

PLAN NUMBER	TITLE	PAGE
<input checked="" type="checkbox"/> M-100-A	STANDARD SYMBOLS	1
<input type="checkbox"/> M-107-A	TEMPORARY EROSION CONTROL	2
<input type="checkbox"/> M-203-B	APPROACH ROADS, FLARING, CUT SLOPE TREATMENT, BRIDGE & CREST WIDENING	3
<input checked="" type="checkbox"/> M-203-C	DITCH TYPES	4
<input type="checkbox"/> M-203-SC	SUPERELEVATION OF CURVES - CROWNED HIGHWAYS	5
<input type="checkbox"/> M-203-SD	SUPERELEVATION OF CURVES - DIVIDED HIGHWAYS	6
<input type="checkbox"/> M-203-SS	SUPERELEVATION OF CURVES - STREETS	7
<input checked="" type="checkbox"/> M-206-AB	EXCAVATION AND BACKFILL FOR STRUCTURES (3 SHEETS)	8
<input type="checkbox"/> M-214-A	PLANTING DETAILS	11
<input type="checkbox"/> M-412-AB	CONCRETE PAVEMENT JOINTS	12
<input type="checkbox"/> M-504-B	STEEL CRIBBING	13
<input type="checkbox"/> M-506-A	GABIONS AND SLOPE MATTRESS	14
<input type="checkbox"/> M-510-AB	STRUCTURAL PLATE CULVERT PIPE - H-20 LOADING (2 SHEETS)	15
<input type="checkbox"/> M-601-BC1	SINGLE CONCRETE BOX CULVERT	17
<input type="checkbox"/> M-601-BC2	DOUBLE CONCRETE BOX CULVERT	18
<input type="checkbox"/> M-601-BC3	TRIPLE CONCRETE BOX CULVERT	19
<input type="checkbox"/> M-601-CH	HEADWALL FOR PIPE CULVERTS	20
<input type="checkbox"/> M-601-KA	TYPE "S" SADDLE HEADWALL FOR PIPE CULVERTS (2 SHEETS)	21
<input type="checkbox"/> M-601-L	HEADWALL, INTERCEPTING HEADWALL AND CULVERT OUTLET PAVING	23
<input type="checkbox"/> M-601-WW	WINGWALLS FOR PIPE OR BOX CULVERTS	24
<input checked="" type="checkbox"/> M-603-CA	CONCRETE AND METAL END SECTIONS	25
<input type="checkbox"/> M-603-MA	METAL CULVERT PIPE - H-20 LOADING	26
<input checked="" type="checkbox"/> M-603-RC	REINFORCED CONCRETE PIPE	27
<input type="checkbox"/> M-604-AB	CONCRETE INLET, TYPE 13	28
<input type="checkbox"/> M-604-BA	INLET, TYPE C	29
<input checked="" type="checkbox"/> M-604-DA	STEPS FOR MANHOLES & INLETS	30
<input type="checkbox"/> M-604-E	MANHOLES	31
<input type="checkbox"/> M-604-H	INLET, TYPE D	32
<input type="checkbox"/> M-604-R	CURB INLET, TYPE R (2 SHEETS)	33
<input type="checkbox"/> M-604-S	PIPE SEWER IN TRENCH	35
<input type="checkbox"/> M-606-AC	GUARD RAIL, TYPE 3, W-BEAM (8 SHEETS)	36
<input type="checkbox"/> M-606-B	GUARD RAIL, TYPE 5, STEEL BARRIER, BOX BEAM (3 SHEETS)	44
<input type="checkbox"/> M-606-D	GUARD RAIL, TYPE 4, CONCRETE BARRIER, CAST-IN-PLACE	47
<input type="checkbox"/> M-606-EA	GUARD RAIL, TYPE 4, CONCRETE BARRIER, PRECAST-PORTABLE	48
<input type="checkbox"/> M-606-G	GUARD RAIL, TYPE 3, W-BEAM FOR LOCAL ROADS & STREETS (3 SHEETS)	49
<input type="checkbox"/> M-607-A	WIRE FENCES AND GATES (2 SHEETS)	52
<input checked="" type="checkbox"/> M-607-BA	CHAIN LINK FENCE (3 SHEETS)	54

PLAN NUMBER	TITLE	PAGE
<input type="checkbox"/> M-607-C	PICKET SNOW FENCE	57
<input type="checkbox"/> M-607-D	BARRIER FENCE	58
<input type="checkbox"/> M-607-E	DEER FENCE AND GATE (2 SHEETS)	59
<input type="checkbox"/> M-608-A	CURB RAMPS FOR THE HANDICAPPED	61
<input type="checkbox"/> M-609-A	CURBS AND GUTTERS	62
<input type="checkbox"/> M-611-D	CATTLE GUARD - WELDED GRILL UNITS - 10' THRU 42' ROADWAYS (2 SHEETS)	63
<input type="checkbox"/> M-612-A	MARKER POSTS AND BENCH MARKS	65
<input type="checkbox"/> M-613-AA	HIGHWAY LIGHTING	66
<input type="checkbox"/> M-615-A	EMBANKMENT PROTECTOR, TYPES 3 & 4 (SHEET 1)	67
<input type="checkbox"/> M-615-A	EMBANKMENT PROTECTOR, TYPE 5 (SHEET 2)	68
<input type="checkbox"/> M-616-S	INVERTED SIPHON (ALSO USE M-603 OR M-604 AS REQUIRED)	69
<input type="checkbox"/> M-620-A	FIELD LABORATORY - CLASS 2	70
<input type="checkbox"/> M-707-CB	TYPICAL ALTERNATE COUPLING BANDS FOR CORRUGATED CULVERT PIPE	71
<input type="checkbox"/> S-612-1	TYPICAL DELINEATOR INSTALLATIONS (4 SHEETS)	72
<input checked="" type="checkbox"/> S-614-1	TYPICAL GROUND SIGN PLACEMENT	76
<input checked="" type="checkbox"/> S-614-2	CLASS I GROUND SIGN INSTALLATIONS	77
<input checked="" type="checkbox"/> S-614-3	CLASS II GROUND SIGN INSTALLATIONS	78
<input checked="" type="checkbox"/> S-614-4	CLASS III SIGNS, LAMINATED ALUMINUM PANELS AND POST SPACING TABLE (2 SHEETS)	79
<input type="checkbox"/> S-614-5	BREAK-AWAY SIGN SUPPORT DETAILS FOR GROUND SIGNS (2 SHEETS)	81
<input type="checkbox"/> S-614-6	CONCRETE FOOTINGS AND SIGN ISLANDS FOR CLASS III SIGNS (2 SHEETS)	83
<input type="checkbox"/> S-614-10	TYPICAL MARKER ASSEMBLY INSTALLATIONS	85
<input type="checkbox"/> S-614-11	MILEPOST SIGN AND INSTALLATION	86
<input type="checkbox"/> S-614-12	STRUCTURE NUMBER INSTALLATION (BRIDGE INFORMATION SHEET)	87
<input type="checkbox"/> S-614-20	TYPICAL POLE MOUNT SIGN INSTALLATION	88
<input type="checkbox"/> S-614-22	TYPICAL MULTI-SIGN INSTALLATIONS	89
<input type="checkbox"/> S-614-30	INTERSTATE ROUTE MARKERS	90
<input type="checkbox"/> S-614-31	U. S. & COLORADO ROUTE MARKERS	91
<input type="checkbox"/> S-614-32	AUXILIARY MARKERS	92
<input type="checkbox"/> S-614-40	TRAFFIC SIGNAL INSTALLATION DETAILS (3 SHEETS)	93
<input type="checkbox"/> S-614-50	TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION (4 SHEETS)	96
<input type="checkbox"/> S-614-51	BARRICADES, DRUMS, CONCRETE BARRIER (TEMP) & VERTICAL PANELS	100
<input checked="" type="checkbox"/> S-627-1	TYPICAL PAVEMENT MARKINGS (3 SHEETS)	101

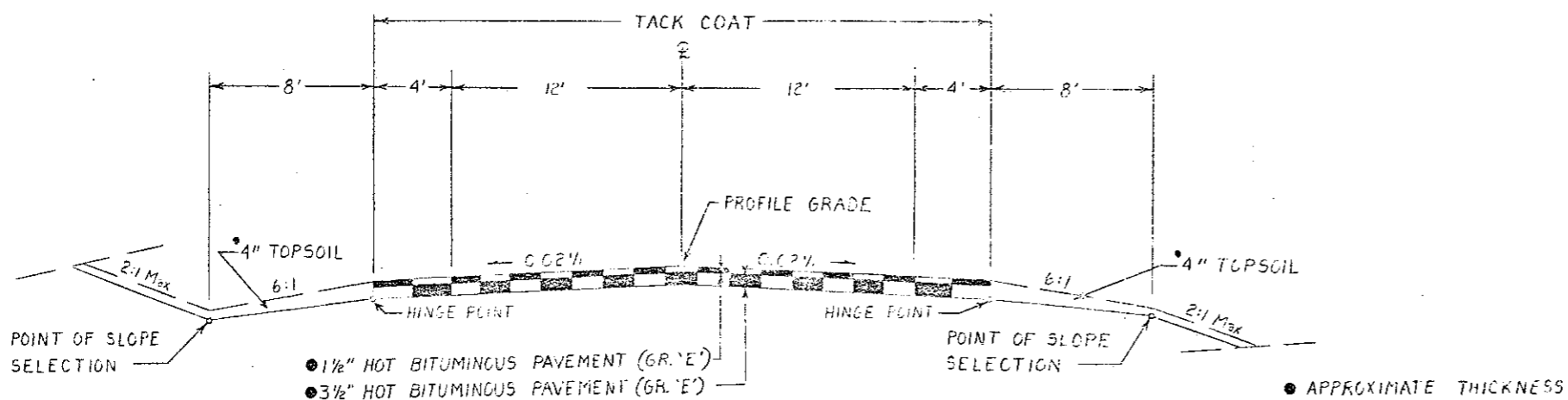
THE STANDARD PLAN SHEETS INDICATED HEREOF BY A MARKED BOX ARE TO BE USED TO CONSTRUCT THIS PROJECT.

