FORM 100-A '65

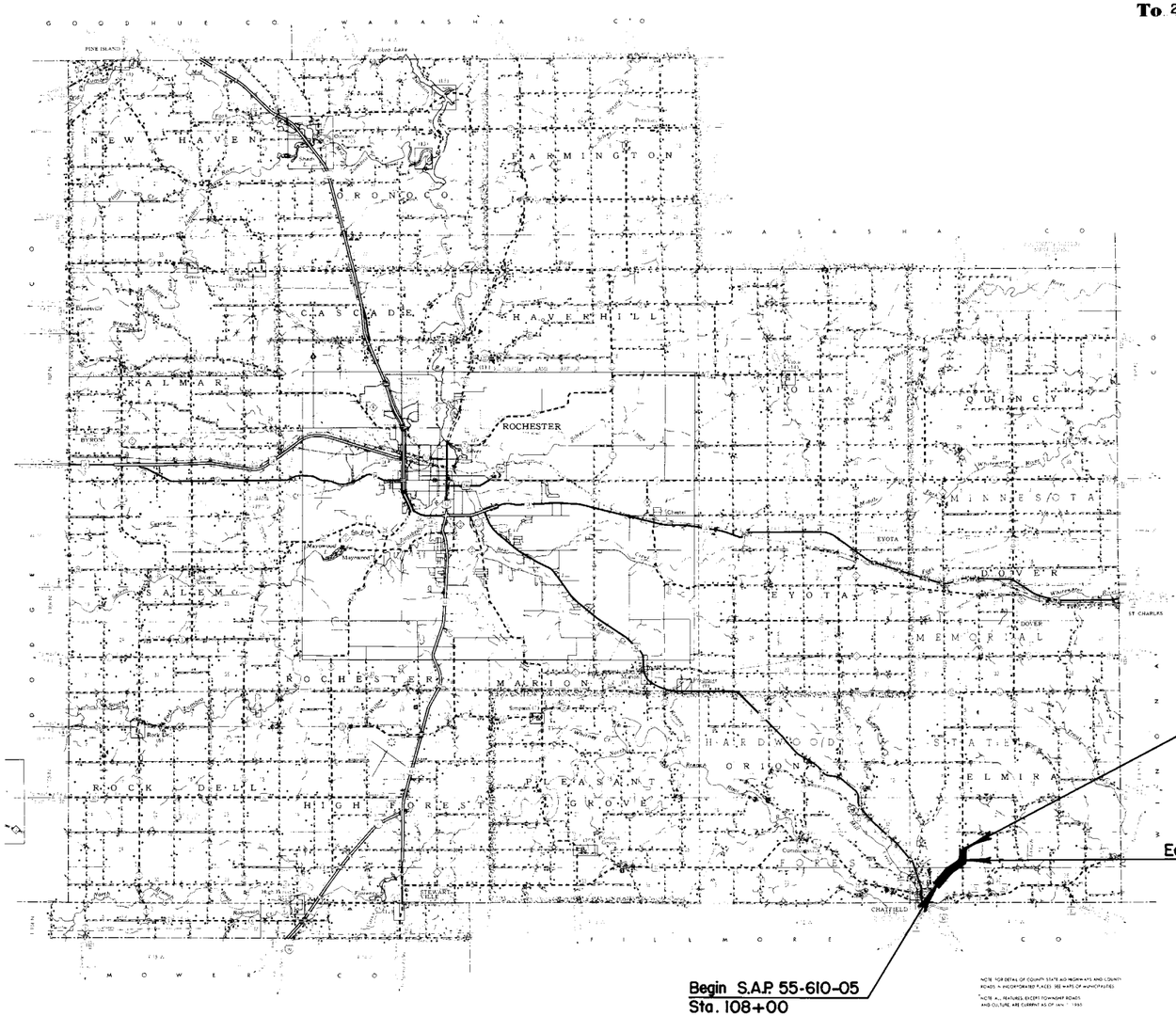
Fed. Proj. No.

