

See STANDARD M-100-A for STANDARD SYMBOLS

STATE DEPARTMENT OF HIGHWAYS
DIVISION OF HIGHWAYS—STATE OF COLORADO

ROW. & P.E. Under
Project No. RF 034-2 (1)

FEDERAL ROAD REGION NO.	DIVISION	PROJECT NO.	SHEET NO.
VIII	COLORADO	RF 034-2(3)	I

AS CONSTRUCTED
REVISED DATE 8-4-76

INDEX OF SHEETS

INDEX OF SHEETS

SHEET NO

PLAN AND PROFILE OF PROPOSED

FEDERAL AID PROJECT NO. RF 034-2(3)
STATE HIGHWAY NO. 34
WELD COUNTY

- 1 TITLE PAGE, SKETCH MAP, TABULATION OF LENGTH AND DESIGN DATA.
- 2 TYPICAL SECTIONS, GENERAL NOTES.
- 3 SUMMARY OF APPROXIMATE QUANTITIES.
- 4 SUMMARY OF EARTHWORK QUANTITIES, FENCING TABULATION AND DETAIL OF CONCRETE LINED DITCHES.
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SCALES OF ORIGINAL DRAWINGS

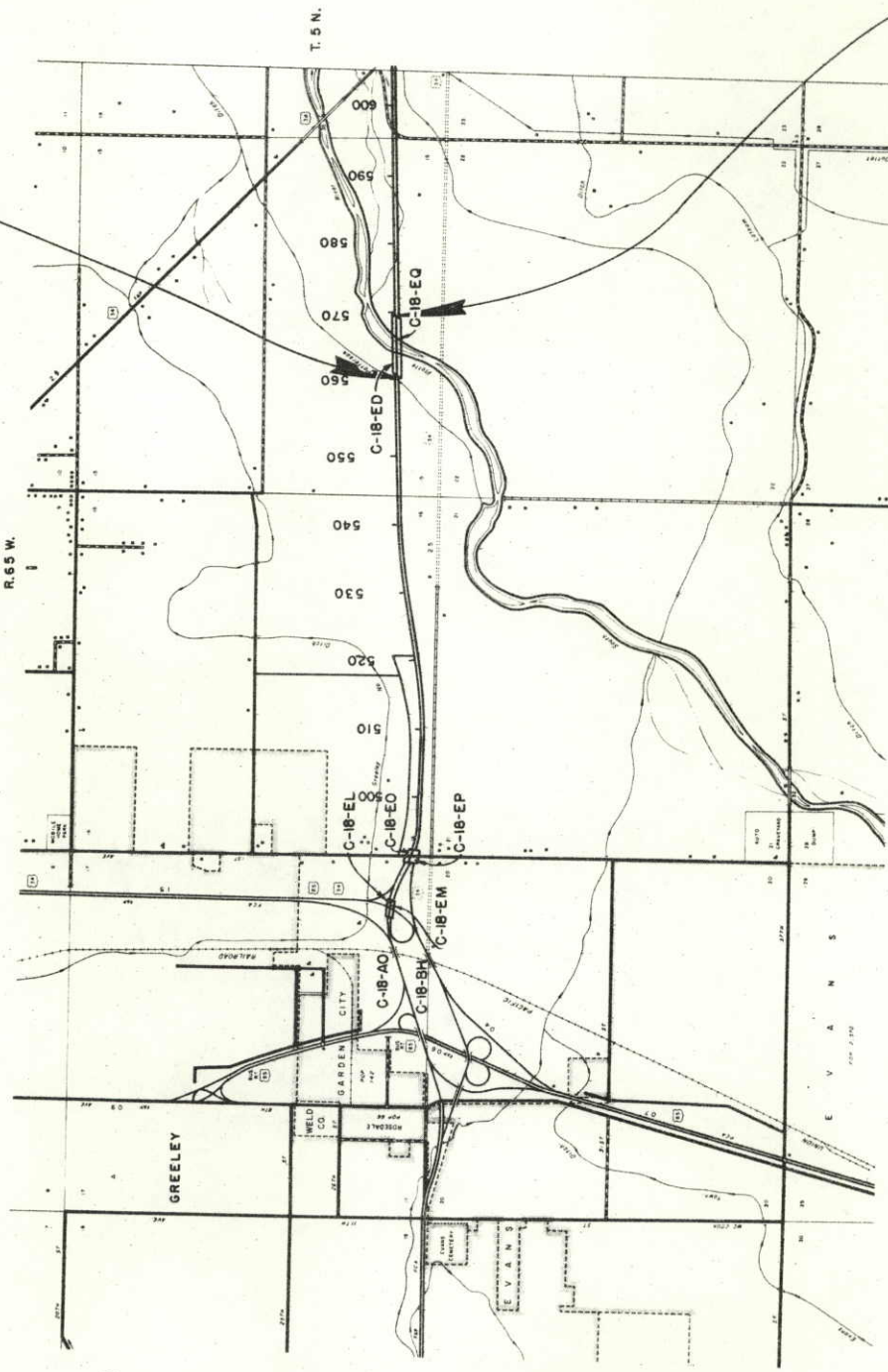
ON PLAN, 1 IN. = 100 FT.
ON PROFILE 1 IN. = 100 FT. HORIZONTAL
1 IN. = 10 FT. VERTICAL

