COLORADO
Department of Transportation

DOCUMENT SEPARATOR SHEET

REGION 5 – JUNE 2017 CONVERSION

To be placed at the beginning of each separator sheet.

r500001909

Description:
ROW Plans 11X17

Route # and Mile Points:
US 160

Originating Office:

ROW/Survey

File Name:
F 022-2(8)_ROW(.PDF)

Box Location:
30 of 38

For assistance, or to request changes to this form,
please email helpdesk@msimaging.com.

MOUNTAIN STATES IMAGING

COLORADO
DEPARTMENT OF HIGHWAYS

PLAN AND PROFILE OF PROPOSED
FEDERAL AID PROJECT NO. F 022-2(8)
STATE HIGHWAY NO. 10
RIO GRANDE COUNTY

SCALES OF ORIGINAL DRAWINGS

ON PLAN. 1 IN. - 100 FT.
ON PROFILE 1 IN. - 100 FT. HORIZONTAL
1 IN. - 10 FT. VERTICAL

GROSS LENGTH OF PROJECT 44,243.3 FT. = 8.379 MILES
NET LENGTH OF PROJECT 44,016.4 FT. = 8.336 MILES

INDEX OF SHEETS

SHEET NO. 1 SKETCH MAP, TITLE PAGE & TABULATION OF LENGTH & DESIGN DATA
2 TYPICAL SECTIONS, GENERAL NOTES & SUMMARY OF APPROXIMATE QUANTITIES
3 LIST OF STRUCTURES & SKETCH MAP OF PIT
4 SUMMARY OF SOIL PROFILE TESTS, SELECTED BORROW PLAN & SURFACING PLAN
5 STANDARD MARKER POSTS M-7-B
6 STANDARD METHODS FOR SUPERELEVATION & WIDENING OF CURVES M-1-B
7 STANDARD SIDE APPROACH ROADS, FLARING, CUT SLOPE TREATMENT & WIDENING AT BRIDGES & AT CREST OF GRADES M-2-RM
8 STANDARD ROADWAY CONSTRUCTION TRAFFIC SIGNS M-2-RS
9 STANDARD TYPES OF DITCHES & CONSTRUCTION METHODS M-107-C

B-100

CONVENTIONAL SIGNS

CENTER LINE — PLAN SHEET — TITLE & SHEET
RIGHT OF WAY LINE — R.O.W. MARKER
COUNTY LINE
TOWNSHIP OR RANGE LINE
LAND LINES — SECTION LINE — 1/4 SECTION LINE — 1/16 SECTION LINE
RAILROAD — TITLE SHEET
CITY LIMITS

