

COLORADO DEPARTMENT OF HIGHWAYS

PLAN AND PROFILE OF PROPOSED FEDERAL AID SECONDARY PROJECT NO. S0019(2) STATE HIGHWAY NO. 71 LINCOLN COUNTY

FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEET
3	COLO.	S0019(2)	1	1

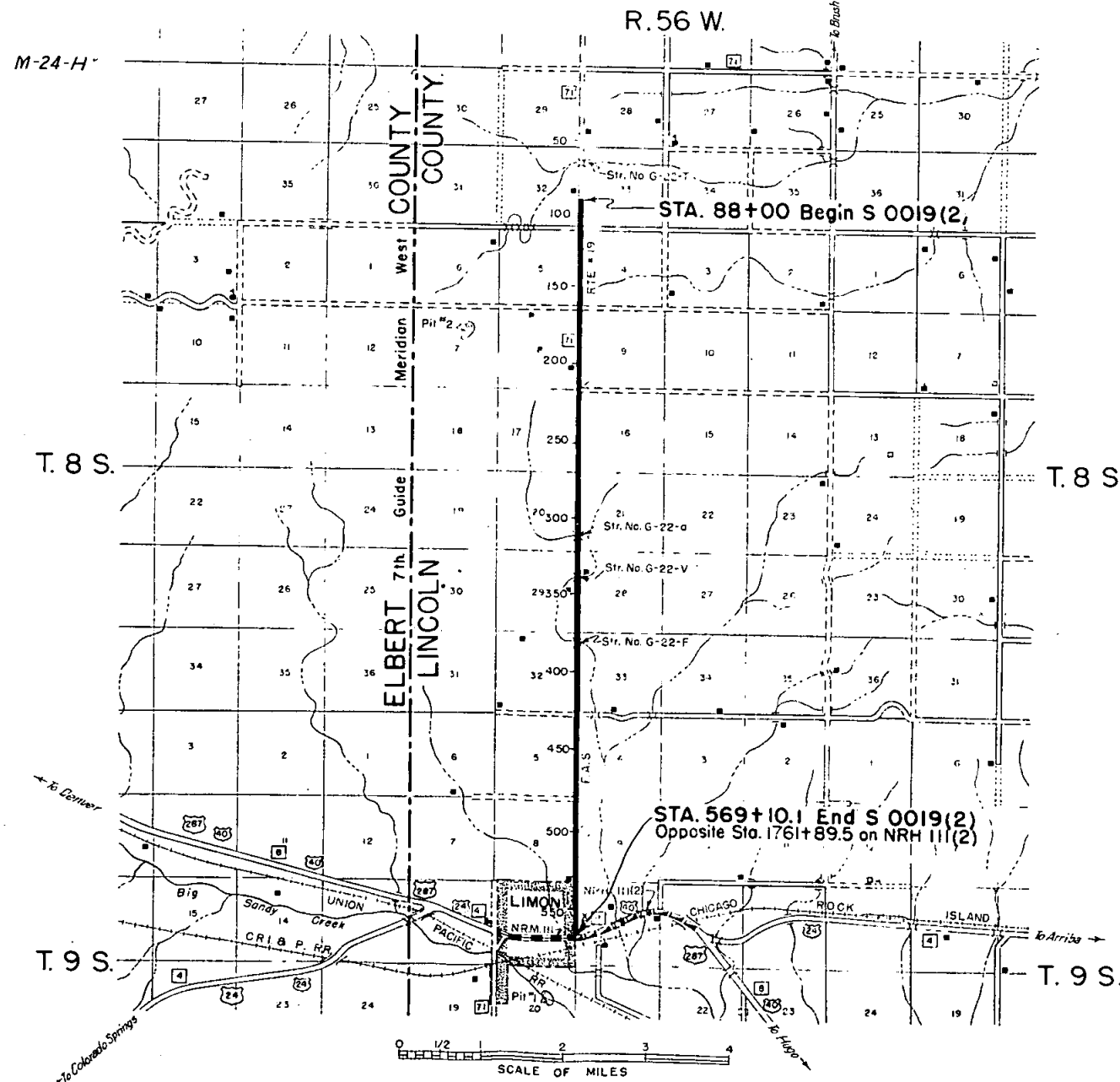
INDEX OF SHEETS

SHEET NO.	DESCRIPTION	REFERENCE
1	SKETCH MAP, TITLE PAGE AND TABULATION OF LENGTH & DESIGN.	
2	TYPICAL SECTION, GENERAL NOTES AND SUMMARY OF APPROXIMATE QUANTITIES.	
3, 3a & 4	LIST OF STRUCTURES.	
5	SELECTED BORROW PLAN, SURFACING PLAN, FENCING REQUIREMENTS, TIMBER GUARD POSTS, R.O.W. MARKERS, SNOW FENCE REQUIREMENTS AND TYPICAL SECTION FOR DETOURS.	
6	PIT LOCATION SHEET.	
7	DETAILS OF BRIDGE STA. 341+.	M-10-B
8	DETAILS OF BRIDGE STA. 379+.	M-7-B
9	STANDARD LETTERS & FIGURES FOR YEAR NUMBERS & STRUCTURE NUMBERS.	M-19-D
10	STANDARD MARKER POSTS.	M-25-B
11	STANDARD TIMBER GUARD POSTS.	
12	STANDARD PICKET SNOW FENCE WITH STEEL POSTS.	M-2-DM
13	STANDARD SIDE APPROACH ROADS, Flaring, CUT SLOPE TREATMENT & WIDENING AT BRIDGES & AT CREST OF GRADES.	M-29-A
14	STANDARD ROADWAY CONSTRUCTION TRAFFIC SIGNS.	
15	STANDARD TYPES OF DITCHES AND CONSTRUCTION METHODS.	M-107-C
16-32	ALIGNMENT PLAN AND PROFILE.	
33-116	CROSS SECTIONS.	
117	SUMMARY OF EARTHWORK QUANTITIES.	
118	STANDARD WIRE FENCE WITH WOODEN POSTS.	

TABULATION OF LENGTH AND DESIGN

STATION	ROADWAY	MAJOR STRUCT'S	
	LIN. FT.	LIN. FT.	LOADING
✓ 88+00 Begin S0019(2)			
✓ 314+01.0 Bridge End	22,601.0		H-12½
✓ 314+21.0 Bridge End	20.0		
✓ 341+36.8 Bridge End	2,715.8		
✓ 342+07.7 Bridge End		70.9	H-20-S16-44
✓ 379+65.9 Bridge End	3,758.2		
✓ 380+51.6 Bridge End		85.7	H-20-S16-44
✓ 569+10.1 End S0019(2) Opp. 1761+89.5 on NRH III(2)	18,858.5		
TOTALS	47,953.5	156.6	
SUMMARY		LIN. FT.	MILES
S0019(2) Roadway		47,953.5	9.082
S0019(2) Bridges		156.6	0.030
TOTAL (Net & Gross)		48,110.1	9.112
DESIGN DATA			
Maximum Delta		✓ 0°22'	
Maximum Degree of Curve		✓ No Curve	
Maximum Grade		✓ 6.24%	
Minimum N.P.S.D. (Horizontal)		✓ 1300'	
Minimum N.P.S.D. (Vertical)		✓ 455'	
Maximum Design Speed		✓ 50 M.P.H.	

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 } 48,110.1 FEET = 9.112 MILES
NET LENGTH OF PROJECT }



CONVENTIONAL SIGNS

CENTER LINE	TITLE SHEET
RIGHT-OF-WAY LINE	
TOWNSHIP OR RANGE LINE	T. 6 S., R. 89 W.
SECTION LINE	T. 7 S., R. 89 W.
QUARTERSECTION LINE	
RAILROAD	
BARBED WIRE FENCE	
WIRE CABLE GUARD FENCE	
TELEPH. & TELEG. LINE	
POWER LINE	
PRESENT ROAD (PLAN SHEET)	
COMBINATION WIRE FENCE	
CITY LIMITS	

NOTICE TO BIDDERS

IT IS RECOMMENDED THAT BIDDERS ON THIS PROJECT GO OVER THE PLAN DETAILS WITH ONE OF THE FOLLOWING FIELD REPRESENTATIVES OF THIS DEPARTMENT:

Glen McEldowney--Construction Engineer--Denver, Colo.
Glen Soper -- Resident Engineer--Denver, Colo.

COLORADO DEPARTMENT OF HIGHWAYS	
APPROVED	DATE
<i>Mark C. Williams</i>	10-21-53
CHIEF ENGINEER	

DEPARTMENT OF COMMERCE BUREAU OF PUBLIC ROADS	
APPROVED	DATE
DISTRICT ENGINEER	

SELECTED BORROW PLAN

SURFACING PLAN

It is estimated that material for Selected Borrow and Gravel Surfacing for the project is available in the vicinity of the pits indicated in the following Selected Borrow Plan and Surfacing Plan. Estimated quantities involved in these operations are shown below.

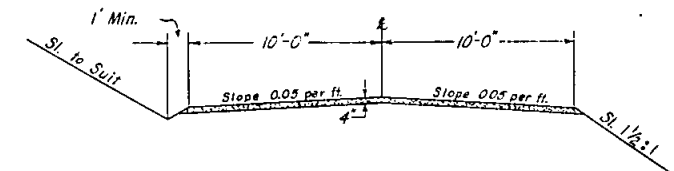
Alteration of the Selected Borrow Plan or the Surfacing Plan as here outlined will be allowed only on written permission from the Department.

