

Project 34-19-112

2/14/88

159+87 - 186+00
2613 L.F.

Extra Earthwork Due to Poor Soils

* Common Excavation 35861 cu. yd

Station 174+00 to 186+07
1201 L.F.

Cost 35861 x 2.04 \$73,156.44

* Mack Excavation 54438 cu. yd

Station 159+87 to 174+00
1413 L.F.

Cost 54438 x 1.25 \$68,047.50

* Common Borrow to Fill in Mack

Station 159+87 to 174+00
1413 L.F.

Cost 54438 x 1.40 x 2.04 \$155,474.93

* Rubble Removal

97 truck loads @ 192.60 \$18,682.20

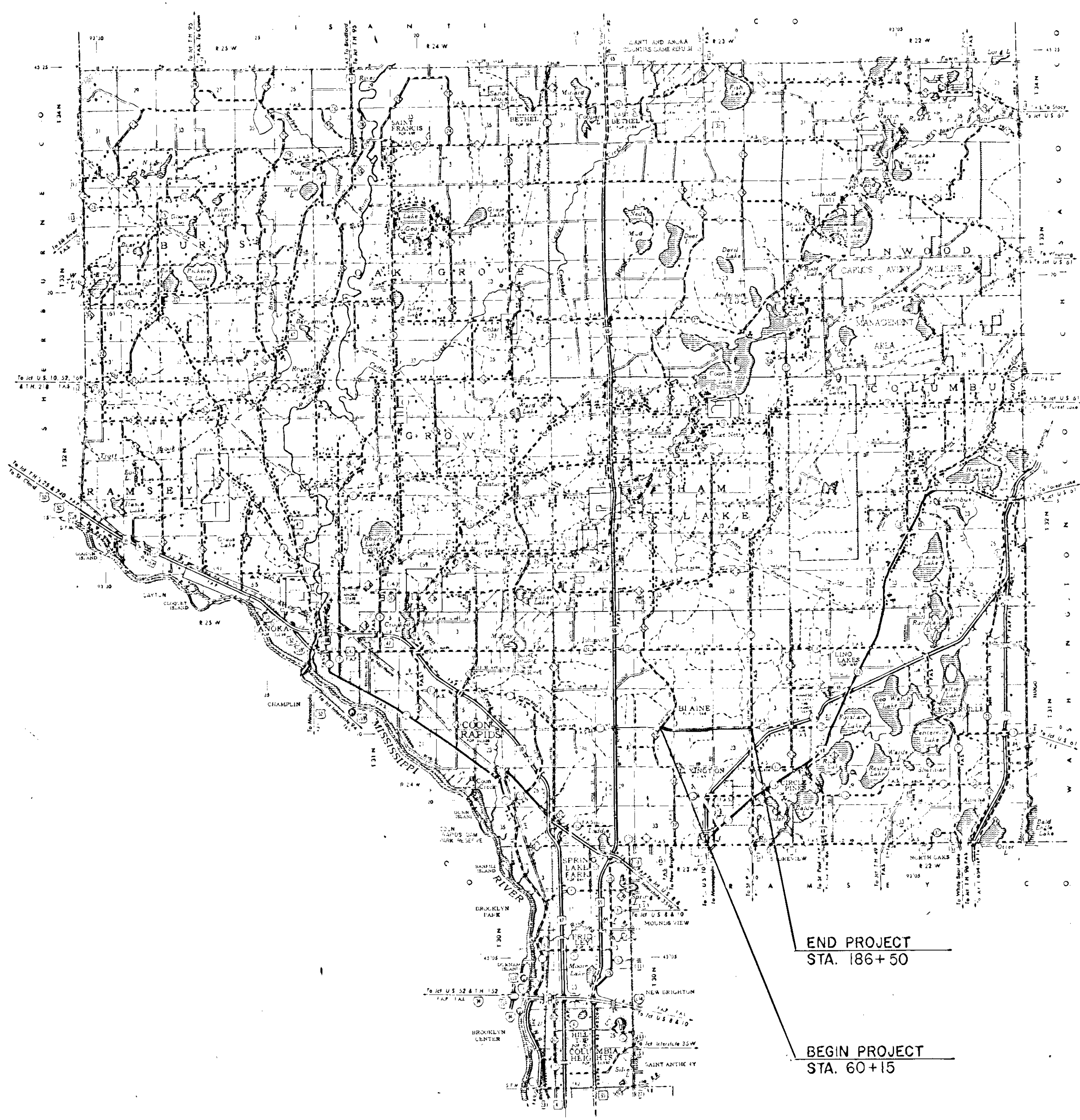
20 truck loads @ 132.00 \$2720.00

Total Cost Above Normal \$318,081.07

Extra Cost for South 1/2 due to Soil \$159,040.54
Station 159+00 to 186+00

CONVENTIONAL SIGNS

STATE LINE	-----
COUNTY LINE	-----
TOWNSHIP OR RANGE LINE	-----
SECTION LINE	-----
QUARTER LINE	-----
SIXTEENTH LINE	-----
RIGHT OF WAY LINE	-----
FRONT FOOT OF WAY LINE	-----
CONTRAIL OF ADJACENT LINE	-----
PROPERTY LINE (EVEN LINES)	-----
PROPERTY LINE (ODD LINES)	-----
INCORPORATED CITY LIMITS	-----
CORPORATE OR CITY LIMITS	-----
TOWN HIGHWAY CENTER LINE	-----
RETAINING WALL	-----
RAILROAD	-----
RAILROAD RIGHT OF WAY LINE	-----
RIVER OR CREEK	-----
DRY RUN	-----
DRAINAGE DITCH	-----
ELECTRIC POWER LINE	-----
TELEPHONE OR TELEGRAPH LINE	-----
JOINT TELEPHONE AND POWER	-----
CONDUIT	-----
TELEPHONE CABLE AERIAL	-----
TELEPHONE CABLE UNDERGROUND	-----
POWER CABLE UNDERGROUND	-----
GAS MAIN	-----
COLLEGE	-----
POWDER MILL	-----
BOARDS WIRE FENCE	-----
STEEL WIRE FENCE	-----
STONE WALL OR FENCE	-----
RAILROAD CROSSING	-----
WATER PIPE	-----
SEWER PIPE	-----
GRAVEL PIT	-----
SAND PIT	-----
BEARW PIT	-----
ROCK QUARRY	-----
MEANDER CORNER	-----



STATE OF MINNESOTA
DEPARTMENT OF HIGHWAYS

CONSTRUCTION PLAN FOR 109TH AVE. NE.
County Highway No. 112

Between RADISSON ROAD And LEXINGTON AVENUE
From SECTION 21, T. 31 N., R. 23 W. To SECTION 23, T. 31 N., R. 23 W.

GROSS LENGTH	12635	FEET	2.39	MILES
BRIDGES LENGTH	0	FEET	0	MILES
EXCEPTIONS LENGTH	0	FEET	0	MILES
NET LENGTH	12635	FEET	2.39	MILES

- INDEX TO SHEETS
- 1 TITLE SHEET & LAYOUT MAP
 - 2 ESTIMATED QUANTITIES & TYPICAL SECTIONS
 - 3-12 PLAN & PROFILE
 - 13-14 EROSION CONTROL DETAILS
 - 15 SUPERELEVATION PLAN
 - 16-31 CROSS SECTIONS
 - 32-36 POND CONST. & BORROW PIT

SCALE

INDEX MAP	2 MI.
PLAN & PROFILE	VERT. 5
	HORIZ. 50
CROSS SECTIONS	VERT. 5
	HORIZ. 10

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

Paul K. Kneid COUNTY ENGINEER DATE 8/22/85
ANOVA COUNTY REG NO 6549

RECOMMENDED FOR APPROVAL _____ DISTRICT ENGINEER
RECOMMENDED FOR APPROVAL _____
APPROVED _____ STATE AID ENGINEER

DESIGN DESIGNATION
ADT (CURRENT YEAR) 0
ADT (FUTURE YEAR) 14,300
Γ (HEAVY COMMERCIAL)
9 Ton Design Soil Factor 40
Design Speed 55 MPH
Design Speed not achieved at:
STA _____ TO STA _____ MPH
STA _____ TO STA _____ MPH

SPECIFICATIONS
THE 1983 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATION FOR CONSTRUCTION" AND SUPPLEMENTAL SPECIFICATIONS, DATED MAY 19, 1987, SHALL GOVERN.

Minn. Proj. No. _____ County Proj. No. 84-19-112
State Proj. No. _____ S.A.P. _____

STATEMENT OF ESTIMATED QUANTITIES

ITEM NO.	ITEM	UNIT	TOTAL EST. QUANT.	FINAL QUANT.
2021.501	MOBILIZATION	LUMP SUM	1	
2031.501	FIELD OFFICE TYPE D	EACH	1	
2101.501	CLEARING	ACRE	24.9	
2101.506	GRUBBING	ACRE	24.9	
2104.501	REMOVE METAL CULVERT	LIN. FT.	145	
2104.501	REMOVE BARB WIRE FENCE	LIN. FT.	1250	
2105.501	COMMON EXCAVATION (P)	CU. YD.	212,490	
2105.505	MUCK EXCAVATION	CU. YD.	154,993	
2105.521	GRANULAR BORROW (EV)	CU. YD.	87,710	
2130.501	WATER	M/GAL.	10	
2211.503	AGG. BASE PLACED, CL. 5A (P)	CU. YD.	7,792	
2221.503	AGG. SHLD. PLACED, CL. 5A (P)	CU. YD.	1,274	
2331.504	BITUMINOUS MATERIAL FOR MIXTURE	TON	1,145	
2331.510	BINDER COURSE MIXTURE	TON	9,664	
2331.514	BASE COURSE MIXTURE	TON	15,779	
2341.504	BITUMINOUS MATERIAL FOR MIXTURE	TON	341	
2341.508	WEARING COURSE MIXTURE	TON	5,680	
2357.502	BIT. MATERIAL FOR TACK COAT	GALLON	3,366	
2451.503	GRANULAR BACKFILL (CV)	CU. YD.	1,250	
2451.509	AGGREGATE BEDDING (CV)	CU. YD.	465	
2501.511	30" CS PIPE CULV	LIN. FT.	30	
2501.561	48" RC PIPE CULV DES 3006 CL II	LIN. FT.	78	
2501.561	54" RC PIPE CULV DES 3006 CL II	LIN. FT.	90	
2501.561	60" RC PIPE CULV DES 3006 CL I	LIN. FT.	234	
2501.515	30" GS PIPE APRONS	EACH	2	
2501.515	48" RC PIPE APRONS	EACH	2	
2501.515	54" RC PIPE APRONS	EACH	2	
2501.515	60" RC PIPE APRONS	EACH	6	
2511.505	HAND-PLACED RIP RAP CL. II	CU. YD.	77	
2511.511	GRANULAR FILTER TYPE I	CU. YD.	38	
2554.509	GUIDE POST, TYPE B	EACH	8	
2557.501	WIRE FENCE DESIGN 9323	LIN. FT.	1,250	
2557.521	WOOD BRACE ASSEMBLIES	EACH	11	
2575.501	ROADSIDE SEEDING	ACRE	21	
2575.502	SEED MIXTURE 5	POUND	1,050	
2575.505	SODDING	SQ. YD.	1,930	
2575.511	MULCH MATERIAL TYPE I	TON	42	
2575.519	DISC ANCHORING	ACRE	21	
2575.531	COMMERCIAL FERT. ANALY. 10-10-10	TON	5.25	
0575.602	HAY OR STRAW BALES	EACH	120	
0331.603	SAW INPLACE BIT	LIN. FT.	120	
ALTERNATE BID				
2105.501	COMMON EXCAVATION (P)	CU. YD.	183,016	
2105.505	MUCK EXCAVATION	CU. YD.	44,586	
2105.100	ENGINEERING FABRIC	SQ. YD.	77,000	
0105.515	MUCK BORROW (LV)	CU. YD.	16,553	

① INCLUDES 12.9 ACRES FOR MITIGATION POND SITE.

STANDARD PLATES (1)

PLATE NO.	DESCRIPTION
0004A	SPECIFICATION REFERENCE TO STANDARD PLATES
3000I	REINFORCED CONCRETE PIPE
3006D	GASKET JOINT FOR R.C. PIPE
3100F	CONCRETE APRON FOR REINFORCED CONCRETE PIPE
3133A	RIPRAP AT RCP OUTLETS
3145C	CONCRETE PIPE TIES
8150B	INSTALLATION OF CULVERT MARKERS
9000B	APPROACHES AND ENTRANCES
9102C	SODDING AT PIPE CULVERT ENDS
9323D	BARBED WIRE FENCE (WOOD POST)

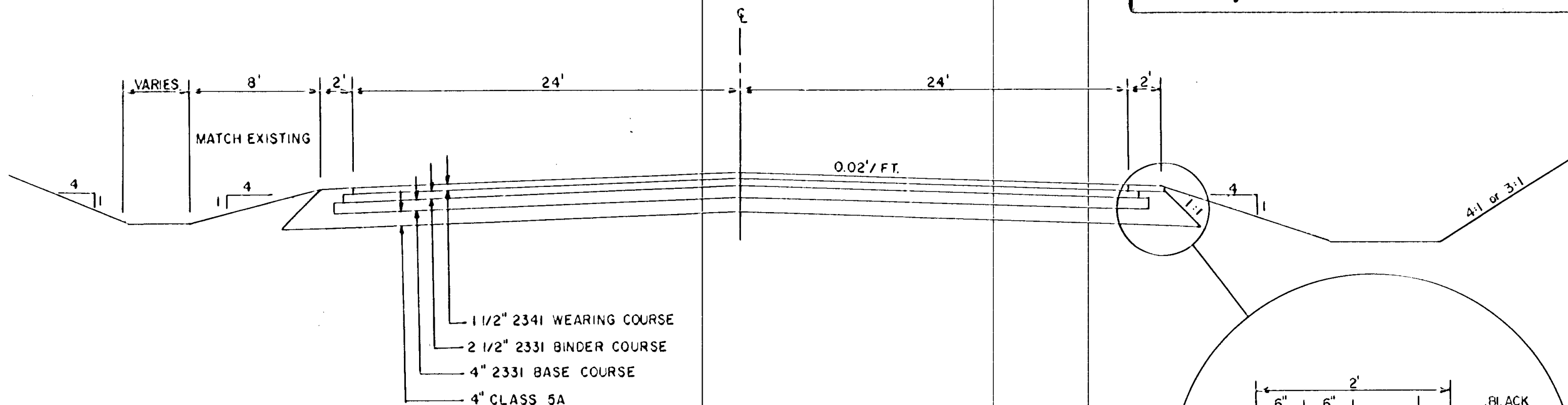
EARTHWORK SUMMARY

EXCAVATION (C.Y.)		ALTERNATE BID QUANTITIES	
212,490	REG. COMMON	29,739	183,016
	MITIGATION POND	182,751	
154,993	MUCK		44,586
87,710	GRANULAR BORROW		-0-
-0-	MUCK BORROW		16,553
EMBANKMENT (C.Y.)		ALTERNATE BID QUANTITIES	
300,200	REG. (SHRINKAGE -160%)	183,016	REG. COMMON (SHRINKAGE -160%) 49,229
			FABRIC AREAS (SHRINKAGE -180%) 133,787
② 129,319	MUCK (SHRINKAGE -140%)	61,140	① TOPSOIL (SHRINKAGE -140%) 15,795
			MITIGATION POND (SHRINKAGE -140%) 45,345
25,674	EXCESS MUCK	-0-	EXCESS MUCK

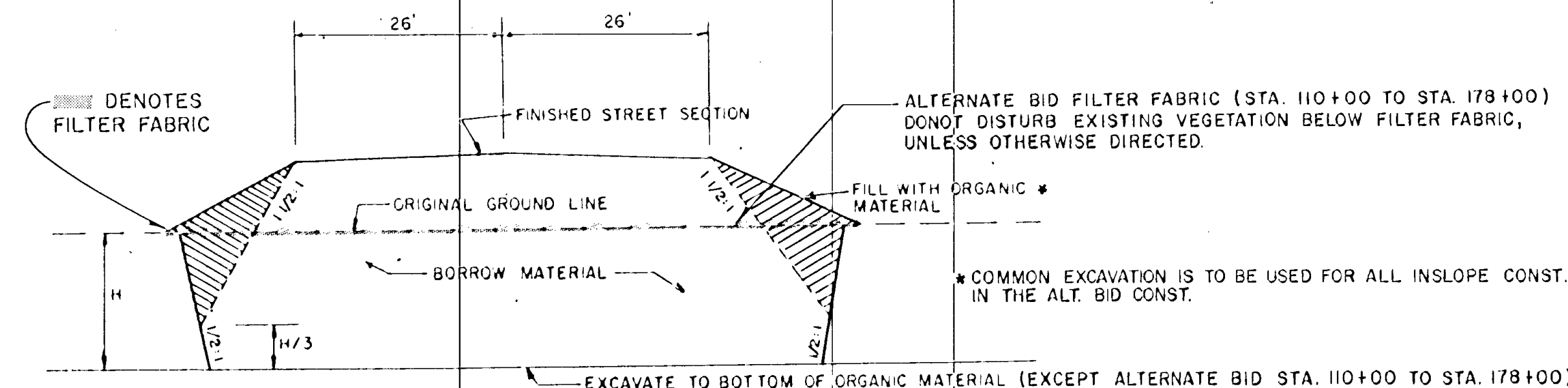
① TO BE USED AS TOPSOIL DRESSING ON THE NEW SLOPES AND DITCH BOTTOMS (AVE. 4" THICKNESS).

② APPROXIMATELY 74,819 C.Y. OF MATERIAL IS TO BE HAULED TO THE MITIGATION POND SITE FOR POND CONSTRUCTION. THE REMAINING EMBANKMENT MATERIAL IS TO BE USED FOR INSLOPE CONSTRUCTION & TOPSOIL DRESSING (AVE. 4" THICKNESS). MITIGATION POND CONSTRUCTION & HAULAGE WILL BE CONSIDERED AS INCIDENTAL TO THE EXCAVATION ITEM & NO ADDITIONAL COMPENSATION WILL BE MADE.

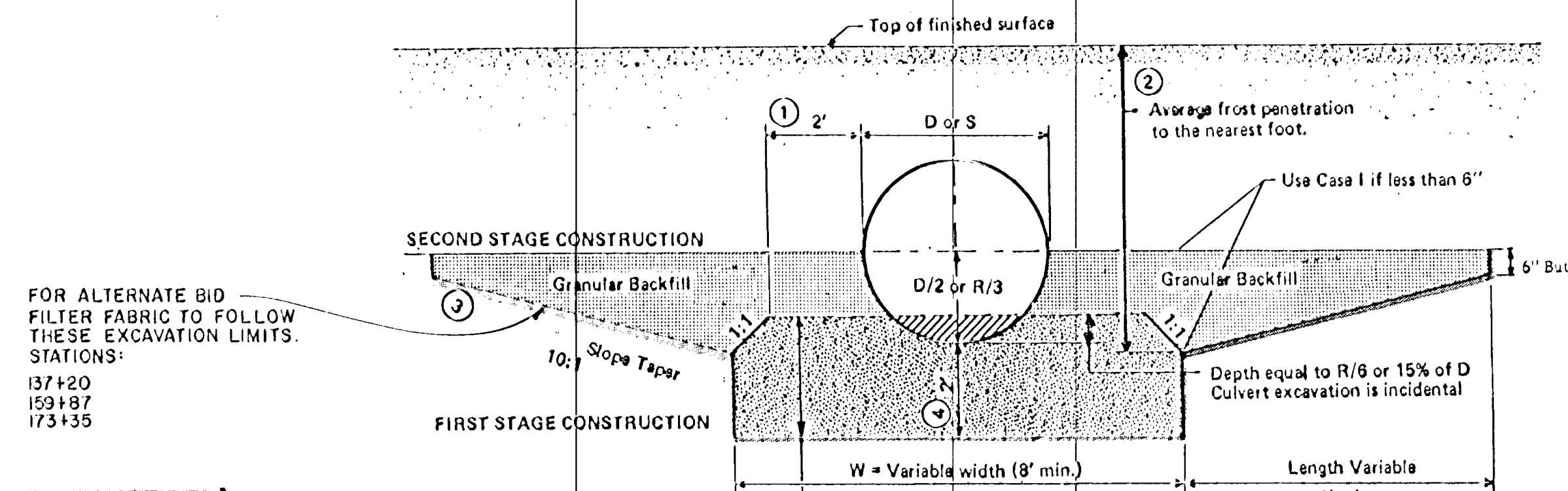
NOTE: SUMMARY IS FOR INFORMATION ONLY. PAY ITEMS ARE THOSE LISTED IN THE ESTIMATED QUANTITIES & PROPOSAL.



STREET SECTION



TYPICAL SWAMP SECTION WITH A STREET FILL SECTION



LEGEND:

- D = Outside diameter of round pipe
- R = Outside rise of pipe-arch
- S = Outside span of pipe-arch
- ① On small pipes this distance will be greater in order to maintain a minimum 8-foot width for W.
- ② Average frost depth will be determined by the Soils Engineer. Taper ratio depends on soil and moisture condition.
- ③ Taper to be used will be recommended by Soils Engineer.
- ④ Depth shall be 2 feet unless recommended deeper by Soils Engineer.

NOTES:

- 1. Excavation will be paid for as Subgrade Excavation (MHD 2105)
- 2. MHD 2451 shall apply to bedding and backfill construction.
- 3. All granular material items are to be measured on the basis of compacted volume (CV).

STORM CULVERTS		48" R.C.P. CULVERT APRONS		54" R.C.P. CULVERT APRONS		60" R.C.P. CULVERT APRONS		GRADE %	INLET ELEV.	OUTLET ELEV.	RIPRAP CU. YD.	GRANULAR FILTER CU. YD.	CULVERT MARKERS	GRANULAR BACKFILL CU. YD.	AGGREGATE BEDDING CU. YD.
79+65	C.L. 50° SKEW							0.20	898.00	897.80	15.8	7.9	2	214.8	105.8
137+20	C.L.	78	2	90	2	90	2	0.08	892.63	892.55	13.4	6.7	2	257.0	97.9
159+10	72° R							0.06	890.31	890.27	18.4	9.2	2	388.5	131.1
159+87	C.L.							0.06	890.33	890.27	18.4	9.2	1	388.5	131.1
173+35	C.L.							0.06	890.06	890.00	18.4	9.2	1	388.5	131.1

TREATMENT OF CENTER-LINE CULVERTS IN PLASTIC SOILS

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under State of Minn. Statute Section 325B.01 to 325B.16.
[Signature]
 Date 7/22/85 Minn. Reg. No. 2716



3100 Hennepin Ave. Suite 200 • 7200 Hennepin Ave. North • Minneapolis, MN 55412 • (612) 429-2181

DATE	BY	DATE	BY
5-18-80	[Signature]		

S.A.P.

S.P.

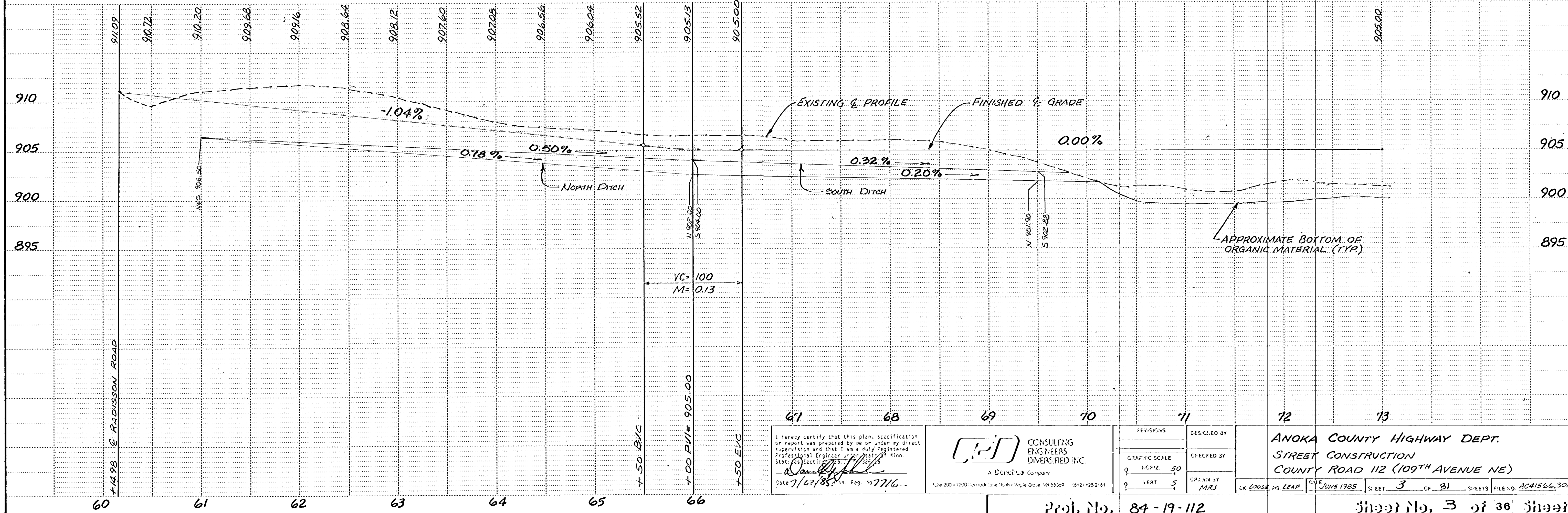
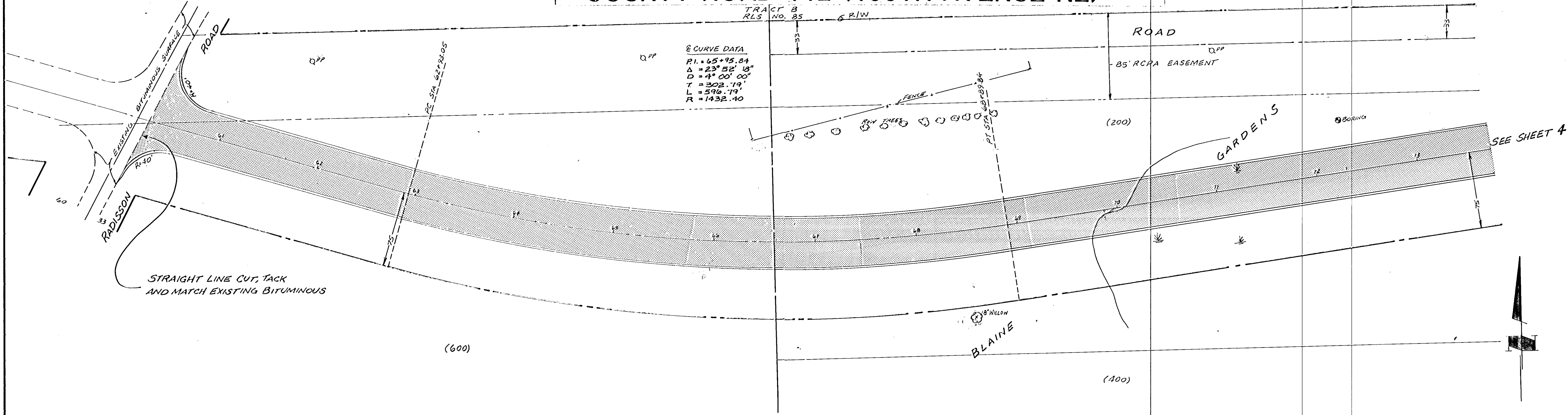
C.P.

84-19-112

Sheet No. 2 of 36 Sheets

* DELETE FOR ALTERNATE BID. SEE ALTERNATE BID QUANTITIES.

