FED. ROAD DIST. NO.	STATE	F.A. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	F 5-3 (2)	1	

Rev 9-13-47-J.P.K Equation

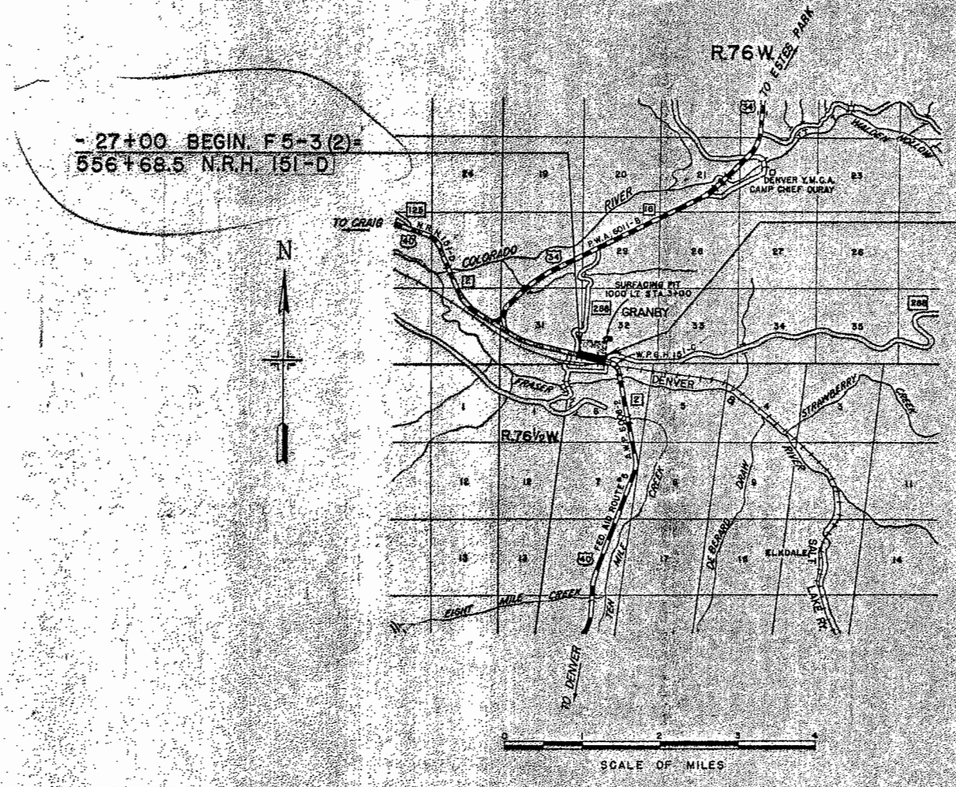
COLORADO
STATE HIGHWAY DEPARTMENT

PLAN AND PROFILE OF PROPOSED
FEDERAL AID PROJECT NO. F 5-3 (2)
STATE HIGHWAY NO. 2
GRAND COUNTY

INDEX OF SHEETS

SCALES OF ORIGINAL TRACING
ON PLAN, 1 IN. = 100 FT.
ON PROFILE 1 IN. = 100 FT. HORIZONTAL
1 IN. = 10 FT. VERTICAL
GRADE LINE ON PROFILE IS SHOWN AS GRADE OF FINISHED ROAD
GROSS LENGTH OF PROJECT } 3000.0 FT. = 0.568 MI.
NET LENGTH OF PROJECT }

- 27+00 BEGIN F 5-3 (2)=
556+68.5 N.R.H. 151-D



3+00 END F 5-3 (2)=
3+00 W.P.G.H. 151-C

CONVENTIONAL SIGNS

CENTER LINE
RIGHT OF WAY LINE
SECTION LINE
QUARTER SECTION LINE
CITY LIMITS
RAILROAD

5,030.2

NOTE:

It is recommended that bidders on this Project go over the plan details with the following field representative of this Department.

E.E. Montgomery, Division Engineer, Denver, Colorado.
F.W. Miller, Resident Engineer, Denver, Colorado.

RECOMMENDED FOR APPROVAL
Jas. O. Bell
ASSISTANT ENGINEER DATE 7-10-47

APPROVED
Mark C. Watrous
STATE HIGHWAY ENGINEER DATE 7-11-47

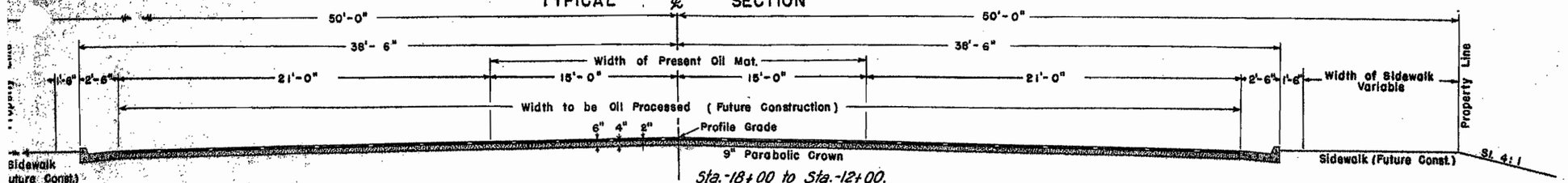
RECOMMENDED FOR APPROVAL - DATE
DISTRICT ENGINEER
PUBLIC ROADS ADMINISTRATION
FEDERAL WORKS AGENCY

APPROVED DATE
DIVISION ENGINEER
PUBLIC ROADS ADMINISTRATION
FEDERAL WORKS AGENCY

FED. ROAD DIST. NO.	STATE	F.A. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	F 5-3 (2)	2	

TYPICAL CROSS SECTION OF IMPROVEMENT AND SUMMARY OF QUANTITIES

TYPICAL ℄ SECTION



FUTURE CONSTRUCTION

The top 2" of Surfacing Material to be Oil Processed.

Asphaltic road material MC-0 is to be placed over a 42 ft. width of roadway (21' on each side from edge of present oil mat to gutter) between Sta. -27+00 to -18+00, and Sta.-12+00 to End of Project. Asphaltic road material MC-0 is to be placed over a 72 ft. width of roadway between Sta. -18+00 to -12+00.

All side approach roads to the Project shall be Oil Processed approximately to the R.O.W. Line.

A seal coat will be required over the entire Oil Processed Area on this Project.

Stone Screenings are to be obtained from Stockpile. (Type I)

GENERAL NOTES

This project is to be constructed in conformity with the Standard Specifications of the Colorado State Highway Department adopted June 1, 1940.

All quantities on preliminary plans are to be considered approximate only.

All roadway excavation required to construct this Project is to be obtained as indicated on the plans. Quantities involved beyond the limits of the ditch, as shown on the Typical Section, either noted on the profile as "Borrow" or on the List of Structures as "Embankment", are to be classified and paid for as "Unclassified Excavation." These quantities are to be staked as part of the original excavation at locations indicated on the plans. Slope stakes, beyond the limits of the Typical Section as shown, are subject to change by the Engineer to fit conditions actually met in construction.

Approximately 6 inches of embankment material will be used to cover culverts in such a manner that a minimum of pipe shall be exposed in the completed work. This shall be accomplished by warping embankment slopes around and adjacent to the culvert.

Except as otherwise noted on the plans, payment for overhaul will be based on measurement along the centerline of the project.

