



COLORADO
Department of
Transportation

DOCUMENT SEPARATOR SHEET

REGION 5 – JUNE 2017 CONVERSION

To be placed at the beginning of each separator sheet.



r500001555

Description:

ROW Plans 11X17

Route # and Mile Points:

US 24

Originating Office:

ROW/Survey

File Name:

F 024-1(8)_ROW(.PDF)

Box Location:

25 of 38

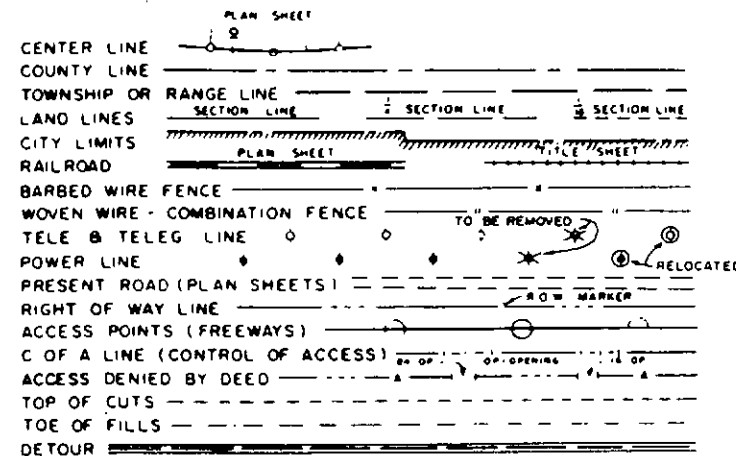
STATE DEPARTMENT OF HIGHWAYS

DIVISION OF HIGHWAYS—STATE OF COLORADO

ROW Purchased
Under Projects
F001-3(19) &
F001-2(12)

FEDERAL ROAD DISTRICT NO.	DIVISION	PROJECT NO.	SHEET NO.
9	COLORADO	F024-1(8) & F285-3(1)	1

CONVENTIONAL SIGNS



INDEX OF SHEETS

SHEET NO

- 1 TITLE AND SKETCH MAP AND TABULATION OF LENGTH AND DESIGN DATA
- 2 TYPICAL SECTION AND GENERAL NOTES
- 3 - 4 SUMMARY OF APPROXIMATE QUANTITIES
- 5 - 6 STRUCTURE QUANTITIES
- 7 TABULATIONS: GUARD RAIL, SURFACING, ROW MARKERS, DELINEATORS AND FENCING
- 8 PIT LOCATION MAP AND DETAILS OF DROP BOX & REMOVAL OF HEADWALL
- 9 DETAILS: STILE, DIVISION BOX, INLET BASIN AND CONCRETE LINED DITCH
- 10 DETAILS OF INTERSECTION (JCT SH 285 & SH 24)
- 11 - 12 DETAILS OF SIGN BRIDGE, STA. 184+ SHEET NO. 12 DELETED
- 13 S-614-1A STANDARD OVERHEAD SIGNS, SIGN BRIDGES, STRUCTURAL FRAME MEMBERS (SPECIAL FOR THIS PROJECT)
- 14 - 19 ALIGNMENT PLAN & PROFILE
- 20 SUMMARY OF EARTHWORK QUANTITIES
- 21 - 29 STRUCTURE CROSS SECTIONS
- 30 - 49 ROADWAY CROSS SECTIONS

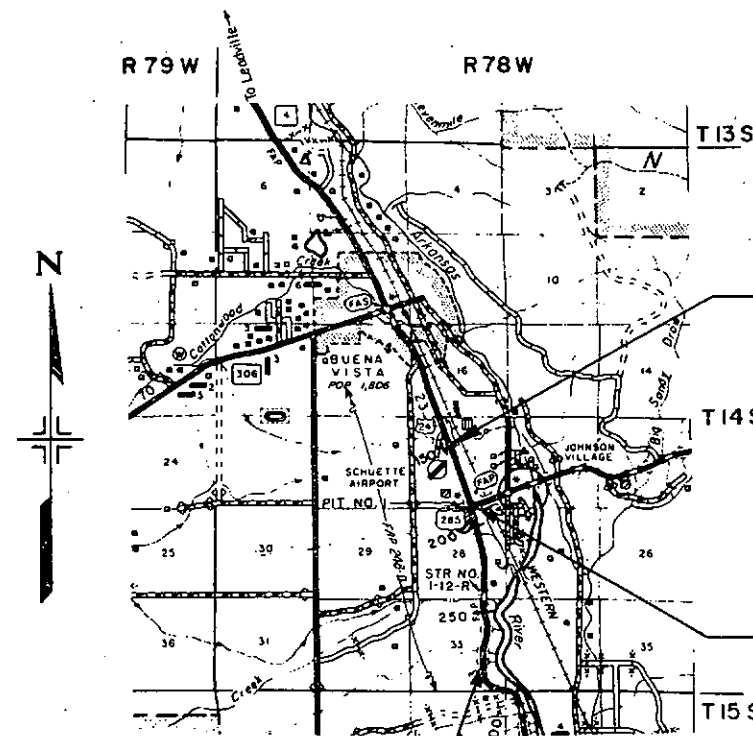
PLAN AND PROFILE OF PROPOSED FEDERAL AID PROJECT NO. F024-1(8) F285-3(1) STATE HIGHWAY NO. 24 & 285 CHAFFEE COUNTY

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 AND DESIGN DATA

STATION	ROADWAY F024-1(8) LIN. FT.	ROADWAY F285-3(1) LIN. FT.	
149+80.7 BEGIN F024-1(8)= 98+13.7 ON FAP 248-D	966.7		
159+47.4 BK. = EQUATION 159+47.0 AH.	2,847.9		
187+94.9 = END F024-1(8)= BEG. F285-3(1)		3,181.1	
219+76.0 BK. = EQUATION 219+64.3 AH.		2,785.9	
247+50.2 BK. = EQUATION 247+61.6 AH.		2,930.8	
276+92.4 END F285-3(1)= 276+92.4 BEGIN F001-3(19)= LT. OF STA. 228+39.3 ON FAP 248-D.			
TOTALS	3,814.6	8,897.8	
SUMMARY			
F024-1(8) ROADWAY (NET & GROSS LENGTH)	3,814.6	0.722	
F285-3(1) ROADWAY (NET & GROSS LENGTH)	8,897.8	1.685	
		2.407	
DESIGN DATA			
MAXIMUM DEGREE OF CURVE		3°00'	
MAXIMUM GRADE		1.98%	
MINIMUM S.S.D. HORIZONTAL		> 1300'	
MINIMUM S.S.D. VERTICAL		665'	
MAXIMUM DESIGN SPEED		70 M.P.H.	
1969 DESIGN TRAFFIC VOLUME		AOT=4300 DHW=645	