GRADE LINE ON PROFILE IS SHOWN AS GRADE OF FINISHED ROAD

STA. 560+39.1 = BEG. RF 034-2(3)

TABULATION OF LENGTH & DESIGN DATA

STATION	MAJOR STRUCTURE	
	LIN. FT.	MILES
STA. 560+39.1 BEGIN RF 034-2(3)	921.8	
STR. NOS. C-18-EQ and C-18-ED		
STA. 569+60.9 END RF 034-2(3)		
TOTAL	921.8	
SUMMARY	LIN. FT.	MILES
NET and GROSS LENGTH	921.8	0.1746
DESIGN DATA		
MAXIMUM DEGREE OF CURVE	NO CURVE	
MAXIMUM GRADE	0.580 %	
MINIMUM SSD-HORIZONTAL	N/A	
MINIMUM SSD-VERTICAL	> 1300'	
MAXIMUM DESIGN SPEED	50 M.P.H.	
1995 DESIGN TRAFFIC VOLUME	{ ADT = 11,750 D.V. = 1,290	



STA. 569+60.9 = END RF 034-2(3)

SCALE OF MILES

AS CONSTRUCTED PLANS
RETURN TO DIST. 4 DESIGN



DIVISION OF HIGHWAYS

APPROVED

Chief Engineer

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED

DIVISION ENGINEER

AS CONSTRUCTED INFORMATION

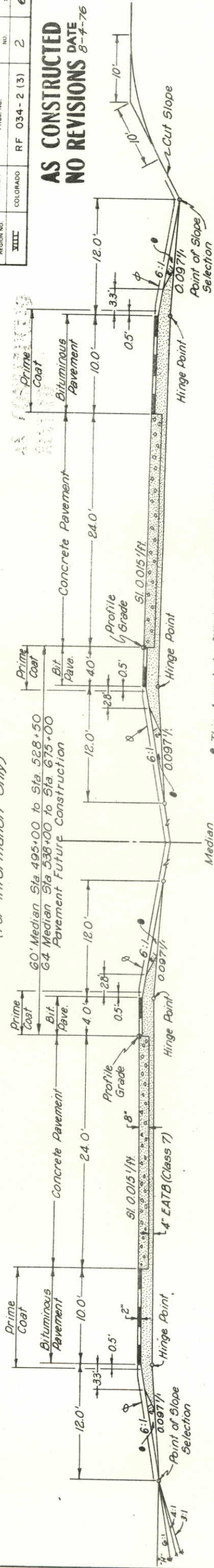
CONTRACTOR **RAMSOUR BROTHERS, INC.**
RESIDENT ENGINEER L. G. DUNNAN
(Project or Resident)
PROJECT STARTED **SEPT. 2, 1975**
PROJECT COMPLETED **AUG. 4, 1976**
AS CONSTRUCTED PLANS APPROVED **J. E. Peterson**
DATE **3/4/77**

M.E.V.

