Form 413 Rev. 1959

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 / R.24W. T.107N.

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

12 / 13

NOTE: SECTION NUMBERS READ FROM THE SOUTH

N

STATE OF MINNESOTA

DEPARTMENT OF HIGHWAYS

CONSTRUCTION PLAN FOR Grading, Box Culverts and Crushed Rock Wearing Course

County State Aid Highway No. 2

BETWEEN T.H. 42 AND CSAH 10

From 1389.4' West of the East 1/16 Corner of SE 1/4 Sec 10 T107N-R12W To 304.5' East and 107.8' North of the S 1/4 Corner Sec 8 T107N-R11W

Give proper reference to Sections, Township and Range

GROSS LENGTH 20457.2 FEET 3.8744 MILES
BRIDGES LENGTH — FEET — MILES
EXCEPTIONS LENGTH — FEET — MILES
NET LENGTH 20457.2 FEET 3.8744 MILES

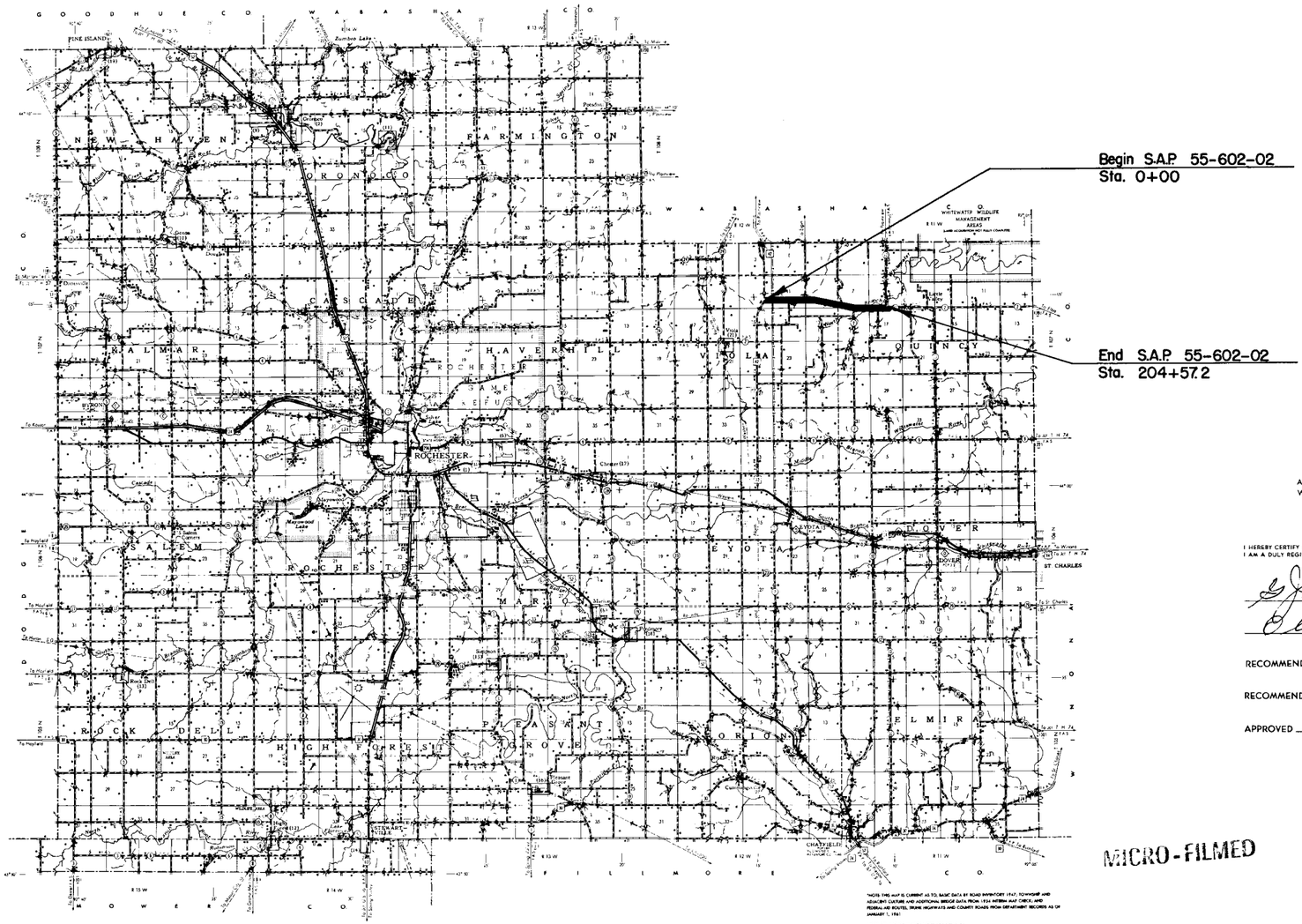
SCALES
PLAN, 1 Inch=100 Feet
PROFILE, Horz. 1 inch=100 Feet. Vert. 1 Inch=10 Feet
WORKING PLANS: Horz. 1 Inch=100 Feet; Vert. 1 Inch=10 Feet; Cross-Section 1 Inch=10 Feet