FEDERAL ROAD DIVISION NO.	DISTRICT	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLORADO	S0019 (2)	5	

TYPICAL SECTION FOR DETOURS

Sta. 340+ to Sta. 344+

Sta. 378+ to Sta. 382+



R.O.W. MARKERS

STATION	SIDE	NO.
88+00	Rt.	1
101+00	Lt.	1
114+50	Rt.	1
127+50	Lt.	1
141+00	Rt.	1
154+00	Lt.	1
167+00	Rt.	1
180+50	Lt.	1
193+50	Rt.	1
207+00	Lt.	1
220+00	Rt.	1
233+00	Lt.	1
246+50	Rt.	1
259+50	Lt.	1
273+00	Rt.	1
286+00	Lt.	1
299+00	Rt.	1
312+50	Lt.	1
325+50	Rt.	1
339+00	Lt.	1
352+00	Rt.	1
365+00	Lt.	1
378+50	Rt.	1
391+50	Lt.	1
405+00	Rt.	1
418+00	Lt.	1
431+00	Rt.	1
444+50	Lt.	1
457+50	Rt.	1
471+00	Lt.	1
484+00	Rt.	1
497+00	Lt.	1
510+50	Rt.	1
523+50	Lt.	1
TOTAL		34

MATERIAL TO BE PLACED	SOURCE	QUANTITY & THICKNESS			OVERHAUL	
		AVAILABLE	THICKNESS	CU. YDS	STA. YDS.	YD. MI.
88+00 to 105+00	Pit #1	150,000 Cu. Yds.	8"	1683	18,513	16,577
105+00 to 120+00			6"	1,095	12,045	10,454
120+00 to 130+00			8"	990	10,890	9,217
130+00 to 136+50			6"	475	5,225	4,348
136+50 to 200+00	1.2 Miles to Sta. 569+20		8"	6,287	69,157	53,381
200+00 to 208+00			6"	584	6,424	4,563
208+00 to 242+00			8"	3,366	37,026	24,962
242+00 to 265+00			10"	2,898	31,878	19,927
265+00 to 272+50	R=67		8"	743	8,173	4,894
272+50 to 294+00			10"	2,709	25,799	17,101
294+00 to 314+01.0			8"	1,981	21,791	11,727
Bridge						
314+21.0 to 341+36.8	Bridge		8"	2,689	29,579	14,707
342+07.7 to 379+65.9			8"	3,721	40,931	18,020
380+51.6 to 569+10.1			8"	18,670	205,370	50,123
Bridge						
Est. for Bridge Widening				83	913	430
Estimated for Correcting Irregularities in Subgrade				4,789	52,680	26,000
Estimated for Appr. to Proj.				150	1,650	1,505
TOTALS				52,913	582,044	287,936

* Based on curve "B"

MATERIAL TO BE PLACED	SOURCE	AVAILABLE	QUANTITY			OVERHAUL		
			TONS USED	TONS USED	TONS USED	TON MILE	TON MILE	TON MILE
88+00 to 163+00	Pit #2	30,000 Cu. Yds.	1,725	2,025	375	4,675	5,488	1,016
163+00 to 314+01.0			3,473	4,077	755	11,912	13,984	2,590
Bridge			7			34		
314+21.0 to 341+36.8			625	733	136	3,201	3,754	696
Bridge	20 Miles to Sta. 163+00		864	1,015	188	4,966	5,834	1,081
342+07.7 to 379+65.9								
Bridge			4,337	5,092	943	34,286	40,255	7,455
380+51.6 to 569+10.1								
Est. for Bridge Widening	R=80		46	46	-	251	251	-
Est. for Approach to Project			62	98	15	204	338	52
From List of Structures								
TOTALS			11,139	13,932	2,412	59,529	73,899	12,890

* Shoulder Surfacing is not to be placed across Road Approaches.

TIMBER GUARD POSTS

STATION	SIDE	SPACING	NO.
251+64	Rt. & Lt.	Culvert	2
287+00	Rt. & Lt.	Culvert	2
313+37 to 314+01	Rt. & Lt.	Bridge	10
314+21 to 314+85	Rt. & Lt.	Bridge	10
340+72.8 to 341+36.8	Rt. & Lt.	Bridge	10
342+07.7 to 342+71.7	Rt. & Lt.	Bridge	10
379+01.9 to 379+65.9	Rt. & Lt.	Bridge	10
380+51.6 to 381+15.6	Rt. & Lt.	Bridge	10
422+68	Rt. & Lt.	Culvert	2
456+93	Rt. & Lt.	Culvert	2
559+58	Rt. & Lt.	Culvert	2
565+23	Rt. & Lt.	Culvert	2
TOTAL			72

FENCING REQUIREMENTS

STATION	SIDE	REMOVE FENCE	REMOVE & REBUILD FENCE	BUILD B.W. FENCE
		LIN. FT.	LIN. FT.	LIN. FT.
163+ to 164+	Rt.	230		300
339+50 to 341+15	Rt.		150	
342+	Rt.		35	
379+	Lt.		40	
379+	Rt.		60	
380+	Lt.		30	
380+	Rt.		40	
564+95 to 568+60	Rt.		365	
TOTALS		230	720	300

It is estimated that 10 Line Posts will be required for Remove and Rebuild Fence.
Line posts to be of the same type and size as in the removed fence.

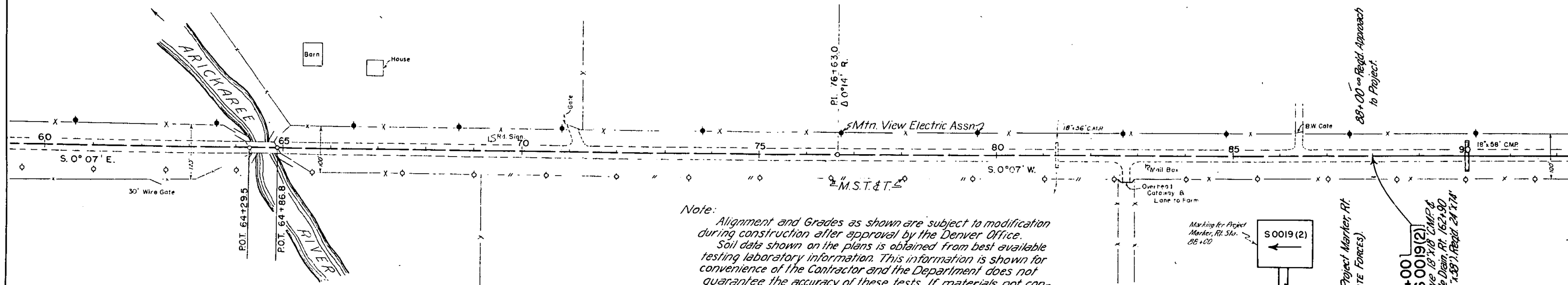
SNOW FENCE REQUIREMENTS

STATION	SIDE	BUILD SNOW FENCE
		LIN. FT.
106+ - 111+	Rt.	700
128+ - 132+	Rt.	300
192+ - 199+	Rt.	800
229+ - 235+	Rt.	600
288+ - 294+	Rt.	600
402+ - 407+	Rt.	500
440+ - 443+	Rt.	300
464+ - 469+	Rt.	600
TOTAL		4,400

N.W. 1/4 Sec. 33, T.7S., R.56 W.

FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	S 0019(2)	16	

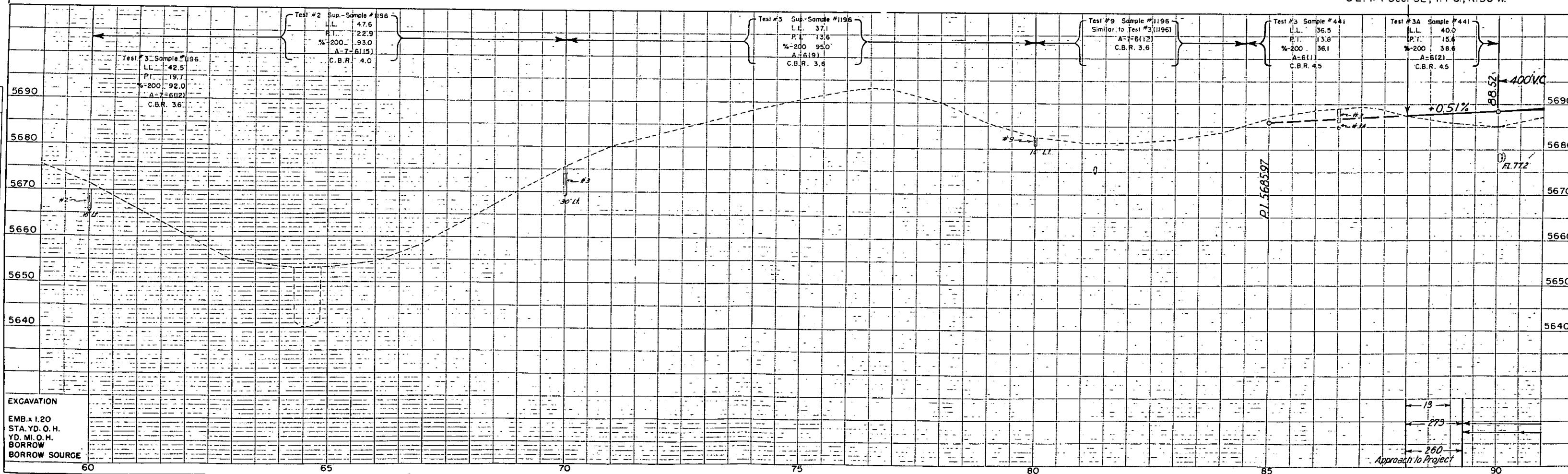
SW. 1/4 Sec. 33, T.7 S., R.56 W.



Note: Alignment and Grades as shown are subject to modification during construction after approval by the Denver Office. Soil data shown on the plans is obtained from best available testing laboratory information. This information is shown for convenience of the Contractor and the Department does not guarantee the accuracy of these tests. If materials not conforming to the data on plans are encountered during construction the grading plan shown on plans will be modified where necessary to secure dense, stable embankments. Fencing, R.O.W. Markers, Snow Fence Requirements and Guard Posts are tabulated on sheet 5.

NE. 1/4 Sec. 32, T.7 S., R.56 W.

SE. 1/4 Sec. 32, T.7 S., R.56 W.

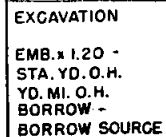


EXCAVATION
EMB. x 1.20
STA. YD. O.H.
YD. M.O.H.
BORROW
BORROW SOURCE

NW. 1/4 Sec. 4, T.8 S., R. 56 W.



