MINNESOTA DEPARTMENT OF TRANSPORTATION

THE COUNTY OF OLMSTED

CONSTRUCTION PLAN FOR GRADING, AGGREGATE BASE AND STORM SEWER

LOCATED ON C.S.A.H. 22 **BETWEEN** C.S.A.H. 9 **AND** 500' NORTH C.S.A.H. 2 **(GEOGRAPHIC DESCRIPTION)**

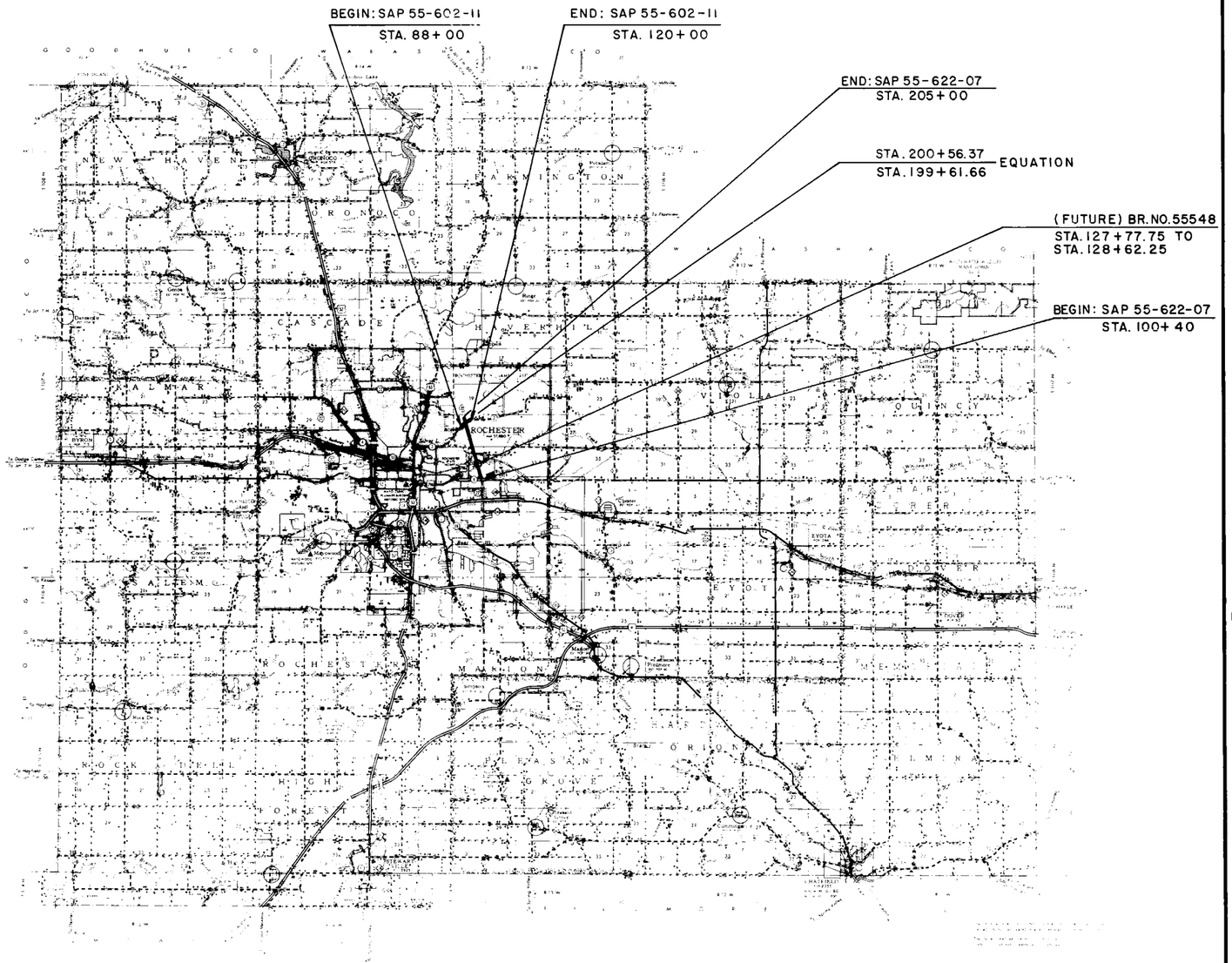
FROM 40'N.OF SE.COR SEC.31 T107N-R13W **TO** APPROX. 539' S. OF N. LINE SEC.30 T.107N.-R.13W. **(LEGAL DESCRIPTION)**

~~**STATE PROJ. NO.**~~ S.A.P. 55-602-11

GROSS LENGTH	3200.00	FEET	0.606	MILES
BRIDGES-LENGTH	0	FEET	0	MILES
EXCEPTIONS-LENGTH	0	FEET	0	MILES
NET LENGTH	3200.00	FEET	0.606	MILES

~~**STATE PROJ. NO.**~~ S.A.P. 55-622-07

GROSS LENGTH	10365.29	FEET	1.963	MILES
BRIDGES-LENGTH	84.50	FEET	0.016	MILES
EXCEPTIONS-LENGTH	0	FEET	0	MILES
NET LENGTH	10280.79	FEET	1.947	MILES



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
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
SLOPE EASEMENT

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

SCALES

PLAN 0 50'
PROFILE 0 50' HOR.
INDEX MAP 0 10560'
CROSS-SECTIONS 0 10'

MINN. PROJ. NO.

THE 1983 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN

INDEX

SHEET NO. 1		TITLE SHEET
"	NO. 2	ESTIMATE OF QUANTITIES
"	NO. 3	TYPICAL SECTIONS
"	NO. 4-15	PLAN AND PROFILE SHEETS
"	NO. 16-60	CROSS SECTIONS

* TRAFFIC PROJECTION YEAR 2000 A.D.T. 13,829 (FROM PROJECT EIS)

APPROVED _____ 19__,
DIRECTOR OF PUBLIC SERVICES, CITY OF ROCHESTER

DESIGN DESIGNATION

R
ADT (Current Year) = *
ADT (Future Year) = *
DHV (Design Hr. Vol.) =
D (Directional Distr.) = %
T (Heavy Commercial) = EST. 10%
SOIL FACTOR 130
10 TON DESIGN

EN18(20)
Design Speed 55 MPH
Based on STOPPING Sight Distance
Height of eye 3.5' Height of object 0.5'
Design Speed not achieved at:
* STA. 101+40.6 TO STA. 105+61 MPH 40
STA. TO STA. MPH
STA. TO STA. MPH
* C.S.A.H. 2

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.

DATE 5/9/86 REG. NO. 13791 ENGR. [signature]
COUNTY Olmsted

Recommended for Approval _____ 5 19__
DISTRICT STATE AID ENGINEER

Recommended for Approval Delbert D. Ottobold 7-11 1986
ACTING STATE AID PLANS AND SPECS ENGINEER

Approved 7-11 1986
for STATE AID ENGINEER

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED
DIVISION ADMINISTRATOR DATE