LAYOUT
Scale, 1 Inch=10560 Feet

MINN. PROJ. —

INDEX OF SHEETS

Sheet No. 1. Title Sheet & Layout Map
" No. 2. Est. Quantities & Typical Sec.
" No. 3. To 9 Plan & Profile
" No. 10 To 42 Cross Sections



NOTE: THIS MAP IS CURRENT AS TO BASIC DATA BY ROAD INVENTORY 1947, TOWNSHIP AND ADJACENT CULTURE AND ADDITIONAL BRIDGE DATA FROM 1954 INTERIM MAP CHECK, AND FEDERAL AID ROUTES, TRUNK HIGHWAYS AND COUNTY ROADS FROM DEPARTMENT RECORDS AS OF JANUARY 1, 1961

NOTE: SEE MAP OF MUNICIPALITIES FOR DETAIL OF COUNTY STATE AID HIGHWAYS AND COUNTY ROADS

Design Speed 50 M.P.H.
Projected ADT 165

ALL FEDERAL, STATE AND LOCAL LAWS WILL BE COMPLIED WITH IN THE CONSTRUCTION OF THIS PROJECT.

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 2-13-63
COUNTY ENGINEER
Olmsted — COUNTY — REG. NO. 1207

RECOMMENDED FOR APPROVAL Oswald Zabel Jr. 3/5/1963
DISTRICT ENGINEER S.H.

RECOMMENDED FOR APPROVAL J. D. McMillan 3/7 1963

APPROVED 3-8 1963 — A.S.E. STATE AID ENGINEER

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

APPROVED

—SPECIFICATIONS—

THE "SPECIFICATIONS FOR HIGHWAY CONSTRUCTION" DATED MAY 1, 1959, AND SUBMITTED FOR APPROVAL BY THE DIVISION ENGINEER OF THE BUREAU OF PUBLIC ROADS ON MARCH 26, 1959, SHALL GOVERN.

MICRO-FILMED

Minn. Proj. No. — State Proj. No. — State Aid Project No. 55-602-02

Olmsted County, Minnesota — County Proj. No. — Plan No. — Sheet No. 1 of 42 Sheets

FORM 129c - No. 2 Rev. '

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

ESTIMATED QUANTITIES

SPECIFICATION NO.	ITEM	UNIT	TOTAL ESTIMATED QUANTITIES	MUNICIPAL	RURAL
2101.502	Clearing	Tree	370		
2101.507	Grubbing	Tree	485		
2104.501	Remove Portable Culverts	Lin. Ft.	654		
2104.520	Remove Box Culv. Rt. Sta. 41+70	Structure	One		
2105.501	Class A Excavation	Cu. Yd.	164666		
2105.502	Class B Excavation	Cu. Yd.	52104		
2109.501	Obliterate Old Road	Acre	5.4		
2130.501	Water	M. Gallons	268		
2252.527	Crushed Rock Wearing Course in Place	Cu. Yd.	10706		
2411.501	Concrete	Cu. Yd.	278.64		
2411.505	Class U Excavation	Cu. Yd.	142		
2411.541	Reinforcement Bars	Pound	33004		
2413.501	Excavation for Timber Box Culv.	Cu. Yd.	35		
2413.511	Timber Box Culvert 48"X60"	Lin. Ft.	56		
2413.512	Timber Box Culvert End Section for 48"X 60"	End Section	2		
2501.511-18"	F&I CMP Culverts 18"	Lin. Ft.	442		
2501.511-24"	F&I CMP Culverts 24"	Lin. Ft.	252		
2501.521-24"	F&I SCP Culverts 24" Class 2	Lin. Ft.	314		
2501.521-42"	F&I SCP Culverts 42" Class 2	Lin. Ft.	52		
2501.521-54"	F&I SCP Culverts 54" Class 2	Lin. Ft.	32		
2512.501	Hand Placed Rip Rap	Cu. Yd.	25		
2515.531-18"	F&I Aprons for CMP - 18"	Apron	26		
2515.531-24"	F&I Aprons for CMP- 24"	Apron	12		
2515.541-24"	F&I Conc Aprons for SCP-24"	Apron	10		
2515.541-42"	F&I Conc Aprons for SCP-42"	Apron	2		
2515.541-54"	F&I Conc Aprons for SCP-54"	Apron	2		

