

CONVENTIONAL SIGNS & ABBREVIATIONS

STATE LINE	---	EXCAVATION	---	E
COUNTY LINE	---	EMBANKMENT	---	F
TOWNSHIP LINE	---	OVERHAUL	---	H
SECTION LINE	---	SURFACING	---	S
CITY, VILLAGE, OR BOROUGH	---	GUARD RAIL	---	GR
FENCE LINE	---	INTERSECTION ANGLE	---	A
RIGHT-OF-WAY LINE	---	RADIUS	---	R
TRAVELLED WAY	---	ELEVATION	---	EL
RAILROADS	---	VERTICAL CURVE	---	VC
RETAINING WALL	---	BENCH MARK	---	B.M.
BASE OR SURVEY LINE	---	SECTIONAL CONCRETE CULVERT	---	P.C.
LEVEE	---	CORRUGATED METAL CULVERT	---	C.M.
GRAVEL PIT	---	CULVERT HAUL	---	P.H.
SAND PIT	---	TON MILES	---	T.M.
CLAY PIT	---	PLACE	---	P
ROCK QUARRY	---	IN PLACE	---	INP
CULVERTS	---	REPLACE	---	REP
PLAIN	---	RIGHT	---	R
WITH FACEWALLS	---	LEFT	---	L
WITH WINGWALLS	---	HAND DITCHING	---	H.D.
DROP INLET	---	POINT OF CURVE	---	P.C.
POWER POLE LINE	---	POINT OF TANGENT	---	P.T.
TELEPHONE OR TELEGRAPH LINE	---	POINT OF INTERSECTION	---	P.I.
MARSH	---	SPECIAL EXCAVATION	---	S.E.
HEDGE, BRUSH, OR TIMBER	---	SPECIAL PLOWING	---	S.P.
GROUND ELEVATION	---	TELEPHONE POLE	---	T.P.
GRADE ELEVATION	---			

OFFICE OF COUNTY SURVEYOR
RAMSEY COUNTY

Plan and Profile of County Project No. 32-N15

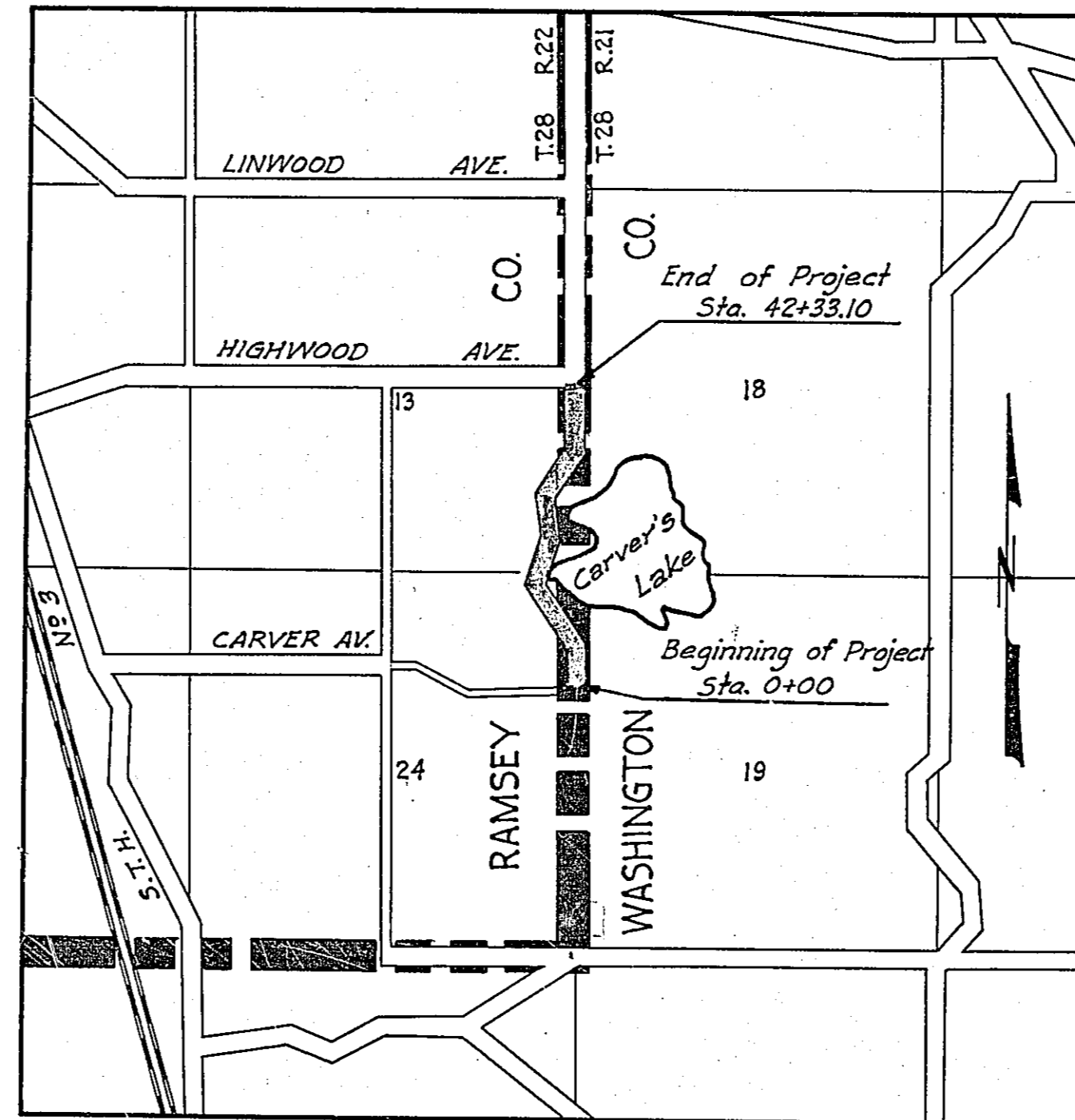
From a point on the E. line of Sec. 24-28-22, 1129' N. of the E. 1/4 Cor. thereof, to the E. 1/4 Cor. of Sec. 13-28-22
Give proper reference to Sections, Township and Range

