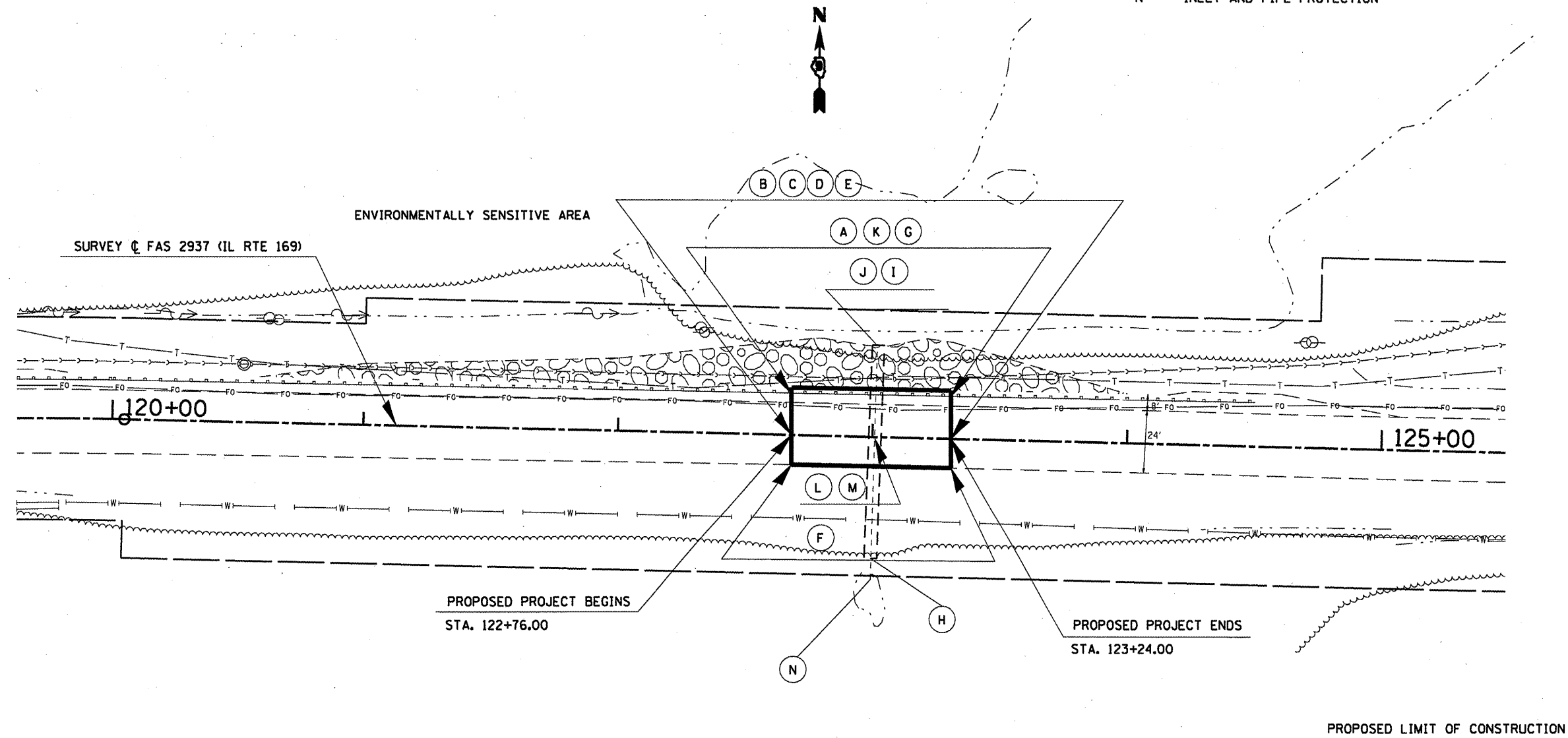


- (A) EXISTING HOT-MIX ASPHALT SHOULDER
REPLACE WITH PCC SHOULDER
- (B) EXISTING AGGREGATE SHOULDER, TYPE B
REPLACE WITH AGGREGATE SHOULDER, TYPE B
- (C) EXISTING 24' HMA PAVEMENT
REPLACE WITH CLASS C PAVEMENT PATCH, 10"
- (D) EXISTING A4 RIPRAP WITH BEDDING STONE AND FILTER FABRIC
REPLACE WITH 22" OF STONE DUMPED RIPRAP A4.

