FORM 129A REV. '54

CONVENTIONAL SIGNS

STATE LINE
COUNTY LINE
TOWNSHIP OR RANGE LINE
SECTION LINE
QUARTER LINE
SIXTEENTH LINE
RIGHT-OF-WAY LINE
PRESENT ROAD R/w LINE
LIMITED ACCESS
PROPERTY LINE (Except Land Lines)
VACATED PLATTED PROPERTY
CORPORATE OR CITY LIMITS
TRUNK HIGHWAY CENTER LINE
RETAINING WALL
STEAM RAILROAD
ELECTRIC RAILROAD
RAILROAD RIGHT-OF-WAY LINE
CREEK
RAPIDS OR WATERFALL
DRY RUN
DRAINAGE DITCH
HIGH TENSION LINE
POWER POLE LINE
TELEPHONE OR TELEGRAPH LINE
TELEPHONE CONDUIT
GUARD RAIL
WIRE FENCE
RAILROAD SNOW FENCE
BOARD OR HIGHWAY SNOW FENCE
STONE WALL OR FENCE
GAS MAIN
WATER PIPE
SEWER PIPE
DRAIN TILE
GRAVEL PIT
SAND PIT
CLAY PIT
ROCK QUARRY
SPRINGS
MARSH

TIMBER
BRUSH
ORCHARD
ROCK LEDGE
SAND
EDGE OF CUT
TOE OF EMBANKMENT
CATCH BASIN
MANHOLE
DROP INLET
FIRE HYDRANT
ARC LAMP
OTHER LAMPS (State Kind)
RAILROAD CROSSING SIGN
RAILROAD CROSSING BELL
ELECTRIC WARNING SIGN
CROSSING GATE
CATTLE GUARD
OVERHEAD (Highway Over)
UNDERPASS (Highway Under)
ABUTMENT, WALL & PIER
BRIDGE
CULVERT
BUILDING (One Story Frame)
C-CONCRETE S-STONE T-TILE B-BRICK ST-STUCCO
HEDGE
IRON PIPE
STONE MONUMENT
WOOD STAKE OR HUB
MEANDER CORNER

T.108N. R.24W. | 35 | 36 | 2 | 1 | T.107N. R.24W.

CENTER SECTION 35 T.108N. R.24W.

12 | 1 | 13 | 4

NOTE: SECTION NUMBERS READ FROM THE SOUTH

N

STATE OF MINNESOTA

DEPARTMENT OF HIGHWAYS

CONSTRUCTION PLAN FOR GRADE and Surface

State Aid Road No. 11 and _____

BETWEEN State Aid Road No. 14 _____ AND State Highway No. 247

From 200' east S¼ corner Section 34 T108N R13W To NE. corner Section 15 T108N R13W
Give proper reference to Sections, Township and Range

GROSS LENGTH 23,299.5 FEET 4.413 MILES
BRIDGES LENGTH _____ FEET _____ MILES
EXCEPTIONS LENGTH _____ FEET _____ MILES
NET LENGTH _____ FEET _____ MILES

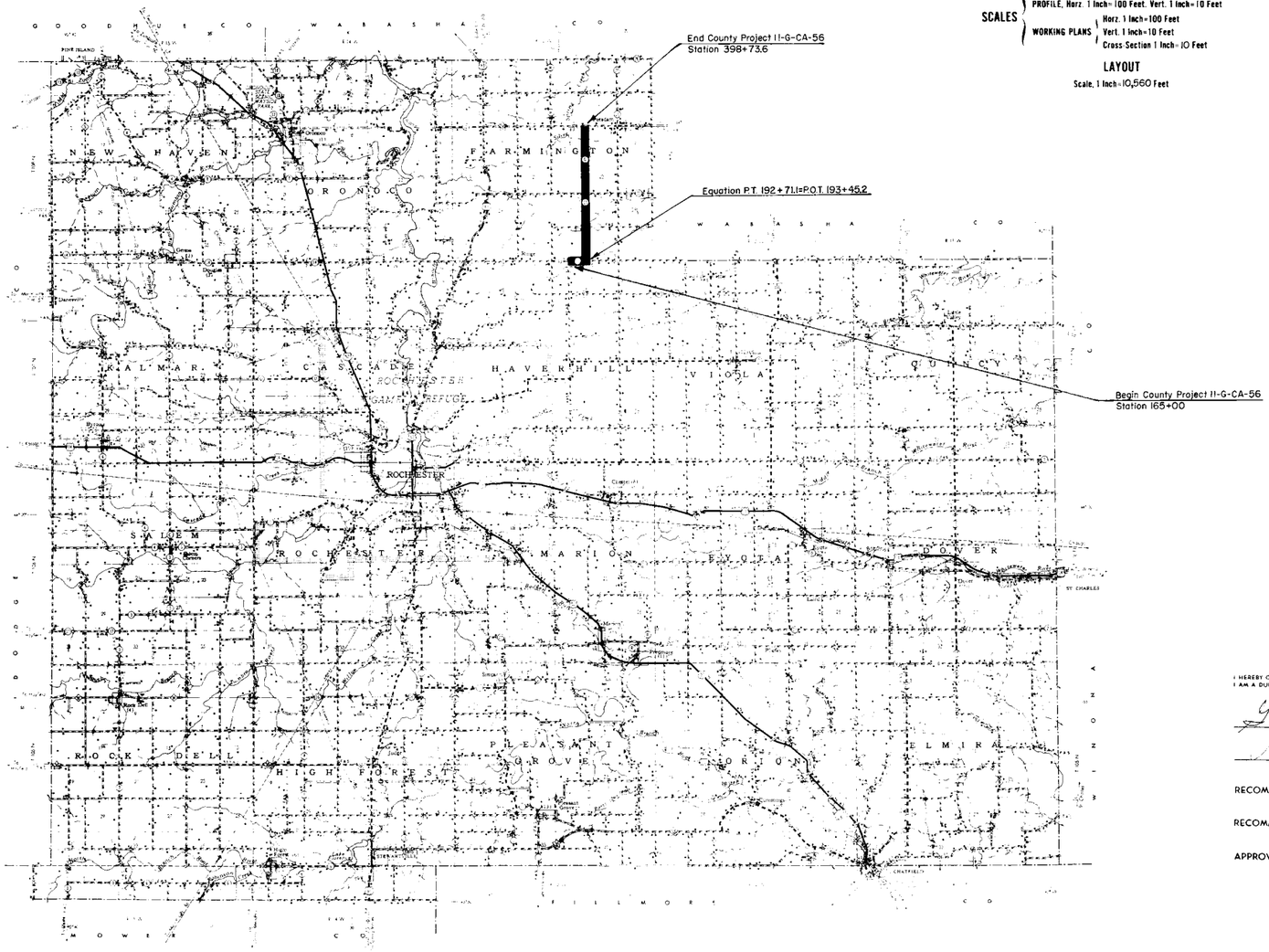
SCALES
PLAN, 1 Inch = 100 Feet
PROFILE, Horz. 1 Inch = 100 Feet, Vert. 1 Inch = 10 Feet
WORKING PLANS: Horz. 1 Inch = 100 Feet; Vert. 1 Inch = 10 Feet; Cross-Section 1 Inch = 10 Feet