DEPARTMENT OF HIGHWAYS
 STATE OF COLORADO
 DIVISION OF HIGHWAYS

STANDARD PLANS LIST
 M & S STANDARDS — JANUARY, 1980

FEDERAL ROAD DISTRICT NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	FCU 235-4(13)	3	18
AS CONSTRUCTED				
NO REVISIONS		REVISED	2/1-82	VOID

TYPICAL SECTION TANGENT



THE DEPTH AND WIDTH OF THE SIDE DITCH SHALL BE VARIED WHERE NECESSARY IN ORDER TO PROVIDE PROPER DRAINAGE.

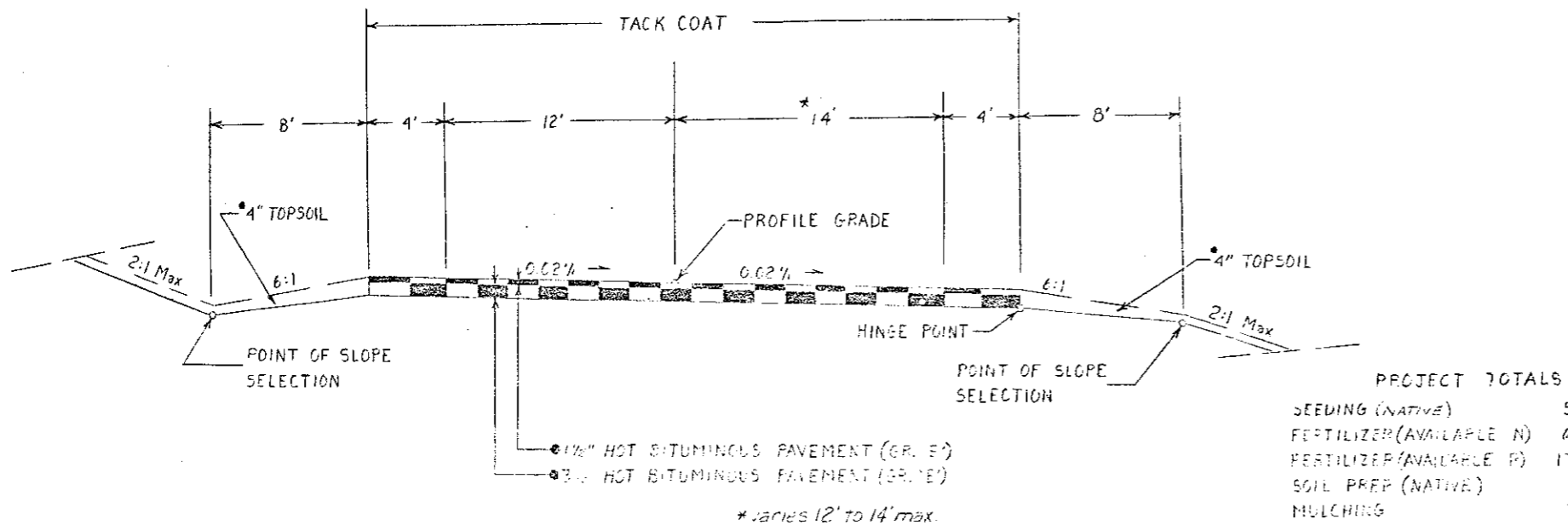
BREAK POINTS ON SLOPES AND IN BOTTOMS OF DITCHES SHALL BE ROUNDED IN CONSTRUCTION FOR A PLEASING APPEARANCE.

MATERIAL SHALL BE PLACED IN SEPARATE COURSES AT THE FOLLOWING RATES PER 100 LIN. FT. OF ROADWAY:

TOP LAYER	30 TONS
BOTTOM LAYER	69 TONS

THE RATES SHOWN HAVE BEEN DETERMINED FROM INFORMATION AVAILABLE AT THE TIME OF DESIGN. RATES SHOULD BE ADJUSTED DURING CONSTRUCTION TO OBTAIN THE REQUIRED APPROXIMATE THICKNESS.

TYPICAL SECTION SUPER ELEVATED



PROJECT TOTALS

SEEDING (NATIVE)	56 LBS
FERTILIZER (AVAILABLE N)	48 LBS
FERTILIZER (AVAILABLE P)	173 LBS
SOIL PREP (NATIVE)	1.5 ACRE
MULCHING	3.0 TON
WATER (LANDSCAPING)	38 M GAL

GENERAL NOTES

FOR PRELIMINARY PLAN QUANTITIES OF BITUMINOUS MATERIALS, THE FOLLOWING RATES OF APPLICATION WERE USED:

HOT BITUMINOUS PAVEMENT AT 110 LBS PER SQ YD PER 1" THICKNESS
TACK COAT (CSS-1H) AT 0.10 GAL PER SQ YD (DILUTED)

RATES OF APPLICATION SHALL BE AS DETERMINED BY THE ENGINEER AT THE TIME OF APPLICATION.

ANY LAYER OF BITUMINOUS PAVEMENT THAT IS TO HAVE A SUCCEEDING LAYER PLACED THEREON SHALL BE COMPLETED FULL WIDTH BEFORE SUCCEEDING LAYER IS PLACED.

A SKI TYPE DEVICE AT LEAST 30 FEET IN LENGTH, SHORT SKI OR SHOE, AND 5000 FEET OF CONTROL LINE AND STAKES SHALL BE FURNISHED WITH EACH BITUMINOUS PAYER. THE CONTROL LINE WILL BE REQUIRED FOR ALL LAYERS OR AS DIRECTED BY THE ENGINEER.

WHEN ORDERED BY THE ENGINEER, A TACK COAT OF EMULSIFIED ASPHALT (CSS-1H) IS TO BE APPLIED BETWEEN PAVEMENT COURSES TO IMPROVE THE BOND. THE TACK COAT FOR THIS PROJECT SHALL BE EMULSIFIED ASPHALT (CSS-1H) DILUTED 1 TO 1 WITH WATER AND APPLIED AT THE RATE OF 0.10 GAL PER SQ YD.

DEPTH OF MOISTURE-DENSITY CONTROL FOR THIS PROJECT SHALL BE AS FOLLOWS:
FULL DEPTH OF ALL EMBANKMENTS.
BASES OF CUTS AND FILLS 6 INCHES.

EXCAVATION REQUIRED FOR COMPACTION OF BASES OF CUTS AND FILLS WILL BE CONSIDERED AS SUBSIDIARY TO THAT OPERATION AND WILL NOT BE PAID FOR SEPARATELY.

WETTING:
COMPACTION (AASHTO T99) - 40 GAL PER CU YD.

IT IS ESTIMATED THAT ¹⁷³ HOURS OF FLAGGING FOR CONTROLLING TRAFFIC ^{WAS} WILL BE REQUIRED FOR THIS PROJECT.

ROAD APPROACHES WHICH REQUIRE BITUMINOUS SHALL HAVE A 4 INCH THICKNESS OF PAVEMENT PLACED AS FOLLOWS:
PUBLIC APPROACHES AND ENTRANCES TO BUILDINGS OR RESIDENCES SHALL BE PAVED TO PROPERTY LINE OR AS DIRECTED BY THE ENGINEER.

WATER LINES, GAS LINES, ETC., AS SHOWN ON THE PLAN AND PROFILE SHEETS ARE PLOTTED FROM THE BEST AVAILABLE INFORMATION. THE CONTRACTOR'S ATTENTION IS DIRECTED TO PARAGRAPH 107.18 OF THE STANDARD SPECIFICATIONS CONCERNING UTILITIES.

THE MINIMUM THICKNESS OF TOPSOIL ^{WAS} SHALL BE 4 INCHES. IT IS ESTIMATED THAT 753 CU YDS ^{WAS} WILL BE REQUIRED AND WILL BE OBTAINED FROM AN UNDESIGNATED SOURCE, (INCLUDES 53 CU YDS. FROM LIST OF STRUCTURES)

WHERE IT IS REQUIRED TO CUT THE EXISTING PAVEMENT, THE CUTTING SHALL BE DONE TO A NEAT LINE WITH A CUTTING WHEEL ATTACHED TO A BLADE OR OTHER METHOD AS APPROVED BY THE ENGINEER. THIS WILL NOT BE PAID FOR SEPARATELY BUT WILL BE CONSIDERED AS SUBSIDIARY TO EMBANKMENT (CIP)

SEEDING, SOIL PREPARATION, FERTILIZING WITH COMMERCIAL FERTILIZER AND MULCHING FOR APPROXIMATELY 1.5 ACRES WILL BE REQUIRED WITHIN RIGHT OF WAY LIMITS ON ALL NEW SLOPES AND AREAS DISTURBED BY CONSTRUCTION. SEEDING SHALL BE DONE WITH MECHANICAL POWER DRAWN DRILLS OR AS DIRECTED BY THE ENGINEER. THE FOLLOWING TYPES AND RATE SHALL BE USED:

COMMON NAME	BOTANICAL NAME	RATE PLS/ACRE
WESTERN WHEATGRASS (BARTON)	ASROPYRON SMITHII	10
BUFFALO GRASS (TREATED)	SUCHLOE DACTYLOIDES	14
FAIRWAY WHEATGRASS	ASROPYRON CRISTATUM	3
SIDE-OATS GRAMA	BOUTELOUA CURTIPENDULA	4
WHITE CLOVER	TRIFOLIUM REPENS	1
LITTLE BLUESTEM	SCHIZACHYRIUM SCOPRIUM	5
		37

MULCHING MATERIAL: 2 TONS PER ACRE STRAW OR NATIVE HAY

COMMERCIAL FERTILIZER	LBS PER ACRE AVAILABLE
AVAILABLE N	45
AVAILABLE P	113

FINAL SUMMARY OF APPROXIMATE QUANTITIES

AS CONSTRUCTED		FEDERAL ROAD DISTRICT NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
NO REVISIONS	REVISED 7/1/82	VOID	VIII	COLORADO	FCU 255-4(18)	4
						19