COUNTY ROAD 112 (109TH AVENUE NE)

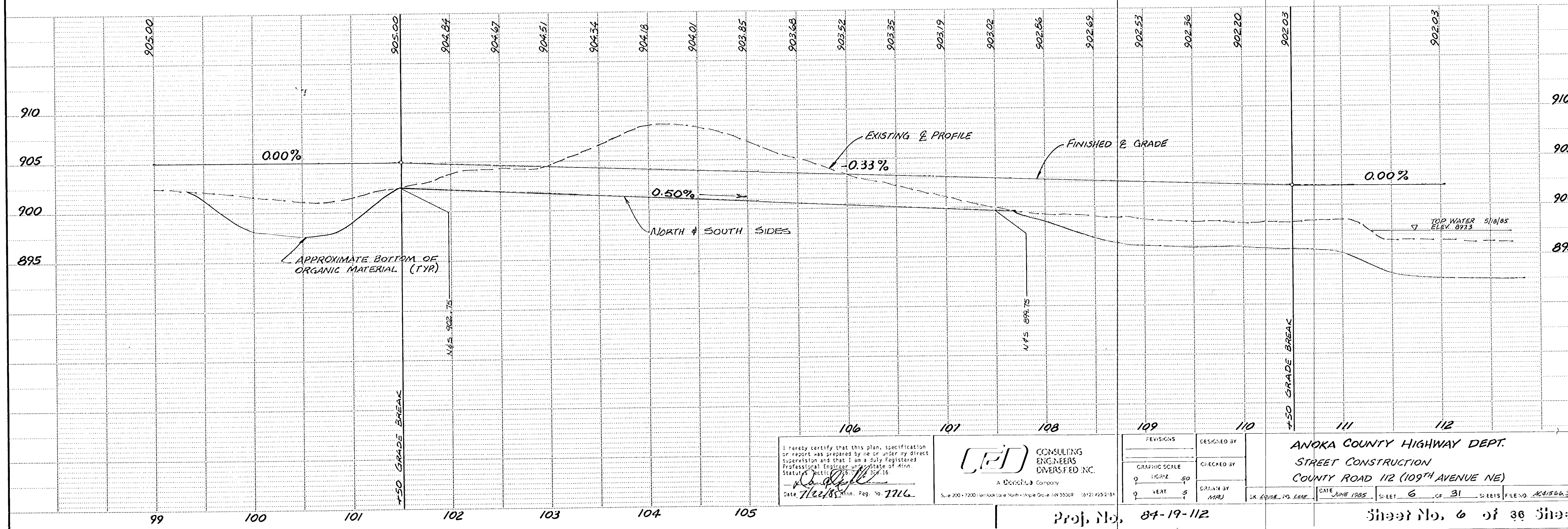
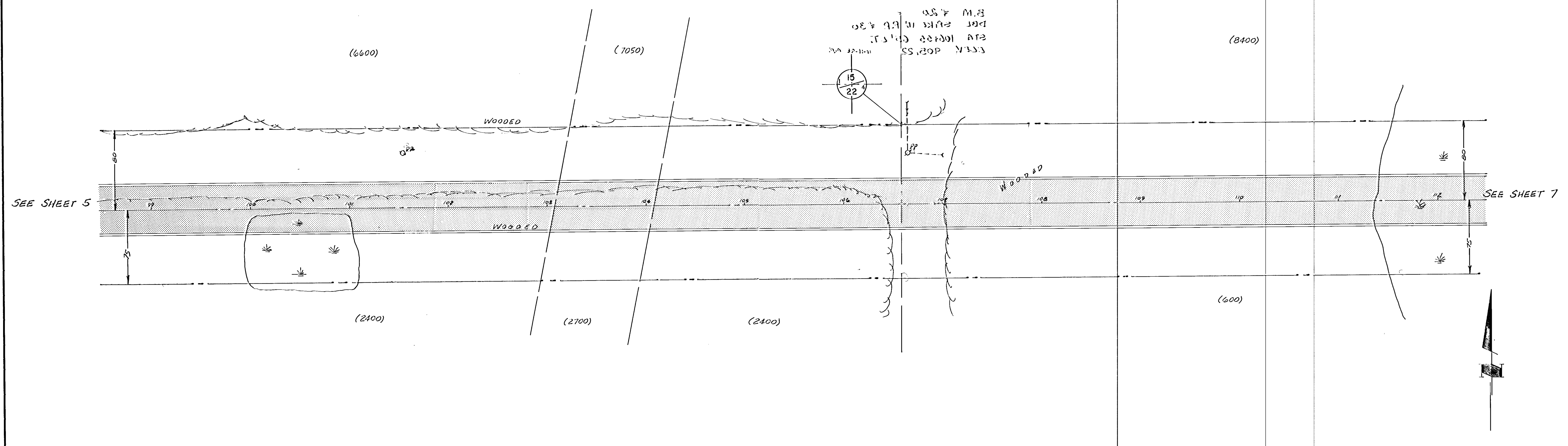


I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly registered Professional Engineer in the State of Minnesota. State of Minnesota, No. 25,316
 Date 7/22/85
 Proj. No. 7716

CEI CONSULTING ENGINEERS INC.
 A DIVERSIFIED Company
 Suite 200 - 7200 Lakeside Lane North - Maple Grove, MN 55069 (612) 425-2181

DESIGNED BY	ANOKA COUNTY HIGHWAY DEPT.
CHECKED BY	STREET CONSTRUCTION
DRAWN BY	COUNTY ROAD 112 (109TH AVENUE NE)
DATE	JUNE 1985
SHEET	3 OF 31 SHEETS
FILE NO.	AC41566-302

COUNTY ROAD 112 (109TH AVENUE NE)



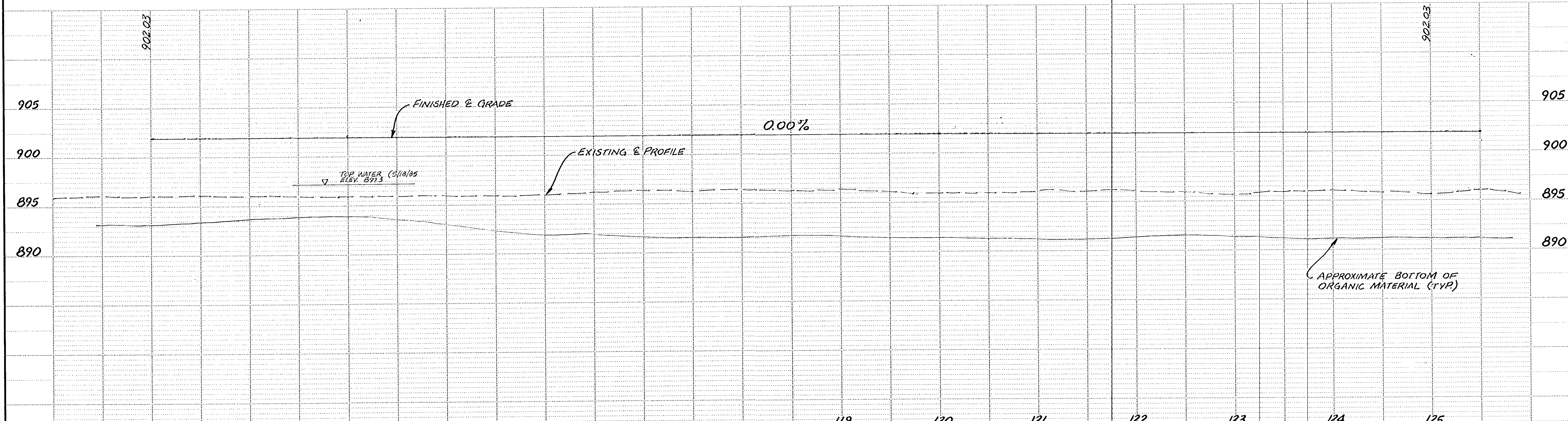
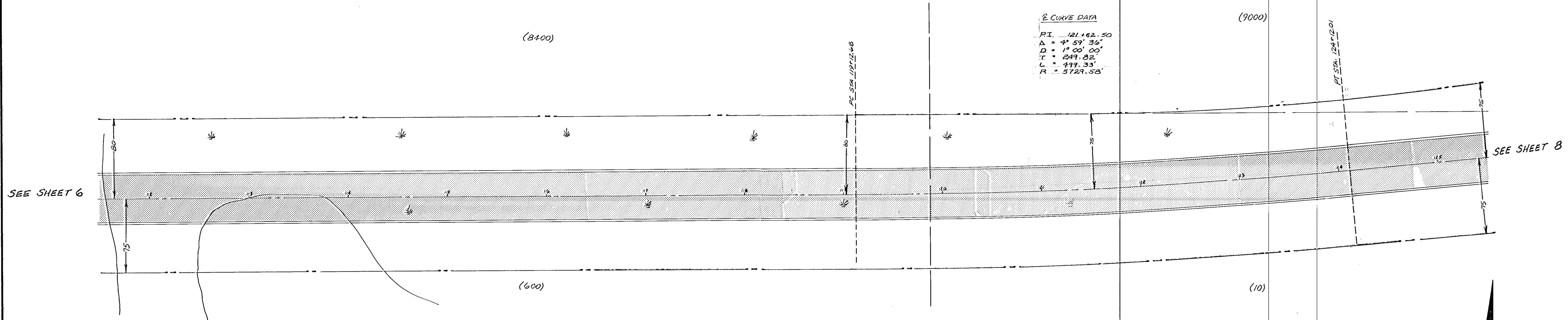
I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the State of Minn. Statutes, Section 320.02, Subsection 16.
 Date 7/22/85 Minn. Reg. No. 7716

CEI CONSULTING ENGINEERS DIVERSIFIED, INC.
 A Diversified Company
 Suite 200 • 7200 Lembeck Lane North • Maple Grove, MN 55069 (612) 425-2151

DESIGNED BY	CHECKED BY
GRAPHIC SCALE	DATE
0 HORIZ 50	JUNE 1985
0 VERT 5	SHEET 6 OF 31 SHEETS
DRAWN BY	FILE NO. AC41566.302
MARJ	

ANOKA COUNTY HIGHWAY DEPT.
 STREET CONSTRUCTION
 COUNTY ROAD 112 (109TH AVENUE NE)
 DATE: JUNE 1985 SHEET 6 OF 31 SHEETS FILE NO. AC41566.302

COUNTY ROAD 112 (109TH AVENUE NE)



I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the State of Minn. Stat. Sect. 326.01, Subpart 1, 26. Date 7/22/85 Minn. Reg. No. 2716

CEI CONSULTING ENGINEERS DIVERSIFIED, INC.
A DIVERSIFIED Company
Suite 200 • 7200 Harwood Lane North • Maple Grove, MN 55369 • (612) 425-2181

DESIGNED BY	MAJ
CHECKED BY	MAJ
DRAWN BY	MAJ
SK. LOOSE VS. LEAF	

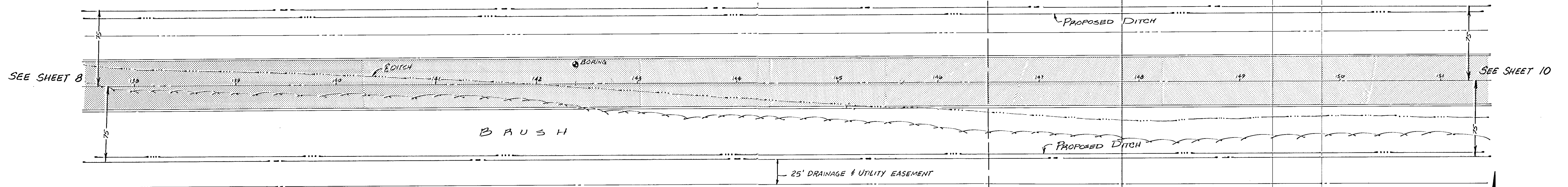
ANOKA COUNTY HIGHWAY DEPT.
STREET CONSTRUCTION
COUNTY ROAD 112 (109TH AVENUE NE)
DATE: JUNE 1985 SHEET 7 OF 31 SHEETS FILE NO. AC41566.302

COUNTY ROAD 112 (109TH AVENUE NE)

Fed. Proj. No.

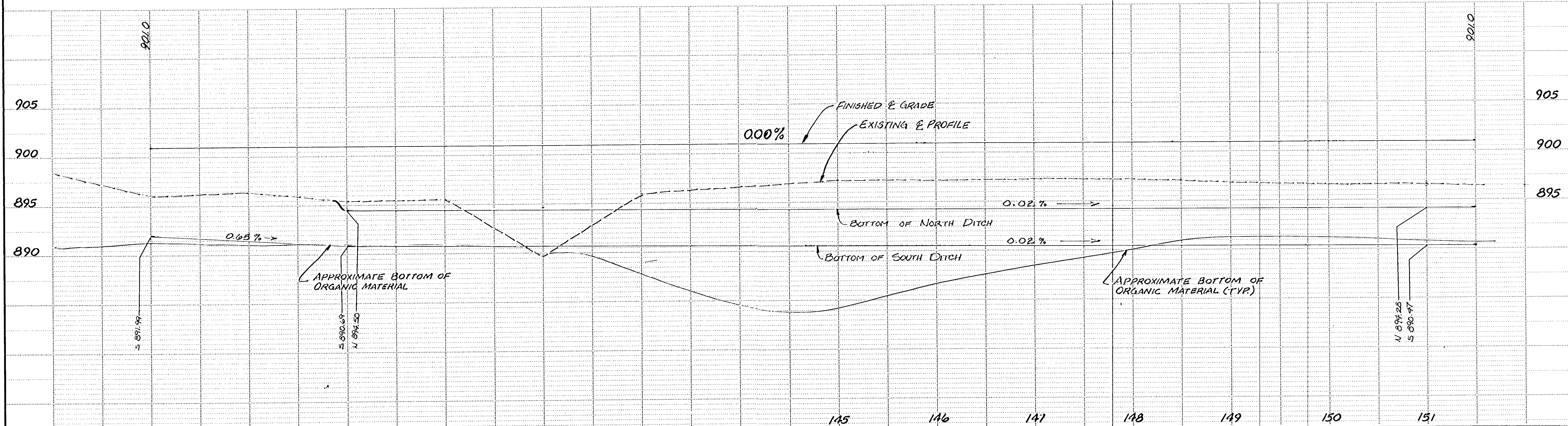
(6000)

(6600)



(3001)

(2400)



I hereby certify that this plan, specification or report 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, No. 02676, Exp. 12/31/88.
 Date 7/22/85, Minn. Reg. No. 7216

ED CONSULTING ENGINEERS DIVERSIFIED, INC.
 A Diversified Company
 Suite 200 • 7200 Hennepin Lane North • Maple Grove, MN 55369 (612) 415-2181

DESIGNED BY	MRJ
CHECKED BY	MRJ
DATE	JUNE 1985

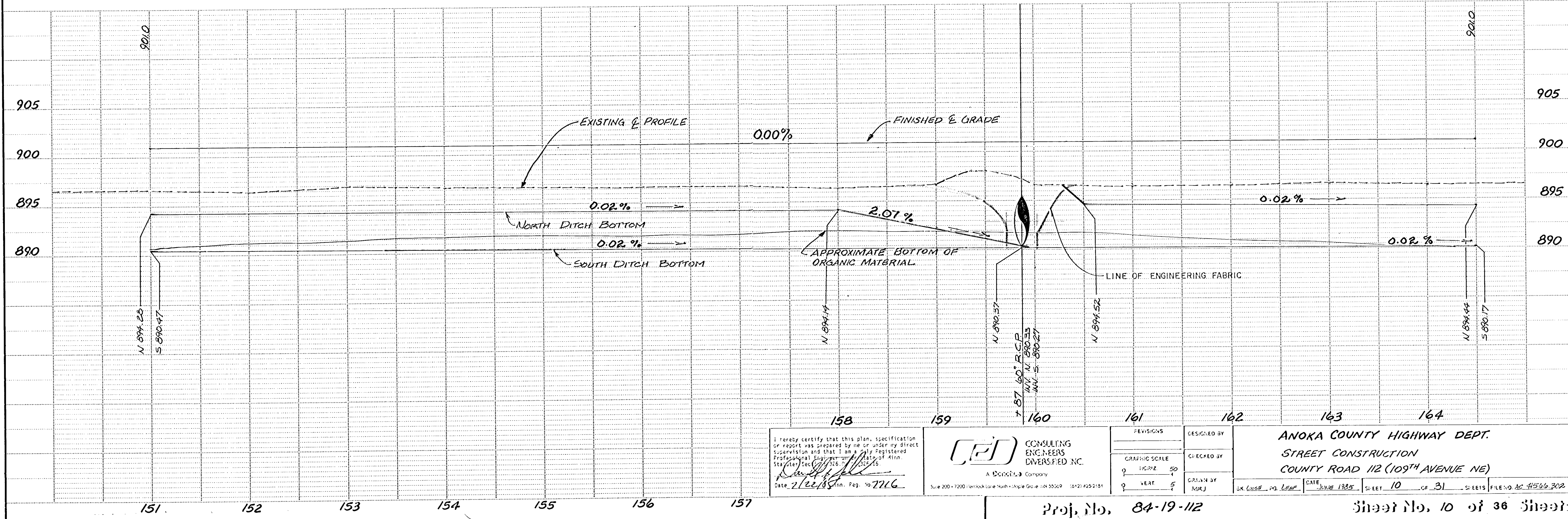
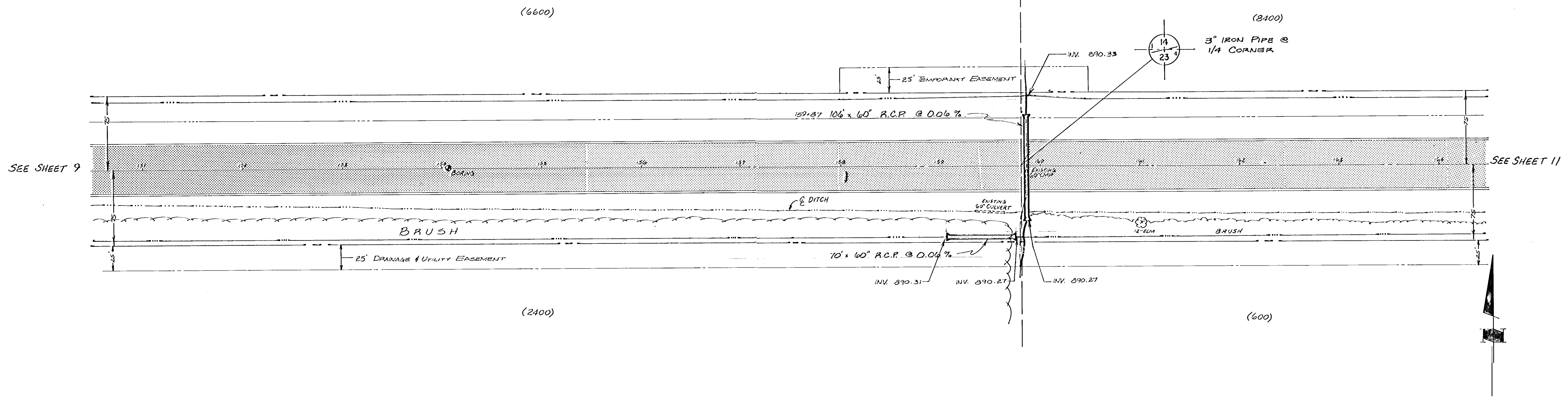
ANOKA COUNTY HIGHWAY DEPT.
 STREET CONSTRUCTION
 COUNTY ROAD 112 (109TH AVENUE NE)

DATE JUNE 1985 SHEET 9 OF 31 SHEETS FILE NO. AC41566.302

Proj. No. 84-19-112

Sheet No. 9 of 36 Sheets

COUNTY ROAD 112 (109TH AVENUE NE)



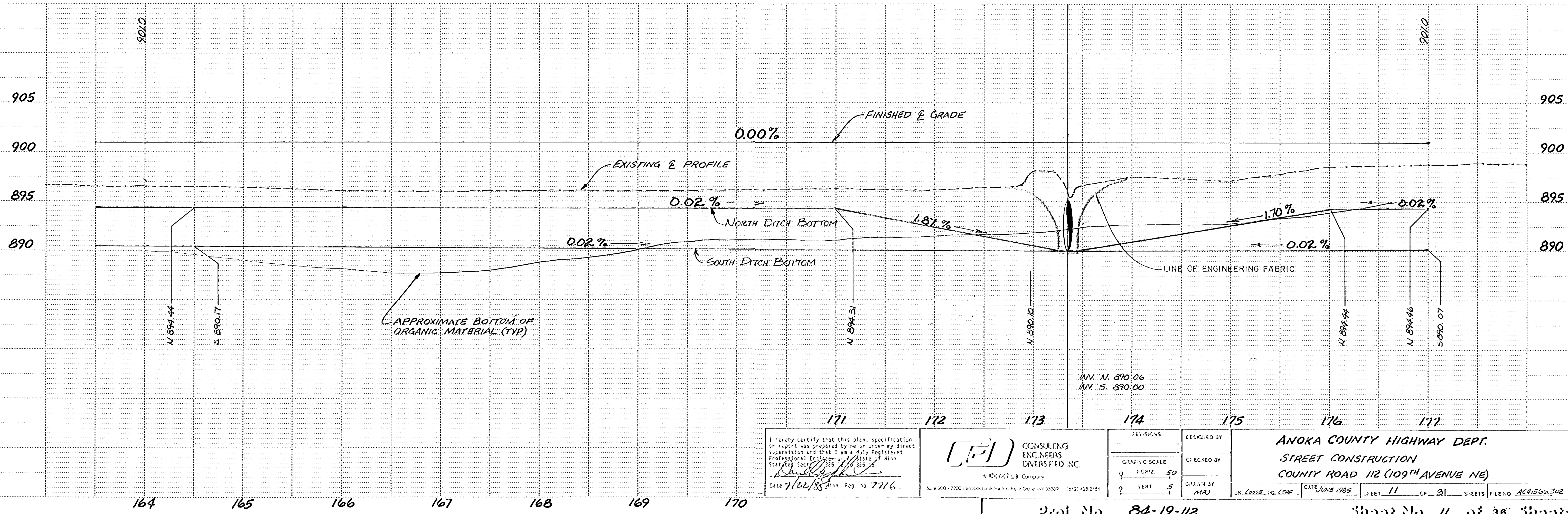
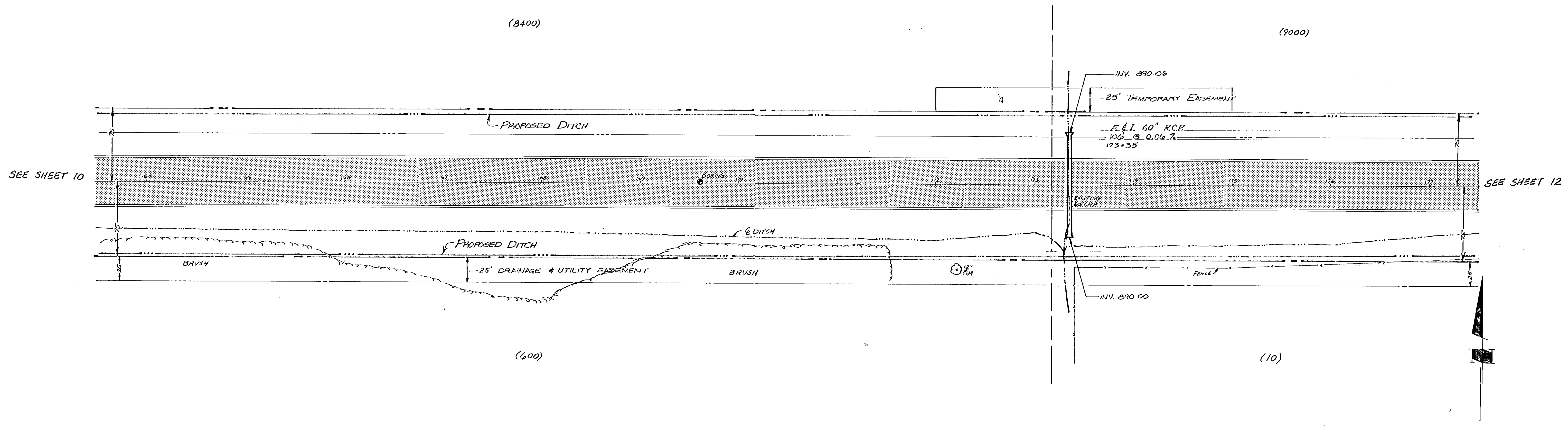
I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a Registered Professional Engineer in the State of Minnesota. Date: 7/22/85. Min. Reg. No. 7116.

CEI CONSULTING ENGINEERS DIVERSIFIED INC.
A DIVERSIFIED Company
Suite 200 • 7200 Verbock Loop North • Maple Grove, MN 55369 (612) 425-2151

REVISIONS	DESIGNED BY
GRAPHIC SCALE	CHECKED BY
0 HORIZ 50'	DRAWN BY
0 VERT 5'	MJR

ANOKA COUNTY HIGHWAY DEPT.	
STREET CONSTRUCTION	
COUNTY ROAD 112 (109TH AVENUE NE)	
DATE: JUNE 1985	FILE NO. AC 415/6/302

COUNTY ROAD 112 (109TH AVENUE NE)

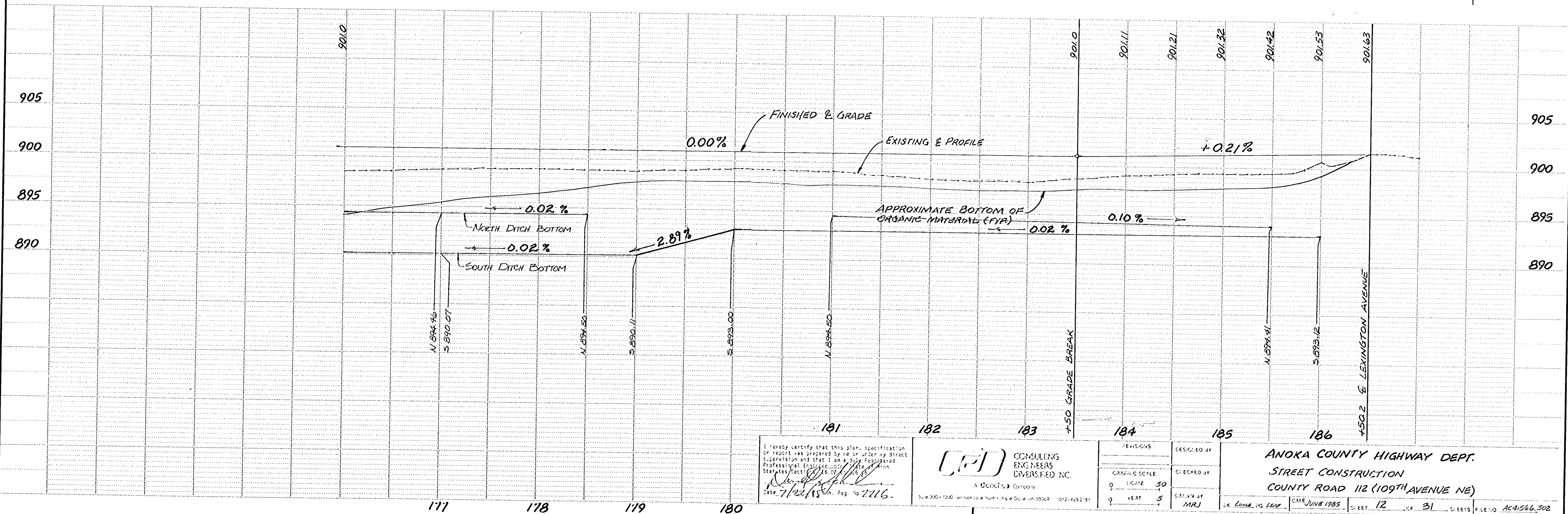
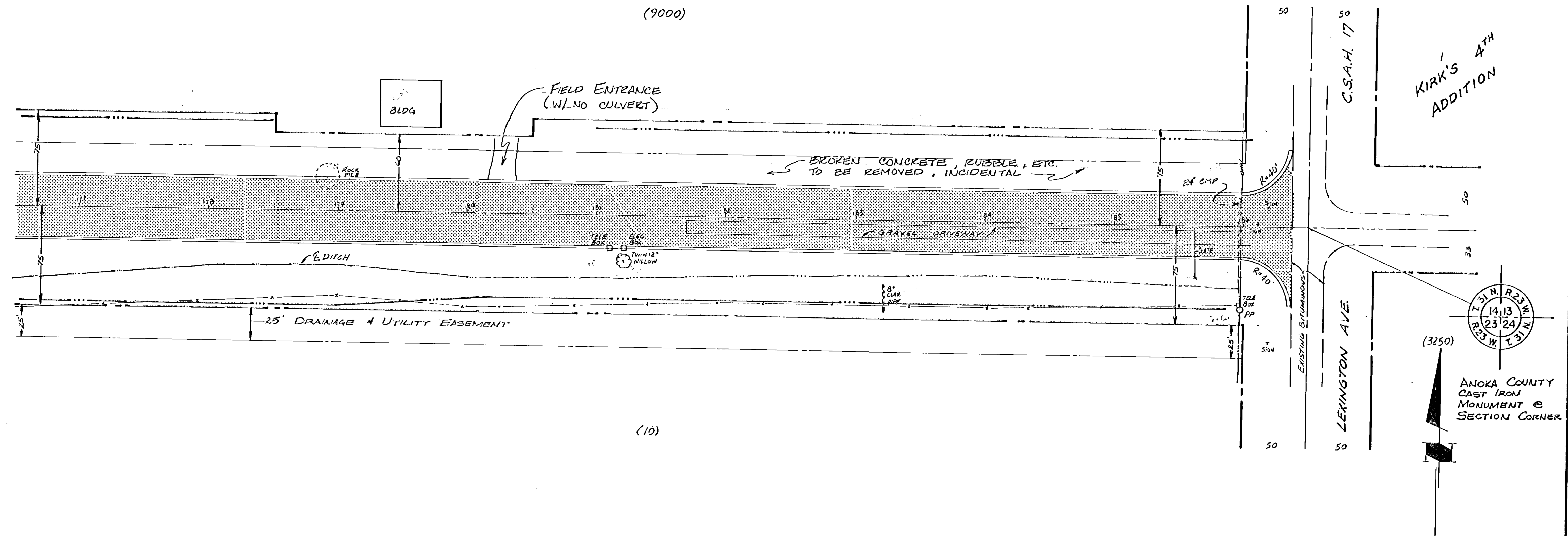


<p>I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer of the State of Minn. Statutes, Sec. 326, 326A, 326B, 326C.</p> <p><i>[Signature]</i> Date 7/22/85 Minn. Reg. No. 7716</p>	<p>CD CONSULTING ENGINEERS DIVERSIFIED INC. A Diversified Company Suite 200 • 7200 Lombard Lane • Minneapolis, MN 55425 • (612) 425-2151</p>	<p>REVISIONS</p>	<p>DESIGNED BY</p>	<p>ANOKA COUNTY HIGHWAY DEPT. STREET CONSTRUCTION COUNTY ROAD 112 (109TH AVENUE NE)</p>
		<p>GRAPHIC SCALE</p> <p>0 HORIZ 50</p> <p>0 VERT 5</p>	<p>CHECKED BY</p>	
		<p>DATE 7/22/85</p>	<p>DRAWN BY MAR</p>	
		<p>FILE NO. AC4566.302</p>		

Proj. No. 84-19-112 Sheet No. 11 of 36 Sheets

COUNTY ROAD 112 (109TH AVENUE NE)

Proj. No.