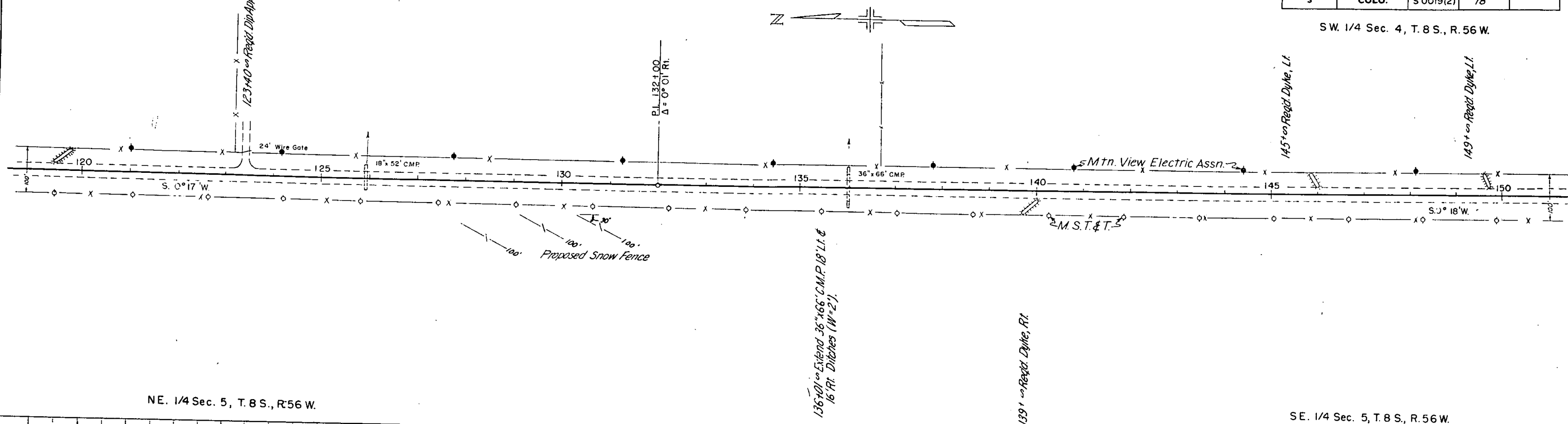
101+65.00 Extend 18" x 50' C.M.P. 6' L.I. & 10' R.I.



SW 1/4 Sec. 4, T. 8 S., R. 56 W.

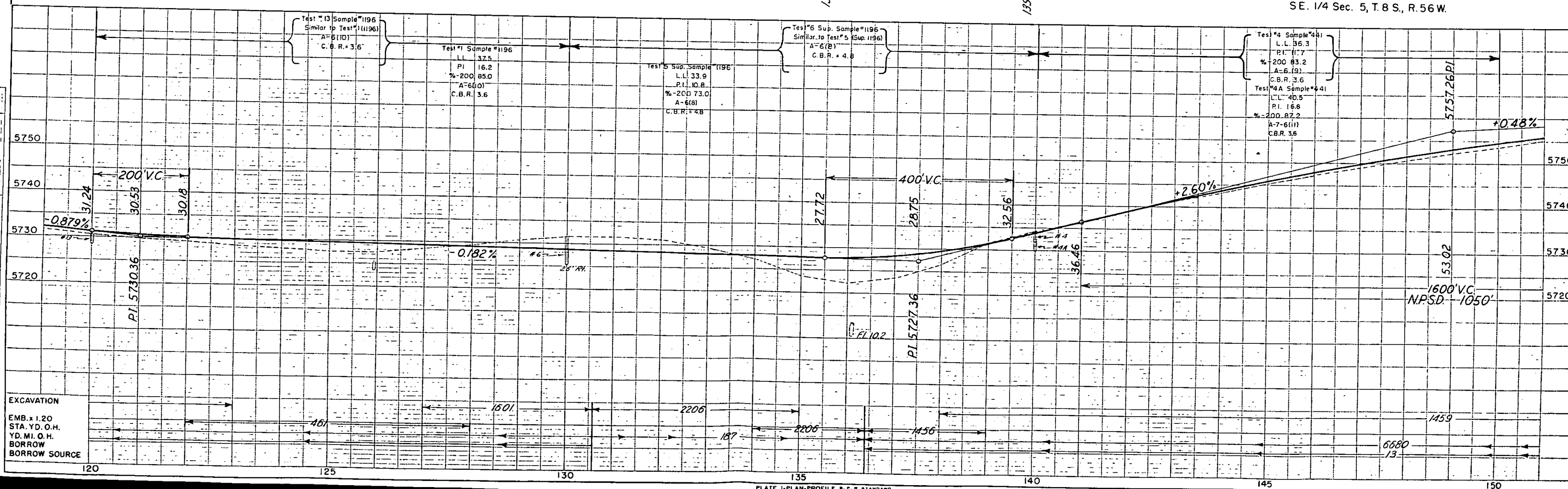
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3	COLO.	S 0019(2)	18	

SW 1/4 Sec. 4, T. 8 S., R. 56 W.



NE 1/4 Sec. 5, T. 8 S., R. 56 W.

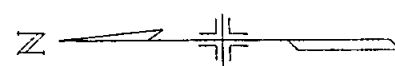
SE 1/4 Sec. 5, T. 8 S., R. 56 W.



SW 1/4 Sec. 4, T.8 S., R.56 W.

FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	S 0019(2)	19	

N.W. 1/4 Sec. 9, T.8 S., R.56 W.



134+00 Regd. Ditch, L.I. & R.I.

163+00 Regd. Road Approach, L.I.

PL 163+08.4
Δ 0°15' L.

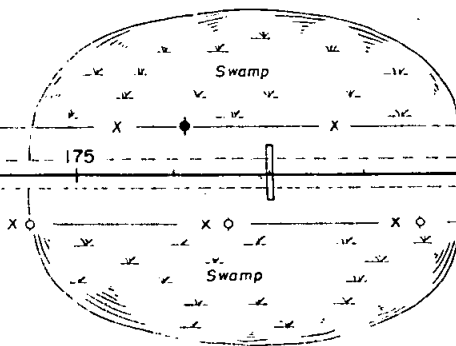
162+90 Regd. 18" x 40" CMP (from 90+02)
as Side Drain Rt. Inlet Ditch, Regd. Road
Approach, Rt.

Remove Fence
Build Fence

Mtn. View Electric Assn.

M.S.T. & T.S.

S. 0°03' W.



177+00 Regd. 24" x 30"
Cross Culvert

SE 1/4 Sec. 5, T.8 S., R.56 W.

NE 1/4 Sec. 8, T.8 S., R.56 W.

Test #16 Sample #1196
L.I. 42.7
P.L. 20.1
% - 200 92.0
A-7-6 (12)
C.B.R. 3.6

Test #17 Sample #1196
Similar to Test #16 (1196)
A-7-6 (12)
C.B.R. 3.6

Test #5 Sup. Sample #1196
L.I. 33.9
P.L. 10.8
% - 200 73.0
A-6 (8)
C.B.R. 4.8

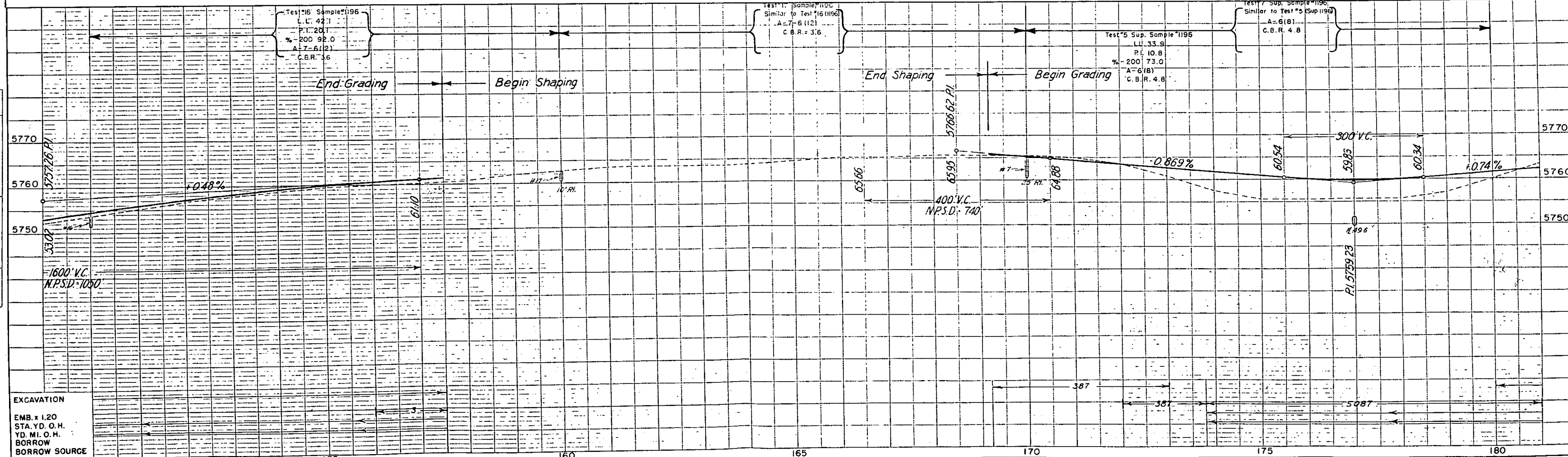
Test #7 Sup. Sample #1196
Similar to Test #5 (1196)
A-6 (8)
C.B.R. 4.8

End Grading

Begin Shaping

End Shaping

Begin Grading

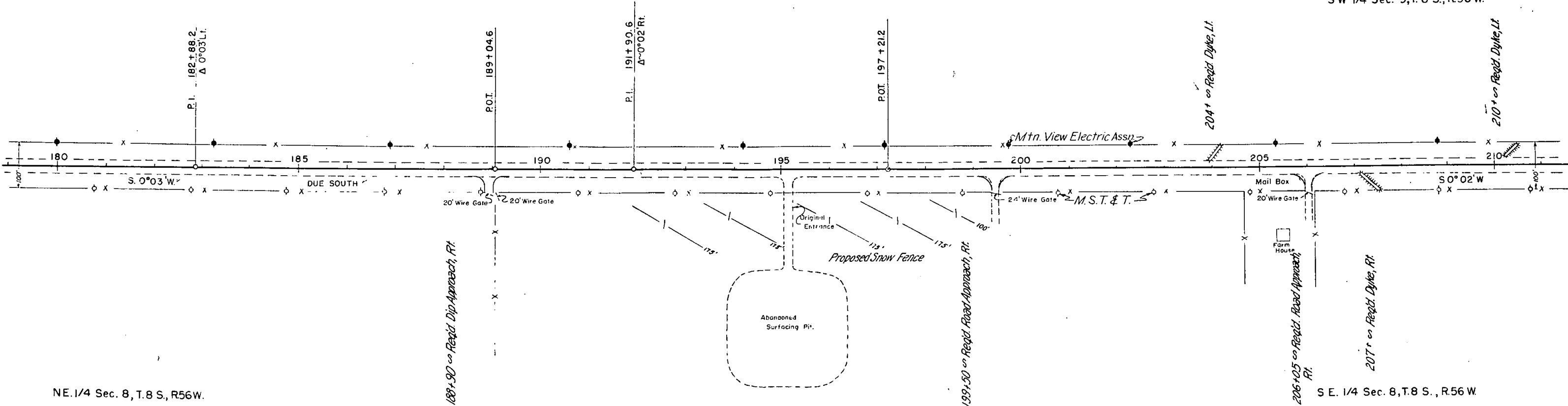
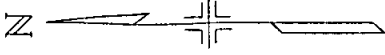


EXCAVATION
EMB. x 1.20
STA. YD. O.H.
YD. MI. O.H.
BORROW
BORROW SOURCE

NW 1/4 Sec. 9, T.8 S., R.56 W.

