R.E. - JAMES M. SULLIVAN

CHECKED 1-8-82 JPC

AS BUILT

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
710 & 741	6	MACON & PIATT	38	1
F.A.P.N. RTE.	ILLINOIS	PROJECT		

* F.A. 710 - (48Z-2 & 3, 50Z-2 & 3) RS-2
F.A. 741 - 11RS-1, (10,12) RS-2

P-95-054-79

FOR INDEX OF SHEETS, SEE SHEET NO. 12

FOR SUMMARY OF QUANTITIES, SEE SHEET NO. 13 & 14

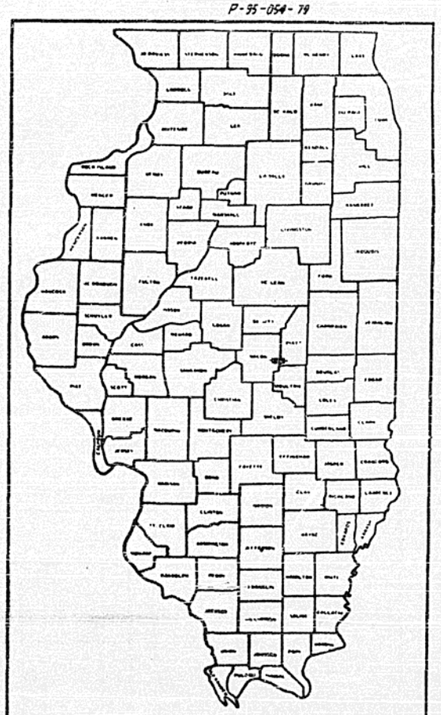
AS BUILT PLANS FOR PROPOSED FEDERAL AID HIGHWAY

F.A. ROUTE 710, SECTION (48Z-2 & 3, 50Z-2 & 3) RS-2, PROJECT F-710(3)
F.A. ROUTE 741, SECTION 11RS-1, (10,12) RS-2, PROJECT F-741(5)
MACON & PIATT COUNTIES

C-95-184-79

MILLING & RESURFACING PROJECT

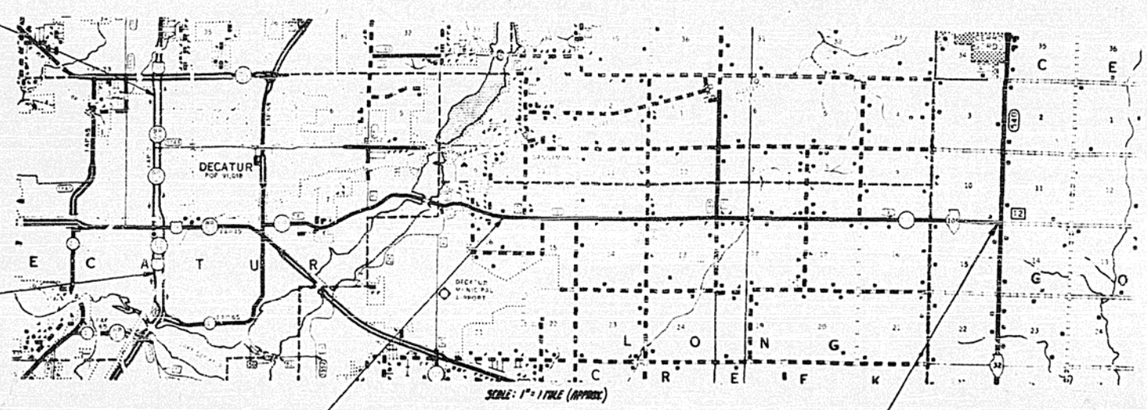
C-95-012-80



LOCATION OF SECTION INDICATED THUS: —

SECTION (48Z-2 & 3, 50Z-2 & 3) RS-2 AND PROJECT F-710 (3) ENDS STATION 358+62.00

SECTION (48Z-2 & 3, 50Z-2 & 3) RS-2 AND PROJECT F-710 (3) BEGINS STATION 200+09.40



SECTION 11RS-1, (10,12) RS-2 AND PROJECT F-741 (5) BEGINS STATION 163+53

SECTION 11RS-1, (10,12) RS-2 AND PROJECT F-741 (5) ENDS STATION 530+21.65

N

TOTAL LENGTH OF SECTION AND PROJECT ON F.A.P. ROUTE 710 = 12,401.5 LIN. FT. = 2.349 MILES
NET LENGTH OF SECTION AND PROJECT ON F.A.P. ROUTE 710 = 12,381.5 LIN. FT. = 2.345 MILES

TOTAL LENGTH OF SECTION AND PROJECT ON F.A.P. ROUTE 741 = 36,730.65 LIN. FT. = 6.958 MILES
NET LENGTH OF SECTION AND PROJECT ON F.A.P. ROUTE 741 = 36,730.65 LIN. FT. = 6.958 MILES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED _____ 19____

RECOMMENDED Aug 28 1979 — DISTRICT ENGINEER — R. H. Wolan

PASSED Aug 28 1979 — ENGINEER OF PLANS AND CONTRACTS

ENGINEER OF DESIGN — Thomas R. Bryant

APPROVED Aug 28 1979 — DIRECTOR DIVISION OF HIGHWAYS — Earl J. Rosenberg

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED

DIVISION ADMINISTRATOR — DATE

CONTRACT NO. 34029

Revised Set 9-7-79

MACON & PIATT COUNTY SECTION * F.A. ROUTES 710 & 741
* F.A.P. 710 - (48Z-2 & 3, 50Z-2 & 3) RS-2
F.A.P. 741 - 11RS-1, (10,12) RS-2

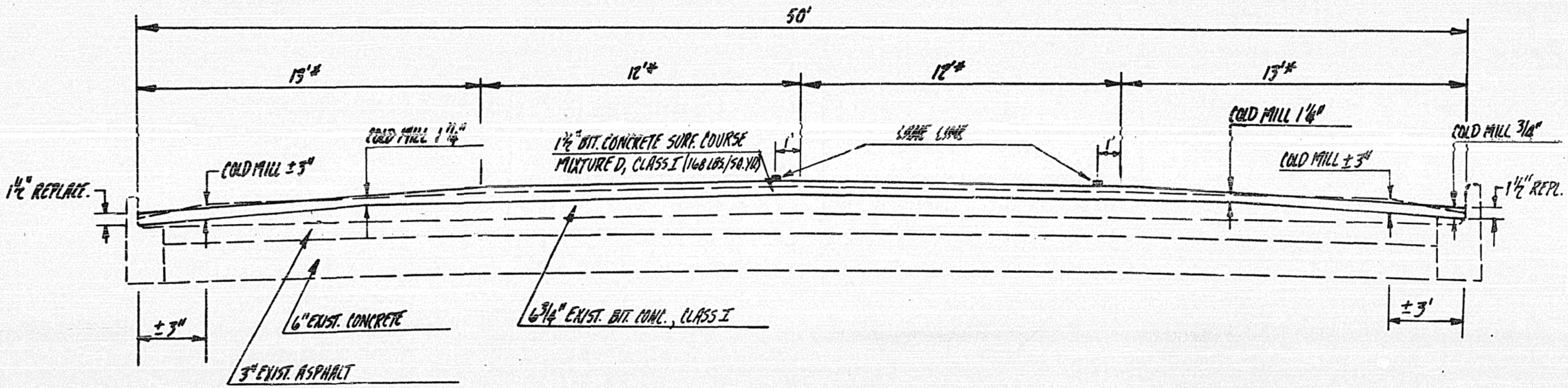
ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F.A.P. 710 & 741	*	MACON & PIATT	38	2

*F.A.P. 710 - (48Z-2&3, 50Z-2&3)RS-2
F.A.P. 741 - 11RS-1, (10-12)RS-2

TYPICAL CROSS SECTION

(1)

MACON ST. TO PRAIRIE AVE. & NORTH ST. TO ELDORADO
STA. 200+09 TO 213+75 & STA. 221+60 TO 225+62
F.A.P. ROUTE 710 (U.S. 51 SOUTHBOUND)



*TYPICAL REPLACEMENT WIDTH IS ONLY SUGGESTED WIDTHS SO THAT A SLOPE MAY BE MAINTAINED. OTHER WIDTHS MAY BE USED.

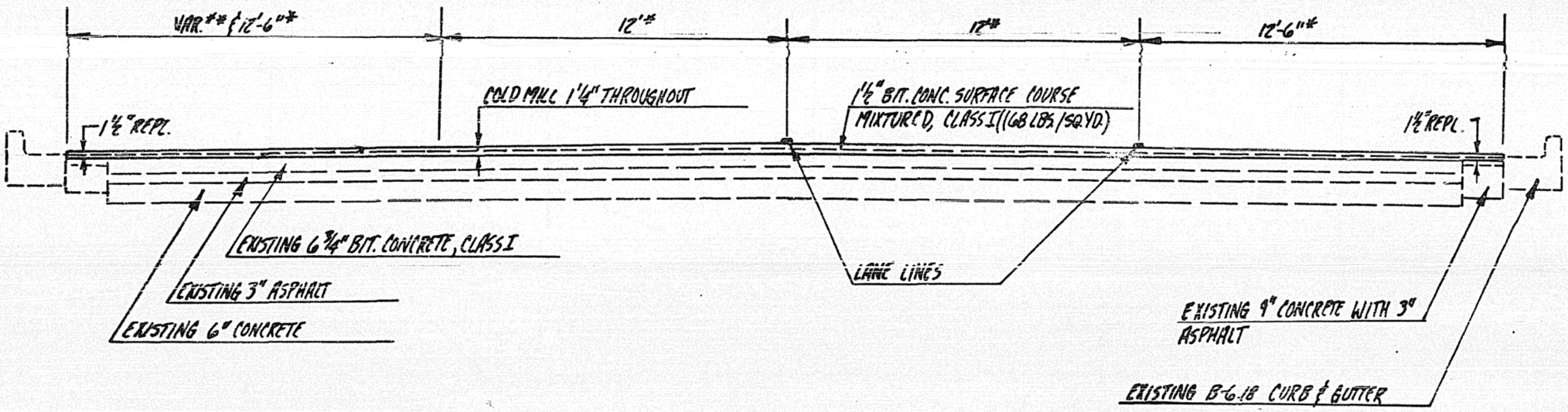
BRUNING 44-131 37565

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F.A.P. 710 & 741	*	MACON & PIATT	38	3

* F.A.P. 710- (48Z-2&3, 50Z-2&3) RS-2
F.A.P. 741- 11RS-1 (10,12) RS-2

TYPICAL CROSS SECTION (2)

PRAIRIE AVE. TO NORTH ST.
STA. 213+75 TO 221+60
F.A.P. 710 (U.S. 51 SOUTHBOUND)



*TYPICAL REPLACEMENT WIDTH IS ONLY SUGGESTED WIDTHS SO THAT A SLOPE MAY BE MAINTAINED. OTHER WIDTHS MAY BE USED.

**WIDTH VARIES DUE TO CITY CURB & GUTTER REHABILITATION PROJECT. SEE PLAN SHEETS.

BRUNING 44-131 37565

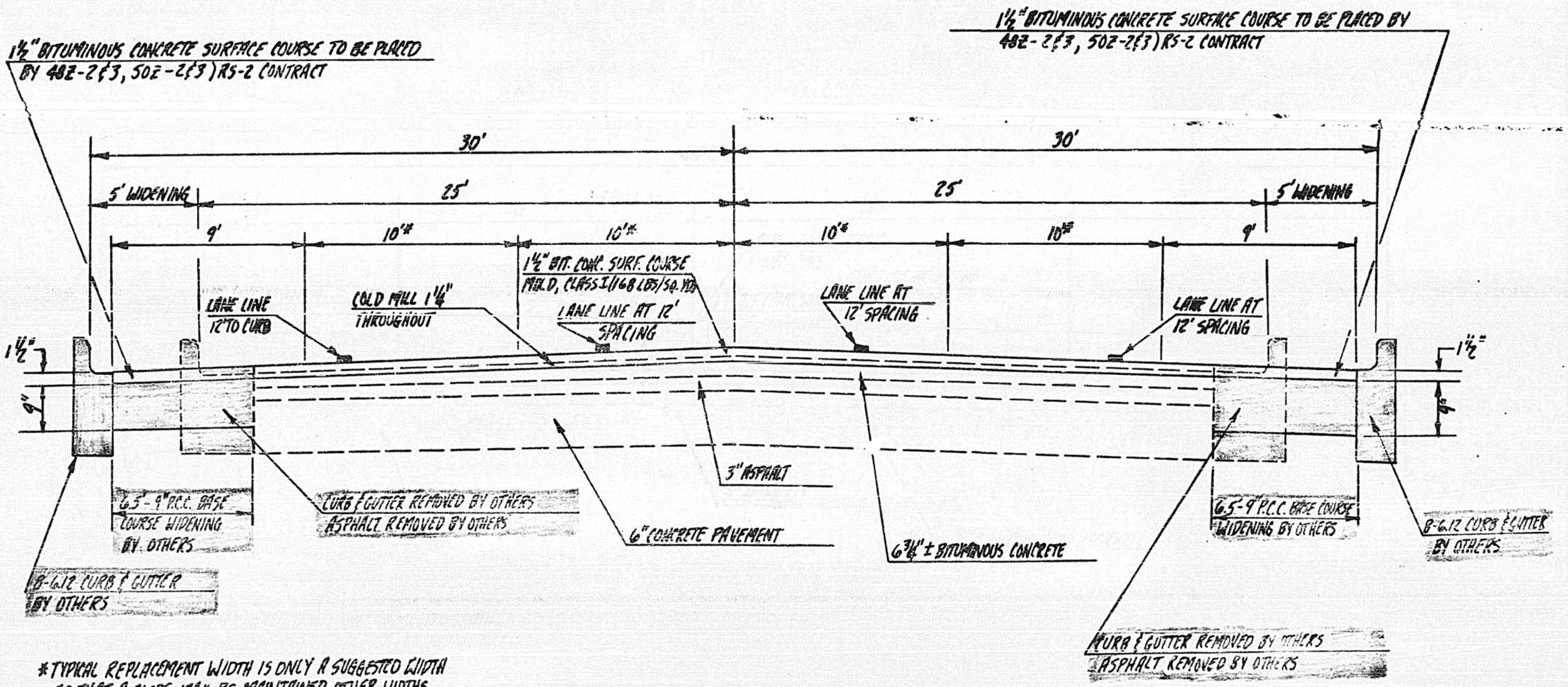
ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F.A.P. 710 & 741	*	MACON & PIATT	38	4

TYPICAL CROSS SECTION

3

ELDORADO ST. TO CERRO GORDO ST.
STA. 225+62 TO STA. 229+71
F.A.P. ROUTE 710 (U.S. 51 SOUTHBOUND)

*F.A.P. 710 - (48Z-2&3, 50Z-2&3) RS-2
F.A.P. 741 - 11RS-1, (10,12) RS-2



*TYPICAL REPLACEMENT WIDTH IS ONLY A SUGGESTED WIDTH SO THAT A SLOPE MAY BE MAINTAINED. OTHER WIDTHS MAY BE USED.

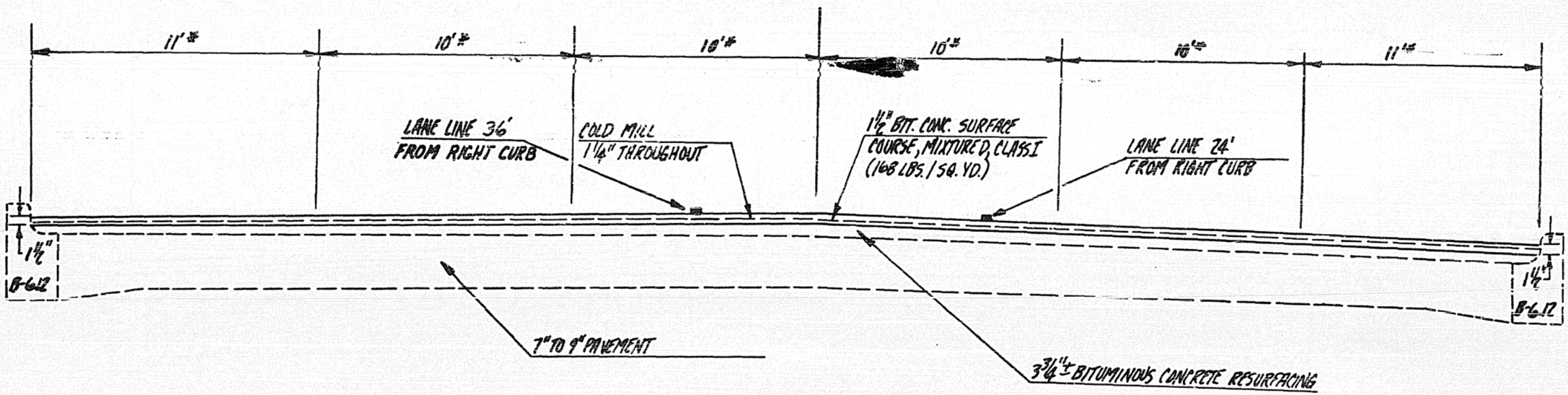
BRUNING 44-131 37565

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F.A.P. 710 & 741	*	MACON & PIATT	38	5

TYPICAL CROSS SECTION (4)

SOUTH OF GREEN ST. TO CERRO GORDO ST.
STA. 229+71 TO 235+92
F.A.P. ROUTE 710 (U.S. 51 SOUTHBOUND)

* F.A.P. 710 - (48 Z-2(S), 50 Z-2(S)) RS-2
F.A.P. 741 - 11 RS-1, (10-12) RS-2



*TYPICAL REPLACEMENT WIDTH IS ONLY SUGGESTED WIDTH SO THAT A SLOPE MAY BE MAINTAINED. OTHER WIDTHS MAY BE USED.

WIDTH THROUGH SUBWAY IS 41'
STATION 231+49 ~ 232+56

CHECKED

BRUNING 44-131 37565

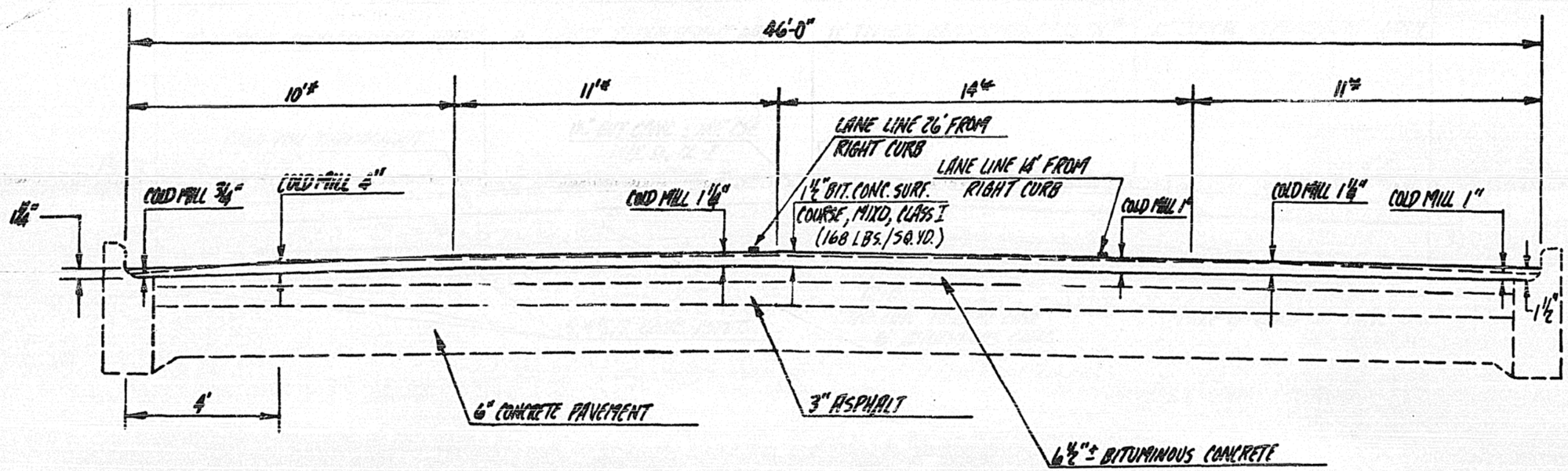
ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F.A.P. 710 & 741	*	MACON & PIATT	38	6

TYPICAL CROSS SECTION

(5)

GREEN ST. TO SOUTH OF GRAND
STA. 235+92 TO STA. 257+28.09
F.A.P. ROUTE 710 (U.S. 51 SOUTHBOUND)

* F.A.P. 710 - (48Z-2(3), 50Z-2(3) RS-2
F.A.P. 741 - 11RS4 (10,12) RS-2



*TYPICAL REPLACEMENT WIDTH IS ONLY SUGGESTED WIDTHS SO THAT A SLOPE MAY BE MAINTAINED. OTHER WIDTHS MAY BE USED.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 710 & 741	*	MACON & PIATT	38	7

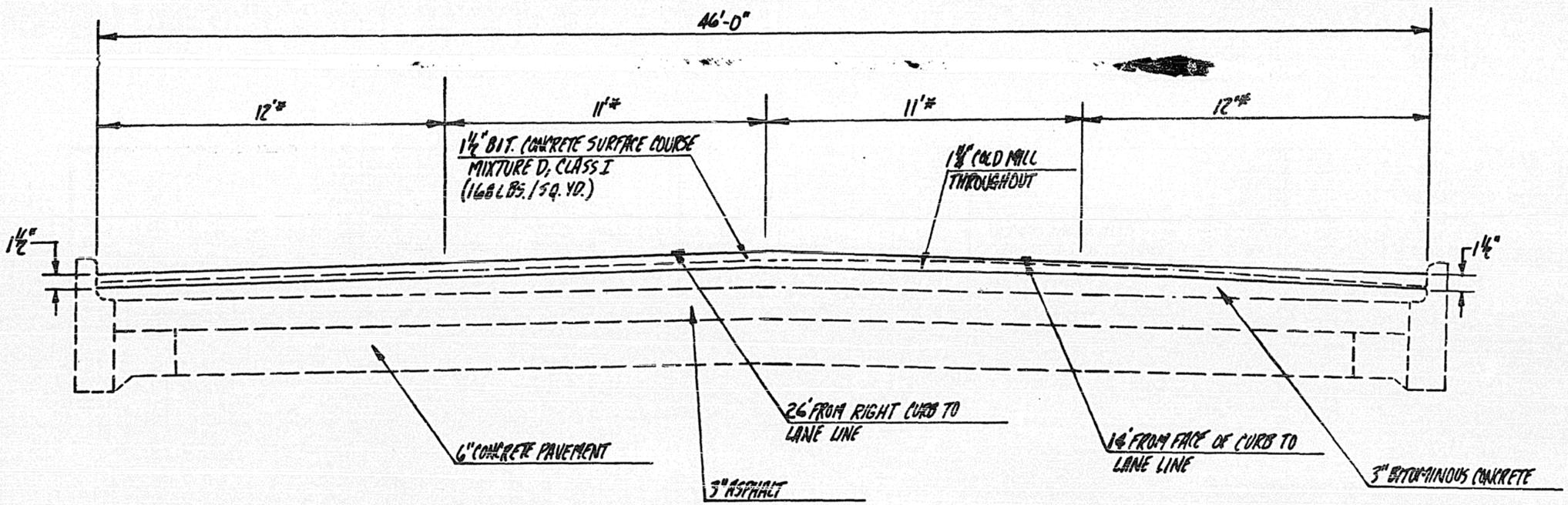
TYPICAL CROSS SECTION

(6)

SOUTH OF GRAND TO SOUTH OF I.C.G. RAILROAD
STA. 261+76.28 TO 262+63 & STA. 265+90 TO 269+97.10
STA. 300+00 TO 315+09
F.A.P. ROUTE 710 (U.S. 51 SOUTHBOUND)

(STATION EQUATION: 269+97.10 = 300+00)

* F.A.P. 710 - (48Z-2&3, 50Z-2&3) RS-2
F.A.P. 741 - 11RS-1, (10,12) RS-2



*TYPICAL REPLACEMENT WIDTH IS ONLY SUGGESTED WIDTH
SO THAT A SLOPE MAY BE MAINTAINED
OTHER WIDTHS MAY BE USED.

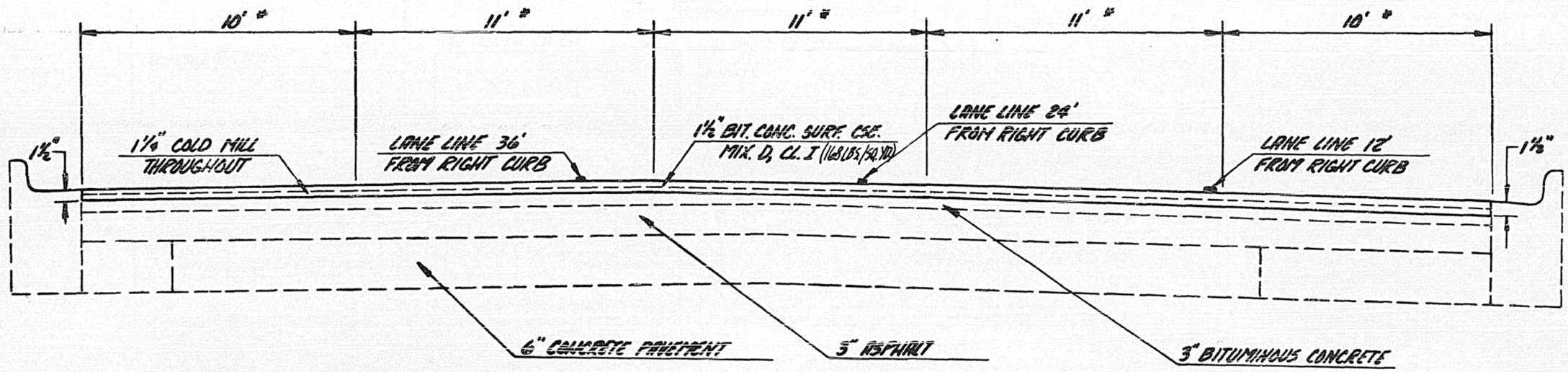
ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F.A.P. 710 & 741	*	MACON & PIATT	38	8

*F.A.P. 710 - (482-2&3, 502-2&3) RS-2
F.A.P. 741 - 11RS-1 (10,12) RS-2

TYPICAL CROSS SECTION

GRAND AVE. INTERSECTION (NORTH)
STA. 262+63 TO STA. 265+90
F.A.P. ROUTE 710 (U.S. 51 SOUTHBOUND)

7



*TYPICAL REPLACEMENT WIDTH, IS ONLY SUGGESTED WIDTHS SO THAT A SLOPE MAY BE MAINTAINED. OTHER WIDTHS MAY BE USED.

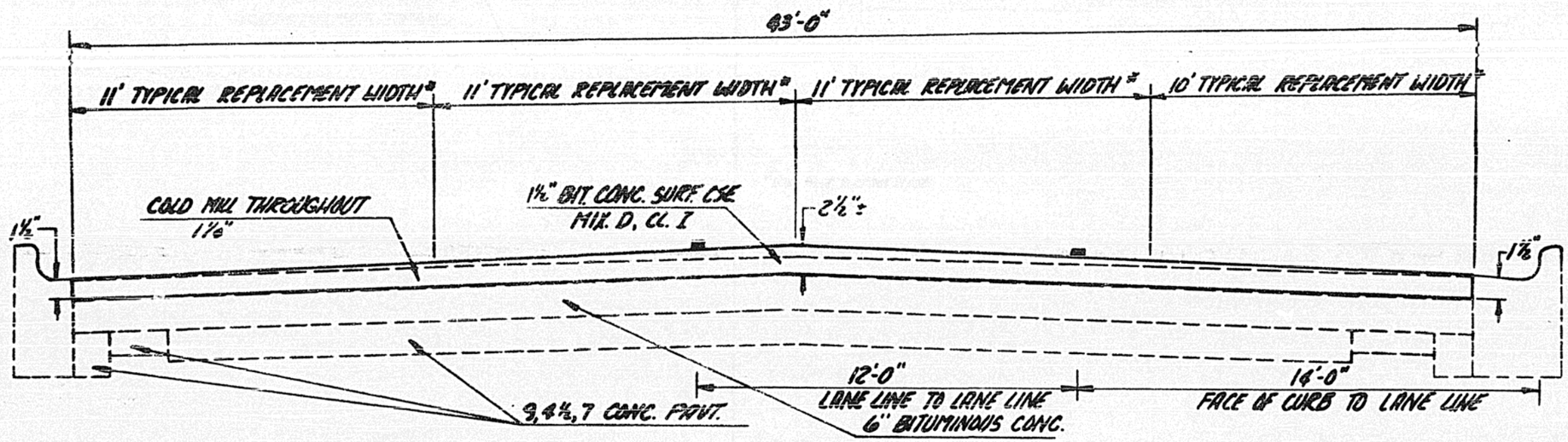
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A. *	*	MACON & PIATT	38	9

*F.A.P. ROUTE 710 SEC. (402-2(3,502-2(3)RS-2
*F.A.P. ROUTE 741 SEC. 11RS-1 (10,12)RS-2

TYPICAL CROSS SECTION

(8)

SOUTH OF ILL. CENTRAL GULF RAILROAD
TO GARFIELD AVE.
STA. 315+09 TO STA. 320+50



*TYPICAL REPLACEMENT WIDTH IS ONLY SUGGESTED WIDTHS SO THAT A SLOPE MAY BE MAINTAINED. OTHER WIDTHS MAY BE USED.

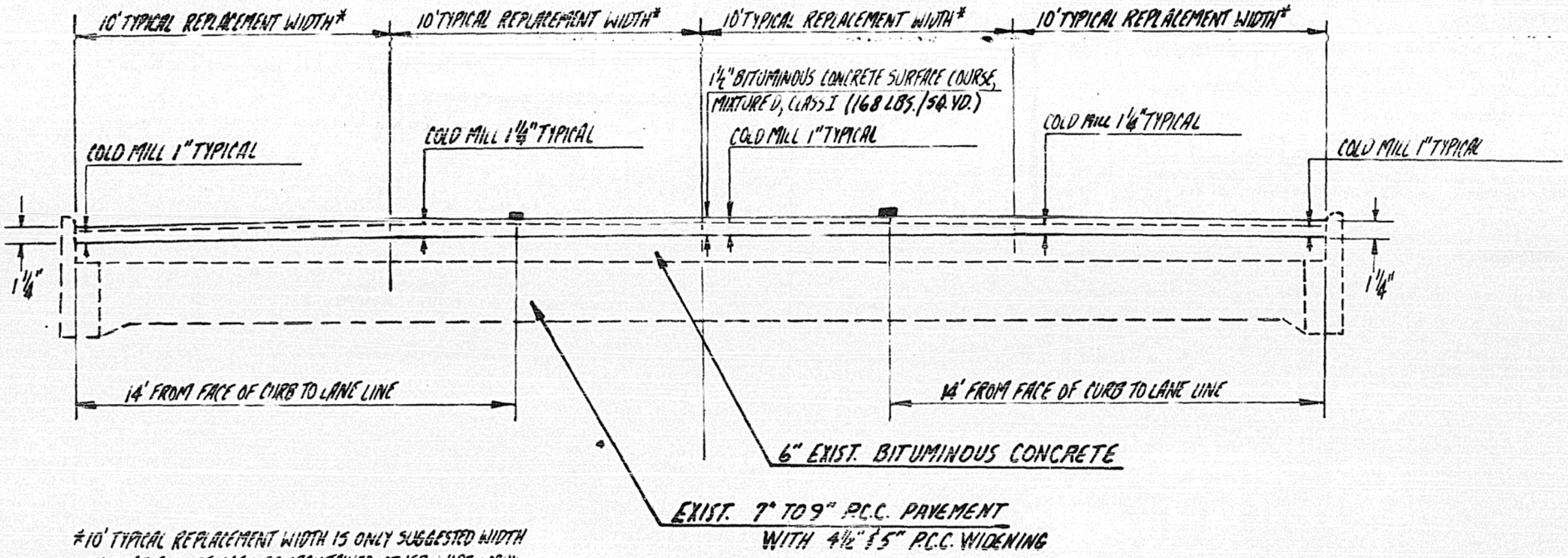
ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F.A.P. 710 & 741	*	MACON & PIATT	38	10

* F.A.P. 710-(482-2&3, 502-2&3)RS-2
F.A.P. 741-11RS-1, (10,12)RS-2

TYPICAL CROSS SECTION

NORTH OF GARFIELD AVE. TO NORTH OF DAMON ST.
STA. 320+50 TO STA. 358+25
F.A.P. ROUTE 710 (U.S. 51 SOUTHBOUND)

9



*10' TYPICAL REPLACEMENT WIDTH IS ONLY SUGGESTED WIDTH SO THAT A SLOPE MAY BE MAINTAINED. OTHER WIDTH MAY BE USED.

DETAILED
CHECKED

BRUNING 44-131 37565

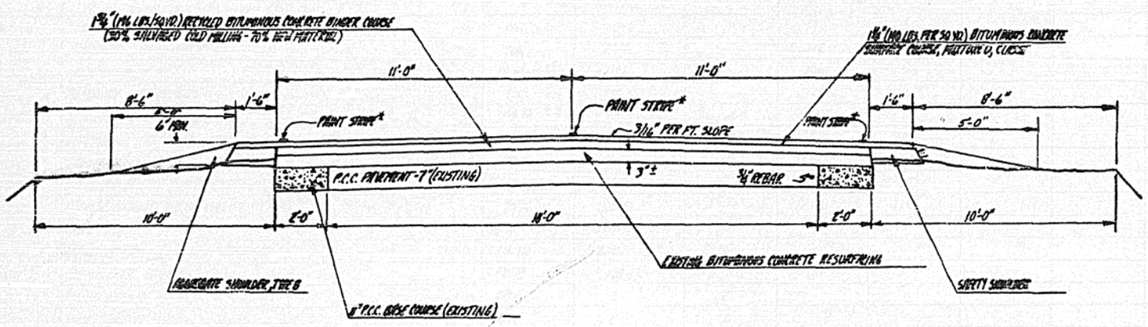
ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F.A.P. 710 & 741	*	PARKE & PATT	38	11

* F.A.P. 710 - (482-2(3), 502-2(3) RS-2
F.A.P. 741 - 11RS-1, (15,17) RS-2

TYPICAL CROSS SECTION FOR F.A.P. ROUTE 741

STA. 163+53 TO STA. 171+15
STA. 179+76 TO STA. 182+19
STA. 201+00 TO STA. 303+00
STA. 317+00 TO STA. 335+00
STA. 401+00 TO STA. 410+00

(1)

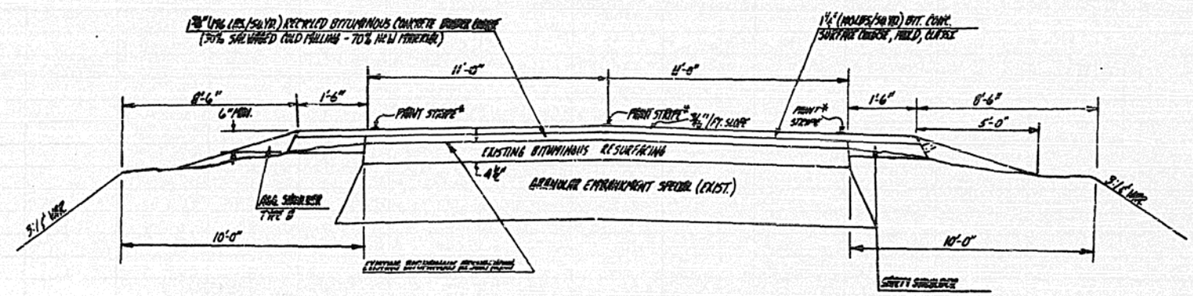


*PAINT STRIPE TO BE DONE BY OTHERS

TYPICAL CROSS SECTION FOR F.A.P. ROUTE 741

STA. 171+15 TO STA. 179+76
STA. 182+19 TO STA. 188+92

(2)

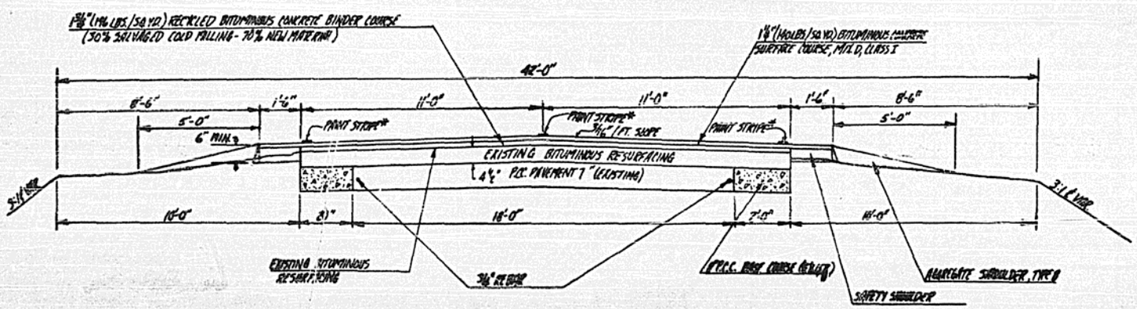


*PAINT STRIPE TO BE DONE BY OTHERS

TYPICAL CROSS SECTION FOR F.A.P. ROUTE 741

STA. 188+92 TO STA. 201+00
STA. 303+00 TO STA. 317+00
STA. 362+64 TO STA. 401+00
STA. 410+00 TO STA. 530+91.65

(3)

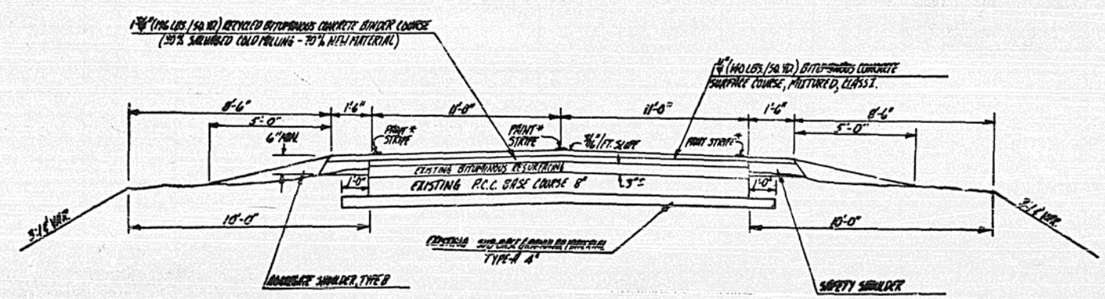


*PAINT STRIPE TO BE DONE BY OTHERS

TYPICAL CROSS SECTION FOR F.A.P. ROUTE 741

STA. 335+00 TO STA. 349+12.88 (BRIDGE)
(BRIDGE) STA. 349+46.13 TO STA. 362+64

(4)



*PAINT STRIPE TO BE DONE BY OTHERS

DRAWING 6A-131 2005-05-4

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	MACON & PIATT		

*FAP 710 **(48Z-2&3,50Z-2&3)RS-2
FAP 741 11RS-1,(10,12)RS-2

GENERAL NOTES

PAVEMENT MARKING TAPE SHALL BE APPLIED TO THE BITUMINOUS MATERIALS (PRIME COAT) AND EACH SUBSEQUENT LIFT OF BITUMINOUS CONCRETE RESURFACING TO DELINEATE THE CENTERLINE ON F.A.P. ROUTE 741 (1509 LIN.FT. YELLOW MARKING TAPE) AS DIRECTED BY THE ENGINEER. PAVEMENT MARKING TAPE SHALL BE APPLIED AFTER COLD-MILLING AND RESURFACING ON F.A.P. ROUTE 710 TO DELINEATE LANE LINES. DOUBLE YELLOW SKIP DASH MARKING SHALL BE USED TO MARK THE CENTER LINE OF ELDORADO STREET. ALSO THE ISLAND ON ELDORADO SHALL BE MARKED WITH YELLOW MARKING TAPE (1,094 LIN.FT. WHITE AND 224 LIN.FT. YELLOW MARKING TAPE).

