

FED. ROAD DIST. NO.	STATE	F. A. S. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	137-B (I)	1	

INDEX OF SHEETS

COLORADO

STATE HIGHWAY DEPARTMENT

PLAN AND PROFILE OF PROPOSED FEDERAL AID SECONDARY PROJECT NO. F.A.S. 137-B (I) STATE HIGHWAY NO. 72

JEFFERSON COUNTY

CONVENTIONAL SIGNS

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

- 1 TITLE SHEET.
- 2 TYPICAL SECTION & SUMMARY OF APPROXIMATE QUANTITIES & SURFACING PLAN.
- 3 LIST OF STRUCTURES, FENCING, R.O.W. MARKERS, & DETAILS OF UNDERDRAIN, STA. 12⁺.
- 4-5 DETAILS OF 14'x14'x68'-5 1/2" C.B.C. STA. 33⁺.
- 6 DETAILS OF EXTENSION OF CATTLE PASS STA. 1⁺.
- 7 STANDARD HEADWALLS FOR C.M.P. CULVERTS.
- 8 STANDARD TIMBER GUARDPOSTS.
- 9 STANDARD WIRE FENCES (UNTREATED WOODEN POSTS) & MARKER POSTS.
- 10 STANDARD METHODS FOR SUPERELEVATION AND WIDENING OF CURVES.
- 11 TYPICAL SIDE APPROACH ROADS & ROADWAY CONSTRUCTION TRAFFIC SIGNS.
- 12-13 PLAN AND PROFILE.
- 14-64 CROSS SECTIONS.

M 102 E REV. 9-26-38.

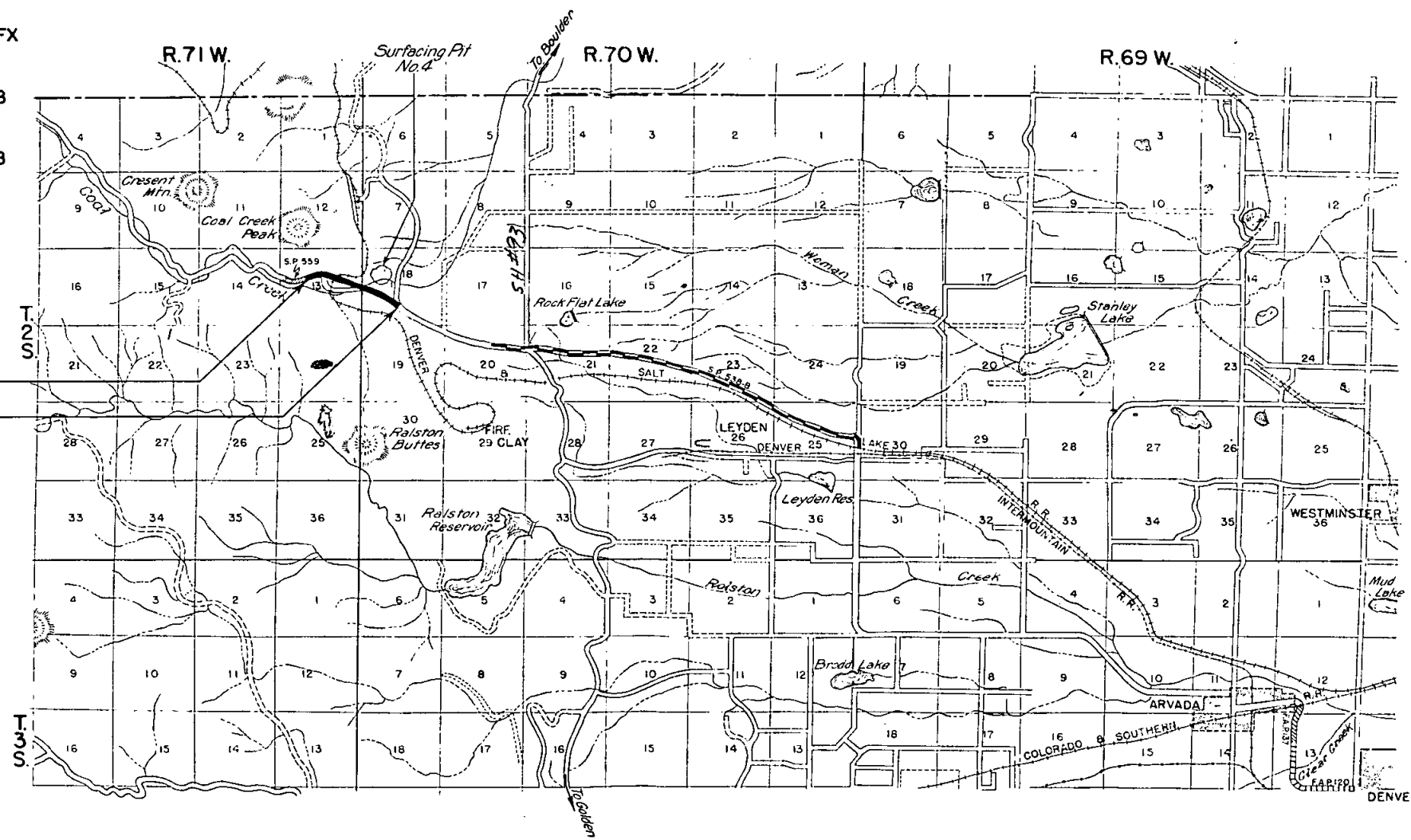
M 19 A

M 24 FX

M 1 B

M 2 B

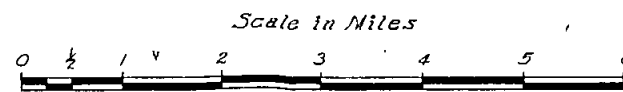
SCALES ON ORIGINAL TRACINGS
 ON PLAN 1 IN. = 100 FT.
 ON PROFILE 1 IN. = 100 FT. HORIZONTAL
 1 IN. = 10 FT. VERTICAL
 GRADE LINE ON PROFILE IS SHOWN AS GRADE OF FINISHED ROAD
 GROSS LENGTH OF PROJECT } 5980.7 FT. = 1.132 MI.
 NET LENGTH OF PROJECT }



STA. 0+00 BEGIN F.A.S. PROJ. NO. F.A.S. 137-B (I)
 STA. 59+78.4 END F.A.S. PROJ. NO. F.A.S. 137-B (I)

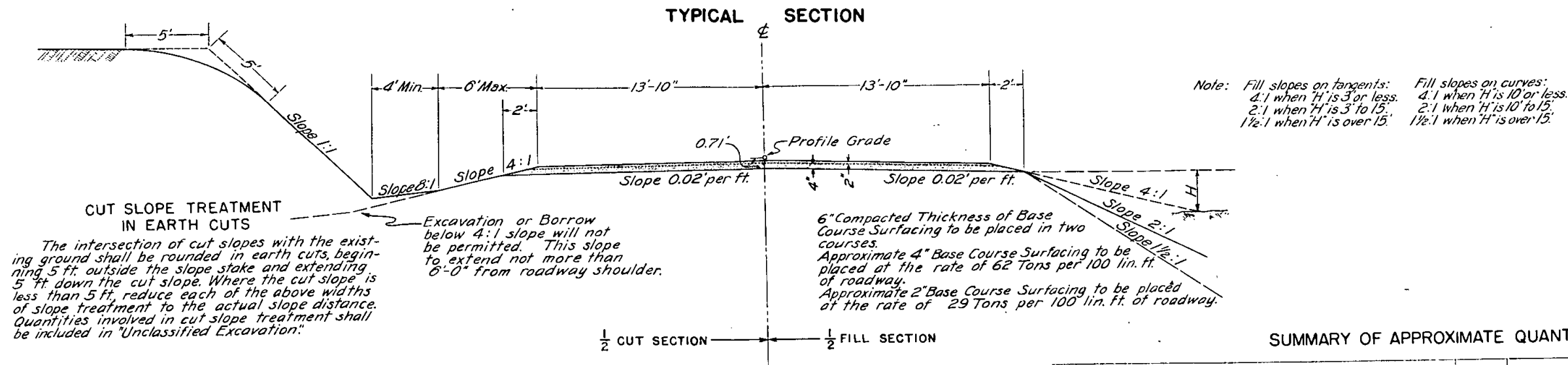
NOTE

*It is recommended that bidders on this project go over the plan details with one of the following field representatives of this department:
 Mr. E. E. Montgomery, Division Engineer, Denver, Colo.
 Mr. W. D. Wheeler, Instrumentman, Golden, Colo.*