## PLANS SYMBOLS

STATE LINE
COUNTY LINE
TOWNSHIP OR RANGE LINE
SECTION LINE
QUARTER LINE
SIXTEENTH LINE
RIGHT-OF-WAY LINE
PRESENT RIGHT-OF-WAY LINE
CONTROL OF ACCESS LINE
PROPERTY LINE (Except Land Lines)
VACATED PLATTED PROPERTY
CORPORATE OR CITY LIMITS
TRUNK HIGHWAY CENTER LINE
RETAINING WALL
RAILROAD
RAILROAD RIGHT-OF-WAY LINE
RIVER OR CREEK
DRY RUN
DRAINAGE DITCH
DRAIN TILE
CULVERT
DROP INLET
GUARD RAIL
BARBED WIRE FENCE
WOVEN WIRE FENCE
CHAIN LINK FENCE
RAILROAD SNOW FENCE
STONE WALL OR FENCE
HEDGE
RAILROAD CROSSING SIGN
RAILROAD CROSSING BELL
ELECTRIC WARNING SIGN
CROSSING GATE
MEANDER CORNER
SPRINGS
MARSH
TIMBER
ORCHARD
BRUSH
NURSERY
CATCH BASIN C.B.
FIRE HYDRANT
CATTLE GUARD
OVERPASS (Highway Over)
UNDERPASS (Highway Under)
BRIDGE
BUILDING (One Story Frame)
F-FRAME C-CONCRETE
S-STONE T-TILE
B-BRICK ST-STUCCO
IRON PIPE OR ROD
MONUMENT (STONE, CONCRETE, OR METAL)
WOODEN HUB
GRAVEL PIT
SAND PIT
BORROW PIT
ROCK QUARRY

## UTILITIES SYMBOLS

POWER POLE LINE
TELEPHONE OR TELEGRAPH POLE LINE
JOINT TELEPHONE AND POWER ON POWER POLES
ON TELEPHONE POLES
ANCHOR
STEEL TOWER
STREET LIGHT
PEDESTAL (TELEPHONE CABLE TERMINAL)
GAS MAIN
WATER MAIN
CONDUIT
TELEPHONE CABLE IN CONDUIT
ELECTRIC CABLE IN CONDUIT
TELEPHONE MANHOLE
ELECTRIC MANHOLE
BURIED TELEPHONE CABLE
BURIED ELECTRIC CABLE
AERIAL TELEPHONE CABLE
SEWER, (SANITARY OR STORM)
SEWER MANHOLE




STATE OF MINNESOTA

# DEPARTMENT OF HIGHWAYS

**CONSTRUCTION PLAN FOR** Grading, Box Culverts and Crushed Rock Base Inplace

**COUNTY STATE AID HIGHWAY NO.** 10

**BETWEEN** 438.3' North of Union Street Chatfield **AND** Assumed Center Sec 29 T105N-R11W

**From** 1140.8' East and 268.4' South of the Center Section 31 T105N-R11W
Give proper reference to Sections, Township and Range

**To** 2626.16' South of N1/4 Corner Section 29 T105N-R11W

| | | | |
|---|---|---|---|
| GROSS LENGTH | 7524.09 | FEET 1.425 | MILES |
| BRIDGES-LENGTH | | FEET | MILES |
| EXCEPTIONS-LENGTH | | FEET | MILES |
| NET LENGTH | 7524.09 | FEET 1.425 | MILES |

INDEX OF SHEETS


Sheet No 1 Title Sheet & Layout Map
" No 2 Est Quantities & Typical Sec
" No 3 To 5 Plan & Profile
" No 6 To 23 Cross Sections


DESIGN SPEED 50 M. P. H.

PROJECTED A. D. T. 559

HCADT LESS THAN 150 VPD

7 Ult 9 TON DESIGN

SOIL FACTOR 100

ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS AND ORDINANCES 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.