TYPICAL SECTIONS (For Information Only)

FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
XIII	COLORADO	RF 034-2 (3)	2	67

AS CONSTRUCTED
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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.

Except when Topsoil is called for, the Contractor will be
required to place additional gravel or other suitable material
to this line after completion of the paving operation. Topsoil,
when required, will be placed to the 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.

GENERAL NOTES

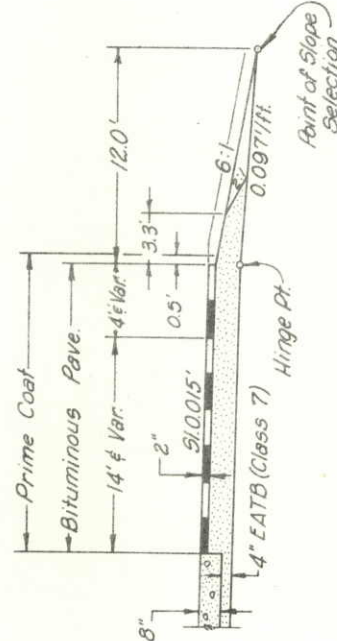
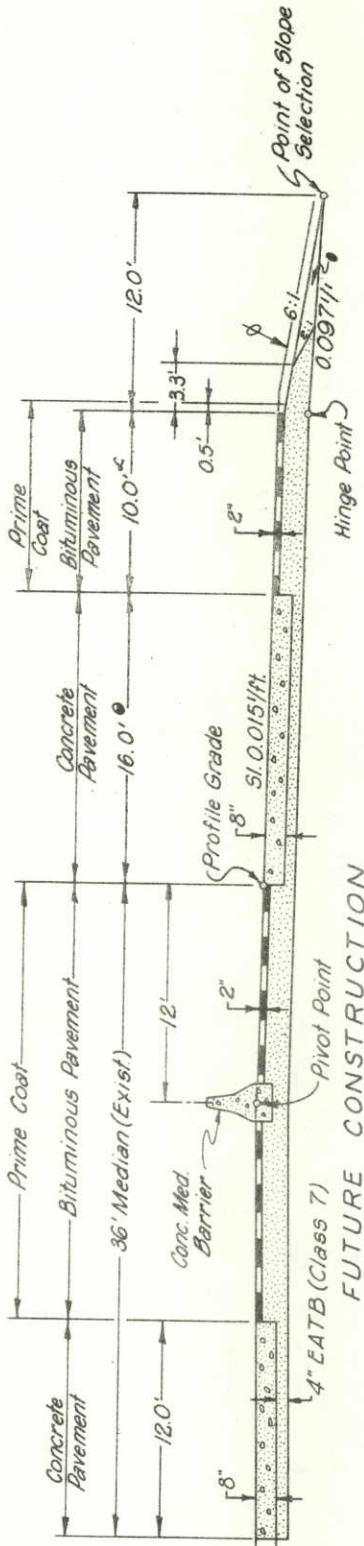
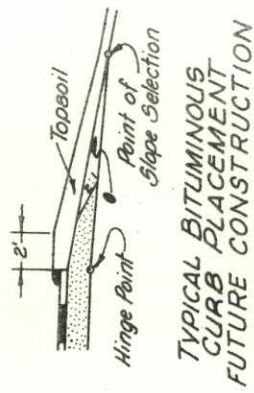
Water shall be used as a dust palliative where required.
Locations shall be as ordered.

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, cesspools, wells, etc.,
to provide neat roadside conditions. It is estimated that
this item applies at the following locations:
528+ to 530+.

