

STATE DEPARTMENT OF HIGHWAYS
DIVISION OF HIGHWAYS—STATE OF COLORADO

PE. & ROW. Under RF 034-2(1)

FEDERAL ROAD REGION NO	DIVISION	PROJECT NO	SHEET NO
VIII	COLORADO	TQFC034-2 (4)	I
AS CONSTRUCTED			
NO REVISIONS			

INDEX OF SHEETS

"M" STANDARDS	
M-100-A	STANDARD SYMBOLS
M-203-B	APPROACH ROADS, FLARING, CUT SLOPE TREATMENT, BRIDGE AND CREST WIDENING
M-203-C	DITCH TYPES
M-203-SD	SUPERELEVATION OF CURVES - DIVIDED HIGHWAYS
M-206-AB	EXCAVATION AND BACKFILL FOR STRUCTURES (3 SHEETS)
M-601-BCI	SINGLE CONCRETE BOX CULVERT
M-601-L	HEADWALL, INTERCEPTING HEADWALL AND CULVERT OUTLET PAVING
M-601-W	WINGWALLS FOR PIPE OR BOX CULVERTS
M-603-CA	CONCRETE AND METAL END SECTIONS
M-603-WA	METAL CULVERT PIPE - H-20 LOADING
M-603-RC	REINFORCED CONCRETE PIPE
M-604-BA	INLET, TYPE C
M-604-D	STEPS FOR MANHOLES AND INLETS
M-607-A	WIRE FENCE AND GATES (2 SHEETS)
M-609-A	CURBS AND GUTTERS
M-614-TB	TRAFFIC SIGNING FOR HIGHWAY CONSTRUCTION (3 SHEETS)
M-615-A	EMBANKMENT PROTECTOR TYPE S (2 SHEETS)
M-616-B	CSP SIPHON

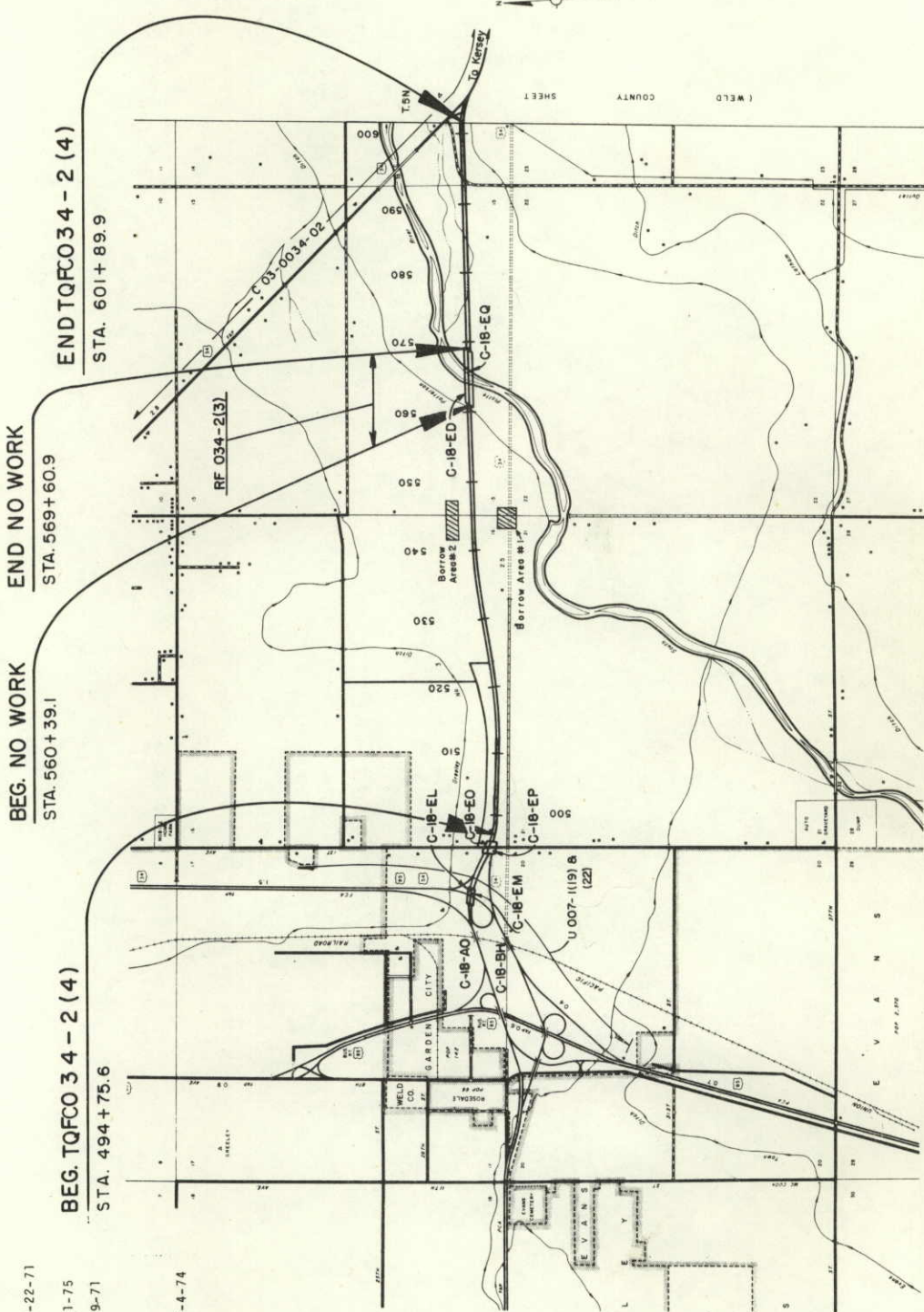
"S" STANDARDS	
S-614-52A	BARRICADES, DRUMS AND VERTICAL PANEL CHANNELIZING DEVICES

PLAN AND PROFILE OF PROPOSED
FEDERAL AID PROJECT NO. TQFC034-2(4)
STATE HIGHWAY NO. 34
WELD COUNTY

SCALES OF ORIGINAL DRAWINGS

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



TABULATION OF LENGTH & DESIGN DATA

STATION	LIN. FT.	
	No Work	Roadway
494+75.6 Begin TQFC034-2(4)		
560+39.1 Begin No Work Section		
569+60.9 End No Work Section		
601+89.9 End TQFC034-2(4)		
TOTALS	921.8	6563.5
SUMMARY		
TQFC034-2(4) Net Length	Lin. Ft.	Miles
No Work Section	9792.5	1.855
TQFC034-2(4) Gross Length	921.8	0.174
	10714.3	2.029
DESIGN DATA		
Maximum Degree of Curve	1° 00'	
Maximum Grade	3.00%	
Minimum S.S.D. Horizontal	> 900'	
Minimum S.S.D. Vertical	835'	
Maximum Design Speed	70 MPH	
1996 Design Traffic Volume	{ ADT 12,100 DDHV 1330	

REVISED SHEETS
1-11, 13, 15-17, 21-28

AS CONSTRUCTED PLANS
RETURN TO DIST. 4 DESIGN

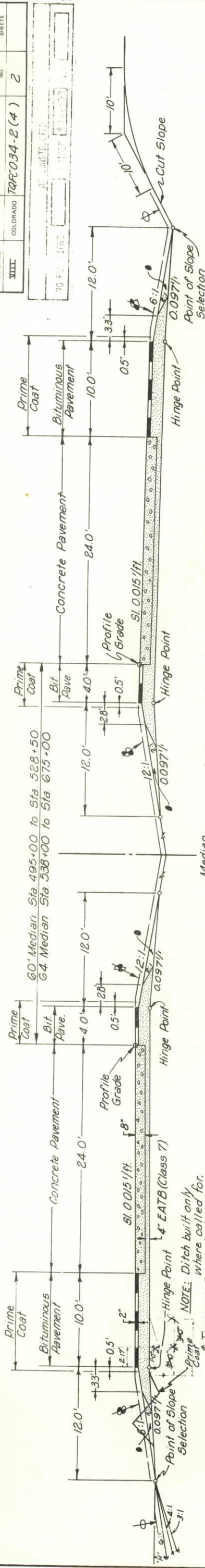
DIVISION OF HIGHWAYS	
APPROVED	DATE
A gnm Cox 8/16/76	
ASST. CHIEF ENGINEER	
DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION	
APPROVED	DATE
DIVISION ADMINISTRATOR	

AS CONSTRUCTED INFORMATION	
CONTRACTOR	MEYER & HARRISON, INC.
DESIGNER - ENGINEER	E. G. FARRAR
(Project re-estimated)	E. G. FARRAR
PROJECT STARTED	October 11, 1976
PROJECT COMPLETED	September 1, 1977
AS CONSTRUCTED PLANS APPROVED	DATE
DATE	8/16/77
TITLE	PC

SCALE OF MILES

Note: All surfacing except Frontage Road, to be Future Construction.

FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
XIII	COLORADO	TQFC034-2(4)	2	



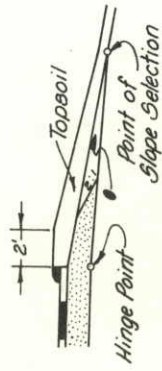
NOTE: Ditch built only where called for. & Temporary Erosion Control Ditch.

See Standards for details of cut slope treatment, flaring and widening.

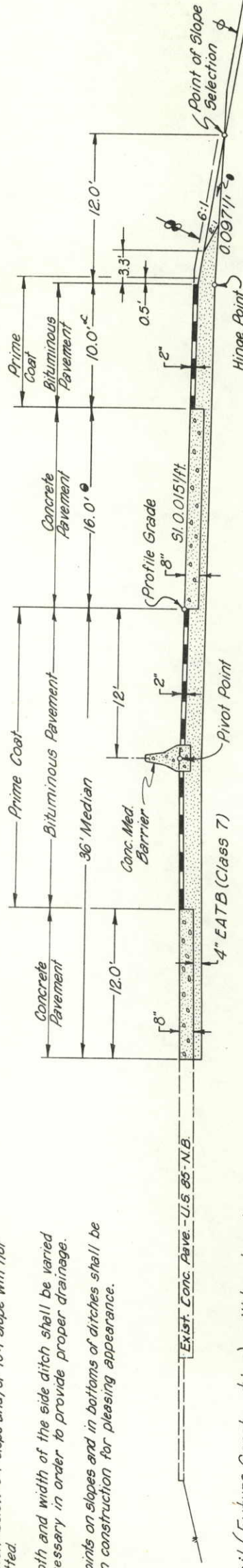
Excavation below 8:1 slope and/or 10:1 slope will not be permitted.

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 on construction for pleasing appearance.



TYPICAL BITUMINOUS CURB PLACEMENT



Exist. Conc. Pav. - U.S. 85 - N.B.

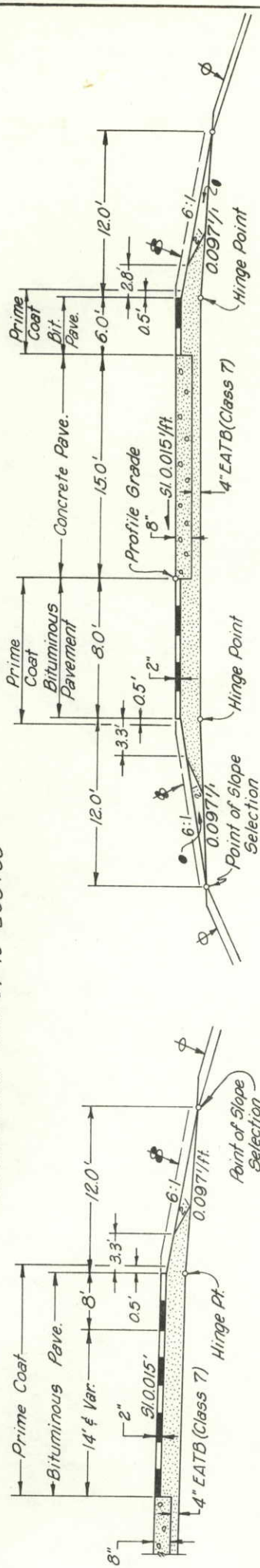
Topsoil, (Future Construction) will be placed to the line shown.

Topsoil, this construction, will be placed to the line shown.

All thicknesses of Base Course and Surface Course shown on plans are approximate.