This Project lies entirely within the boundaries of present Highway Right of Way.

All concrete used on this project shall be "Air-entrained" concrete.

Present oil processed surfacing Sta.-27+00 to -18+00 and Sta. -12+00 to end of project is to be protected from damage.

Between Sta. -27+00 to Sta. -18+00 and Sta. -12+00 to Sta. 3+00 the grade line shown on the plans is informational only. Through this area the only grading work contemplated is on either side of present 30 ft. oil mat. Between Sta. -18+00 to Sta. -12+00 roadbed is to be brought to grade as shown in the plans.

Sta. -18+00 to Sta. -12+00.

6" compacted thickness of top course Gravel or Crushed Rock Surfacing to be placed at the rate of 227 tons per 100 lin. ft. of roadway. (Material to be placed over entire subgrade.)

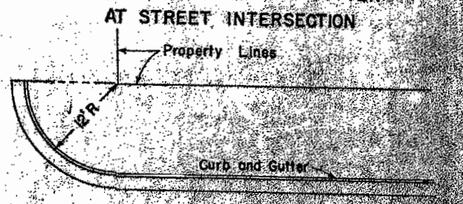
Sta. -27+00 to Sta. -18+00 and Sta. -12+00 to Sta. 3+00.

6" compacted thickness of top course Gravel or Crushed Rock Surfacing to be placed at the rate of 133 tons per 100 lin. ft. of roadway. (Material to be placed between gutter and edge of present oil mat.

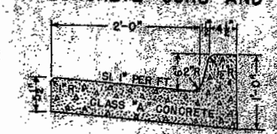
SUMMARY OF APPROXIMATE QUANTITIES

ITEM NO.	ITEM	UNIT		TOTAL ROADWAY
11b	Removal of 3 Structures	Lump Sum		•
13c	Unclassified Excavation	Cu. Yd.		3,000
13d	Unclassified Ditch Excavation	Cu. Yd.		10
14a	Dry Rock Excavation (Str.)	Cu. Yd.		30
14b	Dry Common Excavation (Str.)	Cu. Yd.		220
14c	Wet Rock Excavation (Str.)	Cu. Yd.		10
14d	Wet Common Excavation (Str.)	Cu. Yd.		30
14e	Mechanical Tamping	Hr.		20
15c	Wetting Embankments and Cuts	M Gal.		140
15d	Rolling with Finishing Roller	Hr.		50
15e	Furnishing Finishing Roller	Lump Sum		•
18a	Station Yard Overhaul	Sta. Yd.		14,000
18b	Yard Mile Overhaul	Yd. Mi.		400
26a	Gravel or Crushed Rock Surfacing	Ton		4,700
32b	Stone Screenings (Produce & Stockpile) (Type I)	Ton		170
46a	Class "A" Concrete	Cu. Yd.		2
47	Reinforcing Steel	Lb.		400
53b	18" Corrugated Metal Culvert Pipe	Lin. Ft.		203
53c	24" Corrugated Metal Culvert Pipe	Lin. Ft.		460
81a	Project Marker	Each		1
84b	Concrete Gutter	Lin. Ft.		510
84c	Concrete Combination Curb and Gutter	Lin. Ft.		4,500
130bx	#12 Inlet Grating and Frame	Each		2

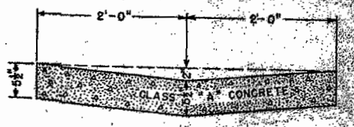
DETAIL OF CURB AND GUTTER AT STREET INTERSECTION



DETAIL OF CONCRETE CURB AND GUTTER



DETAIL OF CONCRETE GUTTER



SURFACING PLAN

[It i]s estimated that material for Gravel Surfacing for the project is available in the vicinity of the pit indicated in the following tabulation. Estimated quantities involved in this operation are shown below.

Alteration of the Surfacing Plan as here outlined will be allowed only on written permission from the Department.

MATERIAL TO BE PLACED	SOURCE	QUANTITY AVAILABLE	TONS USED TOP COURSE	TONS USED	OVERHAUL TON MILE
-27+00 to -18+00 -18+00 to -12+00 -12+00 to +3+00	Pit #1 1000 ft. Lt of Sta. 3+00 S.W. 1/4 Sec. 32, T. 2 N., R. 76 W.	Ample	*1247 1362 *2015		Free Free Free
Road Approaches			74		Free
TOTAL			4698		Free

*Includes quantities for Approaches to Project.

TABULATION OF LENGTH & DESIGN DATA

STATION	ROADWAY LIN. FT.	
-27+00, Beg. F5-3(2) = 556+68.5 N.R.H. 151-D 3+00, End F5-3(2) = 3+00 W.P.G.H. 151-C	3000	
TOTAL	3000	
SUMMARY	LIN. FT.	MILE
F5-3(2) Roadway	3000	0.568

DESIGN DATA

Maximum Grade	4.819 %
Minimum N.P.S.D. - vertical	360'
Maximum Design Speed	45 M.P.H.

COMBINATION CURB & GUTTER

STATION	SIDE	CURB & GUTTER LIN. FT.	GUTTER LIN. FT.
-26+82 to -24+35	Rt.	247	
-24+25	Rt.		20
-24+15 to -23+50	Rt.	65	
-23+40	Rt.		20
-23+30 to -23+10	Rt.	20	
-23+00	Rt.		20
-22+90 to -22+10	Rt.	80	
-22+00	Rt.		20
-21+90 to -20+77	Rt.	113	
-20+31 to -19+60	Rt.	71	
-19+50	Rt.		20
-19+40 to -17+37.5	Rt.	202.5	
-17+25	Rt.		25
-17+12.5 to -16+07	Rt.	105.5	
-15+61 to -15+14	Rt.	47	
-15+06	Rt.		16
-14+98 to -14+79	Rt.	19	
-14+68	Rt.		22
-14+57 to -13+37	Rt.	120	
-13+27	Rt.		20
-13+17 to -12+33.5	Rt.	83.5	
-12+26	Rt.		15
-12+18.5 to -11+36	Rt.	82.5	
-10+90 to -10+10	Rt.	80	
-10+00	Rt.		20
-9+90 to -9+10	Rt.	80	
-9+00	Rt.		20
-8+90 to -7+98	Rt.	98	
-7+90	Rt.		16
-7+82 to -7+24	Rt.	58	
-7+13	Rt.		22
-7+02 to -6+66	Rt.	36	
-6+10 to -4+10	Rt.	200	
-4+04	Rt.		12
-3+98 to -2+41	Rt.	157	
-2+35	Rt.		12
-2+29 to -1+85	Rt.	44	
-1+39 to -0+25	Rt.	114	
0+00	Rt.		50
-25+00 to -20+77	Lt.	423	
-20+31 to -18+29	Lt.	202	
-18+10	Lt.		38
-17+91 to -16+07	Lt.	184	
-15+61 to -14+05.5	Lt.	155.5	
-13+96	Lt.		19
-13+86.5 to -12+56	Lt.	130.5	
-12+50	Lt.		12
-12+44 to -11+36	Lt.	108	
-10+90 to -9+10	Lt.	180	
-9+00	Lt.		20
-8+90 to -8+60	Lt.	30	
-8+50	Lt.		20
-8+40 to -7+95	Lt.	45	
-7+90	Lt.		10
-7+85 to -6+66	Lt.	119	
-6+10 to -2+95	Lt.	315	
-2+90	Lt.		10
-2+85 to -1+85	Lt.	100	
-1+39 to 1+85	Lt.	324	
2+00	Lt.		30
2+15 to 2+75	Lt.	60	
TOTAL		4499	509