SUGGESTED SEQUENCE OF CONSTRUCTION

- 1) CLOSE IL 169 DOWN TO TRAFFIC USING STANDARD BLR 22-6
- 2) REMOVE PAVEMENT AND EXISTING CULVERT.
- 3) LAY THE 48" PIPE CULVERT, BACKFILL WITH ROCK, AND OPEN TO TRAFFIC.
- 4) POUR ONE SIDE OF PATCH AND BUILD END SECTION WHILE TRAFFIC RUNS ON THE OTHER.
- 5) SWITCH TRAFFIC TO PATCH AND WORK ON OTHER SIDE.

- A STONE DUMPED RIPRAP, CLASS A4
- B PAVEMENT REMOVAL
- C PAVED SHOULDER REMOVAL
- D CLASS C PATCH, TY 4, 10"
- E SAW CUTS
- F SEEDING, CLASS 2
- G AGGREGATE SHOULDERS, TYPE B
- H PRECAST REINFORCED CONC. END SECTION, 48"
- I FLAP GATE
- J CAST IN PLACE END SECTION, 48"
- K REMOVE AND REINSTALL EXISTING SPBGR
- L REMOVE EXISTING CULVERTS
- M PIPE CULVERT CLASS A TYP. 4
- N INLET AND PIPE PROTECTION



NOTE: DO NOT EXTEND PROPOSED CULVERT BEYOND THE LIMITS OF THE EXISTING CULVERT DUE TO THE ENVIRONMENTALLY SENSITIVE AREA.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2937	116(1-1)	PULASKI	7	5
CULVERT REPLACEMENT				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

AUTOMATIC FLAPGATE (WITH HEADWALL)

GENERAL NOTES

THE AUTOMATIC FLAP GATE SHALL BE COMMERCIALY PRODUCED BY A RELIABLE MANUFACTURER. THE GATE MAY BE MADE OF CAST IRON, CAST STEEL, OR OTHER SUITABLE MATERIAL. THE DESIGN MAY DIFFER FROM THE DRAWING IF THE GATE WILL WORK IN A SATISFACTORY, TROUBLE FREE MANNER AND WILL WITHSTAND THE ANTICIPATED WATER PRESSURE. THE GATE SHALL BE APPROVED BY THE ENGINEER.

THE SIZE OF AUTOMATIC FLAP GATES REFERS TO THE DIAMETER OF THE PIPE.

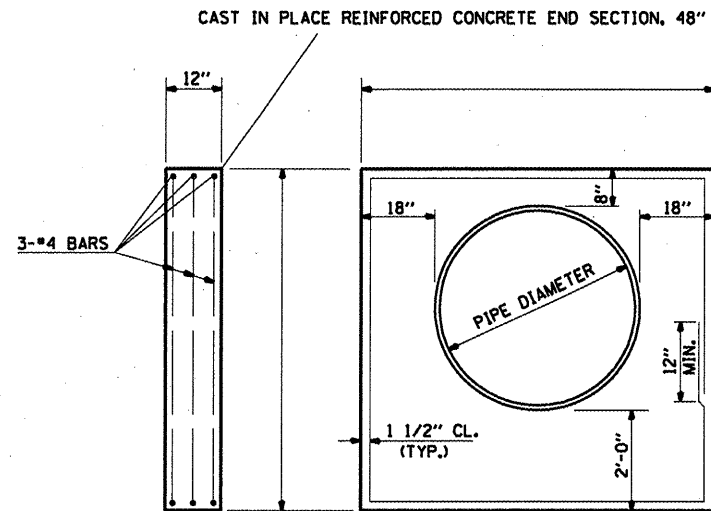
THIS WORK SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR AUTOMATIC FLAP GATES OF THE SIZE SPECIFIED AND SHALL INCLUDE ALL LABOR AND MATERIALS NECESSARY TO COMPLETE THE INSTALLATION.

