

FED. ROAD DIST. NO.	STATE	F.A.S. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	364-C (1)	1	

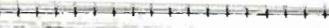
INDEX OF SHEETS

- SHEET NO. 1 SKETCH MAP & TITLE
 2 SUMMARY OF APPROXIMATE QUANTITIES & GENERAL NOTES
 3 TO 5 DETAILS OF BRIDGE STATION 1029+
 6 STANDARD STRUCTURE NUMBER LETTERING M-10-A
 7 TYPICAL SIDE APPROACH ROADS - ROADWAY CONSTRUCTION
 TRAFFIC SIGNS M-2-B
 8 PLAN AND PROFILE

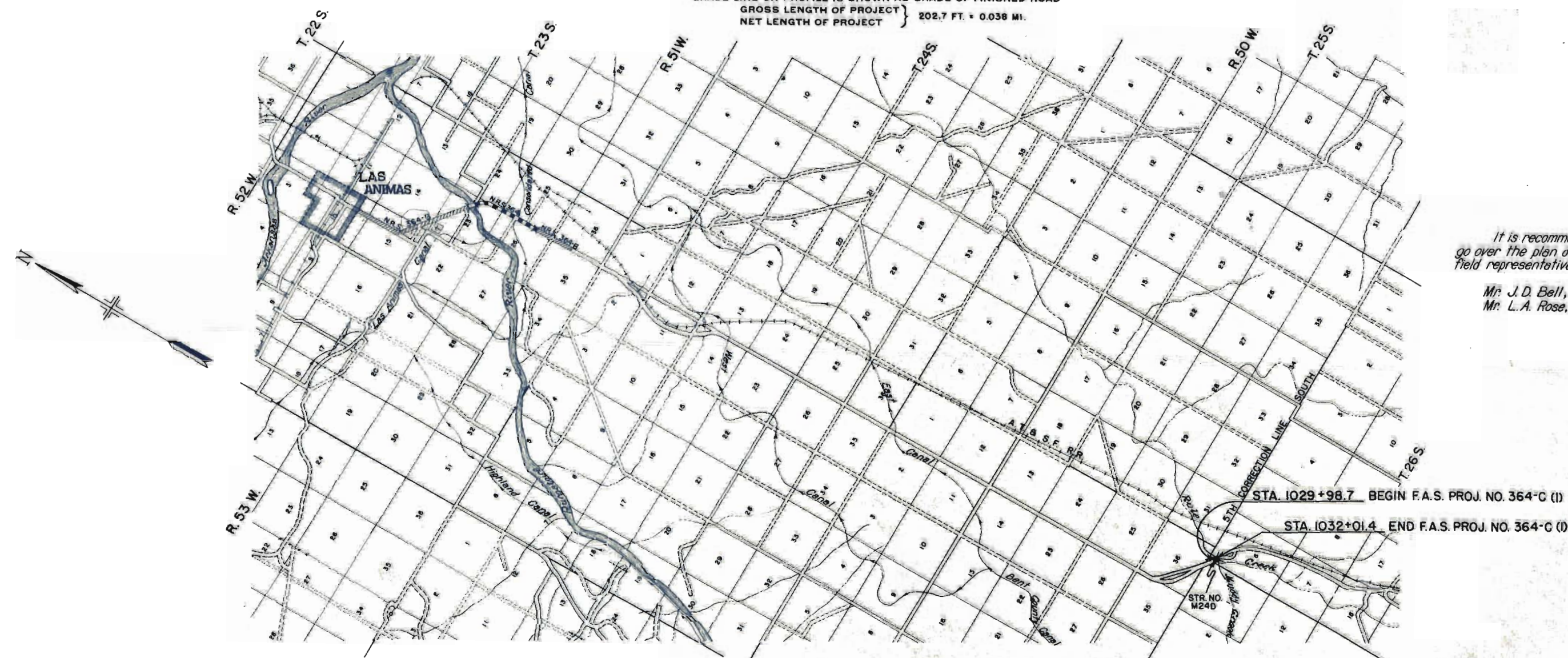
COLORADO STATE HIGHWAY DEPARTMENT

PLAN AND PROFILE OF PROPOSED FEDERAL AID SECONDARY PROJECT NO. F.A.S. 364-C (1) STATE HIGHWAY NO. 101 BENT COUNTY

CONVENTIONAL SIGNS

- CENTER LINE OF SURVEY 
 RIGHT OF WAY LINES 
 TOWNSHIP OR RANGE LINES 
 SECTION LINES 
 ONE-QUARTER SECTION LINES 
 BARBED WIRE FENCE 
 POLE LINES 
 RAILROAD 
 PRESENT ROAD 
 EASEMENT LINE 

SCALES ON ORIGINAL TRACINGS
 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 } 202.7 FT. = 0.038 MI.
 NET LENGTH OF PROJECT }



NOTE

It is recommended that bidders on this project go over the plan details with one of the following field representatives of this department:

Mr. J. D. Bell, Division Engineer, Pueblo, Colo.
 Mr. L. A. Rose, Resident Engineer, Lamar, Colo.