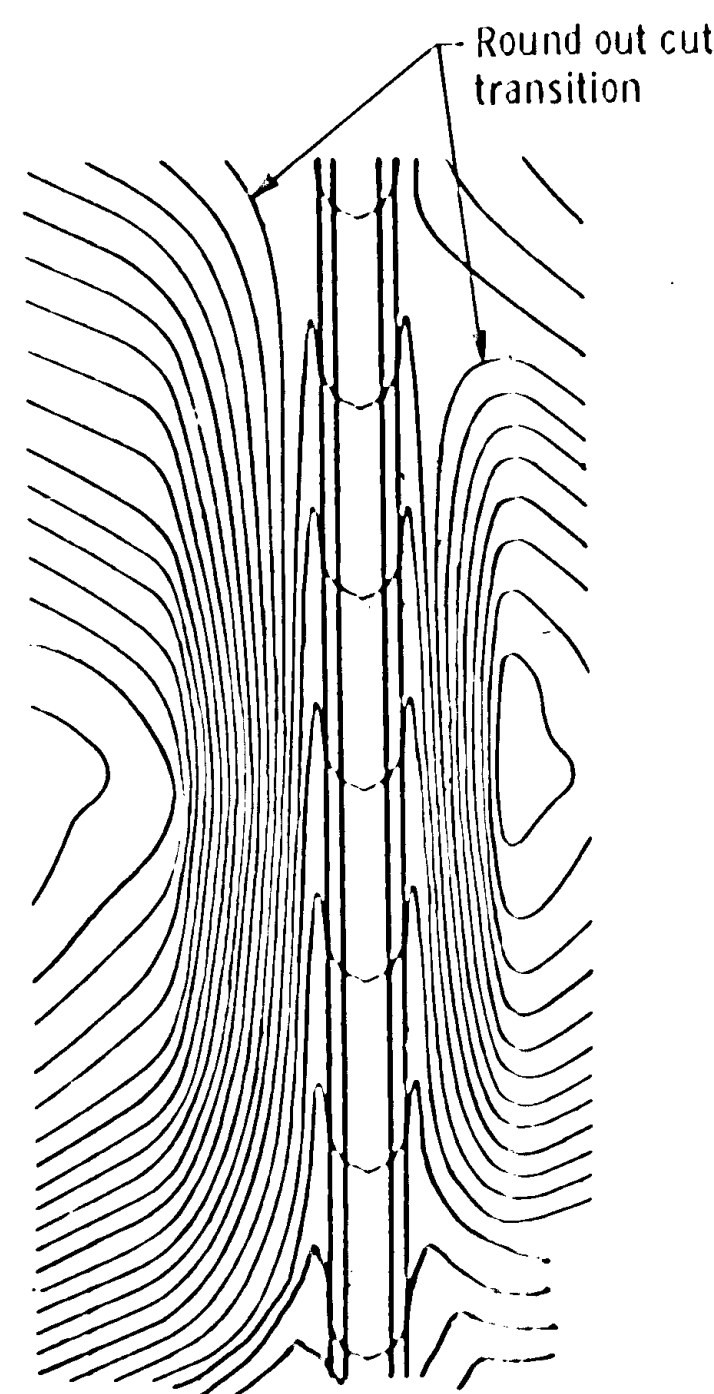


I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer in the State of Minnesota. My registration number is 141324. Date 7/22/85. Min. Reg. No. 2216.

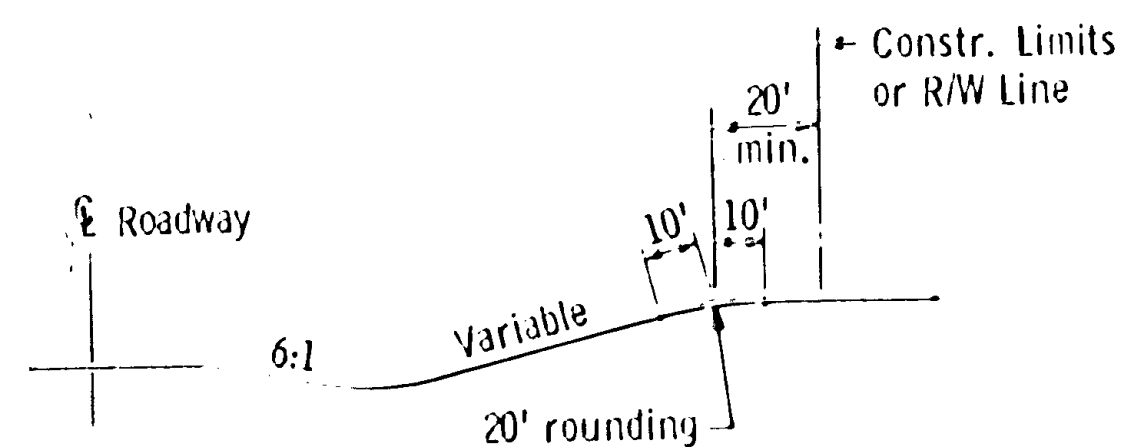
CEJ CONSULTING ENGINEERS DIVERSIFIED, INC.
A CONSULTING COMPANY
Suite 200 • 7200 University Ave. • Minneapolis, MN 55425 • (612) 425-2181

REVISIONS		DESIGNED BY
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1	HORIZ 50	DATE
2	VERT 5	DRAWN BY
		MRJ

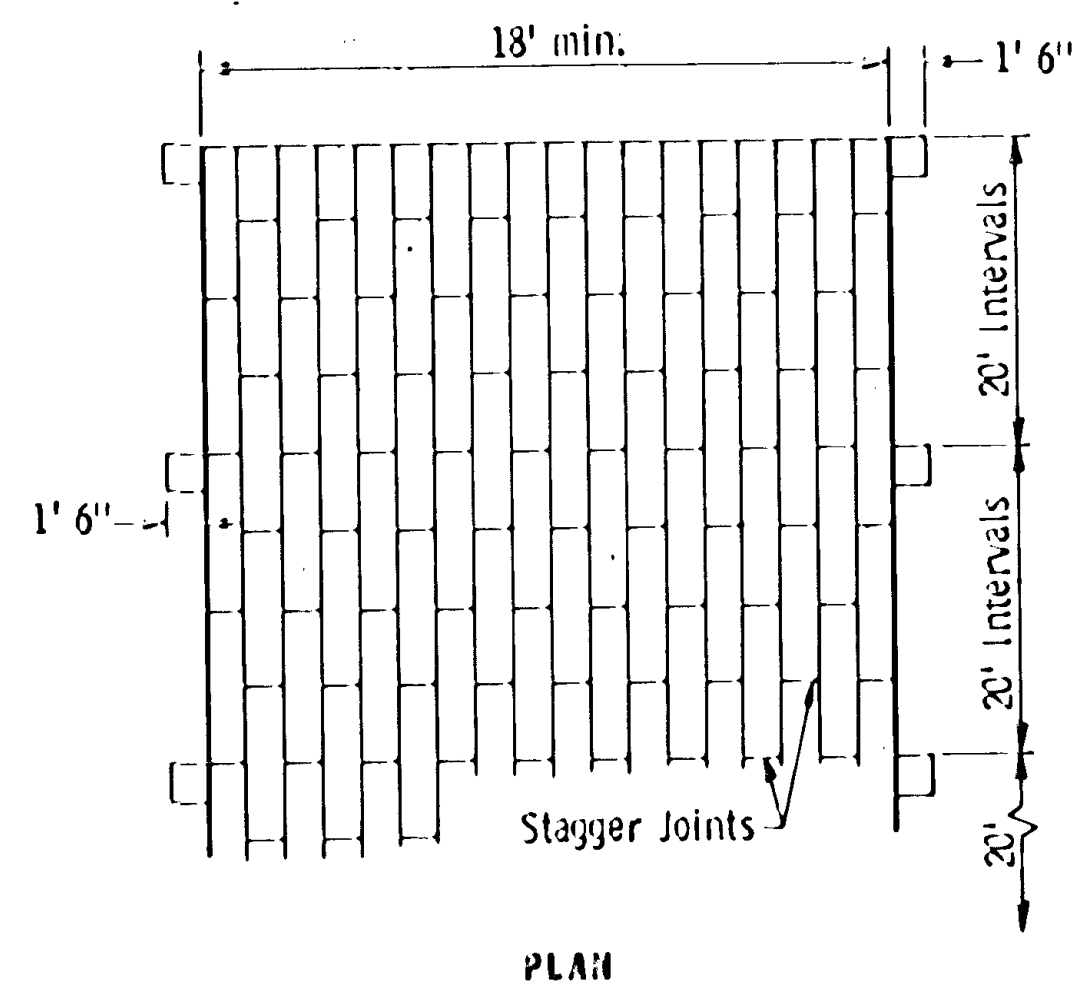
ANOKA COUNTY HIGHWAY DEPT.
STREET CONSTRUCTION
COUNTY ROAD 112 (109TH AVENUE NE)
DATE: JUNE 1985
SHEET 12 OF 31 SHEETS
FILE NO. AC41566-302



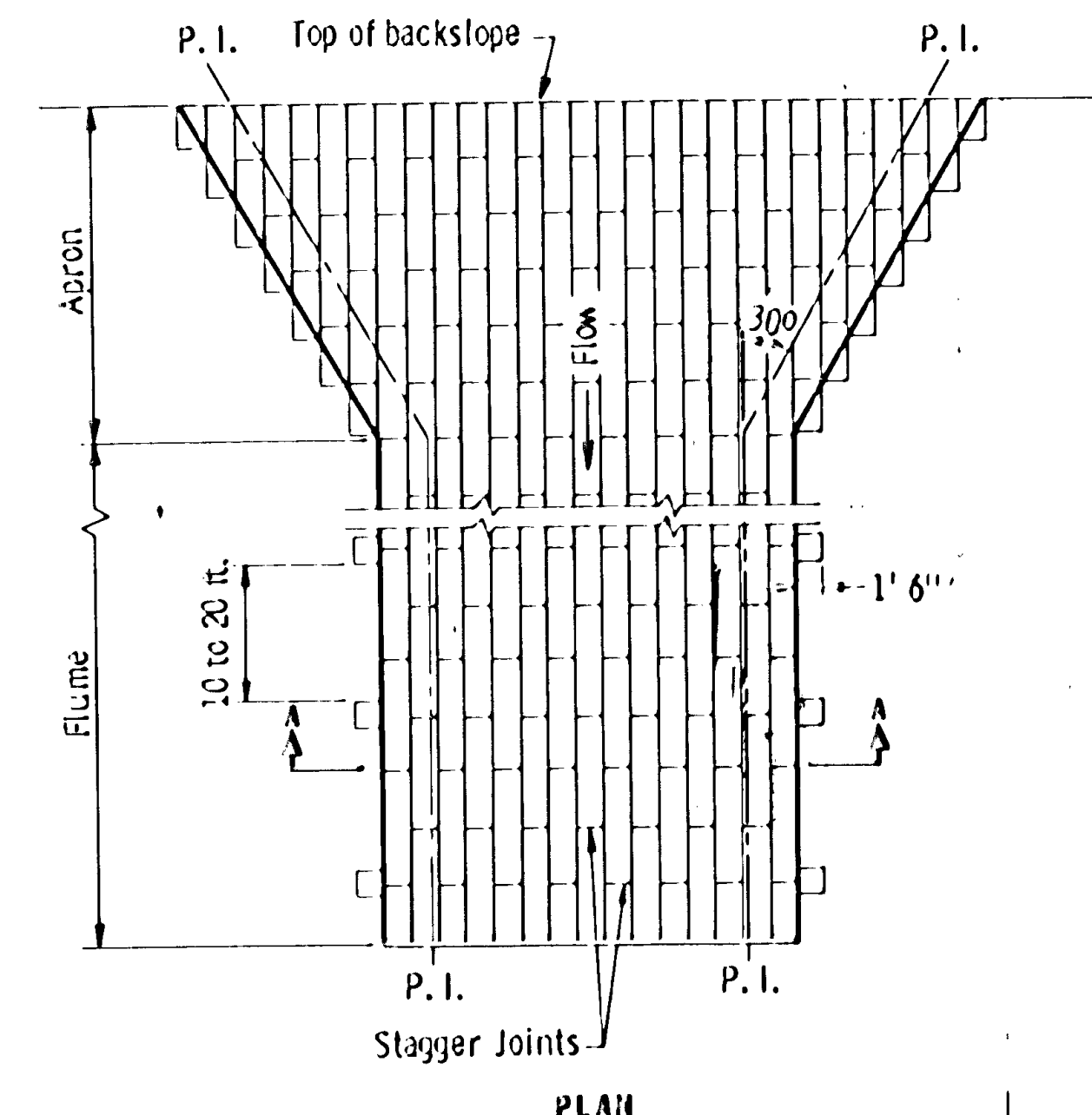
CONTOURING ROAD CUTS



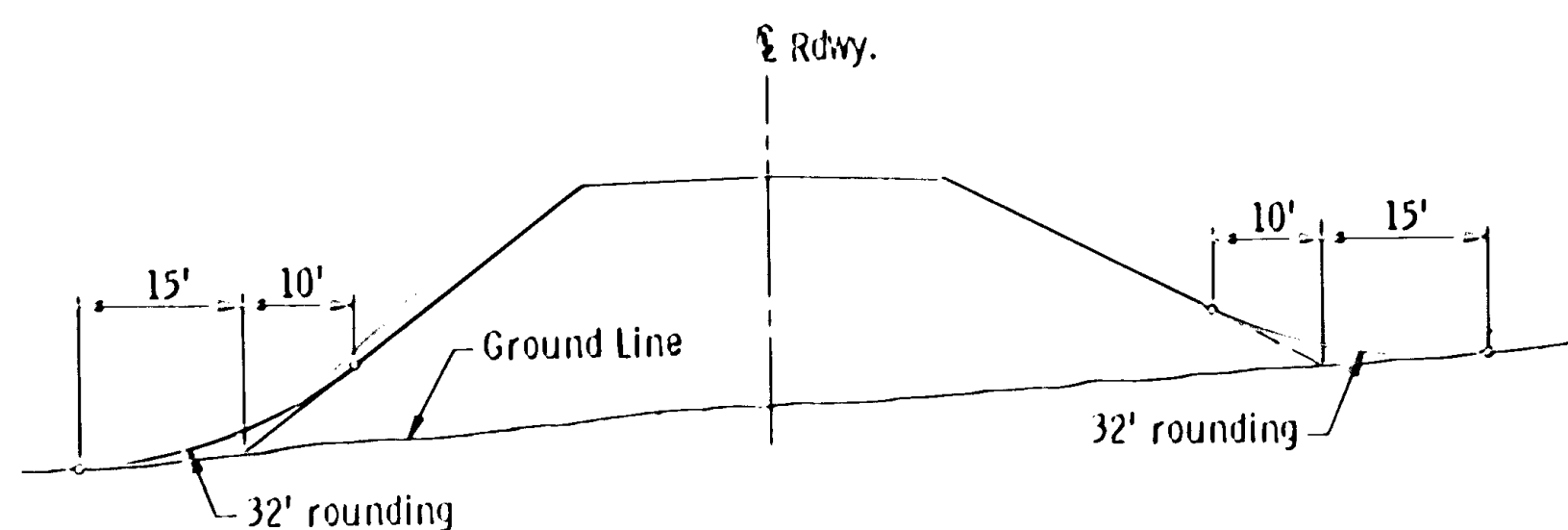
ROUNDING BACK SLOPES



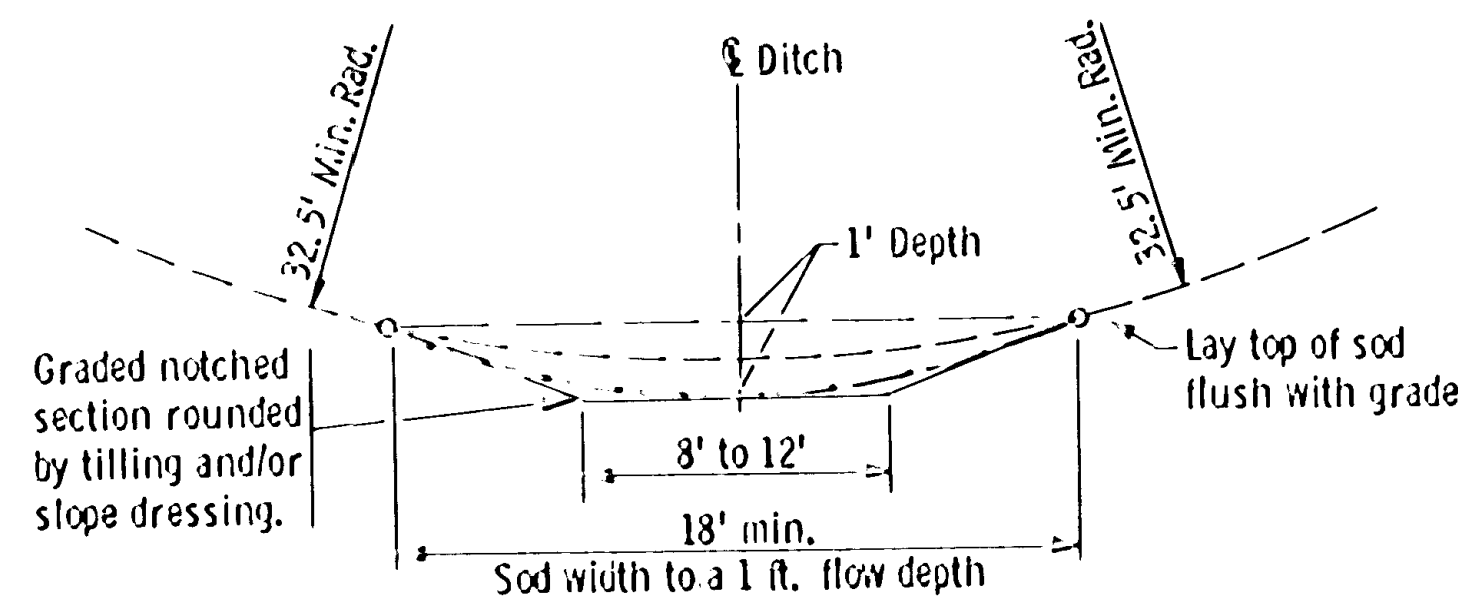
PLAN



PLAN

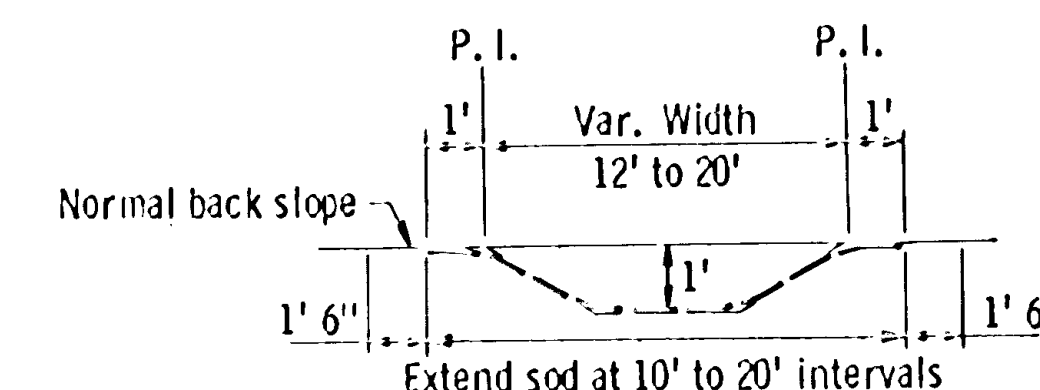


SHAPING FOR DRAINAGE ALONG THE TOE OF FILL SLOPES

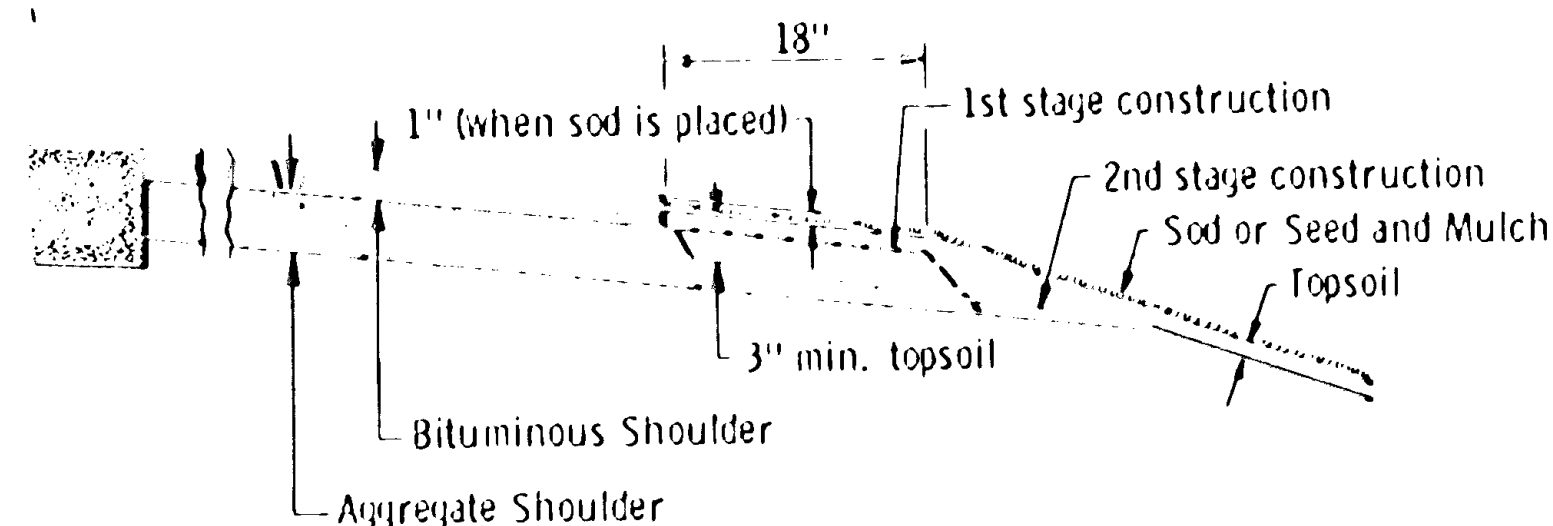


SODDED DITCH CROSS SECTION

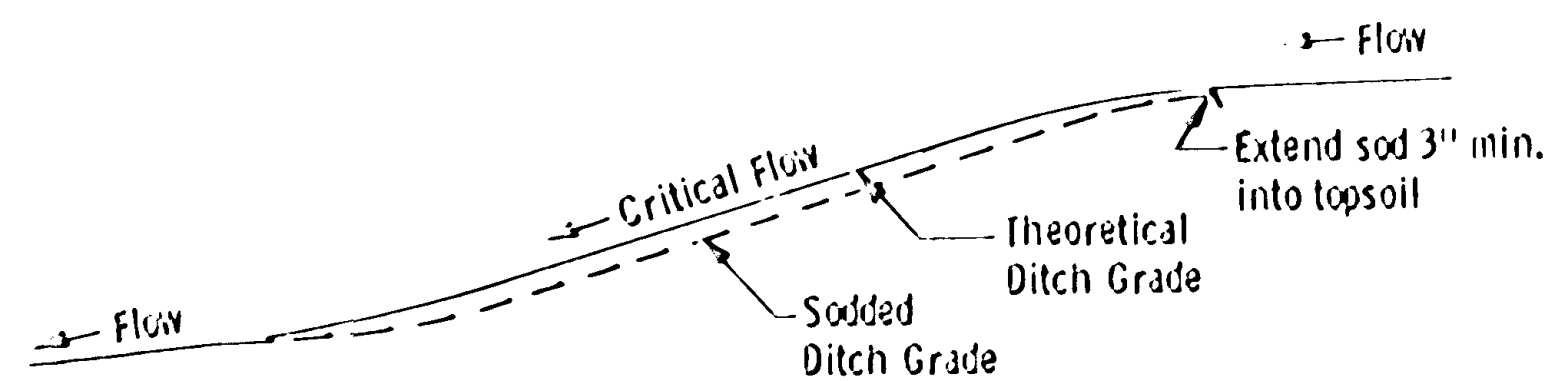
Ditches having a minimum radius of 32.5 feet and requiring sod shall be constructed according to the above details. Where ditch radius is less than 32.5 feet, notching is not required. Sod a minimum of 18 feet in width.