Depth of Moisture-Density control for this project shall be
as follows:

Full depth of all embankments.
Bases of Fills 0.5 feet.
Full depth of spur dikes.
Full depth of embankment sections used for ditches and
channel changes.

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.



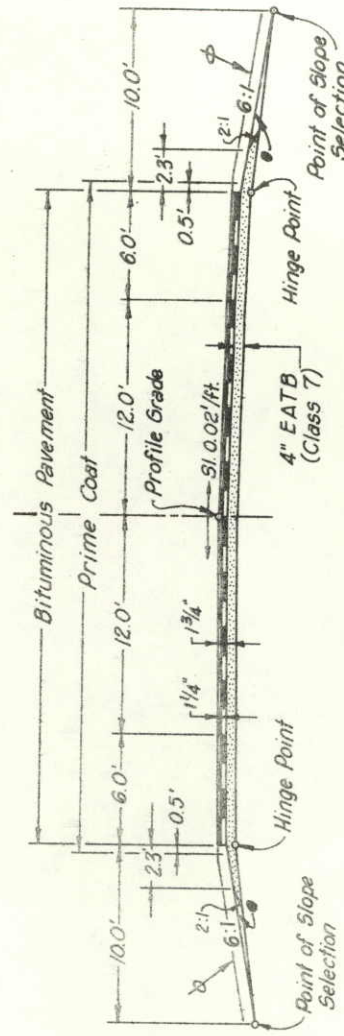
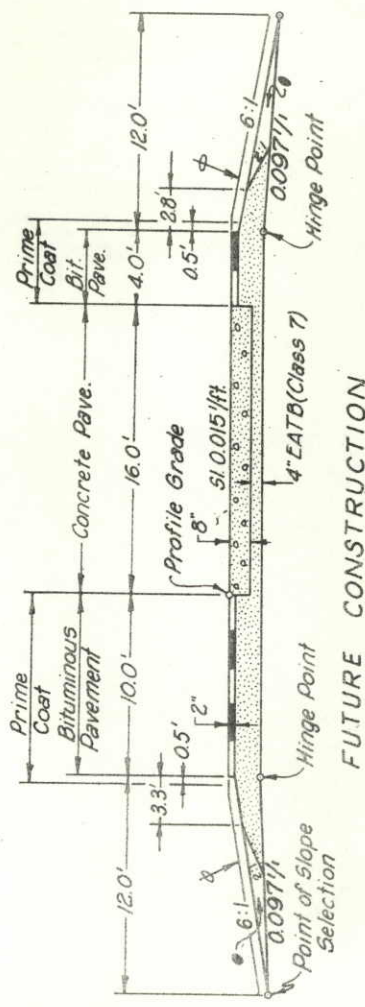
ACCEL. & DECEL. LANES FUTURE CONSTRUCTION

GENERAL NOTES (continued)

Earth slopes shall be disced or roughened by other
approved methods for mulching or erosion protection.

The Contractor shall provide on-the-job training
aimed at developing full journeyman in the type of
trade involved. The number of trainees to be trained
under this contract will be 4.

The minimum thickness of topsoil shall be 4". If
it is estimated that 830 Cu. Yds. will be required
and will be obtained from Excavation Areas.



FRONTAGE ROAD FUTURE CONSTRUCTION

AS CONSTRUCTED
REVISED DATE 8-4-76

AS CONSTRUCTED
REVISED DATE 8-7-76

PROJ. NO.
RFO34-2(3)

