

MINNESOTA DEPARTMENT OF TRANSPORTATION

ANOKA COUNTY

CONSTRUCTION PLAN FOR GRADING, AGGREGATE BASE, BITUMINOUS SURFACE, CONCRETE CURB & GUTTER, STORM SEWER, BIT. TRAIL, AND SIGNAL SYSTEM

LOCATED ON C.S.A.H. 52 BETWEEN 1200 FT S. OF C.S.A.H. 12 AND 700 FT N. OF C.S.A.H. 14 (Geographic Description)

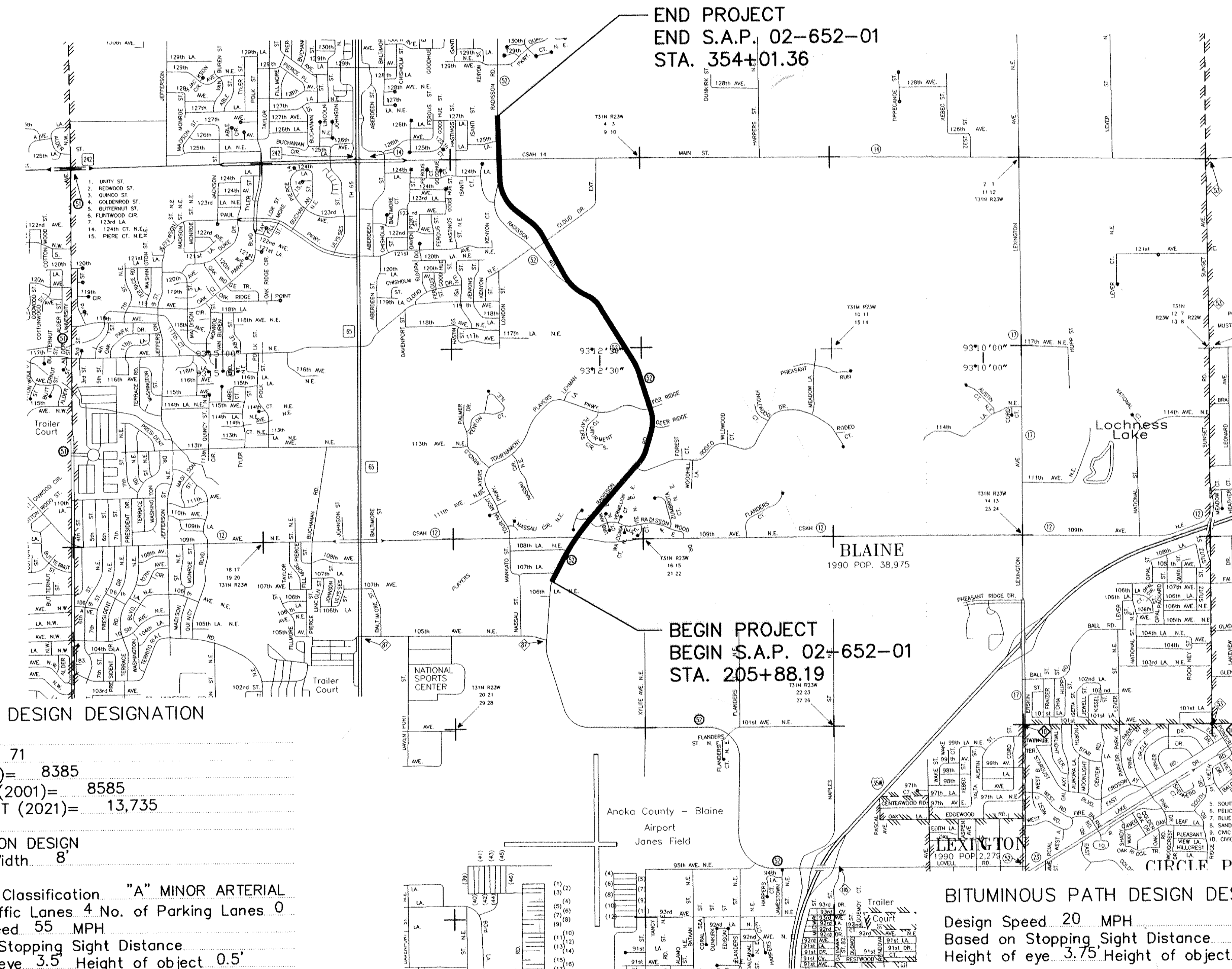
FROM _____ TO _____ (Legal Description)

STATE AID PROJ. NO. 02-652-01

GROSS LENGTH 14813.17 FEET 2.806 MILES
 BRIDGES-LENGTH _____ FEET _____ MILES
 EXCEPTIONS-LENGTH _____ FEET _____ MILES
 NET LENGTH 14813.17 FEET 2.806 MILES

END PROJECT
 END S.A.P. 02-652-01
 STA. 354+01.36

BEGIN PROJECT
 BEGIN S.A.P. 02-652-01
 STA. 205+88.19



DESIGN DESIGNATION

EN18₂₀
 R VALUE 71
 ADT (2000)= 8385
 Proj. ADT (2001)= 8585
 Proj. HCADT (2021)= 13,735
 Soil Factor _____
 10 TON DESIGN
 Shoulder Width 8'

Functional Classification "A" MINOR ARTERIAL
 No. of Traffic Lanes 4 No. of Parking Lanes 0
 Design Speed 55 MPH
 Based on Stopping Sight Distance
 Height of eye 3.5' Height of object 0.5'
 Design Speed not achieved at:
 STA. 346+95.98 TO STA. 354+01.36 MPH *

* DESIGNED TO MEET EXISTING POSTED 45 MPH SPEED LIMIT

BITUMINOUS PATH DESIGN DESIGNATION

Design Speed 20 MPH
 Based on Stopping Sight Distance
 Height of eye 3.75' Height of object 0.0'

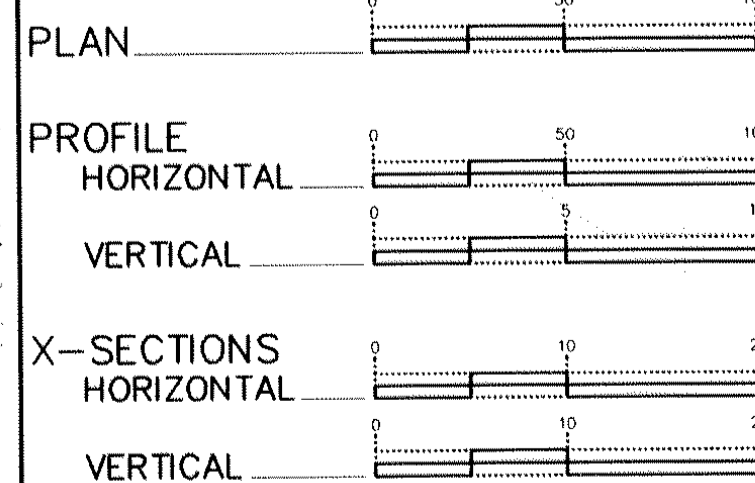
PLAN SYMBOLS

- COUNTY LINE
- TOWNSHIP OR RANGE LINE
- SECTION LINE
- QUARTER LINE
- SIXTEENTH LINE
- RIGHT OF WAY LINE
- SLOPE EASEMENT
- PRESENT RIGHT OF WAY
- PROPERTY LINE
- CORPORATE OR CITY LIMITS
- RETAINING WALL
- RAILROAD
- RAILROAD RIGHT OF WAY
- RIVER OR CREEK
- DRAINAGE DITCH
- CULVERT
- DROP INLET
- GAUARD RAIL
- BARBED WIRE FENCE
- WOVEN WIRE FENCE
- CHAIN LINK FENCE
- WOOD FENCE
- STONE WALL OR FENCE
- HEDGE
- LOWLAND
- TIMBER
- ORCHARD
- BRUSH
- NURSERY
- CATTLE GAUD
- OVERPASS (Highway Over)
- UNDERPASS (Highway Under)
- BRIDGE
- BUILDING (One Story Frame)
- F-FRAME C-CONCRETE
- S-STONE T-TILE
- B-BRICK ST-STUCCO
- RAILROAD CROSSING BELL
- RAILROAD CROSSING GATE
- MANHOLE
- CATCH BASIN
- FIRE HYDRANT
- CAST IRON MONUMENT
- IRON PIN
- GRAVEL PIT
- SAND PIT
- BORROW PIT
- ROCK QUARRY

UTILITY SYMBOLS

- POWER POLE LINE
- TELEPHONE OR TELEGRAPH POLE LINE
- JOINT TELEPHONE & POWER ON POWER POLES
- ON TELEPHONE POLES
- ANCHOR
- STEEL TOWER
- STREET LIGHT
- PEDESTAL (Cable Terminal)
- GAS MAIN
- WATERMAIN
- TELEPHONE CABLE IN CONDUIT
- ELECTRIC CABLE IN CONDUIT
- TELEPHONE MANHOLE
- ELECTRIC MANHOLE
- BURIED TELEPHONE CABLE
- BURIED ELECTRIC CABLE
- AERIAL TELEPHONE CABLE
- SEWER (Sanitary)
- SEWER (Storm)
- SEWER MANHOLE

SCALES



INDEX MAP

MINN. PROJ. NO.
 MINN. PROJ. NO.

GOVERNING SPECIFICATIONS

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

INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	GENERAL LAYOUT
3-6	STATEMENT OF ESTIMATED QUANTITIES
7	STANDARD PLATES/INDEX OF TABULATIONS
8-12	EARTHWORK TABULATION
13	EARTHWORK SUMMARY/CONSTRUCTION NOTES
14-20	TABULATIONS
21-24	TYPICAL SECTIONS
25-27	DETAILS
28	RETAINING WALL PLAN
29-30	DETOUR PLAN
31-58	CONSTRUCTION STAGING AND TRAFFIC CONTROL
59	TRAFFIC CONTROL TABULATION
60-62	ALIGNMENT PLAN
63-66	ALIGNMENT TABULATION
67-73	EXISTING CONDITIONS AND REMOVALS
74-89	CONSTRUCTION PLAN AND PROFILE
90-92	INTERSECTION GEOMETRIC DETAILS
93-99	DRIVEWAY PROFILES
100-105	SUPERELEVATION PLAN
106-116	DRAINAGE PLAN AND PROFILE
117-120	DRAINAGE TABULATION
121-126	SIGNING AND STRIPING PLANS
127	SIGNING DETAILS AND TABULATIONS
128	STRIPING DETAILS AND TABULATIONS
129-144	TRAFFIC SIGNAL PLANS
145-151	TURF ESTABLISHMENT AND EROSION CONTROL PLAN
152-155	EROSION CONTROL DETAILS
156-158	WATERMAIN DETAILS
159-161	WATERMAIN PLAN AND PROFILE
162	WATERMAIN TABULATION
163-168	GRADING PLANS
169-253	CROSS SECTIONS

DELETED SHEET 6

THIS PLAN CONTAINS 252 SHEETS

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 ENGINEERS • ARCHITECTS • PLANNERS
 TOLTE, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 SAINT PAUL, MINNESOTA

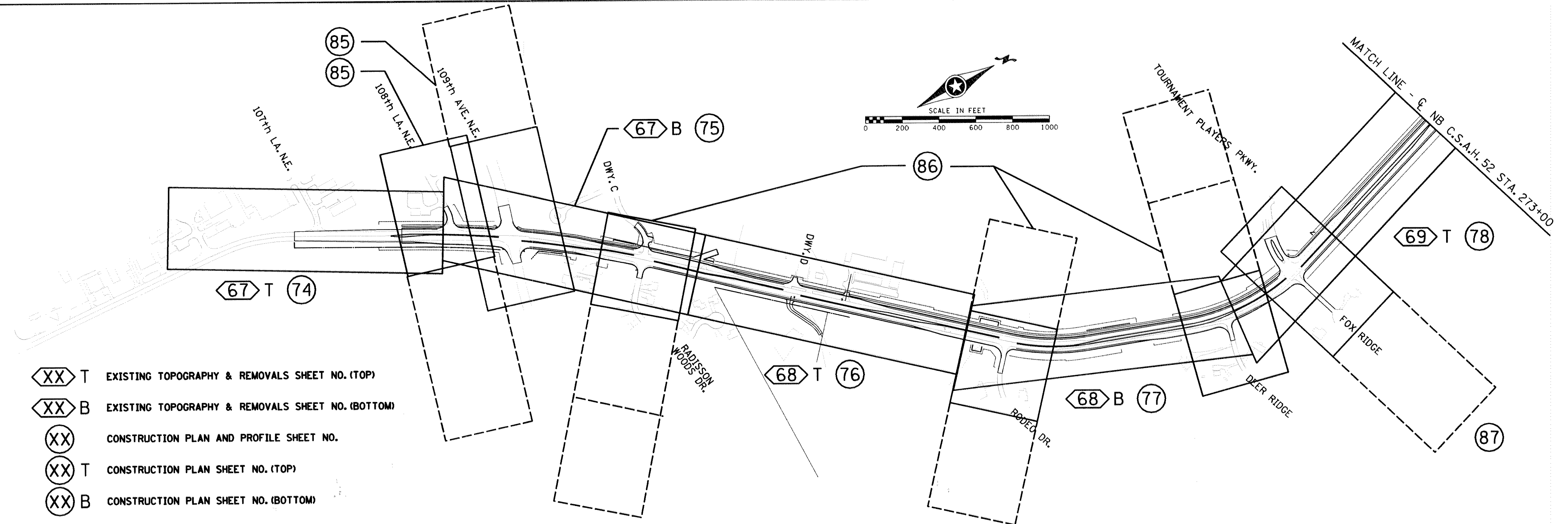
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE	REG. NO.	ENGR.	DESIGN ENGINEER
Recommended for Approval		TRAFFIC SECTION	
Recommended for Approval		ASSISTANT COUNTY ENGINEER	
Approved		ANOKA COUNTY ENGINEER	
Approved		CITY OF BLAINE	
Reviewed for Compliance with State Aid Rules/Policy		METRO-ASSISTANT DIVISION ENGINEER-STATE AID	
Approved for State Aid Funding		STATE AID ENGINEER	

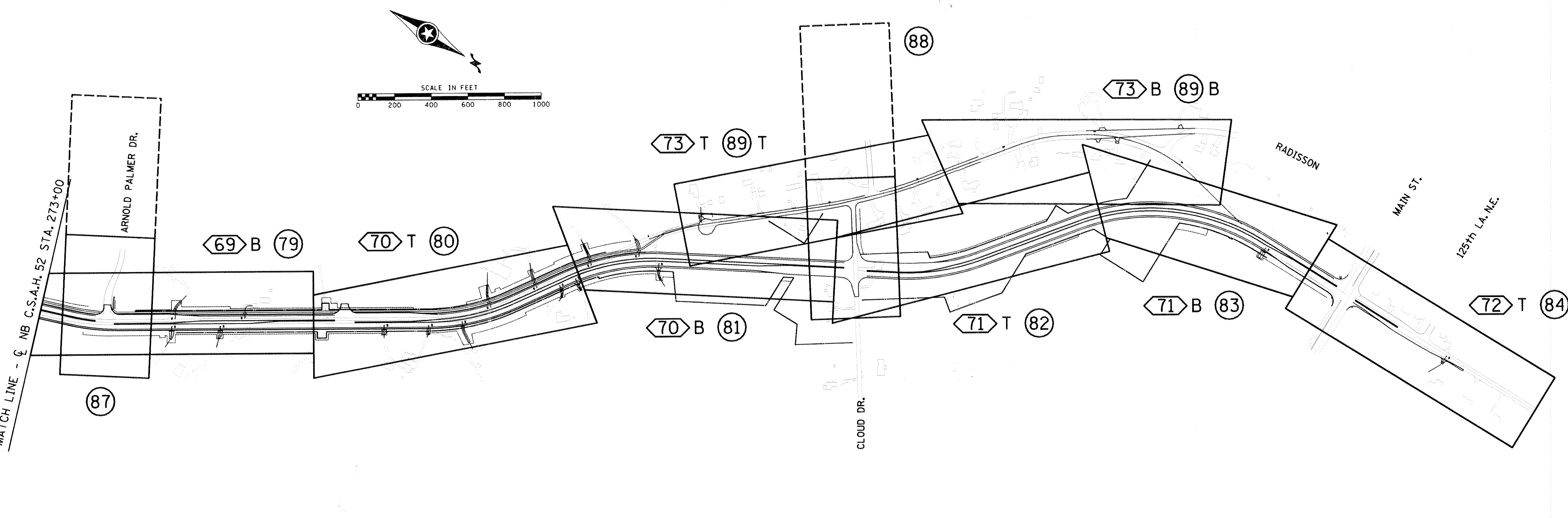
STATE AID PROJ. NO. 02-652-01

106-020-019

SHEET NO. 1 OF 253 SHEETS



- (XX) T EXISTING TOPOGRAPHY & REMOVALS SHEET NO. (TOP)
- (XX) B EXISTING TOPOGRAPHY & REMOVALS SHEET NO. (BOTTOM)
- (XX) CONSTRUCTION PLAN AND PROFILE SHEET NO.
- (XX) T CONSTRUCTION PLAN SHEET NO. (TOP)
- (XX) B CONSTRUCTION PLAN SHEET NO. (BOTTOM)



NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\c11749\par\1\roadway\drawings\genlay01.dgn 25 APR 2001

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE _____ REG. NO. _____

DRAWN BY RRC DATE 11-8-00
 DESIGN BY RRC DATE 11-8-00
 CHECKED BY JMW DATE 11-8-00

STATE PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 GENERAL LAYOUT
 C.S.A.H. 52 RECONSTRUCTION
 STA. 205+88.19 TO 354+01.36

SHEET
 2
 OF
 253

ESTIMATED QUANTITIES

TAB. LETTER	ITEM NUMBER	ITEM	NOTE NO.	UNIT	TOTAL ESTIMATED QUANTITY	ANOKA COUNTY S.A.P. 02-652-01	DRAINAGE S.A.P. 02-652-01	S.A.P. 106-020-019 BLAINE
	2013.601	CELLULAR MOBILE PHONE		LS	2	2		
	2021.501	MOBILIZATION		LS	1	1		
	2031.503	FIELD LABORATORY TYPE D		EACH	1	1		
	2031.503	FIELD OFFICE TYPE D - MODIFIED		EACH	1	1		
A	2101.501	CLEARING		ACRE	4.45	4.45		
A	2101.502	CLEARING		TREE	525	525		
A	2101.506	GRUBBING		ACRE	4.45	4.45		
A	2101.507	GRUBBING		TREE	440	440		
	2102.502	PAVEMENT MARKING REMOVAL		LF	25500	25500		
B	2104.501	REMOVE PIPE CULVERTS		LF	1291	1291		
C	2104.501	REMOVE CURB AND GUTTER		LF	1458	1458		
C	2104.503	REMOVE CONCRETE WALK		SY	34	34		
C	2104.503	REMOVE CONCRETE DRIVEWAY PAVEMENT		SY	20	20		
E	2104.505	REMOVE BITUMINOUS PAVEMENT		SY	△ 9586	9586		
B	2104.509	REMOVE PIPE APRON		EACH	41	41		
F	2104.521	SALVAGE CHAIN LINK FENCE		LF	685	685		
F	2104.521	SALVAGE WOOD FENCE		LF	481	481		
F	2104.521	SALVAGE BARBED WIRE FENCE		LF	1536	1536		
C	2104.511	SAWING CONCRETE PAVEMENT (FULL DEPTH)		LF	12	12		
E	2104.513	SAWING BIT PAVEMENT (FULL DEPTH)		LF	2580	2580		
	2104.523	SALVAGE SIGN TYPE C		EACH	101	101		
	2104.521	SALVAGE SIGN SPECIAL	(1)	EACH	8	8		
△	2104.604	SALVAGE PAVEMENT SECTION	(5)	SY	77272	77272		
	2105.501	COMMON EXCAVATION	(P) (2)	CY	△ 135797	135797		
	2105.505	MUCK EXCAVATION		CY	20866	20866		
	2105.507	SUBGRADE EXCAVATION		CY	23072	23072		
	2105.521	GRANULAR BORROW (LV)		CY	△ 48968	48968		
	2105.522	SELECT GRANULAR BORROW (LV)		CY	37300	37300		
	2105.523	COMMON BORROW (LV)		CY	50261	50261		
H	2118.501	AGGREGATE SURFACING CLASS 5		TON	262	262		
	2130.501	WATER		MGAL	500	500		
H	2211.503	AGGREGATE BASE (CV) CLASS 5	(P) (3)	CY	23876	23876		
	2331.603	SAWED / SEALED JOINT	(4)	LF	18500	18500		
	2331.603	SEASONAL SAW CUT	(4)	LF	18500	18500		
H	2350.609	TYPE MV 3 WEARING COURSE MIXTURE		TON	14142	14142		
H	2350.609	TYPE MV 3 NON WEARING COURSE MIXTURE		TON	13916	13916		
H	2350.609	TYPE LV 3 NON WEARING COURSE MIXTURE		TON	13789	13789		
H	2350.604	BITUMINOUS PAVING FOR PATH CONSTRUCTION		SY	8262	8262		
H	2350.604	BITUMINOUS PAVING FOR DRIVEWAY CONSTR.		SY	1279	1279		
H	2350.604	BITUMINOUS PAVING FOR TEMPORARY WIDENING		SY	18372	18372		
	2350.604	BITUMINOUS PAVING FOR TRENCH RESTORATION		SY	200	200		
H	2357.502	BITUMINOUS MATERIAL FOR TACK COAT		GAL	11815	11815		
S	2411.604	MODULAR BLOCK RETAINING WALL		SF	△ 5469	5469		
K	2501.511	6" CS PIPE DRAIN		LF	310	310		
K	2501.511	15" CS PIPE CULVERT		LF	96	96		
K	2501.511	24" RC PIPE CULVERT		LF	380	380		
K	2501.511	78" RC PIPE CULVERT CLASS II		LF	△ 144	144		

NOTES:

- (P) DENOTES PLAN QUANTITY.
- (1) FOR SALVAGING STREET NAME SIGNS.
- (2) INCLUDES 9950 CY FOR REMOVAL/ SALVAGE OF TEMPORARY WIDENING EMBANKMENT AND 6124 CY FOR REMOVAL / SALVAGE OF TEMPORARY WIDENING PAVEMENT SECTION.
- △ (3) APPROXIMATELY 6124 CY SHALL BE OBTAINED FROM RECLAMATION OF THE TEMPORARY WIDENING SECTION (2" BIT. OVER 10" CLASS 5), AND APPROX. 13120 CY SHALL BE OBTAINED FROM RECLAMATION OF THE EXISTING PAVEMENT SECTION (SEE SHEETS 67-73). AGGREGATE BASE OBTAINED FROM RECLAMATION SHALL MEET THE REQUIREMENTS OF AGGREGATE BASE CL. 7.
- (4) ASSUMED JOINT SPACING OF 40'.
- △ (5) INCLUDES 18372 SY FOR SALVAGE OF THE TEMPORARY WIDENING PAVEMENT SECTION(2" BIT. OVER 10" CLASS 5).

△	4-13-01	LR	LR	LR	ADDENDUM 2	
NO	DATE	BY	CKD	APPR	REVISION	
NAME: k:\site\proj\c11749\par11\roadway1\drawings\estquan.dgn						25 APR 2001

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DESIGN BY JMW DATE 11-8-00

CHECKED BY GAR DATE 11-8-00

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S. A. P. 106-020-019

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AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY

ESTIMATED QUANTITIES
C.S.A.H. 52 RECONSTRUCTION

SHEET
3
OF
253

ESTIMATED QUANTITIES

TAB. LETTER	ITEM NUMBER	ITEM	NOTE NO.	UNIT	TOTAL ESTIMATED QUANTITY	ANOKA COUNTY S.A.P. 02-652-01	DRAINAGE S.A.P. 02-652-01	BLAINE S.A.P. 106-020-019
K	2501.515	15" CS PIPE APRON		EACH	4	4		
L	2501.515	12" RC PIPE APRON		EACH	10		10	
L	2501.515	15" RC PIPE APRON		EACH	3		3	
L	2501.515	18" RC PIPE APRON		EACH	1		1	
K,L	2501.515	24" RC PIPE APRON		EACH	7	7		
L	2501.515	36" RC PIPE APRON		EACH	1		1	
K	2501.515	78" RC PIPE APRON		EACH	2	2		
R	2502.521	4" TP PIPE DRAIN		LF	174		174	
R	2502.541	4" PERF PE PIPE DRAIN		LF	1601		1601	
L	2503.521	57" SPAN CS PIPE-ARCH SEWER		LF	25		25	
L	2503.541	12" RC PIPE SEWER DES 3006		LF	3528		3528	
L	2503.541	15" RC PIPE SEWER DES 3006		LF	1855		1855	
L	2503.541	18" RC PIPE SEWER DES 3006		LF	998		998	
L	2503.541	21" RC PIPE SEWER DES 3006		LF	632		632	
L	2503.541	24" RC PIPE SEWER DES 3006		LF	1255		1255	
L	2503.541	27" RC PIPE SEWER DES 3006		LF	927		927	
L	2503.541	27" RC PIPE SEWER DES 3006 CL III		LF	961		961	
L	2503.541	30" RC PIPE SEWER DES 3006		LF	634		634	
L	2503.541	30" RC PIPE SEWER DES 3006 CL III		LF	293		293	
L	2503.541	33" RC PIPE SEWER DES 3006		LF	1140		1140	
L	2503.541	36" RC PIPE SEWER DES 3006		LF	129		129	
O	2504.502	4" INSULATION BOARD		SF	192			192
O	2504.602	CONNECT TO EXISTING WATER MAIN		EACH	2			2
O	2504.602	RELOCATE HYDRANT & VALVE		EACH	3			3
O	2504.602	HYDRANT		EACH	2			2
	2504.602	ADJUST HYDRANT		EACH	8	8		
	2504.602	ADJUST VALVE BOX		EACH	11	11		
O	2504.602	16" BUTTERFLY VALVE & BOX		EACH	3			3
O	2504.602	1-1/2" CORPORATION STOP		EACH	6			6
O	2504.602	6" GATE VALVE AND BOX		EACH	3			3
O	2504.602	12" GATE VALVE AND BOX		EACH	2			2
O	2504.602	1-1/2" CURB STOP & BOX		EACH	6			6
O	2504.603	1-1/2" TYPE K COPPER PIPE		LF	542			542
O	2504.603	6" WATERMAIN DUCTILE IRON CL 52		LF	15			15
O	2504.603	12" WATERMAIN DUCTILE IRON CL 50		LF	2315			2315
O	2504.603	16" WATERMAIN DUCTILE IRON CL 50		LF	1316			1316
O	2504.620	DUCTILE IRON FITTINGS		LB	2439			2439
L	2506.501	CONST DRAINAGE STRUCTURE DESIGN F		LF	△ 148.8		141.6	
L	2506.501	CONST DRAINAGE STRUCTURE DESIGN G		LF	△ 395.4		400.7	
L	2506.501	CONST DRAINAGE STRUCTURE DESIGN H		LF	12.6		12.6	
L	2506.501	CONST DRAINAGE STRUCTURE DES 54-4020		LF	75.1		75.1	
L	2506.501	CONST DRAINAGE STRUCTURE DES 60-4020		LF	11.3		11.3	
L	2506.501	CONST DRAINAGE STRUCTURE DES 66-4020		LF	7.1		7.1	
L	2506.501	CONST DRAINAGE STRUCTURE DES 78-4020		LF	6.5		6.5	
L	2506.501	CONST DRAINAGE STRUCTURE DES 102-4020		LF	11.3		11.3	
N	2506.511	RECONSTRUCT SANITARY MANHOLES		LF	5.1			5.1
M	2506.516	CASTING ASSEMBLY		EACH	134		134	
N	2506.522	ADJUST FRAME & RING CASTING		EACH	2			2
△	2506.602	78" X 24" TEE SECTION - DESIGN I		EACH	1	1		
△	2506.602	78" X 33" TEE SECTION - DESIGN SPECIAL		EACH	1	1		
K,L	2511.501	RANDOM RIPRAP CLASS III		CY	51.1	8.3	42.8	
H	2521.501	4" CONCRETE WALK		SF	110456	110456		
H	2521.501	6" CONCRETE WALK		SF	400	400		

NO	DATE	BY	CKD	APPR	REVISION
NAME: k:\site\proj\c11749\port1\roadway\drawings\estquan.dgn					
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ANOKA COUNTY
ESTIMATED QUANTITIES
C.S.A.H. 52 RECONSTRUCTION

SHEET
4
OF
253

ESTIMATED QUANTITIES

TAB. LETTER	ITEM NUMBER	ITEM	NOTE NO.	UNIT	TOTAL ESTIMATED QUANTITY	ANOKA COUNTY S.A.P. 02-652-01	DRAINAGE S.A.P. 02-652-01	BLAINE S.A.P. 106-020-019
H	2531.501	CONCRETE CURB & GUTTER DESIGN B412		LF	25660	25660		
H	2531.501	CONCRETE CURB & GUTTER DESIGN B418		LF	19466	9733		9733
H	2531.501	CONCRETE CURB & GUTTER DESIGN B612		LF	270	135		135
H	2531.501	CONCRETE CURB & GUTTER DESIGN B618		LF	836	418		418
H	2531.507	6" CONCRETE DRIVEWAY PAVEMENT		SF	15	15		
H	2535.501	BITUMINOUS CURB		LF	1009	1009		
D	2540.602	RELOCATE MAIL BOX SUPPORT		EACH	12	12		
K,L	2554.509	GUIDE POST TYPE B		EACH	20	16	4	
F	2557.501	WIRE FENCE DESIGN 60V-9322	(3)	LF	1260	1260		
F	2557.529	TEMPORARY FENCE		LF	2260	2260		
F	2557.603	INSTALL BARBED WIRE FENCE		LF	1536	1536		
F	2557.603	INSTALL WOOD FENCE		LF	481	481		
	2563.601	TRAFFIC CONTROL STAGE 1		LS	1	1		
	2563.601	TRAFFIC CONTROL STAGE 2		LS	1	1		
	2563.601	TRAFFIC CONTROL STAGE 3 - PHASE 1		LS	1	1		
	2563.601	TRAFFIC CONTROL STAGE 3 - PHASE 2		LS	1	1		
	2563.601	TRAFFIC CONTROL STAGE 3 - PHASE 3		LS	1	1		
J	2564.531	SIGN PANELS TYPE C		SF	1037.97	1037.97		
	2564.537	INSTALL SIGN TYPE SPECIAL	(5)	EACH	8	8		
J	2564.602	INSTALL SIGN TYPE C		EACH	3	3		
I	2564.602	PAVEMENT MESSAGE (LEFT ARROW) PAINT		EACH	10	10		
I	2564.602	PAVEMENT MESSAGE (RIGHT ARROW) PAINT		EACH	10	10		
I,T	2564.603	4" SOLID LINE WHITE-PAINT		LF	91239	91239		
I	2564.603	4" BROKEN LINE WHITE-PAINT		LF	9007	9007		
I	2564.603	24" SOLID LINE WHITE-PAINT		LF	390	390		
I,T	2564.603	4" SOLID LINE YELLOW-PAINT		LF	32370	32370		
I,T	2564.603	4" DOUBLE SOLID LINE YELLOW-PAINT		LF	24945	24945		
I	2564.603	24" SOLID LINE YELLOW-PAINT		LF	402	402		
I	2564.604	ZEBRA CROSSWALK WHITE-PAINT		SF	2304	2304		
	2565.511	FULL T ACT T CONTROL SIGNAL SYSTEM A	(1)	SIG SYS	1	1		
	2565.511	FULL T ACT T CONTROL SIGNAL SYSTEM B	(2)	SIG SYS	1	1		
	2565.601	EMERGENCY VEHICLE PREEMPTION SYS A	(1)	LS	1	0.5		0.5
	2565.601	EMERGENCY VEHICLE PREEMPTION SYS B	(2)	LS	1			1
	2565.601	TRAFFIC CONTROL INTERCONNECTION		LS	1	1		
P	2573.603	SILT FENCE, TYPE MACHINE SLICED		LF	23316	23316		
P	2575.501	SEEDING		ACRE	14.36	14.36		
P	2575.502	SEED MIXTURE 28A (MOD)		LB	27	27		
P	2575.502	SEED MIXTURE 60A (MOD)		LB	1343	1343		
P	2575.505	SODDING TYPE SALT RESISTANT		SY	14009	14009		
P	2575.505	SODDING TYPE LAWN		SY	3680	3680		
P	2575.511	MULCH MATERIAL TYPE 1		TON	28.72	28.72		
P	2575.519	DISK ANCHORING		ACRE	14.36	14.36		
P	2575.531	COMMERCIAL FERT ANALYSIS 22-5-10	(4)	TON	2.04	2.04		
P	2575.605	EROSION CONTROL BLANKET		SY	4044	4044		
T	2580.502	TEMPORARY LANE MARKING	(6)	LF	20004	20004		

NOTES:

(P) DENOTES PLAN QUANTITY.

(1) SIGNAL SYSTEM AT THE INTERSECTION OF C.S.A.H. 52 AND C.S.A.H. 12 (109TH AVENUE).

(2) SIGNAL SYSTEM AT THE INTERSECTION OF C.S.A.H. 52 AND C.S.A.H. 14 (MAIN STREET).

(3) FENCE SHALL BE BLACK

(4) SLOW RELEASE

(5) STREET NAME SIGNS AT CROSS ROADS

(6) REMOVABLE TAPE FOR TRAFFIC CONTROL. REMOVAL OF TAPE IS INCIDENTAL TO ITEM.

△	4-6-01	JW	JW	LR	ADDENDUM 2
NO	DATE	BY	CKD	APPR	REVISION
NAME: k:\site\proj\c11749\par\1\roadway\drawings\estquan.dgn 25 APR 2001					

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE _____ REG. NO. _____

DRAWN BY SJS DATE 11-8-00

DESIGN BY JMW DATE 11-8-00

CHECKED BY GAR DATE 11-8-00

STATE PROJECT NO.

S.A.P. 02-652-01
S.A.P. 106-020-019

TKDA
TOLTZ, KING, DUVAL, ANDERSON
AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
ESTIMATED QUANTITIES
C.S.A.H. 52 RECONSTRUCTION

SHEET
5
OF
253

STANDARD PLATES

PLATE NO.	DESCRIPTION
3000L	REINFORCED CONCRETE PIPE
3006G	GASKET JOINT FOR R.C. PIPE
3007C	SHEAR REINFORCEMENT FOR PRECAST DRAINAGE STRUCTURES
3040F	CORRUGATED METAL PIPE CULVERT
3100G	CONCRETE APRON FOR REINFORCED CONCRETE PIPE
3123J	METAL APRON FOR CS PIPE
3124B	METAL APRON CONNECTION
3133C	RIPRAP AT RCP OUTLETS
3145E	CONCRETE PIPE TIES
3221C	CORRUGATED STEEL PIPE COUPLING BAND
4005L	MANHOLE OR CATCH BASIN
4006L	MANHOLE OR CATCH BASIN
4008E	CATCH BASIN
4010H	CONCRETE SHORT CONE AND ADJUSTING RING
4011E	PRECAST CONCRETE BASE
4018A	MANHOLE OR CATCH BASIN
4020H	MANHOLE OR CATCH BASIN COVER
4101D	RING CASTING FOR MANHOLE OR CATCH BASIN
4110F	COVER CASTING FOR MANHOLE
4126F	CATCH BASIN FRAME CASTING
4132F	CATCH BASIN FRAME CASTING
4143E	STOOL GRATE AND CONCRETE FRAME
4149C	GRATE CASTING FOR CATCH BASIN
4154B	CATCH BASIN GRATE CASTING
4161F	CURB BOX CASTING FOR CATCH BASIN
4180J	MANHOLE OR CATCH BASIN STEP
7036D	PEDESTRIAN CURB RAMP
7065C	BITUMINOUS CURB
7100G	CONCRETE CURB AND GUTTER
7111J	INSTALLATION OF CATCH BASIN CASTINGS
7113A	CONCRETE APPROACH NOSE DETAIL
8000I	STANDARD BARRICADES
8110D	TRAFFIC SIGNAL BRACKETING (POLE MOUNTED)
8114A	P.V.C. HANDHOLE/PULLBOX
8115D	PEDESTRIAN PUSH BUTTON INSTALLATION
8118C	SERVICE EQUIPMENT AND POLE-TRAFFIC CONTROL SIGNALS
8119C	GROUND MOUNTED CABINET FOUNDATION
8121D	TRANSFORMER BASE AND POLE BASE PLATE
8123D	POLE AND MAST ARM
8124E	MAST ARM SIGNAL HEAD MOUNTS
8126F	POLE FOUNDATION (PA90 AND PA100)
8150B	INSTALLATION OF CULVERT MARKERS
9102D	TURF ESTABLISHMENT AREAS

INDEX OF TABULATIONS

TAB. LETTER	SHEET NO.	DESCRIPTION
A	14-16	CLEARING AND GRUBBING
B	17	CULVERT REMOVAL
C	17	CONCRETE REMOVAL
D	17	MAIL BOXES
E	17	BITUMINOUS REMOVAL
F	19	FENCING
G	8-13	EARTHWORK
H	18-19	CONCRETE, BITUMINOUS, AND AGGREGATE CONSTRUCTION
I	128	STRIPING
J	127	SIGNING
K	20	CULVERTS
L	117-120	DRAINAGE
M	120	CASTING ASSEMBLIES
N	19	SANITARY SEWER
O	162	WATER MAIN
P	20	TURF ESTABLISHMENT AND EROSION CONTROL
R	16	SUBSURFACE DRAINAGE
S	20	MODULAR BLOCK RETAINING WALL
T	59	TEMPORARY PAVEMENT MARKING
U	59	TEMPORARY TRAFFIC CONTROL DEVICES

NO	DATE	BY	CKD	APPR	REVISION
NAME: \$FILES\$					\$DATE\$

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TKDA
 TOLTZ, KING, DUVAL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS • ARCHITECTS • PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 STANDARD PLATES, INDEX OF TABULATIONS
 C.S.A.H. 52 RECONSTRUCTION

SHEET
7
 OF
253

STANDARD PLATES	
PLATE NO.	DESCRIPTION
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3006G	GASKET JOINT FOR R.C. PIPE
3007C	SHEAR REINFORCEMENT FOR PRECAST DRAINAGE STRUCTURES
3040F	CORRUGATED METAL PIPE CULVERT
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△	4-6-01	JW	JW	LR	APPENDUM 2
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AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
STANDARD PLATES, INDEX OF TABULATIONS
C.S.A.H. 52 RECONSTRUCTION

SHEET
7
OF
253

EARTHWORK VOLUMES BY STATIONS										
STATION	EXCAVATION					EMBANKMENT				
	TOPSOIL	COMMON	1' SUBGRADE	3' SUBCUT	MUCK	TOPSOIL	COMMON	MUCK DISPOSAL	GRANULAR	SELECT GRANULAR
C.S.A.H 52 (SOUTH LEG)										
205+89.19	1	5	0	0	0	1	1	0	0	0
206+00.00	11	56	0	0	0	5	4	0	0	0
206+50.00	11	65	0	0	0	5	4	0	0	0
207+00.00	8	76	0	0	0	3	3	0	0	0
207+50.00	13	92	0	0	0	4	3	0	0	0
208+00.00	20	103	0	0	0	6	8	0	0	0
208+50.00	23	112	0	0	0	7	11	0	0	0
209+00.00	24	120	0	0	0	7	10	0	0	0
209+50.00	27	123	0	0	0	7	11	0	0	0
210+00.00	32	118	0	0	0	9	20	0	0	0
210+50.00	3	8	0	0	0	1	8	0	0	0
210+50.00										
SUBTOTALS	173	878	0	0	0	55	83	0	0	0
NB C.S.A.H 52										
210+56.69	17	43	0	0	0	5	18	0	0	0
211+00.00	38	96	0	0	0	11	36	0	0	0
211+50.00	55	82	66	0	0	14	56	4	72	0
212+00.00	73	70	134	0	0	17	72	6	147	0
212+50.00	72	65	133	0	0	17	58	5	152	0
213+00.00	72	57	130	0	0	16	52	4	160	0
213+50.00	73	47	132	0	0	15	52	6	177	0
214+00.00	57	35	131	0	0	11	41	6	234	0
214+50.00	59	24	119	0	0	13	52	8	235	0
215+00.00	84	15	98	0	0	20	95	18	208	0
215+50.00	89	9	83	0	0	21	121	25	230	0
216+00.00	90	12	86	0	0	23	142	28	218	0
216+50.00	80	17	114	0	0	21	117	28	206	0
217+00.00	60	22	163	0	0	14	59	22	258	0
217+50.00	34	90	215	0	0	8	31	11	271	0
218+00.00	43	109	205	0	0	14	41	15	212	0
218+50.00	66	116	174	0	0	17	41	14	178	0
219+00.00	64	206	177	0	0	14	25	1	170	0
219+50.00	69	249	176	0	0	15	29	1	170	0
220+00.00	76	234	175	0	0	16	31	1	170	0
220+50.00	80	214	165	0	0	16	36	1	170	0
221+00.00	80	206	151	0	0	16	51	2	169	0
221+50.00	78	204	141	0	0	16	66	4	171	0
222+00.00	76	191	136	0	0	15	78	6	181	0
222+50.00	75	152	134	0	0	14	86	8	198	0
223+00.00	76	112	124	0	0	14	89	7	214	0
223+50.00	76	87	114	0	0	14	84	6	227	0
224+00.00	71	79	119	0	0	10	55	4	236	0
224+50.00										

EARTHWORK VOLUMES BY STATIONS										
STATION	EXCAVATION					EMBANKMENT				
	TOPSOIL	COMMON	1' SUBGRADE	3' SUBCUT	MUCK	TOPSOIL	COMMON	MUCK DISPOSAL	GRANULAR	SELECT GRANULAR
NB C.S.A.H 52										
224+50.00	35	71	176	0	0	5	16	1	261	0
225+00.00	44	37	156	0	0	11	86	12	329	0
225+50.00	95	7	79	0	0	26	233	49	391	0
226+00.00	100	6	73	0	0	29	272	63	370	0
226+50.00	96	6	75	0	0	26	211	39	274	0
227+00.00	90	14	95	0	0	22	137	20	194	0
227+50.00	82	20	117	0	0	17	88	11	170	0
228+00.00	81	36	140	0	0	17	61	6	170	0
228+50.00	83	88	163	0	0	19	35	3	166	0
229+00.00	77	135	168	0	0	17	16	1	162	0
229+50.00	70	145	167	0	0	14	14	0	161	0
230+00.00	68	165	165	0	0	14	19	1	161	0
230+50.00	70	204	160	0	0	15	22	2	161	0
231+00.00	75	244	157	0	0	18	31	5	161	0
231+50.00	78	293	159	0	0	20	34	6	161	0
232+00.00	77	350	163	0	0	19	23	3	161	0
232+50.00	74	366	165	0	0	18	11	1	161	0
233+00.00	93	508	202	0	0	8	4	0	201	0
233+50.00	97	575	208	0	0	9	3	0	205	0
234+00.00	78	464	177	0	0	17	7	0	170	0
234+50.00	79	447	179	0	0	16	9	0	170	0
235+00.00	76	383	179	0	0	14	10	0	170	0
235+50.00	74	334	0	176	0	13	33	2	170	0
236+00.00	75	319	0	343	0	14	47	4	342	0
236+50.00	74	299	0	511	0	13	33	2	515	0
237+00.00	78	317	0	494	0	16	39	4	498	0
237+50.00	81	336	0	470	0	20	45	4	468	0
238+00.00	82	359	0	455	0	21	44	3	445	0
238+50.00	82	318	0	431	0	21	74	7	433	0
239+00.00	83	243	0	404	0	22	125	16	432	0
239+50.00	88	195	0	390	0	25	178	31	436	0
240+00.00	94	154	0	382	0	28	207	43	436	0
240+50.00	88	120	0	391	0	25	172	30	433	0
241+00.00	80	94	0	418	0	19	97	10	439	0
241+50.00	74	85	0	436	0	14	39	3	453	0
242+00.00	73	69	0	427	0	14	32	0	458	0
242+50.00	75	35	0	389	0	14	90	1	459	0
243+00.00	77	14	0	309	143	16	90	8	463	143
243+50.00	98	12	0	227	322	29	131	128	552	322
244+00.00	106	14	0	182	372	35	109	158	595	372
244+50.00	97	7	0	204	192	26	46	62	610	192
245+00.00	94	0	0	225	0	23	79	47	653	0
245+50.00	92	2	0	197	0	26	125	58	587	0
246+00.00	94	4	0	172	0	30	187	74	533	0
246+50.00										

NO	DATE	BY	CKD	APPR	REVISION
NAME: k:\site\proj\c11749\part1\roadway\drawings\year th01.dgn 25 APR 2001					

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AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
EARTHWORK TABULATIONS
C.S.A.H. 52 RECONSTRUCTION

SHEET
8
OF
253

EARTHWORK VOLUMES BY STATIONS										
STATION	EXCAVATION					EMBANKMENT				
	TOPSOIL	COMMON	1' SUBGRADE	3' SUBCUT	MUCK	TOPSOIL	COMMON	MUCK DISPOSAL	GRANULAR	SELECT GRANULAR
NB C.S.A.H 52										
246+50.00	95	4	0	145	0	30	219	81	534	0
247+00.00	97	4	0	121	0	31	256	92	545	0
247+50.00	97	4	0	102	0	31	249	85	563	0
248+00.00	101	4	0	93	0	31	237	83	607	0
248+50.00	107	4	0	92	0	32	265	105	650	0
249+00.00	112	6	0	86	0	33	295	119	665	0
249+50.00	116	9	0	75	0	33	305	111	647	0
250+00.00	113	12	0	72	0	30	298	83	598	0
250+50.00	106	13	0	84	0	26	266	45	548	0
251+00.00	100	14	0	104	0	22	233	19	509	0
251+50.00	93	13	0	139	0	18	192	7	466	0
252+00.00	89	12	0	210	0	16	122	1	436	0
252+50.00	87	20	0	269	0	15	62	0	431	0
253+00.00	92	27	0	284	0	17	66	13	438	0
253+50.00	101	25	0	292	0	22	80	37	463	0
254+00.00	102	42	0	306	0	21	45	40	497	0
254+50.00	101	112	0	349	0	20	30	23	488	0
255+00.00	103	233	0	393	0	21	36	14	459	0
255+50.00	104	331	0	410	0	23	29	15	457	0
256+00.00	105	368	0	424	0	23	30	19	458	0
256+50.00	107	347	0	466	0	23	38	12	476	0
257+00.00	90	340	0	552	0	16	29	0	552	0
257+50.00	90	289	0	527	0	19	18	30	544	0
258+00.00	111	167	0	442	0	29	31	75	482	0
258+50.00	116	80	0	267	0	32	58	100	353	0
259+00.00	112	25	72	0	0	30	122	85	272	0
259+50.00	120	4	45	0	0	35	296	114	421	0
260+00.00	134	7	54	0	0	43	434	175	510	0
260+50.00	127	15	64	0	0	38	361	139	527	0
261+00.00	107	115	123	0	0	26	143	64	430	0
261+50.00	52	262	189	0	0	10	5	16	284	0
262+00.00	54	200	165	0	0	10	43	11	235	0
262+50.00	93	81	123	0	0	20	79	22	230	0
263+00.00	88	66	108	0	0	20	72	22	247	0
263+50.00	86	43	96	0	0	19	80	20	240	0
264+00.00	87	27	85	0	0	20	98	20	226	0
264+50.00	87	19	82	0	0	19	98	19	215	0
265+00.00	84	13	91	0	0	18	82	14	209	0
265+50.00	81	14	97	0	0	17	70	9	198	0
266+00.00	80	19	89	0	0	17	67	7	185	0
266+50.00	85	17	77	0	0	18	77	11	182	0
267+00.00	97	19	69	0	0	22	116	24	195	0
267+50.00	107	17	48	0	0	27	171	42	219	0
268+00.00	110	11	24	0	0	29	194	48	241	0
268+50.00										

EARTHWORK VOLUMES BY STATIONS										
STATION	EXCAVATION					EMBANKMENT				
	TOPSOIL	COMMON	1' SUBGRADE	3' SUBCUT	MUCK	TOPSOIL	COMMON	MUCK DISPOSAL	GRANULAR	SELECT GRANULAR
NB C.S.A.H 52										
268+50.00	107	11	18	0	0	27	185	40	260	0
269+00.00	104	11	15	0	0	25	174	32	272	0
269+50.00	102	11	17	0	0	25	167	31	272	0
270+00.00	102	13	23	0	0	25	157	33	264	0
270+50.00	102	14	33	0	0	24	148	33	252	0
271+00.00	99	16	47	0	0	23	130	26	228	0
271+50.00	98	23	66	0	0	22	101	21	206	0
272+00.00	98	47	88	0	0	22	76	17	194	0
272+50.00	96	86	111	0	0	21	57	10	186	0
273+00.00	94	122	124	0	0	20	44	4	186	0
273+50.00	94	147	122	0	0	19	35	2	187	0
274+00.00	94	159	116	0	0	19	31	0	192	0
274+50.00	94	146	113	0	0	19	32	1	208	0
275+00.00	94	104	112	0	0	19	40	4	228	0
275+50.00	97	62	109	0	0	21	72	17	250	0
276+00.00	119	75	160	0	0	20	93	34	324	0
276+50.00	143	199	190	0	0	24	88	37	370	0
277+00.00	126	160	118	0	0	27	103	35	342	0
277+50.00	101	24	68	0	0	21	107	27	323	0
278+00.00	95	24	66	0	0	17	77	11	298	0
278+50.00	90	27	71	0	0	13	49	4	270	0
279+00.00	92	33	73	0	0	14	53	6	268	0
279+50.00	100	40	72	0	0	19	97	22	288	0
280+00.00	102	63	102	0	0	21	139	26	263	0
280+50.00	106	82	105	0	0	25	216	43	244	0
281+00.00	110	95	83	0	0	29	248	60	242	0
281+50.00	106	119	91	0	0	27	197	51	202	0
282+00.00	106	143	108	0	0	26	181	49	175	0
282+50.00	105	204	126	0	0	26	166	40	158	0
283+00.00	100	238	140	0	0	22	105	19	144	0
283+50.00	93	265	152	0	0	18	39	4	139	0
284+00.00	91	368	155	0	0	17	18	0	138	0
284+50.00	94	440	157	0	0	19	16	0	141	0
285+00.00	96	434	161	0	0	20	14	0	147	0
285+50.00	93	400	165	0	0	18	12	0	153	0
286+00.00	89	372	168	0	0	16	11	0	157	0
286+50.00	89	381	167	0	0	16	11	0	158	0
287+00.00	91	392	165	0	0	17	14	1	158	0
287+50.00	92	367	0	162	0	17	14	1	158	0
288+00.00	109	339	0	302	0	29	51	106	531	0
288+50.00	112	339	0	455	0	30	73	115	695	0
289+00.00	106	319	0	526	0	17	51	12	561	0
289+50.00	108	321	0	574	0	13	24	4	607	0
290+00.00	96	353	0	536	0	14	5	0	547	0
290+50.00										

NO	DATE	BY	CKD	APPR	REVISION
NAME: k:\site\proj\c11749\par+1\roadway1\drawings\ear th02.dgn 25 APR 2001					

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE _____ REG. NO. _____

DRAWN BY TJV DATE 11-8-00

DESIGN BY TJV DATE 11-8-00

CHECKED BY JMW DATE 11-8-00

STATE PROJECT NO.

S.A.P. 02-652-01
S.A.P. 106-020-019

TKDA
TOLTZ, KING, DUVALL, ANDERSON
AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
EARTHWORK TABULATIONS
C.S.A.H. 52 RECONSTRUCTION

EARTHWORK VOLUMES BY STATIONS										
STATION	EXCAVATION					EMBANKMENT				
	TOPSOIL	COMMON	1' SUBGRADE	3' SUBCUT	MUCK	TOPSOIL	COMMON	MUCK DISPOSAL	GRANULAR	SELECT GRANULAR
NB C.S.A.H 52										
290+50.00	93	328	0	511	0	15	11	1	515	0
291+00.00	91	265	0	510	0	14	16	3	515	0
291+50.00	92	221	0	505	0	15	20	4	515	0
292+00.00	91	192	0	497	0	14	17	3	515	0
292+50.00	87	149	0	490	0	11	12	1	515	0
293+00.00	86	120	0	483	0	11	12	0	510	0
293+50.00	87	106	0	467	0	13	18	0	484	0
294+00.00	88	88	0	446	0	15	32	1	454	0
294+50.00	89	59	0	381	0	15	43	3	437	0
295+00.00	90	35	0	317	0	16	50	3	431	0
295+50.00	93	27	0	307	0	18	69	10	433	0
296+00.00	97	31	0	269	0	21	91	20	445	0
296+50.00	109	25	0	208	0	27	148	54	477	0
297+00.00	126	16	0	158	0	38	272	124	541	0
297+50.00	141	14	0	119	0	48	411	212	634	0
298+00.00	149	14	0	97	0	53	503	263	721	0
298+50.00	147	14	0	85	0	52	498	238	727	0
299+00.00	135	14	0	77	0	45	408	161	644	0
299+50.00	121	12	0	74	0	35	304	84	538	0
300+00.00	107	11	0	98	0	27	228	37	480	0
300+50.00	105	18	0	65	0	26	230	42	474	0
301+00.00	113	24	0	12	0	31	287	81	485	0
301+50.00	126	56	8	0	0	39	335	113	483	0
302+00.00	131	50	2	0	0	42	391	152	525	0
302+50.00	129	11	1	0	0	41	470	183	574	0
303+00.00	125	11	5	0	0	39	440	138	502	0
303+50.00	129	68	23	0	0	41	318	43	340	0
304+00.00	140	160	67	0	0	48	258	0	213	0
304+50.00	117	148	93	0	0	33	152	0	173	0
305+00.00	101	86	73	0	0	18	53	0	171	0
305+50.00	110	63	62	0	0	18	41	0	174	0
306+00.00	114	68	98	0	0	19	35	0	156	0
306+50.00	117	185	140	0	0	20	22	0	141	0
307+00.00	123	407	151	0	0	24	11	0	141	0
307+50.00	152	933	152	0	0	42	12	0	141	0
308+00.00	179	1471	152	0	0	59	12	0	141	0
308+50.00	165	1561	152	0	0	50	11	0	141	0
309+00.00	149	1492	152	0	0	41	11	0	141	0
309+50.00	148	1270	152	0	0	40	11	0	141	0
310+00.00	138	729	143	0	0	37	14	0	141	0
310+50.00	130	247	70	0	0	32	47	0	248	0
311+00.00	127	83	5	0	0	27	60	20	350	0
311+50.00	122	47	2	0	0	24	58	24	354	0
312+00.00	121	36	0	0	0	23	57	28	384	0
312+50.00										

EARTHWORK VOLUMES BY STATIONS										
STATION	EXCAVATION					EMBANKMENT				
	TOPSOIL	COMMON	1' SUBGRADE	3' SUBCUT	MUCK	TOPSOIL	COMMON	MUCK DISPOSAL	GRANULAR	SELECT GRANULAR
NB C.S.A.H 52										
312+50.00	121	35	4	0	0	23	52	29	339	0
313+00.00	123	34	4	0	0	24	27	31	371	0
313+50.00	121	16	0	0	0	23	5	65	641	0
314+00.00	120	5	0	0	0	21	0	79	954	0
314+50.00	122	4	0	0	0	22	0	62	1133	0
315+00.00	123	4	0	0	0	22	0	65	1160	0
315+50.00	126	4	0	0	0	24	0	87	1023	0
316+00.00	130	15	0	0	0	26	0	86	740	0
316+50.00	131	35	5	0	0	27	0	50	490	0
317+00.00	132	30	5	0	0	27	0	27	379	0
317+50.00	143	17	51	0	0	14	0	8	359	0
318+00.00	147	25	83	0	0	11	0	6	309	0
318+50.00	138	85	103	0	0	24	0	9	219	0
319+00.00	128	96	76	0	0	25	0	14	244	0
319+50.00	127	36	5	0	0	25	0	37	479	0
320+00.00	128	10	0	0	0	25	0	82	751	0
320+50.00	137	4	0	0	0	31	3	206	1079	0
321+00.00	152	4	0	0	0	40	5	328	1450	0
321+50.00	159	197	0	0	890	44	23	360	1508	1055
322+00.00	161	400	0	0	1713	47	50	382	1379	2079
322+50.00	161	406	0	0	1616	48	70	385	1318	2041
323+00.00	160	401	0	0	1567	47	94	375	1269	2025
323+50.00	161	415	0	0	1530	48	108	388	1222	1998
324+00.00	160	405	0	0	1476	47	107	378	1174	1983
324+50.00	157	372	0	0	1324	45	104	344	1125	1860
325+00.00	154	340	0	0	1139	44	103	313	1071	1623
325+50.00	152	299	0	0	953	42	103	274	1011	1400
326+00.00	148	264	0	0	739	40	100	240	945	1177
326+50.00	144	233	0	0	530	37	98	209	877	963
327+00.00	140	203	0	0	365	35	117	181	821	773
327+50.00	137	177	0	0	339	33	93	156	774	684
328+00.00	134	89	0	0	183	31	95	155	897	341
328+50.00	132	11	0	0	0	30	64	156	1026	0
329+00.00	132	11	0	0	0	30	35	153	1002	0
329+50.00	131	11	0	0	0	29	12	148	966	0
330+00.00	127	11	0	0	0	27	11	126	858	0
330+50.00	121	11	0	0	0	23	12	95	735	0
331+00.00	122	14	0	0	0	24	10	81	673	0
331+50.00	125	14	0	0	0	26	9	78	644	0
332+00.00	123	12	0	0	0	25	34	72	590	0
332+50.00	114	39	0	0	528	24	37	55	458	591
333+00.00	105	66	0	0	1101	23	25	26	362	1211
333+50.00	104	64	0	0	1157	22	23	19	356	1244
334+00.00	105	65	0	0	1201	22	1	32	369	1311
334+50.00										

NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\c11749\par\1\roadway\drawings\ear\th03.dgn 25 APR 2001

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 S.A.P. 106-020-019

TKDA
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 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 EARTHWORK TABULATIONS
 C.S.A.H. 52 RECONSTRUCTION

SHEET
 10
 OF
 253

EARTHWORK VOLUMES BY STATIONS										
STATION	EXCAVATION					EMBANKMENT				
	TOPSOIL	COMMON	1' SUBGRADE	3' SUBCUT	MUCK	TOPSOIL	COMMON	MUCK DISPOSAL	GRANULAR	SELECT GRANULAR
NB C.S.A.H 52										
334+50.00	113	78	18	0	618	22	23	38	353	387
335+00.00	97	103	80	0	0	24	32	24	238	0
335+50.00	112	480	138	0	0	33	10	3	143	0
336+00.00	147	778	152	0	0	39	12	0	141	0
336+50.00	136	422	76	0	231	32	40	17	403	231
337+00.00	125	97	0	0	332	25	67	40	380	332
337+50.00	119	43	0	0	155	22	69	49	99	155
338+00.00	112	20	0	0	102	18	66	42	401	102
338+50.00	100	28	14	0	48	18	65	34	637	48
339+00.00	79	35	40	0	0	19	59	36	471	0
339+50.00	64	32	53	0	0	17	33	40	326	0
340+00.00	69	33	55	0	0	21	8	87	289	0
340+50.00	67	43	58	0	0	20	5	86	309	0
341+00.00	56	51	76	0	0	15	9	35	276	0
341+50.00	52	49	98	0	0	14	21	23	214	0
342+00.00	46	43	120	0	0	11	10	20	190	0
342+50.00	51	57	147	0	0	13	3	16	180	0
343+00.00	62	89	158	0	0	19	7	13	175	0
343+50.00	64	122	161	0	0	21	6	12	174	0
344+00.00	66	156	161	0	0	22	5	10	176	0
344+50.00	65	162	161	0	0	22	2	8	178	0
345+00.00	59	137	170	0	0	18	16	4	174	0
345+50.00	50	55	81	0	0	7	14	0	79	0
345+95.98										
SUBTOTALS	27280	40846	16652	22668	20866	6343	55128	13479	108513	26643
C.S.A.H 52 (NORTH LEG)										
346+95.98	1	2	4	0	0	0	0	0	4	0
347+00.00	15	81	89	0	0	5	4	0	90	0
347+50.00	14	43	75	0	0	6	2	0	86	0
348+00.00	17	43	75	0	0	7	2	0	91	0
348+50.00	18	40	75	0	0	7	2	0	94	0
349+00.00	22	26	70	0	0	7	2	0	103	0
349+50.00	25	19	63	0	0	6	3	0	109	0
350+00.00	26	24	60	0	0	7	7	0	110	0
350+50.00	26	29	56	0	0	7	5	0	104	0
351+00.00	25	28	55	0	0	6	0	0	91	0
351+50.00	21	29	58	0	0	4	0	0	75	0
352+00.00	15	31	55	0	0	2	0	0	57	0
352+50.00	9	29	47	0	0	2	0	0	47	0
353+00.00	10	26	44	0	0	2	0	0	45	0
353+50.00	12	23	42	0	0	3	0	0	43	0
354+00.00										
SUBTOTALS	256	473	868	0	0	71	27	0	1149	0

EARTHWORK VOLUMES BY STATIONS										
STATION	EXCAVATION					EMBANKMENT				
	TOPSOIL	COMMON	1' SUBGRADE	3' SUBCUT	MUCK	TOPSOIL	COMMON	MUCK DISPOSAL	GRANULAR	SELECT GRANULAR
108TH LANE										
21+21.00										
21+50.00	4	0	23	0	0	3	4	0	34	0
21+75.00	4	0	11	0	0	3	6	0	29	0
22+00.00	8	0	1	0	0	4	14	0	32	0
SUBTOTALS	16	0	35	0	0	10	24	0	95	0
109TH AVENUE										
30+91.00										
31+00.00	5	5	21	0	0	3	1	0	22	0
31+50.00	29	25	90	0	0	18	7	0	119	0
32+00.00	21	13	74	0	0	13	14	0	136	0
33+50.00										
34+00.00	61	124	119	0	0	41	17	0	136	0
34+12.00	12	15	25	0	0	8	1	0	25	0
SUBTOTALS	128	182	329	0	0	83	40	0	438	0
DWY C / RADISSON WOOD DRIVE										
40+45.00										
40+50.00	1	2	6	0	0	1	1	0	6	0
41+00.00	8	10	57	0	0	3	2	0	56	0
41+50.00	15	26	75	0	0	5	1	0	76	0
43+00.00	0	0	0	0	0	0	0	0	0	0
43+25.00	11	31	42	0	0	3	1	0	42	0
43+50.00	5	15	30	0	0	3	1	0	30	0
43+56.00	1	3	7	0	0	1	0	0	7	0
SUBTOTALS	41	87	217	0	0	16	6	0	217	0
RODEO DRIVE										
51+00.00										
51+50.00	30	0	0	38	0	21	101	0	166	0
52+00.00	27	2	0	105	0	17	59	0	154	0
52+05.00	2	1	0	15	0	1	2	0	16	0
SUBTOTALS	59	3	0	158	0	39	162	0	336	0

NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\c11749\par\roadway1\drawings\ear\th04.dgn 25 APR 2001

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TKDA
 TOLTZ, KING, DUVAL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 EARTHWORK TABULATIONS
 C.S.A.H. 52 RECONSTRUCTION

EARTHWORK VOLUMES BY STATIONS										
STATION	EXCAVATION					EMBANKMENT				
	TOPSOIL	COMMON	1' SUBGRADE	3' SUBCUT	MUCK	TOPSOIL	COMMON	MUCK DISPOSAL	GRANULAR	SELECT GRANULAR
DEER RIDGE										
60+50.00										
	14	39	0	186	0	4	2	0	187	0
61+00.00										
	3	6	0	60	0	2	2	0	60	0
61+20.00										
SUBTOTALS	17	45	0	246	0	6	4	0	247	0
TOURNAMENT PLAYERS PKWY / FOX RIDGE										
70+51.00										
	29	101	129	0	0	6	2	0	128	0
71+00.00										
	35	168	132	0	0	8	2	0	131	0
71+50.00										
	46	322	144	0	0	12	2	0	143	0
72+00.00										
73+50.00										
	32	0	0	0	0	15	117	0	58	0
74+00.00										
	24	0	0	0	0	13	114	0	48	0
74+50.00										
	16	0	2	0	0	9	54	0	48	0
75+00.00										
	10	1	26	0	0	5	12	0	48	0
75+50.00										
	5	1	32	0	0	2	3	0	32	0
75+83.00										
SUBTOTALS	197	593	465	0	0	70	306	0	636	0
CLOUD DRIVE										
92+00.00										
	25	26	51	0	0	14	2	0	53	0
92+50.00										
	26	23	60	0	0	13	3	0	62	0
93+00.00										
	17	10	35	0	0	7	3	0	40	0
93+25.00										
94+75.00										
	19	0	1	0	0	6	30	0	43	0
95+00.00										
	24	0	16	0	0	11	22	0	61	0
95+50.00										
	2	0	3	0	0	1	1	0	4	0
95+54.00										
SUBTOTALS	113	59	166	0	0	52	61	0	263	0

EARTHWORK VOLUMES BY STATIONS										
LOCATION	EXCAVATION					EMBANKMENT				
	TOPSOIL	COMMON	1' SUBGRADE	3' SUBCUT	MUCK	TOPSOIL	COMMON	MUCK DISPOSAL	GRANULAR	SELECT GRANULAR
GRADING PLANS AND DRIVEWAYS										
POND A	1192	12275	0	0	0	212	0	0	0	0
POND B	435	2159	0	0	0	65	0	0	0	0
POND C	1174	15858	0	0	0	115	0	0	0	0
POND D	37	1456	0	0	0	9	63	0	0	0
SOUTH INPLACE RADISSON ROAD	38	767	0	0	0	29	194	0	0	0
NORTH INPLACE RADISSON ROAD	2391	5290	0	0	0	1189	1046	0	0	0
DRIVEWAY D233R	0	444	0	0	0	0	6078	0	0	0
DRIVEWAY D236L	0	0	0	0	0	0	0	0	0	0
DRIVEWAY D280L	0	0	0	0	0	0	2668	0	0	0
DRIVEWAY D280R	0	0	0	0	0	0	1583	0	0	0
DRIVEWAY D283R	0	992	0	0	0	0	0	0	0	0
DRIVEWAY D284L	0	0	0	0	0	0	0	0	0	0
DRIVEWAY D292R	0	0	0	0	0	0	0	0	0	0
DRIVEWAY D294R	0	0	0	0	0	0	0	0	0	0
DRIVEWAY D296R	0	0	0	0	0	0	4541	0	0	0
DRIVEWAY D297L	0	0	0	0	0	0	5245	0	0	0
DRIVEWAY D300L	0	0	0	0	0	0	2775	0	0	0
DRIVEWAY D302R	0	0	0	0	0	0	0	0	0	0
DRIVEWAY D303L	0	0	0	0	0	0	4520	0	0	0
DRIVEWAY D303R	0	0	0	0	0	0	1005	0	0	0
DRIVEWAY D306L	0	0	0	0	0	0	0	0	0	0
DRIVEWAY D307R	0	1723	0	0	0	0	0	0	0	0
DRIVEWAY D341R	0	15	0	0	0	0	819	0	0	0
DRIVEWAY D353R	0	0	0	0	0	0	0	0	0	0
SUBTOTALS	5267	41013	0	0	0	1619	30944	0	0	0

NO	DATE	BY	CHKD	APPR	REVISION

NAME: k:\site\proj\c11749\part1\roadway1\drawings\year th05.dgn 25 APR 2001

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ANOKA COUNTY
 EARTHWORK TABULATIONS
 C.S.A.H. 52 RECONSTRUCTION

SHEET
 12
 OF
 253

EARTHWORK VOLUMES BY STATIONS										
LOCATION	EXCAVATION					EMBANKMENT				
	TOPSOIL	COMMON	1' SUBGRADE	3' SUBCUT	MUCK	TOPSOIL	COMMON	MUCK DISPOSAL	GRANULAR	SELECT GRANULAR
C.S.A.H. 52 SUBTOTALS										
CSAH 52 (SOUTH LEG)	173	878	0	0	0	55	83	0	0	0
NB CSAH 52	27280	40846	16652	22668	20866	6343	23471	13479	108513	26643
CSAH 52 (NORTH LEG)	256	473	868	0	0	71	27	0	1149	0
108TH LANE	16	0	35	0	0	10	24	0	95	0
109TH AVENUE	128	182	329	0	0	83	40	0	438	0
DWY C / RADISSON WOOD DRIVE	41	87	217	0	0	16	6	0	217	0
RODEO DRIVE	59	3	0	158	0	39	162	0	336	0
DEER RIDGE	17	45	0	246	0	6	4	0	247	0
TOURNAMENT PLAYERS PKWY / FOX RIDGE	197	593	465	0	0	70	306	0	636	0
CLOUD DRIVE	113	59	166	0	0	52	61	0	263	0
GRADING PLANS AND DRIVEWAYS	5267	41013	0	0	0	1619	30944	0	0	0
C.S.A.H. 52 TOTALS										
	33547	△ (A) 84179	18732	23072	20866	8364	55128	13479	111894	26643

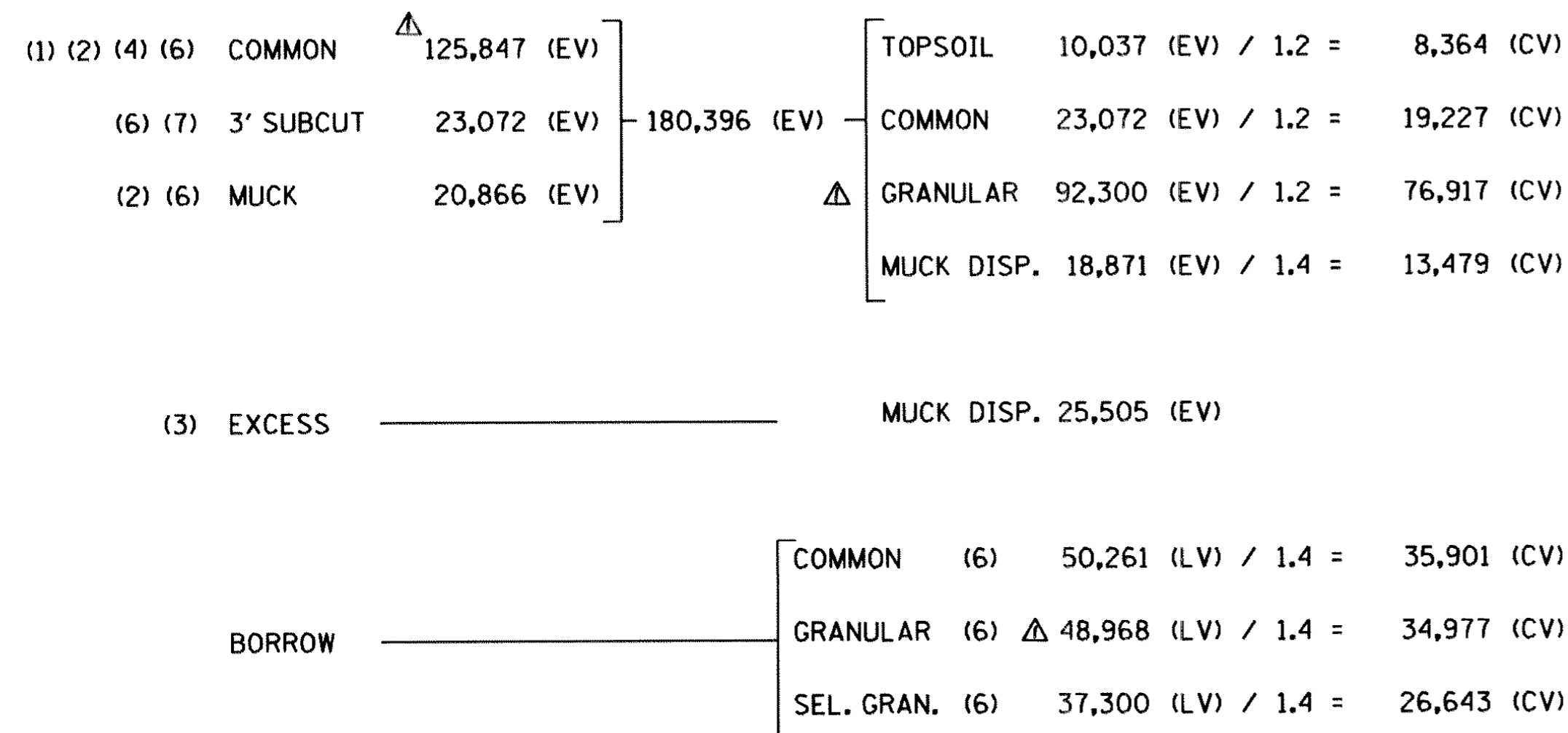
△ (A) QUANTITY INCLUDES 10,111 C.Y. TO BE PAID UNDER 2104.604 SALVAGE PAVEMENT SECTION AND 500 C.Y. TO BE PAID UNDER 2104.505 REMOVE BITUMINOUS PAVEMENT. BITUMINOUS AND AGGREGATE BASE DEPTHS USED TO CALCULATE THESE QUANTITIES WERE BASED ON THE BORING LOGS CONTAINED IN THE SPECIAL PROVISIONS.

SEE SHEETS 8 TO 12 FOR AVERAGE END AREA VOLUMES.

EARTHWORK BALANCE

EXCAVATION (C.Y.)

EMBANKMENT (C.Y.)



- (1) INCLUDES 18,732 C.Y. (EV) OF SUBGRADE TREATMENT AND 33,547 C.Y. (EV) OF TOPSOIL EXCAVATION. REMAINING 84,179 C.Y. (EV) IS AVAILABLE FOR USE AS GRANULAR EMBANKMENT.
- (2) MATERIAL GENERATED FROM MUCK EXCAVATION ALONG WITH 23,510 C.Y. (EV) OF EXCESS TOPSOIL MAY BE PLACED IN MUCK DISPOSAL AREAS (SEE TYPICAL SECTION).
- (3) TO BE DISPOSED OF BY THE CONTRACTOR OFF OF THE PROJECT.

CONSTRUCTION/SOILS NOTES

1. SUITABLE GRADING MATERIAL ON THIS PROJECT SHALL CONSIST OF ALL SOILS ENCOUNTERED WITH THE EXCEPTION OF SLOPE DRESSING, DEBRIS, ORGANIC MATERIAL, MUCK AND OTHER UNSUITABLE MATERIAL.
2. ITEMS REFERRED TO AS INCIDENTAL ON THIS PROJECT SHALL BE CONSIDERED INCIDENTAL WITH NO DIRECT COMPENSATION MADE THEREFORE.
3. SELECT GRANULAR MATERIAL SHALL MEET THE REQUIREMENTS OF SPEC. 3149.2B2.
4. GRANULAR MATERIAL SHALL MEET THE REQUIREMENTS OF SPEC. 3149.2B1.
5. BITUMINOUS AND CONCRETE ITEMS REMOVED BY CONSTRUCTION SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL EITHER BE RECYCLED OR DISPOSED OF OFF THE PROJECT, IN ACCORDANCE WITH THE PROVISIONS OF SPEC. 2104.3C3 WITH NO DIRECT COMPENSATION MADE THEREFORE.
6. UNSUITABLE MATERIALS SHALL BE PLACED IN EMBANKMENTS AT THE LOCATIONS SHOWN ON THE TYPICAL SECTIONS. DISPOSITION OF EXCESS EXCAVATED MATERIAL SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF 2105.3D WITH NO DIRECT COMPENSATION THEREFORE.
7. COMPACTION OF THE GRADING ITEMS OF THIS PROJECT, BOTH PERMANENT AND TEMPORARY, SHALL BE BY THE 'SPECIFIED DENSITY METHOD', EXCEPT WHEN WITHIN 3 FEET OF THE WATER TABLE, THEN BY THE 'QUALITY COMPACTION METHOD'.
8. COMPACTION OF THE AGGREGATE BASE ITEMS OF THIS PROJECT, BOTH PERMANENT AND TEMPORARY, SHALL BE BY THE 'SPECIFIED DENSITY METHOD' EXCEPT WHEN THE CONTRACTOR ELECTS TO USE RECYCLED MATERIALS FOR THE AGGREGATE BASE ITEMS, THEN THE 'QUALITY COMPACTION METHOD' SHALL BE UTILIZED.
9. COMPACTION OF THE BITUMINOUS ITEMS OF THIS PROJECT, BOTH PERMANENT AND TEMPORARY, SHALL BE BY THE 'MAXIMUM SPECIFIED DENSITY METHOD', IN ACCORDANCE WITH THE PROVISIONS OF SPEC. 2350.
10. WHERE WIDENING ADJACENT TO EXISTING PAVEMENT, CUT VERTICALLY TO THE BOTTOM OF THE CLASS 5 AGGREGATE BASE AND THEN AT A 1V:1/2H SLOPE TO THE BOTTOM OF THE BOTTOM OF THE RECOMMENDED SUBGRADE EXCAVATION (AS SHOWN ON THE TYPICAL SECTIONS AND THE CROSS SECTIONS). BACKFILL PROMPTLY TO AVOID UNDERMINING THE EXISTING PAVEMENT.
11. PROVIDE 1:20 LONGITUDINAL TAPERS BETWEEN CHANGES IN SUBGRADE AND SUBCUT DEPTHS.
12. USE TACK COAT BETWEEN ALL BITUMINOUS MIXTURES AND WHERE CONCRETE CURBING ABUTS BITUMINOUS MIXTURES. THE BITUMINOUS TACK COAT MATERIAL SHALL BE APPLIED AT A UNIFORM RATE OF 0.05 GAL./SQ. YD. BETWEEN BITUMINOUS LAYERS. APPLICATION RATES ARE APPLICABLE FOR UNDILUTED EMULSIONS (AS SUPPLIED FROM THE REFINERY). ASPHALT EMULSIONS MAY BE FURTHER DILUTED IN THE FIELD IN ACCORDANCE WITH SPEC. 2357.
13. STRIP AND REUSE AS SLOPE DRESSING ALL EXISTING TOPSOIL, WHERE PRESENT, IN AREAS TO BE DISTURBED BY CONSTRUCTION. TOPSOIL STRIPPING IS CONSIDERED TO BE COMMON EXCAVATION. APPROXIMATE DIMENSIONS ENCOUNTERED ARE 0 INCHES MINIMUM TO 36 INCHES MAXIMUM, AND AVERAGE IS 6.5 INCHES.
14. PLACE A MINIMUM OF 4 INCHES OF SLOPE DRESSING ON ALL AREAS SCHEDULED FOR PERMANENT TURF ESTABLISHMENT. ALL EXCESS TOPSOIL SHALL BE CONSIDERED UNSUITABLE MATERIAL AND PLACED AT LOCATIONS SHOWN ON THE TYPICAL SECTIONS.
15. DITCH GRADE ELEVATIONS ON THE PROFILE DRAWINGS ARE AT THE BOTTOM OF THE TOPSOIL. ON ALL DRAWINGS WITH CONTOURS, THE ELEVATIONS ARE AT THE TOP OF TOPSOIL.
16. DITCH BOTTOMS, TOE OF FILL, CUT RUNOUTS, AND THE TOP EDGE OF THE BACKSLOPES SHALL BE ROUNDED REGARDLESS OF THE SECTION USED ON THE CROSS SECTION SHEETS.
17. ALL SOD UTILIZED WITHIN THE PROJECT LIMITS SHALL MEET THE REQUIREMENTS OF SPEC. 3878.2A (LAWN AND SOD).
18. BITUMINOUS QUANTITIES ARE BASED ON: 110*/SQ. YD.-IN. THE BOTTOM LAYER OF BITUMINOUS IS INCREASED IN THICKNESS BY 1/4 INCH FOR QUANTITY DETERMINATION. AGGREGATE QUANTITIES ARE BASED ON: 105*/SQ. YD.-IN.
19. SOIL BORINGS ALONG THE PROJECT INDICATE THE EXISTING CSAH 52 BITUMINOUS PAVEMENT AVERAGES 6 INCHES THICK SOUTH OF STA. 253+00 AND LESS THAN SIX INCHES THICK NORTH OF STA. 253+00. THE CONTRACTOR SHALL INVESTIGATE AND MAKE OWN DETERMINATION OF ACTUAL PAVEMENT DEPTHS.
20. GRADING GRADE ON THIS PROJECT SHALL BE DEFINED AS THE BOTTOM OF THE AGGREGATE BASE AS SHOWN ON THE TYPICAL SECTIONS.
21. SLOPES DELINEATED IN THIS PROJECT AS 'X':Y' MEANS 'X' VERTICALLY TO 'Y' HORIZONTALLY.
22. ALL SILT FENCING AS SHOWN IN THE PLANS SHALL BE IN PLACE PRIOR TO THE COMMENCEMENT OF GRADING OPERATIONS.

- (4) INCLUDES APPROXIMATELY 5,200 C.Y. (EV) FOR STAGE 1 WIDENING, 43,700 C.Y. (EV) IN STAGE 2, AND 43,700 C.Y. (EV) IN STAGE 3 - PHASE 1.
- (5) INCLUDES APPROXIMATELY 9,950 C.Y. (CV) FOR STAGE 1 WIDENING, 6,800 C.Y. (CV) IN STAGE 2, AND 6,800 C.Y. (CV) IN STAGE 3 - PHASE 1.
- (6) PAY ITEM
- (7) MATERIAL GENERATED FROM 3' SUBCUT IS AVAILABLE FOR USE AS COMMON EMBANKMENT.

△	4-13-01	LR	LR	LR	ADDENDUM 2
NO	DATE	BY	CKD	APPR	REVISION
NAME: k:\site\proj\c11749\par\1\roadway1\drawings\ear th06.dgn 25 APR 2001					

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE _____ REG. NO. _____

DRAWN BY TJV DATE 11-8-00

DESIGN BY JMW DATE 11-8-00

CHECKED BY GAR DATE 11-8-00

STATE PROJECT NO.

S. A. P. 02-652-01

S. A. P. 106-020-019

TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED

ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY

EARTHWORK SUMMARY / CONSTRUCTION NOTES

C.S.A.H. 52 RECONSTRUCTION

SHEET 13 OF 253

CLEARING AND GRUBBING					A	
STATION	OFFSET	CLEARING		GRUBBING		4" DIA. OR LESS
		TREE	ACRE	TREE	ACRE	
NB C.S.A.H. 52						
213+60	85' LT	1		1		
214+40	14' RT	4		1		
214+50	13' RT	1		1		
214+69	19' RT	2		1		
214+73	12' RT	1		1		
214+80	12' RT	1		1		
214+86	16' RT	1		1		
220+66	30' RT	1		1		
220+71	30' RT	1		1		
220+74	30' RT	1		1		
224+29	72' LT	1		1		
224+55	75' LT	1		1		
224+60	83' LT	1		1		
224+62	81' LT	1		1		
224+66	94' LT	1		1		
224+68	106' LT	1		1		
224+71	88' LT	1		1		
225+24	96' LT	2		1		
225+34	80' LT	1		1		
225+41	94' LT	1		1		
225+51	77' LT	1		1		
225+51	87' LT	1		1		
225+89	89' LT	1		1		
225+91	95' LT	1		1		
225+98	99' LT	1		1		
226+02	99' LT	1		1		
226+21	101' LT	4		1		
226+90	52' LT	1		1		
227+05	53' LT	1		1		
227+21	53' LT	1		1		
227+37	53' LT	1		1		
227+53	52' LT	1		1		
227+68	54' LT	1		1		
227+83	54' LT	1		1		
228+72	55' LT	1		1		
228+87	32' RT	1		1		
228+88	56' LT	1		1		
229+05	57' LT	1		1		
229+21	57' LT	1		1		
229+23	25' RT	1		1		
229+46	24' RT	1		1		
229+53	58' LT	1		1		
229+69	58' LT	1		1		
229+85	58' LT	1		1		
230+18	59' LT	1		1		
230+36	59' LT	1		1		
230+53	59' LT	1		1		
230+69	59' LT	1		1		
230+86	60' LT	1		1		
230+96	26' RT	1		1		
231+00	58' LT	1		1		
231+04 TO 232+90	20' RT TO 37' RT		0.05		0.05	
231+49	56' LT	1		1		
231+66	59' LT	1		1		
231+70	70' LT	1		1		
231+81	60' LT	1		1		
231+86	68' LT	1		1		
231+98	68' LT	1		1		
231+99	60' LT	1		1		
232+16	60' LT	1		1		

CLEARING AND GRUBBING					A	
STATION	OFFSET	CLEARING		GRUBBING		4" DIA. OR LESS
		TREE	ACRE	TREE	ACRE	
NB C.S.A.H. 52						
232+33	59' LT	1		1		
232+56	59' LT	1		1		
232+76	55' LT	1		1		
233+27 TO 233+65	31' RT TO 85' RT		0.05		0.05	
233+85	50' LT	1		1		
234+32	95' RT	1		1		
234+41	111' RT	1		1		
234+42	52' LT	1		1		
234+59	51' LT	1		1		
234+73	54' LT	1		1		
234+89	54' LT	1		1		
234+96	49' LT	1		1		
235+31	66' LT	1		1		
235+99	81' LT	1		1		
236+56	82' LT	2		1		
236+62	61' LT	1		1		
236+68	75' LT	1		1		
236+82	74' LT	2		1		
236+89	76' LT	2		1		
237+03	81' LT	1		1		
237+10	73' LT	1		1		
237+22 TO 237+91	56' LT TO 88' LT		0.05		0.05	
238+02	68' LT	2		1		
238+12	68' LT	1		1		
238+38 TO 242+70	54' LT TO 99' LT		0.30		0.30	
238+69 TO 239+50	27' RT TO 39' RT		0.05		0.05	
240+81	61' LT	1		1		
241+09	20' RT	1		1		
241+18 TO 241+95	20' RT TO 38' RT		0.05		0.05	
242+87	64' LT	2		1		
243+95 TO 245+08	27' RT TO 161' RT		0.05		0.05	
245+46 TO 245+55	82' RT TO 123' RT		0.05		0.05	
245+75 TO 247+75	24' RT TO 56' RT		0.10		0.10	
245+96	73' LT	2		1		
246+00	63' LT	1		1		
246+08	63' LT	1		1		
246+14	74' LT	1		1		
246+23	63' LT	1		1		
246+31	66' LT	1		1		
246+29	78' LT	1		1		
246+38	64' LT	1		1		
246+44	64' LT	1		1		
246+47	82' LT	1		1		
246+51	84' LT	1		1		
246+57	62' LT	1		1		
246+67	71' LT	1		1		
246+69	70' LT	1		1		
246+83	73' LT	1		1		
246+84	73' LT	1		1		
247+09	79' LT	1		1		
247+20	74' LT	1		1		
247+29	59' LT	1		1		
247+77	58' LT	2		1		
248+21	75' LT	2		1		
248+62 TO 250+61	33' RT TO 61' RT		0.10		0.10	
248+98 TO 260+60	42' LT TO 114' LT		0.90		0.90	
261+99	131' LT	1		1		
262+06	165' LT	1		1		
262+19 TO 262+25	44' RT TO 145' RT		0.05		0.05	
262+21	201' LT	1		1		

CLEARING AND GRUBBING					A	
STATION	OFFSET	CLEARING		GRUBBING		4" DIA. OR LESS
		TREE	ACRE	TREE	ACRE	
NB C.S.A.H. 52						
262+77	96' LT	1		1		
262+88	92' LT	1		1		
263+07	83' LT	1		1		
263+18 TO 266+95	90' LT TO 54' LT		0.20		0.20	
267+07	32' RT	1		1		
270+77 TO 271+48	86' LT TO 78' LT		0.05		0.05	
276+76	23' RT	3		1		
277+48 TO 280+13	6' RT TO 47' RT		0.15		0.15	
278+20 TO 280+68	61' LT TO 136' LT		0.15		0.15	
280+33 TO 281+86	62' LT TO 127' LT		0.10		0.10	
282+50	65' LT					1
282+91	66' LT					1
283+16	67' LT					1
283+32	67' LT					1
283+45	67' LT					1
283+62	69' LT					1
283+79	70' LT	2		1		
284+67	75' LT	1		1		
284+98	75' LT	2		1		
285+10	76' LT					1
285+32	79' LT	1		1		
285+56	79' LT					4
285+66	78' LT					1
285+77	78' LT	1		1		
285+91	78' LT					1
286+06	83' LT	1		1		
286+20	83' LT					1
286+24	84' LT					1
286+25	82' LT					1
286+27	84' LT					1
286+33	82' LT					1
286+34	79' LT					1
286+29	66' LT	3		1		
286+38	78' LT					1
286+42	84' LT					1
286+43	83' LT					1
286+44	79' LT					1
286+44	85' LT					1
286+46	80' LT					1
286+52	81' LT					1
286+53	66' LT	2		1		
286+54	84' LT					1
286+73	66' LT	1		1		
286+80	85' LT					1
286+85	85' LT					1
287+77	82' LT					1
288+22	44' RT	1		1		
288+25	39' RT	1		1		
288+30	43' RT	1		1		
288+51	135' LT	1		1		
290+06 TO 291+00	36' RT TO 15' RT		0.05		0.05	
291+81	64' LT	1		1		
291+84	64' LT	1		1		
291+91	64' LT	1		1		
291+96	64' LT	1		1		
292+02	63' LT	1		1		
292+12	68' LT	1		1		
292+13	67' LT	1		1		
292+31	66' LT	2		1		
292+48	65' LT	1		1		

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.

DRAWN BY TJV DATE 11-8-00

DESIGN BY TJV DATE 11-8-00

CHECKED BY JMW DATE 11-8-00

STATE PROJECT NO.

S.A.P. 02-652-01
S.A.P. 106-020-019

TKDA

TOLTZ, KING, DUVAL, ANDERSON
AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
TABULATIONS
C.S.A.H. 52 RECONSTRUCTION

SHEET
14
OF
253

NO DATE BY CKD APPR REVISION
NAME: \$FILE\$ \$DATE\$ DATE _____ REG. NO. _____

CLEARING AND GRUBBING						A
STATION	OFFSET	CLEARING		GRUBBING		4" DIA. OR LESS
		TREE	ACRE	TREE	ACRE	
NB C.S.A.H. 52						
292+51	20' RT	2		1		
292+60	66' LT	1		1		
292+63	64' LT	2		1		
292+67	66' LT	1		1		
292+72	18' RT	1		1		
292+73	63' LT	1		1		
292+77	65' LT	1		1		
292+88	66' LT	1		1		
292+89	66' LT	3		1		
292+90	66' LT	2		1		
292+94	10' RT	1		1		
292+94	65' LT	1		1		
292+97	8' RT	1		1		
292+99	67' RT	1		1		
293+01	9' RT	1		1		
293+04	67' LT	1		1		
293+07	64' LT	2		1		
293+17	64' LT	1		1		
293+27	64' LT	1		1		
293+34	67' LT	1		1		
293+46	65' LT	2		1		
293+51	66' LT	1		1		
293+62	64' LT	1		1		
293+70	68' LT	1		1		
293+80	72' LT	1		1		
293+83	73' LT	1		1		
294+00	69' LT	2		1		
294+06	72' LT	1		1		
294+07	64' LT	1		1		
294+17	72' LT	1		1		
294+27	67' LT	1		1		
293+38	65' LT	1		1		
293+41	65' LT	1		1		
294+56	71' LT	1		1		
294+62	69' LT	1		1		
294+68	68' LT	1		1		
294+78	68' LT	1		1		
294+89	72' LT	2		1		
294+91	15' RT	1		1		
295+02	69' LT	1		1		
295+07	69' LT	1		1		
295+12	67' LT	1		1		
295+27	64' LT	1		1		
295+38	17' RT	1		1		
295+40	66' LT	1		1		
295+45	64' LT	2		1		
295+72	64' LT					4
295+77	60' LT					4
295+86	57' LT	1		1		
295+91	64' LT	1		1		
295+91	59' LT	1		1		
295+97	62' LT	1		1		
296+19	24' RT	1		1		
296+25	57' LT	1		1		
296+78	55' LT	1		1		
296+85	55' LT	1		1		
296+87	55' LT	1		1		
296+92	55' LT	1		1		
297+01	40' RT	1		1		
297+07	54' LT	1		1		

CLEARING AND GRUBBING						A
STATION	OFFSET	CLEARING		GRUBBING		4" DIA. OR LESS
		TREE	ACRE	TREE	ACRE	
NB C.S.A.H. 52						
297+09	57' LT	1		1		
297+11	52' LT	1		1		
297+14	56' LT	1		1		
298+24	68' LT	1		1		
298+35	68' LT	1		1		
298+46	69' LT	1		1		
298+57	69' LT	1		1		
298+68	70' LT	1		1		
298+79	21' RT	2		1		
298+79	71' LT	1		1		
298+88	71' LT	1		1		
298+98	72' LT	1		1		
299+08	73' LT	1		1		
299+21	73' LT	1		1		
299+29	73' LT	1		1		
299+33	74' LT	1		1		
299+35	68' LT	1		1		
299+41	76' LT	1		1		
299+49	72' LT	2		1		
299+55	71' LT	1		1		
299+57	79' LT	1		1		
299+67	79' LT	1		1		
299+78	80' LT	1		1		
299+87	80' LT	1		1		
299+99	82' LT	1		1		
299+99	33' RT	1		1		
300+08	82' LT	1		1		
300+18	82' LT	1		1		
300+20	34' RT	1		1		
300+21	12' RT	1		1		
300+22	16' RT	1		1		
300+24	11' RT	1		1		
300+25	39' RT	1		1		
300+26	67' LT	2		1		
300+28	17' RT	1		1		
300+28	81' LT	1		1		
300+29	13' RT	1		1		
300+31	17' RT	1		1		
300+35	12' RT	1		1		
300+36	18' RT	1		1		
300+38	32' RT	1		1		
300+39	81' LT	1		1		
300+41	36' RT	1		1		
300+43	17' RT	1		1		
300+48	18' RT	2		1		
300+48	80' LT	1		1		
300+50	94' LT	1		1		
300+52	16' RT	1		1		
300+55	13' RT	1		1		
300+59	13' RT	1		1		
300+62	18' RT	1		1		
300+67	20' RT	1		1		
300+72 TO 302+39	127' LT TO 66' LT		0.20		0.20	
300+73	19' RT	1		1		
300+74	13' RT	1		1		
300+84	13' RT	1		1		
300+88	14' RT	1		1		
300+92	18' RT	1		1		
300+94	12' RT	1		1		
301+00	19' RT	1		1		

CLEARING AND GRUBBING						A
STATION	OFFSET	CLEARING		GRUBBING		4" DIA. OR LESS
		TREE	ACRE	TREE	ACRE	
NB C.S.A.H. 52						
301+04	13' RT	1		1		
301+09	13' RT	1		1		
301+10	18' RT	1		1		
301+13	5' RT	1		1		
301+14	18' RT	1		1		
301+18	18' RT	1		1		
301+24	17' RT	1		1		
301+26	14' RT	1		1		
301+28	17' RT	1		1		
301+28	7' RT	1		1		
301+31	14' RT	1		1		
301+35	13' RT	1		1		
301+42	18' RT	1		1		
301+46	18' RT	1		1		
301+53	18' RT	1		1		
301+57	18' RT	1		1		
301+60	14' RT	1		1		
301+61	17' RT	1		1		
301+68	4' RT	1		1		
301+68	37' RT	1		1		
301+76	17' RT	1		1		
301+95	36' RT	1		1		
301+98	19' RT	1		1		
302+03	17' RT	1		1		
302+07	18' RT	1		1		
302+15	13' RT	1		1		
302+16	38' RT	1		1		
302+20	13' RT	1		1		
302+24	13' RT	2		1		
302+37	28' RT	1		1		
302+39	16' RT	1		1		
302+41	31' RT	1		1		
302+42	16' RT	1		1		
302+43	13' RT	1		1		
302+48	29' RT	1		1		
302+57	19' RT	1		1		
302+59	15' RT	1		1		
302+60	21' RT	1		1		
302+62	31' RT	1		1		
303+08 TO 303+46	120' LT TO 92' LT		0.05		0.05	
303+32	83' LT	1		1		
303+39	83' LT	1		1		
303+43	14' RT	3		1		
303+48	13' RT	2		1		
303+63	36' RT	1		1		
303+69	5' RT	1		1		
303+88	34' RT	1		1		
303+94	17' RT	1		1		
303+95	7' RT	1		1		
304+04	17' RT	1		1		
304+08	5' RT	1		1		
304+23	16' RT	1		1		
304+30	28' RT	1		1		
304+36	108' LT	1		1		
304+54	6' RT	1		1		
304+68	116' LT	1		1		
304+71	11' RT	1		1		
304+82	10' LT	1		1		
304+84	10' RT	1		1		
304+86	11' LT	1		1		

NO	DATE	BY	CKD	APPR	REVISION

NAME: \$FILES\$ \$DATE\$

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S.A.P. 02-652-01

S.A.P. 106-020-019

TKDA
 TOLTZ, KING, DUVAL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 TABULATIONS
 C.S.A.H. 52 RECONSTRUCTION

CULVERT REMOVAL B				
STATION	OFFSET	REMARKS	REMOVE PIPE CULVERT	REMOVE PIPE APRON
			LF	EACH
NB C.S.A.H. 52				
222+83 TO 223+17	13' RT TO 16' RT	12" CMP	34	2
224+47 TO 225+48	24' RT	18" CMP	101	2
224+68 TO 225+33	50' LT	15" CMP	65	2
235+96 TO 236+43	70' LT	15" CMP	47	2
243+92	70' LT TO 29' RT	36" CMP	99	2
244+91	93' RT			1
244+98 TO 245+53	32' RT	18" CMP	55	2
260+52	35' LT TO 33' RT	18" CMP	68	2
261+30 TO 262+46	79' LT TO 71' LT	18" CMP	109	2
276+30 TO 277+08	72' LT TO 76' LT	18" CMP	73	2
280+06 TO 280+37	58' LT	15" CMP	31	2
284+07 TO 284+32	58' LT	15" CMP	25	2
288+64	77' LT TO 24' RT	84" CMP	101	2
288+83 TO 289+13	63' LT	15" CMP	30	2
303+67 TO 303+95	72' LT TO 76' LT	15" CMP	30	2
337+65 TO 338+00	102' LT TO 175' LT	24" RCP	83	2
340+72 TO 340+81	16' RT TO 64' LT	22x13.5 RCP ARCH	80	2
341+09 TO 341+63	24' RT	15" CMP	54	2
CLOUD DRIVE				
93+91 TO 94+18	21' LT	12" CMP	27	
94+92 TO 95+14	21' LT	12" CMP	22	
INPLACE RADISSON ROAD				
28+61 TO 29+00	40' RT TO 38' RT	15" CMP	37	2
28+62 TO 29+32	57' LT TO 46' LT	15" CMP	75	2
28+92 TO 29+10	150' LT TO 189' LT	15" CMP	45	2
TOTALS			1291	41

CONCRETE REMOVAL C						
STATION	OFFSET	REMARKS	REMOVE CURB AND GUTTER	REMOVE CONC. WALK	REMOVE CONC. DWY. PVMT.	SAWING CONC. PVMT.
			LF	SY	SY	LF
NB C.S.A.H. 52						
224+68 TO 224+76	45' RT TO 54' RT			5		
235+95 TO 236+08	48' LT TO 90' LT	B612 C&G	48			
236+31 TO 236+44	48' LT TO 90' LT	B612 C&G	48			
C.S.A.H. 52 (NORTH LEG)						
352+76 TO 352+88	46' RT TO 48' RT				20	12
108TH LANE						
21+21 TO 22+24	15' LT	B618 C&G	108			
21+21 TO 22+21	13' RT TO 18' RT	B618 C&G	96			
DWY C						
40+45 TO 41+47	13' LT TO 33' LT	B618 C&G	120			
40+45 TO 42+15	15' RT TO 12' RT	B618 C&G	158			
41+68 TO 42+13	33' LT TO 18' LT	B618 C&G	58			
RADISSON WOOD DRIVE						
43+21 TO 43+56	15' RT	B618 C&G	35			
43+20 TO 43+56	15' LT	B618 C&G	36			
TOURNAMENT PLAYERS PARKWAY						
70+51 TO 72+12	30' LT	B618 C&G	150			
70+51 TO 72+38	38' RT	B618 C&G	203			
70+64 TO 72+09	10' LT TO 11' RT	B612 C&G	300			
71+80 TO 72+22	32' LT TO 49' LT			29		
ARNOLD PALMER DRIVE						
83+86 TO 84+35	14' LT	SURMOUNTABLE C&G	49			
83+86 TO 84+35	26' RT	SURMOUNTABLE C&G	49			
TOTALS			1458	34	20	12

BITUMINOUS REMOVAL E				
STATION	OFFSET	REMARKS	REMOVE BIT. PVMT.	SAWING BIT. PVMT.
			SY	LF
C.S.A.H. 52 (SOUTH LEG)				
205+89	23' LT TO 25' RT			48
205+89 TO 210+56	23' LT TO 25' RT		2547	(1) 468
206+53 TO 207+67	26' LT TO 28' LT			114
NB C.S.A.H. 52				
210+56 TO 214+00	54' LT TO 5' RT		1851	(1) 344
214+00 TO 228+00	386' LT TO 143' RT	INCLUDES 109TH AVE.	9957	(1) 1021
228+00 TO 243+00	43' LT TO 6' RT		7584	(1) 1500
235+21 TO 235+35	173' RT TO 160' RT			20
236+08 TO 236+31	90' LT			23
243+00 TO 253+00	43' LT TO 30' RT		4557	(1) 973
253+00 TO 258+00	RT			(1) 424
280+00 TO 273+00	RT			(1) 1276
273+00 TO 275+98	RT			301
280+70 TO 280+78	136' LT TO 129' LT			12
281+75 TO 288+00	RT			629
288+00 TO 303+00	RT AND LT			(1) 1460
294+21 TO 294+30	46' RT TO 48' RT			9
300+66 TO 300+78	141' LT TO 138' LT			12
303+00 TO 304+33	LT			(1) 141
306+19 TO 306+27	133' LT TO 138' LT			10
345+95 TO 346+09	113' LT TO 80' RT			210
C.S.A.H. 52 (NORTH LEG)				
346+88 TO 349+79	48' RT TO 9.5' LT			407
349+79 TO 354+01				(1) 423
108TH LANE				
21+21	15' LT TO 16' RT			31
109TH AVENUE				
30+91	23' LT TO 37' RT			61
34+12	24' LT TO 24' RT			48
DWY C				
40+45	13' LT TO 15' RT			28
RADISSON WOOD DRIVE				
43+56	15' LT TO 15' RT			30
RODEO DRIVE				
52+05	12' LT TO 12' RT			24
DEER RIDGE				
61+20	12' LT TO 12' RT			25
TOURNAMENT PLAYERS PARKWAY				
70+51	30' LT TO 38' RT			69
FOX RIDGE				
75+83	12' LT TO 13' RT			26
ARNOLD PALMER DRIVE				
83+86	14' LT TO 26' RT			39
CLOUD DRIVE				
95+54	12' LT TO 10' RT			22
INPLACE RADISSON ROAD				
2+90 TO 3+06	47' LT			12
7+27 TO 7+62	17' RT			36
8+33 TO 8+59	18' RT			27
9+45 TO 9+64	15' LT			21
12+07 TO 12+42	19' RT			35
12+13 TO 12+76	15' LT			63
13+36 TO 13+65	14' RT			30
17+36 TO 17+64	17' LT			35
18+54	16' LT TO 16' RT			32
24+55	20' LT TO 24' RT			45
25+14 TO 25+31	38' RT			16
29+58 TO 29+72	212' LT TO 188' LT			30
TOTALS			26496	2580

(1) SAWCUTTING OF INPLACE BITUMINOUS TO ABUT PROPOSED WIDENING SHALL OCCUR 1' INSIDE INPLACE EDGE OF BITUMINOUS.

MAIL BOXES D			
STATION	OFFSET	ADDRESS	RELOCATE MAIL BOX SUPPORT
			EACH
NB C.S.A.H. 52			
222+19	1' RT	10911	1
283+10	0' RT	D283R	1
294+18	5' RT	11873	1
295+95	8' RT	11901	1
301+51	10' LT	11945	1
302+49	11' LT		1
SB C.S.A.H. 52			
279+58	3' LT	11674	1
283+85	3' LT	11750	1
299+83	6' LT	11910	1
303+13	14' LT	11958	1
305+63	76' LT	11976	1
306+48	66' LT	D307R	1
TOTALS			12

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ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
TABULATIONS
C.S.A.H. 52 RECONSTRUCTION

SHEET
17
OF
253

NO DATE BY CKD APPR REVISION \$DATE\$

DATE _____ REG. NO. _____

CONCRETE, BITUMINOUS, AND AGGREGATE CONSTRUCTION H

LOCATION	BITUMINOUS AREAS				DRIVEWAY AREAS			CONCRETE ITEMS								BITUMINOUS ITEMS						AGG. ITEMS			
	INSET A FULL DEPTH PVMT.	INSET B PATH / TEMP. WIDEN	INSET D CROSS STREET PVMT.	INSET E REDUCE DEPTH SHLD.	BIT.	CONC.	AGG.	4" CONC. WALK	6" CONC. WALK	6" CONC. DWY. PVMT.	B412 CURB AND GUTTER	B418 CURB AND GUTTER	B612 CURB AND GUTTER	B618 CURB AND GUTTER	MV 3 WEAR	MV 3 NON WEAR	LV 4 WEAR (1)	LV 4 WEAR (2)	LV 4 WEAR (3)	LV 3 NON WEAR	BIT. CURB	TACK COAT	AGG. SURF. CL. 5	AGG. BASE CL. 5	
	SF	SF	SF	SF	SF	SF	SF	SF	SF	SY	LF	LF	LF	LF	TON	TON	SY	SY	SY	TON	LF	GAL	TON	CY	
C.S.A.H. 52																									
C.S.A.H. 52 (SOUTH LEG)	27300														334	334								506	
NB C.S.A.H. 52 210+56 TO 211+75.69	7560			390					20						98	92					228	84		163	
NB C.S.A.H. 52 211+75.69 TO 214+00	8811							2267			225	344			108	108						98		189	
SB C.S.A.H. 52 211+75.69 TO 214+01	7208										225	226			88	88						80		154	
NB C.S.A.H. 52 214+00 TO 228+00	54989							3218	80		1149	1389			672	672						611		1133	
SB C.S.A.H. 52 214+01 TO 228+10	58747										1149	1388			718	718						653		1203	
NB C.S.A.H. 52 228+00 TO 243+00	55255							9561	40		1394	1500			675	675						614		1154	
SB C.S.A.H. 52 228+10 TO 243+10	56076										1394	1522			685	685						623		1170	
NB C.S.A.H. 52 243+00 TO 258+00	53427							14096	40		1378	1574			653	653						594		1123	
SB C.S.A.H. 52 243+10 TO 257+83	51450										1374	1460			629	629						572		1081	
NB C.S.A.H. 52 258+00 TO 273+00	53373							10384	40		1382	1540			652	652						593		1121	
SB C.S.A.H. 52 257+83 TO 272+65	53967										1380	1462			660	660						600		1128	
NB C.S.A.H. 52 273+00 TO 288+00	54515							8648	40		1386	1505			666	666						606		1140	
SB C.S.A.H. 52 272+65 TO 287+55	53946										1386	1511			659	659						599		1130	
NB C.S.A.H. 52 288+00 TO 303+00	48807			834				14316	40		1374	1403			608	597						542		1055	
SB C.S.A.H. 52 287+55 TO 302+40	53962										1378	1500			660	660						600		1129	
NB C.S.A.H. 52 303+00 TO 317+00	42798			8168				15715			1362				635	523						476		1101	
SB C.S.A.H. 52 302+40 TO 316+57	37982			8259							1367	394			578	464						422		1034	
NB C.S.A.H. 52 317+00 TO 332+00	41121			10648				14037	40		1363				649	503						457		1146	
SB C.S.A.H. 52 316+57 TO 331+44	48588			7515							1361				697	594						540		1188	
NB C.S.A.H. 52 332+00 TO 344+00	34296			7587				14710			1212	286			523	419						381		933	
SB C.S.A.H. 52 331+44 TO 343+79	30810			9980							1223				514	377						342		929	
NB C.S.A.H. 52 344+00 TO 346+41	10202							476	20		172	238			125	125						113		208	
SB C.S.A.H. 52 343+79 TO 346+20	5932			1140							172				88	73						66		152	
C.S.A.H. 52 (NORTH LEG) (5)	21189			2023				1040	40		752				287	259						291		486	
BIT. PATH																									
SB C.S.A.H. 52 211.75.69 TO 214+01		1794																							
NB C.S.A.H. 52 214+00 TO 228+00		30						120																	
SB C.S.A.H. 52 214+01 TO 228+10		9729						106																	
SB C.S.A.H. 52 228+10 TO 243+10		11443																							
SB C.S.A.H. 52 243+10 TO 257+83		11612																							
SB C.S.A.H. 52 257+83 TO 272+65		11125																							
SB C.S.A.H. 52 272+65 TO 287+55		11745																							
SB C.S.A.H. 52 287+55 TO 302+40		11148																							
SB C.S.A.H. 52 302+40 TO 316+57		5743																							
CROSS STREETS																									
108TH LANE			4443											128	41	61							25		61
109TH AVENUE	16203														198	198					223	73	180		300
DWY C			5609											234	51	77							31		81
RADISSON WOOD DRIVE			2521											53	23	35							14		34
DWY D			1666												15	23							9		21
RODEO DRIVE			4338												40	60							24		54
DEER RIDGE			3398												31	47						101	19		42
TOURNAMENT PLAYERS PKY			11387					1762					270	421	104	157							63		172
FOX RIDGE			6951												64	96						422	39		86
ARNOLD PALMER			2861												26	39							16		35
CLOUD DRIVE	14342														175	175						197	159		266
INPLACE RADISSON ROAD (4)			75645					2139							713	1063							432	7	960
DRIVEWAYS																									
D233R					5473						48														2
D236L					610						54														2
D280L					894																				
D280R					111		840																		29
D283R					111		783																		27
D284L					165		80																		3
D292R					111		240																		8
D294R					448																				50
D296R					79		1188																		42

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ANOKA COUNTY
TABULATIONS
C.S.A.H. 52 RECONSTRUCTION

CONCRETE, BITUMINOUS, AND AGGREGATE CONSTRUCTION H

LOCATION	BITUMINOUS AREAS				DRIVEWAY AREAS			CONCRETE ITEMS								BITUMINOUS ITEMS						AGG. ITEMS			
	INSET A	INSET B	INSET D	INSET E	BIT.	CONC.	AGG.	4"	6"	6"	B412	B418	B612	B618	MV 3 WEAR	MV 3 NON WEAR	LV 4	LV 4	LV 4	LV 3	BIT. CURB	TACK COAT	AGG. SURF. CL. 5	AGG. BASE CL. 5	
	FULL DEPTH PVMT.	PATH / TEMP. WIDEN	CROSS STREET PVMT.	REDUCE DEPTH SHLD.				CONC. WALK	CONC. WALK	CONC. DWY. PVMT.	CURB AND GUTTER	CURB AND GUTTER	CURB AND GUTTER	CURB AND GUTTER			WEAR (1)	WEAR (2)	WEAR (3)	NON WEAR			CL. 5	CL. 5	
	SF	SF	SF	SF	SF	SF	SF	SF	SF	SY	LF	LF	LF	LF	TON	TON	SY	SY	SY	TON	LF	GAL	TON	CY	
DRIVEWAYS CONT.																									
D297L					165		900																	32	
D300L					925																				
D302R					79		491																	17	
D303R					366		328																	11	
D303L					165		876																	31	
D306L					1031																				
D307R					339		633																	22	
D341R					111		957																	33	
D353R					337	134				15															4
STAGE 1 TEMP. WIDENING																									
C.S.A.H. 52 (SOUTH LEG)		4457																							495
NB C.S.A.H. 52 210+56 TO 211+75.69		1690																							188
NB C.S.A.H. 52 211+75.69 TO 214+00		3191																							355
NB C.S.A.H. 52 214+00 TO 228+00		21236																							2360
NB C.S.A.H. 52 228+00 TO 243+00		19771																							2197
NB C.S.A.H. 52 243+00 TO 258+00		23075																							2564
NB C.S.A.H. 52 258+00 TO 273+00		23433																							2604
NB C.S.A.H. 52 273+00 TO 288+00		31098																							3455
NB C.S.A.H. 52 288+00 TO 303+00		18783																							2087
NB C.S.A.H. 52 303+00 TO 317+00		736																							82
NB C.S.A.H. 52 332+00 TO 344+00		3875																							430
STAGE 2 TEMP. WIDENING																									
NB C.S.A.H. 52 228+00 TO 243+00		6805																							756
STAGE 3 TEMP. WIDENING																									
NB C.S.A.H. 52 228+00 TO 243+00		7192																							799
TOTALS	FOR INFORMATION ONLY							110456	400	15	25680	19466	270	836	14142	13916	8262	1279	18372	13789	1009	11815	262	23876	

- (1) BIT. PATH: 2" TYPE LV 4 WEARING COURSE MIXTURE OVER 4" CLASS 5 AGG. BASE (INCIDENTAL)
- (2) DRIVEWAYS AND TRENCH RESTORATION: 2" TYPE LV 4 WEARING COURSE MIXTURE OVER 4" CLASS 5 AGG. BASE (INCIDENTAL)
- (3) TEMP. WIDENING: 2" TYPE LV 4 WEARING COURSE MIXTURE OVER 4" CLASS 5 AGG. BASE (INCIDENTAL)
- (4) INCLUDES CONSTRUCTION OF BITUMINOUS DRIVEWAYS ABUTTING INPLACE RADISSON ROAD
- (5) INCLUDES FULL-DEPTH BITUMINOUS WIDENING AT STATIONS 349+79.25 TO 354+01.36

SANITARY SEWER N				
STATION	OFFSET	REMARKS	ADJUST FRAME & RING CASTING EACH	RECONST. SANITARY MANHOLE LF
NB C.S.A.H. 52				
224+94	108' LT	EX. T.C. 907.58, NEW T.C. 907.91	1	1.42
224+96	42' LT	EX. T.C. 906.92, NEW T.C. 908.34		
224+99	38' RT	EX. T.C. 907.60, NEW T.C. 907.24	1	
INPLACE RADISSON ROAD				
28+42	95' LT	EX. T.C. 905.40, NEW T.C. 909.08		3.68
TOTALS			2	5.10

FENCING F									
STATION	OFFSET	REMARKS	WOOD FENCE		CHAIN LINK FENCE	BARB WIRE FENCE		F & I DESIGN 60V-9322 FENCE	TEMPORARY CONSTR. FENCE
			SALV.	INST.	SALVAGE	SALV.	INST.		
C.S.A.H. 52									
226+22 TO 228+17	117' LT TO 61' LT	10' HEIGHT						249	
228+41 TO 231+14	61' LT TO 67' LT	10' HEIGHT						271	
231+38 TO 232+82	67' LT TO 88' LT	10' HEIGHT						165	
240+50 TO 243+60	(1)								310
244+60 TO 252+50	(1)								790
258+40 TO 260+00	(1)								160
277+59 TO 280+00	30' RT						241	241	
280+54 TO 282+83	34' RT TO 20' RT						232	232	
283+02 TO 284+22	21' RT						120	120	
296+47 TO 297+82	82' LT TO 142' LT	4' HEIGHT	165	165					
296+20 TO 299+77	33' RT TO 23' RT						365	365	
298+14 TO 300+55	73' LT TO 128' LT	4' HEIGHT	316	316					
299+97 TO 302+60	22' RT						262	262	
303+26 TO 306+30	18' RT TO 52' LT						316	316	
TOTALS			481	481			685	1536	1536

(1) SEE MODULAR BLOCK WALL DETAIL FOR LOCATIONS.

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ANOKA COUNTY
 TABULATIONS
 C.S.A.H. 52 RECONSTRUCTION

SHEET
 19
 OF
 253

NO DATE BY CKD APPR REVISION \$DATE\$

TURF ESTABLISHMENT AND EROSION CONTROL P

LOCATION	SILT FENCE	SEEDING	SEED MIXTURE 28A (MOD.)	SEED MIXTURE 60A (MOD.)	SODDING TYPE SALT RES.	SODDING TYPE LAWN	MULCH MATERIAL TYPE 1	DISK ANCHORING	COMM. FERT. ANALYSIS 22-5-10	EROSION CONTROL BLANKET
	LF	ACRE	LB	LB	SY	SY	TON	ACRE	TON	SY
C.S.A.H. 52										
C.S.A.H. 52 (SOUTH LEG)205+89 TO SB 214+00		0.08		8	225	159	0.16	0.08	0.01	
C.S.A.H. 52 (SOUTH LEG)205+89 TO NB 214+00		0.50		50			1.00	0.50	0.08	
C.S.A.H. 52 (SOUTH LEG)208+50 TO SB 214+00	567									
C.S.A.H. 52 (SOUTH LEG)210+00 TO NB 214+00	512									
SB C.S.A.H. 52 214+00 TO 108TH LANE	80					84				
SB C.S.A.H. 52 108TH LANE TO 109TH AVE.	420	0.08		8	203		0.16	0.08	0.01	
NB C.S.A.H. 52 214+00 TO 109TH AVE.	424	0.18		18			0.36	0.18	0.03	
SB C.S.A.H. 52 109TH AVE. TO DWY. C	979	0.27		27	394		0.54	0.27	0.04	
NB C.S.A.H. 52 109TH AVE. TO RADISSON WOOD DR.	242	0.21		21	46		0.42	0.21	0.03	
SB C.S.A.H. 52 DWY. C TO 228+10	449	0.18		18			0.36	0.18	0.03	
NB C.S.A.H. 52 RADISSON WOOD DR. TO 228+00	328	0.08		8	58		0.16	0.08	0.01	
SB C.S.A.H. 52 228+10 TO 243+10	720	0.28		28	1119		0.56	0.28	0.04	
NB C.S.A.H. 52 228+00 TO 243+00	1306	0.57		57			1.14	0.57	0.09	
SB C.S.A.H. 52 243+10 TO 257+83	132	0.22		22	1519		0.44	0.22	0.03	
NB C.S.A.H. 52 243+00 TO RODEO DR.	339	0.08		8	340		0.16	0.08	0.01	
NB C.S.A.H. 52 RODEO DR. TO DEER RIDGE	1384	0.64		64	351		1.28	0.64	0.10	
NB C.S.A.H. 52 DEER RIDGE TO 258+00	116				69					
SB C.S.A.H. 52 257+83 TO TOURNAMENT PLAYERS PKWY.	141	0.15		15	323		0.30	0.15	0.02	
SB C.S.A.H. TOURNAMENT PLAYERS PKWY. TO 272+65	813	0.17		17	891		0.34	0.17	0.03	
NB C.S.A.H. 52 258+00 TO FOX RIDGE	620	0.20		20	297		0.40	0.20	0.03	
NB C.S.A.H. 52 FOX RIDGE TO 273+00	1308	0.53		53	197		1.06	0.53	0.08	
SB C.S.A.H. 52 272+65 TO ARNOLD PALMER DR.	76	0.06		6	328		0.12	0.06	0.01	
SB C.S.A.H. 52 ARNOLD PALMER DR. TO 287+55	690	0.05		5	905	1029	0.10	0.05	0.01	
NB C.S.A.H. 52 273+00 TO 288+00	1052	0.55		55			1.10	0.55	0.08	
SB C.S.A.H. 52 287+55 TO 302+40	984	0.38		38	1207	676	0.76	0.38	0.06	
NB C.S.A.H. 52 288+00 TO 303+00	1147	0.16		16	3074		0.32	0.16	0.02	
SB C.S.A.H. 52 302+40 TO 316+57	887	0.99		99	344	1720	1.98	0.99	0.15	976
NB C.S.A.H. 52 303+00 TO 317+00	465	1.65	11	127			3.30	1.65	0.20	1172
SB C.S.A.H. 52 316+57 TO CLOUD DR.	270	0.08		8			0.16	0.08	0.01	
NB C.S.A.H. 52 317+00 TO CLOUD DR.	92	0.06		6			0.12	0.06	0.01	100
SB C.S.A.H. 52 CLOUD DR. TO 331+44	1391	0.87		87			1.74	0.87	0.13	247
NB C.S.A.H. 52 CLOUD DR. TO 332+00	1448	0.98		98			1.96	0.98	0.15	81
SB C.S.A.H. 52 331+44 TO 343+79	553	1.40	11	104			2.80	1.40	0.16	380
NB C.S.A.H. 52 332+00 TO 344+00	504	1.01	5	83			2.02	1.01	0.13	1088
NB C.S.A.H. 52 344+00 TO 346+20	86	0.09		9			0.18	0.09	0.01	
SB C.S.A.H. 52 343+79 TO 346+20	96	0.13		12			0.26	0.13	0.02	
C.S.A.H. 52 (NORTH LEG)	749	0.12		12	95		0.24	0.12	0.02	
RADISSON ROAD										
RADISSON ROAD 2+00 TO 4+80	417	0.16		16		96	0.32	0.16	0.02	
RADISSON ROAD 24+50 TO 32+00	1439	1.20		120	1940		2.40	1.20	0.18	
TOTALS	23316	14.36	27	1343	14009	3680	28.72	14.36	2.04	4044

(1) (2) (3) (4) (5)

MODULAR BLOCK WALL S	
LOCATION	SF
C.S.A.H. 52	
240+50 TO 243+60 LT	1031
244+60 TO 252+50 LT	3786
258+40 TO 260+00 LT	652
TOTALS	5469 (1)

△(1) QUANTITY ASSUMES 1.5' EMBEDMENT.

TAB P NOTES:

- (1) APPLIED AT THE RATE OF 30 POUNDS PER ACRE.
- (2) APPLIED AT THE RATE OF 100 POUNDS PER ACRE.
- (3) SEE GRADING PLANS FOR LOCATIONS.
- (4) APPLIED AT THE RATE OF 2 TONS PER ACRE.
- (5) APPLIED AT THE RATE OF 40 POUNDS PER ACRE FOR SEED MIX 28A (MOD.)
300 POUNDS PER ACRE FOR SEED MIX 60A (MOD.)

CULVERTS K																
DESCRIPTION	INLET LOCATION			OUTLET LOCATION			FURNISH AND INSTALL (2) (3) (6)					RANDOM RIPRAP CL. III (5) CU YD	GUIDE POSTS TYPE B (7) EACH	NOTES		
	STA.	OFFSET	ELEV.	STA.	OFFSET	ELEV.	SLOPE OF PIPE %	6"	15"	24"	78"				CLASS OR GAGE	APRONS EACH
								LIN FT	LIN FT	LIN FT	LIN FT					
C/L CULVERT	224+48.0 NB	24.2' RT	905.90	225+48.0 NB	24.9' RT	905.40	0.50	100							(8)	
C/L CULVERT	224+48.0 NB	24.7' RT	905.90	225+48.0 NB	25.4' RT	905.40	0.50	100							(8)	
C/L CULVERT	245+53.0 NB	35.5' RT	901.30	244+98.0 NB	24.3' RT	900.50	1.45	55							(8)	
C/L CULVERT	245+53.0 NB	36.0' RT	901.30	244+98.0 NB	24.8' RT	900.50	1.45	55							(8)	
C/L CULVERT	288+33.0 NB	58.4' RT	889.09	288+17.9 SB	70.5' LT	887.93	0.66				△ 144	2	58.0		(1) (4) (9) △	
DRIVEWAY CULVERT	303+55.0 SB	70.5' LT	901.92	302+85.7 SB	70.5' LT	901.23	1.00		65			2				
DRIVEWAY CULVERT	307+21.9 NB	39.0' RT	898.95	307+57.2 NB	39.0' RT	898.69	0.74		31			2				
C/L CULVERT	314+57.3 SB	36.7' LT	897.00	315+00.0 NB	59.6' RT	894.50	1.80			127		2	23.7	2		
C/L CULVERT	323+44.3 SB	48.7' LT	895.00	324+00.0 NB	59.3' RT	894.60	0.27			139		2	8.3	2		
C/L CULVERT	339+46.8 SB	46.2' LT	898.00	339+39.2 NB	32.5' RT	897.00	0.79			114		2	8.3			
TOTALS								310	96	380	△ 144	12	98.3	4		

TAB K NOTES:

- (1) COUNTY DITCH # 41-5
- (2) STATION AND OFFSET LOCATIONS ARE TO END OF APRON
- (3) LENGTHS LISTED ARE BARREL LENGTHS (DOES NOT INCLUDE APRON LENGTH)
- (4) INCLUDES 11.0 CY AT INLET AND 47.0 CY AT OUTLET
- (5) GRANULAR FILTER BLANKET OR GEOTEXTILE MATERIAL REQUIRED (CONSIDERED INCIDENTAL). SEE MNDOT STANDARD PLATE 3133.
- (6) PIPE TIES SHALL BE REQUIRED FOR ALL RCP JOINTS. SEE MNDOT STANDARD PLATE 3145.
- (7) MARK APRON INLET AND OUTLET WITH GUIDE POST TYPE B (PER STANDARD PLATE 8150).
- (8) CONSTRUCTED FOR STAGE 1 DRAINAGE. REMOVE IN STAGE 3.
- (9) LENGTH DOES NOT INCLUDE TWO 6' TEE SECTIONS (STANDARD PLATE 4008).

NO	DATE	BY	CKD	APPR	REVISION
NAME: \$FILE\$					DATE: _____

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE: _____ REG. NO. _____

DRAWN BY: TJV DATE: 11-8-00

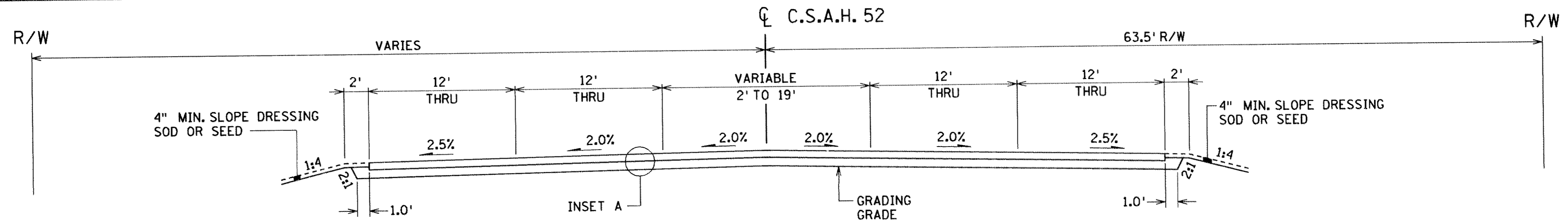
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CHECKED BY: JMW DATE: 11-8-00

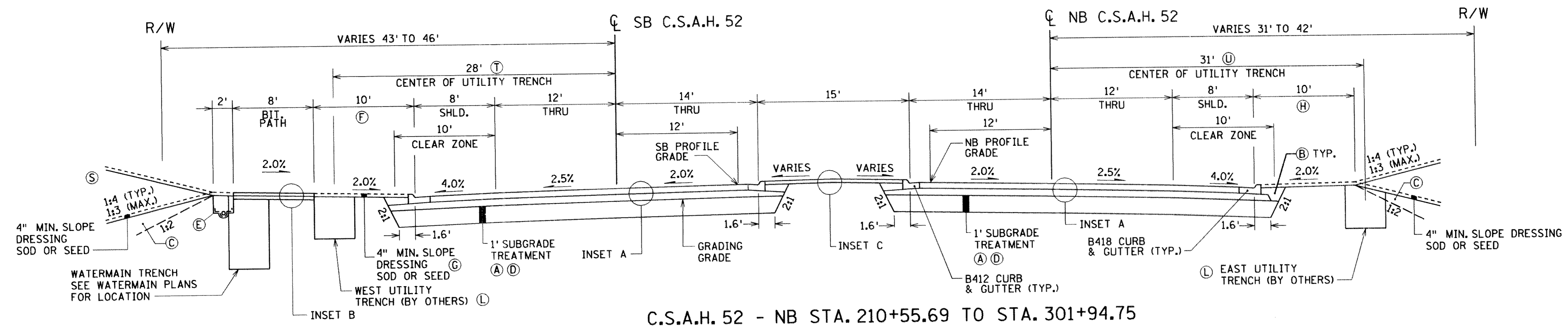
STATE PROJECT NO. _____

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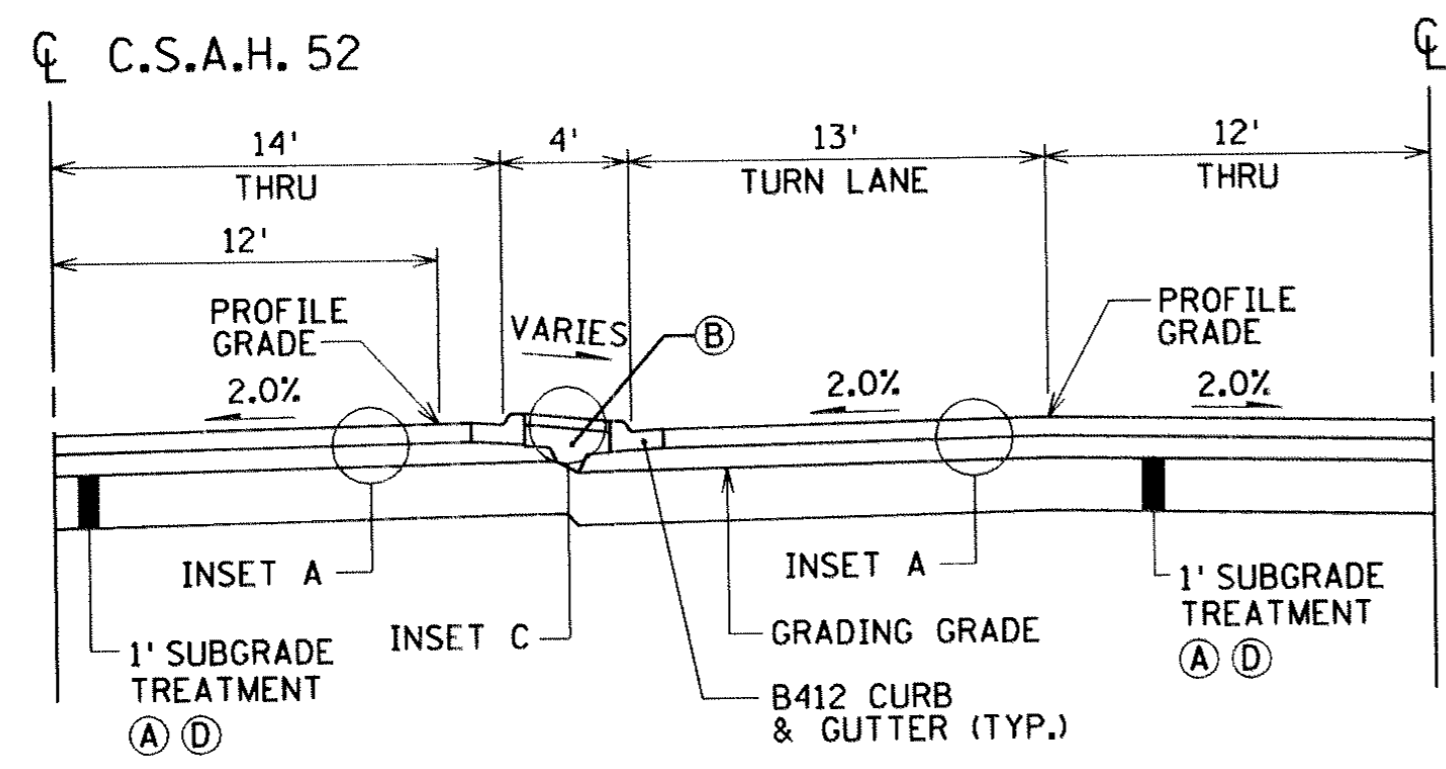
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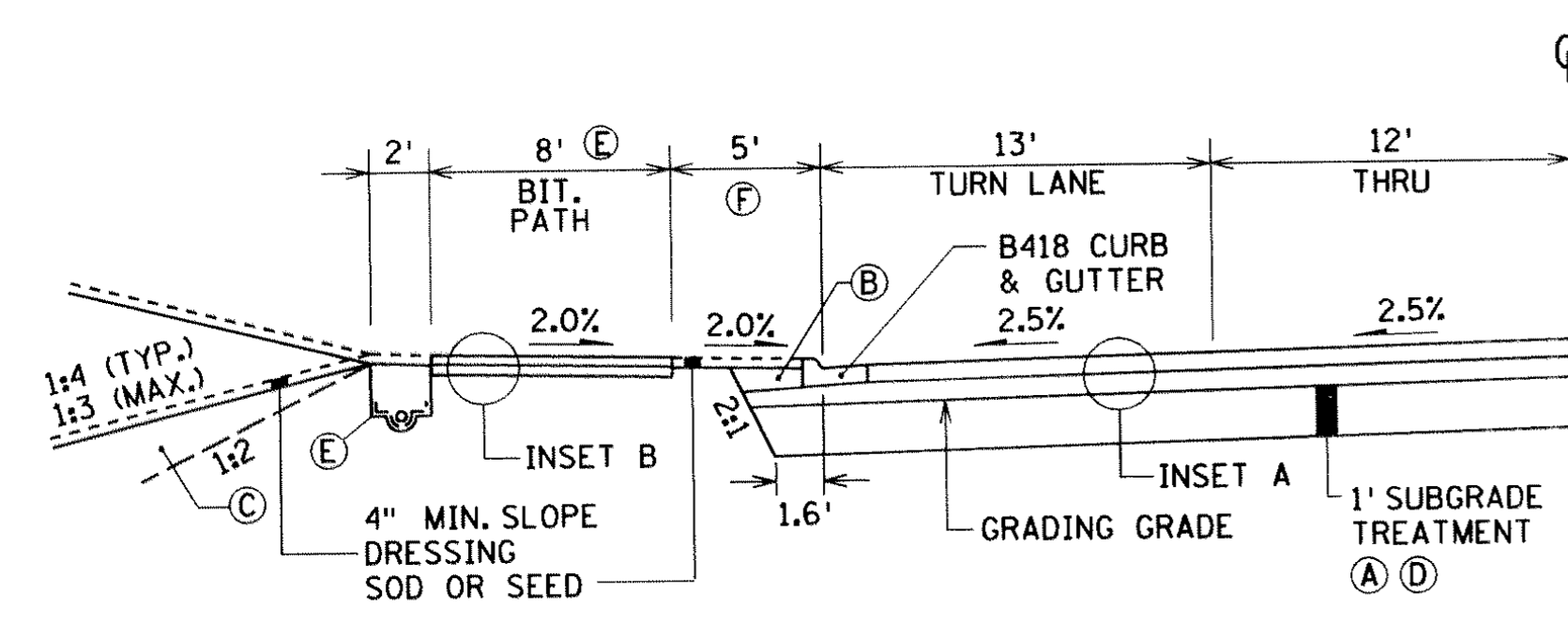
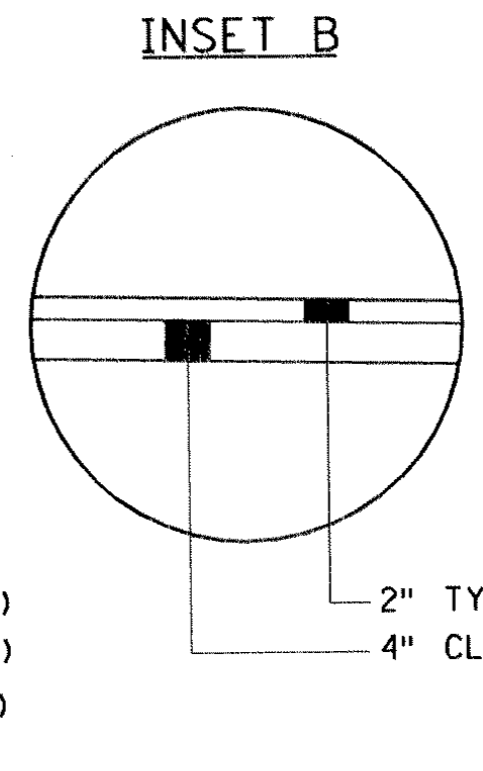
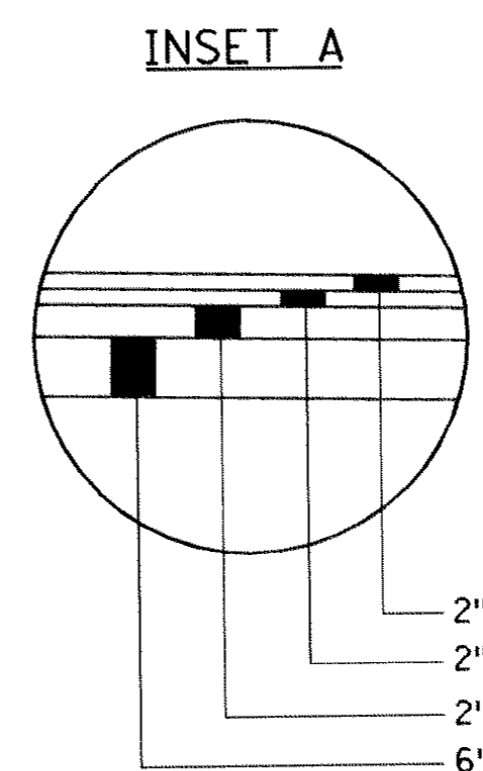
C.S.A.H. 52 STA. 205+88.19 TO STA. 210+55.69



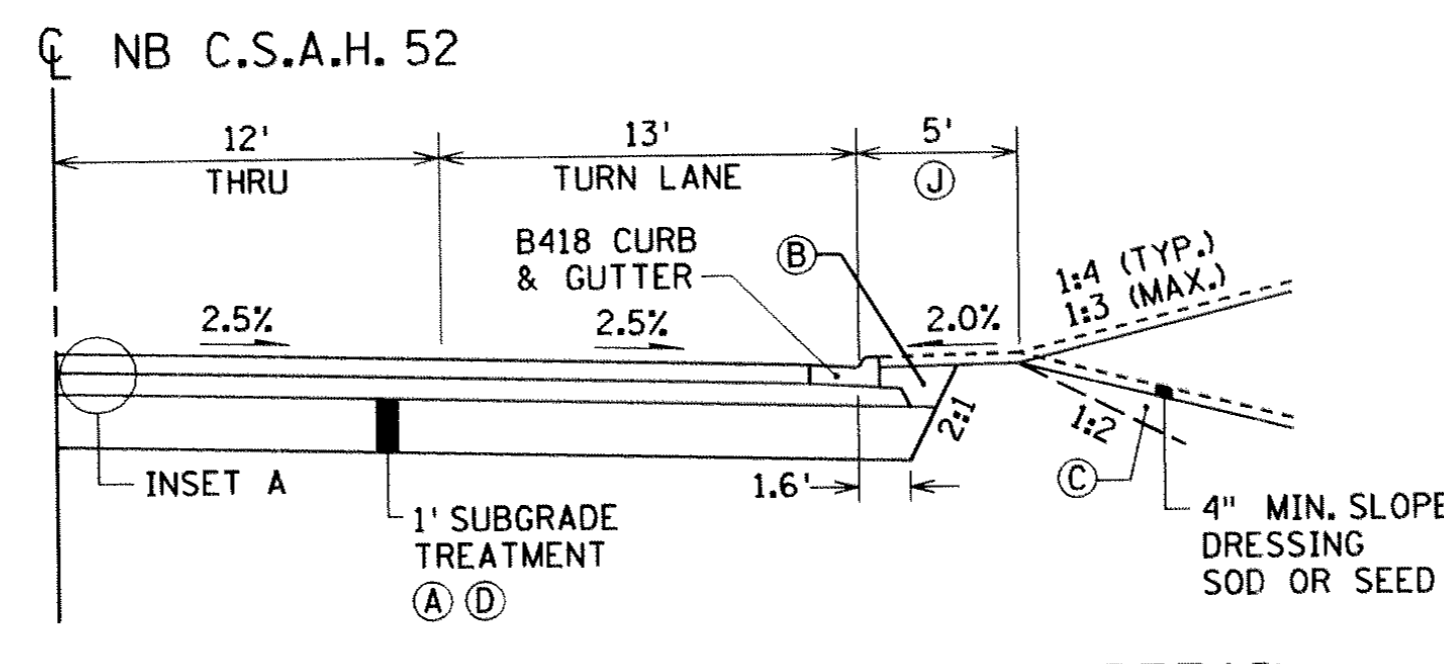
C.S.A.H. 52 - NB STA. 210+55.69 TO STA. 301+94.75



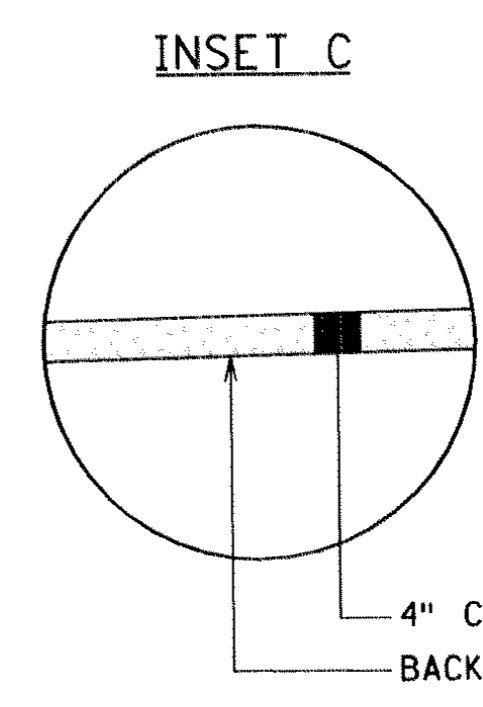
LEFT TURN LANE DETAIL
SEE CONSTRUCTION PLAN FOR LOCATIONS



URBAN RIGHT TURN LANE DETAIL
SEE CONSTRUCTION PLAN FOR LOCATIONS



NB URBAN RIGHT TURN LANE DETAIL
SEE CONSTRUCTION PLAN FOR LOCATIONS



- NOTES:**
- ALL STATIONING REFERS TO NB C.S.A.H. 52 STATIONS UNLESS OTHERWISE INDICATED.
 - SEE SUPERELEVATION PLANS FOR ADDITIONAL CROSS SLOPE INFORMATION.
 - (A) SUBGRADE TREATMENT SHALL CONSIST OF MIXING THE UPPER 1' OF THE SUBGRADE, AND SHALL BE PAID FOR AS COMMON EXCAVATION.
 - (B) BACKFILL WITH SUITABLE GRADING MATERIAL.
 - (C) BACKFILL WITH MUCK EXCAVATED MATERIAL.
 - (D) AT THE LOCATIONS LISTED BELOW, REPLACE 1' SUBGRADE TREATMENT WITH CONSTRUCTION OF A 3' SUBCUT BACKFILLED WITH GRANULAR MATERIAL.

236+00 TO 259+00
288+00 TO 301+25.40
RODEO DRIVE
DEER RIDGE
 - (E) INSTALL EDGE DRAIN IN CUT AREAS. SEE DETAIL FOR DIMENSIONS. SEE DRAINAGE PLAN AND TABULATIONS FOR LOCATIONS.
 - (F) WIDTH OF BOULEVARD VARIES. SEE CONSTRUCTION PLAN FOR LOCATIONS.
 - (G) BITUMINOUS PAVEMENT ON PATH EXTENDS TO BACK OF CURB FROM STA. 221+34 TO STA. 228+73.
 - (H) BOULEVARD WIDTH REDUCED TO 4' AT STA. 227+98 TO STA. 229+05.
 - (J) BERM WIDTH REDUCED TO 2' AT STA. 342+21 TO STA. 345+52.
 - (K) SEE CROSS SECTIONS AND SPECIAL DITCH PROFILES FOR MODIFICATIONS TO THE STANDARD DITCH DEPTH.
 - (L) MATERIAL GENERATED FROM MUCK EXCAVATION SHALL NOT BE USED WITHIN UTILITY TRENCH.
 - (M) SEE CONSTRUCTION PLAN AND ALIGNMENT PLAN FOR BIT. PATH LOCATION BEYOND STA. 306+40.58.
 - (N) SEE CROSS SECTIONS FOR BERM WIDTH.
 - (P) CONSTRUCT LANES AT THE FOLLOWING WIDTHS (MEASURE TO FACE OF CURB):

108TH LANE	15.5' LT/14.9' RT
109TH AVENUE	39.8' LT/22.0' RT
RADISSON WOOD DRIVE	14.8' LT/14.8' RT
DRIVEWAY C	14.0' LT/14.0' RT
ARNOLD PALMER PARKWAY	25.5' LT/13.5' RT
 - (Q) TYPE B618 CURB & GUTTER:

108TH LANE
RADISSON WOOD DRIVE
DRIVEWAY C

 TYPE D312 CURB & GUTTER:

ARNOLD PALMER PARKWAY

 - (R) CONSTRUCT LANES AT THE FOLLOWING WIDTHS (MEASURE TO FACE OF CURB):

RODEO DRIVE	12' LT/12' RT
DEER RIDGE	11.25' LT/12' RT
FOX RIDGE	11.7' LT/11.7' RT
 - (S) CONSTRUCT MODULAR BLOCK WALL AT LOCATIONS LISTED. SEE DETAIL

NB 240+50 TO NB 243+60
NB 244+60 TO NB 252+50
NB 258+40 TO NB 260+00
 - (T) TRANSITION TRENCH OFFSET FROM SB CSAH 52 STA. 219+50, 54' LT. TO SB CSAH 52 STA. 222+14, 28' LT.
 - (U) OFFSET DISTANCE TO C EAST UTILITY TRENCH

NB 211+00 TO 218+50	31'
NB 219+00 TO 221+50	27.5'
NB 222+00 TO 295+00	31'
NB 295+00 TO 304+50	29'
NB 305+00 TO 346+00	31'

NO	DATE	BY	CKD	APPR	REVISION
NAME: \$FILE\$					\$DATE\$

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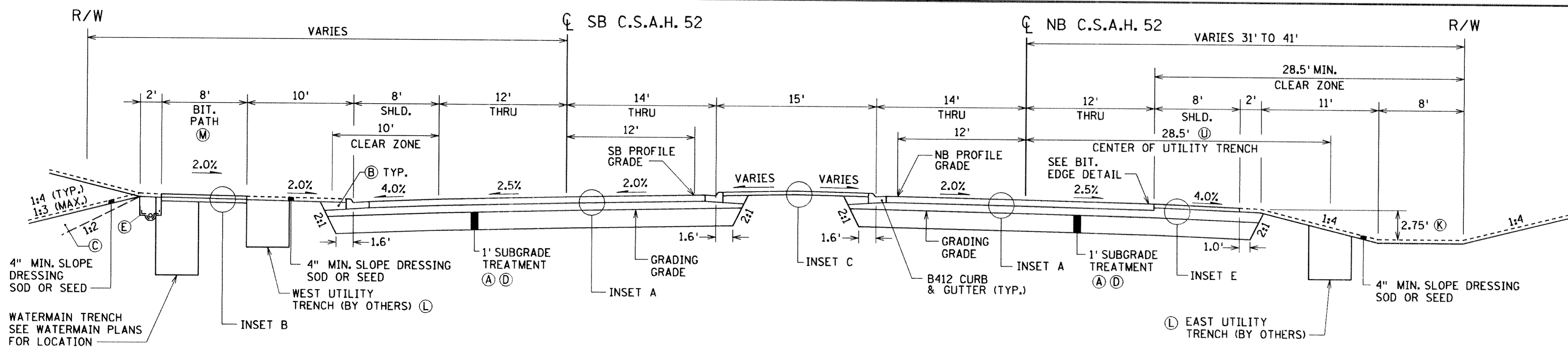
DATE _____ REG. NO. _____

DRAWN BY: TJV DATE 11-8-00
 DESIGN BY: JMW DATE 11-8-00
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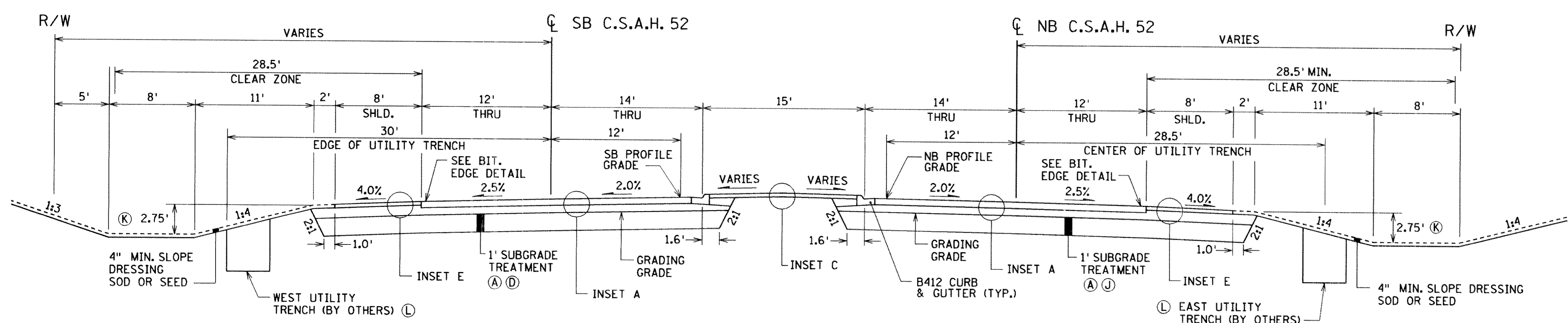
STATE PROJECT NO. S.A.P. 02-652-01
 S.A.P. 106-020-019

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 TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

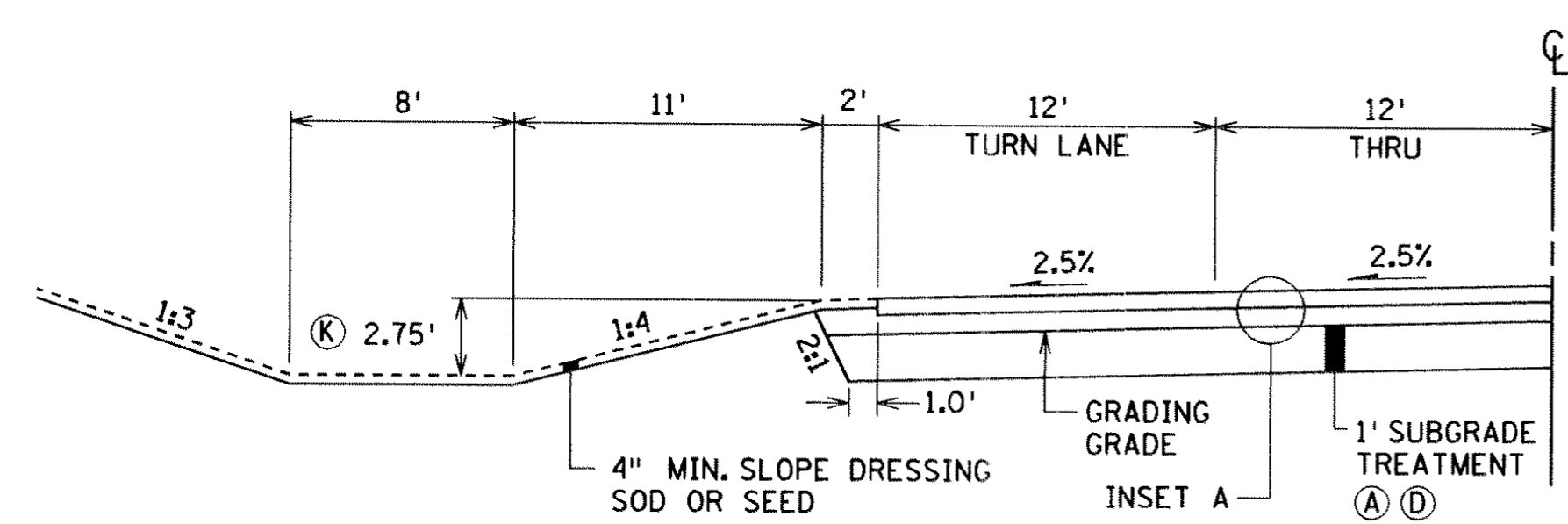
ANOKA COUNTY
 TYPICAL SECTIONS
 C.S.A.H. 52 RECONSTRUCTION



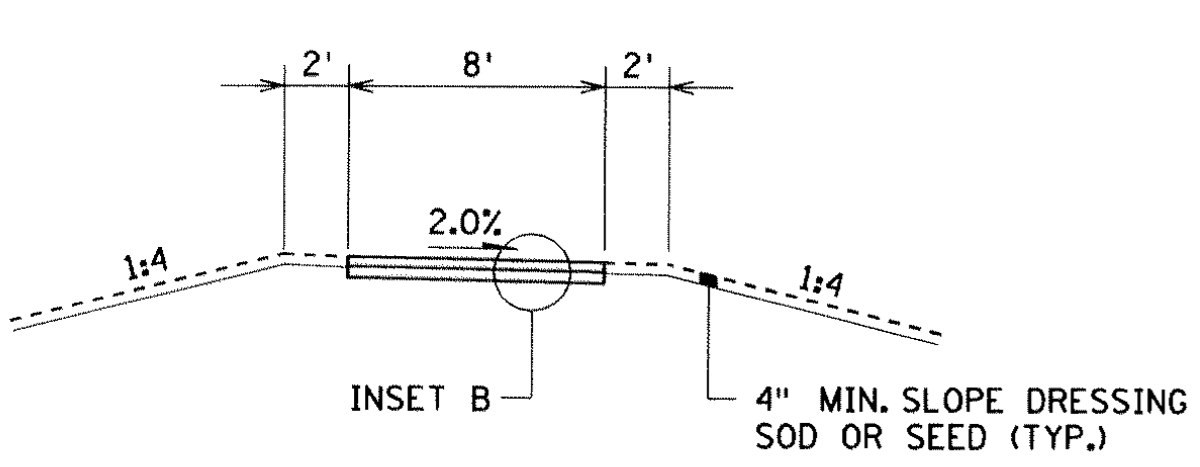
C.S.A.H. 52 - NB STA. 301+94.75 TO STA. 306+72.20



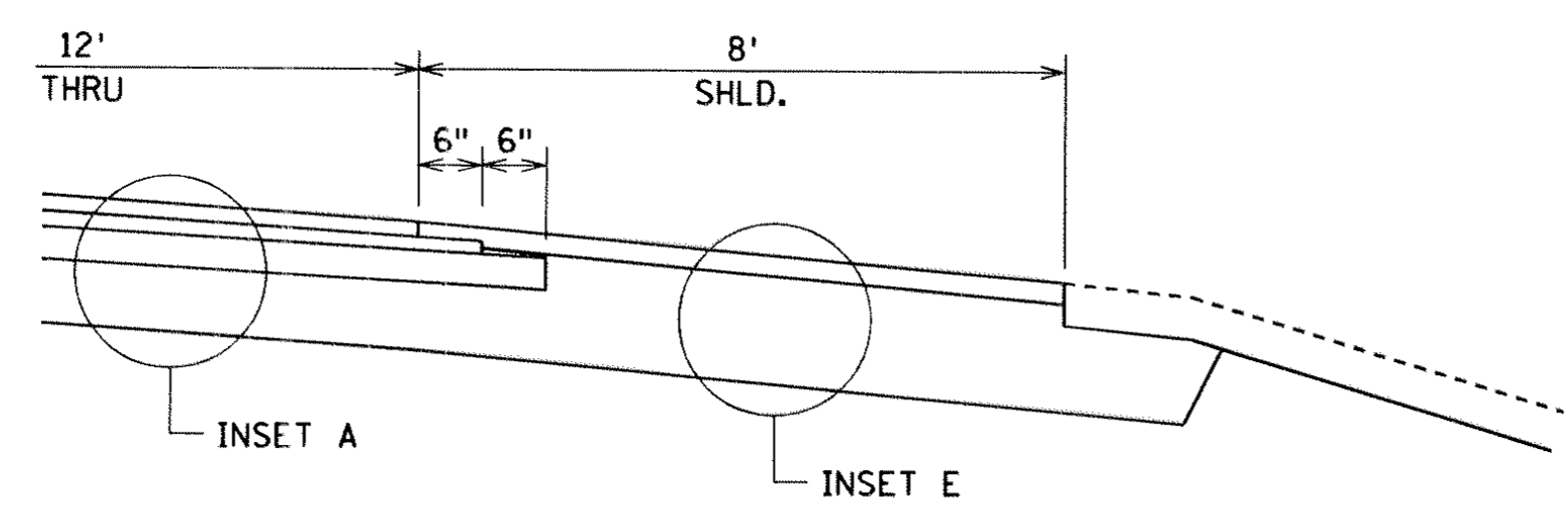
C.S.A.H. 52 - NB STA. 306+72.20 TO STA. 341+14.15



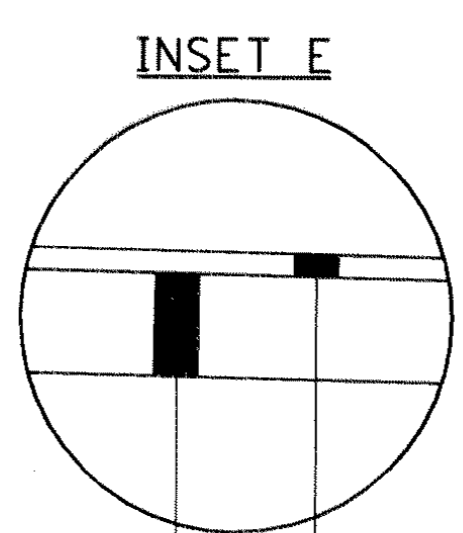
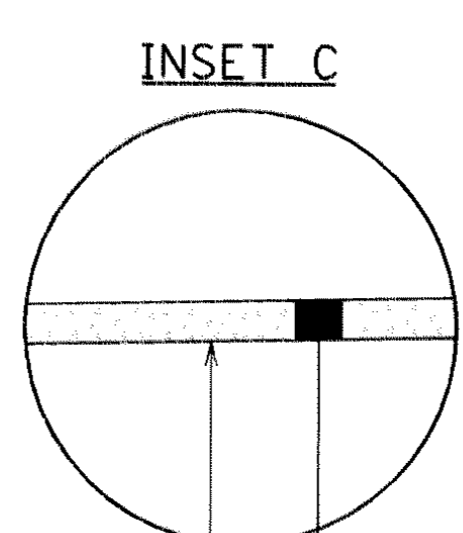
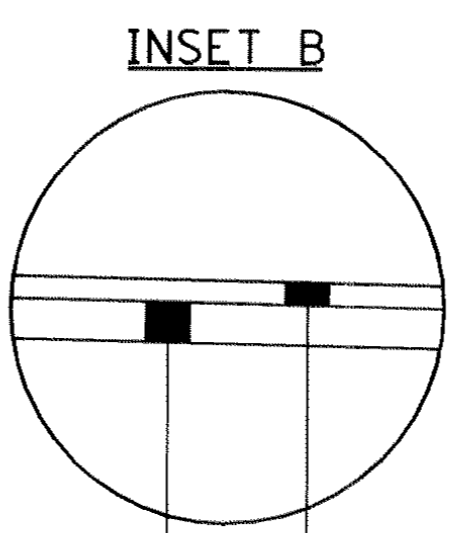
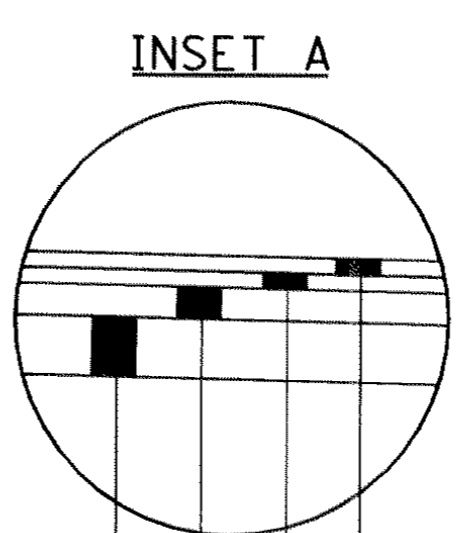
RURAL RIGHT TURN LANE DETAIL
SEE CONSTRUCTION PLAN FOR LOCATIONS



BITUMINOUS TRAIL DETAIL



BITUMINOUS EDGE DETAIL



NOTES:

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- (C) BACKFILL WITH MUCK EXCAVATED MATERIAL.
- (D) AT THE LOCATIONS LISTED BELOW, REPLACE 1' SUBGRADE TREATMENT WITH CONSTRUCTION OF A 3' SUBCUT BACKFILLED WITH GRANULAR MATERIAL.
236+00 TO 259+00
288+00 TO 301+25.40
RODEO DRIVE
DEER RIDGE
- (E) INSTALL EDGE DRAIN IN CUT AREAS. SEE DETAIL FOR DIMENSIONS. SEE DRAINAGE PLAN AND TABULATIONS FOR LOCATIONS.
- (F) WIDTH OF BOULEVARD VARIES. SEE CONSTRUCTION PLAN FOR LOCATIONS.
- (G) BITUMINOUS PAVEMENT ON PATH EXTENDS TO BACK OF CURB FROM STA. 221+34 TO STA. 228+73.
- (H) BOULEVARD WIDTH REDUCED TO 4' AT STA. 227+98 TO STA. 229+05.
- (J) BERM WIDTH REDUCED TO 2' AT STA. 342+21 TO STA. 345+52.
- (K) SEE CROSS SECTIONS AND SPECIAL DITCH PROFILES FOR MODIFICATIONS TO THE STANDARD DITCH DEPTH.
- (L) MATERIAL GENERATED FROM MUCK EXCAVATION SHALL NOT BE USED WITHIN UTILITY TRENCH.
- (M) SEE CONSTRUCTION PLAN AND ALIGNMENT PLAN FOR BIT. PATH LOCATION BEYOND STA. 306+40.58.
- (N) SEE CROSS SECTIONS FOR BERM WIDTH.
- (P) CONSTRUCT LANES AT THE FOLLOWING WIDTHS (MEASURE TO FACE OF CURB):
108TH LANE 15.5' LT/14.9' RT
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RADISSON WOOD DRIVE 14.8' LT/14.8' RT
DRIVEWAY C 14.0' LT/14.0' RT
ARNOLD PALMER PARKWAY 25.5' LT/13.5' RT
- (Q) TYPE B618 CURB & GUTTER:
108TH LANE
RADISSON WOOD DRIVE
DRIVEWAY C
TYPE D312 CURB & GUTTER:
ARNOLD PALMER PARKWAY
- (R) CONSTRUCT LANES AT THE FOLLOWING WIDTHS (MEASURE TO FACE OF CURB):
RODEO DRIVE 12' LT/12' RT
DEER RIDGE 11.25' LT/12' RT
FOX RIDGE 11.7' LT/11.7' RT
- (S) CONSTRUCT MODULAR BLOCK WALL AT LOCATIONS LISTED. SEE DETAIL
NB 240+50 TO NB 243+60
NB 244+60 TO NB 252+50
NB 258+40 TO NB 260+00
- (T) TRANSITION TRENCH OFFSET FROM SB CSAH 52 STA. 219+50, 54' LT. TO SB CSAH 52 STA. 222+14, 28' LT.
- (U) OFFSET DISTANCE TO CENTERLINE EAST UTILITY TRENCH
NB 211+00 TO 218+50 31'
NB 219+00 TO 221+50 27.5'
NB 222+00 TO 295+00 31'
NB 295+00 TO 304+50 29'
NB 305+00 TO 346+00 31'

NO	DATE	BY	CKD	APPR	REVISION
NAME: \$FILE\$					

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DATE _____ REG. NO. _____

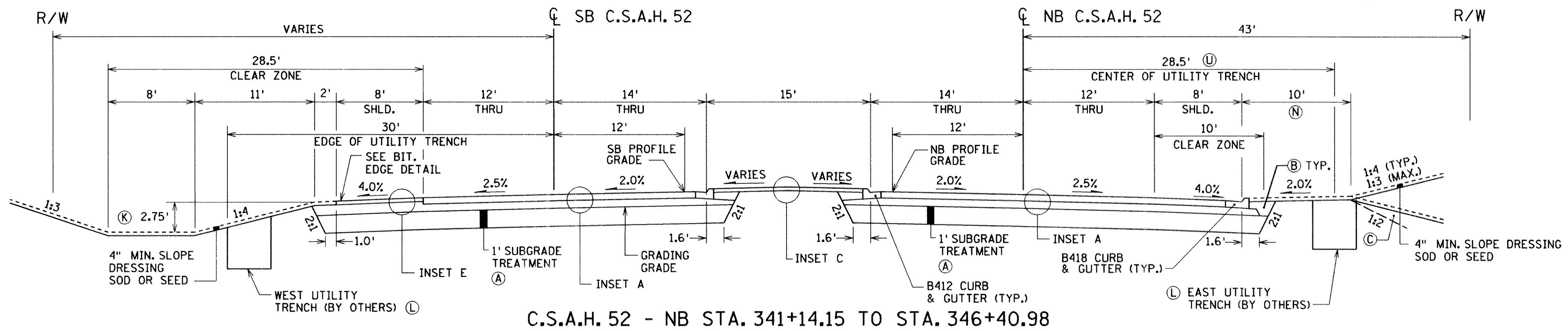
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STATE PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

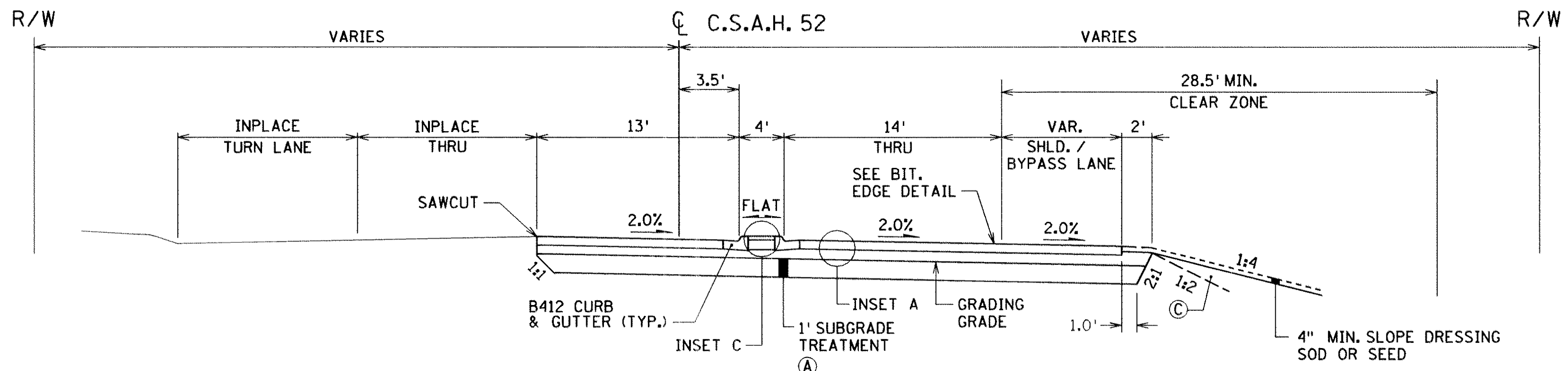
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ANOKA COUNTY
 TYPICAL SECTIONS
 C.S.A.H. 52 RECONSTRUCTION

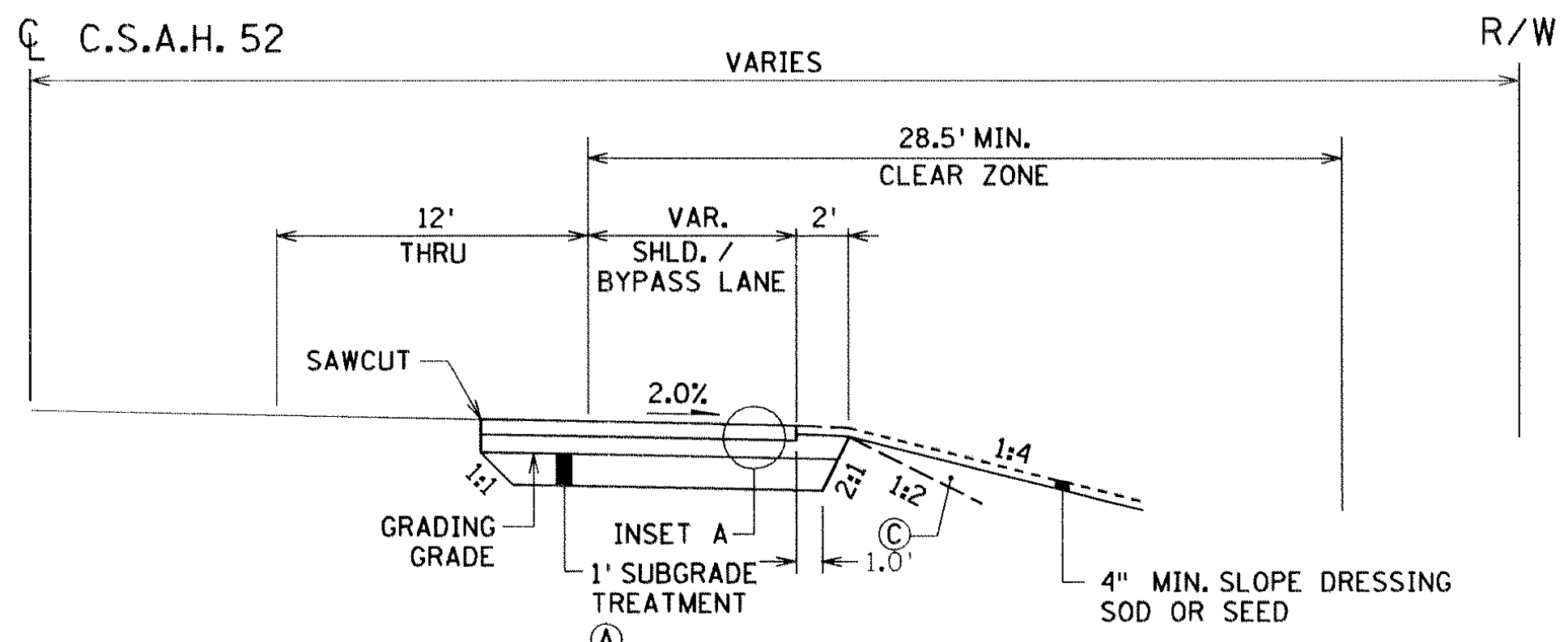
SHEET
 22
 OF
 253



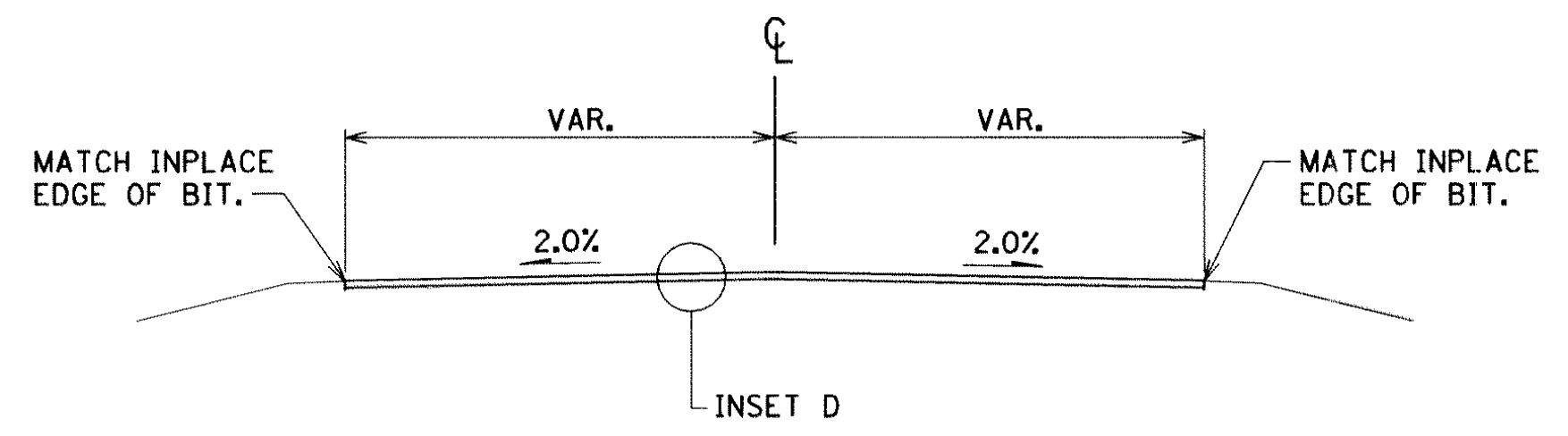
C.S.A.H. 52 - NB STA. 341+14.15 TO STA. 346+40.98



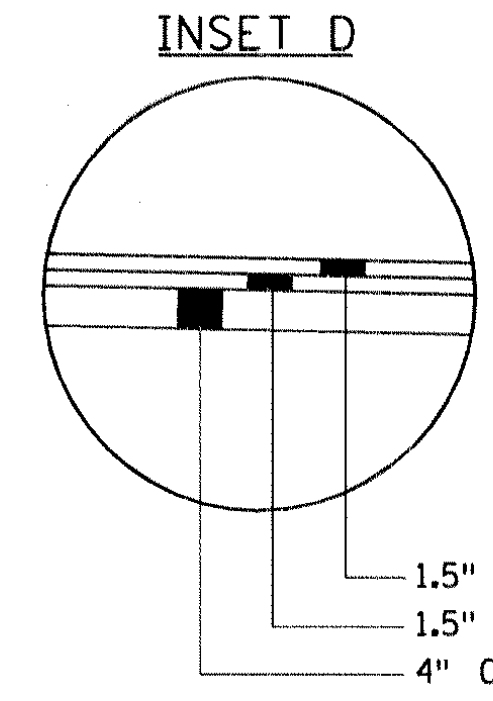
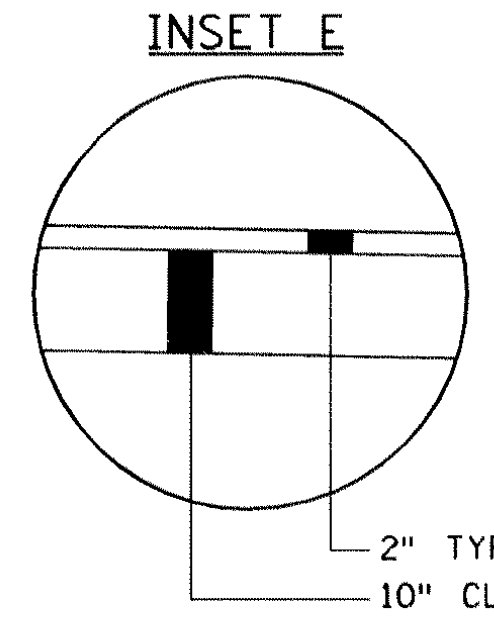
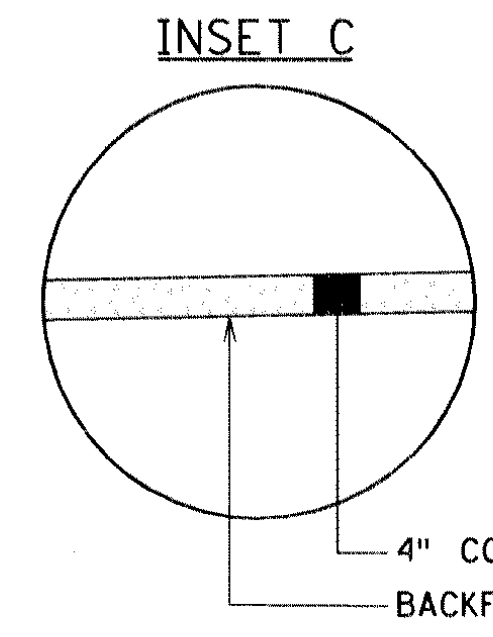
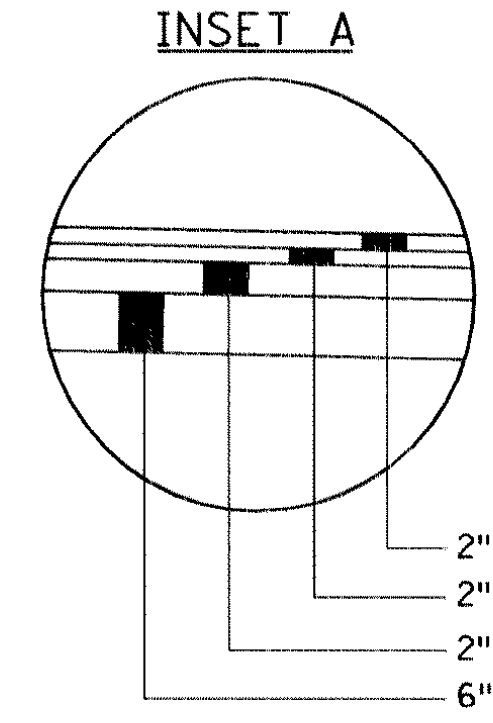
C.S.A.H. 52 STA. 346+40.98 TO STA. 349+79.25



C.S.A.H. 52 STA. 349+79.25 TO STA. 354+01.36



OLD RADISSON ROAD



NOTES:

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- (A) SUBGRADE TREATMENT SHALL CONSIST OF MIXING THE UPPER 1' OF THE SUBGRADE, AND SHALL BE PAID FOR AS COMMON EXCAVATION.
- (B) BACKFILL WITH SUITABLE GRADING MATERIAL.
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 - 236+00 TO 259+00
 - 288+00 TO 301+25.40
 - RODEO DRIVE
 - DEER RIDGE
- (E) INSTALL EDGE DRAIN IN CUT AREAS. SEE DETAIL FOR DIMENSIONS, SEE DRAINAGE PLAN AND TABULATIONS FOR LOCATIONS.
- (F) WIDTH OF BOULEVARD VARIES. SEE CONSTRUCTION PLAN FOR LOCATIONS.
- (G) BITUMINOUS PAVEMENT ON PATH EXTENDS TO BACK OF CURB FROM STA. 221+34 TO STA. 228+73.
- (H) BOULEVARD WIDTH REDUCED TO 4' AT STA. 227+98 TO STA. 229+05.
- (J) BERM WIDTH REDUCED TO 2' AT STA. 342+21 TO STA. 345+52.
- (K) SEE CROSS SECTIONS AND SPECIAL DITCH PROFILES FOR MODIFICATIONS TO THE STANDARD DITCH DEPTH.
- (L) MATERIAL GENERATED FROM MUCK EXCAVATION SHALL NOT BE USED WITHIN UTILITY TRENCH.
- (M) SEE CONSTRUCTION PLAN AND ALIGNMENT PLAN FOR BIT. PATH LOCATION BEYOND STA. 306+40.58.
- (N) SEE CROSS SECTIONS FOR BERM WIDTH.
- (P) CONSTRUCT LANES AT THE FOLLOWING WIDTHS (MEASURE TO FACE OF CURB):

108TH LANE	15.5' LT/14.9' RT
109TH AVENUE	39.8' LT/22.0' RT
RADISSON WOOD DRIVE	14.8' LT/14.8' RT
DRIVEWAY C	14.0' LT/14.0' RT
ARNOLD PALMER PARKWAY	25.5' LT/13.5' RT
- (Q) TYPE B618 CURB & GUTTER:
 - 108TH LANE
 - RADISSON WOOD DRIVE
 - DRIVEWAY C
 TYPE D312 CURB & GUTTER:
 - ARNOLD PALMER PARKWAY
- (R) CONSTRUCT LANES AT THE FOLLOWING WIDTHS (MEASURE TO FACE OF CURB):

RODEO DRIVE	12' LT/12' RT
DEER RIDGE	11.25' LT/12' RT
FOX RIDGE	11.7' LT/11.7' RT
- (S) CONSTRUCT MODULAR BLOCK WALL AT LOCATIONS LISTED. SEE DETAIL
 - NB 240+50 TO NB 243+60
 - NB 244+60 TO NB 252+50
 - NB 258+40 TO NB 260+00
- (T) TRANSITION TRENCH OFFSET FROM SB CSAH 52 STA. 219+50, 54' LT. TO SB CSAH 52 STA. 222+14, 28' LT.
- (U) OFFSET DISTANCE TO C EAST UTILITY TRENCH

NB 211+00 TO 218+50	31'
NB 219+00 TO 221+50	27.5'
NB 222+00 TO 295+00	31'
NB 295+00 TO 304+50	29'
NB 305+00 TO 346+00	31'

NO	DATE	BY	CKD	APPR	REVISION
NAME: \$FILE\$					DATE: \$DATE\$

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE _____ REG. NO. _____

DRAWN BY TJV DATE 11-8-00

DESIGN BY JMW DATE 11-8-00

CHECKED BY GAR DATE 11-8-00

STATE PROJECT NO. _____

S.A.P. 02-652-01

S.A.P. 106-020-019

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY

TYPICAL SECTIONS

C.S.A.H. 52 RECONSTRUCTION

SHEET

23

OF

253

NOTES:

ALL STATIONING REFERS TO NB C.S.A.H. 52 STATIONS UNLESS OTHERWISE INDICATED.