STATE AID PROJ. NO. SAP 55-622-07 & SAP 55-602-11
~~**STATE PROJ. NO.**~~ **SHEET NO.** 1 **OF** 60 **SHEETS**

ESTIMATED QUANTITIES

	SPECIFICATION NO.	ITEM	UNIT	SAP55-602-11 MUNICIPAL	SAP55-602-11 RURAL	SAP55-622-07 MUNICIPAL	SAP55-622-07 RURAL	TOTAL ESTIMATED QUANTITIES
	2021.501	MOBILIZATION	LUMP SUM	0.062	0.086		0.852	1
	2101.501	CLEARING	ACRE	0.1			8.3	8.4
	2101.502	CLEARING	TREE	7			40	47
	2101.506	GRUBBING	ACRE	0.1			8.3	8.4
	2101.507	GRUBBING	TREE	7			42	49
	2104.501	REMOVE PIPE CULVERT	LIN. FT.	144	327		61	532
(1)	2104.501	REMOVE FENCE	LIN. FT.	700	800		5200	6700
	2105.511	COMMON CHANNEL EXCAVATION (P)	CU. YD.				9034	9034
(2)	2105.515	UNCLASSIFIED EXCAVATION (P)	CU. YD.	7468	19042		410,026	436,536
	2105.535	SALVAGED TOPSOIL (EV) (P)	CU. YD.	839	1743		9722	12304
(3)	2123.503	MOTOR GRADER	HOUR		4			4
(3)	2123.508	15 CU.YD. SCRAPER	HOUR		8			8
(3)	2123.509	DOZER	HOUR		8			8
(4)	2130.501	WATER	M-GAL.	18	20			38
(5)	2211.501	AGGREGATE BASE CLASS 2	TON	3680	3855		20611	28146
	2501.511	18" C.S. PIPE CULVERT	LIN.FT.				282	282
	2501.511	24" C.S. PIPE CULVERT	LIN.FT.				120	120
	2501.511	24" R.C. PIPE CULVERT CL.2	LIN.FT.		76			76
	2501.511	30" R.C. PIPE CULVERT CL.2	LIN.FT.				162	162
	2501.511	36" R.C. PIPE CULVERT CL.3	LIN.FT.		64			64
	2501.511	36" R.C. PIPE CULVERT CL.4	LIN.FT.		102			102
	2501.511	36" R.C. PIPE CULVERT CL.5	LIN.FT.		46			46
	2501.515	18" G.S. PIPE APRONS	EACH				12	12
	2501.515	24" G.S. PIPE APRONS	EACH				6	6
	2501.515	15" R.C. PIPE APRONS	EACH	1				1
	2501.515	18" R.C. PIPE APRONS	EACH		1		3	4
	2501.515	24" R.C. PIPE APRONS	EACH		2			2
	2501.515	30" R.C. PIPE APRONS	EACH	1			2	3
	2501.515	36" R.C. PIPE APRONS	EACH		2			2
	2501.521	22" SPAN R.C. PIPE-ARCH CULV. CL.2A	LIN. FT.				286	286
	2501.521	28" SPAN R.C. PIPE-ARCH CULV. CL.2A	LIN. FT.		84		507	591
	2501.521	51" SPAN R.C. PIPE-ARCH CULV. CL.2A	LIN. FT.				434	434
	2501.525	22" SPAN R.C. PIPE-ARCH APRONS	EACH				12	12
	2501.525	28" SPAN R.C. PIPE-ARCH APRONS	EACH		2		13	15
	2501.525	51" SPAN R.C. PIPE-ARCH APRONS	EACH				6	6
	2503.511	12" R.C. PIPE SEWER CL.4	LIN. FT.	454	61			515
	2503.511	15" R.C. PIPE SEWER CL.4	LIN. FT.	112	50			162
	2503.511	18" R.C. PIPE SEWER CL.4	LIN. FT.		388			388
	2503.511	24" R.C. PIPE SEWER CL.3	LIN. FT.	24				24
	2503.511	27" R.C. PIPE SEWER CL.3	LIN. FT.	61				61
	2503.511	30" R.C. PIPE SEWER CL.3	LIN. FT.	171				171
	0504.602	ADJUST VALVE BOX	EACH	3				3
	0504.603	HYDRANT ADJUSTMENT	LIN. FT.	3				3
	2506.508	CONST. MANHOLE DESIGN "C"	EACH	3	3			6
	2506.508	CONST. MANHOLE DESIGN "F"	EACH	1				1
	2506.509	CONST. CATCH BASIN DESIGN "C"	EACH	8	4		1	13
	2506.522	ADJUST FRAME AND RING CASTING	EACH	1				1
	0506.602	RECONSTRUCT CATCH BASIN	EACH	1				1
	0506.602	CONNECT STORM SEWER INTO EXISTING CATCH BASIN	EACH	1				1
	2511.501	RANDOM RIP RAP CL. III	CU. YD.		13		20	33
	2511.511	GRANULAR FILTER	CU. YD.		7		32	39
	2575.511	ROADSIDE SEEDING	ACRE		3.2		36.2	39.4
(6)	2575.502	SEED MIXTURE 2	POUND		322		3620	3942
(7)	2575.502	SEED MIXTURE 5	POUND		78		532	610
(8)	2575.502	SEED CROWN VETCH	POUND		33		226	259
	2575.505	SODDING	SQ. YD.	6878	6390		19,984	33,252
(9)	2575.511	MULCH MATERIAL TYPE 1	TON		6.4		72.3	78.7
(10)	2575.519	DISC ANCHORING	ACRE		1.55		24.85	26.4
(11)	2575.531	COMMERCIAL FERTILIZER ANALYSIS 12-12-12	TON		0.2		2.3	2.5
(12)	2573.501	BALE CHECK	EACH		45		280	325
	2506..507	CONST. CATCH BASIN DESIGN PC-18	LIN. FT.				28	28
	2501.511	84" R.C. PIPE CULVERT CL.2	LIN. FT.				52	52
	2501.511	78" R.C. PIPE CULVERT CL.2	LIN. FT.				4	4
	2501.511	72" R.C. PIPE CULVERT CL.4	LIN. FT.				100	100
	2507.511	72" R.C. PIPE CULVERT CL.5	LIN. FT.				48	48
	2501.511	72" R.C. PIPE CULVERT 4000 D-LOAD PIPE	LIN. FT.				156	156
	2501.515	84" R.C. PIPE APRONS	EACH				2	2
	2511.501	RANDOM RIP RAP CL IV	CU. YD.				64	64
	2506.506	CONSTRUCT MANHOLE DESIGN 120-4019	LIN. FT.				15	15

(P) PLAN QUANTITY

(1) IN AREAS DESIGNATED BY THE ENGINEER.

(2) UNCLASSIFIED EXCAVATION INCLUDES SUBGRADE TREATMENT AS SHOWN ON PLAN AND PROFILE SHEETS.

(3) EQUIPMENT HOURS ARE FOR OBLITERATING OLD ROAD AT LOCATION NOTED IN THE PLANS.

(4) WATER TO BE USED AS A DUST PREVENTATIVE AS DIRECTED BY THE ENGINEER.

(5) INCLUDES 23,716 TONS FOR MAINLINE, 1916 RADIUS AND TAPERS INTERSECTION CSAH 22 AND CSAH 2, 420 TONS ON RIGHT TURN LANES S.B. LANE CSAH 22, 550 TONS FOR 11 APPROACHES, 630 TONS FOR RADIUS AND TAPERS AT INTERSECTION CSAH 22 AND CSAH 9 AND 914 TONS FOR TWP ROAD LT. AND RT. STA. 141+74.

(6) INCLUDES 1219 LBS. TO BE APPLIED WITH SEED MIXTURE 5, 1300 LBS. TO BE APPLIED WITH CROWN VETCH AND 1423 LBS. TO BE APPLIED IN ALL OTHER AREAS NOT TO HAVE SODDING. APPLICATION RATE 100 LBS. PER ACRE.

(7) APPLICATION RATE 50 LBS. PER ACRE, APPLY TO N.B. LANE CSAH 22, LEFT AND RIGHT STA. 109+28 TO STA. 120+00 AND OBLITERATE OLD ROAD AREA CSAH 2.

(8) APPLICATION RATE 20 LBS. PER ACRE. APPLY TO SIDE SLOPES 2:1 AND STEEPER.

(9) APPLICATION RATE 2 TONS PER ACRE. APPLY TO ALL SEED AREAS.

(10) DISC ANCHORING FIGURED FOR MULCHED AREAS ON 3:1 AND FLATTER SLOPES.

(11) APPLICATION RATE 200 LBS. PER ACRE. APPLY WITH SEED MIXTURE 2 AND SEED MIXTURE 5.

(12) HAY OR STRAW BALES TO BE USED FOR EROSION CONTROL.

SODDING LOCATIONS

DITCH LINER LEFT	MEDIAN	DITCH LINER RIGHT
STA. 152+00 TO STA. 159+00	STA. 142+60 TO STA. 162+00	STA. 151+00 TO STA. 162+00
STA. 177+00 TO STA. 178+00	STA. 171+00 TO STA. 199+30	STA. 180+00 TO STA. 193+00
STA. 182+00 TO STA. 187+00	STA. 201+00 TO STA. 205+00	STA. 88+00 TO STA. 107+00
STA. 191+00 TO STA. 199+30		
STA. 201+00 TO STA. 205+00		
STA. 13+00 TO STA. 19+00		
STA. 88+00 TO STA. 108+80		

670 SQ. YDS. SOD TO BE PLACED AROUND CULVERT APRON AT LOCATION AS NOTED IN PLANS.

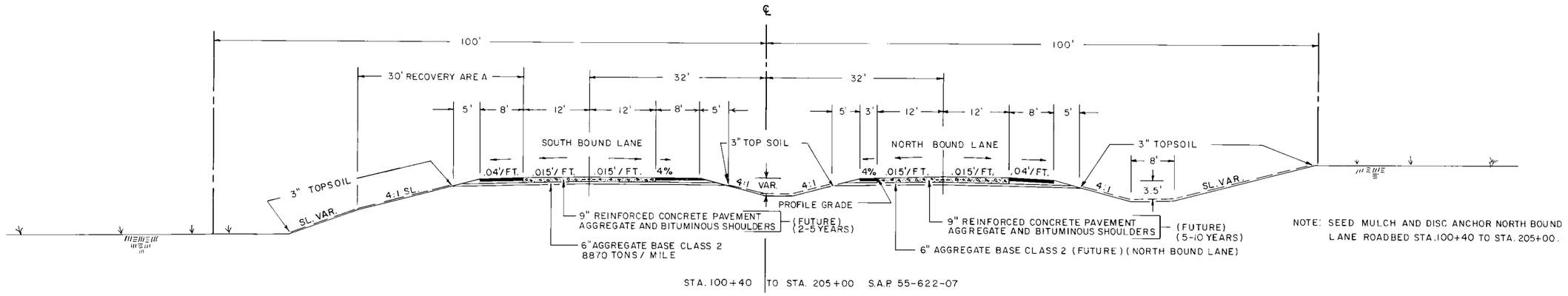
STANDARD PLATES

THE FOLLOWING STANDARD PLATES, APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION, SHALL APPLY ON THIS PROJECT.

PLATE NO.	DESCRIPTION	PLATE NO.	DESCRIPTION
0004 A	SPECIFICATION REFERENCE TO STANDARD PLATES	4014 A	PRECAST CONCRETE MEDIAN DRAIN (WITH ACCESS)
3000 K	REINFORCED CONCRETE PIPE	4101 C	RING CASTING FOR MANHOLE OR CATCH BASIN.
3007 B	SHEAR REINFORCEMENT FOR PRECAST DRAINAGE STRUCTURES	4110 D	COVER CASTING FOR MANHOLE.
3014 J	REINFORCED CONCRETE PIPE-ARCH DETAIL.	4129 F	CATCH BASIN FRAME CASTING
3040 F	CORRUGATED METAL PIPE CULVERT.	4151 B	GRATE CASTING FOR CATCH BASIN.
3100 G	CONCRETE APRON FOR REINFORCED CONCRETE PIPE.	4160 D	CURB BOX CASTING FOR CATCH BASIN.
3110 F	CONCRETE APRON FOR REINFORCED CONCRETE PIPE-ARCH.	4180 H	MANHOLE OR CATCH BASIN STEP
3123 I	METAL APRON FOR C.S. PIPE.	8000 I	STANDARD BARRICADES
3124 B	METAL APRON CONNECTION	9000 B	APPROACHES AND ENTERANCES.
3133 B	RIPRAP AT RCP OUTLETS.	4017 C	CATCH BASIN DESIGN PC
3145 E	CONCRETE PIPE JOINT TIES	3001 B	REINFORCED CONCRETE REDUCER PIPE
3221 C	CORRUGATED STEEL PIPE COUPLING BAND.	4019 E	MANHOLE DESIGN 120-4019 (NO CASTING REQUIRED)
4002 E	MANHOLE OR CATCH BASIN		
4005 K	MANHOLE OR CATCH BASIN		
4010 G	CONC. SHORT CONE & ADJUSTING RING		
4011 D	PRECAST CONCRETE BASE		