LAYOUT
Scale, 1 Inch = 10,560 Feet

MINN. PROJ. _____

INDEX OF SHEETS

Sheet No. 1. Title Sheet & Layout Map
" No. 2. Est. Quantities & Typical Sec.
" No. 3. To 11 Plan & Profile
" No. 12 To 27 Cross Sections



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. F. Silloway — DATE May 4th '56
COUNTY ENGINEER

OLMSTED COUNTY — REG NO 1207

RECOMMENDED FOR APPROVAL _____ 19 ___
DISTRICT ENGINEER

RECOMMENDED FOR APPROVAL _____ 19 ___

APPROVED _____ 19 ___ _____
ENGINEER OF COUNTY DIVISION

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

APPROVED

_____ DISTRICT ENGINEER — _____ DATE

— SPECIFICATIONS —

THE "SPECIFICATIONS FOR HIGHWAY CONSTRUCTION" DATED JULY 1, 1947 AND SUBMITTED FOR APPROVAL BY THE DIVISION ENGINEER OF THE BUREAU OF PUBLIC ROADS ON OCTOBER 15, 1947, AS MODIFIED BY "SUPPLEMENT 1" THERETO DATED APRIL 15, 1953 AND SUBMITTED FOR APPROVAL BY THE DIVISION ENGINEER OF THE BUREAU OF PUBLIC ROADS ON MARCH 25, 1953, SHALL GOVERN.

Minn. Proj. No. _____ State Proj. No. _____

OLMSTED County, Minnesota — County Proj. No. 11-G-CA-56 — Plan No. _____ — Sheet No. 1 of 27 Sheets

H. A. ROGERS CO. Minneapolis

FORM 129 c - # 1 Rev. '46

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

ESTIMATED QUANTITIES

SPECIFICATION NO.	ITEM	UNIT	TOTAL ESTIMATED QUANTITIES
2101.502	Clearing	Tree	103
2101.507	Grubbing	Tree	109
2104.501	Remove Portable Culverts	Linear Foot	688
2109.501	Obliterating Old Road	Acre	045
2105.501	Class A Excavation	Cubic Yard	92,534
2501.511-18	F. and I. C.M.P. Culverts 18"	Linear Foot	490
2501.511-24	F. and I. C.M.P. Culverts 24"	Linear Foot	198
2501.511-30	F. and I. C.M.P. Culverts 30"	Linear Foot	62
2501.511-36	F. and I. C.M.P. Culverts 36"	Linear Foot	146
2501.511-48	F. and I. C.M.P. Culverts 48"	Linear Foot	46
2501.531-24	F. and I. S.C.P. Culverts 24"	Linear Foot	94
2501.531-36	F. and I. S.C.P. Culverts 36"	Linear Foot	48
2515.531-18	F. and I. Aprons for C.M.P. 18"	Apron	30
2515.531-24	F. and I. Aprons for C.M.P. 24"	Apron	8
2515.531-30	F. and I. Aprons for C.M.P. 30"	Apron	2
2515.531-36	F. and I. Aprons for C.M.P. 36"	Apron	6
2515.531-48	F. and I. Aprons for C.M.P. 48"	Apron	2
2515.541-24	F. and I. Aprons for S.C.P. 24"	Apron	4
2515.541-36	F. and I. Aprons for S.C.P. 36"	Apron	2
2413.501	Excavation for Timber Box Culverts	Cubic Yard	125
2413.511	F. and I. Timber Box Culvert 90"X48"	Linear Foot	39
2413.511	F. and I. Timber Box Culvert 113"X48"	Linear Foot	37
2413.512	F. and I. Timber Culvert End Sections 90"X48"	Section	2
2413.512	F. and I. Timber Culvert End Sections 113"X48"	Section	2
2441.502	Single Lane By-pass	By-pass	2
2442.501	Remove Old Structure 270+38℄	Structure	1
2442.501	Remove Old Structure 378+47℄	Structure	1
2252.527	Crushed Rock Wearing Course Inplace(VM)	Cubic Yard	8500