SECTION A-A

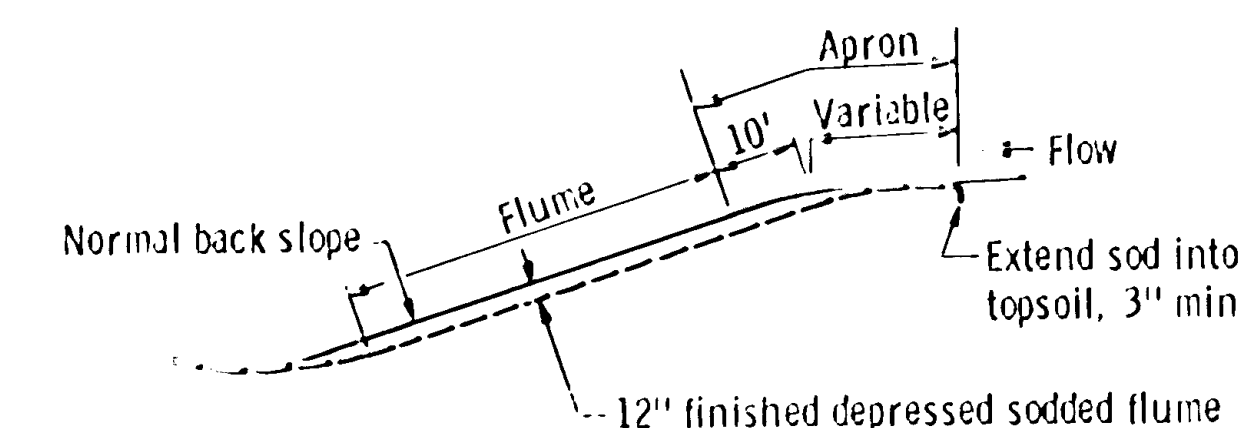


SHAPING AND TOPSOILING INSLOPES



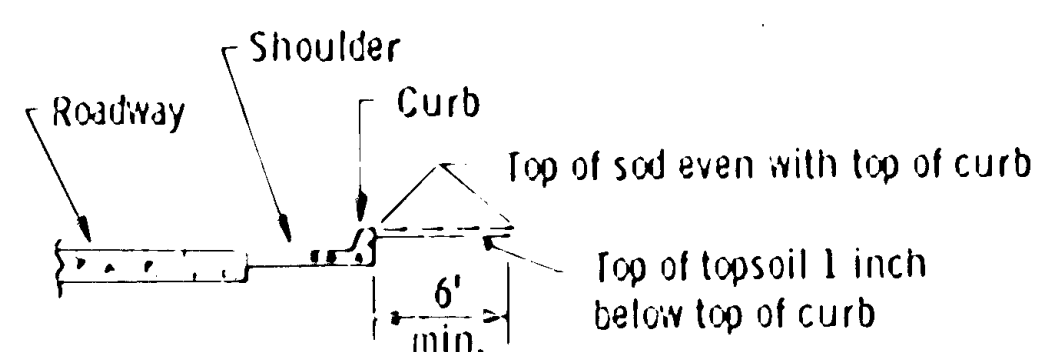
DITCH PROFILE

SODDED DITCH DETAILS



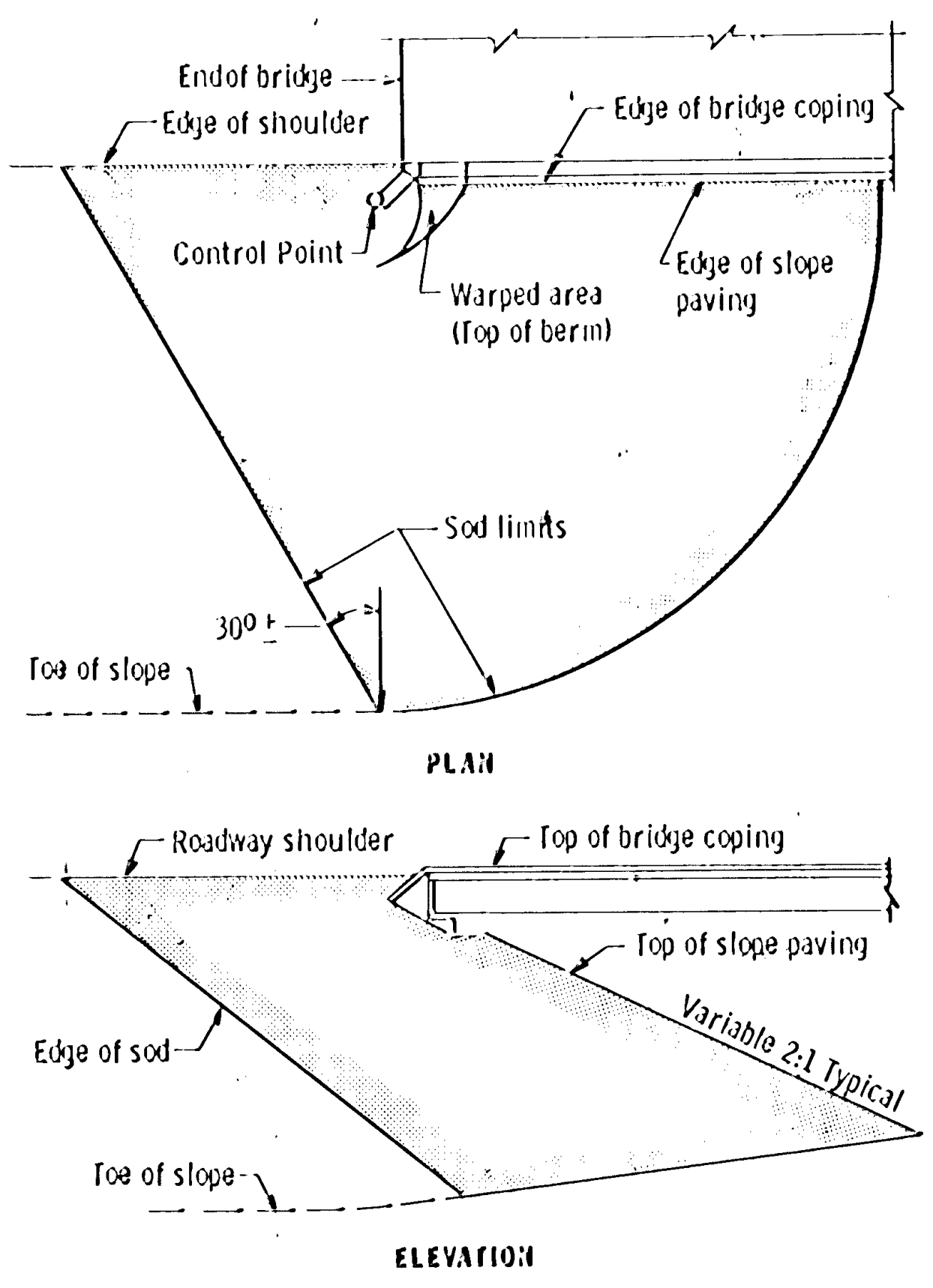
LONGITUDINAL CROSS SECTION

SODDED FLUME DETAILS

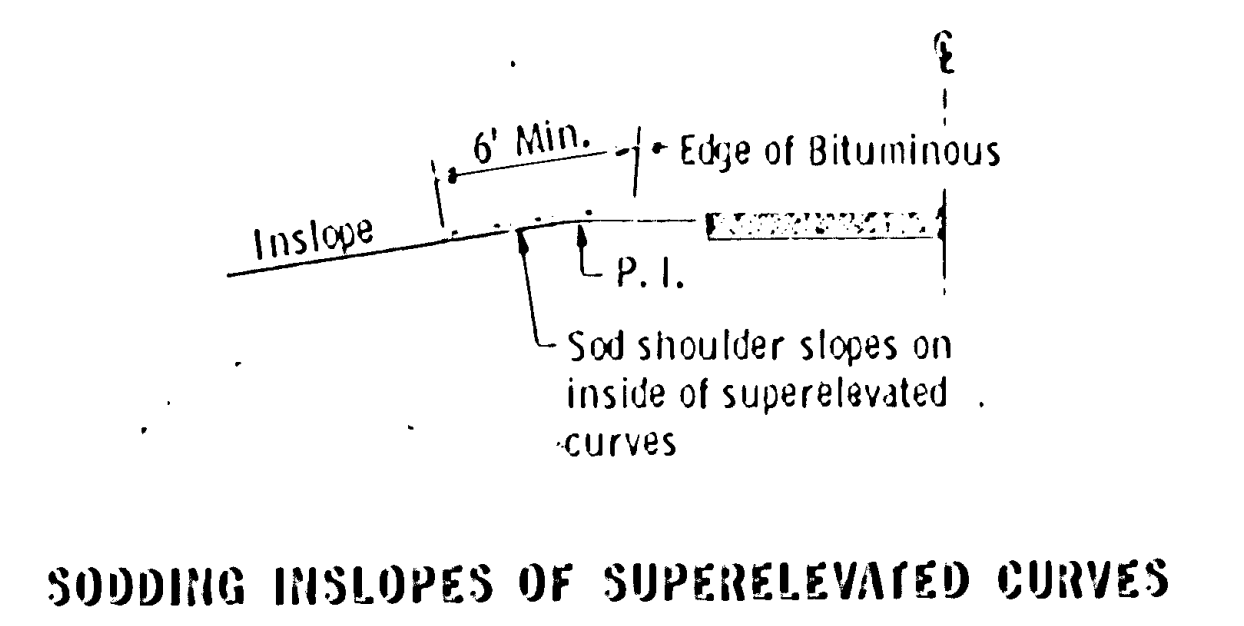


SHAPING ADJACENT TO CURBS WHEN SOD IS PLACED

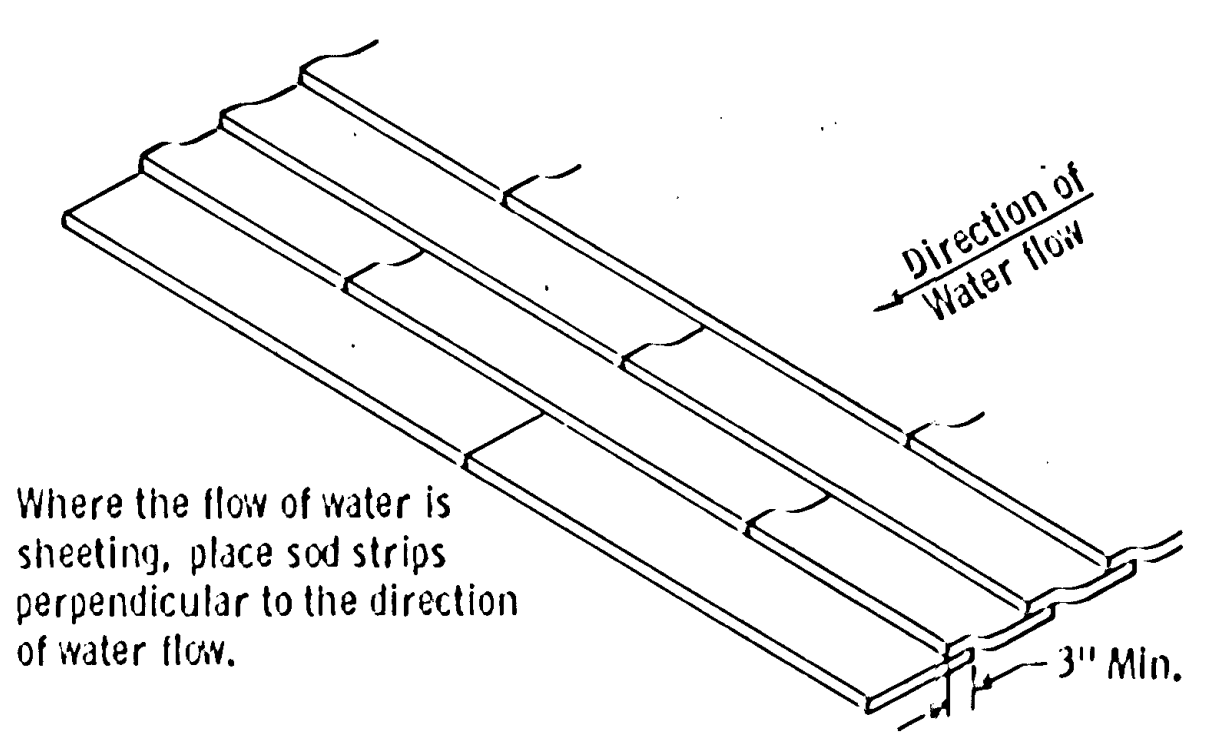
APPROVED, Dec. 17 1976
 Leonard E. Ertle
 Engineering Specialist, Erosion
 MATERIALS RESEARCH AND
 STANDARDS DIVISION



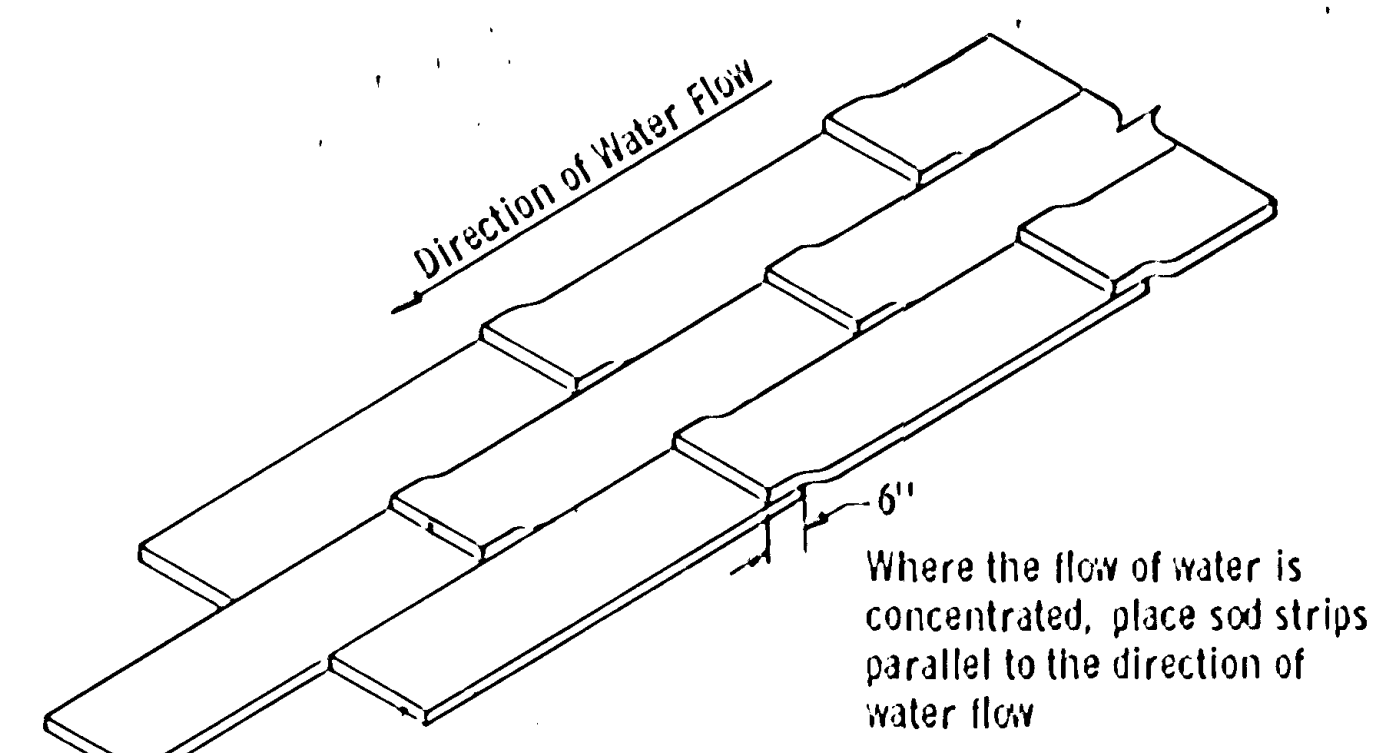
SODDING LIMITS AT BRIDGE APPROACH FILLS



SODDING INSLOPES OF SUPERELEVATED CURVES

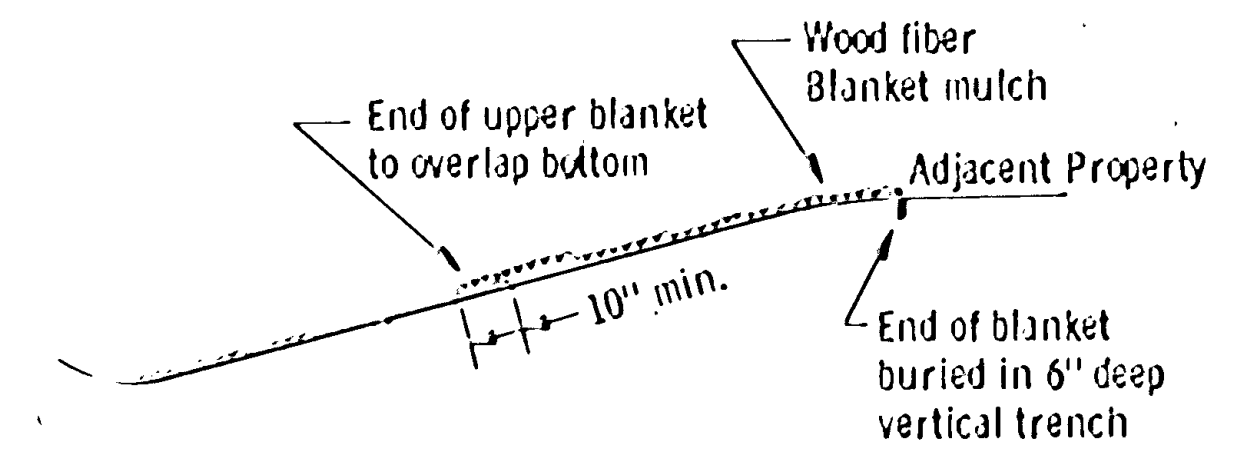


SHINGLING SOD

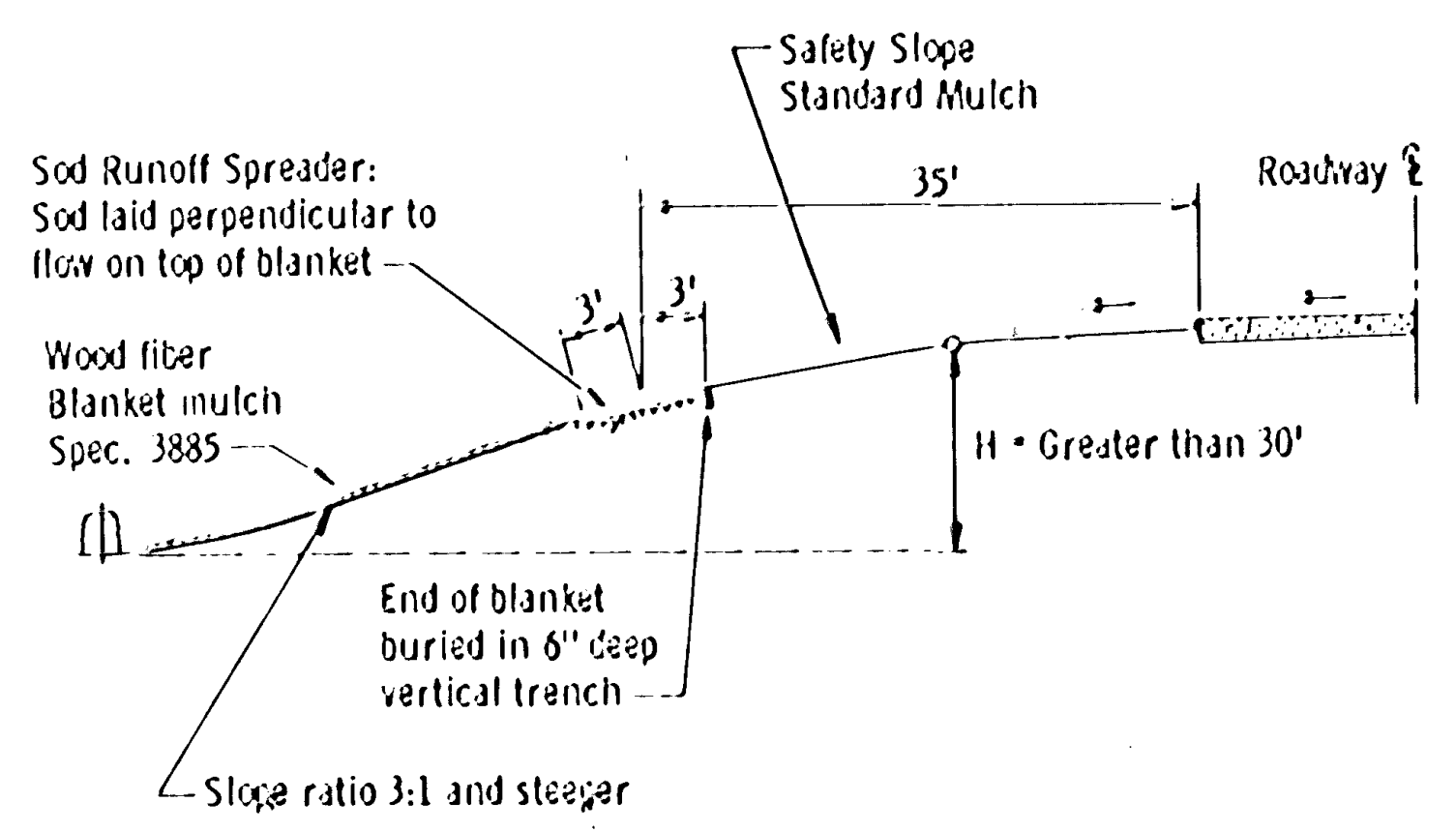


OVERLAPPING SOD

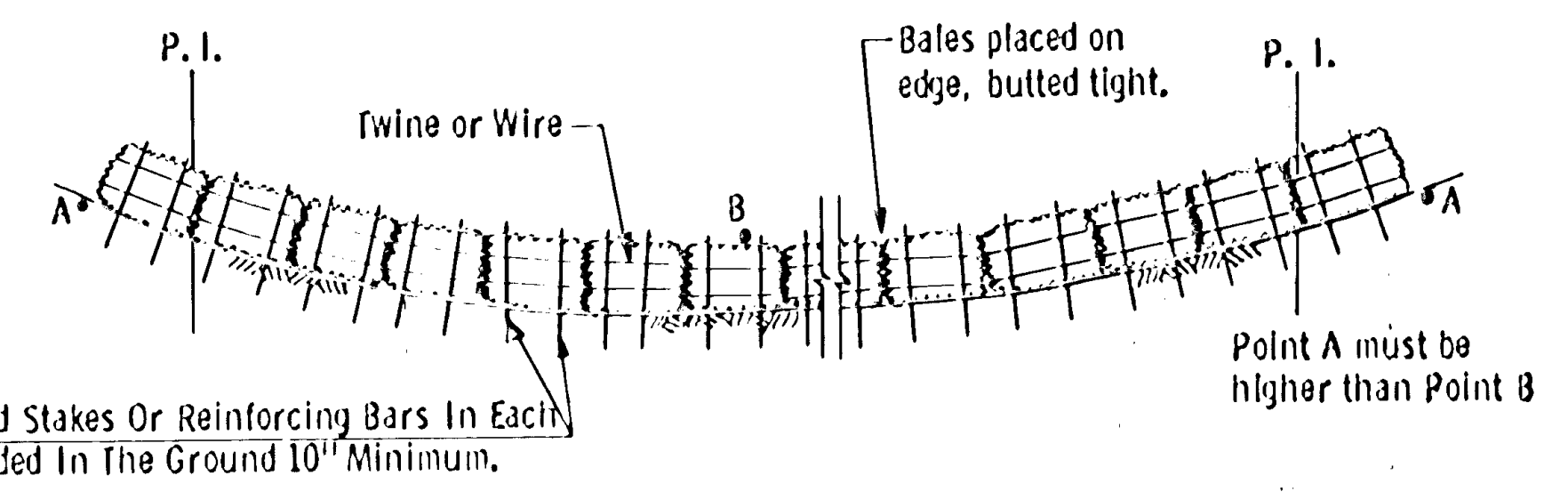
SPECIAL SOD PLACEMENT TECHNIQUES



WOOD FIBER BLANKET INSTALLATION ON A CUT SLOPE (WHEN REQUIRED)

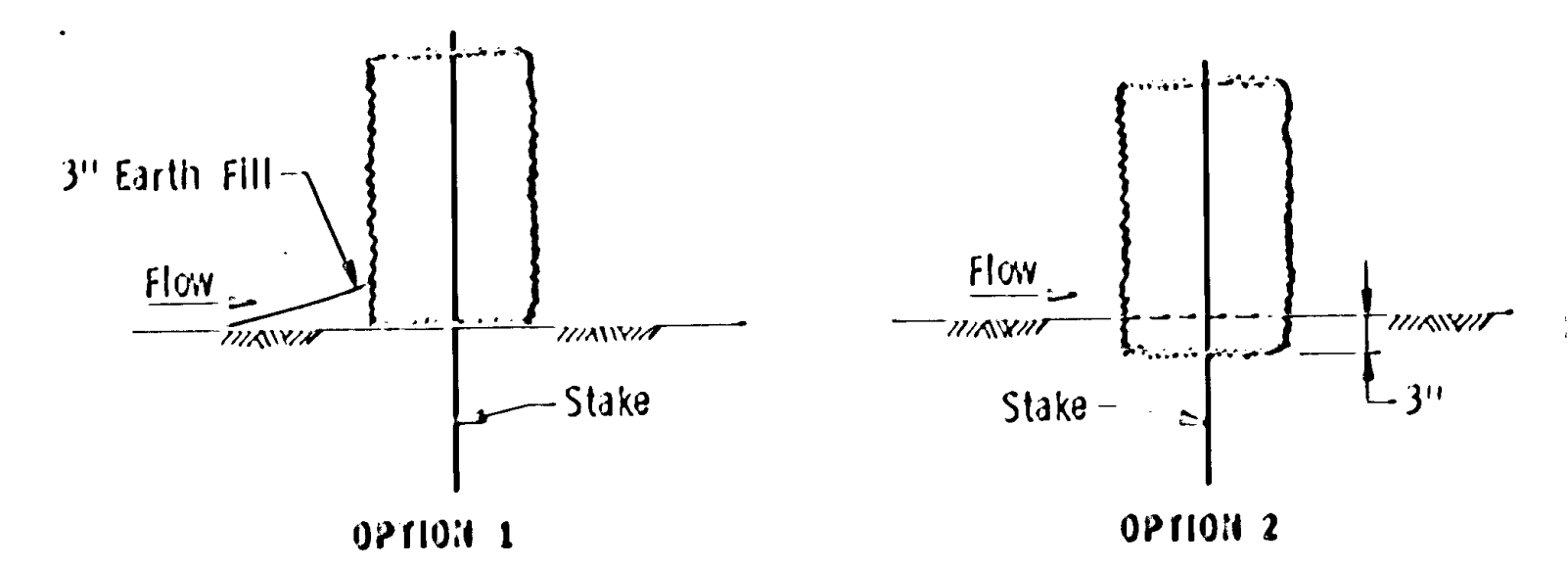


WOOD FIBER BLANKET INSTALLATION ON A SAFETY FILL SLOPE (WHEN REQUIRED)

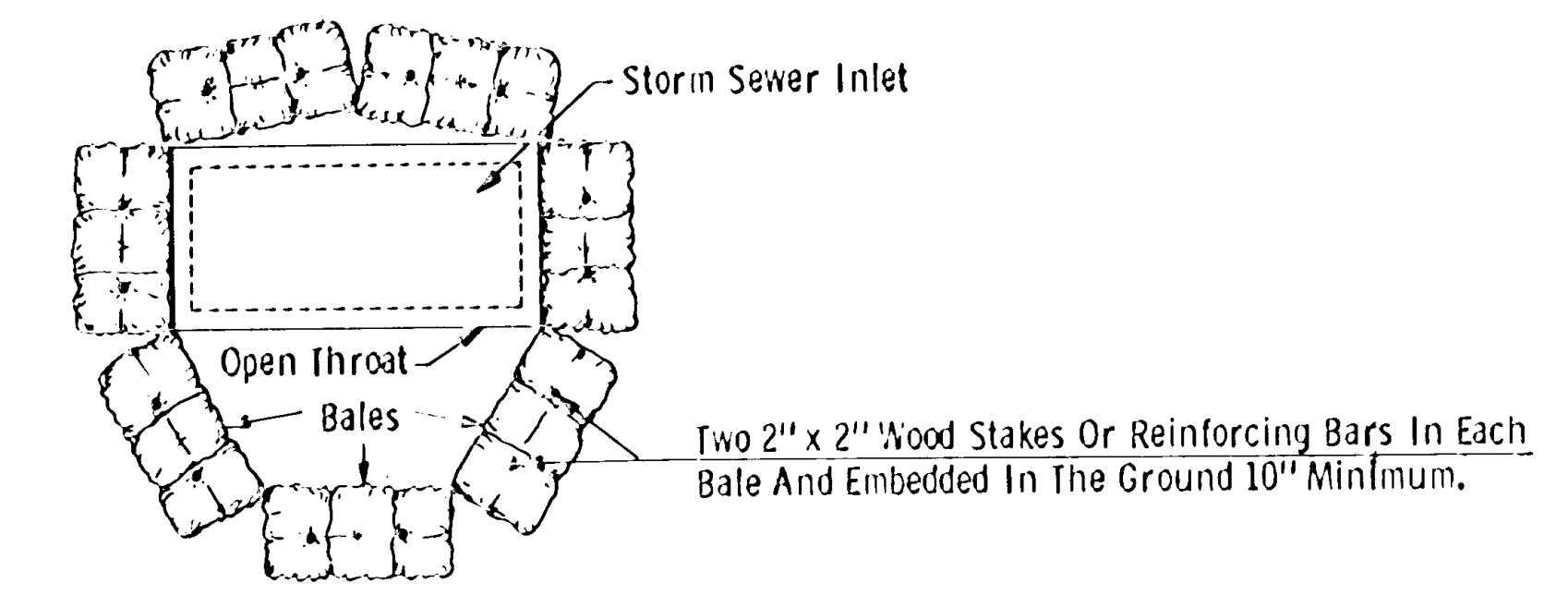


Two 2" x 2" Wood Stakes Or Reinforcing Bars In Each Bale And Embedded In The Ground 10" Minimum.