DIVISION
COLORADO

FINAL MAP
SECTION NO.
VIII

SHEET NO.
3

TOTAL SHEETS
67

SUMMARY OF APPROXIMATE QUANTITIES

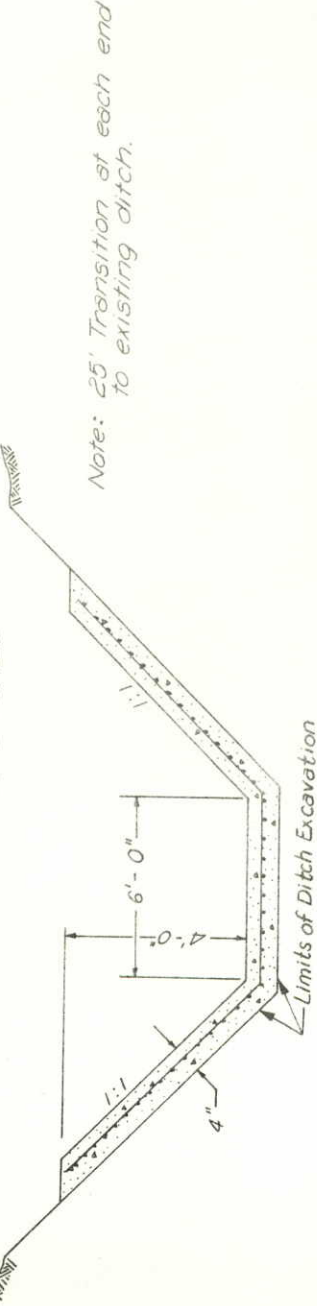
INDEX		CONTRACT ITEM NO.	CONTRACT ITEM	UNIT	ROADWAY PLAN	FINAL	STRUCTURE NO. C-18-EQ PLAN	FINAL	STRUCTURE NO. C-18-ED PLAN	FINAL	PROJECT TOTALS PLAN	FINAL	OVER RUN	UNDER RUN
4	14	201	Cleaning and Grubbing	L. S.	•	•					•	•		
1	5	202	Removal of Fence	Lin. Ft.	1800	2023					1800	2023	323	
		203	Unclassified Excavation	Cu. Yd.	64,000	74,129					64,000	74,129	10,129	
		203	Compaction (AASHTO T-180)	Cu. Yd.	44,000	65,801					44,000	65,801	21,801	
1	35	203	Blading	Hour	26,500	30,041					26,500	30,041	3,541	
4	5	204	Haul	Yd. Mi.	664	655					664	655	31	
4	7	206	Structure Excavation	Cu. Yd.	502	449	1,908	1,943	1,908	1,913	8	2	3,541	
1	8	207	Topsoil Backfill (Class 2)	Cu. Yd.	830	35	764	779	764	764	4,480	4,511	31	
FORM 7		209	Wetting	M Gal.	1,090	592					2,030	2,042	12	
3	40	502	Steel Piling (HP 12x53)	Lin. Ft.			7,546	8,265	7,546	8,109	15,092	16,314	1,222	
3	40	506	Steel Piling Cutoff	Lin. Ft.				774		724				
4	7	507	Riprap	Cu. Yd.			1,350	1,439	1,350	1,440	2,700	2,879	179	
			Concrete Slope & Ditch Paving (Reinforced)	Cu. Yd.	144	140.56					144	140.56		344
		509	Structural Steel	Lb.			15,000	15,000	15,000	15,000	30,000	30,000		
		509	Structural Steel (galvanized)	Lb.			65,100	65,100	65,100	65,100	130,200	130,200		
		516	Dampproofing (Linseed Oil)	Sq. Yd.			4,535	4,933	4,535	4,933	9,070	9,806	736	
		518	Waterstop (6 Inch)	Lin. Ft.			42	42	42	42	84	84		
		518	Bridge Expansion Device (Type I)	Lin. Ft.			653.4	653.4	653.4	653.4	1,306.8	1,306.8		
4	7	601	Concrete Class A (Box Culvert)	Cu. Yd.	265	265					265	265	931	
		601	Concrete Class A (Bridge)	Cu. Yd.										
		601	Concrete Class D (Bridge)	Cu. Yd.										
4	7	602	Reinforcing Steel	Lb.	22,250	22,227	395,375	396,152	395,375	395,375	2,526	2,526	754	
		607	End Post	Each	10	11					10	11	1	
		607	Corner & Line Brace Post	Each	16	13					16	13	3	
		607	Fence Barbed Wire with Metal Posts	Lin. Ft.	3800	3547					3800	3547	253	
		607	Fence Combination Wire with Metal Posts	Lin. Ft.	6800	6,734					6,800	6,734	66	
		607	16 Foot Gate Driveway	Each	2	2					2	2		
		618	Prestressed Concrete Unit (1 Section)(90 to 95 Ft.)	Each			60	60	60	60	120	120		
4	13	620	Field Laboratory	Each	1	1					1	1		
4	13	620	Sanitary Facility	Each	1	1					1	1		
		626	Mobilization	L. S.	•	•					•	•		
			FORCE ACCOUNT											
Form 10		FA01	Clearing of Building Sites	L. S.	•	•					•	•		
Form 10		FA02	On-the-job Trainee	Each			2	2	2	2	4	4		
Form 10			Construct Two Irrigation Structures (W.O. 09908)	L. S.	•	•					•	•		