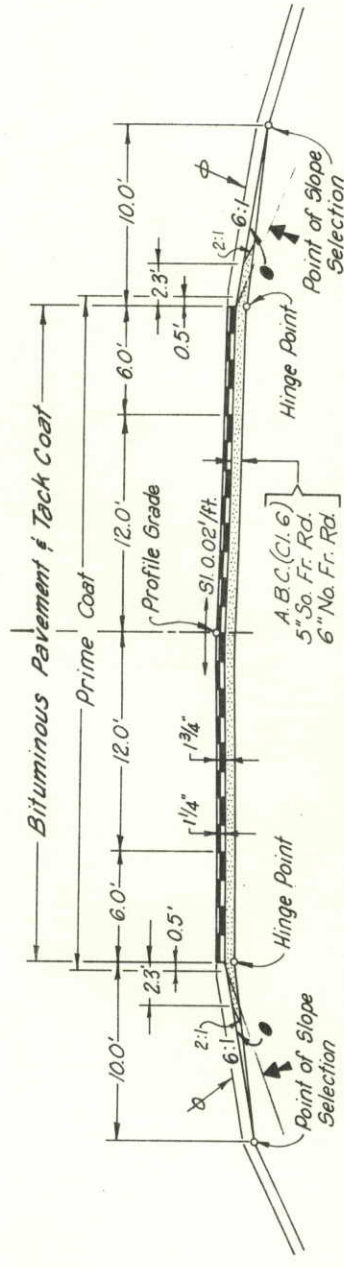
Fill Slopes:
Slope 6:1 where "H" is 10' or less.
Slope 4:1 where "H" is 10' to 25'.
Slope 3:1 where "H" is over 25'.

During multilayer bituminous pavement construction, any layer that is to have a succeeding layer placed thereon shall be completed full width before succeeding layer is placed.



ACCEL. & DECEL. LANES

RAMP



FRONTAGE ROAD

Slope to suit on South Frontage Road.

(R-1) 9-3-76 Rev. or Added Gen. Notes M.E.V.

FEDERAL ROAD DISTRICT NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	TOP-034-2(4)	3	

AS CONSTRUCTED

NO REVISIONS

REVISED 8 Sept 77

VOID

NOTE: Reference to Surfacing and Asphalt, except Frontage Road, to be future construction.

GENERAL NOTES:

For Preliminary Plan Quantities Of Bituminous Materials And Cover Coat Material. The Following Rates Of Application Were Used:
Prime Coat MC-70 @ 0.30 Gals. Per Sq. Yd.
Pack Coat CSS-1 @ 0.10 Gals. Per Sq. Yd.
For Seal CSS-1 @ 0.10 Gals. Per Sq. Yd. For Asphalt Shoulder:
Hot Bituminous Pavement @ 110 Lbs. Per Sq. Yd. Per 1" Thickness
Rates Of Application Shall Be As Determined By The Engineer At The Time Of Application.
Plain Water Shall Be Used As A Dust Palliative Where Required. Locations Shall Be As Ordered.
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 And A Short Ski Or Shoe. (R-1)
Shall Be Furnished With Each Bituminous Pave.
Road Approaches Which Require Bituminous Pavement Shall Be Primed And A 2" Thickness Of Pavement Placed As Follows:
Public Approaches And Entrances To Buildings Or Residences Shall Be Paved 50 Ft. Out From Edge Of Shoulder Or To The Right Of Way Line Whichever Is Less. Field Entrances Shall Be Paved 4 Ft. Out From Edge Of Shoulder.

The Force Account Item "Clearing Of Building Sites, Etc." Shall Include Removal Of All Foundations, Wells, Buildings And Other Appurtenances Not Removed By The Owner. And Any Necessary Backfilling Of Cellars, Bases, Pools, Wells, Etc., To Provide Neat Roadside Conditions. It Is Estimated That This Applies At The Following Locations:
Station 515+50± Lt.
Station 521+00± Lt.
Station 803+50± Lt.

Depth Of Moisture-Density Control For This Project Shall Be As Follows:

Bases Of Cuts 1/2 Foot
Bases Of Fills 1/2 Foot

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.
The Minimum Thickness Of Topsoil Shall Be 6 Inches. Estimated quantity 36,476 Cu. Yd.

Earth Slopes Shall Be Discarded Or Roughened By Other Approved Methods For Mulching Or Erosion Protection. "Seeding, Fertilizing With Commercial Fertilizer" And Mulching Will Be Required On Newly-Constructed Slopes. For Seeding, The Following Shall Be Used:

Common Name	Botanical Name	Percent Purity	Percent Germination	Rate PLS/Acre
Smooth Brome	Bromus Inermis	85	80	6
Orchard Grass	Dactylis Glomerata	90	85	6
Western Wheatgrass	Agropyron Smithii	90	85	6
Crested Wheatgrass	Agropyron Cristatum	90	85	6
Alfalfa Rhizoma Strain	Medicago Sativa "Rhizoma"	95	90	4.25
TOTAL SEEDING		44	45	30.5 Lbs./Acre

For Mulching, 4.25 Tons per Acre Native Hay will be required for this project.
Mulching and Seeding Operations. Seed to be drilled.
Guard Posts, Signs and Indicators Will Be Removed By State Forces.
It is estimated that 1600 Hours Of Flagging For Controlling Traffic Will Be Required For This Project.
Concrete Pipe Joint Fasteners As Shown On M Standard Are Required On:
All Concrete Culvert Installations Excluding Side Drains.
Flexible Conduits On This Project With Helical Corrugations, Joined By Dimpled Connecting Bands, Shall Use A Sealing Compound Or Gasket With The Connecting Band.

* COMMERCIAL FERTILIZER

AVAILABLE NITROGEN (18-0-0) (0-45-0)	PERCENT AVAILABLE NITROGEN	LBS/ACRE AVAILABLE NITROGEN	LBS/ACRE AVAILABLE SUPERPHOSPHATE	RATE LBS/ACRE
18	50	100	278	
45			222	
TOTAL LBS/ACRE FERTILIZER				500

It is estimated that old road is hereby obliterated at the following locations:
595 + to 605 + Lt., 512 + to 521 + Rt. (R-1)
Reset mailboxes along S. Frontage road - Est. 2. (R-1)

All removed fence and guardrail materials to be stockpiled for salvage by state forces. (R-1)

FINAL SUMMARY OF EARTHWORK QUANTITIES

INDEX	BOOK	PAGE	SHEET
Electronic Computer			
REINVENT			
13	50-51		

UNCLASSIFIED EXCAVATION
ROADWAY FROM CROSS SECTION & ELECTRONIC COMPUTER
STRUCTURE QUANTITIES AS EMBANKMENT
EXCAVATION FOR TOPSOIL

CU. YD. 9100
35,152
5474
18,350
60,567
5,265
35,674

TOTAL
BORROW
FOR ROADWAY EMBANKMENT
FOR REPLACING TOPSOIL
FOR INTERCHANGE GRADING
FOR TOPSOIL

CU. YD. 68,076
102,857
23,885
15,000
21,128
1,082,840
101,506
969,752
22,536
24,674
18,117
1,056,252

COMPACTION (AASHTO T180)
(MOISTURE & DENSITY CONTROL)
EMBANKMENT (NET) (919,953 - 24,674)
BASE OF CUTS & FILLS
STRUCTURE QUANTITIES AS EMBANKMENT (NET)
EMBANKMENT TO REPLACE TOPSOIL

CU. YD. 793,813
64,511
27,040
18,350
895,598
64,511
27,040
18,350
995,783

TOTAL
HAUL (25,860) - 10,439
EST. FOR STRUCTURE QUANTITIES & REPLACING TOPSOIL
FROM MASS DIAGRAM

CU. YD. 903,714
102,857
123,197
793,813
103,197

ROADWAY QUANTITIES BALANCE
(FOR INFORMATION ONLY)

CU. YD. 1,056,252
1,056,252

Approximately 30,000 Cu. Yd. will be available from the grading
area Lt. of 670 + to 694 + for this item.
* To be placed and graded as directed between ramps of existing interchange
at beginning of project.

SUMMARY OF ^{FINAL} APPROXIMATE QUANTITIES

	AS CONSTRUCTED				
NO REVISIONS		REVISED	8 Sept 77	VOID	
FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS	
VIII	COLORADO	TPC 034-2(4)	5		

[illegible]

FINAL STRUCTURE QUANTITIES

NO REVISIONS		AS CONSTRUCTED	
REVISED 8 SEPT 77		VOID	
FEDERAL ROAD REGION NO.	DIVISION	PROJECT NO.	SHEET NO.
VIII	COLORADO	TQFC 034-2(4)	7

BOOK	PAGE	INDEX	LOCATION	UNCLASSIFIED EXCAVATION		STRUCTURE EXCAVATION		STRUCTURE BACKFILL		REMOVAL OF STRUCTURE	AGGREGATE BASE COURSE SURFACING (CLASS 5)	HOT BITUMINOUS PAVEMENT (GRADING EX)	RIPRAP	CONCRETE		REINFORCING STEEL	REINFORCED CONCRETE SLOPE AND DITCH PAVING		CULVERT PIPE LINEAR FEET			PLUG CULVERT	"H" OVER CULV	CONCRETE SLOPE AND DITCH PAVING		REINFORCED CONCRETE END SECTION		MISCELLANEOUS	
				EXCAV.	EMB.	CUBIC YARD	DITCH	CUBIC YARD	FINEL	CL 2	FINEL	TON	TON	CL. A	CL. A	LB.	CU. YD.	CU. YD.	12"	18"	24"	30"	Eq.	FT	CUBIC YARD	18"	24"	EACH	
			No. Frontage Rd.																										
11	8	9	10 +	25		24		25				* 30								90									
11	10	50	20 + 75	11		6		7				* 7								24									
11	11	391	26 + 55	13		12		13				* 7								30									
11	13	392	36 + 50	14		15		16				* 10								40									
11	15	393	36 + 75	17		19		20				* 2								66									
11	17	390	39 + 85	20		30		33												84									
11	12	390	27 + 50	205		3		2																					
11	19	394	10 + 14 +	10		12		11												10									
11	20	394	32 + 00 25	180		29		25												70									
11	22	395	36 +	400		7		6												34									
11	24	328	39 +			14		13												70									
11	26		40 + 00 DELETED																										
			Mainline																										
10	8	397	249 + 90 1" to 497 + 00																										
10	9	397	494 + 75 to 506 + 00																										
10	10	57	494 + 80 DELETED																										
10	12	398	497 + 00																										
10	13	397	497 + 00 to 508 + 00																										
10	14	399	506 + 00																										
10	16-17	400	508 + 00																										
10	18	397	508 + 00 to 516 + 00																										
10	19	401	515 + 87																										
10	21	53	516 + 00																										
10	23-24	402	521 + 40																										
			532 + 50 to 544 + 00																										
10	25	397	544 + 00																										
10	26	403	534 + 00																										
10	28	397	538 + 50 to 544 + 00																										
10	29	404	544 + 00																										
10	31	397	544 + 00 to 549 + 00																										
10	32	397	548 + 00																										
10	23	405	548 + 00																										
10	35	397	549 + 00 to 559 + 50																										
10	36		555 + 40																										
10	38	406	556 + 00																										

* Included in Roadway Quantities

* Included in Surfacing Quantities

1 ea. Inlet (Special)(H=5)(Actual H=3'-0")
1 ea. Inlet (Special)(H=5)(Actual H=3'-0")
1 ea. Inlet Type C (H=5)(Actual H=3'-0")
1 ea. Inlet (Special)(H=5)(Actual H=3'-0")
432 Lin. Ft. Concrete Lined Ditch
202 L.F. 18" Bituminous Coated Steel Siphon Pipe
1 ea. 6" Valve & Valve Box
500 L.F. 6" Non-Perforated C.S.P.
2 ea. 18" Trash Guard
1 ea. Inlet Type C (H=5)(Actual H=3'-6")
2 ea. Inlet (Special)(H=5)(Actual H=3'-6")
1 ea. Inlet Type C (H=5)(Actual H=3'-0")
1 ea. Inlet (Special)(H=5)(Actual H=3'-0")

FINAL STRUCTURE QUANTITIES

NO REVISIONS ☐ AS CONSTRUCTED ☐ REVISED ☒ 8 SEP 77 VOID ☐

FEDERAL ROAD REGION NO. VIII DIVISION COLORADO PROJECT NO. TQFC 034-2(4) SHEET NO. 8

INDEX		LOCATION	UNCLASSIFIED EXCAVATION		STRUCTURE EXCAVATION		STRUCTURE BACKFILL		REMOVAL OF STRUCTURE	AGGREGATE BASE COURSE SURFACING (CLASS B) (GRADING EX)	HOT BITUMINOUS PAVEMENT (TON)	RIPRAP	CONCRETE		REINFORCING STEEL	REINFORCED CONCRETE SLOPE AND DITCH PAVING		CULVERT PIPE			PLUG CULVERT	CONCRETE SLOPE AND DITCH PAVING		REINFORCED CONCRETE END SECTION		MISCELLANEOUS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
BOOK	PAGE		EXCAV.	EMB.	CUBIC YARD	DITCH	CUBIC YARD	CL 2					CL A	CL B		CU. YD.	CU. A	CU. B	CU. YD.	CU. YD.		12"	18"	24"	30"		EA.	FT.	CUBIC YARD	18"	24"	EACH																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																

⊕ Included in Roadway Quantities
* Included in Surfacing Plan
Δ To be salvaged by Maintenance Forces

FINAL STRUCTURE QUANTITIES

NO REVISIONS

AS CONSTRUCTED

REVISED 8 SEP 77

VOID

FEDERAL ROAD
REGION NO.

