

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

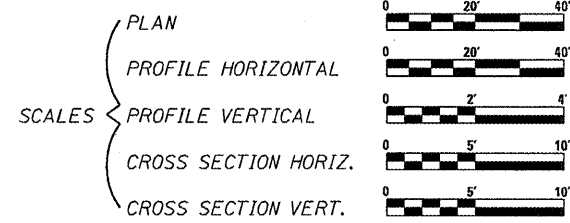
PLANS FOR PROPOSED FEDERAL AID HIGHWAY

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
323	145BR-1	DOUGLAS	39	1
CONTRACT NO. 70393			+ 4	
D-95-036-04			43	

INDEX OF SHEETS

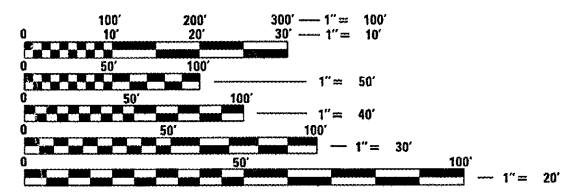
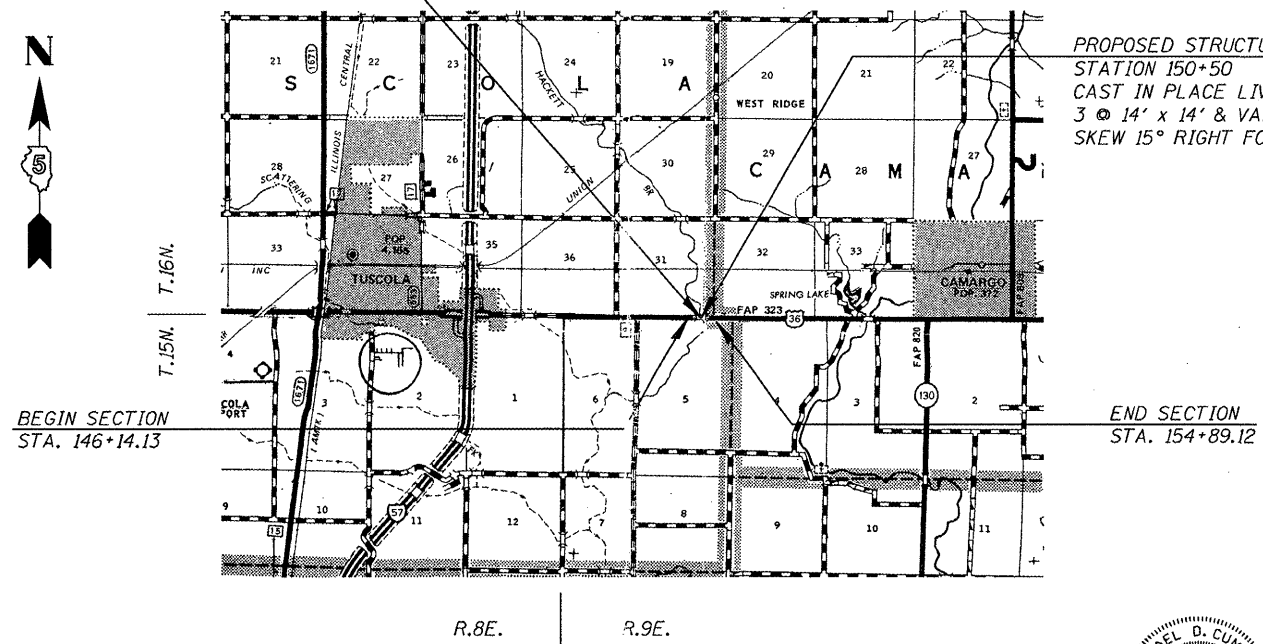
SEE SHEET NO. 2 FOR INDEX OF SHEETS
SEE SHEET NO. 2 FOR LIST OF ILLINOIS D.O.T. HIGHWAY STANDARDS

PROJECT BRF-0323(024)
FAP ROUTE 323 (US 36)
SECTION 145BR-1
DOUGLAS COUNTY
C-95-037-04
BRIDGE REPLACEMENT
OVER HACKETT BRANCH 2.4 MILE E OF I-57



REMOVAL OF EXISTING STRUCTURE NO. 021-0021
STATION 150+57-SINGLE SPAN PPC DECK BEAM
BRIDGE ON CLOSED ABUTMENT
43'-6" BK TO BK OF ABUTMENT

PROPOSED STRUCTURE NO. 021-2026
STATION 150+50
CAST IN PLACE LIVE LOAD CULVERT
3 @ 14' x 14' & VAR.
SKEW 15° RIGHT FORWARD

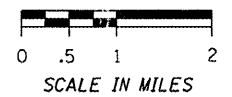


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

CURRENT ADT = 4,350 (2005)

LENGTH OF SECTION: 874.99 FEET = 0.166 MILES



CUMMINS ENGINEERING CORPORATION
SPRINGFIELD, ILLINOIS



Michael D. Cummins (6/29/07)
ILLINOIS PROFESSIONAL NO. 43244
(Expires 11/30/07)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED 0077 20 08

[Signature]
DEPUTY DIRECTOR OF HIGHWAYS, REGION 3 ENGINEER

December 5, 2008
Eric E. Horn
Interim ENGINEER OF DESIGN AND ENVIRONMENT

December 5, 2008
Christine M. Horn
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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OF THE STATE OF ILLINOIS

PROJECT ENGINEER: Nancy Fasig (217) 465-4181
CONSULTANT LIAISON: Jason Strults (217) 465-4181

CONTRACT NO. 70393

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
323	145BR-1	DOUGLAS	39	2
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 70393				

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- 20.-21. FIELD ENTRANCES
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- 24A.-24D. DETAIL OF BRIDGE APPROACH PAVEMENT
- 25.-34. STRUCTURE PLANS - SN 021-2026
- 35.-39. CROSS SECTIONS US 36

LIST OF ILLINOIS DOT HIGHWAY STANDARDS

- | | |
|-----------|---|
| 000001-05 | STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS |
| 001001-02 | AREAS OF REINFORCEMENT BARS |
| 001006 | DECIMAL OF AN INCH AND OF A FOOT |
| 280001-04 | TEMPORARY EROSION CONTROL SYSTEMS |
| 420001-07 | PAVEMENT JOINTS |
| 421001-02 | BAR REINFORCEMENT FOR CRC PAVEMENT |
| 482011-03 | HMA SHOULDER STRIPS/SHOULDERS WITH RESURFACING OR WIDENING AND RESURFACING PROJECTS |
| 515001-03 | NAME PLATE FOR BRIDGES |
| 602301-02 | INLET TYPE A |
| 604001-03 | FRAMES AND LIDS TYPE 1 |
| 630001-08 | STEEL PLATE BEAM GUARDRAIL |
| 630201-06 | PCC/HMA STABILIZATION AT STEEL PLATE BEAM GUARDRAIL |
| 630301-05 | SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS |
| 631032-04 | TRAFFIC BARRIER TERMINAL, TYPE 6A |
| 635006-03 | REFLECTOR AND TERMINAL MARKER PLACEMENT |
| 635011-02 | REFLECTOR MARKER AND MOUNTING DETAILS |
| 667101-01 | PERMANENT SURVEY MARKERS |
| 701001-02 | OFF-ROAD OPERATIONS 2L, 2W, 15' MIN AWAY FOR SPEEDS OF 45 MPH OR GREATER |
| 701006-03 | OFF-ROAD OPERATIONS 2L, 2W, 15' TO EDGE OF PAVEMENT FOR SPEEDS OF 45 MPH OR GREATER |
| 701201-03 | LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS 45 MPH OR GREATER |
| 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 |
| 701901-01 | TRAFFIC CONTROL DEVICES |
| 704001-05 | TEMPORARY CONCRETE BARRIER |
| 780001-02 | TYPICAL PAVEMENT MARKINGS |
| 781001-03 | TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS |
| 886001-01 | DETECTOR LOOP INSTALLATIONS |
| 886006-01 | TYPICAL LAYOUT FOR DETECTION LOOPS |

INDEX OF SHEETS & HIGHWAY STANDARDS

FAP ROUTE 323 (US 36)
SECTION 145BR-1
DOUGLAS COUNTY

CUMMINS ENGINEERING CORPORATION

JOB #: 2114.6
FILE: 21146INDEX
DATE: 5/2/07

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
323	145BR-1	DOUGLAS	39	3
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 70393				

GENERAL NOTES

G.N.-100
ENGLISH UNITS OF MEASUREMENT SHALL GOVERN OVER AND SUPERSEDE ANY METRIC UNITS SHOWN IN THIS CONTRACT. WHERE INCLUDED, METRIC UNITS ARE FOR INFORMATION ONLY.

G.N.-105.09A
ALL ELEVATIONS SHOWN IN THE PLANS ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988. (NAVD 88)

G.N.-107.31
UTILITY LINES WERE PLOTTED FROM INFORMATION FURNISHED BY THE VARIOUS UTILITY COMPANIES INVOLVED (QUALITY LEVEL C &/OR QUALITY LEVEL D) AND THE ACCURACY SHOULD BE CONSIDERED APPROXIMATE ONLY.

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.

G.N.-406
THE QUANTITIES INCLUDED IN THE PLANS FOR HOT-MIX ASPHALT RESURFACING ARE INTENDED TO GIVE THE COVERAGE SHOWN ON THE TYPICAL CROSS SECTIONS. IT IS NOT INTENDED TO INCREASE THE THICKNESS OF THE HOT-MIX ASPHALT MIXTURE IN ORDER TO USE ALL OF THE QUANTITIES INCLUDED IN THE CONTRACT.

G.N.-406H
MIXTURE REQUIREMENTS
THE FOLLOWING MIXTURE REQUIREMENTS ARE APPLICABLE FOR THIS PROJECT:

LOCATIONS:	US 36	US 36
MIXTURE USE(S):	FLEXIBLE CONNECTORS BASE COURSE OPTION	SURFACE COURSE HMA SHOULDERS
AC/PG:	PG 64-22	PG 64-22
RAP % (Max)	25%	15%
Design Air Voids:	4.0% @ Ndes=50	4.0% @ Ndes=50
Mixture Composition: (Gradation Mixture)	IL 19.0	IL 9.5
Friction Aggregate:	N/A	MIX C

G.N.-703A
SHORT TERM PAVEMENT MARKING SHALL BE APPLIED TO THE PAVEMENT AFTER ANY OF THE FOLLOWING: COLD MILLING AND/OR PLACING BITUMINOUS MATERIALS (PRIME COAT), LEVELING BINDER (MACHINE METHOD), BINDER AND SURFACE COURSES. SHORT TERM PAVEMENT MARKING PLACED ON THE SURFACE, SHALL COINCIDE WITH THE FINAL PAVEMENT STRIPING. SHORT TERM PAVEMENT MARKING PLACED PRIOR TO THE SURFACE SHALL COINCIDE WITH THE EXISTING PAVEMENT MARKINGS. USE 4 FEET PER 40 FEET (OR 10% PER STATION).

G.N.-781
RAISED REFLECTIVE PAVEMENT MARKERS SHALL BE PLACED IN ACCORDANCE WITH STANDARD 781001, AND THE DETAILS SHOWN IN THE PLANS. IF THERE IS ANY DISCREPANCY BETWEEN THE STANDARD AND THE DETAILS IN THE PLANS, THE DETAILS IN THE PLANS SHALL GOVERN. THE FINAL PAVEMENT MARKINGS SHALL BE IN PLACE PRIOR TO PLACING THE RAISED REFLECTIVE PAVEMENT MARKERS AND THE RAISED REFLECTIVE PAVEMENT MARKERS SHALL BE PLACED MIDWAY IN THE 30 FOOT (9 m) SPACE BETWEEN THE DASHED CENTERLINE STRIPES (WHEN APPLICABLE).

G.N.-1004.01
COARSE AGGREGATE GRADATION CA-10 MAY BE USED WHENEVER COARSE AGGREGATE CA-6 IS SPECIFIED IN THE STANDARD SPECIFICATIONS.

G.N.-Z0038
AN ALUMINUM TABLET OF THE TYPE SHOWN ON STANDARD 667101 SHALL BE PLACED ON THE PROPOSED STRUCTURE AS DIRECTED BY THE ENGINEER. THE BENCH MARK ELEVATION WILL BE ESTABLISHED AND MARKED BY THE DEPARTMENT. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR PERMANENT BENCH MARKS.

COMMITMENTS

THERE ARE NO COMMITMENTS ON THIS PROJECT.

GENERAL NOTES

FAP ROUTE 323 (US 36)
SECTION 145BR-1
DOUGLAS COUNTY

CUMMINS ENGINEERING CORPORATION	JOB #: 2114.6 FILE: 21146GNOTES DATE: 5/2/07
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
323	145BR-1	DOUGLAS	39	4

FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT

CONTRACT NO. 70393

SUMMARY OF QUANTITIES			S.N. 021-2026 80% FEDERAL 20% STATE
CODE NO.	ITEM	UNIT	CONSTRUCTION TYPE CODE X028-2A
20200100	EARTH EXCAVATION	CU YD	120
20400800	FURNISHED EXCAVATION	CU YD	10
20900110	POROUS GRANULAR BACKFILL	CU YD	472
21301052	EXPLORATION TRENCH 52" DEPTH	FOOT	50
25000200	SEEDING, CLASS 2	ACRE	0.4
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	36
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	36
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	36
25100115	MULCH, METHOD 2	ACRE	0.4
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	40
28000400	PERIMETER EROSION BARRIER	FOOT	1,204
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	15
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	60
40600300	AGGREGATE (PRIME COAT)	TON	2
40600990	TEMPORARY RAMP	SQ YD	135
40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	30
42001165	BRIDGE APPROACH PAVEMENT	SQ YD	270
42001300	PROTECTIVE COAT	SQ YD	270
42001430	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	SQ YD	54
44000100	PAVEMENT REMOVAL	SQ YD	104
44000198	HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH	SQ YD	588
44000700	APPROACH SLAB REMOVAL	SQ YD	108
44004250	PAVED SHOULDER REMOVAL	SQ YD	284
48203100	HOT-MIX ASPHALT SHOULDERS	TON	20
50100200	REMOVAL OF EXISTING STRUCTURES	L SUM	1
50300100	FLOOR DRAINS	EACH	6
50300260	BRIDGE DECK GROOVING	SQ YD	204
50300300	PROTECTIVE COAT	SQ YD	239
50800105	REINFORCEMENT BARS	POUND	39,120
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	23,000
50800515	BAR SPLICERS	EACH	343
* 50900200	STEEL RAILING, TYPE 2399	FOOT	93
51500100	NAME PLATES	EACH	1
54003000	CONCRETE BOX CULVERTS	CU YD	380.5
60100925	PIPE DRAINS 8"	FOOT	40
61100605	MISCELLANEOUS CONCRETE	CU YD	1.0
61133100	FIELD TILE JUNCTION VAULTS, 2' DIA.	EACH	1
* 63000000	STEEL PLATE BEAM GUARD RAIL, TYPE A	FOOT	225
* 63100087	TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	4
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	4
63200310	GUARDRAIL REMOVAL	FOOT	658

* SPECIALTY ITEM

SUMMARY OF QUANTITIES			S.N. 021-2026 80% FEDERAL 20% STATE
CODE NO.	ITEM	UNIT	CONSTRUCTION TYPE CODE X028-2A
67000500	ENGINEER'S FIELD OFFICE, TYPE B	CAL MO	6
67100100	MOBILIZATION	L SUM	1
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1
70300100	SHORT-TERM PAVEMENT MARKING	FOOT	240
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	49
70400100	TEMPORARY CONCRETE BARRIER	FOOT	500
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	300
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	1,970
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	12
* 78100105	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	EACH	1
* 78200405	GUARDRAIL MARKERS	EACH	16
* 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4
78300100	PAVEMENT MARKING REMOVAL	SQ FT	477
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	12
X0323988	TEMPORARY SOIL RETENTION SYSTEM	SQ FT	488
X7200201	WIDTH RESTRICTION SIGNING	L SUM	1
Z0002900	BASE COURSE (OPTION)	SQ YD	467
Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2
Z0030350	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2
Z0037300	PAVEMENT GROOVING	SQ YD	254
Z0038700	PERMANENT BENCH MARKS	EACH	1

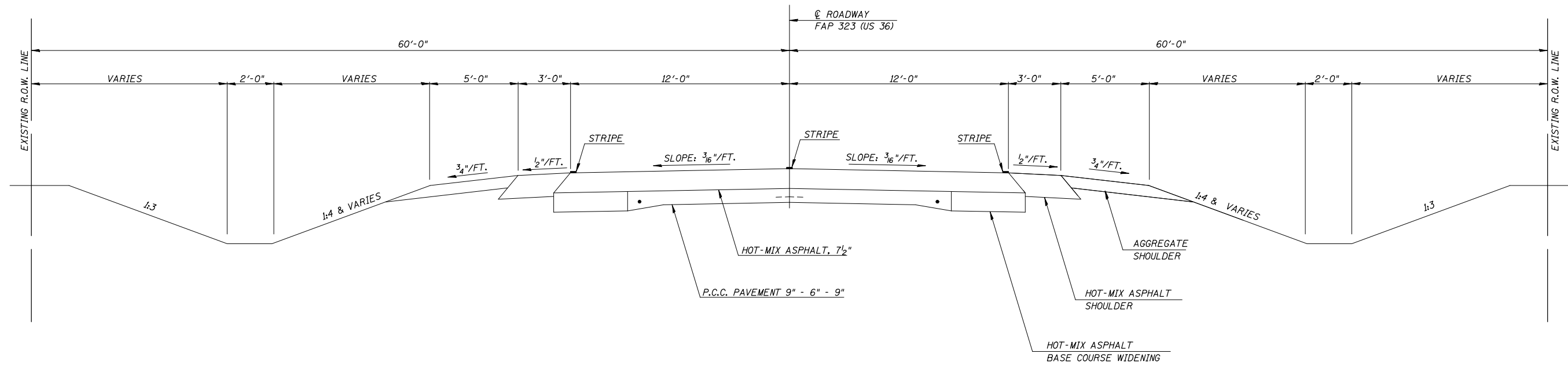
SUMMARY OF QUANTITIES
FAP ROUTE 323 (US 36)
SECTION 145BR-1
DOUGLAS COUNTY

CUMMINS ENGINEERING CORPORATION
JOB #: 2114.6
FILE: 21146DTY.DGN
DATE: 4/3/07

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
323	145BR-1	DOUGLAS	39	5
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 70393				

EXISTING TYPICAL CROSS SECTION

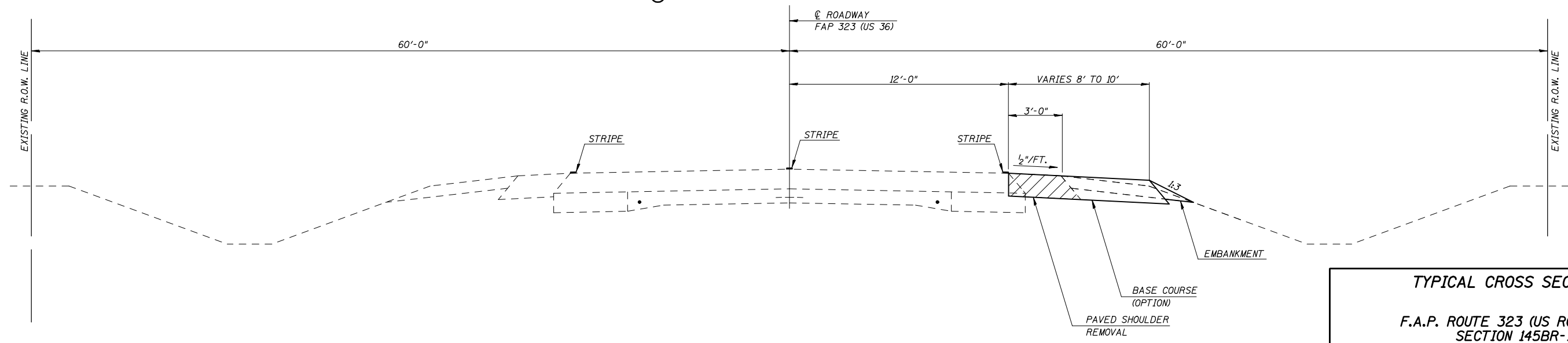
STATION	TO	STATION
LT 146 + 14.13		148 + 27.24
LT 152 + 78.99		154 + 89.12
RT 146 + 14.13		147 + 75.24
RT 152 + 92.66		154 + 89.12



① PROPOSED TYPICAL CROSS SECTION

STATION	TO	STATION
LT 146 + 14.13		LT 148 + 27.24 ②
② LT 152 + 78.99		LT 154 + 89.12
RT 146 + 14.13		RT 147 + 75.24 ②
② RT 152 + 92.66		RT 154 + 89.12

TRANSITION WIDTH OF BASE COURSE (OPTION) AS FOLLOWS
 8' AT STA 146+14.13 TO 10' AT STA 147+75.24
 10' AT STA 153+29.12 TO 8' AT STA 154+89.12



TYPICAL CROSS SECTIONS

F.A.P. ROUTE 323 (US ROUTE 36)
SECTION 145BR-1
DOUGLAS COUNTY

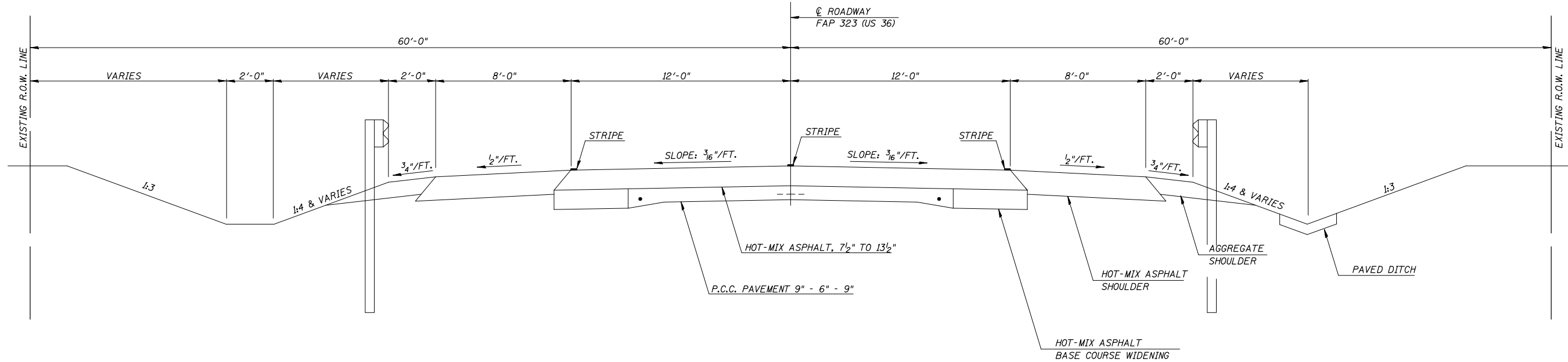
CUMMINS ENGINEERING CORPORATION

JOB #:	2114.6
FILE:	21146.TYP
DATE:	5/2/07

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
323	145BR-1	DOUGLAS	39	6
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 70393				

EXISTING TYPICAL CROSS SECTION

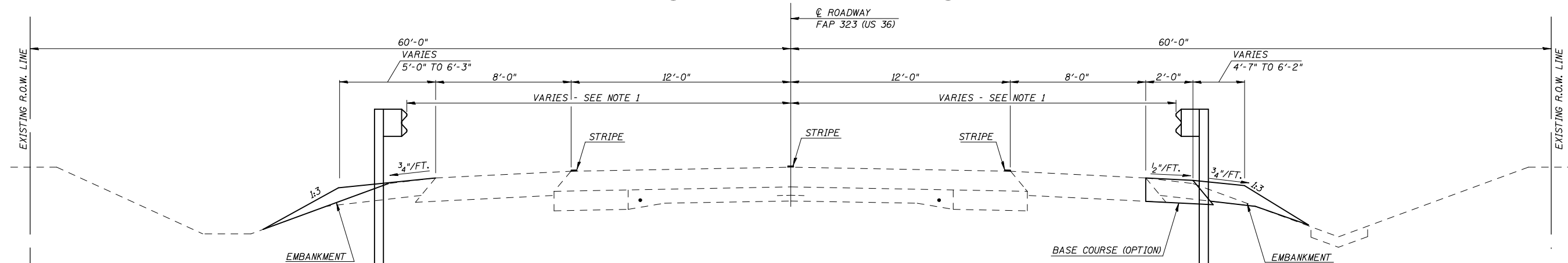
STATION	TO	STATION
LT 148 + 27.24		148 + 30
LT 151 + 70		152 + 78.99
RT 147 + 75.24		148 + 30
RT 151 + 70		152 + 92.66



② PROPOSED TYPICAL CROSS SECTION

STATION	TO	STATION
① LT 148 + 27.24		LT 149 + 30
③ LT 151 + 70		LT 152 + 78.99
① RT 147 + 75.24		RT 149 + 30
③ RT 151 + 70		RT 152 + 92.66

NOTE 1
 OFFSET TO FACE OF GUARDRAIL VARIES AS FOLLOWS:
 22.0' LT STA 149+01.75 TO 20.0' LT STA 149+76.75
 20.0' LT STA 151+12.55 TO 22.0' LT STA 152+50.05
 22.0' RT STA 148+49.95 TO 20.0' RT STA 149+87.45
 20.0' RT STA 151+23.25 TO 22.0' RT STA 151+98.25



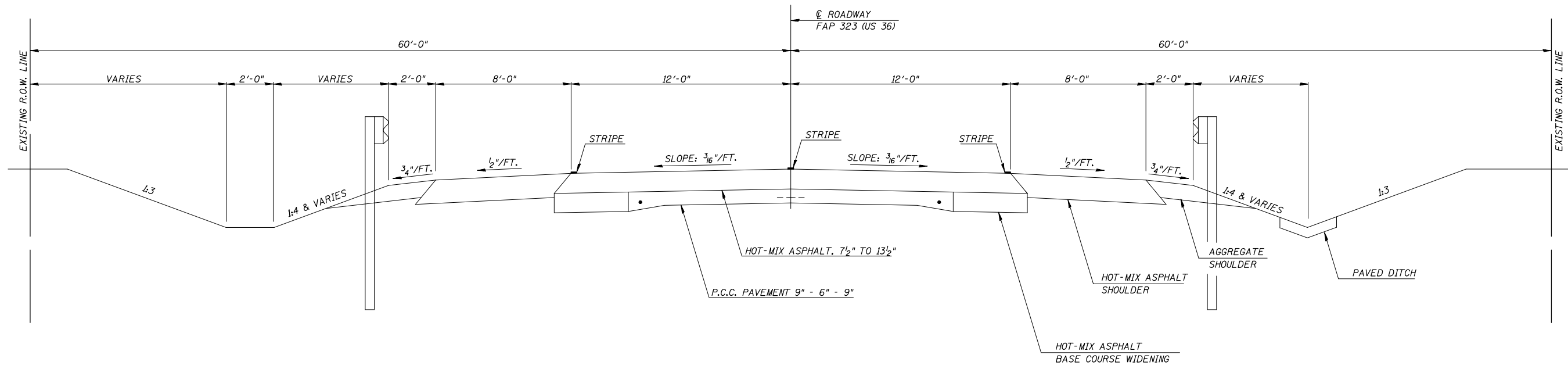
TYPICAL CROSS SECTIONS

F.A.P. ROUTE 323 (US ROUTE 36)
 SECTION 145BR-1
 DOUGLAS COUNTY

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
323	145BR-1	DOUGLAS	39	7
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 70393				

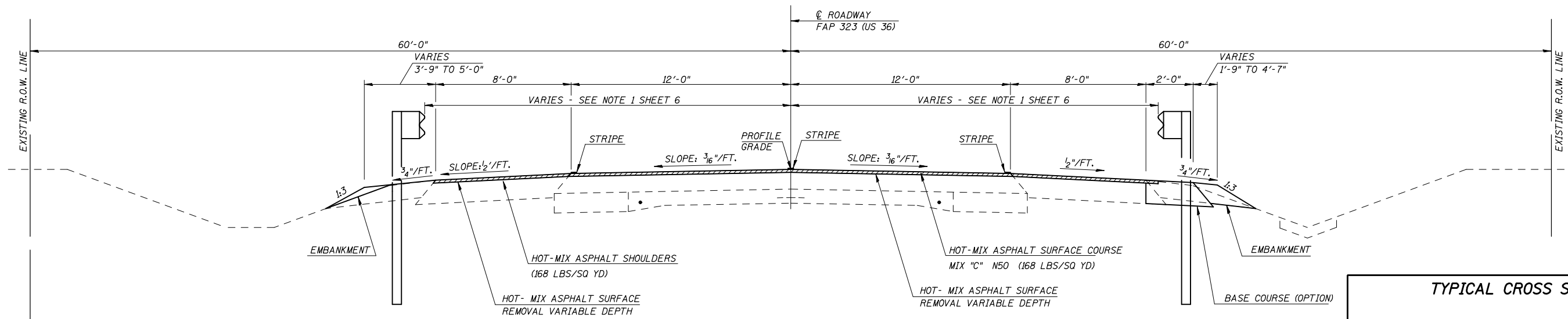
EXISTING TYPICAL CROSS SECTION

STATION	TO	STATION
148 + 30		150 + 16
150 + 98		151 + 70



③ PROPOSED TYPICAL CROSS SECTION

STATION	TO	STATION
② 149 + 30		④ 149 + 89.67
④ 151 + 10.33		② 151 + 70



TYPICAL CROSS SECTIONS

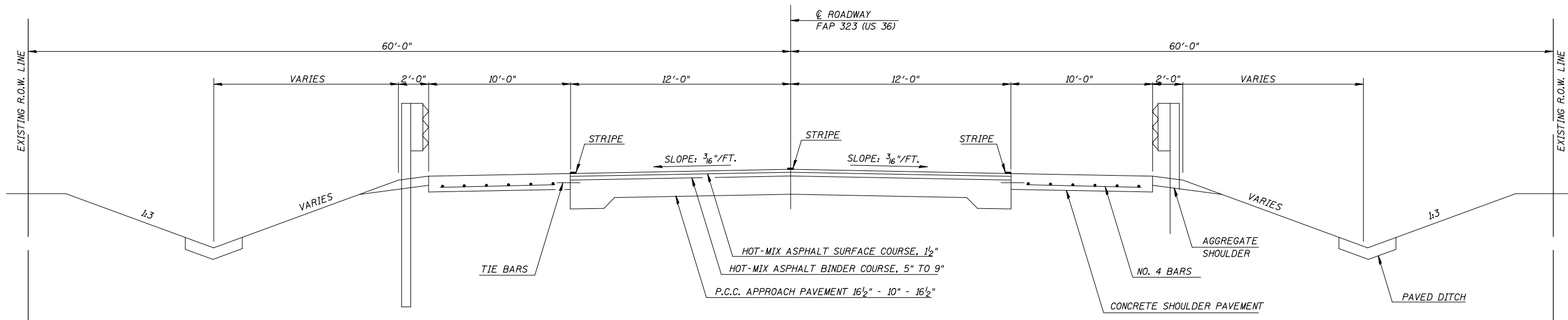
F.A.P. ROUTE 323 (US ROUTE 36)
SECTION 145BR-1
DOUGLAS COUNTY