FENCING TABULATION

STATION	SIDE	GATE		BUILD FENCE		REMOVE FENCE	
		16' DRIVE	EACH	BARBED WIRE	COMB. WIRE	LINE FT.	LINE FT.
				LINE FT.	LINE FT.		
529+ to 532+	Rt					475 322	
531+ to 540+	Cross					570 993	
542+ to 544+	Cross					495	
555+	Cross					320 143	
521+ to 555+50 Lt.		1"			3490 3463		
555+60 to 560+90 Lt.				585 710			
523+00 to 555+25	Rt	1"			3230 3211		
555+50 to 559+60	Rt			445 2690			
569+ to 595+00	Rt			2600		565	
FINAL TOTALS - PLAN		2		3547	6734	2023	
TOTALS -		2		3720	6720	1000	

It is estimated that there are 16 Corner and Line Brace Posts and 10 End Posts.

DETAIL OF CONCRETE LINED DITCHES



Transverse Expansion Joints shall be placed perpendicular to centerline of ditch, at intervals of 30 feet.
Concrete = 0.221 Cu. Yd./Lin. Ft.

AS CONSTRUCTED
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FEDERAL ROAD DISTRICT NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	RF 034-2 (3)	4	67

SUMMARY OF EARTHWORK QUANTITIES

UNCLASSIFIED EXCAVATION (PLANTED X SECTIONS)
Roadway (From Electronic Computations)
Structure Quantities as Embankment
Structure Quantities as Ditch
* Excavation for Topsoil (Stockpiled)

PLAN	Cu. Yd.
48,385	Cu. Yd.
5,540	Cu. Yd.
1,735	Cu. Yd.
7,750	Cu. Yd.
63,410	Cu. Yd.

Total 74,129

COMPACTION (AASHTO T180)
Embankment (Net) (PLANTED X SECTIONS)
Base of Cuts and Fills
Structure Quantities as Embankment (Net)

	Cu. Yd.
26,914	Cu. Yd.
5,093	Cu. Yd.
9,800	Cu. Yd.
1,594	Cu. Yd.
43,191	Cu. Yd.

Total 65,801

HAUL From Mass Diagram
Estimated for Structure Quantities

	Yd. Mi.
25,080	Yd. Mi.
1,406	Yd. Mi.
26,486	Yd. Mi.

Total 30,041

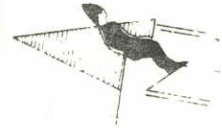
ROADWAY QUANTITIES (FOR INFORMATION ONLY)
Unclassified Excavation

	Cu. Yd.
48,385	Cu. Yd.
37,221	Cu. Yd.
48,385	Cu. Yd.

* Topsoil not used on backslope of excavation areas will be stockpiled within the ROW as directed.

