FORM 129 A

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	G.R.
Fence Line		Intersection Angle	Δ
Right-of-way Line		Radius	R
Travelled Way		Elevation	El.
Railroads		Vertical Curve	V.C.
Retaining Wall		Bench Mark	B.M.
Base or Survey Line	36 T36	Sectional Concrete Culvert	P.1.
Levee		Corrugated Metal Culvert	C.M.
Gravel Pit	G	Culvert Haul	P.L.H.
Sand Pit	S	Ton Miles	T.M.
Clay Pit	C	Place	P
Rock Quarry	Q	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	712	Telephone Pole	Tel.P.
Grade Elevation	724		

STATE HIGHWAY DEPARTMENT
OF MINNESOTA
Aid
Plan and Profile of State Road No. 18
COUNTY OF OLMSTED

From 75′ N. & 480′ E. of the NW. Cor. SW¼SW¼ Sec. 8 T108N R14W **To** 34.3′ N. & 199.8′ E. of the NW. Cor. NE¼NE¼ Sec. 6 T106N R14W
Give proper reference to Section, Township and Range

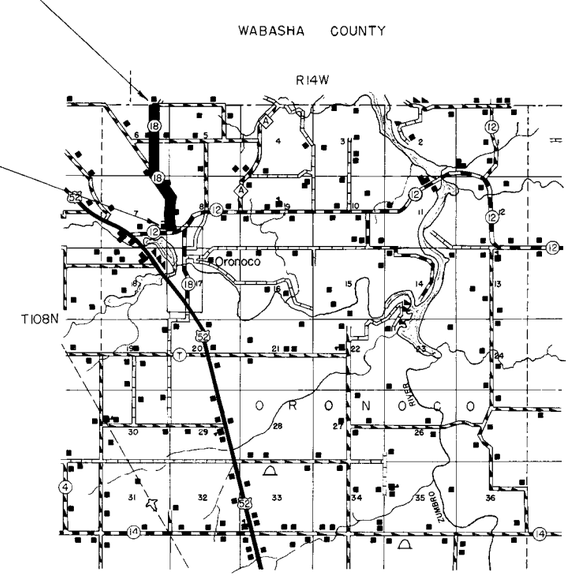
GROSS LENGTH- 9999.5 FEET 1.894 MILES
LENGTH OF EXCEPTIONS- FEET MILES
NET LENGTH- 9999.5 FEET 1.894 MILES

SCALES
- 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 = 10 Feet

LAYOUT
SCALE, 1 inch= 5280 Feet

End S.P. 55-505-01 Minn. Proj. S 791(1) Sta. 99+99.5

Begin S.P. 55-505-01 Minn. Proj. S 791(1) Sta. 0+00



INDEX OF SHEETS

Sheet No. 1. Title Sheet and Layout Map
" No. 2. Typical Cross-Sections and Statement
" No. 3. Tabulation Sheet
" No. 4. Plan and Profile, Sta. 0+00 to Sta. 25+00
" " 5 " " " " 25+00 " " 50+00
" " 6 " " " " 50+00 " " 70+00
" " 7 " " " " 70+00 " " 99+99.5
" " 8 to 16 Cross Sections

SPECIFICATIONS

The Specifications for Highway Construction dated July 1, 1947 and submitted for approval by the Division Engineer of the Bureau of Public Roads October 15, 1947, shall govern.

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

G. J. Sullivan

DATE 5-15-52 REG. NO. 1207

DESIGNATED STATE AID ROAD No. 18

MINN. PROJ. S 791(1)

RECOMMENDED FOR APPROVAL DATE

DISTRICT ENGINEER
BUREAU OF PUBLIC ROADS
DEPARTMENT OF COMMERCE

APPROVED DATE

DIVISION ENGINEER
BUREAU OF PUBLIC ROADS
DEPARTMENT OF COMMERCE

Planned by G. J. Sullivan
HIGHWAY ENGINEER FOR OLMSTED COUNTY

Recommended for Approval M. B. Anderson
DIVISION ENGINEER

Recommended for Approval [illegible] 5-15-52
ENGINEER OF COUNTY DIVISION

Approved 7-3 19[illegible] [illegible]
ENGINEER OF PLANS AND SURVEYS

S.P. 55-505-01 Minn Proj S 791(1)