GROSS LENGTH- 4233.10 FEET 0.80 MILES
LENGTH OF EXCEPTIONS- FEET MILES
NET LENGTH- 4233.10 FEET 0.80 MILES
PLAN, 1 Inch = 100 Feet
PROFILE, Horz. 1 Inch = 100 Feet. Vert. 1 Inch = 10 Feet
WORKING PLANS { Horz. 1 Inch = 100 Feet
Vert. 1 Inch = 10 Feet
Cross-Sections, 1 Inch = 10 Feet

LAYOUT
SCALE, 1 Inch = 2640 Feet

INDEX OF SHEETS

- Sheet No. 1. Title Sheet and Layout Map
- " No. 2. Typical Cross-Sections and Statement
- " No. 3. Plan and Profile, Sta. 0+00 to Sta. 25+00.
- " No. 4. " " " 25+00 " " 42+33.10
- " No. 5 to 12 Incl. Cross Sections



Date of Resolution for Preparation of Plans September 6, 1932

Planned by [Signature] ASSISTANT ENGINEER

Recommended for Approval [Signature] ASSISTANT ENGINEER

Plans Approved and Recommended for Consideration [Signature] COUNTY SURVEYOR

APPROVED 9/23 1932 [Signature] CHAIRMAN OF THE TOWN BOARD

Approved by County Board [Signature] CHAIRMAN OF COUNTY BOARD

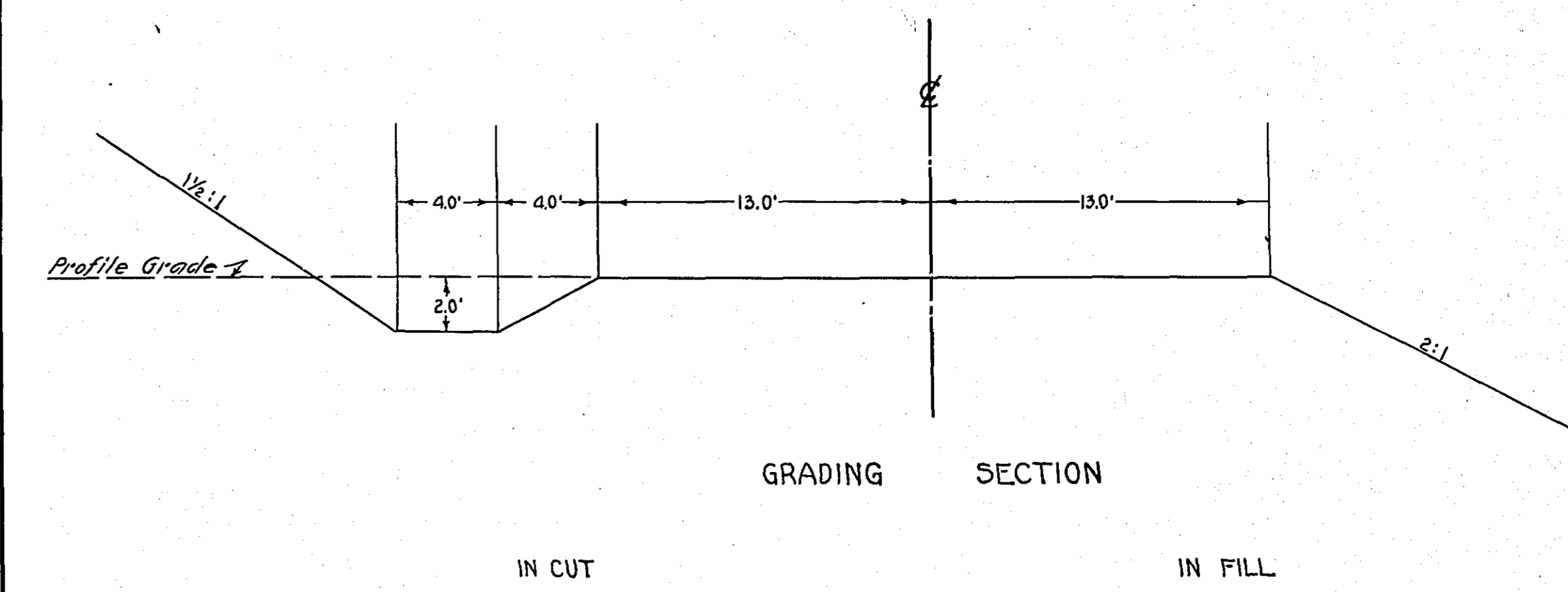
STATEMENT OF ESTIMATED QUANTITIES AND COSTS.