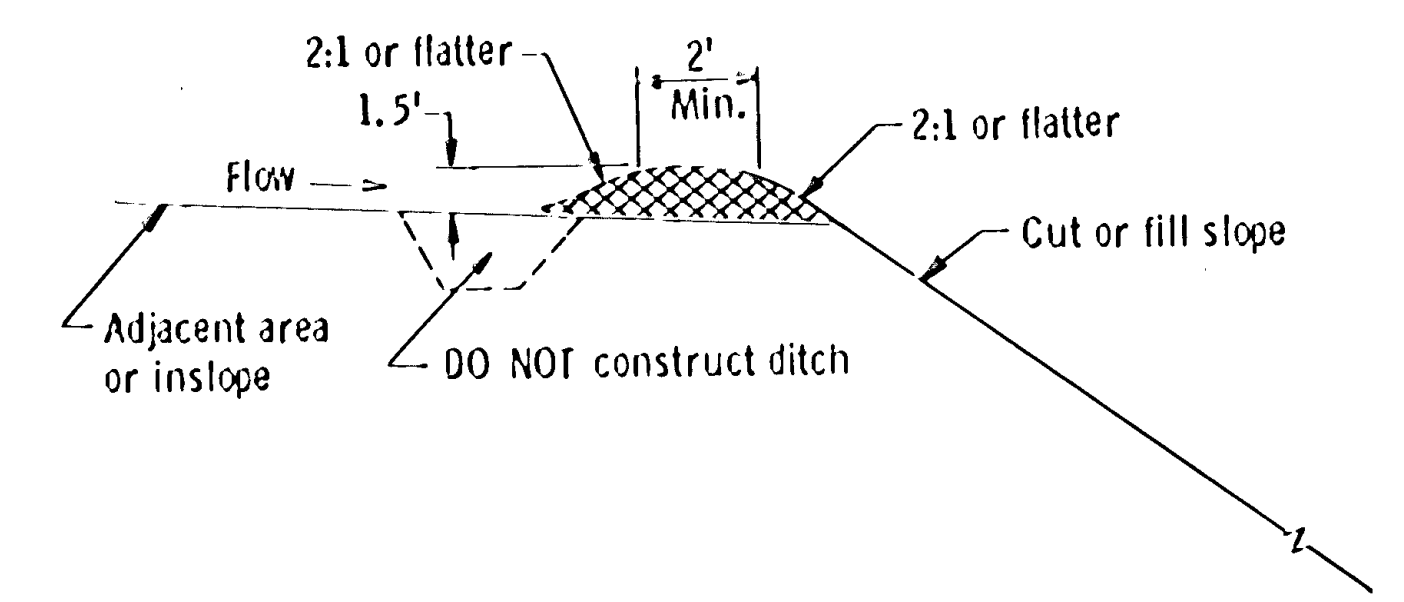
BALE HAY OR STRAW DITCH CHECKS



DITCH CHECK SECTIONS

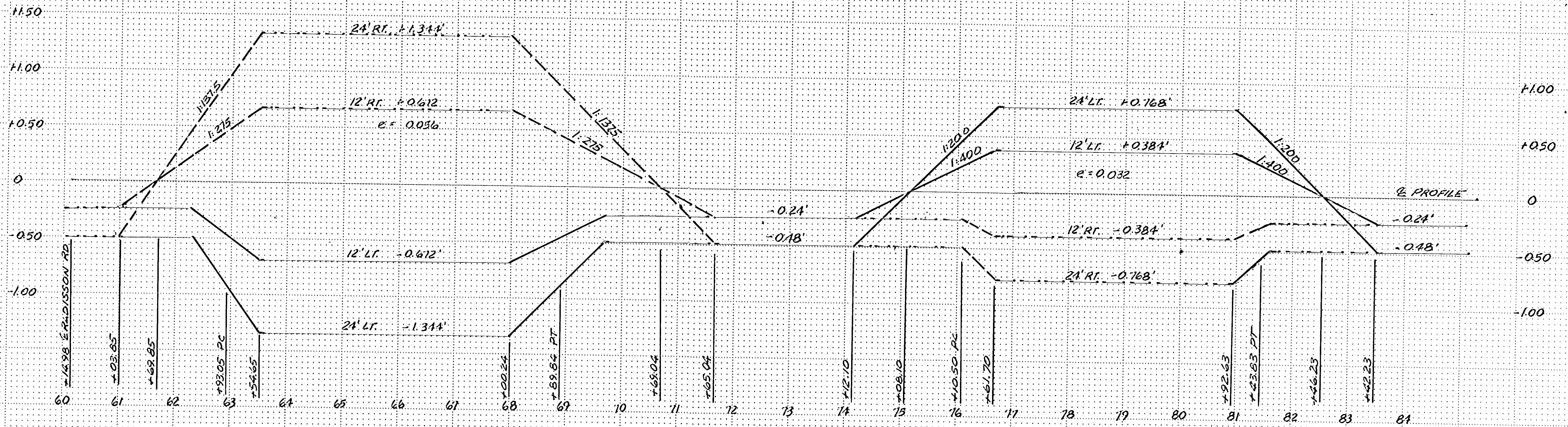


BALE DIVERSION TO PROTECT STORM SEWER INLETS



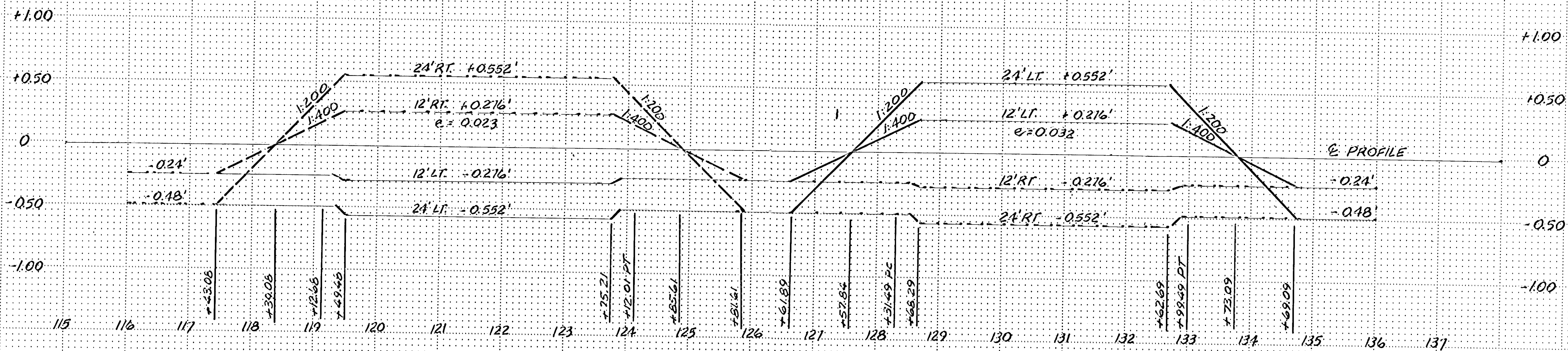
TEMPORARY OR PERMANENT SLOPE PROTECTION DIKE

APPROVED June 18, 1979
 [Signature]
 Director
 ENGINEERING STANDARDS SECTION



CURVE # 1
MAX. SUPER = 0.08

CURVE # 2
MAX. SUPER = 0.08



CURVE # 3
MAX. SUPER = 0.08

CURVE # 4
MAX. SUPER = 0.08

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under State of Minn. Statutes Sections 325.02 to 325.16



CONSULTING ENGINEERS DIVERSIFIED INC.

Engineering Consultants & Land Surveyors

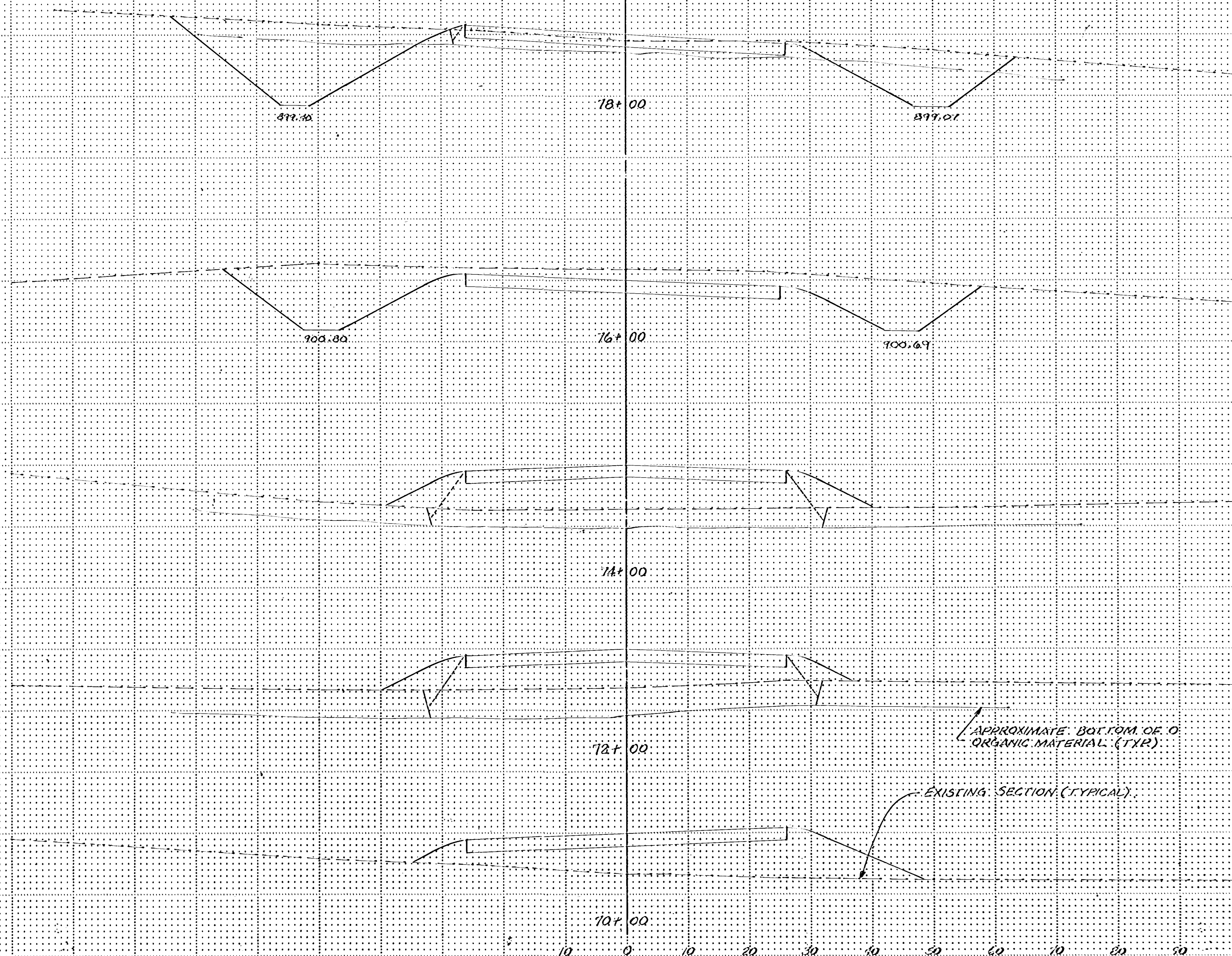
Suite 200
7200 Hennepin Lake North
Maple Grove, MN 55067
(612) 425-2181

REVISIONS		DESIGNED BY
0	HORIZ 100'	
0	VERT 0.5'	

CHECKED BY
DRAWN BY
MRJ

ANOKA COUNTY HIGHWAY DEPT.
SUPERELEVATION
COUNTY ROAD 112 (109TH AVENUE NE)

BK _____ PG _____ DATE JULY 1985 SHEET 15 OF 31 SHEETS FILE NO. AC41566.302



EXCAVATION EMBANKMENT

C: 381
M: 1300
MA: 1500
C: 341

C: 1611
O: 193
OA: 0
CA: 1324

C: 1335
M: 593
MA: 523
C: 1333

C: 126
O: 7
OA: 0
CA: 133

C: 1041
M: 341
MA: 341
C: 1031

C: 854
O: 126
OA: 0
CA: 282

C: 0
M: 863
MA: 863
C: 0

C: 1122
O: 330
OA: 0
CA: 1133

C: 0
M: 522
MA: 522
C: 0

C: 1481
O: 104
OA: 0
CA: 1525

C: 174
M: 0

C: 307
O: 52

APPROXIMATE BOTTOM OF ORGANIC MATERIAL (TYR)

EXISTING SECTION (TYPICAL)

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer in the State of Minnesota.
Date: 7/22/85
Reg. No. 7716

CEI CONSULTING ENGINEERS DIVERSIFIED INC.
A Diversified Company
5000 7200 Hennepin Ave. Minneapolis, MN 55425

DESIGNED BY	PERSONS
CHECKED BY	GRAPHIC SCALE
DRAWN BY	SCALE 1" = 20'
DATE	DATE 7/22/85

ANOKA COUNTY HIGHWAY DEPT.
CROSS SECTIONS
COUNTY ROAD 112 (109TH AVENUE NE)

EX. CASE NO. 112 SHEET 17 OF 31 SHEETS FILE NO. AC 91566.302

Fed. Proj. No.

EXCAVATION EMBANKMENT

C: 461
M: 685
MA: 685
C: 461

C: 983
O: 101
OA: 0
CA: 1210

905

900

C: 461
M: 0
MA: 0
C: 461

C: 910
O: 0
OA: 0
CA: 910

905

900

C: 0
M: 118
MA: 118
C: 0

C: 2214
O: 141
OA: 0
CA: 2415

905

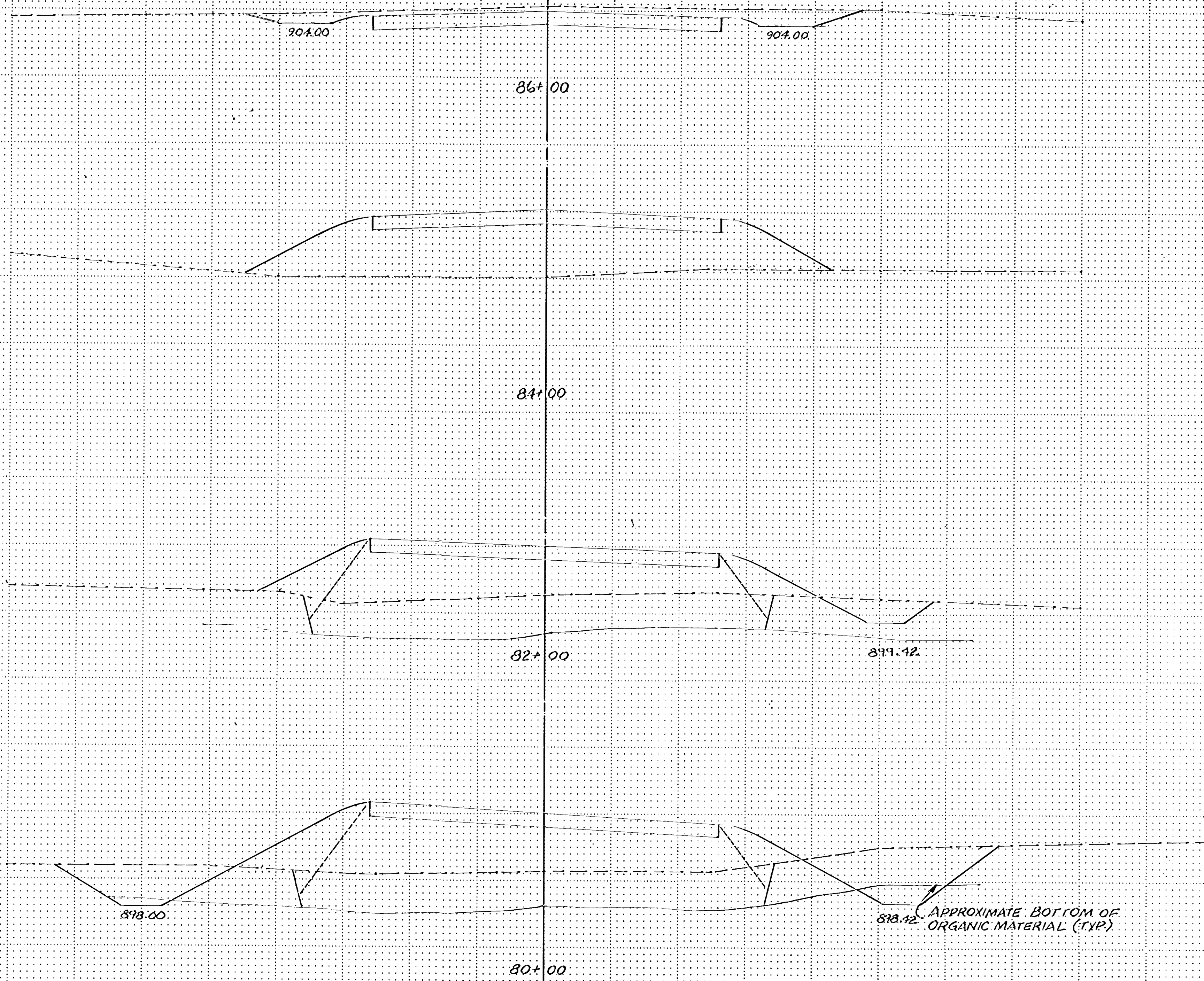
900

C: 31
M: 1656
MA: 1656
C: 31

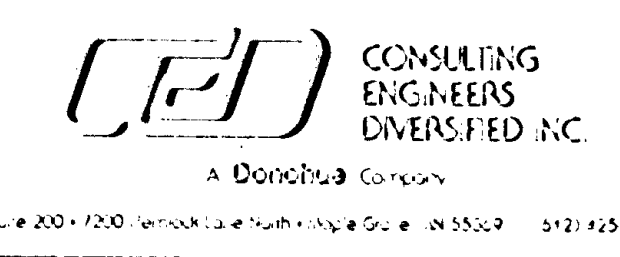
C: 2189
O: 326
OA: 0
CA: 3115

905

900



I hereby certify that this plan, specification or report 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: 7/22/85 Reg. No. 7116.

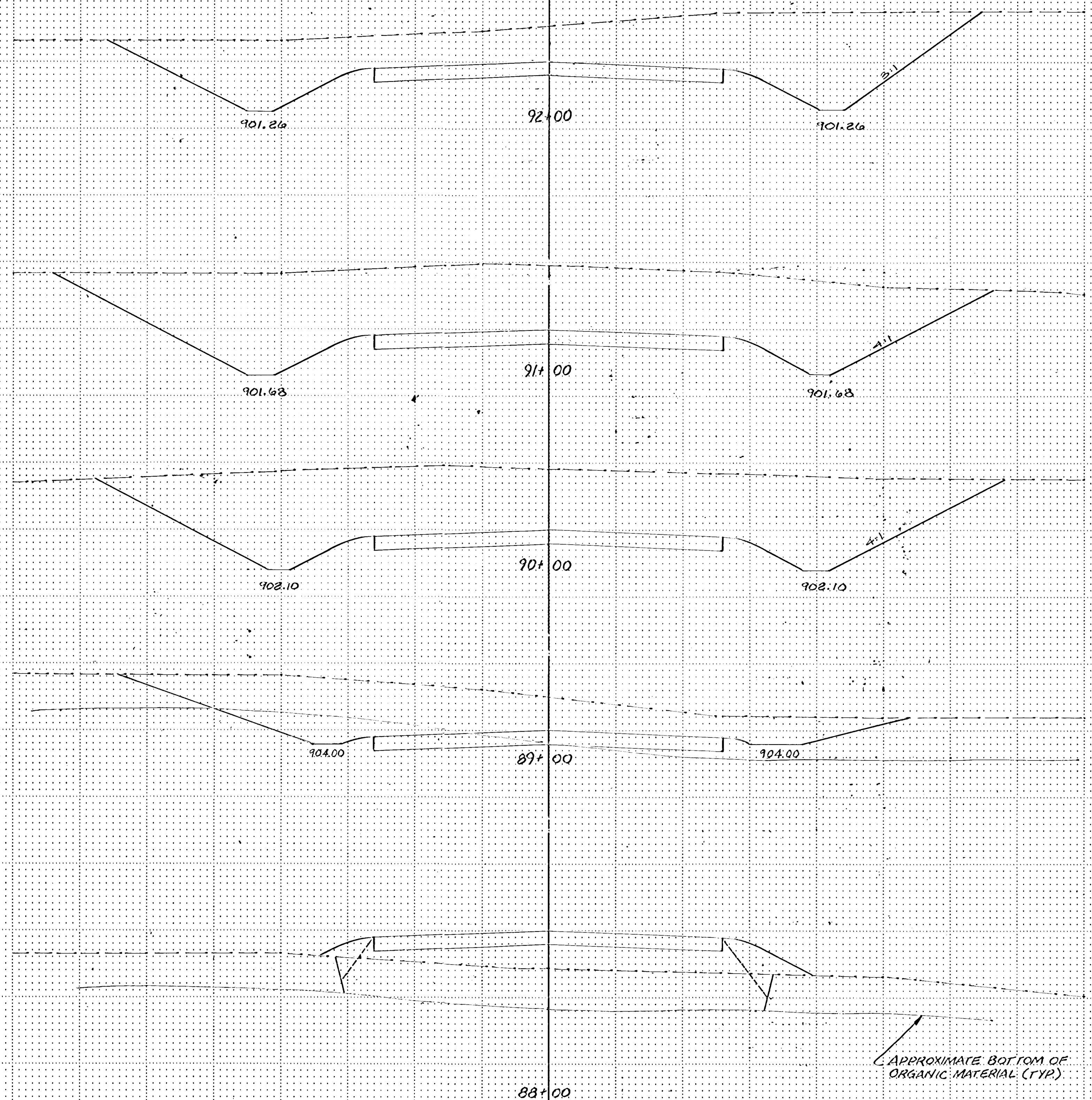


DESIGNED BY	
CHECKED BY	
DRAWN BY	MAJ
DATE	MAY 1985

ANOKA COUNTY HIGHWAY DEPT.
 CROSS SECTIONS
 COUNTY ROAD 112 (109TH AVENUE NE)
 SHEET 18 OF 31 SHEETS FILE NO. AC11560-302

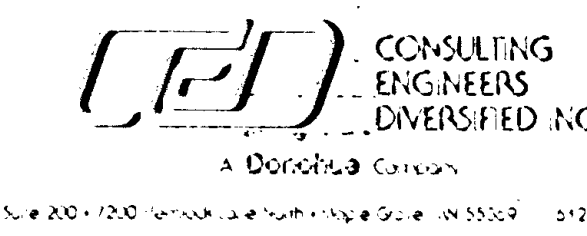
Proj. No. 84-19-112

Sheet No. 18 of 36 Sheets



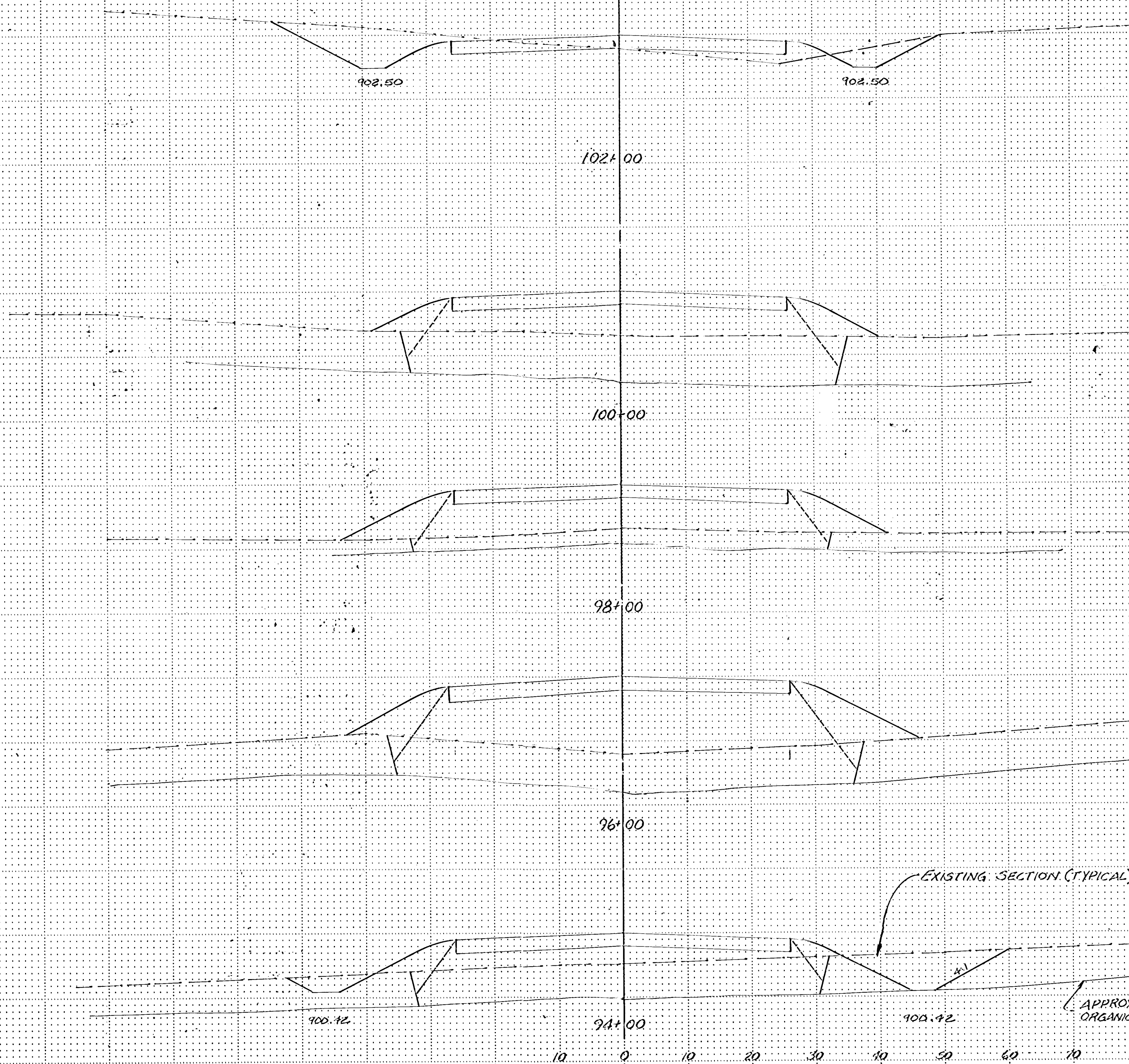
EXCAVATION	EMBANKMENT	
		910
		905
C- 2311 M- 0 MA- 0 C- 2,311	C- 0 O- 0 OA- 0 CA- 0	910
		905
		910
		905
C- 2626 M- 0 MA- 0 C- 2626	C- 0 O- 0 OA- 0 CA- 0	910
		905
		910
		905
C- 1463 M- 615 MA- 615 C- 1463	C- 31 O- 0 OA- 0 CA- 31	910
		905
		910
		905
C- 183 M- 951 MA- 951 C- 183	C- 513 O- 54 OA- 0 CA- 561	905
		900

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer in the State of North Carolina.
 Date: 7/22/85
 No. 7716



DESIGNED BY	
CHECKED BY	
DRAWN BY	MRJ

ANOKA COUNTY HIGHWAY DEPT.
 CROSS SECTIONS
 COUNTY ROAD 112 (109TH AVENUE NE)
 DATE: JUL 1985 SHEET 19 OF 31 SHEETS FILE NO. AC41566.302



EXCAVATION	EMBANKMENT
C- 2515	C- 56
M- 0	O- 0
MA- 0	OA- 0
C- 2515	CA- 56

C- 311	O- 1359
M- 885	O- 156
MA- 885	OA- 0
C- 311	CA- 1315

C- 0	C- 2126
M- 1174	O- 348
MA- 1174	OA- 0
C- 0	CA- 2114

C- 0	C- 2530
M- 1076	O- 454
MA- 1076	OA- 0
C- 0	CA- 2482

C- 0	C- 2522
M- 1631	O- 389
MA- 1631	OA- 0
C- 0	CA- 2411

MA- 330	OA- 0
C- 1930	CA- 731
C- 1930	C- 615
M- 830	O- 122

<p>I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly registered Professional Engineer under the State of Minnesota.</p> <p><i>[Signature]</i></p> <p>Date: 7/22/85 Reg. No. 7726</p>	<p>CEI CONSULTING ENGINEERS DIVERSIFIED INC.</p> <p>A Donohue Company</p> <p>100-100 Industrial Avenue, Suite 100, St. Paul, MN 55107 612-251-5151</p>	REVISIONS	DESIGNED BY	<p>ANOKA COUNTY HIGHWAY DEPT.</p> <p>CROSS SECTIONS</p> <p>COUNTY ROAD 112 (109TH AVENUE NE)</p>
		GRAPHIC SCALE	CHECKED BY	
		1" = 10'		
		1" = 5'		
DATE	FILE NO.	SHEET	OF	SHEETS
7/22/85	JUNE 1985	20	31	FILE NO. AC41566.302

EXCAVATION EMBANKMENT

NOTE:
DONOT EXCAVATE MUCK FROM STA. 110+00
TO STA. 178+00. FOR ALTERNATE BID.