P. J. Sullivan DATE 3-3-66
COUNTY ENGINEER
Olmsted COUNTY REG. NO. 1207

RECOMMENDED FOR APPROVAL Claude W. Gehrtner 3/21/1966
DISTRICT STATE AID ENGINEER

RECOMMENDED FOR APPROVAL C E Weichselbaum 4-14 1966

APPROVED , 19
STATE AID ENGINEER

MICRO-FILMED

S.A.P. 55-610-05

Minn. Project No. State Project No.

Olmsted County, Minnesota. County Proj. No. Plan No. Sheet 1 of 23 Sheets

— SPECIFICATIONS —

STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION DATED JANUARY 1, 1964 AS AMENDED BY "SUPPLEMENTAL SPECIFICATIONS" DATED FEBRUARY 1, 1966 SHALL GOVERN.


ALBINSON, INC.
MINNEAPOLIS, MINN. 55415

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 |
|---|---|---|---|---|---|---|
| | 2101.501 | Clearing | Acre | 4.43 | 0.9 | 3.53 |
| | 2101.502 | Clearing | Tree | 237 | 86 | 151 |
| | 2101.506 | Grubbing | Acre | 4.43 | 0.9 | 3.53 |
| | 2101.507 | Grubbing | Tree | 259 | 69 | 190 |
| | 2104.501 | Remove Portable Culvert | Lin. Ft. | 638 | 272 | 366 |
| | 2104.520 | Remove Conc Box Culverts (Sta.137+91)(Sta.162+25) | Structure | 2 | | 2 |
| | 2105.501 | Class A Excavation | Cu. Yd. | 49196 | 8351 | 40845 |
| | 2105.502 | Class B Excavation | Cu. Yd. | 47332 | 45583 | 1749 |
| | 2105.504 | Class SG Excavation | Cu. Yd. | 6980 | 1547 | 5433 |
| | 2105.506 | Borrow Excavation Class A | Cu. Yd. | 17302 | | 17302 |
| | 2105.510 | Top Soil Covering | Cu. Yd. | 1300 | | 1300 |
| * | 2123.501 | Common Laborers | Hour | 10 | | 10 |
| ** | 2123.503 | Motor Grader | Hour | 10 | | 10 |
| ** | 2123.508 | 15 Cu.Yd. Min. Scraper | Hour | 10 | | 10 |
| ** | 2123.509 | Dozer | Hour | 10 | | 10 |
| ** | 2125.511 | 75 HP Tractor | Hour | 10 | | 10 |
| | 2130.501 | Water | M. Gal. | 124 | 29 | 95 |
| | 2210.527 | Crushed Rock Base Inplace | Cu. Yd. | 4976 | 1164 | 3812 |
| | 2411.501 | Concrete | Cu. Yd. | 734 | 734 | |
| | 2411.511 | Structure Excavation Class U | Cu. Yd. | 591 | 591 | |
| | 2411.541 | Reinforcement Bars | Pound | 12327 | 12327 | |
| | 2441.502 | Single Lane By-Pass | By-Pass | One | One | |
| | 2413.511 | Timber Box Culvert 48"X60" | Lin. Foot | 60 | | 60 |
| | 2413.512 | Timber Culv. End Section 48"X60" | Section | 2 | | 2 |
| | 2501.511 | F&I 18" CMP Culverts | Lin. Foot | 416 | 96 | 320 |
| | 2501.511 | F&I 24" CMP Culverts | Lin. Foot | 64 | 32 | 32 |
| | 2501.512 | F&I 18" Span CMP-A Culverts | Lin. Foot | 60 | 28 | 32 |
| | 2501.521 | F&I 24" RCP Culverts Class II | Lin. Foot | 56 | | 56 |
| | 2501.521 | F&I 48"RCP Culverts Class V | Lin. Foot | 148 | | 148 |
| | 2515.531 | F&I 18" Metal Aprons | Apron | 28 | 6 | 22 |
| | 2515.531 | F&I 24" Metal Aprons | Apron | 4 | 2 | 2 |
| | 2515.532 | F&I 18" Span Metal Aprons For CMP-A | Apron | 4 | 2 | 2 |
| | 2515.541 | F&I 24" Concrete Aprons | Apron | 2 | | 2 |
| | 2515.541 | F&I 48" Concrete Aprons | Apron | 2 | | 2 |

