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.106N. R.24W. / R.24W. T.105N. — 35 | 36 / 2 | 1

CENTER SECTION — 35 — T.106N. R.24W.

12 / 1 / 4 / 13

NOTE: SECTION NUMBERS READ FROM THE SOUTH

N

STATE OF MINNESOTA
DEPARTMENT OF HIGHWAYS

CONSTRUCTION PLAN FOR Grading and Crushed Rock Base Inplace

County State Aid Highway No. 25

BETWEEN West County Line AND CSAH 5

From W 1/4 Corner Sec 18 T106N-R15W To a point 393.69' East of E 1/4 Cor. Sec 17 T106N-R15W

Give proper reference to Sections, Township and Range

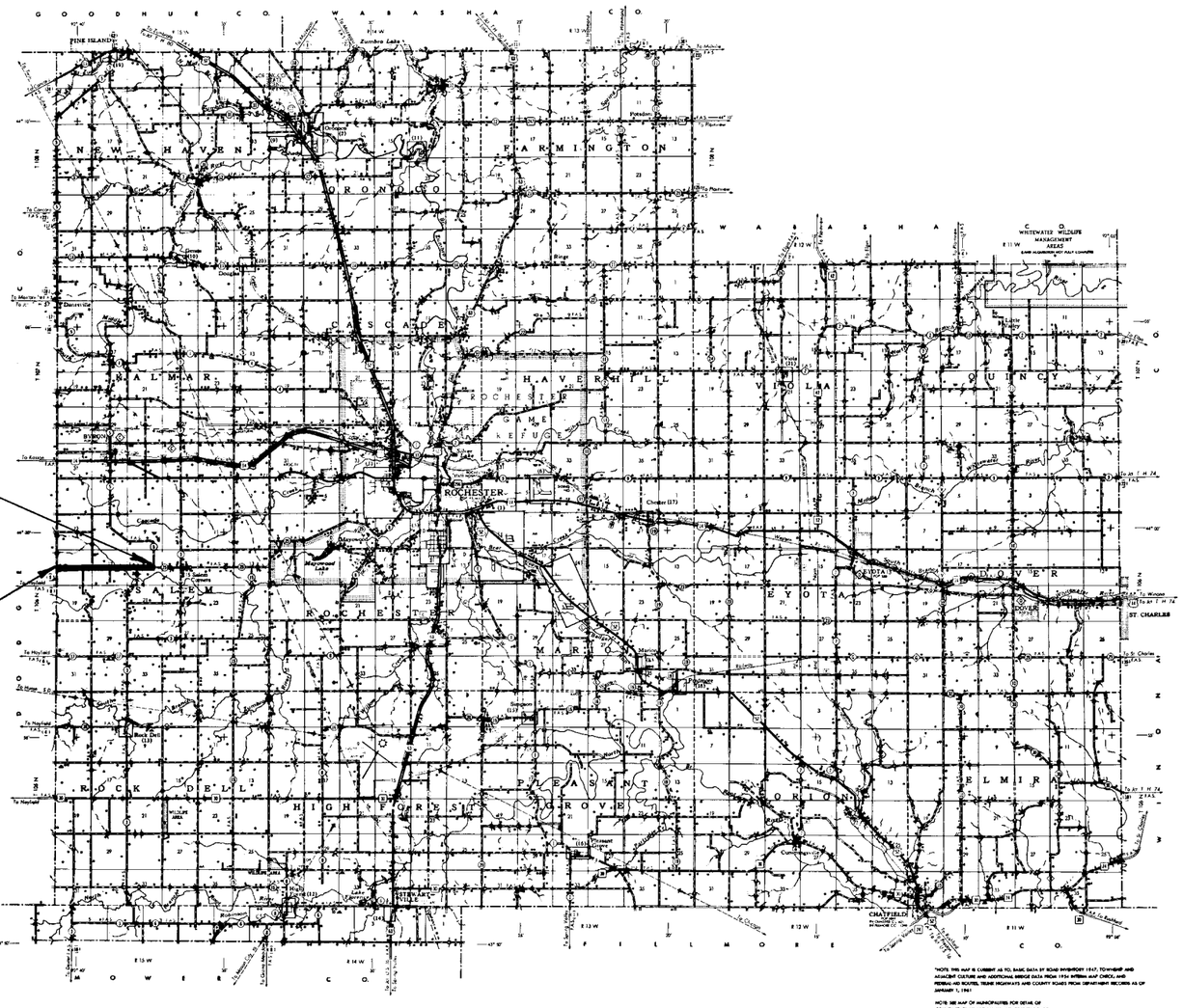
GROSS LENGTH 14427.29 FEET 2.7324 MILES
BRIDGES LENGTH ——— FEET ——— MILES
EXCEPTIONS LENGTH ——— FEET ——— MILES
NET LENGTH 14427.29 FEET 2.73244 MILES