RECOMMENDED FOR APPROVAL
J. E. Maloney
 ASSISTANT ENGINEER
 APPROVED
Chas. D. Hall
 STATE HIGHWAY ENGINEER
 RECOMMENDED FOR APPROVAL
 DIST. ENG. BUREAU PUBLIC ROADS
 RECOMMENDED FOR APPROVAL
 CHIEF ENG. BUREAU PUBLIC ROADS
 APPROVED
 DIRECTOR BUREAU PUBLIC ROADS

TYPICAL CROSS SECTION OF IMPROVEMENT AND SUMMARY OF QUANTITIES



SUMMARY OF APPROXIMATE QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	PROJECT TOTALS
10 a	Clearing and Grubbing Entire Project.	Lump Sum	•
11 a	Remove Disused Bridge Rt. Sta. 22+.	Lump Sum	•
11 b	Removal of 5 Structures.	Lump Sum	•
11 c	Remove and Reset Chicken House Rt. Sta. 41+.	Lump Sum	•
11 d	Removing and Resetting Mail Boxes.	Lump Sum	•
11 e	Remove Portions of Culvert, Sta. 1+.	Lump Sum	•
12 a	Remove Fence.	Lin. Ft.	5,100
13 c	Unclassified Excavation.	Cu. Yd.	36,500
14 a	Dry Rock Excavation (Structural)	Cu. Yd.	60
14 b	Dry Common Excavation (Structural)	Cu. Yd.	410
14 c	Wet Rock Excavation (Structural)	Cu. Yd.	40
14 d	Wet Common Excavation (Structural)	Cu. Yd.	180
18 a	Station Yard Overhaul	Sta. Yd.	3,100
26 a	Gravel or Crushed Rock Surfacing	Ton	5,700
26 c	Overhaul of Surfacing	Ton Mi.	100
46 a	Class "A" Concrete	Cu. Yd.	365
47	Reinforcing Steel	Lb.	38,200
49	Cement Rubble Masonry	Cu. Yd.	79
53 b	18" Corrugated Metal Culvert Pipe.	Lin. Ft.	154
53 c	24" Corrugated Metal Culvert Pipe.	Lin. Ft.	470
53 e	36" Corrugated Metal Culvert Pipe.	Lin. Ft.	50
53 x	8" Corrugated Metal Culvert Pipe.	Lin. Ft.	50
72 x	8" Perforated Cor. Metal Pipe Underdrain.	Lin. Ft.	30
74 x	Timber Guard Posts.	Each	56
76 b	B.W. Fence, Untreated Wooden Posts.	Lin. Ft.	11,700
76 g	Barbed Wire Gates.	Each	3
76 h	Driveway Gates.	Each	1
81 a	Project Markers.	Each	2
81 b	Right of Way Markers.	Each	13
	Force Account		
	Obliterating Old Road.	Lump Sum	•
	Raise Telephone Line Sta. 47+ (WORK BY R.R. CO. FORCES)	Lump Sum	•

GENERAL NOTES

This Project is to be constructed in conformity with the Standard Specifications of the Colorado State Highway Department, adopted June 1, 1937.

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 are subject to change by the Engineer to fit embankment requirements actually encountered on construction.

All poles encroaching on construction are to be moved by owners.

All side approach roads to this project shall be gravel surfaced with a 4" thickness of "Gravel or Crushed Rock Surfacing" extending approximately 30 ft. from the edge of the highway. Estimated tonnage of surfacing material required in this operation is shown on the List of Structures.

Overhaul will be paid for as measured along the center line of the Project except as otherwise noted on the Plans.

All corrugated metal pipe cross culverts are to be provided with one head-wall on the inlet end unless otherwise noted on the Plans.

All wire fences, including line posts, shall be placed approximately six (6) inches inside the highway right of way as shown on the Plans.

During construction of this Project, traffic will use the present traveled roadway. At all places on the project where new construction encroaches on the present traveled roadway, 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.

SURFACING PLAN

STA. TO STA.	APPROXIMATE QUANTITIES		OVERHAUL TON MILE	SOURCE
	TON	TON MILE		
0+00 - 45+00	4110	100		Pit No. 4 located in the N.W. 1/4 Sec. 18 T.2S., R. 70W. from the Northernly bank of Coal Creek Northernly, approximately 500 ft. Lt. Sta. 45+00
45+00 - 59+78.4	1355			
Road Approaches and Approaches to Project.	185			
TOTAL	5650	100		

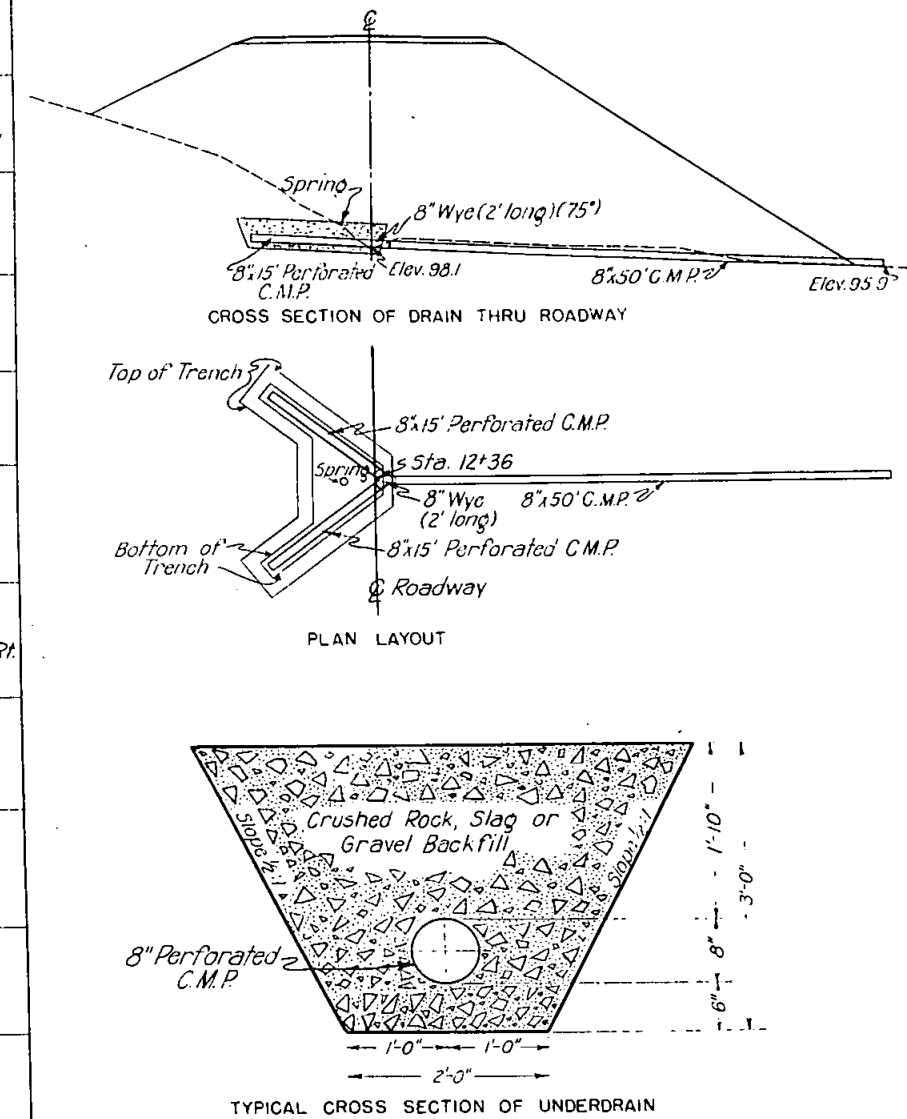
LIST OF STRUCTURES

FED. ROAD DIST. NO.	STATE	F. & S. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	137-B (1)	3	

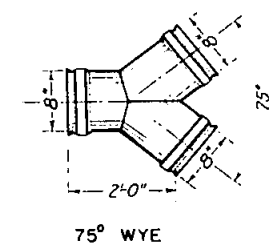
Revised 3-30-39 by B.R.C. changed Reinf. Steel Quantity Sta. 33+50