OLMSTED County, Minnesota. County Proj. No. Plan No. Sheet 1 of 16 Sheets

FORM 129 C - #2 REV. '46

ESTIMATED QUANTITIES

SPECIFICATION NO.	ITEM	UNIT	MILE ONE Sta 0+00 To Sta 49+00	MILE TWO Sta 49+00 To Sta 99+95	MILE Sta To Sta	MILE Sta To Sta	MILE Sta To Sta	MILE Sta To Sta	MILE Sta To Sta	MILE Sta To Sta	MILE Sta To Sta	MILE Sta To Sta	TOTAL ESTIMATED QUANTITIES
2101.502	Clearing	Tree	53	2									55
2101.507	Grubbing	Tree	171	4									175
2105.503	Class "C" Excavation	Cu.Yd.	38352	28141									66493
2104.501	Remove Portable Culverts	Lin.Ft.	118	152									270
2501.511-18	Furnish & Install C.M. Pipe Culv. 18"	Lin.Ft.	92	0									92
2501.511-24	Furnish & Install C.M. Pipe Culv. 24"	Lin.Ft.	64	96									160
2501.521-24	Furnish & Install S.C. Pipe Culv. 24"	Lin Ft.	0	108									108
2501.521-42	Furnish & Install S.C. Pipe Culv. 42"	Lin Ft.	0	80									80
2515.531-18	Furnish & Install Aprons for C.M.P. 18"	Apron	6	0									6
2515.531-24	Furnish & Install Aprons for C.M.P. 24"	Apron	4	6									10
2515.541-24	Furnish & Install Aprons for S.C.P. 24"	Apron	0	6									6
2515.541-42	Furnish & Install Aprons for S.C.P. 42"	Apron	0	4									4
2414.501	Cattle Pass Excavation 60"	Cu.Yd.	0	55									55
2414.511-60"	Furnish & Install P-C Conc. Cattle Pass	Lin.Ft.	0	28									28
2414.512-60	Furnish & Install P-C Conc. 60" Cattle Pass End Sections	End Sec.	0	2									2
2252.527	Crushed Rock Wearing Course in Place	Cu.Yd.	1642	1698									3340

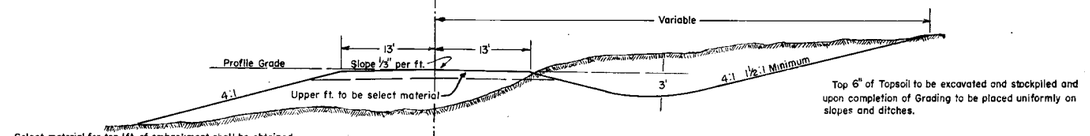
STANDARD DETAIL PLATES

Standard Detail Plates issued October 1, 1947 and submitted for approval by the Division Engineer of the Public Roads Administration October 15, 1947, shall govern.

PLATE NO.	STANDARD DETAIL PLATES
3001	S.C. Conc. Culv. Pipe
3021	P.C. Conc. Cattle Pass
3100A-3102	Conc. Apron for S.C. Culv. Pipe
3123	Metal Aprons for C.M. Pipes

FED. ROAD DIST. NO	STATE	FED. AID PROJ. NO.	SEC.	FISCAL YEAR	SHEET NO	TOTAL SHEETS
5N	MINN.					

TYPICAL GRADING SECTIONS



Select material for top 1ft. of embankment shall be obtained from adjacent cuts between a depth of 1ft. and 3 ft. below the natural surface.

Top 6" of Topsoil to be excavated and stockpiled and upon completion of Grading to be placed uniformly on slopes and ditches.

SPECIAL DETAILS

TYPICAL BASE & SURFACE SECTIONS



Crushed Rock computed at the rate of 1500 Cu. Yds. per mile. 500 Cu. Yds. allowed for Entrances and Approaches.

DAHMS PHOTO PRINT CO MPLS 1, MINN.

TABULATION OF ESTIMATED QUANTITIES

CLEARING & GRUBBING

Plan Sheet No.	STATION TO STATION		CLEAR TREE	GRUB TREE
4	5+00	10+00	16	18
4	10+00	26+00	6	118
5	29+00	31+00	1	4
5	36+00	39+00	29	29
5	44+00	48+00	1	2
6	71+00	76+00	2	4
	TOTAL		55	175

FENCE

Plan Sheet No.	STATION TO STATION		LT.	RT.	REMOVE Lin. Ft.	RESET Lin. Ft.
	TOTAL					

MISCELLANEOUS

Plan Sheet No.	STATION	ITEM	QUAN.
4-7	0 to 100	Crushed Rock Wearing Course	3340 Cu.Yds.

EXCAVATION

Plan Sheet No.	STATION TO STATION		CU.YD.
4	0+00	24+50	19107
5	24+50	37+00	11839
5	37+00	49+00	7406
6	49+00	65+10	11464
7	65+10	87+35	9085
7	87+35	99+99.5	7592
	TOTAL		66493.