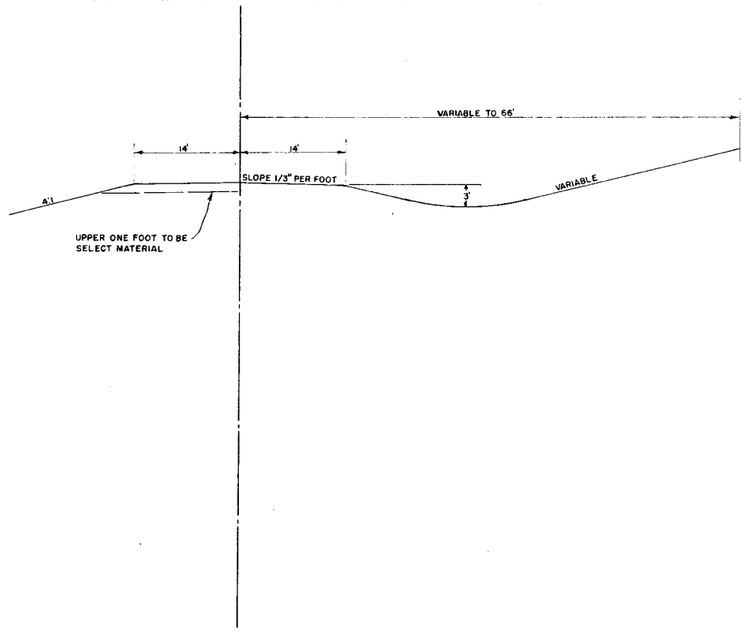
Item 2252.527 includes 345 Cubic Yards for Approaches and Entrances.

STANDARD DETAIL PLATES

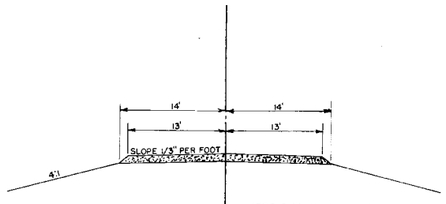
THE FOLLOWING STANDARD DETAIL PLATES, APPROVED BY THE BUREAU OF PUBLIC ROADS, SHALL APPLY ON THIS PROJECT.

PLATE NO.	DESCRIPTION
3061	Timber Box Culverts
3100A	Concrete Apron for S.C.P.
3123A	Metal Aprons for C.M.P.
9000	Approaches and Entrances

TYPICAL GRADING SECTIONS



TYPICAL BASE & SURFACE SECTIONS



1850 Cubic Yards per mile
3" Compacted depth

SPECIAL DETAILS

See Special Provisions

DAMM PHOTO PRINT CO
MPLS. MINN.

163+32℄
Inpl. 18"X38' C.M.P.

168+42℄
Inpl. 30"X36' C.M.P.
F. and L 36"X54" C.M.P.
F. and L 2-30° Metal Aprons

F.E. 169+60 Lt.
No Culv. Inpl.
F. and L. 18"X 30' C.M.P.
F. and L 2-18" Metal Aprons

F.E. 176+70 Lt.
No Culv. Inpl.
F. and L. 18"X30" C.M.P.
F. and L. 2-18" Metal Aprons

184+23℄
Inpl. 48"X42' C.M.P.
Remove
F. and L 48"X46' C.M.P.
F. and L. 2-48" Metal Aprons

P.I. 189+44.2
Δ Lt. 90°02'
D 10°00'
T 73.4
L 900.3

Construct 2-50' Radius Shoulder Curves

P.C. 183+70.8

S.A.R. No. 14

77.85 ℄

48.5

155

3.3'

50'

3.3'

50'

F.E.+60

F.E.+70

170'

175

180

50'

185

3.3'

50'

3.3'

58.0

Township Road

35.8

190

Obliterate old Road 0.30 Acre

P.T. 165+09.4

P.C. 161+96.2

P.I. 163+98.9
Δ Rt. 90°00'
D 29°00'
T 202.7
L 353.2

Begin C.P. 11-G-CA-56 Sta. 165+00

3 4
3 4

T 10 N. R 4 W.
34 35
3 2
R 3 W. T 9 N.

80
70
60
50
1140

INL. 73.0
OUT. 66.0

-1.2%

72.4

+00

644

+00

-2.8%

52.54667

+23.33333

P.I. +00
ELEV. 700
K 30.95
M=0.8

P.I. +73.33333
ELEV. 42.74667

700 V.C.
K=5.25

53.84667

+23.33333

INL. 44.0
OUT. 40.0

+3.8%

+00

E634
F510

+20

160 165 170 175 180 185 190

116.78 72.8 77.6 79.4 +50 79.9 80.1 +50 80.7 81.3 +50 80.6 +09.6 78.8 76.8 75.2 74.1 1173.4 72.4 71.0 69.6 68.4 1166.2 63.5 60.3 57.1 54.4 1151.9 50.3 48.9 47.9 47.1 47.0 +50 1146.6 44.8 +50 50.1 51.7 +50 52.5 51.8 +50 51.3 50.4 +50 52.9 56.0 +50 1159.3 63.0 +50 65.9 69.6 +50 72.5

198+91℄
Inpl. 30"X48' C.M.P.
Remove
F. and L 30' X62' C.M.P.
F. and L 2-30" Metal Aprons

206+25 ℄
Inpl. 36"X42' C.M.P.
Remove
F. and L. 36"X 54' C.M.P.
F. and L 2-36" Metal Aprons

F.E. 214+24 Lt.
No Culv. Inpl.
F. and L 18"X30' C.M.P.
F. and L 2-18" Metal Aprons

221+88℄
Inpl. 36"X34' C.M.P.
Remove
F. and L 36"X 38' C.M.P.
F. and L 2-36" Metal Aprons

P.T. 192+71.3

P.O.T. 193+45.2

Pl. 214+05.5
▲Lt. 0°06'

34+35

F.E. 206+88 Rt.
No Culv. Inpl.
No Culv. reqd.