THE SPECIAL OUTLET HEADWALL SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR CU. YD. FOR CONCRETE HEADWALL AND PER POUND OF REINFORCEMENT BARS AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED EXPOSED EDGES SHALL BE BEVELLED 3/4". CLASS SI CONCRETE SHALL BE USED THROUGHOUT.

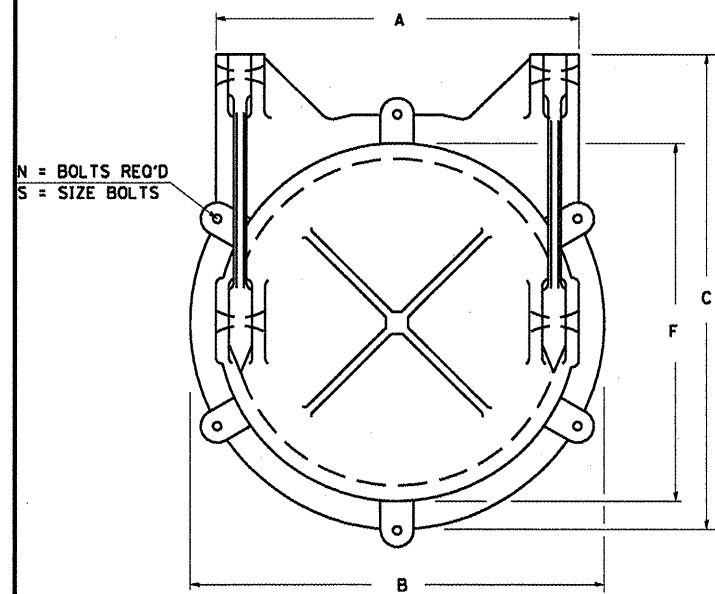
THIS HEADWALL IS NOT DESIGNED FOR RETENTION OF AN EARTH EMBANKMENT.

TYPICAL DIMENSIONS IN INCHES

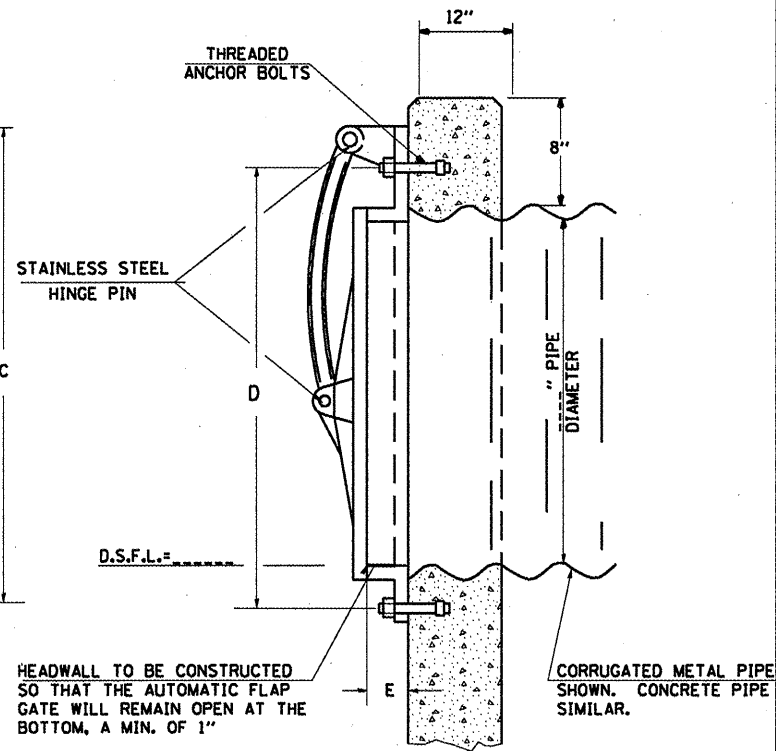
PIPE DIAMETER	A	B	C	D	E	F	N	S
12	13 1/4	15 1/4	18	15 1/4	1 1/4	13 1/4	4	3/4
15	16 1/4	19	21	18 1/4	1 1/4	16 1/4	4	3/4
18	19 1/4	22 1/4	24 1/4	22 1/4	1 1/4	19 1/4	4	3/4
21	22 1/4	25 1/4	27 1/4	25 1/4	1 1/4	22 1/4	4	3/4
24	25 1/4	28 1/4	30 1/4	28 1/4	1 1/4	25 1/4	6	3/4
27	28 1/4	31 1/4	33 1/4	31 1/4	1 1/4	28 1/4	6	3/4
30	31 1/4	34 1/4	36 1/4	33 1/4	1 1/4	31 1/4	6	3/4
36	37 1/4	41 1/4	43 1/4	41 1/4	1 1/4	37 1/4	6	3/4
42	43 1/4	47 1/4	49 1/4	47 1/4	1 1/4	43 1/4	6	3/4
48	49 1/4	54	56 1/4	54	1 1/4	49 1/4	6	1