ITEM	UNIT	MILE														TOTAL ESTIMATED QUANTITIES	ESTIMATED UNIT PRICES	AMOUNTS	TOTALS	
		ONE	TWO	THREE	FOUR	FIVE	SIX	SEVEN	EIGHT	NINE	TEN	ELEVEN	TWELVE	THIRTEEN	FOURTEEN					
1	Clearing	Acre	0.02															0.02		
2	Clearing	Tree	79															79		
3	Grubbing	Acre	1.02															1.02		
4	Grubbing	Tree	41															41		
5	Excavation - Earth	Cu. Yd.	33,800															33,800		
6	Excavation - Loose Rock	Cu. Yd.	100															100		
7	Excavation - Solid Rock	Cu. Yd.	50															50		
8	Excavation - Overhaul	Cu. Yd.	41,540															41,540		
9	Special Excavation	Lin. Ft.	70															70		
10	Hand Ditching	Cu. Yd.																		
11	Tile Drain	Lin. Ft.																		
12	Tile Drain	in.																		
13	Tile Drain	in.																		
14	Porous Back Fill Material	Cu. Yd.																		
15	Stone Rip-Rap	Cu. Yd.																		
16	Wearing Rip-Rap of Stone	Cu. Yd. mile																		
17	Install	Lin. Ft.																		
18	Install	Lin. Ft.																		
19	Install	Lin. Ft.																		
20	Install	Lin. Ft.																		
21	Install	Lin. Ft.																		
22	Install	Lin. Ft.																		
23	Install	Lin. Ft.																		
24	Install 24" P ₃	Lin. Ft.	108															108		
25	Install 30" P ₃	Lin. Ft.	156															156		
26	Install 36" P ₃	Lin. Ft.	50															50		
27	Install 48" P ₃	Lin. Ft.	66															66		
28	Headwall Conc.	Cu. Yd.	7.48															7.48		
29	Headwall Steel	Lbs.	305															305		
30	Remove old culverts	Lin. Ft.	130															130		
31	Replace old culverts	Lin. Ft.	99															99		
TOTAL ESTIMATED COST OF GRADING		(IN 'TOTALS' COLUMN)																		
33	Culv. Material	Lin. Ft.																		
34	Culv. Material	Lin. Ft.																		
35	Culv. Material	Lin. Ft.																		
36	Culv. Material	Lin. Ft.																		
37	Culv. Material	Lin. Ft.																		
38	P ₃ Culv. Material 24"	Lin. Ft.	108															108		
39	P ₃ Culv. Material 30"	Lin. Ft.	156															156		
40	P ₃ Culv. Material 36"	Lin. Ft.	50															50		
41	P ₃ Culv. Material 48"	Lin. Ft.	66															66		
TOTAL ESTIMATED COST OF PORTABLE CULVERT MATERIAL		(IN 'TOTALS' COLUMN)																		
42	Gravel Pit Stripping	Cu. Yd.																		
43	Screening	Cu. Yd.																		
44	Loading	Cu. Yd.																		
45	Hauling	Cu. Yd. Mile																		
46	Shaping & Compacting	Man Hour																		
47	Shaping & Compacting	Man Hour																		
48																				
49																				
50																				
51																				
TOTAL ESTIMATED COST OF GRAVEL HAUL		(IN 'TOTALS' COLUMN)																		
52	Gravel Material F. O. B. Pit	Cu. Yd.																		
53	Freight (if any)	Cu. Yd.																		
54	Unloading from Cars	Cu. Yd.																		
TOTAL ESTIMATED COST OF GRAVEL MATERIAL		(IN 'TOTALS' COLUMN)																		
55	Fine Grading-Exc. & Emb.	Cu. Yd.																		
56	Shoulders - Earth	Cu. Yd.																		
57																				
58																				
59	Pavement	Sq. Yd.																		
60	Integral Curb (One Course Concrete)	Lin. Ft.																		
61	Stopping Curb	Lin. Ft.																		
62	Surface Drain	Lin. Ft.																		
63	Surface Drain Basins	Basin																		
64	Bridge Approach Slabs (Square)	Slab																		
65	Bridge Approach Slabs (Skew)	Slab																		
66																				
67																				
68																				
TOTAL ESTIMATED COST OF PAVEMENT CONSTRUCTION		(IN 'TOTALS' COLUMN)																		
69	Concrete	Cu. Yd.																		
70	Reinforcing Steel	Lb.																		
71	Excavation - Earth	Cu. Yd.																		
72	Excavation - Loose Rock	Cu. Yd.																		
73	Excavation - Solid Rock	Cu. Yd.																		
74	Bridge	* Bridge No.																		
75	Concrete	Station																		
76	Concrete	Cu. Yd.																		
77	Reinforcing Steel	Lb.																		
78	Structural Steel	Lb.																		
79	Piling	Lin. Ft.																		
80	Temporary Crossing	Lump Sum																		
81	Removing old Bridge	Lump Sum																		
82	Bituminous Surface	Sq. Yd.																		
83																				
84																				
TOTAL ESTIMATED COST OF STRUCTURES		(IN 'TOTALS' COLUMN)																		
85	Guard Rail (Cable)	Lin. Ft.	4090															4090		
86	Guard Rail (Anchors)	Each.	20															20		
87	Excavation for Gutter	Cu. Yd.																		
TOTAL ESTIMATED COST OF MISCELLANEOUS ITEMS		(IN 'TOTALS' COLUMN)																		

P3 Culverts to be delivered on Project by culvert contractor.

TYPICAL CROSS SECTIONS AND DETAILS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SEC.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MINN.					