ESTIMATED QUANTITIES:

2,827 LIN.FT. PAVEMENT MARKING TAPE

THE EXCAVATION RESULTING FROM COMBINATION CURB AND GUTTER REMOVAL AT OAKLEY ROAD SHALL BE FILLED WITH AGGREGATE, CONFORMING TO THE SPECIFICATIONS OF SHOULDER STONE. THE STONE WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER TON OF AGGREGATE SHOULDERS, TYPE B.

QUANTITIES HAVE BEEN INCLUDED IN THE PLANS FOR 22 MAILBOX TURNOUTS ON F.A.P. ROUTE 741. THE ACTUAL NUMBER OF MAILBOX TURNOUTS WILL BE DETERMINED BY THE ENGINEER.

ESTIMATED QUANTITIES:

165	GALLONS	BITUMINOUS MATERIAL (PRIME COAT)
112	TONS	BITUMINOUS BINDER SPECIAL (HOT MIX RECYCLING)
50	TONS	BITUMINOUS CONCRETE SURFACE COURSE, MIXTURE D, CLASS I

THE CROSS SLOPE OF THE FINISHED GRADE ON F.A.P. ROUTE 710 SHALL BE SIMILAR TO THE EXISTING CROWN TO MAINTAIN SUITABLE CROSS DRAINAGE

AT THE LIMITS OF COLD MILLING ON SIDE STREETS ON F.A.P. ROUTE 710, A SAW CUT SHALL BE MADE OR A SMALL MILLING MACHINE SHALL BE USED TRANVERSELY TO INSURE THAT A NEAT BUTT JOINT WILL BE MADE WITH THE EXISTING AND PROPOSED SURFACES.

THERE IS A TOTAL OF 31 PRIVATE AND COMMERCIAL ENTRANCES - 1,516 SQ.YDS., 52 FIELD ENTRANCES - 870 SQ.YDS., 13 SIDE ROADS - 2,373 SQ.YDS. ON FAP ROUTE 741.

ESTIMATED QUANTITIES:

1,665	GALLONS	BITUMINOUS MATERIALS (PRIME COAT)
432	TONS	BITUMINOUS BINDER SPECIAL (HOT MIX RECYCLING)
500	TONS	BITUMINOUS CONCRETE SURFACE COURSE MIXTURE D, CLASS I

THE QUANTITY OF BITUMINOUS CONCRETE RESURFACING ON THE MAINLINE OF FAP 741 (ILL. ROUTE 105) IS APPROXIMATELY 103,311 SQ.YDS.

ESTIMATED QUANTITIES:

9,445	GALLONS	BITUMINOUS MATERIALS (PRIME COAT)
13,351	TONS	BITUMINOUS BINDER SPECIAL (HOT MIX RECYCLING)
7,609	TONS	BITUMINOUS CONCRETE SURFACE COURSE, MIXTURE D, CLASS I

THE QUANTITY OF COLD MILLING TO BE DONE ON THE MAINLINE OF FAP ROUTE 710 (U.S. 51 SOUTHBOUND) IS 62,636 SQ.YDS COLD MILLING ON ELDORADO STREET 2,951 SQ.YDS. ON ALL OTHER SIDE STREETS 3,418 SQ.YD.

ESTIMATED QUANTITY:

69,005 SQ.YD. COLD-MILLING

QUANTITIES HAVE BEEN INCLUDED TO MARK PARKING DELINEATION LINES WITH THERMOPLASTIC PAVEMENT MARKING-LINE 4" AND PAINT PAVEMENT MARKING-LINE 4" ON F.A.P. ROUTE 710. FOR ACTUAL LAYOUT OF PARKING DELINEATION, CONSULT THE CITY ENGINEER. PARKING AREAS SHALL BE MARKED FROM MACON STREET TO GREEN STREET.

NOTE: DRIVEWAYS ON THE EAST SIDE OF RTE. 51 FROM GRAND ST. TO NORTH ST. RECEIVED A PARTIAL OVERLAY TO ELEMINATE STANDING WATER CAUSED BY THE ADDITION OF 1½" OF SURFACE COURSE @ E.O.P..

REPLACED EXISTING STORM SEWER AT THE SUBWAY ON RTE. 51 FROM THE MANHOLE ON ℄ TO THE RT. EDGE OF PAVEMENT. (15" CLASS IV R.C.C.P. STORM SEWER USED)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DISTRICT FIVE

REVIEWED BY: A. W. Mattes
DISTRICT ENGINEER OF DESIGN

DATE: 7/17/79

EXAMINED BY: Charles R. Patton
DISTRICT ENGINEER OF CONST.

Ronald F. Johnson
DISTRICT ENGINEER OF MAINT.

J. D. Benson
DISTRICT ENGINEER OF PLANNING

P. L. Engelbrecht
DISTRICT ENGINEER OF TRAFFIC

BUREAU 44-131 37139

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 710	**	MACON & PIATT	38	12

*FAP 710 - ** (48Z-2&3, 50Z-2&3) RS-2
FAP 741 - 11RS-1, (10,12) RS-2

INDEX OF SHEETS

THE FOLLOWING STANDARDS ARE A PART OF THESE PLANS AND ARE INCLUDED AFTER SHEET NO. 38

STANDARD NO.	DESCRIPTION
2116-2	P.C.C. PATCHING DETAILS
2117-1	BITUMINOUS PATCHING DETAILS
2371	MAILBOX TURNOUT
2230-13	STEEL PLATE BEAM GUARD RAIL
2239-6	WIDENING AND SHOULDERS FOR PAVEMENT RESURFACING
2298-4	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
2299-7	DESIGN OF TRAFFIC CONTROL DEVICES
2300-1	FLAGMAN TRAFFIC CONTROL SIGN
2301-3	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
2302-3	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
2303-4	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
2304-4	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
2305-3	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
2307-4	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
2309-3	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
2312-5	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
2326-2	TRAFFIC BARRIER TERMINAL TYPE 10
2336-1	TRAFFIC BARRIER TERMINAL TYPE 1 AND 1A
2371	DETAILS FOR MOUNTING TRAFFIC SIGNALS
2374	DETAILS OF STEEL MAST ARM ASSEMBLY AND POLE
2378	DETAILS OF CONCRETE FOUNDATIONS
2381	EROSION CONTROL

BUREAU 44-131 37139

SUMMARY OF QUANTITIES

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
* * * *	*	MACON & PIATT	38	13

*F.A.P. ROUTE 710 - SEC. (482-2,3, 502-2,3) RS-2
*F.A.P. ROUTE 741 - SEC. 11RS-1 (10,12) RS-2

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	STA. 200+09.40 TO STA. 358+62 (MACON CO.) (URBAN)	STA. 163+53 TO STA. 484+00 (MACON CO.) (RURAL)	STA. 484+00 TO STA. 531+56.65 (PIATT CO.) (RURAL)	STA. 200+09.40 TO STA. 358+62 (MACON CO.) (URBAN)	STA. 163+53 TO STA. 484+00 (MACON CO.) (RURAL)	STA. 484+00 TO STA. 531+56.65 (PIATT CO.) (RURAL)	STA. 200+09.40 TO STA. 358+62 (MACON CO.) (URBAN)
				CONSTRUCTION TYPE CODE						
				6706	6706	6706	6706	6706	6706	1031
202006	EXCAVATING AND GRADING EXISTING SHOULDER	UNIT	~~691~~ 734		596	95				
215011	AGGREGATE SHOULDERS, TYPE B	TON	~~5810~~ 6409		5112	698				
307001	PREPARATION OF BASE	SQ. YD.	~~3191~~ 2755		3046	145				
307002	AGGREGATE BASE REPAIR	TON	~~135~~ 0		129	6				
402007	AGGREGATE SURFACE COURSE, TYPE A 8"	SQ. YD.	~~44~~ 43		44					
406001	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	~~18,520~~ 12,742	7,245	9,920	1355				
406008	AGGREGATE (PRIME COAT)	TON	~~345~~ 220	145	176	24				
406013	BITUMINOUS CONCRETE SURFACE COURSE, MIXTURE D, CLASS I	TON	~~14,245~~ 13,567	6085	7180	980				
X06769	BITUMINOUS BINDER SPECIAL (HOT MIX RECYCLING)	TON	0 [redacted]		12,160	1735				
X06770	COLD MILL	SQ. YD.	69,005	69,005						
X06771	TRANSPORT COLD MILL SALVAGED AGGREGATE	CU. YD.	2396	2396						
30200	[redacted]	POUND	~~170~~ 162		170					
602496	VALVE BOXES 6"	EACH	~~2~~ 7	2						
602497	VALVE BOXES 12"	EACH	~~2~~ 0	2						
602555	MANHOLES TO BE ADJUSTED	EACH	~~10~~ 9	10						
602666	VALVE BOXES TO BE ADJUSTED	EACH	~~20~~ 10	20						
603001	FRAMES AND GRATES TO BE ADJUSTED	EACH	~~18~~ 11	18						
607005	COMBINATION CURB & GUTTER REMOVAL	LIN. FT.	~~141~~ 133		141					
607010	BITUMINOUS CONCRETE SURFACE REMOVAL	SQ. YD.	~~147~~ 147		147					
607022	CURB REMOVAL & REPLACEMENT	LIN. FT.	4		4					
620010	PAVEMENT REMOVAL & REPLACEMENT, TYPE I	SQ. YD.	~~10~~ 5	10						
620011	PAVEMENT REMOVAL & REPLACEMENT, TYPE II	SQ. YD.	~~50~~ 34	50						
620012	PAVEMENT REMOVAL & REPLACEMENT, TYPE III	SQ. YD.	~~200~~ 179	200						
620022	PAVEMENT REMOVAL & BITUMINOUS REPLACEMENT, TYPE I	SQ. YD.	~~432~~ 184		386	46				
620023	PAVEMENT REMOVAL & BITUMINOUS REPLACEMENT, TYPE II	SQ. YD.	~~995~~ 933		924	71				
620024	PAVEMENT REMOVAL & BITUMINOUS REPLACEMENT, TYPE III	SQ. YD.	~~104~~ 36		83	21				
666009	ENGINEER'S FIELD OFFICE, TYPE A	CAL. MO.	4	2	1.8	0.2				
667001	PAVEMENT MARKING TAPE	LIN. FT.	~~7817~~ 7736				1518	1328	181	
668001	TRAFFIC CONTROL & PROTECTION, STANDARD 2312	L.SUM	1		0.9	0.1				
668009	TRAFFIC CONTROL & PROTECTION, STANDARD 2309 (SPECIAL)	EACH	1		1					
668018	TRAFFIC CONTROL & PROTECTION (SPECIAL)	L.SUM	1	1						
X620835	TRAFFIC BARRIER TERMINAL, TYPE 1A	EACH	4		4					
X620836	STEEL PLATE BEAM GUARD RAIL, TYPE B	LIN. FT.	100		100					
X620838	TRAFFIC BARRIER TERMINAL, TYPE 10	EACH	4		4					
Z10167	CONCRETE CURB REPAIR	LIN. FT.	~~50~~ 171	50						
Z10180	DECK SLAB REPAIR (FULL DEPTH)	SQ. YD.	~~9~~ 12		9					
Z10181	DECK SLAB REPAIR (PARTIAL DEPTH)	SQ. YD.	~~40~~ 17		40					
Z10570	WATERPROOFING MEMBRANE SYSTEM	SQ. YD.	~~163~~ 167		163					
* T5201	THERMOPLASTIC PAVEMENT MARKING - LETTERS & SYMBOLS	SQ. FT.	~~1084.2~~ 1,364				1084.2			
* T5101 02	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	LIN. FT.	~~9072~~ 8490				9072			
* T5101 04	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	LIN. FT.	~~2957.5~~ 2150				2957.5			
* T5101 06	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	LIN. FT.	~~709~~ 360				709			
* T5101 07	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	LIN. FT.	~~240~~ 440				240			
* T5201	PAINT PAVEMENT MARKING - LETTERS & SYMBOLS	SQ. FT.	~~1084.2~~ 0				1084.2			
* T5201 02	PAINT PAVEMENT MARKING - LINE 4"	LIN. FT.	9072 992				9072			
* T5201 04	PAINT PAVEMENT MARKING - LINE 6"	LIN. FT.	~~2957.5~~ 0				2957.5			
* T5201 06	PAINT PAVEMENT MARKING - LINE 12"	LIN. FT.	~~709~~ 0				709			
* T5201 07	PAINT PAVEMENT MARKING - LINE 24"	LIN. FT.	~~240~~ 0				240			
* T40053	SIGNAL HEAD, ALUMINUM, 1-FACE, 3 SECTION, MAST ARM MOUNTED	EACH	2							2
* T40501	TRAFFIC SIGNAL BACKPLATE	EACH	2							2
* T40501	12-INCH SIGNAL ADAPTER	EACH	11							11
* T40849	STEEL MAST ARM ASSEMBLY AND POLE, 30 FT.	EACH	2							2
* T42005	GALVANIZED STEEL CONDUIT IN TRENCH 2"	LIN FT.	~~28~~ 29							28
* T42134	ELECTRIC CABLE IN CONDUIT NO. 12 S/C	LIN FT	~~100~~ 30							100
* T42704	CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	LIN FT	16							16
X04748	MOBILIZATION	L.SUM	1	0.5		0.5				

* SPECIALTY ITEMS

SUMMARY OF QUANTITIES

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 710 / F.A.P. 741	*	MACON & PIATT	38	14

F.A.P. ROUTE 710 - SEC. (482-2,13, 502-2,13) R1-2
F.A.P. ROUTE 741 - SEC. (R1F-1,10,12) R5-2

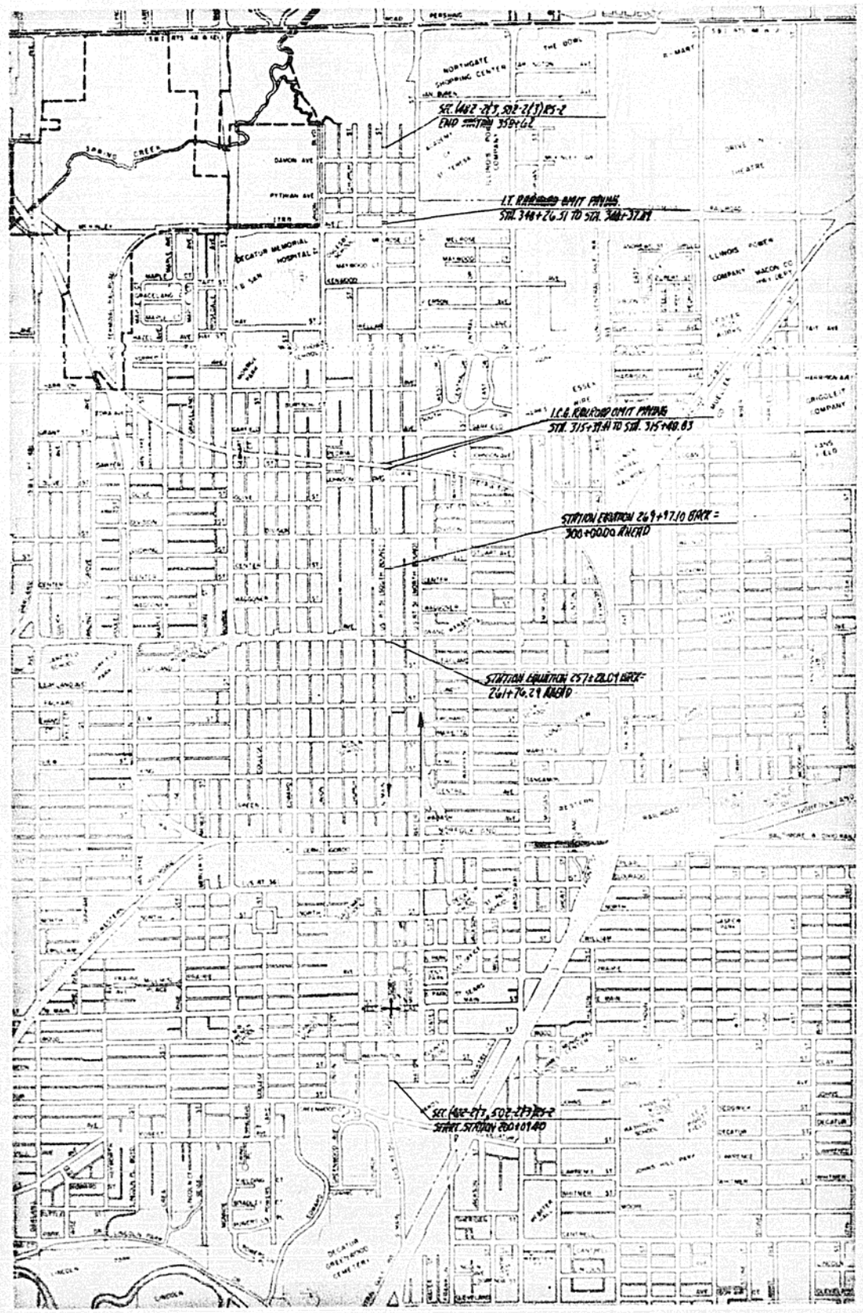
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	STA 200+09.40 TO STA 358+62 (MACON CO.) URBAN	STA 163+53 TO STA 484+00 (MACON CO.) RURAL	STA 484+00 TO STA 531+56.65 (PIATT CO.) RURAL	STA 200+09.40 TO STA 358+62 (MACON CO.) URBAN	STA 163+53 TO STA 484+00 (MACON CO.) RURAL	STA 484+00 TO STA 531+56.65 (PIATT CO.) RURAL	STA 200+09.40 TO STA 358+62 (MACON CO.) URBAN
				CONSTRUCTION TYPE CODE						
				6706	6706	6706	6706	6706	6706	Y031
T42810	DRILL EXISTING HANDHOLE	EACH	2							2
T43001	TRENCH AND BACKFILL	LIN FT	~~16~~ 29							16
T43901	MODIFY EXISTING CONTROLLER	EACH	1							1
T44601	PULL AND REINSTALL ELECTRIC CABLE FROM CONDUIT	LIN FT	~~60~~ 0							60
617046	SIDEWALK REMOVAL AND REPLACEMENT	SQ FT	~~160~~ 162							160
X95390	BIT BIND SPEC (HOT MIX RECYCLE) W/ REJUVENATOR	TON	10,861		10,861					
X95391	BIT BIND SPEC (HOT MIX RECYCLE) W/O REJUVENATOR	TON	782		[redacted]	782				
X95411	BIT BIND CSE (TYPE A)	TON	1,165		1,165					
X95412	BIT BIND CSE (TYPE A)	TON	837			837				
X95410	LEVEL BINDER	TON	15	15						
FRC005	POTHOLE & JT FILLING	DOL	9,017.00							
FRC006	DRIVEWAY OVERLAY	DOL	3,108.09							
FRC007	GUTTER RESHAPING	DOL	[redacted]							
FRC008	STORM SEWER REPLACEMENT	DOL	1,088.78							
FRC009	BIT CONC SURF REM	DOL	418.18							
FRC010	WORK ZONE TRAFFIC CONTROL	DOL	4,563.77							
FRC011	EMBANKMENT SPECIAL	DOL	1,959.88							
FRC012	COLD MILLING	DOL	416.19							
046916	SURFACE VARIATIONS	DOL	-212.45							

* SPECIALTY ITEMS

LIMITS OF COLD MILLING
F.A.P. ROUTE 710 SOUTHBOUND

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. P.A. #	#	MACON & MATT	38	15

*F.A.P. ROUTE 710 (U.S. ROUTE 51) S.B.L., SEC. (102-2-3), 302-2(3) RS-2
*F.A.P. ROUTE 741 (ILL. ROUTE 105) SEC. 4.R3-1 (10,12) RS-2

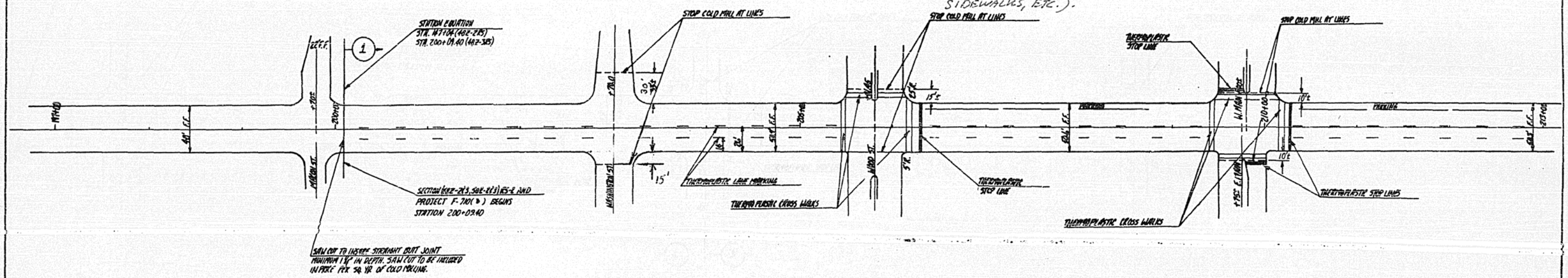


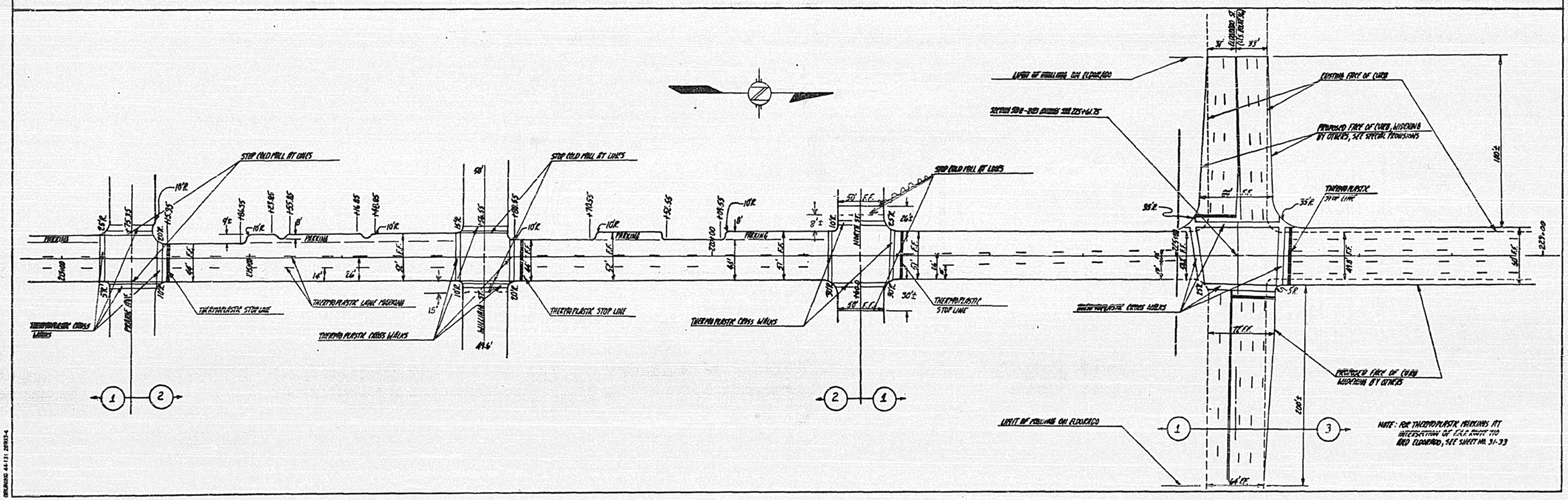
BILNING 66-131 27130

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 710	VI	MACON & PIATT	38	16

*F.A.P. 710 - SEC. (402-2(1), 502-2(1))R5-2
*F.A.P. 711 - SEC. 11R5-1 (19,12)R5-2

NOTE: A CITY BEAUTIFICATION PROJECT HAS BEEN PERFORMED FROM WOOD ST. TO PRAIRIE ST. (NEW CURB & GUTTER, SIDEWALKS, ETC.).



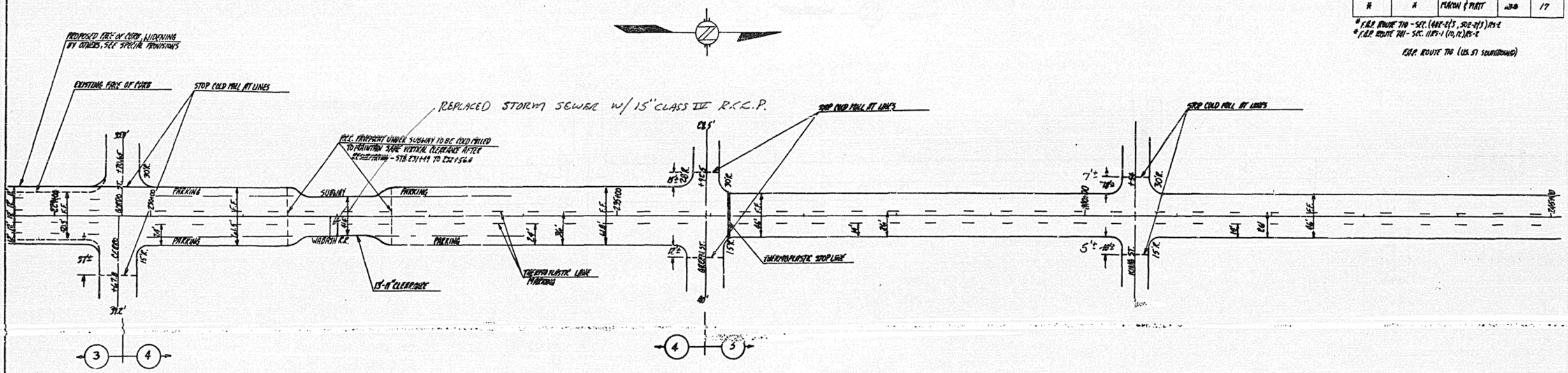


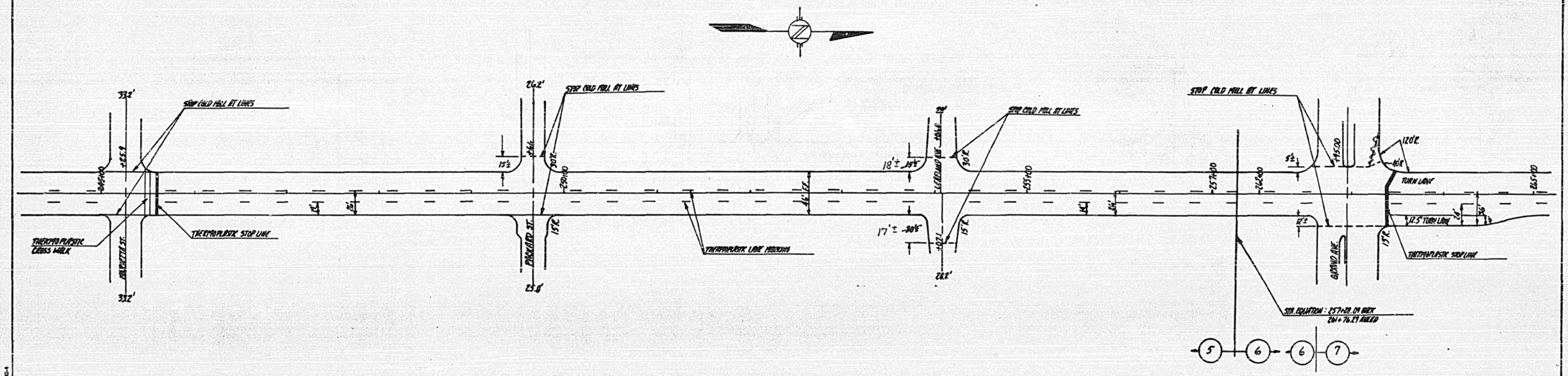
DRAWING 44-131 2R1R3-4

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
#	#	MACON & PIATT	#38	17

F.A.P. ROUTE 710 - SEC. (4BE-2)3 ; 5BE-7)3) R5-2
F.A.P. ROUTE 711 - SEC. 11R5-1 (10, 12) R5-2

F.A.P. ROUTE 710 (U.S. 51 SOUTHBOUND)

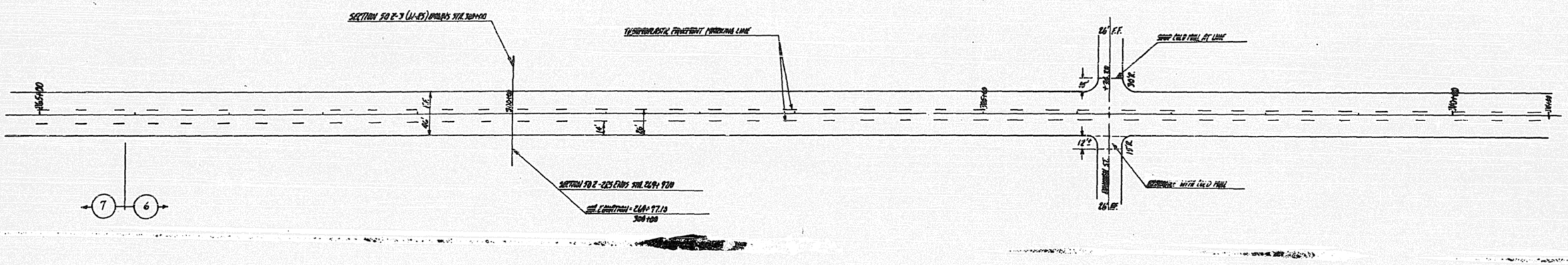


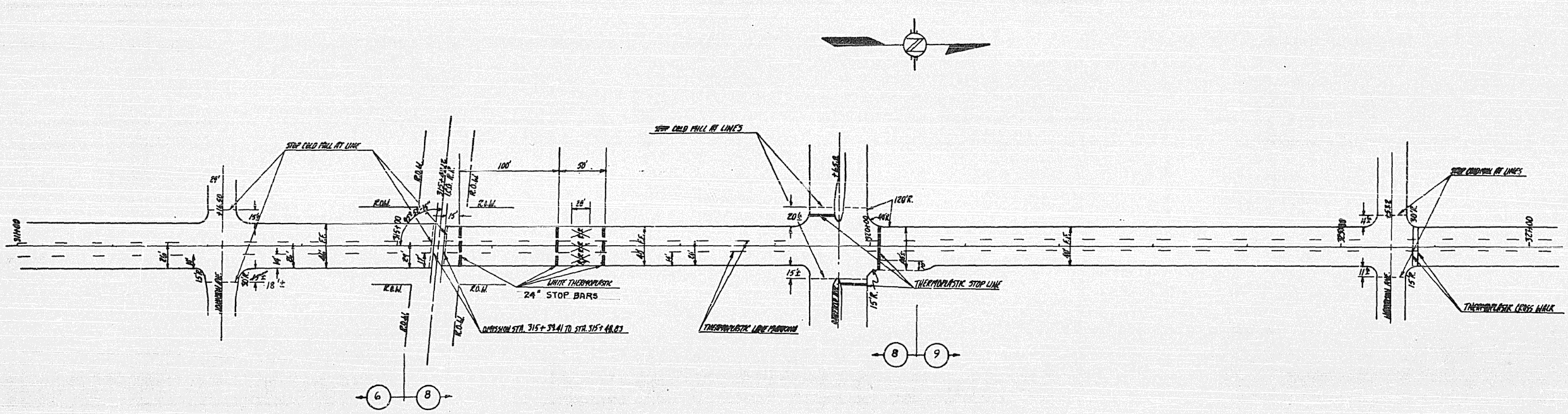


ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
* #	*	MARION & PORTY	30	18

*F.A.P. ROUTE 710 - SEC. (142-2(3), 512-2(3)) R5-2
#F.A.P. ROUTE 741 - SEC. 11R5-1, (10,12) R5-2

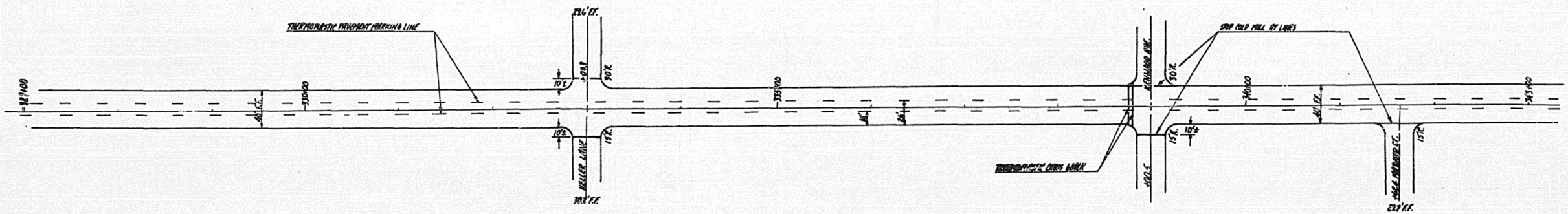
F.A.P. ROUTE 710 (U.S. 51 SOUTHBOUND)

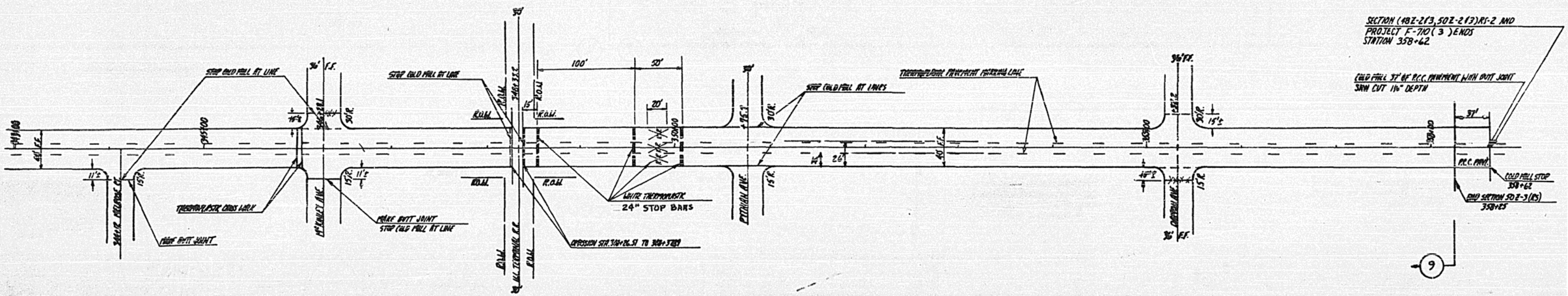




ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
* * * # * *	*	MACON & PIATT	38	19

* F.A.P. ROUTE 710 - SEC. (48Z-2(3), 50Z-2(3))RS-2
\# F.A.P. ROUTE 741 - SEC. (11-RH, (10, 12)RS-2
F.A.P. 710 (US. 51) SOUTHBOUND





ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
#	#	MACOUPIN & MATT	38	20

F.A.P. ROUTE 741 (ILL. ROUTE 105)

SECTION 11RS-1,(10,12)RS-2 AND PROJECT F-741(5) BEGINS STATION 163+53

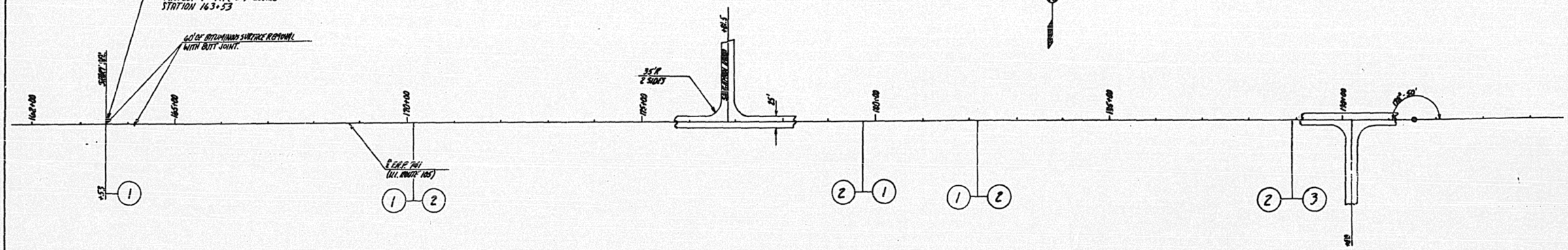
60' OF BITUMINOUS SURFACE REMOVAL WITH BUTT JOINT.