FED. ROAD DIST. NO.	STATE	FA. PROJ. NO.	SHEET NO.
8	COLO.	F.S.-13 (2)	4

LIST OF STRUCTURES

STATION	DESCRIPTION	REMOVE STRUCT.	EXCAVATION CU. YD.			STRUCTURAL EXCAVATION CU. YD.				GRAVEL OR CRUSHED ROCK SURFACING	MECHANICAL TAMPING	CONCRETE CU. YD.		REINFORCING STEEL	CORRUGATED METAL CULVERT PIPE LIN. FT.				INLET GRATING & FRAME			MISCELLANEOUS
			UNCL.		UNCL.							CLASS "A"	CLASS "B"									
		NO.	EXCAV.	EMBANK.	DITCH	Ø				TON	HOUR			LB.	18"	24"			NO.			
-27+00	Approach to Project			10						*												
-24+25	Driveway Entrance Rt.		5																			
-23+40	Driveway Entrance Rt.		5																			
-22+00	Driveway Entrance Rt.			5																		
-20+55	C.M.P. Side Drain Lt.					23									70							
-20+55	Road Approach Rt. & Lt.									14												
-19+50	Driveway Entrance Rt.			10																		
-17+25	Driveway Entrance Rt.			5																		
-15+84	Road Approach Rt. & Lt.									14												
-15+61	Extend 18" Cross Culvt. Rt. & Lt. Rem. Hdwl. Lt.	1				9									@28+1							
-15+06	Driveway Entrance Rt.			10											24+1							
-14+68	Driveway Entrance Rt.			10																		
-13+96	Driveway Entrance Lt.			10																		
-13+27	Driveway Entrance Rt.			5																		
-12+26	Driveway Entrance Rt.			5																		
-11+13	Road Approach Rt. & Lt.									14												
-10+85	Extend 18" Cross Culvt. Rt.					26									@78+1							
-10+00	Driveway Entrance Rt.			5																		
-9+00	Driveway Entrance Lt. & Rt.		5																			
-8+50	Driveway Entrance Lt.		10																			
-7+90	Driveway Entrance Rt. & Lt.		5																			
-7+13	Driveway Entrance Rt.		5																			
-6+38	Road Approach Rt. & Lt.									18												
-6+70	Cross Culv. Conc. Inlet (No. 12) ("H"=6") Outlet (W"=1")				10	50						1.02		166		100			1			
-4+04	Driveway Entrance Rt.			5																		
-2+35	Driveway Entrance Rt.			5																		
-1+62	Road Approach Rt. & Lt.									14												
-1+35	Cross Culvt. Conc. Inlet (No. 12) ("H"=5")					50						0.84		137		100			1			
	Remove 18"x 88' C.M.P. & Inlet.	2																				
0+00	Driveway Entrance Rt.			10																		
2+00	Driveway Entrance Lt.		5																			
2+25	C.M.P. Side Drain Lt.					110										260						
3+00	Approach to Project & Project Marker.		10							*												1 Project Marker
	Mechanical Tamping for C.M.P. Culverts.										20											
	TOTALS	3	50	95	10	268				74	20	1.86		303	203	460			2			

Ø Structural Excavation is estimated to be 90% Common and 10% Rock, each of which is estimated to be 90% Dry and 10% Wet.
* Surfacing for Approaches to Project are included in Surfacing Plan.
@ Allow 1 ft. additional for connecting bands.

STANDARD M-10-B.

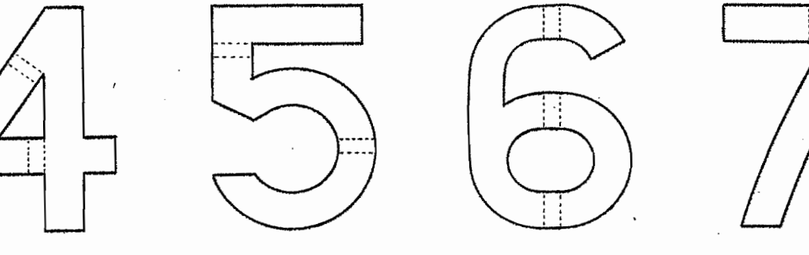
FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.
3	COLO.	F-S-36	5

1 2 3 4 5 6 7 8 9 0

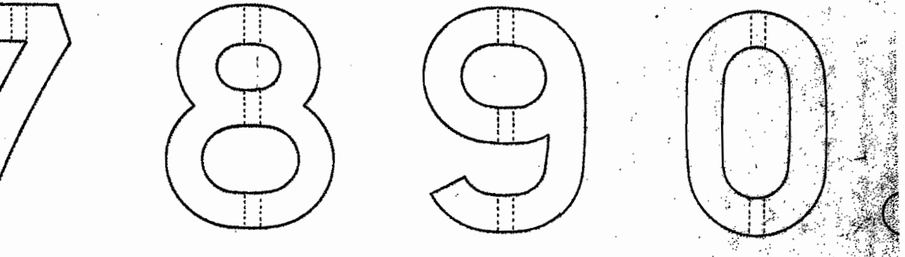
A B C D E F G H I J K L

M N O P Q R S T U V W

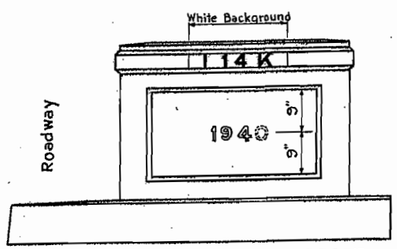
X Y Z



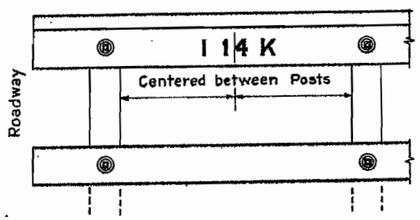
SAMPLE BRIDGE NUMBER



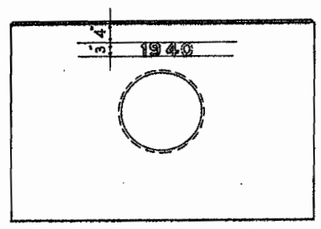
SAMPLE YEAR NUMBER



TYPICAL FOR CONCRETE ENDPOST



TYPICAL FOR TIMBER WING HANDRAIL



TYPICAL FOR CULVERT HEADWALL SYPHON, RETAINING WALL, ETC.
(Downstream Headwall)

General Notes

ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS OF THE COLORADO STATE HIGHWAY DEPARTMENT, ADOPTED JUNE 1, 1940.

COMPENSATION FOR THIS WORK SHALL BE INCLUDED IN THE ORIGINAL CONTRACT ITEMS AND WILL NOT BE PAID FOR AS A SEPARATE ITEM.

THE SIZE, SHAPE AND SPACING OF THE LETTERS AND FIGURES SHALL BE IN ACCORDANCE WITH THE FULL SIZE SHOWN ON THIS SHEET. ADDITIONAL COPIES OF THIS FULL SIZE SHEET CAN BE OBTAINED FROM THE DEPARTMENT WITHOUT CHARGE.