STA. 1029+98.7 BEGIN F.A.S. PROJ. NO. 364-C (1)

STA. 1032+01.4 END F.A.S. PROJ. NO. 364-C (1)

RECOMMENDED FOR APPROVAL

Chas. D. Bell
 ASSISTANT ENGINEER

APPROVED
Chas. D. Bell
 STATE HIGHWAY ENGINEER

RECOMMENDED FOR APPROVAL

DIST. ENG. BUREAU PUBLIC ROADS

RECOMMENDED FOR APPROVAL

CHIEF ENG. BUREAU PUBLIC ROADS

APPROVED

DIRECTOR BUREAU PUBLIC ROADS

SCALE OF MILES

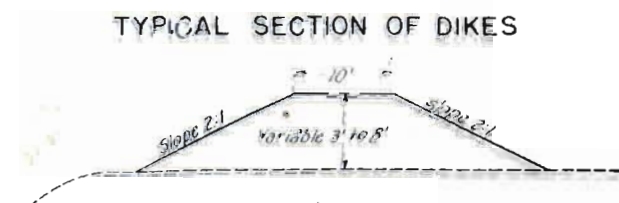
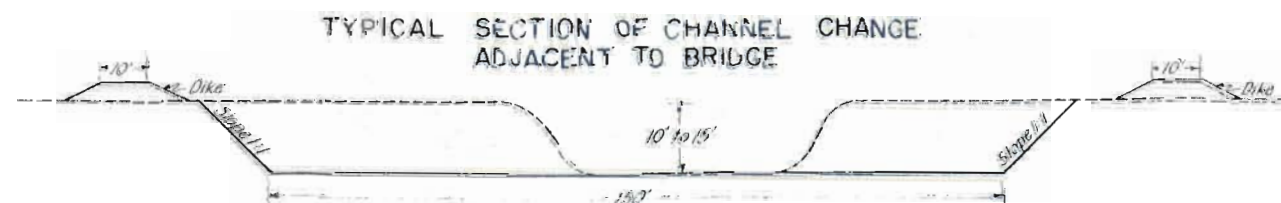
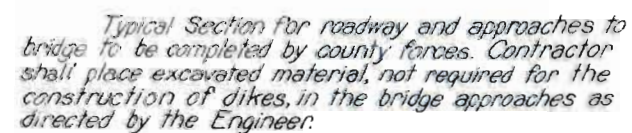


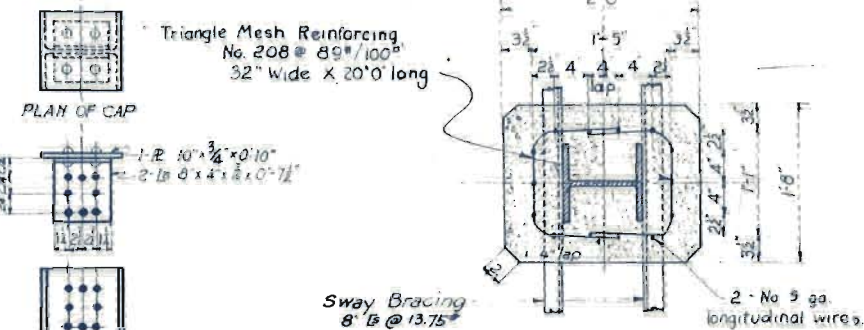
500

SUMMARY OF APPROXIMATE QUANTITIES

During construction of this project, traffic will use the present traveled roadway. At all places on the project where construction encroaches on the present traveled road, traffic must be adequately provided for at the Contractor's expense. Also the contractor shall, at his own expense, construct and maintain in safe condition all temporary approaches to and crossings of intersecting roads.

ITEM NO.	DESCRIPTION	UNIT	BRIDGE STA. 1029+	PROJECT TOTAL
10a	Clearing and Grubbing the Entire Project	Lump Sum	•	•
13c	Unclassified Excavation	Cu Yd	30,500	30,500
14b	Dry Common Excavation (Structural)	Cu Yd	250	250
15b	Wet Common Excavation (Structural)	Cu Yd	250	250
18a	Station Yard Overhaul	Sq Yd	182,000	182,000
18b	Yard Mile Overhaul	Yd Mi.	100	100
42a	Untreated Bridge Timber	M Ft B.M.	0.4	0.4
46a	Class A Concrete	Cu Yd	466	50
46c	Class A Concrete (Handrails)	Cu Yd	20	20
47	Reinforcing Steel	Lb	47,500	188,40
48	Structural Steel	Lb	129,000	129,000
48x	Structural Steel Piles	Lb	135,700	135,700
65	Dry Rubble Slope Paving (18" Thick)	Sq Yd	330	330
80c	Sheet Pile	Lb	467	467
89a	Drain Pipe (Concrete Floor) (3" x 3'-0")	Each	20	20





SECTION - CONCRETE ENCASEMENT
BENT PILING



SECTION A-A

- * To be included in Bid Price of Class "A" Concrete
- * Includes 3800 Lbs for Swaybracing.
- * Includes 2300* wire mesh for bent piling.

ALL WORK SHALL BE DONE ACCORDING TO THE STANDARD SPECIFICATIONS OF THE COLORADO STATE HIGHWAY DEPARTMENT.

ALL CONCRETE SHALL BE CLASS "A."

FORMS FOR CONCRETE SURFACES EXPOSED IN THE FINISHED WORK SHALL BE CONSTRUCTED OF SHIP LAP OR TONGUE AND GROOVE LUMBER S3S UNLESS FACED WITH PLYWOOD BOARD.

CONCRETE GIRDERS, FLOOR SLABS AND CURB SHALL BE POURED MONOLITHICALLY. FOOTINGS IN ROCK SHALL BE POURED OUT TO THE ROCK AND NOT FORMED.

ALL REINFORCING BARS SHALL BE DEFORMED AND TAGGED WITH THE STATION NUMBER AND LETTER DESIGNATION. MAIN BARS SHALL NOT BE SPLICED.