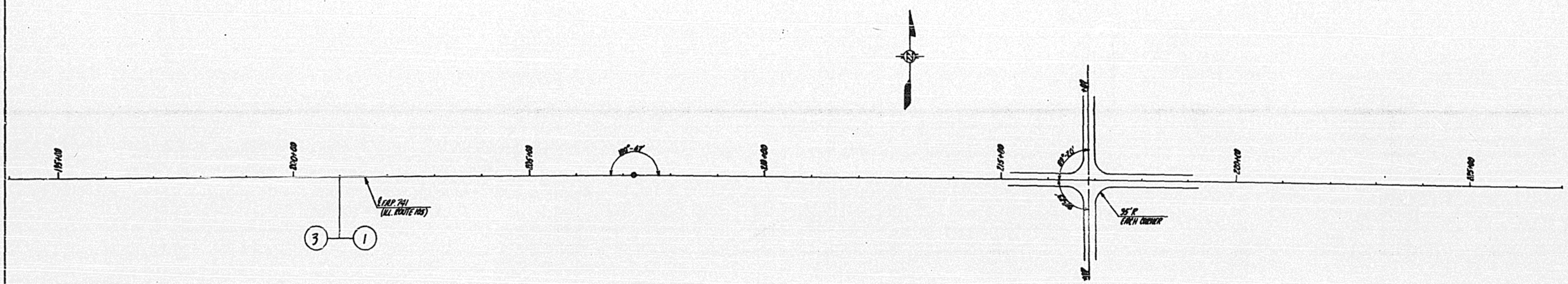
SURVEY TIE

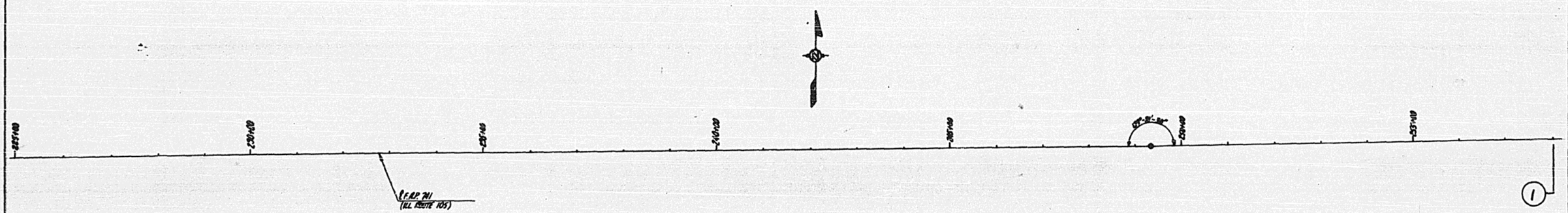
35'R & SLOPES

25'

℄ F.A.P. 741 (ILL. ROUTE 105)





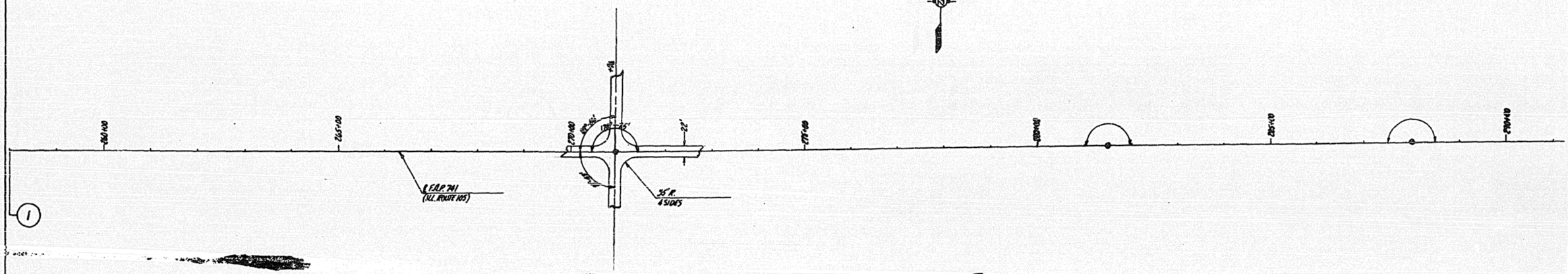


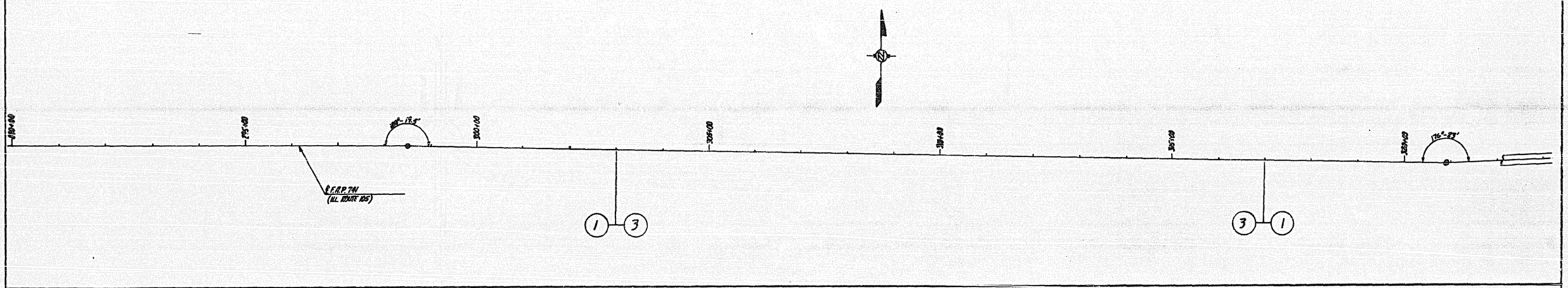
DRAWING 44-131 SHEET 3-4

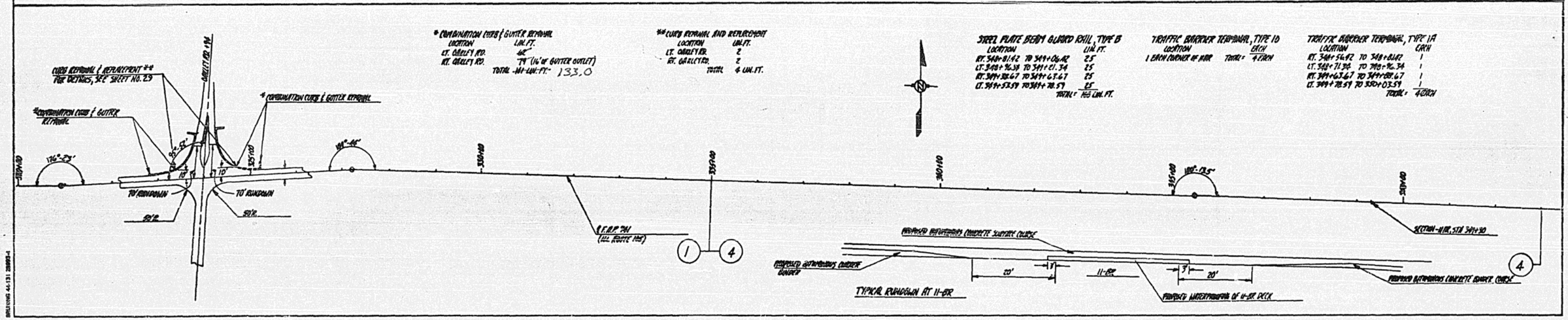
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	*	MACON / PIATT	38	21

*F.A.R. ROUTE 710-SEC. (462-2(3, 502-2(3)R5-C
*F.A.R. ROUTE 741-SEC. 1R5-1 (12,12)R5-2

F.A.P. ROUTE 741 (U.S. ROUTE 105)







TYPICAL RUNDOWN AT 11-BR

* COMBINATION CURB & GUTTER REMOVAL	
LOCATION	LIN. FT.
LT. ORELLY RD.	46'
RT. ORELLY RD.	79' (16' OF GUTTER OUTLET)
TOTAL -ALL LIN. FT.-	133.0

** CURB REMOVAL AND REPLACEMENT	
LOCATION	LIN. FT.
LT. ORELLY RD.	2
RT. ORELLY RD.	2
TOTAL	4 LIN. FT.

STEEL PLATE BEAM GUARD RAIL, TYPE B	
LOCATION	LIN. FT.
RT. 348+81.42 TO 349+06.42	25
LT. 348+96.38 TO 349+21.34	25
RT. 349+38.67 TO 349+63.67	25
LT. 349+53.59 TO 349+78.59	25
TOTAL:	100 LIN. FT.

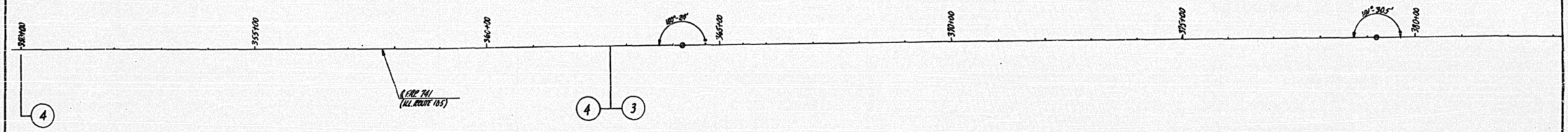
TRAFFIC BARRIER TERMINAL, TYPE 1D	
LOCATION	EACH
1 EACH CORNER OF BRR.	TOTAL: 4 EACH

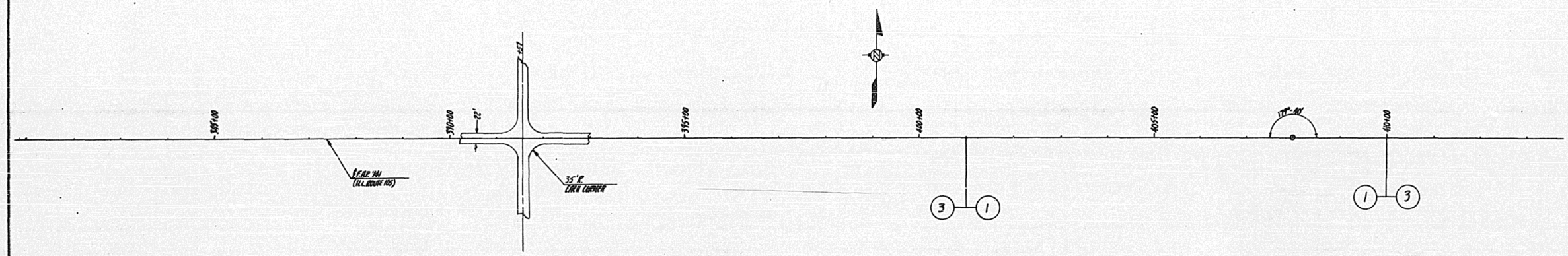
TRAFFIC BARRIER TERMINAL, TYPE 1A	
LOCATION	EACH
RT. 348+56.42 TO 348+81.42	1
LT. 348+71.38 TO 348+96.34	1
RT. 349+63.67 TO 349+88.67	1
LT. 349+78.59 TO 350+03.59	1
TOTAL:	4 EACH

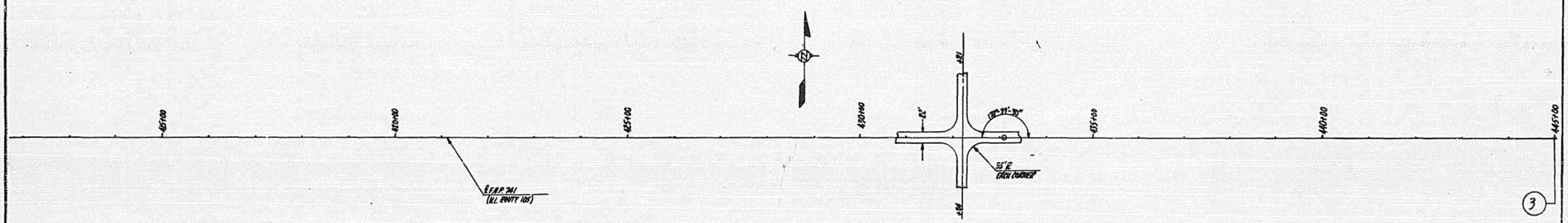
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 741	#	MERCER & HART	38	22

*F.A.P. ROUTE 710 SEC. (4&2-2)(3,5&2-2(3))R5-2
*F.A.P. ROUTE 741 SEC. 11.R5-1 (10,12)R5-2

F.A.P. ROUTE 741 (ILL. ROUTE 105)



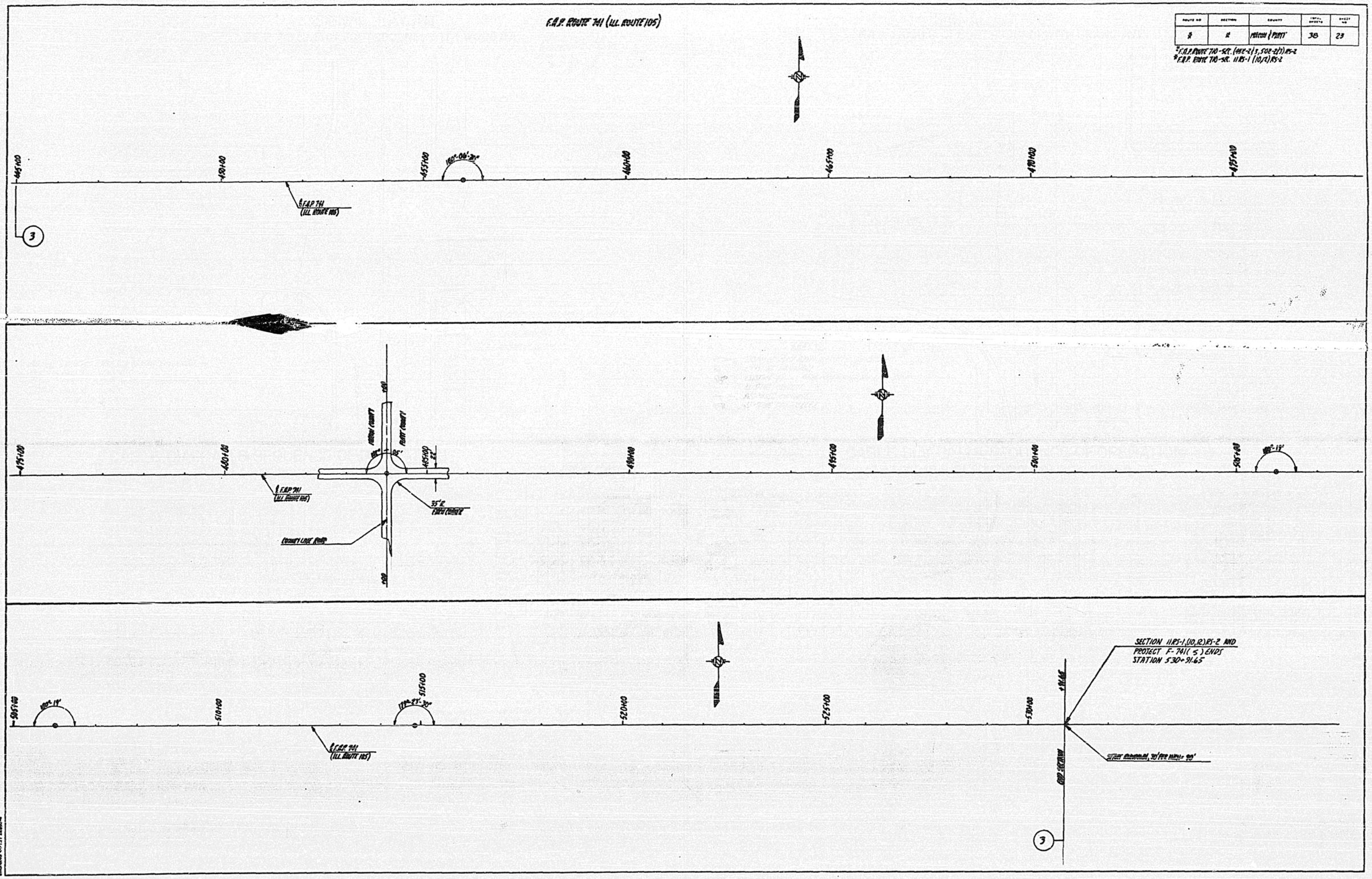




F.A.P. ROUTE 741 (ILL. ROUTE 105)

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
*	*	MACON & PIATT	38	23

*F.A.P. ROUTE 710-SEC. (4R2-2)S, S02-2(7) RS-2
*F.A.P. ROUTE 710-SEC. 11RS-1 (10,12) RS-2

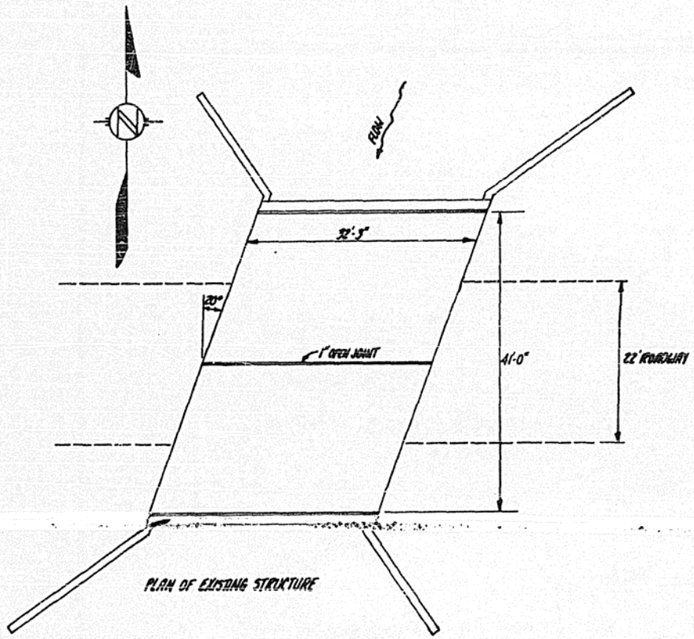


BREAKING 69-131 28893-4

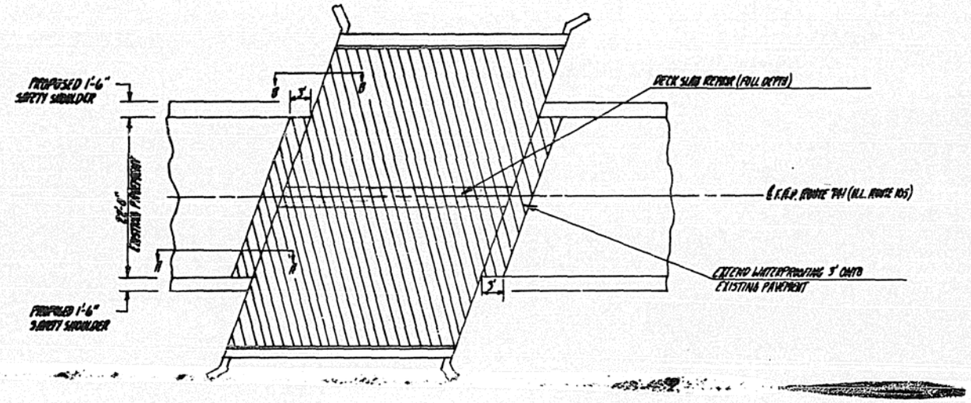
F.A.P. ROUTE 741 (ILL. ROUTE 105)
BRIDGE REPAIR
STATION 349+30
SECTION 11BR

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	#	MACON & PIATT	38	24

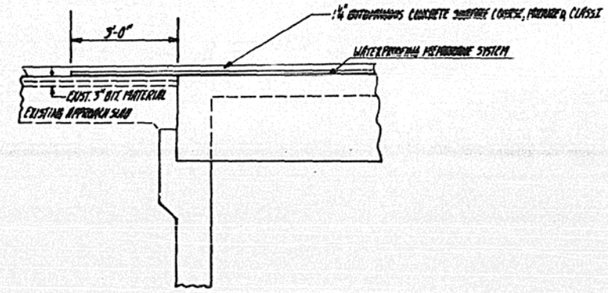
*F.A.P. ROUTE 310-SEC. (4BZ-2)3, 5D2-2(3) RS-2 (US 51 S.B.L.)
#F.A.P. ROUTE 741-SEC. 2B5-1 (10,12) RS-2 (ILL. 105)



PLAN OF EXISTING STRUCTURE

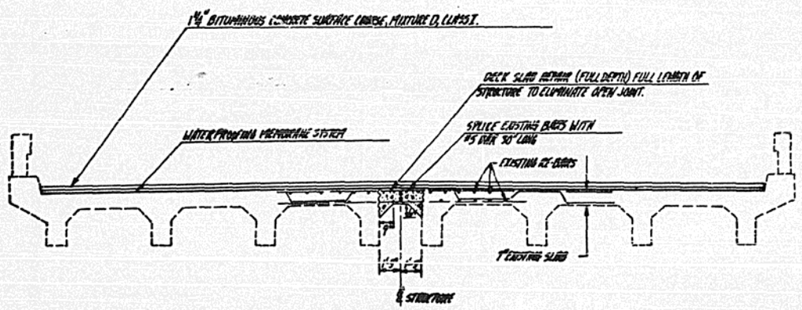


WATERPROOFING MEMBRANE SYSTEM

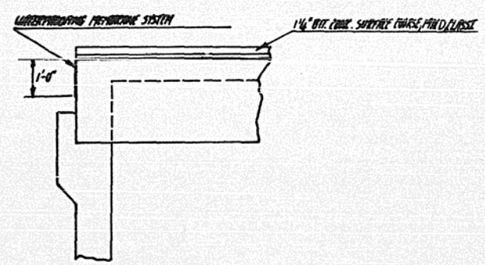


SECTION A-A

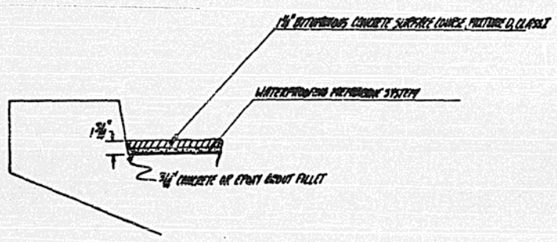
SUMMARY OF QUANTITIES			
CODE NUMBER	ITEM	UNIT	QUANTITY
Z10530	WATERPROOFING MEMBRANE SYSTEM	SQ. YD.	~~163~~ 167
Z10180	DECK SLAB REPAIR (FULL DEPTH)	SQ. YD.	~~4~~ 12
512001	REINFORCEMENT BARS	POUND	~~170~~ 162
666001	TRAFFIC CONTROL & PROTECTION (SPECIAL)	CALL	1
Z10181	DECK SLAB REPAIR (PTD)	SQ. YD.	17



CROSS SECTION OF STRUCTURE



SECTION B-B

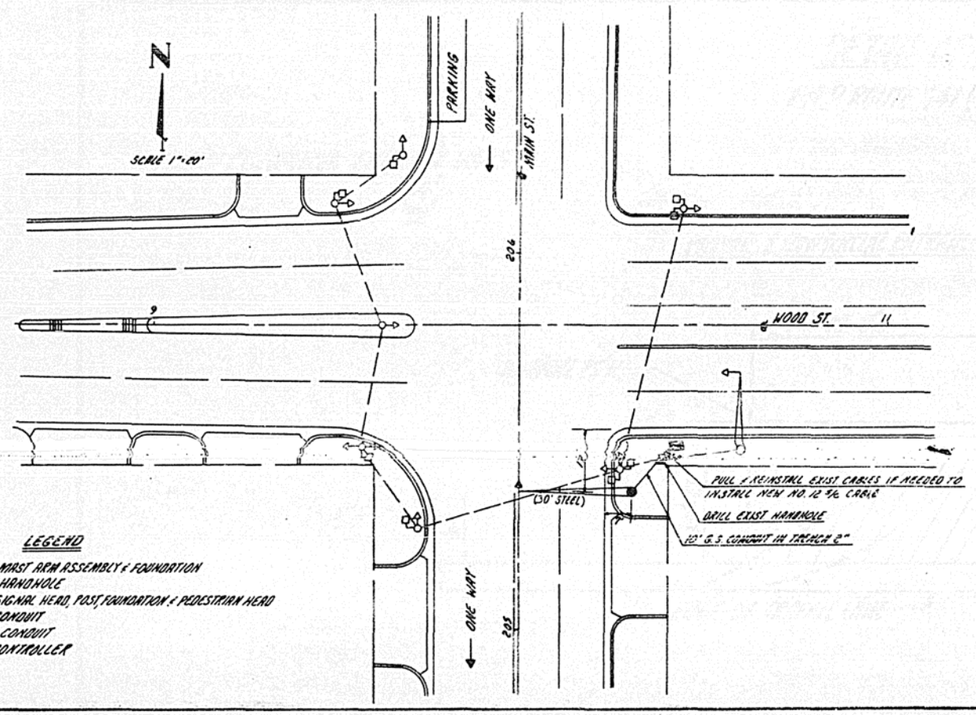


SECTION AT HUB GUARD

BRUNING 46-131 (8893)-A

SIGNAL LAYOUT

F.A.P. 710 (U.S. 51 SOUTHBOUND) WITH WOOD ST.

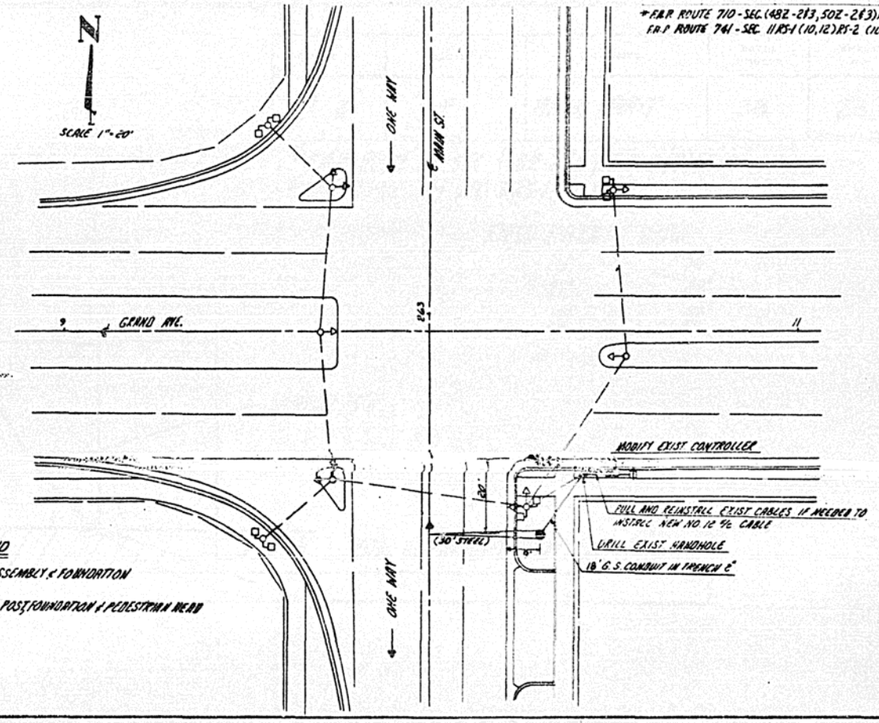


SIGNAL LAYOUT

F.A.P. 710 (U.S. 51 SOUTHBOUND) WITH GRAND AVE.

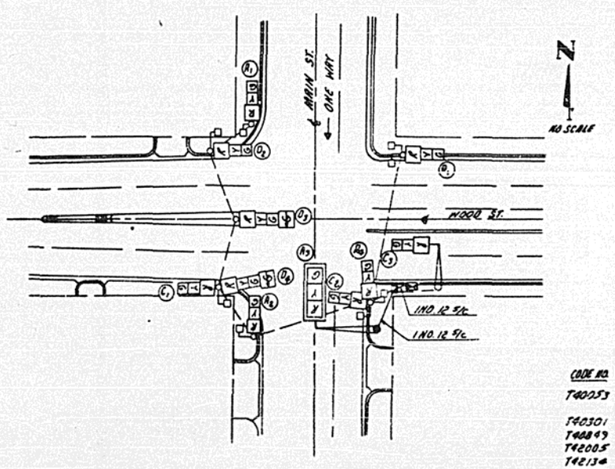
*	*	MACON & PIATT	38	25

*F.A.P. ROUTE 710 - SEC. (482-213, 502-283) RS-2 (US 51 SBL)
F.A.P. ROUTE 741 - SEC. 11 RS-1 (10,12) RS-2 (ILL. 105)



CABLE DIAGRAM & SEQUENCE OF OPERATION

F.A.P. 710 (U.S. 51 SOUTHBOUND) WITH WOOD ST.



PROPOSED SEQUENCE OF OPERATION

PHASING DIAGRAMS												
PHASE	I					II				III		
INTERVAL	1	2	3	4	5	6	7	8	9	10	11	12
SIGNAL FACE												
NORTH APPR. A_1, A_2, A_3, A_4	G	G	G	G	Y	R	R	R	R	R	R	R
WEST APPR. C_1, C_2, C_3	R	R	R	R	R	G	G	G	G	Y	R	R
EAST APPR. D_1, D_2	R	R	R	R	R	G	G	G	G	G	G	Y
SOUTH APPR. B_1, B_2	R	R	R	R	R	G	G	G	G	G	G	Y
WOOD ST. PED. CROSS	W	W	W	FL DW	FL DW	DW	DW	DW	DW	DW	DW	DW
MAIN ST. PED. CROSS	DW	DW	DW	DW	DW	W	W	W	FL DW	FL DW	DW	DW
DURATION % CYCLE	5	11	4	15	4	11	10	6	14	4	12	4	100
DURATION SECONDS	4	8.8	3.2	12	3.2	8.8	8	4.8	12	3.2	7.6	3.2	80

NOTE: EXISTING AND PROPOSED SEQUENCE OF OPERATION ARE THE SAME. ONLY SIGNAL A_4 HAS BEEN ADDED. SEE GENERAL NOTE #1

GENERAL NOTES

1. SIGNAL HEAD A_3 AND A_4 WILL BE WIRED IN PARALLEL. THE CONNECTION WILL BE MADE AT THE CONTROLLER.
2. THE ACTUAL LOCATION OF THE SIGNAL FOUNDATION WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
3. THE MAST ARM POLE SHALL BE A MINIMUM OF 6' FROM CENTER OF POLE TO FACE OF CURB (OR MAST ARM SIDE) OR AS SHOWN ON THE PLAN.
4. A QUANTITY HAS BEEN COMPUTED FOR PULL AND REINSTALL ELECTRIC CABLE. IF THE ELECTRIC CABLE DOES NOT HAVE TO BE PULLED TO ACCOMPLISH THE WORK THEN THIS QUANTITY WILL BE DEDUCTED FROM THE CONTRACT.

SUMMARY OF QUANTITIES

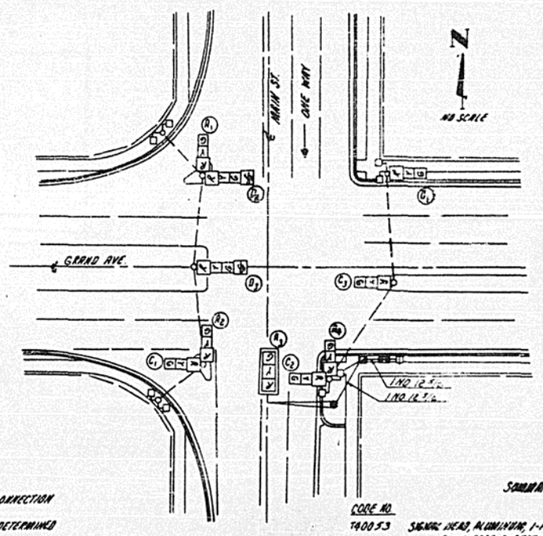
CODE NO.	ITEM	UNIT	QUANTITY
T40053	SIGNAL HEAD, ALUMINUM, 1-FACE 3-SECTION, MAST ARM MOUNTED A_3 & 1-FACE 3-SECTION WITH 12" LENSES	EACH	1
T40301	TRAFFIC SIGNAL BACKPLATE	EACH	1
T40849	STEEL MAST ARM ASSEMBLY AND POLE, 30 FT.	EACH	1
T42005	GALVANIZED STEEL CONDUIT IN TRENCH 2"	LIN. FT.	~~40~~ 23.9
T42134	ELECTRIC CABLE IN CONDUIT NO. 12 Al.	LIN. FT.	~~40~~ 30.2
T42704	CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	LIN. FT.	8
T42810	DRILL EXISTING HANDHOLE	EACH	1
T43001	TRENCH AND BACKFILL	LIN. FT.	~~40~~ 23.9
T44601	PULL AND REINSTALL ELECTRIC CABLE FROM CONDUIT	LIN. FT.	~~30~~ 0
U7046	SIDEWALK REMOVAL AND REPLACEMENT	SQ. FT.	~~100~~ 96.7

CABLE DIAGRAM & SEQUENCE OF OPERATION

F.A.P. 710 (U.S. 51 SOUTHBOUND) WITH GRAND AVE.

EXISTING SEQUENCE OF OPERATION

PHASING DIAGRAMS								
PHASE	I			II			III	
INTERVAL	1	2	3	4	5	6	7	8
SIGNAL FACE								
NORTH APPR. A_1, A_2, A_3	G	G	Y	R	R	R	R	R
WEST APPR. C_1, C_2, C_3	R	R	R	G	G	Y	R	R
EAST APPR. D_1	R	R	R	G	G	G	G	Y
SOUTH APPR. B_1, B_2	R	R	R	G	G	G	G	Y
GRAND AVE. PED. CROSS	W	DW	DW	DW	DW	DW	DW	DW
MAIN ST. PED. CROSS	DW	DW	DW	W	DW	DW	DW	DW
DURATION % CYCLE	30	20	5	15	9	4	13	4	100
DURATION SECONDS	24	16	4	12	7.2	3.2	10.4	3.2	80



PROPOSED SEQUENCE OF OPERATION

PHASING DIAGRAMS								
PHASE	I			II			III	
INTERVAL	1	2	3	4	5	6	7	8
SIGNAL FACE								
NORTH APPR. A_1, A_2, A_3, A_4	G	G	Y	R	R	R	R	R
WEST APPR. C_1, C_2, C_3	R	R	R	G	G	Y	R	R
EAST APPR. D_1	R	R	R	G	G	G	G	Y
SOUTH APPR. D_2, B_1, B_2	R	R	R	G	G	G	G	Y
GRAND AVE. PED. CROSS	W	FL DW	DW	DW	DW	DW	DW	DW
MAIN ST. PED. CROSS	DW	DW	DW	W	FL DW	DW	DW	DW
DURATION % CYCLE	14	36	5	9	15	4	13	4	100
DURATION SECONDS	11.2	28.8	4	7.2	12	3.4	10.4	3.2	80

1. SIGNAL HEAD A_3 AND A_4 WILL BE WIRED IN PARALLEL. THE CONNECTION WILL BE MADE AT THE CONTROLLER.
2. THE ACTUAL LOCATION OF THE SIGNAL FOUNDATION WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
3. THE MAST ARM POLE SHALL BE A MINIMUM OF 6' FROM CENTER OF POLE TO FACE OF CURB (OR MAST ARM SIDE) OR AS SHOWN ON THE PLAN.
4. A QUANTITY HAS BEEN COMPUTED FOR PULL AND REINSTALL ELECTRIC CABLE. IF THE ELECTRIC CABLE DOES NOT HAVE TO BE PULLED TO ACCOMPLISH THE WORK THEN THIS QUANTITY WILL BE DEDUCTED FROM THE CONTRACT.
5. ALL 8" RED LENSES AND 8" ARROW LENSES WILL BE REPLACED WITH 12" VERSIONS OF THE APPROPRIATE KIND.

*NOTE: THE CITY OF DECATUR HAD HUBBARD ELECTRIC REPLACE ALL THE ELCBL @ THE GRAND & MAIN INTERSECTION.

