

COUNTY ROAD "J" - C.S.A.H. 32 - 85TH AVENUE N.E.

THE CITIES OF SHOREVIEW AND BLAINE RAMSEY AND ANOKA COUNTIES

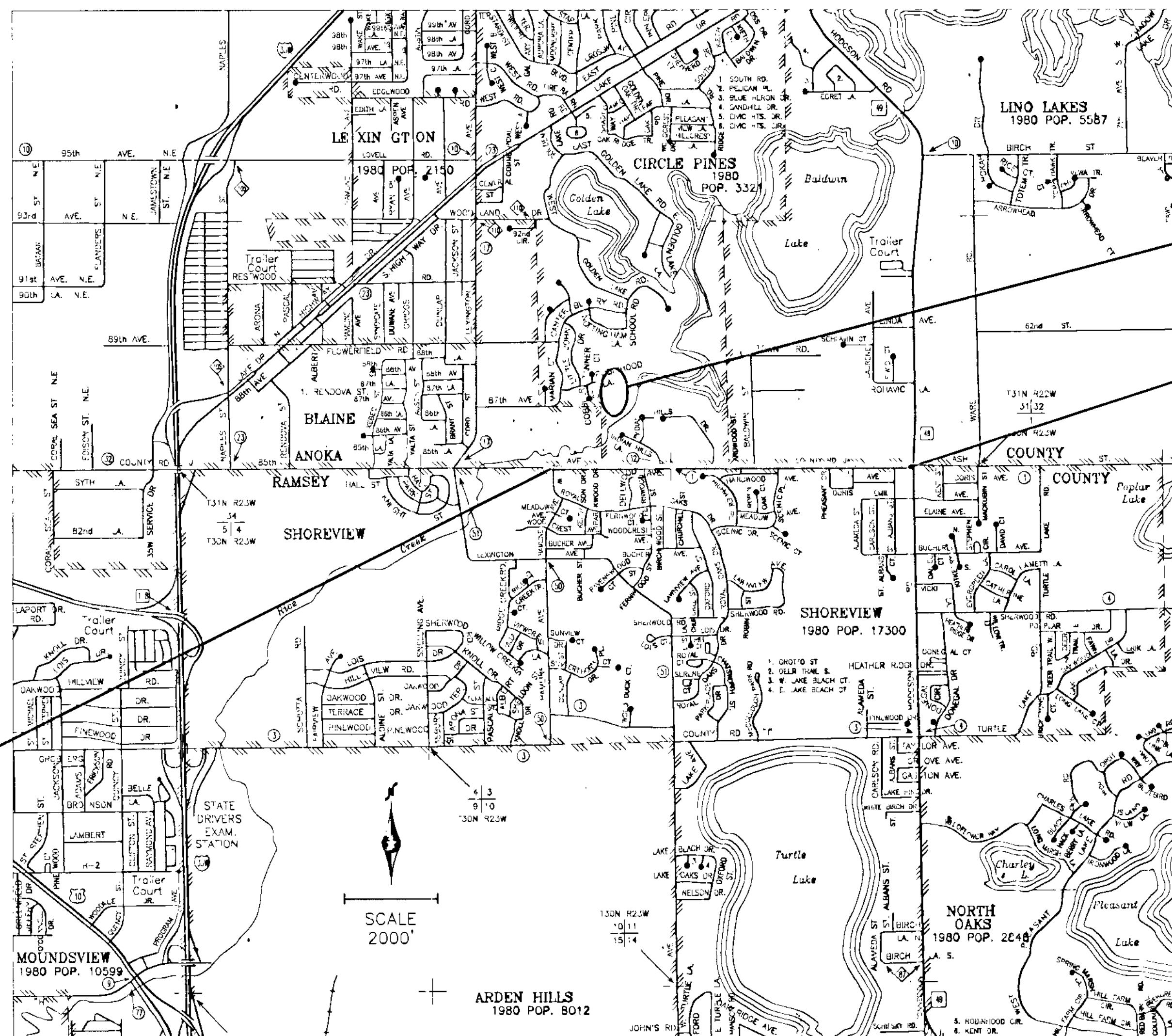
CONSTRUCTION PLAN FOR GRADING, SURFACING, DRAINAGE

LOCATED ON C.S.A.H. 32 BETWEEN WEST ROYAL OAKS DRIVE AND HODGSON ROAD (TRUNK HIGHWAY 49) (Geographic Description)

FROM A POINT 335.83' EAST OF THE SW CORNER OF THE SE 1/4 OF THE SW 1/4 OF THE SEC. 36, T. 31, R. 23 TO A POINT 1240.35' EAST OF THE SW CORNER OF THE SE 1/4 OF SEC. 31, T. 31, R. 22 (Legal Description)

STATE AID PROJ. NO. 02-632-08

STATE AID PROJ. NO. 62-601-07



GROSS LENGTH 7707 FEET 1.46 MILES
 BRIDGES LENGTH FEET MILES
 EXCEPTIONS LENGTH FEET MILES
 NET LENGTH 7707 FEET 1.46 MILES

WETLAND MITIGATION SITE

END S.A.P. 02-632-08
 S.A.P. 62-601-07 STA. 258+39

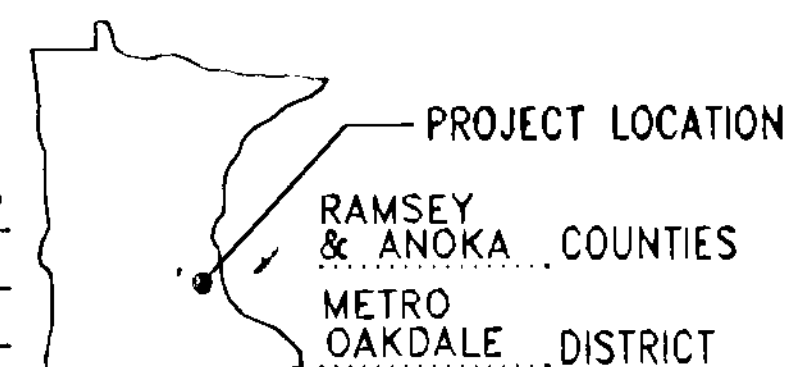
BEGIN S.A.P. 02-632-08
 S.A.P. 62-601-07 STA. 181+32

SCALES

PLAN 50
 PROFILE 50

DESIGN DESIGNATION

Functional Classification: Low Density Arterial
 No. of Traffic Lanes = 4 No. of Parking Lanes = 0
 ADT (Current Year) 1990 = 5600 Design Speed 50* MPH
 ADT (Future Year) 2010 = 11200 Based on STOPPING Sight Distance
 DHV (Design Hr. Vol.) = 840 Height of eye 3.5' Height of Object 0.5'
 D (Directional Distr.) = 50 % Design Speed not achieved at: N.A.
 T (Heavy Commercial) = 5 % STA. N.A. TO STA. N.A. MPH N.A.
 R-Value 60 N20 Factor 1,855,382 Design Load 9 ton



PLAN REVISIONS		
DATE	SHEET NO.	APPROVED BY
3/14/92	1,2,3,4,7,9,12,21,29,37	

MINN. PROJ. NO. LOCAL FUNDS
 MINN. PROJ. NO.

GOVERNING SPECIFICATIONS

THE 1988 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" AND "SUPPLEMENTAL SPECIFICATIONS TO THE 1988 STANDARD SPECIFICATIONS FOR CONSTRUCTION", DATED JANUARY 2, 1991, SHALL GOVERN.

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THIS PLAN SET CONTAINS 76 SHEETS
 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.

BRW, INC.

DATE 5/6/92 REG. NO. 21429

ENGINEER *Steven P. Jensen*
 STEVEN P. JENSEN

Recommended For Approval *Paul K. Hill* 3/10/1992
 RAMSEY COUNTY ENGINEER

Approved 19
 CHAIR OF THE RAMSEY COUNTY BOARD

Approved 7/10 1993 *Paul K. Hill*
 ANOKA COUNTY ENGINEER

Approved 8/6 1992 *Charles Spade*
 CITY OF BLAINE

Approved 8/6 1992 *Cassidy May*
 CITY OF SHOREVIEW

Approved 3/10 1991 *R. J. Hill*
 CITY OF LINO LAKES

Approved 8/7 1992 *Jane W. Kinatt*
 CITY OF CIRCLE PINES

Recommended For Approval *Steve Jensen* 8/12/1992
 DISTRICT STATE AID ENGINEER

Recommended For Approval *Paul Hill* 8/12/1992
 STATE AID PLANS AND SPECS ENGINEER

Approved 8-26-1992 *Paul Hill*
 STATE AID ENGINEER

I HEREBY CERTIFY THAT THE FINAL FIELD REVISIONS, IF ANY, OF THIS PLAN WERE MADE 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 REG. NO.

STATE AID PROJ. NO. 02-632-08, 62-601-07
 STATE PROJ. NO.

SHEET NO. 1 OF 76 SHEETS

* 35 MPH STA. 239+00 TO 258+36


ESTIMATED QUANTITIES

NOTE	CHART (4)	ITEM NO.	ITEM	UNIT	TOTAL QUANTITIES		RAMSEY COUNTY				ANOKA COUNTY									
					EST.	FINAL	PARTICIPATING SAP 62-601-07		NON-PARTICIPATING SHOREVIEW		PARTICIPATING SAP 02-632-08		NON-PARTICIPATING CIRCLE PINES		NON-PARTICIPATING LINO LAKES		NON-PARTICIPATING BLAINE		STORM SEWER	
							EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL
		2021.501	MOBILIZATION	LS	1		0.5				0.5									
		2031.501	FIELD OFFICE, TYPE D	EA	1		0.5				0.5									
		2051.501	MAINT. & RESTORATION OF HAUL ROADS	LS	1		0.5				0.5									
	A	2101.501	CLEARING	AC	0.85		0.42				0.42									
	A	2101.502	CLEARING	TREE	70		35				35									
	A	2101.506	GRUBBING	AC	0.85		0.42				0.42									
	A	2101.507	GRUBBING	TREE	70		35				35									
		2104.501	REMOVE WATERMAIN 12"	LF	180		180													
	G	2104.501	REMOVE PIPE CULVERTS	LF	520		359				161									
	C	2104.501	REMOVE CONCRETE CURB AND GUTTER	LF	479		293				186									
(7)	D	2104.505	REMOVE BITUMINOUS PAVEMENT	SY	27314		13878.5				13435.5									
	C	2104.505	REMOVE CONCRETE DRIVEWAY	SY	252		42				210									
	G	2104.509	REMOVE STRUCTURE (STORM)	EA	1		1													
		2104.509	REMOVE WOOD POST	EA	4						4									
	H	2104.509	REMOVE GATE VALVE MANHOLE	EA	2		2													
	C	2104.511	SAWING CONCRETE PAVEMENT	LF	124		27				97									
(6)	D	2104.513	SAWING BITUMINOUS PAVEMENT	LF	1125		579.5				545.5									
	F	2104.521	SALVAGE FENCE	LF	899		411				488									
		2104.523	SALVAGE HYDRANT & GATE VALVE	EA	1		1													
	E	2104.523	SALVAGE SIGNS TYPE C	EA	39		39													
(3)	G	2104.523	SALVAGE WEIR MANHOLE	EA	1		1													
	H	2104.523	SALVAGE GATE VALVE 12"	EA	2		2													
		2104.523	SALVAGE CASTING ASSEMBLY	EA	2		2													
		2104.525	ABANDON WATER MAIN	EA	1		1													
(1)	P	2105.501	COMMON EXCAVATION	CY	86765 (P)		43382.5				43382.5									
	P	2105.505	MUCK EXCAVATION	CY	60989		30494.5				30494.5									
	P	2105.507	SUBGRADE EXCAVATION	CY	11860		5930				5930									
	P	2105.522	SELECT GRANULAR BORROW (LV)	CY	36030		18015				18015									
	P	2105.522	SELECT GRAN. BORROW MOD. 5% (LV)	CY	19839		9919.5				9919.5									
(2)		2130.501	WATER	M GAL	50		25				25									
(2)		2131.502	CALCIUM CHLORIDE SOLUTION	GAL	1000		500				500									
(10)	L	2211.503	AGG. BASE PLACED CLASS 5A	CY	9676 (P)		4483		731 (9)		4447 (11)		15 (11)							
		2340.501	CONTRACTOR TESTING	TON	13001		6535.5				6465.5									
	L	2340.508	TYPE 41 WEARING COURSE MIXTURE	TON	3546		1782.5				1783.5									
	L	2340.510	TYPE 31 BINDER COURSE MIXTURE	TON	3546		1782.5				1783.5									
	L	2340.514	TYPE 31 BASE COURSE MIXTURE	TON	5909		2970.5				2938.5									
	M	0331.601	2" THICK BITUMINOUS WEARING COURSE	SY	742		437				305									
	L	2357.502	BITUMINOUS MATERIAL FOR TACK COAT	GAL	4300		2162.5				2137.5									
		0411.603	PRECAST RETAINING WALL	SQ FT	730		730													
	N	2501.515	15" RC PIPE APRON	EA	3		0.5				0.5								2	
	N	2501.515	18" RC PIPE APRON	EA	2		0.5				0.5								1	
	N	2501.515	21" RC PIPE APRON	EA	1														1	
	N	2501.515	24" RC PIPE APRON	EA	3		1.5				1.5									
	N	2501.515	36" RC PIPE APRON	EA	2		1				1									

NOTES:

- (1) INCLUDES 69,828 CU YD EXCAVATION FROM THE WETLAND MITIGATION AREA. SEE SHEET 19
- (2) FOR DUST CONTROL AS DIRECTED BY THE ENGINEER
- (3) INCLUDES CASTING ASSEMBLY
- (4) CHART INDEX - SEE SHEET 4
- (5) LENGTH DOES NOT INCLUDE CAPS
- (6) FULL DEPTH REGARDLESS OF PAVEMENT DEPTH
- (7) AVERAGE PAVEMENT DEPTH APPROXIMATELY 6"
- (8) SEE CHART F FOR FENCE TYPES AND LENGTHS

- (9) QUANTITY FOR USE UNDER BITUMINOUS WALK
- (10) INCLUDES 45 CY FOR CONCRETE DRIVEWAYS, 122 CY FOR BIT. DRIVEWAYS, 69 CY FOR AGGREGATE DRIVEWAYS, 146 CY FOR MITIGATION AREA BIT. PATHS, 77 CY FOR CONCRETE WALKS, AND 975 CY FOR BIT. WALK.
- (11) INCLUDES QUANTITY FOR USE UNDER CONCRETE WALK
- (12) PROVIDED FOR AREAS OF SOD AND SEED MIXTURE 500 ONLY.
- (13) 100% NON-PARTICIPATING FOR STATE AID FUNDS

 BIRW INCORPORATED 1870 N. 10TH STREET SOUTH, MINNEAPOLIS, MN 55415	PLANNING TRANSPORTATION ENGINEERING URBAN DESIGN	ORIGINAL DATE 5/8/92 REVISIONS 8/2/92
	DESIGN BY: TIG DRAWN BY: TIG CHECKED BY: SPJ	SURVEY BOOK

COUNTY ROAD J
 C.S.A.H. 32
 RAMSEY/ANOKA COUNTY
 ESTIMATED QUANTITIES

S.A.P. NO. 02-632-08
 62-601-07

SHEET 2 OF 76

ESQUAT

ESTIMATED QUANTITIES


NOTE	CHART	ITEM NO.	ITEM	UNIT	TOTAL QUANTITIES		RAMSEY COUNTY				ANOKA COUNTY						STORM SEWER		
							PARTICIPATING		NON-PARTICIPATING		PARTICIPATING		NON-PARTICIPATING		NON-PARTICIPATING				
							EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL			
	N	2501.561	15" RC PIPE CULVERT DES 3006 CL II	LF	83		41.5			41.5									
	N	2501.561	18" RC PIPE CULVERT DES 3006 CL II	LF	45		22.5			22.5									
	N	2501.561	24" RC PIPE CULVERT DES 3006 CL III	LF	211		105.5			105.5									
	N	2501.561	36" RC PIPE CULVERT DES 3006 CL III	LF	98		49			49									
	N	2503.541	15" RC PIPE SEWER DESIGN 3006 CL II	LF	3160														3160
	N	2503.541	18" RC PIPE SEWER DESIGN 3006 CL II	LF	2060														2060
	N	2503.541	21" RC PIPE SEWER DESIGN 3006 CL III	LF	310														310
		0504.602	48" GATE VALVE MANHOLE	EA	2		2												
		0504.602	INSTALL 12" GATE VALVE	EA	2		2												
		0504.602	12" PIPE BEND 90°	EA	1		1												
		0504.602	INSTALL HYDRANT & GATE VALVE	EA	1		1												
	H	0504.602	ADJUST GATE VALVE MANHOLE	EA	3		2			1									
	H	0504.602	ADJUST HYDRANT	EA	2							2							
	H	0504.602	ADJUST VALVE BOX	EA	9		3			3									
	H	0504.602	RELOCATE HYDRANT AND GATE VALVE	EA	7		6			1									
		0504.602	CONNECT TO EXISTING WATERMAIN	EA	2		2												
		0504.602	INSTALL CASTING ASSEMBLY	EA	2		2												
	H	0504.602	RECONSTRUCT GATE VALVE MANHOLE	EA	3		3												
		0504.603	12" WATERMAIN ENCASMENT - POLYETHYLENE	LF	430		430												
		0504.603	12" WATERMAIN DUCTILE IRON CL 53	LF	497		497												
		0504.605	3" POLYSTYRENE INSULATION	SY	14		14												
	N	2506.501	CONST. DRAIN. STRUCT. DESIGN 48-4020	LF	31.7														31.7
	N	2506.501	CONST. DRAIN. STRUCT. DESIGN 84-4020	LF	6.9														6.9
	N	2506.501	CONST. DRAIN. STRUCT. DESIGN SPECIAL 1	LF	100.3														100.3
	N	2506.501	CONST. DRAIN. STRUCT. DESIGN SPECIAL 2	LF	35.2														35.2
	N	2506.501	CONST. DRAIN. STRUCT. DESIGN SPECIAL 2-72	LF	6.4														6.4
	N	2506.501	CONST. DRAIN. STRUCT. DESIGN LP-4	LF	44.1														44.1
	O	2506.516	CASTING ASSEMBLY	EA	38														38
(3)	G	0506.602	INSTALL WEIR MANHOLE	EA	1														1
	I	0506.602	RECONSTRUCT SANITARY MANHOLES	EA	8		4			4									
	I	0506.602	ADJUST FRAME & RING CASTINGS (SANITARY)	EA	2		1			1									
(14)	N	2511.501	RANDOM RIPRAP CL III	CY	60														60
	K	2521.501	4" CONCRETE WALK	SF	4728		126(13)		378			884		3340					
	M	2521.511	2" BITUMINOUS WALK	SF	75926		13171(13)		39515		23240(13)								
	K	2531.507	6" CONCRETE DRIVEWAY PAVEMENT	SY	265		74			191									
	K	2531.501	CONCRETE C & G DESIGN B624	LF	15774		7947			2192		1314		3814		507			
(8)		0557.603	INSTALL FENCE	LF	899		411			488									
		0563.601	DETOUR SIGNING	LS	1		0.5			0.5									

(14) GRAN. FILTER MATERIAL WILL BE CONSIDERED INCIDENTAL TO RIPRAP CONSTRUCTION.

NOTES:

- (1) INCLUDES 69,828 CU YD EXCAVATION FROM THE WETLAND MITIGATION AREA. SEE SHEET 19.
- (2) FOR DUST CONTROL AS DIRECTED BY THE ENGINEER.
- (3) INCLUDES CASTING ASSEMBLY
- (4) CHART INDEX - SEE SHEET 4
- (5) LENGTH DOES NOT INCLUDE GAPS
- (6) FULL DEPTH REGARDLESS OF PAVEMENT DEPTH
- (7) AVERAGE PAVEMENT DEPTH APPROXIMATELY 6"

- (8) SEE CHART F FOR FENCE TYPES AND LENGTHS
- (9) QUANTITY FOR USE UNDER BITUMINOUS WALK
- (10) INCLUDES 45 CY FOR CONCRETE DRIVEWAYS, 122 CY FOR BIT. DRIVEWAYS, 69 CY FOR AGGREGATE DRIVEWAY, 146 CY FOR MITIGATION AREA BIT. PATH, 77 CY FOR CONCRETE WALK, AND 975 CY FOR BIT. WALK
- (11) INCLUDES QUANTITY FOR USE UNDER CONCRETE WALK
- (12) PROVIDED FOR AREAS OF SOD AND SEED MIXTURE 500 ONLY.
- (13) 100% NON-PARTICIPATING FOR STATE AID FUNDS

 BRW INC. 700 THIRD STREET SOUTH, MINNEAPOLIS, MN 55415	PLANNING TRANSPORTATION ENGINEERING URBAN DESIGN	ORIGINAL DATE 5/8/92 REVISIONS 8/14/92	COUNTY ROAD J C.S.A.H. 32 RAMSEY/ANOKA COUNTY ESTIMATED QUANTITIES
	DESIGN BY: TJG DRAWN BY: TJG CHECKED BY: SPJ	SURVEY BOOK	
S.A.P. NO. 02-632-08 62-601-07		SHEET 3 OF 76	

ESTIMATED QUANTITIES

NOTE	CHART	ITEM NO.	ITEM	UNIT	TOTAL QUANTITIES		RAMSEY COUNTY				ANOKA COUNTY								
					EST.	FINAL	PARTICIPATING		NON-PARTICIPATING		PARTICIPATING		NON-PARTICIPATING		NON-PARTICIPATING		STORM SEWER		
							SAP 62-601-07	SHOREVIEW	EST.	FINAL	SAP 02-632-08	CIRCLE PINES	LINO LAKES	BLAINE	EST.	FINAL	EST.	FINAL	
	R	2564.531	F & I SIGN PANELS TYPE C	SF	503.75		251.88				251.87								
	S	0564.602	PAVEMENT MESSAGE (RIGHT ARROW) - PAINT	EA	2		1				1								
		0564.602	INSTALL SIGN TYPE C	EA	16		8				8								
	S	0564.603	4" SOLID LINE YELLOW - PAINT	LF	1560		780				780								
	S	0564.603	4" SOLID LINE WHITE - PAINT	LF	16960		8480				8480								
	S	0564.603	4" SOLID DOUBLE YELLOW - PAINT	LF	170		85				85								
(5)	S	0564.603	4" BROKEN LINE YELLOW - PAINT	LF	1400		700				700								
	S	0564.603	36" SOLID LINE WHITE - PAINT	LF	84		42				42								
		0564.604	CONSTRUCTION SIGNS-SPECIAL	SF	29.9		14.9				14.8								
		2571.505	SPECKLED ALDER OR WINTERBERRY 24" HIGH B&B	SHRUB	8		4				4								
			ILEX VERTICILLATA																
		2571.505	RED-OSIER DOGWOOD 24" HIGH B&B	SHRUB	7		3.5				3.5								
			CORNUS STOLONIFERA																
		2571.505	PUSSY WILLOW 24" HIGH B&B	SHRUB	9		4.5				4.5								
			SALIX DISCOLOR																
	B	2571.541	TRANSPLANT TREES (44" DIA. SPADE)	TREE	18		4.5		13.5										
	B	2571.541	TRANSPLANT TREES (60" DIA. SPADE)	TREE	42		10		32										
	B	2571.544	TRANSPLANT SHRUB	SHRUB	34		8.5		25.5										
		2573.501	BALE CHECK	EA	100		50				50								
		2573.502	SILT FENCE HEAVY DUTY	LF	6500		3250				3250								
	Q	2575.501	SEEDING	AC	2.2 (P)		1.1				1.1								
	Q	2575.502	SEED MIXTURE 500	LB	110		55				55								
	Q	0575.609	SEEDING WETLAND	AC	3.5		1.75				1.75								
	Q	0575.609	SEEDING UPPER WETLAND	AC	3.6		1.8				1.8								
	Q	2575.505	SODDING TYPE LAWN & BOULEVARD	SY	20122		10061				10061								
		2575.511	MULCH MATERIAL TYPE 1	TON	4.4		2.2				2.2								
		2575.519	DISK ANCHORING (P)	AC	5.8 (P)		2.9				2.9								
(12)		2575.532	COMMERCIAL FERT. ANALYSIS 12-12-12	LB	1280		640				640								

THE FOLLOWING STANDARD PLATES AS APPROVED BY THE FHWA SHALL APPLY.
STANDARD PLATES

MNDOT STANDARD PLATE NUMBER	DESCRIPTION
0005A	SPECIFICATION REFERENCE TO STANDARD PLATES
3000L	REINFORCED CONCRETE PIPE
3006F	GASKET JOINT FOR RC PIPE
3100G	CONCRETE APRON FOR REINFORCED CONCRETE PIPE
3133B	RIPRAP AT RCP OUTLETS
3145E	CONCRETE PIPE TIES
4010G	CONC. SHORT CONE & ADJUSTING RING
4011D	PRECAST CONCRETE BASE
4020E	MANHOLE OR CATCH BASIN
4021D	PRECAST CURB OPENING CATCH BASIN
4101C	RING CASTING FOR MANHOLE OR CATCH BASIN
4110E	COVER CASTING FOR MANHOLE
4180H	MANHOLE OR CATCH BASIN STEPS
7100F	CONCRETE CURB AND GUTTERS
7111G	INSTALLATION & REINFORCEMENT OF CATCH BASIN CASTINGS
7135J	CONCRETE WALK & CURB RETURNS AT ENTRANCES
7036D	PEDESTRIAN CURB RAMP
8000I	STANDARD BARRICADE
9102D	SODDING AT PIPE CULVERT ENDS
9322J	CHAIN LINK FENCE

INDEX OF TABULATION CHARTS

SHEET NO.	CHART	DESCRIPTION
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8	C	CONCRETE REMOVALS
8	D	BITUMINOUS REMOVALS
8	E	SALVAGE TYPE C SIGN
8	F	SALVAGE FENCE
9	G	STORM SEWER REMOVAL & MODIFICATIONS
9	H	WATERMAIN MODIFICATIONS
9	I	SANITARY SEWER MODIFICATIONS
10	J	PUBLIC UTILITIES
11	K	CONCRETE WALK AND CURB & GUTTER
11	L	BITUMINOUS & AGGREGATE SUMMARY
11	M	MISCELLANEOUS BITUMINOUS
29	N	DRAINAGE TABULATION
29	O	CASTING ASSEMBLIES
6	P	EARTHWORK SUMMARY
12	Q	TURF ESTABLISHMENT
12	R	PERMANENT SIGNING TABULATION
12	S	PAVEMENT MARKING TABULATION

BASIS OF ESTIMATED QUANTITIES

TYPE 31 - 110#/SQ YD/INCH
 TYPE 41 - 110#/SQ YD/INCH
 TACK COAT - 0.05 GAL/SQ YD/LAYER
 SEED MIXTURE 500 - 50#/ACRE
 MULCH MATERIAL - 2 TON/ACRE
 FERTILIZIER 12-12-12 - 200#/ACRE

NOTES:

- INCLUDES 69,828 CU YD EXCAVATION FROM THE WETLAND MITIGATION AREA. SEE SHEET 19.
- FOR DUST CONTROL AS DIRECTED BY THE ENGINEER
- INCLUDES CASTING ASSEMBLY
- CHART INDEX - SEE SHEET 4
- LENGTH DOES NOT INCLUDE GAPS
- FULL DEPTH REGARDLESS OF PAVEMENT DEPTH
- AVERAGE PAVEMENT DEPTH APPROXIMATELY 6"
- SEE CHART F FOR FENCE TYPES AND LENGTHS
- QUANTITY FOR USE UNDER BITUMINOUS WALK
- INCLUDES 45 CY FOR CONCRETE DRIVEWAYS, 122 CY FOR BITUMINOUS DRIVEWAYS, 69 CY FOR AGGREGATE DRIVEWAY, 146 CY FOR MITIGATION AREA PATH, 77 CY FOR CONCRETE WALKS, AND 975 CY FOR BIT. WALK
- INCLUDES QUANTITY FOR USE UNDER CONCRETE WALK
- PROVIDED FOR AREAS OF SOD AND SEED MIXTURE 500 ONLY.
- 100% NON-PARTICIPATING FOR STATE AID

BRW PLANNING TRANSPORTATION ENGINEERING URBAN DESIGN
 (612) 370-0700
 BRW INC. 700 THIRD STREET SOUTH, MINNEAPOLIS, MN 55415

DESIGN BY: JIG
 DRAWN BY: JIG
 CHECKED BY: SPL

SURVEY BOOK

ORIGINAL DATE	5/6/92
REVISIONS	8/14/92

COUNTY ROAD J
 C.S.A.H. 32
 RAMSEY/ANOKA COUNTY
 ESTIMATED QUANTITIES

S.A.P. NO. 02-632-08
 62-601-07

SHEET 4 OF 76

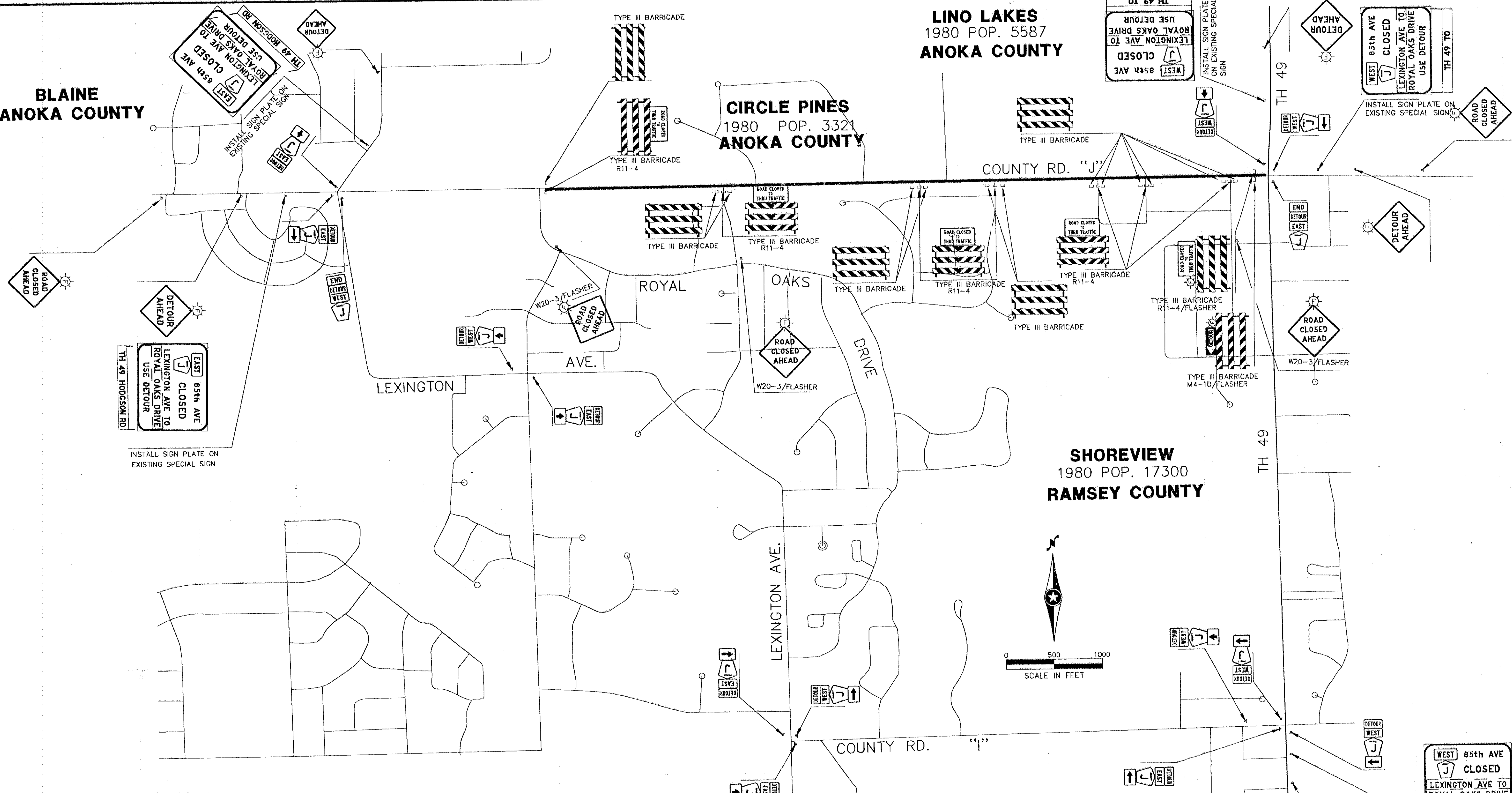
DESIGN FILE
 No. 1313A

BLAINE
ANOKA COUNTY

LINO LAKES
1980 POP. 5587
ANOKA COUNTY

CIRCLE PINES
1980 POP. 3321
ANOKA COUNTY

SHOREVIEW
1980 POP. 17300
RAMSEY COUNTY



TH 49 HODGSON RD
86" x 10" 6" SERIES D - 76.1

TH 49 TO
86" x 10" 6" SERIES D - 39.4

NOTE:
SIGN PLATE SHALL HAVE BLACK LEDGEND ON ORANGE BACKGROUND.

- NOTE:
- (1) CONTRACTOR MUST PROVIDE ACCESS FOR LOCAL RESIDENTS AT ALL TIMES.
 - (2) ARRANGEMENTS WILL NEED TO BE COORDINATED WITH RESIDENTS DURING MUCK EXCAVATION TO PROVIDE ACCESS TO THEIR PROPERTIES.
 - (3) REGULATORY TRAFFIC CONTROL DEVICES TO BE MODIFIED AS NEEDED FOR THE DURATION OF THE DETOUR.
 - (4) DETOUR SIGNING FROM S.A.P. NO. 02-632-04, 62-601-06 WILL BE USED FOR THIS PROJECT. CONTRACTOR TO INSTALL SIGN PLATES OVER THE EXISTING SPECIAL SIGNS FOR THE NEW CONSTRUCTION LIMITS.

ALL TRAFFIC CONTROL SIGNING AND DEVICES SHALL CONFORM TO THE MUTCD, INCLUDING APPENDIX B, DATED MARCH, 1990.

BRW
BRW INC. 700 THIRD STREET SOUTH, MINNEAPOLIS, MN 55415
DESIGN BY: T.J.G.
DRAWN BY: T.J.G.
CHK'D BY: S.P.J.

PLANNING TRANSPORTATION ENGINEERING URBAN DESIGN
SURVEY BOOK 8927

ORIGINAL DATE 5/6/92
REVISIONS

COUNTY ROAD "J"
C.S.A.H. 32
RAMSEY/ANOKA COUNTY
DETOUR LAYOUT

S.A.P. NO. 02-632-08
62-601-07

SHEET 5 OF 76


DESIGN FILE No. 1313A

CLEARING AND GRUBBING A				
STATION	LOCATION	QUANTITY	CLEAR & GRUB DESCRIPTION	ACRE
181+31-183+40	30'-40'LT		WOODS	0.05
183+50	44'LT	1	14" OAK	
184+47	37'LT	1	14" OAK	
184+62	41'LT	1	12" TREE	
184+77	39'LT	1	12" OAK	
186+77-187+49	40'-57'RT		WOODS	0.05
186+95	43'LT	1	ASH	
190+55	39'LT	1	6" MAPLE	
190+70	43'LT	1	6" SPRUCE	
190+95	37'LT	1	8" OAK	
190+96	34'LT	1	4" OAK	
190+98	33'LT	1	4" OAK	
191+05	44'LT	1	18" PINE	
191+08	33'LT	1	6" OAK	
191+36	35'LT	1	12" PINE	
191+78	27'LT	1	6" OAK	
191+82	32'LT	1	6" OAK	
192+10-194+45	36'-48'LT		WOODS	0.05
196+47	62'RT	1	4" SPRUCE	
196+79	72'RT	1	4" PINE	
197+03	71'RT	1	4" PINE	
198+35	62'RT	1	4" PINE	
199+08-199+32	32'-46'LT		WOODS	0.05
202+13-205+54	27'-60'RT		WOODS	0.20
221+53	35'LT	N/A	2" CEDAR	
222+10	40'LT	1	4" MAPLE	
222+18	39'LT	N/A	2" SPRUCE	
222+33	39'LT	N/A	2" SPRUCE	
222+38	35'LT	N/A	SHRUB	
222+45	35'LT	N/A	SHRUB	
222+79	35'LT	N/A	SHRUB	
222+84	35'LT	N/A	SHRUB	
222+96	35'LT	N/A	SHRUB	
223+04	35'LT	N/A	SHRUB	
223+10-223+56	34'LT	N/A	SHRUBS	
223+64-223+88	35'-37'LT	N/A	BUSHES	
224+62	44'LT	1	6" PINE	
224+63	34'LT	1	6" PINE	
224+64	30'LT	1	4" PINE	
224+75	30'LT	1	6" PINE	
224+81	30'LT	1	6" PINE	
224+86	31'LT	1	6" PINE	
224+95	31'LT	1	6" PINE	
225+04	30'LT	1	6" PINE	
225+10	30'LT	1	6" PINE	
225+20	29'LT	1	6" PINE	
225+29	29'LT	1	6" PINE	
225+44	31'LT	1	6" PINE	
225+49	32'LT	1	6" PINE	
225+57	35'LT	1	6" PINE	
225+64	33'LT	N/A	BUSH	
225+81	34'LT	N/A	BUSH	
225+88	29'LT	1	9" PINE	
225+94	32'LT	1	6" PINE	
226+01	35'LT	1	6" PINE	
226+24	35'LT	1	10" CEDAR	
226+55	32'LT	N/A	BUSH	
226+67	35'LT	1	8" SPRUCE	
226+77	35'LT	1	6" SPRUCE	
226+82	36'LT	1	6" SPRUCE	
226+95	35'LT	1	12" CEDAR	
227+28	37'LT	1	8" SPRUCE	
227+37	37'LT	1	8" SPRUCE	
227+43	38'LT	1	5" SPRUCE	
227+48	38'LT	1	5" SPRUCE	
227+56	38'LT	1	5" SPRUCE	

CLEARING AND GRUBBING A				
STATION	LOCATION	QUANTITY	CLEAR & GRUB DESCRIPTION	ACRE
228+80-230+22	27'-78'RT		WOODS	0.05
229+32	35'LT	1	18" COTTONWOOD	
229+38	34'LT	1	18" COTTONWOOD	
229+57	38'LT	1	12" COTTONWOOD	
229+69	34'LT	1	10" COTTONWOOD	
229+78	36'LT	1	10" COTTONWOOD	
229+90	33'LT	1	12" COTTONWOOD	
229+96	34'LT	1	16" COTTONWOOD	
230+08-230+58	28'-50'LT		WOODS	0.05
230+80-232+44	26'-53'RT		WOODS	0.10
233+09-233+75	38'-55'RT		WOODS	0.05
234+42-236+67	26'-46'LT		WOODS	0.10
237+27-237+82	31'-46'LT		WOODS	0.05
243+24	32'LT	N/A	BUSH	
243+96	36'LT	1	6" SPRUCE	
244+03-244+35	35'LT	N/A	SHRUBS	
244+10	45'LT	N/A	3" MAPLE	
244+76	42'LT	N/A	2" TREE	
245+22	40'LT	N/A	2" TREE	
245+81	40'LT	N/A	2" TREE	
246+10	38'LT	1	14" ASH	
246+73	45'LT	N/A	1" TREE	
247+03-247+38	33'LT	N/A	SHRUBS	
247+36	43'LT	N/A	1" TREE	
248+08	33'RT	1	20" TREE	
248+20	34'LT	N/A	2" ASH	
249+04	37'LT	N/A	BUSH	
249+14	35'LT	N/A	BUSH	
249+20	38'LT	N/A	1" PINE	
249+25	37'LT	N/A	1" PINE	
249+36	37'LT	N/A	1" PINE	
249+94	33'LT	N/A	3" SPRUCE	
250+05	33'LT	N/A	3" SPRUCE	
250+15	33'LT	N/A	3" SPRUCE	
250+25	44'LT	1	6" TREE	
250+64	36'LT	1	4" TREE	
251+25	38'LT	1	8" SPRUCE	
251+27	42'LT	1	12" PINE	
251+32	33'LT	1	8" PINE	
251+37	35'LT	1	8" PINE	
251+50	32'LT	1	4" SPRUCE	
251+57	30'LT	1	6" SPRUCE	
251+58	29'LT	1	12" SPRUCE	
251+65	30'LT	1	6" SPRUCE	
252+09	34'LT	N/A	1" PINE	
252+26	35'LT	1	14" TREE	
252+55	42'LT	1	4" TREE	
252+74	42'LT	N/A	1" SPRUCE	
252+76	33'LT	1	18" TREE	
253+03	34'LT	N/A	2" SPRUCE	
253+11	33'LT	N/A	2" SPRUCE	
253+20-254+75	33'-39'LT	N/A	2" SPRUCE	
254+78-256+56	32'-67'RT		WOODS	0.05
256+84	40'RT	N/A	3" TREE	
257+05	40'RT	N/A	3" TREE	
257+26	40'RT	N/A	3" TREE	
257+89	42'RT	N/A	2" TREE	
257+91	42'RT	N/A	BUSH	
257+92	42'RT	N/A	BUSH	
TOTALS:		70		0.85

TRANSPLANT TREES & SHRUBS B				
STATION	LOCATION	TRANSPLANT TREES	TRANSPLANT SHRUBS	DESCRIPTION
214+54	48'RT	1		4" PINE
214+66	48'RT	1		4" PINE
220+45-220+93	45'-48'RT	5		4" PINE
221+04-221+38	43'-55'RT	5		4" PINE
222+40	45'RT	1		3" PINE
226+37	45'RT	1		4" PINE
226+41	45'RT	1		4" PINE
226+56	44'RT	1		4" PINE
226+65	45'RT	1		4" PINE
226+76	45'RT	1		4" PINE
226+87	45'RT	1		4" PINE
226+97	45'RT	1		4" PINE
227+07	45'RT	1		4" PINE
227+17	44'RT	1		4" PINE
227+26	44'RT	1		4" PINE
227+36	44'RT	1		4" PINE
227+47	40'RT	1		4" PINE
227+55	42'RT	1		4" PINE
227+64-228+21	39'-72'RT	7		4" PINE
238+65-239+37	37'-38'RT		11	SHRUBS
238+70	38'RT	(1) 1		1" PINE
240+05	41'RT		1	BUSH
241+35-242+30	40'-41'RT		16	SHRUBS
242+87-244+40	37'-55'RT	(1) 17		1" SPRUCE TREES
246+43	29'RT	1		12" PINE
246+61	30'RT	1		12" PINE
246+71	30'RT	1		12" PINE
246+78	30'RT	1		12" PINE
246+89	30'RT	1		12" PINE
249+65	31'RT	1		4" MAPLE
249+70-250+04	31'RT		6	SHRUBS
249+77	32'LT	1		4" TREE
251+22	32'RT	1		8" SPRUCE
251+69	29'RT	1		3" TREE
TOTAL		60	34	

(1) TRANSPLANT WITH 44" DIA. SPADE ALL OTHERS TRANSPLANT WITH 60" DIA. SPADE

 BRW INC. 700 THIRD STREET SOUTH, MINNEAPOLIS, MN 55415	PLANNING TRANSPORTATION ENGINEERING URBAN DESIGN	ORIGINAL DATE 5/8/92 REVISIONS 8/11/92	COUNTY ROAD J C.S.A.H. 32 RAMSEY/ANOKA COUNTY TABULATED QUANTITIES
	DESIGN BY: J.J.G. DRAWN BY: J.J.G. CHECKED BY: S.P.J.	SURVEY BOOK	
S.A.P. NO. 02-632-08 62-601-07			DESIGN FILE No. 1313A

STORM SEWER REMOVAL & MODIFICATIONS					G		
LINE NUMBER	STATION	LOCATION	ITEM INPLACE	NOTES	2104.501 REMOVE	2104.523 SALVAGE	2104.509 REMOVE
					LIN FT	STRUCT EA	STRUCT EA
1	181+09	35' RT	CB MANHOLE	(1)			1
2	181+09-181+49	25'-35' RT	15" RCP	(2)	42		
3	186+32	24' RT	48" DIA. WEIR OUTLET STRUCTURE	(3)		(4) 1	
4	186+32	29' LT-24' RT	24" CMP	(2)	53		
5	190+16-190+52	30' LT	12" CMP	(2)	36		
6	196+80	18' LT-20' RT	24" CMP	(2)	38		
7	199+80-200+68	37' RT	15" RCP	(2)	88		
8	202+15	39'-54' RT	12" RCP	(2)	15		
9	207+78	27' LT-30' RT	12" CMP	(2)	57		
10	228+15-228+84	30'-32' RT	12" CMP	(2)	69		
11	232+56-232+75	28' LT-36' RT	36" CMP	(2)	68		
12	255+16-255+41	23' LT-25' RT	24" CMP	(2)	54		
TOTALS:					520	1	1


NOTES:

- (1) BULKHEAD 15" OPENING ON EAST SIDE OF CB. THIS SHALL BE CONSIDERED INCIDENTAL TO THE SALVAGE WEIR MANHOLE ITEM.
- (2) LINEAR FOOTAGE REMOVED INCLUDES APRONS
- (3) SEE THE STORM SEWER TABULATION CHART FOR PLACEMENT OF STRUCTURE
- (4) INCLUDES CASTING ASSEMBLY

WATERMAIN MODIFICATIONS			H			
STATION	LOCATION	ITEM INPLACE	0504.602 ADJUST EACH	2104.509 REMOVE EACH	0504.602 RECONSTRUCT EACH	REMARKS
200+12	44' RT	GATE VALVE MH	1			
204+42	70' LT	HYDRANT & GV	1			
204+51	62' LT	VALVE BOX	1			
204+89	49' LT	VALVE BOX	1			
215+57	70' LT	HYDRANT & GV	1			
215+67	60' LT	VALVE BOX	1			
228+39	42' RT	GATE VALVE MH		1		SALV. GV & CAST. ASS.
228+83	37' RT	HYDRANT & GV				SALVAGE HYDRANT & GV
232+25	21' RT	GATE VALVE MH		1		SALV. GV & CAST. ASS.
233+28	21' RT	GATE VALVE MH	1			
234+61	27' RT	HYDRANT & GV				RELOCATE HYDRANT & GV
239+04	24' RT	GATE VALVE MH			1	ECCENTRIC CONE
240+06	42' RT	HYDRANT & GV				RELOCATE HYDRANT & GV
240+16	37' RT	VALVE BOX	1			
245+17	38' RT	VALVE BOX	1			
245+47	43' RT	HYDRANT & GV				RELOCATE HYDRANT & GV
245+82	20' RT	GATE VALVE MH	1			
249+66	28' RT	HYDRANT & GV				RELOCATE HYDRANT & GV
250+83	46' LT	HYDRANT & GV				RELOCATE HYDRANT & GV
250+95	32' LT	VALVE BOX	1			
250+95	36' LT	GATE VALVE MH	1			
250+95	42' LT	VALVE BOX	1			
250+99	36' LT	VALVE BOX	1			
252+00	20' RT	GATE VALVE MH			1	
253+80	24' RT	HYDRANT & GV				RELOCATE HYDRANT & GV
253+86	30' RT	VALVE BOX	1			
258+02	32' RT	HYDRANT & GV				RELOCATE HYDRANT & GV
258+07	20' RT	GATE VALVE MH			1	

SANITARY SEWER MODIFICATIONS							
STATION	LOCATION	ITEM INPLACE	OWNERSHIP	PROPOSED ELEVATION	INPLACE ELEVATION	2506.522 ADJUST EACH	0506.602 RECONSTRUCT EACH
241+78	23' LT	MANHOLE	LINO LAKES	901.28	899.45		1
245+29	23' RT	MANHOLE	SHOREVIEW	900.10	900.74		1
245+40	39' RT	FORCEMAIN MH	SHOREVIEW	900.32	900.68	1	
245+96	23' LT	MANHOLE	LINO LAKES	899.58	900.74		1
248+28	23' RT	MANHOLE	SHOREVIEW	899.11	900.43		1
249+18	19' LT	FORCEMAIN MH	LINO LAKES	899.54	900.45		1
249+96	23' LT	MANHOLE	LINO LAKES	899.85	(1)		1
250+87	23' RT	MANHOLE	SHOREVIEW	900.31	901.21		1
253+96	23' RT	MANHOLE	SHOREVIEW	900.39	901.40		1
253+98	28' LT	MANHOLE	LINO LAKES	900.39	900.70	1	
TOTALS:						2	8

- (1) FIELD VERIFY EXISTING ELEVATION

 BRW INC. 700 THIRD STREET SOUTH, MINNEAPOLIS, MN 55415	PLANNING TRANSPORTATION ENGINEERING URBAN DESIGN	ORIGINAL DATE 5/8/92 REVISIONS 8/11/92	COUNTY ROAD J C.S.A.H. 32 RAMSEY/ANOKA COUNTY TABULATED QUANTITIES
	DESIGN BY: TJC DRAWN BY: TJC CHECKED BY: SPJ	SURVEY BOOK	

PUBLIC UTILITIES (1)(2) J			
STATION	LOCATION	ITEM INPLACE	OWNERSHIP
182+53	27'RT	POWER POLE	NSP
182+53	34'LT	POWER POLE	NSP
185+45	27'RT	POWER POLE	NSP
187+35	27'RT	POWER POLE	NSP
189+27	27'RT	POWER POLE	NSP
191+15	27'RT	POWER POLE	NSP
195+50	30'RT	POWER POLE	NSP
197+73	30'RT	POWER POLE	NSP
199+89	30'RT	POWER POLE	NSP
202+21	32'RT	POWER POLE	NSP
202+60	32'LT	POWER POLE	NSP
200+50-202+21	32'-40'RT	BURIED ELECTRIC	NSP
202+60-204+38	32'LT	BURIED ELECTRIC	NSP
216+00-217+61	27'LT	BURIED ELECTRIC	NSP
217+61	27'LT	POWER POLE	NSP
219+79	23'LT	POWER POLE	NSP
221+58	LT TO RT	BURIED ELECTRIC	NSP
221+94	25'LT	POWER POLE	NSP
222+03-224+00	26'RT	BURIED ELECTRIC	NSP
224+02	28'LT	POWER POLE	NSP
224+00	LT TO RT	BURIED ELECTRIC	NSP
227+25	26'LT	POWER POLE	NSP
230+30	27'LT	POWER POLE	NSP
230+30	28'RT	POWER POLE	NSP
233+70	28'LT	POWER POLE	NSP
235+78	28'LT	POWER POLE	NSP
237+75	30'LT	POWER POLE	NSP
240+07	20'-67'RT	BURIED ELECTRIC	NSP
240+07-240+49	27'-29'LT	BURIED ELECTRIC	NSP
240+49	29'LT	POWER POLE	NSP
241+96	30'LT	POWER POLE	NSP
243+91	29'LT	POWER POLE	NSP
243+91	29'LT-27'RT	BURIED ELECTRIC	NSP
243+91-245+10	27'-70'RT	BURIED ELECTRIC	NSP
246+73	30'LT	POWER POLE	NSP
248+02	22'RT	POWER POLE	NSP
248+23	30'LT	POWER POLE	NSP
249+73	30'LT	POWER POLE	NSP
251+24-251+70	28'-65'LT	BURIED ELECTRIC	NSP
251+70	28'LT	POWER POLE	NSP
253+00	30'LT	POWER POLE	NSP
254+23	56'RT	POWER POLE	NSP
254+96	27'LT	POWER POLE	NSP
256+47	27'LT	POWER POLE	NSP
258+19	28'LT	POWER POLE	NSP
181+31-191+15	27'RT	OH CABLE TV	NCCTV
191+15-204+85	73'LT-27'RT	UG CABLE TV	NCCTV
221+03-258+27	21'-82'LT	2" STEEL GASMAIN	MIDWEST GAS
224+08	21'-81'LT	2" STEEL GASMAIN	MIDWEST GAS
251+20-251+26	21'-68'LT	2" STEEL GASMAIN	MIDWEST GAS
200+47	43'-70'RT	2" STEEL GASMAIN	NSP
227+98-258+50	19'-130'RT	4" Pe GASMAIN	NSP
228+72	43'RT	GASMAIN VALVE	NSP
240+05	27'45'RT	2" STEEL GASMAIN	NSP
245+06	23'-50'RT	2" STEEL GASMAIN	NSP
254+23	30'-55'RT	2" STEEL GASMAIN	NSP
181+30-202+21	27'-31'RT	OH TELEPHONE	US WEST
200+40	43'-70'RT	BURIED TELEPHONE	US WEST
200+44	34'LT-70'RT	BURIED TELEPHONE	US WEST
200+44-223+74	23'-75'LT	BURIED TELEPHONE	US WEST
202+21-204+35	75'LT-31'RT	BURIED TELEPHONE	US WEST
202+84-238+70	24'LT	BURIED TELEPHONE	US WEST
221+53	45'-70'RT	BURIED TELEPHONE	US WEST

PUBLIC UTILITIES (1)(2) J			
STATION	LOCATION	ITEM INPLACE	OWNERSHIP
224+02-240+49	26'-71'LT	OH TELEPHONE	US WEST
228+66-238+70	26'-123'RT	BURIED TELEPHONE	US WEST
238+70	26'RT	TELEPHONE CABINET	US WEST
238+70	26'LT-26'RT	BURIED TELEPHONE	US WEST
238+70-253+28	26'-40'LT	2 BURIED TELEPHONE	US WEST
240+49-254+80	26'-30'LT	BURIED TELEPHONE	US WEST
240+08	40'-63'RT	BURIED TELEPHONE	US WEST
251+28-254+80	30'-70'LT	BURIED TELEPHONE	US WEST
254+80	30'LT	TELEPHONE CABINET	US WEST
254+15-254+80	30'-70'RT	BURIED TELEPHONE	US WEST
254+80-258+34	30'-40'LT	BURIED TELEPHONE	US WEST
258+30	37'LT	TELEPHONE MH (3)	US WEST
200+00	50'RT	STREET LIGHT	CITY OF SHOREVIEW
204+41	61'LT	STREET LIGHT	CITY OF CIRCLE PINES
215+98	51'LT	STREET LIGHT	CITY OF CIRCLE PINES
221+63	43'RT	STREET LIGHT	CITY OF SHOREVIEW
228+68	43'RT	STREET LIGHT	CITY OF SHOREVIEW
240+08	46'RT	STREET LIGHT	CITY OF SHOREVIEW
245+12	45'RT	STREET LIGHT	CITY OF SHOREVIEW
251+23	35'LT	STREET LIGHT	CITY OF LINO LAKES
251+23	26'RT	STREET LIGHT	CITY OF SHOREVIEW

- (1) THE SIZE LOCATION AND DEPTHS OF UTILITIES AS SHOWN IN THE PLANS ARE ONLY APPROXIMATE AND THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES AND VERIFY ALL UTILITY LOCATIONS.
- (2) RELOCATE BY OTHERS UNLESS OTHERWISE NOTED
- (3) FIELD ADJUST MANHOLE

ALL CONTRACTORS MUST CONTACT
GOPHER STATE ONE CALL
TWIN CITY AREA 454-0002
MN. TOLL FREE 1-800-252-1166
BEFORE CONSTRUCTION BEGINS

NORTHERN STATES POWER CO. (NSP)
825 RICE ST. 3RD FLOOR
ST. PAUL MN 55117
ATTEN: KATHLEEN MARTINEZ
(612) 229-2316

NORTHERN STATES POWER CO. (NSP GAS)
825 RICE ST. 3RD FLOOR
ST. PAUL MN 55117
ATTEN: WILLIAM MARKA
(612) 229-2563

MIDWEST GAS
1930 COON RAPIDS BOULEVARD
COON RAPIDS MN 55433
ATTEN: WENDELL HUBERT
(612) 754-4200

US WEST
70 WEST 4TH
ST PAUL MN 55104
ATTEN: GENE McCLOUD
(612) 493-3200

CITY OF SHOREVIEW
4600 NORTH VICTORIA ST.
SHOREVIEW MN 55126
ATTEN: CHARLES AHL
(612) 490-4650

CITY OF CIRCLE PINES
200 CIVIC HEIGHTS CIRCLE
CIRCLE PINES MN
ATTEN: BERT CAVERSON
(612) 784-5898

CITY OF LINO LAKES
1189 MAIN STREET
LINO LAKES MN 55014
ATTEN: DARREL SCHNEIDER
(612) 292-4501

NORTH CENTRAL CABLE TELEVISION
934 WOODHILL DRIVE
ROSEVILLE MN 55113
ATTEN: SCOTT GUNDERSON
(612) 483-3233

BRW
BRW INC. 700 THIRD STREET SOUTH, MINNEAPOLIS, MN 55415

DESIGN BY: TJC
DRAWN BY: TJC
CHECKED BY: SPJ

PLANNING
TRANSPORTATION
ENGINEERING
URBAN DESIGN

SURVEY BOOK

ORIGINAL DATE 5/6/92
REVISIONS

COUNTY ROAD J
C.S.A.H. 32
RAMSEY/ANOKA COUNTY
TABULATED QUANTITIES

S.A.P. NO. 02-632-08
62-601-07

SHEET 10 OF 76

CONCRETE WALK AND CURB & GUTTER K				
STATION TO STATION	LOCATION	2531.501	2521.501	2531.507
		B624 C&G LIN FT	4" CONC. WALK SQ FT	6" CONC. DRIVEWAY SQ YD
181+30 TO 204+44	26.5'-56.5' LT	2342		
181+30 TO 200+04	26.5'-56.5' RT	1901		
200+42 TO 221+63	26.5'-56.5' RT	2176		
204+78 TO 215+60	26.5'-56.5' LT	1137		
215+93 TO 224+16	26.5'-56.5' LT	870	4140	
221+97 TO 228+33	26.5'-56.5' RT	730		
224+40 TO 250+85	26.5'-56.5' LT	2693		155
228+66 TO 240+09	26.5'-56.5' RT	1236		
240+42 TO 245+13	26.5'-56.5' RT	525		
245+47 TO 253+80	26.5'-56.5' RT	888		34
251+19 TO 258+50	26.5'-56.5' LT	785		36
253+64 TO 253+82	100' - 70' RT			40
254+13 TO 258+50	26.5'-56.5' RT	491		
	TOTAL	15774	4140	265


BITUMINOUS AND AGGREGATE SUMMARY L											
AGGREGATE SUMMARY					BITUMINOUS SUMMARY (2)(3)						
STATION TO STATION	LOCATION	AREA (1) SQ YD	2211.503 6" AGG. BASE CL 5A CU YD	STATION TO STATION	LOCATION	AREA (1) SQ YD	2340.514 2.5" TYPE 31 BASE TON	2340.510 1.5" TYPE 31 BINDER TON	2340.508 1.5" TYPE 41 WEAR TON	2357.502 TACK COAT GAL	
COUNTY ROAD J				COUNTY ROAD J							
181+30 TO 258+50	27.5'LT - 27.5'RT	47178	7863	181+30 TO 258+50	24'LT - 24'RT	41173	5661	3397	3397	4117	
FERNWOOD STREET				FERNWOOD STREET							
0+27.5 TO 0+65	18.5'LT - 18.5'RT	208	35	0+24 TO 0+65	15'LT - 15'RT	167	23	14	14	17	
INDIAN HILLS LANE				INDIAN HILLS LANE							
0+27.5 TO 0+75	17'LT - 17'RT	233	39	0+24 TO 0+75	13.5'LT - 13.5'RT	183	25	15	15	18	
INDIAN HILLS DRIVE				INDIAN HILLS DRIVE							
0+27.5 TO 0+88	17'LT - 17'RT	283	47	0+24 TO 0+88	13.5'LT - 13.5'RT	222	31	18	18	22	
HARDWOOD STREET				HARDWOOD STREET							
0+27.5 TO 0+64	17'LT - 17'RT	192	32	0+24 TO 0+64	13.5'LT - 13.5'RT	150	21	12	12	15	
BALDWIN LAKE ROAD				BALDWIN LAKE ROAD							
0+27.5 TO 0+92	14'LT - 14'RT	255	43	0+24 TO 0+92	13'LT - 13'RT	226	31	19	19	23	
SCENIC PLACE				SCENIC PLACE							
0+27.5 TO 1+04	17'LT - 17'RT	343	57	0+24 TO 1+04	13.5'LT - 13.5'RT	270	37	22	22	27	
PHEASANT DRIVE				PHEASANT DRIVE							
0+27.5 TO 0+56	17'LT - 17'RT	162	27	0+24 TO 0+56	13.5'LT - 13.5'RT	126	17	10	10	13	
GROTTO STREET				GROTTO STREET							
0+27.5 TO 0+66	17'LT - 17'RT	199	33	0+24 TO 0+66	13.5'LT - 13.5'RT	156	21	13	13	16	
WOODRIDGE LANE				WOODRIDGE LANE							
0+27.5 TO 0+66	17'LT - 17'RT	199	33	0+24 TO 0+66	13.5'LT - 13.5'RT	156	21	13	13	16	
ST. ALBANS STREET				ST. ALBANS STREET							
0+27.5 TO 0+66	17'LT - 17'RT	199	33	0+24 TO 0+66	13.5'LT - 13.5'RT	156	21	13	13	16	
	TOTAL		8242	TOTAL			5909	3546	3546	4300	

MISCELLANEOUS BITUMINOUS M			
STATION TO STATION	LOCATION	2521.511	0531.603
		2" BIT. WALK (2) SQ FT	BIT. (1)(2) DRIVEWAY SQ YD
181+12 TO 199+96	RT	15075	
184+31 TO 184+40	LT		8
191+84 TO 191+98	LT		19
200+49 TO 221+51	RT	16812	
222+07 TO 228+22	RT	4923	
222+56 TO 222+74	LT		103
226+30 TO 226+50	LT		39
228+73 TO 240+03	RT	9036	
229+13 TO 229+28	LT		7
240+50 TO 245+07	RT	3654	
241+43 TO 241+57	LT		19
247+00 TO 257+20	RT		59
247+74 TO 248+00	RT		71
248+54 TO 248+81	RT		44
248+66 TO 248+86	LT		65
249+39 TO 249+63	RT		63
250+92 TO 251+17	RT		65
251+76 TO 251+96	RT		23
251+79 TO 251+91	LT		13
252+59 TO 252+84	RT		18
254+24 TO 258+22	RT	3186	
257+40 TO 257+70	RT		48
	TOTAL	52686	742

- (1) PAID AS 2" BIT. WEARING COURSE
(2) TYPE 41 WEARING COURSE

NOTES

- (1) APPROACH STREET RADIUS GORE AREAS INCLUDED.
(2) BASIS OF TONNAGE ESTIMATE: 110 POUNDS PER SQUARE YARD INCH.
(3) BASIS OF TACK COAT ESTIMATE: 0.05 GALLONS PER SQUARE YARD.