Note: All slopes to conform to R.O.W. as shown

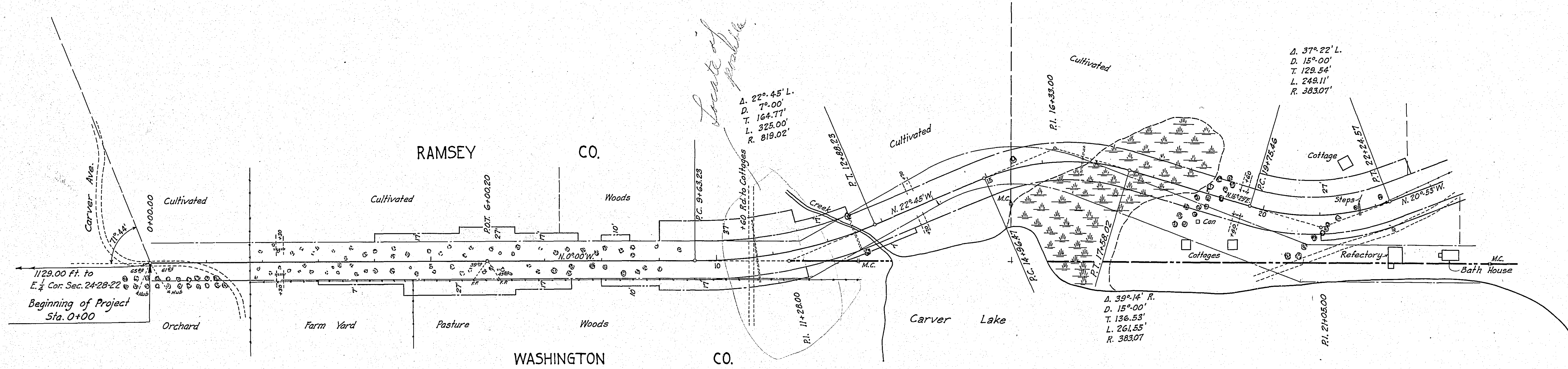
*NOTE: BRIDGE ITEMS LISTED UNDER BRIDGE NUMBERS IN MILE COLUMNS REGARDLESS OF LOCATION

2+30 L. 2+30 R.
Rep. 15'x26' C.M. Rep. 18'x26' C.M.
From 37+25 From 37+96

10+70 12+50
P. 30'x114' P3 P. 48'x66' P3
Special Exc. 25 C.Y.
Head Wall Rt. Steel 197 Lbs.
Conc. 483 C.Y.

13+70 R.&L. 16+75 19+60 L. 19+60 R.
No Culv. Req'd. P. 24'x54' P3 Rep. 12'x26' C.M. Rep. 12'x21' C.M.
Special Exc. 15 C.Y. From 41+14 From 29+00