MINN. PROJ. _____

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

INDEX OF SHEETS

Sheet No. 1. Title Sheet & Layout Map
" No. 2. Est. Quantities & Typical Sec.
" No. 3. To 7 Plan & Profile
" No. 8 To 27 Cross Sections



End S.A.P. 55-625-02
Sta. 244+27.29

Begin S.A.P. 55-625-02
Sta. 100+00

Design Speed 50 M.P.H. Except Sta. 100+00 to Sta. 105+00 35 M.P.H.

Projected ADT 255

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 — COUNTY ENGINEER — DATE 2-18-64
Olmsted — COUNTY — REG. NO. 1207

RECOMMENDED FOR APPROVAL Chas. Bentson 2/27 19 64 — DISTRICT ENGINEER S.A.
RECOMMENDED FOR APPROVAL L. A. Hoffman 3-25 19 64
APPROVED ——— 19 ——— STATE AID ENGINEER

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS
APPROVED

—SPECIFICATIONS—

THE "SPECIFICATIONS FOR HIGHWAY CONSTRUCTION" DATED JAN 1, 1964 SHALL GOVERN.

"NOTE: THIS MAP IS CURRENT AS TO BASIC DATA BY ROAD INVENTORY 1947, TOWNSHIP AND ADJACENT CULTURE AND ADDITIONAL BRIDGE DATA FROM 1956 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.

MICRO-FILMED

Minn. Proj. No. _____ State Proj. No. _____ State Aid Project No. 55-625-02

Olmsted County, Minnesota — County Proj. No. _____ 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	102
2101.507	Grubbing	Tree	137
2104.501	Remove Portable Culverts	Lin.Ft.	426
2105.501	Class A Excavation	Cu. Yd.	59328
2105.502	Class B Excavation	Cu. Yd.	9449
2105.504	Class SG Excavation	Cu. Yd.	1382
2105.506	Borrow Excavation Class A	Cu. Yd.	950
2130.501	Water	M. Gallons	190
2201.527	Gravel Sub-Base Inplace (Class 4)	Cu. Yd.	5034
2210.527	Crushed Rock Base Inplace	Cu. Yd.	7593
2501.511-18"	F&I 18" CMP Culverts	Lin. Ft.	718
2501.511-24"	F&I 24" CMP Culverts	Lin. Ft.	32
2501.511-30"	F&I 30" CMP Culverts	Lin. Ft.	76
2501.511-36"	F&I 36" CMP Culverts	Lin. Ft.	60
2501.521-24"	F&I 24" RCP Culverts Class II	Lin.Ft.	68
2501.521-24"	F&I 24" RCP Culverts Class III	Lin.Ft.	106
2515.531-18"	F&I Metal Aprons For 18" CMP	Apron	46
2515.531-24"	F&I Metal Aprons For 24" CMP	Apron	2
2515.531-30"	F&I Metal Aprons For 30" CMP	Apron	4
2515.531-36"	F&I Metal Aprons For 36" CMP	Apron	4
2515.541-24"	F&I Conc Aprons For 24" SCP	Apron	6