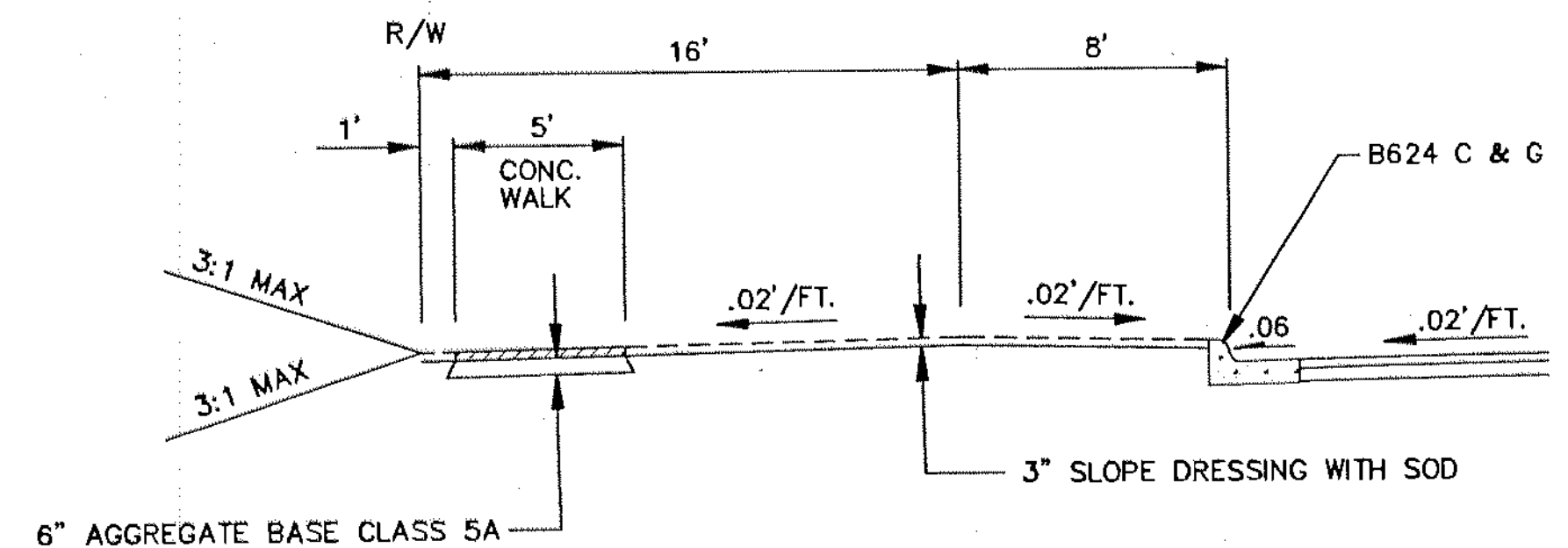
I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the State of Minn. Statutes Sections 326.02 to 326.16.	 PLANNING TRANSPORTATION ENGINEERING URBAN DESIGN BRW INC. 700 THIRD STREET SOUTH, MINNEAPOLIS, MN 55415	ORIGINAL DATE 5/6/92	COUNTY ROAD J C.S.A.H. 32 RAMSEY/ANOKA COUNTY TABULATED QUANTITIES
		REVISIONS	
Date: _____ Minn. Reg. No. 21429	SURVEY BOOK	S.A.P. NO. 02-632-08 62-601-07	DESIGN FILE No. 1313A

TURF ESTABLISHMENT					Q
LOCATION	2575.505	2557.501	2557.502	0575.609	0575.609
	SOD	ROADSIDE	SEED	SEEDING	SEEDING
	SQ YD	ACRES	MIX 500	WETLAND	UPPER WETLAND
			POUND	ACRE	ACRE
181+32 TO 194+00	2492	0.67	33.5		
194+00 TO 207+00	3337	0.61	30.5		
206+00 TO 221+00	4770	0.50	25.0		
221+00 TO 234+00	4363	0.21	10.5		
234+00 TO 247+50	2961	0.15	7.5		
247+50 TO 258+30	2199	0.06	3.0		
MITIGATION AREA				3.5	3.6
TOTAL	20122	2.2	110	3.5	3.6

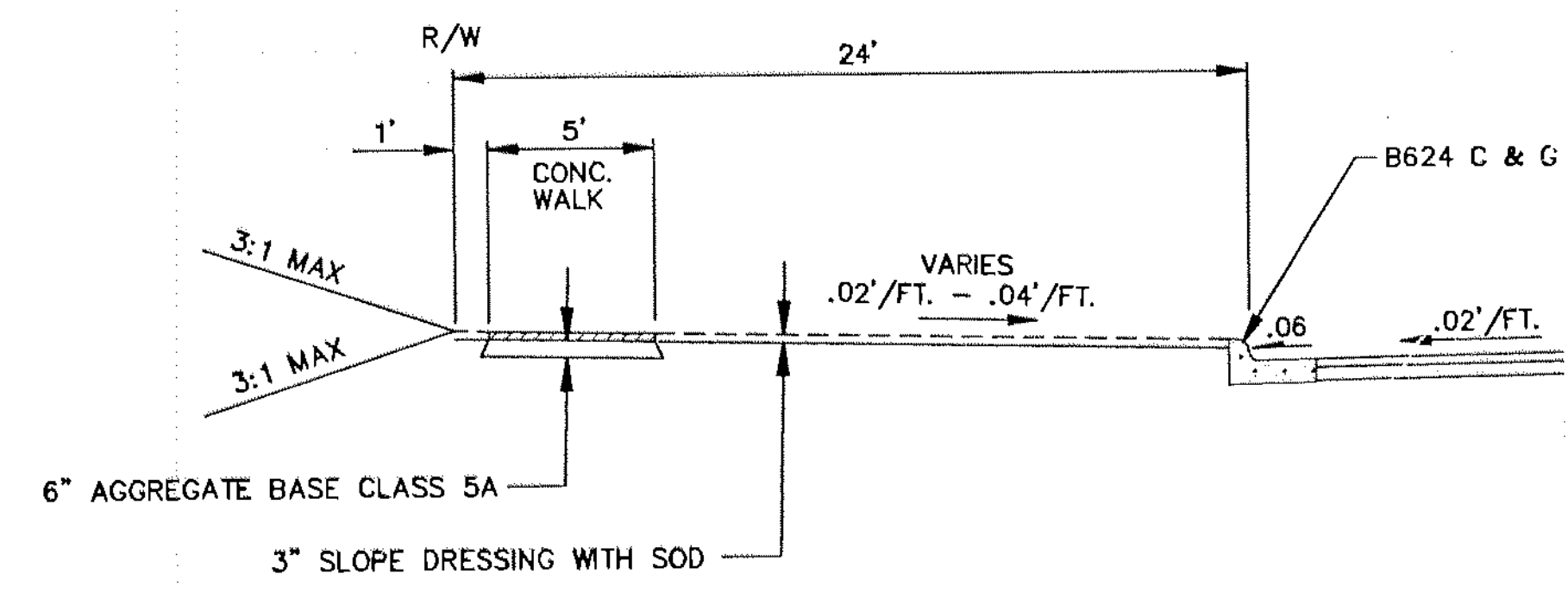
PAVEMENT MARKING TABULATION							S
LOCATION	0564.603	0564.603	0564.603	0564.603	0564.603	0564.602	PAVT MESSAGE
	DOUBLE	4" BROKEN	4" SOLID	4" SOLID	36" SOLID	PAVT MESSAGE	
	YELLOW LN	YELLOW LN	WHITE LN	YELLOW LN	WHITE LN	RT ARROW	
	LIN FT	LIN FT	LIN FT	LIN FT	LIN FT	EACH	
181+32 TO 194+00		250	2540				
194+00 TO 206+00		230	2700			42	
206+00 TO 221+00		290	3600	630			
221+00 TO 234+00	170	180	3060	470		42	
234+00 TO 247+50		250	2580				
247+50 TO 258+30		200	2480	460			2
TOTAL	170	1400	16960	1560		84	2

PERMANENT SIGNING TABULATION									R
SIGN NO.	NUMBER OF INSTALLATIONS	POST TYPE	NOTES	POST LENGTH FEET	MOUNTING HEIGHT FEET	SIZE INCHES	SIGN PANEL		LEGEND
							EACH SQ FT	CODE NUMBER	
C-1	11	2U		14	7	48" x 48"	16	R1-1	STOP
C-2	5	1U		13	7	24" x 30"	5	R2-1	SPEED LIMIT 50
C-3	7	2U		13	7	30" x 30"	6.25	R3-X1	RIGHT TURN LANE
C-4	1		(1)						ADOPT A HIGHWAY
C-5	9		(1)						STREET SIGN
C-6	3	2U		14	7	36" x 48" x 48"	6	W14-3	NO PASSING ZONE
C-7	1		(1)						AXLE WEIGHT LIMIT 6 TON
C-8	1	1U		13	7	24" x 30"	5	R2-5A	REDUCED SPEED AHEAD
C-9	2		(1)						CRIME WATCH
C-10	1		(1)						STOP AHEAD
C-11	2	1U		13	7	24" x 30"	5	R2-1	SPEED LIMIT 35
C-12	1		(1)						NEIGHBORHOOD WATCH
C-13	1		(1)						GAS LINE
C-14	4	2U		15	7	48" x 48"	16	R1-1	STOP
	4					12" x 6"	0.5	R1-3	4-WAY
C-15	19	1U		13	7	24" x 24"	4	R8-1A	NO PARKING
C-16	4	2U		14	7	36" x 36"	9	W11-2	PEDESTRIAN CROSSING ADVANCED WARNING
C-17	4	2U		16	7	36" x 36"	9	W2A-2	PEDESTRIAN CROSSING
	4					24" x 18"	3	S2-P2	SUPPLEMENTAL PLAQUE (ARROW)
TOTAL							503.75		

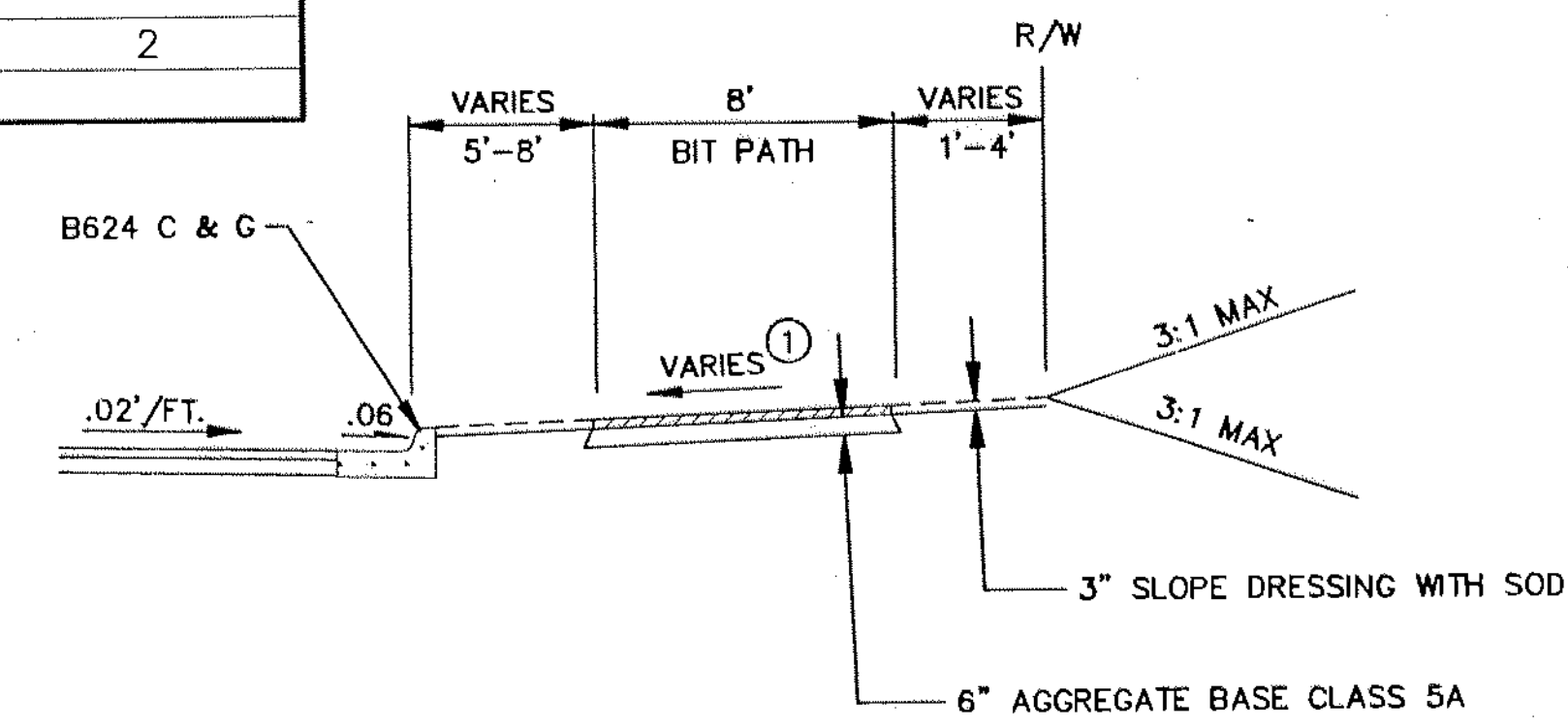
(1) INSTALL SALVAGED SIGN



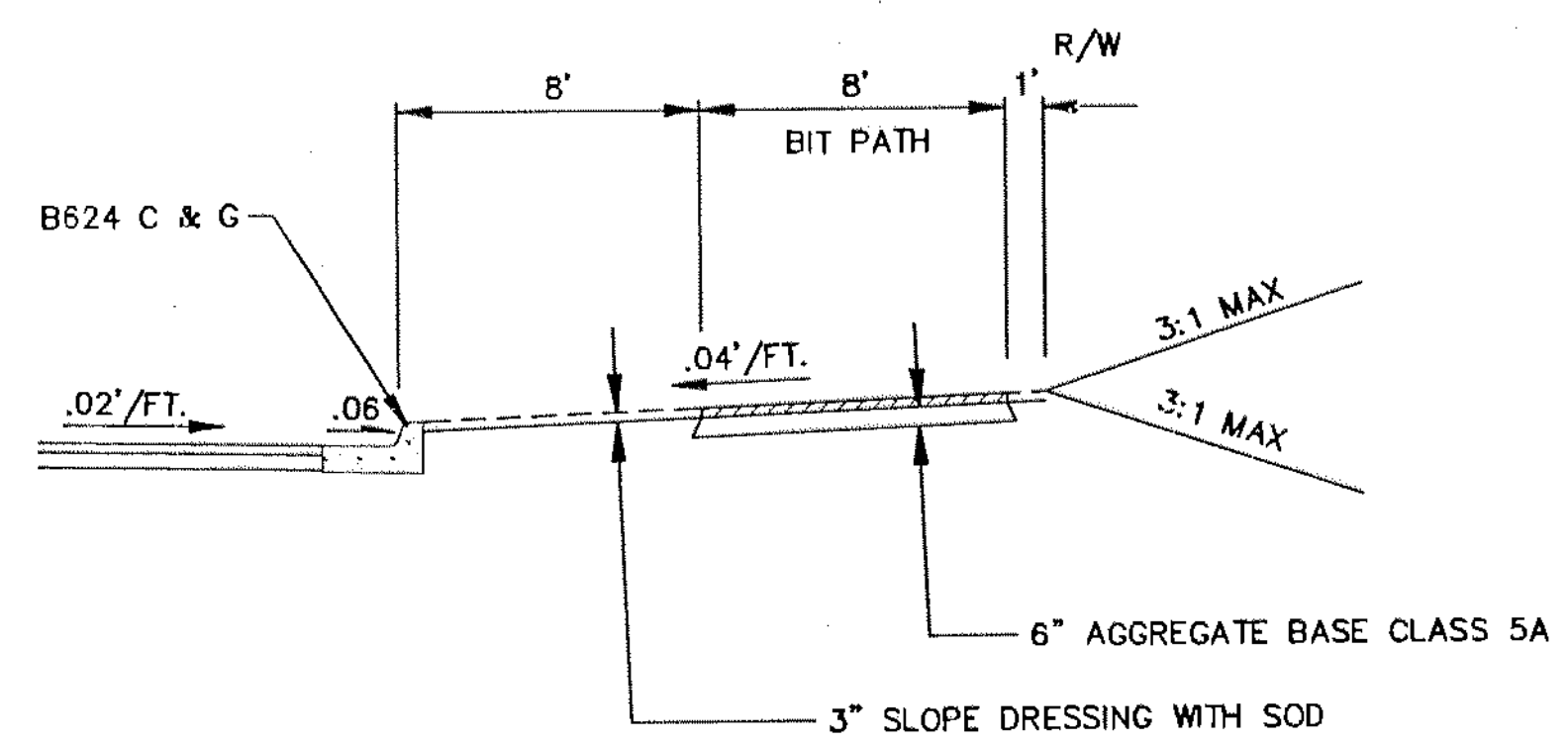
INSET A
STA. 215+95 TO STA. 221+00
STA. 224+00 TO STA. 224+15



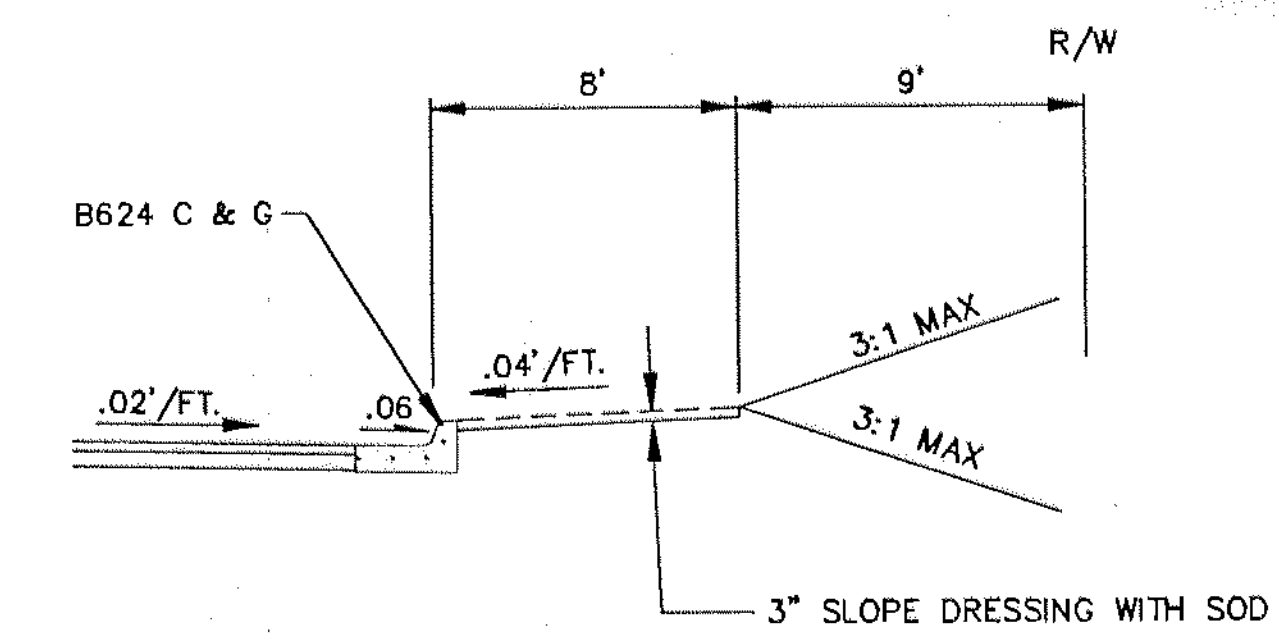
INSET B
STA. 221+00 TO STA. 224+00



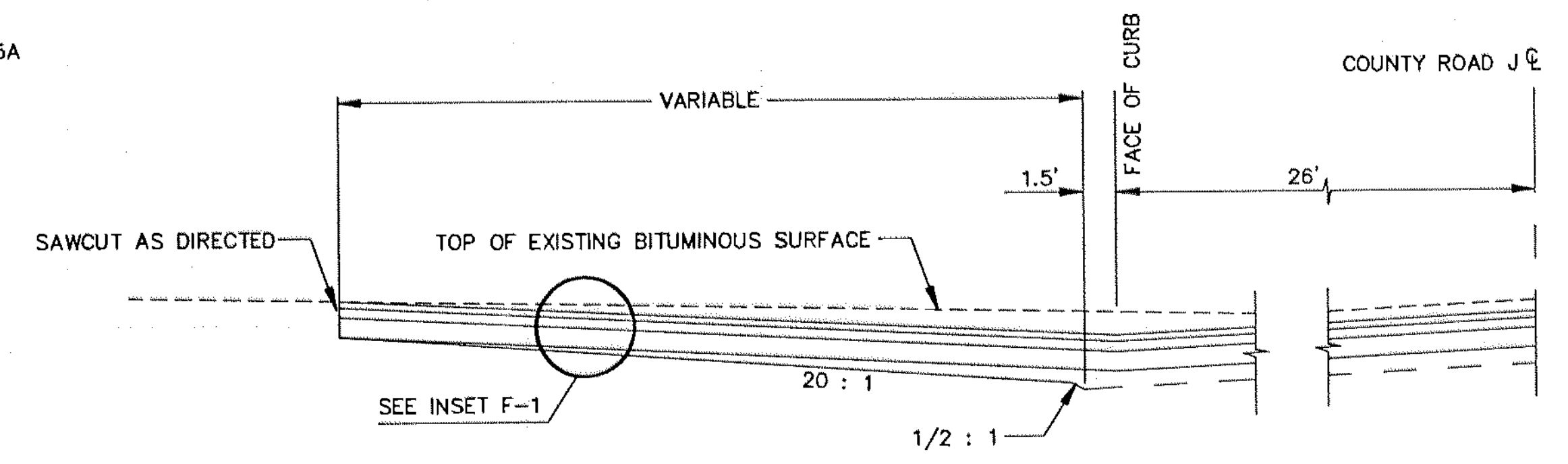
INSET C
STA. 215+00 TO STA. 228+00
STA. 237+00 TO STA. 238+00
STA. 257+00 TO STA. 258+36



INSET D
STA. 181+32 TO STA. 183+00
STA. 199+00
STA. 201+00 TO STA. 205+00



INSET E
STA. 245+50 TO STA. 253+80



- NOTES:**
- SEE CROSS SECTION SHEETS FOR SLOPES.
 - SEE SHEET 13 FOR APPLICATION OF INSETS.

BRW
BRW INC. 700 THIRD STREET SOUTH, MINNEAPOLIS, MN 55415

DESIGN BY: TJG
DRAWN BY: TJG
CHKD BY: SEV

PLANNING
TRANSPORTATION
ENGINEERING
URBAN DESIGN

SURVEY BOOK

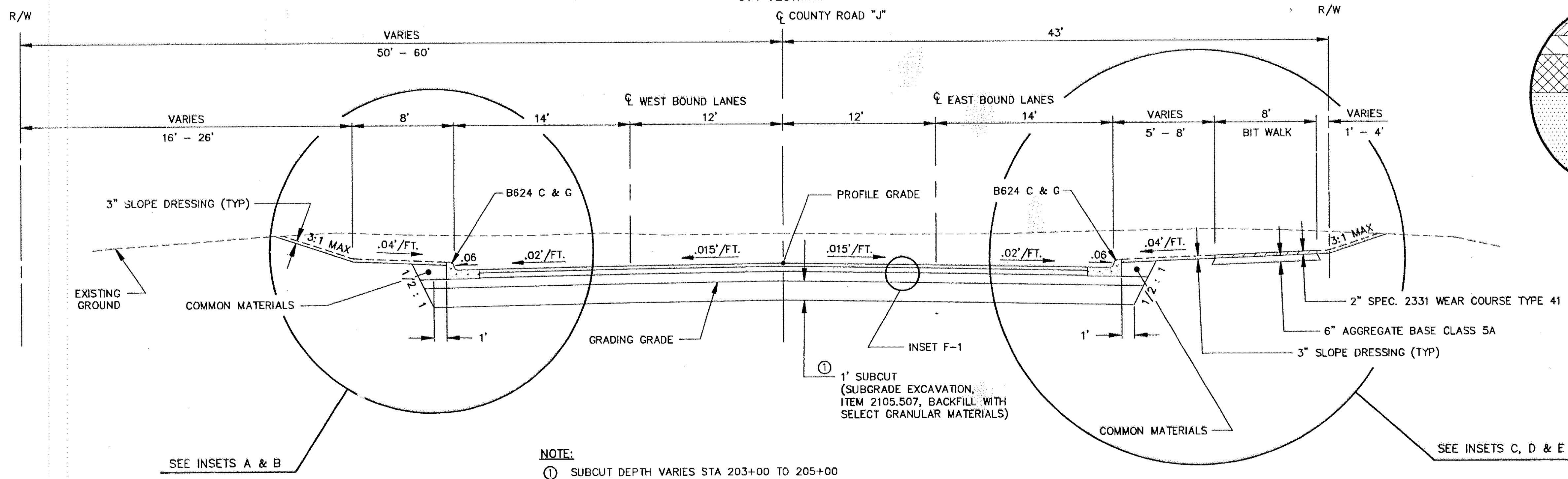
S.A.P. NO. 02-632-08
62-601-07

ORIGINAL DATE	5/6/92
REVISIONS	8/11/92

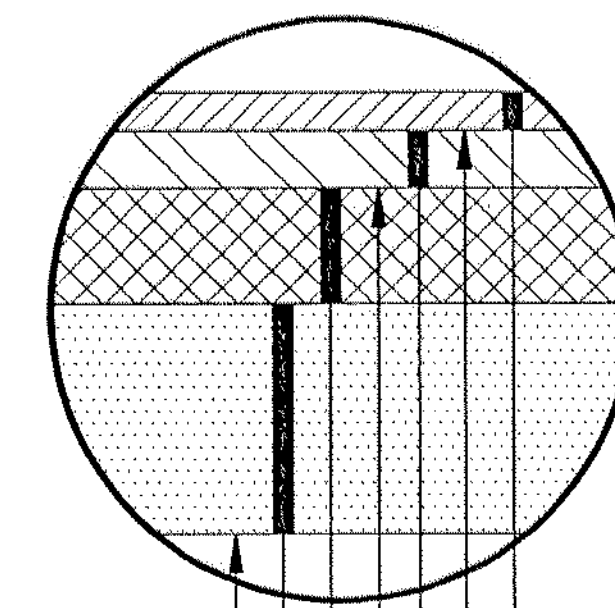
COUNTY ROAD J
C.S.A.H. 32
RAMSEY/ANOKA COUNTY
TABULATED QUANTITIES

COUNTY ROAD J
(STA. 181+32 TO STA.258+36)

CUT SECTIONS



INSET F-1

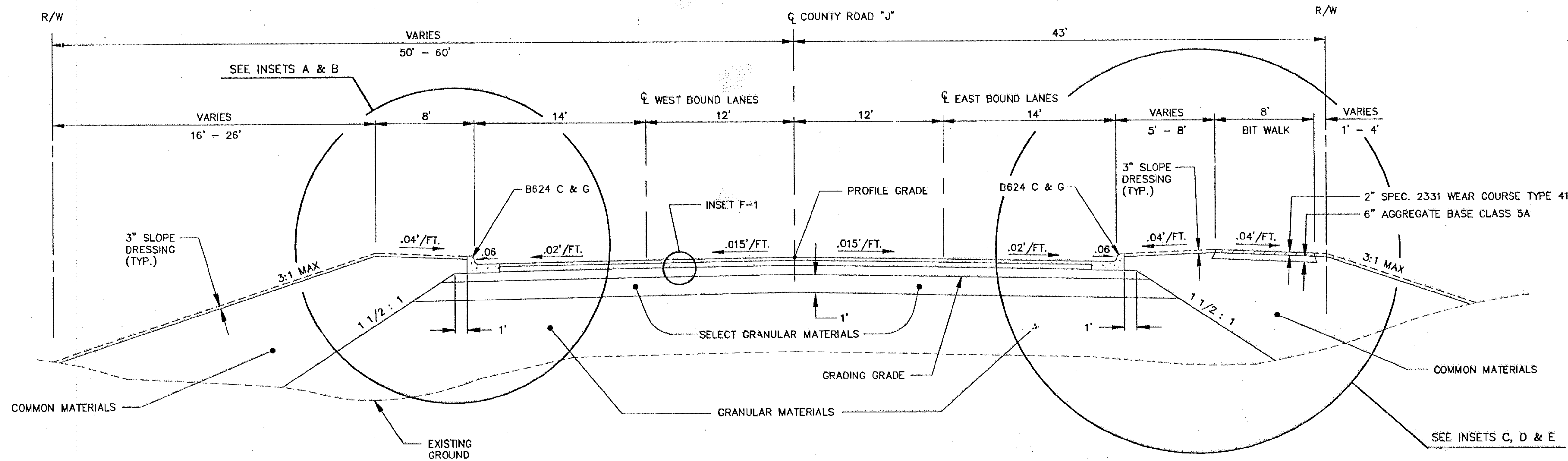


- 1 1/2" PLANT MIXED BITUMINOUS SURFACE, SPEC. 2340 WEAR COURSE TYPE 41.
- TACK COAT, SPEC 2357.
- 1 1/2" PLANT MIXED BITUMINOUS SURFACE, SPEC. 2340, BINDER COURSE TYPE 31.
- TACK COAT, SPEC 2357.
- 2 1/2" PLANT MIXED BITUMINOUS BASE, SPEC. 2340, BASE COURSE TYPE 31.
- 6" AGGREGATE BASE CLASS 5A, SPEC 2211.
- GRADING GRADE

NOTE:
① SUBCUT DEPTH VARIES STA 203+00 TO 205+00

COUNTY ROAD J
(STA. 181+32 TO STA.258+36)

FILL SECTIONS



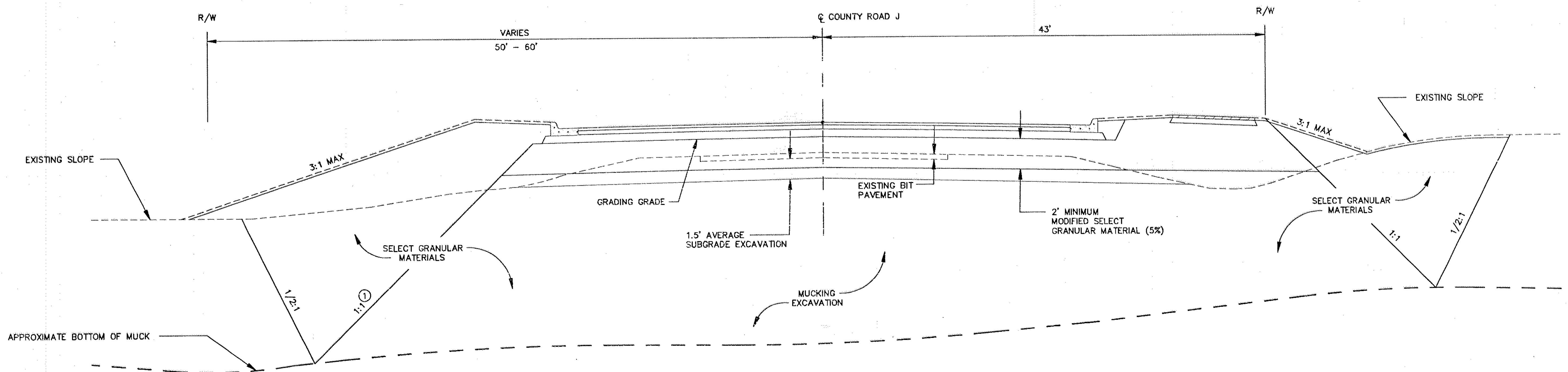
NOTE:
1. THE OBSTACLE CLEAR ZONE SHALL BE 1 1/2 FEET FROM THE BACK OF CURB, STA 239+00 - 258+36.
THE OBSTACLE CLEAR ZONE SHALL BE 9 1/2 FEET FROM THE BACK OF CURB, STA 181+32 - 239+00.
2. INSERTS A THUR E SHOWN ON SHEET 12.

BRW <small>BRW INC. 700 THIRD STREET SOUTH, MINNEAPOLIS, MN 55415</small>	PLANNING TRANSPORTATION ENGINEERING URBAN DESIGN	ORIGINAL DATE 5/6/92
	DESIGN BY: SPJ DRAWN BY: FMJ CHECKED BY: SPJ	SURVEY BOOK 8927
S.A.P. NO. 02-632-08 62-601-07		DESIGN FILE No. 1313A

COUNTY ROAD J
C.S.A.H. 32
RAMSEY/ANOKA COUNTY
TYPICAL SECTIONS

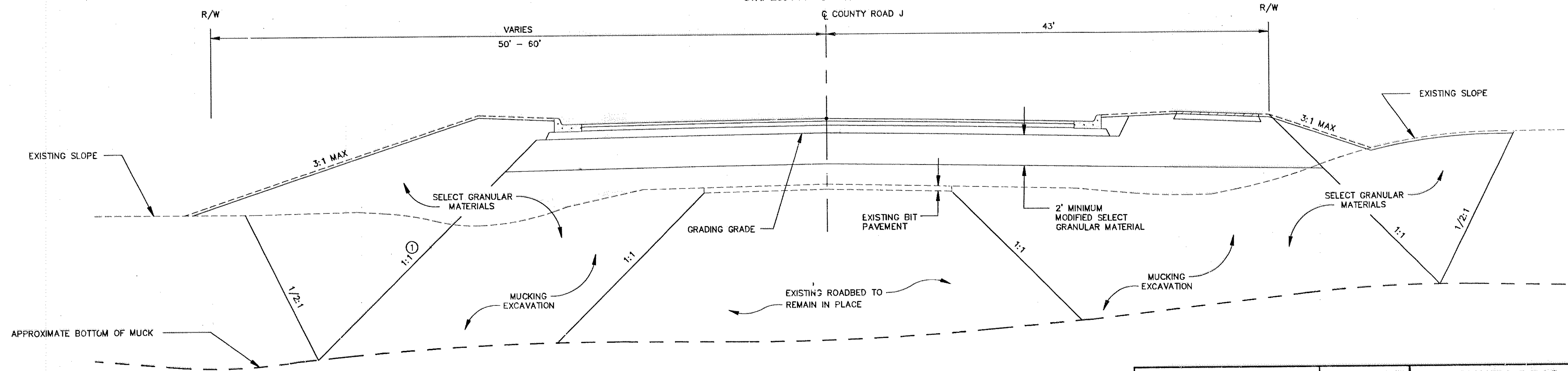
**COUNTY ROAD J
TYPICAL MUCKING SECTION**

STA. 184+00 TO STA. 191+00
STA. 199+00 TO STA. 202+50
STA. 205+00 TO STA. 209+00
STA. 212+00 TO STA. 215+00



**COUNTY ROAD J
TYPICAL MUCKING SECTION**

STA. 195+50 TO STA. 199+00
STA. 209+00 TO STA. 212+00



NOTES:

- SLOPE SHALL BE 1/2 : 1 AT STATIONS 201+00 AND 207+00 - 213+00 TO MINIMIZE IMPACTS ON THE INPLACE 8 INCH WATERMAIN - SEE CROSS SECTIONS.

BRW BRW INC. 700 THIRD STREET SOUTH, MINNEAPOLIS, MN 55415	PLANNING TRANSPORTATION ENGINEERING URBAN DESIGN	ORIGINAL DATE 5/8/92
	DESIGN BY: SPJ DRAWN BY: EMJ CHECKED BY: SPJ	SURVEY BOOK E927

REVISIONS

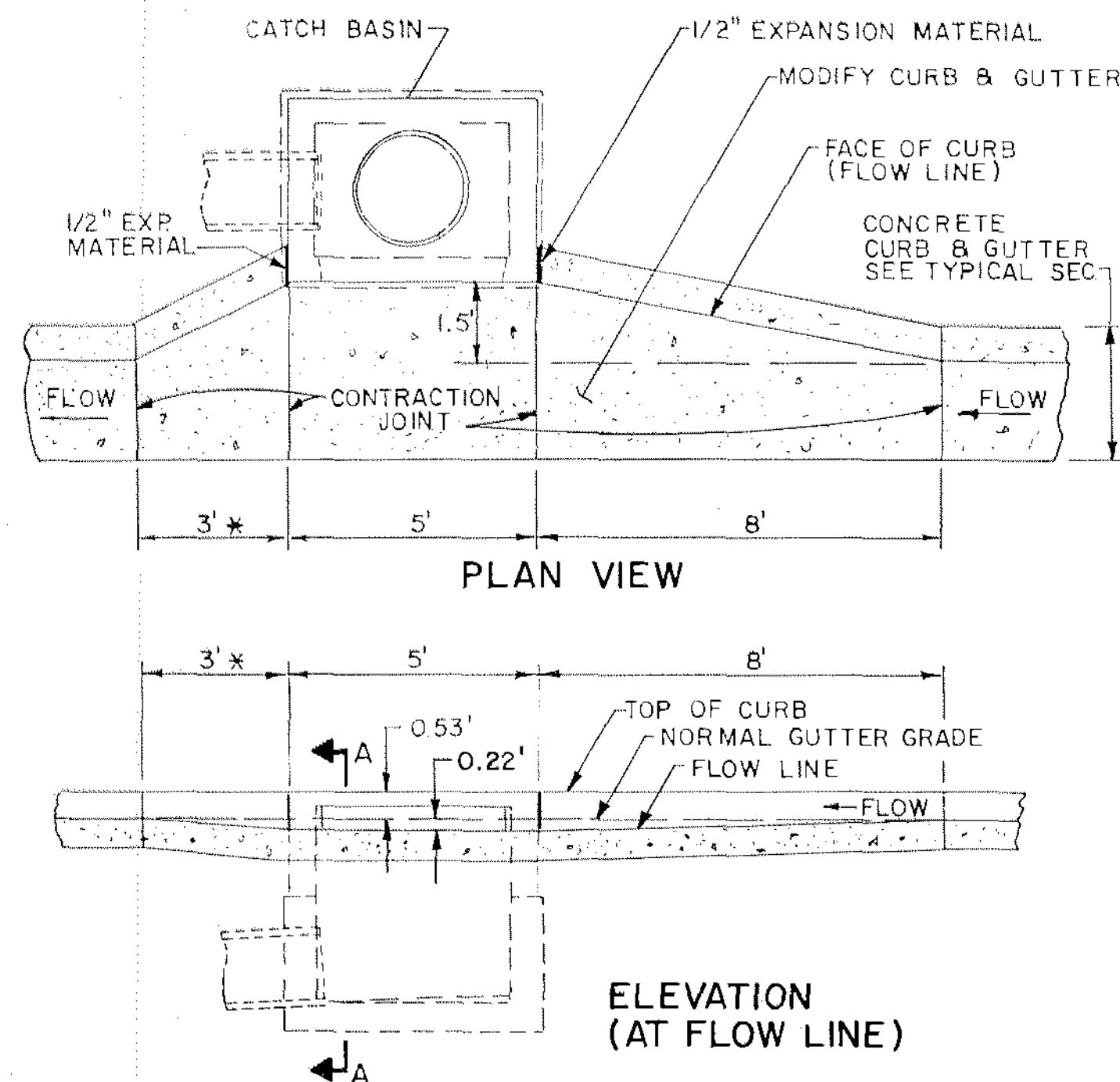
**COUNTY ROAD J
C.S.A.H. 32
RAMSEY/ANOKA COUNTY
MUCKING DETAIL**

S.A.P. NO. 62-632-08
62-601-07

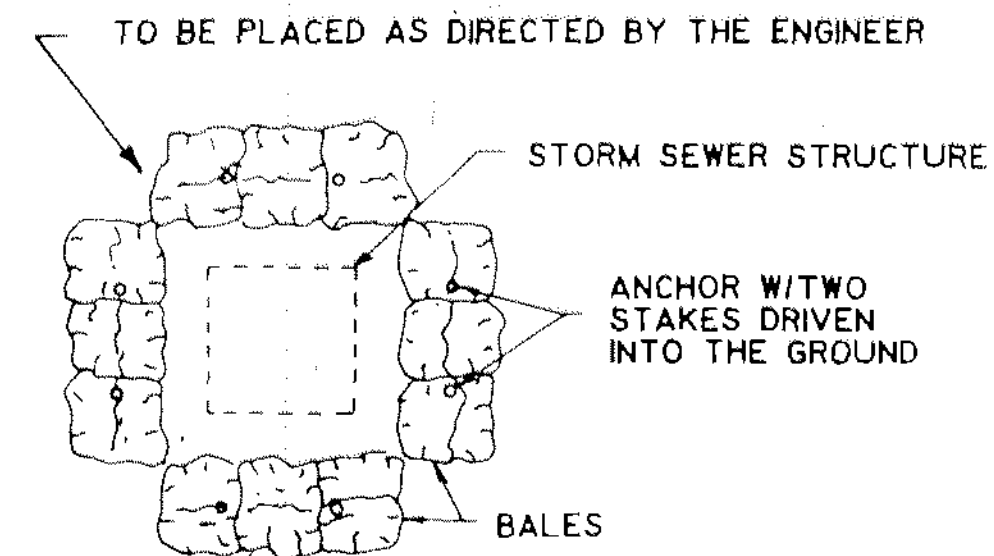
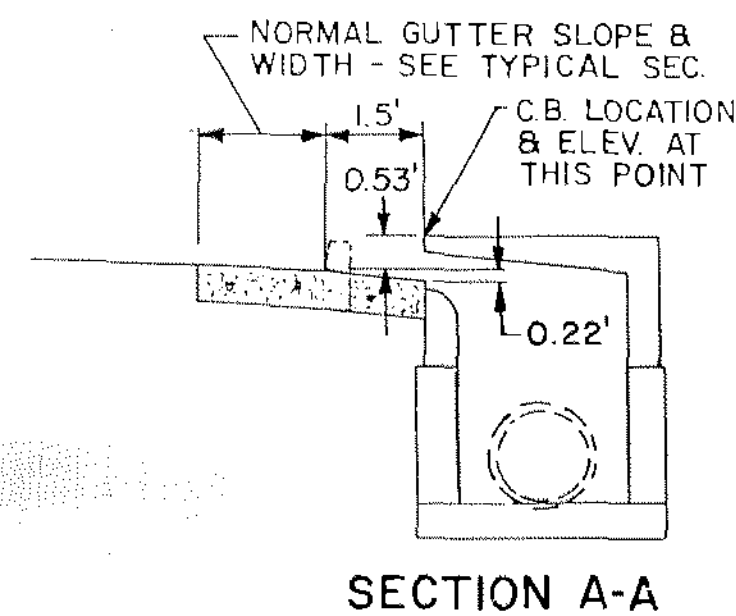
SHEET 14 OF 76

DESIGN FILE
No. 1313A
TYPICAL

**CURB OPENING CATCH BASIN - DESIGN LP
INSTALLATION DETAIL**

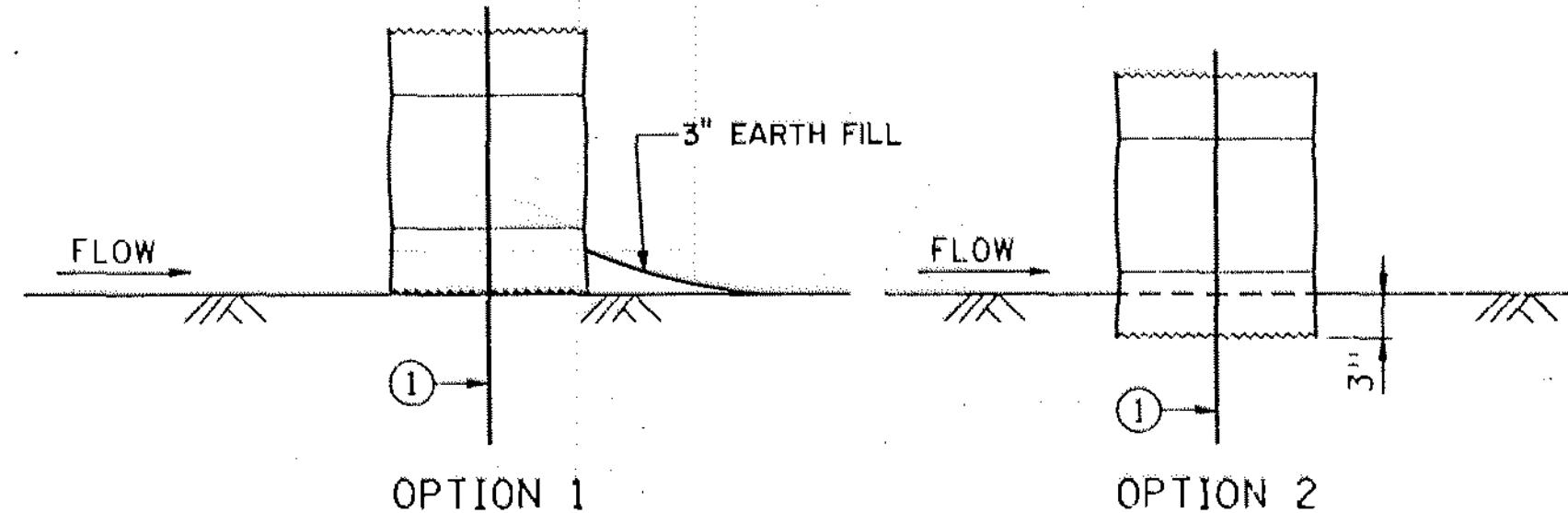


- NOTES:**
1. X DIMENSION SHALL BE 'B' WHEN STRUCTURE INSTALLED AT LOW POINT IN GRADE.
 2. CATCH BASIN - DESIGN LP- SEE MN/DOT STD. PL. NO 4021
 3. TOP OF CATCH BASIN SHALL BE INSTALLED AT SAME SLOPE AS BLVD GRADES AND TOP OF CURB GRADE EACH SIDE OF STRUCTURE
 4. ELEVATION OF STRUCTURE IS COMPUTED AT LOCATION SHOWN IN SEC. A-A AT ϕ OF C.B. OPENING.



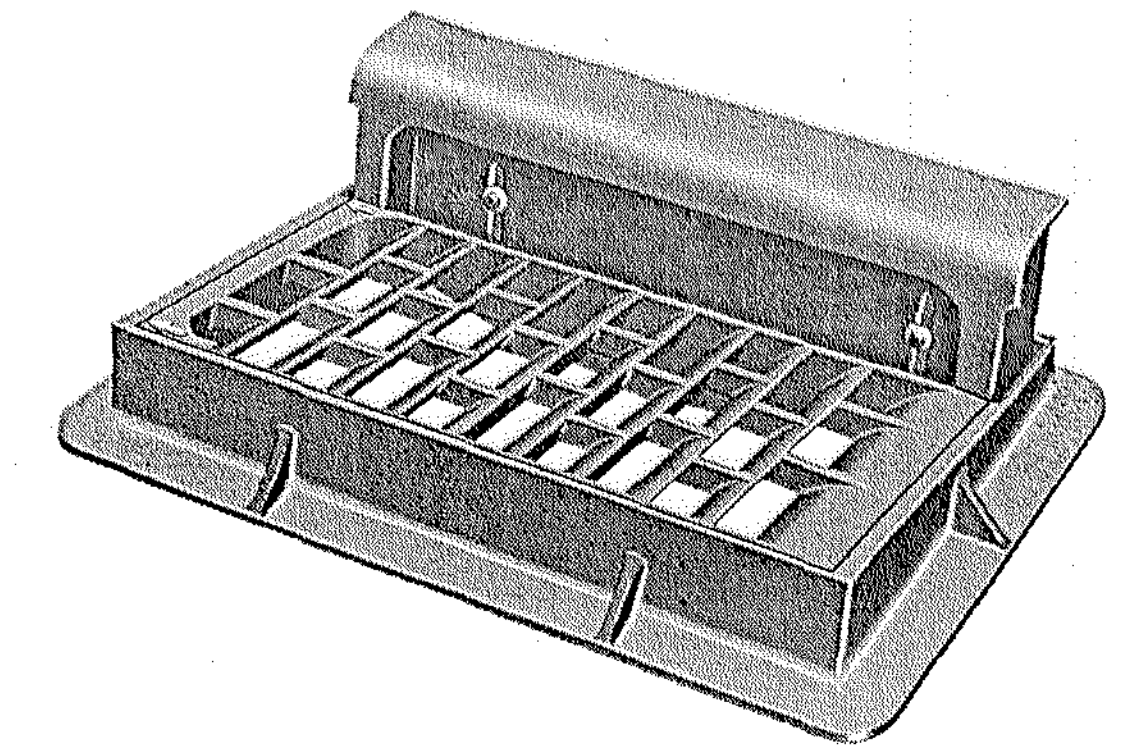
TEMPORARY BARRIER OF SEDIMENT CONTROL BALES TO PREVENT SEDIMENT-LADEN WATER FROM ENTERING INCOMPLETE STORM SEWER SYSTEM.

**HAYBALES FOR
SEDIMENT CONTROL
(AT STORM SEWER STRUCTURES)**

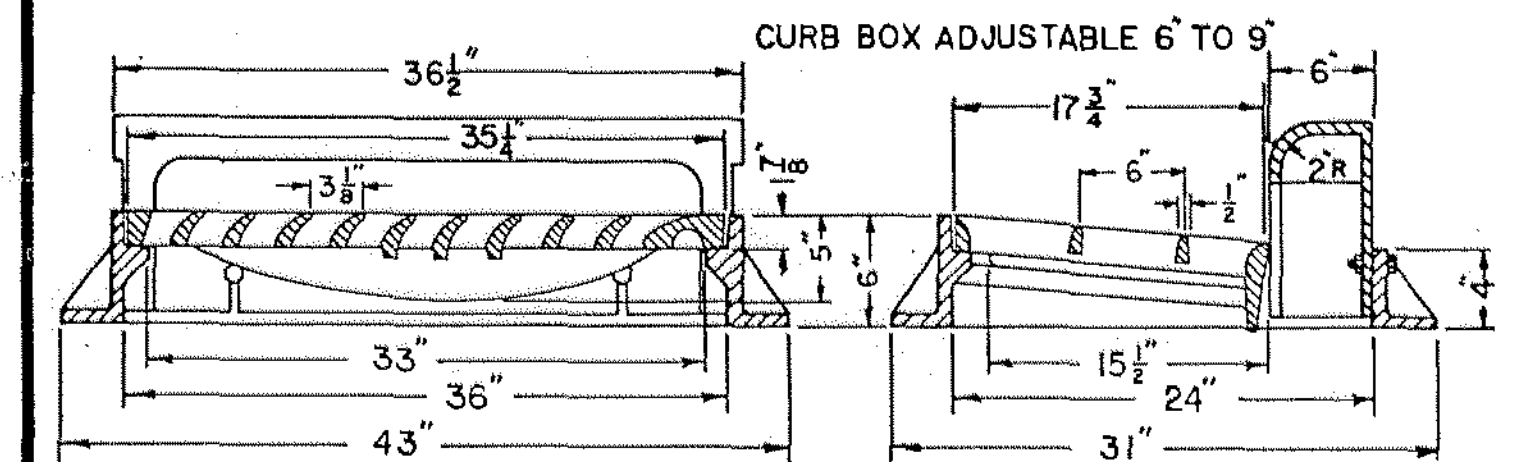


- NOTE:**
- ① TWO 2" X 2" WOOD STAKES OR REINFORCING BARS IN EACH BALE AND EMBEDDED IN THE GROUND 10" MINIMUM.

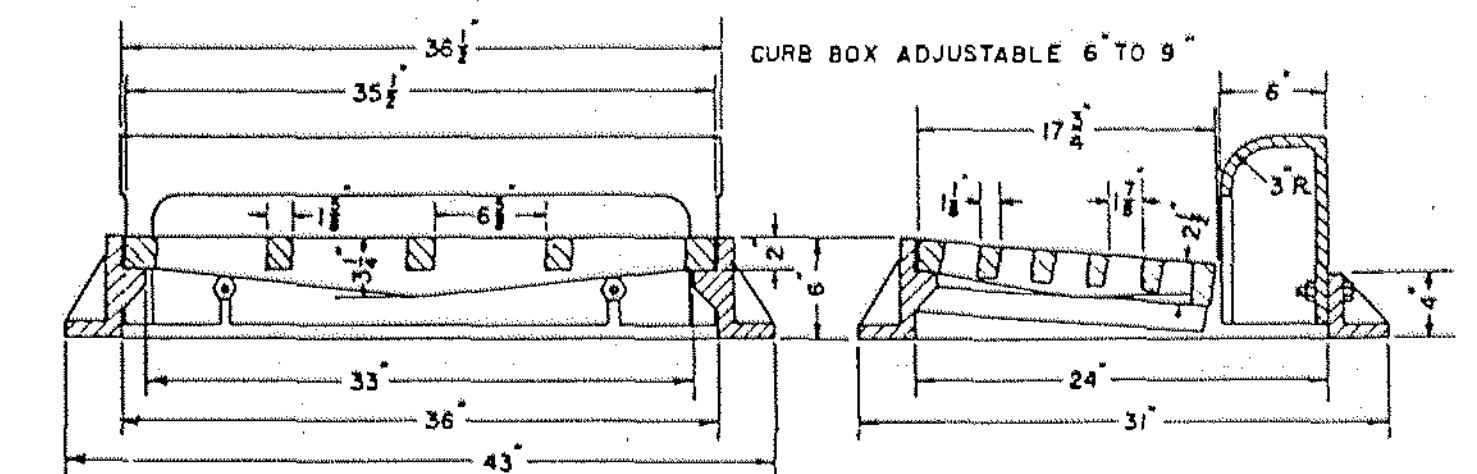
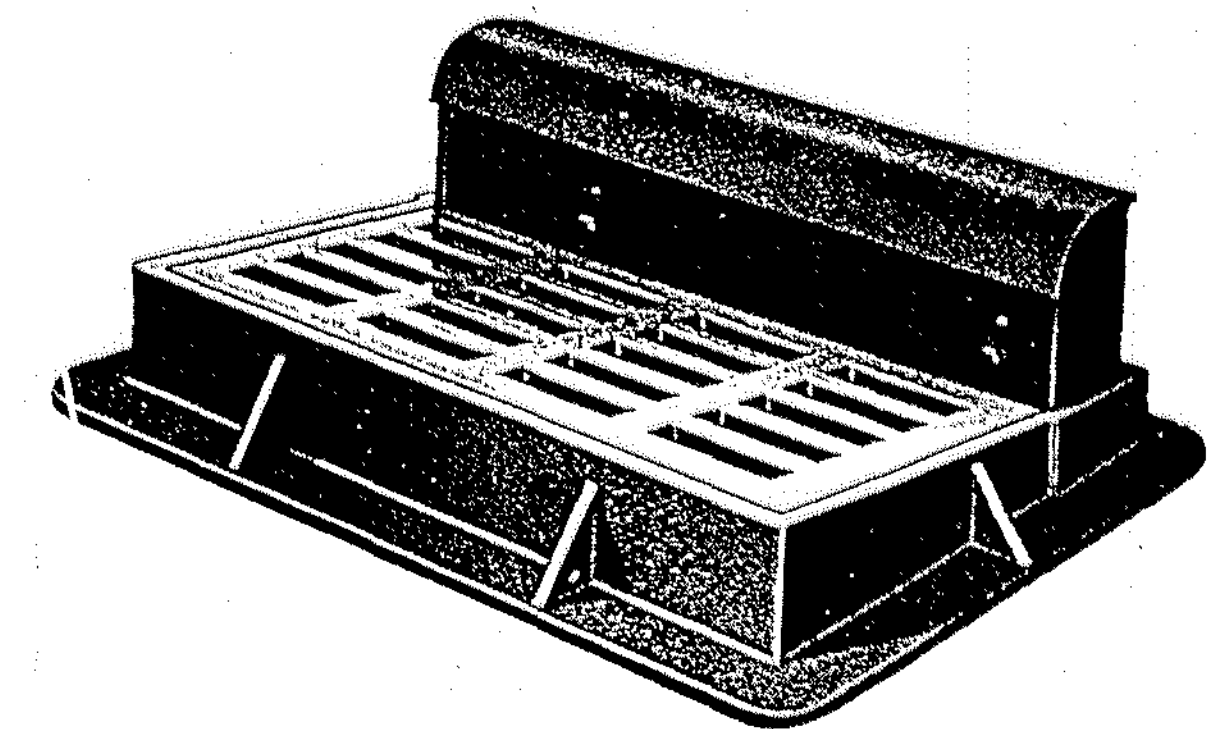
BALE CHECK DETAILS



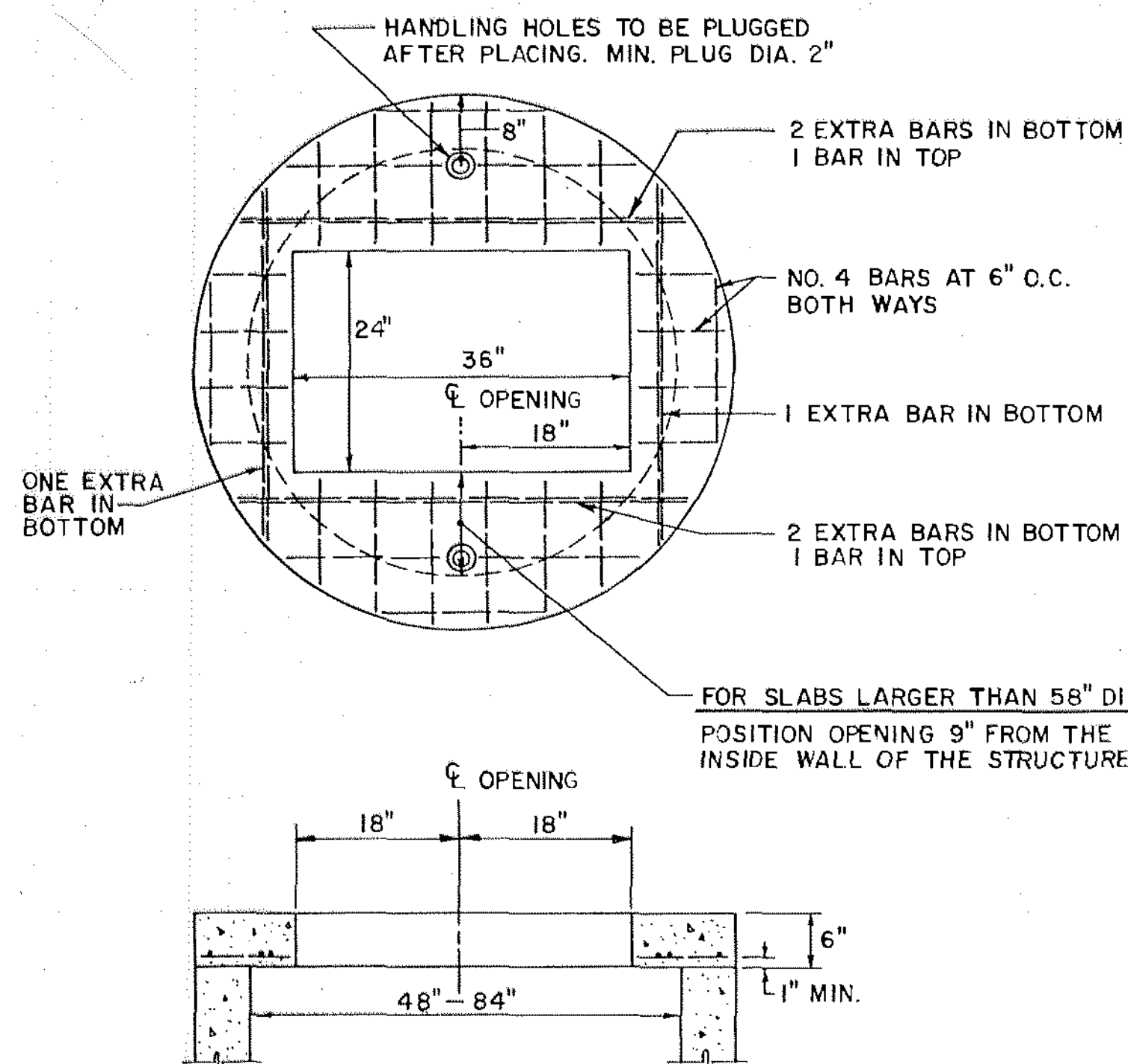
R-3067-LL



**CASTING DETAIL
B - 20**

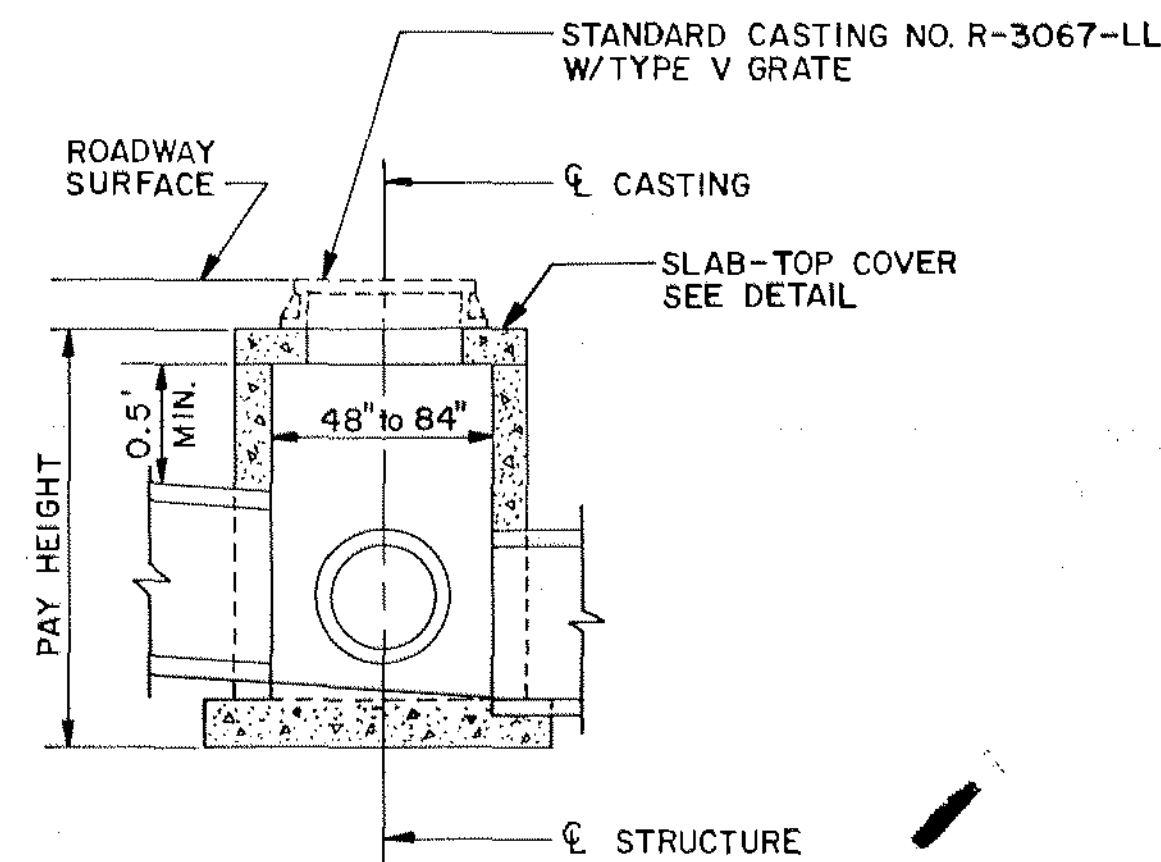


**CASTING DETAIL
B - 21**



**H.S. 20 DESIGN
MANHOLE SLAB-TOP
(RECTANGULAR OPENING)**

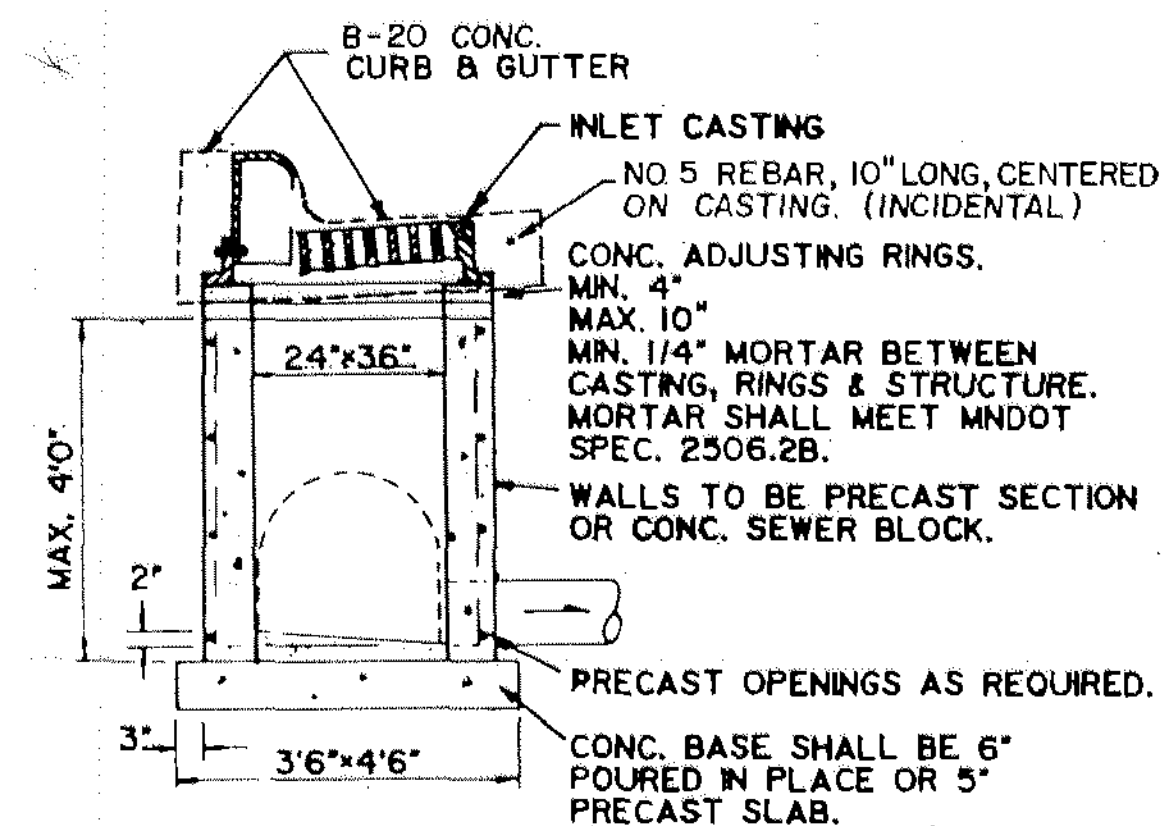
FOR DS-2 AND DS 2-72 MANHOLES



SEE STANDARD PLATE 4020 FOR ADDITIONAL MANHOLE CONSTRUCTION INFORMATION.

CATCH BASIN DESIGN (SPECIAL 2)

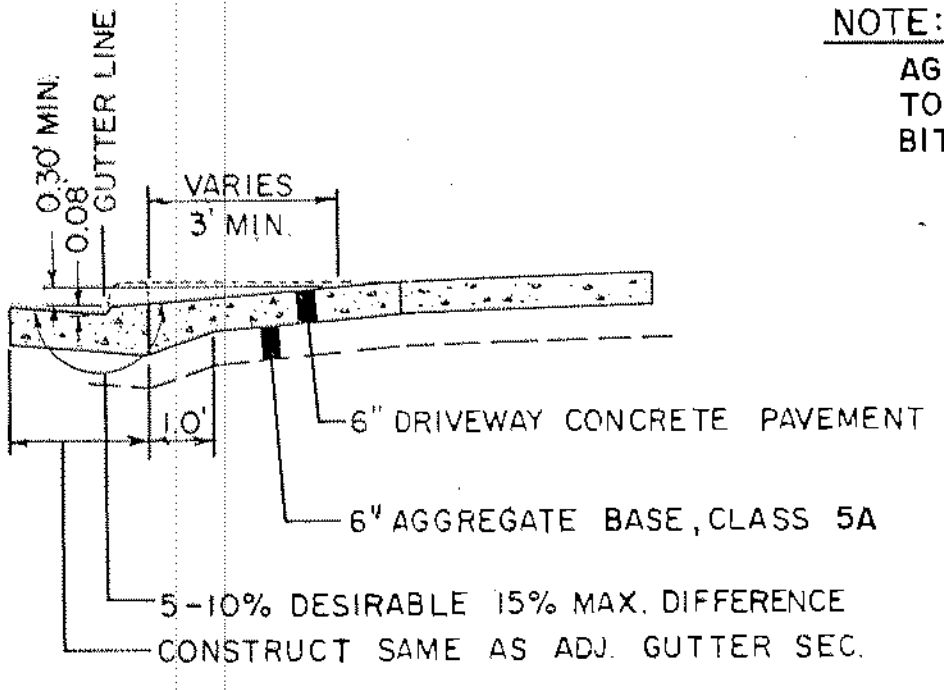
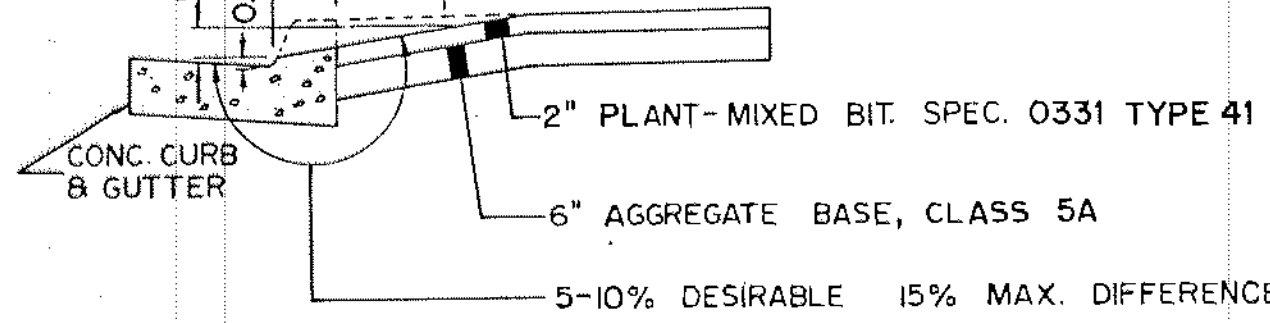
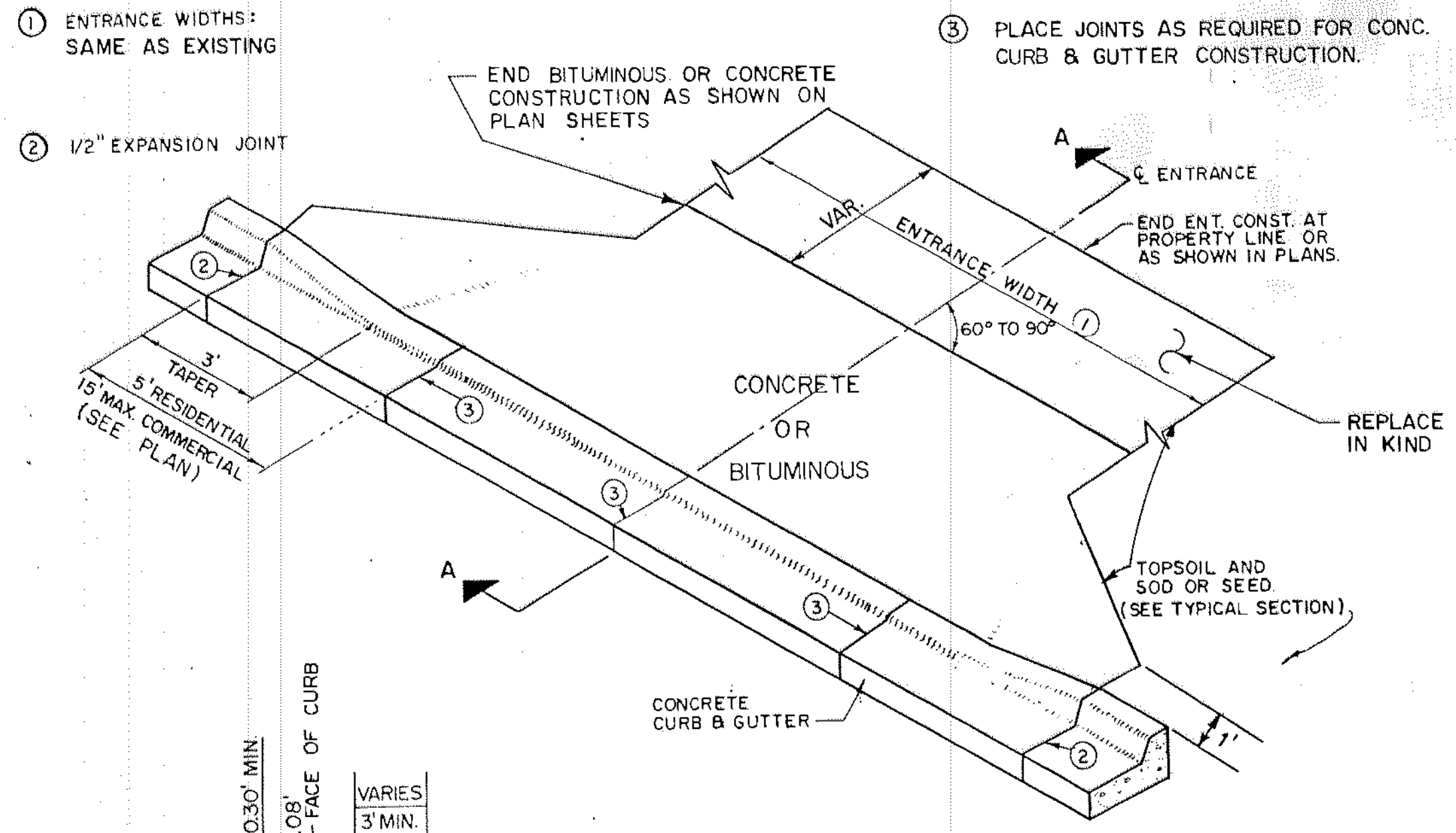
AND DESIGN SPECIAL 2-72



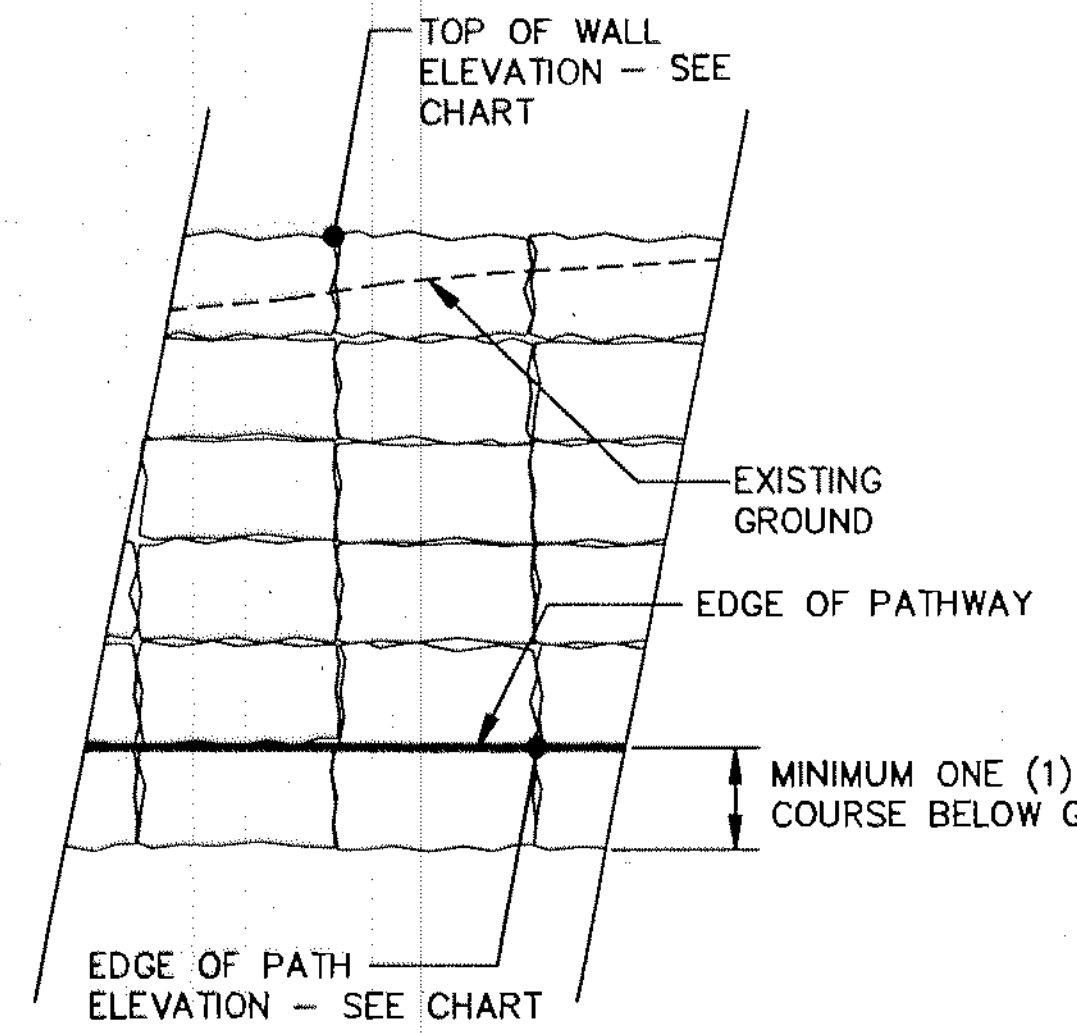
**DRAINAGE STRUCTURE
DESIGN SPECIAL I**

<p>BRW INC. 700 THIRD STREET SOUTH, MINNEAPOLIS, MN 55415</p>	<p>PLANNING TRANSPORTATION ENGINEERING URBAN DESIGN</p>	<p>ORIGINAL DATE 5/6/92 REVISIONS</p>	<p>COUNTY ROAD J C.S.A.H. 32 RAMSEY/ANOKA COUNTY CONSTRUCTION DETAILS</p>
	<p>DESIGN BY: SPJ DRAWN BY: PJL CHK'D BY:</p>	<p>SURVEY BOOK</p>	
<p>SHEET 15 OF 76</p>			<p>DESIGN FILE No. 1313A</p>

ENTRANCE DETAIL



NOTE: AGGREGATE DRIVES SHALL BE CONSTRUCTED TO MATCH THE SAME SHAPE AS THE BITUMINOUS AND CONCRETE DRIVEWAYS.