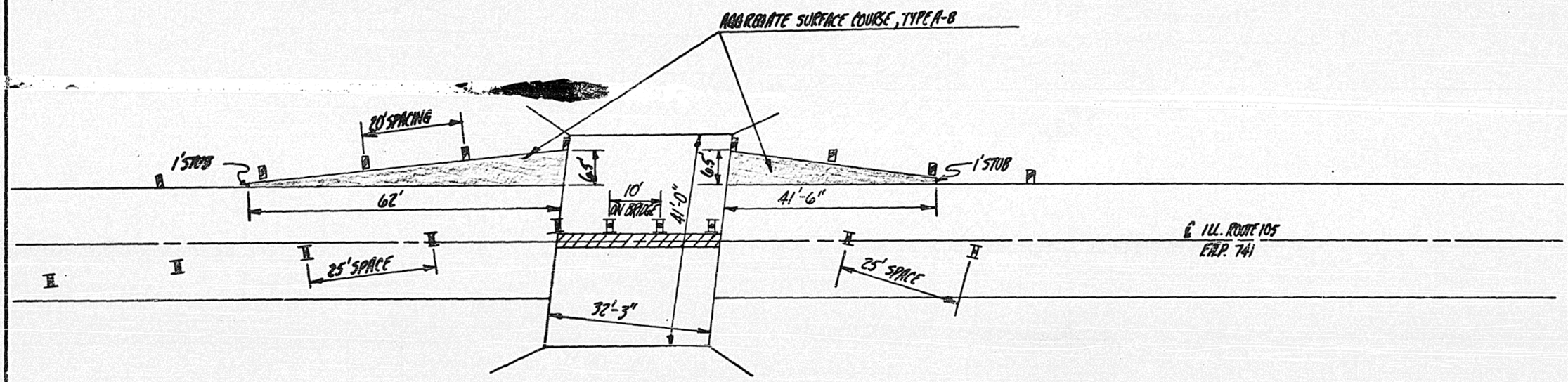
SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	QUANTITY
T40053	SIGNAL HEAD, ALUMINUM, 1-FACE 3-SECTION MAST ARM MOUNTED A_3 & 1-FACE 3-SECTION WITH 12" LENSES	EACH	1
T40301	TRAFFIC SIGNAL BACKPLATE	EACH	1
T40501	12-INCH SIGNAL HOODS	EACH	11
T40849	STEEL MAST ARM ASSEMBLY AND POLE, 30 FT.	EACH	1
T42005	GALVANIZED STEEL CONDUIT IN TRENCH 2"	LIN. FT.	~~40~~ 17.2
T42134	ELECTRIC CABLE IN CONDUIT NO. 12 Al.	LIN. FT.	~~80~~ 0
T42704	CONCRETE FOUNDATION, TYPE E 30 INCH DIAMETER	LIN. FT.	8
T42810	DRILL EXISTING HANDHOLE	EACH	1
T43001	TRENCH AND BACKFILL	LIN. FT.	~~40~~ 17.2
T43901	MODIFY EXISTING CONTROLLER	EACH	1
T44601	PULL AND REINSTALL ELECTRIC CABLE FROM CONDUIT	LIN. FT.	~~30~~ 0
U7046	SIDEWALK REMOVAL AND REPLACEMENT	SQ. FT.	~~40~~ 64.9

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F.A.P. 710 & 741	*	MACON & PIATT	38	26

*F.A.P. 710 SEC. (48Z-2(3, 50Z-2(3))RS-2
*F.A.P. 741 SEC 11RS-1 (10,12)RS-2

TYPICAL APPLICATION FOR BRIDGE DECK REPAIR
SHOULDER DETAIL
F.A.P. ROUTE 741, STA. 349+30



SYMBOLS

WORK AREA

TYPE I OR II BARRICADE WITH STEADY BURNING LIGHTS

VERTICAL PANEL (SEE STANDARD 2299)

DRAWN BY
CHECKED

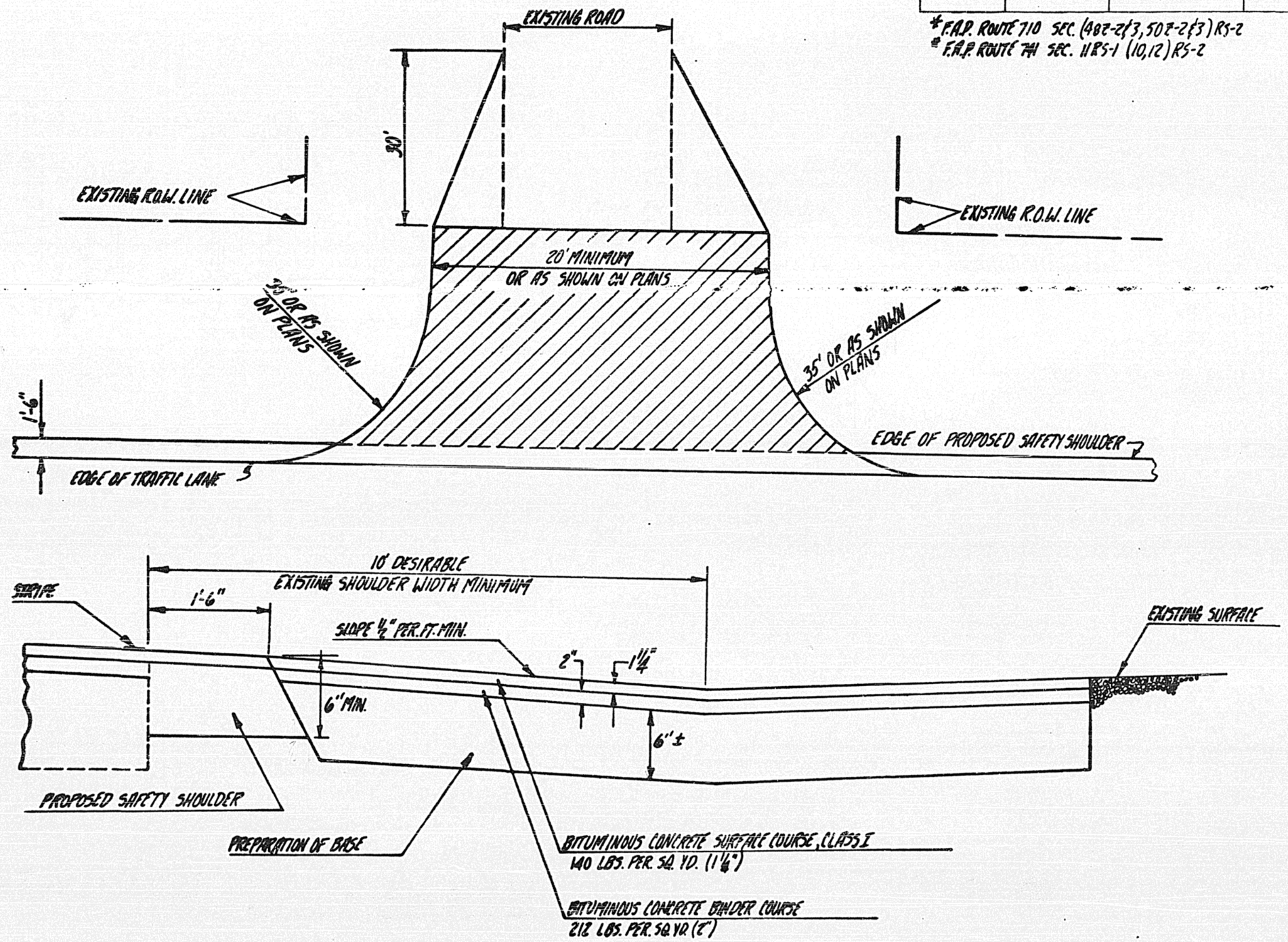
BRUNING 44-131 37565

DETAIL OF SIDEROADS TO BE RECONSTRUCTED

F.A.P. ROUTE 741 (ILL. ROUTE 105)

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
S. B. I. F. A. *	*	MACON & PIATT	38	27

*F.A.P. ROUTE 710 SEC. (482-2(3,502-2(3) RS-2
#F.A.P. ROUTE 741 SEC. 11RS-1 (10,12) RS-2



DESIGNED

CHECKED

BRUNING 44-131 375565

DETAIL OF ENTRANCES

F.A.P. ROUTE 741 (ILL. ROUTE 105)

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
S. B. I. F. A. *	*	MACON & PIATT	38	28

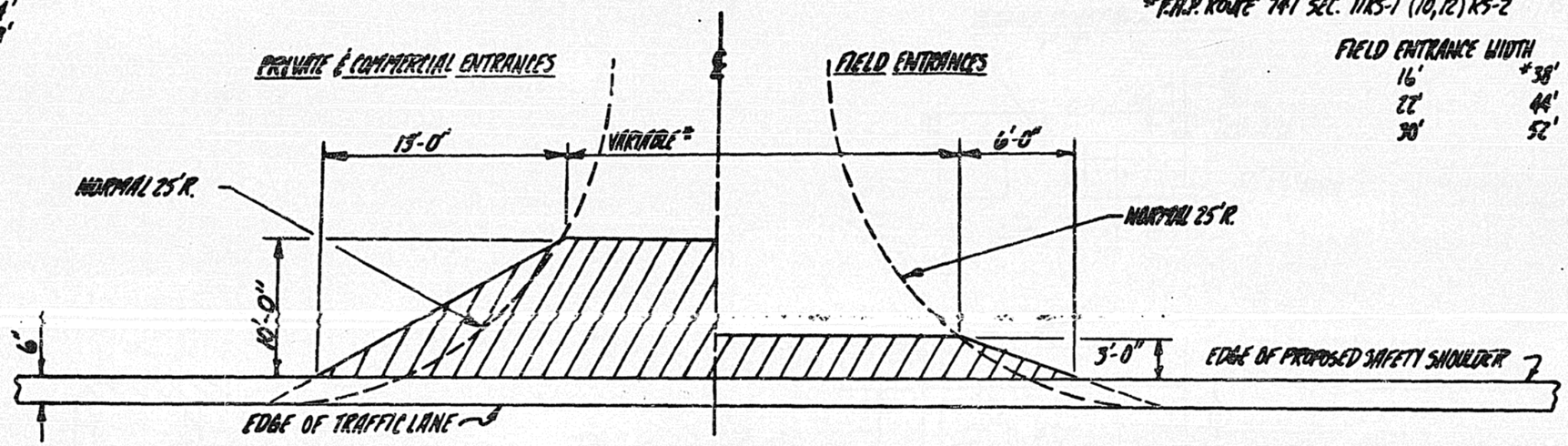
*F.A.P. ROUTE 710 SEC. (48Z-2&3, 50Z-2&3) R5-2
*F.A.P. ROUTE 741 SEC. 11B5-1 (10,12) R5-2

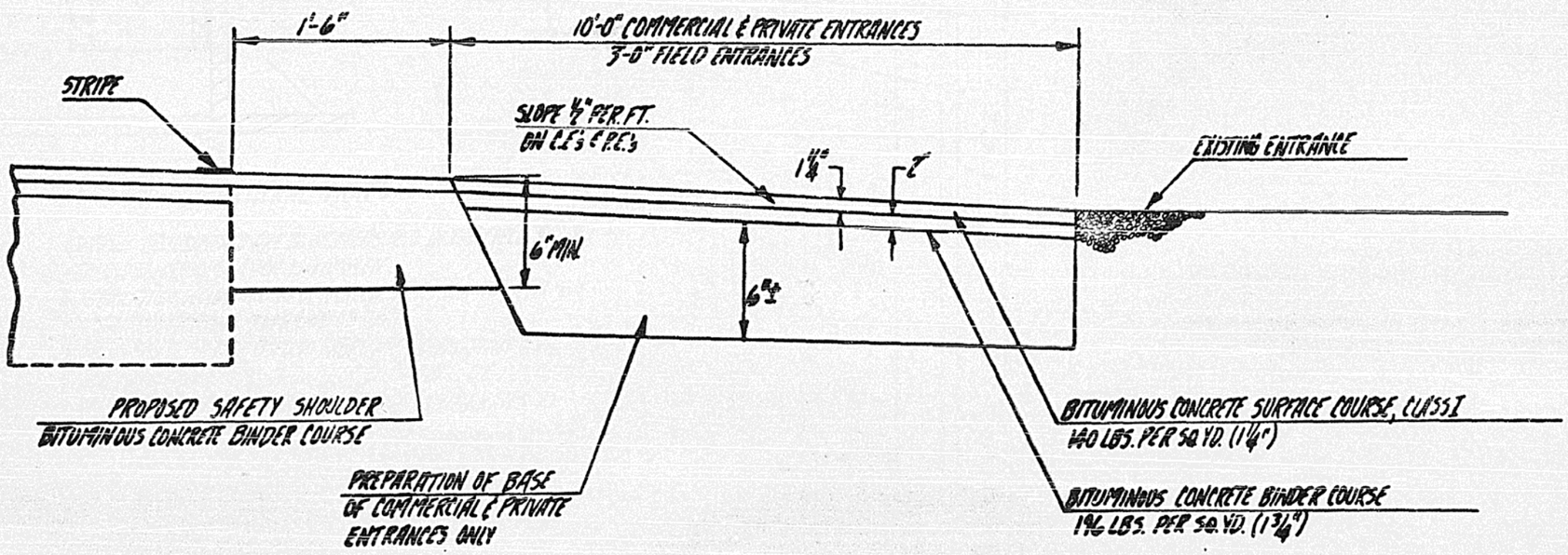
PRIVATE & COMMERCIAL ENTRANCE WIDTH

16'	*24'
30'	38'

FIELD ENTRANCE WIDTH

16'	*38'
22'	44'
30'	52'





DESIGNED

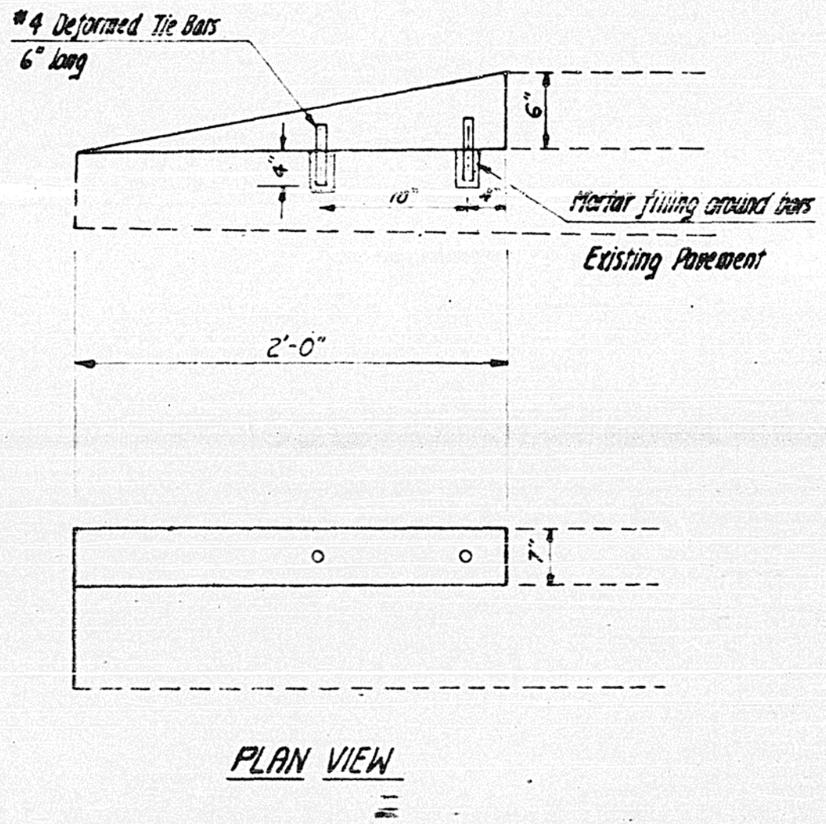
CHECKED

BRUNING 44-131 37965

TYPICAL DETAIL OF DEPRESSED CURB

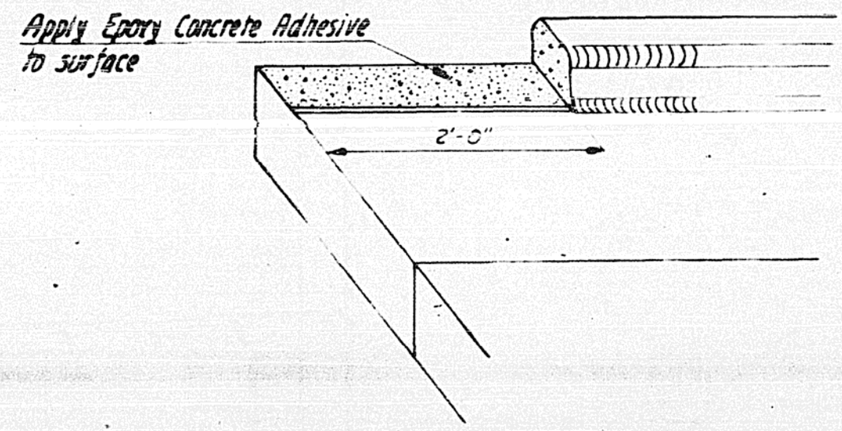
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	*	MACON & PIATT	38	29

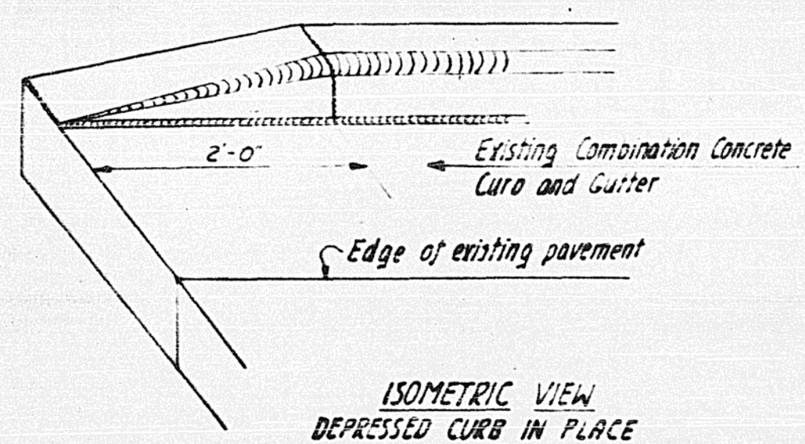
*F.A.P. 710 - SEC. (48Z-2&3, 50Z-2&3) R52
*F.A.P. 741 - SEC. 11R5-1 (10,12) R5-2



PLAN VIEW

ISOMETRIC VIEW
EXISTING CURB REMOVED





ISOMETRIC VIEW
DEPRESSED CURB IN PLACE

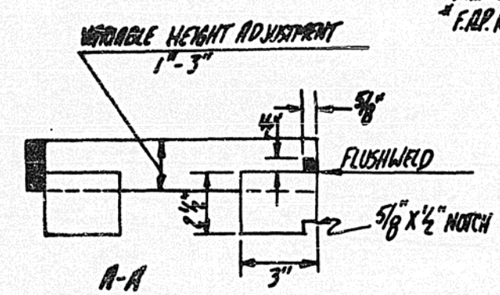
NOTE: The cost of furnishing and installing Dowel Bars, Epoxy Concrete Adhesive, and Mortar Filling shall be included in the contract unit price per lin. ft. for CURB REMOVAL AND REPLACEMENT.

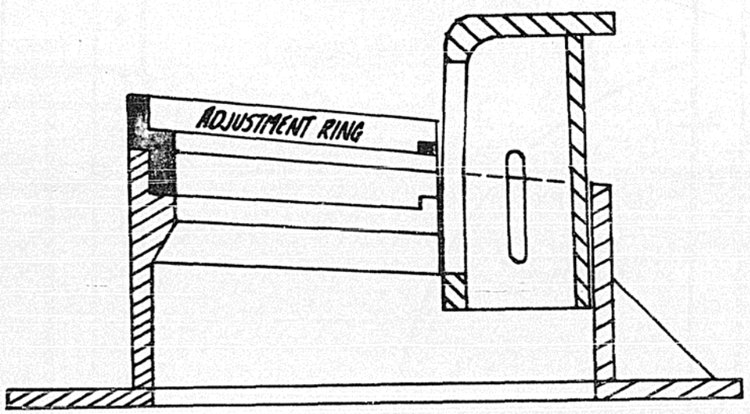
DESIGNED
CHECKED

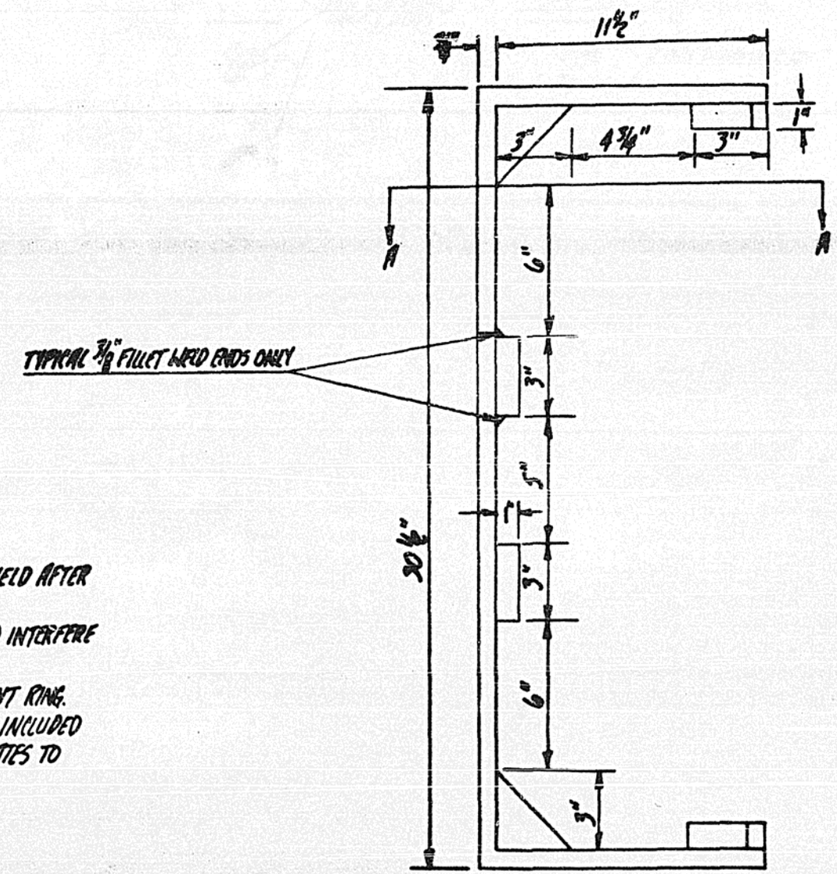
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	*	MACON & PIATT	38	30

*F.A.P. ROUTE 710 - SEC. (48-2 & 3, 50-2 & 3) RS-2
*F.A.P. ROUTE 741 - 11 RS-1 (10,12) RS-2

ADJUSTMENT RINGS FOR C-11 FRAMES & GRATES







ADJUSTMENT RING

GENERAL NOTES:

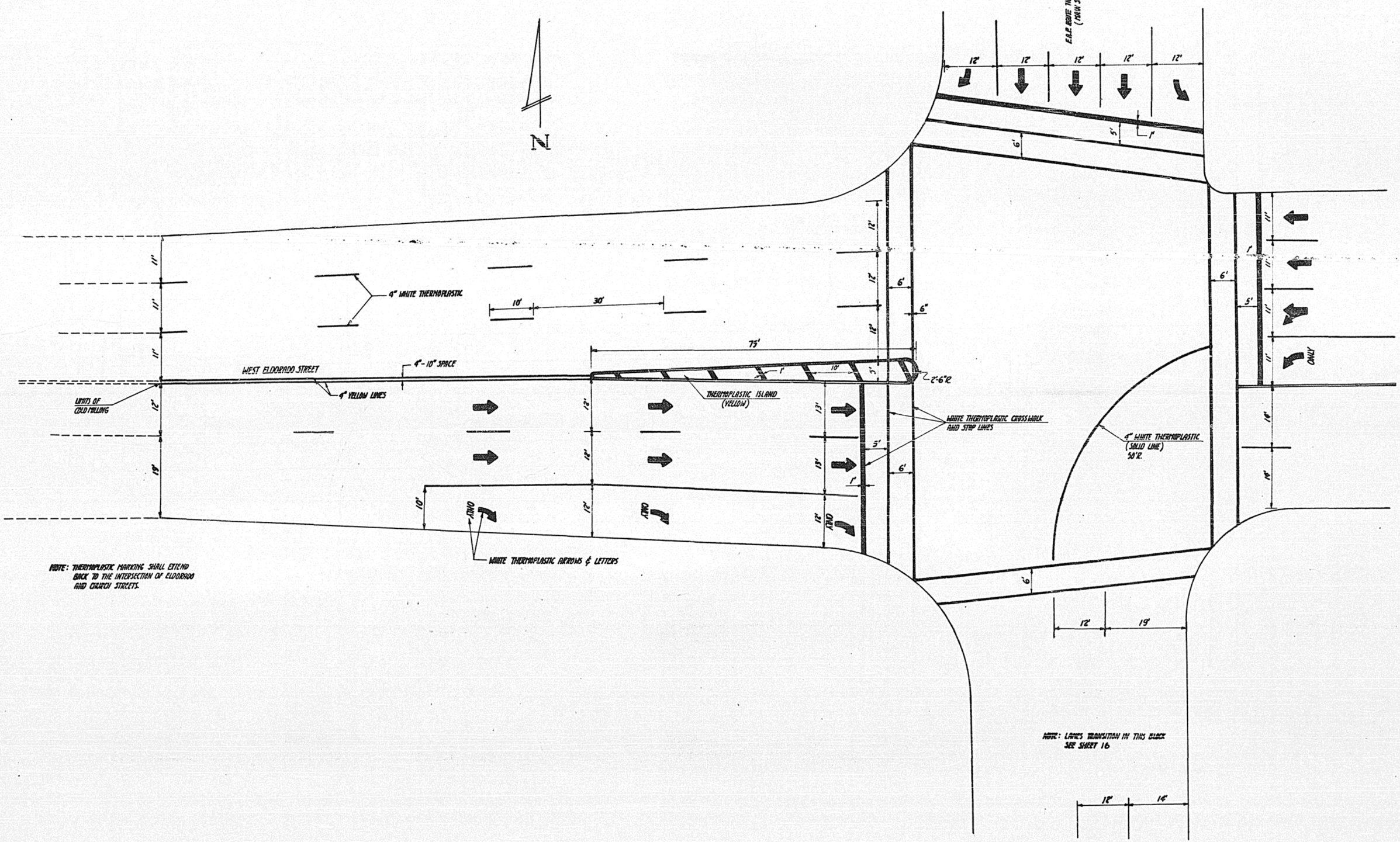
1. HEIGHT ADJUSTMENTS ARE TO BE MEASURED IN THE FIELD AFTER COLD MILLING OPERATION IS COMPLETE.
2. FABRICATION WELDS ARE TO BE PLACED SO AS NOT TO INTERFERE WITH RING SEATING ON FRAME OR GRATE.
3. MILD STEEL MAY BE USED TO FABRICATE ADJUSTMENT RING.
4. ALL MATERIAL, LABOR AND OTHER COST SHALL BE INCLUDED IN THE UNIT PRICE, EACH, FOR FRAMES AND GRATES TO BE ADJUSTED.

ROUTE NO	SEC.	COUNTY	TOTAL SHEETS	SHEET NO
*	*	MACON & PIATT	38	31
FED. ROAD DIST. NO. 9	ILLINOIS		PROJECT	

* F.A.P. ROUTE 710 - SEC. (98Z-2 & 3, 502-2 & 3) RS-2
F.A.P. ROUTE 741 - SEC. 11RS-1, (10,11) RS-2

TYPICAL THERMOPLASTIC PAVEMENT LANE AND INTERSECTION MARKING

SCALE: 1" = 10'

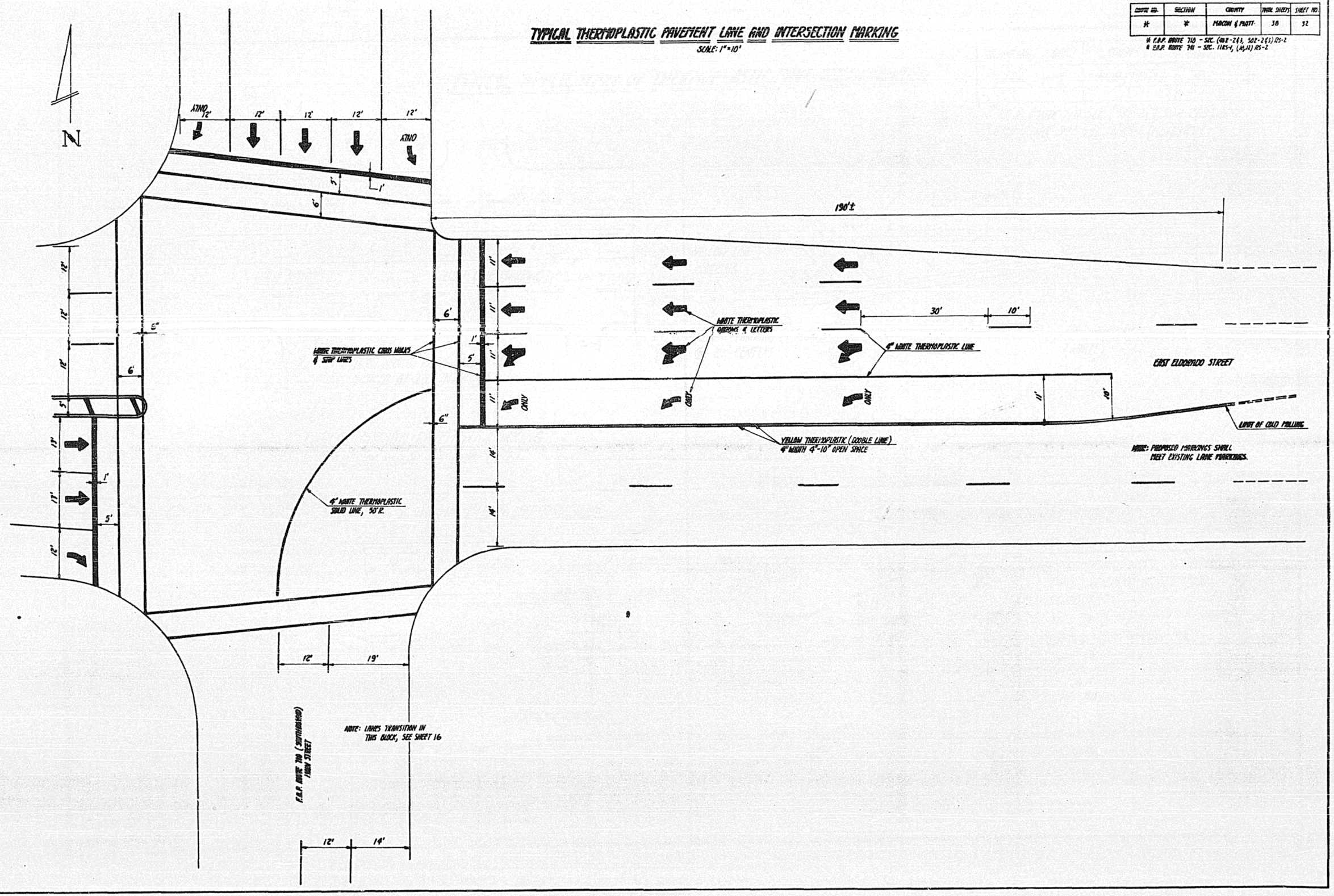


CONTRACT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	*	MACON & PIATT	38	32

* F.A.P. ROUTE 710 - SEC. (10B-2&3), 50B-2(&3) RS-2
* F.A.P. ROUTE 741 - SEC. 11RS-1, (A,B,C) RS-2

TYPICAL THERMOPLASTIC PAVEMENT LANE AND INTERSECTION MARKING

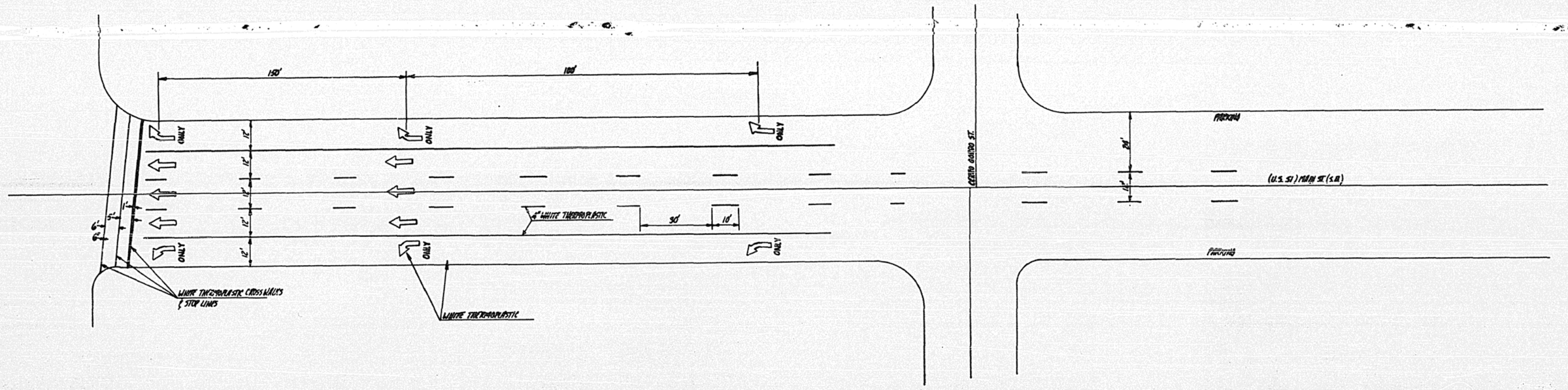
SCALE: 1" = 10'



ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
*	*	MARSH & PART	38	33

*S.H. ROUTE 710 - SEC. (402-2&3, 502-2&3) R5-2
*F.A.P. ROUTE 741 - SEC. 1185-1 (10,12) R5-2

TYPICAL THERMOPLASTIC PAVEMENT LANE & INTERSECTION MARKING

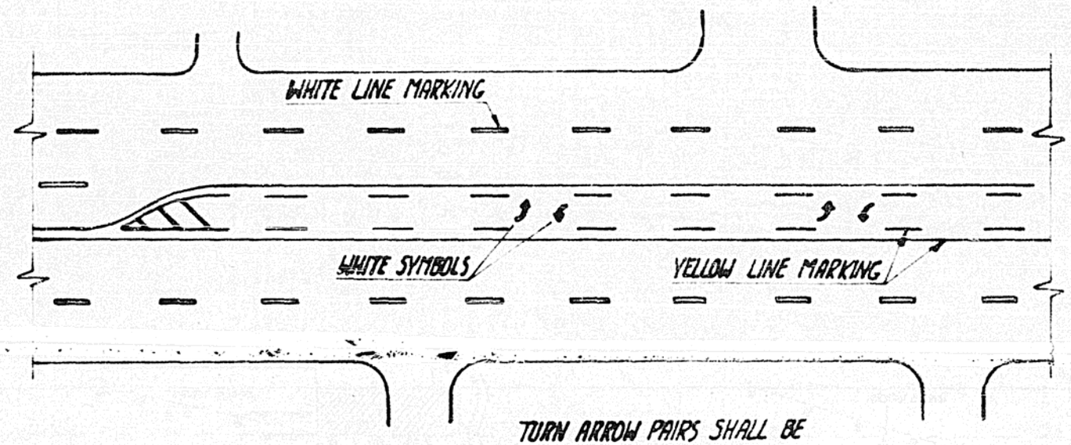


BRENCHG 66-131 200802-4

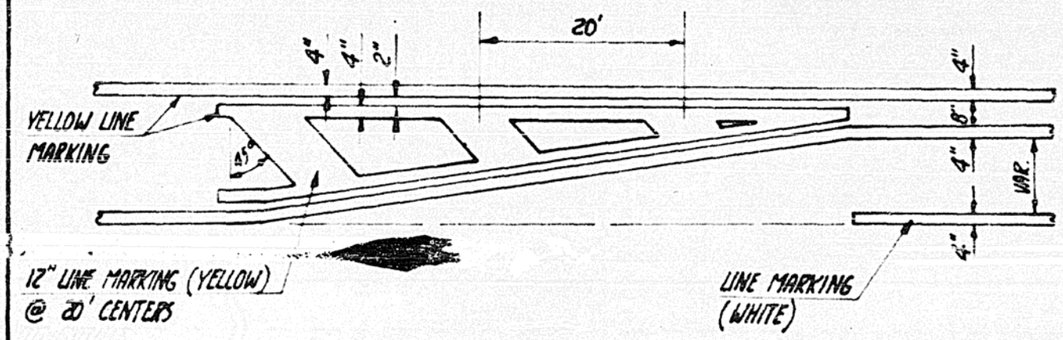
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
*	*	MACON & PIATT	38	34

*F.A.P. ROUTE 710 SEC. (48Z-2&3, 50Z-2&3) RS-2
*F.A.P. ROUTE 741 SEC. 11RS-1 (10,12) RS-2

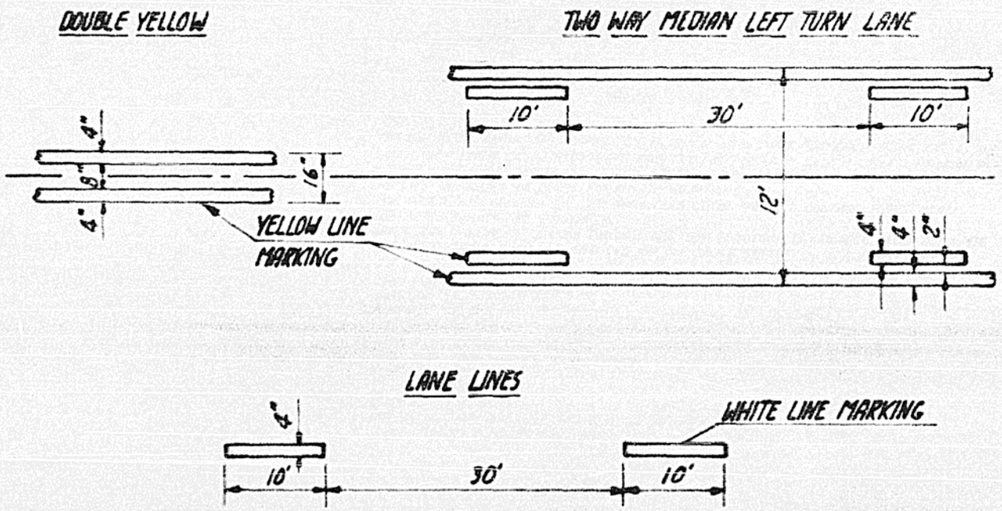
TYPICAL APPLICATION OF THERMOPLASTIC PAVEMENT MARKING



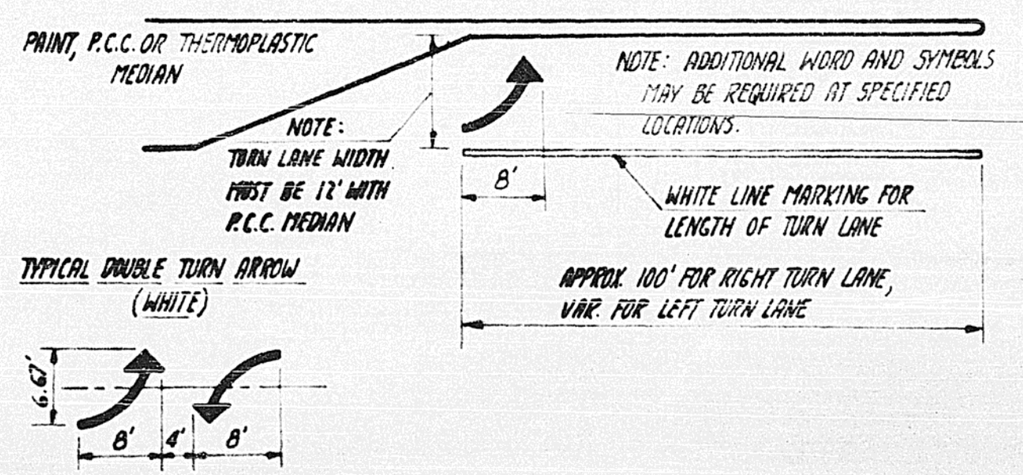
TYPICAL MEDIAN PAVEMENT MARKING
TWO WAY MEDIAN LEFT TURN LANE



TYPICAL MEDIAN TRANSITION MARKING
LEFT TURN LANE SHOWN



TYPICAL LINE MARKING APPLICATIONS



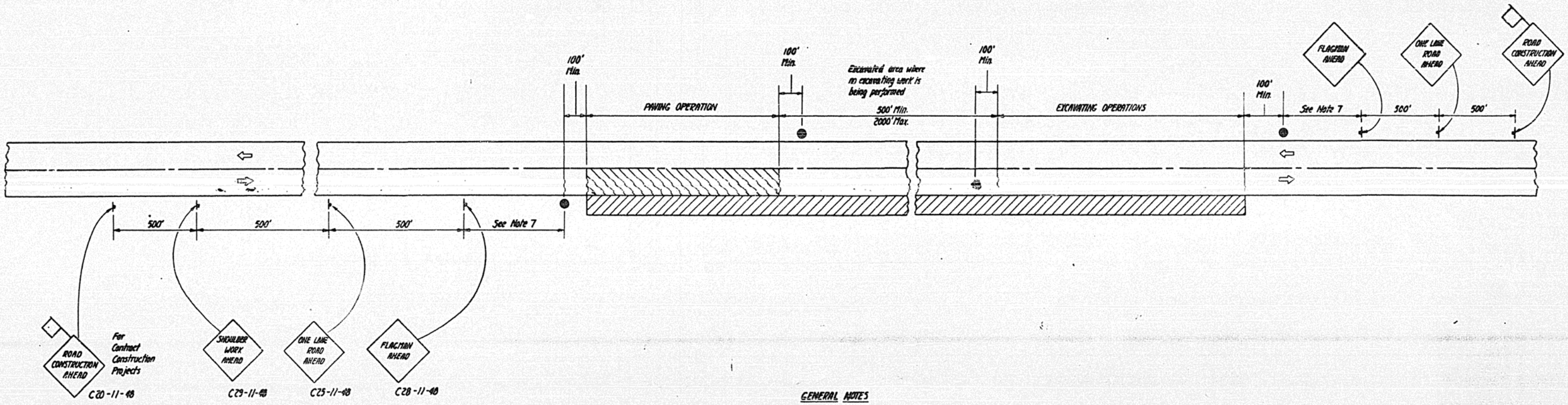
TYPICAL WORD AND SYMBOL MARKING

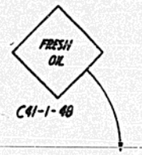
DESIGNED BY W.R.G.
CHECKED BY D.L.C.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
N.B.L. F.L. #	#	MACON / PUTT	38	35

#F.H.P. ROUTE 110 SEC. (44)2-2(3,50)2-2(3)R5-2
#F.A.P. ROUTE 741 SEC. 11R5-1 (10,12) R5-2

TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR HIGHWAY CONSTRUCTION AND MAINTENANCE





Shall be used when prime is applied to pavement and shall remain until no tracking. Install a minimum of 500 ft. preceding start of prime.