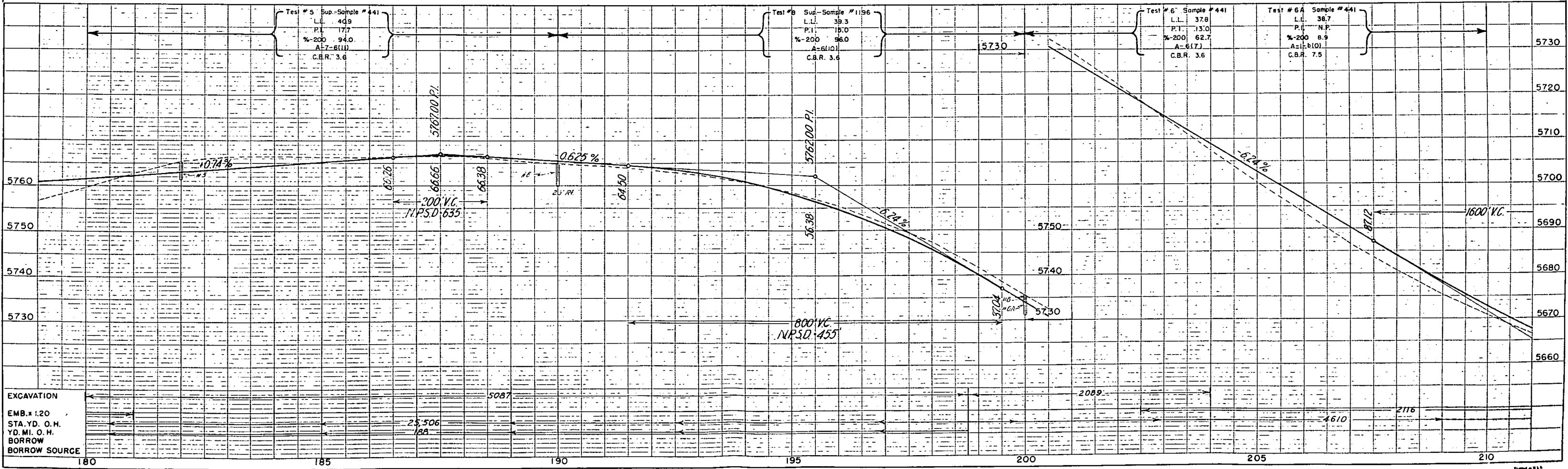
FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	S 0019(2)	20	

SW 1/4 Sec. 9, T.8 S., R.56 W.



NE 1/4 Sec. 8, T.8 S., R.56 W.

SE 1/4 Sec. 8, T.8 S., R.56 W.

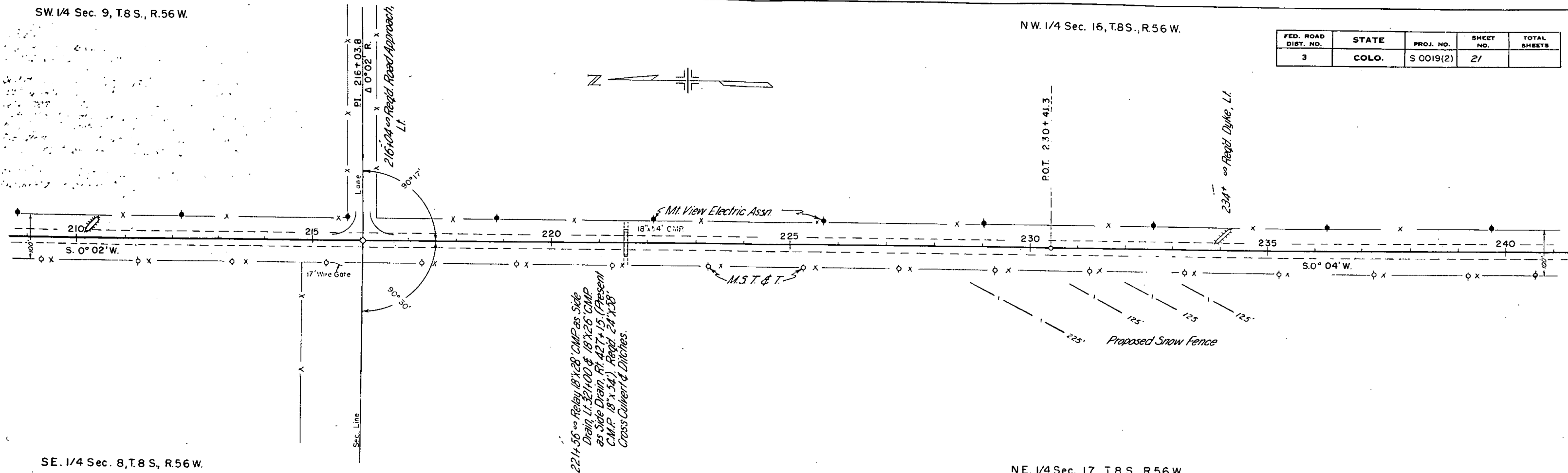


EXCAVATION
EMB. x 1.20
STA. YD. O.H.
YD. MI. O.H.
BORROW
BORROW SOURCE

SW 1/4 Sec. 9, T.8 S., R.56 W.

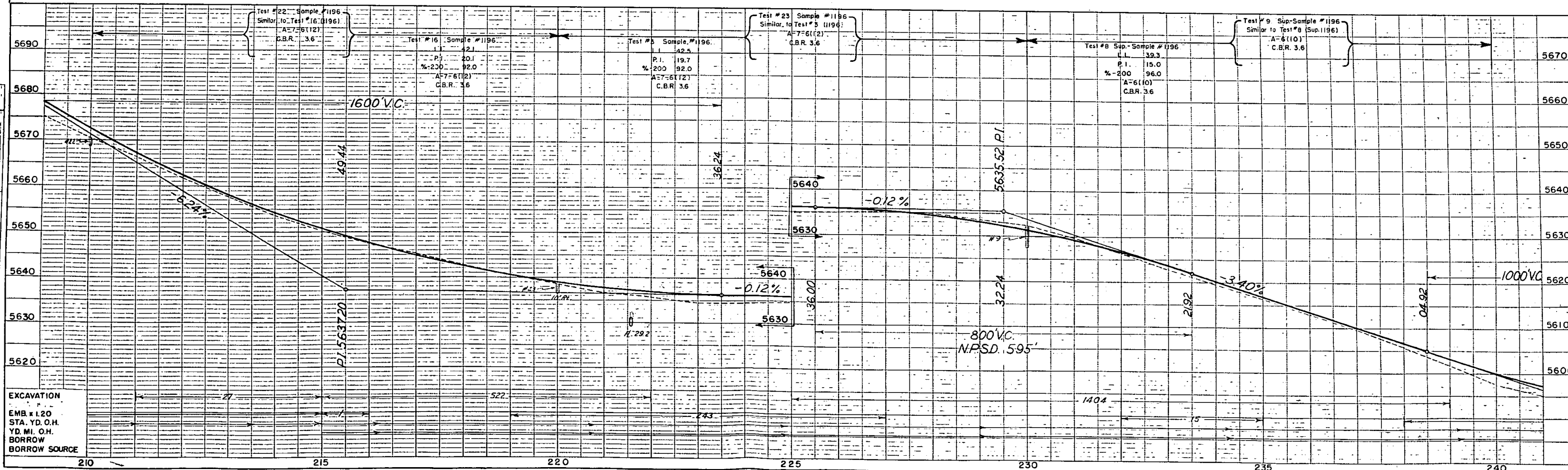
NW 1/4 Sec. 16, T.8 S., R.56 W.

FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	S 0019(2)	21	



SE 1/4 Sec. 8, T.8 S., R.56 W.

NE 1/4 Sec. 17, T.8 S., R.56 W.



EXCAVATION
EMB. x 1.20
STA. YD. O.H.
YD. MI. O.H.
BORROW
BORROW SOURCE

FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	S0019(2)	22	

NE. 1/4 Séc. 20
T. 8 S., R. 56 W.