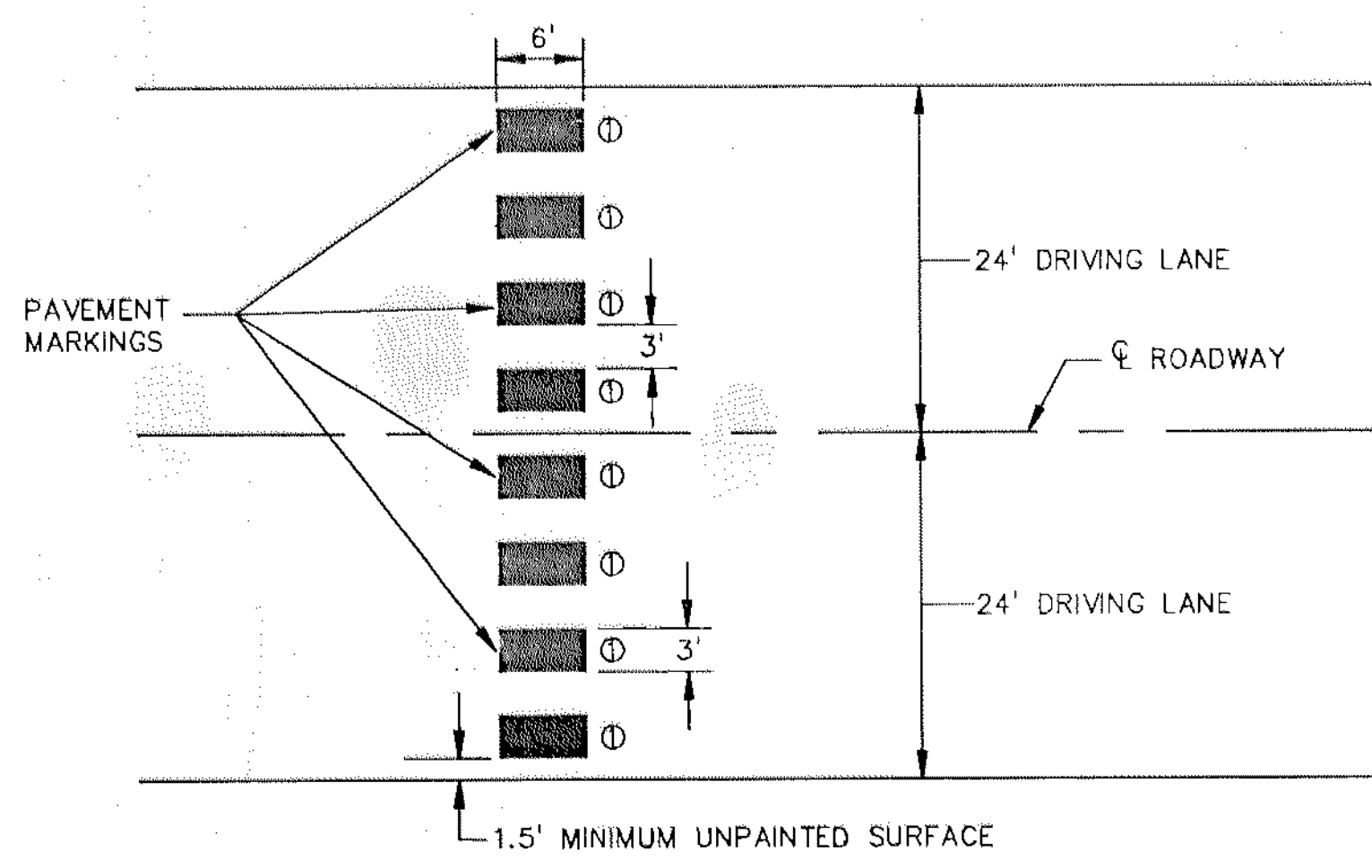


PRECAST RETAINING WALL			
STATION	EDGE OF PATH EL.	TOP OF WALL EL.	PRECAST WALL SQ. FT.
222+50	905.1	906.0	51.75
222+75	904.9	906.8	76.75
223+00	904.7	907.6	88.00
223+25	904.5	907.3	88.00
223+50	904.2	907.1	89.25
223+75	903.9	906.8	90.50
224+00	903.5	906.5	83.00
224+25	903.2	905.5	68.00
224+50	902.7	904.5	54.25
224+75	902.3	903.5	40.50
225+00	901.8	902.5	40.50
	TOTAL		730.0 *

* SQUARE FOOT OF WALL ESTIMATED ASSUMING 8" BELOW GRADE AND 6" ABOVE EXISTING GROUND LINE

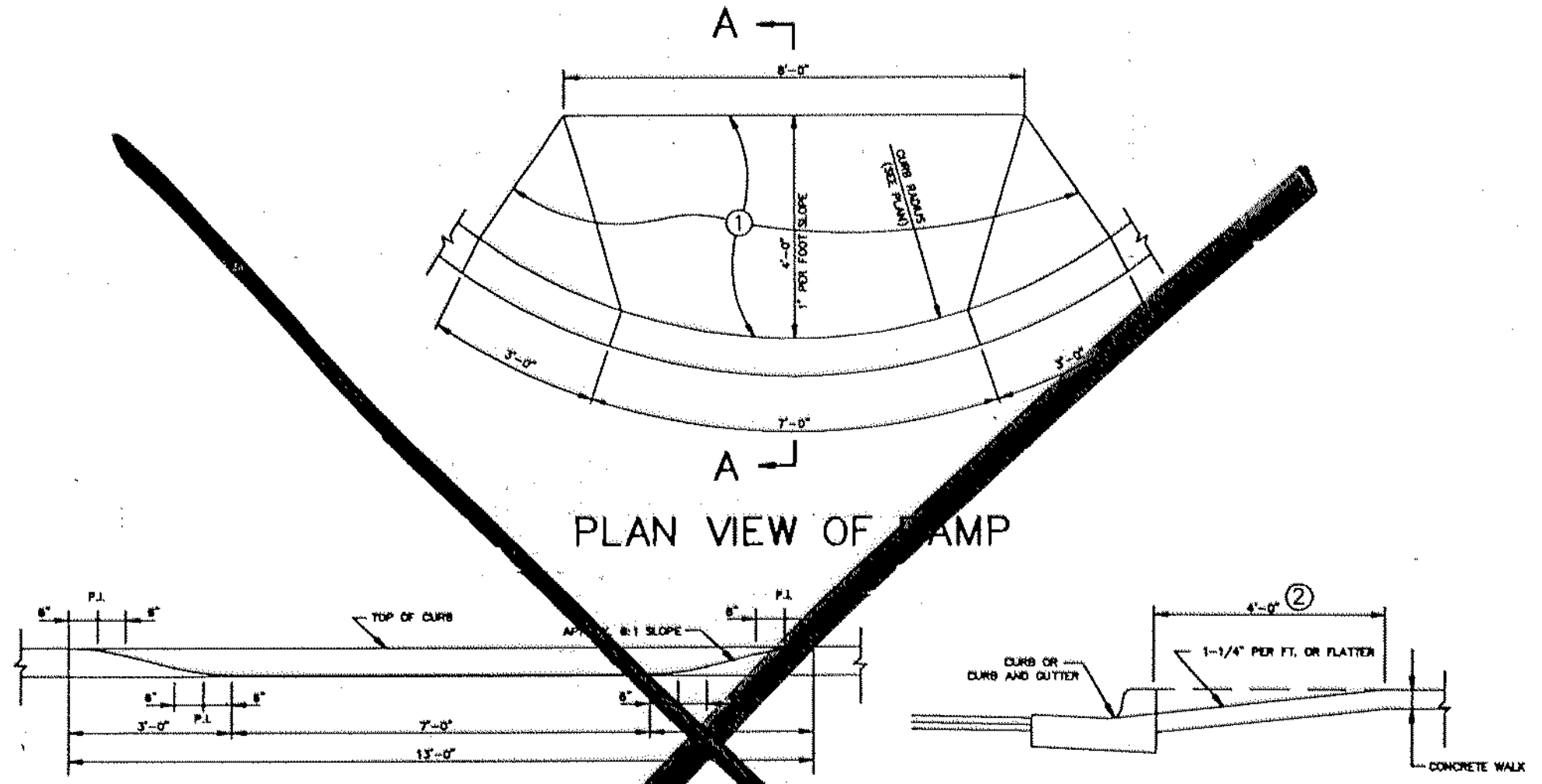
NOTE: PRECAST BLOCK DEPTH SHALL BE A MAXIMUM OF 12" DEEP IN ORDER TO MINIMIZE IMPACT ON TREES AND SHRUBS.

RETAINING WALL



NOTES:
 ① WHITE TRAFFIC PAINT IN AREAS AS SHOWN.
 ② CONTRACTOR TO PROVIDE A SAMPLE PANEL FOR APPROVAL.

PEDESTRIAN CROSSWALK MARKING

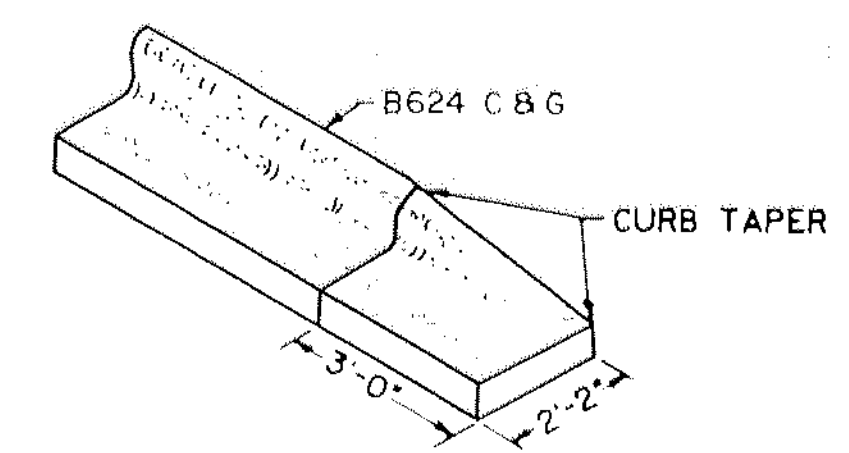


NOTE: THE CURB AND CURB TRANSITION ON THE RAMP WILL BE PAID FOR AS LINEAR FEET OF CONCRETE CURB OR CONCRETE CURB AND GUTTER. THE RAMP AREA WILL BE PAID FOR AS SQUARE FEET OF CONCRETE WALK. SURFACE TREATMENT WILL BE CONSIDERED INCIDENTAL.

① SURFACE TREATMENT: THIS TREATMENT SHALL CONSIST OF AN AGGREGATE SURFACE FINISH. THE AGGREGATE SHALL MEET THE REQUIREMENTS OF SPEC. 3137 CA-70 MODIFIED TO 100% PASSING THE 1/2" SIEVE. IMMEDIATELY PRIOR TO PLACING THE COURSE AGGREGATE, THE SURFACE SHALL BE COATED WITH AN APPROVED EPOXY BONDING AGENT. INSTEAD OF THE ABOVE TREATMENT, THE CONTRACTOR AT HIS OPTION AFTER NOTICAL CONCRETE FINISHING, MAY EMBED AGGREGATE, MEETING THE REQUIREMENTS OF SPEC. 3137 CA-70 MODIFIED TO 100% OF THE MATERIAL 1/2" TO 3/8" IN SIZE, IN THE GREEN CONCRETE. THE EMBEDDED AGGREGATE SHALL PROTRUDE AT LEAST 3/16" ABOVE THE CONCRETE SURFACE. THE EMBEDDED AGGREGATE MAY BE LIGHTLY RINSED TO WASH MORTAR OFF OF IT.

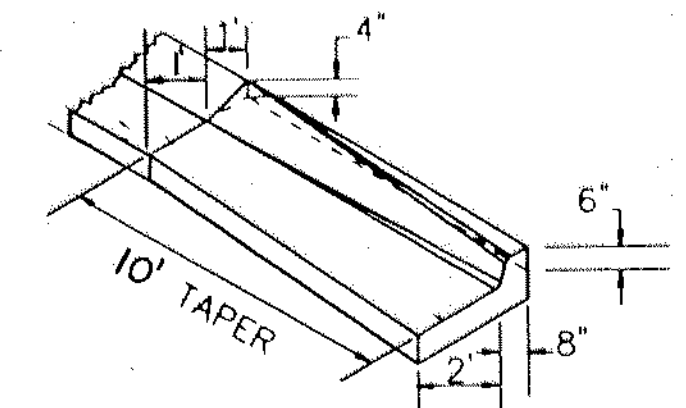
② 4'-0" DIMENSIONS MAY BE INCREASED WHERE FEASIBLE, TO PROVIDE A FLATTER SLOPE.

PEDESTRIAN CURB RAMP



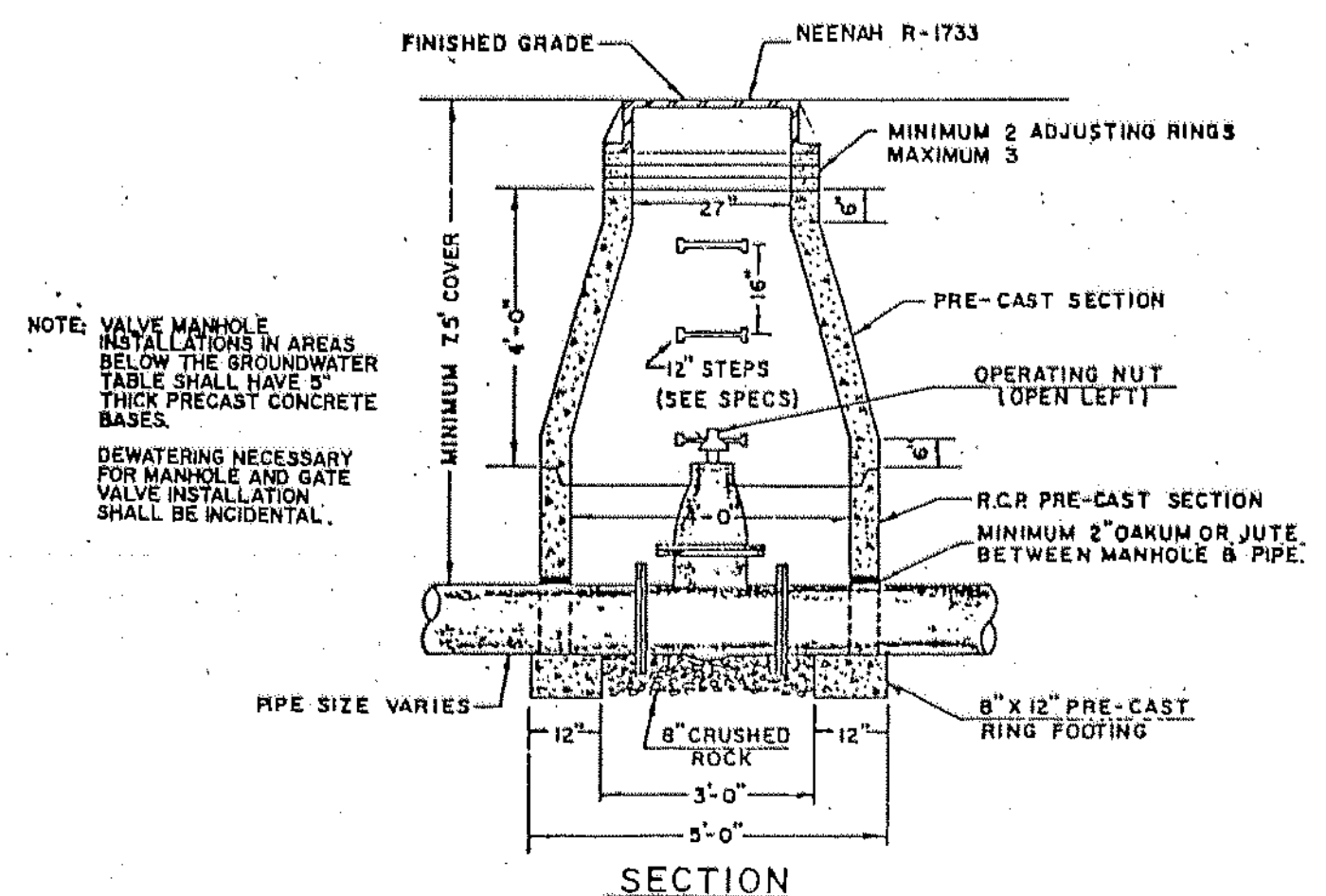
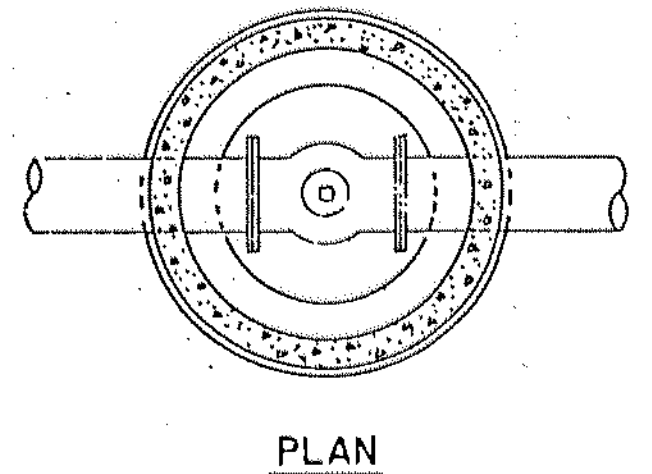
NOTE: CURB TAPER TO BE CONSTRUCTED AT ENDS OF ALL CURB AND GUTTER THAT DO NOT CONNECT TO IN-PLACE CURBS. CONSTRUCT TAPER BEYOND END OF CURB RETURN RADIUS AT STREET INTERSECTIONS.

CURB TAPER ①



① TRANSITION LENGTH PAID AS B624 C & G

CURB TRANSITION B624 TO D412

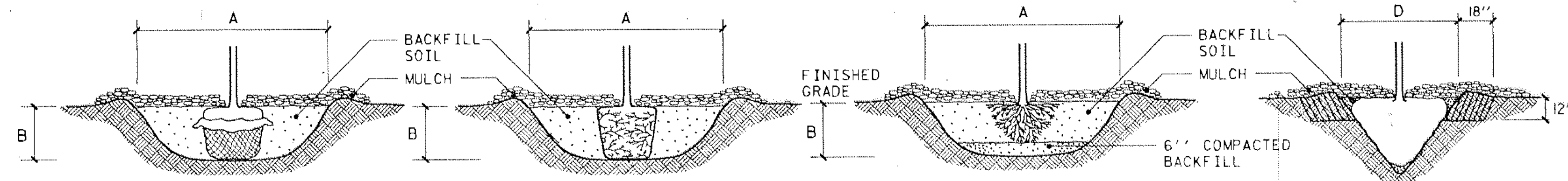


48" GATE VALVE MANHOLE

<p>BRW INC. 700 THIRD STREET SOUTH, MINNEAPOLIS, MN 55415</p>	<p>PLANNING TRANSPORTATION ENGINEERING URBAN DESIGN</p>	<p>ORIGINAL DATE 5/8/92</p> <p>REVISIONS</p>	<p>COUNTY ROAD J C.S.A.H. 32 RAMSEY/ANOKA COUNTY CONSTRUCTION DETAILS</p>
	<p>DESIGN BY: SPJ</p> <p>DRAWN BY: PMJ</p> <p>CHECKED BY:</p>	<p>SURVEY BOOK</p>	
<p>S.A.P. NO. 02-632-08 62-601-07</p>		<p>DESIGN FILE SHEET 16 OF 76 No. 1313A</p>	

PLANTING HOLE DIMENSIONS

PLANT TYPE	PLANT SIZE (UP TO AND INCLUDING)	MINIMUM HOLE WIDTH (INCHES)		APPROXIMATE HOLE DEPTH (INCHES)
		A	B	
EVERGREEN TREES	3' B.B.	42	11	
	4' B.B.	51	13	
	5' B.B.	60	13	
	6' B.B.	66	15	
	7' B.B.	72	16	
	8' B.B.	81	18	
SHADE & FLOWERING TREES	9' B.B.	90	20	
	10' B.B.	102	21	
	1" B.R.	54	14	
	1 1/4" B.R.	60	14	
EVERGREEN SHRUBS (UPRIGHT)	1 1/2" B.R.	66	15	
	1 3/4" B.R.	72	16	
	2" B.R.	84	19	
	2 1/2" B.B.	84	19	
	3" B.B.	96	20	
	3 1/2" B.B.	114	23	
	4" B.B.	126	25	
	2" B.B.	36	9	
3" B.B.	48	12		
4" B.B.	63	14		
EVERGREEN SHRUBS (SPREADING)	18" spread B.B.	30	8	
	2' spread B.B.	36	9	
	2 1/2' spread B.B.	42	11	
DECIDUOUS SHRUBS	3' spread B.B.	48	12	
	18" B.R.	30	8	
	2' B.R.	33	9	
	3' B.R.	42	11	
	4' B.R.	48	12	
	5' B.R.	54	14	
	6' B.R.	60	14	
	18" B.B.	27	7	
	2' B.B.	30	8	
	3' B.B.	36	9	
CONTAINER GROWN PLANTS	4' B.B.	42	11	
	5' B.B.	48	12	
	6' B.B.	54	14	
	*1 cont.	23	7	
	*2 cont.	26	9	
	*3 cont.	30	10	
*5 cont.	36	13		
*7 cont.	42	13		
*15 cont.	51	18		



BALLED & BURLAPPED STOCK

1. SCARIFY SIDES AND BOTTOM OF HOLE.
2. PROCEED WITH CORRECTIVE PRUNING AS DIRECTED BY ENGINEER.
3. SET PLANT ON UNDISTURBED NATIVE SOIL, OR THOROUGHLY COMPACTED BACKFILL SOIL AT THE SAME DEPTH AS IT WAS GROWN IN THE NURSERY.
4. PLANT SHALL BE PLACED IN PLANTING HOLE WITH BURLAP AND WIRE BASKET, IF USED, INTACT. ONCE IN PLACE, THE PLANT SHALL BE BACKFILLED TO WITHIN 12" OF THE TOP OF THE ROOTBALL. THE BURLAP SHALL BE FOLDED OR CUT BACK.
5. PLUMB AND BACKFILL WITH THE BACKFILL SOIL SPECIFIED.
6. BACKFILL VOIDS AND CONSTRUCT 3" DEPTH WATERING BASIN.
7. WATER THOROUGHLY WITHIN 2 HOURS.
8. PLACE MULCH WITHIN 48 HOURS OF THE SECOND WATERING.
9. BIODEGRADABLE TWINE MAY BE LEFT ON AS SUPPORT BETWEEN THE ROOT BALL AND ROOT COLLAR UNTIL THE END OF THE PLANT ESTABLISHMENT PERIOD AT WHICH TIME IT MUST BE CUT AND TOTALLY REMOVED FROM THE ROOT COLLAR. USE OF NONBIODEGRADABLE TWINE SHALL NOT BE PERMITTED.

CONTAINER STOCK

1. SCARIFY SIDES AND BOTTOM OF HOLE.
2. PROCEED WITH CORRECTIVE PRUNING AS DIRECTED BY ENGINEER.
3. REMOVE CONTAINER AND SCORE OUTSIDE OF SOIL MASS TO REDIRECT CIRCLING FIBROUS ROOTS AS NECESSARY.
4. SET PLANT ON UNDISTURBED NATIVE SOIL, OR THOROUGHLY COMPACTED BACKFILL SOIL AT THE SAME DEPTH AS IT WAS GROWN IN THE NURSERY.
5. BACKFILL VOIDS AND CONSTRUCT 3" DEPTH WATERING BASIN.
6. WATER THOROUGHLY WITHIN 2 HOURS.
7. PLACE MULCH WITHIN 48 HOURS OF THE SECOND WATERING.

BARE ROOT STOCK

1. SOAK ROOTS IN WATER FOR AT LEAST ONE HOUR PRIOR TO PLANTING.
2. SCARIFY SIDES AND BOTTOM OF HOLE.
3. PROCEED WITH CORRECTIVE PRUNING AS DIRECTED BY ENGINEER.
4. TRANSFER PLANT DIRECTLY FROM WATER TO HOLE. SET PLANT AT SAME DEPTH AS IT WAS GROWN IN THE NURSERY. PLUMB AND IMMEDIATELY BACKFILL WITH THE BACKFILL SOIL SPECIFIED.
5. BACKFILL VOIDS AND CONSTRUCT 3" DEPTH WATERING BASIN.
6. WATER THOROUGHLY WITHIN 2 HOURS.
7. PLACE MULCH WITHIN 48 HOURS OF THE SECOND WATERING.

MACHINE-TRANSPLANTED STOCK (TREE SPADE)

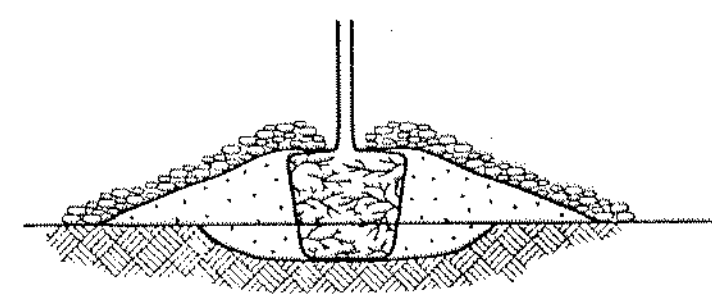
1. SCARIFY SIDES AND BOTTOM OF HOLE.
2. SET PLANT ON UNDISTURBED NATIVE SOIL AT SAME DEPTH AS IT WAS PREVIOUSLY GROWN.
3. PLUMB AND BACKFILL WITH THE BACKFILL SOIL SPECIFIED, FILLING ALL VOIDS.
4. AFTER PLANTING, THE SOIL IMMEDIATELY ADJACENT TO THE SPADE MOVED SOIL, FOR A MINIMUM DISTANCE OF 18" SHALL BE TURNED OVER AND/OR ROTOTILLED TO A MINIMUM DEPTH OF 12".
5. CONSTRUCT 3" DEPTH WATERING BASIN.
6. WATER THOROUGHLY WITHIN 2 HOURS.
7. PLACE MULCH WITHIN 48 HOURS OF THE SECOND WATERING.

MINIMUM TREE SPADE SIZE REQUIREMENTS

SPADE SIZE (DIAMETER) 'D'	OAK TREES (CALIPER)	DECIDUOUS TREES (CALIPER)	EVERGREEN TREES (HEIGHT)
42"	1.0" to 1.5"	2" to 3"	5' to 7'
60"	1.5" to 2.5"	3" to 4"	7' to 9'
78"	2.5" to 3.5"	4" to 6"	9' to 14'
85"	3.5" to 5.0"	6" to 8"	14' to 18'

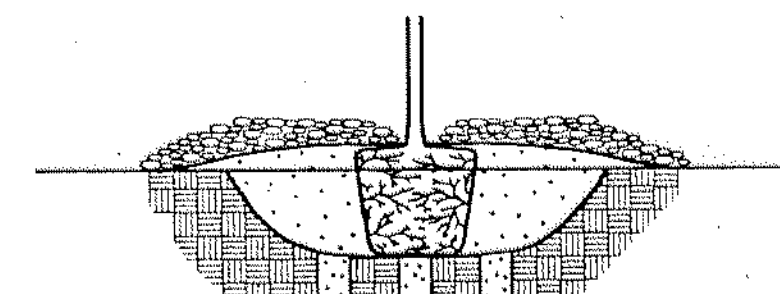
SEE SPECIAL PROVISIONS FOR ADDITIONAL MINIMUM REQUIREMENTS APPLICABLE TO MECHANIZED DIGGING EQUIPMENT.

SHRUB AND TREE PLANTING DETAILS



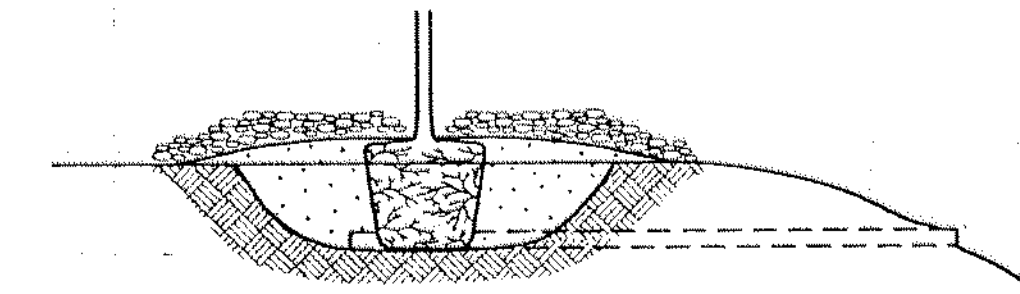
INSTALL MINI-BERM

1. EXCAVATE HOLE OR BED 1/4 THE DEPTH OF THE ROOT BALL.
2. SET ROOT BALL IN HOLE.
3. CONSTRUCT BERM WITH SANDY LOAM TOPSOIL EXTENDING THE BERM BASE 3 TIMES THE HEIGHT OF THE BERM.
4. COMPLETE PLANTING ACCORDING TO SHRUB AND TREE PLANTING DETAILS ABOVE AS APPLICABLE.



INSTALL GRANULAR FILTER

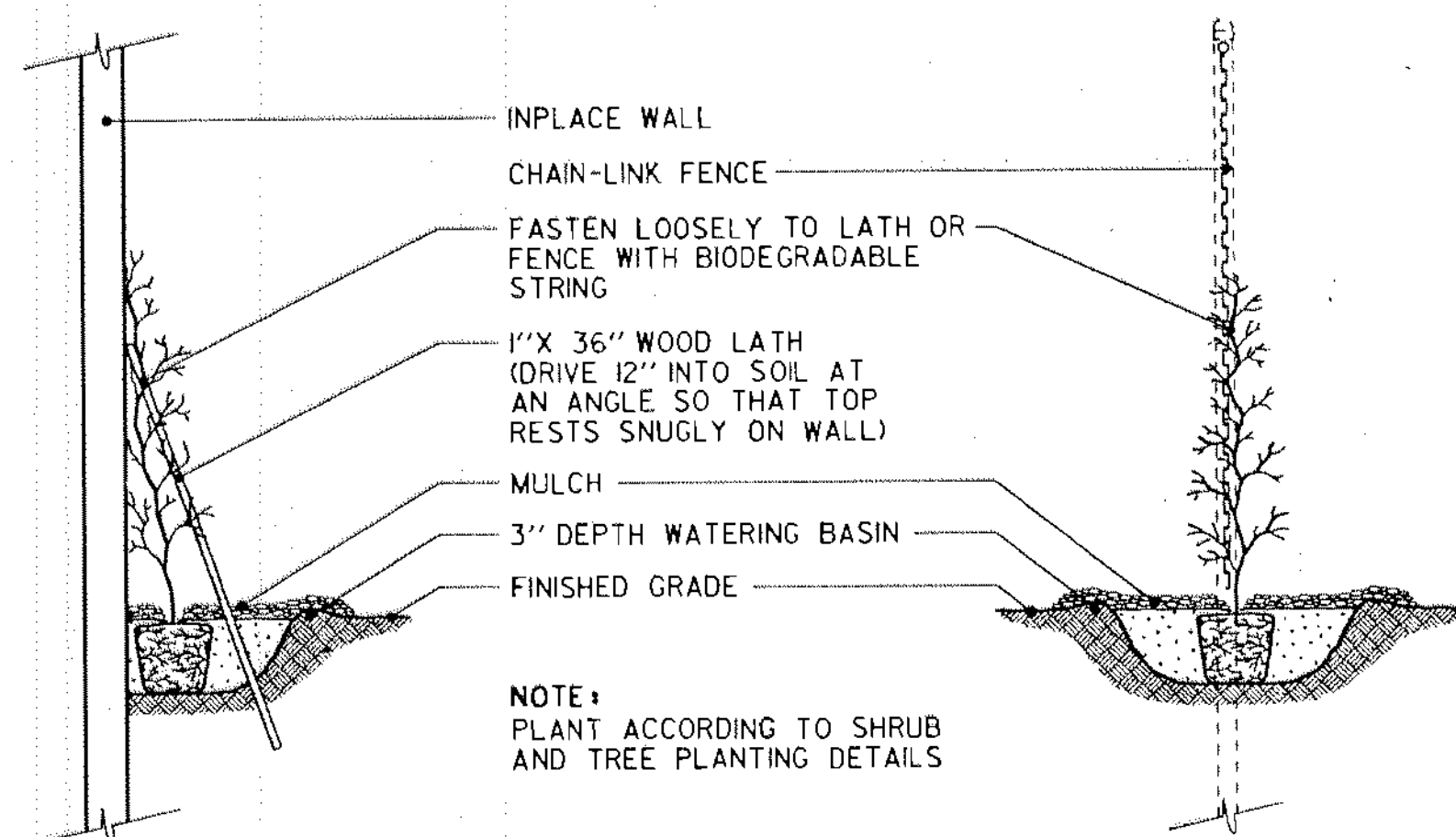
1. EXCAVATE HOLE OR BED TO ALLOW PLACING TOP OF ROOT BALL 1"-3" HIGHER THAN FINISHED GRADE.
2. AUGER 8" DIAMETER HOLES ENTIRELY THROUGH IMPERVIOUS OR POORLY DRAINED HARD PAN SOIL LAYER TO ADEQUATELY DRAINED SUBSOIL.
3. BACKFILL AUGER HOLES WITH A THOROUGHLY INCORPORATED MIXTURE OF 50% SAND AND 50% HEAVY INPLACE SOIL.
4. COMPLETE PLANTING ACCORDING TO SHRUB AND TREE PLANTING DETAILS ABOVE AS APPLICABLE.



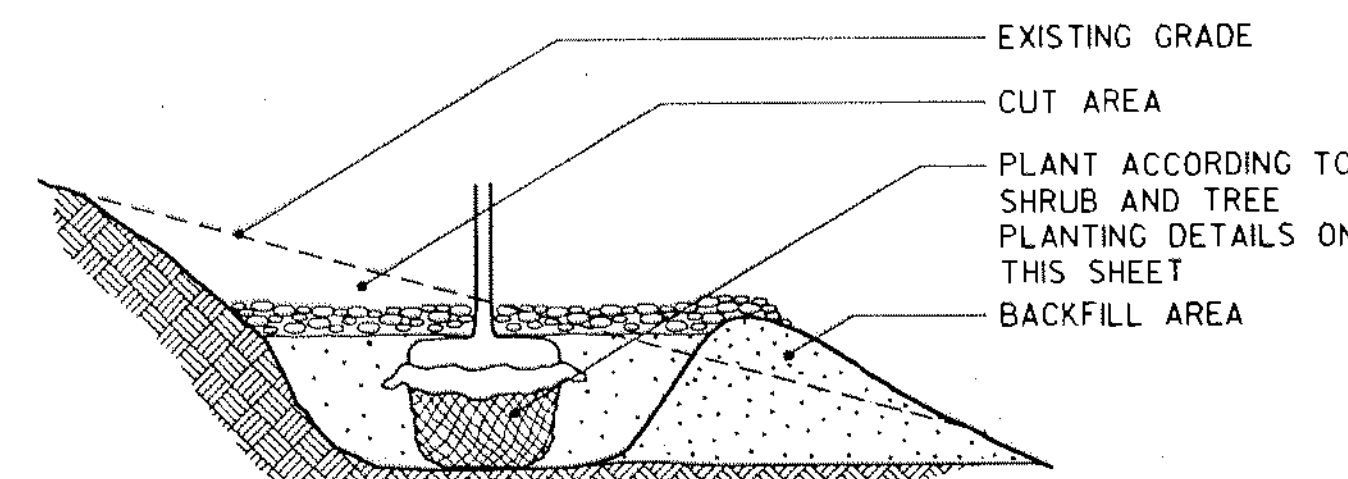
INSTALL TILE DRAINAGE

1. EXCAVATE HOLE OR BED TO ALLOW PLACING TOP OF ROOT BALL 1"-3" HIGHER THAN FINISHED GRADE.
2. INSTALL 4" MINIMUM DIAMETER DRAIN TILE DAYLIGHTING AT A LOWER GRADE AS APPROVED BY THE ENGINEER OR LANDSCAPE ARCHITECT.
3. COMPLETE PLANTING ACCORDING TO SHRUB AND TREE PLANTING DETAILS ABOVE AS APPLICABLE.

SHRUB AND TREE PLANTING ALTERNATIVE DETAILS IN POORLY DRAINED SOIL (NEED AND ALTERNATIVE SELECTION SHALL BE DETERMINED BY CONTRACTOR SUBJECT TO APPROVAL BY THE ENGINEER.)

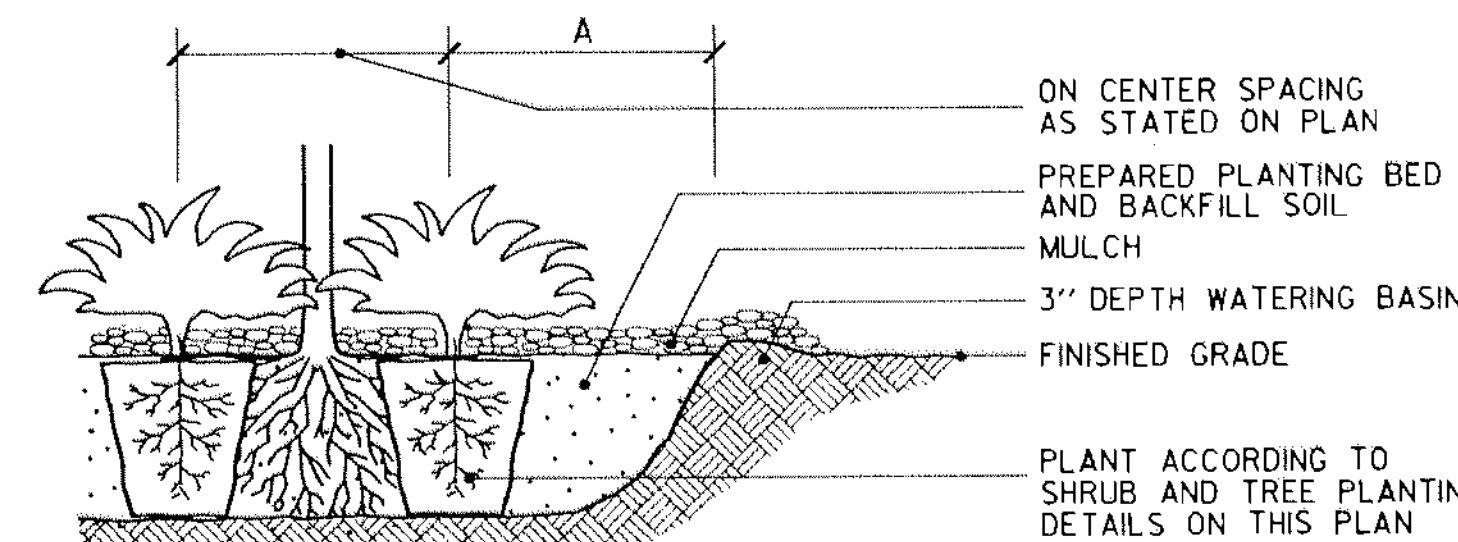


VINE PLANTING DETAIL



PLANTING ON A SLOPE

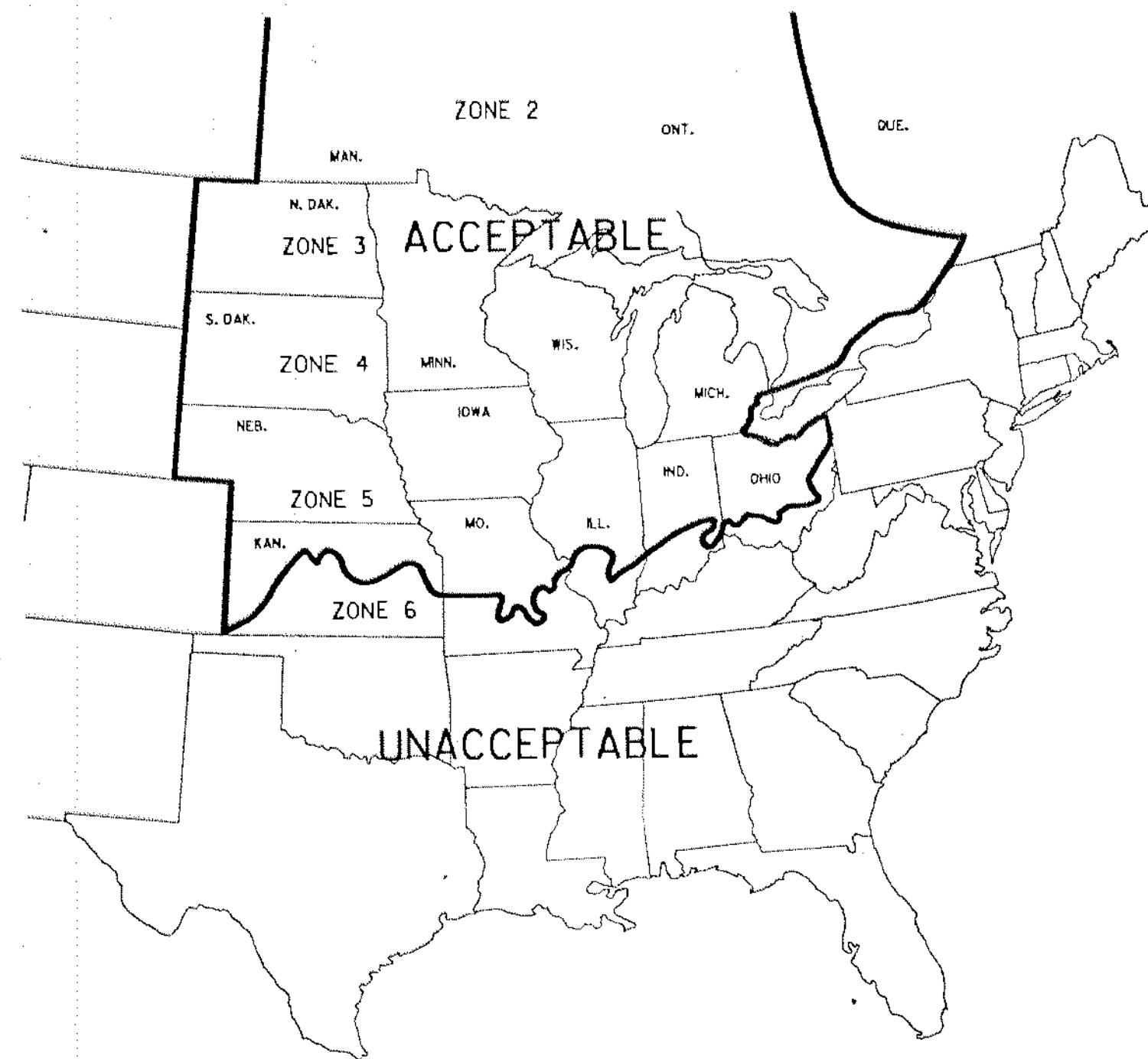
NOTE: EXTENDED EXCAVATION AND BACKFILL SOIL TO A POINT DOWNSLOPE EQUAL TO OR LOWER IN ELEVATION THAN THE BOTTOM OF THE HOLE DIRECTLY BENEATH THE PLANT TO INSURE ADEQUATE DRAINAGE IN HEAVY SOILS. GRANULAR SOIL MUST BE ADDED AS BACKFILL IN AREAS OF POOR DRAINAGE.



TREE / SHRUB / GROUND COVER MASS BED PLANTING DETAIL

GENERAL NOTES - SEE SPECIAL PROVISIONS FOR SPECIFIC PROJECT REQUIREMENTS

- PLANTING BED PREPARATION:** ALL MASS PLANTING BEDS SHALL BE TILLED TO A MINIMUM DEPTH OF 10". AMENDMENTS SHALL BE APPLIED AFTER CULTIVATION.
- BACKFILL SOIL:** USE SOIL EXCAVATED FROM PLANTING HOLES AND PROVIDE AMMENDMENTS. REMOVE ALL DEBRIS INCLUDING ROCKS LARGER THAN 3" DIA.
- FERTILIZER:** NONE
MN/DOT 3881
- COMPOST:** NONE
MN/DOT 3890
- MULCH MATERIAL:** Mn/DOT 2571.2C4, Mn/DOT 2571.3H, Mn/DOT 3882 TYPE 6, UNLESS OTHERWISE SPECIFIED, MASS MULCH ALL PLANTING BEDS.
- TREE STAKING:** Mn/DOT 2571.3J. SEE SPECIAL PROVISIONS. TREE STAKING (ALL SIZES) WILL NOT BE REQUIRED UNLESS NECESSARY TO MAINTAIN TREES IN A PLUMB CONDITION WHERE VANDALISM, SOIL, OR WIND CONDITIONS ARE A PROBLEM AS REQUESTED BY THE ENGINEER.
- TREE PAINTING:** PAINT OAKS, LINDENS, LOCUSTS, MAPLES, CRABAPPLES, AND MOUNTAIN ASHES. ONLY UNDILUTED EXTERIOR WHITE LATEX BASE PAINT IS ACCEPTABLE.
- RODENT PROTECTION:** PROVIDE ON ALL TREES, EXCEPT SPRUCE UNLESS OTHERWISE SPECIFIED.
- MASS PLANTINGS:** PLANT SPACING OF _____ OR LESS SHALL BE MASS EXCAVATED AND/OR CULTIVATED BY TILLING. PLANT IN STAGGERED ROWS ON THE PERIMETER FIRST, THEN UNIFORMLY FILL IN WITH REMAINING QUANTITY USING TRIANGULAR SPACING. PROVIDE 5' RADIUS CLEAR OF SHRUBS AROUND EACH DECIDUOUS TREE AND 8' RADIUS AROUND EACH EVERGREEN TREE. NOTIFY ENGINEER OF GROSS PLANT QUANTITY SURPLUS OR DEFICIENCY IMMEDIATELY. PLANT SPACINGS OF _____ OR LESS SHALL BE MASS MULCHED.
- PLANTING PLAN:** RESPECT STATED DIMENSIONS. DO NOT SCALE DRAWINGS.
- WATERING GUIDELINES:**
- | PLANT TYPE | AVERAGE AMOUNT OF WATER PER APPLICATION (GALLONS) |
|--|---|
| MACHINE TRANSPLANTED TREES (3" CALIPER+) | 50-100 |
| BALLED & BURLAPPED TREES | 20± |
| BARE ROOT TREES | 15± |
| BALLED & BURLAPPED SHRUBS | 10± |
| BARE ROOT OR CONTAINER SHRUBS | 7± |
| WOODY SEEDLINGS | 4± |
| HERBACEOUS GROUNDCOVERS AND VINES | 3± |
- 1) THE WATERING GUIDELINES ASSUME A SOIL CONDITION WITH ADEQUATE BUT NOT EXCESSIVE OR POOR DRAINAGE. WATERING INTERVALS AND AMOUNT OF APPLICATION MUST BE VARIED CONSIDERING PREVAILING SOIL MOISTURE AND WEATHER CONDITIONS THROUGHOUT THE GROWING SEASON. ADEQUATE BUT NOT EXCESSIVE SOIL MOISTURE IN THE ROOT ZONE OF NEW PLANTINGS MUST BE MAINTAINED AT ALL TIMES THROUGHOUT THE GROWING SEASON FOR THE FIRST TWO YEARS FOLLOWING PLANTING. WATERING MAY BE REQUIRED WEEKLY. THIS DETERMINATION SHALL BE MADE BY THE CONTRACTOR.
- 2) THE CONTRACTOR IS ADVISED THAT THE WATERING GUIDELINES ARE NOT REQUIREMENTS OF THE CONTRACT ALTHOUGH FAILURE TO CORRECT WATER DEFICITS BY SUPPLEMENTAL WATERING MAY RESULT IN UNACCEPTABLE PLANTS FOR WHICH REDUCED OR NO PAYMENT WILL BE MADE.



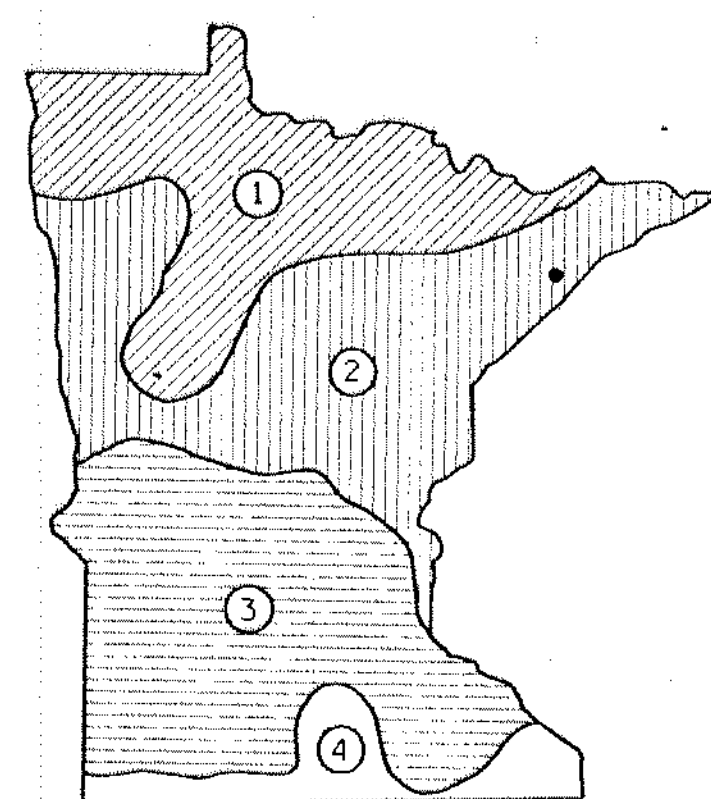
- ZONE 1 BELOW -50 F
- ZONE 2 -50 to -40
- ZONE 3 -40 to -30
- ZONE 4 -30 to -20
- ZONE 5 -20 to -10

PLANTS WITHIN THESE ZONES FROM THE ACCEPTABLE GROWING RANGE MAY BE USED ON ALL PROJECTS UNLESS OTHERWISE SPECIFIED.

PLANTS WITHIN THIS ZONE FROM THE ACCEPTABLE GROWING RANGE ARE ALLOWED ONLY ON PROJECTS WITHIN ZONE 4 IN MINNESOTA.

ACCEPTABLE GROWING RANGES FOR PLANT STOCK

SOURCE: U.S.D.A. PLANT HARDINESS ZONE MAP

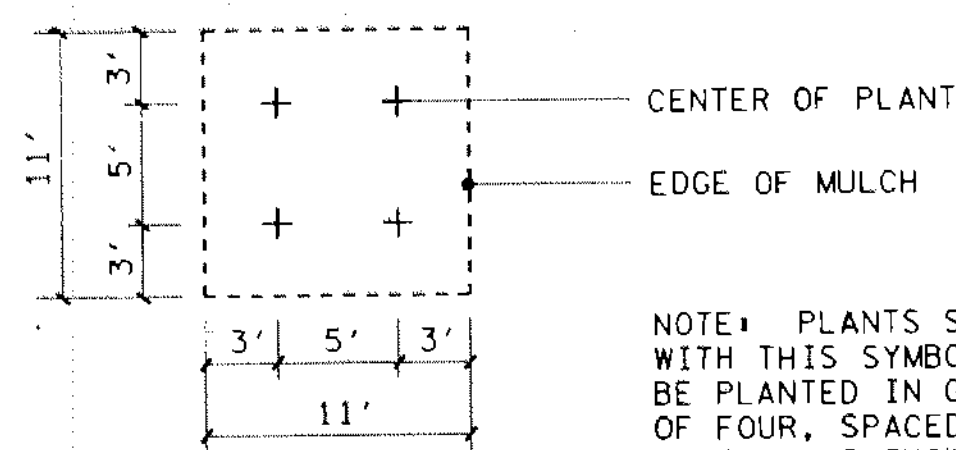


• - INDICATES PROJECT LOCATION

	SPRING		FALL	
	DECIDUOUS	EVERGREEN	DECIDUOUS	EVERGREEN
1	APRIL 21 TO JUNE 1	APRIL 21 TO JUNE 1	OCT. 1 TO NOV. 1	AUG. 25 TO SEPT. 15
2	APRIL 14 TO JUNE 1	APRIL 14 TO MAY 24	OCT. 1 TO NOV. 6	AUG. 25 TO SEPT. 15
3	APRIL 7 TO JUNE 1	APRIL 7 TO MAY 17	OCT. 10 TO NOV. 15	AUG. 25 TO SEPT. 15
4	APRIL 1 TO MAY 25	APRIL 1 TO MAY 15	OCT. 15 TO NOV. 20	SEPT. 5 TO OCT. 1

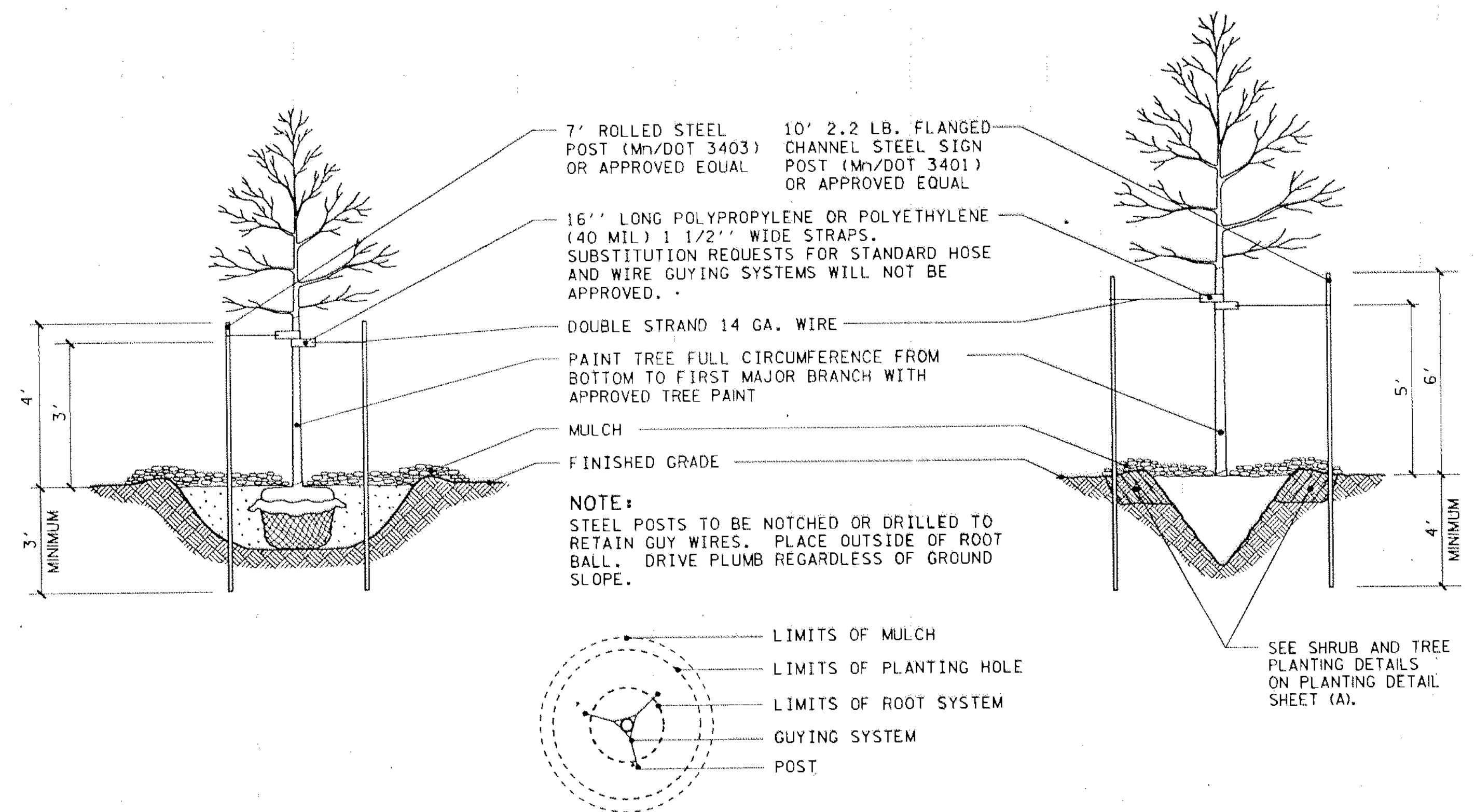
NOTE: ACTUAL DATES MAY CHANGE DEPENDING UPON SEASONAL CONDITIONS AS DETERMINED BY THE ENGINEER. FALL PLANTING MAY NOT BE RECOMMENDED OR ALLOWED. SEE SPECIAL PROVISIONS FOR SPECIFIC PROJECT REQUIREMENTS.

OPTIMUM PLANTING DATE ZONES IN MINNESOTA



NOTE: PLANTS SHOWN WITH THIS SYMBOL WILL BE PLANTED IN GROUPS OF FOUR, SPACED AND MULCHED AS SHOWN.

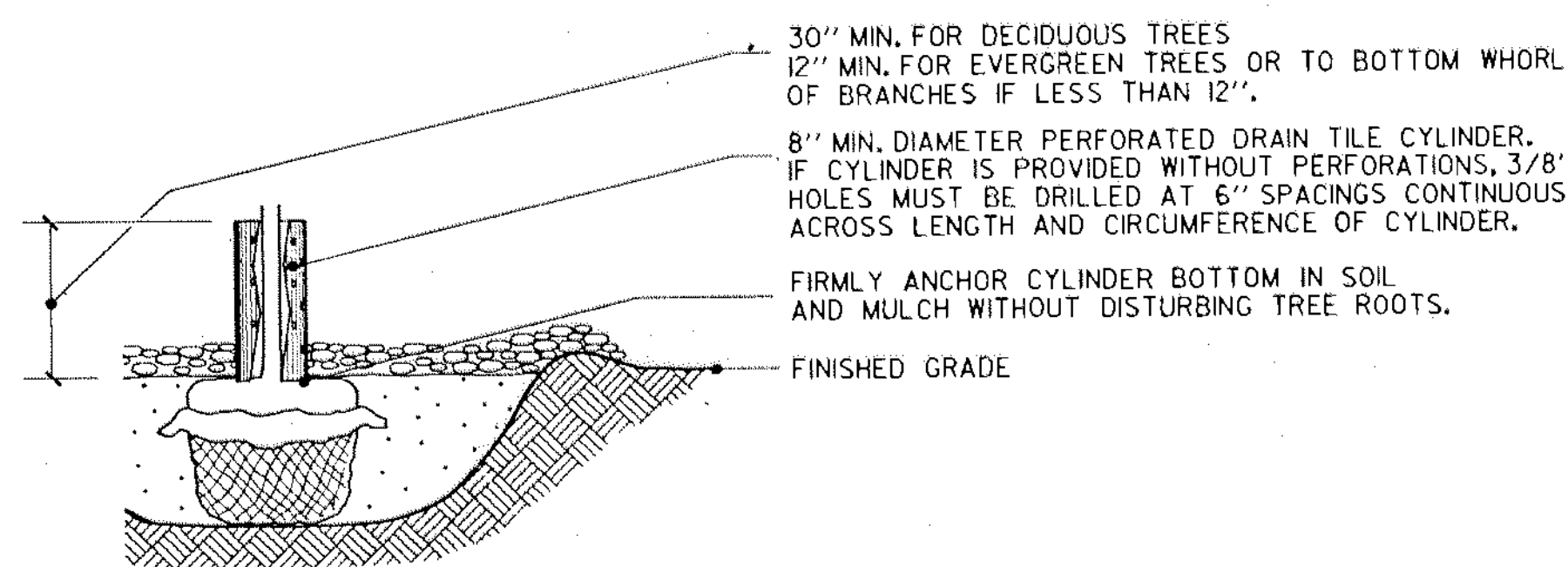
SPREADING SHRUB PLANTING DETAIL



STANDARD TREE STAKING AND WRAPPING DETAIL

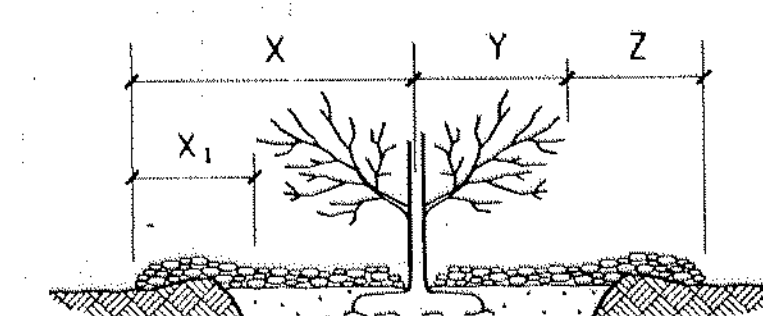
TYPICAL PLAN VIEW

LARGE TREE STAKING AND WRAPPING DETAIL



- NOTES:
- DO NOT CUT LOWER BRANCHES TO PERMIT PROTECTION.
 - PLACE MULCH INSIDE CYLINDER TO SAME DEPTH AS OUTSIDE.
 - INSTALLATION UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

RODENT PROTECTION DETAIL



SUBSIDENCE OR DETERIORATION OF MULCH THROUGHOUT THE CONTRACT IS ACCEPTABLE TO THE EXTENT THAT THE MULCH DEPTH IS NO LESS THAN TWO THIRDS OF THE SPECIFIED DEPTH AT FINAL ACCEPTANCE. REPLACEMENT MULCH SHALL BE REQUIRED TO PROVIDE A DEPTH AT LEAST TWO THIRDS OF THE SPECIFIED DEPTH WHEN THE SUBSIDENCE OR LOSS IS EXCESSIVE OR WHEN THE CONTRACTOR'S OPERATIONS HAVE CONTAMINATED THE MULCH WITH SOIL.

NOTE: REMOVE MULCH PLACED TO A DEPTH GREATER THAN THAT SPECIFIED WHEN DIRECTED BY THE ENGINEER.