INDEX BOOK PAGE SHEET	CONTRACT ITEM NO.	CONTRACT ITEM	UNIT	ROADWAY		PROJECT TOTALS		DIFFER. +/-	PERCENT OF PLAN
				PLAN	AS CONST.	PLAN	AS CONST.		
305 Book	201	CLEARING AND GRUBBING	L.S.	1	1	1	1	-0-	100
	202	REMOVAL OF HEADWALL	EACH	1	1	1	1	-0-	100
	202	REMOVAL OF PIPE	LIN. FT.	110	68	110	68	-42	62
	202	REMOVAL OF CURB	LIN. FT.	97	99	97	99	+2	102
	202	REMOVAL OF CURB AND GUTTER	LIN. FT.	107	112	107	112	+5	105
	202	REMOVAL OF ASPHALT MAT	SQ. YD.	1618	1632	1618	1632	+14	101
	202	REMOVAL OF PAVEMENT MARKINGS	SQ. FT.	25	242	25	242	+217	968
	202	REMOVAL OF GROUND SIGN	EACH	4	3	4	3	-1	75
	202	REMOVAL OF FENCE	LIN. FT.	824	843	824	843	+19	102
	203	EMBANKMENT MATERIAL (COMPLETE IN PLACE)	CU. YD.	5719	5719	5719	5719	-0-	100
	206	STRUCTURE EXCAVATION	CU. YD.	115	115	115	115	-0-	100
	206	STRUCTURE BACKFILL (CLASS 2)	CU. YD.	97	97	97	97	-0-	100
	207	TOPSOIL (HAUL)	CU. YD.	758	758	758	758	-0-	100
	209	WATER (LANDSCAPING) DELETED BY ICS (6-24-82)	M. GAL.	38	-0-	38	-0-	-0-	-0-
	210	RESET GROUND SIGN	EACH	5	7	5	7	+2	140
	210	RESET CHAIN LINK FENCE	LIN. FT.	165	33	165	33	-132	20
	212	SEEDING (NATIVE)	LB.	56	56	56	56	-0-	100
	212	FERTILIZER (AVAILABLE N)	LB.	68	68	68	68	-0-	100
	212	FERTILIZER (AVAILABLE P)	LB.	173	173	173	173	-0-	100
	212	SOIL PREPARATION (NATIVE)	ACRE	1.5	1.5	1.5	1.5	-0-	100
	213	MULCHING	TON	3	3	3	3	-0-	100
305 Book ENVELOPES 1 THRU 3	402	HOT BITUMINOUS PAVEMENT (PATCHING) (HAUL AND ASPHALT)	TON	2	10	2	10	+8	500
	403	HOT BITUMINOUS PAVEMENT (GRADING) (HAUL AND ASPHALT)	TON	2649	2486.60	2649	2486.60	-162.40	94
305 Book	411	EMULSIFIED ASPHALT (CS5-1H)	GAL.	451	98	451	98	-353	22
	602	18 INCH REINFORCED CONCRETE PIPE	LIN. FT.	50	50	50	50	-0-	100
	603	36 INCH REINFORCED CONCRETE PIPE	LIN. FT.	48	48	48	48	-0-	100
	603	18 INCH REINFORCED CONCRETE END SECTION	EACH	2	2	2	2	-0-	100
	602	21 INCH EQUIVALENT CORRUGATED STEEL PIPE ARCH	LIN. FT.	95	95	95	95	-0-	100
	603	24 INCH EQUIVALENT CORRUGATED STEEL PIPE ARCH	LIN. FT.	54	54	54	54	-0-	100
	603	21 INCH EQUIVALENT ARCH STEEL END SECTION	EACH	1	1	1	1	-0-	100
	603	24 INCH EQUIVALENT ARCH STEEL END SECTION	EACH	2	2	2	2	-0-	100
	604	INLET TYPE C (5 FOOT)	EACH	1	1	1	1	-0-	100
	607	LINE POST (CHAIN LINK)	EACH	28	3	28	3	-25	11
	607	END POST (CHAIN LINK)	EACH	3	3	3	3	-0-	100
	607	CORNER AND LINE BRACE POST (CHAIN LINK)	EACH	2	2	2	2	-0-	100
	607	FENCE CHAIN LINK (48 INCH)	LIN. FT.	150	150	150	150	-0-	100
	609	CURB TYPE 4 (SECTION B)	LIN. FT.	330	323	330	323	-7	98
	610	MEDIAN COVER MATERIAL (BITUMINOUS)	TON	23	32.26	23	32.26	+9.26	140
	612	DELINEATOR (TYPE I)	EACH	18	18	18	18	-0-	100
305 Book ENVELOPE #1	614	FLAGGING	HOUR	500	133	500	133	-367	27
305 Book	614	SIGN PANEL (CLASS I)	SQ. FT.	35	82	35	82	+47	234
	614	SIGN PANEL (CLASS II)	SQ. FT.	12	12	12	12	-0-	100
	614	SIGN PANEL (CLASS III)	SQ. FT.	24	24	24	24	-0-	100
	614	TIMBER SIGN POST 4x4 INCH	LIN. FT.	87	129	87	129	+42	148
	614	TIMBER SIGN POST 6x6 INCH	LIN. FT.	65	65	65	65	-0-	100
	614	BARRICADE (TYPE 3 F B)	EACH	1	1	1	1	-0-	100
	614	BARRICADE (TYPE 3 M B) (TEMPORARY) DELETED BY ICS (6-24-82)	EACH	3	0	3	0	-3	-0-
	614	CONSTRUCTION TRAFFIC SIGN (PANEL SIZE A)	EACH	4	5	4	5	+1	125
	614	CONSTRUCTION TRAFFIC SIGN (PANEL SIZE B)	EACH	20	17	20	17	-3	85
	614	VERTICAL PANEL	EACH	30	20	30	20	-10	67
305 Book	614	VERTICAL PANEL (WITH LIGHT) (FLASHING)	EACH	20	10	20	10	-10	50

FINAL SUMMARY OF APPROXIMATE QUANTITIES

AS CONSTRUCTED

NO REVISIONS REVISED 7/1/82 VOID

FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	FCU 285-4(13)	5	18

INDEX			CONTRACT ITEM NO.	CONTRACT ITEM	UNIT	ROADWAY												PROJECT TOTALS		DIFFER +/-	PERCENT OF PLAN	
						PLAN	AS CONST.	PLAN	AS CONST.													
305	BOOK		614	TRAFFIC CONE DELETE BY FORM 105 (6-21-82)	EACH	30	0												30	0	-30	0
			620	FIELD OFFICE (CLASS 1) CMO 1993 (MCR 1)	EACH	1	0												1	0	-1	0
			1993(2)	MODIFY INTERSECTION	LS	1	1												1	1	0	100
			620	SANITARY FACILITY	EACH	1	1												1	1	0	100
			626	MOBILIZATION	LS	1	1												1	1	0	100
			627	PAVEMENT MARKING PAINT	GAL.	27	30												27	30	+3	111
			1993(3)	SHOULDER DPT REMOVAL	LS	1	1												1	1	0	100
				<u>FORCE ACCOUNT</u>																		
			FAOI	MINOR CONTRACT REVISIONS	F.A.	1	1												1	1	0	100
						\$5,000	0												\$5,000	0.00		

FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	FCU 285-4 (13)	6	18

AS CONSTRUCTED			
NO REVISIONS	REVISED	7/1/82	VOID

TABULATION OF SURFACING

INDEX	LOCATION	HOT BITUMINOUS PAVEMENT (HAUL & ASPHALT)-GRADING E		*TACK COAT
		TOP LAYER	BOT. LAYER	CSS-1H
BOOK	PAGE	TONS	TONS	GAL.
	FRONTAGE ROAD RELOCATION			
	APPR. TO PROJ. 0+00 to 2+07.77	643	1500	390
	FRONTAGE ROAD CONNECTION			
	3+14.06 to 6+03.04	85	198	51
	CUL-DE-SAC 12+73 to 13+78	17	33	10
	EST. FOR IRREGULARITIES		173	
	PROJECT TOTAL	745	1994	38 451

ENVELOPES PROJECT TOTAL 2486.60 98

1 THRU 3 STABILIZATION BASED ON: *UNDILUTED

18" E.D.L.A. = 5

REGIONAL FACTOR = 1.5

SERVICEABILITY FACTOR = 2.0

H.B.R. STRENGTH COEFFICIENT = 0.44

WSN = 2.15

R VALUE = 13

● INCLUDES TONNAGE FOR TAPER 32.26

NOTE: 102 TONS HBP (PATCHING) AND 23 TONS MEDIAN COVER MATL (BITUMINOUS) REQ'D FOR THE ISLANDS ON KIPLING

SUMMARY OF EARTHWORK

INDEX	EMBANKMENT MATERIAL (COMPLETE IN PLACE)	
BOOK	PAGE	SHEET
	ROADWAY (FROM CROSS SECTIONS)	5696
	FROM LIST OF STRUCTURES	23
	TOTAL	5,719 CU YD.
	FOR INFORMATION ONLY	
	UNCLASSIFIED EXCAVATION	
	ROADWAY (FROM CROSS SECTIONS)	994
	FROM LIST OF STRUCTURES	34
	▲ FROM UNDESIGNATED SOURCE	5543
	TOTAL	6,576 CU YD.
	EMBANKMENT (NET)	
	ROADWAY (FROM CROSS SECTIONS)	5696
	FROM LIST OF STRUCTURES	23
	TOTAL	5,719 CU YD.
	EMBANKMENT X FACTOR (1.1)	
	ROADWAY (FROM CROSS SECTIONS)	6550
	FROM LIST OF STRUCTURES	23
	TOTAL	6576 CU YD.
	COMPACTION (AASH TO T99)	
	EMBANKMENT (NET)	5,719
	EASE OF CUTS AND FILLS	2,335
	TOTAL	8,054 CU YD.
	NETTING (FOR COMPACTION)	
	TOTAL	322 MGAL.