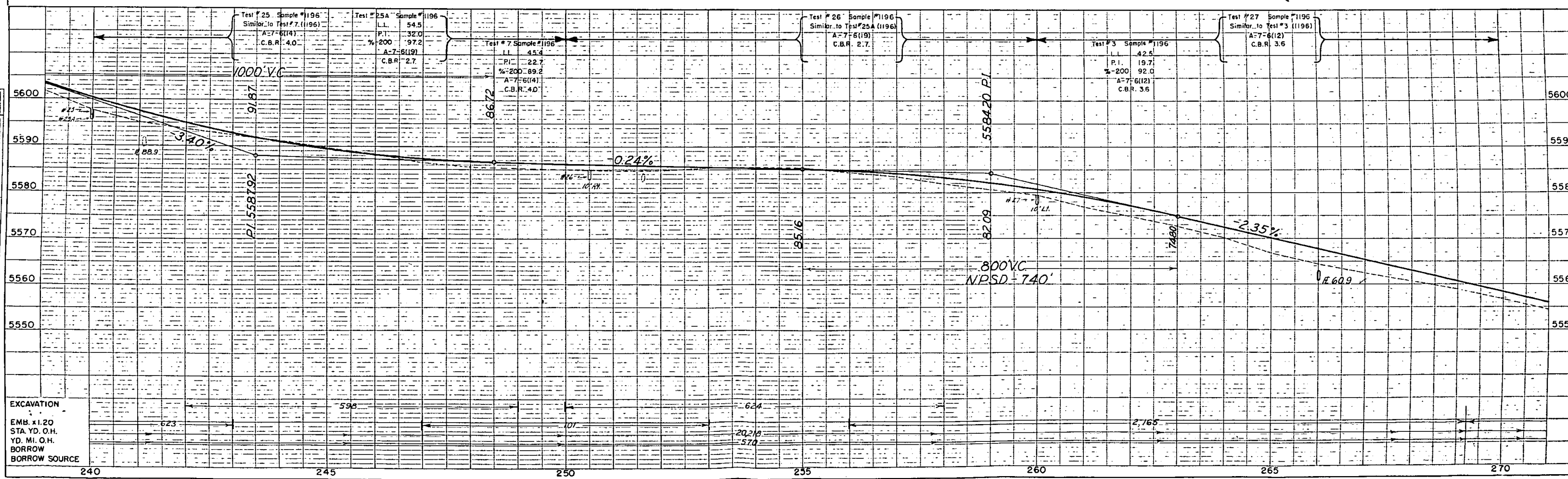


PLATE 1-PLAN-PROFILE S. P. R. STANDARD

Printed in U.S.A.
On SUPER-60 Gsm Paper

FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	S 0019(2)	23	

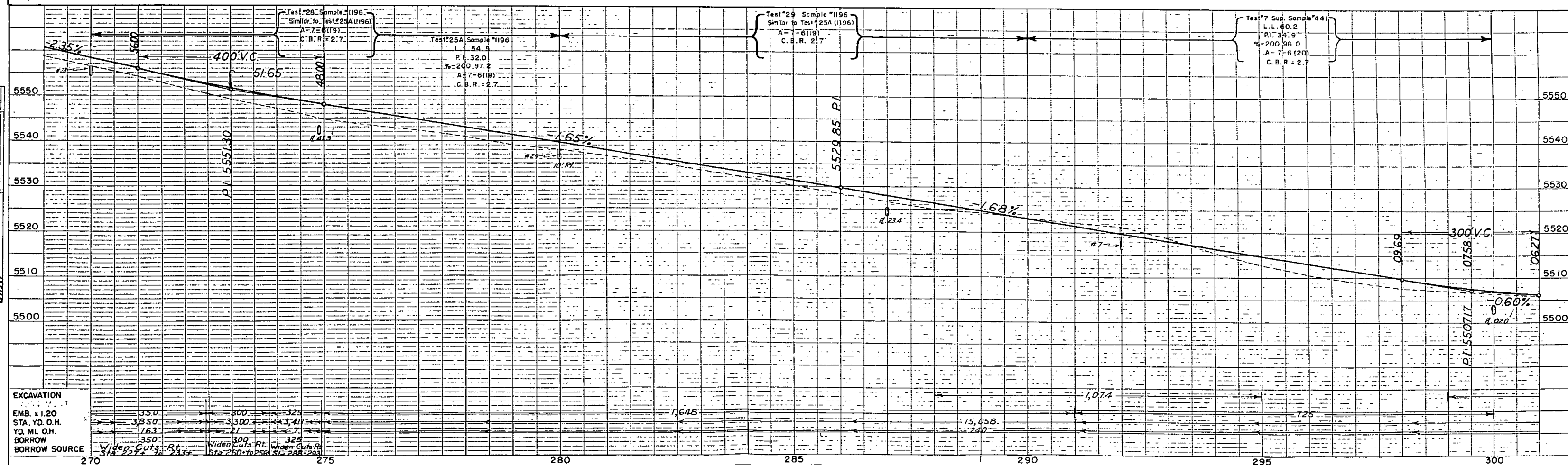
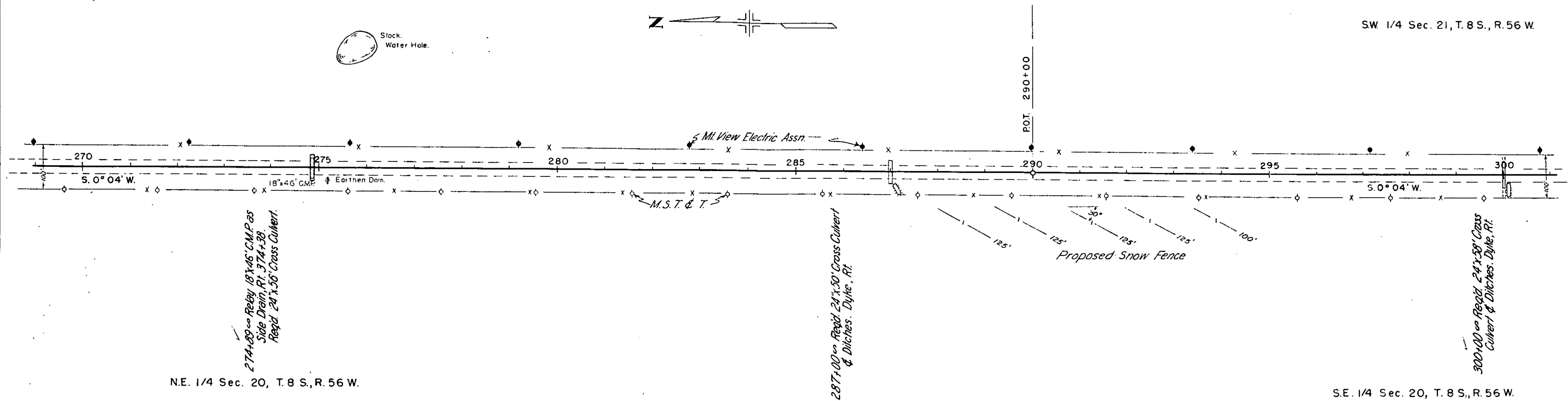
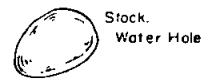


PLATE I-PLAN-PROFILE B. P. R. STANDARD
EUGENE BRETHERTON CO., Chicago-New York

Printed in U.S.A.
On IMPERIAL Tracing Cloth

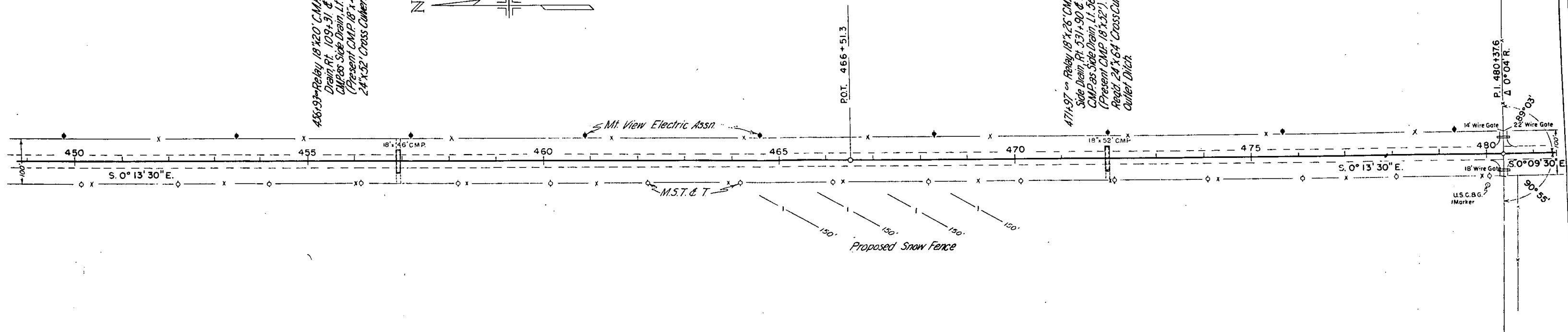
N.W. 1/4 Sec. 4, T. 9 S., R. 56 W.

S.W. 1/4 Sec. 4, T. 9 S., R. 56 W.

FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	S 0019(2)	29	

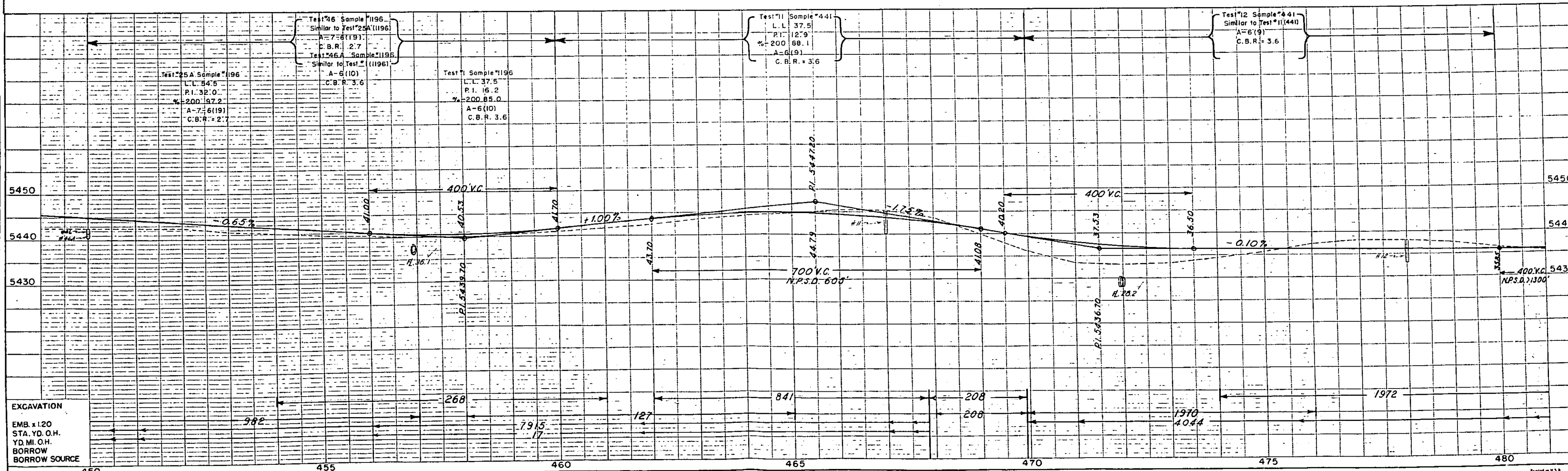
465+97 to Relay 18'x26' CMP as Side
Drain Rt. 109+31 & Relay 18'x26'
CMP as Side Drain Lt. 460+37
(Present CMP 18'x46') Road.
24'x52' Cross Culvert & Ditches.

471+97 to Relay 18'x26' CMP as
Side Drain Rt. 537+90 & 18'x26'
CMP as Side Drain Lt. 562+00
(Present CMP 18'x52')
Road. 24'x64' Cross Culvert &
Outlet Ditch.