TYPE OF PLANT	X CENTER OF PLANT TO MULCH LINE	X ₁ EDGE OF BRANCHING TO MULCH LINE	Y DEPTH OF MULCH	Z DEPTH OF MULCH
EVERGREEN TREES	VARIABLE	3' MIN.	6"	6"
DECIDUOUS TREES	3' MIN.	N/A	6"	6"
EVERGREEN SHRUBS	VARIABLE	3' MIN.	3"	6"
DECIDUOUS SHRUBS	3' MIN.	N/A	6"	6"
VINES	2' MIN.	N/A	6"	4"
GROUNDCOVERS	VARIABLE	2' MIN.	3"	3"
MACHINE-TRANSPLANTED TREES	12" BEYOND EDGE OF HOLE		6"	6"

MULCH PLACEMENT DETAIL

STANDARD PLANTING DETAILS (B)
DATED JANUARY 25, 1991

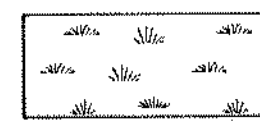
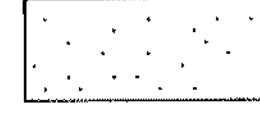




MITIGATION SITE EARTHWORK SUMMARY

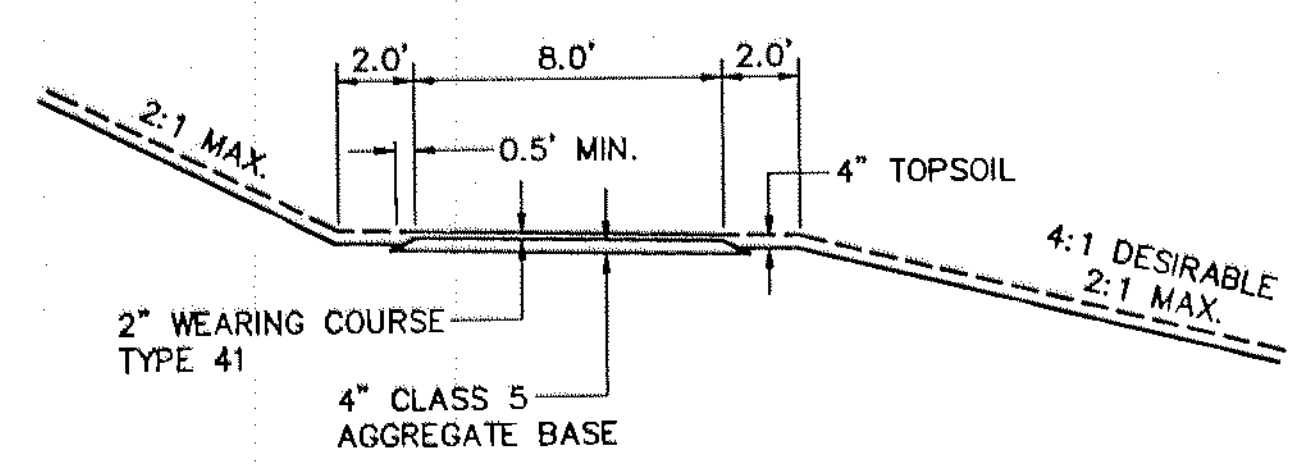
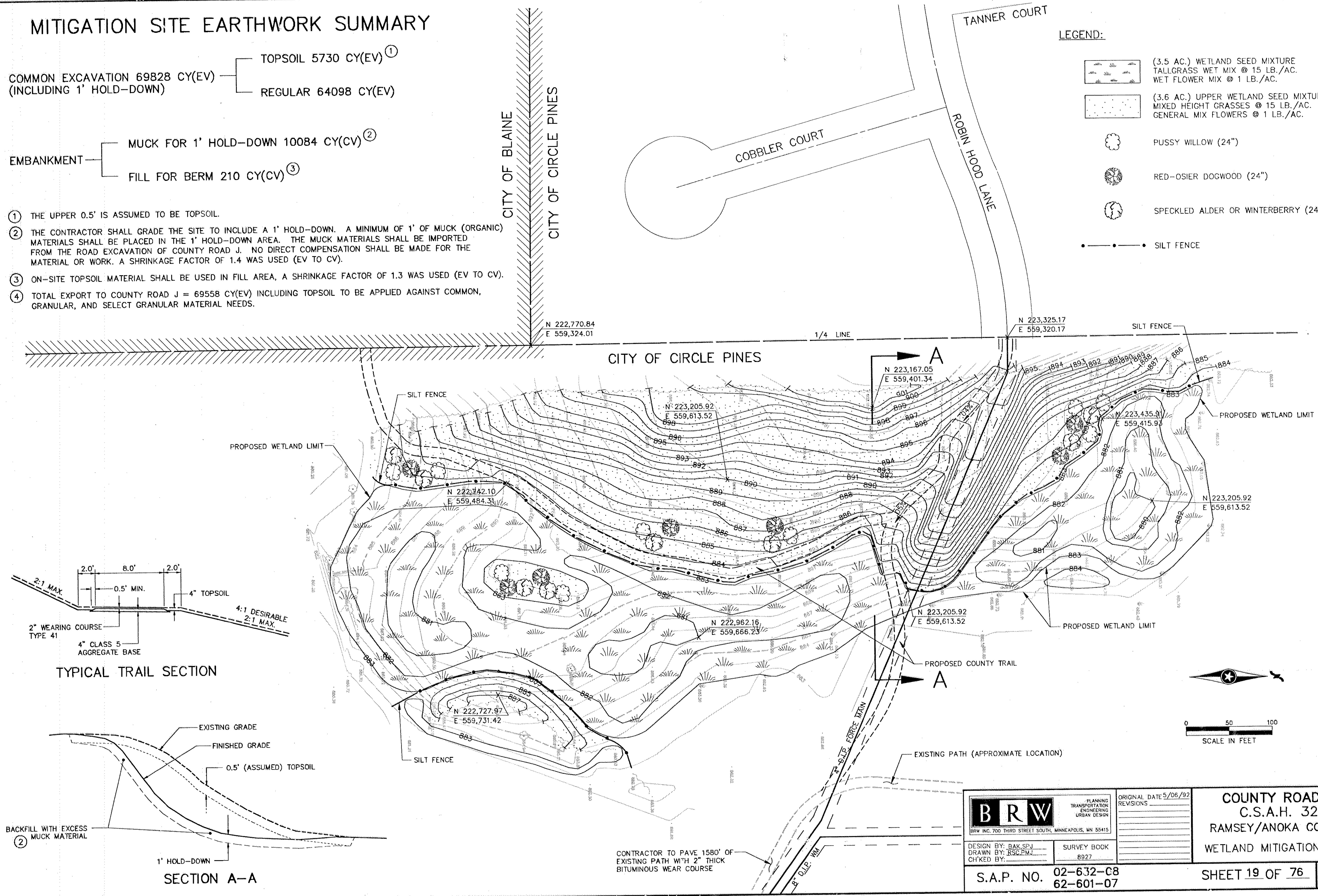
COMMON EXCAVATION 69828 CY(EV) (INCLUDING 1' HOLD-DOWN) — TOPSOIL 5730 CY(EV)^①
 REGULAR 64098 CY(EV)

EMBANKMENT — MUCK FOR 1' HOLD-DOWN 10084 CY(CV)^②
 FILL FOR BERM 210 CY(CV)^③

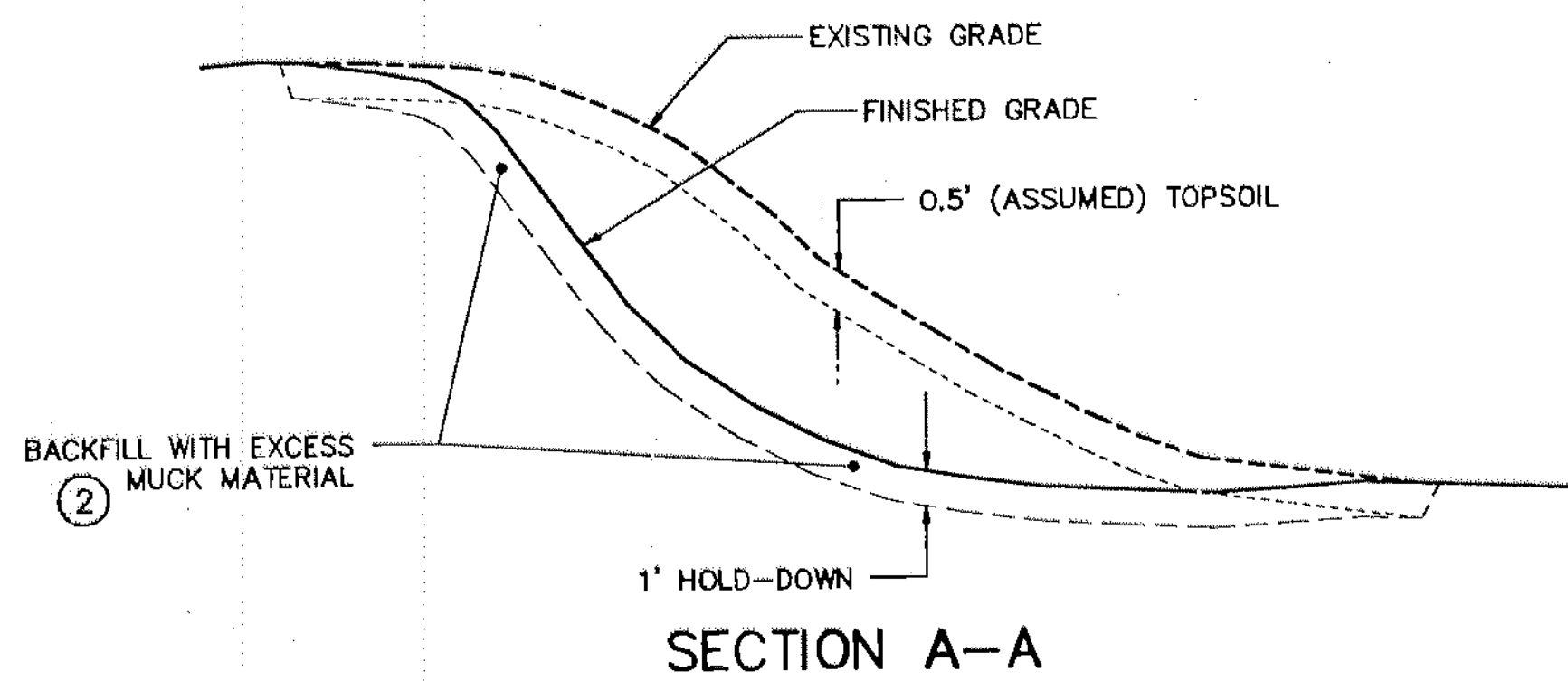
- ① THE UPPER 0.5' IS ASSUMED TO BE TOPSOIL.
- ② THE CONTRACTOR SHALL GRADE THE SITE TO INCLUDE A 1' HOLD-DOWN. A MINIMUM OF 1' OF MUCK (ORGANIC) MATERIALS SHALL BE PLACED IN THE 1' HOLD-DOWN AREA. THE MUCK MATERIALS SHALL BE IMPORTED FROM THE ROAD EXCAVATION OF COUNTY ROAD J. NO DIRECT COMPENSATION SHALL BE MADE FOR THE MATERIAL OR WORK. A SHRINKAGE FACTOR OF 1.4 WAS USED (EV TO CV).
- ③ ON-SITE TOPSOIL MATERIAL SHALL BE USED IN FILL AREA, A SHRINKAGE FACTOR OF 1.3 WAS USED (EV TO CV).
- ④ TOTAL EXPORT TO COUNTY ROAD J = 69558 CY(EV) INCLUDING TOPSOIL TO BE APPLIED AGAINST COMMON, GRANULAR, AND SELECT GRANULAR MATERIAL NEEDS.

LEGEND:

-  (3.5 AC.) WETLAND SEED MIXTURE
TALLGRASS WET MIX @ 15 LB./AC.
WET FLOWER MIX @ 1 LB./AC.
-  (3.6 AC.) UPPER WETLAND SEED MIXTURE
MIXED HEIGHT GRASSES @ 15 LB./AC.
GENERAL MIX FLOWERS @ 1 LB./AC.
-  PUSSY WILLOW (24")
-  RED-OSIER DOGWOOD (24")
-  SPECKLED ALDER OR WINTERBERRY (24")
-  SILT FENCE

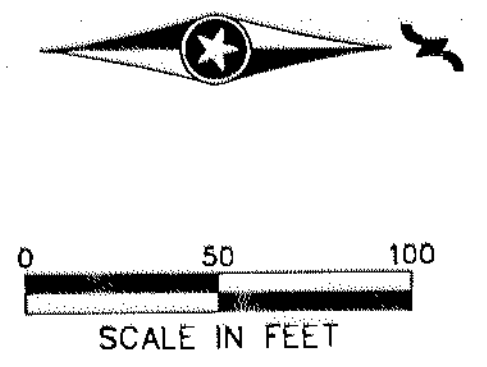



TYPICAL TRAIL SECTION

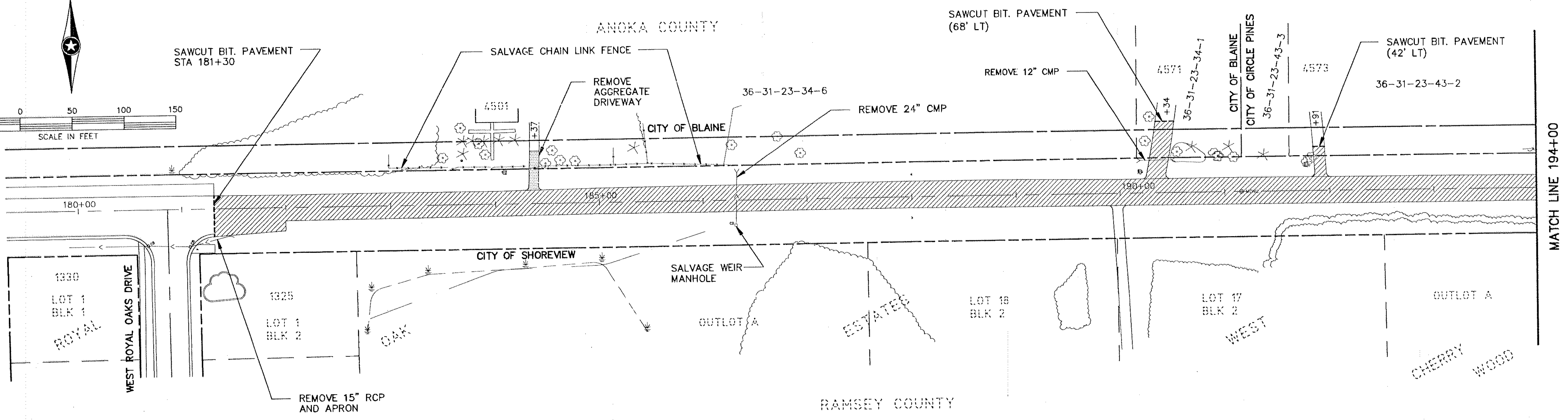
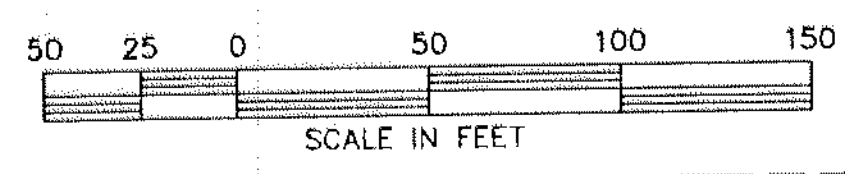


SECTION A-A

CONTRACTOR TO PAVE 1580' OF EXISTING PATH WITH 2" THICK BITUMINOUS WEAR COURSE

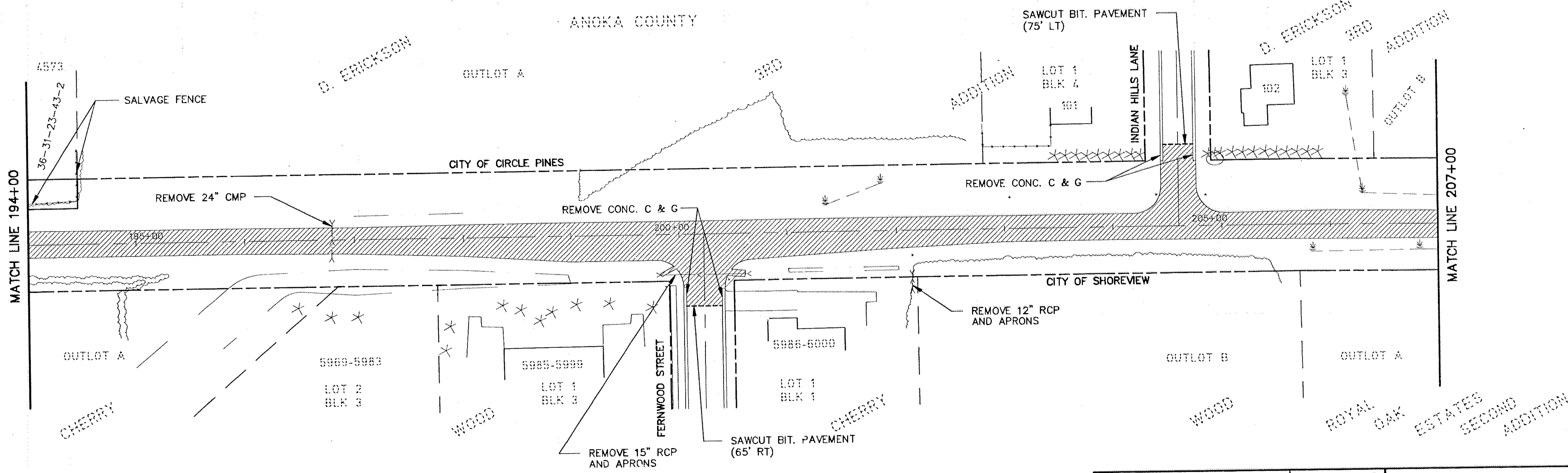


 BRW INC. 700 THIRD STREET SOUTH, MINNEAPOLIS, MN 55415	PLANNING TRANSPORTATION ENGINEERING URBAN DESIGN	ORIGINAL DATE 5/06/92 REVISIONS	COUNTY ROAD J C.S.A.H. 32 RAMSEY/ANOKA COUNTY WETLAND MITIGATION AREA
	DESIGN BY: BAK SPJ DRAWN BY: RSC, PMJ CHECKED BY:	SURVEY BOOK 8927	
S.A.P. NO. 02-632-C8 62-601-07			



NOTE:

RELOCATE ALL MAIL BOXES
SEE SPECIAL PROVISIONS



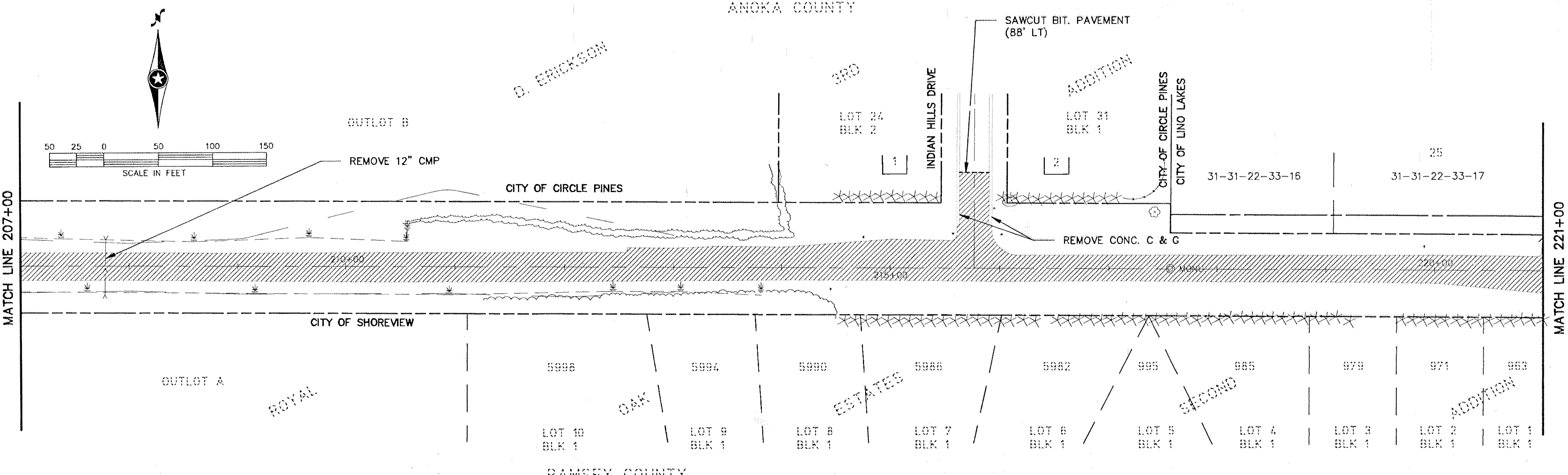
LEGEND:

- BITUMINOUS REMOVAL
- AGGREGATE REMOVAL
- SAWCUT
- MAIL BOXES

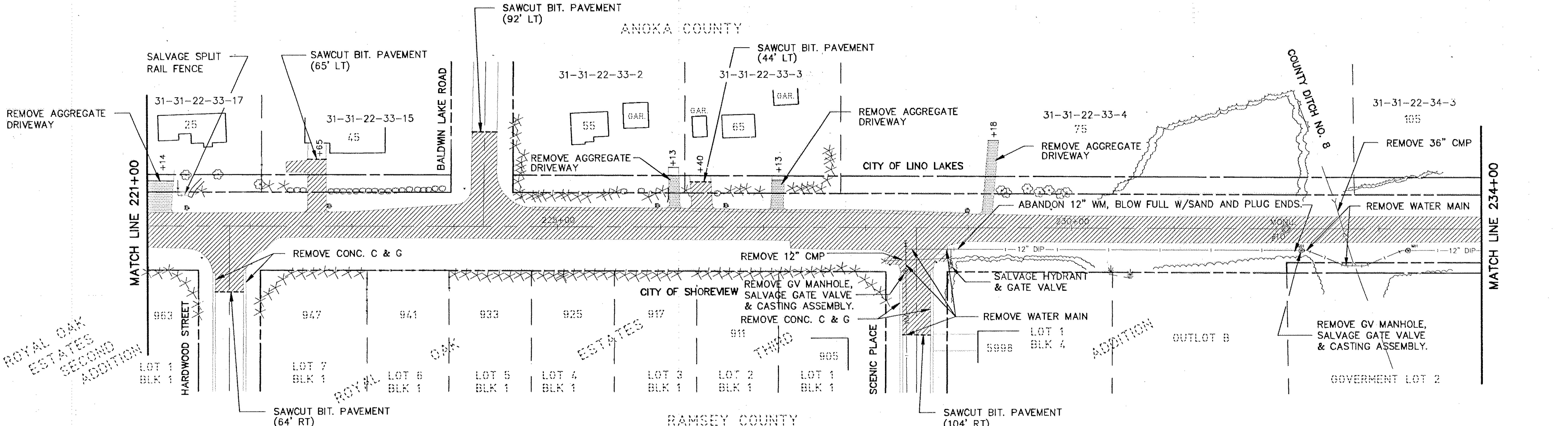
① INCIDENTAL TO COMMON EXCAVATION

 <small>BRW INC. 700 THIRD STREET SOUTH, MINNEAPOLIS, MN 55415</small>	<small>PLANNING TRANSPORTATION ENGINEERING URBAN DESIGN</small>	<small>ORIGINAL DATE 5/6/92 REVISIONS</small>	COUNTY ROAD J C.S.A.H. 32 ANOKA/RAMSEY COUNTY REMOVALS STA 181+32 TO 207+00
	<small>DESIGN BY: SPJ DRAWN BY: PMJ CHK'D BY: SPJ</small>	<small>SURVEY BOOK 8927</small>	
S.A.P. NO. 02-632-08 62-601-07		SHEET 20 OF 76	

REMOVAL

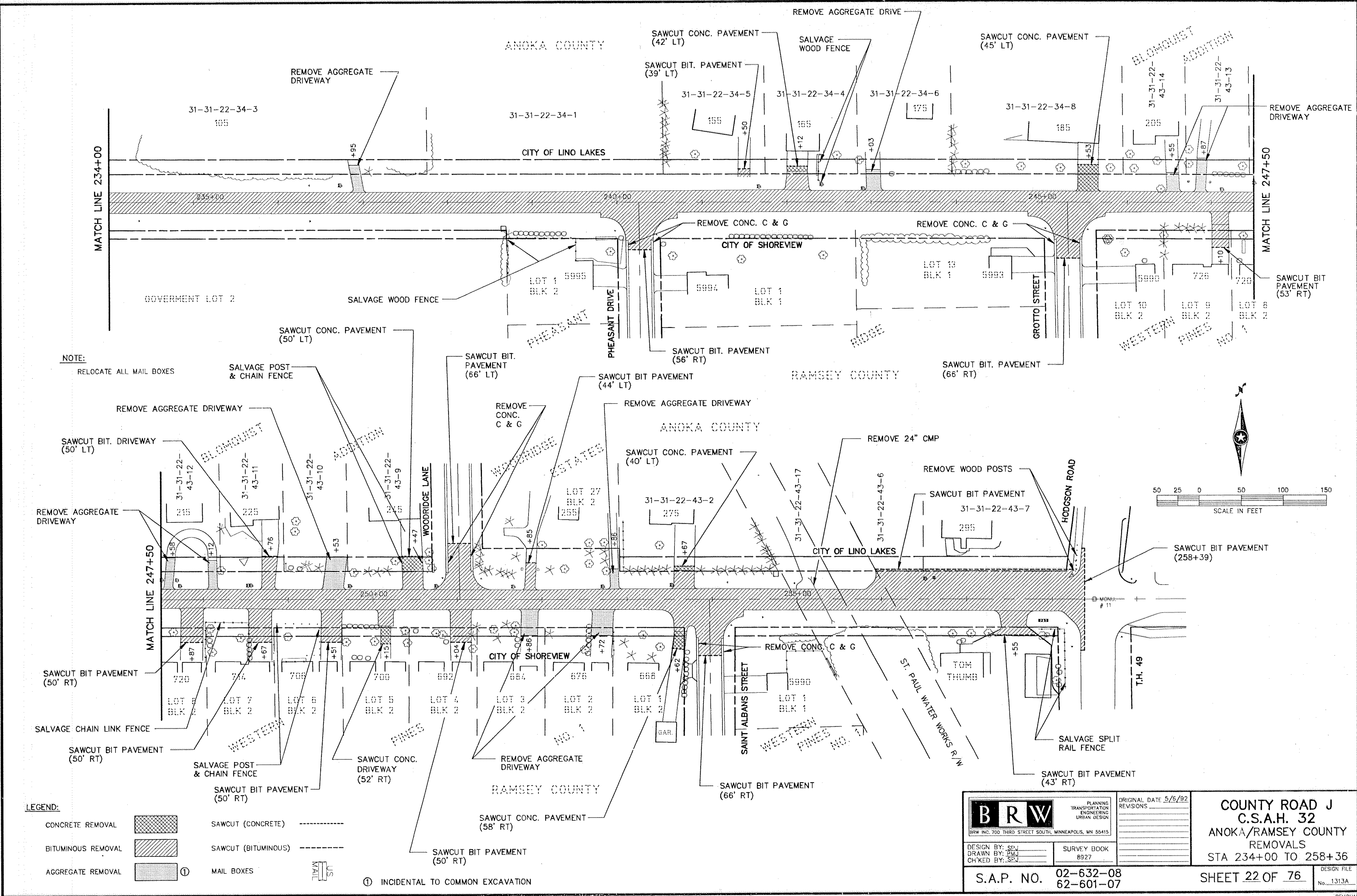


NOTE:
RELOCATE ALL MAIL BOXES

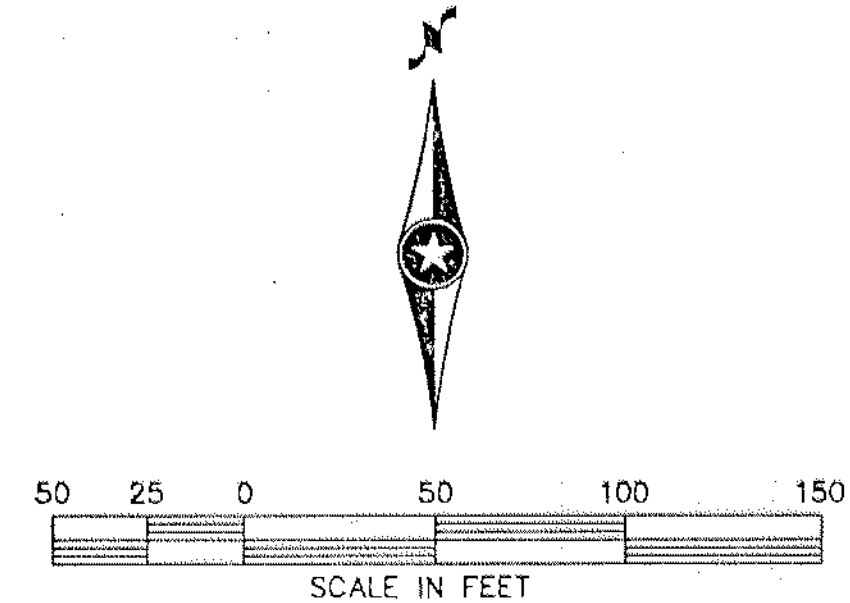


- LEGEND:**
- BITUMINOUS REMOVAL
 - AGGREGATE REMOVAL
 - SAWCUT
 - MAIL BOXES
 - INCIDENTAL TO COMMON EXCAVATION

BRW <small>BRW INC. 700 THIRD STREET SOUTH, MINNEAPOLIS, MN 55415</small>	PLANNING TRANSPORTATION ENGINEERING URBAN DESIGN	ORIGINAL DATE 5/8/92 REVISIONS 8/11/92	COUNTY ROAD J C.S.A.H. 32 ANOKA/RAMSEY COUNTY REMOVALS STA 207+00 TO 234+00
	DESIGN BY: SPJ DRAWN BY: PMJ CHECKED BY: SPJ	SURVEY BOOK 8927	
S.A.P. NO. 02-632-08 62-601-07		SHEET 21 OF 76	



NOTE:
RELOCATE ALL MAIL BOXES



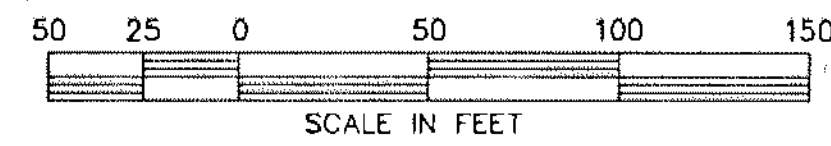
LEGEND:

CONCRETE REMOVAL		SAWCUT (CONCRETE)	-----
BITUMINOUS REMOVAL		SAWCUT (BITUMINOUS)	-----
AGGREGATE REMOVAL		MAIL BOXES	

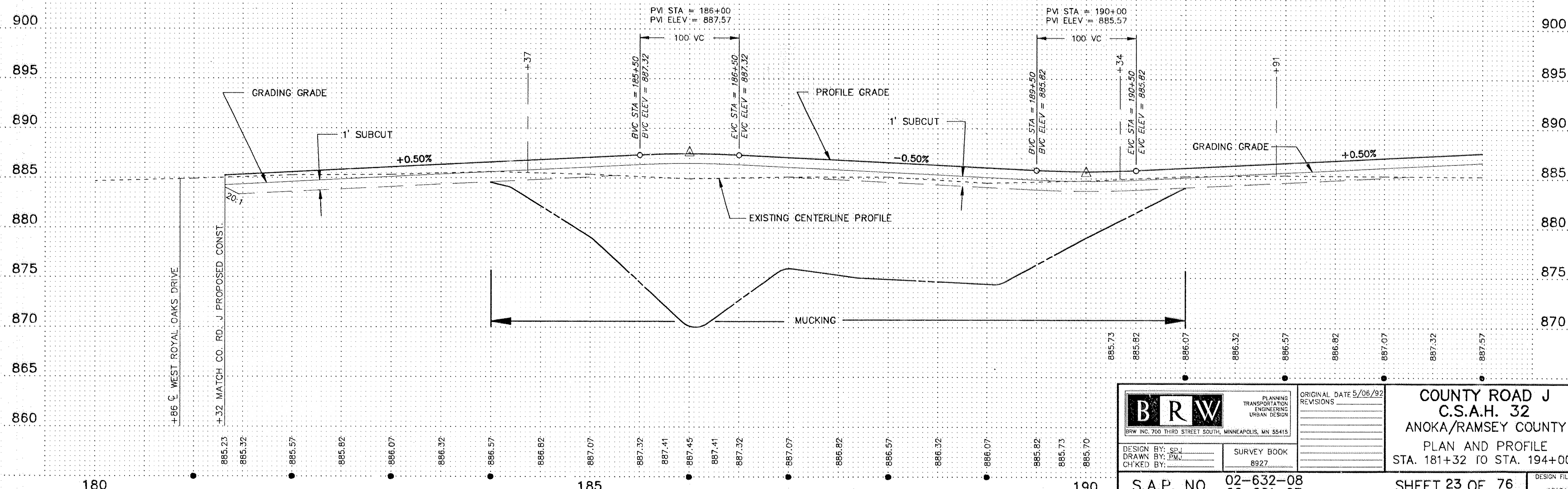
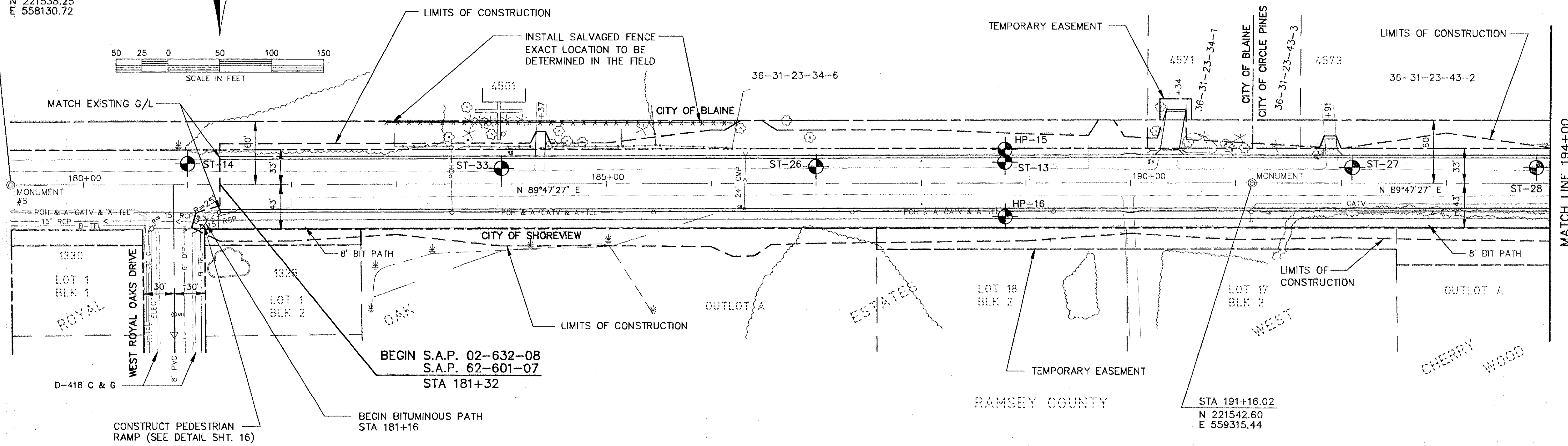
① INCIDENTAL TO COMMON EXCAVATION

 BRW INC. 700 THIRD STREET SOUTH, MINNEAPOLIS, MN 55415	PLANNING TRANSPORTATION ENGINEERING URBAN DESIGN	ORIGINAL DATE 5/6/92 REVISIONS	COUNTY ROAD J C.S.A.H. 32 ANOKA/RAMSEY COUNTY REMOVALS STA 234+00 TO 258+36
	DESIGN BY: SPJ DRAWN BY: BMJ CH'K'D BY: SPJ	SURVEY BOOK 8927	
		SHEET 22 OF 76	DESIGN FILE No. 1313A

P.J. STA 179+31.29
 N 221538.25
 E 558130.72



ANOKA COUNTY



DESIGN BY: SPJ
 DRAWN BY: PMV
 CHECKED BY:

SURVEY BOOK
 8927

ORIGINAL DATE	5/06/92
REVISIONS	

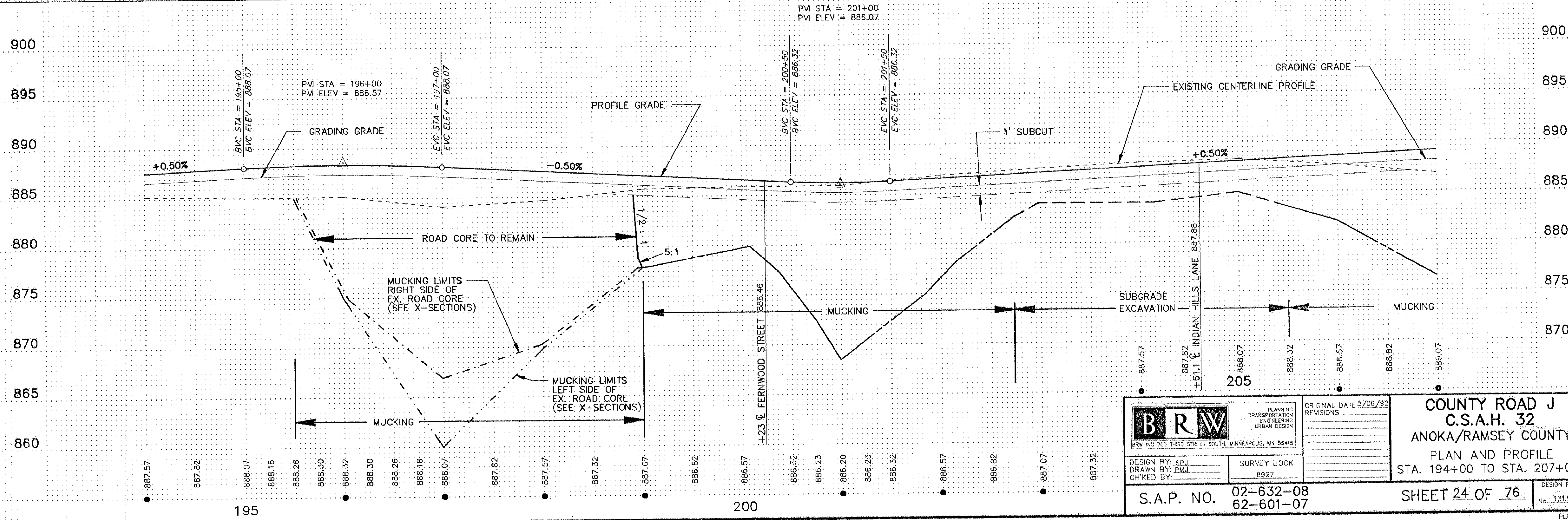
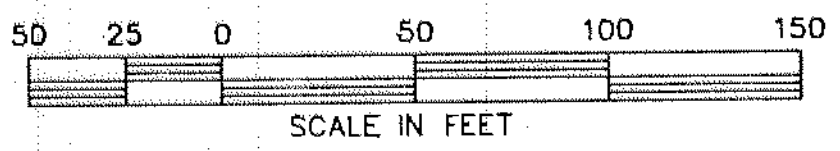
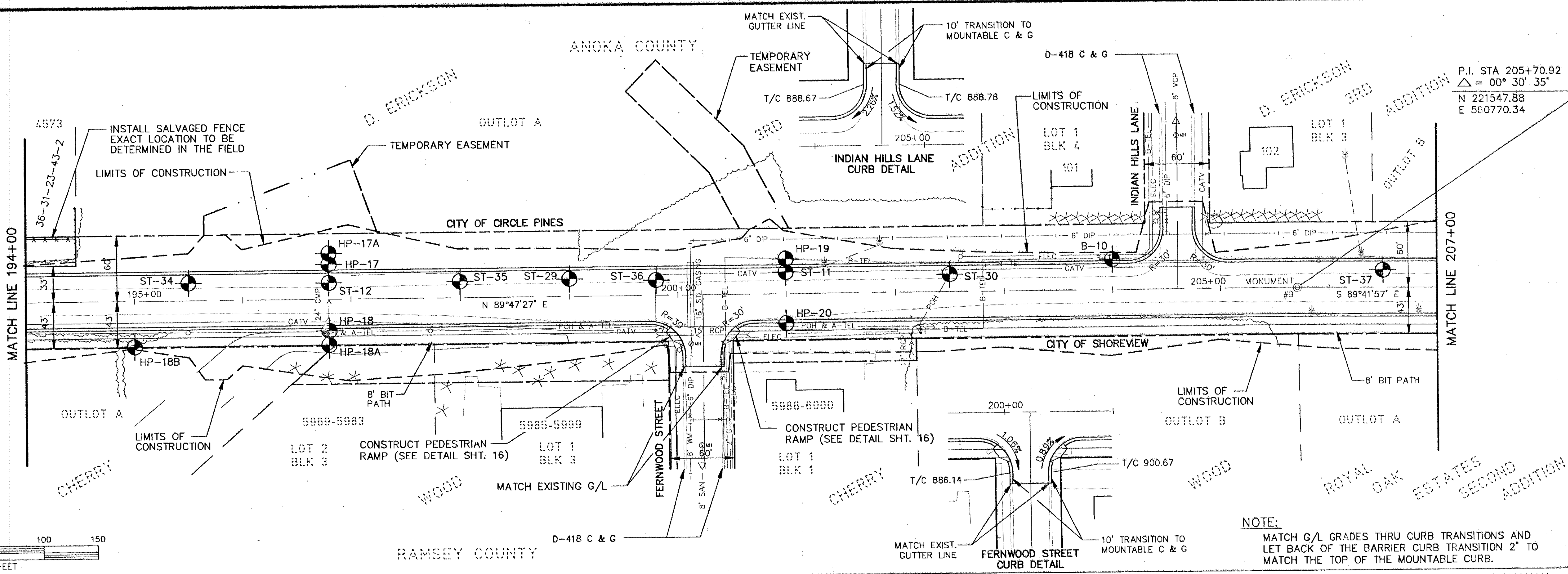
COUNTY ROAD J
 C.S.A.H. 32
 ANOKA/RAMSEY COUNTY
 PLAN AND PROFILE
 STA. 181+32 TO STA. 194+00

S.A.P. NO. 02-632-08
 62-601-07

SHEET 23 OF 76

DESIGN FILE
 No. 1313A

PLANPROT

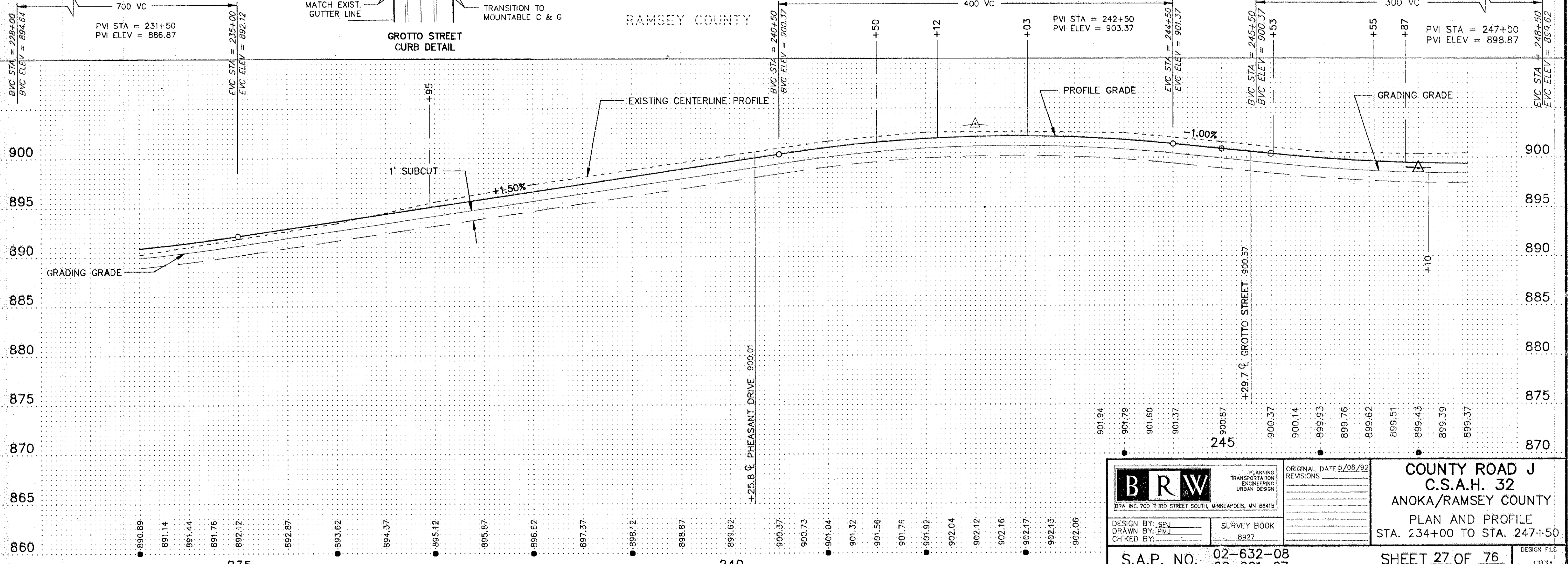
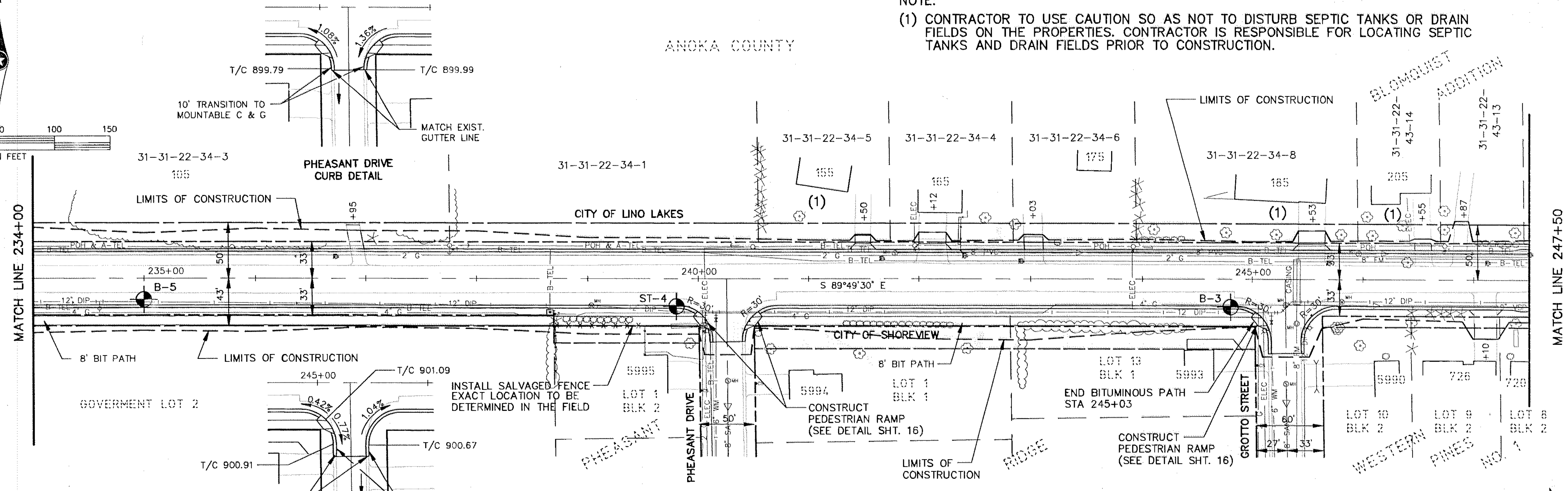
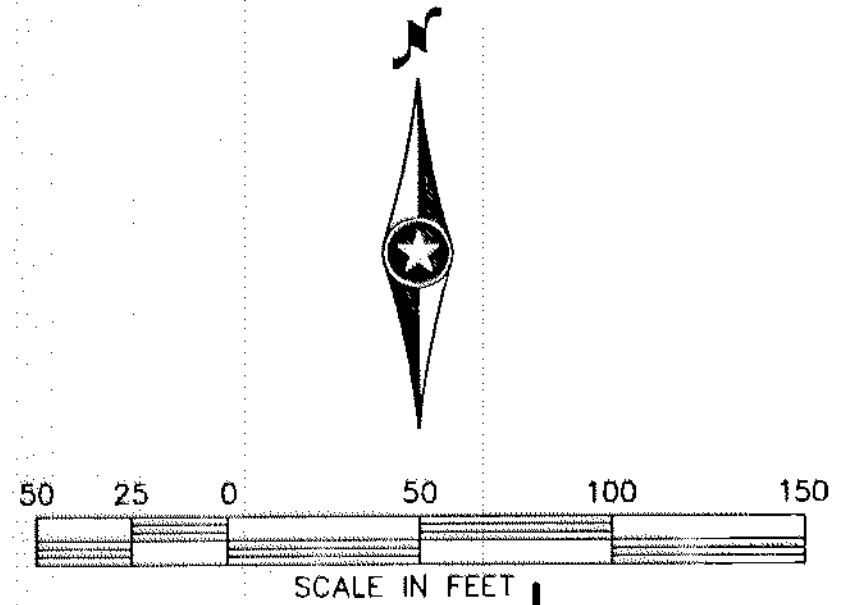


<p>BRW INC. 700 THIRD STREET SOUTH, MINNEAPOLIS, MN 55415</p>	<p>PLANNING TRANSPORTATION ENGINEERING URBAN DESIGN</p>	<p>ORIGINAL DATE 5/06/92</p> <p>REVISIONS</p>	<p>COUNTY ROAD J C.S.A.H. 32 ANOKA/RAMSEY COUNTY</p> <p>PLAN AND PROFILE STA. 194+00 TO STA. 207+00</p>
	<p>DESIGN BY: SPJ</p> <p>DRAWN BY: EML</p> <p>CHECKED BY:</p>	<p>SURVEY BOOK 8927</p>	
	<p>S.A.P. NO. 02-632-08 62-601-07</p>	<p>SHEET 24 OF 76</p>	

ANOKA COUNTY

NOTE:

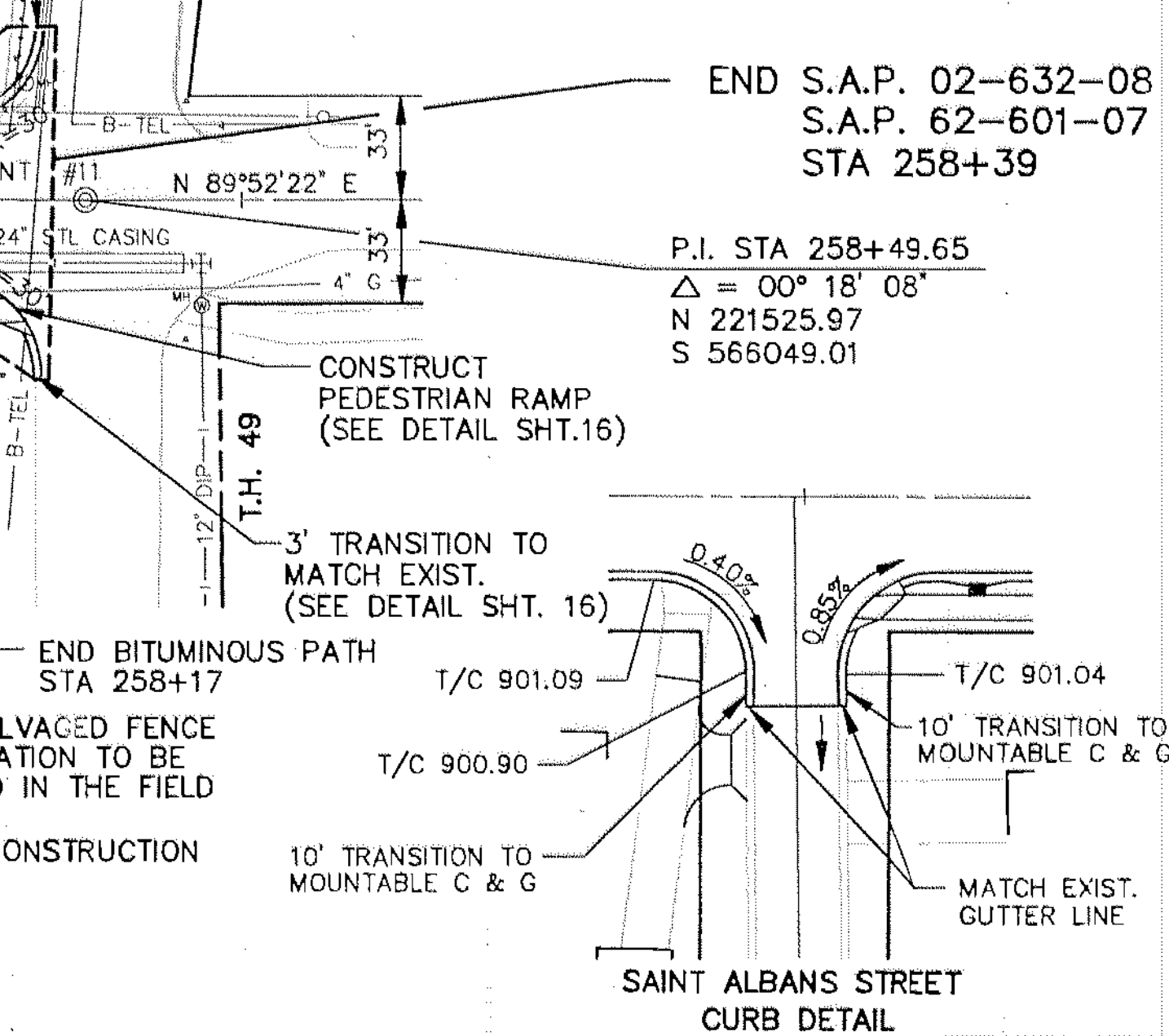
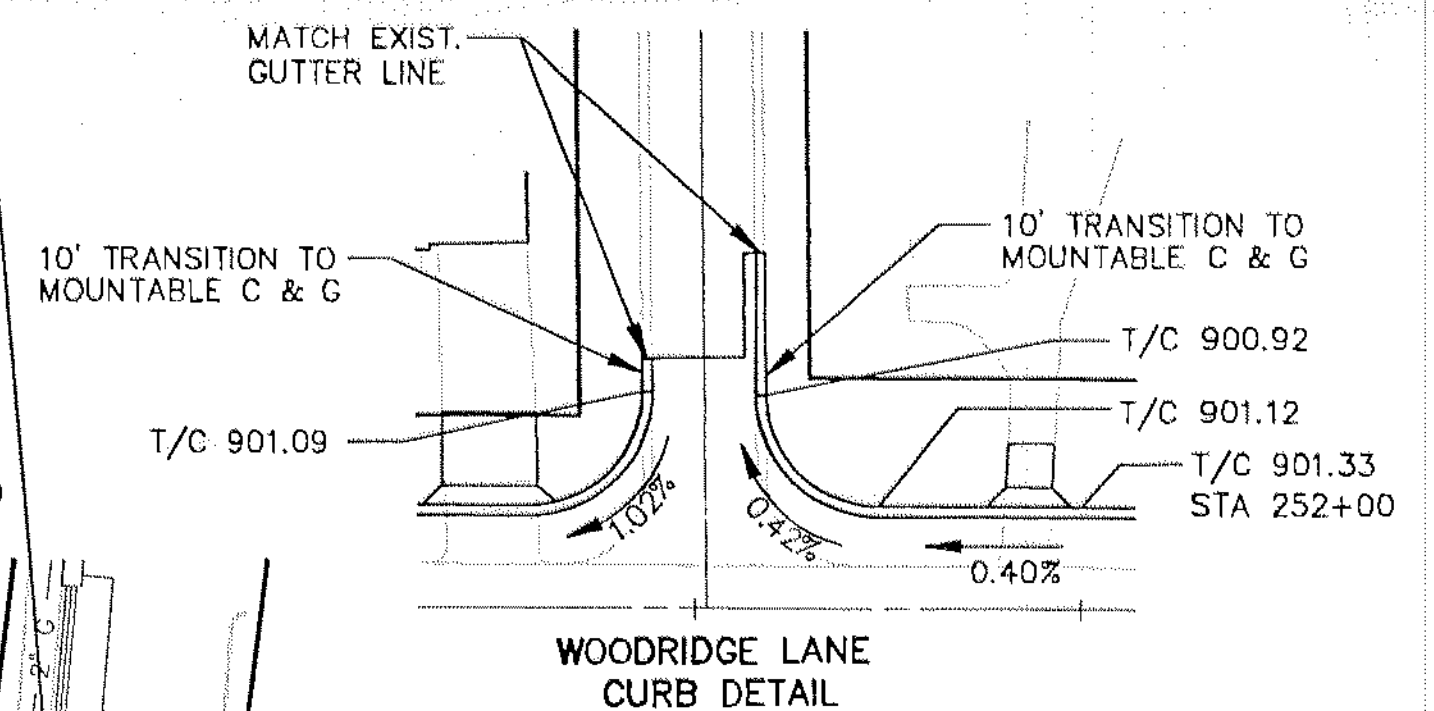
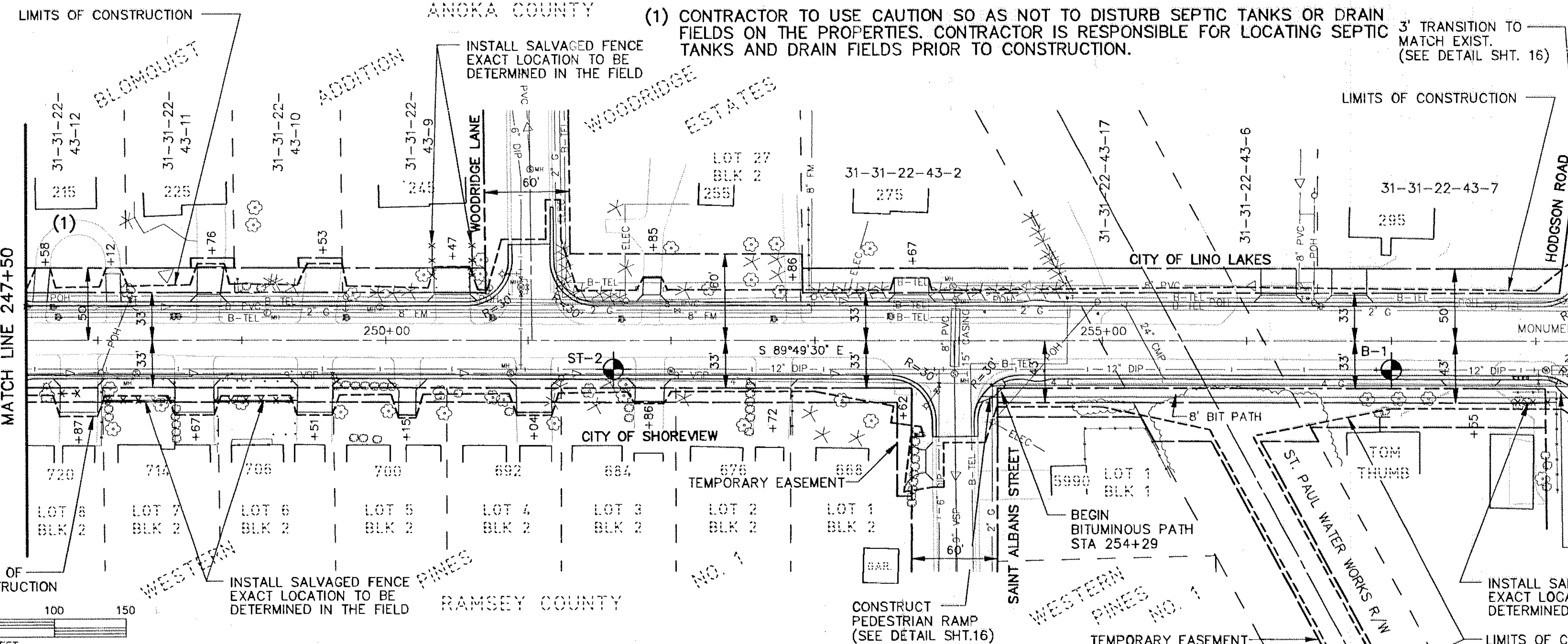
(1) CONTRACTOR TO USE CAUTION SO AS NOT TO DISTURB SEPTIC TANKS OR DRAIN FIELDS ON THE PROPERTIES. CONTRACTOR IS RESPONSIBLE FOR LOCATING SEPTIC TANKS AND DRAIN FIELDS PRIOR TO CONSTRUCTION.



 BRW INC. 700 THIRD STREET SOUTH, MINNEAPOLIS, MN 55415	PLANNING TRANSPORTATION ENGINEERING URBAN DESIGN	ORIGINAL DATE 5/08/92 REVISIONS	COUNTY ROAD J C.S.A.H. 32 ANOKA/RAMSEY COUNTY PLAN AND PROFILE STA. 234+00 TO STA. 247+50
	DESIGN BY: SPJ DRAWN BY: PWJ CH'KED BY:	SURVEY BOOK 8927	
SHEET 27 OF 76		DESIGN FILE No. 1313A	

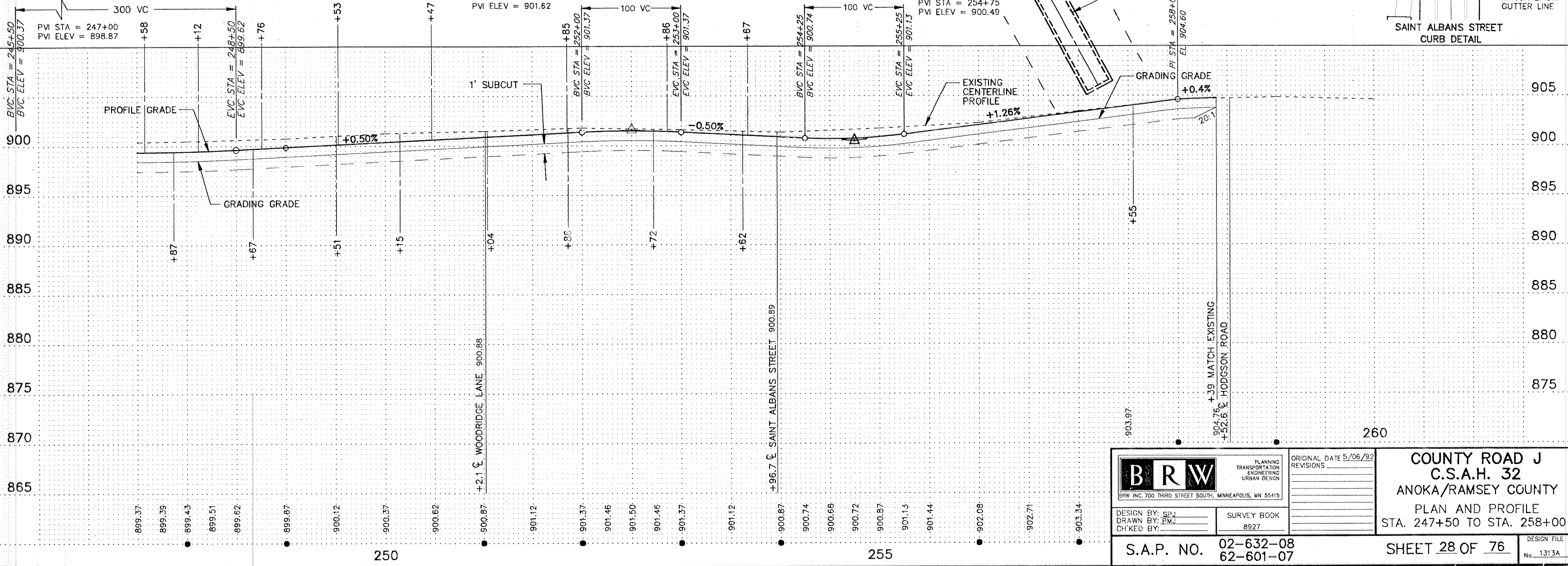
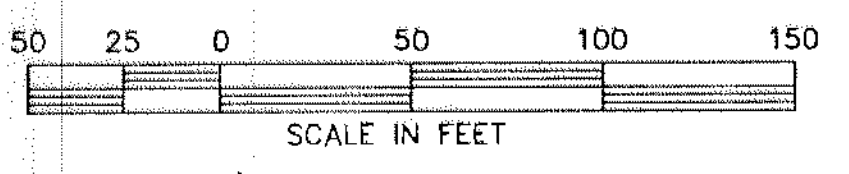
NOTE:

(1) CONTRACTOR TO USE CAUTION SO AS NOT TO DISTURB SEPTIC TANKS OR DRAIN FIELDS ON THE PROPERTIES. CONTRACTOR IS RESPONSIBLE FOR LOCATING SEPTIC TANKS AND DRAIN FIELDS PRIOR TO CONSTRUCTION.



END S.A.P. 02-632-08
 S.A.P. 62-601-07
 STA 258+39

P.I. STA 258+49.65
 $\Delta = 00^\circ 18' 08''$
 N 221525.97
 S 566049.01



<p>BRW INC. 700 THIRD STREET SOUTH, MINNEAPOLIS, MN 55415</p>	PLANNING TRANSPORTATION ENGINEERING URBAN DESIGN	ORIGINAL DATE 5/06/92 REVISIONS	COUNTY ROAD J C.S.A.H. 32 ANOKA/RAMSEY COUNTY PLAN AND PROFILE STA. 247+50 TO STA. 258+00
	DESIGN BY: SPJ DRAWN BY: PMJ CHECKED BY:	SURVEY BOOK 8927	
SHEET 28 OF 76			DESIGN FILE No. 1313A

DRAINAGE TABULATION

N

LINE NO.	STRUC. NO.	STATION	LOCATION	NOTES	TOP OF CASTING ELEVATION	OUTLET EL.	PAY HEIGHT LIN FT	MH OR CB	2506.501 DESIGN TYPE (8)	2506.516 F&I CAST ASSEMBLY	2503.541			2501.561				CLASS OF PIPE (6)	2501.515 APRON EACH	STRUCT. NO.	GRADE IN %	INLET ELEVATION	2511.501 RIPRAP CU YD	GRAN.(10) FILTER CU YD							
											15" RCP LIN FT	18" RCP LIN FT	21" RCP LIN FT	15" RCP LIN FT	18" RCP LIN FT	24" RCP LIN FT	36" RCP LIN FT														
1	100	186+35	59'RT	(1)(4)(7)(11)	883.10	880.17		MH								107	III		101	0.20	879.95	5.8	2.9								
2	101	186+35	54'LT			879.95			APRON									1-24"	103	0.20	882.62										
3	102	193+50	25.67'RT	(1)(2)(11)	886.73	882.73	4.37	CB	SP1	B-20	51								104	0.33	881.48										
4	103	193+50	25.67'LT	(1)(2)(11)	886.73	882.62	4.48	CB	SP1	B-20	350								106	0.30	881.40										
5	104	190+00	27.5'LT	(3)(11)	885.69	881.48	4.41	CB	LP4	A-11 (9)		22							104	0.20	881.48										
6	105	190+00	27.5'RT	(3)(11)	885.69	881.60	4.29	CB	LP4	A-11 (9)	59																				
7	106	189+80	45'LT			881.40			APRON									1-18"				3.6	1.8								
8	107	195+75	62'RT	(4)		881.33			APRON							104	III	1-24"	108	0.20	881.10	5.8	2.9								
9	108	195+75	51'LT			881.10			APRON									1-24"				5.8	2.9								
10	109	205+10	25.67'RT	(1)(2)(11)	887.53	883.53	4.37	CB	SP1	B-20	51								110	0.20	883.43										
11	110	205+10	25.67'LT	(1)(2)(11)	887.53	883.43	4.47	CB	SP1	B-20	90								111	0.50	882.98										
12	111	204+15	25.67'LT	(1)(2)(11)	887.06	882.98	4.45	CB	SP1	B-20	200								113	0.50	881.98	2.9	1.4								
13	112	202+15	58'RT	(5)		884.30			APRON		78							1-15"	118	0.20	881.75										
14	113	202+15	25.67'LT	(1)(2)(11)	886.06	881.98	4.45	CB	SP2	B-20		115							118	0.20	881.75										
15	114	201+00	27.5'RT	(3)(11)	886.19	882.10	4.29	CB	LP4	A-11 (9)	59								116	0.20	882.15										
16	115	200+08	56.17'RT	(1)(2)(11)	885.59	882.24	3.72	CB	SP1	B-21	44								117	0.20	882.05										
17	116	199+75	25.67'RT	(1)(2)(11)	886.11	882.15	4.33	CB	SP2	B-20	51								118	0.24	881.75										
18	117	199+75	25.67'LT	(1)(2)(11)	886.11	882.05	4.43	CB	SP2	B-20	125								119	0.50	881.55										
19	118	201+00	27.5'LT	(3)(5)(11)	886.19	881.75	4.64	CB	LP4	A-11 (9)		27					III					4.6	2.3								
20	119	200+83	56'LT			881.55			APRON									1-21"													
21	120	216+25	25.67'RT	(1)(2)(11)	896.93	892.00	5.30	CB	SP1	B-20	51								121	0.20	891.90										
22	121	216+25	25.67'LT	(1)(2)(11)	896.93	891.90	5.40	CB	SP2	B-20	250								125	1.64	887.80										
23	122	215+61.8	78'LT	(1)(2)(11)	894.57	892.10	2.84	CB	SP1	B-20	30								123	0.20	892.04										
24	123	215+91.8	78'LT	(1)(2)(11)	894.59	892.04	2.92	CB	SP1	B-20	63								121	0.20	891.90										
25	124	213+75	25.67'RT	(1)(2)(11)	891.91	887.90	4.38	CB	SP1	B-20	51								125	0.20	887.80										
26	125	213+75	25.67'LT	(1)(2)(11)	891.91	887.80	4.48	CB	SP2	B-20	250								127	0.56	886.40										
27	126	211+25	25.67'RT	(1)(2)(11)	890.61	886.50	4.48	CB	SP1	B-20	51								127	0.20	886.40										
28	127	211+25	25.67'LT	(1)(2)(11)	890.61	886.40	4.58	CB	SP2	B-20		325							130	0.50	884.78										
29	128	208+00	63.67'RT	(5)		882.93			APRON									1-15"	129	0.37	882.79	2.9	1.4								
30	129	208+00	25.67'RT	(1)(2)(11)	888.98	882.79	6.56	CB	SP1	B-20		51							130	0.37	882.60										
31	130	208+00	25.67'LT	(1)(2)(5)(11)	888.98	882.60	6.75	CB	SP2	B-20						45			131	0.50	882.35	3.6	1.8								
32	131	207+65	60'LT			882.35			APRON									1-18"													
33	132	223+80	25.67'RT	(1)(2)(11)	902.80	900.00	3.17	CB	SP1	B-20	51								133	0.20	899.89										
34	133	223+80	25.67'LT	(1)(2)(11)	902.80	899.89	3.28	CB	SP1	B-20	220								133A	2.22	885.00										
35	133A	226+00	25.67'LT	(1)(2)(11)	898.49	895.00	3.86	CB	SP1	B-20	264								137	2.22	889.15										
36	134	228+34.6	97'RT	(1)(11)	890.04	887.00	3.41	CB	SP1	B-21	30								135	0.20	886.94										
37	135	228+64.6	97'RT	(1)(11)	889.87	886.94	3.30	CB	SP1	B-21	124								137	0.20	886.69										
38	136	228+00	25.67'RT	(1)(2)(11)	894.05	891.00	3.42	CB	SP1	B-20	82								137	2.26	889.15										
39	137	228+64	26.92'LT	(1)(2)(11)	892.74	886.69	6.42	CB	SP2-72	B-20		353							139	0.30	885.63										
40	138	232+17	27.5'RT	(3)(11)	889.99	885.75	4.44	CB	LP4	A-11 (9)	59								139	0.20	885.63										
41	139	232+17	27.5'LT	(3)(11)	889.99	885.00	5.19	CB	LP4	A-11 (9)			43				III		154	0.50	884.78										
42	140	247+45	27.5'RT	(3)(11)	899.36	895.39	4.17	CB	LP4	A-11 (9)	44								142	0.20	895.30										
43	141	247+45	27.5'LT	(3)(11)	899.36	895.32	4.24	CB	LP4	A-11 (9)	11								142	0.20	895.30										
44	142	247+45	18'LT	(1)(12)	899.03	895.30	3.85	MH	48-4020	A-7		265							144	0.31	894.48										
45	143	244+80	25.67'RT	(1)(2)(11)	900.48	896.31	4.54	CB	SP1	B-20	44								144	0.20	896.21										
46	144	244+80	18'LT	(1)(12)	900.70	894.48	6.34	MH	48-4020	A-7		400							146	0.36	893.04										
47	145	240+80	25.67'RT	(1)(2)(11)	900.20	896.00	4.57	CB	SP1	B-20	44								146	0.20	895.91										
48	146	240+80	18'LT	(1)(12)	900.42	893.04	7.50	MH	48-4020	A-7		195							149	0.38	892.30										
49	147	238+85	25.67'RT	(1)(2)(11)	897.31	893.07	4.61	CB	SP1	B-20	44								149	0.20	892.98										
50	148	238+85	25.67'LT	(1)(2)(11)	897.31	893.00	4.68	CB	SP1	B-20	8								149	0.20	892.98										
51	149	238+85	18'LT	(1)(12)	897.52	889.25	8.39	MH	48-4020	A-7		385							152	0.52	887.25										
52	150	235+00	25.67'RT	(1)(2)(11)	891.53	887.34	4.56	CB	SP1	B-20	44								152	0.20	887.25										
53	151	235+00	25.67'LT	(1)(2)(11)	891.53	887.27	4.63	CB	SP1	B-20	8								152	0.20	887.25										
54	152	235+00	18'LT	(1)(12)	891.75	886.25	5.62	MH	48-4020	A-7			240				III		154	0.35	885.41										
55	153	232+85	58'RT	(5)		883.07			APRON									1-36"	154	0.30	882.90	11.0	5.5								
56	154	232+60	18'LT	(1)(5)(13)	889.68	882.90	6.90	MH	84-4020	A-7							III		155	0.30	882.80										
57	155	232+50	48'LT			882.80			APRON									1-36"				11.0	5.5								
58	156	254+55	27.5'LT	(3)(11)	900.66	896.74	4.12	CB	LP4	A-11 (9)	59								157	0.15	896.62										
59	157	254+55	27.5'RT	(3)(5)(11)	900.66	896.62	4.24	CB	LP4	A-11 (9)	120								158	0.40	896.12										
60	158	255+57	52'RT			896.12			APRON													2.9	1.4								
											TOTALS:	3160	2060	310	83	45	211	98													

CASTING ASSEMBLY

O

ASSEMBLY TYPE	NUMBER REQUIRED	FRAME, GRATE, & CURB BOX CASTING	RING CAST.	COVER CAST.	PLATE NO.
A-7	6		700-7	716	4101,4110
A-11	10	CASTINGS ARE INCIDENTAL	790-2	716	4108,4110
B-20	29	SEE SHEET NO. 15			
B-21	3	SEE SHEET NO. 15			

- (1) OFFSET LOCATION DESCRIBES THE CENTER OF THE STRUCTURE BASE FROM THE CENTER LINE OF COUNTY ROAD J
- (2) SEE SHEET NO. 15 FOR SP1 & SP2 STRUCTURE DETAILS
- (3) SEE SHEET NO. 15 FOR DESCRIPTION OF OFFSET LOCATION
- (4) TIE ALL JOINTS
- (5) TIE LAST THREE JOINTS BEFORE APRON
- (6) ALL PIPE IS CLASS II UNLESS OTHERWISE NOTED
- (7) INPLACE CIRCULAR WEIR MANHOLE TO BE RELOCATED
- (8) ALL SP2 STRUCTURES ARE 48" IN DIA. UNLESS OTHERWISE NOTED
- (9) CASTINGS ARE CONSIDERED INCIDENTAL.
- (10) NECESSARY FILTER MATERIAL IS INCIDENTAL.

