MINNESOTA DEPARTMENT OF TRANSPORTATION

THE COUNTY OF OLMSTED

CONSTRUCTION PLAN FOR GRADING AND AGGREGATE BASE

LOCATED ON C.R. 148 **BETWEEN** C.S.A.H. 8 & T.H. 63 **AND** 6.0 MILES S.W. OF ROCH. **(GEOGRAPHIC DESCRIPTION)**

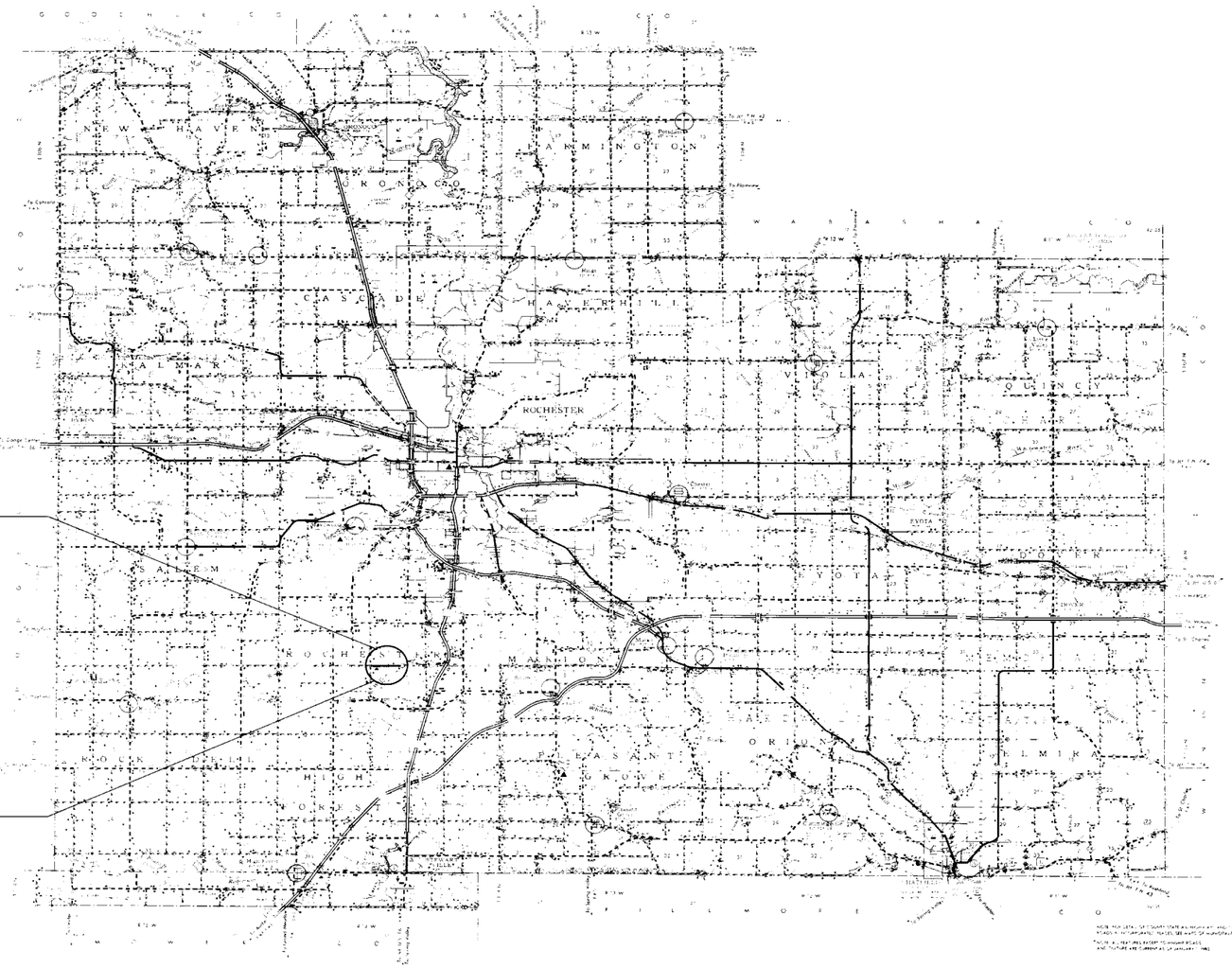
FROM S 1/4 COR. SEC. 33 ROCHESTER TWP. T106N-R14W **TO** 1235.03' W. OF S 1/4 COR. SEC. 34 ROCHESTER TWP. T106N-R14W **(LEGAL DESCRIPTION)**

~~**STATE PROJ. NO.** C148-89-4~~

GROSS LENGTH	4030.50	FEET	0.7634 MILES
BRIDGES-LENGTH	0.00	FEET	0.00 MILES
EXCEPTIONS-LENGTH	0.00	FEET	0.00 MILES
NET LENGTH	4030.50	FEET	0.7634 MILES

STATE PROJ. NO. .....