Equation P.T. 192+71.13 = P.O.T. 193+45.2

B.M. Elev. 1173.62
Spike in P. Pole
26' Rt: 215+10

Profile 75' Lt.
Profile 75' Rt.

Pl. +24.8
ELEV. 7720.576
400' V.C.
M=2.0

Pl. +00
ELEV. 682.8
400' V.C.
M=1.2

Pl. +00
ELEV. 558.8
400 V.C.
M=1.2

Pl. +00
ELEV. 678.2
500 V.C.
M=3.0

INL. 69.5
OUT. 64.5

INL. 65.0
OUT. 60.6

INL. 50.0
OUT. 48.0

E 6975
F 5197

E 1889
E 1424

E 6307
F 4744

Sheet No. 4 of 27 Sheets

PLAN
SURVEYED
DRAWN
TRACED
PLOTTED
CHECKED
NOTE BOOK
NO.
ALIGNMENT CHECKED
PAT. OF WAY CHECKED

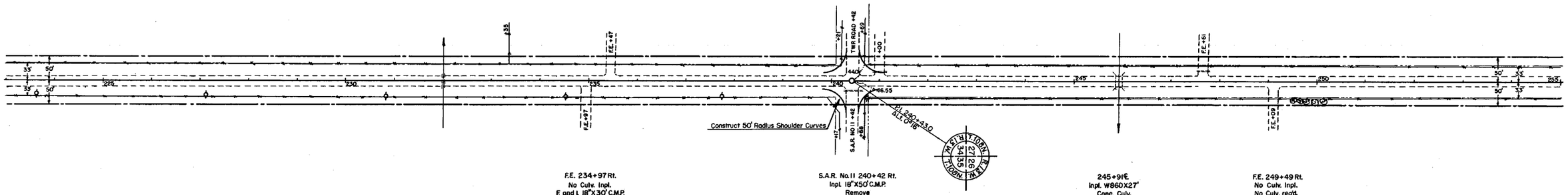
232+00 ℄
Inpl. 36"X36' C.M.P.
Remove
F. and l. 36"X48' S.C.P.
F. and l. 2-36" Conc. Aprons

F.E. 235+47 Lt.
No Culv. Inpl.
F. and l. 18"X30' C.M.P.
F. and l. 2-18" Metal Aprons

Twp. Road 240+42 Lt.
No Culv. Inpl.
F. and l. 18"X 50' C.M.P.
F. and l. 2-18" Metal Aprons

F.E. 241+00 Lt.
Inpl. 18"X36' C.M.P.
Remove
F. and l. 18"X30' C.M.P.
F. and l. 2-18" Metal Aprons

F.E. 247+61 Lt.
Inpl. 15" X20' C.M.P.
Remove
No Culv. reqd.



F.E. 234+97 Rt.
No Culv. Inpl.
F. and l. 18"X30' C.M.P.
F. and l. 2-18" Metal Aprons

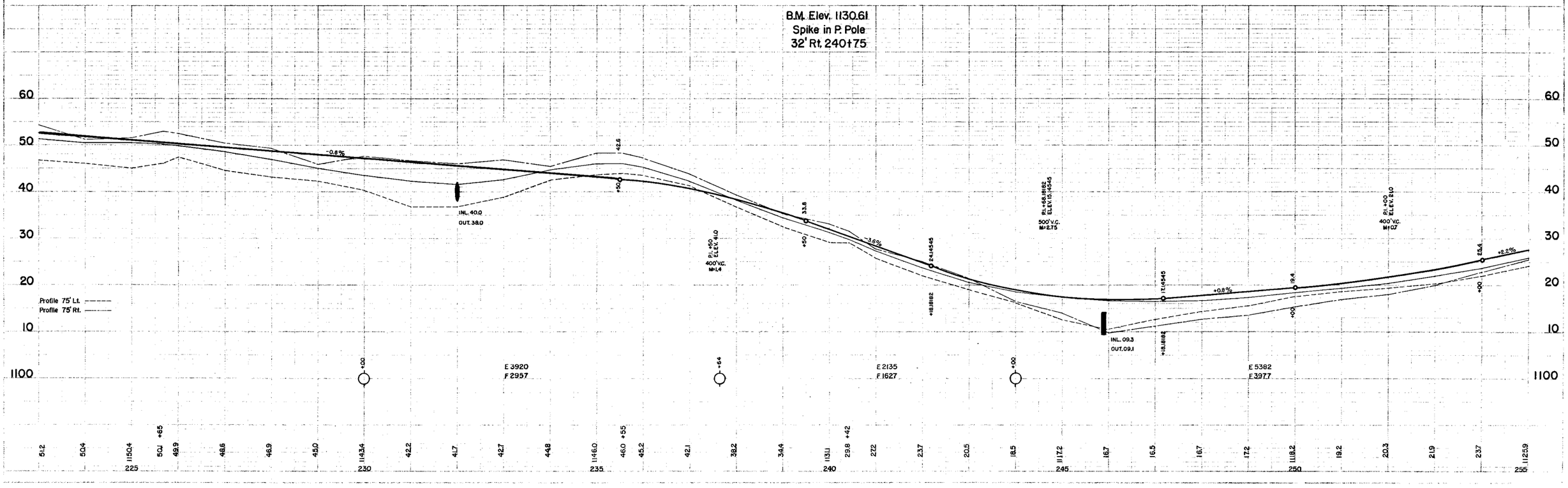
S.A.R. No.11 240+42 Rt.
Inpl. 18"X50' C.M.P.
Remove
F. and l. 18"X50' C.M.P.
F. and l. 2-18" Metal Aprons

245+91 ℄
Inpl. W860X27'
Conc. Culv.