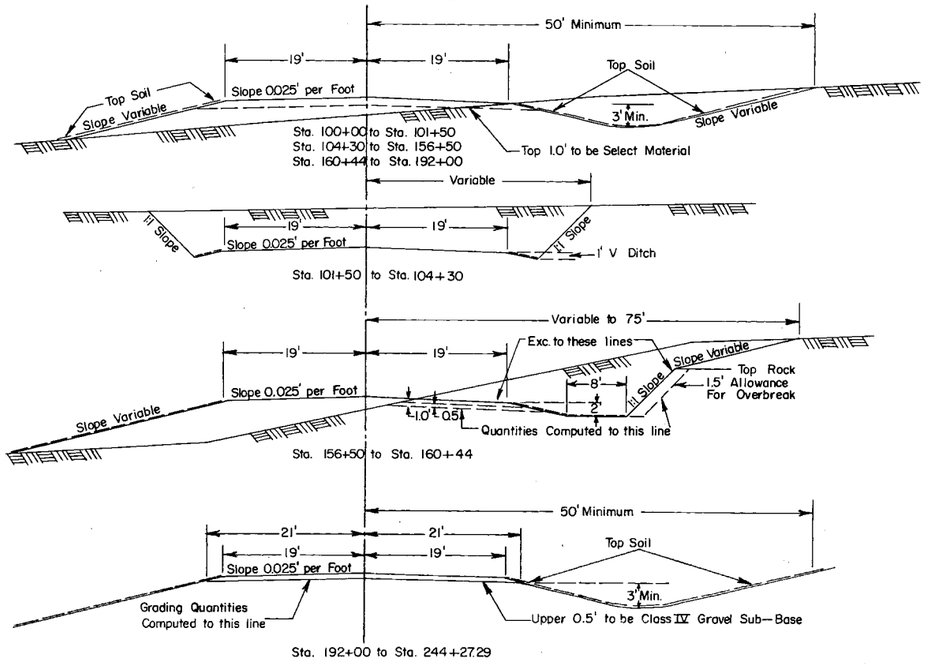
Note: Item 2210.527 includes 492 Cu.Yds. Approaches and TWP Rds

STANDARD DETAIL PLATES

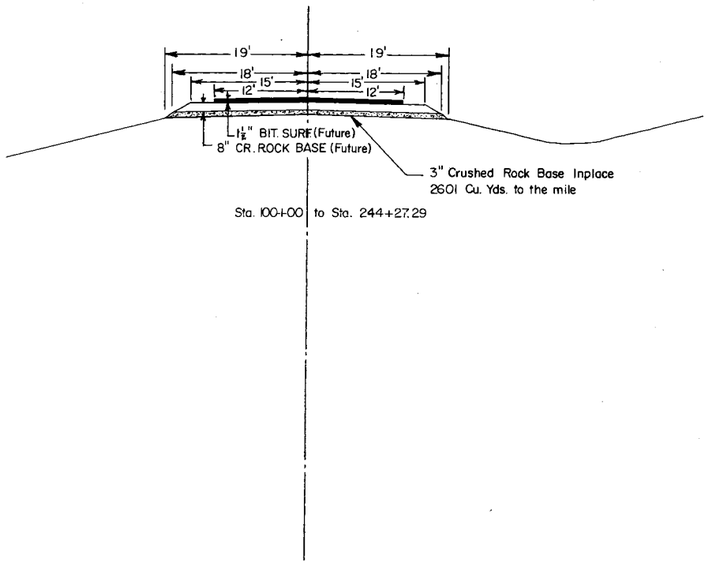
THE FOLLOWING STANDARD DETAIL PLATES, APPROVED BY THE BUREAU OF PUBLIC ROADS, SHALL APPLY ON THIS PROJECT.

PLATE NO.	DESCRIPTION
3000 B	Reinforced Concrete Pipe
3100 C	
3102 B	Concrete Apron for Reinforced Concrete Pipe
3123 A	Metal Apron for CMP Pipe

TYPICAL GRADING SECTIONS



TYPICAL BASE & SURFACE SECTIONS



SPECIAL DETAILS

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 listed as SG excavation. Backfill with select material from R.O.W. Tapers shall be 50:1 in all cases.

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

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

DAHMS PHOTO PRINT CO
MPLS. 1, MINN

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

PLAN — DATE / BY — SURVEYED — PLOTTED — ALIGNMENT CHECKED — R/W CHECKED — NOTE BOOK — NO.