THE YEAR NUMBERS ARE RECESSED IN CONCRETE 3/8" MINIMUM AS SHOWN, INTO THE PANEL OF THE ENDPOST ON THE RIGHT HAND SIDE OF EACH BRIDGE END AND INTO THE FACE OF THE DOWNSTREAM HEADWALL OF CULVERTS, SIPHONS, CATTLE PASSES, RETAINING WALL, ETC. NUMBERS TO BE MADE OF WOOD, METAL OR OTHER SUITABLE MATERIAL AND ATTACHED TO THE FORMS BEFORE CONCRETE IS POURED.

THE YEAR NUMBER OF EACH STRUCTURE SHALL CORRESPOND WITH THE YEAR IN WHICH THE CONCRETE IS POURED.

THE STRUCTURE NUMBER SHALL BE STENCILED ON THE RIGHT HAND SIDE OF EACH BRIDGE END AS SHOWN ON THIS STANDARD AND AS SPECIFIED.

THE CORRECT NUMBER FOR EACH BRIDGE IS SHOWN IN THE LOWER RIGHT HAND CORNER OF THE DETAIL SHEETS FOR THAT BRIDGE.

A PROPER WHITE BACKGROUND, RECTANGULAR IN SHAPE AND EXTENDING THREE INCHES BEYOND THE LIMITS OF THE NUMBER SHALL BE PAINTED WITH TWO COATS OF ACCEPTABLE WHITE PAINT UNLESS AN APPROVED WHITE CONCRETE PAINT IS USED. BEFORE PAINTING THE SURFACE MUST BE THOROLY DRIED, CLEANED AND PROPERLY SIZED. ON TIMBER HANDRAILS THE WHITE PAINT USED ON THE BRIDGE WILL BE SATISFACTORY.

AFTER THE WHITE BACKGROUND HAS DRIED SUFFICIENTLY, THE CORRECT STRUCTURE NUMBER SHALL BE CAREFULLY STENCILED ON IT, WITH TWO COATS OF STANDARD "C SECOND FIELD COAT DARK" AS SPECIFIED UNDER ITEM 41 "STEEL BRIDGES." THE BRACES OF THE STENCILED LETTERS AND FIGURES SHALL BE CAREFULLY FILLED IN BY HAND TO MAKE SOLID FIGURES.

SUFFICIENT TIME BETWEEN SUCCESSIVE COATS SHALL BE ALLOWED TO PERMIT THORO DRYING.

COLORADO STATE HIGHWAY DEPARTMENT
STANDARD LETTERS AND FIGURES FOR YEAR NUMBERS AND STRUCTURE NUMBERS

Designed by G.H.D.	Approved by C.H.
Made by W.P.M.	Bridge Engineer
Checked by	Date: June,

STRUCTURE NO.

STANDARD M-10-B

REVISIONS

Rev. 6-28-40, A.E. 1940 Specs.
Rev. 1-2-46, C.S.O. Item 81a

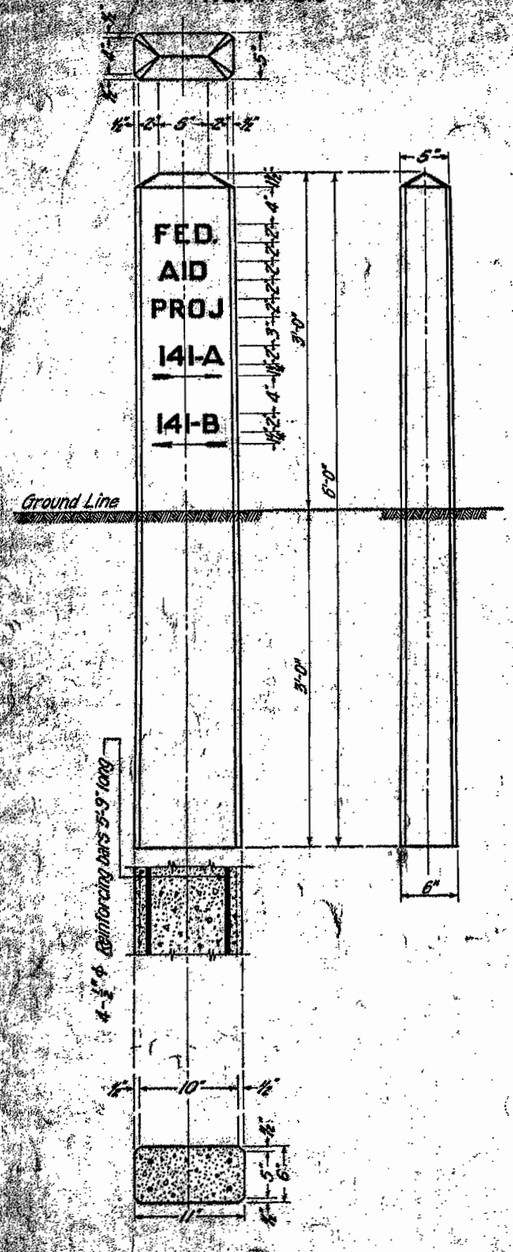
FED. ROAD DIST. NO.	STATE	SHEET NO.
3	COLO.	F5-3(2) 5A

STANDARD M-7-B

Rev. 8 Jan. 46 C.S.O. 12"ø to 12"ø
Rev. June 10" 46; W.E.M. Bronze Tablet
Rev. Mar. 21-1947, W.H.M.— Project Marker Post

PROJECT MARKER POST

ITEM Nº 81a



NOTES FOR PROJECT MARKER POSTS

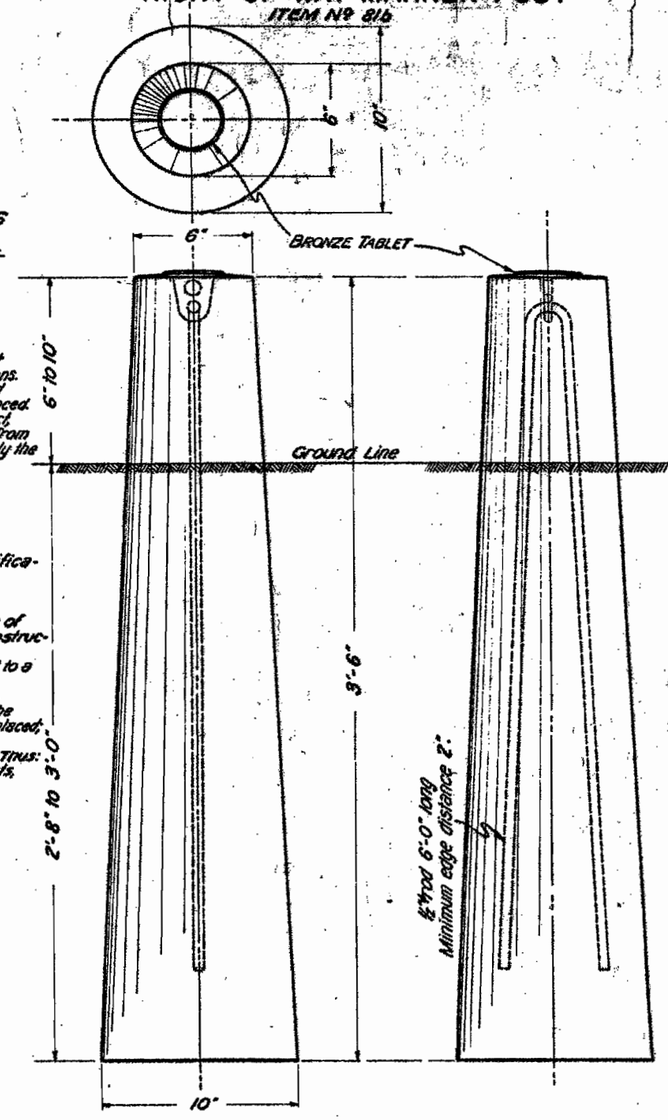
All work shall be done in accordance with the Standard Specifications of the Colorado State Highway Department, adopted June 1, 1940.
Posts shall be made of Class "A" Concrete, except use White Portland Cement.
All exposed surfaces shall be rubbed free of form marks.
All letters, numbers and arrows shall be recessed a minimum of ¼" into the concrete and painted black with black paint conforming to Item No. 41 "Second Field Coat-Dark" of the specifications.
Numbers and arrows shall show the proper numbers and directions of the projects each way from where the post is placed.
Post to be set with sign facing the road at the end of the project, two feet inside the R.O.W. line or at a point amply protected from traffic in such a position that the sign will indicate properly the projects to which it refers.