F.E. 249+49 Rt.
No Culv. Inpl.
No Culv. reqd.

249+00 to 251+00
Clear 14 Trees Grub 6 Trees

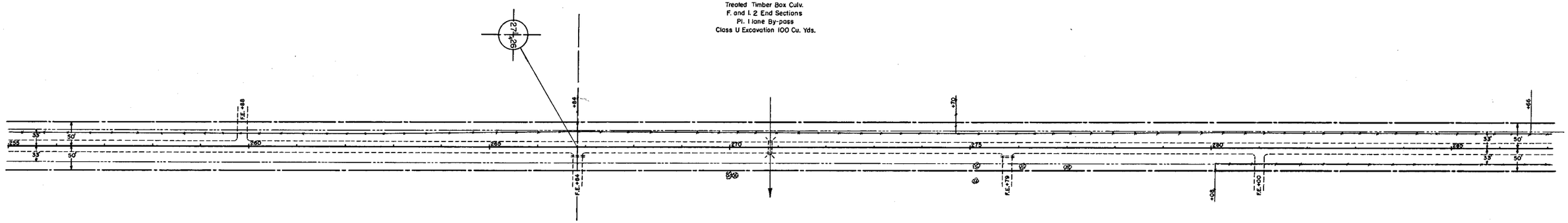
B.M. Elev. 1130.61
Spike in P. Pole
32' Rt. 240+75



Sheet No. 1 of 27 Sheets

F.E. 259+88 Lt.
No Culv. Inpl.
F. and I. 18"X30' C.M.P.
F. and I. 2-18" Metal Aprons

270+38 ℄
Inpl. W84X30
Conc. Culv.
Remove
F. and I. 90°X46'X39'
Treated Timber Box Culv.
F. and I. 2 End Sections
Pl. I lane By-pass
Class U Excavation 100 Cu. Yds.



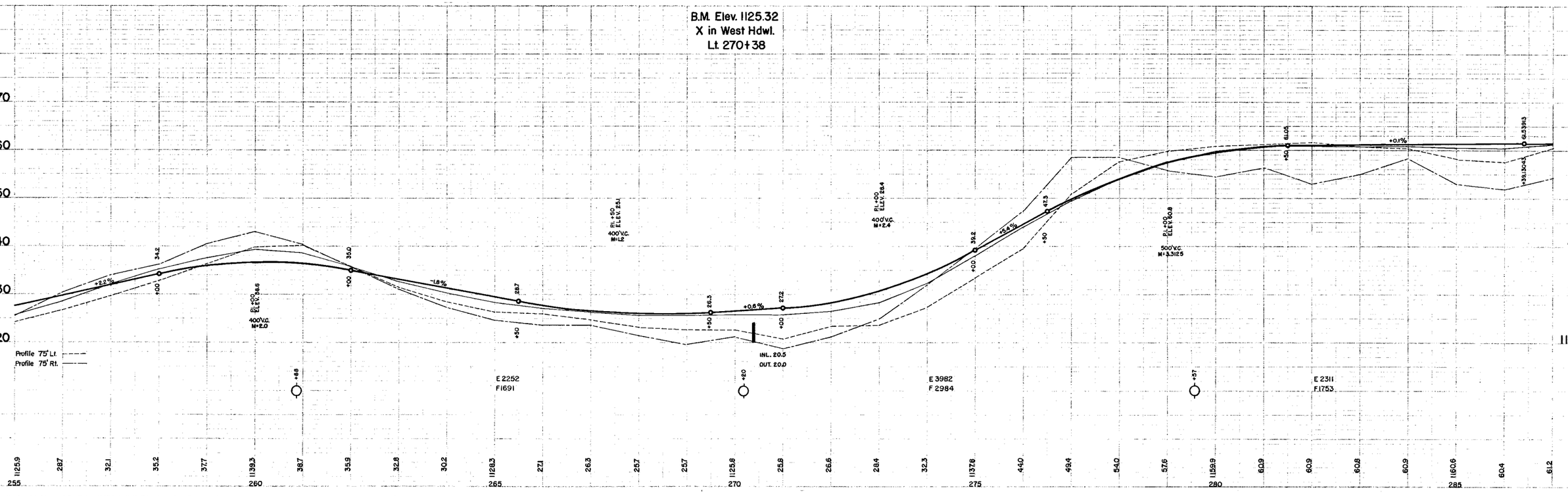
F.E. 266+84 Rt.
Inpl. 15"X18' C.M.P.
Remove
F. and I. 18"X30" C.M.P.
F. and I. 2-18" Metal Aprons

F.E. 275+79 Rt.
Inpl. 15"X24' C.M.P.
Remove
F. and I. 18"X30' C.M.P.
F. and I. 2-18" Metal Aprons

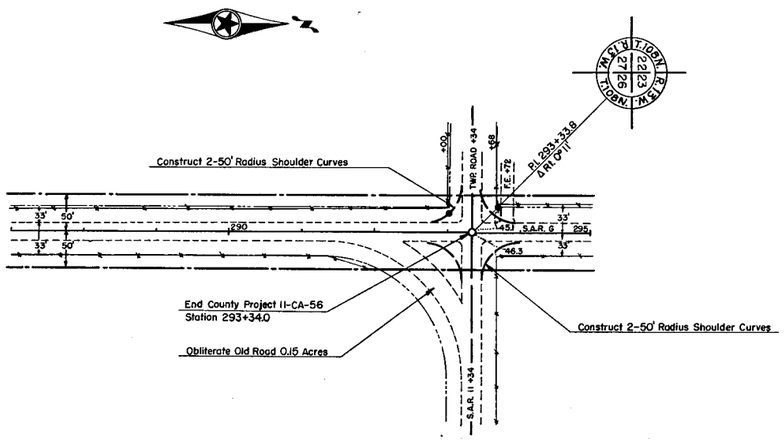
F.E. 281+00 Rt.
No Culv. Inpl.
No Culv. req'd.