SEE SUPERELEVATION PLANS FOR ADDITIONAL CROSS SLOPE INFORMATION.

(A) SUBGRADE TREATMENT SHALL CONSIST OF MIXING THE UPPER 1' OF THE SUBGRADE, AND SHALL BE PAID FOR AS COMMON EXCAVATION.

(B) BACKFILL WITH SUITABLE GRADING MATERIAL.

(C) BACKFILL WITH MUCK EXCAVATED MATERIAL.

(D) AT THE LOCATIONS LISTED BELOW, REPLACE 1' SUBGRADE TREATMENT WITH CONSTRUCTION OF A 3' SUBCUT BACKFILLED WITH GRANULAR MATERIAL.

236+00 TO 259+00
288+00 TO 301+25.40
RODEO DRIVE
DEER RIDGE

(E) INSTALL EDGE DRAIN IN CUT AREAS. SEE DETAIL FOR DIMENSIONS. SEE DRAINAGE PLAN AND TABULATIONS FOR LOCATIONS.

(F) WIDTH OF BOULEVARD VARIES. SEE CONSTRUCTION PLAN FOR LOCATIONS.

(G) BITUMINOUS PAVEMENT ON PATH EXTENDS TO BACK OF CURB FROM STA. 221+34 TO STA. 228+73.

(H) BOULEVARD WIDTH REDUCED TO 4' AT STA. 227+98 TO STA. 229+05.

(J) BERM WIDTH REDUCED TO 2' AT STA. 342+21 TO STA. 345+52.

(K) SEE CROSS SECTIONS AND SPECIAL DITCH PROFILES FOR MODIFICATIONS TO THE STANDARD DITCH DEPTH.

(L) MATERIAL GENERATED FROM MUCK EXCAVATION SHALL NOT BE USED WITHIN UTILITY TRENCH.

(M) SEE CONSTRUCTION PLAN AND ALIGNMENT PLAN FOR BIT. PATH LOCATION BEYOND STA. 306+40.58.

(N) SEE CROSS SECTIONS FOR BERM WIDTH.

(P) CONSTRUCT LANES AT THE FOLLOWING WIDTHS (MEASURE TO FACE OF CURB):
108TH LANE 15.5' LT/14.9' RT
109TH AVENUE 39.8' LT/22.0' RT
RADISSON WOOD DRIVE 14.8' LT/14.8' RT
DRIVEWAY C 14.0' LT/14.0' RT
ARNOLD PALMER PARKWAY 25.5' LT/13.5' RT

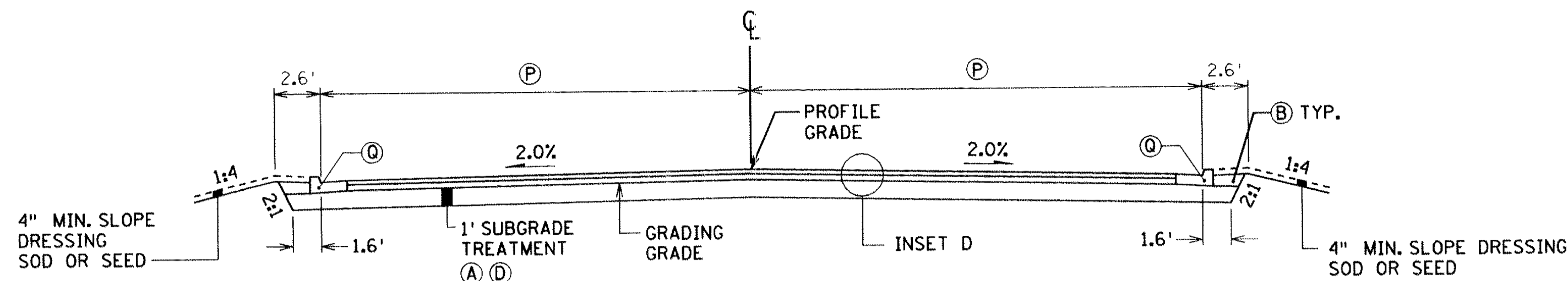
(Q) TYPE B618 CURB & GUTTER:
108TH LANE
RADISSON WOOD DRIVE
DRIVEWAY C
TYPE D312 CURB & GUTTER:
ARNOLD PALMER PARKWAY

(R) CONSTRUCT LANES AT THE FOLLOWING WIDTHS (MEASURE TO FACE OF CURB):
RODEO DRIVE 12' LT/12' RT
DEER RIDGE 11.25' LT/12' RT
FOX RIDGE 11.7' LT/11.7' RT

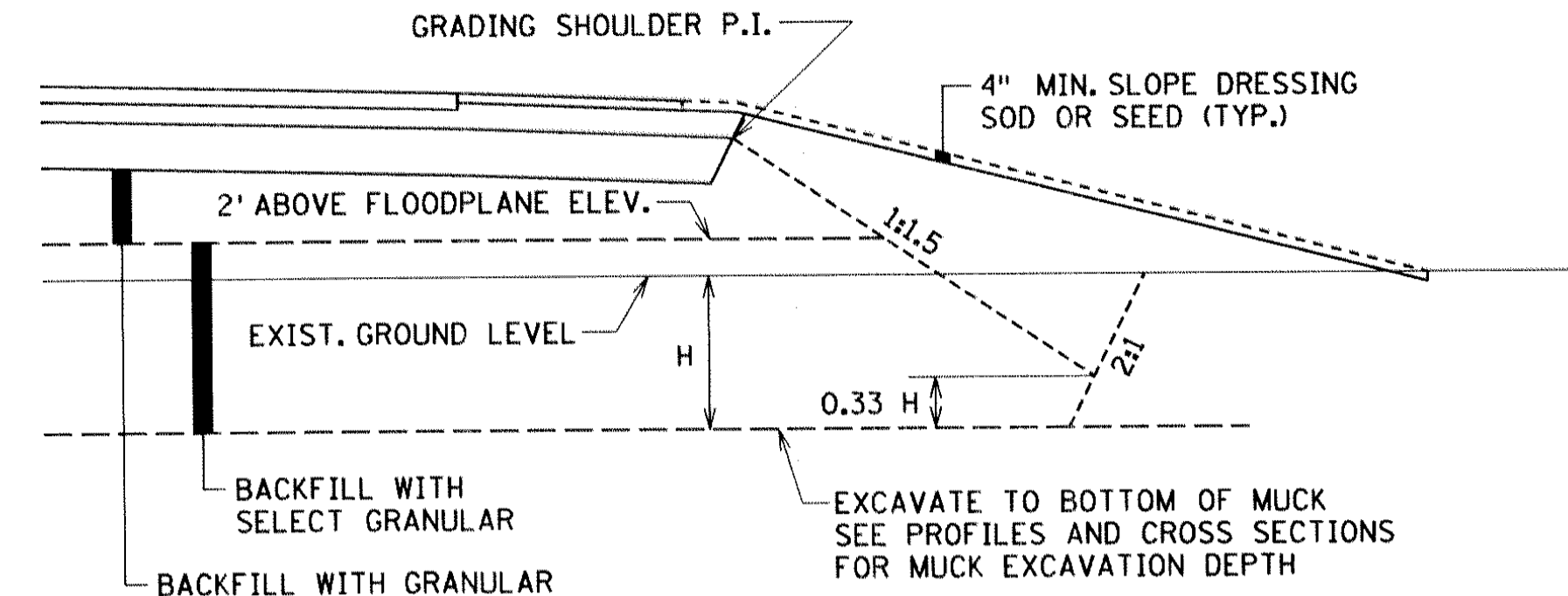
(S) CONSTRUCT MODULAR BLOCK WALL AT LOCATIONS LISTED. SEE DETAIL
NB 240+50 TO NB 243+60
NB 244+60 TO NB 252+50
NB 258+40 TO NB 260+00

(T) TRANSITION TRENCH OFFSET FROM SB CSAH 52 STA. 219+50, 54' LT. TO SB CSAH 52 STA. 222+14, 28' LT.

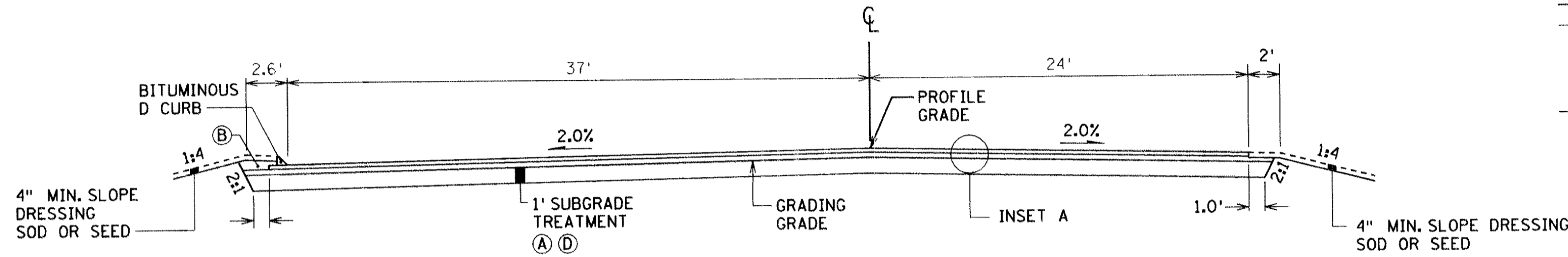
(U) OFFSET DISTANCE TO \bar{C} EAST UTILITY TRENCH
NB 211+00 TO 218+50 31'
NB 219+00 TO 221+50 27.5'
NB 222+00 TO 295+00 31'
NB 295+00 TO 304+50 29'
NB 305+00 TO 346+00 31'



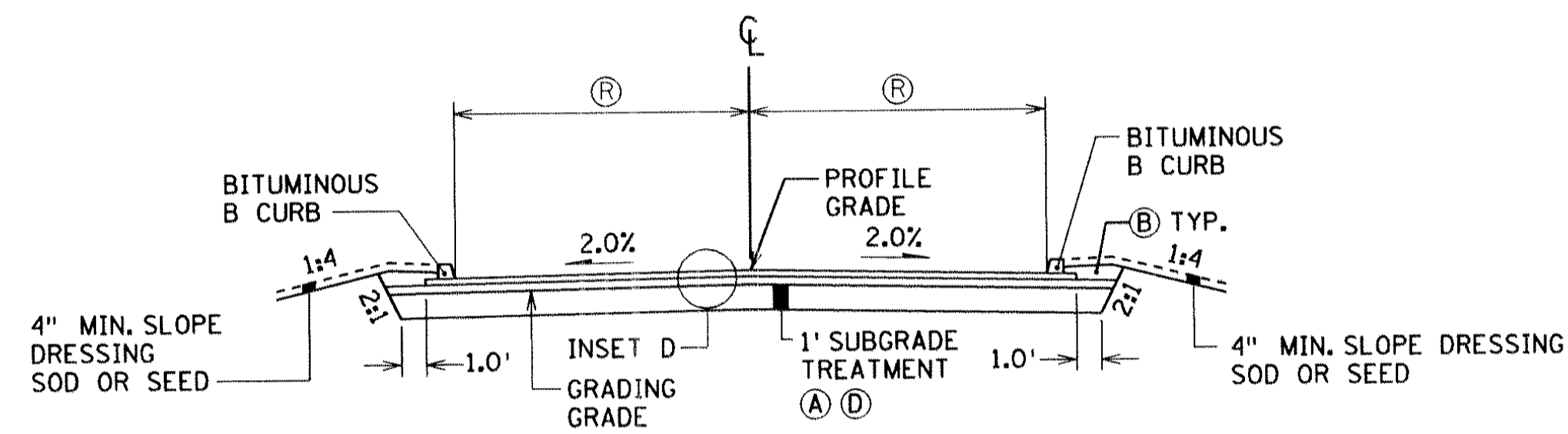
108TH LANE, RADISSON WOOD DRIVE
DRIVEWAY C, ARNOLD PALMER PARKWAY



TYPICAL MUCK EXCAVATION DETAIL

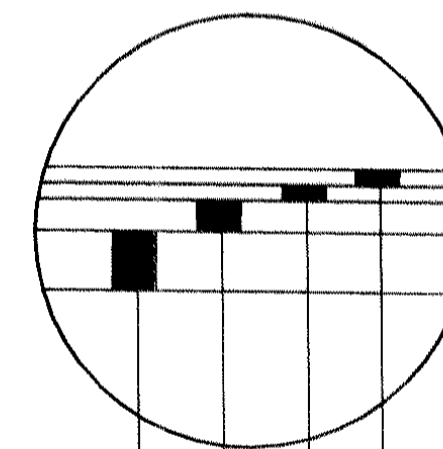


109TH AVENUE



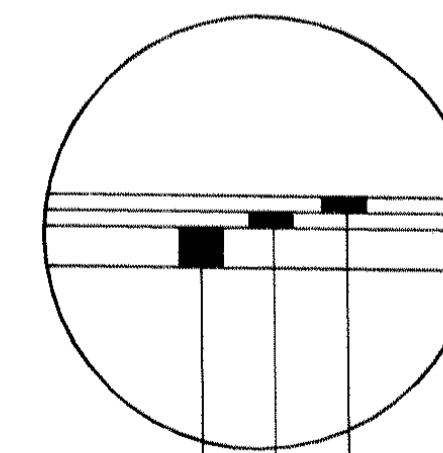
RODEO DRIVE, DEER RIDGE, FOX RIDGE

INSET A

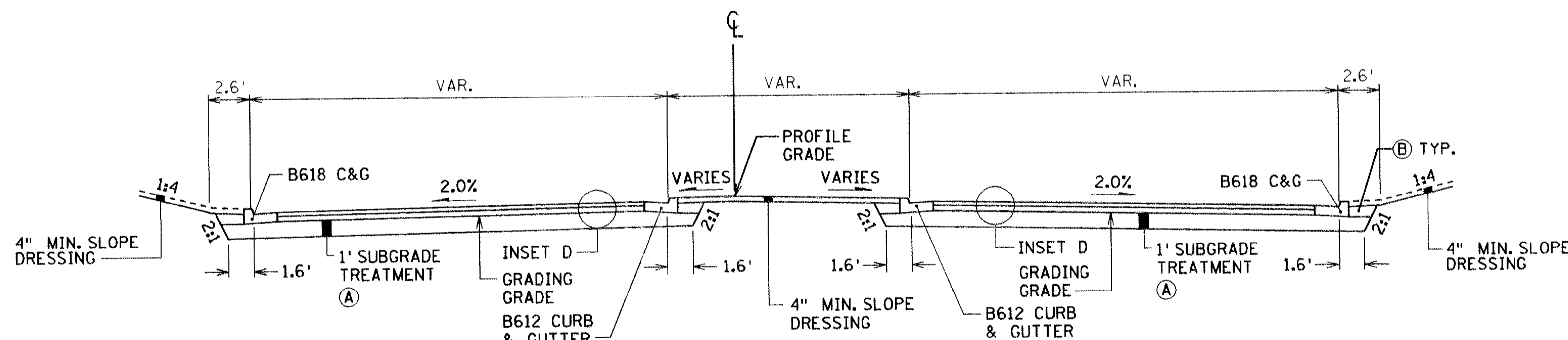


2" TYPE MV 3 MIXTURE (MVWE45035C)
2" TYPE MV 3 MIXTURE (MVNW35035C)
2" TYPE LV 3 MIXTURE (LVNW35030B)
6" CLASS 5 AGGREGATE, SPEC. 2211

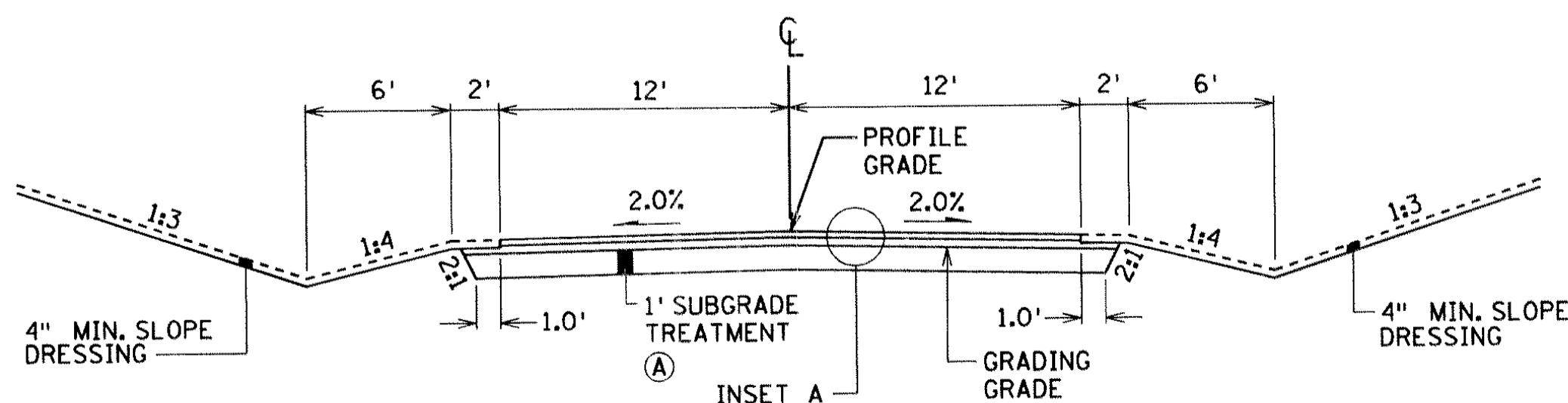
INSET D



1.5" TYPE MV 3 MIXTURE (MVWE35035C)
1.5" TYPE MV 3 MIXTURE (MVNW35035C)
4" CLASS 5 AGGREGATE, SPEC. 2211



TOURNAMENT PLAYERS PARKWAY



CLOUD DRIVE

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.

DRAWN BY TJV DATE 11-8-00

DESIGN BY JMW DATE 11-8-00

CHECKED BY GAR DATE 11-8-00

STATE PROJECT NO.

S.A.P. 02-652-01
S.A.P. 106-020-019

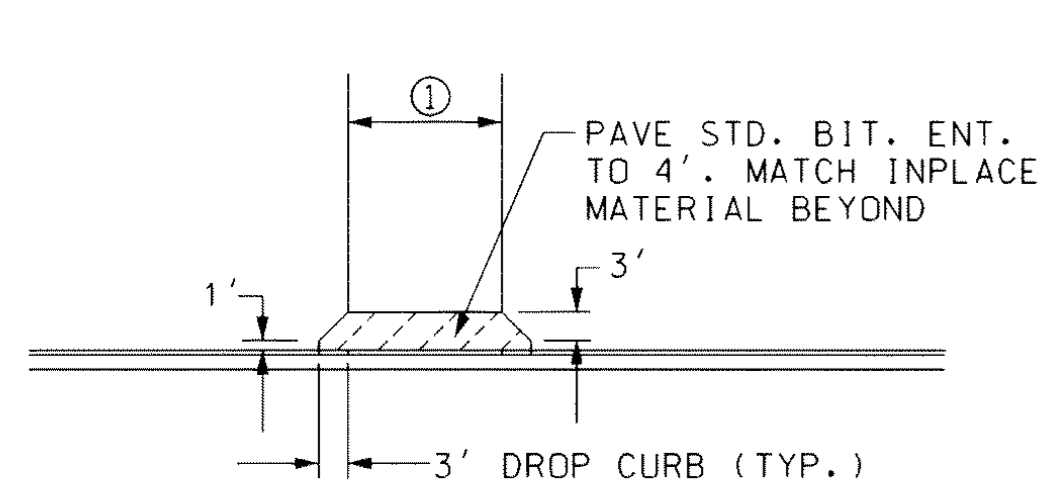
TKDA
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AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
TYPICAL SECTIONS
C.S.A.H. 52 RECONSTRUCTION

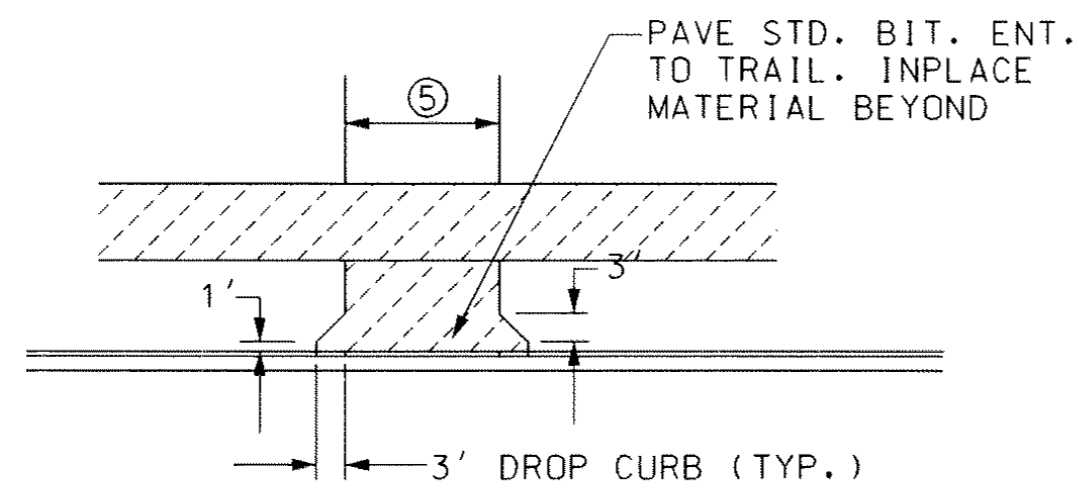
SHEET
24
OF
253

NO	DATE	BY	CKD	APPR	REVISION

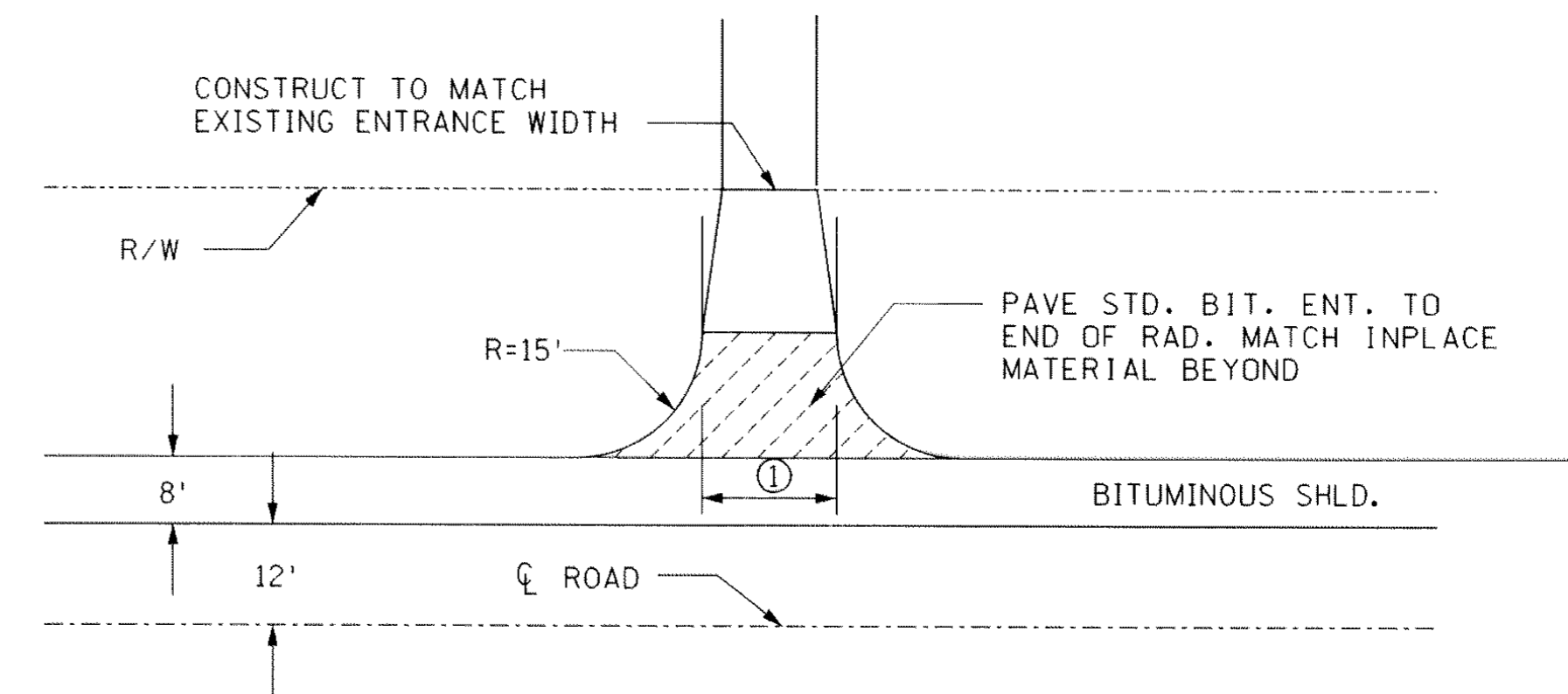
DATE _____ REG. NO. _____



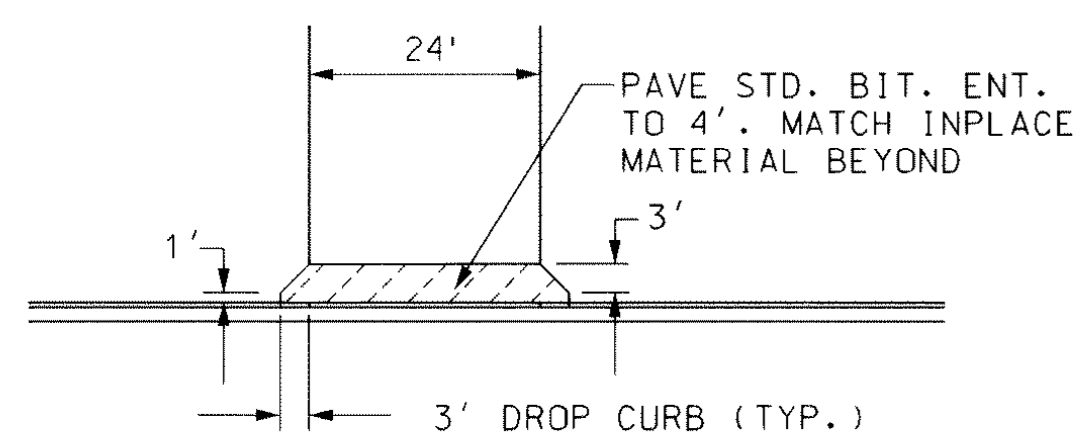
URBAN RESIDENTIAL ENTRANCE WITHOUT BITUMINOUS PATH



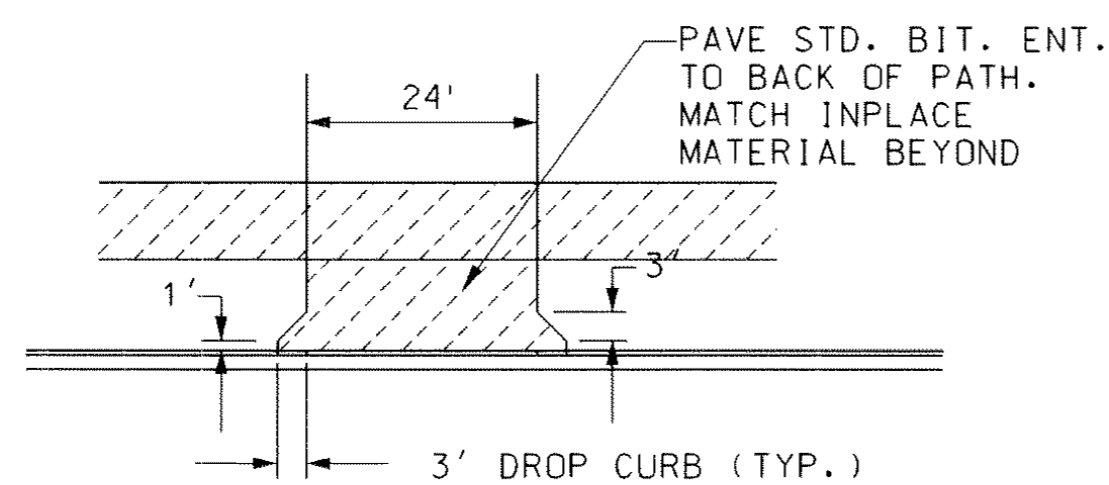
URBAN RESIDENTIAL ENTRANCE WITH BITUMINOUS PATH



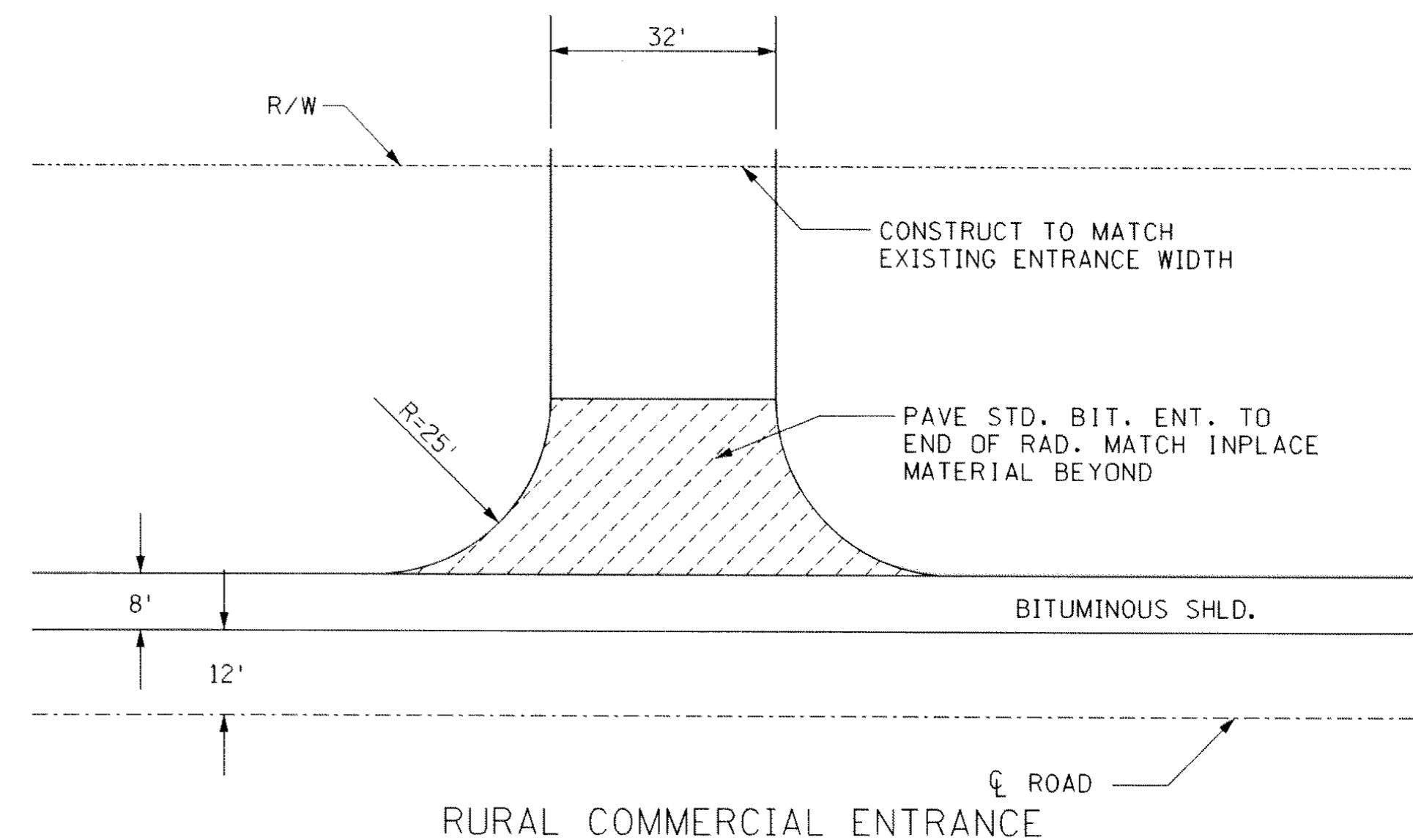
RURAL RESIDENTIAL ENTRANCE



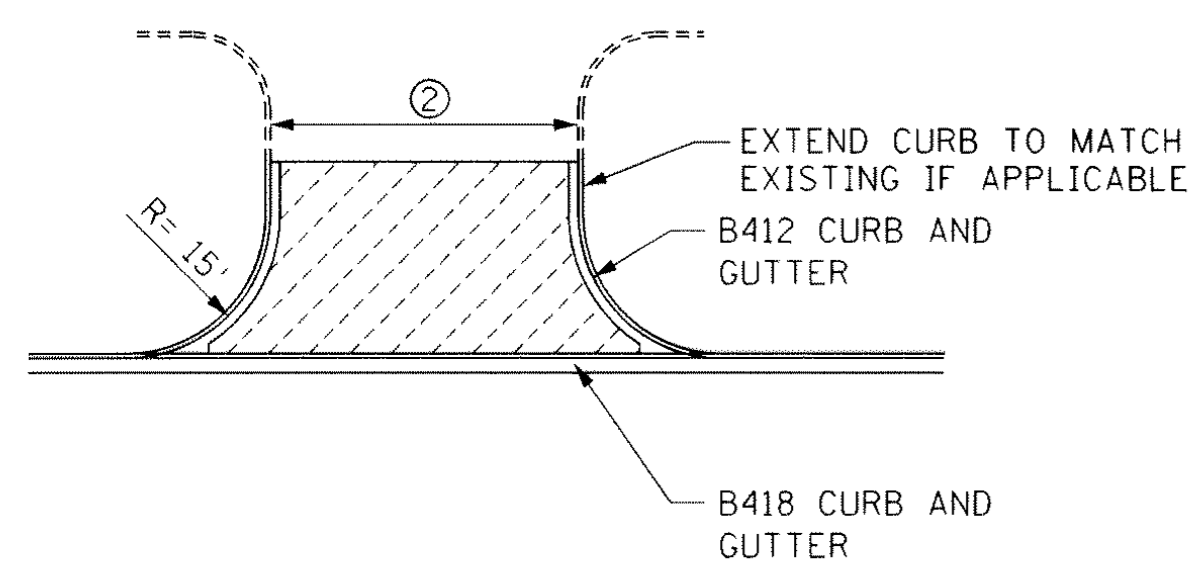
URBAN FIELD ENTRANCE WITHOUT BITUMINOUS PATH



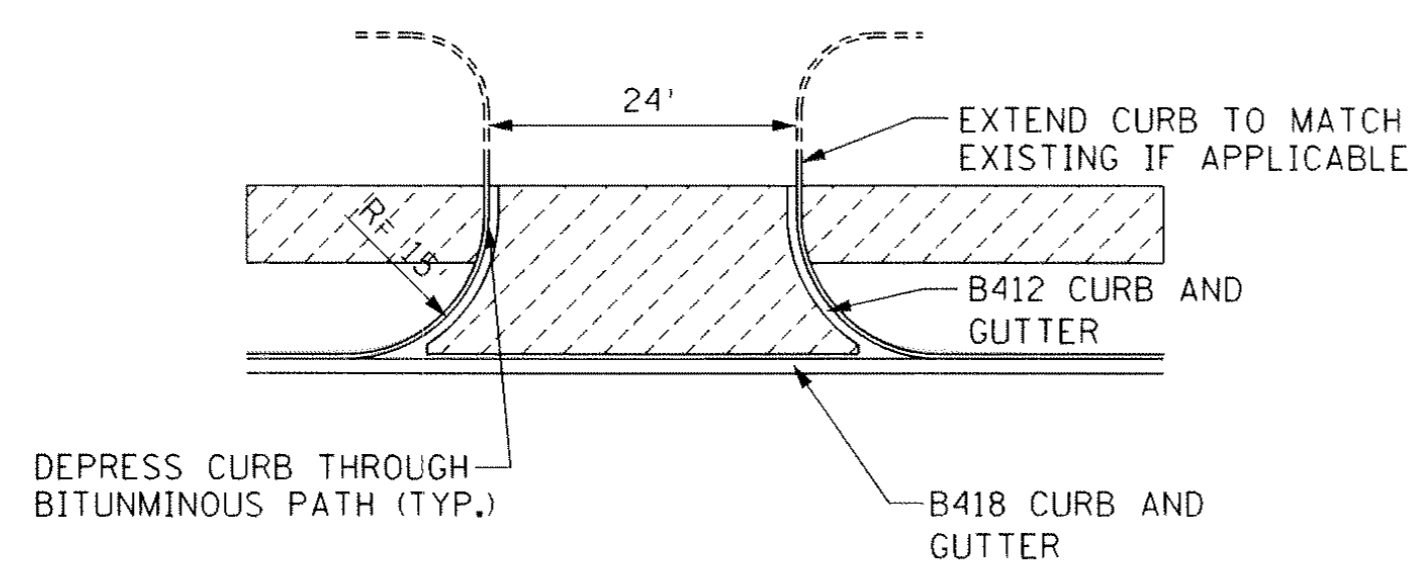
URBAN FIELD ENTRANCE WITH BITUMINOUS PATH



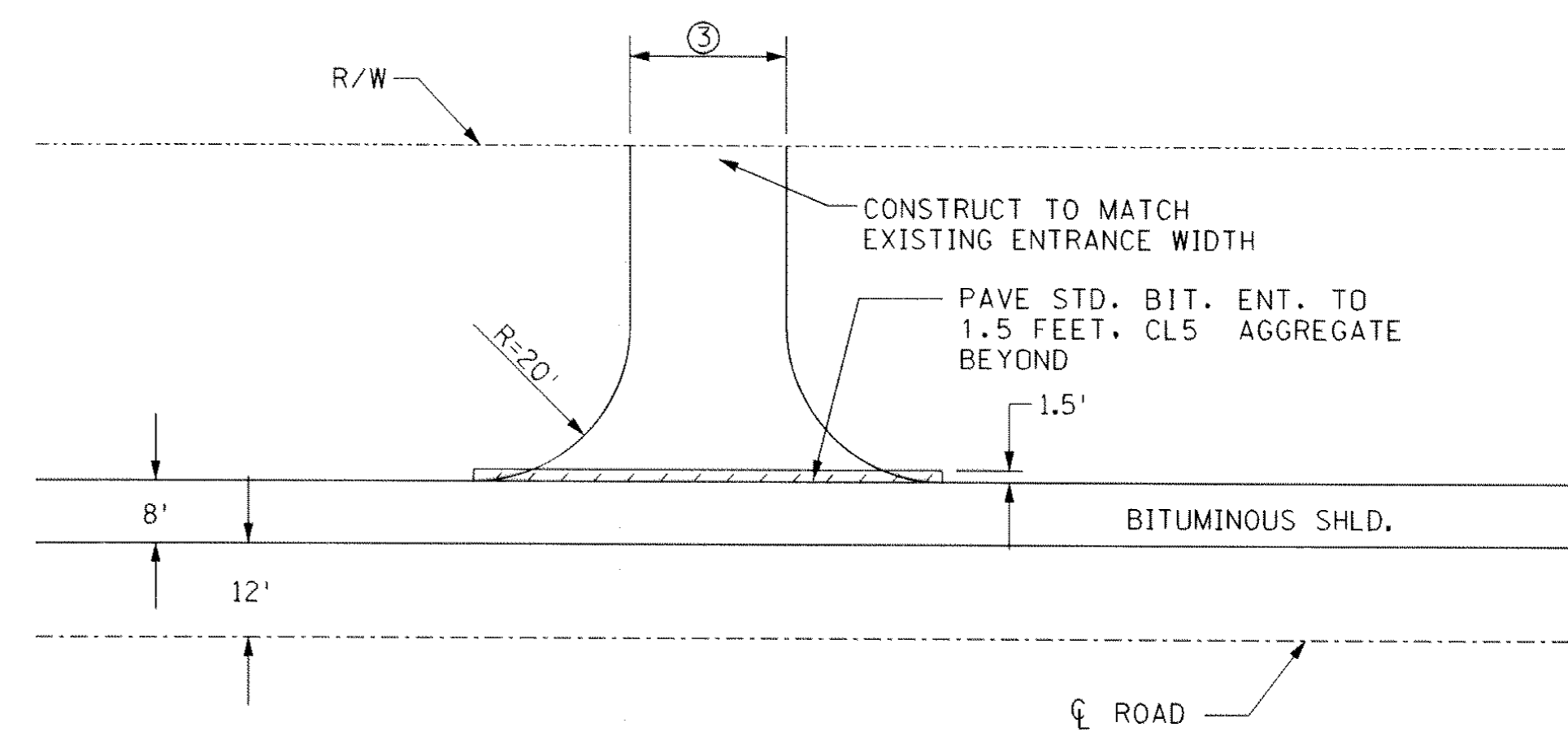
RURAL COMMERCIAL ENTRANCE



URBAN COMMERCIAL ENTRANCE WITHOUT BITUMINOUS PATH



URBAN COMMERCIAL ENTRANCE WITH BITUMINOUS PATH



RURAL FIELD ENTRANCE

- ① EXISTING WIDTH (16' MIN. / 24' MAX.) TO R/W LINE.
- ② EXISTING WIDTH (32' MIN. / 50' MAX.) TO END OF RADIUS.
- ③ EXISTING WIDTH (20' MIN. / 32' MAX.)
- ④ FOR EXISTING CONCRETE DRIVEWAYS AND ENTRANCES, REPLACE IN KIND USING BITUMINOUS DRIVEWAY DIMENSIONS. FOR EXISTING CONCRETE APRONS, REPLACE IN KIND USING STANDARD PLATE 7035.
- ⑤ EXISTING WIDTH (16' MIN. / 24' MAX.) TO BACK OF PATH.

NOTE:
 STANDARD BIT. ENTRANCE CONST.
 - 2" 2350 LV4 WEAR COURSE
 - 4" AGG. BASE CL-5

NO	DATE	BY	CKD	APPR	REVISION

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DATE _____ REG. NO. _____

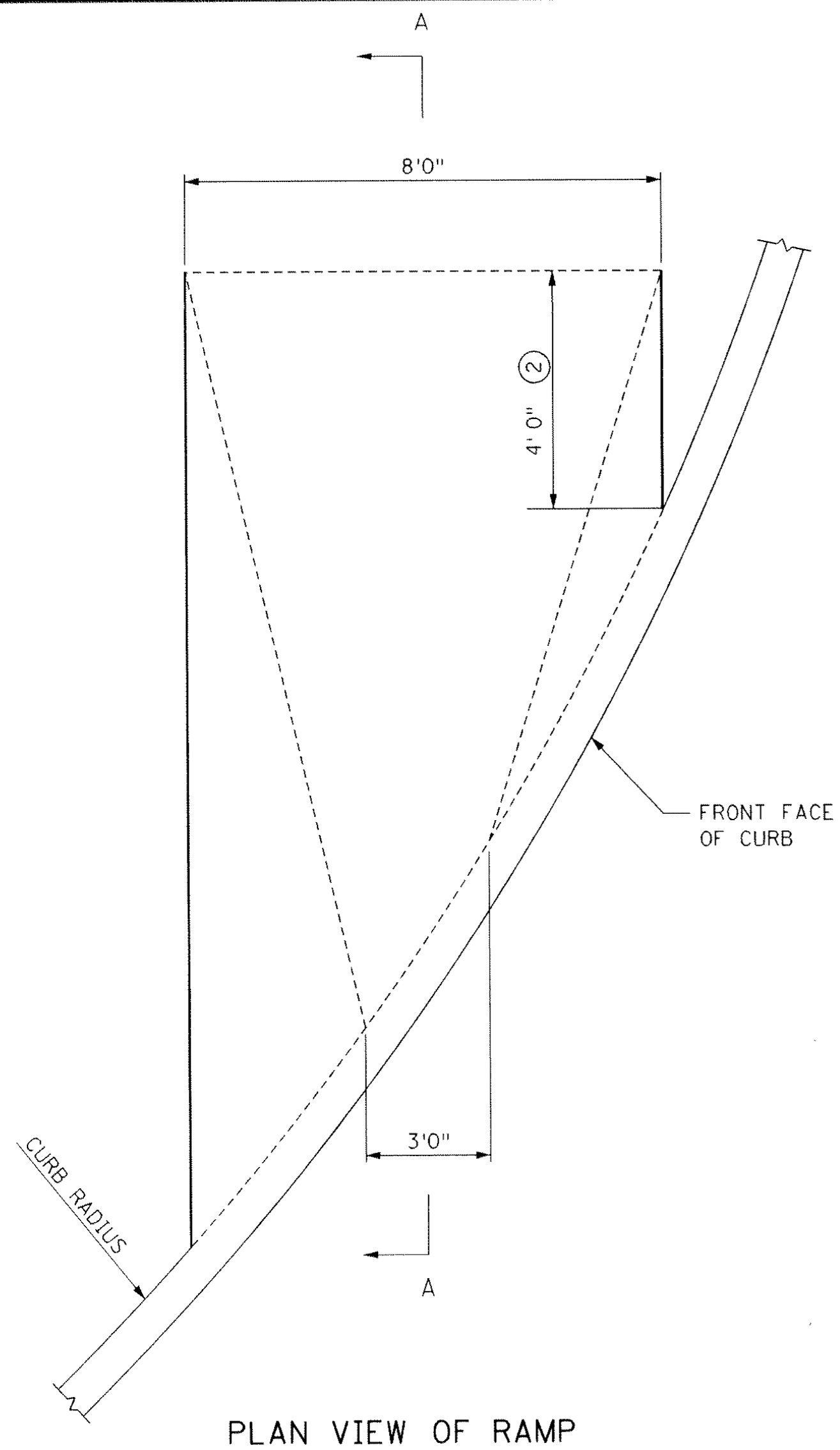
DRAWN BY TJV DATE 11-8-00
 DESIGN BY TJV DATE 11-8-00
 CHECKED BY JMW DATE 11-8-00

STATE PROJECT NO. _____
 S.A.P. 02-652-01
 S.A.P. 106-020-019

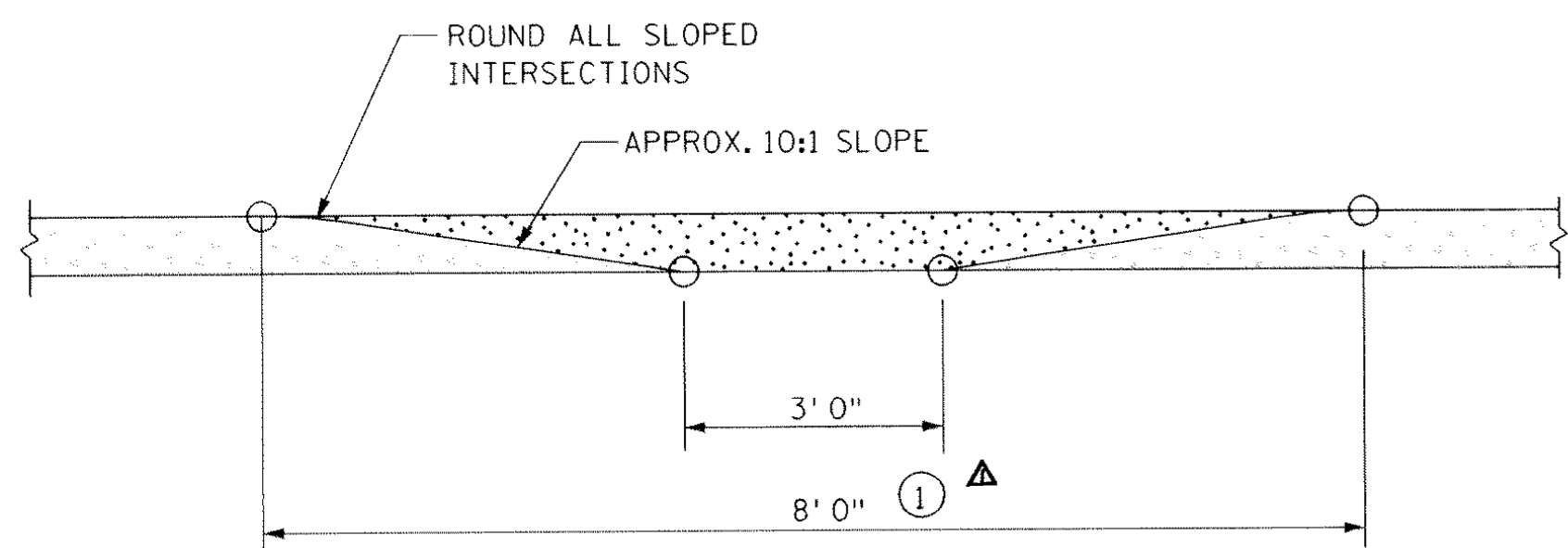
TKDA
 TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 DRIVEWAY DETAILS
 C.S.A.H. 52 RECONSTRUCTION

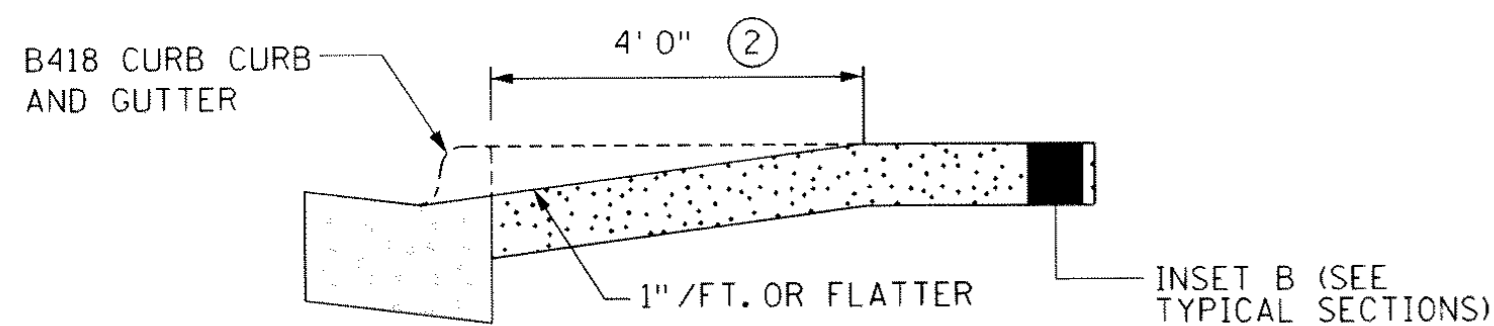
SHEET
 25
 OF
 253



PLAN VIEW OF RAMP



ELEVATION OF RAMP

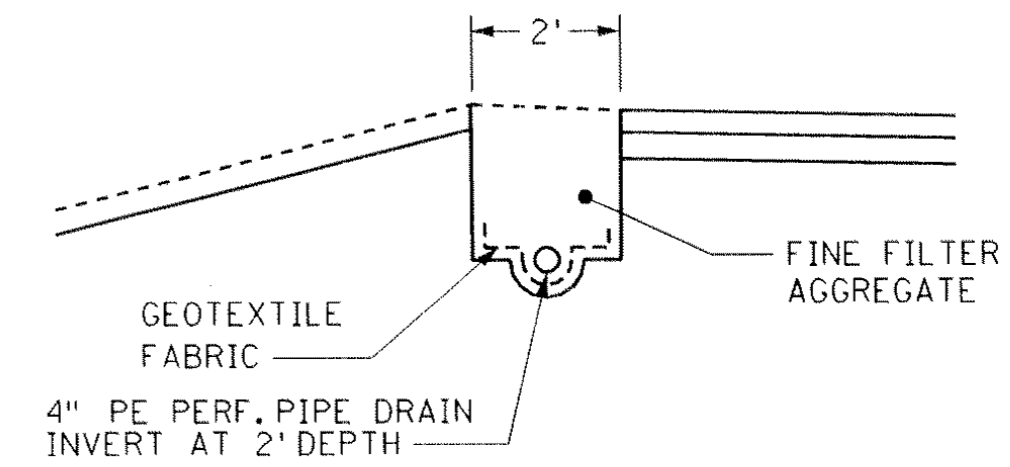


SECTION A - A

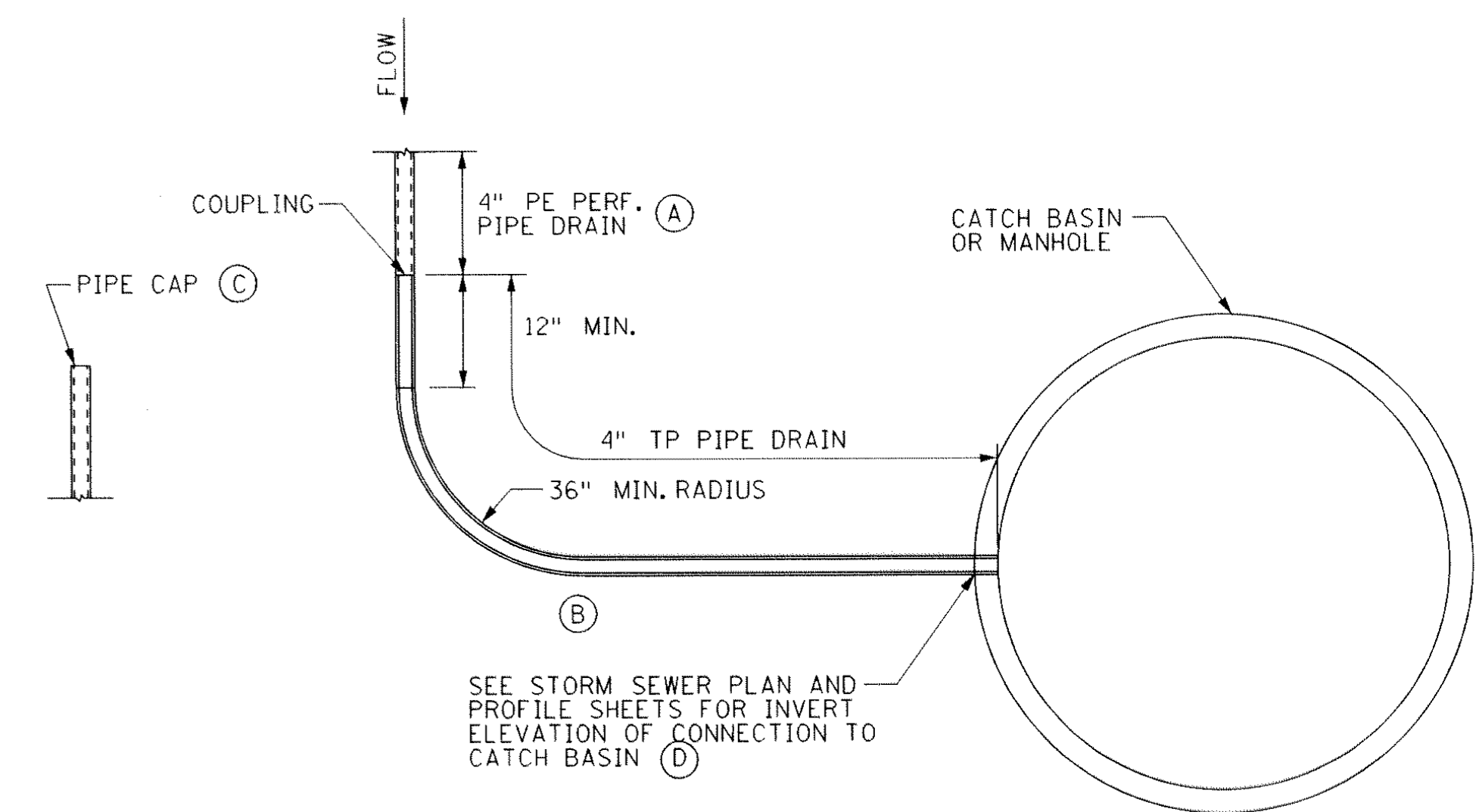
PEDESTRIAN CURB RAMP

NOTES:

- ① REGARDLESS OF CURB HEIGHT, CURB AND GUTTER ADJACENT TO PEDESTRIAN RAMPS WILL BE PAID FOR AS LINEAR FOOT OF CONCRETE CURB AND GUTTER. THE RAMP AREA WILL BE INCLUDED IN THE QUANTITIES FOR BITUMINOUS PATH.
- ② MINIMUM DISTANCE TO BACK OF CURB.



EDGE DRAIN DETAIL



- (A) PAYMENT FOR 4" PE PERF. PIPE DRAIN SHALL BE FULL COMPENSATION FOR TRENCHING, GEOTEXTILE FABRIC, PE PIPE AND INSTALLATION, AND ALL OTHER ASSOCIATED WORK.
- (B) PAYMENT FOR 4" TP PIPE DRAIN SHALL BE FULL COMPENSATION FOR TRENCHING, FURNISHING AND PLACING PIPE, CONNECTING TO DRAINAGE STRUCTURES, BACKFILL AND COMPACTION, AND ALL OTHER ASSOCIATED WORK.
- (C) CAPS ON ALL UPSTREAM PIPE ENDS SHALL BE INCIDENTAL TO 4" PE PERF. PIPE DRAIN.
- (D) ALL 4" PE PIPE CONNECTIONS INTO CATCH BASINS SHALL BE MADE BY BREAKING INTO SAID STRUCTURE AND GROUTING AROUND PE PIPE.

SEE SPECIAL PROVISIONS FOR INSTALLATION AND MATERIAL DETAILS.
THE BOTTOM OF THE TRENCH SHALL BE SHAPED TO CRADLE THE LOWER 1/3 OF THE PIPE.

EDGE DRAIN CONNECTION TO CATCH BASIN

Δ	4-13-01	JW	JW	LR	APPENDUM 2
NO	DATE	BY	CKD	APPR	REVISION
NAME: k:\site\proj\c11749\part1\roadway1\drawings\d102.dgn 25 APR 2001					

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.

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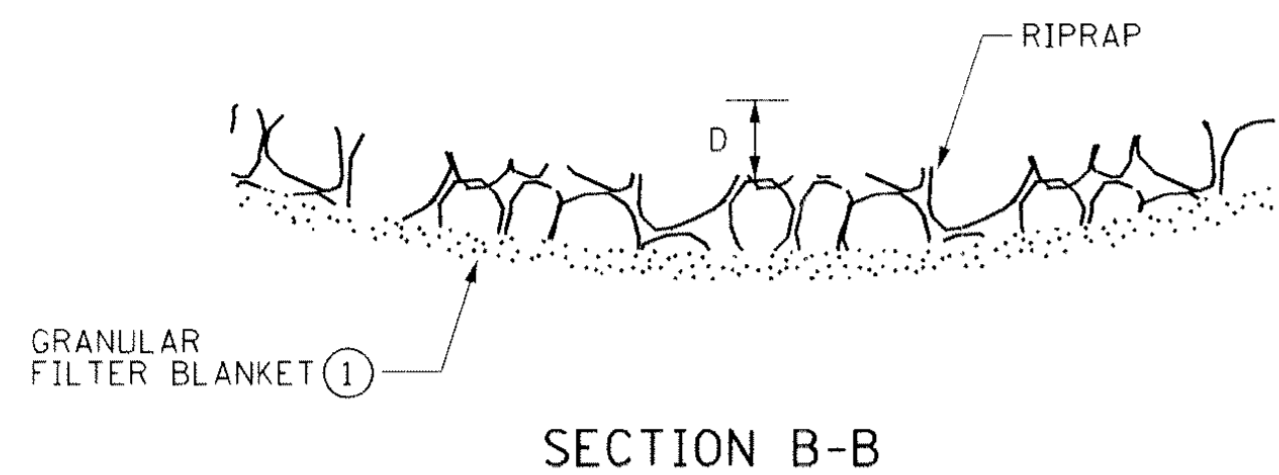
S. A. P. 02-652-01
S. A. P. 106-020-019

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TOLTZ, KING, DUVALL, ANDERSON
AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

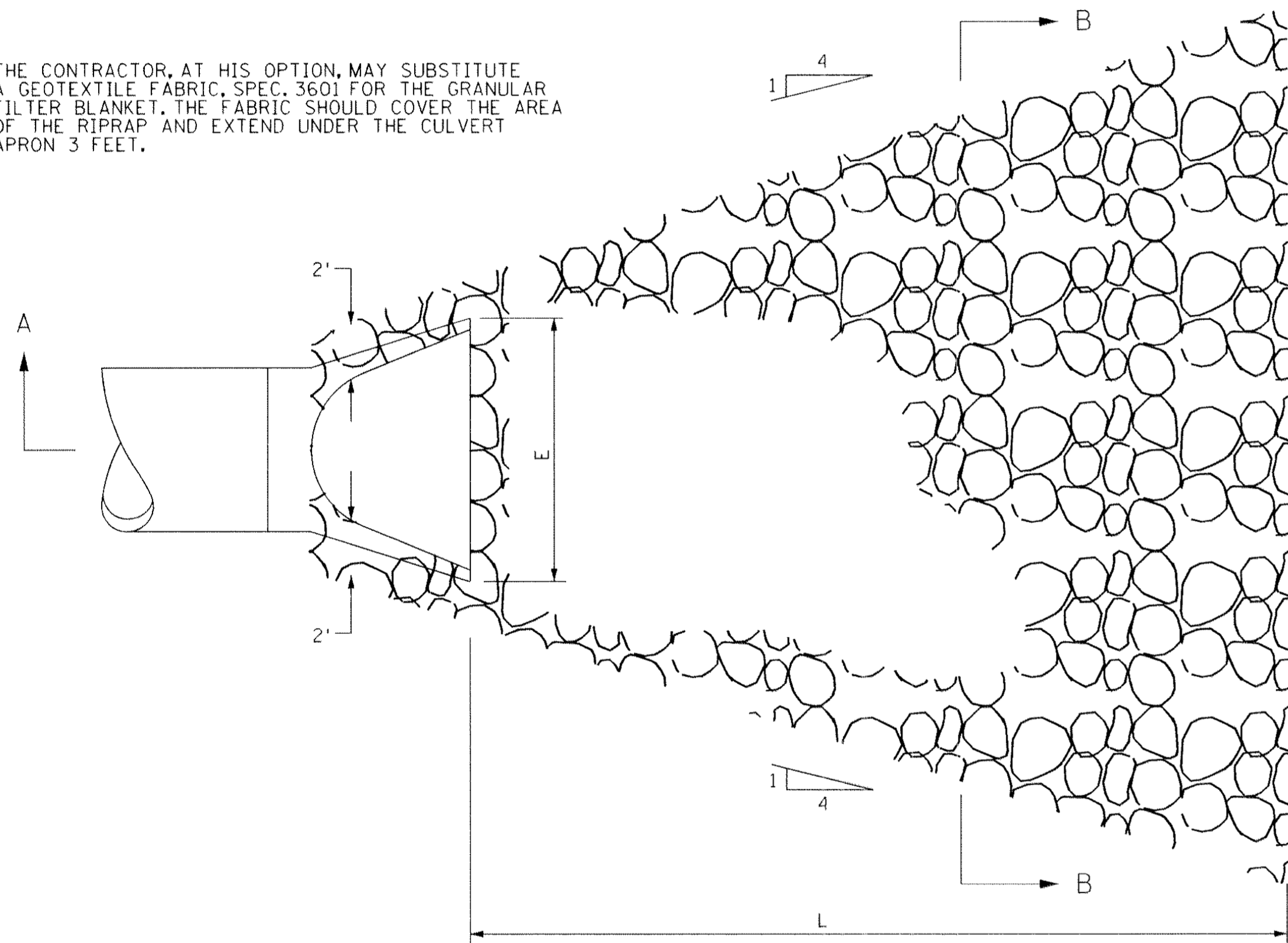
ANOKA COUNTY
MISC. DETAILS
C.S.A.H. 52 RECONSTRUCTION

SHEET
26
OF
253

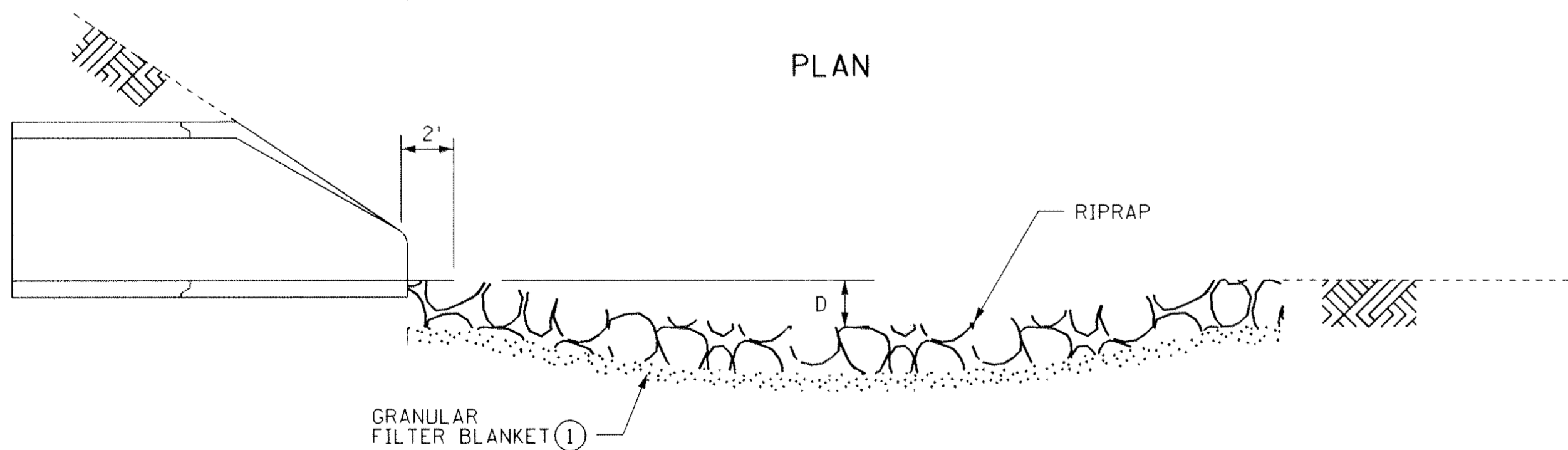
LOCATION	DIA. OF PIPE	E	L	D	CLASS III d50 = 9"	
					18" DEPTH RIPRAP CU. YDS	9" DEPTH GRANULAR FILTER CU. YDS
COUNTY DITCH 41-3 EAST APRON	36	72	5	1	5.0	2.5
COUNTY DITCH 41-5 EAST APRON	78	114	5	2	11.0	5.5
COUNTY DITCH 41-5 WEST APRON	78	114	33	2	47.0	23.5



(1) THE CONTRACTOR, AT HIS OPTION, MAY SUBSTITUTE A GEOTEXTILE FABRIC, SPEC. 3601 FOR THE GRANULAR FILTER BLANKET. THE FABRIC SHOULD COVER THE AREA OF THE RIPRAP AND EXTEND UNDER THE CULVERT APRON 3 FEET.

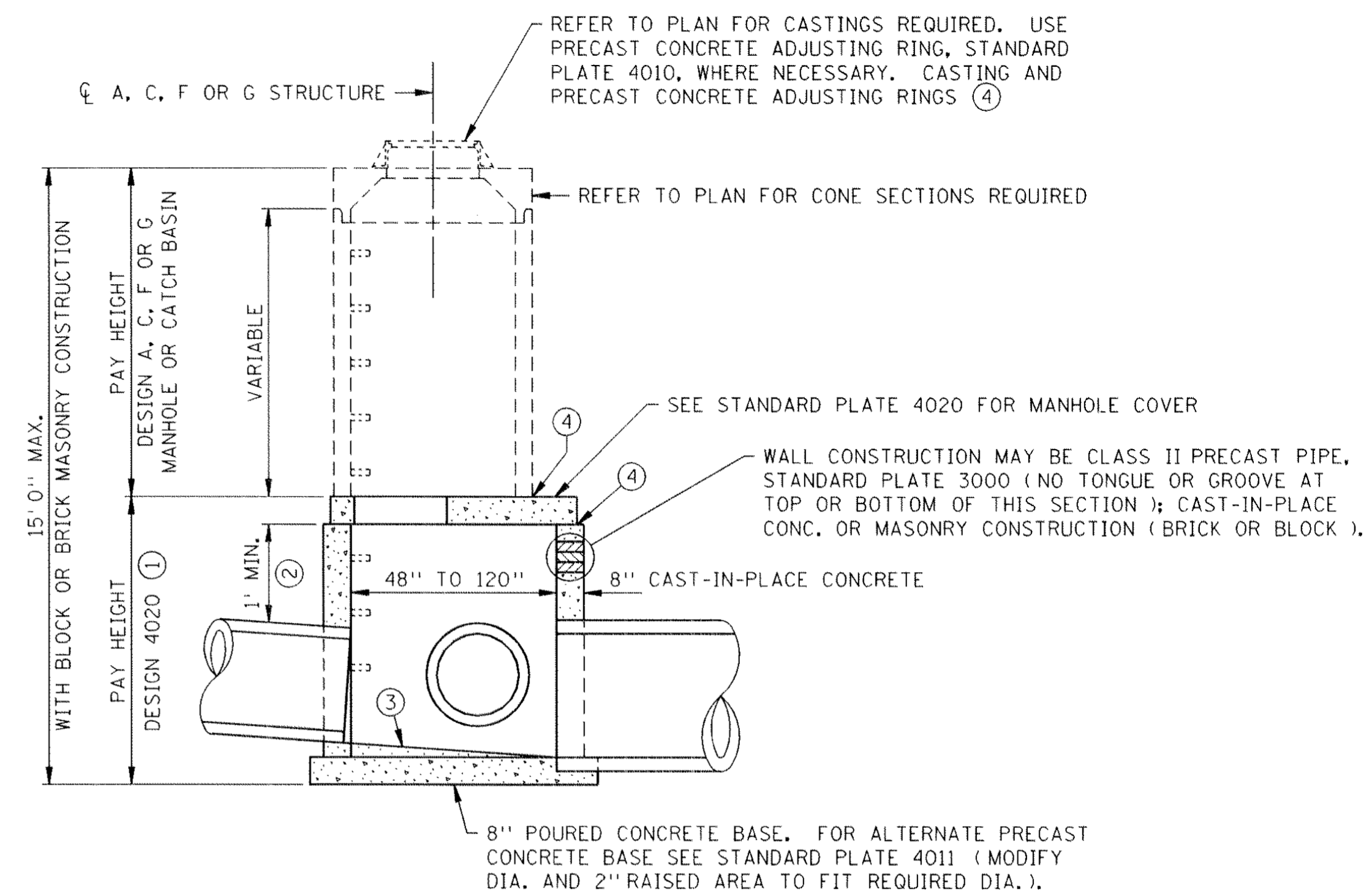


PLAN



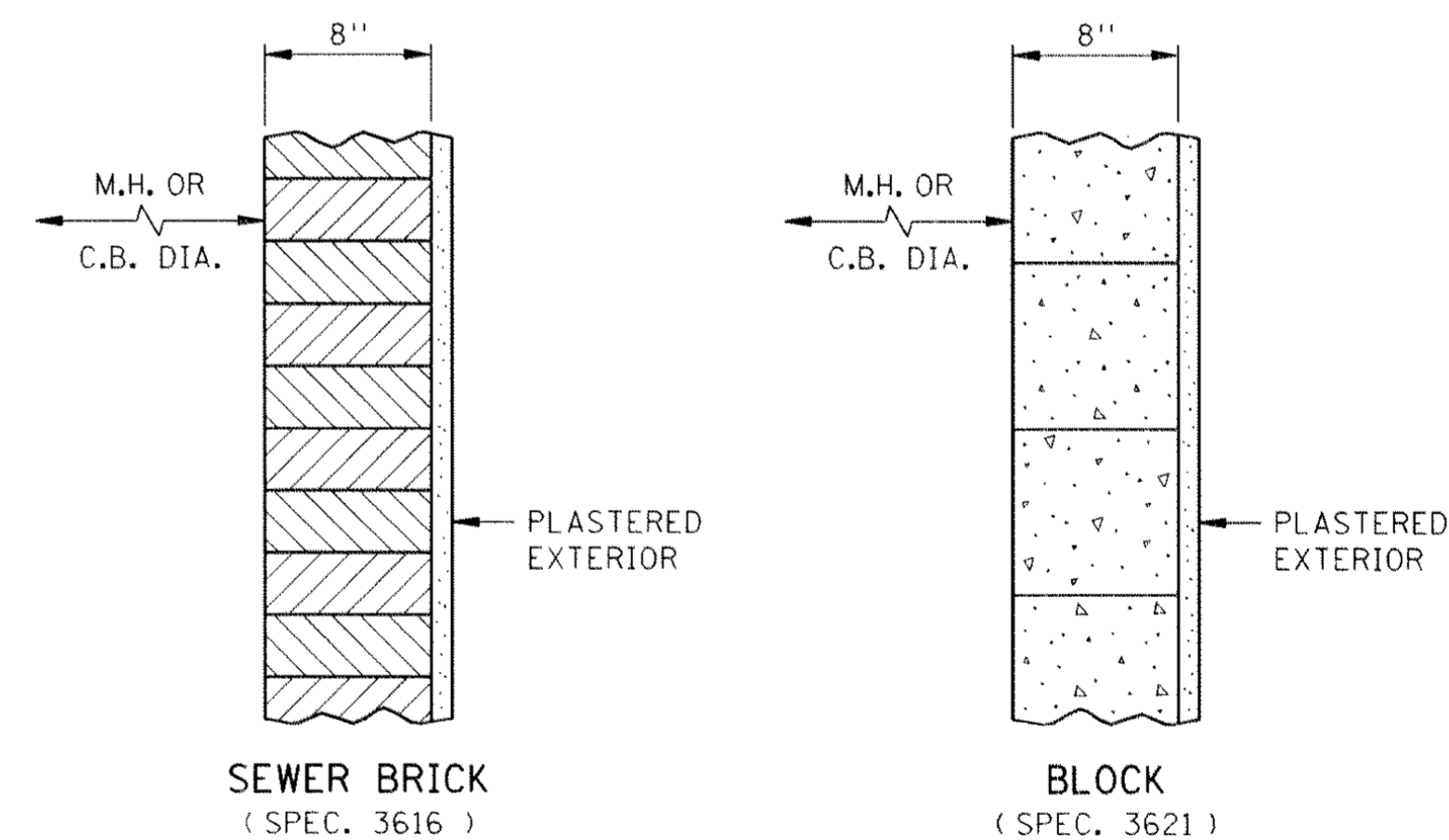
SECTION A-A

RIPRAP DETAIL (COUNTY DITCH 41-3 AND 41-5)



VIEW OF INSTALLATION

MANHOLE OR CATCH BASIN STRUCTURE (DESIGN 4020)
FOR USE UNDER ALL TRAFFIC CONDITIONS
INSTALLATION DETAILS



MASONRY CONSTRUCTION

INSTALLATION NOTES:
SEE SPEC. 2506 FOR CONSTRUCTION NOTES.

GENERAL DIMENSIONS FOR CONCRETE CONSTRUCTION APPLY TO BRICK AND CONCRETE MASONRY UNIT CONSTRUCTION ALSO, EXCEPT AS NOTED.

- (1) REFER TO PLANS FOR HEIGHT, DIAMETER AND STEP REQUIREMENTS.
- (2) 1 FT. MINIMUM FOR PRECAST. 3 BRICKS OR 1 BLOCK MINIMUM FOR MASONRY CONSTRUCTION.
- (3) PROVIDE MORTAR FILLETS TO FIT BOTTOM PORTIONS OF PIPE TO DIRECT FLOW TO OUTLET.
- (4) PROVIDE A FULL MORTAR BED.

DESIGNATION:
STANDARD PLATE-DESIGN DIA.
EXAMPLE: DESIGN 66-4020

NO	DATE	BY	CKD	APPR	REVISION
NAME: k:\site\proj\c11749\part1\roadway\drawings\d102.dgn					
25 APR 2001					

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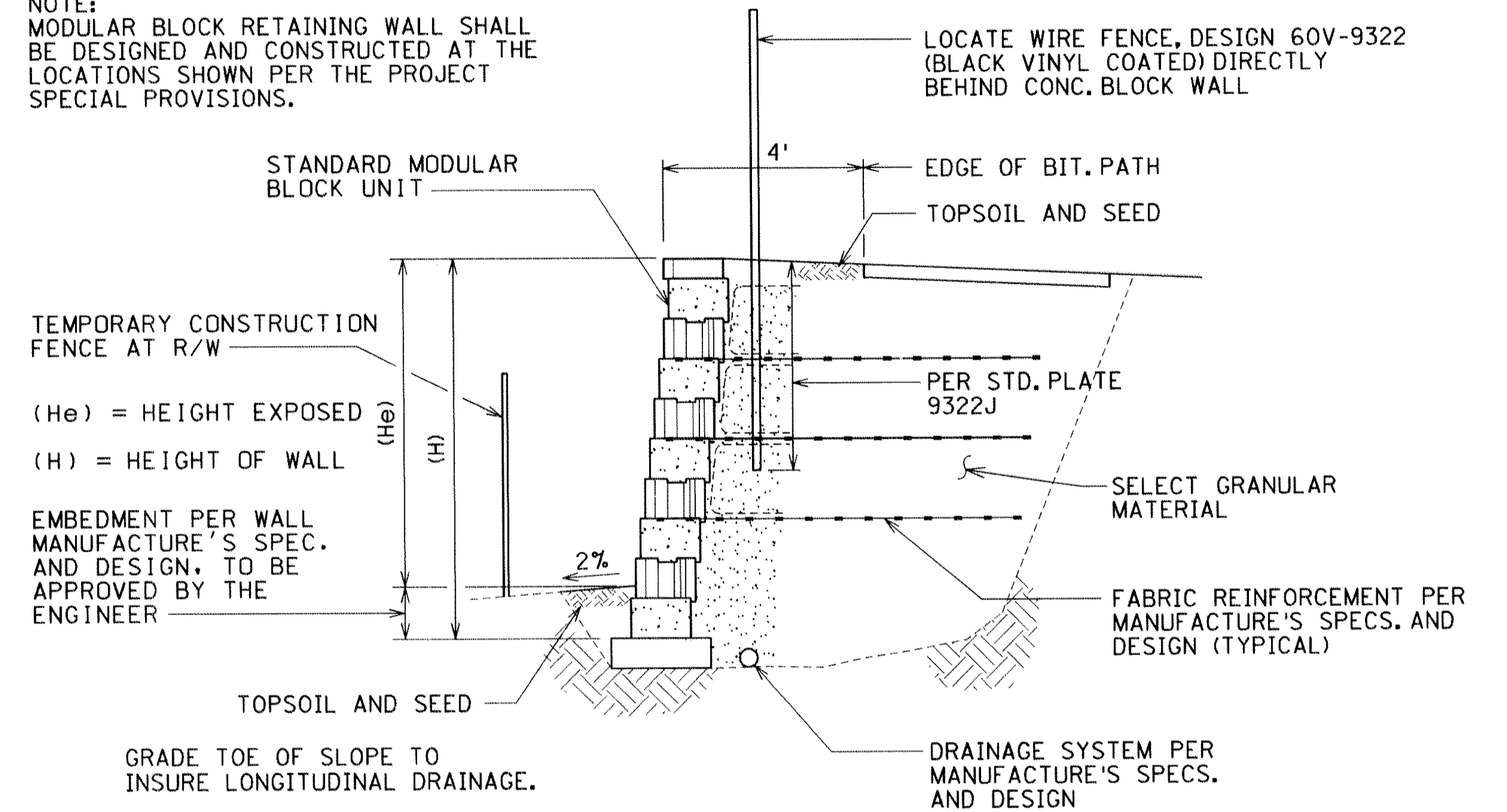
STATE PROJECT NO. _____
 S.A.P. 02-652-01
 S.A.P. 106-020-019

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 MISC. DETAILS
 C.S.A.H. 52 RECONSTRUCTION

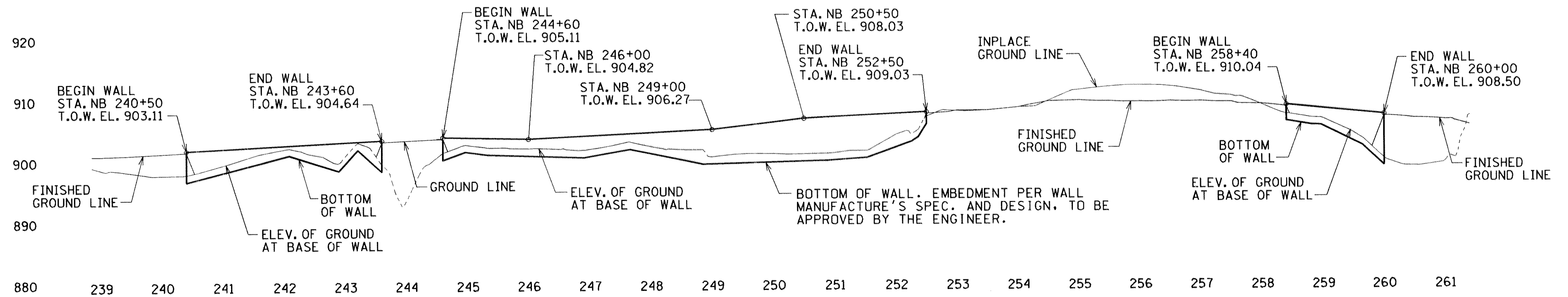
SHEET
 27
 OF
 253

NOTE:
 MODULAR BLOCK RETAINING WALL SHALL
 BE DESIGNED AND CONSTRUCTED AT THE
 LOCATIONS SHOWN PER THE PROJECT
 SPECIAL PROVISIONS.



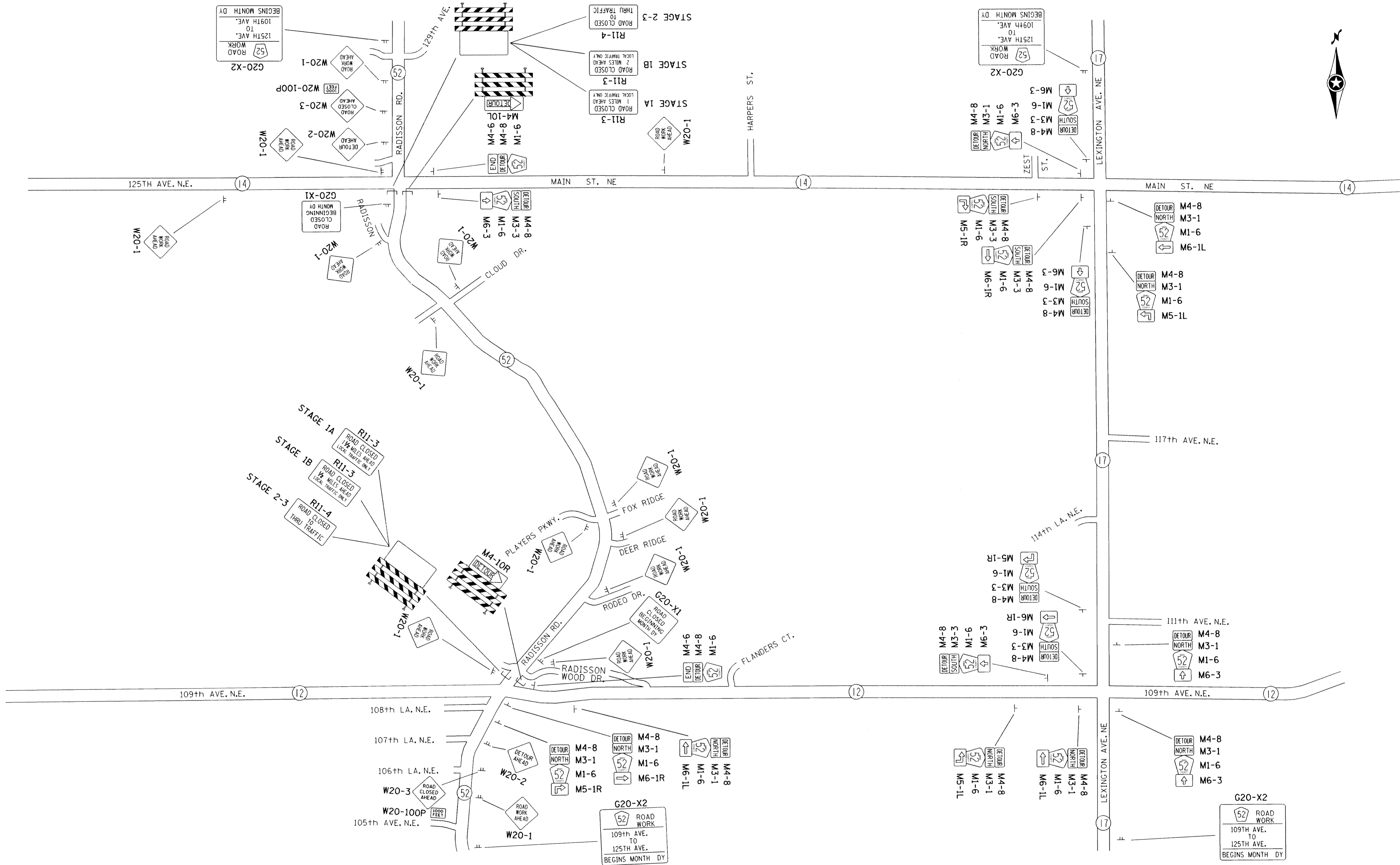
MODULAR BLOCK WALL SECTION

NOTE: TOP OF WALL ELEVATIONS ARE MINIMUM ELEVATIONS.



MODULAR BLOCK WALL PROFILE

					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.		DRAWN BY <u>TJV</u> DATE <u>11-8-00</u>		STATE PROJECT NO.		TKDA TOLTZ, KING, DUVAL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA		ANOKA COUNTY		SHEET 28 OF 253
					DESIGN BY <u>JMW</u> DATE <u>11-8-00</u>		CHECKED BY <u>GAR</u> DATE <u>11-8-00</u>		S.A.P. 02-652-01 S.A.P. 106-020-019				RETAINING WALL		
NO	DATE	BY	CKD	APPR	REVISION	DATE	REG. NO.			C.S.A.H. 52 RECONSTRUCTION					
NAME: \$FILE\$					\$DATE\$										



NO	DATE	BY	CKD	APPR	REVISION
NAME: k:\site\proj\c11749\part1\roadway\drawings\detour1.dgn					
25 APR 2001					

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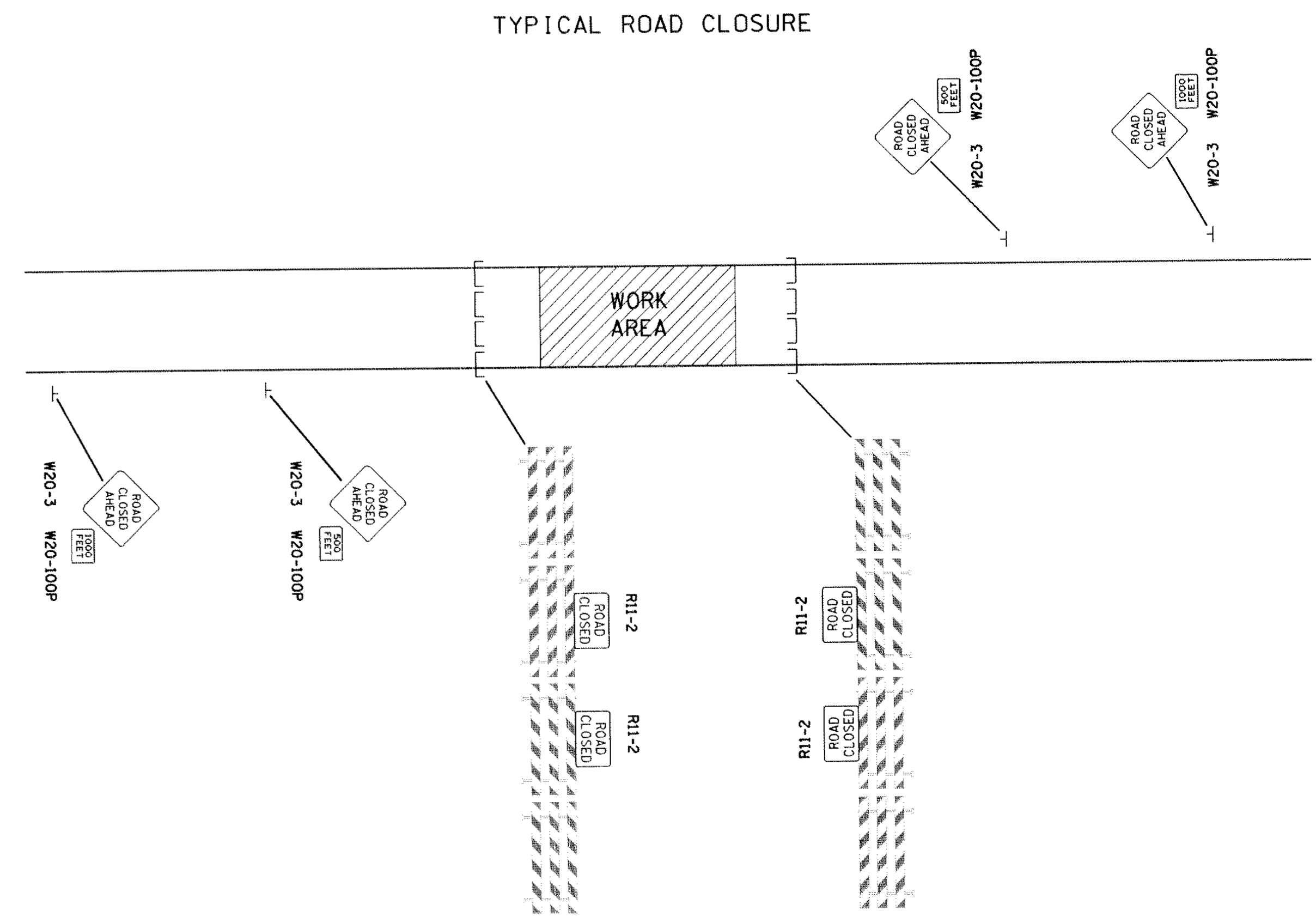
TKDA
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 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 DETOUR PLAN
 C.S.A.H. 52 RECONSTRUCTION

SHEET
 29
 OF
 253

DETOUR SIGNING			
M.U.T.C.D. CODE	SIZE	INSERT	QUANTITY
W20-1	48" x 48"		16 *
W20-2	48" x 48"		2 *
W20-3 W20-100P	48" x 48" 24" x 18"		2 *
M4-10L TYPE III	48" x 18" 8 FOOT		1 *
M4-10R TYPE III	48" x 18" 8 FOOT		1 *
R11-3 TYPE III	60" x 30" 8 FOOT		2 *
R11-3 TYPE III	60" x 30" 8 FOOT		2 *
R11-4 TYPE III	60" x 30" 8 FOOT		1 *

DETOUR SIGNING			
M.U.T.C.D. CODE	SIZE	INSERT	QUANTITY
R11-4 TYPE III	60" x 30" 8 FOOT		1 *
G20-X2	96" x 84"		2 *
G20-X2	96" x 84"		2 *
M4-8A M3-1A M1-6A M- --	24" x 12" 24" x 12" 24" x 24" 21" x 15"	 	2 * 3 * 3 * 1 *
M4-8A M3-3A M1-6A M- --	24" x 12" 24" x 12" 24" x 24" 21" x 15"	 	2 * 2 * 4 *
M4-8A M4-8A M1-6A	24" x 12" 24" x 12" 24" x 24"	 	2 *
G20-X1	60" x 48"		2 *



ROAD CLOSURE SIGNING			
M.U.T.C.D. CODE	SIZE	INSERT	QUANTITY
R11-2 TYPE III	48" x 30" 8 FOOT		2 *
R11-2 TYPE III	48" x 30" 8 FOOT		2 *
TYPE III	8 FOOT		4 *
W20-3 W20-100P	48" x 48" 24" x 18"		2 *
W20-3 W20-100P	48" x 48" 24" x 18"		2 *

NOTES:

- 1) ALL BARRICADES SHALL BE PROPERLY WEIGHTED WITH SANDBAGS.
- 2) ALL BARRICADES SHALL HAVE REFLECTIVE MATERIAL ON BOTH SIDES.
- 3) ALL BARRICADE MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE FIELD MANUAL DATED APRIL 1995.
- 4) ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MOST RECENT EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE FIELD MANUAL DATED JANUARY 1998.
- 5) ADDITIONS OR CHANGES TO THIS PLAN MAY BE MADE AS DETERMINED BY THE ENGINEER.

* SIGNS TO BE INSTALLED A MINIMUM OF SEVEN DAYS PRIOR TO ACTUAL CLOSING DATE OF ROAD CLOSURE AND IMPLEMENTATION OF DETOUR SIGN. SIGNS TO BE REMOVED AT TIME OF DETOUR INSTALLATION.

NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\c11749\par1\roadway\drawings\detour2.dgn 25 APR 2001

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE _____ REG. NO. _____

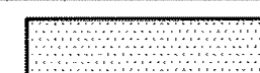
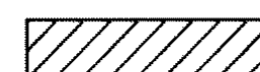
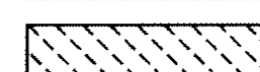
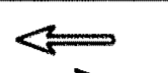

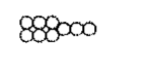
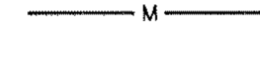

DRAWN BY TJV DATE 11-8-00
 DESIGN BY TJV DATE 11-8-00
 CHECKED BY KRC DATE 11-8-00

STATE PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

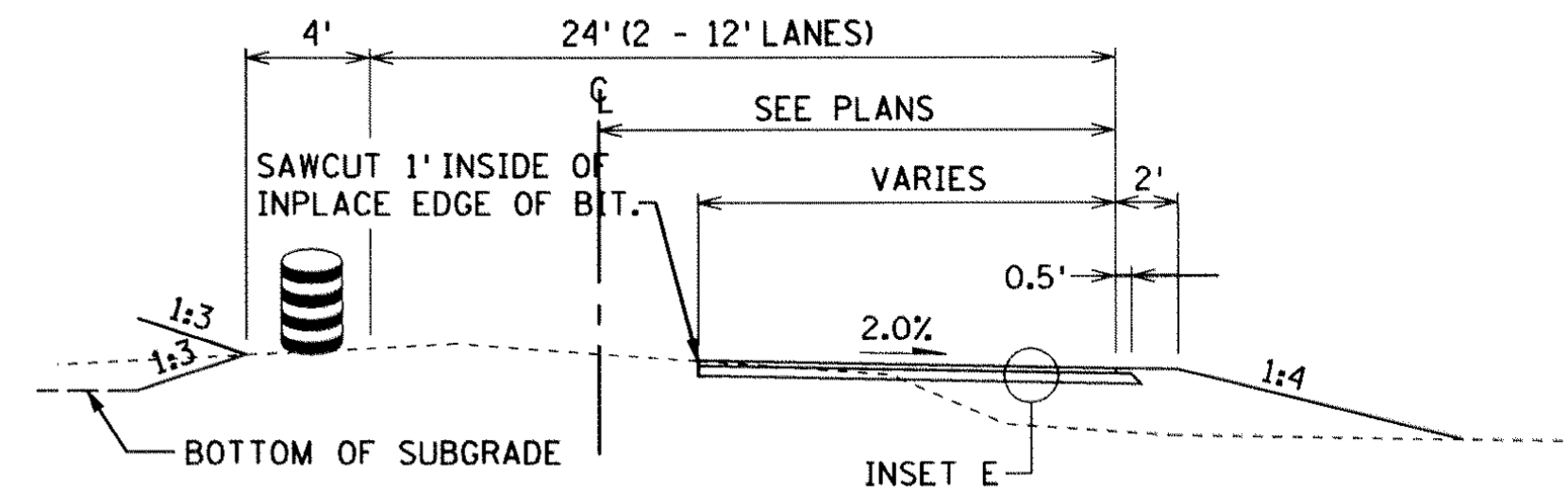
ANOKA COUNTY
 DETOUR AND ROAD CLOSURE SIGNING
 C.S.A.H. 52 RECONSTRUCTION

LEGEND

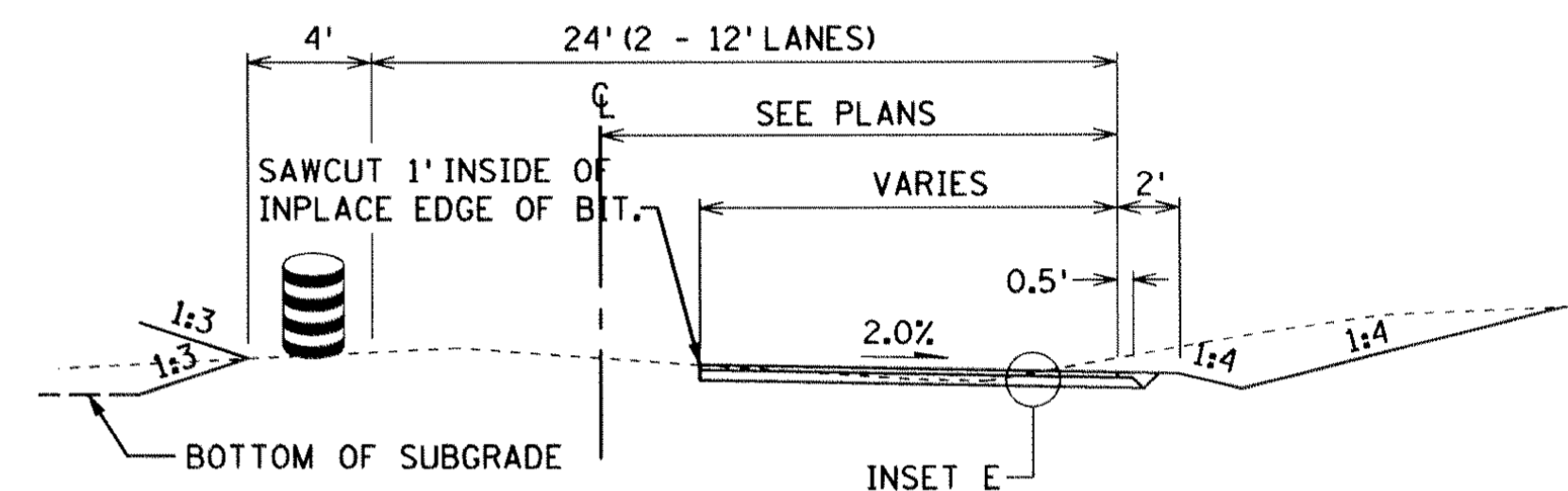
-  TEMPORARY WIDENING
-  PERMANENT CONSTRUCTION IN THIS STAGE
-  PERMANENT CONSTRUCTION UNDER TRAFFIC IN THIS STAGE
-  TRAFFIC FLOW IN THIS STAGE
-  RETROREFLECTIVE DRUM
-  40 MPH IMPACT ATTENUATOR
-  SOLID LINE PAVEMENT MARKING PLUS TRPMs
-  CHANNELIZER

STAGE 1 CONSTRUCTION

- TRAFFIC SHALL UTILIZE EXISTING CSAH 52.
- CONSTRUCT TEMPORARY WIDENING ON THE EAST SIDE OF CSAH 52 FROM STA. 205+89 TO 297+08 AND ON THE WEST SIDE FROM SB STA. 296+89 TO 303+77.
- CONSTRUCT TEMPORARY WIDENING ON THE EAST SIDE OF CSAH 52 FROM STA. 339+00 TO 340+79.
- CONSTRUCT NB CSAH 52 FROM 305+00 TO 339+00.
- CONSTRUCT SB CSAH 52 FROM 305+00 TO 338+20.
- CONSTRUCT CENTERLINE CULVERTS AT COUNTY DITCHES 41-3 AND 41-5.
- CONSTRUCT EMBANKMENT AT LOCATIONS NECESSARY TO ALLOW FOR CONSTRUCTION OF EAST AND WEST UTILITY TRENCHES (BY OTHERS). SEE SPECIAL PROVISIONS FOR APPROXIMATE LOCATIONS.
- REMOVE EXISTING SIGNAL AT 109TH AVENUE.
- EXISTING SIGNAL AT CSAH 14 SHALL REMAIN OPERATIONAL DURING THIS STAGE.
- CLOUD DRIVE OPEN TO TRAFFIC.



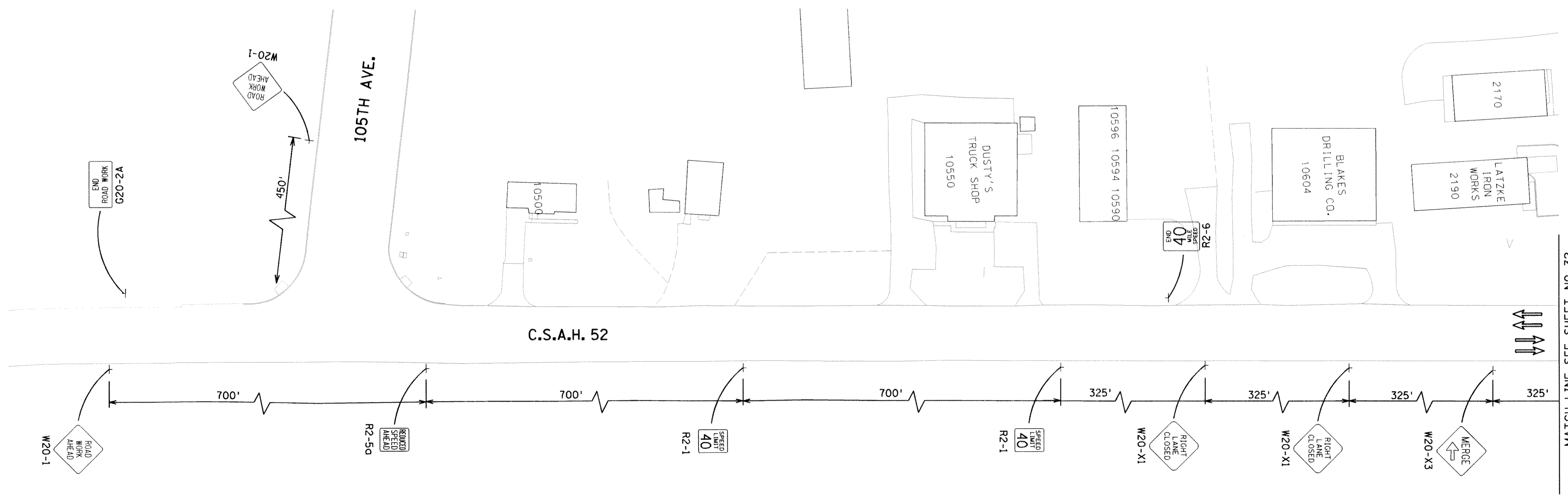
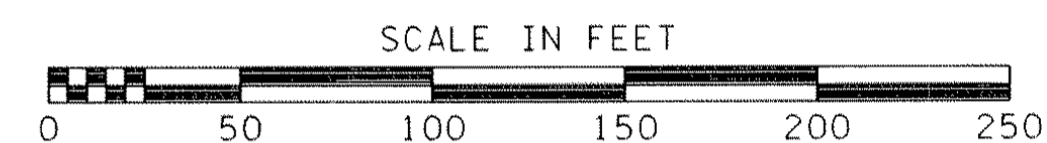
TEMPORARY WIDENING DETAIL (FILL)
SEE STAGING PLAN FOR LOCATIONS



TEMPORARY WIDENING DETAIL (CUT)
SEE STAGING PLAN FOR LOCATIONS

NOTE:

CONTRACTOR SHALL REMOVE ALL CONFLICTING SIGNING AND STRIPING FOR NB LANE DROP PRIOR TO 109TH, PRIOR TO IMPLEMENTATION OF THIS TRAFFIC CONTROL SCHEME.



NO	DATE	BY	CKD	APPR	REVISION

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE _____ REG. NO. _____

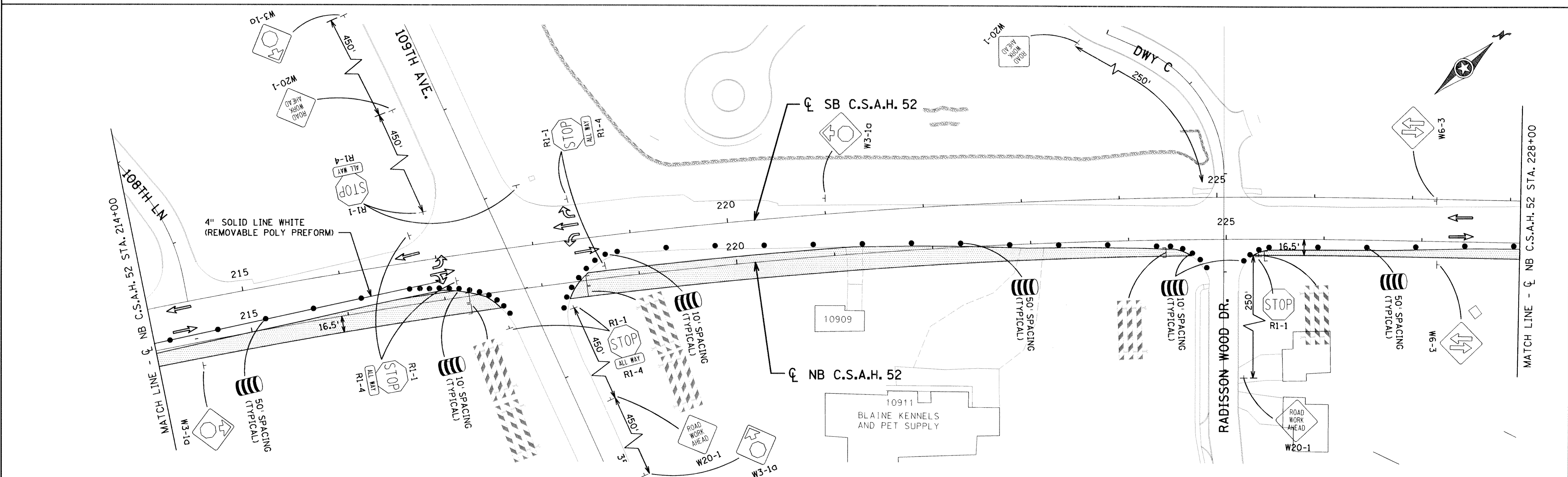
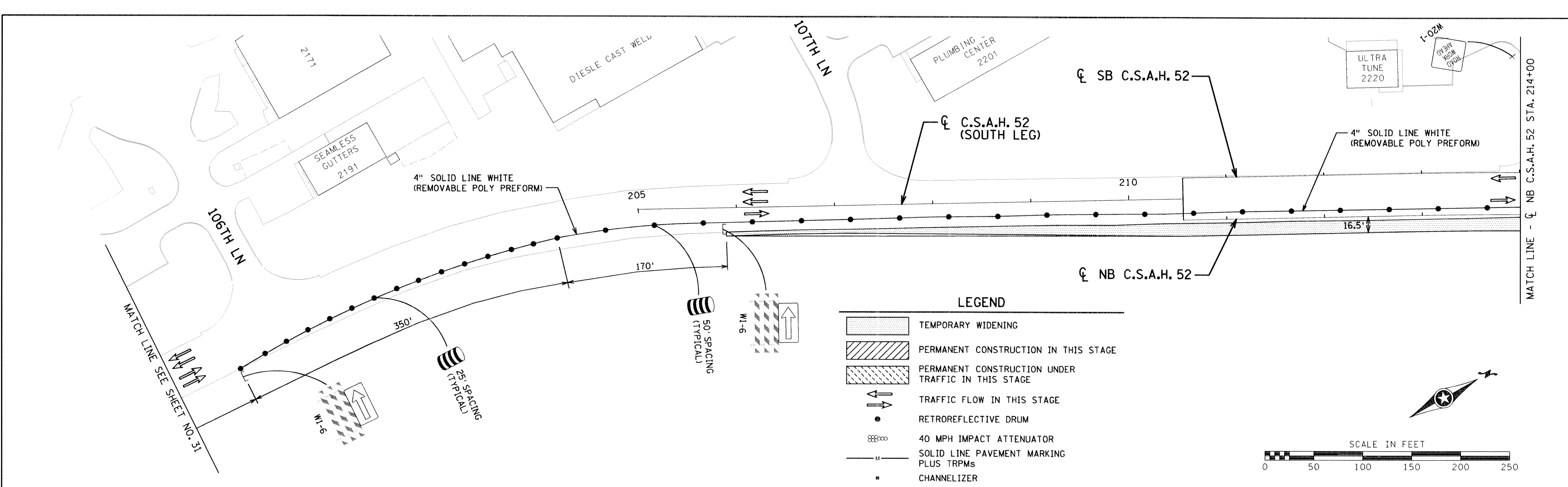
DRAWN BY TJV DATE 11-8-00
 DESIGN BY TJV DATE 11-8-00
 CHECKED BY GAR DATE 11-8-00

STATE PROJECT NO. _____
 S.A.P. 02-652-01
 S.A.P. 106-020-019

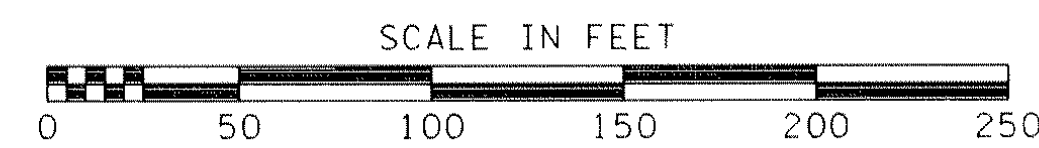
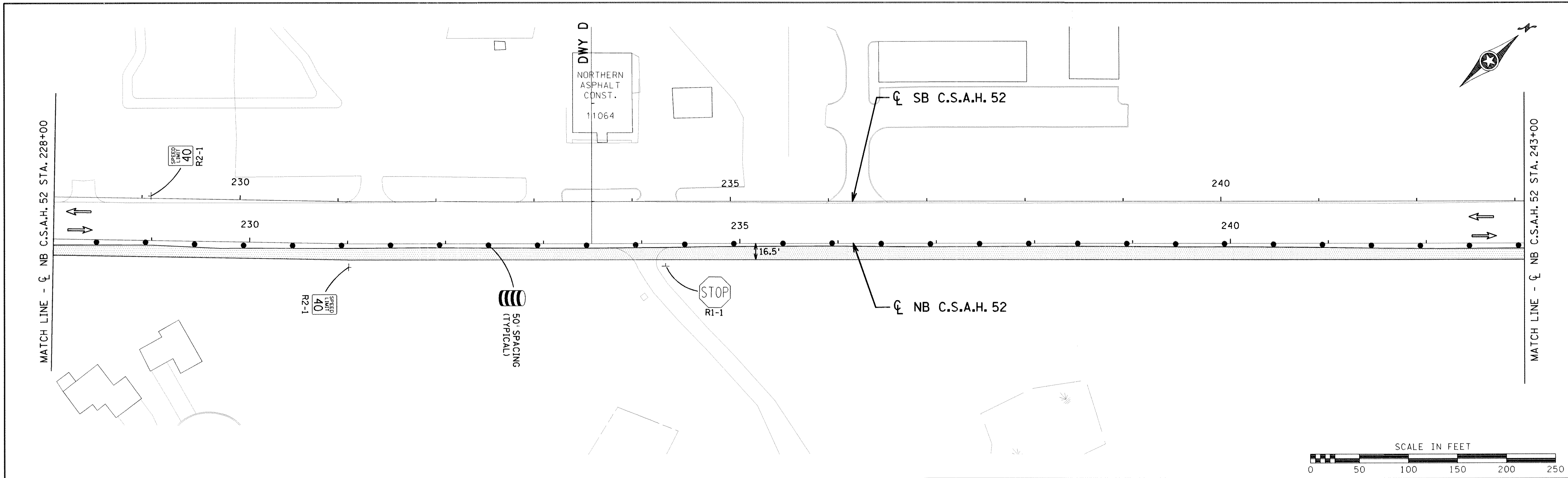
TKDA
 TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 STAGE 1 CONSTRUCTION
C.S.A.H. 52 RECONSTRUCTION
 STA. 205+00 TO STA. 228+00

SHEET **31**
 OF **253**

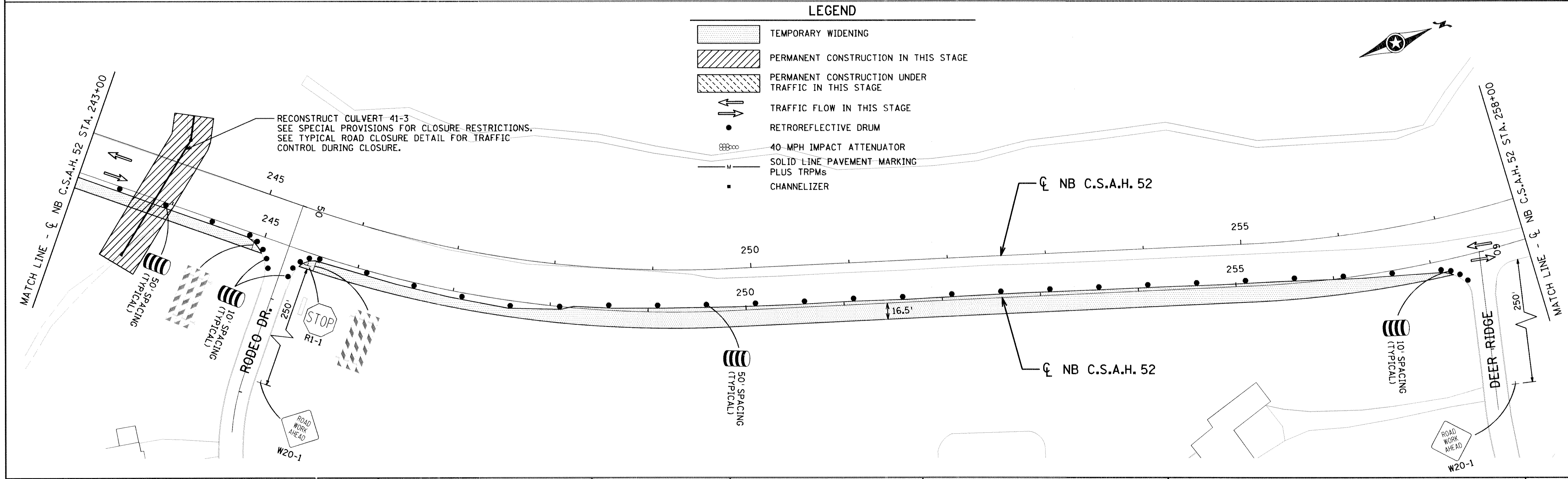


I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.					DRAWN BY <u>TJV</u> DATE <u>11-8-00</u>		STATE PROJECT NO.		TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA		ANOKA COUNTY STAGE 1 CONSTRUCTION C.S.A.H. 52 RECONSTRUCTION STA. 205+00 TO STA. 228+00		SHEET 32 OF 253
DATE _____ REG. NO. _____					DESIGN BY <u>TJV</u> DATE <u>11-8-00</u>		S.A.P. 02-652-01 S.A.P. 106-020-019						
NAME: \$FILE\$					CHECKED BY <u>GAR</u> DATE <u>11-8-00</u>								
NO. DATE BY CKD APPR REVISION													



LEGEND

- TEMPORARY WIDENING
- PERMANENT CONSTRUCTION IN THIS STAGE
- PERMANENT CONSTRUCTION UNDER TRAFFIC IN THIS STAGE
- TRAFFIC FLOW IN THIS STAGE
- RETROREFLECTIVE DRUM
- 40-MPH IMPACT ATTENUATOR
- SOLID LINE PAVEMENT-MARKING PLUS TRPMs
- CHANNELIZER



NO	DATE	BY	CKD	APPR	REVISION

NAME: \$FILE\$ \$DATE\$

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DATE _____ REG. NO. _____

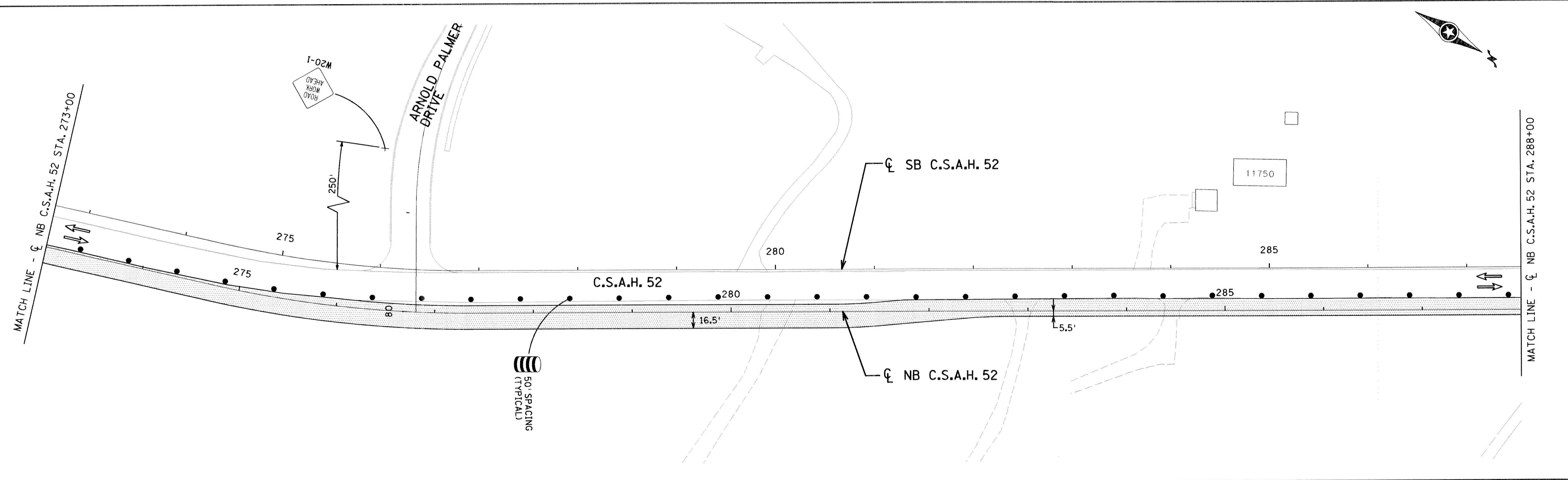
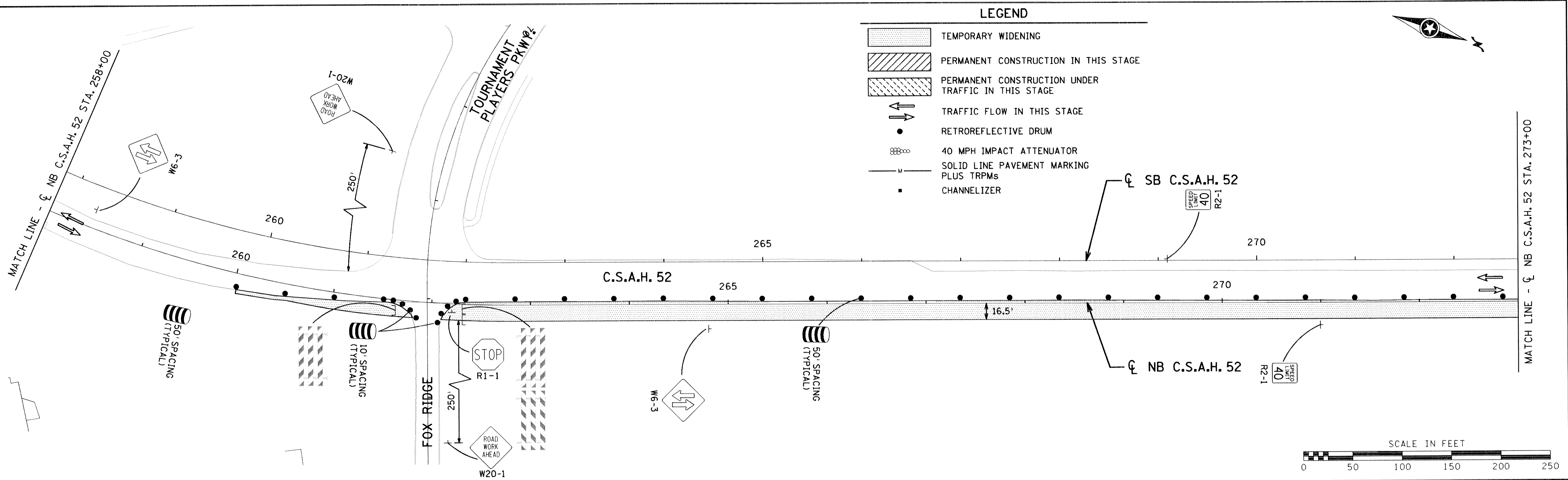
DRAWN BY TJV DATE 11-8-00
 DESIGN BY TJV DATE 11-8-00
 CHECKED BY GAR DATE 11-8-00

STATE PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

TKDA
 TOLTZ, KING, DUVAL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 STAGE 1 CONSTRUCTION
C.S.A.H. 52 RECONSTRUCTION
 STA. 228+00 TO STA. 258+00

SHEET
 33
 OF
 253



NO	DATE	BY	CKD	APPR	REVISION

NAME: \$FILE\$ \$DATE\$

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE _____ REG. NO. _____

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 DESIGN BY TJV DATE 11-8-00
 CHECKED BY GAR DATE 11-8-00


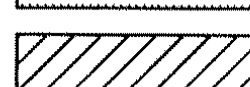
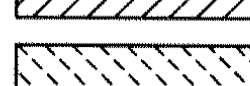
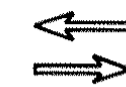

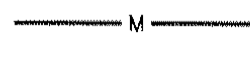
STATE PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

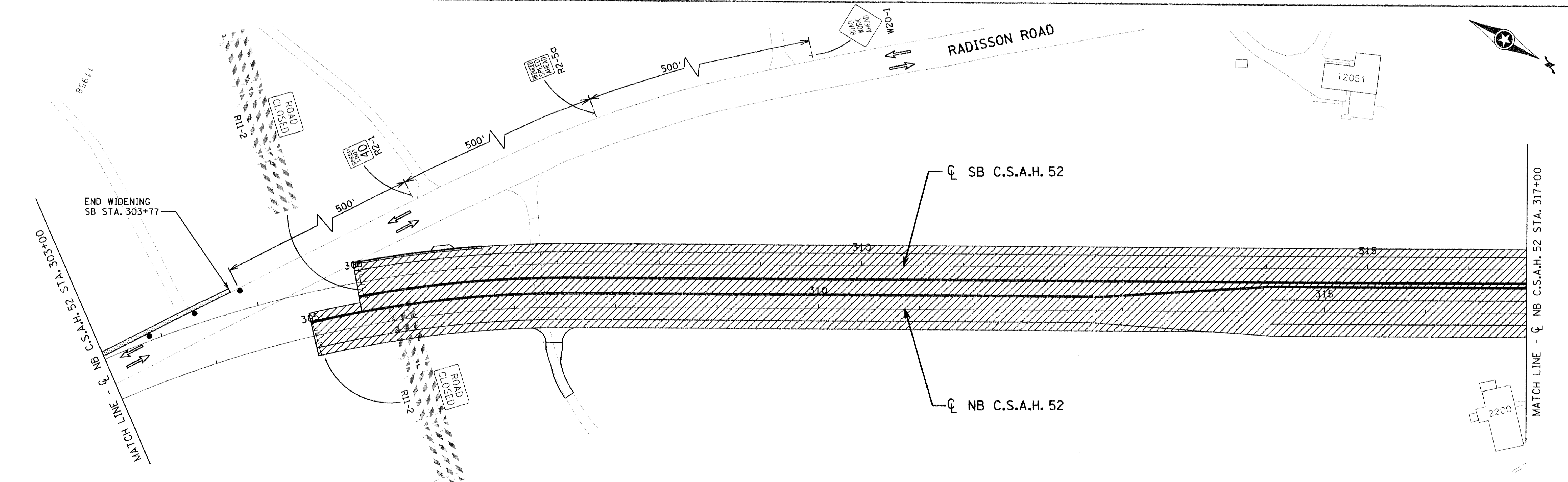
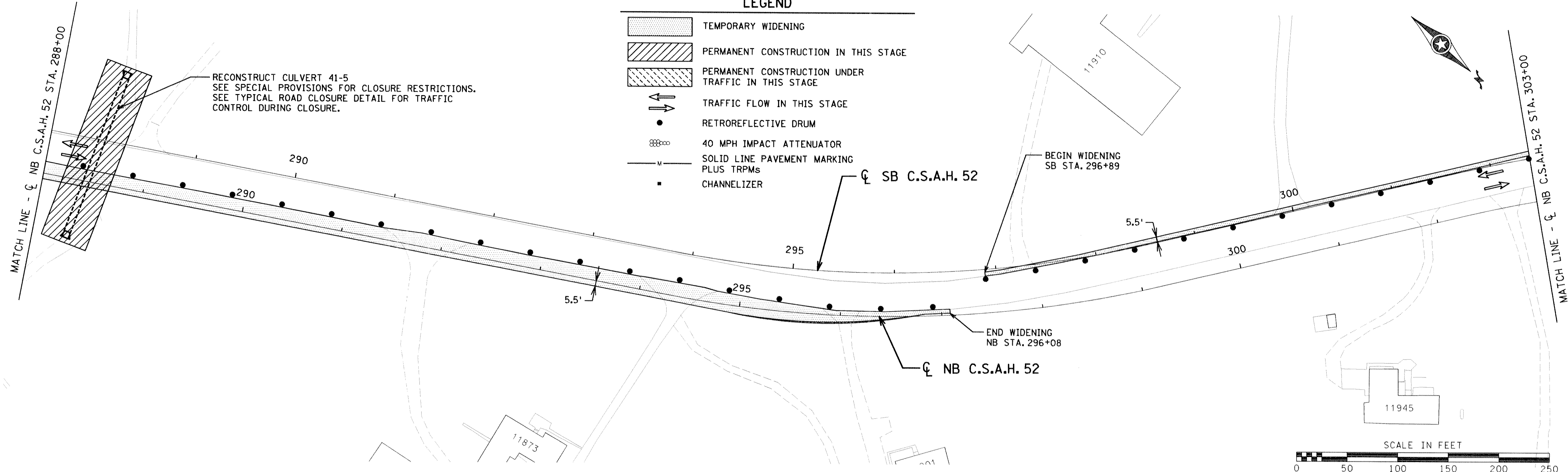
TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 STAGE 1 CONSTRUCTION
 C.S.A.H. 52 RECONSTRUCTION
 STA. 258+00 TO STA. 288+00

SHEET
 34
 OF
 253

LEGEND

-  TEMPORARY WIDENING
-  PERMANENT CONSTRUCTION IN THIS STAGE
-  PERMANENT CONSTRUCTION UNDER TRAFFIC IN THIS STAGE
-  TRAFFIC FLOW IN THIS STAGE
- RETROREFLECTIVE DRUM
-  40 MPH IMPACT ATTENUATOR
-  SOLID LINE PAVEMENT MARKING PLUS TRPMs
- CHANNELIZER



NO	DATE	BY	CKD	APPR	REVISION

NAME: \$FILE\$ DATE: \$DATE\$

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DATE _____ REG. NO. _____

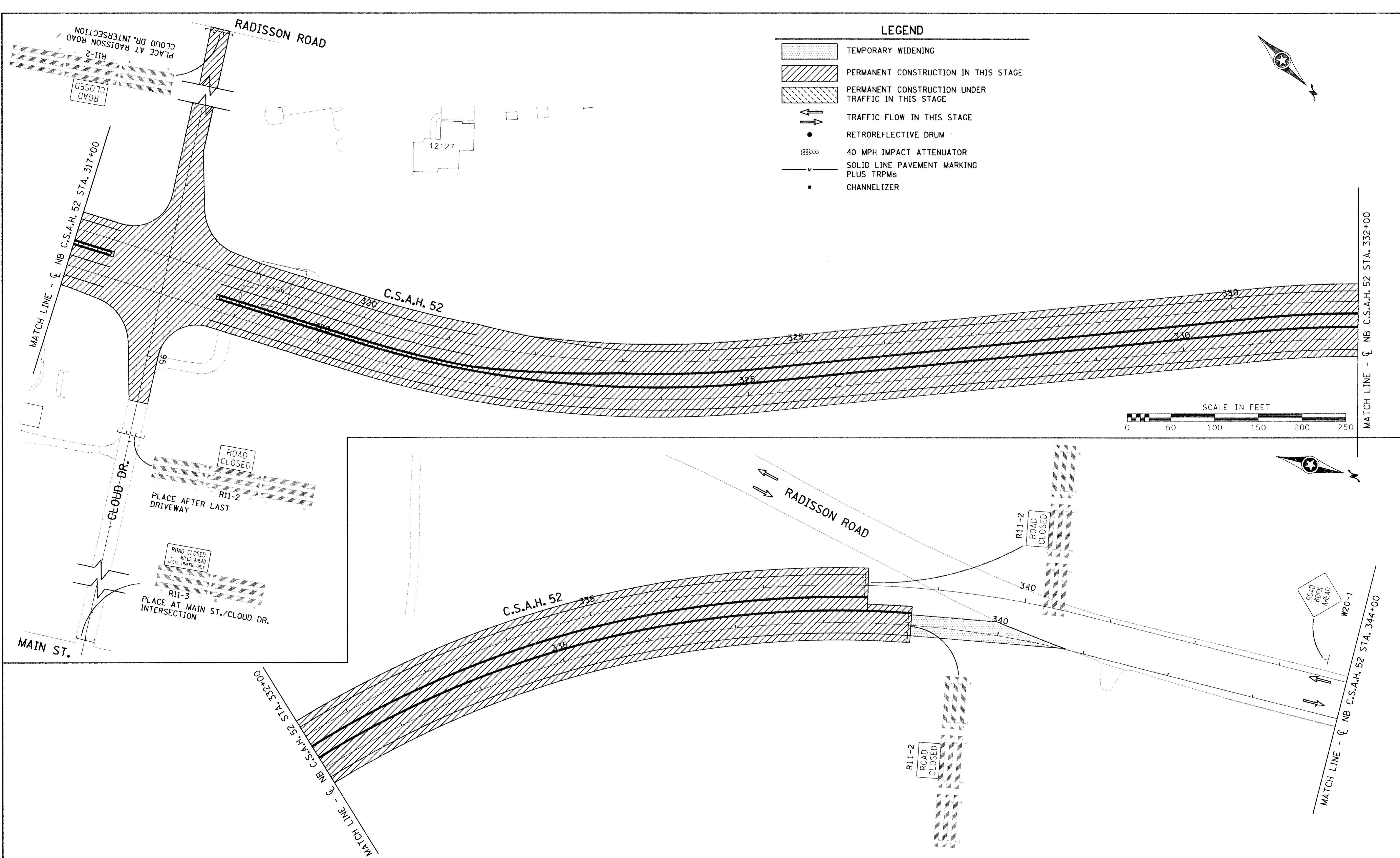
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 CHECKED BY GAR DATE 11-8-00

STATE PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019


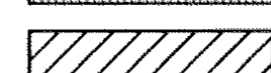
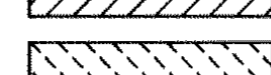
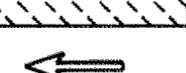

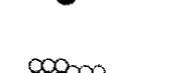


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 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

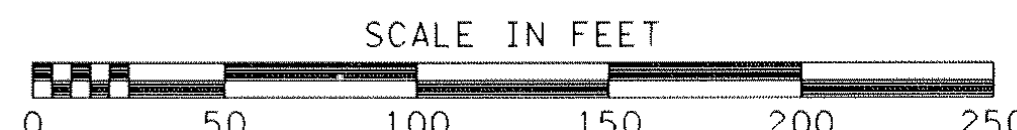
ANOKA COUNTY
 STAGE 1 CONSTRUCTION
 C.S.A.H. 52 RECONSTRUCTION
 STA. 288+00 TO STA. 317+00

SHEET
 35
 OF
 253



LEGEND

-  TEMPORARY WIDENING
-  PERMANENT CONSTRUCTION IN THIS STAGE
-  PERMANENT CONSTRUCTION UNDER TRAFFIC IN THIS STAGE
-  TRAFFIC FLOW IN THIS STAGE
-  RETROREFLECTIVE DRUM
-  40 MPH IMPACT ATTENUATOR
-  SOLID LINE PAVEMENT MARKING PLUS TRPMs
-  CHANNELIZER



NO	DATE	BY	CKD	APPR	REVISION
NAME: \$FILE\$					

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DATE _____ REG. NO. _____

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STATE PROJECT NO.


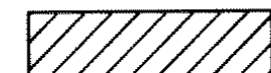
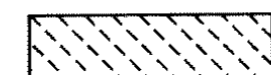


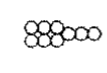


S.A.P. 02-652-01
S.A.P. 106-020-019

TKDA
TOLTZ, KING, DUVAL, ANDERSON
AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
STAGE 1 CONSTRUCTION
C.S.A.H. 52 RECONSTRUCTION
STA. 317+00 TO STA. 344+00

SHEET
36
OF
253

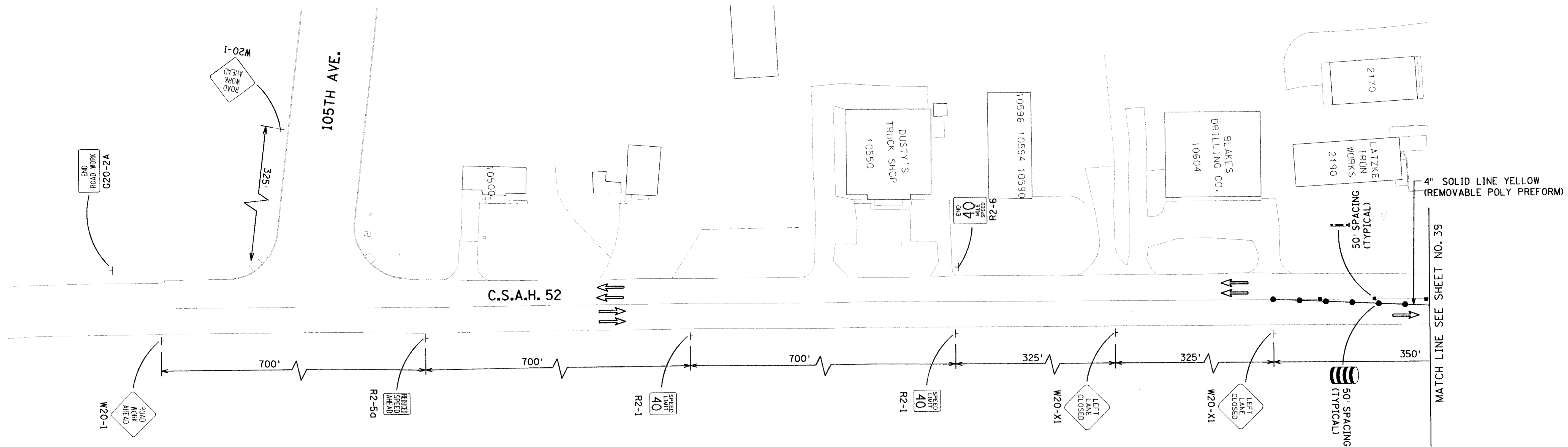
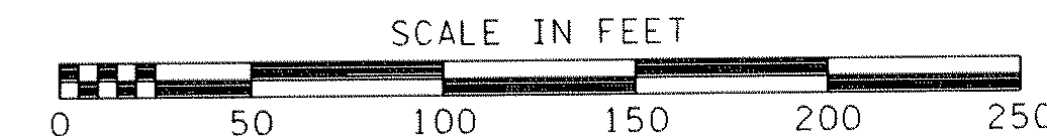
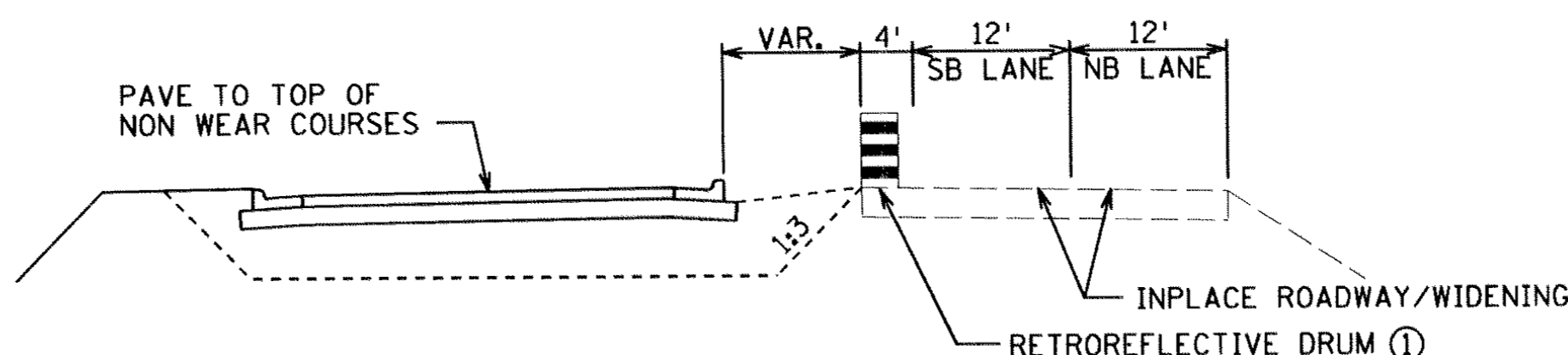
LEGEND

-  TEMPORARY WIDENING
-  PERMANENT CONSTRUCTION IN THIS STAGE
-  PERMANENT CONSTRUCTION UNDER TRAFFIC IN THIS STAGE
-  TRAFFIC FLOW IN THIS STAGE
-  RETROREFLECTIVE DRUM
-  40 MPH IMPACT ATTENUATOR
-  SOLID LINE PAVEMENT MARKING PLUS TRPMs
-  CHANNELIZER

STAGE 2 CONSTRUCTION

- TRAFFIC SHALL UTILIZE THE EXISTING NB LANE AND WIDENING FROM STA. 205+89 TO 295+00, CROSS OVER TO SB LANE AND WIDENING TO STA. 304+00, AND INPLACE RADISSON ROAD TO MAIN ST. (CSAH14).
- CONSTRUCT SB CSAH 52, INCLUDING STORM SEWER AND CURB AND GUTTER, FROM SB STA. 205+88 TO 293+82.
- CONSTRUCT TEMPORARY WIDENING ON THE WEST SIDE OF CSAH 52 FROM SB STA. 293+82 TO 296+00.
- CONSTRUCT TEMPORARY WIDENING ON THE EAST SIDE OF CSAH 52 FROM NB STA. 297+00 TO 299+18.
- CONSTRUCT NB CSAH 52, INCLUDING CURB AND GUTTER, FROM NB STA. 299+18 TO 305+00.
- CONSTRUCT TEMPORARY WIDENING ON THE WEST SIDE OF CSAH 52 FROM SB STA. 340+80 TO 342+80.
- CONSTRUCT SB CSAH 52, INCLUDING STORM SEWER AND CURB AND GUTTER, FROM SB STA. 342+80 TO 345+75.
- BEGIN SIGNAL CONSTRUCTION AT BOTH CSAH 12 AND CSAH 14.

TYPICAL SECTION FOR STAGE 2
PERMANENT CONSTRUCTION



NO	DATE	BY	CKD	APPR	REVISION

NAME: \$FILE\$ DATE: \$DATE\$

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

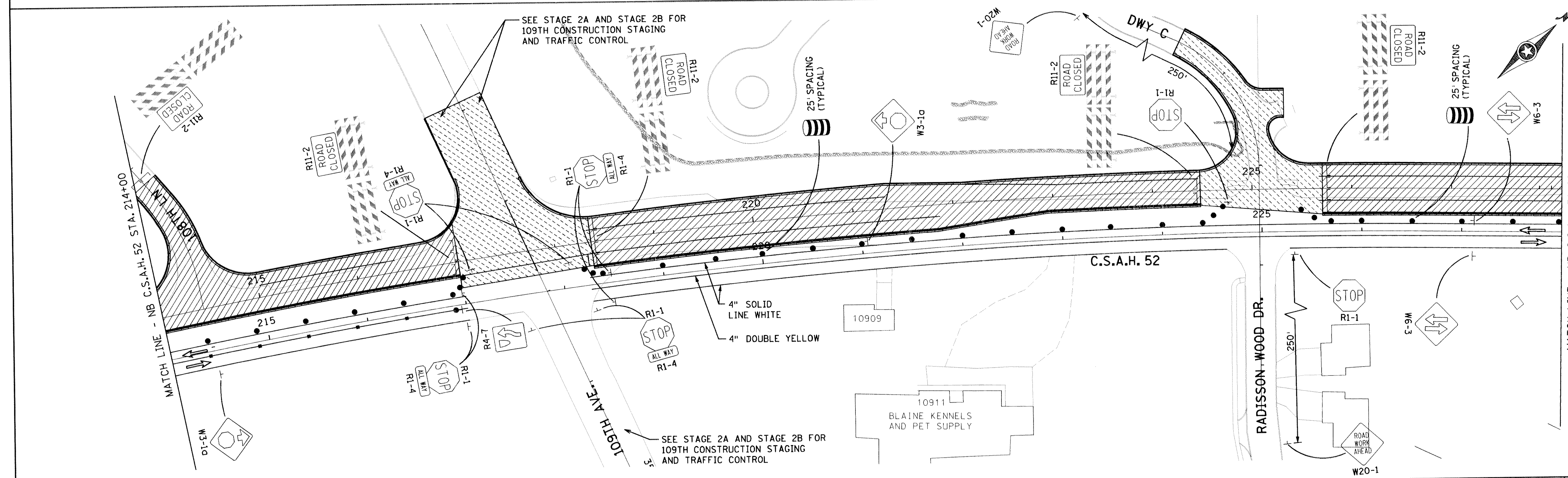
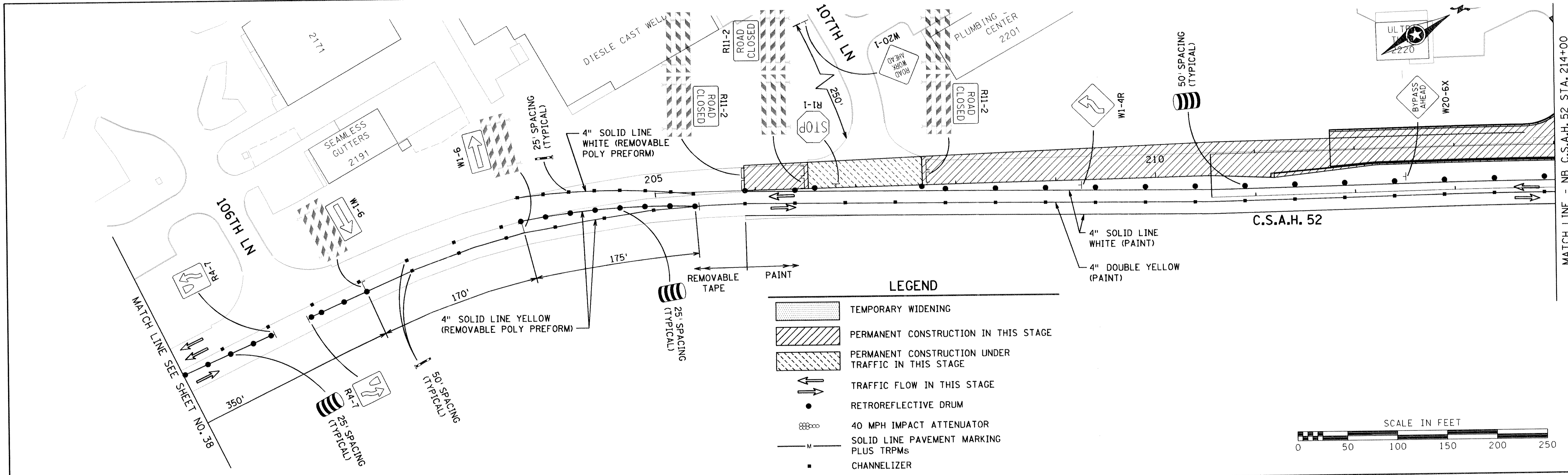
DATE _____ REG. NO. _____

DRAWN BY TJV DATE 11-8-00
 DESIGN BY TJV DATE 11-8-00
 CHECKED BY GAR DATE 11-8-00

STATE PROJECT NO. _____
 S.A.P. 02-652-01
 S.A.P. 106-020-019

TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 STAGE 2 CONSTRUCTION
 C.S.A.H. 52 RECONSTRUCTION



NO	DATE	BY	CKD	APPR	REVISION

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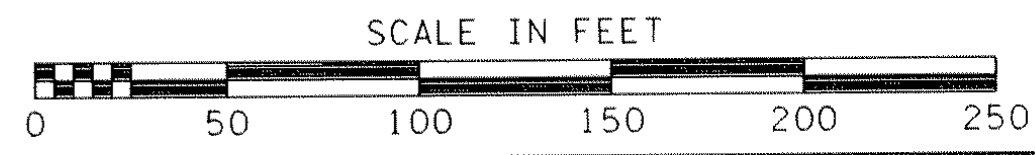
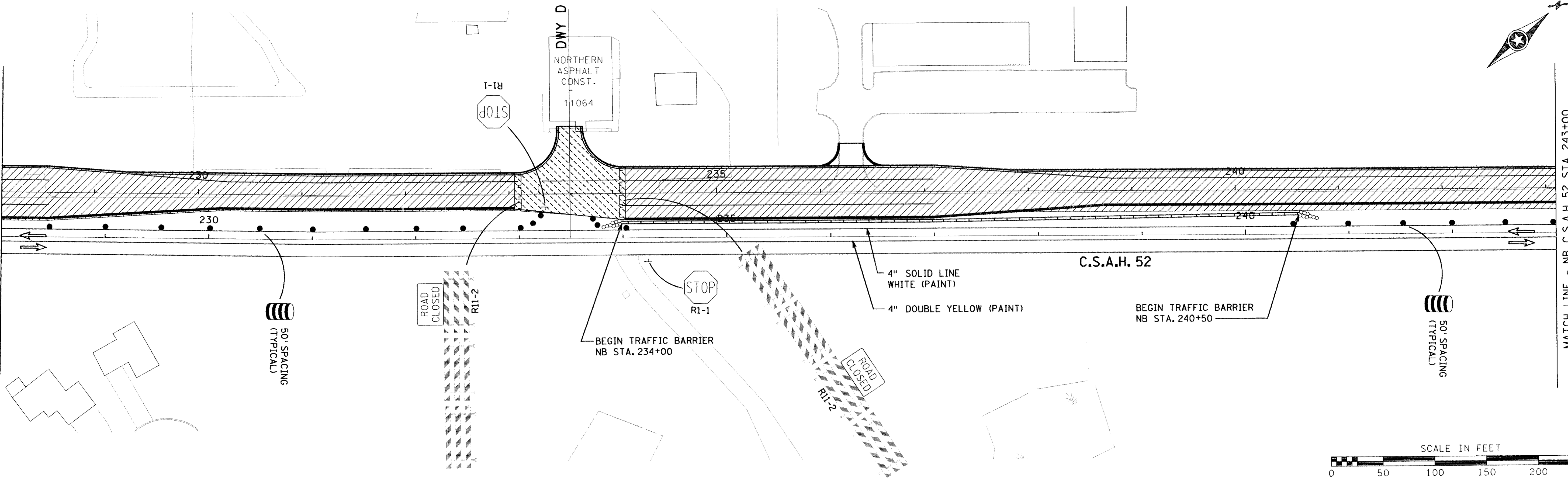
TKDA
 TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 STAGE 2 CONSTRUCTION
 C.S.A.H. 52 RECONSTRUCTION
 STA. 205+00 TO STA. 228+00

SHEET
 38
 OF
 253

MATCH LINE - NB C.S.A.H. 52 STA. 228+00

MATCH LINE - NB C.S.A.H. 52 STA. 243+00

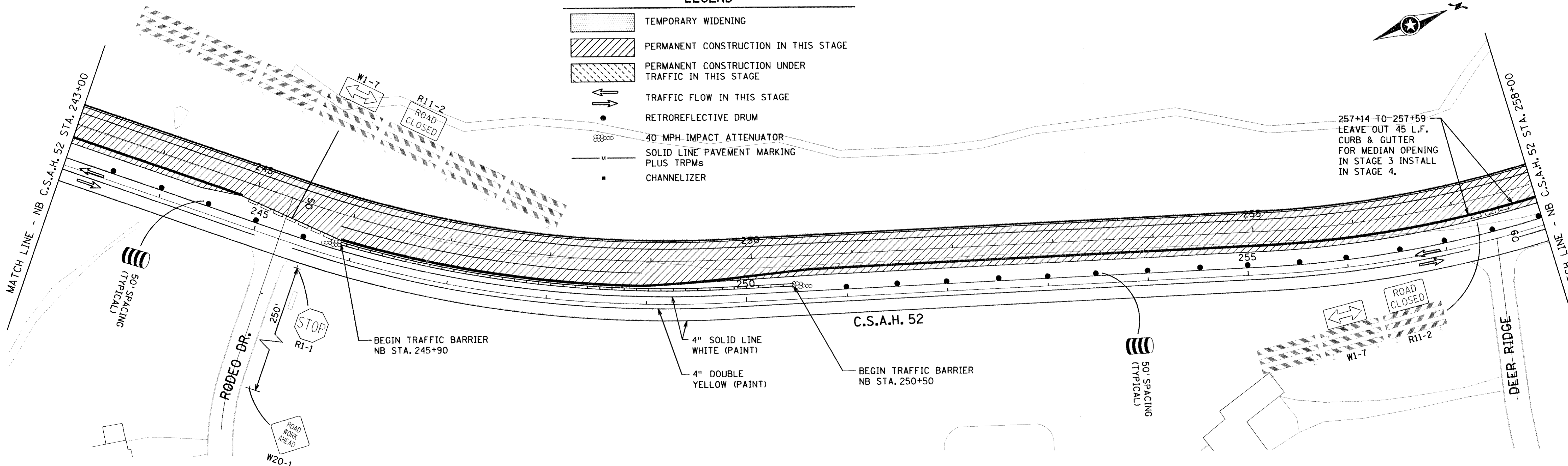


LEGEND

- TEMPORARY WIDENING
- PERMANENT CONSTRUCTION IN THIS STAGE
- PERMANENT CONSTRUCTION UNDER TRAFFIC IN THIS STAGE
- TRAFFIC FLOW IN THIS STAGE
- RETROREFLECTIVE DRUM
- 40 MPH IMPACT ATTENUATOR
- SOLID LINE PAVEMENT MARKING PLUS TRPMs
- CHANNELIZER

MATCH LINE - NB C.S.A.H. 52 STA. 243+00

MATCH LINE - NB C.S.A.H. 52 STA. 258+00



257+14 TO 257+59
LEAVE OUT 45 L.F.
CURB & GUTTER
FOR MEDIAN OPENING
IN STAGE 3 INSTALL
IN STAGE 4.