SOUNDINGS AND DEPTH OF FOOTINGS SHOWN ARE ACCORDING TO THE BEST AVAILABLE DATA. IF ESSENTIALLY DIFFERENT CONDITIONS ARE ENCOUNTERED THE BRIDGE ENGINEER WILL INSPECT AND DETERMINE IF CORRECTION IS NECESSARY.

ALL RIVETS TO BE 4 DIA. ALL RIVETS TO BE POWER DRIVEN.

FOR DRIVING ALL PILING THE STATION HAMMER SHALL DEVELOP AT EACH FULL BLOW AN ENERGY OF NOT LESS THAN 15000 FT.-LBS. FOR EACH FULL STROKE OF PISTON. A DROP HAMMER SHALL NOT BE USED. FIXED LEADS ARE REQUIRED. PILING TO BE 0.2% COPPER BEARING STEEL. ALL HOLES IN PILE TO BE DRILLED OR PUNCHED IN FIELD AFTER PILES ARE DRIVEN.

RAIL SHALL BE CONSTRUCTED ACCURATELY TO LINE AND GRADE.

ALL STRUCTURAL STEEL INCLUDING EXPOSED PORTION OF SWAY BRACES SHALL BE GIVEN TWO COATS OF ALUMINUM PAINT IN FIELD. PILING SHOP COAT MAY BE APPLIED IN STRUCTURE NO. M-24-D

Sheet No 4 Details of Superstructure.
Sheet No 5 Details of Abutments Nos 1 & 126.

Max. Pile Load - 28 Tons.

LOADING DATA

LIVE LOAD A. A. S. H. O. 1936 CLASS A. H-161
DEAD LOAD ASSUMES 15 LBS. PER SQ. FT. ADDITIONAL WEARING SURFACE WHICH INCLUDED THE 3/4 INCH CONCRETE MONOLITHIC WEARING SURFACE SHOWN

DESIGNING DATA

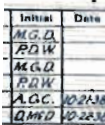
A.A.S.H.O. 1936 EXCEPT CONCRETE UNIT STRESSES
PER A.A.S.H.O. AUG. 1928

COLORADO
STATE HIGHWAY DEPARTMENT
5'-40' CONCRETE & I BEAM SPANS
STEEL PILE BENTS & ABUTMENTS
DETAILS OF BENTS 2 TO 5 INCL.
GEN. LAYOUT & SUMMARY OF QUANTITIES

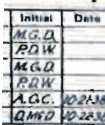
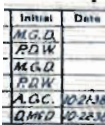
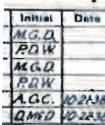
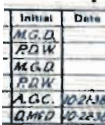
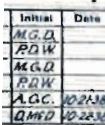
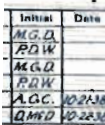
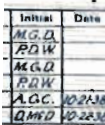
Across Rule Creek
Sta. 1029+98.65 TO 1032+01.35
Near LAS ANIMAS Sec. 6 T.26 S. R. 51 W.

Designed by MGD
Made by A.T.K.
Checked by

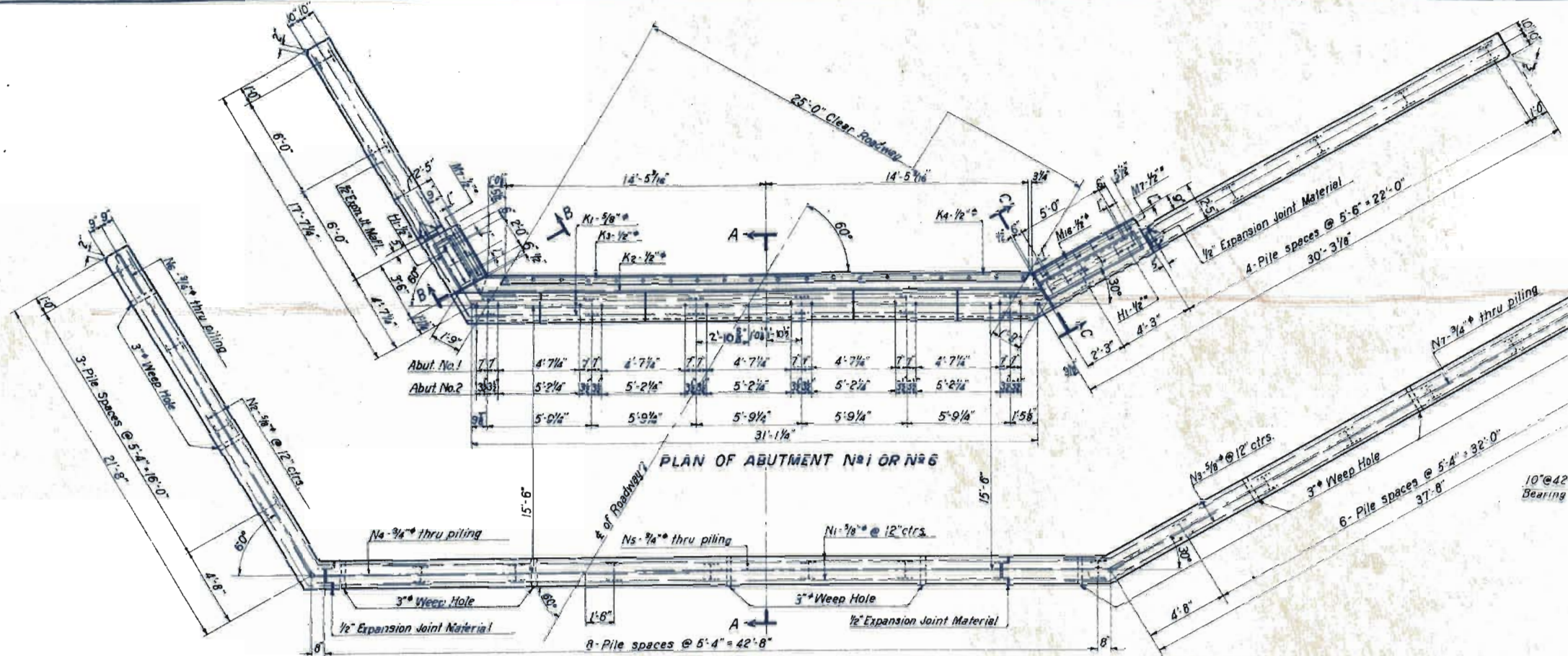
Approved by *P. B. Bailey*
Bridge Engineer
Date: Oct. 25, 1938