- (11) STEPS TO BE LOCATED ON THE STREET SIDE OF THE DRAINAGE STRUCTURE
- (12) STEPS TO BE LOCATED ON THE DOWNSTREAM SIDE OF THE DRAINAGE STRUCTURE
- (13) STEPS TO BE LOCATED ON THE NE SIDE OF THE DRAINAGE STRUCTURE

REVISIONS:
8/14/92

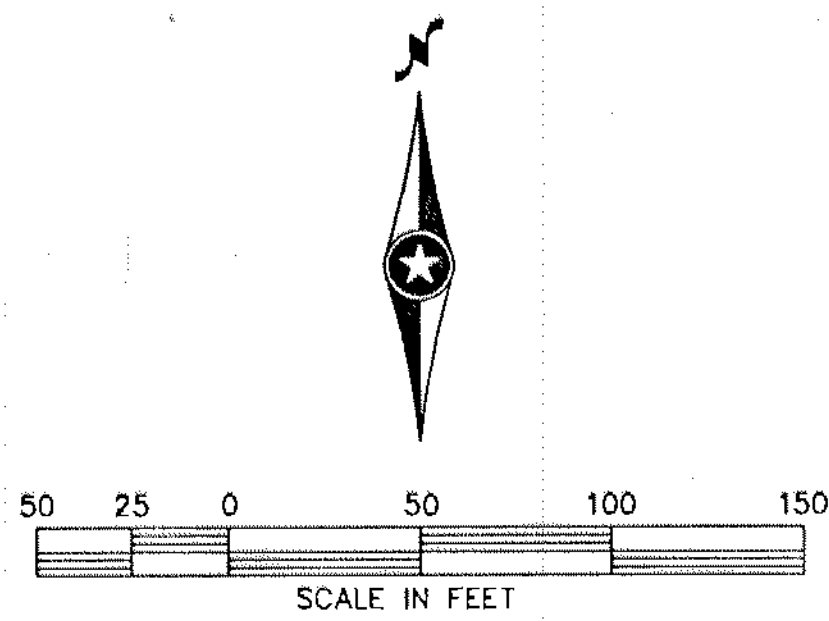
COUNTY ROAD J
C.S.A.H. 32
RAMSEY/ANOKA COUNTY
DRAINAGE TABULATION

S.A.P. NO. 02-632-08
62-601-07

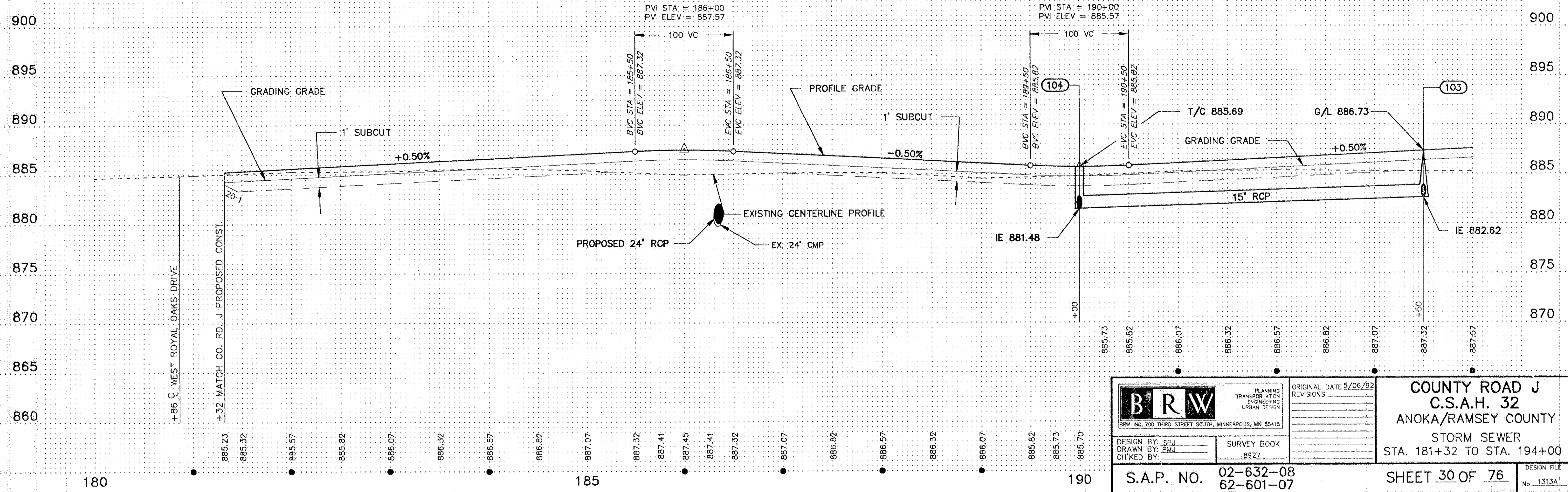
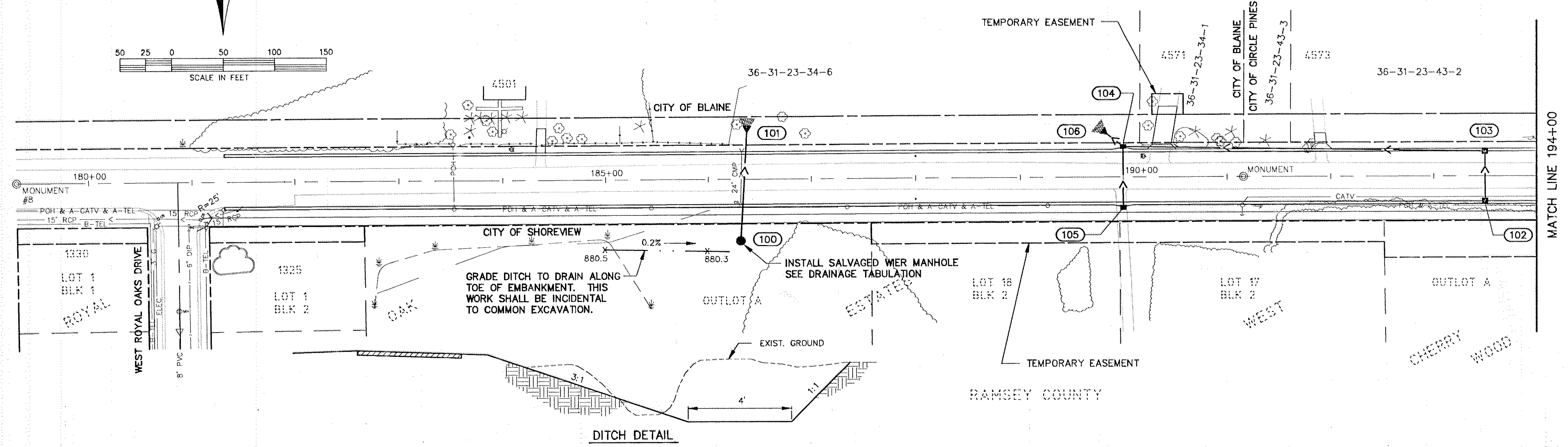
SHEET 29 OF 76

DESIGN FILE
No. 1313A

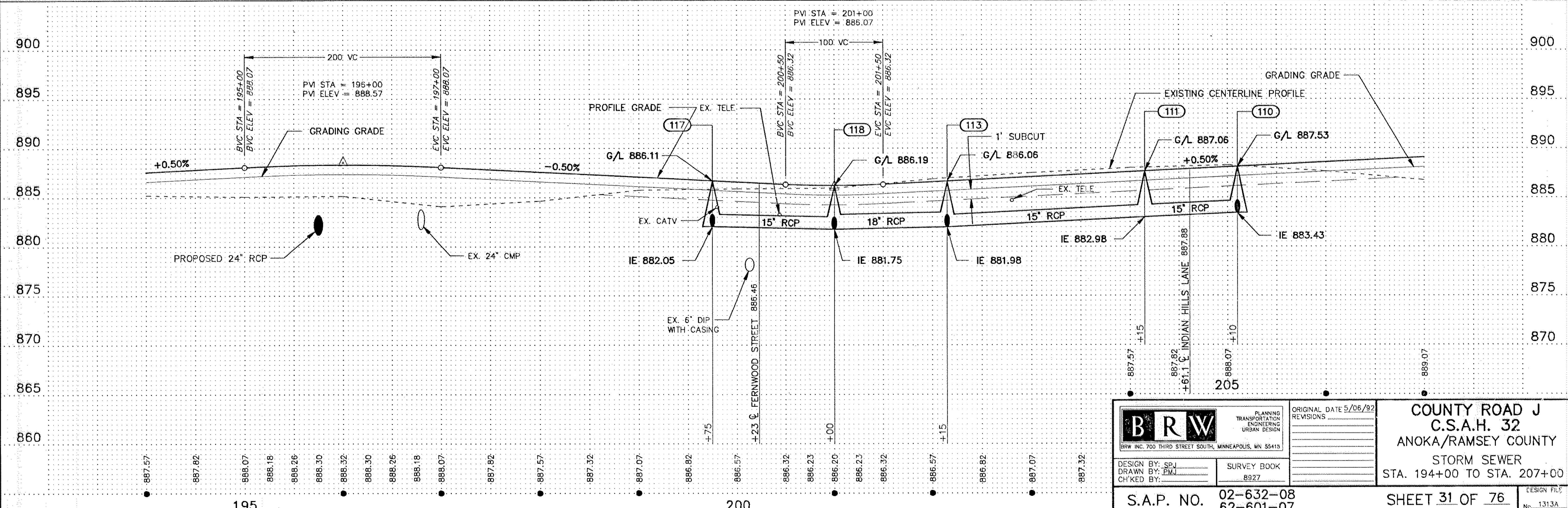
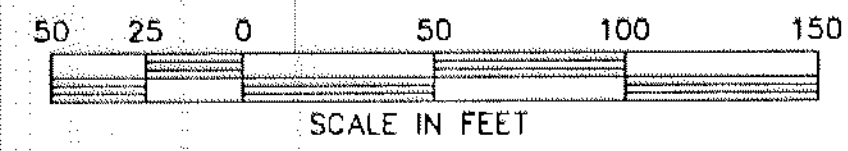
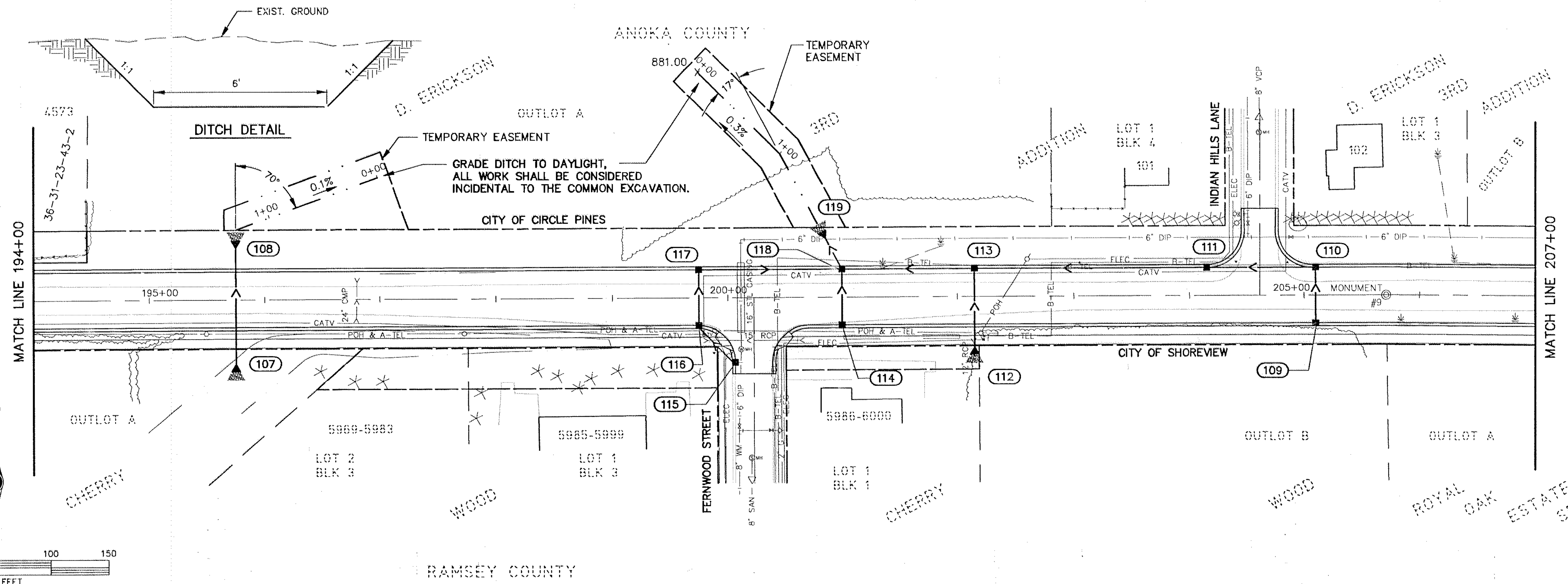
DRAINTAB



ANOKA COUNTY



<p>BRW INC. 700 THIRD STREET SOUTH, MINNEAPOLIS, MN 55415</p>	<p>PLANNING TRANSPORTATION ENGINEERING URBAN DESIGN</p>	<p>ORIGINAL DATE 5/06/92 REVISIONS</p>	<p>COUNTY ROAD J C.S.A.H. 32 ANOKA/RAMSEY COUNTY STORM SEWER STA. 181+32 TO STA. 194+00</p>
	<p>DESIGN BY: SPJ DRAWN BY: PMJ CHKD BY:</p>	<p>SURVEY BOOK 8927</p>	<p>S.A.P. NO. 02-632-08 62-601-07</p>



 BRW INC. 700 THIRD STREET SOUTH, MINNEAPOLIS, MN 55415	PLANNING TRANSPORTATION ENGINEERING URBAN DESIGN	ORIGINAL DATE 5/06/92 REVISIONS	COUNTY ROAD J C.S.A.H. 32 ANOKA/RAMSEY COUNTY STORM SEWER STA. 194+00 TO STA. 207+00
	DESIGN BY: SPJ DRAWN BY: PMJ CH'KED BY:	SURVEY BOOK 8927	
SHEET 31 OF 76		DESIGN FILE No. 1313A	

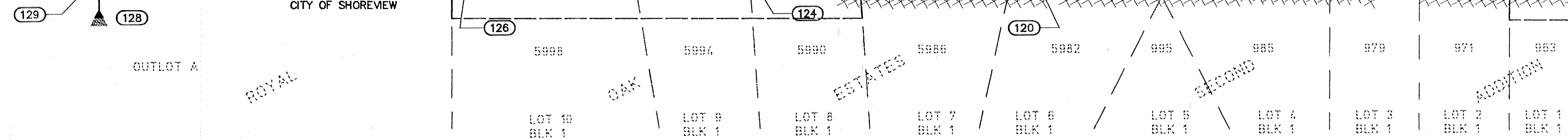
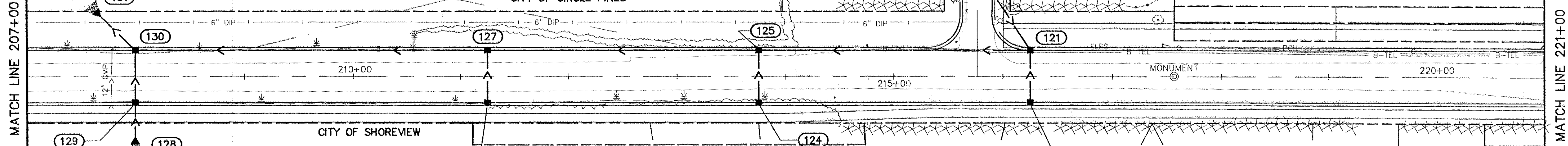
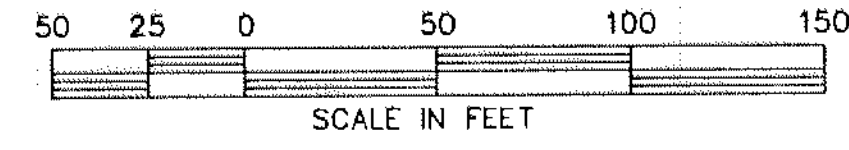
ANKA COUNTY

D. ERICKSON

LOT 24
BLK 2

ADDITION
LOT 31
BLK 1

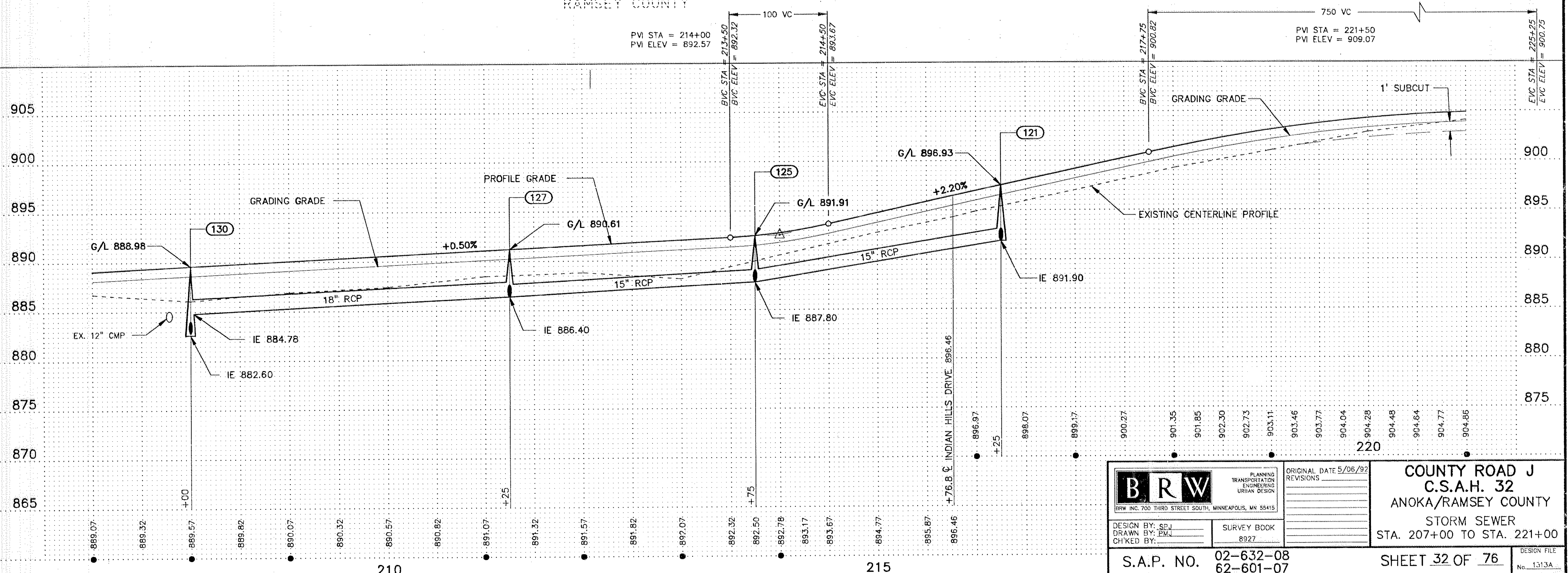
CITY OF CIRCLE PINES
CITY OF LINO LAKES



RAMSEY COUNTY

PVI STA = 214+00
PVI ELEV = 892.57

PVI STA = 221+50
PVI ELEV = 909.07



DESIGN BY: SPJ
DRAWN BY: EML
CHK'D BY:

SURVEY BOOK
8927

ORIGINAL DATE 5/06/92
REVISIONS

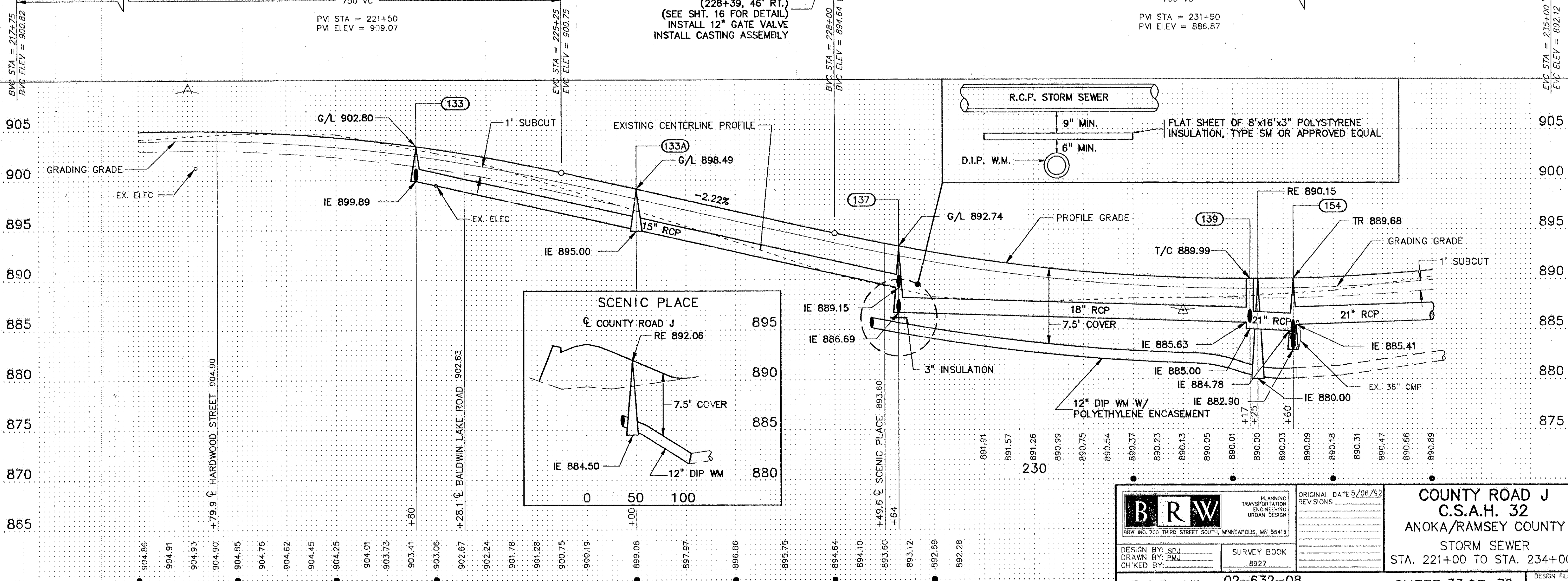
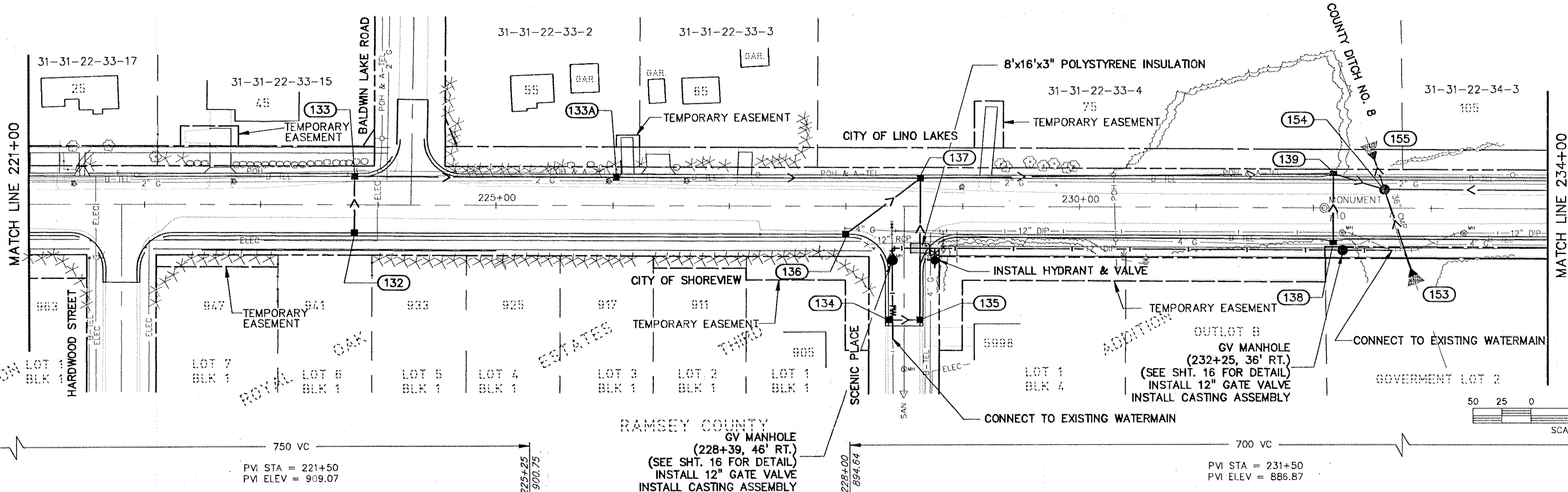
COUNTY ROAD J
C.S.A.H. 32
ANKA/RAMSEY COUNTY
STORM SEWER
STA. 207+00 TO STA. 221+00

S.A.P. NO. 02-632-08
62-601-07

SHEET 32 OF 76

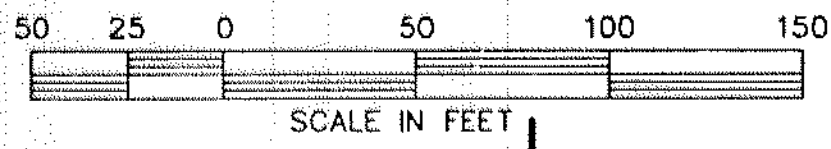
DESIGN FILE
No. 1513A

PLANPRO3



<p>BRW INC. 700 THIRD STREET SOUTH, MINNEAPOLIS, MN 55415</p>	<p>PLANNING TRANSPORTATION ENGINEERING URBAN DESIGN</p>	<p>ORIGINAL DATE 5/06/92</p>	<p>COUNTY ROAD J C.S.A.H. 32 ANOKA/RAMSEY COUNTY</p>
	<p>DESIGN BY: SPJ</p>	<p>SURVEY BOOK 8927</p>	<p>STORM SEWER STA. 221+00 TO STA. 234+00</p>
	<p>S.A.P. NO. 02-632-08 62-601-07</p>	<p>SHEET 33 OF 76</p>	<p>DESIGN FILE No. 1313A</p>

ANOKA COUNTY

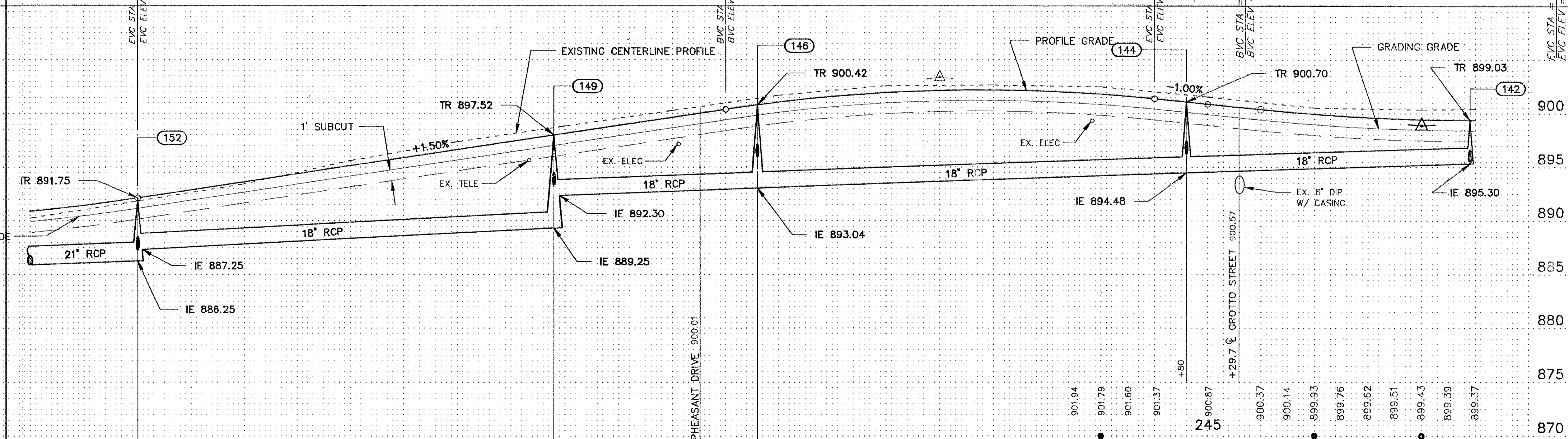
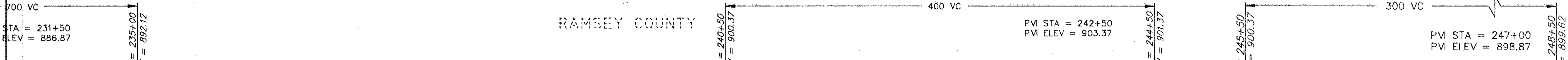
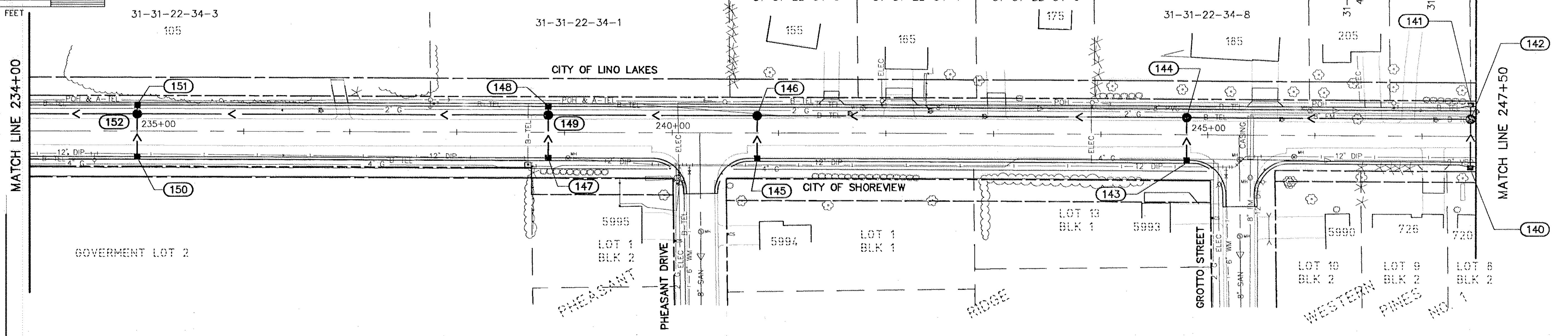


MATCH LINE 234+00

MATCH LINE 247+50

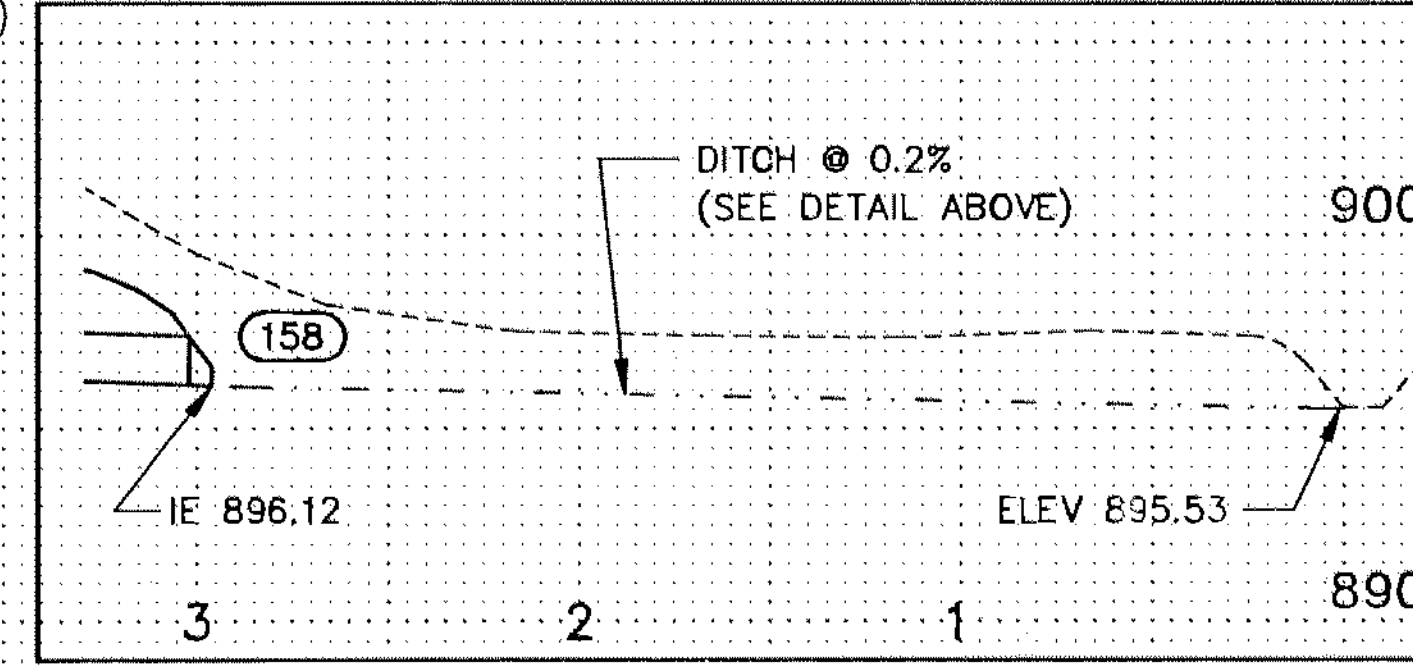
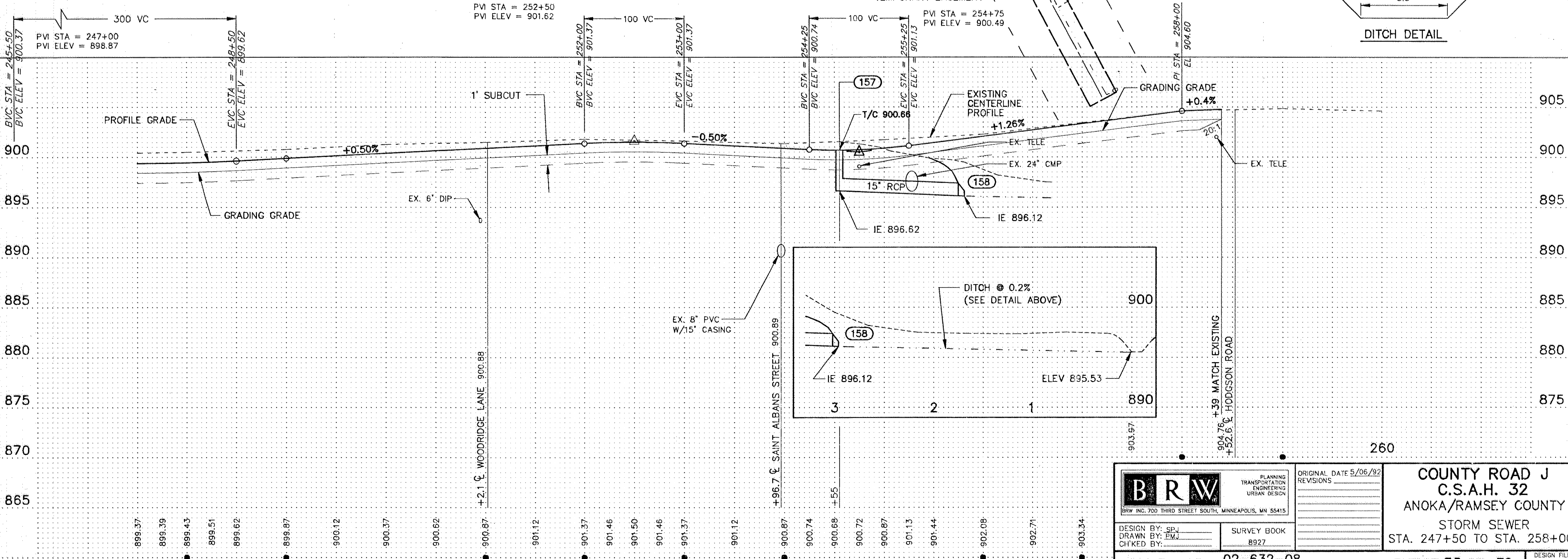
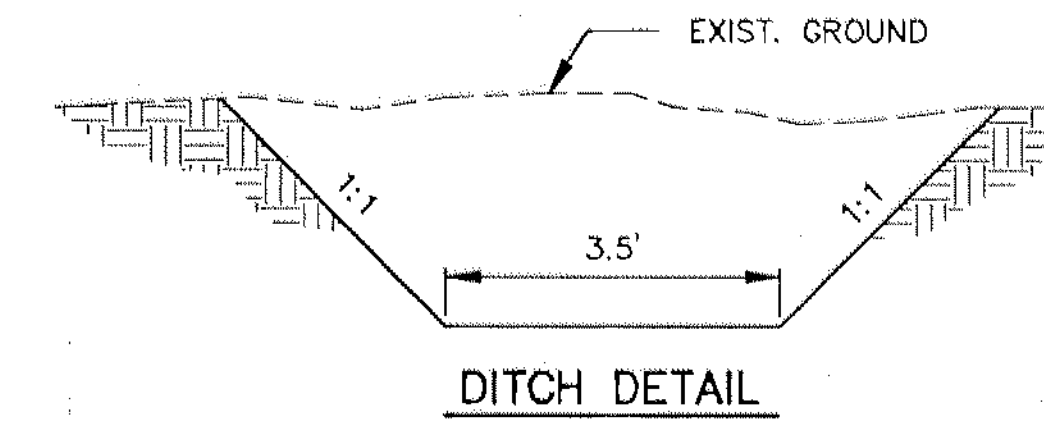
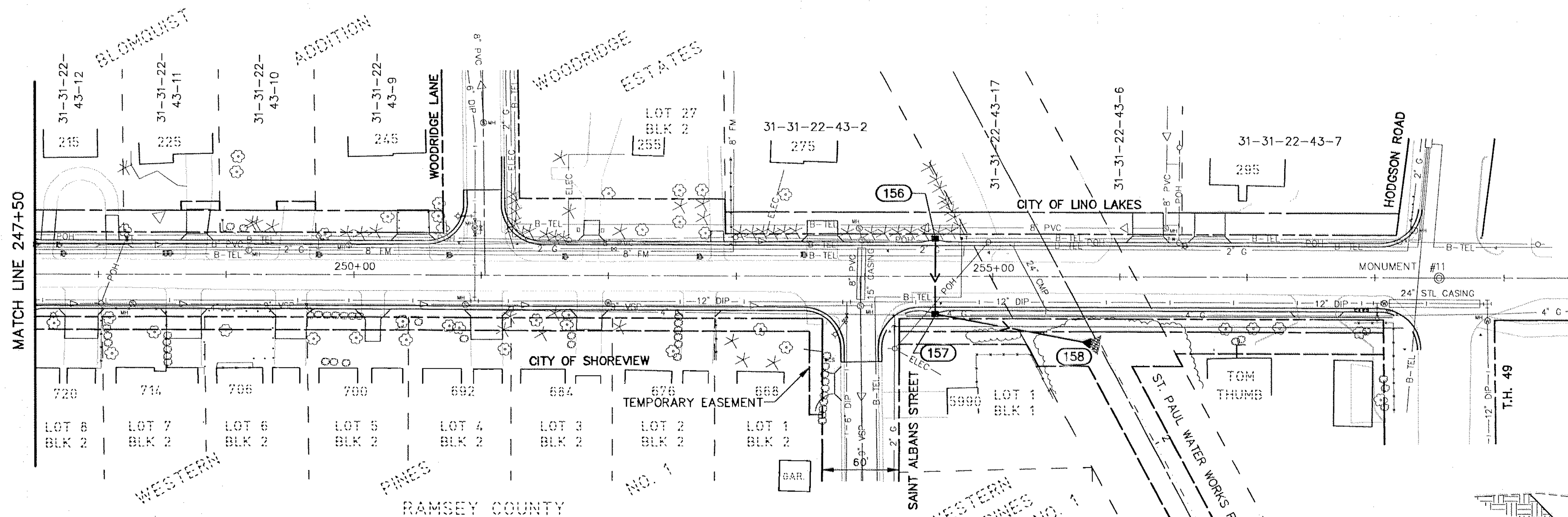
MATCH LINE 234+00

MATCH LINE 247+50

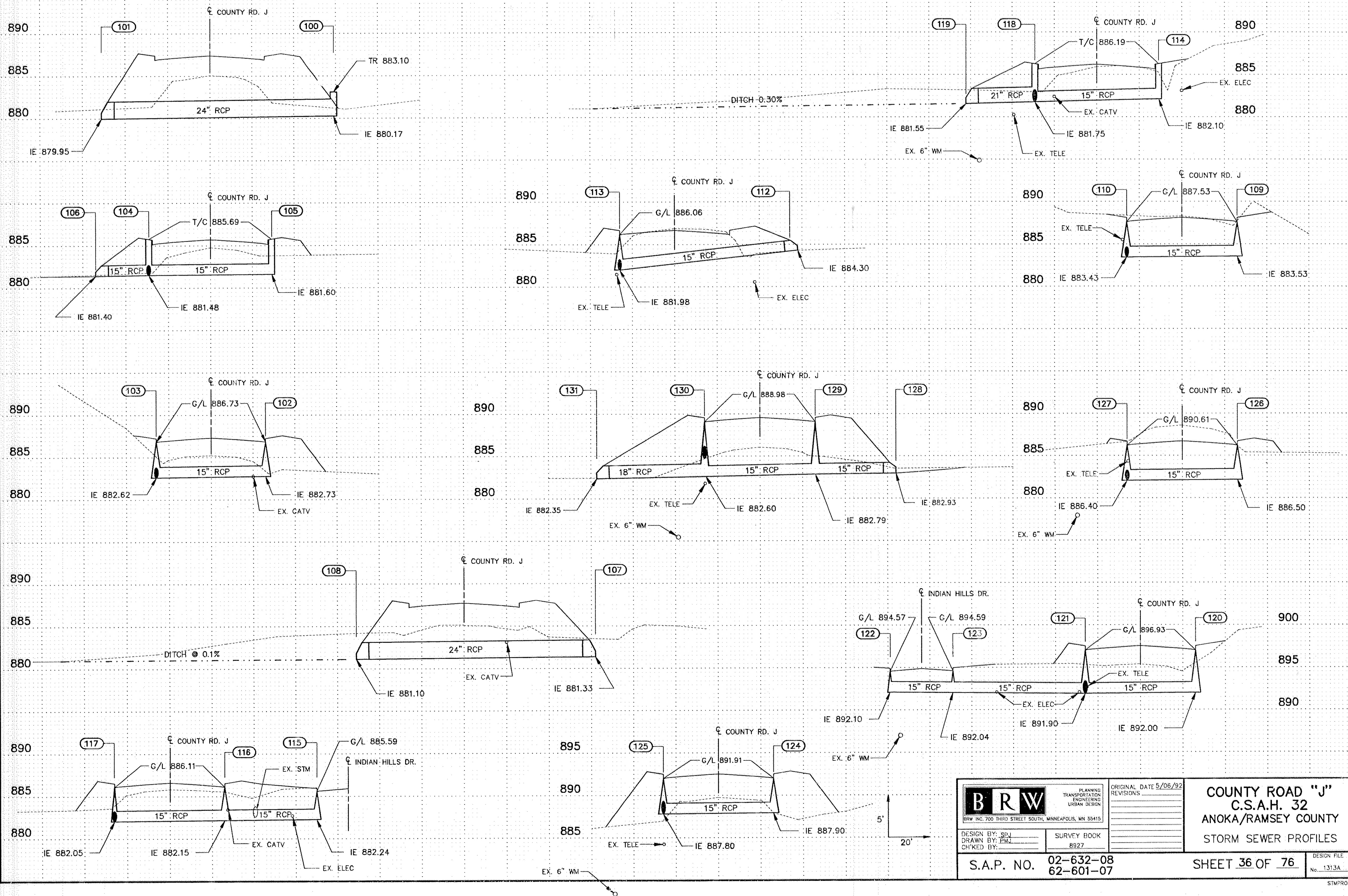


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235																											

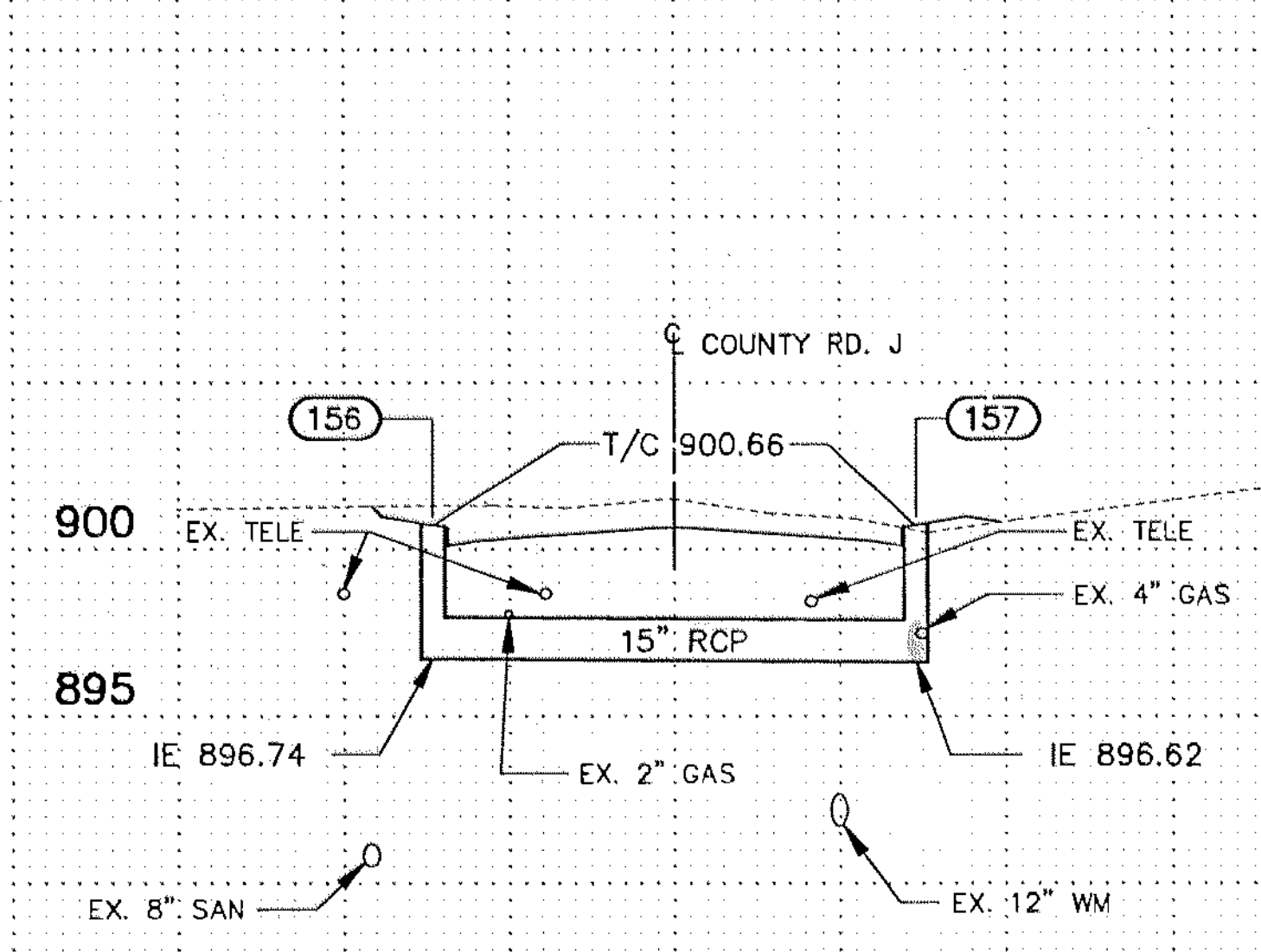
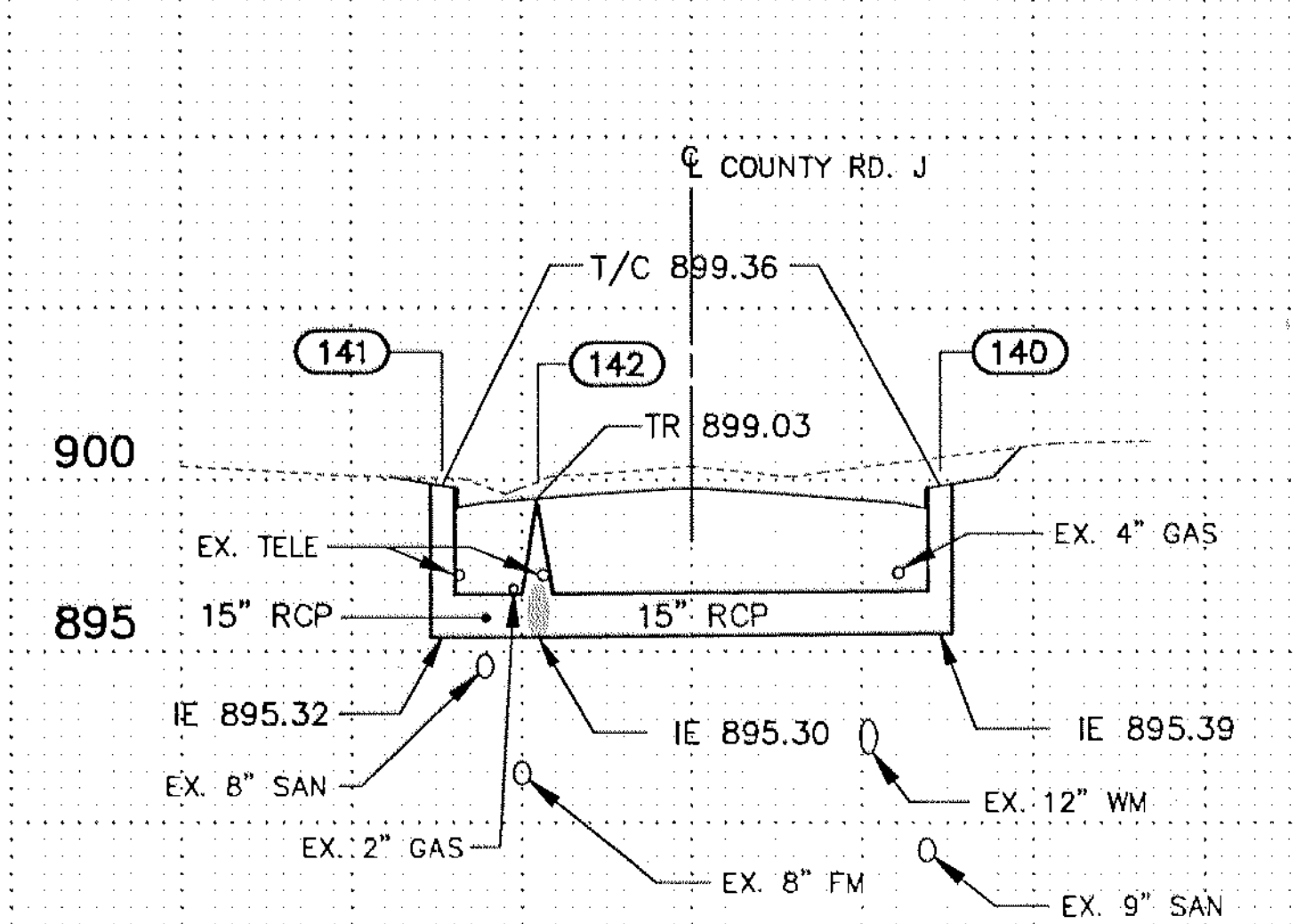
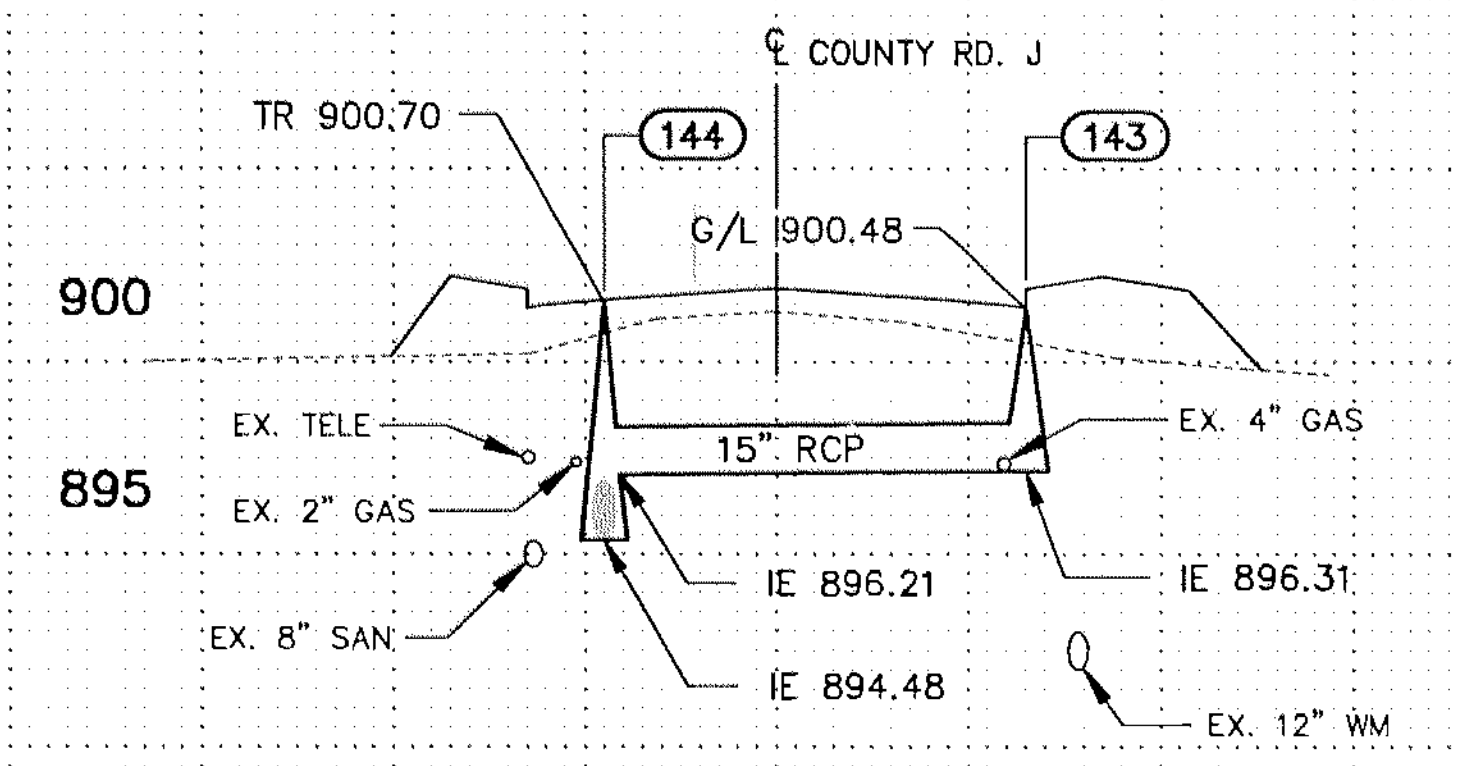
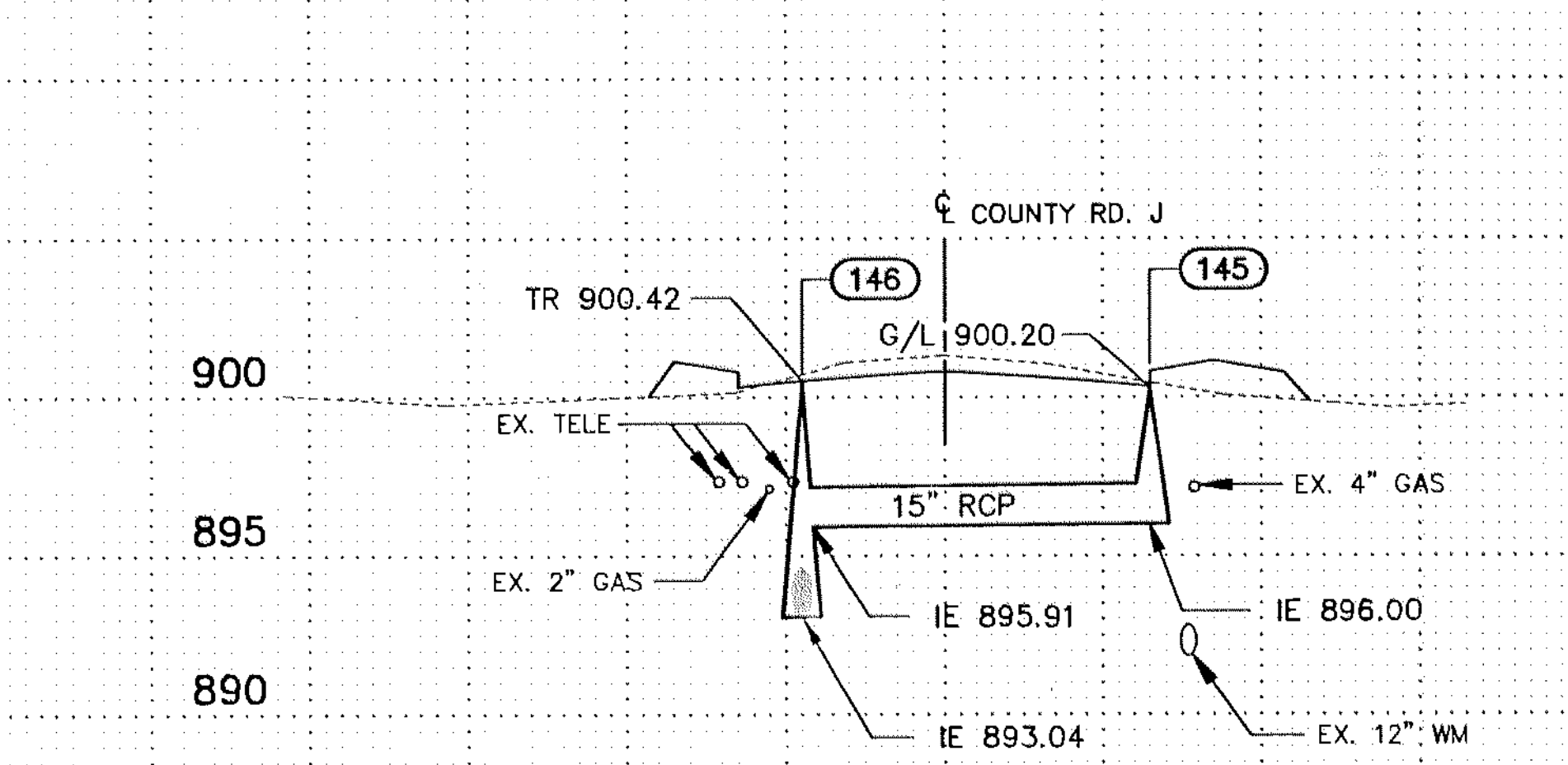
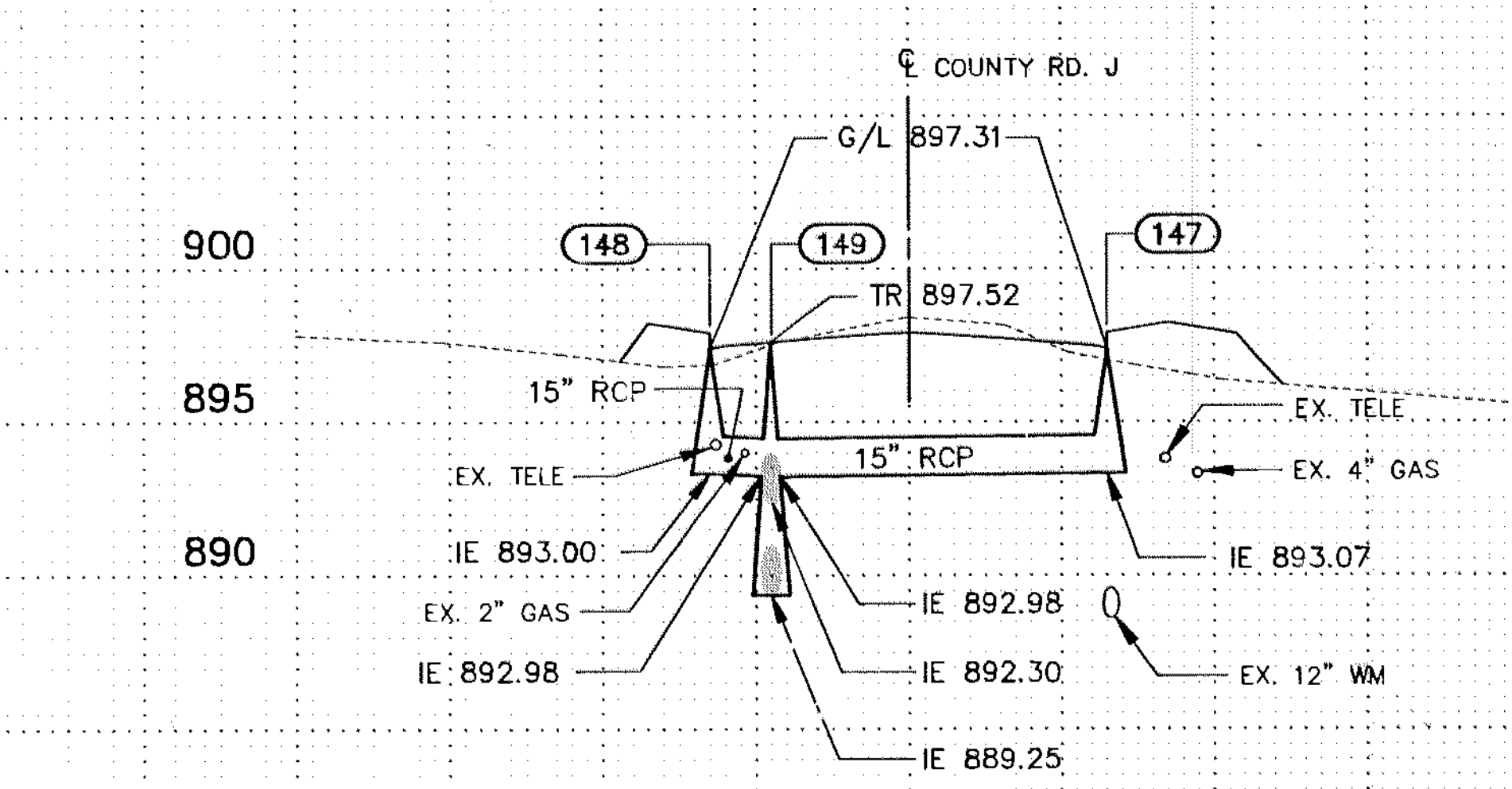
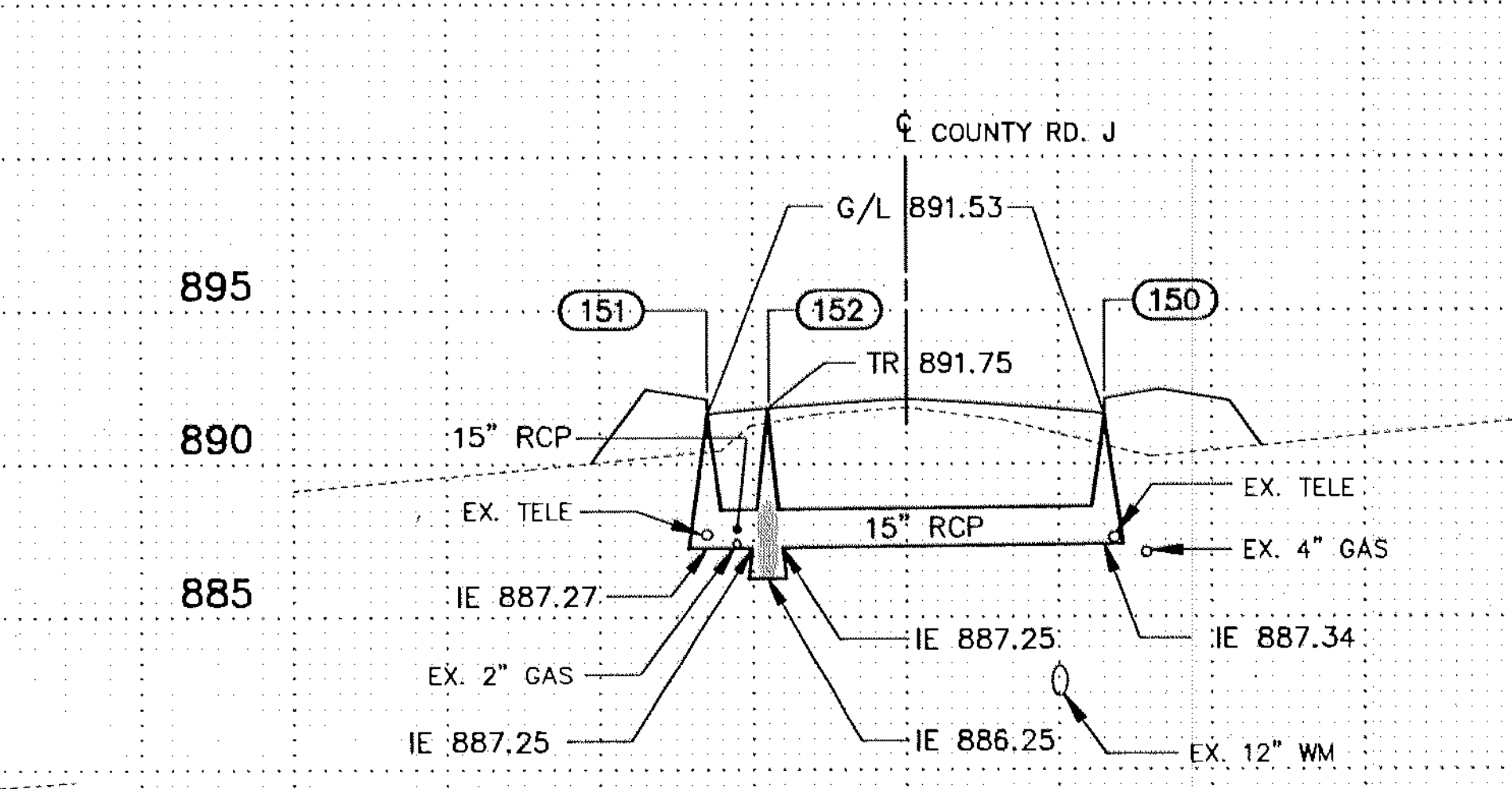
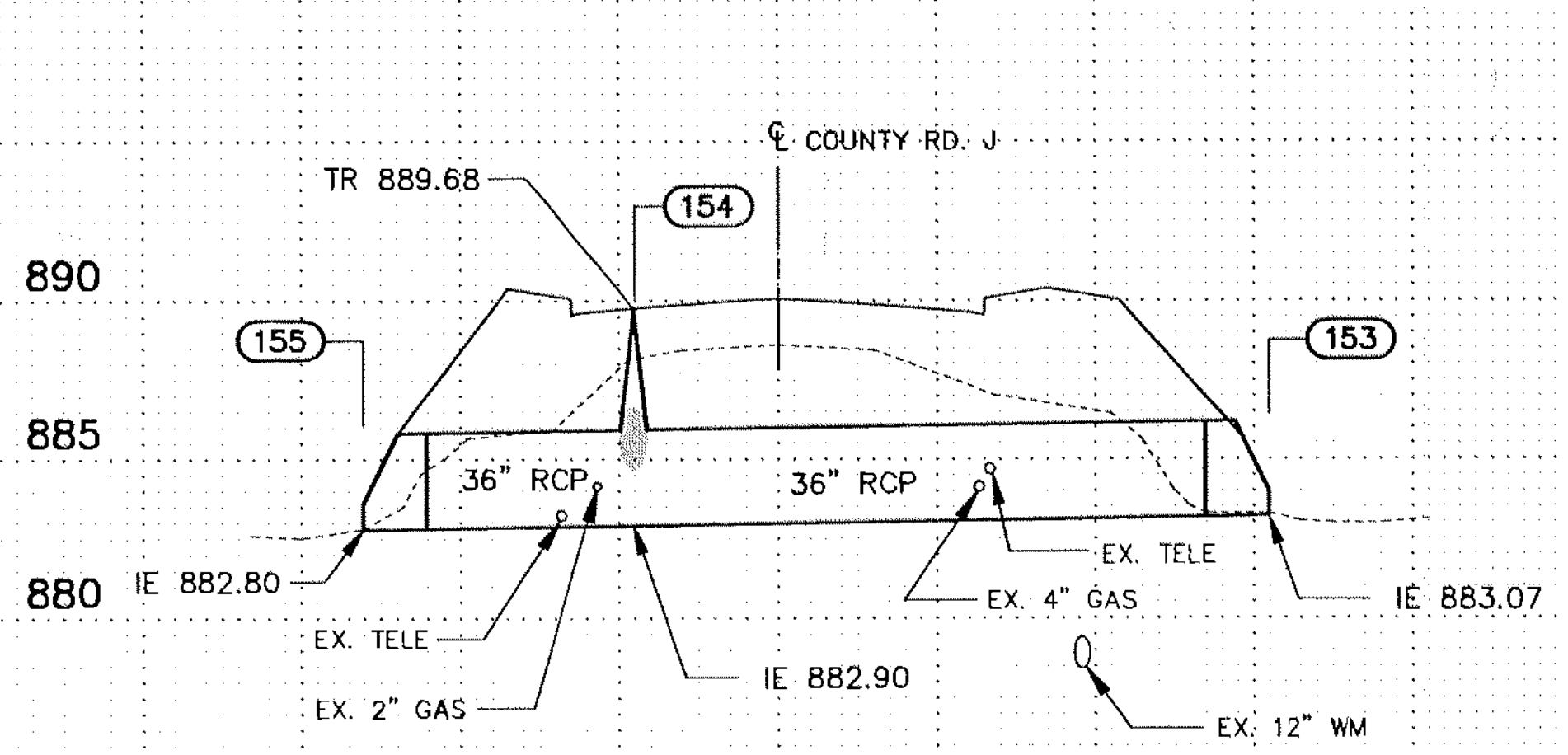
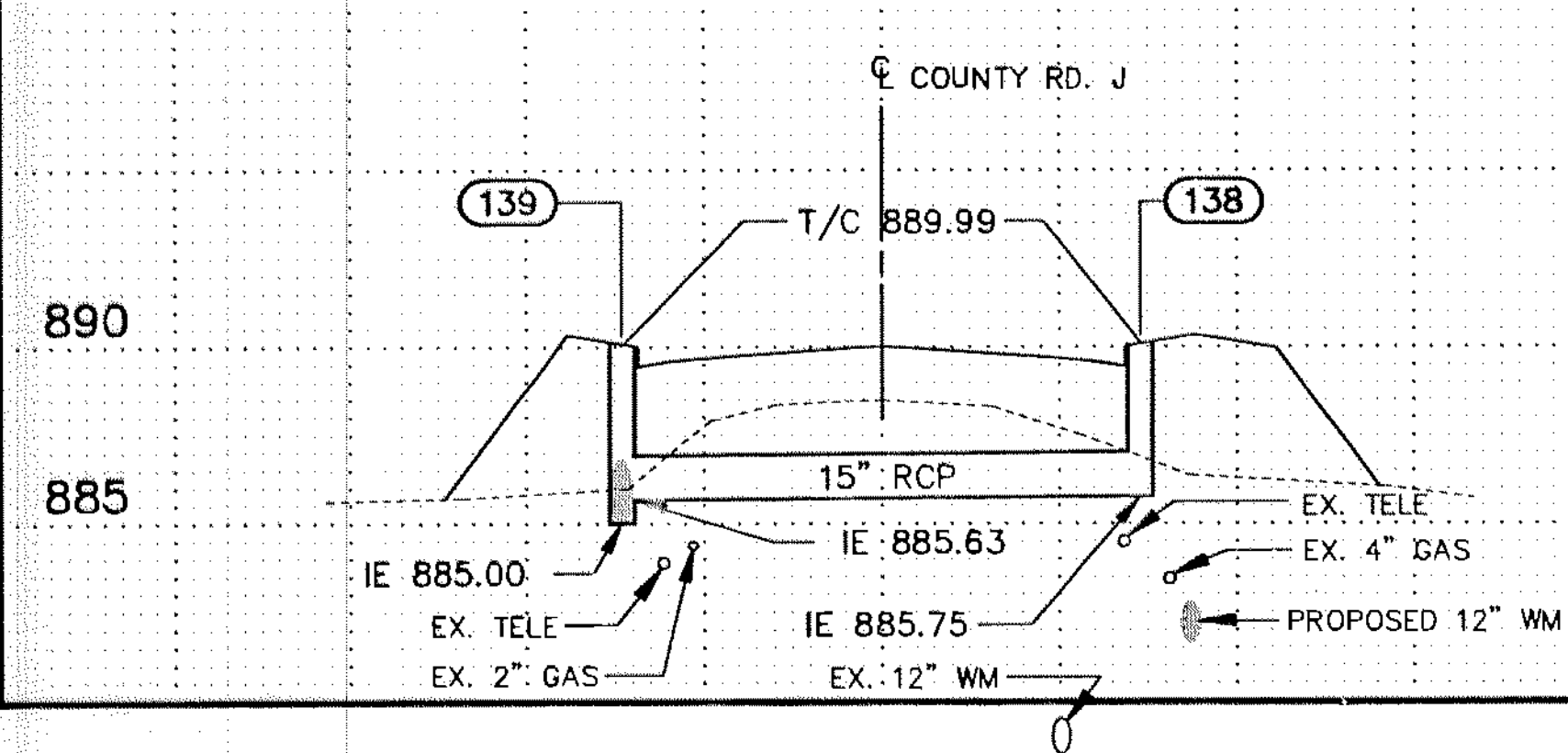
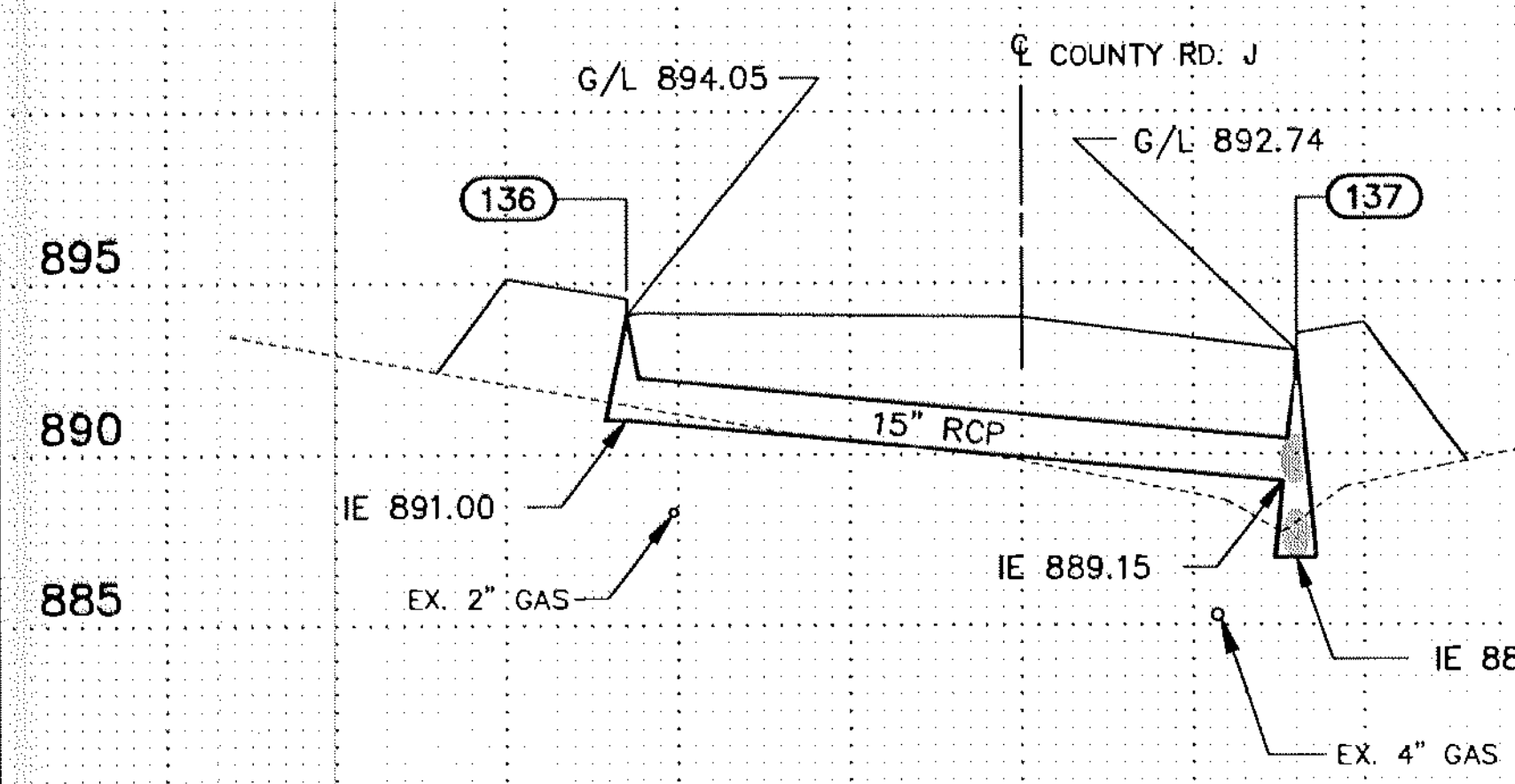
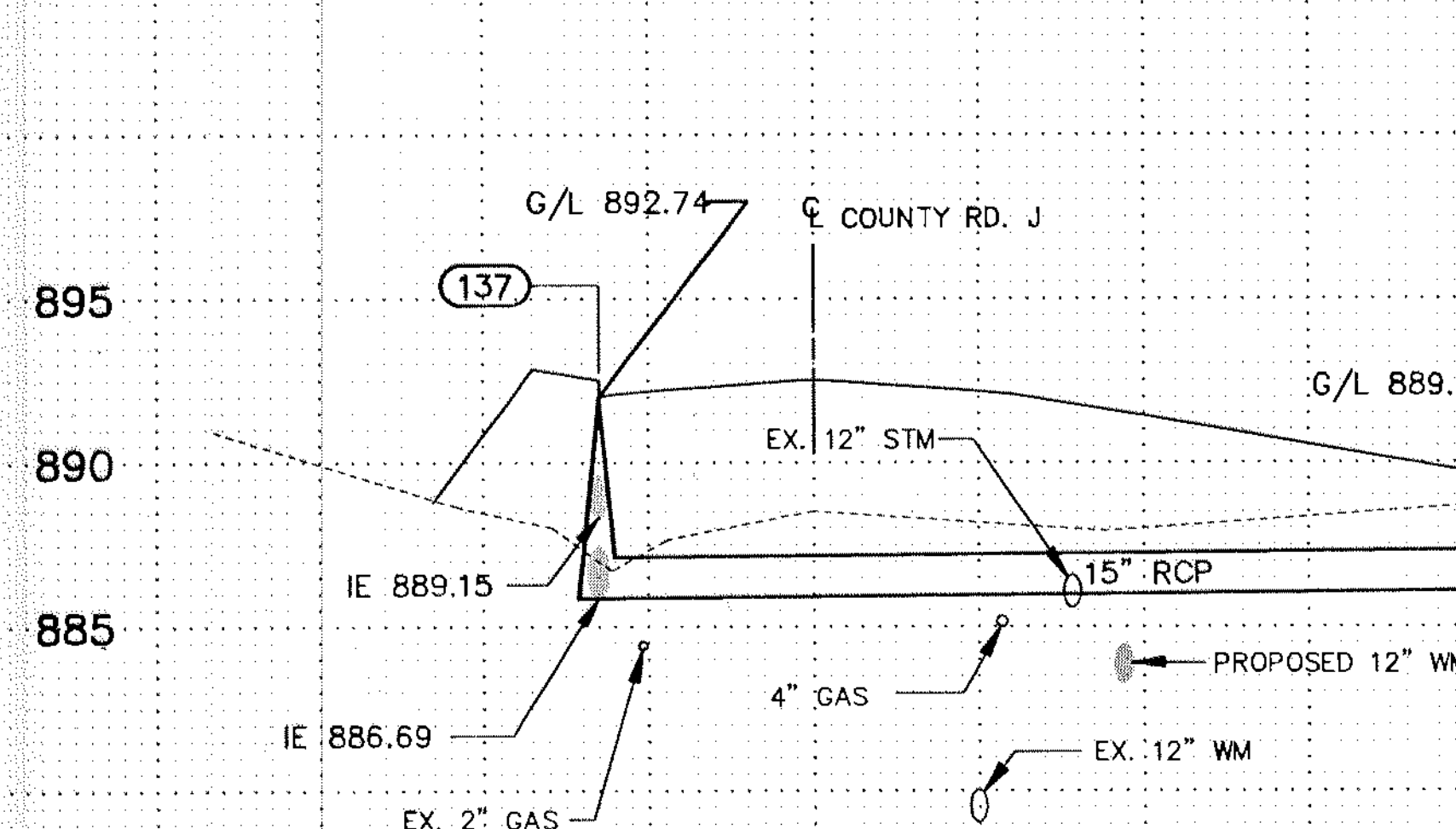
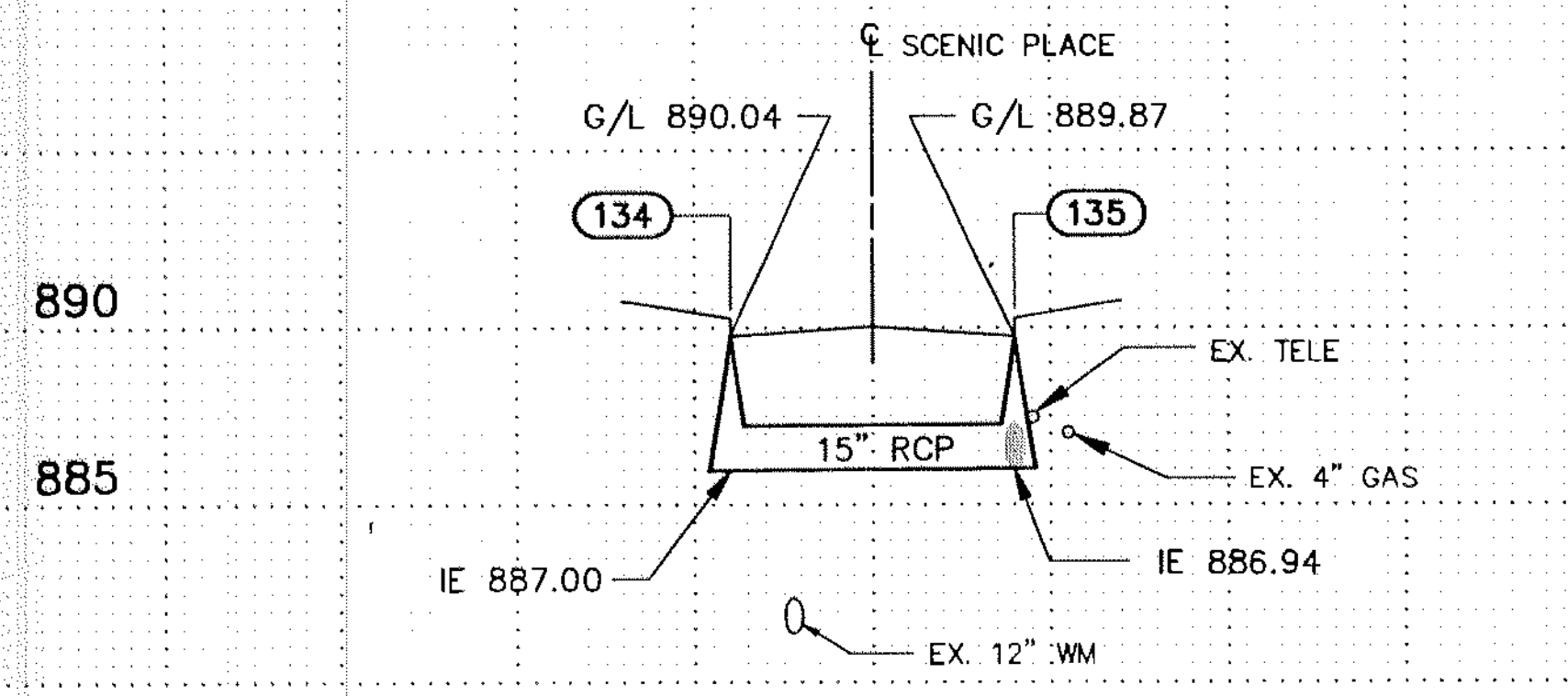
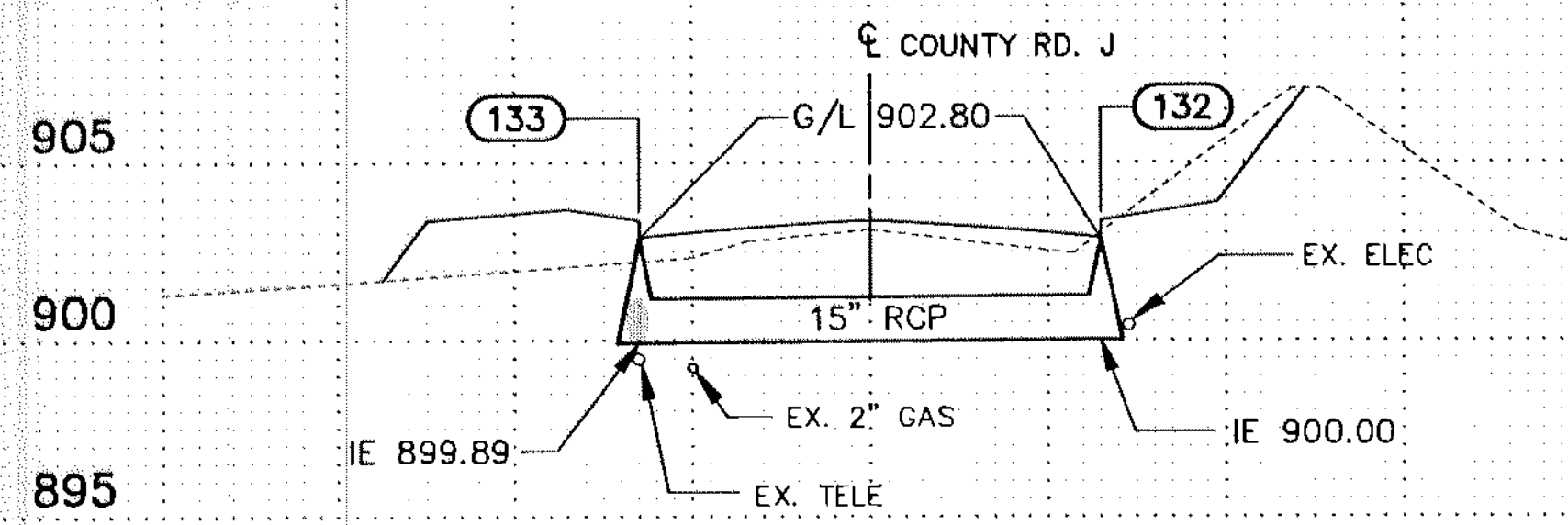
<p>BRW INC. 700 THIRD STREET SOUTH, MINNEAPOLIS, MN 55415</p>	PLANNING TRANSPORTATION ENGINEERING URBAN DESIGN	ORIGINAL DATE 5/08/92 REVISIONS:	COUNTY ROAD J C.S.A.H. 32 ANOKA/RAMSEY COUNTY STORM SEWER STA. 234+00 TO STA. 247+50	
	DESIGN BY: SPJ DRAWN BY: PMJ CH'K'D BY:	SURVY BOOK 8927		DESIGN FILE No. 1313A
	S.A.P. NO. 02-632-08 62-601-07			SHEET 34 OF 76