C= 0
M= 954
MA= 0
CA= 0
C= 16.11
O= 254
CA= 0
CA= 178K
900

C= 0
M= 963
MA= 763
C= 0
C= 11.14
O= 210
CA= 0
CA= 20.17
905

C= 148
M= 333
MA= 333
C= 148
C= 826
O= 154
CA= 0
CA= 745
905

C= 2452
M= 0
MA= 0
C= 2752
C= 0
O= 0
CA= 0
CA= 0
905

ALTERNATE BID: PROVIDE FILTER FABRIC
FROM STATION 110+00 TO
STATION 178+00 FULL WIDTH.

APPROXIMATE BOTTOM OF
ORGANIC MATERIAL.

I hereby certify that this plan, specification
or report was prepared by me or under my direct
supervision and that I am a duly Registered
Professional Engineer in the State of
Illinois, License No. 123456.
Date: 7/22/85
Reg. No. 2216



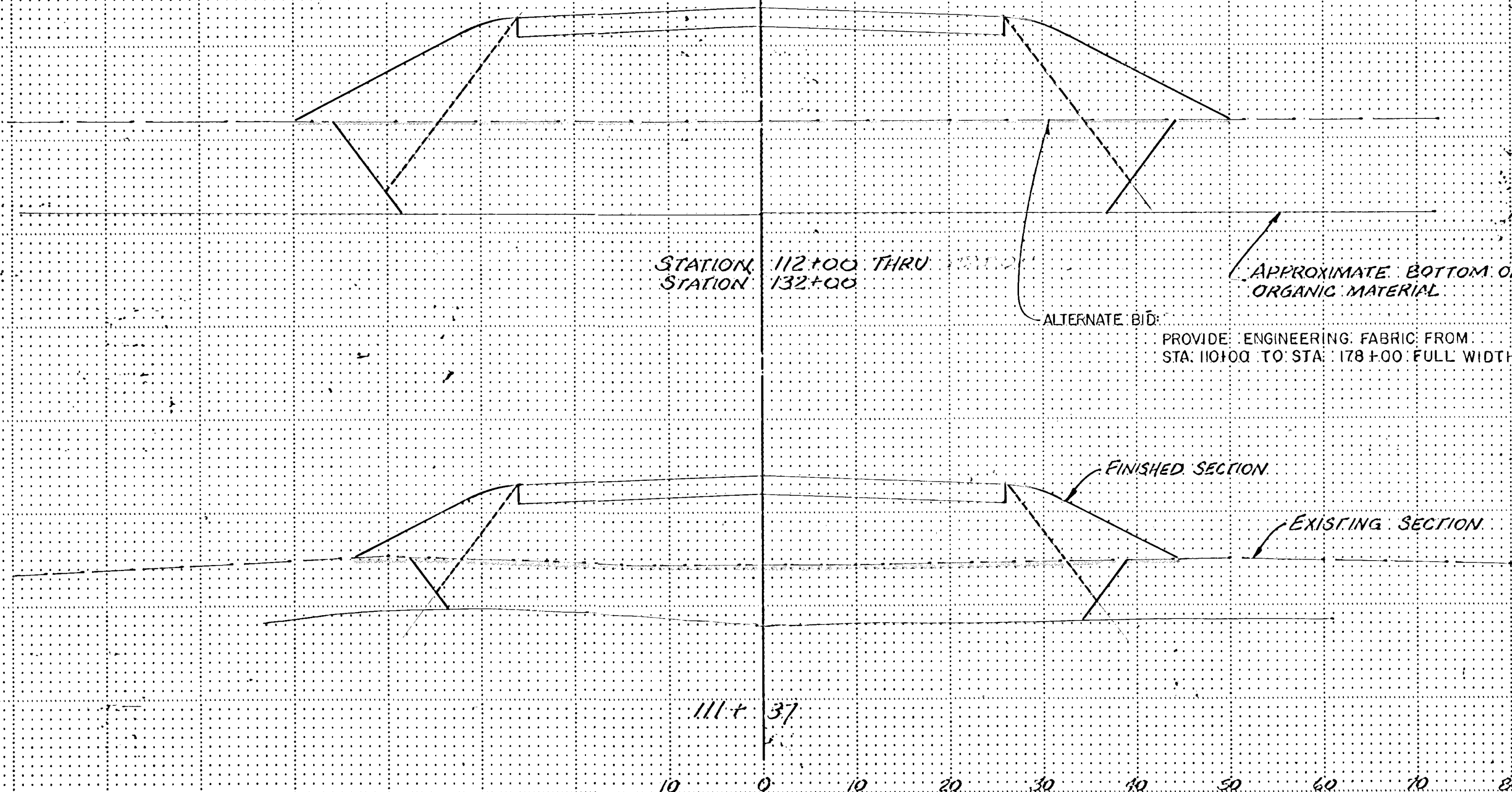
DESIGNED BY
CHECKED BY
DRAWN BY
MRJ

ANOKA COUNTY HIGHWAY DEPT.
CROSS SECTIONS
COUNTY ROAD 112 (109TH AVENUE NE)
DATE: JUNE 1985
SHEET 21 OF 31
SPECS FILE NO. AC 41560.302

EXCAVATION	EMBANKMENT
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NOTE:
DONOT EXCAVATE MUCK FROM
STA: 110+00 TO STA: 178+00.
FOR ALTERNATE BID.

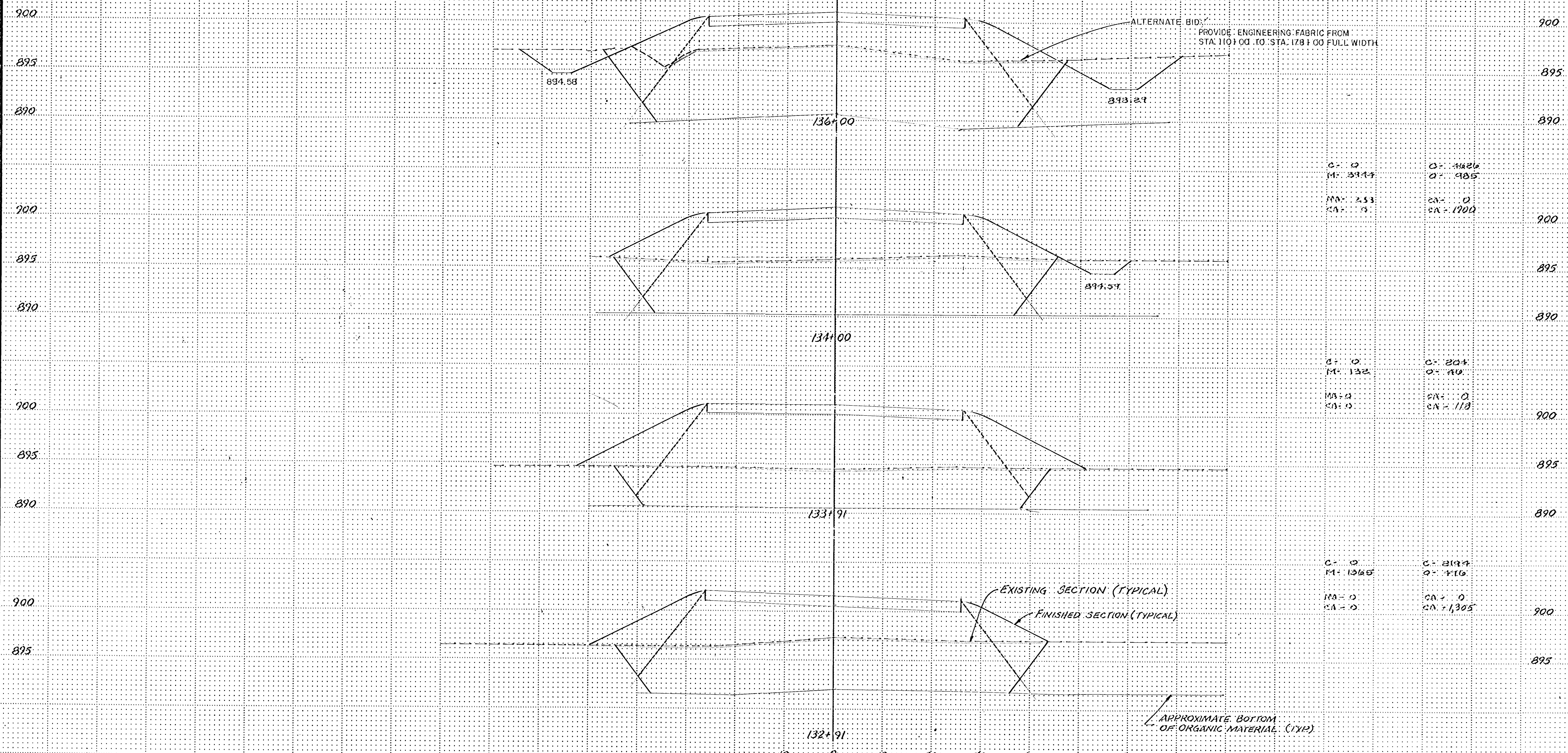
C= 0	C= 2064	
M= 1363	O= 428	
MA= 0	PA= 0	
CA= 0	CA= 1131	
C= 0	C= 40,518	900
M= 29,704	O= 10,519	
MA= 0	PA= 0	
C= 0	CA= 27,332	895
C= 0	C= 1231	905
M= 108	O= 250	
MA= 0	PA= 0	
CA= 0	CA= 119	900
		895



<p>I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the State of Michigan, License No. 2716.</p> <p><i>[Signature]</i> Date: 7/22/85</p>	<p>CD CONSULTING ENGINEERS DIVERSIFIED INC. A Donohue Company S. W. 200 - 7000 Lakeside Drive, Suite 100, Grand Rapids, MI 49502 513-4252-01</p>	DESIGNED BY	<p>ANOKA COUNTY HIGHWAY DEPT. CROSS SECTIONS COUNTY ROAD 112 (109TH AVENUE NE)</p>
		CHECKED BY	
		CRAWN BY	
		DATE	
<p>GRAPHIC SCALE HORIZ 1" = 20' VERT 1" = 5'</p>		<p>DATE: JUNE 1985 SHEET: 22 OF 31 SHEETS FILE NO: AC 41566-302</p>	

NOTE:
 DONOT EXCAVATE MUCK FROM
 STA. 110+00 TO STA. 178+00
 FOR ALTERNATE BID.

EXCAVATION	EMBANKMENT
C= 0 M= 3974 MA= 0 CA= 0	C= 4615 O= 196 MA= 0 CA= 1327
C= 0 M= 3974 MA= 253 CA= 0	C= 4826 O= 485 MA= 0 CA= 1700
C= 0 M= 132 MA= 0 CA= 0	C= 204 O= 40 MA= 0 CA= 118
C= 0 M= 1565 MA= 0 CA= 0	C= 2194 O= 416 MA= 0 CA= 1305



ALTERNATE BID:
 PROVIDE ENGINEERING FABRIC FROM
 STA. 110+00 TO STA. 178+00 FULL WIDTH

EXISTING SECTION (TYPICAL)
 FINISHED SECTION (TYPICAL)

APPROXIMATE BOTTOM
 OF ORGANIC MATERIAL (TYP)

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly registered Professional Engineer in the State of Minn. State Sec. 230.01, subd. 1, par. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100. Date: 7/21/85 Min. Reg. No. 2116	CONSULTING ENGINEERS DIVERSIFIED INC. A Donohue Company 200-1200 Hennepin Ave. Suite 1555 St. Paul, MN 55102	REVISIONS _____ _____ _____	DESIGNED BY _____ CHECKED BY _____ DRAWN BY MRJ	ANOKA COUNTY HIGHWAY DEPT. CROSS SECTIONS COUNTY ROAD 112 (107TH AVENUE NE)
		GRAPHIC SCALE 1" = 40' HORIZ 1" = 5' VERT	SA 0000, 10 LEAF, DATE JUNE 1985, SHEET 23 OF 31 SHEETS, FILE NO. AC-11566-302	

NOTE:
DONOT EXCAVATE MUCK FROM
STA. 110+00 TO 178+00 FOR
ALTERNATE BID

EXCAVATION	EMBANKMENT
C = 0 M = 3104 MA = 1035 CA = 0	C = 1152 O = 1674 OA = 0 CA = 2351

ALTERNATE BID:
PROVIDE ENGINEERING FABRIC FROM
STA. 110+00 TO 178+00 FULL WIDTH

APPROXIMATE BOTTOM OF ORGANIC MATERIAL (TYP)

C = 0 M = 4314 MA = 1031 CA = 0	C = 6610 O = 1330 OA = 0 CA = 2162
--	---

C = 31 M = 3378 MA = 1040 CA = 37	C = 1514 O = 131 OA = 0 CA = 2763
--	--

C = 31 M = 3130 MA = 652 CA = 37	C = 1393 O = 630 OA = 0 CA = 2250
---	--

EXISTING SECTION (TYPICAL)

FINISHED SECTION (TYPICAL)

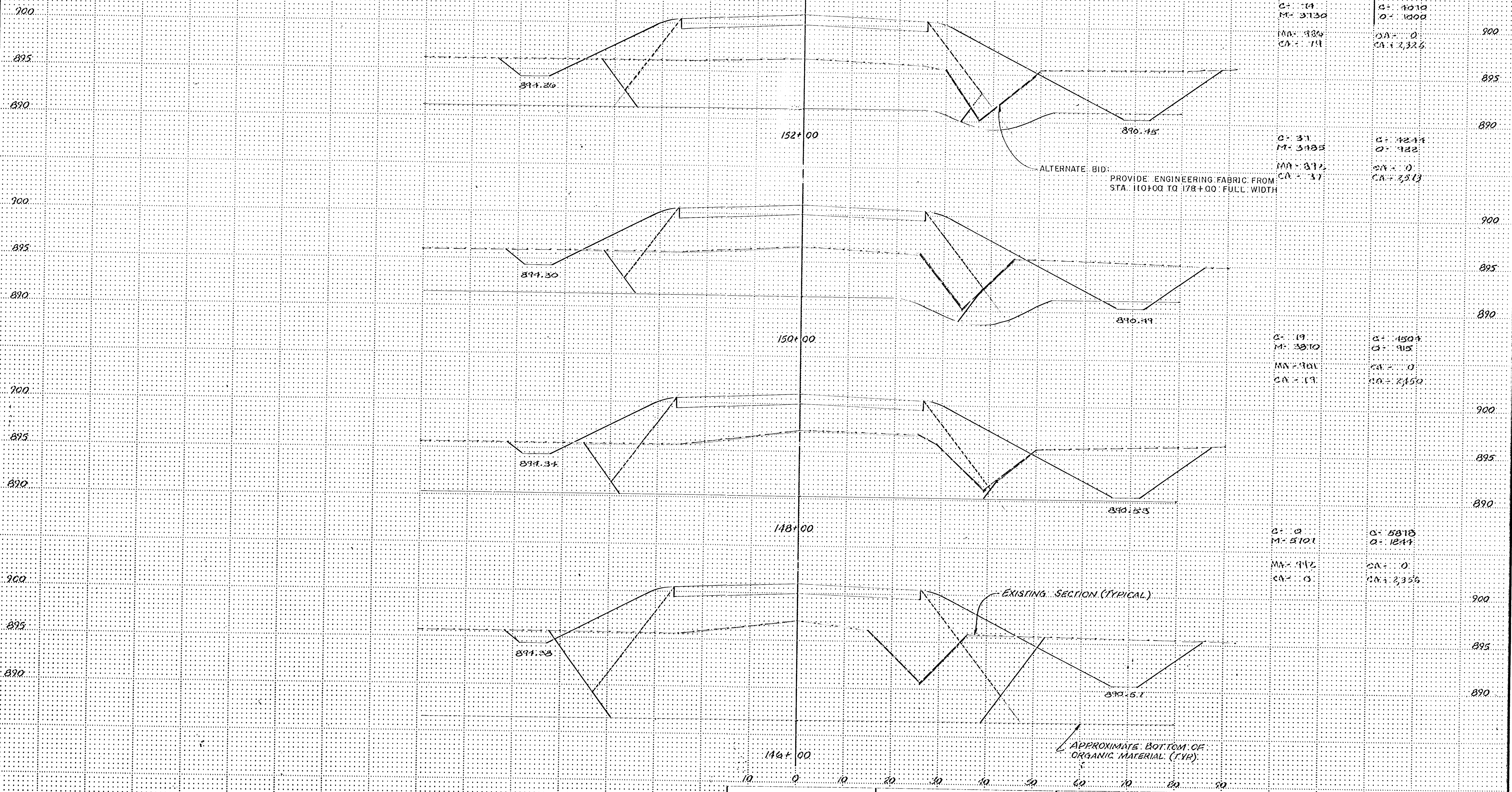
I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer in the State of Minn. State License No. 12577, Exp. 12/31/16.
Date 7/22/85 Min. Reg. No. 2716.



REVISIONS		DESIGNED BY
GRAPHIC SCALE	1" = 40'	
1	VERT 5'	CHECKED BY
2	VERT 5'	DRAWN BY

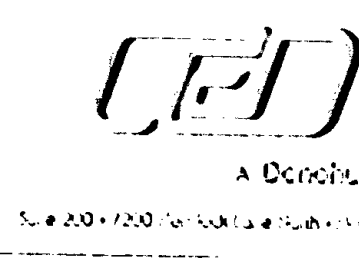
ANOKA COUNTY HIGHWAY DEPT.
CROSS SECTIONS
COUNTY ROAD 112 (109TH AVENUE NE)
DATE: JUNE 1985 SHEET 24 OF 31 SHEETS FILE NO. AC41566302

NOTE:
DO NOT EXCAVATE MUCK FROM
STA. 110+00 TO 178+00 FOR ALTERNATE BID.



EXCAVATION	EMBANKMENT	
C = 14 M = 3130 MA = 986 CA = 14	C = 1010 O = 1000 CA = 0 CA = 2,326	900
C = 31 M = 3185 MA = 972 CA = 37	C = 1211 O = 122 CA = 0 CA = 2,513	890
C = 19 M = 3810 MA = 901 CA = 19	C = 1504 O = 915 CA = 0 CA = 2,150	900
C = 0 M = 5101 MA = 912 CA = 0	C = 5818 O = 1847 CA = 0 CA = 2,356	890

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer in the State of Michigan.
Date 7/22/85
Page 10 of 116



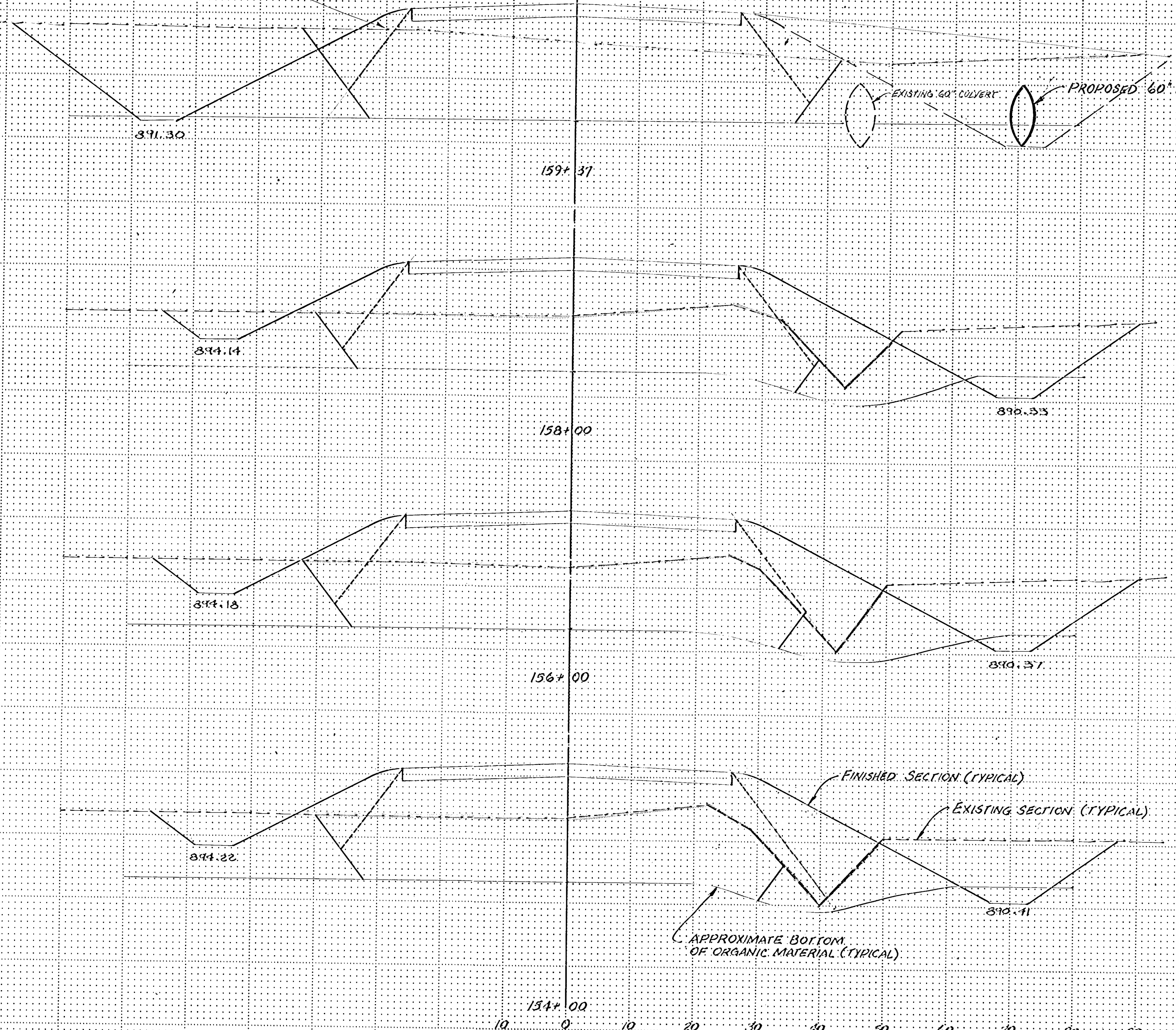
DESIGNED BY	CHECKED BY
GRAPHIC SCALE	DATE
1" = 10'	7/22/85
DATE	BY
7/22/85	MJR

ANOKA COUNTY HIGHWAY DEPT.
CROSS SECTIONS
COUNTY ROAD 112 (107TH AVENUE NE)
DATE 7/22/85 SHEET 25 OF 31 SHEETS FILE NO. AC 1566.302

ALTERNATE BID
 PROVIDE ENGINEERING FABRIC FROM
 STA. 110+00 TO 178+00 FULL WIDTH

NOTE:
 DO NOT EXCAVATE MUCK FROM
 STA. 110+00 TO 178+00 FOR
 ALTERNATE BID

Excavation	EMBANKMENT	
C = 4.4 M = 16.1 MA = 3.75 CA = 1.1	C = 12.31 O = 19.7 CA = 0 CA = 7.26	900
		895
		890
C = 10.9 M = 35.04 MA = 13.31 CA = 10.1	C = 25.88 O = 50.1 CA = 0 CA = 7.81	900
		895
		890
C = 13.5 M = 38.22 MA = 10.57 CA = 13.3	C = 37.55 O = 10.57 CA = 0 CA = 7.037	900
		895
		890
C = 10.4 M = 33.34 MA = 10.15 CA = 10.11	C = 33.93 O = 10.00 CA = 0 CA = 2.012	900
		895
		890



I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer in the State of Minnesota.