STATION TO STATION	DESCRIPTION	REMOVE STRUCT. NO.	EXCAVATION CU. YD.		STRUCTURAL EXCAVATION CU. YD.	CONCRETE CU. YD.		REINF. STEEL LBS.	CORRUGATED METAL CULVERT PIPE LIN. FT.				GR. OR CR. ROCK SURF. TON	CEMENT RUBBLE MASONRY CU. YD.	TIMBER GUARD POSTS EACH	MISCELLANEOUS
			UNCL.	EMB.		CL. "A"	CL. "B"		8"	18"	24"	36"				
0+00 to 1+44 5+00 to 10+50	Project Marker & Approach to Project 6'x28' Cattle Pass, Extend 6'-6" Lt. & 7'-0" Rt. (Skew 33°20') Details Sh. 6. Guard Posts Rt. 25' Center to Center.			100		90	7	975					50	57	23	1 Project Marker Rem. Portions of Culvert Sta. 1+
6+62 11+00 to 13+50 12+36	Cross Culvert, Interc. Hdwall & Inlet ditch, & Remove Structure. Guard Posts Rt. 50' Center to Center. Perforated C.M.P. Underdrain & cross culvert. Det. Sh. 3.	1	10			90				74				2.0	6	2-15' Lengths 8" Perforated C.M.P. Underdrain.
13+00 to 12+28 12+50 to 13+50 14+33.85	Remove Structure, Rt. Cross Culvert & Inlet Ditch. Guard Posts Lt. 50' Center to Center 37'-8" Deck Plate Girder Span.	1	5			10					90			2.05	3	
21+50 to 22+22 22+22 to 25+22	Cross Culvert, Intercepting Headwall. Remove Disused Bridge Rt. Road Approach & Side Drain Rt. Cross Culvert (Sk. 60°), Intercept.		50	800		15					66		30	2.4	1	Remove Disused Bridge Rt.
28+85	Hdwall; Inlet & Outlet Ditches & Guard Post Lt. Cross Culv. (Sk. 50°) Intercept. Hdwl. & Guard Post Lt.					30					74			2.4	1	
33+50 to 33+00 to 35+00 36+65 to 37+50	14'x14'x68'-5 1/2" C.B.C. (40° Skew) Det. Sh. 4 & 5 & Ch Imp Guard Posts Lt. & Rt. 50' Center to Center. Remove Structure, Rt. Cross Culvert Intercept. Hdwall. Inlet & Outlet ditches Gd. Post Rt.	1	200			295	358	37220							10	
39+00 to 43+50 40+75 to 41+ 43+15 to 44+70	Guard Posts Lt. 50' Center to Center. Road Approach & Side Drain Rt. Remove & Reset Chicken House Rt. Cross Culv. (Sk. 65°) & Outlet ditch Remove Structure, Lt.			10							26		15	2.05		Rem. & Reset Chicken House Rt.
46+62 50+50 to 56+	Cross Culv. (Sk. 75°), Inlet & Outlet ditches, Guard Post Rt. and Remove Structure Lt. Road Approach Rt. Road Approach Lt.	1	5			10					50			3.70	1	
57+40 59+78.4	Cross Culvert (Skew 72°30'), Intercepting headwall, & Inlet & Outlet Ditches. Project Marker & Approach to Project.		40	50		15					64		15 25	2.4		
				100									50			1 Project Marker
† For classification see sheets 4 & 6. Quantities not included in totals this sheet. * Structural Excavation is estimated to be 20% Rock & 80% Common. Each of which is estimated to be 20% Wet & 80% Dry.																
47+	Raise Telephone Line (Work by R.R. Co. Forces)															(FORCE ACCOUNT)
TOTALS		5	380	1060		280	365	38195	50	154	4.70	50	185	78.40	56	

DETAILS OF PERFORATED C.M.P. UNDERDRAIN STA. 12+



Price bid per lin. ft. of
Perforated C.M.P. Underdrain
to include Crushed Rock, Slag
or Gravel backfill.
Cost of 8"-75° Wye to be
included in the unit bid price
per lin. ft. of 8" Corrugated
Metal Pipe.



Item No. 14 Excavation (Structural)
53x 8" Corrugated Metal Culvert Pipe
72x 8" Perforated Corr. Metal Pipe Underdrain

20 cu. yds.
50 lin. ft.
30 lin. ft.

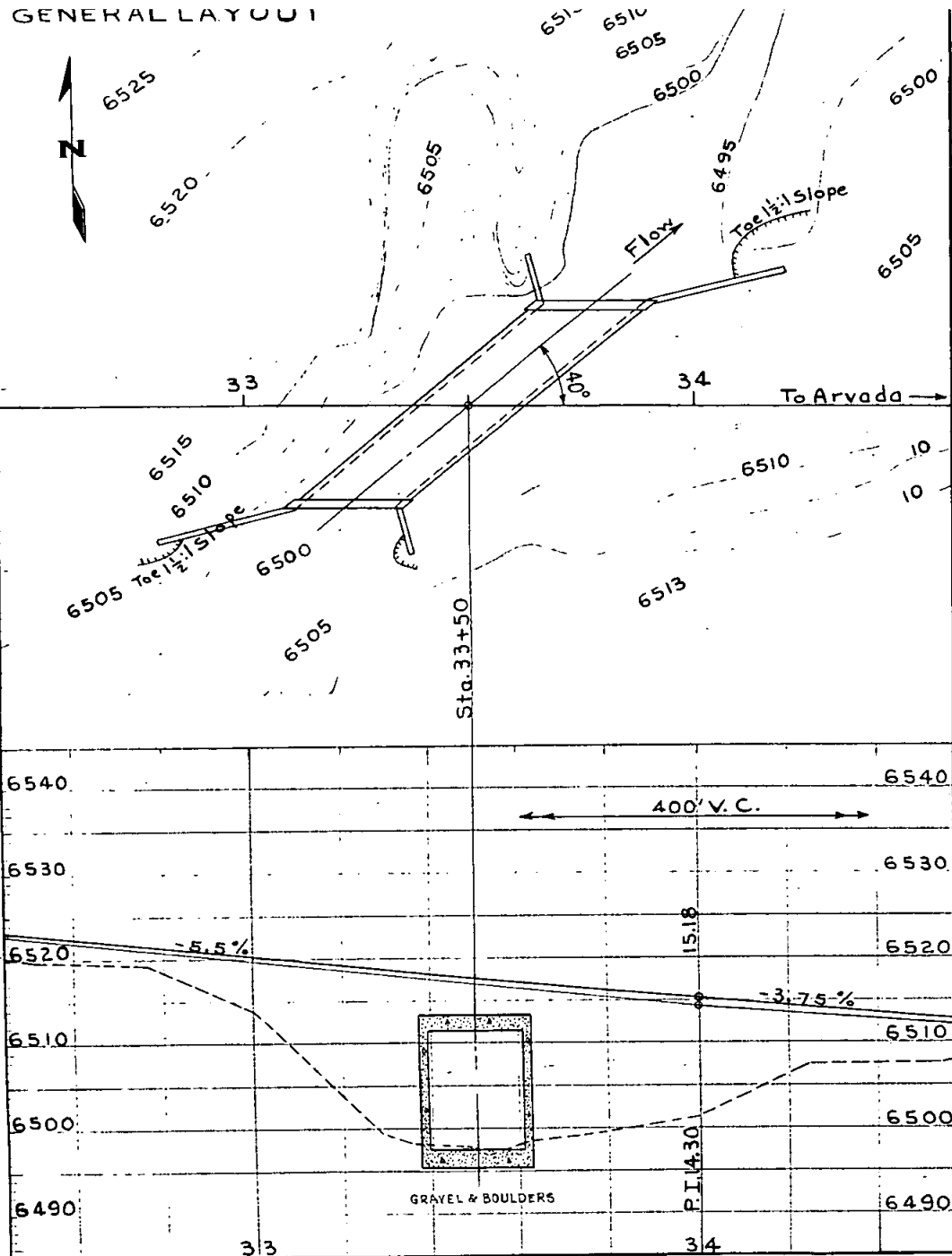
FENCING REQUIREMENTS

STATION TO STATION	SIDE	REMOVE FENCE BUILDUP FENCE		GATES NO.	
		LIN. FT.	LIN. FT.	BARBED WIRE	DRIVEWAY
0+00 to 13+40	L & R	1350			
0+00 to 12+70	R	1410			
0+00 to 13+38	L		1350		
0+00 to 13+42	R		1360		
13+40	X	140			
15+40	X	140			
15+42 to 30+00	L		1470		
15+45 to 30+00	R		1470		
30+00 to 59+78	L		3010		
30+00 to 59+78	R		3020		
34+85 to 41+75	L & R	710			1
40+75	R		300		
43+00	X				1
49+00	L				1
50+50	R				
52+45 to 59+78	L & R	750			
57+45 to 59+78	L	240			1
58+20	R				
TOTALS		5040	11680	3	1