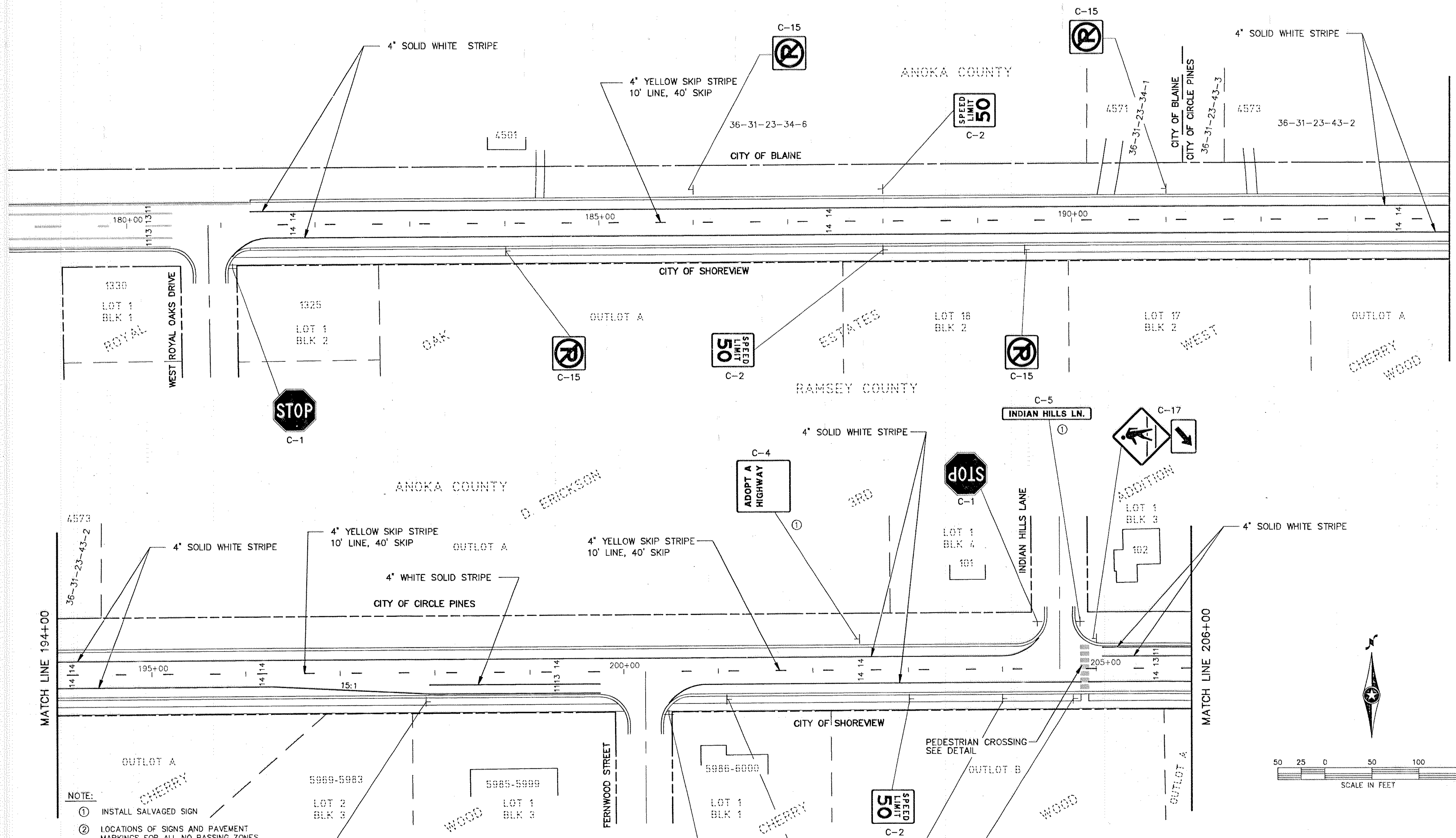
 BRW INC. 700 THIRD STREET SOUTH, MINNEAPOLIS, MN 55415	PLANNING TRANSPORTATION ENGINEERING URBAN DESIGN	ORIGINAL DATE 5/06/92 REVISIONS	COUNTY ROAD J C.S.A.H. 32 ANOKA/RAMSEY COUNTY STORM SEWER STA. 247+50 TO STA. 258+00
	DESIGN BY: SPJ DRAWN BY: EWJ CHECKED BY:	SURVEY BOOK 8927	
SHEET 35 OF 76		DESIGN FILE No. 1313A	



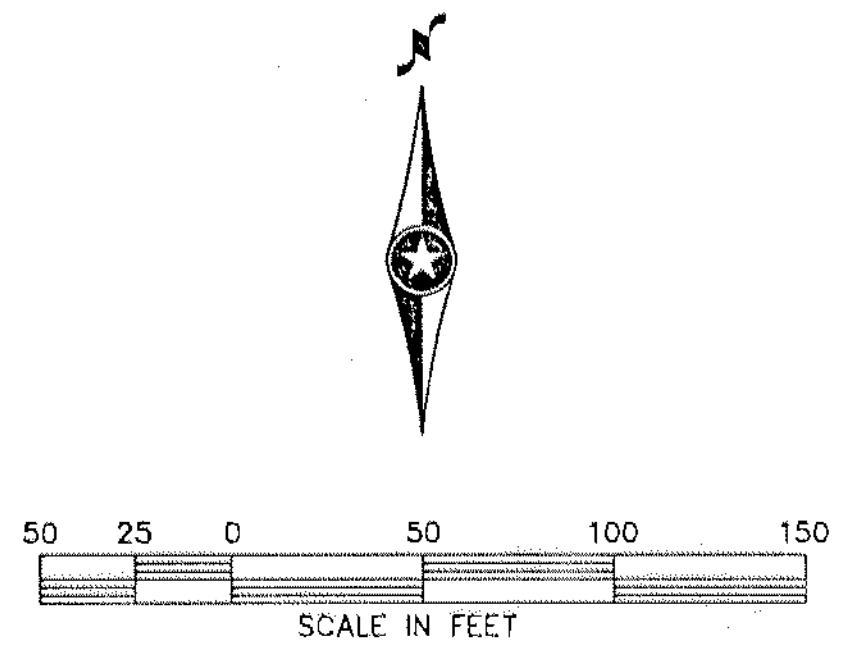
 BRW INC. 700 THIRD STREET SOUTH, MINNEAPOLIS, MN 55415	PLANNING TRANSPORTATION ENGINEERING URBAN DESIGN	ORIGINAL DATE 5/08/92 REVISIONS	COUNTY ROAD "J" C.S.A.H. 32 ANOKA/RAMSEY COUNTY STORM SEWER PROFILES
	DESIGN BY: SPJ DRAWN BY: PMJ CHECKED BY:	SURVEY BOOK 8927	
SHEET 36 OF 76			DESIGN FILE No. 1313A



	PLANNING TRANSPORTATION ENGINEERING URBAN DESIGN	ORIGINAL DATE 5/08/92 REVISIONS 8/11/92	COUNTY ROAD J C.S.A.H. 32 ANOKA/RAMSEY COUNTY STORM SEWER PROFILES
	DESIGN BY: SPJ DRAWN BY: EWJ CHECKED BY:	SURVEY BOOK 8927	
S.A.P. NO. 02-632-08 62-601-07		SHEET 37 OF 76	



- NOTE:**
- ① INSTALL SALVAGED SIGN
 - ② LOCATIONS OF SIGNS AND PAVEMENT MARKINGS FOR ALL NO PASSING ZONES ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
 - ③ LOCATIONS OF ALL SIGNS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
 - ④ ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, including Appendix B, dated 3/90.



 <small>BRW INC. 700 THIRD STREET SOUTH, MINNEAPOLIS, MN 55415</small>	PLANNING TRANSPORTATION ENGINEERING URBAN DESIGN	ORIGINAL DATE 5/06/92 REVISIONS	COUNTY ROAD J C.S.A.H. 32 RAMSEY/ANOKA COUNTY SIGNING AND STRIPING STA 181+32 TO 206+00
	DESIGN BY: SPJ DRAWN BY: EMJ CH'KED BY:	SURVEY BOOK 8927	
S.A.P. NO.		SHEET 38 OF 76	

D. ERICKSON ADDITION

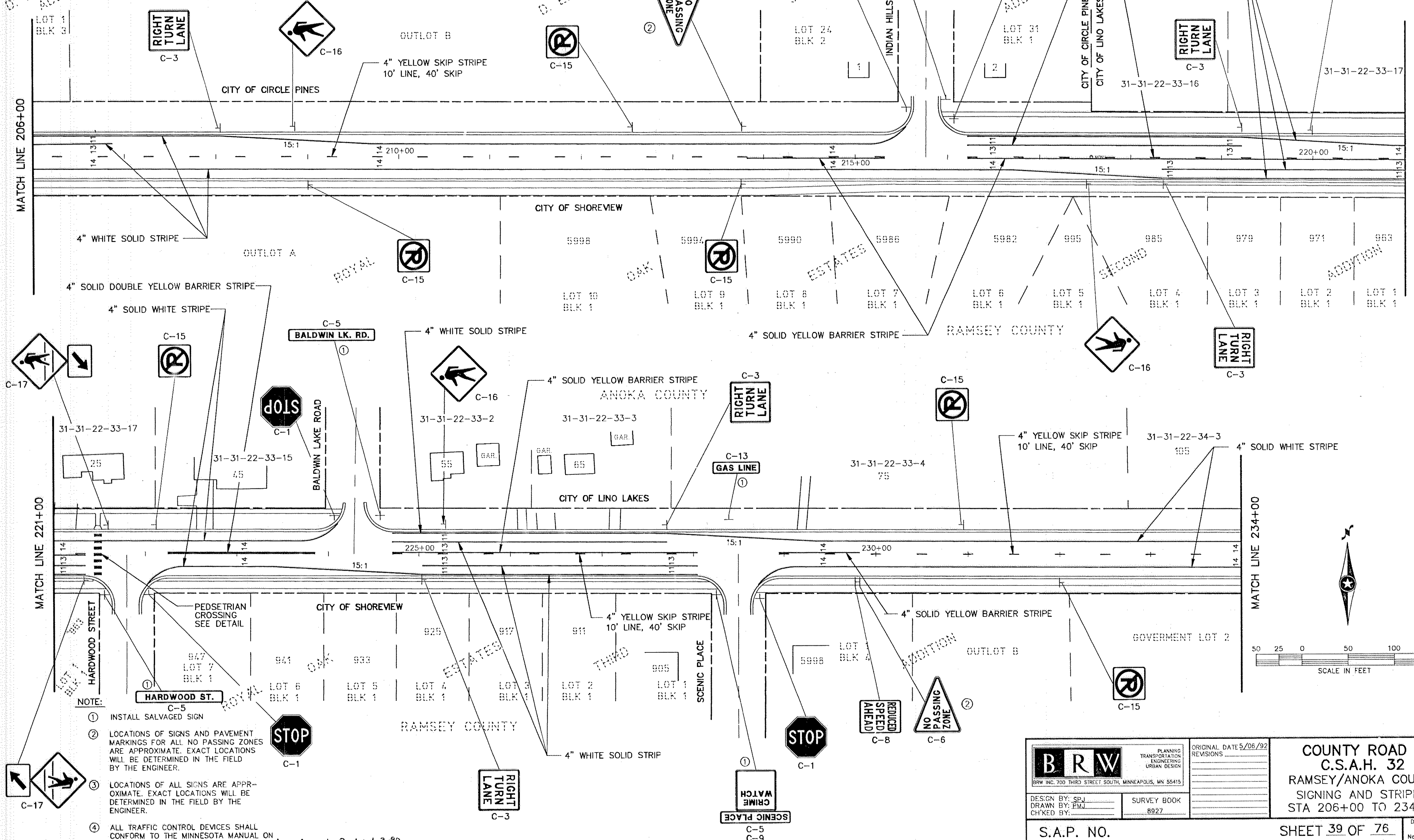
ANOKA COUNTY

MATCH LINE 206+00

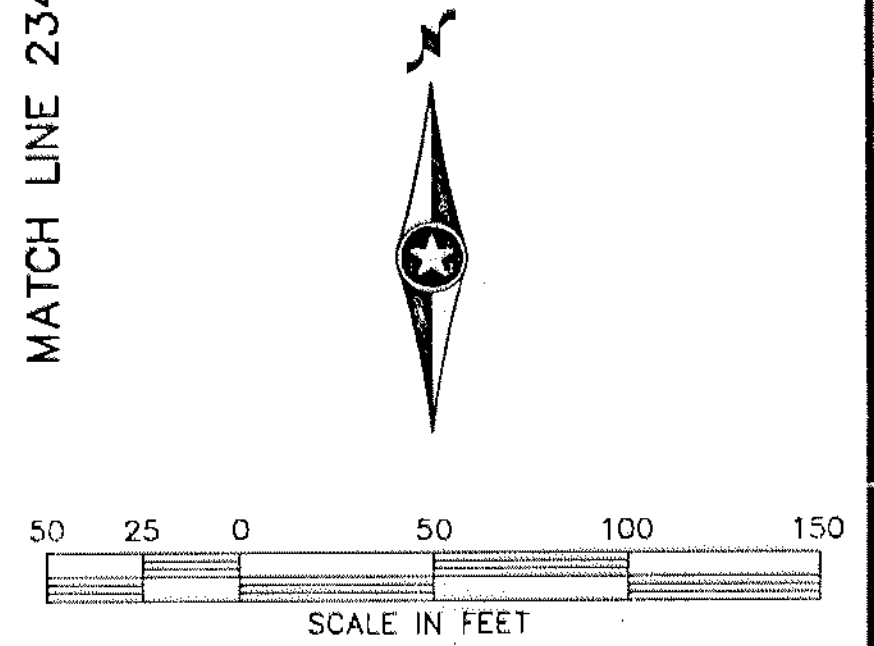
MATCH LINE 221+00

MATCH LINE 221+00

MATCH LINE 234+00

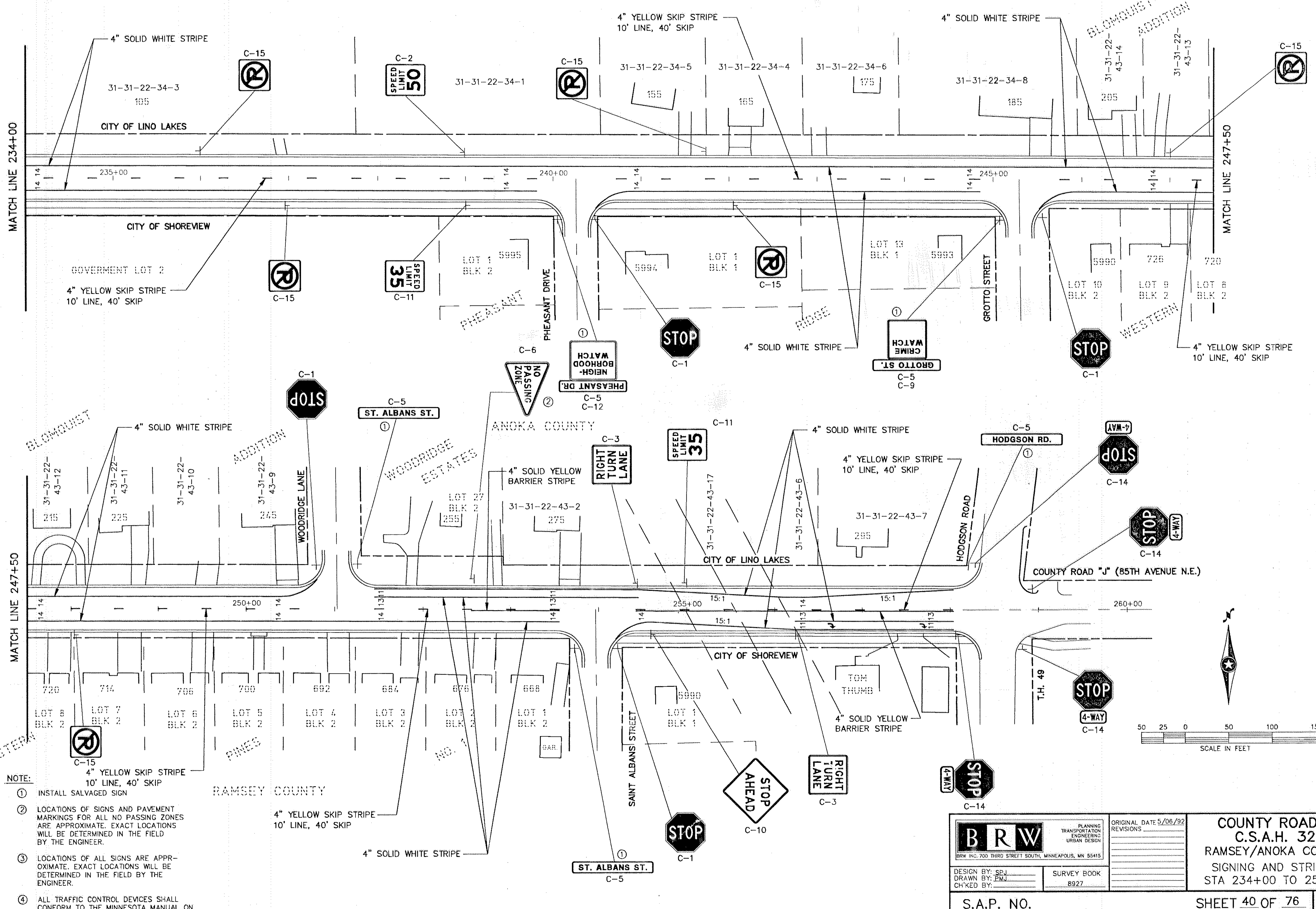


- NOTE:
- ① INSTALL SALVAGED SIGN
 - ② LOCATIONS OF SIGNS AND PAVEMENT MARKINGS FOR ALL NO PASSING ZONES ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
 - ③ LOCATIONS OF ALL SIGNS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
 - ④ ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, including Appendix B, dated 3-90.

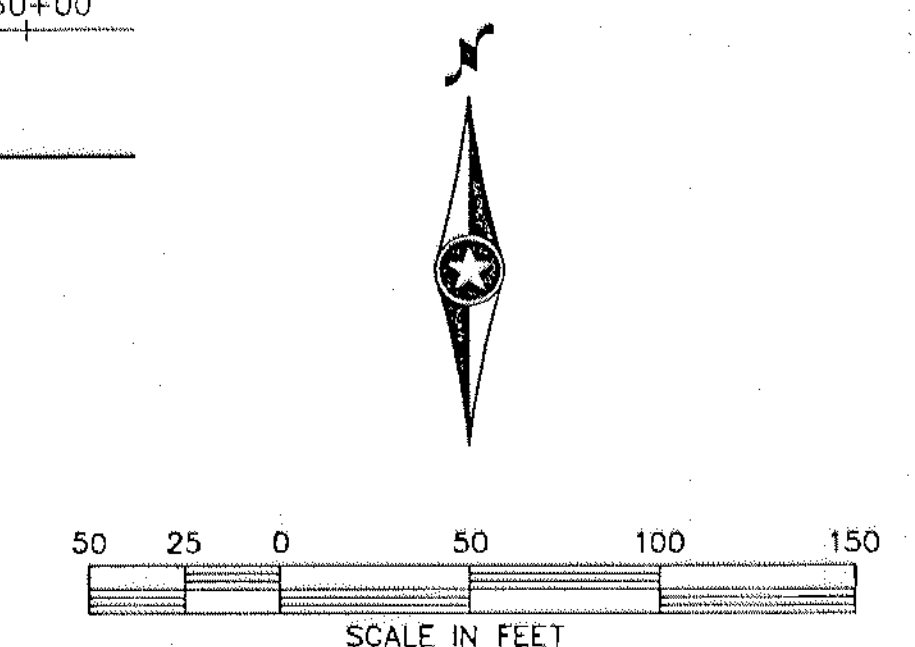


<p>BRW INC. 700 THIRD STREET SOUTH, MINNEAPOLIS, MN 55415</p>	<p>PLANNING TRANSPORTATION ENGINEERING URBAN DESIGN</p>	<p>ORIGINAL DATE 5/06/92 REVISIONS _____</p>	
	<p>DESIGN BY: SPJ</p>	<p>SURVEY BOOK 8927</p>	
	<p>DRAWN BY: PMJ</p>		
	<p>CHECKED BY: _____</p>		

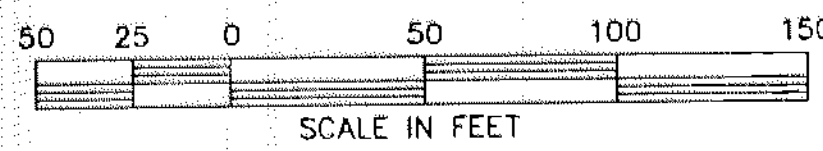
COUNTY ROAD J
C.S.A.H. 32
 RAMSEY/ANOKA COUNTY
 SIGNING AND STRIPING
 STA 206+00 TO 234+00



- NOTE:**
- ① INSTALL SALVAGED SIGN
 - ② LOCATIONS OF SIGNS AND PAVEMENT MARKINGS FOR ALL NO PASSING ZONES ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
 - ③ LOCATIONS OF ALL SIGNS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
 - ④ ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.



 <small>BRW INC. 700 THIRD STREET SOUTH, MINNEAPOLIS, MN 55415</small>	<small>PLANNING TRANSPORTATION ENGINEERING URBAN DESIGN</small>	<small>ORIGINAL DATE 5/06/92</small> <small>REVISIONS</small>	COUNTY ROAD J C.S.A.H. 32 RAMSEY/ANOKA COUNTY SIGNING AND STRIPING STA 234+00 TO 258+36
	<small>DESIGN BY: SPJ</small> <small>DRAWN BY: EML</small> <small>CH'KED BY:</small>	<small>SURVEY BOOK</small> <small>8927</small>	
S.A.P. NO.		SHEET 40 OF 76	



ANOKA COUNTY

36-31-23-34-6

4571

36-31-23-34-1

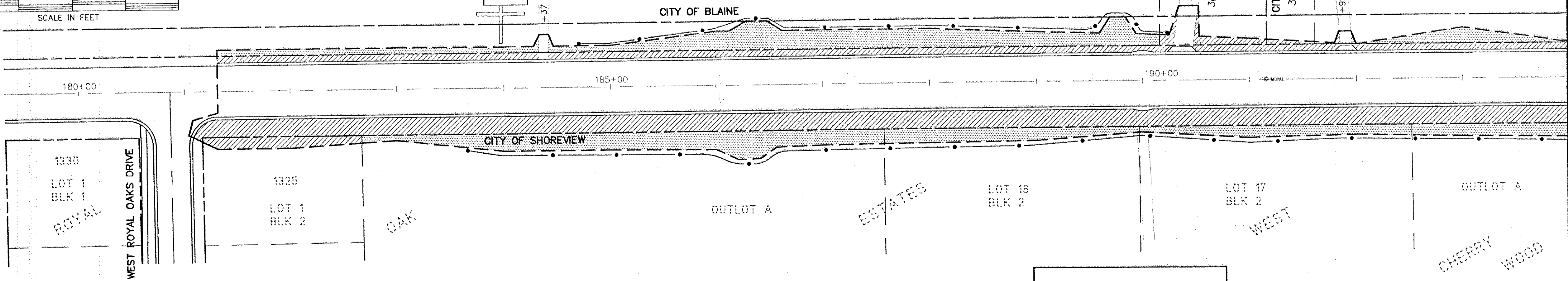
CITY OF BLAINE
CITY OF CIRCLE PINES

4573

36-31-23-43-3

36-31-23-43-2

MATCH LINE 194+00



NOTE:

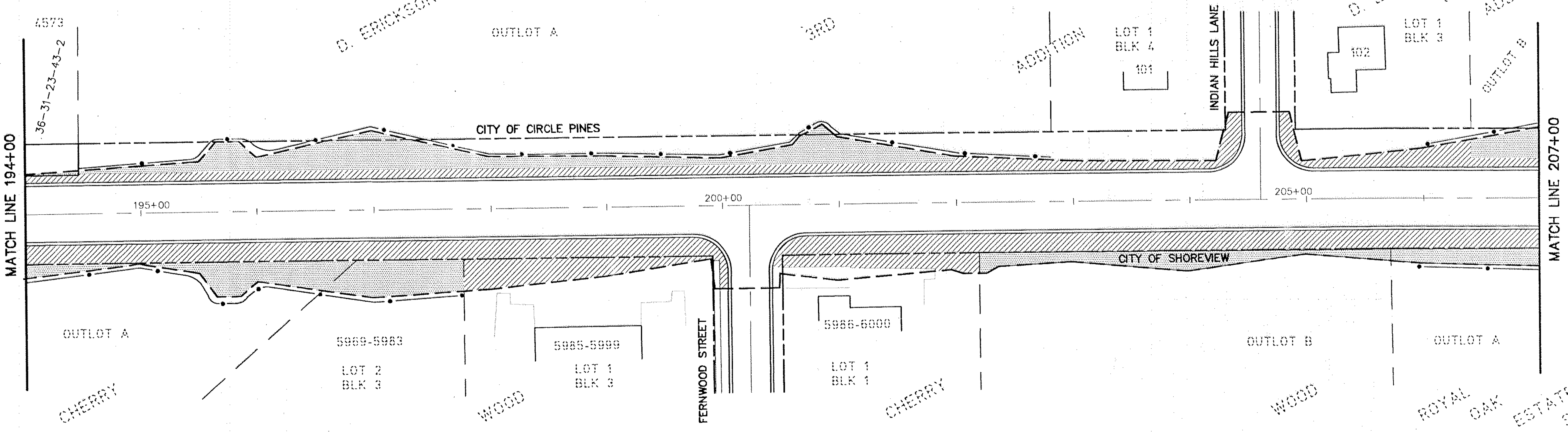
1. TYPE I MULCH SHALL BE APPLIED TO ALL SEED AREAS IN ACCORDANCE WITH SECTION 2575.3 OF THE MNDOT STANDARD SPECIFICATIONS.

LEGEND:

- SOD
- SEED
- SILT FENCE

RAMSEY COUNTY

ANOKA COUNTY

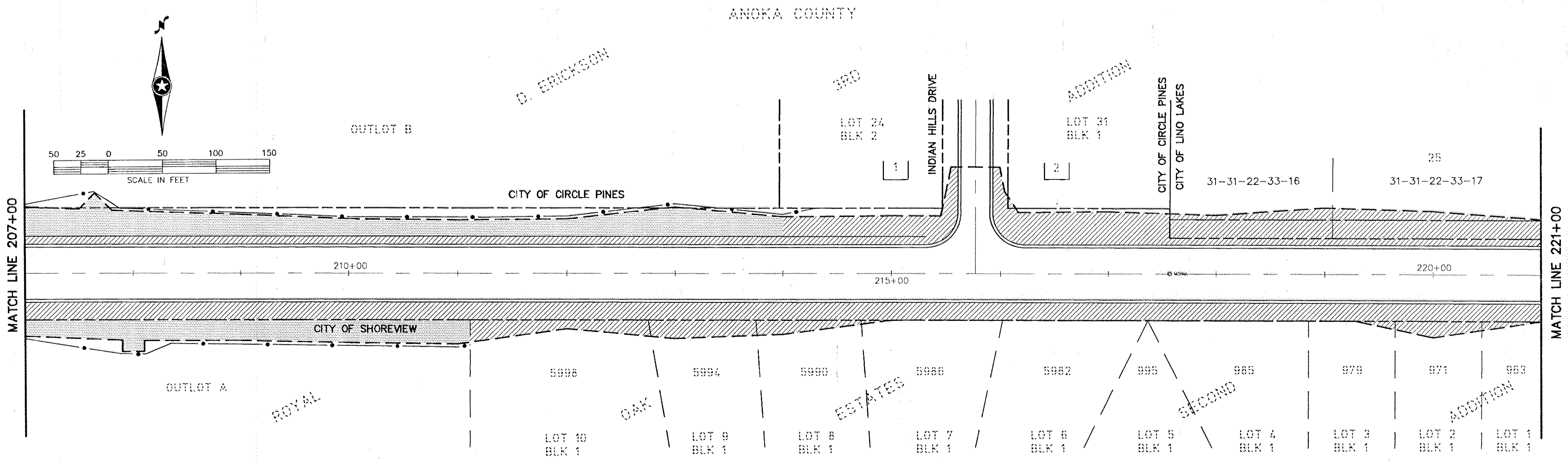
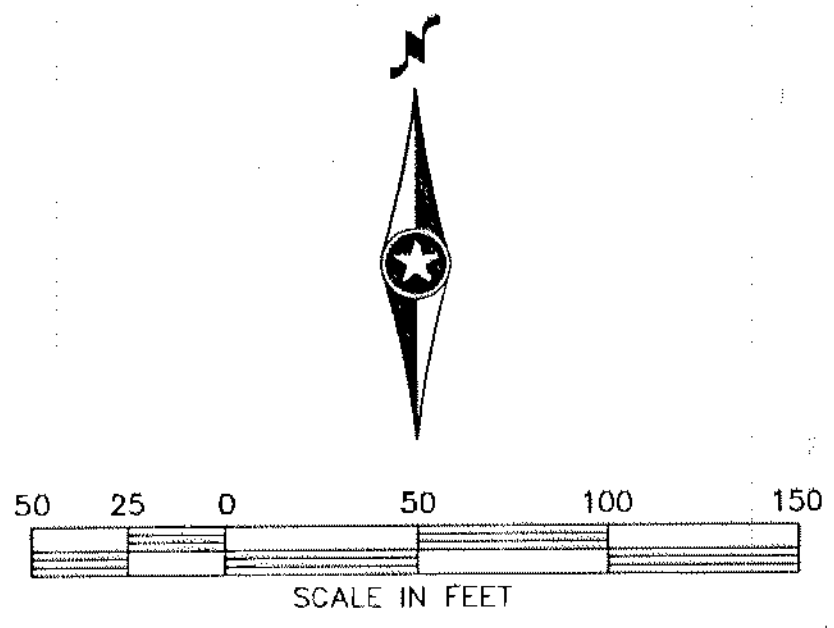


MATCH LINE 194+00

MATCH LINE 207+00

RAMSEY COUNTY

<p>BRW INC. 700 THIRD STREET SOUTH, MINNEAPOLIS, MN 55415</p>	<p>PLANNING TRANSPORTATION ENGINEERING URBAN DESIGN</p>	<p>ORIGINAL DATE 5/06/92 REVISIONS</p>	<p>COUNTY ROAD J C.S.A.H. 32 ANOKA/RAMSEY COUNTY EROSION CONTROL & TURF ESTABLISHMENT STA 181+32 TO 207+00</p>
	<p>DESIGN BY: SPJ DRAWN BY: PWJ CHECKED BY:</p>	<p>SURVEY BOOK 8927</p>	
<p>S.A.P. NO. 02-632-08 62-601-07</p>		<p>SHEET 41 OF 76</p>	

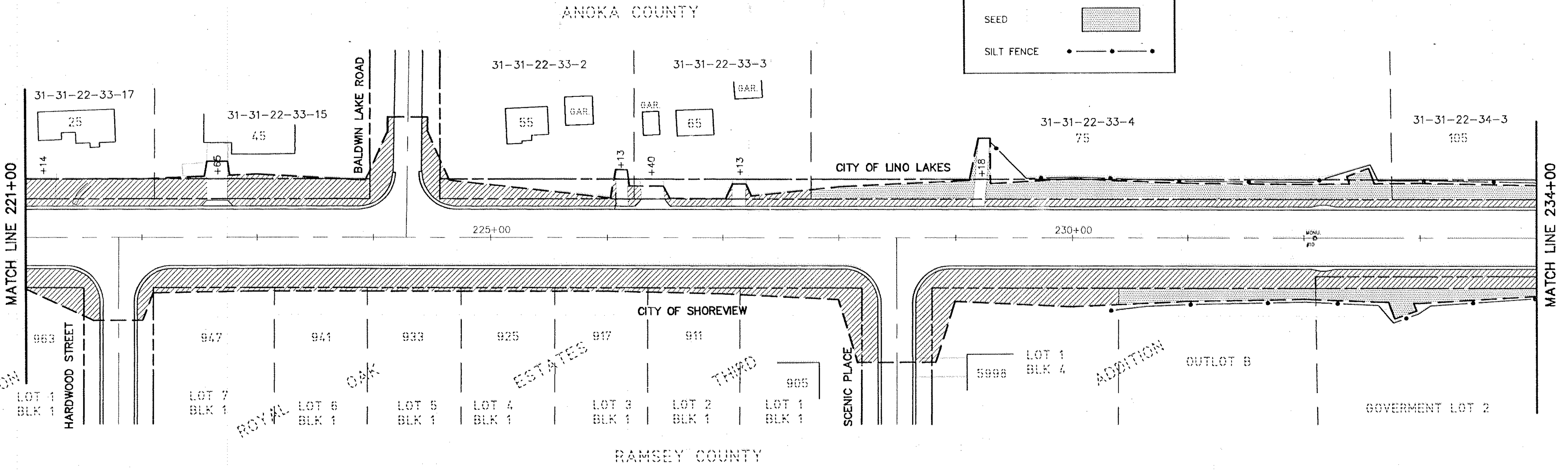


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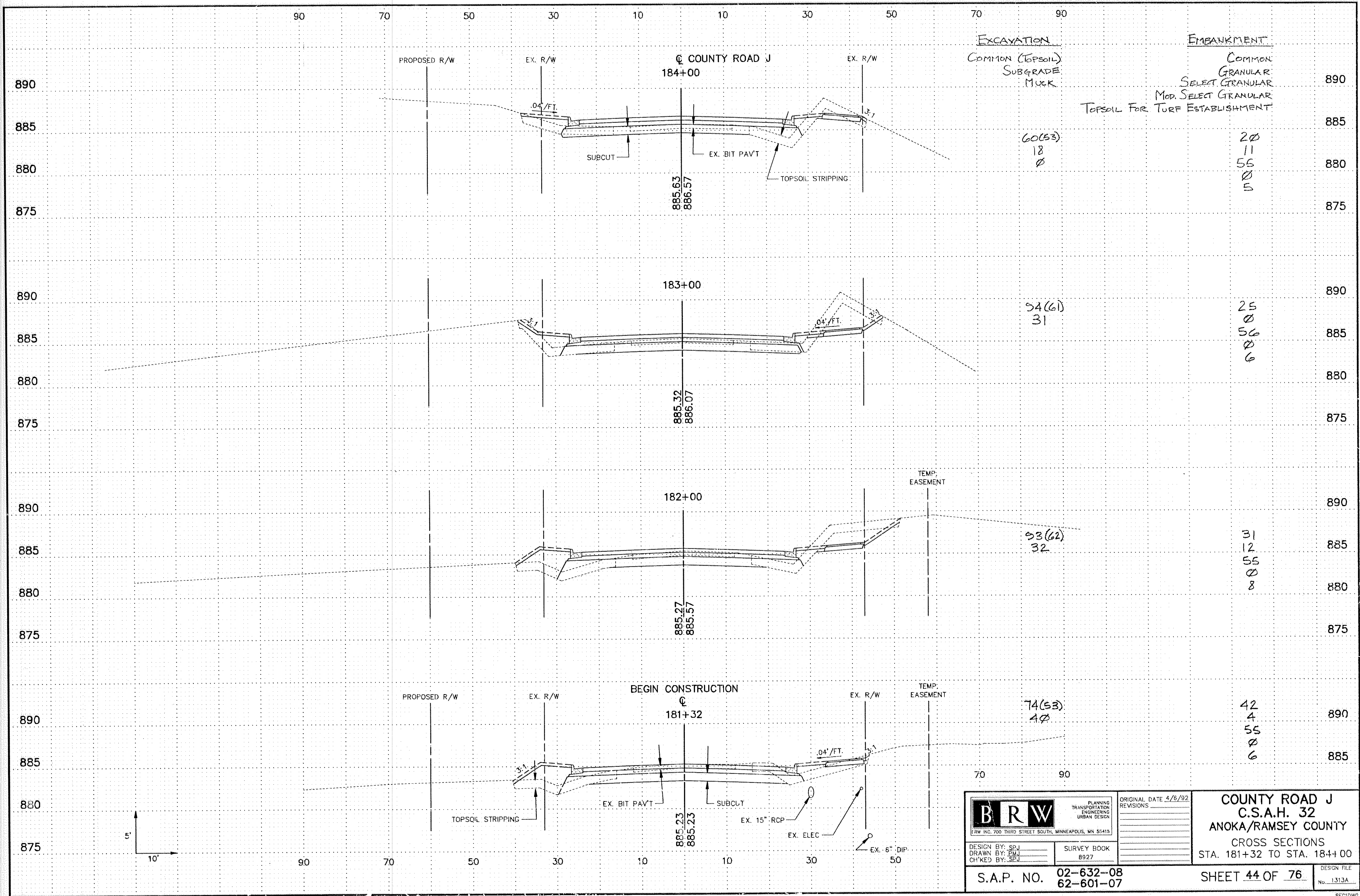
1. TYPE I MULCH SHALL BE APPLIED TO ALL SEED AREAS IN ACCORDANCE WITH SECTION 2575.3 OF THE MNDOT STANDARD SPECIFICATIONS.

LEGEND:

- SOD
- SEED
- SILT FENCE



 <small>BRW INC. 700 THIRD STREET SOUTH, MINNEAPOLIS, MN 55415</small>	PLANNING TRANSPORTATION ENGINEERING URBAN DESIGN	ORIGINAL DATE 5/06/92 REVISIONS	COUNTY ROAD J C.S.A.H. 32 ANOKA/RAMSEY COUNTY EROSION CONTROL & TURF ESTABLISHMENT STA 207+00 TO 234+00
	DESIGN BY: SPJ DRAWN BY: EMJ CHECKED BY:	SURVEY BOOK 8927	
S.A.P. NO. 02-632-08 62-601-07		SHEET 42 OF 76	



ORIGINAL DATE 4/6/92
REVISIONS

COUNTY ROAD J
C.S.A.H. 32
ANOKA/RAMSEY COUNTY
CROSS SECTIONS
STA. 181+32 TO STA. 184+00

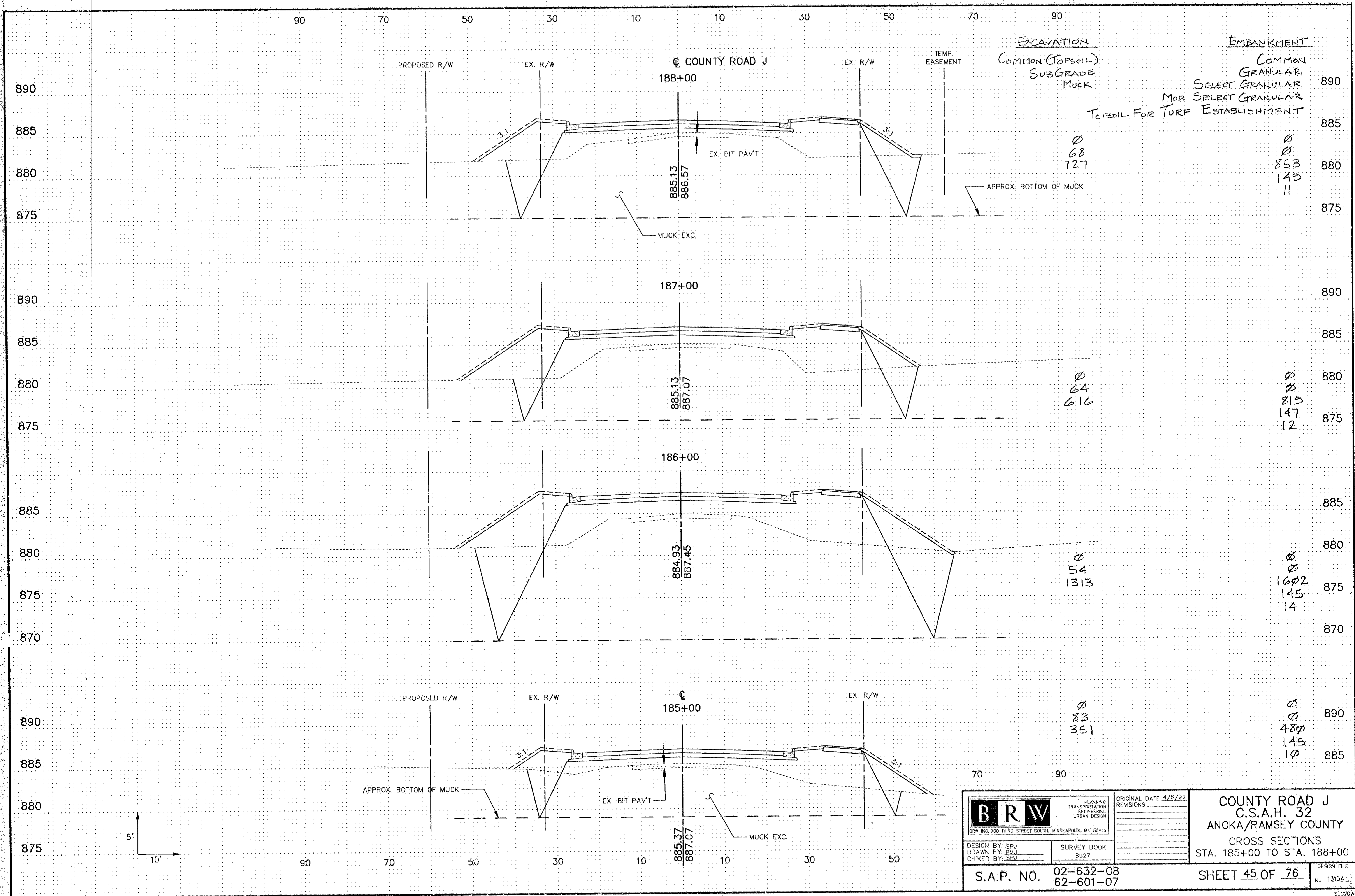
DESIGN BY: SPJ
DRAWN BY: PMJ
CHK'D BY: SPJ

SURVEY BOOK
8927

S.A.P. NO. 02-632-08
62-601-07

SHEET 44 OF 76

DESIGN FILE
No. 1313A



DESIGN BY: SPJ
 DRAWN BY: EMJ
 CHECKED BY: SPJ

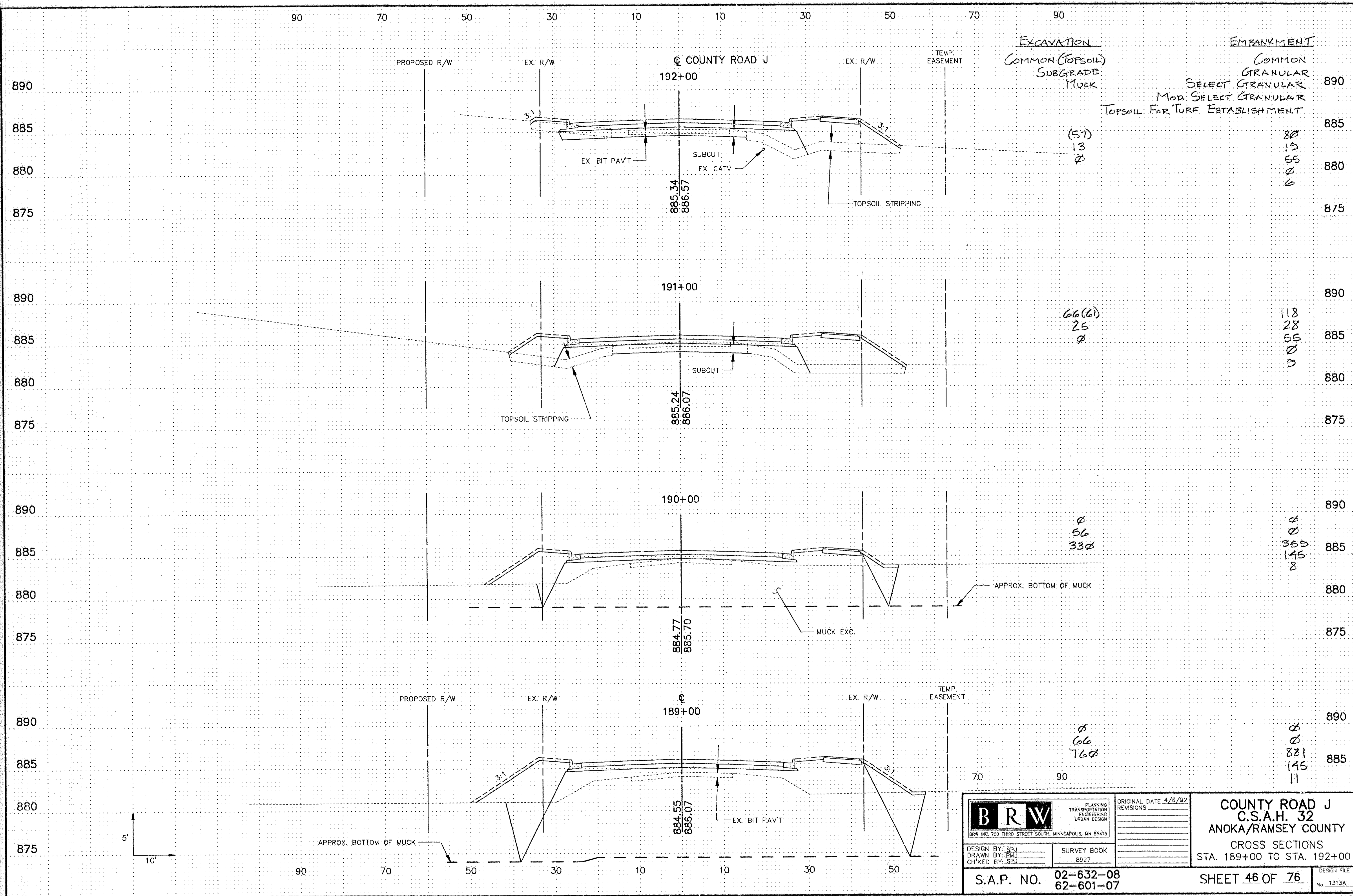
SURVEY BOOK
 8927

ORIGINAL DATE: 4/8/92
 REVISIONS:

COUNTY ROAD J
 C.S.A.H. 32
 ANOKA/RAMSEY COUNTY
 CROSS SECTIONS
 STA. 185+00 TO STA. 188+00

S.A.P. NO. 02-632-08
 62-601-07

SHEET 45 OF 76
 DESIGN FILE No. 1313A



DESIGN BY: SPJ
DRAWN BY: PMJ
CHK'D BY: SPJ

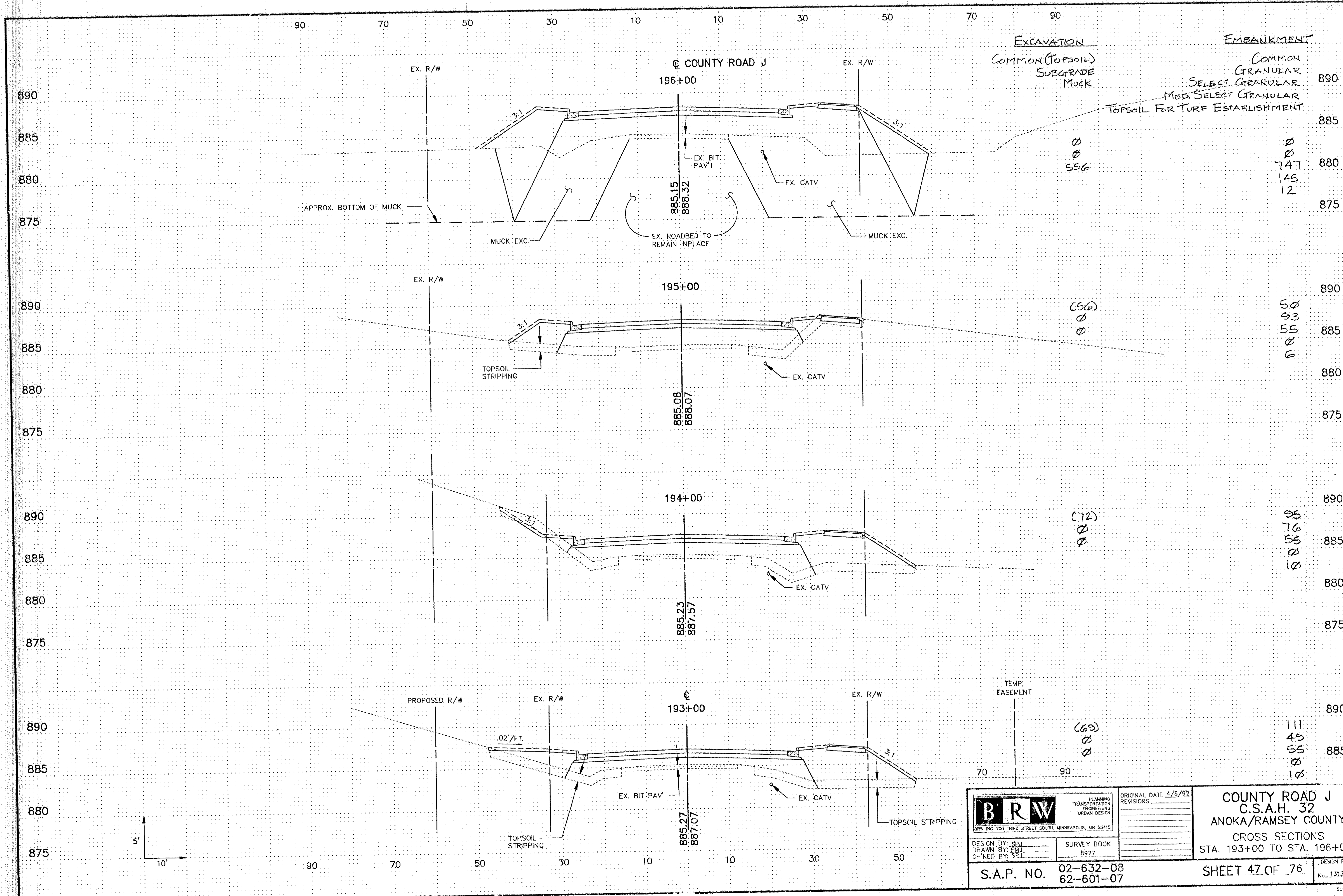
SURVEY BOOK
8927

ORIGINAL DATE	4/8/92
REVISIONS	

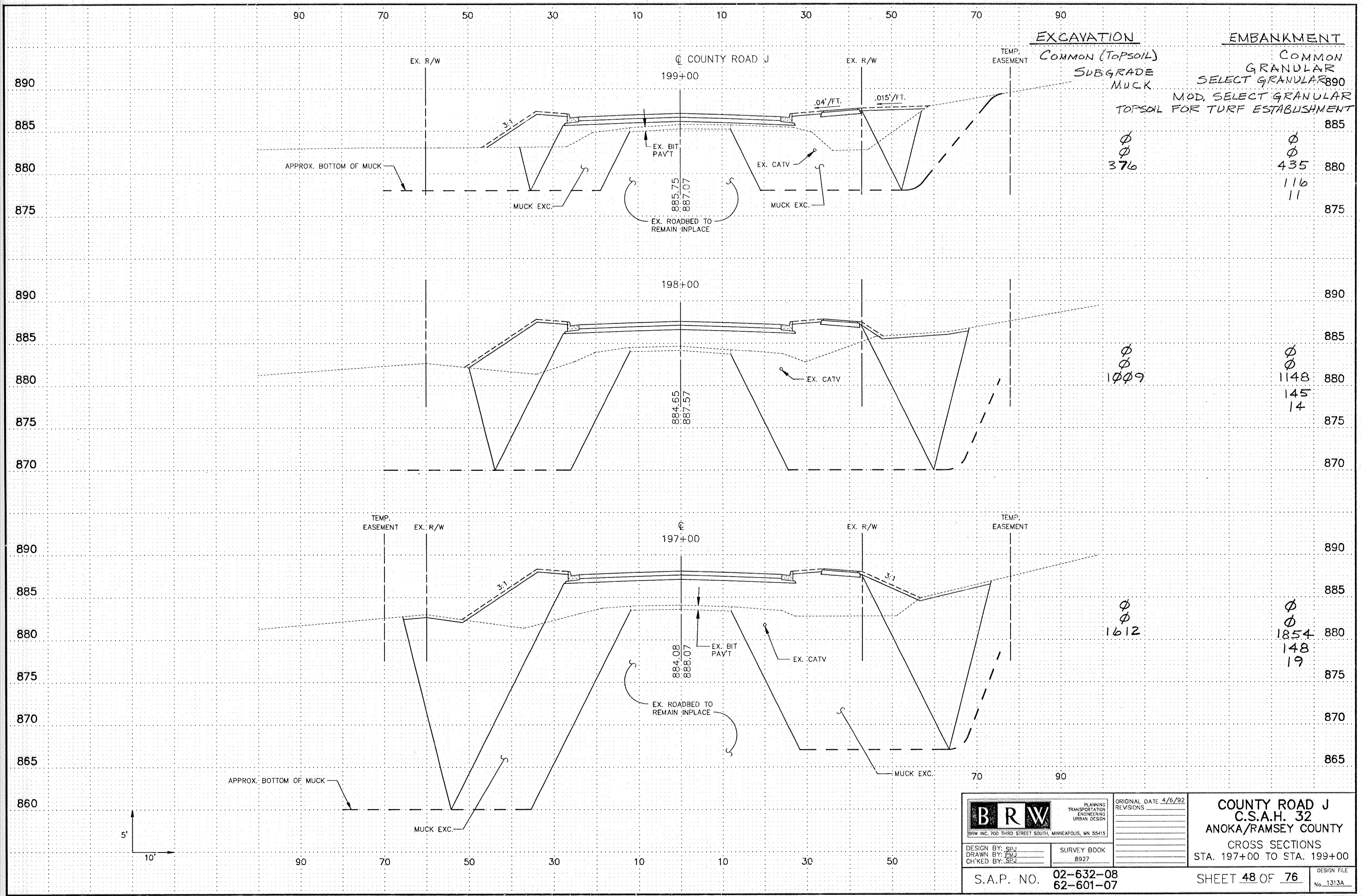
COUNTY ROAD J
C.S.A.H. 32
ANOKA/RAMSEY COUNTY
CROSS SECTIONS
STA. 189+00 TO STA. 192+00

S.A.P. NO. 02-632-08
62-601-07

SHEET 46 OF 76
DESIGN FILE No. 1313A



 BRW INC. 700 THIRD STREET SOUTH, MINNEAPOLIS, MN 55415	PLANNING TRANSPORTATION ENGINEERING URBAN DESIGN	ORIGINAL DATE 4/8/92 REVISIONS	COUNTY ROAD J C.S.A.H. 32 ANOKA/RAMSEY COUNTY CROSS SECTIONS STA. 193+00 TO STA. 196+00
	DESIGN BY: SPJ DRAWN BY: PMJ CHECKED BY: SPJ	SURVEY BOOK 8927	
S.A.P. NO. 02-632-08 62-601-07		DESIGN FILE No. 1313A	



EXCAVATION
 COMMON (TOPSOIL)
 SUBGRADE
 MUCK
 TOPSOIL FOR TURF ESTABLISHMENT

EMBANKMENT
 COMMON
 GRANULAR
 SELECT GRANULAR
 MOD. SELECT GRANULAR

890
 885
 880
 875

Ø
 Ø
 376

Ø
 Ø
 435
 116
 11

890
 885
 880
 875
 870

Ø
 Ø
 1009

Ø
 Ø
 1148
 145
 14

890
 885
 880
 875
 870
 865
 860

Ø
 Ø
 1612

Ø
 Ø
 1854
 148
 19

BRW
 BRW INC. 700 THIRD STREET SOUTH, MINNEAPOLIS, MN 55415

PLANNING
 TRANSPORTATION
 ENGINEERING
 URBAN DESIGN

DESIGN BY: SPJ
 DRAWN BY: DMJ
 CHECKED BY: SEV

SURVEY BOOK
 8927

S.A.P. NO. 02-632-08
 62-601-07

ORIGINAL DATE	4/6/92
REVISIONS	

COUNTY ROAD J
C.S.A.H. 32
ANOKA/RAMSEY COUNTY
 CROSS SECTIONS
 STA. 197+00 TO STA. 199+00

SHEET 48 OF 76

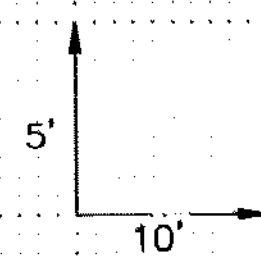
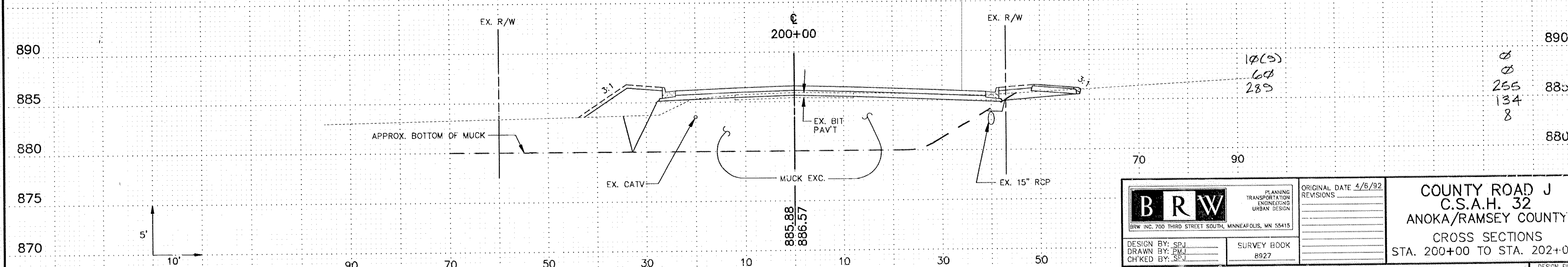
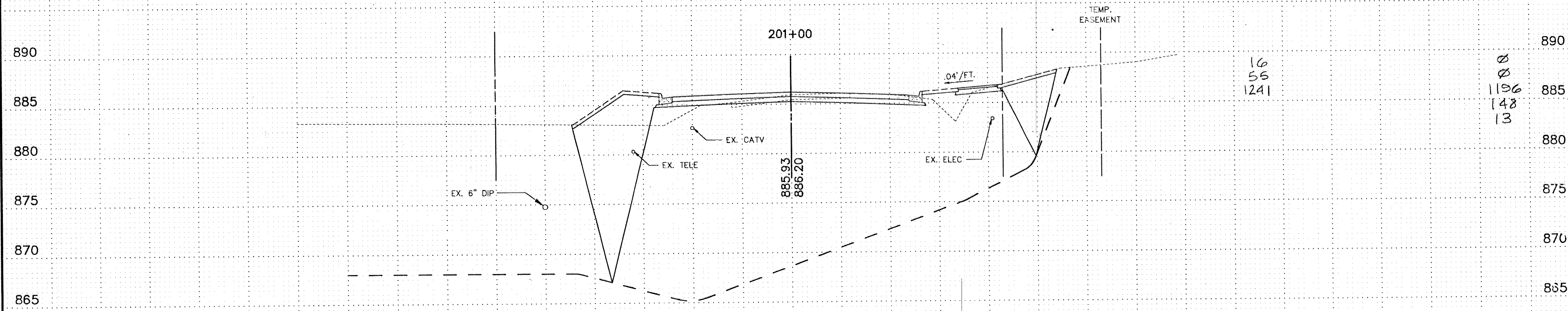
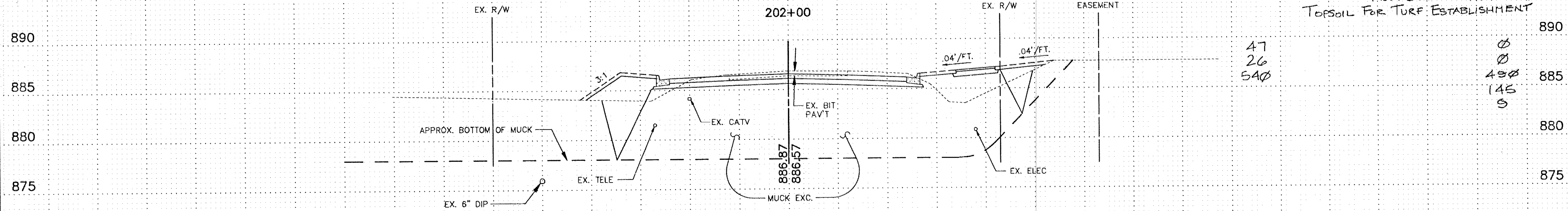
DESIGN FILE
 No. 1313A

90 70 50 30 10 10 30 50 70 90

© COUNTY ROAD J

EXCAVATION
COMMON (TOPSOIL)
SUBGRADE
MUCK

EMBANKMENT
COMMON
GRANULAR
SELECT GRANULAR
MOD. SELECT GRANULAR
TOPSOIL FOR TURF ESTABLISHMENT



DESIGN BY: SPJ
DRAWN BY: EML
CHK'D BY: SPJ

SURVEY BOOK
8927

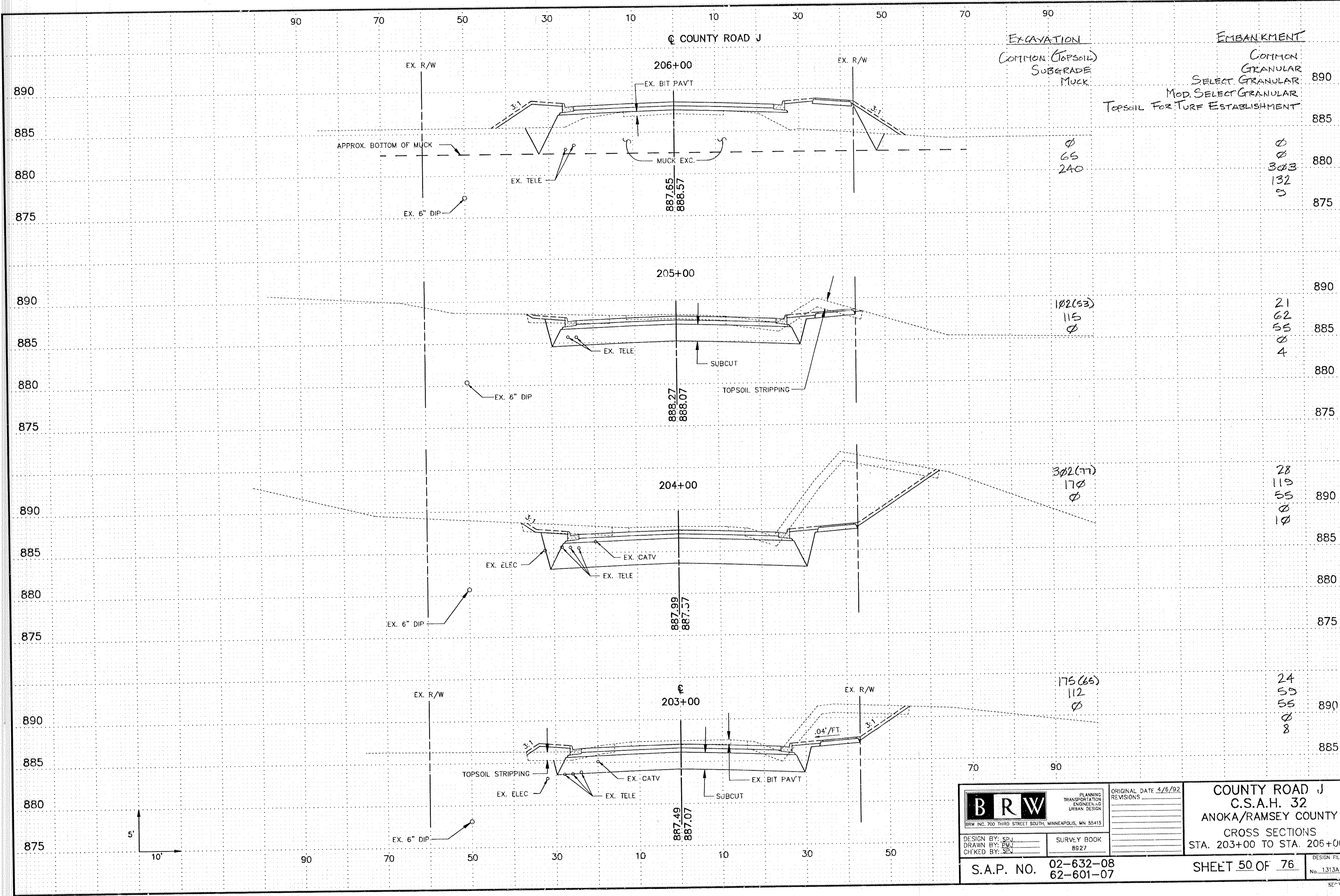
ORIGINAL DATE	4/6/92
REVISIONS	

COUNTY ROAD J
C.S.A.H. 32
ANOKA/RAMSEY COUNTY
CROSS SECTIONS
STA. 200+00 TO STA. 202+00

S.A.P. NO. 02-632-08
62-601-07

SHEET 49 OF 76

DESIGN FILE
No. 1313A



EXCAVATION
 COMMON TOPSOIL
 SUBGRADE
 MUCK

EMBANKMENT
 COMMON GRANULAR
 SELECT GRANULAR
 MOD. SELECT GRANULAR
 TOPSOIL FOR TURF ESTABLISHMENT

890
 885
 880
 875

Ø
 65
 240

Ø
 303
 132
 8

890
 885
 880
 875

102(53)
 115
 Ø

21
 62
 55
 Ø
 4

890
 885
 880
 875

302(77)
 170
 Ø

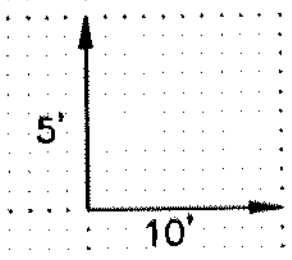
28
 115
 55
 Ø
 10

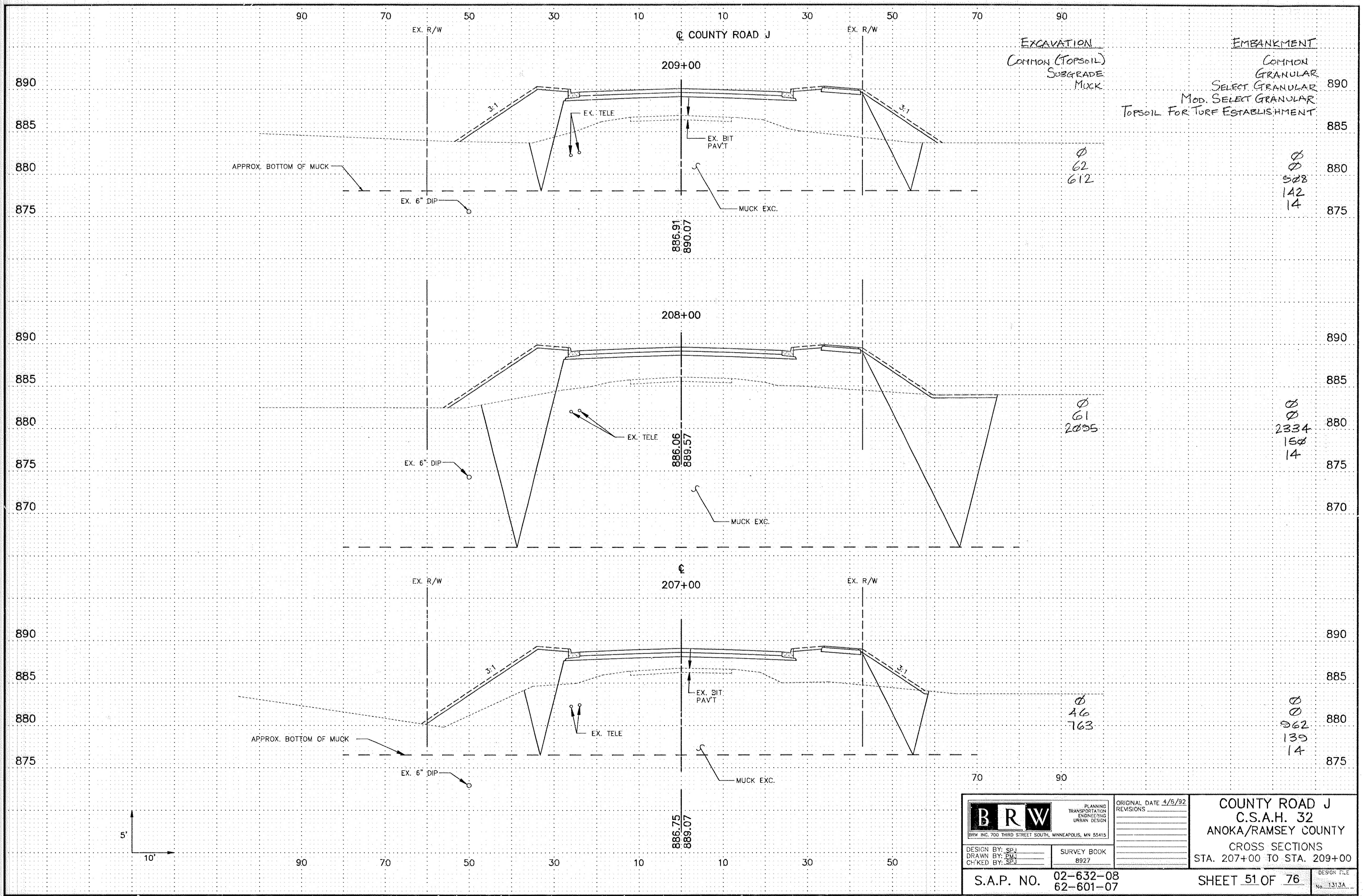
890
 885
 880
 875

175(66)
 112
 Ø

24
 55
 55
 Ø
 8

<p>BRW INC. 700 THIRD STREET SOUTH, MINNEAPOLIS, MN 55415</p>	<p>PLANNING TRANSPORTATION ENGINEERING URBAN DESIGN</p>	<p>ORIGINAL DATE 4/6/92 REVISIONS</p>	<p>COUNTY ROAD J C.S.A.H. 32 ANOKA/RAMSEY COUNTY CROSS SECTIONS STA. 203+00 TO STA. 206+00</p>
	<p>DESIGN BY: SPJ DRAWN BY: EMJ CHECKED BY: SPJ</p>	<p>SURVEY BOOK 8927</p>	
<p>S.A.P. NO. 02-632-08 62-601-07</p>		<p>SHEET 50 OF 76</p>	





EXCAVATION
 COMMON (TOPSOIL)
 SUBGRADE
 MUCK

EMBANKMENT
 COMMON GRANULAR
 SELECT GRANULAR
 MOD. SELECT GRANULAR
 TOPSOIL FOR TURF ESTABLISHMENT

Ø
62
612

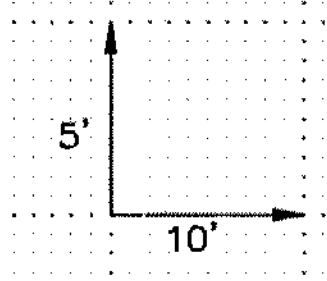
Ø
Ø
528
142
14

Ø
61
2055

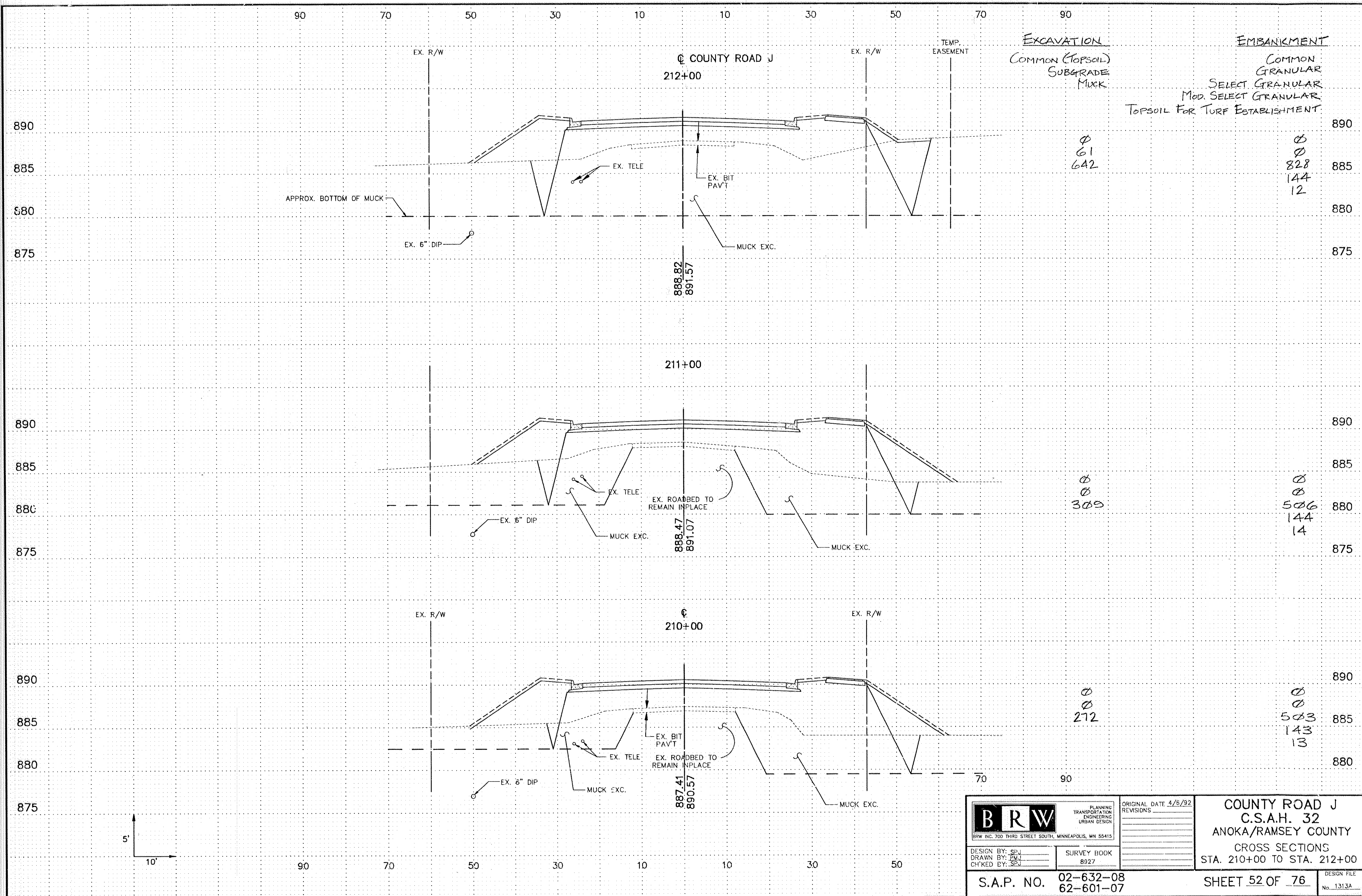
Ø
Ø
2334
150
14

Ø
46
763

Ø
Ø
562
139
14



 <small>BRW INC. 700 THIRD STREET SOUTH, MINNEAPOLIS, MN 55415</small>	<small>PLANNING TRANSPORTATION ENGINEERING URBAN DESIGN</small>	<small>ORIGINAL DATE 4/5/92</small> <small>REVISIONS</small>	COUNTY ROAD J C.S.A.H. 32 ANOKA/RAMSEY COUNTY CROSS SECTIONS STA. 207+00 TO STA. 209+00
	<small>DESIGN BY: SPJ</small> <small>DRAWN BY: PML</small> <small>CHECKED BY: SPJ</small>	<small>SURVEY BOOK</small> <small>8927</small>	
S.A.P. NO. 02-632-08 62-601-07		SHEET 51 OF 76	



EXCAVATION
 COMMON (TOPSOIL)
 SUBGRADE
 MUCK.

EMBANKMENT
 COMMON GRANULAR
 SELECT GRANULAR
 MOD. SELECT GRANULAR
 TOPSOIL FOR TURF ESTABLISHMENT.

Ø
 61
 6A2

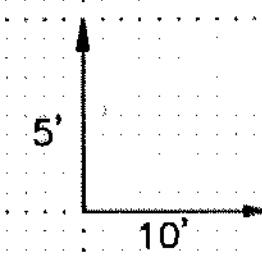
Ø
 828
 144
 12

Ø
 309

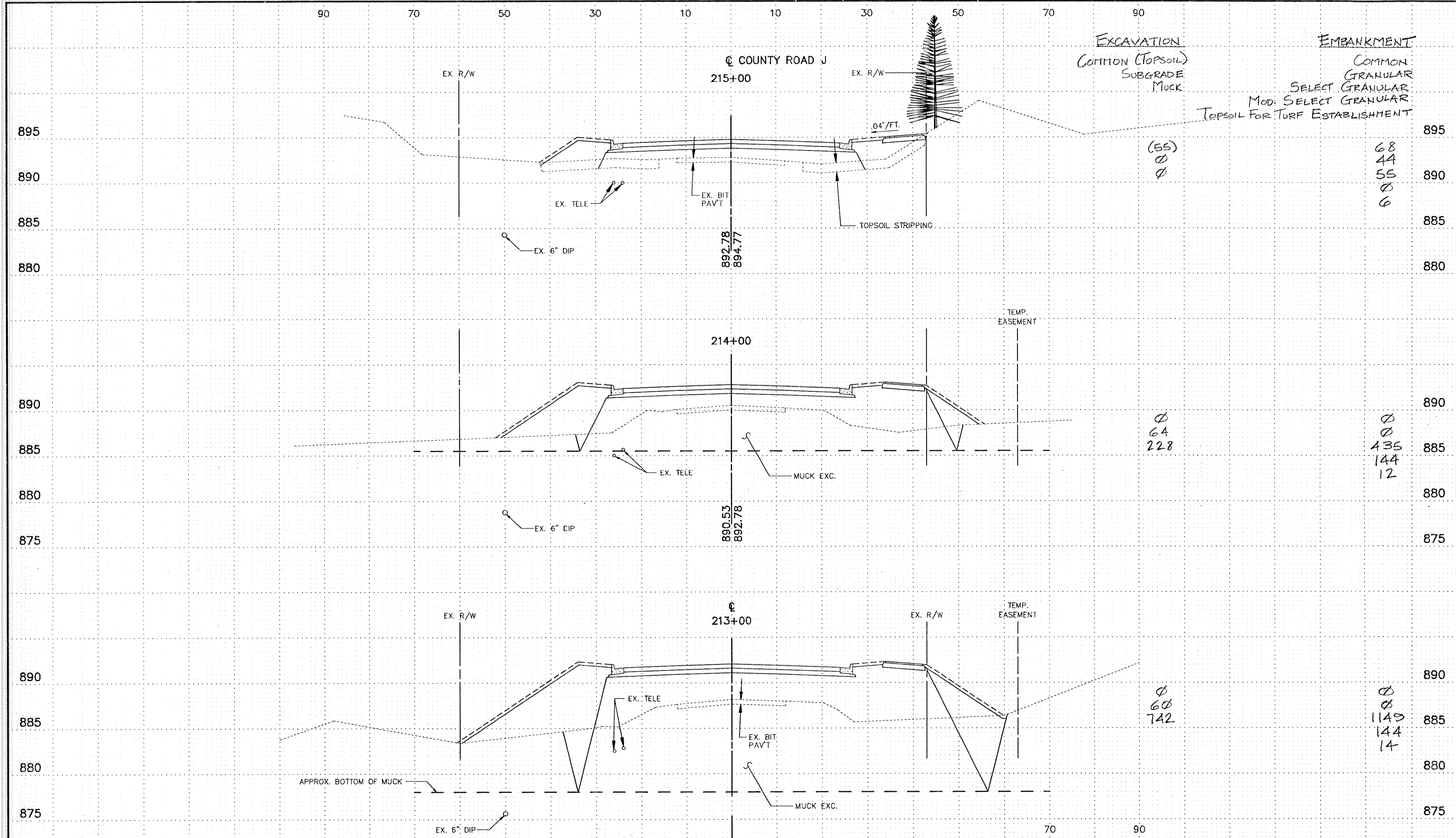
Ø
 506
 144
 14

Ø
 272

Ø
 503
 143
 13



 <small>BRW INC. 700 THIRD STREET SOUTH, MINNEAPOLIS, MN 55415</small>	<small>PLANNING TRANSPORTATION ENGINEERING URBAN DESIGN</small>	<small>ORIGINAL DATE 4/6/92</small> REVISIONS:	COUNTY ROAD J C.S.A.H. 32 ANOKA/RAMSEY COUNTY CROSS SECTIONS STA. 210+00 TO STA. 212+00
	<small>DESIGN BY: SPJ</small> <small>DRAWN BY: EWL</small> <small>CHECKED BY: SPJ</small>	<small>SURVEY BOOK</small> <small>8927</small>	
S.A.P. NO. 02-632-08 62-601-07		SHEET 52 OF 76	



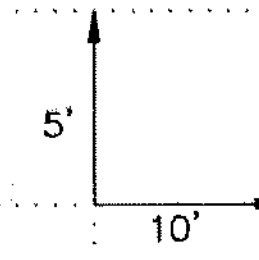
EXCAVATION
 COMMON (TOPSOIL)
 SUBGRADE:
 MUCK

EMBANKMENT
 COMMON
 GRANULAR
 SELECT GRANULAR
 MOD: SELECT GRANULAR
 TOPSOIL FOR TURF ESTABLISHMENT

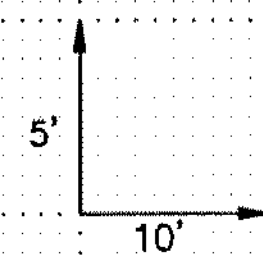
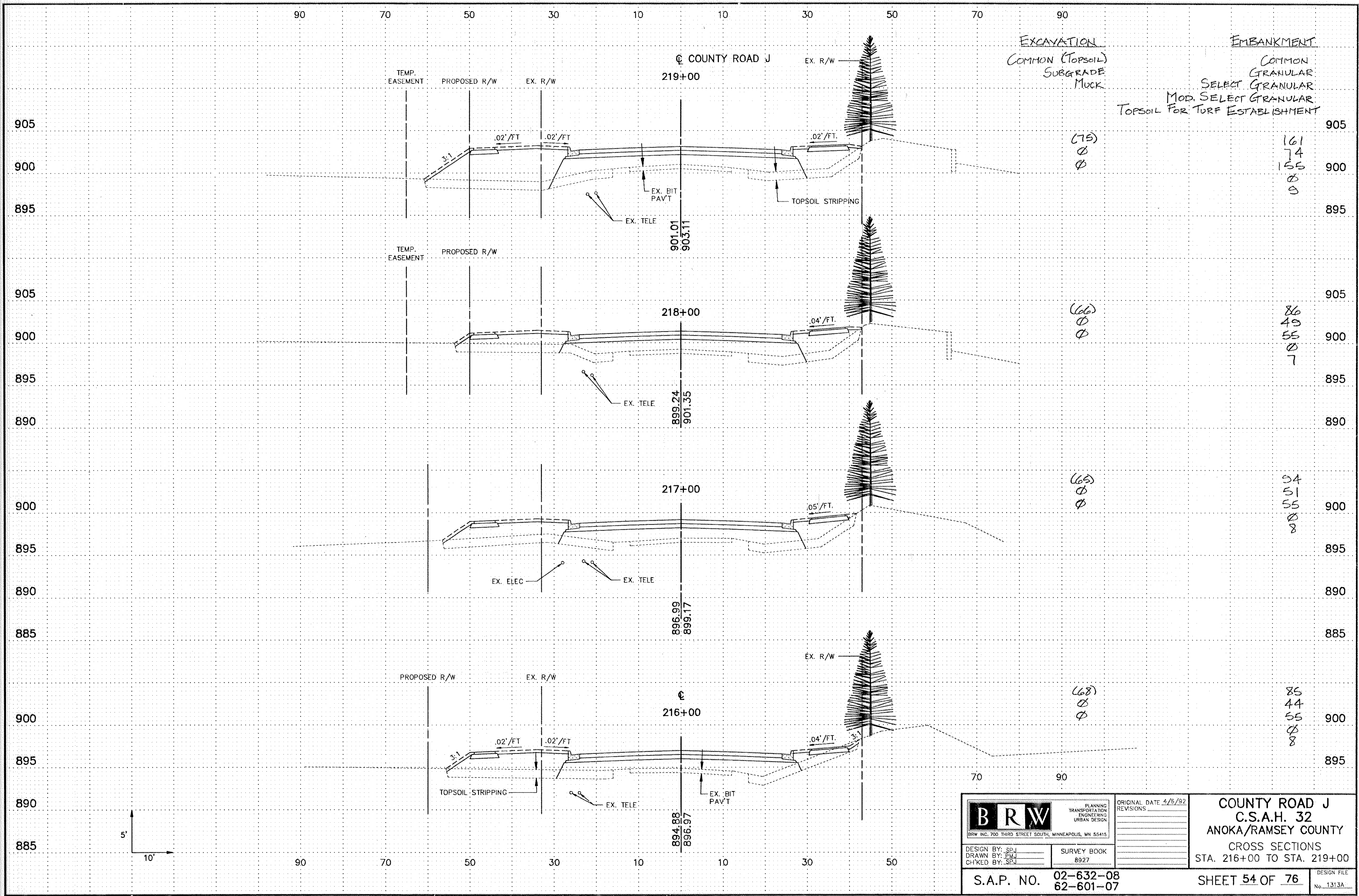
(55)
 68
 44
 55
 6

64
 228
 0
 435
 144
 12

60
 742
 0
 1149
 144
 14



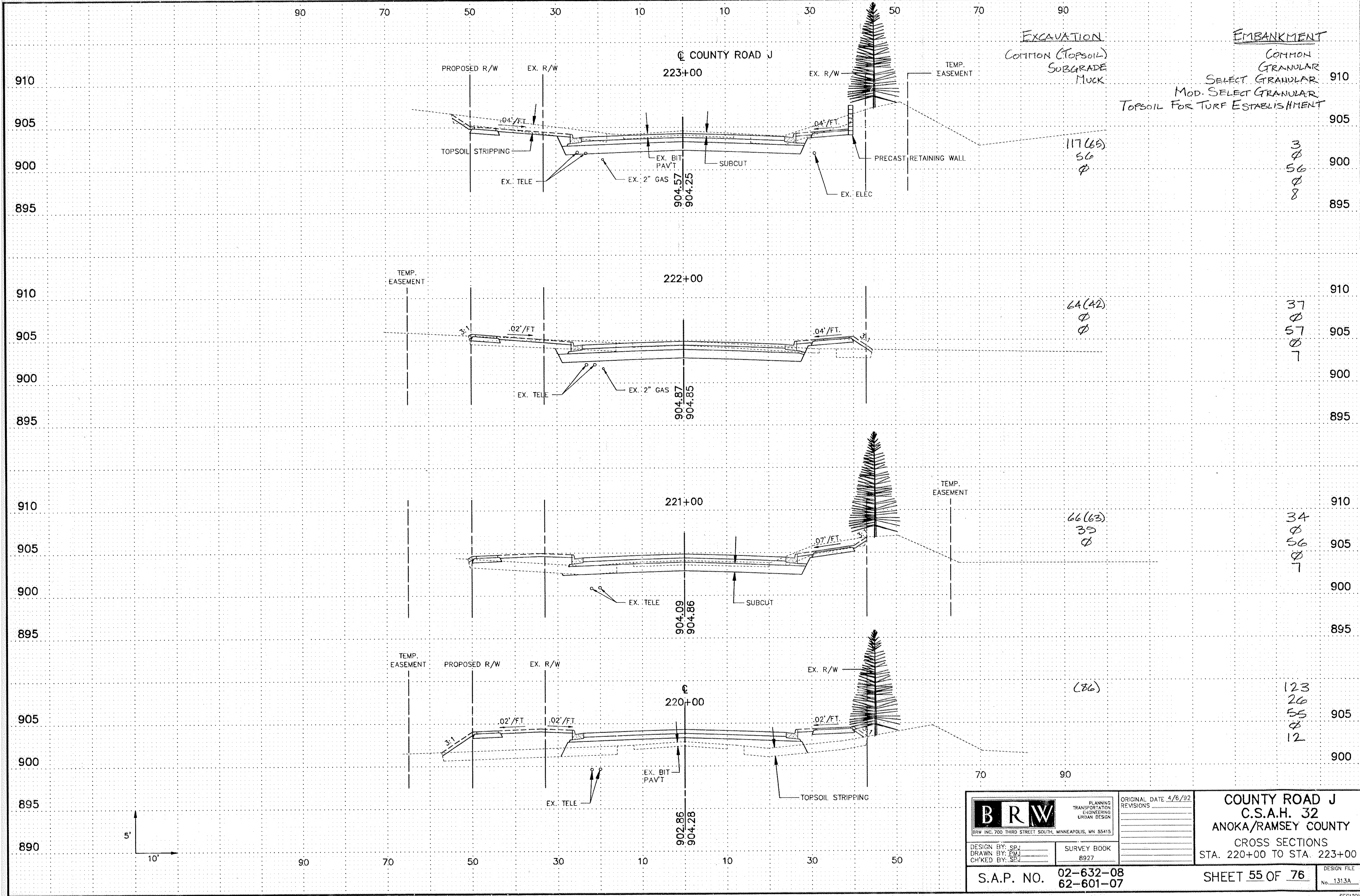
	PLANNING TRANSPORTATION ENGINEERING URBAN DESIGN	ORIGINAL DATE 4/6/92	COUNTY ROAD J C.S.A.H. 32 ANOKA/RAMSEY COUNTY CROSS SECTIONS STA. 213+00 TO STA. 215+00
	DESIGN BY: SPJ DRAWN BY: PMJ CHECKED BY: SPJ	SURVEY BOOK 8927	
S.A.P. NO. 02-632-08 62-601-07		SHEET 53 OF 76	



 BRW INC. 700 THIRD STREET SOUTH, MINNEAPOLIS, MN 55415	PLANNING TRANSPORTATION ENGINEERING URBAN DESIGN	ORIGINAL DATE 4/6/92 REVISIONS:	COUNTY ROAD J C.S.A.H. 32 ANOKA/RAMSEY COUNTY CROSS SECTIONS STA. 216+00 TO STA. 219+00
	DESIGN BY: SPJ DRAWN BY: EMJ CHECKED BY: SPJ	SURVEY BOOK 8927	

SHEET 54 OF 76

DESIGN FILE No. 1313A



EXCAVATION:
COMMON (TOPSOIL)
SUBGRADE
MUCK.

EMBANKMENT
COMMON
GRANULAR
SELECT GRANULAR
MOD. SELECT GRANULAR
TOPSOIL FOR TURF ESTABLISHMENT

117(65)
56
φ

3
φ
56
φ
8

64(42)
φ
φ

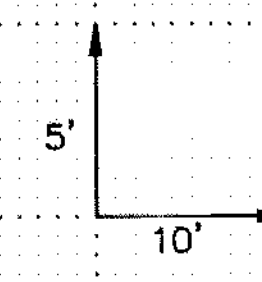
37
φ
57
φ
7

66(63)
39
φ

34
φ
56
φ
7

(86)

123
26
55
φ
12



DESIGN BY: SPJ
DRAWN BY: EMJ
CHK'D BY: SPJ

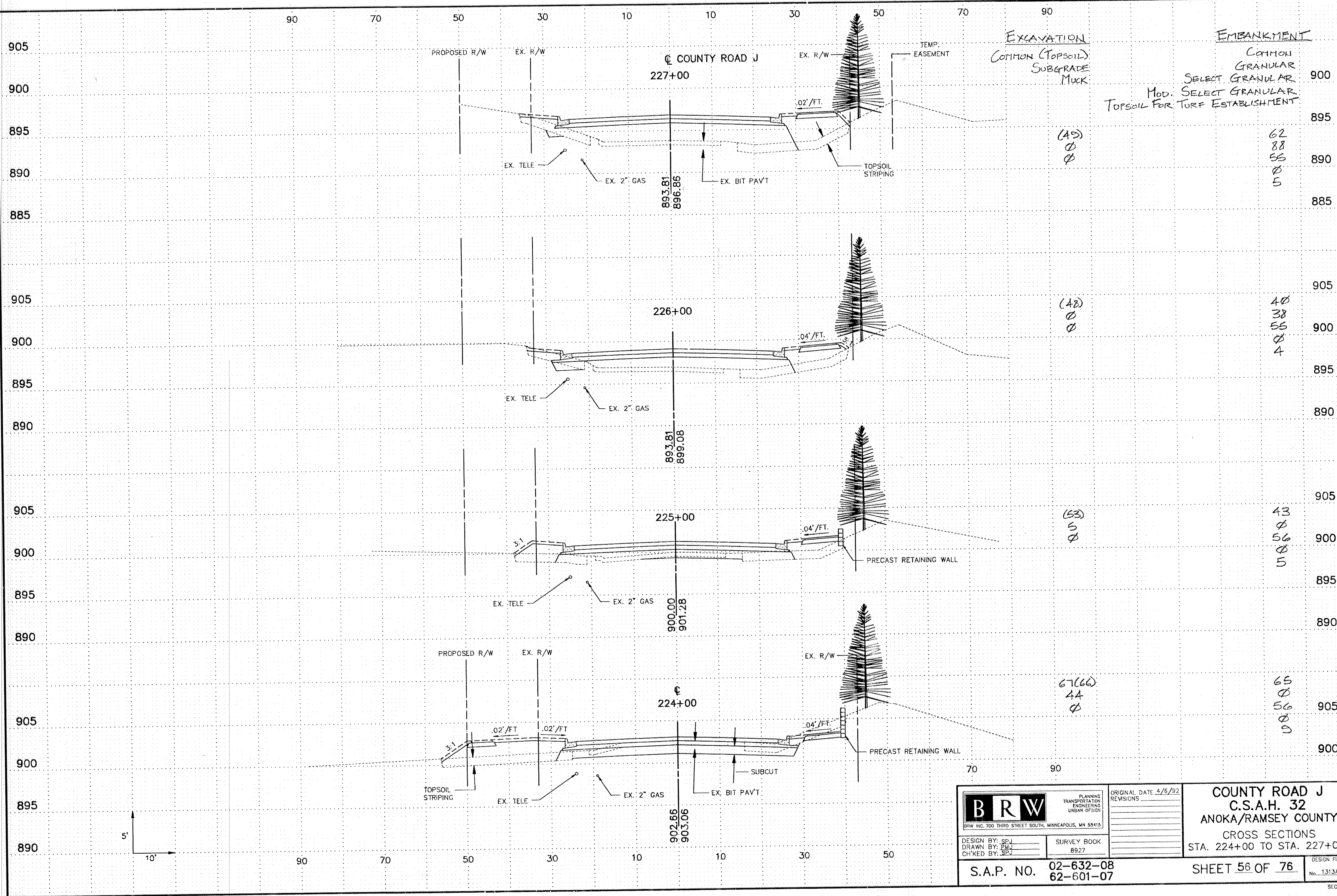
SURVEY BOOK
8927

ORIGINAL DATE 4/6/92
REVISIONS

COUNTY ROAD J
C.S.A.H. 32
ANOKA/RAMSEY COUNTY
CROSS SECTIONS
STA. 220+00 TO STA. 223+00

S.A.P. NO. 02-632-08
62-601-07

SHEET 55 OF 76
No. 1313A



(49)
Ø
Ø

62
88
55
Ø
5

(48)
Ø
Ø

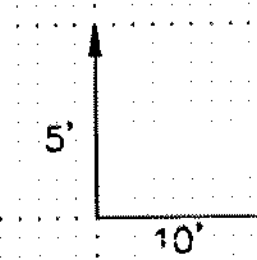
40
38
55
Ø
4

(53)
5
Ø

43
Ø
56
Ø
5

67(66)
44
Ø

65
Ø
56
Ø
5



BRW
BRW INC. 700 THIRD STREET SOUTH, MINNEAPOLIS, MN 55415

PLANNING
TRANSPORTATION
ENGINEERING
URBAN DESIGN

DESIGN BY: SPJ
DRAWN BY: BML
CHK'D BY: SPJ

SURVEY BOOK
8927

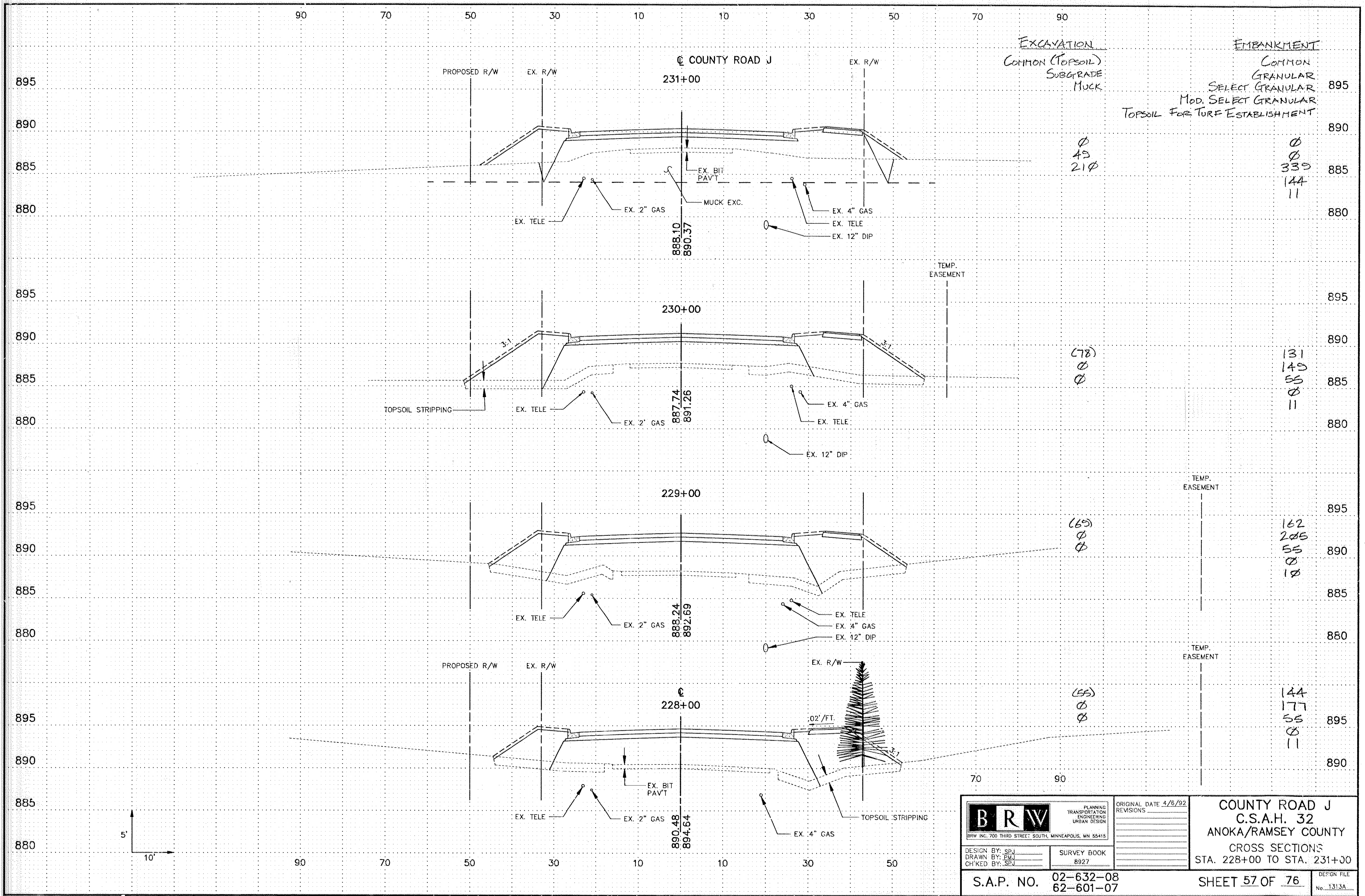
ORIGINAL DATE	4/6/92
REVISIONS	

COUNTY ROAD J
C.S.A.H. 32
ANOKA/RAMSEY COUNTY
CROSS SECTIONS
STA. 224+00 TO STA. 227+00

S.A.P. NO. 02-632-08
62-601-07

SHEET 56 OF 76

DESIGN FILE
No. 1313A



EXCAVATION
 COMMON (TOPSOIL)
 SUBGRADE
 MUCK

EMBANKMENT
 COMMON
 GRANULAR
 SELECT GRANULAR
 MOD. SELECT GRANULAR
 TOPSOIL FOR TURF ESTABLISHMENT

Ø
 45
 21Ø

Ø
 335
 144
 11

(78)
 Ø
 Ø

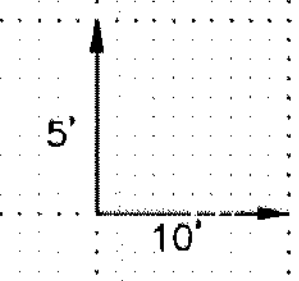
131
 145
 55
 Ø
 11

(65)
 Ø
 Ø

162
 205
 55
 Ø
 1Ø

(55)
 Ø
 Ø

144
 171
 55
 Ø
 11



 <small>BRW INC. 700 THIRD STREET SOUTH, MINNEAPOLIS, MN 55415</small>	<small>PLANNING TRANSPORTATION ENGINEERING URBAN DESIGN</small>	<small>ORIGINAL DATE 4/6/92 REVISIONS</small>	COUNTY ROAD J C.S.A.H. 32 ANOKA/RAMSEY COUNTY CROSS SECTIONS STA. 228+00 TO STA. 231+00
	<small>DESIGN BY: SPJ DRAWN BY: PMJ CHECKED BY: SPJ</small>	<small>SURVEY BOOK 8927</small>	
S.A.P. NO. 02-632-08 62-601-07		SHEET 57 OF 76	

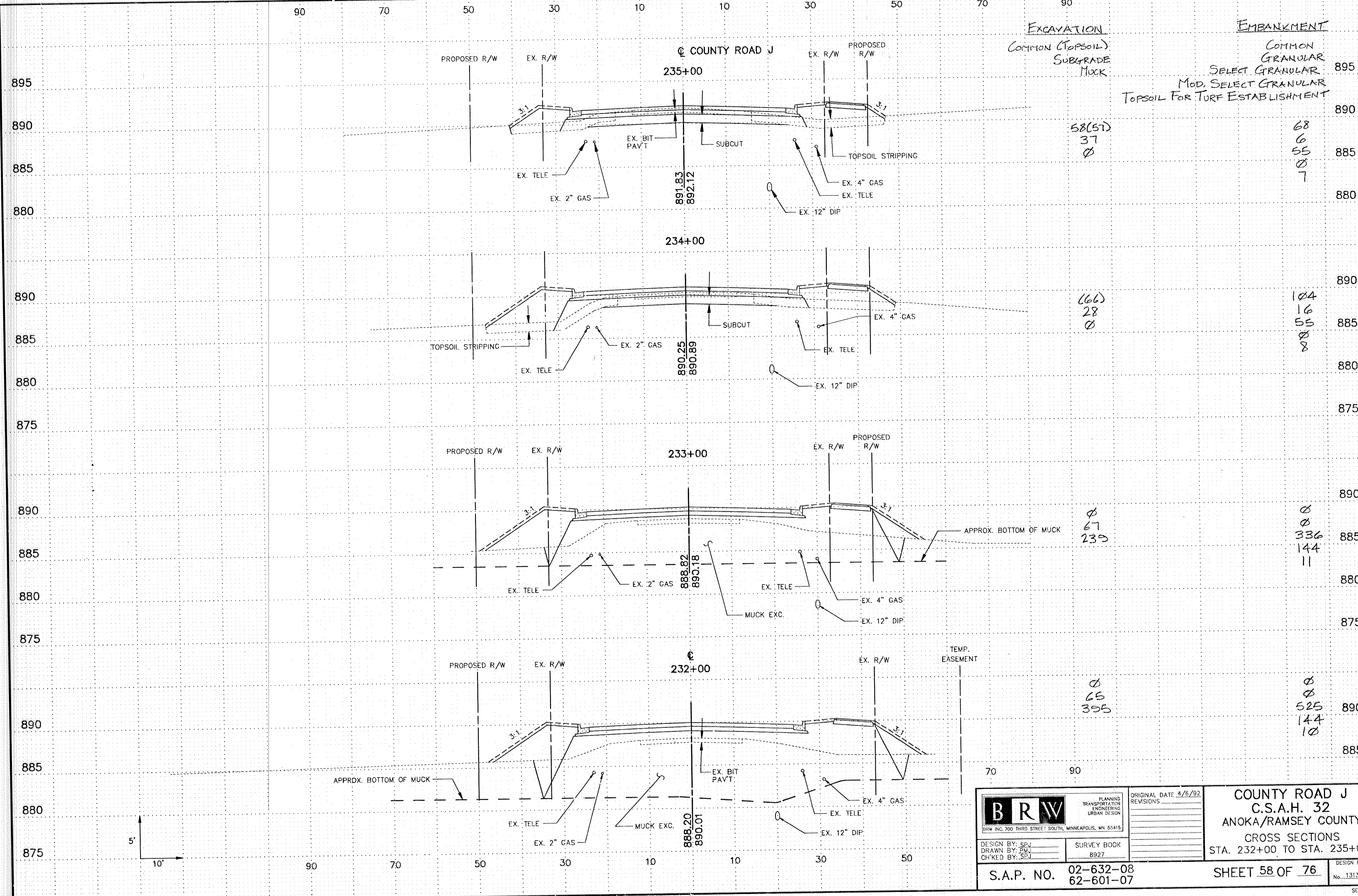
90 70 50 30 10 10 30 50 70 90

EXCAVATION
COMMON (TOPSOIL)
SUBGRADE
MUCK

EMBANKMENT
COMMON
GRANULAR
SELECT GRANULAR
MOD. SELECT GRANULAR
TOPSOIL FOR TURF ESTABLISHMENT

895
890
885
880
875
890
885
880
875
890
885
880
875
890
885
880
875

895
890
885
880
875
890
885
880
875
890
885
880
875
890
885
880
875



58(57)
37
Ø

(66)
28
Ø

Ø
67
239

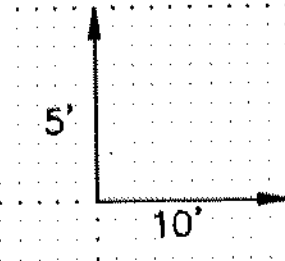
Ø
65
355

68
6
55
Ø
7

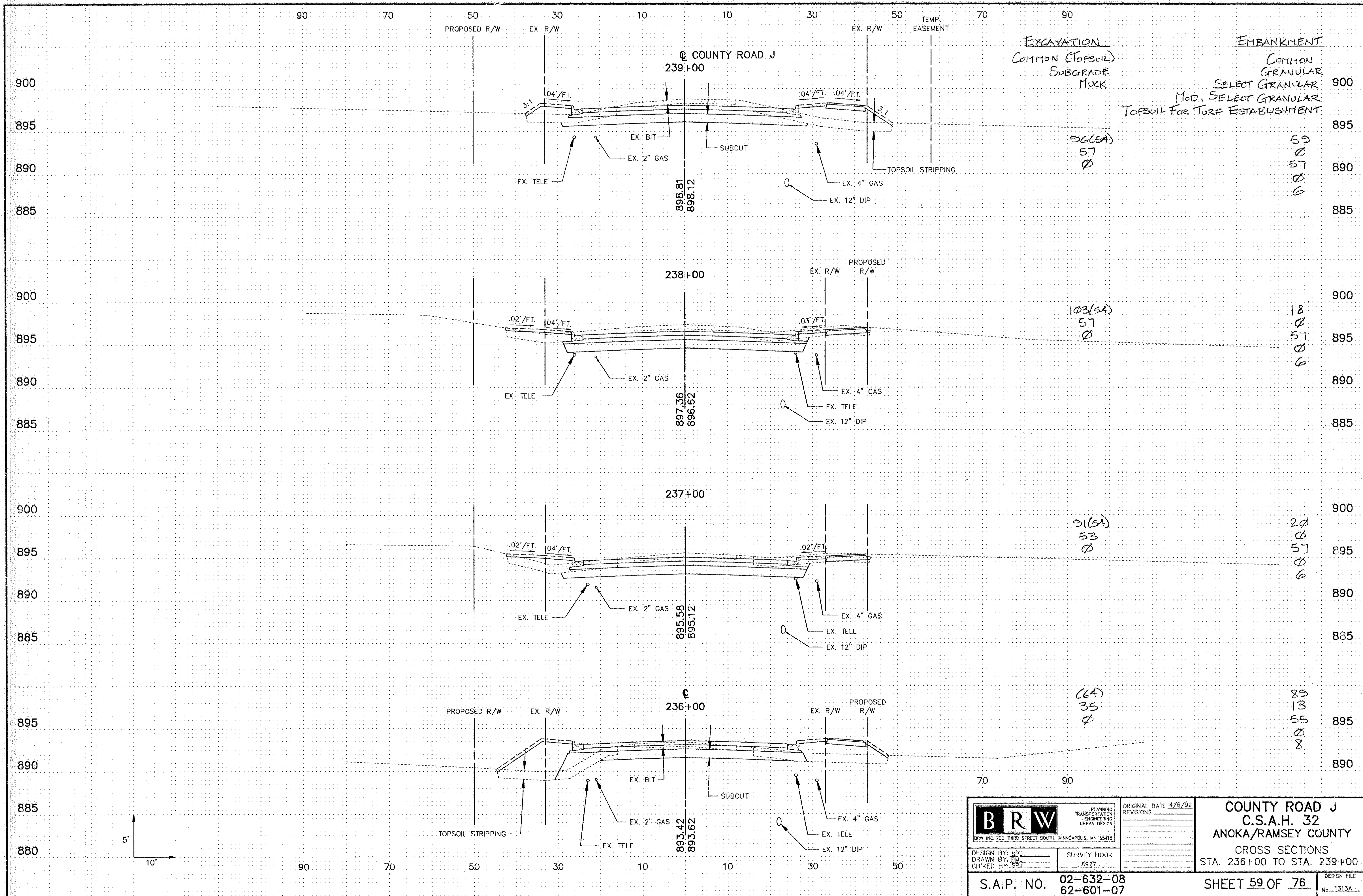
104
16
55
Ø
8

Ø
Ø
336
144
11

Ø
Ø
525
144
10

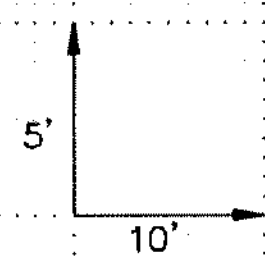


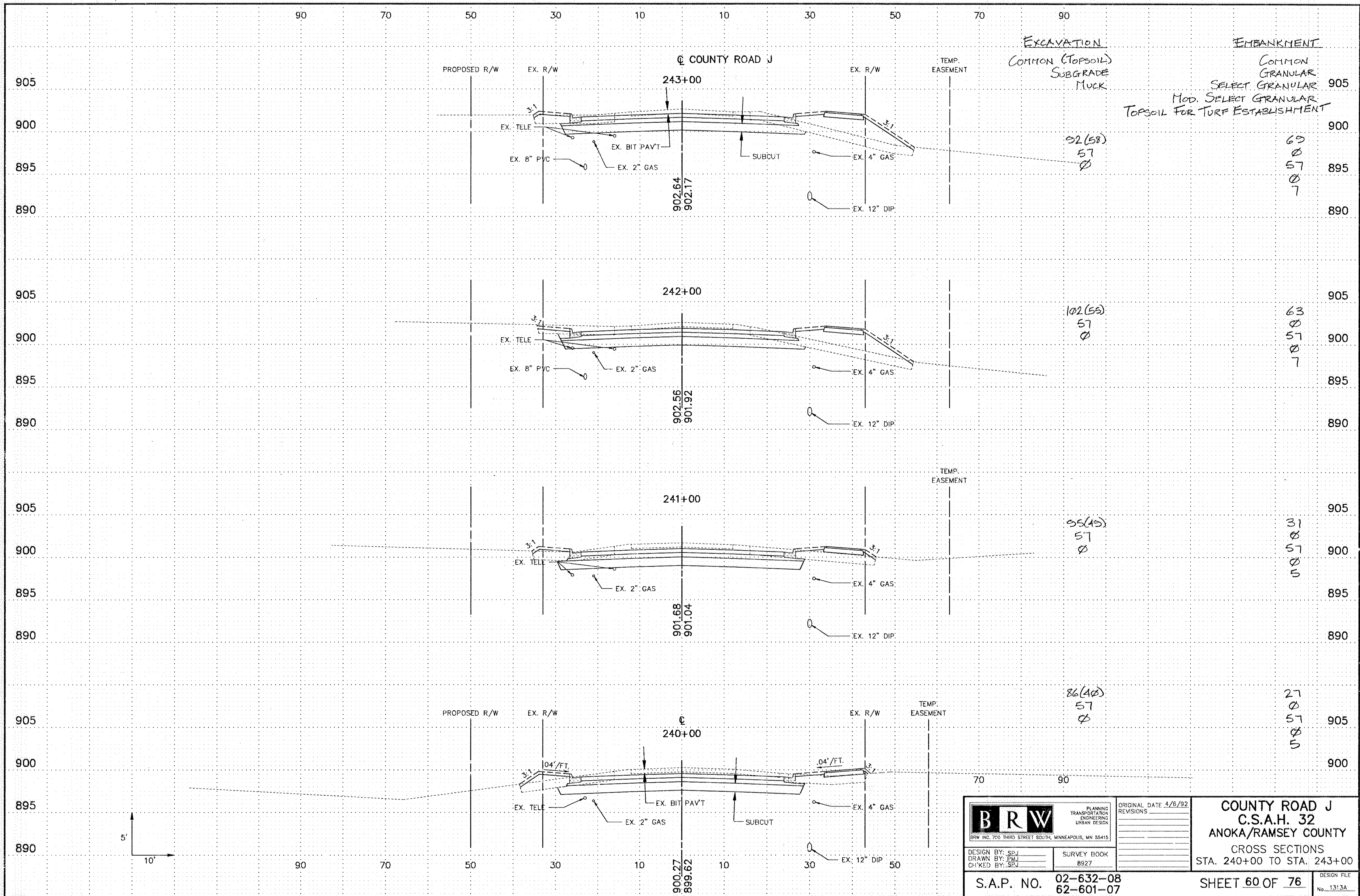
<p>BRW INC. 700 THIRD STREET SOUTH, MINNEAPOLIS, MN 55415</p>	<p>PLANNING TRANSPORTATION ENGINEERING URBAN DESIGN</p>	<p>ORIGINAL DATE 4/8/92 REVISIONS</p>	<p>COUNTY ROAD J C.S.A.H. 32 ANOKA/RAMSEY COUNTY CROSS SECTIONS STA. 232+00 TO STA. 235+00</p>
	<p>DESIGN BY: SDJ DRAWN BY: PMJ CHK'D BY: SDJ</p>	<p>SURVEY BOOK 8927</p>	
<p>SHEET 58 OF 76</p>			<p>DESIGN FILE No. 1313A</p>



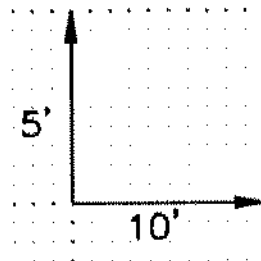
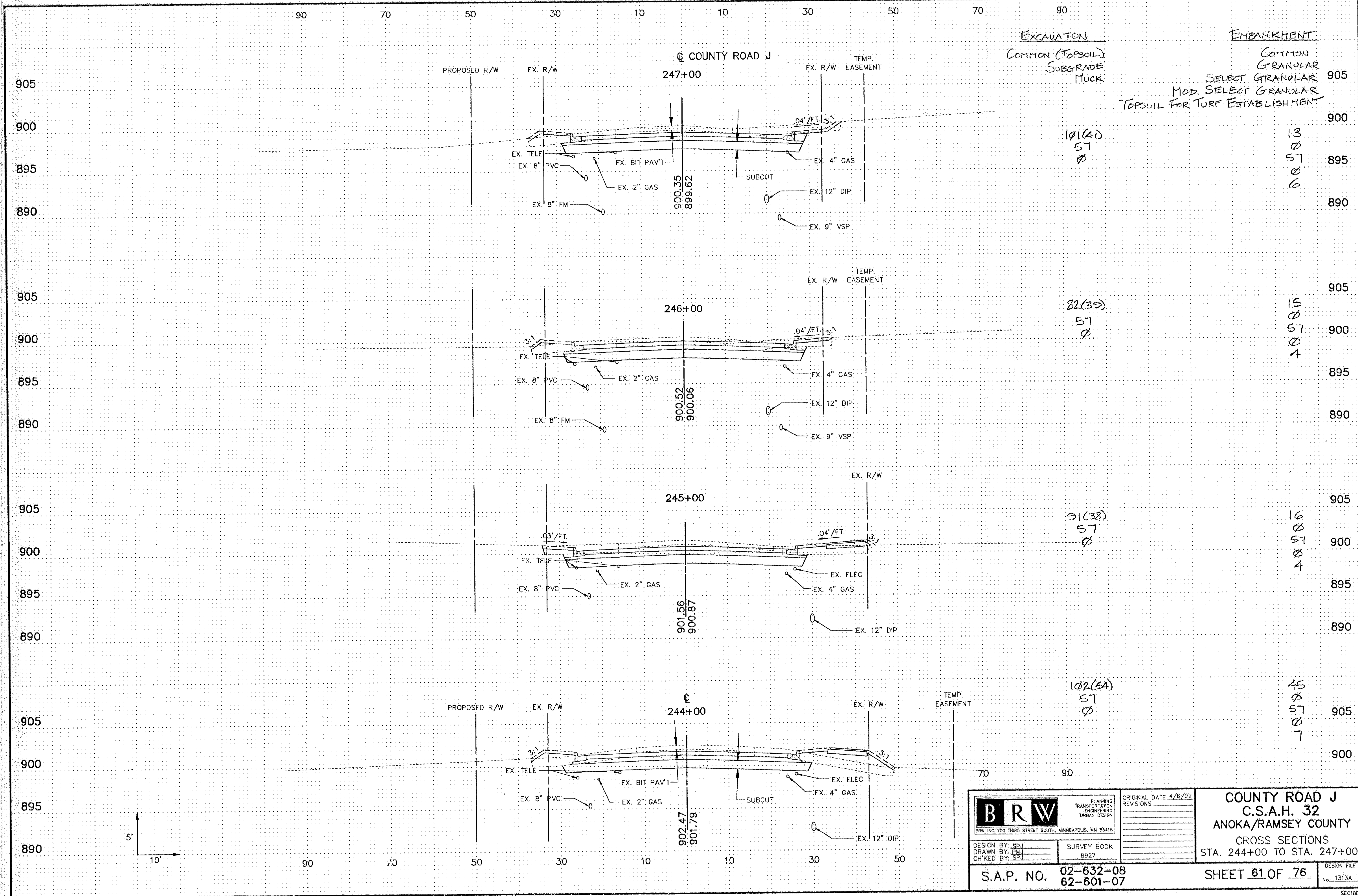
Station	Excavation	Embankment
239+00	56(SA) 57 Ø	59 Ø 57 Ø 6
238+00	103(SA) 57 Ø	18 Ø 57 Ø 6
237+00	91(SA) 53 Ø	2Ø Ø 57 Ø 6
236+00	(6A) 35 Ø	89 13 55 Ø 8