DIVISION

COLORADO

PROJECT NO.

7QFC 034-2(4)

SHEET
NO.

9

INDEX	BOOK	PAGE	LOCATION	UNCLASSIFIED EXCAVATION		STRUCTURE EXCAVATION		STRUCTURE BACKFILL		REMOVAL OF STRUCTURE	AGGREGATE BASE SURFACING (CLASS 5.1) (GRADING EX)		HOT BITUMINOUS PAVEMENT	RIPRAP	CONCRETE REINFORCING STEEL		REINFORCED CONCRETE SLOPE AND DITCH PAVING		CULVERT PIPE LINEAR FEET			PLUG CULVERT	"H" OVER CULV	CONCRETE SLOPE AND DITCH PAVING		REINFORCED CONCRETE END SECTION		MISCELLANEOUS		
				EXCAV.	EMB.	CUBIC YARD	DITCH	CL. 2	CUBIC YARD	EACH	TON	TON		CU. YD.	CL. A	CL. A	LB.	CU. YD.	12"	18"	24"	30"	E.O.	FT.	CUBIC YARD	18"	24"			
			Ramp "E" (cont)																											
12	33	419	249+00			4	8							+	1.3				56	50			3						Tea. Inlet (Special) (H=5')(Actual H=3'-0")	
12	35	397	249+00 to 254+00																										Tea. Inlet (Special) (H=5')(Actual H=3'-0")	
12	37	420	254+00			10													80	82			3						Tea. Inlet (Special) (H=5')(Actual H=3'-0")	
12	39	397	254+00 to 261+37																										Tea. Inlet (Special) (H=5')(Actual H=3'-0")	
12	41	421	261+ to 263+			2												52	87.53										Tea. Inlet (Special) (H=5')(Actual H=3'-0")	
12	43	397	263+90 to 266+00			4	48	8	10					+	1.3			1.1		46	54			1					Tea. Inlet (Special) (H=5')(Actual H=3'-0")	
12	46	422	261+60			79	8	36	8					+	1.3			1.1		220	45			5					Tea. Inlet (Special) (H=5')(Actual H=3'-0")	
12	48	365	263+			26	35	6						+	1.3			44		220	45			1					Tea. Inlet (Special) (H=5')(Actual H=3'-0")	
12	50	423	266+00			2																							Tea. Inlet (Special) (H=5')(Actual H=3'-0")	
12	52	424	268+																										Tea. Inlet (Special) (H=5')(Actual H=3'-0")	
12	54	425	268+ to 270+																										Tea. Inlet (Special) (H=5')(Actual H=3'-0")	
			Ramp "I"																											Tea. Inlet (Special) (H=5')(Actual H=3'-0")
12	55	426	241+50			10	11							1					30	32			3						Tea. Inlet (Special) (H=5')(Actual H=3'-0")	
12	56	276	241+ to 245+																										Tea. Inlet (Special) (H=5')(Actual H=3'-0")	
12	57	397	241+50 to 247+80																										Tea. Inlet (Special) (H=5')(Actual H=3'-0")	
12	58	427	242+50			10	19	18	22																				Tea. Inlet (Special) (H=5')(Actual H=3'-0")	
12	59	353	Existing Interchange																										Tea. Inlet (Special) (H=5')(Actual H=3'-0")	
			Existing Interchange																										Tea. Inlet (Special) (H=5')(Actual H=3'-0")	
			Existing Interchange																										Tea. Inlet (Special) (H=5')(Actual H=3'-0")	
			Final Totals			5265	1191	1219		7	*	*	*	18		499	425.83	36,342	171.6	738	675	1468	44	2					Tea. Inlet (Special) (H=5')(Actual H=3'-0")	
			RAW Totals			27,040	5474	1097	1232	7	712	61		17		6,378	425.83	36,342	105.6	736	888	1562	44	2					Tea. Inlet (Special) (H=5')(Actual H=3'-0")	

⊕ To be salvaged by Maintenance Forces
* Included in Substructure Quantities
⊕ Included in Roadway Quantities

⊕ Requires 25° Elbow
Requires 30° Elbow

NO REVISIONS		AS CONSTRUCTED		FEDERAL ROAD REGION NO. VIII		DIVISION COLORADO		PROJ. NO. TQFC 034-2(4)		SHEET NO. 10		TOTAL SHEETS	
		REVISED 8 SEPT 73		VOID									

FINAL
SURFACING PLAN
REF: DOH FORM 87, TICKET ENVELOPES

LOCATION	SOURCE	QUANTITY - TONS					
		AGGREGATE BASE CL G		TOP LAYER HOT BITUMINOUS PMT GR EX		BOTTOM LAYER HOT BITUMINOUS PMT GR EX	
		PLAN	FINAL	PLAN	FINAL	PLAN	FINAL
Frontage Roads 10+10 to 43+00 Lt 9+40 to 44+00 Rt		4,442 3,668	4443.60 *4363.65	922 969	1705.30 1,345	1283 1,345	1348.60 1398.00
Approaches: 20+75 Lt 26+55 Lt 36+50 Lt 39+85 Lt 496+ Rt 513+ Rt 522+ Rt		9 9 21 6 6 6	* INCLUDED	5 5 12 2 2 4	26.0		
Estimated For: Structure Quantities County Rd. 595+ to 608+ Correcting Irregularities Gradients on Detour Extension	UNDESIGNATED	712 411 930	0 433.65 0	61	85.8		
Totals		10,226	9738.35	1,984	1973.85	2628	2746.6

Stabilization based on the following:
18" E.D.L. A. 30 N Fr. Rd. 18 S Fr. Rd.
Regional Factor 1.5
Serviceability Index 2.0
Strength Coefficients:
Bituminous Pavement ... 0.44
Aggregate Base Course ... 0.12 ($R_{min} = 78$)
(Cl.G)

FINAL FENCING

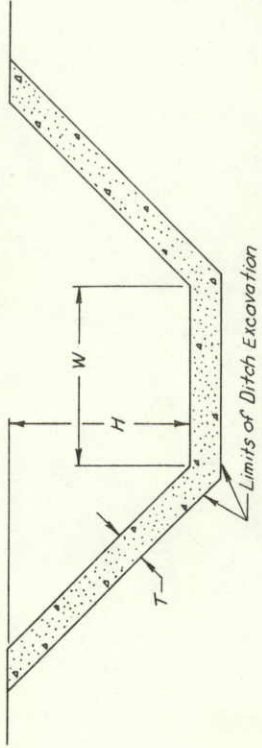
LOCATION	SIDE	REMOVE FENCE		BUILD B.W. FENCE	
		LIN. FT.		LIN. FT.	
500+00	RT.	150			
500+00	LT.	200			
500+00 TO 515+50	RT.	1520			
582+ TO 595+	LT.	4880			
595+05 TO 595+10	RT.	151			
595+88 TO 596+55	RT.	170			
569+55 TO 602+05	LT.	583			
601+90 TO 602+00	RT.	295			
602+00 TO 602+05	LT.	120			
602+05 TO 607+58	LT.	633			
607+58 TO 611+30	RT.	741			
241+1" TO 500+00	LT.	438			
500+00 TO 522+00	RT.	0			
500+00 TO 522+00	LT.	538			
1ST AVE - WEST					
595+70 TO 612+80	RT.	0			
604+ TO 609+	LT. & RT.	4760 4000 4000			
TOTALS		5001 4443			6060

It is estimated that 743 End Posts and 48 Corner and Line Brace Posts will be required. 16

REF: Book 10 Page 59

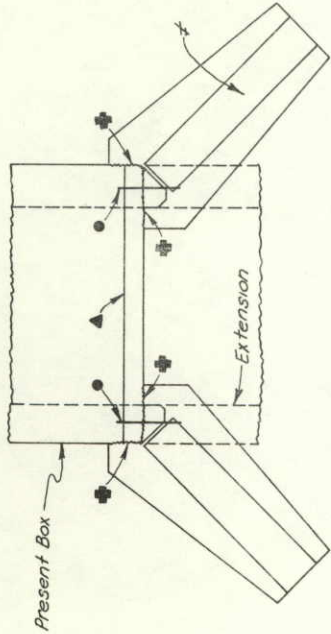
Location	W	H	T	SLOPE	CUBIC YDS/LIN. FT.
250+80 TO Line Lt	2' 2"	2' 2"	4"	1:1	0.119
494+80 TO Lt	3' 2"	3' 2"	4"	1:1	0.142 (116)
601+	10'	6'	4"	1:1	0.340
241+1" TO 243+1"	2' 1"	2' 1"	4"	1:1	0.119
514+ to 521+ Rt	2'	2'	4"	1:1	0.119

Transverse Expansion Joints shall be placed perpendicular to centerline of ditch, at intervals of 30 feet.



DETAIL OF
CONCRETE LINED DITCHES

DETAIL OF
HEADWALL REMOVAL



- Remove Along these lines.
- This headwall to be removed when fill over headwall is less than 1 foot.
- 2 ft reinforcing bars to be placed of every longitudinal bar shown on the standard. Size to be same as longitudinal bars.
- The cost of drilling holes and placing tie bars is to be included in payment for "Removal Of Headwalls".
- Removal of Headwall to include Wing Walls

TOPSOIL

Source (Haul)	Under Roadway Prism From Pit	CUBIC YARDS	FINAL
Required	Interchange Area (To 1st. Ave.) 269 E" + 50 (1st. Ave.) To 560+10 (Platte River Bridge) 569+90 (Platte River Bridge To 600+)	11,552 16,115 11,811	35,993 19,907 43,008
Total Required		39,478	43,008

REF: Book 13 Page 50-51

Curb & Gutter
FINAL - FORM 305
Req'd Curb Type 4 (Section B) to be placed as directed at the following structures:
Str. No. C-18EL 60 Lin. Ft.
Str. No. C-18-EM 63 Lin. Ft.
Str. No. C-18-EP 76 Lin. Ft.
Total 199 Lin. Ft.
199