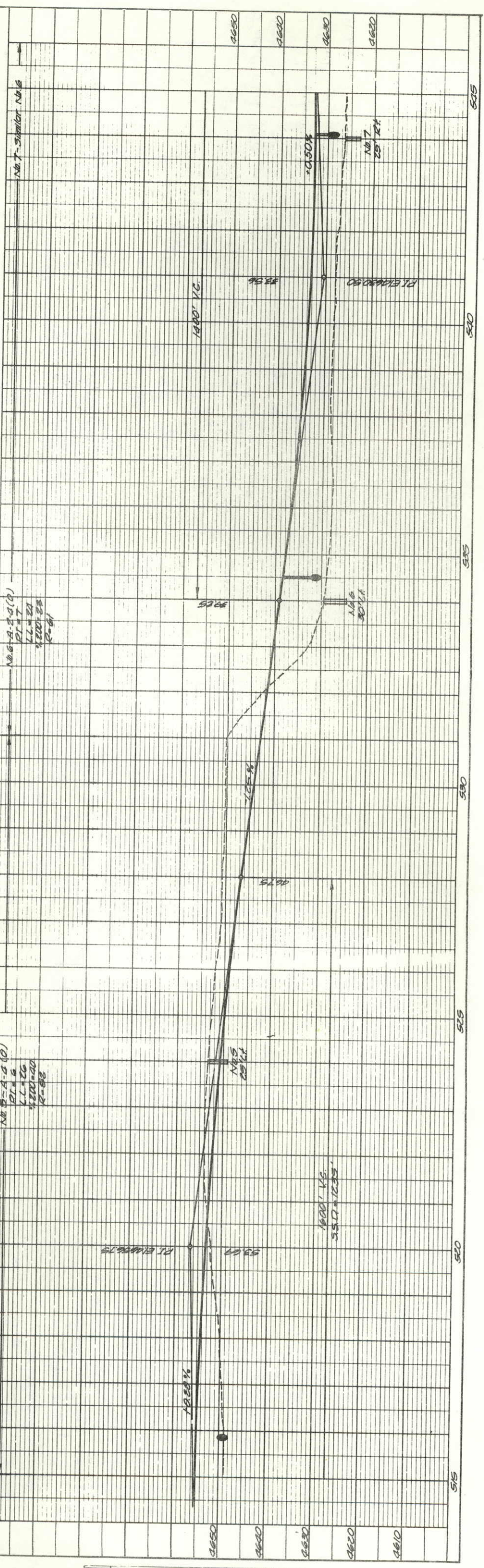
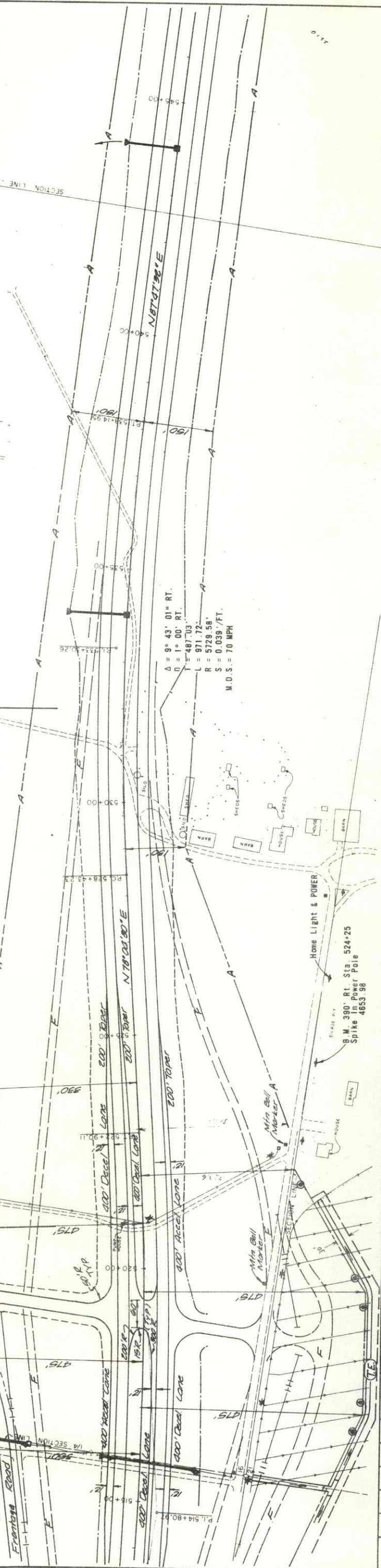
SE 1/4 SEC. 16
T5N R65W