Sta. 276+92.4 End F285-3(1)=
BEGIN F001-3(19)=
Lt. of Sta. 228+39.3 on FAP 248-D

Sta. 149+80.7 Begin F024-1(8)=
End F001-2(12)=
98+13.7 on FAP 248-D

Sta. 187+94.9 End F024-1(8)=
BEGIN F285-3(1)
Sta. 138+31 on FAP 248-D

- S-614-2A STANDARD OVERHEAD SIGNS, SIGN BRIDGES, MISCELLANEOUS DETAILS 3-11-69
S-614-12A OVERHEAD SIGN POSTS - TYPES 1-5 THRU VII-S 3-11-69
S-614-14A ATTACHMENT DETAILS FOR OVERHEAD SIGN PANELS 3-11-69
S-614-15A LIGHT BRACKET AND FIXTURE MOUNTING DETAILS 3-11-69
S-614-16A FLUORESCENT SIGN LIGHTING EQUIPMENT 7-15-68
S-614-17A OVERHEAD SIGNS, INSTRUCTIONS AND EXAMPLES 3-11-69

SEE SPECIAL PROVISIONS FOR
NOTICE TO BIDDERS

DIVISION OF HIGHWAYS	
APPROVED:	DATE
<i>Chas. E. Shumate</i>	7-18-69
CHIEF ENGINEER	
By: <i>J. L. Bower</i>	Deputy Chief Eng.
DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION BUREAU OF PUBLIC ROADS	
APPROVED:	DATE
DIVISION ENGINEER	

M.E.V.

DESIGN BASED ON

18" EDLA = 64
Regional Factor = 1.0
Serviceability Index = 2.5
H.B.P. Strength Coef. = 0.40
A.B.C. CL. 6 Strength Coef. = 0.12

FEDERAL ROAD REGION NO.	DISTRICT	PROJ. NO.	SHEET NO.	TOTAL SHEETS
8	COLORADO	F 024-1(8) F 285-3(1)	7	

SURFACING PLAN

STATION TO STATION	SOURCE	QUANTITY - TONS						HAUL - TON MILE					
		BASE COURSE		SURFACE COURSES - HOT BITUMINOUS PAVEMENT				BASE COURSE		SURFACE COURSES - HOT BITUMINOUS PAVEMENT			
			AGGREGATE BASE COURSE CLASS 6		2" BOTTOM LAYER GRADING E		1 1/2" TOP LAYER GRADING E		AGGREGATE BASE COURSE CLASS 6		2" BOTTOM LAYER GRADING E		1 1/2" TOP LAYER GRADING E
APPROACH TO PROJECT 148+80.7 - 149+80.7	PIT NO. 1 OWNER H.O. WINTERS		52		27		20		43		23		17
149+80.7 - 176+00			2,698		1,415		1,048		1,535		805		597
176+00 - 179+00			339		180		132		99		53		39
179+00 - 187+94.9			466		242		180		84		44		32
179+00 - 187+94.9							206						37
EST. FOR SHOULDER BLADING IRREGULARITIES			153				21		77				4
			356						129				
LIST OF STRUCTURES			104		45				52		22		
ESTIMATED FOR TRAFFIC CONTROL			300						108				
TOTAL FOR F 024-1(8)			4,468		1,909		1,607		2,127		947		726
187+94.9 - 197+50			344		172		134		64		32		25
187+94.9 - 197+50							258						48
IRREGULARITIES + WIDENING FOR GUARD RAIL			853				59		719				81
197+50 - 219+76.0 BK			2,293		1,202		891		1,115		585		434
219+64.3 AH - 247+50.2 BK			2,870		1,505		1,115		2,758		1,446		1,072
247+61.6 AH - 276+92.4			3,019		1,583		1,172		4,536		2,378		1,761
ESTIMATED FOR TRAFFIC CONTROL			700						590				
EST. FOR SHOULDER BLADING APPROACH TO PROJECT			356				20		356				36
FROM LIST OF STRUCTURE			52		27				93		49		
			184		90				219		105		
TOTAL FOR F 285-3(1)			10,671		4,579		3,649		10,450		4,595		3,457

FENCING REQUIREMENTS

STATION	SIDE	REMOVE FENCE		BUILD FENCE @ COMBINATION WIRE		GATE 16 FT. DRIVEWAY		GATE DOUBLE 20 FT. DRIVEWAY	
		LIN. FT.		LIN. FT.		EACH		EACH	
F 024-1(8): 173+00 TO 180+00 180+00 TO 187+95 174+ 175+	RT. RT. RT. RT.			700 810					
TOTAL, F 024-1(8)				1,510		1		1	
FOR PROJECT NO. F 024-1(8), IT IS ESTIMATED THAT THERE ARE 2 CORNER AND LINE BRACE POSTS AND 6 END POSTS.									
F 285-3(1): 187+95 TO 200+00 207+45 TO 210+00 210+00 TO 219+76.0 BK 219+64.3 AH TO 250+00 240+00 TO 240+69 241+20 TO 247+50.2 BK 247+61.6 AH TO 258+70 258+78 TO 265+00 239+50 TO 240+60 241+20 TO 247+50.2 BK	RT. RT. RT. RT. RT. RT. RT. RT. RT. RT. RT.	1,255 300 976 2,035 55 630 1,170 622 125 630							
247+61.6 AH TO 251+00 252+90 TO 268+00 187+95 TO 192+00 239+50 TO 240+55 240+90 TO 247+50.2 BK 247+61.6 AH TO 251+00 252+90 TO 258+78 258+86 TO 268+00 187+95 TO 200+00 207+45 TO 210+00 210+00 TO 219+76.0 BK	LT. LT. LT. LT. LT. LT. LT. LT. LT. LT. LT.	415 1,510		405 115 660 340 595 930 1,205 255 976					
219+64.3 AH TO 240+00 240+00 TO 240+55 240+90 TO 247+50.2 BK 247+61.6 AH TO 258+78 258+86 TO 265+00 262+ 190+ 200+ 226+ 243+	RT. RT. RT. RT. RT. RT. RT. RT. RT. RT. RT.	2,035 80 660 1,170 650							
TOTAL, F 285-3(1)		9,723		10,076		5			

FOR PROJECT NO. F 285-3(1), IT IS ESTIMATED THAT THERE ARE 22 CORNER AND LINE BRACE POSTS, AND 14 END POSTS. © HOVEN WIRE TO BE 34" HIGH