BARRICADES
FINAL - FORM 305

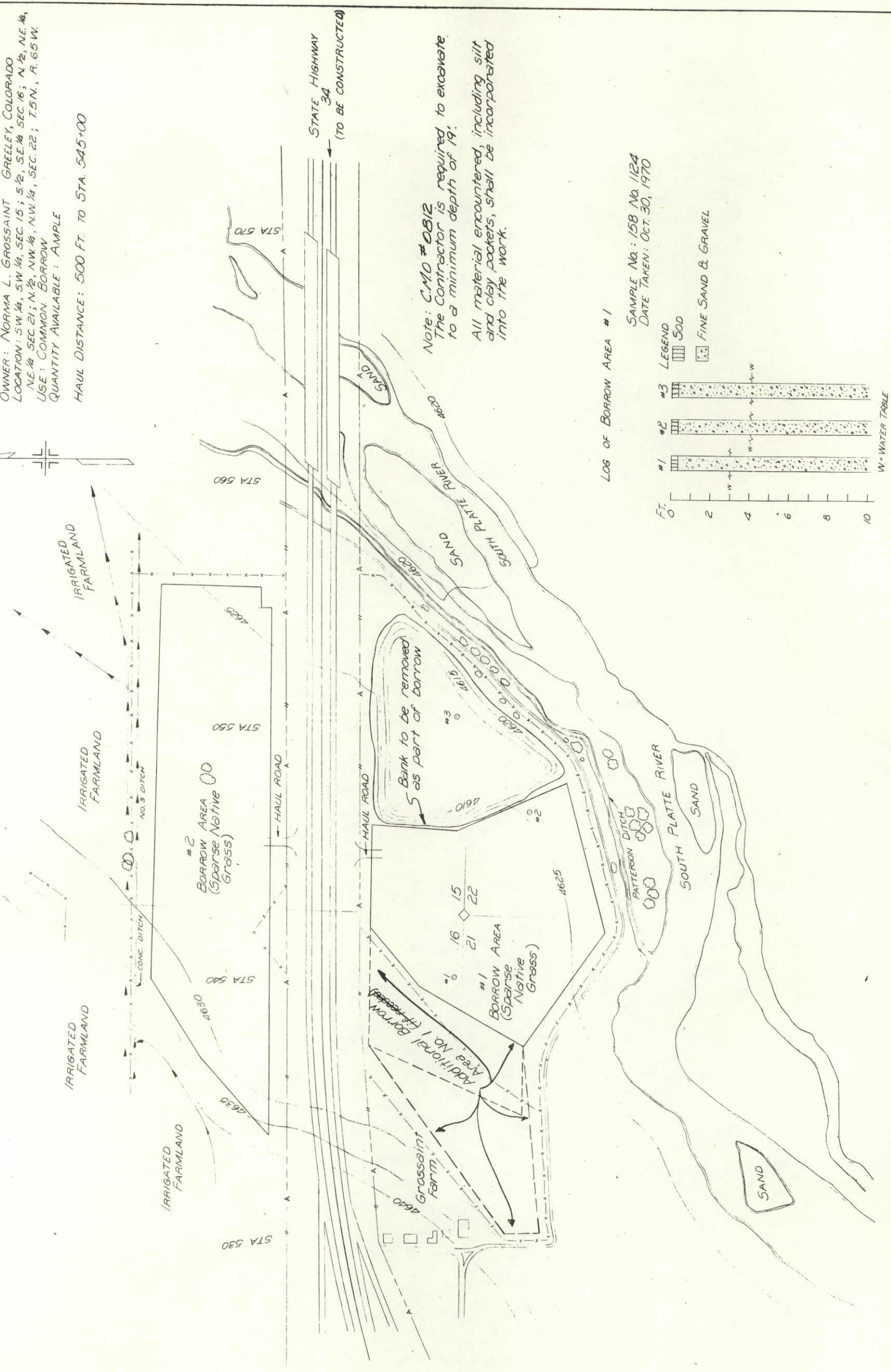
LOCATION	Type 3
	Lin. Ft. F-D
250+50 "D"	53
232+50 "E"	53
518+00 ML	56
520+00 ML	78
594+50 ML	78
595+50 Median	1
607+00 ML W.B. Lane	1
9+80 N. Frontage Rd	36
9+20 S. Frontage Rd	36
40+05 N. Frontage Rd Lt	36

SKETCH OF BORROW AREAS #1 & #2

FEDERAL ROAD DISTRICT NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	704034-2(1)	11	

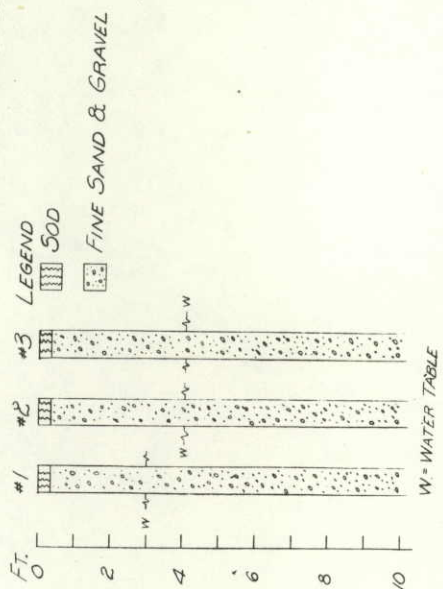
NO REVISIONS		AS CONSTRUCTED	
REVISED 8 SEPT 77		VOID	

OWNER: NORMA L. GROSSAINT GREELEY, COLORADO
LOCATION: SW 1/4, SW 1/4, SEC. 15; S 1/2, SE 1/4 SEC. 16; N 1/2, NE 1/4, NE 1/4 SEC. 21; N 1/2, NW 1/4, NW 1/4, SEC. 22; T.5N., R. 65W.
USE: COMMON BORROW
QUANTITY AVAILABLE: AMPLE
HAUL DISTANCE: 500 FT. TO STA. 545+00

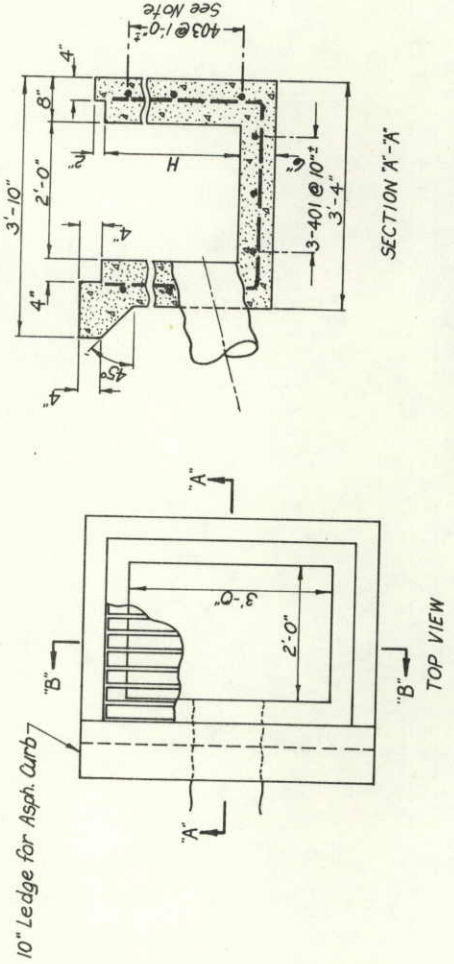
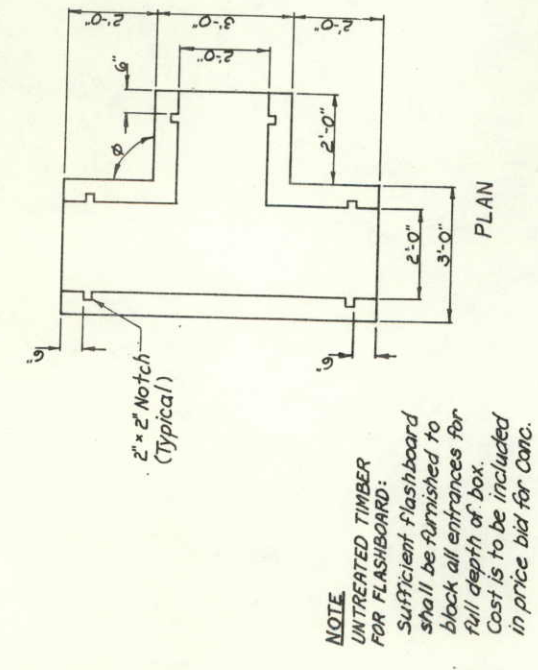
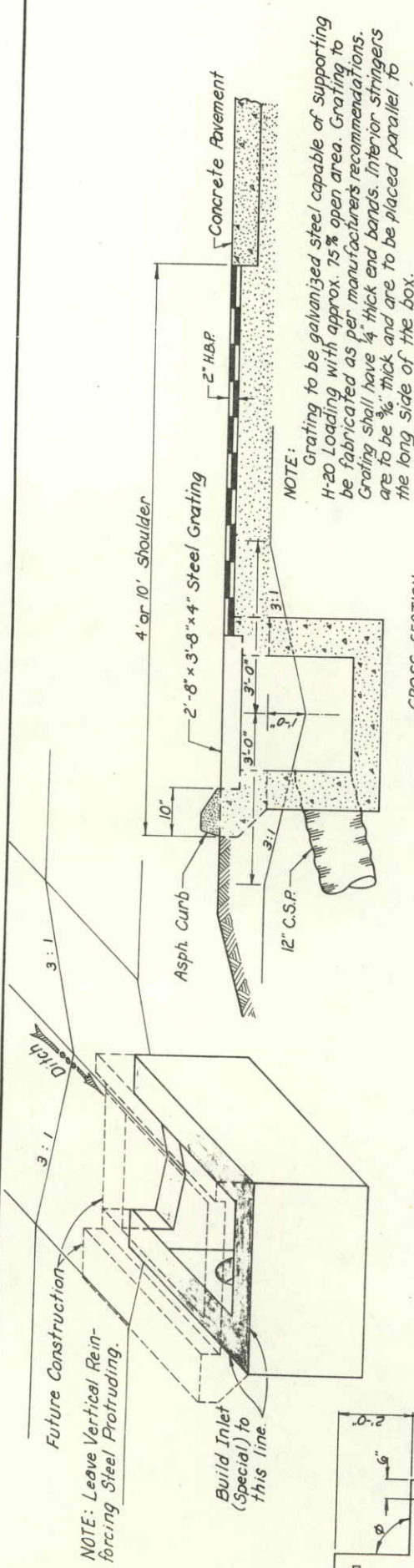


Note: C.M.O. #0812
The Contractor is required to excavate to a minimum depth of 19'.
All material encountered, including silt and clay pockets, shall be incorporated into the work.

LOG OF BORROW AREA #1
SAMPLE No: 158 No. 1124
DATE TAKEN: OCT. 30, 1970



SCALE: 1"=200'

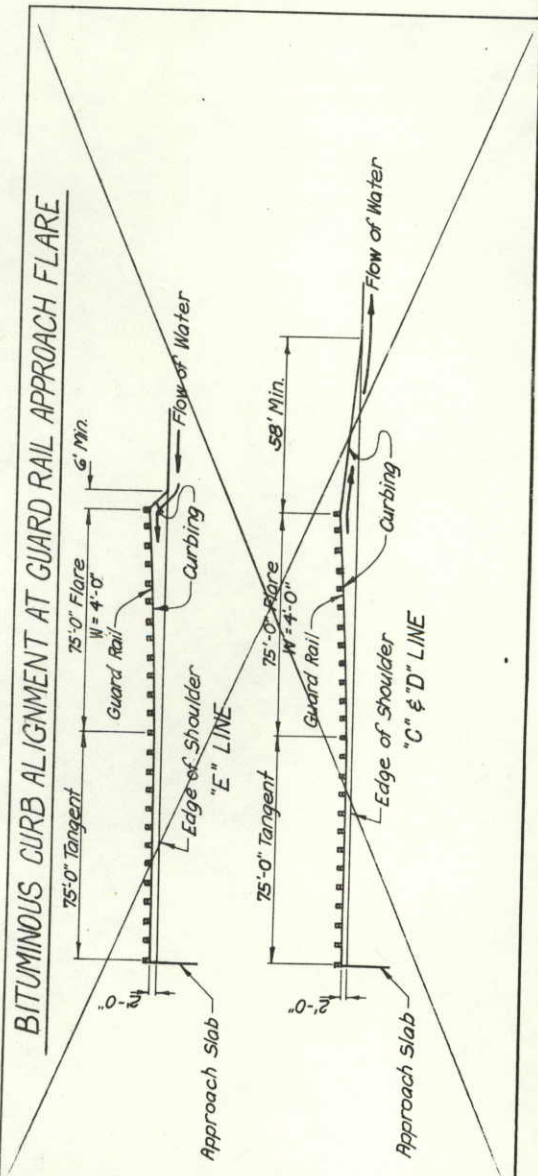
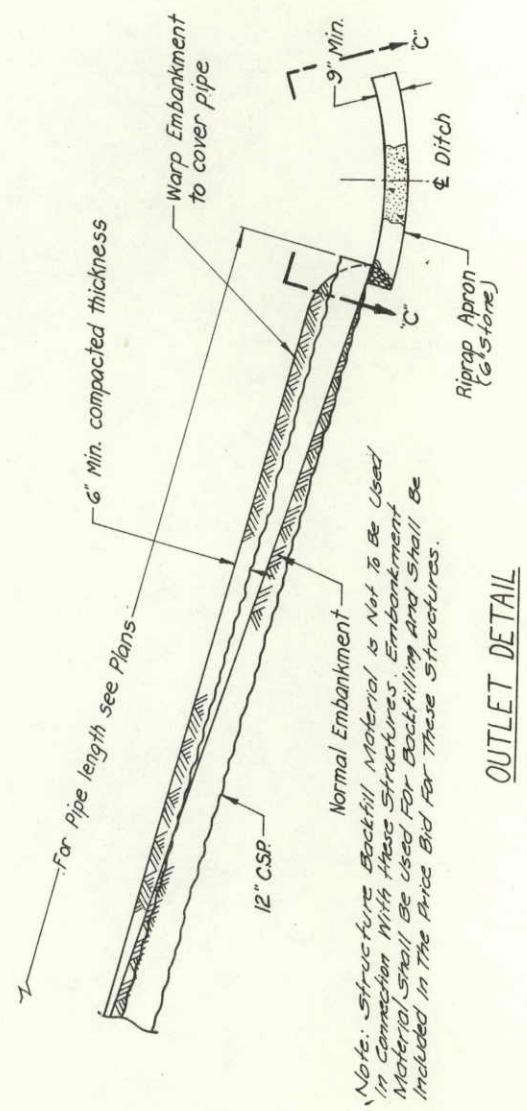


QUANTITIES FOR ONE INLET

H	CONCRETE # (CU. YDS.)	REIN. STEEL (LBS.)	NO. STEPS REQD.
3'-0"	1.3	76	1
5'-0"	1.9	116	2
6'-0"	2.2	136	2

* NOTE: Includes Volume occupied by Pipes.