GROSS LENGTH		FEET	MILES
BRIDGES-LENGTH		FEET	MILES
EXCEPTIONS-LENGTH		FEET	MILES
NET LENGTH		FEET	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
FLEETEX 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
ELECTRICAL CABLE IN CONDUIT
TELEPHONE MANHOLE
ELECTRIC MANHOLE
BURIED TELEPHONE CABLE
BURIED ELECTRICAL CABLE
AERIAL TELEPHONE CABLE
SEWER (SANITARY OR STORM)
SEWER MANHOLE

SCALES

PLAN 0 100'
PROFILE 0 100' HORZ. 0 10' VERT.
INDEX MAP 0 2 MILES
CROSS SECTIONS 0 10'

ALLENSON MPLS 55405

72285

MINN. PROJ. NO. .....

GOVERNING SPECIFICATIONS

THE 1988 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN.

INDEX

SHEET	NO. 1	TITLE SHEET AND LAYOUT MAP
SHEET	NO. 2	ESTIMATE OF QUANTITIES AND TYPICAL SECTIONS
SHEET	NO. 3-4	PLAN AND PROFILE
SHEET	NO. 5-12	CROSS SECTIONS

DESIGN DESIGNATION

R .....
ΣN18(20) .....

ADT (Current Year)	=	90 (1989)	Design Speed 45 MPH
ADT (Future Year)	=	162 (2009)	Based on STOPPING Sight Distance
DHV (Design Hr. Vol.)	=		Height of eye 3.5' Height of object 0.5'
D (Directional Distr.)	=	%	Design Speed not achieved at: .....
T (Heavy Commercial)	=	%	STA. TO STA. MPH
SOIL FACTOR		130 %	STA. TO STA. MPH
SHOULDER WIDTH			STA. TO STA. MPH

.....TON DESIGN

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 8/25/89 REG. NO. 10397 ENGR Michael Sheehan

COUNTY Olmsted

Recommended for Approval ..... 19 .....
DISTRICT STATE AID ENGINEER

Recommended for Approval ..... 19 .....
STATE AID PLANS AND SPECS ENGINEER

Approved ..... 19 .....
STATE AID ENGINEER

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED

....
DIVISION ADMINISTRATOR DATE

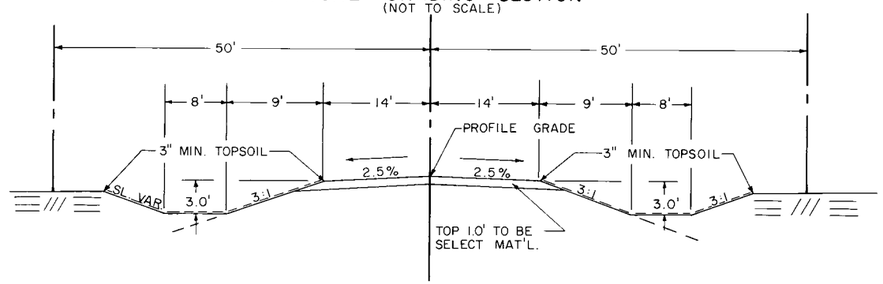
~~**STATE AID PROJ. NO.**~~ .....
~~**STATE PROJ. NO.**~~ C148-89-4 OLMSTED COUNTY C.R. 148 **SHEET NO.** 1 **OF** 12 **SHEETS**