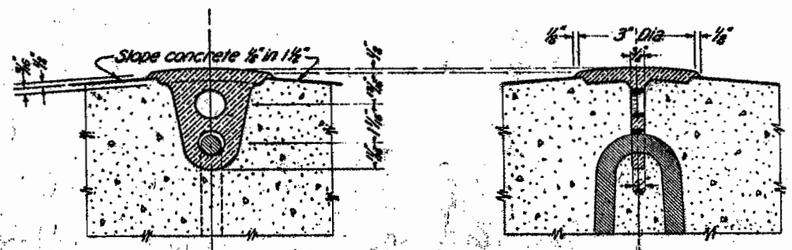
NOTES FOR R.O.W. MARKER POSTS

All work shall be done in accordance with the Standard Specifications of the Colorado State Highway Department, adopted June 1, 1940.
Posts shall be made of Class "A" concrete.
The upper 12 inches of marker posts shall be rubbed free of form marks, and the top surface of the post must be constructed to drain thoroughly.
All exposed surfaces of the bronze tablet are to be ground to a smooth surface.
All letters are to be depressed a minimum of 1/16 inch.
Information on the bronze tablet indicated by pin lines is to be stamped in the field by the engineering party after post is placed; ½ inch letters and figures to be used.;
Project designations on tablets shall be properly shown. Thus: "F.A.P. Nº" for Federal Aid Projects, "S.P. Nº" for State Projects, R.W.A. Nº for R.W.A. Projects, etc.

RIGHT OF WAY MARKER POST

ITEM Nº 81b





DETAIL OF BRONZE TABLET FOR RIGHT OF WAY MARKER POST

COLOR
STATE HIGHWAY
STAND
MARKER

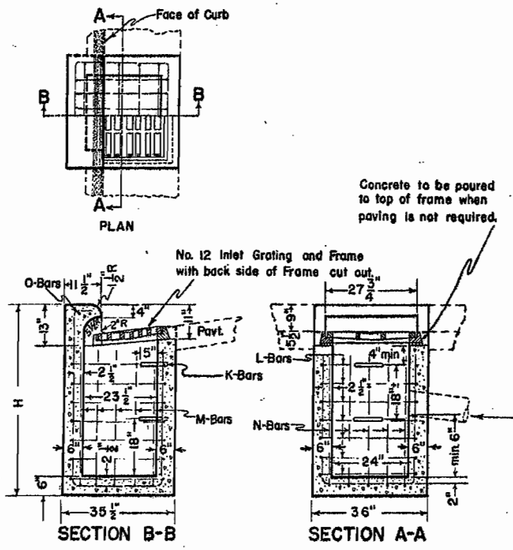
Designed by R.E.L. | Approved
Made by R.E.S.
Checked by R.E.L. | Date

STANDARD M-12-C 13

FED. ROAD DIST. NO.	STATE	SHEET NO.
3	COLO.	F 5-3(2) 6

Revision 1-10-46 B.B. Changed Standard No.

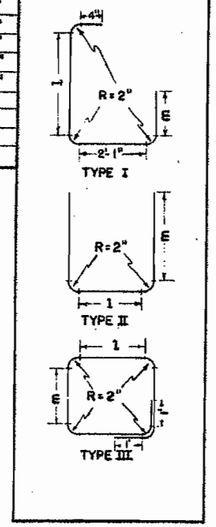
NO. 12 CONCRETE INLET



BAR LIST FOR H = 5' 0"

MARK	SIZE	NO. REQD.	LENGTH	TYPE	DIMENSIONS l	DIMENSIONS m	TOTAL LENGTH
K	3/4"ϕ	2	2' 6"	I	0' 8"	0' 8"	5' 0"
L	1/2"ϕ	7	12' 0"	III	2' 2"	2' 2"	84' 0"
M	1/2"ϕ	5	9' 5"	II	2' 1"	*3' 5"	47' 1"
N	1/2"ϕ	5	10' 11"	I	*4' 3"	*3' 6"	54' 7"
O	1/2"ϕ	2	2' 7"	STR.	—	—	5' 2"

BENDING DIAGRAM

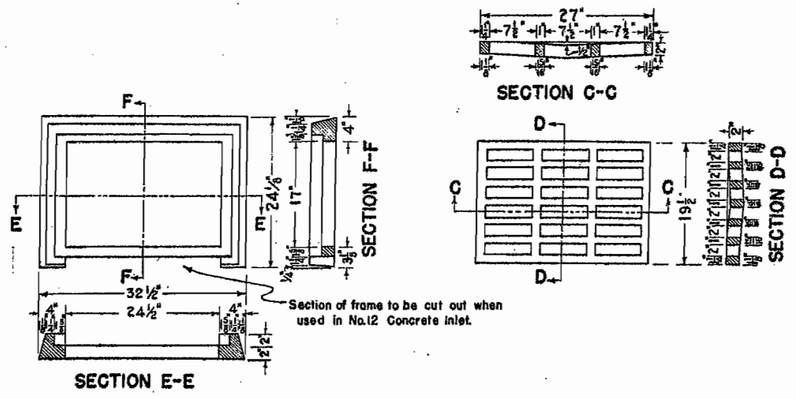


* These dimensions to be increased in increments of 6" for H above 5'-0"
Add 1 L bar for each 6" additional height above 5'0"
Additional K bars required as follows;
H= 6' 6" to 7' 6" - 1 bar;
H= 8' 0" to 9' 0" - 2 bars;
H= 9' 6" to 10' 0" - 3 bars;
Cut or bend bars around pipes as required.

See Plans for size and locations of outlets.

NO. 12 INLET GRATING & FRAME

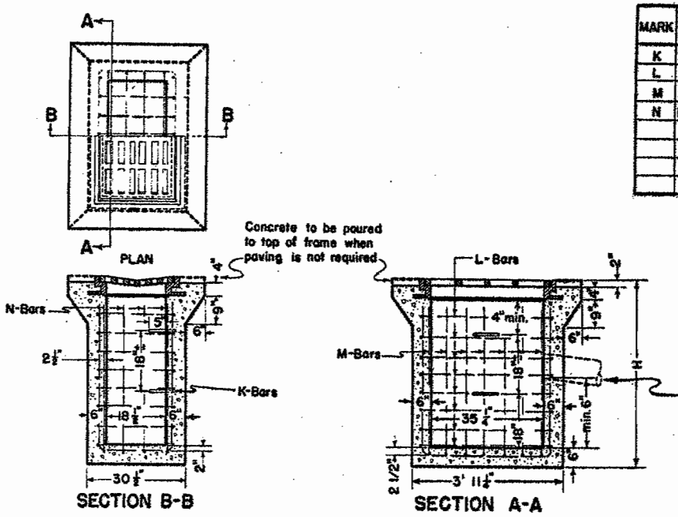
Approx. Weight 340 lbs.