▲ MINIMUM R VALUE SHALL BE 13

DELINEATORS

Station	Side	Spacing	Type I*
Fr. Rd. Reloc.			Each
3+70	Lt	Minor Intersect.	6
2+1	Lt & Rt	Minor Intersect.	6
Fr. Rd. Conn.			
15+60	Lt	Island	3
15+90	Lt	Island	3
TOTALS			18

*Crystal

TABULATION OF FENCING

INDEX	LOCATION	SIDE	REMOVE FENCE	RESET CHAIN LINK FENCE	NEW POST CHAIN LINK	END POST CHAIN LINK	CORNER AND LINE SPACE POST (CHAIN LINK)	FENCE CHAIN LINK (4" NCH)
			LIN. FT.	LIN. FT.	EACH	EACH	EACH	EACH
	FRONTAGE ROAD RELOCATION							Lin. Ft.
	1+56 to 2+80	Rt. to Lt.	139	124				
	3+38 to 4+03	Lt. to Rt.	108	105				
	11+27 to 14+64	Rt.	336	350				
	14+64	Lt.	12	25				
	14+65 to 16+21	Lt.			33	165	3	1
	20+93	Lt.	30	48				
	FRONTAGE ROAD CONNECTION							
	3+59 to 5+18	Lt. to Rt.	218	172				70
	13+10 to 13+80	Lt.						80
	13+80							
	PROJECT TOTAL		843	824	33	165	3	2

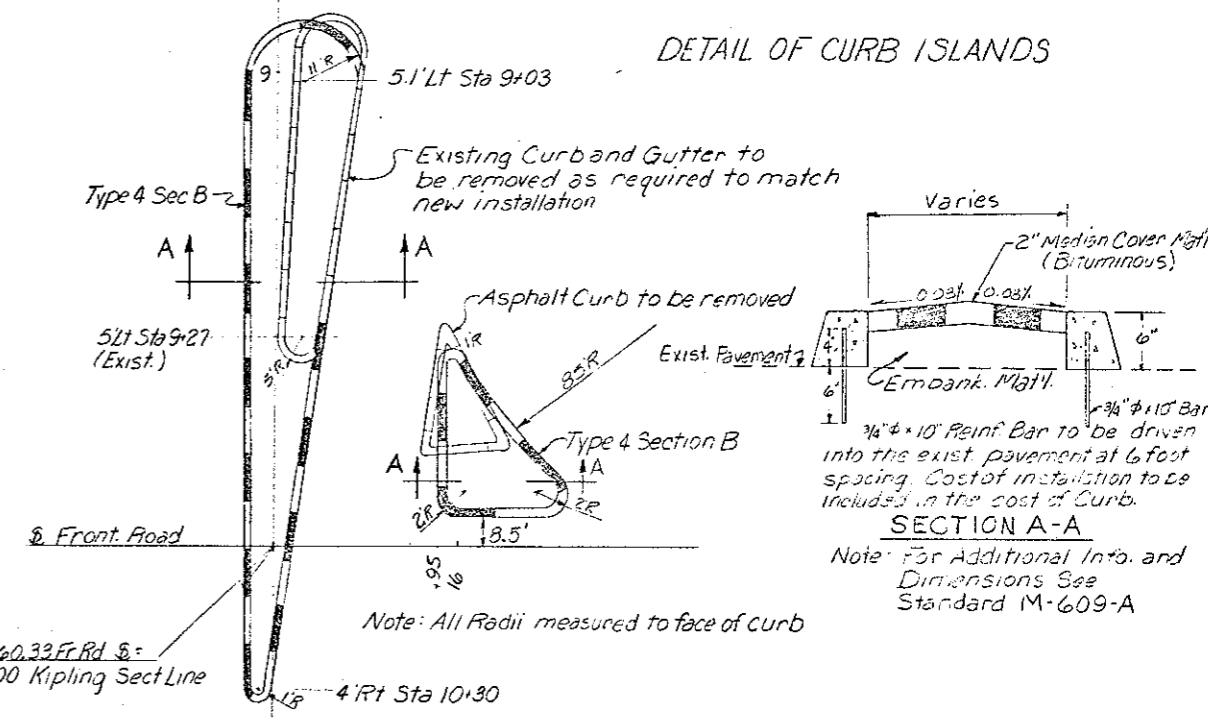
LIST OF STRUCTURES

INDEX	LOCATION	UNCLASSIFIED EXCAVATION	STRUCTURE EXCAVATION	STRUCTURE BACKFILL	INLET TYPE C EACH	CULVERT PIPE LINEAR FEET				"H" OVER CULVERT PIPE FEET	CURB TYPE 4 SECTION B LIN. FT.	REMOVAL OF ASPHALT MAT SQ. YDS.	REMOVAL OF PIPE LIN. FT.	TOPSOIL CU. YDS.	MISCELLANEOUS
						DITCH	CL. 2	5 FOOT	18"						
	FRONTAGE ROAD RELOCATION														
	0+60 to 3+70 Lt.														30
	0+11 to 0+31 Rt.														
	2+85 to 3+22 Lt.														
	3+65 Lt.			22	25	1 (40)			95	2.8					REQ'D, 1-21" EQUIV. ARCH STEEL END SECT.; REMOVE HEADWALL
	4+15			9	24				50	2.0					REQ'D, 2-18" REINFORCED CONCRETE END SECTIONS
	6+40			62	26					2.7					
	11+36 to 11+42 Rt.												14		REQ'D, 2-24" EQUIV. ARCH STEEL END SECTIONS
	15+90	▲ 34		22	22					1.3					
	FRONTAGE ROAD CONNECTION														
	3+14.26 to 6+03.04 Lt.														
	4+11 to 4+30 Rt.														
	15+60														112 REMOVE 107L F CURB & GUTTER; RECD 19 CU. YDS EMB (CIP)
	16+00														39 REMOVE 37L F CURB; RECD 19 CU. YDS EMB (CIP)
	PROJECT TOTAL	34	115	97	1		150	48	95	54	323	700	24	53	

▲ FOR INFORMATION ONLY

● INCLUDES PLYWOOD FOR BLOTTING ENDS

Kipling Sect. Line



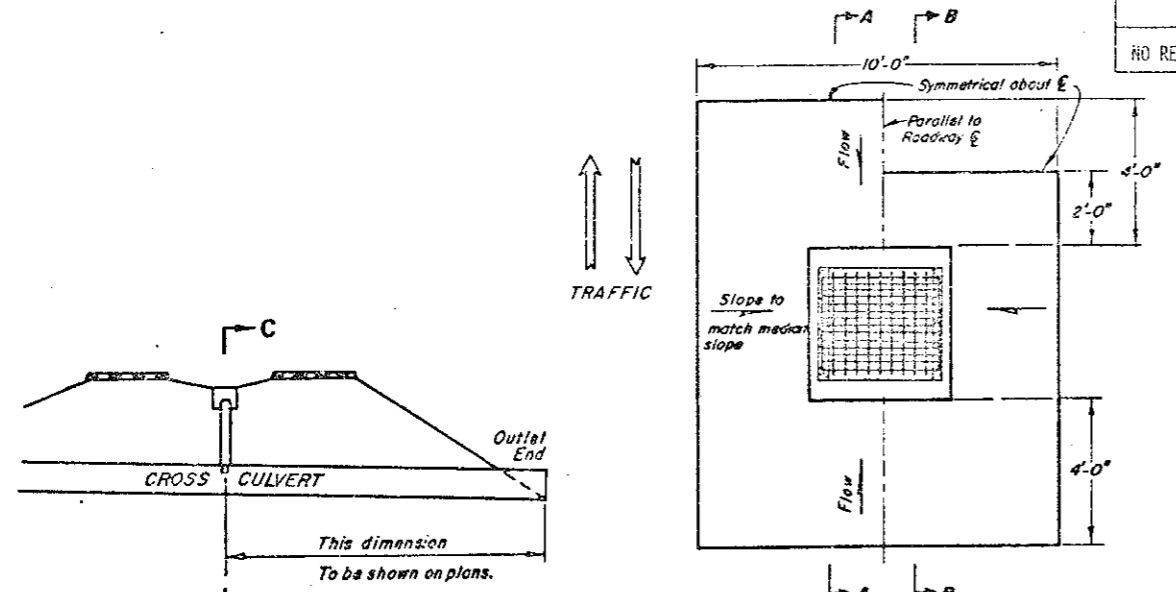
AS CONSTRUCTED
NO REVISIONS 7/1/62 REVISED: _____ VOID: _____

STANDARD M-604-BA

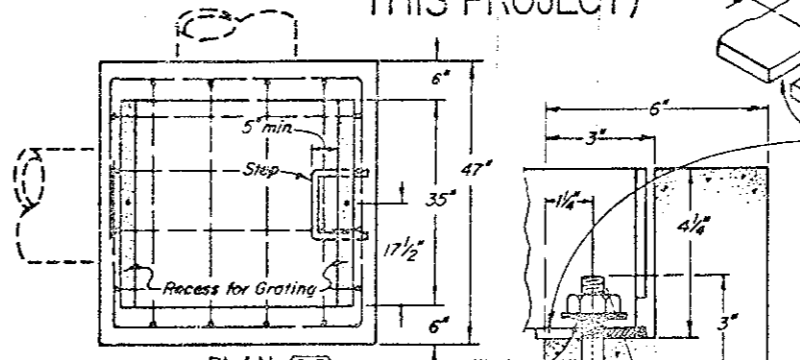
(JUNE 1, 1967)
(SPECIAL FOR THIS PROJECT)

FEDERAL ROAD DISTRICT NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	FCU 285-4(13)	7	13

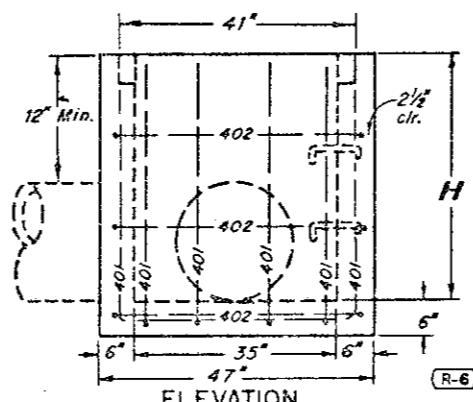
REVISIONS				
(R-1)	2-13-67	Grate Detail & Quantities		
(R-2)	12-18-67	Connection to skewed culvert, & detail		
(R-3)	7-19-69	Note B Detail Name		
(R-4)	4-13-71	Conc in S. Slope and Ditch Paving		
(R-5)	5-24-71	Lower reinforcing bar spacing		
(R-6)	4-5-76	Reinforcing bar spacing		
(R-7)	11-19-76	Grate mesh dimensions, Quantities		
(R-8)	7-3-75	Added det. WWF		
(R-9)	3-4-76	Gen. Note, Conc. Slope & Ditch Paving		