[Signature]
 Date 7/23/85 Reg. No. 17716

CEI CONSULTING ENGINEERS DIVERSIFIED INC.
 A Donohue Company
 5400-1200 WINDYBUSH BLVD. SUITE 100 WISCONSIN 53212-1251

DESIGNED BY	MRJ
CHECKED BY	MRJ
DATE	JUNE 1985

ANOKA COUNTY HIGHWAY DEPT.
 CROSS SECTIONS
 COUNTY ROAD 112 (109TH AVENUE NE)

DATE: JUNE 1985 SHEET 26 OF 31 SHEETS FILE NO. AC 91566302

900
895
890
900
895
890
900
895
890
900
895
890

ALTERNATE BID
PROVIDE ENGINEERING FABRIC FROM
STA. 110+00 TO 178+00 FULL WIDTH

NOTE
DO NOT EXCAVATE MUCK FROM
STA. 110+00 TO 178+00 FOR
ALTERNATE BID

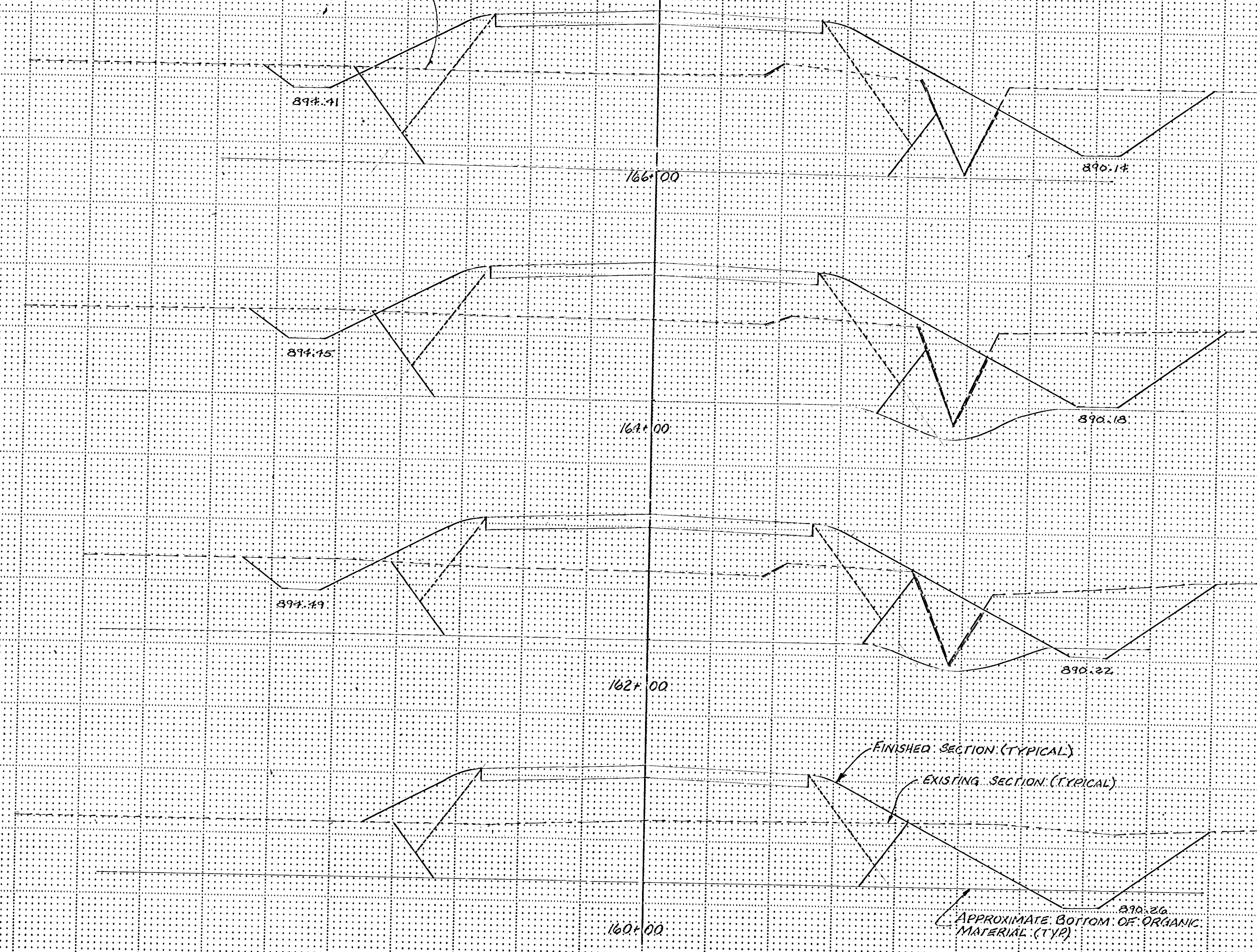
Excavation Embankment

C: 0
M: 5615
MA: 1150
CA: 0
C: 5430
O: 1289
CA: 0
CA: 2,315

C: 0
M: 5525
MA: 1112
CA: 0
C: 5400
O: 1211
CA: 0
CA: 2,198

C: 22
M: 4737
MA: 912
CA: 22
C: 4570
O: 981
CA: 0
CA: 1,126

C: 89
M: 3948
MA: 1071
CA: 28
C: 4052
O: 793
CA: 0
CA: 1,262

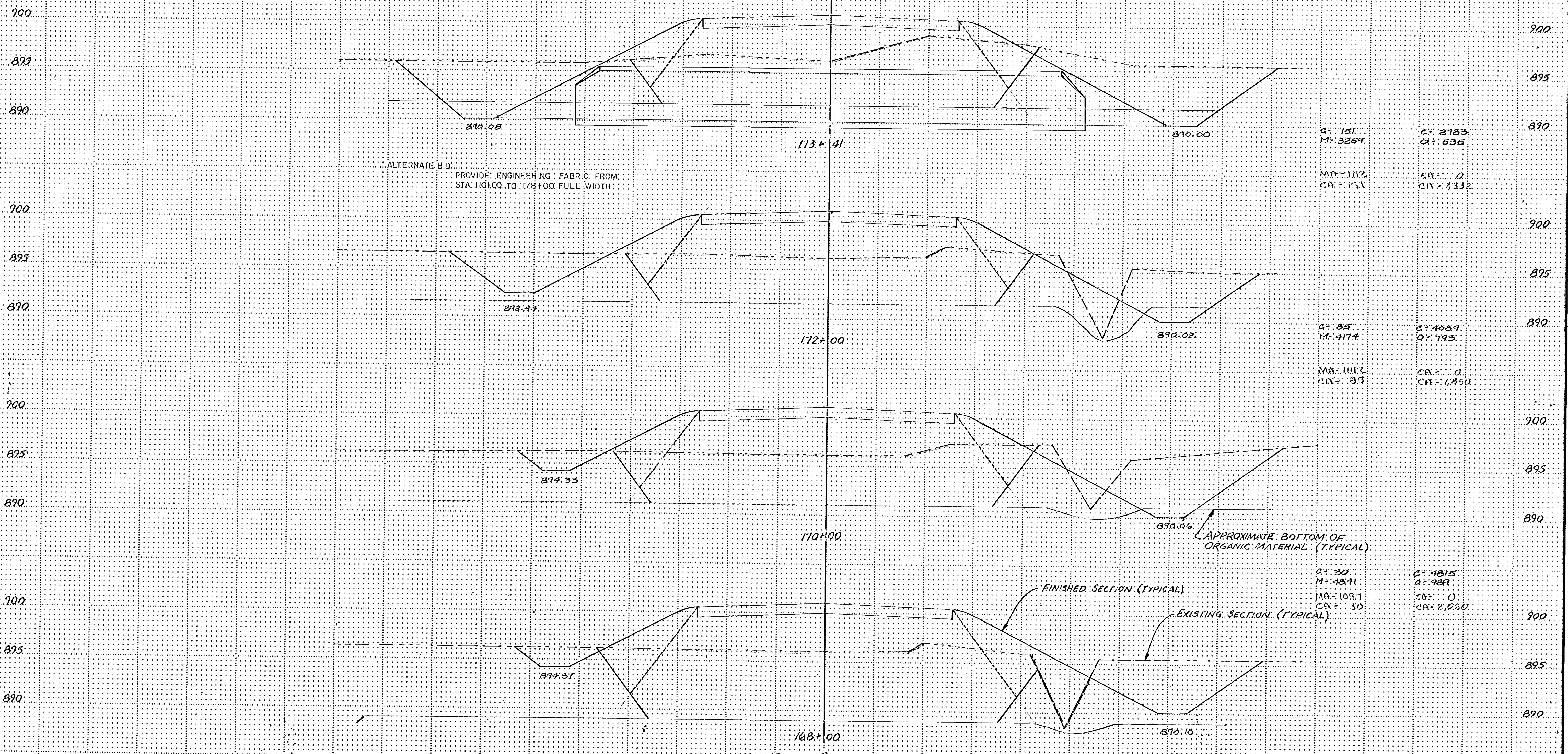


I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer in the State of Illinois. State of Illinois, No. 00161637. Date 7/22/85. Reg. No. 7716.

[E.I.] CONSULTING ENGINEERS DIVERSIFIED INC.
A Diversified Company
510 20th Street, Suite 200, Chicago, IL 60604 (312) 425-2191

REVISIONS		DESIGNED BY
1	GRAPHIC SCALE	CHECKED BY
2	1" = 40'	DATE
3	YEAR 85	DRAWN BY
		MRJ

ANDRA COUNTY HIGHWAY DEPT.
CROSS SECTIONS
COUNTY ROAD 112 (107th AVENUE NE)
DATE 2/28/85 SHEET 27 OF 31 FILE NO. AC 41566-302



NOTE DO NOT EXCAVATE MUCK FROM STA 110+00 TO 178+00 FOR ALTERNATE BID

ALTERNATE BID PROVIDE ENGINEERING FABRIC FROM STA 110+00 TO 178+00 FULL WIDTH

APPROXIMATE BOTTOM OF ORGANIC MATERIAL (TYPICAL)

FINISHED SECTION (TYPICAL)

EXISTING SECTION (TYPICAL)

EXCAVATION	EMBANKMENT
C= 19 M= 121	C= 1070 O= 210
MA= 1173 CA= 171	QA= 0 CN= 542
C= 151 M= 3259	C= 2183 O= 635
MA= 1112 CA= 151	QA= 0 CN= 1332
C= 85 M= 417	C= 4089 O= 193
MA= 1112 CA= 83	QA= 0 CN= 1350
C= 30 M= 4841	C= 1815 O= 989
MA= 1031 CA= 30	QA= 0 CN= 2,060

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer in the State of Michigan.
Date 7/22/85
7716



REVISIONS	DESIGNED BY
1	
2	
3	

ANOKA COUNTY HIGHWAY DEPT.
CROSS SECTIONS
COUNTY ROAD 112 (107th AVENUE NE)
DATE 2/22/85 SHEET 28 OF 31 SHEETS FILE NO. AC41568-302

NOTE:
DO NOT EXCAVATE MUCK FROM
STA. 110+00 TO 178+00 FOR ALTERNATE BID

EXCAVATION EMBANKMENT

C= 524
M= 1300
MA= 1300
CA= 524

C= 891
O= 318
OA= 0
CA= 1213

C= 320
M= 2820
MA= 1413
CA= 320

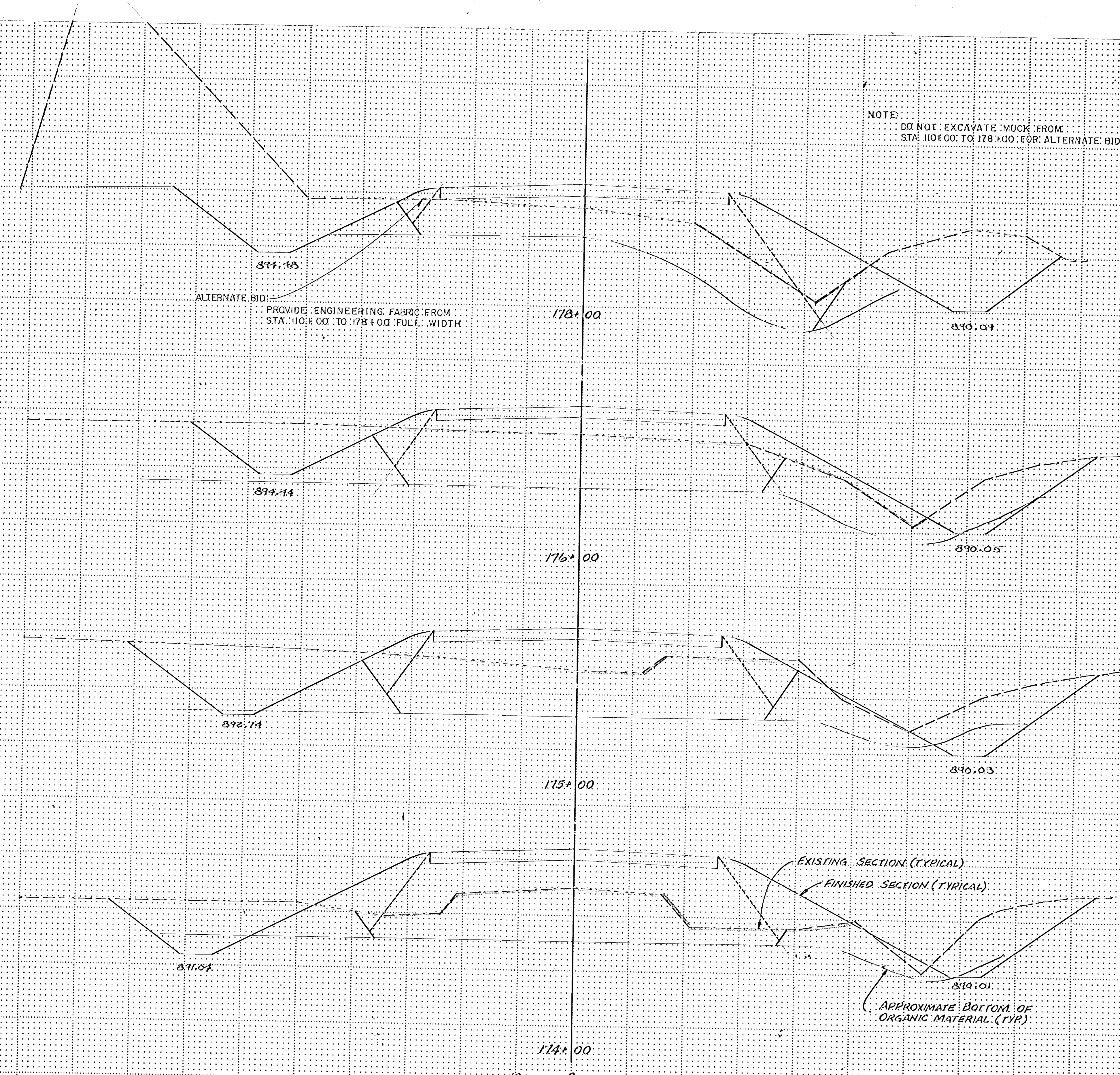
C= 2693
O= 670
OA= 0
CA= 1213

C= 10
M= 2007
MA= 1233
CA= 10

C= 1414
O= 265
OA= 0
CA= 1013

C= 117
M= 1863
MA= 679
CA= 117

C= 1591
O= 311
OA= 0
CA= 113



ALTERNATE BID:
PROVIDE ENGINEERING FABRIC FROM
STA. 110+00 TO 178+00 FULL WIDTH

EXISTING SECTION (TYPICAL)
FINISHED SECTION (TYPICAL)
APPROXIMATE BOTTOM OF
ORGANIC MATERIAL (TYP.)

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer in the State of North Carolina.
Date: 7/22/65
Proj. No. 7216

CE CONSULTING ENGINEERS DIVERSIFIED, INC.
A Donnell Company
2400-1720 W. 10th St. Raleigh, N.C. 27603

DESIGNED BY	CREATED BY
CHECKED BY	CREATED BY
DATE	DATE

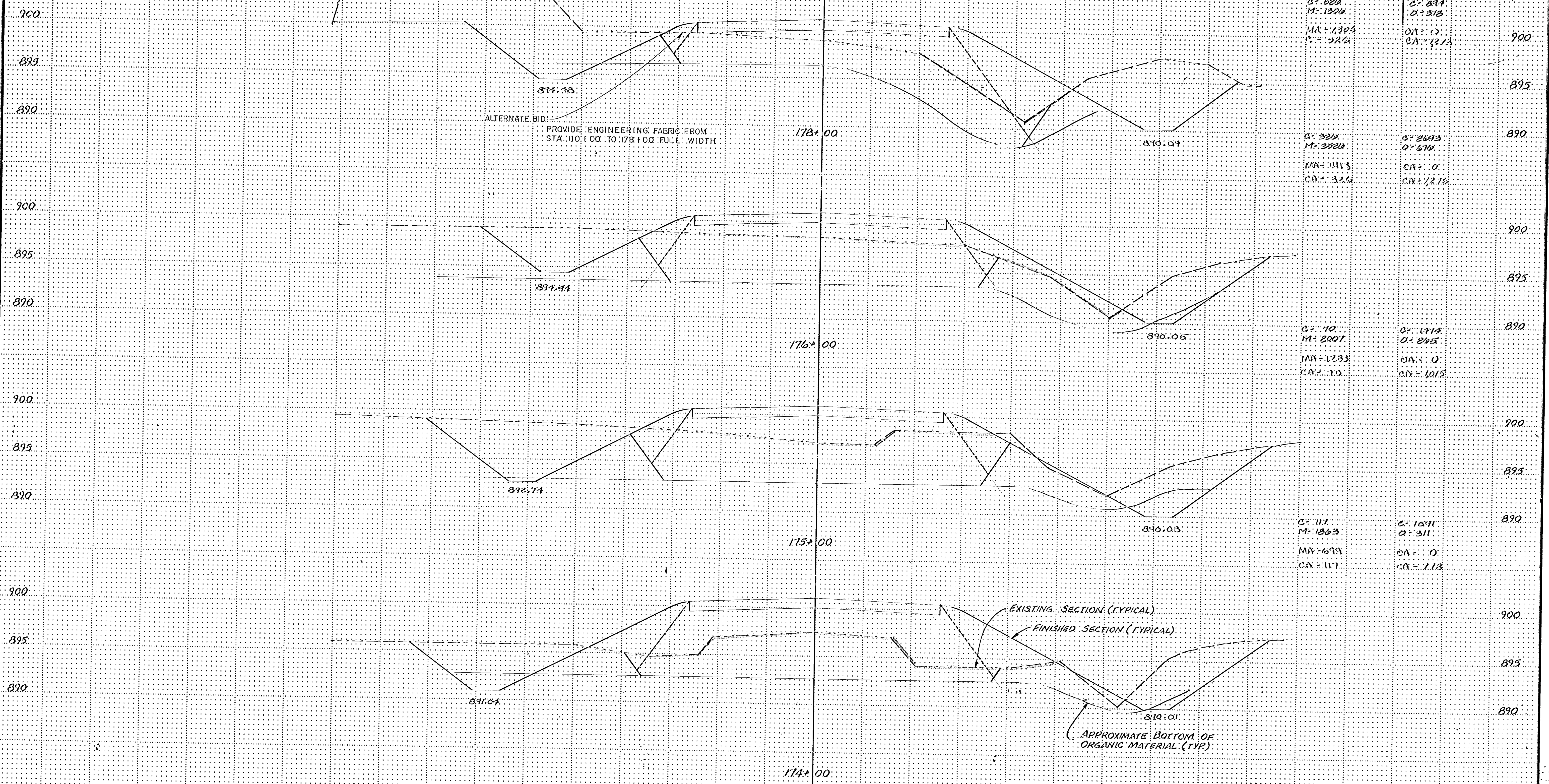
ANOKA COUNTY HIGHWAY DEPT.
CROSS SECTIONS
COUNTY ROAD 112 (109TH AVENUE NE)
DATE: 7/22/65 SHEET 29 OF 31 SHEETS FILE NO. AC 1566302

NOTE:
DO NOT EXCAVATE MUCK FROM
STA. 110+00 TO 178+00 FOR ALTERNATE BID

EXCAVATION EMBANKMENT

C= 524 M= 1306 MA= 1306 CA= 524	C= 894 O= 318 OA= 0 CA= 1218	900
C= 328 M= 328 MA= 1413 CA= 328	C= 2693 O= 670 OA= 0 CA= 1218	890
C= 10 M= 2007 MA= 1233 CA= 10	C= 1418 O= 265 OA= 0 CA= 1015	890
C= 117 M= 1863 MA= 679 CA= 117	C= 1591 O= 311 OA= 0 CA= 118	890

ALTERNATE BID:
PROVIDE ENGINEERING FABRIC FROM
STA. 110+00 TO 178+00 FULL WIDTH

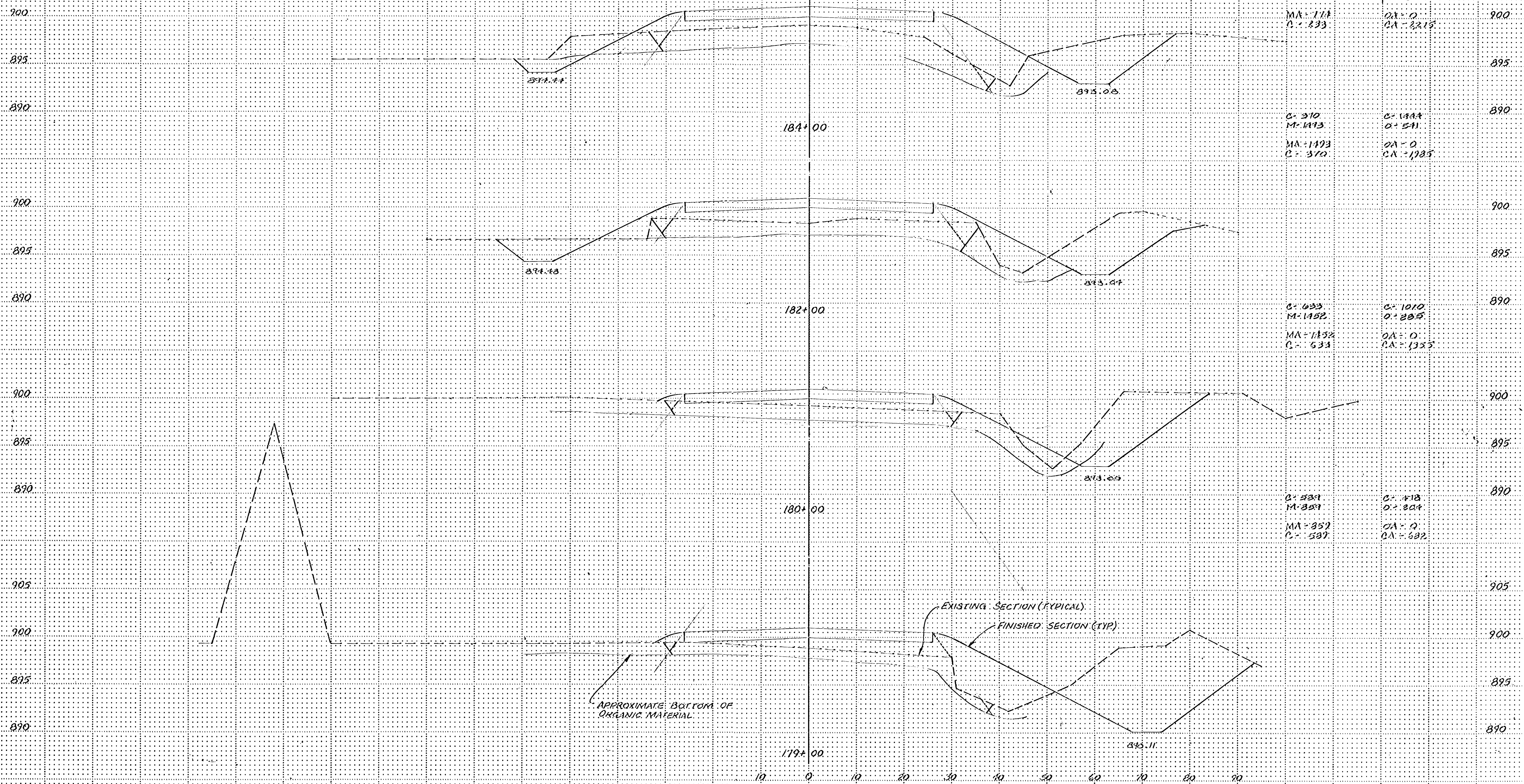


I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer in the State of Minnesota.
[Signature]
Date: 7/22/15, Pgs. 10, 7716.

[Logo] CONSULTING ENGINEERS DIVERSIFIED INC.
A Diversified Company
S.W. 200+1200 University Avenue, Suite 200, Minneapolis, MN 55425-1311

DESIGNED BY	CREATED BY
CHECKED BY	DATE
DATE	DATE

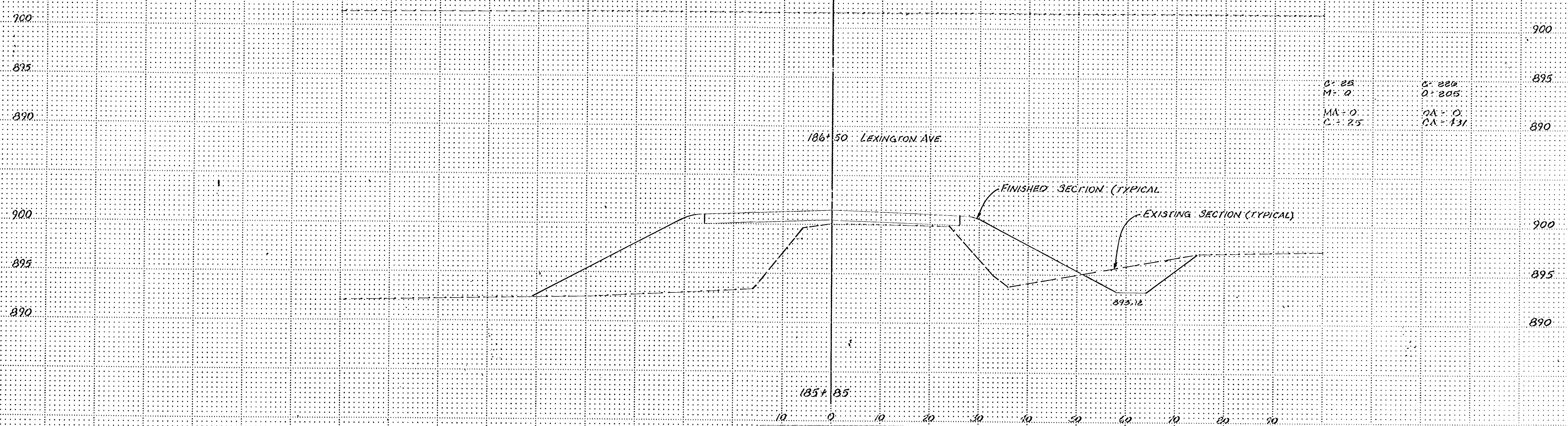
ANOKA COUNTY HIGHWAY DEPT.
CROSS SECTIONS
COUNTY ROAD 112 (107TH AVENUE NE)
DATE: 2/15/15, SHEET 29 OF 31, SHEETS FILE NO. AC41563-302



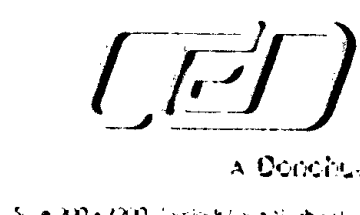
<p>I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly registered Professional Engineer in the State of Michigan.</p> <p><i>[Signature]</i> Date: 7/22/85</p>	<p>LED CONSULTING ENGINEERS DIVERSIFIED INC. A Donohue Company S. # 200 • 1200 Forest Lake Blvd • Wyandotte, MI 48192 • 313-245-2151</p>	REVISIONS _____ _____ _____	DESIGNED BY _____ CHECKED BY _____ DRAWN BY MRJ	ANOKA COUNTY HIGHWAY DEPT. CROSS SECTIONS COUNTY ROAD 112 (109TH AVENUE NE) DATE: JUNE 1985 SHEET 30 OF 31 SHEETS FILE NO. AC 41566.302
		GRAPHIC SCALE HORIZ: 1" = 40' VERT: 1" = 5'	BA COUSE, PD SEAF.	
		PROJECT NO. 84-19-112	SHEET NO. 30 OF 36 SHEETS	
		Scale: 1" = 40' (Horizontal) 1" = 5' (Vertical)		

Fed. Proj. No.