SYMBOLS

- Work Area
- Sign with 18" × 18" (minimum) orange flag attached
- Sign on portable or permanent support
- Flagman with Traffic Control sign
- Type I or Type II Barricade with steady burning light

GENERAL NOTES

1. Under restricted sight distance conditions additional devices may be required at the discretion of the Engineer.
2. Two flagmen shall be required for each separate construction operation.
3. The flagmen shall be in sight of each other or in direct communication at all times.
4. Construction operations shall be confined to one traffic lane leaving the opposite lane open to traffic. At least 500 feet of both traffic lanes shall be available for traffic movement at intervals not greater than 1000 ft.
5. No paving or excavating operations shall be performed at night unless authorized by the Engineer.
6. When these operations are suspended, all vehicles and equipment, including traffic control and protective devices, shall be removed from the pavement and the excavated area shall be protected by Type I or Type II Barricades at 100 foot centers. ROAD CONSTRUCTION AHEAD AND SHOULDER WORK AHEAD signs shall be installed as shown to protect the curing operations. ROAD CONSTRUCTION AHEAD and ROAD CONSTRUCTION 500 FT. signs shall be installed for traffic in the opposite direction.
7. Minimum distance is 200 ft. Maximum distance to be determined by the Engineer but in no case to exceed the length of ½ day's operation.
8. All signs shall be post mounted if the working time exceeds four days.
9. High intensity flashing lights shall be used on each approach in advance of the work area during hours of darkness and installed above the first two signs in each series.
10. When a side road intersects the highway on which work is being performed, additional traffic control devices shall be erected and flagmen provided as directed by the Engineer.
11. Longitudinal dimensions may be adjusted slightly to fit field conditions. The lateral placement of the flagmen may be varied from that shown.
12. All warning signs shall have minimum dimensions of 48 in. by 48 in. and have black legend and border on an orange reflectorized background.
13. All vehicles, equipment, men (except flagmen) and their activities are restricted at all times to one side of the pavement unless otherwise authorized by the Engineer.
14. All barricade lights shall be monodirectional.
15. Form BT 725 is required.
16. At locations where construction operations result in a differential in elevation between the edge of pavement and the shoulders exceeding 3 inches, Type I or Type II barricades shall be placed at one hundred foot centers. If this condition is to exist during night time hours, barricades shall be equipped with monodirectional steady-burning lights. Cones may be substituted for barricades at half the spacing during daytime excavation operations.

CASE VI

RURAL MOVING OPERATIONS
DAY OPERATIONS ONLY

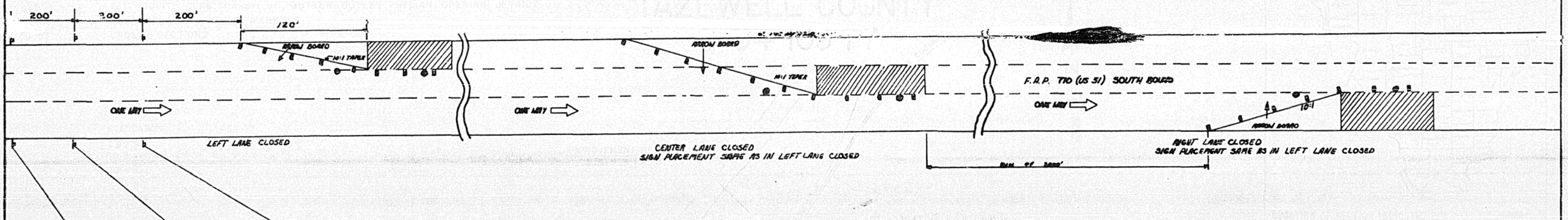
Where, at any time, any vehicle, equipment, men or their activities require an intermittent or continuous moving operation on the pavement where the average speed of movement is less than four miles per hour.

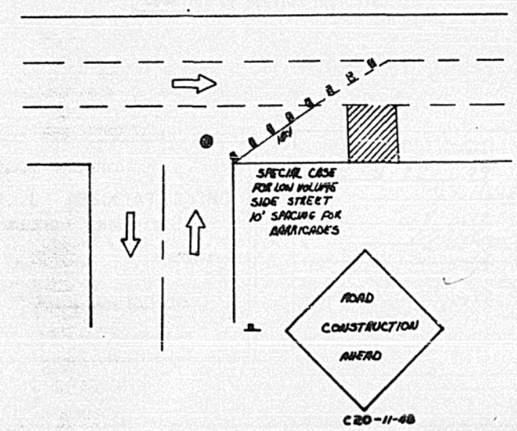
STANDARD 2306 (SPECIAL)

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
*	*	MACON & MATT	38	36

* F.A.P. ROUTE 710, (U.S. ROUTE 51) SEC. (RS 2-2(3, 502-2C3) RS-2
* K&R ROUTE 741, (IL. ROUTE 105) SEC. 11RS-1(10,12) RS-2

TRAFFIC CONTROL AND PROTECTION (SPECIAL)
F.A.P. ROUTE 710 (US 51) SOUTH BOUND LANE





GENERAL NOTES

1. THE 10:1 TAPER SHALL BE FORMED BY PLACING ONE CONE FOR EACH FOOT OF LANE WIDTH OR A DRUM OR BARRICADE FOR EACH TWO FOOT OF LANE WIDTH UNLESS NOTED ON PLANS.
2. TYPE I OR TYPE II BARRICADES WITH STEADY BURNING LIGHTS SHALL BE USED IN LIEU OF CONES OR DRUMS FOR NIGHT OPERATIONS.
3. FOR OPERATIONS WITHIN AN INTERSECTION, TRAFFIC CONTROL PLANS SHALL BE APPROVED BY THE ENGINEER.
4. WHERE THE WORK AREA EXTENDS THROUGH THE INTERSECTION, BARRICADES AND ADEQUATE WARNING SIGNS SHALL BE ERECTED ON THE CROSS STREET.

4A. IF THE WORK AREA IS IN THE PARKING LANE AND PARKING EXIST DURING WORK HOURS A ROAD CONSTRUCTION AHEAD SIGN SHALL BE INSTALLED 200 FT. IN ADVANCE OF THE WORK AREA AND THE AREA PROTECTED WITH CONES OR BARRICADES.

5. A MINIMUM OF ONE LANE TRAFFIC SHALL BE MAINTAINE AT ALL TIMES
6. EACH WORK LOCATION SEPARATED BY 200 FT. OR MORE REQUIRES A FLAGMAN LOCATED NOT MORE THAN 100 FT. BEHIND MACHINE.
7. A (ROAD CONSTRUCTION NEXT-MILE) SIGN SHALL BE POST MOUNTED 1500 FT. PRECEDING THE JOB. (ONE SIGN EACH SIDE OF STREET)
8. WHEN TAPER CLOSING A LANE OR LANES ARE SEPARATED FROM THE WORK AREA BY 1500 TO 2000 FT. INTERVAL DEAD NOW, THE TAPER SHALL BE MOVED FORWARD.
9. HIGH INTENSITY FLASHING LIGHT SHALL BE USED ON EACH ROAD CONSTRUCTION NEXT-MILE.
10. ALL WARNING SIGNS SHALL HAVE BLACK LEGEND AND BORDER ON ORANGE REFLECTORIZED BACK GROUND. WHEN POSTED SPEED LIMIT IS 35, OR 40 MPH ALL WARNING SIGNS SHALL HAVE MINIMUM DEMENSIONS OF 48 IN. BY 48 IN.
11. ALL VEHICLES, EQUIPMENT, MEN (EXCEPT FLAGMAN) AND THEIR ACTIVITIES ARE RESTRICTED AT ALL TIMES TO ONE LANE OF PAVEMENT, UNLESS THE CENTER AND LEFT LANE ARE BOTH CLOSED, UNLESS AUTHORIZED BY THE ENGINEER.
12. FORM BT-725 IS REQUIRED WHEN TRAVEL LANE IS CLOSED AT NIGHT.
13. ALL TRAFFIC CONTROL NEEDED WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER LUMP SUM FOR TRAFFIC CONTROL AND PROTECTION. (SPECIAL)

SYMBOLS

- WORK AREA
- SIGN WITH 18x18 (MINIMUM) ORANGE FLAG ATTACHED
- BARRICADE TYPE I OR II PERMANENT SUPPORT
- FLAGMAN WITH TRAFFIC CONTROL SIGN
- BARRICADE, TYPE I OR II STEADY BURN LIGHT

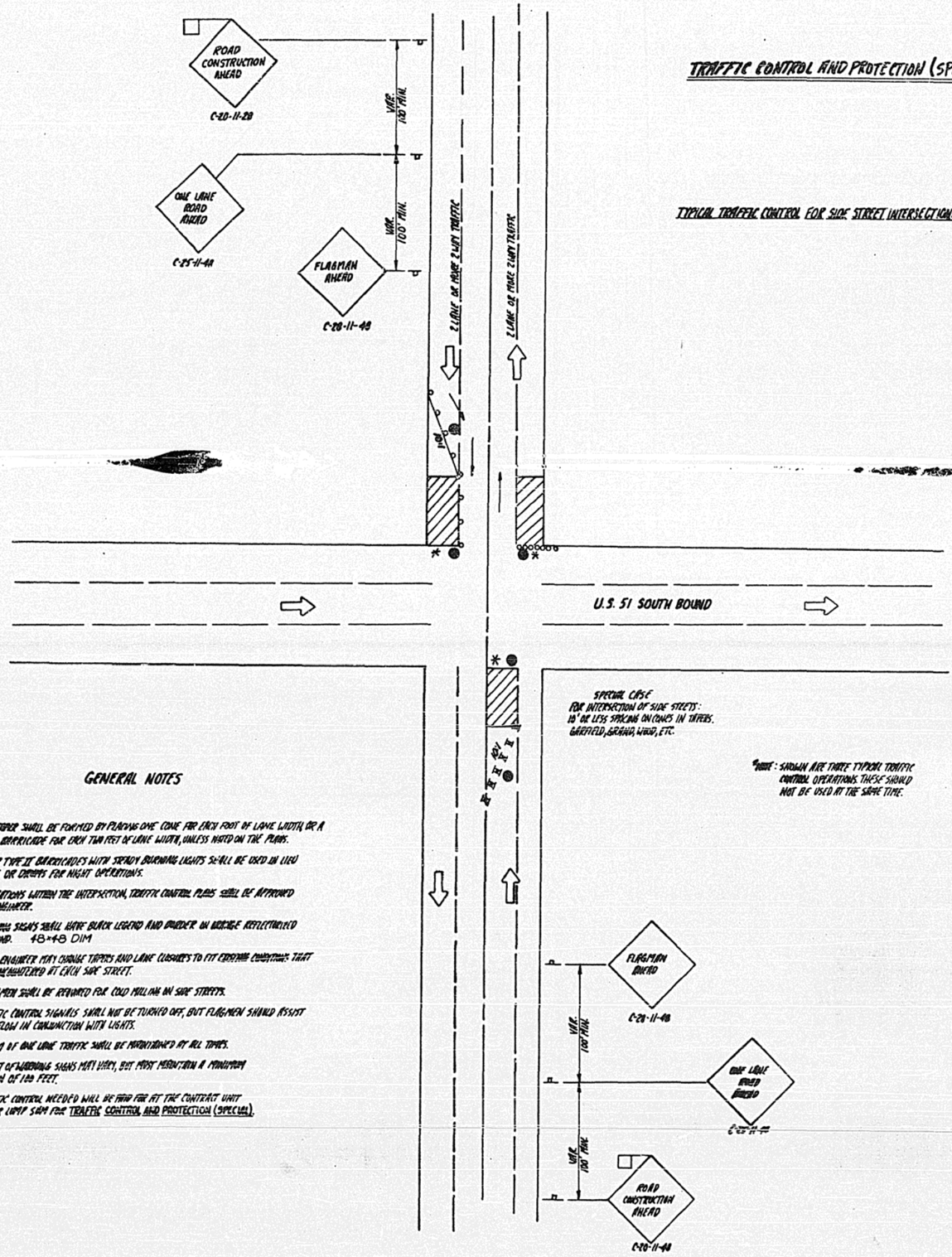
BRUNING 44-131 2293934

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
U.S. 4	*	MARION & PART	38	37

*F.A.P. ROUTE 740 (U.S. ROUTE 51) SEC. (482-2,3, 502-2,3) R5-2
*F.A.P. ROUTE 741 (ILL. ROUTE 185) SEC. 41R5-1 (10,12) R5-2

TRAFFIC CONTROL AND PROTECTION (SPECIAL)

TYPICAL TRAFFIC CONTROL FOR SIDE STREET INTERSECTIONS



GENERAL NOTES

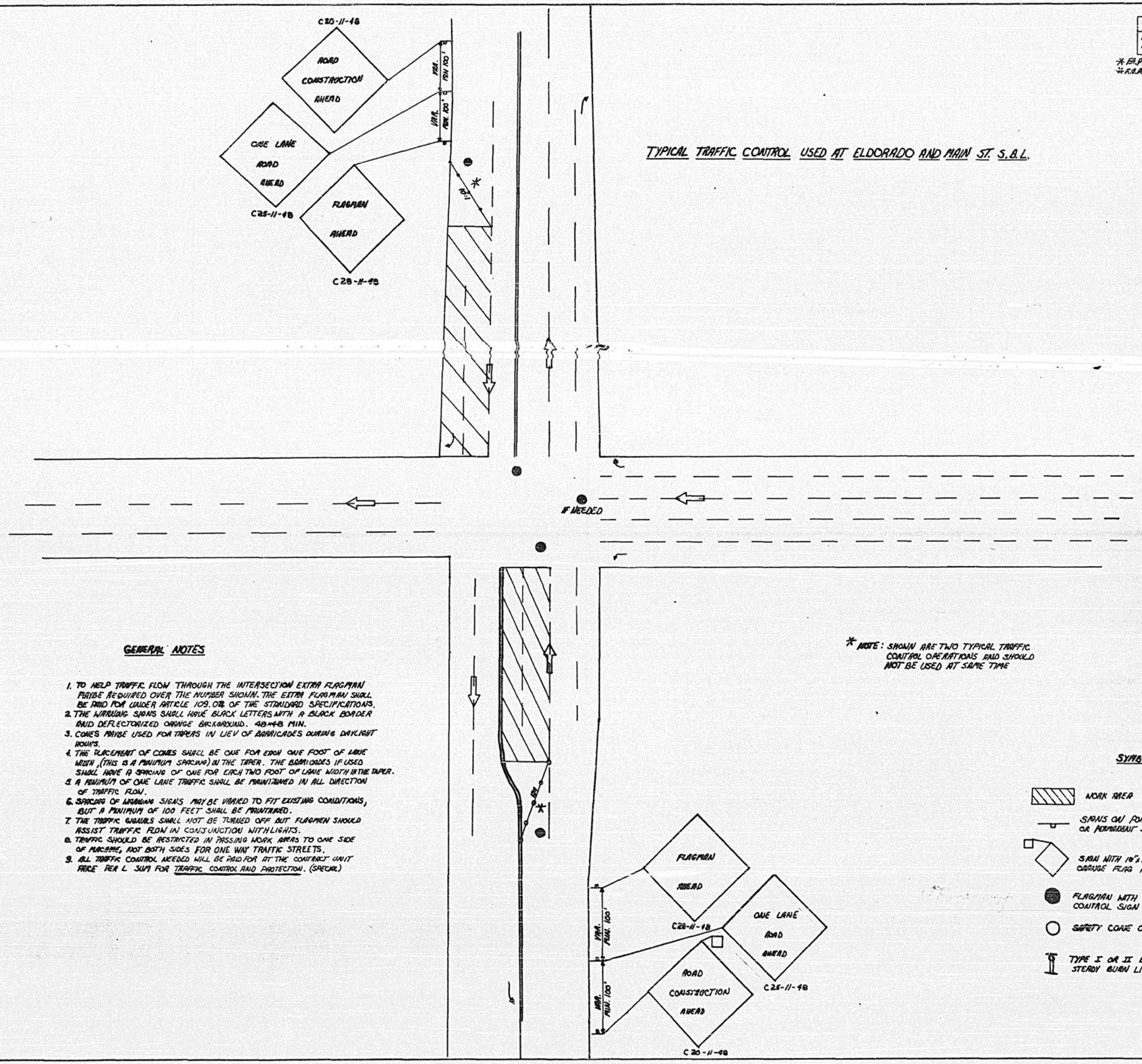
1. THE 100' TAPER SHALL BE FORMED BY PLACING ONE CONE PER EACH FOOT OF LANE WIDTH, OR A DRUM OR BARRICADE FOR EACH TEN FEET OF LANE WIDTH, UNLESS NOTED ON THE PLANS.
2. TYPE I OR TYPE II BARRICADES WITH STEADY BURNING LIGHTS SHALL BE USED IN LIEU OF CONES OR DRUMS FOR NIGHT OPERATIONS.
3. FOR OPERATIONS WITHIN THE INTERSECTION, TRAFFIC CONTROL PLANS SHALL BE APPROVED BY THE ENGINEER.
4. ALL WARNING SIGNS SHALL HAVE BLACK LEGEND AND BORDER ON ORANGE REFLECTORIZED BACKGROUND. 48×48 DIM
5. RESIDENT ENGINEER MAY CHANGE TAPERS AND LANE CLOSURES TO FIT EXISTING CONDITIONS THAT MAY BE ENCOUNTERED AT EACH SIDE STREET.
6. TWO FLAGMEN SHALL BE REQUIRED FOR COLD MILLING ON SIDE STREETS.
7. THE TRAFFIC CONTROL SIGNALS SHALL NOT BE TURNED OFF, BUT FLAGMEN SHOULD ASSIST TRAFFIC FLOW IN CONJUNCTION WITH LIGHTS.
8. A MINIMUM OF ONE LANE TRAFFIC SHALL BE MAINTAINED AT ALL TIMES.
9. PLACEMENT OF WARNING SIGNS MAY VARY, BUT MUST MAINTAIN A MINIMUM SEPARATION OF 100 FEET.
10. ALL TRAFFIC CONTROL NEEDED WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER LUMP SUM FOR TRAFFIC CONTROL AND PROTECTION (SPECIAL).

SYMBOLS

- SIGN WITH 18"x18" (MIN) DOUBLE FLAG ATTACHED
- LANE CLOSED
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- FLAGMAN WITH TRAFFIC CONTROL SIGN
- TYPE I OR TYPE II BARRICADE WITH STEADY BURNING LIGHT
- SAFETY CONE OR BARREL

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	*	MADERA & PATT	38	38

* F.A.P. ROUTE 710 (U.S. ROUTE 51 SB LANE) SEC. 98Z-2(3), 99Z-2(3) RS-2
** F.A.P. ROUTE 741 (U.S. ROUTE 105) SEC. 11AS-1(10,12) AS-2



TYPICAL TRAFFIC CONTROL USED AT ELDORADO AND MAIN ST. S.B.L.

GENERAL NOTES

1. TO HELP TRAFFIC FLOW THROUGH THE INTERSECTION EXTRA FLAGMAN MAYBE REQUIRED OVER THE NUMBER SHOWN. THE EXTRA FLAGMAN SHALL BE PAID FOR UNDER ARTICLE 109.08 OF THE STANDARD SPECIFICATIONS.
2. THE WARNING SIGNS SHALL HAVE BLACK LETTERS WITH A BLACK BORDER AND DEFLECTORIZED ORANGE BACKGROUND. 48"x48" MIN.
3. CONES MAYBE USED FOR TAPERS IN LIEU OF BARRICADES DURING DAYLIGHT HOURS.
4. THE PLACEMENT OF CONES SHALL BE ONE FOOT OF LANE WIDTH, (THIS IS A MINIMUM SPACING) IN THE TAPER. THE BARRICADES IF USED SHALL HAVE A SPACING OF ONE FOOT OF LANE WIDTH IN THE TAPER.
5. A MINIMUM OF ONE LANE TRAFFIC SHALL BE MAINTAINED IN ALL DIRECTION OF TRAFFIC FLOW.
6. SPACING OF WARNING SIGNS MAY BE VARIED TO FIT EXISTING CONDITIONS, BUT A MINIMUM OF 100 FEET SHALL BE MAINTAINED.
7. THE TRAFFIC SIGNALS SHALL NOT BE TURNED OFF BUT FLAGMEN SHOULD ASSIST TRAFFIC FLOW IN CONJUNCTION WITH LIGHTS.
8. TRAFFIC SHOULD BE RESTRICTED IN PASSING WORK AREAS TO ONE SIDE OF PAVEMENT, NOT BOTH SIDES FOR ONE WAY TRAFFIC STREETS.
9. ALL TRAFFIC CONTROL NEEDED WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER L SUM FOR TRAFFIC CONTROL AND PROTECTION. (SPECIAL)

* NOTE: SHOWN ARE TWO TYPICAL TRAFFIC CONTROL OPERATIONS AND SHOULD NOT BE USED AT SAME TIME

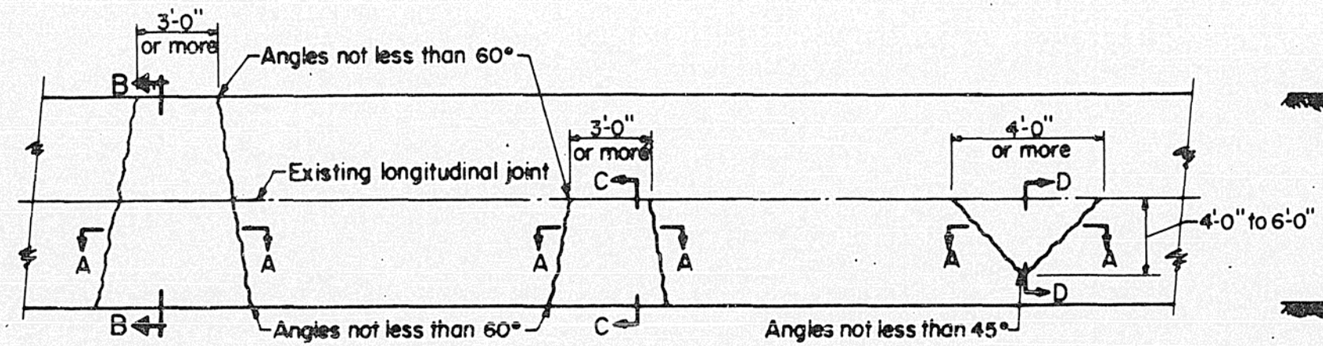
SYMBOLS

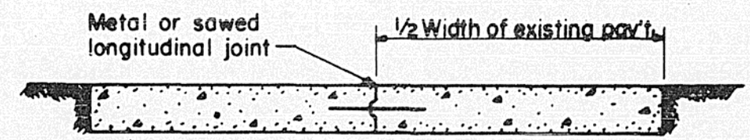
- WORK AREA
- SIGNS ON PORTABLE OR PERMANENT SUPPORTS
- SIGN WITH 18"x18" (MINIMUM) ORANGE FLAG ATTACHED
- FLAGMAN WITH TRAFFIC CONTROL SIGN
- SAFETY CONE OR BARREL
- TYPE I OR II BARRICADE WITH STEADY BURN LIGHT

DRAWING 66-131 200023-4

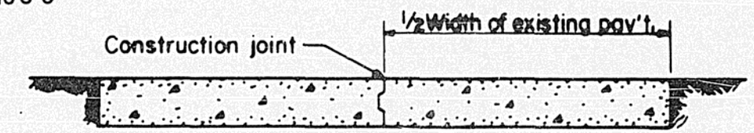
STANDARD DESIGN

P.C.C. PATCHING DETAILS

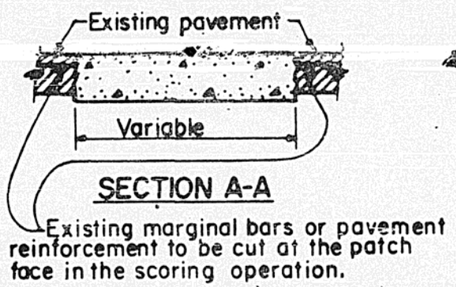




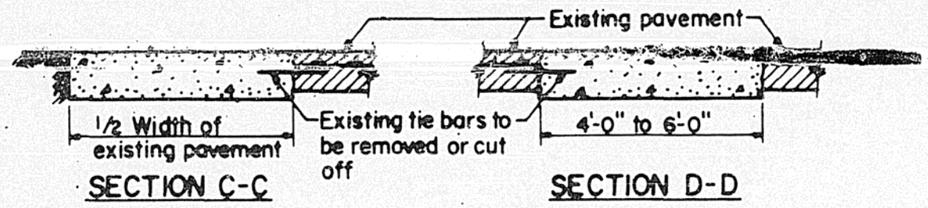
SECTION B-B
(Built in one operation)



SECTION B-B
(Built in two operations)

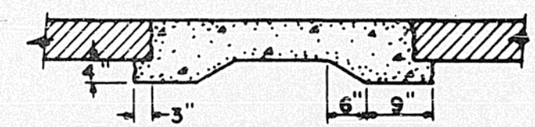


SECTION A-A

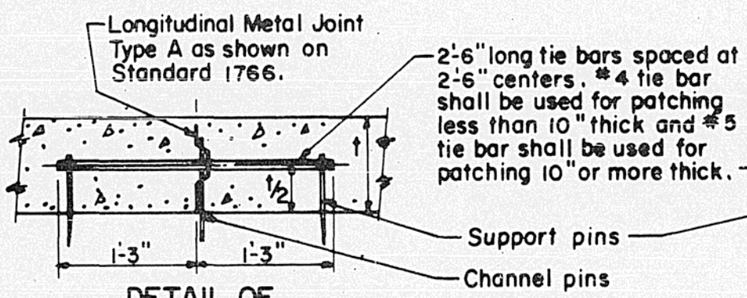


SECTION C-C

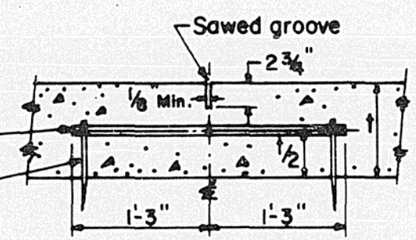
SECTION D-D



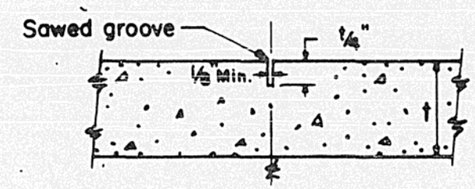
DETAIL OF UNDERCUTTING
(When specified in the Special Provisions)



DETAIL OF
METAL LONGITUDINAL JOINT



DETAIL OF
SAWED LONGITUDINAL JOINT



DETAIL OF
SAWED CONTRACTION JOINT

NOTES

For thickness of patches see special provisions or summary of quantities.

CONTRACTION JOINTS: When the patched pavement is not to be resurfaced, transverse contraction joints shall be sawed in all 20-foot, or longer, patches:

1. At approximate 15 to 20-foot centers,
2. In prolongation of existing contraction or construction joints in the adjacent lane.
3. In accordance with the procedures specified in Art. 408.12 (c) of the Standard Specifications,
4. And be sealed in accordance with Articles 408.02 (h) and 408.17 (a) of the Standard Specifications.

Where expansion joints exist in the portion of pavement to remain in place, the adjacent new pavement shall provide the same width and type of joint and joint filler in prolongation with the existing joint.

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ISSUED 8-12-54	
	REVISIONS	
PASSED Jan 8 1976	W.F.	12-9-66
W. E. Hemmings	D.W.W.	1-8-76
Engineer of Design Operations		
APPROVED Jan 8 1976		
Thomas B. Bright		
Engineer of Design		

STANDARD 2116-2

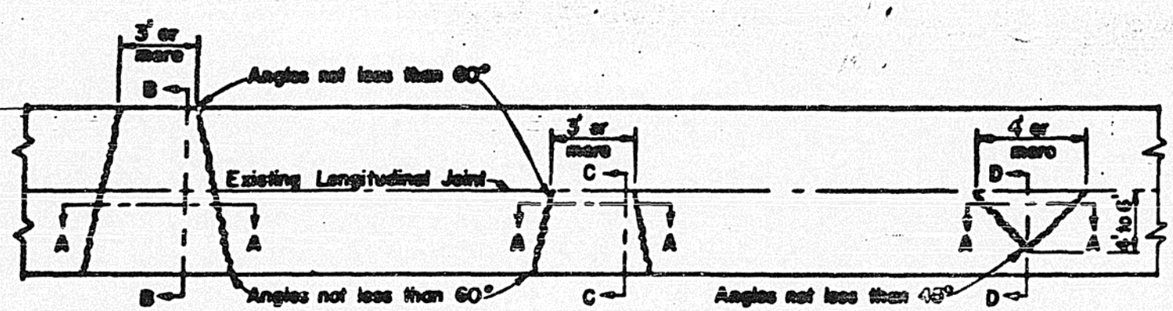
(1/4 Size) Redrawn W.F.

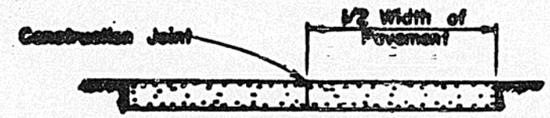
C-75.6 g

STANDARD DESIGN

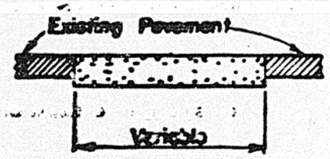
BITUMINOUS PATCHING DETAILS

NOTE
For thickness of patches see special provisions or the summary of quantities.

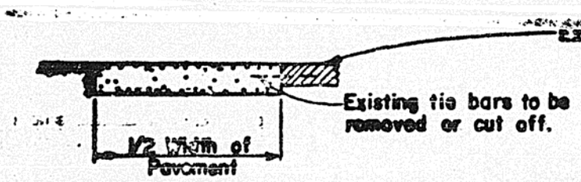




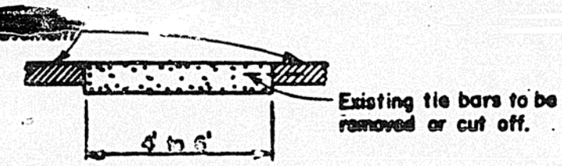
SECTION B-B
(Built in two operations)



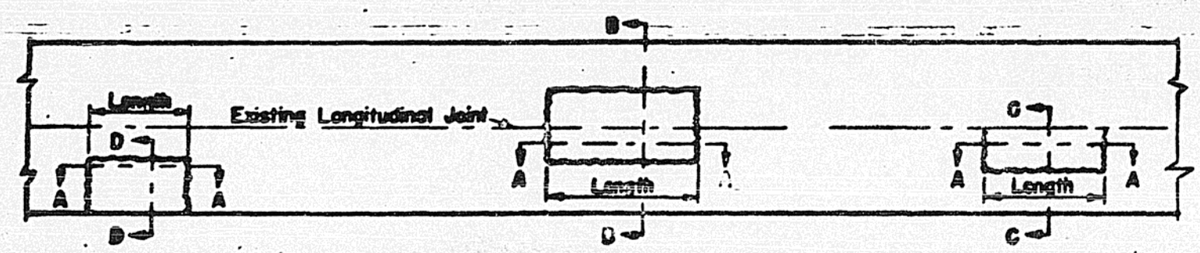
SECTION A-A

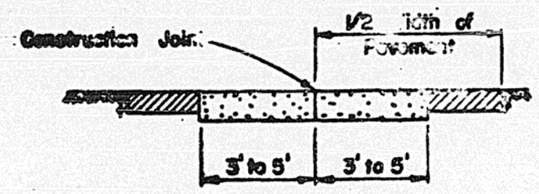


SECTION C-C

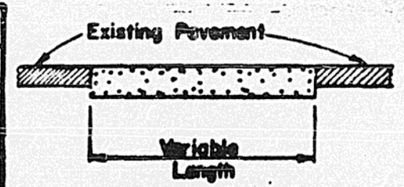


SECTION D-D

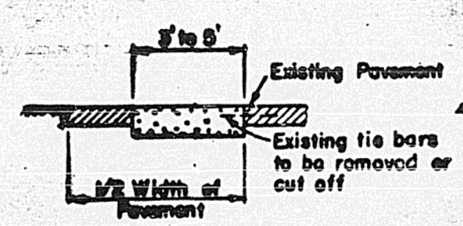




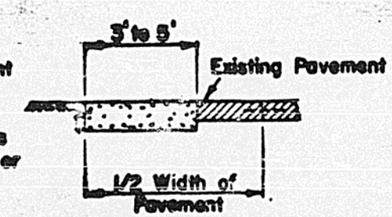
SECTION B-B
(Built in two operations)



SECTION A-A



SECTION C-C

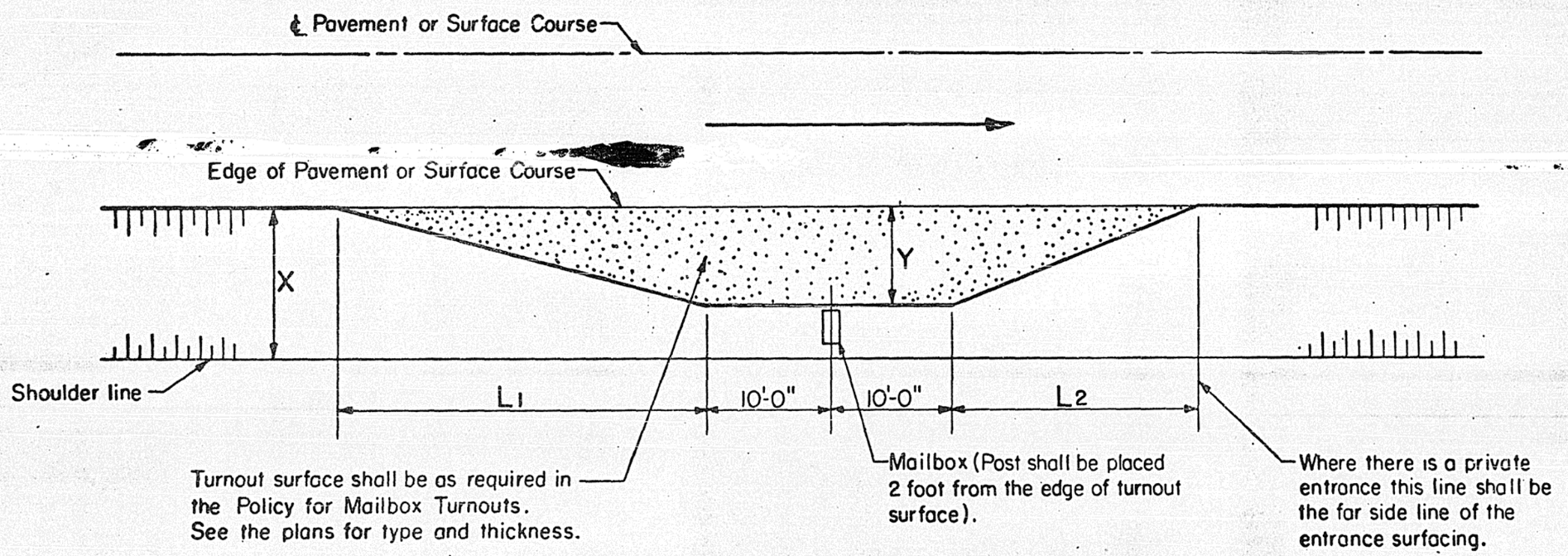


SECTION D-D

STATE OF ILLINOIS DEPARTMENT OF PUBLIC WORKS AND BUILDINGS DIVISION OF HIGHWAYS	ISSUED 10-29-54	
	REVISIONS	
	WF	12-9-66
ADOPTED Dec. 9, 1966 A J VanAusdall ENGINEER OF ROAD PLANS AND CONTRACTS		
APPROVED Dec. 9, 1966 W E Baumann ENGINEER OF DESIGN		