PORTABLE CULVERT REQUIREMENTS

Plan Sheet No	STATION	LOCATION ℄	LT.	RT.	REMOVE Size	Length	Type	* Install C.M. Culvert Size	Length	* Install S.C. Culvert Size	Length	Furnish & Install Corrugated Metal Pipe Diameter and Length of Barrell 18"	24"	C.M. Apron	Pipe Culvert Excav.	Furnish & Install Sectional Concrete Pipe Diameter and Length of Barrell 24"	42"	60" Cattle Pass	60" Conc. Apron	Remarks
4	8+47			X	24"	32'	S.C.						32'	2						
5	29+42			X								28'		2						
5	33+05			X	18"	32'	S.C.					32'		2						
5	38+48			X								32'		2						
5	45+33	X			18"	30'	C.M.													
5	45+40		X		24"	24'	S.C.						32'	2					4	2 lines
5	50+00	X															80'		4	2 lines
6	63+00	X																28'	2	
6	67+00	X														56'			4	
6	72+07		X		24"	58'	C.M.						32'	2						
6	72+07			X	24"	26'	C.M.						32'	2						
6	75+50		X										32'	2		52'			2	
7	93+19	X			18"	38'	C.M.													
7	93+19	X			15"	32'	C.M.													
	TOTAL					270						92	160	16			108	80	28	12

* Length includes Aprons.

CSAH # 2

CSAH # 18

3+43 C.L.
Inpl. 34'x58"span CMP
No change

81°47'

ORONOCO

He

Pump

Pl. 2+148=
32+92.7 SAR No.12

Pl. 2+14.8
Δ 73°36'
D 20°00'
T 214.8
L 368.0

Rt. 2+168.0

P.C. 0+00

Begin S.P. 55-505-01 Sta. 0+00
MINN. S 791(1)

B.M. Elev. 976.49
□ in S.E. Cor. Conc. Tank
100' Rt. 37+20 SAR "12"

Pl. 7+15.0
Δ 20°30' Lt.
D 7°00'
T 148.1
L 292.9

Rt. 8+69.8

P.C. 5+76.9

Garden

Farmyard

Woodlot

P.C. 10+28.0

Pl. 14+76.4
Δ 56°10' Rt.
D 8°00'
T. 382.4
L. 702.1

Pl. 17+29.6

8+47 FE Rt
Inpl. 24"x32' SCP
Remove
F & I. 24"X 32' C.M.P.
F. & I. 2 Aprons for 24" C.M.P.

5+00 to 10+00
Cl. 16 Gr. 18

10+00 to 26+00
Cl. 6 Gr. 118

P.C. 23+34.9

Pl. 29+16.7
Δ 48°25' Lt.
D 8°00'
T. 322.3
L. 605.2

P.T. 31+96.8

29+42 FE Rt.
No culv. inpl.
See Sheet No. 5

33+05 FE Rt.
Inpl. 18"x 32' SCP
See Sheet No. 5

Sub-grade Treatment.
23+00 to 27+00
Exc. 2' below grade 26' wide.
Backfill with Select Material.

Pl. +50
Elev. 81.6

200' V.C.
M=0.6

Pl. +90
Elev. 92.16

300' V.C.
M=.375

+2.4%

+3.4%

00%

Exc. 19107 { TS. 1445 / 17662
Emb. 13376

1070
1060
1050
1040
1030
1020
1010
1000
990
980

OLMSTED COUNTY, MINN. SB NO. 55-505-01 PLAN NO. ..... SHEET NO. 4 of 16 Sheets

PLAN

SURVEYED
PLOTTED
NOTE BOOK
NO.

45+40 FE Lt.
Inpl. 24"x 24' S C P
Remove
F. & I. 24"X32' C.M.P.
F. & I. 2 Aprons for 24" C.M.P.

P.I. 29+16.7
Δ 48°25' Lt.
D 8°00'
T 322.3
L 605.2

P.C. 23+93.4

P.T. 31+99.6

P.I. 48+15.1
Δ 36°05' Rt.
D 4°00'
T 466.7
L 902.1

P.C. 43+48.4

P.T. 52+50.5

45+33 C L
Inpl. 15"x30' C M P
Remove
No Culv. reqd.

50+00 C.L.
F. & I. 2-42"X40' S.C.P.
F. & I. 4 Aprons for S.C.P. 42"

38+48 FE Rt.
No culv. inpl.
F. & I. 18"X32' C.M.P.
F. & I. 2 Aprons for 18" C.M.P.

29+42 FE Rt.
No culv. inpl.
F. & I. 18"X 28' C.M.P. 29+00 to 31+00
F. & I. 2 Aprons for 18" C.M.P. Cl. I Gr. 4

33+05 FE Rt.
Inpl. 18"x 32' S C P
Remove
F. & I. 18"X32' C.M.P.
F. & I. 2 Aprons for 18" C.M.P.