NO. 13 CONCRETE INLET

BAR LIST FOR H = 5'0"

MARK	SIZE	NO. REQD.	LENGTH	TYPE	DIMENSIONS P	DIMENSIONS Q	TOTAL LENGTH
K	3/4"ϕ	2	2' 6"	I	0' 8"	0' 8"	5' 0"
L	1/2"ϕ	8	13' 0"	II	3' 1"	1' 9"	104' 0"
M	1/2"ϕ	7	10' 0"	I	1' 8"	*3' 11"	70' 0"
N	1/2"ϕ	4	11' 4"	I	3' 0"	*3' 11"	45' 4"

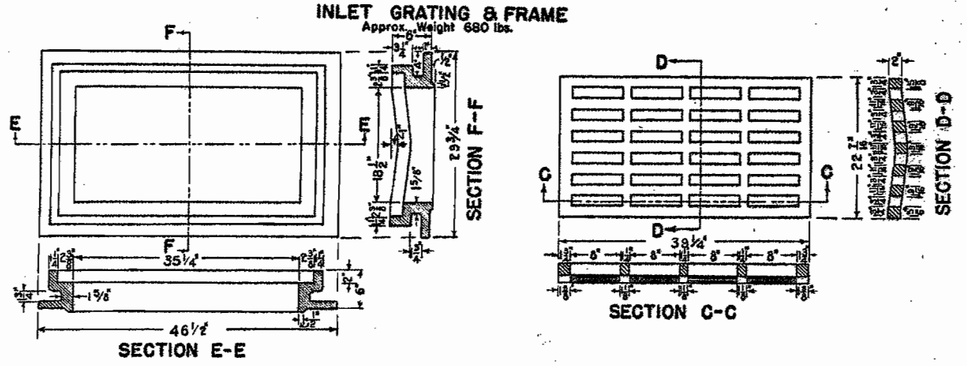


* These dimensions to be increased in increments of 6" for H above 5'-0"
Add 1 L bar for each 6" additional height above 5'0"
Additional K bars required as follows;
H= 6' 0" to 7' 0" 1 bar;
H= 7' 6" to 8' 6" 2 bars;
H= 9' 0" to 10' 0" 3 bars;
Cut or bend bars around pipes as required.

See Plans for size and locations of outlets.

NO. 13 INLET GRATING & FRAME

Approx. Weight 680 lbs.



QUANTITIES

H	CLASS "A" CONCRETE CU. YDS.*	REINFORCING *STEEL
5' 0"	0.90	137 lbs.
5' 6"	0.99	152 "
6' 0"	1.08	166 "
6' 6"	1.17	185 "
7' 0"	1.27	200 "
7' 6"	1.36	215 "
8' 0"	1.45	233 "
8' 6"	1.54	248 "
9' 0"	1.63	263 "
9' 6"	1.73	282 "
10' 0"	1.82	297 "

*Volume for inlet - volume occupied by pipes to be deducted for pay quantity of concrete.

* Includes 1% allowance for overrun.

QUANTITIES

H	CLASS "A" CONCRETE CU. YDS.*	REINFORC * STEEL
5' 0"	1.26	156 lbs.
5' 6"	1.36	172 "
6' 0"	1.46	192 "
6' 6"	1.57	208 "
7' 0"	1.67	225 "
7' 6"	1.77	245 "
8' 0"	1.87	261 "
8' 6"	1.97	277 "
9' 0"	2.07	297 "
9' 6"	2.17	313 "
10' 0"	2.28	329 "

*Volume for inlet - volume occupie by pipes to be deducted for pay q of concrete.

* Includes 1% allowance for overrun.

GENERAL NOTES

All work shall be done in accordance with the Standard Specifications of the Colorado State Highway Department, adopted June 1, 1940.
All reinforced concrete shall be class "A."
All concrete walls shall be formed on both sides.
All exposed concrete corners shall be beveled to a 1" face.
All reinforcing bars shall be deformed, of intermediate grade, and shall be tagged with mark designation and station number.
All castings shall be painted with two coats of asphalt or coal tar and oil.

COLORADO
STATE HIGHWAY DEPART
STANDARD
NO. 12 AND NO. 13
CONCRETE INLETS

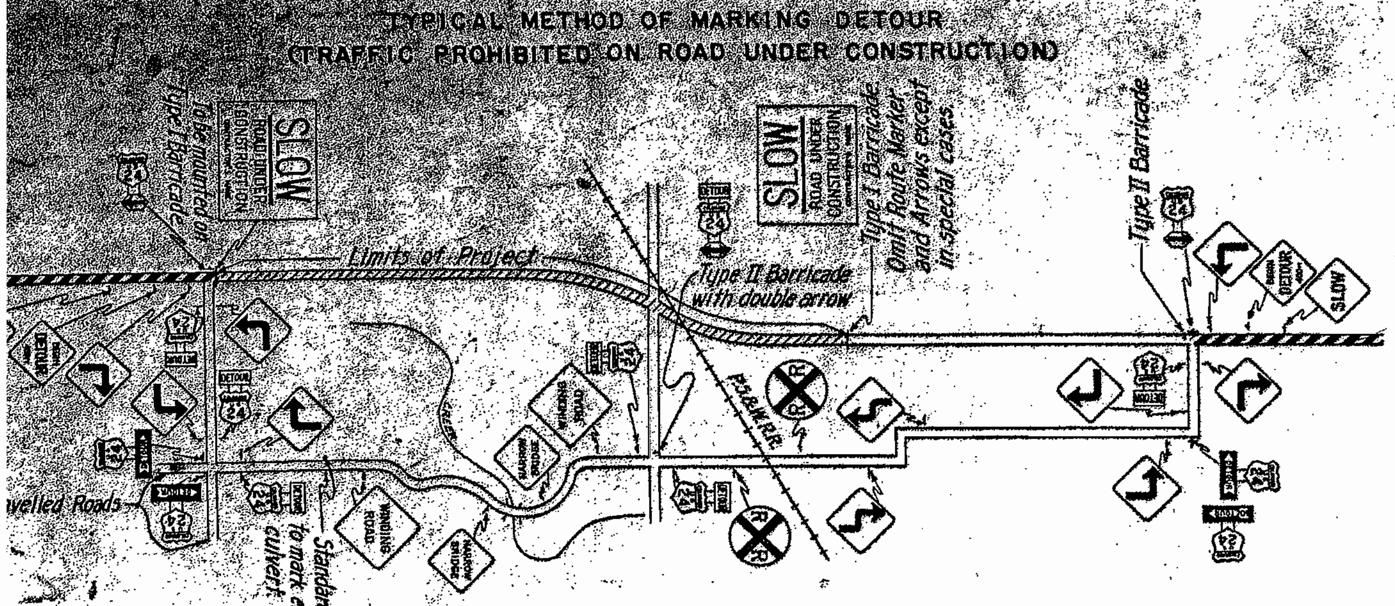
Designed by A.R.G	Approved by
Made by A.R.G	Bridge Engi
Check Design A.Z.	
Check Detail O.R.S	Date