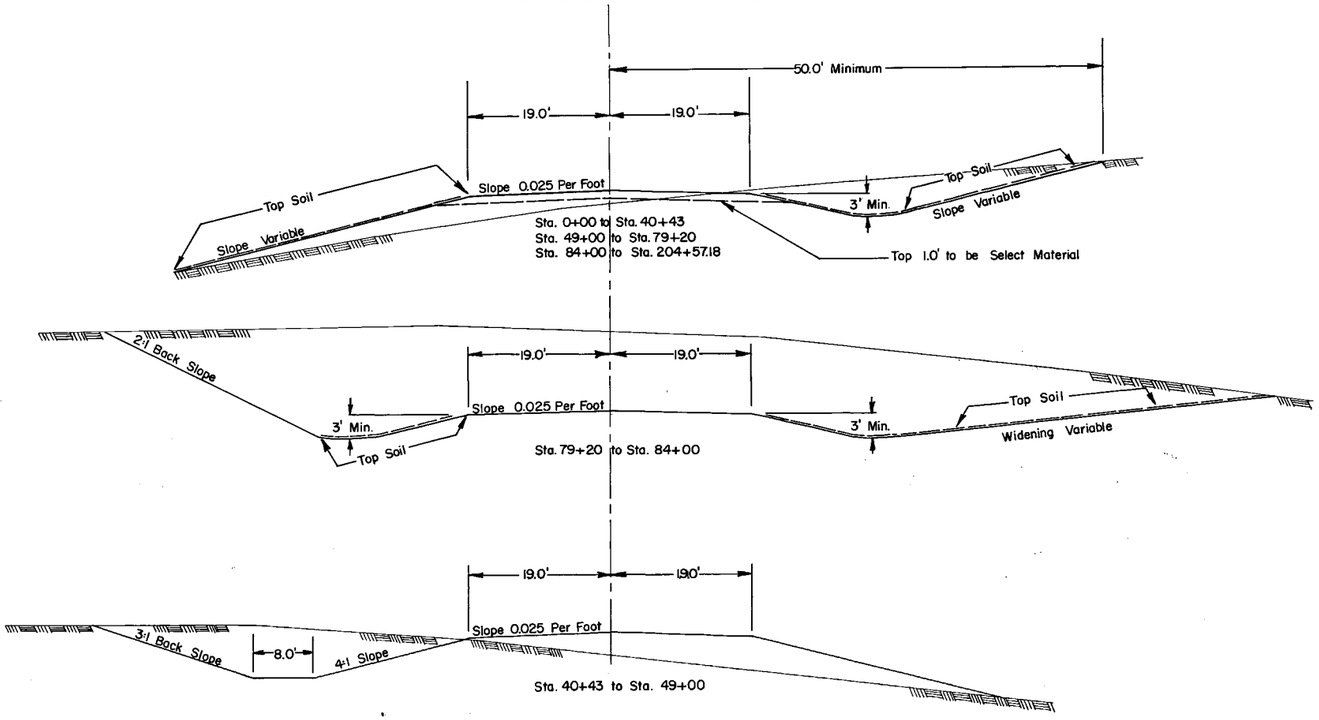
Note: Item 2252.527 Includes 484 Cu.Yds. Approaches, 131 Cu.Yds. For Twp. Rds. and 25 Cu.Yds. For CSAH 7.

STANDARD DETAIL PLATES

Standard Detail Plates issued October 1, 19 and submitted for approval by the Division Engineer of the Public Roads Administration October 15, 19 shall govern

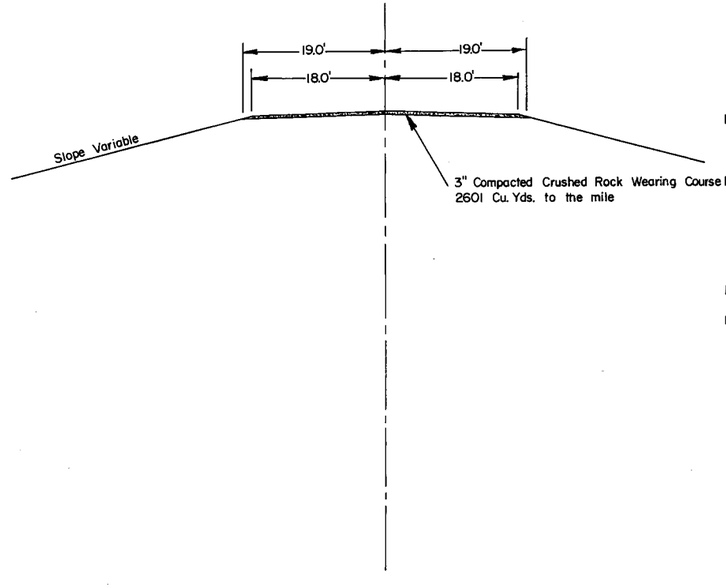
PLATE NO.	STANDARD DETAIL PLATES
3000 B	Reinforced Concrete Pipe
3060	Timber Box Culvert
3100B & 3102A	Concrete Apron for Reinforced Concrete Pipe
3123A	Metal Aprons for CM Pipes

TYPICAL GRADING SECTIONS



SPECIAL DETAILS

TYPICAL BASE & SURFACE SECTIONS



Note: Material from the upper 1.0' of the Natural Topsoil, shall not be used in the upper 1.0' of the roadway. Part of this material shall be uniformly spread on slopes and ditch bottoms to a depth of 3". No payment in addition to the contract price for Class A excavation will be made for spreading the topsoil as above provided, nor will any undercutting made in excavation prior to placing the topsoil, be measured for payment.