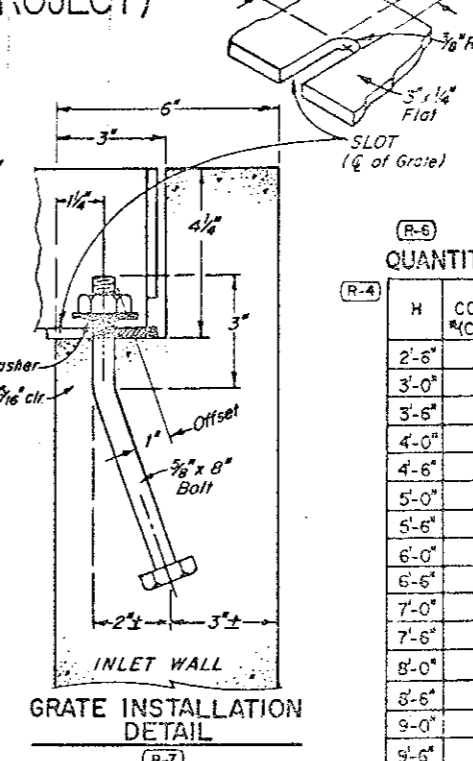
LAYOUT OF INLET IN MEDIAN DITCH (R-7)



PLAN (R-7)



ELEVATION CONCRETE INLET (R-7)



GRATE INSTALLATION DETAIL (R-7)

QUANTITIES FOR ONE INLET

H	CONCRETE (CU. YDS.)	REINF. STEEL (LBS.)	NO. STEPS REQ'D.
2'-6"	0.9	75	0
3'-0"	1.0	80	0
3'-6"	1.2	96	0
4'-0"	1.3	101	1
4'-6"	1.4	116	2
5'-0"	1.5	122	2
5'-6"	1.7	137	2
6'-0"	1.8	142	3
6'-6"	1.9	158	3
7'-0"	2.0	163	3
7'-6"	2.2	179	4
8'-0"	2.3	184	4
8'-6"	2.4	199	4
9'-0"	2.5	205	5
9'-6"	2.7	220	5
10'-6"	3.0	235	5
11'-6"	3.4	251	6

BAR LIST FOR H2'-6" AND BENDING DIAGRAM

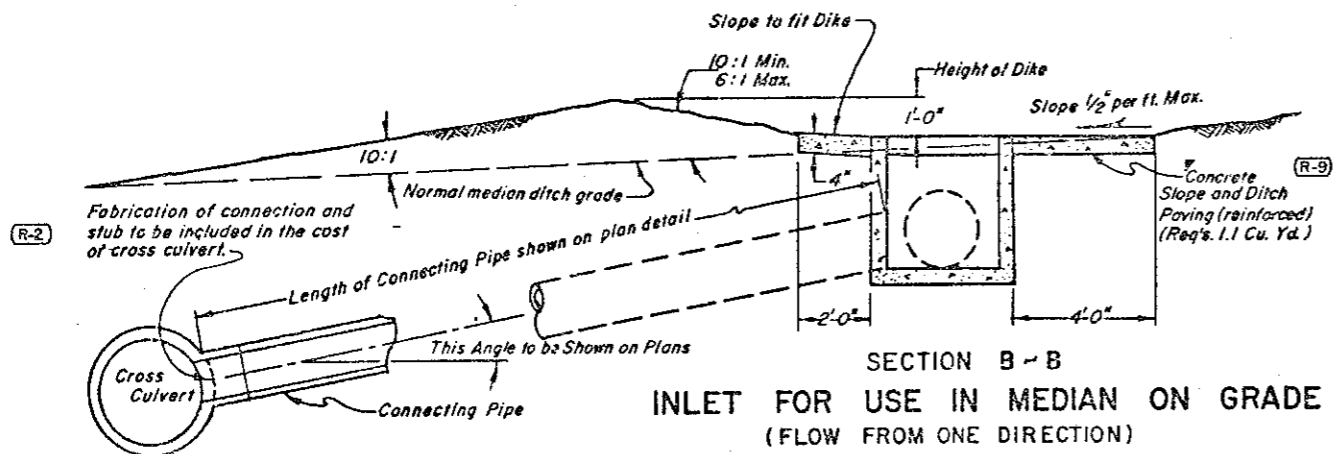
MARK	NO. REQ'D.	HGT. "U"	LENGTH
401	2	2'-3"	7'-11"
401	6	2'-7"	8'-0"
402	3		18'-0"

No. 401 U
Increase dimension "U" G" for each 6" increase of H above 2'-6".

No. 402
Add one bar for each foot increase of H above 2'-6".

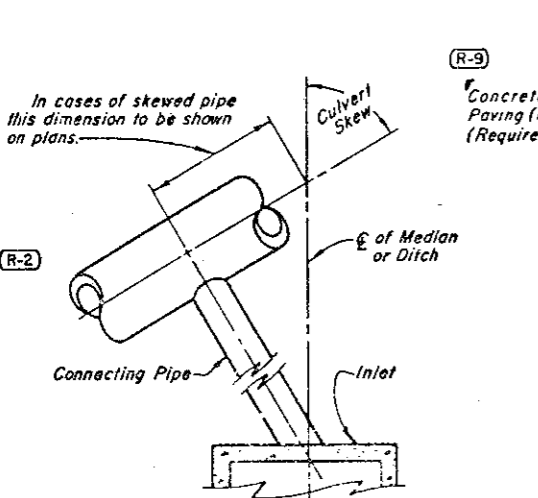
* Note: Includes Volume occupied by pipes. (R-3)

All bars to be 1/2" Dia. - Cut or bend around pipes as required.

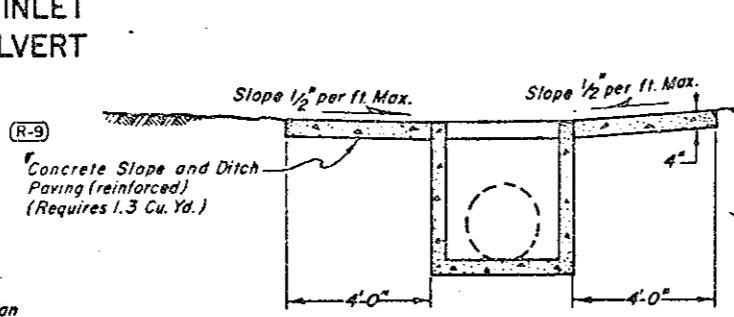


SECTION B-B INLET FOR USE IN MEDIAN ON GRADE (FLOW FROM ONE DIRECTION)

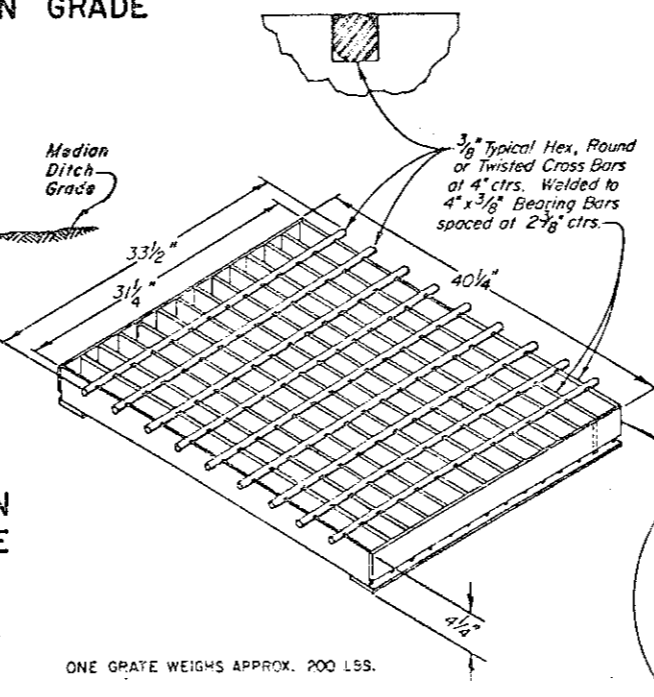
SECTION C-C DETAIL SHOWING MEDIAN INLET CONNECTED TO A CROSS CULVERT



DETAIL SHOWING MEDIAN INLET CONNECTED TO A SKEWED CROSS CULVERT



SECTION A-A INLET FOR USE IN MEDIAN AT BOTTOM OF VERTICAL CURVE

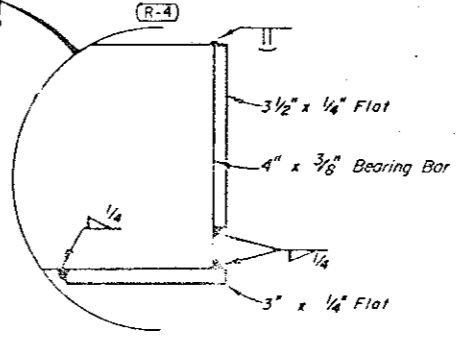


ONE GRATE WEIGHS APPROX. 200 LBS.

CLOSE MESH GRATING

GENERAL NOTES

- All work shall be done in accordance with the Standard Specifications applicable to the project.
- All concrete shall be Class A or B.
- For detail of Inlet Step, see M-Standard "Steps for Manholes and Inlets".
- All reinforcing bars shall be deformed, of intermediate grade, and shall be tagged with the station number and bar designation.
- All edge distances not marked "clear" are to E of bar.
- Concrete slope and ditch paving shall conform to Section 507. Reinforcement for concrete slope paving shall be WWF 4 x 4 - W1.4 x W1.4 or WWF 6 x 6 - W2.1 x W2.1.
- Grating shall conform to Section 604.
- Inlet grating shall be galvanized as described for Frames, Grates, Covers and Steps in Section 712.
- Steps or ladder will be required when Inlet "H" exceeds 3'-6".
- Concrete Slope and Ditch Paving will be required when shown on Plans.