100+00 Twp Rd Lt
Inpl 15"X 36' CMP
Remove
F&I 18"X 46' CMP
F&I 2–18" Metal Aprons
For CMP

102+92 Double FE Lt
No Culv Inpl
No Culv. Req'd

103+59 FE Lt
Inpl 8"X 20' CMP
Remove
No Ent. Req'd

105+41 FE Lt
Inpl 8"X 20' CMP
Remove
F&I 18"X 32' CMP
F&I 2–18" Metal Aprons
For CMP

105+64 FE Lt
No Culv Inpl
No Culv. Req'd

112+91 FE Lt
No Culv Inpl
F&I 18"X 28' CMP
F&I 2–18" Metal Aprons
For CMP

125+60 FE Lt
No Culv Inpl
F&I 18"X 28' CMP
F&I 2–18" Metal Aprons
For CMP

125+79 FE Lt
No Culv Inpl
F&I 18"X 28' CMP
F&I 2–18" Metal Aprons
For CMP

130+05 ℄ Culv
Inpl 36"X 51' CMP
Extend
F&I 36" X 12' Lt & 16' Rt CMP
F&I 2–36" Metal Aprons
For CMP

Begin S.A.P 55–625–02
Sta. 100+00

P.O.T. 103+15.0 Spk Inplace

P.O.T. 114+30.0 Spk Inplace

P.O.T. 125+68.67 Spk Inplace

100+00 CSAH 25 Rt
No Culv Inpl
No Culv. Req'd

103+78 FE Rt
No Culv Inpl
F&I 18"X32' CMP
F&I 2–18" Metal Aprons,
For CMP

106+38 ℄ Culv
Inpl(18"CMP & 3'X2' Conc Box) X 23'
Remove
F&I 24"X 68' RCP Class II
F&I 2-24" Conc. Aprons
For SCP
Pl. on "C" Bedding

108+17 FE Rt
No Culv Inpl
F&I 18"X 28' CMP
F&I 2–18" Metal Aprons
For CMP

125+80 FE Rt
No Culv Inpl
F&I 18"X 28' CMP
F&I 2–18" Metal Aprons
For CMP

Gravel Pit

Cl. 16 Gr. 15 — Cl. 3 Gr. 3

B.M. Elev. 1158.04'
Spk in PP SW of
Sta. 100+00

B.M. Elev. 1147.96'
Spk in TP 28' Lt
Sta. 107+23

B.M. Elev. 1188.28'
Spk in PP 32' Rt
Sta. 125+72

PROFILE — SURVEYED — PLOTTED — GRIDLINES CHECKED — 0.1 ft. NOTCH — STRUCTURE NOTATIONS CHKD — NOTE BOOK — NO.

Finished ℄ Grades

Present ℄ Grade

Profile 75' Lt

Profile 75' Rt

P.I.+00
Elev. 76.6
400' V.C.
M=4.0%

+4.0%

-4.0%

+4.8%

P.I.+00
Elev. 60.6
400' V.C.
M=4.4%

P.I.+78.18182
Elev. 02.75273
700' V.C.
M= 4.8125

-0.7%

Note: 950 Cu.Yds. from side borrow

EXC Class A 1219
Class B 753
EMB 1974

EXC Cl.A 235
Cl.B 49
EMB 173

Inlet Elev. 60.1
Outlet Elev. 56.7

EXC Class A 9062
Class B 838
EMB 7114

EXC Class A 3372
Class B 1376
EMB 3428

Inlet Elev. 86.1
Outlet Elev. 83.0

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

PLAN — SURVEYED — PLOTTED — NOTE BOOK — NO. — BY — DATE — ALIGNMENT CHECKED — RT. OF WAY CHECKED

139+32 FE Lt
No Culv Inpl
F&I 18"X 28' CMP
F&I 2-18" Metal Aprons
For CMP

152+26 Twp Rd Lt
Inpl 12"X 42' CMP
Remove
F&I 18"X 36' CMP
F&I 2-18" Metal Aprons
For CMP

POT. 142+45.0
Spk Inplace

PI. 152+30.16
Δ Lt 0°24'

138+71 FE Rt
No Culv Inpl
Place FE on Twp Rd
F&I 18"X 28' CMP
F&I 2-18" Metal Aprons
For CMP

139+18 Twp Rd Rt
Inpl 12"X 40' CMP
Remove
F&I 18"X 36' CMP
F&I 2-18" Metal Aprons
For CMP

152+19 FE Rt
No Culv Inpl
F&I 18"X 32' CMP
F&I 2-18" Metal Aprons
For CMP

B.M. Elev. 1219.64'
Spk in PP 34' Rt
Sta. 138+74

B.M. Elev. 1211.99'
Spk in PP 33' Lt
Sta. 152+63

PROFILE — SURVEYED — PLOTTED — NOTE BOOK — NO. — BY — DATE — GRADES CHECKED — R.M. TIED — STRUCTURE NOTATIONS CHKD

Profile 75' Lt
Profile 75' Rt

Finished ℄ Grades: 93.5 93.3 94.2 95.1 99.1 02.6 06.1 09.6 13.1 16.6 19.8 22.5 24.7 26.3 27.3 27.9 27.8 27.3 26.2 24.5 22.3 19.6 16.6 13.6 10.3 06.5 02.2 97.3 91.8 85.8 79.3 72.5 65.7