STANDARD M-2-D

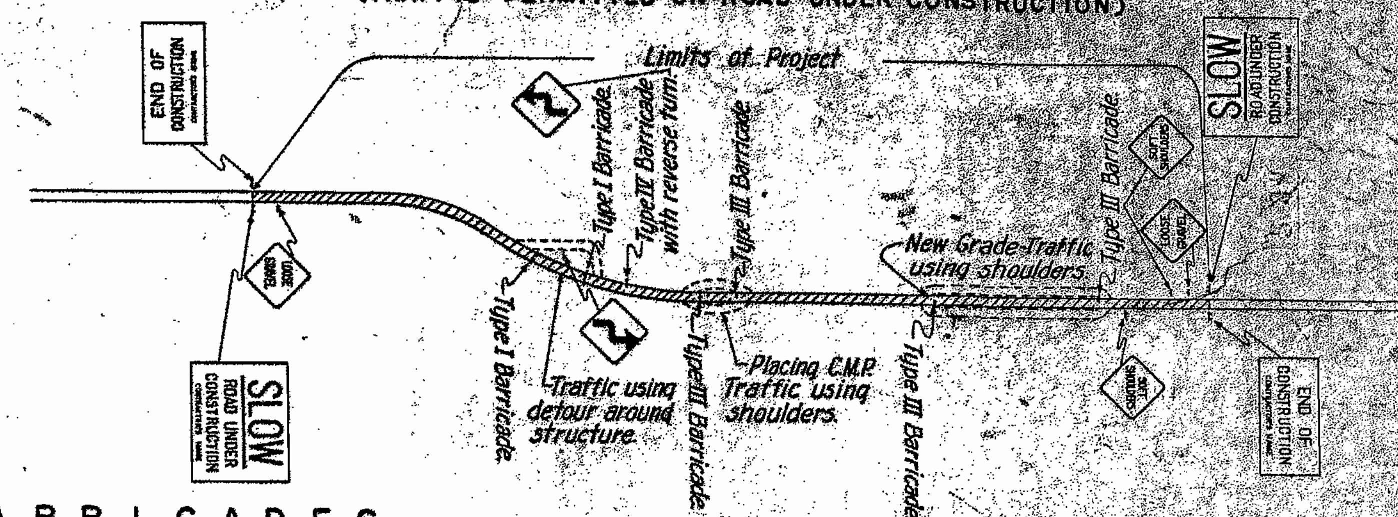
FED. ROAD DIST. NO.	STATE		SHEET NO.	TOTAL SHEETS
9	COLO.	F 5-3(2)	7	

Rev. 9-10-48 Slow Signs. R&E

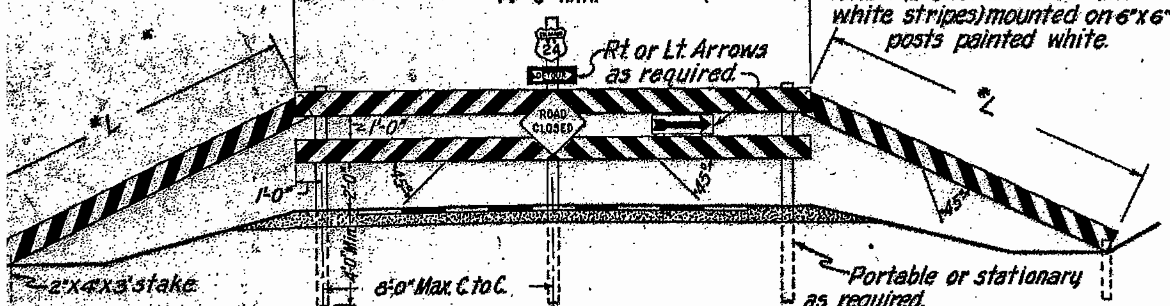
TYPICAL METHOD OF MARKING DETOUR (TRAFFIC PROHIBITED ON ROAD UNDER CONSTRUCTION)

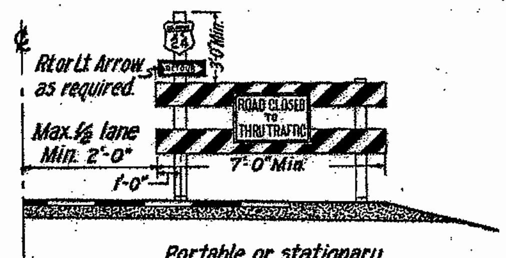


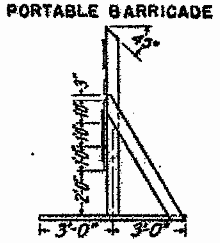
TYPICAL METHOD OF MARKING HIGHWAY (TRAFFIC PERMITTED ON ROAD UNDER CONSTRUCTION)

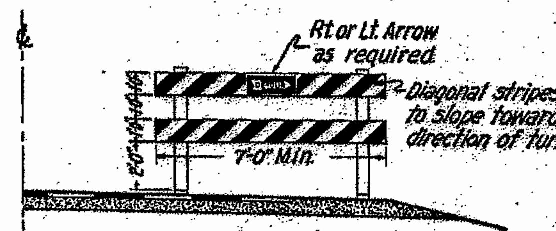


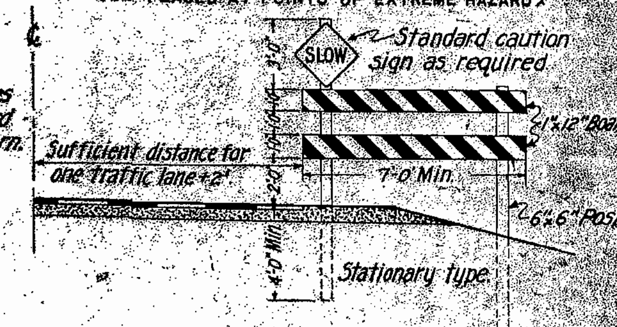
DETAILS OF BARRICADES



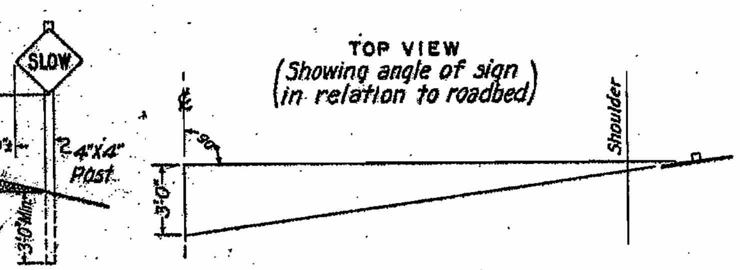




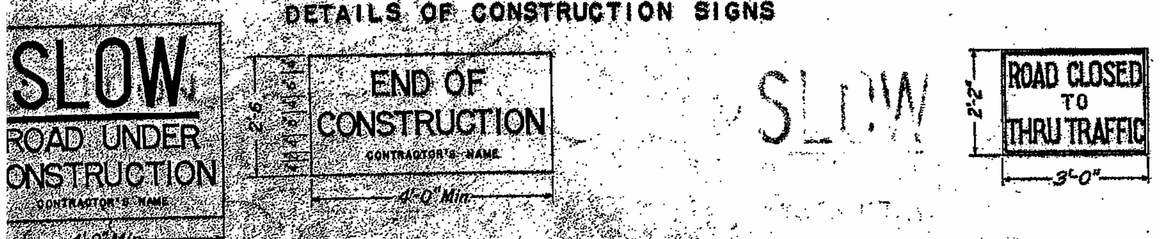




POSITION OF SIGNS RELATIVE TO ROADBED & HAZARDS



DETAILS OF CONSTRUCTION SIGNS



Signs to be of 1" material with at least three cleats in back. Background to be white. "SLOW" and underline to be red, and all other lettering to be black. Sign to be set on 2-4"x4" posts 4 feet in the ground, except when mounted on face of Type I barricades (opposite side from reflectorized arrow) at limits of project. Not required on Type I barricades inside limits of project.