EXCAVATION EMBANKMENT



I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the State of Ohio. My registration expires on 12/31/2016.
 Date 7/22/15 Reg. No. 2716



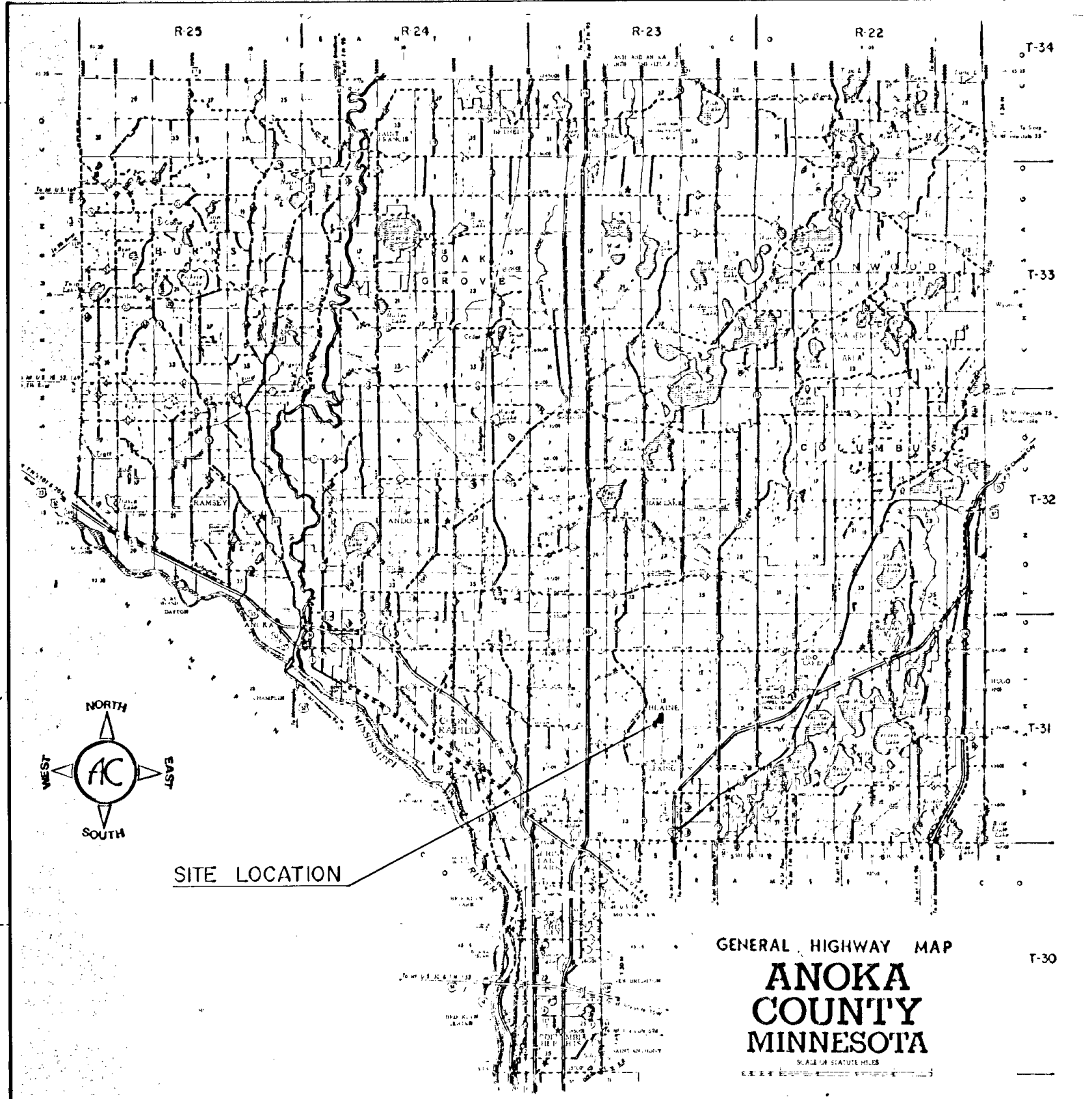
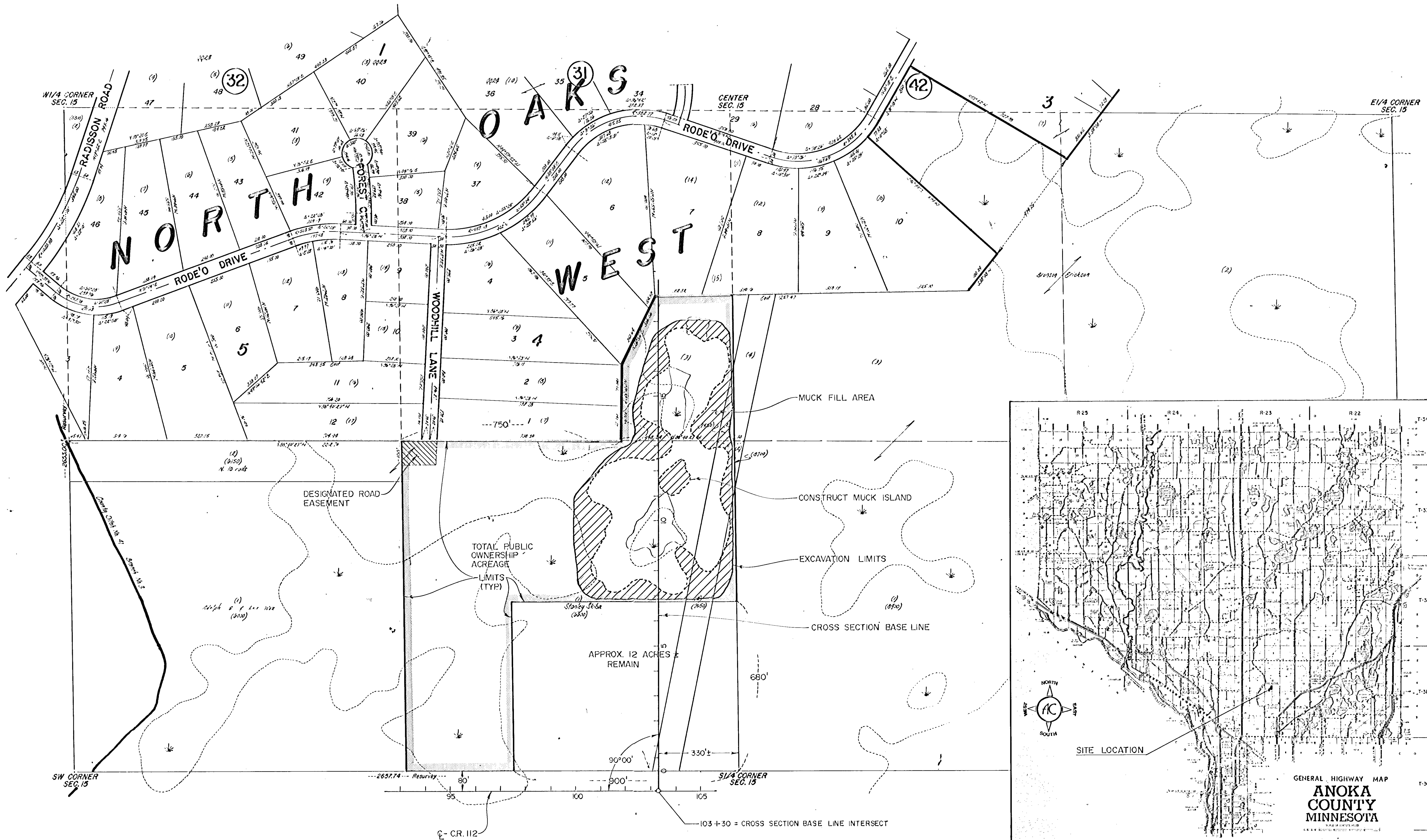
CONSULTING ENGINEERS DIVERSIFIED, INC.
 A DIVERSIFIED COMPANY
 5000 W. 120th Street, Suite 200, Overland Park, KS 66213-2731

DESIGNED BY	
CHECKED BY	
DATE	
SCALE	
GRAPHIC SCALE	
1" = 20'	
VERT. 1" = 5'	

ANOKA COUNTY HIGHWAY DEPT.
 CROSS SECTIONS
 COUNTY ROAD 112 (109TH AVENUE NE)
 SA 10218, PG. LEAF, DATE JUNE 12, 2015, SHEET 31 OF 31 SHEETS, FILE NO. AC-11566-302

S 1/2 SEC. 15, T. 31, R. 23

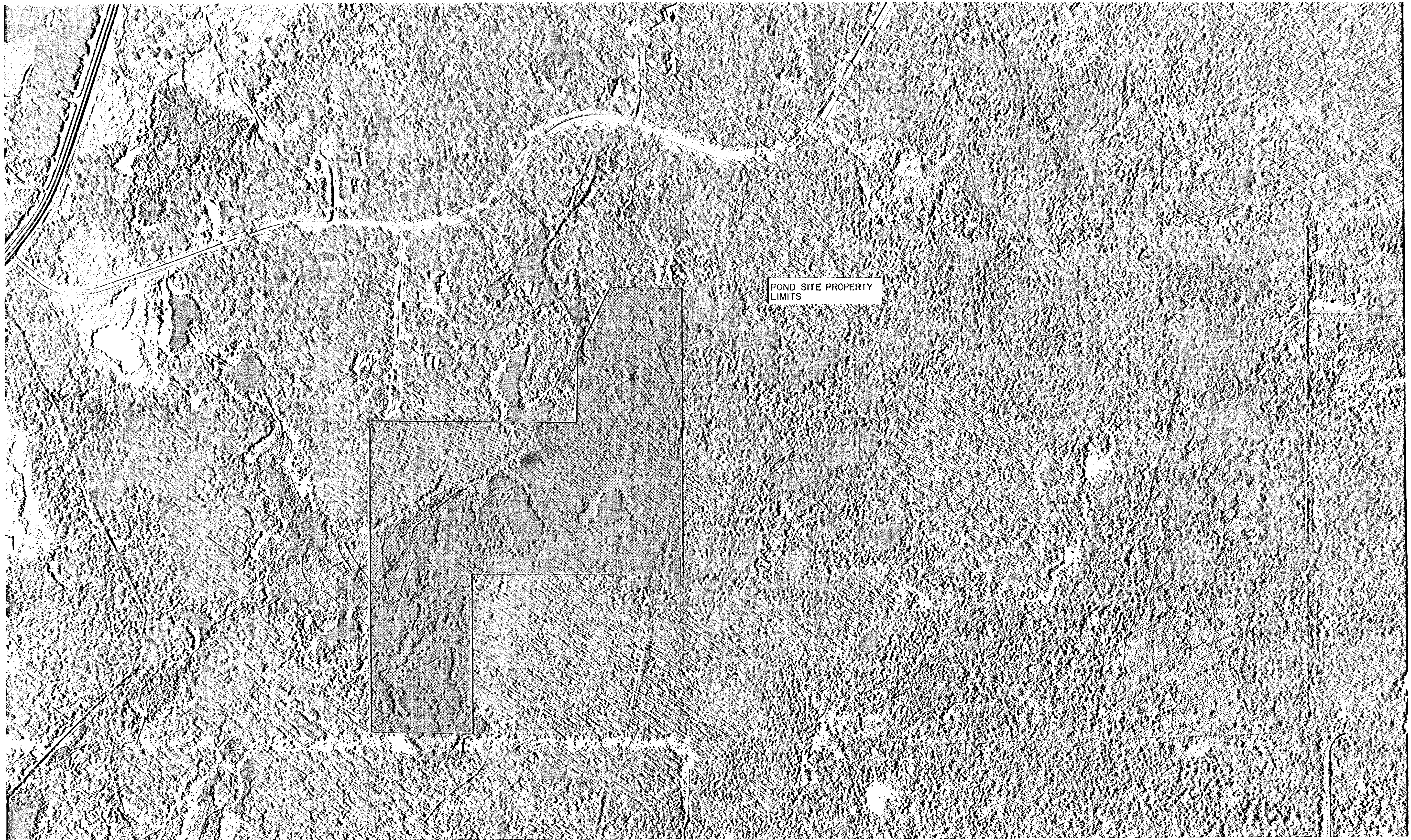
CITY OF BLAINE



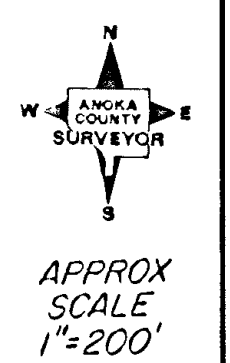
POND CONSTRUCTION - SITE PLAN

REVISIONS			
DATE	BY	DATE	BY

S.A.P. S.P. C.P. 84-19-112



POND SITE PROPERTY LIMITS

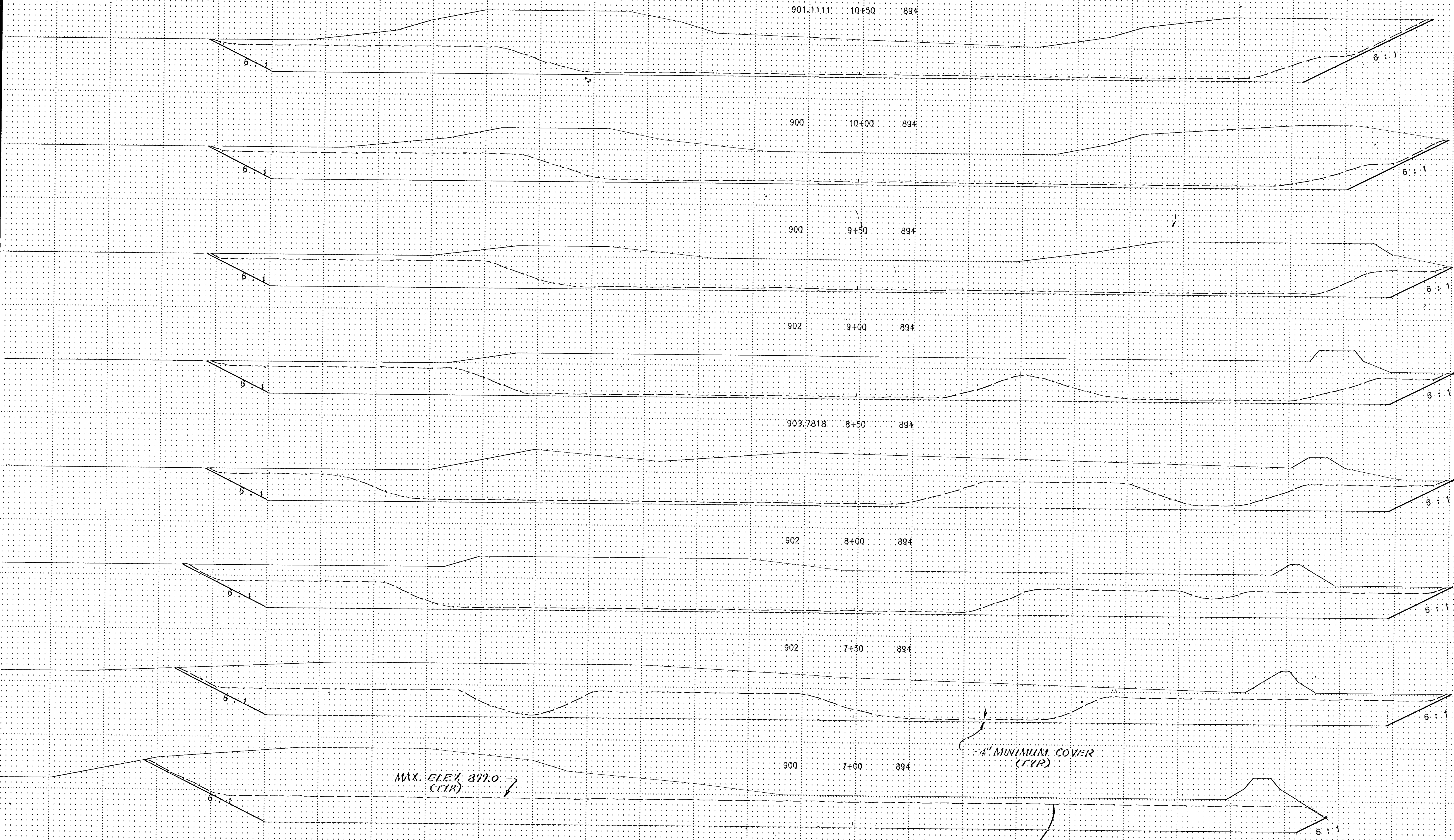


POND SITE PROPERTY LOCATION

REVISIONS			
DATE	BY	DATE	BY

S.A.P. _____ S.P. _____ C.P. 84-19-112 _____

EXCAVATION		EMBANKMENT	
Sub-Totals	Cu. Yds.	Cu. Yds.	Sub-Totals



MUCK	10234	0	2078
MUCK	9452	0	2160
MUCK	9209	0	2269
MUCK	9788	0	2526
MUCK	10388	0	3590
MUCK	10465	0	3989
MUCK	10384	0	4550
MUCK	5173	0	2806

MAX. ELEV. 899.0
(CTR)

4" MINIMUM COVER
(CYR)

MUCK EMBANKMENT LIMITS
(CYR)

SCALE:
HORZ. 1"=30'
VERT. 1"=10'

POND CONST. & BORROW PIT

QUANTITIES SHOWN APPLY TO BASE BID ONLY.

State Proj. No.

C.P. 84-19-112

Sheet No. 34 of 36 Sheets

TULLOCH ROAD CROSS SECTION 007 10/84

EXCAVATION
Sub-Totals Cu. Yds. EMBANKMENT
Cu. Yds. Sub-Totals

902.375 14+00 894

902.375 13+50 894

905.5 13+20 894

905.8182 13+00 894

906.4 12+50 894

905.5 12+00 894

902.5 11+50 894

900.4 11+00 894

MUCK 5644 0 2475

MUCK 3588 0 1585

MUCK 2653 0 901

MUCK 10030 0 3141

MUCK 13232 0 3246

MUCK 13583 0 2578

MUCK 12740 0 2206

MUCK 11222 0 1898

MAX. ELEV. 899.0 (TYP)

4" MINIMUM COVER (TYP)

MUCK EMBANKMENT LIMITS (TYP)

POND CONST. & BORROW PIT

QUANTITIES SHOWN APPLY TO BASE BID ONLY.

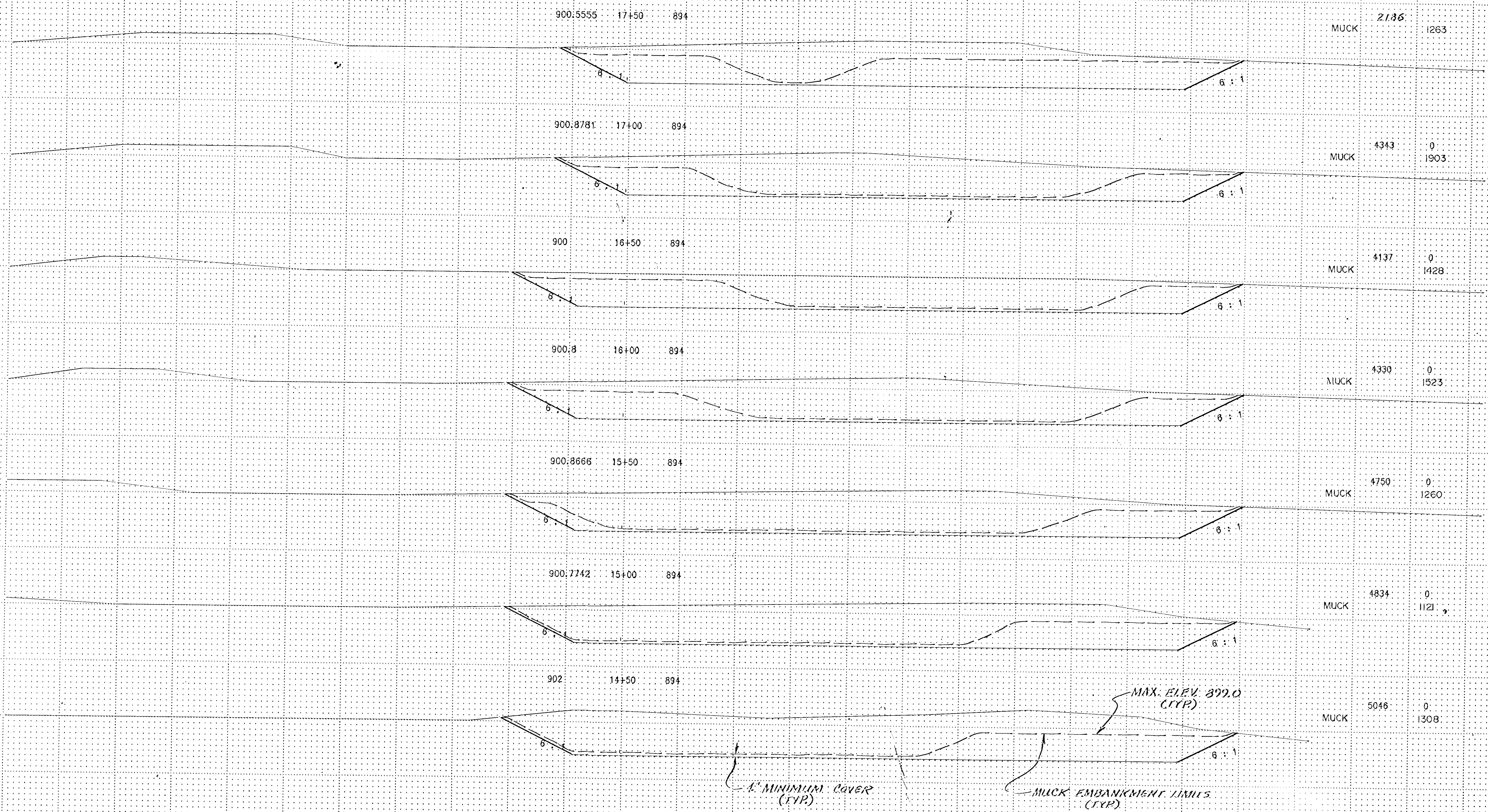
State Proj. No.

C.P. 84-19-112

Sheet No. 35 of 36 Sheets

REVISION POST CROSS SECTION 1011 10/84

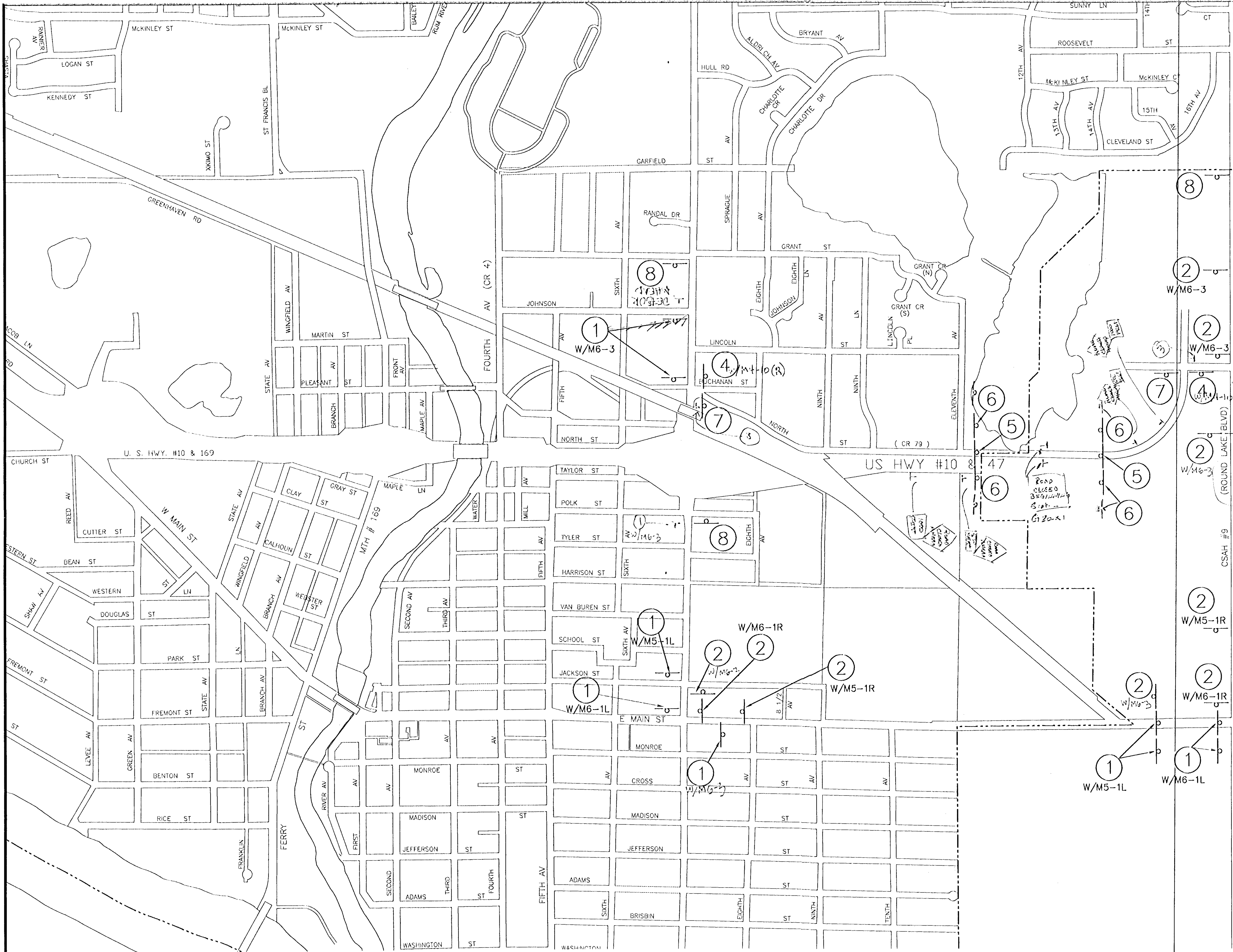
EXCAVATION		EMBANKMENT	
Sub-Totals	Cu. Yds.	Cu. Yds.	Sub-Totals



MUCK	2186	0	1263
MUCK	4343	0	1903
MUCK	4137	0	1428
MUCK	4330	0	1523
MUCK	4750	0	1260
MUCK	4834	0	1121
MUCK	5046	0	1308
MUCK	5362	0	1638

POND CONST. & BORROW PIT

QUANTITIES SHOWN APPLY TO BASE BID ONLY.



SHOW HWY 10 RAMPS
AND SIGN PLACEMENT
IN RELATION TO INTERCHANGES

These should be
checked out to
be correct

9/18/02
Jane
could you let me
know how this looks
the
sp

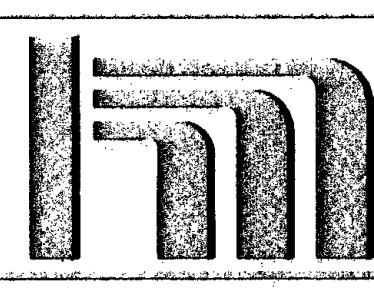
DATE	REVISION
7/25/05	RELOCATED CROWN POINT AND REVISED ROAD WIDTH
9/01/05	ADD BITUMINOUS FLUME AT STA. 1000+40

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

JAMES E. JOHNSON
Date: 1/31/05 Lic. No. 12651

DESIGNED BY: JEJ
DRAWN BY: RAA
CHECKED BY: JEJ

DATE: 10/14/04
FILE NO.: 3250.01



Hakanson Anderson Assoc., Inc.
Civil Engineers and Land Surveyors
3601 Thurston Ave., Anoka, Minnesota 55303
763-427-5860 FAX 763-427-0520
www.hakanson-anderson.com

CARLSON TOYOTA
CR #79 (RIVERDALE DRIVE)
ROADWAY IMPROVEMENTS

**TRAFFIC CONTROL AND
DETOUR ROUTING PLAN**
COUNTY ROAD #79 ROAD CLOSURE
CITY OF COON RAPIDS, MINNESOTA

SHEET 11 OF 12 SHEETS
3250.01