NO	DATE	BY	CKD	APPR	REVISION

NAME: \$FILE\$ \$DATE\$

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE _____ REG. NO. _____

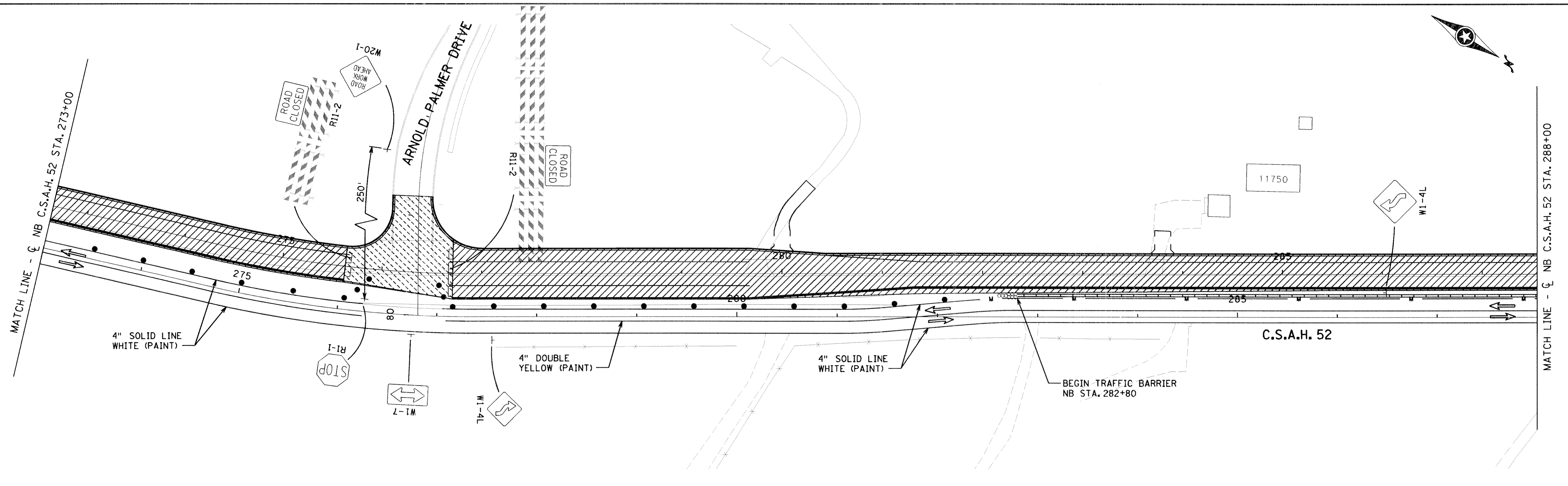
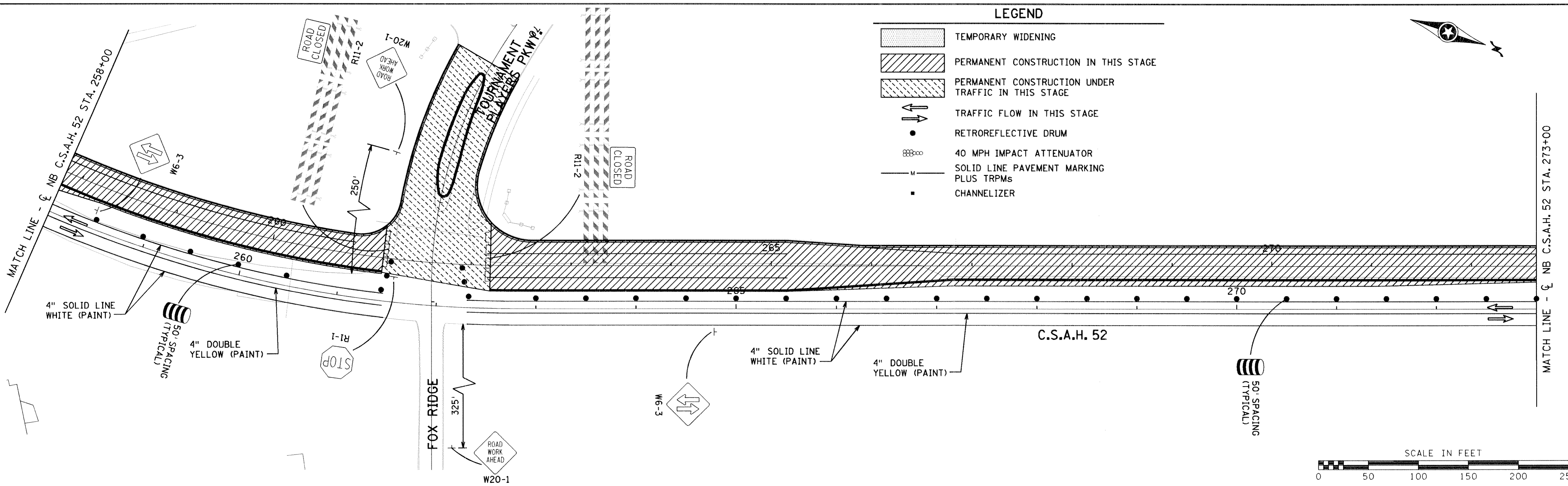
DRAWN BY: TJV DATE: 11-8-00
 DESIGN BY: TJV DATE: 11-8-00
 CHECKED BY: GAR DATE: 11-8-00

STATE PROJECT NO. _____
 S.A.P. 02-652-01
 S.A.P. 106-020-019

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 STAGE 2 CONSTRUCTION
 C.S.A.H. 52 RECONSTRUCTION
 STA. 228+00 TO STA. 258+00

SHEET
 39
 OF
 253



NO	DATE	BY	CKD	APPR	REVISION

NAME: \$FILE\$ \$DATE\$

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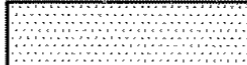

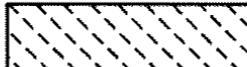
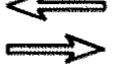


STATE PROJECT NO.
 S.A.P. 02-652-01
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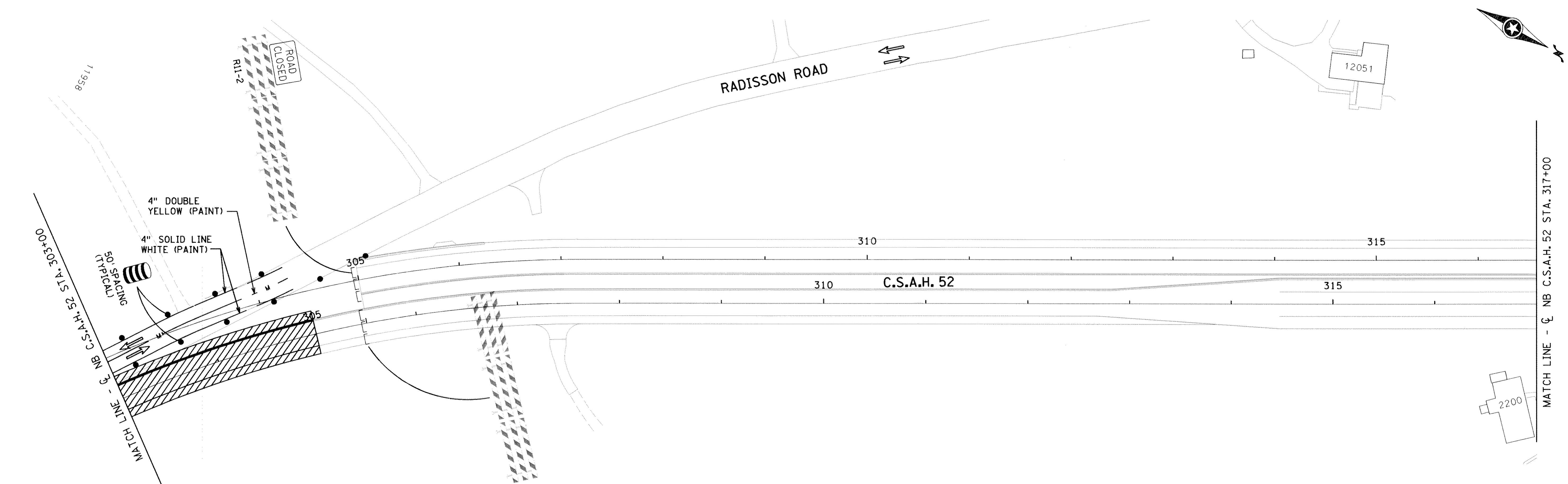
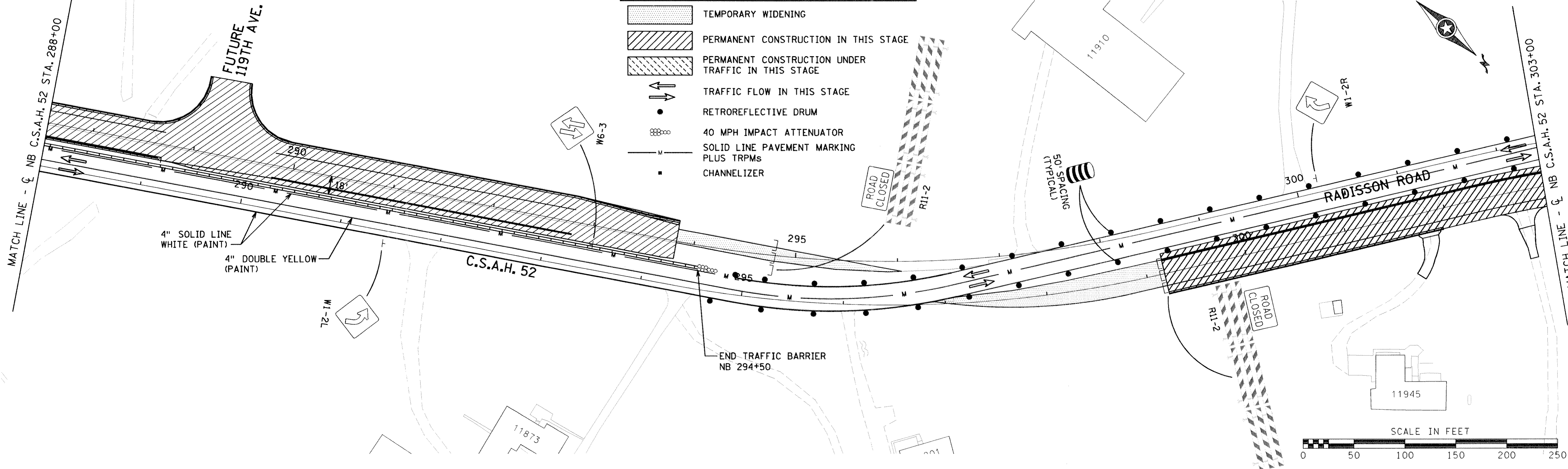
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 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 STAGE 2 CONSTRUCTION
 C.S.A.H. 52 RECONSTRUCTION
 STA. 258+00 TO STA. 288+00

SHEET
 40
 OF
 253

LEGEND

-  TEMPORARY WIDENING
-  PERMANENT CONSTRUCTION IN THIS STAGE
-  PERMANENT CONSTRUCTION UNDER TRAFFIC IN THIS STAGE
-  TRAFFIC FLOW IN THIS STAGE
- RETROREFLECTIVE DRUM
-  40 MPH IMPACT ATTENUATOR
-  SOLID LINE PAVEMENT MARKING PLUS TRPMs
- CHANNELIZER



NO	DATE	BY	CKD	APPR	REVISION
NAME: \$FILE\$					

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STATE PROJECT NO.


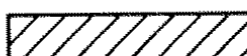
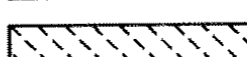
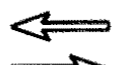

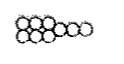


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S.A.P. 106-020-019

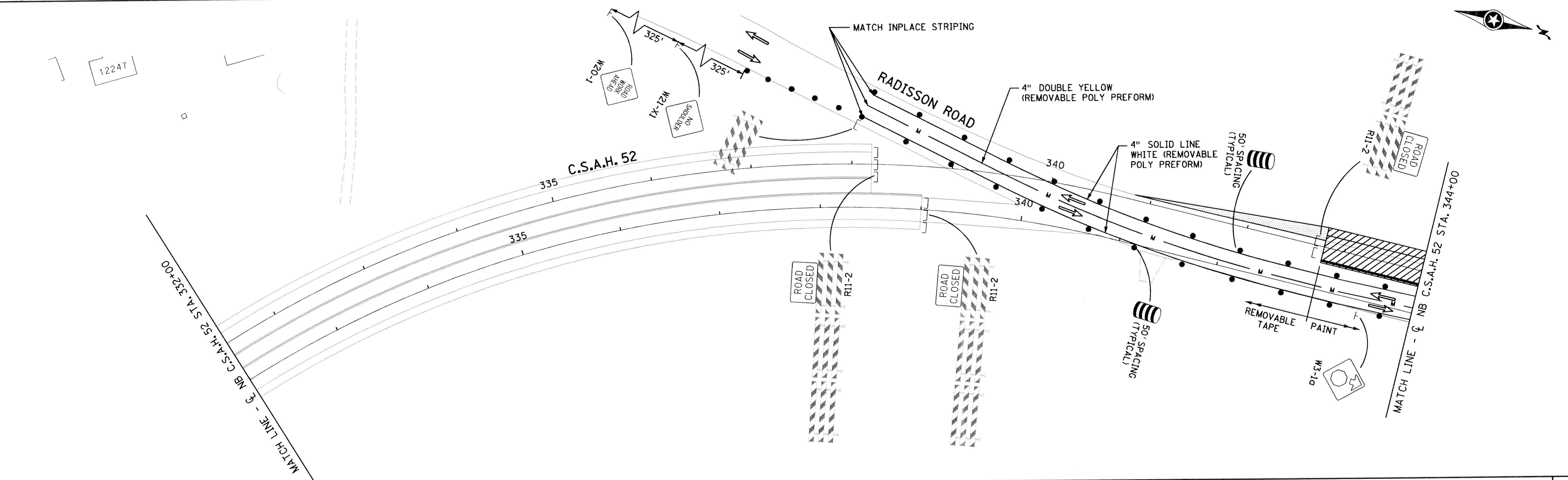
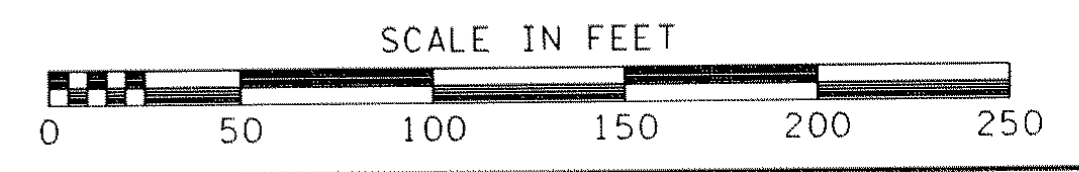
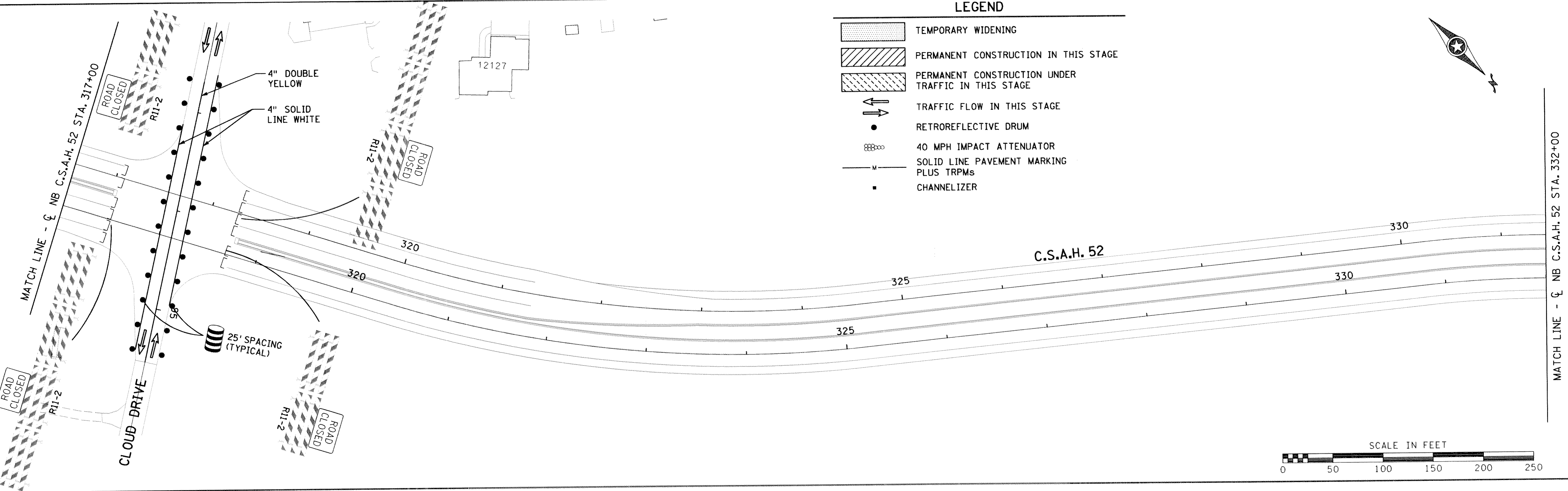
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AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
STAGE 2 CONSTRUCTION
C.S.A.H. 52 RECONSTRUCTION
STA. 288+00 TO STA. 317+00

SHEET
41
OF
253

LEGEND

-  TEMPORARY WIDENING
-  PERMANENT CONSTRUCTION IN THIS STAGE
-  PERMANENT CONSTRUCTION UNDER TRAFFIC IN THIS STAGE
-  TRAFFIC FLOW IN THIS STAGE
-  RETROREFLECTIVE DRUM
-  40 MPH IMPACT ATTENUATOR
-  SOLID LINE PAVEMENT MARKING PLUS TRPMs
-  CHANNELIZER



NO	DATE	BY	CKD	APPR	REVISION	DATE

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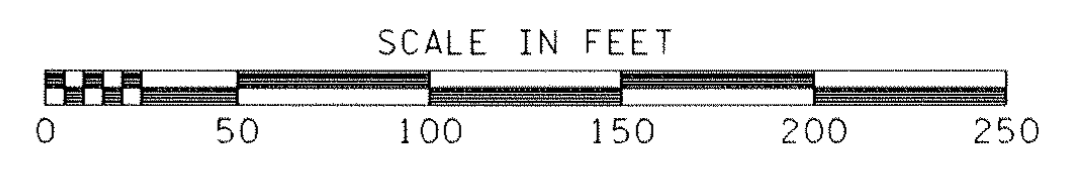
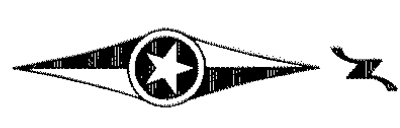
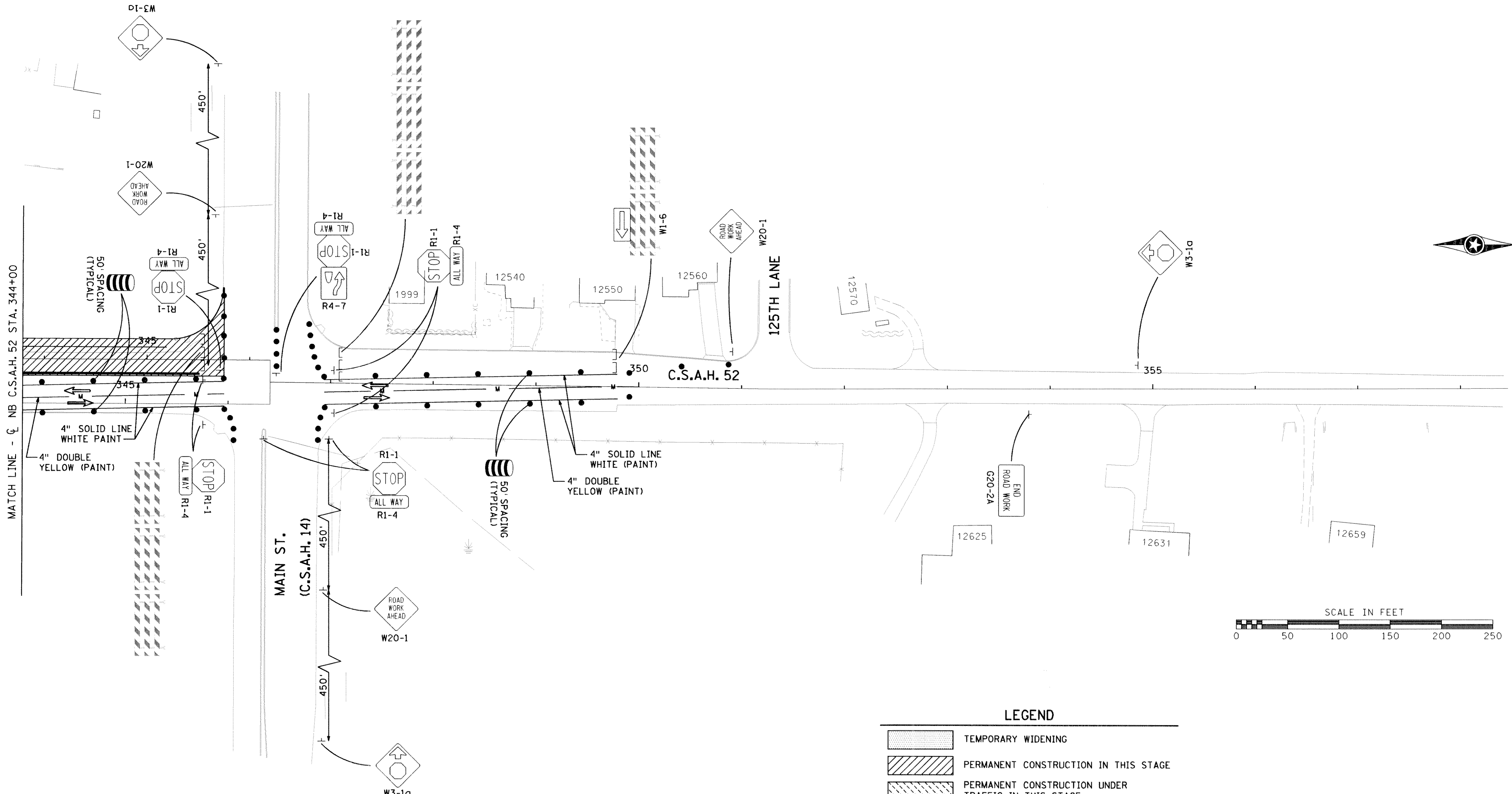
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 CHECKED BY GAR DATE 11-8-00

STATE PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

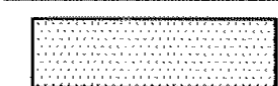


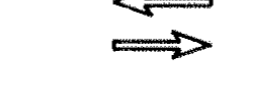

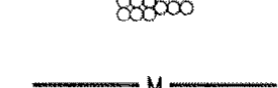


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ANOKA COUNTY
 STAGE 2 CONSTRUCTION
 C.S.A.H. 52 RECONSTRUCTION
 STA. 317+00 TO STA. 344+00

SHEET
 42
 OF
 253



LEGEND

-  TEMPORARY WIDENING
-  PERMANENT CONSTRUCTION IN THIS STAGE
-  PERMANENT CONSTRUCTION UNDER TRAFFIC IN THIS STAGE
-  TRAFFIC FLOW IN THIS STAGE
-  RETROREFLECTIVE DRUM
-  40 MPH IMPACT ATTENUATOR
-  SOLID LINE PAVEMENT MARKING PLUS TRPMs
-  CHANNELIZER

NO	DATE	BY	CKD	APPR	REVISION

NAME: \$FILE\$ \$DATE\$

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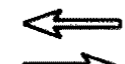

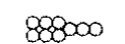


STATE PROJECT NO. _____
 S.A.P. 02-652-01
 S.A.P. 106-020-019

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 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 STAGE 2 CONSTRUCTION
 C.S.A.H. 52 RECONSTRUCTION
 STA. 344+00 TO STA. 353+00

SHEET
 43
 OF
 253

LEGEND

-  TEMPORARY WIDENING
-  PERMANENT CONSTRUCTION IN THIS STAGE
-  PERMANENT CONSTRUCTION UNDER TRAFFIC IN THIS STAGE
-  TRAFFIC FLOW IN THIS STAGE
-  RETROREFLECTIVE DRUM
-  40 MPH IMPACT ATTENUATOR
-  SOLID LINE PAVEMENT MARKING PLUS TRPMs
-  CHANNELIZER

STAGE 3 - PHASE 1 CONSTRUCTION

- TRAFFIC SHALL UTILIZE THE PORTIONS OF SB CSAH 52 BUILT IN STAGE 2, FROM STA. 205+89 TO 293+82, CROSS OVER TO NB CSAH 52 TO STA 299+18, UTILIZE NB CSAH 52 BUILT IN STAGE 1 STA. 299+18 TO 339+00, CROSS OVER TO SB CSAH 52 TO STA. 342+80 AND UTILIZE SB CSAH 52 TO MAIN ST. (CSAH14).
- CONSTRUCT NB CSAH 52, INCLUDING STORM SEWER AND CURB AND GUTTER, FROM NB STA. 205+88 TO 295+00.
- CONSTRUCT TEMPORARY WIDENING ON THE WEST SIDE OF CSAH 52 FROM SB STA. 293+82 TO 298+37.
- CONSTRUCT SB CSAH 52, INCLUDING STORM SEWER AND CURB AND GUTTER, FROM SB STA. 298+37 TO 305+00.
- CONSTRUCT NB CSAH 52, INCLUDING STORM SEWER AND CURB AND GUTTER, FROM NB STA. 343+00 TO 346+09.
- CONSTRUCT NB CSAH 52, INCLUDING STORM SEWER AND CURB AND GUTTER, FROM STA. 346+88 TO 354+01.
- CONTINUE WORKING ON SIGNALS AT 109TH AVE. AND CSAH 14

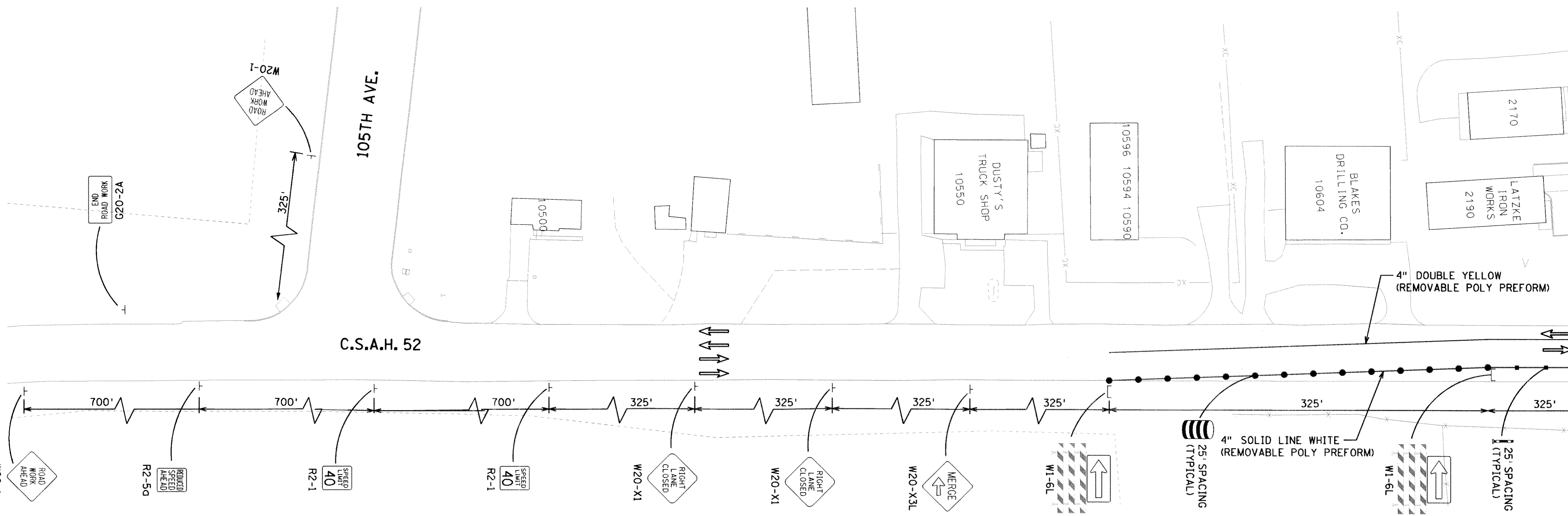
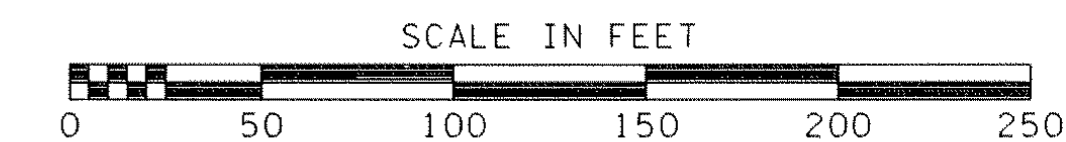
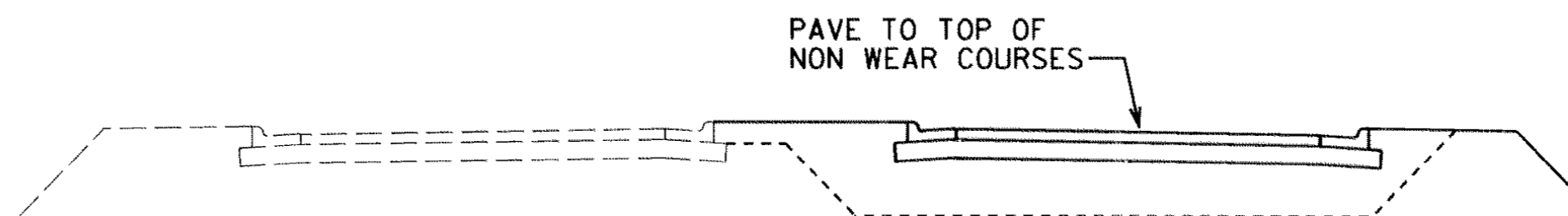
STAGE 3 - PHASE 2 CONSTRUCTION

- TRAFFIC SHALL UTILIZE THE PORTIONS OF SB CSAH 52 BUILT IN STAGE 2 FROM STA. 205+89 TO 293+18, AND IN STAGE 3 - PHASE 1 FROM 293+82 TO 298+37, AND IN STAGE 1 298+37 TO CLOUD DRIVE. ALL TRAFFIC SHALL TURN LEFT OR RIGHT TO ACCESS MAIN ST. (CSAH 14).
- CONSTRUCT NB CSAH 52 FROM NB STA. 295+00 TO 299+18.
- CONSTRUCT NB CSAH 52 FROM NB STA. 399+00 TO 343+00.
- CONSTRUCT SB CSAH 52 FROM SB STA. 338+20 TO 342+79.
- ACTIVATE SIGNAL AT CSAH 14.

STAGE 3 - PHASE 3 CONSTRUCTION

- TRAFFIC SHALL UTILIZE PORTIONS OF SB CSAH 52 BUILT IN PREVIOUS STAGES FROM STA. 205+89 TO 289+00, CROSS OVER TO NB CSAH 52 TO STA. 290+20, UTILIZE NB CSAH 52 TO CLOUD DRIVE, WHERE SB TRAFFIC CROSSES OVER TO SB CSAH 52. FROM CLOUD DRIVE TO MAIN ST., SB TRAFFIC WILL UTILIZE SB CSAH 52 AND NB TRAFFIC WILL UTILIZE NB CSAH 52.
- CONSTRUCT SB CSAH 52 FROM SB STA. 293+82 TO 298+37.

TYPICAL SECTION FOR STAGE 3 PERMANENT CONSTRUCTION



MATCH LINE SEE SHEET NO. 46

NO	DATE	BY	CKD	APPR	REVISION
NAME: \$FILE\$					DATE: \$DATE\$

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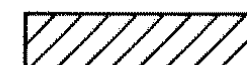
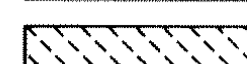



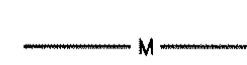

STATE PROJECT NO. S.A.P. 02-652-01
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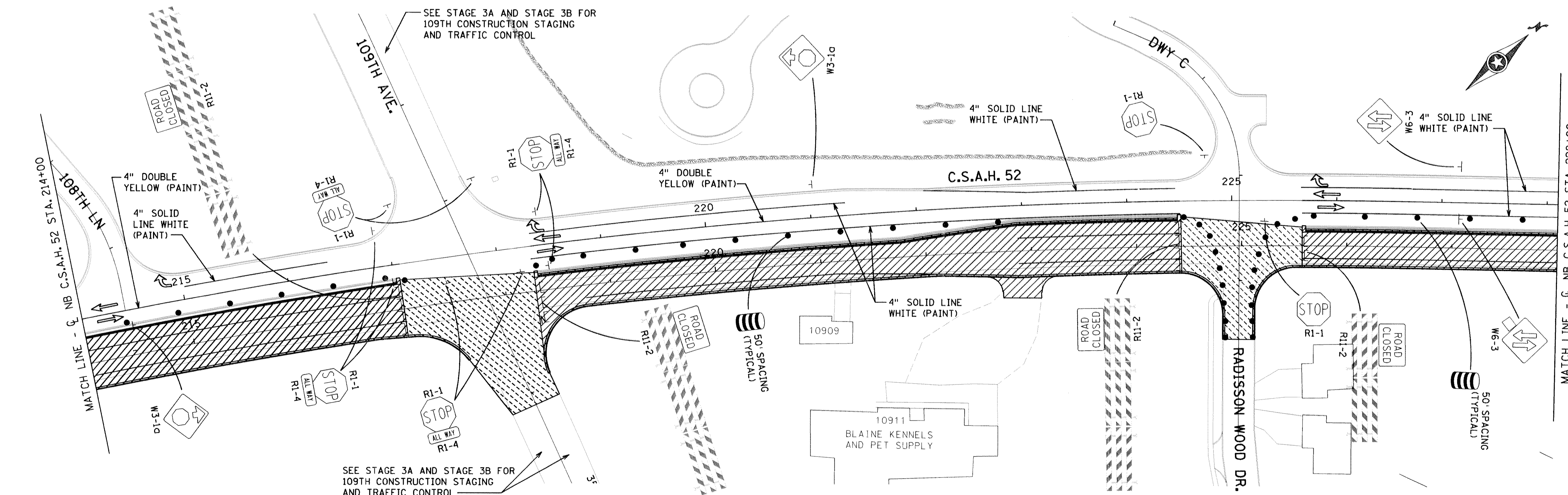
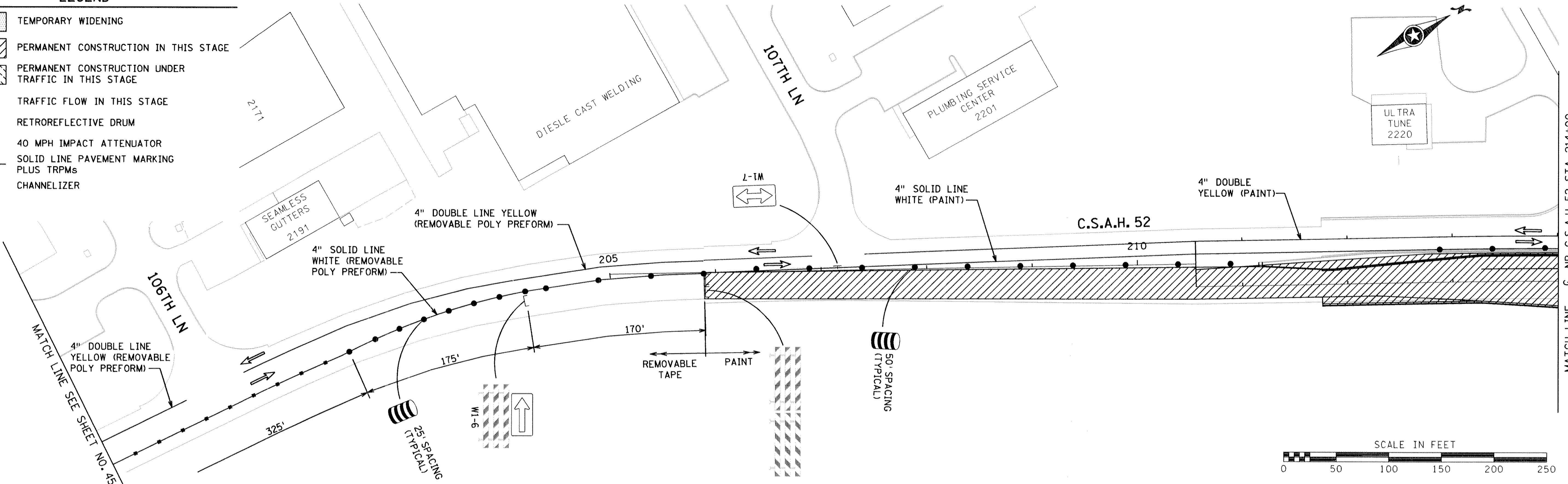
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 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 STAGE 3 CONSTRUCTION
 C.S.A.H. 52 RECONSTRUCTION

SHEET 45 OF 253

LEGEND

-  TEMPORARY WIDENING
-  PERMANENT CONSTRUCTION IN THIS STAGE
-  PERMANENT CONSTRUCTION UNDER TRAFFIC IN THIS STAGE
-  TRAFFIC FLOW IN THIS STAGE
-  RETROREFLECTIVE DRUM
-  40 MPH IMPACT ATTENUATOR
-  SOLID LINE PAVEMENT MARKING PLUS TRPMs
-  CHANNELIZER



NO	DATE	BY	CKD	APPR	REVISION

NAME: \$FILES\$ \$DATE\$

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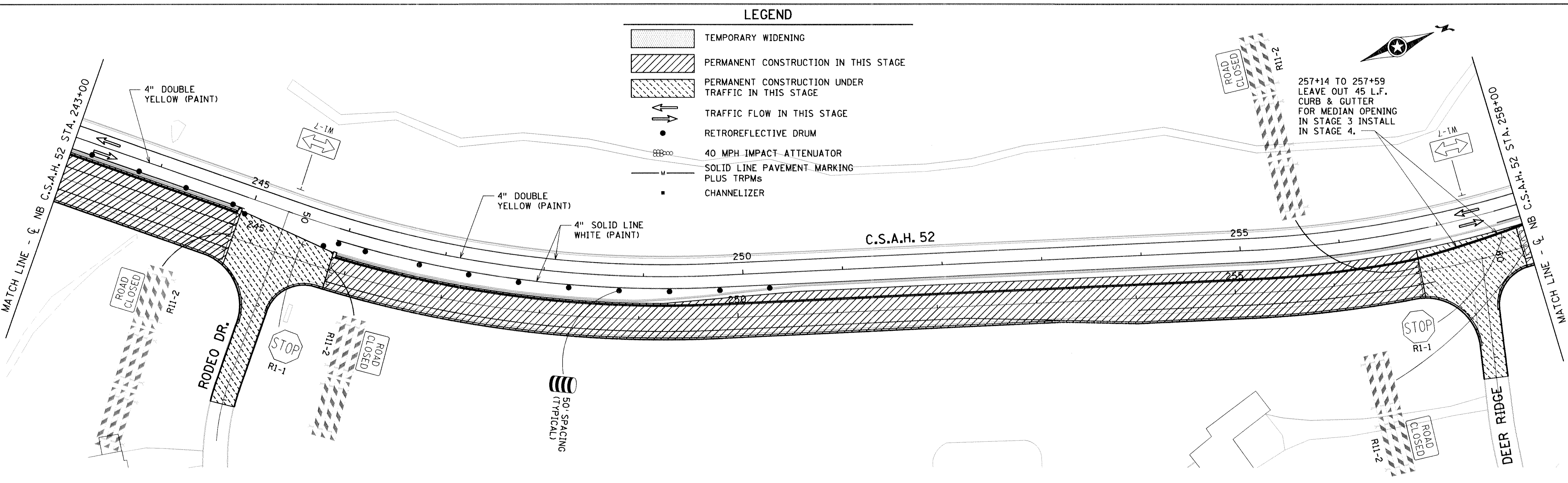
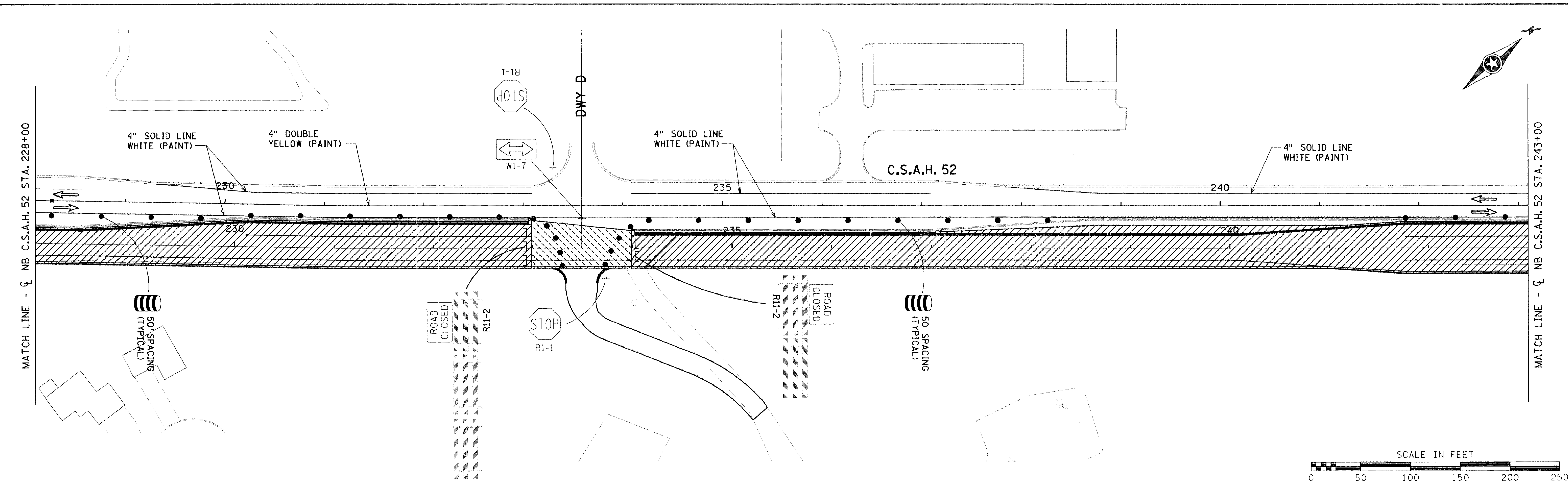
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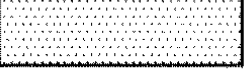
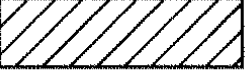

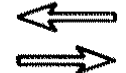

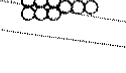


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 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 STAGE 3 CONSTRUCTION
 C.S.A.H. 52 RECONSTRUCTION
 STA. 205+00 TO STA. 228+00

SHEET
 46
 OF
 253



LEGEND

-  TEMPORARY WIDENING
-  PERMANENT CONSTRUCTION IN THIS STAGE
-  PERMANENT CONSTRUCTION UNDER TRAFFIC IN THIS STAGE
-  TRAFFIC FLOW IN THIS STAGE
-  RETROREFLECTIVE DRUM
-  40 MPH IMPACT ATTENUATOR
-  SOLID LINE PAVEMENT MARKING PLUS TRPMs
-  CHANNELIZER

NO	DATE	BY	CHKD	APPR	REVISION
NAME: \$FILE\$					DATE: \$DATE\$

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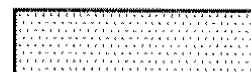
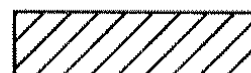
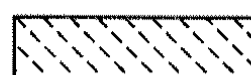





S. A. P. 02-652-01
S. A. P. 106-020-019

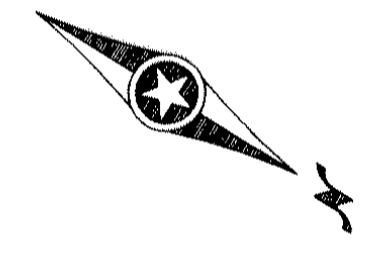
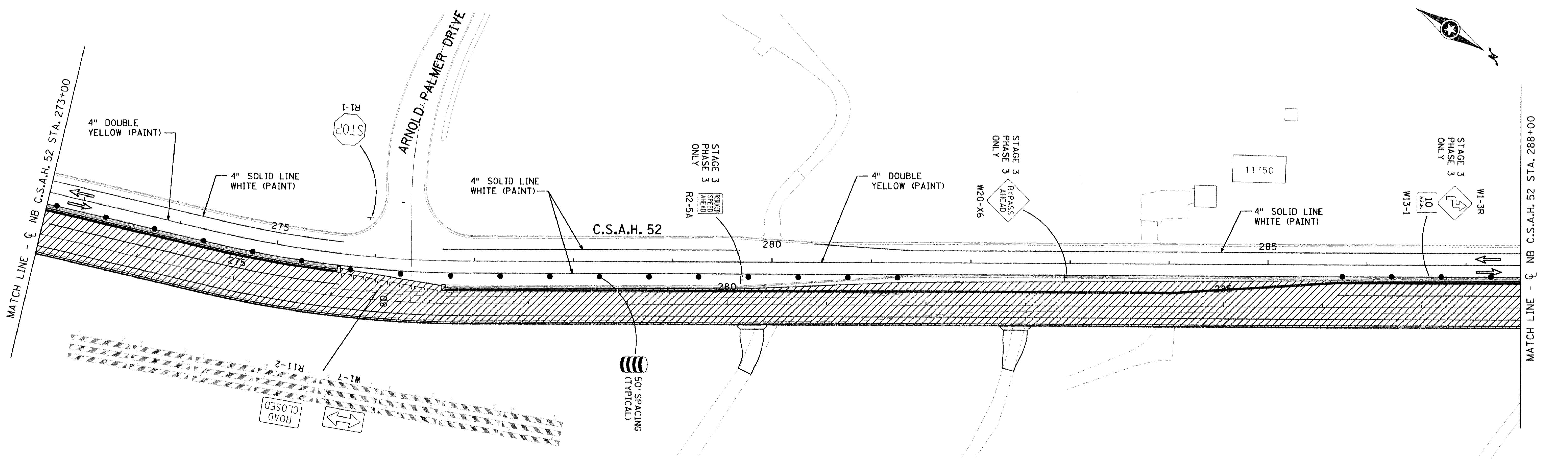
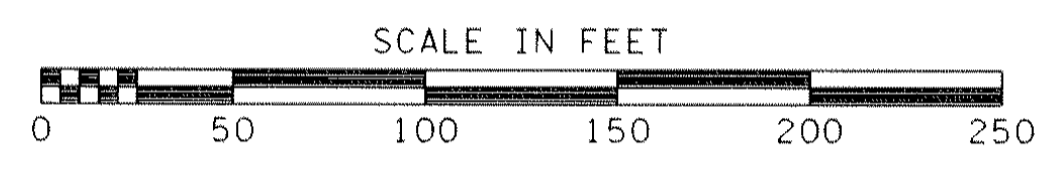
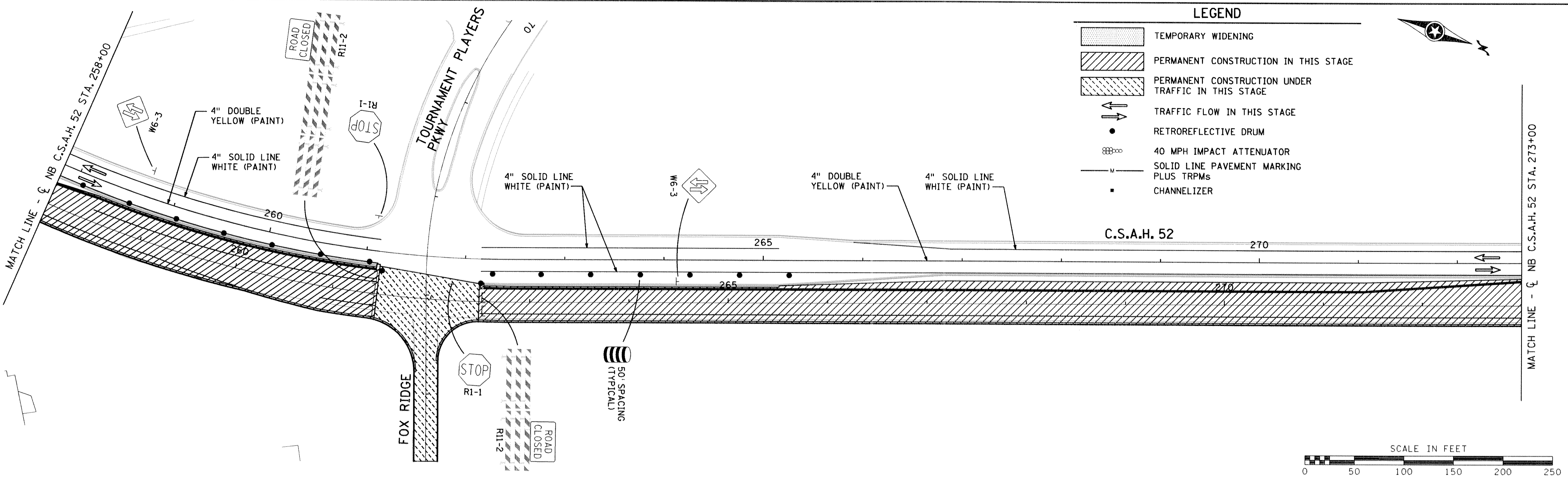
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TOLTZ, KING, DUVAL, ANDERSON
AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
STAGE 3 CONSTRUCTION
C.S.A.H. 52 RECONSTRUCTION
STA. 228+00 TO STA. 258+00

SHEET
47
OF
253

LEGEND

-  TEMPORARY WIDENING
-  PERMANENT CONSTRUCTION IN THIS STAGE
-  PERMANENT CONSTRUCTION UNDER TRAFFIC IN THIS STAGE
-  TRAFFIC FLOW IN THIS STAGE
-  RETROREFLECTIVE DRUM
-  40 MPH IMPACT ATTENUATOR
-  SOLID LINE PAVEMENT MARKING PLUS TRPMs
-  CHANNELIZER



NO	DATE	BY	CKD	APPR	REVISION

NAME: \$FILE\$ #DATE\$

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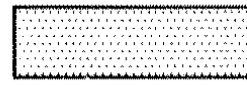
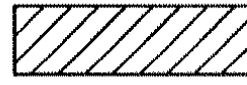
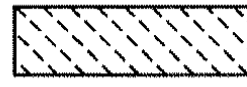
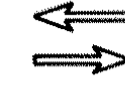

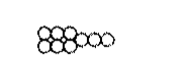


STATE PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

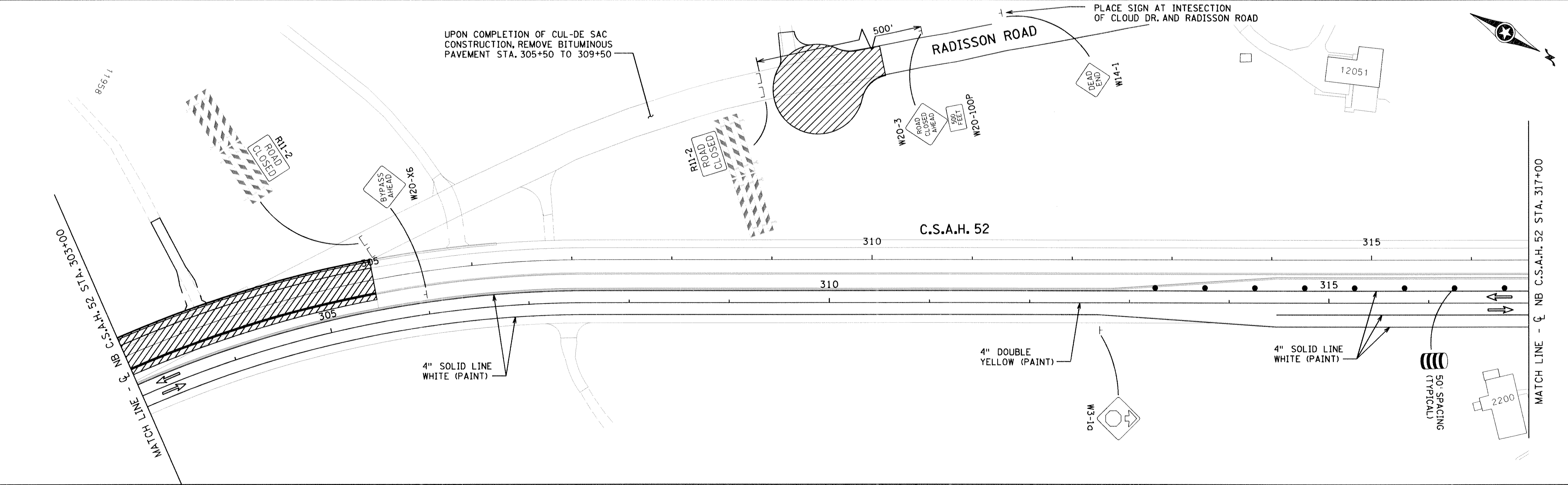
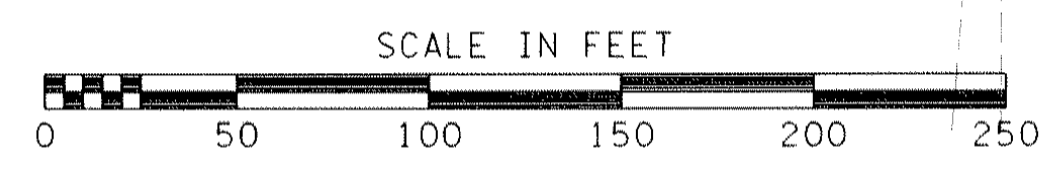
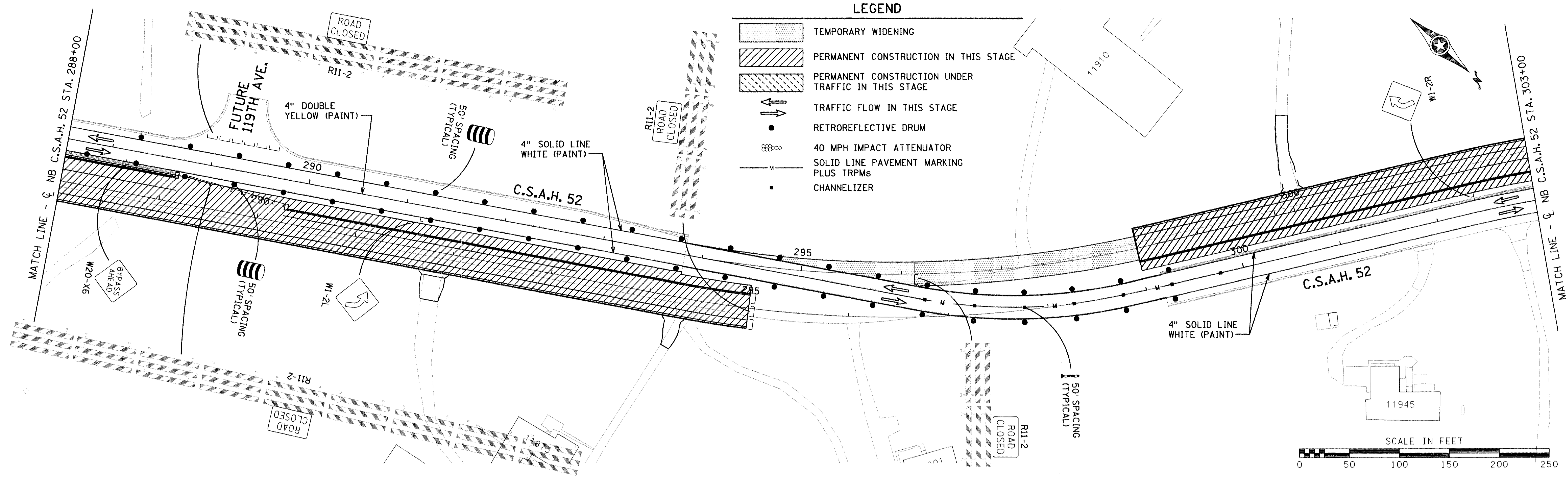
TKDA
 TOLTZ, KING, DUVAL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 STAGE 3 CONSTRUCTION
 C.S.A.H. 52 RECONSTRUCTION
 STA. 258+00 TO STA. 288+00

SHEET
 48
 OF
 253

LEGEND

-  TEMPORARY WIDENING
-  PERMANENT CONSTRUCTION IN THIS STAGE
-  PERMANENT CONSTRUCTION UNDER TRAFFIC IN THIS STAGE
-  TRAFFIC FLOW IN THIS STAGE
-  RETROREFLECTIVE DRUM
-  40 MPH IMPACT ATTENUATOR
-  SOLID LINE PAVEMENT MARKING PLUS TRPMs
-  CHANNELIZER



NO	DATE	BY	CKD	APPR	REVISION
NAME: \$FILE\$					\$DATE\$

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DATE _____ REG. NO. _____

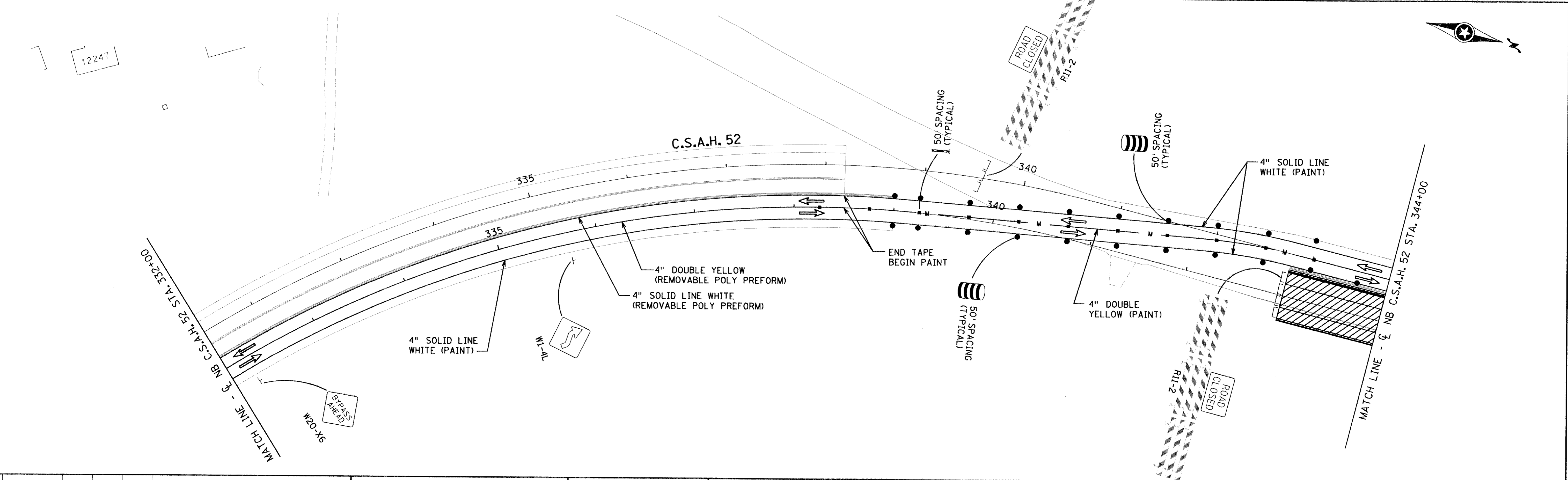
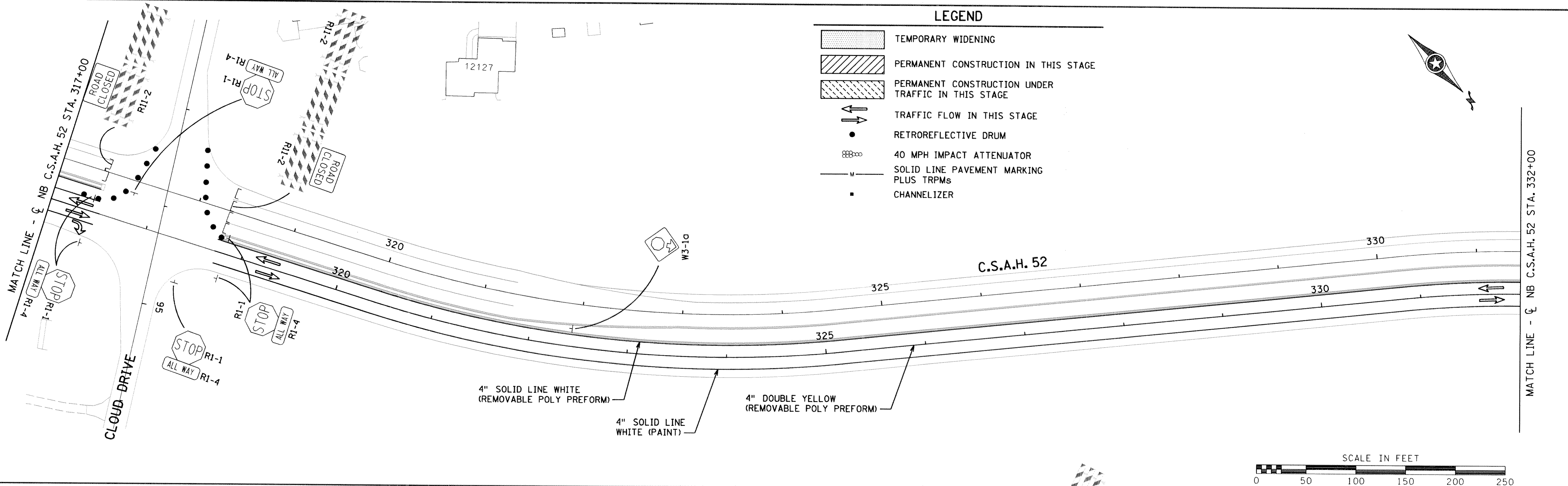
DRAWN BY RRC DATE 11-8-00
 DESIGN BY TJV DATE 11-8-00
 CHECKED BY GAR DATE 11-8-00

STATE PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

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 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 STAGE 3 - PHASE 1 CONSTRUCTION
 C.S.A.H. 52 RECONSTRUCTION
 STA. 288+00 TO STA. 317+00

SHEET
 49
 OF
 253



NO	DATE	BY	CKD	APPR	REVISION
NAME: \$FILE\$					DATE: \$DATE\$

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DATE _____ REG. NO. _____

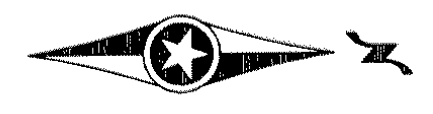
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 CHECKED BY GAR DATE 11-8-00

STATE PROJECT NO. _____
 S.A.P. 02-652-01
 S.A.P. 106-020-019

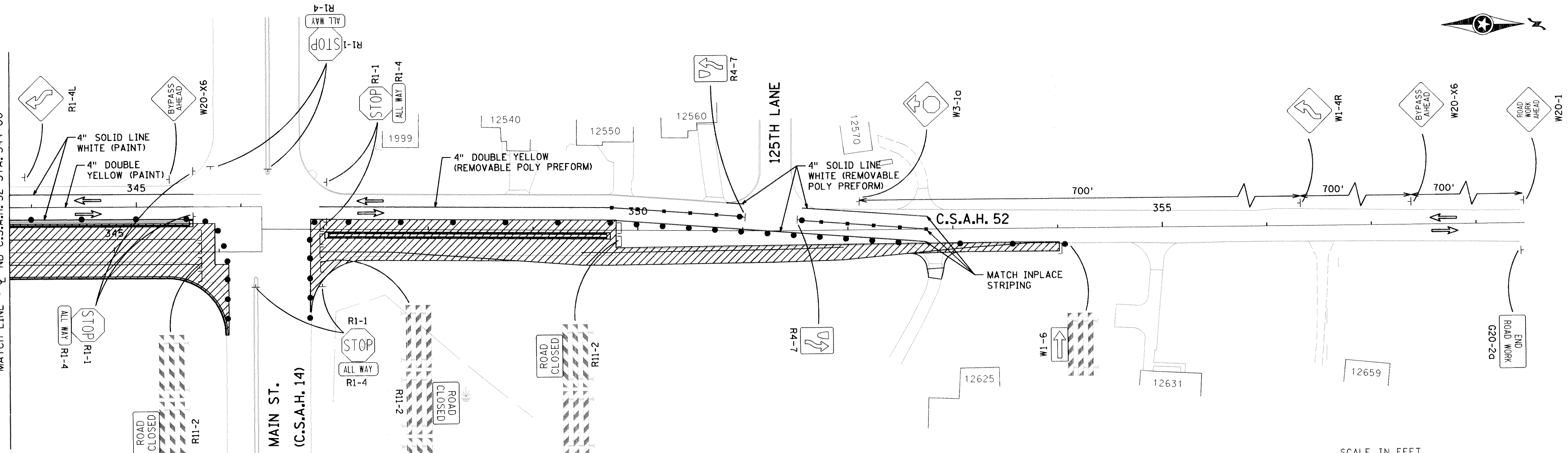
TKDA
 TOLTZ, KING, DUVAL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 STAGE 3 - PHASE 1 CONSTRUCTION
 C.S.A.H. 52 RECONSTRUCTION
 STA. 317+00 TO STA. 344+00

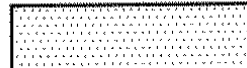
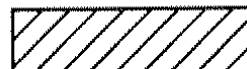
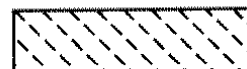





SHEET
 50
 OF
 253

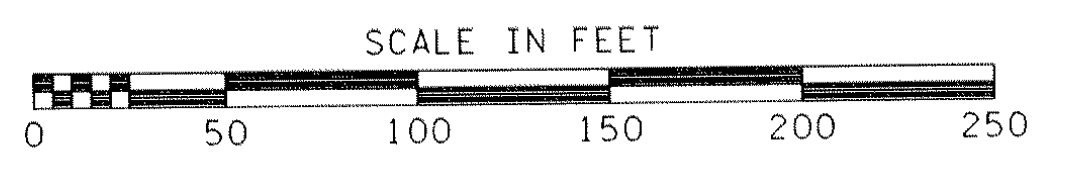


MATCH LINE - C NB C.S.A.H. 52 STA. 344+00



LEGEND

-  TEMPORARY WIDENING
-  PERMANENT CONSTRUCTION IN THIS STAGE
-  PERMANENT CONSTRUCTION UNDER TRAFFIC IN THIS STAGE
-  TRAFFIC FLOW IN THIS STAGE
-  RETROREFLECTIVE DRUM
-  40 MPH IMPACT ATTENUATOR
-  SOLID LINE PAVEMENT MARKING PLUS TRPMs
-  CHANNELIZER



NO	DATE	BY	CKD	APPR	REVISION

NAME: \$FILE\$ \$DATE\$

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 DESIGN BY TJV DATE 11-8-00
 CHECKED BY GAR DATE 11-8-00

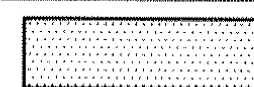
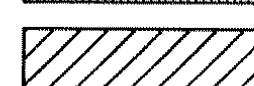
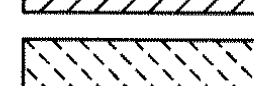
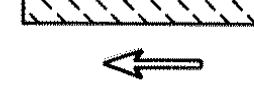
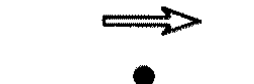

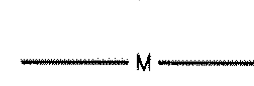

STATE PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

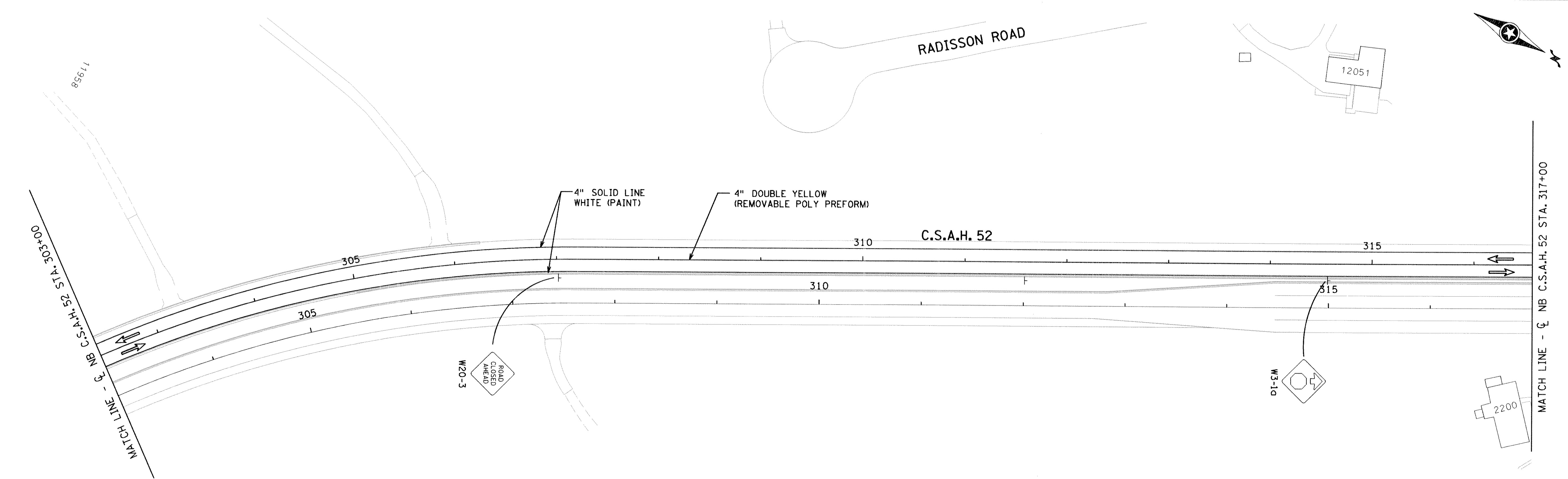
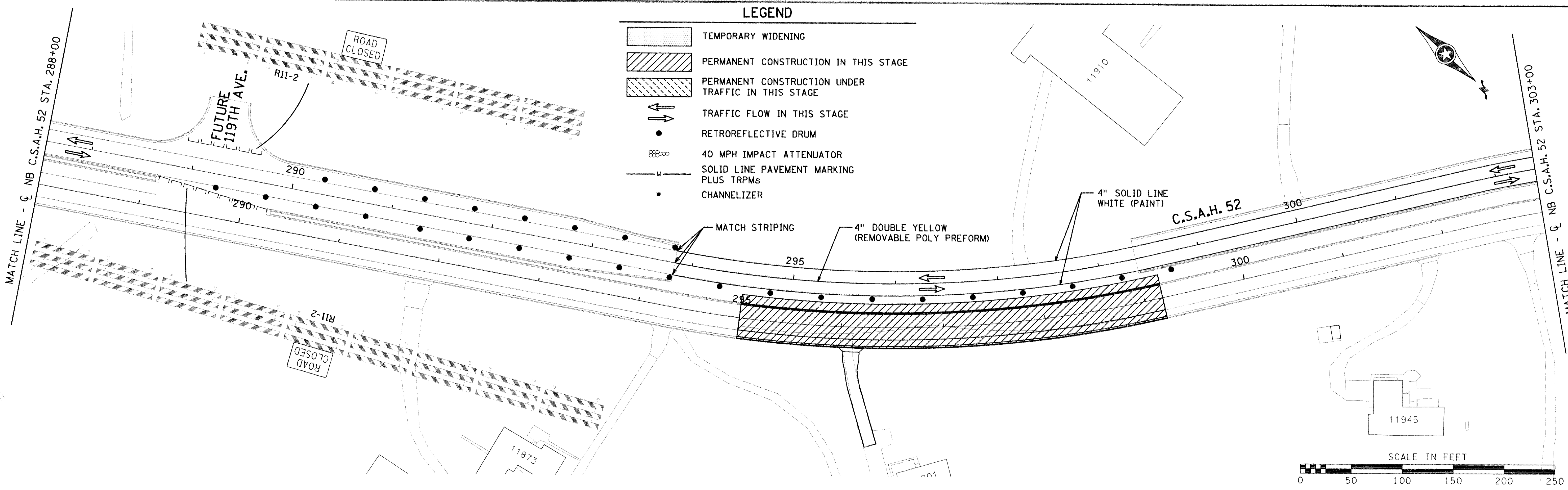
TKDA
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 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 STAGE 3 - PHASE 1 CONSTRUCTION
 C.S.A.H. 52 RECONSTRUCTION
 STA. 344+00 TO STA. 353+00

SHEET
 51
 OF
 253

LEGEND

-  TEMPORARY WIDENING
-  PERMANENT CONSTRUCTION IN THIS STAGE
-  PERMANENT CONSTRUCTION UNDER TRAFFIC IN THIS STAGE
-  TRAFFIC FLOW IN THIS STAGE
-  RETROREFLECTIVE DRUM
-  40 MPH IMPACT ATTENUATOR
-  SOLID LINE PAVEMENT MARKING PLUS TRPMs
-  CHANNELIZER



NO	DATE	BY	CHKD	APPR	REVISION
NAME: \$FILE\$					DATE: \$DATE\$

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DATE _____ REG. NO. _____

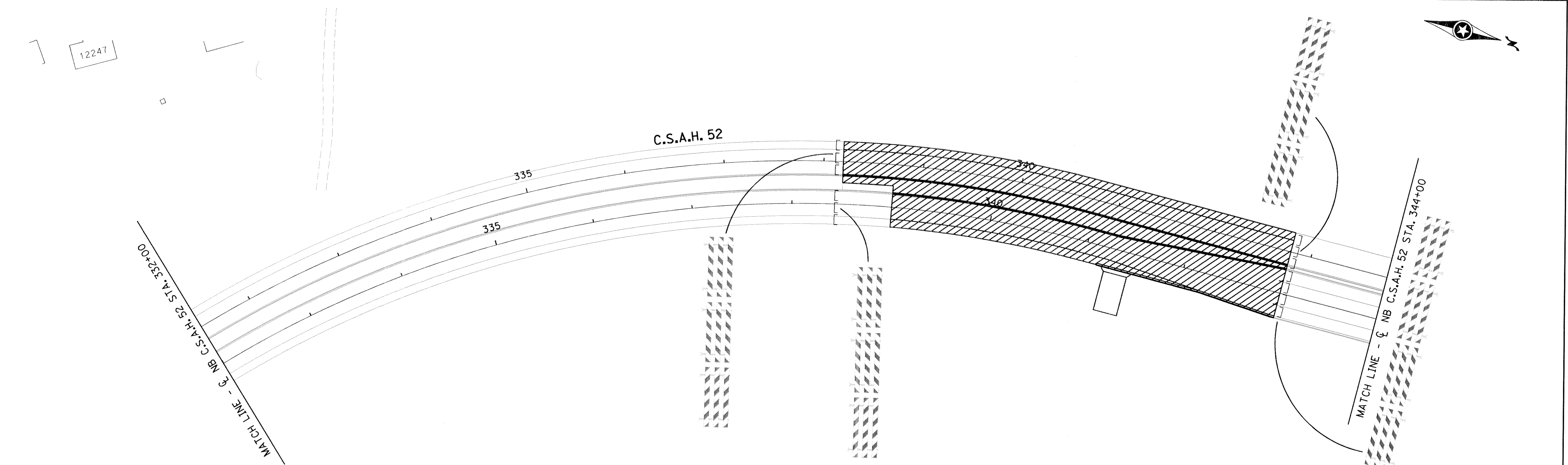
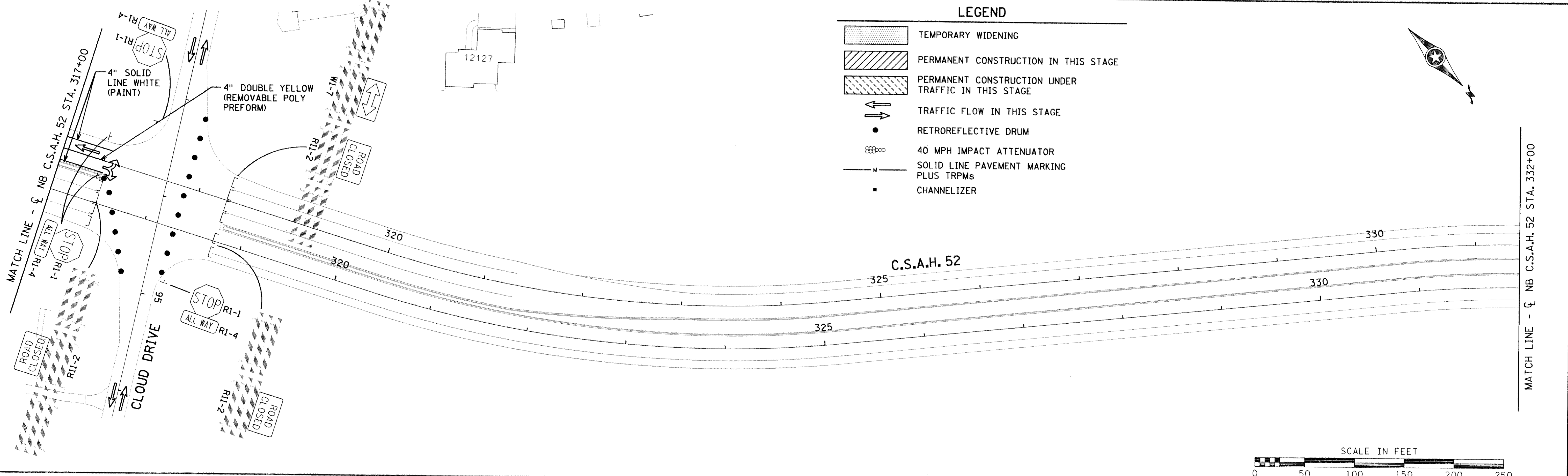
DRAWN BY RRC DATE 11-8-00
 DESIGN BY TJV DATE 11-8-00
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STATE PROJECT NO.
 S.A.P. 02-652-01
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 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 STAGE 3 - PHASE 2 CONSTRUCTION
 C.S.A.H. 52 RECONSTRUCTION
 STA. 288+00 TO STA. 317+00

SHEET
 52
 OF
 253



NO	DATE	BY	CKD	APPR	REVISION
NAME: \$FILE\$					\$DATE\$

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ANOKA COUNTY
 STAGE 3 - PHASE 2 CONSTRUCTION
 C.S.A.H. 52 RECONSTRUCTION
 STA. 317+00 TO STA. 344+00

SHEET
 53
 OF
 253

MATCH LINE - C NB C.S.A.H. 52 STA. 344+00

50' SPACING
(TYPICAL)

345

345

ROAD CLOSED

W1-7

R11-2

ROAD CLOSED

R11-2

MAIN ST.
(C.S.A.H. 14)

50' SPACING
(TYPICAL)

1999

12540

12550

12560

12570

125TH LANE

C.S.A.H. 52

350

355

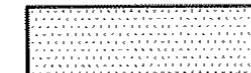
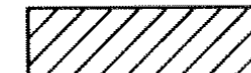

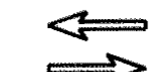

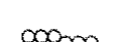


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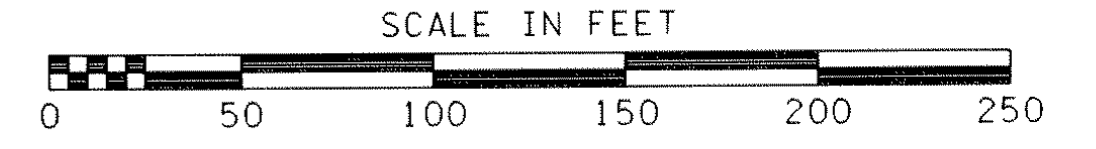
12631

12659



LEGEND

-  TEMPORARY WIDENING
-  PERMANENT CONSTRUCTION IN THIS STAGE
-  PERMANENT CONSTRUCTION UNDER TRAFFIC IN THIS STAGE
-  TRAFFIC FLOW IN THIS STAGE
-  RETROREFLECTIVE DRUM
-  40 MPH IMPACT ATTENUATOR
-  SOLID LINE PAVEMENT MARKING PLUS TRPMs
-  CHANNELIZER



NO	DATE	BY	CKD	APPR	REVISION

NAME: \$FILE\$ \$DATE\$

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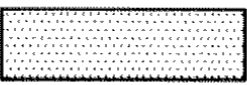
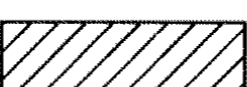

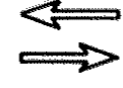

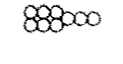
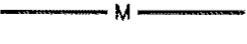

STATE PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

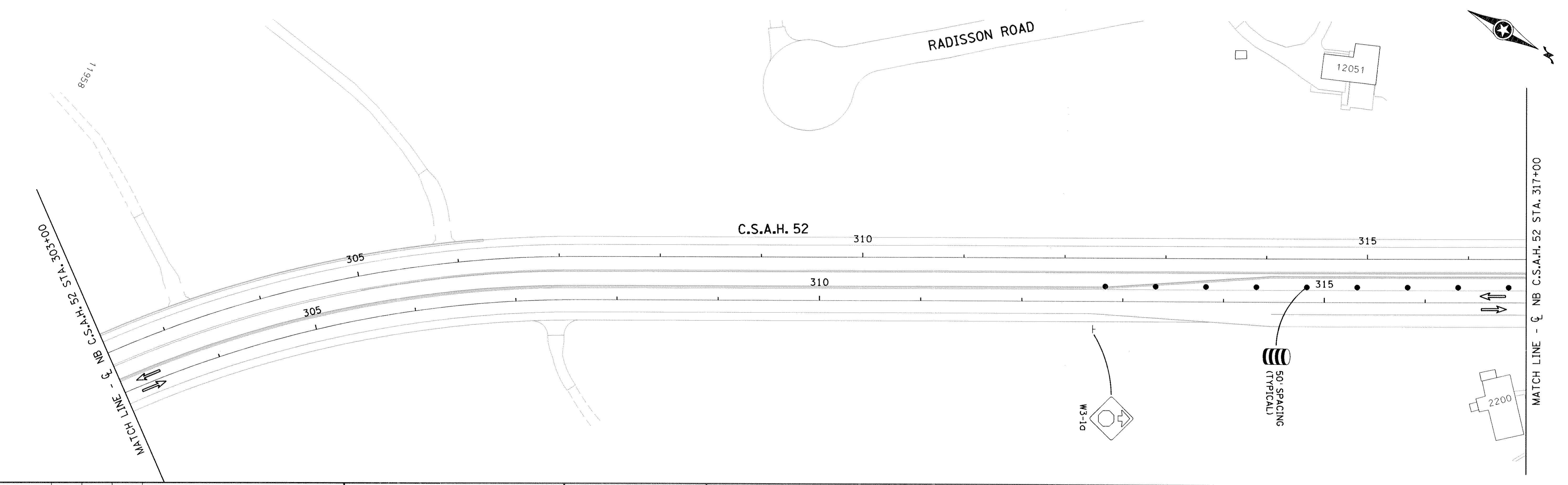
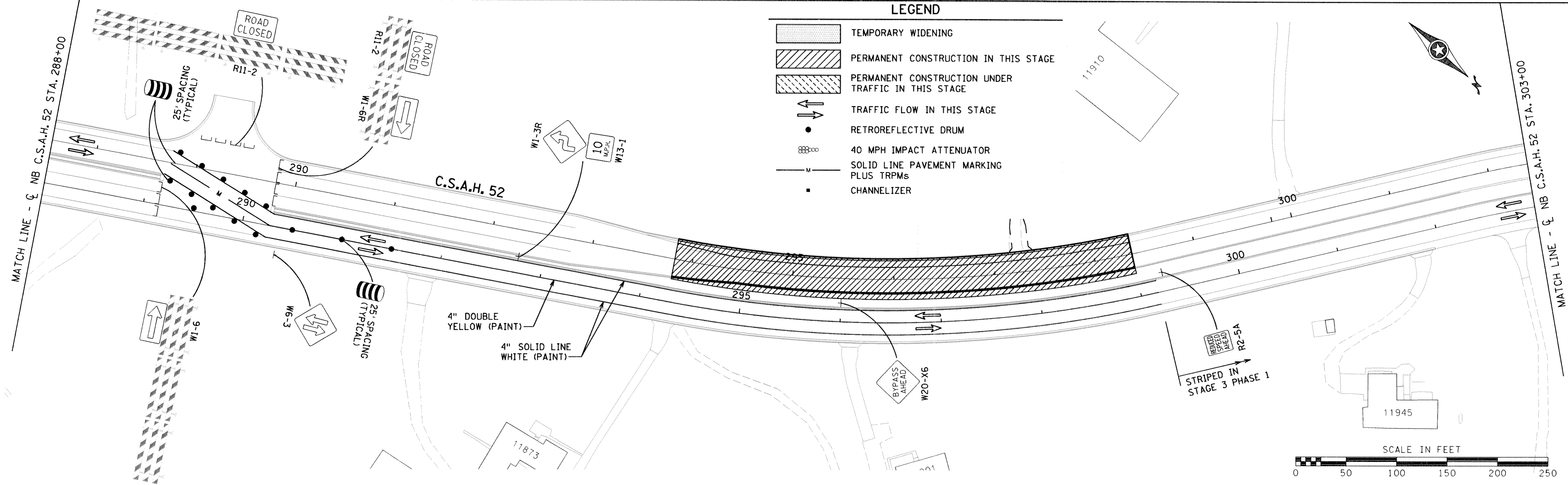
TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 STAGE 3 - PHASE 2 CONSTRUCTION
 C.S.A.H. 52 RECONSTRUCTION
 STA. 344+00 TO STA. 353+00

SHEET
54
OF
253

LEGEND

-  TEMPORARY WIDENING
-  PERMANENT CONSTRUCTION IN THIS STAGE
-  PERMANENT CONSTRUCTION UNDER TRAFFIC IN THIS STAGE
-  TRAFFIC FLOW IN THIS STAGE
-  RETROREFLECTIVE DRUM
-  40 MPH IMPACT ATTENUATOR
-  SOLID LINE PAVEMENT MARKING PLUS TRPMs
-  CHANNELIZER



NO	DATE	BY	CKD	APPR	REVISION
NAME: \$FILE\$					\$DATE\$

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S.A.P. 02-652-01

S.A.P. 106-020-019

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 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY

STAGE 3 - PHASE 3 CONSTRUCTION

C.S.A.H. 52 RECONSTRUCTION

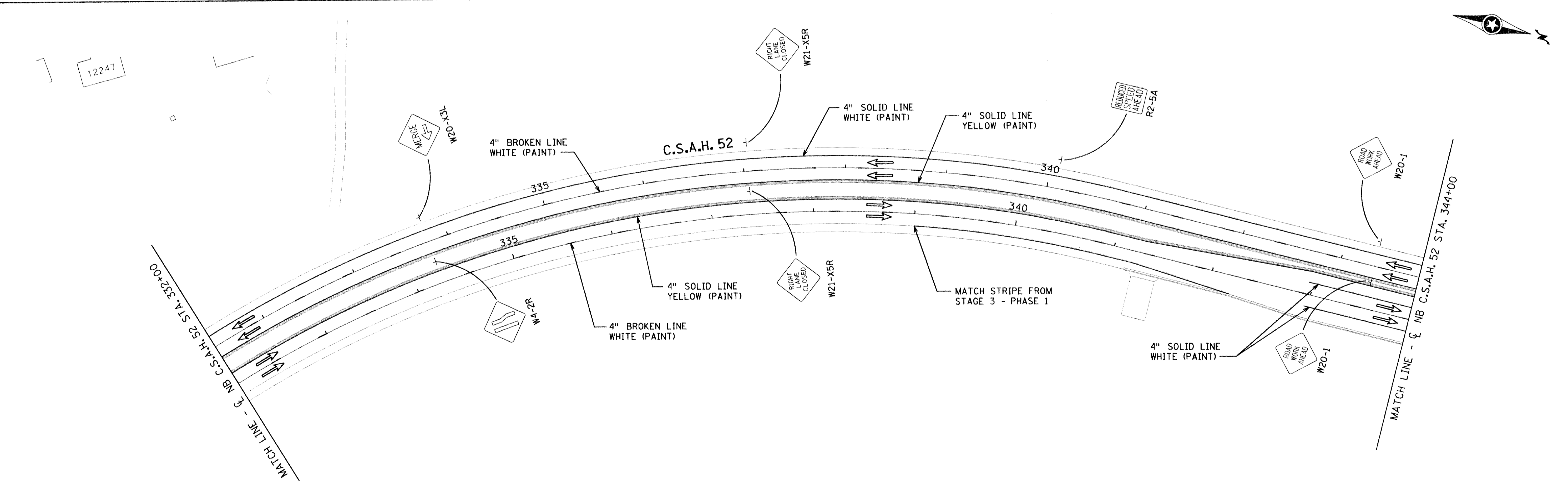
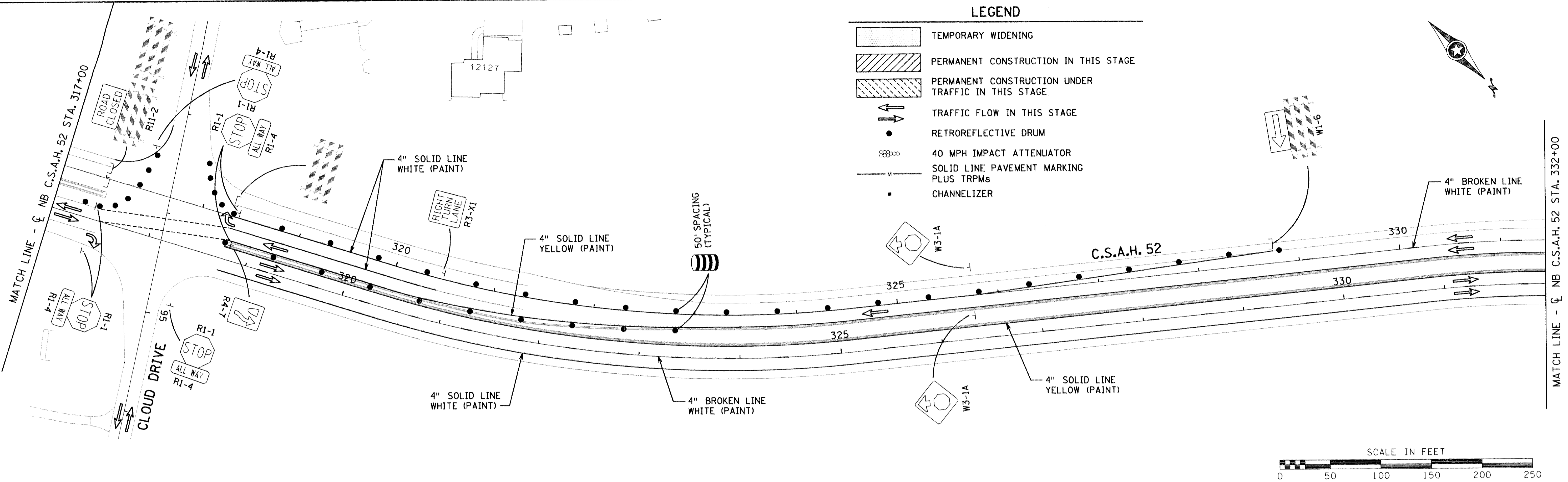
STA. 288+00 TO STA. 317+00

SHEET

55

OF

253



NO	DATE	BY	CKD	APPR	REVISION

NAME: \$FILE\$ \$DATE\$

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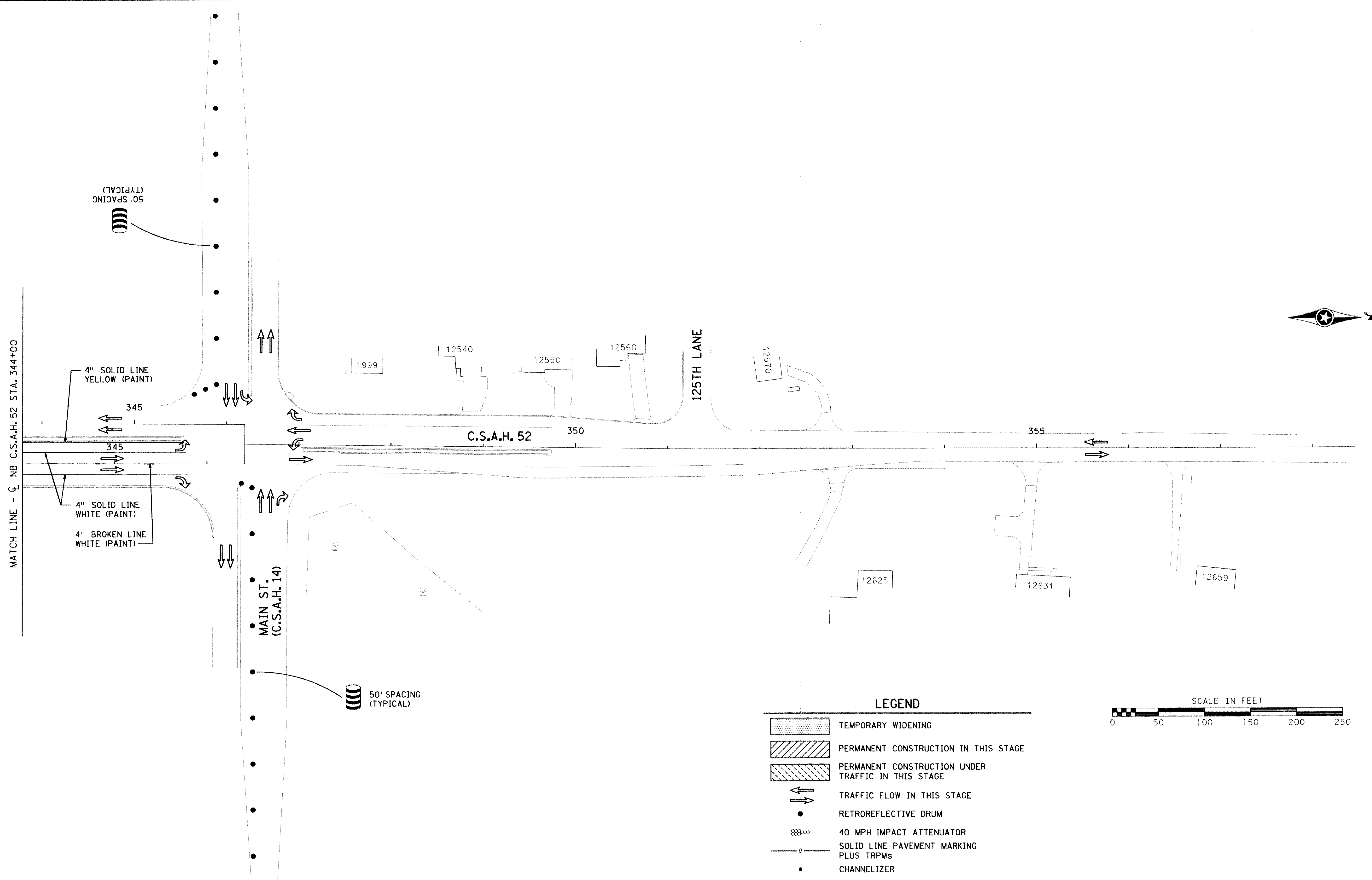
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TKDA
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 SAINT PAUL, MINNESOTA

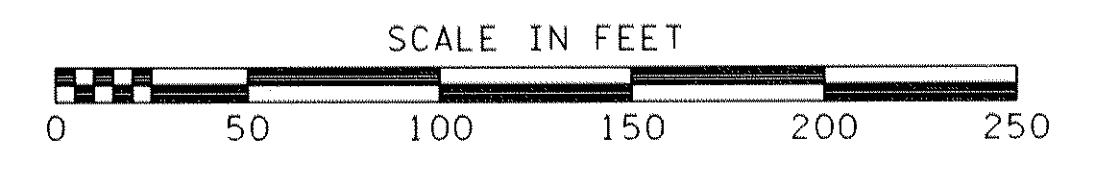
ANOKA COUNTY
 STAGE 3 - PHASE 3 CONSTRUCTION
 C.S.A.H. 52 RECONSTRUCTION
 STA. 317+00 TO STA. 344+00

SHEET
 56
 OF
 253



LEGEND

- TEMPORARY WIDENING
- PERMANENT CONSTRUCTION IN THIS STAGE
- PERMANENT CONSTRUCTION UNDER TRAFFIC IN THIS STAGE
- TRAFFIC FLOW IN THIS STAGE
- RETROREFLECTIVE DRUM
- 40 MPH IMPACT ATTENUATOR
- SOLID LINE PAVEMENT MARKING PLUS TRPMs
- CHANNELIZER



NO	DATE	BY	CKD	APPR	REVISION
NAME: \$FILE\$					DATE: \$DATE\$

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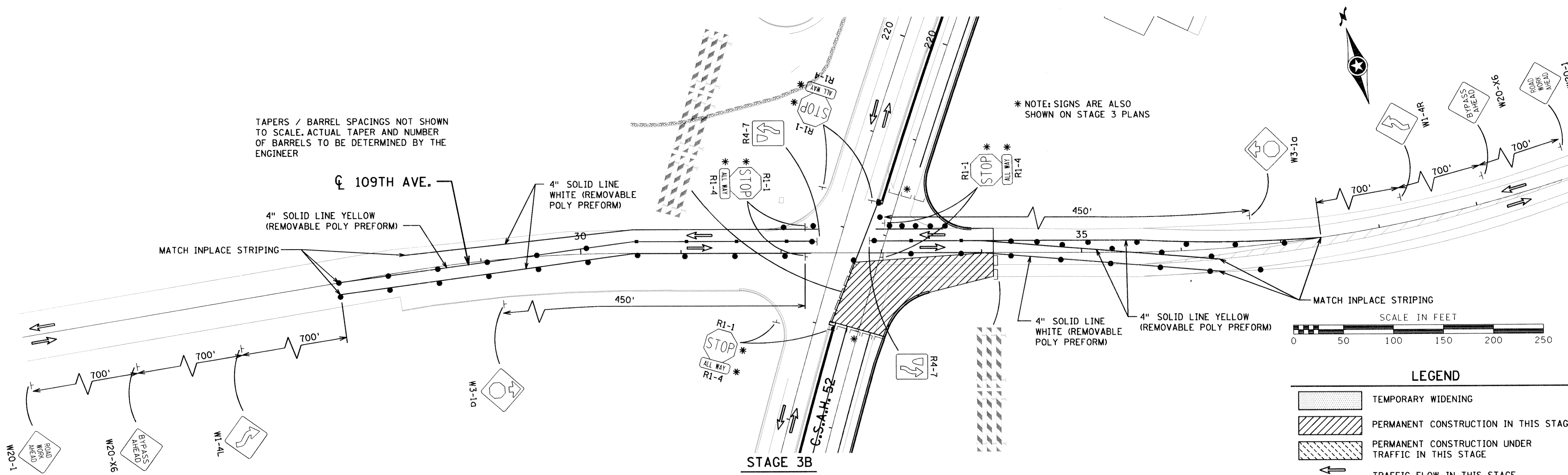
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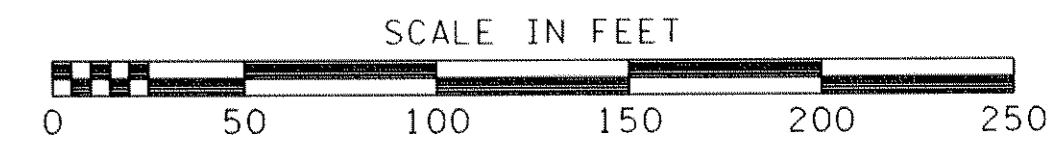
ANOKA COUNTY
 STAGE 3 - PHASE 3 CONSTRUCTION
 C.S.A.H. 52 RECONSTRUCTION
 STA. 344+00 TO STA. 353+00

SHEET
 57
 OF
 253

TAPERS / BARREL SPACINGS NOT SHOWN TO SCALE. ACTUAL TAPER AND NUMBER OF BARRELS TO BE DETERMINED BY THE ENGINEER

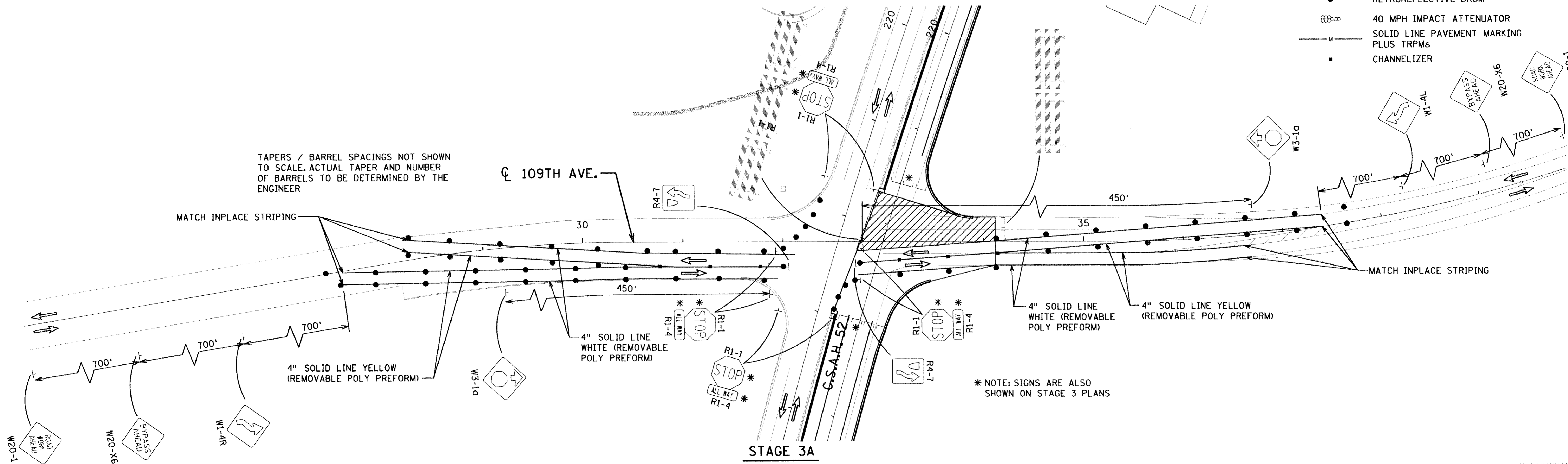


* NOTE: SIGNS ARE ALSO SHOWN ON STAGE 3 PLANS



LEGEND	
	TEMPORARY WIDENING
	PERMANENT CONSTRUCTION IN THIS STAGE
	PERMANENT CONSTRUCTION UNDER TRAFFIC IN THIS STAGE
	TRAFFIC FLOW IN THIS STAGE
	RETROREFLECTIVE DRUM
	40 MPH IMPACT ATTENUATOR
	SOLID LINE PAVEMENT MARKING PLUS TRPMs
	CHANNELIZER

TAPERS / BARREL SPACINGS NOT SHOWN TO SCALE. ACTUAL TAPER AND NUMBER OF BARRELS TO BE DETERMINED BY THE ENGINEER



* NOTE: SIGNS ARE ALSO SHOWN ON STAGE 3 PLANS

NO	DATE	BY	CKD	APPR	REVISION

NAME: \$FILE\$ \$DATE\$

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DRAWN BY TJV DATE 11-8-00
 DESIGN BY JMW DATE 11-8-00
 CHECKED BY GAR DATE 11-8-00

STATE PROJECT NO.
 S.A.P. 02-652-01
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TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS • ARCHITECTS • PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 STAGE 3A AND 3B CONSTRUCTION
 C.S.A.H. 52 RECONSTRUCTION
 109TH AVE.

SHEET
 58
 OF
 253

GENERAL CONSTRUCTION STAGING AND TRAFFIC CONTROL NOTES

1. THE CONSTRUCTION STAGING AND TRAFFIC CONTROL SHOWN FOR THIS PROJECT ARE THE SUGGESTED METHODS OF CONSTRUCTION UNDER TRAFFIC, HOWEVER, THE CONTRACTOR HAS THE OPTION OF PRESENTING ALTERNATIVE CONSTRUCTION STAGING AND TRAFFIC CONTROL PLANS TO THE ENGINEER FOR APPROVAL.
2. ACCESS TO ALL ADJACENT PROPERTIES SHALL BE MAINTAINED TO THE SATISFACTION OF THE ENGINEER THROUGHOUT THE CONSTRUCTION.
3. ALL TRAFFIC CONTROL DEVICES AND SIGNING SHALL CONFORM TO THE MMUTCD, INCLUDING 'FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS' DATED JANUARY, 2001, AND THE MINNESOTA STANDARD SIGNS MANUAL.
4. STOP SIGNS SHALL BE RELOCATED TO MAINTAIN TRAFFIC CONTROL AS DIRECTED BY THE ENGINEER.
5. ALL TRAFFIC LANES SHALL BE A MINIMUM OF 12' IN WIDTH UNLESS NOTED OTHERWISE.
6. PORTABLE CONCRETE BARRIER PLACEMENT AND END TREATMENTS SHALL CONFORM TO FIGURES VI-12a AND VI-12b OF THE MMUTCD.
7. REMOVE CONFLICTING PAVEMENT MARKINGS AS DIRECTED BY THE ENGINEER.
8. ALL ROADWAYS SHALL BE PROPERLY STRIPED BEFORE OPENED TO TRAFFIC.
9. DRAINAGE SHALL BE MAINTAINED DURING CONSTRUCTION STAGES AS DIRECTED THE ENGINEER. TEMPORARY BLOCKING OF STRUCTURES AND PIPE WILL BE CONSIDERED INCIDENTAL WORK.
10. TURF ESTABLISHMENT AND EROSION CONTROL MEASURES WILL BE PERFORMED IN ACCORDANCE WITH THE PROVISIONS OF THE SPECIFICATIONS 2573 AND 2575.
11. SIGNAL WORK WILL BE PERFORMED AS DIRECTED BY THE ENGINEER.
12. ALL SIGN POSTS USED TO POST DETOUR ROUTES SHALL BE REMOVED AND THE SURROUNDING GROUND RETURNED TO ITS ORIGINAL CONDITION WHEN DETOUR IS TAKEN OFF THAT STREET.
13. ALL SIGNS AND BARRICADES PROVIDED BY THE CONTRACTOR FOR TRAFFIC CONTROL DURING CONSTRUCTION SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE JOB SITE WHEN THEY ARE NO LONGER NEEDED.
14. FOR LONGITUDINAL DROP-OFFS TREATMENT, SEE PAGES 6K-102 AND 6K-103 OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIELD MANUAL, DATED JANUARY 1998.
15. ALL TRAFFIC CONTROL DEVICES SHALL HAVE RETRO-REFLECTIVE SHEETING.
16. BARRICADES SHALL BE TYPE III AND SHALL BE CONSTRUCTED OF LIGHT MATERIAL (SEE STANDARD PLATE 8000I FOR RECOMMENDED SUPPORT).
17. THE ACTUAL NUMBER OF BARRICADES AT EACH LOCATION REQUIRED MAY VARY DEPENDING UPON THE SIZE OF BARRICADES USED, THE WIDTH OF THE ROAD CLOSURE AND THE MOVEMENT OF LOCAL AND CONSTRUCTION TRAFFIC.
18. THESE TRAFFIC CONTROL LAYOUTS DO NOT SHOW ALL INPLACE SIGNING. CONTRACTOR SHALL RELOCATE ALL APPROPRIATE INPLACE SIGNING TO MAINTAIN PROPER SIGN VISIBILITY DURING CONSTRUCTION AS DEEMED NECESSARY BY THE ENGINEER.
19. CENTERLINE CULVERTS SHALL BE CONSTRUCTED UNDER LOCAL TRAFFIC. TRAFFIC CONTROL SHALL BE PROVIDED PER TYPICAL ROAD CLOSURE DETAIL AND INCLUDED IN THE LUMP SUM COST OF 2563.601 TRAFFIC CONTROL STAGE 1.
20. TRAFFIC CONTROL SHALL BE PAID FOR AS A LUMP SUM PER STAGE ITEM. QUANTITIES SHOWN IN THE TEMPORARY TRAFFIC CONTROL DEVICES TABULATION ARE FOR INFORMATIONAL PURPOSES ONLY AND ARE NOT TO BE USED FOR PAY QUANTITIES. QUANTITIES SHOWN IN THIS TABULATION REFLECT THE MAXIMUM QUANTITY REQUIRED DURING ANY CONSTRUCTION STAGE.
21. THE LOCATIONS AND QUANTITIES OF TRAFFIC CONTROL DEVICES SHOWN ON THESE PLANS ARE APPROXIMATE AND ARE SUBJECT TO REVISION BY THE ENGINEER.
22. THE CONTRACTOR SHALL PROVIDE CHANNELIZING DEVICES (AND SIGNING IF NECESSARY) AT ALL PRIVATE ENTRANCE LOCATIONS WHERE NEEDED TO SAFELY GUIDE TRAFFIC TO AND FROM THE TRAVEL CORRIDOR TO THE SATISFACTION OF THE ENGINEER.
23. THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, AS APPROPRIATE, ALL SIGNS, PAVEMENT MARKINGS AND DEVICES SHOWN ON THESE PLANS TO THE SATISFACTION OF THE ENGINEER. THE CONTRACTOR SHALL INSTALL SALVAGED AND NEW PERMANENT SIGNING NECESSARY TO MAINTAIN TRAFFIC CONTROL AT TIMES AND LOCATION SPECIFIED BY THE ENGINEER.
24. QUANTITIES LISTED IN STAGE 3-1 OF THE TEMPORARY PAVEMENT MARKING TABULATION INCLUDE TEMPORARY PAVEMENT MARKINGS SHOWN ON TRAFFIC CONTROL PLAN SHEETS LABELED "STAGE 3 CONSTRUCTION" AND "STAGE 3A AND 3B CONSTRUCTION".

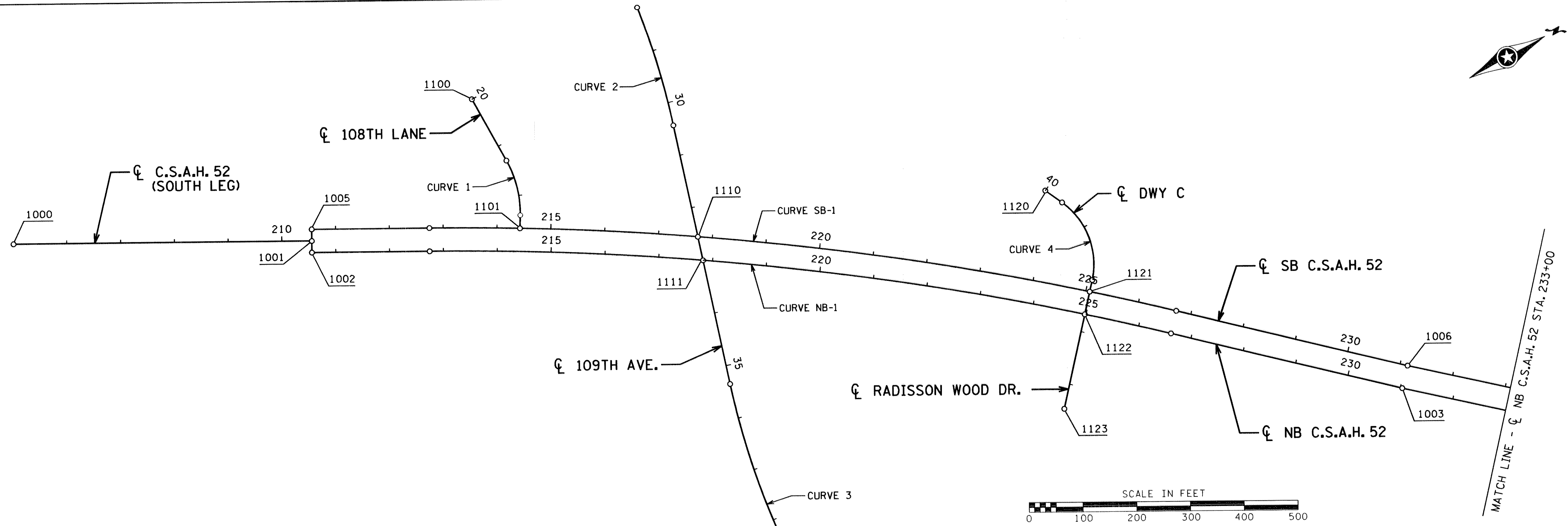
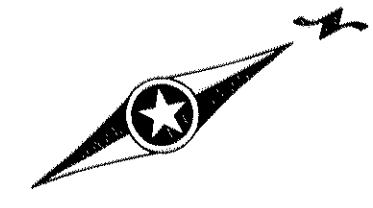
U TEMPORARY TRAFFIC CONTROL DEVICES (FOR INFORMATION ONLY)				
ITEM	SIGN NO. OR TYPE OF DEVICE	SIZE	COLOR	QUANTITY
	G20-2A	48" x 24"	BLACK ON ORANGE	2
	R1-1	36" x 36"	WHITE ON RED	38
	R1-4	18" x 6"	WHITE ON RED	29
	R2-1	24" x 30"	BLACK ON WHITE	7
	R2-5a	36" x 48"	BLACK ON WHITE	4
	R2-6	24" x 30"	BLACK ON WHITE	1
	R3-X1	30" x 30"	BLACK ON WHITE	1
	R4-7	24" x 30"	BLACK ON WHITE	5
	R11-2	48" x 30"	BLACK ON WHITE	26
	R11-3	60" x 30"	BLACK ON WHITE	1
	W1-2L	48" x 48"	BLACK ON ORANGE	1
	W1-2R	48" x 48"	BLACK ON ORANGE	1
	W1-3R	48" x 48"	BLACK ON ORANGE	2

U TEMPORARY TRAFFIC CONTROL DEVICES (FOR INFORMATION ONLY)				
ITEM	SIGN NO. OR TYPE OF DEVICE	SIZE	COLOR	QUANTITY
	W1-4L	48" x 48"	BLACK ON ORANGE	4
	W1-4R	48" x 48"	BLACK ON ORANGE	3
	W1-6	48" x 24"	BLACK ON ORANGE	6
	W1-7	48" x 24"	BLACK ON ORANGE	7
	W3-1a	48" x 48"	BLACK & RED ON YELLOW	8
	W4-2R	36" x 36"	BLACK ON ORANGE	1
	W6-3	30" x 30"	BLACK ON ORANGE	5
	W13-1	24" x 24"	BLACK ON ORANGE	2
	W14-1	30" x 30"	BLACK ON YELLOW	1
	W20-1	48" x 48"	BLACK ON ORANGE	14
	W20-100P	24" x 18"	BLACK ON ORANGE	1
	W20-3	48" x 48"	BLACK ON ORANGE	1
	W20-X3	48" x 48"	BLACK ON ORANGE	2

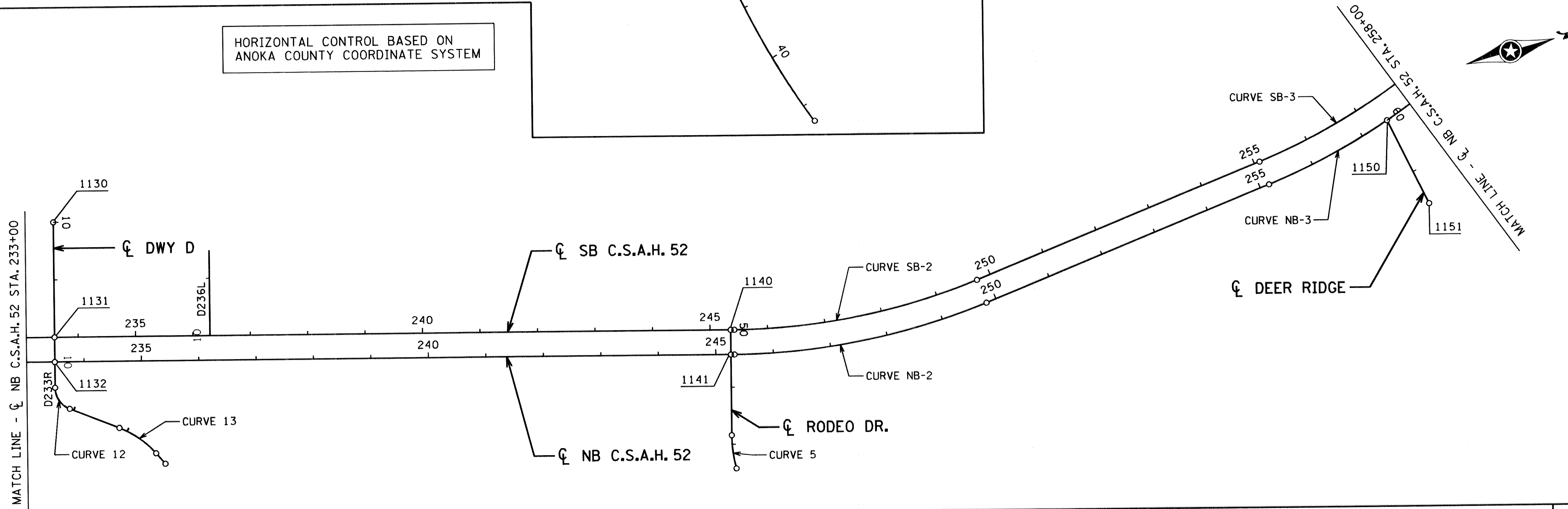
U TEMPORARY TRAFFIC CONTROL DEVICES (FOR INFORMATION ONLY)				
ITEM	SIGN NO. OR TYPE OF DEVICE	SIZE	COLOR	QUANTITY
	W20-X6	48" x 48"	BLACK ON ORANGE	8
	W21-X5R	48" x 48"	BLACK ON ORANGE	1
	W20-X1R	48" x 48"	BLACK ON ORANGE	3
	W20-X1L	48" x 48"	BLACK ON ORANGE	2
	TYPE III BARRICADE	8' (MIN.)	ORANGE ON WHITE	103
	RETRO REFLECTIVE DRUM			371
	TUBULAR MARKER	36"		46
	TRPM	WHITE REFLECTOR		126
	TRPM	YELLOW REFLECTOR		562
	PRECAST CONCRETE J-BARRIER	STANDARD PLATE NO. 8323H		2280 L.F.
	IMPACT ATTENUATOR ASSEMBLY			6

T TEMPORARY PAVEMENT MARKING TABULATION						
ITEM	STAGE 1 L.F.	STAGE 2 L.F.	STAGE 3-1 L.F.	STAGE 3-2 L.F.	STAGE 3-3 L.F.	TOTAL L.F.
4" DOUBLE SOLID YELLOW PAINT STRIPE		9957	14798			24755
4" SOLID WHITE PAINT STRIPE		19811	25034	4649	4491	53985
4" SOLID YELLOW PAINT STRIPE					5250	5250
4" BROKEN WHITE PAINT STRIPE					4087	4087
TEMP. LANE MARKING 4" SOLID WHITE	1635	3790	4699			10124
TEMP. LANE MARKING 4" SOLID YELLOW		3052	2559			5611
TEMP. LANE MARKING 4" DOUBLE YELLOW		481	1465	2323		8538
		481	1465	2323		

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. DATE _____ REG. NO. _____					DRAWN BY <u>TJV</u> DATE <u>11-8-00</u> DESIGN BY <u>TJV</u> DATE <u>11-8-00</u> CHECKED BY <u>GAR</u> DATE <u>11-8-00</u>		STATE PROJECT NO. _____ S.A.P. 02-652-01 S.A.P. 106-020-019		TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA		ANOKA COUNTY TRAFFIC CONTROL TABULATION C.S.A.H. 52 RECONSTRUCTION		SHEET 59 OF 253
NO	DATE	BY	CKD	APPR	REVISION		NAME: #FILE#		#DATE#				



HORIZONTAL CONTROL BASED ON ANOKA COUNTY COORDINATE SYSTEM



NO	DATE	BY	CKD	APPR	REVISION

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE _____ REG. NO. _____

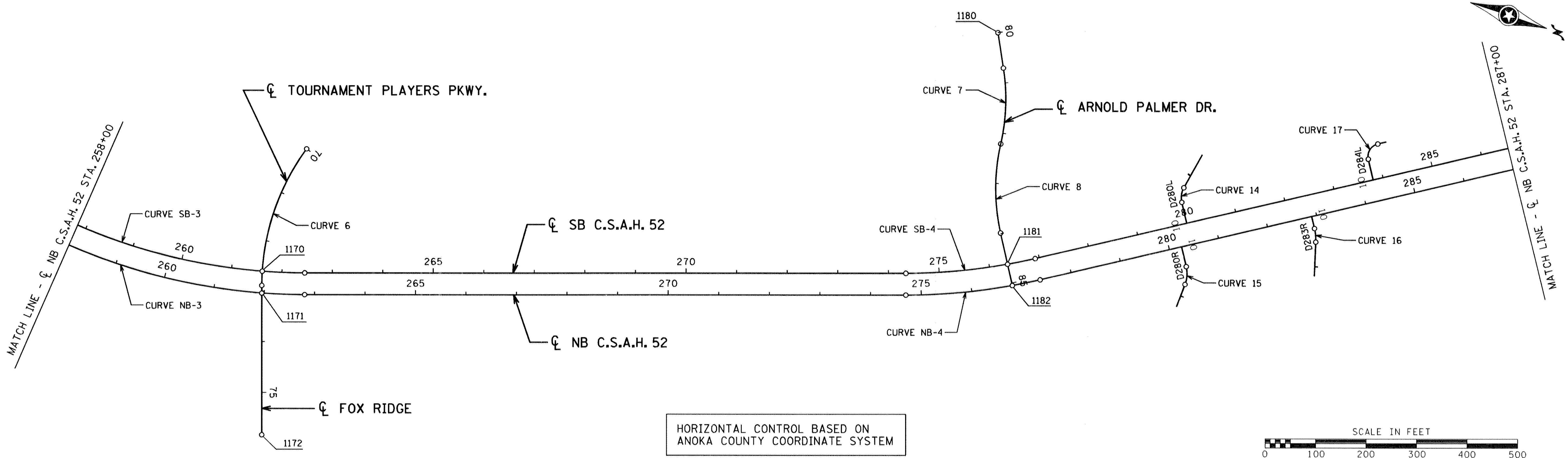
DRAWN BY TJV DATE 11-8-00
 DESIGN BY JMW DATE 11-8-00
 CHECKED BY GAR DATE 11-8-00

STATE PROJECT NO. _____
 S.A.P. 02-652-01
 S.A.P. 106-020-019

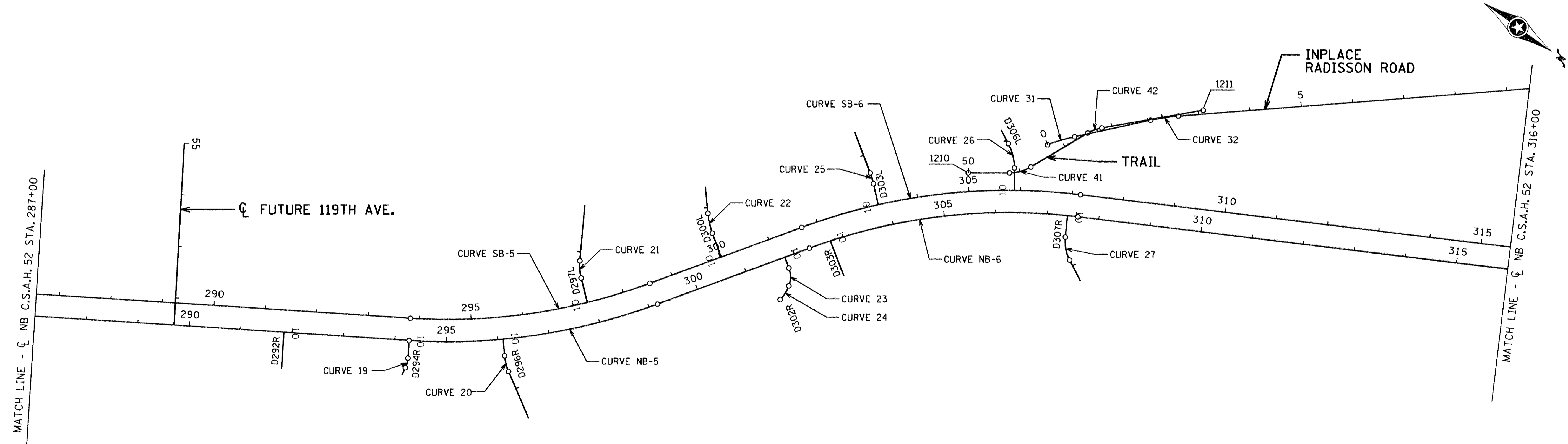
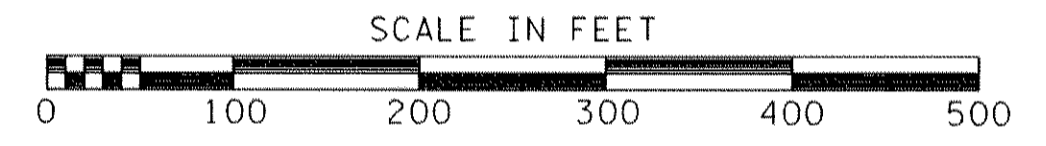
TKDA
 TOLTZ, KING, DUVAL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 ALIGNMENT PLAN
 C.S.A.H. 52 RECONSTRUCTION
 STA. 205+00 TO 258+00

SHEET 60 OF 253



HORIZONTAL CONTROL BASED ON ANOKA COUNTY COORDINATE SYSTEM



NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\c11749\par\1\roadway1\drawings\allgn02.dgn 25 APR 2001

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE _____ REG. NO. _____

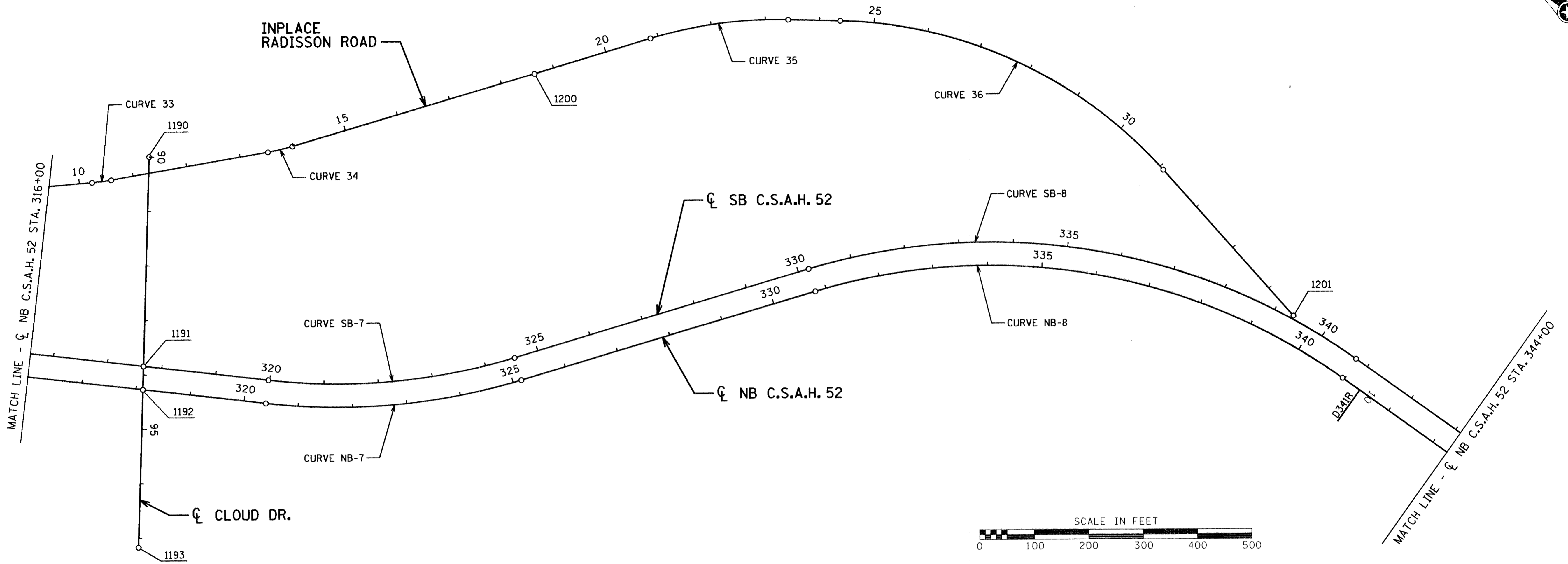
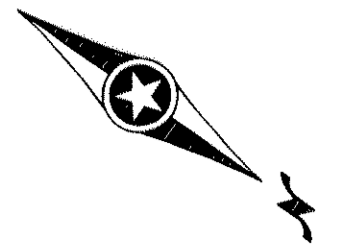
DRAWN BY TJV DATE 11-8-00
 DESIGN BY JMW DATE 11-8-00
 CHECKED BY GAR DATE 11-8-00

STATE PROJECT NO. _____
 S.A.P. 02-652-01
 S.A.P. 106-020-019

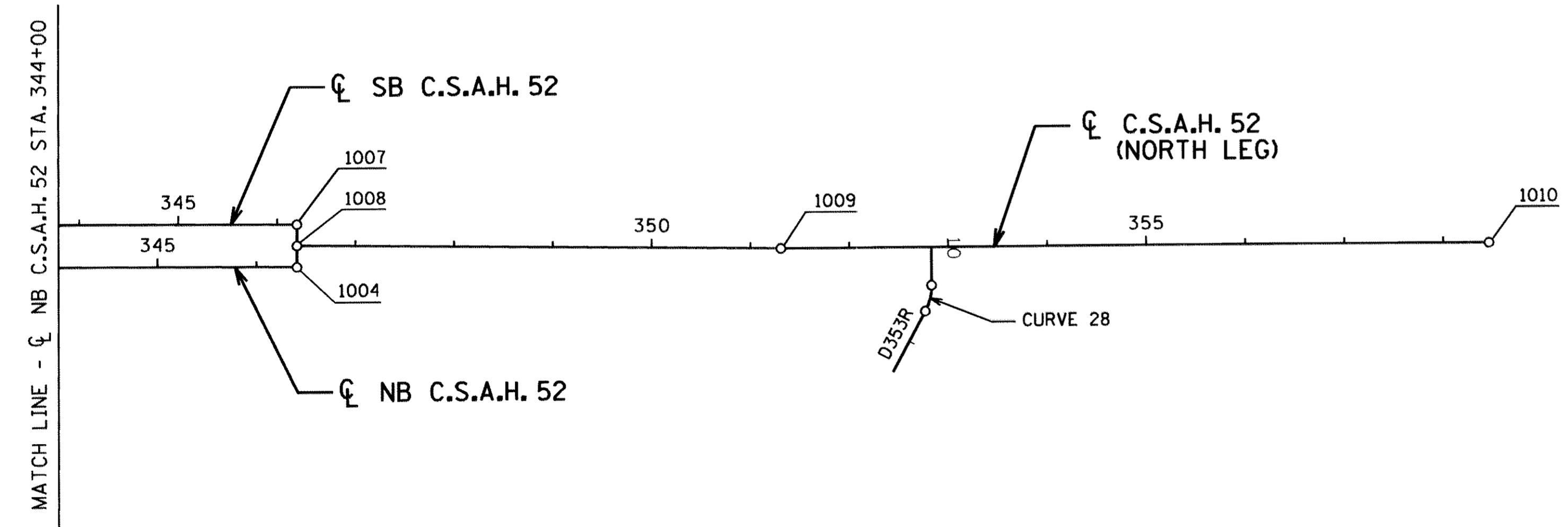
TKDA
 TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 ALIGNMENT PLAN
 C.S.A.H. 52 RECONSTRUCTION
 STA. 258+00 TO 316+00

SHEET 61 OF 253



HORIZONTAL CONTROL BASED ON ANOKA COUNTY COORDINATE SYSTEM



NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\c11749\par\1\roadway\1\drawings\align03.dgn 25 APR 2001

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE _____ REG. NO. _____

DRAWN BY TJV DATE 11-8-00
 DESIGN BY JMW DATE 11-8-00
 CHECKED BY GAR DATE 11-8-00

STATE PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

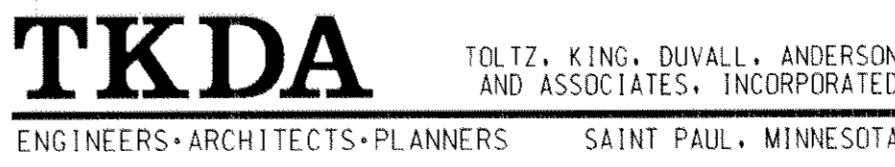
TKDA
 TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 ALIGNMENT PLAN
 C.S.A.H. 52 RECONSTRUCTION
 STA. 316+00 TO 359+00

SHEET
 62
 OF
 253

ALIGNMENT TABULATION										
CURVE NO.	POINT	STATION	CURVE DATA					COORDINATES		AZIMUTH
			DELTA	DEGREE	RADIUS	TANGENT	LENGTH	X	Y	
☪ C.S.A.H 52 (SOUTH LEG)										
1000	POT	205+01.32						513,501.975	147,215.213	28° 20' 52.03"
1001	POT	210+55.69						513,765.201	147,703.102	28° 20' 52.03"
☪ NB C.S.A.H 52										
1002	POT	210+55.69 = ☪ C.S.A.H. 52 (SOUTH LEG) STA. 210+55.69 (21.5' RT.)						513,784.124	147,692.893	28° 20' 52.24"
NB-1	PC	212+74.71						513,888.118	147,885.645	28° 20' 52.24"
	PI	219+71.60	13° 52' 07.46" RT	0° 59' 59.73"	5,730.000'	696.894'	1,386.976'	514,219.019	148,498.968	PI
	CC							518,930.983	145,164.907	
	PT	226+61.68						514,687.286	149,015.095	42° 12' 59.70"
1003	PI	231+03.88	1° 02' 29.81" LT					514,984.411	149,342.587	PI
NB-2	PC	245+32.60						515,925.029	150,417.994	41° 10' 29.89"
	PI	247+60.26	22° 08' 04.36" LT	4° 55' 21.64"	1,163.915'	227.661'	449.644'	516,074.912	150,589.355	PI
	CC							515,048.947	151,184.270	
	PT	249+82.25						516,149.183	150,804.560	19° 02' 25.53"
NB-3	PC	255+16.65						516,323.525	151,309.726	19° 02' 25.53"
	PI	259+12.88	37° 36' 00.80" LT	4° 55' 21.64"	1,163.915'	396.232'	763.817'	516,452.789	151,684.280	PI
	CC							515,223.289	151,689.436	
	PT	262+80.47						516,326.671	152,059.904	341° 26' 24.72"
NB-4	PC	274+69.70						515,948.144	153,187.290	341° 26' 24.72"
	PI	276+04.00	13° 09' 49.01" LT	4° 55' 21.64"	1,163.915'	134.295'	267.408'	515,905.399	153,314.600	PI
	CC							514,844.762	152,816.822	
	PT	277+37.11						515,834.784	153,428.831	328° 16' 35.71"
NB-5	PC	294+27.49						514,945.948	154,866.665	328° 16' 35.71"
	PI	296+76.24	23° 58' 02.40" LT	4° 53' 20.66"	1,171.915'	248.749'	490.223'	514,815.151	155,078.250	PI
	CC							513,949.121	154,250.450	
	PT	299+17.72						514,609.682	155,218.460	304° 18' 33.31"
NB-6	PC	302+31.40						514,350.581	155,395.268	304° 18' 33.31"
	PI	305+00.38	27° 04' 53.59" RT	5° 07' 47.37"	1,116.915'	268.988'	527.924'	514,128.395	155,546.886	PI
	CC							514,980.141	156,317.848	
	PT	307+59.32						513,999.595	155,783.032	331° 23' 26.90"
NB-7	PC	320+40.37						513,386.186	156,907.674	331° 23' 26.90"
	PI	322+81.36	23° 10' 58.28" LT	4° 52' 35.72"	1,174.915'	240.992'	475.391'	513,270.791	157,119.242	PI
	CC							512,354.721	156,345.086	
	PT	325+15.76						513,081.426	157,268.300	308° 12' 28.62"
NB-8	PC	330+79.87						512,638.168	157,617.209	308° 12' 28.62"
	PI	336+26.16	52° 07' 37.31" RT	5° 07' 47.37"	1,116.915'	546.289'	1,016.156'	512,208.910	157,955.099	PI
	CC							513,329.000	158,494.849	
	PT	340+96.02						512,212.104	158,501.379	0° 20' 05.94"
1004	POT	346+40.98 = ☪ C.S.A.H. 52 (NORTH LEG) STA. 346+40.98 (21.5' RT.)						512,215.290	159,046.326	0° 20' 05.94"

ALIGNMENT TABULATION											
CURVE NO.	POINT	STATION	CURVE DATA					COORDINATES		AZIMUTH	
			DELTA	DEGREE	RADIUS	TANGENT	LENGTH	X	Y		
☪ SB C.S.A.H 52											
1005	POT	210+55.69 = ☪ C.S.A.H. 52 (SOUTH LEG) STA. 210+55.69 (21.5' LT.)							513,746.280	147,713.310	28° 20' 52.24"
SB-1	PC	212+74.71							513,850.274	147,906.062	28° 20' 52.24"
	PI	219+76.83	13° 52' 07.46" RT	0° 59' 32.92"	5,773.000'	702.124'	1,397.384'	514,183.659	148,523.988	PI	
	CC							518,930.983	145,164.907		
	PT	226+72.09						514,655.440	149,043.988	42° 12' 59.70"	
1006	PI	231+13.89	1° 02' 29.81" LT					514,952.302	149,371.191	PI	
SB-2	PC	245+42.23						515,892.663	150,446.304	41° 10' 29.89"	
	PI	247+61.48	22° 08' 04.36" LT	5° 06' 41.47"	1,120.915'	219.250'	433.033'	516,037.009	150,611.334	PI	
	CC							515,048.947	151,184.270		
	PT	249+75.26						516,108.536	150,818.588	19° 02' 25.53"	
SB-3	PC	255+09.67						516,282.877	151,323.755	19° 02' 25.53"	
	PI	258+91.26	37° 36' 00.80" LT	5° 06' 41.47"	1,120.915'	381.593'	735.598'	516,407.366	151,684.470	PI	
	CC							515,223.289	151,689.436		
	PT	262+45.26						516,285.907	152,046.217	341° 26' 24.72"	
SB-4	PC	274+34.50						515,907.381	153,173.603	341° 26' 24.72"	
	PI	275+63.83	13° 09' 49.01" LT	5° 06' 41.47"	1,120.915'	129.334'	257.528'	515,866.214	153,296.210	PI	
	CC							514,844.762	152,816.822		
	PT	276+92.03						515,798.208	153,406.221	328° 16' 35.71"	
SB-5	PC	293+82.41						514,909.372	154,844.055	328° 16' 35.71"	
	PI	296+22.03	23° 58' 02.40" LT	5° 04' 31.07"	1,128.915'	239.622'	472.235'	514,783.374	155,047.876	PI	
	CC							513,949.121	154,250.450		
	PT	298+54.65						514,585.445	155,182.942	304° 18' 33.31"	
SB-6	PC	301+68.33						514,326.344	155,359.749	304° 18' 33.31"	
	PI	304+47.67	27° 04' 53.59" RT	4° 56' 22.75"	1,159.915'	279.344'	548.248'	514,095.604	155,517.204	PI	
	CC							514,980.141	156,317.848		
	PT	307+16.57						513,961.845	155,762.442	331° 23' 26.90"	
SB-7	PC	319+97.62						513,348.436	156,887.084	331° 23' 26.90"	
	PI	322+29.80	23° 10' 58.28" LT	5° 03' 42.64"	1,131.915'	232.172'	457.992'	513,237.264	157,090.909	PI	
	CC							512,354.721	156,345.086		
	PT	324+55.62						513,054.830	157,234.512	308° 12' 28.62"	
SB-8	PC	330+19.72						512,611.572	157,583.421	308° 12' 28.62"	
	PI	335+87.04	52° 07' 37.31" RT	4° 56' 22.75"	1,159.915'	567.321'	1,055.277'	512,165.788	157,934.319	PI	
	CC							513,329.000	158,494.849		
	PT	340+75.00						512,169.105	158,501.630	0° 20' 05.94"	
1007	POT	346+19.95 = ☪ C.S.A.H. 52 (NORTH LEG) STA. 346+40.98 (21.5' LT.)						512,172.291	159,046.577	0° 20' 05.94"	
☪ C.S.A.H 52 (NORTH LEG)											
1008	POT	346+40.98						512,193.790	159,046.451	0° 44' 17.84"	
1009	PI	351+30.84	0° 49' 32.36" LT					512,200.102	159,536.274	PI	
1010	POT	358+46.33						512,199.011	160,251.763	359° 54' 45.48"	

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.					DRAWN BY <u>TJV</u> DATE <u>11-8-00</u>	STATE PROJECT NO.	 TOLTZ, KING, DUWALL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA	ANOKA COUNTY ALIGNMENT TABULATIONS C.S.A.H. 52 RECONSTRUCTION	SHEET 63 OF 253	
DESIGN BY <u>JMW</u> DATE <u>11-8-00</u>					S.A.P. 02-652-01 S.A.P. 106-020-019					
CHECKED BY <u>GAR</u> DATE <u>11-8-00</u>										
NO	DATE	BY	CKD	APPR	REVISION	DATE	REG. NO.			
NAME: k:\site\proj\c11749\part1\roadway\drawings\align04.dgn					25 APR 2001					

ALIGNMENT TABULATION										
CURVE NO.	POINT	STATION	CURVE DATA					COORDINATES		AZIMUTH
			DELTA	DEGREE	RADIUS	TANGENT	LENGTH	X	Y	
☪ 108TH LANE										
1100	POT	20+00.00						513,679.250	148,091.038	89° 38' 42.09"
1	PC	21+30.53						513,809.776	148,091.847	89° 38' 42.09"
	PI	21+84.81	30° 22' 14.32" RT	28° 38' 52.40"	200.000'	54.284'	106.014'	513,864.059	148,092.183	PI
	CC							513,811.015	147,891.851	
	PT	22+36.54						513,911.063	148,065.028	120° 01' 01.07"
1101	POT	22+60.98 = ☪ SB C.S.A.H. 52 STA. 214+42.78						513,932.223	148,052.803	120° 01' 01.07"
☪ 109TH AVENUE										
2	PC	28+14.00						513,678.650	148,441.715	97° 06' 12.31"
	PI	29+28.83	9° 32' 51.65" RT	4° 10' 01.08"	1,375.000'	114.830'	229.128'	513,792.598	148,427.515	PI
	CC							513,508.616	147,077.269	
	PT	30+43.13						513,902.613	148,394.611	106° 39' 03.89"
1110	POT	32+54.93 = ☪ SB C.S.A.H. 52 STA. 217+73.08						514,105.538	148,333.919	106° 39' 03.89"
1111	POT	32+99.83 = ☪ NB C.S.A.H. 52 STA. 217+82.23						514,148.553	148,321.054	106° 39' 03.89"
3	PC	35+34.93						514,373.791	148,253.689	106° 39' 03.89"
	PI	38+37.72	23° 52' 18.00" LT	3° 59' 59.94"	1,432.400'	302.790'	596.794'	514,663.884	148,166.927	PI
	CC							514,784.235	149,626.025	
	PT	41+31.72						514,964.273	148,204.985	82° 46' 45.90"
☪ DWY C / RADISSON WOOD DRIVE										
1120	POT	40+00.00						514,342.227	148,939.156	64° 17' 49.88"
4	PC	40+38.32						514,376.755	148,955.775	64° 17' 49.88"
	PI	41+30.91	66° 57' 28.94" RT	40° 55' 32.00"	140.000'	92.590'	163.609'	514,460.184	148,995.932	PI
	CC							514,437.473	148,829.627	
	PT	42+01.93						514,529.791	148,934.877	131° 15' 18.82"
1121	POT	42+24.02 = ☪ SB C.S.A.H. 52 STA. 225+07.20						514,546.402	148,920.307	131° 15' 18.82"
1122	POT	42+67.03 = ☪ NB C.S.A.H. 52 STA. 224+97.52						514,578.734	148,891.948	131° 15' 18.82"
1123	POT	44+46.57						514,713.704	148,773.560	131° 15' 18.82"
☪ DWY D										
1130	POT	10+00.00						514,962.969	149,687.170	131° 10' 30.13"
1131	POT	12+00.00 = ☪ SB C.S.A.H. 52 STA. 233+58.75						515,113.509	149,555.498	131° 10' 30.13"
1132	POT	12+43.00 = ☪ NB C.S.A.H. 52 STA. 233+49.13						515,145.875	149,527.189	131° 10' 30.13"
☪ RODEO DRIVE										
1140	POT	50+00.00 = ☪ SB C.S.A.H. 52 STA. 245+35.91						515,888.505	150,441.549	131° 12' 24.73"
1141	POT	50+43.00 = ☪ NB C.S.A.H. 52 STA. 245+26.26						515,920.855	150,413.222	131° 12' 24.73"
5	PC	51+83.63						516,026.655	150,320.579	131° 12' 24.73"
	PI	52+13.09	15° 13' 47.23" LT	25° 59' 54.17"	220.382'	29.464'	58.580'	516,048.821	150,301.169	PI
	CC							516,171.838	150,486.380	
	PT	52+42.21						516,075.308	150,288.264	115° 58' 37.50"
☪ DEER RIDGE										
1150	POT	60+00.00 = ☪ NB C.S.A.H. 52 STA. 257+51.08						516,377.246	151,537.509	104° 50' 24.86"
1151	POT	61+61.96						516,533.800	151,496.028	104° 50' 24.86"

ALIGNMENT TABULATION											
CURVE NO.	POINT	STATION	CURVE DATA					COORDINATES		AZIMUTH	
			DELTA	DEGREE	RADIUS	TANGENT	LENGTH	X	Y		
☪ TOURNAMENT PLAYERS PKWY / FOX RIDGE											
6	PC	70+00.00							516,052.574	151,971.688	107° 49' 36.05"
	PI	71+49.54	36° 23' 11.15" LT	12° 35' 32.92"	455.000'	149.537'	288.954'	516,194.931	151,925.909	PI	
	CC							516,191.867	152,404.842		
	PT	72+88.95						516,336.691	151,973.506	71° 26' 24.90"	
1170	POC	72+60.77 = ☪ SB C.S.A.H. 52 STA. 261+60.96						516,309.711	151,965.367		
1171	POT	73+03.84 = ☪ NB C.S.A.H. 52 STA. 261+95.30						516,350.803	151,978.244	71° 26' 24.90"	
1172	POT	75+83.95						516,616.348	152,067.402	71° 26' 24.90"	
☪ ARNOLD PALMER DRIVE											
1180	POT	80+00.00						515,399.022	153,194.291	62° 36' 17.71"	
7	PC	80+70.37						515,461.502	153,226.671	62° 36' 17.71"	
	PI	81+46.70	21° 36' 25.88" RT	14° 19' 26.20"	400.000'	76.330'	150.847'	515,529.272	153,261.792	PI	
	CC							515,645.551	152,871.529		
	PT	82+21.22						515,605.213	153,269.490	84° 12' 43.59"	
8	PC	82+21.22						515,605.216	153,269.490	84° 12' 43.59"	
	PI	83+11.43	25° 25' 02.59" LT	14° 19' 26.20"	400.000'	90.208'	177.447'	515,694.964	153,278.587	PI	
	CC							515,564.878	153,667.451		
	PT	83+98.67						515,772.120	153,325.324	58° 47' 41.01"	
1181	POT	84+62.02 = ☪ SB C.S.A.H. 52 STA. 276+36.34						515,826.302	153,358.145	58° 47' 41.01"	
1182	POT	85+05.05 = ☪ NB C.S.A.H. 52 STA. 276+81.03						515,863.110	153,380.441	58° 47' 41.01"	
☪ FUTURE 119TH AVENUE											
	POT	55+00.00						514,887.874	154,289.685	57° 47' 23.87"	
	POT	58+09.80 = ☪ NB C.S.A.H. 52 STA. 289+24.80						515,149.992	154,454.813	57° 47' 23.87"	
	POT	58+52.80 = ☪ NB C.S.A.H. 52 STA. 289+70.25						515,186.376	154,477.734	57° 47' 23.87"	
☪ CLOUD DRIVE											
1190	POT	90+00.00						513,138.469	156,472.382	56° 35' 48.07"	
1191	POT	93+84.25 = ☪ SB C.S.A.H. 52 STA. 317+66.21						513,459.245	156,683.923	56° 35' 48.07"	
1192	POT	94+27.40 = ☪ NB C.S.A.H. 52 STA. 318+12.56						513,495.268	156,707.679	56° 35' 48.07"	
1193	POT	97+17.34						513,737.318	156,867.301	56° 35' 48.07"	

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.				DRAWN BY <u>TJV</u> DATE <u>11-8-00</u>		STATE PROJECT NO.		TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA		ANOKA COUNTY ALIGNMENT TABULATIONS C.S.A.H. 52 RECONSTRUCTION		SHEET 64 OF 253
DESIGN BY <u>JMW</u> DATE <u>11-8-00</u>				CHECKED BY <u>GAR</u> DATE <u>11-8-00</u>		S.A.P. 02-652-01 S.A.P. 106-020-019						
REVISION												
NO DATE BY CKD APPR												
NAME: k:\site\proj\c11749\par\1\roadway\drawings\align05.dgn 25 APR 2001												

ALIGNMENT TABULATION										
CURVE NO.	POINT	STATION	CURVE DATA					COORDINATES		AZIMUTH
			DELTA	DEGREE	RADIUS	TANGENT	LENGTH	X	Y	
DRIVEWAY D233R										
12	POT	10+00.00						515,145.875	149,527.189	131° 10' 29.28"
	PC	10+45.00						515,179.747	149,497.562	131° 10' 29.28"
	PI	10+72.19	68° 24' 49.36" LT	143° 14' 22.02"	40.000'	27.191'	47.762'	515,200.214	149,479.661	PI
	CC							515,206.082	149,527.671	
	PT	10+92.76						515,224.390	149,492.106	62° 45' 39.92"
13	PC	11+85.42						515,306.770	149,534.515	62° 45' 39.92"
	PI	12+25.39	27° 14' 16.88" RT	34° 43' 28.97"	165.000'	39.976'	78.440'	515,342.313	149,552.812	PI
	CC							515,382.291	149,387.813	
	PT	12+63.86						515,382.289	149,552.813	89° 59' 56.80"
	POT	12+88.28						515,406.713	149,552.813	
DRIVEWAY D236L										
	POT	10+00.00						515,291.964	149,759.526	311° 10' 28.96"
	POT	11+48.05						515,180.528	149,856.994	311° 10' 28.96"
DRIVEWAY D280L										
14	POT	10+00.00						515,636.148	153,668.379	238° 16' 35.03"
	PC	10+42.84						515,599.709	153,645.853	238° 16' 35.03"
	PI	10+58.39	42° 29' 06.35" RT	143° 14' 22.02"	40.000'	15.549'	29.660'	515,586.483	153,637.677	PI
	CC							515,578.676	153,679.877	
	PT	10+72.50						515,571.207	153,640.580	280° 45' 41.38"
	POT	11+47.10						515,497.918	153,654.510	280° 45' 41.38"
DRIVEWAY D280R										
15	POT	10+00.00						515,683.407	153,673.708	58° 16' 36.01"
	PC	10+40.00						515,717.431	153,694.741	58° 16' 36.01"
	PI	10+58.46	34° 12' 18.32" RT	95° 29' 34.68"	60.000'	18.461'	35.820'	515,733.134	153,704.448	PI
	CC							515,748.980	153,643.705	
	PT	10+75.82						515,751.578	153,703.649	92° 28' 54.34"
	POT	11+22.51						515,798.221	153,701.627	92° 28' 54.34"
DRIVEWAY D283R										
16	POT	10+00.00						515,544.065	153,899.116	58° 16' 34.94"
	PC	10+23.99						515,564.471	153,911.731	58° 16' 34.94"
	PI	10+37.59	15° 29' 30.48" RT	57° 17' 44.81"	100.000'	13.602'	27.038'	515,576.041	153,918.883	PI
	CC							515,617.053	153,826.671	
	PT	10+51.03						515,589.101	153,922.685	73° 46' 05.43"
	POT	11+18.26						515,653.656	153,941.479	73° 46' 05.43"
DRIVEWAY D284L										
17	POT	10+00.00						515,436.460	153,991.407	238° 16' 35.58"
	PC	10+42.27						515,400.509	153,969.183	238° 16' 35.58"
	PI	10+67.42	90° 21' 50.31" RT	229° 10' 59.22"	25.000'	25.159'	39.429'	515,379.109	153,955.954	PI
	CC							515,387.364	153,990.448	
	PT	10+81.69						515,366.016	153,977.438	328° 38' 25.89"
	POT	10+98.42						515,357.309	153,991.725	328° 38' 25.89"

ALIGNMENT TABULATION										
CURVE NO.	POINT	STATION	CURVE DATA					COORDINATES		AZIMUTH
			DELTA	DEGREE	RADIUS	TANGENT	LENGTH	X	Y	
DRIVEWAY D292R										
	POT	10+00.00						515,073.916	154,659.656	58° 16' 36.99"
	POT	10+70.00						515,133.458	154,696.463	58° 16' 36.99"
DRIVEWAY D294R										
19	POT	10+00.00						514,945.948	154,866.665	58° 16' 35.25"
	PC	10+34.17						514,975.014	154,884.633	58° 16' 35.25"
	PI	10+44.02	22° 17' 47.02" RT	114° 35' 29.61"	50.000'	9.853'	19.457'	514,983.395	154,889.814	PI
	CC							515,001.305	154,842.103	
	PT	10+53.63						514,993.115	154,891.428	80° 34' 22.27"
	POT	10+69.22						515,008.492	154,893.981	80° 34' 22.27"
DRIVEWAY D296R										
20	POT	10+00.00						514,838.078	155,014.086	49° 20' 08.49"
	PC	10+32.12						514,862.441	155,035.015	49° 20' 08.49"
	PI	10+47.83	17° 51' 39.43" LT	57° 17' 44.81"	100.000'	15.714'	31.173'	514,874.361	155,045.255	PI
	CC							514,797.279	155,110.869	
	PT	10+63.29						514,882.566	155,058.657	31° 28' 29.06"
	POT	11+61.57						514,933.879	155,142.476	31° 28' 29.06"
DRIVEWAY D297L										
21	POT	10+00.00						514,685.812	155,105.865	220° 22' 48.92"
	PC	10+49.02						514,654.053	155,068.522	220° 22' 48.92"
	PI	10+66.10	19° 22' 58.77" RT	57° 17' 44.81"	100.000'	17.078'	33.830'	514,642.989	155,055.513	PI
	CC							514,577.877	155,133.308	
	PT	10+82.85						514,628.234	155,046.913	239° 45' 47.69"
	POT	11+90.23						514,535.463	154,992.839	239° 45' 47.69"
DRIVEWAY D300L										
22	POT	10+00.00						514,463.788	155,265.959	214° 18' 33.33"
	PC	10+49.60						514,435.832	155,224.991	214° 18' 33.33"
	PI	10+69.32	14° 58' 50.55" RT	38° 11' 49.87"	150.000'	19.722'	39.219'	514,424.715	155,208.700	PI
	CC							514,311.931	155,309.540	
	PT	10+88.82						514,409.765	155,195.837	229° 17' 23.87"
	POT	11+40.02						514,370.953	155,162.441	229° 17' 23.87"

NO	DATE	BY	CKD	APPR	REVISION
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I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE _____ REG. NO. _____

DRAWN BY: TJV DATE 11-8-00
 DESIGN BY: JMW DATE 11-8-00
 CHECKED BY: GAR DATE 11-8-00

STATE PROJECT NO.
 S. A. P. 02-652-01
 S. A. P. 106-020-019

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 ALIGNMENT TABULATIONS
 C.S.A.H. 52 RECONSTRUCTION

SHEET
 65
 OF
 253

ALIGNMENT TABULATION										
CURVE NO.	POINT	STATION	CURVE DATA					COORDINATES		AZIMUTH
			DELTA	DEGREE	RADIUS	TANGENT	LENGTH	X	Y	
DRIVEWAY D302R										
23	POT	10+00.00						514,392.416	155,366.720	34° 18' 32.71"
	PC	10+22.25						514,404.959	155,385.101	34° 18' 32.71"
	PI	10+40.72	40° 32' 06.63" RT	114° 35' 29.61"	50.000'	18.463'	35.374'	514,415.366	155,400.352	PI
	CC							514,446.259	155,356.918	
	PT	10+57.63						514,433.187	155,405.179	74° 50' 39.33"
24	PC	10+57.87						514,432.953	155,405.116	74° 50' 39.33"
	PI	10+74.09	24° 23' 59.21" RT	76° 23' 39.74"	75.000'	16.215'	31.939'	514,448.604	155,409.355	PI
	CC							514,452.561	155,332.724	
	PT	10+89.81						514,464.609	155,406.750	99° 14' 38.54"
POT	10+90.08						514,464.874	155,406.707	99° 14' 38.54"	
DRIVEWAY D303L										
25	POT	10+00.00						514,204.984	155,454.983	221° 56' 04.68"
	PC	10+42.12						514,176.834	155,423.647	221° 56' 04.68"
	PI	10+52.97	8° 16' 23.65" LT	38° 11' 49.87"	150.000'	10.848'	21.659'	514,169.584	155,415.577	PI
	CC							514,288.420	155,323.405	
	PT	10+63.78						514,163.571	155,406.547	213° 39' 41.03"
POT	11+48.82						514,116.435	155,335.767	213° 39' 41.03"	
DRIVEWAY D303R										
POT	10+00.00						514,315.634	155,420.112	33° 25' 26.85"	
POT	10+72.36						514,355.493	155,480.506	33° 25' 26.85"	
DRIVEWAY D306L										
26	POT	10+00.00						514,029.446	155,653.331	234° 29' 08.64"
	PC	10+43.66						513,993.911	155,627.971	234° 29' 08.64"
	PI	10+68.52	27° 55' 27.95" LT	57° 17' 44.81"	100.000'	24.863'	48.737'	513,973.673	155,613.528	PI
	CC							514,052.001	155,546.574	
	PT	10+92.39						513,962.555	155,591.289	206° 33' 40.70"
POT	11+22.24						513,949.210	155,564.594	206° 33' 40.70"	
DRIVEWAY D307R										
27	POT	10+00.00						514,009.545	155,765.180	60° 20' 30.80"
	PC	10+41.45						514,045.564	155,785.690	60° 20' 30.80"
	PI	10+65.19	33° 03' 48.98" LT	71° 37' 11.01"	80.000'	23.745'	46.166'	514,066.199	155,797.440	PI
	CC							514,005.979	155,855.210	
	PT	10+87.62						514,077.082	155,818.545	27° 16' 41.81"
POT	11+32.53						514,097.665	155,858.461	27° 16' 41.81"	
DRIVEWAY D341R										
POT	10+00.00						512,212.330	158,540.003	90° 20' 08.14"	
POT	10+70.00						512,282.328	158,539.593	90° 20' 08.14"	

ALIGNMENT TABULATION										
CURVE NO.	POINT	STATION	CURVE DATA					COORDINATES		AZIMUTH
			DELTA	DEGREE	RADIUS	TANGENT	LENGTH	X	Y	
D353R										
28	POT	10+00.00						512,199.870	159,688.462	89° 54' 44.73"
	PC	10+38.43						512,238.296	159,688.521	89° 54' 44.73"
	PI	10+52.34	28° 23' 29.62" RT	104° 10' 26.92"	55.000'	13.913'	27.254'	512,252.209	159,688.542	PI
	CC							512,238.380	159,633.521	
	PT	10+65.68						512,264.458	159,681.945	118° 18' 14.34"
POT	11+34.71						512,325.235	159,649.215	118° 18' 14.34"	
INPLACE RADISSON ROAD										
31	PC	0+00.00						513,920.243	155,654.036	304° 19' 56.48"
	PI	0+27.47	7° 51' 25.71" RT	14° 19' 26.20"	400.000'	27.470'	54.853'	513,897.559	155,669.529	PI
	CC							514,145.840	155,984.348	
32	PT	0+54.85						513,877.206	155,687.977	312° 11' 22.19"
	PC	2+05.73						513,765.418	155,789.303	312° 11' 22.19"
	PI	2+33.12	7° 50' 02.03" RT	14° 19' 26.20"	400.000'	27.388'	54.691'	513,745.126	155,807.696	PI
	CC							514,034.052	156,085.674	
33	PT	2+60.42						513,727.529	155,828.684	320° 01' 24.23"
	PC	10+23.64						513,237.177	156,413.549	320° 01' 24.23"
	PI	10+41.37	5° 04' 25.97" LT	14° 19' 26.20"	400.000'	17.723'	35.422'	513,225.790	156,427.130	PI
34	CC							512,930.654	156,156.559	
	PT	10+59.07						513,213.247	156,439.650	314° 56' 58.25"
	PC	13+51.87						513,006.023	156,646.510	314° 56' 58.25"
35	PI	13+75.13	6° 39' 25.77" LT	14° 19' 26.20"	400.000'	23.264'	46.476'	512,989.558	156,662.946	PI
	CC							512,723.429	156,363.418	
	PT	13+98.34						512,971.299	156,677.362	308° 17' 32.48"
36	PI	18+63.45	0° 00' 00.56" RT					512,606.256	156,965.576	PI
	PC	20+85.88						512,431.679	157,103.412	308° 17' 33.04"
	PI	22+15.10	17° 56' 30.00" RT	7° 00' 00.03"	818.510'	129.212'	256.309'	512,330.266	157,183.482	PI
	CC							512,938.890	157,745.826	
37	PT	23+42.19						512,258.450	157,290.898	326° 14' 03.04"
	PC	24+37.91						512,205.252	157,370.466	326° 14' 03.04"
	PI	27+93.46	46° 56' 03.00" RT	6° 59' 44.96"	819.000'	355.552'	670.889'	512,007.636	157,666.042	PI
1201	CC							512,886.100	157,825.666	
	PT	31+08.79						512,088.636	158,012.245	13° 10' 06.04"
	POT	34+67.85						512,170.433	158,361.858	13° 10' 06.04"
TRAIL										
41	POT	50+00.00						514,053.547	155,560.711	324° 34' 49.05"
	PC	50+80.00						514,007.182	155,625.906	324° 34' 49.05"
	PI	51+02.08	30° 51' 24.41" LT	71° 37' 11.01"	80.000'	22.078'	43.084'	513,994.386	155,643.898	PI
	CC							513,941.987	155,579.541	
42	PT	51+23.08						513,974.173	155,652.781	293° 43' 24.64"
	PC	52+51.57						513,856.544	155,704.474	293° 43' 24.64"
	PI	52+66.35	20° 55' 37.53" RT	71° 37' 11.01"	80.000'	14.774'	29.220'	513,843.018	155,710.418	PI
	CC							513,888.730	155,777.714	
1211	PT	52+80.79						513,832.507	155,720.801	314° 39' 02.17"
	POT	54+80.88						513,690.162	155,861.421	314° 39' 02.17"

NO	DATE	BY	CHKD	APPR	REVISION

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE _____ REG. NO. _____

DRAWN BY TJV DATE 11-8-00

DESIGN BY JMW DATE 11-8-00

CHECKED BY GAR DATE 11-8-00

STATE PROJECT NO. _____

S.A.P. 02-652-01
S.A.P. 106-020-019

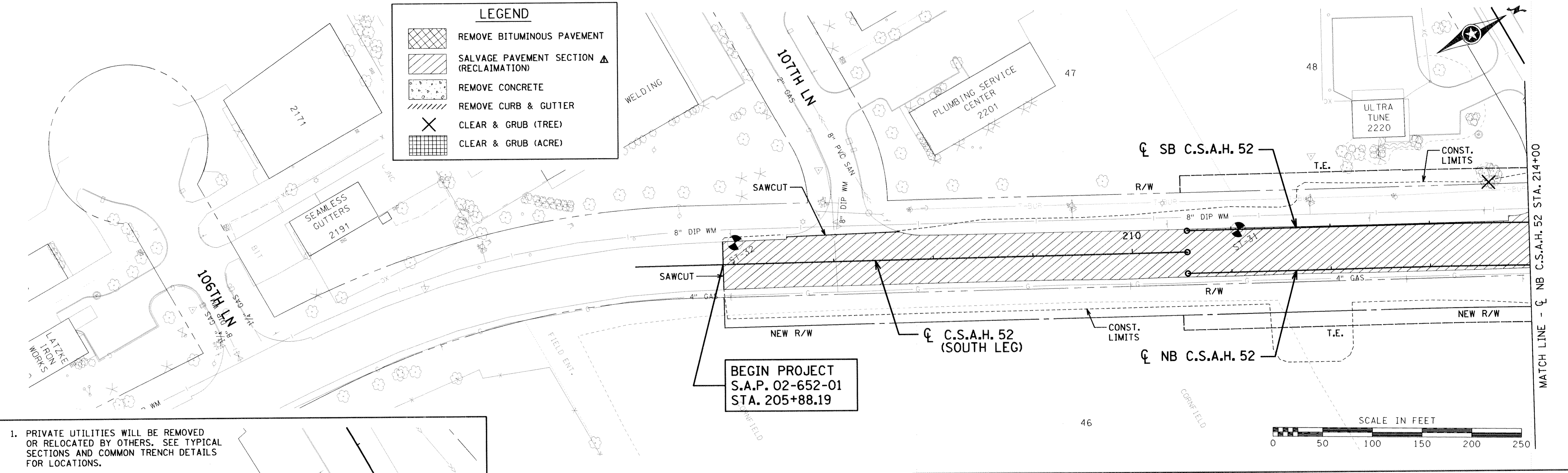
TKDA
TOLTZ, KING, DUVALL, ANDERSON
AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
ALIGNMENT TABULATIONS
C.S.A.H. 52 RECONSTRUCTION

SHEET
66
OF
253

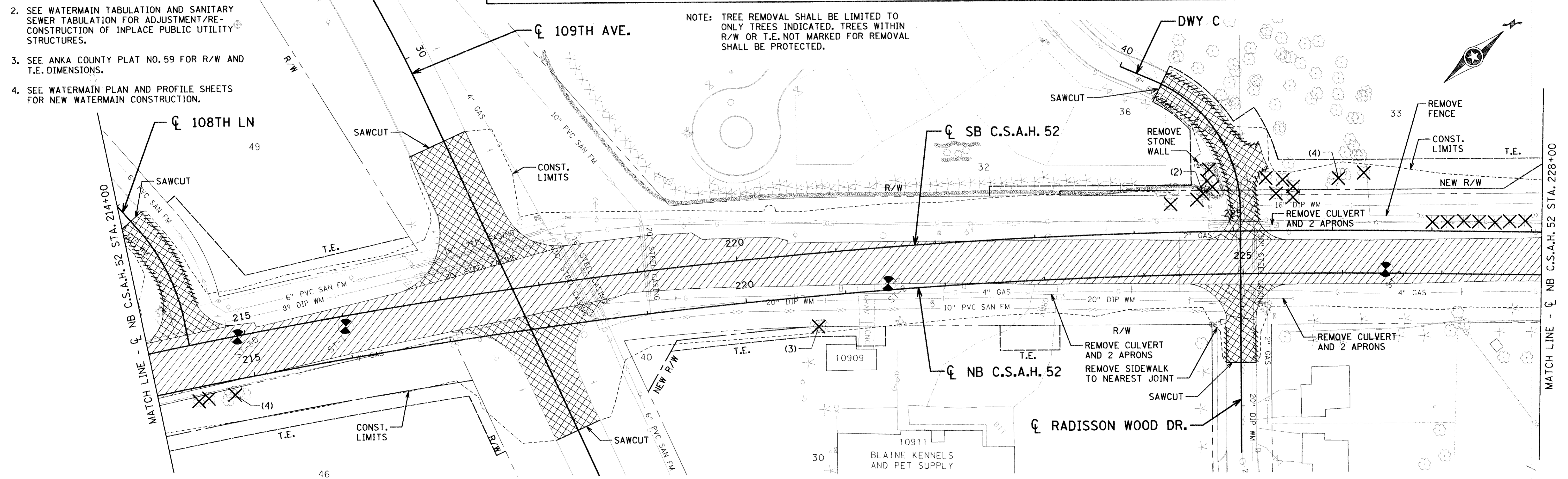
LEGEND

	REMOVE BITUMINOUS PAVEMENT
	SALVAGE PAVEMENT SECTION (RECLAMATION)
	REMOVE CONCRETE
	REMOVE CURB & GUTTER
	CLEAR & GRUB (TREE)
	CLEAR & GRUB (ACRE)



- PRIVATE UTILITIES WILL BE REMOVED OR RELOCATED BY OTHERS. SEE TYPICAL SECTIONS AND COMMON TRENCH DETAILS FOR LOCATIONS.
- SEE WATERMAIN TABULATION AND SANITARY SEWER TABULATION FOR ADJUSTMENT/RECONSTRUCTION OF INPLACE PUBLIC UTILITY STRUCTURES.
- SEE ANKA COUNTY PLAT NO. 59 FOR R/W AND T.E. DIMENSIONS.
- SEE WATERMAIN PLAN AND PROFILE SHEETS FOR NEW WATERMAIN CONSTRUCTION.