CUMMINS ENGINEERING CORPORATION	JOB #: 2114.6
	FILE: 21146.TYP
	DATE: 5/2/07

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
323	145BR-1	DOUGLAS	39	8
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 70393				

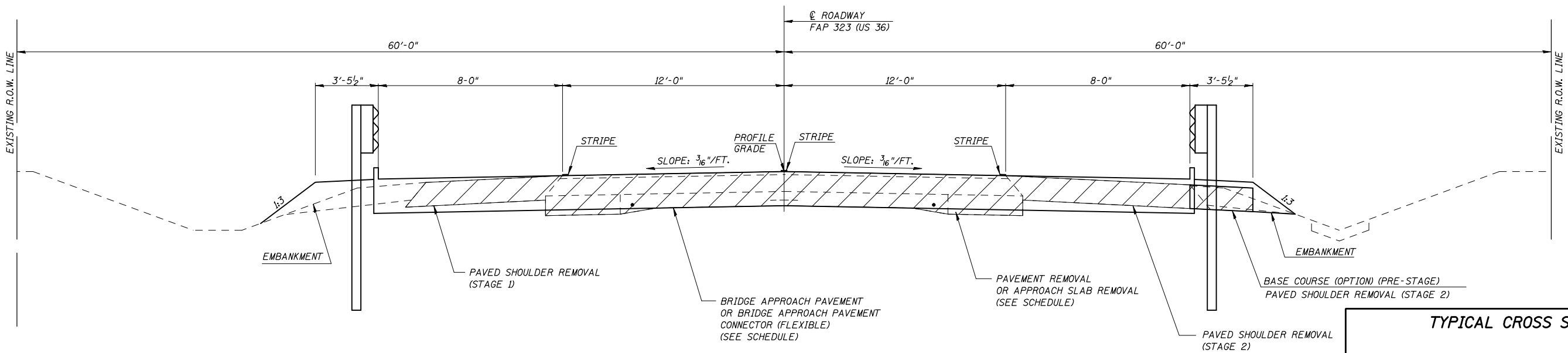
EXISTING TYPICAL CROSS SECTION

STATION TO STATION
 150 + 16 TO 150 + 36
 150 + 78 TO 150 + 98



④ PROPOSED TYPICAL CROSS SECTION

STATION TO STATION
 ③ 149 + 89.67 TO 150 + 25.67 ⑤
 ⑤ 150 + 74.33 TO 151 + 10.33 ③



TYPICAL CROSS SECTIONS
 F.A.P. ROUTE 323 (US ROUTE 36)
 SECTION 145BR-1
 DOUGLAS COUNTY

CUMMINS ENGINEERING CORPORATION

JOB #:	2114.6
FILE:	21146.TYP
DATE:	5/2/07

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
323	145BR-1	DOUGLAS	39	10

FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT

CONTRACT NO. 70393

EARTHWORK

LOCATION	EARTH EXCAVATION	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE	EMBANKMENT	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-)
	CU YD	CU YD	CU YD	CU YD
EARTH EXCAVATION PRELIMINARY PHASE				
STA 146+14.13 TO STA 150+25.67	60	45	45	0
STA 150+74.33 TO STA 154+89.12	60	45	30	15
STAGE 2				
STA 148+65.00 TO STA 150+25.67	0	0	10	-10
STA 150+74.33 TO STA 152+74.00	0	0	15	-15
TOTAL	120	90	100	-10

SHRINKAGE FACTOR = 25%

EXCAVATION FOR BASE COURSE (OPTION) IS INCLUDED IN THE QUANTITY FOR EARTH EXCAVATION

SEEDING

LOCATION	SEEDING CLASS 2	FERTILIZER NUTRIENTS			MULCH METHOD 2
		NITROGEN	PHOSPHORUS	POTASSIUM	
	ACRE	POUNDS	POUNDS	POUNDS	ACRE
LT STA 148+63 TO STA 152+79	0.15	13.5	13.5	13.5	0.15
RT STA 146+14 TO STA 154+89	0.25	22.5	22.5	22.5	0.25
TOTAL	0.40	36	36	36	0.4

PERIMETER EROSION BARRIER

LOCATION	FOOT
LT STA 148+63 TO STA 150+25	162
LT STA 150+46 TO STA 152+79	233
RT STA 146+14 TO STA 148+00	186
RT STA 148+38 TO STA 150+57	219
RT STA 150+85 TO STA 154+89	404
TOTAL	1,204

BASE COURSE (OPTION)

LOCATION	WIDTH	SQ YD
RT STA 146+14.13 TO STA 147+75.24	8' TO 10'	161
RT STA 147+75.24 TO STA 147+90.98	7' TO 2'	8
RT STA 147+90.98 TO STA 150+23.17	2'	52
RT STA 150+90.08 TO STA 152+92.45	2'	45
RT STA 152+92.45 TO STA 153+29.12	10	41
RT STA 153+29.12 TO STA 154+89.12	10' TO 8'	160
TOTAL		467

HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH

LOCATION	WIDTH	SQ YD
STA 149+30.00 TO STA 149+96.19	40	294
STA 151+03.81 TO STA 151+70.00	40	294
TOTAL		588

HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH INCLUDES CONSTRUCTION OF BUTT JOINTS (SEE SPECIAL PROVISIONS)

TEMPORARY RAMP

LOCATION	WIDTH	SQ YD
STAGE 1		
STA 149+91.19 TO STA 149+96.19	24	13.5
STA 151+03.81 TO STA 151+08.81	24	13.5
STAGE 2		
STA 149+91.19 TO STA 149+96.19	16	9.0
STA 151+03.81 TO STA 151+08.81	16	9.0

FINAL PHASE

STA 149+30.00 TO STA 149+35.00	40	22.5
STA 149+91.19 TO STA 149+96.19	40	22.5
STA 151+03.81 TO STA 151+08.81	40	22.5
STA 151+65.00 TO STA 151+70.00	40	22.5
TOTAL		135

BITUMINOUS MATERIALS (PRIME COAT)

LOCATION	WIDTH	GALLON
STA 149+30.00 TO STA 149+96.19	40	30
STA 151+03.81 TO STA 151+70.00	40	30
TOTAL		60

AGGREGATE (PRIME COAT)

LOCATION	WIDTH	TON
STA 149+30.00 TO STA 149+96.19	40	1
STA 151+03.81 TO STA 151+70.00	40	1
TOTAL		2

HOT-MIX ASPHALT SURFACE COURSE MIX "C" N50

LOCATION	WIDTH	TON
STA 149+30.00 TO STA 149+96.19	24	15
STA 151+03.81 TO STA 151+70.00	24	15
TOTAL		30

BRIDGE APPROACH PAVEMENT

LOCATION	WIDTH	SQ YD
STAGE 1		
STA 149+96.19 TO STA 150+26.19	24.25	81
STA 150+73.81 TO STA 151+03.81	24.25	81
STAGE 2		
STA 149+96.19 TO STA 150+26.19	16.25	54
STA 150+73.81 TO STA 151+03.81	16.25	54
TOTAL		270

PAVEMENT GROOVING

LOCATION	WIDTH	SQ YD
STA 149+96.19 TO STA 150+26.19	38	127
STA 150+73.81 TO STA 151+03.81	38	127
TOTAL		254

PROTECTIVE COAT

LOCATION	WIDTH	SQ YD
STA 149+96.19 TO STA 150+26.19	40.5	135
STA 150+73.81 TO STA 151+03.81	40.5	135
TOTAL		270

BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)

LOCATION	WIDTH	SQ YD
STAGE 1		
STA 149+90.19 TO STA 149+96.19	24	16
STA 151+03.81 TO STA 151+09.81	24	16
STAGE 2		
STA 149+90.19 TO STA 149+96.19	16	11
STA 151+03.81 TO STA 151+09.81	16	11
TOTAL		54

HOT-MIX ASPHALT SHOULDERS

LOCATION	WIDTH	TON
LT STA 149+30.00 TO STA 149+96.19	8	5
LT STA 151+03.81 TO STA 151+70.00	8	5
RT STA 149+30.00 TO STA 149+96.19	8	5
RT STA 151+03.81 TO STA 151+70.00	8	5
TOTAL		20

GUARDRAIL REMOVAL

LOCATION	FOOT
STAGE 1	
LT STA 148+46 TO STA 150+36	190
LT STA 150+78 TO STA 152+17	139
STAGE 2	
RT STA 148+97 TO STA 150+36	139
RT STA 150+78 TO STA 152+68	190
TOTAL	658

SHORT-TERM PAVEMENT MARKING

LOCATION	APPLICATIONS	FOOT
FINAL PHASE		
CENTERLINE		
STA 146+14.13 TO STA 154+89.12	1	88
STA 149+30.00 TO STA 149+96.19	3	24
STA 151+03.81 TO STA 151+70.00	3	24

SHOULDER

LT STA 148+27.24 TO STA 152+78.98	1	20
RT STA 146+14.13 TO STA 154+89.12	1	36
LT STA 149+30.00 TO STA 149+90.24	3	12
LT STA 150+98.90 TO STA 151+70.00	3	12
RT STA 149+30.00 TO STA 150+01.10	3	12
RT STA 151+09.75 TO STA 151+70.00	3	12
TOTAL		240

WORK ZONE PAVEMENT MARKING REMOVAL

LOCATION	SQ FT
FINAL PHASE	
CENTERLINE	
STA 146+14.13 TO STA 154+89.12	30

SHOULDER

LT STA 148+27.24 TO STA 152+78.98	7
RT STA 146+14.13 TO STA 154+89.12	12
TOTAL	49

PAVED SHOULDER REMOVAL

LOCATION	TYPE	WIDTH	SQ YD
PRESTAGE			
RT STA 146+14.13 TO STA 147+75.24	HMA	3	54
RT STA 152+92.58 TO STA 154+89.12	HMA	3	66
STAGE 1			
LT STA 149+84.31 TO STA 150+23.44	HMA	8	34
LT STA 150+23.42 TO STA 150+36.00	CONC	10	14
LT STA 150+78.00 TO STA 150+90.08	CONC	10	14
LT STA 150+90.08 TO STA 151+07.11	HMA	8	14
STAGE 2			
RT STA 149+92.89 TO STA 150+23.17	HMA	8	32
RT STA 150+23.17 TO STA 150+36.00	CONC	10	14
RT STA 150+78.00 TO STA 150+90.08	CONC	10	14
RT STA 150+90.08 TO STA 151+16.22	HMA	8	28
TOTAL			284

PAVED SHOULDER REMOVAL INCLUDES REMOVING PORTIONS OF BASE COURSE (OPTION) CONSTRUCTED IN PRE-STAGE

APPROACH SLAB REMOVAL

LOCATION	WIDTH	SQ YD
STAGE 1		
LT STA 150+16.00 TO STA 150+36.00	18	40
LT STA 150+78.00 TO STA 150+98.00	18	40
STAGE 2		
RT STA 150+16.00 TO STA 150+36.00	6	14
RT STA 150+78.00 TO STA 150+98.00	6	14
TOTAL		108

PAVEMENT REMOVAL

LOCATION	WIDTH	SQ YD
STAGE 1		
LT STA 149+90.19 TO STA 150+16.00	18	55
LT STA 150+98.00 TO STA 151+09.81	18	23
STAGE 2		
RT STA 149+90.19 TO STA 150+16.00	6	16
RT STA 150+98.00 TO STA 151+09.81	6	10
TOTAL		104

TEMPORARY CONCRETE BARRIER

LOCATION	FOOT
STAGE 1	
LT STA 148+02.06 TO RT STA 149+76.61	12:1 TAPER
RT STA 149+76.61 TO RT STA 151+26.61	TANGENT
RT STA 151+26.61 TO LT STA 153+01.16	12:1 TAPER
TOTAL	500

RELOCATE TEMPORARY CONCRETE BARRIER

LOCATION	FOOT
STAGE 2	
RT STA 149+01.71 TO LT STA 149+76.61	12:1 TAPER
LT STA 149+76.61 TO LT STA 151+26.61	TANGENT
LT STA 151+26.61 TO RT STA 152+01.50	12:1 TAPER
TOTAL	300

IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3

LOCATION	EACH
STAGE 1	
LT STA 148+02.06	1
LT STA 153+01.16	1
TOTAL	2

IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3

LOCATION	EACH
STAGE 2	
RT STA 149+01.71	1
RT STA 152+01.50	1
TOTAL	2

PAINT PAVEMENT MARKING - LINE 4"

LOCATION	COLOR	FOOT
EDGE LINES		
LT STA 146+14.13 TO STA 154+89.12	SOLID WHITE	875
RT STA 146+14.13 TO STA 154+89.12	SOLID WHITE	875
CENTERLINE		
STA 146+14.13 TO STA 154+89.12	YELLOW SKIP DASH	220
TOTAL		1,970

STEEL PLATE BEAM GUARDRAIL TYPE A

LOCATION	FOOT
LT STA 149+51.75 TO STA 149+76.75	25
LT STA 151+12.55 TO STA 152+00.05	87.5
RT STA 148+99.95 TO STA 149+87.45	87.5
RT STA 151+23.25 TO STA 151+48.25	25
TOTAL	225

TRAFFIC BARRIER TERMINAL TYPE 6A

LOCATION	EACH
LT STA 149+76.75 TO STA 150+20.50	1
LT STA 150+68.80 TO STA 151+12.55	1
RT STA 149+87.45 TO STA 150+31.20	1
LT STA 150+79.50 TO STA 151+23.25	1
TOTAL	4

TRAFFIC BARRIER TERMINAL TYPE 1 SPECIAL (TANGENT)

LOCATION	EACH
LT STA 149+01.75 TO STA 149+51.75	1
LT STA 152+00.05 TO STA 152+50.05	1
RT STA 148+49.95 TO STA 148+99.95	1
RT STA 151+48.25 TO STA 151+98.25	1
TOTAL	4

AGGREGATE SURFACE COURSE TYPE B

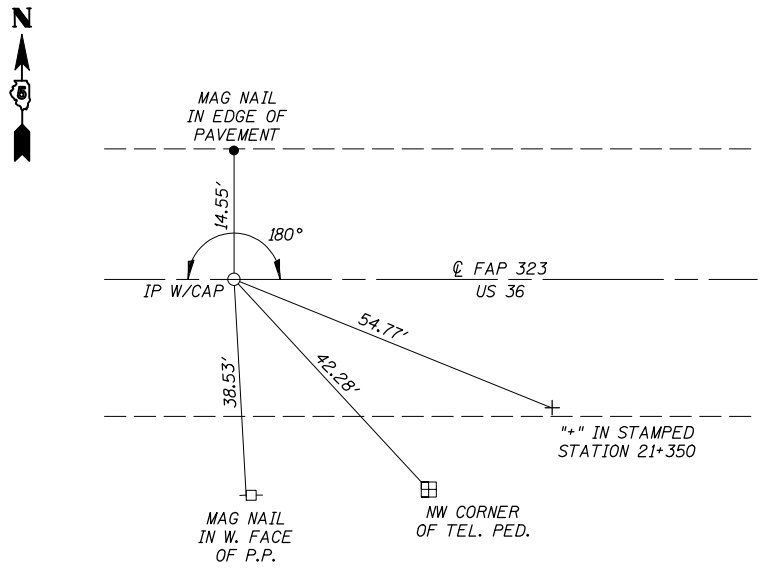
LOCATION	TON
RT STA 148+20	15
TOTAL	15

TERMINAL MARKER-DIRECT APPLIED

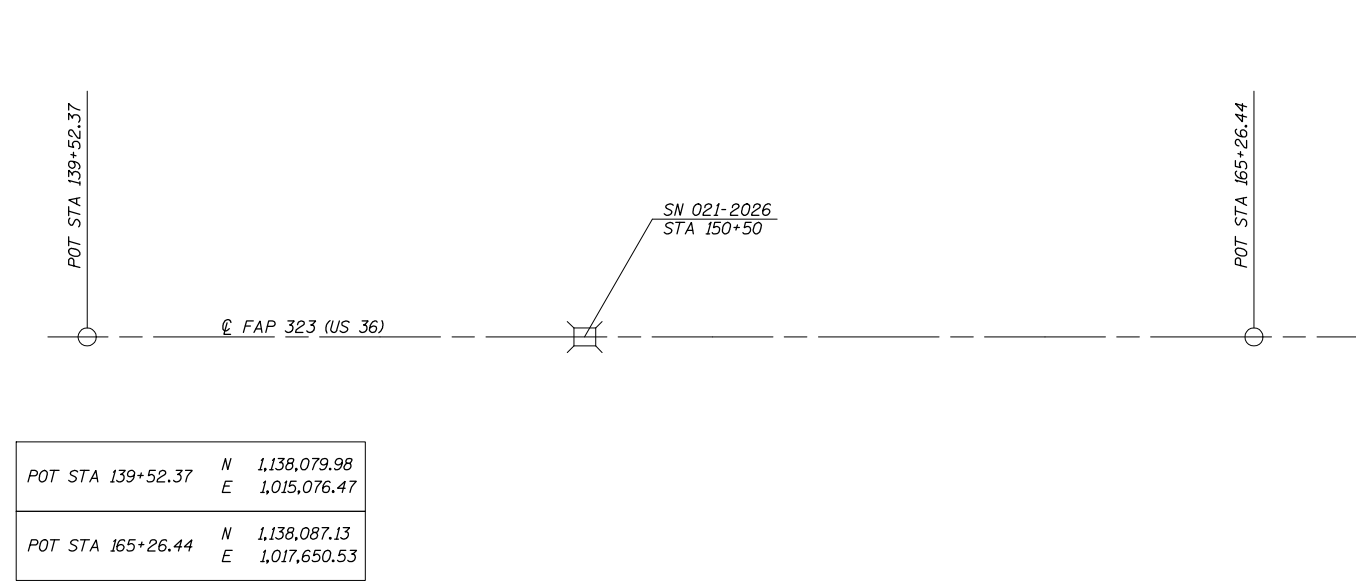
LOCATION	EACH
LT STA 149+01.75	1
LT STA 152+50.05	1
RT STA 148+49.95	1
RT STA 151+98.25	1
TOTAL	

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
323	145BR-1	DOUGLAS	39	11
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				
CONTRACT NO. 70393				

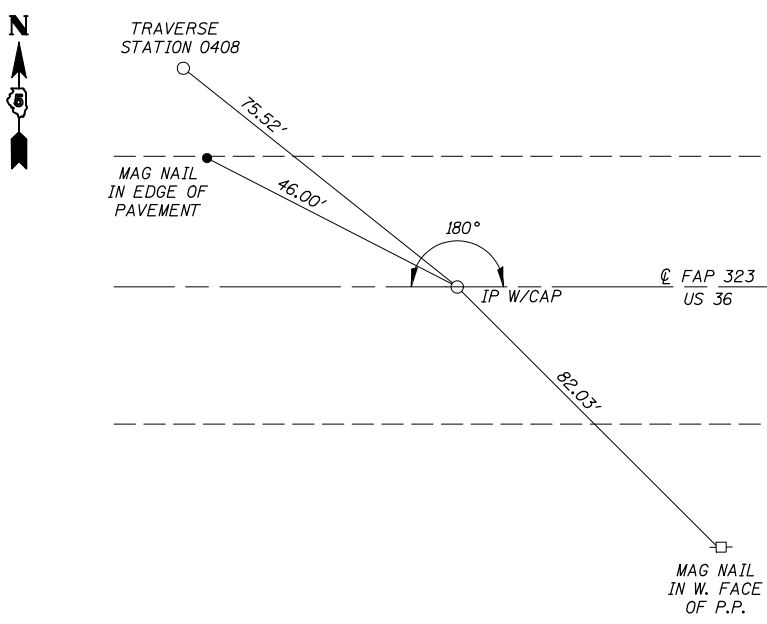
**POT STA. 139+52.37
IRON PIN (W/CAP)**



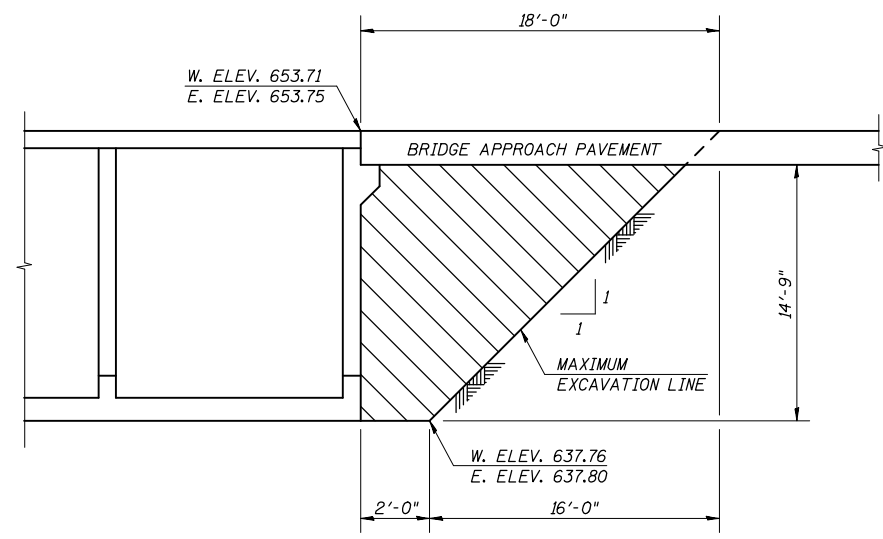
ALIGNMENT LAYOUT



**POT STA. 165+26.44
IRON PIN (W/CAP)**



**DETAIL OF POROUS GRANULAR BACKFILL
AT STRUCTURE NO. 021-2026
STATION 150+50**



 PAY LIMITS OF POROUS GRANULAR BACKFILL - CA 6

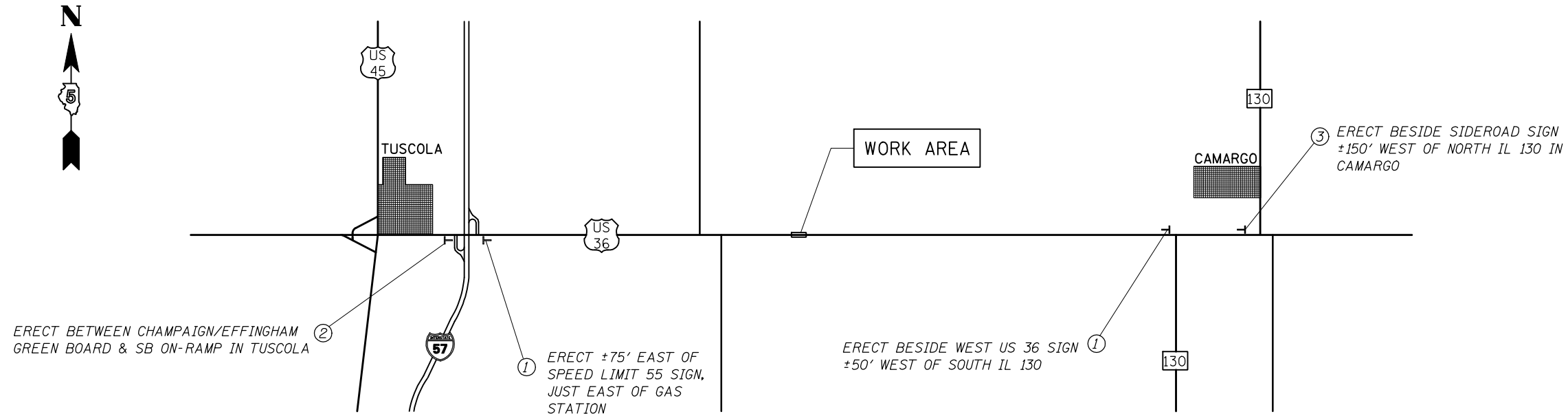
NOTES: POROUS GRANULAR BACKFILL SHALL EXTEND 1'-4" OUTSIDE OF THE EDGE OF THE BRIDGE APPROACH PAVEMENT. DIMENSIONS SHOWN ARE AT RIGHT ANGLES.

**ALIGNMENT, CROSS TIES
POROUS GRANULAR BACKFILL**
FAP ROUTE 323 (US 36)
SECTION 145 BR-1
DOUGLAS COUNTY

CUMMINS ENGINEERING CORPORATION
JOB #: 2114.6
FILE: 21146XTIES.DGN
DATE: 5/2/07

WIDTH RESTRICTION SIGNING DETAIL

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
323	145BR-1	DOUGLAS	39	12
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				
CONTRACT NO. 70393				

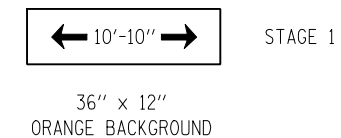


LEGEND

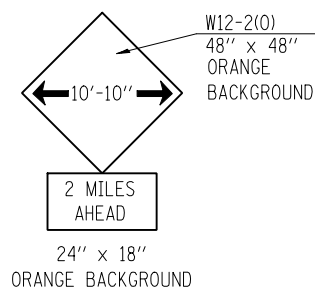
① POST MOUNTED SIGNS WITH PANEL DESIGNATION

GENERAL NOTES:

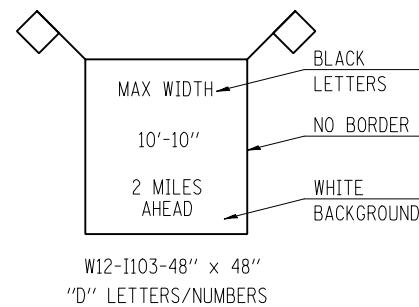
1.) UNDER "ONE LANE ROAD AHEAD" SIGNS FOR STD. 701321 SETUP ADD THE FOLLOWING:



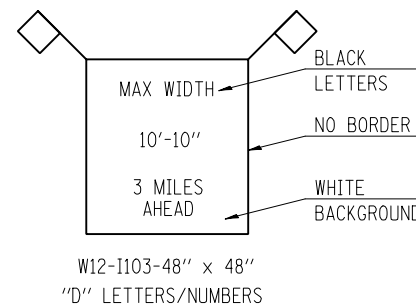
- 2.) ALL TRAFFIC CONTROL DEVICES SHALL BE FURNISHED, ERECTED AND MAINTAINED BY THE CONTRACTOR.
- 3.) SIGNS 2 AND 3 SHALL HAVE FLAGS INSTALLED UNLESS OTHERWISE DIRECTED.
- 4.) LOCATIONS OF TRAFFIC CONTROL DEVICES MAY BE ADJUSTED BY THE ENGINEER.
- 5.) ALL TRAFFIC CONTROL SHOWN ON THIS SHEET SHALL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR WIDTH RESTRICTION SIGNING.
- 6.) THE ILLINOIS DEPARTMENT OF TRANSPORTATION WILL SUPPLY ALL "ROUTE MARKER" SIGNS, IF APPLICABLE. THE CONTRACTOR SHALL NOTIFY THE DISTRICT BUREAU OF OPERATIONS A MINIMUM OF 10 WORKING DAYS PRIOR TO PLACEMENT OF WIDTH RESTRICTION SIGNING TO ENSURE AVAILABILITY OR FABRICATION OF THE "ROUTE MARKER" SIGNS.
- 7.) ALL SIGNS SHALL BE POST MOUNTED UNLESS OTHERWISE DIRECTED.
- 8.) ALL SIGNS SHOWN ORANGE SHALL BE FLUORESCENT ORANGE.
- 9.) WIDTH RESTRICTION SIGNING IS REQUIRED FOR STAGE 1 ONLY.
- 10.) SIGNS 2 AND 3 SHALL BE INSTALLED AT THE FOLLOWING MINIMUM HEIGHTS
RURAL 5'-0" (1.52 m) (MIN.)
URBAN 7'-0" (2.13 m) (MIN.)