Note: Corrugated metal and Sectional Concrete pipe Culvert excavation will be considered incidental, and will be under unit price for "Furnish and Install Culvert Pipe".

Note: Subgrade Treatment:
Excavate 1.0' below profile grade for compaction, as shown on the plan and profile sheets. Excavation has been computed and is included in balanced quantities. Backfill with select material from R.O.W. Tapers shall be 50:1 in all cases.

Note: Place Sectional Concrete Pipe on Class "C" Bedding.

Note: All dimensions and slopes shown on typical sections are approximate.

FED ROAD DIST. NO.	STATE	FEDERAL PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS

Begin S.A.P. 55-602-02
Sta. 0+00

75' 42 75'

Number

Highway

75' Theory 30'

6+14 FE Lt
No Culv Inpl
No Culv. Req'd

Sta. 8+70 Northern Natural Gas Co.

13+81 FE Lt
No Culv Inpl
No Culv. Req'd

Pi 13+69.39
Rt
Δ 08°22'

29+85 FE Lt
Inpl 15"X24' CMP
Remove
F.&I. 24"X 32' C.M.P.
F.&I. 2-24" Metal Aprons
For C.M.P.

1+52 FE Rt
No Culv Inpl
F.&I. 18" X 28' C.M.P.
F.&I. 2-18" Metal Aprons
For C.M.P.

8+78 FE Rt
Inpl 15"X 24' CMP
Remove
F.&I. 18"X 28' C.M.P.
F.&I. 2-18" Metal Aprons
For C.M.P.

14+00 FE Rt
No Culv Inpl
No Culv. Req'd

29+38 FE Rt
Inpl 18"X18' SCP
Remove
F.&I. 24"X 28' C.M.P.
F.&I. 2-24" Metal Aprons
For C.M.P.

34.7°
91.25°

B.M. Elev. 1177.63'
Spk in PP West
of Intersection

B.M. Elev. 1214.82'
Spk in PP 60' Lt
Sta. 13+90

Finished ℄ Grades: 800 800 800 804 816 835 862 893 924 955 985 008 024 033 033 027 012 990 961 925 888 851 819 796 780 768 756 744 731 716 692 666

Present ℄ Grades: 1180.3 81.1 +22 80.4 +62 80.0 80.0 80.6 81.5 1183.1 85.4 87.9 90.6 93.5 1196.9 00.7 05.4 10.3 13.2 12.3 +50 1210.3 05.8 00.1 94.3 89.5 1185.7 82.8 80.6 79.2 78.0 1176.7 75.4 73.9 72.4 71.1 +60 69.6 1168.7 66.0

Profile 75' Lt
Profile 75' Rt

Elev. 80.0
Elev. 86.2
Elev. 97.05
Elev. 94.35
Elev. 85.5
Elev. 78.1
Elev. 73.8
Elev. 67.95

+0.0%
+3.1%
-3.7%
-1.2%
+2.7%

P.I. +00
Elev. 80.0
400' V.C.
M = 1.55
P.V.C. +00
P.V.T. +00

P.I. +00
Elev. 11.0
900' V.C.
M = 7.65
P.V.C. +50
P.V.T. +50

P.I. +00
Elev. 79.92
300' V.C.
M = 0.9375
P.V.C. +90
P.V.T. +90

P.I. +40
Elev. 72.0
300' V.C.
M = 0.5625
P.V.C. +50
P.V.T. +50

Subgrade Treatment:
Sta. 0+52 to 12+20
Upper 0.5' ft. of profile grade to be granular mat'l from Sta. 83 to 84+50.
Subcut and Exc. Quantities for backfill and lift included in bal's Sta. 0+00 to 8+10 and 8+10 to 12+00.