DETAIL OF INLET (SPECIAL)



DIVISION BOX

SSta 494+80±
Sta 515+50
φ = 90° @ 494+80±
φ = 75° @ 515+50±

BAR LIST FOR H=3' AND BENDING DIAGRAM

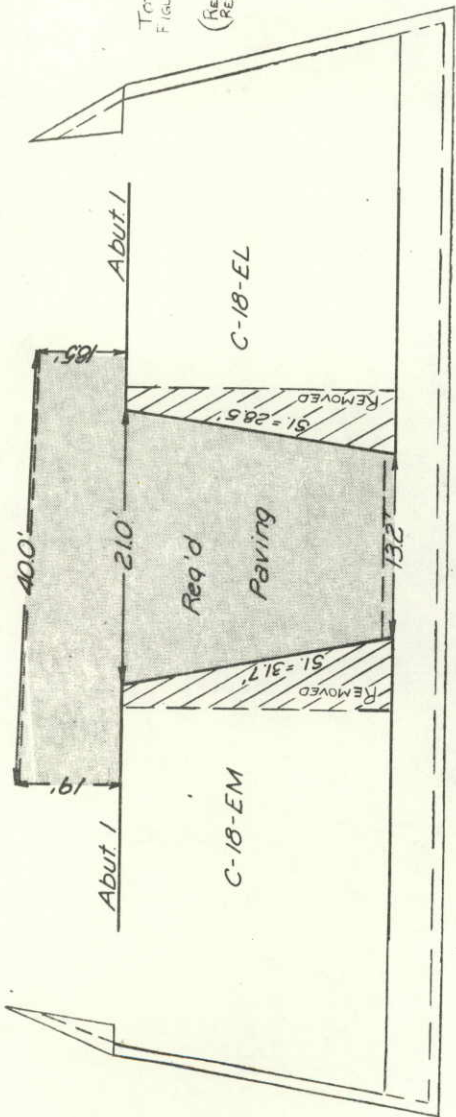
MARK	NO	HGT REQD. "U"	LENGTH "U"
401	3	3'-0"	9'-8"
402	5	3'-0"	8'-8"
403	3	—	14'-0"

All bars to be 1/2" dia. — Out or bend around pipes as reqd.

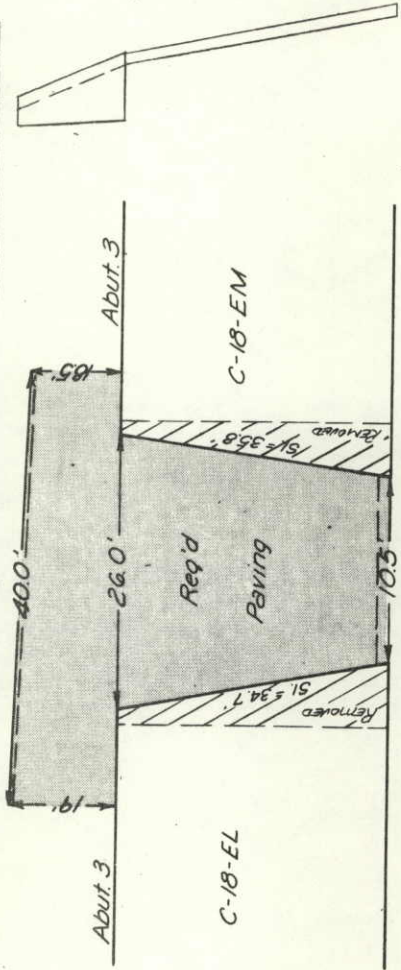
SECTION "C-C"

DETAIL OF SLOPE PAVING
(Not to Scale)

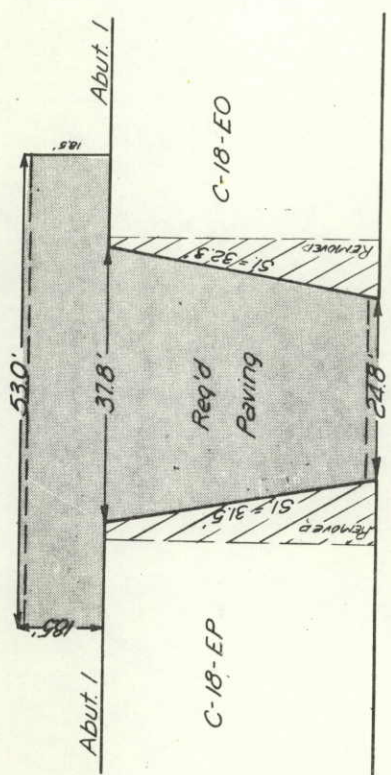
FEDERAL ROAD DISTRICT NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	TQ R0342(4)	13	
AS CONSTRUCTED				
NO REVISIONS				
REVISED 8 SEP 77 VOID				



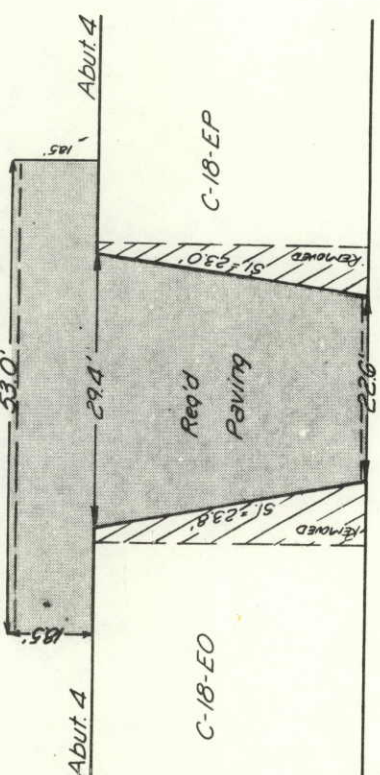
TOTAL CONCRETE THIS STRUCTURE
FIGURED QUANTITY (266' x 184")
39.44 YDS
ADDITIONAL CONCRETE
(REMOVED) 22.41 YDS
(REMAINS) 2.50 YDS



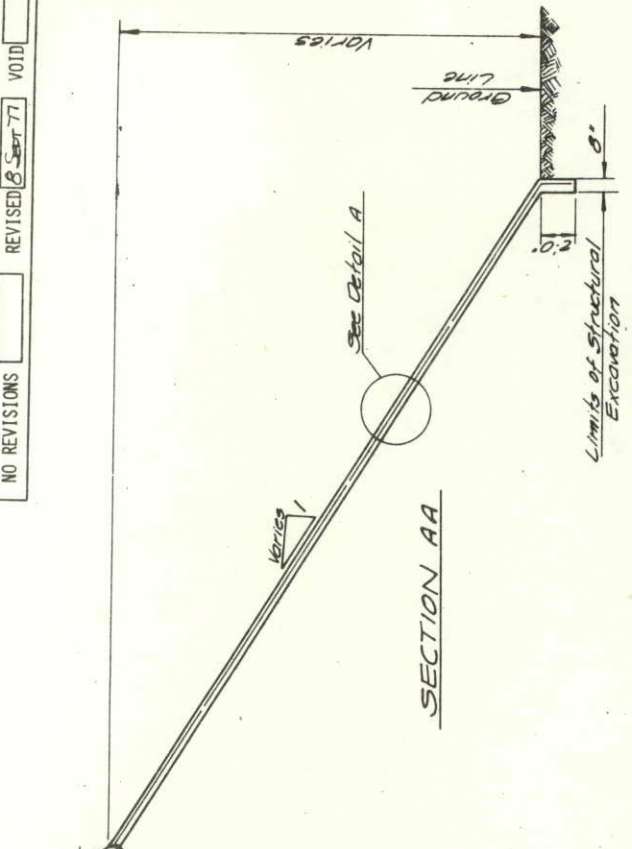
TOTAL CONCRETE THIS STRUCTURE
FIGURED QUANTITY (266' x 184")
33.75 YDS
ADDITIONAL CONCRETE
(REMOVED) 56.68 YDS
(REMAINS) 6.30 YDS



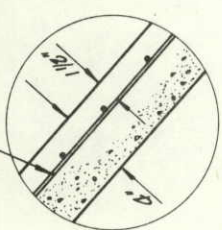
TOTAL CONCRETE THIS STRUCTURE
FIGURED QUANTITY (266' x 184")
41.61 YDS
ADDITIONAL CONCRETE
(REMOVED) 34.44 YDS
(REMAINS) 3.60 YDS



TOTAL CONCRETE THIS STRUCTURE
FIGURED QUANTITY (266' x 184")
31.86 YDS
ADDITIONAL CONCRETE
(REMOVED) 31.78 YDS
(REMAINS) 3.60 YDS



24-1010 Walled Wire Fabric
Conforming to AASHTO Spec.
M 55 Wire Fabric To Be
Included in Bid Price For
Concrete Slope And Ditch Paving



DETAIL A

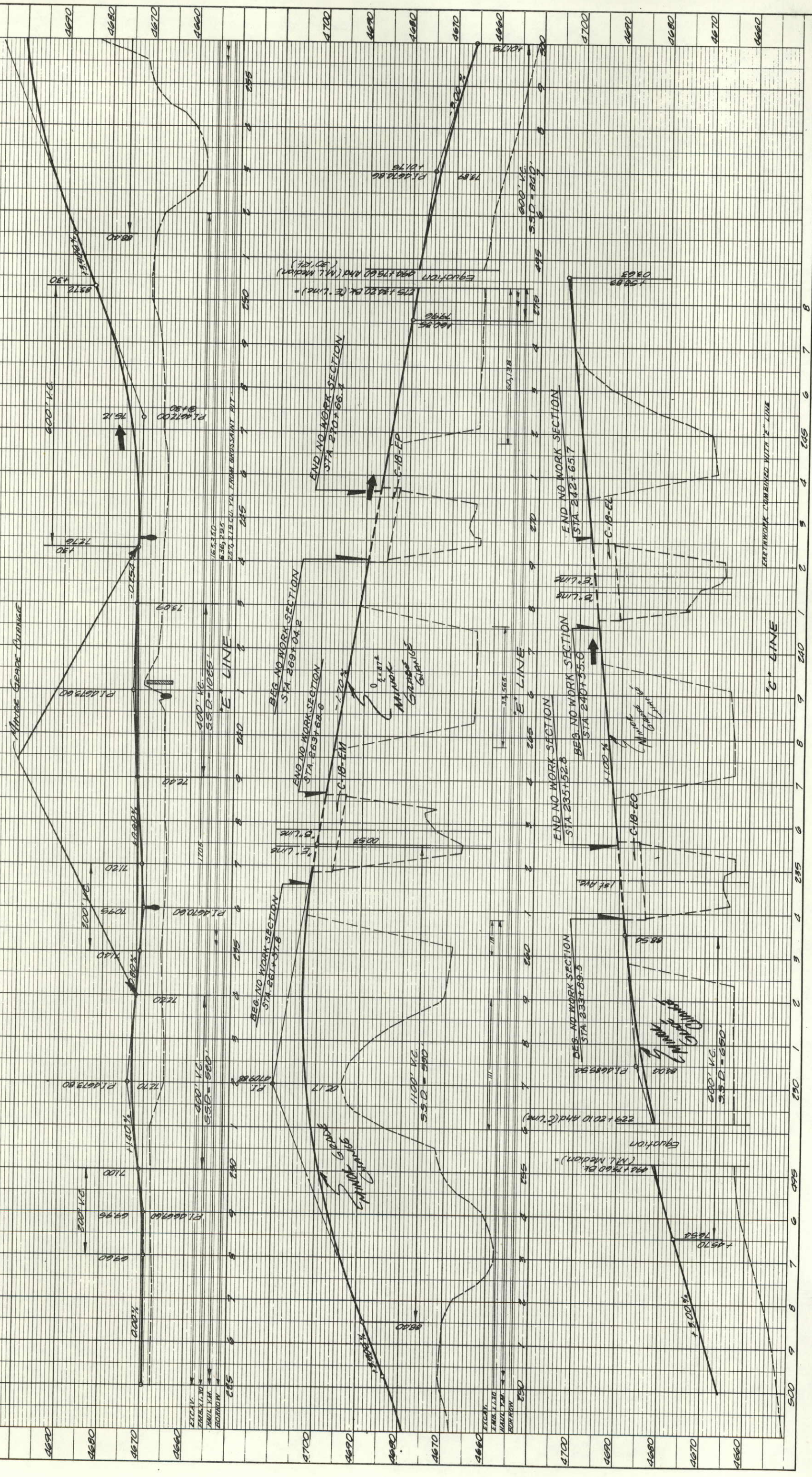
NOTES:

- Slope Paving Shall Be Poured In 5'-6" Transverse Sections With A Tooled Construction Joint At Each Section.
- The Wire Fabric Shall Be 2" From The End Of Joints And Shall Lap 4" At Splices.
- Where Slope Or Berm Paving Butts Against Abutment (As Shown In Section AA) Or Wing Walls, Separate With 1/2" Expansion Joint Material Type III. (Include In Bid Price For Item 507).
- Transition Ends Of Slope Paving May Be Modified By The Engineer To Fit Conditions Encountered In The Field.
- In All Cases, The Exposed Aggregate Finish Shall Be Started On The First Panel Facing On Coming Traffic.
- Alternate Panels Are To Receive An Exposed Aggregate Finish. The Concrete In The Exposed Aggregate Panels Shall Be 2" Lower Than The Adjacent Panels. After The Concrete Is Struck To This Grade The Surface Shall Be Sprayed With An Approved Retarder. The Amount Of Retarder Sprayed On The Surface Shall Be As Recommended By The Manufacturer.
- The Concrete Shall Then Be Allowed To Set. Setting Time Shall Be Determined By The Engineer. After Setting The Prescribed Time, The Surface Shall Be Broomed And Washed With Water To Expose Aggregate.
- The Exposed Aggregate Finish Shall Then Be Sprayed With A Clear Curing Compound. Concrete Shall Conform To The Requirements Of Section 601. Concrete Shall Be Class "B" With The Following Modifications:
- Coarse Aggregate Used In The Exposed Aggregate Panels Shall Meet The Requirements Of AASHTO Designation M-43 Number 6.

FEDERAL ROAD DISTRICT	NO. 10	PROJ. NO.	707C-034-2(2)	SHEET NO.	10	TOTAL SHEETS	10
STATE	COLORADO						

AS CONSTRUCTED	REVISED	DATE	BY

RAMP PROFILES



EARTHWORK COMBINED WITH 'E' LINE

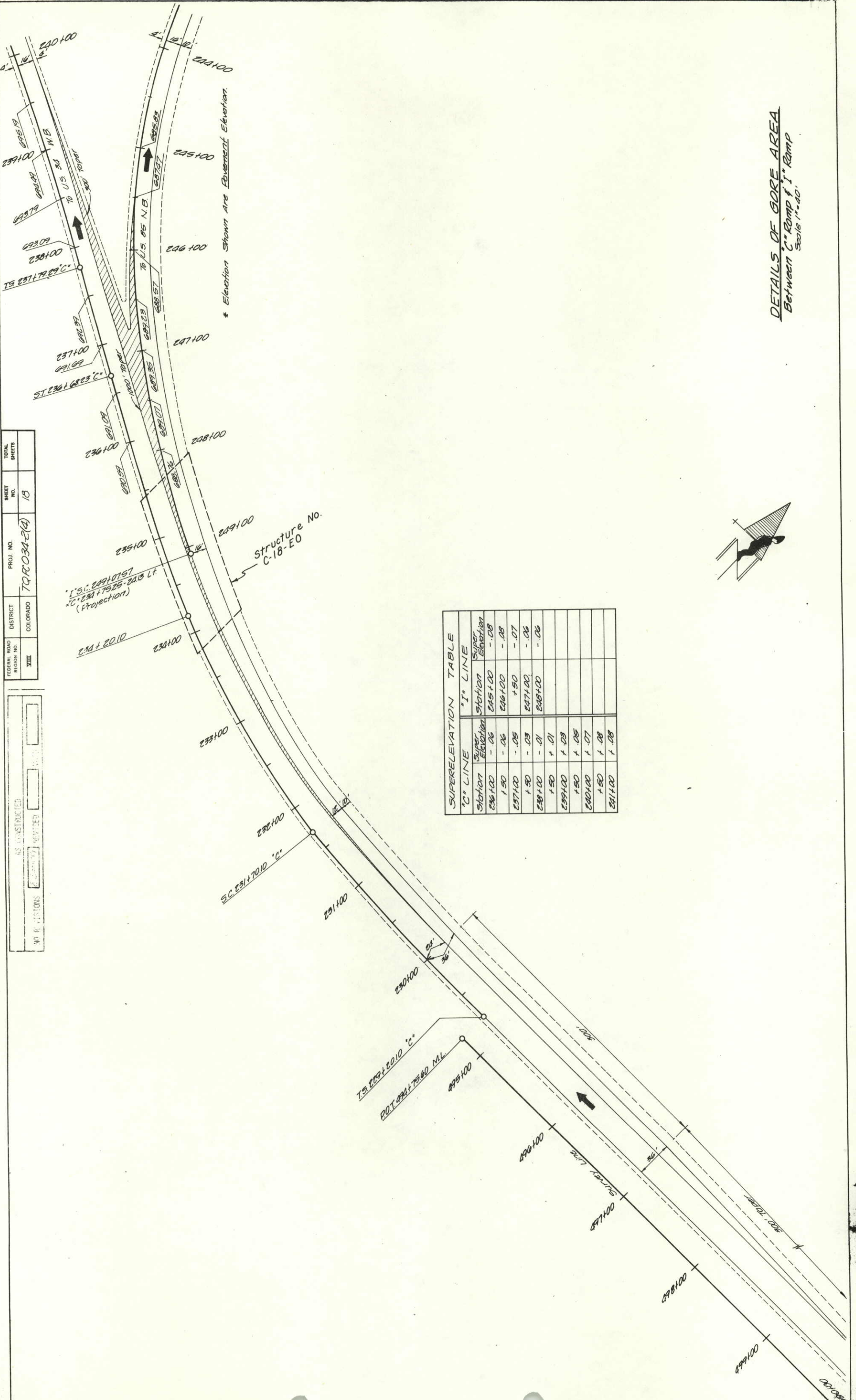
'C' LINE

FEDERAL ROAD DISTRICT	PROJ. NO.	SHEET NO.	TOTAL SHEETS
XIII	70R034-2(4)	13	

AS CONSTRUCTED

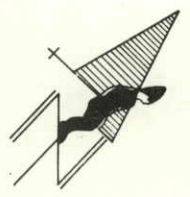
NO REVISIONS

REVISIONS



SUPERELEVATION TABLE

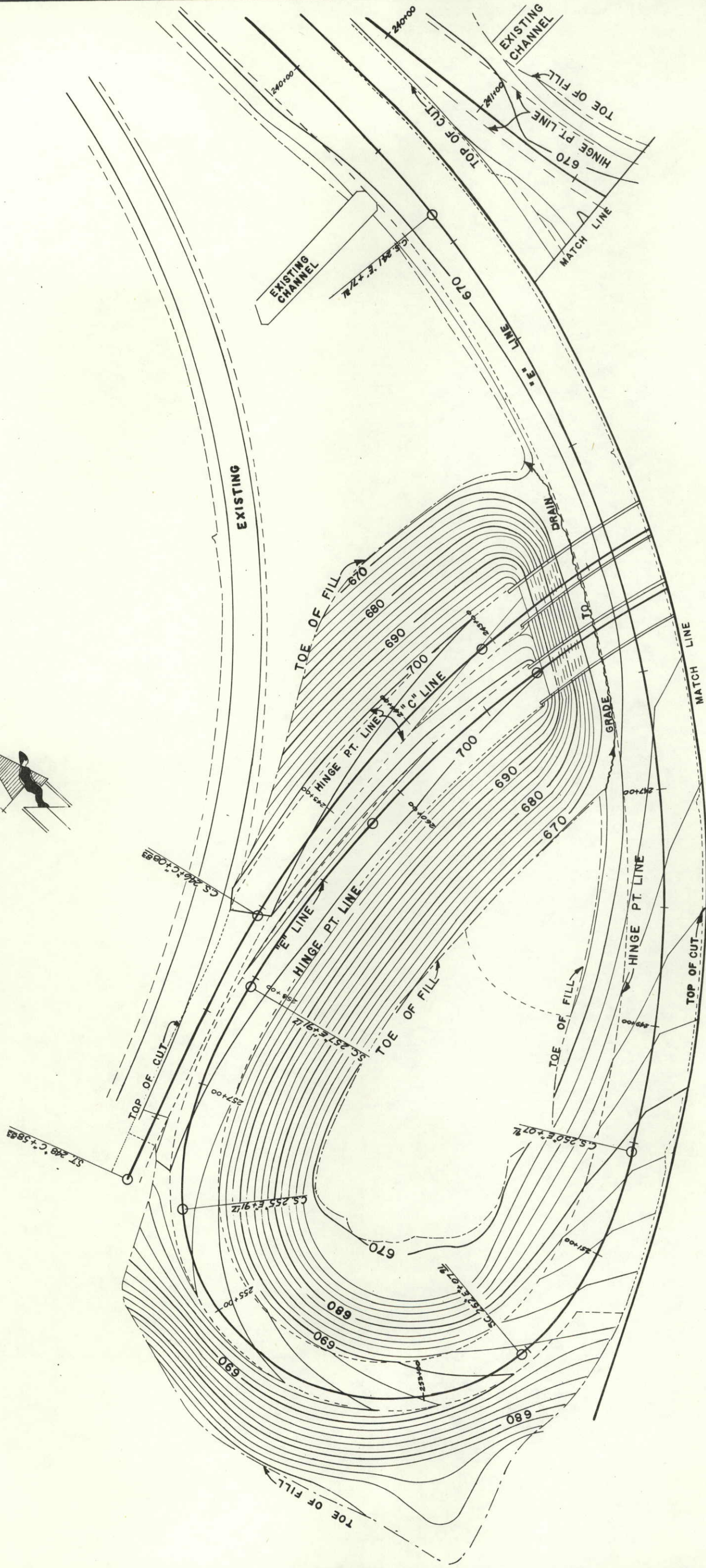
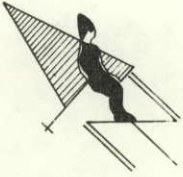
"I" LINE		"O" LINE	
Station	Super Elevation	Station	Super Elevation
236+00	- .06	245+00	- .08
237+00	- .06	246+00	- .08
238+00	- .05	247+00	- .07
239+00	- .03	248+00	- .06
240+00	- .01	249+00	- .06
241+00	+ .01		
242+00	+ .03		
243+00	+ .05		
244+00	+ .07		
245+00	+ .08		



DETAILS OF GORE AREA
Between "C" Ramp & "I" Ramp
Scale 1"=40'

FEDERAL ROAD DISTRICT	PROJ. NO.	SHEET NO.
REGION NO.	7QF034-2(4)	19
STATE	COLORADO	

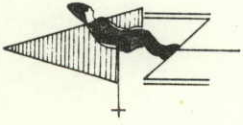
NO REVISIONS	REVISED	VOID



INTERCHANGE
CONTOUR GRADING
SCALE 1" = 40'
BASE ELEV. = 4000'