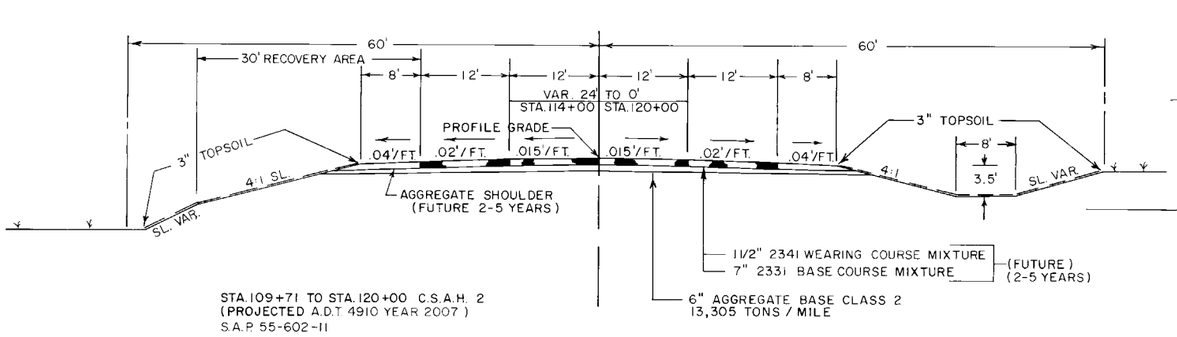
TYPICAL SECTIONS

ALL UTILITY POLES AND UNYIELDING OBJECTS SHALL BE REMOVED AND RELOCATED OUTSIDE THE 42' RECOVERY AREA.

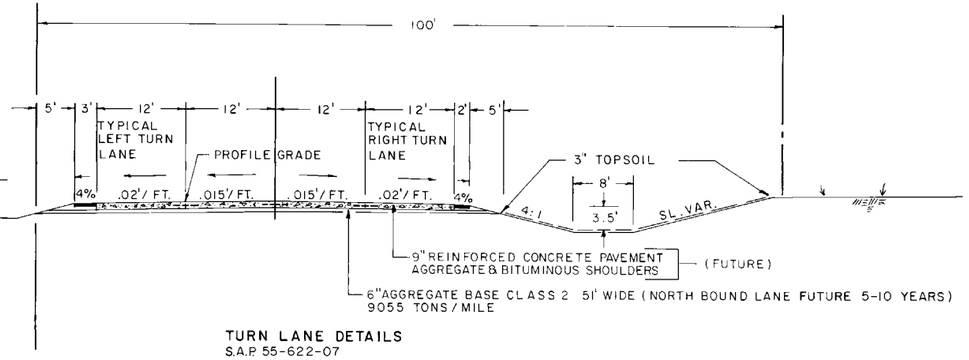


NOTE: SEED MULCH AND DISC ANCHOR NORTH BOUND LANE ROADBED STA.100+40 TO STA. 205+00.

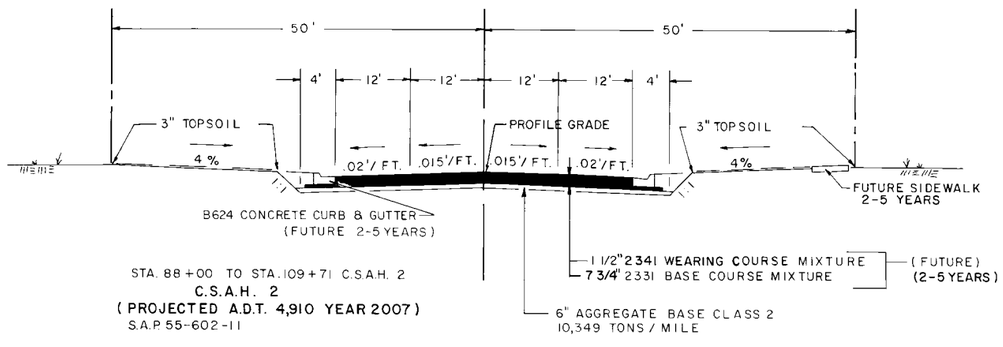
STA. 100+40 TO STA. 205+00 S.A.P. 55-622-07



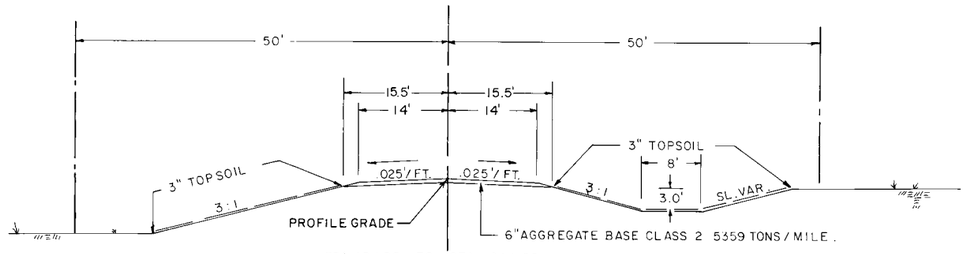
STA.109+71 TO STA.120+00 C.S.A.H. 2
(PROJECTED A.D.T 4910 YEAR 2007)
S.A.P. 55-602-11



TURN LANE DETAILS
S.A.P 55-622-07



STA. 88+00 TO STA.109+71 C.S.A.H. 2
C.S.A.H. 2
(PROJECTED A.D.T. 4,910 YEAR 2007)
S.A.P 55-602-11



STA.12+00 TO STA. 21+00
TOWNSHIP ROAD LT. & RT. STA. 141+74
S.A.P 55-622-07 PROJECTED A.D.T. 80 YEAR 2007

Fed. Proj. No.

END: CONST. C.S.A.H. 9
STA. 45+30

MATCH LINE STA. 48+00

MATCH LINE STA.48+00

CONST. ℄ CULV. EXIT RAMP LT. STA. 101+40
28" SPAN x 42" R.C.PIPE-ARCH CULV. CL. 2A
2-28" SPAN R.C. PIPE-ARCH APRONS
PLACE CULV. ON "B" BEDDING
F. & I. CONC. PIPE JOINT TIES
INLET ELEV. 33.7 OUTLET ELEV. 32.0
PLACE 32 SQ. YDS. SOD AROUND APRON

Δ 90°
D 23°37'32"
T 376.99'
R 240.00'
E 99.41'

℄ E.B.L. C.S.A.H. 9

℄ W.B.L. C.S.A.H. 9

P.C. 93+28.46

MATCH LINE STA. 93+00

FUTURE S.A.P. 55-622-08 1987

FUTURE S.A.P 55-622-08 1987 TO STA. 111+00 N.B. LANE

MATCH LINE STA. 108+00

WOODS

SURVEY ℄

C.B. 22-1

P.O.S.T. 100+20.57

C.B. 22-1
CONST. C.B. DESIGN "C" 2.5' RT.
STA. 100+90
OUTLET ELEV. W. 34.9
PRECAST CONC. MEDIAN DRAIN
(STD. PLATE 4014A) EL. 39.2
(71 LIN. FT. 28" SPAN R.C. PIPE-ARCH CL. 2A & 1-28" SPAN R.C.P.-ARCH OUTLET APRON)
PLACE 40 SQ. YDS. SOD AROUND APRON AND MEDIAN DRAIN.

℄ S.B. LANE 32' LT.
P.I. 107+70.39
LT. 21° 27' 55"
D 0° 45' 11.4"
L 2850.05'
T 1441.93'
R 7607.43'
REMOVE CROWN
165' RUNOFF

SURVEY ℄
P.I. 107+76.45
LT. 21° 27' 55"
D 0° 45' 00"
L 2862.04'
T 1447.99'
E 136.01'

F.E. RT. 96+37
INPL. 18"x 27' C.M.P. W/APRONS
NO CHANGE

BEGIN: SAP 55-622-07
STA. 100+40

END: S.A.P. 55-622-08 1987
STA. 100+40

SEC. 13 T. 107 N. R. 13 W.
SOUTH DAKOTA

B.M. EL. 1038.23
TOP BRASS PLUG
SW. INT. 9 & 22

CL. 2.4 ACRES — GR. 2.4 ACRES

℄ PROFILE
PROFILE 75' LT.
PROFILE 75' RT.

P.I. +00
ELEV. 1041.8
300' V.C.
M = 0.63

P.I. +00
ELEV. 1043.41
200' V.C.
M = 0.095

P.V.T. +50.0 ELEV. 31.64

P.V.C. +50 ELEV. 38.38

P.V.T. +50 ELEV. 42.70

C.B. 22-1 2.5' RT. STA. 100+00
P.V.C. +00
ELEV. 42.79

P.V.T. +00.0
ELEV. 44.41

+2.28 %

+0.6 %

+0.62 %

+1.0 %

20' RIGHT SURVEY ℄ FINISH ELEV.

Copy Equipment Form #2

Fed. Proj. No.