DELINEATOR TABULATION

STATION	SIDE	SPACING	DELINEATORS	
			TYPE I	TYPE II
			EACH	EACH
F 024-1(8) 149+80.7 TO 155+84.7 158+86.7 TO 167+47.0 174+40 TO 182+40 176+93 TO 182+93	LT LT & RT LT RT	1° CURVE 1° CURVE 200' 200'	3 6 4	5
TOTAL: F 024-1(8)			13	5
F 285-3(1) 192+91.8 TO 198+91.8 194+41 TO 200+41 199+63.2 TO 227+58.0 228+08.0 TO 252+90.1 255+36.1 TO 266+44.1	LT RT LT & RT LT & RT LT & RT	200' 200' 2° CURVE 2° 15' CURVE 1° 30' CURVE	4 22 16 10	4
TOTAL: F 285-3(1)			52	4

R.O.W. MARKERS

STATION	SIDE	NO.
F 024-1(8) P.T. 159+47.4 (BK.)= 159+47.0 (AH)	LT & RT	2
TOTAL: F 024-1(8)		2
F 285-3(1) T.S. 207+45.2 S.T. 219+76.0 (BK.)= 219+64.3 (AH.) T.S. 239+50.2 S.T. 247+50.2 (BK.)= 247+61.6 (AH.) T.S. 252+90.1	RT RT LT & RT LT & RT LT & RT	1 1 2 2 2
TOTAL: F 285-3(1)		8

GUARD RAIL

STATION	SIDE	GUARD RAIL	
		TYPE 3	
		LIN. FT.	
F 024-1(8) 183+20 TO 184+95 183+45 TO 185+20	RT. LT.	175' 175'	
TOTAL: F 024-1(8)		350	
F 285-3(1) 239+95 TO 24+70 249+50 TO 254+75 239+70 TO 241+45	LT. LT. RT.	175' 525' 175'	
TOTAL: F 285-3(1)		875	

* BOTH ENDS TO BE FLARED AND ANCHORED WITH TYPE I ANCHOR.
TYPE IV ANCHOR 25' FROM END OF GUARD RAIL.

RIGHT OF WAY MARKER POST STANDARD M-612-A (JULY 1, 1965)

FEDERAL ROAD REG. NO.	DIVISION	PROJECT NO.	SHEET NO.
9	COLORADO		

REVISIONS			
(R-1)	5-2-66	R.O.W. Marker Note	M.R.H.
(R-2)	7-24-68	Dept. Name	M.R.H.

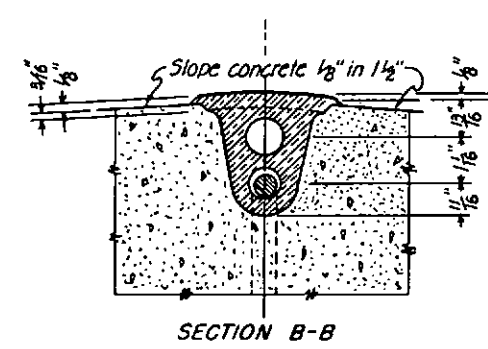
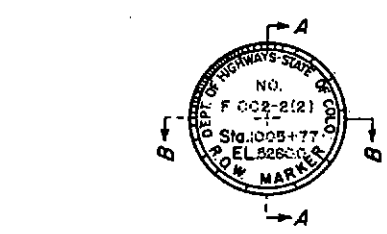
NOTES FOR R.O.W. MARKER POSTS

All work shall be done in accordance with the Standard Specifications applicable to the project.

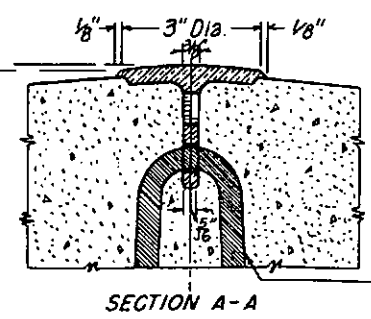
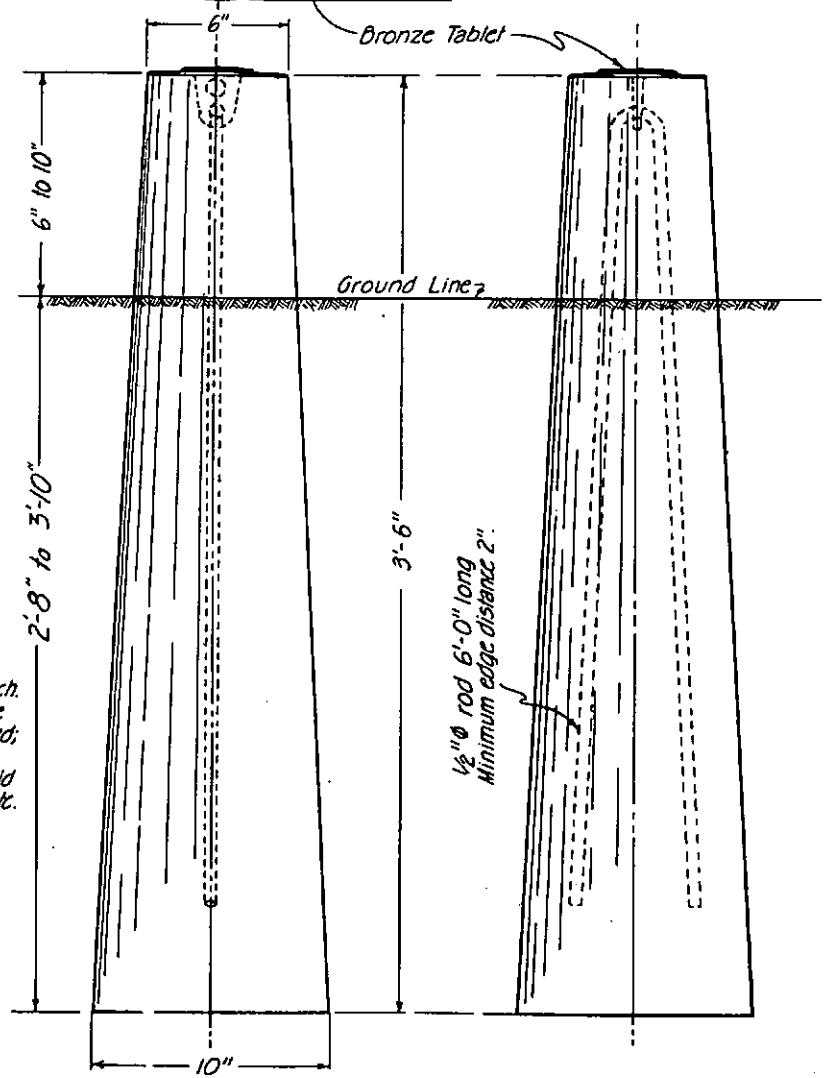
Posts shall be made of class 'A' Concrete. The upper 12 inches of marker posts shall be rubbed free of form marks, and the top surface of the post must be constructed to drain thoroughly.