ESTIMATED QUANTITIES

	SPECIFICATION NO.	ITEM	UNIT	MUNICIPAL	RURAL	TOTAL ESTIMATED QUANTITIES
	2101.502	CLEARING	TREE		15	15
	2101.507	GRUBBING	TREE		15	15
	2104.501	REMOVE PIPE CULVERTS	LIN. FT.		152	152
	2104.501	REMOVE FENCE	LIN. FT.		5,331	5,331
	2104.521	SALVAGE PIPE CULVERTS	LIN. FT.		34	34
	2105.515	UNCLASSIFIED EXCAVATION (P)	CU. YD.		17,848	17,848
	2105.535	SALVAGED TOPSOIL (EV) (P)	CU. YD.		1,707	1,707
①	2211.501	AGGREGATE BASE CLASS 2	TON		2,032	2,032
	2211.501	AGGREGATE BASE CLASS 5 (MOD)	TON		1,918	1,918
	2501.511	18" C.S. PIPE CULVERT	LIN. FT.		56	56
	2501.511	30" C.S. PIPE CULVERT	LIN. FT.		120	120
	2501.511	18" R.C. PIPE CULVERT CLASS 2	LIN. FT.		36	36
	2501.511	30" R.C. PIPE CULVERT CLASS 2	LIN. FT.		40	40
	2501.515	18" G.S. PIPE APRONS	EACH		4	4
	2501.515	30" G.S. PIPE APRONS	EACH		8	8
	2501.515	18" R.C. PIPE APRONS	EACH		2	2
	2501.515	30" R.C. PIPE APRONS	EACH		2	2
	2501.521	57" SPAN C.S. PIPE-ARCH CULVERTS	LIN. FT.		32	32
	2501.525	57" SPAN G.S. PIPE-ARCH APRONS	EACH		2	2
	2575.501	ROADSIDE SEEDING (P)	ACRE		4.0	4.0
②	2575.502	SEED MIXTURE 500	POUND		200	200
③	2575.502	SEED MIXTURE 1100	POUND		320	320
	2575.505	SODDING TYPE EROSION	SQ.YD.		2,435	2,435
④	2575.511	MULCH MATERIAL TYPE 1	TON		8.0	8.0
	2575.519	DISC. ANCHORING (P)	ACRE		4.0	4.0
⑤	2575.531	COMMERCIAL FERTILIZER ANALYSIS 12-12-12	TON		0.8	0.8

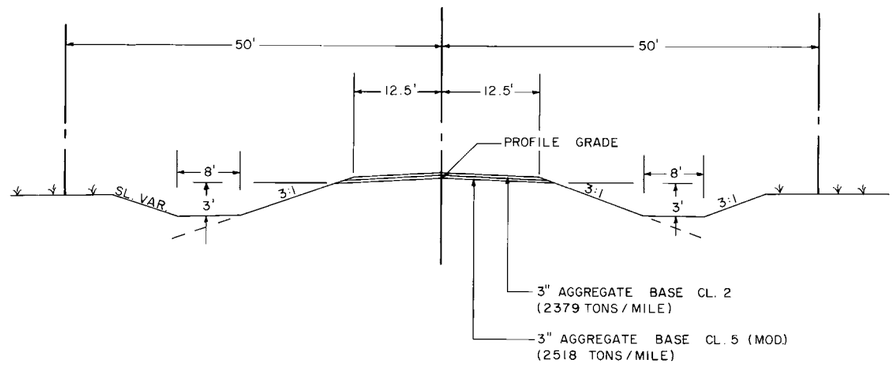
(P) PLAN QUANITITY

TYPICAL GRADING SECTION
(NOT TO SCALE)



STA. 52+69.50 TO 93+00

TYPICAL AGGREGATE BASE SECTION
(NOT TO SCALE)



STA. 52+69.50 TO 93+00

STANDARD PLATES

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

PLATE NO	DESCRIPTION
0005 A	SPECIFICATION REFERENCE TO STANDARD PLATES
3000 K	REINFORCED CONCRETE PIPE
3040 F	CORRUGATED METAL PIPE CULVERT
3100 G	CONCRETE APRON FOR REINFORCED CONCRETE PIPE
3123 I	METAL APRON FOR C.S. PIPE
3124 B	METAL APRON CONNECTION
3145 E	CONCRETE PIPE TIES
3221 C	CORRUGATED STEEL PIPE COUPLING BAND
8000 I	STANDARD BARRICADES
8003 B	BREAKAWAY SIGN SUPPORT (PLASTIC)
9000 B	APPROACHES AND ENTRANCES
9102 C	SODDING AT PIPE CULVERT ENDS

① INCLUDES 1,812 TONS FOR MAINLINE AND 220 TONS FOR APPROACHES.

② APPLICATION RATE 50 POUNDS PER ACRE.