℄ S.B. LANE 32' LEFT SURVEY ℄
P.I. 107 + 70.39
ΔLT. 21° 27' 55"
D - 0° 45' 11.4"
L - 2850.05'
T - 1441.93'
R - 7607.437'
REMOVE CROWN
165' RUNOFF

℄ N.B. LANE 32' RIGHT SURVEY ℄
P.I. 107 + 82.52
ΔLT. 21° 27' 55"
D - 0° 44' 48.7"
L - 2874.03'
T - 1454.06'
R - 7671.437'
REMOVE CROWN
165' RUNOFF

MATCH LINE STA. 108 +00

WOODS

FUTURE CONST. N.B. LANE STA. 100+00 TO 111+00
1987

WOODS

END: S.A.P. 55-622-08 1987
STA. 111+00 N.B. LANE

BEGIN: N.B. LANE CONST. STA. 111+00
S.A.P. 55-622-07

SURVEY ℄
P.I. 107 + 76.45
ΔLT. 21° 27' 55"
D = 0° 45' 00"
L = 2862.04'
T = 1447.99'
E = 136.01'

SURVEY ℄

EQUATION: PT. 121 +78.51 = S.B. LANE
P.O.T. 121 + 90.5

P.T. 121 + 90.49
SURVEY ℄

EQUATION: P.T. 122 +02.49
P.O.T. 121 +90.5
N.B. LANE

BEGIN CONSTRUCTION N.B. LANE
STA. 111 +00

CONST. F.E. RT. STA. 113 +50
18"x44' C.S. PIPE CULV.
2-18" G.S. PIPE APRONS

CONST ℄ CULV. STA. 115+00
30"x162' R.C. PIPE CULV. CL. 2
2-30" R.C. PIPE APRONS
PLACE CULV. ON "B" BEDDING
F.& I. CONC. PIPE JOINT TIES
PLACE 40 SQ. YDS. SOD AROUND APRONS

CL. 1.1 ACRES — GR. 1.1 ACRES

CL. 18 - GR. 18

B.M. EL. 1068.27
SPK. IN WOOD POST
RT. 20' STA. 110+30

B.M. EL. 1047.65
SPK. IN WOOD POST
LT. 25' STA. 115+30

BM. EL. 1042.14
TOP RE-ROD ℄
STA. 121 + 90.49

20' RIGHT SURVEY ℄ FINISHED ELEV.

49.41 50.41 51.41 52.41 53.41 54.34 54.90 55.05 54.79 54.12 53.04 51.55 49.64 47.33 44.39 41.32

P.V.C. +42.5
ELEV. 53.835

(+55 M.P.H.)
P.I. +42.50
ELEV. 1058.8350
1000' V.C.
M = 5.125

STA. 121 + 98.0 = EQUATION
STA. 121 + 90.50

P.V.T. +35.0
ELEV. 43.335

+1.0%

-3.1%

℄ PROFILE
PROFILE 75' LT.
PROFILE 75' RT.

INLET ELEV. 48.6

OUTLET ELEV. 42.6

SUBGRADE TREATMENT:
EXCAVATE 1.0 BELOW SUBGRADE ELEV.
FROM STA. 101+20 TO STA. 113+00 AND
FROM STA. 119+00 TO STA. 27 + 72.

80.4 76.4 68.2 57.6 51.5 48.8 47.7 46.6 46.4 46.5 46.1 46.6 48.4 45.7 41.6 37.6

1100 1090 1080 1070 1060 1050 1040 1030 1020 1010

108 110 115 120 123

~~State Proj. No.~~ S.A.P. 55-622-07 OLMSTED COUNTY C.S.A.H. 22 **Sheet No.** 5 **of** 60 **Sheets**

Copy Equipment Form #3

Fed. Proj. No.

BR. NO. 55548 STA. 127+77.75 TO STA. 128+62.25 S.B. LANE
TO BE CONSTRUCTED BY OTHERS

CONSTRUCT F.E. RT. STA. 124 +00
24"x 40' C.S. PIPE CULV.
2- 24"G.S. PIPE APRONS

CONST. ℄ CULV. STA. 134+35
51"SPAN x 142' R.C. PIPE- ARCH CL. 2A
2-51"SPAN R.C. PIPE- ARCH APRONS
PLACE CULV. ON "B" BEDDING.
F. & I. CONC. PIPE JOINT TIES
PLACE 60 SQ. YDS. SOD AROUND APRONS.
CONST. 2 CATCH BASIN DESIGN PC-18"x10'
ANGLE 11°30'
2-18" R.C. PIPE INLET APRONS
SEE PLAN SHEET NO. 27 FOR ELEV. & DETAILS

CONSTRUCT F.E. RT. STA. 136 +00
18"x 44' C.S. PIPE CULV.
2-18" G.S. PIPE APRONS

CL. 1.0 ACRE — GR. 1.0 ACRE — CL. 8 — GR. 8

B.M. EL. 1024.11
SPK. IN P.P. RT.
30' STA. 129+55

(+55 M.P.H.)
P.I. +00
ELEV. 1028.92
400' V.C.
M= 1.4

(+55 M.P.H.)
P.I. + 50.0
ELEV. 1026.57
400' V.C.
M = 0.95

SUBGRADE TREATMENT:
EXCAVATE 1.0' BELOW SUBGRADE ELEV.
FROM STA. 128+90 TO STA. 129+16

INLET ELEV. 21.0
OUTLET ELEV. 20.3

℄ PROFILE
PROFILE 75' LT.
PROFILE 75' RT.

Fed. Proj. No.

CONST. TWP. ROAD LT. & RT. STA. 142+02
SEE PLAN SHEETS NO. 15 & 53

TWP. ROAD
P.I. 14+00
ΔLT. 8°00'
D-4°00'
T-100.16'
L-200.00'
E-3.5'
R-1432.39'
0.029'/FOOT RATE OF SUPER
140' LENGTH OF RUNOFF
P.C. 12+99.84
P.T. 14+99.84

D.N.R. SHED

P.O.T. 141+74.14

SILVER CREEK RD.

P.T. 14+99.84

P.C. 16+88.97

TWP. ROAD
P.I. 17+90.0
ΔRT. 20° ±
D-10°
T-101.03'
L-200.00'
E-8.84'
R-572.96'
0.048'/FOOT RATE OF SUPER
230' LENGTH OF RUNOFF

CONST. ℄ CULV. STA. 142+39
51" SPAN x 146' R.C. PIPE ARCH CL. 2A
2-51" SPAN R.C. PIPE-ARCH APRONS
PLACE CULV. ON "B" BEDDING.
F. & I. CONC. PIPE JOINT TIES
SKEW CULV. 14°
PLACE 60 SQ. YDS. SOD AROUND APRONS

CONST. ℄ CULV. STA. 142+48
51" SPAN x 146' R.C. PIPE-ARCH CL. 2A
2-51" SPAN R.C. PIPE-ARCH APRONS
PLACE CULV. ON "B" BEDDING
F. & I. CONC. PIPE JOINT TIES
SKEW CULV. 14°
PLACE 60 SQ. YDS. SOD AROUND APRONS
CONST. CATCH BASIN DESIGN P.C. 18"x8' ANGLE 18°
1-18" R.C. PIPE INLET APRON
SEE PLAN SHEET NO. 29 FOR ELEV. & DETAILS.

SURVEY ℄

P.O.T. 151+95.82

MATCH LINE STA. 152+00

CONST. ℄ CULV. STA. 151+75 N.B. LANE
22" SPAN x 48' R.C. PIPE CL. 2A
2-22" SPAN R.C. PIPE-ARCH APRONS
PLACE CULV. ON "B" BEDDING
F. & I. CONC. PIPE JOINT TIES
CONST. DITCH BLOCK AT INLET
PLACE 22 SQ. YDS. SOD AROUND APRONS

CL. 11 — GR. 13

B.M. EL. 1036.15
SPK. IN T.P. LT.
25' STA. 141+60

B.M. EL. 1101.09
TOP 1" SQ. ROD ℄
STA. 151+95.82

℄ PROFILE
PROFILE 75' LT.
PROFILE 75' RT.

(+55 M.P.H.)
P.I. +00
ELEV. 1041.77
500' V.C.
M = 2.125

P.V.C. +50.0 ELEV. 37.77
P.V.T. +50.0 ELEV.

+1.6%
+5.0%

INLET ELEV. 34.0
OUTLET ELEV. 33.2

INLET ELEV. 77.8
OUTLET ELEV. 77.1

SURGRADE TREATMENT:
EXCAVATE 1.0' BELOW SUBGRADE ELEV.
FROM STA. 141+00 TO STA. 142+50

20' RIGHT SURVEY ℄ FINISHED ELEV.

32.17 33.77 35.37 36.97 38.66 40.94 43.89 47.54 51.86 54.27 56.77 61.77 66.77 71.77 76.77 81.77 86.77

26.0 27.3 30.5 32.9 34.0 36.0 35.7 36.6 35.8 35.6 36.1 37.5 39.6 41.1 43.4 46.6 53.5 58.1 72.1 97.4 01.0

+50 +62 +85 +25 +43 +75

138 140 145 150 152

1100 1090 1080 1070 1060 1050 1040 1030 1020 1010

Copy Equipment Form #1

State Proj. No. S.A.P. 55-622-07 OLMSTED COUNTY C.S.A.H. 22 Sheet No. 7 of 60 Sheets

Fed. Proj. No.

CONST. APPROACH LT. STA. 162+00
18"x44' C.S. PIPE CULV.
2-18" G.S. PIPE APRONS

MATCH LINE STA. 152+00

SURVEY ℄

P.C. 154+87.91

P.I. 156+48.77
ΔRT. 9° 00' 11"
D = 1° 15' 00"
T = 360.86'
L = 720.24'
E = 14.18'
RATE OF SUPER 0.027'/FT.
165' RUNOFF

P.O.T. 160+08.15
S.B. LANE P.T. 160+13.18+

CONST. ℄ CULV. STA. 159+00
28"SPAN x 130' R.C.PIPE-ARCH CULV. CL. 2A
2-28" SPAN R.C.PIPE-ARCH APRONS
PLACE CULV. ON "B" BEDDING
F.&I. CONC. PIPE JOINT TIES.
CONST. DITCH BLOCK AT INLET.
PLACE 32 SQ. YDS. SOD AROUND APRONS

P.T. 160+08.15 SURVEY ℄

P.O.T. 160+08.15
N.B. LANE P.T. 160+03.13+

CONST. APPROACH RT. STA. 162+00
18"x44' C.S. PIPE CULV.
2-18" G.S. PIPE APRONS

FUTURE STREET

P.O.T. 164+65.90

CONST. ℄ CULV. STA. 162+75
22"SPAN x 50' R.C.PIPE-ARCH CULV. CL. 2A
2-22" SPAN R.C.PIPE-ARCH APRONS
PLACE CULV. ON "B" BEDDING
F.&I. CONC. PIPE JOINT TIES
PLACE 22 SQ. YDS. SOD AROUND APRONS

CL. 2 — GR. 2

B.M. EL. 1102.69
TOP I" SQ. ROD P.I.
℄ STA. 156+48.77

B.M. EL. 1131.67
TOP RE-ROD P.O.T.
℄ STA. 164+65.90

20' RIGHT SURVEY ℄ FINISHED ELEV.