EXC 2428 { 1860 from Bal. 0+00 to 8+10
568 from Bal. 40+43 to 82+68
EMB 1688

EXC 2060 { 1771 Bal 8+10 to 12+00
289 from Sta. 83 to 84+50
EMB 1417

0 5 10 15 20 25 30

PROFILE

OLMSTED COUNTY, MINN. State Proj. No. 55-602-02 Sheet No. 3 of 42 Sheets

FED ROAD DIST NO	STATE	FEDPHAL PROJ NO	FISCAL YEAR	SHEET No	TOTAL SHEETS

PLAN
SURVEYED
PLOTTED
NOTE BOOK
NO. CHAIN CHECKED
NO. CHAIN CHECKED

P.I. 41+76.11
Δ Lt 4°21'
D 0°36'
T 362.68'
L 725.0'

P.C. 38+13.43

P.T. 45+38.43

53+00
Construct Farm Entrance Rt
No Culv. Req'd

54+00
Construct Field Entrance Lt
No Culv Req'd

52+91
Const. C106 X 56'
Conc 79.14 Cu.Yds.
Reinf. Bars 13,866 lbs
Class U Exc. 95 Cu. Yds.

Construct Twp Road Connection
50' Shoulder Radii

Shed
Shed
Shed
Shed
Pump House
Barn
Chicken House
Bldg
Shed
Shed
Grainary
Ho
House

66' Twp Rd

41+00 Twp Rd Rt
Inpl 18"X36' CMP
Remove
F&I 54"X 32' SCP Class 2
F&I 2-54" Conc Aprons
For SCP

41+70 Rt (old road)
Inpl W44X42'+45°
Remove

Cl. 15 Gr. 24

B.M.Elev. 1154.78'
Spk in TP 31' Rt
Sta. 34+11.5

B.M. Elev. 1142.55'
X in SE Cor Hdwl
Rt of Sta. 41+00

Cl. 50 Gr. 40

Obliterate Old Road 4.2 Acres

B.M. Elev. 1129.61'
X in SE Cor. Hdwl
Old Culv.

B.M. Elev. 1127.21'
Spk in 18" Walnut
52' Lt Sta. 53+31

Elev. 7055
P.V.T.+50
-2.7%
Elev. 63.82692
P.V.C.+73.0769
Elev. 47.47692
P.V.T.+73.0769
P.I.+23.0769
Elev. 49.7769
300' V.C.
M=0.4875
-1.4%
Elev. 28.72308
P.V.C.+26.923
P.I.+76.9231
Elev. 26.6231
300' V.C.
M=0.24375
Elev. 25.49808
P.V.T.+26.923
-0.75%
Inlet 18.0
Outlet 16.3

Profile 75' Rt
Profile 75' Lt

EXC { Class A 17295
Class B 843
EMB 13090

Finished Grades
Present Grades

OLMSTED COUNTY, MINN. State Proj. No. 55-602-02 Sheet No. 4 of 42 Sheets

FED. ROAD DIST. NO.	STATE	FEDERAL PROJ. NO.	FISCAL YEAR	SHEET No.	TOTAL SHEETS

PLAN — SURVEYED: BY — DATE; PLOTTED; ALIGNMENT CHECKED; PROFILE AND XSECTIONS CHECKED; NOTE BOOK NO.

66+00 ℄
F&I 24"X64' SCP Class 2
F&I 2–24" Conc Aprons
For SCP

66+85 Twp Rd Rt
No Culv Inpl
No Culv Req'd

73+60
Construct Field Entrance Lt
No Culv Req'd

73+96 ℄
F&I 48"X60"X56' Timber Cattle Pass
F&I 2 Timber Cattle Pass End Sections 48"X 60"
Class U Exc 35 Cu. Yds.

85+20 FE Lt
No Culv Inpl
No Culv Req'd

Township Road
66'
PC. 66+62.96
Shed
Hog House
House
Ga.
Farm Lane
Drainage Ditch
P.I. 74+21.63
Δ Rt 22°28'
D 1°30'
T 758.67'
L 1497.78'
P.O.T. Sta. 82+50
P.O.T. Sta. 85+00
8.57'
14.28'
29.55'
16.16'
31.55'
45.89'
Windmill
Born
Grainery
Sheds
Shed
Equation P.T. 81+60.74 L. = 81+78.1 L.

73+60
Construct Farm Entrance Rt
F&I 18"X 32' CMP
F&I 2–18" Metal Aprons
For CMP

74+17 Rt (℄ Old Road)
Inpl W46X 29'
No Change

84+16 FE Rt
Inpl 18"X 24' CMP
Remove
F&I 18"X28' CMP
F&I 2–18" Metal Aprons
For CMP

Cl. 130 Gr. 202 — Obliterate Old Road 1.2 Acres — Cl. 40 Gr. 41

B.M. Elev. 1116.24'
Spk in PP 79' Rt
Sta. 66+46

B.M. Elev. 1107.65'
Spk in Cor Fe Post
74' Lt Sta. 73+61

B.M. Elev. 1167.16'
Spk in 18" Oak
4' Rt Sta. 82+42

Finished ℄ Grades: 22.7 21.95 21.2 20.45 19.7 18.95 18.2 17.45 16.7 15.95 15.2 14.45 13.7 13.05 13.3 14.45 16.2 19.2 23.1 27.1 30.7 33.5 35.6 36.8 37.3 35.9 35.8 33.8 31.6 29.3 27.0 24.9 24.2