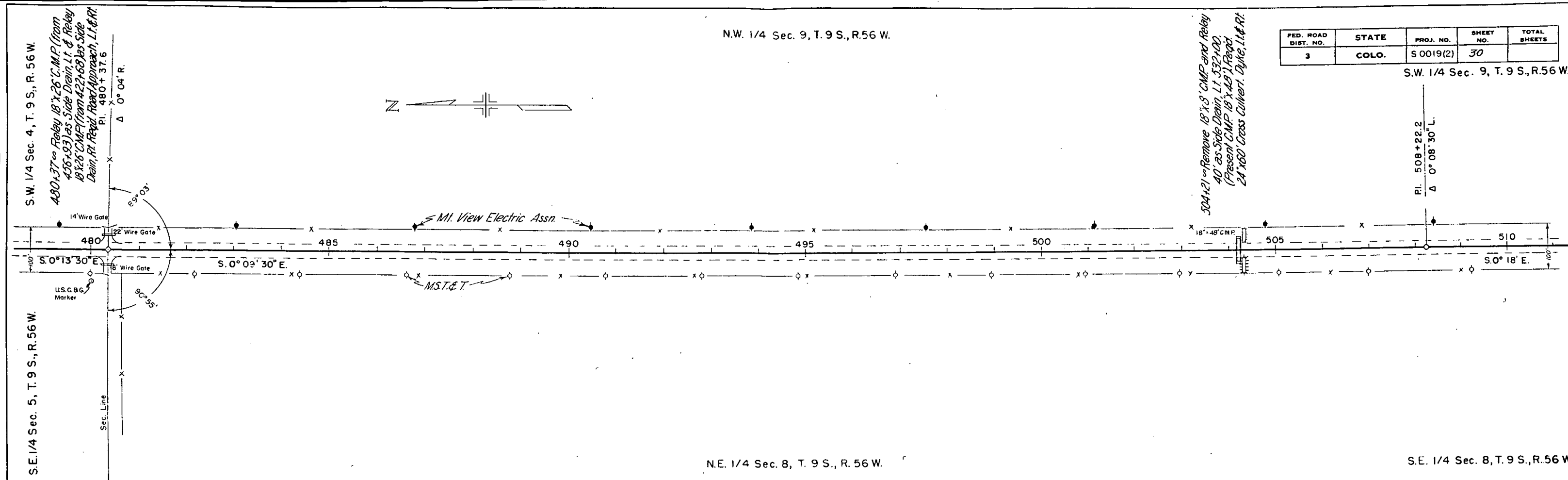
N.E. 1/4 Sec. 5, T. 9 S., R. 56 W.

S.E. 1/4 Sec. 5, T. 9 S., R. 56 W.

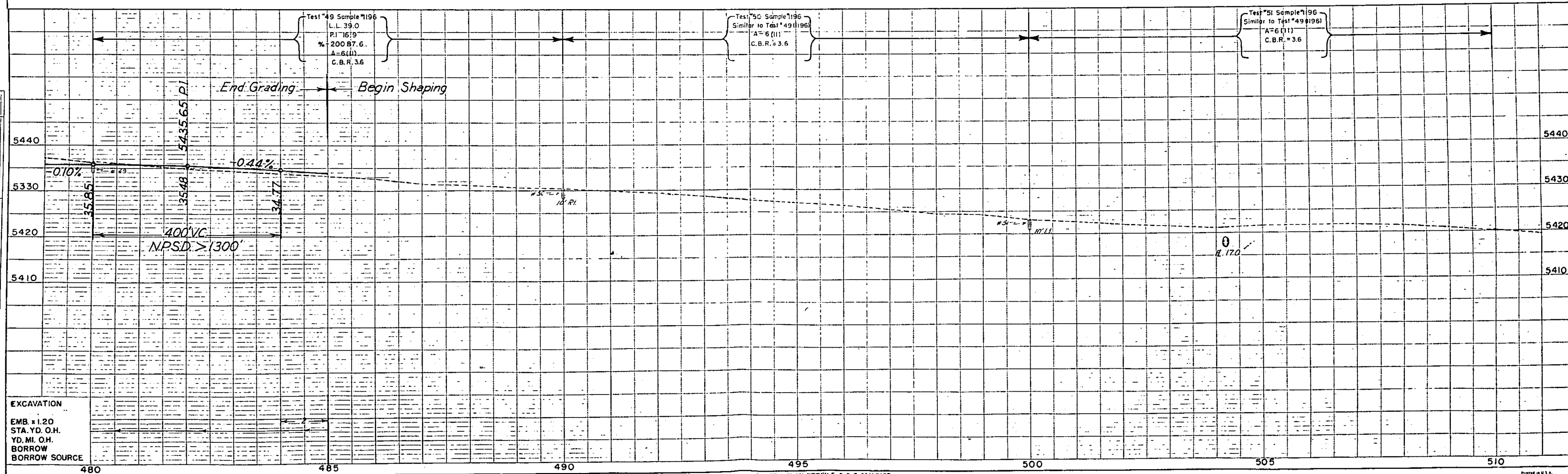


NOTE BOOK
NO. 7112
ALIGNED CHECKED
BY: OF WAY CHECKED

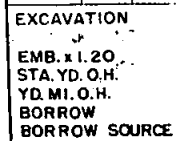
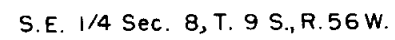
NOTE BOOK
NO. 7112
GRADES CHECKED
BY: N. - NOTED
STRUCTURE NOTATION ON D



FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	S 0019(2)	30	



N.W. 1/4 Sec. 16, T. 9 S., R. 56 W.



PLAN	DATE
NO. 2237	
NOTE: BOOK GRADINGS CHECKED.	
NOTE: BOOK ALIGNMENT CHECKED.	
NOTE: BOOK RT. OF WAY CHECKED.	

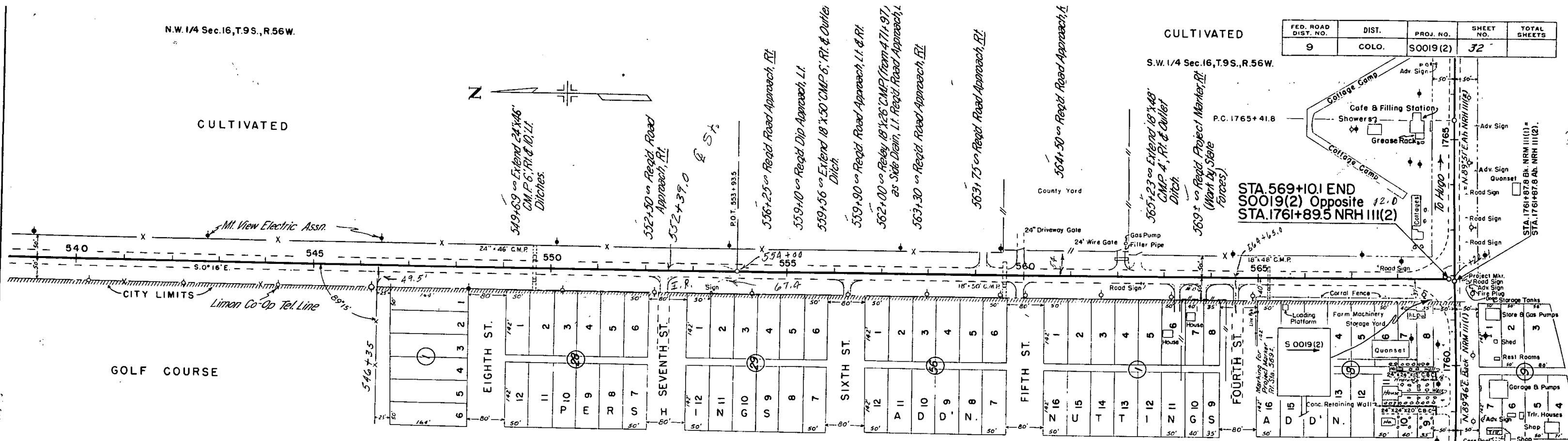
EXCAVATION	DATE
NO. 2237	
NOTE: BOOK GRADINGS CHECKED.	
NOTE: BOOK ALIGNMENT CHECKED.	
NOTE: BOOK RT. OF WAY CHECKED.	

N.W. 1/4 Sec. 16, T.9S., R.56W.

CULTIVATED

S.W. 1/4 Sec. 16, T.9S., R.56W.

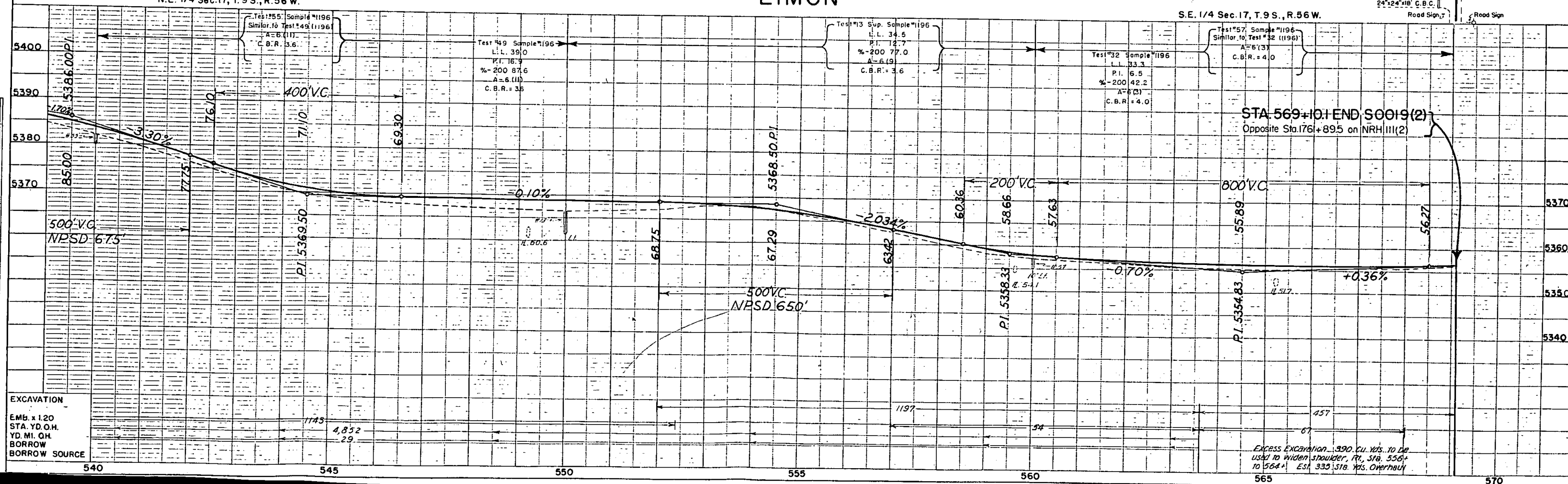
FED. ROAD DIST. NO.	DIST.	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	S0019(2)	32	



N.E. 1/4 Sec. 17, T.9S., R.56W.