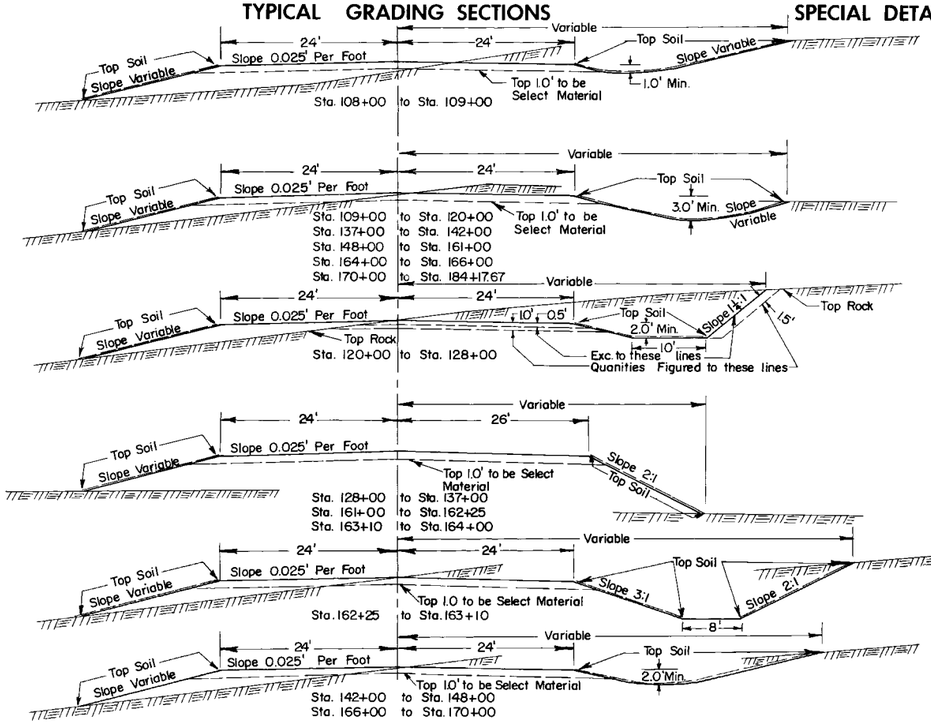
Item No. 2210.527 Includes 135 Cu. Yds. for Approaches and 160 Cu. Yds. TWP Roads.
*For Removing & Resetting Fence.
**For Obliterating Old Road.

## 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

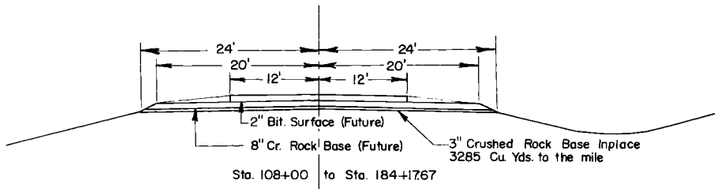
| PLATE NO. | STANDARD DETAIL PLATES |
|---|---|
| 3000C | Reinforced Concrete Pipe |
| 3040 | Corrugated Metal Pipe-Arch |
| 3060 & 3061 | Timber Box Culvert |
| 3100D | |
| 3102C | Concrete Apron for Reinforced Concrete Pipe |
| 3122C | Metal Apron for C.M. Pipe-Arch Culverts |
| 3123C | Metal Apron for C.M. Pipes |
| 9000 | Approaches and Entrances |

## 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 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 "C" Bedding.