(R-1) Light weight aggregate conforming to ASTM Designation C-330 will be allowed.

All exposed surfaces of the bronze tablet are to be ground to a smooth surface. All letters are to be depressed a minimum of 1/16 inch. Information on the bronze tablet indicated by pin lines is to be stamped in field by the engineering party after marker is placed. 3/16 inch letters and figures to be used. Project designations on tablets shall be properly shown (i.e.; I for Fed. Aid Interstate; F for Fed. Aid Primary; S for Fed. Aid Secondary, etc. & C for State Projects, see detail below.)



SECTION B-B



SECTION A-A

DETAIL OF BRONZE TABLET FOR RIGHT OF WAY MARKER POST AND BENCH MARK

Omit and use 12" x 1/2" bar for Bench Mark Tablet.

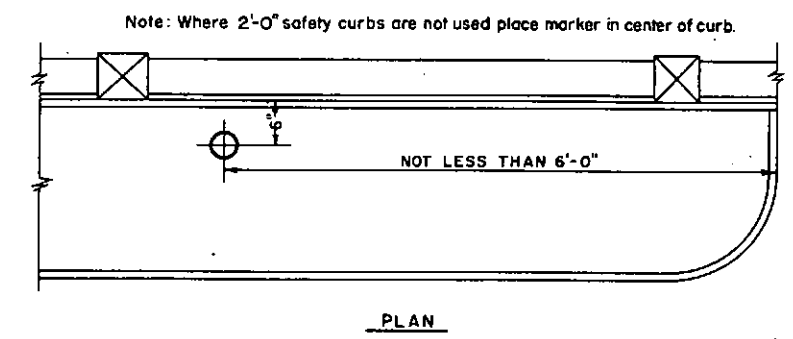
BENCH MARK

All work shall be done in accordance with Standard Specifications applicable to the project.

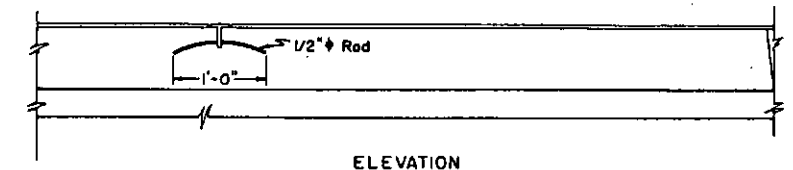
All exposed surfaces of the bronze tablet are to be ground to a smooth surface. All letters are to be depressed a minimum of 1/16 inch. Information on the bronze tablet indicated by pin lines is to be stamped in field by the engineering party after marker is placed. 3/16 inch letters and figures to be used. Project designation on tablets shall be properly shown (i.e.; I for Fed. Aid Interstate; F for Fed. Aid Primary; S for Fed. Aid Secondary, etc. & C for State Projects. See details below).

Bronze Bench Mark Tablets will be furnished by the Department at no expense to the Contractor.

Installation of Bronze Bench Mark Tablets will not be paid for directly, but shall be included in the price bid for Concrete.



PLAN



ELEVATION



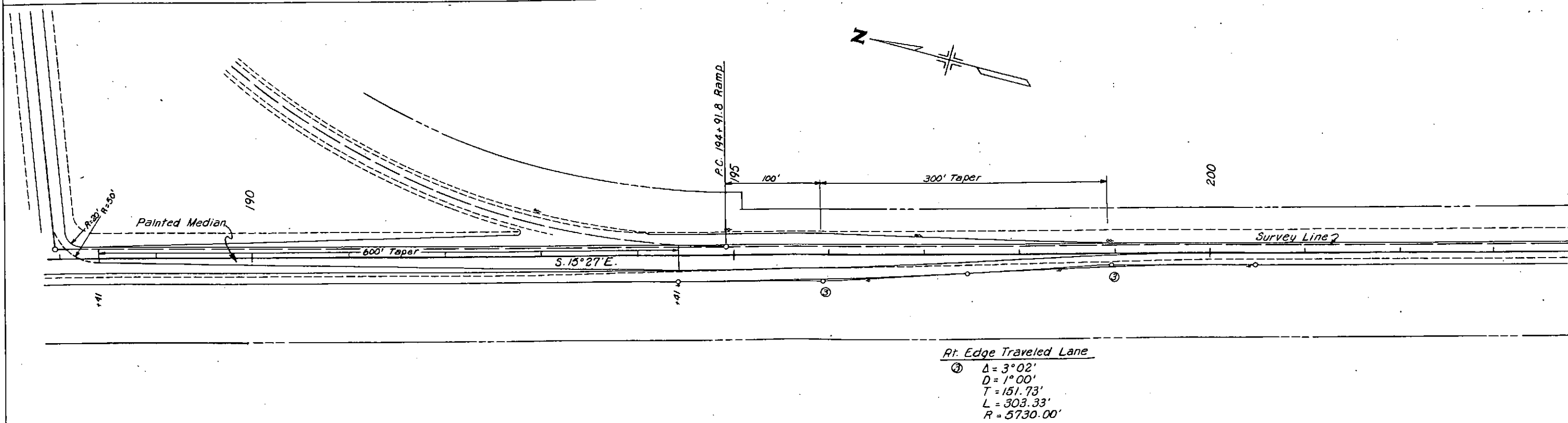
One marker to be placed on Bridges as shown. The station shown on marker shall be the center-line stationing directly opposite the marker.