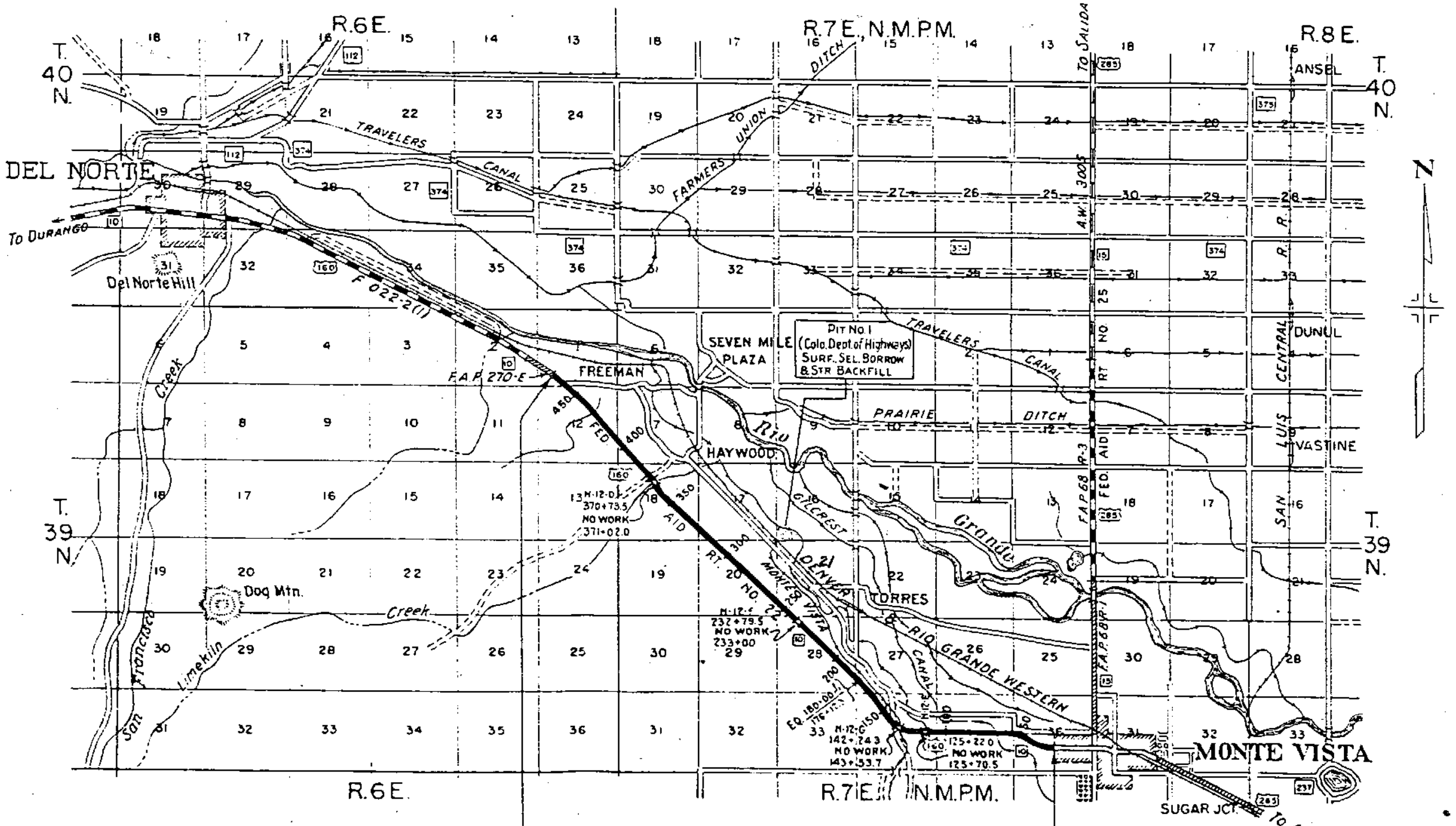
TABULATION OF LENGTH & DESIGN DATA

STATION	DESCRIPTION	ROADWAY LIN. FT.	NO WORK BRIDGES LIN. FT.	LOADING
25+69.0	BEGIN F 022-2(8) = 25+69.0 FAP 270 E			
		9,953.0		
125+22.0 125+70.5	BRIDGE, IRRIG. CANAL		48.5	H-15
		1,653.8		
142+24.3 143+53.7	C.B.C., MONTE VISTA CANAL		129.4	H-15
		3,258.6		
176+12.3 Bk. = 180+00 Ah.	EQUATION			
		5,279.5		
232+79.5 233+00	BRIDGE, WASH		20.5	H-15
		13,773.5		
370+73.5 371+02.0	BRIDGE, LIME KILN CR.		28.5	H-15
		10,098.0		
472+00	END F 022-2(8) = 472+00 FAP 270-E			
TOTALS F 022-2(8)		44,016.4	226.9	

SUMMARY	LIN. FT.	MILES
Net Length F 022-2(8)	44,016.4	8.336
NO WORK SECTIONS	226.9	0.043
GROSS LENGTH F 022-2(8)	44,243.3	8.379

DESIGN DATA

Maximum Degree of Curve	3°00'
Maximum Grade	5.228%
Minimum N.P.S.D. - Horizontal	500'
Minimum N.P.S.D. - Vertical	430'
Maximum Design Speed	50 M.P.H.