Initial	Date
M.G.D.	
P.D.W.	
M.G.D.	
P.D.W.	
A.G.C.	10-21-38
Q.M.F.D.	10-22-38

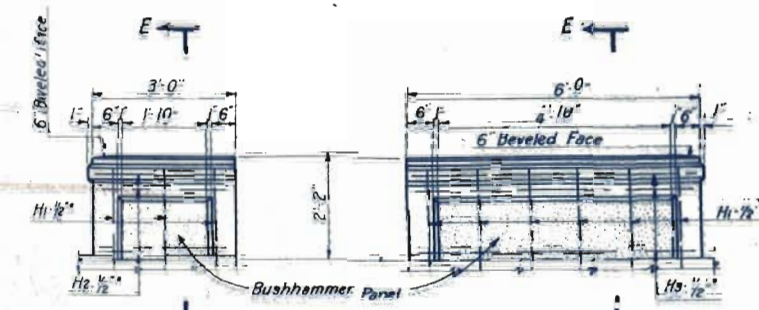


STATE	F.A.S.	SHEET NO.	TOTAL SHEETS
COLO.	364-C(1)	5	5

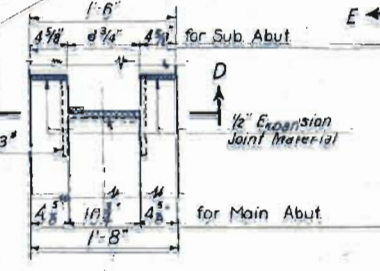


PLAN OF ABUTMENT N°1 OR N°6

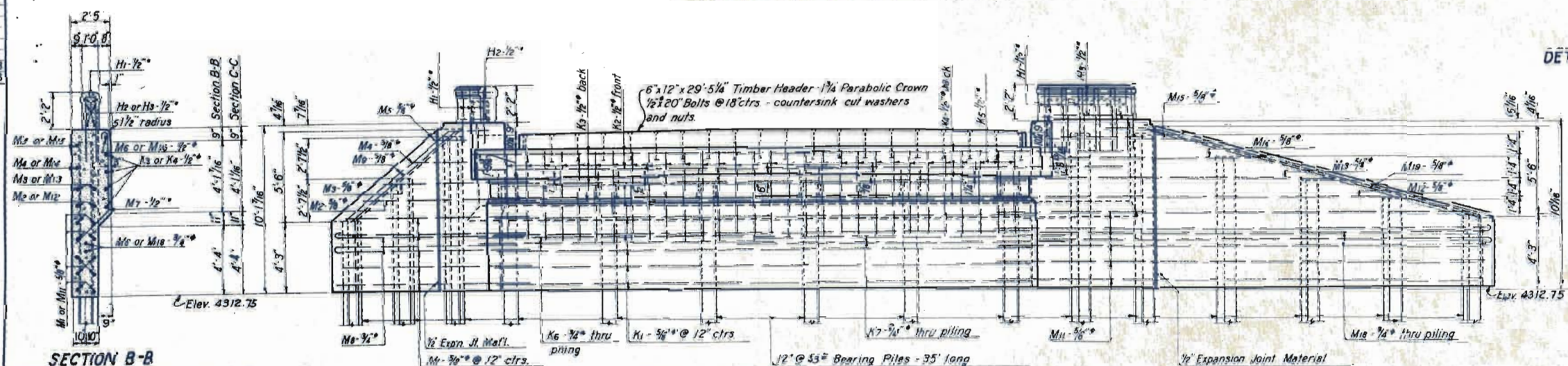
PLAN OF SUB-ABUTMENT N°1 OR N°6



DETAILS OF END POSTS



DETAIL OF EXPANSION JOINTS



ELEVATION OF ABUTMENT N°1 OR N°6

SECTION B-B
OPPOSITE HAND FOR SECTION C-C

BAR LIST FOR ABUTMENT N°1 (DUPLICATE FOR ABUTMENT N°6)																				Bending Diagrams																			
Mark	Size	No. Req'd	Length	Type	ℓ	m	x	r	t	Mark	Size	No. Req'd	Length	Type	ℓ	m	x	r	t	Mark	Size	No. Req'd	Length	Type	ℓ	m	x	r	t										
K1	5/8"	14	31'-3"	Str.						M1	5/8"	2	16'-0"	I	13'-6"	2'-6"	5 1/4"			N1	5/8"	28	40'-0"	I	37'-4"	2'-8"	6 1/4"												
K2	1/2"	2	31'-0"	Str.						M2	5/8"	10	32'-9"	I	29'-9"	3'-0"	6 3/8"			N2	5/8"	2	24'-3"	I	21'-0"	3'-3"	20 1/16"												
K3	1/2"	4	22'-0"	I	18'-9"	3'-3"	20 1/16"			M3	5/8"	2	28'-6"	I	25'-6"	3'-0"	6 3/8"			N3	5/8"	2	29'-6"	I	26'-3"	3'-3"	6 1/16"												
K4	1/2"	4	20'-0"	I	14'-0"	6'-0"	6 3/8"			M4	5/8"	2	24'-6"	I	21'-6"	3'-0"	6 3/8"			N4	5/8"	2	22'-3"	IV	21'-3"			3"	2 1/2"										
K5	1/2"	31	10'-9"	II				2"	2"	M5	5/8"	1	14'-0"	Str.						N5	5/8"	2	38'-3"	IV	37'-3"			3"	2 1/2"										
K6	5/8"	2	20'-0"	I	16'-9"	3'-3"	20 1/16"			M6	5/8"	1	9'-6"	Str.																									
K7	5/8"	2	20'-9"	I	17'-6"	3'-3"	6 3/8"			M7	1/2"	1	6'-0"	Str.																									
										M8	1/4"	2	30'-9"	IV	20'-9"				3"	2 1/2"																			
										M9	5/8"	2	25'-6"	I	23'-0"	2'-6"	2 1/8"																						
M1	5/8"	10	20'-0"	I	17'-0"	3'-0"	20 1/16"			H1	1/2"	9	8'-6"	II																									
M2	5/8"	2	17'-9"	I	14'-9"	3'-0"	20 1/16"			H2	1/2"	6	2'-9"	Str.																									
M3	5/8"	2	15'-6"	I	12'-6"	3'-0"	20 1/16"			H3	1/2"	6	5'-9"	Str.																									
M4	5/8"	1	8'-0"	Str.																																			
M5	5/8"	1	5'-0"	Str.																																			
M6	1/2"	1	3'-0"	Str.																																			
M7	1/2"	9	7'-9"	III				2"	2"	N1	5/8"	28	40'-0"	Str.																									
M8	5/8"	2	18'-0"	IV	17'-0"			3"	2 1/2"	N2	5/8"	28	28'-0"	I	21'-3"	6'-9"	20 1/16"																						

Bar Summary for One Abutment

408	Lin. Ft. of 5/8" Bars	@ 1.502	Lbs. per Ft.	= 613	Lbs.
4,282	" " 5/8" "	@ 1.043	" " "	= 4,466	"
531	" " 1/2" "	@ 0.850	" " "	= 451	"
239	" " 1/2" "	@ 0.668	" " "	= 160	"
		1% for overrun		= 60	"
		Total		= 5,750	"