R.O.W. MARKERS

STATION	SIDE	NO.
4+06 ²	R	1
5+53 ²	R	1
9+60	R	1
9+70	L	1
16+00	R & L	2
17+07 ²	R & L	2
34+00	R	1
35+00	R	1
36+26	L	1
36+57	R	1
32+40	R	1
TOTAL		13

GENERAL LAYOUT



SUMMARY OF QUANTITIES

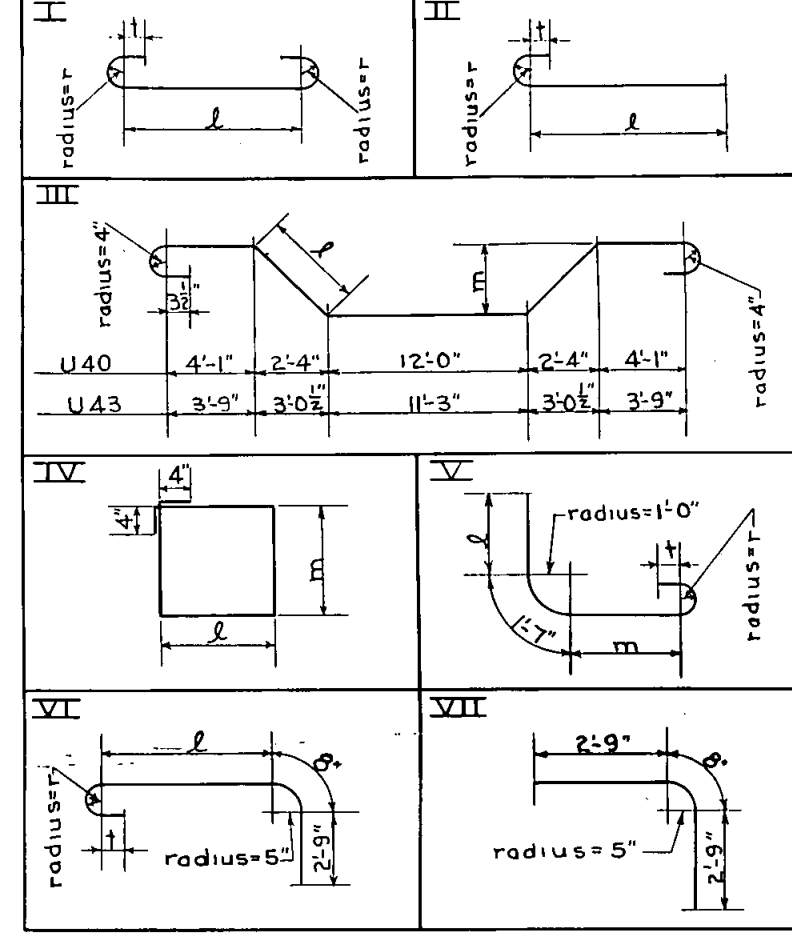
ITEM NO.	DESCRIPTION	UNIT	TOTAL
14a	Dry Rock Structural Excavation	Cu.Yd.	10
14b	Dry Common Structural Excavation	Cu.Yd.	130
14c	Wet Rock	"	25
14d	Wet Common	"	130
46a	Class 'A' Concrete	Cu.Yd.	358
47	Reinforcing Steel	Lbs.	37,220
13c	Unclassified Excavation	Cu.Yd.	200

BAR LIST FOR ENTIRE STRUCTURE

MARK	SIZE	NO. REQ.	LENGTH	TYPE	ℓ	m	r	t	MARK	SIZE	NO. REQ.	LENGTH	TYPE	ℓ	m	r	t
U1	7/8"	133	17'-7"	II	15'-3"		3 1/2"	3"	C1	7/8"	2	21'-7"	V	15'-11"	2'-11"	3 1/2"	3"
U2	1"	121	17'-10"	II	15'-2"		4"	3 1/2"	C2	7/8"	2	20'-8"	V	15'-2"	2'-9"	3 1/2"	3"
U3 TO U38	7/8"	4 E.A.	4'-11" TO 16'-5 3/4" BY 4 1/4"	II	2'-11" TO 15'-3 3/4"		3 1/2"	3"	C3	7/8"	2	19'-9"	V	14'-5"	2'-7"	3 1/2"	3"
U39	3/4"	8	27'-0"	II	25'-0"		3"	2 1/2"	C4	3/4"	4	17'-8"	V	12'-10"	2'-3"	3"	2 1/2"
U40	1"	4	29'-5"	III	3'-3 1/2"	2'-4"			C5	5/8"	4	15'-6"	V	11'-2"	1'-11"	2 1/2"	2"
U41	1 1/8"	12	27'-9"	III	24'-9"		4 1/2"	4"	C6	1/2"	4	13'-6"	V	9'-7"	1'-8"	2"	2"
U42	1/2"	50	8'-8"	IV	2'-6"	1'-6"			C7	1/2"	6	11'-0"	V	7'-7"	1'-2"	2"	2"
U43	1"	4	30'-3"	III	4'-5"	3'-2 1/2"			C8	7/8"	6	10'-11"	V	5'-8"	2'-6"	3 1/2"	3"
U44	1/2"	50	10'-5"	IV	3'-4 1/2"	1'-6"			C9	3/4"	4	9'-0"	V	4'-3"	2'-2"	3"	2 1/2"
W1	3/4"	326	18'-5"	II	16'-5"		3"	2 1/2"	C10	4"	4	8'-0"	V	3'-9"	1'-10"	2 1/2"	2"
W2	7/8"	24	17'-8"	II	16'-6"		3 1/2"	3"	C11	1/2"	6	6'-11"	V	3'-4"	1'-4"	2"	2"
W3	1/2"	56	8'-5"	IV	2'-9"	1'-1 1/2"			C12	1/2"	14	10'-6"					
VI	1/2"	224	20'-1"						C13			1'-3" TO 10'-0"					
VI	1/2"	224	20'-1"						C20			BY 1'-3"					
B1	1"	4	21'-9"	V	15'-10"	3'-0"	4"	3 1/2"									
B2	1"	4	20'-10"	V	15'-2"	2'-9"	4"	3 1/2"									
B3	7/8"	4	19'-10"	V	14'-5"	2'-8"	3 1/2"	3"									
B4	7/8"	6	18'-6"	V	13'-4"	2'-5"	3 1/2"	3"									
B5	3/4"	4	17'-5"	V	12'-7"	2'-3"	3"	2 1/2"									
B6	3/4"	4	16'-6"	V	11'-10"	2'-1"	3"	2 1/2"									
B7	5/8"	6	14'-11"	V	10'-8"	1'-10"	2 1/2"	2"	R1 TO R6	1/2"	2 E.A.	7'-6" TO 8'-11 1/2" BY 3 1/2"	VI	3'-5" TO 4'-10 1/2" BY 3 1/2"		2"	2"
B8	5/8"	6	13'-7"	V	9'-7"	1'-7"	2 1/2"	2"									
B9	1/2"	4	12'-7"	V	8'-11"	1'-5"	2"	2"									
B10	1"	8	13'-10"	V	8'-2"	2'-9"	4"	3 1/2"	R7 TO R11	5/8"	2 E.A.	9'-4" TO 10'-6" BY 3 1/2"	VI	5'-1" TO 6'-3" BY 3 1/2"		2 1/2"	2"
B11	7/8"	8	12'-7"	V	7'-4"	2'-6"	3 1/2"	3"									
B12	3/4"	10	11'-4"	V	6'-8"	2'-1"	3"	2 1/2"									
B13	5/8"	14	9'-7"	V	5'-8"	1'-6"	2 1/2"	2"									
B14	1"	8	10'-2"	V	4'-6"	2'-9"	4"	3 1/2"									
B15	7/8"	8	9'-6"	V	4'-4"	2'-5"	3 1/2"	3"									
B16	3/4"	10	8'-6"	V	3'-11"	2'-0"	3"	2 1/2"									
B17	5/8"	12	7'-3"	V	3'-4"	1'-6"	2 1/2"	2"									
B18	1/2"	18	29'-6"														
B19	1/2"	2	25'-2"														
B20	1/2"	2	21'-2"														
B21	1/2"	2	17'-2"														
B22	1/2"	2	13'-2"														
B23	1/2"	2	9'-1"														
B24	1/2"	2	5'-1"														
F1	1/2"	6	7'-11"	VI	3'-10"		2"	2"									
F2	1/2"	6	8'-2"	VI	4'-1"		2"	2"									
F3	5/8"	8	8'-8"	VI	4'-5"		2 1/2"	2"									
F4	5/8"	8	9'-0"	VI	4'-9"		2 1/2"	2"									
F5	5/8"	8	9'-4"	VI	5'-1"		2 1/2"	2"									
F6	3/4"	8	9'-10"	VI	5'-5"		3"	2 1/2"									
F7	3/4"	8	10'-2"	VI	5'-9"		3"	2 1/2"									
F8	3/4"	8	10'-7"	VI	6'-2"		3"	2 1/2"									
F9	7/8"	8	11'-1"	VI	6'-6"		3 1/2"	3"									
F10	7/8"	8	11'-5"	VI	6'-10"		3 1/2"	3"									
F11	7/8"	6	6'-4"	II	5'-2"		3 1/2"	3"									
F12	5/8"	10	4'-9"	II	3'-11"		2 1/2"	2"									
F13	5/8"	10	5'-1"	II	4'-3"		2 1/2"	2"									
F14	5/8"	8	5'-5"	II	4'-7"		2 1/2"	2"									
F15	5/8"	8	5'-9"	II	4'-11"		2 1/2"	2"									
F16	5/8"	8	6'-1"	II	5'-3"		2 1/2"	2"									
F17	1"	8	8'-7"	II	7'-3"		4"	3 1/2"									
F18	1/2"	24	38'-0"														
F19	1/2"	6	6'-2"	VII													