STANDARD 2117-1

STANDARD DESIGN
MAILBOX TURNOUT



DIMENSIONS

"X" Width of Shoulder	12'	10'	8'	6'	5'	4'
"Y" Width of Turnout	8'	8'	6'	4'	3'	2'
"L1"	30'	30'	23'	15'	11'	8'
"L2"	20'	20'	15'	10'	8'	5'

NOTE: Dimensions for Township and District Roads may vary from the above dimensions.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

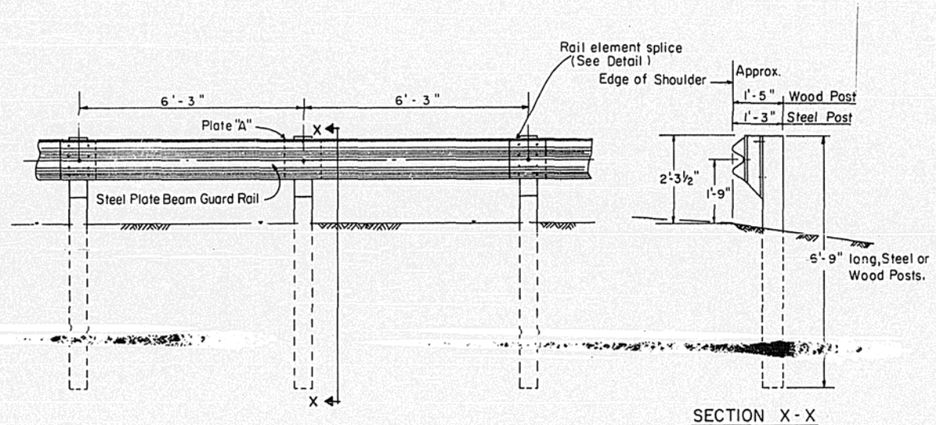
PASSED October 26, 1962
A V Van Auxhall
Engineer of Road Plans And Contracts

APPROVED October 26, 1962
Engineer of Design

REVISIONS	
BY	DATE

STANDARD 2171

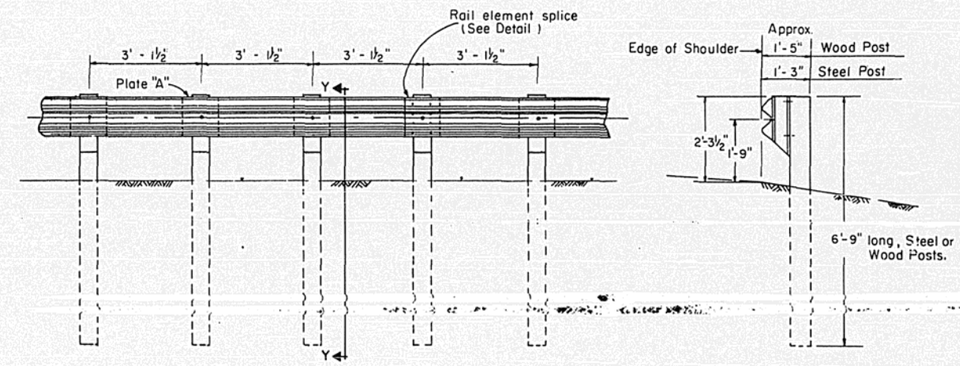
W.H.F. 10-26-62



SECTION X-X

TYPE A

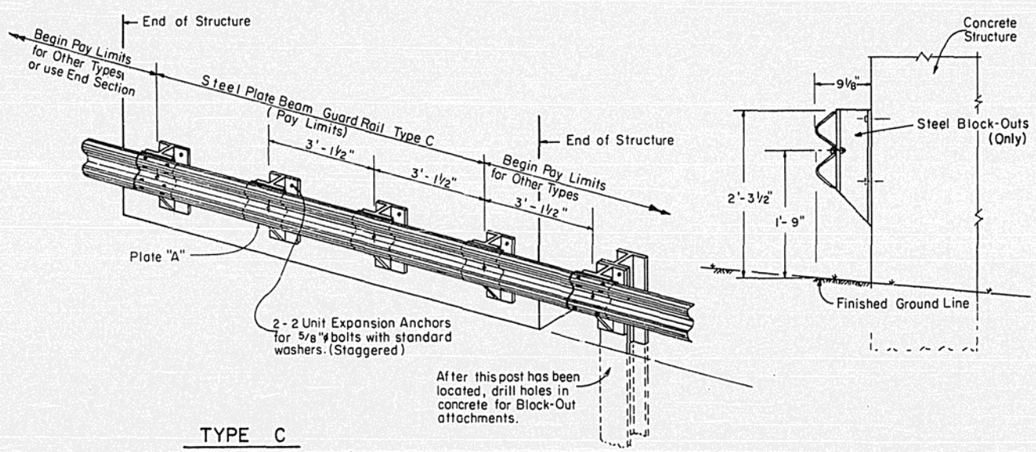
(6'-3" Typical Post Spacing)



SECTION Y-Y

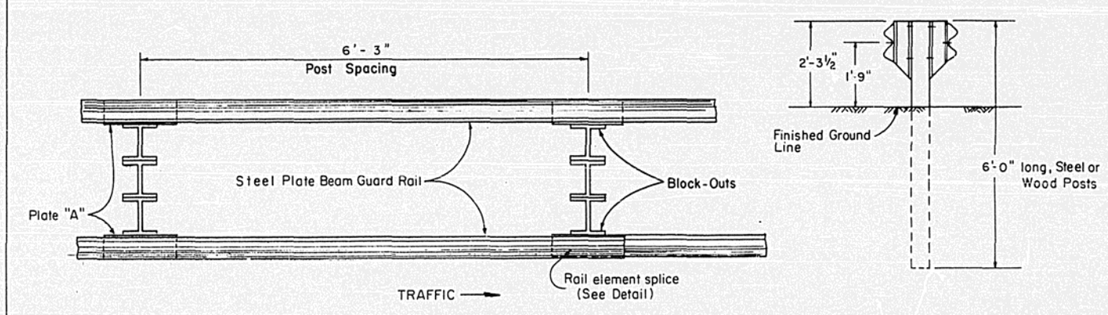
TYPE B

(3'-1½" Closed Post Spacing)



TYPE C

(3'-1½" Block-Out Spacing)



TYPE D

(Double Steel Plate Beam Guard Rail,
with 6'-3" Typical Post Spacing)

Illinois Department of Transportation

PASSED July 25, 1979

W. E. Henning
Engineer of Design Operations

APPROVED July 25, 1979

Thomas B. Enright
Engineer of Design

ISSUED 2-11-66

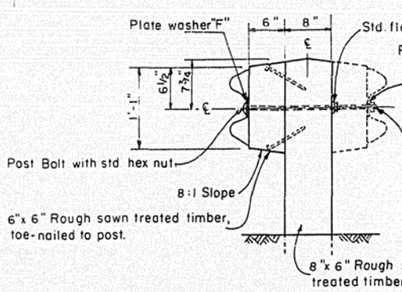
STEEL PLATE BEAM GUARD RAIL
TYPES A, B, C & D

Sheet 1 of 2 Sheets

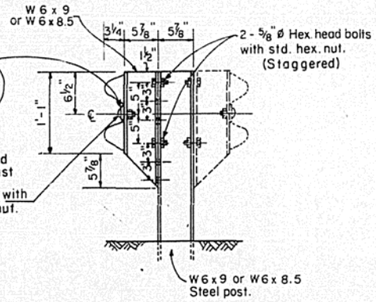
STANDARD 2230-13

F-3.1 k

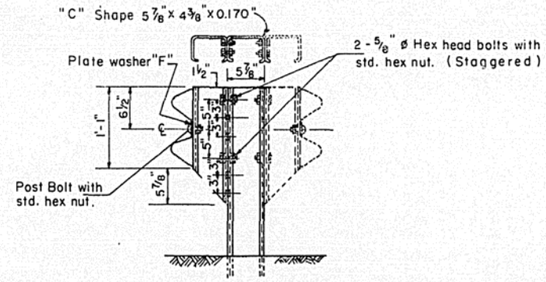
Full Size DWW Sr.



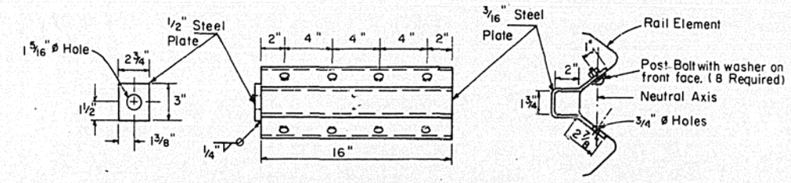
TYPICAL DETAIL OF WOOD POST CONSTRUCTION



TYPICAL DETAIL OF STEEL POST CONSTRUCTION

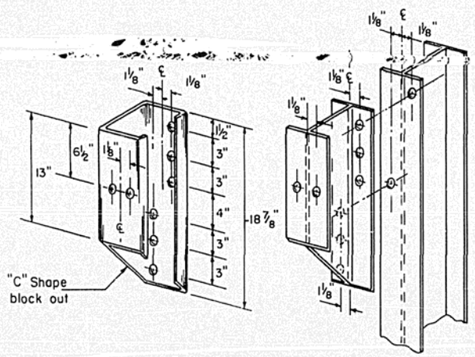


TYPICAL DETAIL OF STEEL POST CONSTRUCTION (ALTERNATE "C" SHAPE)

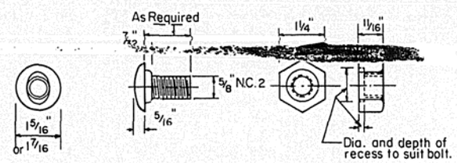


ANCHOR PLATE "T" DETAILS

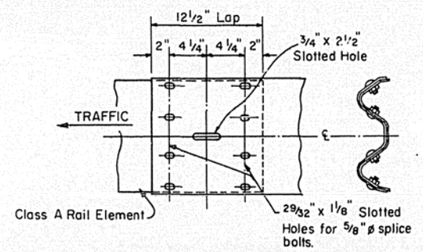
Anchor Plate "T" shall be used to attach cable assembly to guard rail when required on Traffic Barrier Terminals.



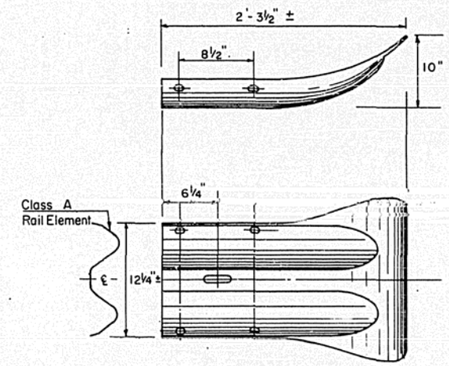
BLOCK-OUT DETAILS



POST OR SPLICE BOLT & NUT



RAIL ELEMENT SPLICE

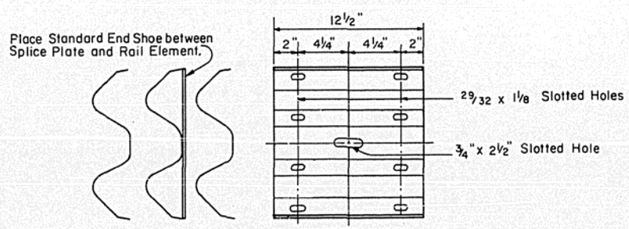


NOTE:

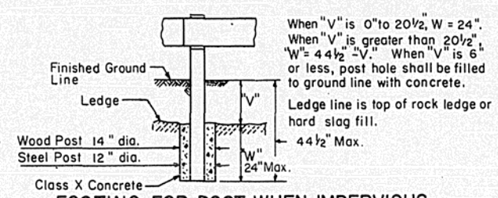
End Section shall be used only when specified on the contract plans.

Cost included in the bid unit price for Guard Rail.

END SECTION



SPLICE PLATE



When "V" is 0" to 20½", W = 24". When "V" is greater than 20½", "W" = 44½" - "V". When "V" is 6" or less, post hole shall be filled to ground line with concrete.

Ledge line is top of rock ledge or hard slag fill.

FOOTING FOR POST WHEN IMPERVIOUS MATERIAL IS ENCOUNTERED

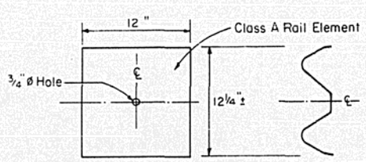
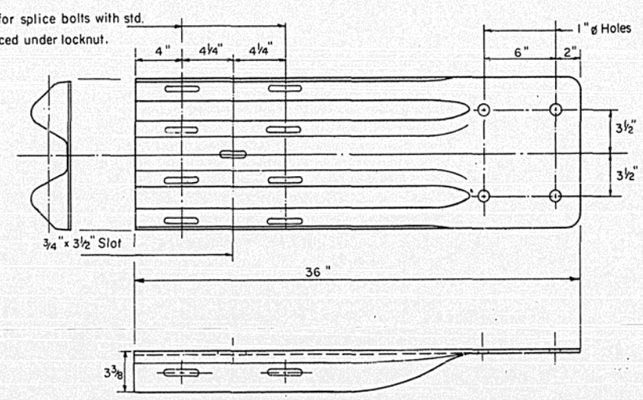


PLATE "A"

NOTE:

"Plate A" shall be placed between rail element and block-out at all non-splice mounting points.



STANDARD END SHOE

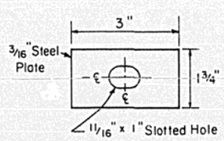


PLATE WASHER "F"

Plate Washer "F" shall be used at all locations where rail element is bolted to a block-out unless otherwise noted.

When end shoe is attached to a bridge parapet which has an expansion joint, the bolts shall be provided with a locknut or double nut and shall be tightened only to a point that will allow guard rail movement.

The Standard End Shoe shall be attached to the concrete with Pre-drilled or Self-drilling anchor bolts. The anchor cone shall be set flush with the surface of the concrete.

Externally threaded studs protruding from the surface of the concrete will not be permitted.

GENERAL NOTES

All rail element shall be Class A unless otherwise noted.

All holes in posts and block-outs shall be ¾" ø.

All concrete, and accessories used in the placing of the guard rail shall be included in the bid unit price for guard rail.

Rail element may be furnished in nominal lengths of either 12'-6" or 25'-0".

All rail elements and accessories shall conform to AASHTO M-180 unless otherwise noted.

For steel block-outs attached to wood posts, use 2-⅝" ø lag bolts (staggered) in pre-drilled post holes.

The Contractor shall load test 10% of all expansion anchor bolts in guard rail installations in the presence of the Engineer. The equipment and method used shall meet the approval of the Engineer. The minimum test load shall be 8,000 pounds for ⅞" ø bolts and 3,000 pounds for ⅝" ø bolts in direct pull. For each anchor that fails the test requirements, two (2) more anchor bolts, picked by the Engineer shall be tested. Each anchor bolt that fails to meet the test requirement shall be reset or removed and the hole drilled deeper. All reset anchor bolts shall meet minimum test requirements.

Illinois Department of Transportation

APPROVED July 25, 1979
Engineer of Design Operations

APPROVED July 25, 1979
Engineer of Design

ISSUED 2-11-66

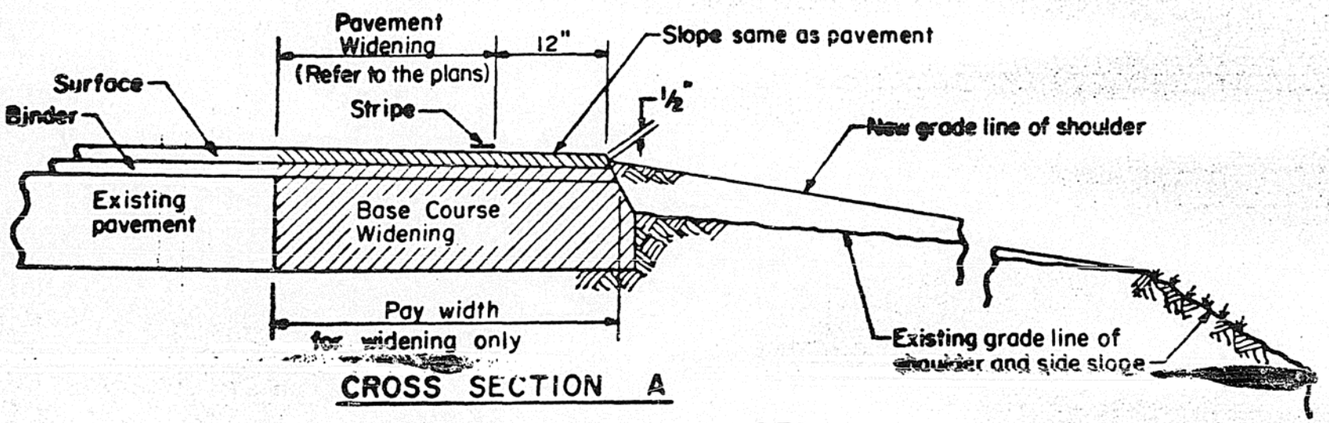
STEEL PLATE BEAM GUARD RAIL

(Sheet 2 of 2 Sheets)

STANDARD 2230 - 13

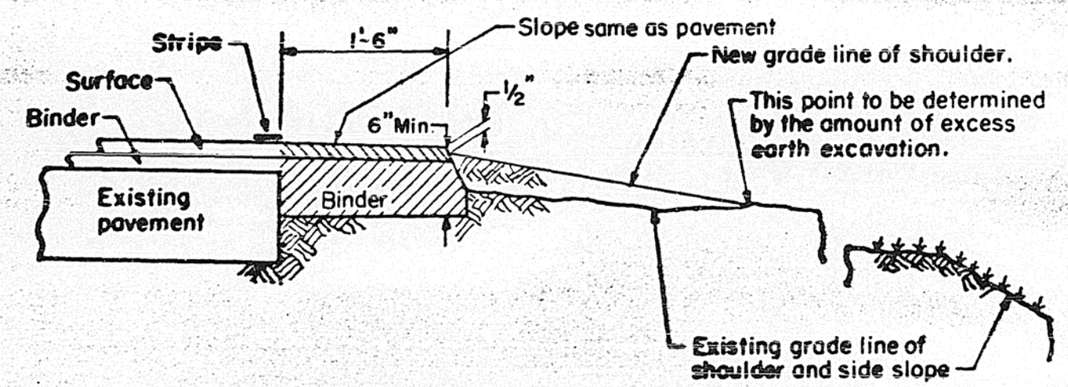
Full Size D.W.W. Sr.

F-3.2 d



CROSS SECTION A

DETAIL OF WIDENING WITH SHOULDER



CROSS SECTION B

DETAIL OF BITUMINOUS SHOULDER

GENERAL NOTES

Refer to the plans for the thickness of the bituminous binder and surface on pavement.

The Bituminous Binder shoulder material for Section B may be placed in one or two layers at the option of the Contractor.

The bituminous mixture for Section B shall be compacted to a density of not less than 85% of the theoretical density. The compaction equipment shall be as determined by the Engineer.

The bituminous binder and surface mixtures for shoulders will be paid for at the contract unit price per ton of the type specified for the adjacent resurfacing except that the thickness of surface course paid for will be limited to that specified for the resurfacing or 1½" whichever is less. Surface course used in excess of this amount will be paid for as binder course.

The earthwork required as shown in Section A will be measured to the neat lines as shown and will be paid for at the contract unit price per cubic yard for EARTH EXCAVATION WIDENING which price shall include use of earth excavation to regrade the shoulders to the new grade line and disposal of excess as specified in the Standard Specifications.

The earthwork required as shown in Section B will be paid for at the contract unit price per unit (100 lineal feet) measured separately on the right and left hand sides for EXCAVATING AND GRADING EXISTING SHOULDER which price shall include use of excess earth excavation to regrade the shoulders to the new grade line.

Stripe at edge of pavement to be furnished by others.

Illinois Department of Transportation

PASSED April 15 1977

D. E. Deming
Engineer of Design Operations

APPROVED April 15 1977

Thomas B. Bright
Engineer of Design

ISSUED 5-10-67	
REVISIONS	
W.F.	12-1-69
W.F.	3-18-70
W.F.	1-18-71
W.F.	12-17-71
D.W.W.	4-15-77

Redrawn 12-1-69

WIDENING AND SHOULDERS FOR PAVEMENT RESURFACING

STANDARD 2239-6

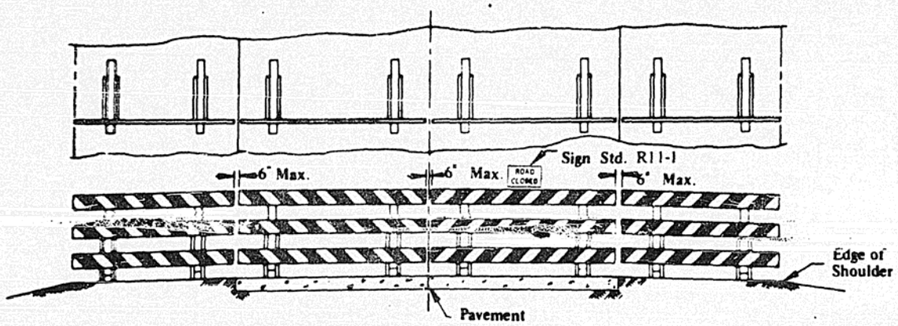
C-22.15

(1/4 Size) W.F.

STANDARD DESIGN

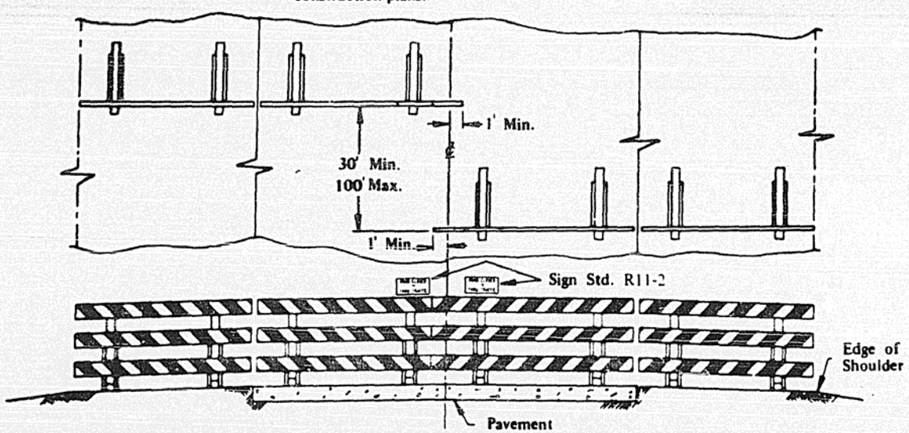
TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR HIGHWAY CONSTRUCTION AND MAINTENANCE

TYPICAL APPLICATIONS OF TYPE III BARRICADES CLOSING A ROAD



ROAD CLOSED TO ALL TRAFFIC

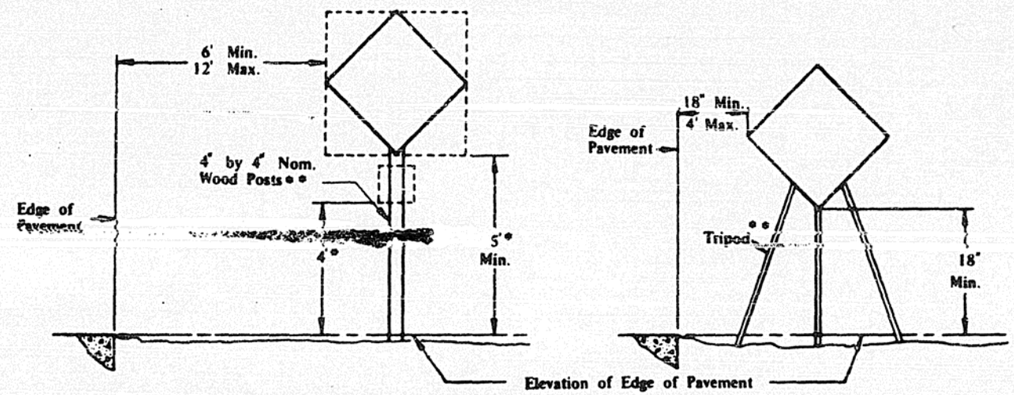
The barricades shall be to the edge of the shoulders except when otherwise directed by the Engineer or shown on the detailed construction plans.

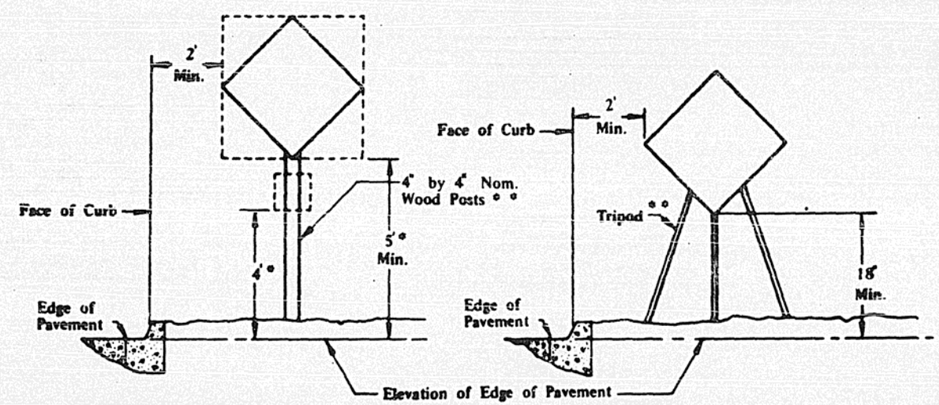


ROAD CLOSED TO THRU TRAFFIC

Reflectorized striping shall appear on both sides of barricades. The barricades shall be to the edge of the shoulders, except when otherwise directed by the Engineer or shown on the detailed construction plans.

TYPICAL SIGN INSTALLATIONS





*Add 2 ft. if parking exists within 200 ft. in advance of the sign location at any time during the project.

**Alternate designs and/or materials may be permitted when authorized by the Engineer. All materials shall be substantial and durable.

Signs on temporary supports shall be within 20° of a vertical position.

Weights of concrete, stone, or brick will not be allowed and all weights used to stabilize signs other than sandbags must be rigidly attached to the sign support as close to the ground as possible.

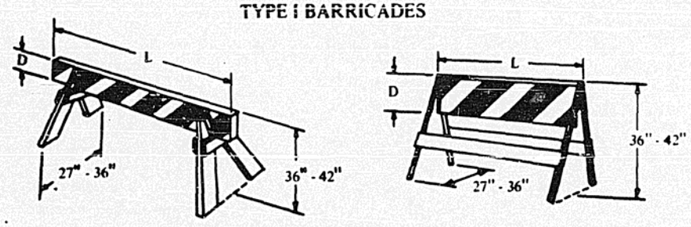
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ISSUED 4-3-69	
	REVISED BY	DATE
APPROVED 17 1973 L. E. McBerly Engineer of Traffic		

STANDARD 2298-4

F-6.01 c

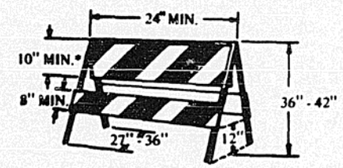
STANDARD DESIGN
DESIGN OF TRAFFIC CONTROL DEVICES FOR HIGHWAY CONSTRUCTION AND MAINTENANCE

TYPE I BARRICADES



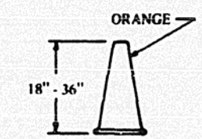
LENGTH (L)	DEPTH (D)
36" MIN.	10" MIN. (12" SLOPING RAIL)

TYPE II BARRICADES

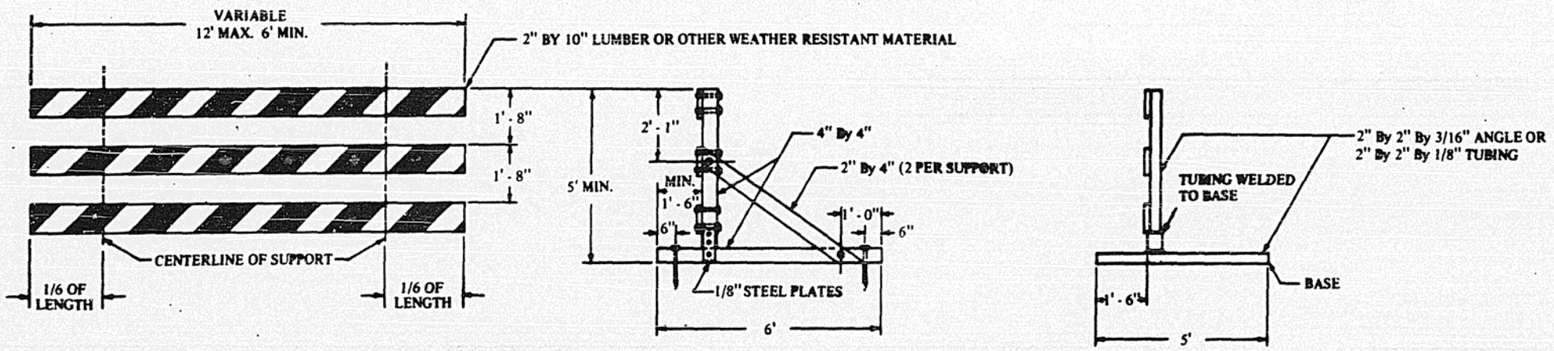


*12" SLOPING

CONES



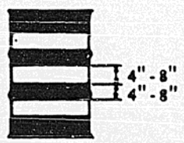
TYPE III BARRICADES



TYPICAL WOOD SUPPORTS

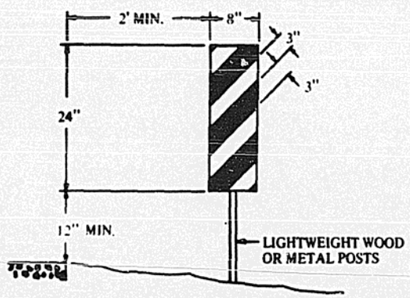
TYPICAL STEEL SUPPORTS

DRUMS



"55 GALLON"
OR
"30 GALLON"

VERTICAL PANELS



GENERAL NOTES

1. Barricade legs or supports shall be orange, white or silver in color.
2. All reflectorized material, shall meet the latest reflective sheeting requirements of the Department to be used in construction and maintenance areas.
3. All barricades and vertical panels shall have alternating reflectorized white and reflectorized orange stripes at 45° from the vertical. Barricade stripes shall be 6 inches in width on barricades 36 inches or greater in length and 4 inches in width on barricades less than 36 inches in length. Stripes on vertical panels shall be 3 inches in width.
4. Type I and Type II Barricades shall be striped on both sides. Type III Barricades shall be striped on both sides where traffic approaches from either direction.
5. Diagonal stripes shall slope downward at 45° toward the side on which traffic will pass.
6. Vertical panels placed on the outside of curves shall be reflectorized on both sides.
7. The top rail on Type I and Type II Barricades may be vertical as shown or sloping at no greater than a 30 degree angle.
8. Drums shall have alternating reflectorized orange and reflectorized white horizontal, circumferential stripes. Stripes shall be 4 inches to 8 inches in width. If non reflective spaces are left between the orange and white stripes or at the top and bottom of the drum, they shall be no more than 2 inches in width and shall be painted orange or white. Other than for these 2-inch spaces, the entire drum shall be striped.
9. Frames shown are typical. Alternate designs and/or materials may be permitted when authorized by the Engineer. All materials shall be substantial and durable. Nominal lumber sizes are acceptable to satisfy dimensions.
10. Barricades may be identified with a legend that does not exceed one inch in height at a location not visible to traffic.
11. Weights of concrete, stone, or brick will not be allowed and all weights used to stabilize barricades other than sandbags must be rigidly attached to the barricades as close to the ground as possible. No weights or sandbags will be allowed on the top rail of barricades. Drums may be weighted internally with just enough sand, water, or other material to provide stability.
12. When used, warning lights on Type I and Type II Barricades shall be mounted above the top rail to the side on which traffic will pass and shall not obscure any reflectorized portion of the rail.

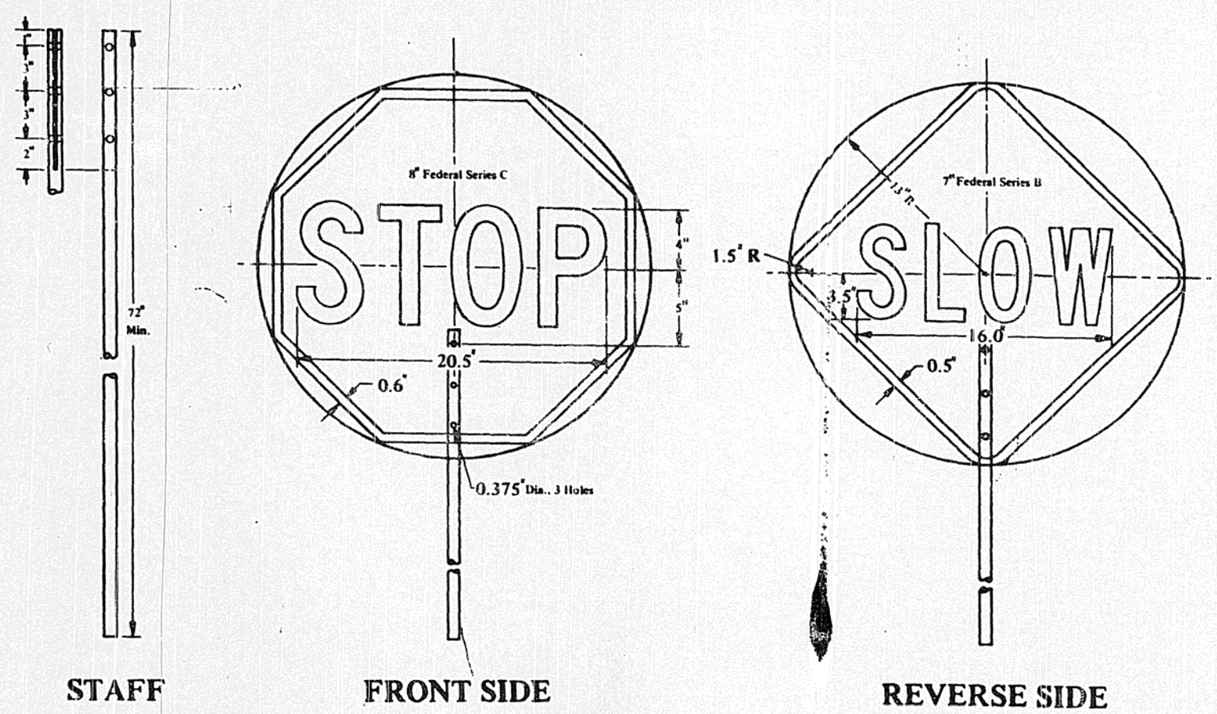
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ISSUED 4-5-69	
	REVISED By	DATE
APPROVED 12-27-74 G.E. Mokaby, Engineer of Traffic	R.V.	6-1-76

STANDARD 2299-7

F-602 d

F603a

STANDARD DESIGN FOR FLAGMAN TRAFFIC CONTROL SIGN



STAFF FRONT SIDE REVERSE SIDE

GENERAL NOTES

1. The "STOP" face shall consist of white letters and border on a red reflectorized background.
2. The "SLOW" face shall consist of black letters and border on a orange reflectorized background.
3. Areas outside sign borders shall be light blue.
4. The portion of the staff within the sign face shall match the sign colors.
5. All colors and letters shall meet applicable federal standards.
6. The sign shall be attached to the staff with rust resistant hardware.
7. The staff shall consist of two sections joined by a coupling located 60 in. from the bottom of the staff. Alternate designs may be used when approved by the Engineer. All materials shall be substantial and durable.
8. This sign shall be furnished by the contractor and shall be used by the flagman in lieu of flags or other signaling devices. The cost of furnishing and maintaining the sign shall be considered incidental to the contract and no additional compensation will be allowed.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

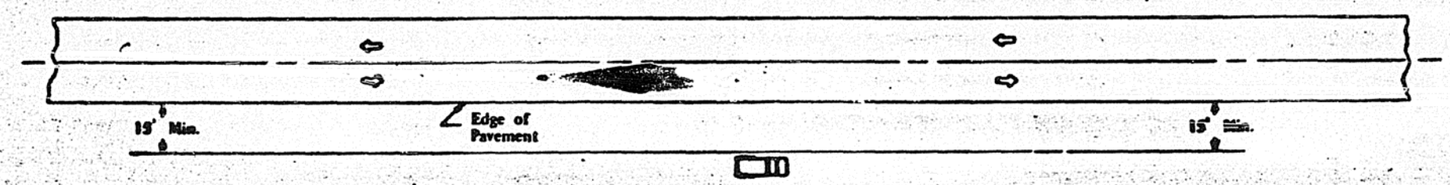
APPROVED 6-12 1973
G. E. McCarty
Engineer of Traffic

ISSUED 4-3-69	
REVISED	
BY	DATE

STANDARD 2300-1

STANDARD DESIGN

TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR HIGHWAY CONSTRUCTION AND MAINTENANCE



CASE I

TWO-LANE, TWO WAY TRAFFIC, RURAL DAY OR NIGHT OPERATIONS

Where, at all times, all vehicles, equipment, men and their activities are more than 15 ft. from the edge of pavement.

TYPICAL APPLICATIONS

- Landscaping Work
- Utility Operations
- Fencing Contracts and Maintenance
- Cleaning Culverts

GENERAL NOTES

1. No special signing is required.
2. If the work operation requires that two or more work vehicles cross the 15 ft. clear zone in any one hour, traffic control will be in conformance with Case II.