I

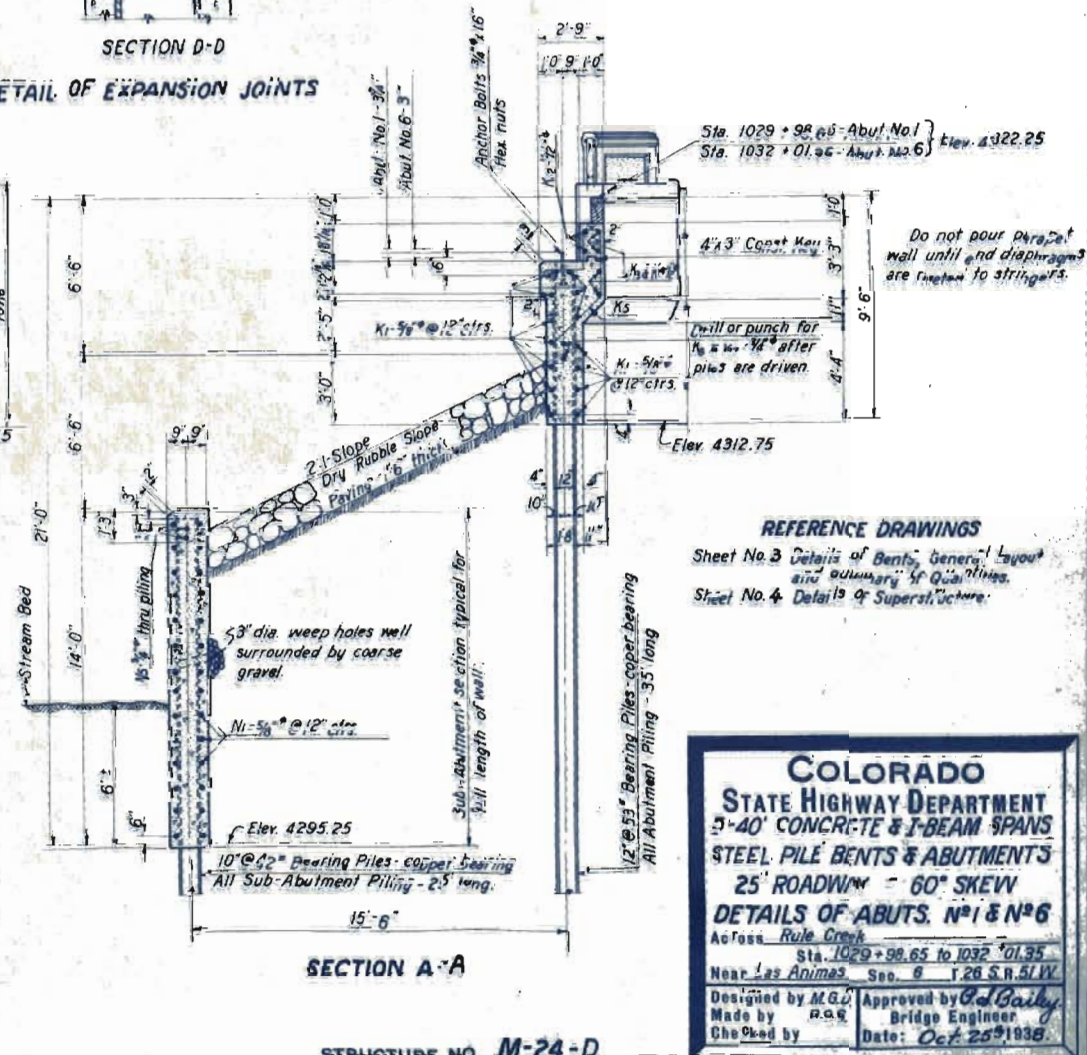
II

III

IV

V

Bar Summary for One Abutment
 408 Lin. Ft. of 5/8" Bars @ 1,502 Lbs. per Ft. = 613 Lbs.
 4,282 " " 1/2" " @ 1,043 " " = 4,466 "
 531 " " 1/2" " @ 0,850 " " = 451 "
 239 " " 1/2" " @ 0,668 " " = 160 "
 1% for overrun = 60 "
 Total = 5,750 "



SECTION A-A

REFERENCE DRAWINGS
 Sheet No. 3 Details of Bents, General Layout
 and Summary of Quantities.
 Sheet No. 4 Details of Superstructure.

COLORADO
 STATE HIGHWAY DEPARTMENT
 5'-40" CONCRETE & I-BEAM SPANS
 STEEL PILE BENTS & ABUTMENTS
 25' ROADWAY - 60° SKEW
 DETAILS OF ABUTS. N°1 & N°6
 Across Rule Creek
 Sta. 1029+98.65 to 1032+01.35
 Near Las Animas, Sec. 8 T.26 S.R.51 W.
 Designed by M.G.D. Approved by C. Bailey
 Made by R.A.G. Bridge Engineer
 Checked by Date: Oct. 25, 1938.



SCALE OF LETTERING

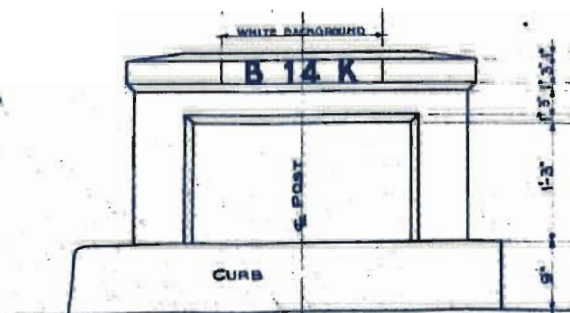
STANDARD M-10-A

FED. ROAD DIST. NO.	STATE	F.R.S. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	364-C(11)	6	

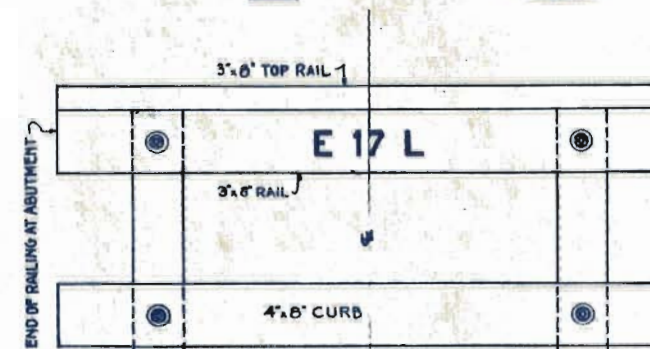
Revised 3-11-1936 A.G.K. Changed to 1935 Specifications.
Revised 6-1-37 A.G.K. Changed to 1937 Specifications.



SAMPLE BRIDGE NUMBER



TYPICAL CONCRETE ENDPOST.