333 Lin. Ft. 1/8" Bars @ 4.303 Lbs. per Ft. = 1433 LBS.
 239 " " 1" " @ 3.400 " " " = 813 "
 2589 " " 1 1/8" " @ 2.670 " " " = 6913 "
 5033 " " 7/8" " @ 2.044 " " " = 10287 "
 6995 " " 3/4" " @ 1.502 " " " = 10508 "
 1124 " " 5/8" " @ 1.043 " " " = 1172 "
 8566 " " 1/2" " @ 0.668 " " " = 5722 "
 1% Over run = 372 "
TOTAL = 37,220 LBS.

BENDING DIAGRAMS



GENERAL NOTES

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 SHIPLAP OR TONGUE AND GROOVE LUMBER S3S UNLESS FACED WITH PANEL 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 REDESIGN IS NECESSARY.
 POURING FOOTINGS MONOLITHICALLY WITH FLOOR OF BOX.
 POURING WALLS INDEPENDENT OF SIDES OF BOX.

REFERENCE DRAWINGS

Sheet No. 5 Details of 14'x14' Concrete Box Culvert

LOADING DATA.
 LIVE LOAD = 2.6 LBS. PER SQ. FT.
 DEAD LOAD = FILL AT 108 LBS PER CU. FT.

DESIGNING DATA.
 A.A.S.H.O. 1935 EXCEPT CONCRETE UNIT STRESSES PER A.A.S.H.O. AUG. 1929

COLORADO STATE HIGHWAY DEPARTMENT
 GENERAL LAYOUT, SUMMARY OF QUANTITIES & BAR LIST FOR 14'x14' CONC. BOX CULVERT
 Across COAL CREEK
 Sta. 33+50
 Near ARVADA Sec. 13 T. 25 R. 11W
 Designed by B. R. Approved by P. O. Bailey
 Made by H. A. L. F. Bridge Engineer
 Checked by _____ Date: Sept 17, 1938

STRUCTURE NO. E-15-B

rd 6x6x28' Cattle Pass
7'-6" R1 (Skew 83°20')
+6 Rem. Portions of
vert.
5+00 to 10+50 ~ Req'd
timber Guard Posts,
50-ft. centers, Rt.

N. E. 1/4 SEC. 13

NOTE: Roadway Ditch on Lt to
be graded from Sta.
14+00 to drain into C.M.P.
cross culvert at Sta. 12+28.

Sta. 12+28 ~ Req'd 24"x90'
C.M.P. Cross Culv. & 5 cu. yds.
Uncl. Excav. for inlet ditch.

Sta. 21+50 ~ Req'd 24"x66' C.M.P.
Cross Culv. with Intercepting
Headwall.

FED. ROAD DIST. NO.	STATE	F. A. S. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	137-B (I)	12	

N. E. 1/4 SEC. 13

TWP. 2 S. RANGE 70 W.
TWP. 2 S. RANGE 71 W.

N. W. 1/4 SEC. 18

50 ~ Req'd 14"x14"x68'-5 1/2" C.B.C.
(20° Skew). Details Sheets 4 & 5.
200 Cu. Yds. Uncl. Excav. for
channel improvement.
3+00 - 35+00 ~ Req'd 5 guard posts
Rt. spaced 50' center

Sta. 28+85 ~ Req'd 24"x74' C.M.P.
Cross Culv. (Sk. 50°) with Intercepting
Hdwall and 1 Guard Post Lt.

Sta. 25+22 ~ Req'd 24"x60' C.M.P.
Cross Culv. (Sk. 60°) with Intercepting
Hdwall, 50 cu. yds. Uncl. Excav.
for Inlet & Outlet ditches and 1
Guard Post Lt.

Sta. 22+ ~ Req'd 800 cu. yds. Embank.
& 24"x50' C.M.P. side drain for road
approach Rt.

Sta. 12+50 to 13+50
Req'd 3 Timber Guard
Posts, 50-ft. centers,
Lt.

Sta. 14+33.85 ~
Req'd 37'-8" Deck Plate Girder Span
with Gravity Conc. Abuts, including Rail-
road fills and trimming, to be done
by the Denver & Salt Lake Railroad.
Grading work for the highway, includ-
ing prism of the underpass, to be done
by the Highway Contractor.

Sta. 12+36 ~ Req'd 2-15 ft
lengths 8" Perforated C.M.P.
Underdrain & 8"x50' C.M.P.
cross culvert. (Details
Sheet 3)

Sta. 11+00 to 13+50 ~
Req'd 6 Timber Guard
Posts, 50-ft. centers, Rt.

$\Delta = 60^{\circ}23' L$
 $D = 14'$
 $T = 238.1'$
 $L = 431.3'$
 $R = 409.3'$

24"x74' C.M.P.
Intercepting
Class. Excav. for
P. Rt.

Sta. 13+00 ~ Rem.
18"x34' C.M.P. Culv. Rt.

Rec No 90006864
1/24/90
to County of Jeff.

Sta. 22+ Rem. Disused
Bridge Rt.

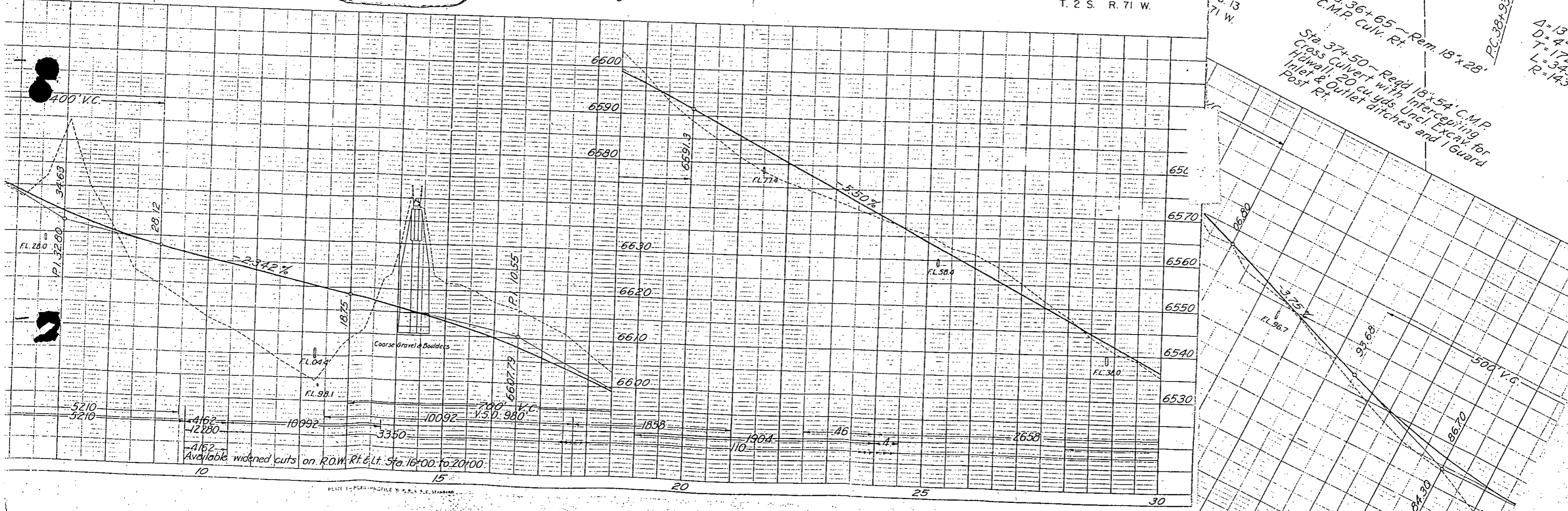
$\Delta = 23^{\circ}04' R$
 $D = 1^{\circ}30'$
 $T = 779.5'$
 $L = 1537.8'$
 $R = 3820'$

S. E. 1/4 SEC. 13
T. 2 S. R. 71 W.

Sta. 36+65 ~ Rem 18"x28'
C.M.P. Culv. Rt.