℄ PROFILE
PROFILE 75' LT.
PROFILE 75' RT.

ELEV. 91.52

P.V.C. +95.0

+5.0%

(+55 M.P.H.)
P.I. +00
ELEV. 1016.77
1010' V.C.
M = 5.17625

STA. 160+05.10 = STA. 160+08.15 EQUATION

INLET ELEV. 06.6
OUTLET ELEV. 06.1

INLET ELEV. 16.4
OUTLET ELEV. 15.4

ELEV. 21.29626

P.V.T. +08.14

+0.9%

SUBGRADE TREATMENT:
EXCAVATE 1.0' BELOW SUBGRADE ELEV.
FROM STA. 150+50 TO STA. 170+15

UNCLASSIFIED EXC.	267,716	EMB.	251,763
SALVAGED TOPSOIL (EV.)	6,714		
COMMON CHANNEL EXC.	9,034		

Conv. Equipment Form #2

~~State Proj. No.~~ S.A.P. 55-622-07 OLMSTED COUNTY C.S.A.H. 22 **Sheet No.** 8 **of** 60 **Sheets**

Fed. Proj. No.

CONST. ℄ CULV. STA. 174+06 SKEW 15°
84"x52" R.C. PIPE CL. 2 (INCLUDES 84" TO 78" x 4' REDUCER
78"x4' R.C. PIPE (78" TO 72" REDUCER)
72"x100' R.C. PIPE CL. 4
72"x48' R.C. PIPE CL. 5
72"x156' R.C. PIPE 4000 D-LOAD PIPE
2-84" R.C. PIPE APRONS
F. & I. CONC. PIPE JOINT TIES
PLACE CULV. ON "B" BEDDING
20 CU. YDS. RANDOM RIP RAP CL. III 24" THICK AROUND INLET APRON
64 CU. YDS. RANDOM RIP RAP CL. V 24" THICK AT OUTLET APRON
32 CU. YDS. GRANULAR FILTER 12" THICK AT OUTLET APRON
CONST. M.H. NO. 22-1 DESIGN 120-4019
175' LT. STA. 173+57.8 15.0 LIN. FT.
CASTING OR HOLE IN COVER NOT REQ'D.
SEE PLAN SHEET 38 FOR DETAIL DRAWING

CONST. APPROACH LT. STA. 180+00
18"x 62' C.S. PIPE CULV.
2-18" G.S. PIPE APRONS

CONST. ℄ CULV. STA. 171+00 N.B. LANE
28"SPAN x 58' R.C. PIPE-ARCH CULV. CL. 2A
2-28"SPAN R.C. PIPE-ARCH APRONS
PLACE CULV. ON "B" BEDDING
F. & I. CONC. PIPE JOINT TIES
CONST. DITCH BLOCK AT INLET
PLACE 32 SQ. YDS. SOD AROUND APRONS

CONST. APPROACH RT. STA. 180+00
24"x 40' C.S. PIPE CULV.
2-24" G.S. PIPE APRONS

CONST. ℄ CULV. STA. 180+80
22"SPAN x 48' R.C. PIPE-ARCH CULV. CL. 2A
2-22"SPAN R.C. PIPE-ARCH APRONS
PLACE CULV. ON "B" BEDDING
F. & I. CONC. PIPE JOINT TIES
PLACE 22 SQ. YDS. SOD AROUND APRONS

CL. 3.28 ACRES - GR. 3.28 ACRES

B.M. EL. 1126.43
TOP RE-ROD P.O.T.
℄ STA. 169+44.59

B.M. EL. 1092.95
TOP RE-ROD P.O.T.
℄ STA. 173+64.33

B.M. EL. 1135.06
TOP RE-ROD P.O.T.
℄ STA. 177+03.61

INLET ELEV. 23.9
OUTLET ELEV. 20.5

P.V.C. +50.0
ELEV. 27.99

P.I. +00
ELEV. 1131.14
700' V.C.
M = 4.4625

INLET ELEV. 88.
OUTLET ELEV. 84.60

INLET ELEV. 77.7
OUTLET ELEV. 77.55

P.V.T. +50.0
ELEV. 52.14

INLET EL. 63.2
OUTLET EL. 61.3

℄ PROFILE
PROFILE 75' LT.
PROFILE 75' RT.

SUBGRADE TREATMENT:
EXCAVATE 1.0' BELOW SUBGRADE ELEV.
STA. 177+10 TO STA. 177+90.

UNCLASSIFIED EXC.	75,042
SALVAGED TOPSOIL (EV)	1,218
E.M.B.	57,594

~~State Proj. No.~~ S.A.P. 55-622-07 OLMSTED COUNTY C.S.A.H. 22 **Sheet No. 9 of 60 Sheets**

Copy Equipment Form #2

Fed. Proj. No.

CONST. APPROACH LT. STA. 191+50
24"x40' C.S. PIPE CULV.
2-24" G.S. PIPE APRONS

CONST. APPROACH RT. STA. 191+50
18"x44' C.S. PIPE CULV.
2-18" G.S. PIPE APRON

CONST. ℄ CULV. STA. 192+30 N.B. LANE
22"SPANx48'R.C. PIPE-ARCH CULV. CL. 2A
2-22" SPAN R.C. PIPE-ARCH APRONS
PLACE CULV. ON "B" BEDDING
F.&I. CONC. PIPE JOINT TIES
PLACE 22 SQ.YDS. SOD AROUND APRONS

P.I. 190+94.38
ΔRT. 12° 30' 00"
D = 1° 45' 00"
T = 358.57'
L = 714.29'
E = 19.58'
RATE OF SUPER 0.035'/FT.
185' RUNOFF

B.M. EL. 1223.41
TOP RE-ROD P.O.T.
℄ STA. 185+05.32

B.M. EL. 1025.14
TOP CAP P.I. ℄
STA. 190+94.38

(+55 M.P.H.)
P.I. +17.65556
ELEV. 1222.19933
1330' V.C.
M = 8.9775

P.V.C. +52.65556
ELEV. 82.29930

P.V.T. +86.93556
ELEV. 26.18933

STA. 194+45.73= EQUATION
STA. 194+50.01

INLET ELEV. 16.0
OUTLET ELE. 14.2

℄ PROFILE
PROFILE 75' LT.
PROFILE 75' RT.

SUBGRADE TREATMENT:
EXCAVATE 1.0' BELOW SUBGRADE ELEV.
FROM STA. 180+50 TO STA. 194+80

UNCLASSIFIED EXC	76,502	EMB. 58,420
SALVAGED TOPSOIL (EV.)	2,675	

CL. 1 GR. 1 — CL. 0.5 ACRE — GR. 0.5 ACRE

20' RIGHT SURVEY ℄ FINISHED ELEV.

Carv Equipment Form #2

~~State Proj. No.~~ S.A.P. 55-622-07 OLMSTED COUNTY C.S.A.H. 22 **Sheet No.** 10 **of** 60 **Sheets**

Fed. Proj. No.

CONST. ℄ CULV. ENT. RAMP LT. STA. 198+30
28"SPAN x 54" R.C.P. ARCH CULV. CL. 2A
2-28"SPAN R.C.P.-ARCH APRONS
PLACE CULV. ON "B" BEDDING
F.&I. CONC. PIPE JOINT TIES
INLET EL. 21.0 OUTLET EL. 18.4
PLACE 32 SQ. YDS. SOD AROUND APRONS.

Δ74° 22' 13"
R-213.18'
T-161.72'
L-276.71'
E-54.40'

CONST. ℄ CULV. EXIT RAMP LT. STA. 201+40
22"SPAN x 44" R.C.P.-ARCH CULV. CL. 2A
2-22"SPAN R.C.P.-ARCH APRONS
PLACE CULV. ON "B" BEDDING
F.&I. CONC. PIPE JOINT TIES
INLET EL. 23.0 OUTLET EL. 22.7
PLACE 22 SQ. YDS. SOD AROUND APRONS

CONST. ℄ CULV. CSAH 2 STA. 108+45
28"SPAN x 84" R.C.P.-ARCH CULV. CL. 2A
2-28"SPAN R.C.P.-ARCH APRONS
PLACE CULV. ON "B" BEDDING
F.&I. CONC. PIPE JOINT TIES
INLET EL. 22.4 OUTL EL. 22.1
SKEW CULV. 8°
PLACE 32 SQ. YDS. SOD AROUND APRONS

CULV. INPL. LT. STA. 201+00
INPL. 18"x 56' C.M.P. & 2-18"APRONS
REMOVE 61 LIN. FEET

Δ90° 21' 47"
R 213.18'
T 214.53'
L 336.21'
E 89.26'

P.O.T. C.S.A.H. 2 109+27.47

END: S.A.P. 55-622-04
STA. 179+24.87

END: SAP 55-622-07
STA. 205+00

WOODS

SURVEY ℄ 198 C.S.A.H. 22 199 201 202 203 204 205 C.S.A.H. 22 173

C.S.A.H. 2

82°00' 13"

160'

Δ74° 23' 13"
R-213.18'
T-161.72'
L-276.71'
E-54.40'

EQUATION: P.O.T. 199 +61.66 SOUTH STA.
P.O.T. 200 +56.37 NORTH STA.