Roadway Cut is source of Embankment Material West
of River



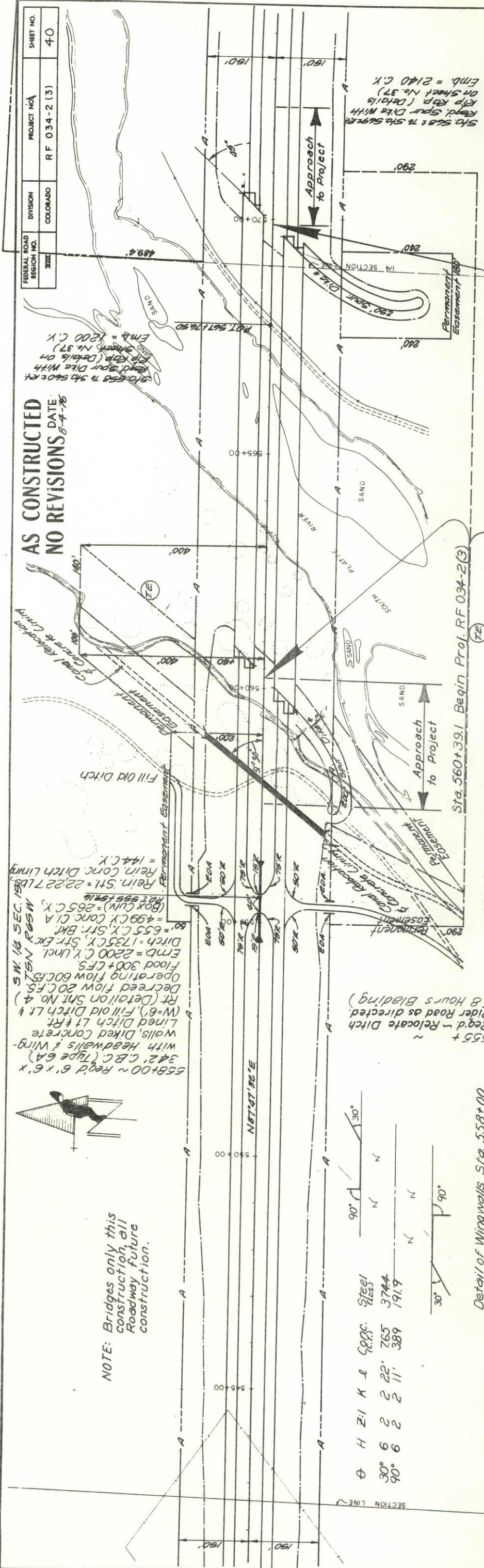
FEDERAL ROAD REGION NO.	DIVISION	PROJECT NO.	SHEET NO.
XIII	COLORADO	RF 034-2 (3)	39

AS CONSTRUCTED
NO REVISIONS
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FEDERAL ROAD REGION NO.	DIVISION	PROJECT NO.	SHEET NO.
XXXX	COLORADO	R F 034-2 (3)	40

AS CONSTRUCTED
NO REVISIONS DATE 8-4-78



NOTE: Bridges only this construction, all Roadway future construction.

θ	H	Z:1	K	ℓ	Q.P.C.	Steel (165)
30°	6	2	2	22"	765	3744
90°	6	2	2	11"	389	1919

Detail of Wingwalls Sta. 558+00

Sta. 560+39.1 Begin Proj. RF 034-2(3)

Bar M. No. 6 - Elev. 10025.56
Iron Pin 300' N. Sta. 555 + 60

Sta. 569+60.9 End Proj. RF 034-2(3)