Above sign to be furnished and installed by the Department where required.

GENERAL NOTES

ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS OF THE COLORADO STATE HIGHWAY DEPARTMENT APPLICABLE TO THE PROJECT.

WHERE TRAFFIC IS MAINTAINED THROUGH OR OVER ANY PART OF THE PROJECT THE CONTRACTOR WILL BE REQUIRED TO MARK ALL HAZARDS WITHIN THE LIMITS OF THE PROJECT WITH WELL PAINTED, WELL MAINTAINED BARRICADES AND STANDARD CAUTION SIGNS, WARNING SIGNS, AND DIRECTIONAL TYPE SIGNS. BARRICADES AND SIGNS SHALL BE MOVED, ADDED TO, CHANGED OR REMOVED AS REQUIRED DURING THE PROGRESS OF CONSTRUCTION TO MEET CHANGING CONDITIONS.

THE CONTRACTOR SHALL FURNISH AND INSTALL THE FOLLOWING AS REQUIRED WITHIN THE LIMITS OF THE PROJECT:

1. ALL BARRICADES.
2. APPROVED REFLECTORIZED DIRECTIONAL ARROW FOR EACH TYPE I BARRICADE.
3. "SLOW - ROAD UNDER CONSTRUCTION (CONTRACTOR'S NAME)" SIGNS - MINIMUM 2.
4. "END OF CONSTRUCTION (CONTRACTOR'S NAME)" SIGNS - MINIMUM 2.
5. STANDARD CAUTION, WARNING AND DIRECTIONAL TYPE SIGNS AS REQUIRED.
6. FLARES OR TORCHES AS FOLLOWS:
   A. TYPE I BARRICADES - MINIMUM 3 EACH.
   B. TYPE III OR IV BARRICADES - MINIMUM 1 EACH.
   C. STANDARD CAUTION OR WARNING SIGNS - MINIMUM 1 EACH.

NOTE: FLARES OR TORCHES SHALL BE OF AN OIL BURNING TYPE APPROVED BY THE STATE OF COLORADO AND SHALL BE PLACED FROM 3 TO 6 FEET AHEAD OF THE SIGN OR OBJECT TO BE ILLUMINATED. IN ALL CASES FLARES OR TORCHES SHALL BE PLACED A SUFFICIENT DISTANCE AWAY, WITHIN THE ABOVE RANGE, TO AVOID DAMAGE TO FACE OF SIGN FROM SMOKE OR FLAME AND SHALL BE KEPT BURNING FROM SUNSET TO SUNRISE.

ALL LUMBER USED IN BARRICADES AND SIGNS SHALL BE SOUND, DURABLE MATERIAL AND SHALL BE KEPT WELL PAINTED WITH NEAT, UNIFORM LETTERS AND SYMBOLS CONFORMING TO STYLE SHOWN FOR THE VARIOUS SIGNS. UNEVEN OR SMEARED LETTERING WILL NOT BE PERMITTED.

WHERE TRAFFIC IS PROHIBITED FROM THE PROJECT, THE DETOUR WILL BE MARKED BY THE DEPARTMENT, EXCEPT THAT TYPE I BARRICADES, COMPLETE WITH NECESSARY ARROWS AND SIGNS, SHALL BE PROVIDED, ERECTED, PAINTED AND MAINTAINED BY THE CONTRACTOR AT BOTH ENDS OF THE PROJECT AND AT ALL INTERSECTING ROADS REQUIRED TO BE LEFT OPEN FOR CROSS TRAFFIC.

US AND/OR STATE ROUTE MARKERS DEEMED NECESSARY FOR GUIDANCE OF TRAFFIC OVER THE PROJECT OR FOR USE ON TYPE I BARRICADES WILL BE FURNISHED BY THE DEPARTMENT TO BE INSTALLED BY THE CONTRACTOR.

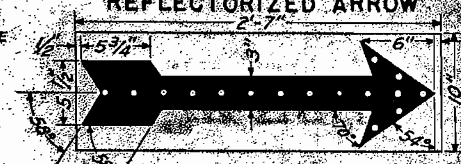
THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL SIGNS FURNISHED HIM BY THE DEPARTMENT AND SHALL RETURN SAME UPON COMPLETION OF THE PROJECT. THE CONTRACTOR WILL BE REQUIRED TO REIMBURSE THE DEPARTMENT FOR ANY SIGNS FURNISHED HIM WHICH HAVE BECOME DAMAGED OR LOST DURING HIS OPERATIONS.

THE TYPICAL METHOD OF MARKING AS SHOWN ILLUSTRATES THE MINIMUM ACCEPTABLE SIGNING PROCEDURE. MODIFICATIONS AND ADDITIONAL REQUIREMENTS WILL BE DETERMINED BY LOCATION, TRAFFIC VOLUME AND OTHER PERTINENT CONDITIONS AFFECTING THE PUBLIC CONVENIENCE AND SAFETY.

ANY SPECIAL SIGNS DEEMED NECESSARY FOR THE GUIDANCE AND PROTECTION OF TRAFFIC OVER THE PROJECT OR DETOUR WILL BE FURNISHED AND INSTALLED BY THE DEPARTMENT.

ALL COSTS INCIDENTAL TO THE FOREGOING REQUIREMENTS WILL NOT BE PAID FOR AS A SEPARATE ITEM BUT SHALL BE INCLUDED IN THE ORIGINAL CONTRACT PRICES FOR THE PROJECT.

DETAILS OF REFLECTORIZED ARROW



For use on Type I Barricades at ends of project and/or inside of project where needed.

Reflector buttons shall be Signal Service ALA 31 (white crystal) or suitable equivalent. Minimum thickness of lumber to be 1".

COLORADO STATE HIGHWAY DEPARTMENT

STANDARD ROADWAY CONSTRUCTION TRAFFIC SIGNS

Designed by A.R.P. / A.Z. — Made by B.O.C. — Checked by

Approved by R.E.L. — Date: Sept. 25 1945

NOTE:
Alignment and Grades as shown are subject to modification during construction, after approval by the Denver Office.
The soil data shown on the plans is obtained from best available testing laboratory information. This information is shown for the convenience of the Contractor and the Department does not guarantee the accuracy of these tests. If materials not conforming to the data on the plans are encountered during construction, necessary modifications of the grading plan shown on the plans will be made to secure dense stable embankment.

S.W.¼ SEC.32 T.2 N., R.74 W. 76

GRANBY

FED. ROAD DIST. NO.	STATE	F.A. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	F 5-3 (2)	8	

Rev. 9-13-47-J.P.K. Equation