③ APPLICATION RATE 80 POUNDS PER ACRE.
RYE TO BE SUBSTITUTED FOR OATS FOR SEASON OF PLANTING FROM AUGUST 15 TO OCTOBER 15.

④ APPLICATION RATE 2 TONS PER ACRE.

⑤ APPLICATION RATE 200 POUNDS PER ACRE.

NOTE: PLACE REINFORCED CONCRETE PIPE ON "B" BEDDING AS DIRECTED BY THE ENGINEER.

NOTE: ALL DIMENSIONS AND SLOPES SHOWN ON TYPICAL SECTIONS ARE APPROXIMATE.

NOTE: SALVAGED TOPSOIL SHALL BE PLACED ON SLOPES AS SHOWN ON PLANS AND DIRECTED BY THE ENGINEER.

NOTE: THE SHRINKAGE FACTOR HAS BEEN INCLUDED IN THE EMBANKMENT QUANTITIES.

SODDING LOCATIONS	SQ. YDS.
℄ CULV. STA. 53+20 INLET & OUTLET	21
℄ CULV. STA. 79+26 INLET & OUTLET	40
DITCH & SLOPES LT. STA. 74+00 TO 77+50	680
DITCH LINER LT. STA. 70+00 TO 74+00	533
DITCH LINER LT. STA. 77+50 TO 79+26	234
DITCH LINER LT. STA. 86+25 TO 93+00	927
TOTAL SQ. YDS. SODS	2435

ALBINSON INC MINNEAPOLIS 55401

TWP RD. LT. 52+67
NO CHANGE

℄ CULV. 52+90
INPL. 18"x 34' CMP
NO APRONS
SALVAGE PIPE CULV.

CONST. ℄ CULV. STA. 53+20
18"x 36' R.C. PIPE CULV. CL. 2
2-18" R.C. PIPE APRONS
PLACE CULV. ON "B" BEDDING
F & I CONCRETE PIPE JOINT TIES

CONST. F.E. LT. 59+50
18"x 28' C.S. PIPE CULV.
2-18" G.S. PIPE APRONS

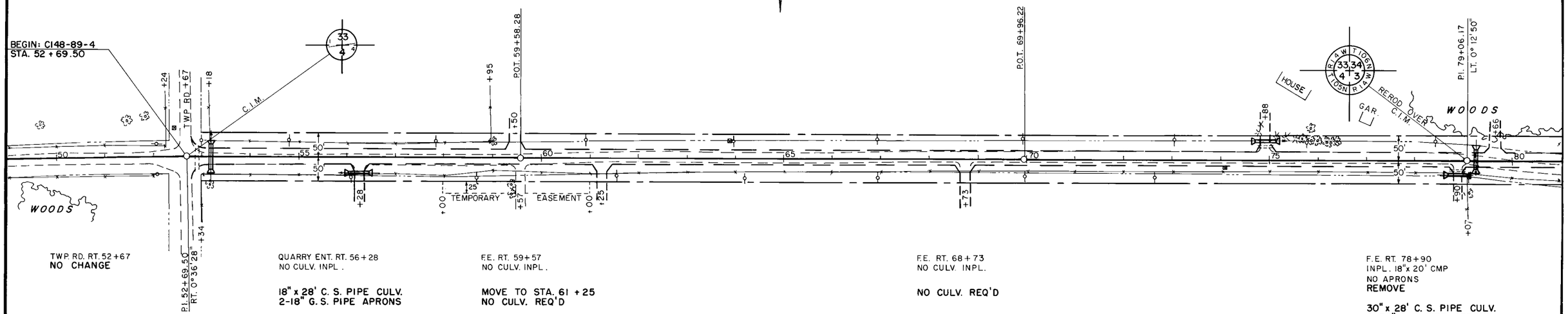
CONST. F ENT. LT. STA. 79+66
SEE PROPERTY OWNER FOR LOCATION.
USE AS DITCH BLOCK.
NO CULVERT REQUIRED.

RES. DR. LT. 74+88
INPL. 24"x 28' CMP
NO APRONS
REMOVE

30"x 32' C.S. PIPE CULV.
2-30" G.S. PIPE APRONS

℄ CULV. 79+26
INPL. 24"x 30'CMP
NO APRONS
REMOVE

30"x 40' R.C. PIPE CULV. CL. 2
2-30" R.C. PIPE APRONS
PLACE CULV. ON "B" BEDDING
F & I CONCRETE PIPE JOINT TIES



TWP. RD. RT. 52+67
NO CHANGE

QUARRY ENT. RT. 56+28
NO CULV. INPL.