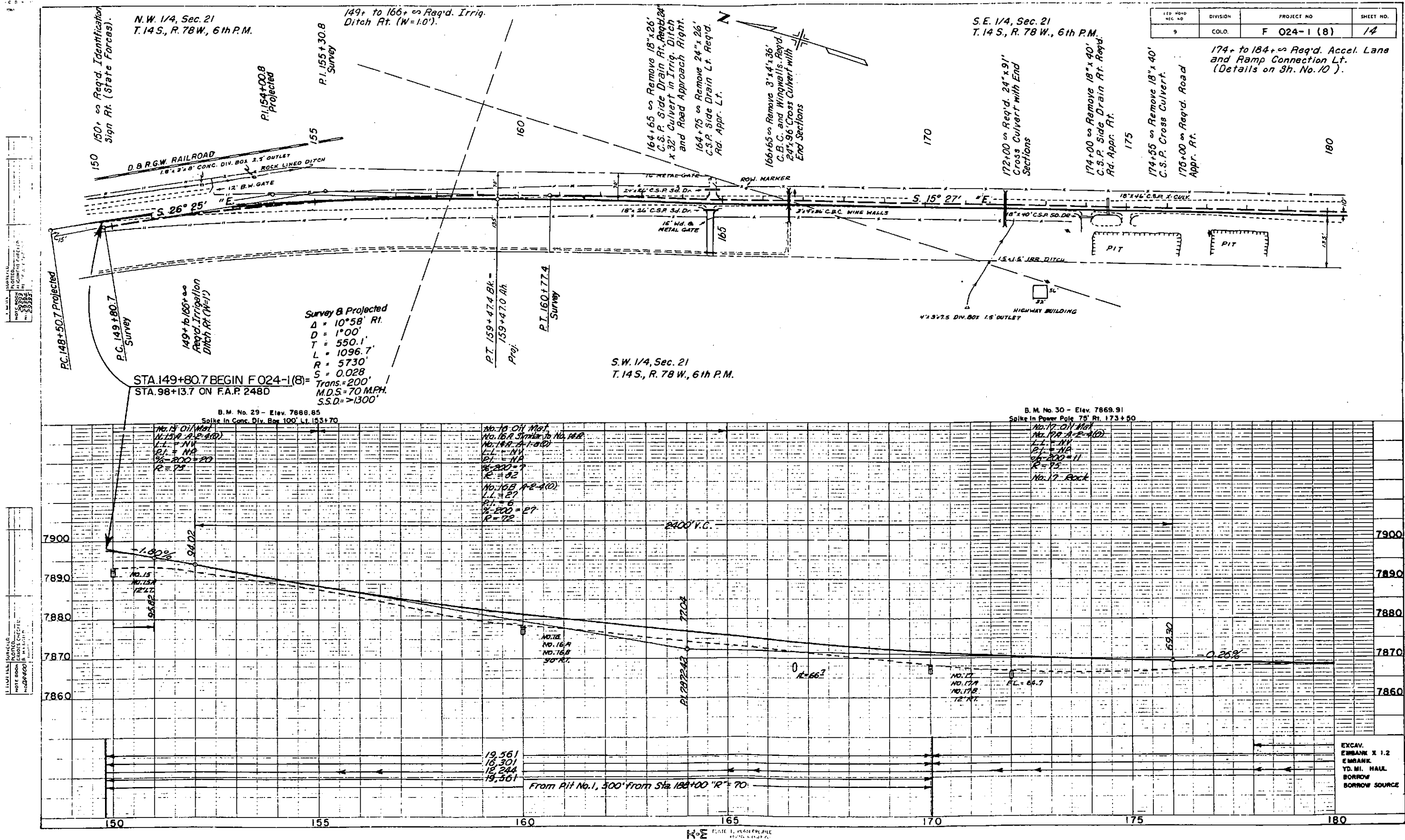
(R-2)

DEPARTMENT OF HIGHWAYS
STATE OF COLORADO
DIVISION OF HIGHWAYS

**MARKER POSTS
AND
BENCH MARKS**

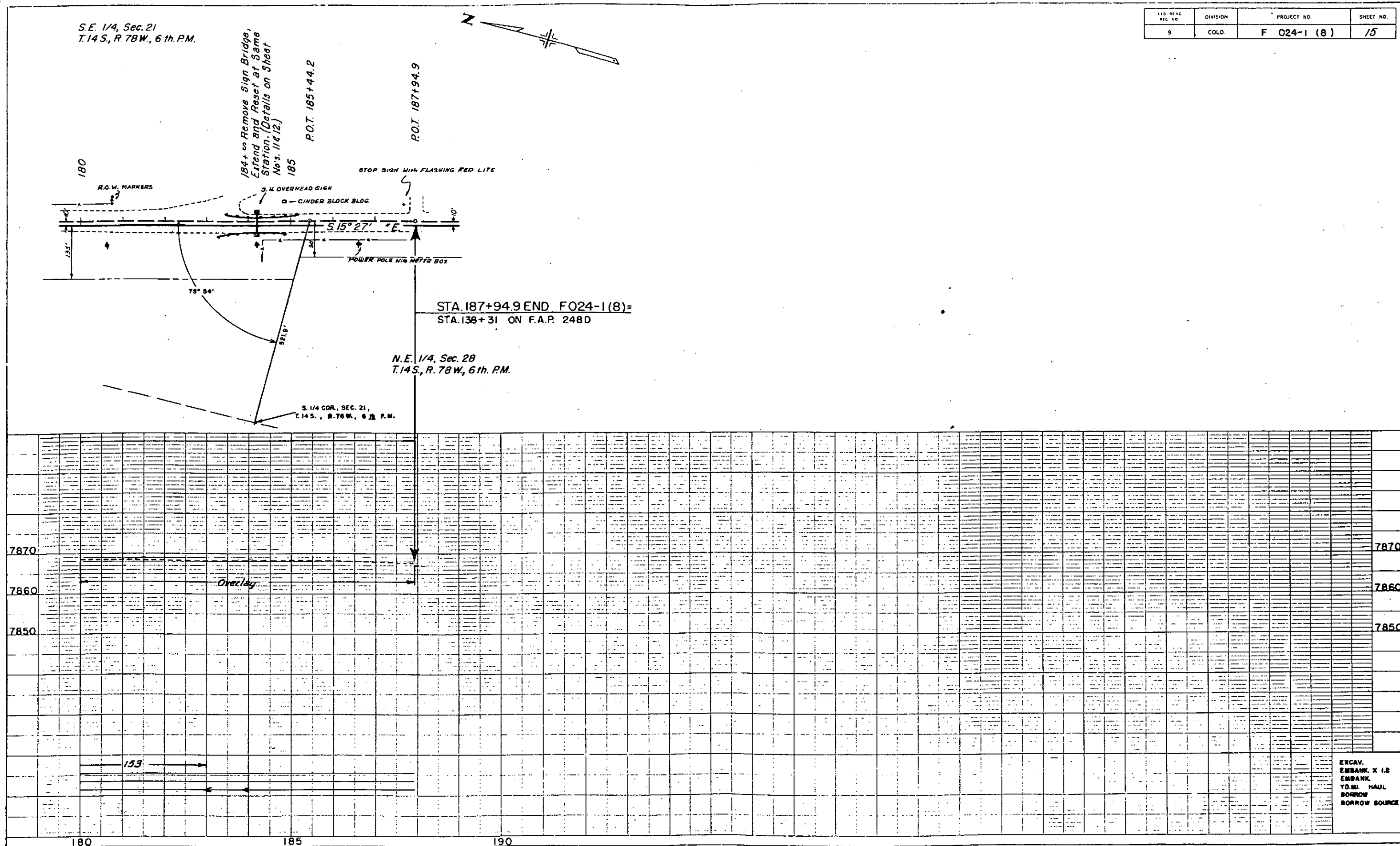
Designed by R.E.L. Approved by J.E. O'Leary
Made by E.E.O. Staff Design Engr.
Checked by R.E.L. Date: July 1, 1965