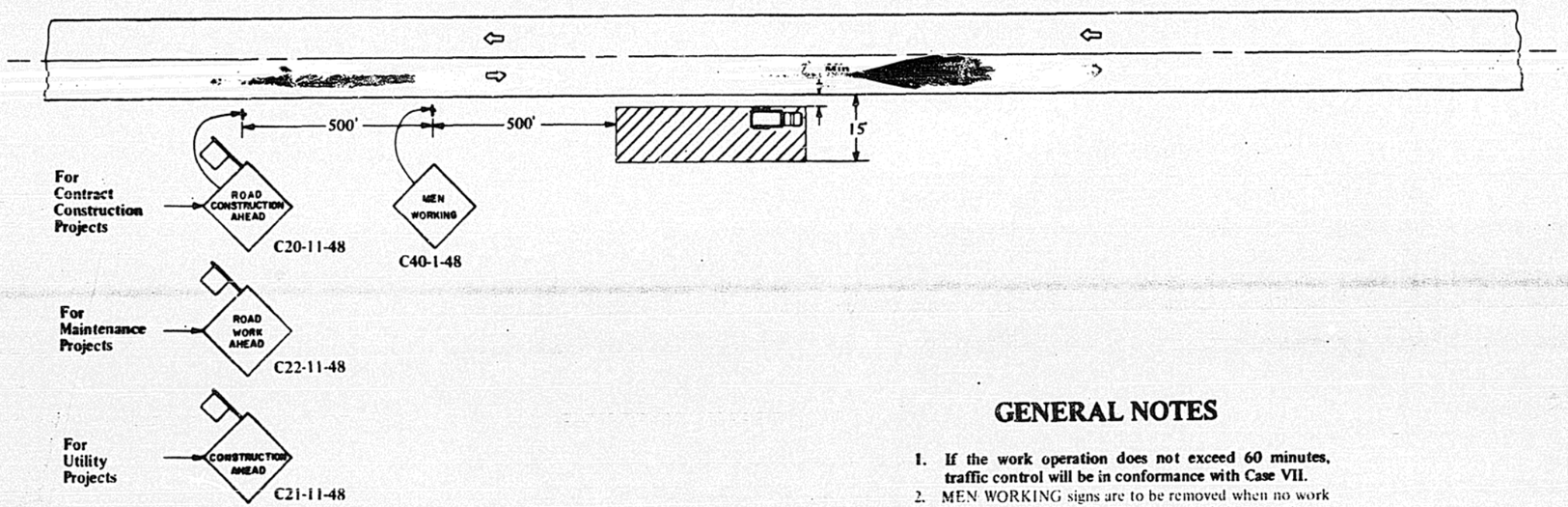
F-6.06 b

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ISSUED 4-3-69	
	REVISED BY	DATE
APPROVED 6-12 1973		
L. E. Mahony Engineer of Traffic		

STANDARD 2301-3

STANDARD DESIGN

TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR HIGHWAY CONSTRUCTION AND MAINTENANCE



GENERAL NOTES

1. **If the work operation does not exceed 60 minutes, traffic control will be in conformance with Case VII.**
2. MEN WORKING signs are to be removed when no work is being performed. Any unattended obstacle or excavation in the work area, which in the opinion of the engineer constitutes a hazard, shall be protected by Type I or Type II Barricades at 50-foot centers with flashing lights or torches at night. When used, torches must be placed on the ground. If the hazard exceeds 100 feet in length, steady burning lights shall be substituted for flashing lights or torches. When the distance is greater than 250 feet, barricade spacing may be increased to 100 feet.
3. **If the work operation requires that four or more work vehicles enter the through traffic lanes in a one–hour period, a flagman shall be provided and the FLAGMAN 500 FT sign shall be substituted for the MEN WORKING sign.**
4. **Longitudinal dimensions may be adjusted slightly to fit field conditions.**
5. **All warning signs shall have minimum dimensions of 48 in. by 48 in. and have black legend and border on an orange reflectorized background.**
6. All vehicles, equipment, men and their activities are restricted at all times to one side of the pavement unless otherwise authorized by the Engineer.

TYPICAL APPLICATIONS

Utility Operations
Culvert Extensions
Side Slope Changes
Guard Rail Installation and Maintenance
Delineator Installation and Maintenance
Landscaping Operations
Cleaning Ditches and Drainage Structures
Sign Installation and Maintenance
Shoulder Repair

SYMBOLS

Work Area.

Sign with 18 in. by 18 in. (minimum) orange flag attached.

Sign on portable or permanent support.

CASE II

TWO-LANE, TWO WAY TRAFFIC, RURAL DAY OR NIGHT OPERATIONS

Where, at any time, any vehicle, equipment, men or their activities will encroach in the area closer than 15 ft. but not closer than 2 ft. to the edge of pavement.

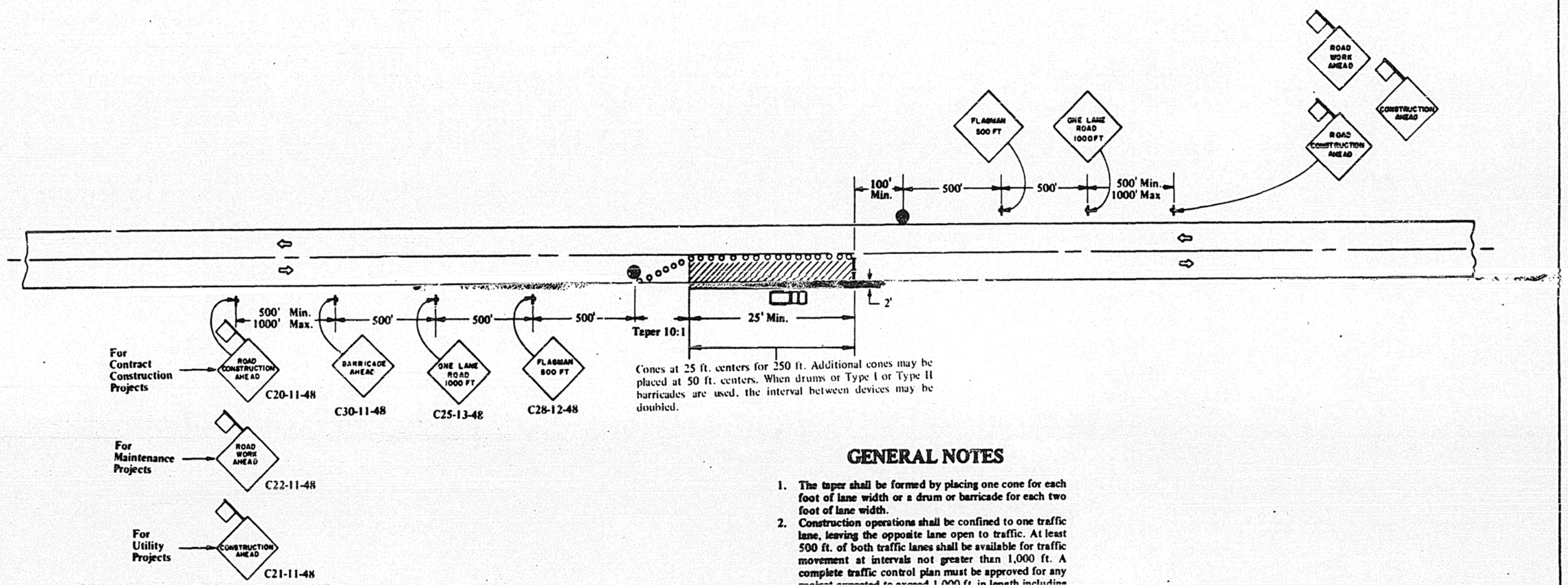
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ISSUED 4-3-69	
	REVISED BY	DATE
APPROVED 6-12 1973 L. E. Moberly Engineer of Traffic		

STANDARD 2302-3

F-6.07 b

STANDARD DESIGN

TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR HIGHWAY CONSTRUCTION AND CONTRACT MAINTENANCE



Cones at 25 ft. centers for 250 ft. Additional cones may be placed at 50 ft. centers. When drums or Type I or Type II barricades are used, the interval between devices may be doubled.

GENERAL NOTES

1. The taper shall be formed by placing one cone for each foot of lane width or a drum or barricade for each two foot of lane width.
2. Construction operations shall be confined to one traffic lane, leaving the opposite lane open to traffic. At least 500 ft. of both traffic lanes shall be available for traffic movement at intervals not greater than 1,000 ft. A complete traffic control plan must be approved for any project expected to exceed 1,000 ft. in length including both taper and work areas.
3. If the work operation does not exceed 60 minutes, traffic control will be in conformance with Case VII.
4. The flagmen shall be in sight of each other or in direct communication at all times.
5. When there is no work being performed, the FLAGMAN 500 FT sign(s) and the flagmen will not be required. A ONE LANE ROAD 500 FT sign(s) shall be installed in place of the FLAGMAN 500 FT sign(s).
6. All signs, cones, barricades and drums are to be removed at completion of the day's operations and the work area opened to traffic.
7. When a side road intersects the highway on which work is being performed, additional traffic control devices shall be erected and flagmen provided as directed by the Engineer.
8. Longitudinal dimensions may be adjusted slightly to fit field conditions. The lateral placement of the flagmen may be varied from that shown.
9. All warning signs shall have minimum dimensions of 48 in. by 48 in. and have black legend and border on an orange reflectorized background.
10. All vehicles, equipment, men (except flagmen) and their activities are restricted at all times to one side of the pavement unless otherwise authorized by the Engineer.

SYMBOLS

- Work Area.
- Sign with 18 in. by 18 in. (minimum) orange flag attached.
- Cone, Drum (55 or 30 gallon), Type I or Type II Barricade.
- Sign on portable or permanent support.
- Flagman with Traffic Control sign.
- Type I or Type II Barricade.

TYPICAL APPLICATIONS

Pavement Patch
Utility Operations

CASE III

TWO-LANE, TWO WAY TRAFFIC, RURAL DAY OPERATIONS ONLY

Where, at any time, any vehicle, equipment, men or their activities will encroach in the area between the center line and a line 2 ft. outside the edge of pavement.

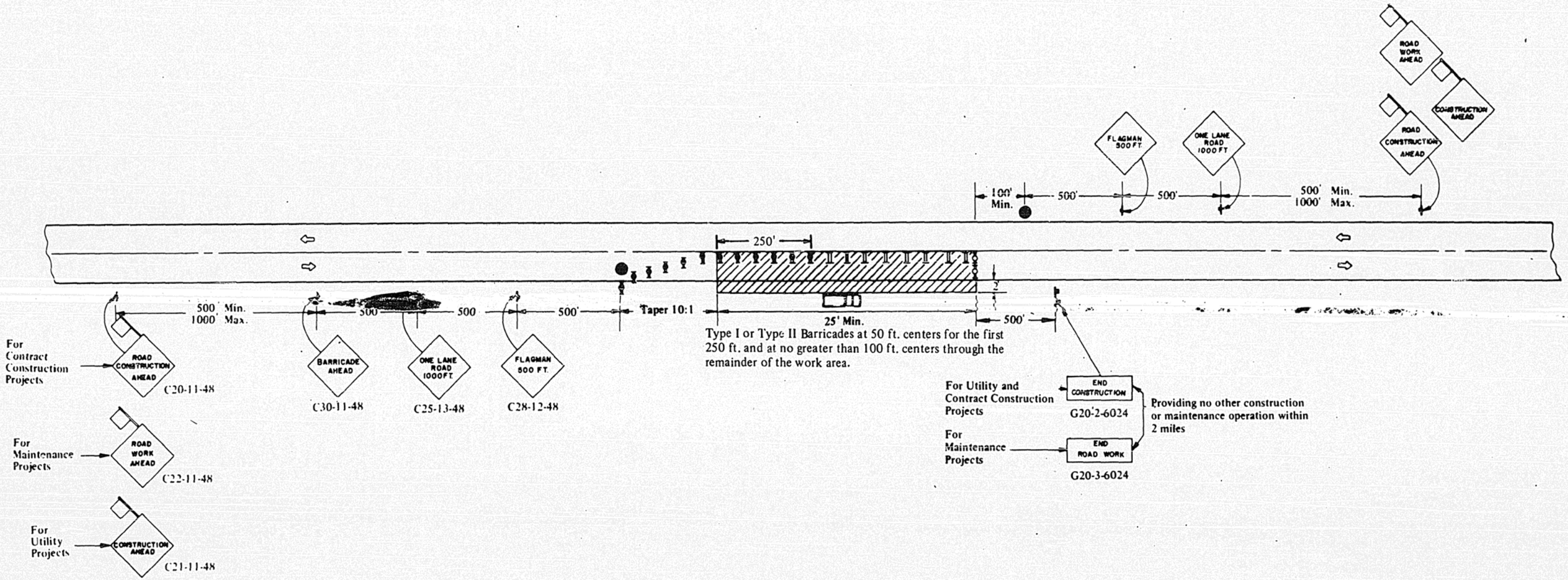
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ISSUED 4-3-69 REVISED	
	BY	DATE
APPROVED 6-12 1973		
L. E. Moberly, Engineer of Traffic		

STANDARD 2303-4

F-6.08 b

STANDARD DESIGN

TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR HIGHWAY CONSTRUCTION AND CONTRACT MAINTENANCE



TYPICAL APPLICATIONS

Isolated Patch
Installation of Drainage Structure
Utility Operations

SYMBOLS

- Work Area.
- Sign with 18 in. by 18 in. (minimum) orange flag attached.
- Sign on portable or permanent support.
- Flagman with Traffic Control sign.
- Type I or Type II Barricade with flashing light.
- Type I or Type II Barricade with steady burning light.
- Type I or Type II Barricade.

GENERAL NOTES

1. Construction operations shall be confined to one traffic lane, leaving the opposite lane open to traffic. At least 500 ft. of both traffic lanes shall be available for traffic movement at intervals not greater than 1,000 ft. A complete traffic control plan must be approved for any project expected to exceed 1,000 ft in length including both taper and work areas.
2. The taper shall be formed by placing one barricade for each two foot of lane width.
3. The flagmen shall be in sight of each other or in direct communication at all times.
4. When there is no work being performed, the FLAGMAN 500 FT sign(s) and the flagmen will not be required. A ONE LANE ROAD 500 FT sign(s) shall be installed in place of the FLAGMAN 500 FT sign(s).
5. Cones may be substituted for barricades, except those with flashing lights, at half the spacing during daytime operations.
6. **The Engineer may require drums, either 55 gallon or 30 gallon, to be used to supplement the barricades if the closure time exceeds four days.**
7. All signs shall be post mounted if the closure time exceeds four days.
8. High intensity flashing lights shall be used on each approach in advance of the work area during hours of darkness and installed above the first two signs in each series.
9. Torches may be substituted for flashing barricade lights. When used, torches must be placed on the ground.
10. When a side road intersects the highway on which work is being performed, additional traffic control devices shall be erected and flagmen provided as directed by the Engineer.
11. Longitudinal dimensions may be adjusted slightly to fit field conditions. The lateral placement of the flagmen may be varied from that shown.
12. All signs shall be in accordance with the Illinois Manual on Uniform Traffic Control Devices and be reflectorized. All warning signs shall be a minimum of 48 in. by 48 in.
13. All vehicles, equipment, men (except flagmen) and their activities are restricted at all times to one side of the pavement unless otherwise authorized by the Engineer.
14. All barricade lights shall be bidirectional except lights on taper barricades, which shall be monodirectional.
15. Form BT 725 is required.

CASE IV

TWO-LANE, TWO WAY TRAFFIC, RURAL NIGHT OPERATIONS OR OPERATIONS EXCEEDING ONE DAYLIGHT PERIOD

Where, at any time, any vehicle, equipment, men or their activities will encroach in the area between the center line and a line 2 ft. outside the edge of pavement.

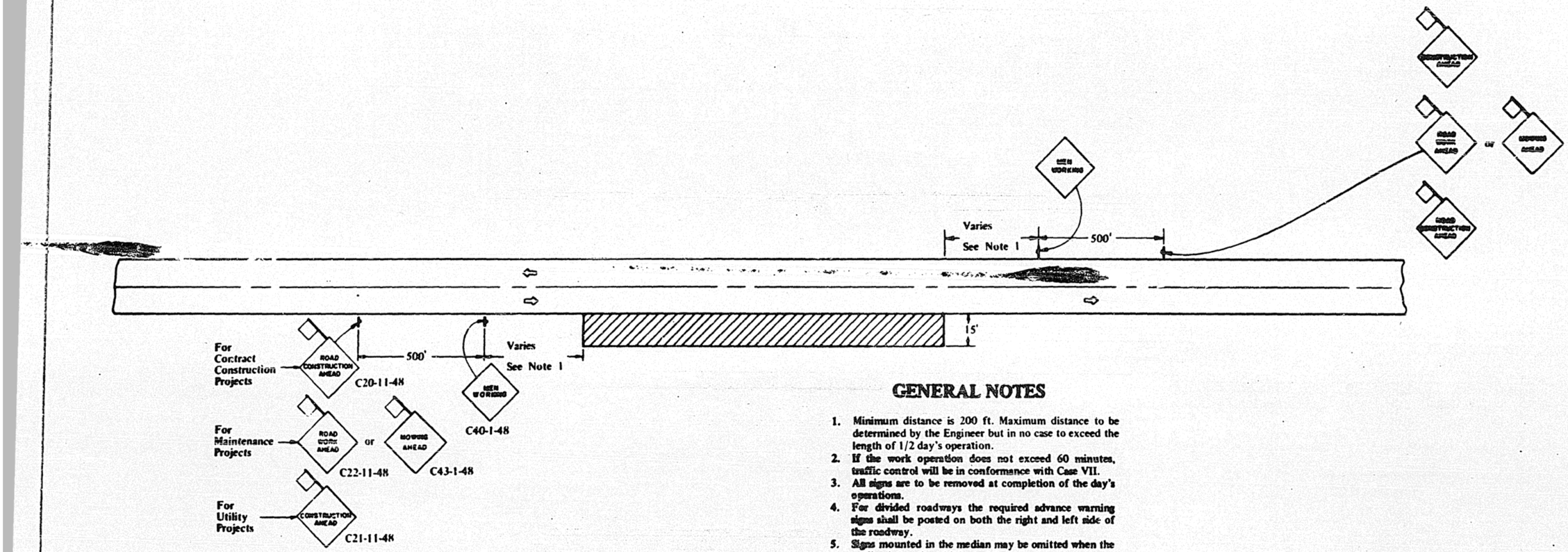
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ISSUED 4-3-69	
	REVISED	
	BY	DATE
APPROVED 6-12 1973	RTY	4/25/75
G.E. Moberly Engineer of Traffic		

STANDARD 2304-4

F-6.09 c

STANDARD DESIGN

TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR HIGHWAY CONSTRUCTION AND MAINTENANCE



GENERAL NOTES

1. Minimum distance is 200 ft. Maximum distance to be determined by the Engineer but in no case to exceed the length of 1/2 day's operation.
2. If the work operation does not exceed 60 minutes, traffic control will be in conformance with Case VII.
3. All signs are to be removed at completion of the day's operations.
4. For divided roadways the required advance warning signs shall be posted on both the right and left side of the roadway.
5. Signs mounted in the median may be omitted when the median is less than 10 feet wide.
6. For multilane roadways the advance warning signs for traffic approaching from the opposite direction will be omitted.
7. MEN WORKING signs are to be removed when no work is being performed. Any unattended obstacle or excavation in the work area, which in the opinion of the engineer constitutes a hazard, shall be protected by Type I or Type II Barricades at 50-foot centers with flashing lights or torches at night. When used, torches must be placed on the ground. If the hazard exceeds 100 feet in length, steady burning lights shall be substituted for flashing lights or torches. When the distance is greater than 250 feet, barricade spacing may be increased to 100 feet.
8. If the work operation requires that four or more work vehicles enter the through traffic lanes in a one-hour period, a flagman shall be provided and the FLAGMAN AHEAD sign shall be substituted for the MEN WORKING sign.
9. Longitudinal dimensions may be adjusted slightly to fit field conditions.
10. All warning signs shall have minimum dimensions of 48 in. by 48 in. and have black legend and border on an orange reflectorized background.
11. All vehicles, equipment, men and their activities are restricted at all times to one side of the pavement unless otherwise authorized by the Engineer.

CASE V

RURAL MOVING OPERATIONS DAY OPERATIONS ONLY

Where, at any time, any vehicle, equipment, men or their activities require an intermittent or continuous moving operation on the shoulder.

TYPICAL APPLICATIONS

Shoulder Work
Mowing
Utility Operations

SYMBOLS

Work Area.

Sign with 18 in. by 18 in. (minimum) orange flag attached.

Sign on portable or permanent support.

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ISSUED 4-3-69	
	REVISED BY	DATE
APPROVED 6-12 1973 G. E. Moberly Engineer of Traffic		

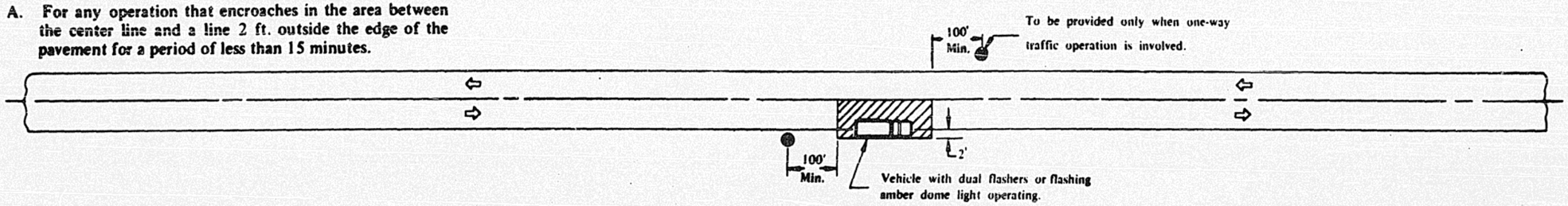
STANDARD 2305-3

F-6.10 b

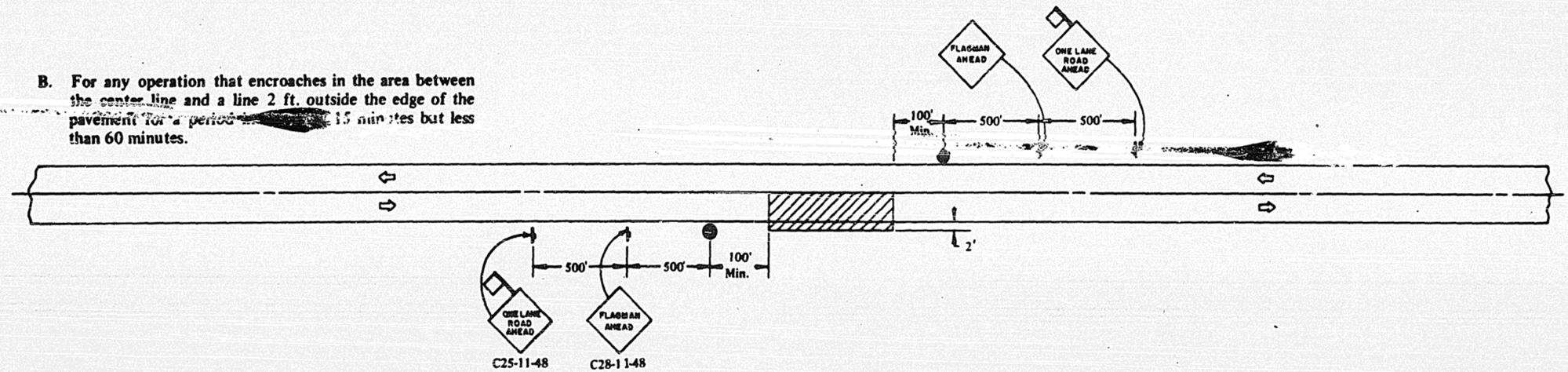
STANDARD DESIGN

TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR HIGHWAY CONSTRUCTION AND CONTRACT MAINTENANCE

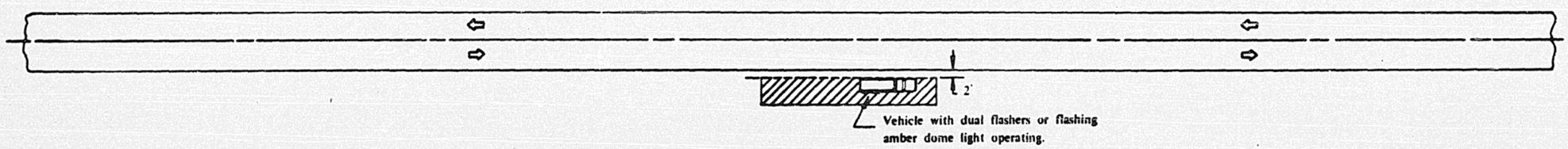
A. For any operation that encroaches in the area between the center line and a line 2 ft. outside the edge of the pavement for a period of less than 15 minutes.



B. For any operation that encroaches in the area between the center line and a line 2 ft. outside the edge of the pavement for a period [redacted] 15 minutes but less than 60 minutes.



C. For any operation that is more than 2 ft. outside the edge of the pavement for a period of less than 60 minutes.



TYPICAL APPLICATIONS

Marking Patches
Field Survey
String Line
Utility Operation
Cleaning Up Debris on Pavement

SYMBOLS

Work Area.

Sign with 18 in. by 18 in. (minimum) orange flag attached.

Sign on portable or permanent support.

Flagman with Traffic Control sign.

GENERAL NOTES

1. Construction operations shall be confined to one traffic lane. On two-lane roads, at least 500 ft. of both traffic lanes shall be available for traffic movement at intervals not greater than 1,000 ft. and a complete traffic control plan must be approved for any project expected to exceed 1,000 ft. in length.
2. The flagmen shall be in sight of each other or in direct communication at all times.
3. All signs are to be removed at completion of each operation.
4. For multilane roadways the flagman shown for traffic approaching from the opposite direction will be positioned as directed by the Engineer and the advance warning signs for traffic approaching from the opposite direction omitted.
5. Longitudinal dimensions may be adjusted slightly to fit field conditions. The lateral placement of the flagmen may be varied from that shown.
6. All warning signs shall have minimum dimensions of 48 in. by 48 in. and have black legend and border on an orange reflectorized background.
7. All vehicles, equipment, men (except flagmen) and their activities are restricted at all times to one side of the pavement unless otherwise authorized by the Engineer.

CASE VII

SHORTTIME OPERATIONS
DAY OR NIGHT OPERATIONS

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ISSUED 4-3-69	
	REVISED	
	BY	DATE
APPROVED 6-12 1973		
L.E. Mobley Engineer of Traffic		

STANDARD 2307-4

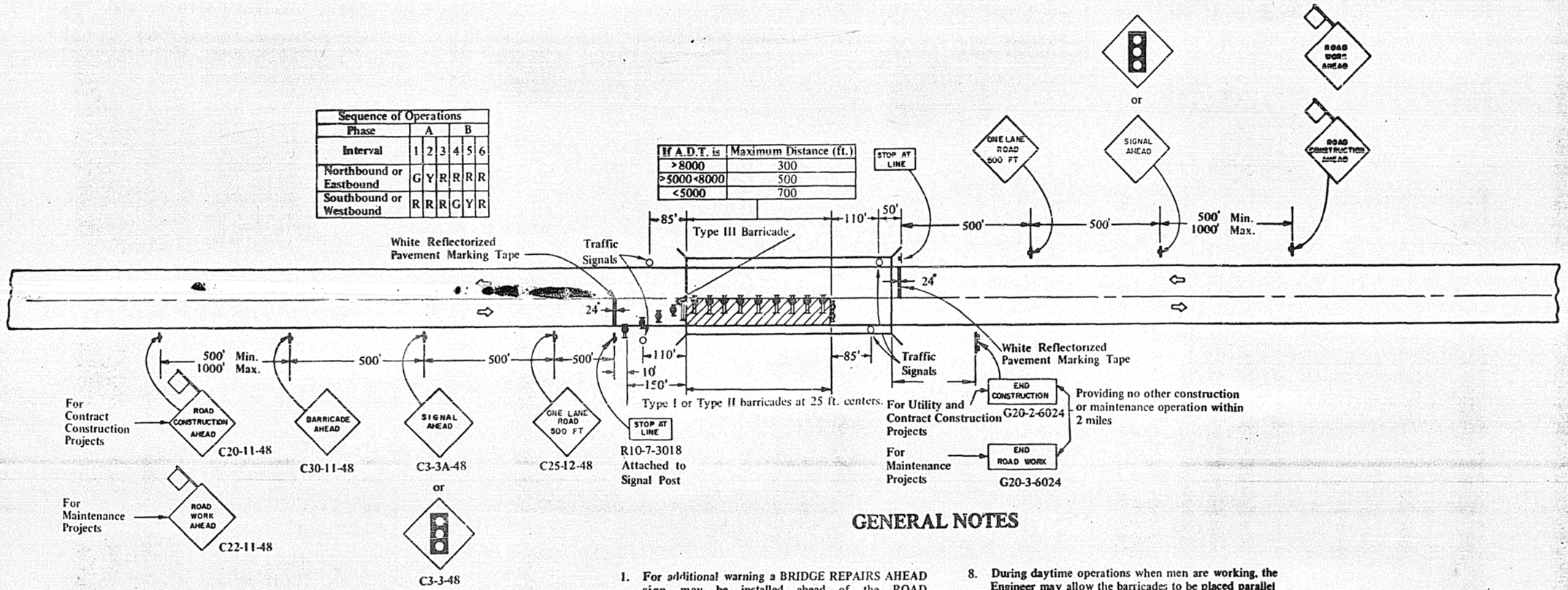
F-6.12 b

STANDARD DESIGN

TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR HIGHWAY CONSTRUCTION AND MAINTENANCE

Sequence of Operations						
Phase	A			B		
Interval	1	2	3	4	5	6
Northbound or Eastbound	G	Y	R	R	R	R
Southbound or Westbound	R	R	R	G	Y	R

If A.D.T. is	Maximum Distance (ft.)
>8000	300
>5000<8000	500
<5000	700



GENERAL NOTES

1. For additional warning a BRIDGE REPAIRS AHEAD sign may be installed ahead of the ROAD CONSTRUCTION AHEAD or ROAD WORK AHEAD sign. The distance between successive signs shall be 500 ft.
2. The Engineer must be notified at least 72 hours prior to placing the temporary signals in operation so that arrangements can be made to inspect the installation and set the timing of the signals. The Contractor must furnish timing cycle gears of 60, 65, 70, 80, 90, 100, and 110 seconds for the controller.
3. At any time that the signals are not operating the signal head shall be hooded and the SIGNAL AHEAD sign covered or removed.
4. The left signal head shall normally be mounted at a height of 10 feet above the road surface measured to the bottom of the signal head. The right head shall normally be mounted at a height of 14 feet above the road surface. Baffle plates will be required on all signals.
5. All red lenses shall normally be 12-inch nominal diameter. The right signal head shall be aimed so the the centers of the light beams of the indications are directed toward a point in the center of the approach lane 500 feet in advance of the signal. The left indication shall be aimed at a point in the center of the approach lane 100 feet in advance of the stop line.
6. If flagmen are used instead of traffic signals, the traffic control devices shall conform to Case III or Case IV.
7. Cones may be substituted for barricades with steady burning lights at half the spacing during daytime operations.
8. During daytime operations when men are working, the Engineer may allow the barricades to be placed parallel to the center line.
9. Steady burning lights will not be required for day operations.
10. The taper shall be formed by placing one barricade for each two foot of lane width.
11. Bidirectional lights shall be used at night along the center line whether the work area is separated from the travelled lane using barricades or by using other devices. Monodirectional lights shall be used at night on all other barricades.
12. The Engineer may require drums, either 55 gallon or 30 gallon, to be used to supplement the barricades if the closure time exceeds four days.
13. All signs shall be post mounted if the closure time exceeds four days.
14. High intensity flashing lights shall be used on each approach in advance of the work area during hours of darkness and installed above the first two signs in each series.
15. Longitudinal dimensions may be adjusted slightly to fit field conditions.
16. All warning signs shall have minimum dimensions of 48 in. by 48 in. and have black legend and border on an orange reflectorized background. All signs other than warning signs shall have as a minimum the dimensions shown and shall have a black legend and border on a white reflectorized background.
17. All vehicles, equipment, men and their activities are restricted at all times to one side of the pavement unless otherwise authorized by the Engineer.
18. Form BT 725 is required.

SYMBOLS

Work Area.

Sign with 18 in. by 18 in. (minimum) orange flag attached.

Sign on portable or permanent support.

Type I or Type II Barricade with flashing lights.

Type I or Type II Barricade with steady burning light.

TYPICAL APPLICATION

Bridge Deck Repair

CASE IX

TWO-LANE, TWO WAY TRAFFIC, RURAL ONE LANE CLOSURE ON A BRIDGE DECK DAY OR NIGHT OPERATIONS

Where, at any time, any vehicle, equipment, men or their activities will encroach on one lane of a bridge deck and traffic signals are required.

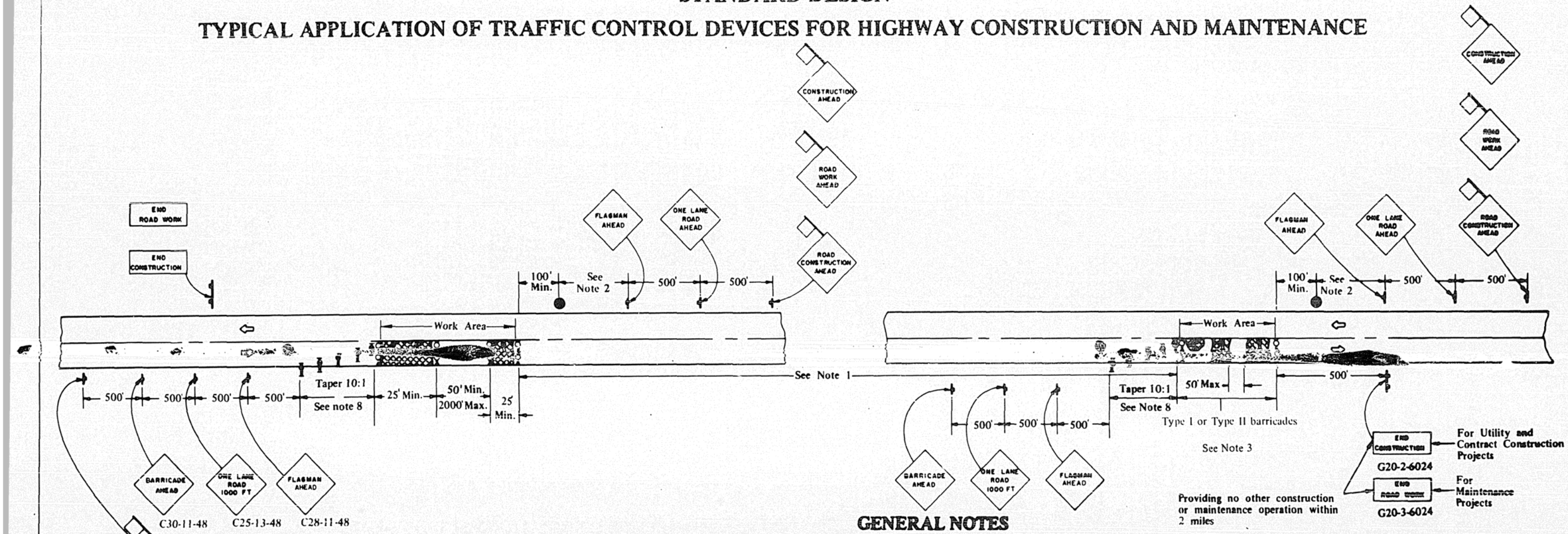
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ISSUED 4-3-69	
	REVISED	
	BY	DATE
APPROVED 6-12 1973		
H. E. Moberly Engineer of Traffic		

STANDARD 2309-3

F-6.14

STANDARD DESIGN

TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR HIGHWAY CONSTRUCTION AND MAINTENANCE



For Contract Construction Projects — ROAD CONSTRUCTION AHEAD — C20-11-48

For Maintenance Projects — ROAD WORK AHEAD — C22-11-48

For Utility Projects — CONSTRUCTION AHEAD — C21-11-48

TYPICAL APPLICATIONS

Cable Laying
Overhead Stringing of Cable
Patching

SYMBOLS

Patch

Sign with 18 in. by 18 in. (minimum) orange flag attached.

Sign on portable or permanent support.

Flagman with Traffic Control sign.

Type I or Type II Barricade with flashing light.

Type I or Type II Barricade with steady burning light.

GENERAL NOTES

1. **When the distance between successive patches is less than 2,000 ft., the entire operation may be considered as one work area for signing purposes. When the distance between successive patches exceeds 2,000 ft., additional warning signs and taper shall be placed as shown. Under restricted sight distance conditions, such additional devices may also be required for distances less than 2,000 ft. at the discretion of the Engineer. The flagman in advance of the taper will only be required when men are working within 250 ft. beyond the beginning of the taper.**
2. Construction operations shall be confined to one traffic lane, leaving the opposite lane open to traffic. At least 500 ft. of both traffic lanes shall be available for traffic movement at intervals not greater than 1,000 ft. Two flagmen shall be required for each separate construction operation. All work areas shall be protected during periods when men are working by cones or barricades along the center line. Barricades shall be placed at a maximum of 100 ft. centers with a minimum of one per patch or 50 ft. centers whichever is greater. A complete traffic control plan must be approved for any construction operation expected to exceed 1,000 ft. in length without the 500 foot available for two-way traffic.
3. Where successive patches are more than 50 ft. but less than 2,000 ft. apart, Type I or Type II Barricades with flashing lights shall be placed on the pavement beyond and in advance of the work areas. Unless otherwise directed by the Engineer, all barricades will have the reflective surface facing traffic at night.
4. The flagmen shall be in sight of each other or in direct communication at all times.
5. At all times the flagman should be positioned to protect the workmen. The first flagman shall be a minimum of 200 ft. and a maximum distance of 1/2 day's operation beyond the FLAGMAN sign and a minimum of 100 ft. in advance of the work party.
6. When there is no work being performed, FLAGMAN signs and the flagmen will not be required. ONE LANE ROAD 500 FT. signs shall be installed in place of the FLAGMAN signs.
7. Lights will not be required on Type I or Type II Barricades for day operations.
8. The taper shall be formed by placing one Type I or Type II Barricade for each 2 ft. of lane width.
9. **When the distance between patches is less than 500 ft., the barricade adjacent to the edge of the pavement on the far side of the patch may be omitted.**
10. **All signs shall be post mounted if the closure time exceeds four days.**
11. High intensity flashing lights shall be used on each approach in advance of the work area during hours of darkness and installed above the first two signs in each series.
12. **Torches may be substituted for flashing barricade lights. When used, torches must be placed on the ground.**
13. **When a side road intersects the highway on which work is being performed, additional traffic control devices shall be erected and flagmen provided as directed by the Engineer.**
14. **Longitudinal dimensions may be adjusted slightly to fit field conditions. The lateral placement of the flagmen may be varied from that shown.**
15. All barricade lights shall be bidirectional except lights on taper barricades, which shall be monodirectional.
16. **All warning signs shall have minimum dimensions of 48 in. by 48 in. and have black legend and border on an orange reflectorized background. All signs other than warning signs shall have as a minimum the dimensions shown and shall have a black legend and border on a white reflectorized background.**
17. Form BT 725 is required.
17. **All vehicles, equipment, men (except flagmen) and their activities are restricted at all times to one side of the pavement unless otherwise authorized by the Engineer.**

CASE XII

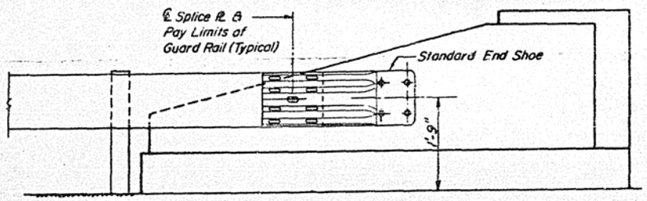
TWO-LANE, TWO WAY TRAFFIC RURAL WORK AREAS IN SERIES DAY OR NIGHT OPERATIONS

Where, at any time, any vehicle, equipment, men or their activities will encroach in the area between the center line and a line 2 ft. outside the edge of pavement.