Sta. 37+50 ~ Req'd 18"x54' C.M.P.
Cross Culvert with Intercepting
Hdwall, 20 cu. yds. Uncl. Excav. for
Inlet & Outlet ditches and 1 Guard
Post Rt.

$\Delta = 13^{\circ}$
 $D = 4'$
 $T = 174'$
 $L = 343'$
 $R = 143'$



N. W. 1/4 SEC. 13
T. 2 S. R. 71 W.
NOTE: All poles encroaching on construction are to be moved by owners. Gates, fencing requirements, and ROW markers are tabulated on Sheet No. 3.

Sta. 0+00 ~ Req'd 100 cu. yds. Embank. for appr. to project & Project Marker.

Sta. 1+44 ~ Req'd extend 6'x6'x28' Cattle Pass 6'-6" Lt. and 7'-6" Rt. (Skew 83°20'). Details Sheet 6. Rem. Portions of Present Culvert.
Sta. 5+00 to 10+50 ~ Req'd 23 Timber Guard Posts, 25-ft. centers, Rt.

N. E. 1/4 SEC. 13

NOTE: Roadway Ditch on Lt. to be graded from Sta. 14+00 to drain into C.M.P. cross culvert at Sta. 12+28.

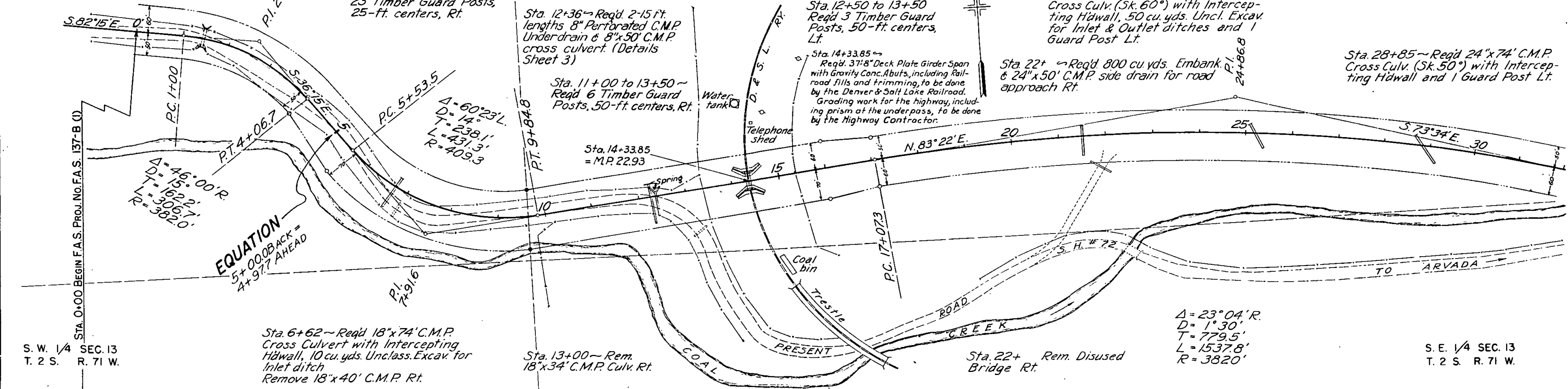
Sta. 12+28 ~ Req'd 24"x90' C.M.P. Cross Culv. & 5 cu. yds. Uncl. Excav. for inlet ditch.

Sta. 21+50 ~ Req'd 24"x66' C.M.P. Cross Culv. with Intercepting Headwall.

Sta. 25+22 ~ Req'd 24"x60' C.M.P. Cross Culv. (Sk. 60°) with Intercepting Hdwall, 50 cu. yds. Uncl. Excav. for Inlet & Outlet ditches and 1 Guard Post Lt.

Sta. 28+85 ~ Req'd 24"x74' C.M.P. Cross Culv. (Sk. 50°) with Intercepting Hdwall and 1 Guard Post Lt.

FED. ROAD DIST. NO.	STATE	F. A. S. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLD.	137-B (I)	12	



S. W. 1/4 SEC. 13
T. 2 S. R. 71 W.

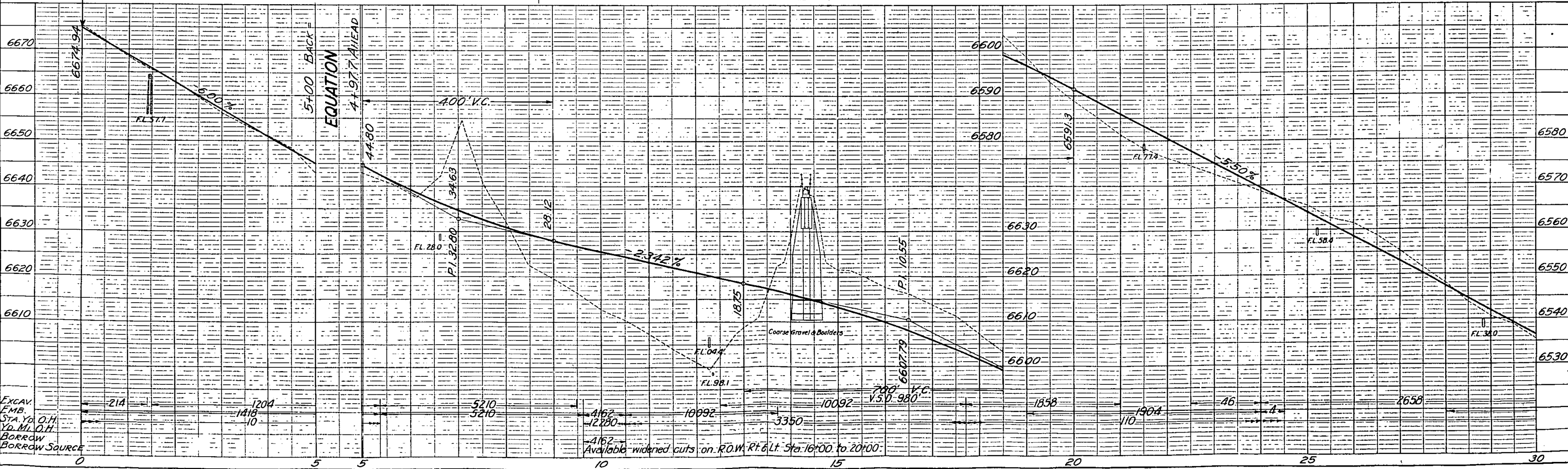
Sta. 6+62 ~ Req'd 18"x74' C.M.P. Cross Culvert with Intercepting Hdwall, 10 cu. yds. Uncl. Excav. for Inlet ditch. Remove 18"x40' C.M.P. Rt.

Sta. 13+00 ~ Rem. 18"x34' C.M.P. Culv. Rt.

Sta. 22+ ~ Rem. Disused Bridge Rt.

Δ=23°04'R
D=1°30'
T=779.5'
L=1537.8'
R=3820'

S. E. 1/4 SEC. 13
T. 2 S. R. 71 W.



N. W. 1/4 SEC. 13
T. 2 S. R. 71 W.
NOTE: All poles encroaching on construction are to be moved by owners. Gates, fencing requirements, and ROW markers are tabulated on Sheet No. 3.

Sta. 0+00 ~ Req'd 100 cu. yds. Embank. for appr. to project & Project Marker.

Sta. 1+44 ~ Req'd extend 6'x6'x28' Cattle Pass 6'-6" Lt and 7'-6" Rt (Skew 83°20'). Details Sheet 6. Rem. Portions of Present Culvert
Sta. 5+00 to 10+50 ~ Req'd 23 Timber Guard Posts, 25-ft. centers, Rt.