NOTE: TREE REMOVAL SHALL BE LIMITED TO ONLY TREES INDICATED. TREES WITHIN R/W OR T.E. NOT MARKED FOR REMOVAL SHALL BE PROTECTED.



4-13-01	LR	LR	LR	ADDENDUM 2
NO	DATE	BY	CKD	APPR

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE _____ REG. NO. _____

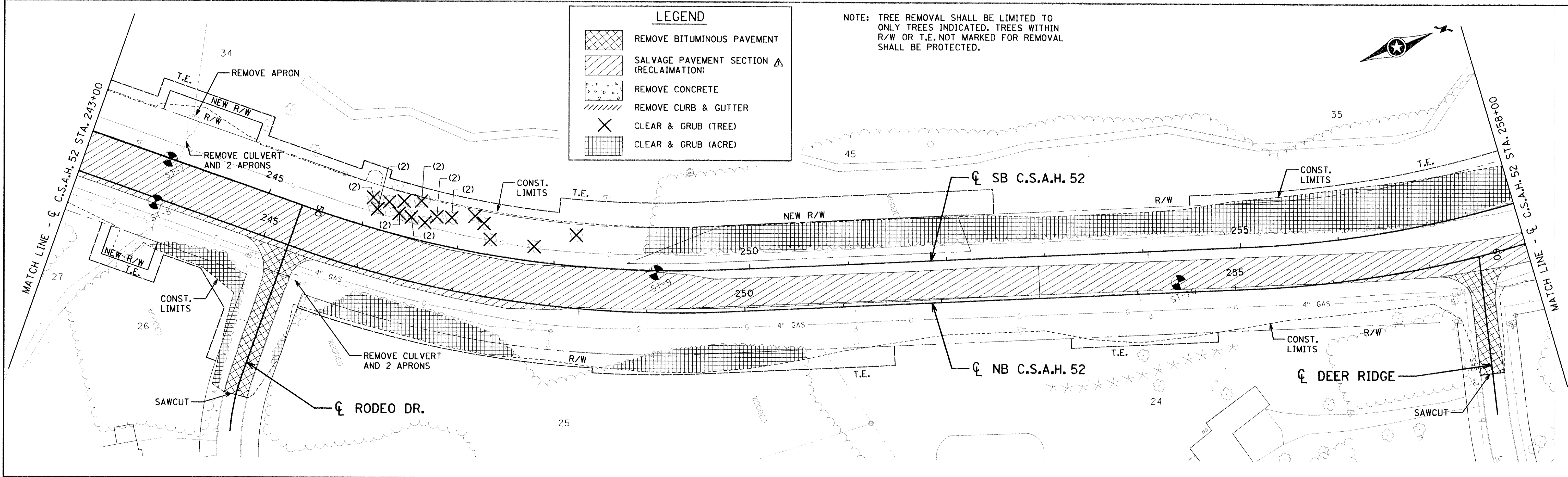
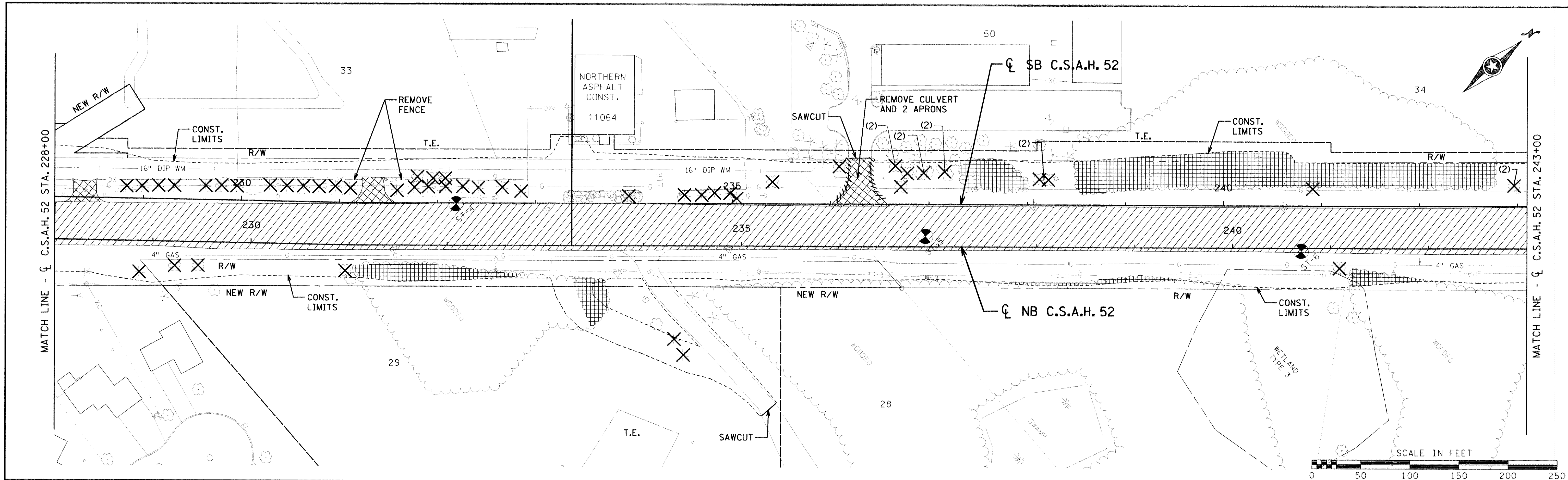
DRAWN BY TJV DATE 11-8-00
 DESIGN BY JMW DATE 11-8-00
 CHECKED BY GAR DATE 11-8-00

STATE PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

TKDA
 TOLTZ, KING, DUvall, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 EXISTING CONDITIONS AND REMOVALS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 205+88.19 TO STA. 228+00

SHEET
 67
 OF
 253



LEGEND

	REMOVE BITUMINOUS PAVEMENT
	SALVAGE PAVEMENT SECTION (RECLAMATION)
	REMOVE CONCRETE
	REMOVE CURB & GUTTER
	CLEAR & GRUB (TREE)
	CLEAR & GRUB (ACRE)

NOTE: TREE REMOVAL SHALL BE LIMITED TO ONLY TREES INDICATED. TREES WITHIN R/W OR T.E. NOT MARKED FOR REMOVAL SHALL BE PROTECTED.

4-13-01	LR	LR	LR	ADDENDUM 2
NO	DATE	BY	CKD	APPR

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DATE _____ REG. NO. _____

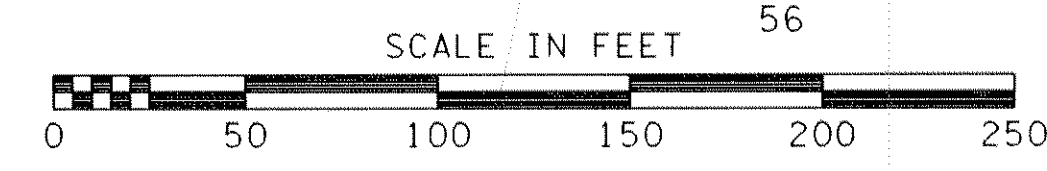
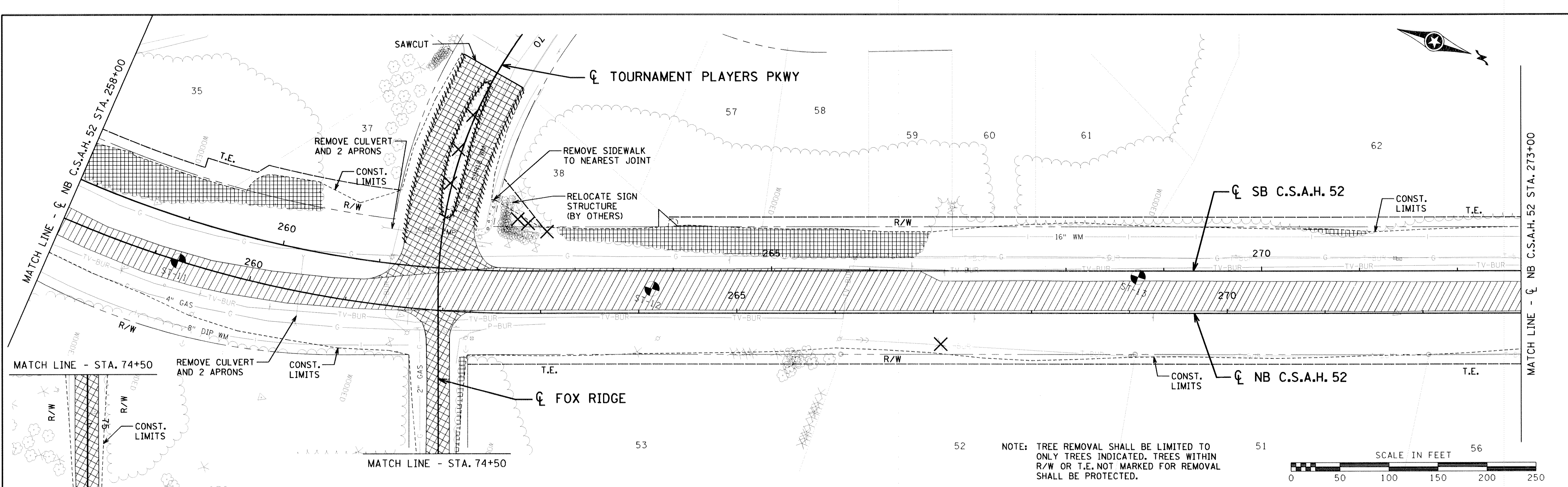
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 DESIGN BY: JMW DATE: 11-8-00
 CHECKED BY: GAR DATE: 11-8-00

STATE PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

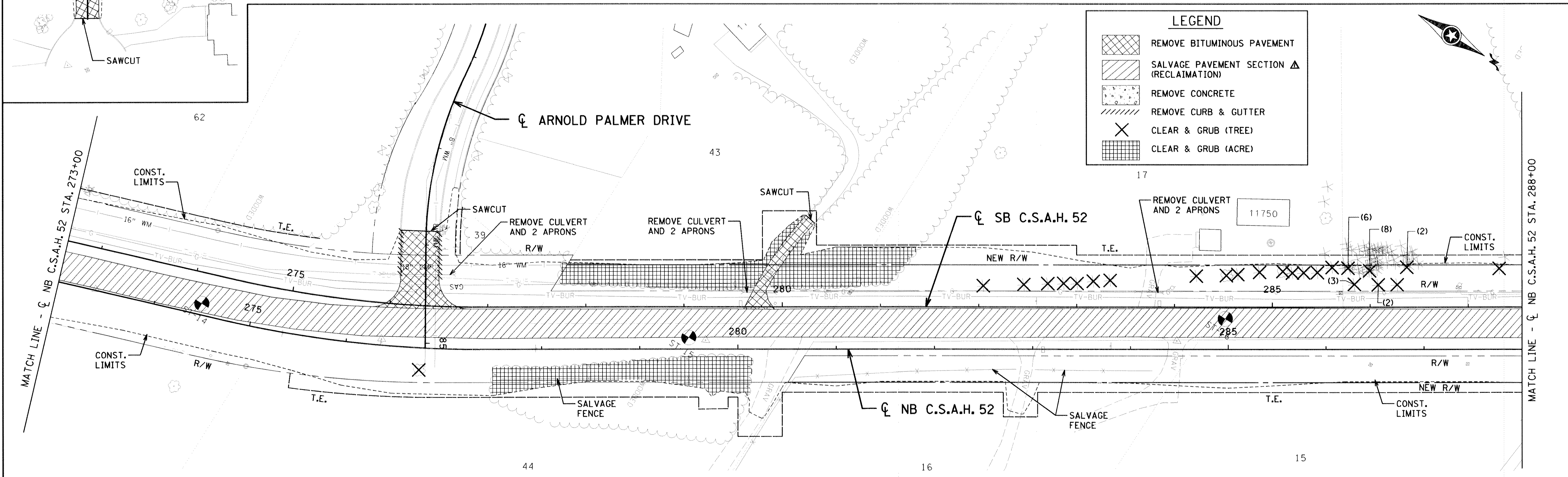
TKDA
 TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 EXISTING CONDITIONS AND REMOVALS
C.S.A.H. 52 RECONSTRUCTION
 STA. 228+00 TO STA. 258+00

SHEET
 68
 OF
 253



NOTE: TREE REMOVAL SHALL BE LIMITED TO ONLY TREES INDICATED. TREES WITHIN R/W OR T.E. NOT MARKED FOR REMOVAL SHALL BE PROTECTED.



LEGEND	
	REMOVE BITUMINOUS PAVEMENT
	SALVAGE PAVEMENT SECTION (RECLAMATION)
	REMOVE CONCRETE
	REMOVE CURB & GUTTER
	CLEAR & GRUB (TREE)
	CLEAR & GRUB (ACRE)

4-13-01	LR	LR	LR	ADDENDUM 2
NO	DATE	BY	CKD	APPR
NAME: \$FILE\$	\$DATE\$			

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DATE _____ REG. NO. _____

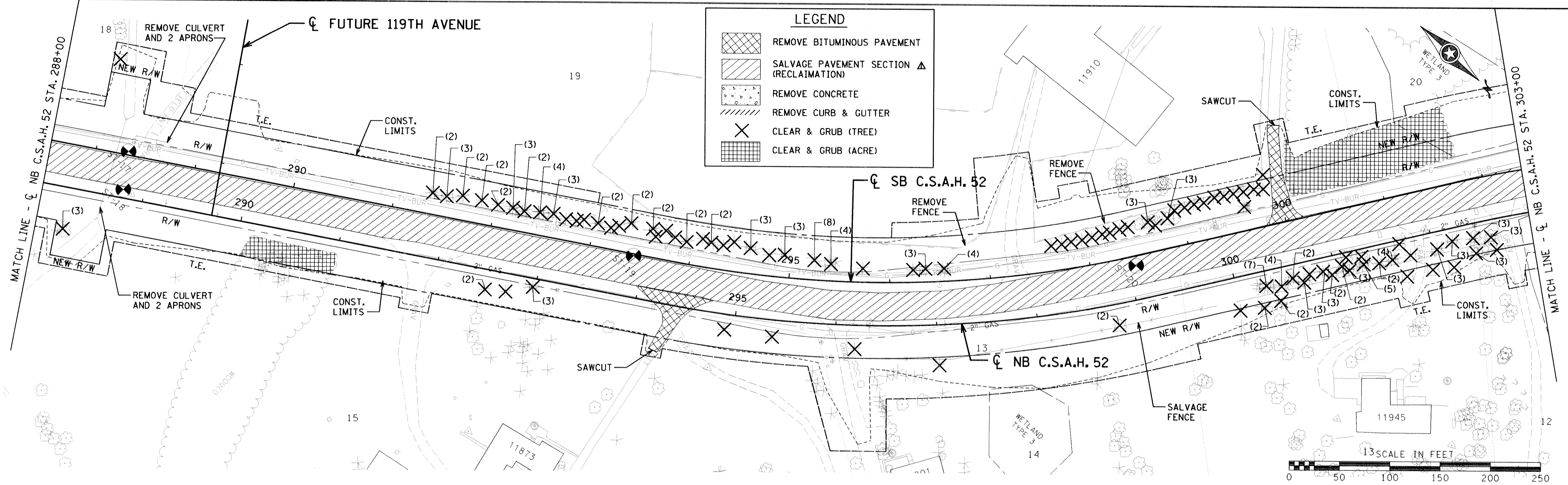
DRAWN BY TJV DATE 11-8-00
 DESIGN BY JMW DATE 11-8-00
 CHECKED BY GAR DATE 11-8-00

STATE PROJECT NO. S.A.P. 02-652-01
 S.A.P. 106-020-019

TKDA
 TOLTZ, KING, DUVAL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 EXISTING CONDITIONS AND REMOVALS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 258+00 TO STA. 288+00

SHEET 69 OF 253

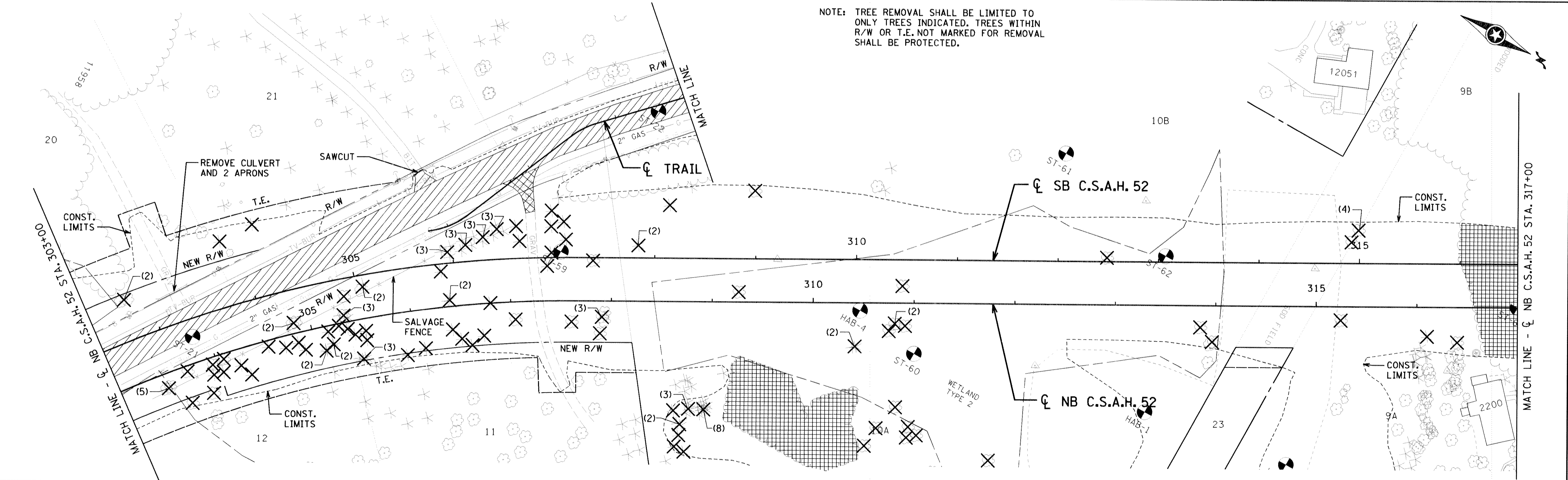


LEGEND

- REMOVE BITUMINOUS PAVEMENT
- SALVAGE PAVEMENT SECTION (RECLAMATION)
- REMOVE CONCRETE
- REMOVE CURB & GUTTER
- CLEAR & GRUB (TREE)
- CLEAR & GRUB (ACRE)



NOTE: TREE REMOVAL SHALL BE LIMITED TO ONLY TREES INDICATED. TREES WITHIN R/W OR T.E. NOT MARKED FOR REMOVAL SHALL BE PROTECTED.



4-13-01	LR	LR	LR	APPENDUM 2
NO	DATE	BY	CKD	APPR

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE _____ REG. NO. _____

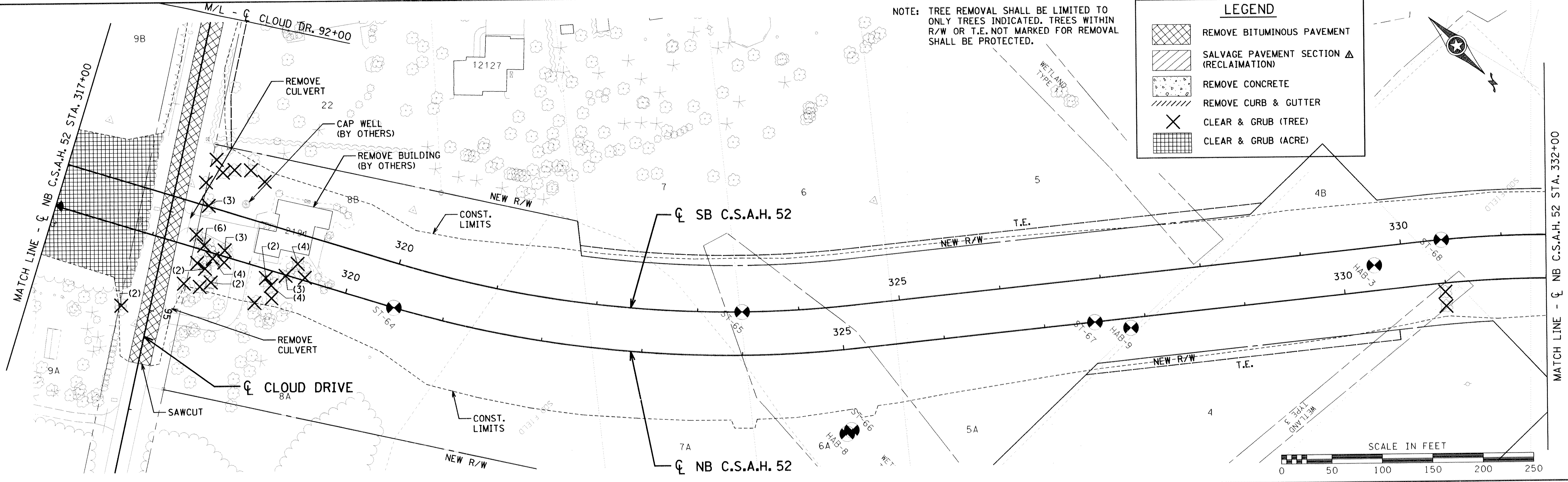
DRAWN BY TJV DATE 11-8-00
 DESIGN BY JMW DATE 11-8-00
 CHECKED BY GAR DATE 11-8-00

STATE PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 EXISTING CONDITIONS AND REMOVALS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 288+00 TO STA. 317+00

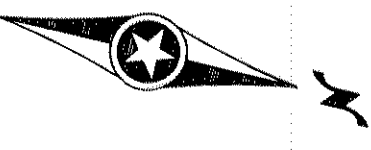
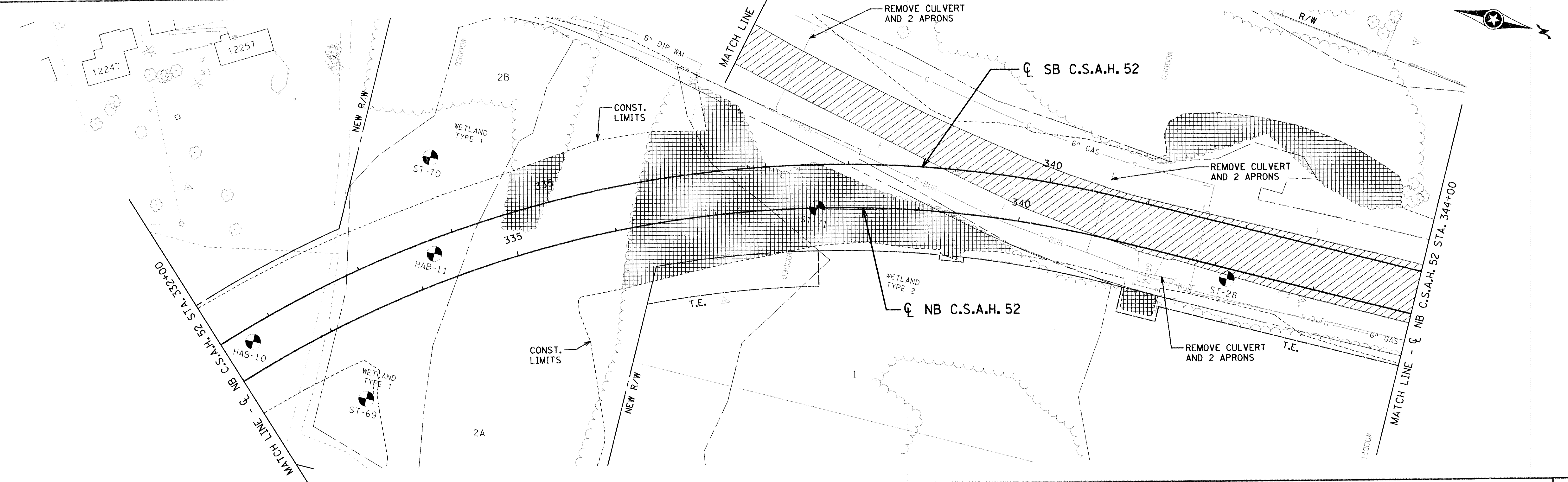
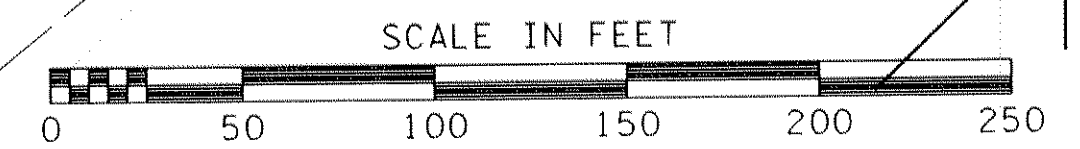
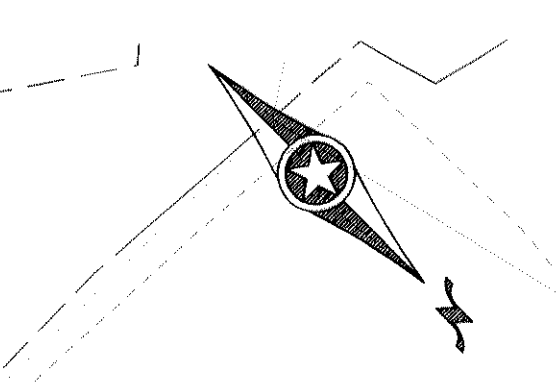
SHEET
 70
 OF
 253



NOTE: TREE REMOVAL SHALL BE LIMITED TO ONLY TREES INDICATED. TREES WITHIN R/W OR T.E. NOT MARKED FOR REMOVAL SHALL BE PROTECTED.

LEGEND

- REMOVE BITUMINOUS PAVEMENT
- SALVAGE PAVEMENT SECTION (RECLAMATION)
- REMOVE CONCRETE
- REMOVE CURB & GUTTER
- CLEAR & GRUB (TREE)
- CLEAR & GRUB (ACRE)



4-13-01	LR	LR	LR	ADDENDUM 2
NO	DATE	BY	CKD	APPR

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE _____ REG. NO. _____

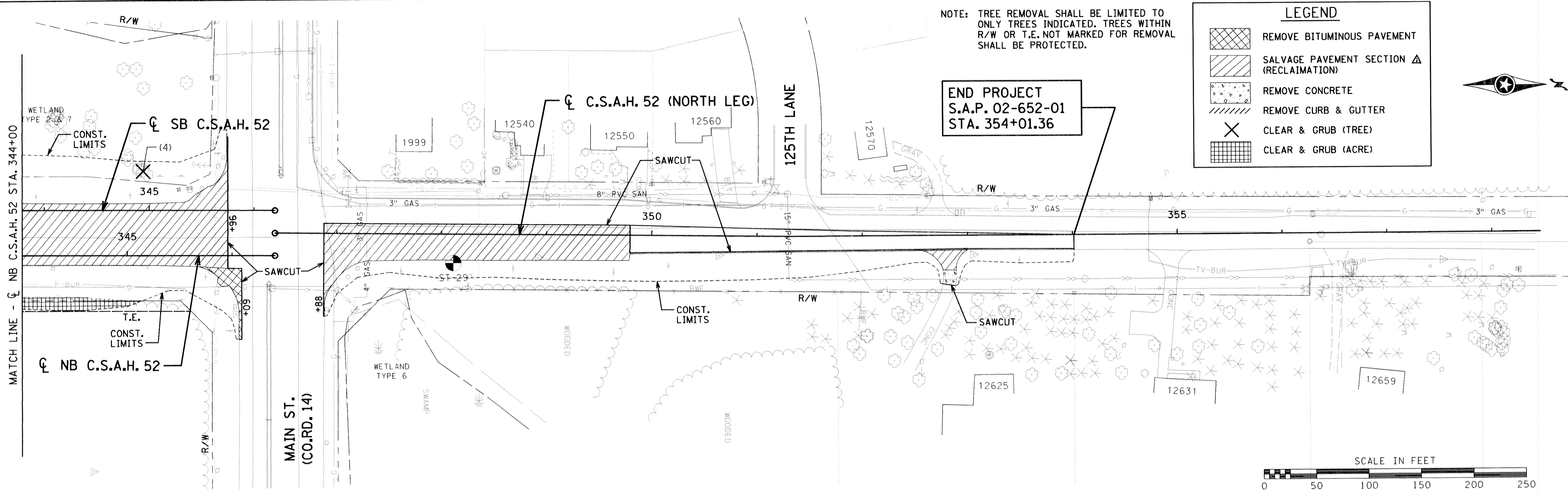
DRAWN BY TJV DATE 11-8-00
 DESIGN BY JMW DATE 11-8-00
 CHECKED BY GAR DATE 11-8-00

STATE PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 EXISTING CONDITIONS AND REMOVALS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 317+00 TO STA. 344+00

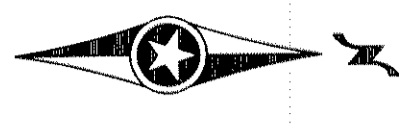
SHEET
 71
 OF
 253



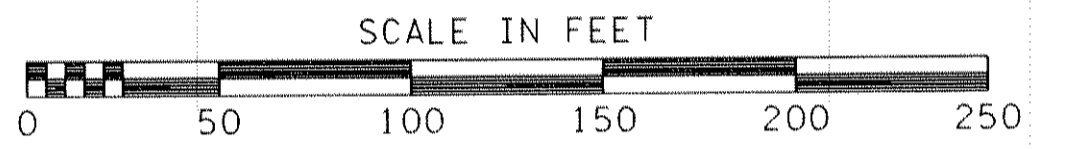
NOTE: TREE REMOVAL SHALL BE LIMITED TO ONLY TREES INDICATED. TREES WITHIN R/W OR T.E. NOT MARKED FOR REMOVAL SHALL BE PROTECTED.

LEGEND

- REMOVE BITUMINOUS PAVEMENT
- SALVAGE PAVEMENT SECTION (RECLAMATION)
- REMOVE CONCRETE
- REMOVE CURB & GUTTER
- CLEAR & GRUB (TREE)
- CLEAR & GRUB (ACRE)



END PROJECT
S.A.P. 02-652-01
STA. 354+01.36



4-13-01	LR	LR	LR	APPENDUM 2
NO	DATE	BY	CKD	APPR
NAME: \$FILE\$	\$DATE\$			

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DATE _____ REG. NO. _____

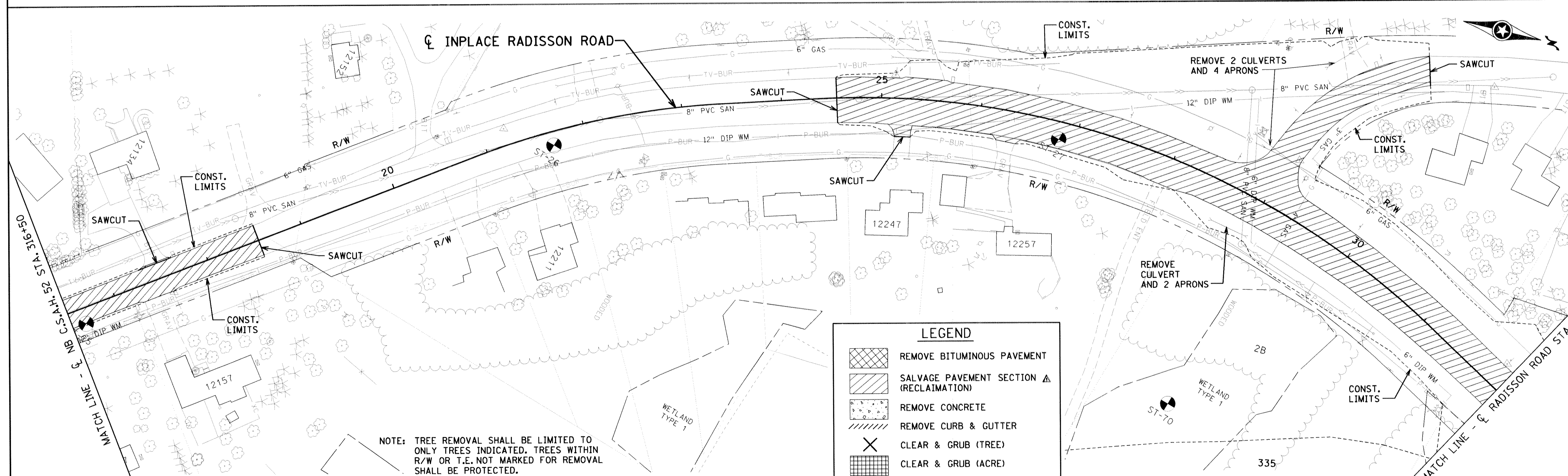
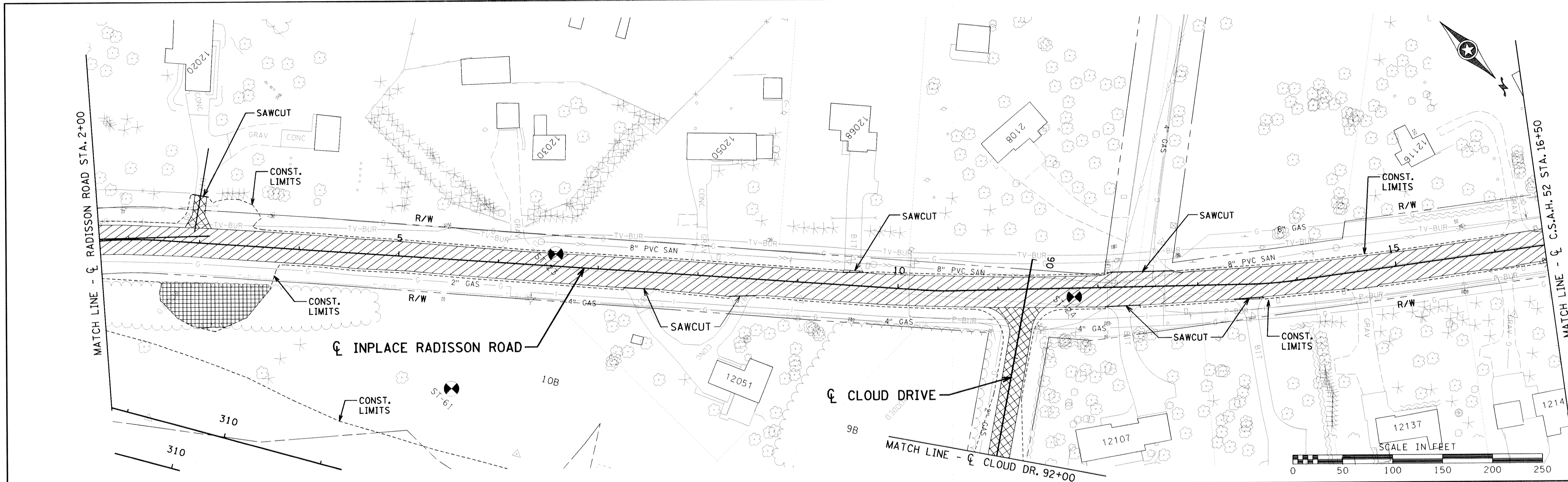
DRAWN BY TJV DATE 11-8-00
 DESIGN BY JMW DATE 11-8-00
 CHECKED BY GAR DATE 11-8-00

STATE PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 EXISTING CONDITIONS AND REMOVALS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 344+00 TO STA. 354+01.36

SHEET
72
OF
253



LEGEND

- REMOVE BITUMINOUS PAVEMENT
- SALVAGE PAVEMENT SECTION (RECLAMATION)
- REMOVE CONCRETE
- REMOVE CURB & GUTTER
- CLEAR & GRUB (TREE)
- CLEAR & GRUB (ACRE)

NOTE: TREE REMOVAL SHALL BE LIMITED TO ONLY TREES INDICATED. TREES WITHIN R/W OR T.E. NOT MARKED FOR REMOVAL SHALL BE PROTECTED.

NO	DATE	BY	CKD	APPR	REVISION
NAME: \$FILE\$					

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DATE _____ REG. NO. _____

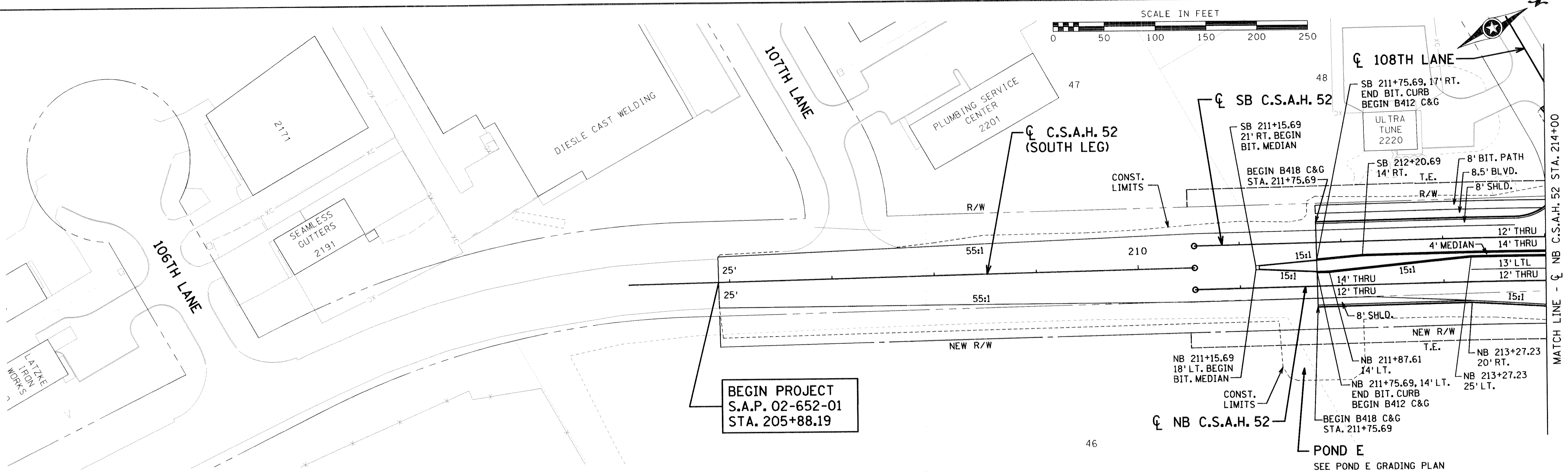
DRAWN BY TJV DATE 11-8-00
 DESIGN BY JMW DATE 11-8-00
 CHECKED BY GAR DATE 11-8-00

STATE PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

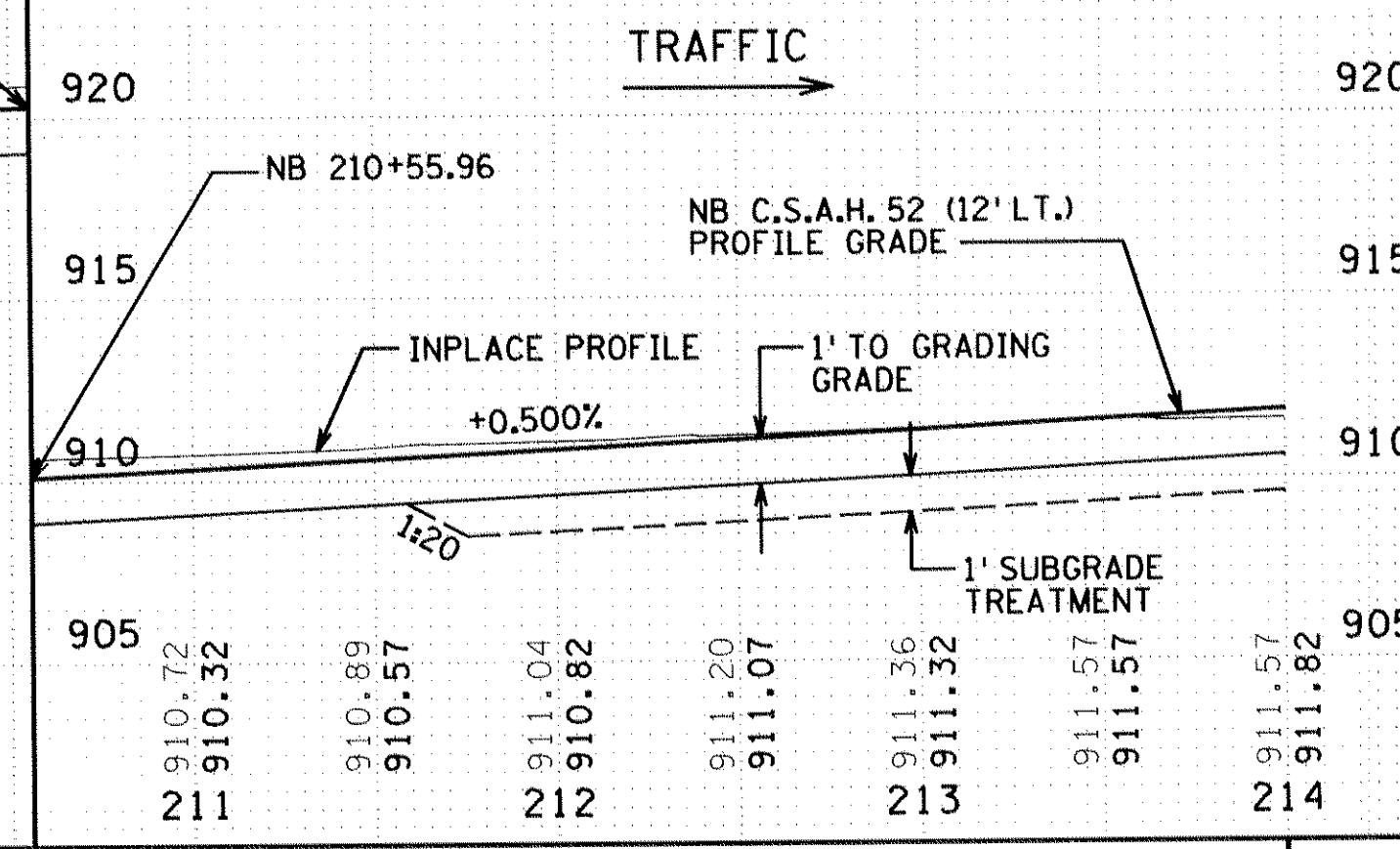
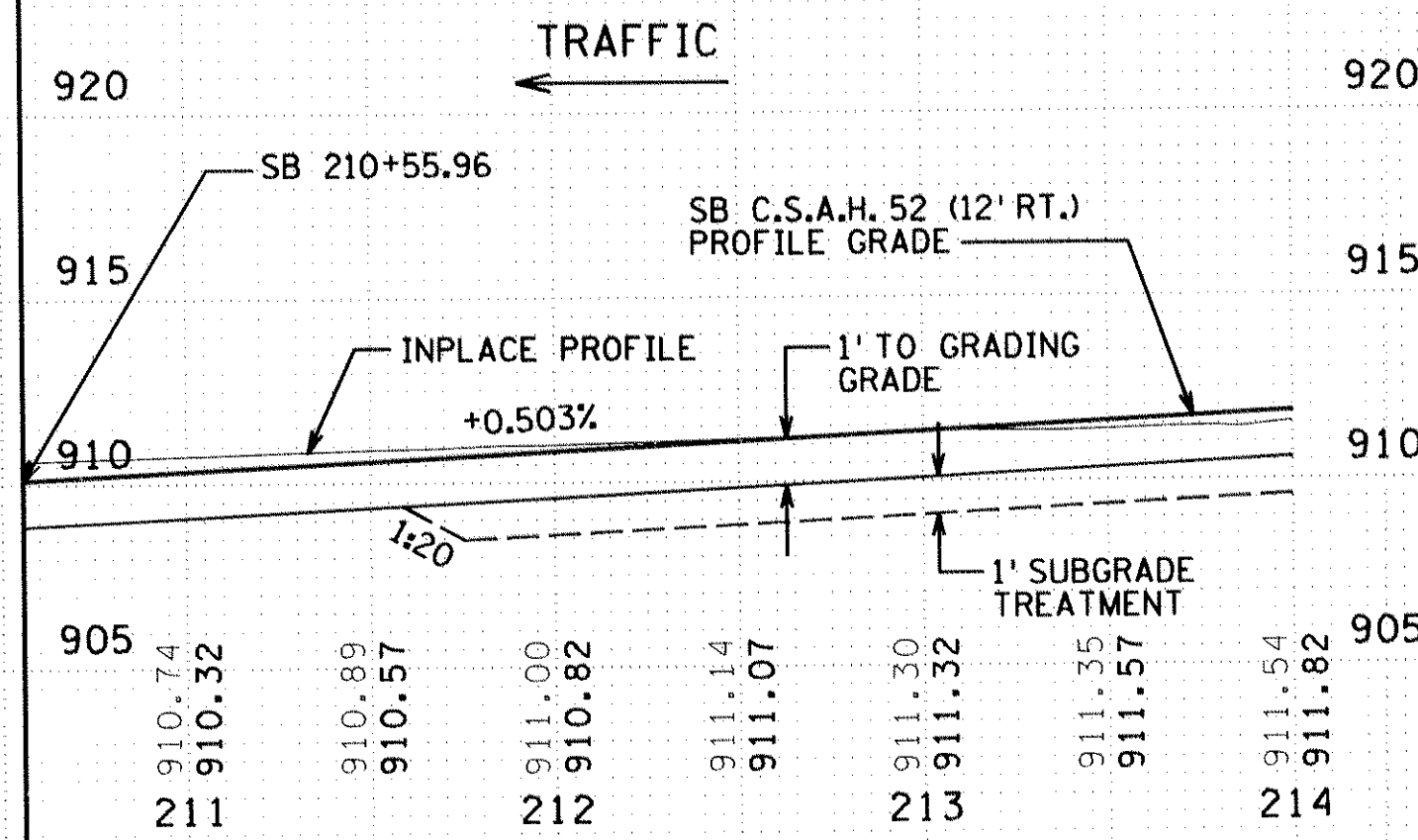
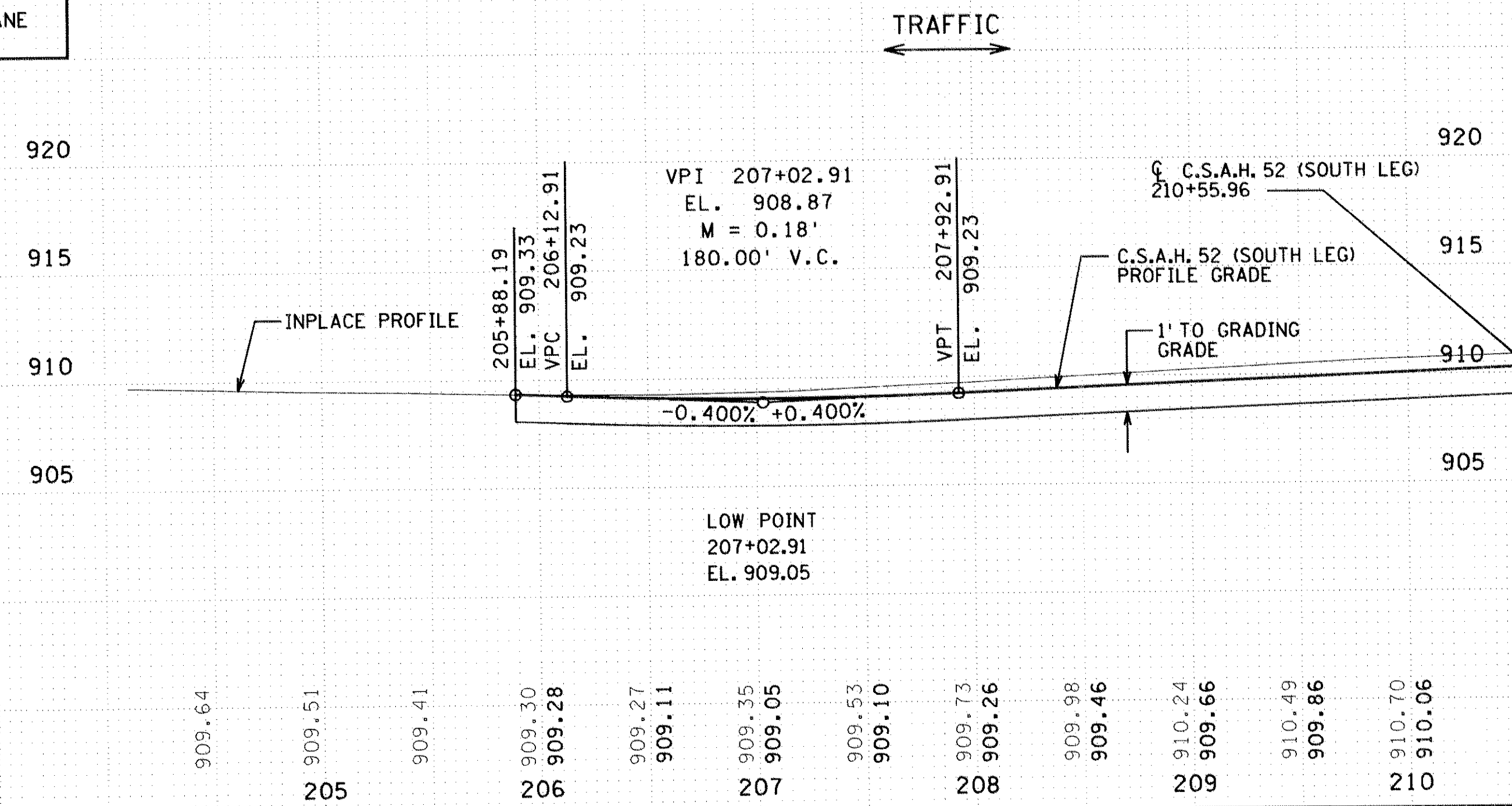
TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 EXISTING CONDITIONS AND REMOVALS
 C.S.A.H. 52 RECONSTRUCTION
 OLD RADISSON ROAD

SHEET
 73
 OF
 253



B.M. ELEV. 910.257
I.P. #9013
195' N. OF 106TH LANE
3' W. OF EB



NO	DATE	BY	CHKD	APPR	REVISION

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DATE _____ REG. NO. _____

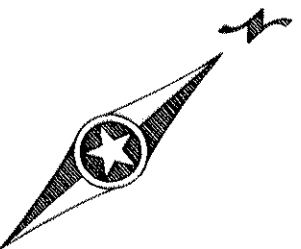
DRAWN BY TJV DATE 11-8-00
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STATE PROJECT NO.
S.A.P. 02-652-01
S.A.P. 106-020-019

TKDA
TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
ENGINEERS • ARCHITECTS • PLANNERS SAINT PAUL, MINNESOTA

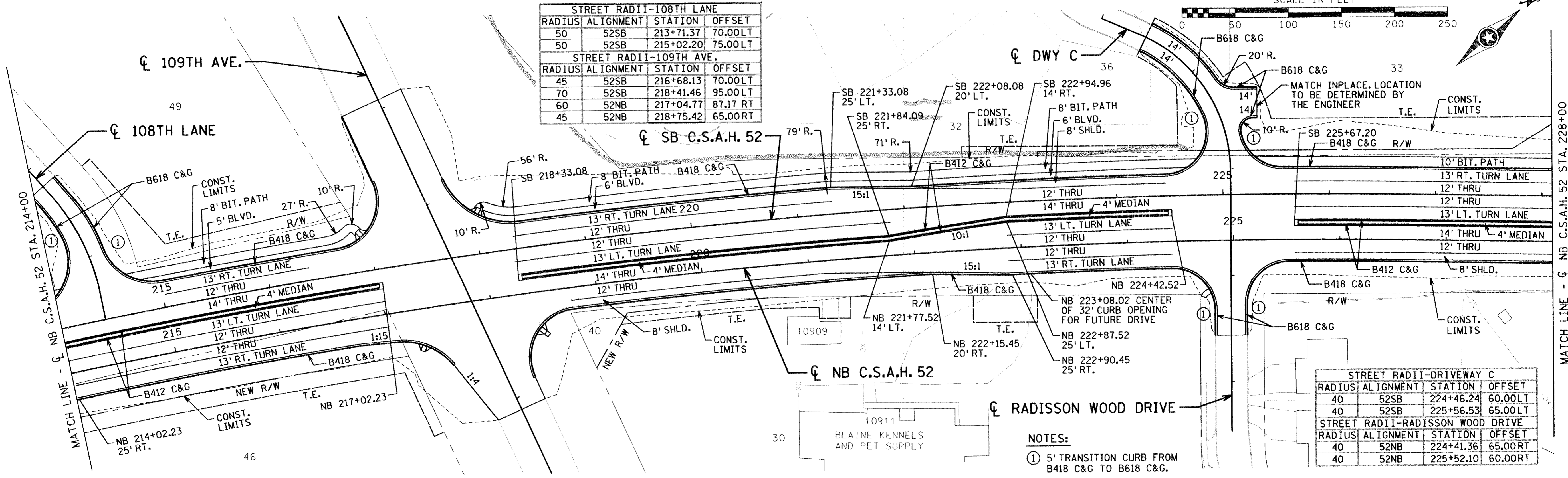
ANOKA COUNTY
CONSTRUCTION PLAN AND PROFILE
C.S.A.H. 52 RECONSTRUCTION
STA. 205+88.19 TO STA. 214+00

SHEET 74 OF 253



STREET RADII-108TH LANE			
RADIUS	ALIGNMENT	STATION	OFFSET
50	52SB	213+71.37	70.00LT
50	52SB	215+02.20	75.00LT

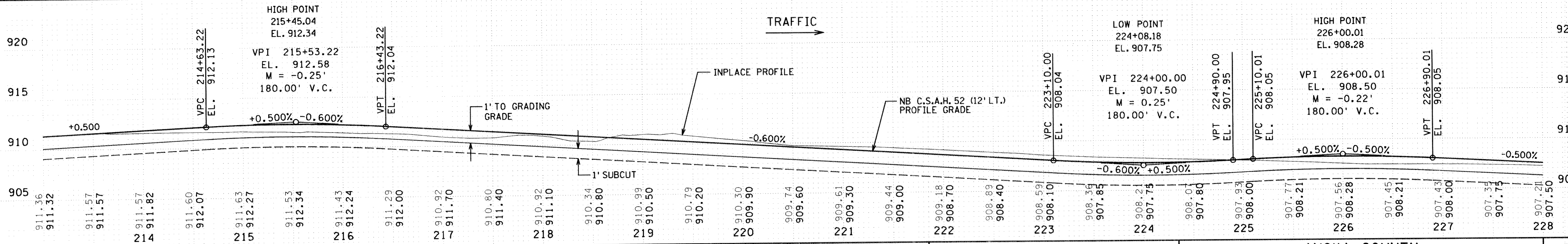
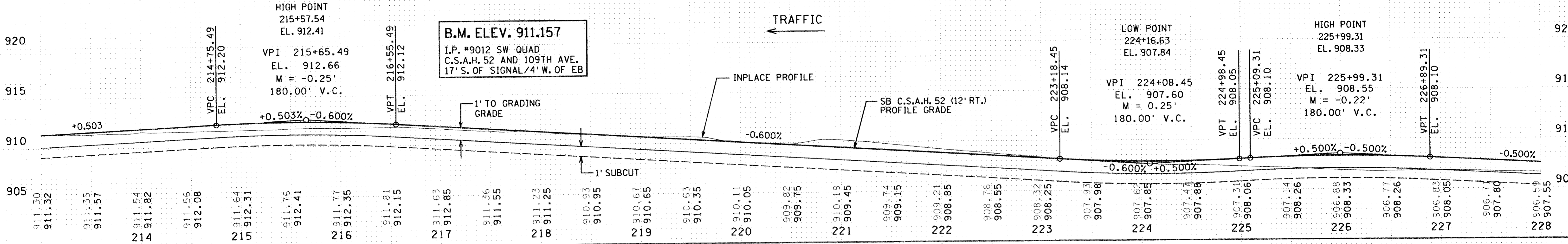
STREET RADII-109TH AVE.			
RADIUS	ALIGNMENT	STATION	OFFSET
45	52SB	216+68.13	70.00LT
70	52SB	218+41.46	95.00LT
60	52NB	217+04.77	87.17 RT
45	52NB	218+75.42	65.00RT



STREET RADII-DRIVEWAY C			
RADIUS	ALIGNMENT	STATION	OFFSET
40	52SB	224+46.24	60.00LT
40	52SB	225+56.53	65.00LT

STREET RADII-RADISSON WOOD DRIVE			
RADIUS	ALIGNMENT	STATION	OFFSET
40	52NB	224+41.36	65.00RT
40	52NB	225+52.10	60.00RT

NOTES:
 ① 5' TRANSITION CURB FROM B418 C&G TO B618 C&G.



NO	DATE	BY	CHKD	APPR	REVISION

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DATE _____ REG. NO. _____

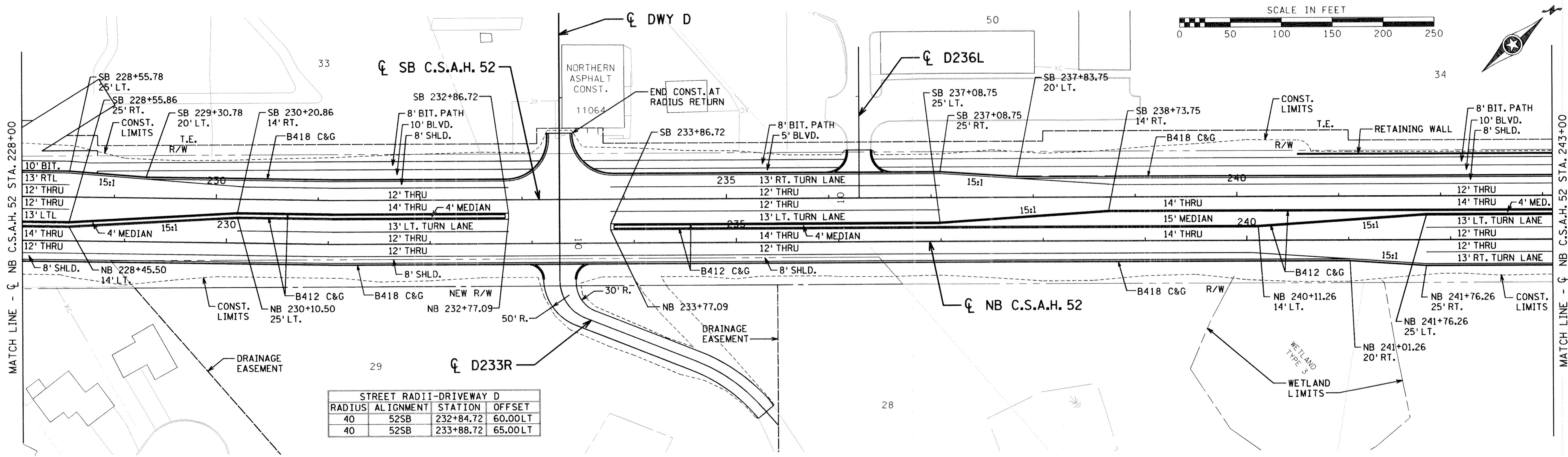
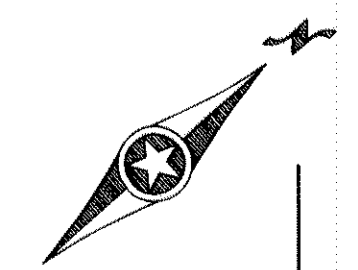
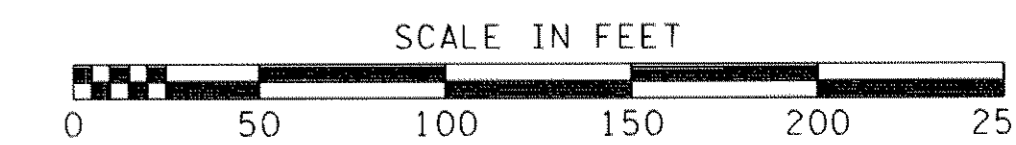
DRAWN BY TJV DATE 11-8-00
 DESIGN BY JMW DATE 11-8-00
 CHECKED BY GAR DATE 11-8-00

STATE PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

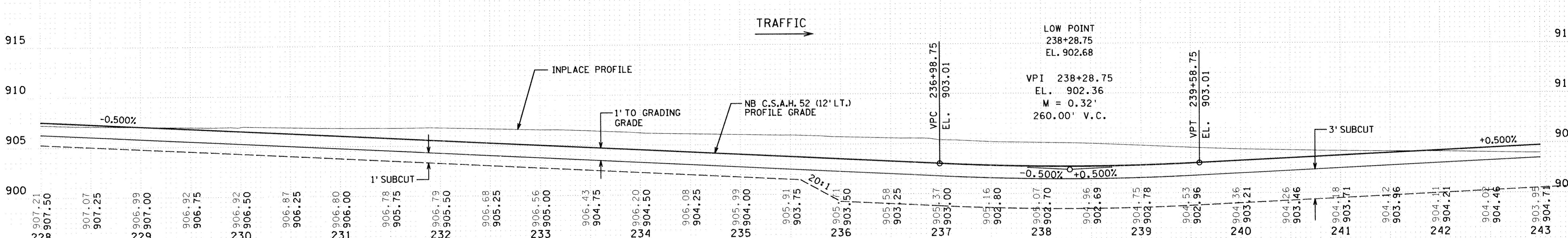
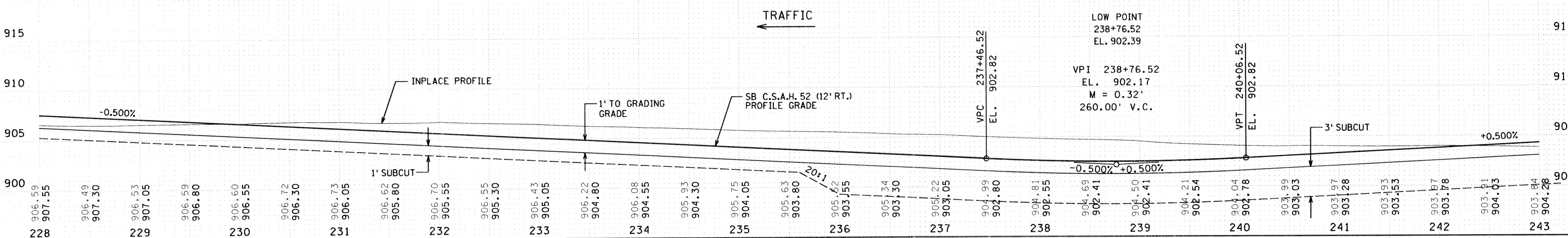
TKDA
 TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CONSTRUCTION PLAN AND PROFILE
C.S.A.H. 52 RECONSTRUCTION
 STA. 214+00 TO STA. 228+00

SHEET
 75
 OF
 253



STREET RADII-DRIVEWAY D			
RADIUS	ALIGNMENT	STATION	OFFSET
40	52SB	232+84.72	60.00LT
40	52SB	233+88.72	65.00LT



NO	DATE	BY	CKD	APPR	REVISION

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STATE PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

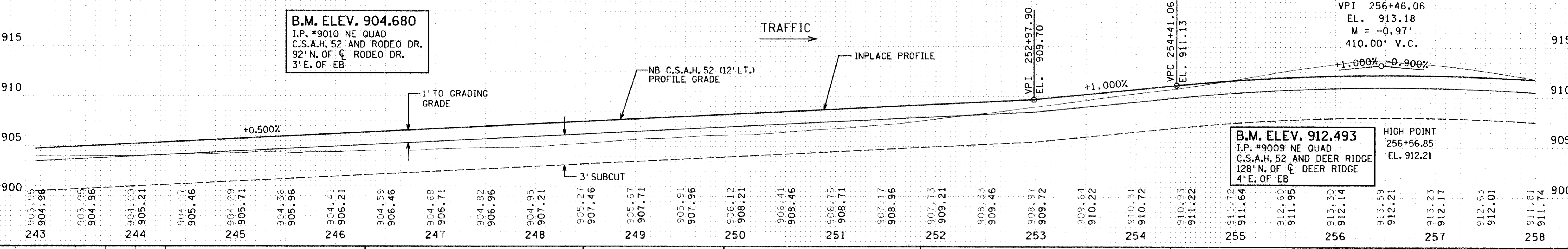
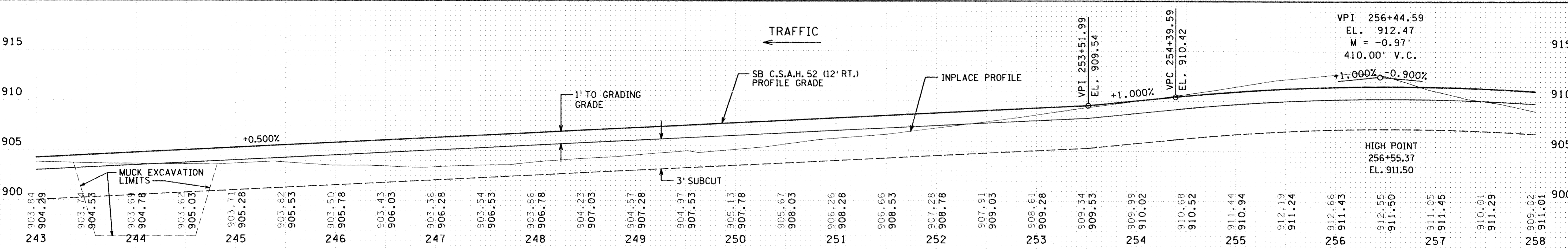
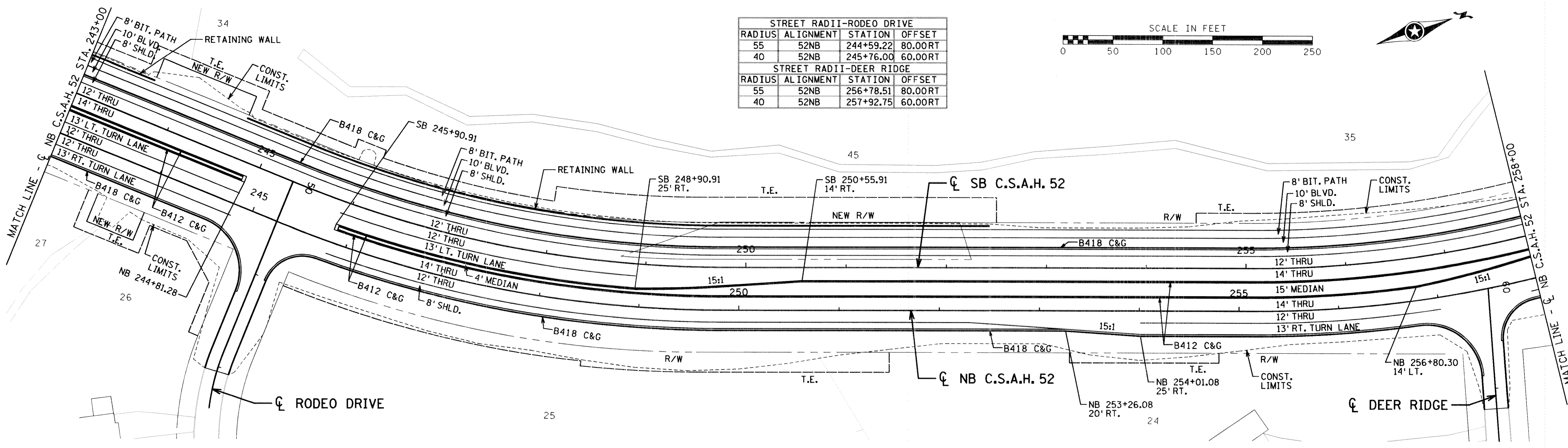
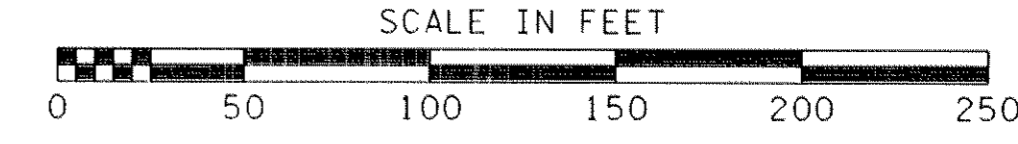
TKDA
 TOLTZ, KING, DUVAL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CONSTRUCTION PLAN AND PROFILE
 C.S.A.H. 52 RECONSTRUCTION
 STA. 228+00 TO STA. 243+00

SHEET
 76
 OF
 253

STREET RADII-RODEO DRIVE			
RADIUS	ALIGNMENT	STATION	OFFSET
55	52NB	244+59.22	80.00RT
40	52NB	245+76.00	60.00RT

STREET RADII-DEER RIDGE			
RADIUS	ALIGNMENT	STATION	OFFSET
55	52NB	256+78.51	80.00RT
40	52NB	257+92.75	60.00RT



NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\c11749\par t1\roadway\drawings\plan04.dgn 25 APR 2001

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE _____ REG. NO. _____

DRAWN BY TJV DATE 11-8-00

DESIGN BY JMW DATE 11-8-00

CHECKED BY GAR DATE 11-8-00

STATE PROJECT NO.

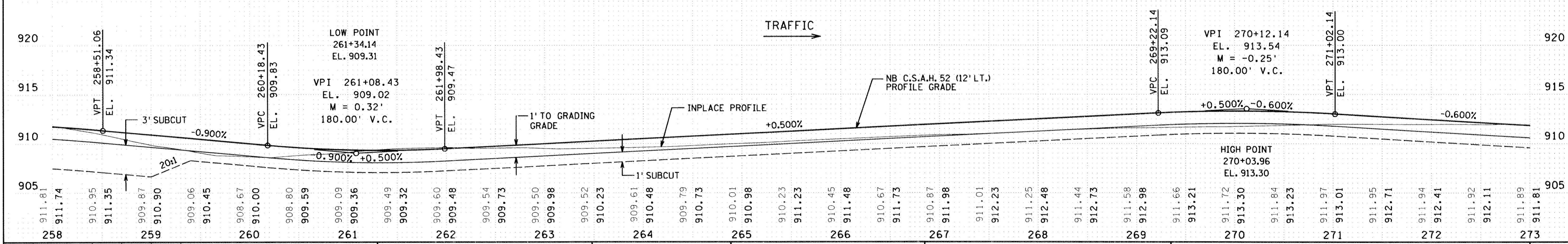
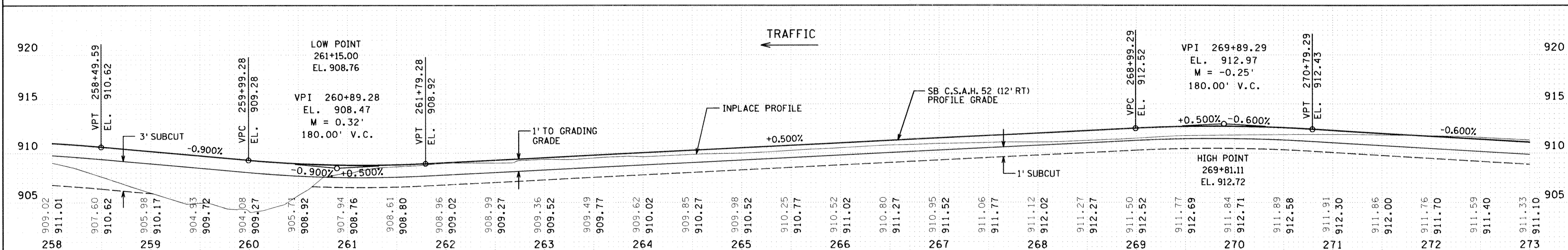
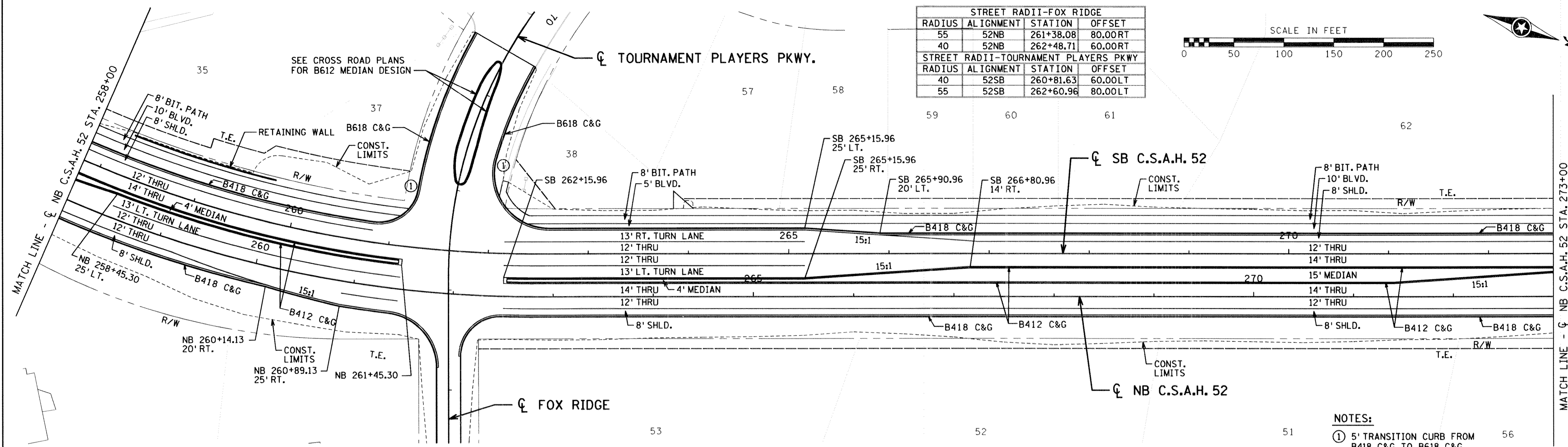
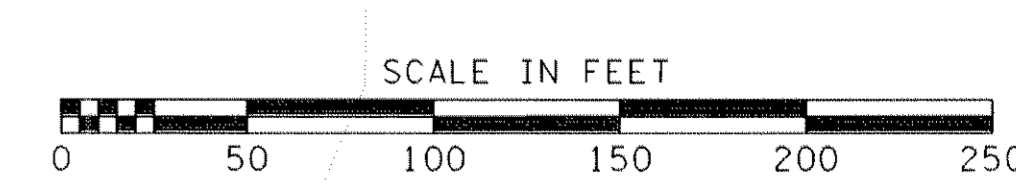
S.A.P. 02-652-01
S.A.P. 106-020-019

TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
CONSTRUCTION PLAN AND PROFILE
C.S.A.H. 52 RECONSTRUCTION
STA. 243+00 TO STA. 258+00

SHEET
77
OF
253

STREET RADII-FOX RIDGE			
RADIUS	ALIGNMENT	STATION	OFFSET
55	52NB	261+38.08	80.00RT
40	52NB	262+48.71	60.00RT
STREET RADII-TOURNAMENT PLAYERS PKWY			
RADIUS	ALIGNMENT	STATION	OFFSET
40	52SB	260+81.63	60.00LT
55	52SB	262+60.96	80.00LT



NO	DATE	BY	CHKD	APPR	REVISION

NAME: k:\site\proj\c11749\part1\roadway\drawings\plan05.dgn 25 APR 2001

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE _____ REG. NO. _____

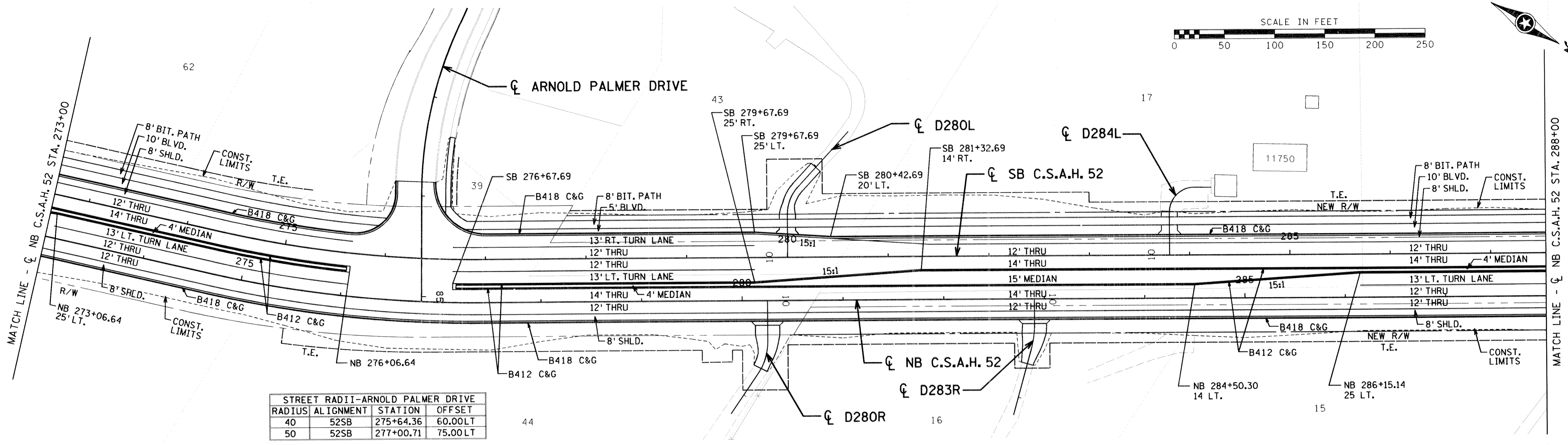
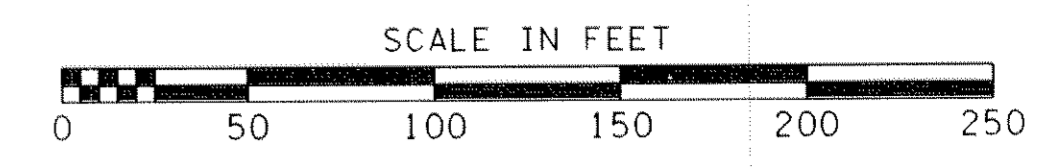
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DESIGN BY JMW DATE 11-8-00
CHECKED BY GAR DATE 11-8-00

STATE PROJECT NO. S.A.P. 02-652-01
S.A.P. 106-020-019

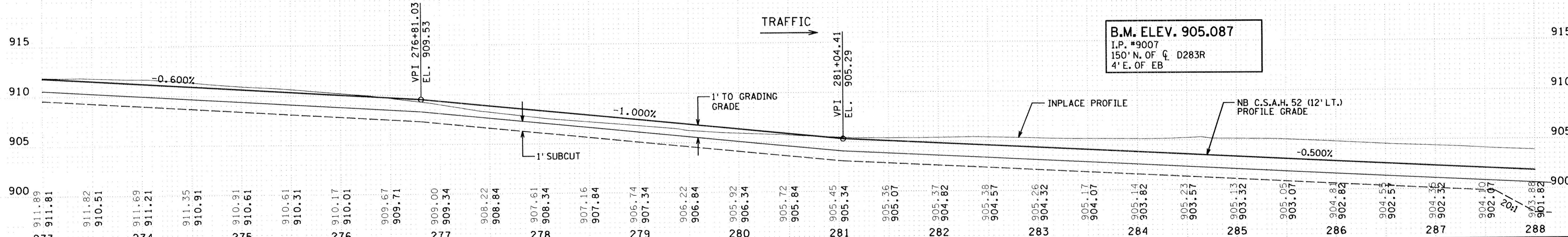
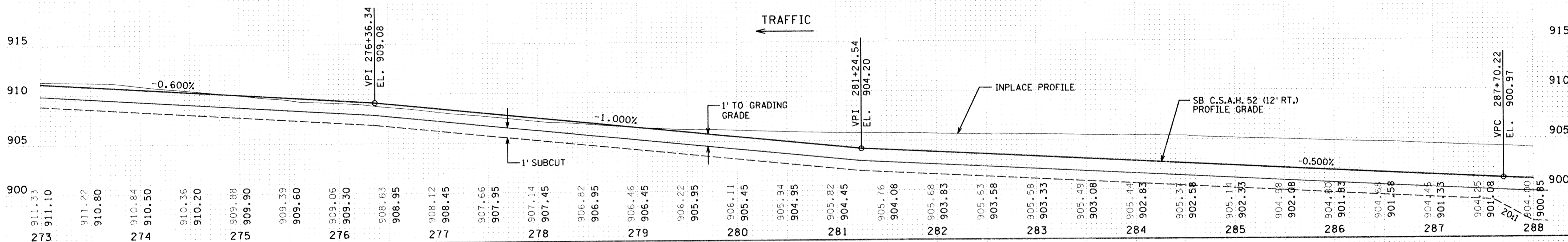
TKDA
TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
CONSTRUCTION PLAN AND PROFILE
C.S.A.H. 52 RECONSTRUCTION
STA. 258+00 TO STA. 273+00

SHEET 78 OF 253



STREET RADII-ARNOLD PALMER DRIVE			
RADIUS	ALIGNMENT	STATION	OFFSET
40	52SB	275+64.36	60.00LT
50	52SB	277+00.71	75.00LT



NO	DATE	BY	CKD	APPR	REVISION

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DATE _____ REG. NO. _____

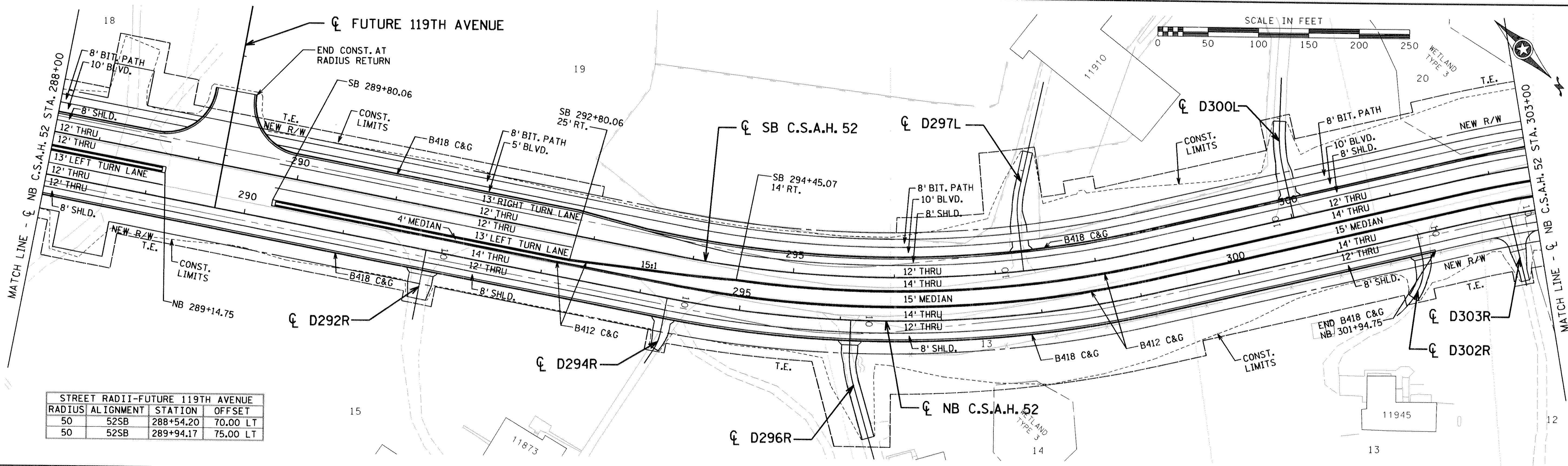
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 CHECKED BY GAR DATE 11-8-00

STATE PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

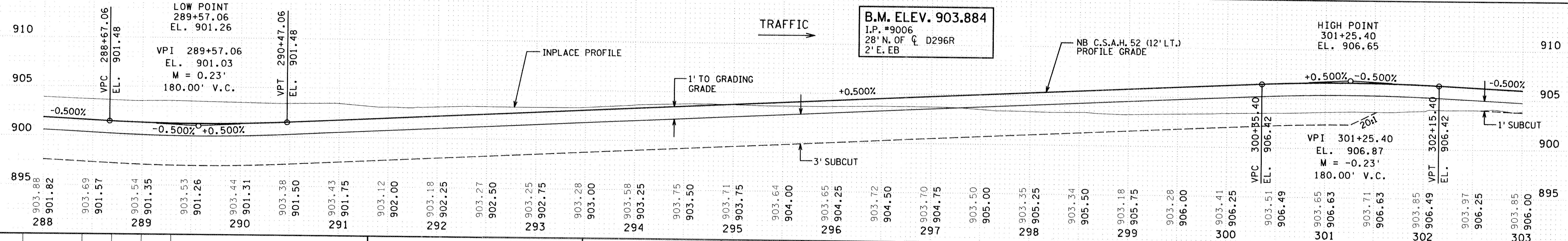
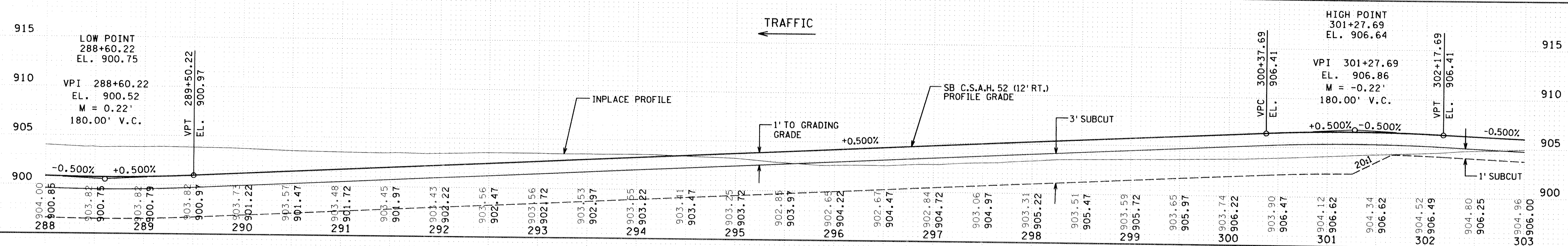
TKDA
 TOLTZ, KING, DUVAL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CONSTRUCTION PLAN AND PROFILE
 C.S.A.H. 52 RECONSTRUCTION
 STA. 273+00 TO STA. 288+00

SHEET
 79
 OF
 253



STREET RADII-FUTURE 119TH AVENUE			
RADIUS	ALIGNMENT	STATION	OFFSET
50	52SB	288+54.20	70.00 LT
50	52SB	289+94.17	75.00 LT



NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\c11749\part1\roadway\drawings\plan07.dgn 25 APR 2001

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE _____ REG. NO. _____

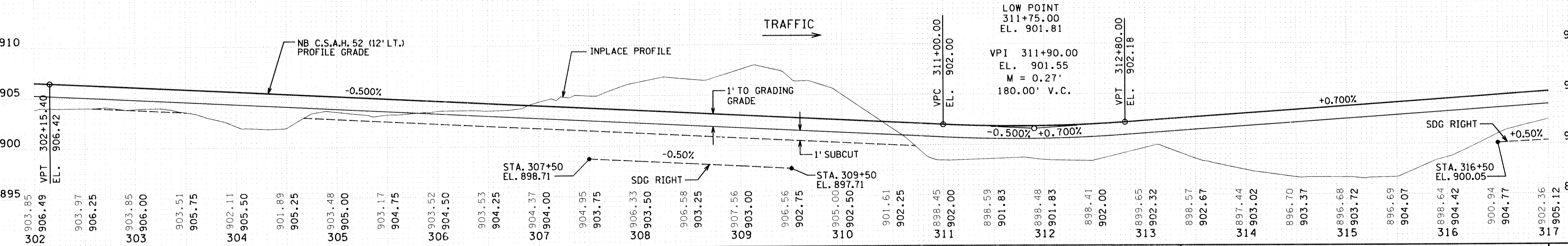
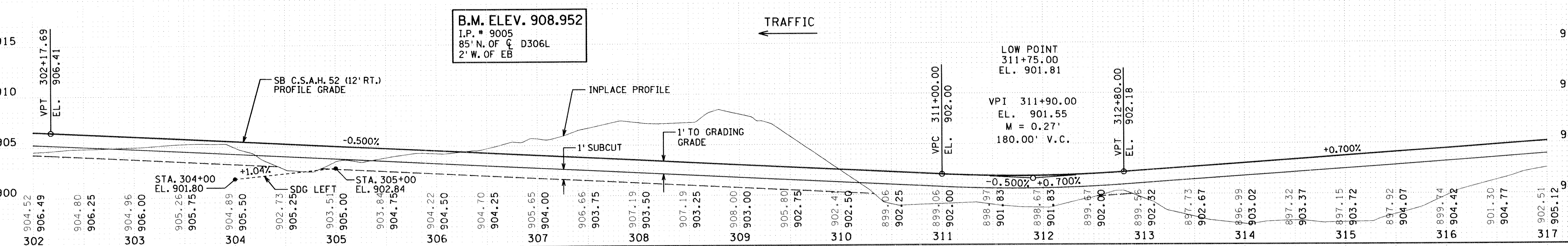
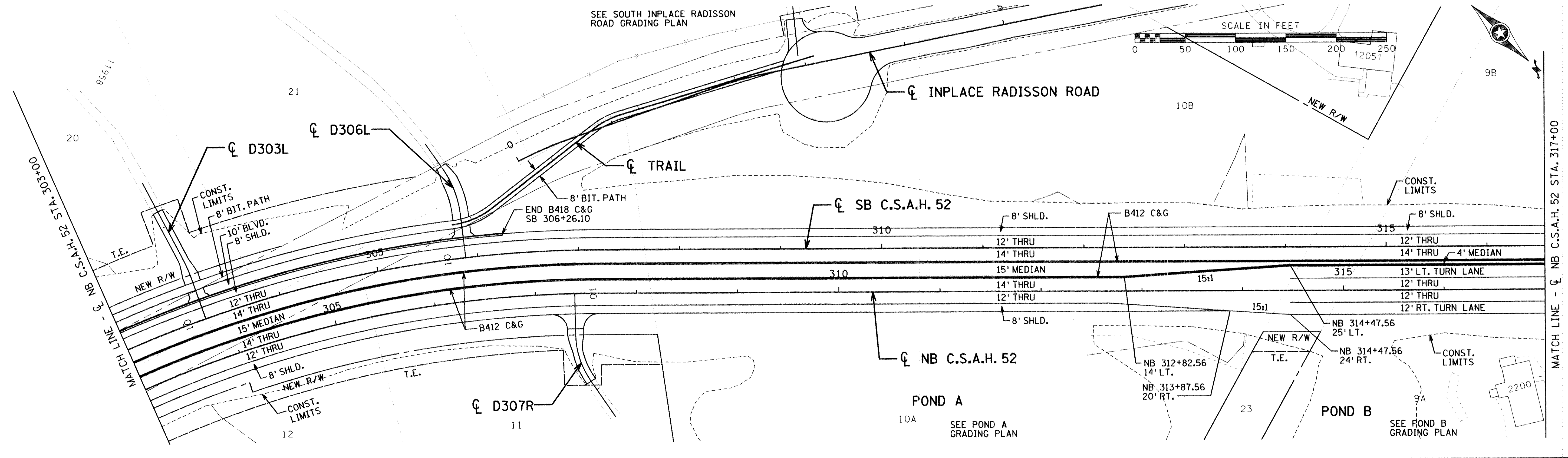
DRAWN BY TJV DATE 11-8-00
 DESIGN BY JMW DATE 11-8-00
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STATE PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
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 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CONSTRUCTION PLAN AND PROFILE
 C.S.A.H. 52 RECONSTRUCTION
 STA. 288+00 TO STA. 303+00

SHEET
 80
 OF
 253



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.

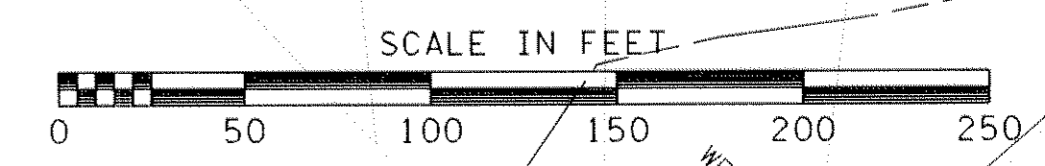
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STATE PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

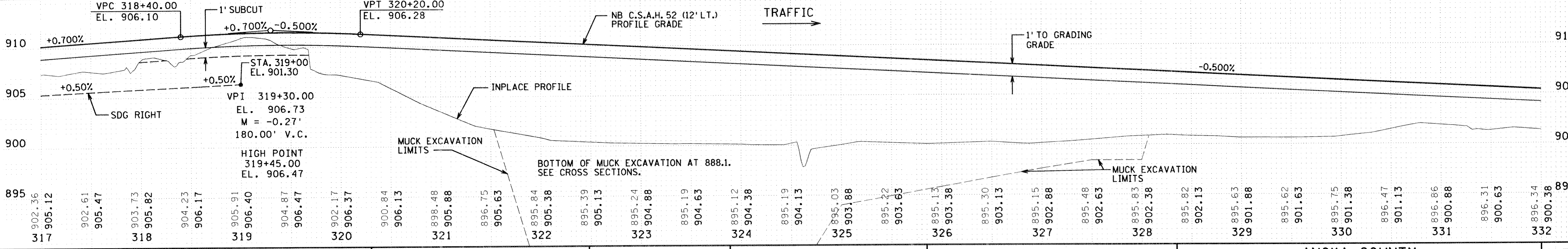
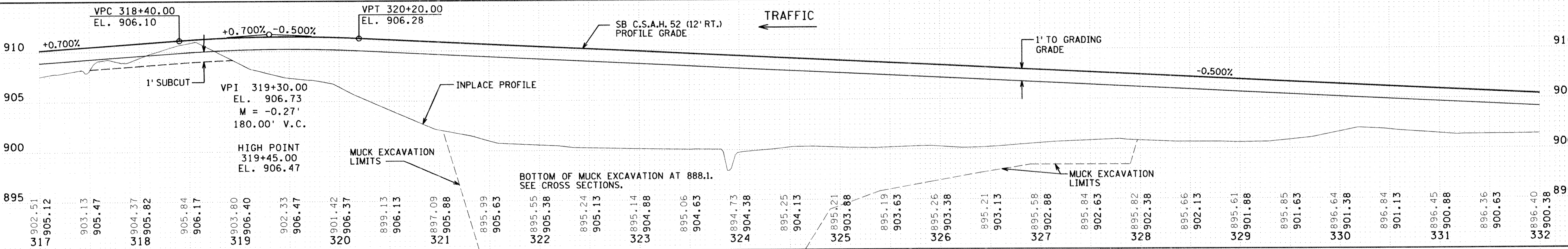
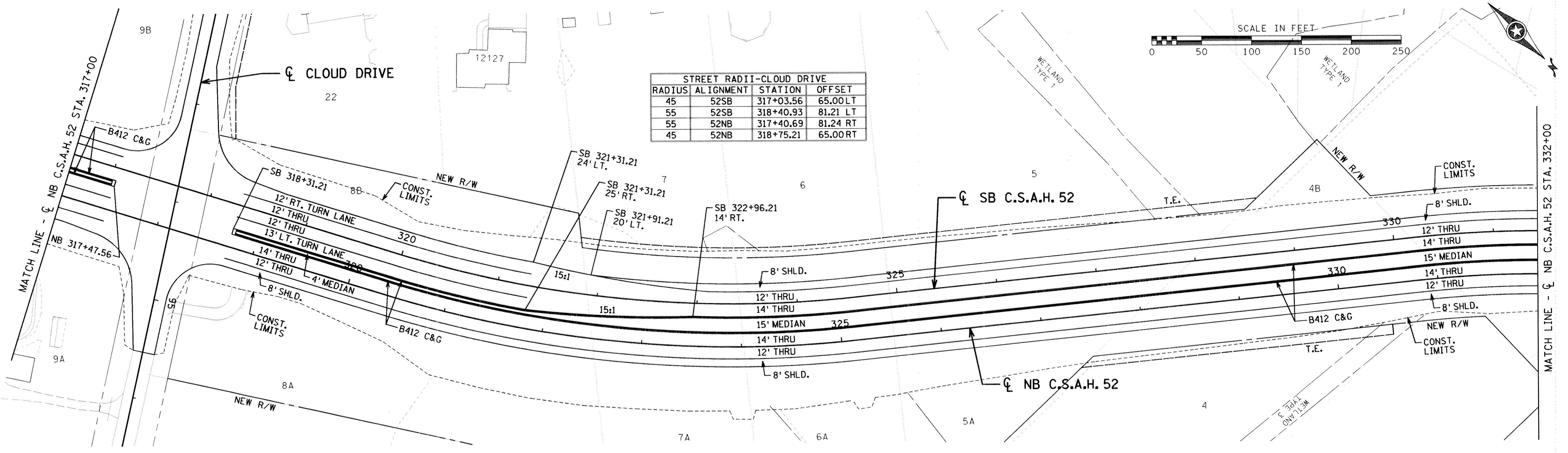
TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CONSTRUCTION PLAN AND PROFILE
 C.S.A.H. 52 RECONSTRUCTION
 STA. 303+00 TO STA. 317+00

SHEET
 81
 OF
 253



STREET RADII-CLOUD DRIVE			
RADIUS	ALIGNMENT	STATION	OFFSET
45	52SB	317+03.56	65.00LT
55	52SB	318+40.93	81.21 LT
55	52NB	317+40.69	81.24 RT
45	52NB	318+75.21	65.00RT



NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\ct1749\part1\roadway\drawings\plan09.dgn 25 APR 2001

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DATE _____ REG. NO. _____

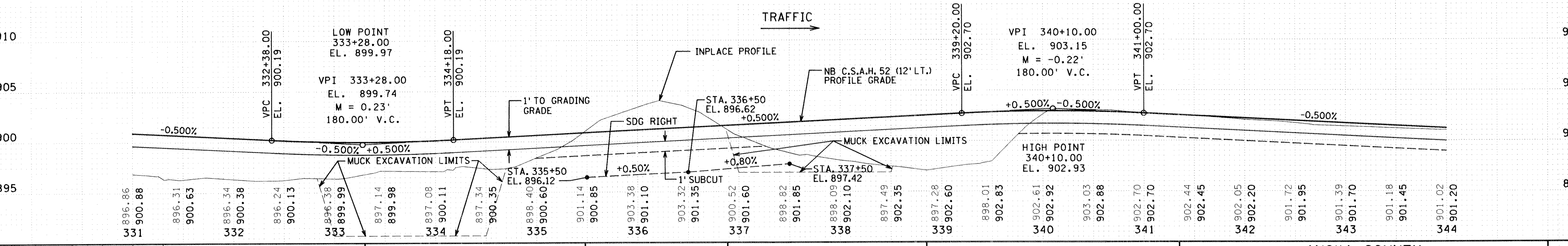
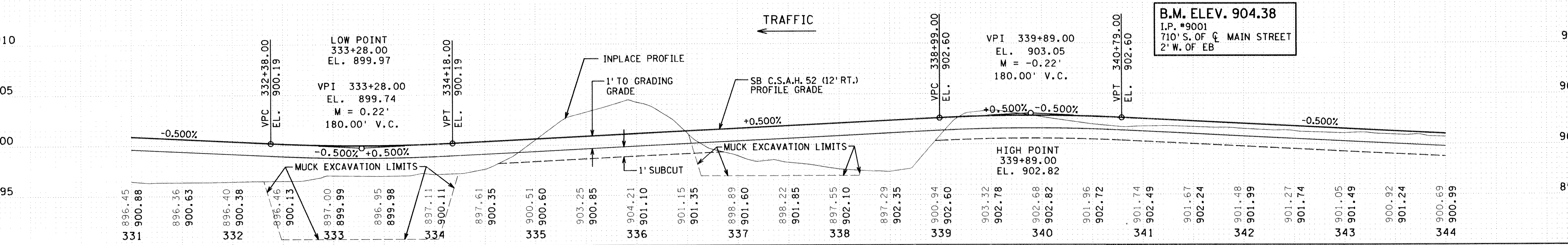
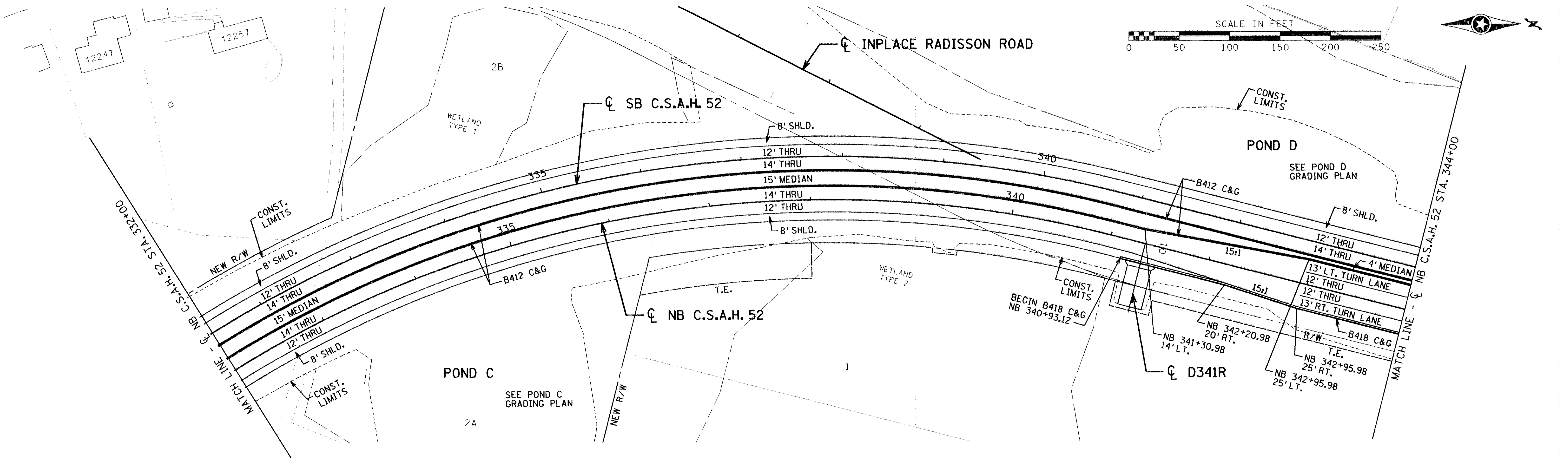
DRAWN BY TJV DATE 11-8-00
 DESIGN BY JMW DATE 11-8-00
 CHECKED BY GAR DATE 11-8-00

STATE PROJECT NO. _____
 S.A.P. 02-652-01
 S.A.P. 106-020-019

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 TOLTZ, KING, DUVAL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CONSTRUCTION PLAN AND PROFILE
 C.S.A.H. 52 RECONSTRUCTION
 STA. 317+00 TO STA. 332+00

SHEET
 82
 OF
 253



NO	DATE	BY	CKD	APPR	REVISION

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DATE _____ REG. NO. _____

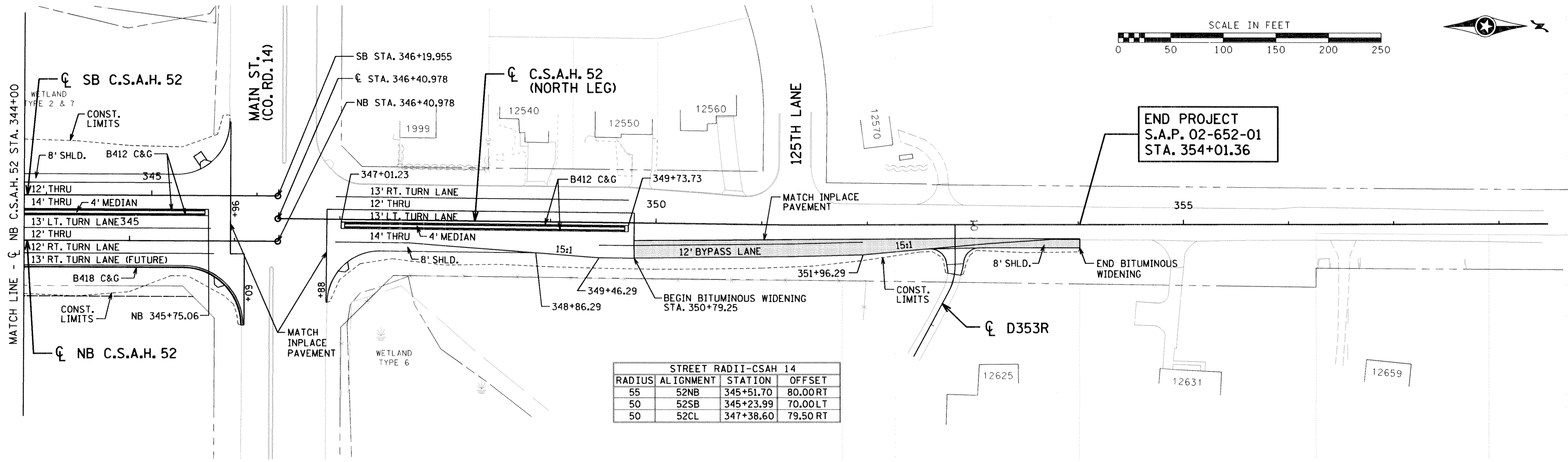
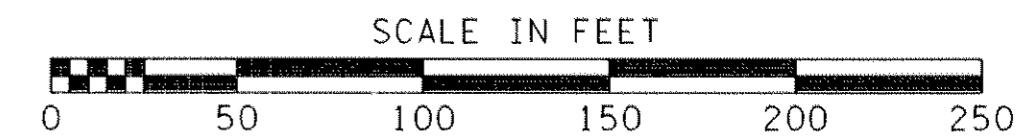
DRAWN BY TJV DATE 11-8-00
 DESIGN BY JMW DATE 11-8-00
 CHECKED BY GAR DATE 11-8-00

STATE PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

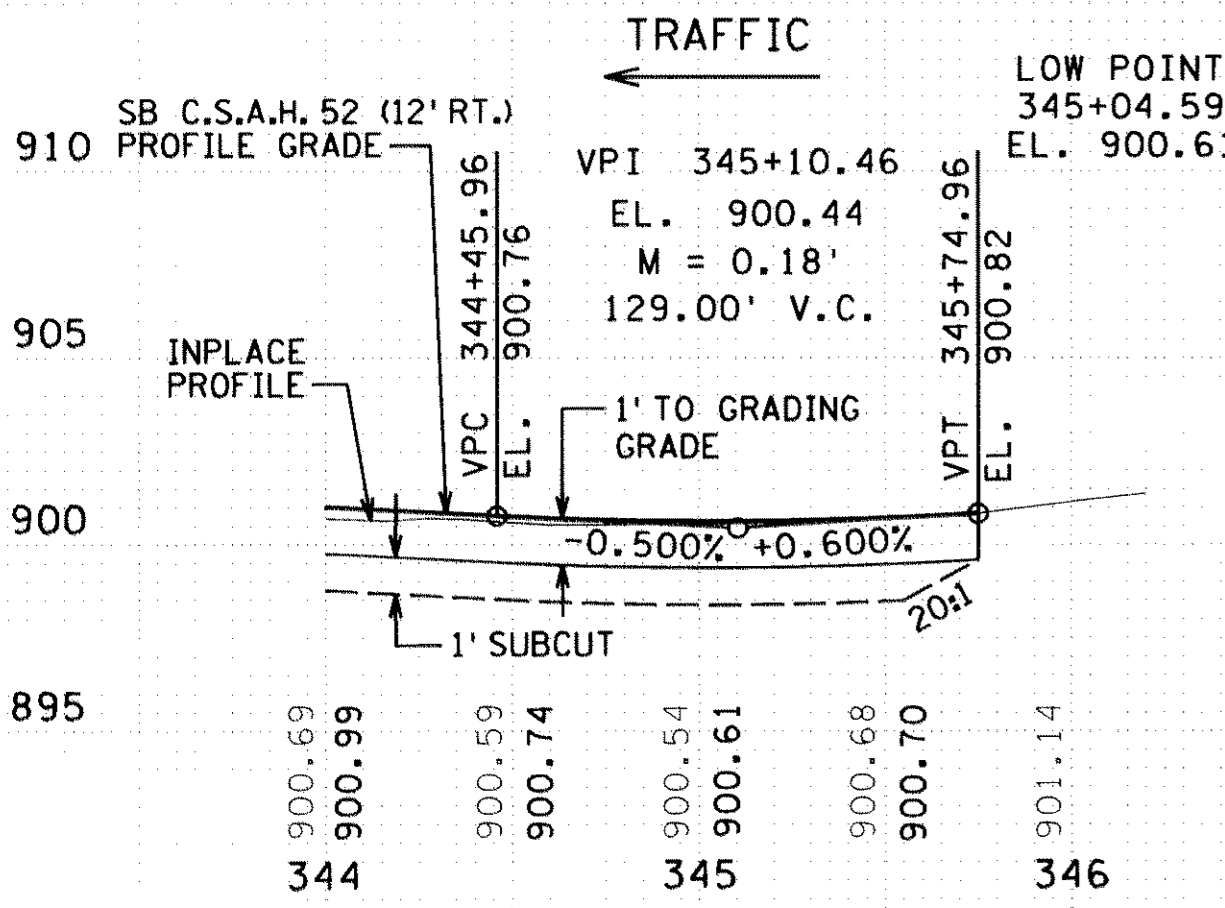
TKDA
 TOLTZ, KING, DUVAL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CONSTRUCTION PLAN AND PROFILE
 C.S.A.H. 52 RECONSTRUCTION
 STA. 332+00 TO STA. 344+00

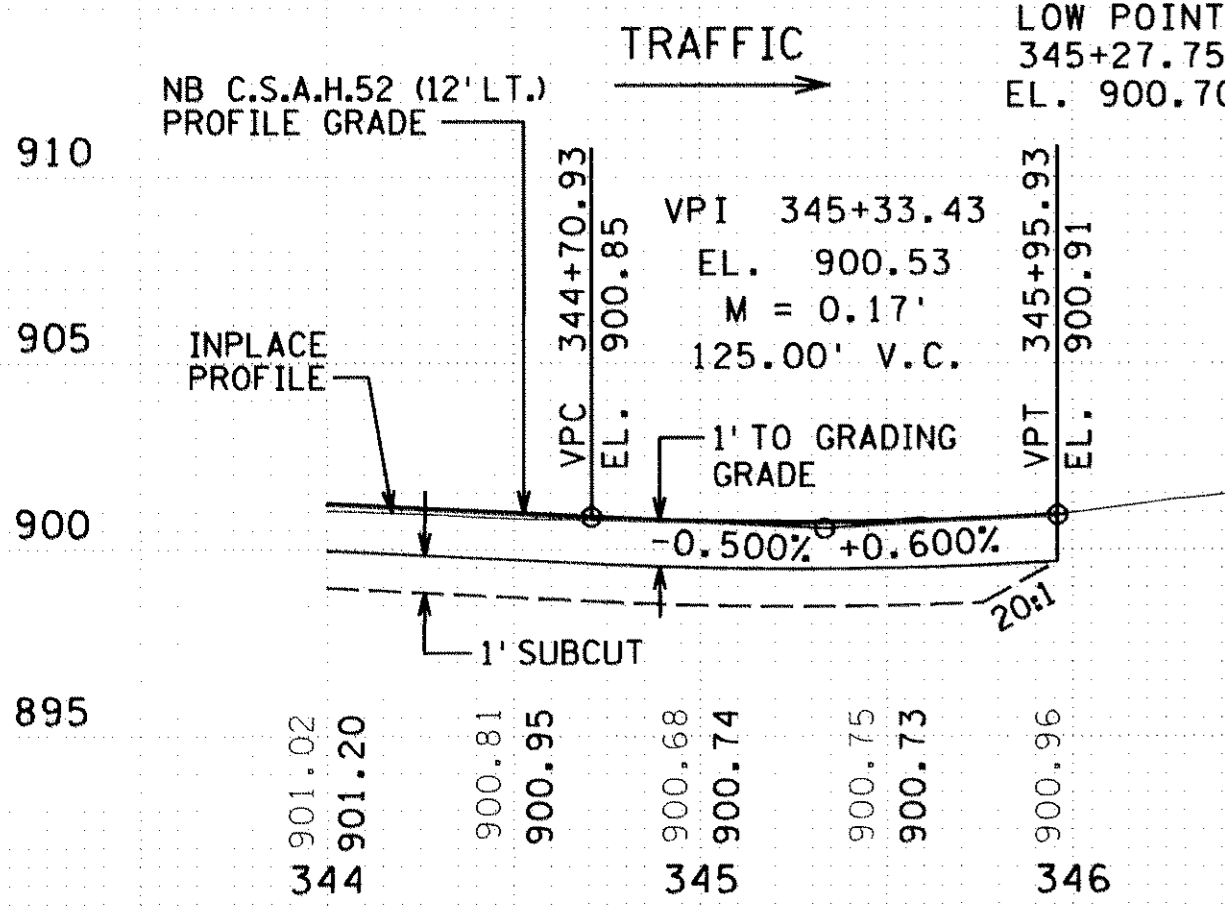
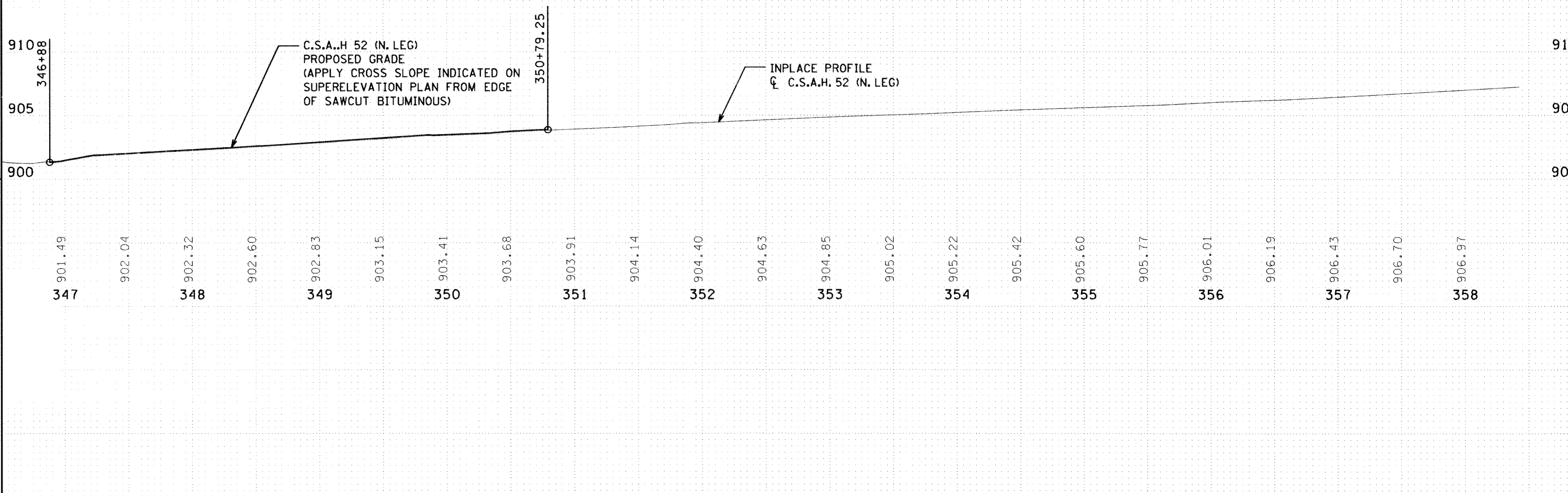
SHEET
 83
 OF
 253



STREET RADII-CSAH 14			
RADIUS	ALIGNMENT	STATION	OFFSET
55	52NB	345+51.70	80.00RT
50	52SB	345+23.99	70.00LT
50	52CL	347+38.60	79.50RT



B.M. ELEV. 900.82
 I.P. #9000 SE QUAD.
 C.S.A.H. 52 AND MAIN STREET
 3' S. OF EB



NO	DATE	BY	CHKD	APPR	REVISION

NAME: k:\site\proj\11749\part1\roadway\drawings\plan1.dgn 25 APR 2001

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE _____ REG. NO. _____

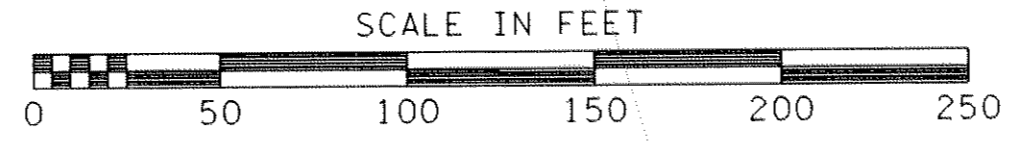
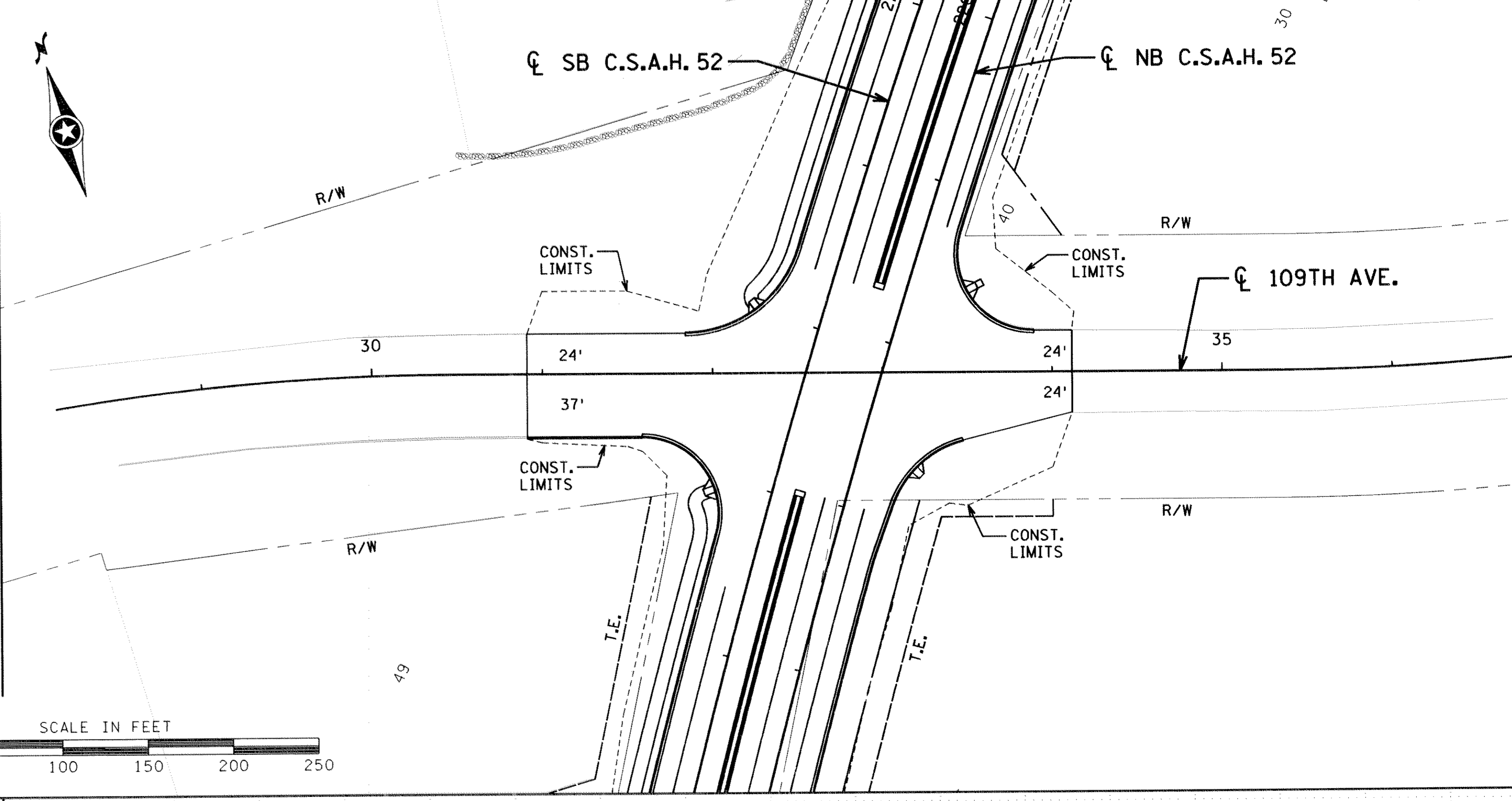
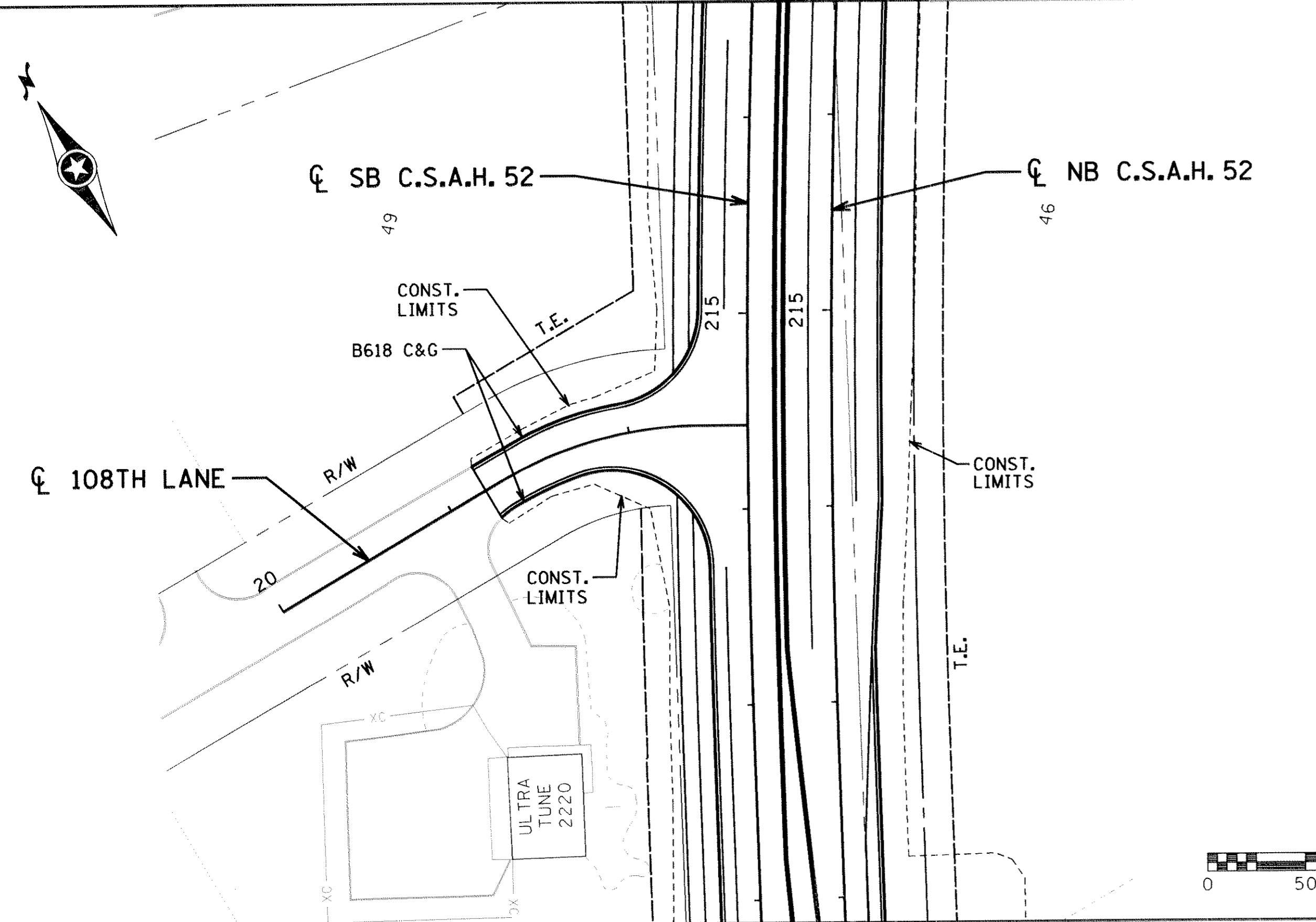
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 DESIGN BY JMW DATE 11-8-00
 CHECKED BY GAR DATE 11-8-00

STATE PROJECT NO. S.A.P. 02-652-01
 S.A.P. 106-020-019

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

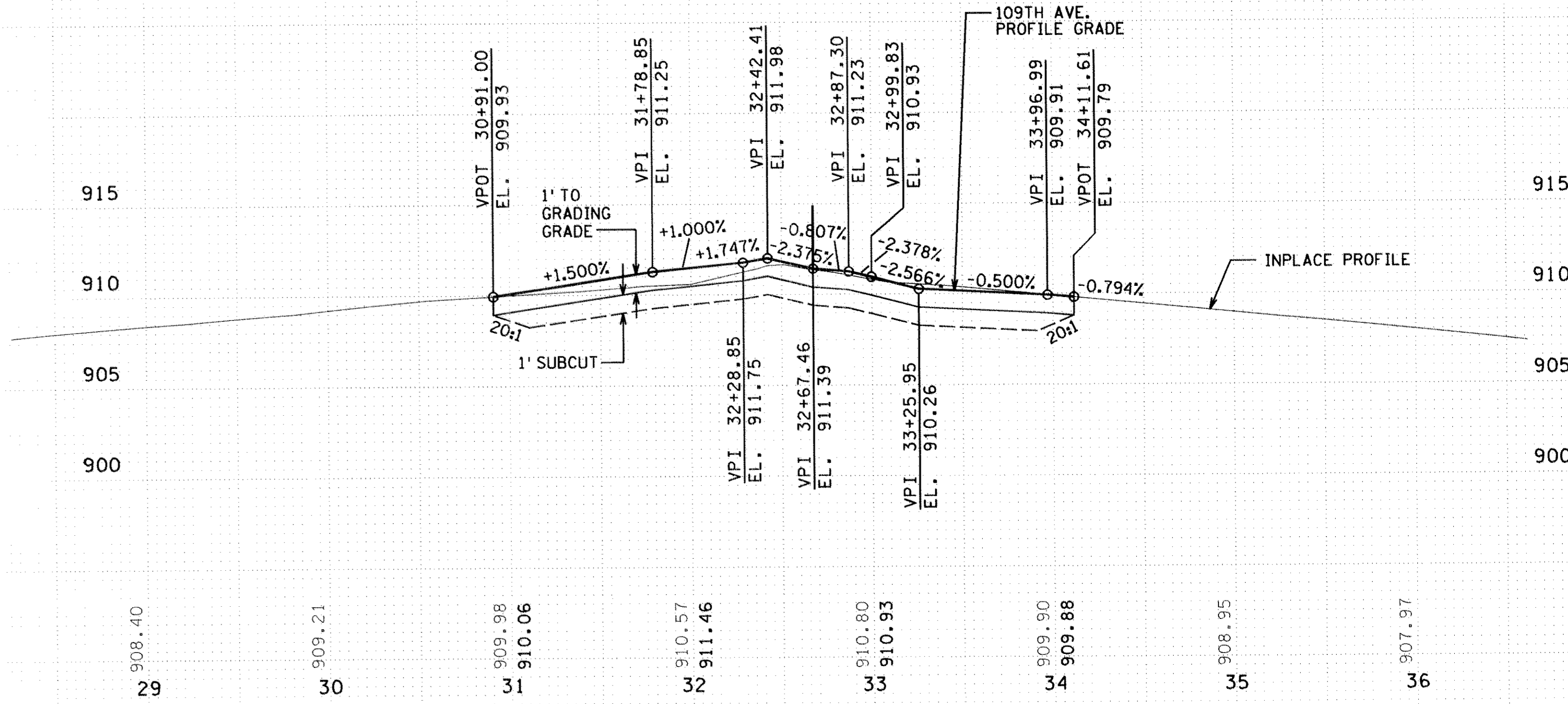
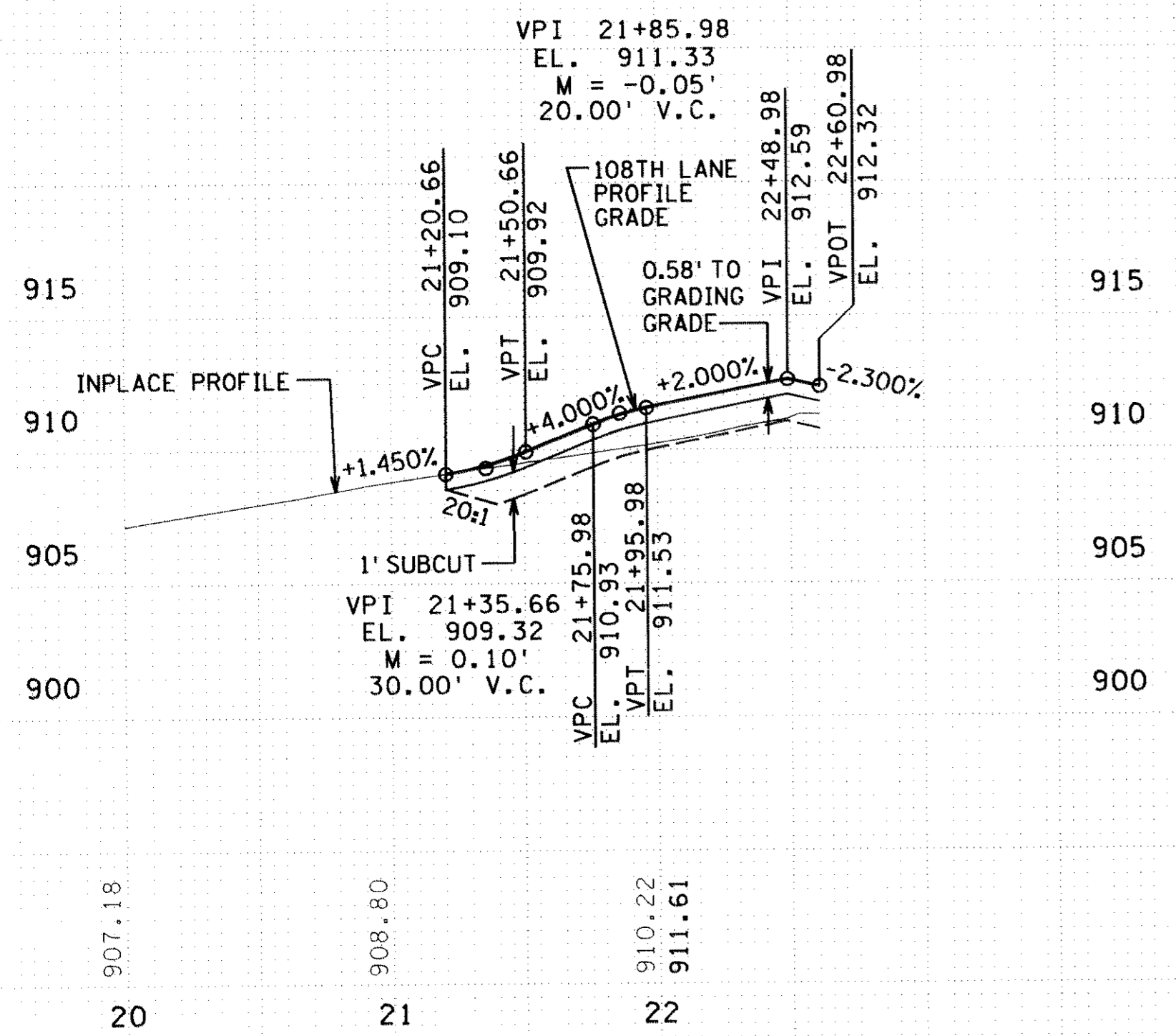
ANOKA COUNTY
 CONSTRUCTION PLAN AND PROFILE
 C.S.A.H. 52 RECONSTRUCTION
 STA. 344+00 TO STA. 354+01.36

SHEET 84 OF 253



TRAFFIC

TRAFFIC



NO	DATE	BY	CKD	APPR	REVISION

DATE: 25 APR 2001

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE: _____ REG. NO. _____

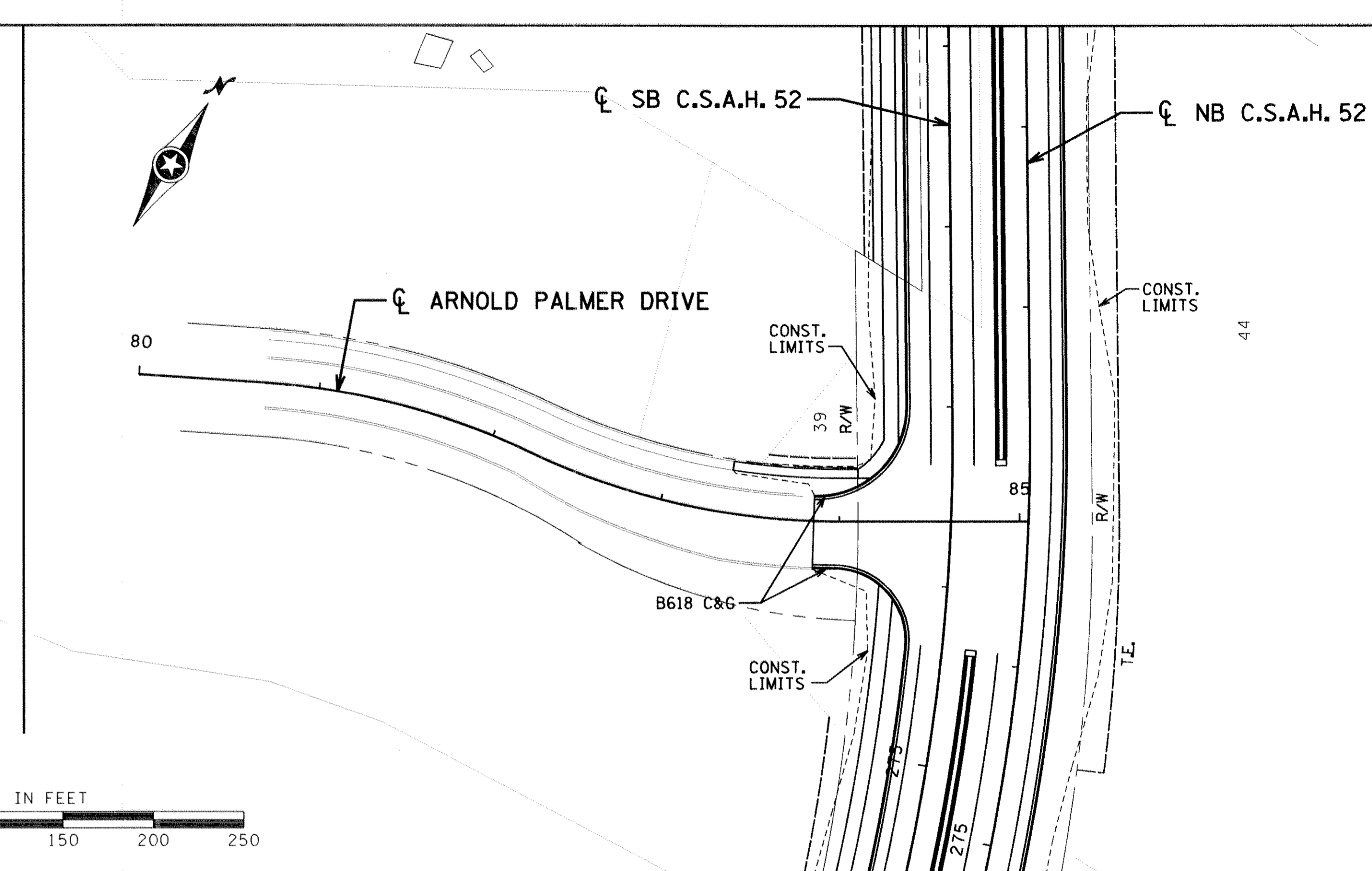
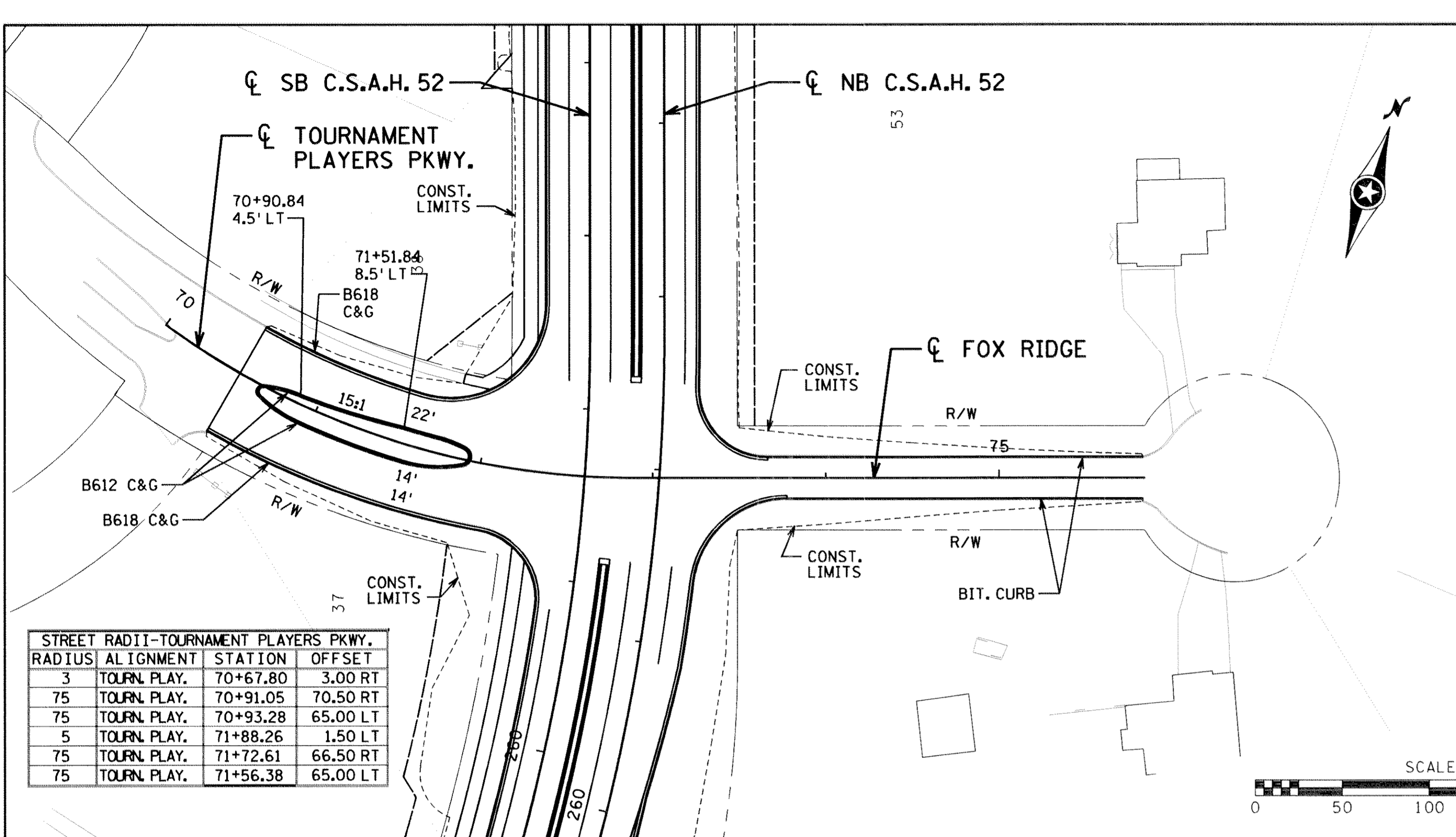
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 DESIGN BY: JMW DATE: 11-8-00
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STATE PROJECT NO. S.A.P. 02-652-01
 S.A.P. 106-020-019

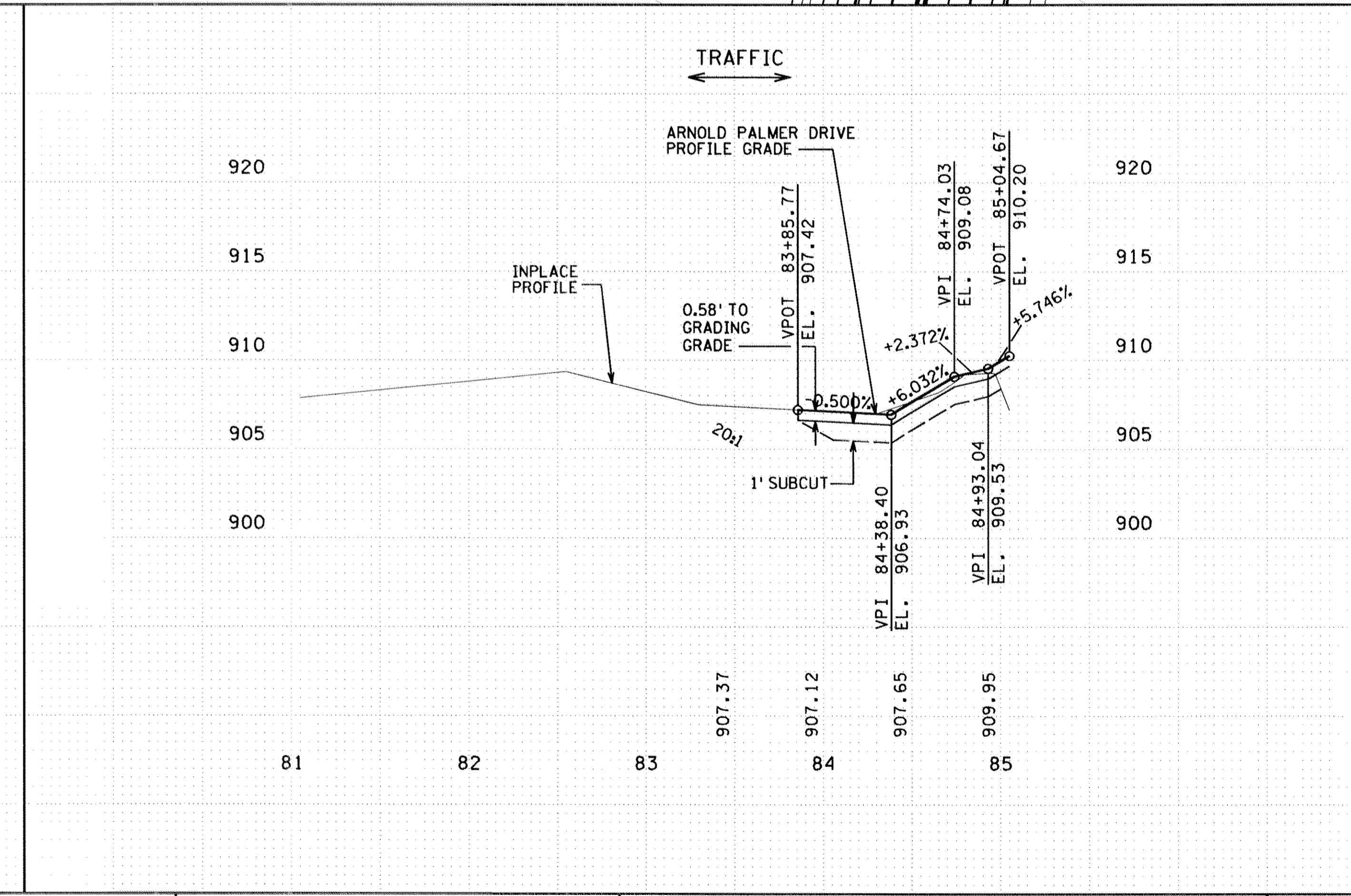
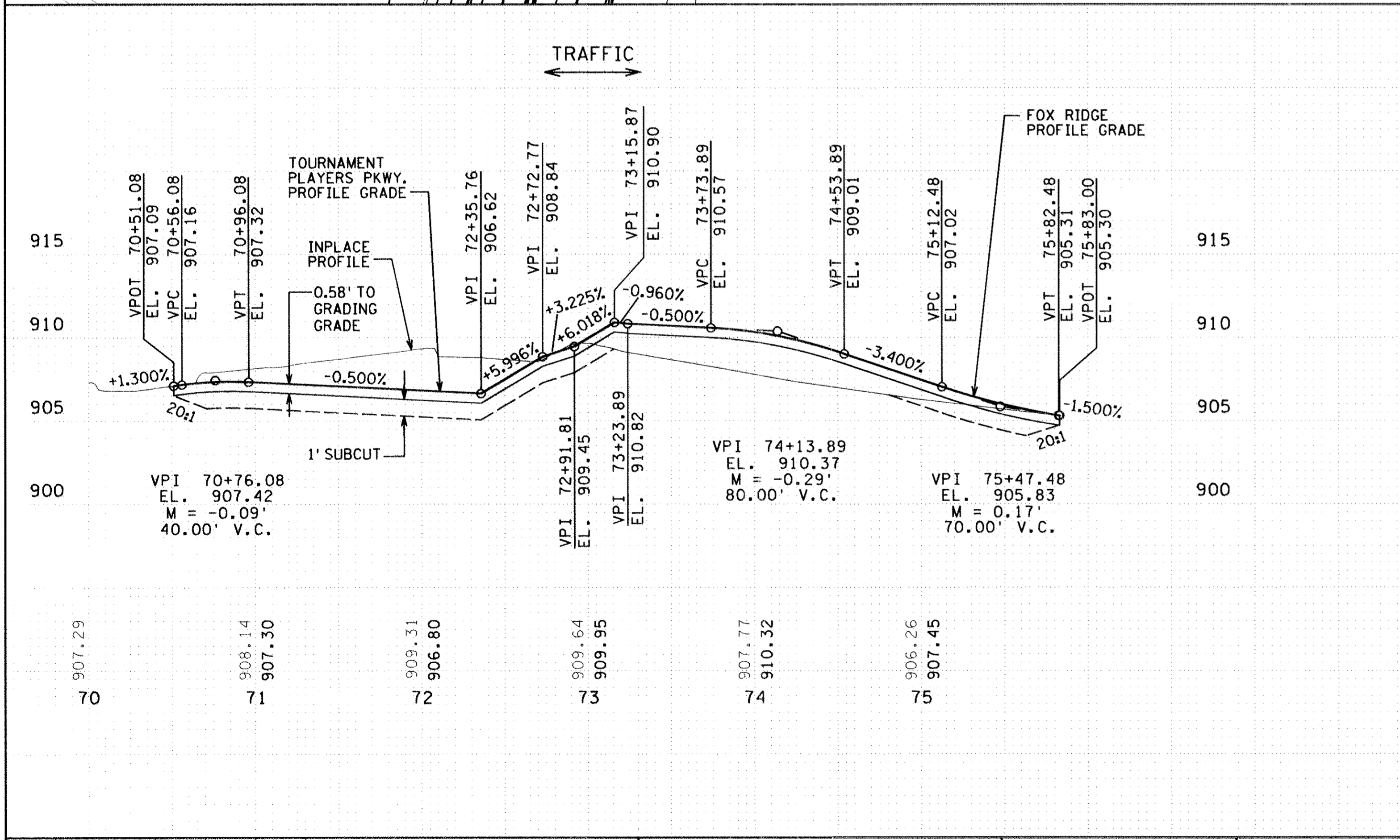
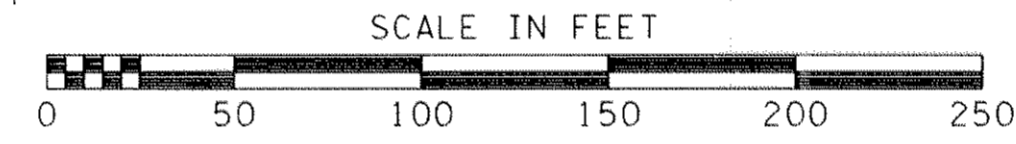
TKDA
 TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CONSTRUCTION PLAN AND PROFILE
 C.S.A.H. 52 RECONSTRUCTION
 108TH LANE, 109TH AVE.

SHEET 85 OF 253



STREET RADII-TOURNAMENT PLAYERS PKWY.			
RADIUS	ALIGNMENT	STATION	OFFSET
3	TOURN. PLAY.	70+67.80	3.00 RT
75	TOURN. PLAY.	70+91.05	70.50 RT
75	TOURN. PLAY.	70+93.28	65.00 LT
5	TOURN. PLAY.	71+88.26	1.50 LT
75	TOURN. PLAY.	71+72.61	66.50 RT
75	TOURN. PLAY.	71+56.38	65.00 LT



NO	DATE	BY	CHKD	APPR	REVISION

NAME: k:\site\proj\c11749\part1\roadway\drawings\plan14.dgn 25 APR 2001

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE _____ REG. NO. _____

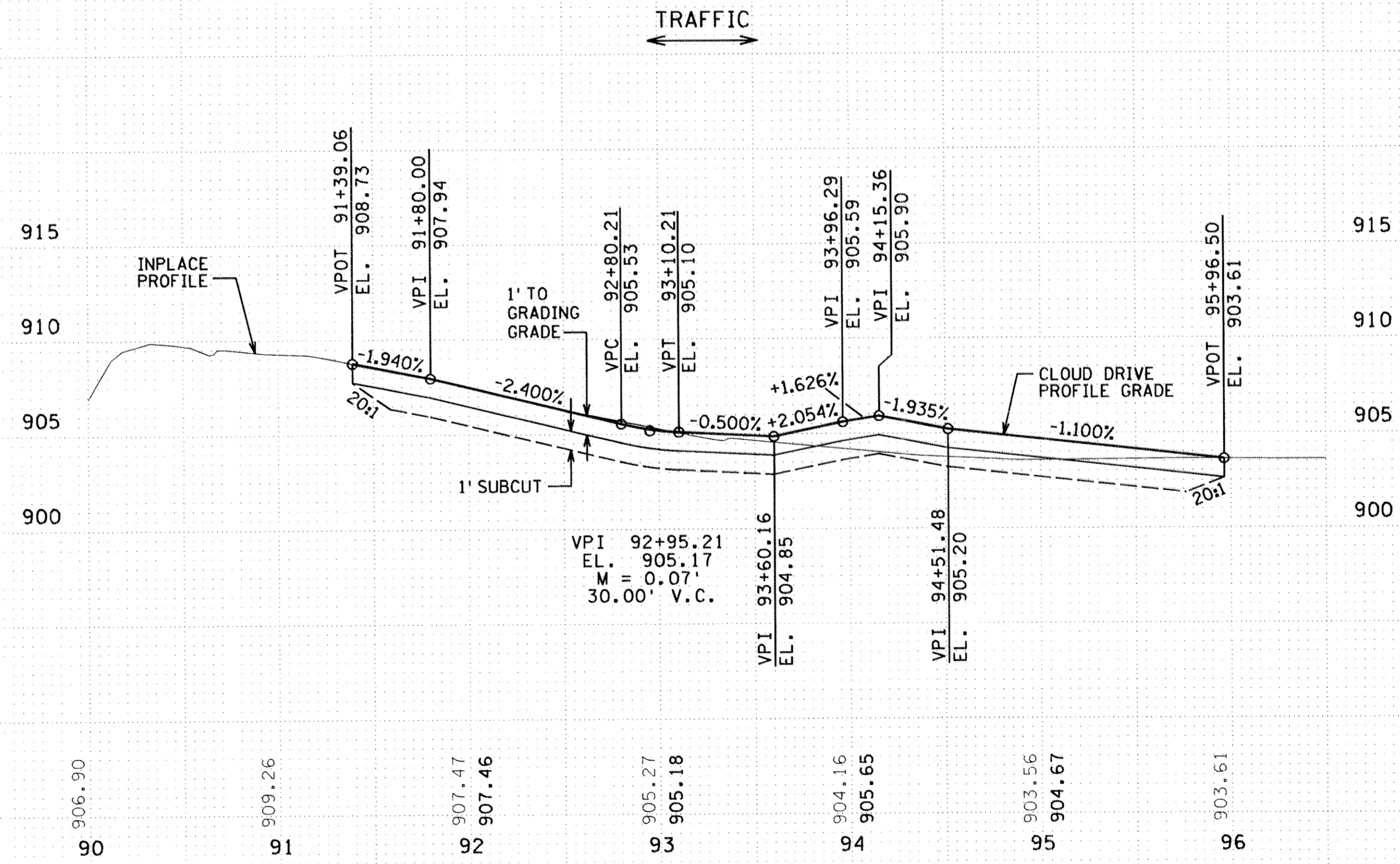
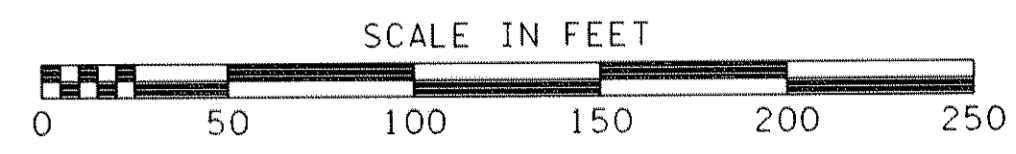
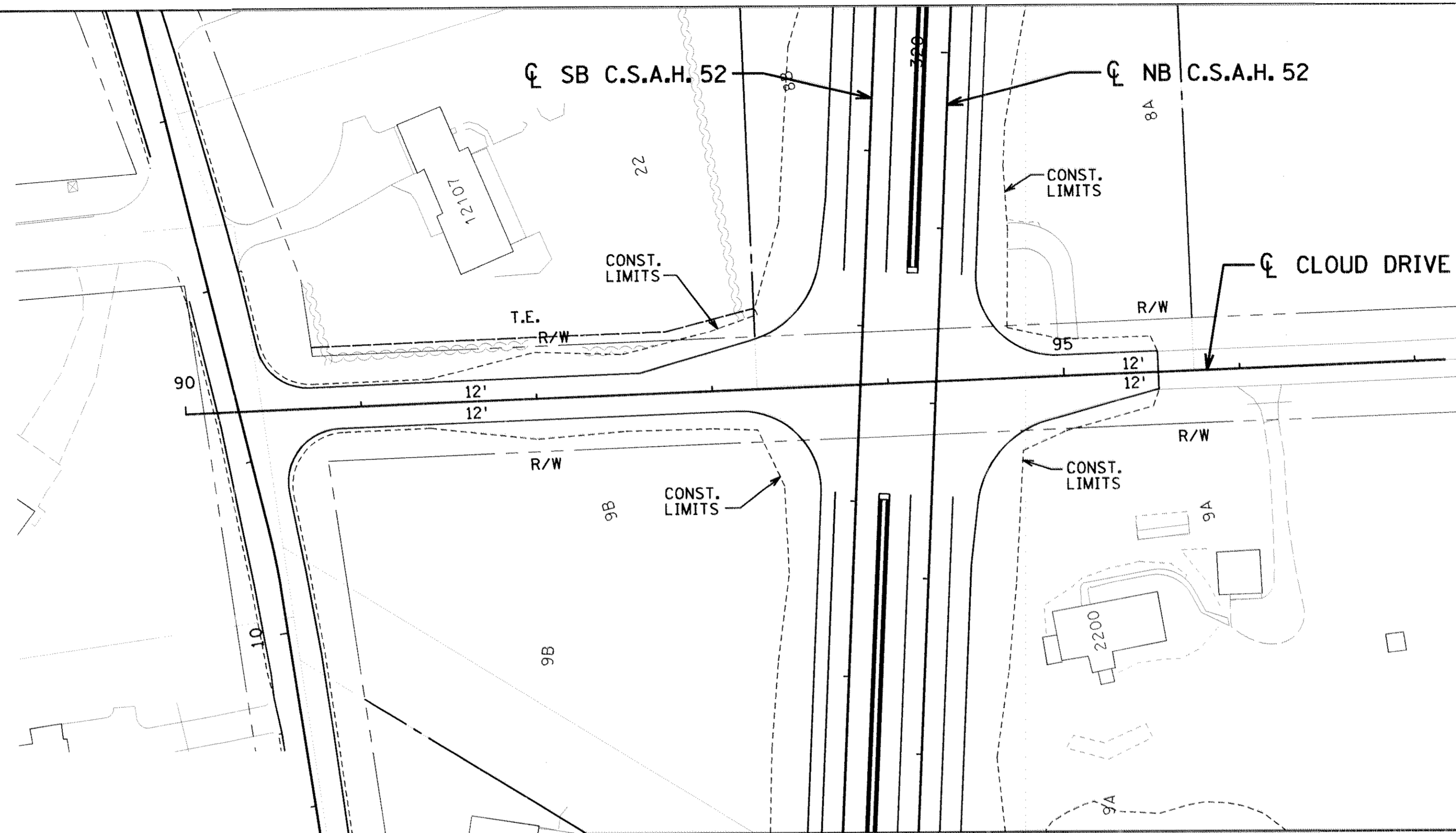
DRAWN BY TJV DATE 11-8-00
DESIGN BY JMW DATE 11-8-00
CHECKED BY GAR DATE 11-8-00

STATE PROJECT NO.
S.A.P. 02-652-01
S.A.P. 106-020-019

TKDA
TOLTZ, KING, DUVAL, ANDERSON AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
CONSTRUCTION PLAN AND PROFILE
C.S.A.H. 52 RECONSTRUCTION
TOURNAMENT PLAYERS PKWY, FOX RIDGE, PALMER DRIVE

SHEET 87 OF 253



NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\c11749\part1\roadway\drawings\plan15.dgn 25 APR 2001

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.

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STATE PROJECT NO. _____
 S.A.P. 02-652-01
 S.A.P. 106-020-019

TKDA TOLTZ, KING, DUVAL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CONSTRUCTION PLAN AND PROFILE
 C.S.A.H. 52 RECONSTRUCTION
 CLOUD DRIVE

SHEET
 88
 OF
 253

RADIUS	ALIGNMENT	STATION	OFFSET
45	INP. RAD. RD.	3+18.02	15.00 RT
30	INP. RAD. RD.	3+63.02	45.00 LT
30	INP. RAD. RD.	3+86.76	45.00 RT
30	INP. RAD. RD.	10+76.84	45.00 RT
30	INP. RAD. RD.	11+62.61	45.00 RT

MATCH LINE - ☉ RADISSON ROAD STA. 2+00

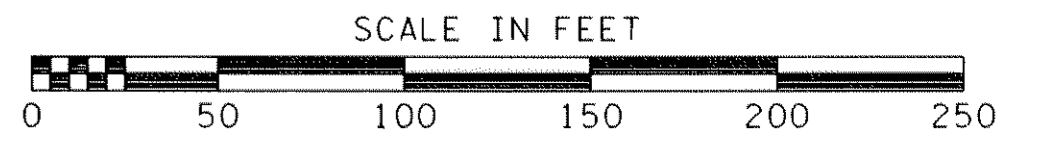
MATCH LINE - ☉ C.S.A.H. 52 STA. 16+50

SEE SOUTH INPLACE RADISSON ROAD GRADING PLAN FOR CUL-DE-SAC CONST.

☉ INPLACE RADISSON ROAD

☉ CLOUD DRIVE

MATCH LINE - ☉ CLOUD DR. 92+00



☉ INPLACE RADISSON ROAD

24+54.93
20.49 LT

CONST. LIMITS

29+58.37
211.66 LT

END BIT. CONST. MATCH INPLACE

BEGIN BIT. CONST. MATCH INPLACE

24+55.12
24.51 RT.