Present ℄ Grades: 90.8 89.1 88.8 88.8 90.1 91.4 93.3 97.4 99.8 01.9 05.7 08.8 12.0 15.4 19.2 19.7 20.2 21.1 21.7 21.1 22.6 26.3 28.8 29.6 29.7 29.4 28.7 28.0 27.0 26.4 25.3 22.8 20.0 17.1 14.2 14.0 13.7 13.2 12.7 12.2 11.0 10.6 07.8 04.7 01.9 98.9 97.0 95.1 91.9 89.3 87.3 84.4 81.1 78.8 76.3

+60 +05 +27 +48 +50 +88 +11 +31 +45 +54 +63 +42 +90 +10 +25 +38 +53 +80 +54 +60 +28 +64 +44

P.I. +00
Elev. 92.1
400' V.C.
M= 2.1

+3.5%

P.V.C. +00
P.V.T. +00
Elev. 93.5
Elev. 92.1
Elev. 166

P.I. +00
Elev. 37.6
1200' V.C.
M= 9.75

-3.0%

P.V.C. +00
P.V.T. +00
Elev. 13.6
Elev. 37.6

Subgrade Treatment
Excavate 1.0' Below Profile Grade
Sta. 138+88 to 151+00

P.I. +50
Elev. 03.1
700' V.C.
M=3.325

-6.9%

P.V.C. +00
P.V.T. +00
Elev. 73.3

+28
+55

EXC Class A 4144
SG 474
EMB 2940

130 135 140 145 150 155 160

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

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

171+69 FE Lt
Inpl 24"X 16' CMP
Remove
F&I 36"X 32' CMP
F&I 2-36" Metal Aprons
For CMP

179+75 ℄ Box Culv
Inpl C108D X 42.7'
No Change

182+88 FE Lt
No Culv Inpl
No Culv Req'd

178+56 Twp Rd. Rt
Inpl 24"X 32" CMP
Remove
F&I 30"X48' CMP
F&I 2-30" Metal Aprons
For CMP

182+94 FE Rt
No Culv Inpl
No Culv. Req'd

PLAN — SURVEYED, PLOTTED, GRADES CHECKED, ALIGNMENT CHECKED, RT. OF WAY CHECKED, NOTE BOOK, NO., BY, DATE

Cl. 19 Gr. 59 — Cl. 1 Gr. 3 — Cl. 37 Gr. 33

B.M. Elev. 1131.76'
Spk in PP 26' Lt
Sta. 164+ 58

B.M. Elev. 1104.18'
Spk in PP 28' Lt
Sta. 182+36

PROFILE — SURVEYED, PLOTTED, GRADES CHECKED, ALIGN. NOTED, STRUCTURE NOTATING CHKD, NOTE BOOK, NO., BY, DATE

Profile 75' Lt
Profile 75' Rt

-6.8%
-6.8%
-0.7%
-0.45%

P.I. + 36.06557
Elev. 15.64755
600' V.C.
M = 4.575

P.I. + 00
Elev. 04.7
400' V.C.
M = 0.1250

P.V.C. + 36.06857 Elev. 36.04764
P.V.T. + 36.06557 Elev. 13.64753
P.V.C. + 00 Elev. 06.1
P.V.T. + 00 Elev. 03.8

EXC Class A 19765
Class B 6433
SG 908

EMB 18465

Finished ℄ Grades
Present ℄ Grades

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

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

193+16 FE Lt
No Culv Inpl
F&I 18"X 28' CMP
F&I 2–18" Metal Aprons
For CMP

199+16 FE Rt
No Culv Inpl
F&I 18"X 32' CMP
F&I 2–18" Metal Aprons
For CMP

202+87 FE Rt
No Culv Inpl
F&I 18"X 28' CMP
F&I 2–18" Metal Aprons
For CMP

204+81 FE Rt
Inpl 15"X 26' CMP
Remove
F&I 18"X 32' CMP
F&I 2–18" Metal Aprons
For CMP