STA. 472+00 END F 022-2(8) = 472+00 ON FAP 270-E

25+69.0 BEGIN F 022-2(8) = 25+69.0 BEGIN FAP 270-E

Scale in Miles
0 1 2 3 4

NOTICE TO BIDDERS

IT IS RECOMMENDED THAT BIDDERS ON THIS PRO[JECT GO] OVER THE PLAN DETAILS WITH ONE OF THE FOLLOWI[NG] REPRESENTATIVES OF THIS DEPARTMENT:

J. E. Casey, Construction Engineer, Durango, Colo.
R. B. Dudley, Resident Engineer, Alamosa, Colo.

COLORADO
DEPARTMENT OF HIGHWAYS

APPROVED:
Mark U. Watson 6/9/50
CHIEF ENGINEER DATE

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

RECOMMENDED FOR APPROVAL:

DISTRICT ENGINEER DATE

APPROVED:

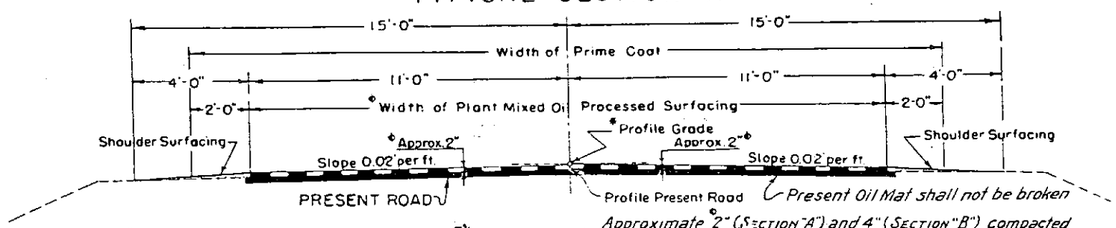
DIVISION ENGINEER DATE

FED. ROAD	STATE		SHEET	TOTAL

FED. ROAD DIV. NO.	DISTRICT	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	F 022-2(8)	2	

TYPICAL CROSS SECTION OF IMPROVEMENT AND SUMMARY OF QUANTITIES

TYPICAL SECTION "A"



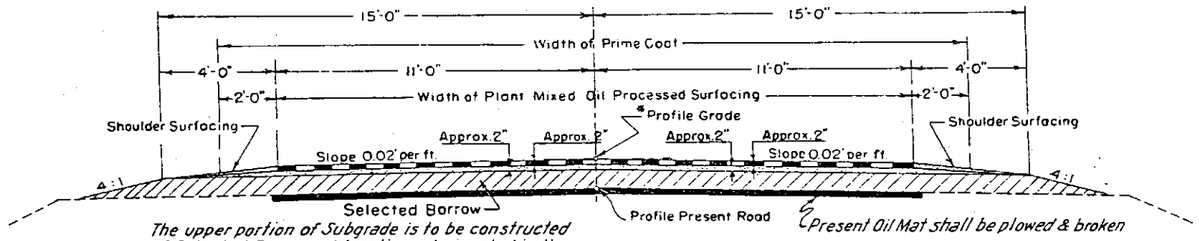
* NOTE:
Profile Grade will be approximately the combined thickness of Selected Borrow and/or Surfacing above profile of present Roadway.

Approximate 2" (SECTION "A") and 4" (SECTION "B") compacted thickness of Gravel or Crushed Rock Surfacing shall be placed in separate courses at the following approximate rates per 100 lin. ft. of Roadway:

	SECTION "A"	SECTION "B"
Plant Mixed Oil Processed Course	* 25 Tons	25 Tons
Bottom Course	0 Tons	29 Tons
Surfacing for Shoulder Areas	5 Tons	5 Tons

* SECOND STORY

TYPICAL SECTION "B"



The upper portion of Subgrade is to be constructed of Selected Borrow at locations designated in the Selected Borrow tabulation. Estimated quantities involved in this operation and thickness of material required are tabulated in the Selected Borrow Plan.