P.C. 111+39.58

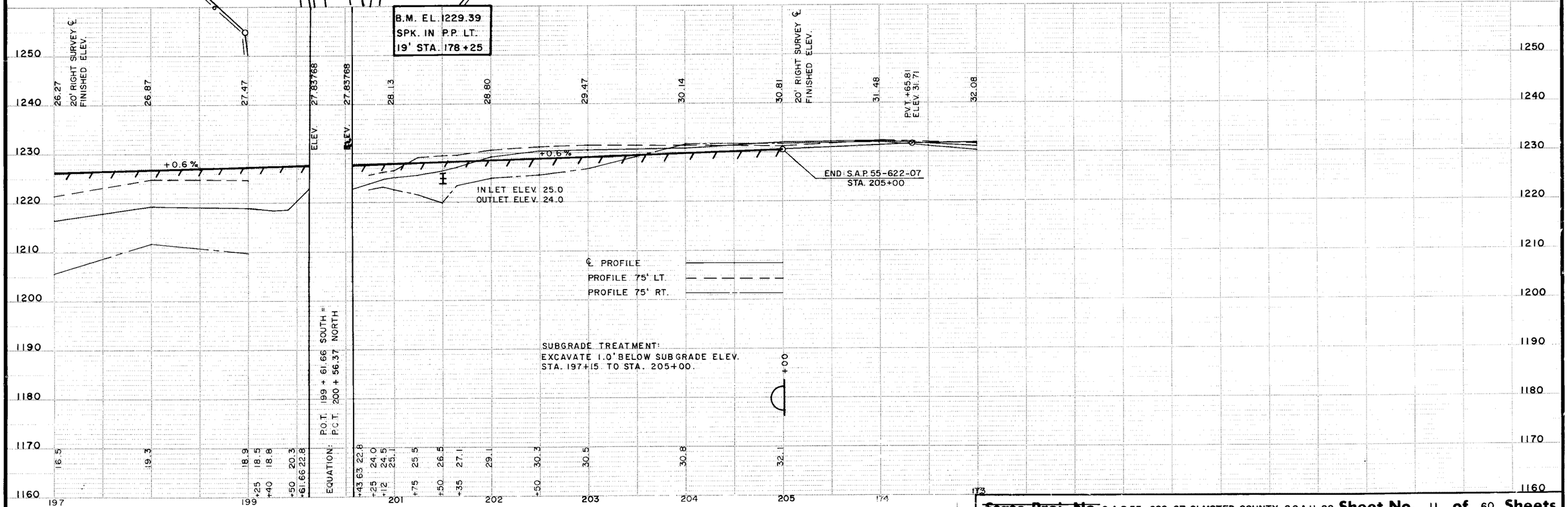
CONST. ℄ CULV. EXIT RAMP RT. STA. 199+00
28"SPAN x 76' R.C.P.-ARCH CULV. CL. 2A
2-28"SPAN R.C.PIPE-ARCH APRONS
PLACE CULV. ON "B" BEDDING
F.&I. CONC. PIPE JOINT TIES
INLET EL. 23.0 OUTLET EL. 04.5
PLACE 32 SQ. YDS. SOD AROUND APRONS

Δ90° 21' 47"
R-213.18'
T-214.53'
L-336.21'
E-89.26'

CONST. ℄ CULV. STA. 201+50 N.B. LANE
22"SPAN x 48" R.C.P.-ARCH CULV. CL. 2A
2-22"SPAN R.C. PIPE-ARCH APRONS
PLACE CULV. ON "B" BEDDING
F.&I. CONC. PIPE JOINT TIES
PLACE 22 SQ. YDS. SOD AROUND APRONS

CONST. ℄ CULV. ENT. RAMP RT. STA. 201+75
28"SPAN x 76' R.C.P.-ARCH CULV. CL. 2A
2-28"SPAN R.C.PIPE-ARCH APRONS
PLACE CULV. ON "B" BEDDING
F.&I. CONC. PIPE JOINT TIES
INLET EL. 23.0 OUTLET EL. 13.0
PLACE 32 SQ. YDS. SOD AROUND APRONS

B.M. EL. 1229.39
SPK. IN P.P. LT.
19' STA. 178+25



Copy Equipment Form #2

~~State Proj. No.~~ S.A.P. 55-622-07 OLMSTED COUNTY C.S.A.H. 22 **Sheet No.** 11 **of** 60 **Sheets**

C.B. 31 (INPL. C.B.)
REMOVE 24"x22'R.C.P.& APRON
FIELD CONNECT 24" R.C.P.
EL. 15.87
(24 LIN. FT. 24" R.C.PIPE CL.3)

℄ CULV. 88+21
INPL. 18"x 66'CMP
APRON ON INLET
NO CHANGE

NEW STREET LT. 89+66
NO CHANGE

C.B. 32
CONST. C.B. DESIGN "C" 33' LT. STA. 89+23
GRATE EL. 18.94 OUTLET EL. SO. 14.49
INLET EL. NO. 14.74 GR. FRAM NO 802 A
GRATE NO. 811 CURB BOX NO. 823 A
(53 LIN. FT. 27" R.C.PIPE CL. 3)

C.B. 33
CONST. C.B. DESIGN "C" 33' RT. STA. 89+50
GRATE EL. 18.50 INLET EL. N. 13.98
OUTLET EL. S. 13.88 GR. FRAM NO. 802 A
GRATE NO. 811 CURB BOX NO. 823 A
(8 LIN. FT. 27" R.C.PIPE CL. 3)

CB. INPL. 47' LT. STA. 89+91
REMOVE 15"x19'R.C.PIPE & APRON
RECONST. CATCH BASIN.

F.E. LT. 91+53
INPL. 15"x 22'CMP
REMOVE
NO ENT. REQ'D.

C.B. 35
CONST. C.B. DESIGN "C" 25' LT. STA. 90+12
GRATE EL. 19.05 OUTLET EL. S. 15.05
GRATE FRAM NO. 802 A GRATE NO. 811
CURB BOX NO. 823 A
(50 LIN. FT. 12" R.C.PIPE CL.4)

C.B. 34
CONST. C.B. DESIGN. "C" 25' RT. STA. 90+12
GRATE EL. 18.71 INLET EL. N. 14.57
OUTLET EL. S. 14.47 GRATE FRAM NO. 802 A
GRATE NO. 811 CURB BOX NO. 823 A
(8 LIN. FT. 12" R.C.PIPE CL.4)

F.E. LT. 93+94
NO CULV. INPL.
REMOVE
NO ENT. REQ'D.

C.B. 36
CONST. C.B. DESIGN "C" 25' LT. STA. 93+00
GRATE EL. 19.80 OUTLET EL. S. 16.30
GRATE FRAM NO. 802 A GRATE NO. 811
CURB BOX NO. 823 A
(50 LIN. FT. 12" R.C.PIPE CL.4)

C.B. 37
CONST. C. B. DESIGN "C" 25' RT. STA. 93+00
GRATE EL. 19.80 INLET EL. N. 16.15
OUTLET EL. S. 16.05 GRATE NO. 811
GRATE FRAM NO. 802 A CURB BOX 823 A
(8 LIN. FT. 12" R.C. PIPE CL.4)

C.B. 38
CONST. C.B. 25' LT. STA. 96+00
GRATE EL. 21.88 OUTLET EL. S. 18.38
GRATE FRAM NO. 802 A GRATE NO. 811
CURB BOX NO. 823 A
(50 LIN. FT. 12" R.C.PIPE CL.4)

C.B. 39
CONST. C.B. 25' RT. STA. 96+00
GRATE EL. 21.88 INLET EL. N. 17.90
OUTLET EL. S. 17.80 GRATE NO. 811
GRATE FRAM NO. 802 A CURB BOX NO. 823 A
(50 LIN. FT. 15" R.C.P. CL.4 & 1-15" R.C. PIPE
OUTLET APRON)

WATER GATE VALVE 46' LT. STA. 93+62
ADJUST GATE VALVE −1.0'

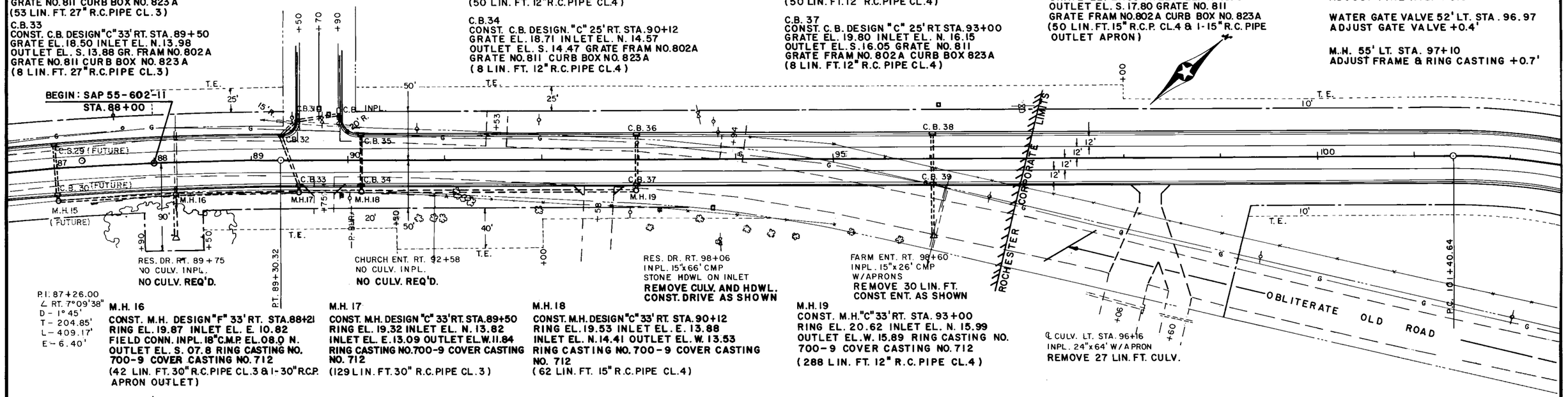
M.H. 51' RT. STA. 93+75
ADJUST FRAME & RING CASTING +1.0'

WATER GATE VALVE 51' LT. STA. 96+94
ADJUST GATE VALVE +0.6'

FIRE HYD. 48' LT. STA. 96+44
ADJUST FIRE HYD. +3.0'

WATER GATE VALVE 52' LT. STA. 96.97
ADJUST GATE VALVE +0.4'