DEPARTMENT OF HIGHWAYS
STATE OF COLORADO
DIVISION OF HIGHWAYS

INLET, TYPE C

Designed by D. B. R. Approved by J. R. D.
Made by J. R. D. Staff Design Engineer
Checked by R. S. M. Date: June 1, 1967

Project Curve Data
 PI Sta 4+20.03
 Δ 89° 17' 02" Rt.
 D 19° 05' 55"
 T 296.27'
 L 467.49'
 R 300.00'
 E 0.02%
 M.D.S. 28 M.P.H.
 S.S.D. > 600'
 TL 100'

Survey Curve Data
 PI Sta 5+00.00
 Δ 90° 00' 00" Rt.
 D 28° 36' 52"
 T 200.00'
 L 314.16'
 R 200.00'
 PC 3+00.00
 PT 6+14.16

S.E. 1/4 SEC. 33
 T.4 S., R. 69 W.

Connection Curve Data
 PI Sta. 4+55.28
 Δ 42° 14' 59" Rt.
 D 22° 55' 06"
 T 96.59'
 L 184.35'
 R 250.00'

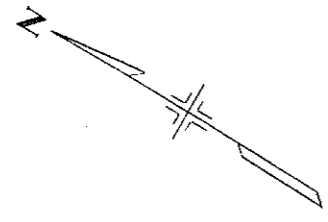
AS CONSTRUCTED
 NO REVISIONS [] REVISED 7/1/82 []

FEDERAL ROAD DISTRICT NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	FCU 285-4(13)	3	18

60% of T.L. to be on tangent roadway
 40% of T.L. on the curve (All Curves)
 Note: Project PI Sta. 4+20.03 = 1.75' Lt. Survey Sta. 4+20

UTILITIES
 Lakehurst Water and Sanitation
 Public Service Co. of Colorado
 Mountain Bell Telephone Co.

DATE	BY	REVISION



BM #4 ~ ELEV. 5527.71
 Chisel D N.W. Corner Conc. Diversion Box
 24' Ft. Survey Sta. 4+90 S.W. Fr. Pd.
 (Exist. Fr. Rd.)

FR. RD STA 0+00 PROJ. BEGIN FCU 285-4(13) =
 700' Lt. Sta. 0+00 Survey Line

Project Sta 3+70 =
 Connection Sta. 3+14.26

3x65 Proj. E - Reg'd.
 21" x 45" Equiv. C.S.P. Arch
 with End Section Rk
 Remove Headwall Lt
 Req'd. Inlet Type C.Lt.
 Water Right 16 C.F.T.S
 D.H.W. = 5529.90

4x15 Proj. E - Reg'd.
 18" x 6" R.C.P. with
 End Section Lt. Rk.

6x40 Proj. E - Reg'd.
 36" x 48" R.C.P.
 Block both ends with
 Plywood
 C.A. = 13.5 Acres
 D.H.W. = 5527.5'
 D.H.W. = 5528.6'
 D.H.W. = 5530.4'

Discharge Piped on future
 developed flow, including the
 water right
 when the
 the culvert
 at Sta 4+15
 is plugged.

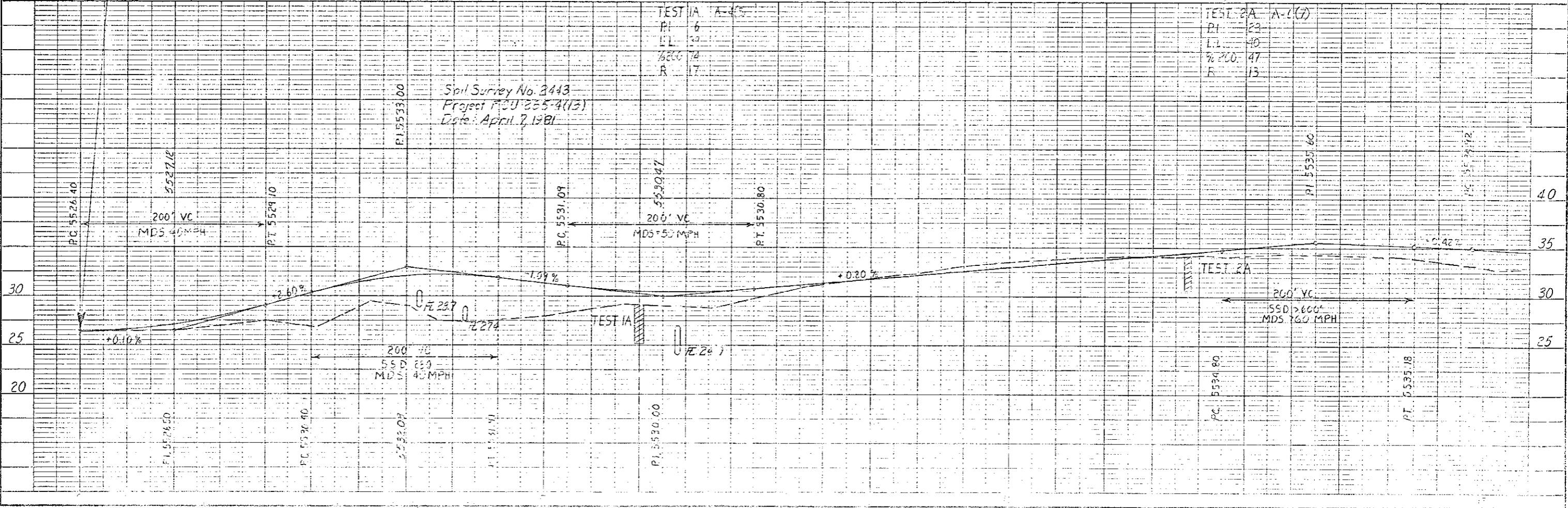
BM #5 ~ ELEV. 5535.13
 #4 Re-bar in Fence
 11' Lt. Survey Sta. 13+46

Project Curve Data
 PI Sta 10+77.20
 Δ 90° 00' 00" Lt.
 D 19° 05' 55"
 T 300.00'
 L 471.24'
 R 300.00'
 E 0.02%
 M.D.S. 28 M.P.H.
 S.S.D. > 600'
 TL 100'

Survey Curve Data
 PI Sta 12+10.10
 Δ 90° 18' 03" Lt.
 D 20° 38' 52"
 T 201.05'
 L 315.21'
 R 200.00'
 PC 10+09.05
 PT 13+24.25

DATE	BY	REVISION

Spot Survey No. 2443
 Project FCU 285-4(13)
 Date: April 7, 1981



TABULATION OF SIGNING QUANTITIES

ITEM NO.	ITEM	UNIT	PROJECT TOTALS	AS CONST. TOTALS
202	REM GROUND SIGN	EA.	4	3
202	REM PVMT MKGS	SQ. FT.	25	242
210	RES GROUND SIGN	EA	5	7
614	SIGN PANEL (CL. I)	SQ. FT.	35	82
614	SIGN PANEL (CL. II)	SQ. FT.	12	12
614	SIGN PANEL (CL. III)	SQ. FT.	24	24
614	TIMBER SIGN POST (4 x 4)	LIN. FT.	87	129
614	TIMBER SIGN POST (6 x 6)	LIN. FT.	65	65
614	BARRICADE (3F-B)	EA.	1	1
614	BARRICADE (3M-B)(TEMP) Deleted by 105 6-21-82	EA.	3	-0-
614	CONST. TRAF SIGN (A)	EA	4	5
614	CONST TRAF SIGN (B)	EA	20	17
614	VERTICAL PANEL	EA	30	20
614	VERTICAL PANEL (LIGHT-FLASHING)	EA	20	10
614	▲ TRAFFIC CONE Deleted by 105 6-21-82	EA	30	-0-
627	PVMT MKG PAINT	GAL.	27	30

▲ 28 INCHES

IT IS ESTIMATED THAT 25 SQ. FT. OF PAVEMENT MARKINGS WILL REQUIRE REMOVAL AT S. KIPLING & FRONTAGE RD. INTERSECTION.

SCHEDULE OF CONSTRUCTION TRAFFIC SIGNS

SIGN CODE	LEGEND	DIMENSIONS	PLAN TOTALS			AS CONST. TOTALS				
			A	B	C	QUANTITY REQUIRED	A	B	C	QUANTITY REQUIRED
XW20-1	ROAD/CONSTRUCTION (DIST)	48" x 48"		5				4		
SW20-4	ONE LANE/ROAD (DIST)	36" x 36"	2					2		
XW20-7a	FLAGGER SYMBOL	48" x 48"		2				4		
	BE/PREPARED/TO/STOP	36" x 36"	2					4		
SG20-2	END/CONSTRUCTION	60" x 24"		4				2		
SRII-2	ROAD/CLOSED	48" x 30"		3				0		
* XW20-5a	LANE/CLOSED/AHEAD	48" x 48"		2				0		
IW4-2(R)	RIGHT LANE TRANSITION	48" x 48"		2				1		
	VERTICAL PANEL								30	20
	VERTICAL PANEL (LIGHT-FLASHING)								20	10
	TRAFFIC CONE	28"							30	-0-
	BARRICADE (3M-B)(TEMP)								3	-0-
IW4-2(L)	LEFT LANE TRANSITION	48" x 48"		2				0		
	NO RIGHT/LEFT TURN	24" X 24"						5		

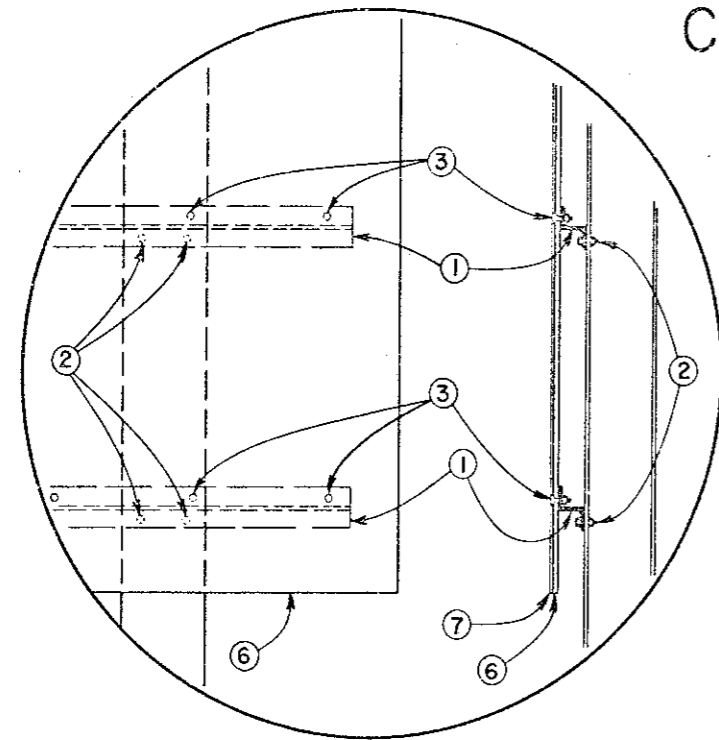
* W20-5 ADVANCE WARNING SIGNS TO BE FURNISHED WITH INTERCHANGEABLE PLAQUES READING "RIGHT" & "LEFT" AT NO ADDITIONAL EXPENSE.