18"x 28' C.S. PIPE CULV.
2-18" G.S. PIPE APRONS

F.E. RT. 59+57
NO CULV. INPL.

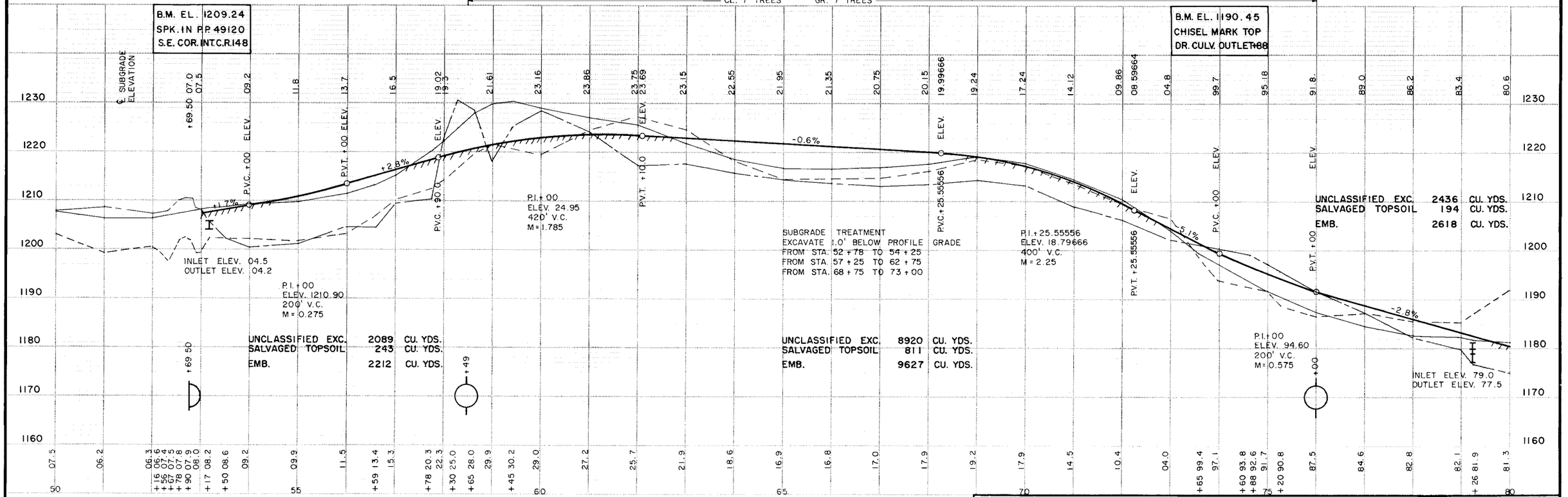
MOVE TO STA. 61+25
NO CULV. REQ'D

F.E. RT. 68+73
NO CULV. INPL.

NO CULV. REQ'D

F.E. RT. 78+90
INPL. 18"x 20' CMP
NO APRONS
REMOVE

30"x 28' C.S. PIPE CULV.
2-30" G.S. PIPE APRONS



UNCLASSIFIED EXC.	2089	CU. YDS.
SALVAGED TOPSOIL	243	CU. YDS.
EMB.	2212	CU. YDS.

UNCLASSIFIED EXC.	8920	CU. YDS.
SALVAGED TOPSOIL	811	CU. YDS.
EMB.	9627	CU. YDS.

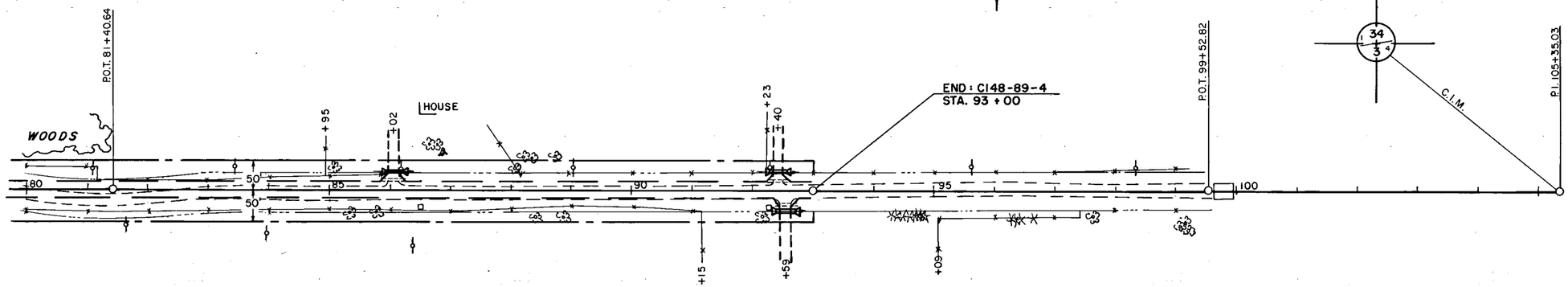
UNCLASSIFIED EXC.	2436	CU. YDS.
SALVAGED TOPSOIL	194	CU. YDS.
EMB.	2618	CU. YDS.