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

| TED ROAD DIST NO. | STATE | FEDERAL PROJ NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| | | | | | |

PLAN — SURVEY — PLOTTED — DRAWN — CHECKED — TRACED — CHECKED — NOTE BOOK — NO. — DATE — BY

PROFILE — SURVEY — PLOTTED — GRADES CHECKED — NOTE BOOK — NO. — DATE — BY — STRUCTURE NOTATIONS OKD

Ave — To T.H. #52 — Union — Bennett — Clayton — Street — McKenny — Cliff — Avenue — "A" — (CSAH 10) — "B" — Street — Division — Street — C H A T F I E L D — Division — Avenue — Burr — Oak — Street — Avenue — Street — Avenue — "C" — Street — "D" — COLLEGE — "E" — AVENUE — AVENUE — AVENUE — STREET — "F" — CLAY STREET — COTTAGE STREET

108+67 ℄ Culv
Inpl 18"X68' CMP
1-18" Apron
Remove

109+50 8.60 ℄ Culvs. skewed 45°
Inpl 2-42"X78' CMP
Remove
109+40 Construct C64X100'+45°
Concrete 73.4 Cu.Yds.
Reinforcement Bars 12,327 Lbs
Class U Exc. 59.1 Cu.Yds.
Single Lane By-Pass

109+60 Farm Ent. Lt
Inpl 18"X26' CMP
Remove
F&I 24"X32' CMP
F&I 2-24" Metal Aprons
For CMP

114+33 Farm Ent. Lt.
Inpl 24"X24' CMP
Remove
F&I 24"X32' CMP
F&I 2-24" Metal Aprons
For CMP

Begin S.A.P. 55-610-05
Sta. 108+00

P.C. 108+50.20
Rt 46°02'
5°00'
162.30'
306.89'

P.T. 109+94.79

108+04 Driveway Rt
No Culv Inpl
No Change

109+29 FE Rt
No Culv Inpl
F&I 18" Span X 28' CMP-A
F&I 2-18" Span Metal Aprons
For CMP-A

120+33 FE Rt
No Culv Inpl
F&I 18"X32' CMP
F&I 2-18" Metal Aprons
For CMP

Cl. 86 Gr 69

Ho.
Woods
Chatfield
Shed
City Dump

B.M. Elev. 1034.17'
Spk in PP NW Cr
Int. Union St. & Ave. B

B.M. Elev. 1048.42'
Spk in TP 24' Rt
Sta. 114+46

Profile 75' Lt
Profile 75' Rt

Finished ℄ Grades
Present ℄ Grades

P.I. +50
Elev. 39.05
400' V.C.
M= 1.4'

P.I. +00
Elev. 50.3
600' V.C.
M= 3.75'

Elev. 41.6
Elev. 42.05
Elev. 45.8
Elev. 69.8
-1.3%
+1.5%
+6.5%
P.V.C. +50
P.V.T. +50
P.V.C. +00
P.V.T. +00
Inlet Elev. 33.2
Outlet Elev. 32.5

Subgrade Treatment
Excavate 1.0' Below Profile Grade
Sta. 108+00 to Sta. 123+50

1100 90 80 70 60 50 40 1030

105 110 115 120

BRUNING NO. 5987

STEEL PLAN & PROFILE - 40 FT.
CHARLES BRUNING COMPANY, INC.
MADE IN U.S.A.

State Proj. No. SAP 55-610-05 (CSAH 10) Sheet No. 3 of 23 Sheets

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

125+61 FE Lt
Inpl 15"X24' CMP
Remove
FBl 18"X28' CMP
FBl 2-18" Metal Aprons
For CMP

CHATFIELD CITY LIMITS

AVENUE E

CLAY

PC 121+36.57

PI 125+13.0
Δ Lt 9°47'
D 1°18'
T 376.43'
L 752.56'

Sta 128+00

PT 128+89.13

POT 129+33.24

POT 131+88.72

POT 131+94.37

POT 136+13.97

Barn

144+27 Farm Ent Lt
Inpl 18"X34' CMP
Remove
FBl 18"X32' CMP
FBl 2-18" Metal Aprons
For CMP

148+41 FE Lt
Inpl 15"X24' CMP
Remove
FBl 18"X28' CMP
FBl 2-18" Metal Aprons
For CMP