TYPICAL TIMBER WING

GENERAL NOTES

ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS OF THE COLORADO STATE HIGHWAY DEPARTMENT ADOPTED JUNE 1-1937.

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 PARTICULAR BRIDGE.

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

BEFORE STENCILING THE NUMBER ON THE BRIDGE, THE SURFACE MUST BE THOROUGHLY CLEANED. A PROPER WHITE BACKGROUND SHALL BE PAINTED ON CONCRETE SURFACES. ON TIMBER HANDRAILS THE WHITE PAINT USED ON THE BRIDGE WILL BE SATISFACTORY. ON CONCRETE ENDPOSTS THE DRY CONCRETE SURFACE SHALL BE PROPERLY SIZED BEFORE PLACING THE WHITE RECTANGLE, UNLESS AN APPROVED WHITE CONCRETE PAINT IS USED.

TWO COATS OF ACCEPTABLE WHITE PAINT SHALL BE APPLIED TO THE CONCRETE IN A NEAT RECTANGULAR SHAPE AND EXTEND THREE INCHES BEYOND THE LIMITS OF THE STRUCTURE NUMBER.

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 THE PRECEDING COAT TO DRY.

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

COLORADO
STATE HIGHWAY DEPARTMENT
STANDARD STRUCTURE
NUMBER LETTERING.

Designed by G.H.D.
Made by G.H.D.
Check Design
Check Detail
Approved by *Ed Bailey*
Bridge Engineer
Date: Feb. 6, 1935.