36+00 to 39+00
Cl. 29 Gr. 29

44+00 to 48+00
Cl. I Gr. 2

B.M. Elev. 1099.09
Hub on fence line 80' Rt 38+00

P.I. 0+00
Elev. 80.9
400' V.C.
M=0.3

+3.4%

+4.0%

P.I. 7+26.16
Elev. 1088.33
500' V.C.
M=5.9375

-5.5%

P.I. 10+57.15
Elev. 80.1036
300' V.C.
M=1.05

-2.7%

P.I. 7+00
Elev. 69.4
400' V.C.
M=1.42

+0.14%

P.I. 7+78.3133
Elev. 70.2096
400' V.C.
M=0.83

+1.8%

Sub-grade Treatment
36+00 to 39+00
Exc. 2' below grade.
Backfill with select material.

Exc: 11839 T.S. 694
11145
Emb. 8734

Exc. 7406 T.S. 360
7046
Emb. 5494

55-505-01

63+00 ℄
F. & I. 60"X28' P.C. Conc. C.P.
F. & I. 2 P.C. End Sections
Exc. 55 Cu. Yds.

67+00 ℄
F. & I. 2-24"X28' S.C.P.
F. & I. 4 Aprons for 24" S.C.P.

72+07 Twp Rd Lt
Inpl. 24"x 58' C.M.P.
Remove
F. & I. 24"X 32' C.M.P.
F. & I. 2 Aprons for 24" C.M.P.

Pl. FE. 75+50 Lt.
F. & I. 24"X 32' C.M.
F. & I. 2 Aprons for 24" C.M.P.

72+07 Twp Rd Rt
Inpl. 24"x 26' C.M.P.
Remove
F. & I. 24"X 32' C.M.P.
F. & I. 2 Aprons for 24" C.M.P.

Pl. 71+36.6
Δ 0°01' Rt.

71+00 to 76+00
Cl. 2 Gr. 4

P.T. 52+50.5

BM Elev. 1088.72
Spike in root of 36" Maple
48' Lt 73+27

Pl. 178.3133
Elev. 1070.2096
400' V.C.
M=0.83

Pl. 196.875
Elev. 1079.3544
400' V.C.
M=1.6

Pl. +00
Elev. 97.26
200' V.C.
M=0.4

Pl. +00
Elev. 103.7
200' V.C.
M=0.475

Pl. 450
Elev. 100
300' V.C.
M=1.65

Pl. +00
Elev. 81.4
400' V.C.
M=0.5

Pl. +00
Elev. 85.4
400' V.C.
M=0.95

Sub-grade Treatment.
56+00 to 66+00
Exc. 2' below grade. Backfill
with select material.

Exc. 11464 / TS. 1167
Emb 8406 / 10297

+18%
+0.8%
-1.1%
+2.1%
+3.7%
+1.8%

1120
1110
1100
1090
1080
1070
1060

50 55 60 65 70 75 80

72+07 Twp Rd Lt.
Inpl. 24"x 58' CMP

72+07 Twp Rd Rt
Inpl. 24"x 26' CMP

Rt. 71+86.6
ΔRt. 0°01'

Wabasha County
Olmsted County

Sec. 6

93+19 CL
Inpl. 15"x32' & 18"x36' C.M.P
Remove
F. & I. 24"X52' S.C.P.
F. & I. 2 Aprons for 24" S.C.P.
Pl. Ditch block

END S.P.55-505-01
S.791 (1L STA 99+99.5

Rt. 96+65.1

Rt. 99+49.5

B.M. 1088.72
Spike in root of 36" Maple
48' Lt 73+27

B.M. 1119.41
Spike in Power Pole
135' Lt 98+25

Pl. +00 Elev. 92.6
200' V.C.
M=.04

Pl. +00 Elev. 037
200' V.C.
M=.0475

Pl. +00 Elev. 1100
300' V.C.
M=.165

Pl. +50 Elev. 1100
300' V.C.
M=.165

Pl. +50 Elev. 1172
600' V.C.
M=.765

Pl. +00 Elev. 1123.2
400' V.C.
M=.165

Pl. +00 Elev. 1121.0
300' V.C.
M=2.0

Sub-grade Treatment
85+00 to 87+00

Sub-grade Treatment
94+00 to 99+50

Exc. 9085 { T.S. 725 / 8360
Emb. 7355

Exc. 7592 { T.S. 610 / 6982
Emb. 5629

+21%
+37%
+18%
+6.2%
-.07%
-6.2%

1150
1140
1130
1120
1110
1100
1090
1080

70 75 80 85 90 95 100

OLMSTED COUNTY, MINN. Job No. 55-505-01 PLAN NO. ..... Sheet No. 7 of 16 Sheets