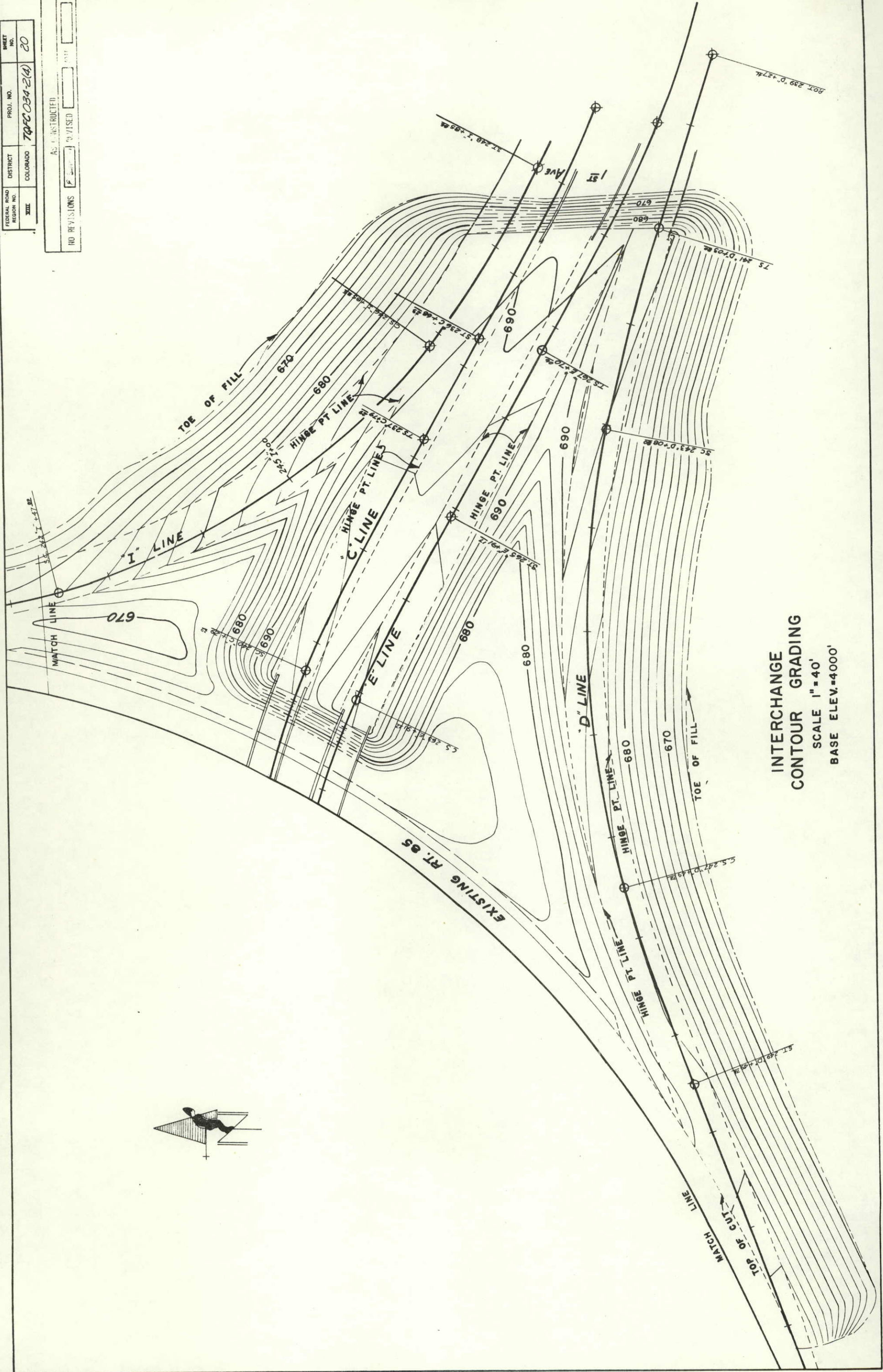
DESIGNED BY	INITIAL	DATE	CHECKED BY
CHECKED BY			
QUANTITIES BY			
DETAILED BY			

DESIGNED BY	INITIAL	DATE	CHECKED BY
CHECKED BY			
QUANTITIES BY			
CHECKED BY			

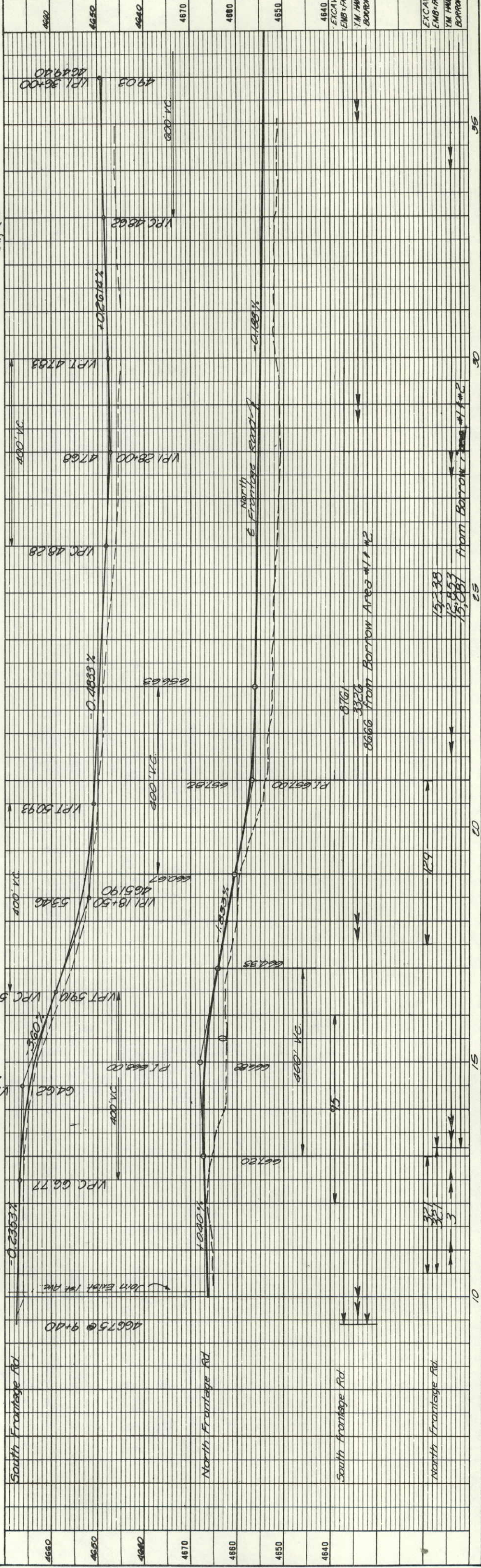
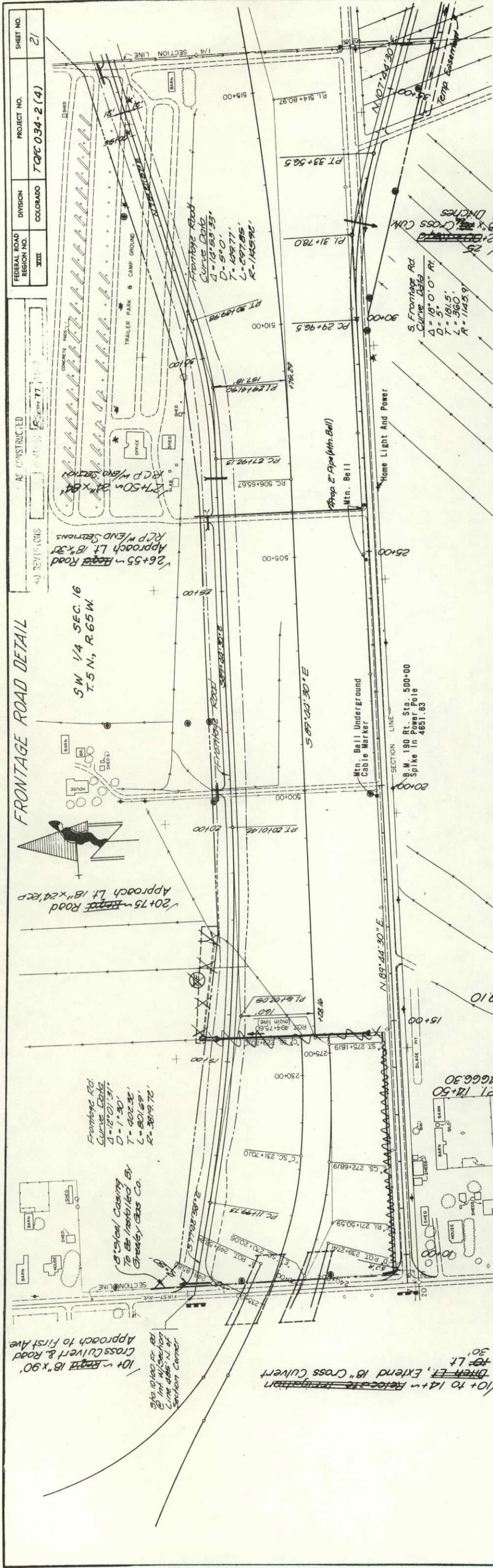


FEDERAL ROAD REGION NO.	DISTRICT	PROJ. NO.	SHEET NO.
XIII	COLORADO	702C 034-2(4)	20

NO REVISIONS	AS INSTRUCTED	DATE



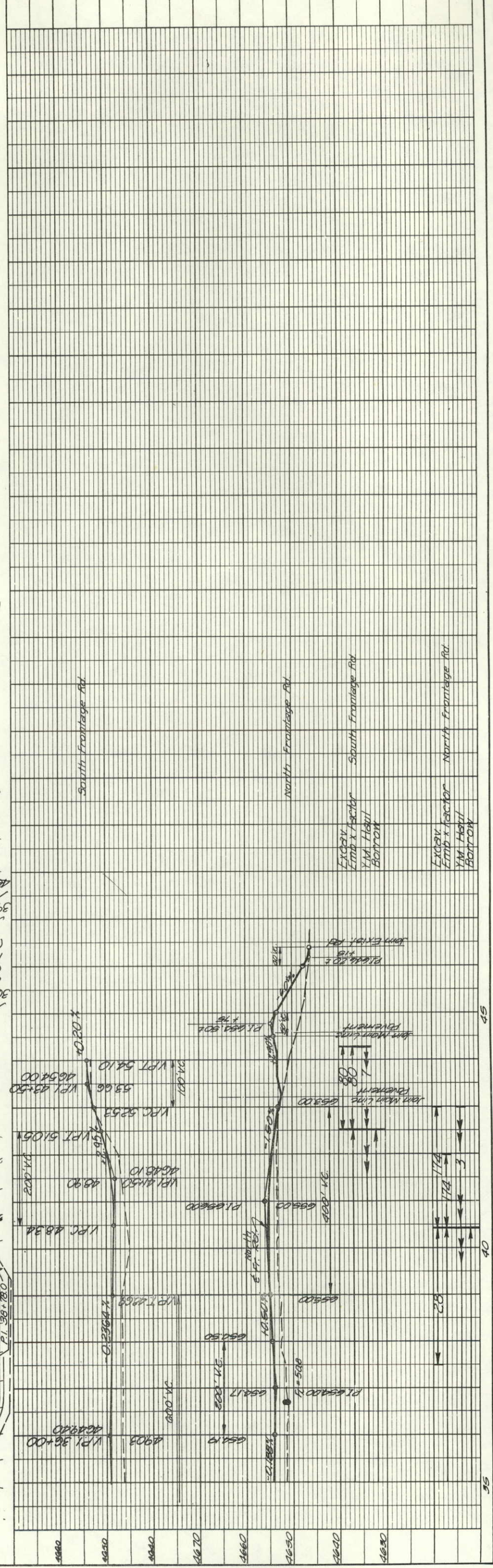
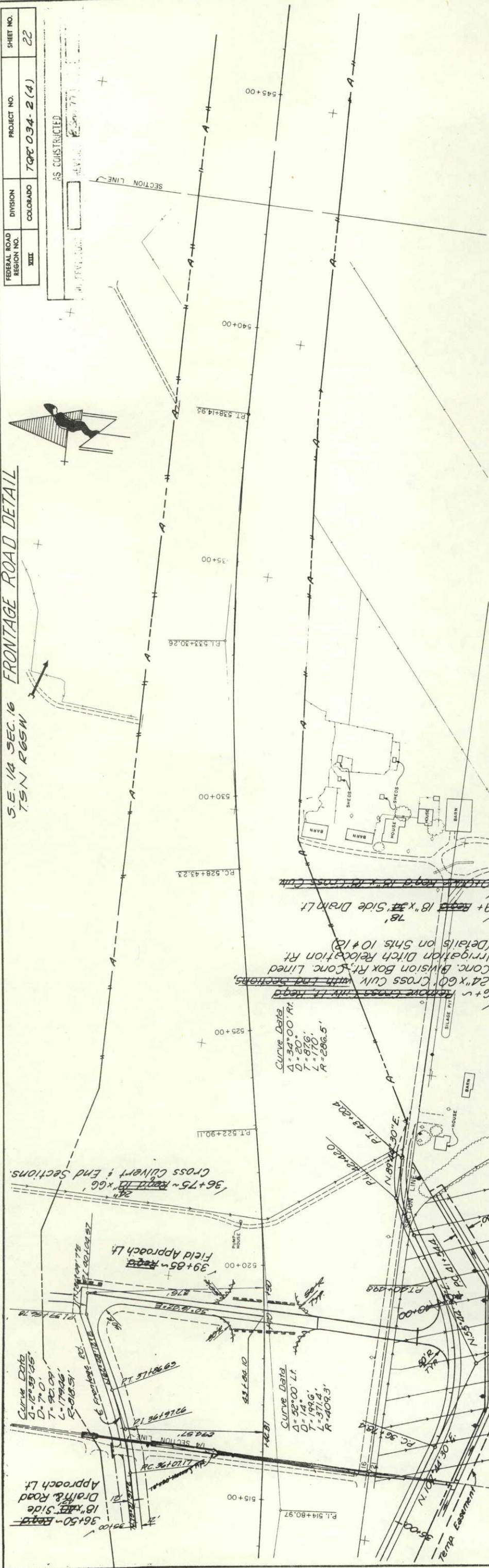
INTERCHANGE
CONTOUR GRADING
SCALE 1"=40'
BASE ELEV.=4000'