N. E. 1/4 SEC. 13
NOTE: Roadway Ditch on Lt. to be graded from Sta. 14+00 to drain into C.M.P. cross culvert at Sta. 12+28.

Sta. 12+28 ~ Req'd 24'x90' C.M.P. Cross Culv. & 5 cu. yds. Uncl. Excav. for inlet ditch.

Sta. 21+50 ~ Req'd 24'x66' C.M.P. Cross Culv. with Intercepting Headwall.

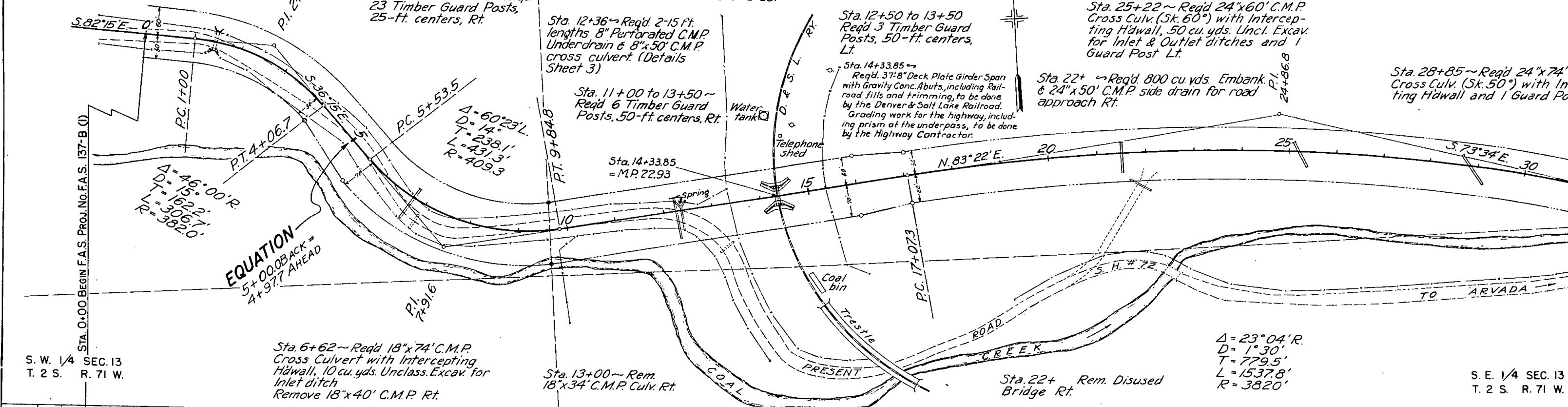
FED. ROAD DIST. NO.	STATE	F. A. S. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	137-B (1)	12	12

Sta. 25+22 ~ Req'd 24'x60' C.M.P. Cross Culv. (Sk. 60°) with Intercepting Hdwall, 50 cu. yds. Uncl. Excav. for Inlet & Outlet ditches and 1 Guard Post Lt.

Sta. 22+ ~ Req'd 800 cu. yds. Embank. & 24'x50' C.M.P. side drain for road approach Rt.

Sta. 28+85 ~ Req'd 24'x74' Cross Culv. (Sk. 50°) with Intercepting Hdwall and 1 Guard Post Lt.

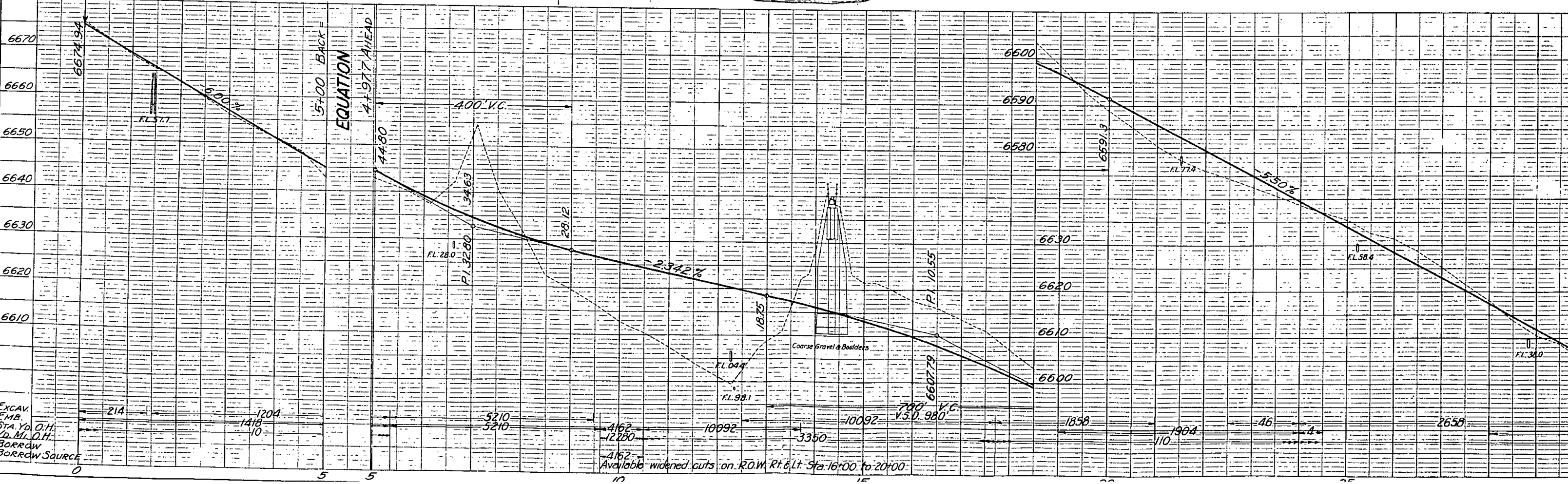
DATE	BY	REVISION



S. W. 1/4 SEC. 13
T. 2 S. R. 71 W.

S. E. 1/4 SEC. 13
T. 2 S. R. 71 W.

DATE	BY	REVISION



EXCAV. F.M.B. STA. YD. O.H. Yd. M.L. O.H. BORROW BORROW SOURCE

Available widened cuts on R.O.W. Rt. 6 Lt. Sta. 16+00. to 20+00.

N.E. 1/4 SEC. 13

N.W. 1/4 SEC. 18

FED. ROAD DIST. NO.	STATE	F.A.S. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	137-B (1)	13	

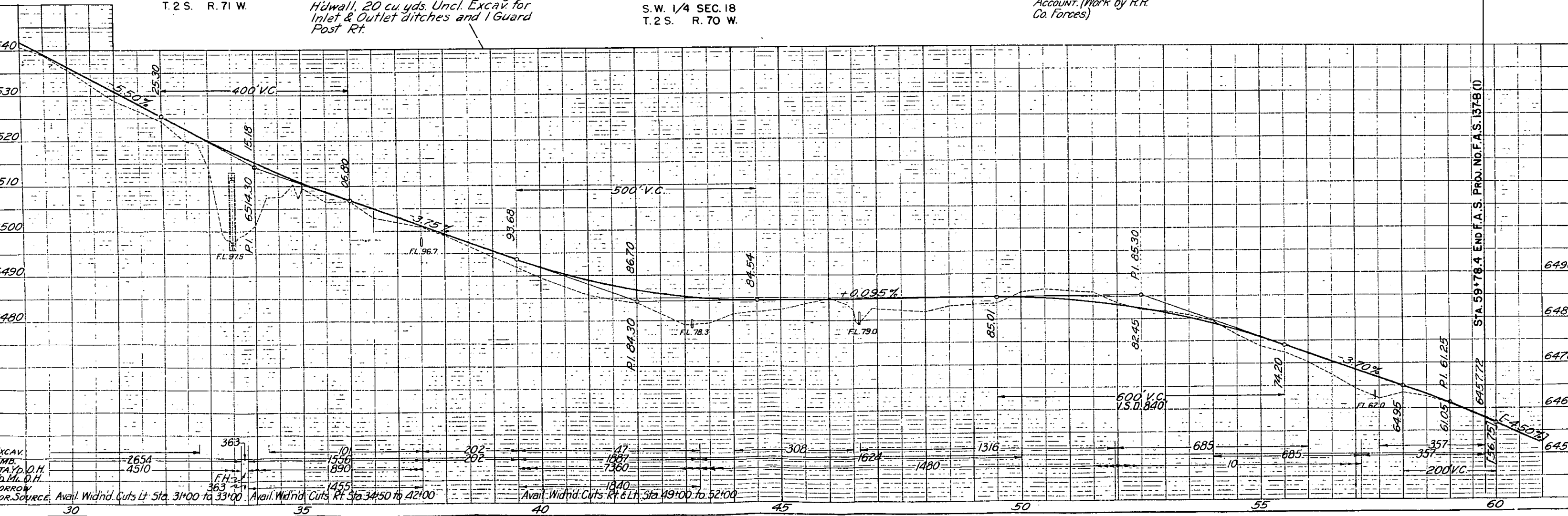
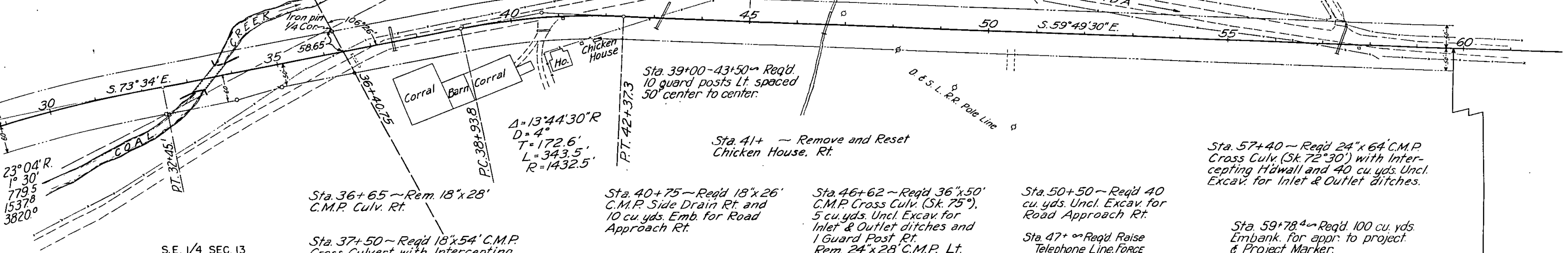
TWP. 2 S. RANGE 70 W.
TWP. 2 S. RANGE 71 W.