PLAN	DATE
BY	
NO.	
NOTE FOR ALIGNMENT CHECKED	
NOTE FOR ELEVATION CHECKED	
NOTE FOR VOLUME CHECKED	



PROFILE	DATE
BY	
NO.	
NOTE BOOK IS NOT CHECKED	
NOTE FOR ELEVATION CHECKED	
NOTE FOR VOLUME CHECKED	

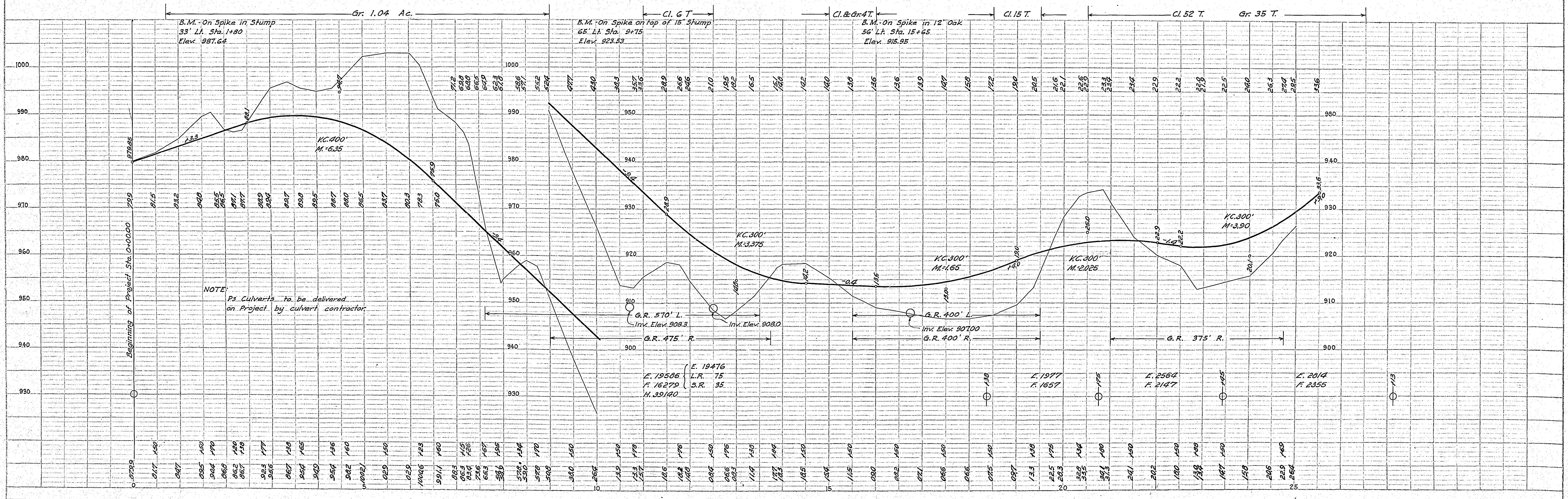


PLATE 1 - PLAN-PROFILE - G. P. R. & E. STANDARD
REDFIELD & ELLIS CO., NEW YORK

Ramsey Co. Minnesota, County Proj. 32-N15 Sheet 3 of 12 Sheets

Ford G. Lewis Rd 6002

24+40
P. 36"x90" Ps
Special Exc. 30 C.Y.
Head Wall L. - Steel 1108 Lbs
Conc. 2.65 C.Y.

28+10 R.&L.
No Culv. Req'd.
29+00 L.
Inp. 12"x21" C.M.
Rem.
Haul to 19+60 R.

29+00
P. 24"x54" Ps
32+00 R.&L.
No Culv. Req'd.

37+25
Inp. 15"x26" C.M.
Remove
Haul to 2+30 L.