LIMON

S.E. 1/4 Sec. 17, T.9S., R.56W.



EXCAVATION
EMB. x 1.20
STA. YD. O.H.
YD. MI. O.H.
BORROW
BORROW SOURCE

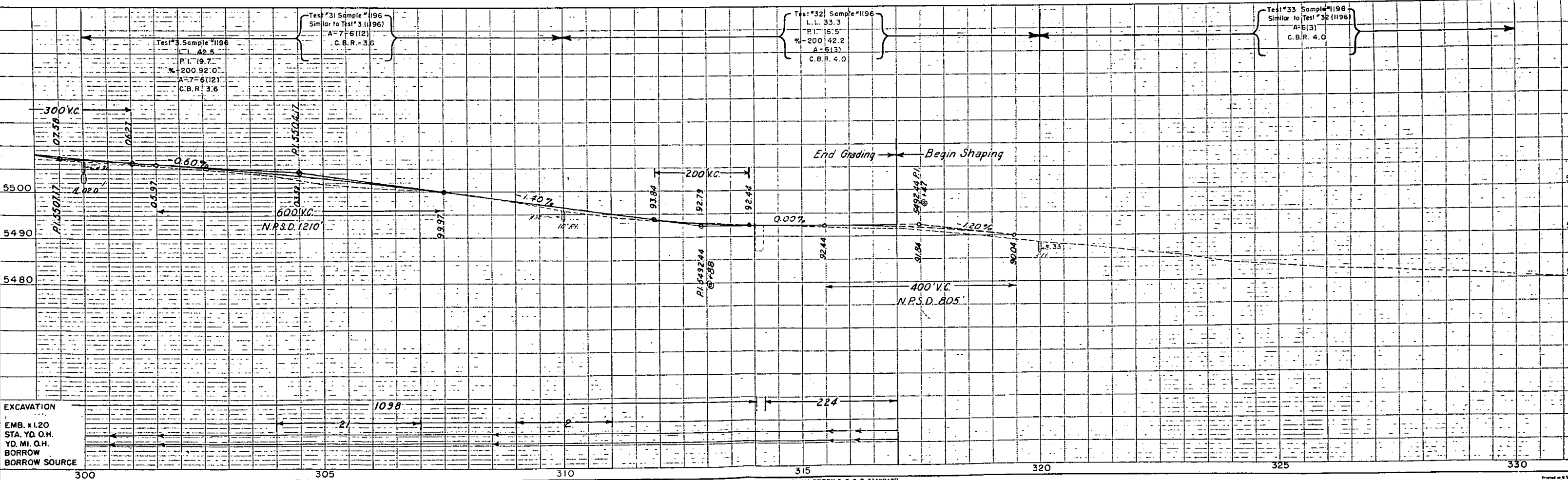
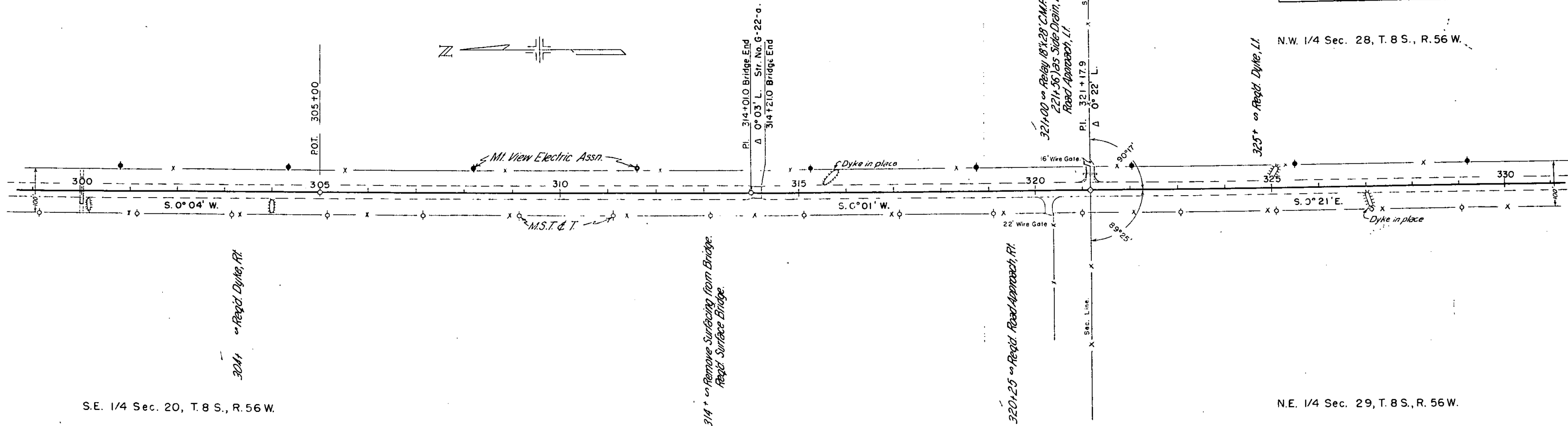
EXCESS EXCAVATION 390 Cu. Yds. to be used to widen shoulder, Rt. Sta. 556+ to 564+ Est. 335 1/2 Yds. Overhaul

S.W. 1/4 Sec. 21, T. 8 S., R. 56 W.

FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	S0019(2)	24	

N.W. 1/4 Sec. 28, T. 8 S., R. 56 W.

N.E. 1/4 Sec. 29, T. 8 S., R. 56 W.



EXCAVATION
EMB. x 1.20
STA. YD. O.H.
YD. MI. O.H.
BORROW
BORROW SOURCE

PLAT 1-PLAN-PROFILE - STANDARD

Printed on 8 1/2 x 11 inch paper, 100% recycled, 50% post consumer waste.

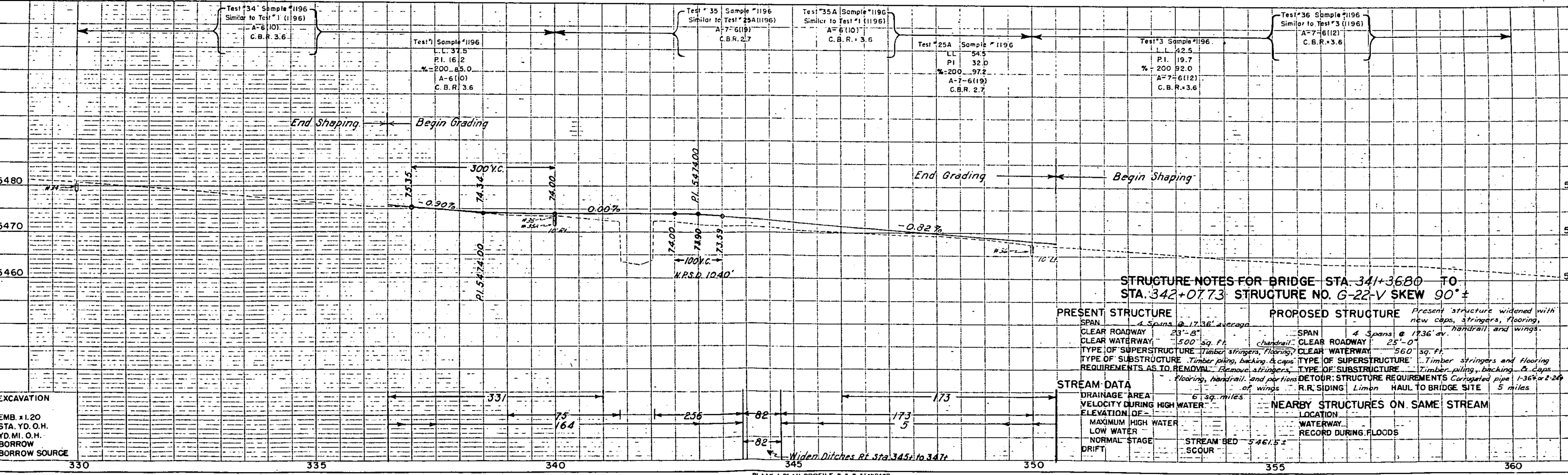
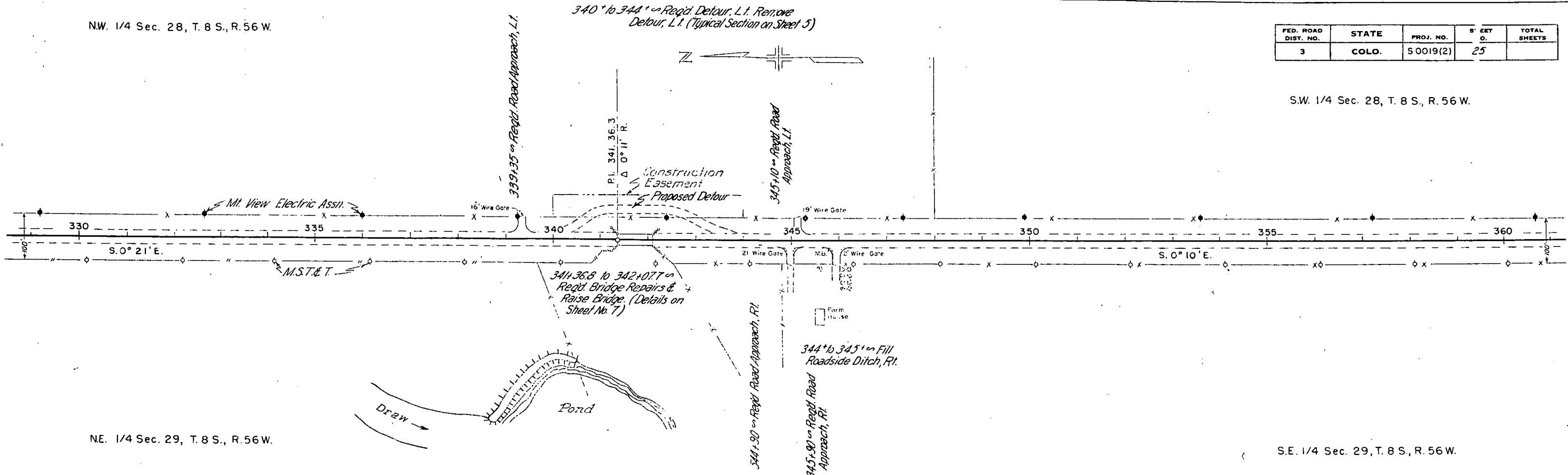
NW 1/4 Sec. 28, T. 8 S., R. 56 W.

FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	S 0019(2)	25	

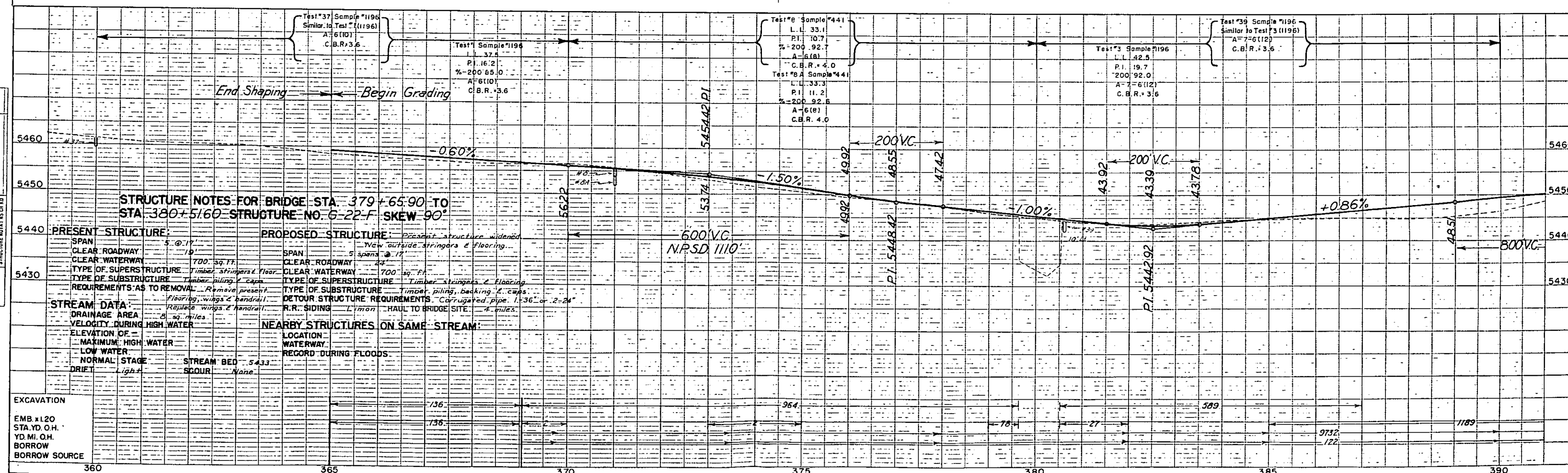
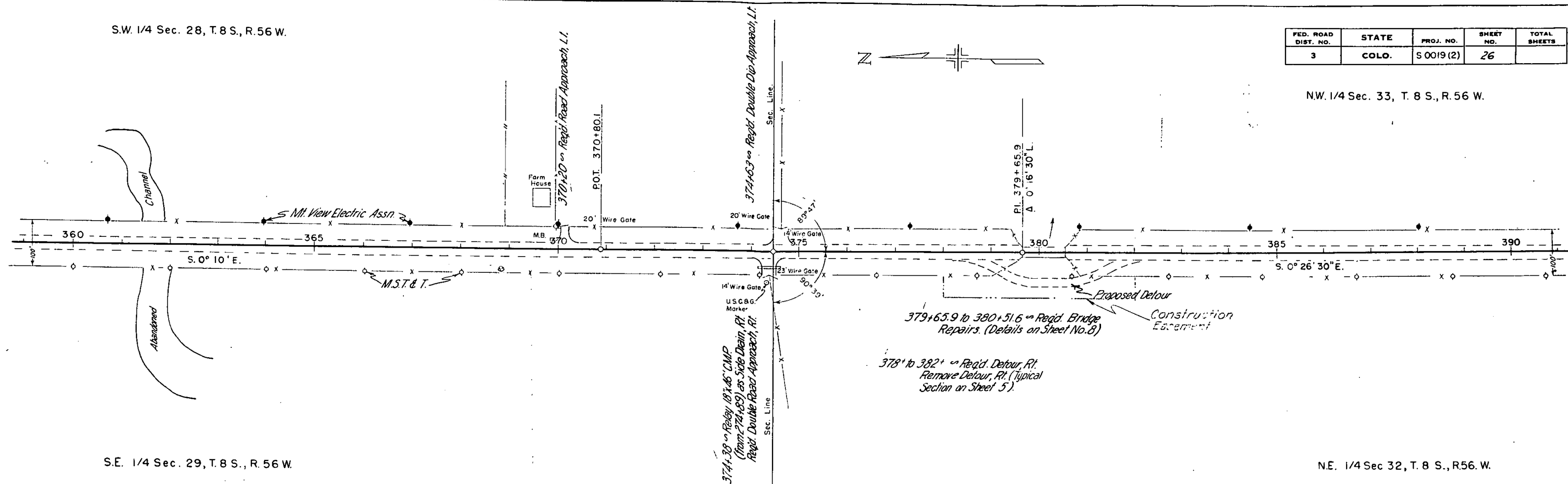
S.W. 1/4 Sec. 28, T. 8 S., R. 56 W.

NE 1/4 Sec. 29, T. 8 S., R. 56 W.

S.E. 1/4 Sec. 29, T. 8 S., R. 56 W.



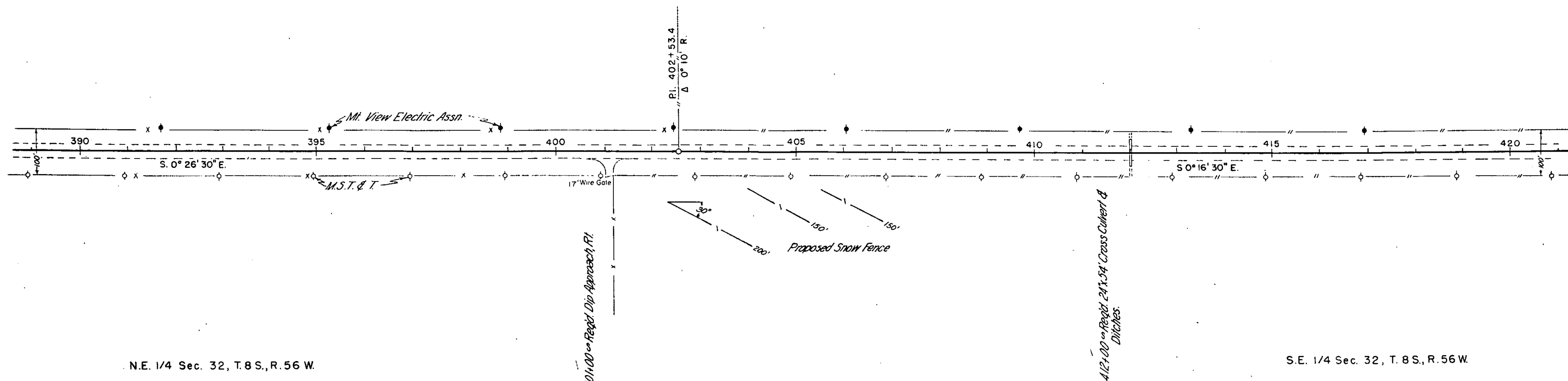
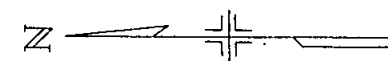
FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	S 0019 (2)	26	



N.W. 1/4 Sec. 33, T. 8 S., R. 56 W.

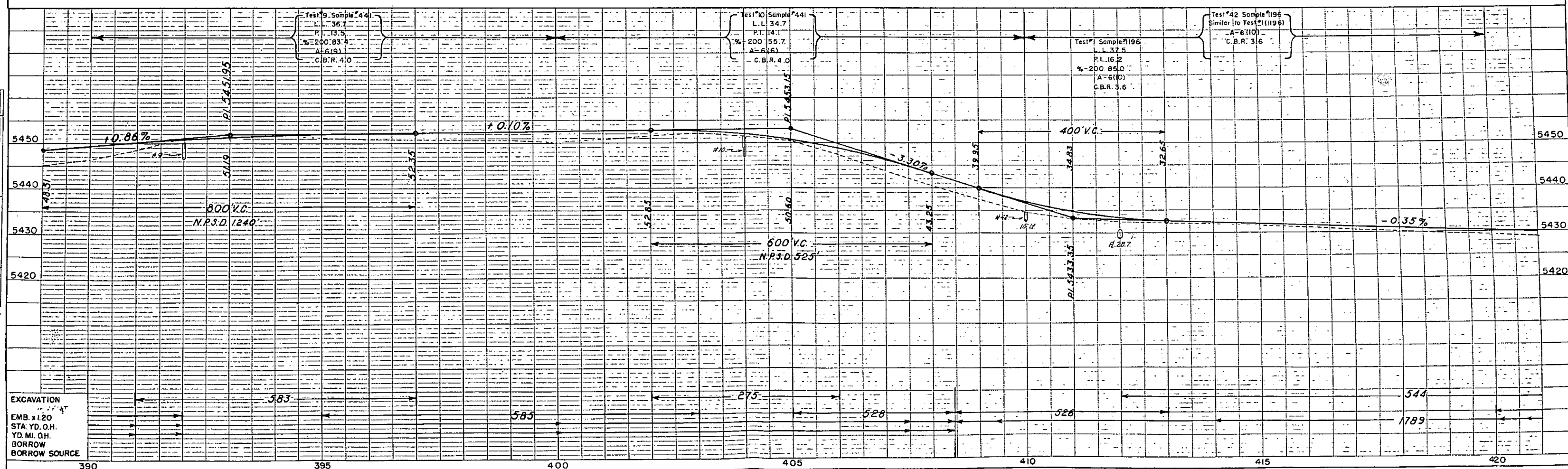
FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	S0019(2)	27	

S.W. 1/4 Sec. 33, T. 8 S., R. 56 W.



N.E. 1/4 Sec. 32, T. 8 S., R. 56 W.

S.E. 1/4 Sec. 32, T. 8 S., R. 56 W.



EXCAVATION
EMB. x 120
STA. YD. O.H.
YD. MI. Q.H.
BORROW
BORROW SOURCE

S.W. 1/4 Sec. 33, T. 8 S., R. 56 W.

N.W. 1/4 Sec. 4, T.9 S.; R. 56 W.

FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	S0019(2)	28	