SIGN PANEL ①



SIGN PANEL ②

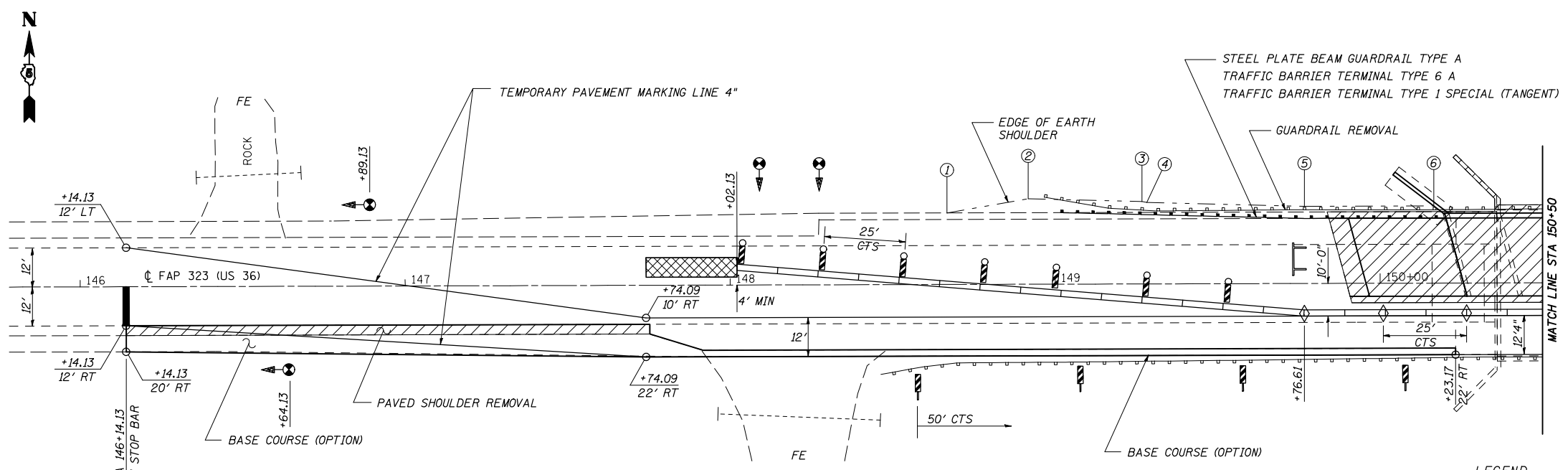


SIGN PANEL ③

WIDTH RESTRICTION SIGNING DETAIL

FAP ROUTE 323 (US 36)
SECTION 145BR-1
DOUGLAS COUNTY

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
323	145BR-1	DOUGLAS	39	13
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 70393				



- PRELIMINARY PHASE**
- REMOVE EXISTING PAVED SHOULDER RT STA 146+14.13 TO RT STA 147+75.24 AND RT STA 152+92.58 TO RT STA 154+89.12
 - CONSTRUCT BASE COURSE (OPTION) RT STA 146+14.13 TO STA 150+23.17 AND RT STA 150+90.08 TO STA 154+89.12
 - INSTALL TEMPORARY SIGNALS AND TRAFFIC CONTROL DEVICES
- STAGE 1**
- INSTALL TEMPORARY CONCRETE BARRIER AND IMPACT ATTENUATORS
 - REMOVE EXISTING PAVEMENT MARKINGS AND INSTALL TEMPORARY PAVEMENT MARKINGS
 - REMOVE GUARDRAIL, TERMINALS, & BRIDGE RAIL
 - REMOVE PAVEMENT, APPROACH SLAB, PAVED SHOULDER
 - REMOVE STRUCTURE
 - CONSTRUCT STRUCTURE
 - PLACE POROUS GRANULAR BACKFILL
 - CONSTRUCT APPROACH PAVEMENT AND CONNECTOR
 - WIDEN EARTH SHOULDERS
 - INSTALL BRIDGE RAIL, GUARDRAIL, AND TERMINALS
 - CONSTRUCT TEMPORARY RAMPS

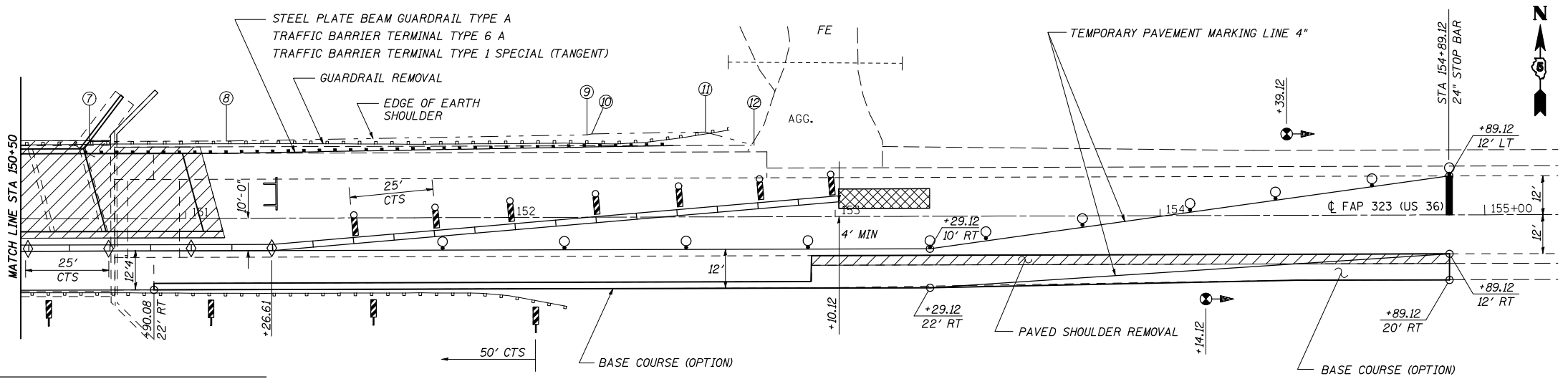
LEGEND

	TEMPORARY TRAFFIC SIGNALS		STEADY BURNING LIGHTS AND DOUBLE VERTICAL PANEL
	TEMPORARY IMPACT ATTENUATOR NON-DIRECTIVE TEST LEVEL 2		DOUBLE VERTICAL PANEL
	TEMPORARY CONCRETE BARRIER		TYPE C BIDIRECTIONAL REFLECTOR
	DRUM WITH STEADY BURNING LIGHT		INDICATES REMOVAL AREAS
	TYPE III BARRICADE		

SEE STANDARD 701321 FOR DETAILS NOT SHOWN
RUMBLE STRIPS WILL NOT BE REQUIRED

LEFT SHOULDER LAYOUT

POINT NO	STA	OFFSET
1	148+66.75	22.00
2	148+91.75	26.30
3	149+26.75	25.35
4	149+28.25	25.05
5	149+76.75	23.75
6	150+16.55	23.75
7	150+70.35	23.75
8	151+12.55	23.75
9	152+23.55	23.35
10	125+25.05	25.65
11	152+60.05	26.15
12	152+74.30	22.20



TEMPORARY PAVEMENT MARKING-LINE 4"

LOCATION	LINE TYPE & COLOR	TEMPORARY PAVEMENT MARKINGS	WORKZONE PAVEMENT MARKING REMOVAL	
		FOOT	SQ FT	
12' LT STA 146+14.13 TO	10' RT STA 147+74.09	SOLID WHITE EDGE LINE	162	54
10' RT STA 147+74.09 TO	10' RT STA 153+29.12	SOLID WHITE EDGE LINE	555	185
10' RT STA 153+29.12 TO	12' LT STA 154+89.12	SOLID WHITE EDGE LINE	162	54
12' RT STA 146+14.13 TO	22' RT STA 147+74.09	SOLID WHITE EDGE LINE	160	53
22' RT STA 147+74.09 TO	22' RT STA 153+29.12	SOLID WHITE EDGE LINE	555	185
22' RT STA 153+29.12 TO	12' RT STA 154+89.12	SOLID WHITE EDGE LINE	160	53
TOTAL			1,754	584

QUANTITIES FOR PLACEMENT AND REMOVAL OF TEMPORARY PAVEMENT MARKINGS ARE INCLUDED FOR INFORMATION ONLY. PLACING, MAINTAINING, AND REMOVING TEMPORARY PAVEMENT MARKINGS WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST FOR TRAFFIC CONTROL AND PROTECTION STANDARD 701321

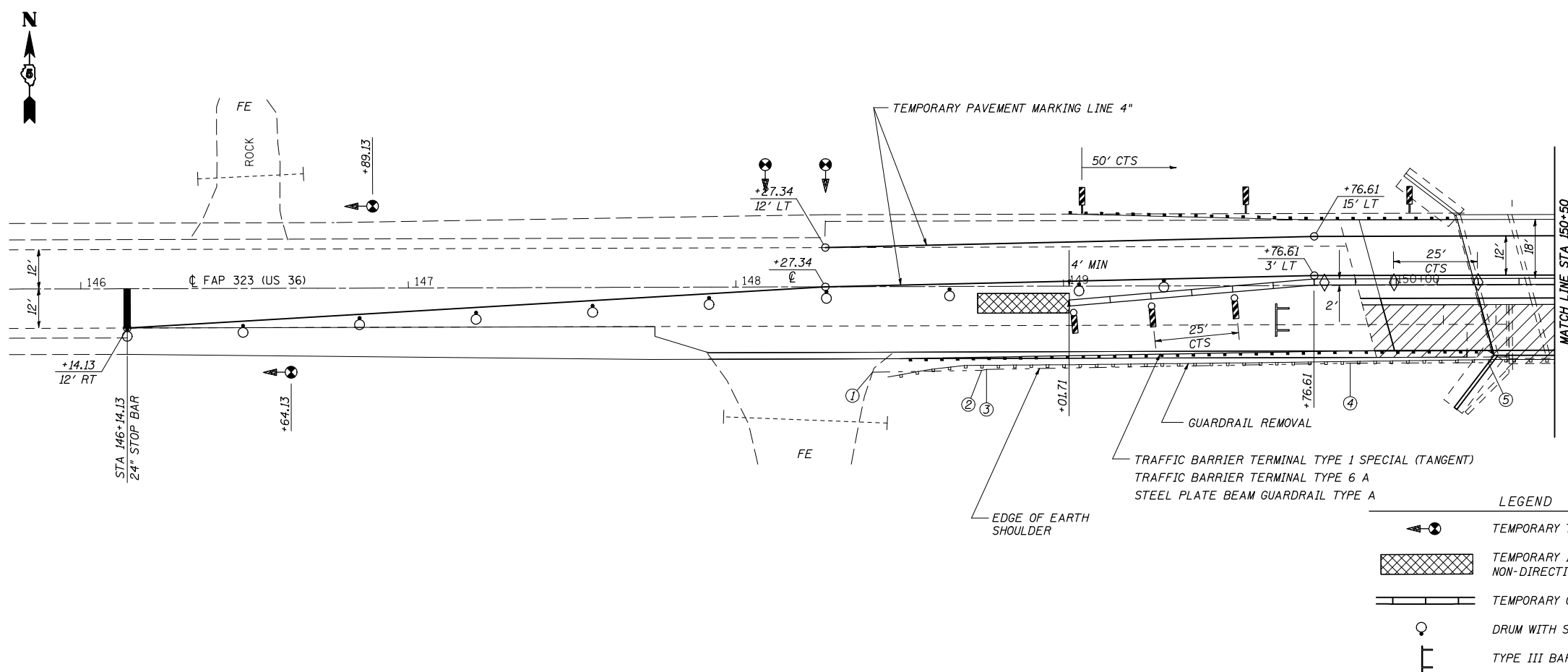
MATERIAL FOR TEMPORARY PAVEMENT MARKINGS SHALL BE AS SPECIFIED IN ARTICLE 703.05 OF THE STANDARD SPECIFICATIONS.

**TRAFFIC CONTROL & PROTECTION
STAGE 1**

**FAP ROUTE 323 (US 36)
SECTION 145BR-1
DOUGLAS COUNTY**

CUMMINS ENGINEERING CORPORATION	JOB #: 2114.6 FILE: 21146STAGE1 DATE: 5/2/07
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
323	145BR-1	DOUGLAS	39	14
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 70393				



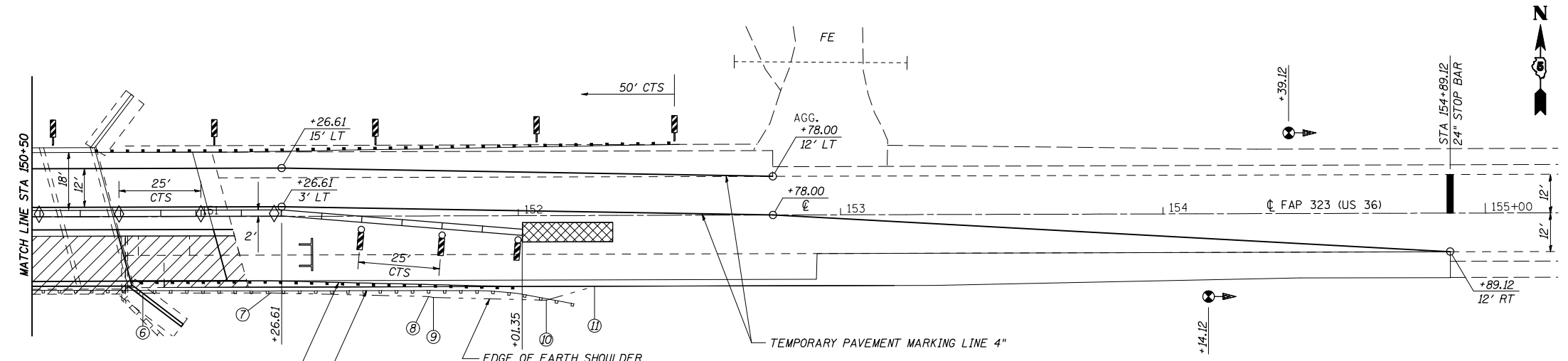
- STAGE 2**
1. RELOCATE TEMPORARY CONCRETE BARRIER AND IMPACT ATTENUATORS
 2. REMOVE EXISTING PAVEMENT MARKINGS, STAGE 1 TEMPORARY PAVEMENT MARKINGS, AND INSTALL TEMPORARY PAVEMENT MARKINGS
 3. REMOVE GUARDRAIL, TERMINALS, AND BRIDGE RAIL
 4. REMOVE PAVEMENT, APPROACH SLAB, AND PAVED SHOULDER
 5. REMOVE STRUCTURE
 6. CONSTRUCT STRUCTURE
 7. PLACE POROUS GRANULAR BACKFILL
 8. CONSTRUCT APPROACH PAVEMENT AND CONNECTOR
 9. WIDEN EARTH SHOULDER
 10. INSTALL BRIDGE RAIL, GUARDRAIL, AND TERMINALS
 11. CONSTRUCT TEMPORARY RAMPS
- FINAL PHASE**
1. REMOVE TEMPORARY CONCRETE BARRIER, IMPACT ATTENUATORS, AND TEMPORARY SIGNALS
 2. REMOVE STAGE 2 TEMPORARY PAVEMENT MARKINGS; INSTALL SHORT TERM PAVEMENT MARKINGS
 3. MILL BUTT JOINTS AND INSTALL TEMPORARY RAMPS
 4. PLACE HMA SURFACE AND SHOULDER
 5. CONSTRUCT AGGREGATE SHOULDER
 6. BRIDGE DECK GROOVING AND PAVEMENT GROOVING
 7. REMOVE SHORT TERM PAVEMENT MARKINGS AND PLACE PAVEMENT MARKINGS
 8. INSTALL RAISED MARKERS, GUARDRAIL MARKERS, AND TERMINAL MARKERS

LEGEND

	TEMPORARY TRAFFIC SIGNALS		STEADY BURNING LIGHTS AND DOUBLE VERTICAL PANEL
	TEMPORARY IMPACT ATTENUATOR NON-DIRECTIVE TEST LEVEL 2		DOUBLE VERTICAL PANEL
	TEMPORARY CONCRETE BARRIER		TYPE C BIDIRECTIONAL REFLECTOR
	DRUM WITH STEADY BURNING LIGHT		INDICATES REMOVAL AREAS
	TYPE III BARRICADE	SEE STANDARD 701321 FOR DETAILS NOT SHOWN RUMBLE STRIPS WILL NOT BE REQUIRED	

RIGHT SHOULDER LAYOUT

POINT NO	STA	OFFSET
1	148+41.60	26.10
2	148+74.95	25.65
3	148+76.45	25.35
4	149+87.45	23.75
5	150+29.65	23.75
6	150+83.45	23.75
7	151+23.25	23.75
8	151+71.75	25.05
9	151+73.25	25.35
10	152+08.25	26.25
11	152+23.60	22.00



TEMPORARY PAVEMENT MARKING-LINE 4"

LOCATION	LINE TYPE & COLOR	TEMPORARY PAVEMENT MARKINGS	WORKZONE PAVEMENT MARKING REMOVAL
		FOOT	SQ. FT.
12' LT STA 148+27.34 TO 15' LT STA 149+76.61	SOLID WHITE EDGE LINE	149	50
15' LT STA 149+76.61 TO 15' LT STA 151+26.61	SOLID WHITE EDGE LINE	150	50
15' LT STA 151+26.61 TO 12' LT STA 152+78.00	SOLID WHITE EDGE LINE	151	50
12' RT STA 146+14.13 TO @ STA 148+27.34	SOLID WHITE EDGE LINE	213	71
@ STA 148+27.34 TO 3' LT STA 149+76.61	SOLID WHITE EDGE LINE	150	50
3' LT STA 149+76.61 TO 3' LT STA 151+26.61	SOLID WHITE EDGE LINE	150	50
3' LT STA 151+26.61 TO @ STA 152+78.00	SOLID WHITE EDGE LINE	151	50
@ STA 152+78.00 TO 12' RT STA 154+89.08	SOLID WHITE EDGE LINE	211	70
TOTAL		1,325	441

QUANTITIES FOR PLACEMENT AND REMOVAL OF TEMPORARY PAVEMENT MARKINGS ARE INCLUDED FOR INFORMATION ONLY. PLACING, MAINTAINING, AND REMOVING TEMPORARY PAVEMENT MARKINGS WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST FOR TRAFFIC CONTROL AND PROTECTION STANDARD 701321

MATERIAL FOR TEMPORARY PAVEMENT MARKINGS SHALL BE AS SPECIFIED IN ARTICLE 703.05 OF THE STANDARD SPECIFICATIONS.

**TRAFFIC CONTROL & PROTECTION
STAGE 2**

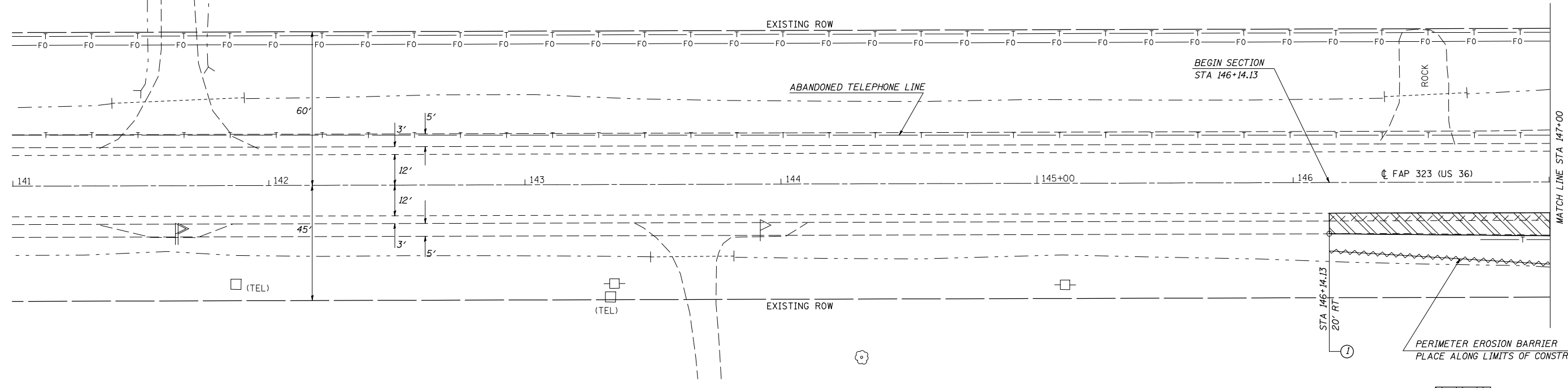
**FAP ROUTE 323 (US 36)
SECTION 145BR-1
DOUGLAS COUNTY**

CUMMINS ENGINEERING CORPORATION	JOB #: 2114.6
	FILE: 21146STAGE2
	DATE: 4/3/07

SEC 31, T16N, R9E, 3rd PM

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
323	145BR-1	DOUGLAS	39	15
STA. 141+00		TO STA. 147+00		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 70393				

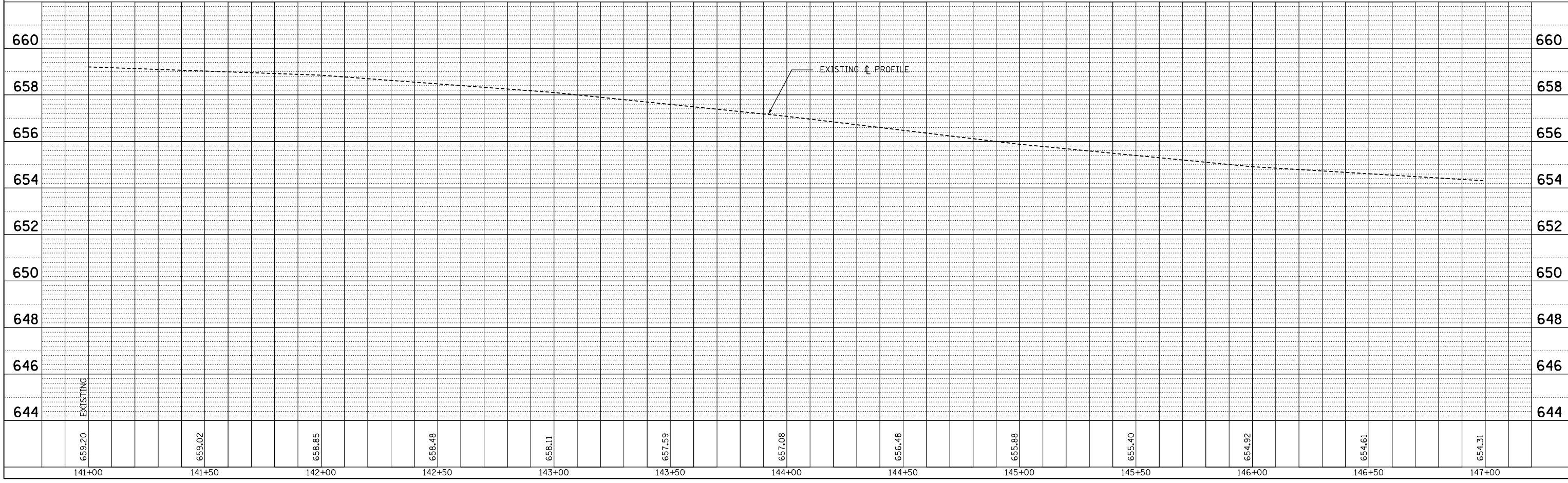
PLAN	SURVEYED	BY	DATE
NO.			
	PLOTTED		
	CHKD BY		
	DATE		



- BASE COURSE OPTION
- PAVED SHOULDER REMOVAL

SEC 5, T15N, R9E, 3rd PM

PROFILE	SURVEYED	BY	DATE
NO.			
	PLOTTED		
	CHKD BY		
	DATE		



F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
323	145BR-1	DOUGLAS	39	16
STA.	147+00	TO STA.	153+00	
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

CONTRACT NO. 70393

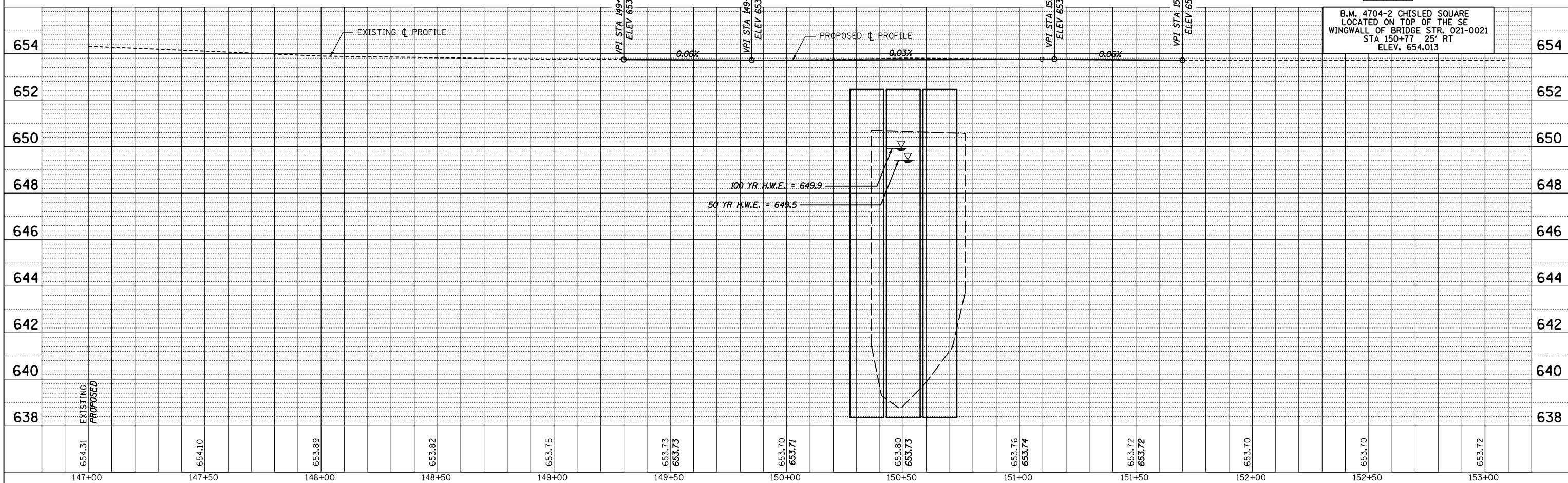
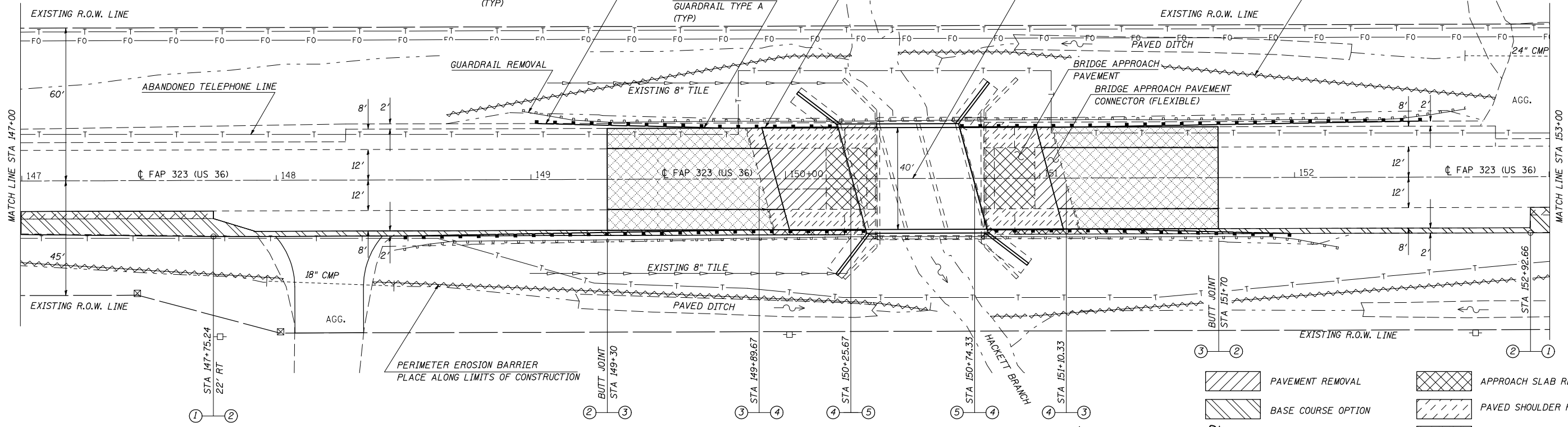
EXISTING S.N. 021-0021
 1 SPAN @ 40'-0" ON CLOSED ABUTS.
 43'-6" BK TO BK ABUTS.
 STATION 150+57, SKEW = 0°
 EXISTING STRUCTURE TO BE REMOVED

SEC 31, T16N, R9E, 3rd PM

STA 150+50 PROP. STRUCTURE NO. 021-2026
 CAST IN PLACE LIVE LOAD CULVERT
 3 @ 14' x 14.03' & VAR. - SKEW 15° RIGHT FWD.
 US INVERT ELEV. = 638.42
 DS INVERT ELEV. = 638.28

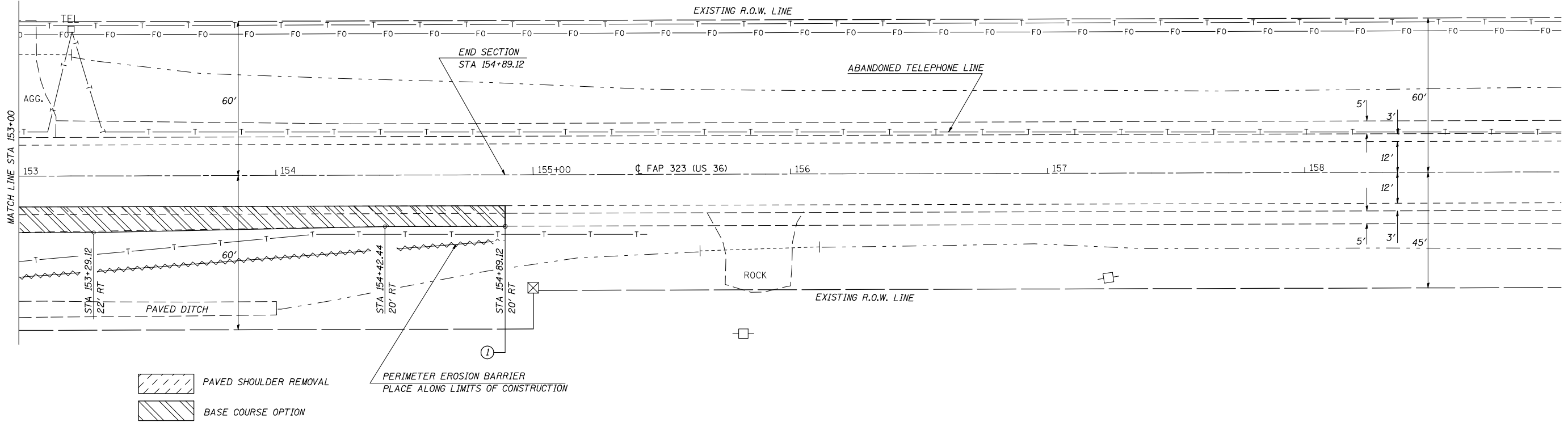
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	PLOTTED	
	CHECKED	
	BY	
	NO. OF WAY CHECKED	
	DATE FILE NAME	

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	PLOTTED	
	CHECKED	
	BY	
	NO. NOTED	
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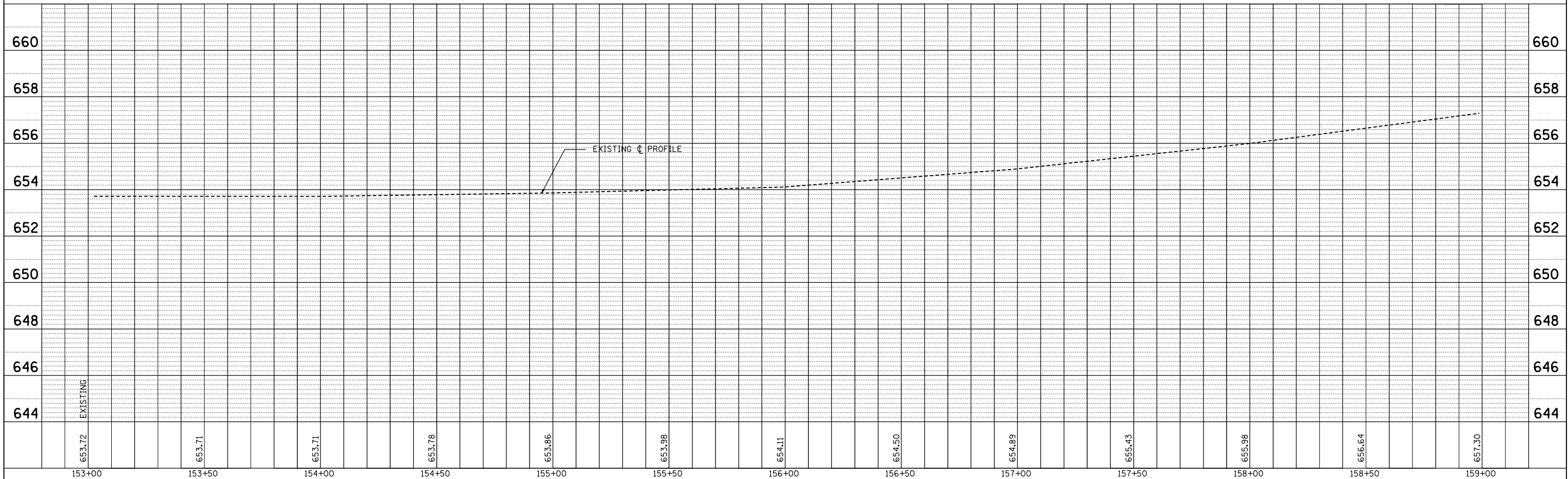


F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
323	145BR-1	DOUGLAS	39	17
STA. 153+00 TO STA. 159+00		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 70393				