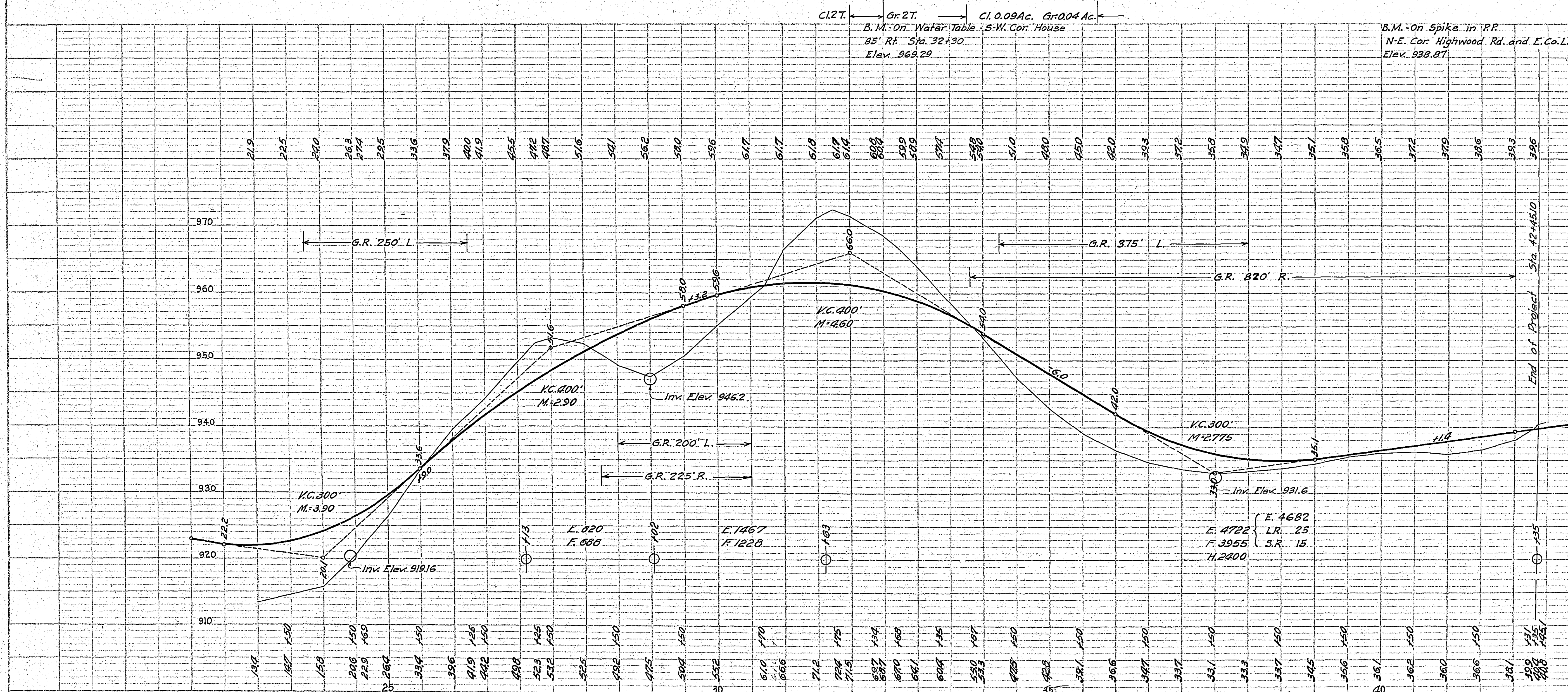
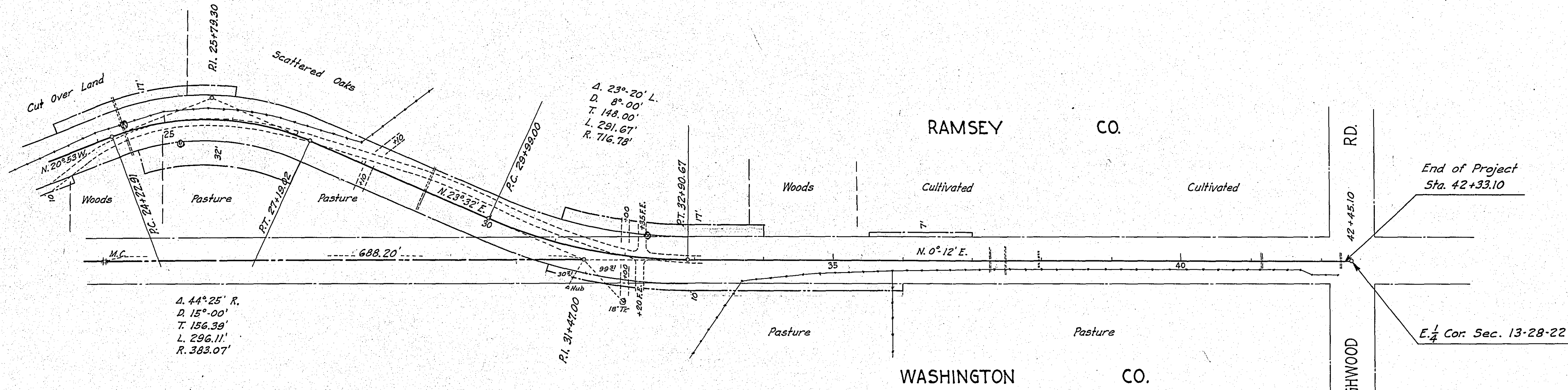
37+36
Inp. 18"x26" C.M.
Remove
Haul to 2+30 R.

37+50
P. 30"x42" Ps
41+14
Inp. 12"x26" C.M.
Remove
Haul to 19+60 L.

42+24
Inp. 12"x31" C.M.
Remove

DATE	
BY	
PLAN	
SURVEYED	
NOTED	
NOTED	
NOTED	
NOTED	
NO.	

DATE	
BY	
PROFILE	
SURVEYED	
NOTED	
NOTED	
NOTED	
NOTED	
NO.	



PROJECT 32-N15
ESTIMATED QUANTITIES

Clearing Acres	0.09
Grubbing "	1.08
Clearing Trees	79
Grubbing "	41
Exc. Earth Cu. Yds.	33800
L.R.	100
S.R.	50
O.H.	41540
Install 24" Ps Lin. Ft.	108
30" Ps	156
36" Ps	90
48" Ps	66
Rem. Old Culv.	130
Rep.	99
Guard Rail Cable Lin. Ft.	4090
Guard Rail Anchors Each	20
Headwalls Conc. Cu. Yds.	7.48
Steel Lbs.	305
Special Exc. Cu. Yds.	70