M.H. 55' LT. STA. 97+10
ADJUST FRAME & RING CASTING +0.7'



P.I. 87+26.00
∠ RT. 7°09'38"
D − 1°45'
T − 204.85'
L − 409.17'
E − 6.40'

M.H. 16
CONST. M.H. DESIGN "F" 33' RT. STA. 88+21
RING EL. 19.87 INLET EL. E. 10.82
FIELD CONN. INPL. 18" C.M.P. EL. 08.0 N.
OUTLET EL. S. 07.8 RING CASTING NO. 700-9 COVER CASTING NO. 712
(42 LIN. FT. 30" R.C.PIPE CL.3 & 1-30" R.C.P. APRON OUTLET)

M.H. 17
CONST. M.H. DESIGN "C" 33' RT. STA. 89+50
RING EL. 19.32 INLET EL. N. 13.82
INLET EL. E. 13.09 OUTLET EL. W. 11.84
RING CASTING NO. 700-9 COVER CASTING NO. 712
(129 LIN. FT. 30" R.C.PIPE CL. 3)

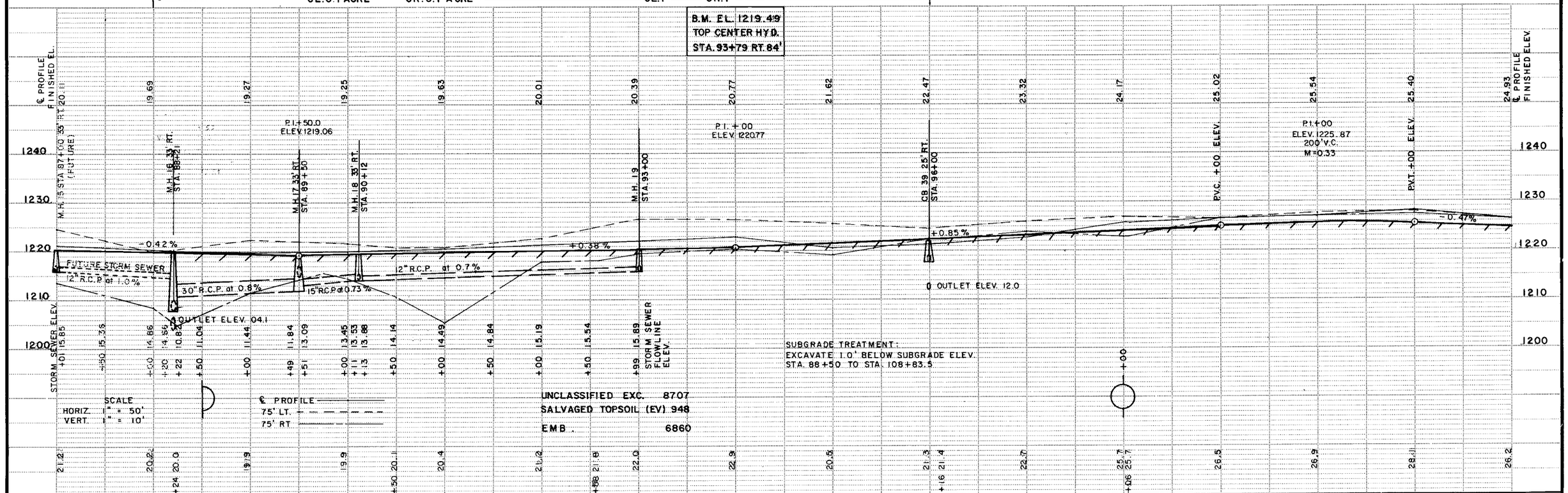
M.H. 18
CONST. M.H. DESIGN "C" 33' RT. STA. 90+12
RING EL. 19.53 INLET EL. E. 13.88
INLET EL. N. 14.41 OUTLET EL. W. 13.53
RING CASTING NO. 700-9 COVER CASTING NO. 712
(62 LIN. FT. 15" R.C.PIPE CL.4)

M.H. 19
CONST. M.H. "C" 33' RT. STA. 93+00
RING EL. 20.62 INLET EL. N. 15.99
OUTLET EL. W. 15.89 RING CASTING NO. 700-9 COVER CASTING NO. 712
(288 LIN. FT. 12" R.C.PIPE CL.4)

P.T. 89+30.32

CL. 0.1 ACRE — GR. 0.1 ACRE — CL. 7 — GR. 7

B.M. EL. 1219.49
TOP CENTER HYD.
STA. 93+79 RT. 84'



SCALE
HORIZ. 1" = 50'
VERT. 1" = 10'

℄ PROFILE
75' LT.
75' RT.

SUBGRADE TREATMENT:
EXCAVATE 1.0' BELOW SUBGRADE ELEV.
STA. 88+50 TO STA. 108+83.5

UNCLASSIFIED EXC.	8707
SALVAGED TOPSOIL (EV)	948
EMB.	6860

Fed. Proj. No.

F.E. LT. 105 +50
INPL. 12"x 22' C.M.P.
REMOVE
NO ENT. REQ'D.

C.B. 40
CONST. C.B. DESIGN "C" 25' LT. STA. 103+00
GRATE EL. 24.29 OUTLET EL. S. 20.79
GRATE NO. 811 GRATE FRAME NO. 802A
CURB BOX NO. 823A
(50 LIN. FT. 15" R.C. PIPE CL. 4)

C.B. 42
CONST. C.B. DESIGN "C" 25' LT. STA. 106+00
GRATE EL. 25.75 OUTLET EL. S. 20.25
GRATE NO. 811 GRATE FRAME NO. 802A
CURB BOX NO. 823A
(53 LIN. FT. 12" R.C. PIPE CL. 4)

C.B. 43
CONST. C.B. DESIGN "C" 27.8' RT. STA. 106+00
GRATE EL. 25.52 INLET EL. N. 19.77
OUTLET EL. S. 19.67 CURB BOX NO. 823A
GRATE NO. 811 GRATE FRAME NO. 823A
(8 LIN. FT. 12" R.C.P. CL. 4)

F.E. LT. 109 +21
INPL. 15"x 34' C.M.P.
REMOVE
NO ENT. REQ'D.

℄ CULV. 111 + 84
INPL. 24"x 84' C.M.P.
APRON ON INLET
REMOVE 87 LIN. FT.
36"x64' R.C. PIPE CULV. CL.3
36"x102' R.C. PIPE CULV. CL.4
36"x46' R.C. PIPE CULV. CL.5
2-36" R.C. PIPE APRONS
PLACE CULV. ON "B" BEDDING
13 CU. YDS. RANDOM RIPRAP CL. III 18" DEPTH AND
7 CU. YDS. GRANULAR FILTER 9" DEPTH AT
OUTLET APRON.
24 SQ. YDS. SOD AROUND INLET APRON.
SKEW CULV. 30°

C.B. 41
CONST. C.B. DESIGN "C" 25' RT. STA. 103+00
GRATE EL. 23.87 INLET EL. N. 20.55
OUTLET EL. S. 20.3 GRATE NO. 811
GRATE FRAME NO. 802 A CURB BOX NO. 823 A
(8 LIN. FT. 18" R.C. PIPE CL. 4)

OBLITERATE OLD ROAD

EQUATION P.T. 106+90.98 = P.O.T. 103+72.93

M.H. 20
CONST. M.H. DESIGN "C" 33'
RT. STA. 103+00
RING EL. 24.69 INLET EL.
N. 20.28 OUTLET EL. E. 20.23
RING CASTING NO. 700-9
COVER CASTING NO. 712
(138 LIN. FT. 18" R.C. PIPE
CL. 4)

M.H. 21
CONST. M.H. 33' RT. STA. 104+50
RING EL. 25.57 INLET EL. W. 19.82
OUTLET EL. E. 19.77
RING CASTING NO 700-9
COVER CASTING NO. 712
(138 LIN. FT. 18" R.C. PIPE CL. 4)

M.H. 22
CONST. M.H. DESIGN "C" 35.8' RT. STA. 106+00
RING EL. 26.34 INLET EL. N. 19.61
OUTLET EL. E. 19.26 RING CASTING NO. 700-9
COVER CASTING NO. 712 INLET EL. W. 19.36
(104 LIN. FT. 18" R.C.P. CL. 4 & 1-18" R.C. PIPE
OUTLET APRON)

P.I. 103 + 60.77
ΔRT. 42° 02'
D = 10° 00'
T = 220.13'
L = 420.34'
E = 40.83'
REMOVE CROWN,
170' RUNOFF

P.O.T. 109 +27.47 INTERSECTION OF C.S.A.H. 2 & C.S.A.H. 22

F.E. RT. 107 +07
NO CULV. INPL.
NO ENT. REQ'D.

F.E. RT. 109 +69
NO CULV. INPL.
NO ENT. REQ'D.

℄ CULV. 104 +02
INPL. 18"x 58' C.M.P.
W/APRONS
REMOVE 63 LIN. FT.