29+72.06
188.18 LT.
SEE NORTH INPLACE RADISSON ROAD GRADING PLAN

END BIT. CONST. MATCH INPLACE BIT. STA 18+54.45

CONST. LIMITS

CONST. LIMITS

WETLAND TYPE 1

WETLAND TYPE 1

MATCH LINE - ☉ RADISSON ROAD STA. 32+00

MATCH LINE - ☉ NB C.S.A.H. 52 STA. 316+50

NO	DATE	BY	CHKD	APPR	REVISION

NAME: k:\site\proj\c11749\par\1\roadway\drawings\plan16.dgn 25 APR 2001

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE _____ REG. NO. _____

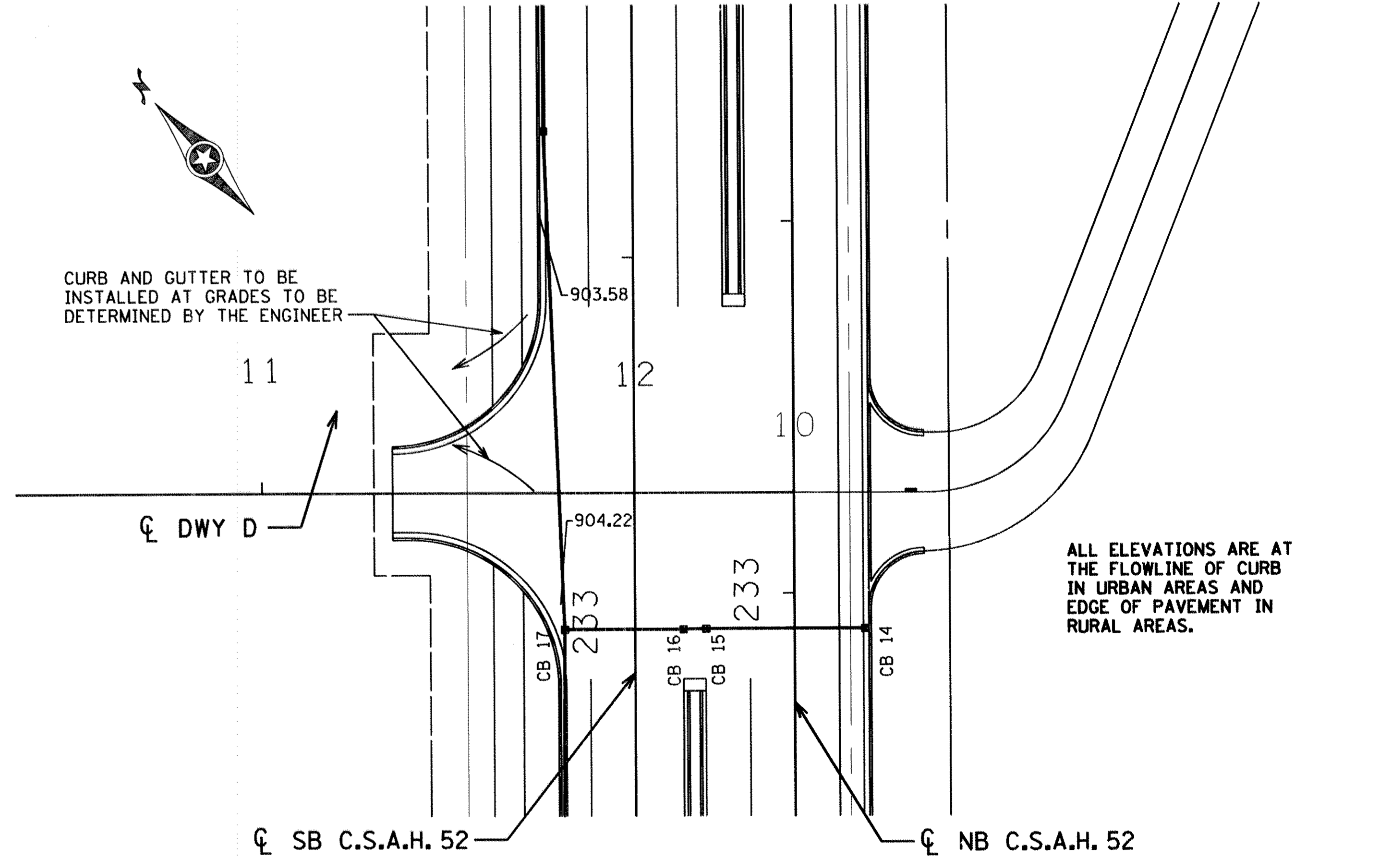
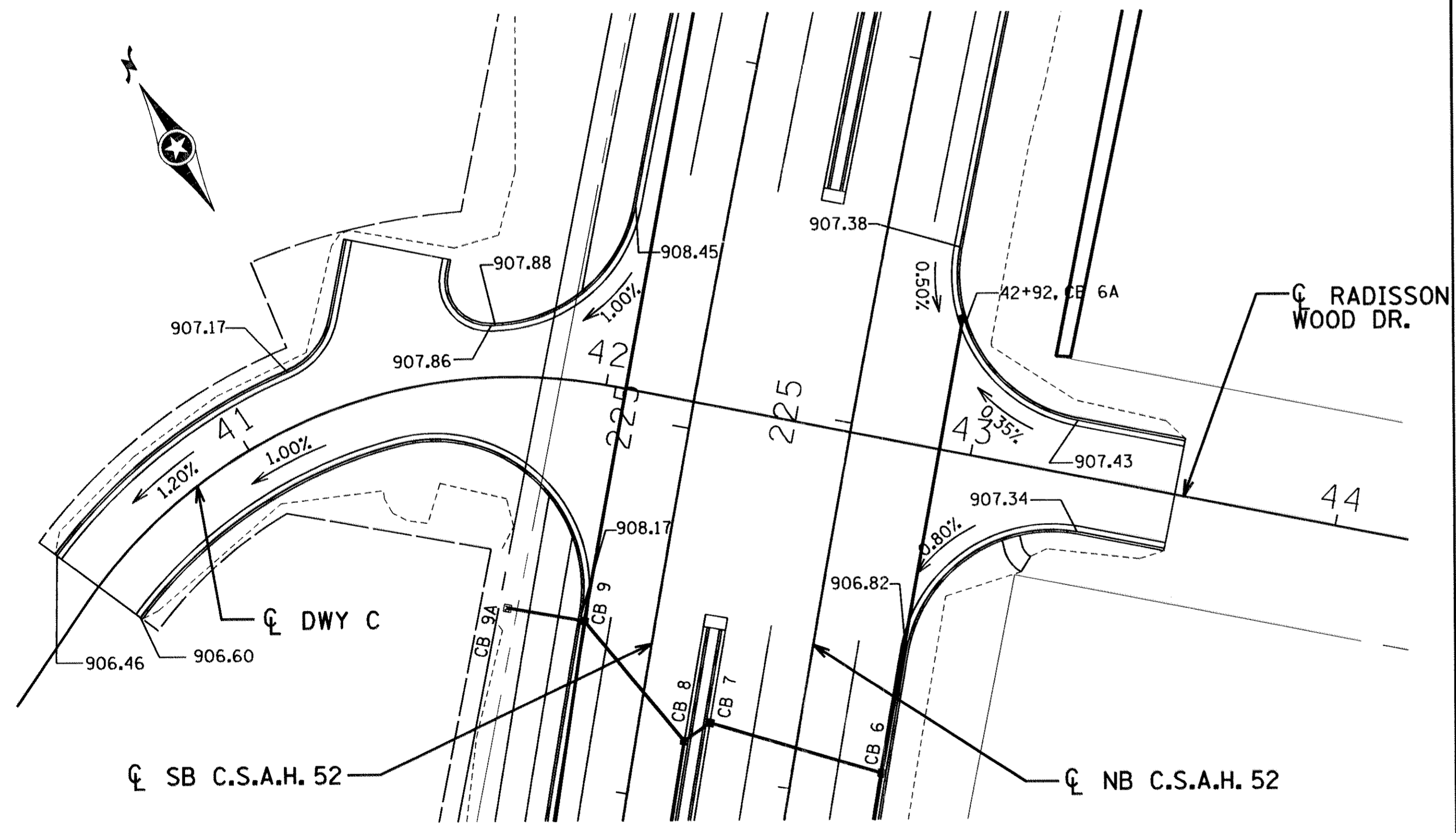
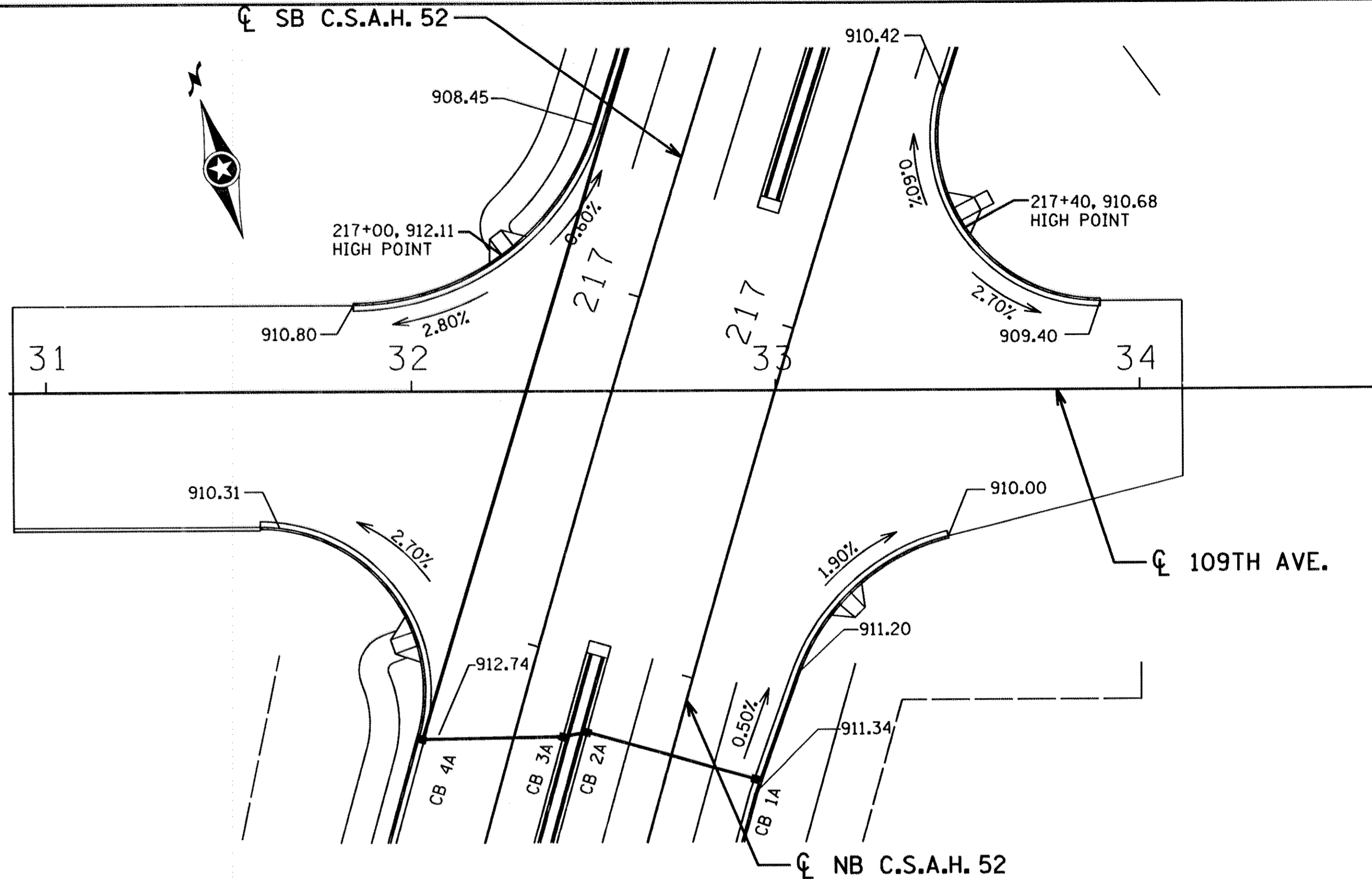
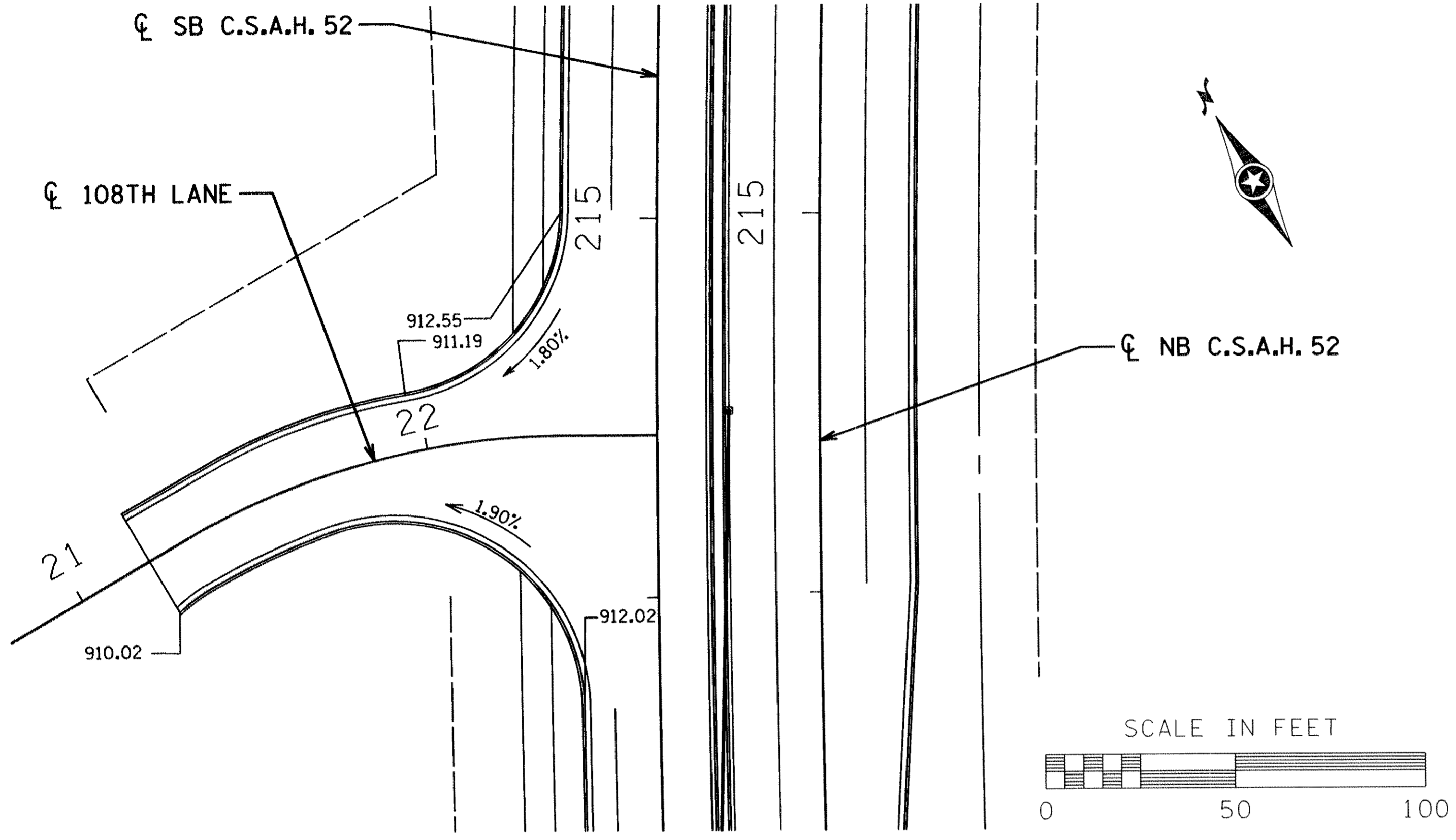
DRAWN BY TJV DATE 11-8-00
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STATE PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CONSTRUCTION PLAN
 C.S.A.H. 52 RECONSTRUCTION
 OLD RADISSON ROAD

SHEET
 89
 OF
 253



ALL ELEVATIONS ARE AT THE FLOWLINE OF CURB IN URBAN AREAS AND EDGE OF PAVEMENT IN RURAL AREAS.

NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\11749\part1\roadway\drawings\inter s01.dgn 25 APR 2001

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE _____ REG. NO. _____

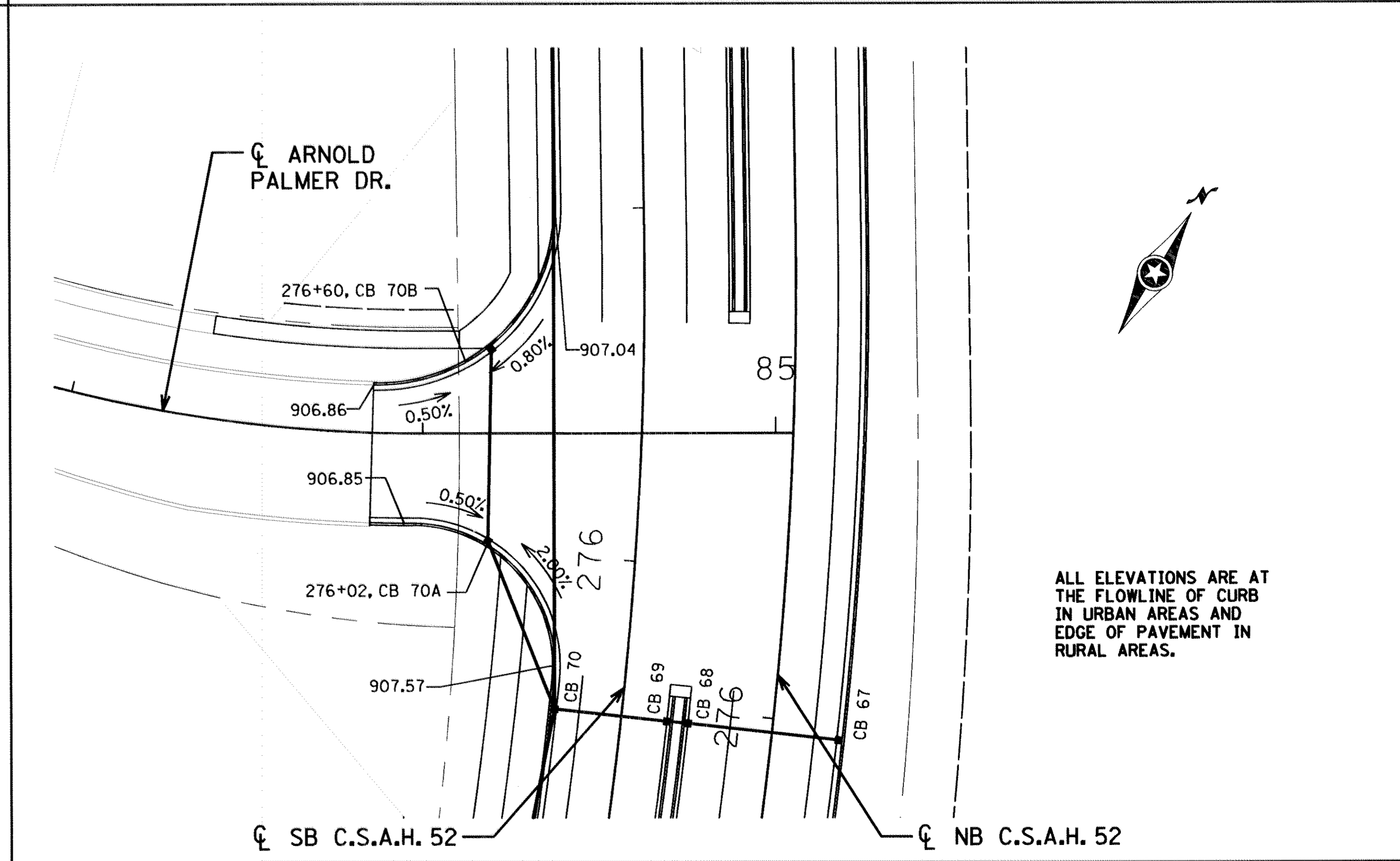
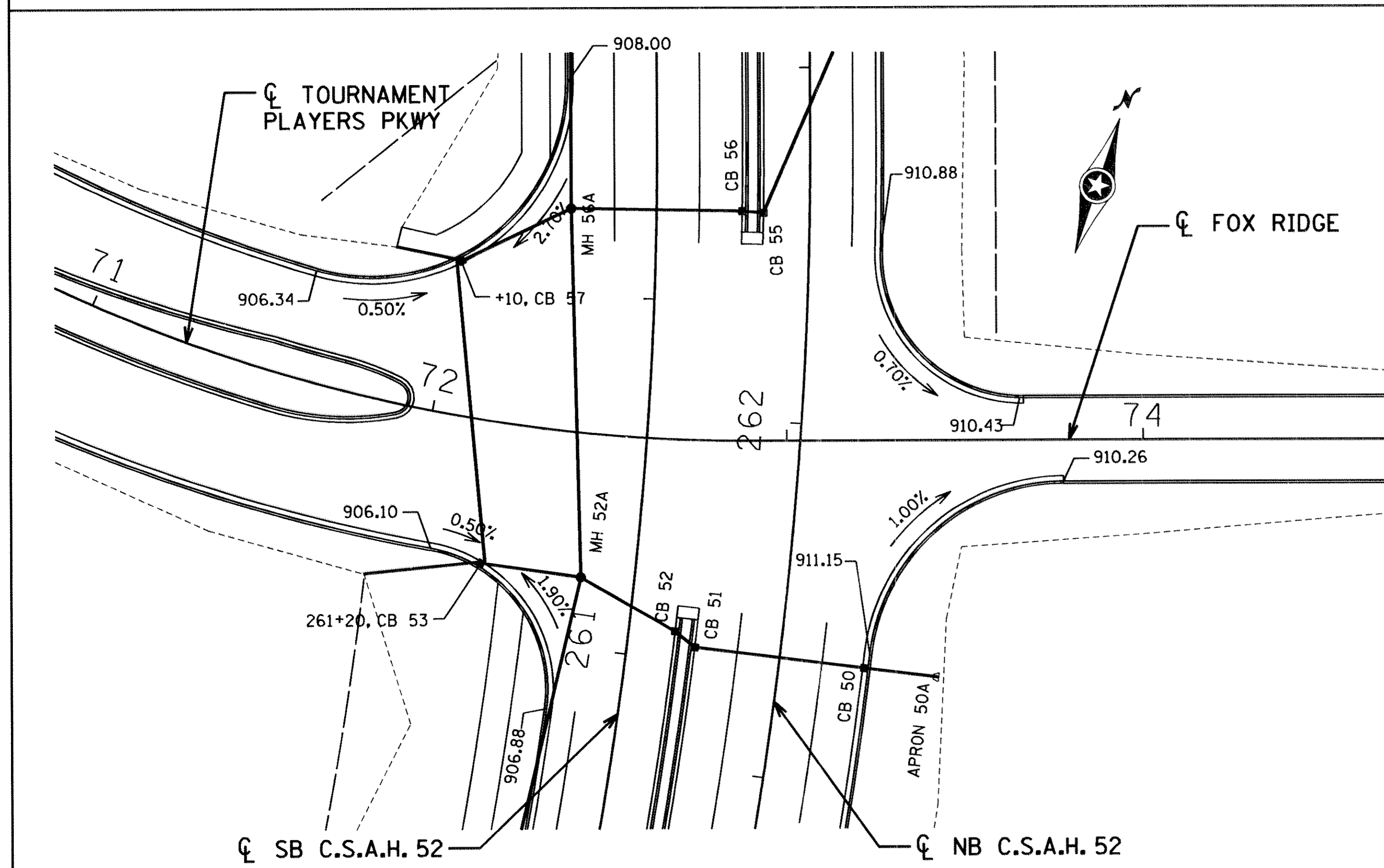
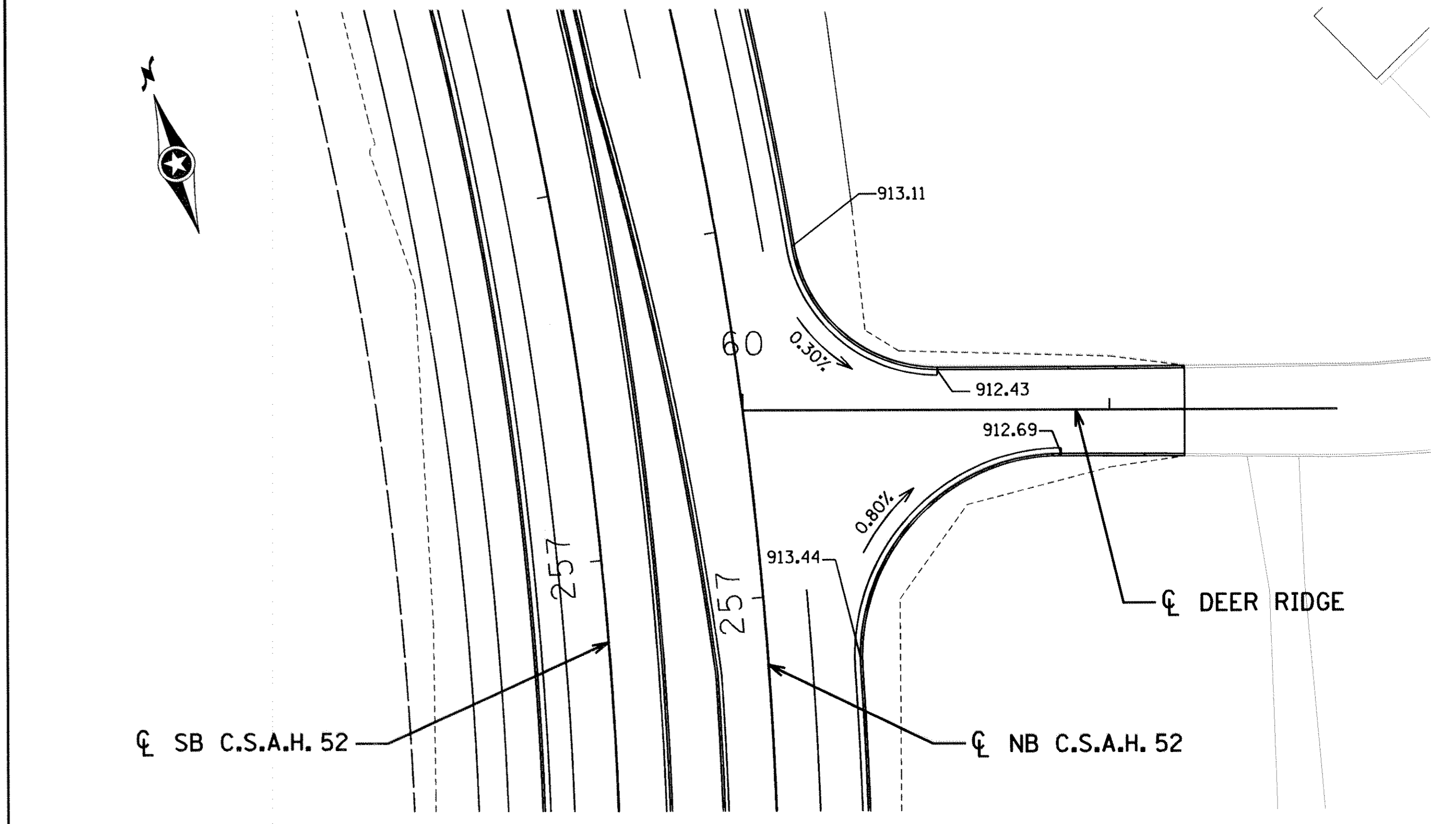
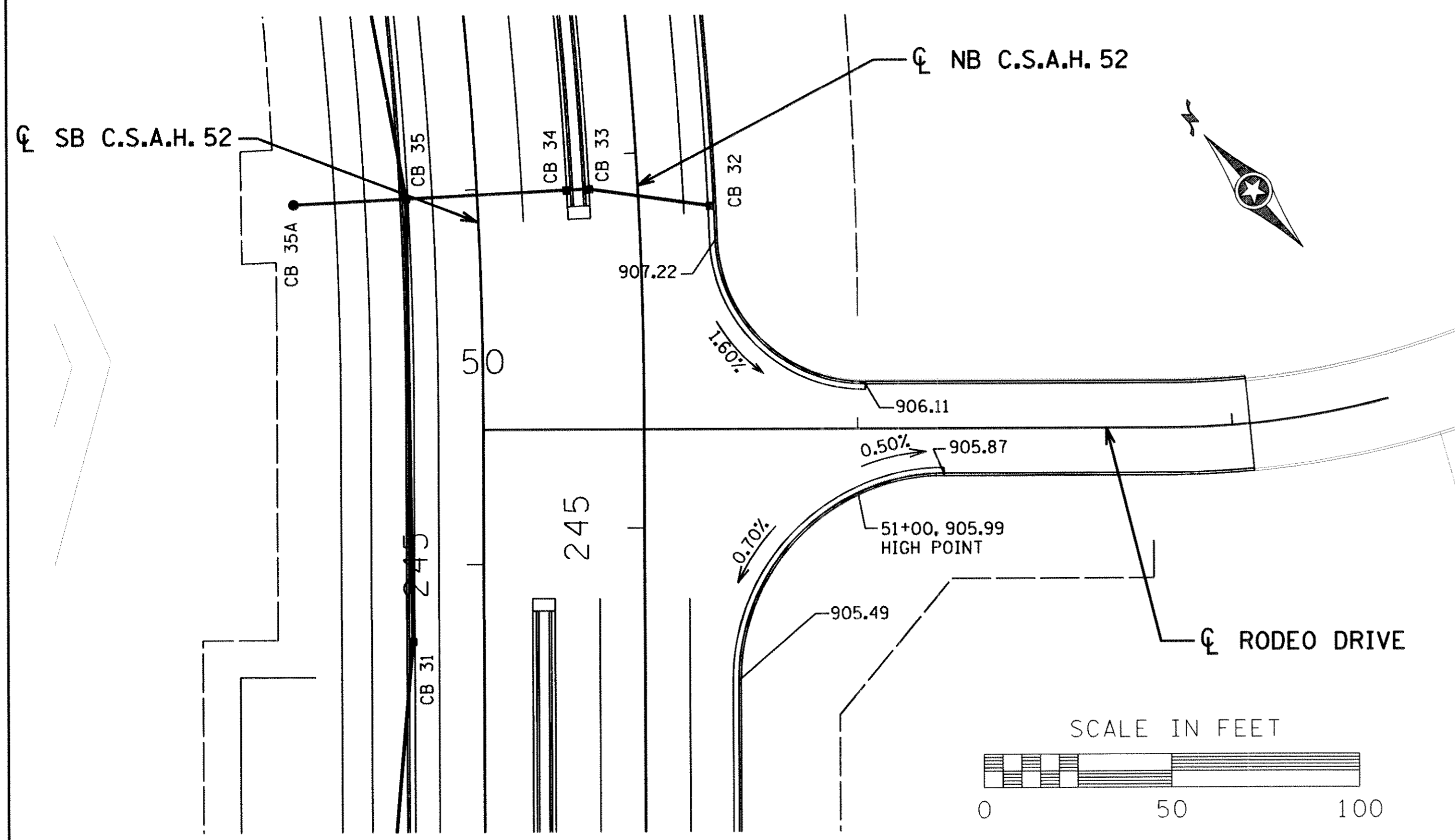
DRAWN BY RRC DATE 11-8-00
 DESIGN BY RRC DATE 11-8-00
 CHECKED BY JMW DATE 11-8-00

STATE PROJECT NO. _____
 S.A.P. 02-652-01
 S.A.P. 106-020-019

TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 INTERSECTION DETAILS
 C.S.A.H. 52 RECONSTRUCTION
 108TH LANE, 109TH AVE., RAD. WOOD DR., DWY D

SHEET
 90
 OF
 253



ALL ELEVATIONS ARE AT THE FLOWLINE OF CURB IN URBAN AREAS AND EDGE OF PAVEMENT IN RURAL AREAS.

NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\c11749\part1\roadway1\drawings\inters02.dgn 25 APR 2001

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE _____ REG. NO. _____

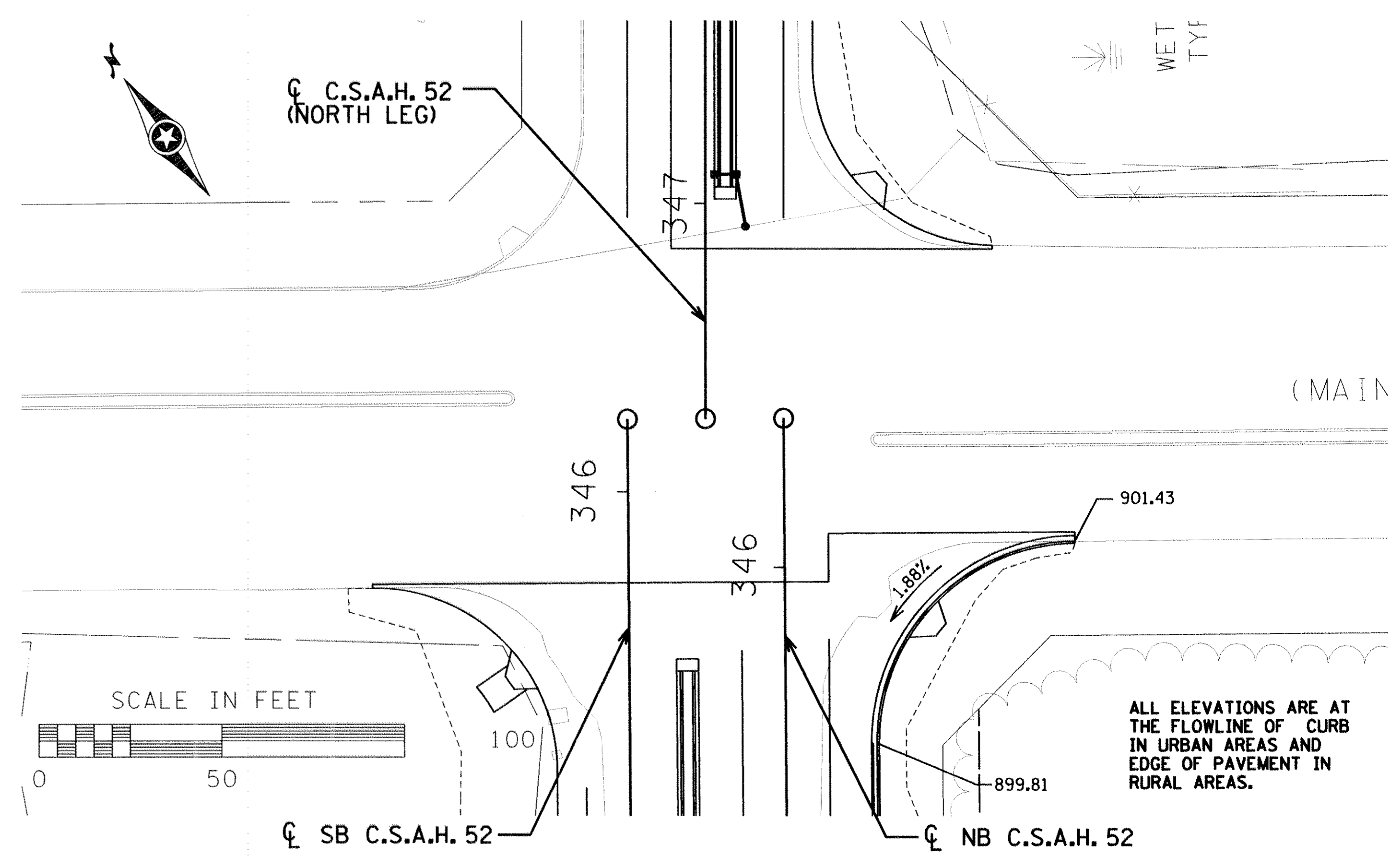
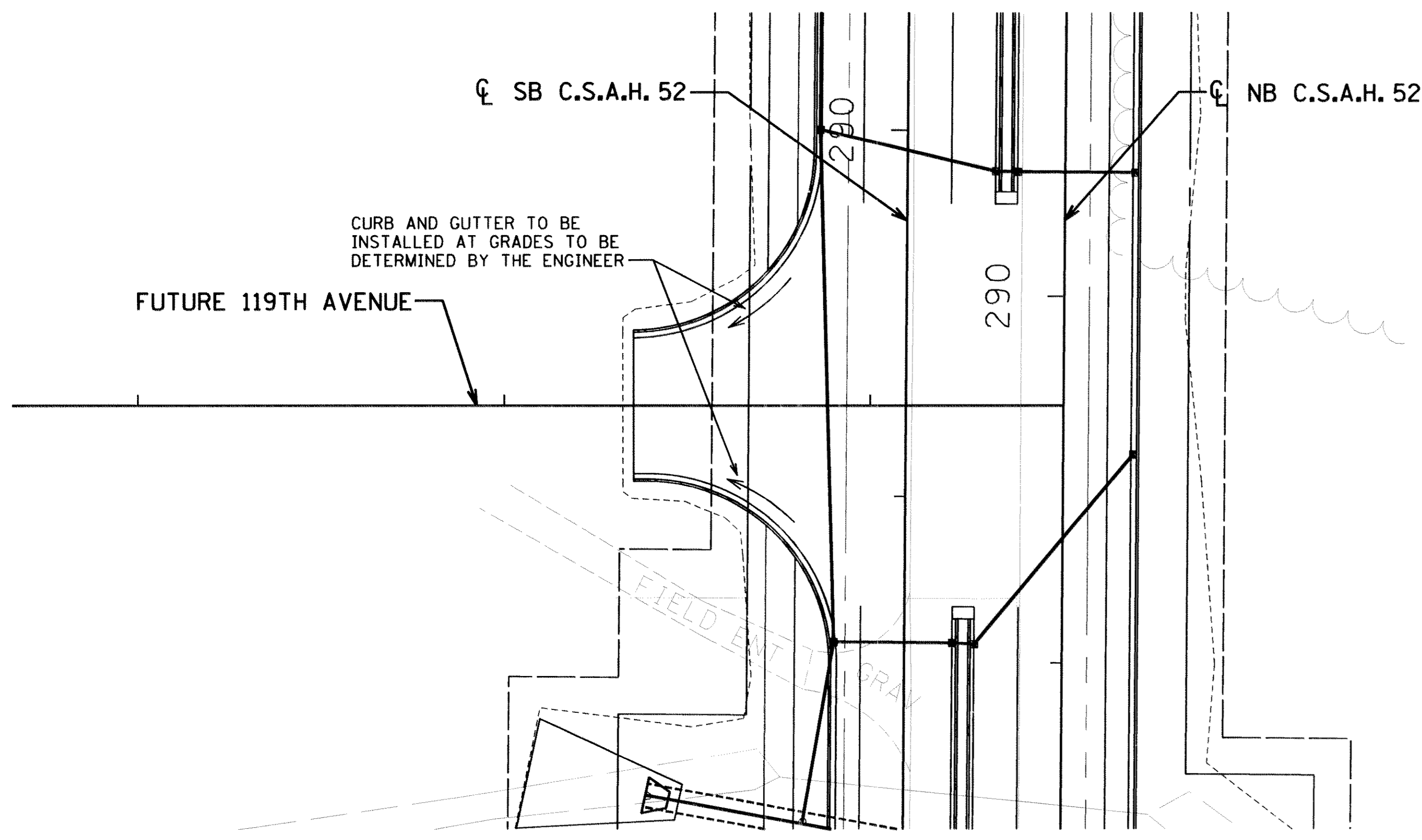
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 DESIGN BY RRC DATE 11-8-00
 CHECKED BY JMW DATE 11-8-00

STATE PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

TKDA
 TOLTZ, KING, DUVAL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 INTERSECTION DETAILS
 C.S.A.H. 52 RECONSTRUCTION
 RODEO, DEER RIDGE, TOURN. PLAYERS, A.PALMER

SHEET
 91
 OF
 253



NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\c11749\par\1\roadway\drawings\inters03.dgn 25 APR 2001

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 DATE _____ REG. NO. _____

DRAWN BY RRC DATE 11-8-00
 DESIGN BY RRC DATE 11-8-00
 CHECKED BY JMW DATE 11-8-00

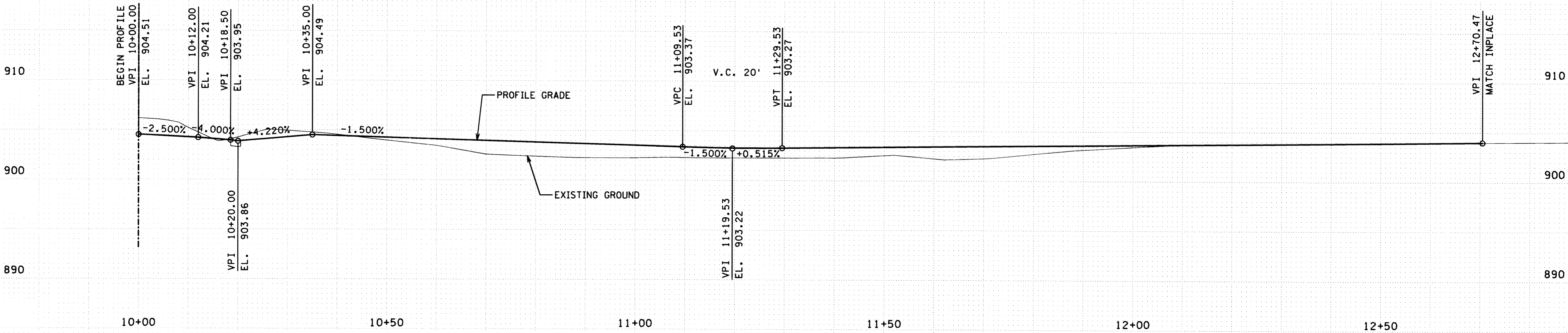
STATE PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

TKDA
 TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 INTERSECTION DETAILS
 C.S.A.H. 52 RECONSTRUCTION
 CLOUD DRIVE, MAIN STREET

SHEET
 92
 OF
 253

☒ N.B. C.S.A.H. 52
233+49.13



D233R

NO	DATE	BY	CKD	APPR	REVISION

NAME: \$FILE\$ \$DATE\$

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE _____ REG. NO. _____

DRAWN BY TJV DATE 11-8-00
 DESIGN BY JMW DATE 11-8-00
 CHECKED BY GAR DATE 11-8-00

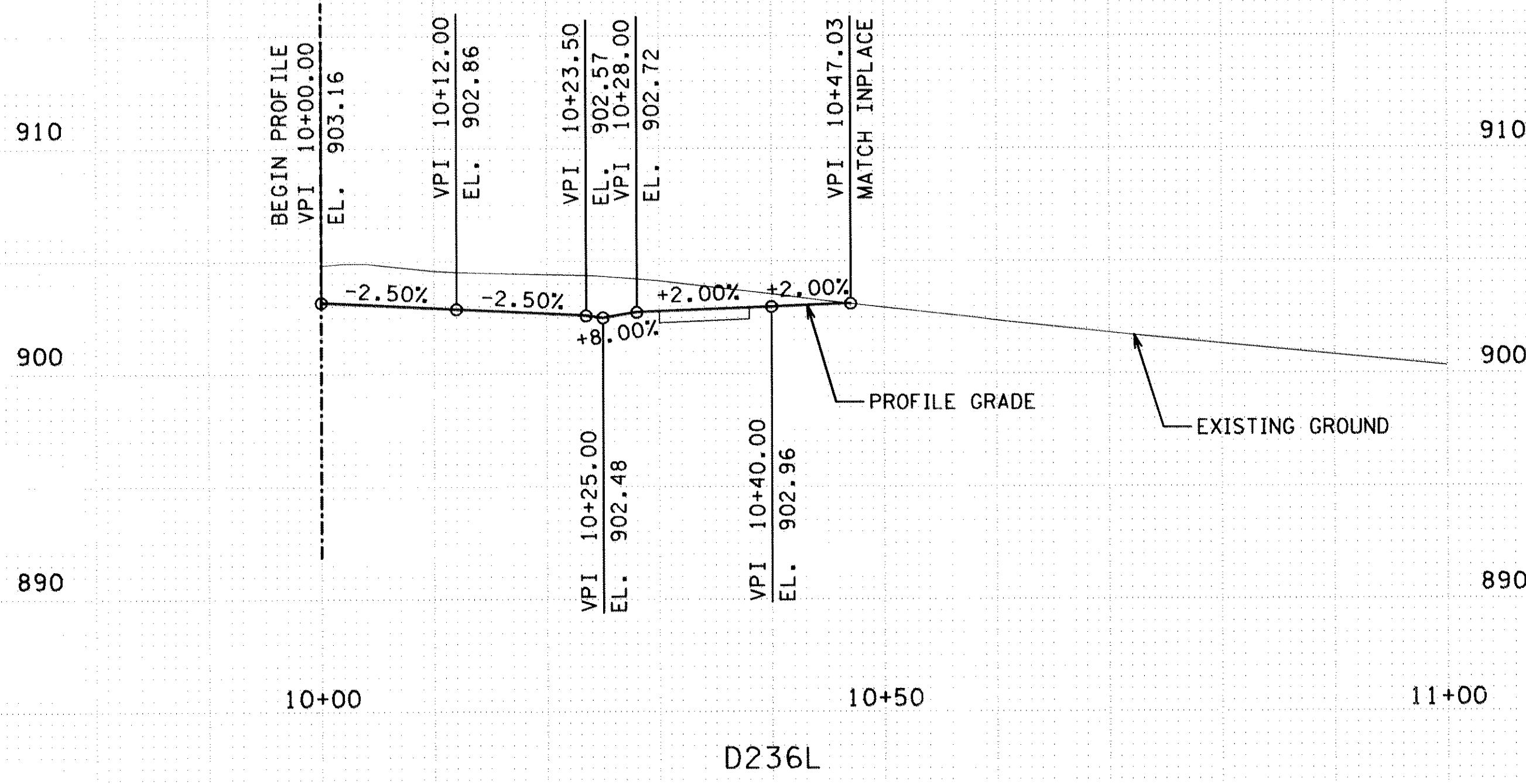
STATE AID PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

TKDA
 TOLTZ, KING, DUVAL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS • ARCHITECTS • PLANNERS SAINT PAUL, MINNESOTA

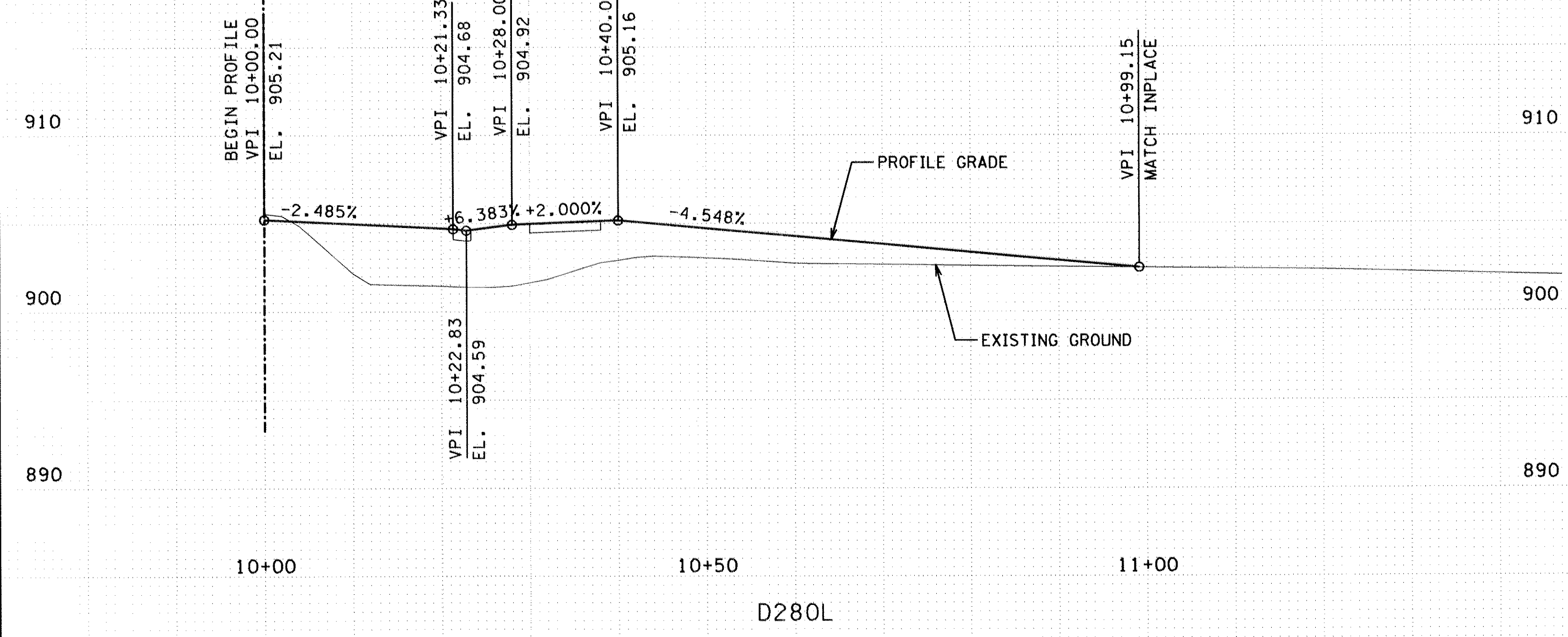
ANOKA COUNTY
 DRIVEWAY PROFILES
 C.S.A.H. 52 RECONSTRUCTION
 D233R

SHEET
 93
 OF
 253

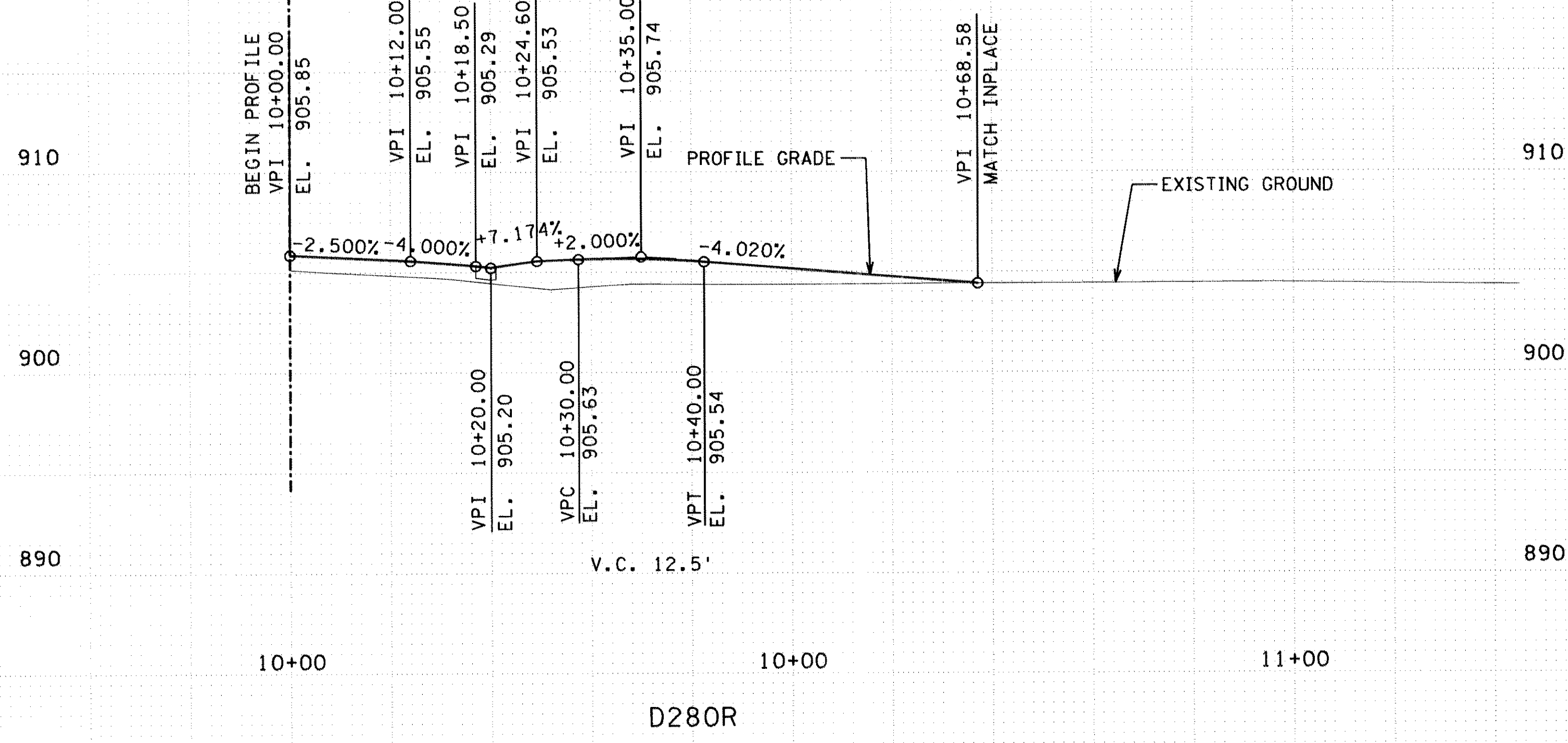
☒ S.B. C.S.A.H. 52
236+29.81



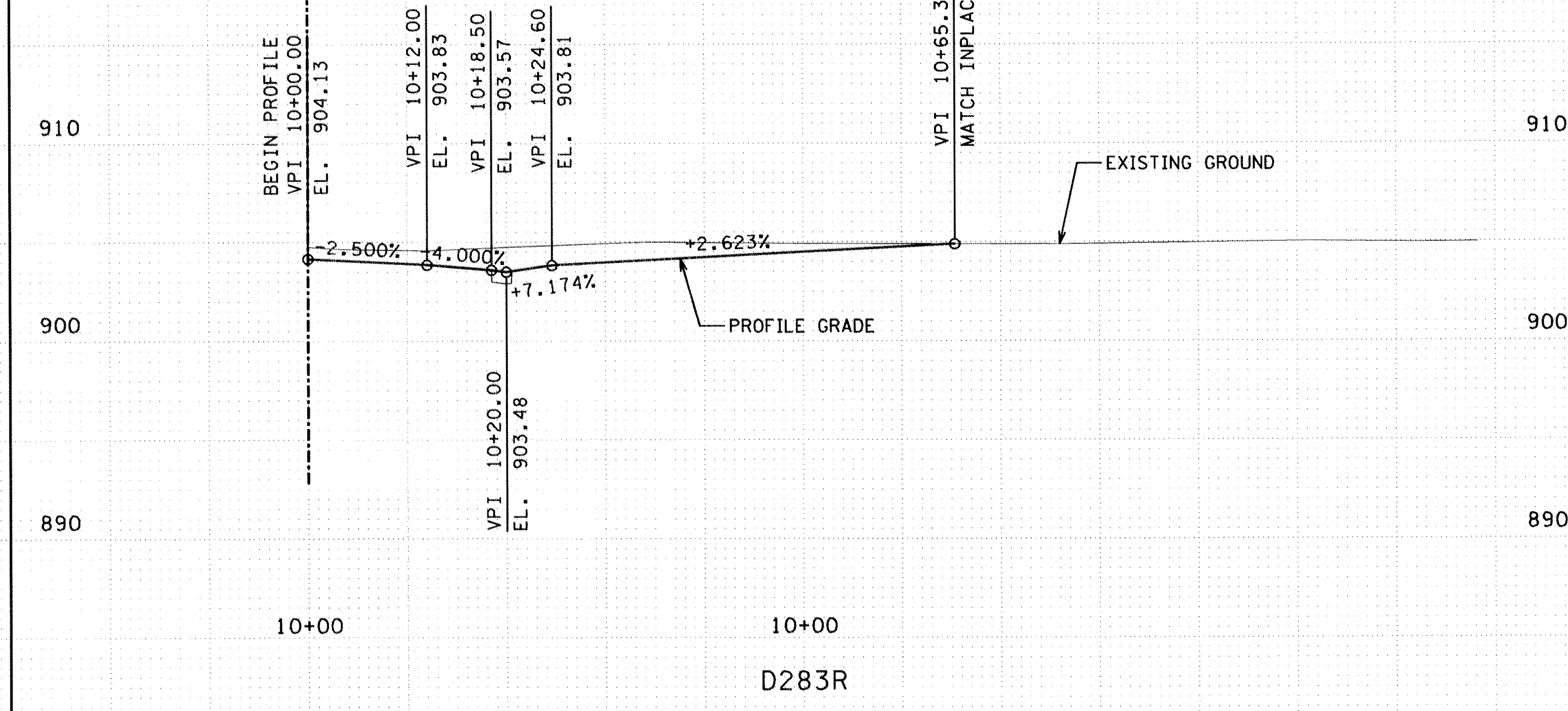
☒ S.B. C.S.A.H. 52
280+00.23



☒ N.B. C.S.A.H. 52
280+25.00



☒ N.B. C.S.A.H. 52
282+90.00



I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE _____ REG. NO. _____

DRAWN BY TJV DATE 11-8-00
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 CHECKED BY GAR DATE 11-8-00

STATE AID PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019



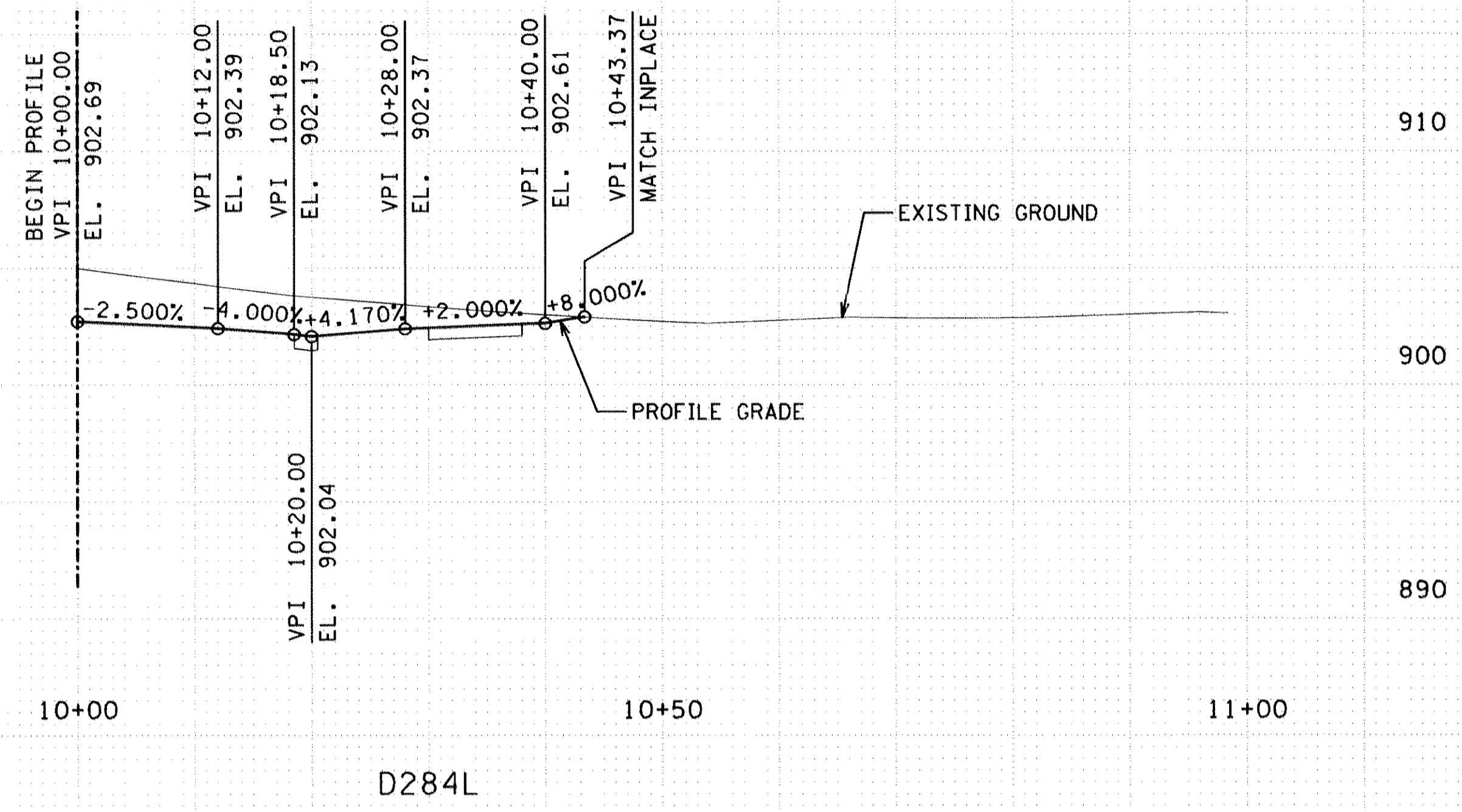
ANOKA COUNTY
 DRIVEWAY PROFILES
 C.S.A.H. 52 RECONSTRUCTION
 D236L, D280L, D280R, D283R

SHEET
 94
 OF
 253

NO	DATE	BY	CKD	APPR	REVISION

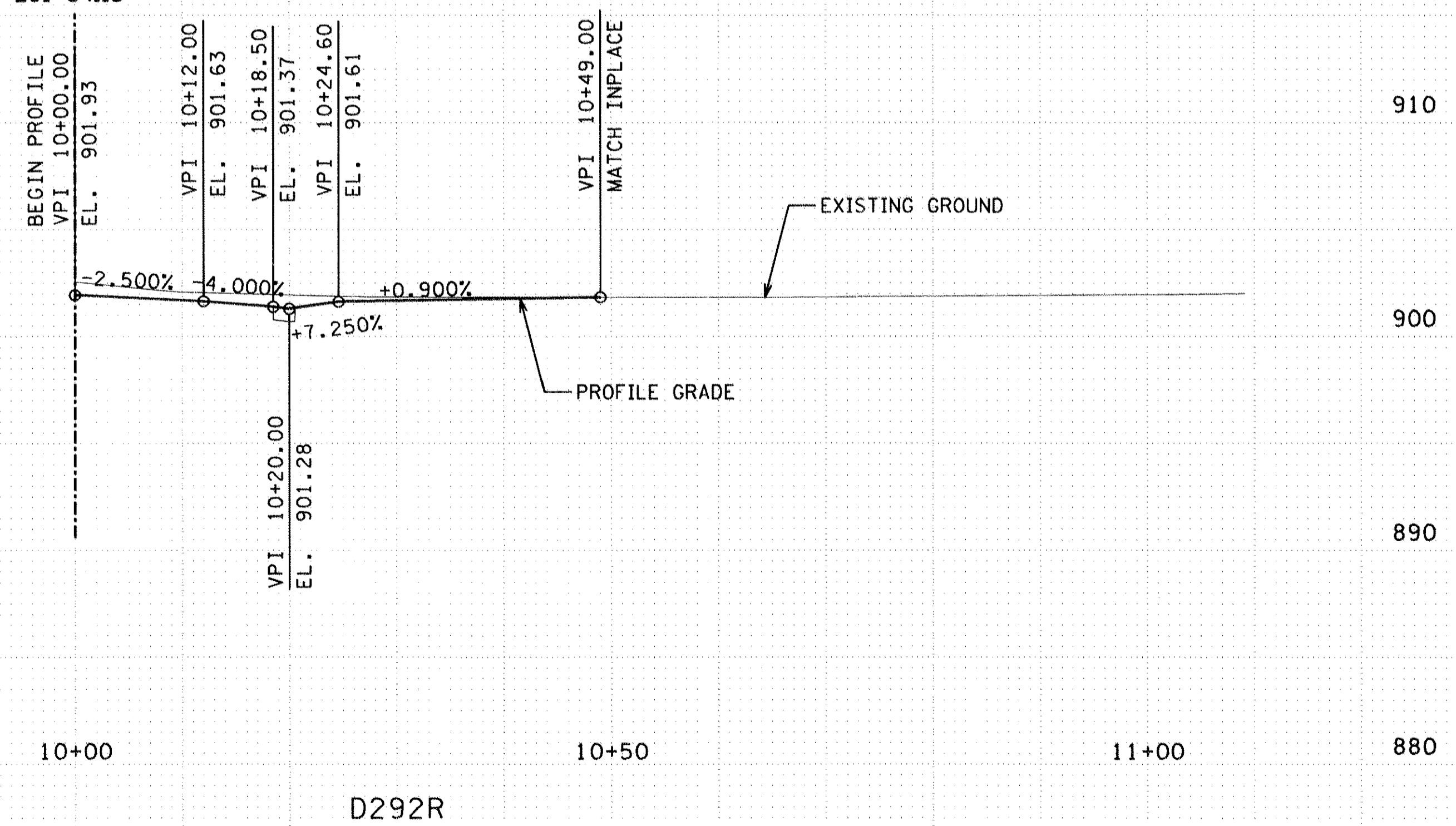
NAME: \$FILE\$ \$DATE\$

☒ S.B. C.S.A.H. 52
283+80.00



D284L

☒ N.B. C.S.A.H. 52
291+84.13



D292R

NO	DATE	BY	CKD	APPR	REVISION

NAME: \$FILE\$ DATE: \$DATE\$

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DATE _____ REG. NO. _____

DRAWN BY TJV DATE 11-8-00
DESIGN BY JMW DATE 11-8-00
CHECKED BY GAR DATE 11-8-00

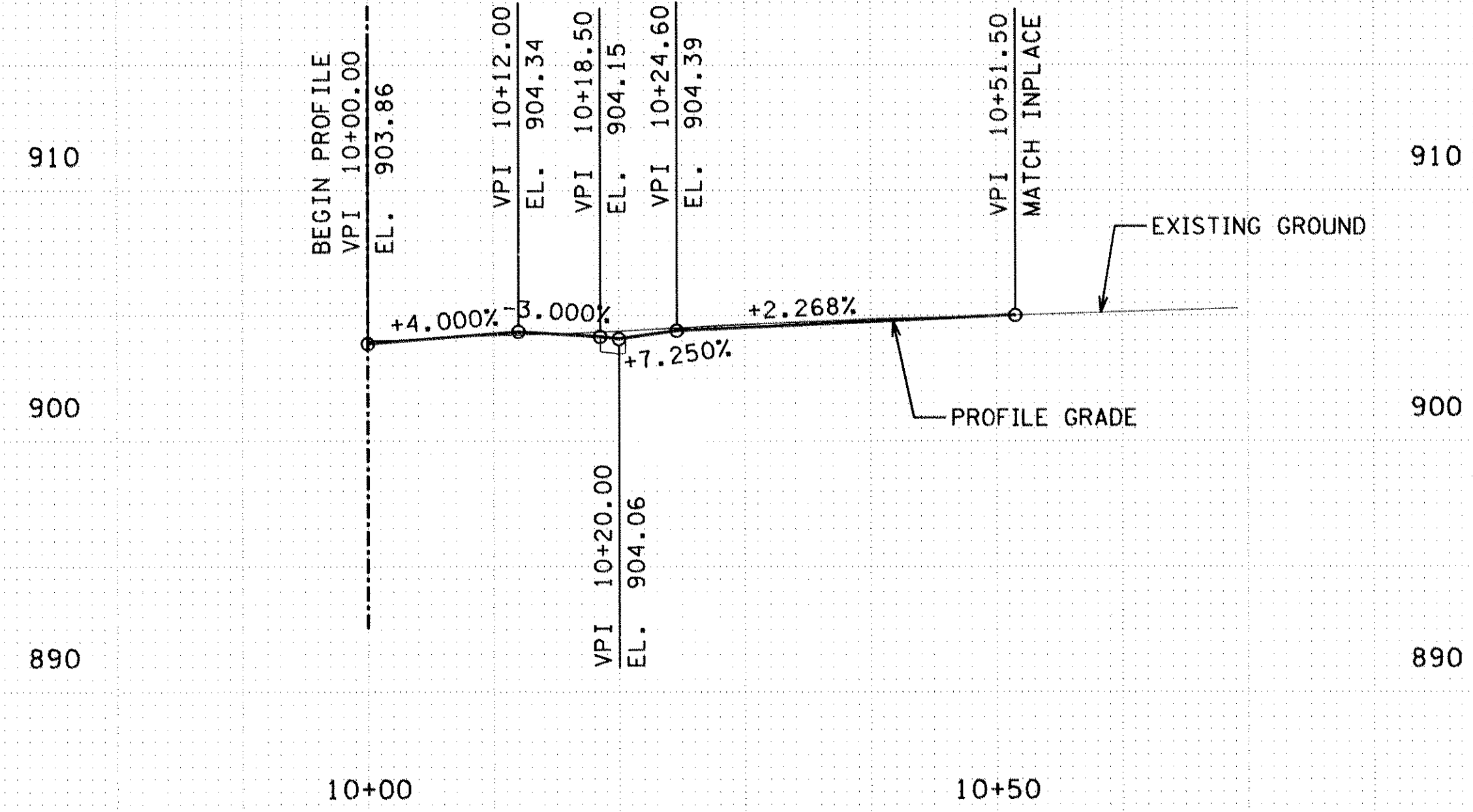
STATE AID PROJECT NO.
S.A.P. 02-652-01
S.A.P. 106-020-019

TKDA
TOLTZ, KING, DUVAL, ANDERSON
AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
DRIVEWAY PROFILES
C.S.A.H. 52 RECONSTRUCTION
D284L, D292R

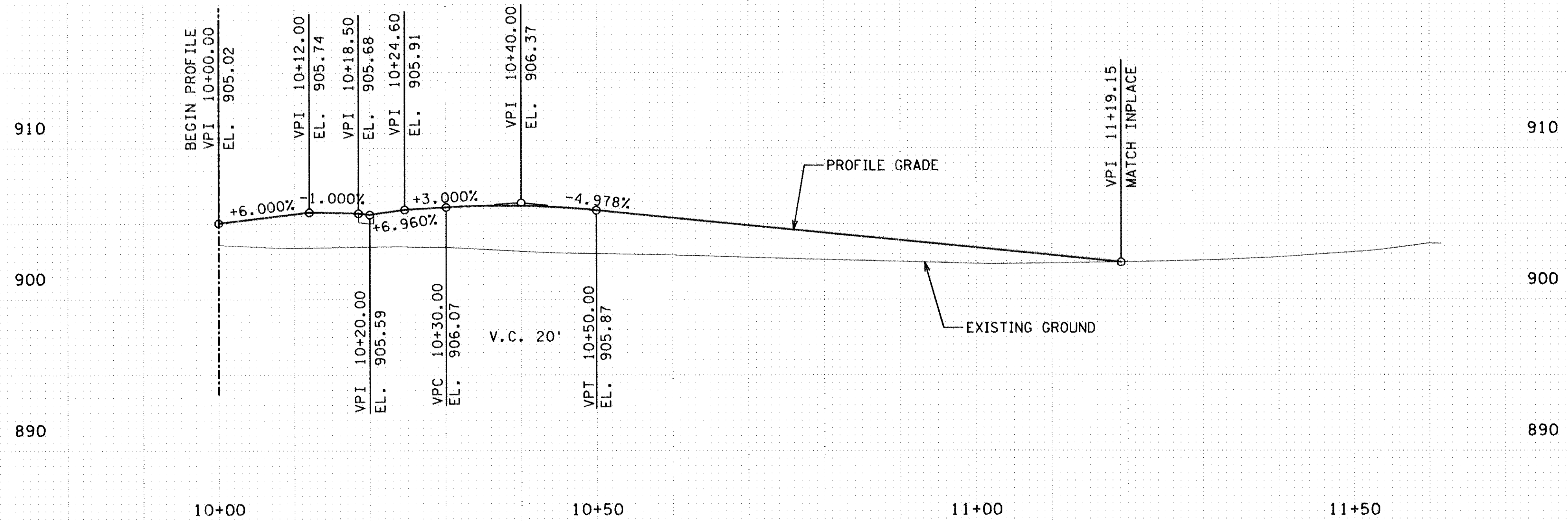
SHEET
95
OF
253

☺ N.B. C.S.A.H. 52
294+27.50



D294R

☺ N.B. C.S.A.H. 52
296+10.35



D296R

NO	DATE	BY	CKD	APPR	REVISION
NAME: \$FILE\$					\$DATE\$

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE _____ REG. NO. _____

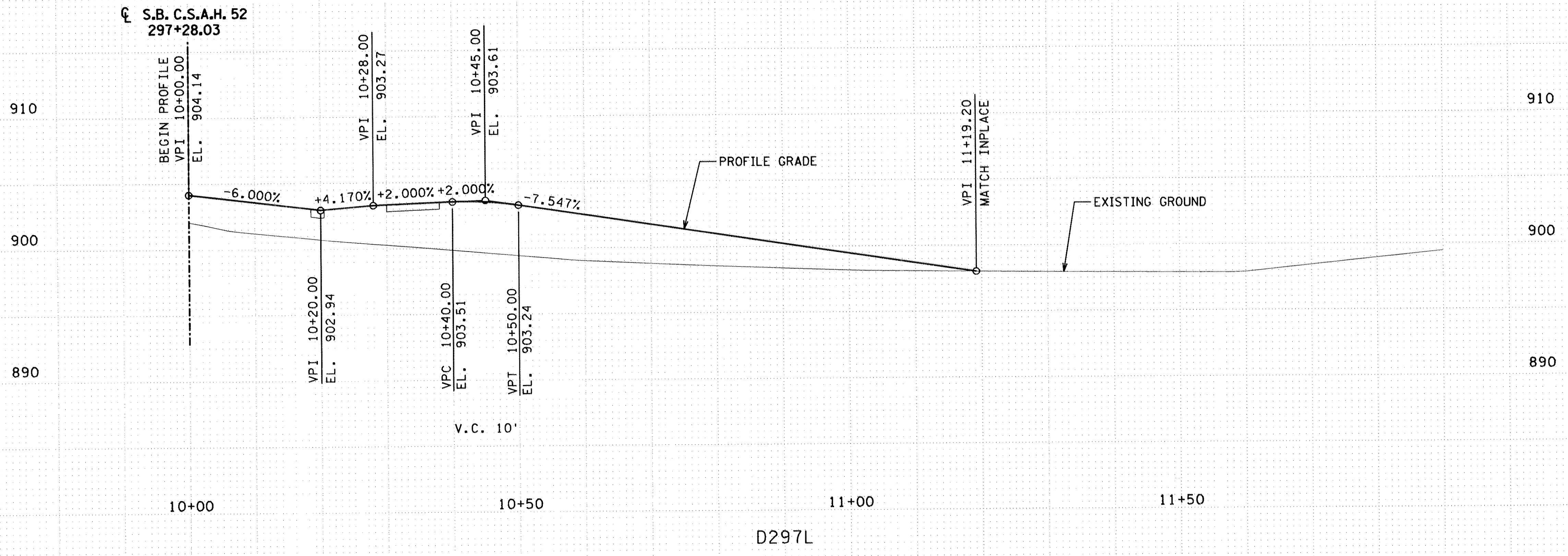
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DESIGN BY JMW DATE 11-8-00
CHECKED BY GAR DATE 11-8-00

STATE AID PROJECT NO.
S.A.P. 02-652-01
S.A.P. 106-020-019

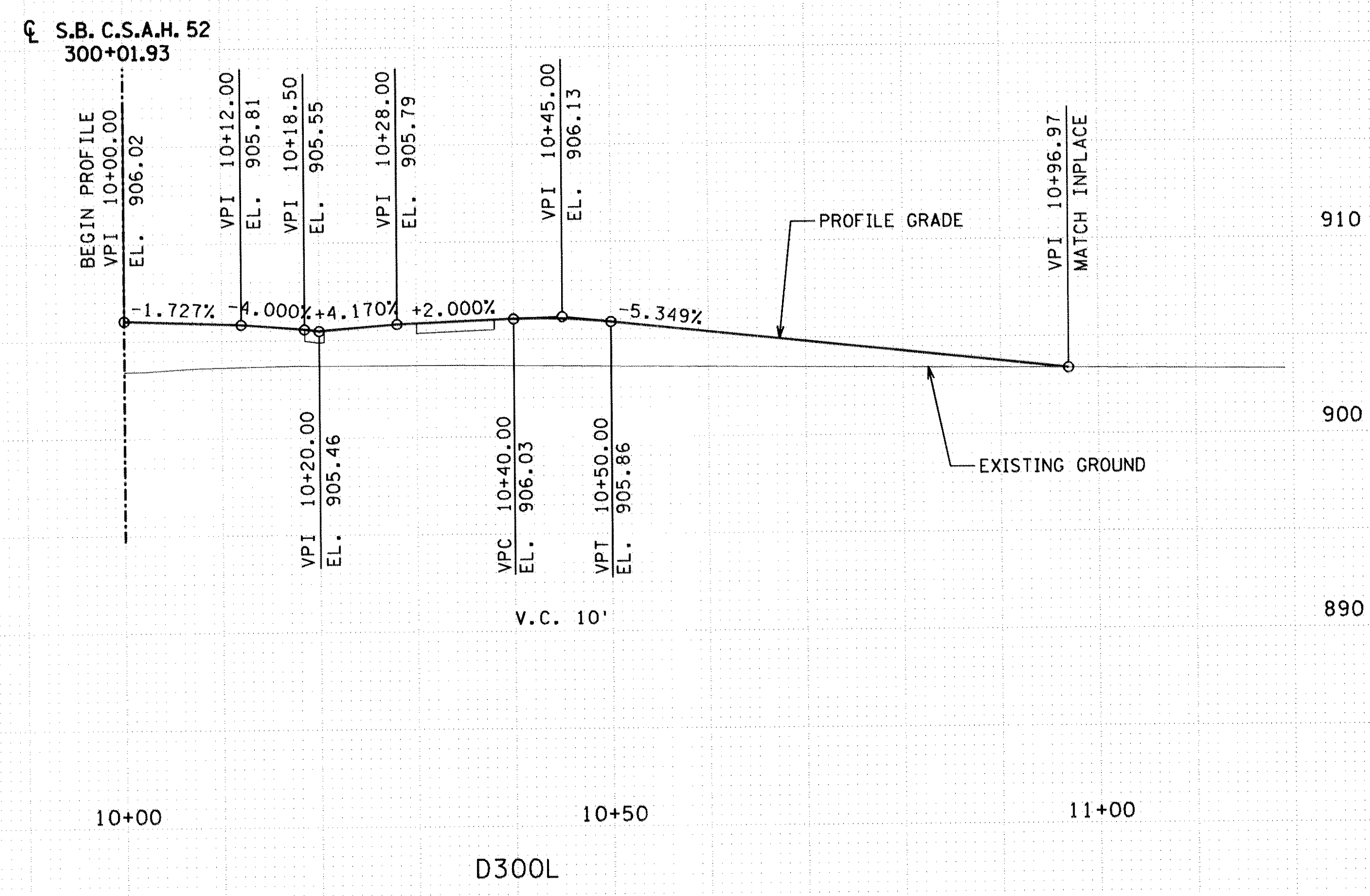
TKDA
TOLTZ, KING, DUVALL, ANDERSON
AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
DRIVEWAY PROFILES
C.S.A.H. 52 RECONSTRUCTION
D294R, D296R

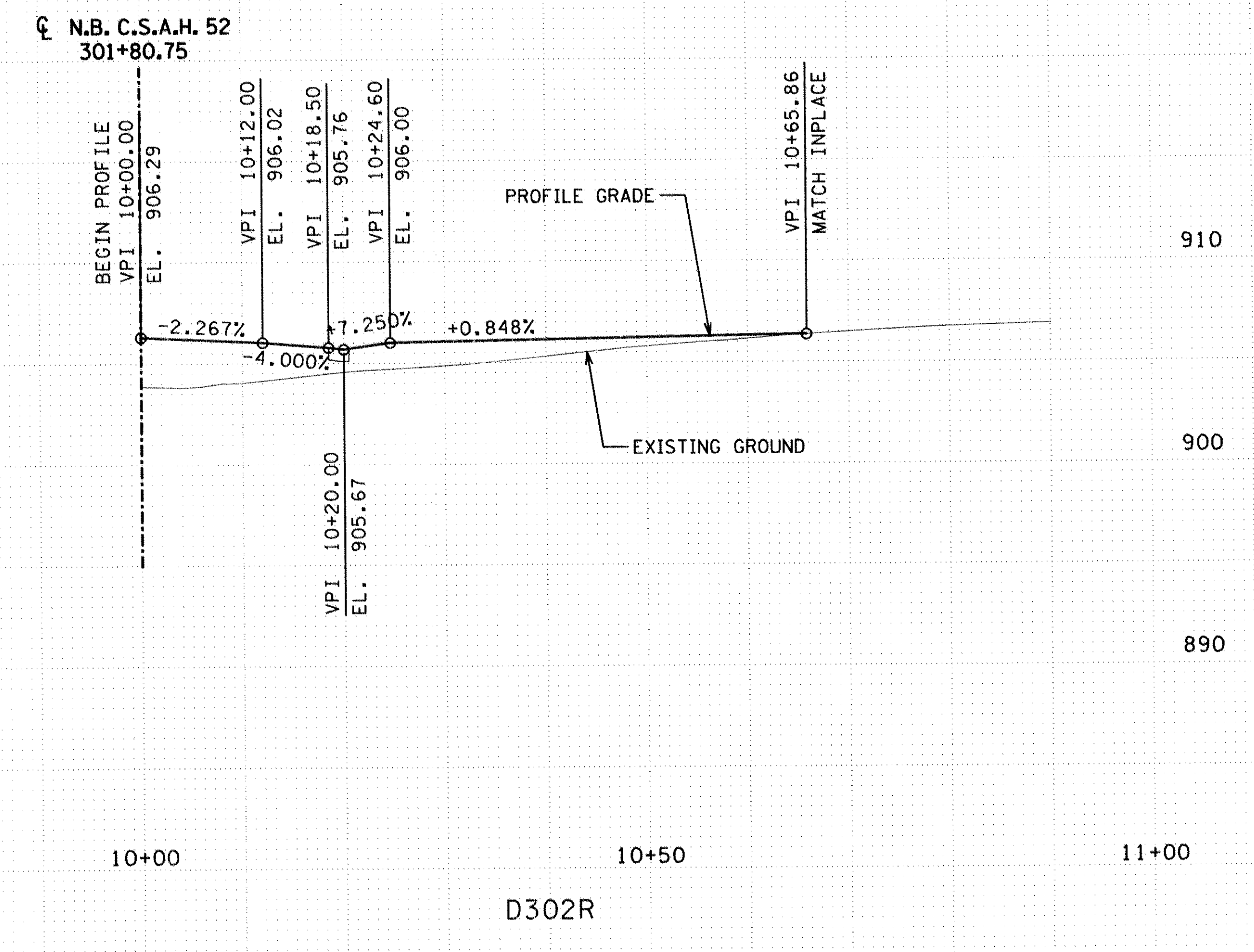
SHEET
96
OF
253



D297L



D300L



D302R

NO	DATE	BY	CKD	APPR	REVISION

NAME: \$FILE\$ \$DATE\$

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE _____ REG. NO. _____

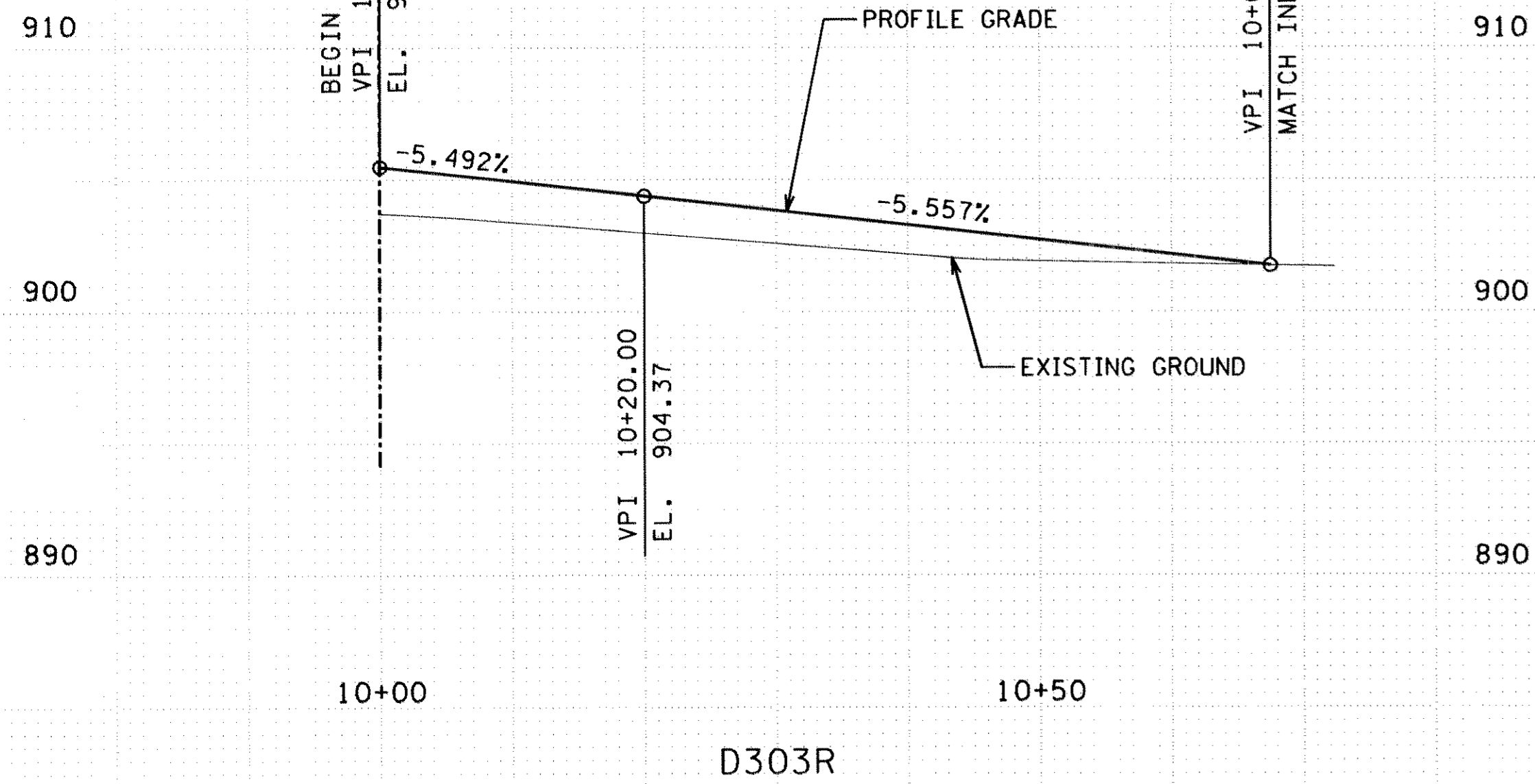
DRAWN BY TJV DATE 11-8-00
 DESIGN BY JMW DATE 11-8-00
 CHECKED BY GAR DATE 11-8-00

STATE AID PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

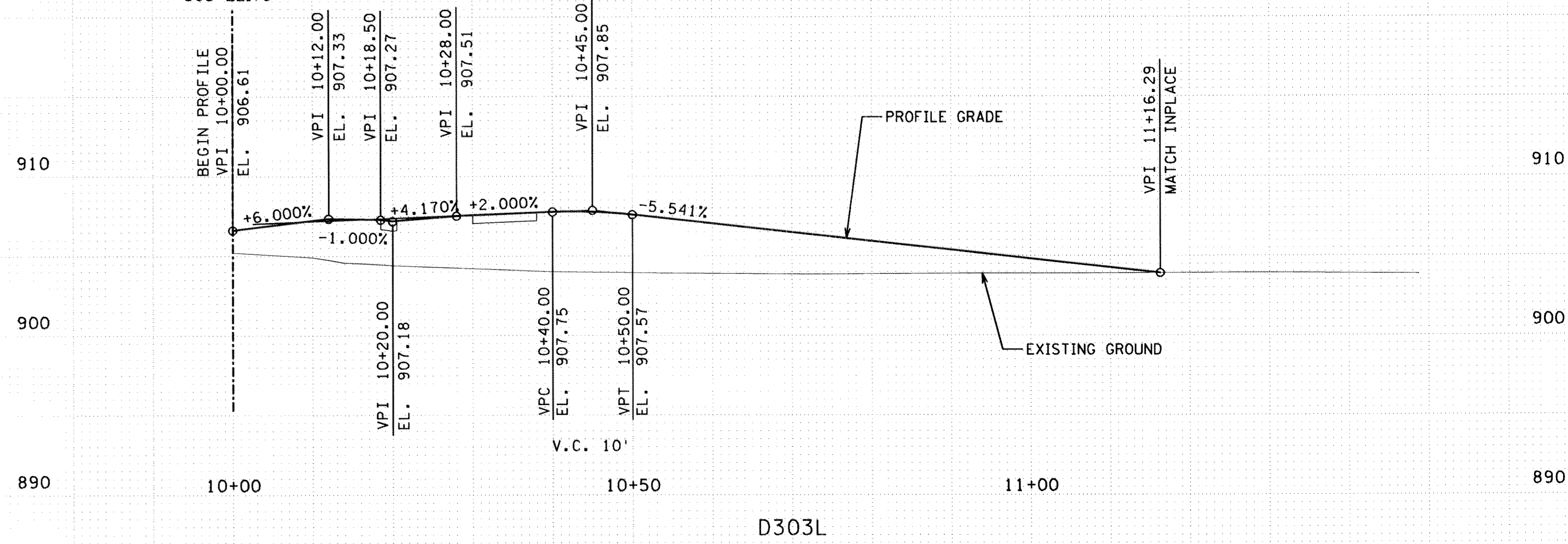
TKDA
 TOLTZ, KING, DUVAL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 DRIVEWAY PROFILES
 C.S.A.H. 52 RECONSTRUCTION
 D297L, D300L, D302R

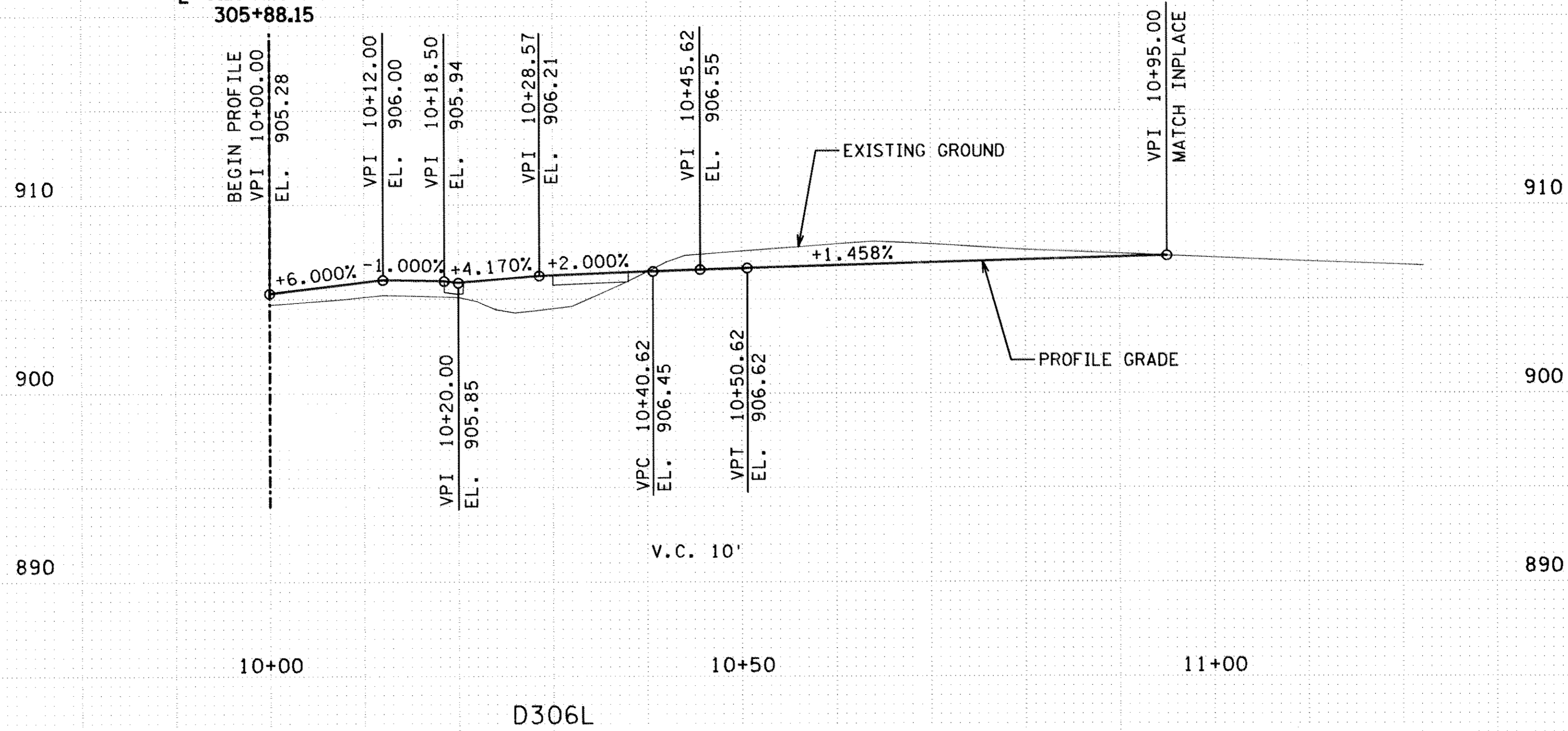
☒ N.B. C.S.A.H. 52
302+74.27



☒ S.B. C.S.A.H. 52
303+22.70



☒ S.B. C.S.A.H. 52
305+88.15



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.

DRAWN BY TJV DATE 11-8-00
DESIGN BY JMW DATE 11-8-00
CHECKED BY GAR DATE 11-8-00

STATE AID PROJECT NO.

S.A.P. 02-652-01
S.A.P. 106-020-019

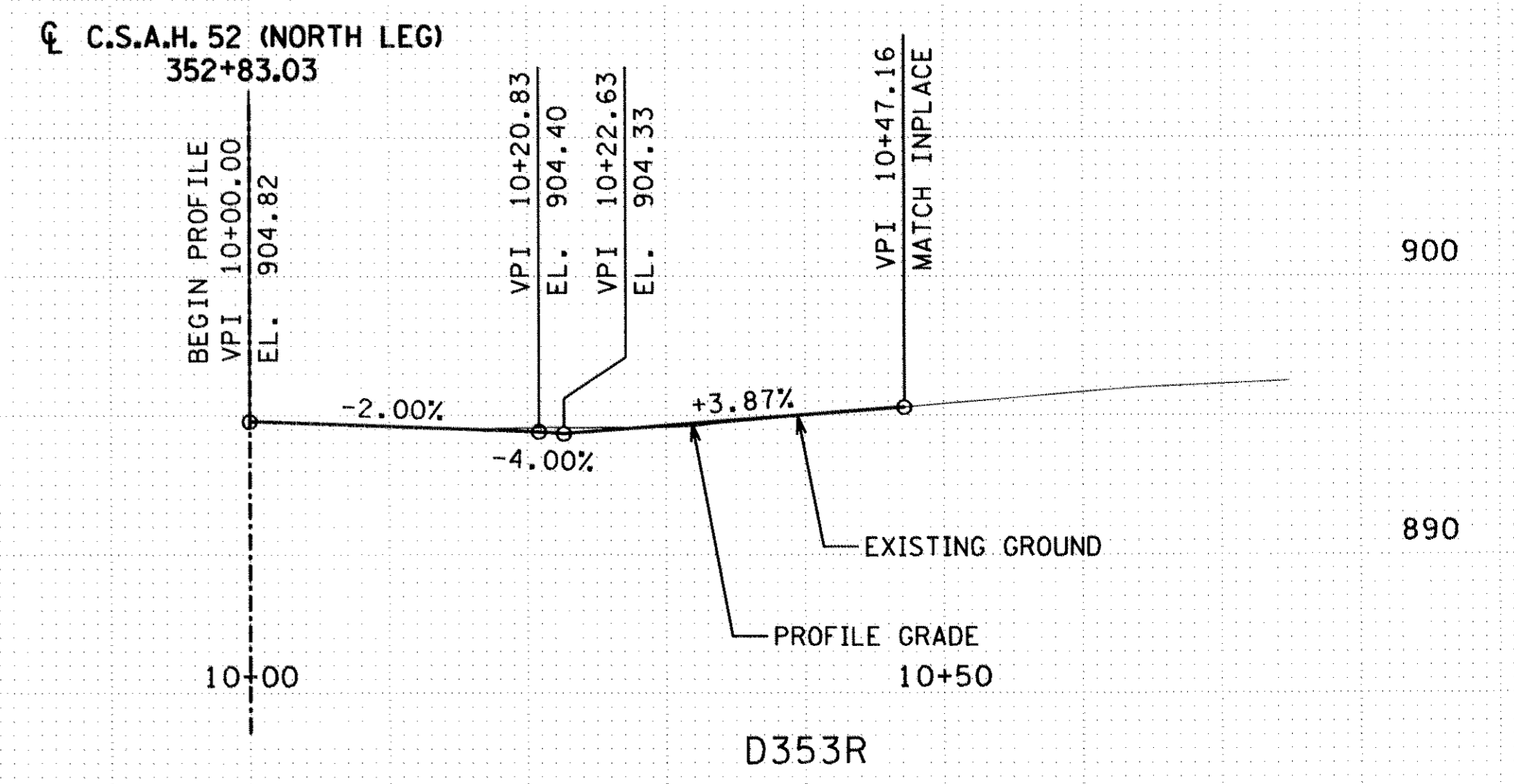
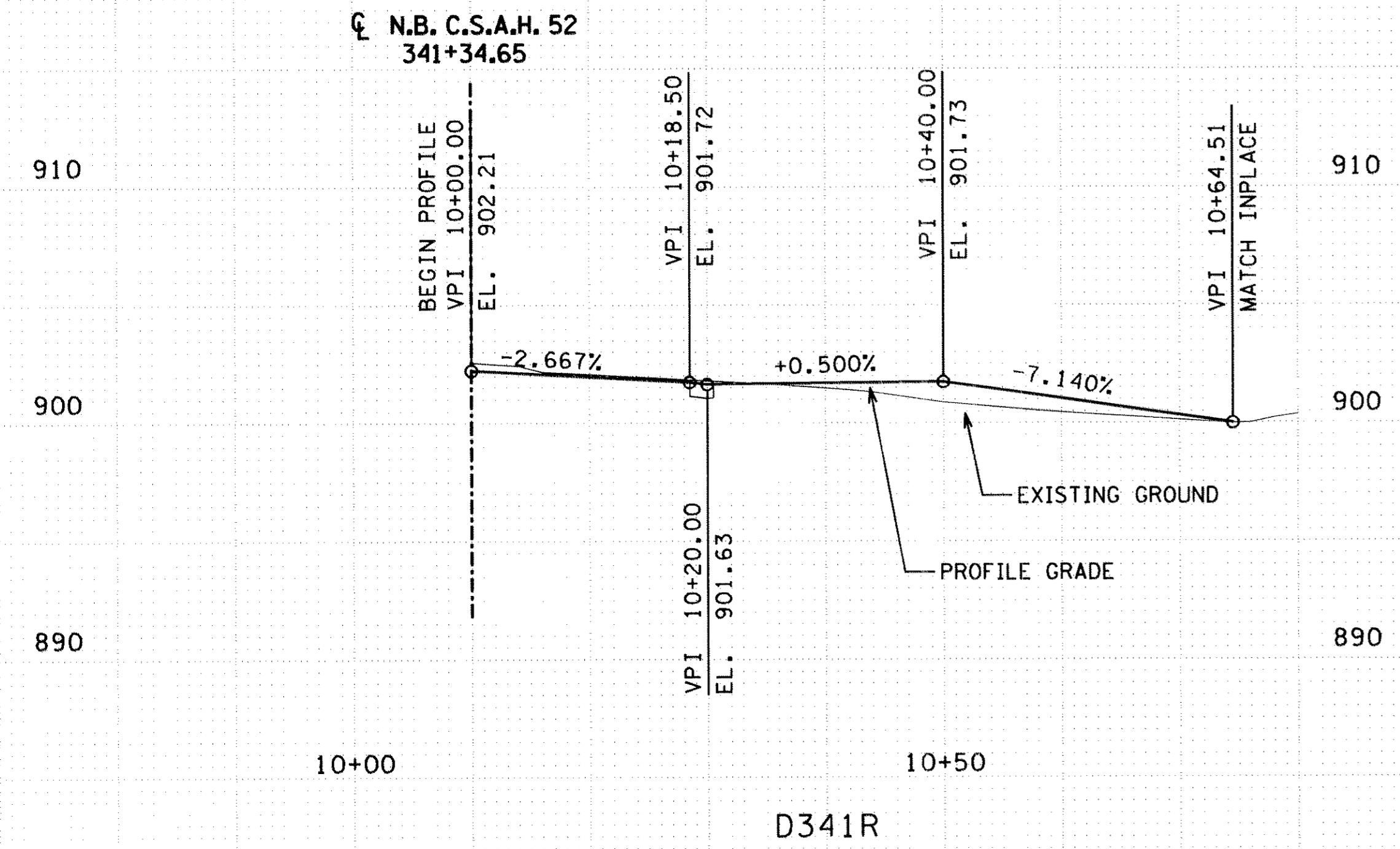
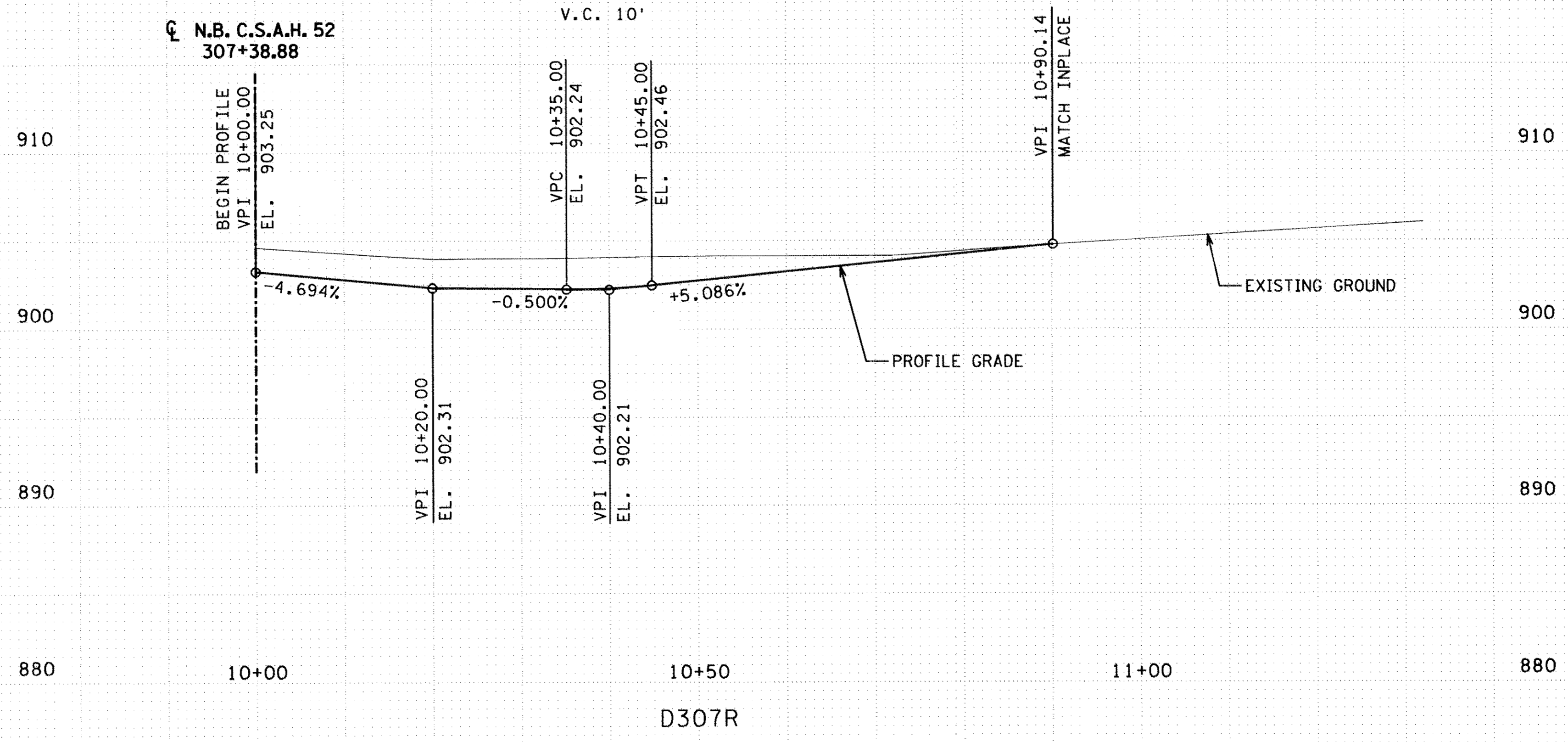
TKDA
TOLTZ, KING, DUVAL, ANDERSON
AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
DRIVEWAY PROFILES
C.S.A.H. 52 RECONSTRUCTION
D303R, D303L, D306L

SHEET
98
OF
253

NO	DATE	BY	CKD	APPR	REVISION

DATE _____ REG. NO. _____



NO	DATE	BY	CKD	APPR	REVISION
NAME: \$FILE\$					DATE: \$DATE\$

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 DATE _____ REG. NO. _____

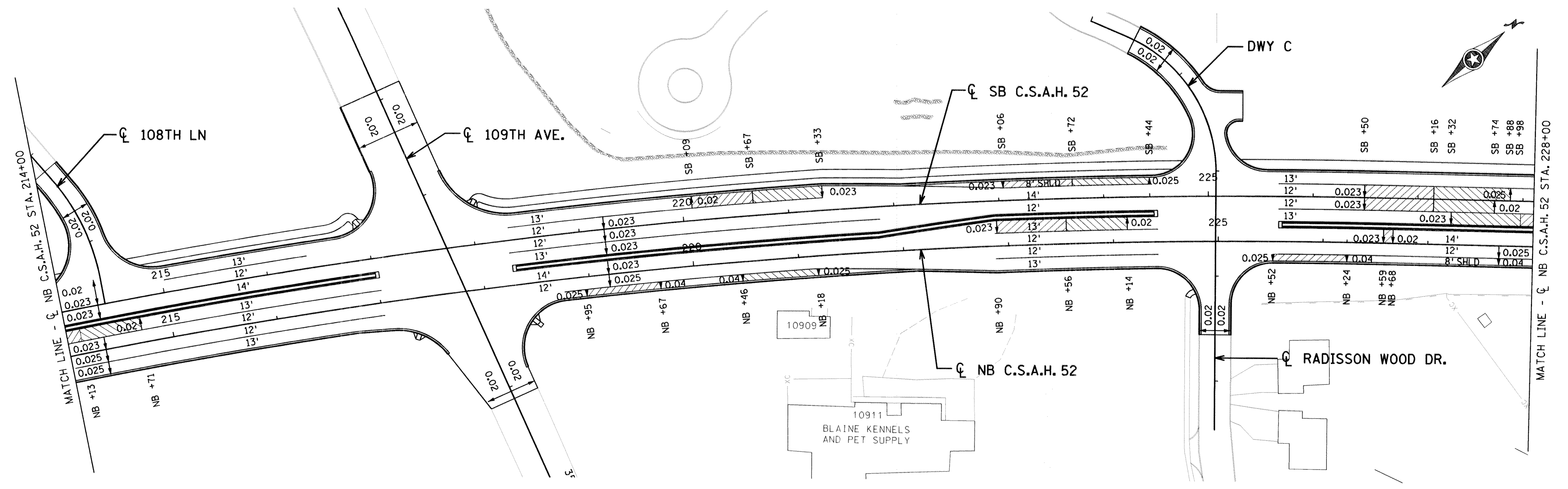
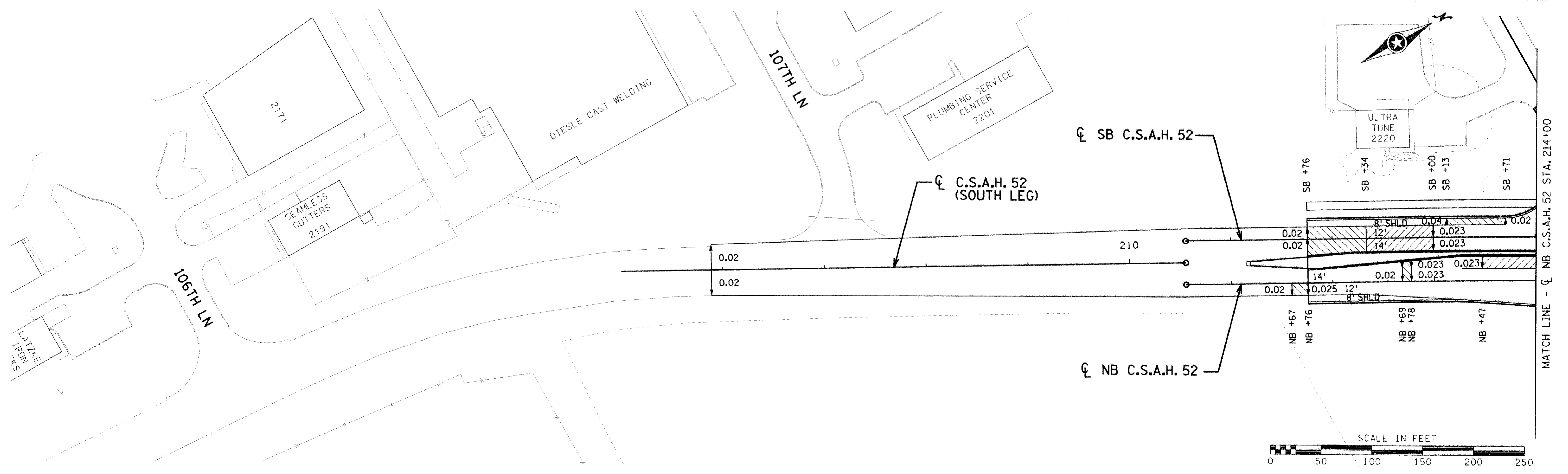
DRAWN BY TJV DATE 11-8-00
 DESIGN BY JMW DATE 11-8-00
 CHECKED BY GAR DATE 11-8-00

STATE AID PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 DRIVEWAY PROFILES
 C.S.A.H. 52 RECONSTRUCTION
 D307R, D341R, D353R

SHEET
 99
 OF
 253



NO	DATE	BY	CKD	APPR	REVISION

NAME: \$FILE\$ \$DATE\$ DATE REG. NO.

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.

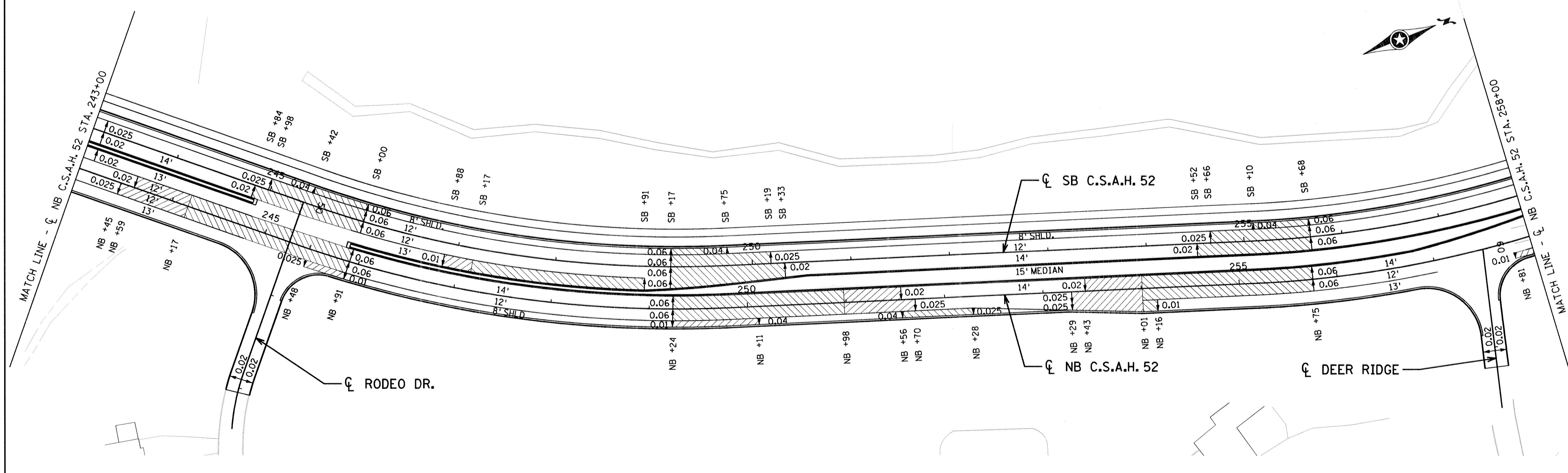
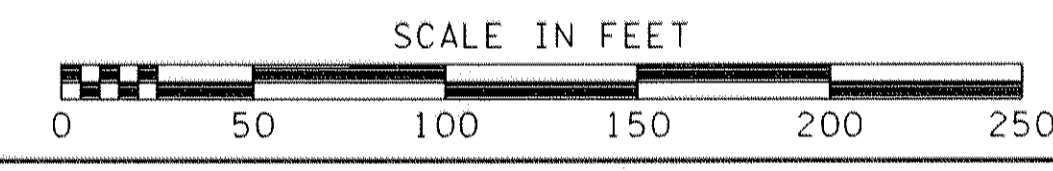
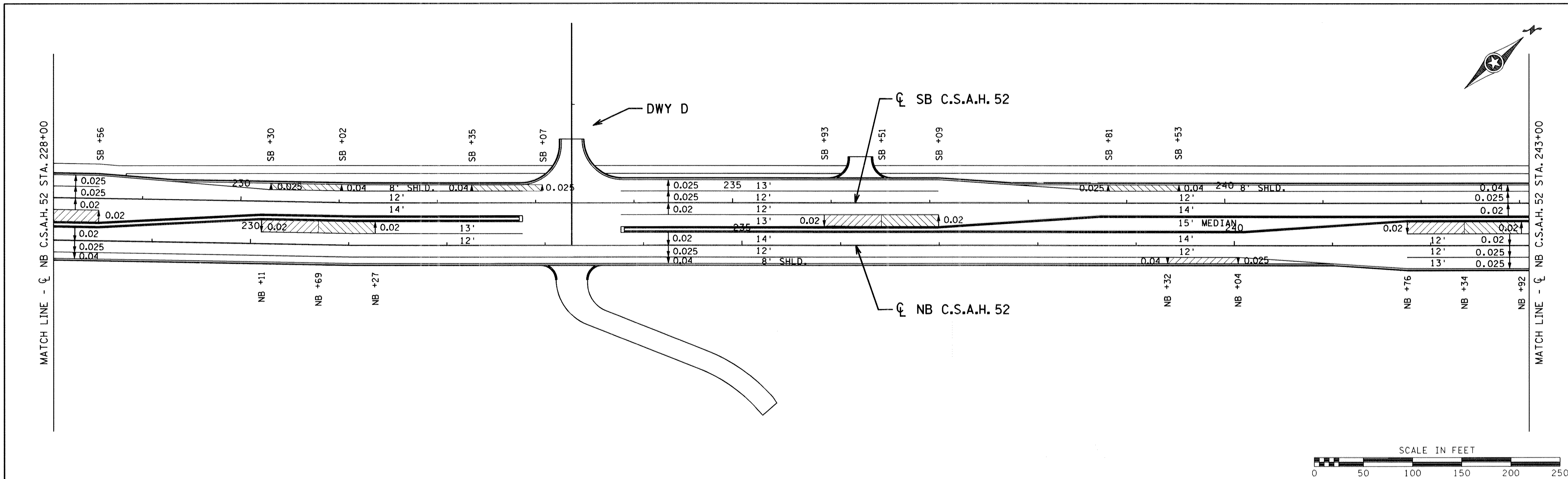
DRAWN BY TJV DATE 11-8-00
 DESIGN BY JMW DATE 11-8-00
 CHECKED BY GAR DATE 11-8-00

STATE PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

TKDA
 TOLTZ, KING, DUVAL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 SUPERELEVATION PLAN
 C.S.A.H. 52 RECONSTRUCTION
 STA. 205+88.19 TO STA. 228+00

SHEET
 100
 OF
 253



NO	DATE	BY	CKD	APPR	REVISION
NAME: \$FILE\$					DATE: \$DATE\$

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE _____ REG. NO. _____

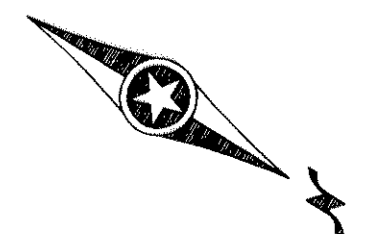
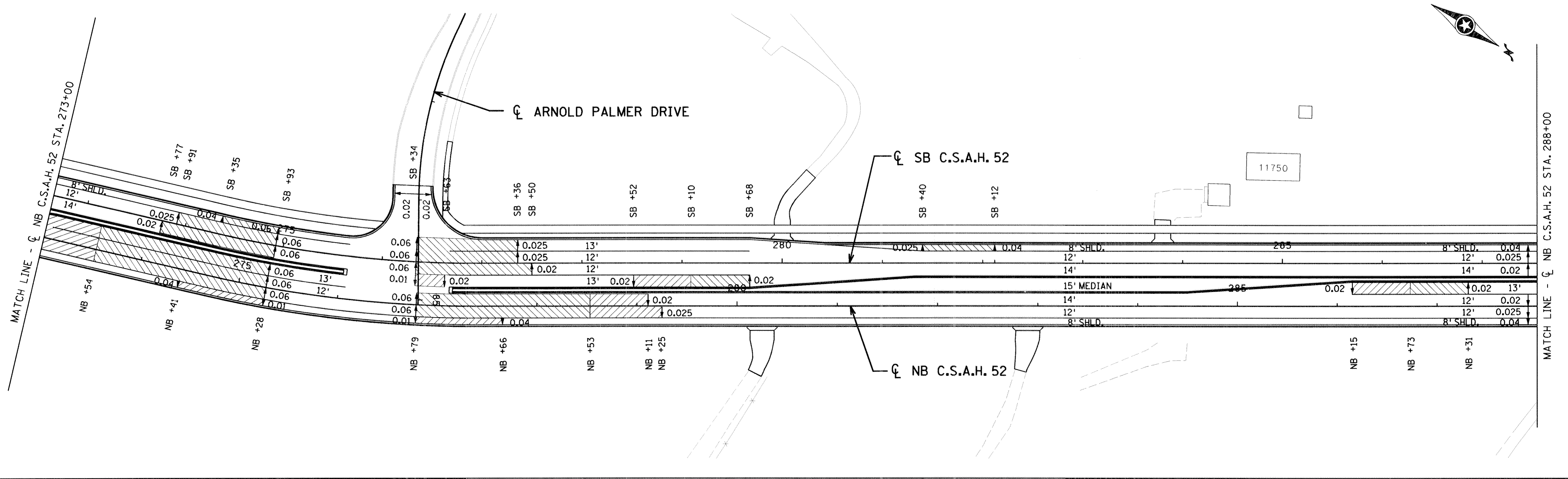
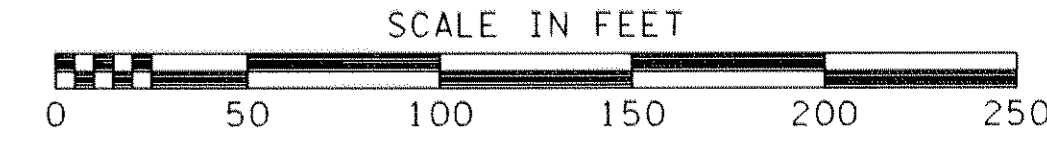
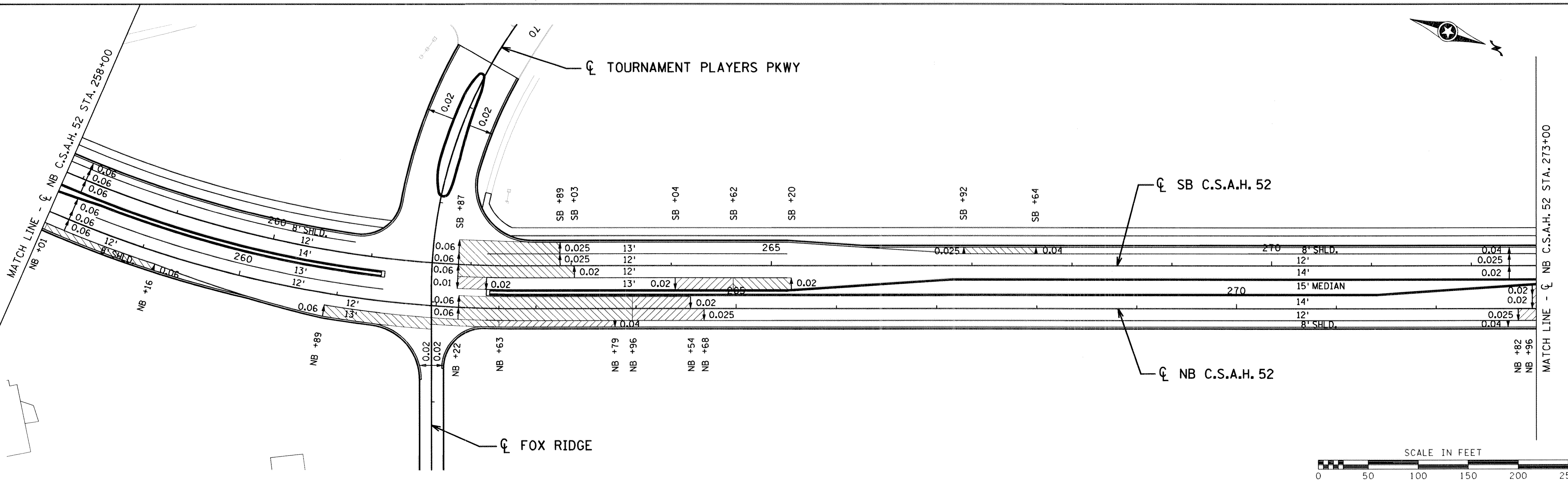
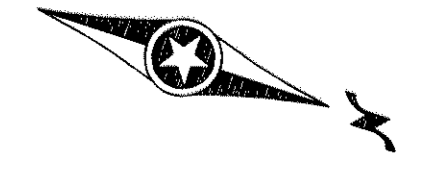
DRAWN BY TJV DATE 11-8-00
 DESIGN BY JMW DATE 11-8-00
 CHECKED BY GAR DATE 11-8-00

STATE PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

TKDA
 TOLTZ, KING, DUVAL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 SUPERELEVATION PLAN
 C.S.A.H. 52 RECONSTRUCTION
 STA. 228+00 TO STA. 258+00

SHEET
 101
 OF
 253



NO	DATE	BY	CKD	APPR	REVISION

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE _____ REG. NO. _____

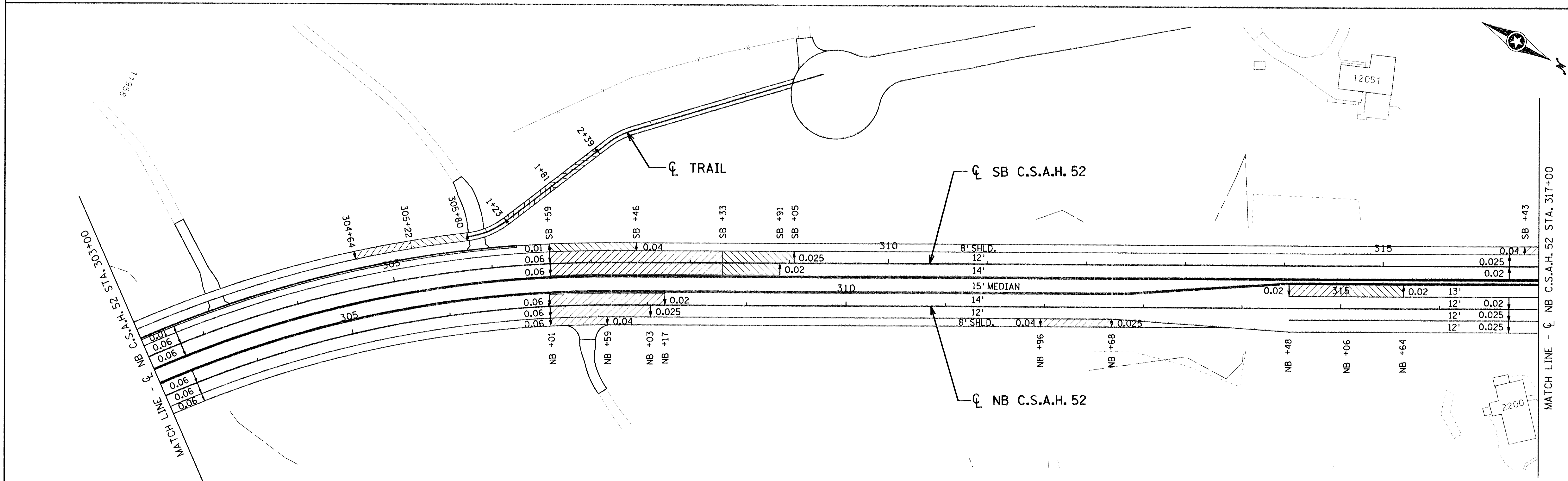
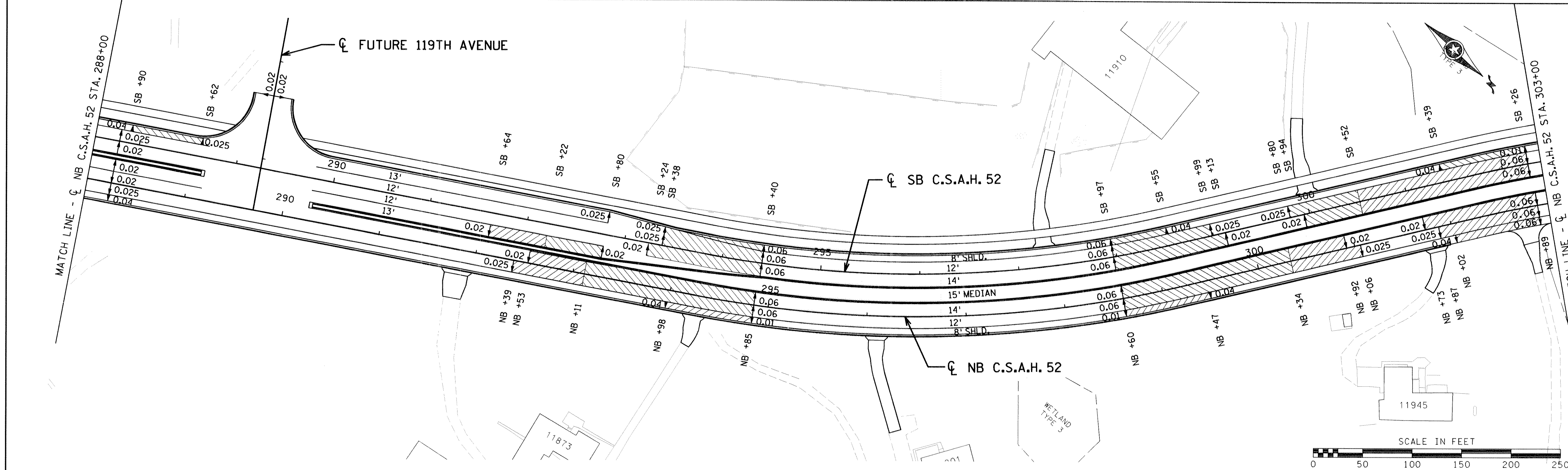
DRAWN BY TJV DATE 11-8-00
 DESIGN BY JMW DATE 11-8-00
 CHECKED BY GAR DATE 11-8-00

STATE PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

TKDA
 TOLTZ, KING, DUVAL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 SUPERELEVATION PLAN
 C.S.A.H. 52 RECONSTRUCTION
 STA. 258+00 TO STA. 288+00

SHEET
 102
 OF
 253



NO	DATE	BY	CKD	APPR	REVISION

NAME: \$FILE\$ \$DATE\$

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE _____ REG. NO. _____

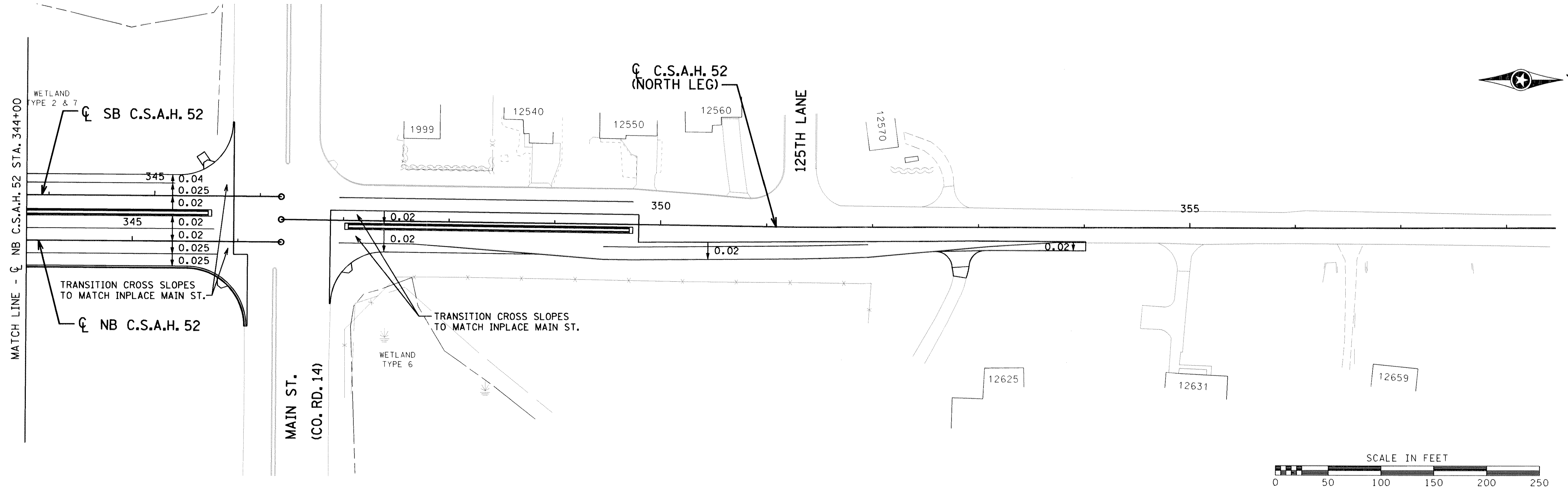
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 CHECKED BY: GAR DATE: 11-8-00

STATE PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

TKDA
 TOLTZ, KING, DUVAL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 SUPERELEVATION PLAN
 C.S.A.H. 52 RECONSTRUCTION
 STA. 288+00 TO STA. 317+00

SHEET
 103
 OF
 253



NO	DATE	BY	CKD	APPR	REVISION

NAME: \$FILE\$ \$DATE\$

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE _____ REG. NO. _____

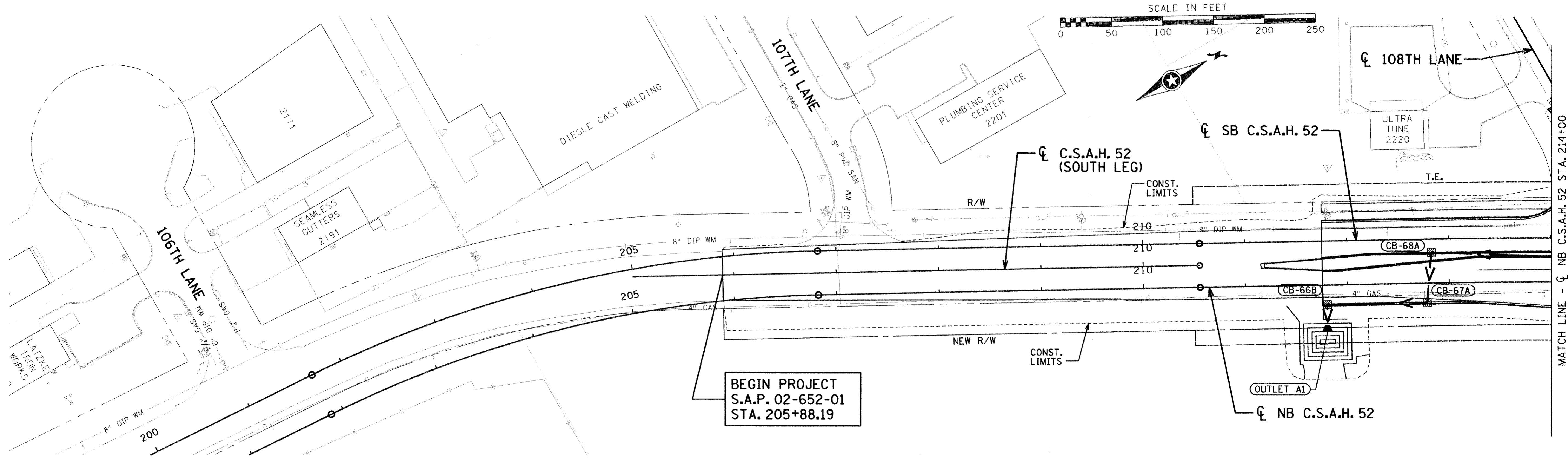
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 DESIGN BY JMW DATE 11-8-00
 CHECKED BY GAR DATE 11-8-00

STATE PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

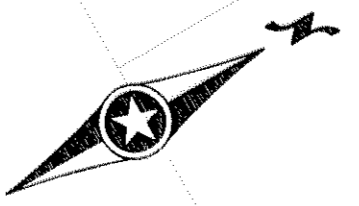
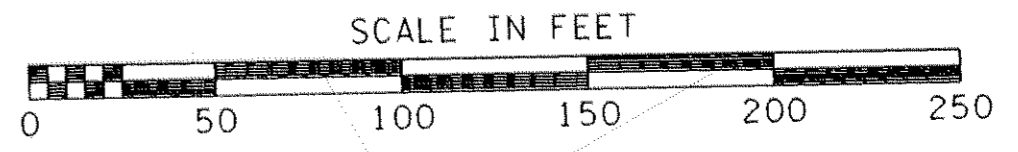
TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 SUPERELEVATION PLAN
 C.S.A.H. 52 RECONSTRUCTION
 STA. 344+00 TO STA. 354+01.36

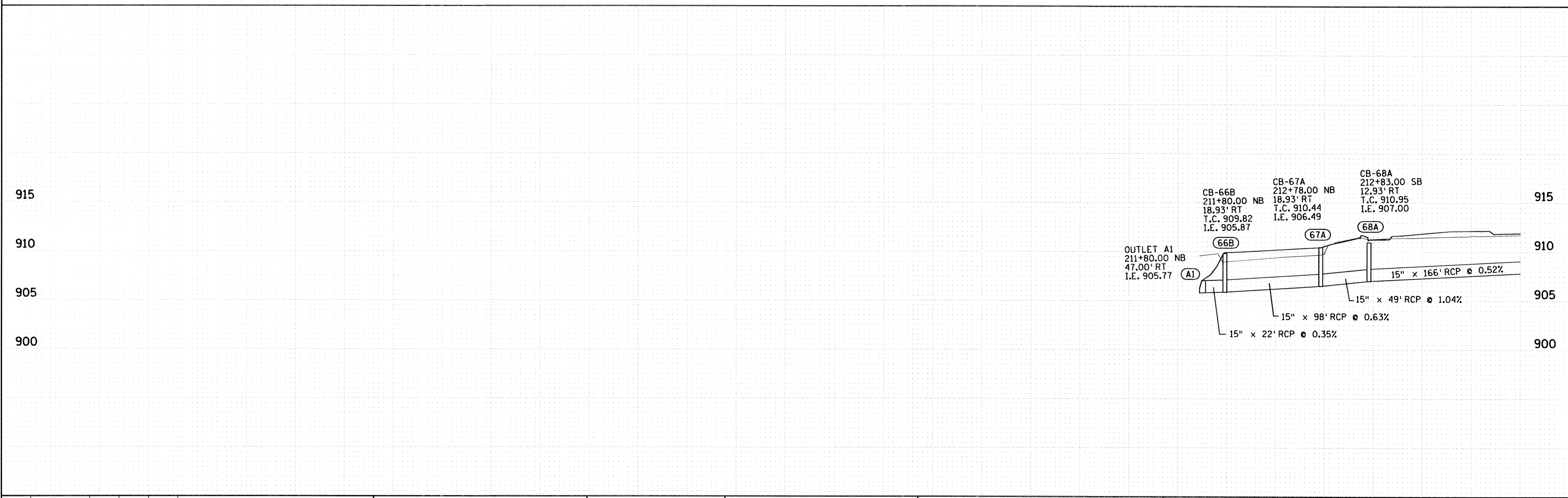
SHEET
 105
 OF
 253



BEGIN PROJECT
S.A.P. 02-652-01
STA. 205+88.19



MATCH LINE - C.S.A.H. 52 STA. 214+00



Structure	Station	Right of Way	Top of Curve	Invert Elevation
OUTLET A1	211+80.00 NB	47.00' RT	I.E. 905.77	
CB-66B	211+80.00 NB	18.93' RT	T.C. 909.82	I.E. 905.87
CB-67A	212+78.00 NB	18.93' RT	T.C. 910.44	I.E. 906.49
CB-68A	212+83.00 SB	12.93' RT	T.C. 910.95	I.E. 907.00

NO	DATE	BY	CHKD	APPR	REVISION

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE _____ REG. NO. _____

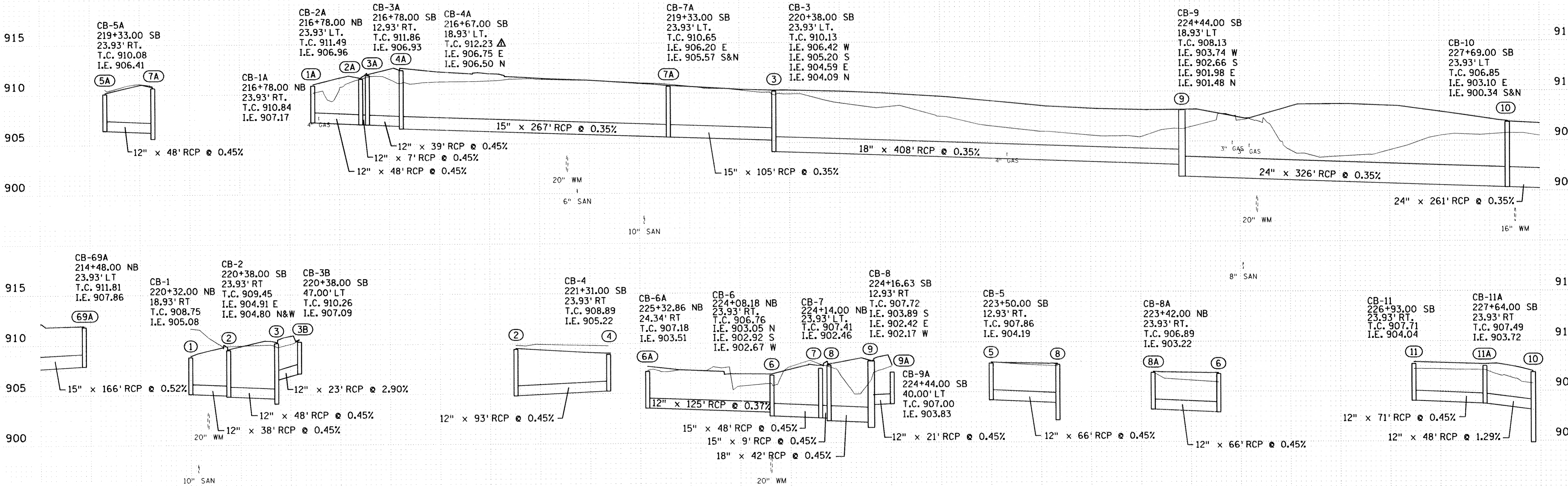
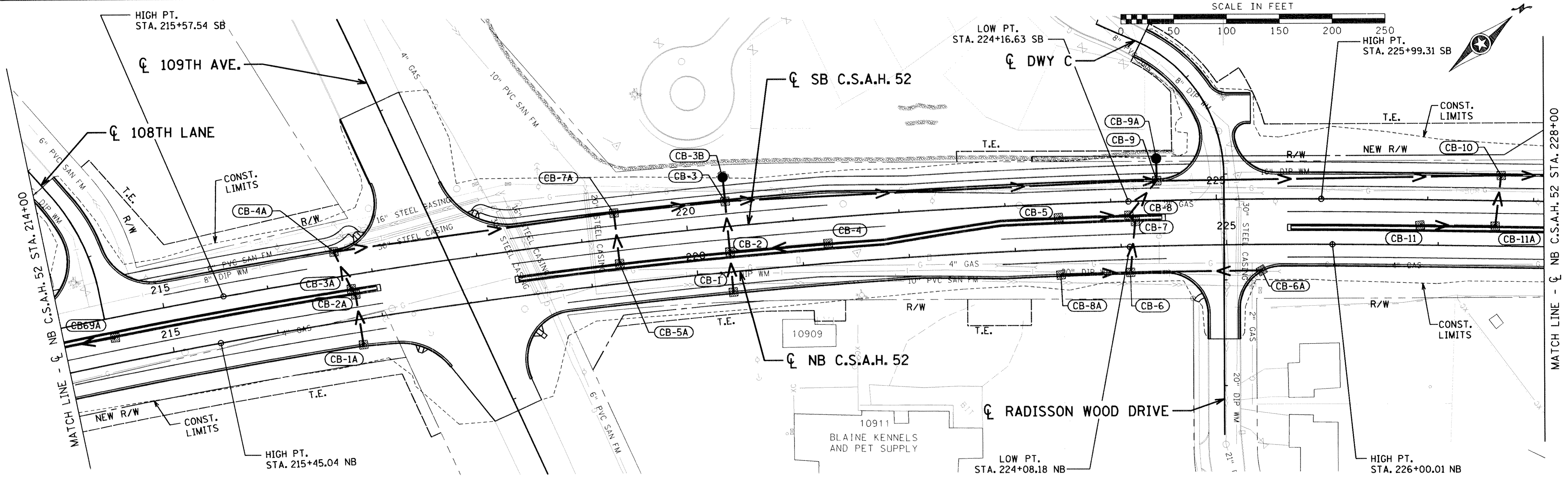
DRAWN BY MAW DATE 11-8-00
 DESIGN BY MAW DATE 11-8-00
 CHECKED BY JMW DATE 11-8-00

STATE PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 DRAINAGE PLAN
 C.S.A.H. 52 RECONSTRUCTION
 STA. 205+88.19 TO STA. 214+00

SHEET
 106
 OF
 253



NO	DATE	BY	CKD	APPR	REVISION
NAME: k:\site\proj\11749\par1\roadway\drawings\drain02.dgn					
25 APR 2001					

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE _____ REG. NO. _____

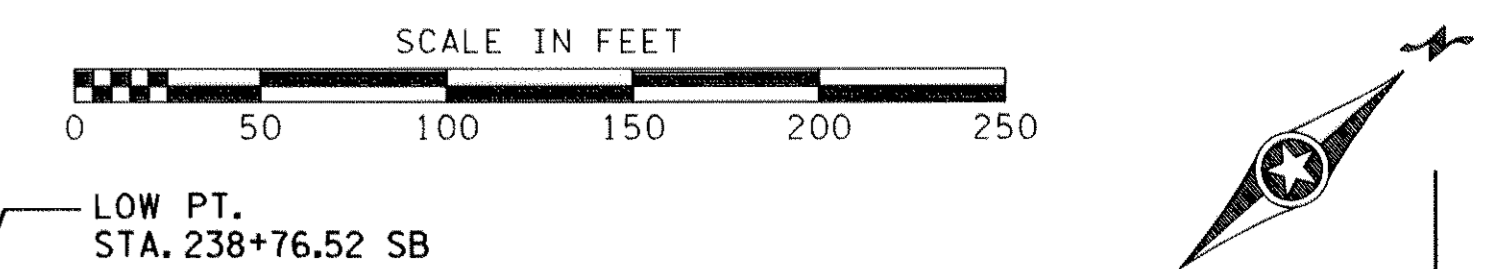
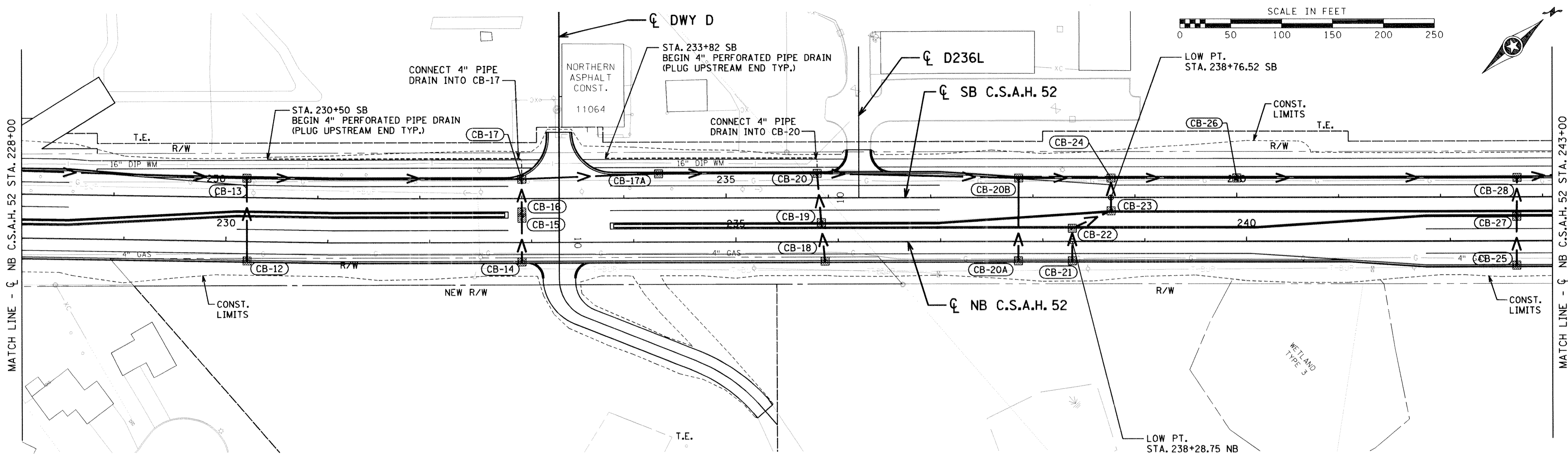
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 CHECKED BY: JMW DATE 11-8-00

STATE PROJECT NO. S.A.P. 02-652-01
 S.A.P. 106-020-019

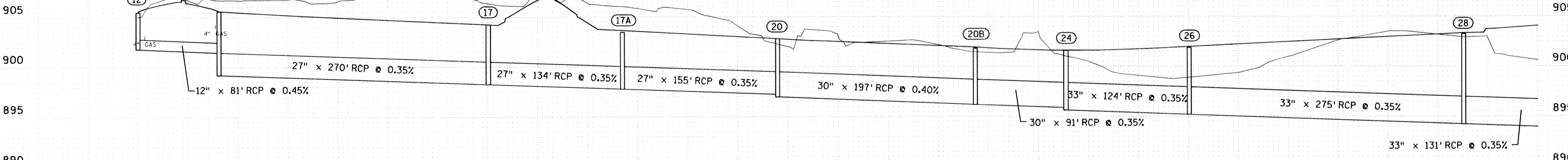


ANOKA COUNTY
 DRAINAGE PLAN
 C.S.A.H. 52 RECONSTRUCTION
 STA. 214+00 TO STA. 228+00

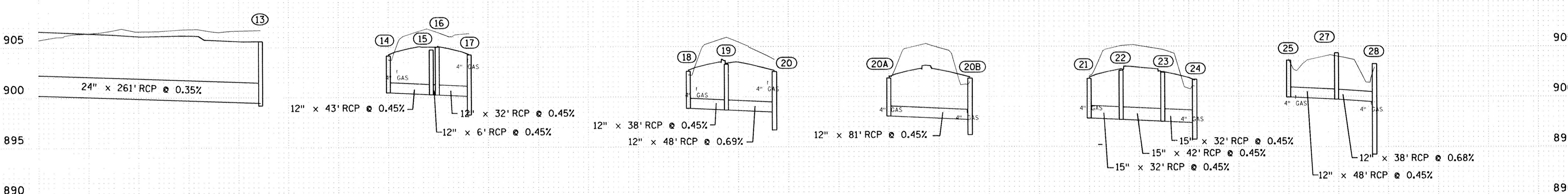
SHEET 107 OF 253



CB-12 230+21.00 NB 18.93' RT. T.C. 905.47 I.E. 901.78	CB-13 230+30.00 SB 18.93' LT. T.C. 905.57 I.E. 901.41 E I.E. 899.43 S I.E. 899.18 N	CB-17 233+00.00 SB 18.93' LT T.C. 904.21 I.E. 901.81 4" PE PIPE I.E. 900.09 E I.E. 898.23 S&N	CB-17A 234+34.00 SB 23.93' LT T.C. 903.43 I.E. 897.76 S&N	CB-20 235+89.00 SB 23.93' LT T.C. 902.65 Δ I.E. 900.50 4" PE PIPE I.E. 898.47 E I.E. 897.22 S I.E. 896.97 N	CB-20B 237+86.00 SB 18.93' LT T.C. 901.79 I.E. 897.67 E I.E. 896.18 S&N	CB-24 238+76.50 SB 18.93' LT T.C. 901.56 I.E. 897.36 E I.E. 895.86 S I.E. 895.61 N	CB-26 240+00.00 SB 18.93' LT T.C. 901.86 I.E. 895.18 S&N	CB-28 242+75.00 SB 18.93' LT T.C. 903.23 I.E. 899.44 E I.E. 894.21 S&N
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CB-15 232+90.50 NB 23.93' LT T.C. 904.71 I.E. 900.26	CB-16 233+00.00 SB 12.93' RT T.C. 904.97 I.E. 900.23	CB-18 235+87.00 NB 18.93' RT T.C. 902.64 I.E. 898.97	CB-19 235+93.00 SB 23.93' RT T.C. 903.36 I.E. 898.80	CB-20A 237+76.00 NB 18.93' RT T.C. 901.81 I.E. 898.04	CB-21 238+28.80 NB 18.93' LT T.C. 901.76 I.E. 897.84	CB-22 238+28.80 NB 12.93' LT T.C. 902.60 I.E. 897.69	CB-23 238+76.50 SB 23.93' RT T.C. 902.31 I.E. 897.50	CB-25 242+65.00 NB 23.93' RT T.C. 903.58 I.E. 899.91	CB-27 242+65.00 NB 12.93' LT T.C. 904.31 I.E. 899.70
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NO	DATE	BY	CKD	APPR	REVISION
NAME: k:\site\proj\c11749\par\1\roadway\drawings\drain03.dgn 25 APR 2001					

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE _____ REG. NO. _____

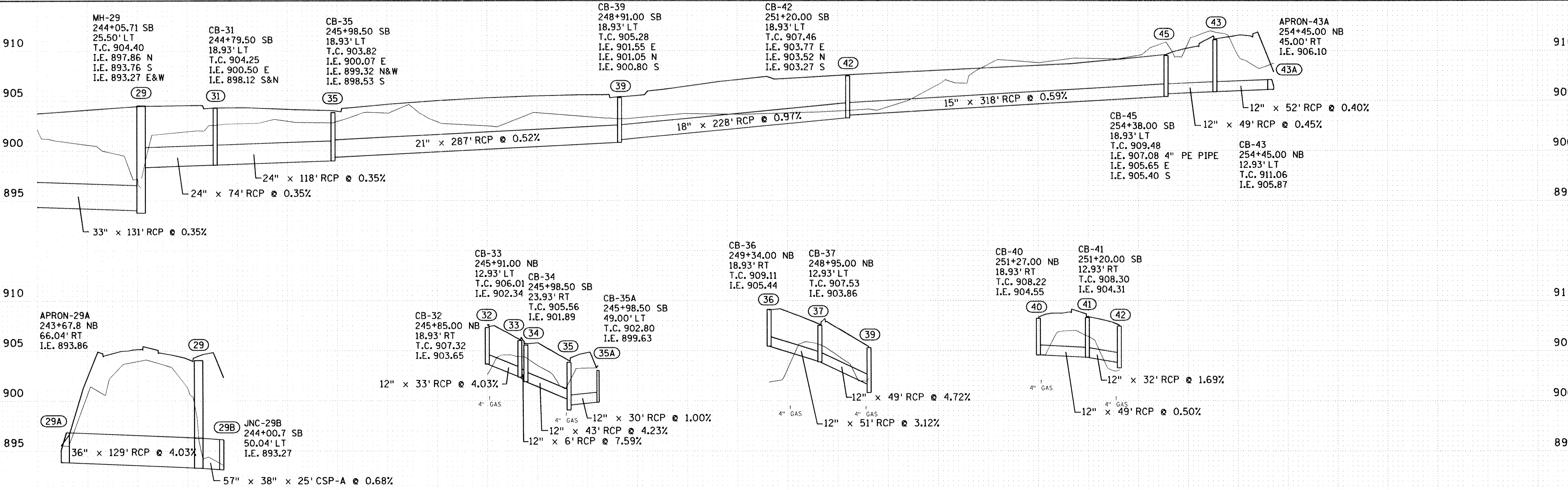
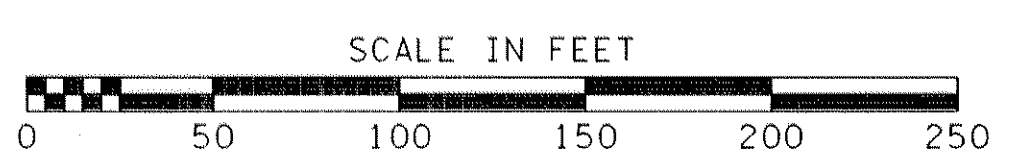
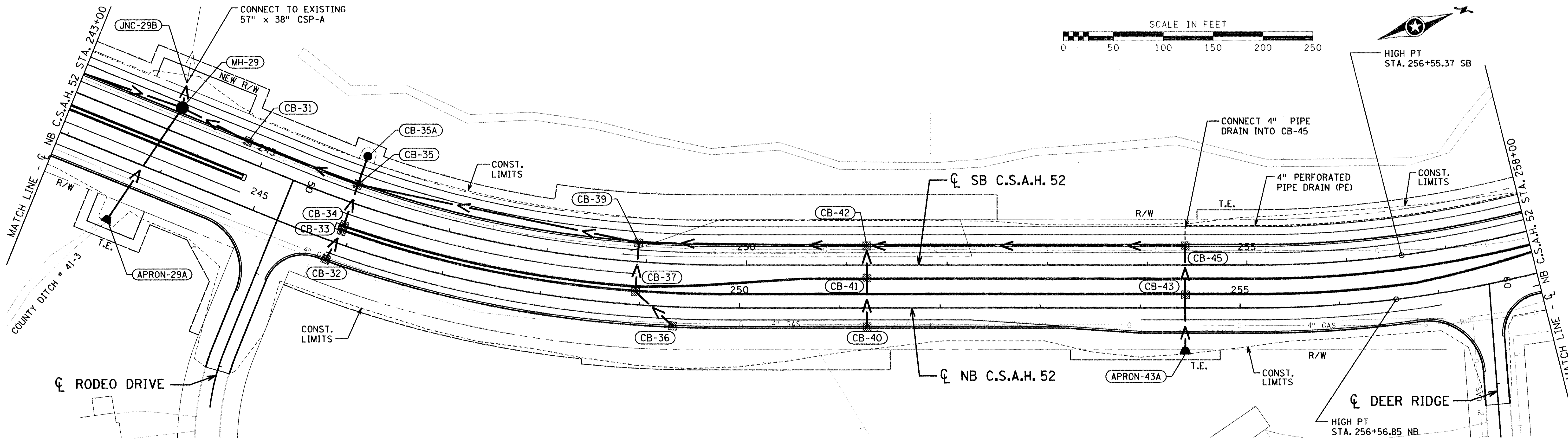
DRAWN BY MAW DATE 11-8-00
DESIGN BY MAW DATE 11-8-00
CHECKED BY JMW DATE 11-8-00

STATE PROJECT NO.
S.A.P. 02-652-01
S.A.P. 106-020-019

TKDA
TOLTZ, KING, DUVALL, ANDERSON
AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
DRAINAGE PLAN
C.S.A.H. 52 RECONSTRUCTION
STA. 228+00 TO STA. 243+00

SHEET
108
OF
253



NO	DATE	BY	CKD	APPR	REVISION
NAME: k:\site\proj\c11749\par\1\roadway\drawings\drain04.dgn					
25 APR 2001					

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE _____ REG. NO. _____

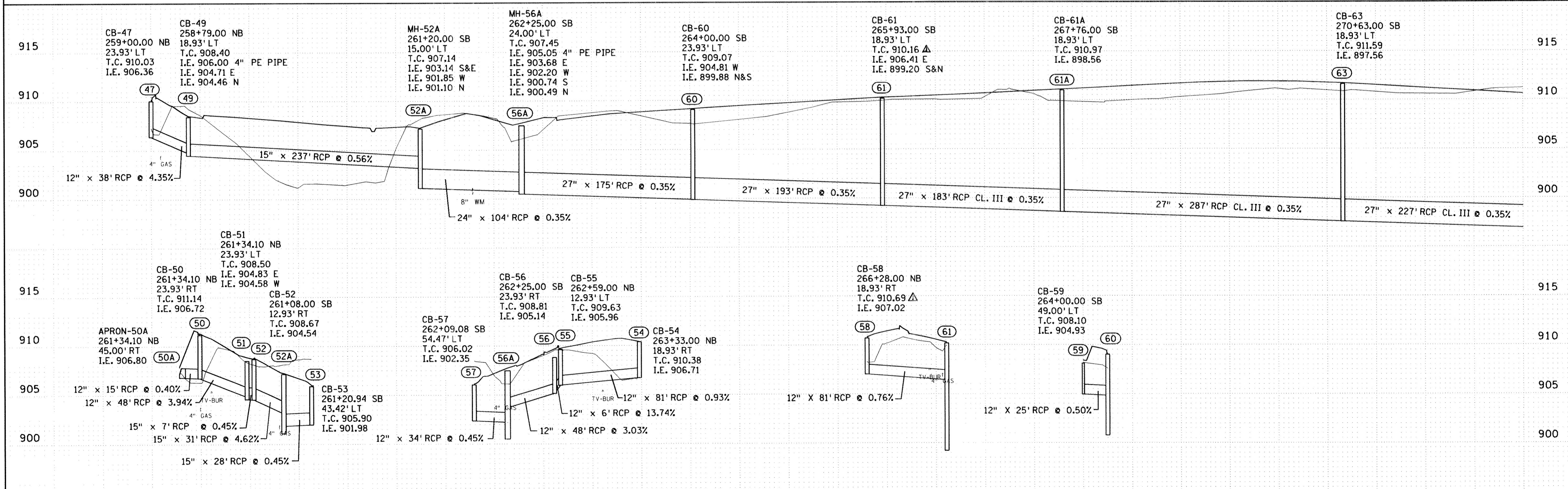
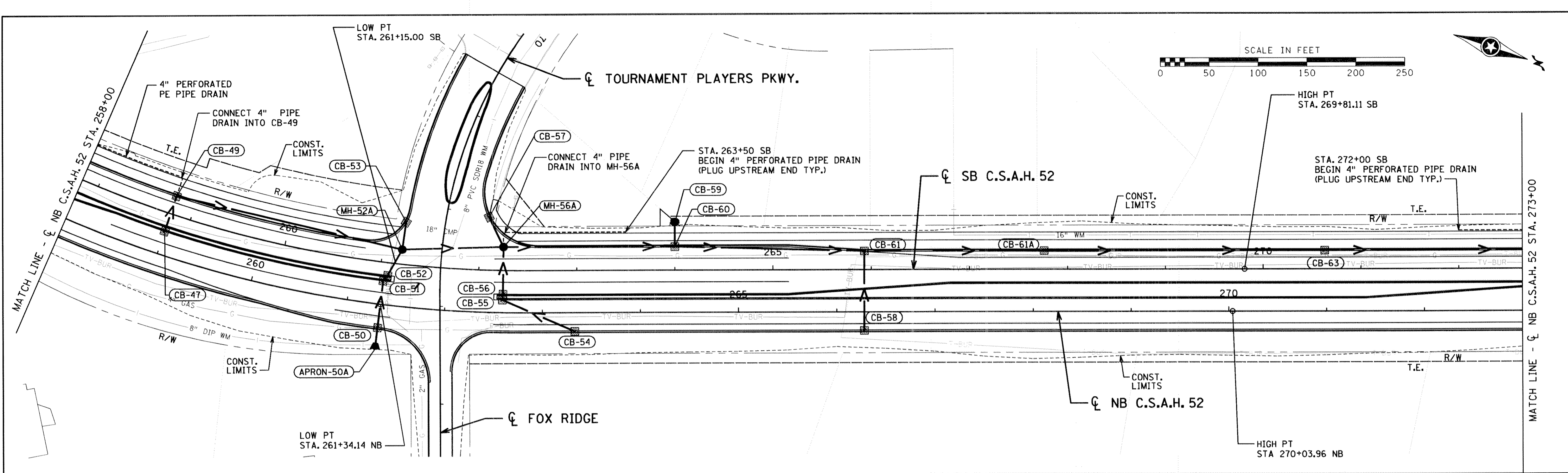
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 DESIGN BY MAW DATE 11-8-00
 CHECKED BY JMW DATE 11-8-00

STATE PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

TKDA
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 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 DRAINAGE PLAN
 C.S.A.H. 52 RECONSTRUCTION
 STA. 243+00 TO STA. 258+00

SHEET
 109
 OF
 253



4-6-01	MW	MW	LR	APPENDUM 2
NO	DATE	BY	CKD	APPR
				REVISION
NAME: k:\site\proj\c11749\part11\roadway\drawings\drain05.dgn 25 APR 2001				

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE _____ REG. NO. _____

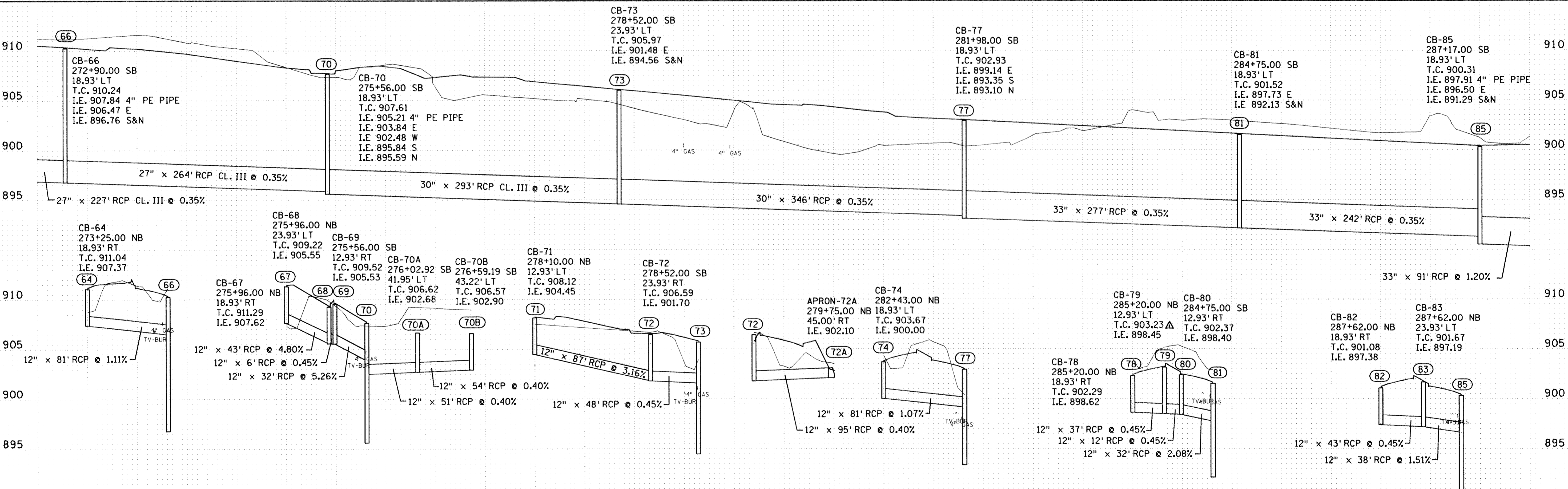
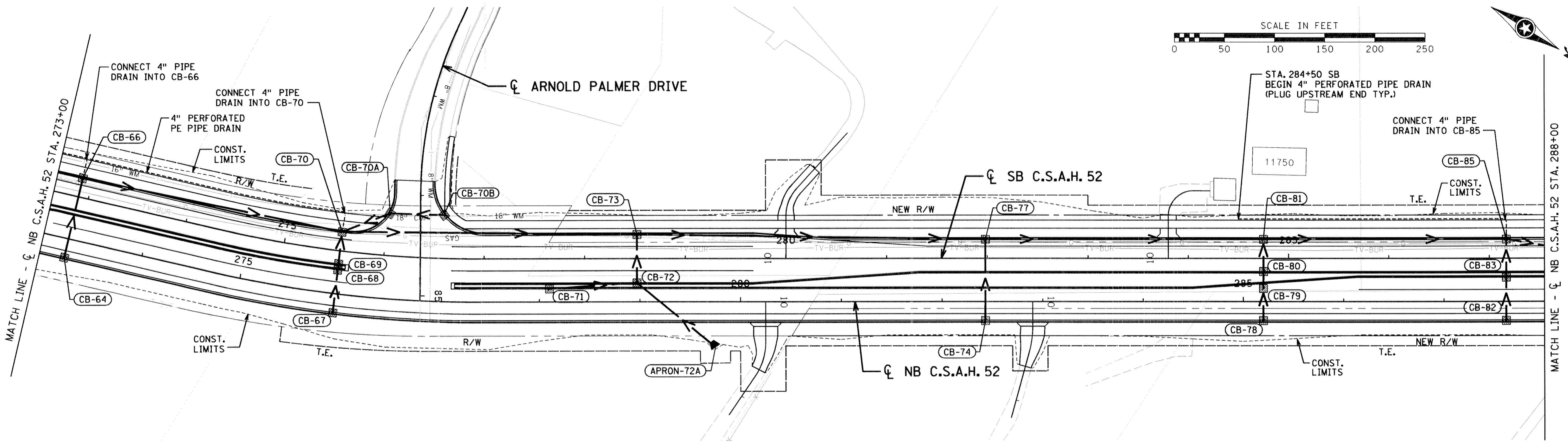
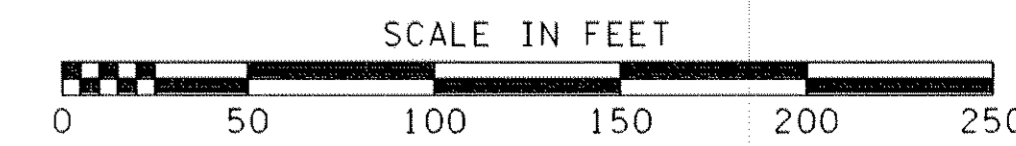
DRAWN BY: MAW DATE 11-8-00
 DESIGN BY: MAW DATE 11-8-00
 CHECKED BY: JMW DATE 11-8-00

STATE PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

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 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 DRAINAGE PLAN
 C.S.A.H. 52 RECONSTRUCTION
 STA. 258+00 TO STA. 273+00

SHEET
 110
 OF
 253



4-6-01	MW	MW	LR	APPENDUM 2
NO	DATE	BY	CKD	APPR
				REVISION
NAME: k:\site\proj\11749\par\1\roadway\drawings\drain06.dgn				
25 APR 2001				