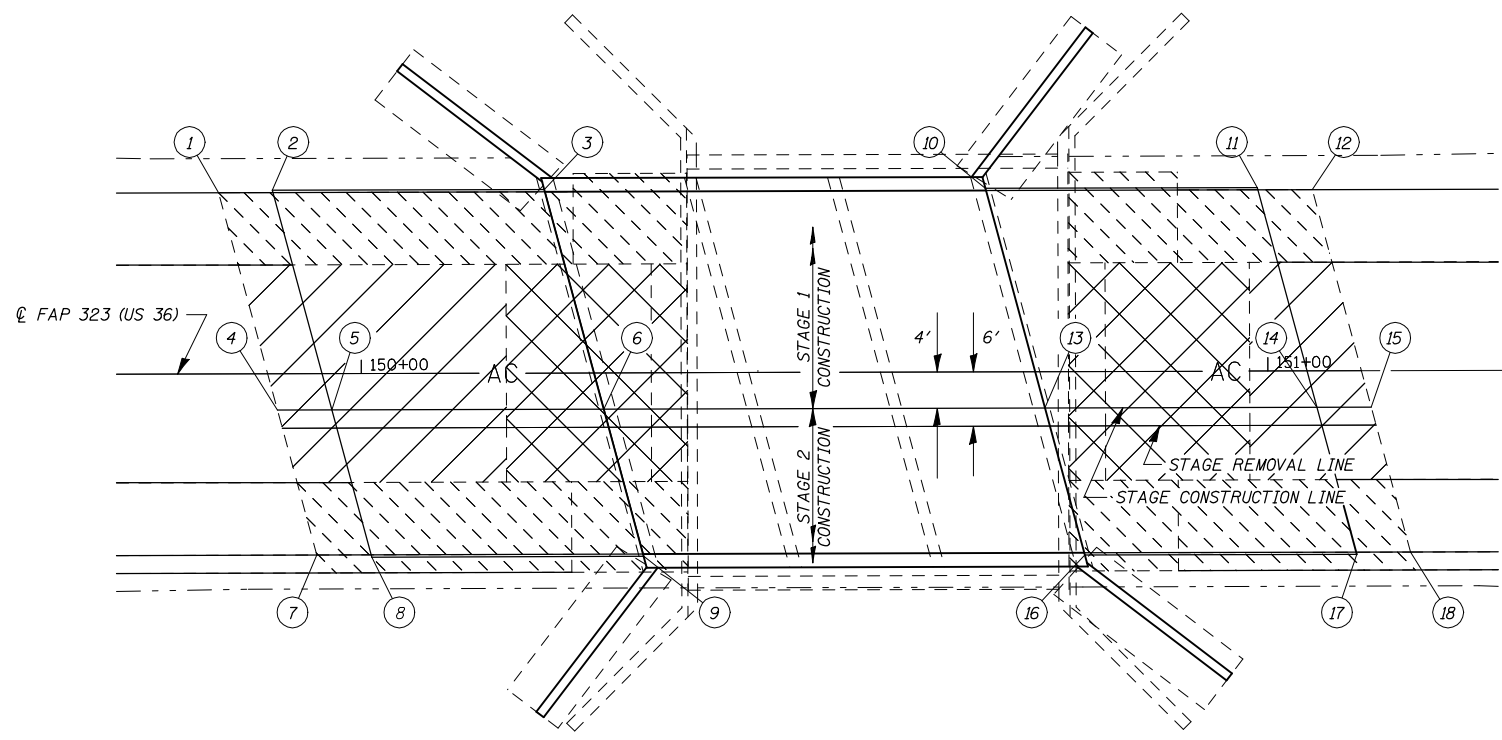
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	PLOTTED		
	NOTED		
	NO. OF WAY CHECKED		
	NO. OF PAVED FILE NAME		



PROFILE	SURVEYED	BY	DATE
	PLOTTED		
	NOTED		
	NO. OF WAY CHECKED		
	NO. OF STRUCTURE NOTATIONS CHRD		



F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
323	145BR-1	DOUGLAS	39	18
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 70393				



APPROACH AND CONNECTOR PAVEMENT LAYOUT

WEST APPROACH			EAST APPROACH		
POINT	STA	OFFSET	POINT	STA	OFFSET
1	149+84.83	-20.00	10	150+68.39	-20.25
2	149+90.76	-20.25	11	150+98.39	-20.25
3	150+20.76	-20.25	12	150+04.45	-20.00
4	149+91.26	4.00	13	150+75.88	4.00
5	149+97.26	4.00	14	151+05.88	4.00
6	150+27.26	4.00	15	151+11.88	4.00
7	149+95.55	20.00	16	150+79.24	20.25
8	150+01.61	20.25	17	151+09.24	20.25
9	150+31.61	20.25	18	151+15.17	20.00

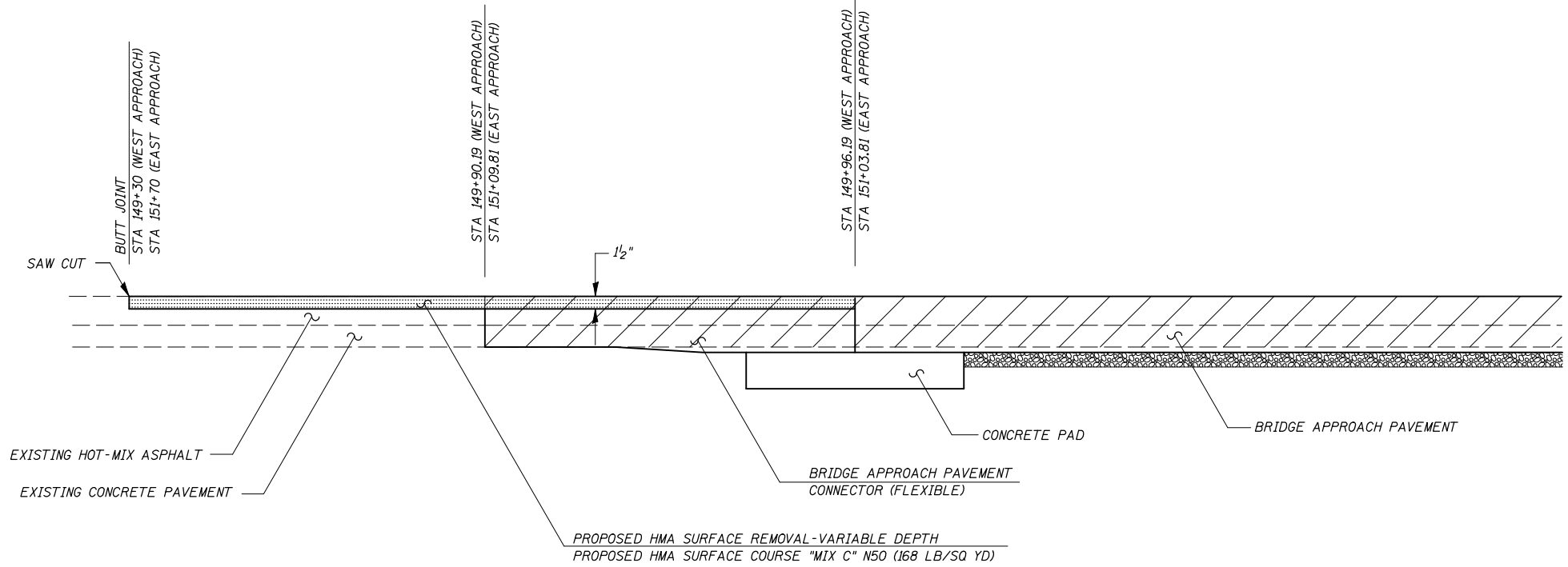
SEE DETAIL OF BRIDGE APPROACH PAVEMENT FOR INFORMATION NOT SHOWN.

HOT-MIX ASPHALT SURFACE REMOVAL VARIABLE DEPTH

LOCATION	REMOVAL DEPTH (FOOT)				
	LEFT SHOULDER	LEFT EDGE OF PAVEMENT	CENTERLINE	RIGHT EDGE OF PAVEMENT	RIGHT SHOULDER
149+30.00	-0.12	-0.12	-0.12	-0.12	-0.12
149+50.00	-0.16	-0.13	-0.10	-0.10	-0.12
149+96.19	-0.11	-0.11	-0.11	-0.15	-0.12
151+03.81	-0.15	-0.14	-0.13	-0.19	-0.14
151+50.00	-0.19	-0.13	-0.10	-0.15	-0.12
151+70.00	-0.12	-0.12	-0.12	-0.12	-0.12

CONSTRUCT TEMPORARY RAMPS IN STAGE 1 AND 2 ON CONNECTOR PAVEMENT. (SEE SCHEDULE)

HOT-MIX ASPHALT SURFACE REMOVAL VARIABLE DEPTH SHALL INCLUDE CONSTRUCTION OF BUTT JOINTS (SEE SPECIAL PROVISIONS)



- PAVED SHOULDER REMOVAL
- PAVEMENT REMOVAL
- APPROACH SLAB REMOVAL

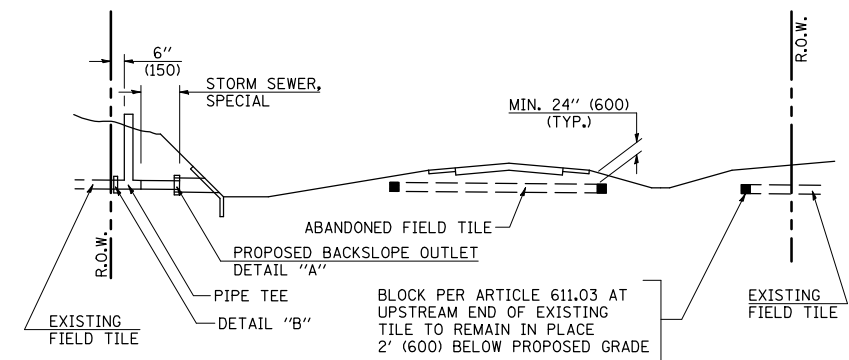
SECTION THROUGH APPROACH ROADWAY

**BRIDGE APPROACH PAVEMENT
BUTT JOINT DETAIL**

FAP ROUTE 323 (US 36)
SECTION 145BR-1
DOUGLAS COUNTY

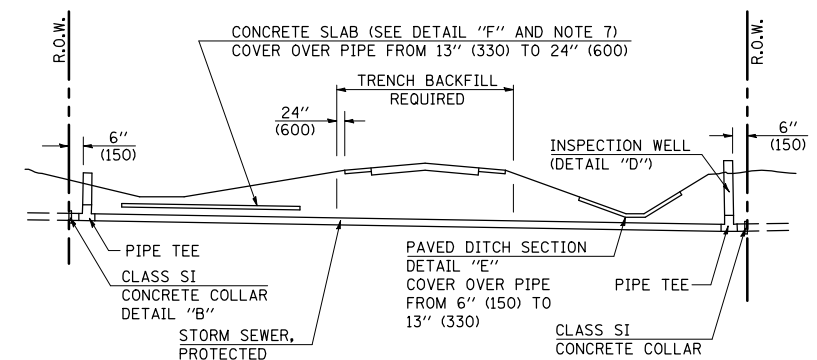
CUMMINS ENGINEERING CORPORATION	JOB #: 2114.6
	FILE: 21146APPR
	DATE: 4/3/07

CONTRACT NO. 70393



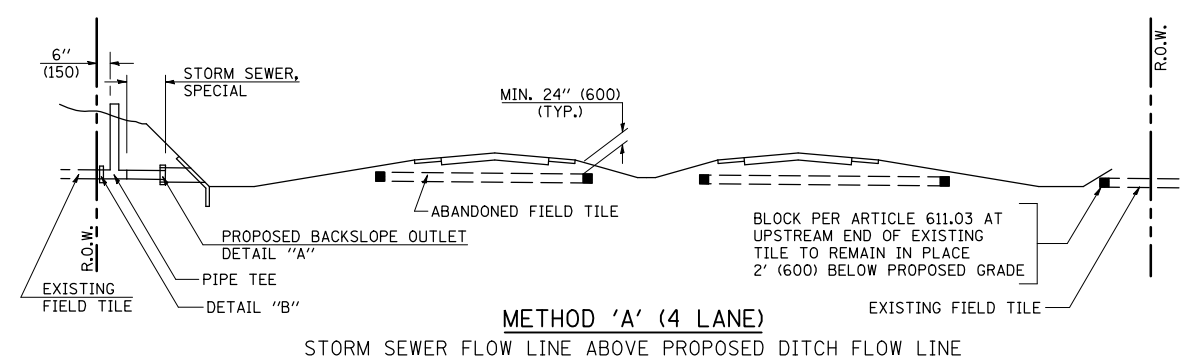
METHOD 'A' (2 LANE)

STORM SEWER FLOW LINE ABOVE PROPOSED DITCH FLOW LINE



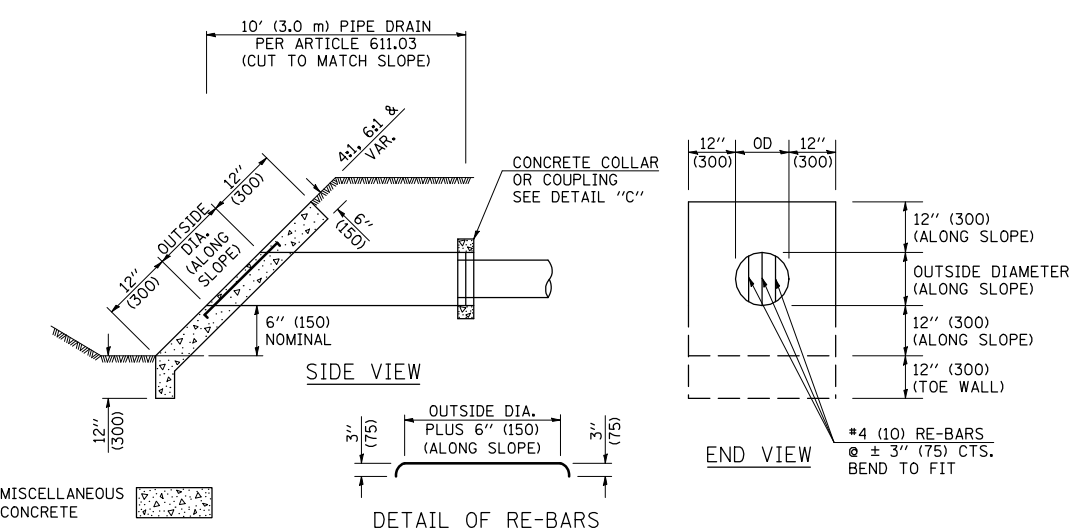
METHOD 'B' (2 LANE)

STORM SEWER LESS THAN 2' (600 mm) BELOW DITCH FLOW LINE AND STORM SEWERS CROSSING UNDER PAVEMENT AND PAVED DITCH

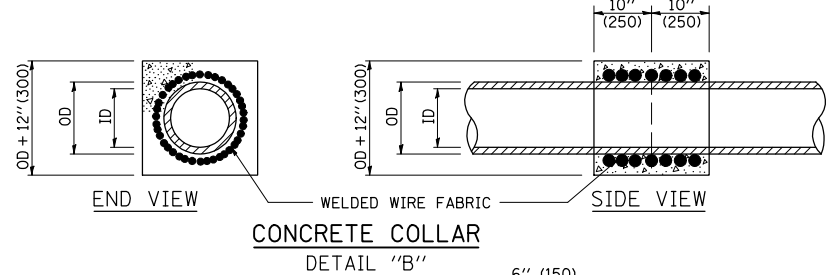


METHOD 'A' (4 LANE)

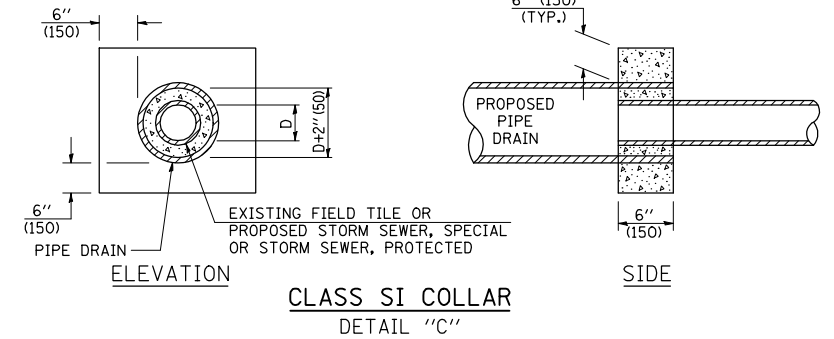
STORM SEWER FLOW LINE ABOVE PROPOSED DITCH FLOW LINE



HEADWALL FOR BACKSLOPE OUTLET
DETAIL "A"



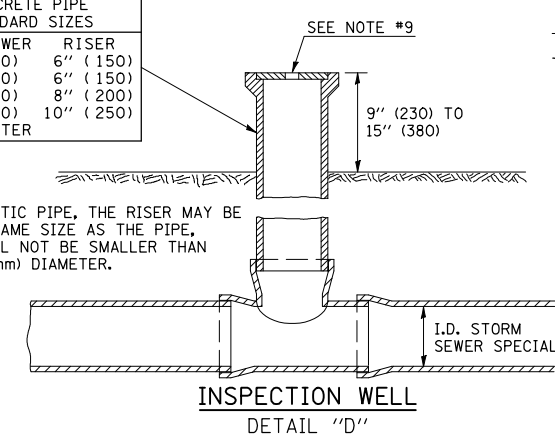
CONCRETE COLLAR
DETAIL "B"



CLASS SI COLLAR
DETAIL "C"

CONCRETE PIPE STANDARD SIZES	
STORM SEWER	RISER
6" (150)	6" (150)
8" (200)	6" (150)
10" (250)	8" (200)
12" (300)	10" (250)
OR GREATER	

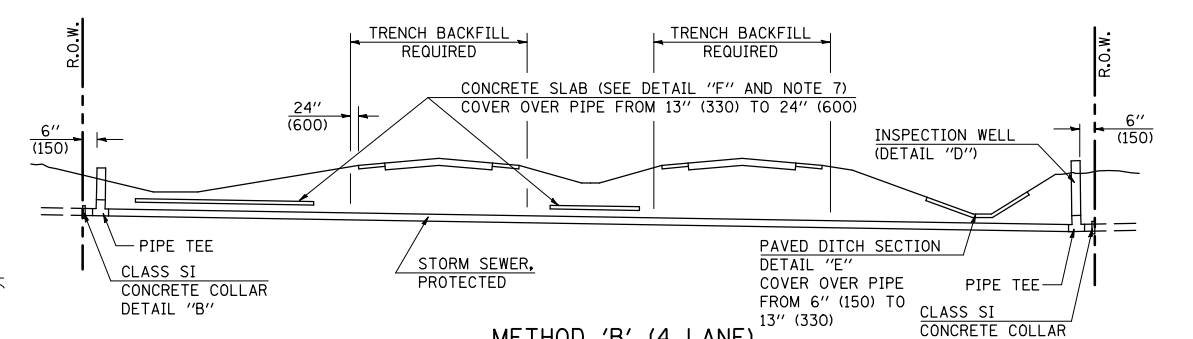
FOR PLASTIC PIPE, THE RISER MAY BE OF THE SAME SIZE AS THE PIPE, BUT SHALL NOT BE SMALLER THAN 4" (100 mm) DIAMETER.



INSPECTION WELL
DETAIL "D"

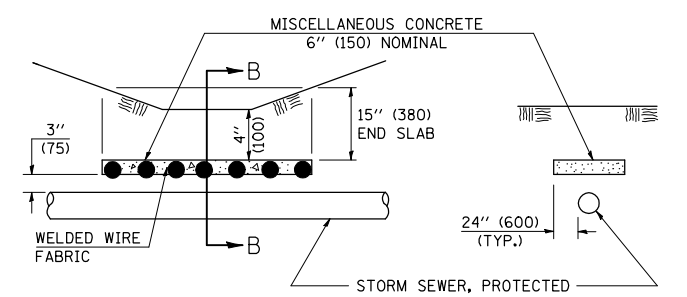
GENERAL NOTES

- EXISTING FIELD TILE ENCOUNTERED BY EXPLORATION TRENCH SHALL BE INSPECTED BY THE ENGINEER FOR UNOBSTRUCTED FLOW WITHIN THE LIMITS OF THE RIGHT-OF-WAY.
- ONLY FIELD TILE THAT DOES NOT HAVE SATISFACTORY FLOW AND OR HAS VISIBLE SIGNS OF DETERIORATION (SINK HOLES, ETC.) SHALL BE REPLACED WITHIN THE LIMITS OF THE RIGHT-OF-WAY IN ACCORDANCE WITH METHOD "B".
- INSPECTION WELLS SHALL BE CONSTRUCTED APPROXIMATELY 6" (150 mm) INSIDE OF BOTH RIGHT-OF-WAY LINES AT ALL FIELD TILE LOCATIONS.
- EXISTING FIELD TILE ABANDONED UNDER EXISTING PAVEMENTS OR PAVED SHOULDERS SHALL BE FILLED WITH FLOWABLE GROUT AS DIRECTED BY THE ENGINEER. THIS WORK WILL BE PAID FOR ACCORDING TO ARTICLE 109.04.
- NON-CIRCULAR FIELD TILE SHALL BE REPLACED WITH STORM SEWER, SPECIAL OF AT LEAST THE SAME CROSS SECTIONAL AREA. ALL EXISTING FIELD TILE SHALL BE REPLACED WITH STORM SEWER OF THE TYPE REQUIRED FOR THE MINIMUM DEPTH OF COVER.
- THE 6" (150 mm) CONCRETE SLAB OR DITCH LINING SHALL BE POURED THE LENGTH OF THE TRENCH AT ALL DITCH FLOW LINE LOCATIONS WITHIN THE RIGHT-OF-WAY WITH LESS THAN 2' (600 mm) OF EARTH COVER. MISCELLANEOUS CONCRETE SHALL BE USED ACCORDING TO SECTION 611.
- ALL MISCELLANEOUS SLABS, APRONS AND DITCH LININGS SHALL BE REINFORCED WITH WELDED WIRE FABRIC AS SHOWN FOR PAVED DITCH IN STANDARD 606401.
- HEADWALL FOR BACKSLOPE OUTLET MAY BE USED FOR PIPE DRAIN DIAMETERS UP TO 10" (250 mm). SPECIAL DESIGNS WILL BE REQUIRED FOR LARGER SIZES.
- THE INSPECTION WELL LID FOR P.C.C. PIPE SHALL BE CONSTRUCTED OF 3/8" (10 mm) CAST IRON AND PROVIDED WITH A 1" (25 mm) DIAMETER HOLE IN CENTER. THE LID FOR THE OTHER PIPE MATERIALS SHALL BE A GRATE ASSEMBLY PREFABRICATED FOR AND COMPATIBLE WITH THE PIPE SYSTEM.



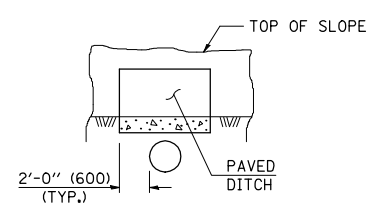
METHOD 'B' (4 LANE)

STORM SEWER LESS THAN 2' (600 mm) BELOW DITCH FLOW LINE AND STORM SEWERS CROSSING UNDER PAVEMENTS AND PAVED DITCHES



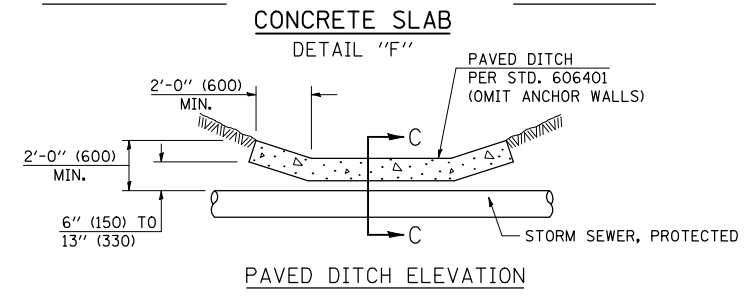
SLAB ELEVATION

SECTION B-B



SECTION C-C

PAVED DITCH
DETAIL "E"



CONCRETE SLAB
DETAIL "F"

PAVED DITCH ELEVATION

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

DATE	REVISIONS	NAME
11/06	REPLACED DETAIL A-18.02	TJB

ILLINOIS DEPARTMENT OF TRANSPORTATION
FIELD TILE SYSTEMS
(TREATMENT OF EXISTING)
DISTRICT 5 DETAIL NO. 61101011A

PLOT DATE = 10/6/2008
 FILE NAME = c:\p\projects\45923884 (v8)\consultant_f.mxd\plans\61101011a.dgn
 PLOT SCALE = 4:23625 sf / IN.
 USER NAME = stults,j

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
323	145BR-1	DOUGLAS	39	20

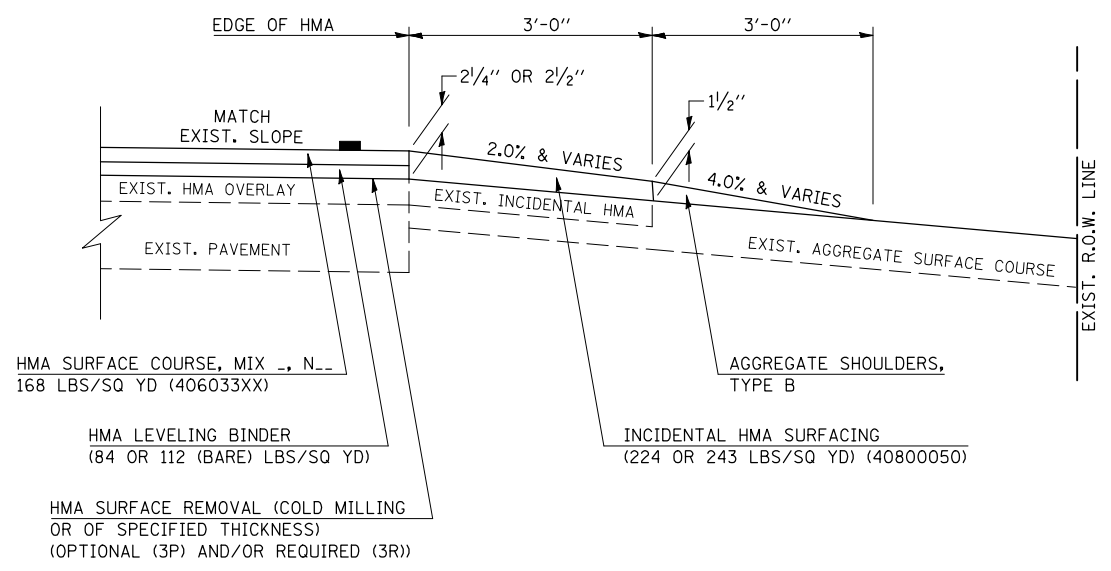
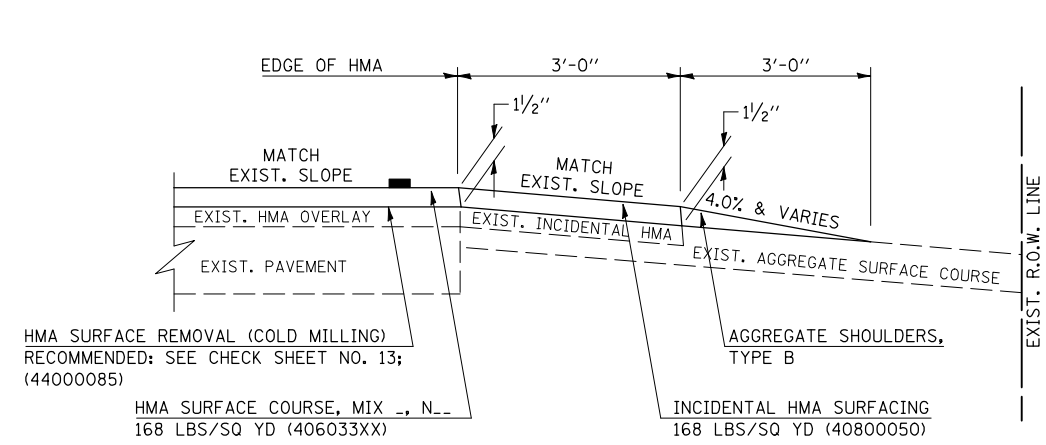
CONTRACT NO. 70393

PROJECTS WITHOUT RECONSTRUCTION

("3R" WITHOUT RECONSTRUCTION, 3P, SMART AND CM)

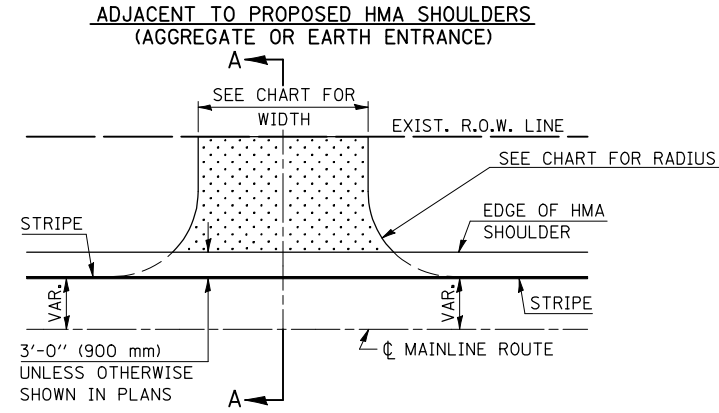
S.M.A.R.T. IMPROVEMENTS
(POLICY RESURFACING; BDE 53-4.03; 1/2")

"3P" OR "3R" IMPROVEMENTS
(POLICY RESURFACING; BDE 53-4.02; 2/4" OR 2/2" ON BARE CONCRETE)

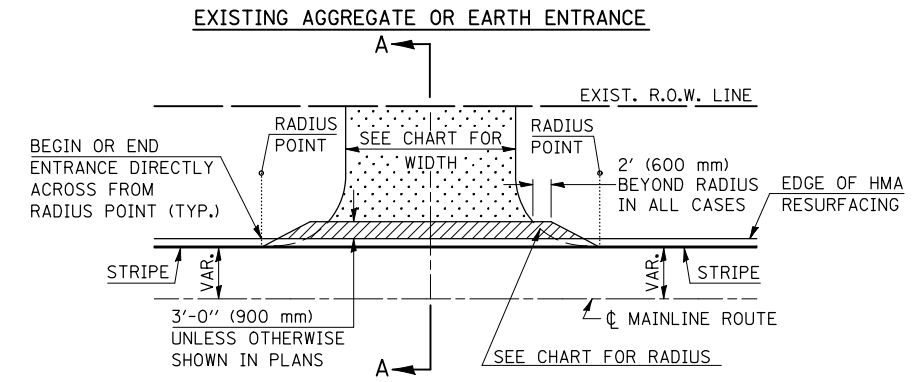


PROJECTS WITH RECONSTRUCTION

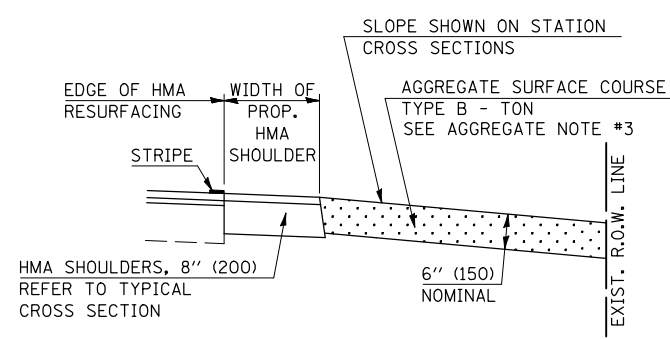
("3R" IMPROVEMENTS AND SMART/3P "SPOT" LOCATIONS)



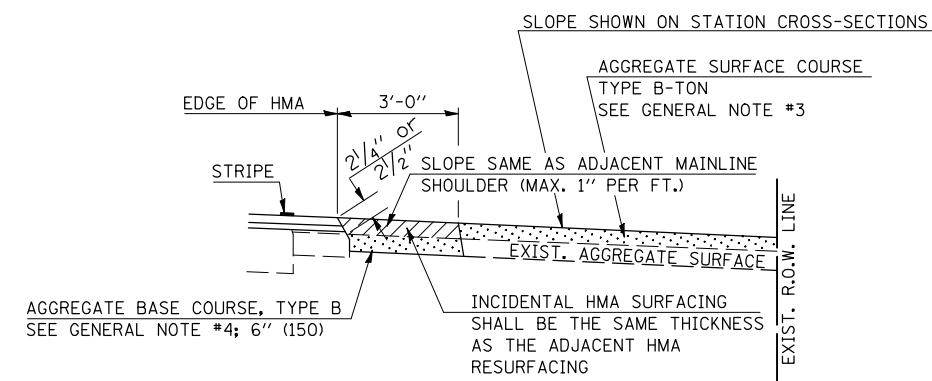
TYPICAL APPLICATION



TYPICAL APPLICATION



SECTION A-A



SECTION A-A

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

DATE	REVISIONS	NAME
12-01-06	RENUMBERED/COMBINED C-1.32 & C-1.26 WITH ADDITIONS OF S.M.A.R.T. & 3P & 3R IMPROV.	T.J.B.