FED. ROAD DIST. NO.	STATE	F.R.S. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLG.	304-C (1)	7	

Revised 6-1-57 A.G.K. changed to 1957 Specifications.

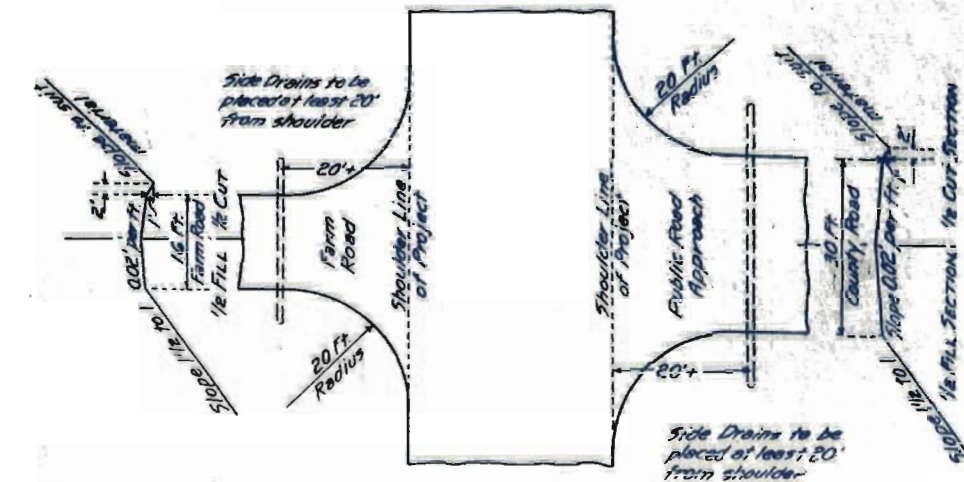
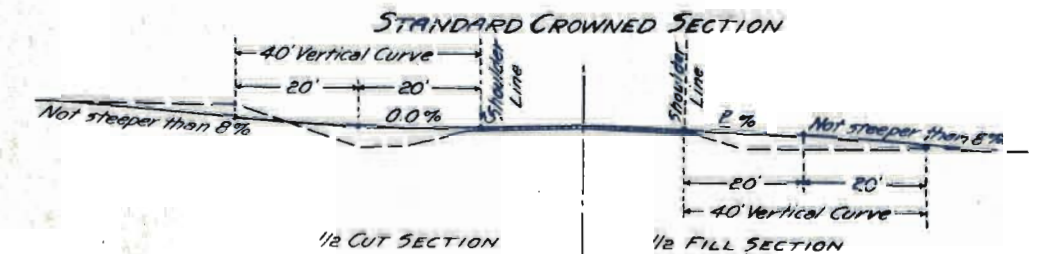


Diagram of a rectangular sign with dimensions and text layout:

- Dimensions:**
 - Overall width: 5'0"
 - Overall height: 3'4"
 - Text area width: 4'0"
 - Text area height: 2'6"
 - Top margin: 8"
 - Left margin: 6"
 - Right margin: 6"
 - Bottom margin: 3"
- Text:**
 - SLOW** (Large, bold, blue letters)
 - ROAD UNDER CONSTRUCTION** (Large, bold, blue letters)
 - CONTRACTOR'S NAME (Smaller, blue letters)

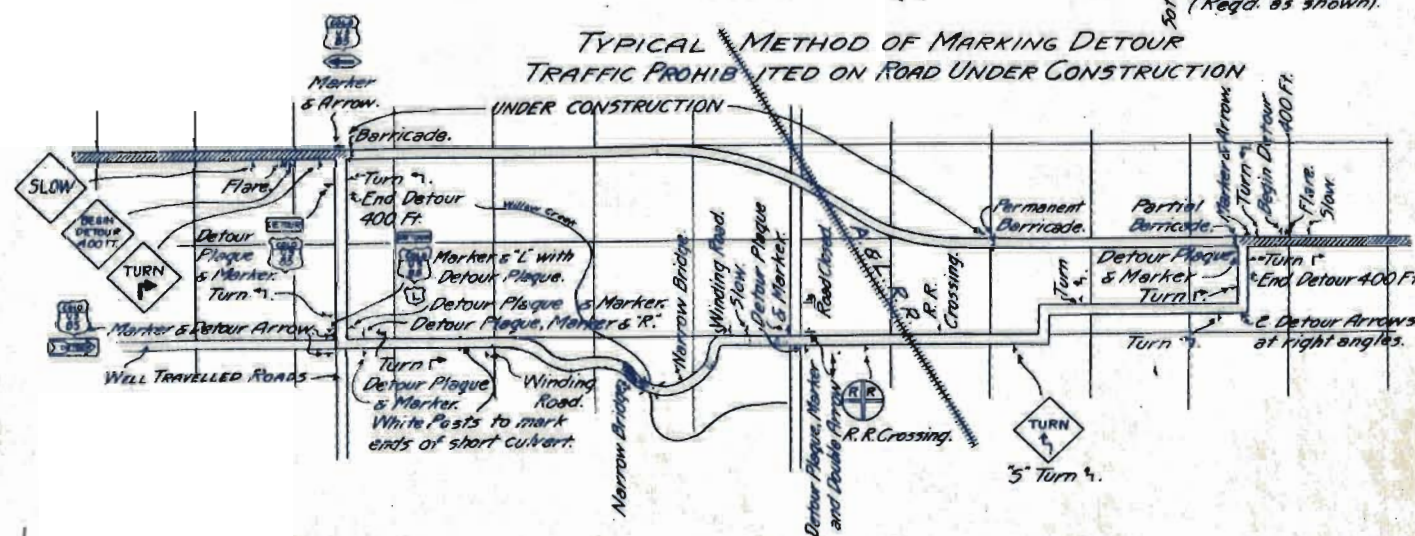
Sign to be made on 1" material with at least three cleats on the back. Background to be white, SLOW and underline to be red, and other lettering to be black. Sign to be set on 2-6"x6" posts 4 ft in the ground.