Present ℄ Grades: 18.0 11.78 16.7 15.4 14.2 12.9 11.17 10.6 11.2 17.4 17.1 11.6 08.0 08.1 07.3 07.1 07.7 08.4 09.0 09.5 09.0 08.6 07.6 06.5 07.0 08.9 07.1 08.0 08.6 10.8.0 07.7 07.7 09.2 12.2 15.4 22.2 27.3 31.4 40.3 50.7 55.5 63.4 64.7 65.2 65.4 66.6 67.2 66.9 64.8 55.6 50.1 48.9 41.9 33.6 34.9 29.4 22.9 22.3 22.8 24.3 22.7 19.7 19.3 19.5

Profile 75' Lt
Profile 75' Rt
−0.75%
+4.0%
−2.3%
P.I. +00
Elev. 11.45
500' V.C.
M = 2.96875
P.I. +00
Elev. 43.1
800' V.C.
M = 6.3
Elev. 13.3
Elev. 21.1
Elev. 27.1
Elev. 33.8
Elev. 27.72040
P.V.C. +50
P.V.I. +50
P.V.C. +00
P.V.I. +00
P.V.C. +68.6765
Inlet 10.9
Outlet 10.6
Inlet 07.1
Outlet 06.7
+68

EXC { Class A 24846 / Class B 39164
EMB 46751

EXC { Class A 10931 / Class B 4948
EMB 11316

60 65 70 75 80 85 90

State Proj. No. 55-602-02 Sheet No. 5 of 42 Sheets
OLMSTED COUNTY, MINN.

FED. ROAD DIST. No.	STATE	FEDERAL PROJ. No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS

PLAN

NO.	NOTE BOOK	SURVEYED / DRAWN / ALIGNMENT CHECKED / RT. OF WAY CHECKED	BY	DATE

98+88 FE Lt
No Culv Inpl
No Culv. Req'd.

106+30 FE Lt
Inpl 15"x20' CMP
Remove

105+00
Const. Field Ent. Lt.
F. & I. 18"X 28' C.M.P.
F. & I. 2-18" Metal Aprons
For C.M.P.

P.I. 109+54
Δ Lt 30°02'
D 2°30'
T 614.84'
L 1201.33'

92+12 ℄ Culv
Inpl 36"X 36' CMP
Remove
F. & I. 42"X 52' SCP Class 2
F. & I. 2-42" Conc Aprons
For SCP

102+03 FE Rt
Inpl 15"X 34' CMP
Remove
F. & I. 18"X 68' CMP
F. & I. 2-18" Metal Aprons
For CMP

105+00
Const. Field Ent. Rt.
F. & I. 18"X 28' C.M.P.
F. & I. 2-18" Metal Aprons
For C.M.P.

107+57 FE (Rt old road)
Inpl 15"X20' CMP
Remove

114+06 FE Rt
Inpl 18" X 34' CMP
Remove

115+50
Const. Field Ent. Rt.
F. & I. 18"X 28' C.M.P.
F. & I. 2-18" Metal Aprons
For C.M.P.

P.O.T. 94+00
P.C. 102+87.70
P.O.T. 104+00
P.T. 114+89.03
P.C. 119+37.42
Woods

PROFILE

NO.	NOTE BOOK	SURVEYED / DRAWN / ALIGNMENT CHECKED / STRUCTURE QUANTS CHK'D	BY	DATE

Cl. 10 Gr. 11 — Cl. 13 Gr. 12

B.M. Elev. 1132.14'
Spk in P.P. 12' Lt
Sta. 97+41

B.M. Elev. 1191.73
Spk in Tel. Pole
3' Lt Sta. 109+64

Finished ℄ Grades

Present ℄ Grades

Profile 75' Lt
Profile 75' Rt

P.I. + 81.1765
Elev. 13.6329
1225' V.C.
M = 13.01562

Elev. 51.60796
Elev. 52.0
+6.2%
P.V.T. +93.6765
P.V.C. +83.00

P.I. +50
Elev. 98.5
1500' V.C.
M = 21.0

P.V.T. +00
Elev. 61.0
-5.0%
P.V.C. +00
Elev. 36.0

EXC { Class A 12311
Class B 449
EMB 8760

OLMSTED COUNTY, MINN. State Proj. No. 55-602-02 Sheet No. 6 of 42 Sheets

FED ROAD DIST NO	STATE	FEDERAL PROJ NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS

120+16 ℄ Culv Skewed 45°
Inpl 24"X44' CMP
Remove
F&I 24"X70' CMP
F&I 2-24" Metal Aprons
For CMP