 BRW INC. 700 THIRD STREET SOUTH, MINNEAPOLIS, MN 55415	PLANNING TRANSPORTATION ENGINEERING URBAN DESIGN	ORIGINAL DATE 4/6/92 REVISIONS	COUNTY ROAD J C.S.A.H. 32 ANOKA/RAMSEY COUNTY CROSS SECTIONS STA. 236+00 TO STA. 239+00
	DESIGN BY: SPJ DRAWN BY: PML CHECKED BY: SEV	SURVEY BOOK 8927	
S.A.P. NO. 02-632-08 62-601-07		SHEET 59 OF 76	

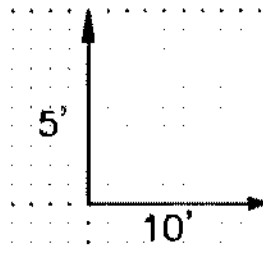
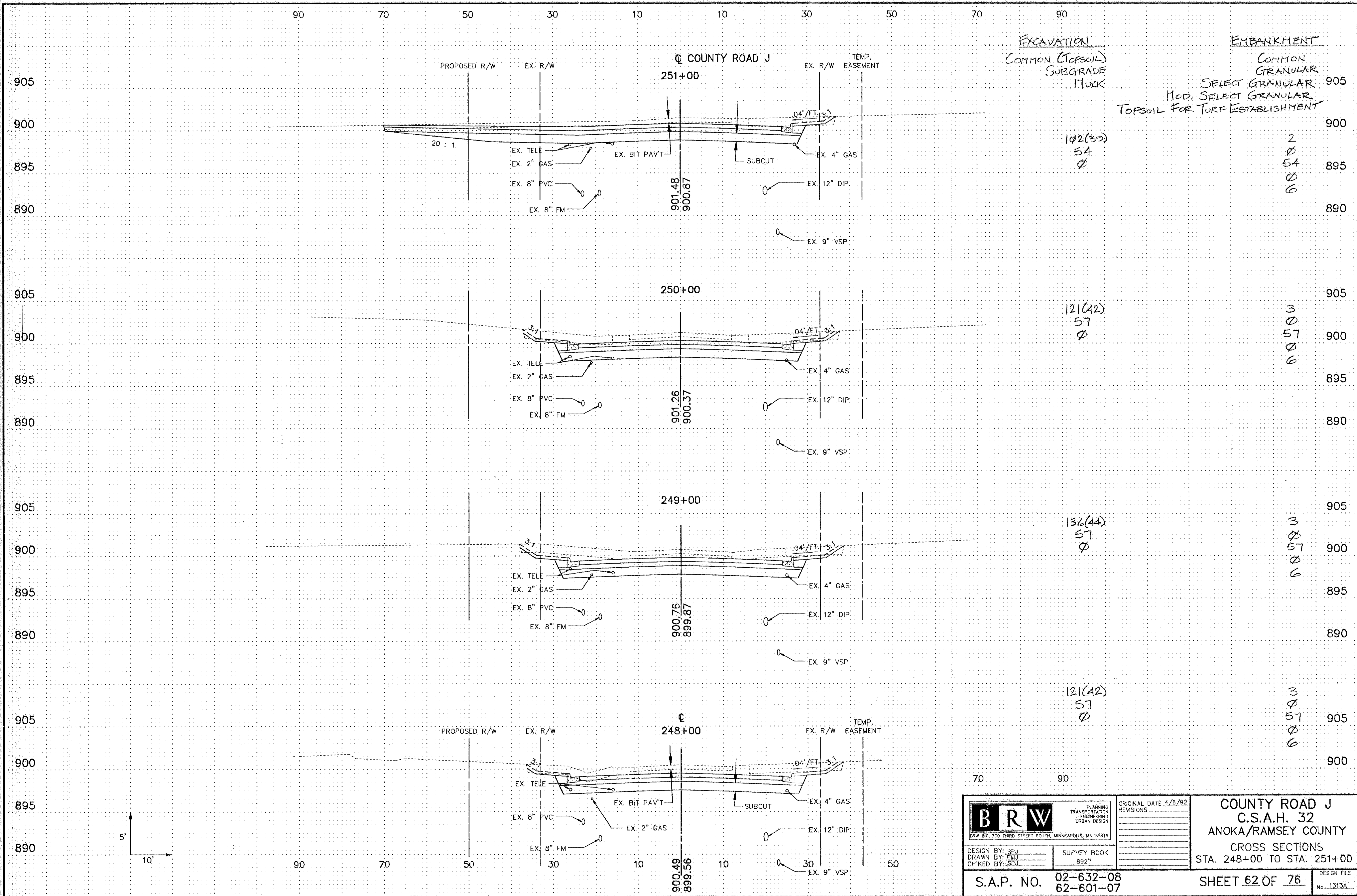




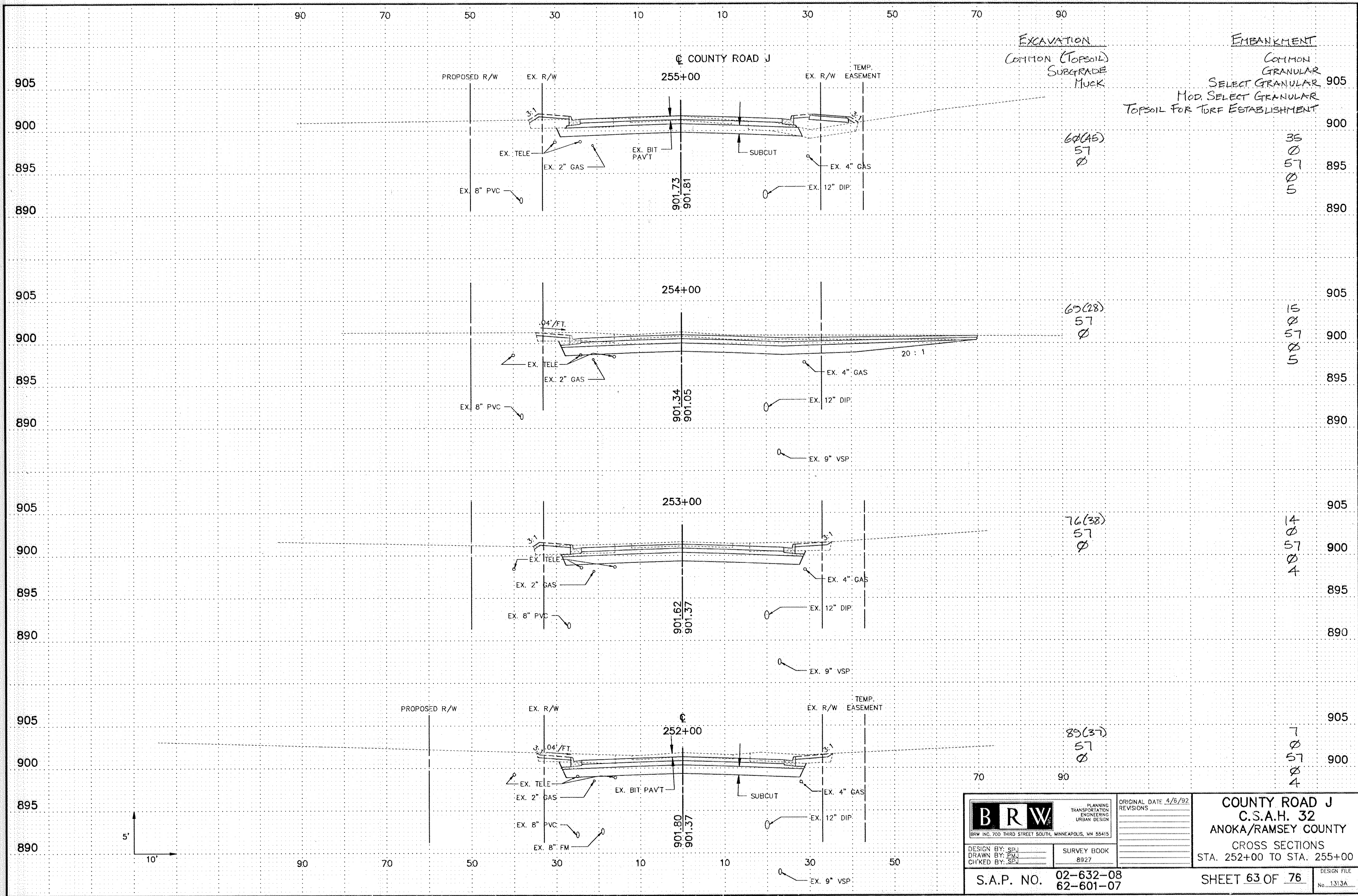
BRW <small>BRW INC. 700 THIRD STREET SOUTH, MINNEAPOLIS, MN 55415</small>	PLANNING TRANSPORTATION ENGINEERING URBAN DESIGN	ORIGINAL DATE 4/6/92	COUNTY ROAD J C.S.A.H. 32 ANOKA/RAMSEY COUNTY CROSS SECTIONS STA. 240+00 TO STA. 243+00
	DESIGN BY: SPJ DRAWN BY: PMJ CHECKED BY: SPJ	SURVEY BOOK 8927	
S.A.P. NO. 02-632-08 62-601-07		SHEET 60 OF 76	
		DESIGN FILE No. 1313A	



<p>BRW INC. 700 THIRD STREET SOUTH, MINNEAPOLIS, MN 55415</p>	<p>PLANNING TRANSPORTATION ENGINEERING URBAN DESIGN</p>	<p>ORIGINAL DATE 4/8/92</p> <p>REVISIONS</p>	<p>COUNTY ROAD J C.S.A.H. 32 ANOKA/RAMSEY COUNTY CROSS SECTIONS STA. 244+00 TO STA. 247+00</p>
	<p>DESIGN BY: SPJ DRAWN BY: PJJ CHECKED BY: SPJ</p>	<p>SURVEY BOOK 8927</p>	
<p>S.A.P. NO. 02-632-08 62-601-07</p>		<p>SHEET 61 OF 76</p>	



 BRW INC. 700 THIRD STREET SOUTH, MINNEAPOLIS, MN 55415	PLANNING TRANSPORTATION ENGINEERING URBAN DESIGN	ORIGINAL DATE 4/8/92 REVISIONS	COUNTY ROAD J C.S.A.H. 32 ANOKA/RAMSEY COUNTY CROSS SECTIONS STA. 248+00 TO STA. 251+00
	DESIGN BY: SPJ DRAWN BY: TMJ CHECKED BY: SPJ	SURVEY BOOK 8927	
S.A.P. NO. 02-632-08 62-601-07		SHEET 62 OF 76	



EXCAVATION
COMMON (TOPSOIL)
SUBGRADE
MUCK

EMBANKMENT
COMMON
GRANULAR
SELECT GRANULAR
MOD. SELECT GRANULAR
TOPSOIL FOR TURF ESTABLISHMENT

60(45)
57
Ø

35
Ø
57
Ø
5

65(28)
57
Ø

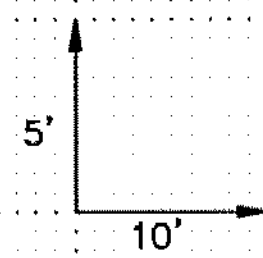
15
Ø
57
Ø
5

76(38)
57
Ø

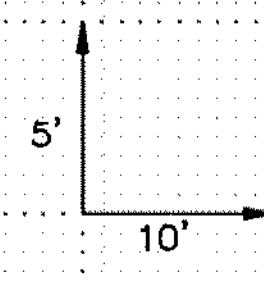
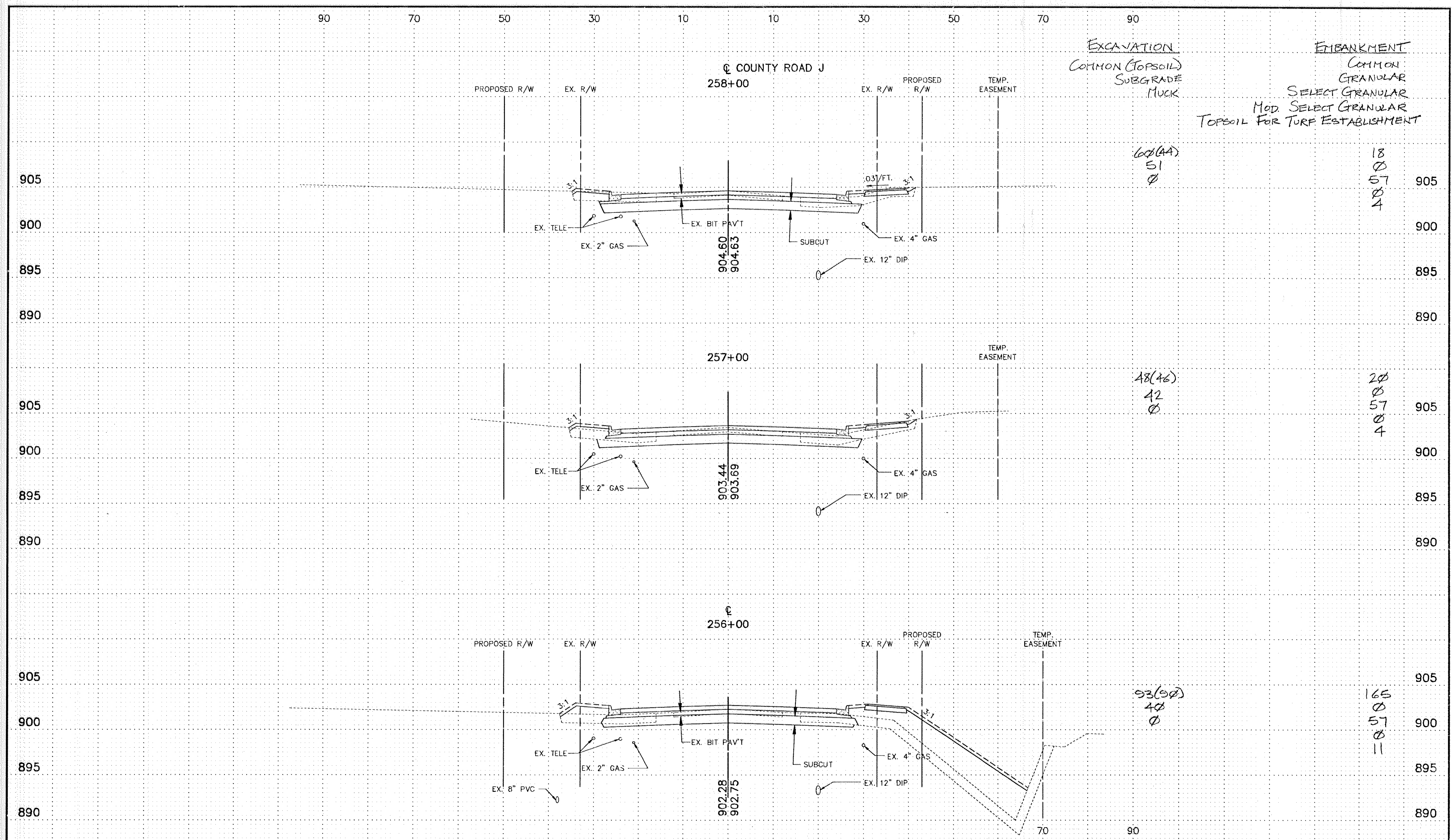
14
Ø
57
Ø
4

85(37)
57
Ø

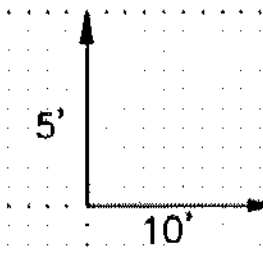
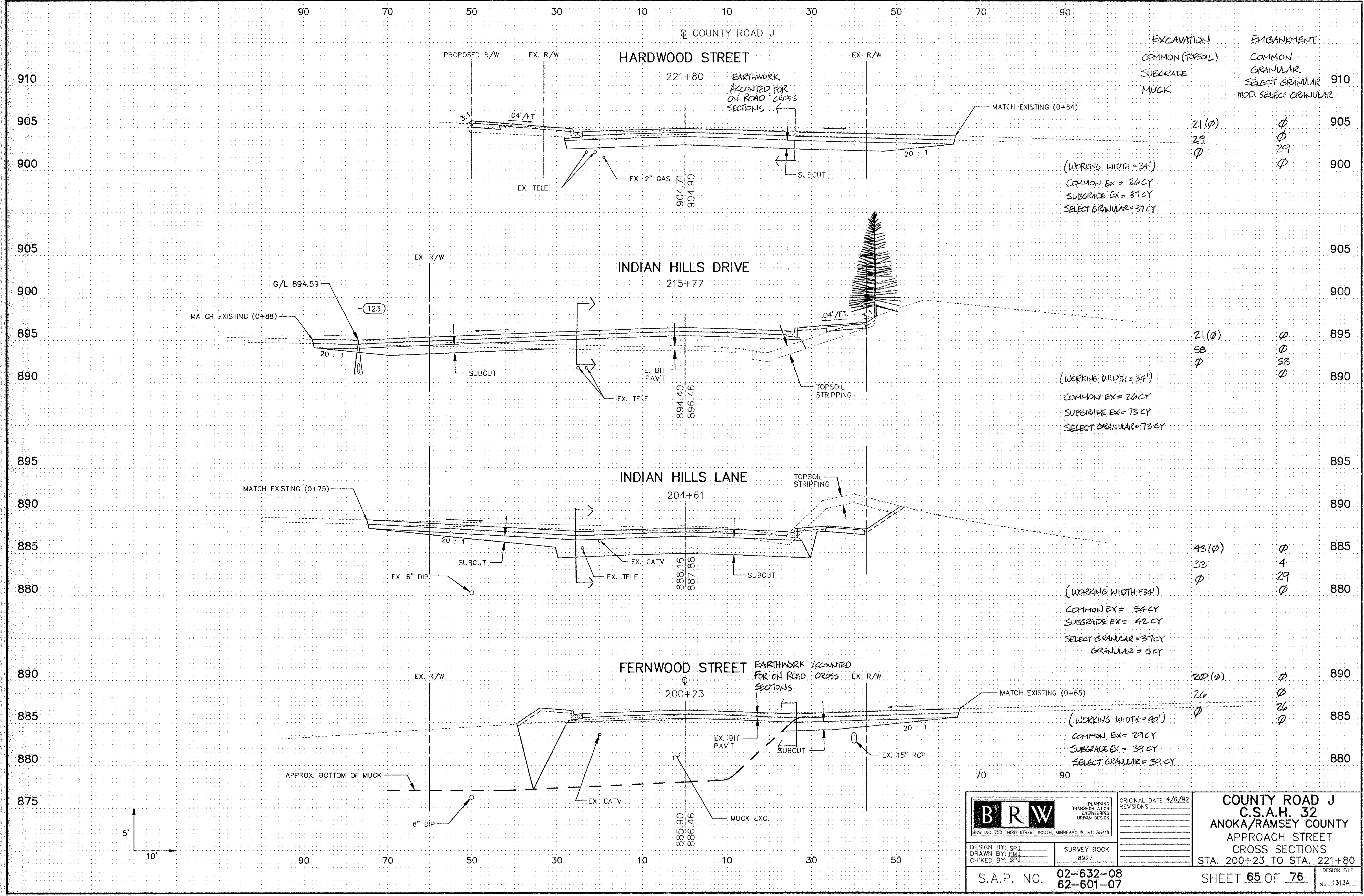
7
Ø
57
Ø
4



<p>BRW INC. 700 THIRD STREET SOUTH, MINNEAPOLIS, MN 55415</p>	<p>PLANNING TRANSPORTATION ENGINEERING URBAN DESIGN</p>	<p>ORIGINAL DATE 4/8/92 REVISIONS</p>	<p>COUNTY ROAD J C.S.A.H. 32 ANOKA/RAMSEY COUNTY CROSS SECTIONS STA. 252+00 TO STA. 255+00</p>
	<p>DESIGN BY: SPJ DRAWN BY: FMJ CHK'D BY: SPJ</p>	<p>SURVEY BOOK 8927</p>	
<p>S.A.P. NO. 02-632-08 62-601-07</p>		<p>SHEET 63 OF 76</p>	



 BRW INC. 700 THIRD STREET SOUTH, MINNEAPOLIS, MN 55415	PLANNING TRANSPORTATION ENGINEERING URBAN DESIGN	ORIGINAL DATE 4/5/92 REVISIONS	COUNTY ROAD J C.S.A.H. 32 ANOKA/RAMSEY COUNTY CROSS SECTIONS STA. 256+00 TO STA. 258+00
	DESIGN BY: SPJ DRAWN BY: EMJ CHECKED BY: SPJ	SURVEY BOOK 8927	
S.A.P. NO. 02-632-08 62-601-07		SHEET 64 OF 76	



 <small>BRW INC. 700 THIRD STREET SOUTH, MINNEAPOLIS, MN 55415</small>	<small>PLANNING TRANSPORTATION ENGINEERING URBAN DESIGN</small>	<small>ORIGINAL DATE 4/8/92 REVISIONS</small>	COUNTY ROAD J C.S.A.H. 32 ANOKA/RAMSEY COUNTY APPROACH STREET CROSS SECTIONS STA. 200+23 TO STA. 221+80
	<small>DESIGN BY: SPJ DRAWN BY: ENJ CHECKED BY: SPJ</small>	<small>SURVEY BOOK 8927</small>	
S.A.P. NO. 02-632-08 62-601-07		SHEET 65 OF 76	

90 70 50 30 10 10 30 50 70 90

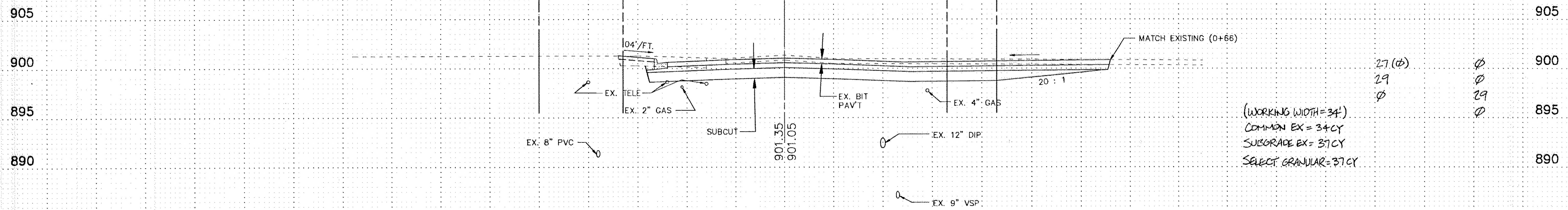
COUNTY ROAD J

SAINT ALBANS STREET

253+97

EXCAVATION
COMMON (TOPSOIL)
SUBGRADE
MUCK

EMBANKMENT
COMMON
GRANULAR
SELECT GRANULAR
MOD. SELECT GRANULAR

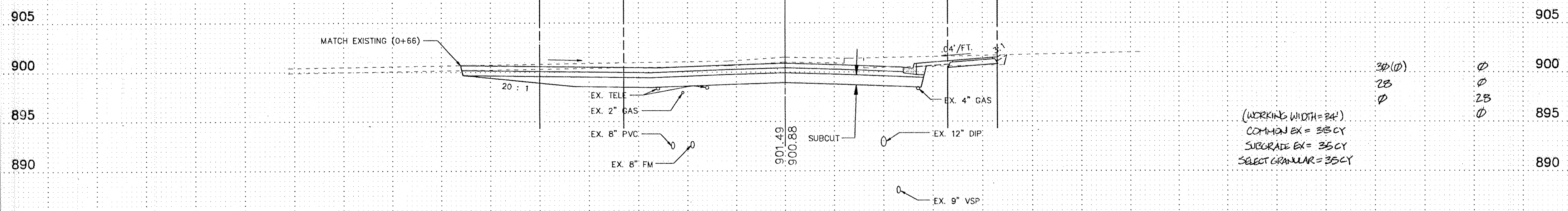


(WORKING WIDTH=34')
COMMON EX = 34 CY
SUBGRADE EX = 37 CY
SELECT GRANULAR = 37 CY

27 (Ø)	Ø	905
29	Ø	900
Ø	29	895
Ø	Ø	890

WOODRIDGE LANE

251+02

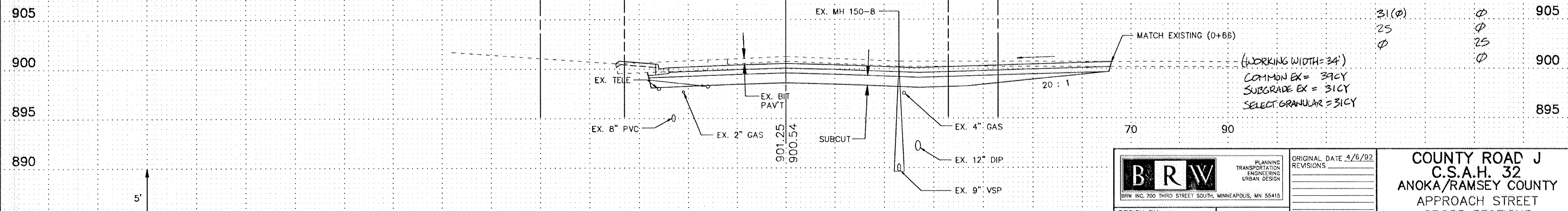


(WORKING WIDTH=34')
COMMON EX = 38 CY
SUBGRADE EX = 35 CY
SELECT GRANULAR = 35 CY

30 (Ø)	Ø	905
28	Ø	900
Ø	28	895
Ø	Ø	890

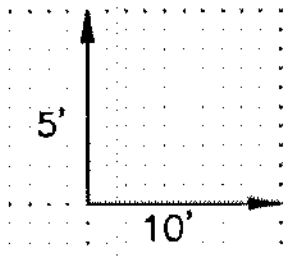
GROTTO STREET

245+30

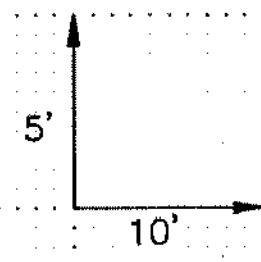
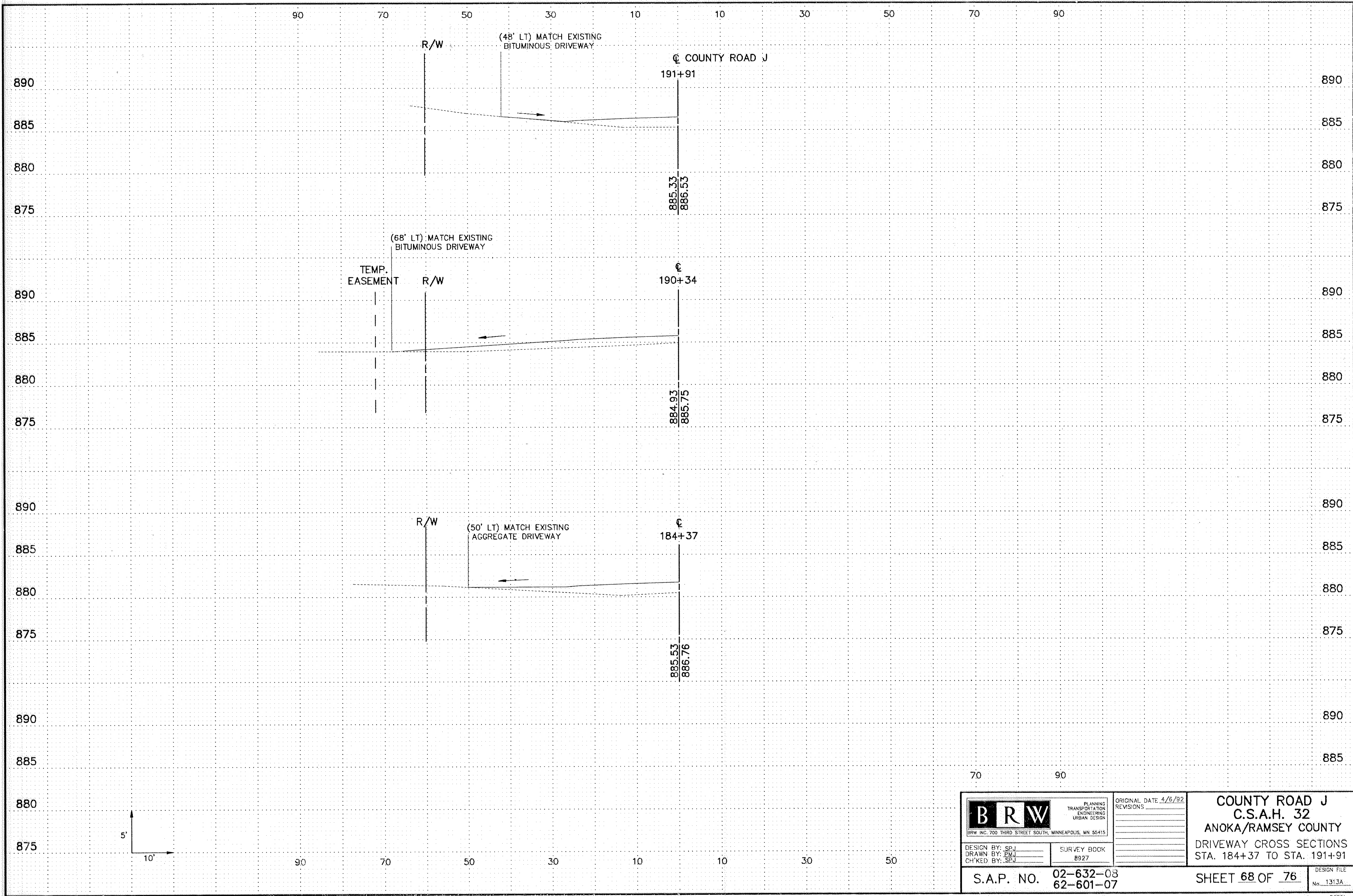


(WORKING WIDTH=34')
COMMON EX = 39 CY
SUBGRADE EX = 31 CY
SELECT GRANULAR = 31 CY

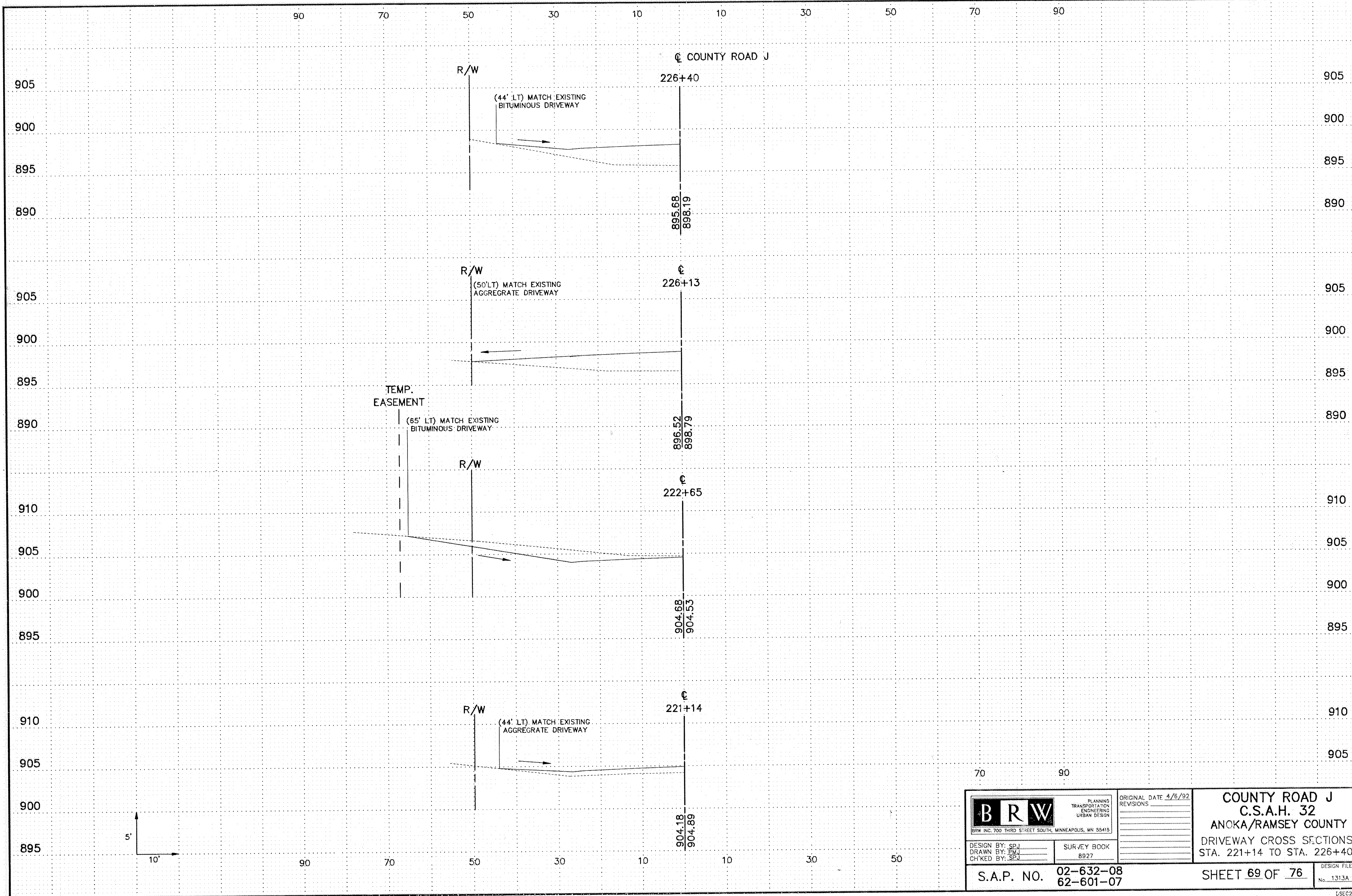
31 (Ø)	Ø	905
25	Ø	900
Ø	25	895
Ø	Ø	890



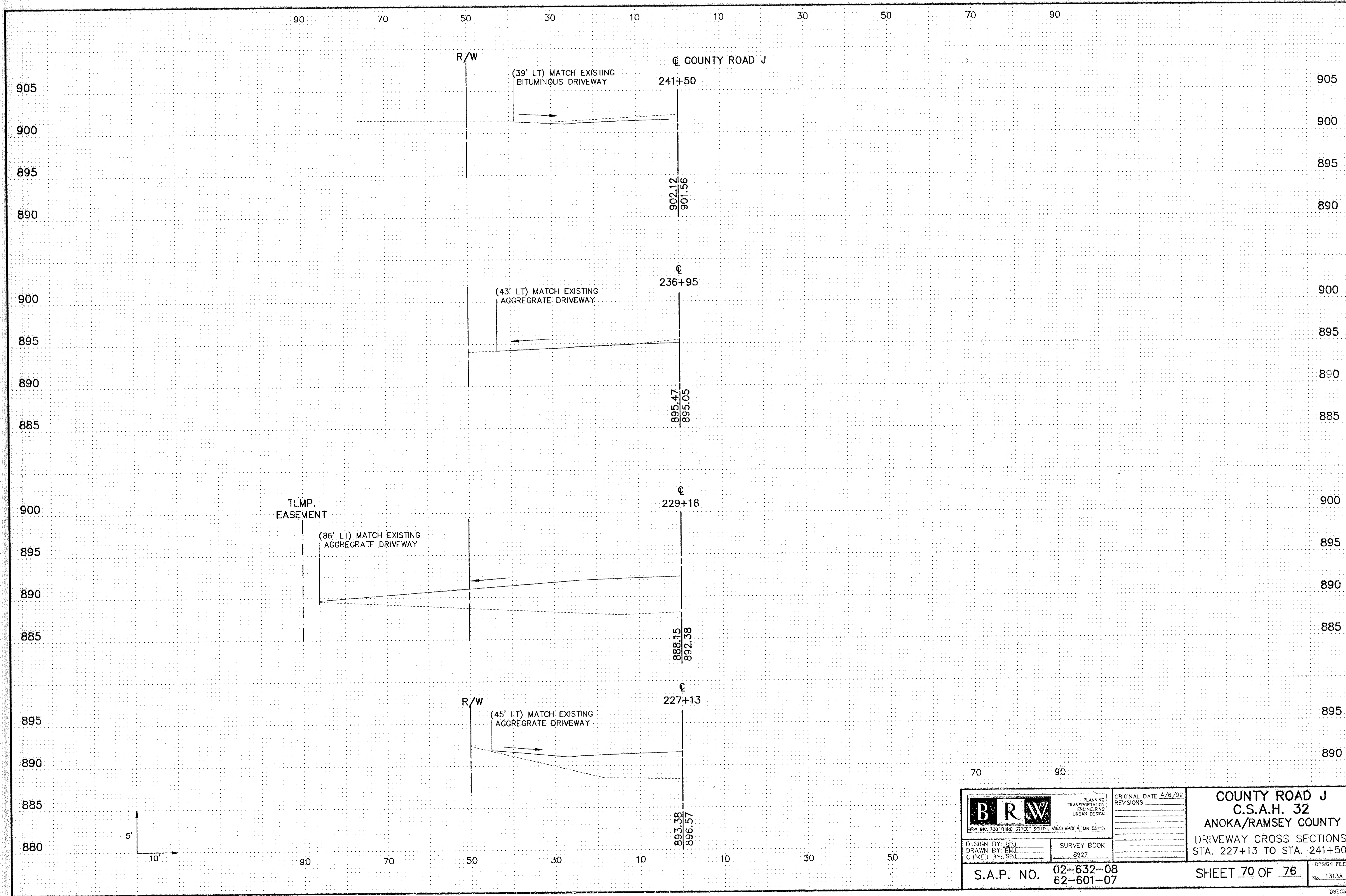
<p>BRW INC. 700 THIRD STREET SOUTH, MINNEAPOLIS, MN 55415</p>	<p>PLANNING TRANSPORTATION ENGINEERING URBAN DESIGN</p>	<p>ORIGINAL DATE 4/6/92 REVISIONS</p>	<p>COUNTY ROAD J C.S.A.H. 32 ANOKA/RAMSEY COUNTY APPROACH STREET CROSS SECTIONS STA. 245+30 TO STA. 253+97</p>
	<p>DESIGN BY: SPJ DRAWN BY: PMJ CHK'D BY: SPJ</p>	<p>SURVEY BOOK 8927</p>	
<p>S.A.P. NO. 02-632-08 62-601-07</p>		<p>SHEET 67 OF 76</p>	



 <small>BRW INC. 700 THIRD STREET SOUTH, MINNEAPOLIS, MN 55415</small>	<small>PLANNING TRANSPORTATION ENGINEERING URBAN DESIGN</small>	<small>ORIGINAL DATE 4/8/92</small> <small>REVISIONS</small>	COUNTY ROAD J C.S.A.H. 32 ANOKA/RAMSEY COUNTY DRIVEWAY CROSS SECTIONS STA. 184+37 TO STA. 191+91
	<small>DESIGN BY: SPJ</small> <small>DRAWN BY: EMJ</small> <small>CHECKED BY: SPJ</small>	<small>SURVEY BOOK</small> <small>8927</small>	
S.A.P. NO. 02-632-08 62-601-07		SHEET 68 OF 76	



 <small>BRW INC. 700 THIRD STREET SOUTH, MINNEAPOLIS, MN 55415</small>	<small>PLANNING TRANSPORTATION ENGINEERING URBAN DESIGN</small>	<small>ORIGINAL DATE 4/6/92</small> <small>REVISIONS</small>	COUNTY ROAD J C.S.A.H. 32 ANOKA/RAMSEY COUNTY DRIVEWAY CROSS SECTIONS STA. 221+14 TO STA. 226+40
	<small>DESIGN BY: SPJ</small> <small>DRAWN BY: EMJ</small> <small>CHK'ED BY: SPJ</small>	<small>SURVEY BOOK</small> <small>8927</small>	
S.A.P. NO. 02-632-08 62-601-07		SHEET 69 OF 76	



BRW
 BRW INC. 700 THIRD STREET SOUTH, MINNEAPOLIS, MN 55415
 PLANNING
 TRANSPORTATION
 ENGINEERING
 URBAN DESIGN

ORIGINAL DATE	4/6/92
REVISIONS	

DESIGN BY: SPJ
 DRAWN BY: EWJ
 CHECKED BY: SPJ

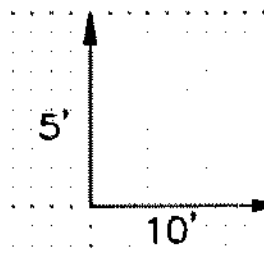
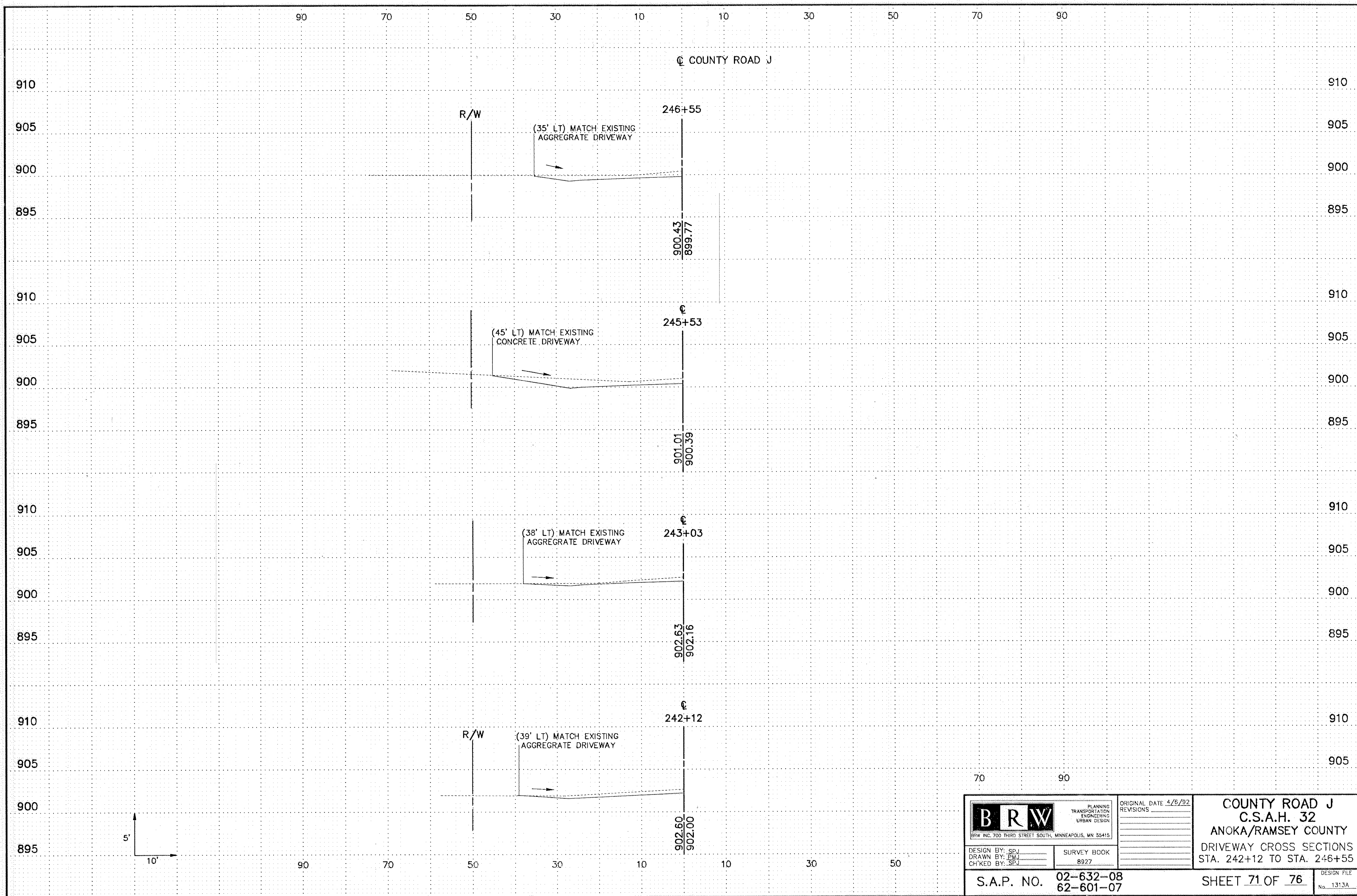
SURVEY BOOK
 8927

S.A.P. NO. 02-632-08
 62-601-07

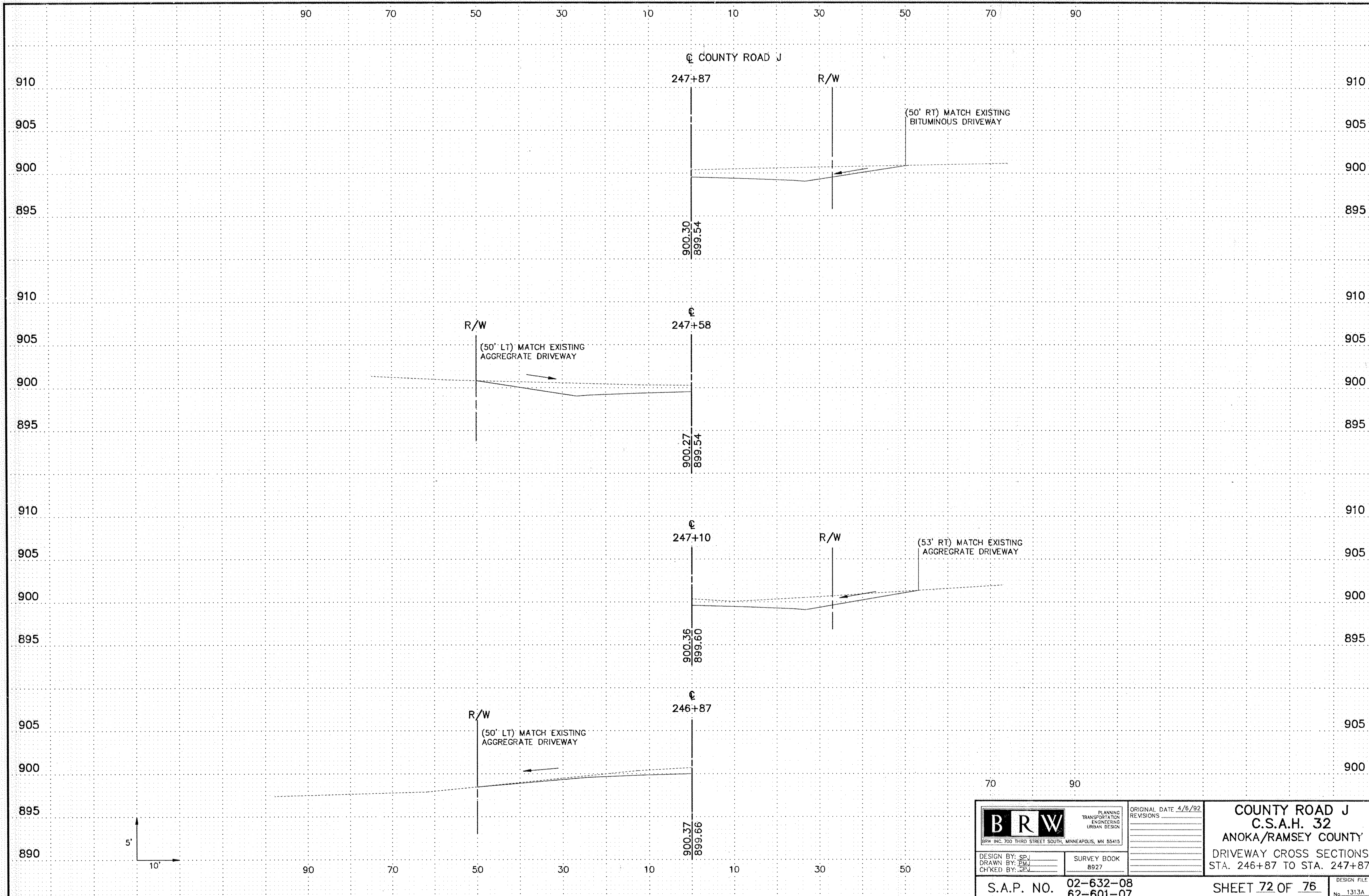
COUNTY ROAD J
C.S.A.H. 32
ANOKA/RAMSEY COUNTY
 DRIVEWAY CROSS SECTIONS
 STA. 227+13 TO STA. 241+50

SHEET 70 OF 76

DESIGN FILE
 No. 1313A



 BRW INC. 700 THIRD STREET SOUTH, MINNEAPOLIS, MN 55415	PLANNING TRANSPORTATION ENGINEERING URBAN DESIGN	ORIGINAL DATE 4/8/92 REVISIONS	COUNTY ROAD J C.S.A.H. 32 ANOKA/RAMSEY COUNTY DRIVEWAY CROSS SECTIONS STA. 242+12 TO STA. 246+55
	DESIGN BY: SPJ DRAWN BY: PWJ CHECKED BY: SPJ	SURVEY BOOK 8927	
S.A.P. NO. 02-632-08 62-601-07		SHEET 71 OF 76	



BRW
 BRW INC. 700 THIRD STREET SOUTH, MINNEAPOLIS, MN 55415
 DESIGN BY: SPJ
 DRAWN BY: EMJ
 CHECKED BY: SPJ

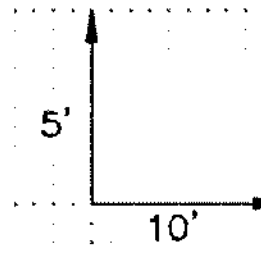
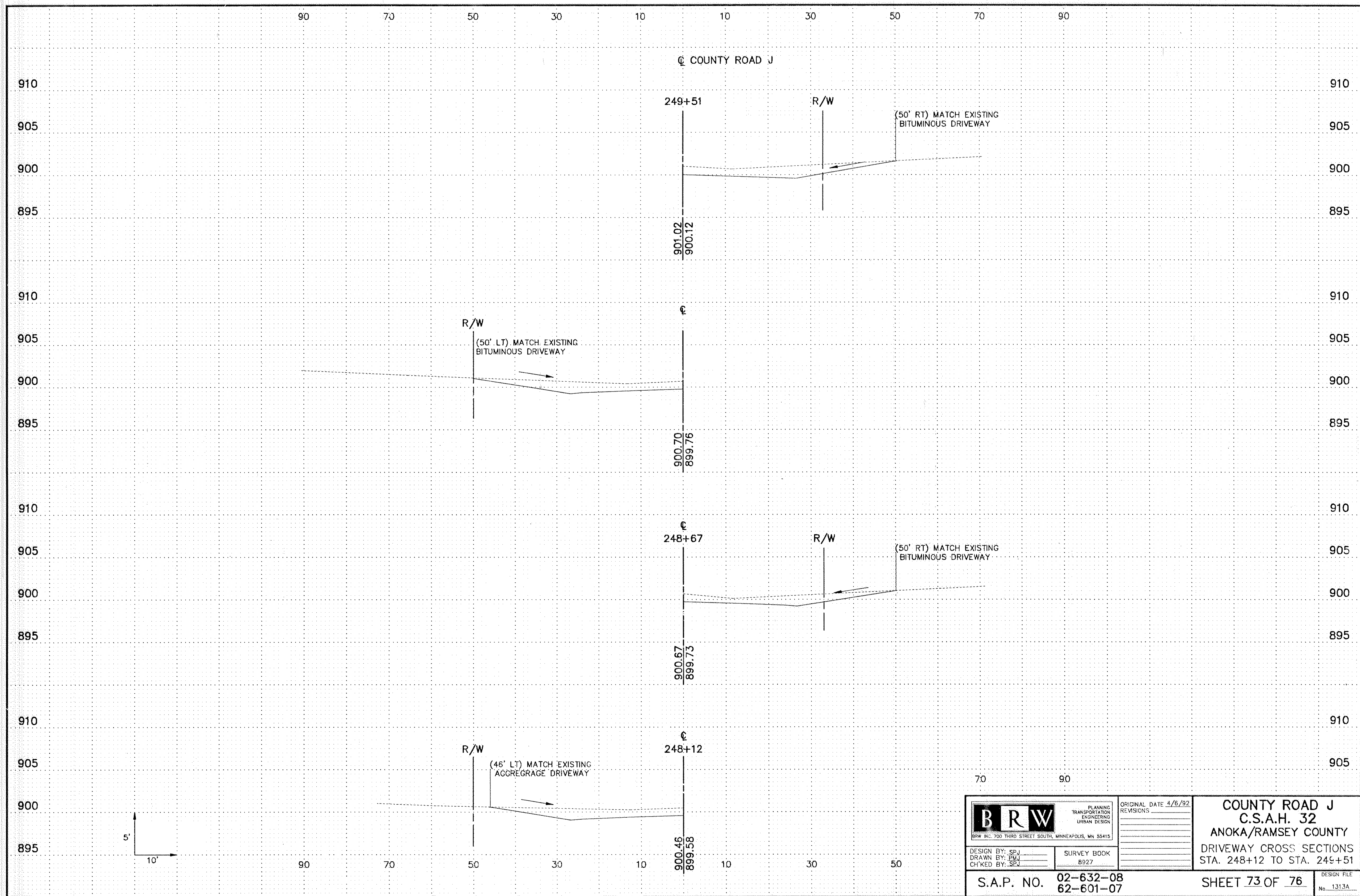
PLANNING	ORIGINAL DATE 4/6/92
TRANSPORTATION	REVISIONS
ENGINEERING	
URBAN DESIGN	
SURVEY BOOK	
8927	

COUNTY ROAD J
C.S.A.H. 32
ANOKA/RAMSEY COUNTY
 DRIVEWAY CROSS SECTIONS
 STA. 246+87 TO STA. 247+87

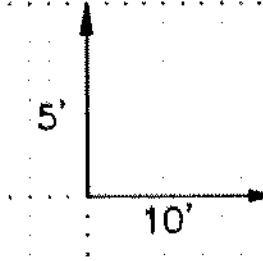
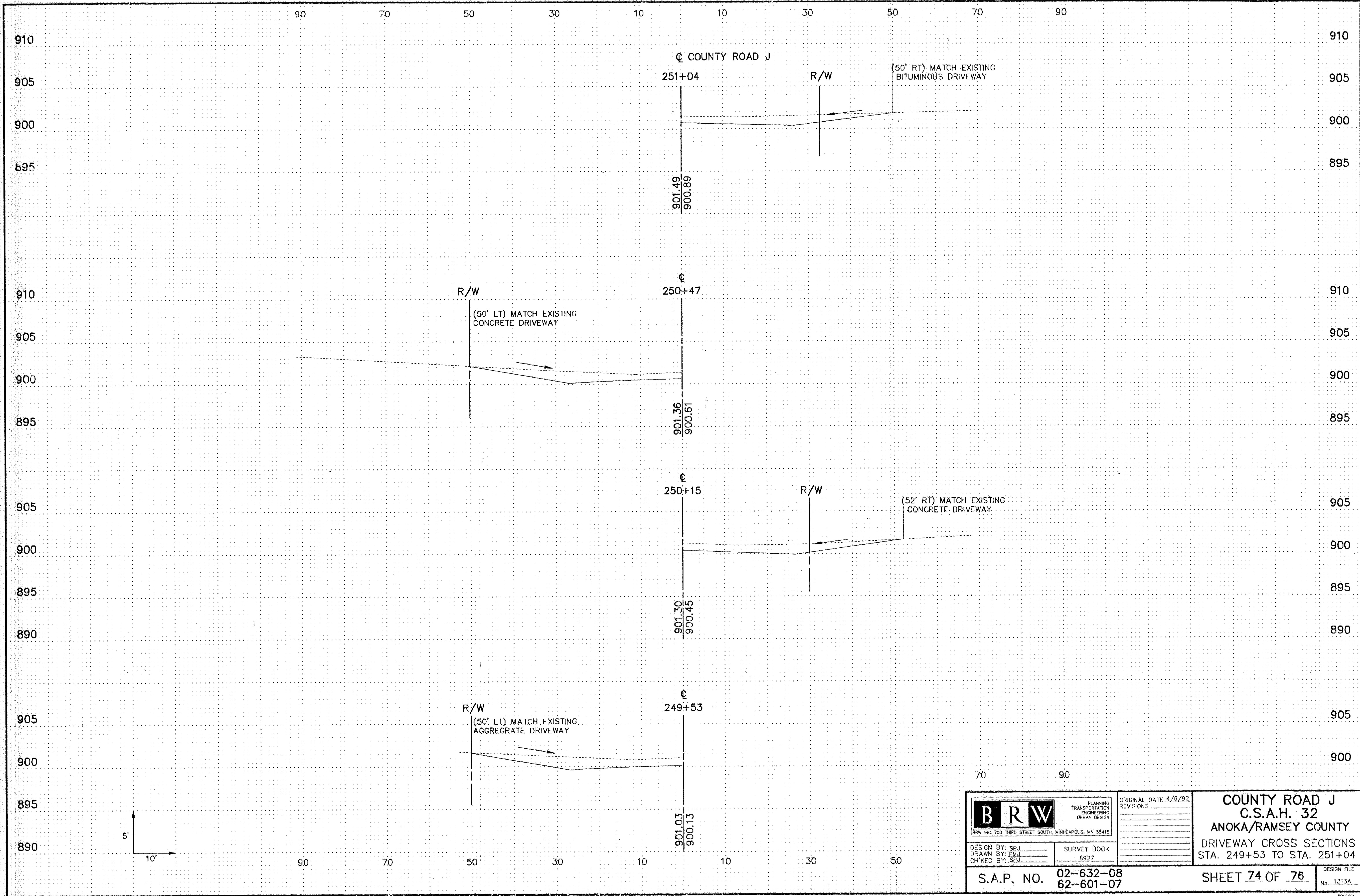
S.A.P. NO. 02-632-08
 62-601-07

SHEET 72 OF 76

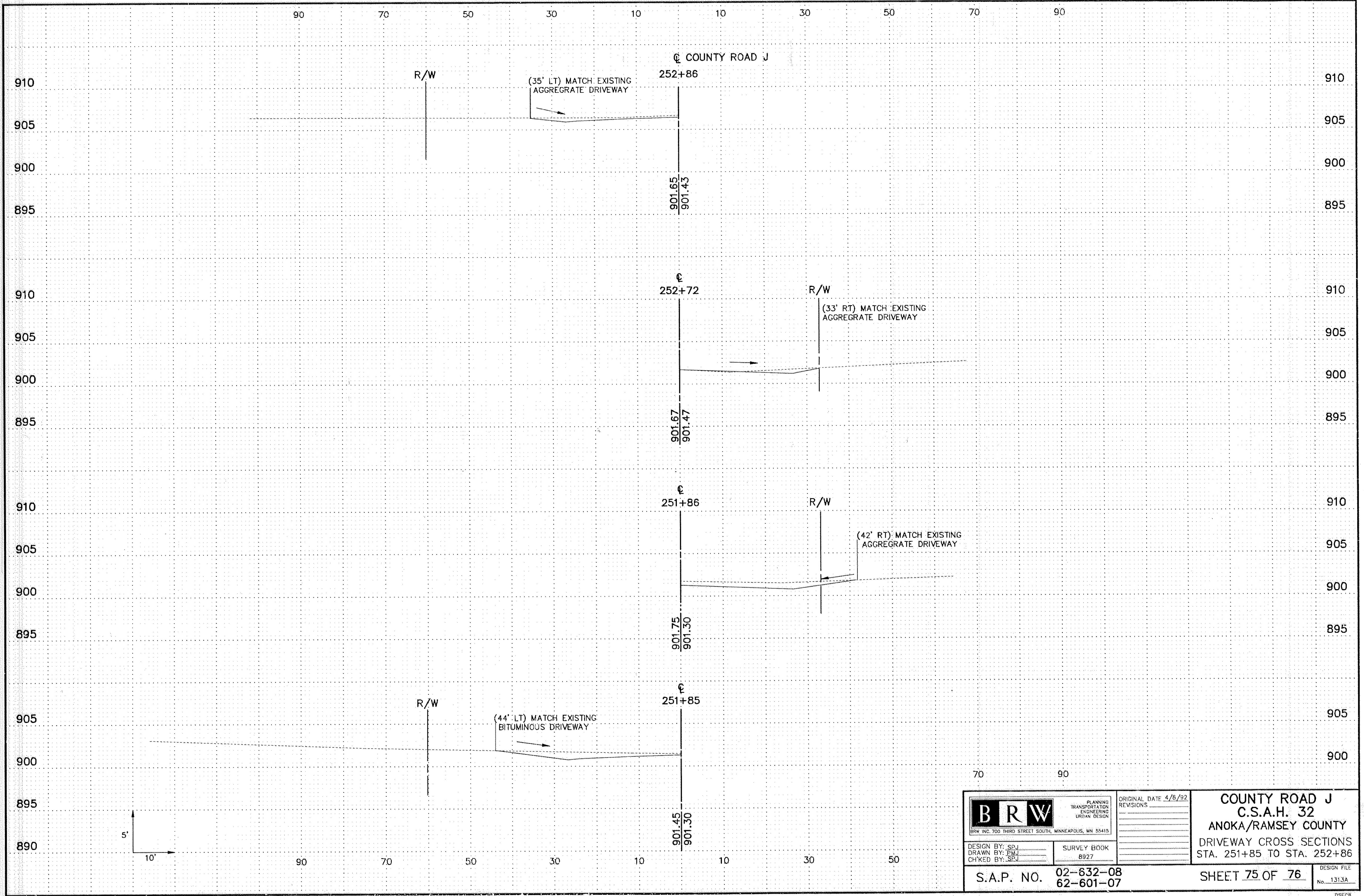
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 No. 1313A



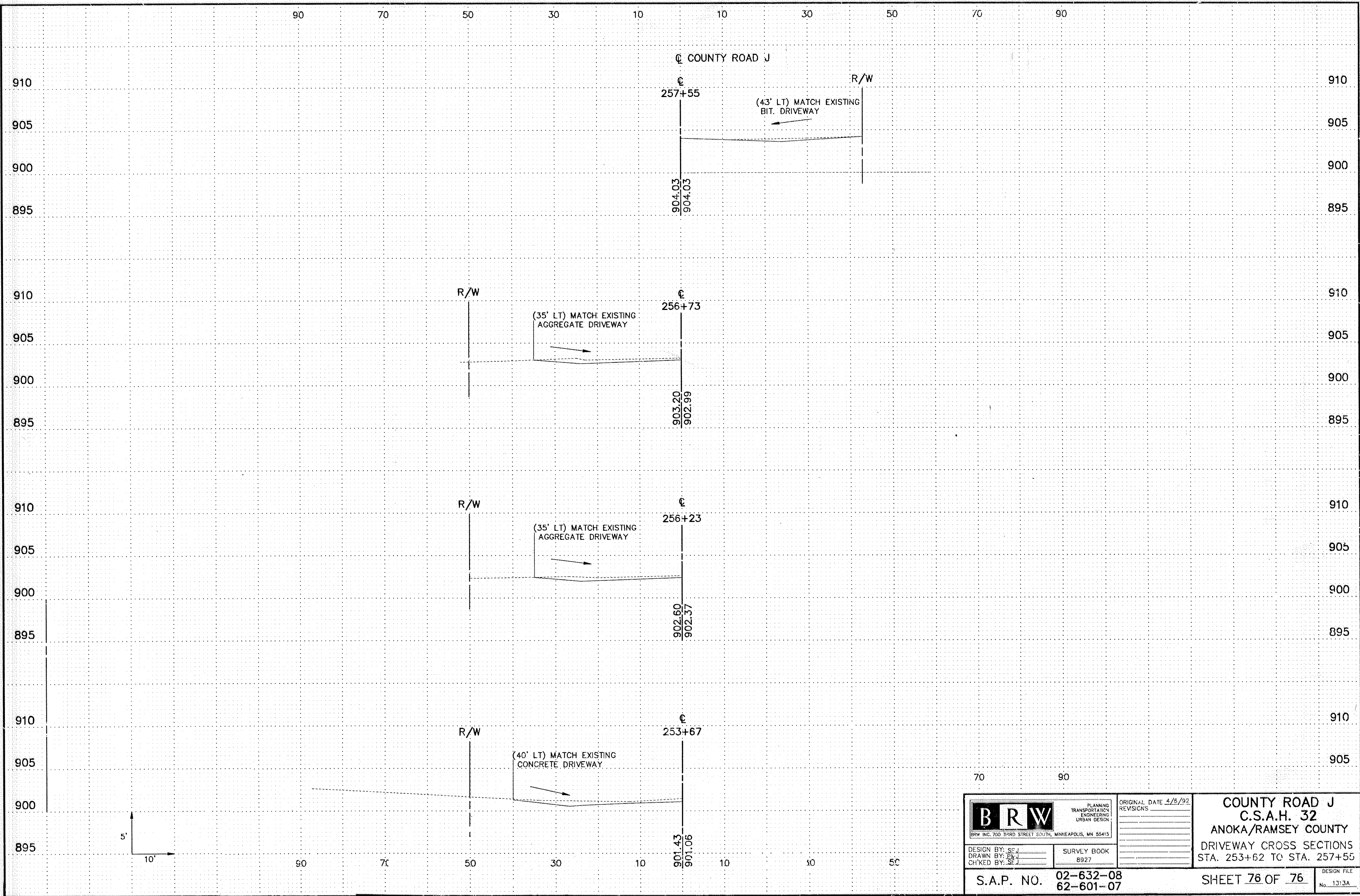
 <small>BRW INC. 700 THIRD STREET SOUTH, MINNEAPOLIS, MN 55415</small>	<small>PLANNING TRANSPORTATION ENGINEERING URBAN DESIGN</small>	<small>ORIGINAL DATE 4/6/92</small>	COUNTY ROAD J C.S.A.H. 32 ANOKA/RAMSEY COUNTY DRIVEWAY CROSS SECTIONS STA. 248+12 TO STA. 249+51
	<small>DESIGN BY: SPJ</small> <small>DRAWN BY: PMJ</small> <small>CHK'D BY: SPJ</small>	<small>SURVEY BOOK</small> <small>8927</small>	
S.A.P. NO. 02-632-08 62-601-07		SHEET 73 OF 76	



 <small>BRW INC. 700 THIRD STREET SOUTH, MINNEAPOLIS, MN 55415</small>	<small>PLANNING TRANSPORTATION ENGINEERING URBAN DESIGN</small>	<small>ORIGINAL DATE 4/6/92</small> <small>REVISIONS</small>	COUNTY ROAD J C.S.A.H. 32 ANOKA/RAMSEY COUNTY DRIVEWAY CROSS SECTIONS STA. 249+53 TO STA. 251+04
	<small>DESIGN BY: SPJ</small> <small>DRAWN BY: FMJ</small> <small>CHECKED BY: SPJ</small>	<small>SURVEY BOOK</small> <small>8927</small>	
S.A.P. NO. 02-632-08 62-601-07		SHEET 74 OF 76	



 BRW INC. 700 THIRD STREET SOUTH, MINNEAPOLIS, MN 55415	PLANNING TRANSPORTATION ENGINEERING URBAN DESIGN	ORIGINAL DATE 4/8/92 REVISIONS	COUNTY ROAD J C.S.A.H. 32 ANOKA/RAMSEY COUNTY DRIVEWAY CROSS SECTIONS STA. 251+85 TO STA. 252+86
	DESIGN BY: SPJ DRAWN BY: PMJ CH'KED BY: SPJ	SURVEY BOOK 8927	
S.A.P. NO. 02-632-08 62-601-07		SHEET 75 OF 76	



 <small>BRW INC. 700 THIRD STREET SOUTH, MINNEAPOLIS, MN 55415</small>	<small>PLANNING TRANSPORTATION ENGINEERING URBAN DESIGN</small>	<small>ORIGINAL DATE 4/6/92</small> <small>REVISIONS</small>	COUNTY ROAD J C.S.A.H. 32 ANOKA/RAMSEY COUNTY DRIVEWAY CROSS SECTIONS STA. 253+62 TO STA. 257+55
	<small>DESIGN BY: SEJ</small> <small>DRAWN BY: EYJ</small> <small>CHECKED BY: SEJ</small>	<small>SURVEY BOOK</small> <small>8927</small>	
S.A.P. NO. 02-632-08 62-601-07		SHEET 76 OF 76	