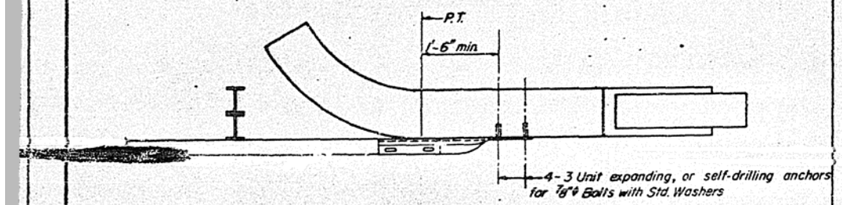
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ISSUED 4-3-69	
	REVISED BY	DATE
APPROVED 6-12 1973 G. E. Moberly Engineer of Traffic		

STANDARD 2312-5

F-6.17 b

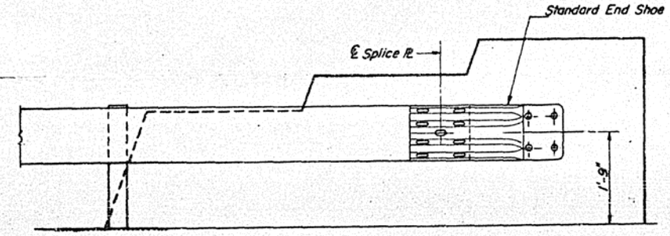


ELEVATION

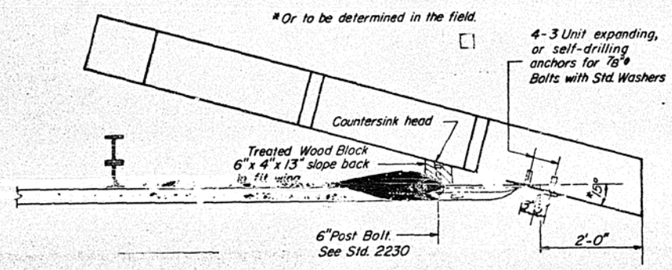


PLAN

CURVED WING

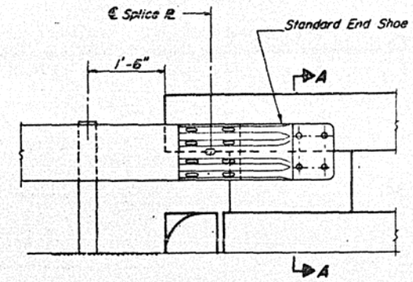


ELEVATION

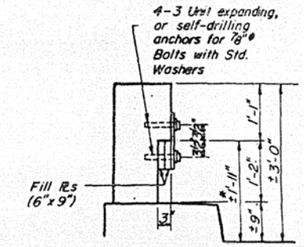


PLAN

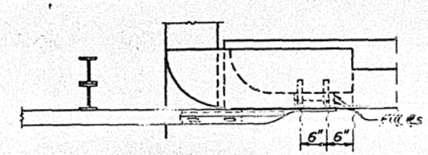
FLARED WING



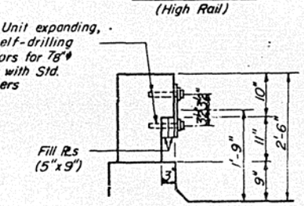
ELEVATION



SECTION A-A
(High Rail)

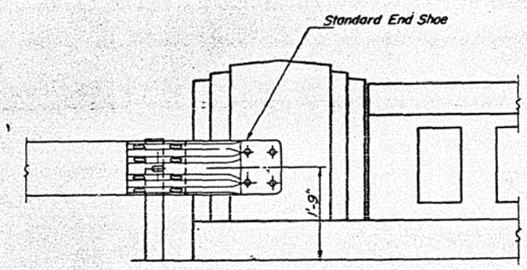


PLAN

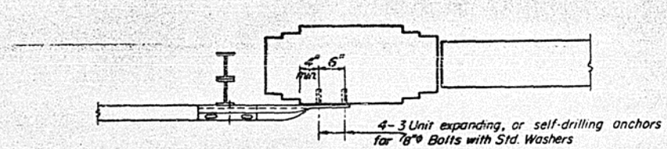


SECTION A-A
(Low Rail)

R.C. HANDRAIL



ELEVATION



PLAN

CONCRETE HANDRAIL

NOTES

Materials and strength requirements for the Standard End Shoe shall conform to that shown for the "Steel Plate Beam Guard Rail" in the Standard Specifications.

The Contractor shall be required to load test 10% of the expansion anchor bolts in place in the presence of the Engineer. The equipment and method used for load testing shall meet the approval of the Engineer. The minimum test load shall be 8000 pounds in direct pull. For each anchor that fails to pass the minimum test load requirements, two (2) more anchor bolts, picked by the Engineer shall be tested. Each anchor bolt tested that fails to meet the test load requirement shall be reset or removed and the hole drilled deeper. After the anchor bolt is reset, the new setting shall be retested.

The minimum edge distance (distance from any anchor to edge of existing concrete) shall be six (6) inches unless otherwise shown.

If the existing name plate is covered completely or partially by the end shoe, the name plate shall be moved to an adjacent area along the rail or end post.

Pay limits of guard rail shall be at ℄ of end shoe splice. Cost of Standard End Shoe and attachments shall be included in cost of TRAFFIC BARRIER TERMINAL, TYPE 10 (One Each)

Place end shoe between guard rail and splice plate with the guard rail on the roadway face.

For details of guardrail not shown see Standard 2230

The Standard End Shoe shall be attached to the existing concrete with Pre-drilled or Self-drilling anchor bolts. The anchor cone shall be set flush with the surface of the concrete. Externally threaded studs protruding from the surface of the concrete will not be permitted.

Illinois Department of Transportation

PASSED Aug. 1, 1977
Engineer of Bridge and Traffic Structures

APPROVED Aug. 1, 1977
Engineer of Design

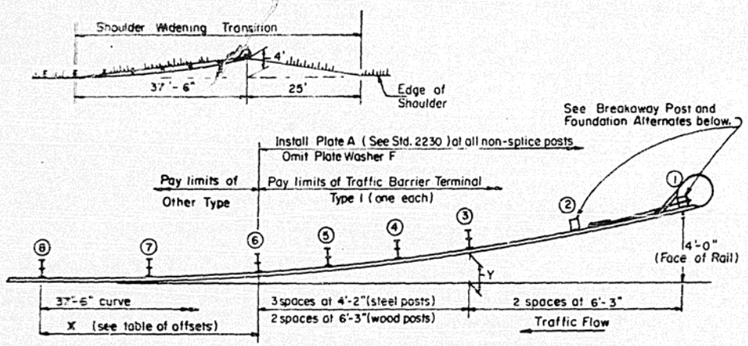
ISSUED 9-25-70	
REVISIONS	
D.W.W.	2-1-74
D.W.W.	8-1-77

TRAFFIC BARRIER TERMINAL
TYPE 10

STANDARD 2326-2

Full Size

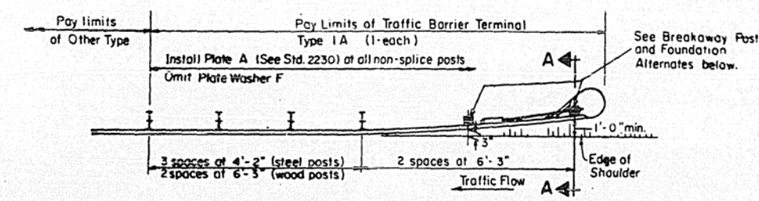
F-3.21b



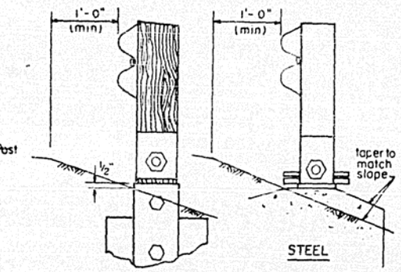
Offsets to Face of Rail (feet)		
Post	X	Y
1	37.22	4.00
2	31.09	2.79
3	24.92	1.79
4	20.79	1.25
5	16.64	0.80
6	12.49	0.45
7	6.25	0.11
8	0.00	0.00

PLAN TYPE I

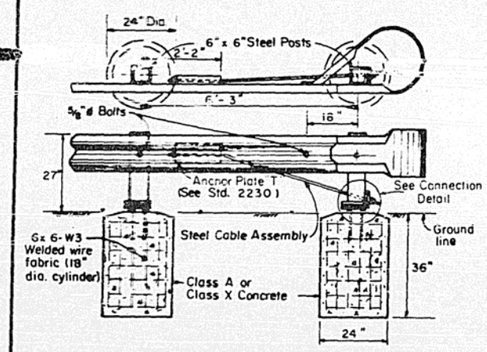
NOTE:
The 1'-0" minimum dimension should be increased if the slope adjacent to the barrier is 10:1 or flatter.



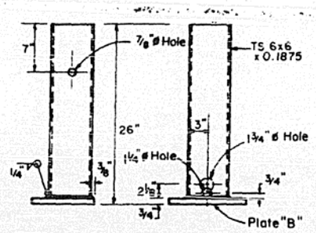
PLAN TYPE 1A



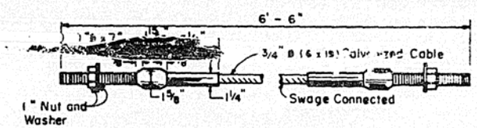
SECTION A-A



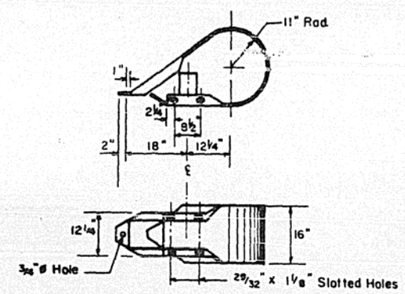
STEEL BREAKAWAY POSTS -CONCRETE FOUNDATIONS



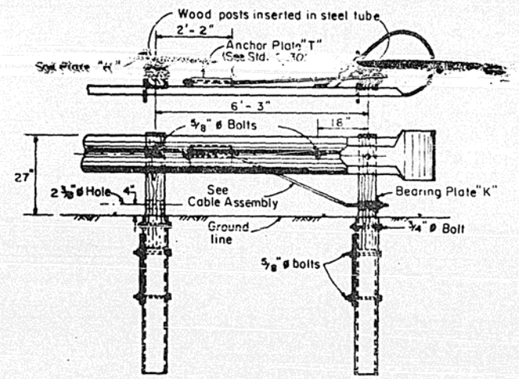
STEEL BREAKAWAY POST
(2 ea.)



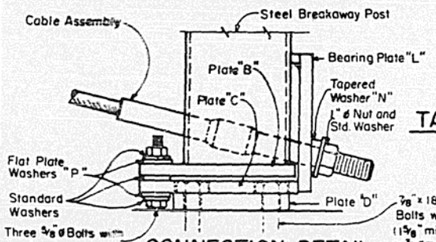
CABLE ASSEMBLY (1 ea.)
(40,000 lbs. min. breaking strength)
Tighten cable to taut tension.



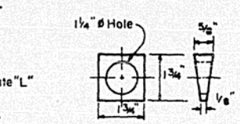
NOSE
(1 ea.)



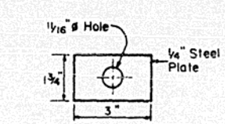
WOOD BREAKAWAY POSTS TUBULAR STEEL FOUNDATIONS



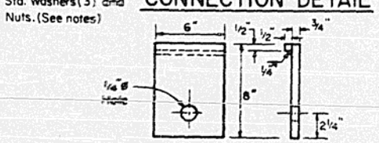
CONNECTION DETAIL



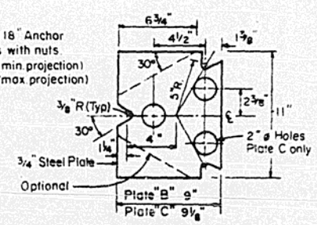
TAPERED WASHER "N"
(1 ea.)



FLAT PLATE WASHER "P"
(12 ea.)



BEARING PLATE "L" (1 ea.)



PLATES "B" & "C"
(2 ea. "B")
(2 ea. "C")

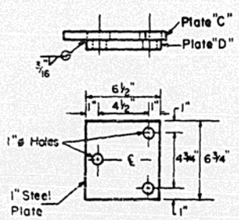


PLATE "D"
(2 ea.)

NOTES:

See Standard 2230 for details of guard rail not shown.

All steel parts shall be galvanized after fabrication.

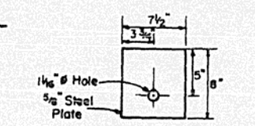
Base plate bolts for steel breakaway posts shall conform to ASTM A-325 and shall be torqued to 155-170 ft.-lbs.

As an alternate to the nut torqued to 155-170 ft.-lbs., the Contractor may use a controlled torque nut system utilizing a torque-off groove concept with double hex configuration and elliptically deformable thread section meeting the approval of the Engineer.

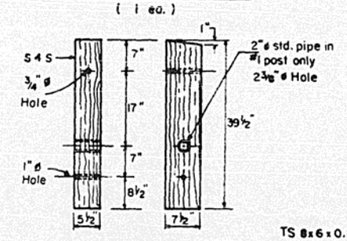
Posts at locations ① & ② may be either the above steel breakaway post or the above wood breakaway post, at the option of the Contractor. Remaining posts in the terminal may be either standard wood posts or steel posts, at the option of the Contractor, irrespective of the type of breakaway posts selected. If standard wood posts are used, one post shall be located midway between and in lieu of posts ④ & ⑤. For Terminal Type 1, the offset (Y) shall be 1.00 foot.

The wood breakaway posts shall be treated and conform to the requirements of Art. 711.06 of the Standard Specifications.

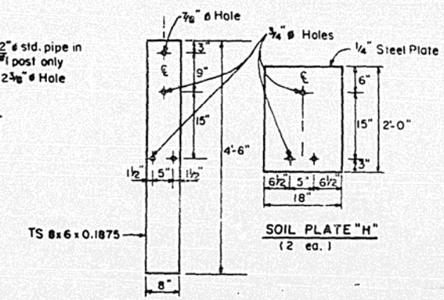
A two-piece assembly may be substituted for the one-piece nose above.



BEARING PLATE "K"
(1 ea.)



WOOD BREAKAWAY POST
(2 ea.)



STEEL TUBE
(2 ea.)

SOIL PLATE "H"
(2 ea.)

Illinois Department of Transportation

PASSED Feb. 26, 1979
Engineer of Design Operations

APPROVED Feb. 26, 1979
Engineer of Design

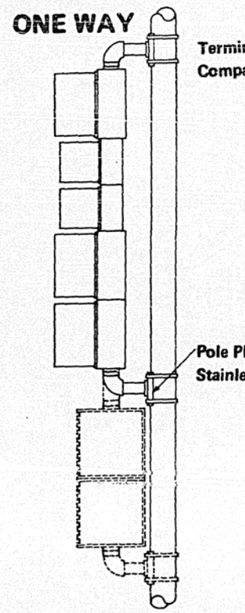
ISSUED 4-3-78

TRAFFIC BARRIER TERMINAL TYPE 1 & 1A

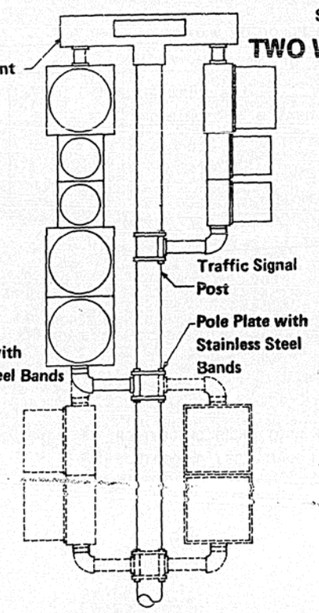
STANDARD 2336-1

F 3.25 a

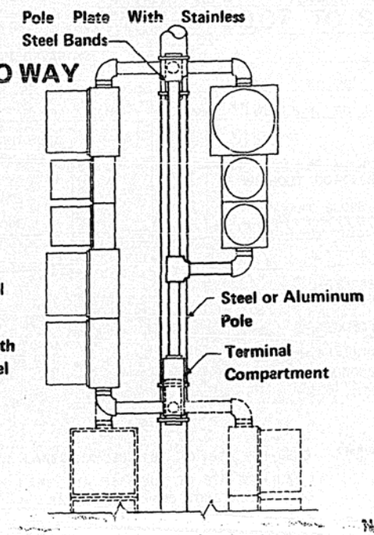
Full Size (DWW Sr.)



Bracket Mounted Traffic Signal Head

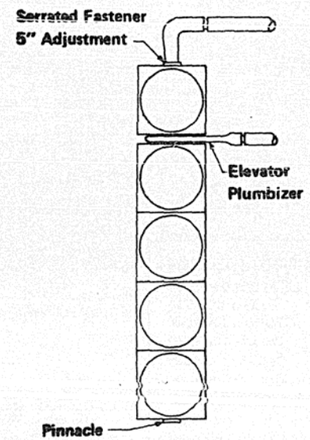


Bracket Mounted Traffic Signal Head



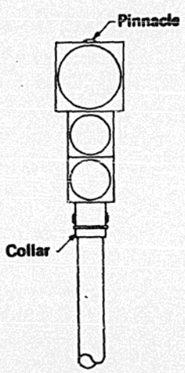
Bracket Mounted Traffic Signal Head

Note: [redacted] of a bracket mounted signal head shall not be less than 8'-0" nor more than 15'-0" above the sidewalk or, if none, above the crown of the pavement.

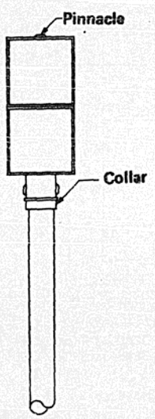


Aluminum Mast Arm Mounting Detail

ONE WAY

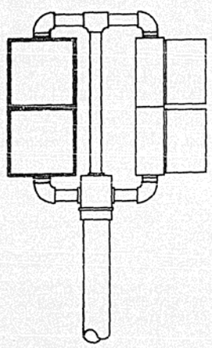


Post Top Mounted Traffic Signal Head



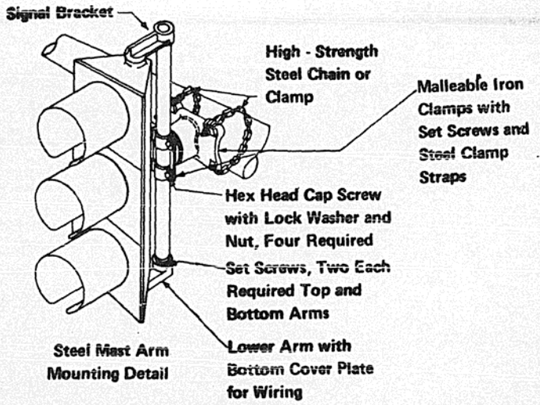
Post Top Mounted Pedestrian Signal Head

TWO WAY



Post Top Mounted Pedestrian Signal Head

Note: Only traffic signal heads consisting of one face and three sections may be post top mounted.



Steel Mast Arm Mounting Detail

Note: Other Types of Mounting Brackets may be used upon approval by the Engineer

Illinois Department of Transportation

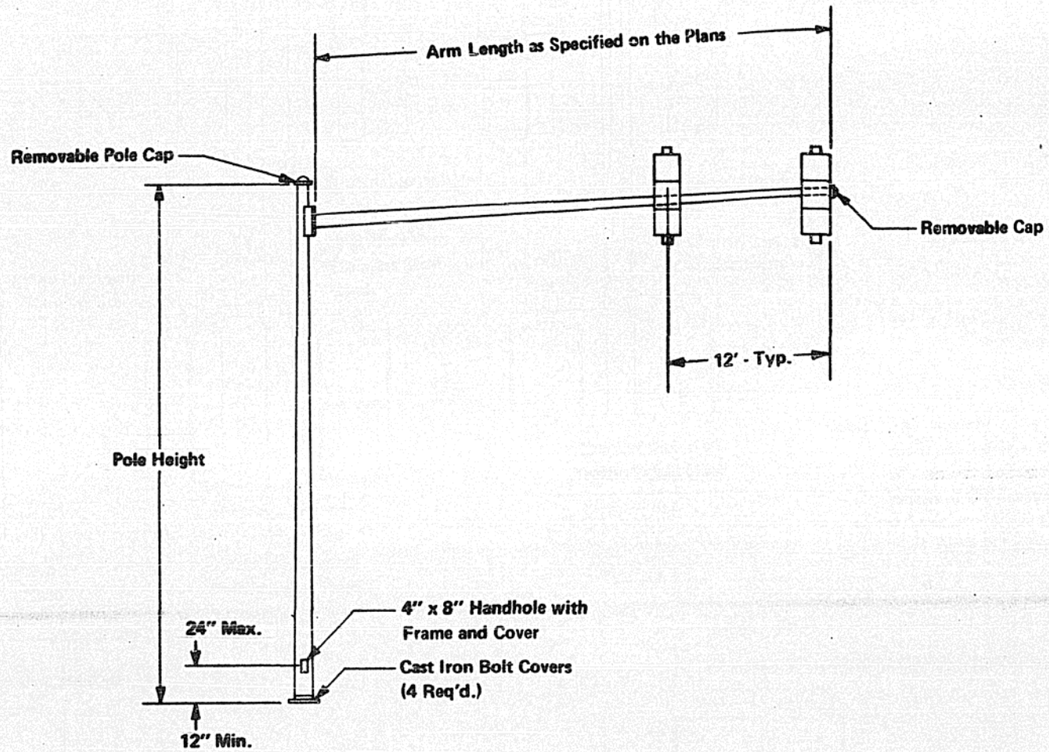
ISSUED 1-1-77	
REVISED	
BY	DATE

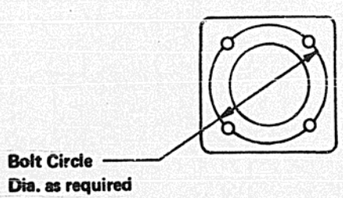
APPROVED 3-19 1977
L. E. Moberly
Engineer of Traffic

DETAILS FOR MOUNTING TRAFFIC SIGNALS

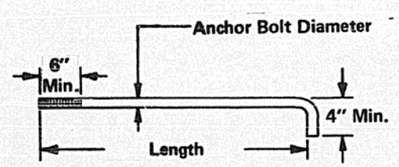
STANDARD NO. 2371

E-6.20





BASE PLATE



ANCHOR BOLT

The anchor bolts shall conform to the requirements of article 710.12 of the Standard Specifications for Road and Bridge Construction.

NOTES

1. Mast arm assembly and pole shall be constructed with one piece mast arm and pole or other equivalent sectional design.
2. This standard shall be designed to support one 80 pound signal with a projected area of 14.7 square feet at the free end of the mast arm, one 50 pound signal with a projected area of 8.7 square feet, 12 feet inward on the mast arm and one 125 pound signal with a projected area of 7.6 square feet mounted 12 feet high on the shaft or the signal loadings shown on the plans, whichever is greater. The design shall be in accordance with the requirements of the current "Standard Specifications For Structural Supports for Highway Signs, Luminaires, and Traffic Signals" as published by the American Association of State Highway and Transportation Officials for 80 m.p.h. wind velocity.
3. The contractor shall submit detailed drawings showing design materials, thickness of sections, and weld sizes to the Engineer for approval prior to fabrication. These drawings shall be at least 17" x 22" in size and of adequate quality for microfilming.
4. The type of signal mounting bracket to be used shall be approved by the Engineer.
5. The signal head (including, backplate when used) shall be not less than 16'-0" or more than 18'-0" above the roadway.

Illinois Department of Transportation

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BY	DATE

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Engineer of Bridge and Traffic Structures

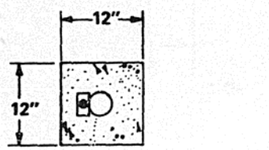
APPROVED 3-18 1977
Engineer of Traffic

DETAILS OF STEEL MAST ARM ASSEMBLY AND POLE

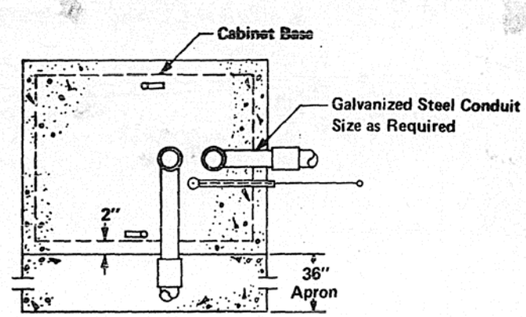
STANDARD NO. 2374

E-6.35

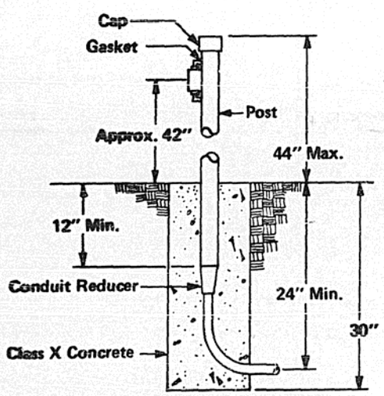
Mast Arm Length	Dim. "A"	Dim. "B"	Number of No. 5 Rebars
Less Than 30'	24"	20"	6
30' and Longer	30"	26"	8



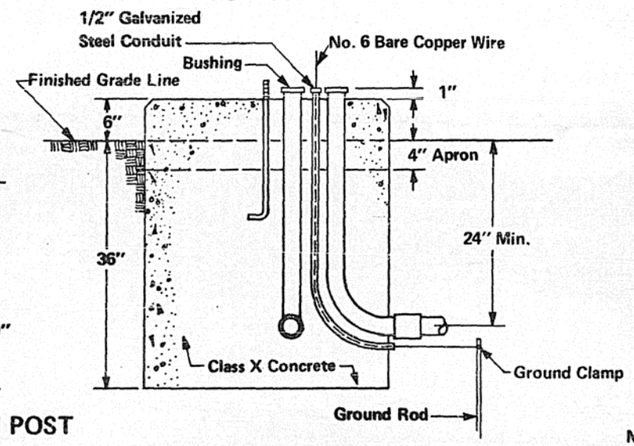
TOP VIEW



TOP VIEW

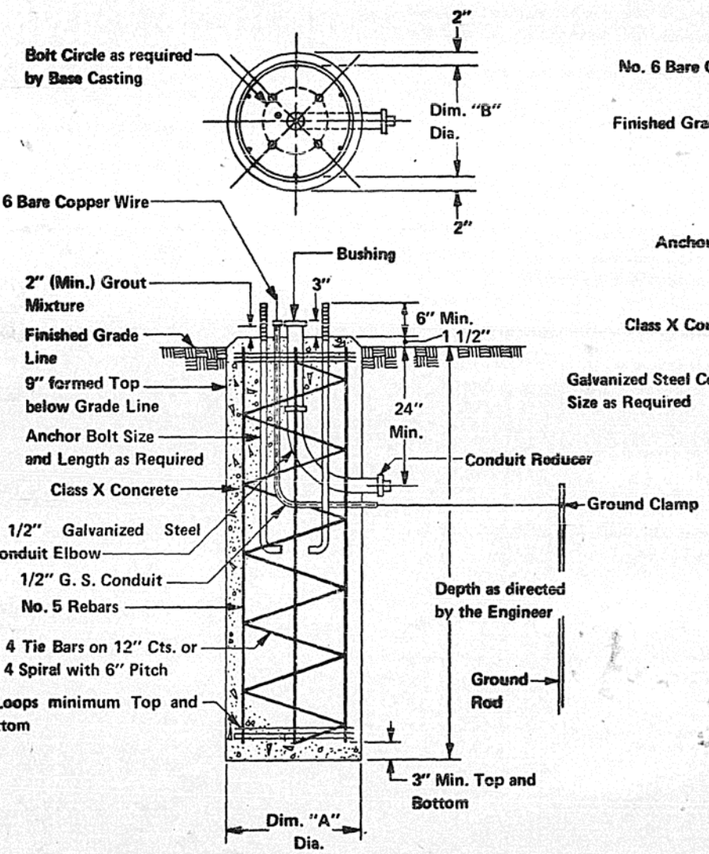


PEDESTRIAN PUSHBUTTON POST INSTALLATION

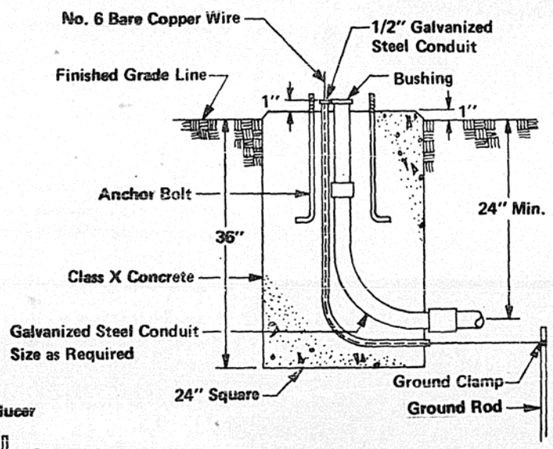


TYPE "D" FOUNDATION FOR GROUND MOUNTED CONTROLLER CABINET

TOP VIEW



TYPE "E" FOUNDATION



TYPE "A" FOUNDATION

NOTES

1. The dimensions of the type "D" foundation shall be 4" wider and longer than the base dimensions of the controller cabinet.

2. The ground rod shall be installed in the bottom of conduit trench.

Illinois Department of Transportation

ISSUED 1-1-77
REVISED

BY	DATE

APPROVED 3-18 1977
Engineer of Bridge and Traffic Structures

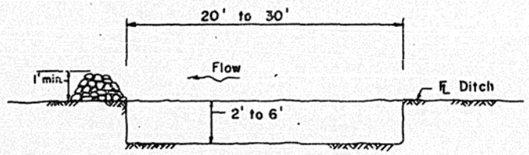
APPROVED 3-18 1977
G. E. Moberly
Engineer of Traffic

DETAILS OF CONCRETE FOUNDATIONS

STANDARD NO. 2378

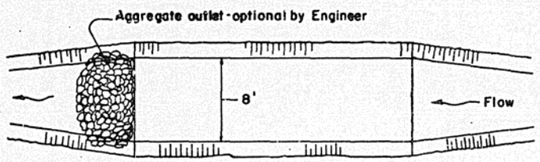
E-6.55

SEDIMENT BASIN



SECTION THRU ELEVATION

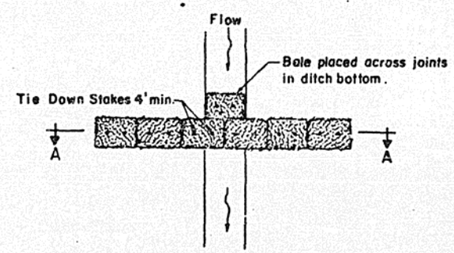
The performance of the basin will improve if put into a series.

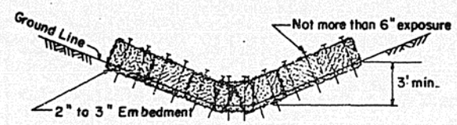


PLAN VIEW

The long dimension should be parallel with the direction of the flow. Accumulated silt shall be removed anytime the basins become 75% filled.

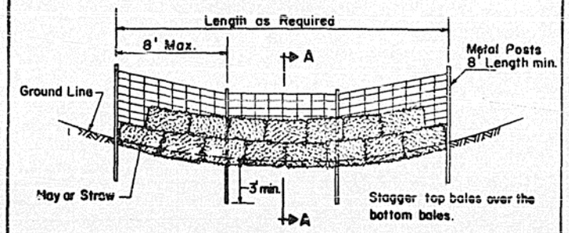
HAY OR STRAW DITCH CHECK



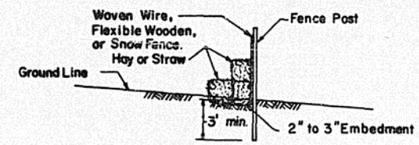


SECTION A-A

HAY OR STRAW DITCH CHECK- TWO BALES HIGH

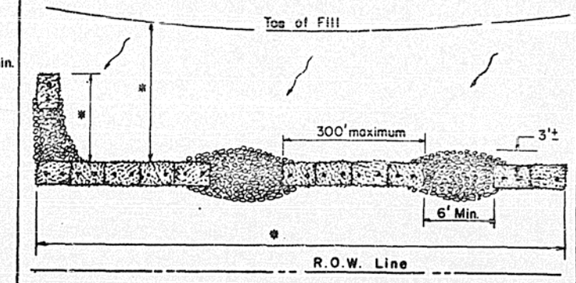


ELEVATION VIEW



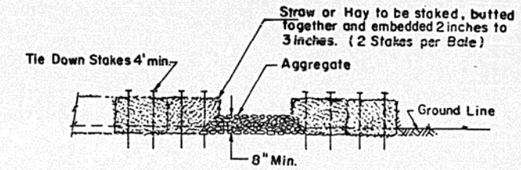
SECTION A-A

HAY OR STRAW EROSION CHECK STONE OUTLETS



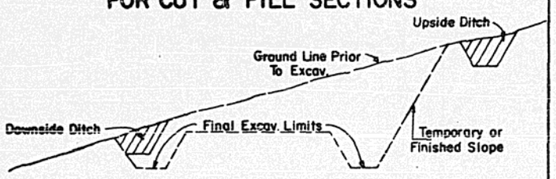
* To be constructed as required

PLAN VIEW

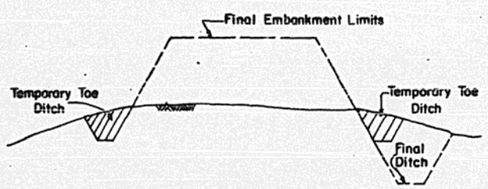


ELEVATION

TEMPORARY DITCHES FOR CUT & FILL SECTIONS



TYPICAL CUT CROSS SECTION



TYPICAL FILL CROSS SECTION

Temporary Ditches or the final ditch grades included in the plans shall be excavated at the earliest opportunity during construction in order to control runoff from the embankment or cut section per Art. 202.06 of the Standard Specifications. Some means of trapping siltation should be provided at the outflow of these ditch systems.

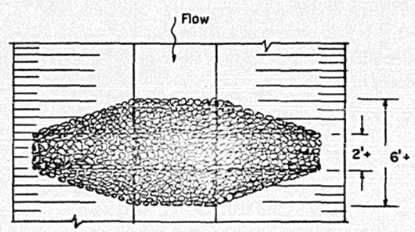
Illinois Department of Transportation

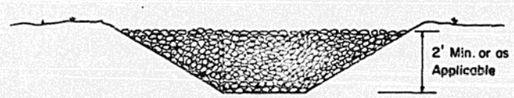
PASSED Mar. 6, 1979
Engineer of Design Operations

APPROVED Mar. 6, 1979
Engineer of Design

ISSUED 3-6-79

AGGREGATE DITCH CHECK

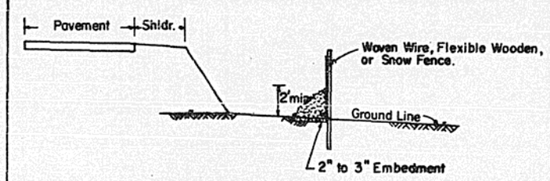




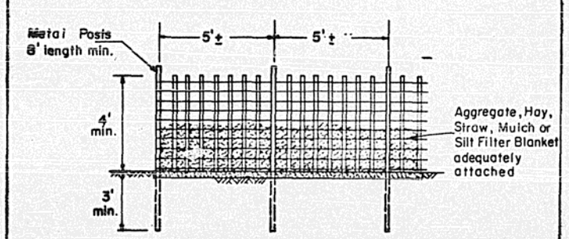
To be constructed by depositing material and shaping in a manner approved by the Engineer.

If the ditch check is within the clear zone and the road is open to traffic, the traffic approach slope of the aggregate shall be graded to 4:1.

MULCH BARRIER



SIDE ELEVATION VIEW



FRONT ELEVATION VIEW

GENERAL NOTES

Actual configuration and location of Temporary Erosion Control Systems shall be as shown on the plans or as directed by the Engineer.

Ditch Checks and Sediment Basins should be constructed at appropriate intervals along the waterway to be effective.

Where more than one row of bales are used, stagger bales to cover joints.

Where bales are shown staked, a minimum of two stakes per bale shall be used.

The Temporary Erosion Control Systems installed by the Contractor shall be properly maintained as directed by the Engineer to control siltation at all times during the life of the contract.

All salvageable temporary erosion control items shall be removed and become the property of the Contractor at the completion of the contract.

Existing R.O.W. fence may be utilized if such location is desired with use of Mulch Barrier or Hay or Straw Ditch Check - Two Bales High.

TEMPORARY EROSION CONTROL SYSTEMS

STANDARD 2381

A-12.25

Full Size D.W.W. Sr.