Contractor shall be required to have at least two such arrows for use on barricades at the ends of each project.
Reflector Buttons shall be of a type and size, and the sign shall be subject to Department approval.

[illegible]

GENERAL NOTES ON APPROACHES
The maximum grades shown are to be the limiting grades for all except extreme cases.
When the length of the approach as determined by the intersection of these grades with the natural ground is such as to damage the Property so served, or cause unreasonable conditions, the grades may be modified.
In such cases, methods used, and maximum grades, shall be as indicated on the plans, or provided by work order.

GENERAL NOTES FOR ROADWAY CONSTRUCTION TRAFFIC SIGNS



All Work shall be done in accordance with the Standard Specifications of the Colorado State Highway Department adopted June 1-1937.

Whenever traffic is permitted on a road while under construction, the Contractor shall at all times adequately and appropriately mark any and all hazards on the Project with well painted, well maintained barricades and standard caution and warning signs. The Contractor shall also mark with standard directional signs any places where the direction of the flow of traffic is not plain.

Whenever traffic is prohibited from a Project under construction, the Detour will be marked by the Department and the barricades at either end of the Project shall be erected and maintained by the Contractor.

All signs and barricades shall be immediately moved, added to, removed, or changed to appropriately mark hazards, or conditions altered, corrected, or changed by construction progress.

The Contractor shall furnish:

- (1) All barricade material. It shall always be well painted, as per sketch, and well maintained.*
- (2) A reflectorized arrow of an approved type for each barricade at the ends of the Project, and at other barricades required where traffic is permitted on road under construction.*
- (3) "SLOW-ROAD UNDER CONSTRUCTION" signs as required.*
- (4) Any special signs the Department may deem necessary for the protection of traffic over the Project.*
- (5) At least three (3) flares or torches for each barricade, and other flares to illuminate such signs as are called for on these plans, or as the Department may direct.*

Flares or torches shall be placed between 3 and 5 feet ahead of the sign or object to be illuminated, and shall be kept burning from sunset to sunrise.

Costs of all of the foregoing materials and work by the Contractor shall be included in the original contract prices for the Project.

The Highway Department will furnish all standard signs not required to be furnished by the Contractor.

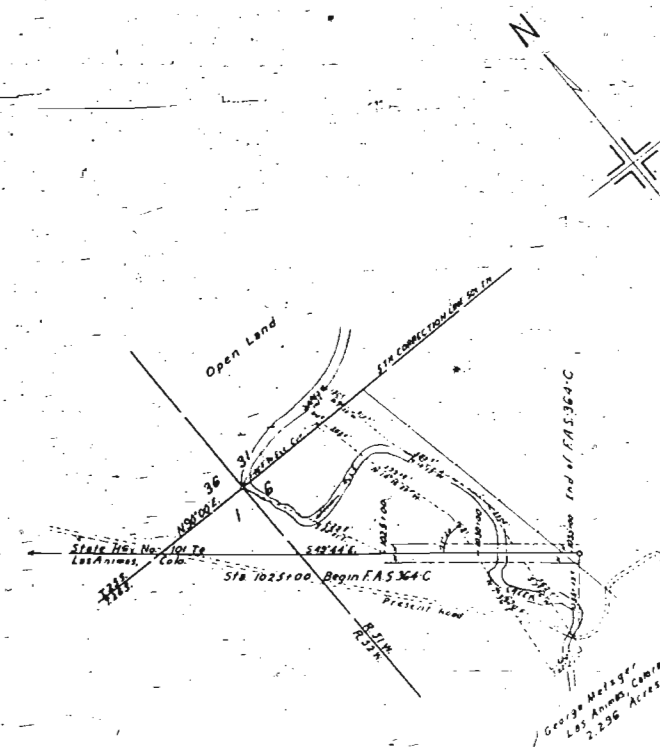
COLORADO
STATE HIGHWAY DEPARTMENT
TYPICAL
SIDE APPROACH ROADS
ROADWAY CONSTRUCTION
TRAFFIC SIGNS

Designed by <i>J.S.M.</i> Made by <i>S.B.C.</i> Check <i>J.S.M.</i> Check <i>K.A.K.</i>	Approved by <i>J.H. Marshall</i> Date: <i>Aug. 20, 1935</i>
--	--

COLORADO
STATE HIGHWAY DEPARTMENT
TYPICAL
SIDE APPROACH ROADS
ROADWAY CONSTRUCTION
TRAFFIC SIGNS

Designed by <i>J.H.M.</i>	Approved by <i>H. Marshall</i>
Made by <i>S.H.C.</i>	
Check <i>J.H.M.</i>	
Check <i>K.A.K.</i>	
Date: <i>Aug. 20, 1935</i>	

REP. DIST. DIST. NO.	STATE	PREC. NO.	INSTR. NO.	TOTAL INSTR.
3	COLORADO	AS964-C	1	1



COLORADO
STATE HIGHWAY DEPARTMENT
RIGHT OF WAY MAP
PROJ. F.A.S. 364-C
BENT COUNTY

State Highway No. 101
Drawn by R.H.M.

[illegible]