SPECIAL OUTLET HEADWALL

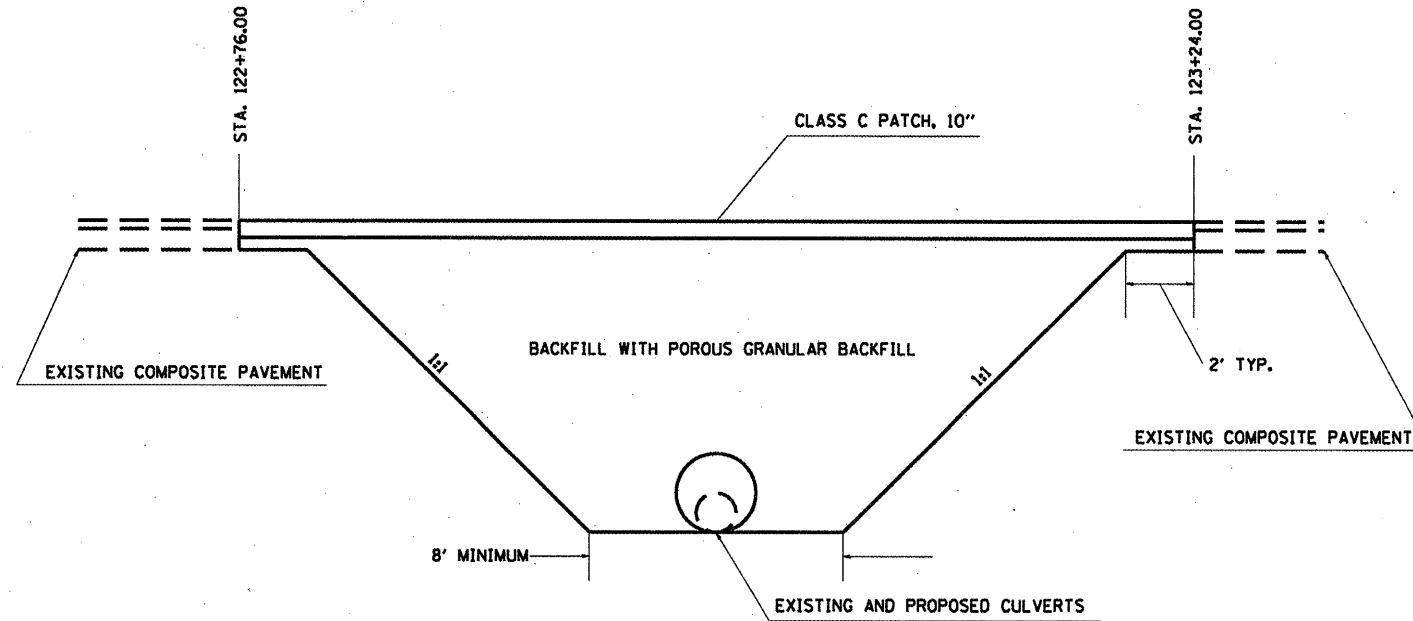


FRONT FACE



SECTION

TYPICAL PROFILE VIEW OF CULVERT



REVISIONS
REVISION 1
REVISION 2
REVISION 3
REVISION 4

STD. 9-27.

NOTE: THE STANDARD DETAIL FOR THE CAST IN PLACE END SECTION WILL HAVE TO BE ALTERED TO ALLOW THE BOTTOM PORTION OF THE FLAP GATE TO FUNCTION PROPERLY.