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE _____ REG. NO. _____

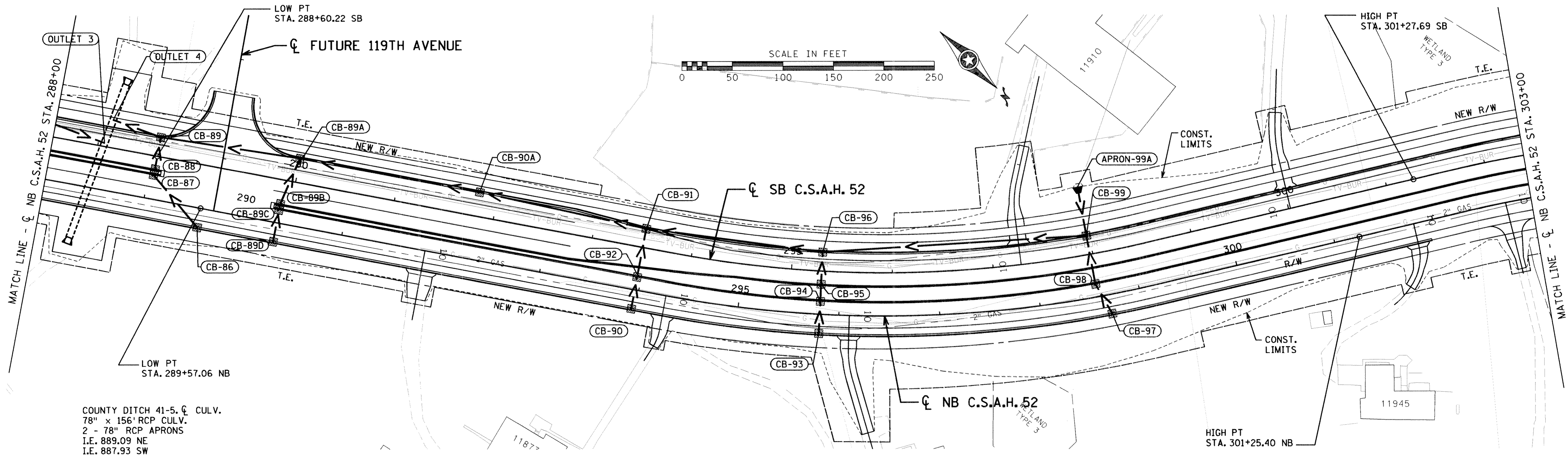
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 DESIGN BY MAW DATE 11-8-00
 CHECKED BY JMW DATE 11-8-00

STATE PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

TKDA
 TOLTZ, KING, DUVAL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

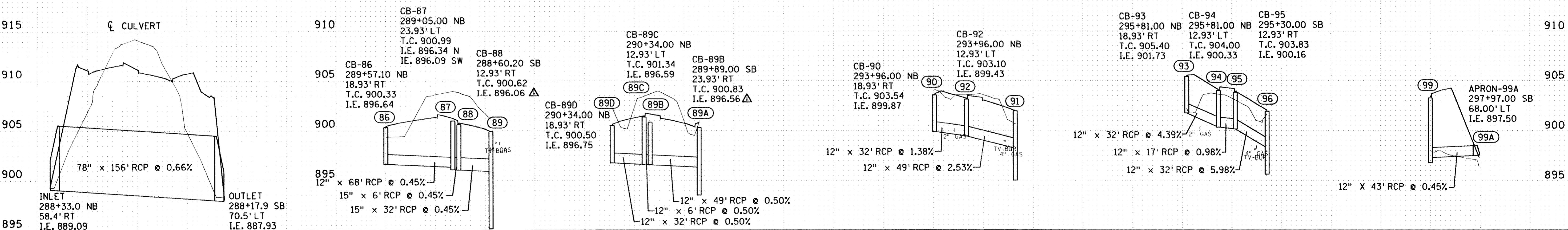
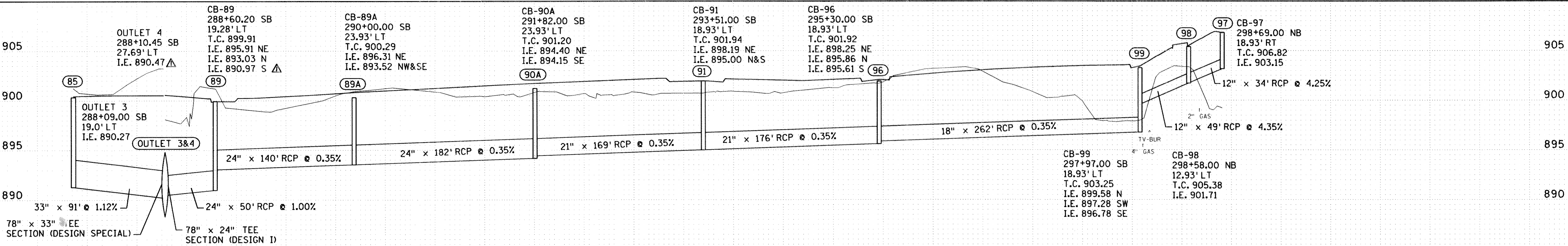
ANOKA COUNTY
 DRAINAGE PLAN
 C.S.A.H. 52 RECONSTRUCTION
 STA. 273+00 TO STA. 288+00

SHEET
 111
 OF
 253



COUNTY DITCH 41-5. CULV.
 78" x 156' RCP CULV.
 2 - 78" RCP APRONS
 I.E. 889.09 NE
 I.E. 887.93 SW

HIGH PT
 STA. 301+25.40 NB



NO	DATE	BY	CKD	APPR	REVISION
NAME: k:\site\proj\c11749\par\1\roadway\drawings\drain07.dgn					
25 APR 2001					

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE _____ REG. NO. _____

DRAWN BY: MAW DATE: 11-8-00
 DESIGN BY: MAW DATE: 11-8-00
 CHECKED BY: JMW DATE: 11-8-00

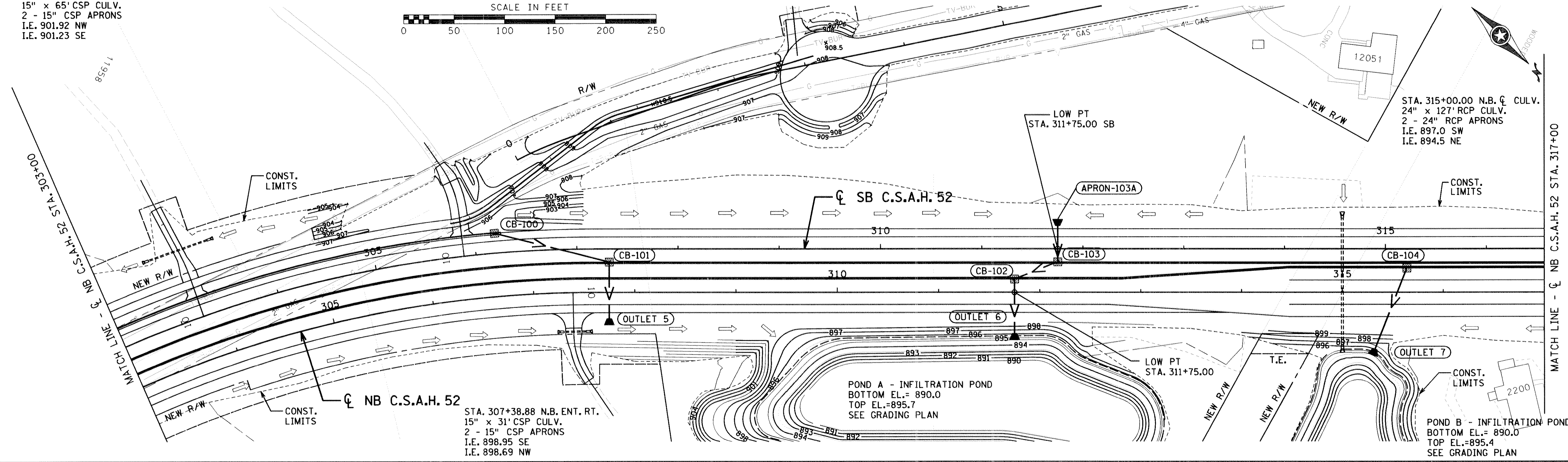
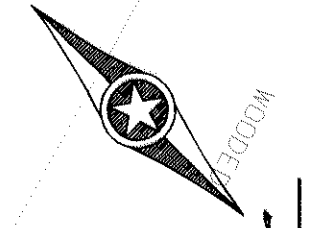
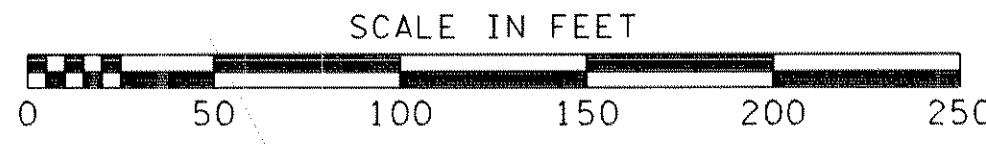
STATE PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

TKDA
 TOLTZ, KING, DUVAL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 DRAINAGE PLAN
 C.S.A.H. 52 RECONSTRUCTION
 STA. 288+00 TO STA. 303+00

SHEET
 112
 OF
 253

STA. 303+22.70 S.B. ENT. LT
 15" x 65' CSP CULV.
 2 - 15" CSP APRONS
 I.E. 901.92 NW
 I.E. 901.23 SE

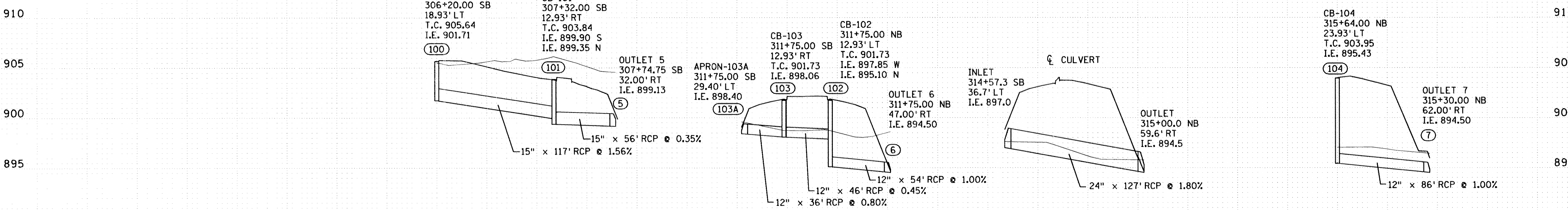


STA. 307+38.88 N.B. ENT. RT.
 15" x 31' CSP CULV.
 2 - 15" CSP APRONS
 I.E. 898.95 SE
 I.E. 898.69 NW

STA. 315+00.00 N.B. CULV.
 24" x 127' RCP CULV.
 2 - 24" RCP APRONS
 I.E. 897.0 SW
 I.E. 894.5 NE

POND A - INFILTRATION POND
 BOTTOM EL.= 890.0
 TOP EL.=895.7
 SEE GRADING PLAN

POND B - INFILTRATION POND
 BOTTOM EL.= 890.0
 TOP EL.=895.4
 SEE GRADING PLAN



CB-100
 306+20.00 SB
 18.93' LT
 T.C. 905.64
 I.E. 901.71

CB-101
 307+32.00 SB
 12.93' RT
 T.C. 903.84
 I.E. 899.90 S
 I.E. 899.35 N

APRON-103A
 311+75.00 SB
 29.40' LT
 I.E. 898.40

CB-103
 311+75.00 SB
 12.93' RT
 T.C. 901.73
 I.E. 898.06

CB-102
 311+75.00 NB
 12.93' LT
 T.C. 901.73
 I.E. 897.85 W
 I.E. 895.10 N

INLET
 314+57.3 SB
 36.7' LT
 I.E. 897.0

CB-104
 315+64.00 NB
 23.93' LT
 T.C. 903.95
 I.E. 895.43

OUTLET 7
 315+30.00 NB
 62.00' RT
 I.E. 894.50

OUTLET 6
 311+75.00 NB
 47.00' RT
 I.E. 894.50

OUTLET
 315+00.0 NB
 59.6' RT
 I.E. 894.5

12" x 54' RCP @ 1.00%
 12" x 46' RCP @ 0.45%
 12" x 36' RCP @ 0.80%

24" x 127' RCP @ 1.80%

12" x 86' RCP @ 1.00%

NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\stf\proj\c11749\part1\roadway\drawings\drain08.dgn 25 APR 2001

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE _____ REG. NO. _____

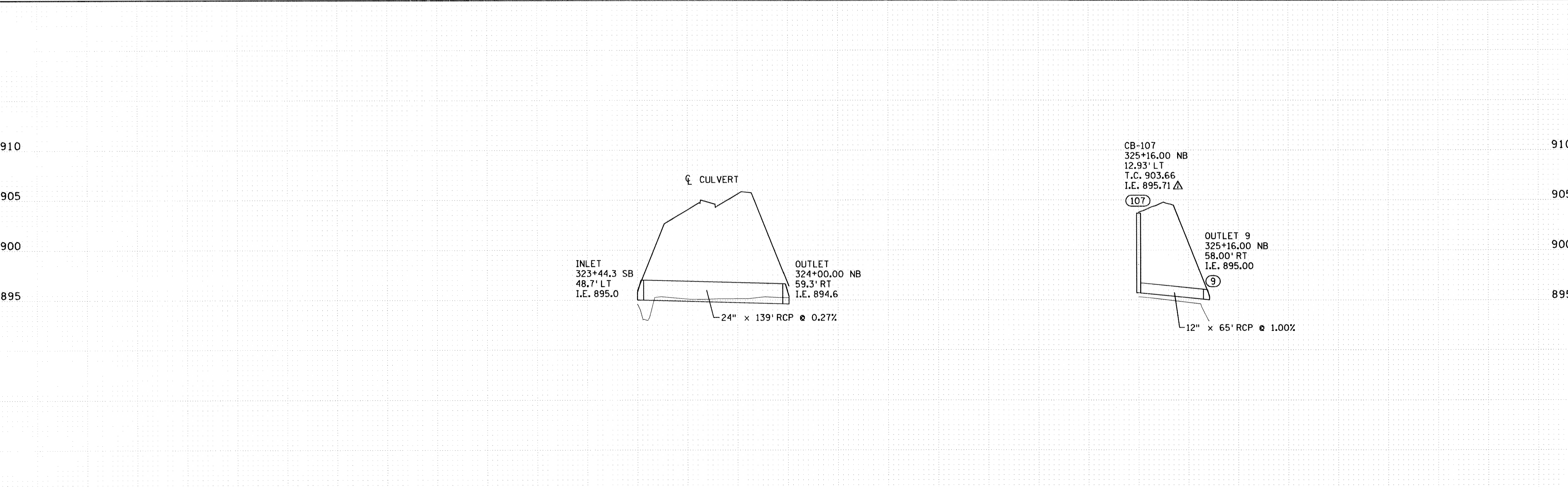
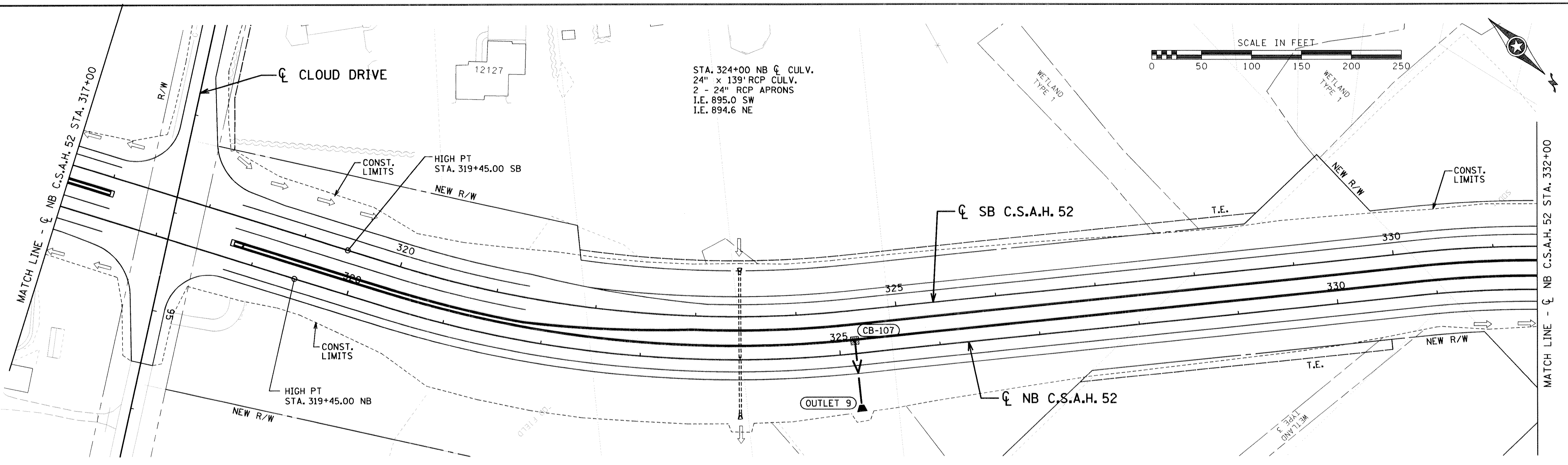
DRAWN BY MAW DATE 11-8-00
 DESIGN BY MAW DATE 11-8-00
 CHECKED BY JMW DATE 11-8-00

STATE PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

TKDA
 TOLTZ, KING, DUVAL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 DRAINAGE PLAN
 C.S.A.H. 52 RECONSTRUCTION
 STA. 303+00 TO STA. 317+00

SHEET
 113
 OF
 253



4-6-01	MW	MW	LR	APPENDUM 2	
NO	DATE	BY	CKD	APPR	REVISION
NAME: \$FILE\$					\$DATE\$

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE _____ REG. NO. _____

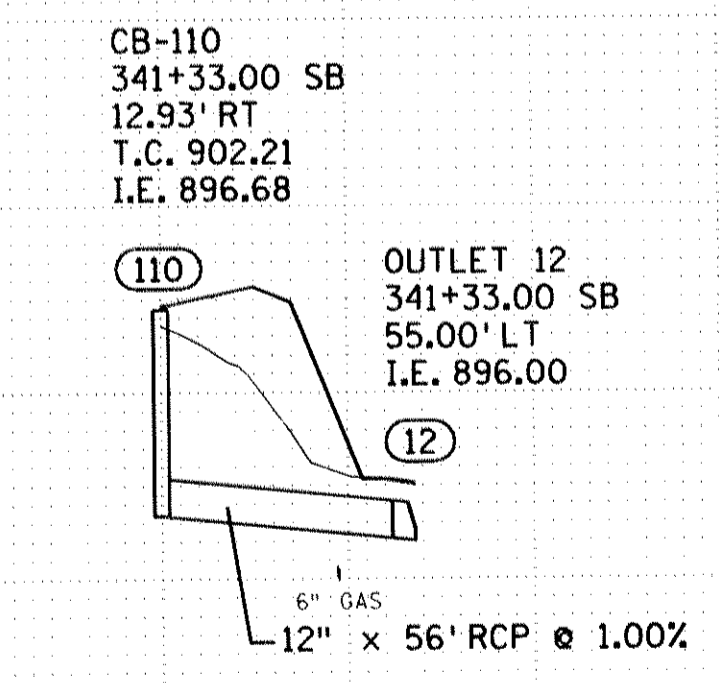
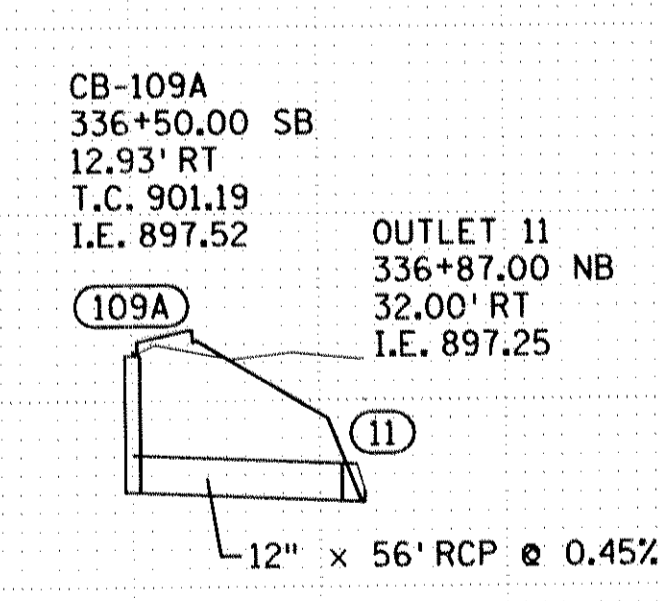
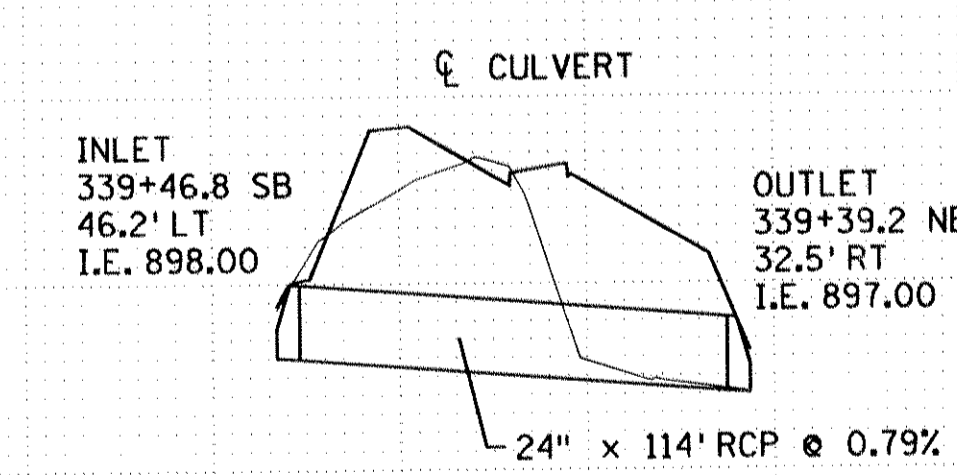
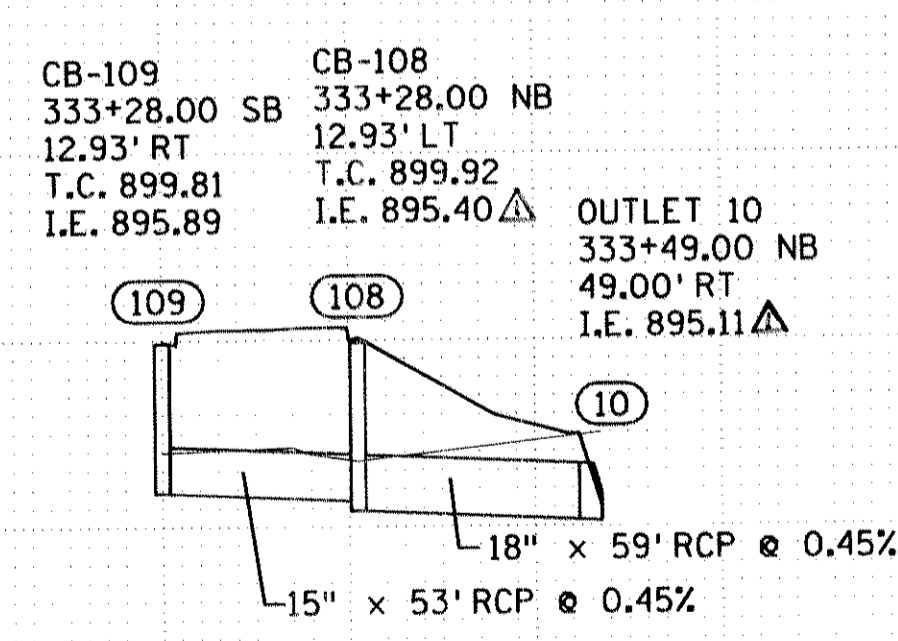
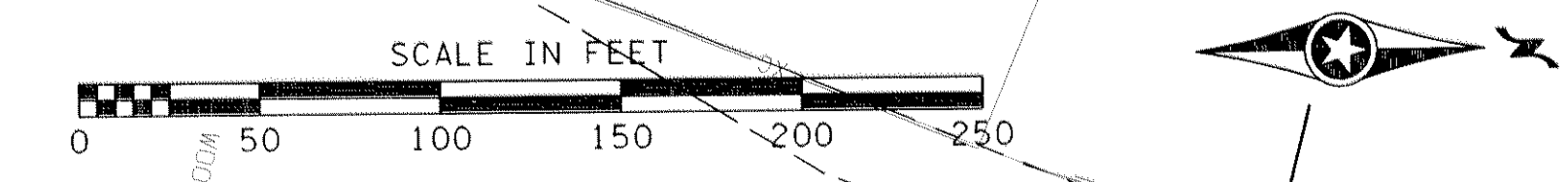
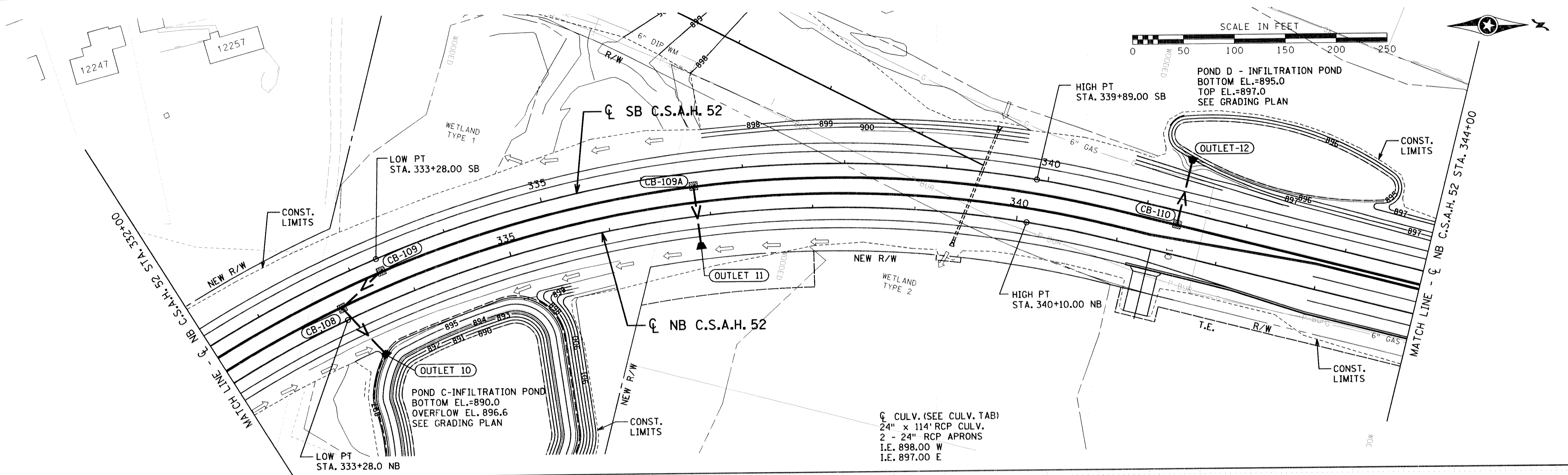
DRAWN BY MAW DATE 11-8-00
 DESIGN BY MAW DATE 11-8-00
 CHECKED BY JMW DATE 11-8-00

STATE PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
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 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 DRAINAGE PLAN
 C.S.A.H. 52 RECONSTRUCTION
 STA. 317+00 TO STA. 332+00

SHEET
 114
 OF
 253



4-6-01	MW	MW	LR	ADDENDUM 2
NO	DATE	BY	CKD	APPR
REVISION				
NAME: k:\site\proj\c11749\part1\roadway\drawings\drain10.dgn				25 APR 2001

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE _____ REG. NO. _____

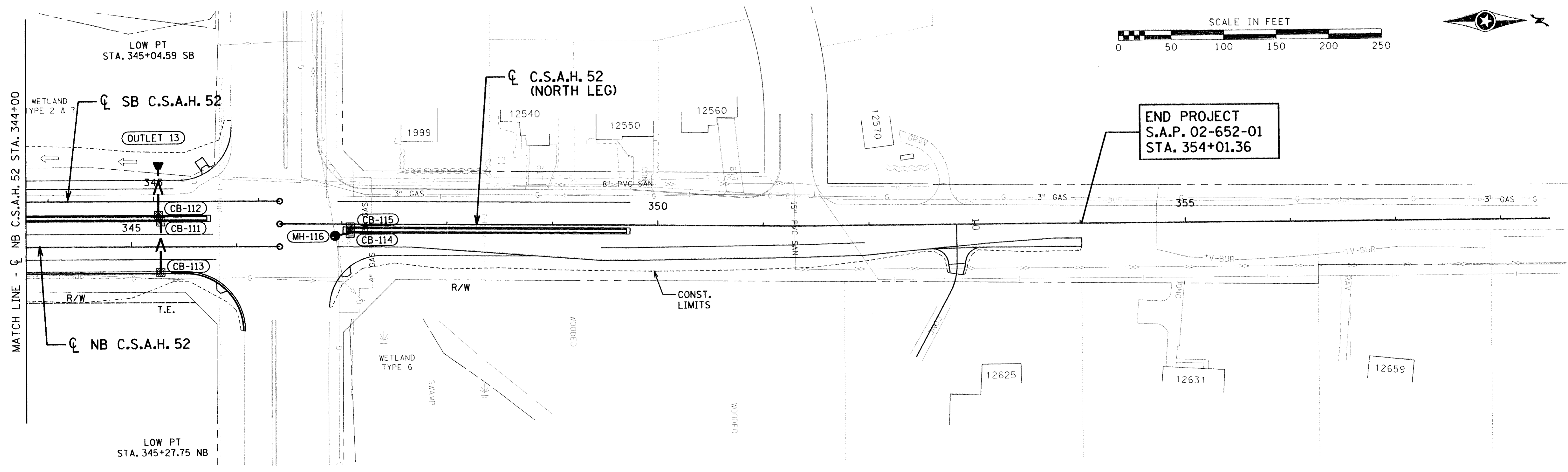
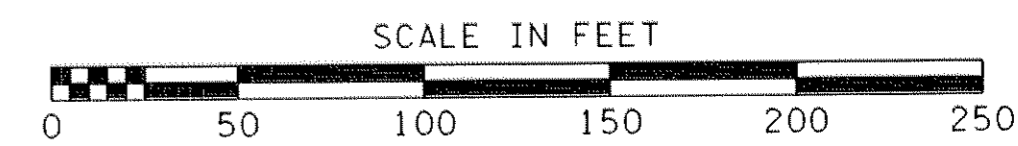
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 DESIGN BY MAW DATE 11-8-00
 CHECKED BY JMW DATE 11-8-00

STATE PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

TKDA
 TOLTZ, KING, DUVAL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

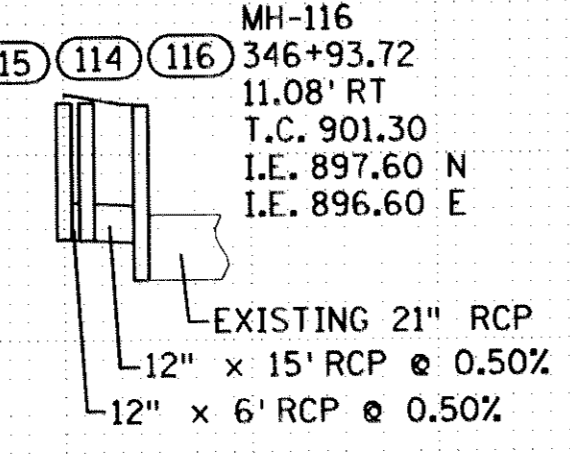
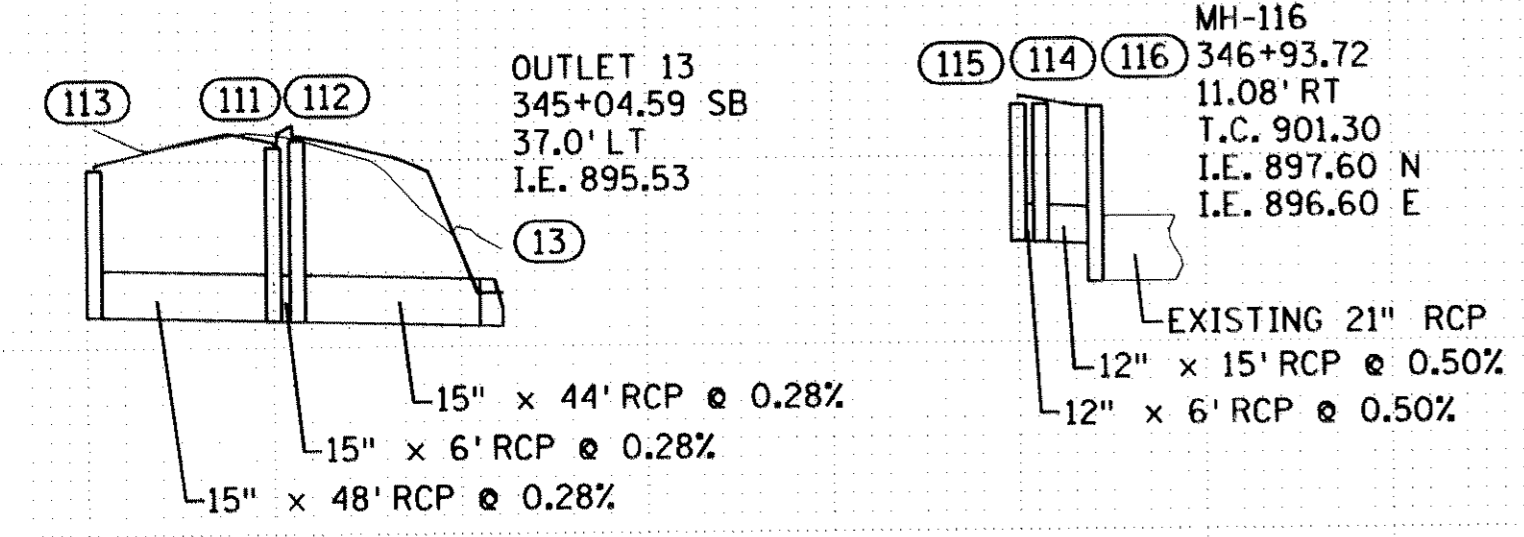
ANOKA COUNTY
 DRAINAGE PLAN
 C.S.A.H. 52 RECONSTRUCTION
 STA. 332+00 TO STA. 344+00

SHEET
 115
 OF
 253



CB-113	CB-111	CB-112	CB-115	CB-114
345+27.75 NB	345+27.75 NB	345+04.59 SB	347+08.00	347+08.00
23.93' RT	23.93' LT	12.93' RT	2.43' RT	8.57' RT
T.C. 899.77	T.C. 900.36	T.C. 900.53	T.C. 901.37	T.C. 901.37
I.E. 895.83	I.E. 895.69	I.E. 895.67	I.E. 897.70	I.E. 897.67

905
900
895
890



NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\c11749\part1\roadway\drawings\drain1.dgn 25 APR 2001

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE _____ REG. NO. _____

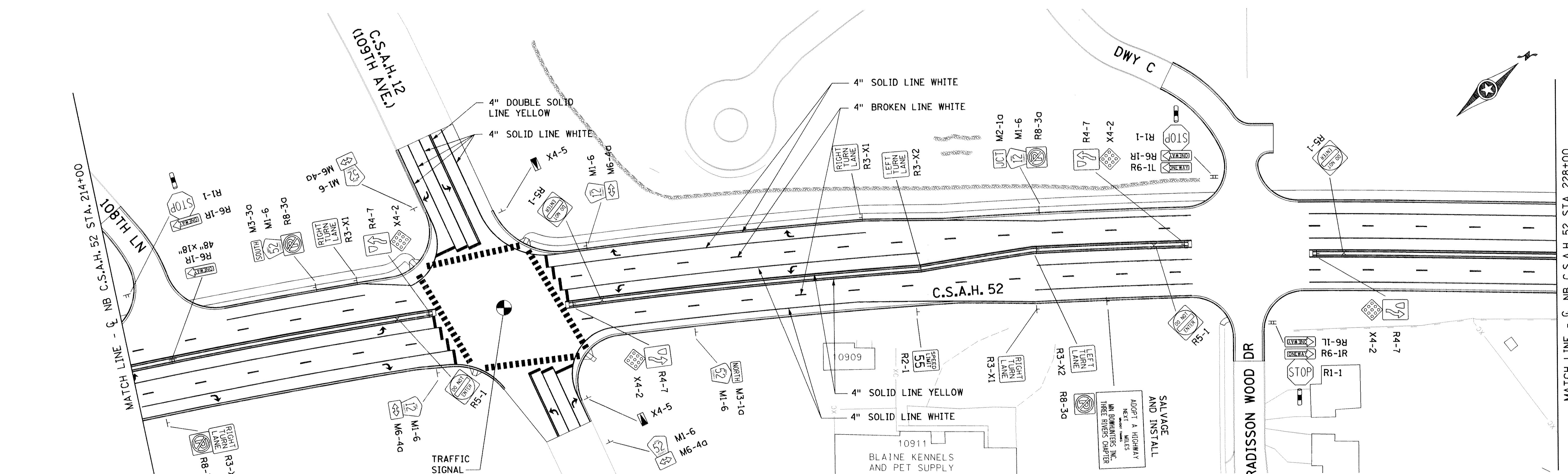
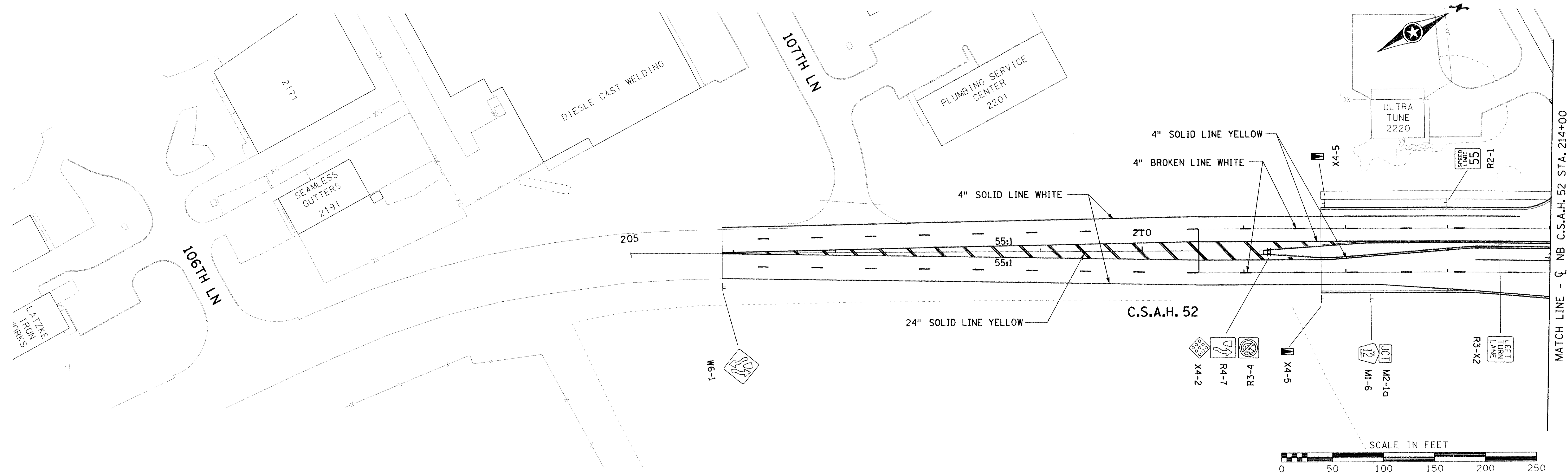
DRAWN BY MAW DATE 11-8-00
 DESIGN BY MAW DATE 11-8-00
 CHECKED BY JMW DATE 11-8-00

STATE PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 DRAINAGE PLAN
 C.S.A.H. 52 RECONSTRUCTION
 STA. 344+00 TO STA. 354+01.36

SHEET
 116
 OF
 253



NO	DATE	BY	CKD	APPR	REVISION

NAME: \$FILE\$ \$DATE\$

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE _____ REG. NO. _____

DRAWN BY TJV DATE 11-8-00
 DESIGN BY TJV DATE 11-8-00
 CHECKED BY JMW DATE 11-8-00

STATE PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

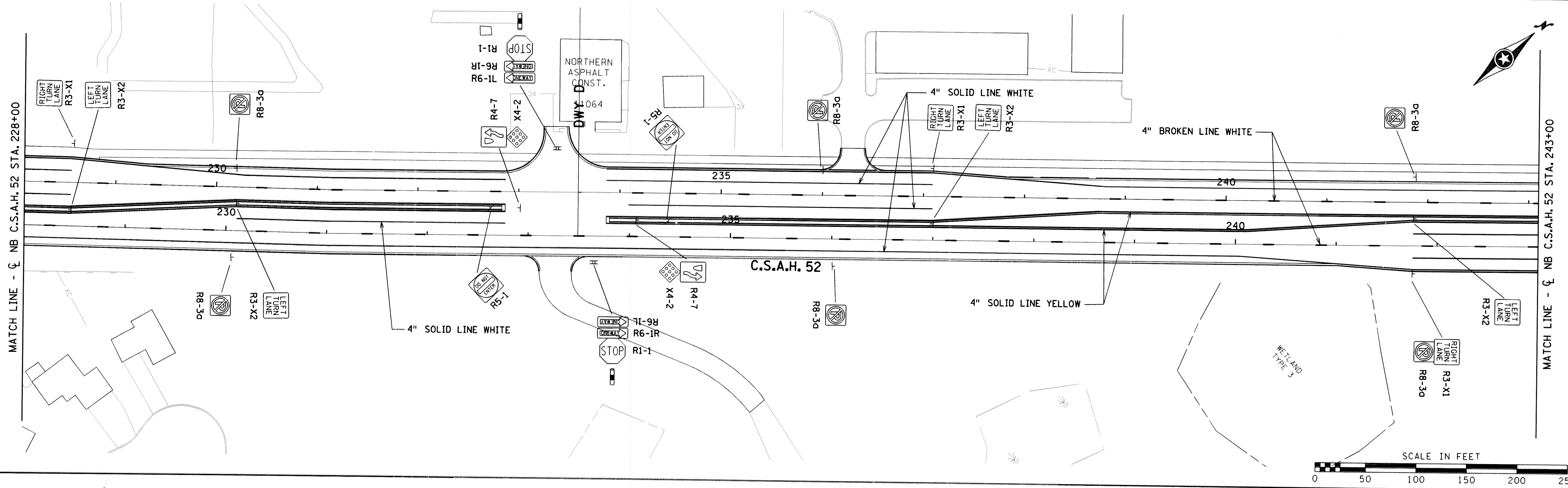
TKDA TOLTZ, KING, DUVAL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 SIGNING AND STRIPING PLAN
 C.S.A.H. 52 RECONSTRUCTION
 STA. 205+88.19 TO STA. 228+00

SHEET
 121
 OF
 253

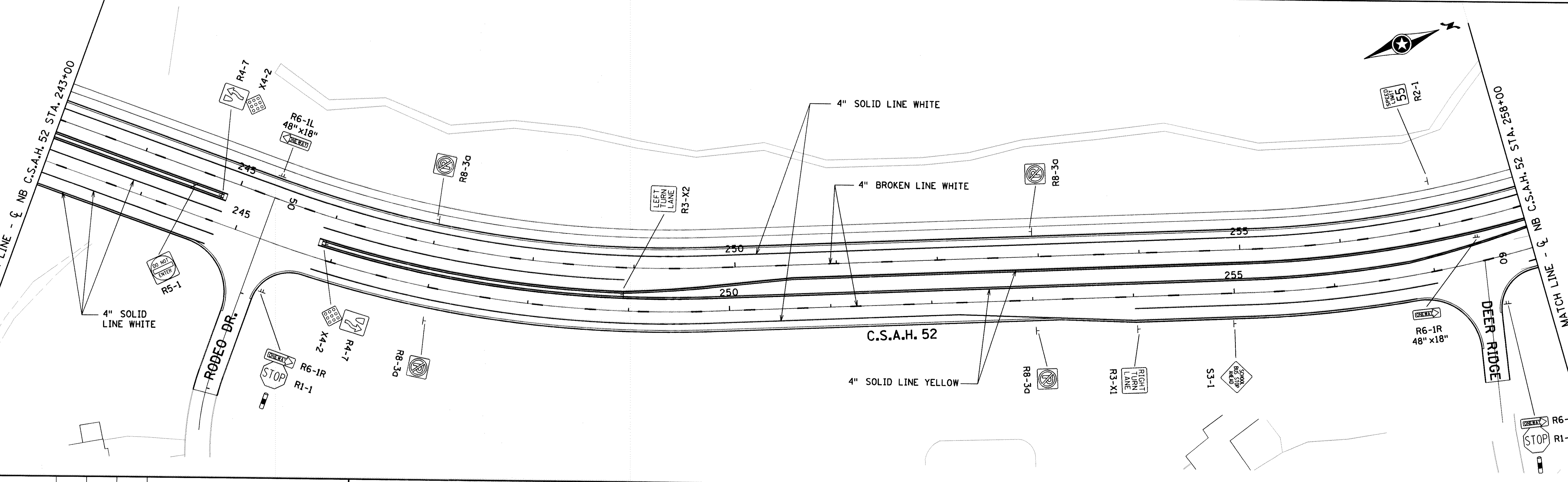
MATCH LINE - C NB C.S.A.H. 52 STA. 228+00

MATCH LINE - C NB C.S.A.H. 52 STA. 243+00



MATCH LINE - C NB C.S.A.H. 52 STA. 243+00

MATCH LINE - C NB C.S.A.H. 52 STA. 258+00



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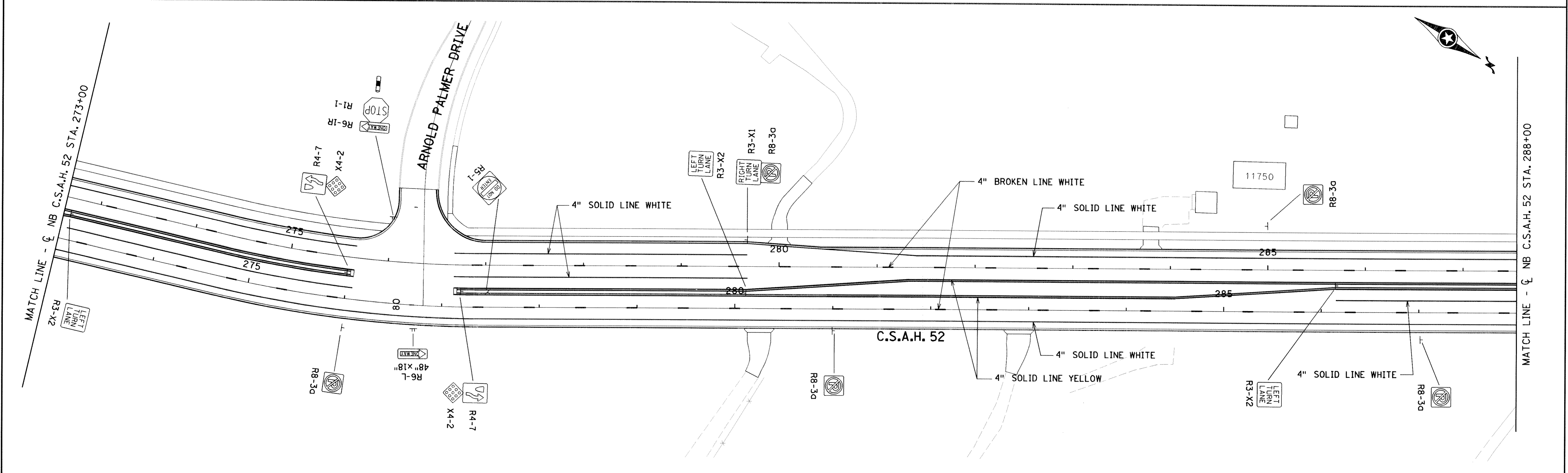
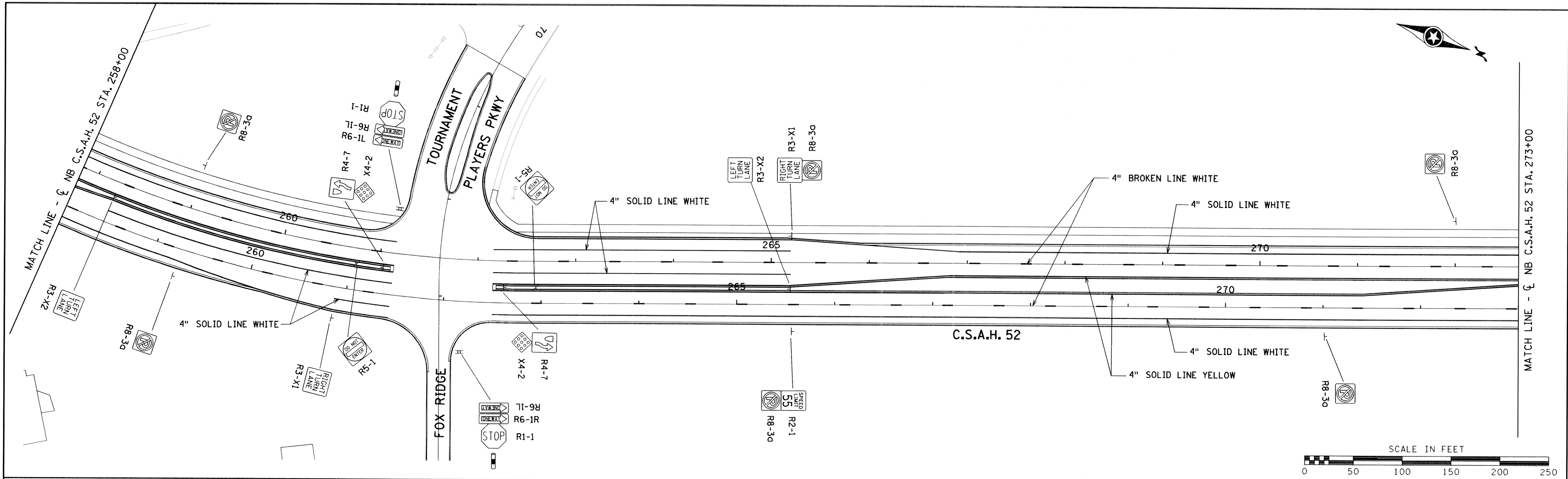
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SHEET
 122
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 253



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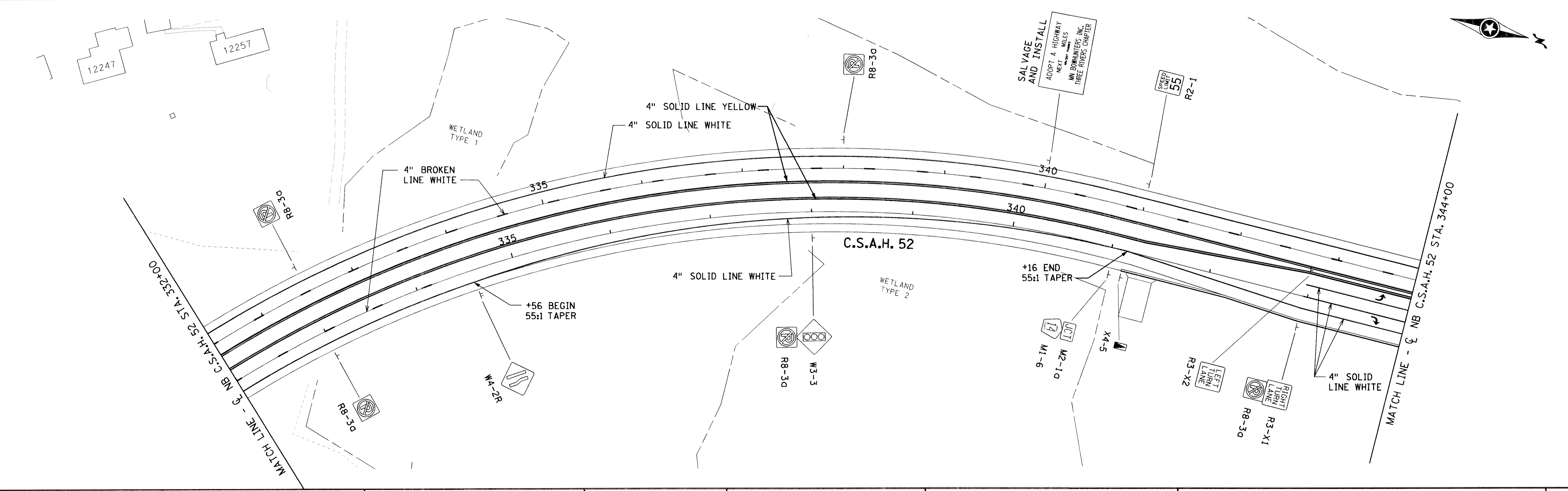
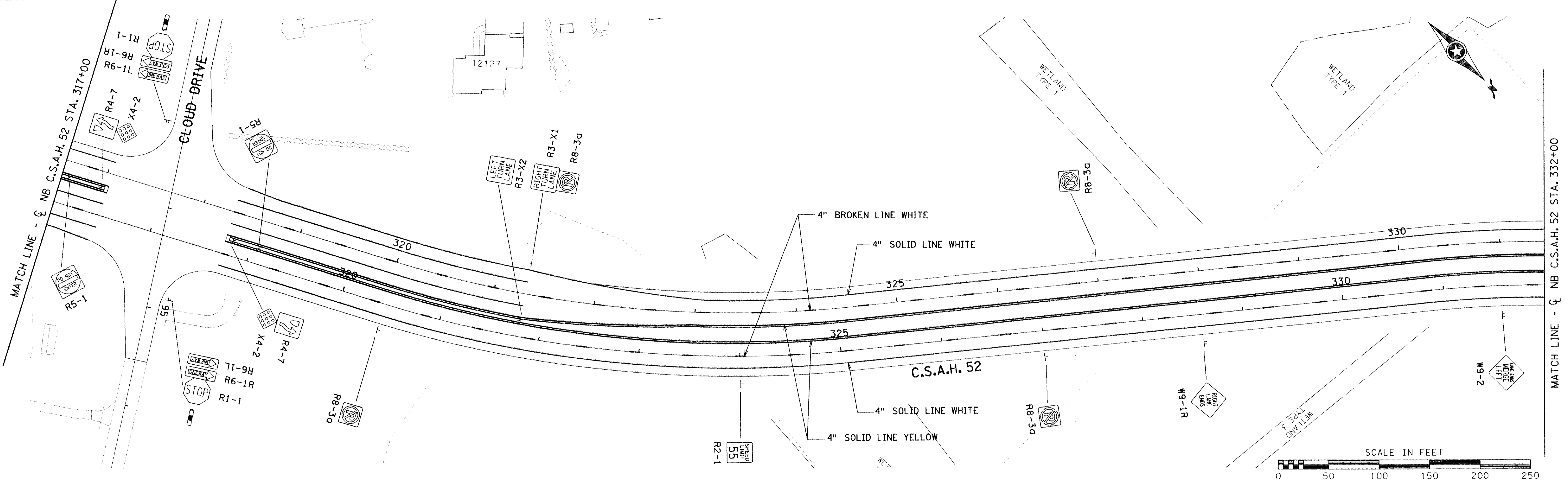
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ANOKA COUNTY
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 C.S.A.H. 52 RECONSTRUCTION
 STA. 258+00 TO STA. 288+00

SHEET
 123
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 253



NO	DATE	BY	CHKD	APPR	REVISION
NAME: \$FILE\$					\$DATE\$

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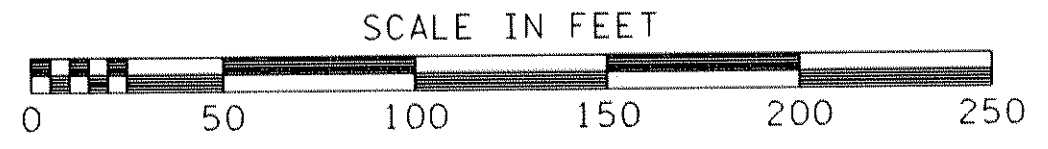
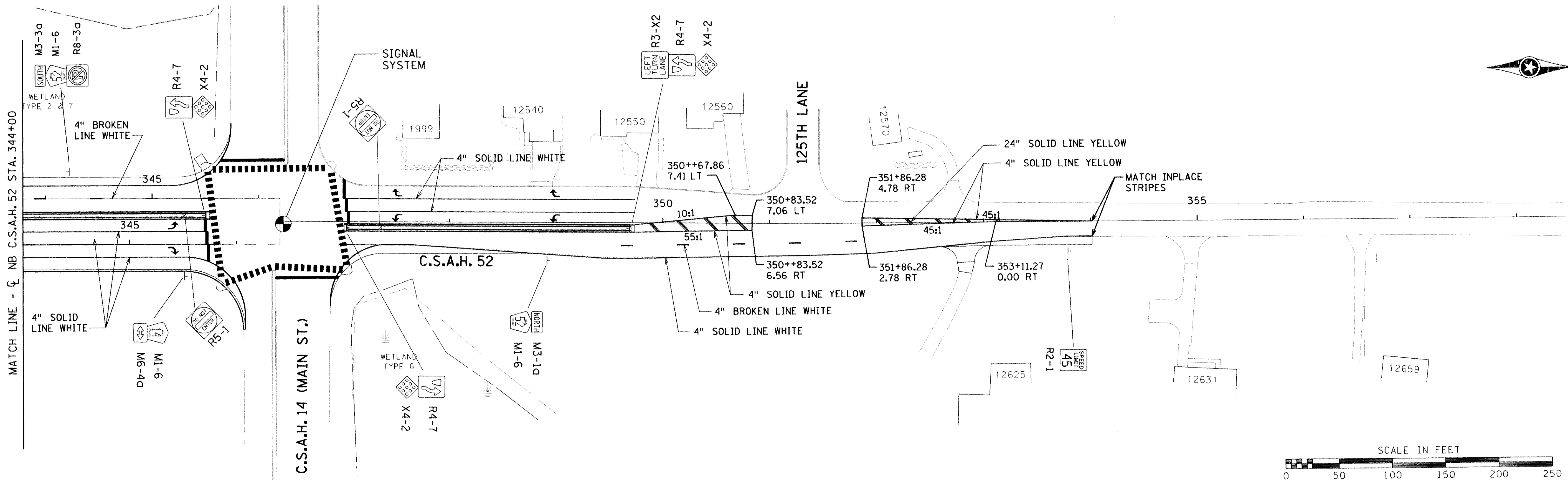
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ANOKA COUNTY
 SIGNING AND STRIPING PLAN
 C.S.A.H. 52 RECONSTRUCTION
 STA. 317+00 TO STA. 344+00

SHEET
 125
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 253



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ANOKA COUNTY
 SIGNING AND STRIPING PLAN
 C.S.A.H. 52 RECONSTRUCTION
 STA. 344+00 TO STA. 354+01.36

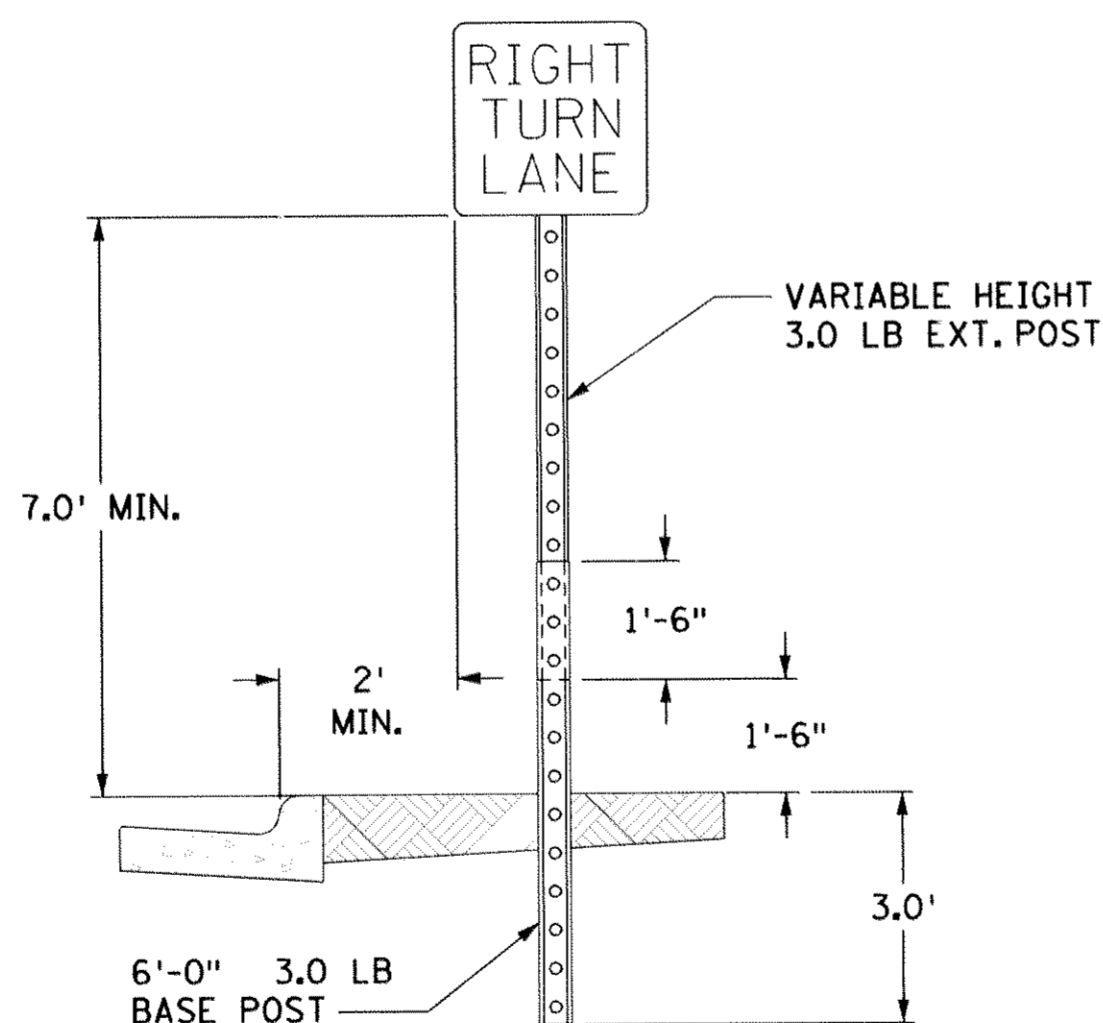
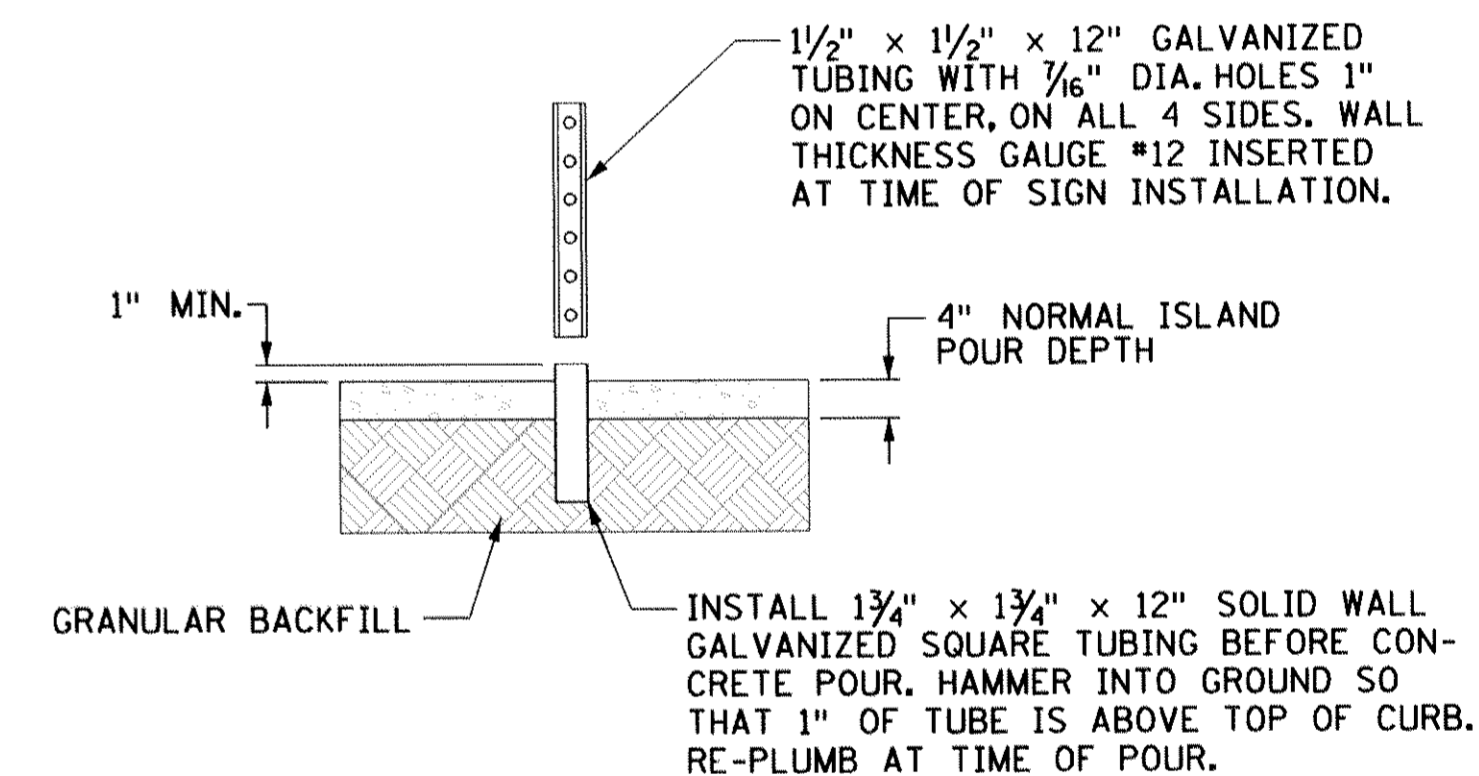
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SIGNING J

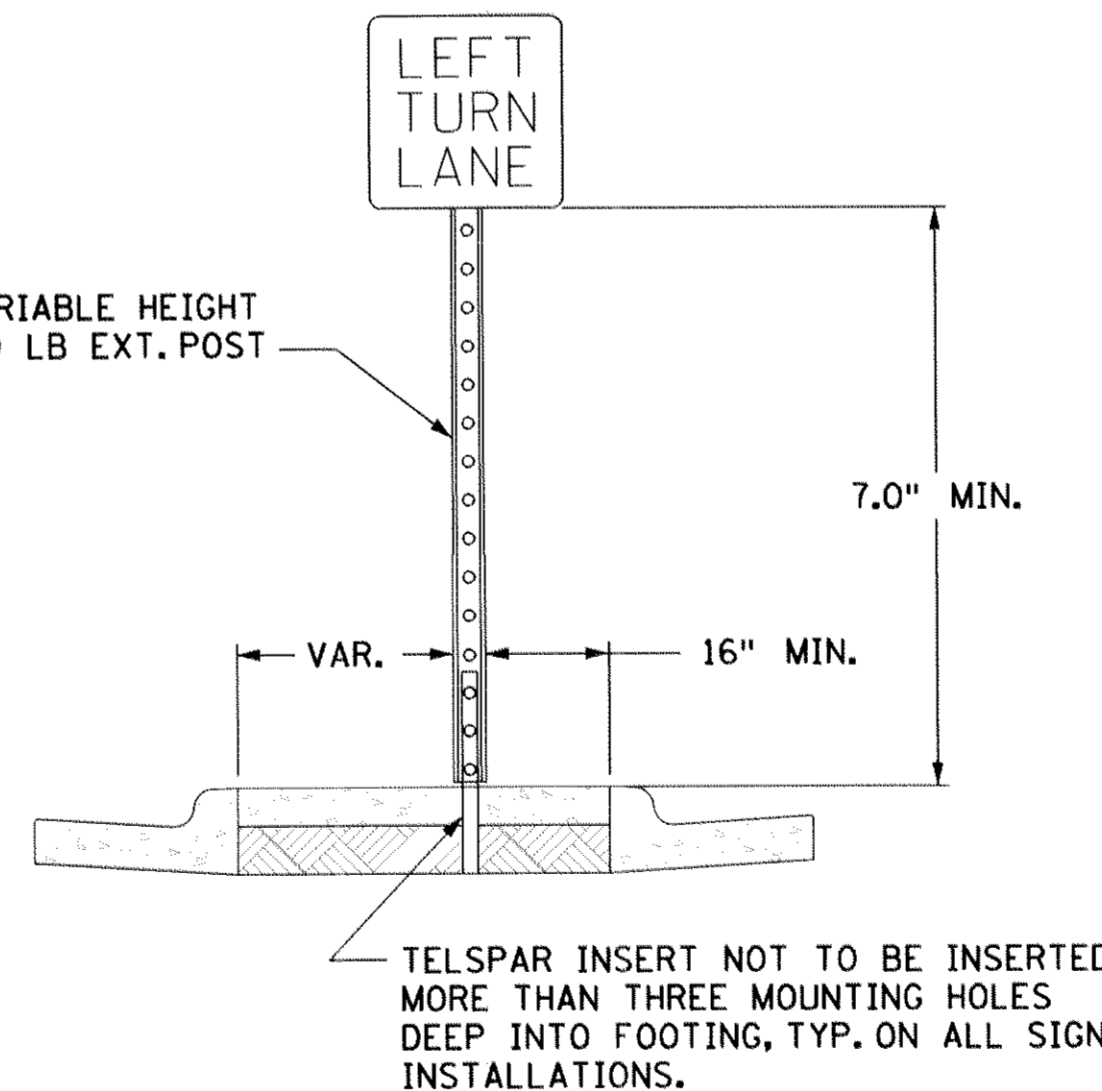
PANEL CODE	PANEL LEGEND	SIGN SIZE	SIGN AREA	TOTAL INSTALLATIONS	TOTAL SIGN AREA	INSTALL SIGN TYPE C	MOUNTING HEIGHT	POSTS PER INSTALLATION	GROUND MOUNT	MEDIAN MOUNT	NOTES
			SF	EACH	SF	EACH	LF	EACH	EACH	EACH	
M1-6	COUNTY ROAD MARKER	24"x24"	4.00	12	48.00		7	1	12		(1)
M2-1a	JUNCTION	21"x15"	2.19	3	6.56						(1)
M3-1a	NORTH	24"x12"	2.00	2	4.00						(1)
M3-3a	SOUTH	24"x12"	2.00	2	4.00						(1)
M6-4a	DIRECTIONAL ARROW (DOUBLE)	21"x15"	2.19	5	10.94						(1)
R1-1	STOP	30"x30"	6.25	12	75.00		7	1	12		
R2-1	SPEED LIMIT	36"x48"	12.00	8	96.00		7	1	16		
R3-4	NO U TURN	24"x24"	4.00	1	4.00						(2)
R3-X1	RIGHT TURN LANE	30"x30"	6.25	15	93.75		7	1	15		
R3-X2	LEFT TURN LANE	30"x30"	6.25	18	112.50		7	1		18	
R4-7	KEEP RIGHT	24"x30"	5.00	20	100.00		7	1		20	
R5-1	DO NOT ENTER	30"x30"	6.25	15	93.75		7	1		15	
R5-3	NO MOTOR VEHICLES	24"x24"	4.00	1	4.00		7	1	1		
R6-1L	ONE WAY LEFT	36"x12"	3.00	8	24.00						(3)
R6-1L	ONE WAY LEFT	48"x18"	6.00	3	18.00		7	2	6		(3)
R6-1R	ONE WAY RIGHT	36"x12"	3.00	12	36.00						(3)
R6-1R	ONE WAY RIGHT	48"x18"	6.00	2	12.00		7	2		4	
R8-3a	NO PARKING	24"x24"	4.00	45	180.00		7	1	30		(4)
S3-1	SCHOOL BUS STOP AHEAD	30"x30"	6.25	1	6.25		7	1	1		
W3-3	SIGNAL AHEAD	36"x36"	9.00	1	9.00		7	2	2		
W4-2R	LANE REDUCTION TRANSITION	36"x36"	9.00	1	9.00		7	2	2		
W6-1	DIVIDED HIGHWAY	36"x36"	9.00	1	9.00		7	2	2		
W9-1R	RIGHT LANE ENDS	36"x36"	9.00	1	9.00		7	2	2		
W9-2	LANE ENDS MERGE LEFT	36"x36"	9.00	1	9.00		7	2	2		
X4-2	HAZARD MARKER	18"x18"	2.25	20	45.00						(5)
X4-5	SNOW PLOW MARKER	6"x12"	0.50	7	3.50		4	1	7		
	DELINEATOR	4" DIA.x1.5"	1.31	12	15.72						(3)
	ADOPT A HIGHWAY										(6)
	CRIME WATCH										(6)
TOTALS					1037.97			3			

NOTES:

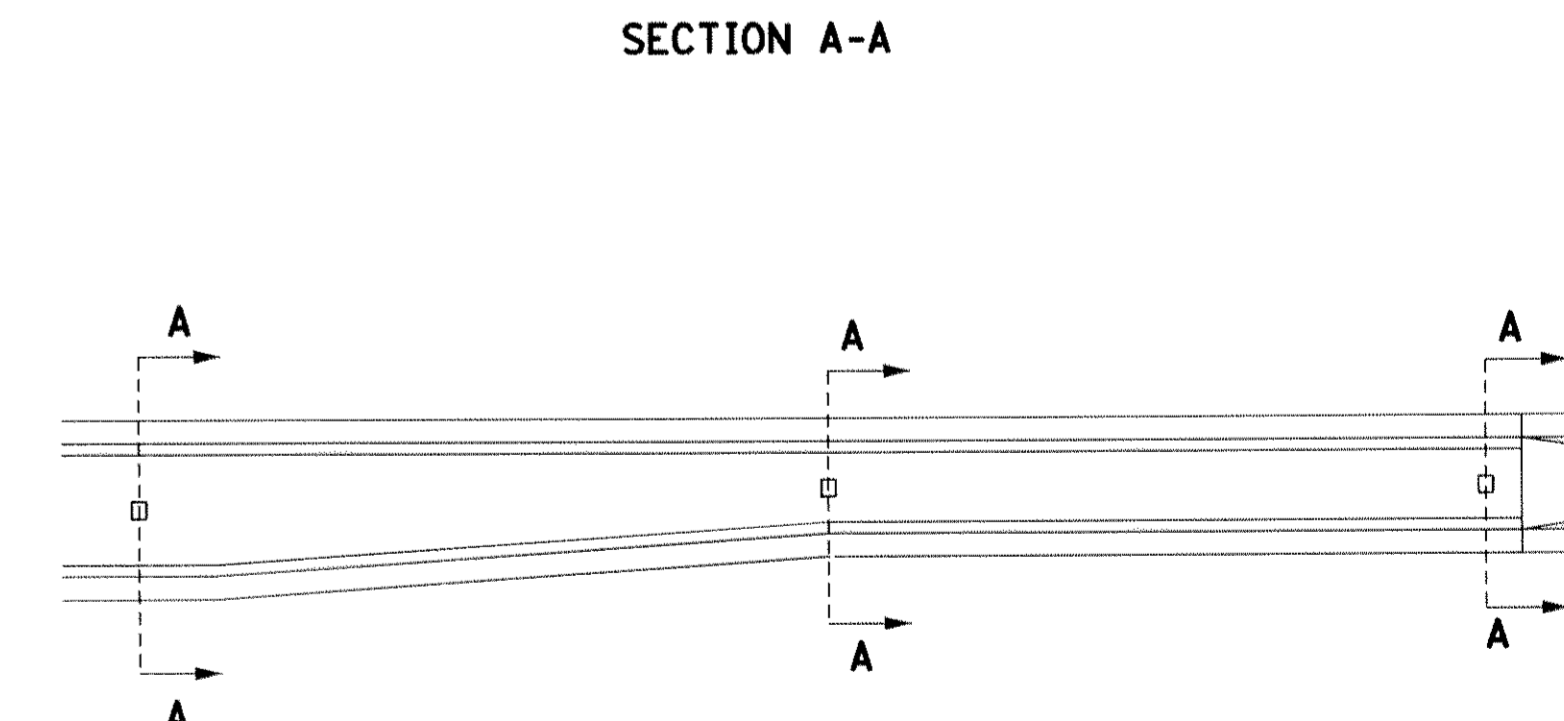
- (1) SIGNS MOUNTED ON M1-6 SIGN POST ASSEMBLIES.
- (2) SIGN MOUNTED ON BACK OF R4-7 SIGN POST ASSEMBLY.
- (3) SIGNS MOUNTED ON R1-1 SIGN POST ASSEMBLIES.
- (4) 4 SIGNS MOUNTED ON M1-6 SIGN POST ASSEMBLIES,
2 SIGNS MOUNTED ON R2-1 SIGN POST ASSEMBLIES,
7 SIGNS MOUNTED ON R3-X1 SIGN POST ASSEMBLIES,
1 SIGN MOUNTED ON W3-3 SIGN POST ASSEMBLY,
AND 1 SIGN MOUNTED ON SALVAGED ADOPT A HIGHWAY
SIGN POST ASSEMBLY.
- (5) SIGNS MOUNTED ON R4-7 SIGN POST ASSEMBLIES.
- (6) INSTALLATION OF PREVIOUSLY SALVAGED SIGNS.



**GROUND POST MOUNT SIGN
INSTALLATION TYPICAL**



**ISLAND MOUNT BREAK-AWAY SIGN
INSTALLATION TYPICAL**



SIGNING AND STRIPING DETAILS

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 S.A.P. 02-652-01
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TKDA TOLTZ, KING, DUVAL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 SIGNING DETAILS AND TABULATIONS
 C.S.A.H. 52 RECONSTRUCTION

SHEET
 127
 OF
 253

NO	DATE	BY	CKD	APPR	REVISION

DATE _____ REG. NO. _____

STRIPING I

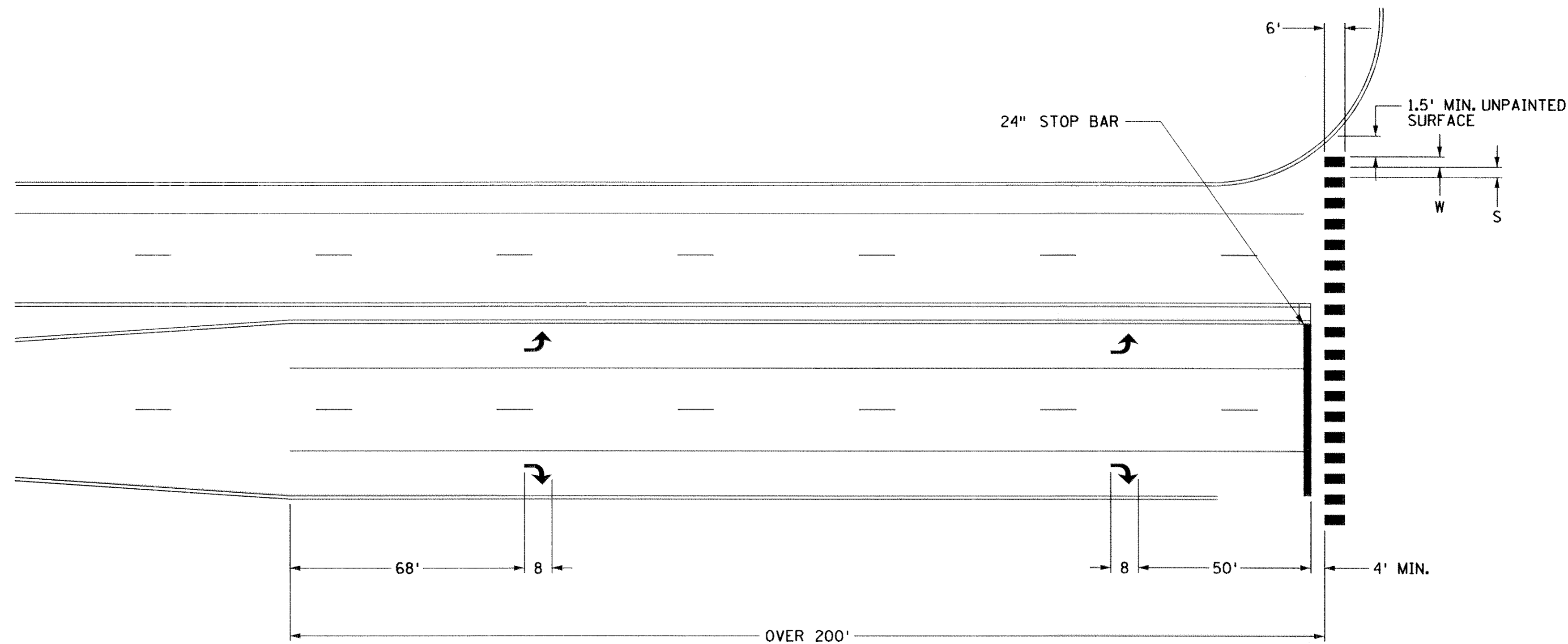
LOCATION	LEFT ARROW	RIGHT ARROW	4" SOLID WHITE	4" BROKEN WHITE	24" SOLID WHITE	4" SOLID YELLOW	4" DOUBLE SOLID YELLOW	24" SOLID YELLOW	ZEBRA CROSS WALK
	EACH	EACH	LF	LF	LF	LF	LF	LF	SF
C.S.A.H. 52									
C.S.A.H. 52 (SOUTH LEG)			936	180		936		223	
NB C.S.A.H. 52 210+56 TO 214+00			417	60		344		39	
SB C.S.A.H. 52 210+56 TO 214+01			312	60		345		45	
NB C.S.A.H. 52 214+00 TO 228+00	2	2	2105	230	50	1159			288
SB C.S.A.H. 52 214+01 TO 228+10	2	2	2408	230	48	1164			270
NB C.S.A.H. 52 228+00 TO 243+00			2038	290		1400			
SB C.S.A.H. 52 228+10 TO 243+10			2088	270		1400			
NB C.S.A.H. 52 243+00 TO 258+00			1950	270		1390			
SB C.S.A.H. 52 243+10 TO 257+83			1768	280		1384			
NB C.S.A.H. 52 258+00 TO 273+00			1759	270		1388			
SB C.S.A.H. 52 257+83 TO 272+65			2045	270		1386			
NB C.S.A.H. 52 273+00 TO 288+00			1986	270		1390			
SB C.S.A.H. 52 272+65 TO 287+55			2035	270		1391			
NB C.S.A.H. 52 288+00 TO 303+00			1618	260		1385			
SB C.S.A.H. 52 287+55 TO 302+40			1664	260		1379			
NB C.S.A.H. 52 303+00 TO 317+00			1901	270		1405			
SB C.S.A.H. 52 302+40 TO 316+57			1423	270		1413			
NB C.S.A.H. 52 317+00 TO 332+00			1460	270		1370			
SB C.S.A.H. 52 316+57 TO 331+44			1950	270		1367			
NB C.S.A.H. 52 332+00 TO 344+00	1	1	1402	50		1210			
SB C.S.A.H. 52 331+44 TO 343+79			1244	240		1224			
NB C.S.A.H. 52 344+00 TO 346+41	1	1	552		40	176			180
SB C.S.A.H. 52 343+79 TO 346+20			181	30		176			126
C.S.A.H. 52 (NORTH LEG)	2	2	1256	50	42	938		34	270
CROSS STREETS									
109TH AVENUE	2	2	756		90		190		504
MAIN STREET					120				666
TOTALS	10	10	37254	4920	390	27120	190	341	2304

PAINTED AREAS ARE TO BE CENTERED ON CENTER AND LANE LINES, EVEN IF INTERSECTION IS NOT ALIGNED.

LOCATION OF ZEBRA CROSSWALKS AND STOP BARS, SIGNAL LOOPS AND PED RAMPS ARE APPROXIMATE. FINAL LOCATIONS ARE TO BE DETERMINED AND FIELD VERIFIED DURING CONSTRUCTION BY THE FIELD ENGINEER.

ZEBRA CROSSWALKS ARE TO BE PARALLEL TO THE DRIVING LANE OR LANES, EVEN IF THE STREET IS ON AN ANGLE TO THE INTERSECTION.

A MIN. OF 1'-6" CLEAR DISTANCE MUST BE LEFT ADJACENT TO THE CURB. IF LAST PAINTED AREA FALLS INTO THIS AREA, IT MUST BE OMITTED.



(L) WIDTH OF INSIDE LANE	(W) WIDTH OF TAPED AREA	(S) WIDTH OF SPACE
9'	2.0'	2.5'
10'	2.5'	2.5'
11'	2.5'	3.0'
12'	3.0'	3.0'
13'	3.0'	3.5'

NOTES:

- 1.) TAPED AREAS TO BE CENTERED ON CENTER LINE AND LANE LINES.
- 2.) ZEBRA CROSSWALKS REQUIRE REFLECTORIZED WHITE POLYMER PREFORMED TAPE.
- 3.) A MINIMUM OF 1.5 FT. CLEAR DISTANCE MUST BE LEFT ADJACENT TO CURB. IF LAST TAPED AREA FALLS INTO THIS DISTANCE IT MUST BE OMITTED.
- 4.) SOLID WHITE POLYMER PREFORMED STOPLINES 24" WIDE.

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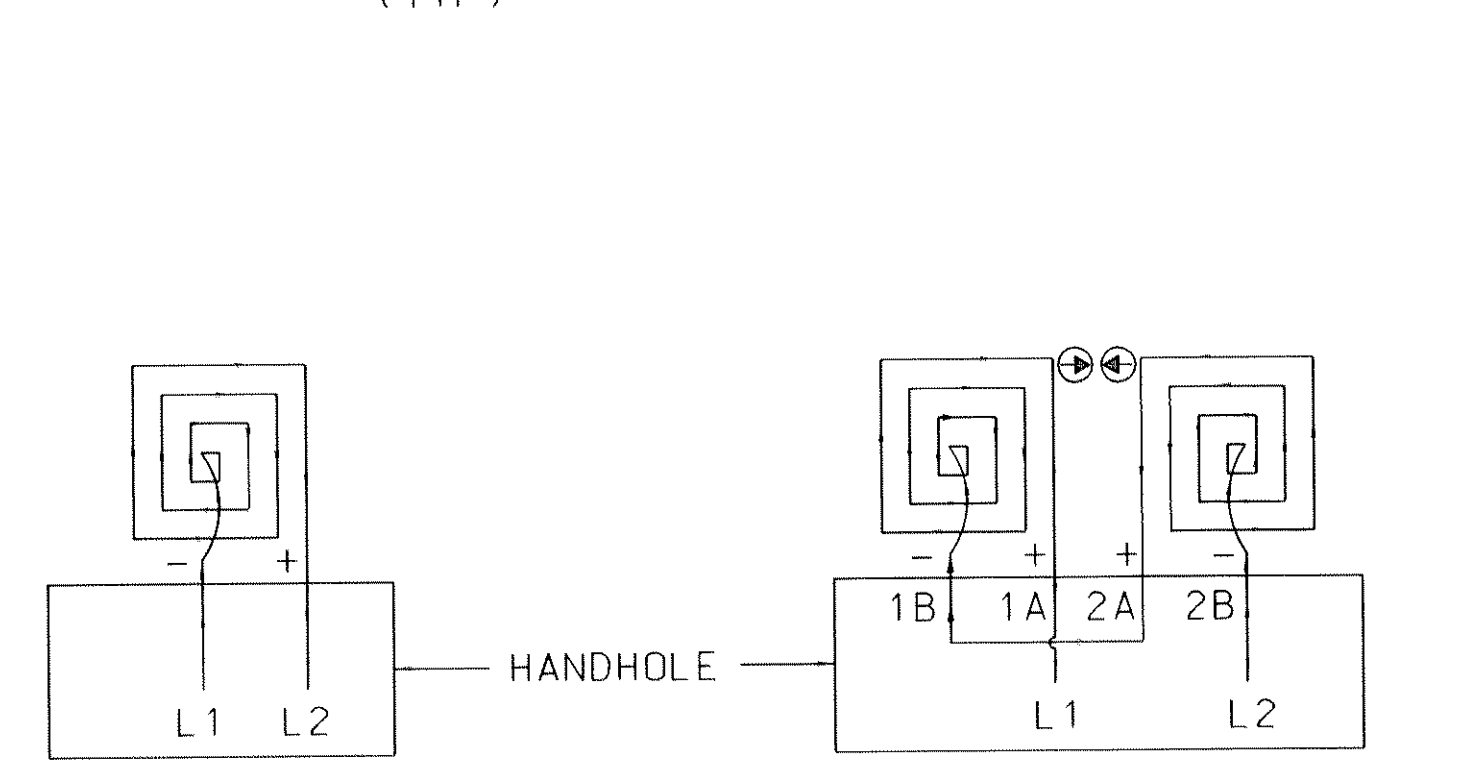
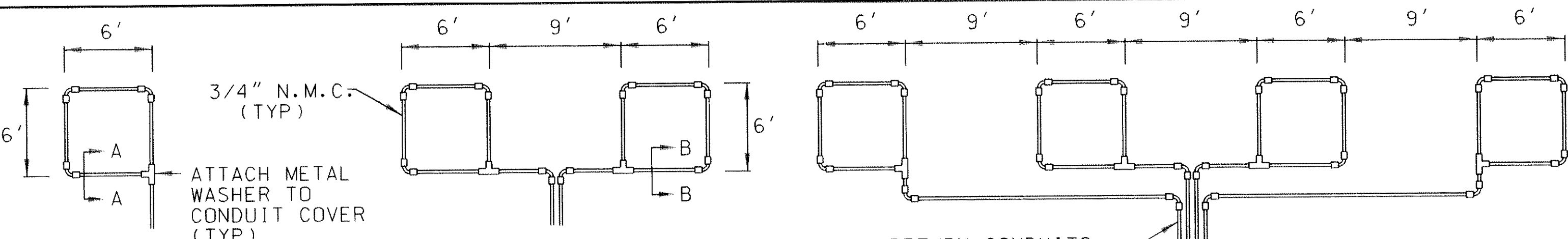
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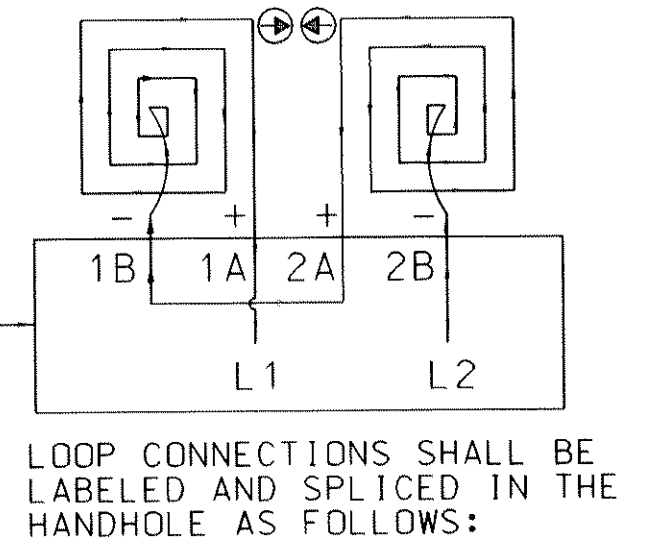
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ANOKA COUNTY
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C.S.A.H. 52 RECONSTRUCTION

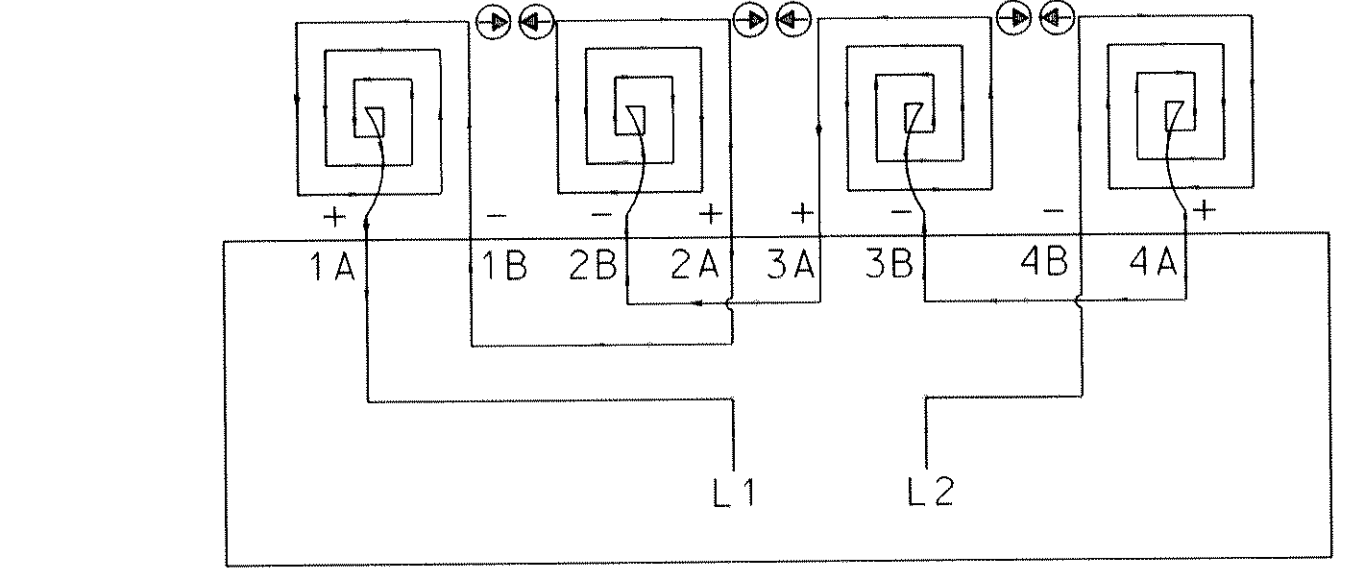
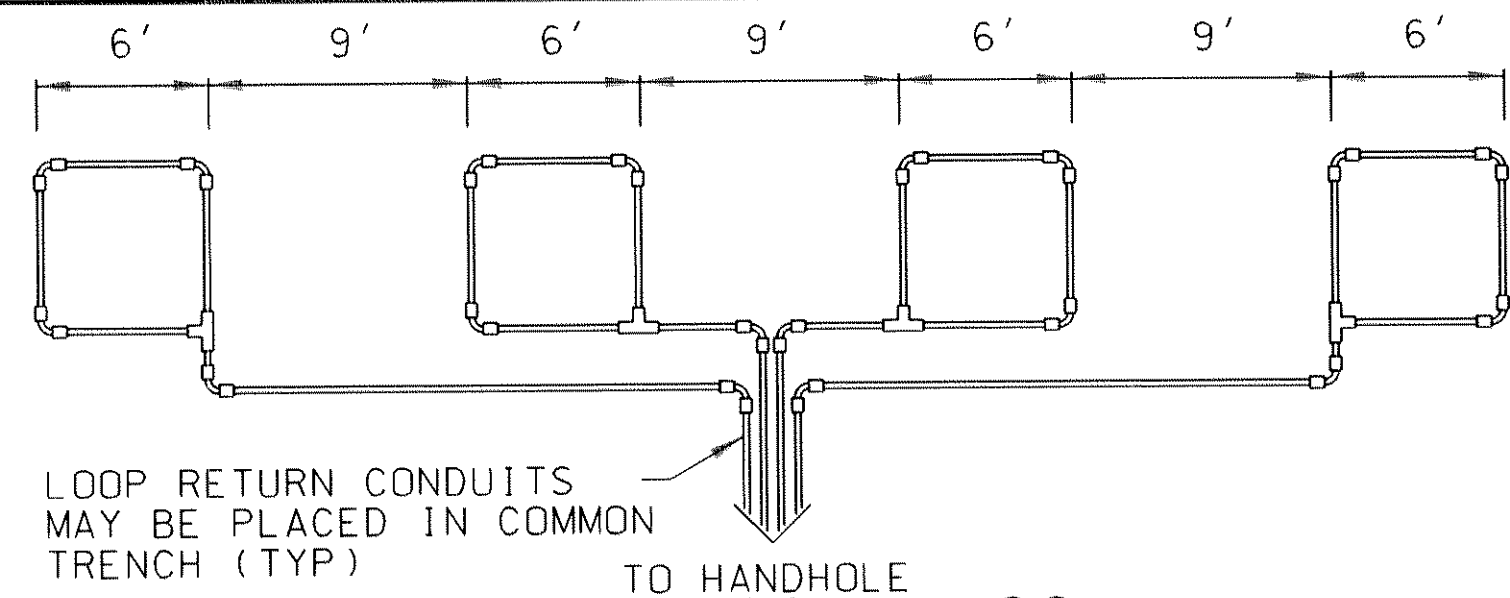
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253



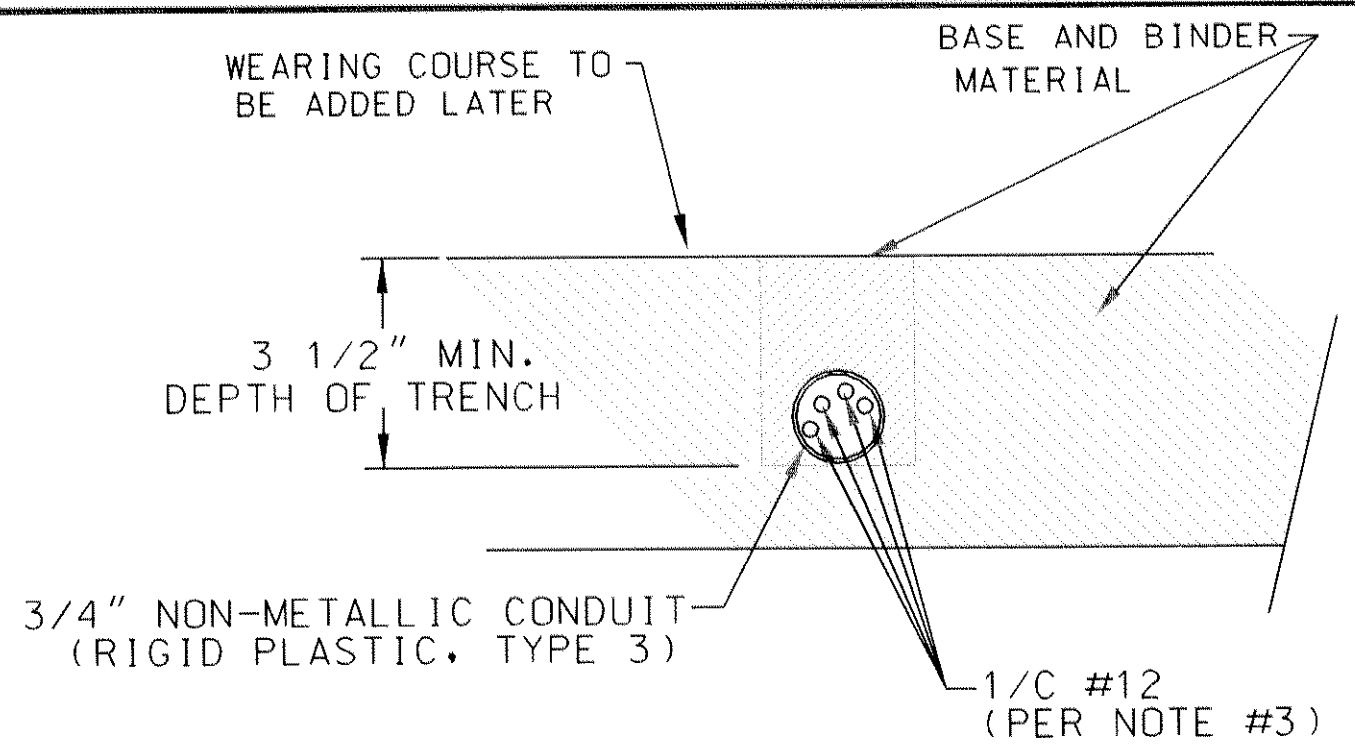
**LOOP DETECTOR
DETAIL 'A'**
(LOOP PHASING FOR
SINGLE CONNECTION)



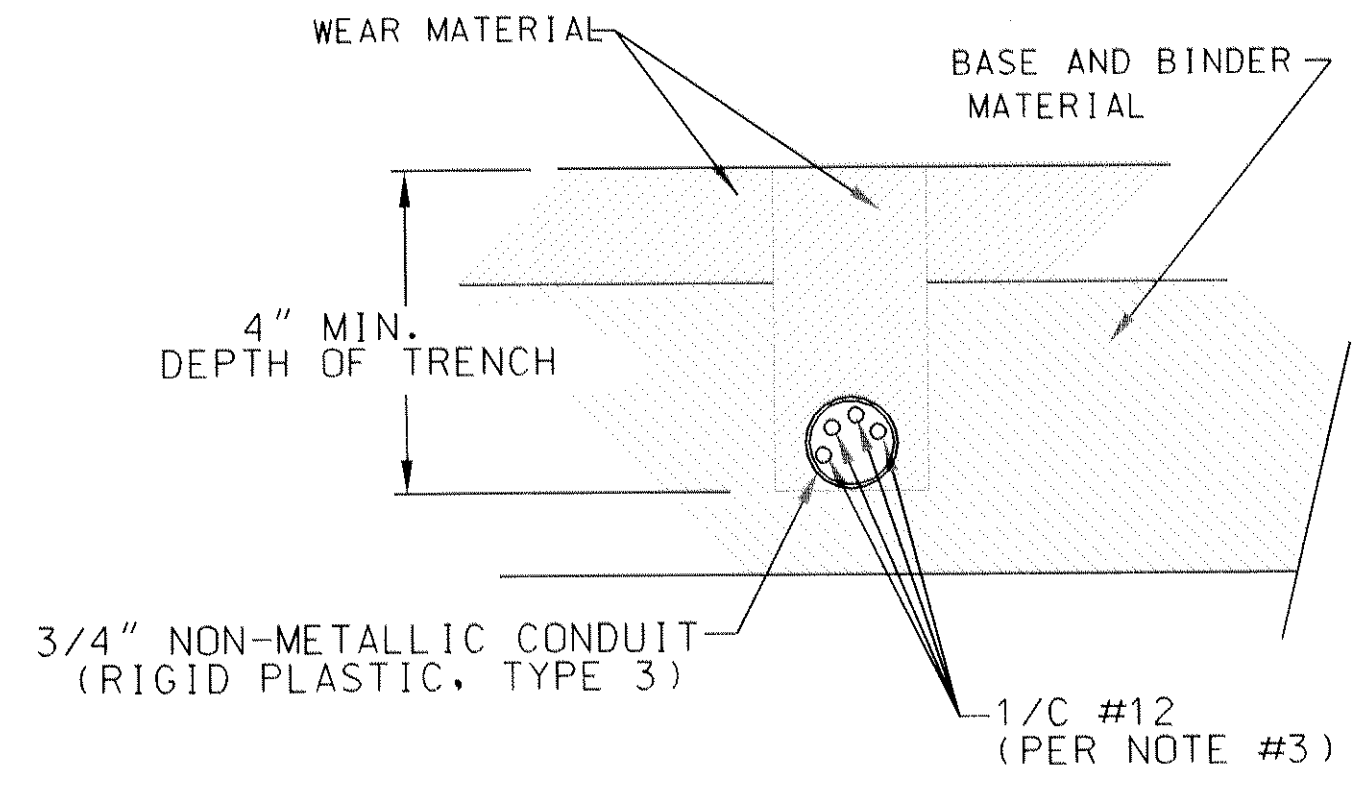
**LOOP DETECTOR
DETAIL 'B'**
(LOOP PHASING FOR
SERIES CONNECTION)



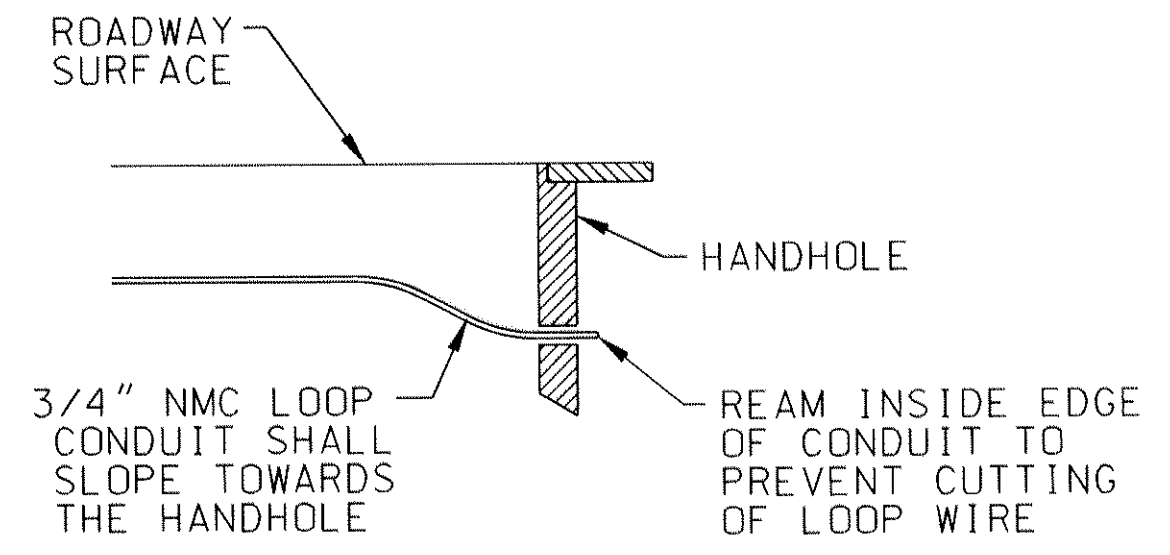
**LOOP DETECTOR
DETAIL 'C'**
(LOOP PHASING FOR
SERIES CONNECTION)



SECTION A-A
DETAIL FOR LOOP INSTALLATION
IN NEW ROADWAY



SECTION B-B
DETAIL FOR LOOP INSTALLATION
IN EXISTING ROADWAY



DRAINAGE DETAIL

LOOP DETECTOR WIRING

- 1) ALL CORNERS SHALL BE 90° CONDUIT BENDS.
- 2) CONNECT WIRES IN HANDHOLES USING SPLICE KIT METHOD DESCRIBED IN THE SPECIAL PROVISIONS.
- 3) LOOP DETECTOR WIRES SHALL BE #12 AWG CROSSED LINKED POLYETHYLENE (XLP). SEE SPECIAL PROVISIONS.
- 4) LOOP LEAD IN WIRES SHALL BE TWISTED A MIN. OF (5) TURNS PER FOOT THROUGH THE CONDUIT TO THE HANDHOLE.
- 5) NMC DESIGNATES NON-METALLIC CONDUIT (SPEC. 3803)
- 6) LOOPS 6' x 6' THRU 6' x 14' SHALL HAVE (4) TURNS.

LEGEND OF SYMBOLS

CONTROLLER AND SERVICE EQUIP. NO's	(A)
SIGNAL BASE NO.	(1)
SIGNAL FACE NO.	(1-)
LUMINAIRE NO.	(L)
CONTROLLER AND CABINET	(C)
CONTROLLER AND CABINET - IN PLACE	(C-)
HANDHOLE	(H)
HANDHOLE - IN PLACE	(H-)
RIGID STEEL CONDUIT (RSC)	(RSC)
RIGID STEEL CONDUIT (RSC) - IN PLACE	(RSC-)
SIGNAL FACE WITH BACKGROUND SHIELD	(SFS)
SIGNAL FACE W/O BACKGROUND SHIELD	(SFS-)
SIGNAL FACE - IN PLACE	(SFS-)
PEDESTRIAN INDICATORS	(PI)
PEDESTRIAN INDICATORS - IN PLACE	(PI-)
PEDESTRIAN PUSH BUTTONS ON PEDESTAL OR POLE	(PPB)
PEDESTRIAN PUSH BUTTON STATION	(PPB-)
TRAFFIC SIGNAL PEDESTAL	(TSP)
TRAFFIC SIGNAL PEDESTAL - INPLACE	(TSP-)
TRAFFIC SIGNAL POLE AND MAST ARM	(TSPMA)
TRAFFIC SIGNAL POLE AND MAST ARM - IN PLACE	(TSPMA-)
STREET LIGHT POLE AND LUMINAIRE	(SLLPL)
STREET LIGHT POLE AND LUMINAIRE - IN PLACE	(SLLPL-)
MAST ARM AND LUMINAIRE	(MAL)
MAST ARM AND LUMINAIRE - INPLACE	(MAL-)
WOOD POLE	(WP)
WOOD POLE - IN PLACE	(WP-)
SOURCE OF POWER	(SOP)
EMERGENCY VEHICLE PREEMPTION DETECTOR	(EVPD)
RAILROAD SIGNAL - IN PLACE	(RRS)
RIGHT OF WAY LINE	(ROW)
CENTERLINE	(CL)
EDGE OF ROADWAY	(EOR)
SHOULDERLINE	(SL)
CURB LINE	(CL)
STOP BAR	(SB)

ABBREVIATIONS

3-1(EG) SIGNAL HEAD PHASE "3" - NO "1"	P2-1(EG) PEDESTRIAN INDICATION PHASE "2" - NO. "1"
BR. GR. BARE GROUND	PB PUSH BUTTON
CH. SW. CHECK SWITCH	PB2-1(EG) PUSH BUTTON PHASE "2" - NO. "1"
CLR CLEAR	PEC PHOTOELECTRIC CELL
D2-1(EG) DETECTOR PHASE "2" - NO. "1"	PED PEDESTRIAN
DWK DON'T WALK	R RED
EOG EQUIPMENT GROUND	R&S REMOVE AND SALVAGE
EVP EMERGENCY VEHICLE PRE-EMPTION	RLTA RED LEFT TURN ARROW
F&I FURNISH AND INSTALL	RRTA RED RIGHT TURN ARROW
FL FLASH/FLASHING	RSC RIGID STEEL CONDUIT
G GREEN	SOP SOURCE OF POWER
GLTA GREEN LEFT TURN ARROW	SPR SPARE
GRN GREEN	ST. LHT STREET LIGHT
GR. R GROUND ROD	STA STATION
GRTA GREEN RIGHT TURN ARROW	SW SWITCH
GTHA GREEN THRU ARROW	SWD SWITCHED
HH HANDHOLE	S&R SALVAGE AND REINSTALL
HPS HIGH PRESSURE SODIUM	TDW TELEPHONE DROP WIRE
JB JUNCTION BOX	WLK WALK
LUM LUMINAIRE	YEL YELLOW
NEU NEUTRAL	YLTA YELLOW LEFT TURN ARROW
NMC NONMETALLIC CONDUIT	YRTA YELLOW RIGHT TURN ARROW
	YTHA YELLOW THRU ARROW

CONDUCTOR COLOR CODE

R	RED
O	ORANGE
BL	BLUE
WH	WHITE
R/BLK	RED WITH BLACK TRACER
O/BLK	ORANGE WITH BLACK TRACER
BL/BLK	BLUE WITH BLACK TRACER
WH/BLK	WHITE WITH BLACK TRACER
BLK	BLACK
BLK/WH	BLACK WITH WHITE TRACER
G/BLK	GREEN WITH BLACK TRACER
G	GREEN

STANDARD PLATES

PLATE NO.	DESCRIPTION
8110D	TRAFFIC SIGNAL BRACKETING (POLE MOUNTED)
8114A	P.V.C. HANDHOLE/PULLBOX
8115 D	PEDESTRIAN PUSH BUTTON INSTALLATION
8118C	SERVICE EQUIPMENT AND POLE-TRAFFIC CONTROL SIGNALS
8119C	GROUND MOUNTED CABINET FOUNDATION
8121D	TRANSFORMER BASE AND POLE BASE PLATE
8123D	POLE AND MAST ARM
8124E	MAST ARM SIGNAL HEAD MOUNTS
8126F	POLE FOUNDATION (PA90 AND PA100)

NO	DATE	BY	CKD	APPR	REVISION

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE _____ REG. NO. _____

DRAWN BY SFH DATE 11-8-00

DESIGN BY BDP DATE 11-8-00

CHECKED BY TAC DATE 11-8-00

STATE PROJECT NO. _____

S.A.P. 02-652-01

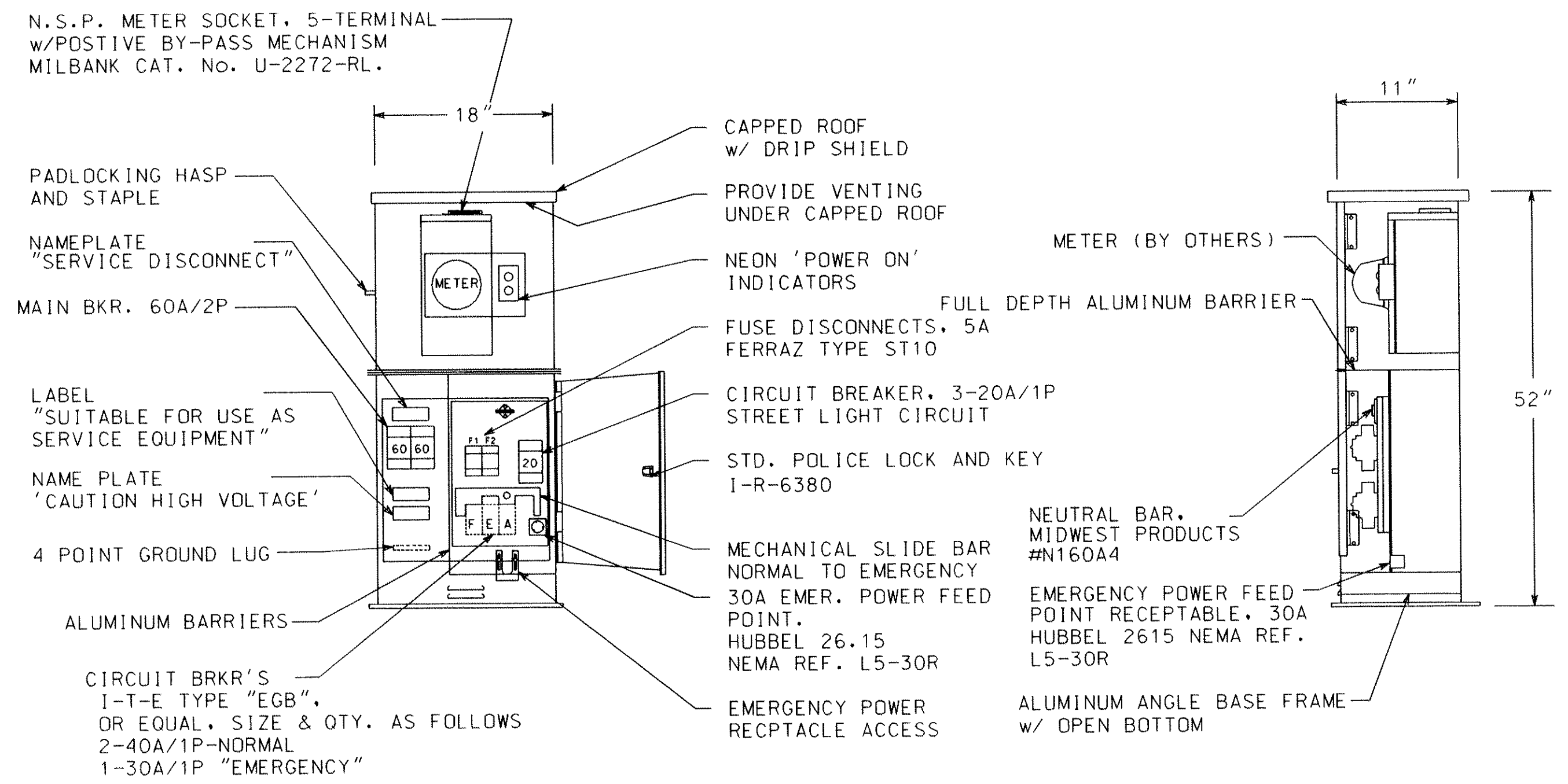
S.A.P. 106-020-019

TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
TRAFFIC SIGNAL SYSTEMS "A & B"
C.S.A.H. 52 RECONSTRUCTION
SIGNAL DETAILS

SHEET 129 OF 253

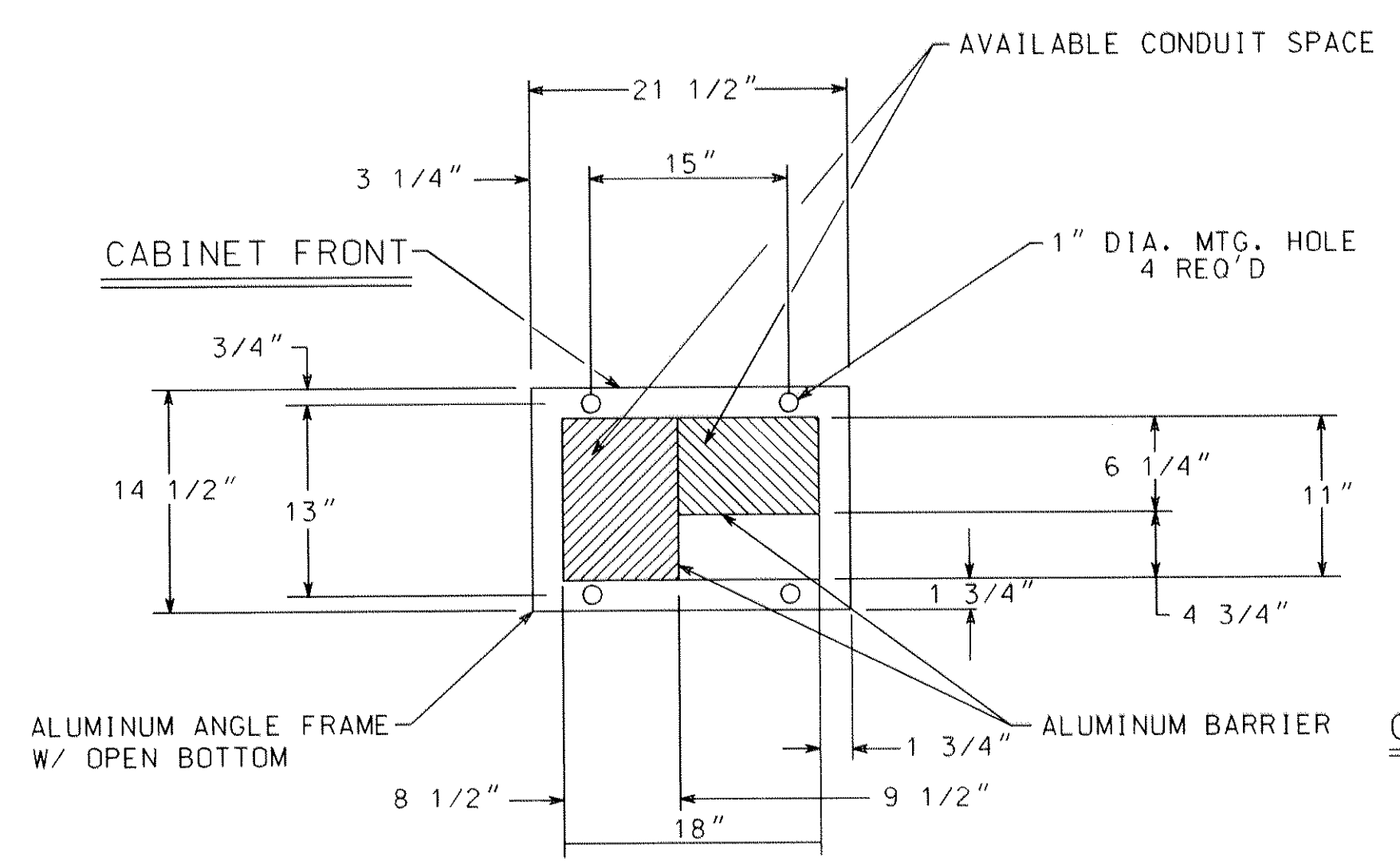
SIGNAL SERVICE CABINET



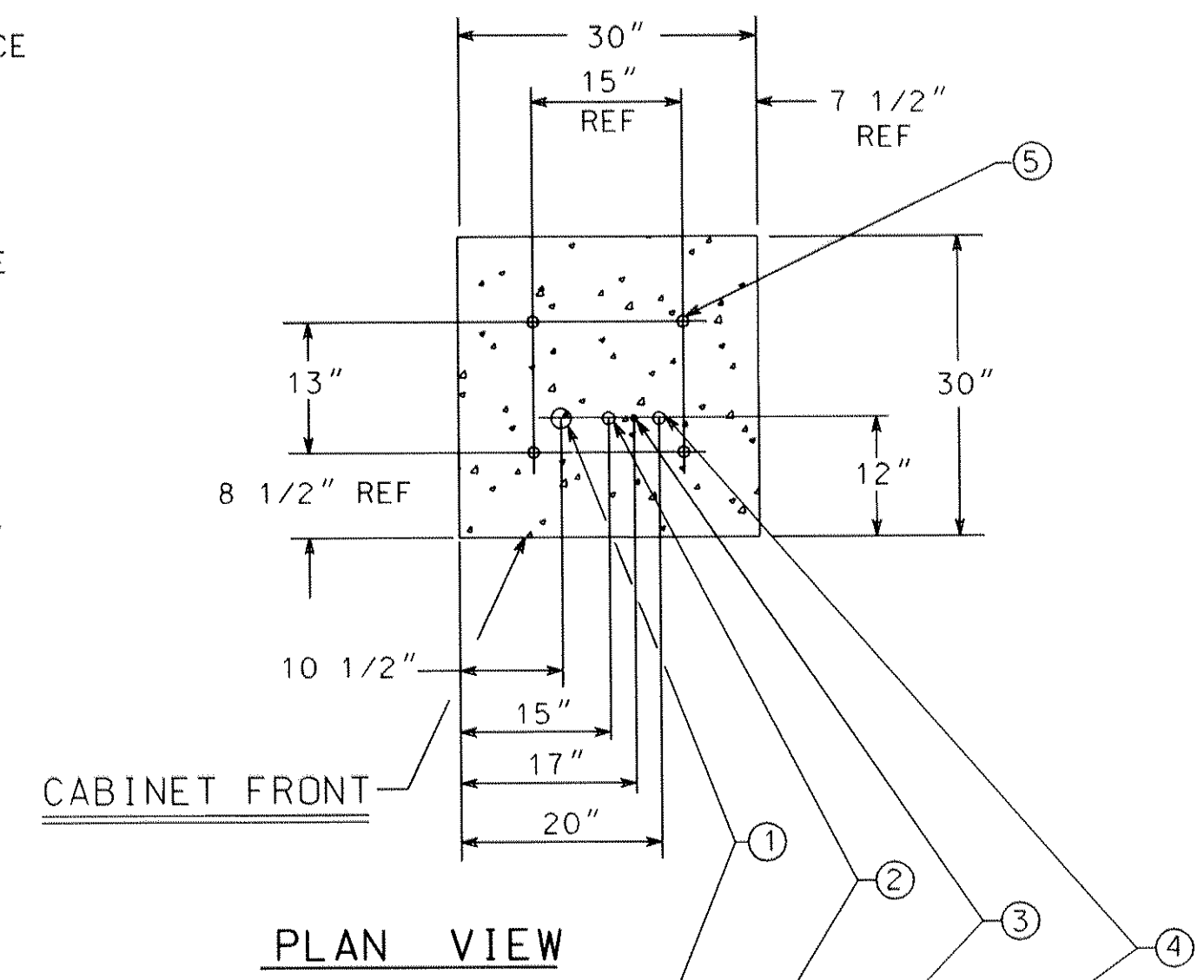
FRONT ELEV.

RIGHT SIDE ELEV.

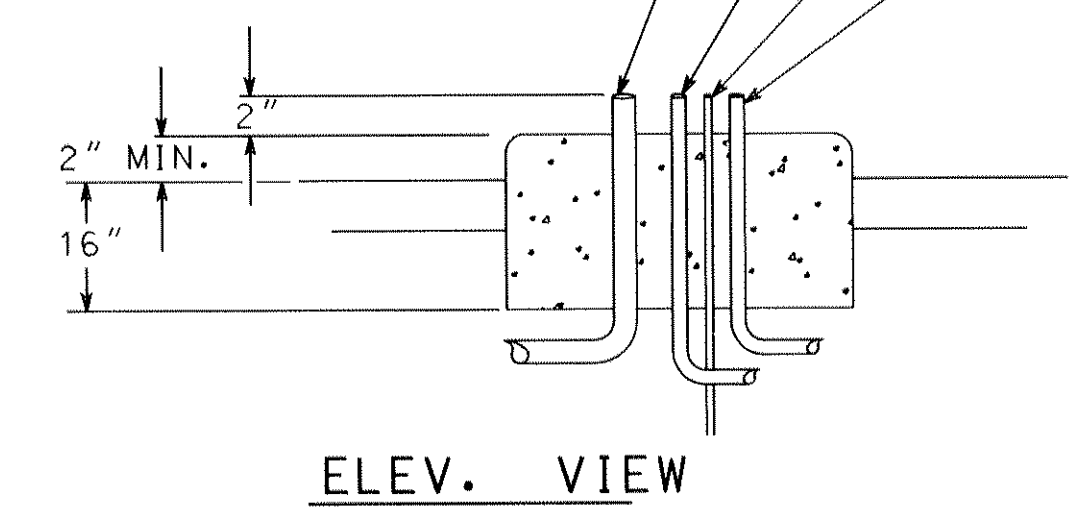
SERVICE CABINET FOUNDATION



BASE VIEW



PLAN VIEW



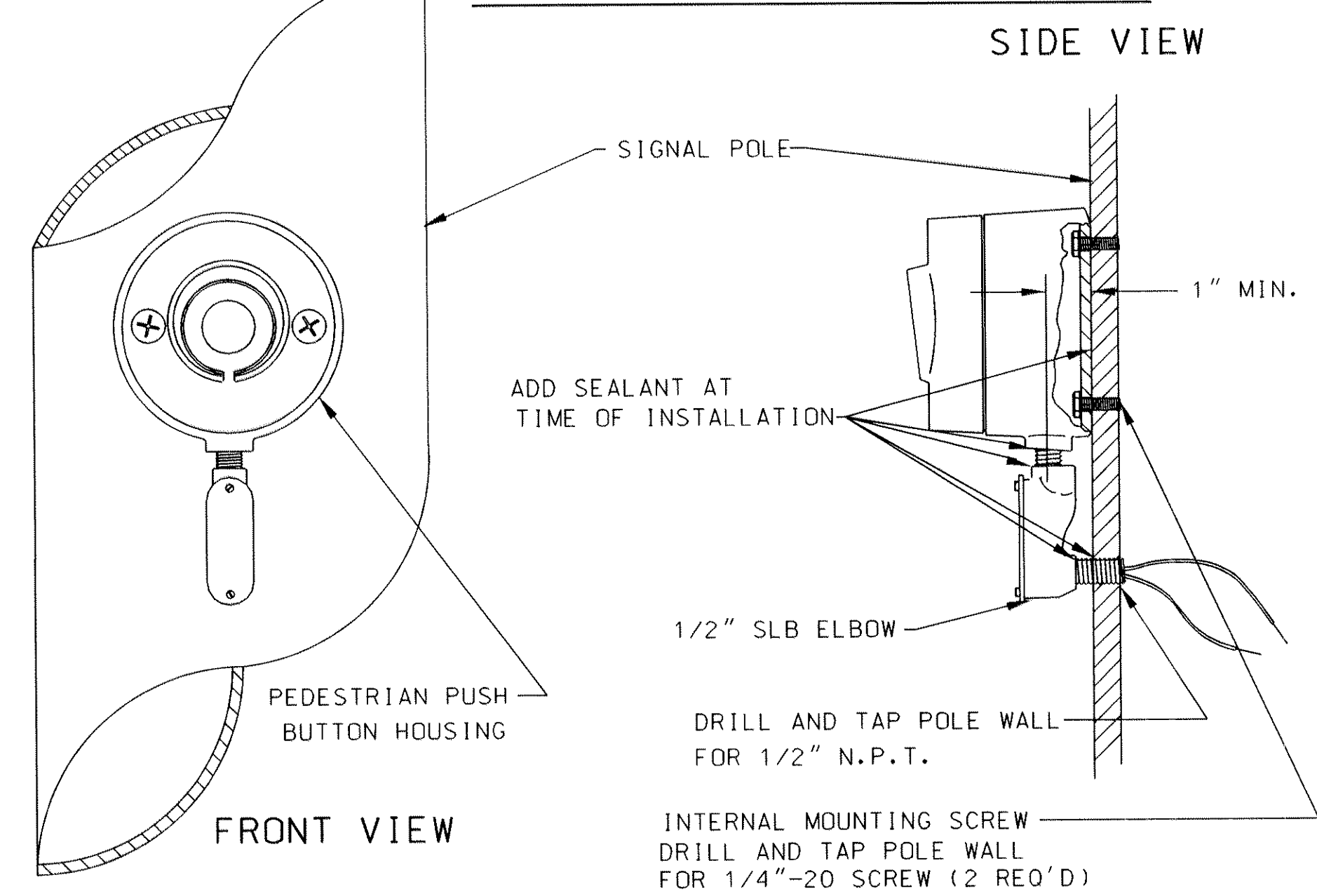
ELEV. VIEW

- ① 2" RSC TO HANDHOLE (FOR SOP)
- ② 1 1/4" RSC TO CONTROLLER CABINET
- ③ GROUNDING ROD
- ④ 1 1/4" RSC TO HANDHOLE (FOR STREET LIGHTING)
- ⑤ ANCHOR BOLT LOCATIONS (4 REQUIRED)

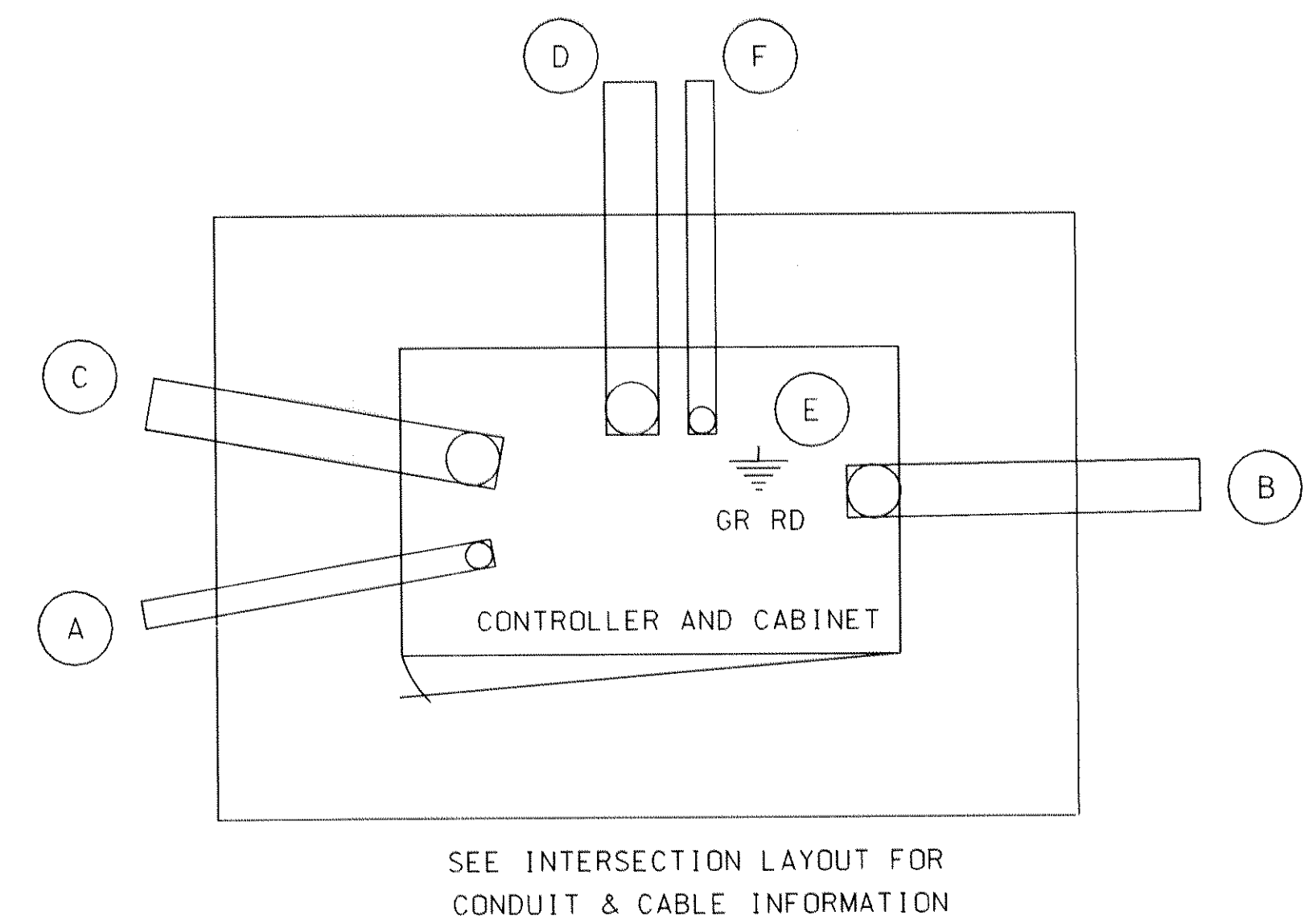
CONSTRUCTION NOTES

ENCLOSURE SHALL BE FABRICATED FROM 1/8" TYPE 5052 H32 ALUMINUM FOR OUTDOOR WEATHER PROOF SERVICES. DOORS AND BASE TO BE GASKETED, ALL HINGES, PINS AND LOCKS TO BE OF NON CORRODING CONSTRUCTION. CABINET TO BE ANNOIDIZED CLEAR.
 ENCLOSURE SHALL BE 'UL' APPROVED

MAST ARM POLE PEDESTRIAN PUSH BUTTON DETAIL



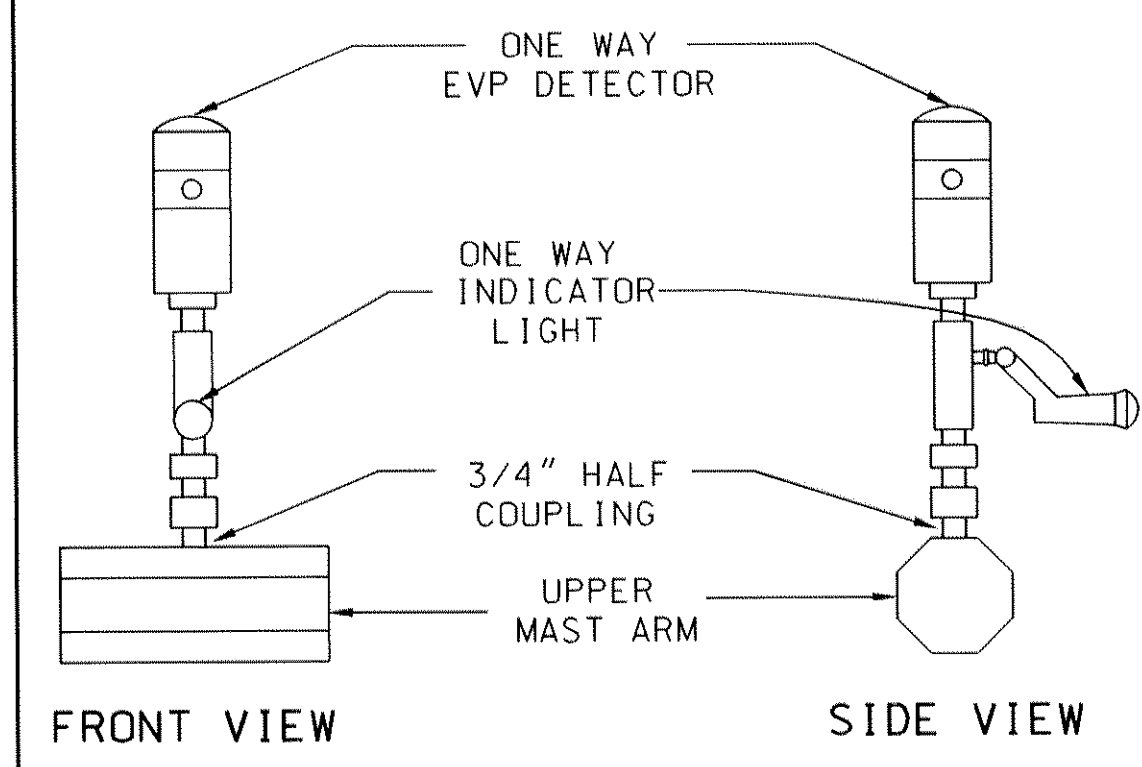
- A 1 1/4" R.S.C. FOR SERVICE CONNECTION (VIA HH)
- B 4" R.S.C. TO HH
- C 4" R.S.C. TO HH
- D 3" R.S.C. STUBOUT, THREAD & CAP BOTH ENDS (FOR FUTURE USE).
- E 5/8" DIA X 15' GROUND ROD
- F 2" R.S.C. STUBOUT, THREAD & CAP BOTH ENDS (FOR FUTURE USE).



CONCRETE FOUNDATION
 SEE MN/DOT STANDARD PLATE NO. 8119C FOR DIMENSIONS.

TYPICAL CONTROLLER CABINET PAD LAYOUT
 NO SCALE

EVP DETECTOR AND LIGHT MOUNTING DETAIL ON MAST ARM



NO	DATE	BY	CKD	APPR	REVISION

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STATE PROJECT NO.
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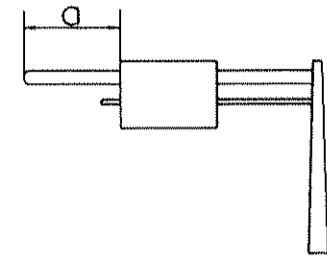
TKDA
 TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 TRAFFIC SIGNAL SYSTEMS "A & B"
 C.S.A.H. 52 RECONSTRUCTION
 SIGNAL DETAILS

SHEET 130 OF 253

TYPE "D" SIGNS - F & I								
SIGNAL SYSTEM	SIGN PANEL	SIZE (inches)	NO. REQ.	NO. POSTS PER SIGN	POST SPACING (inches)	AREA (sq. ft.) PER SIGN	POLE NO.	Ø
A	D-1	108x18	1	3	45"	13.50	1	8'
A	D-2	102x18	1	3	45"	12.75	2	26'
A	D-3	108x18	1	3	45"	13.50	3	8'
A	D-4	102x18	1	3	45"	12.75	4	26'
B	D-5	66x18	1	2	42"	8.25	1	16'
B	D-6	108x18	1	3	45"	13.50	2	26'
B	D-7	66x18	1	2	42"	8.25	3	16'
B	D-8	108x18	1	3	45"	13.50	4	26'
TYPE "C" SIGNS - F & I								
A	R6-1L	36x12	4	①	-	3.00	1,2,3,4	-
A	R6-1R	36x12	2	①	-	3.00	2,4	-
B	R6-1L	36x12	4	①	-	3.00	1,2,3,4	-
B	R6-1R	36x12	2	①	-	3.00	2,4	-
B	R9-3a	18x18	2	①	-	12.00	3,4	-

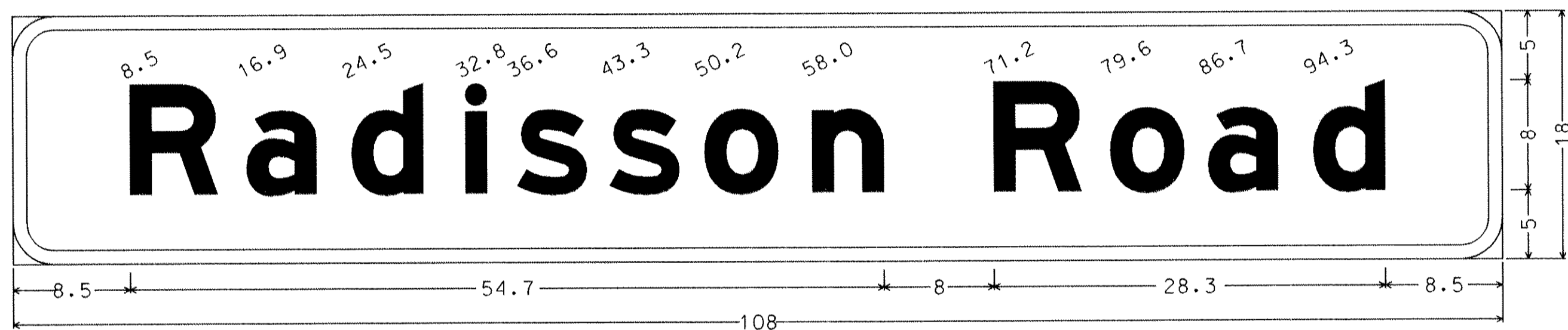
MAST ARM MOUNTED SIGNING



NOTES:

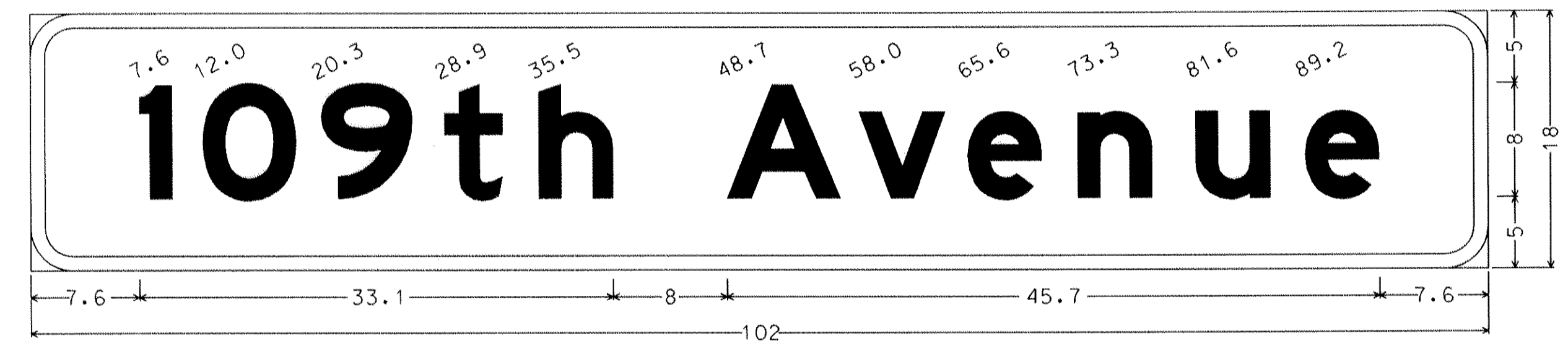
- 1) TYPE "D" SIGN COLOR-WHITE LEGEND AND BORDER ON GREEN BACKGROUND, FULLY REFLECTORIZED.
- 2) CORNERS EXTENDING BEYOND THE BORDER SHALL NOT BE TRIMMED.
- 3) FOR STRUCTURAL DETAILS, TYPE "C" AND "D" SIGNS, SEE DETAILS AND STANDARD SIGNS MANUAL.
- 4) FOR TYPE "D" STRINGER AND PANEL-JOINT DETAIL, SEE DETAILS AND STANDARD SIGNS MANUAL.
- 5) TYPE "C" AND "D" SIGN PANELS SHALL BE FURNISHED AND INSTALLED BY SIGNAL CONTRACTOR INCIDENTAL TO ITEM NO. 2565.511 FOR SIGNAL SYSTEM.
- 6) ① = MOUNT SIGN PANEL ON TRAFFIC SIGNAL MAST ARM POLE.

D-1, D-3, D-6, D-8



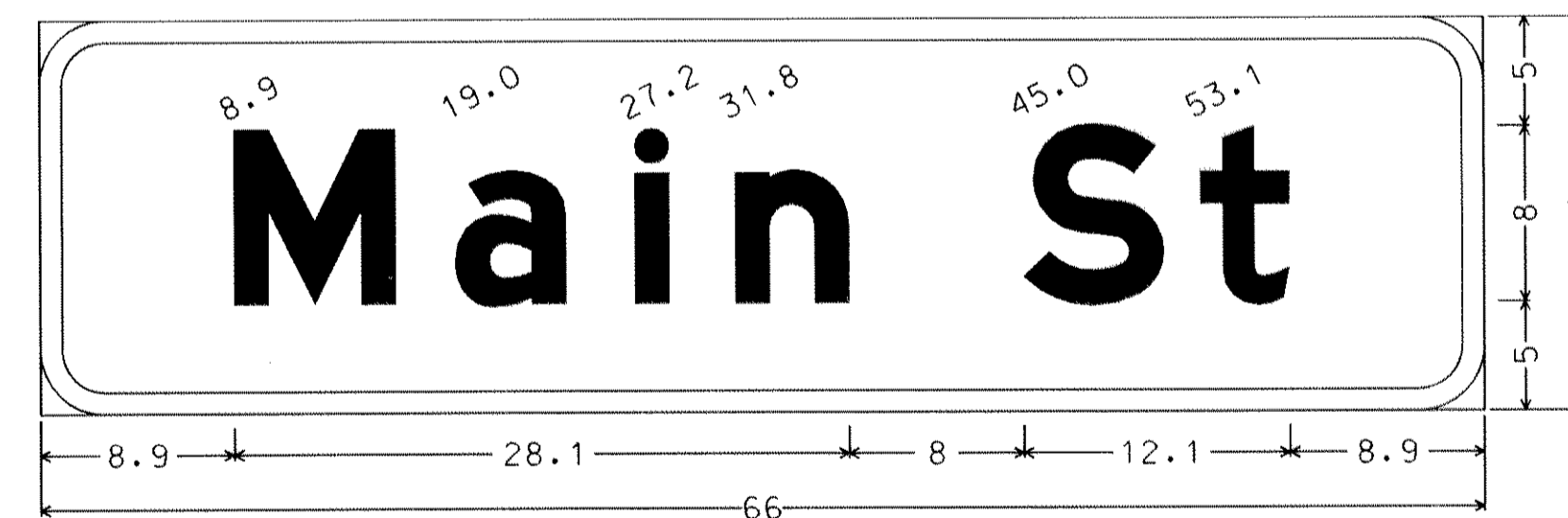
3.0" Radius, 1.0" Border, White on Green:
[Radisson Road] E Mod:

D-2, D-4



3.0" Radius, 1.0" Border, White on Green:
[109th Avenue] E Mod:

D-5, D-7



3.0" Radius, 1.0" Border, White on Green:
[Main St] E Mod:

NO.	DATE	BY	CKD	APPR	REVISION

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 S. A. P. 106-020-019

TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 TRAFFIC SIGNAL SYSTEM "A & B"
 C.S.A.H. 52 RECONSTRUCTION
 TRAFFIC SIGNAL SIGNING DETAILS

LOOP DETECTORS

NUMBER	SIZE (FEET)	FUNCTION	LOCATION	ACTION
D1-1	2-6 x 6	1	5' & 50'	2
D2-1	6 x 6	1	400'	2
D2-2	6 x 6	1	400'	2
D3-1	2-6 x 6	1	5' & 50'	2
D4-1	6 x 6	3,8	EXISTING	1
D4-2	6 x 10, 6 x 6	7	AS SHOWN	2
D4-3	2-6 x 6	1	5'	2
D5-1	2-6 x 6	1	5' & 50'	2
D6-1	6 x 6	1	475'	2
D6-2	6 x 6	1	475'	2
D7-1	2-6 x 6	1	5' & 50'	2
D8-1	6 x 6	3,8	EXISTING	1
D8-2	6 x 10, 6 x 6	7	AS SHOWN	2
D8-3	2-6 x 6	1	5'	2

LOOP DETECTORS FUNCTIONS

- CALL AND EXTEND
- EXTEND ONLY
- DELAY CALL - IMMEDIATE EXTEND
- CARRY OVER (STRETCH)

LOOP DETECTORS ACTION

- INPLACE-PROTECT AND USE INPLACE.
- PVC LOOP TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR.

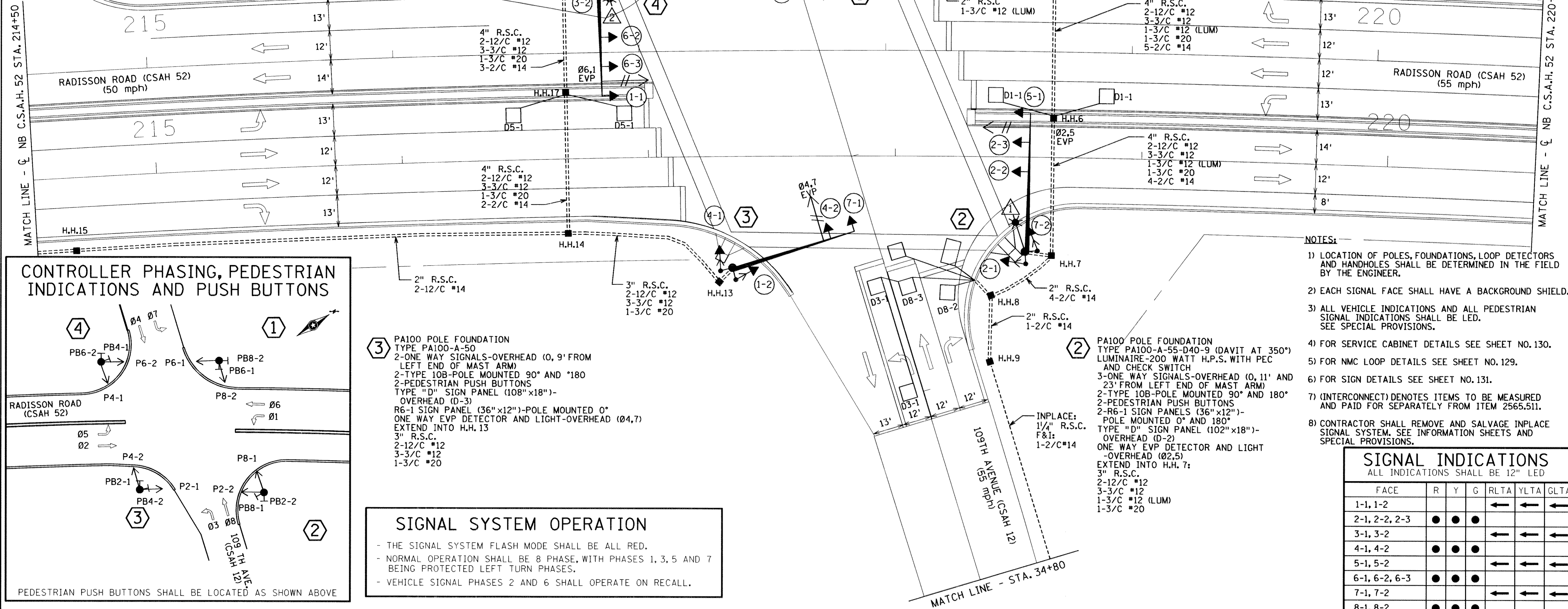
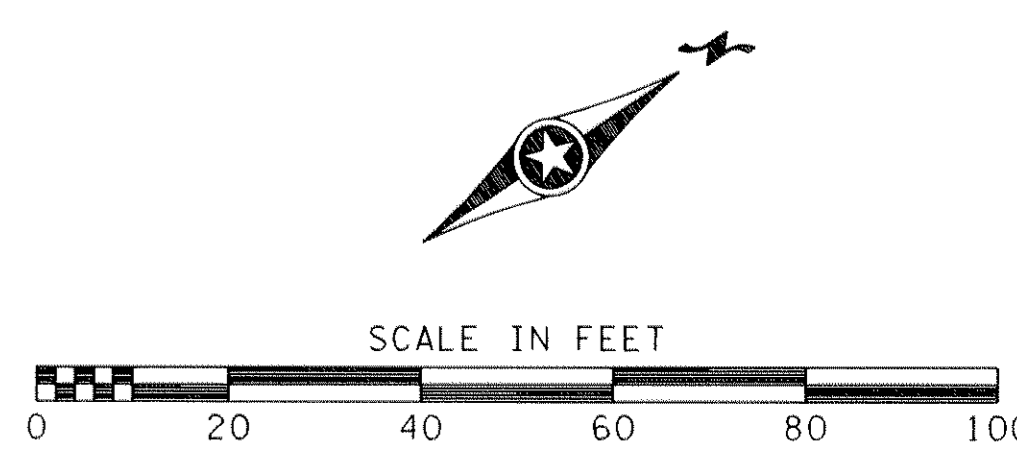
NOTE:
LOCATION = DISTANCE FROM STOP BAR TO FRONT OF LOOP DETECTOR

4 PA100 POLE FOUNDATION
TYPE PA100-A-50-D40-9 (DAVIT AT 350°)
LUMINAIRE-200 WATT H.P.S. WITH PEC
AND CHECK SWITCH
3-ONE WAY SIGNALS-OVERHEAD (0, 11' AND 23' FROM LEFT END OF MAST ARM)
2-TYPE 10B-POLE MOUNTED 90° AND 180°
2-PEDESTRIAN PUSH BUTTONS
2-R6-1 SIGN PANELS (36"x12")-POLE MOUNTED 0° AND 180°
TYPE "D" SIGN PANEL (102"x18")-OVERHEAD (D-4)
ONE WAY EVP DETECTOR AND LIGHT-OVERHEAD (06,1)
EXTEND INTO H.H. 18
3" R.S.C.
2-12/C #12
3-3/C #12
1-3/C #12 (LUM)
1-3/C #20

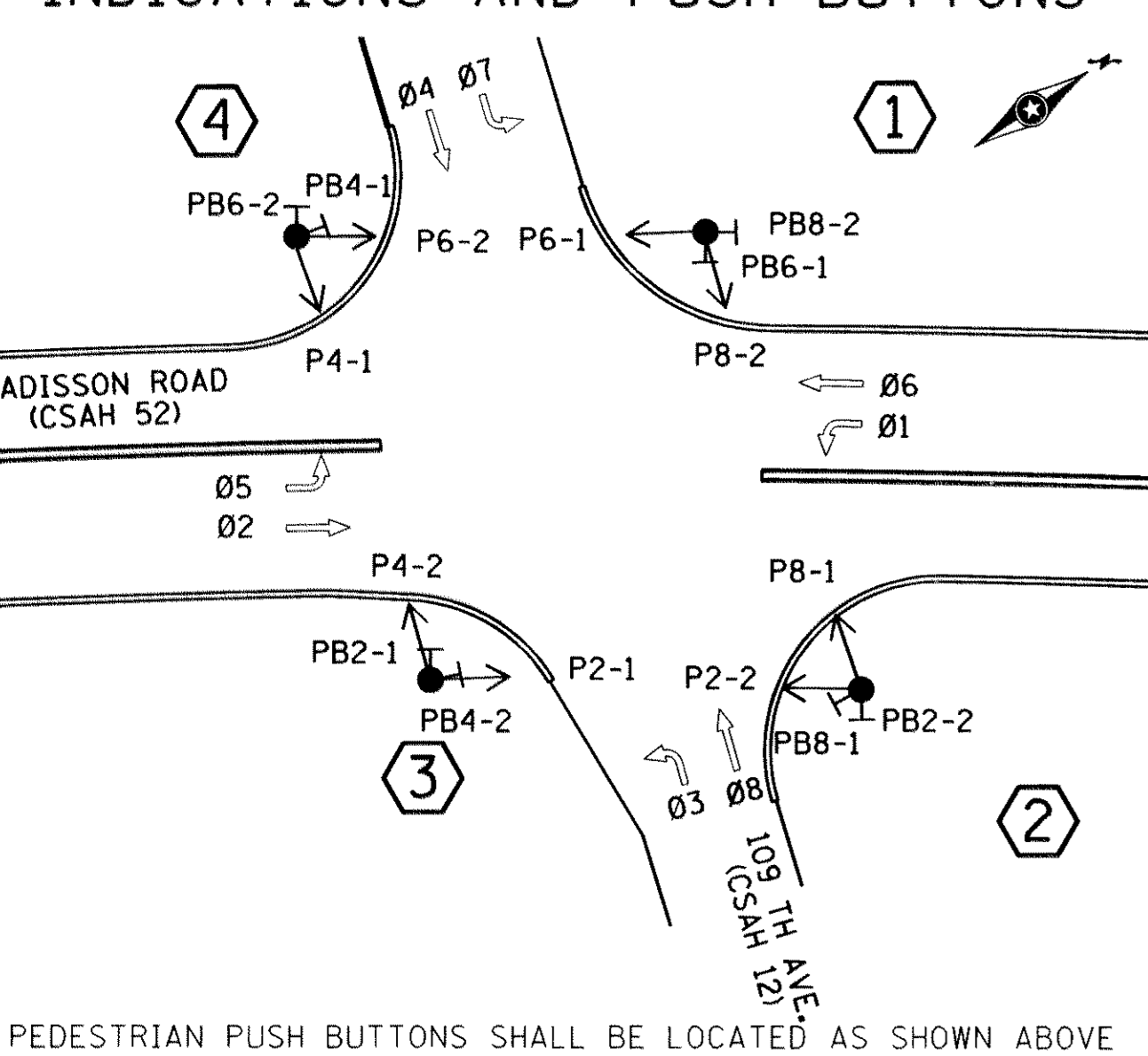
B SERVICE CABINET
CABINET FOUNDATION
EXTEND INTO H.H. 1:
UNMETERED STREET LIGHT SERVICE
1/4" R.S.C.
2-3/C #12 (LUM)
EXTEND INTO H.H. 24:
METERED SIGNAL SERVICE
1/4" R.S.C.
3-1/C #6
STUB OUT 2" R.S.C. (FOR SERVICE BY CONNEXUS)

A INSTALL CONTROLLER AND CABINET (FURNISHED BY COUNTY)
CABINET AND FOUNDATION
EXTEND INTO H.H. 24:
METERED SIGNAL SERVICE
1/4" R.S.C.
3-1/C #6
EXTEND INTO H.H. 1:
4" R.S.C.
4-12/C #12
6-3/C #12
2-3/C #20
7-2/C #14
EXTEND INTO H.H. 23:
4" R.S.C.
4-12/C #12
6-3/C #12
2-3/C #20
7-2/C #14
STUB OUT 1-2" R.S.C. (THREAD AND CAP BOTH ENDS-FOR FUTURE USE)
AND 1-3" R.S.C. (THREAD AND CAP BOTH ENDS-FOR FUTURE USE)

1 PA100 POLE FOUNDATION
TYPE PA100-A-45
2-ONE WAY SIGNALS-OVERHEAD (0, 9' FROM LEFT END OF MAST ARM)
2-TYPE 10B-POLE MOUNTED 90° AND 180°
2-PEDESTRIAN PUSH BUTTONS
TYPE "D" SIGN PANEL (108"x18")-OVERHEAD (D-1)
R6-1 SIGN PANEL (36"x12")-POLE MOUNTED 0°
ONE WAY EVP DETECTOR AND LIGHT-OVERHEAD (08,3)
EXTEND INTO H.H. 1:
3" R.S.C.
2-12/C #12
3-3/C #12
1-3/C #12
1-3/C #20



CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS



3 PA100 POLE FOUNDATION
TYPE PA100-A-50
2-ONE WAY SIGNALS-OVERHEAD (0, 9' FROM LEFT END OF MAST ARM)
2-TYPE 10B-POLE MOUNTED 90° AND 180°
2-PEDESTRIAN PUSH BUTTONS
TYPE "D" SIGN PANEL (108"x18")-OVERHEAD (D-3)
R6-1 SIGN PANEL (36"x12")-POLE MOUNTED 0°
ONE WAY EVP DETECTOR AND LIGHT-OVERHEAD (04,7)
EXTEND INTO H.H. 13
3" R.S.C.
2-12/C #12
3-3/C #12
1-3/C #20

SIGNAL SYSTEM OPERATION

- THE SIGNAL SYSTEM FLASH MODE SHALL BE ALL RED.
- NORMAL OPERATION SHALL BE 8 PHASE, WITH PHASES 1, 3, 5 AND 7 BEING PROTECTED LEFT TURN PHASES.
- VEHICLE SIGNAL PHASES 2 AND 6 SHALL OPERATE ON RECALL.

- NOTES:**
- LOCATION OF POLES, FOUNDATIONS, LOOP DETECTORS AND HANDHOLES SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
 - EACH SIGNAL FACE SHALL HAVE A BACKGROUND SHIELD.
 - ALL VEHICLE INDICATIONS AND ALL PEDESTRIAN SIGNAL INDICATIONS SHALL BE LED. SEE SPECIAL PROVISIONS.
 - FOR SERVICE CABINET DETAILS SEE SHEET NO. 130.
 - FOR NMC LOOP DETAILS SEE SHEET NO. 129.
 - FOR SIGN DETAILS SEE SHEET NO. 131.
 - (INTERCONNECT) DENOTES ITEMS TO BE MEASURED AND PAID FOR SEPARATELY FROM ITEM 2565.511.
 - CONTRACTOR SHALL REMOVE AND SALVAGE INPLACE SIGNAL SYSTEM. SEE INFORMATION SHEETS AND SPECIAL PROVISIONS.