127+19 Twp Rd Lt
No Culv Inpl
No Culv Req'd

130+82 ℄ Culv
Inpl 24"X 32' CMP
Remove
F&I 24"X 66' CMP
F&I 2-24" Metal Aprons
For CMP

134+25 FE Lt
No Culv Inpl
No Culv Req'd

148+39 FE Lt
No Culv Inpl
No Culv Req'd

Pl. 144+53.35
Δ Lt 22°54'
D 3°15'
T 357.38'
L 704.62'

P.O.T. 134+28.82

P.C. 140+95.97

Pl. 148+03.58

Pl. 148+49.89 Replace ℄
Lt 0°19' Steel Rod

Pl. 124+55.18
Δ Rt 36°06'
D 3°30'
T 517.76'
L 1002.86'

P.T. 129+40.28

138+85 FE Rt
Inpl 18"X38" CMP
Remove
F&I 18"X50' CMP
F&I 2-18" Metal Aprons
For CMP

146+93 ℄
F&I 24"X58'SCP Class 2
F&I 2-24" Conc Aprons
For SCP

147+03 ℄ Culv
Inpl 42" X 34' CMP
Remove
Move to Sta. 147+13
F&I 24"X58' SCP Class 2
F&I 2-24" Conc Aprons
For SCP

148+49 CSAH 7 Rt
No Culv Inpl
No Culv Req'd

Woods

Cl. 68 Gr. 117

Obliterate Old Road 1.5 Acres

B.M. Elev. 1130.71'
Spk in P.P. 24' Lt
Sta. 121+27

B.M. Elev. 1075.59'
Spk in Cottonwood
52' Rt. Sta. 148+81

P.I.+00
Elev. 26.0
400' V.C.
M=1.6

-5.0%

Inlet 36.1
Outlet 28.0

P.V.C.+00 Elev. 36.0

P.V.T.+00 Elev. 22.4

-1.8 %

Profile 75' Lt
Profile 75' Rt

EXC { Class A 59310
Class B 6700
EMB 46407

P.I.+00
Elev. 06.2
400' V.C.
M=0.350

Inlet 08.4
Outlet 01.5

P.V.C.+00 Elev. 09.8

P.V.T.+00 Elev. 01.2

-2.5%

-2.5 %

P.V.C.+40.90909 Elev. 82.67727

P.I.+40.90909
Elev. 77.67727
400' V.C.
M=1.100

-0.3%

Inlet 72.5
Outlet 71.8

P.V.T.+40.90909 Elev. 77.07727

Finished ℄ Grades

Present ℄ Grades

120 125 130 135 140 145

OLMSTED COUNTY, MINN.

FED. ROAD DIST. NO.	STATE	FEDERAL PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS

161+35
Const. Field Ent.
F. & I. 24" X 28' C.M.P.
F. & I. 2-24" Metal Aprons
For C.M.P.

161+64 FE Lt
Inpl 15"X 48' CMP
Remove

170+25 FE Lt
Inpl 15"X 24' CMP
Remove
F. & I. 24" X 28' C.M.P.
F. & I. 2-24" Metal Aprons
For C.M.P.

P.O.T. 160+00 Spk Inplace

P.I. 174+81.26 Lt 0°2'30" Inplace 2"x2" Hub with Spk

T.10N R.11W 7 8 18 17 T.10N R.12W

48.37' 32.81' 41.81' 36.72' 36.8' 35.06' 31.43'

161+47 FE Rt
Inpl 15"X 24' CMP
Remove

161+77
Const. Field Ent.
F. & I. 18"X 28' C.M.P.
F. & I. 2-18" Metal Aprons
For C.M.P.

171+42 ℄ Box Culv
Inpl W108T X 26'
Extend 10' Rt. & 16' Lt.
Conc. 139.6
Reinf. Bars 13158 lbs.
Class U Exc. 35 cu. yds.

CSAH 7 +49 +79

DATE | BY | SURVEYED | PLOTTED | QUANTITIES CHECKED | PLAN | NOTE BOOK NO. | ALIGNMENT CHECKED | PROFILE CHECKED

B.M. Elev. 1074.47'
Spk in PP Rt 34'
Sta. 160+20

B.M. Elev. 1060.48'
X SE Cor S Hdwl
14.5' Rt Sta. 171+58

Cl. 44 Gr. 38

Finished ℄ Grades: 766 763 760 757 754 751 748 745 742 739 736 731 724 713 700 685 670 655 640 627 618 612 611 613.5 619.5 630.5 644.5 662.5 682.5 701.5 714.5 721.5 719.5