275+00 to 277+00
Clear 3 Trees Grub 3 Trees

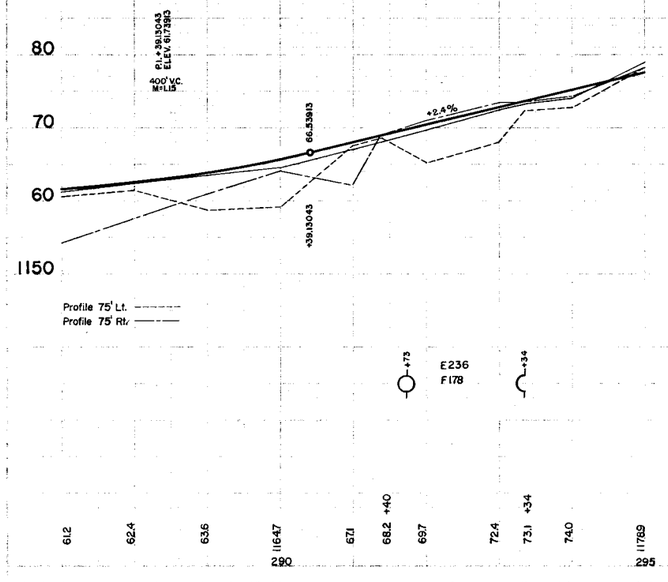
B.M. Elev. 1125.32
X in West Hdwl.
Lt. 270+38



Twp. Road 293+34 Lt.
No Culv. Inpl.
No Culv. req'd.



B.M. Elev. 1173.65
Spike in P.P.
32' Rt. 293+68



Township Road 293+34 Lt.
No Culv. Inpl.
No Culv. req'd.

F.E. 293+72 Lt.
No Culv. Inpl.
F. and I. 18"X30' C.M.P.
F. and I. 2-18" Metal Aprons

F.E. 307+57 Lt.
No Culv. Inpl.
F. and I. 18"X30' C.M.P.
F. and I. 2-18" Metal Aprons

T.108N. R.13W. — Sec. 22, 23, 26, 27

P.I. 293+33.8
Δ Rt. OP 11

End S.A.R. No. 11 begin S.A.R. "G"

S.A.R. No. 11 293+34 Rt.
No Culv. Inpl.
No Culv. req'd.

Begin C.P. C.A.-G-56
Sta. 293+340

B.M. Elev. 1173.65
Spike in P.P.
32' Rt. 293+68

Profile 75' Lt. ------
Profile 75' Rt. ——

E 505
F 373

E 1285
F 964

E 978
F 731

E 3379
F 2548

E 1144
F 858

OLMSTED COUNTY, Minn. Sheet No. 8 27

323+16 ℄
Inpl. 24"X32' C.M.P.
Remove
F. and l. 24"X 54' S.C.P.
F. and l. 2-24" Conc. Aprons
Pl. Ditch Check Lt.

327+13 ℄
Inpl. 18"X30' C.M.P.
Remove
No Culv. reqd.

332+87 ℄
Inpl. 18"X32' C.M.P.
Remove
F. and l. 24"X64' C.M.P.
F. and l. 2-24" Metal Aprons

F.E. 334+41 Lt.
Inpl. 15"X24' C.M.P.
Remove
No Culv. reqd.

F.E. 336+38 Lt.
No Culv. Inpl.
F. and l. 18"X30' C.M.P.
F. and l. 2-18" Metal Aprons

338+63 Lt. 32'
Tile Outlet

350+78 ℄
Inpl. 18"X30' C.M.P.
Remove
F. and l. 24"X48' C.M.P.
F. and l. 2-24" Metal Aprons

Pl. 319+73.4
Δ Rt. 0°04'

Pl. 346+13.7
Δ Rt. 0°05'

Boulder and Vanish

F.E. 326+82 Rt.
No Culv. Inpl.
No Culv. reqtd.

338+63 ℄
Inpl. 12"X24' C.M.P.
Remove
F. and l. 24"X 56' C.M.P.
F. and l. 2-24" Metal Aprons

F.E. 346+00 Rt.
Inpl. 15"X24' C.M.P.
Remove
F. and l. 18"X30' C.M.P.
F. and l. 2-18" Metal Aprons