1 UNIT	SURVEYED	
NOTES MOON	PLOTTED	
20393	ALIGNMENT CHECKED	
20394	RI 31 MAR CHECKED	
20395		

NOTE BOOK	SURVEYED		
NO. 400	PLOTTED		
	GRADES CHECKED		
	R. M. MOORE		
	STRUCTURE NOTATION CHECKED		

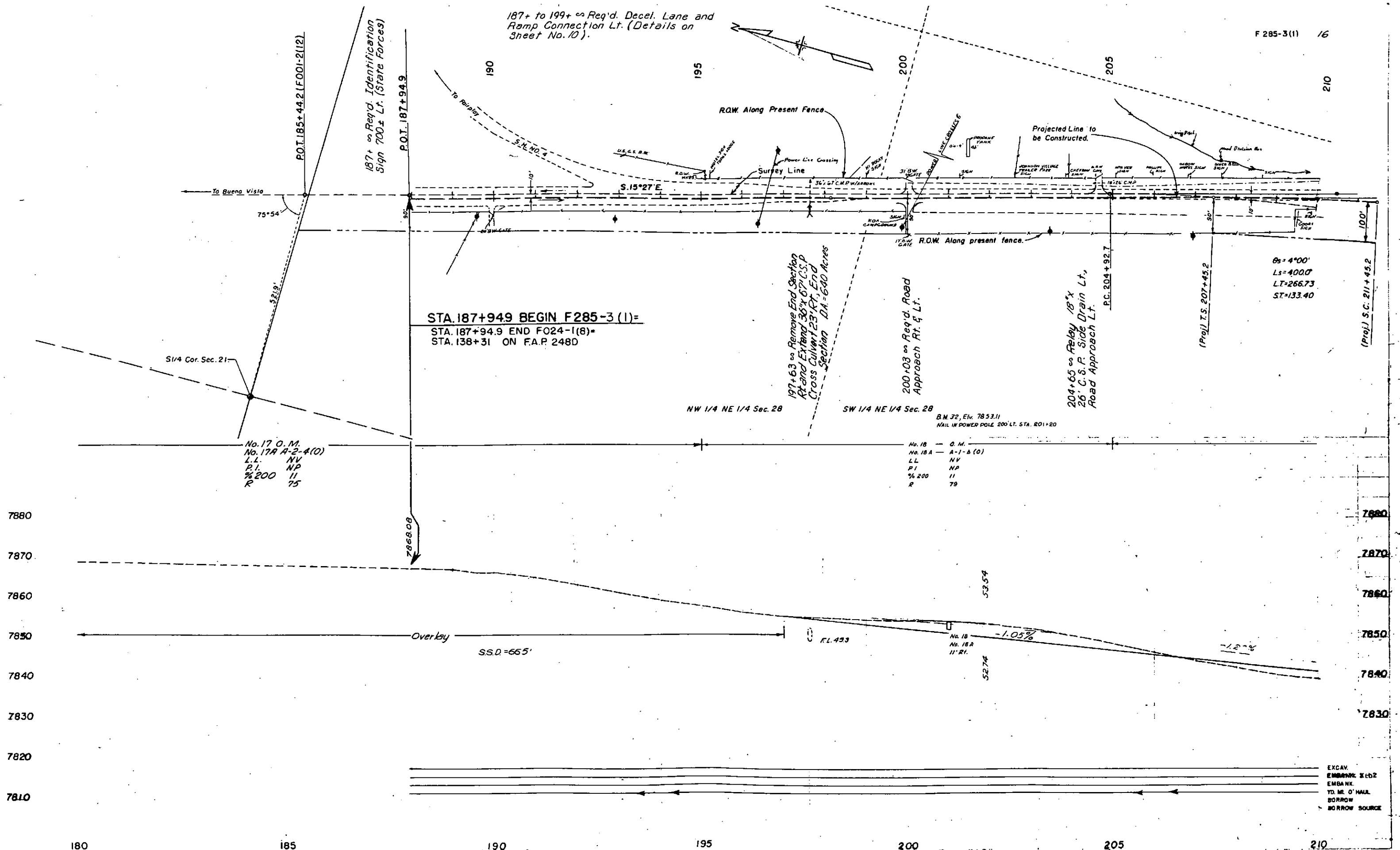


29.345
D.A.G.C.

29.345
D.A.G.C.

29.345
D.A.G.C.

29.345
D.A.G.C.



187+ to 199+ as Req'd. Decel. Lane and Ramp Connection Lt. (Details on Sheet No. 10).

187+ as Req'd. Identification Sign 700± Lt. (State Forces)

STA. 187+94.9 BEGIN F285-3 (1)=
STA. 187+94.9 END F024-1(8)=
STA. 138+31 ON F.A.P. 248D

197+63 as Remove End Section Rt. and Extend 36' 67' C.S.P. Cross Culvert 23' Rt. End Section 10A-640 Acres