Elev. 736 | Elev. 700 | Elev. 640 | Elev. 662.5 | Elev. 682.5

-0.3% | -1.5% | +2.0% | -0.8%

P.V.C. +00 | P.V.T. +00 | P.V.C. +00 | P.V.T. +00 | P.V.C. +50

P.I. +00
Elev. 730
400' V.C.
M = 0.60

P.I. +00
Elev. 57.25
900' V.C.
M = 3.9375

P.I. +50
Elev. 732.5
400' V.C.
M = 1.4

Profile 75' Lt
Profile 75' Rt

Subgrade Treatment:
Exc. 1.0' Below Profile Grade
Sta. 156+00 to Sta. 165+00

Inlet 50.5
Outlet 48.5

Subgrade Treatment:
Exc. 1.0' Below Profile Grade
Sta. 177+50 to Sta. 180+25

EXC 6726
EMB 4113

EXC 3307
EMB 2114

Present ℄ Grades: 762 1075ft 752 +60 750 744 743 +42 742 743 744 +74 1074.5 744 744 745 747 +46 1074.5 741 738 +50 730 711 +48 701 689 1066.3 650 +50 640 623 616 612 1060.9 609 +70 610 611 +15 612 +42 612 +64 611 +86 612 612 614 +40 616 1062.0 630 +64 638 667 702 717 +82 727 728 +52 1072.4 715 +39 710 +70 706

150 | 155 | 160 | 165 | 170 | 175 | 180

PROFILE | SURVEYED | PLOTTED | QUANTITIES CHECKED | GRADES CHECKED | D. M's NOTED | STRUCTURE ROTATIONS CHKD | NOTE BOOK NO.

SINGLE PLAN & PROFILE—GOTHIC

OLMSTED COUNTY, MINN. State Proj. No. 55-602-02 Sheet No. 8 of 42 Sheets

FED ROAD DIST. NO	STATE	FEDERAL PROJ. NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS

182+80 ℄ Culv
Inpl 24"X 36' CMP
Remove
F. & I. 24"X 70' S.C.P. Class 2
F. & I. 2-24" Conc. Aprons
For S.C.P.

188+62 ℄ Culv
Inpl 15"X 32' CMP
Remove
F. & I. 24"X 64' S.C.P. Class 2
F. & I. 2-24" Conc. Aprons
For S.C.P.

193+04 FE Lt
Inpl 15"X 16' CMP
Remove
No Culv. Req'd.

End S.A.P. 55-602-02
Sta. 204+57.18

P.I. 202+02

P.O.T. 195+98.43
Spk Impluse

P.C. 198+81.7

P.I. 200+97.31
Δ Lt 29°30'
D 7°00'
T 215.6
L 421.4

Construct
80' Shoulder Radius

CSAH 10

181+11 FE Rt
Inpl 15"X 26' CMP
Remove
F. & I. 18"X 32' C.M.P.
F. & I. 2-18" Metal Aprons
For C.M.P.

188+02 Twp Rd Rt
No Culv Inpl
F. & I. 18'X 36' C.M.P.
F. & I. 2-18" Metal Aprons
For C.M.P.

188+39 FE Rt
No Culv Inpl
No F. Ent. Req'd

200+35 ℄ Box Culv
Inpl W106 X 27'
Extend 40' Lt.
Conc. 59.9 cu. yds.
Reinf. Bars 5980 lbs.
Class U Exc. 12.0 cu. yds.

P.O.T. 204+17.31
Inpl 1/2" Steel Rod & Limestone

202+32 FE Rt
Inpl 18"X 30' CMP
Remove
F. & I. 18"X 28' C.M.P.
F. & I. 2-18" Metal Aprons
For C.M.P.

B.M. Elev. 1068.85
Spk in TP 34' Rt
Sta. 181+67

B.M. Elev. 1060.17'
□ in SE Cor S. Hdwl
24' Rt Sta. 200+35

Finished ℄ Grades

Present ℄ Grades

Profile 75' Lt

Profile 75' Rt

P.I. +50
Elev. 73.25
400' V.C.
M = 1.4

Inlet 65.5
Outlet 59.7

Sp. Ditch Rt.
Sta. 182+80 to Sta. 186+00

P.I.+86.11111
Elev. 68.16111
600' V.C.
M = 1.35

Inlet 67.4
Outlet 61.3

P.I. +00
Elev. 77.3
600' V.C.
M = 3.0

Subgrade Treatment:
Exc. 1.0 Below Profile Grade
Sta. 192+50 to Sta. 199+50

Inlet 52.5
Outlet 49.1

P.I. +50
Elev. 57.8
500' V.C.
M = 3.25

EXC 19609
EMB 12830

EXC 5577
EMB 3608

EXC 266
EMB 185

SINGLE PLAN & PROFILE - DOTTED
CHARLES BRUNING COMPANY, INC.

OLMSTED COUNTY, MINN.

State Proj. No. 55-602-02 Sheet No. 9 of 92 Sheets