Limestone and Vanish

323+00 to 324+00 Clear 6 Trees Grub 1 Tree

335+00 to 338+00 Clear and Grub 8 Trees

B.M. Elev. 1127.59
Spike in Cor. F.P.
32' Rt. 319+74

B.M. Elev. 1113.95
Spike in P.P.
32' Rt. 339+31

B.M. Elev. 1080.88
Spike in Tel. Pole
32' Lt. 351+55

Pl. +56.66667
ELEV. 1201.8667
500' V.C.
M=1.875

INL. 16.3
OUT. 13.5

INL. 13.4
OUT. 08.5

Pl. +17.85
ELEV. 1168.5
500' V.C.
M=2.5

INL. 12.9
OUT. 07.5

Pl. +00
ELEV. 93.4
400' V.C.
M=1.95

INL. 7.9.5
OUT. 7.3.5

Profile 75' Lt. - - - - -
Profile 75' Rt. ——

E 8682
F 6527

E 1929
F 1446

E 4696
F 3578

29.9 | 1126.1 | 23.2 | 21.0 | 19.2 19.0 +16 | 19.6 | 1120.1 | 18.5 | 17.9 | 17.5 | 18.1 | 1119.0 | 17.8 | 14.7 | 13.4 | 14.1 | 1117.0 | 19.2 | 18.8 | 17.3 | 16.4 +65 | 16.1 | 1115.1 | 12.6 | 08.0 | 03.5 | 99.3 | 1095.2 | 91.0 | 86.9 | 83.7 | 81.6 | 1080.2 | 79.5

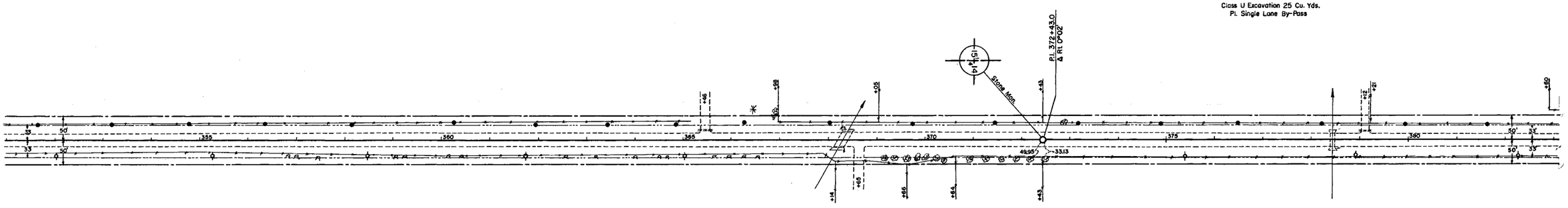
320 325 330 335 340 345 350

F.E. 365+46 Lt.
Inpl. 18" X26' C.M.P.
Remove
F. and I. 24" X30' C.M.P.
F. and L 2-24" Metal Aprons

368+30 ℄
Inpl. W104D X 33' X 30°
Conc. Culv.
No Change

378+47 ℄
Inpl W104 X 27'
Conc. Culv.
Remove
F. and L 113"X48"X37'
Treated Timber Box Culv.
F. and L 2 End Sections
Class U Excavation 25 Cu. Yds.
Pl. Single Lane By-Pass

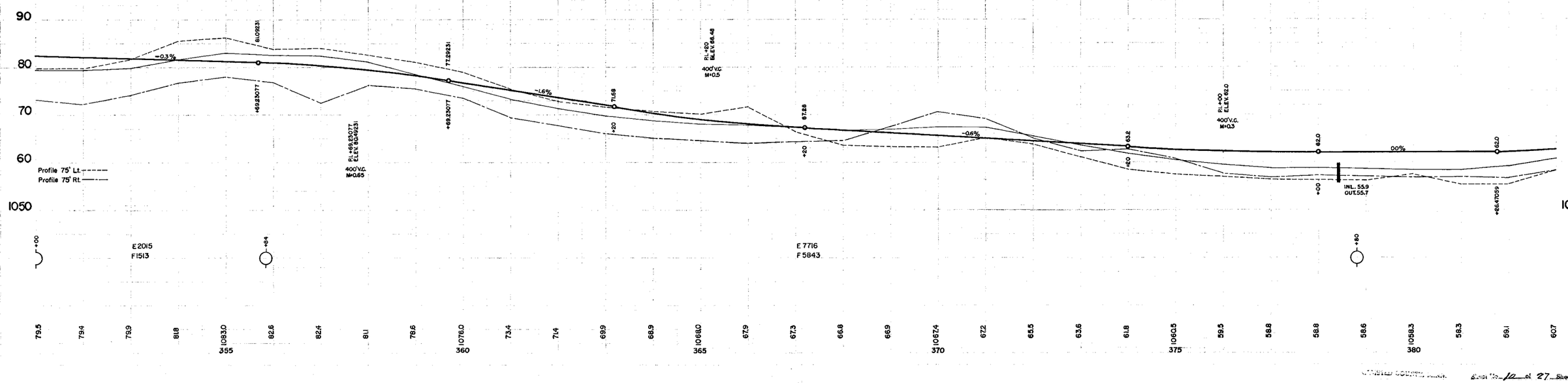
F.E. 379+12 Lt.
Inpl. 15" X24' C.M.P.
Remove
No Culv. req'd.



F.E. 368+65 Rt.
No Culv. Inpl.
No Culv. req'd.