CLASS III SIGNS - SHEET 2

AS CONSTRUCTED		
NO REVISIONS	7/1/82	REVISED
		VOID

FEDERAL ROAD REGION NO.	DISTRICT	PROJ. NO.	SHEET NO.	TOTAL SHEETS
XXXIII	COLORADO	FCU 265-4(13)	15	18

REVISIONS	

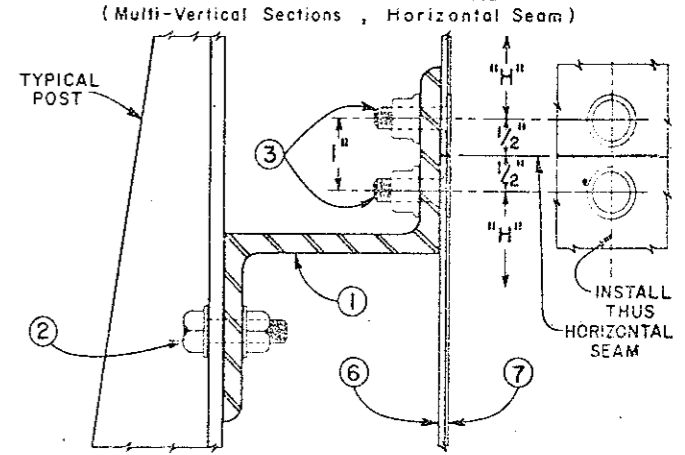


TYPICAL ELEVATION DETAIL

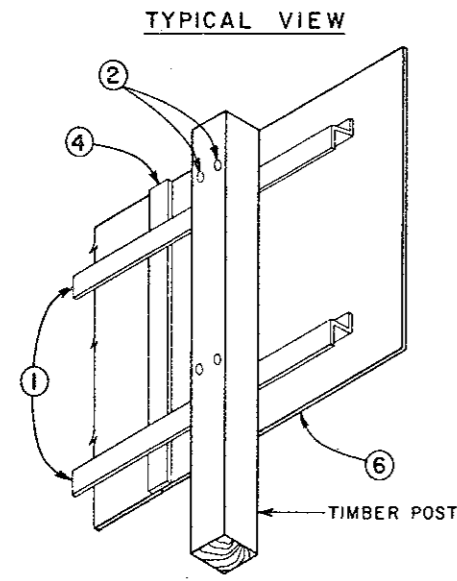
FABRICATION NOTES

- ① BACKING ZEE. See "SPACING TABLE" Aluminum Alloy 6061-T6. Each zee to be provided with a 3/16" x 2" horizontal slot for each post mounting bolt. The length of each zee to be 1" less than the sign panel width.
- ② 3/8" HEX-HEAD BOLT. With nut and washers. 2 per backing zee per post are required.
- ③ 3/8" (No. 6) 90° COUNTERSUNK ALUMINUM LOCKBOLT FASTENER.
- ④ 2" x 0.080" ALUMINUM CLOSURE STRIP.
- ⑤ 1/8" x 3/8" UNIVERSAL-HEAD, HOLLOW SHANK ALUMINUM RIVET.
- ⑥ SHEET ALUMINUM. 0.125" minimum thickness.
- ⑦ NON-EXPOSED LENS REFLECTIVE SHEETING. To have a dry (heat activated) adhesive backing.

TYPICAL DETAIL SEAM CLOSURE ZEE

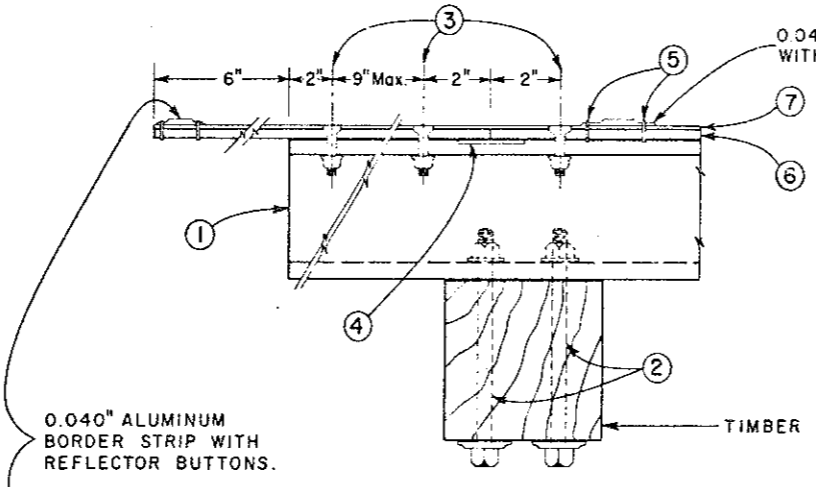


TYPICAL TIMBER POST INSTALLATION

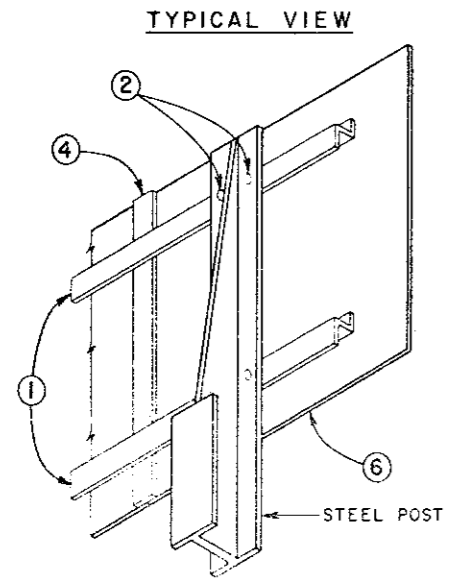


TYPICAL VIEW

PANEL FABRICATION AND MOUNTING DETAILS

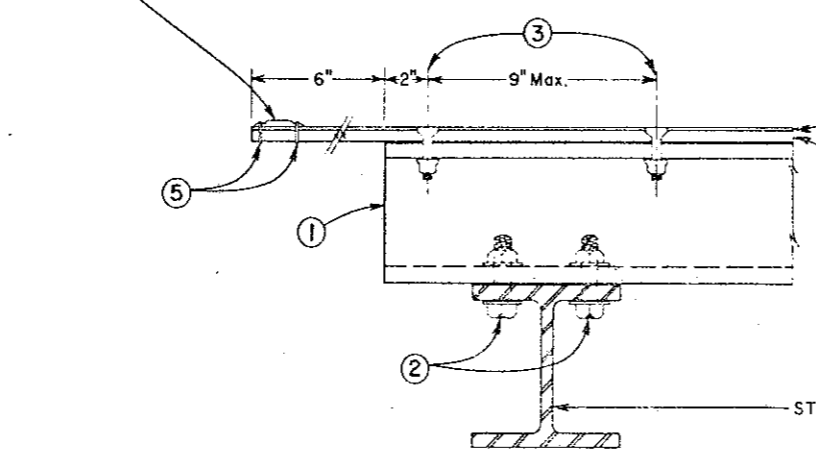


TYPICAL STEEL POST INSTALLATION

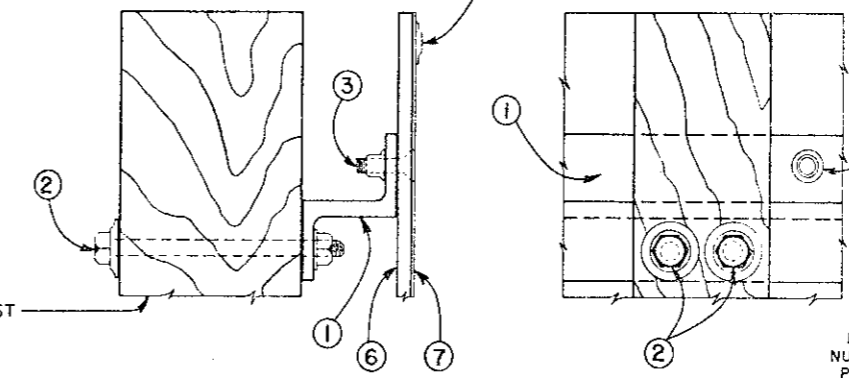


TYPICAL VIEW

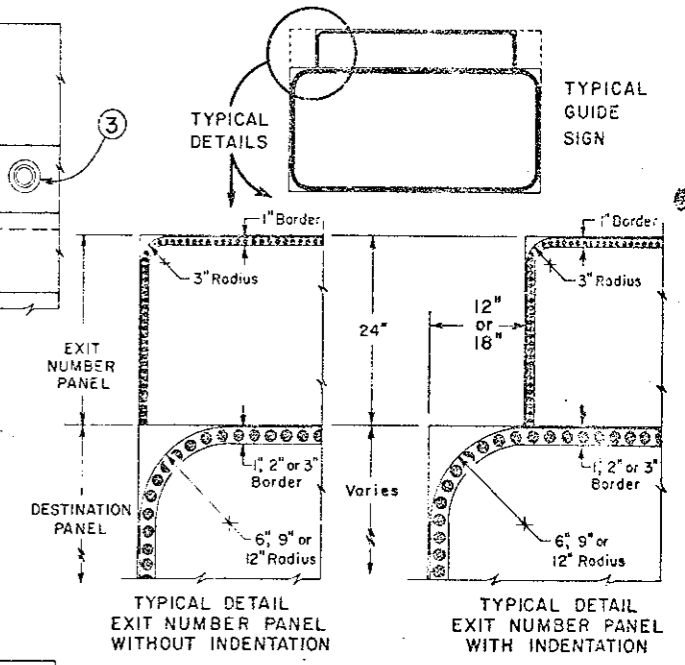
PANEL FABRICATION AND MOUNTING DETAILS



BORDER STRIP



TYPICAL BORDER DETAILS EXIT NUMBER PANELS



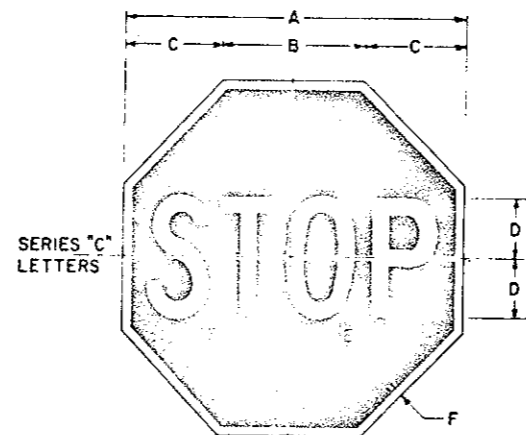
DEPARTMENT OF HIGHWAYS
STATE OF COLORADO
DIVISION OF HIGHWAYS