152+84 FE Lt
No Culv. Inpl
FBl 18"X28' CMP
FBl 2-18" Metal Aprons
For CMP

PI 142+76.88
Rt 43°00'
Δ 4°30'
T 564.37'
D 1078.0

PI 144+76.86
Rt 54°00'
Δ 4°00'
T 360'
D 1350.0

PC 157+82.15

PC 157+46.88

PT 147+45.75

PRC 150+46.30

PT 155+36.88

POT 154+00

122+84 Dump Ent Rt
No Culv. Inpl
FBl 18"X36' CMP
FBl 2-18" Metal Aprons
For CMP

Chatfield City Dump

AVENUE COTTAGE STREET

AVENUE PRAIRIE STREET

130+23 ℄ Culv (old road) skewed
Inpl 24"X 42" CMP
Remove
Move to Sta. 128+00
FBl 24"X56' RCP Class II
FBl 2-24" Concrete Aprons
For SCP
Place Pipe on "C" Bedding
Place Ditch Block

135+03 FE Lt
No Culv. Inpl
No Culv. Req'd

137+91 ℄ Box Culv
Inpl W46 X 55' Conc Box
Remove
138+50 Construct ℄ Culv
FBl 48"X60"X60' Timber Culv
FBl 2-48"X60" End Sections
For Timber Box Culv
Place Ditch Block

144+17 FE Rt
No Culv Inpl
FBl 18"X28' CMP
FBl 2-18" Metal Aprons
For CMP

146+22 FE Rt
Inpl 15"X24' CMP
Remove
FBl 18"X28' CMP
FBl 2-18" Metal Aprons
For CMP

Cl. 99 Gr. 148 Cl. 1.0 Acre Gr. 1.0 Acre

Cl. 48 Gr. 38

BM Elev. 1112.19'
Spk in TP 62' Rt
Sta. 125+66

BM Elev. 1176.12'
X in W. Hdwl C.P.
3' Lt Sta. 137+93

BM Elev. 1258.20'
Spk in PP Lt
Sta. 152+07

Finished ℄ Grades

Present ℄ Grades

Profile 75' Lt

Profile 75' Rt

P.I.+00
Elev. 21.8
400' V.C.
M=0.4'

+6.5%

Elev. 33.2

P.V.T.+00

Elev. 09.8

P.V.C.+00

Inlet Elev. 17.9
Outlet Elev. 17.2

Elev. 56.0

P.I.+00
Elev. 67.4
400' V.C.
M=0.65'

+5.7%

Elev. 61.9

Elev. 68.1

Elev. 74.6

Subgrade Treatment
Excavate 1.0' Below Profile Grade
Sta. 136+50 to Sta. 141+50

P.I.+23.07692
Elev. 18.01538
400' V.C.
M=0.65'

+5.7%

P.V.T.+23.07692

P.V.C.+23.07692

Elev. 04.01538

Elev. 81.4

P.V.T.+00

+10%

Inlet Elev. 79.8
Outlet Elev. 76.8

Elev. 23.41538

Elev. 36.536

P.V.C.+48.0

P.I.+48.0
Elev. 70.736
1200' V.C.
M=15.0'

Subgrade Treatment
Excavate 1.0' Below Profile Grade
Sta. 143+18 to Sta. 157+10

EXC Class A 10851
Class B 46463
Class SG 1907

EMB 50144

Class A 9006
EXC Class B 869
Class SG 1271

EMB 7433

1170 1160 1150 1140 1130 1120 1110 1100 1090 1080

1260 1250 1240 1230 1220 1210 1200 1190 1180

60 50 40 30 20 10 90

125 130 135 140 145 150

PROFILE SURFACED OUTLET GRADE CROSS SECTIONS NOTE BOOK NO. DATE

PLAN SURVEYED PLOTTED BLUEPRINTED AT OF WAY CHANGE NOTE BOOK NO. DATE

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

153+75 FE Rt
Inpl 15"X24' CMP
Remove
FBI 18"X28' CMP
FBI 2-18" Metal Aprons
For CMP