B.M. Elev. 1066.47
X in Culv. Hdwl.
Rt. 368+10

B.M. Elev. 1058.70
□ in West Hdwl.
Lt. 378+48

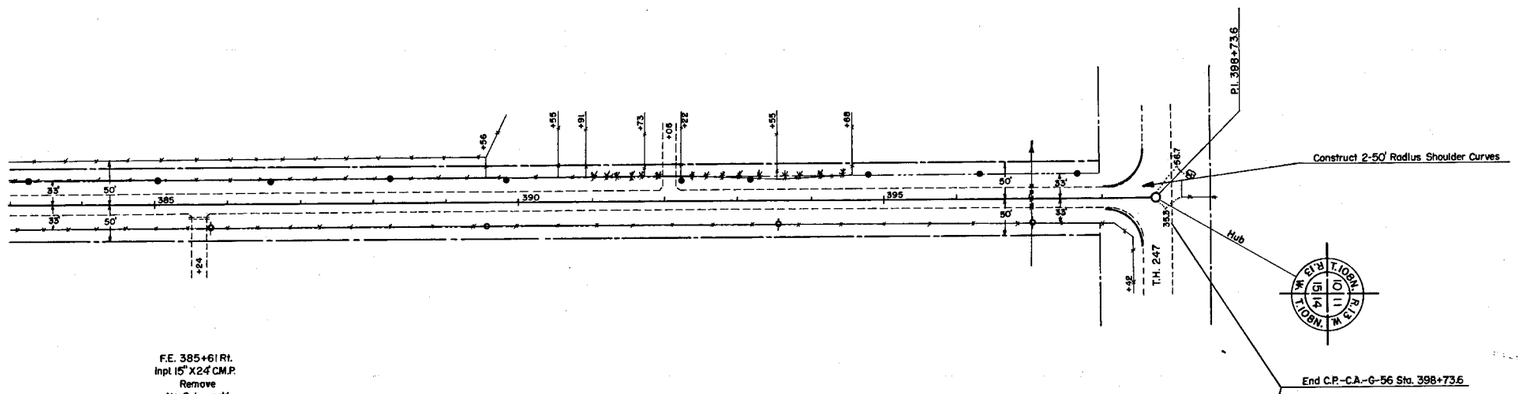


357+00 to 373+00 Clear 45 Trees Grub 64 Trees

Sheet No. 12 of 27 Sheets

F.E. 392+06 Lt.
No Culv. inpl.
No Culv. req'd.

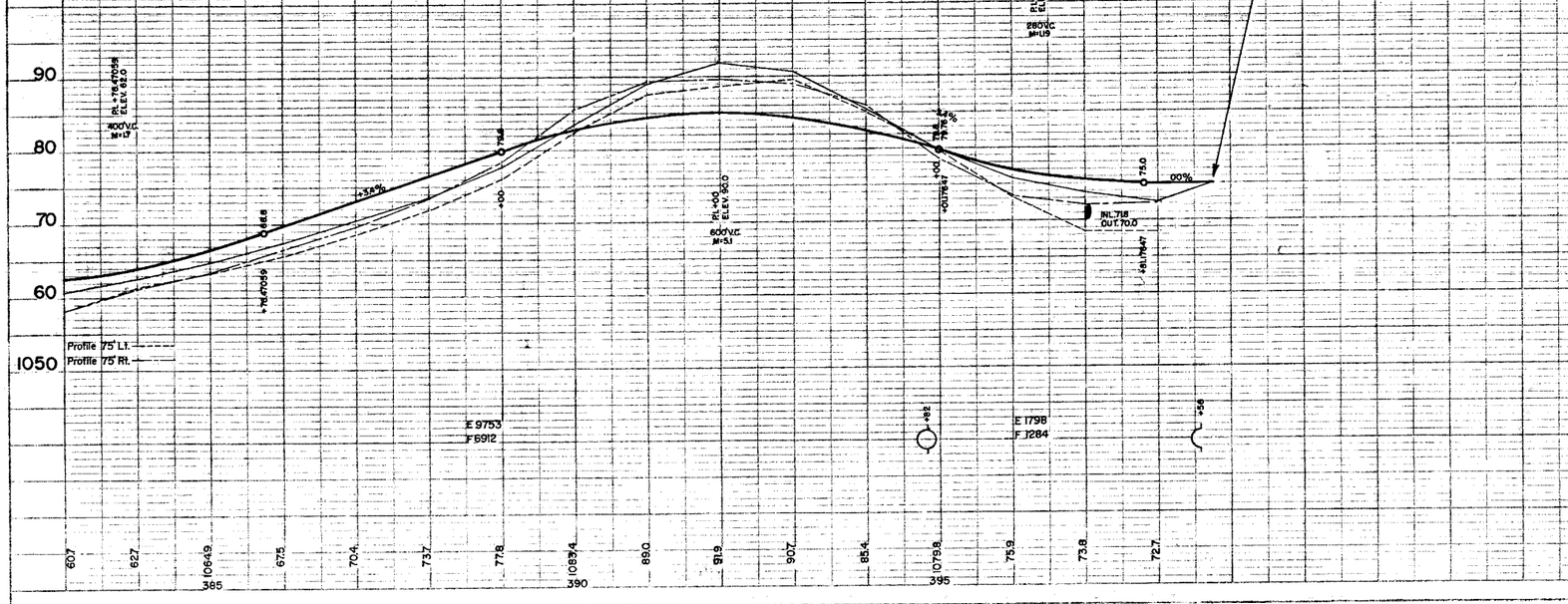
397+02 ℄
Inpl. 18" X 32' C.M.P.
Remove
F. and L. 24" X 40' S.C.P.
F. and L. 2-24" Conc. Aprons



F.E. 385+61 Rt.
Inpl. 15" X 24' C.M.P.
Remove
No Culv. req'd.

391+00 to 395+00 Clear and Grub 27 Trees

B.M. Elev. 1069.83
Spike in 14" Pine
75' Lt. 399+49



PLAN
DRAWN
TRACED
CHECKED
NOTE BOOK
QUANTITY CHECKED
NO.
ST. OF WAY CHECKED

PROFILE
SURVEYED
PLOTTED
PROFILE CHECKED
IF NOT NOTED
NO.
STRUCTURE NOTATIONS CHECKED

DATE
BY

PLAN AND PROFILE" O. P. R. & B. E. STANDARD
KOUFFEL & ESSER CO. NEW YORK.

K. & E. CO. No. 2-61-HC

CLEARED COUNTY, MINN. Sheet No. 11 of 27 Sheets