ILLINOIS DEPARTMENT OF TRANSPORTATION

FIELD ENTRANCES (NONCOMMERCIAL RURAL)

DISTRICT 5 DETAIL NO. 40800050A

PLOT DATE = 10/6/2008
FILE NAME = c:\p\projects\40800050A.dgn
PLOT SCALE = 4.23625 x 1/16"
USER NAME = stults,j

GENERAL NOTES

1. THE EXISTING SURFACE SHALL BE PREPARED IN ACCORDANCE WITH SECTION 408 OF THE STANDARD SPECIFICATIONS.
2. ANY NECESSARY WORK BEHIND THE HMA SHOULDER OR THE INCIDENTAL HMA SURFACING SHALL BE AS SHOWN IN THE PLANS AND/OR AS DIRECTED BY THE ENGINEER.
3. EARTH EXCAVATION REQUIRED FOR THE CONSTRUCTION OF THE AGGREGATE SURFACE COURSE SHALL BE INCLUDED IN THE COST OF AGGREGATE SURFACE COURSE.
4. AGGREGATE BASE COURSE, TYPE B, 6" (150) MIN. SHALL BE USED WHERE IN THE OPINION OF THE ENGINEER THERE IS NOT SUFFICIENT BASE MATERIAL FOR THE PROPOSED ENTRANCES. THIS MATERIAL SHALL GENERALLY BE USED TO WIDEN ANY EXISTING RETURN OR TO CONSTRUCT NEW ENTRANCES WHERE NONE NOW EXISTS.
5. THE AGGREGATE BASE COURSE SHALL BE CONSTRUCTED 1' (0.3 m) WIDER THAN THE SURFACE DIMENSIONS AS SHOWN ABOVE.
6. EXISTING FIELD ENTRANCES OF AGGREGATE OR EARTH WITH NO HMA APRON SHALL NOT RECEIVE A NEW HMA APRON WITHOUT PROPER APPROVAL THROUGH THE BUREAU OF OPERATIONS "POLICY ON PERMITS FOR ACCESS DRIVEWAYS TO STATE HIGHWAYS".
7. TO ASSURE APPROPRIATE ACCESS POLICIES ARE FOLLOWED ALL NEW ACCESS SHALL BE APPLIED FOR THROUGH THE BUREAU OF OPERATIONS PERMIT APPLICATION PROCESS. PLAN PREPARATION MEMORANDUMS 40-09 AND 40-11 ALONG WITH DISTRICT CONSTRUCTION MEMORANDUM 03/14 DISCUSS THIS PROCEDURE.

RURAL ENTRANCE DESIGN STANDARDS (PPM 40-09)																
DESIGN ELEMENT	NEW CONSTRUCTION & 3R WITH RECONSTRUCTION						3R W/OUT RECONSTRUCTION, 3P, SMART & CM									
	NONCOMMERCIAL			FIELD W/ FARM IMPLEMENTS			COMMERCIAL			NONCOMMERCIAL			COMMERCIAL			
	PRIVATE & FIELD			FIELD W/ FARM IMPLEMENTS			COMMERCIAL			PRIVATE & FIELD			COMMERCIAL			
	min.	des.	max.	min.	max.	min.	des.	max.	min.	des.	max.	min.	des.	max.		
SURFACE WIDTH (FT)							1 LANE, 1 WAY						1 LANE, 1 WAY			
	12	16	24	24	30	14	16	24								
							2 LANE, 2 WAY						2 LANE, 2 WAY			
RADIUS (FT)	15	25	40	30		24	30	35	resurface existing configuration; existing aggregate or earth entrances shall have the continuation of aggregate shoulders placed behind them							
SHOULDER WIDTH (FT)	2	2		2		1	3									
SHOULDER SLOPE (%)	2	4	6	4		2	4	6								
ENTRANCE GRADE (%)	0	2 to 5	10 or 12	2 to 5	10 or 12	0	2 to 5	8 or 10								
SIDE SLOPE (FT)	4:1	6:1	10:1	4:1	6:1	4:1	6:1	10:1								
SURFACE TYPE																
INCIDENTAL HMA SURFACING (INCH)		2		2		3 or 4			taper from hma resurfacing thickness (2 1/2", 2 1/4" or 1 1/2") to 1/2" to minimize aggregate shoulder							
AGGREGATE SURFACE COURSE, TYPE A (INCH)		6		6		8			if applicable use items: Preparation of Base & Aggregate Base Repair; see PPM 30-02							
PCC DRIVEWAY PAVEMENT (INCH)		6						6 or 8								

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

DATE	REVISIONS	NAME
12-01-06	RENUMBERED/COMBINED C-1.32 & C-1.26 WITH ADDITIONS OF S.M.A.R.T. & 3P & 3R IMPROV.	T.J.B.

ILLINOIS DEPARTMENT OF TRANSPORTATION

**FIELD ENTRANCES
(NONCOMMERCIAL RURAL)**

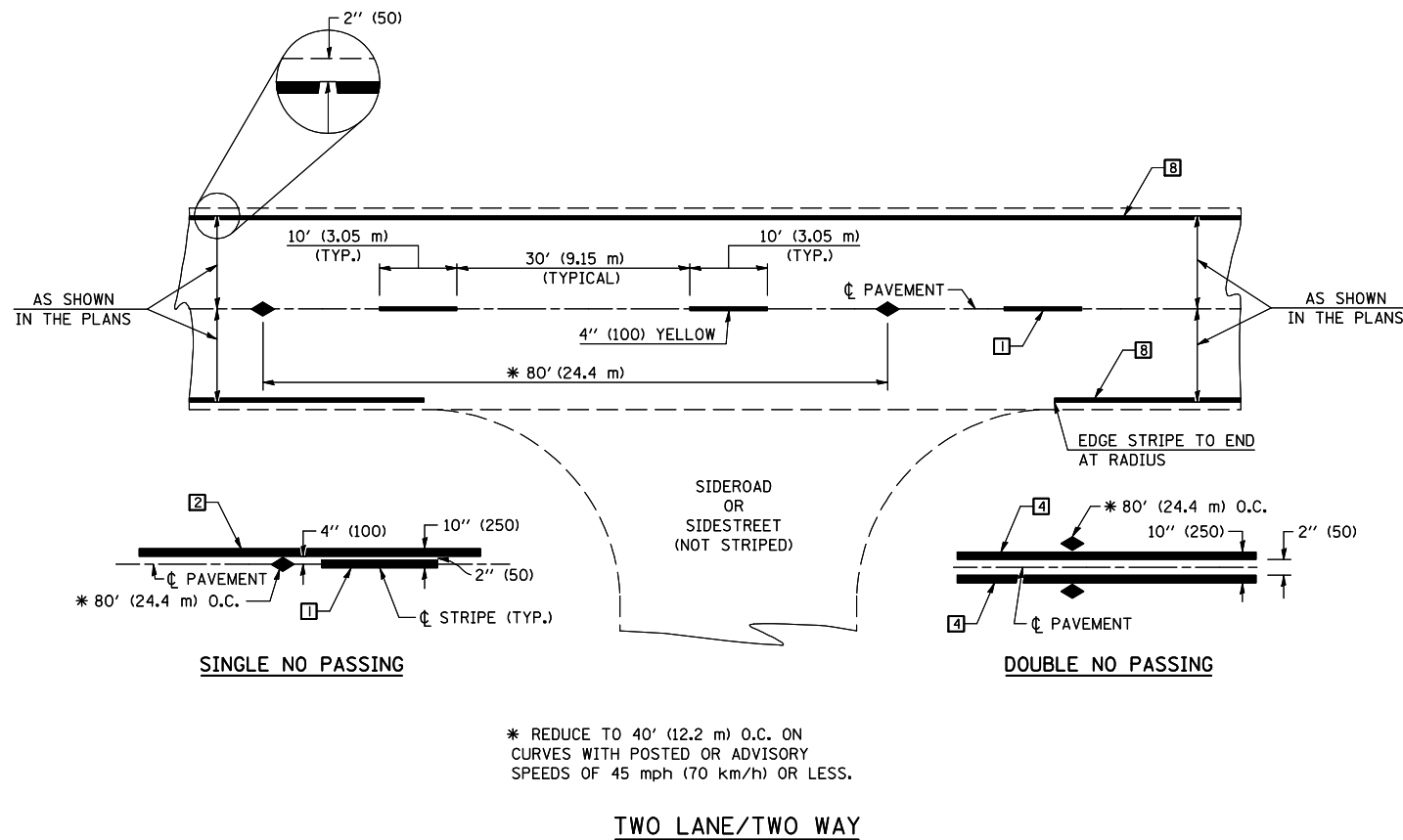
DISTRICT 5 DETAIL NO. 40800050A

PLOT DATE = 10/6/2008
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 PLOT SCALE = 4:23625 sf / IN.
 USER NAME = stults,j

PAVEMENT MARKING AND MARKERS

(RURAL AND URBAN APPLICATIONS)

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
323	145BR-1	DOUGLAS	39	22
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 70393				



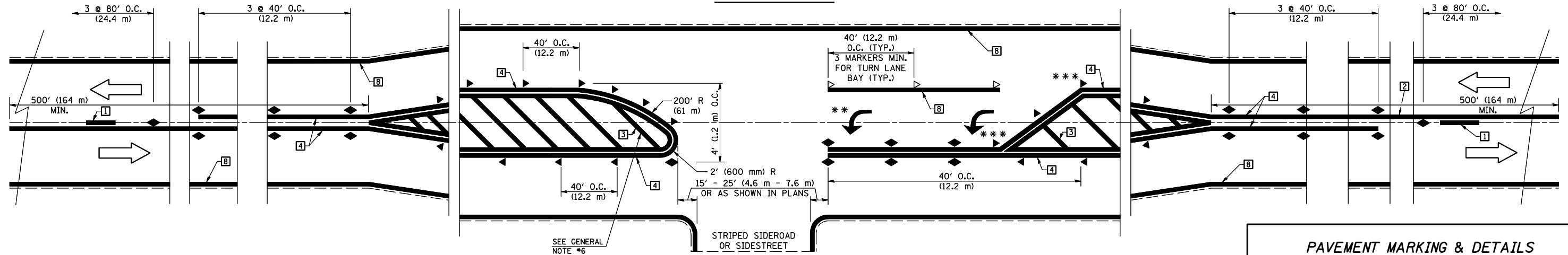
TYPICAL PAVEMENT MARKING LEGEND

- 1 4" (100) SKIP-DASH (YELLOW)
- 2 4" (100) SOLID (YELLOW)
- 3 12" (300) DIAGONAL (YELLOW)
- 4 4" (100) DOUBLE YELLOW (NARROW)
- 5 RESERVED
- 6 RESERVED
- 7 4" (100) SKIP-DASH (WHITE)
- 8 4" (100) SOLID (WHITE)
- 9 12" (300) DIAGONAL (WHITE)
- 10 6" (150) SOLID (WHITE)
- 11 24" (600) STOP BAR (WHITE)
- 12 8" (200) SOLID (WHITE)
- 13 6" (100) LANE LINE EXTENSIONS (WHITE)
- 14 4" (100) PARKING WHITE

TYPICAL PAVEMENT MARKERS LEGEND

- ◆ TWO-WAY AMBER MARKER
- ▶ ONE-WAY AMBER MARKER
- ▷ ONE-WAY CRYSTAL MARKER

RURAL LEFT TURN



*** REDUCE SPACING IF NECESSARY TO ASSURE MARKERS AT CORNER POINTS.

** TURN ARROWS SHALL BE PLACED AS SHOWN ON SHEET #2.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

SHEET 1 OF 3

	NAME	DATE	REVISIONS	REVISIONS
DESIGNED	J.M.H.	5/85	NAME	DATE
CHECKED	FMS	6/85	GEOMETRICS/K.A.G.	07/02
CADD NO.	7800XXXX	6/88	K.A.G.	09/05

PAVEMENT MARKING & DETAILS

FAP ROUTE 323 (US 36)
SECTION 145BR-1
DOUGLAS COUNTY

CUMMINS ENGINEERING CORPORATION

JOB #: 2114.6
FILE: 21146D5PVTMK
DATE: 4/3/07

PLOT DATE = 10/6/2008
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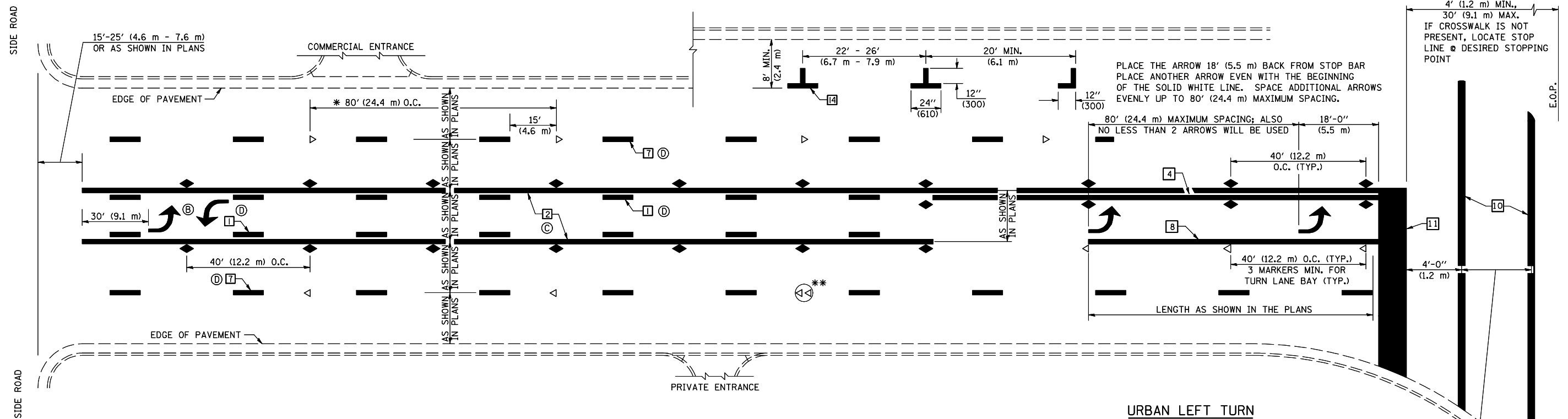
PAVEMENT MARKING AND MARKERS

(RURAL AND URBAN APPLICATIONS)

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
323	145BR-1	DOUGLAS	39	23

FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT

CONTRACT NO. 70393



* REDUCE TO 40 FEET (12.2 METERS) ON CENTER ON CURVES WHERE ADVISORY SPEEDS ARE 10 MPH (15 km/h) LOWER THAN POSTED SPEEDS.

** DOUBLE LANE LINE MARKERS SHALL BE SPECIFIED AND SPACED AS SHOWN IN HIGHWAY STANDARD 781001 FOR MULTI-LANE DIVIDED AND UNDIVIDED HIGHWAYS.

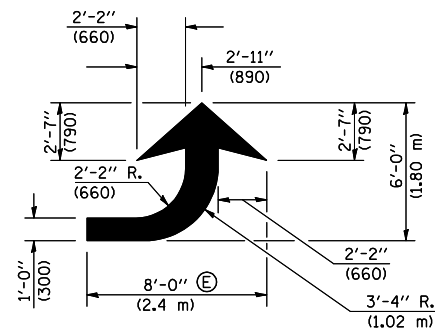
(2 LANES TO 3 LANES OR 4 LANES TO 5 LANES)

URBAN LEFT TURN

CROSSWALK WIDTH 6'-0" (1.8 m) OR AS SHOWN IN THE PLANS

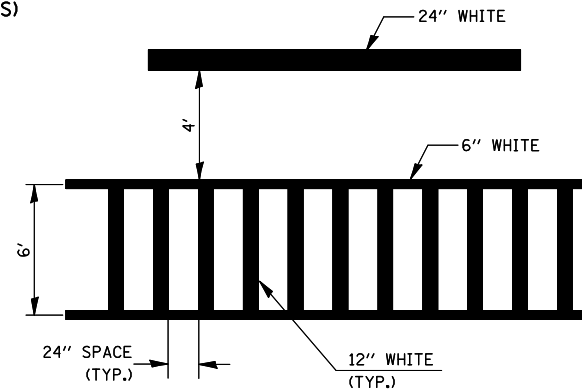
NOTES:

- Ⓑ TURN ARROW PAIRS SHALL BE PLACED AT 250' (75 m) INTERVALS AND SHALL BE EVENLY SPACED BETWEEN BOTH ENDS OF THE BIDIRECTIONAL LEFT TURN LANE.
- Ⓒ THE SOLID YELLOW PAVEMENT MARKINGS [2] SHOULD GENERALLY START OR END NEAR THE RADIUS POINT OF EACH STREET RETURN EXCEPT WHERE ONE OR BOTH ENDS WOULD INCLUDE STOP BARS.
- Ⓓ THE SKIP-DASH PAVEMENT MARKINGS [1] OR [7] SHOULD BE CENTERED BETWEEN BOTH ENDS OF EACH CITY BLOCK AND SHALL BE PLACED SO THEY LINE UP ACROSS FROM EACH OTHER. SEE EXAMPLE ON SHEET 2 OF 3.
- Ⓔ TURN ARROW SIZE DEPENDS ON THE LOCATION. RURAL LOCATION - LARGE ARROW SIZE URBAN LOCATION - SMALL ARROW SIZE

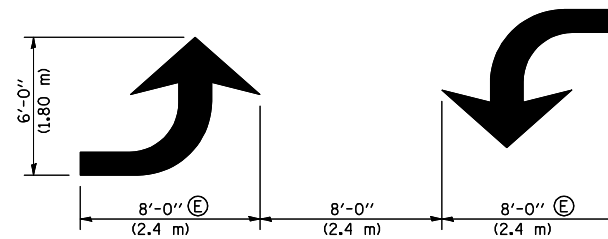


LEFT ARROW

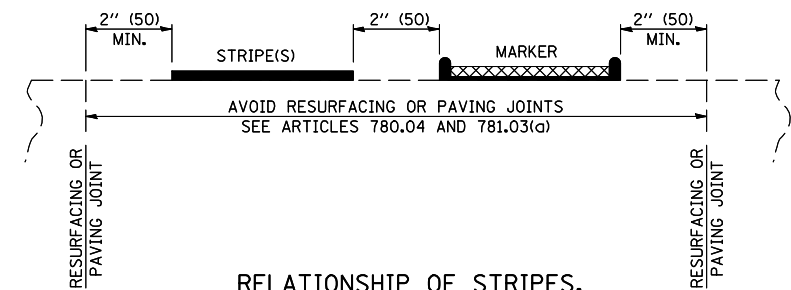
REVERSE FOR RIGHT ARROW
AREA = 15.6 SQ. FT. (1.47 m²)
(WHITE)



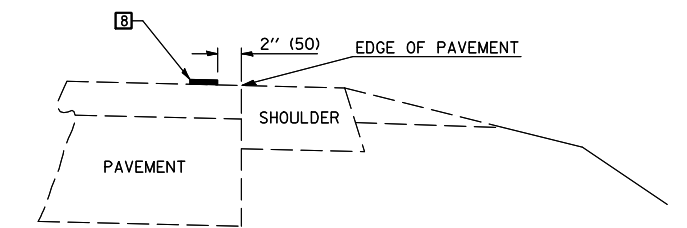
TYPICAL SPACING FOR CROSSWALKS & STOP BARS



TYPICAL DOUBLE TURN ARROWS (WHITE)



RELATIONSHIP OF STRIPES, MARKERS AND JOINTS



RELATIONSHIP OF EDGE LINE TO EDGE OF PAVEMENT
(SAFETY SHOULDER OR PAVED SURFACE)
SEE ARTICLE 780.04

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

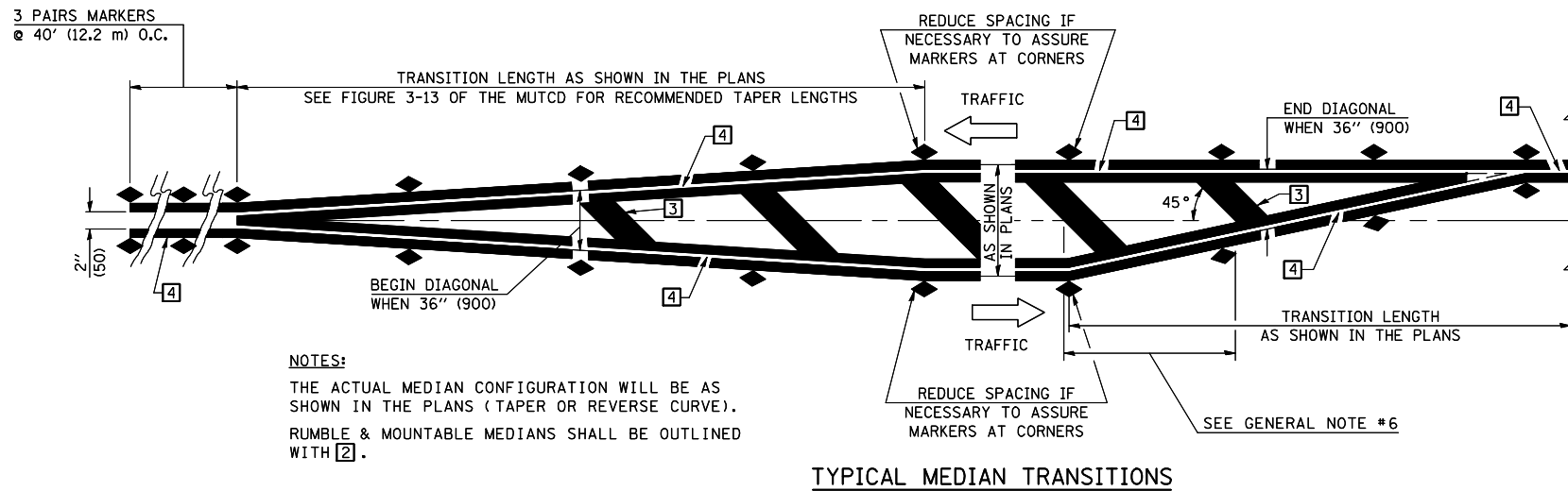
SHEET 2 OF 3

	NAME	DATE	REVISIONS	REVISIONS
DESIGNED	J.M.H.	5/85	NAME	DATE
CHECKED	FMS	6/85	GEOMETRICS/K.A.G.	07/02
CADD NO.	7800XXXX	6/88	GEOMETRICS/K.A.G.	08/06
			K.A.G.	09/05

PLOT DATE = 10/6/2008
 FILE NAME = c:\p\projects\45923684 (v8)\consultant\final\plans\21146d5p\mk.dgn
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 PLOT TITLE =

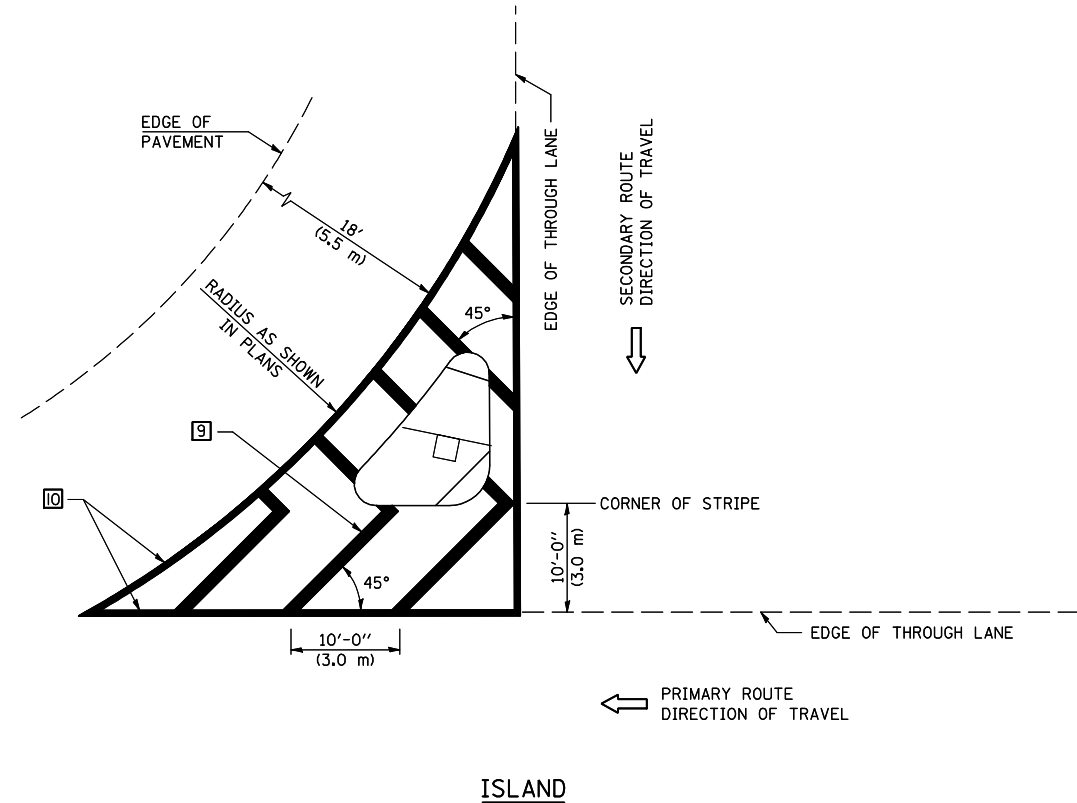
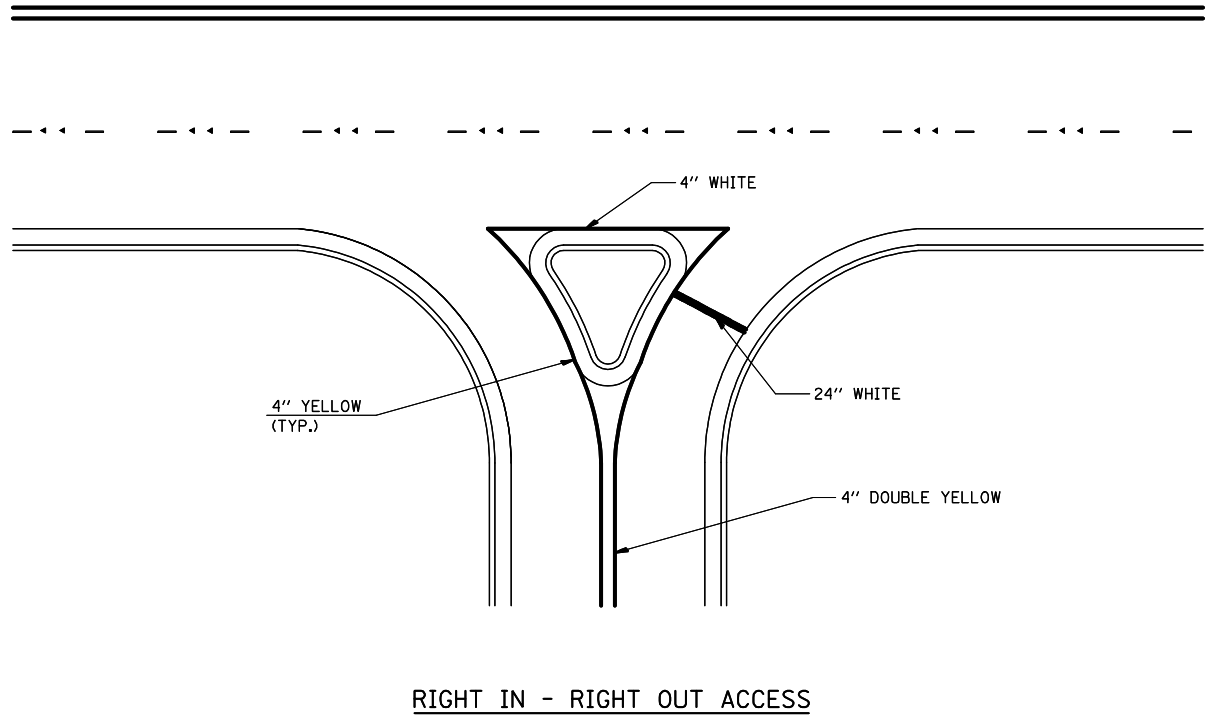
PAVEMENT MARKING AND MARKERS (RURAL AND URBAN APPLICATIONS)

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
323	145BR-1	DOUGLAS	39	24
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 70393				



GENERAL NOTES

1. WHEN MEDIANS ARE PRESENT, PAVEMENT MARKINGS ARE TO BE PLACED ADJACENT TO MEDIANS.
2. SOME OF THE INFORMATION INCLUDED WITH THIS DETAIL MAY NOT BE APPLICABLE TO THIS IMPROVEMENT.
3. PAVEMENT MARKINGS ARE TO BE EXTENDED THROUGH OMISSIONS WHEN APPLICABLE.
4. A STRIPING KEY IS AVAILABLE ELSEWHERE AND SHALL BE SHOWN WHERE THE QUANTITIES ARE LISTED.
5. FINAL PAVEMENT MARKINGS SHALL BE IN PLACE PRIOR TO PLACING ANY RAISED REFLECTIVE PAVEMENT MARKERS.
6. THE FOLLOWING CRITERIA SHALL BE USED FOR SELECTING THE DIAGONAL PAVEMENT MARKING SPACING,
 < 30 MPH USE 15' (< 50 km/h USE 4.5 m)
 30-45 MPH USE 20' (50-75 km/h USE 6.0 m)
 > 45 MPH USE 30' (> 75 km/h USE 9.0 m)



PLOT DATE = 10/6/2008
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 PLOTTER = HP DesignJet 5000

SHEET 3 OF 3

	NAME		DATE		REVISIONS		REVISIONS	
	DESIGNED	CHECKED	CADD NO.	DATE	NAME	DATE	NAME	DATE
	J.M.H.	FMS	7800XXXX	5/85	GEOMETRICS/K.A.G.	07/02	GEOMETRICS/K.A.G.	08/06
		C.T.D.		6/88	K.A.G.	09/05		