WOODS

BEGIN TAPER STA. 114+00

P.I. 115 +03.46
ΔRT. 8° 28' 30"
D = 1° 10'
T = 363.88'
L = 726.43'
E = 13.47'
REMOVE CROWN
140' RUNOFF

B.M. EL. 122939
SPK. IN P.P. LT. 122'
STA. 109 +43

P.I. +00
ELEV. 1224.46

P.I. +00
ELEV. 1226.7
300' V.C.
M = 0.7125

INLET ELEV. 13.0

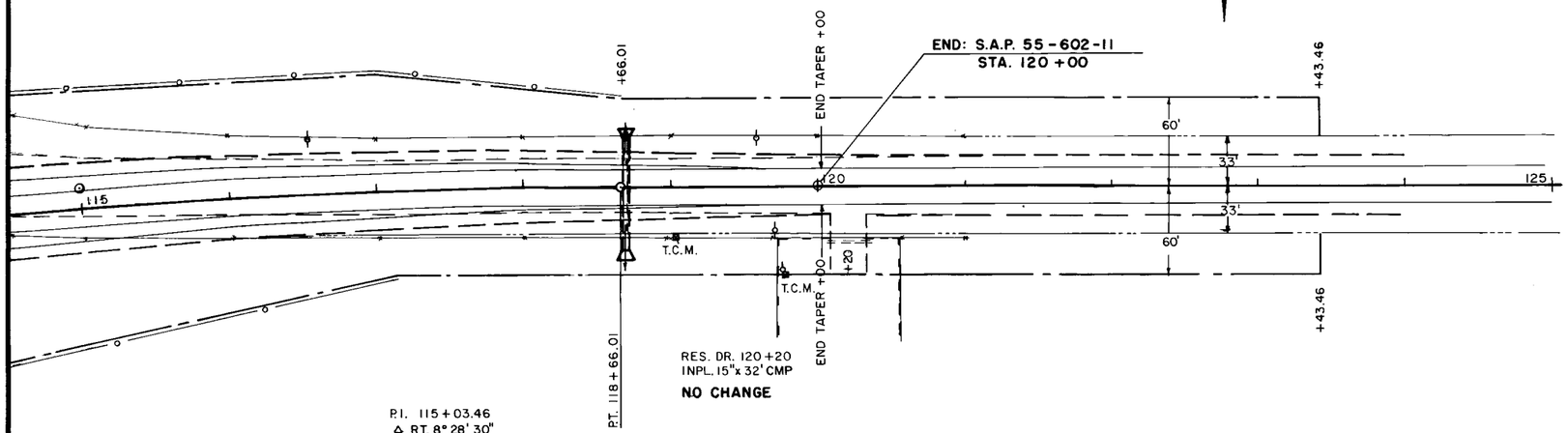
OUTLET ELEV. 98.5

SUBGRADE TREATMENT:
EXCAVATE 1.0' BELOW SUBGRADE ELEV.
FROM STA. 112+00 TO STA. 120+00

NOTE: QUANTITIES FOR BALANCE STA. 98+00 TO STA. 111+85 (C.S.A.H. 2) ARE INCLUDED IN QUANTITIES IN BALANCE STA. 185+42 TO STA. 205+00 (C.S.A.H. 22)

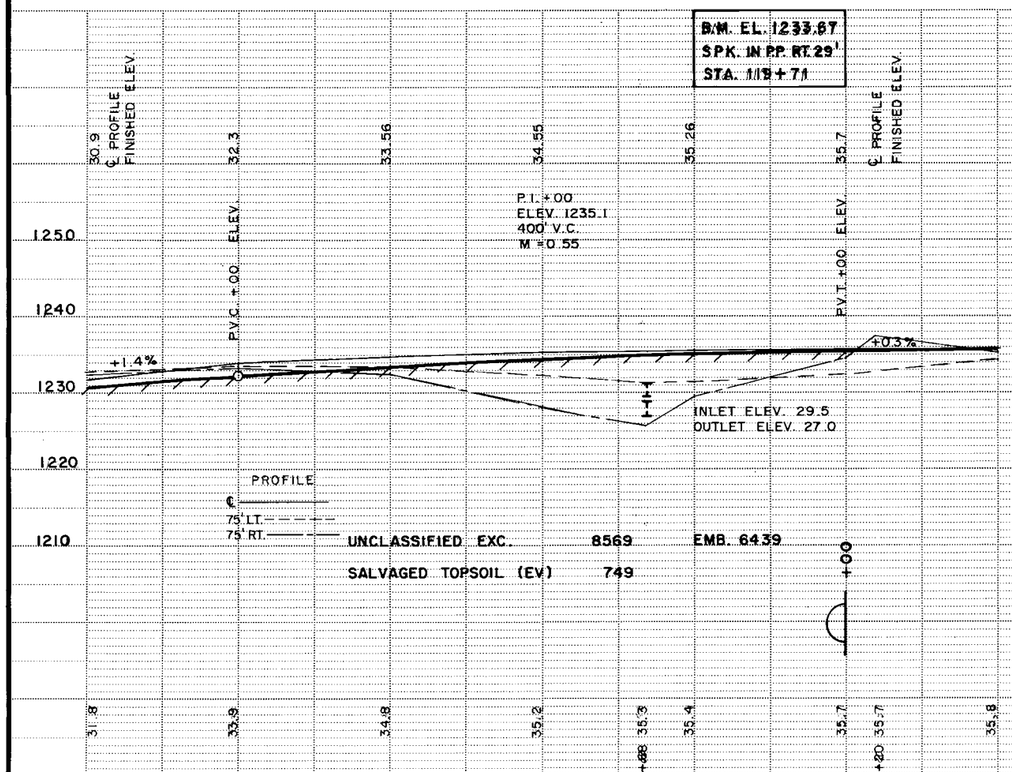
℄ PROFILE
PROFILE 75' LT.
PROFILE 75' RT.

℄ CULV. 118+68
INPL. 18"x 62' CMP
W/APRONS
REMOVE 67 LIN. FT.
24"x76' R.C. PIPE CULV. CL.2
2-24"R.C. PIPE APRONS
PLACE CULV. ON "B" BEDDING
PLACE 30 SQ.YDS. SOD AROUND APRONS
CONST. DITCH BLOCK AT INLET



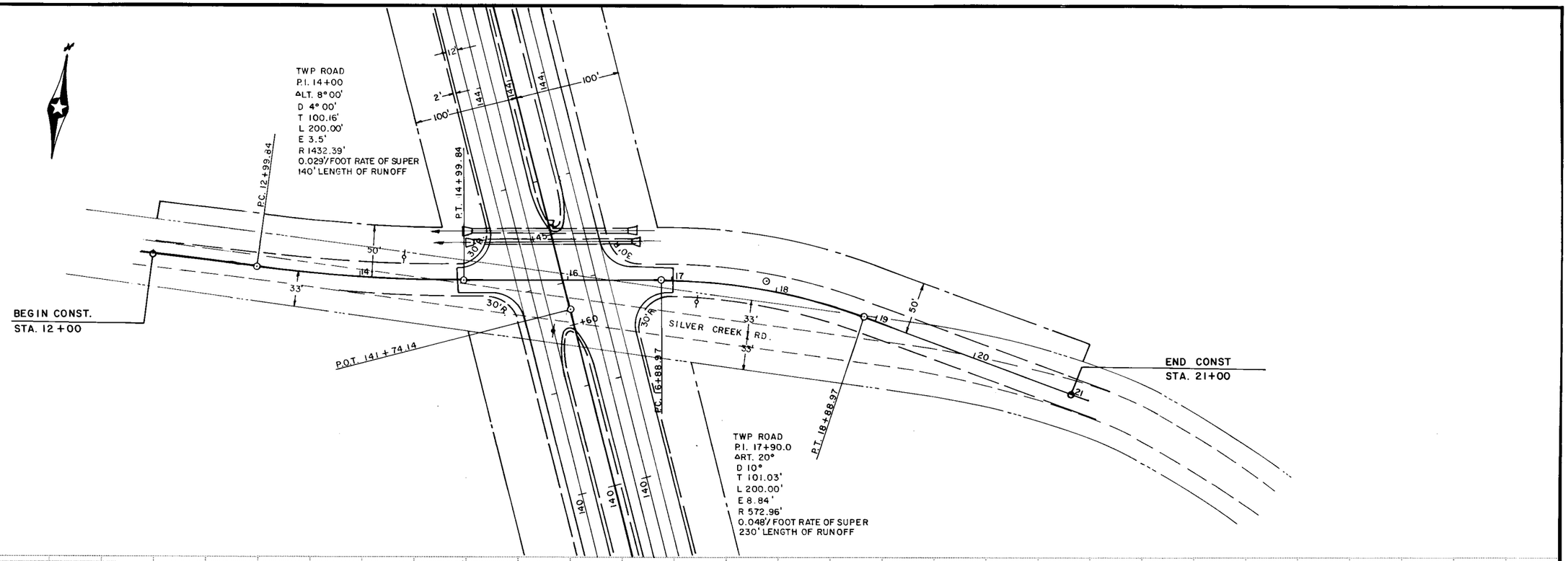
P.I. 115+03.46
Δ RT. 8°28'30"
D – 1° 10'
T – 363.88'
L – 726.43'
E – 13.47'

B.M. EL. 1233.67
SPK. IN PP. RT. 29'
STA. 118+71



UNCLASSIFIED EXC. 8569 EMB. 6439

SALVAGED TOPSOIL (EV) 749


TWP ROAD
P.I. 14+00
ΔLT. 8°00'
D 4°00'
T 100.16'
L 200.00'
E 3.5'
R 1432.39'
0.029'/FOOT RATE OF SUPER
140' LENGTH OF RUNOFF
P.C. 12+99.84
P.T. 14+99.84
BEGIN CONST.
STA. 12+00
P.O.T. 141+74.14
SILVER CREEK RD.
E.C. 16+88.97
P.T. 18+88.97
END CONST
STA. 21+00
TWP ROAD
P.I. 17+90.0
ΔRT. 20°
D 10°
T 101.03'
L 200.00'
E 8.84'
R 572.96'
0.048'/FOOT RATE OF SUPER
230' LENGTH OF RUNOFF
FINISHED ℄ ELEV.
BEG IN CONST. STA. 12+00
P.V.C. +00 ELEV. 34.09
P.I. +00
ELEV. 34.59
200' V.C.
M = 0.425
P.V.T. +00 ELEV. 36.79
P.V.C. +00
P.I. +50
ELEV. 37.89
100' V.C.
M = 0.2125
P.V.T. +00 ELEV. 38.14
+62 ℄ S.B.L.
+27 ℄ N.B.L.
P.V.C. +50 ELEV. 38.58
P.I. +00
ELEV. 39.38
300' V.C.
M = 1.7625
P.V.T. +00 ELEV.
END CONST. STA. 21+00
FINISHED ℄ ELEV.
+0.5%
+2.2%
+0.5%
+0.5%
+5.2%
1070
1060
1050
1040
1030
10
15
20
25