FARM DR. LT. 86+02
INPL. 18"x20' CMP
NO APRONS
REMOVE

30" x 32' C. S. PIPE CULV.
2-30" G. S. PIPE APRONS

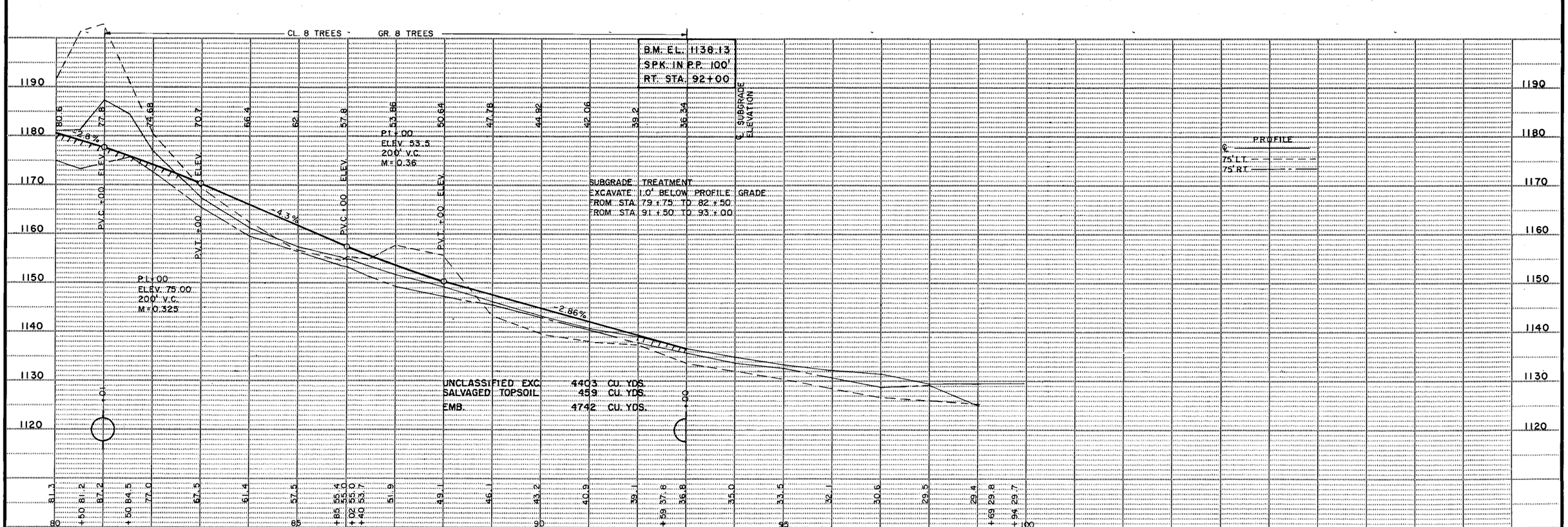
F.E. LT. 92+40
INPL. 15"x18' CMP
NO APRONS
REMOVE

30" x 28' C. S. PIPE CULV.
2-30" G. S. PIPE APRONS



FARM DR. RT. 92+59
INPL. 24"x36' CMP
NO APRONS
REMOVE

57" SPAN x 32' C. S. PIPE - ARCH CULV.
2-57" SPAN G. S. PIPE - ARCH APRONS
INLET ELEV. 33.5
OUTLET ELEV. 33.2



~~State Proj. No.~~ C148-89-4 OLMSTED COUNTY CR. 148 **Sheet No.** 4 **of** 12 **Sheets**