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

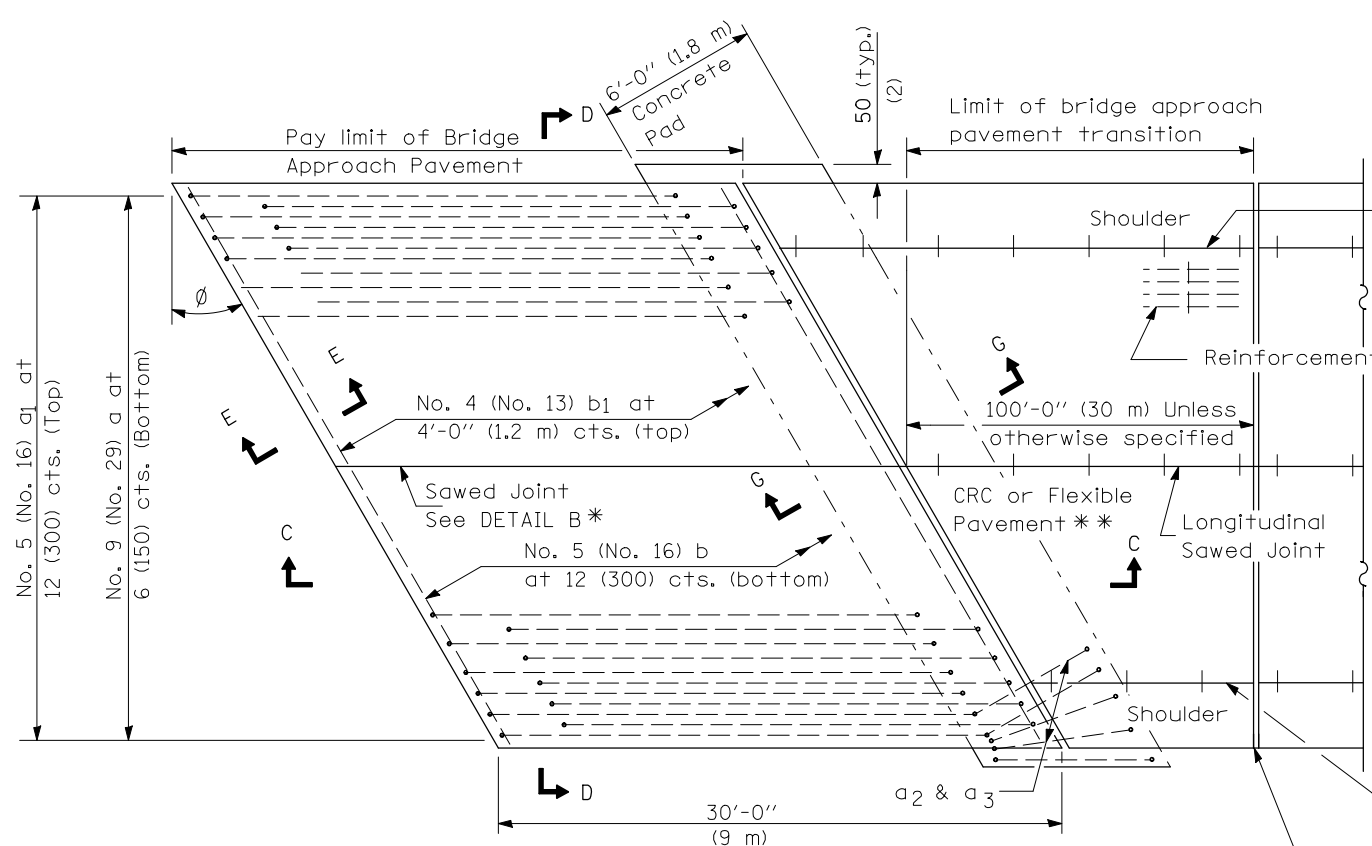
PAVEMENT MARKING & DETAILS

FAP ROUTE 323 (US 36)
SECTION 145BR-1
DOUGLAS COUNTY

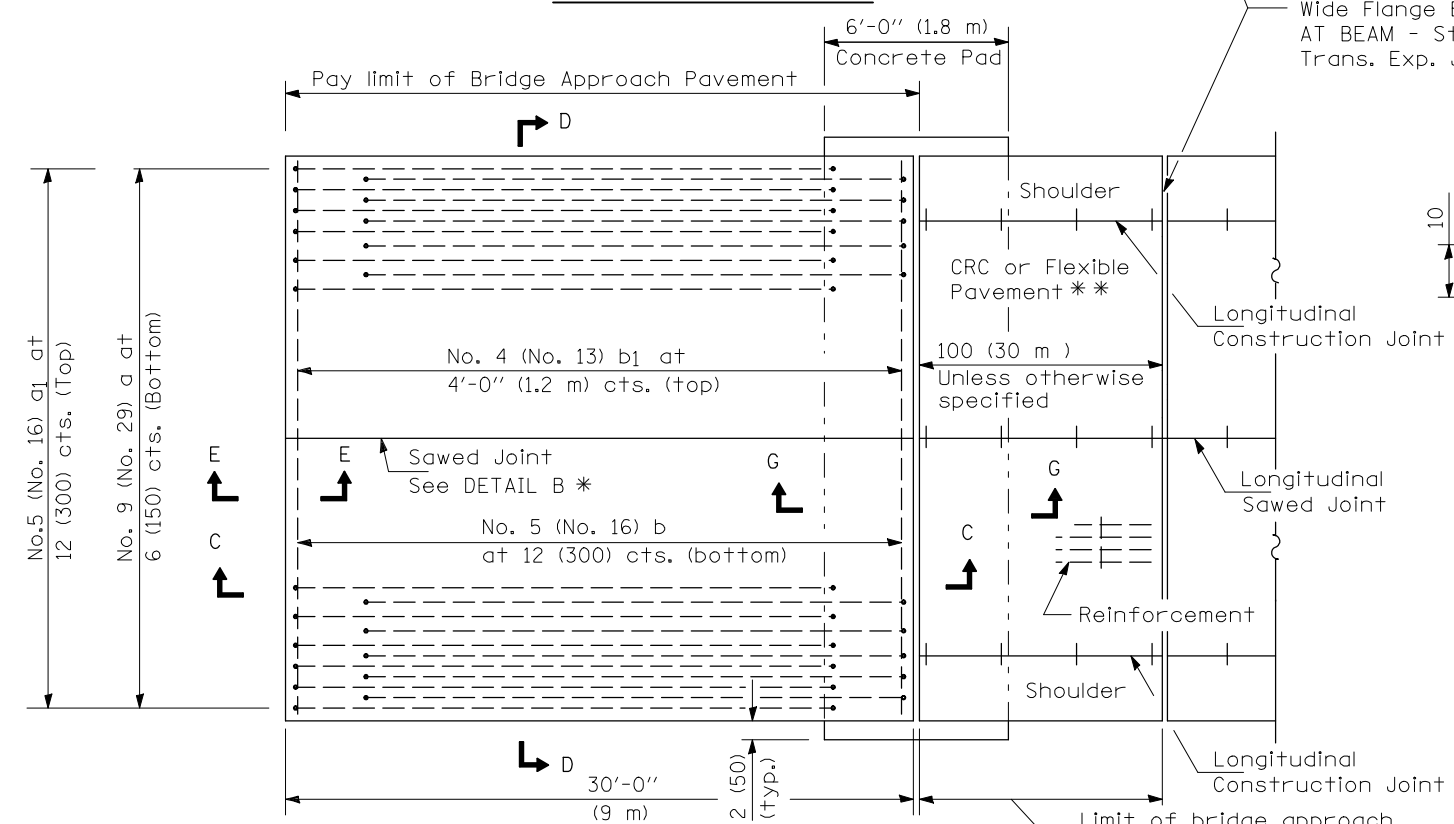
CUMMINS ENGINEERING CORPORATION

JOB #: 2114.6
FILE: 21146D5PVTMK
DATE: 4/3/07

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
323	145BR-1	DOUGLAS	39	24A
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 70393				



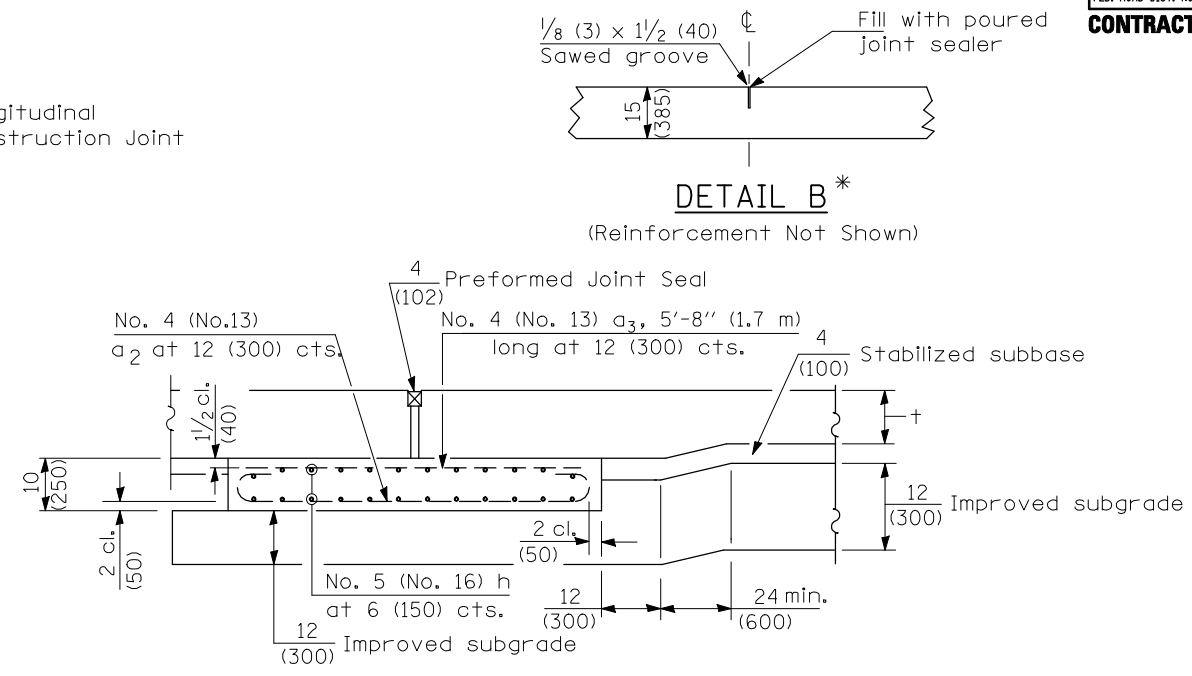
PLAN - WITH SKEW



PLAN - WITHOUT SKEW

* Saw \perp or lane edge if poured two or more lane widths at a time.
 ** Omit Reinforcement, tie bars and Long. sawed Jt. for Flexible Pavement.

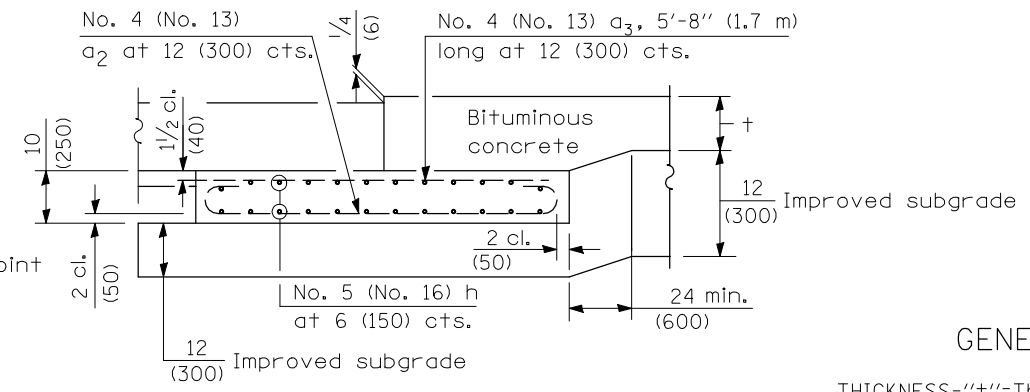
NEW CONSTRUCTION



SECTION G-G - RIGID PAVEMENT

(Showing reinforcement)

Rigid Pavement only:
 Wide Flange Beam Terminal Joint (See DETAIL AT BEAM - Standard 421101 or 421106) or 2 (50)
 Trans. Exp. Joint as detailed on Standard 420001.



SECTION G-G - FLEXIBLE PAVEMENT

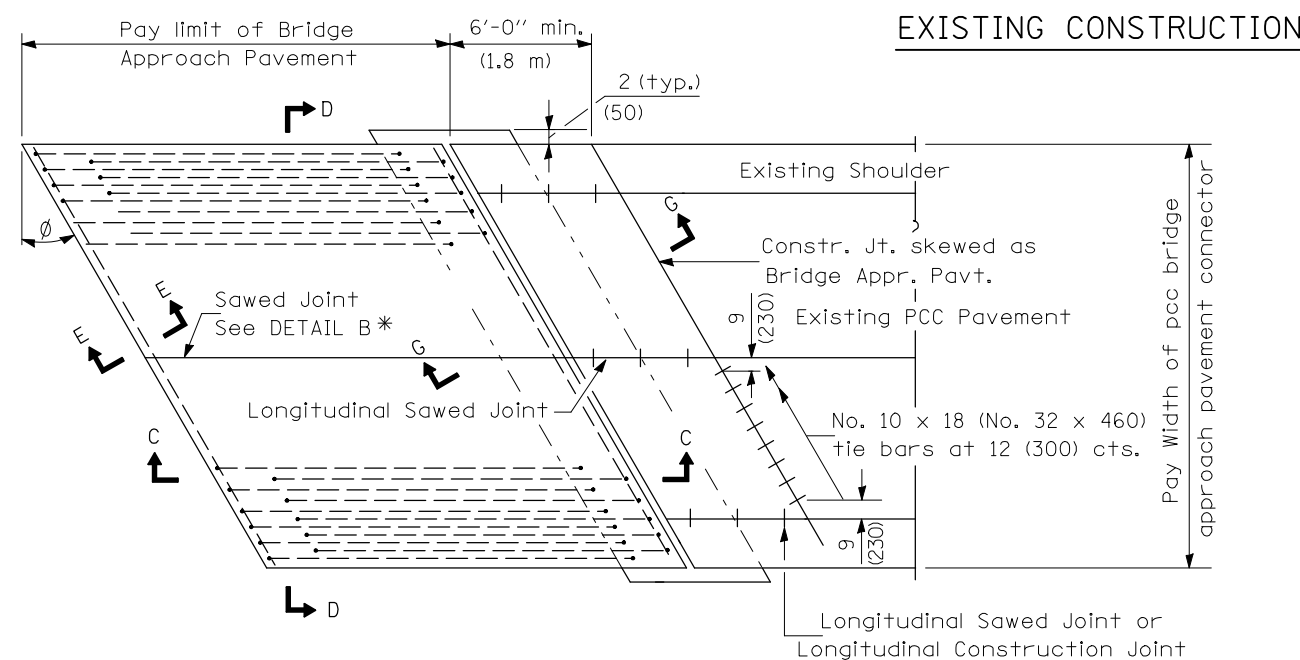
(Showing reinforcement)

GENERAL NOTES

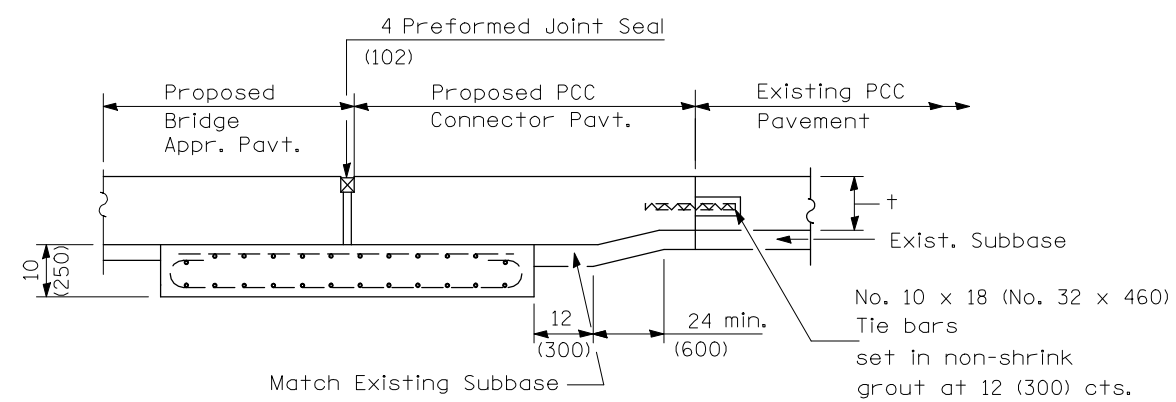
THICKNESS-"t"=Thickness of Pavement.
 See Standard 421001 for reinforcement details not shown.
 See Standard 420001 for joint details not shown.
 All dimensions are in inches (millimeters) unless otherwise shown.

DETAILS
BRIDGE APPROACH PAVEMENT
 FAP ROUTE 323 (US 36)
 SECTION 145BR-1
 DOUGLAS COUNTY
 (Sheet 1 of 4)

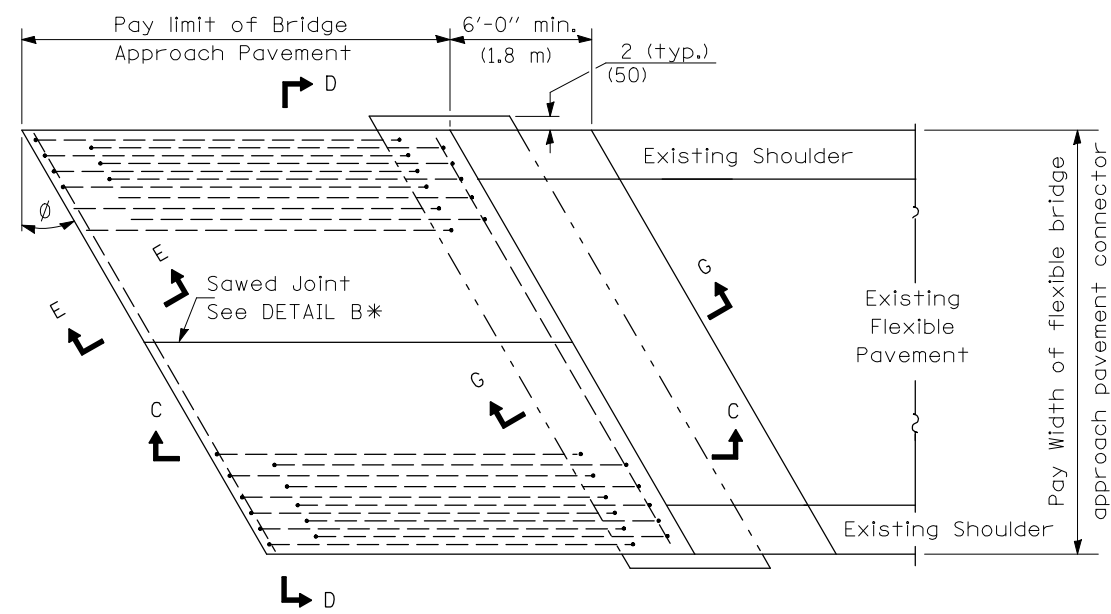
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FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 70393				



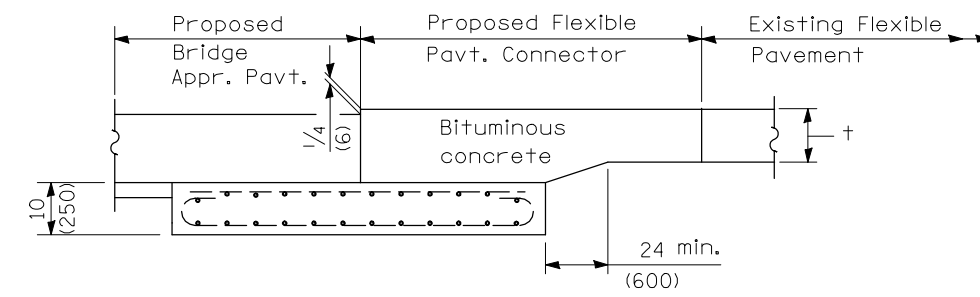
BRIDGE APPROACH PAVEMENT CONNECTOR (PCC)



SECTION G-G - RIGID PAVEMENT



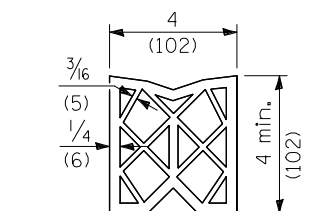
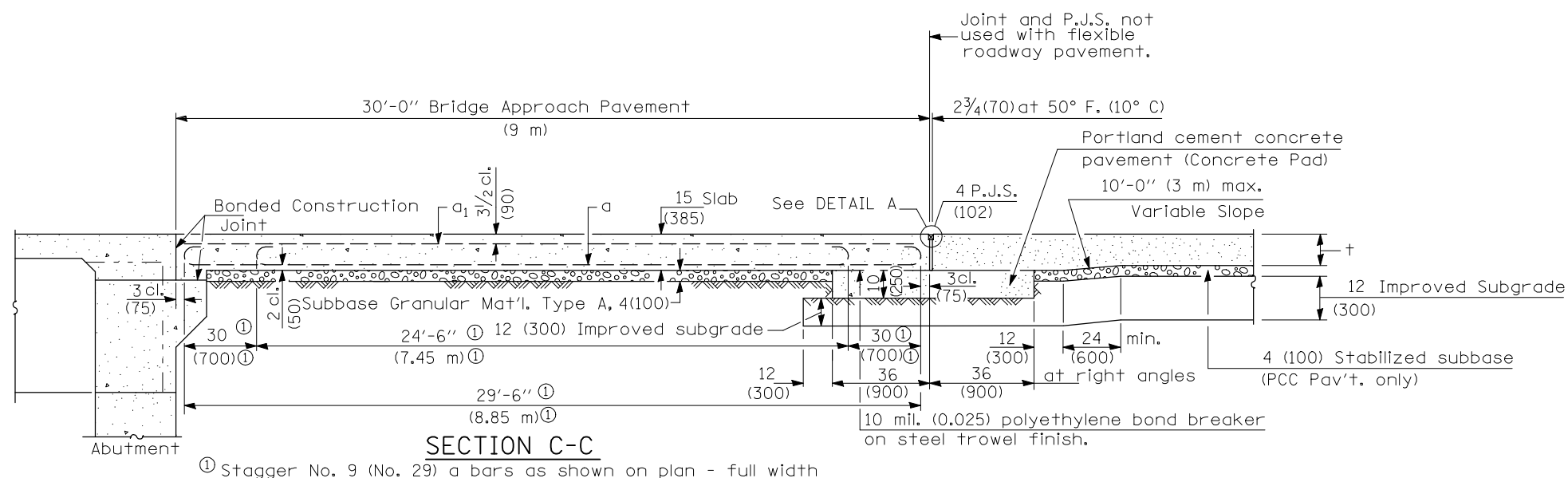
BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)



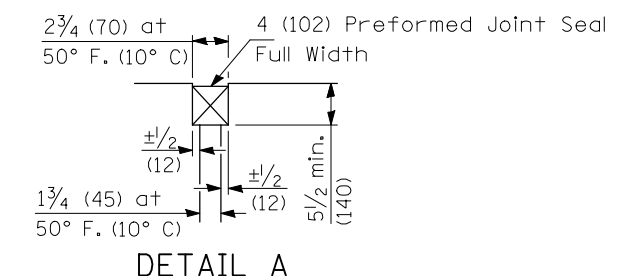
SECTION G-G - FLEXIBLE PAVEMENT

DETAILS
BRIDGE APPROACH PAVEMENT
 FAP ROUTE 323 (US 36)
 SECTION 145BR-1
 DOUGLAS COUNTY
 (Sheet 2 of 4)

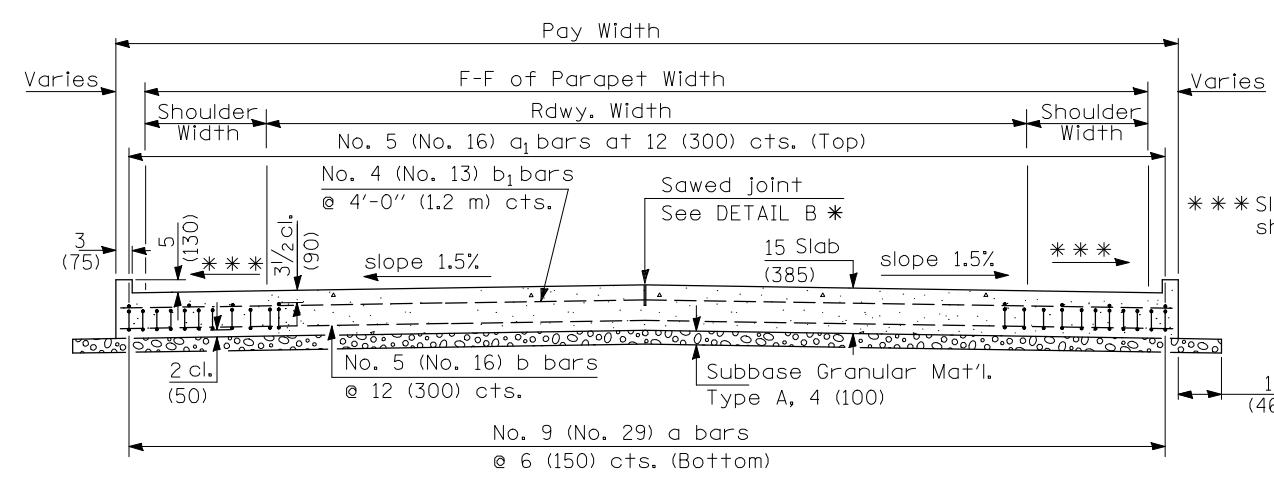
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323	145BR-1	DOUGLAS	39	24C
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 70393				



PREFORMED JOINT SEAL



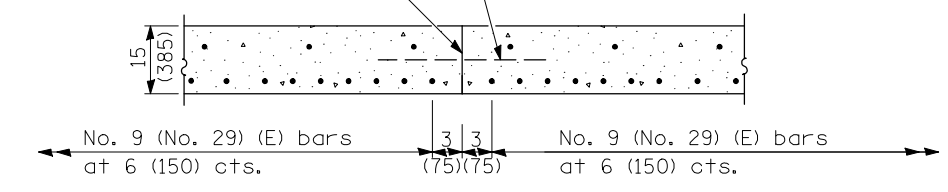
DETAIL A



SECTION D-D

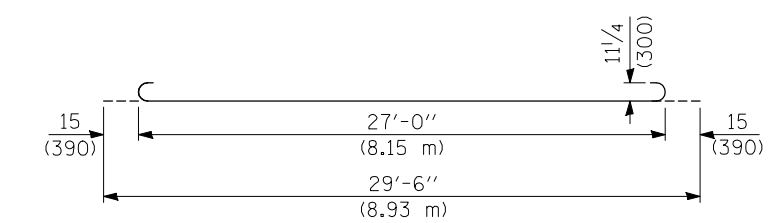
(See Plan for Dimensions not shown)

Longitudinal Construction Joint in accordance with details shown on Standard 420001.

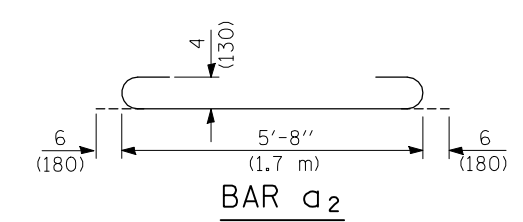


OPTIONAL LONGITUDINAL CONSTRUCTION JOINT

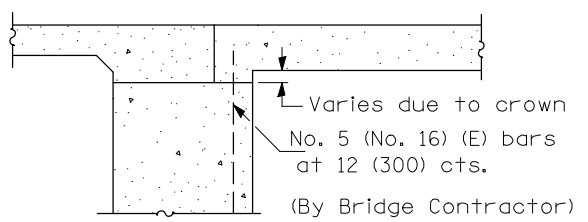
As approved by the Engineer, the Contractor may elect to reduce the widths of pour by use of the Optional Longitudinal Construction Joint shown. Joints shall be located at the edge of a traffic lane.