SIGNAL INDICATIONS						
ALL INDICATIONS SHALL BE 12" LED						
FACE	R	Y	G	RLTA	YLTA	GLTA
1-1, 1-2				←	←	←
2-1, 2-2, 2-3	●	●	●			
3-1, 3-2				←	←	←
4-1, 4-2	●	●	●			
5-1, 5-2				←	←	←
6-1, 6-2, 6-3	●	●	●			
7-1, 7-2				←	←	←
8-1, 8-2	●	●	●			

NO	DATE	BY	CKD	APPR	REVISION

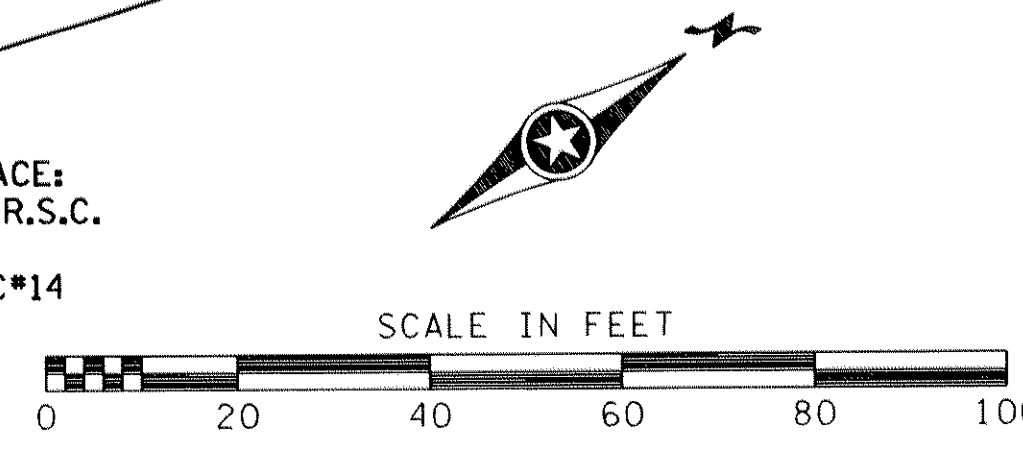
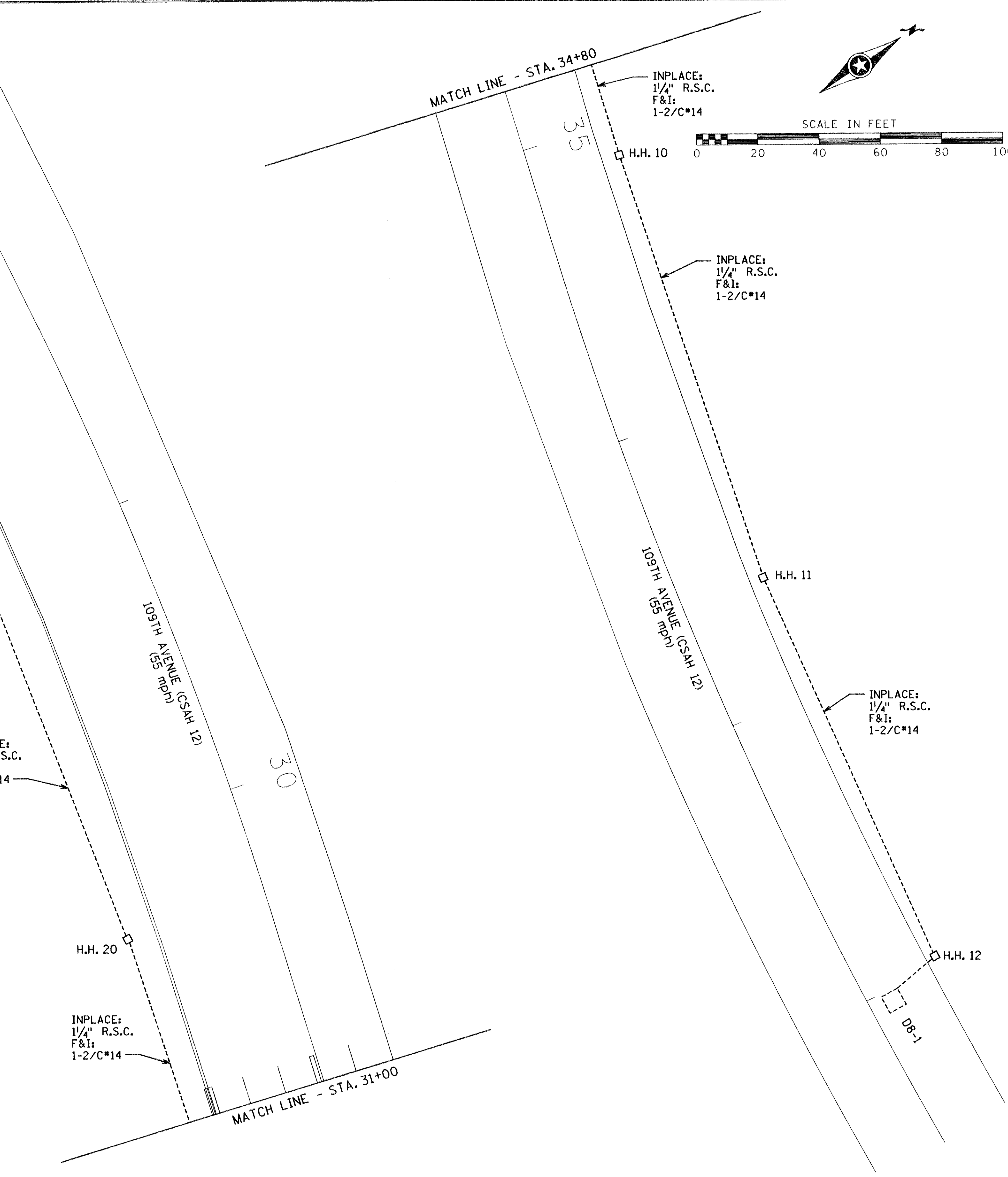
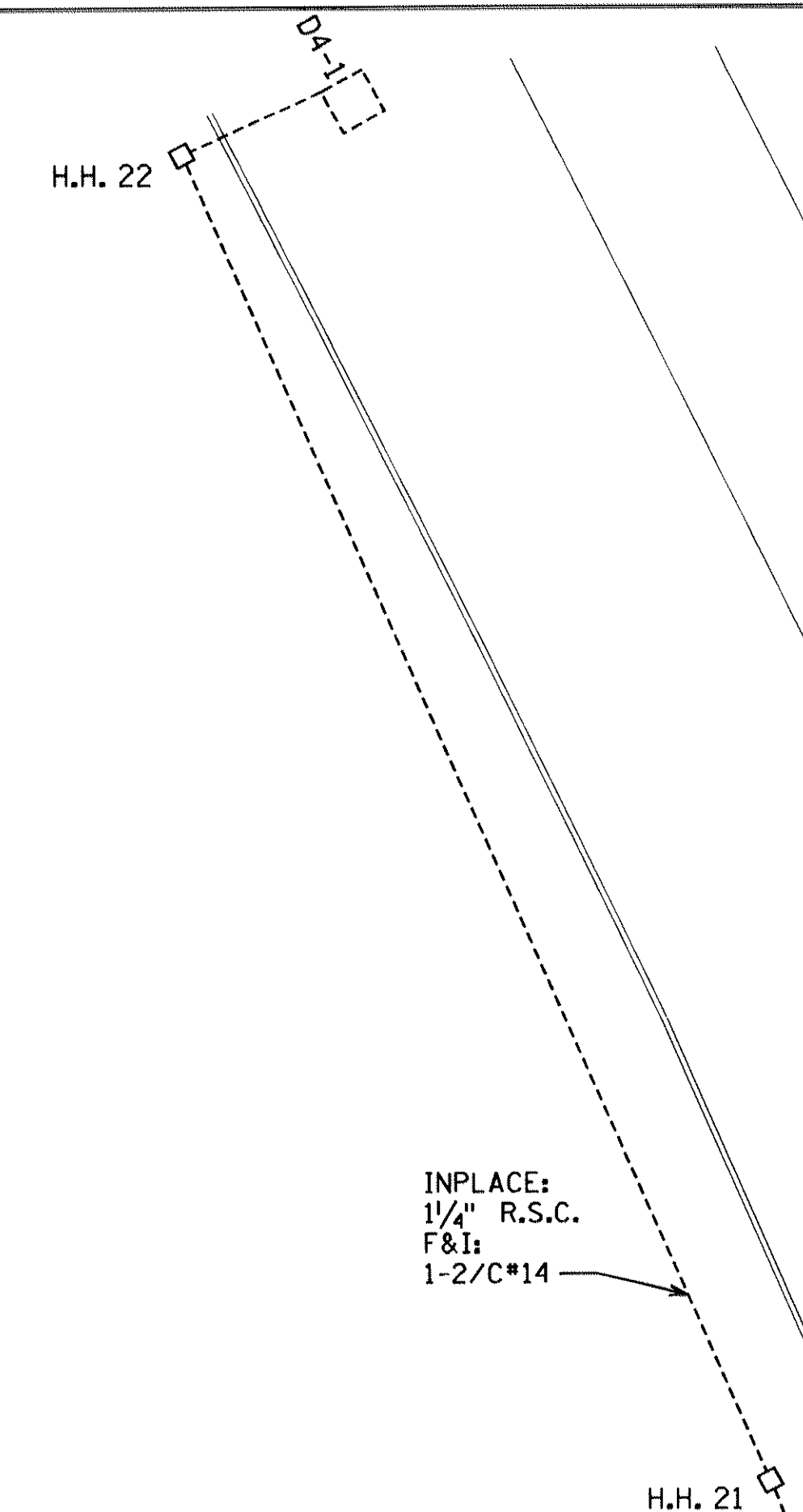
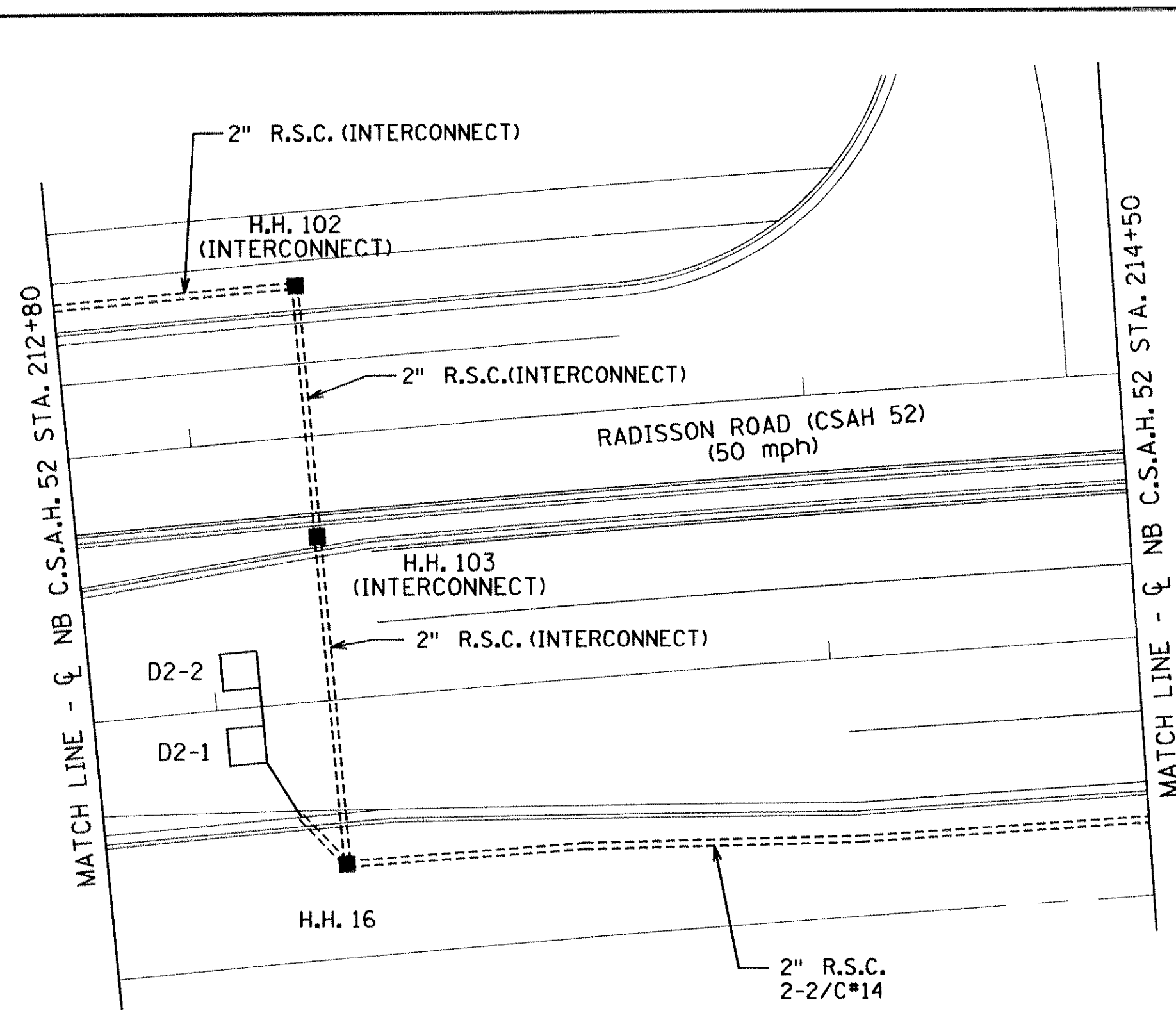
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ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA



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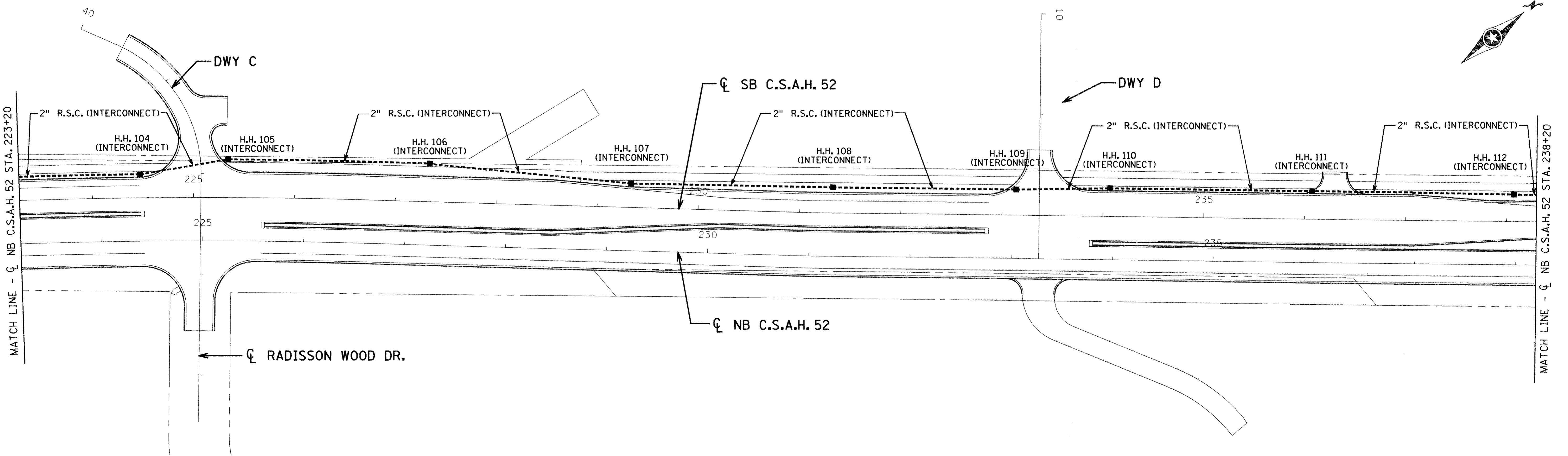
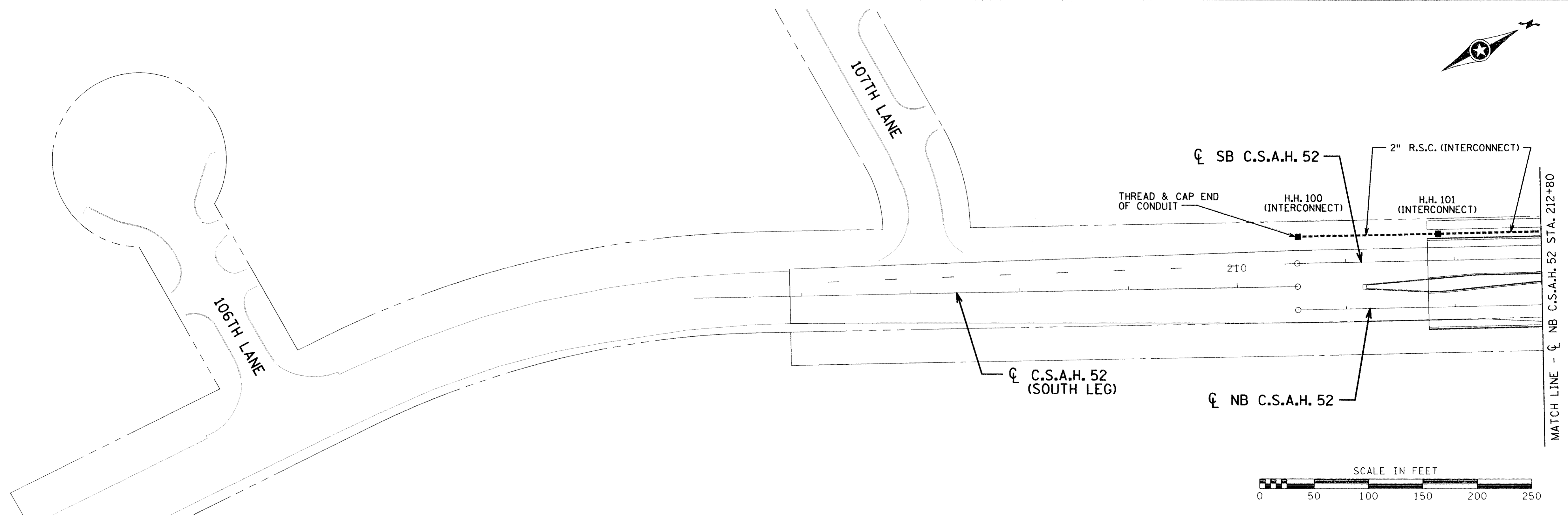
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 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 MATCH LINES - SYSTEM "A"
 C.S.A.H. 52 RECONSTRUCTION
 RADISSON RD. (C.S.A.H. 52) AT 109TH AVE. (C.S.A.H. 12)

SHEET
 133
 OF
 253



NO	DATE	BY	CKD	APPR	REVISION
NAME: \$FILE\$					\$DATE\$

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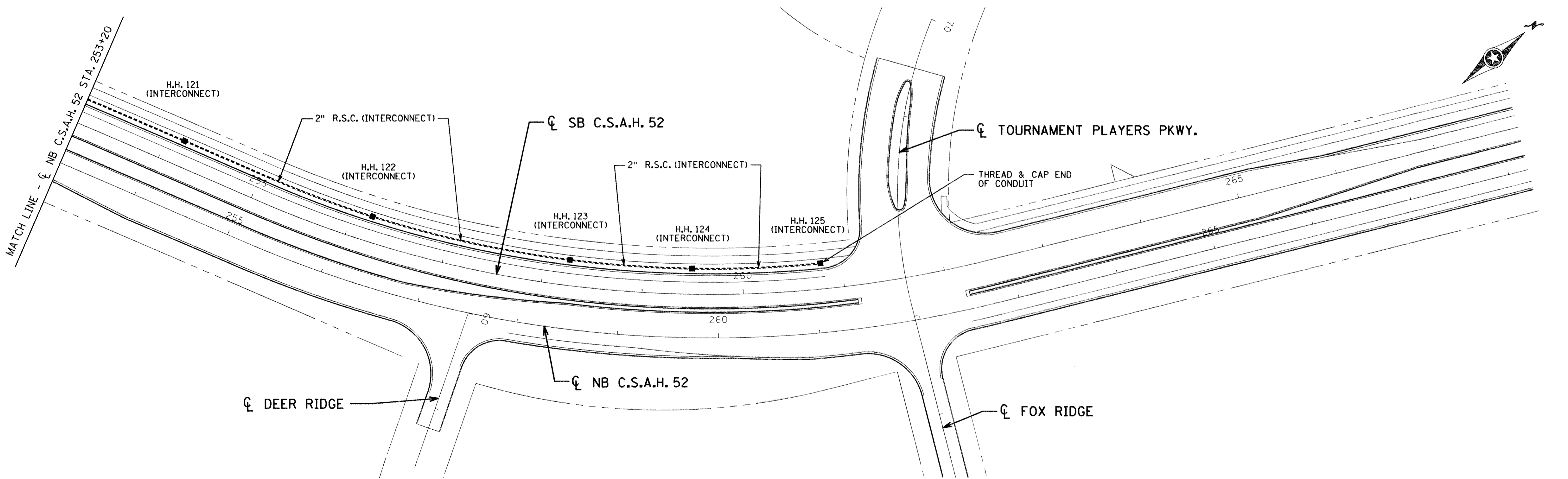
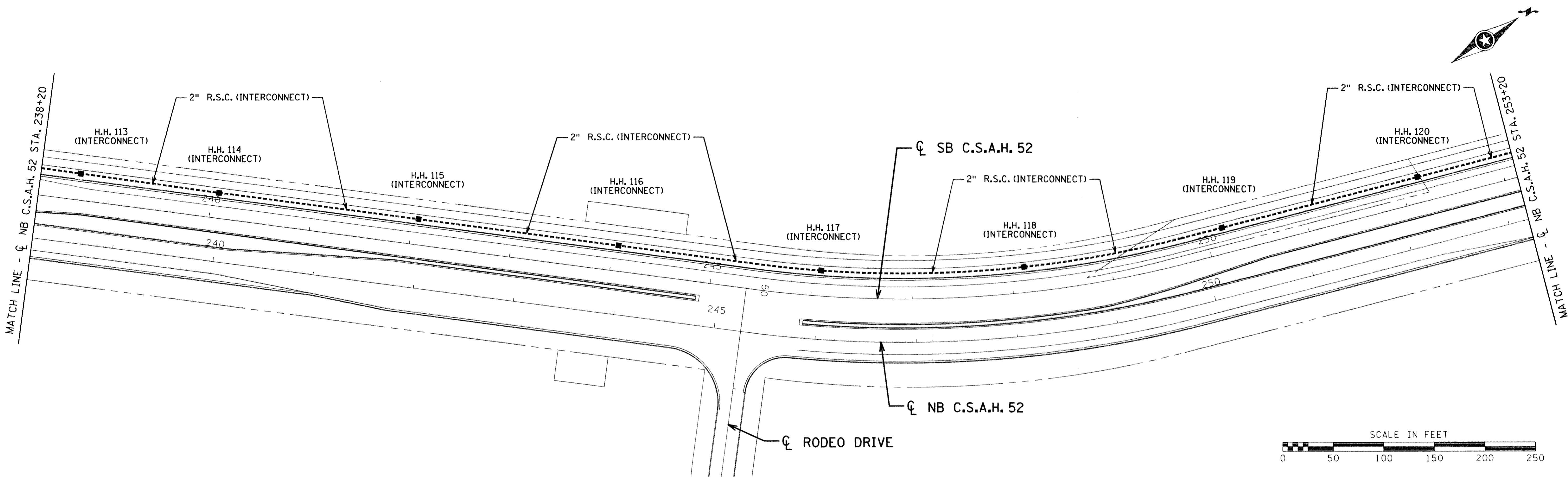
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 TOLTZ, KING, DUVAL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 TRAFFIC SIGNAL INTERCONNECT
 C.S.A.H. 52 RECONSTRUCTION
 STA. 205+00 TO STA. 238+20

SHEET
 134
 OF
 253



NO	DATE	BY	CKD	APPR	REVISION
NAME: \$FILE\$					
DATE: \$DATE\$					

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 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 TRAFFIC SIGNAL INTERCONNECT
 C.S.A.H. 52 RECONSTRUCTION
 STA. 238+20 TO STA. 268+20

SHEET 135
 OF 253

LOOP DETECTORS

NUMBER	SIZE (FEET)	FUNCTION	LOCATION	ACTION
D1-1	4-6 x 6	1	EXISTING	1
D2-1	6 x 6	1	EXISTING	1
D3-1	2-6 x 6	1	5' & 50'	2
D4-1	6 x 6	3,8	EXISTING	1
D4-2	2-6 x 6	7	EXISTING	1
D4-3	2-6 x 6	1	EXISTING	1
D4-3	6 x 6	1	AS SHOWN	2
D5-1	4-6 x 6	1	EXISTING	1
D6-1	2-6 x 6	1	EXISTING	1
D7-1	2-6 x 6	1	5' & 50'	2
D8-1	6 x 6	3,8	475'	2
D8-2	6 x 6	3,8	475'	3
D8-3	6 x 10, 6 x 6	7	AS SHOWN	3
D8-4	2-6 x 6	7	5'	2
D8-5	2-6 x 6	1	5'	2

NOTES:

- LOCATION OF POLES, FOUNDATIONS, LOOP DETECTORS AND HANDHOLES SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- EACH SIGNAL FACE SHALL HAVE A BACKGROUND SHIELD.
- FOR SERVICE CABINET DETAILS SEE SHEET NO. 130.
- FOR NMC LOOP DETAILS SEE SHEET NO. 129.
- FOR SIGN DETAILS SEE SHEET NO. 131.
- ALL VEHICLE INDICATIONS AND ALL PEDESTRIAN SIGNAL INDICATIONS SHALL BE LED. SEE SPECIAL PROVISIONS.
- (R&S) = ITEMS TO BE REMOVED AND SALVAGED BY CONTRACTOR.
(S&R) = ITEMS TO BE SALVAGED AND REINSTALLED BY CONTRACTOR.
(F&I) = ITEMS TO BE FURNISHED AND INSTALLED BY CONTRACTOR.

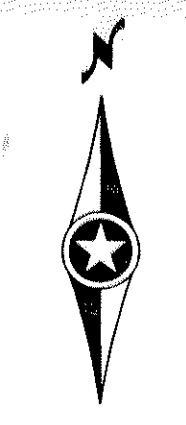
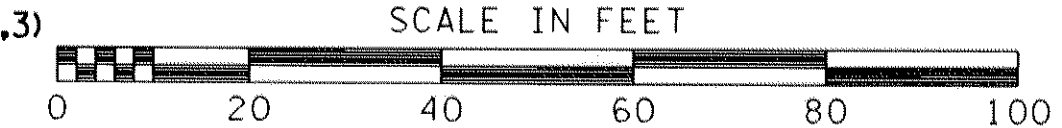
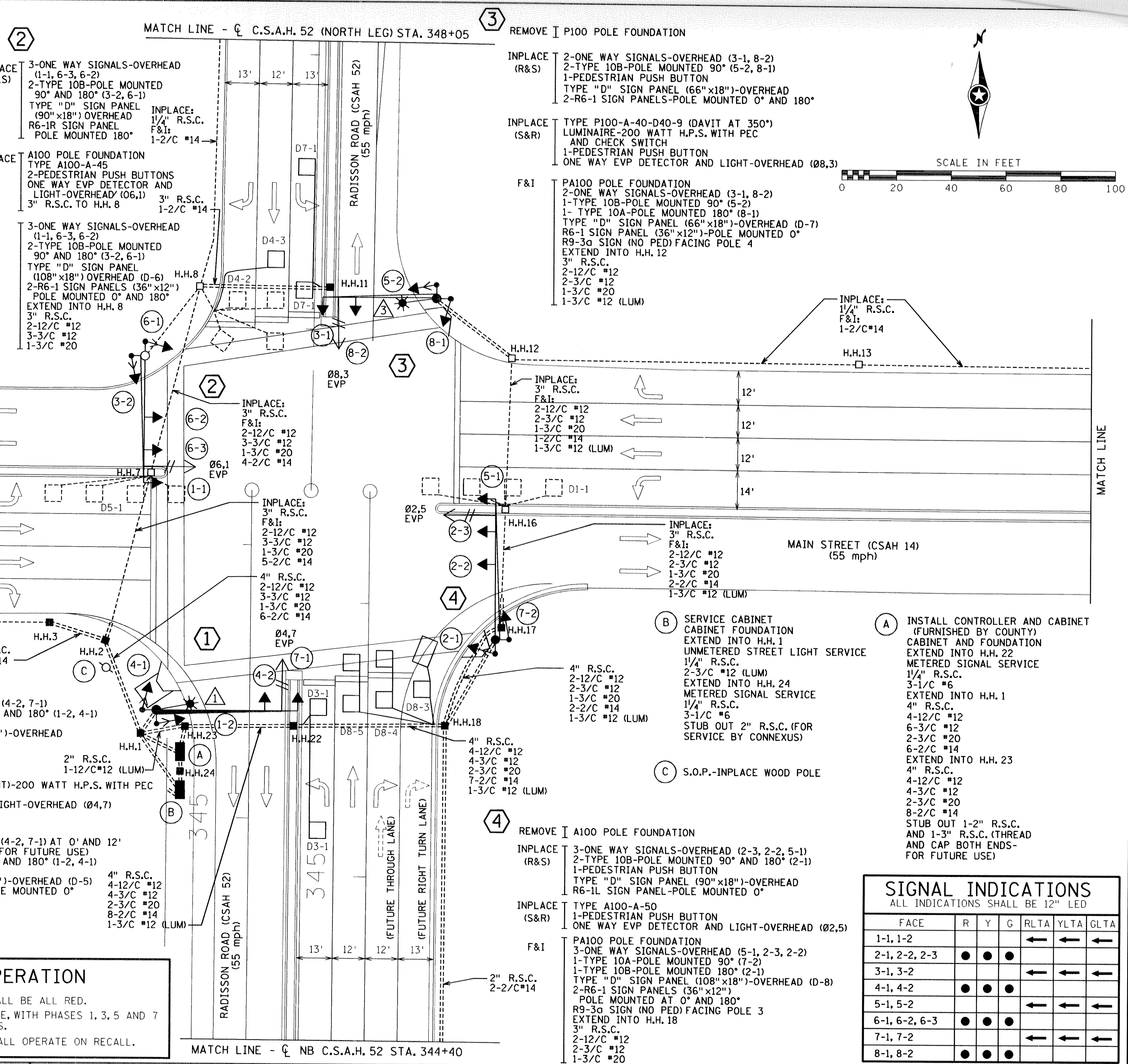
LOOP DETECTORS FUNCTIONS

- CALL AND EXTEND
- EXTEND ONLY
- DELAY CALL - IMMEDIATE EXTEND
- CARRY OVER (STRETCH)

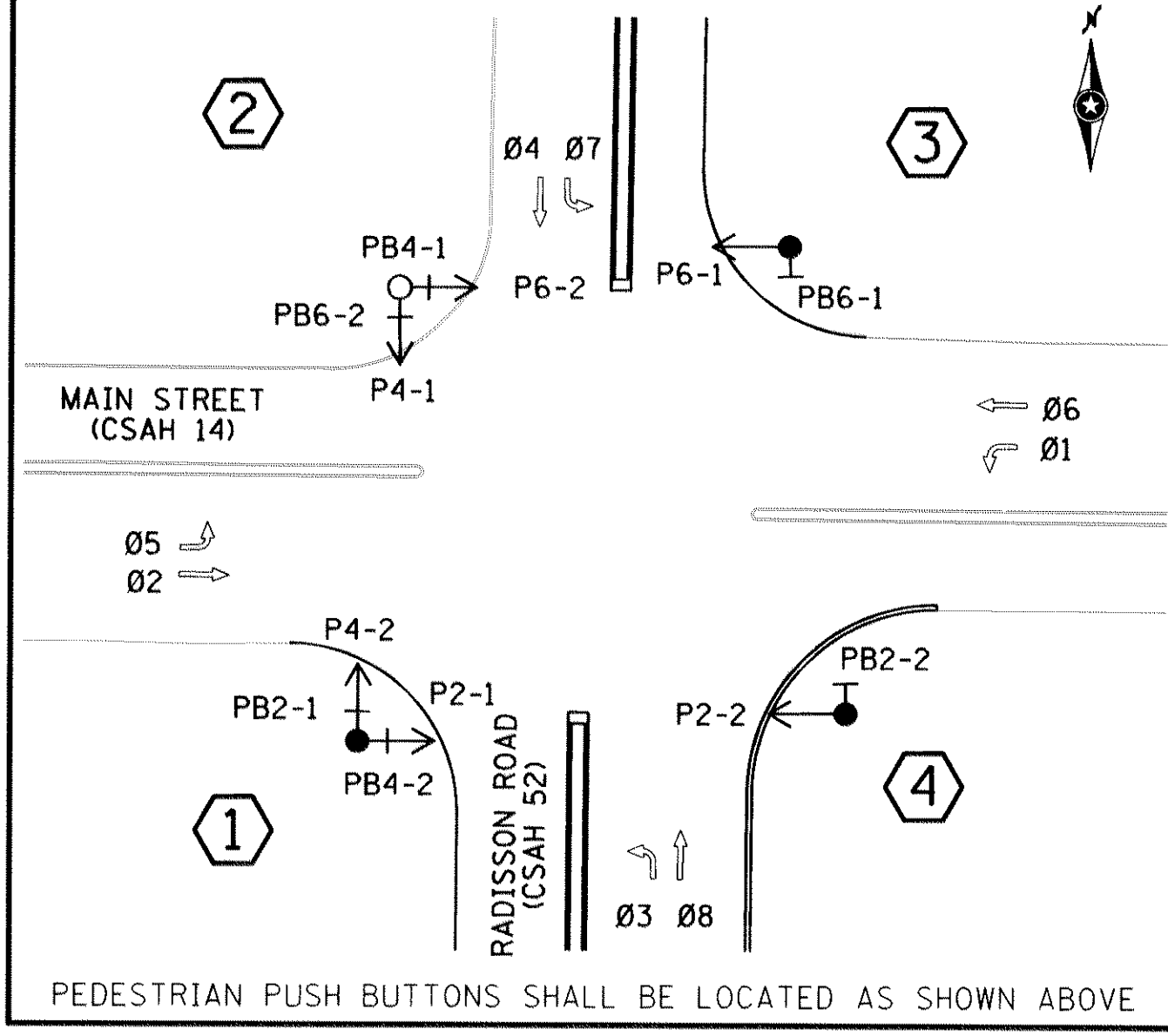
LOOP DETECTORS ACTION

- INPLACE-PROTECT AND USE INPLACE.
- PVC LOOP TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR.
- PVC LOOP TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR FOR FUTURE CONDITIONS.

NOTE:
LOCATION = DISTANCE FROM STOP BAR TO FRONT OF LOOP DETECTOR



CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS



SIGNAL SYSTEM OPERATION

- THE SIGNAL SYSTEM FLASH MODE SHALL BE ALL RED.
- NORMAL OPERATION SHALL BE 8 PHASE, WITH PHASES 1, 3, 5 AND 7 BEING PROTECTED LEFT TURN PHASES.
- VEHICLE SIGNAL PHASES 2 AND 6 SHALL OPERATE ON RECALL.

SIGNAL INDICATIONS

ALL INDICATIONS SHALL BE 12" LED

FACE	R	Y	G	RLTA	YLTA	GLTA
1-1, 1-2				←	←	←
2-1, 2-2, 2-3	●	●	●			
3-1, 3-2				←	←	←
4-1, 4-2	●	●	●			
5-1, 5-2				←	←	←
6-1, 6-2, 6-3	●	●	●			
7-1, 7-2				←	←	←
8-1, 8-2	●	●	●			

NO	DATE	BY	CKD	APPR	REVISION

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.

DRAWN BY SFH DATE 11-8-00
 DESIGN BY BDP DATE 11-8-00
 CHECKED BY TAC DATE 11-8-00

STATE PROJECT NO. S.A.P. 02-652-01
 S.A.P. 106-020-019



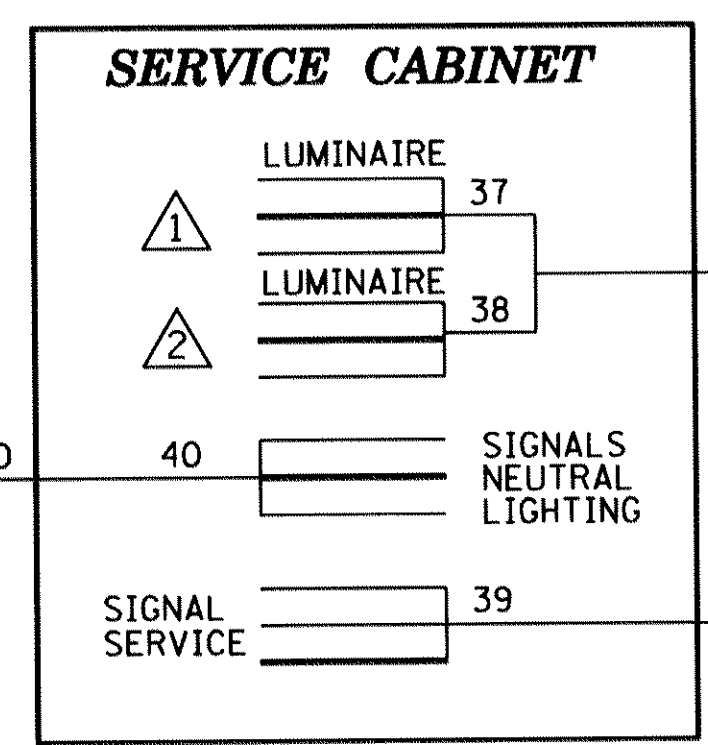
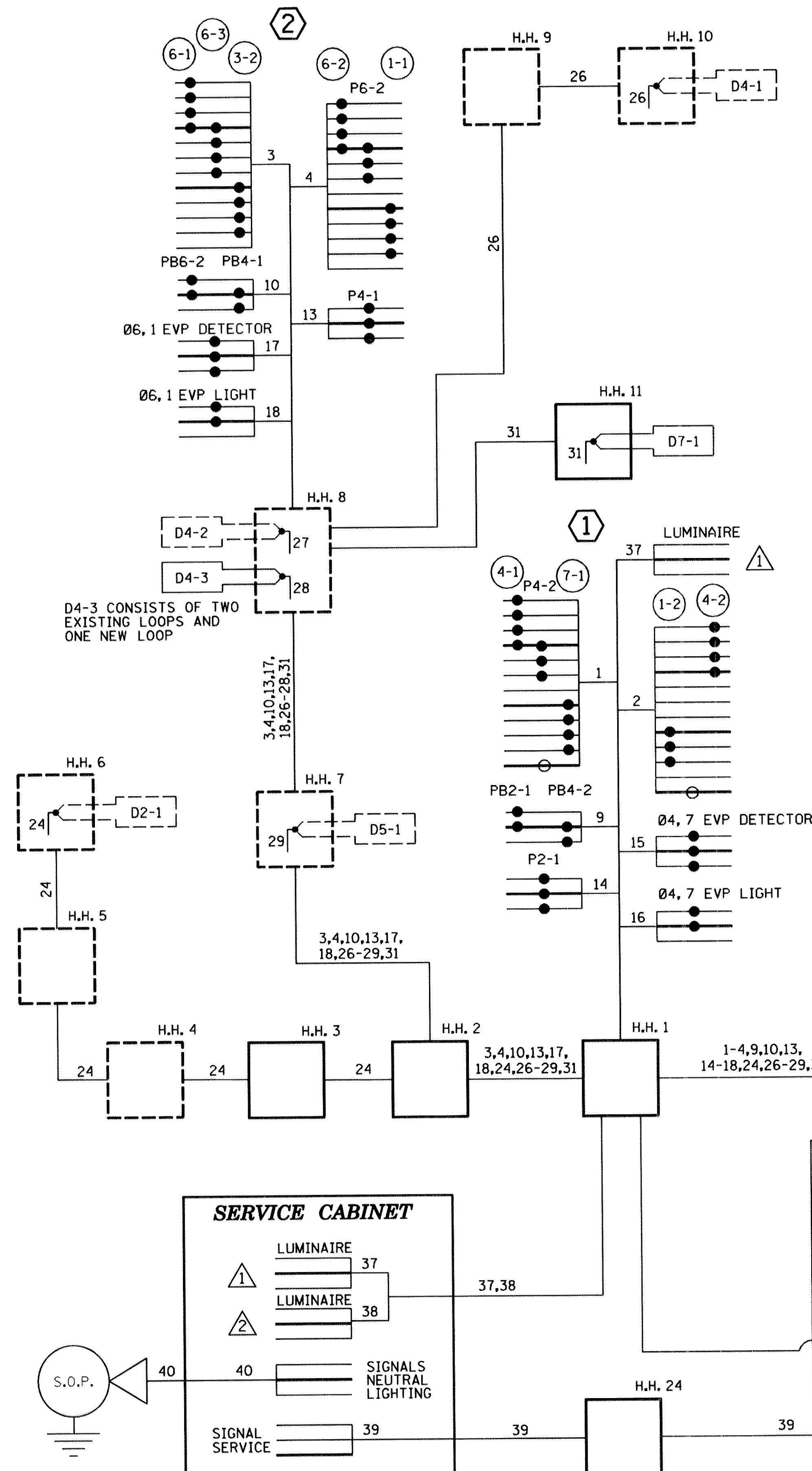
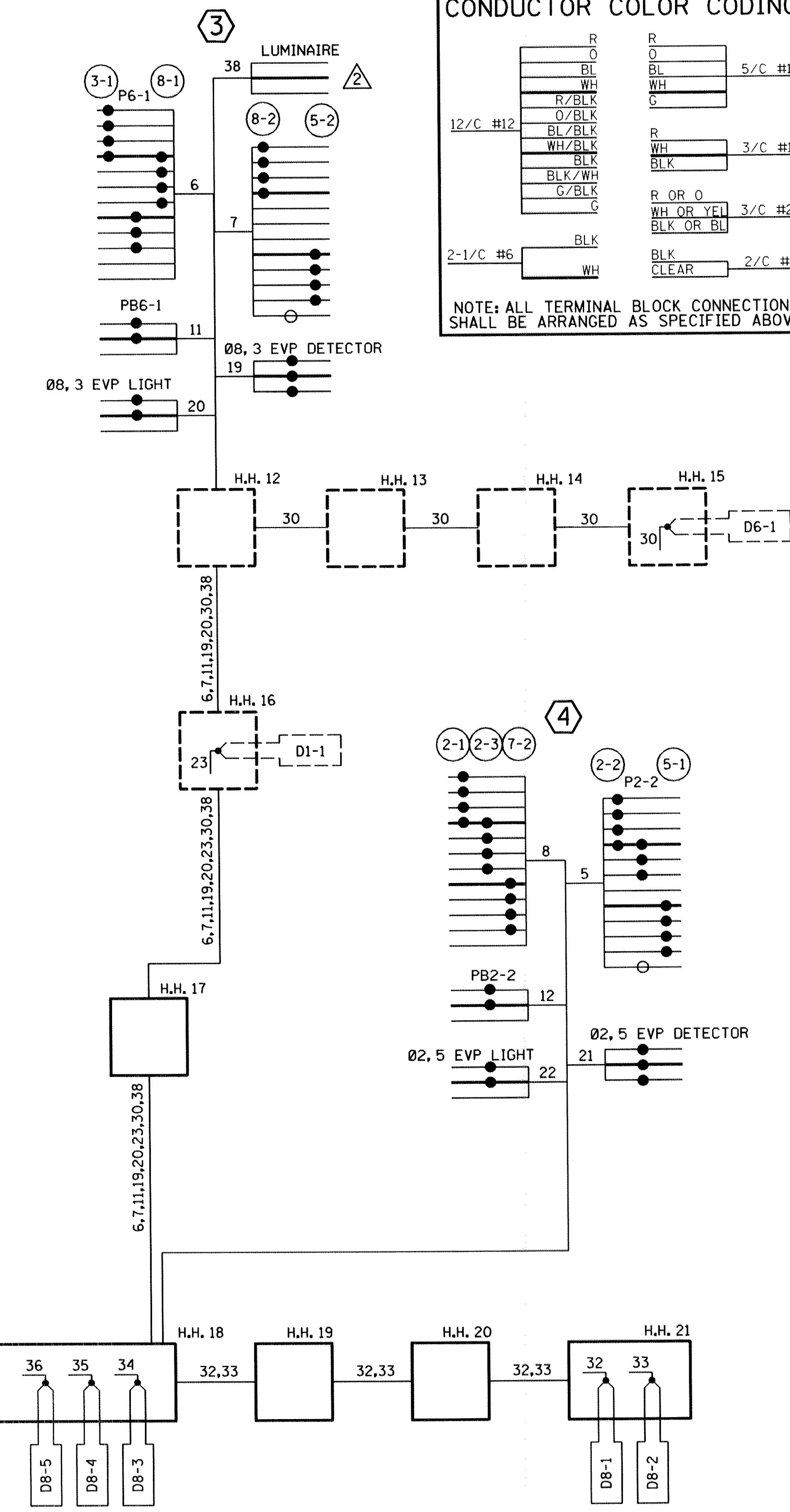
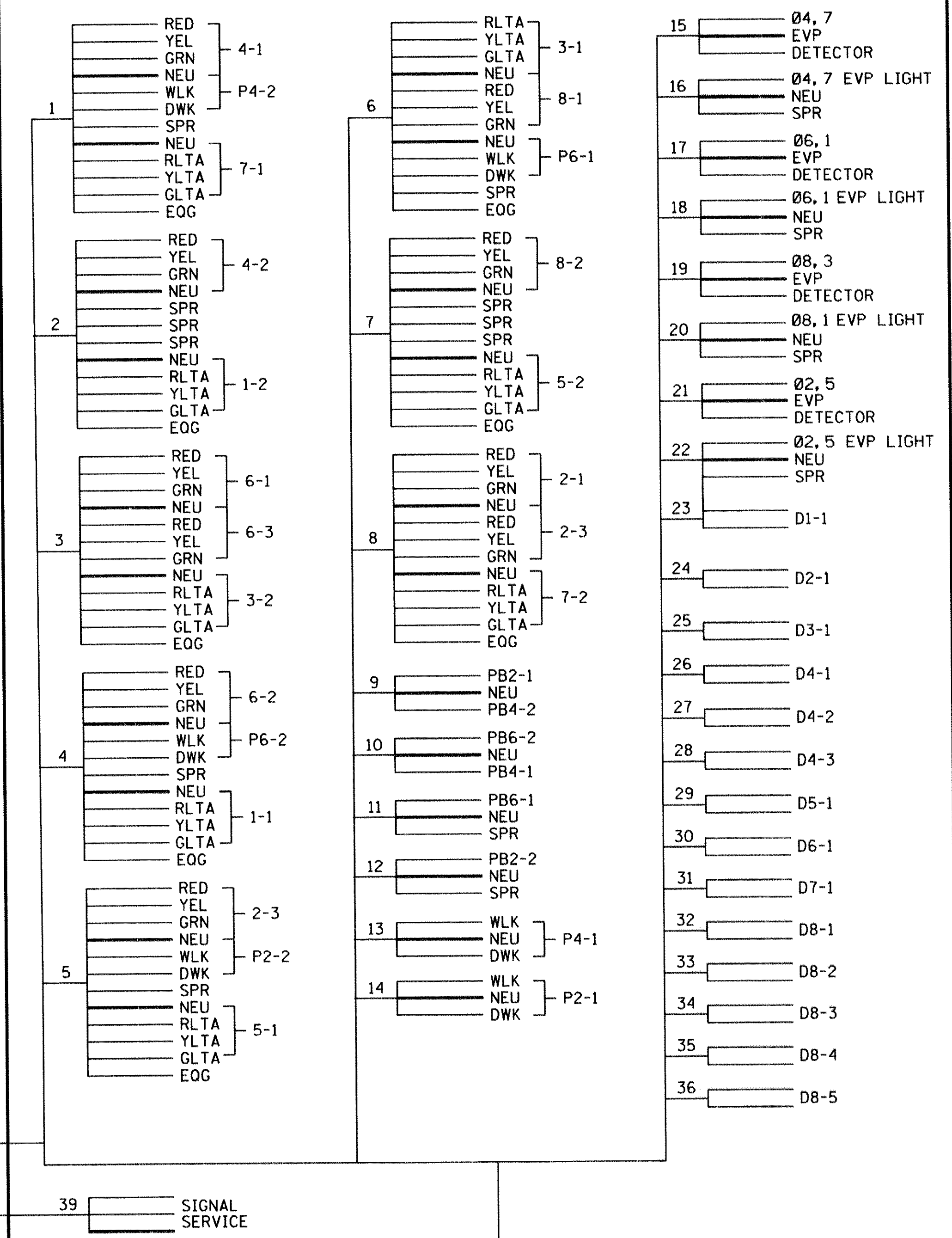
ANOKA COUNTY
 INTERSECTION LAYOUT - SYSTEM "B"
 C.S.A.H. 52 RECONSTRUCTION
 RADISSON RD. (C.S.A.H. 52) AT MAIN ST. (C.S.A.H. 14)
 SHEET 137 OF 253

CONDUCTOR COLOR CODING

R	R
0	0
BL	BL
WH	WH
G	G
5/C #12	5/C #12
R	R
WH	WH
BLK	BLK
3/C #12	3/C #12
R OR 0	R OR 0
WH OR YEL	WH OR YEL
BLK OR BL	BLK OR BL
3/C #20	3/C #20
BLK	BLK
2/C #14	2/C #14
WH	CLEAR
2/C #14	2/C #14

NOTE: ALL TERMINAL BLOCK CONNECTIONS SHALL BE ARRANGED AS SPECIFIED ABOVE

CONTROLLER CABINET



NO	DATE	BY	CKD	APPR	REVISION

NAME: \$FILE\$ \$DATE\$

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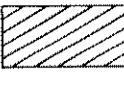





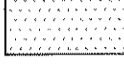
STATE PROJECT NO. S.A.P. 02-652-01
 S.A.P. 106-020-019

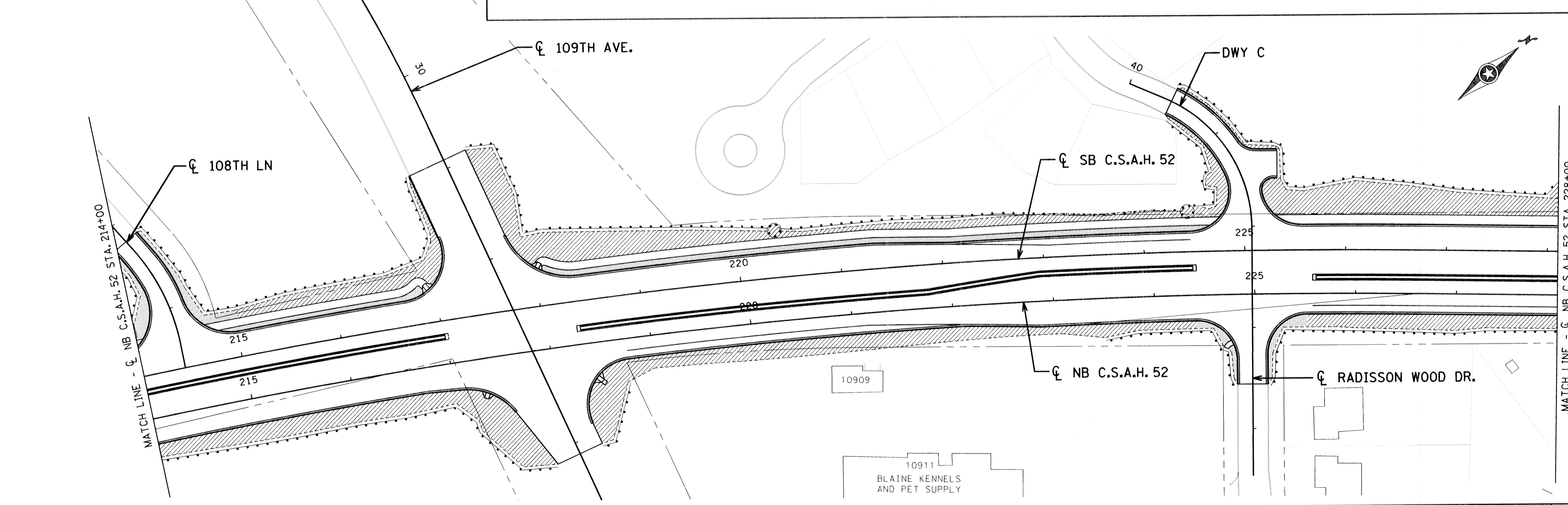
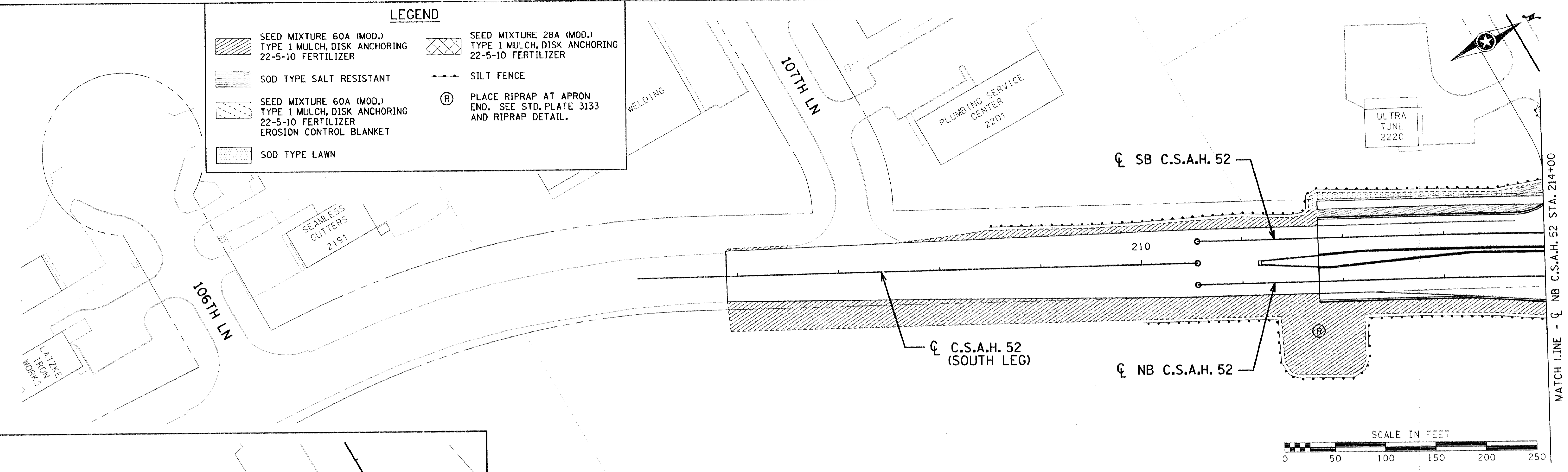
TKDA
 TOLTZ, KING, DUVAL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 WIRING DIAGRAM - SYSTEM "B"
 C.S.A.H. 52 RECONSTRUCTION
 RADISSON RD. (C.S.A.H. 52) AT MAIN STREET

SHEET 139 OF 253

LEGEND

 SEED MIXTURE 60A (MOD.) TYPE 1 MULCH, DISK ANCHORING 22-5-10 FERTILIZER	 SEED MIXTURE 28A (MOD.) TYPE 1 MULCH, DISK ANCHORING 22-5-10 FERTILIZER
 SOD TYPE SALT RESISTANT	 SILT FENCE
 SEED MIXTURE 60A (MOD.) TYPE 1 MULCH, DISK ANCHORING 22-5-10 FERTILIZER EROSION CONTROL BLANKET	 (R) PLACE RIPRAP AT APRON END. SEE STD. PLATE 3133 AND RIPRAP DETAIL.
 SOD TYPE LAWN	



NO	DATE	BY	CKD	APPR	REVISION

NAME: \$FILES\$ \$DATE\$

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE _____ REG. NO. _____

DRAWN BY SFH DATE 11-8-00
 DESIGN BY JMW DATE 11-8-00
 CHECKED BY GAR DATE 11-8-00

STATE PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

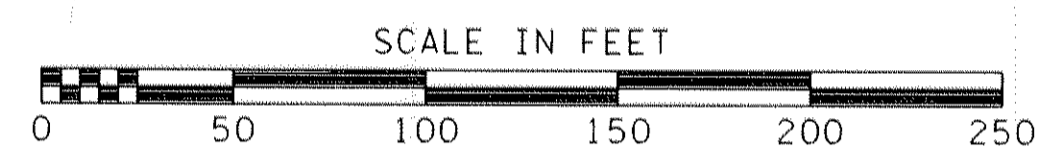
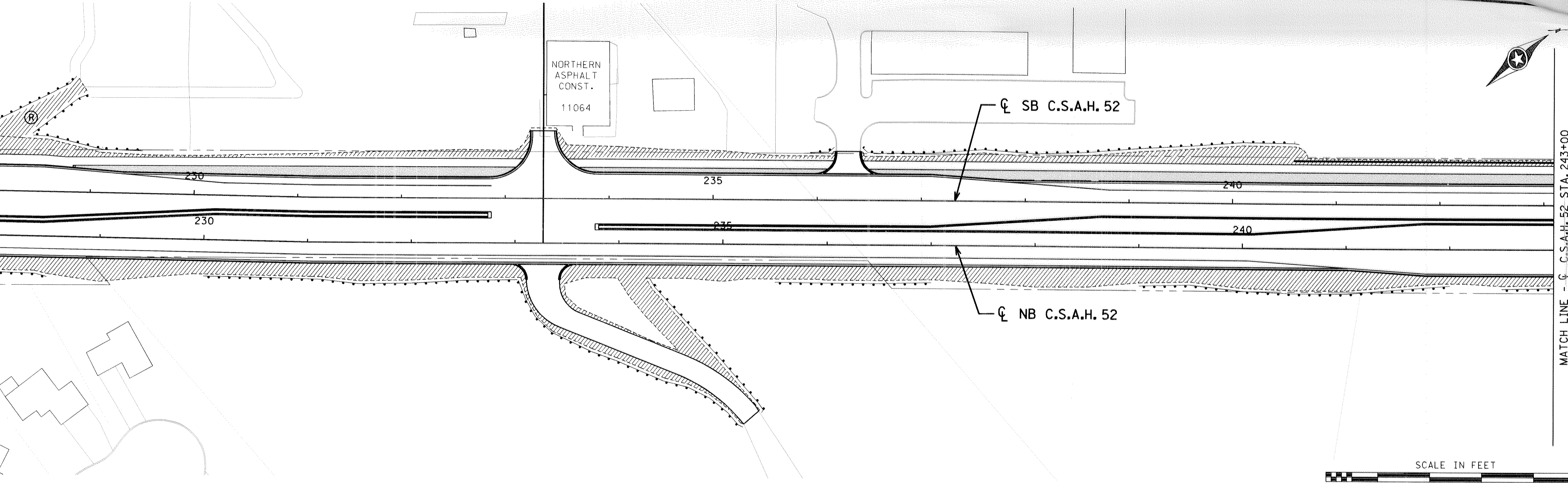
TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 TURF ESTABLISHMENT AND EROSION CONTROL
 C.S.A.H. 52 RECONSTRUCTION
 STA. 205+88.19 TO STA. 228+00

SHEET
 145
 OF
 253

MATCH LINE - C C.S.A.H. 52 STA. 228+00

MATCH LINE - C C.S.A.H. 52 STA. 243+00

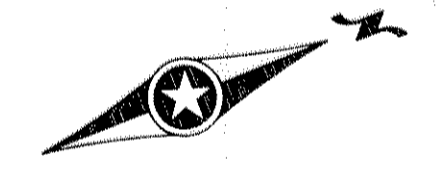
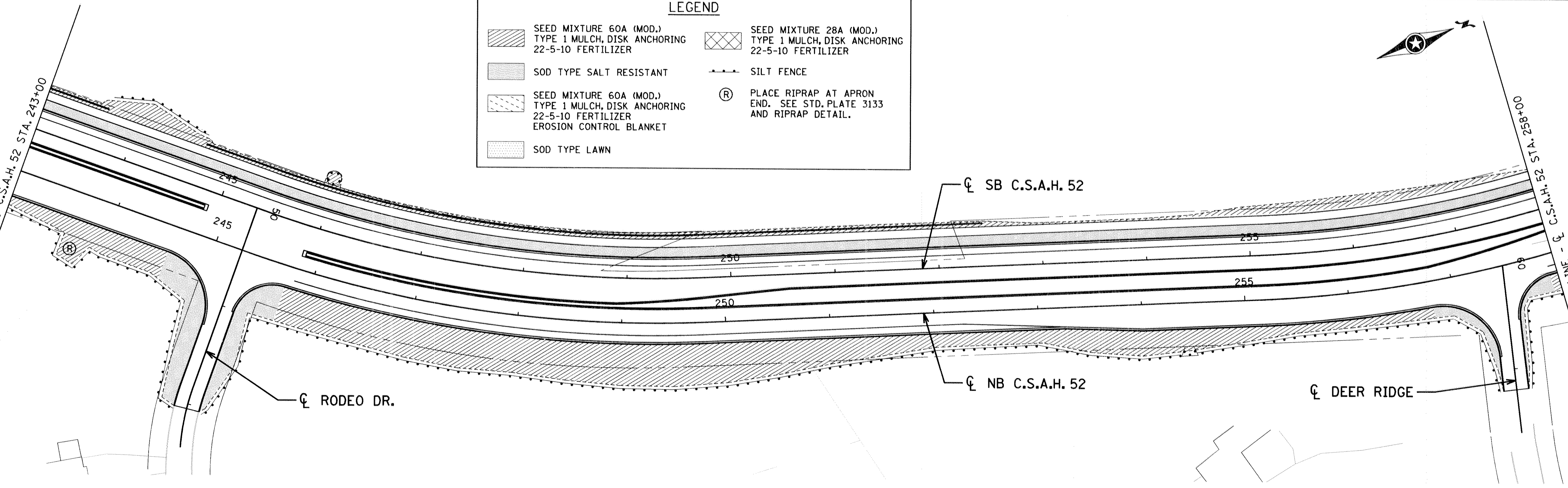


LEGEND

- SEED MIXTURE 60A (MOD.) TYPE 1 MULCH, DISK ANCHORING 22-5-10 FERTILIZER
- SEED MIXTURE 28A (MOD.) TYPE 1 MULCH, DISK ANCHORING 22-5-10 FERTILIZER
- SOD TYPE SALT RESISTANT
- SILT FENCE
- SEED MIXTURE 60A (MOD.) TYPE 1 MULCH, DISK ANCHORING 22-5-10 FERTILIZER EROSION CONTROL BLANKET
- PLACE RIPRAP AT APRON END. SEE STD. PLATE 3133 AND RIPRAP DETAIL.
- SOD TYPE LAWN

MATCH LINE - C C.S.A.H. 52 STA. 243+00

MATCH LINE - C C.S.A.H. 52 STA. 258+00



NO	DATE	BY	CHKD	APPR	REVISION	DATE

NAME: \$FILE\$ #DATE\$

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DATE _____ REG. NO. _____

DRAWN BY SFH DATE 11-8-00

DESIGN BY JMW DATE 11-8-00

CHECKED BY GAR DATE 11-8-00

STATE PROJECT NO.

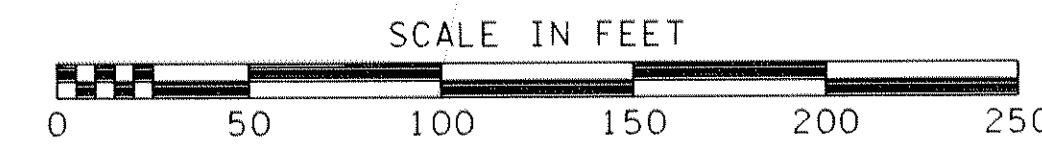
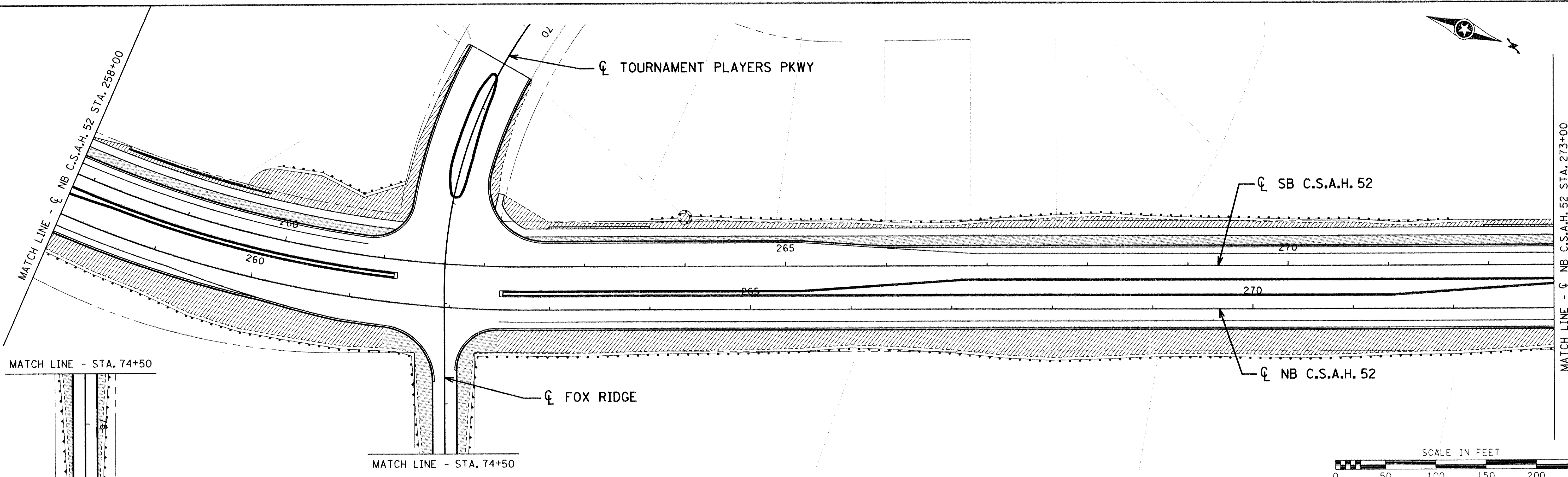
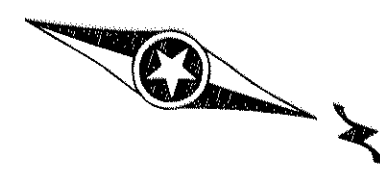
S.A.P. 02-652-01
S.A.P. 106-020-019

TKDA
TOLTZ, KING, DUWALL, ANDERSON AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY

TURF ESTABLISHMENT AND EROSION CONTROL
C.S.A.H. 52 RECONSTRUCTION
STA. 228+00 TO STA. 258+00

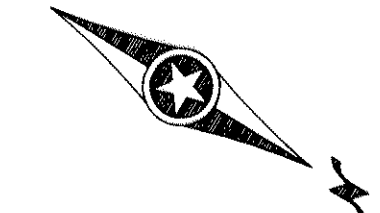
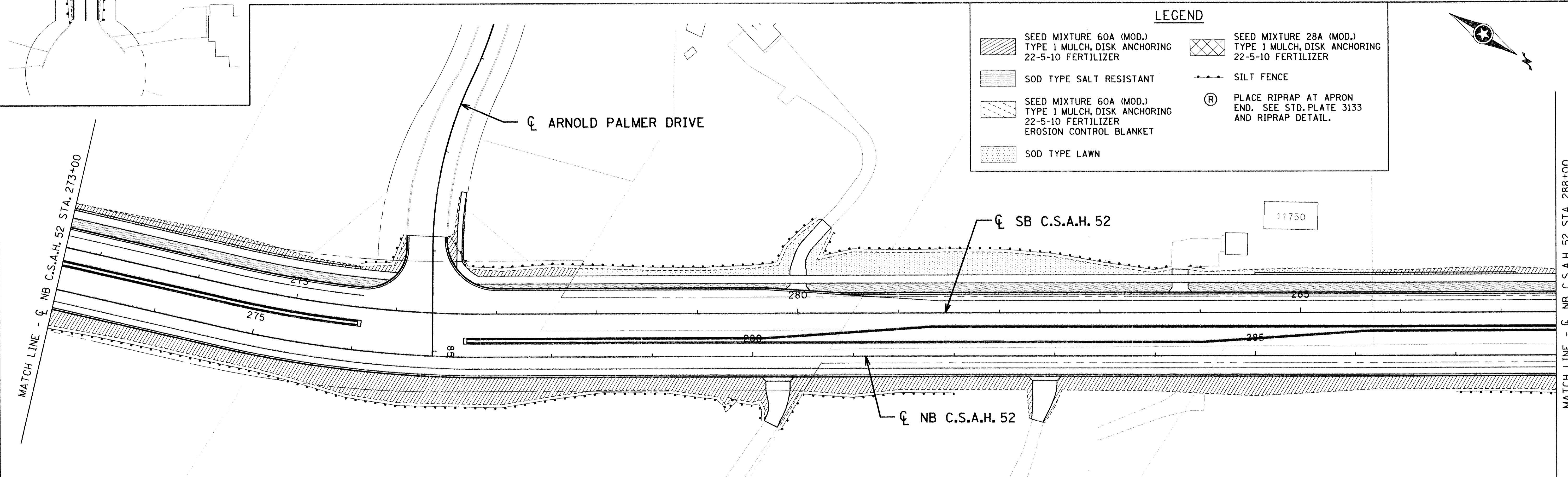
SHEET
146
OF
253



MATCH LINE - STA. 74+50

MATCH LINE - STA. 74+50

MATCH LINE - C.S.A.H. 52 STA. 273+00



LEGEND

	SEED MIXTURE 60A (MOD.) TYPE 1 MULCH, DISK ANCHORING 22-5-10 FERTILIZER		SEED MIXTURE 28A (MOD.) TYPE 1 MULCH, DISK ANCHORING 22-5-10 FERTILIZER
	SOD TYPE SALT RESISTANT		SILT FENCE
	SEED MIXTURE 60A (MOD.) TYPE 1 MULCH, DISK ANCHORING 22-5-10 FERTILIZER EROSION CONTROL BLANKET		PLACE RIPRAP AT APRON END. SEE STD. PLATE 3133 AND RIPRAP DETAIL.
	SOD TYPE LAWN		

MATCH LINE - C.S.A.H. 52 STA. 288+00

NO	DATE	BY	CKD	APPR	REVISION

NAME: \$FILE\$ \$DATE\$

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DATE _____ REG. NO. _____

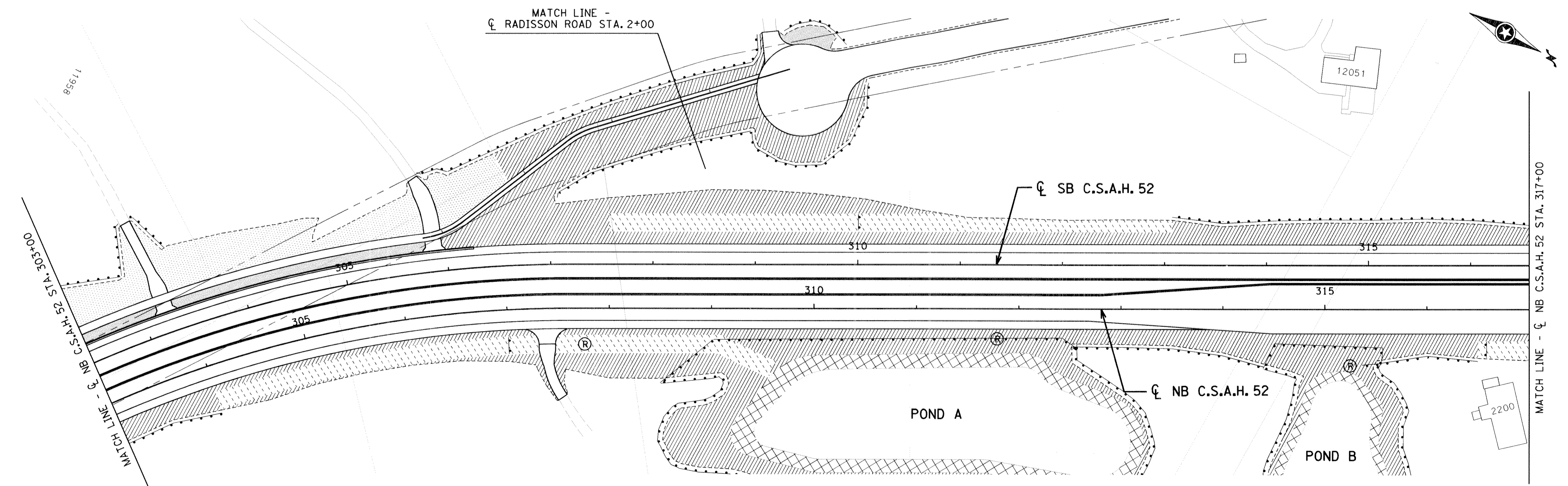
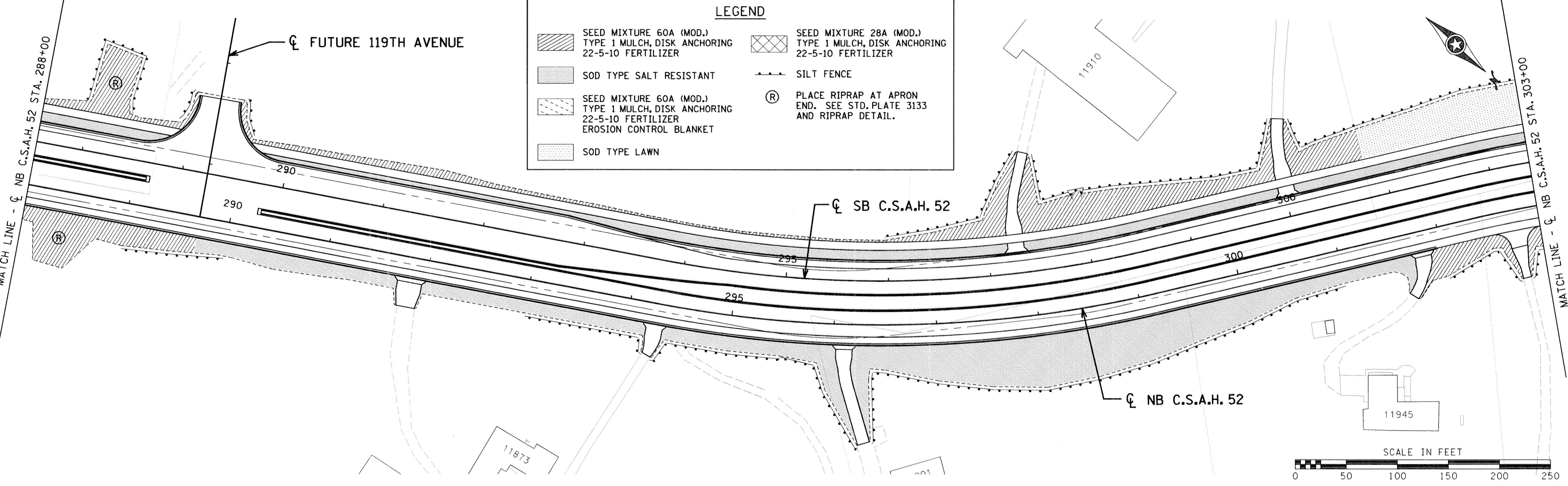
DRAWN BY SFH DATE 11-8-00
 DESIGN BY JMW DATE 11-8-00
 CHECKED BY GAR DATE 11-8-00

STATE PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

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 AND ASSOCIATES, INCORPORATED
 ENGINEERS • ARCHITECTS • PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 TURF ESTABLISHMENT AND EROSION CONTROL
C.S.A.H. 52 RECONSTRUCTION
 STA. 258+00 TO STA. 288+00

SHEET
 147
 OF
 253



NO	DATE	BY	CKD	APPR	REVISION
NAME: \$FILE\$					

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DATE _____ REG. NO. _____

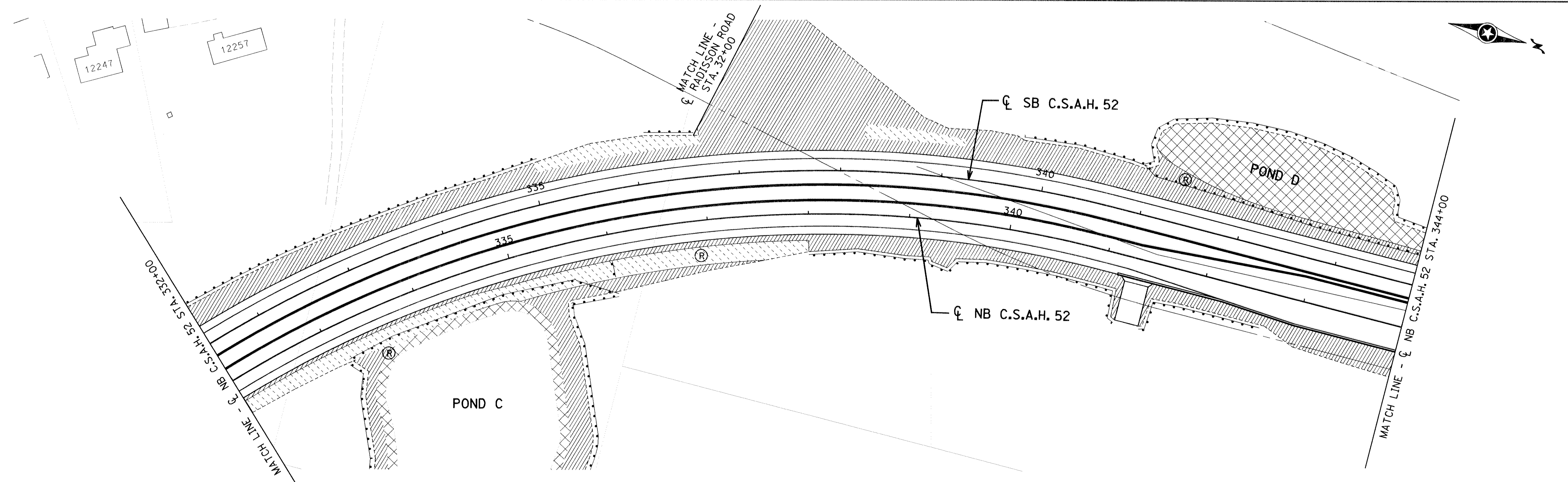
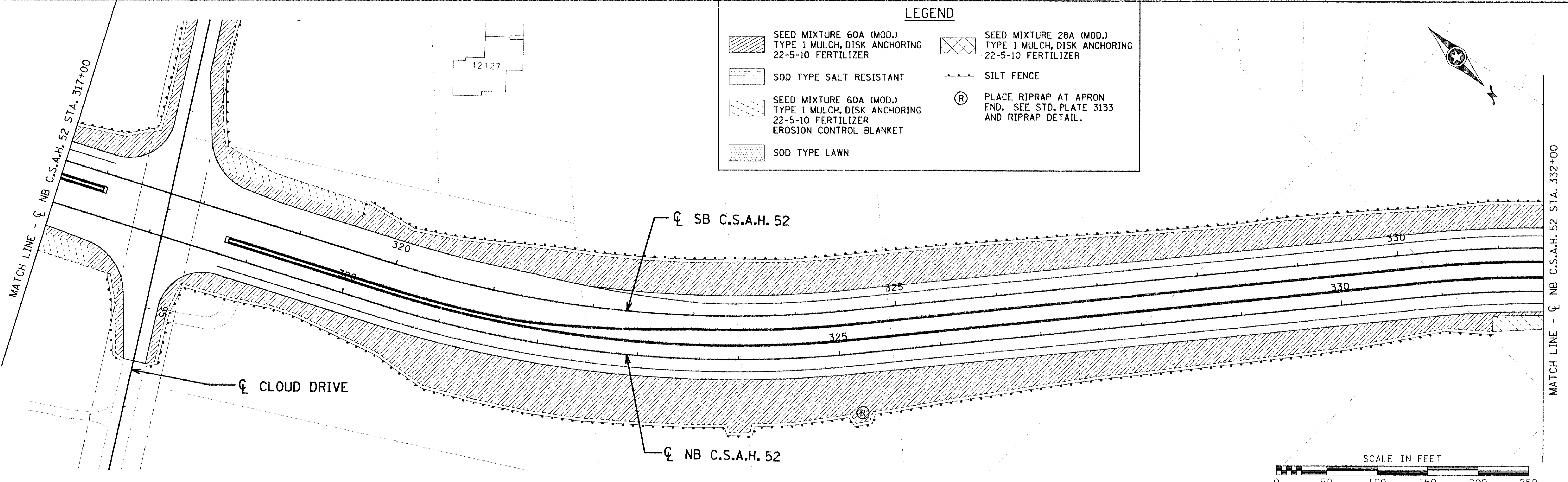
DRAWN BY SFH DATE 11-8-00
 DESIGN BY JMW DATE 11-8-00
 CHECKED BY GAR DATE 11-8-00

STATE PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

TKDA
 TOLTZ, KING, DUVAL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 TURF ESTABLISHMENT AND EROSION CONTROL
 C.S.A.H. 52 RECONSTRUCTION
 STA. 288+00 TO STA. 317+00

SHEET
 148
 OF
 253



NO	DATE	BY	CKD	APPR	REVISION
NAME: \$FILE\$					
DATE: _____ REG. NO. _____					

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DRAWN BY SFH DATE 11-8-00
 DESIGN BY JMW DATE 11-8-00
 CHECKED BY GAR DATE 11-8-00

STATE PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

TKDA
 TOLTZ, KING, DUJALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 TURF ESTABLISHMENT AND EROSION CONTROL
 C.S.A.H. 52 RECONSTRUCTION
 STA. 317+00 TO STA. 344+00

SHEET
 149
 OF
 253





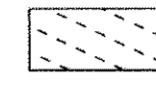

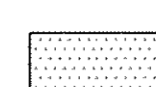
MATCH LINE - C NB C.S.A.H. 52 STA. 344+00

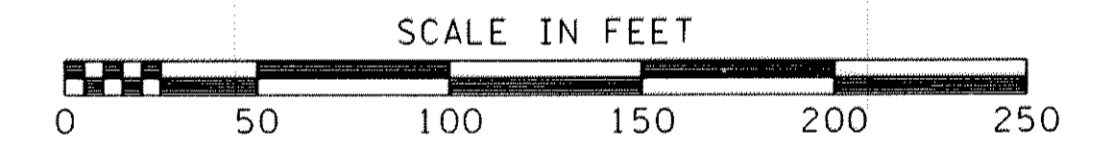
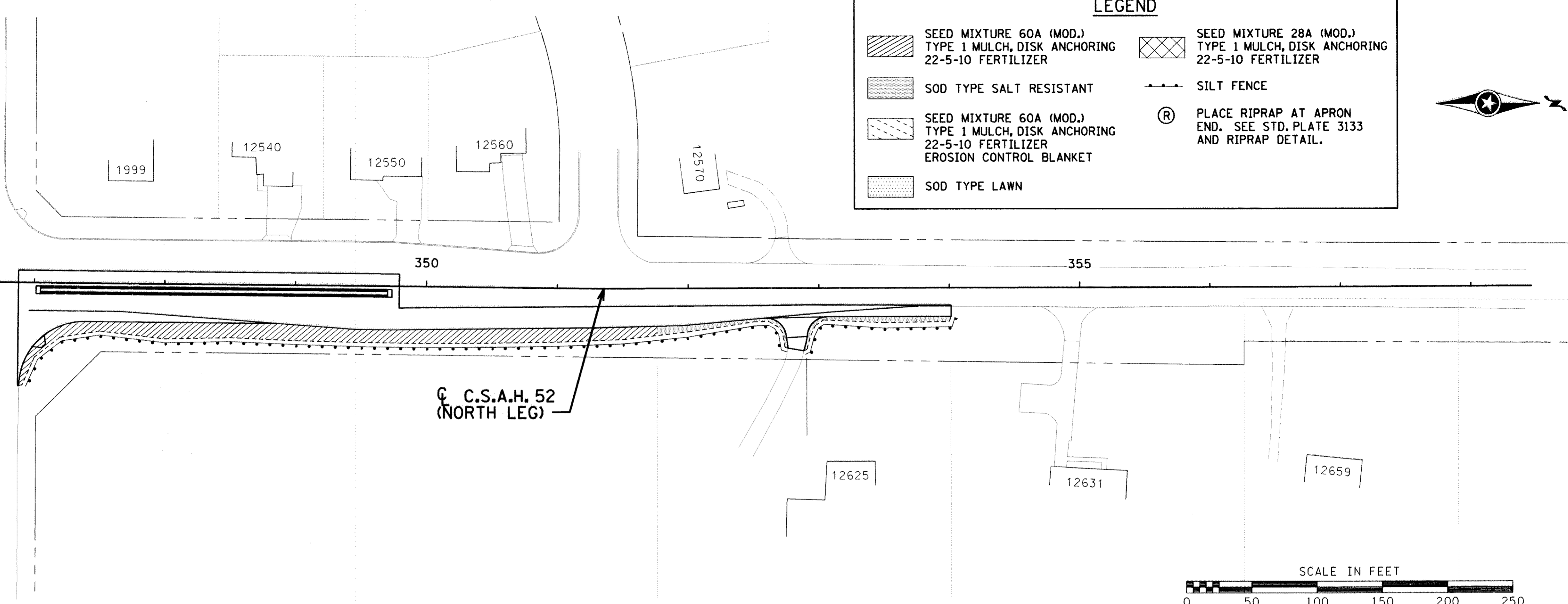
☐ SB C.S.A.H. 52

☐ NB C.S.A.H. 52

☐ C.S.A.H. 52 (NORTH LEG)

LEGEND

	SEED MIXTURE 60A (MOD.) TYPE 1 MULCH, DISK ANCHORING 22-5-10 FERTILIZER		SEED MIXTURE 28A (MOD.) TYPE 1 MULCH, DISK ANCHORING 22-5-10 FERTILIZER
	SOD TYPE SALT RESISTANT		SILT FENCE
	SEED MIXTURE 60A (MOD.) TYPE 1 MULCH, DISK ANCHORING 22-5-10 FERTILIZER EROSION CONTROL BLANKET		PLACE RIPRAP AT APRON END. SEE STD. PLATE 3133 AND RIPRAP DETAIL.
	SOD TYPE LAWN		



NO.	DATE	BY	CKD	APPR	REVISION

NAME: \$FILE\$ \$DATE\$

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DATE _____ REG. NO. _____

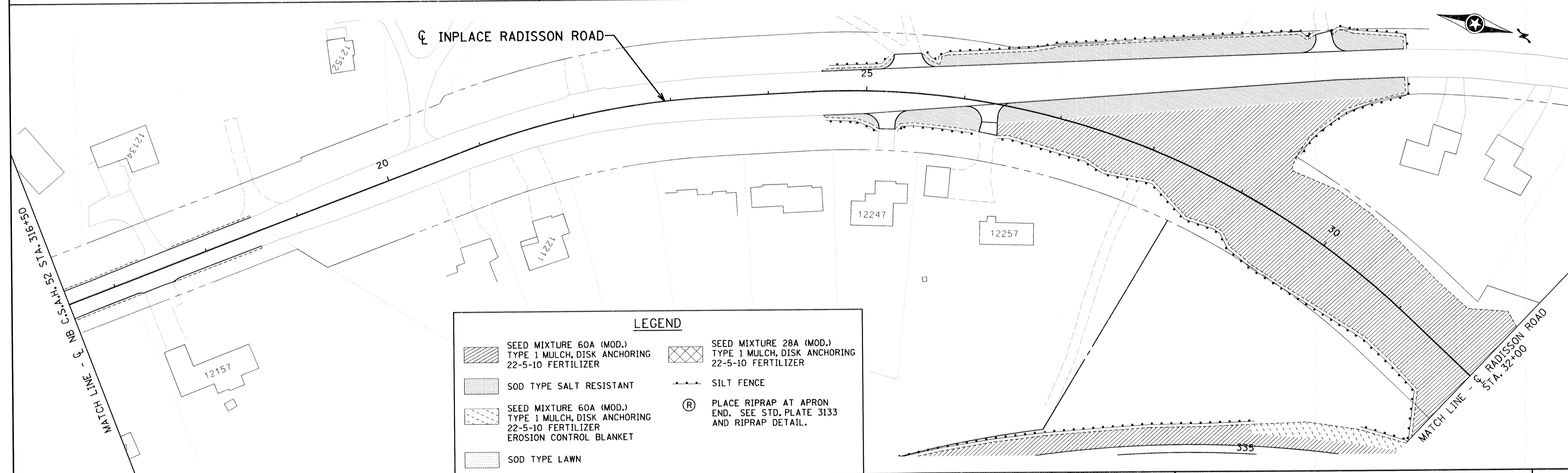
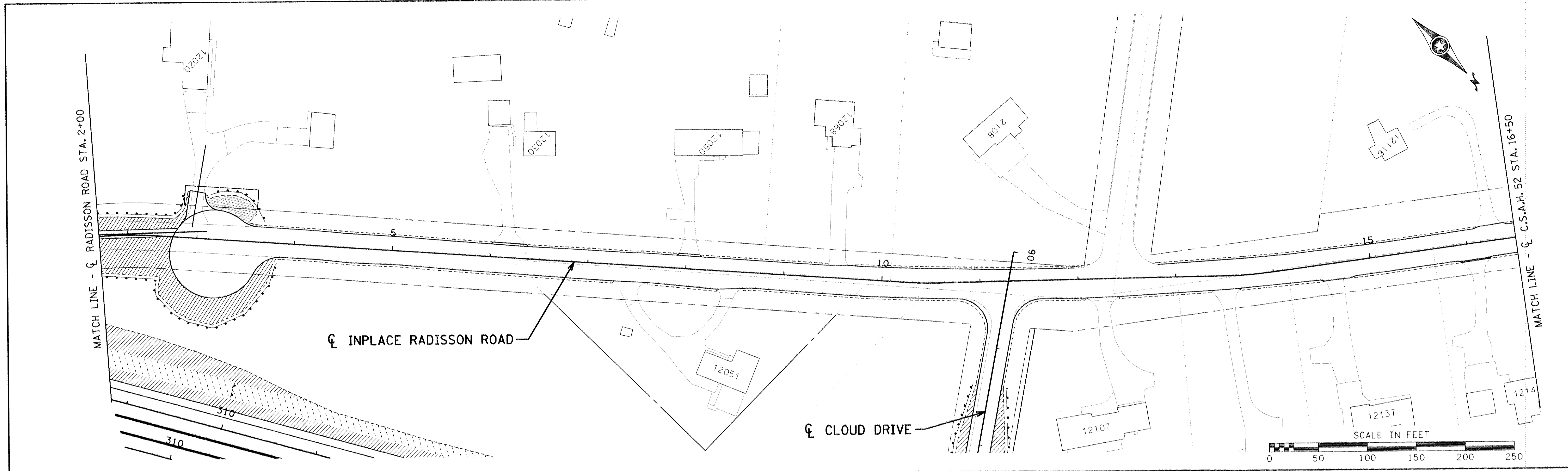
DRAWN BY SFH DATE 11-8-00
 DESIGN BY JMW DATE 11-8-00
 CHECKED BY GAR DATE 11-8-00

STATE PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

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 TOLTZ, KING, DUVAL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 TURF ESTABLISHMENT AND EROSION CONTROL
C.S.A.H. 52 RECONSTRUCTION
 STA. 344+00 TO STA. 354+01.36

SHEET
 150
 OF
 253



LEGEND

	SEED MIXTURE 60A (MOD.) TYPE 1 MULCH, DISK ANCHORING 22-5-10 FERTILIZER		SEED MIXTURE 28A (MOD.) TYPE 1 MULCH, DISK ANCHORING 22-5-10 FERTILIZER
	SOD TYPE SALT RESISTANT		SILT FENCE
	SEED MIXTURE 60A (MOD.) TYPE 1 MULCH, DISK ANCHORING 22-5-10 FERTILIZER EROSION CONTROL BLANKET		PLACE RIPRAP AT APRON END. SEE STD. PLATE 3133 AND RIPRAP DETAIL.
	SOD TYPE LAWN		

NO	DATE	BY	CKD	APPR	REVISION	DATE	REG. NO.

NAME: \$FILE\$

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DATE _____ REG. NO. _____

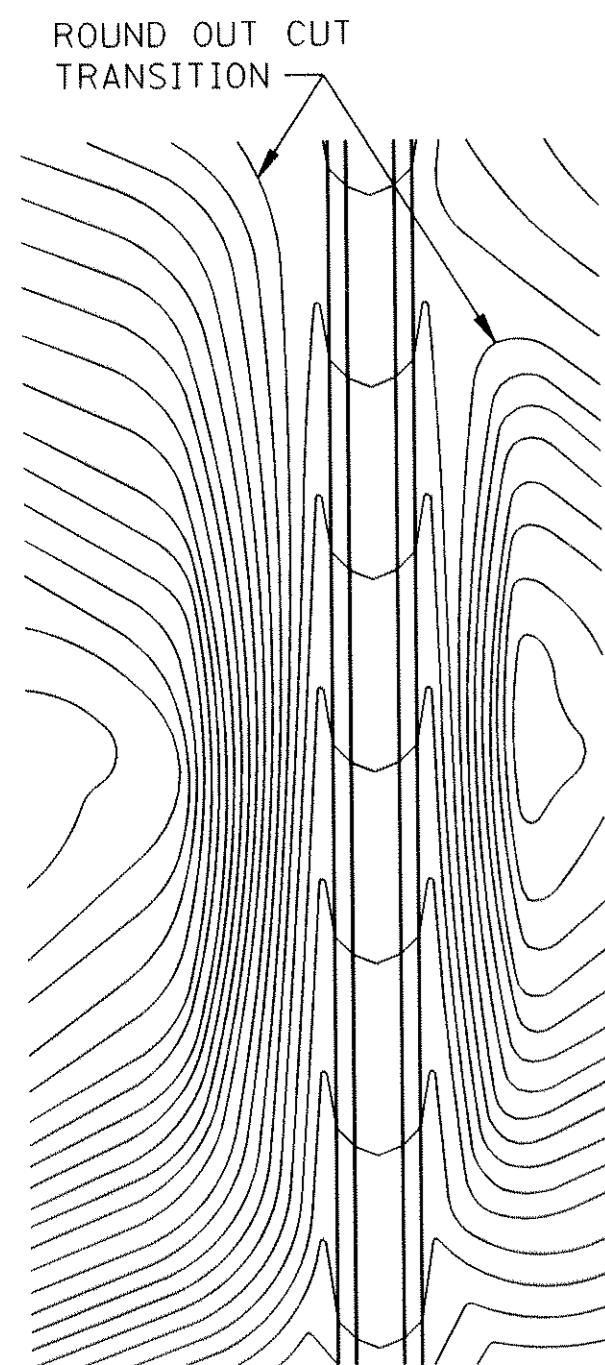
DRAWN BY SFH DATE 11-8-00
 DESIGN BY JMW DATE 11-8-00
 CHECKED BY GAR DATE 11-8-00

STATE PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

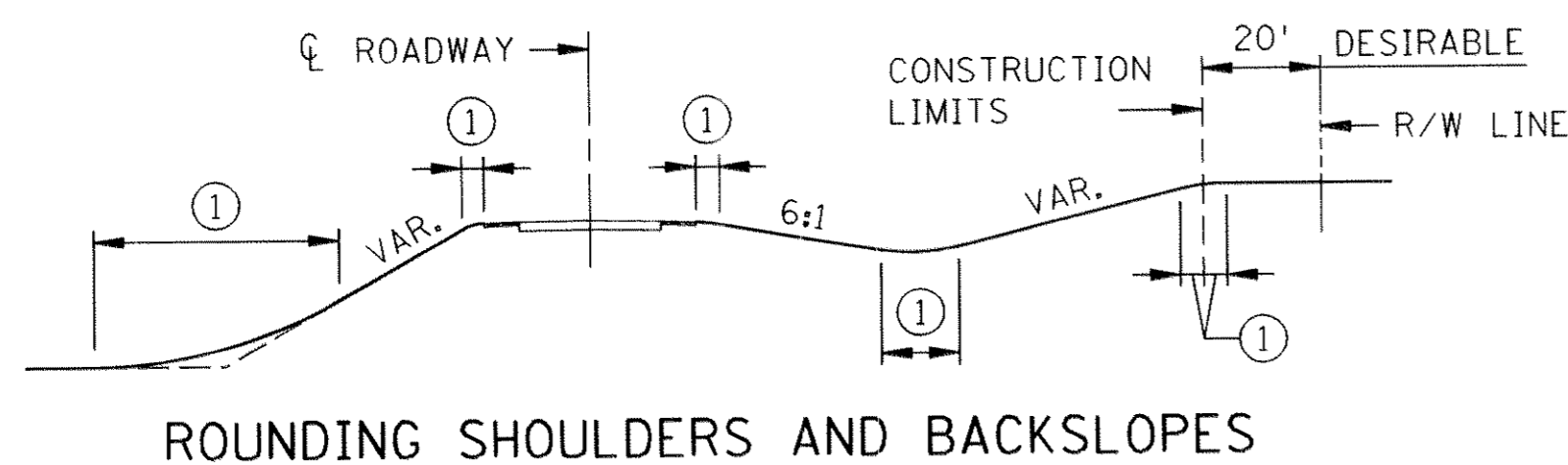
TKDA
 TOLTZ, KING, DUVAL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 TURF ESTABLISHMENT AND EROSION CONTROL
C.S.A.H. 52 RECONSTRUCTION
 STA. 2+00 TO STA. 33+00

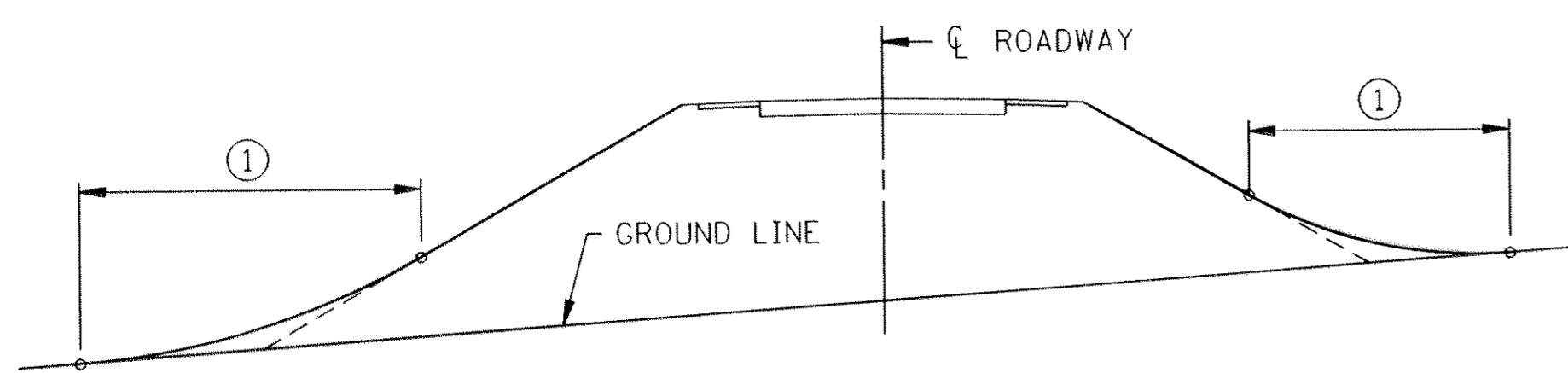
SHEET
 151
 OF
 253



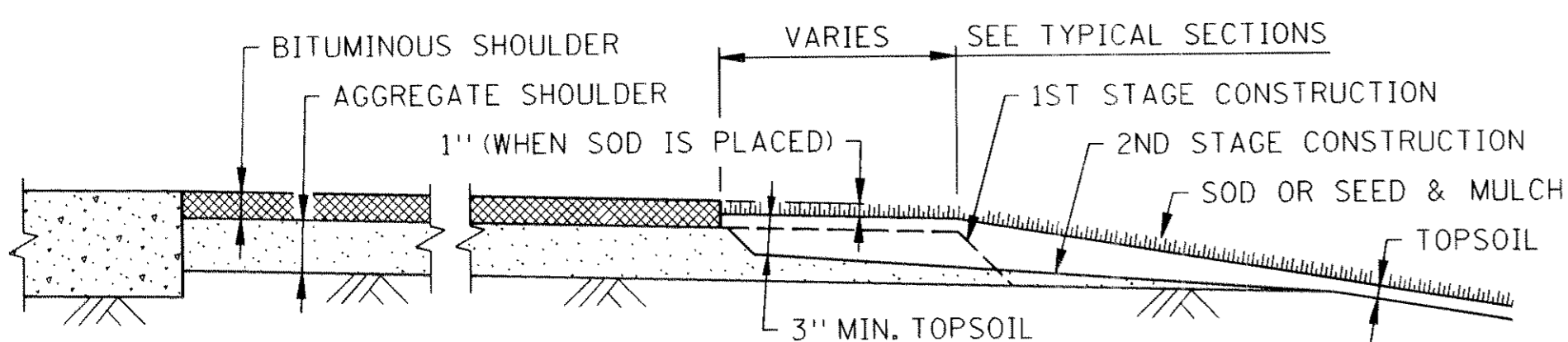
CONTOURING ROAD CUTS



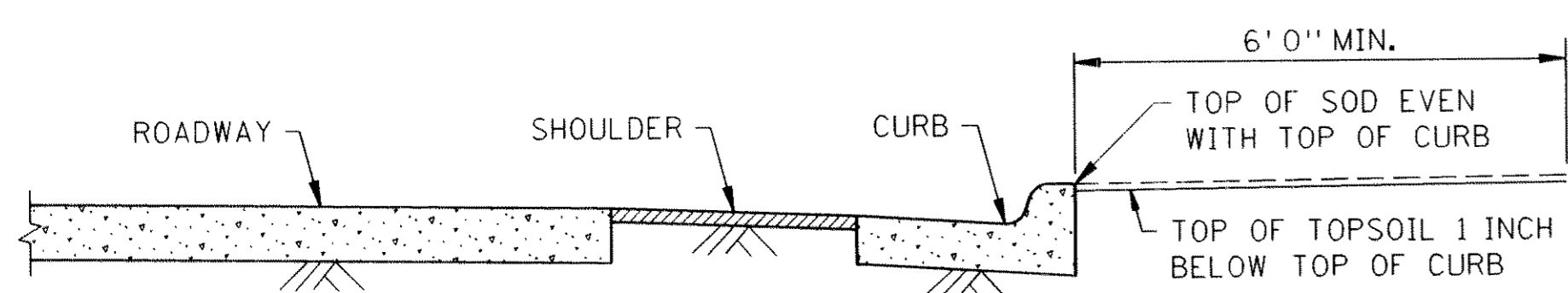
ROUNDING SHOULDERS AND BACKSLOPES



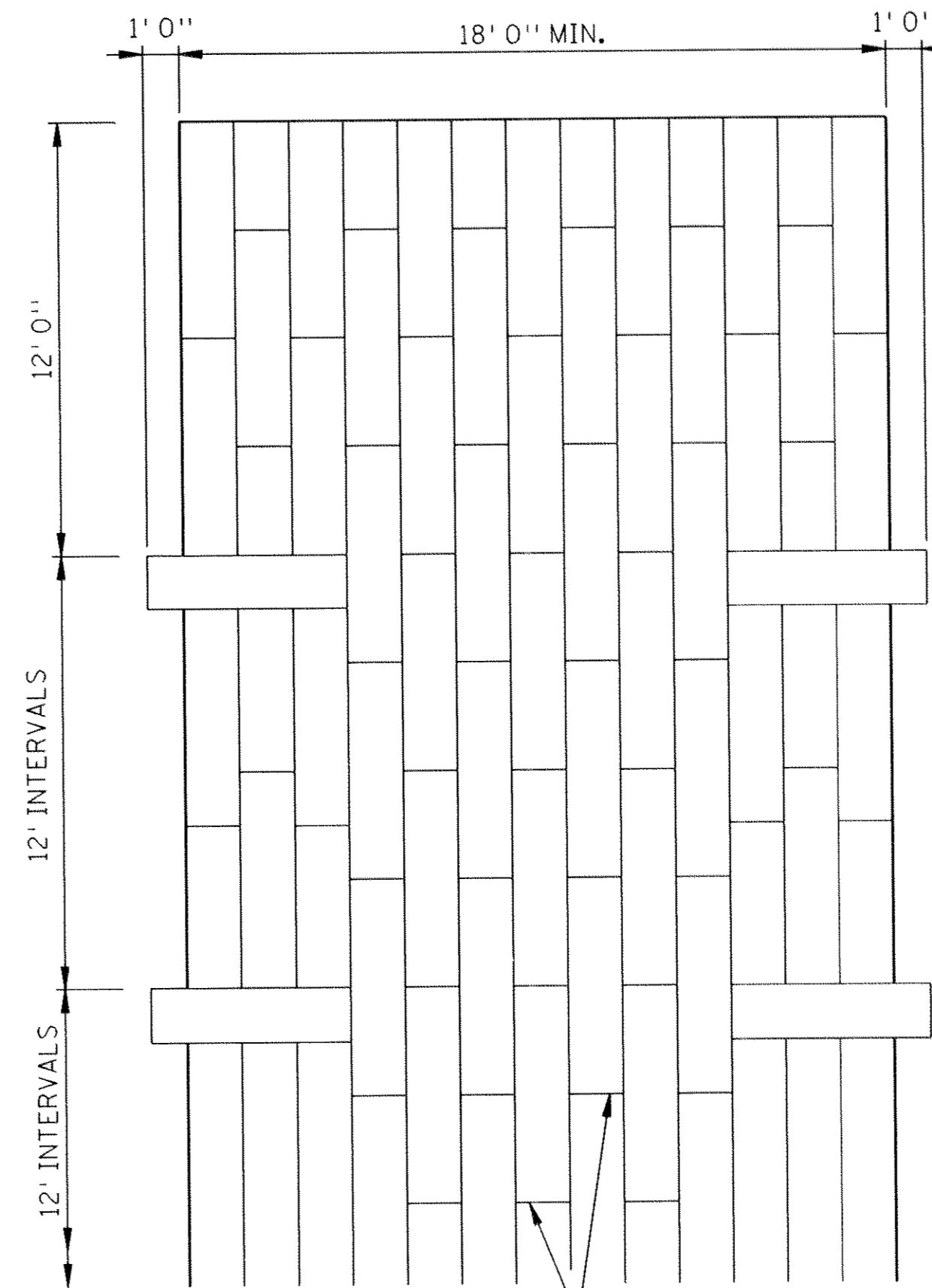
SHAPING FOR DRAINAGE ALONG THE TOE OF FILL SLOPES



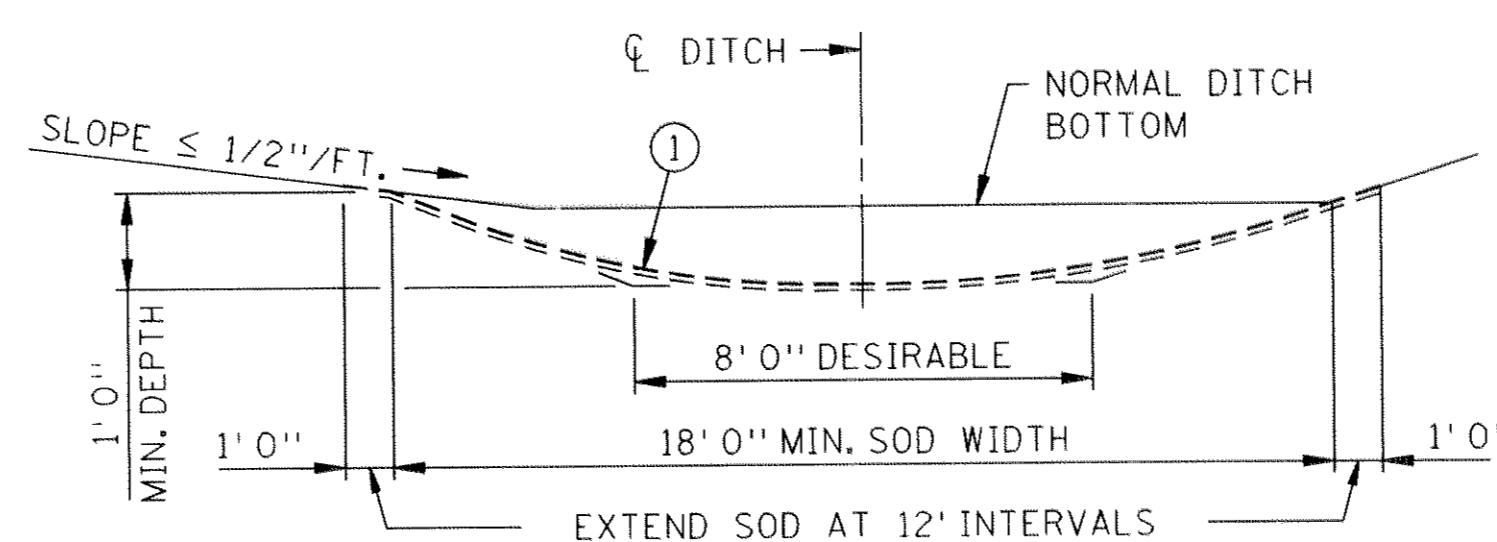
SHAPING AND TOPSOILING INSLOPES



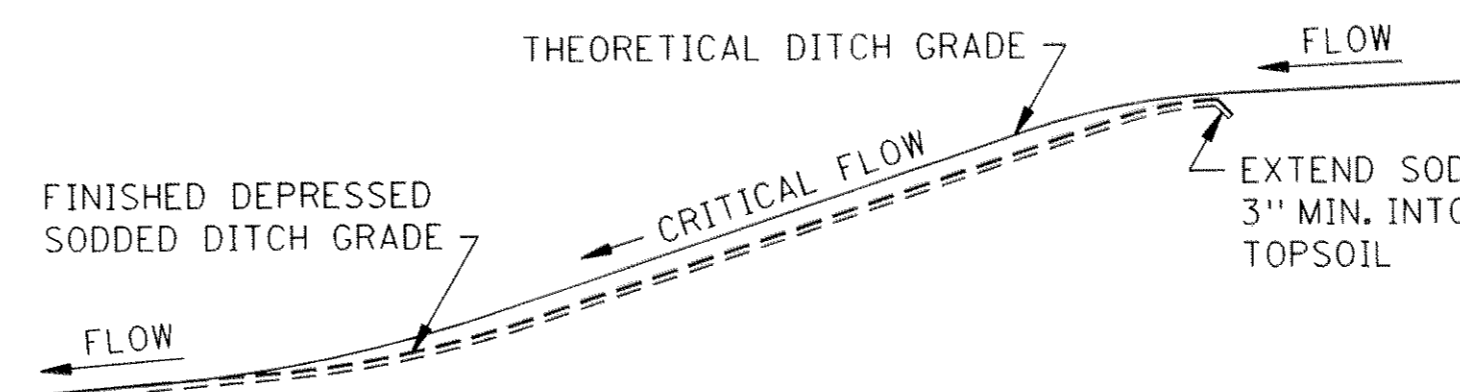
SHAPING ADJACENT TO CURBS WHEN SOD IS PLACED



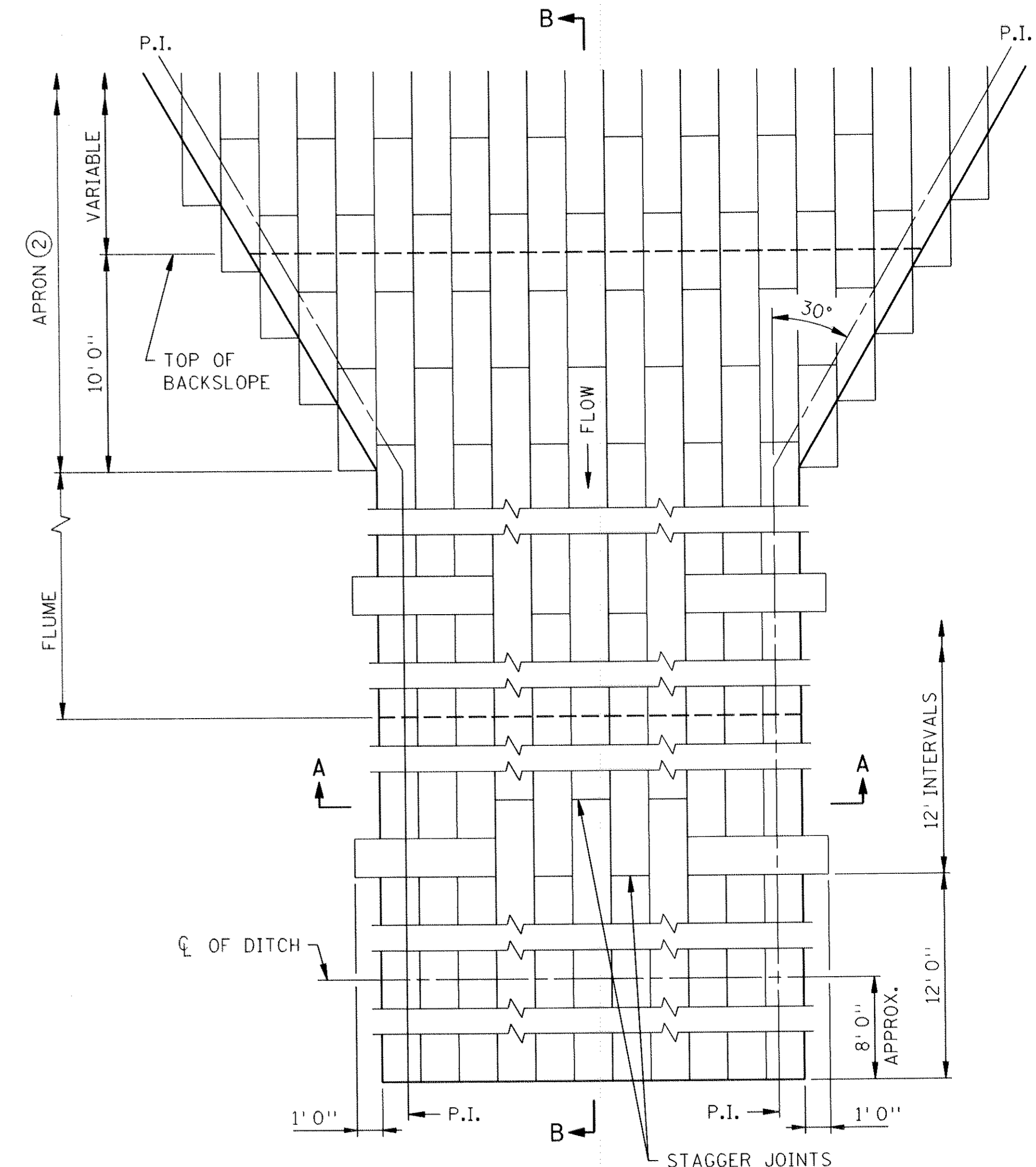
PLAN VIEW



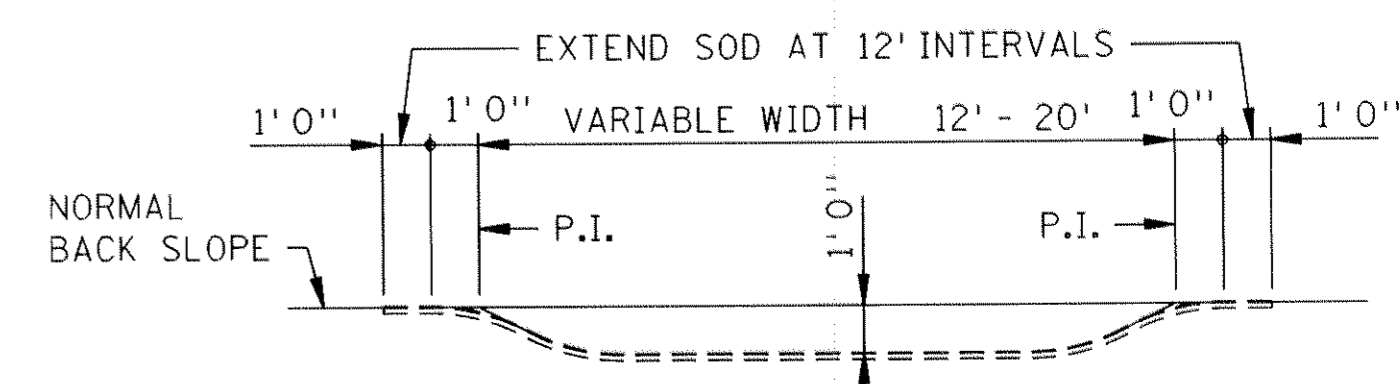
SODDED DITCH CROSS SECTION
WHERE FRONT OR BACK SLOPE IS FLAT (LESS THAN $1/2''/FT.$), FIRST NOTCH DITCH AND THEN PROVIDE ROUNDING.



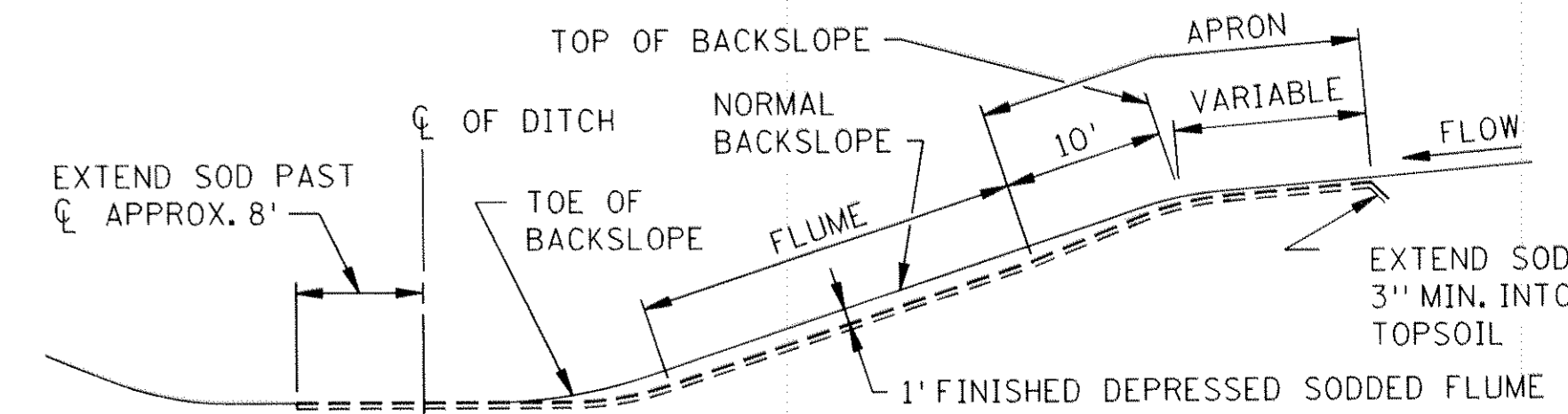
DITCH PROFILE
SODDED DITCH DETAILS



PLAN VIEW



SECTION A-A



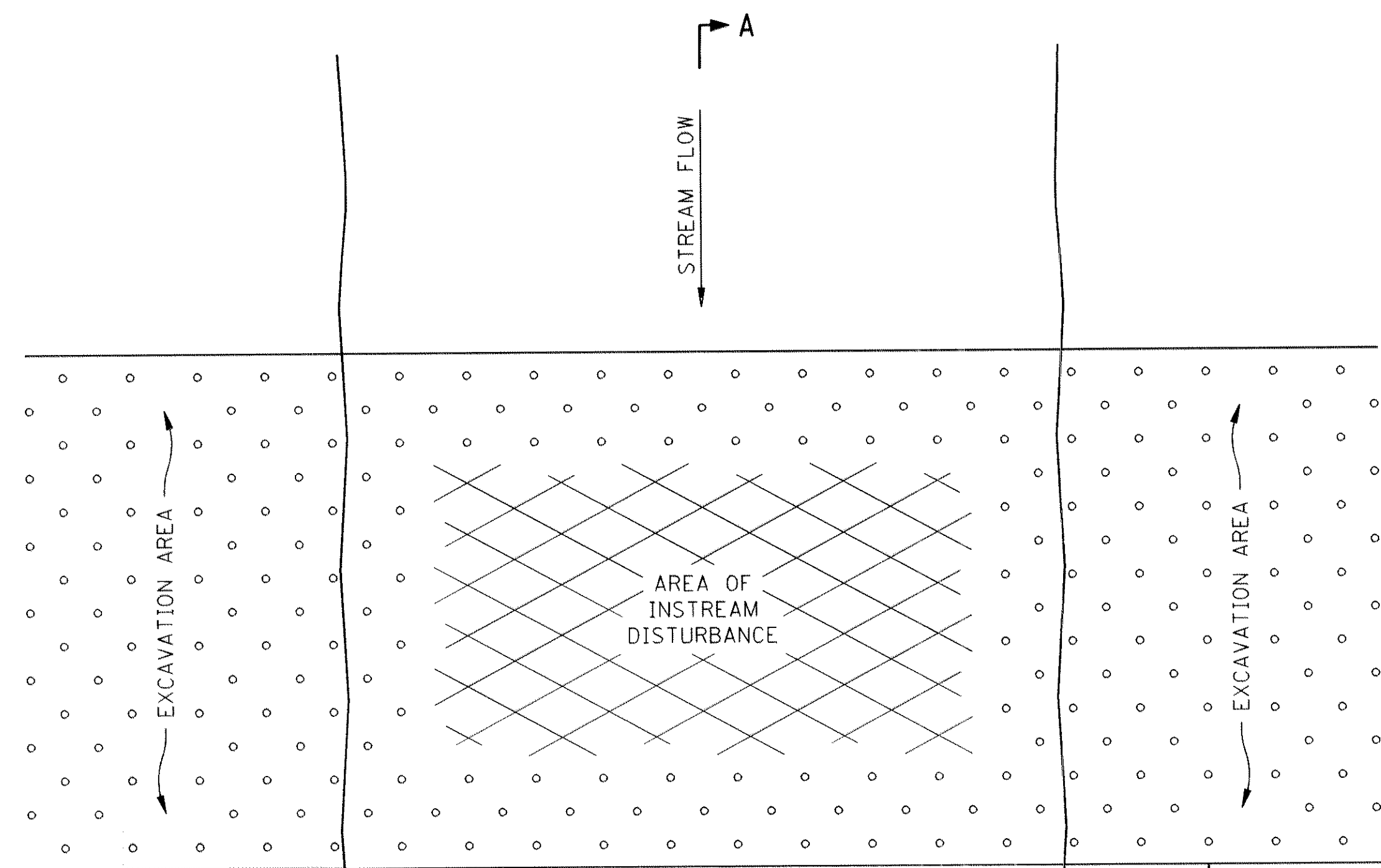
SECTION B-B
SODDED FLUME DETAILS

NOTES:

- SEE SPEC. 2575.3 FOR ADDITIONAL INFORMATION.
- ① FOR ROUNDING, SEE ROAD DESIGN MANUAL.
- ② CONSTRUCT TAPER AS DIRECTED BY THE ENGINEER.

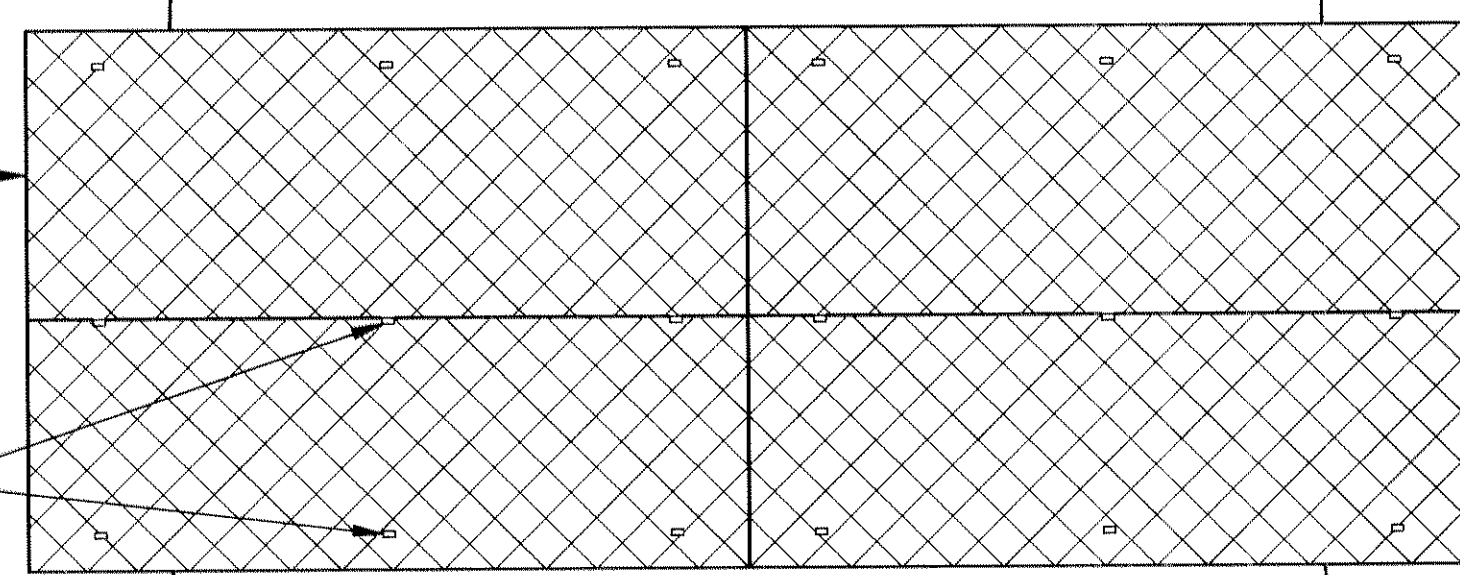
STANDARD SHEET NO. 5-297.404	TITLE:
STANDARD APPROVED: DECEMBER 19, 1990	

PERMANENT EROSION CONTROL
ALONG ROADWAYS, DITCHES AND FLUMES



4 FT. MIN. DOWNSTREAM COVERAGE OF SEDIMENT MATS FOR EACH FT./SEC. OF WATER VELOCITY

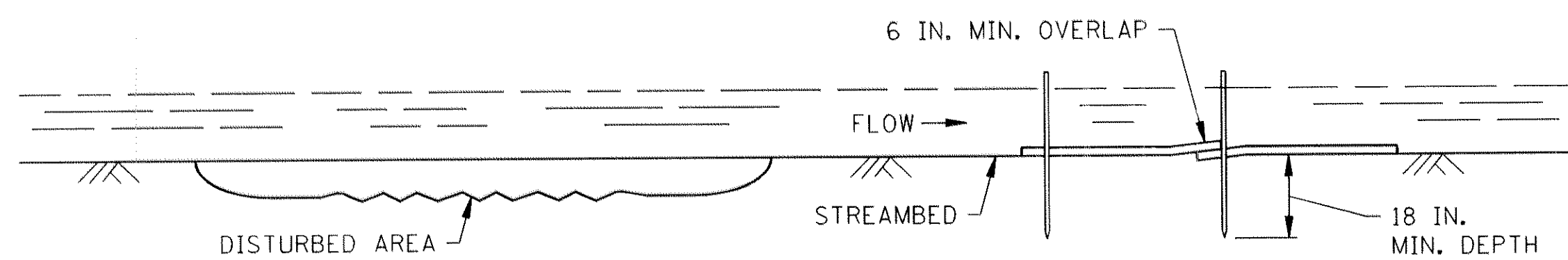
STAKE AT 4 FT. INTERVALS



SEDIMENT MATS

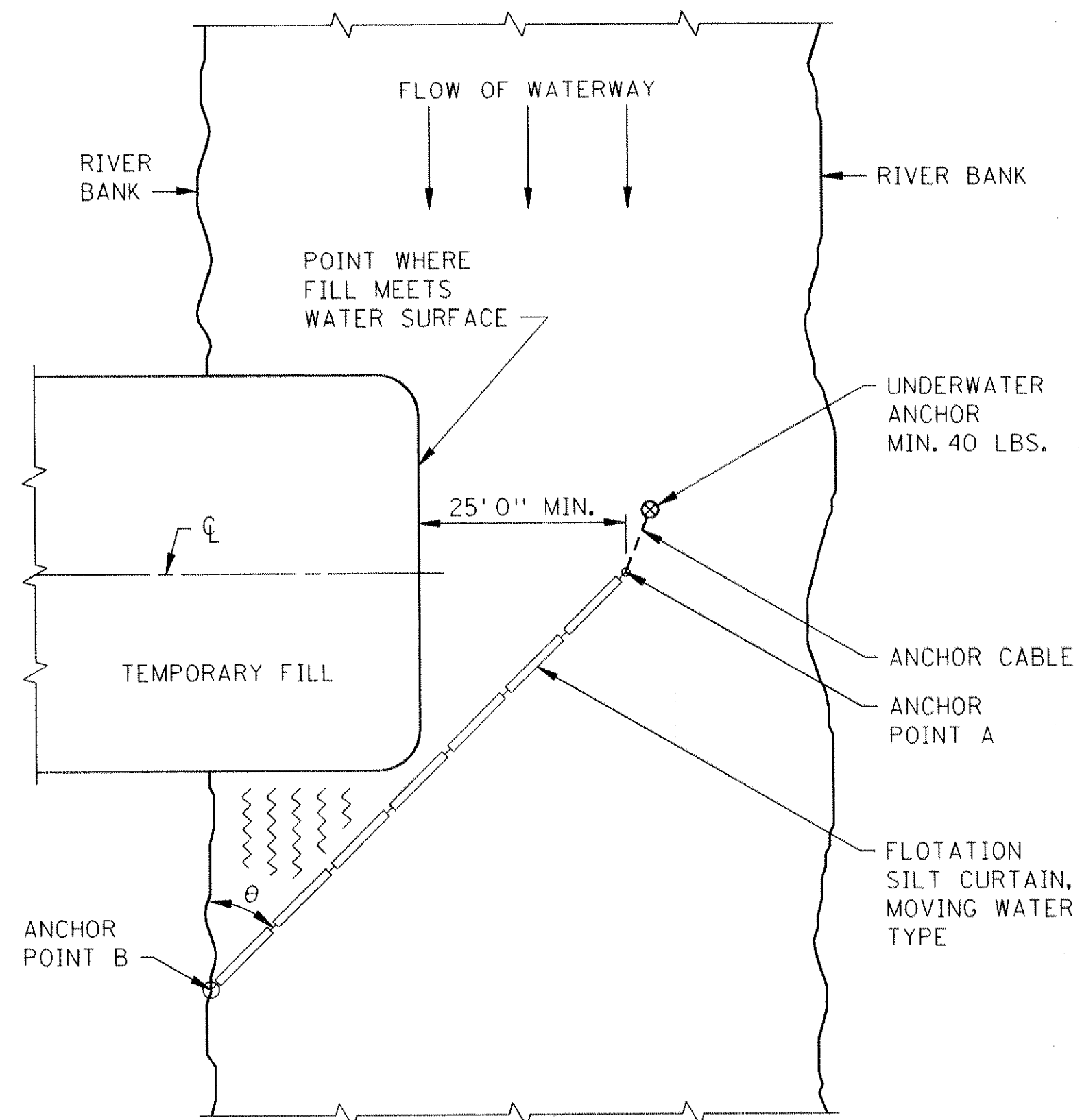
EDGE OF STREAM

PLAN VIEW



SECTION A-A
SEDIMENT MAT
TYPICAL STREAMBED INSTALLATION

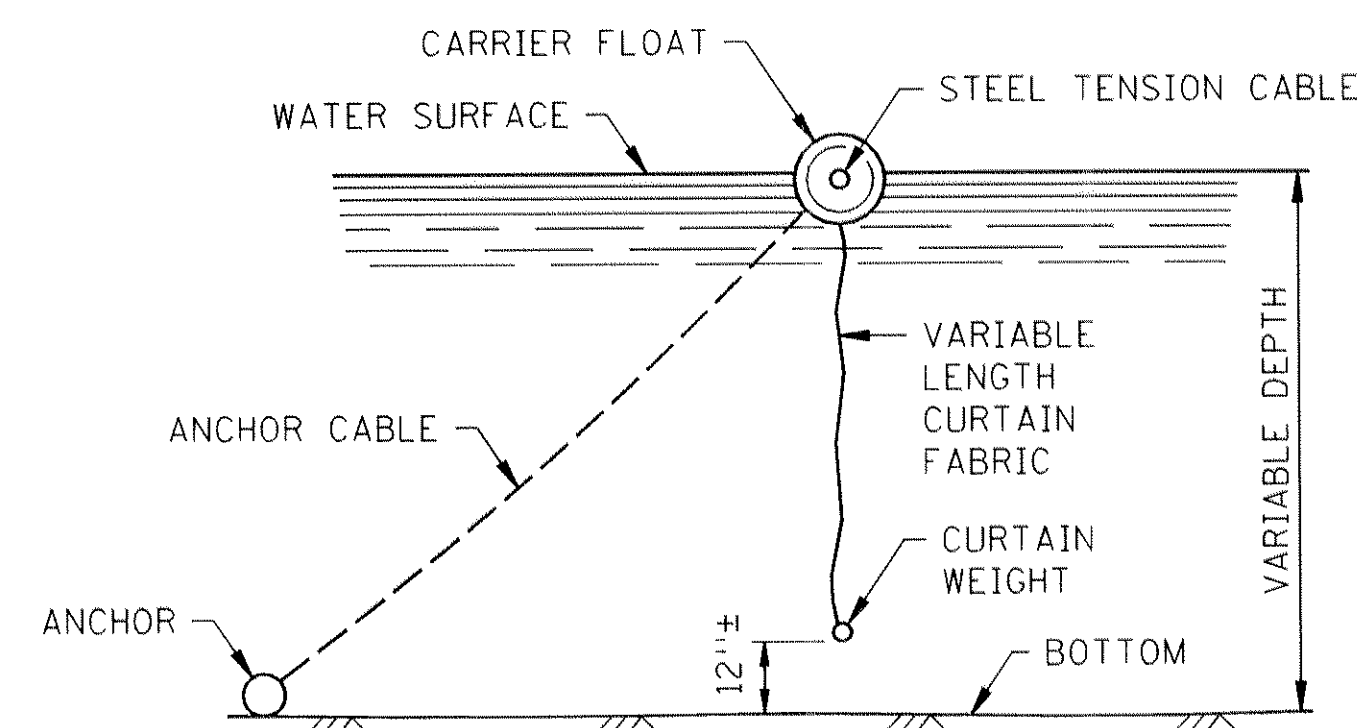
DESIGN CRITERIA:
MAXIMUM FLOW VELOCITY: 5 FT./SEC.
MAXIMUM FLOW DEPTH: 2 FT.



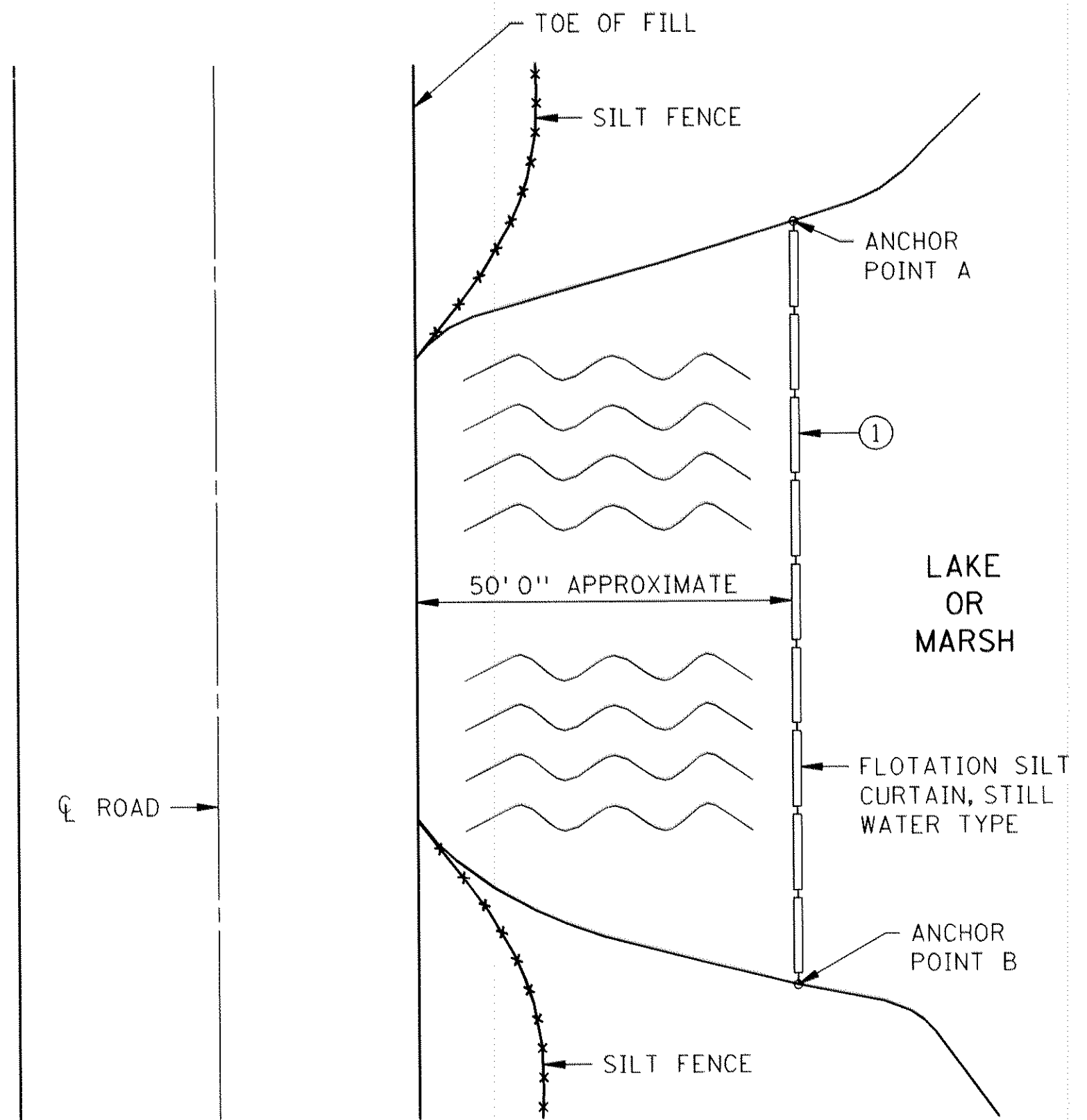
∠ θ	RIVER VELOCITY
45°	SLOW, LESS THAN 5 FT./SEC.
35°	MODERATE, 5 - 7 FT./SEC.

PLAN VIEW OF SILT CURTAIN - MOVING WATER

DESIGN CRITERIA:
MAXIMUM WATER DEPTH: 12 FT.
MAXIMUM WATER VELOCITY: 7 FT./SEC.

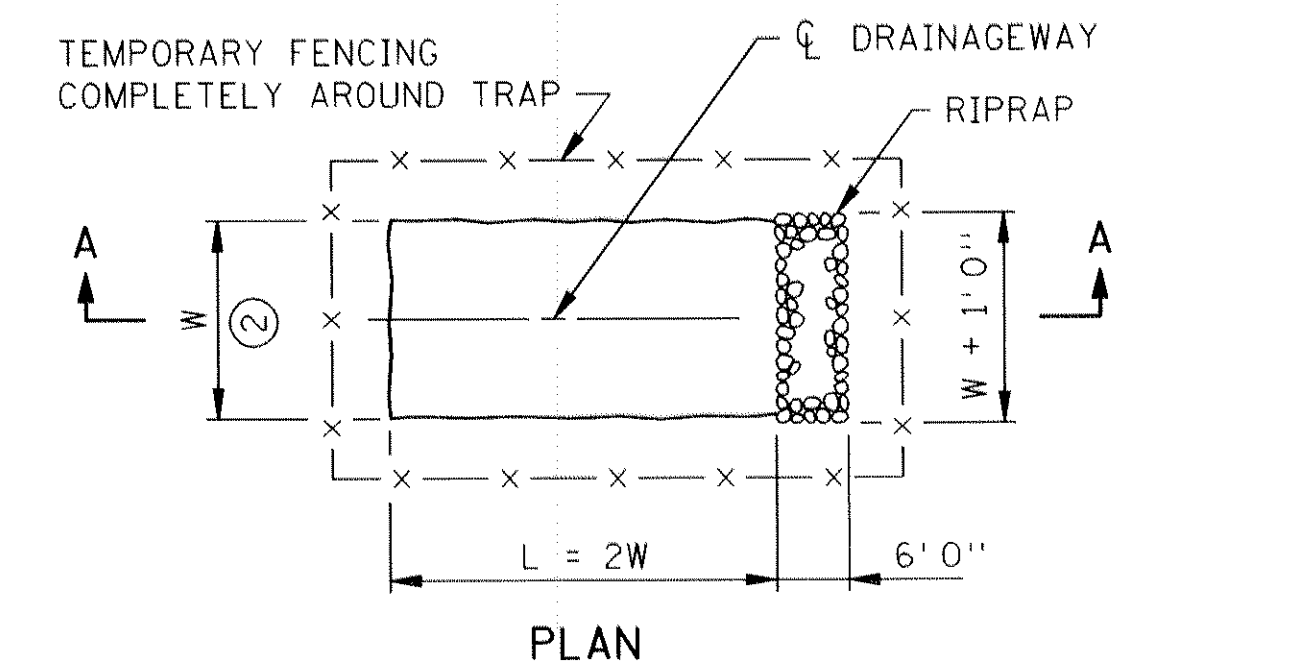


FLOTATION SILT CURTAIN DETAIL
(SEE SPEC. 3887)

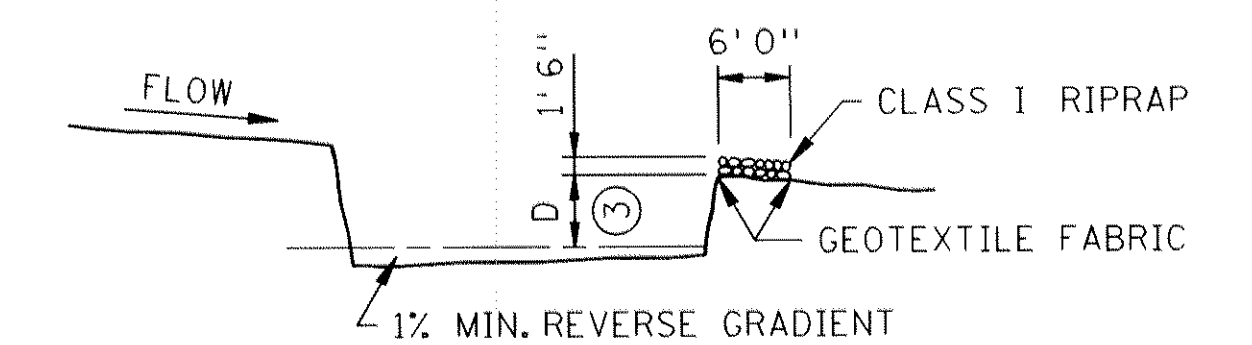


PLAN VIEW OF SILT CURTAIN - STILL WATER

DESIGN CRITERIA:
MAXIMUM WATER DEPTH: 12 FT.



PLAN



SECTION A-A
TEMPORARY SEDIMENT TRAP DETAIL

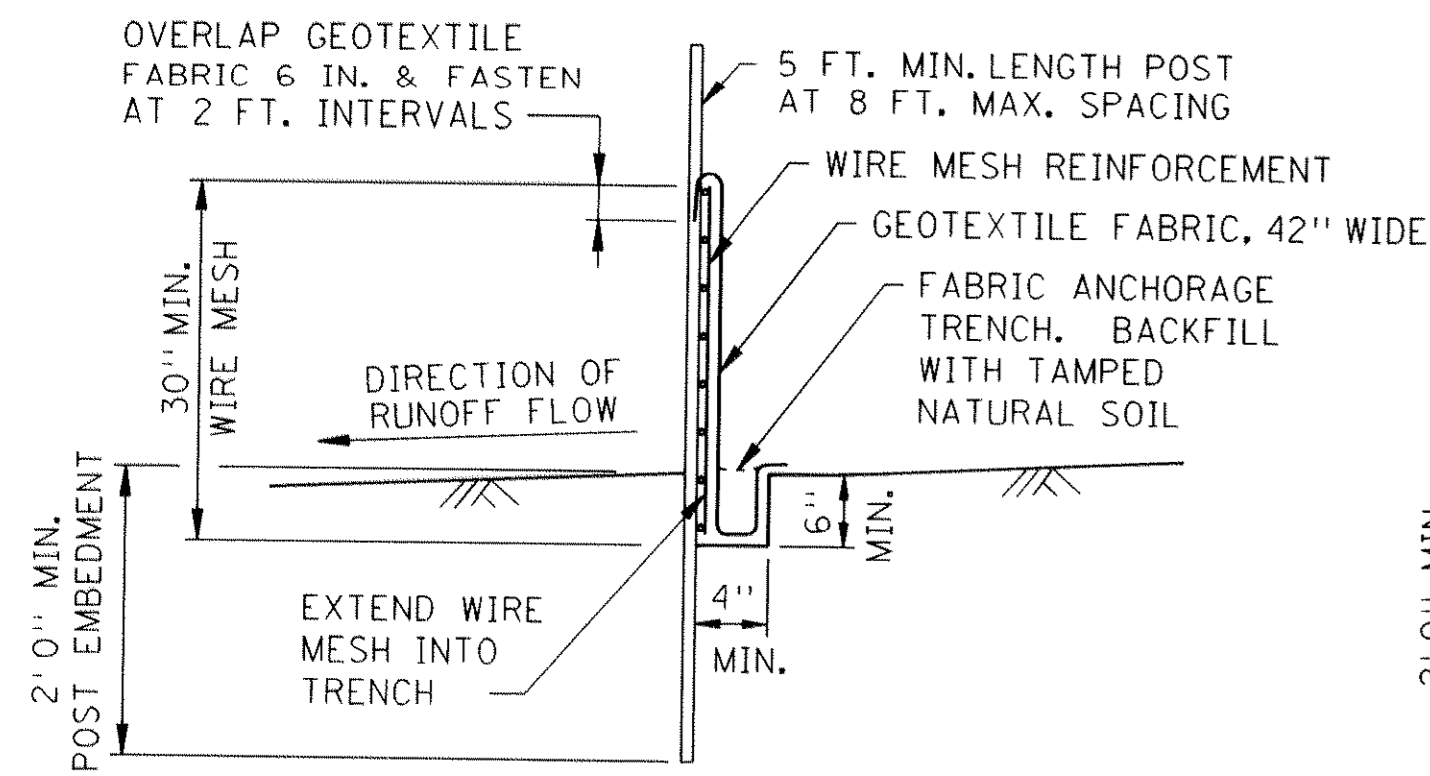
NOTES:

- ① CURTAIN 1 FT. FROM BOTTOM
- ② W = 10 FT. MIN., 20 FT. MAX.
- ③ D = 3 FT. MIN., 6 FT. MAX.

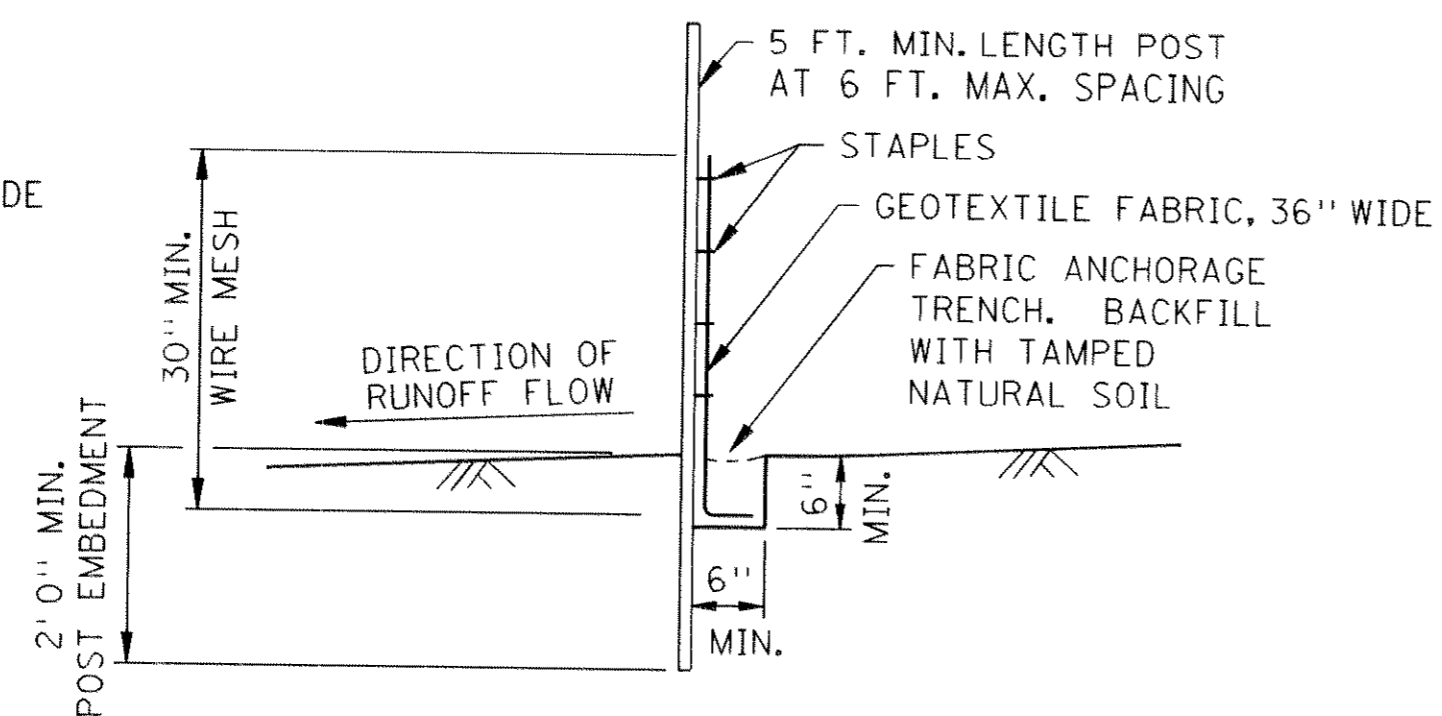
STANDARD SHEET NO.
5-297.405 (1 OF 3)
STANDARD APPROVED:
MAY 1, 1995

TITLE:

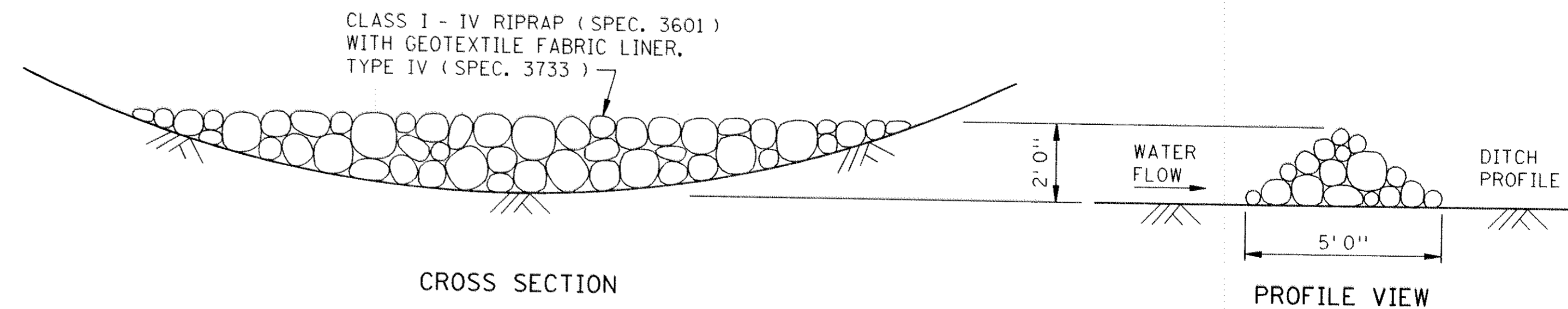
TEMPORARY EROSION CONTROL



HEAVY DUTY

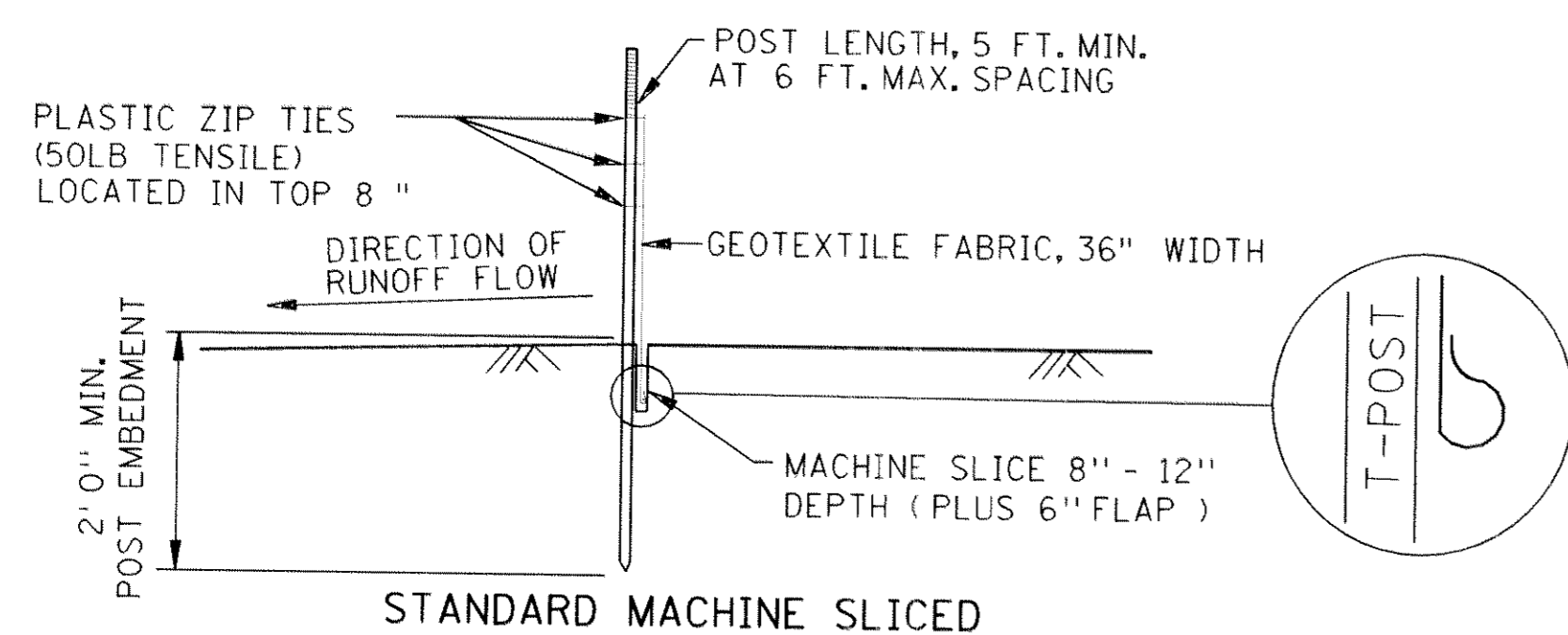


PREASSEMBLED

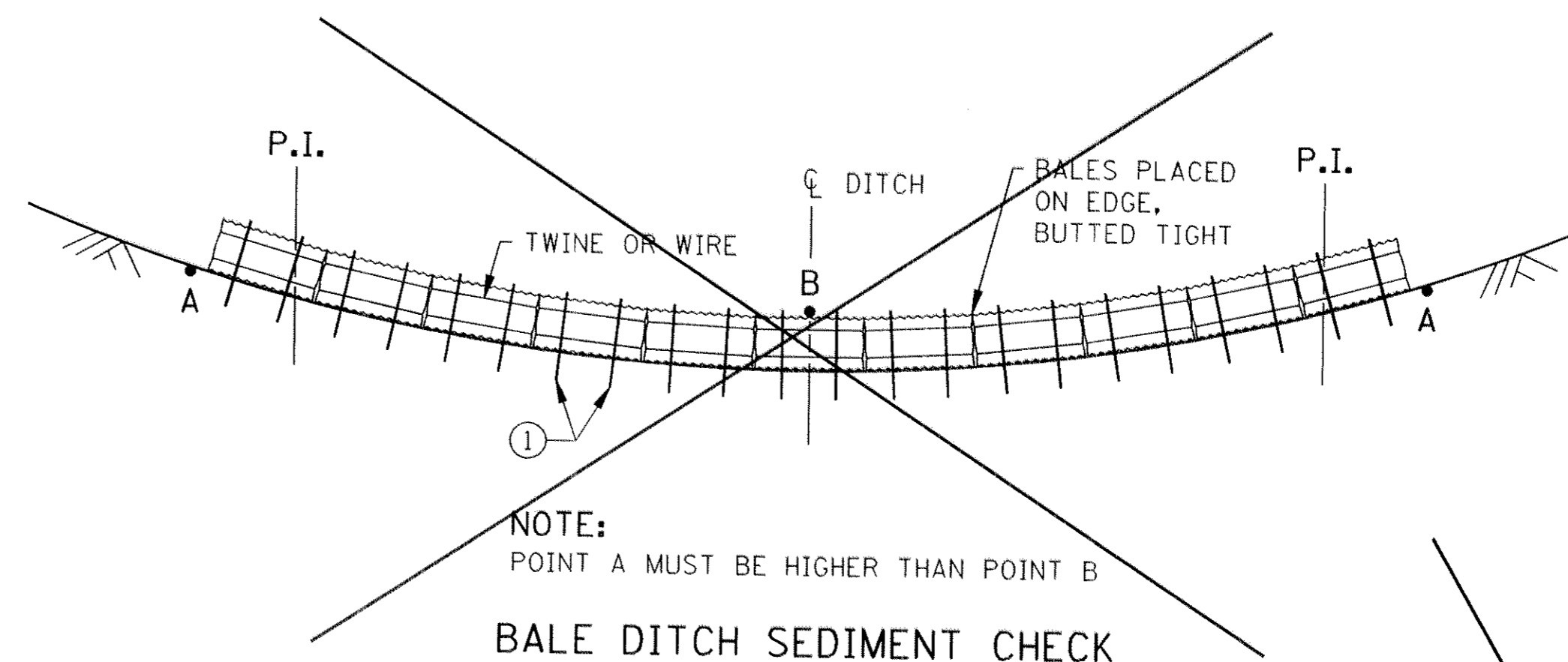


CROSS SECTION

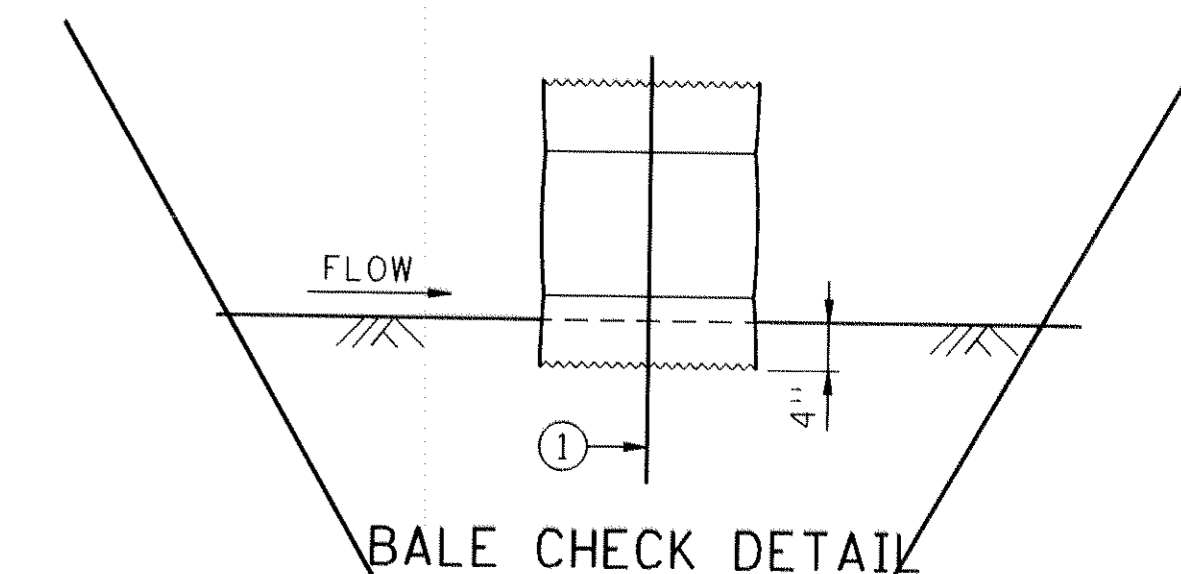
ROCK DITCH CHECK



STANDARD MACHINE SLICED



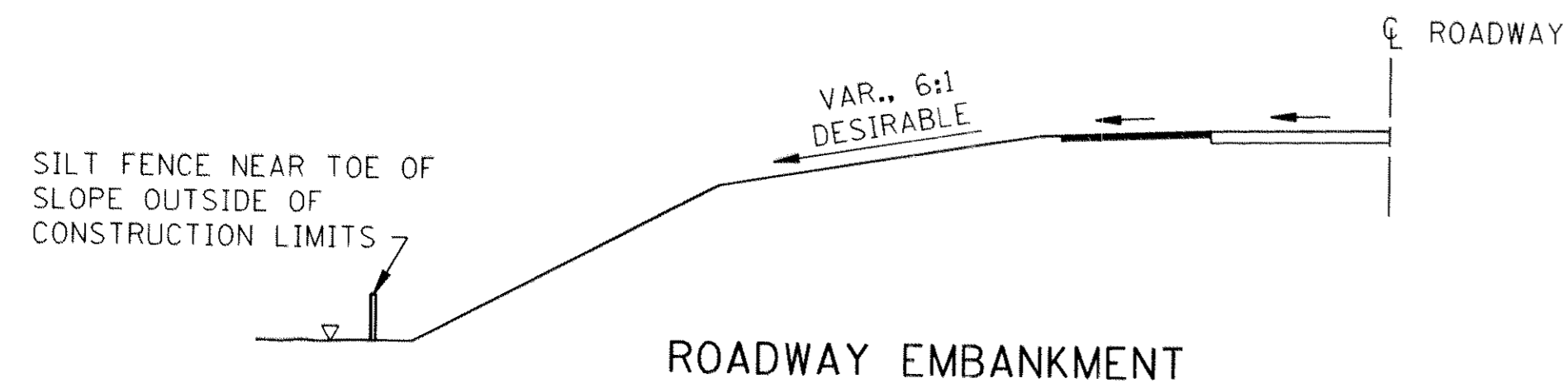
BALE DITCH SEDIMENT CHECK



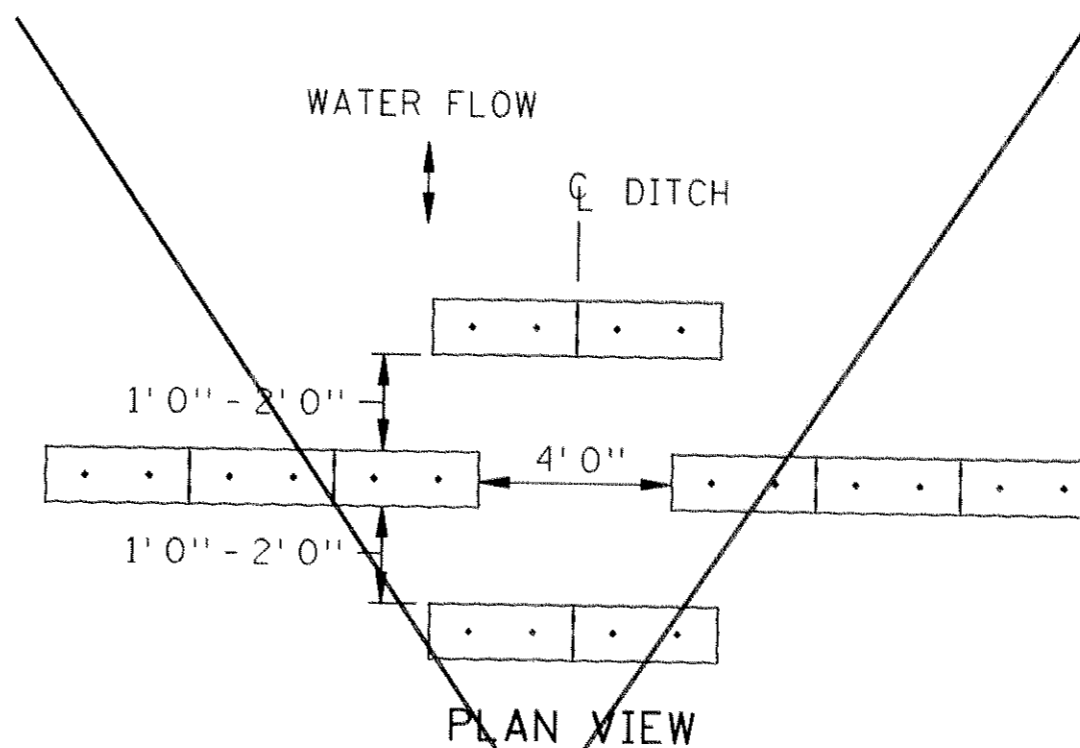
BALE CHECK DETAIL

DESIGN CRITERIA:
MAXIMUM CONTRIBUTING AREA: 3 ACRES

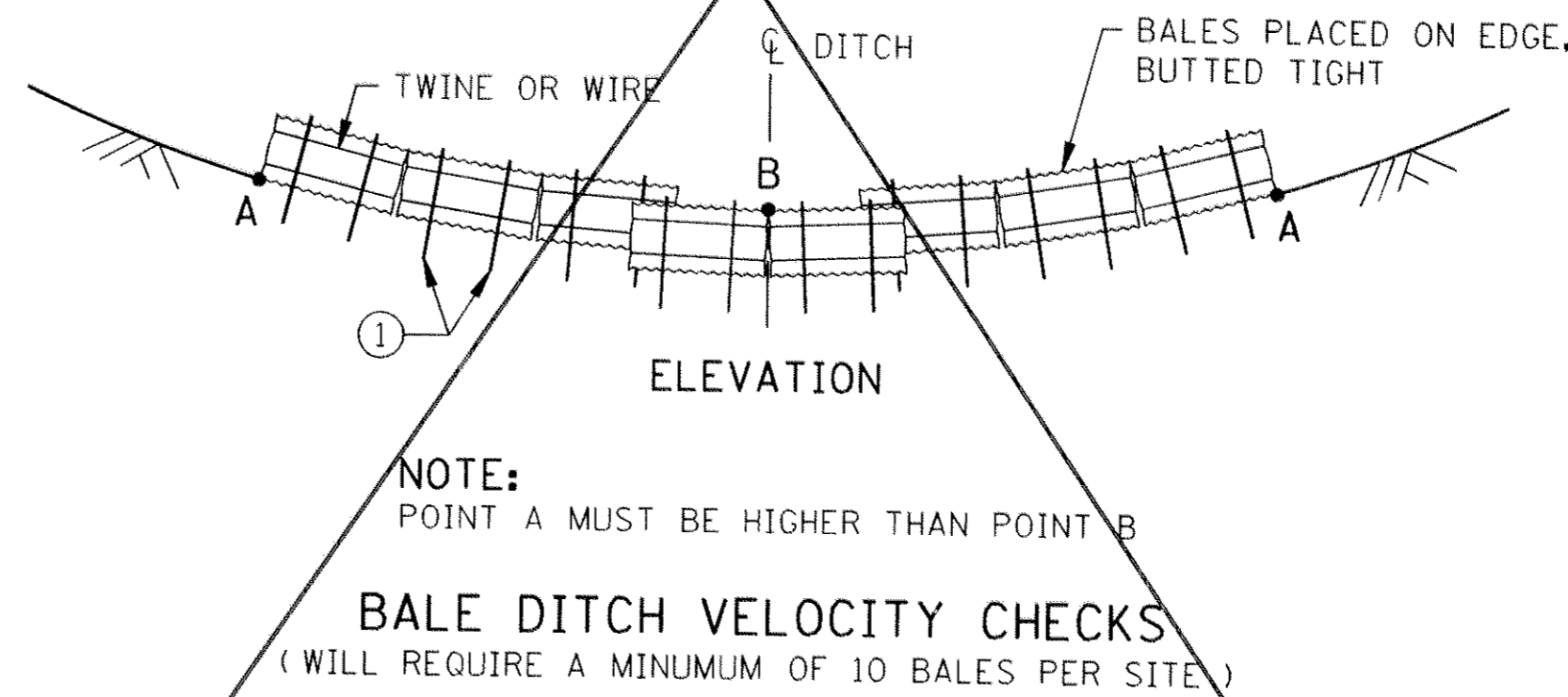
SILT FENCE DETAILS
TO PROTECT AREAS FROM SHEET FLOW
(SEE SPEC. 3886)



ROADWAY EMBANKMENT



PLAN VIEW



ELEVATION

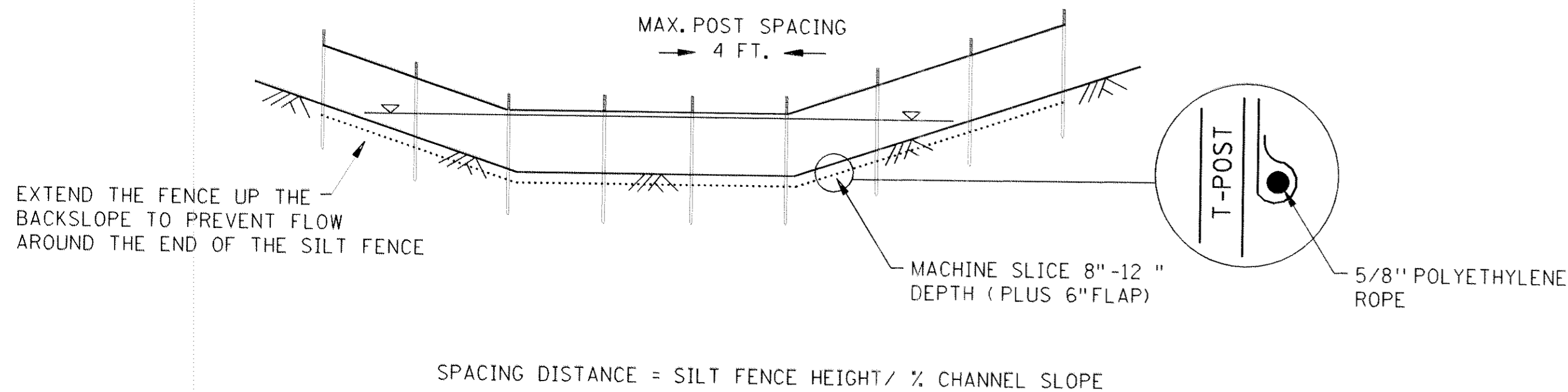
BALE DITCH VELOCITY CHECKS
(WILL REQUIRE A MINIMUM OF 10 BALES PER SITE)

RECOMMENDED SPACING BETWEEN DITCH CHECKS	
DITCH GRADE (%)	SPACING (FT.)
2	100
4	75
6	50
8	40
10	25

DESIGN CRITERIA:

	BALE	ROCK
STORM FREQUENCY:	2 YR. - 24 HR.	10 YR. - 24 HR.
MAX. FLOW VELOCITY:	5 FT./SEC.	12 FT./SEC.
MAX. DITCH GRADE:	5%	—
MAX. DRAINAGE AREA:	2 ACRES	5 ACRES

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



SILT FENCE DITCH CHECK
TYPE MACHINE SLICED

SPACING DISTANCE = SILT FENCE HEIGHT / 1/2 CHANNEL SLOPE

NOTE: WHEN SEDIMENT BUILD UP REACHES 1.5 FT. THE SILT SHOULD BE REMOVED OR A SECOND SILT FENCE BUILT UPSTREAM THE EXISTING ONE AT A SUITABLE DISTANCE.