Sta. 33+50 ~ Req'd 14'x14'x68'-5 1/2" C.B.C. (40° Skew). Details Sheets 4 & 5. & 200 Cu. Yds. Uncl. Excav. for Channel Improvement.
Sta. 33+00 - 35+00 ~ Req'd 5 guard posts Lt. & 5 guard posts Rt. spaced 50' center to center.

Sta. 43+15 ~ Req'd 24"x66' C.M.P. Cross Culv. (Sk. 65°) and 10 cu. yds. Uncl. Excav. for Outlet ditch.

Sta. 44+70 ~ Remove 18"x28' C.M.P. Lt.

Sta. 56+ ~ Req'd 50 cu. yds. Embank. for Rd. Appr. Lt.



EXCAV. EMB. STA. TO O.H. YD. TO O.H. BORROW SOURCE

Avail. Width Cuts Lt. Sta. 31+00 to 33+00

Avail. Width Cuts Rt. Sta. 34+50 to 42+00

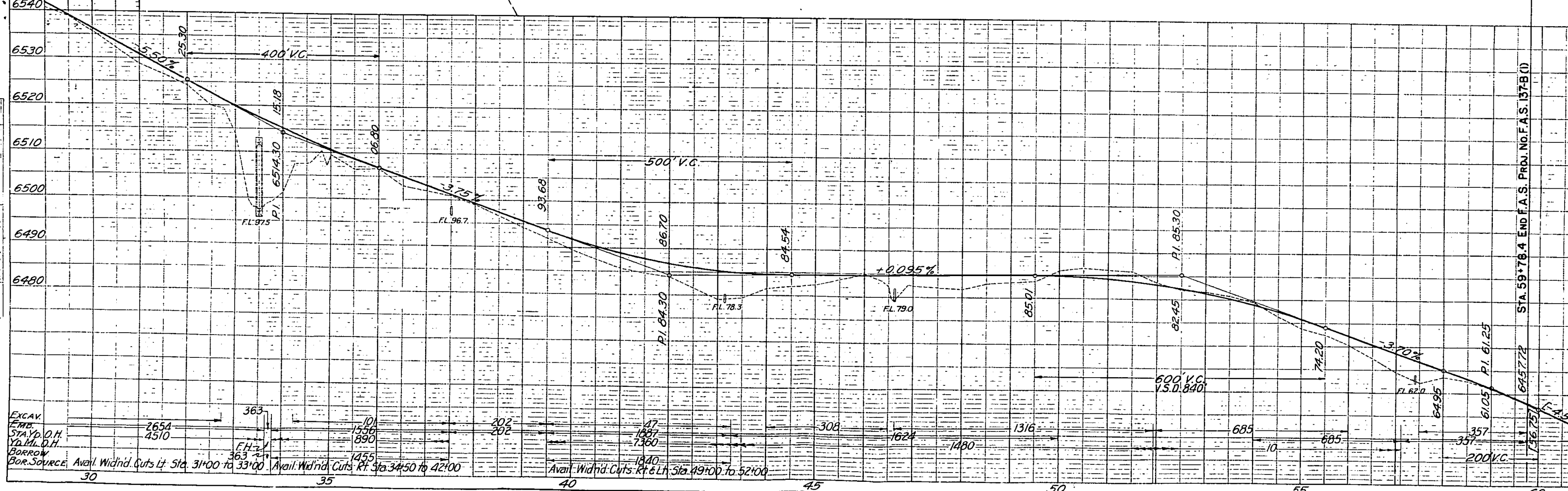
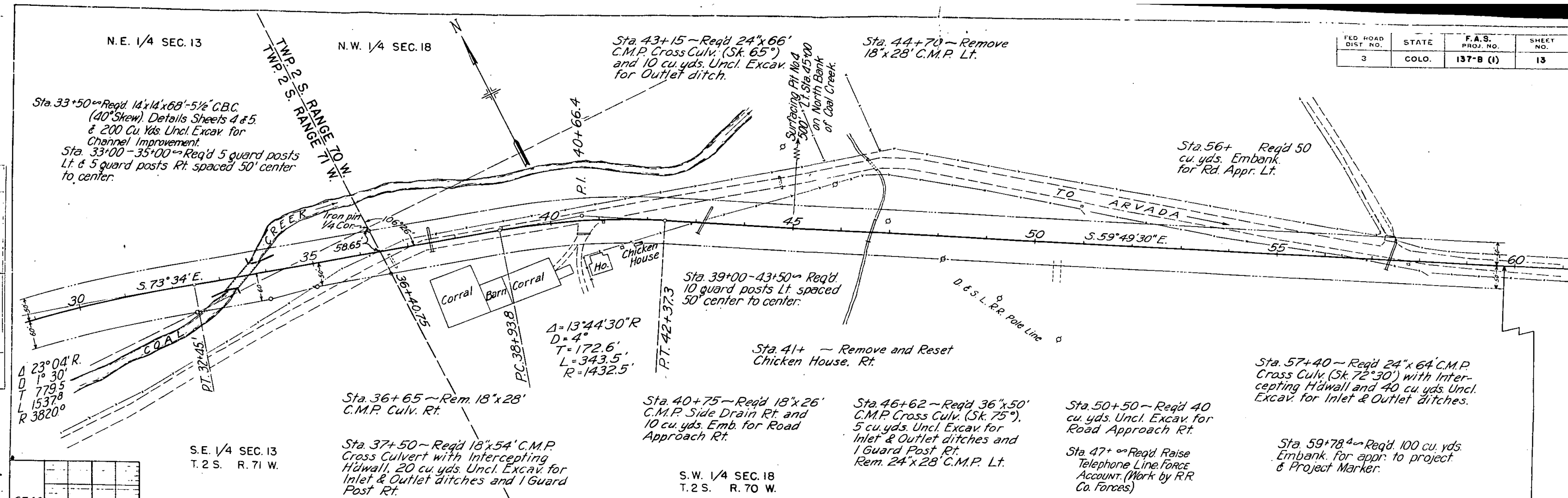
Avail. Width Cuts Rt. & Lt. Sta. 49+00 to 52+00

STA. 59+78.4 END F.A.S. PROJ. NO. F.A.S. 137-B (1)

FED. ROAD DIST. NO.	STATE	F.A.S. PROJ. NO.	SHEET NO.
3	COLO.	137-B (1)	13

PLAN	DATE

PROFILE	DATE



STA. 59+78.4 END F.A.S. PROJ. NO. F.A.S. 137-B (1)