BAR a

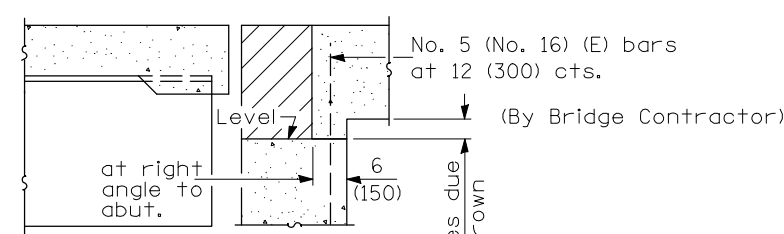


BAR a₂



SECTION E-E

(Integral Abutments)



SECTION E-E

(Jointed Abutments)

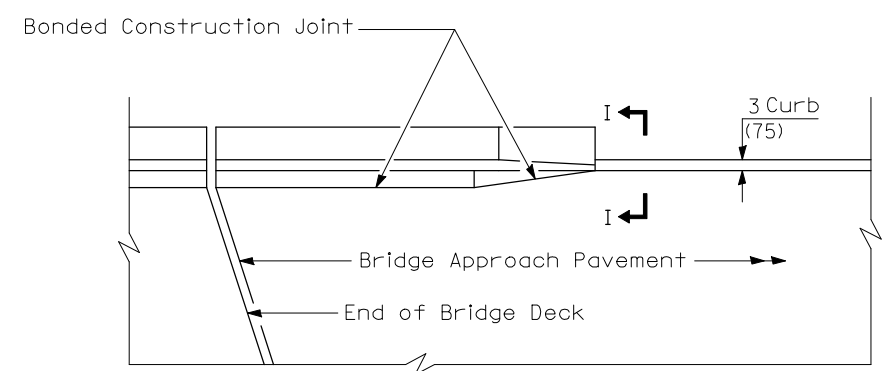
DESIGN STRESSES

f_y = 60,000 p.s.i. (400 MPa)
 f'c = 3,500 p.s.i. (24 MPa)
 n = 8.5

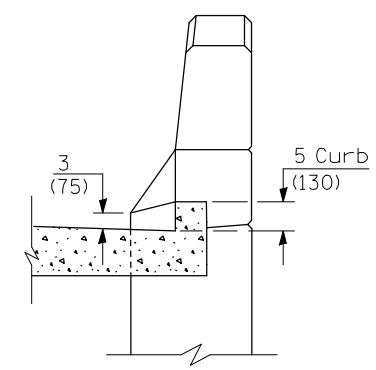
DETAILS
BRIDGE APPROACH PAVEMENT
 FAP ROUTE 323 (US 36)
 SECTION 145BR-1
 DOUGLAS COUNTY

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
323	145BR-1	DOUGLAS	39	24D

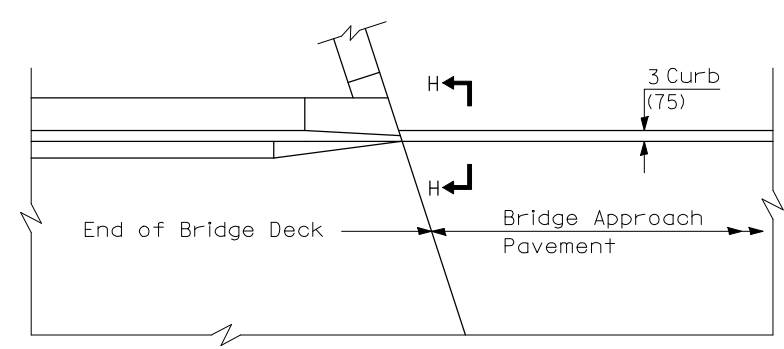
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT
CONTRACT NO. 70393



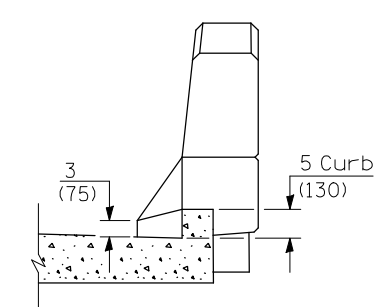
**PARAPET TO CURB TRANSITION
 PILE BENT ABUTMENT**



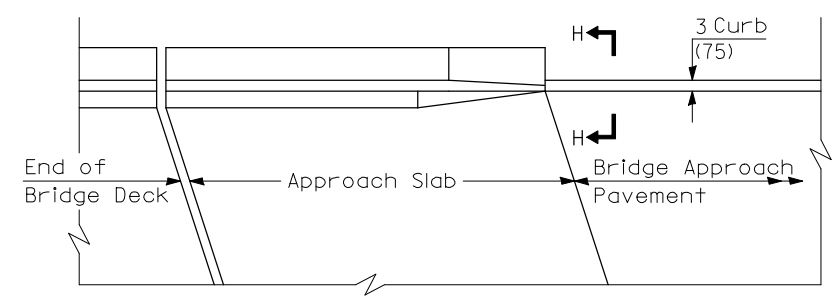
SECTION I - I



**PARAPET TO CURB TRANSITION
 INTEGRAL ABUTMENT**



SECTION H - H

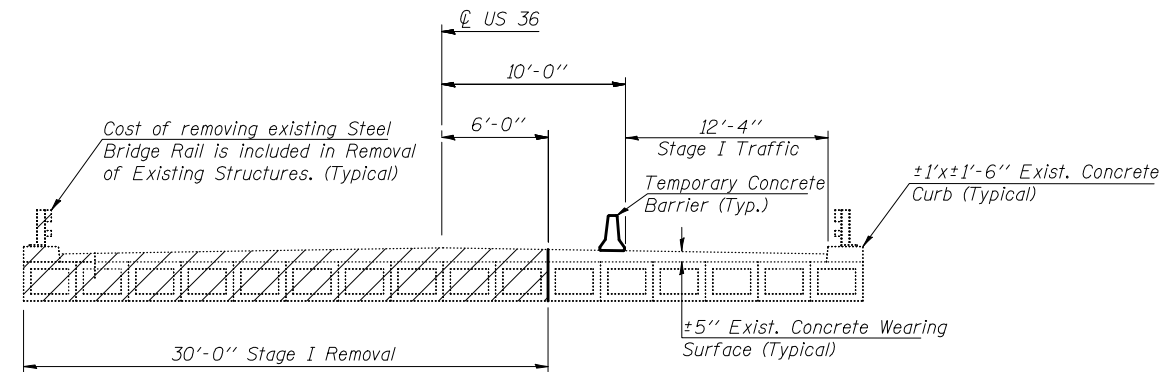


**PARAPET TO CURB TRANSITION
 VAULTED ABUTMENT**

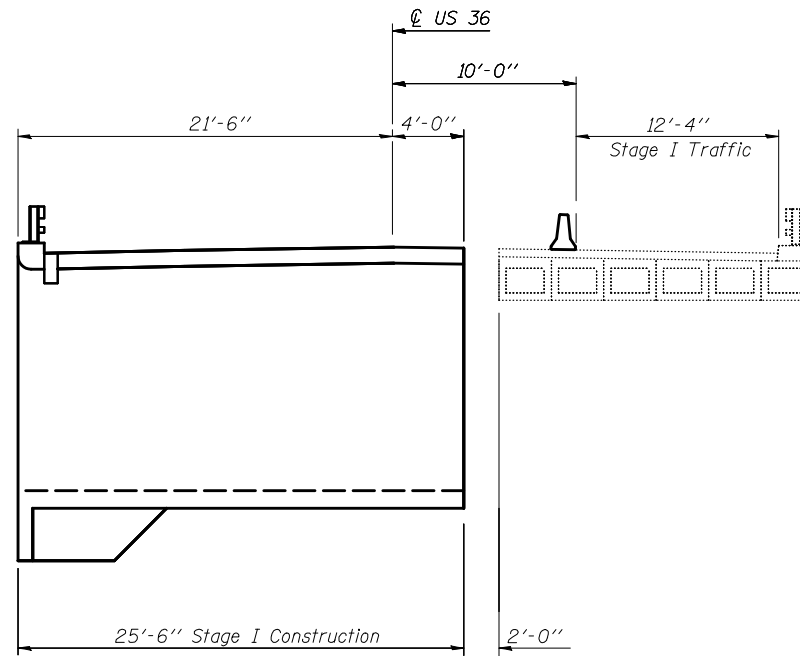
DETAILS
BRIDGE APPROACH PAVEMENT
 FAP ROUTE 323 (US 36)
 SECTION 145BR-1
 DOUGLAS COUNTY
 (Sheet 4 of 4)

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 2 10 SHEETS
FAP 323	145BR-1	DOUGLAS	39	26	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

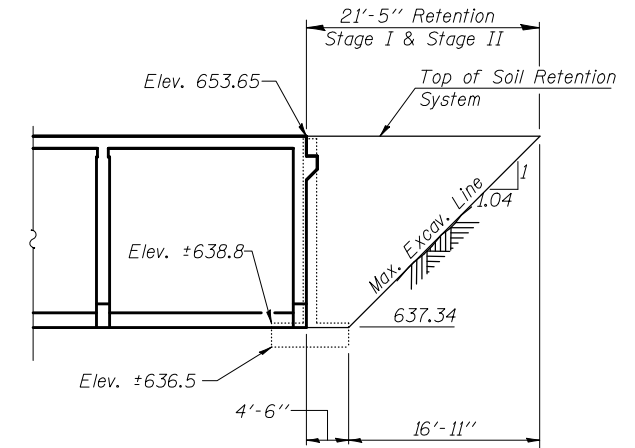
Contract #70393



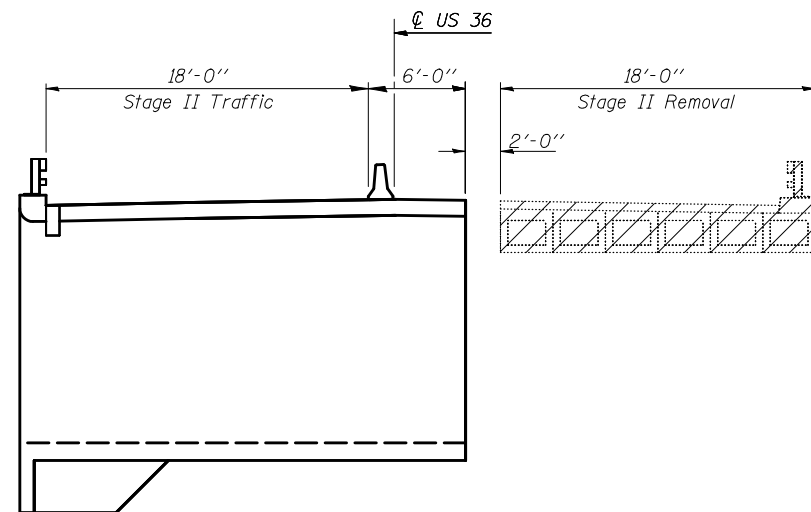
STAGE I REMOVAL
(Looking East)



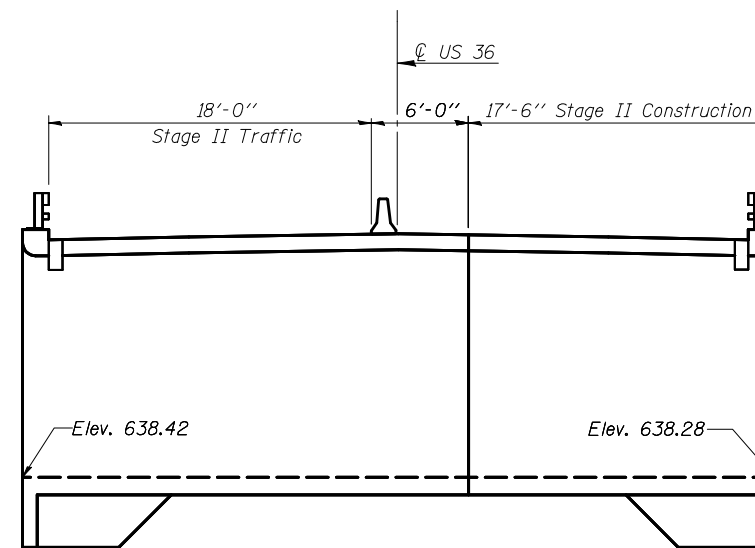
STAGE I CONSTRUCTION
(Looking East)



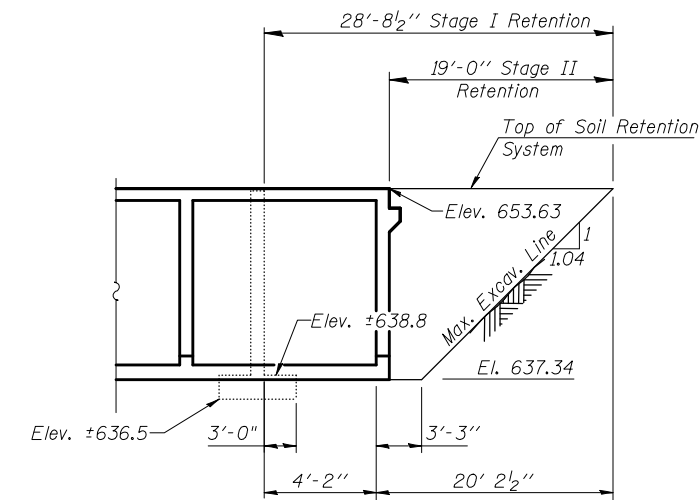
EAST ABUTMENT
(Looking North)



STAGE II REMOVAL
(Looking East)



STAGE II CONSTRUCTION
(Looking East)



WEST ABUTMENT
(Looking South)
TEMPORARY SOIL RETENTION SYSTEM
(Slope and distances shown along CL Roadway)

NOTES:

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.

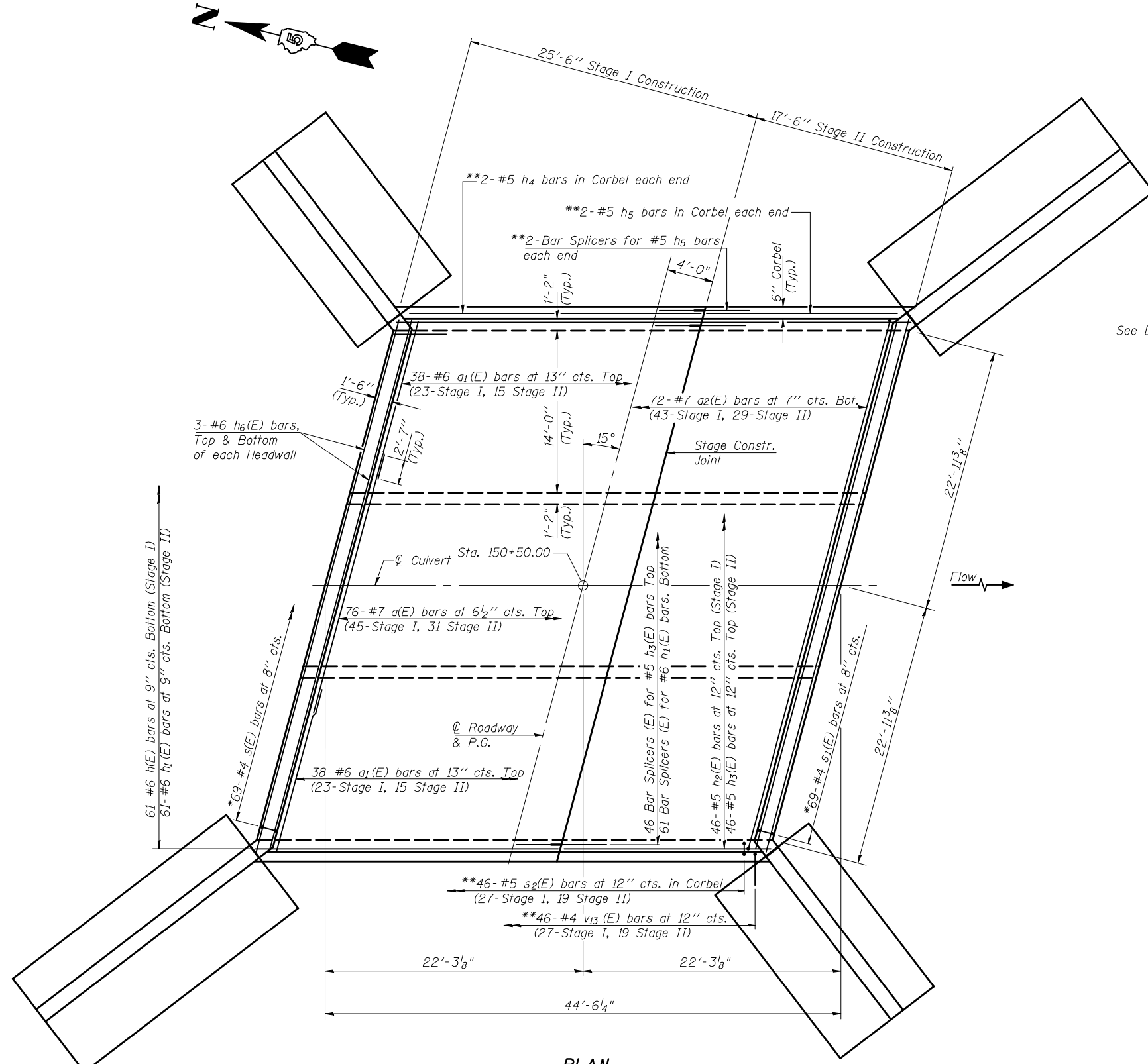
The Contractor shall sawcut the upper portion of the existing abutments at the stage removal line before Stage I removal to ensure the remaining portion will not be prematurely damaged. Cost of sawcutting is included in Removal of Existing Structures. Hatched areas indicate Removal of Existing Structures.

For quantity of Temporary Concrete Barrier, see Roadway Plans. Dimensions are at right angles to CL Roadway unless noted otherwise.

ILLINOIS DEPARTMENT OF TRANSPORTATION			
SHEET TITLE STAGE CONSTRUCTION DETAILS			
PROJECT	US 36 OVER HACKETT BRANCH FAP RTE 323 SECTION 145 BR-1 DOUGLAS COUNTY STATION 150+50 STRUCTURE NUMBER 021-2026	PROJECT NO.	03020
SCALE		DATE	06/05/07
DRAWN BY	TFG	CHECKED BY	CME/KS/MCB
COOMBE-BLOXDORF P.C. Engineers / Land Surveyors Springfield, Illinois		DRAWING NO.	2
Design Firm License No. 184-002708		OF 10 SHTS	

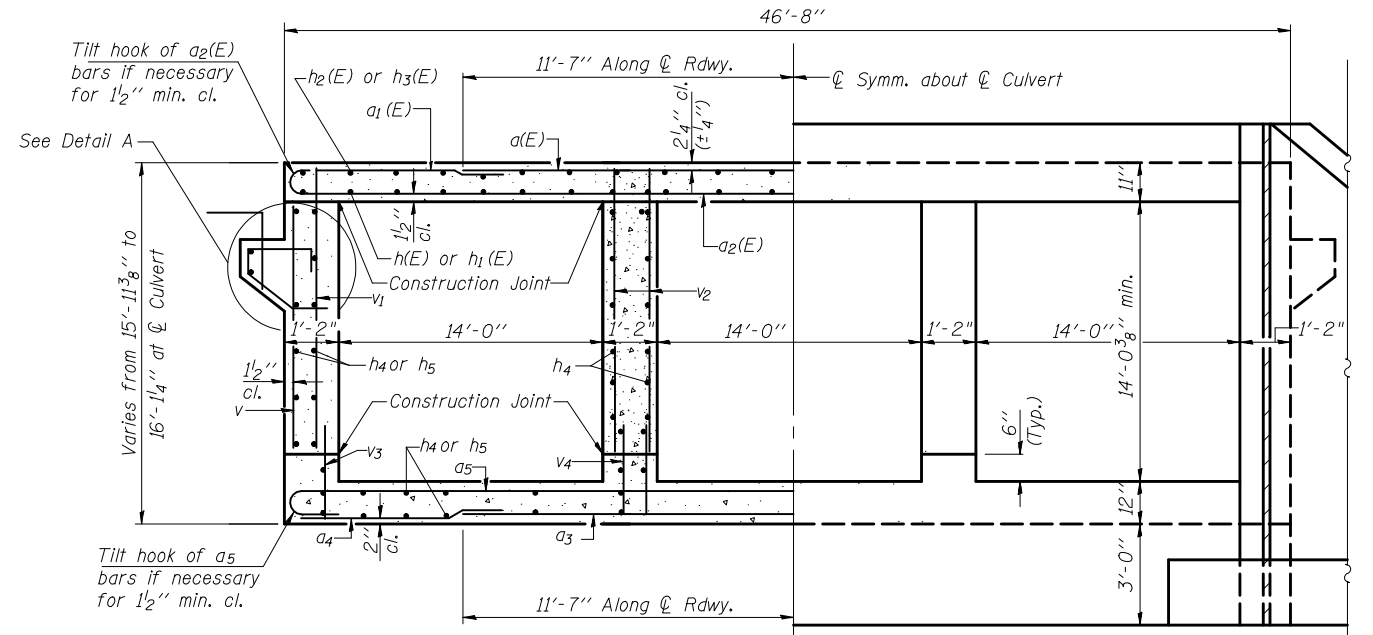
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Contract #70393



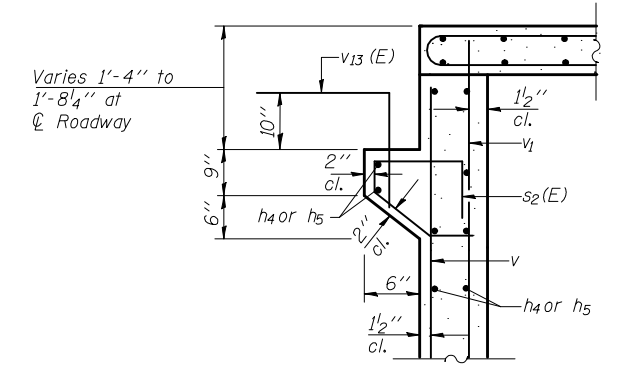
**PLAN
TOP SLAB**

*Space s(E) and s1(E) bars in headwall to miss 1" ϕ Anchor Rods for Steel Bridge Rail.
**See Detail A.



HALF SECTION THRU BARREL

HALF END ELEVATION



DETAIL A

NOTES

See Sheet 1 of 10 for drain locations.
See Sheet 7 of 10 for drain details.
See Sheets 6 and 7 of 10 for wing wall reinforcement and details.

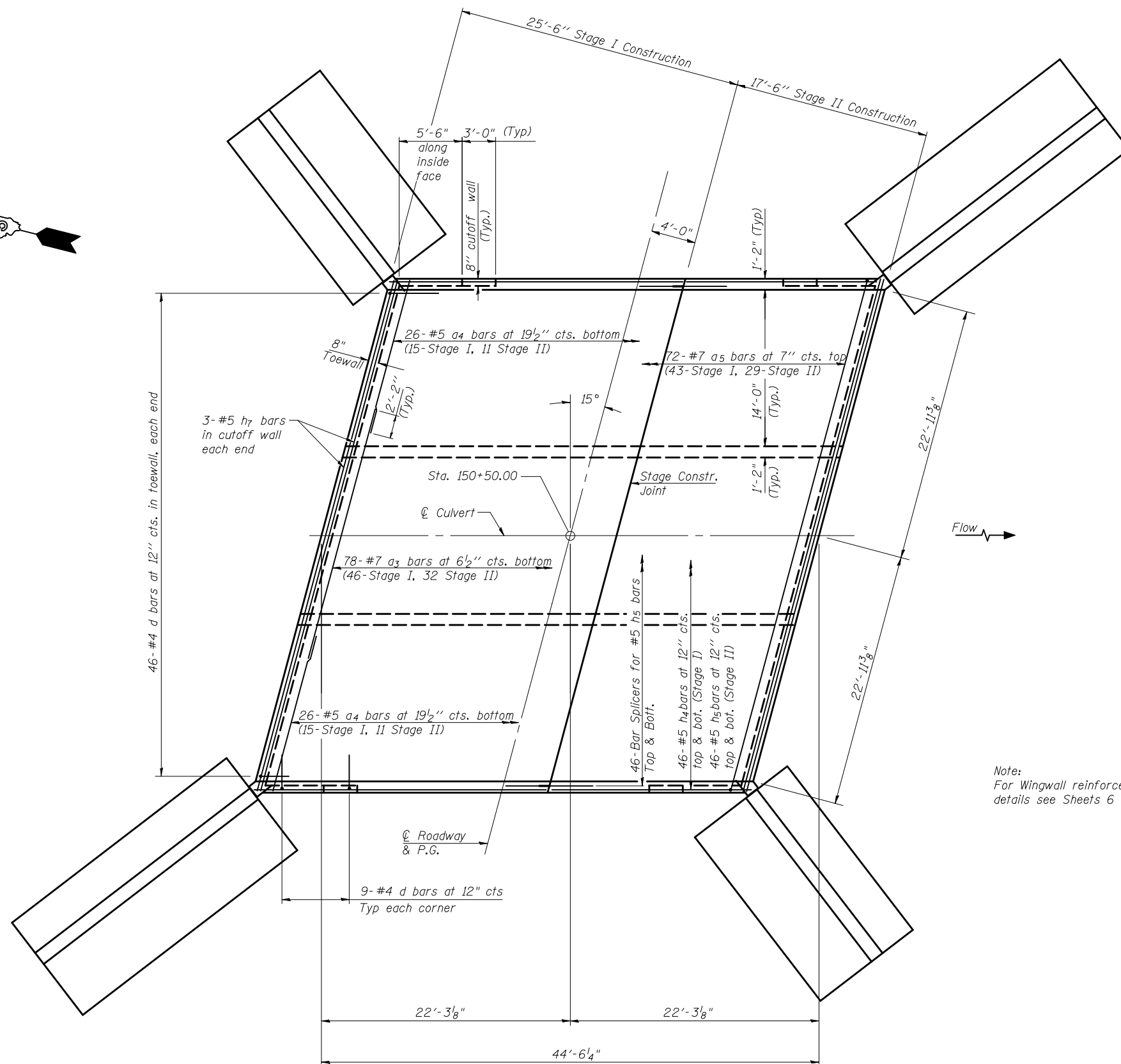
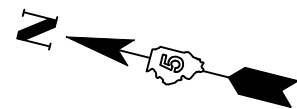
ILLINOIS DEPARTMENT OF TRANSPORTATION	
SHEET TITLE TOP SLAB DETAILS	
PROJECT US 36 OVER HACKETT BRANCH FAP RTE 323 SECTION 145 BR-1 DOUGLAS COUNTY STATION 150+50 STRUCTURE NUMBER 021-2026	PROJECT NO. 03020 SCALE DATE 06/05/07 DRAWN BY TFG CHECKED BY CME/KS/MCB DRAWING NO.
COOMBE-BLOXDORF P.C. Engineers / Land Surveyors Springfield, Illinois Design Firm License No. 184-002708	4 OF 10 SHTS

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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 323	145BR-1	DOUGLAS	39	29
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

SHEET NO. 5
10 SHEETS

Contract #70393



Note:
For Wingwall reinforcement and details see Sheets 6 and 7 of 10.

**PLAN
BOTTOM SLAB**

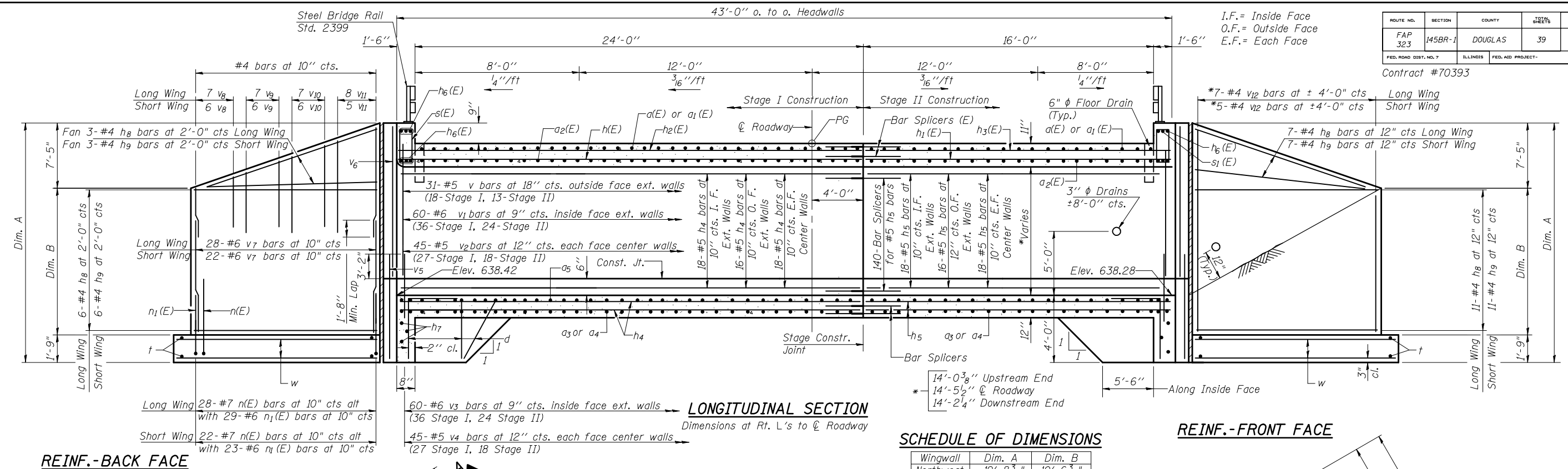
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ILLINOIS DEPARTMENT OF TRANSPORTATION	
SHEET TITLE BOTTOM SLAB DETAILS	
PROJECT US 36 OVER HACKETT BRANCH FAP RTE 323 SECTION 145 BR-1 DOUGLAS COUNTY STATION 150+50 STRUCTURE NUMBER 021-2026	PROJECT NO. 03020 SCALE DATE 06/05/07 DRAWN BY TFG CHECKED BY CME/KS/MCB DRAWING NO.
COOMBE-BLOXDORF P.C. Engineers / Land Surveyors Springfield, Illinois Design Firm License No. 184-002708	5 OF 10 SHTS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 323	145BR-1	DOUGLAS	39	30
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

Contract #70393

I.F. = Inside Face
O.F. = Outside Face
E.F. = Each Face



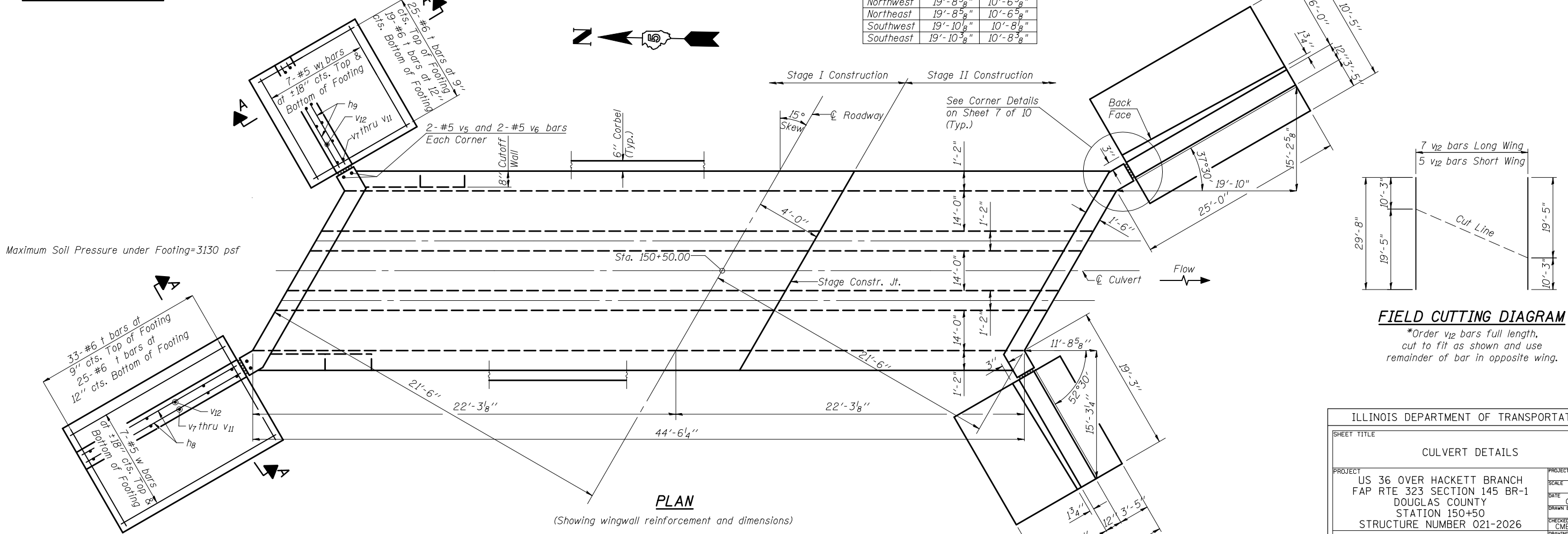
REINF.-BACK FACE

LONGITUDINAL SECTION
Dimensions at Rt. L's to \varnothing Roadway

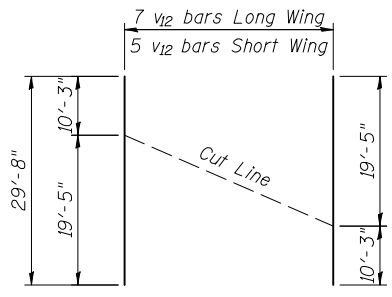
SCHEDULE OF DIMENSIONS

Wingwall	Dim. A	Dim. B
Northwest	19'-8 ³ / ₈ "	10'-6 ³ / ₈ "
Northeast	19'-8 ⁵ / ₈ "	10'-6 ⁵ / ₈ "
Southwest	19'-10 ⁵ / ₈ "	10'-8 ⁵ / ₈ "
Southeast	19'-10 ³ / ₈ "	10'-8 ³ / ₈ "

REINF.-FRONT FACE



PLAN
(Showing wingwall reinforcement and dimensions)



FIELD CUTTING DIAGRAM

*Order #5 bars full length, cut to fit as shown and use remainder of bar in opposite wing.

NOTES

All construction joints shall be bonded.
See Sheets 4 and 5 of 10 for slab reinforcement.
See Sheet 7 of 10 for Section A-A and Corner Details.