205+63 FE Rt
Inpl 18"X 30' CMP
Remove
F&I 18"X 32' CMP
F&I 2–18" Metal Aprons
For CMP

208+85 FE Lt
No Culv Inpl
No Ent. Req'd

211+09 FE Lt
No Culv Inpl
F&I 30"X 28' CMP
F&I 2–30" Metal Aprons
For CMP

211+50 FE Lt
Inpl 12"X 16' CMP
Remove
No Ent. Req'd

218+03 Twp Rd Rt
No. Culv Inpl
F&I 18"X 36' CMP
F&I 2–18" Metal Aprons
For CMP

Pt. 204+92.60
4 Rt 0°2'30"
1" Steel Rod
Over Limestone

17-16

Bldg
Ho.
House
Twp Rd
66'

DATE
BY
PLAN
SURVEYED
PLOTTED
NOTE BOOK
NO.
ALIGNMENT CHECKED
RT. OF WAY CHECKED

Cl. 0 Gr. 3

B.M. Elev. 1100.56'
Spk in PP 28' Lt
Sta. 190+29

B.M. Elev. 1095.16'
Spk in PP 31' Lt
Sta. 204+93

Cl. 0 Gr. 1

B.M. Elev. 1089.14'
Spk in PP 32' Lt
Sta. 217+72

Finished Grades
Present Grades
Profile 75' Lt
Profile 75' Rt

-0.45%
-1.0%

P.V.C. +90.90909
Elev. 90.79091

P.I. +90.90909
Elev. 89.89091
400' V.C.
M=0.275

P.V.T. +90.90909
Elev. 87.89091

Note: Sta. 192+00 to Sta. 220+00
Place 0.5' Class 4 Gravel

EXC Class A 8225
Class 4 552
EMB 5676

EXC Class A 10552
Class 4 3549
EMB 7333

PROFILE
SURVEYED
PLOTTED
GRADES CHECKED
B.M. NOTED
CREATURE NOTATNS. CHKD
NOTE BOOK
NO.

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

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

227+35 FE Lt
No Culv Inpl
No Ent. Req'd

230+88 FE Lt
Inpl 24"X 31' CMP
Remove
F&I 24"X 32' CMP
F&I 2-24" Metal Aprons
For CMP

242+60 ℄ Culv
F&I 24"X 50' RCP Class III
F&I 2-24" Conc Aprons
For SCP
Place on B Bedding

244+27 CSAH 5 Lt
No Culv Inpl
No Culv. Req'd

End S.A.P. 55-625-02
Sta. 244+27.29

221+28 FE Rt
Inpl 24"X 20' CMP-A
Remove
F&I 18"X 32' CMP
F&I 2-18" Metal Aprons
For CMP

227+35 FE Rt
Inpl 12"X 14' CMP
Remove
F&I 18"X 28' CMP
F&I 2-18" Metal Aprons
For CMP

230+75 ℄ Culv (Skewed)
Inpl 24"X 40' CMP
Remove
F&I 24"X 56' RCP Class III Skew 30°
F&I 2-24" Conc Aprons
For SCP
Place on B Bedding

234+13 FE Rt
Inpl 18"X 20' CMP
Remove
F&I 18"X 28' CMP
F&I 2-18" Metal Aprons
For CMP

242+32 FE Rt
No Culv Inpl
F&I 18"X 32' CMP
F&I 2-18" Metal Aprons
For CMP

244+27 FE Rt
Inpl 18"X 26' CMP
No Change

CL 19 Gr. 16 — CL 7 Gr. 4

B.M. Elev. 1078.27
Spk in PP 30' Lt
Sta. 230+58

B.M. Elev. 1076.64
Spk in PP 32'
Rt Sta. 243+98

P.I.+00
Elev. 81.8
400' V.C.
M=0.35

-1.0%

-0.3%

Inlet Elev. 76.2
Outlet Elev. 76.0

Inlet Elev. 72.3
Outlet Elev. 72.0

Profile 75' Lt

Profile 75' Rt

Note: Sta. 220+00 to Sta. 244+27.29
Place 0.5' Class 4 Gravel

EXC Class A 2754
Class 4 933

EMB 1947

SINGLE PLAN & PROFILE—DOTTED
CHARLES BRUNING COMPANY, INC

Olmsted County State Proj. No. 55-625-02 Sheet No. 7 of 27 Sheets