DATE	BY	REVISION

DATE	BY	REVISION

S.E. 1/4 SEC. 16
T5N R65W

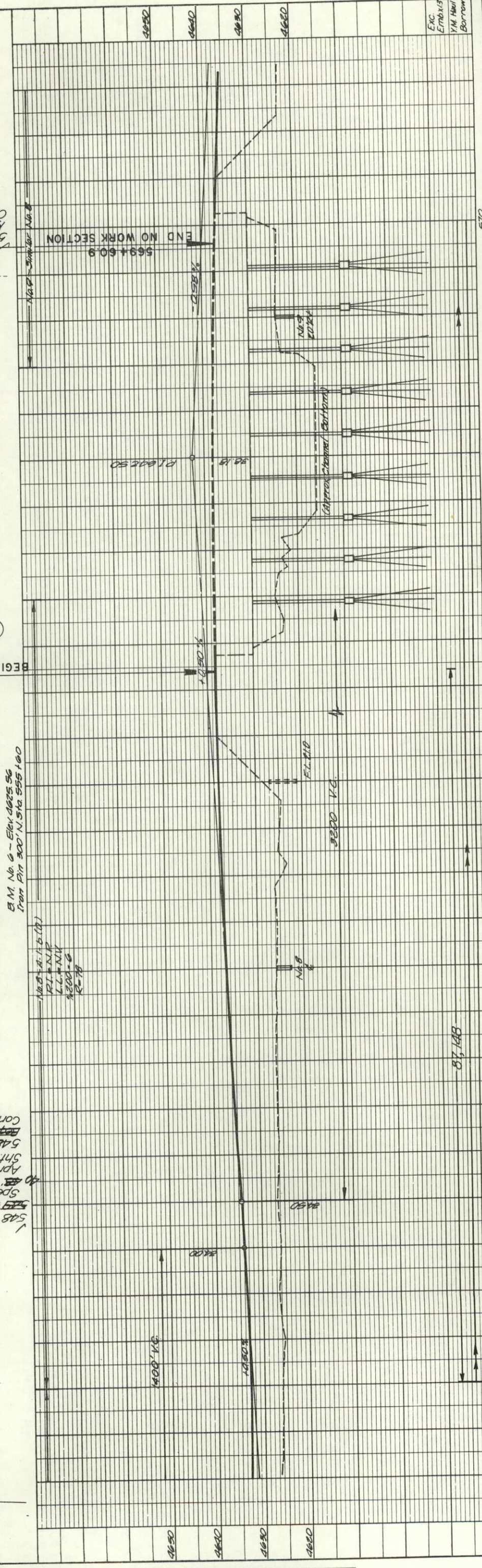
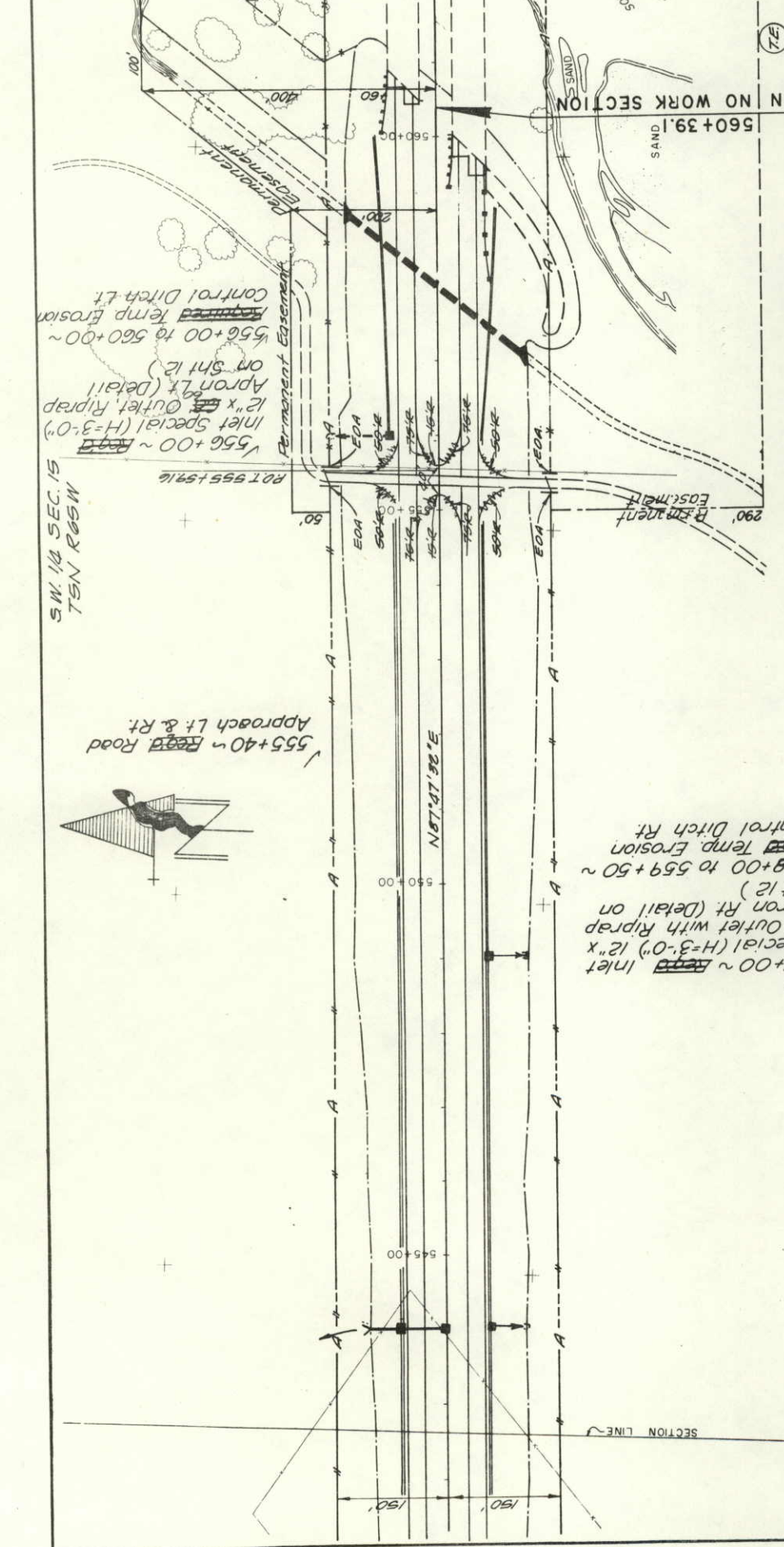


DATE	BY	REVISION

DATE	BY	REVISION

FEDERAL ROAD REGION NO.	DIVISION	PROJECT NO.	SHEET NO.
XXXX	COLORADO	TQPC 034-2 (4)	26

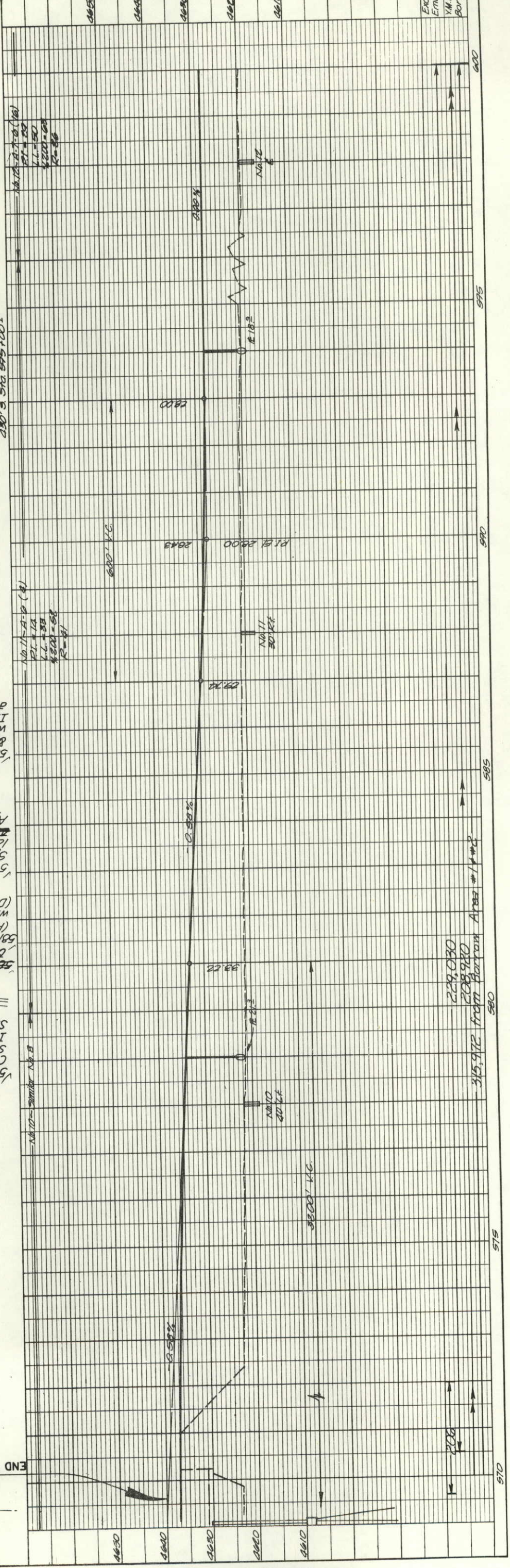
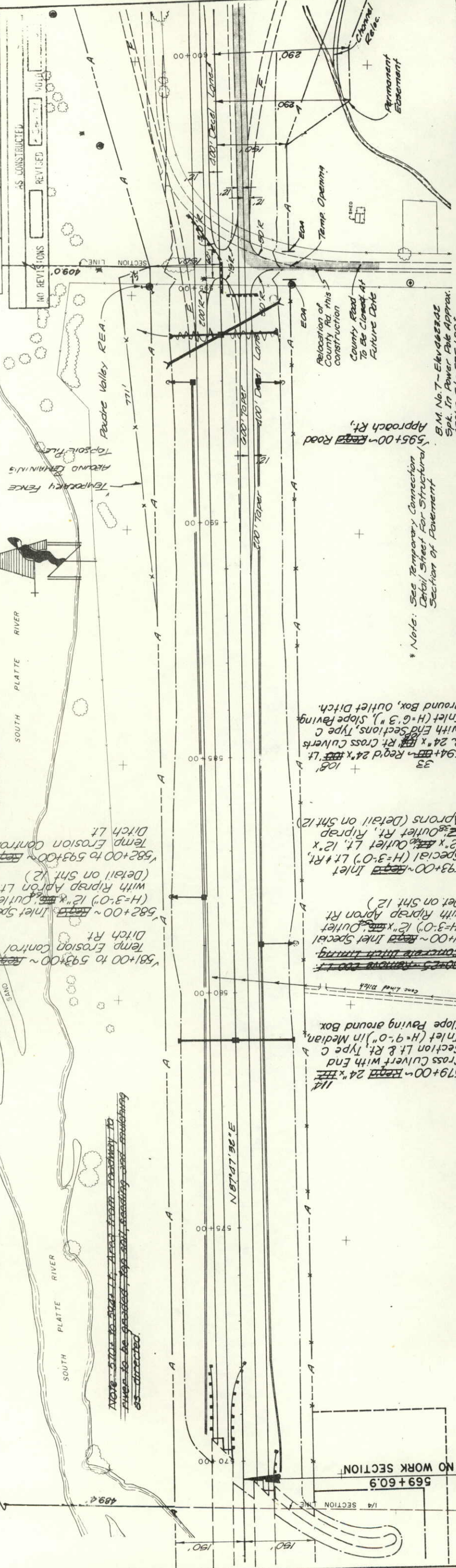
AS CONSTRUCTED	REVISED	VOITH
1. Rev. 5/10/01	2. 3/27/01	



NO.	DATE	BY	REVISION
1			

NO.	DATE	BY	REVISION
1			

NO.	DATE	BY	REVISION
1			



PROFILE	
DATE	BY
STRUCTURE NOTATION: CHD	
NOTE BOOK	
GRADES CHECKED	
PLOTTER	
NO. 1	

PLAN	
DATE	BY
STRUCTURE NOTATION: CHD	
NOTE BOOK	
GRADES CHECKED	
PLOTTER	
NO. 1	