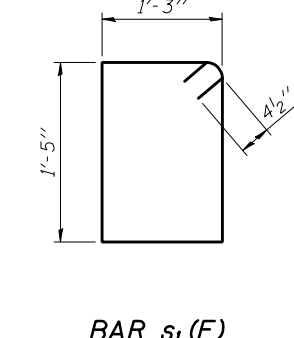
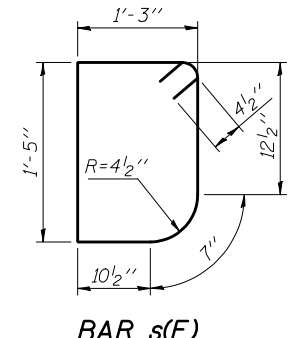
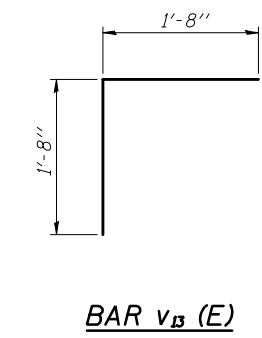
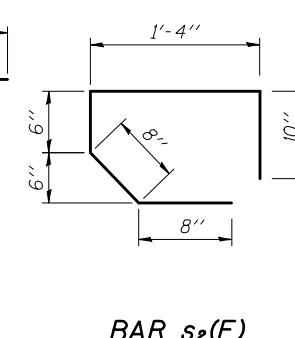
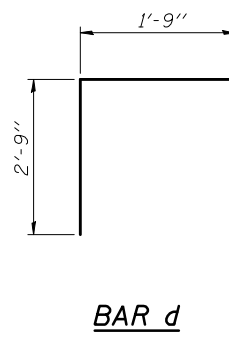
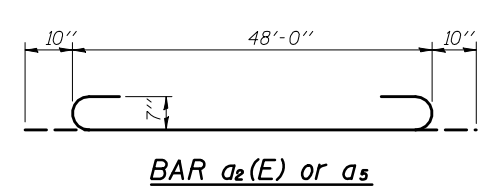
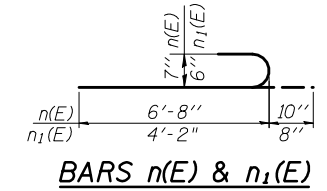
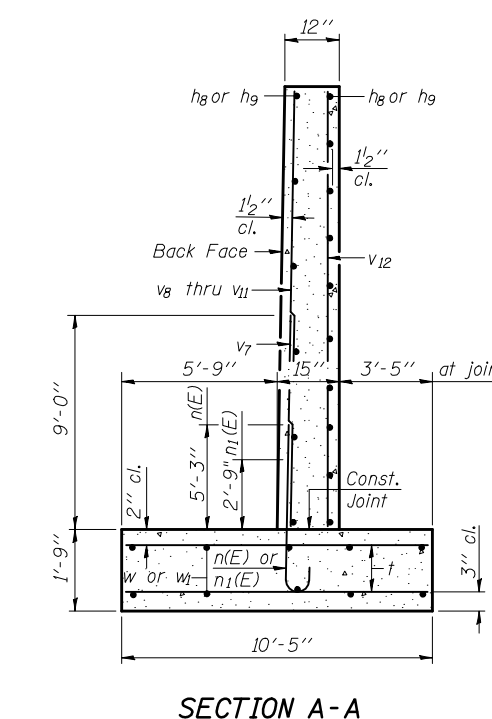
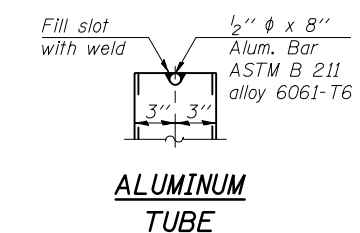
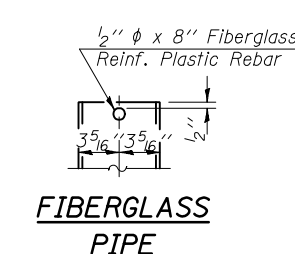
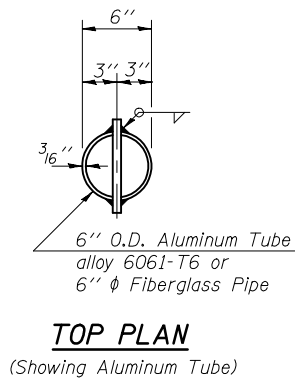
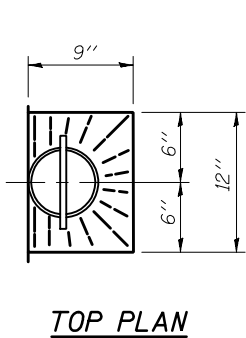
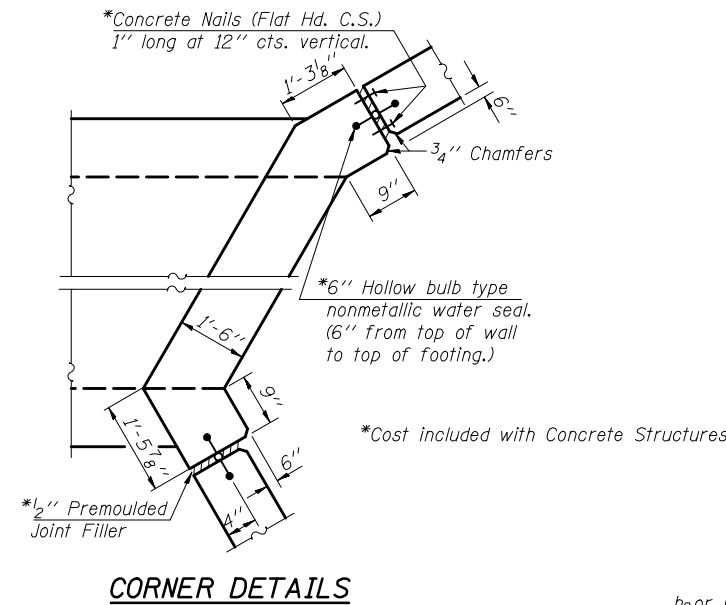
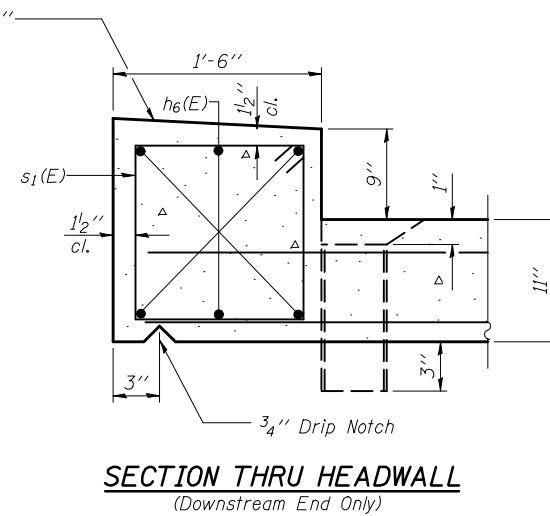
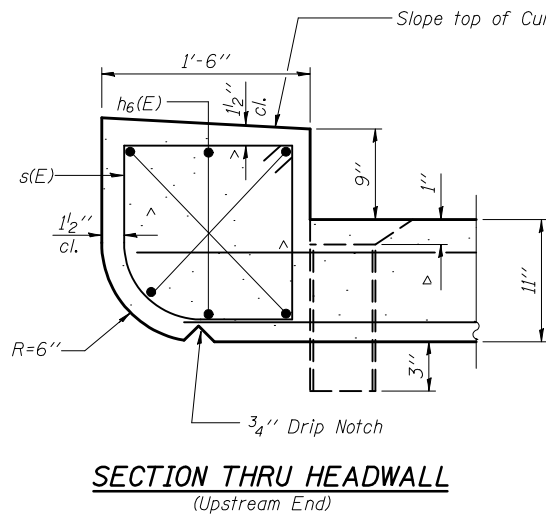
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ILLINOIS DEPARTMENT OF TRANSPORTATION	
SHEET TITLE CULVERT DETAILS	
PROJECT US 36 OVER HACKETT BRANCH FAP RTE 323 SECTION 145 BR-1 DOUGLAS COUNTY STATION 150+50 STRUCTURE NUMBER 021-2026	PROJECT NO. 03020 SCALE DATE 06/05/07 DRAWN BY TFG CHECKED BY CME/KS/MCB DRAWING NO.
COOMBE-BLOXDORF P.C. Engineers / Land Surveyors Springfield, Illinois Design Firm License No. 184-002708	6 OF 10 SHTS

Contract #70393

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	76	#7	23'-2"	—
a ₁ (E)	76	#6	15'-0"	—
a ₂ (E)	72	#7	49'-8"	U
a ₃	78	#7	23'-2"	—
a ₄	52	#5	14'-7"	—
a ₅	72	#7	49'-8"	U
d	128	#4	5'-6"	—
h(E)	61	#6	26'-0"	—
h ₁ (E)	61	#6	17'-9"	—
h ₂ (E)	46	#5	26'-0"	—
h ₃ (E)	46	#5	17'-9"	—
h ₄	236	#5	26'-0"	—
h ₅	236	#5	17'-9"	—
h ₆ (E)	12	#6	46'-9"	—
h ₇	6	#5	46'-9"	—
h ₈	54	#4	23'-10"	—
h ₉	54	#4	18'-1"	—
n(E)	100	#7	7'-6"	U
n ₁ (E)	104	#6	4'-10"	U
s(E)	69	#4	5'-11"	U
s ₁ (E)	69	#4	6'-1"	U
s ₂ (E)	92	#5	4'-0"	U
t	204	#6	10'-1"	—
v	62	#5	13'-2"	—
v ₁	120	#6	14'-1"	—
v ₂	180	#5	14'-1"	—
v ₃	120	#6	4'-6"	—
v ₄	180	#5	4'-6"	—
v ₅	8	#5	7'-6"	—
v ₆	8	#5	14'-10"	—
v ₇	100	#6	8'-10"	—
v ₈	26	#4	4'-8"	—
v ₉	26	#4	6'-8"	—
v ₁₀	26	#4	8'-8"	—
v ₁₁	26	#4	10'-4"	—
v ₁₂	12	#4	29'-8"	—
v ₁₃ (E)	92	#4	3'-4"	—
w	28	#5	23'-10"	—
w ₁	28	#5	18'-1"	—
Reinforcement Bars	Pound		39120	
Reinforcement Bars, Epoxy Coated	Pound		23000	
Concrete Box Culverts	Cu. Yd.		380.5	
Bar Splicers	Each		343	



PLOT DATE = 10/16/2008
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 USER NAME = stuf131m

ILLINOIS DEPARTMENT OF TRANSPORTATION

SHEET TITLE: CULVERT DETAILS

PROJECT: US 36 OVER HACKETT BRANCH
FAP RTE 323 SECTION 145 BR-1
DOUGLAS COUNTY
STATION 150+50
STRUCTURE NUMBER 021-2026

PROJECT NO. 03020
SCALE: 06/05/07
DRAWN BY: TFG
CHECKED BY: CME/KS/MCB
DRAWING NO. 7

COOMBE-BLOXDORF P.C.
Engineers / Land Surveyors
Springfield, Illinois
Design Firm License No. 184-002708

OF 10 SHTS

Contract #70393

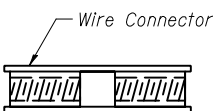
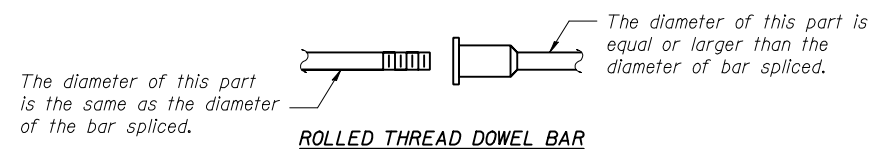
NOTES

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.
Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.
All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.
Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.
Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

- ① Minimum Capacity (Tension in kips) = $1.25 \times f_y \times A_t$
- ② Minimum *Pull-out Strength (Tension in kips) = $0.66 \times f_y \times A_t$

Where f_y = Yield strength of lapped reinforcement bars in ksi.
 A_t = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

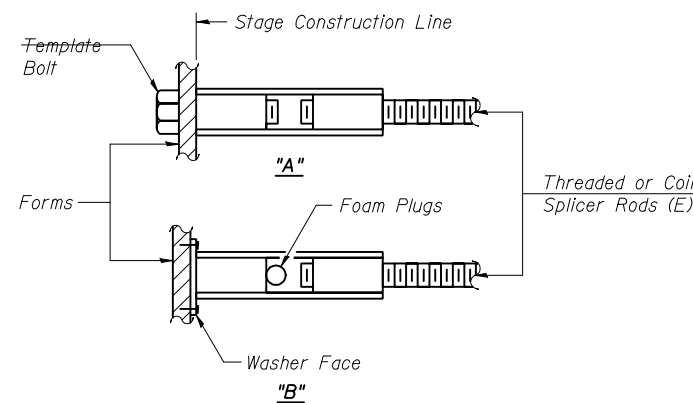
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	7.9
#5	2'-0"	23.0	12.3
#6	2'-7"	33.1	17.4
#7	3'-5"	45.1	23.8
#8	4'-6"	58.9	31.3
#9	5'-9"	75.0	39.6
#10	7'-3"	95.0	50.3
#11	9'-0"	117.4	61.8



WELDED SECTIONS

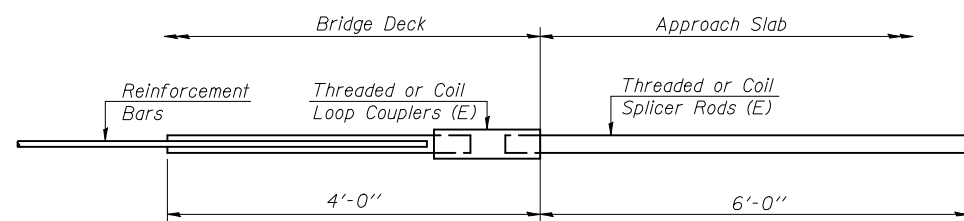
BAR SPLICER ASSEMBLY ALTERNATIVES

** Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.



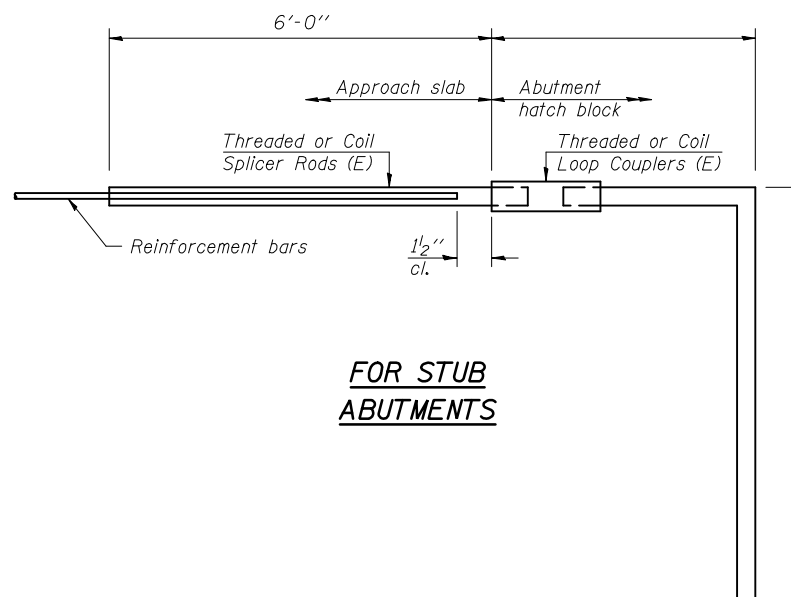
INSTALLATION AND SETTING METHODS

"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.



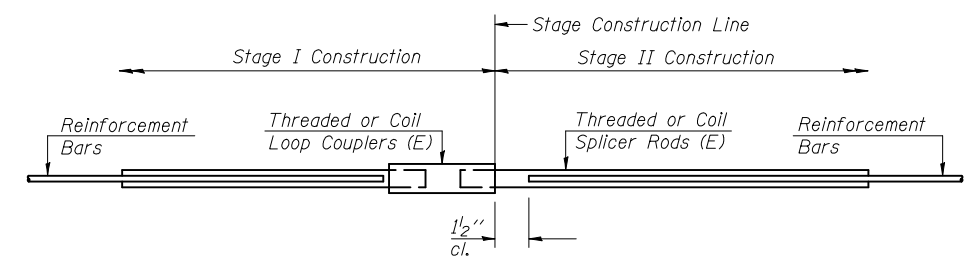
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required =



FOR STUB ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required =



STANDARD

Bar Size	No. Assemblies Required	Location
#5	46	Top Slab (E)
#6	61	Top Slab (E)
#5	92	Bottom Slab
#5	140	Walls
#5	4	Corbels

ILLINOIS DEPARTMENT OF TRANSPORTATION

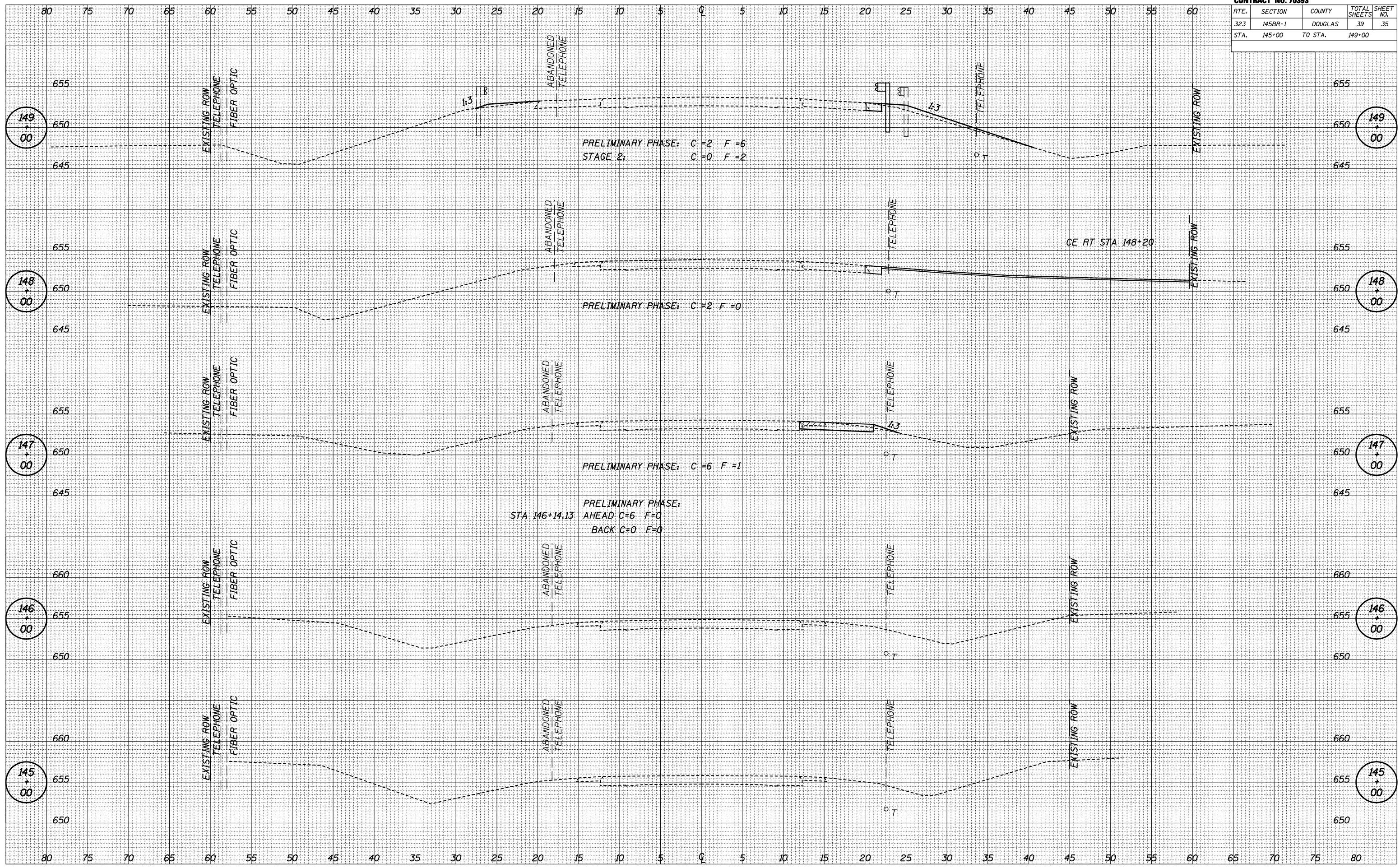
SHEET TITLE	
BAR SPLICER ASSEMBLY DETAILS	
PROJECT	PROJECT NO.
US 36 OVER HACKETT BRANCH FAP RTE 323 SECTION 145 BR-1 DOUGLAS COUNTY STATION 150+50 STRUCTURE NUMBER 021-2026	03020
SCALE	DATE
03/20	06/05/07
DRAWN BY	CHECKED BY
TFG/CFG	CME/KS/MCB
DRAWING NO.	
9	
OF 10 SHTS	

COOMBE-BLOXDORF P.C.
Engineers / Land Surveyors
Springfield, Illinois
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RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
323	145BR-1	DOUGLAS	39	35
STA.	145+00	TO STA.	149+00	

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

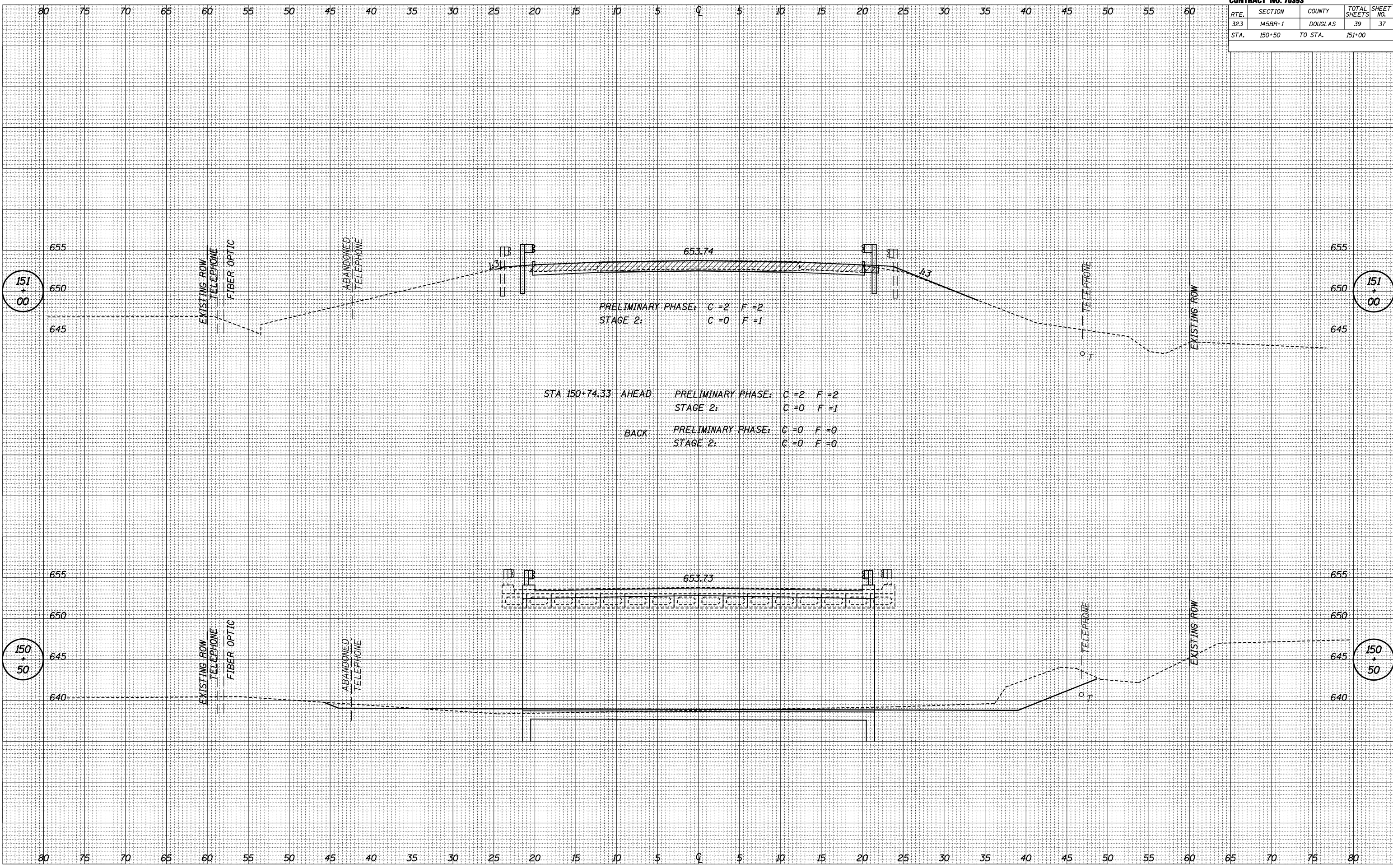
BY	DATE
ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	DATE
	AREAS CHECKED



RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
323	M5BR-1	DOUGLAS	39	37
STA.	150+50	TO STA.	151+00	

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

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



PRELIMINARY PHASE: C = 2 F = 2
 STAGE 2: C = 0 F = 1

STA 150+74.33 AHEAD PRELIMINARY PHASE: C = 2 F = 2
 STAGE 2: C = 0 F = 1
 BACK PRELIMINARY PHASE: C = 0 F = 0
 STAGE 2: C = 0 F = 0

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
323	M5BR-1	DOUGLAS	39	38
STA.	151+50	TO STA.	153+00	

BY: _____ DATE: _____

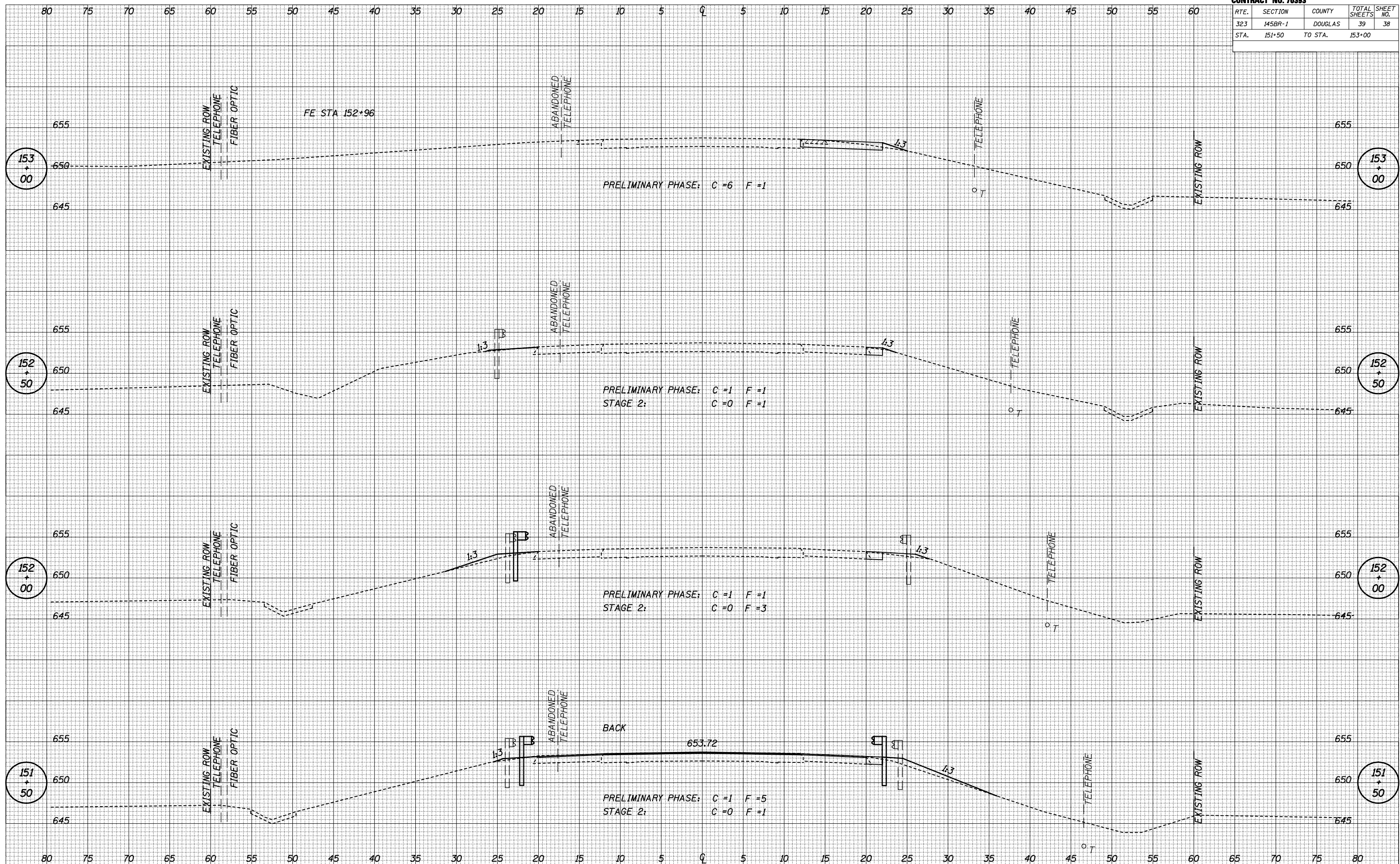
FINAL SURVEY SURVEYED _____
 SURVEY PLOTTED _____
 NOTE BOOK _____
 NO. _____

AREAS CHECKED: _____

BY: _____ DATE: _____

ORIGINAL SURVEY SURVEYED _____
 SURVEY PLOTTED _____
 NOTE BOOK _____
 NO. _____

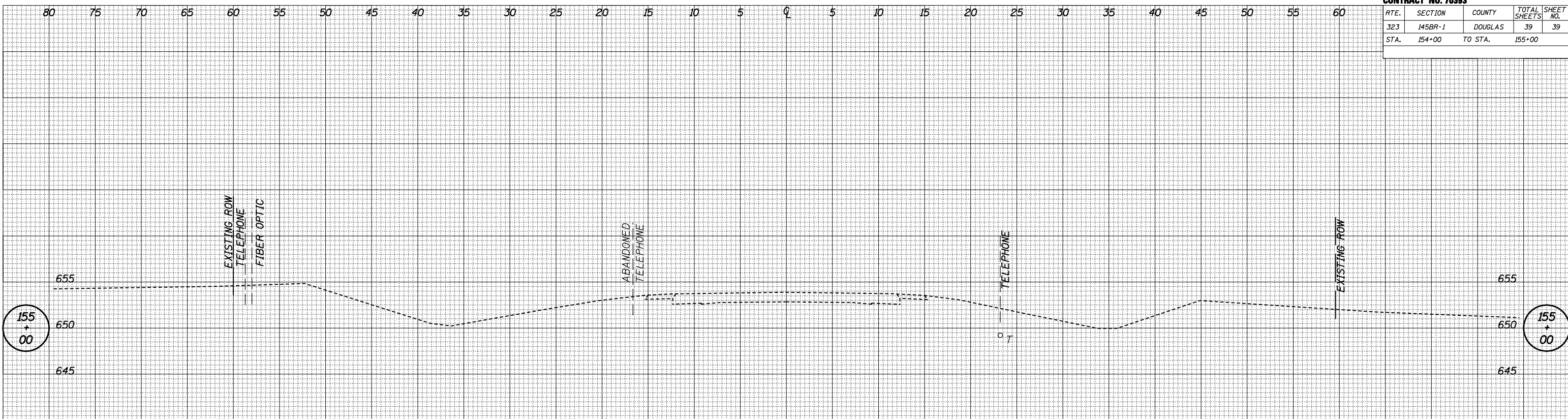
AREAS CHECKED: _____



RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
323	145BR-1	DOUGLAS	39	39
STA.	154+00	TO STA.	155+00	

BY	DATE

FINAL SURVEY	SURVEYED	PLOTTED	DATE	NO.



BY	DATE

ORIGINAL SURVEY	SURVEYED	PLOTTED	DATE	NO.