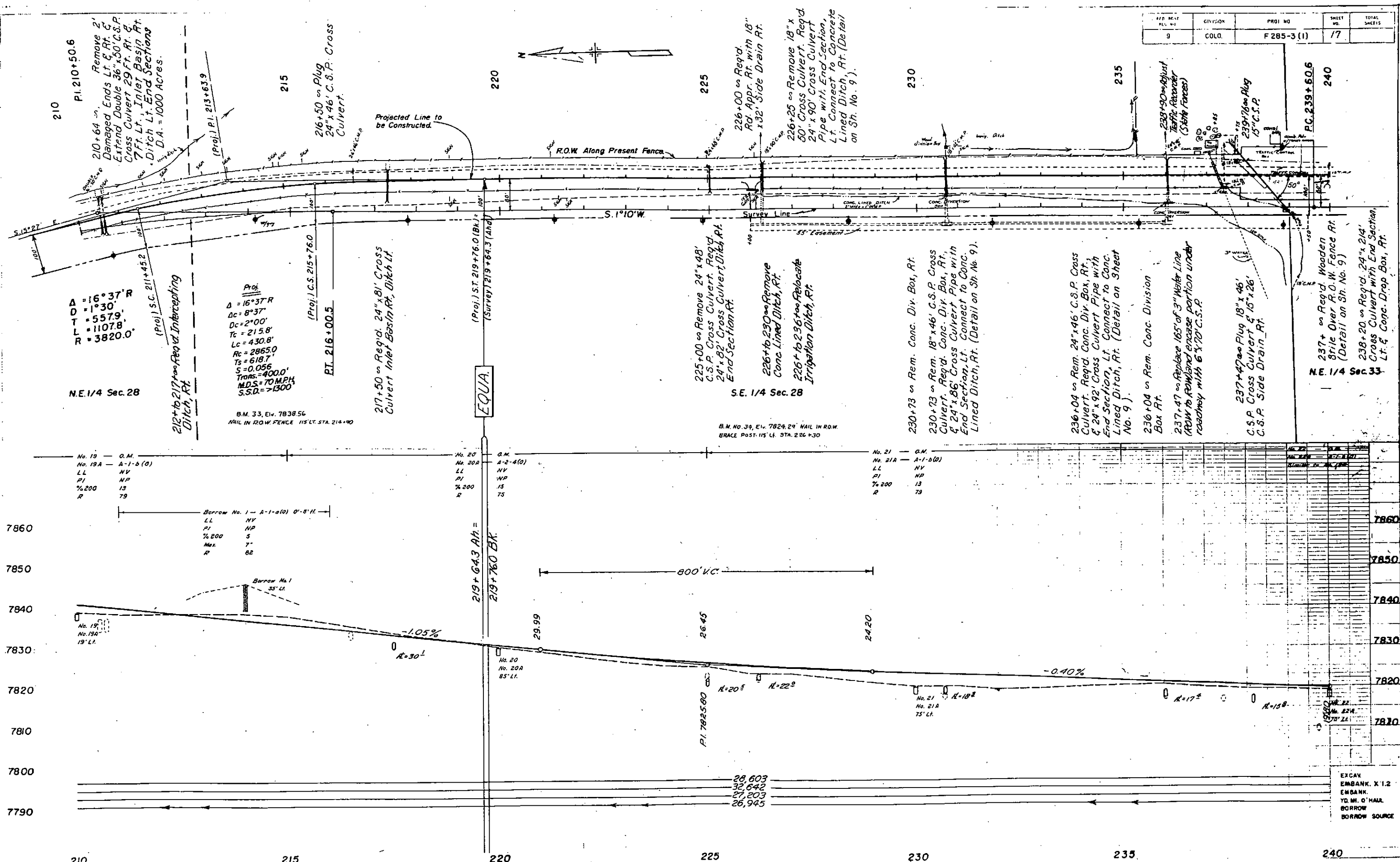
200+03 as Req'd. Road Approach Rt. & Lt.

204+65 as Relay 18' x 26' C.S.P. Side Drain Lt. Road Approach Lt.

6s=4'00'
Ls=400.0'
LT=266.73
ST=133.40

EXCAV.
EMBANK. 2 to 2
EMBANK.
TO MR. O'HALL
BORROW
BORROW SOURCE

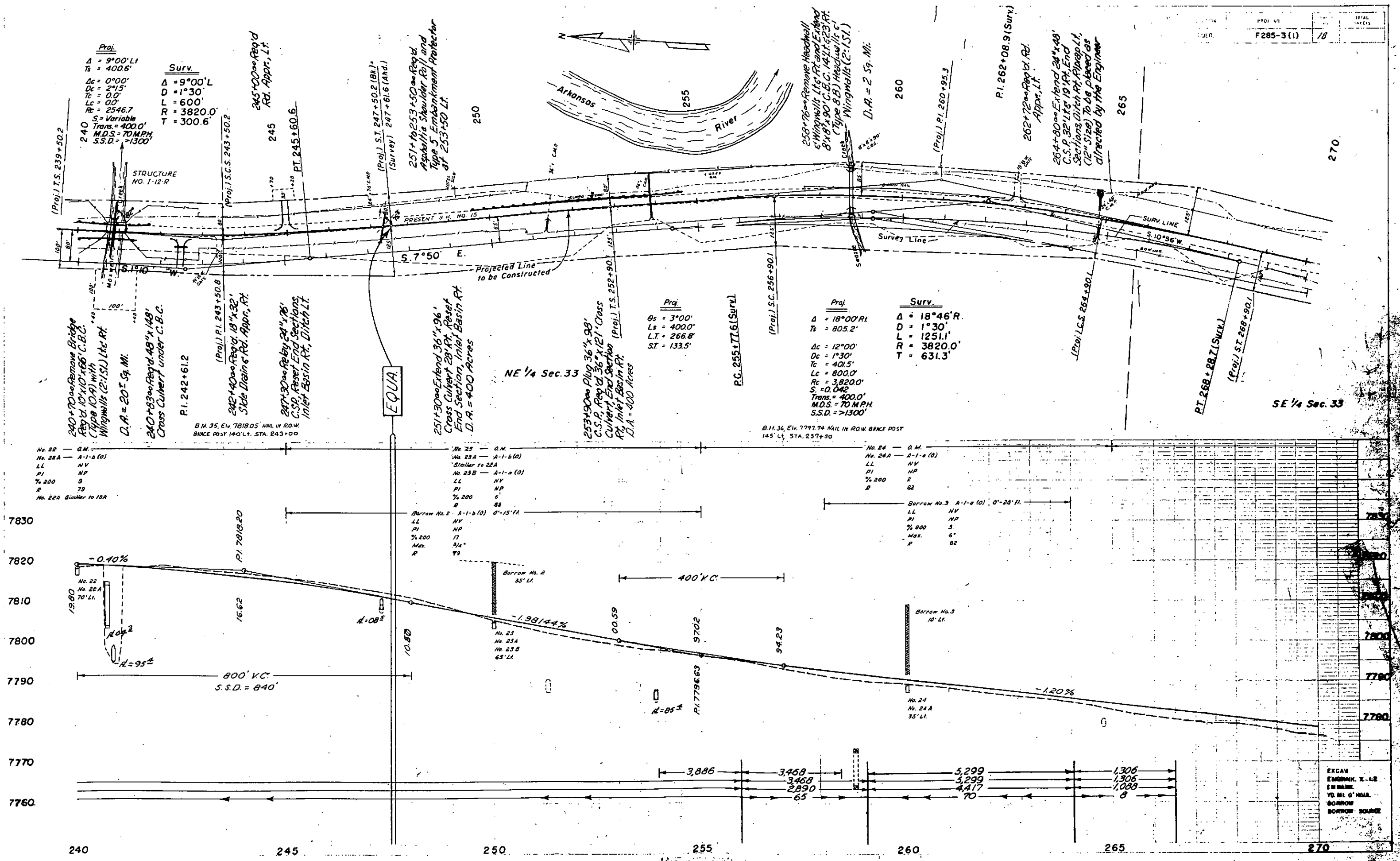
REV.	DATE	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9		COLO.	F 285-3 (1)	17	