159+00 Construct Twp Rd Approach
FBI 18"X36' CMP
FBI 2-18" Metal Aprons
For CMP

℄ Culv West Approach
Inpl 18"X40' CMP
Remove

℄ Culv CSAH 10
Inpl 18"X51' CMP
Remove

162+25 ℄ Culv
Inpl W44 X 106' Conc Box
Remove
FBI 48"X148' RCP Class V
FBI 2-48" Conc Aprons
For SCP
Place Pipe on "C" Bedding

166+50 FE Lt
Inpl 18"X29' CMP
Remove
FBI 18"X28' CMP
FBI 2-18" Metal Aprons
For CMP

Obliterate Old Road
1.06 Acres
Note: Payment for Obliterating old road to be by equipment hours. (See special provisions)

166+48 Farm Ent Rt
Inpl 15"X24' CMP
Remove
FBI 18" Span X 32' CMP-A
FBI 2-18" Span Metal Aprons
For CMP-A

169+75 FE Rt
Inpl 15"X24' CMP
Remove
No Culv Req'd

184+08 FE Lt
No Culv Inpl
FBI 18"X28' CMP
FBI 2-18" Metal Aprons
For CMP

179+37 FE Rt
Inpl 15"X24' CMP
Remove
FBI 18"X28' CMP
FBI 2-18" Metal Aprons
For CMP

184+09 FE Lt
No Culv Inpl
FBI 18"X28' CMP
FBI 2-18" Metal Aprons
For CMP

End S.A.P. 55-610-05
Sta. 184+17.67

P.C. 153+45.50
P.C. 154+02.80
P.T. 166+29.38
P.T. 167+28.34
P.O.T. 168+16.52
P.O.T. 176+03
P.C. 180+84.67
P.T. 184+17.67
Line Revision
Lt 193.24
Lt 79°12'30"
660.00
790.44
1320.14'
Rt 161+59.16
Lt 89°38'
600.00'
1256.66'
1290.96'
Woods
BORROW AREA
Twp Rd
Cl. 3.43 Acres Gr. 3.43 Acres
Cl. 4 Gr. 4

BM Elev. 1242.65
Spk in PP 52' Rt
Sta. 167+07

BM Elev. 1259.06'
Spk in PP 28' Lt
Sta. 183+45

Pt. +00
Elev. 29.8
700' V.C.
M=6.5625'

Pt. +00
Elev. 45.8
200' V.C.
M=0.225

Pt. +22.85714
Elev. 67.12571
600' V.C.
M=2.625'

Pt. +00
Elev. 59.0
400' V.C.
M=1.2'

Elev. 44.9936
Elev. 44.85
-4.3%
P.V.T. +48.0
P.V.C. +50
Elev. 41.0
Elev. 42.6
+3.2%
P.V.T. +50
P.V.C. +00
Inlet Elev. 12.0
Outlet Elev. 02.6
Profile 75' Lt
Profile 75' Rt
Elev. 48.05556
+2.3%
P.V.T. +93.72'
P.V.C. +22.85714
P.V.T. +22.85714
Elev. 60.22571
Elev. 63.52571
-1.2%
+1.2%
P.V.C. +00
Subgrade Treatment
Excavate 1.0' Below Profile Grade
Sta. 167+00 to Sta. 184+17.67

EXC Class A 16565
Class A Borrow 17302
Class SG 1288
Topsoil 1300
EMB 22235

EXC Class A 12038
Class SG 2205
EMB 8294

EXC Class A 736
Class SG 309
EMB 501

Finished ℄ Grades
Present ℄ Grades
EQUATION

SURVEY
ALIGNMENT CHECKED
RT OF WAY STAKED
PLAN
PROFILE
NOTE BOOK
NO.
DATE
BY

ENGINEERS NO. 5897

SINGLE PLAN & PROFILE DOTTED
CHARLES SOUTHWICK COMPANY, INC.
LAKE IN HILLS

State Proj. No. S.A.P. 55-610-05(CSAH 10) Sheet No. 5 of 23 Sheets