CLASS III SIGNS
SHEET ALUMINUM
PANELS

UNIFORM STANDARD REGULATORY & WARNING SIGNS

FEDERAL ROAD REGION NO.	DISTRICT	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	FCU 285-4(13)	16	18

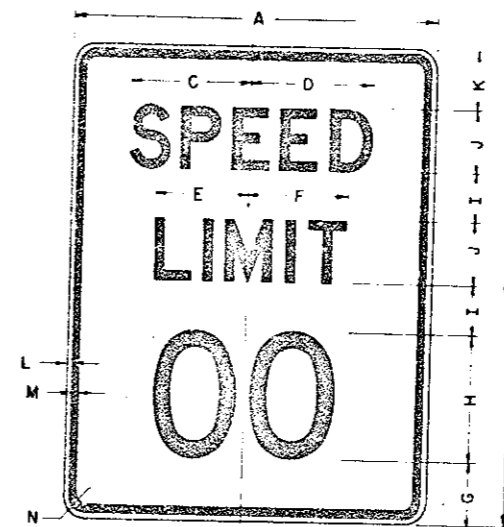
AS CONSTRUCTED				
NO REVISIONS	7/1/62	REVISED		VOID



SERIES "C"
LETTERS

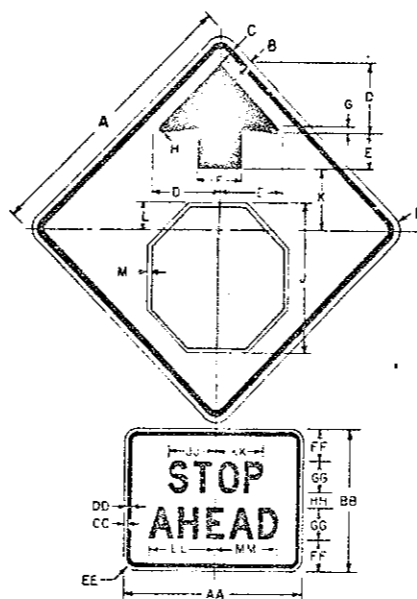
CODE	A	B	C	D	E	F
CR1-1	24"	9 ¹⁵ / ₁₆ "	7 ¹¹ / ₁₆ "	4"	10 ¹ / ₈ "	3/8"
SR1-1	30"	12 ⁷ / ₁₆ "	8 ¹³ / ₁₆ "	5"	12 ³ / ₈ "	1/2"
XR1-1	48"	19 ⁷ / ₈ "	14 ¹ / ₈ "	8"	20 ¹ / ₄ "	7/8"

Legend and border - Reflectorized white.
Background - Reflectorized red (Reverse screened on reflective sheeting)



CODE	A	B	C	D	E	F	G	H	I	J	K	L	M	N
CR2-1(-)	8"	24"	7 ³ / ₈ "	7 ³ / ₈ "	5 ⁷ / ₈ "	6"	2 ³ / ₈ "	8" ^D	1 ¹ / ₂ "	4" ^D	2 ³ / ₈ "	3/8"	9/16"	1/2"
SR2-1(-)	24"	30"	9 ³ / ₈ "	9 ³ / ₈ "	7 ¹ / ₂ "	7 ¹ / ₂ "	4"	10" ^E	2"	4" ^E	4"	1/2"	5/8"	1 ¹ / ₂ "
XR2-1(-)	36"	48"	14"	14 ¹ / ₂ "	10 ³ / ₄ "	11 ³ / ₁₆ "	7 ¹ / ₂ "	14" ^E	4 ¹ / ₂ "	6" ^E	6 ¹ / ₂ "	5/8"	7/8"	2"
IR2-1(-)	48"	60"	15 ¹ / ₂ "	15 ⁷ / ₈ "	12 ³ / ₈ "	12 ⁷ / ₈ "	8"	16" ^E	6 ¹ / ₄ "	8" ^D	7 ¹ / ₂ "	3/4"	7/8"	3"

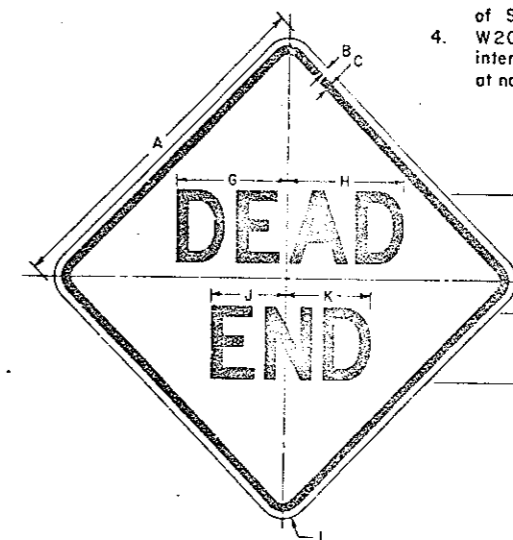
Legend and border - Screen processed black.
Background - Reflectorized white.



CODE	A	B	C	D	E	F	G	H	J	K	L	M	N
CW3-1a	30	1 ³ / ₄ "	7 ¹ / ₂ "	13 ³ / ₄ "	5	5 ¹ / ₁₆ "	5 ¹ / ₁₆ "	19 ³ / ₈ "	6 ¹ / ₄ "	2 ⁷ / ₈ "	1 ¹ / ₂ "	1 ⁷ / ₈ "	1 ⁷ / ₈ "
SW3-1a	36	3 ³ / ₈ "	9	4 ¹ / ₂ "	6	3 ¹ / ₈ "	3 ¹ / ₈ "	19	7 ¹ / ₂ "	3 ¹ / ₂ "	5 ¹ / ₈ "	2 ¹ / ₂ "	2 ¹ / ₂ "
IW3-1a	48	5 ¹ / ₂ "	12	6	8	1	1	25 ¹ / ₈ "	10	4 ¹ / ₂ "	7 ¹ / ₄ "	3	3

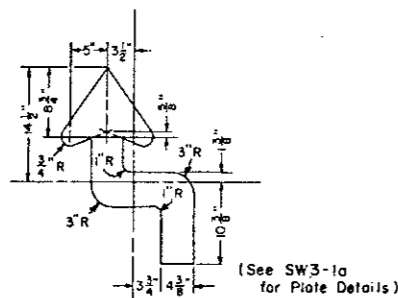
CODE	AA	BB	CC	DD	EE	FF	GG	HH	JJ	KK	LL	MM
ESW3-1a	24	18	1 ¹ / ₂ "	1 ¹ / ₂ "	4	4	2	6 ¹ / ₂ "	6 ¹ / ₂ "	8 ¹ / ₂ "	8 ¹ / ₂ "	8 ¹ / ₂ "
EIW3-1a	36	24	2 ¹ / ₈ "	2 ¹ / ₈ "	4	4	16	4	9 ³ / ₈ "	9 ³ / ₈ "	13	13

Border and Arrow - Black (Non-Ref.)
Symbol - White Border on Red Background (Ref.)
Background - Yellow (Ref.)



CODE	A	B	C	D	E	F	G	H	J	K	L
CW14-1	24	3 ³ / ₈ "	5 ⁵ / ₈ "	5D	1	2	8 ¹ / ₂ "	8 ³ / ₈ "	5 ⁵ / ₈ "	6 ¹ / ₄ "	1 ¹ / ₂ "
SW14-1	30	4 ¹ / ₂ "	7 ¹ / ₂ "	6D	1 ¹ / ₂ "	2 ¹ / ₂ "	9 ³ / ₄ "	10 ¹ / ₄ "	6 ³ / ₄ "	7 ¹ / ₂ "	1 ⁷ / ₈ "
XW14-1	36	5 ⁵ / ₈ "	9 ¹ / ₈ "	7D	2	3	11 ³ / ₈ "	11 ¹³ / ₁₆ "	7 ⁷ / ₈ "	8 ³ / ₄ "	2 ¹ / ₄ "

Legend - Black (Non-Ref.)
Background - Yellow (Ref.)



SWI-3(L)

Reverse Arrow Detail For SWI-3(R)

NOTES:

- All Warning Signs shall have a Screen Processed Black Legend and Border on a Reflectorized Yellow Background.
- Galvanized Sheet Steel shall be hot dip Galvanized sheets of structural quality, 0.0598" min. thick, Grade A per ASTM Spec. A446-60T, 2 oz coating class with a light Phosphate coating on surfaces that are to receive reflective sheeting per Federal Spec TT-C-490 for Galvanized sheets.
- See applicable Standard for installation details: Class I or Class II as denoted in the Tabulation of Signs.
- W20-5 Advance warning sign to be furnished with interchangeable plaques reading "right" & "left" at no additional expense.