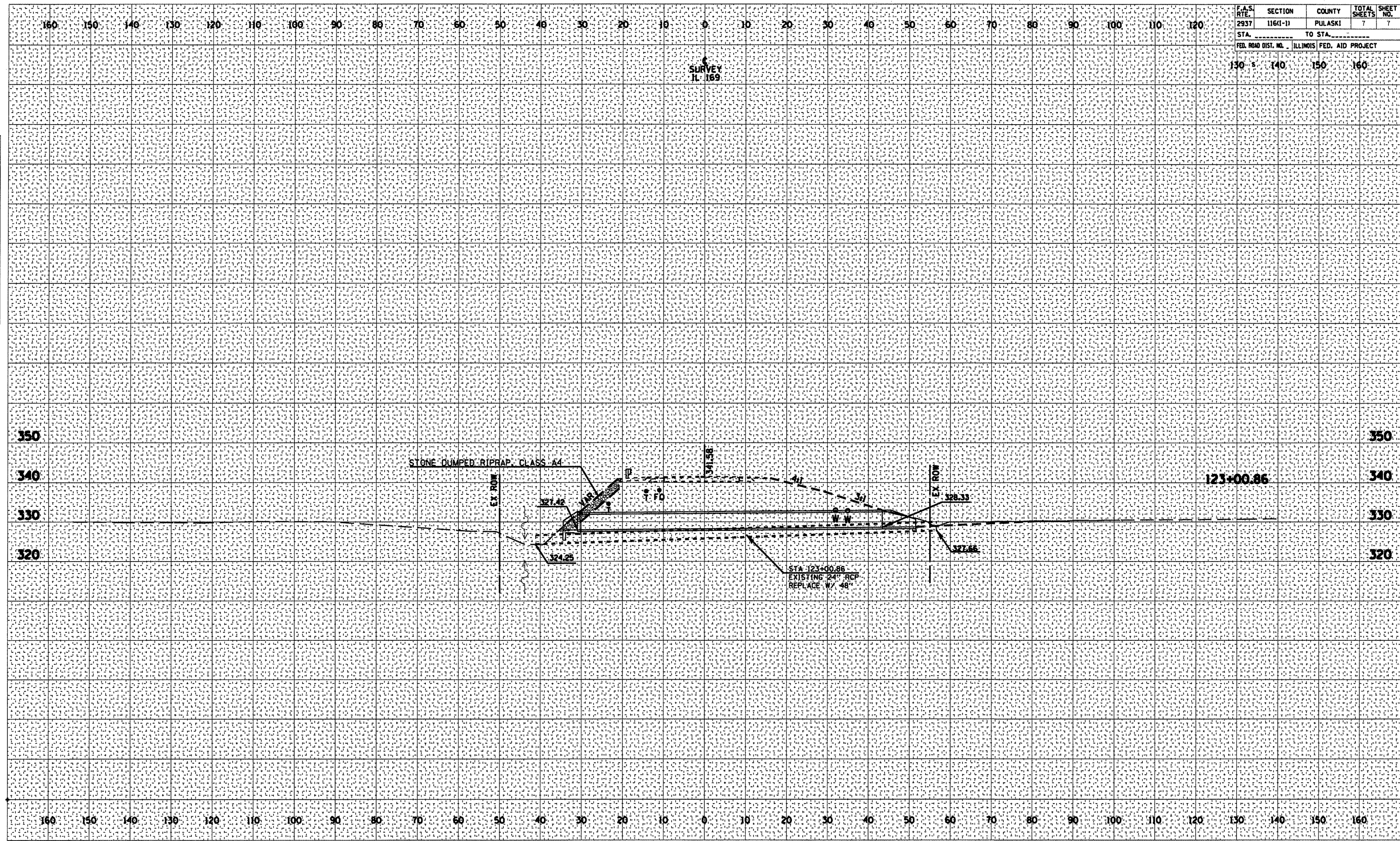
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2937	116(1)-11	PULASKI	7	6
CULVERT REPLACEMENT				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

Plot Date: 3/25/2009
 Plotted By: amsc-rog
 Plot Title: FAS 2937
 File Name: F1E1E

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

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



F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2937	1161-11	PULASKI	7	7
STA. _____		TO STA. _____		
FED. ROAD DIST. NO. _____		ILLINOIS FED. AID PROJECT		
130-5-140		150-160		