GENERAL NOTES

1. This Project is to be constructed in conformity with the Specifications of the Colorado State Highway Department adopted, January 1, 1948.
2. All quantities on preliminary plans are to be considered approximate only.
3. Payment for Overhaul will be based on measurement along the centerline of the Project.
4. All Curves are to be Superelevated and Widened as provided by the Standard Superelevation Sheet included with the plans, except curves over 6° which shall be provided with the Superelevation for a 6° curve.
5. All Side Approach Roads to the Project shall be Prime Coated to approximately 50 feet out from edge of Oil Mat or to the Right of Way line, whichever is less.
6. For preliminary plan quantities of Asphaltic Road Materials, the following rates of application were used:
   PRIME COAT MC (Prime) { @ 0.10 Gals. per Sq. Yd. (SECTION "A") / @ 0.40 Gals per Sq. Yd. (SECTION "B") }
   PAVING ASPHALT (200-300 Penetration) @ 5.94 lbs. per Sq Yd per inch thickness.
7. Rate of application and Grade of Oil shall be determined by the Engineer at time of application.
8. For Alignment and Profile see Project F AP 270-E.
9. All side Approach Roads to the Project shall receive two (2) inches of Bottom Course Surfacing.

TABULATION OF SEQUENCE FOR TYPICAL SECTIONS

TYPICAL SECTION "A"	TYPICAL SECTION "B"
25+69.0 to 38+00	38+00 to 44+00
44+00 to 57+00	57+00 to 72+00
72+00 to 125+22.0	
125+70.5 to 142+24.3	
143+53.7 to 145+00	145+00 to 176+12.3 Bk.
	180+00 Ah. to 232+79.5
	233+00 to 240+00
240+00 to 272+00	272+00 to 287+00
287+00 to 302+00	302+00 to 314+00
314+00 to 370+73.5	
371+02.0 to 472+00	

SUMMARY OF APPROXIMATE QUANTITIES

ITEM NO.	ITEM	UNIT		PROJECT TOTALS
13d	Unclassified Ditch Excavation	Cu. Yd.		1,000
13x	Selected Borrow	Cu. Yd		11,100
14b	Dry Common Excavation (Str.)	Cu. Yd		30
14d	Wet Common Excavation (Str.)	Cu. Yd		10
16a	Structure Backfill (Class 1)	Cu. Yd		30
16d	Mechanical Tamping	Hour		10
17ax	Rolling with Tamping Roller (2 Unit)	Hour		80
17b	Rolling with Flat Wheeled Roller	Hour		160
17c	Rolling with Rubber Tired Roller	Hour		60
17dx	Furnishing Tamping Roller (2 Unit)	Each		1
17e	Furnishing Flat Wheeled Roller	Each		1
17f	Furnishing Rubber Tired Roller	Each		1
17g	Wetting	M Gal.		610
18a	Station Yard Overhaul	Sta. Yd		123,000
18b	Yard Mile Overhaul	Yd. Mile		33,400
18c	Ton Mile Overhaul	Ton Mile		11,800
26c	Gravel or Crushed Rock Surfacing (Grading C)	Ton		6,800
29e	Asphalt (200-300 Penetration)	Ton		720
30x	Asphaltic Road Material MC (Prime)	Gal.		26,600
32a	Plant Mixed Oil Processed Surfacing	Ton		12,250
53b	18" Corrugated Metal Culvert Pipe	Lin. Ft.		120
	STATE FORCES			
81a	Project Markers	Each		2
	NON-FEDERAL AID			
	Signing & Striping entire Project	Lump Sum		•
	R.R. Advance Warning Signs	Each		2
	R.R. Cross Buck Signs	Each		2
	FORCE ACCOUNT (NON-FED. AID)			
	U.P. R.R. Grade Crossing (Work by Denver & Grande Western R.R. Forces)	Lump Sum		•

FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS

FEDERAL ROAD DIVISION NO.	DISTRICT	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLORADO	F 022-2(8)	3	

LIST OF STRUCTURES

LOCATION	DESCRIPTION	EXCAVATION CU. YDS UNCL.	EXCAVATION CU. YDS EMBANK.	EXCAVATION CU. YDS UNCL DITCH	★ STRUCT. EXCAV. CU.YDS	STRUCTURE BACKFILL CU. YDS CL. I		MECH. TAMPING HOUR	SURFACING TONS		CORR. METAL CULVERT PIPE LIN. FT. 18"		MISCELLANEOUS
25+69.0	Approach to Project; Project Marker.								5				
26+50.0	Road Approach, Rt.		60						9				Project Marker (State Forces)
30+00	Road Approach, Rt.		60						9				
53+25	Road Approach, Rt.								9				
67+30	Road Approach, Lt.		30						9				
68+00	Road Approach, Rt.		30						9				
94+00	Road Approach, Rt. & Lt.								18				
113+50	Road Approach, Rt. & Lt.								18				
137+00	Road Approach, Rt.		30						9				
138+00	Road Approach, Lt.		200						10				
140+00	Road Approach, Rt.		300						36				
145+25	Road Approach, Rt. & Lt.								18				
153+00	Road Approach, Rt.		60						9				
154+00	Side Drain & Road Approach, Lt.		60		5	6			9		24		
157+00	Road Approach, Rt.		30						9				
160+10	Road Approach, Rt.		60						9				
171+80	Road Approach, Lt.		60						9				
187+00	Road Approach, Lt.		60						20				
193+80	Side Drain & Road Approach, Rt.		60		5	6			20		24		
193+ to 204+	Drain Ditch, Lt.			500									
195+00	Side Drain & Road Approach, Lt.		60		5	6			20		24		
214+ to 219+	Drain Ditch, Lt.			500									
216+00	Side Drain, Lt. & Road Approach, Lt. & Rt.				5	6			40		24		
238+00	Side Drain & Road Approach, Lt.		60		5	6			20		24		
282+15	Road Approach, Lt. & Rt.								40				
347+75	Road Approach, Rt.		60						20				
373+00	Road Approach, Lt. & Rt.								40				
382+00	Road Approach, Rt.		60						20				
384+00	Road Approach, Lt.								20				
400+50	Road Approach, Lt. & Rt.								40				
448+00	Road Approach, Lt.								20				
472+00	Approach to Project; Project Marker								5				Project Marker (State Forces)
Entire Project	Mechanical Tamping												
Entire Project	Overhaul for Structure Backfill							3					63 Yd Miles; 330 Sta. Yds.
TOTALS			1.340	1.000	25	30		3	529		120		

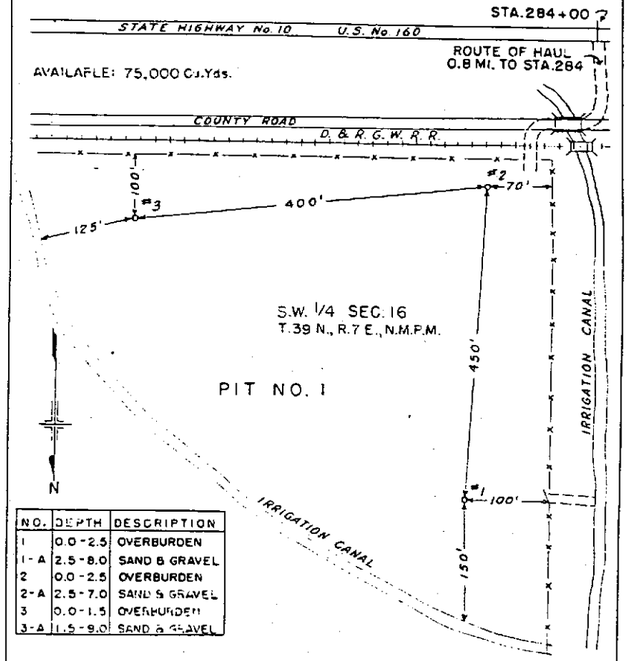
* Selected Borrow

★ Structural Excavation is estimated to be 100% Common and 0.0% Rock, which is estimated to be 90% Dry and 10% Wet.

SELECTED BORROW & SURFACING PIT NO. 1

Owner - Colo. Dept. Of Highways

SAMPLE NO. 998



NO.	DEPTH	DESCRIPTION
1	0.0 - 2.5	OVERBURDEN
1 - A	2.5 - 8.0	SAND & GRAVEL
2	0.0 - 2.5	OVERBURDEN
2 - A	2.5 - 7.0	SAND & GRAVEL
3	0.0 - 1.5	OVERBURDEN
3 - A	1.5 - 9.0	SAND & GRAVEL