EXCAV
EMBANK. X 1.2
EMBANK.
TO M. O'HAIR
BORROW
BORROW SOURCE

R. TROTSCH Nov 9, 1927

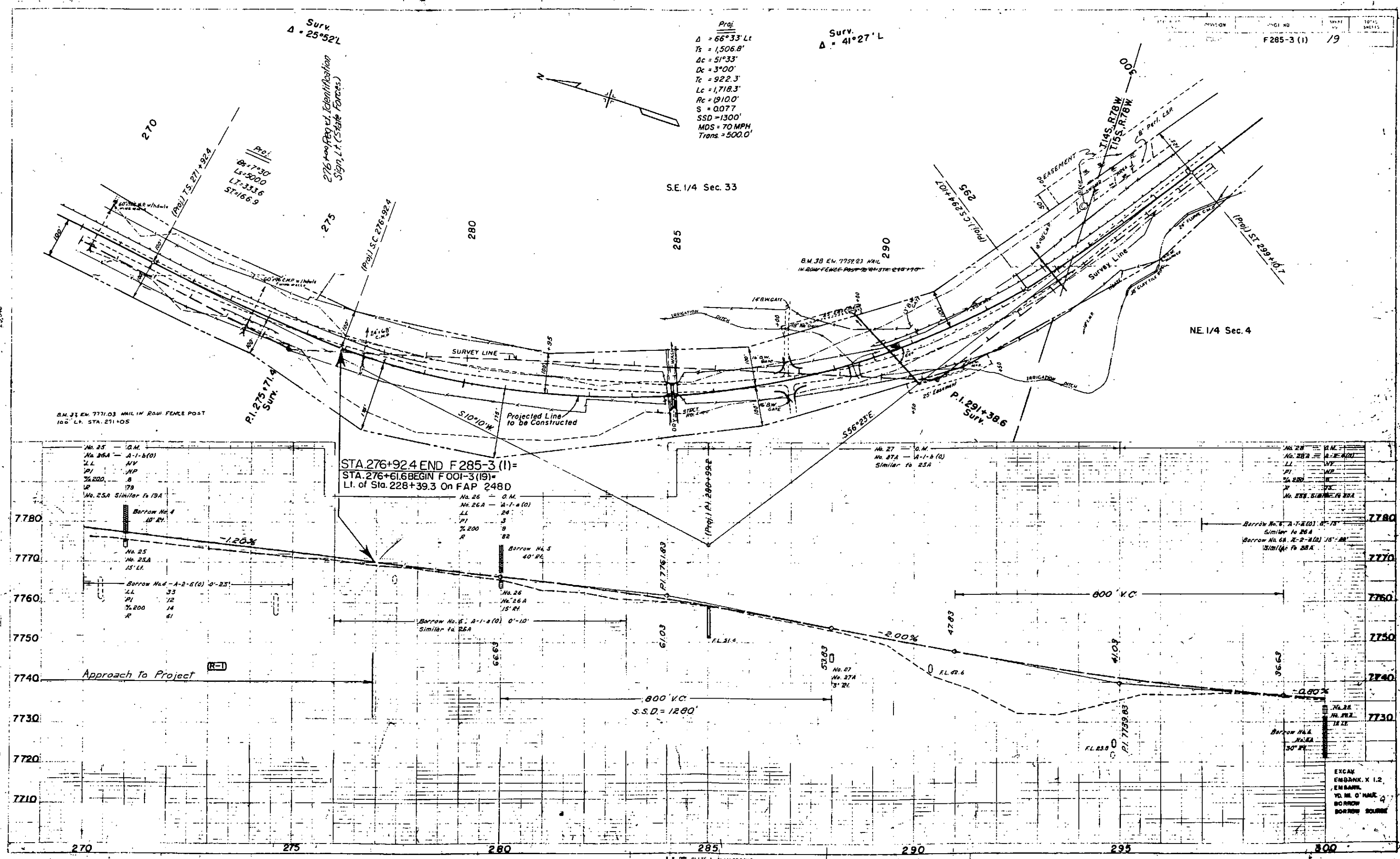
PLAN



R. Tiptsch 4/15/1979

PLAN
29,345
D.105

29,345
D.105



DATE	
BY	
REVIEWED	
APPROVED	
DATE	
NO.	

DATE	
BY	
REVIEWED	
APPROVED	
DATE	
NO.	

Excavation
Cu. Yds. Area

Embankment
Area Cu. Yds.

Excavation
Cu. Yds. Area

Embankment
Area Cu. Yds.

FED. ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	F024-1(8) F285-3(1)	20	

SUMMARY OF EARTHWORK QUANTITIES

F024-1(8)
ROADWAY

F285-3(1)
ROADWAY

COMBINED
TOTALS

UNCLASSIFIED EXCAVATION

ROADWAY (FROM CROSS SECTIONS)
ESTIMATED FOR SUBSIDENCE
STRUCTURE QUANTITIES AS EMBANKMENT
STRUCTURE QUANTITIES AS EXCAVATION
STRUCTURE QUANTITIES AS DITCH EXCAVATION
ESTIMATED FOR CUT SLOPE TREATMENT
STRIPPING (REMOVING OVERBURDEN)
STRIPPING (REPLACING OVERBURDEN)
TOTAL FOR PAY QUANTITY

153
16
266
0
754
0
400
400
1,989

42,562
4,256
521
50
4,651
265
1,000
1,000
53,305

42,715
4,272
787
50
3,405
265
1,400
1,400
56,294

BORROW

FROM PITS
ESTIMATED FOR SUBSIDENCE
TOTAL FOR PAY QUANTITY

19,561
4,956
24,517

0
0
0

19,561
4,956
24,517

EMBANKMENT (MODIFIED)

EMBANKMENT (NET)
BASE OF CUTS AND FILLS
TOTAL FOR PAY QUANTITY

26,143
3,520
32,263

23,136
8,123
31,259

31,889
13,643
65,542

HAUL

FROM MASS DIAGRAM
ESTIMATED FOR SUBSIDENCE
TOTAL FOR PAY QUANTITY

31,236
3,724
40,960

2,096
209
2,305

39,332
3,933
43,265

ROADWAY QUANTITIES BALANCE (FOR INFORMATION ONLY)

EXCAVATION
UNCLASSIFIED
BORROW
TOTAL

153
19,561
19,714

42,562
0
42,562

42,715
19,561
62,276

EMBANKMENT (FROM CROSS SECTIONS)
TOTAL

26,143
26,143

23,136
23,136

31,889
31,889

EMBANKMENT X FACTOR (1.20)
TOTAL

32,091
32,091

30,185
30,185

62,276
62,276

ROADWAY QUANTITIES USED FOR EARTHWORK BALANCE

EXCAVATION	SUMMARY
SHEET	CULYD.
TOTALS	CULYD.
EMPAKMENT	CULYD.