DESIGN CRITERIA	
STORM FREQUENCY	2 YR. - 24 HR.
MAX. DITCH GRADE	5%
MAX. DRAINAGE AREA	1 ACRE

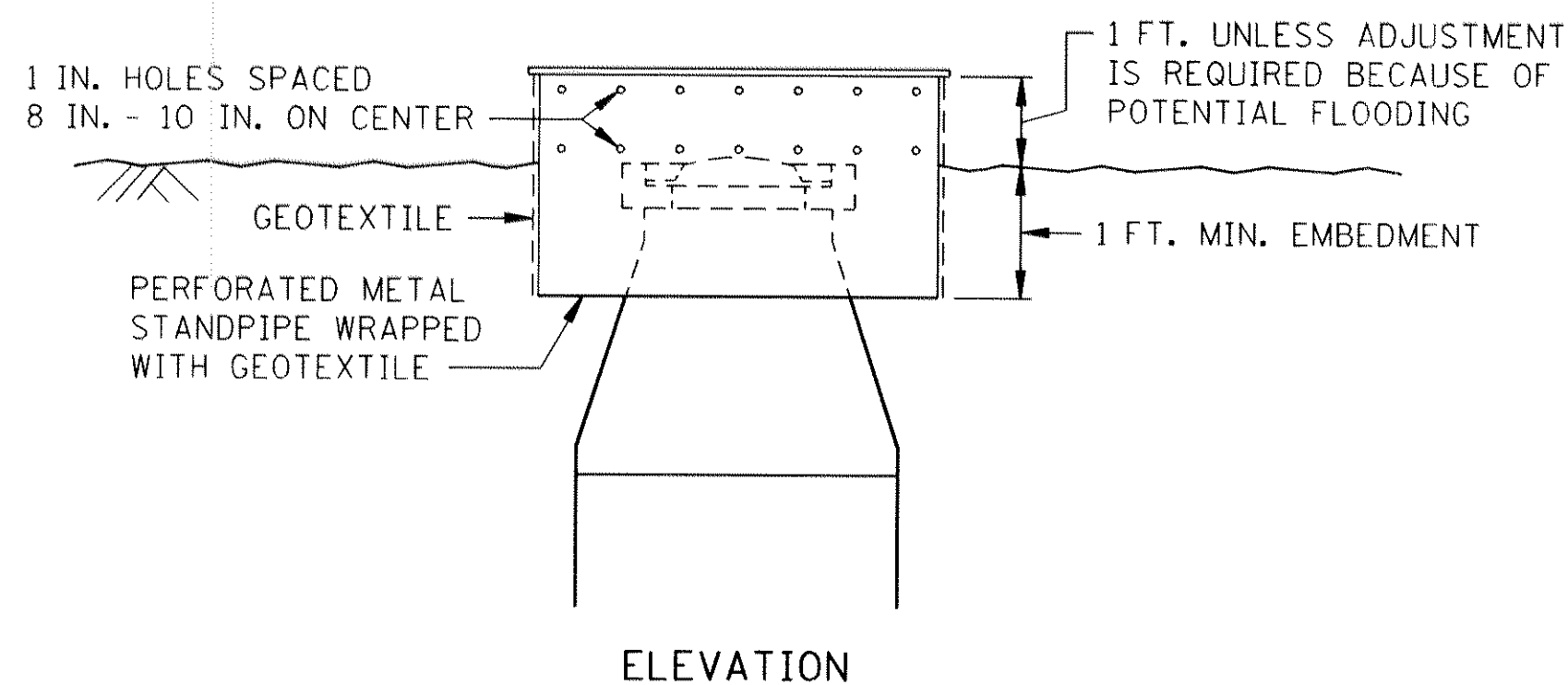
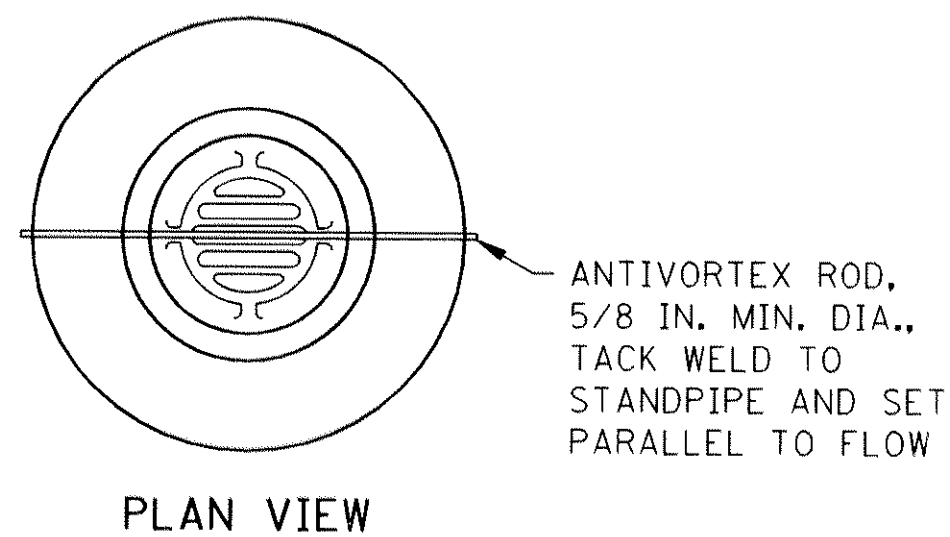
REVISION DATE
3-25-99

STANDARD SHEET NO.
5-297.405 (2 OF 3)
STANDARD APPROVED:
MAY 1, 1995

TITLE:

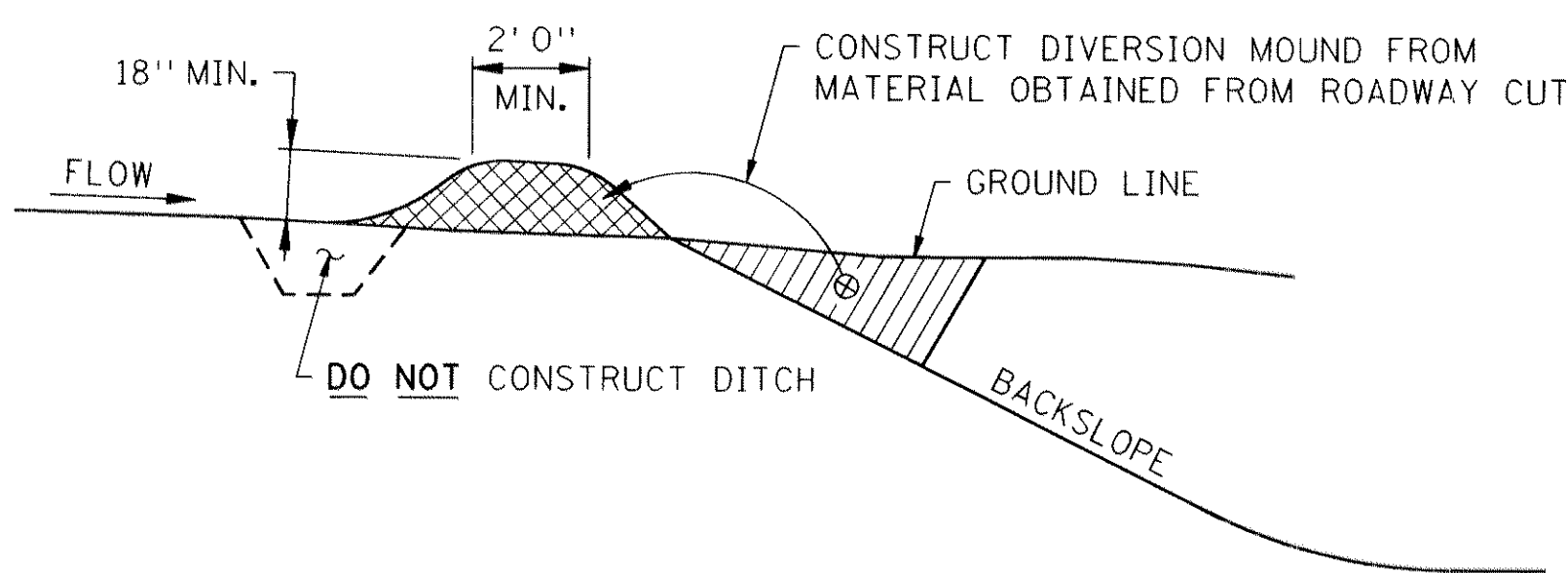
TEMPORARY EROSION CONTROL

STATE AID PROJ. NO. 02-652-01, 106-020-019 SHEET NO. 154 OF 253 SHEETS



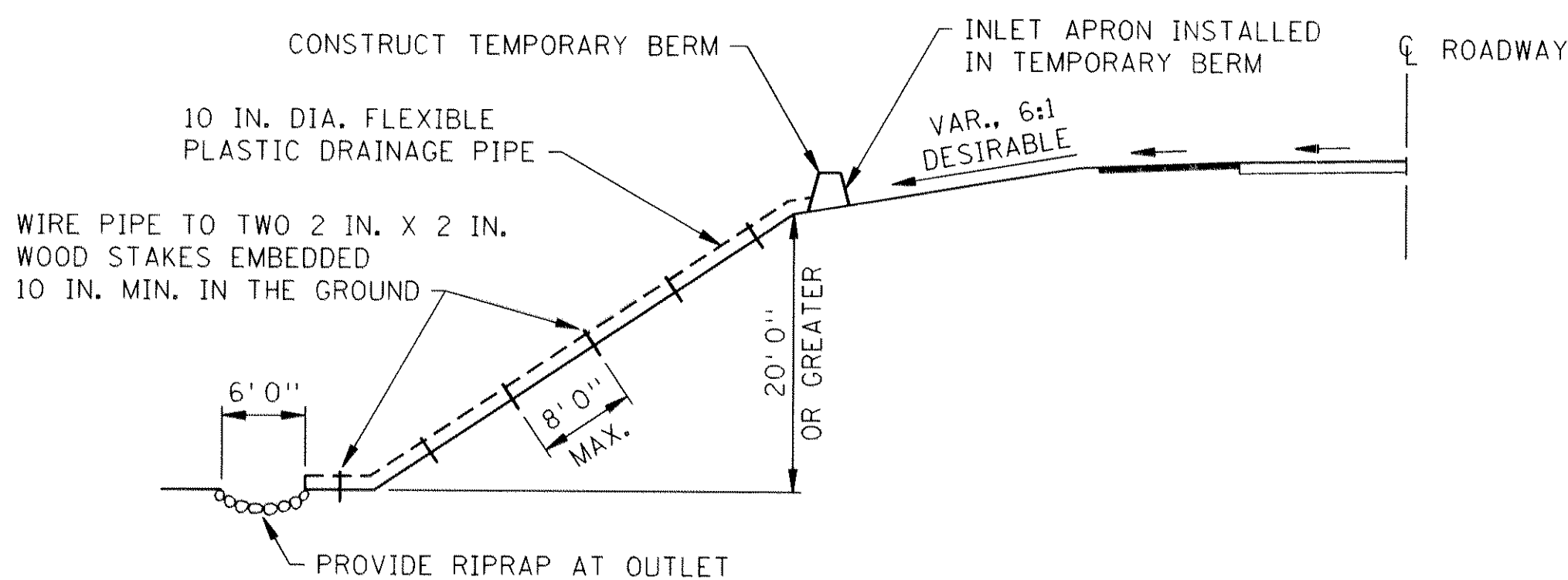
TEMPORARY STANDPIPE ①
TO PROTECT DROP INLET

DESIGN CRITERIA:
STORM FREQUENCY: 10 YEAR - 24 HOUR.



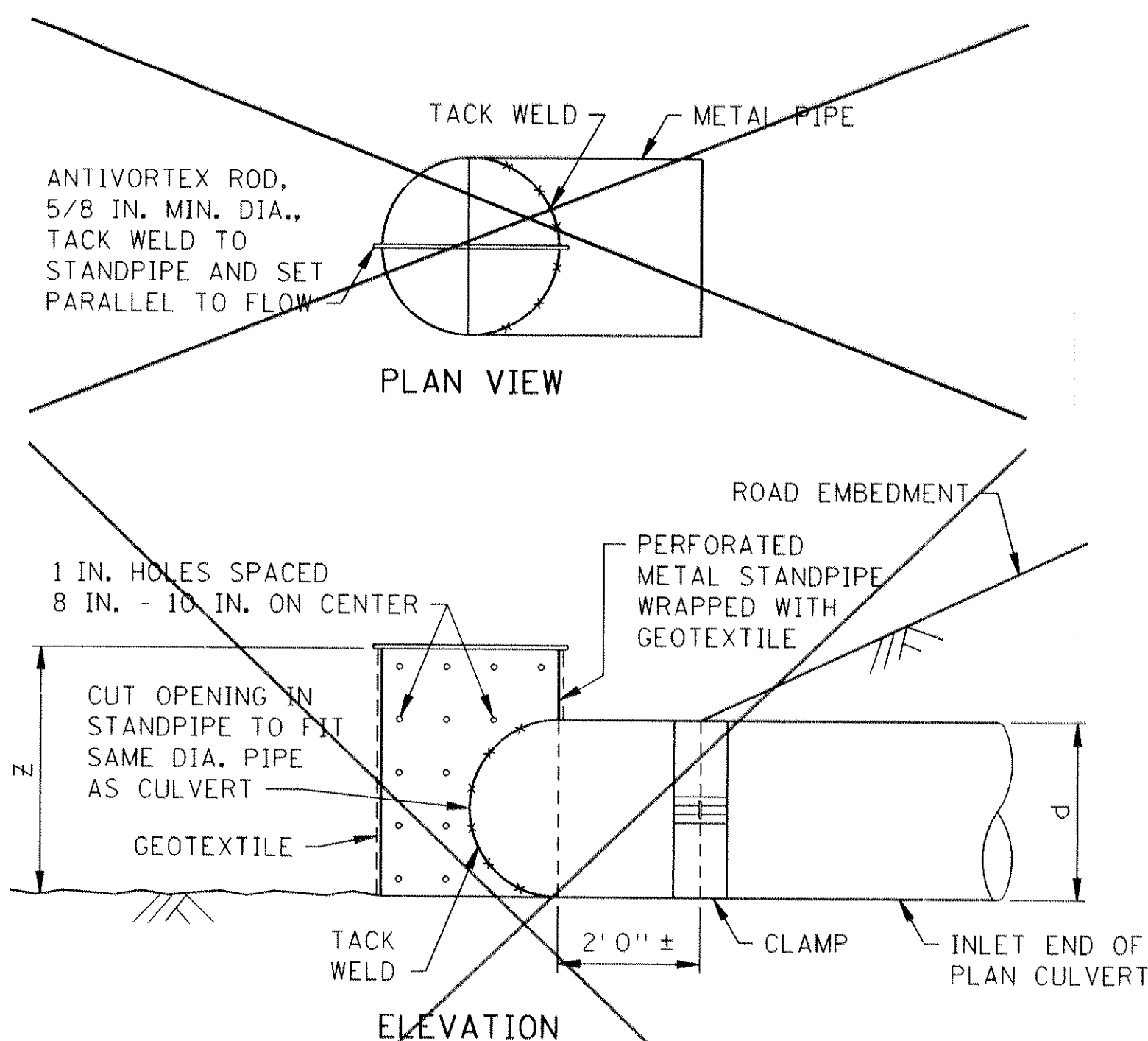
DIVERSION MOUND

DESIGN CRITERIA:
STORM FREQUENCY: 10 YEAR - 24 HOUR
MAXIMUM DRAINAGE AREA: 5 ACRES
MAXIMUM DIVERSION: GRADE 5%



TEMPORARY DRAIN ON FILL SLOPE

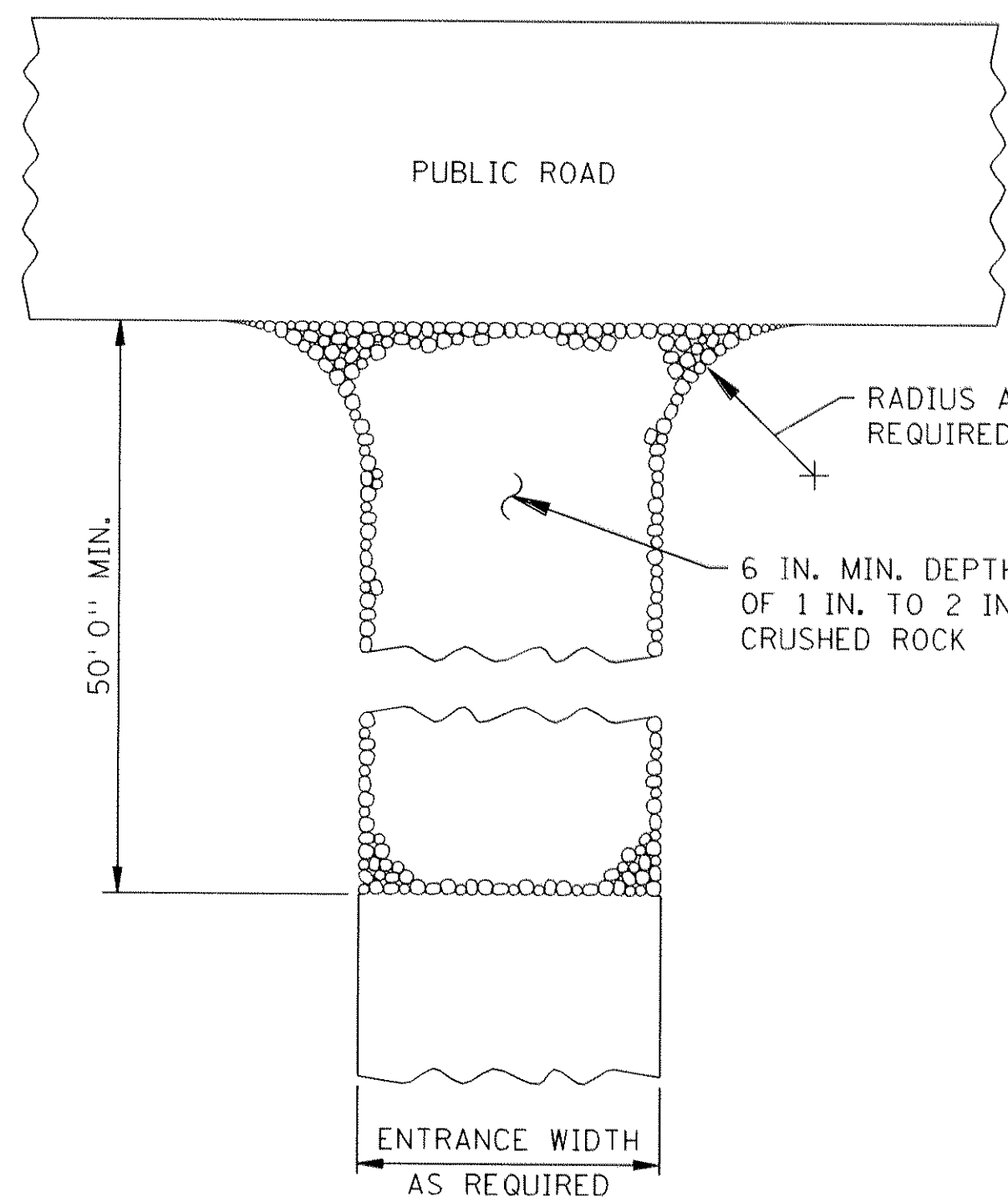
DESIGN CRITERIA:
STORM FREQUENCY: 2 YEAR - 24 HOUR
MAXIMUM DRAINAGE AREA: 3 ACRES



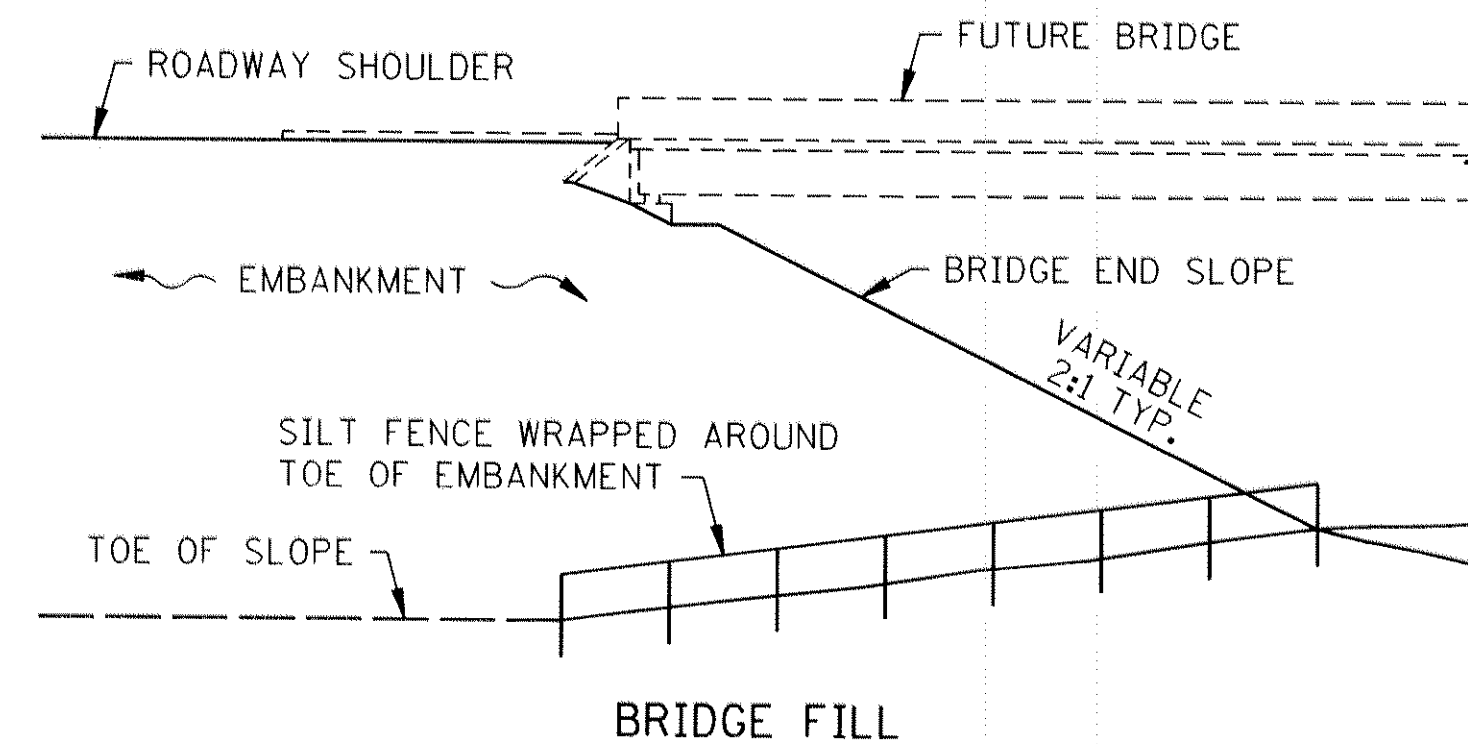
TEMPORARY STANDPIPE
FOR SEDIMENT CONTROL ON CULVERT INLET

d = DIA. OF STANDPIPE EQUAL TO DIA. OF PLAN CULVERT
z = LENGTH OF PERFORATED STANDPIPE (d + 1 FT.)

DESIGN CRITERIA:
CULVERT SIZE: 12 - 36 IN.
STORM FREQUENCY: 10 YR. - 24 HR.

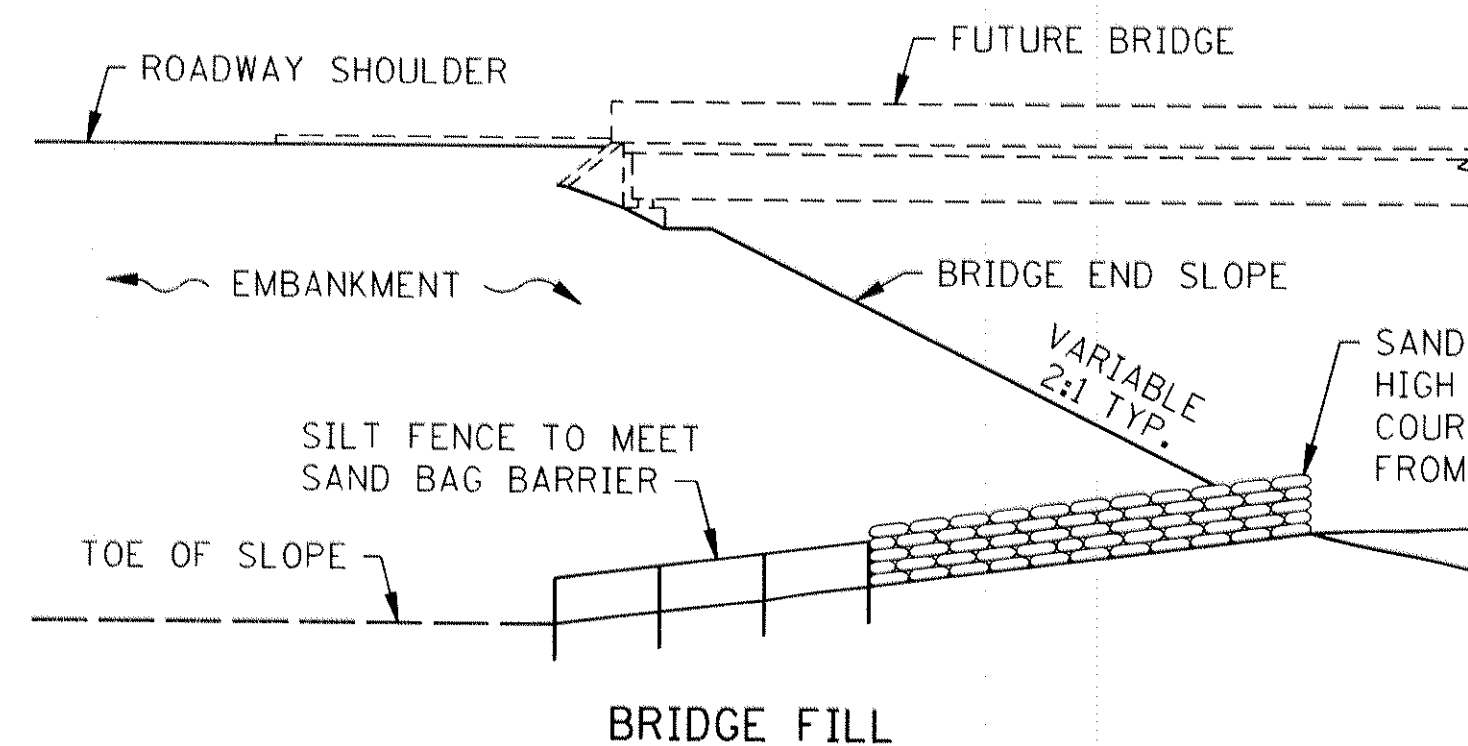


ROCK CONSTRUCTION ENTRANCE



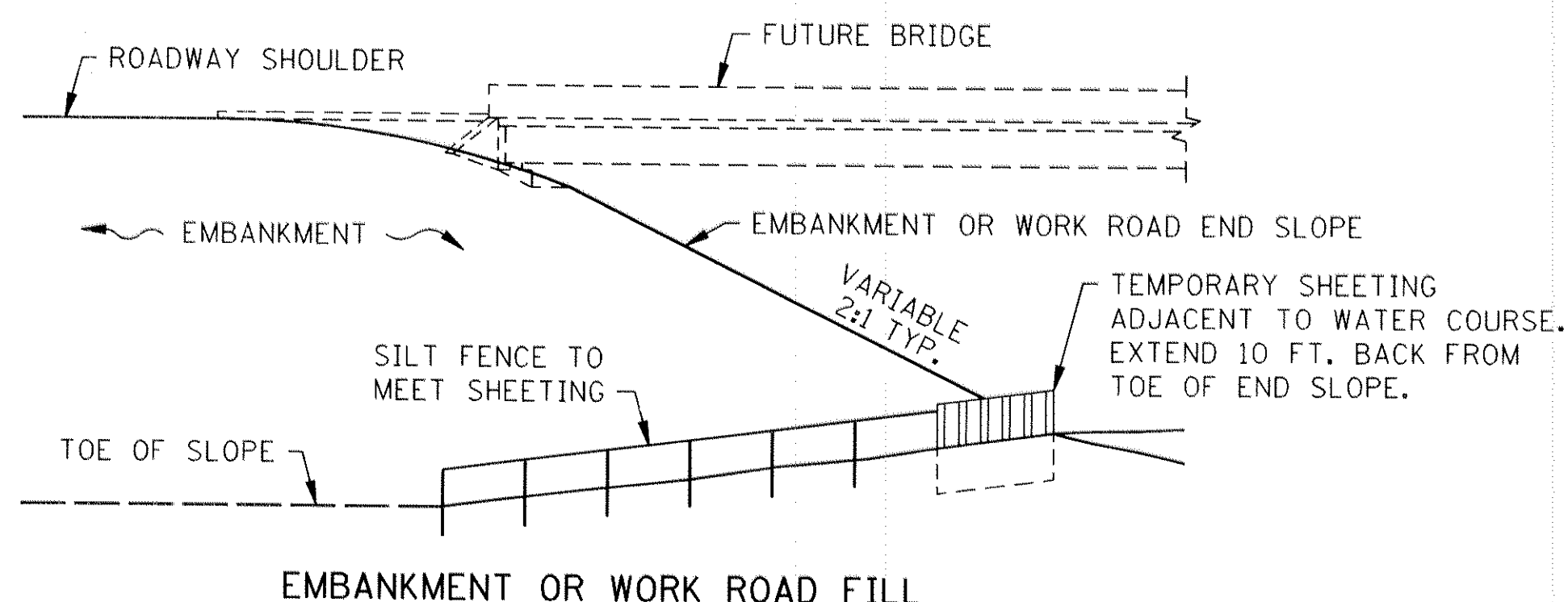
BRIDGE FILL

DESIGN CRITERIA:
WATER COURSE FLOW VELOCITY: STAGNANT
CONTRIBUTING SLOPE AREA: 1/2 ACRE



BRIDGE FILL

DESIGN CRITERIA:
MAX. WATER COURSE FLOW VELOCITY: 7 FT./SEC.
CONTRIBUTING SLOPE AREA: 1 ACRE



EMBANKMENT OR WORK ROAD FILL

DESIGN CRITERIA:
MAX. WATER COURSE FLOW VELOCITY: 15 FT./SEC.
CONTRIBUTING SLOPE AREA: 3 ACRES

NOTES:

① AN APPROVED MANUFACTURED H.D.P.E. EROSION CONTROL DEVICE IS AN OPTION.

STANDARD SHEET NO.
5-297.405 (3 OF 3)

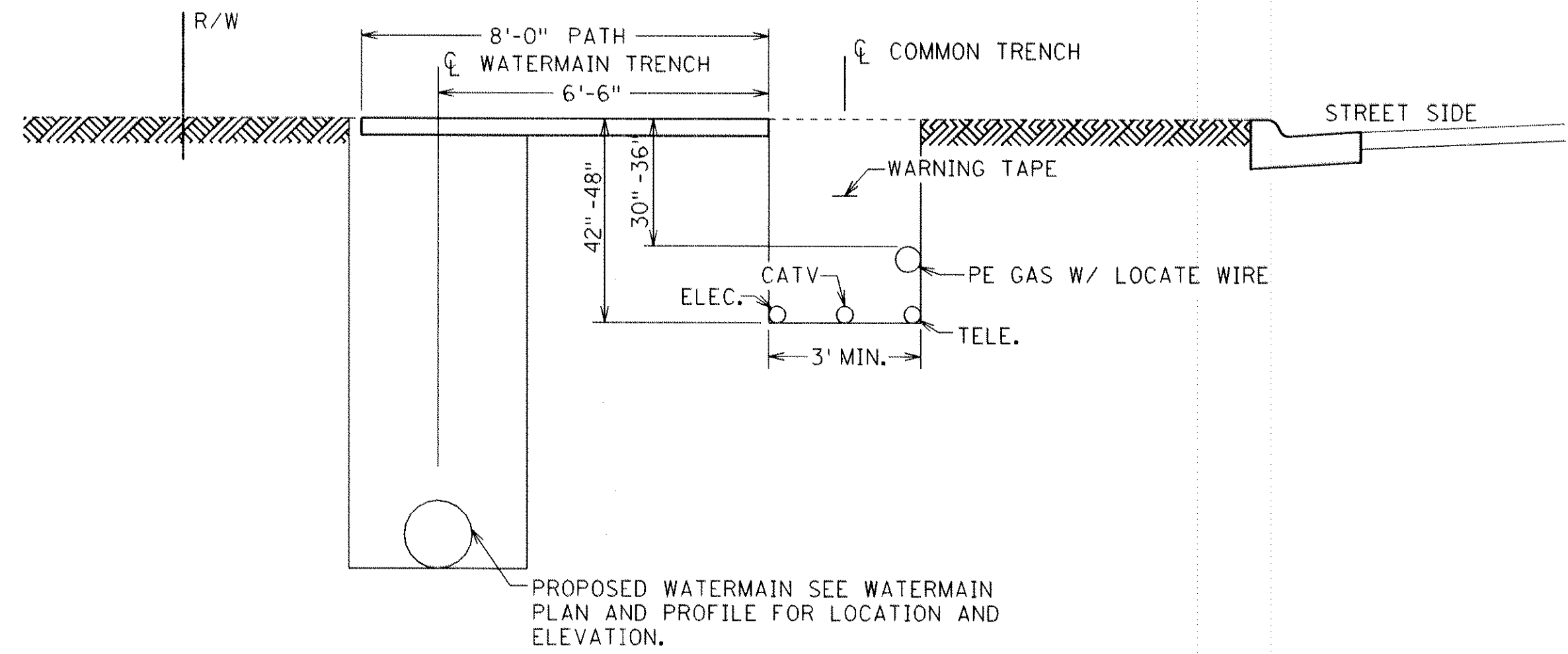
STANDARD APPROVED:
MAY 1, 1995

TITLE:

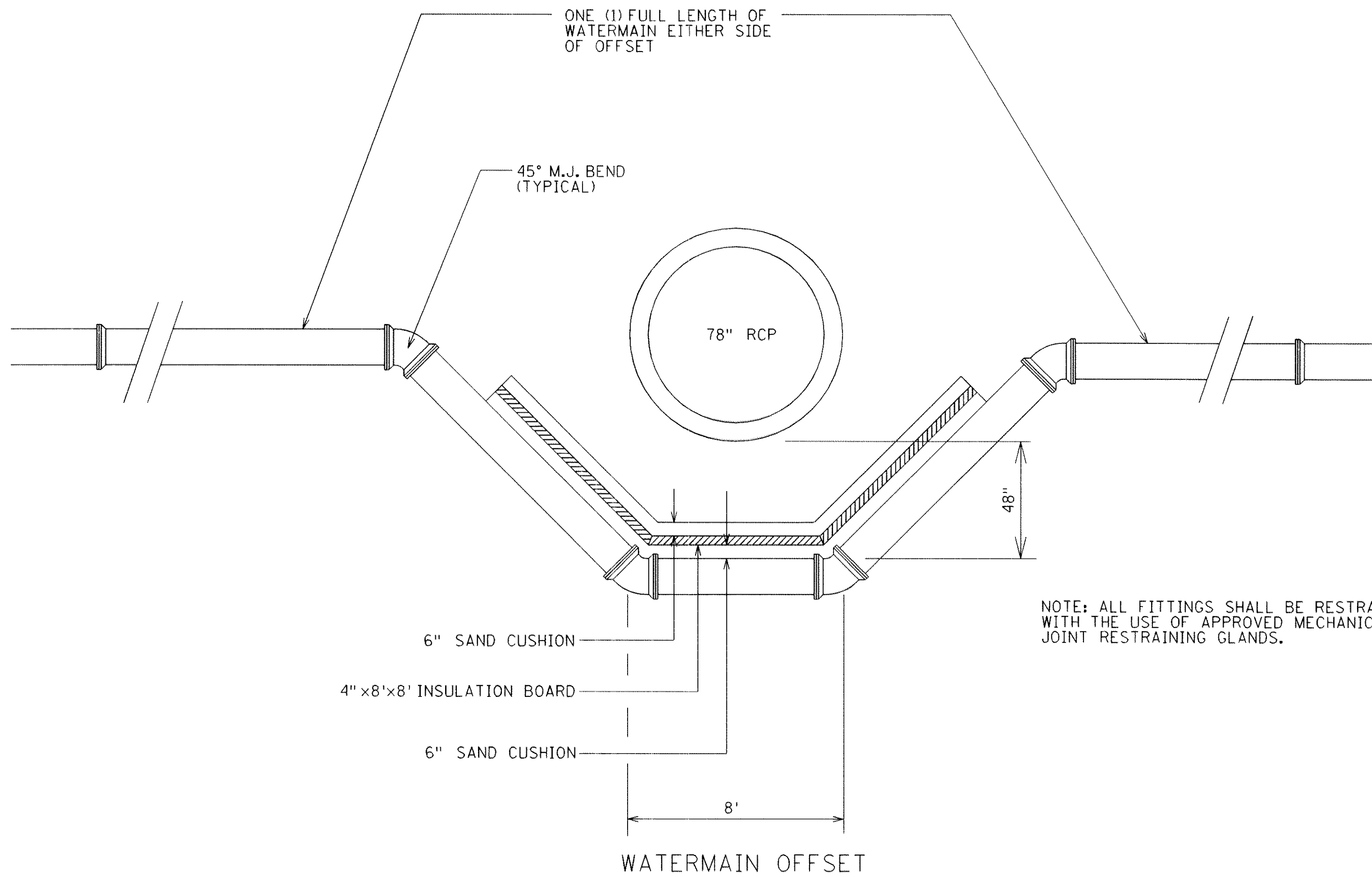
TEMPORARY EROSION CONTROL

REVISION DATE
11-5-99

STATE AID PROJ. NO. 02-652-01, 106-020-019 SHEET NO. 155 OF 253 SHEETS



WATERMAIN AND UTILITY TRENCH DETAIL



	PIPE SIZE								
	6"	8"	10"	12"	14"	16"	18"	20"	24"
BENDS									
90°	-39	-57	-89	-108	-210	-264	-335	-400	-565
45°	-32	-46	-70	-86	-154	-202	-250	-305	-405
22 1/2°	-32	-46	-64	-84	-148	-178	-255	-310	-412
11 1/4°	-30	-42	-58	-74	-130	-158	-205	-245	-315
SLEEVES									
SHORT	-28	-38	-49	-56	-111	-130	-160	-195	-255
LONG	-36	-46	-62	-76	-140	-172	-225	-255	-335
PLUG	-18	-26	-36	-46	-85	-93	-130	-153	-202
CAP	-17	-25	-35	-44	-79	-100	-122	-202	-214
TEES									
RUN	-	-	-	-	-	-	-	-	-
8"	-56	-	-	-	-	-	-	-	-
10"	-72	-86	-	-	-	-	-	-	-
12"	-90	-105	-120	-	-	-	-	-	-
14"	-110	-125	-140	-160	-	-	-	-	-
16"	-182	-206	-228	-234	-280	-	-	-	-
18"	-228	-248	-264	-280	-316	-322	-	-	-
20"	-275	-295	-315	-335	-380	-405	-435	-	-
24"	-315	-345	-370	-395	-440	-465	-505	-535	-
	-415	-445	-470	-500	-550	-580	-625	-660	-720
CROSS									
8"	-80	-	-	-	-	-	-	-	-
10"	-	-105	-	-	-	-	-	-	-
12"	-	-	-145	-	-	-	-	-	-
14"	-	-	-	-215	-	-	-	-	-
16"	-	-	-	-	-335	-	-	-	-
18"	-	-	-	-	-	-385	-	-	-
20"	-	-	-	-	-	-	-XXX	-	-
24"	-	-	-	-	-	-	-	-XXX	-XXX
REDUCERS									
8"	-36	-	-	-	-	-	-	-	-
10"	-47	-50	-	-	-	-	-	-	-
12"	-60	-60	-64	-	-	-	-	-	-
14"	-100	-100	-100	-100	-	-	-	-	-
16"	-124	-124	-124	-124	-140	-	-	-	-
18"	-	-190	-190	-190	-190	-195	-	-	-
20"	-	-	-220	-205	-200	-200	-225	-	-
24"	-	-	-	-	-	-305	-310	-320	-305

WEIGHTS TAKEN FROM AWWA C153
WEIGHT DOES NOT INCLUDE GLANDS, GASKETS, BOLTS AND RESTRAINING DEVICES

Date: 12/27/96 WATER MAIN FITTINGS Plate No. WS-4

NO	DATE	BY	CKD	APPR	REVISION

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE _____ REG. NO. _____

DRAWN BY RRC DATE 11-8-00

DESIGN BY LDB DATE 11-8-00

CHECKED BY RRC DATE 11-8-00

STATE PROJECT NO.

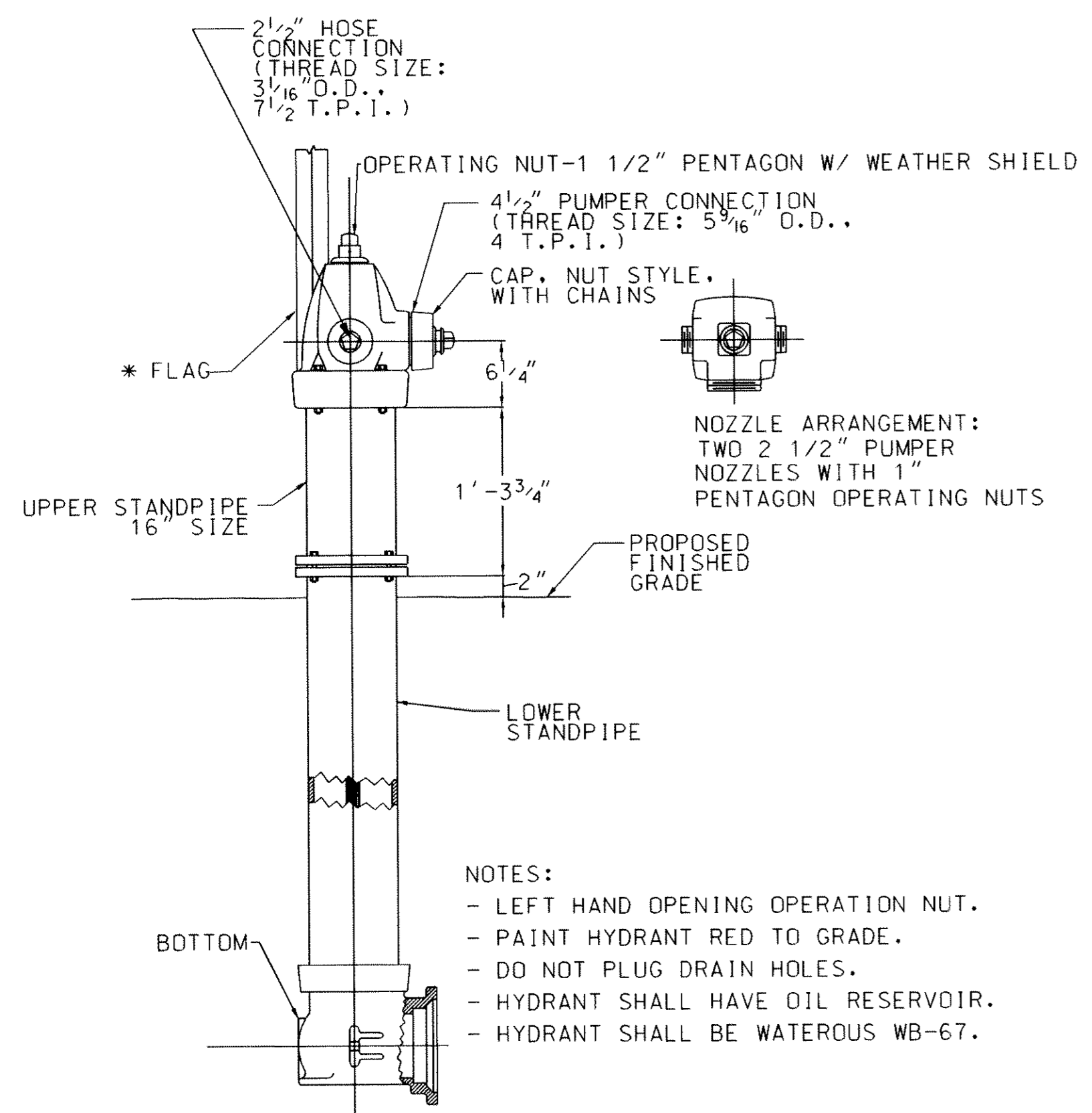
S.A.P. 02-652-01
S.A.P. 106-020-019

TKDA
TOLTZ, KING, DUVALL, ANDERSON
AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
WATERMAIN DETAILS
C.S.A.H. 52 RECONSTRUCTION

SHEET
156
OF
253

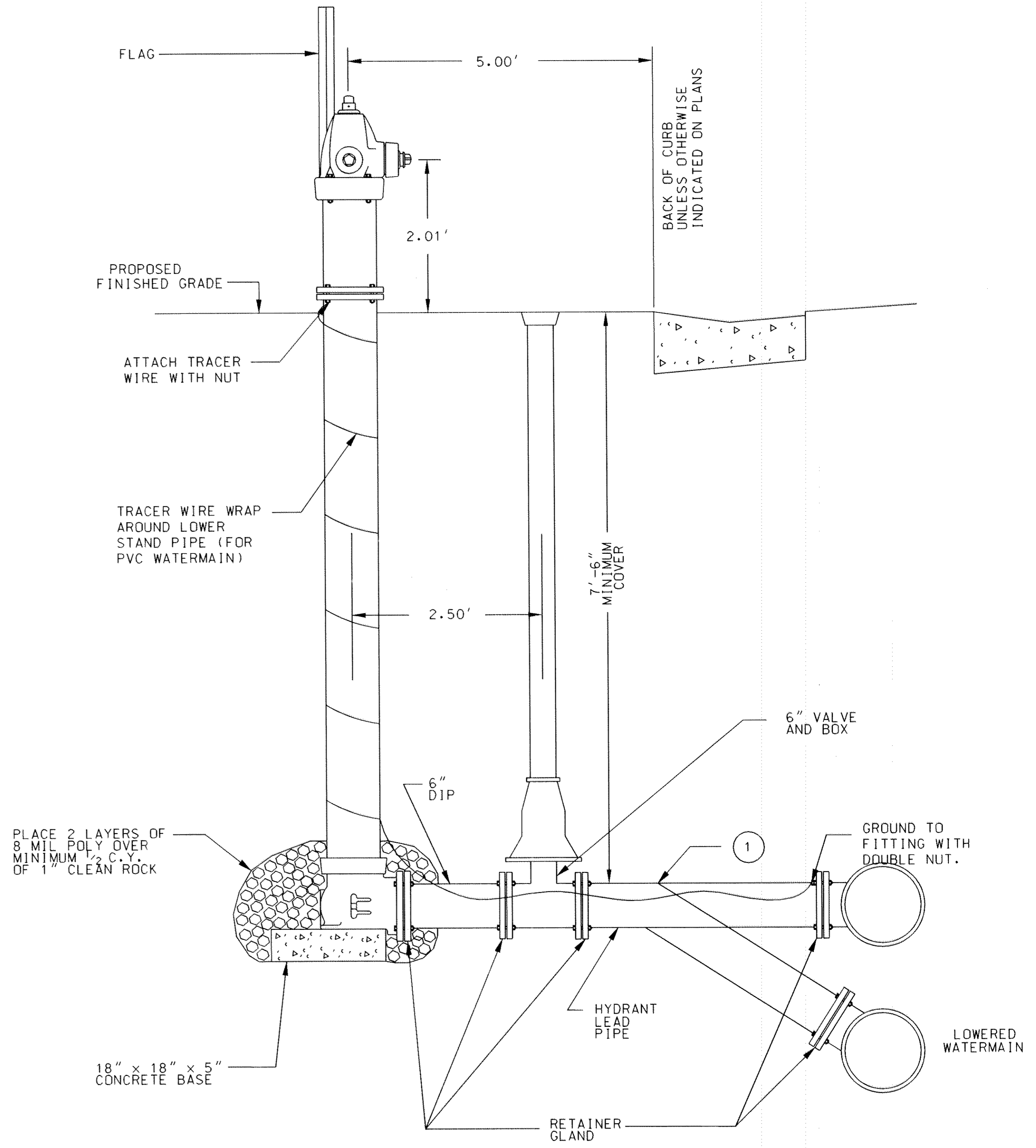
① CONTRACTOR SHALL INSTALL BEND TO ACHIEVE 7.5' BURY. BEND SHALL NOT EXCEED 45°. ALL FITTINGS WILL BE PAID AS PER UNIT PRICE.



- NOTES:
- LEFT HAND OPENING OPERATION NUT.
 - PAINT HYDRANT RED TO GRADE.
 - DO NOT PLUG DRAIN HOLES.
 - HYDRANT SHALL HAVE OIL RESERVOIR.
 - HYDRANT SHALL BE WATEROUS WB-67.

* FLAG TO BE EITHER INSTALLED OR DELIVERED AS DIRECTED IN FIELD BY THE ENGINEER.

Date: 4/13/00 TYPICAL HYDRANT Plate No. WS-1



Date: 4/13/00 HYDRANT INSTALLATION Plate No. WS-2

NO	DATE	BY	CKD	APPR	REVISION

NAME: \$FILE\$ DATE: \$DATE\$

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DATE _____ REG. NO. _____

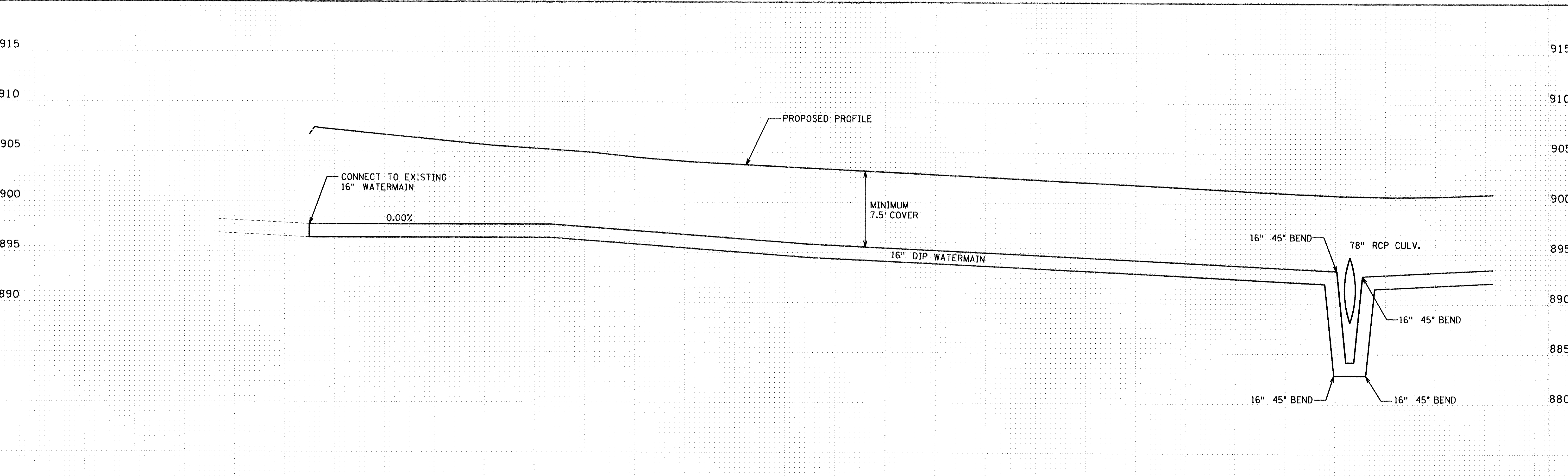
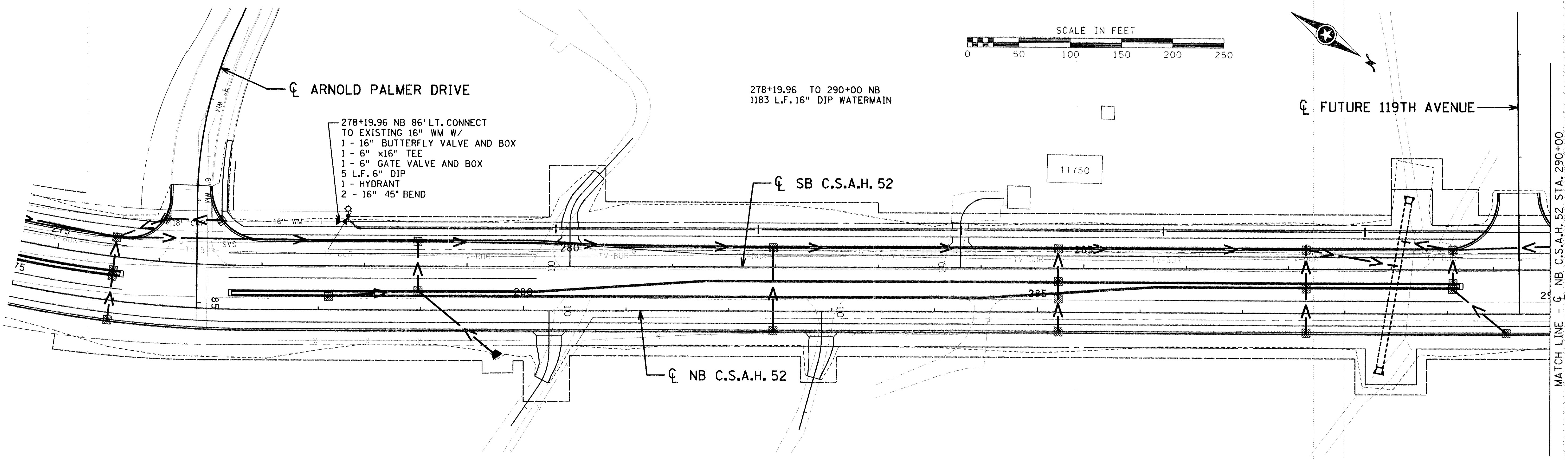
DRAWN BY RRC DATE 11-8-00
 DESIGN BY LDB DATE 11-8-00
 CHECKED BY RRC DATE 11-8-00

STATE AID PROJECT NO.
 S.A.P. 02-652-02
 S.A.P. 02-652-03
 S.A.P. 02-652-04
 S.A.P. 106-020-019

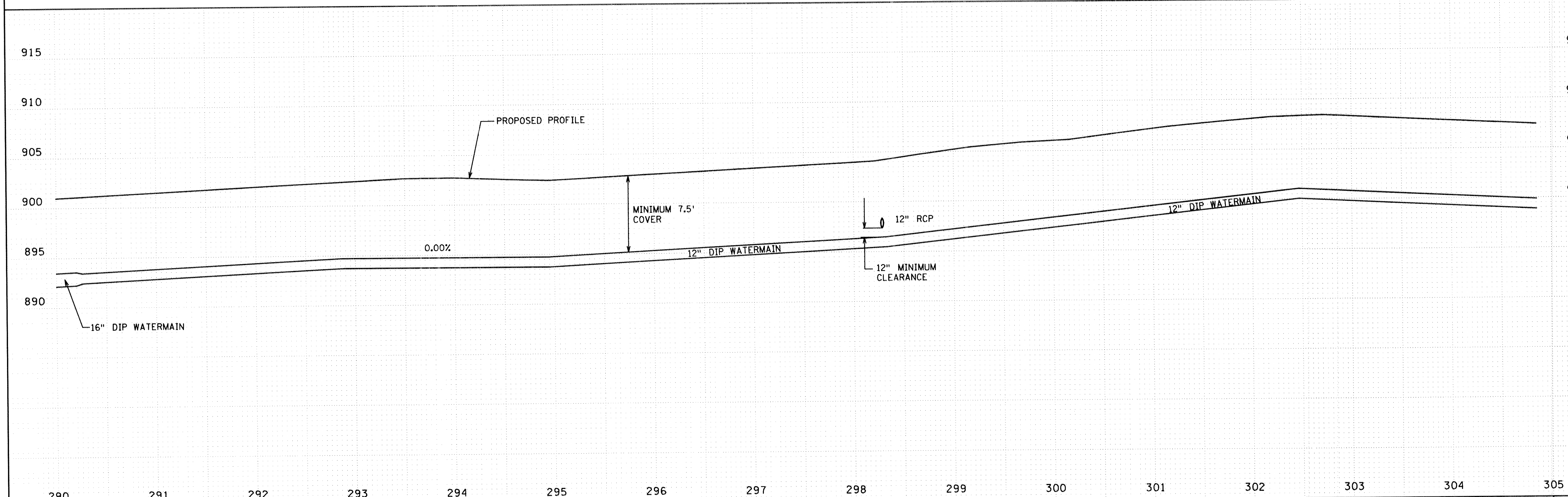
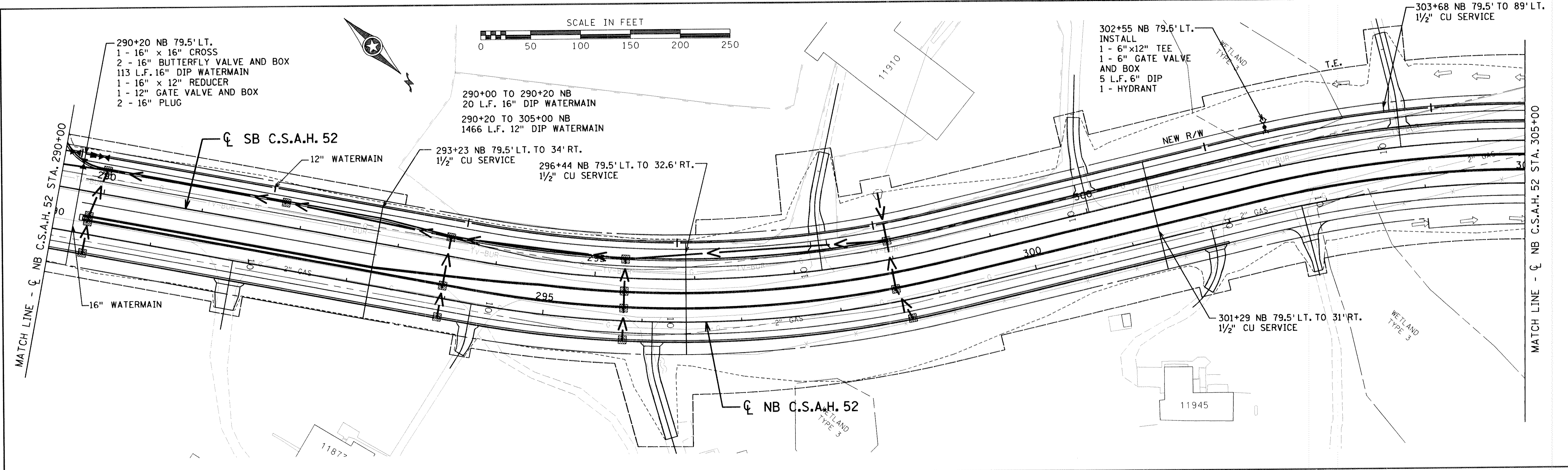
TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 WATERMAIN DETAILS
 C.S.A.H. 52 RECONSTRUCTION

SHEET
 157
 OF
 246

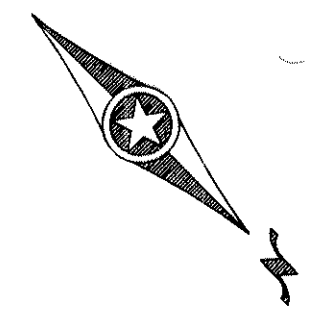
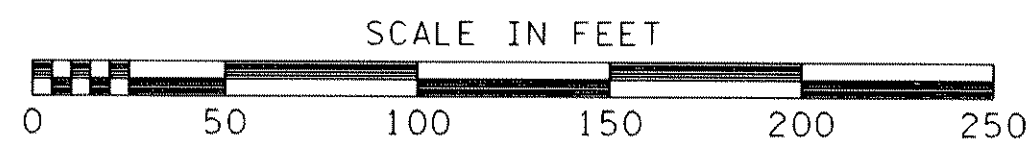


275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290			
			I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.			DRAWN BY <u>RRC</u> DATE <u>11-8-00</u>			STATE PROJECT NO.			TKDA <small>TOLTZ, KING, DUVAL, ANDERSON AND ASSOCIATES, INCORPORATED</small> <small>ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA</small>			ANOKA COUNTY			SHEET 159 OF 253
			DESIGN BY <u>LDB</u> DATE <u>11-8-00</u>			S.A.P. 02-652-01 S.A.P. 106-020-019			WATERMAIN PLAN AND PROFILE C.S.A.H. 52 RECONSTRUCTION STA. 275+00 TO STA. 290+00									
NO DATE BY CKD APPR REVISION			DATE _____ REG. NO. _____			CHECKED BY <u>RRC</u> DATE <u>11-8-00</u>												
NAME: \$FILE\$			\$DATE\$															



290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305
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.			DRAWN BY <u>RRC</u> DATE <u>11-8-00</u> DESIGN BY <u>LDB</u> DATE <u>11-8-00</u> CHECKED BY <u>RRC</u> DATE <u>11-8-00</u>			STATE PROJECT NO. S.A.P. 02-652-01 S.A.P. 106-020-019			TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA			ANOKA COUNTY WATERMAIN PLAN AND PROFILE C.S.A.H. 52 RECONSTRUCTION STA. 290+00 TO STA. 305+00			SHEET 160 OF 253
NO	DATE	BY	CKD	APPR	REVISION	DATE	REG. NO.								
NAME: \$FILE\$															

11976



305+00 NB TO
6+33.53 RADISSON RD.
849 L.F. 12" DIP WATERMAIN

306+33 NB 79.5' LT.
1 - 12" 22 1/2° BEND

306+02 NB 79.5' TO 130' LT.
1 1/2" C U SERVICE

MATCH LINE - 305+00
C.S.A.H. 52 STA. 305+00
NB C.S.A.H. 52

306+62 NB 91.4' LT. TO
307+18 NB 41' RT.
1 1/2" C U SERVICE

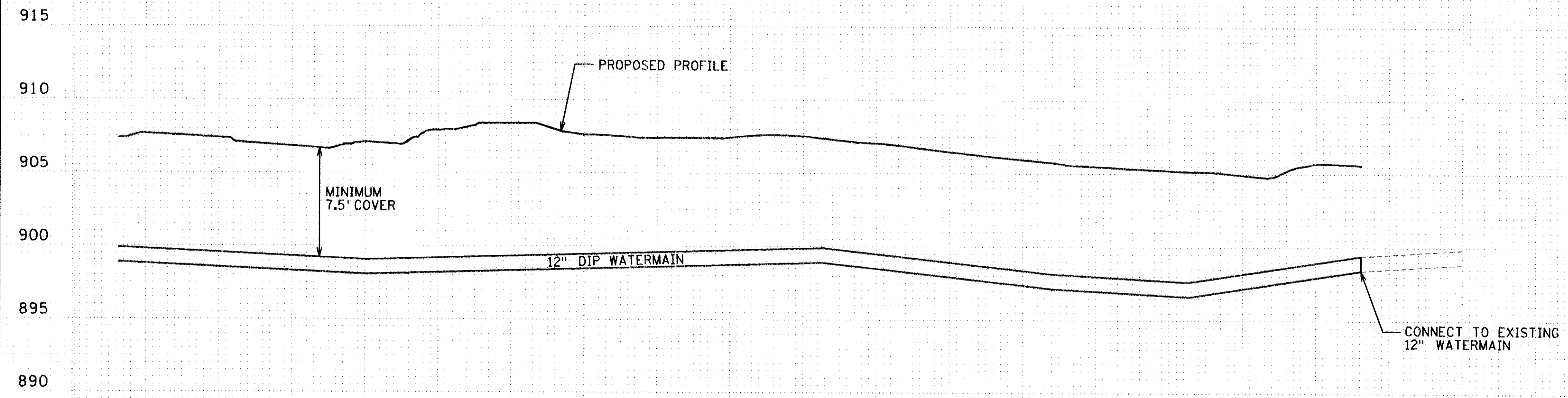
INPLACE RADISSON ROAD

6+33.53 RADISSON RD.
27.7' RT. CONNECT TO
EXISTING 12" WATERMAIN
WITH 1 - 12" GATE VALVE
AND BOX

2+64 RADISSON RD. TO
INSTALL
1 - 6" x 12" TEE
1 - 6" GATE VALVE
AND BOX
5 L.F. 6" DIP
1 - HYDRANT

SB C.S.A.H. 52

NB C.S.A.H. 52



305 306 0 1 2 3 4 5 6

NO	DATE	BY	CKD	APPR	REVISION
NAME: \$FILE\$					\$DATE\$

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DATE _____ REG. NO. _____

DRAWN BY RRC DATE 11-8-00
DESIGN BY LDB DATE 11-8-00
CHECKED BY RRC DATE 11-8-00

STATE PROJECT NO.
S. A. P. 02-652-01
S. A. P. 106-020-019

TKDA
TOLTZ, KING, DUVALL, ANDERSON
AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
WATERMAIN PLAN AND PROFILE
C.S.A.H. 52 RECONSTRUCTION
STA. 305+00 TO STA. 317+00

SHEET
161
OF
253

WATER MAIN O														
STATION TO STATION	OFFSET	CONN. TO EXIST. WM	HYDRANT	1-1/2" CORP. STOP	6" GATE VALVE & BOX	12" GATE VALVE & BOX	16" BUTTERFLY VALVE & BOX	1-1/2" CURB STOP & BOX	1-1/2" TYPE K COPPER PIPE	6" WM DUCTILE IRON CL. 52	12" WM DUCTILE IRON CL. 50	16" WM DUCTILE IRON CL. 50	DUCTILE IRON FITTINGS	4" INSULATION BOARD
		EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	LF	LF	LF	LF	LB
NB C.S.A.H. 52														
278+19.96	86' LT.	1	1		1		1			5			632	
278+19.96 - 290+20	79.5' - 86' LT.											1203		192
288+47 - 288+67	79.5' LT.												202	
288+47	79.5' LT.												202	
288+53	79.5' LT.												202	
288+61	79.5' LT.												202	
288+67	79.5' LT.												202	
290+20 - 6+33.53 *	VARIES										2315			
290+20	79.5' LT.					1	2					113	695	
293+23	79.5' LT. - 34' RT.			1				1	114					
296+44	79.5' LT. - 32.6' RT.			1				1	112					
301+29	79.5' LT. - 31' RT.			1				1	111					
302+55	79.5' LT.		1		1					5			110	
303+68	79.5' - 89' LT.			1				1	10					
306+02	79.5' - 130' LT.			1				1	51					
306+33	79.5' LT.												84	
306+62 - 307+18	91.4' LT. - 41' RT.			1				1	144					
2+64 *	26' RT.		1		1					5			110	
6+33.53 *	26' RT.	1				1								
TOTALS		2	3	6	3	2	3	6	542	15	2315	1316	2439	192

* RADISSON ROAD STATION

NO	DATE	BY	CKD	APPR	REVISION

NAME: \$FILES\$ \$DATE\$

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

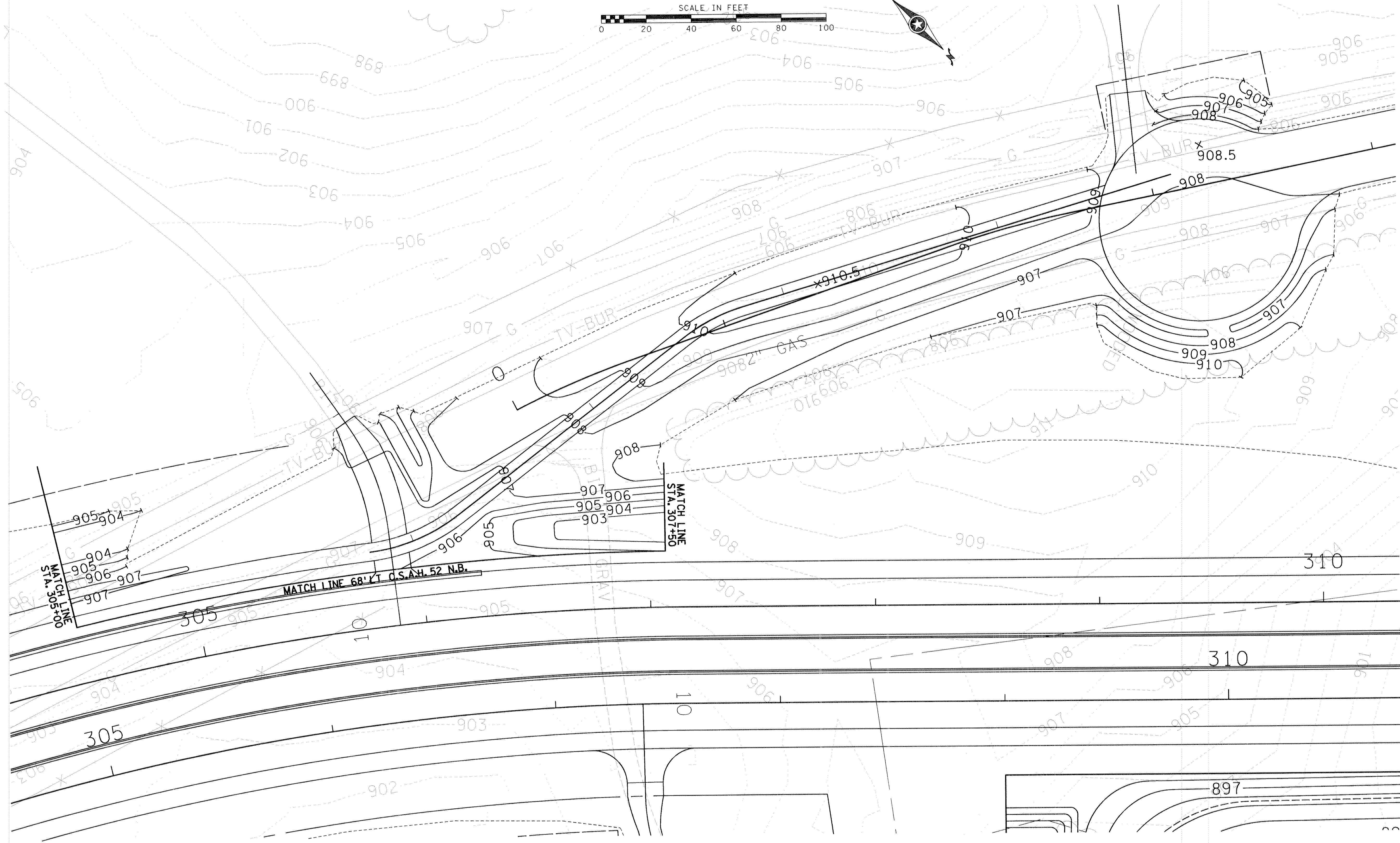
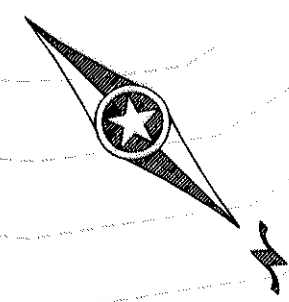
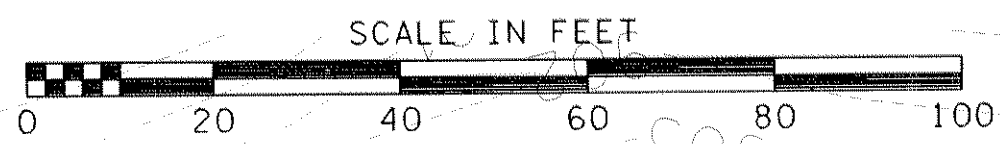
DATE _____ REG. NO. _____

DRAWN BY RRC DATE 11-8-00
 DESIGN BY LDB DATE 11-8-00
 CHECKED BY RRC DATE 11-8-00

STATE PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 WATER MAIN TABULATION
 C.S.A.H. 52 RECONSTRUCTION



NO	DATE	BY	CKD	APPR	REVISION
NAME: k:\site\proj\c11749\par11\roadway1\drawings\grade01.dgn					25 APR 2001

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE _____ REG. NO. _____

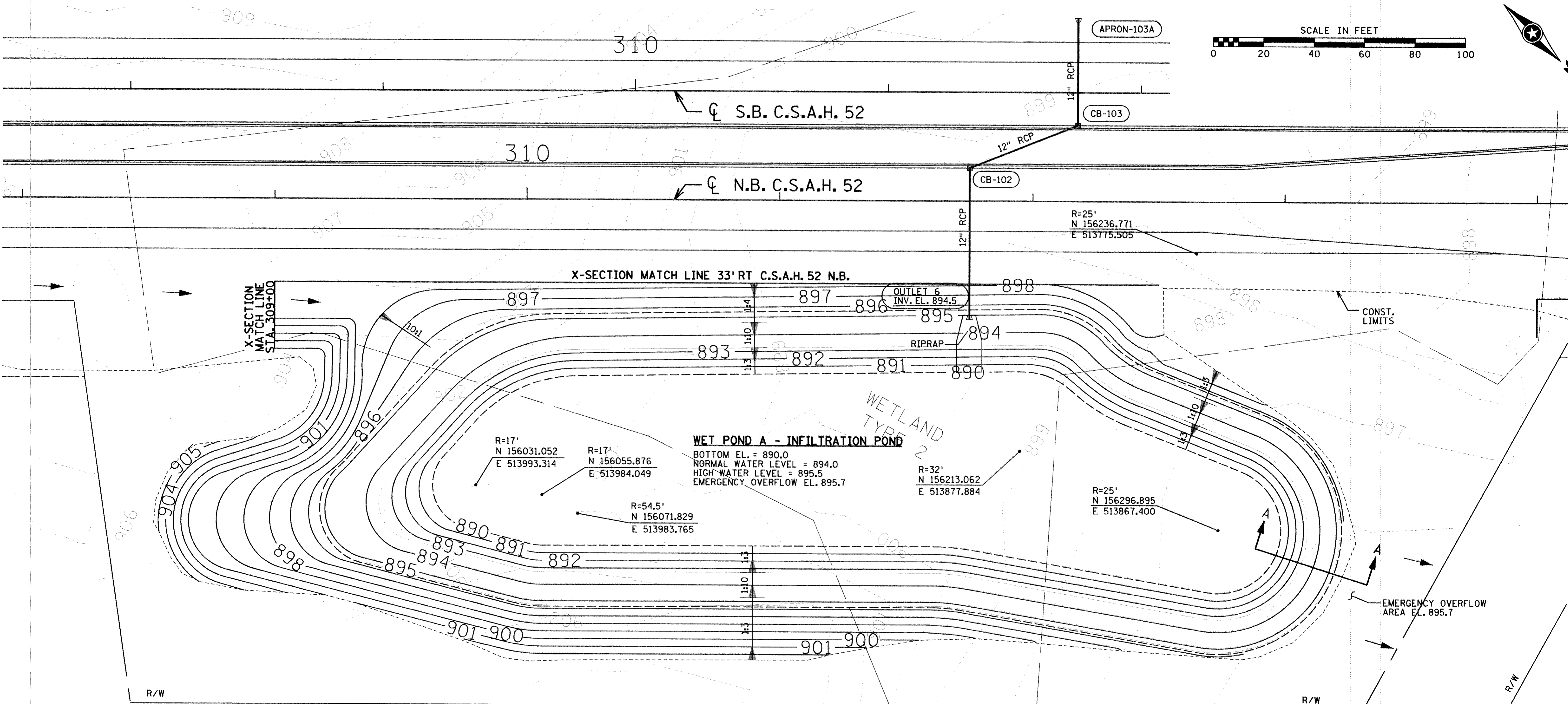
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 DESIGN BY PCM DATE 11-8-00
 CHECKED BY JMW DATE 11-8-00

STATE PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

TKDA
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 ENGINEERS • ARCHITECTS • PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 GRADING PLAN
C.S.A.H. 52 RECONSTRUCTION
 SOUTH INPLACE RADISSON ROAD

SHEET
 163
 OF
 253



X-SECTION MATCH LINE STA. 309+00

X-SECTION MATCH LINE 33' RT C.S.A.H. 52 N.B.

WET POND A - INFILTRATION POND

BOTTOM EL. = 890.0
 NORMAL WATER LEVEL = 894.0
 HIGH WATER LEVEL = 895.5
 EMERGENCY OVERFLOW EL. 895.7

R=17'
 N 156031.052
 E 513993.314

R=17'
 N 156055.876
 E 513984.049

R=54.5'
 N 156071.829
 E 513983.765

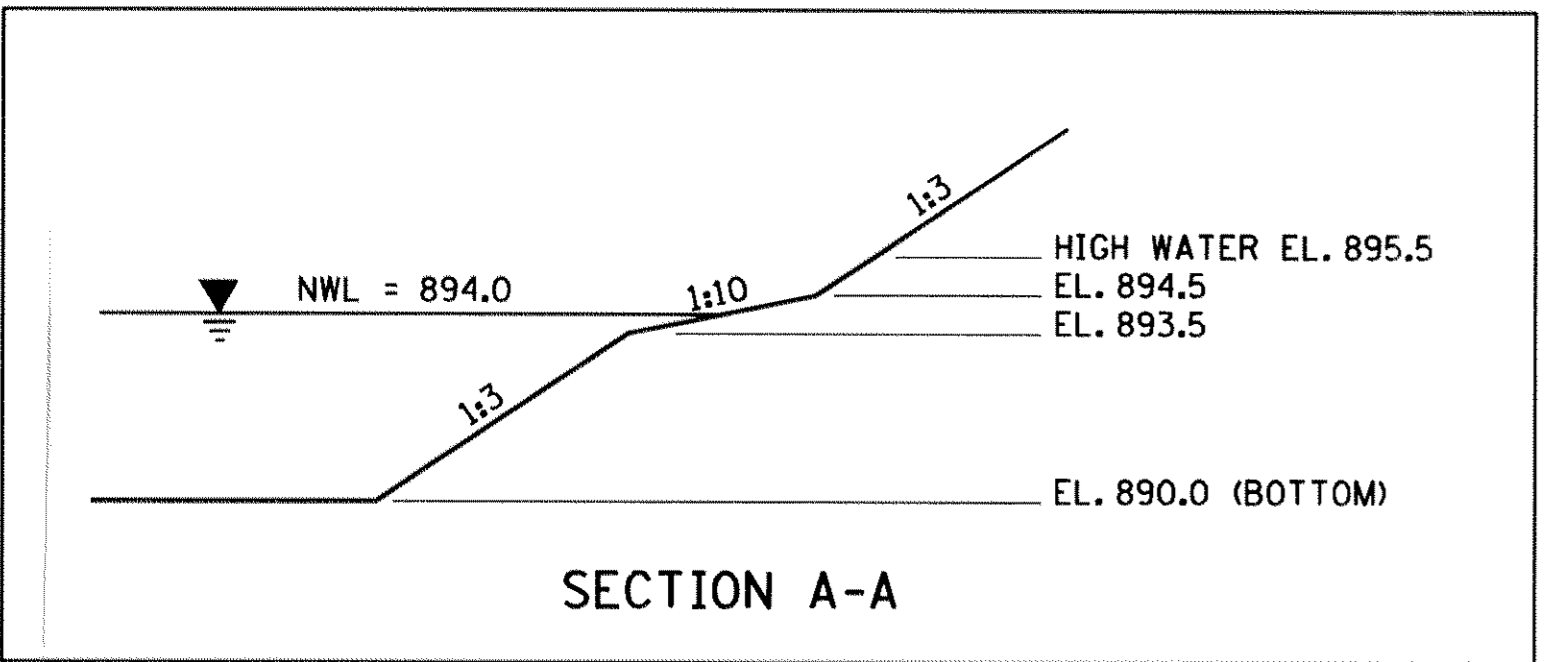
R=32'
 N 156213.062
 E 513877.884

R=25'
 N 156296.895
 E 513867.400

R=98.5'
 N 156247.190
 E 514014.682

NOTES:

1. PLACE SEED MIX 28A (MOD.) ON SIDESLOPES OF POND FROM EL. 893.5 TO EL. 895.5. DO NOT PLACE TOPSOIL IN THIS AREA.
2. PLACE SEED MIX 60A (MOD.) ON SIDESLOPES OF POND ABOVE EL. 895.5
3. NO TOPSOIL OR SEED SHALL BE PLACED ON BOTTOM & SIDESLOPES OF POND BELOW EL. 895.5



STORMWATER INFILTRATION POND A

DRAINAGE AREA: 5.84 ACRES (2.48 ACRES IMPERVIOUS, 3.36 ACRES PERVIOUS)
 INFILTRATION RATE: 0.02 FT/MIN (THROUGH SIDES ONLY, ABOVE 894.0)
 SEASONAL HIGH WATER TABLE EL.: 894.0
 DESIGN EVENT: TWO BACK-TO-BACK 100-YEAR STORMS
 DESIGN HIGH WATER EL.: 895.5
 100-YR. WATER EL.: 894.9

NO	DATE	BY	CKD	APPR	REVISION
NAME: k:\site\proj\c11749\part1\roadway1\drawings\grade02.dgn 25 APR 2001					

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE _____ REG. NO. _____

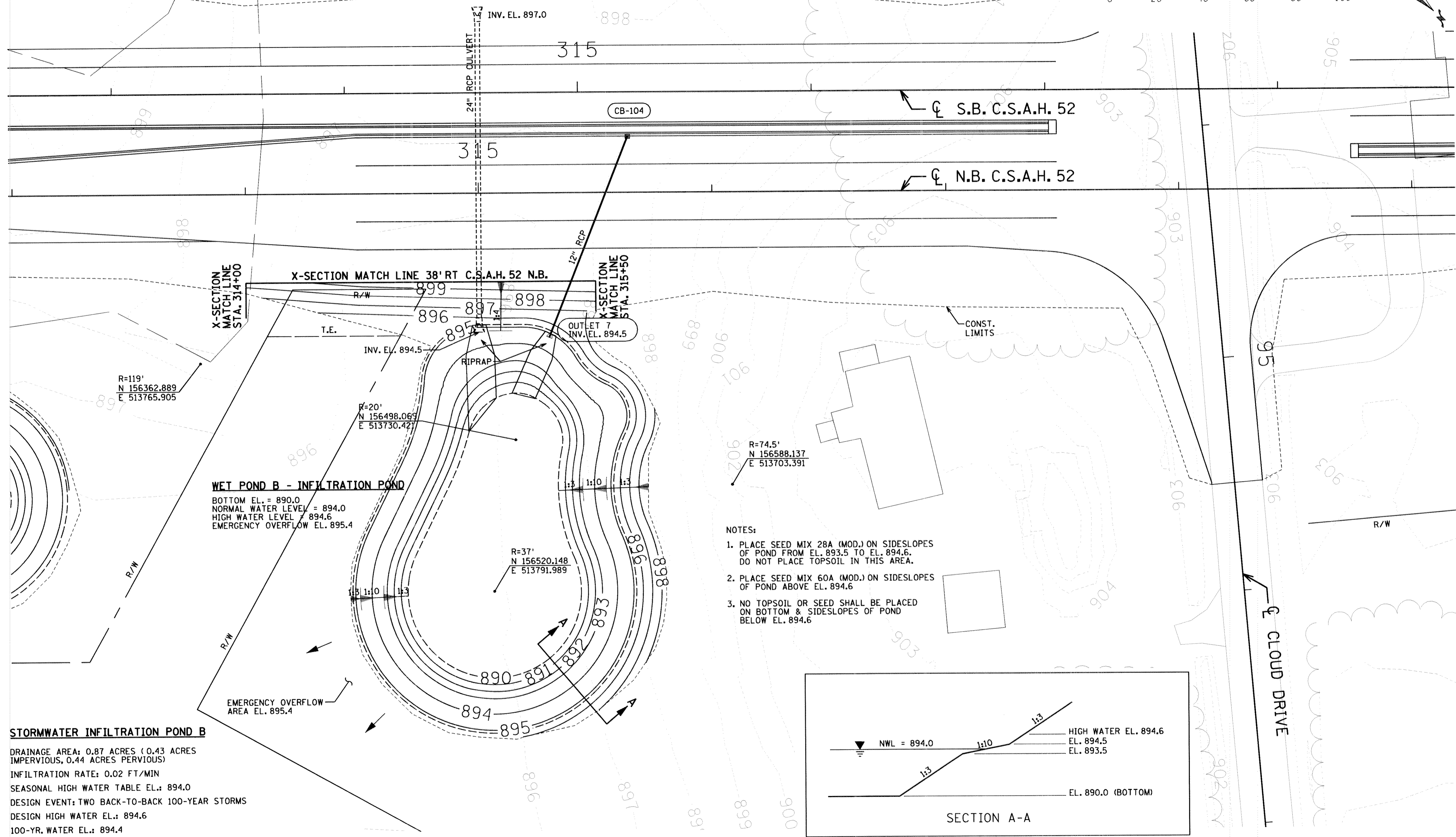
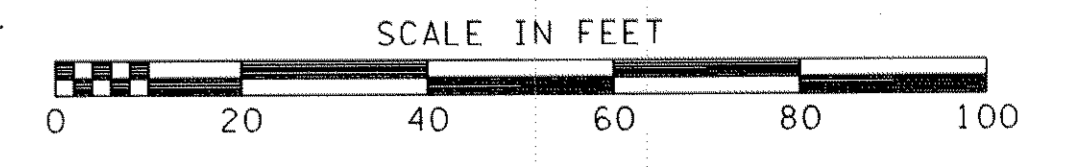
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 DESIGN BY PCM DATE 11-8-00
 CHECKED BY MAW DATE 11-8-00

STATE PROJECT NO.
 S. A. P. 02-652-01
 S. A. P. 106-020-019

TKDA
 TOLTZ, KING, DUVAL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 GRADING PLAN
C.S.A.H. 52 RECONSTRUCTION
 POND A

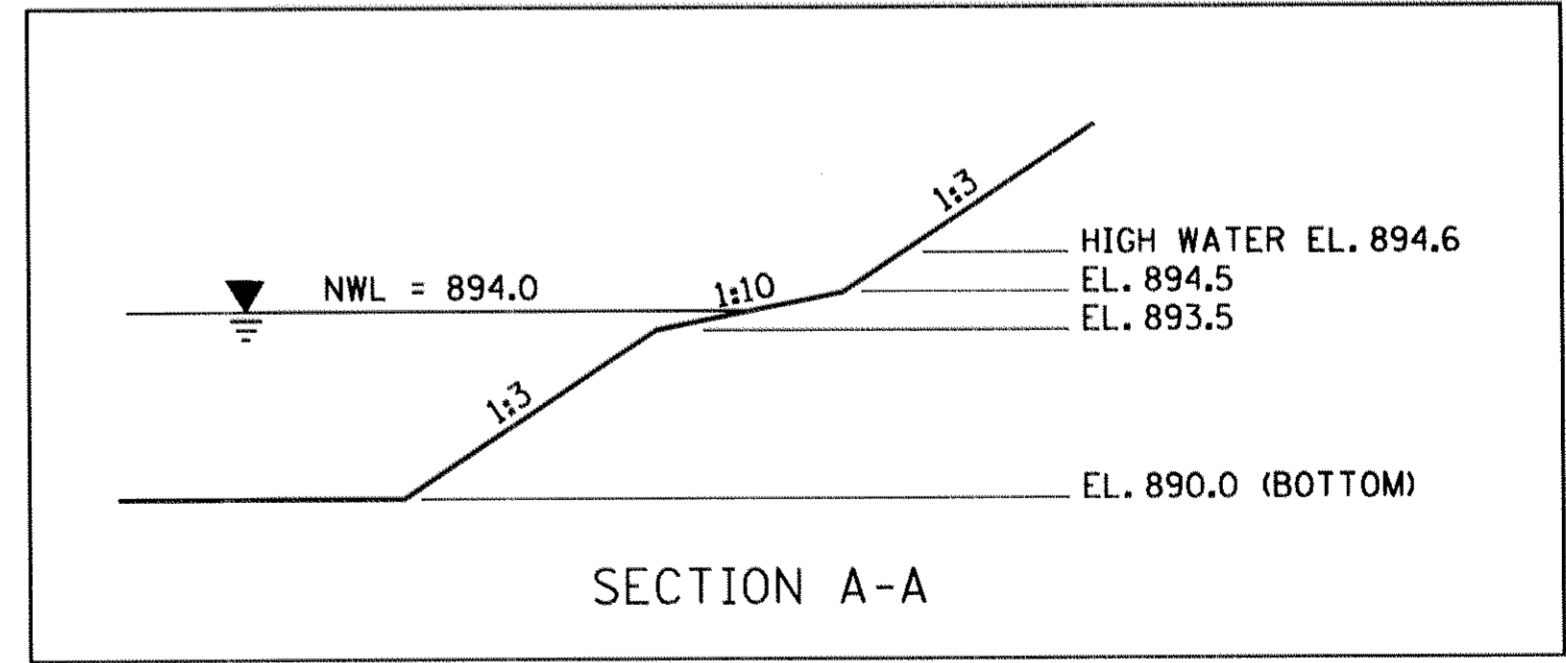
SHEET
 164
 OF
 253



WET POND B - INFILTRATION POND
 BOTTOM EL. = 890.0
 NORMAL WATER LEVEL = 894.0
 HIGH WATER LEVEL = 894.6
 EMERGENCY OVERFLOW EL. 895.4

NOTES:

1. PLACE SEED MIX 28A (MOD.) ON SIDESLOPES OF POND FROM EL. 893.5 TO EL. 894.6. DO NOT PLACE TOPSOIL IN THIS AREA.
2. PLACE SEED MIX 60A (MOD.) ON SIDESLOPES OF POND ABOVE EL. 894.6
3. NO TOPSOIL OR SEED SHALL BE PLACED ON BOTTOM & SIDESLOPES OF POND BELOW EL. 894.6



STORMWATER INFILTRATION POND B
 DRAINAGE AREA: 0.87 ACRES (0.43 ACRES IMPERVIOUS, 0.44 ACRES PERVIOUS)
 INFILTRATION RATE: 0.02 FT/MIN
 SEASONAL HIGH WATER TABLE EL.: 894.0
 DESIGN EVENT: TWO BACK-TO-BACK 100-YEAR STORMS
 DESIGN HIGH WATER EL.: 894.6
 100-YR. WATER EL.: 894.4

NO.	DATE	BY	CKD	APPR	REVISION
NAME: k:\site\proj\11749\part1\roadway\drawings\grade03.dgn 25 APR 2001					

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 DATE _____ REG. NO. _____

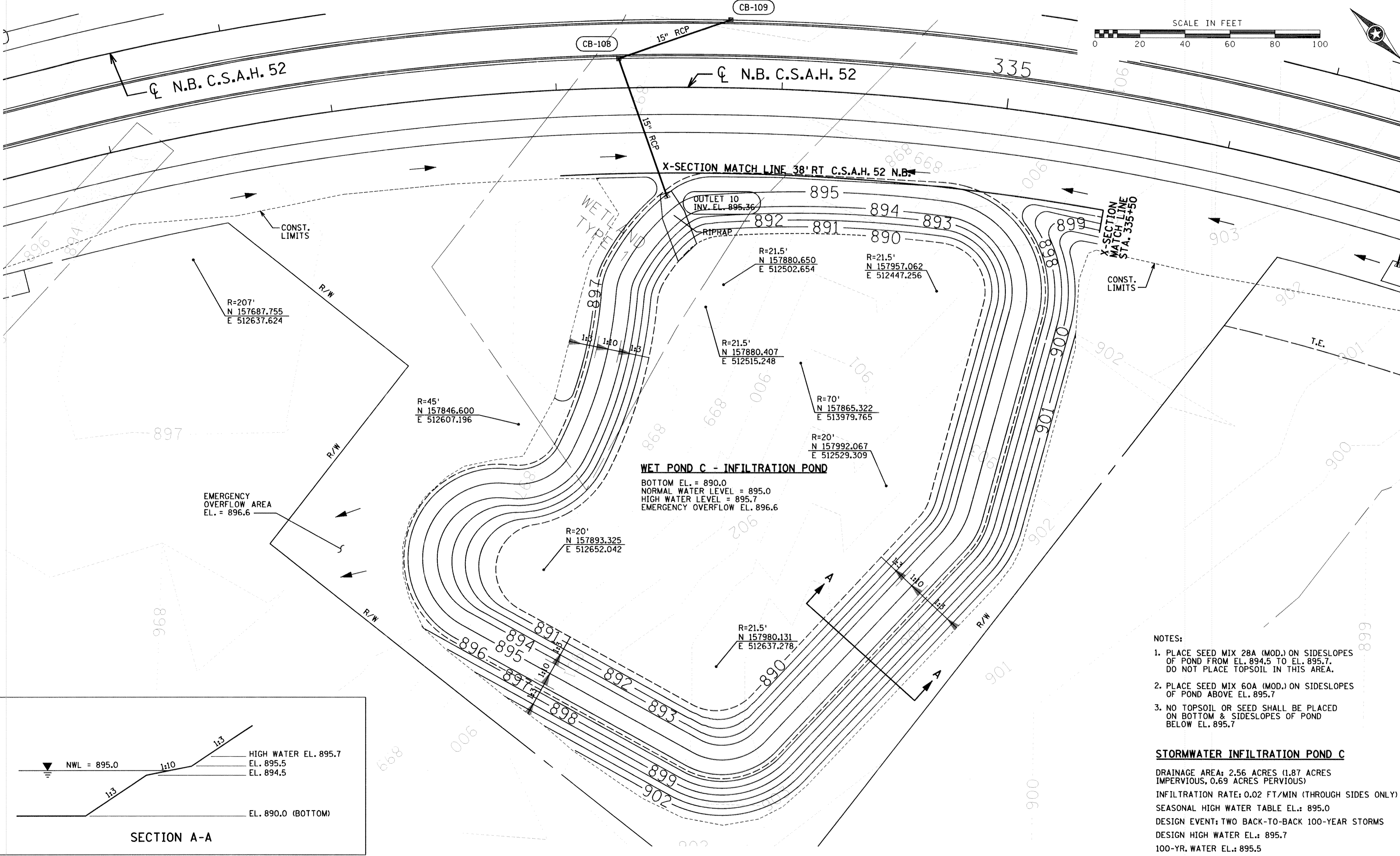
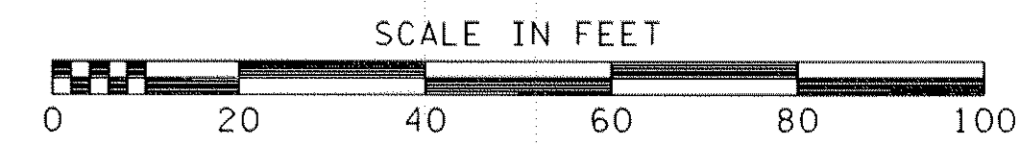
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 DESIGN BY PCM DATE 11-8-00
 CHECKED BY MAW DATE 11-8-00

STATE PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

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 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 GRADING PLAN
 C.S.A.H. 52 RECONSTRUCTION
 POND B

SHEET
 165
 OF
 253

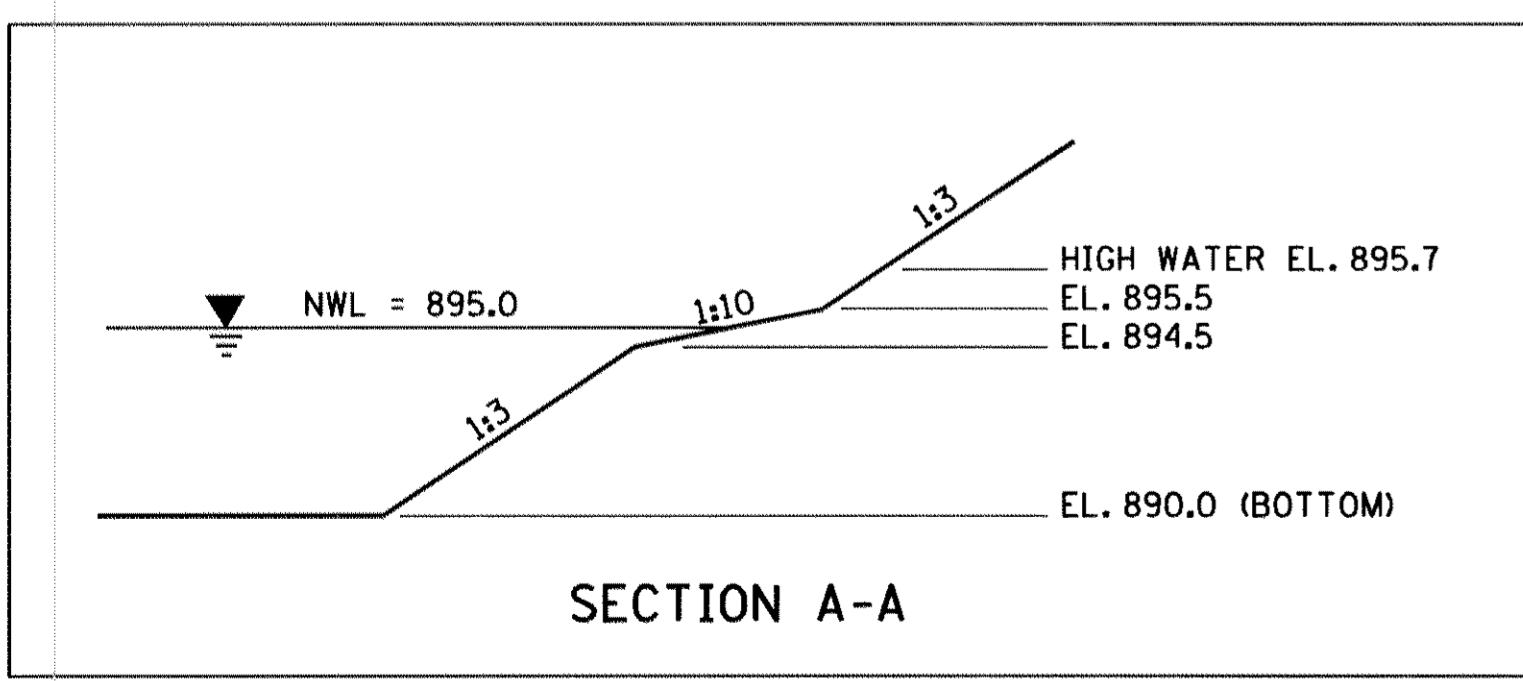


WET POND C - INFILTRATION POND
 BOTTOM EL. = 890.0
 NORMAL WATER LEVEL = 895.0
 HIGH WATER LEVEL = 895.7
 EMERGENCY OVERFLOW EL. 896.6

EMERGENCY OVERFLOW AREA
 EL. = 896.6

- NOTES:**
1. PLACE SEED MIX 28A (MOD.) ON SIDESLOPES OF POND FROM EL. 894.5 TO EL. 895.7. DO NOT PLACE TOPSOIL IN THIS AREA.
 2. PLACE SEED MIX 60A (MOD.) ON SIDESLOPES OF POND ABOVE EL. 895.7
 3. NO TOPSOIL OR SEED SHALL BE PLACED ON BOTTOM & SIDESLOPES OF POND BELOW EL. 895.7

STORMWATER INFILTRATION POND C
 DRAINAGE AREA: 2.56 ACRES (1.87 ACRES IMPERVIOUS, 0.69 ACRES PERVIOUS)
 INFILTRATION RATE: 0.02 FT/MIN (THROUGH SIDES ONLY)
 SEASONAL HIGH WATER TABLE EL.: 895.0
 DESIGN EVENT: TWO BACK-TO-BACK 100-YEAR STORMS
 DESIGN HIGH WATER EL.: 895.7
 100-YR. WATER EL.: 895.5



NO	DATE	BY	CKD	APPR	REVISION
NAME: k:\site\proj\c11749\par\11\roadway\drawings\grade04.dgn 25 APR 2001					

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 DATE _____ REG. NO. _____

DRAWN BY PCM DATE 11-8-00
 DESIGN BY PCM DATE 11-8-00
 CHECKED BY MAW DATE 11-8-00

STATE PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

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 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 GRADING PLAN
 C.S.A.H. 52 RECONSTRUCTION
 POND C

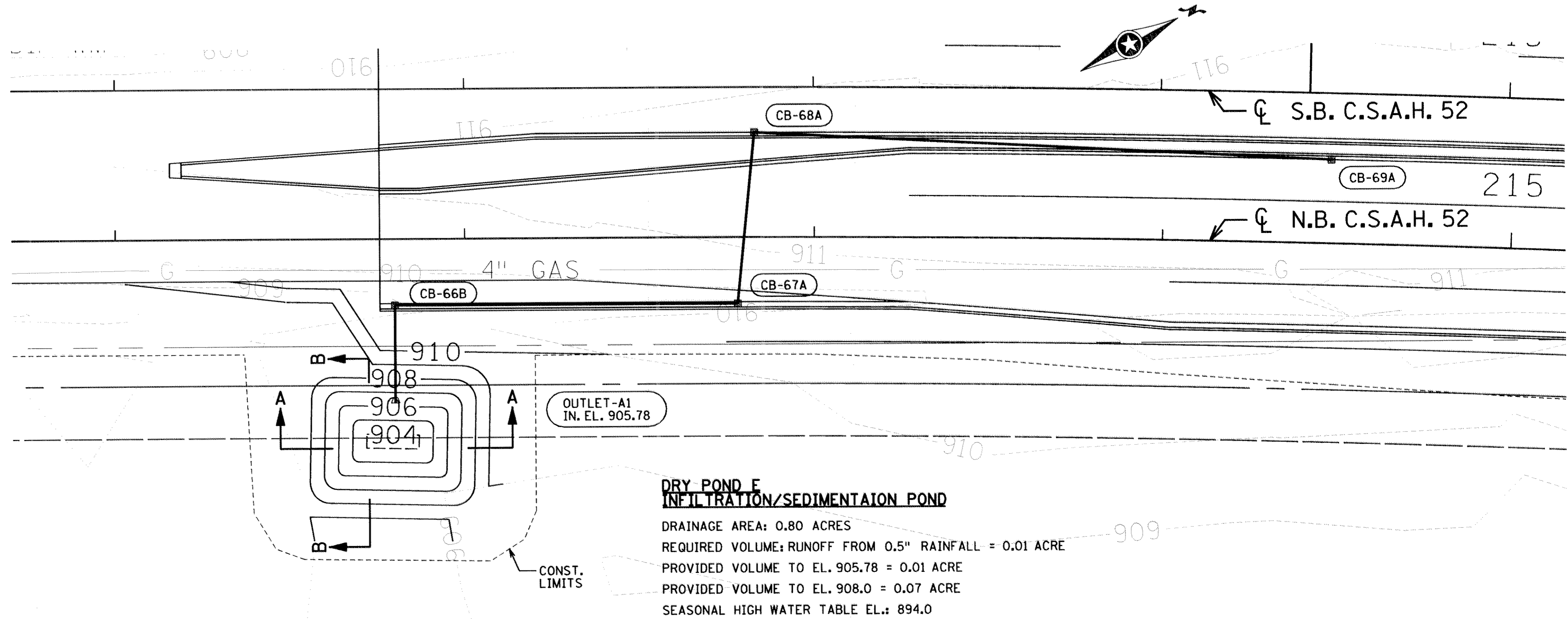
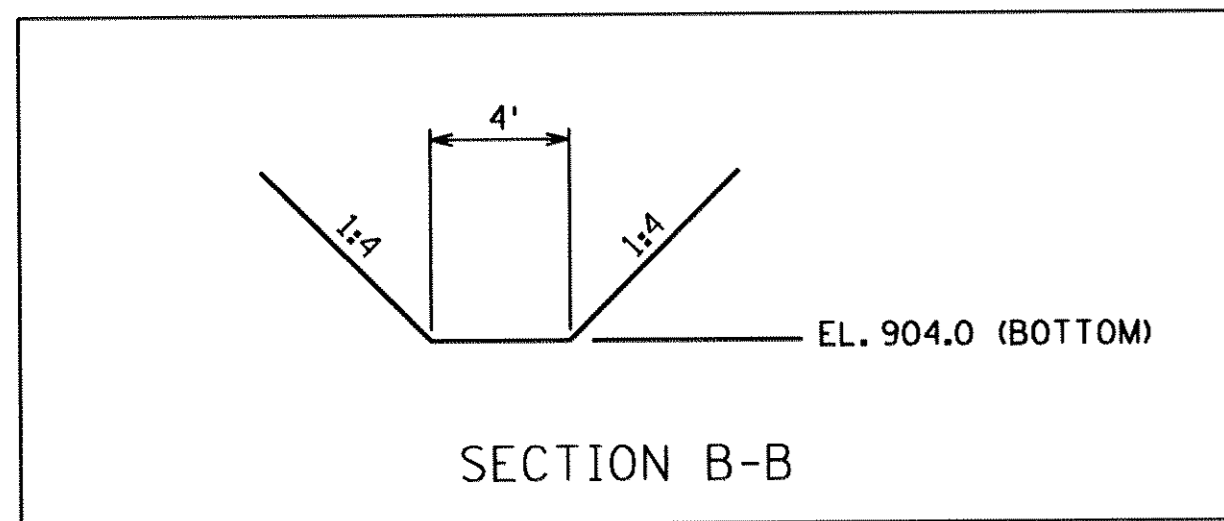
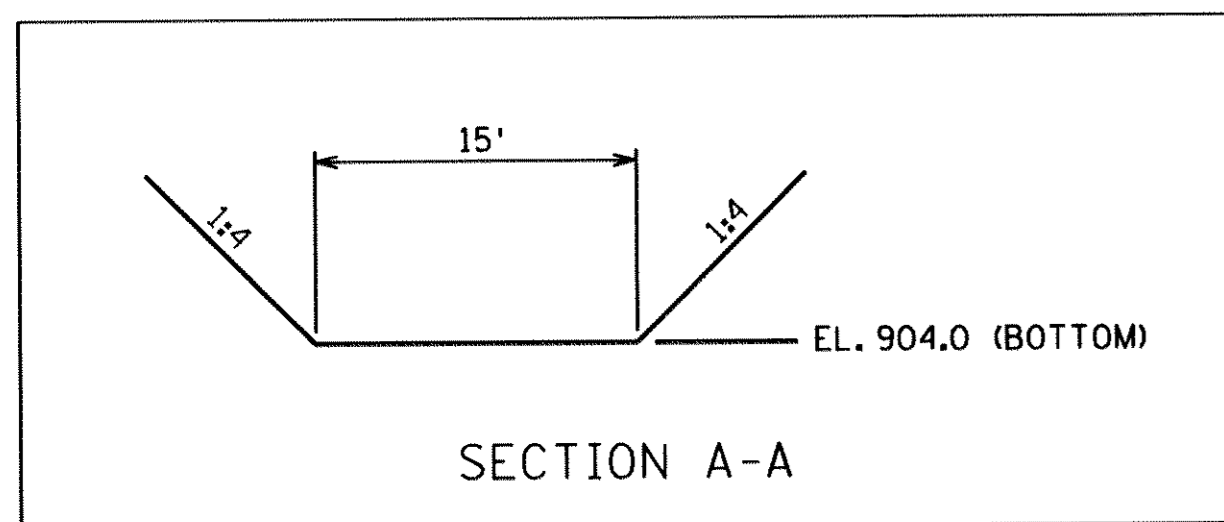
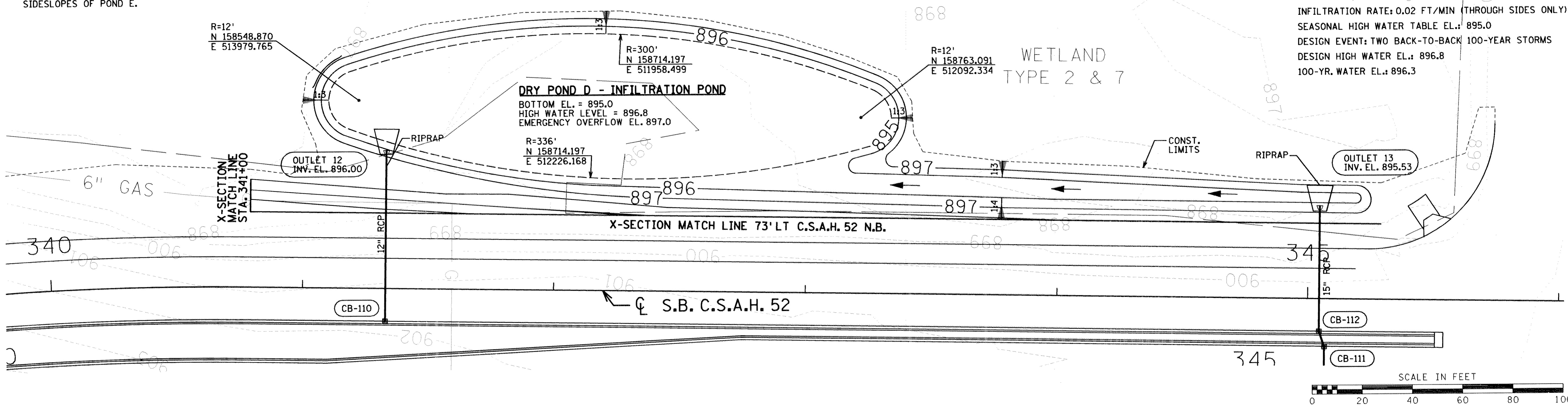
SHEET
 166
 OF
 253

NOTES:

1. PLACE SEED MIX 28A (MOD.) ON BOTTOM AND SIDESLOPES OF POND D.
2. PLACE SEED MIX 60A (MOD.) ON BOTTOM AND SIDESLOPES OF POND E.

STORMWATER INFILTRATION POND D

DRAINAGE AREA: 1.71 ACRES (1.08 ACRES IMPERVIOUS, 0.63 ACRES PERVIOUS)
 INFILTRATION RATE: 0.02 FT/MIN (THROUGH SIDES ONLY)
 SEASONAL HIGH WATER TABLE EL.: 895.0
 DESIGN EVENT: TWO BACK-TO-BACK 100-YEAR STORMS
 DESIGN HIGH WATER EL.: 896.8
 100-YR. WATER EL.: 896.3



DRY POND E INFILTRATION/SEDIMENTATION POND

DRAINAGE AREA: 0.80 ACRES
 REQUIRED VOLUME: RUNOFF FROM 0.5" RAINFALL = 0.01 ACRE
 PROVIDED VOLUME TO EL. 905.78 = 0.01 ACRE
 PROVIDED VOLUME TO EL. 908.0 = 0.07 ACRE
 SEASONAL HIGH WATER TABLE EL.: 894.0

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.

DRAWN BY PCM DATE 11-8-00
 DESIGN BY PCM DATE 11-8-00
 CHECKED BY MAW DATE 11-8-00

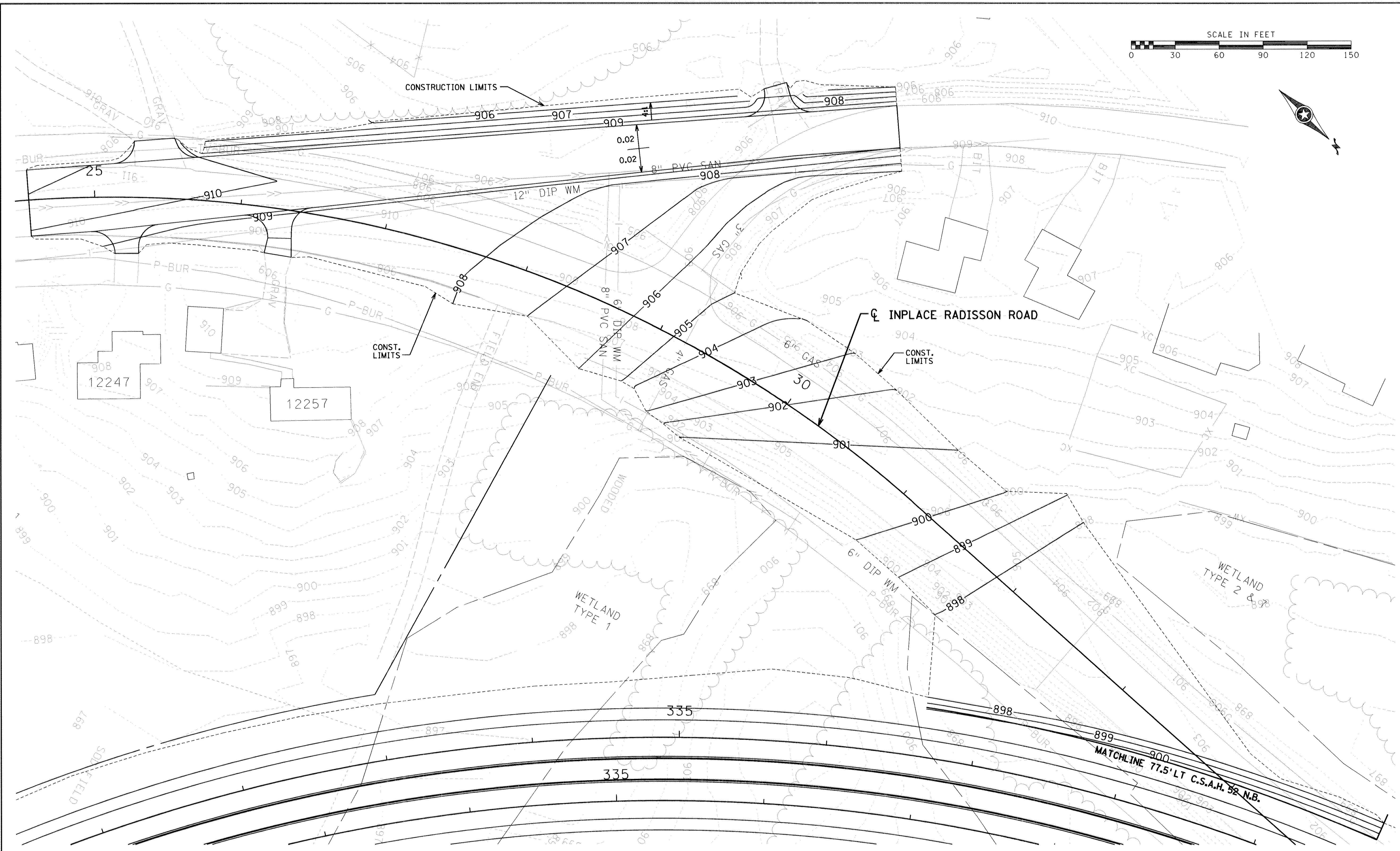
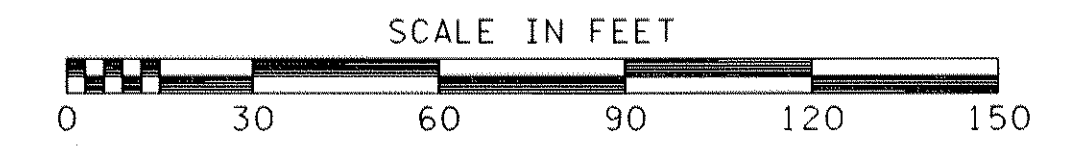
STATE PROJECT NO.

S.A.P. 02-652-01
 S.A.P. 106-020-019

TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 GRADING PLAN
 C.S.A.H. 52 RECONSTRUCTION
 POND D AND POND E

SHEET
 167
 OF
 253



NO	DATE	BY	CKD	APPR	REVISION

NAME: k:\site\proj\c11749\part1\roadway\drawings\grade06.dgn 25 APR 2001

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE _____ REG. NO. _____

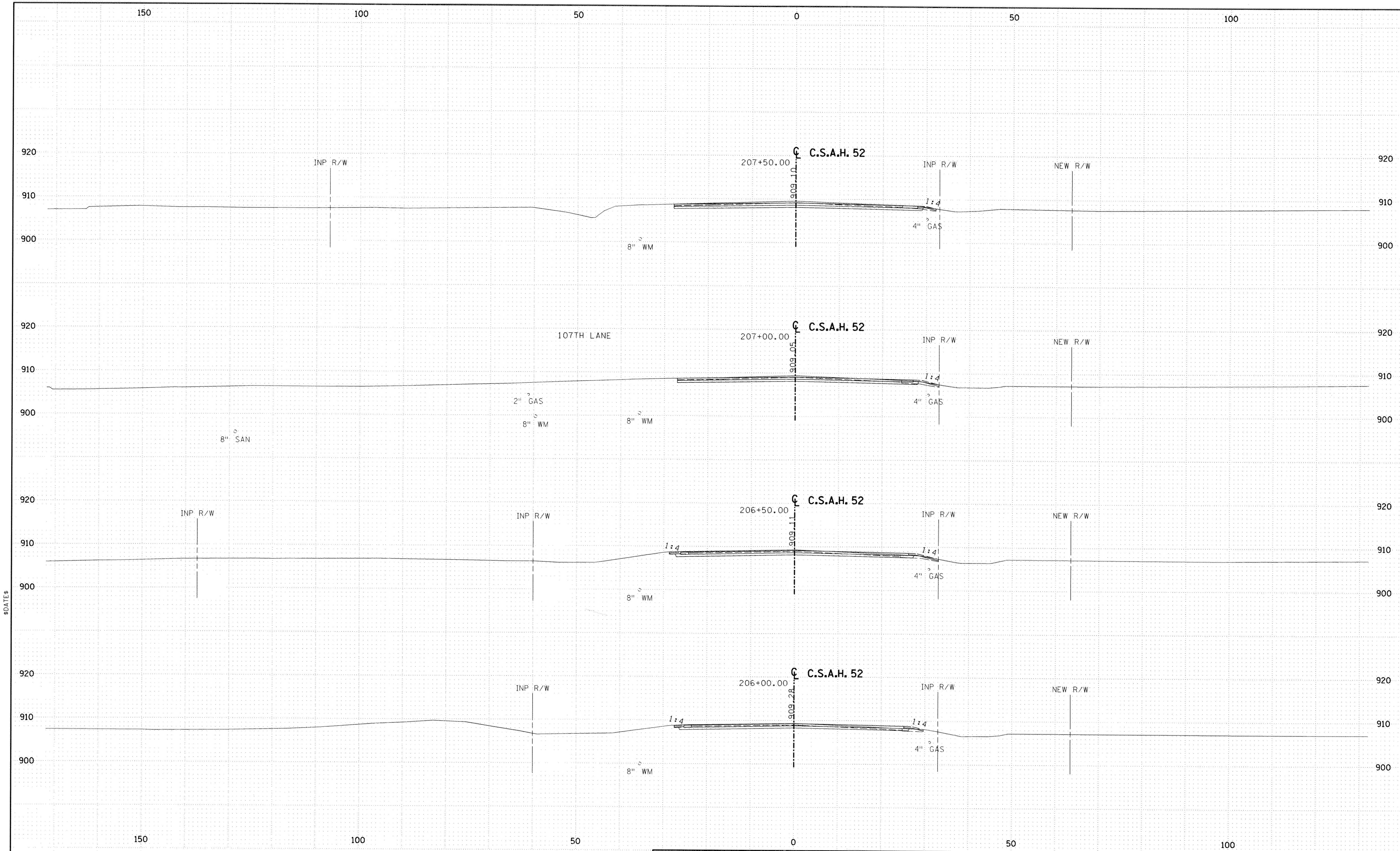
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STATE PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

TKDA
 TOLTZ, KING, DUVAL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 GRADING PLAN
 C.S.A.H. 52 RECONSTRUCTION
 NORTH INPLACE RADISSON ROAD

SHEET
 168
 OF
 253



\$DATE\$
 \$FILE\$

STATE AID PROJECT NO. S. A. P. 02-652-01 S. A. P. 106-020-019	TKDA <small>TOLTZ, KING, DUVAL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA</small>	ANOKA COUNTY CROSS SECTIONS C.S.A.H. 52 RECONSTRUCTION STA. 206+00 TO STA. 207+50	SHEET 169 OF 253
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C.S.A.H. 52

209+50.00

909.86

INP R/W

INP R/W

NEW R/W

T-BUR

1:4

8" WM

1:4

4" GAS

C.S.A.H. 52

209+00.00

909.66

INP R/W

INP R/W

NEW R/W

T-BUR

1:4

8" WM

1:4

4" GAS

C.S.A.H. 52

208+50.00

909.46

INP R/W

INP R/W

NEW R/W

T-BUR

1:4

8" WM

1:4

4" GAS

C.S.A.H. 52

208+00.00

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INP R/W

INP R/W

NEW R/W

T-BUR

1:4

8" WM

1:4

4" GAS

STATE AID PROJECT NO.
S.A.P. 02-652-01
S.A.P. 106-020-019

TKDA
TOLTZ, KING, DUVALL, ANDERSON
AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
STA. 208+00 TO STA. 209+00

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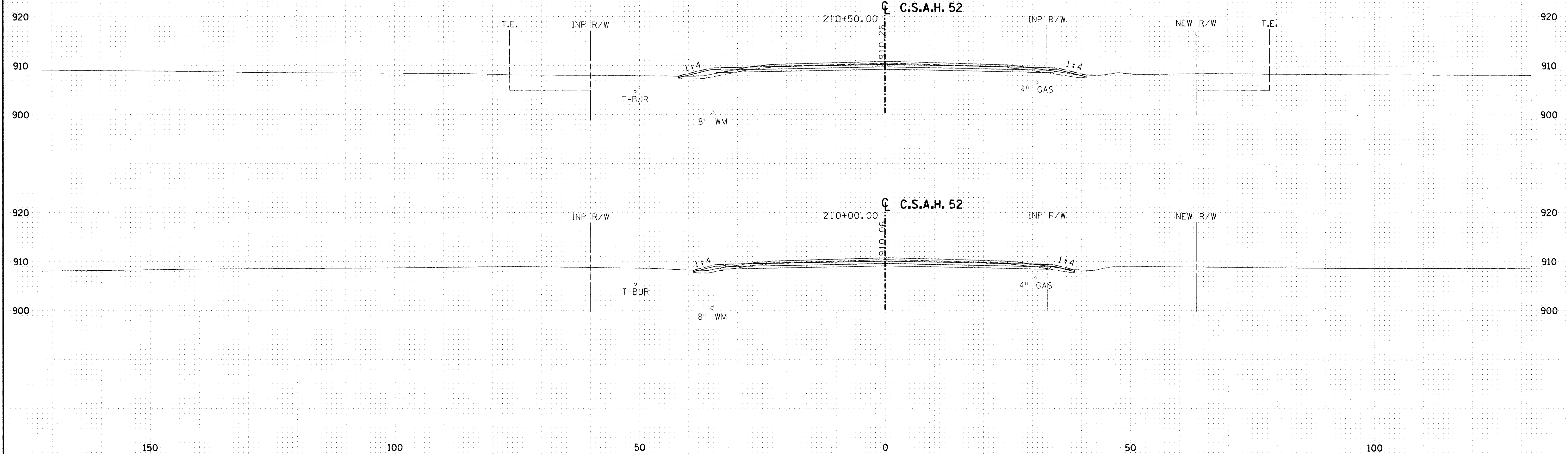
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STATE AID PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

TKDA
 TOLTZ, KING, DUVAL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 209+50 TO STA. 210+50

SHEET
 171
 OF
 253

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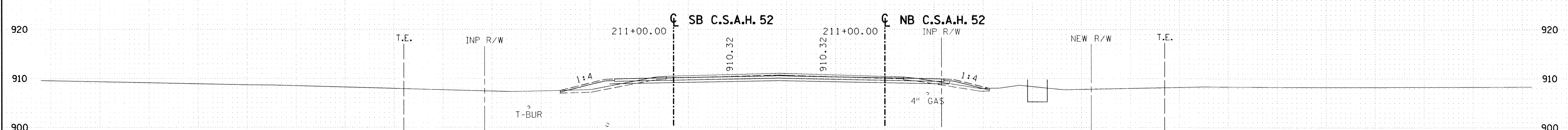
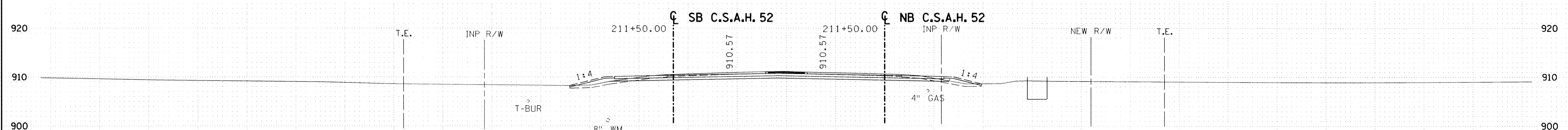
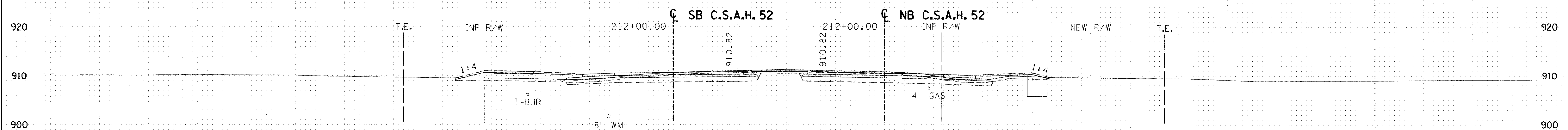
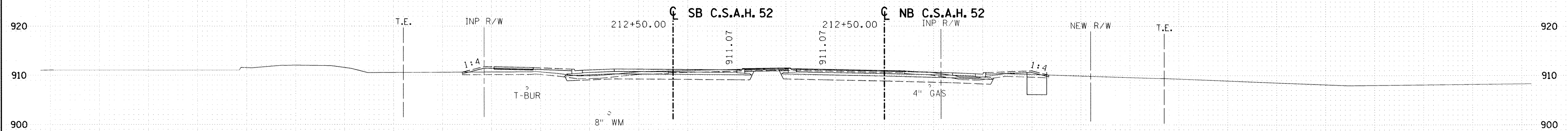
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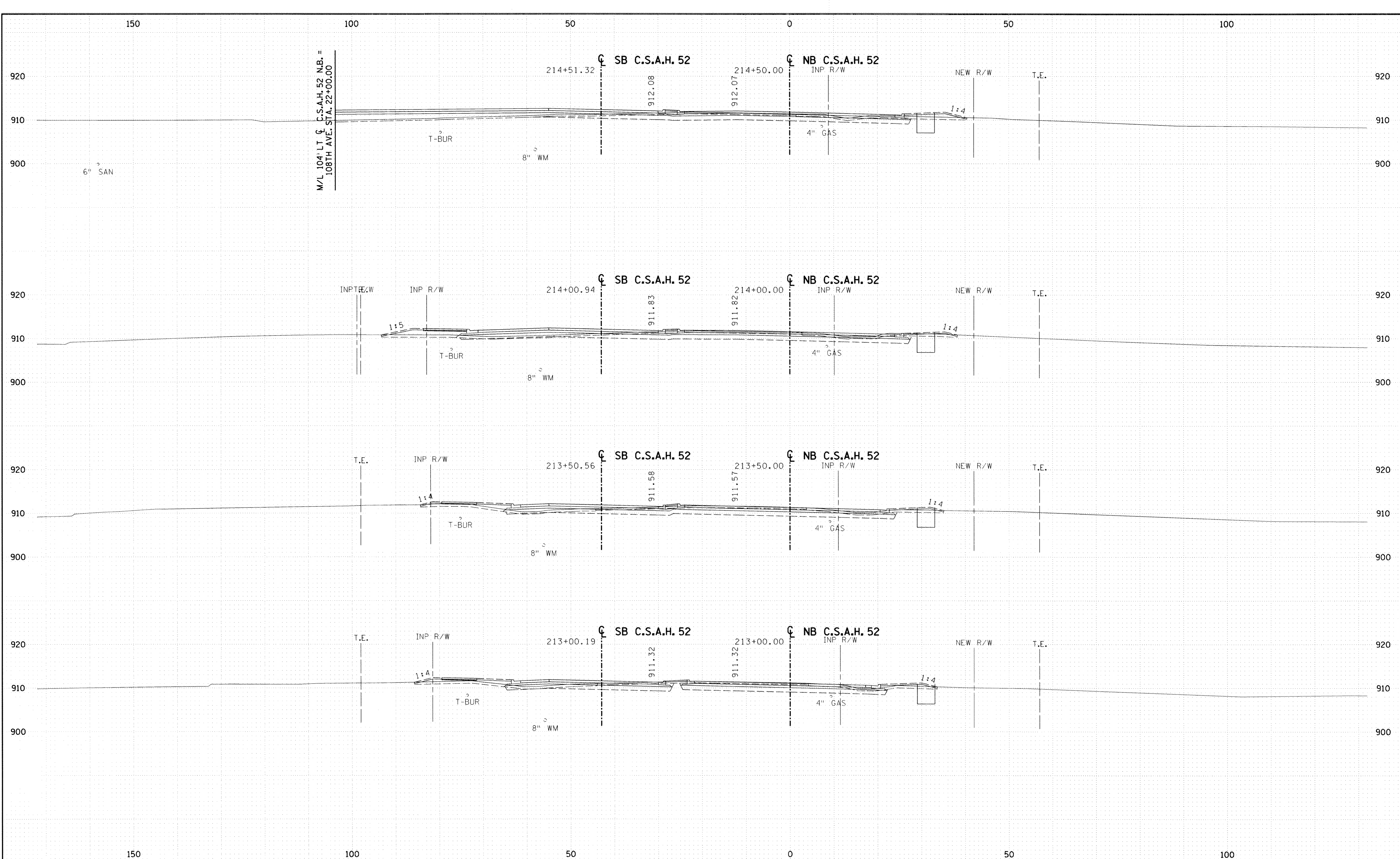
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S.A.P. 106-020-019

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ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
STA. 211+00 TO STA. 212+50

SHEET
172
OF
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STATE AID PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

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 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 213+00 TO STA. 214+50

SHEET
 173
 OF
 253

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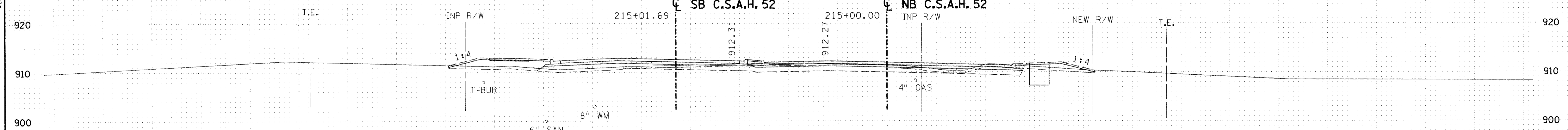
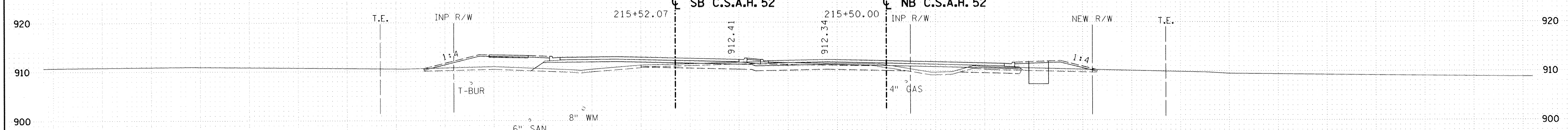
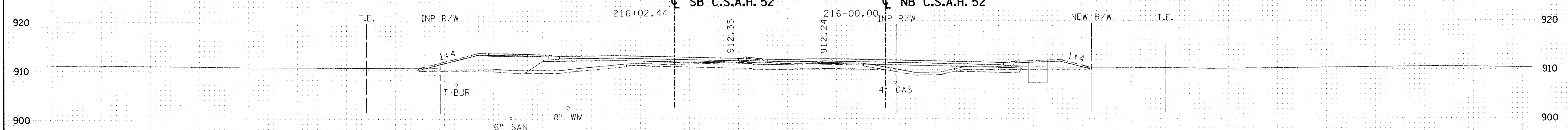
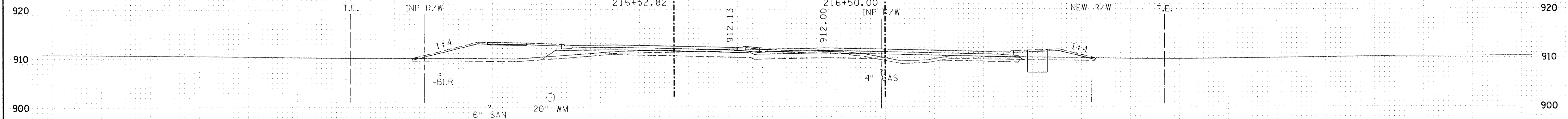
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STATE AID PROJECT NO.
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 S.A.P. 106-020-019

TKDA
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 AND ASSOCIATES, INCORPORATED
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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 215+00 TO STA. 216+50

SHEET
 174
 OF
 253

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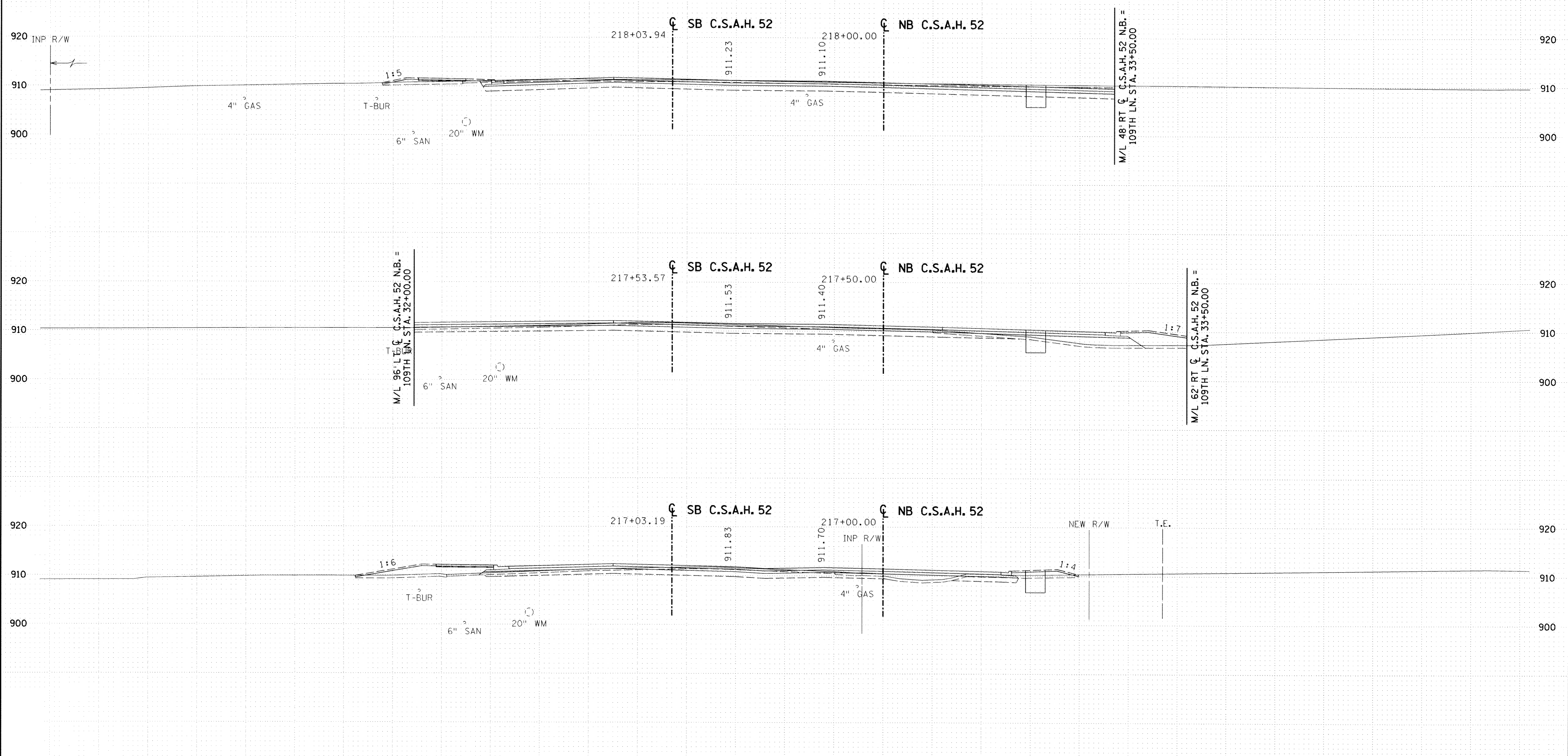
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STATE AID PROJECT NO.
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 S.A.P. 106-020-019

TKDA
 TOLTZ, KING, DUVAL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 217+00 TO STA. 218+00

SHEET
 175
 OF
 253

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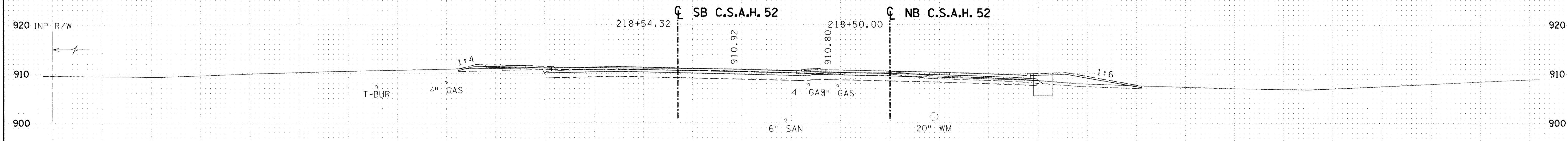
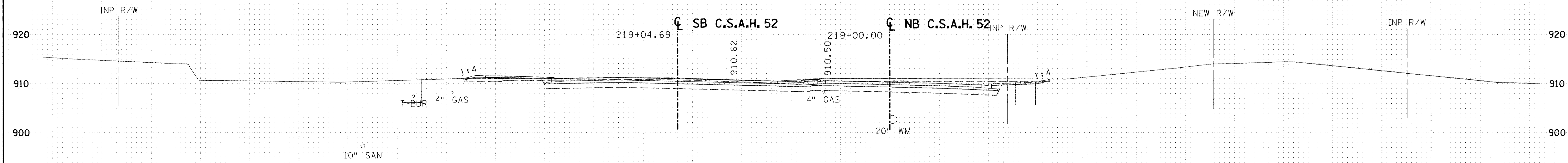
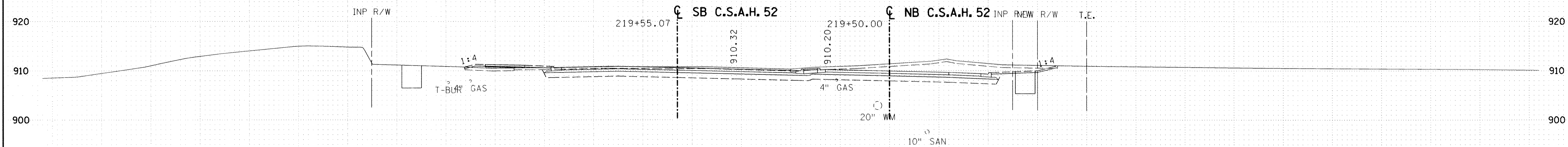
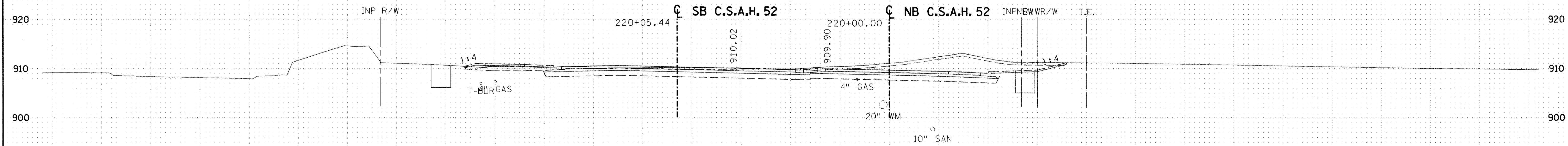
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STATE AID PROJECT NO.
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TKDA
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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 218+50 TO STA. 220+00

SHEET
 176
 OF
 253

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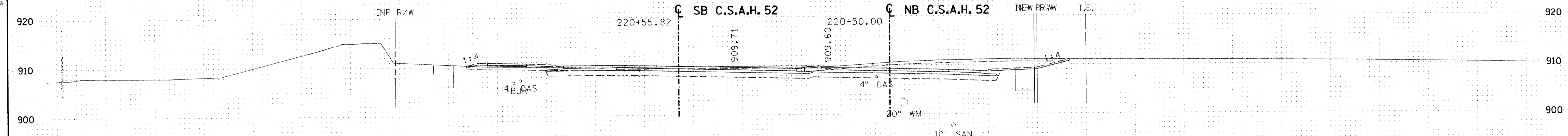
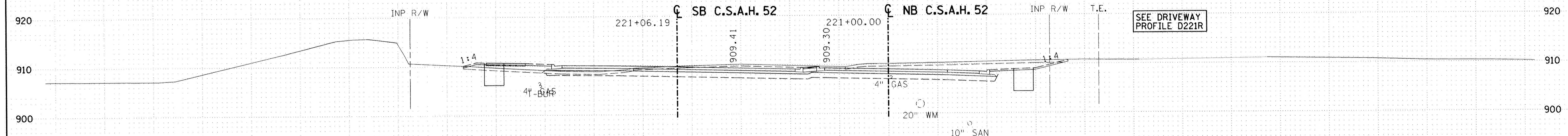
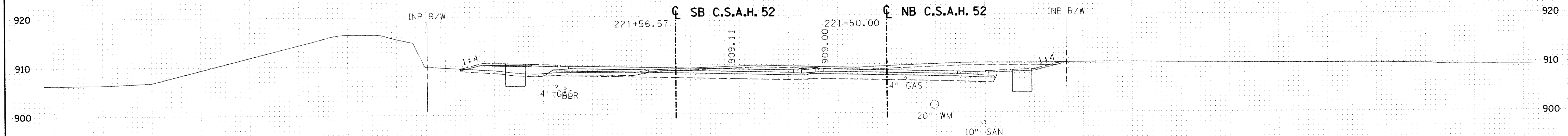
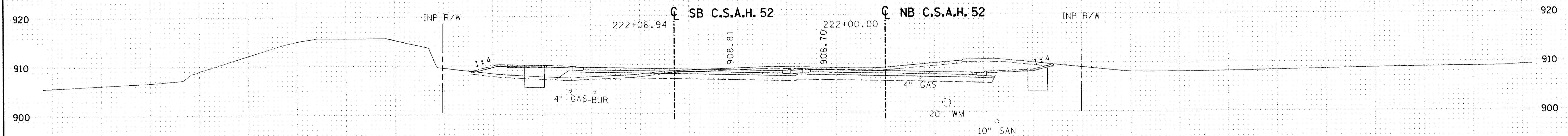
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100



150

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100

STATE AID PROJECT NO.

S.A.P. 02-652-01
S.A.P. 106-020-019

TKDA

TOLTZ, KING, DUVALL, ANDERSON
AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
STA. 220+50 TO STA. 222+00

SHEET
177
OF
253

150

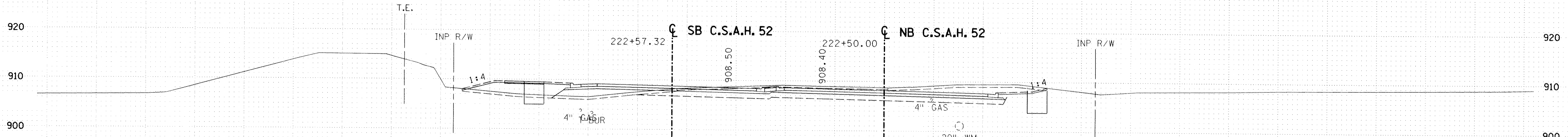
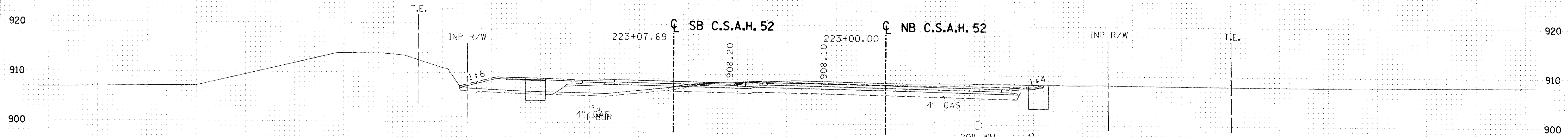
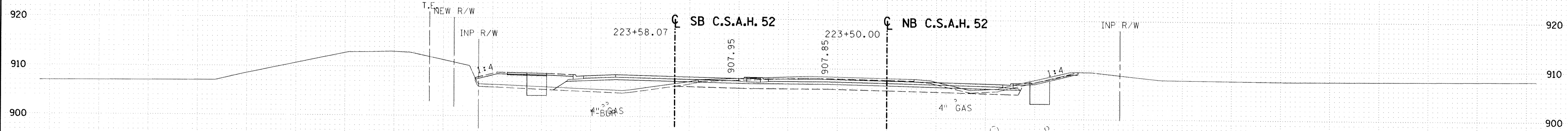
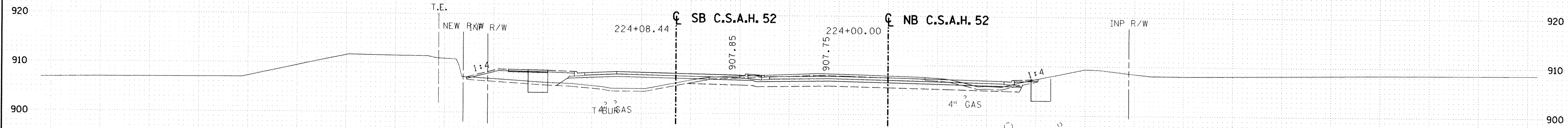
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100



150

100

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50

100

STATE AID PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019



ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 222+50 TO STA. 224+00

SHEET
 178
 OF
 253

150

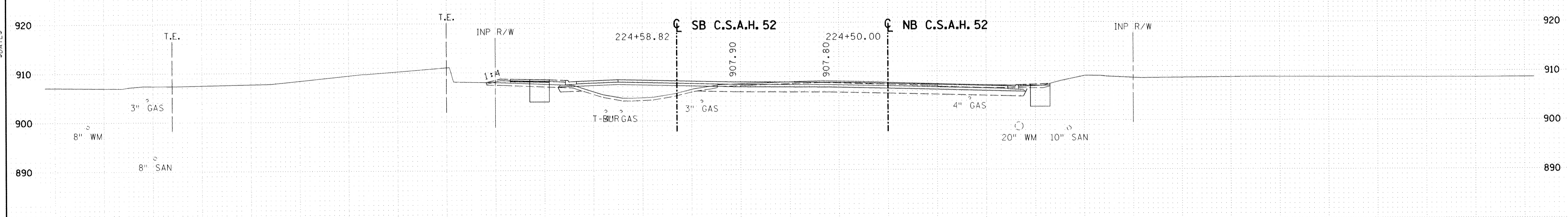
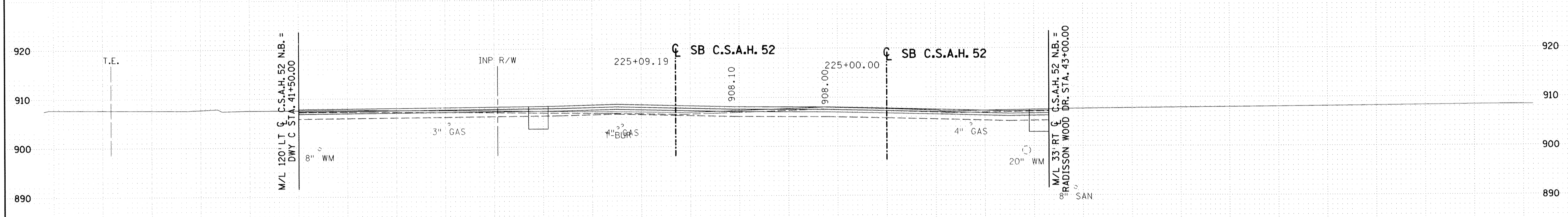
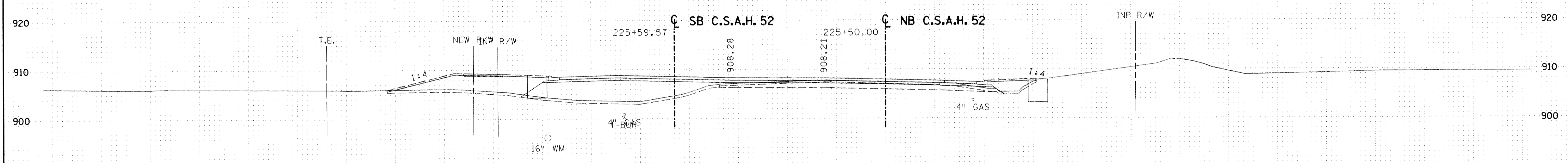
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STATE AID PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 224+50 TO STA. 225+50

SHEET
 179
 OF
 253

150

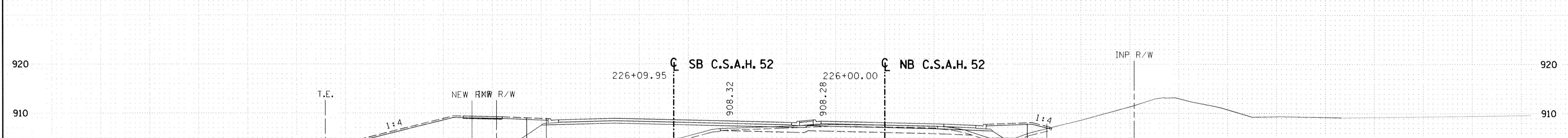
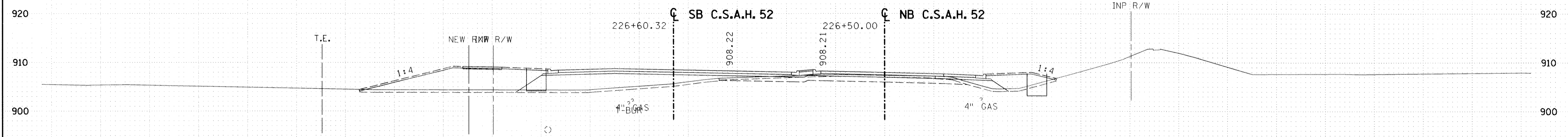
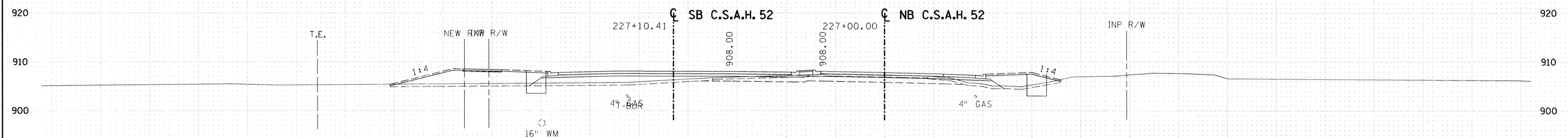
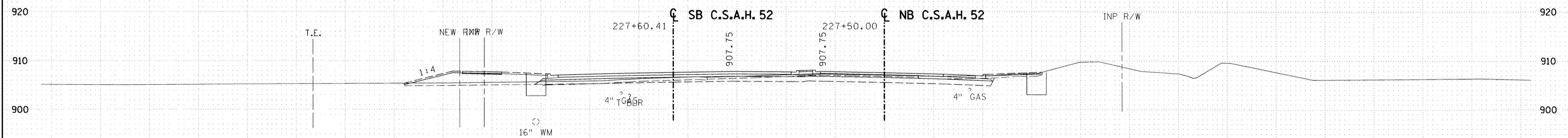
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STATE AID PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

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 TOLTZ, KING, DUVALL, ANDERSON
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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 226+00 TO STA. 227+50

SHEET
 180
 OF
 253

150

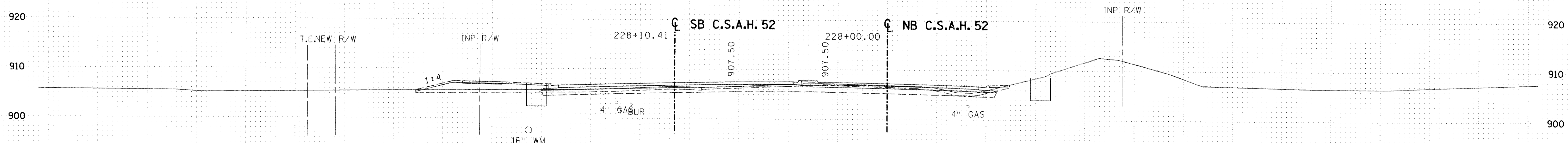
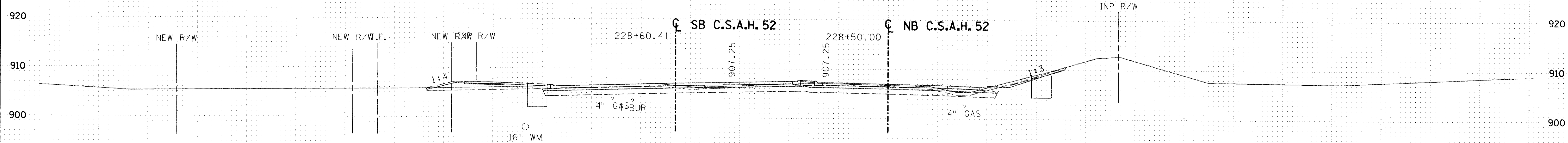
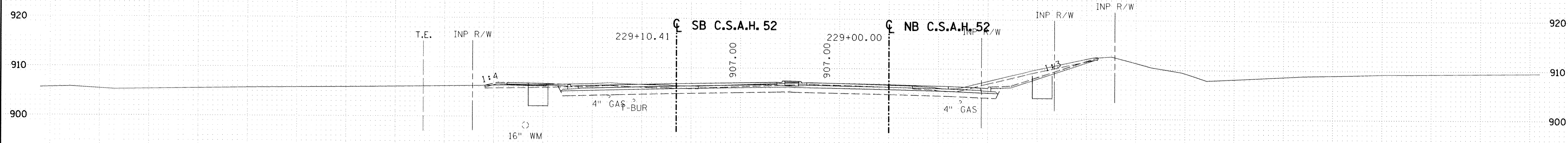
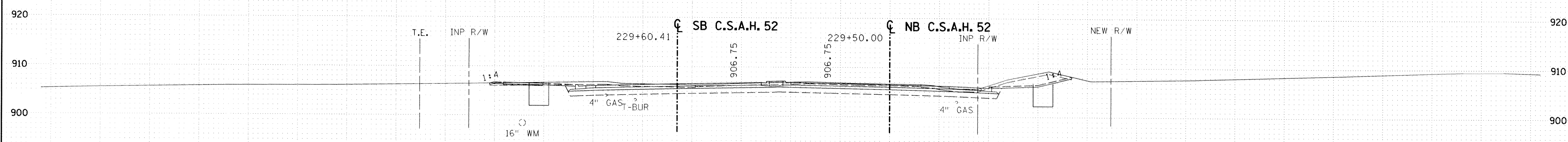
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STATE AID PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

TKDA
 TOLTZ, KING, DUVAL, ANDERSON
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 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 228+00 TO STA. 229+50

SHEET
 181
 OF
 253

150

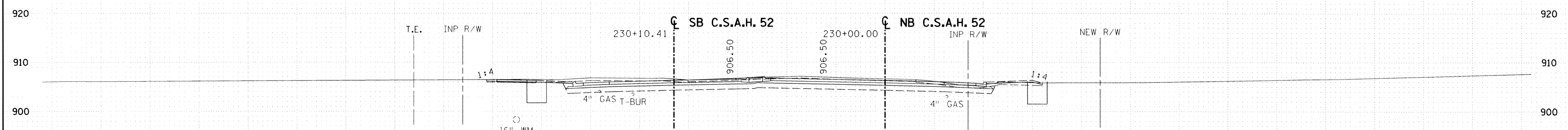
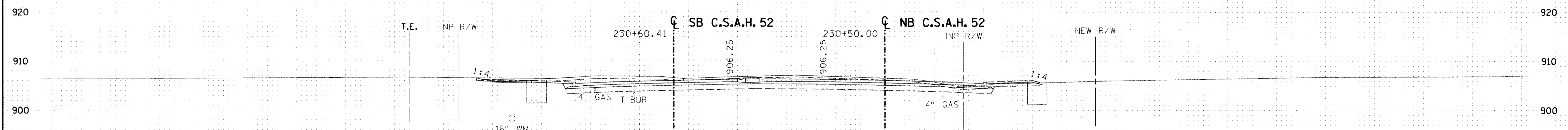
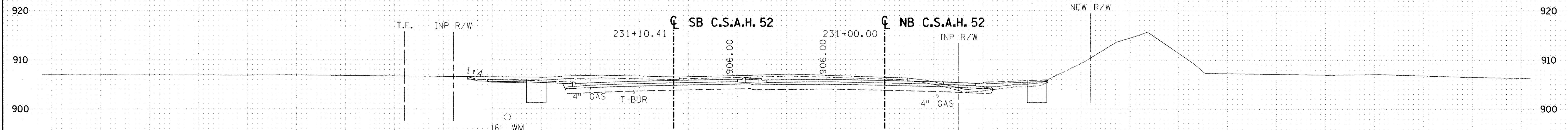
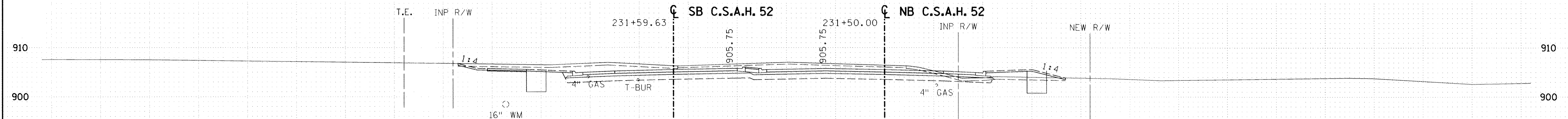
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STATE AID PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

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ANOKA COUNTY
 CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
 STA. 230+00 TO STA. 231+50

SHEET
 182
 OF
 253

150

100

50

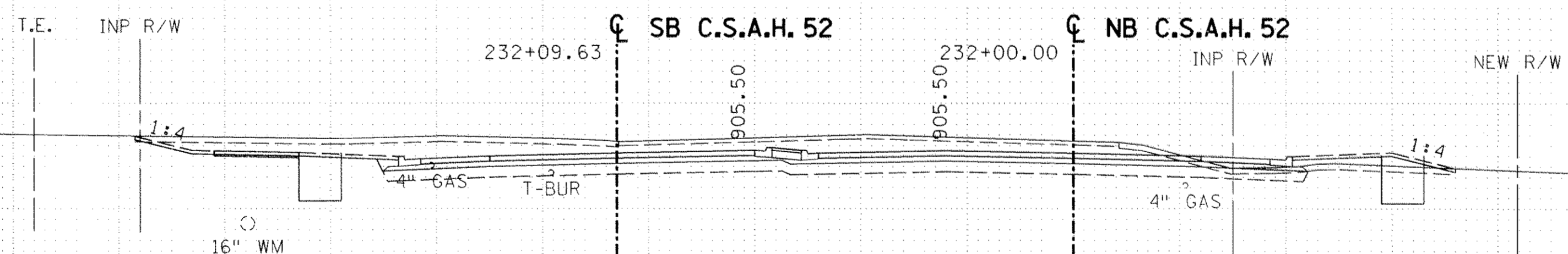
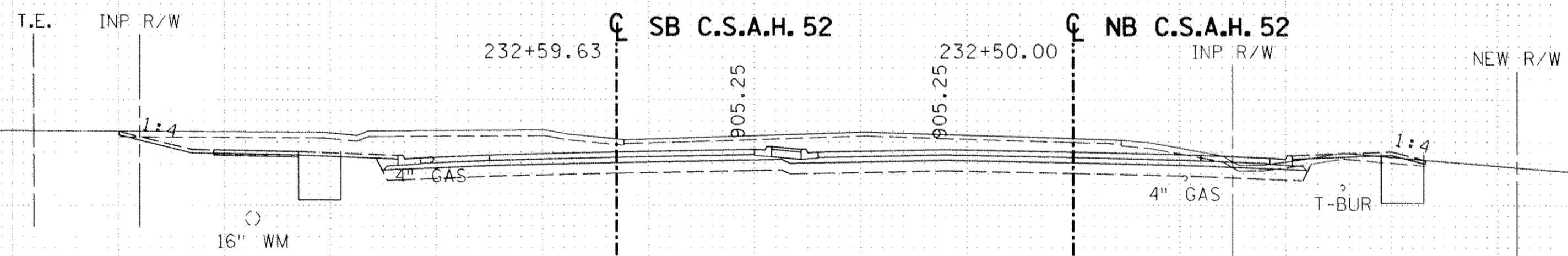
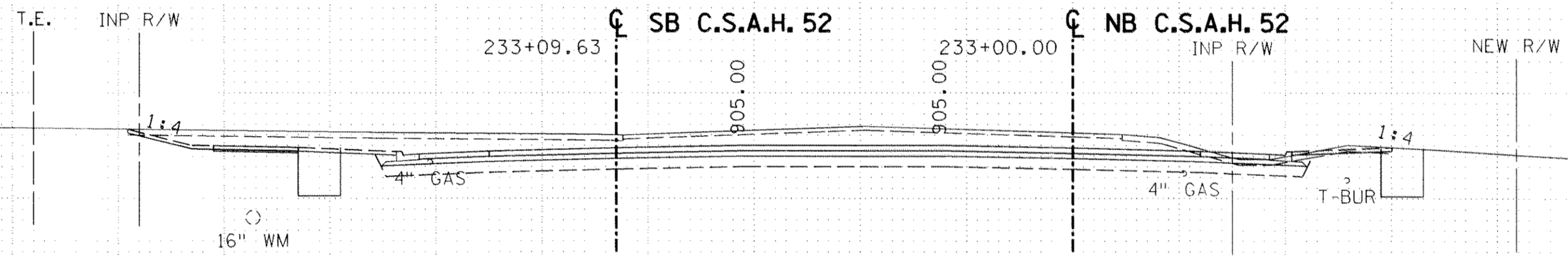
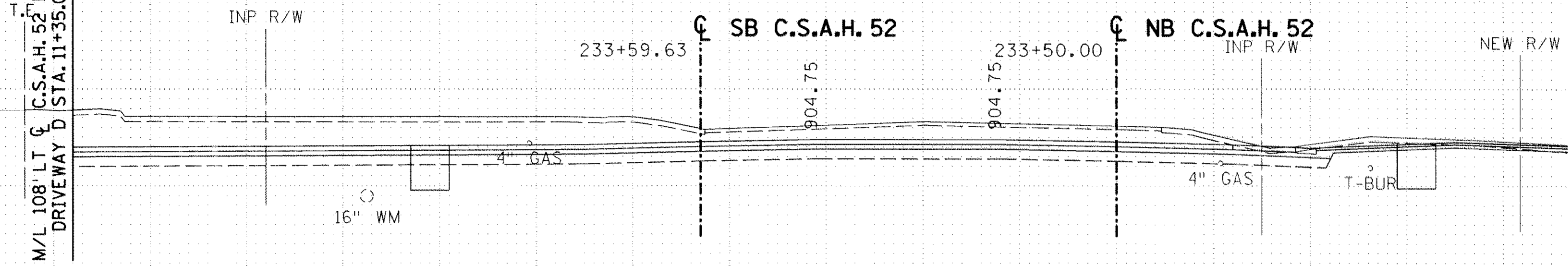
0

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100

M/L 108' LT C.C.S.A.H. 52 N.B. =
DRIVEWAY D STA. 11+35.00

SEE DRIVEWAY
PROFILE D233R



150

100

50

0

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100

STATE AID PROJECT NO.
S.A.P. 02-652-01
S.A.P. 106-020-019

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ANOKA COUNTY
CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
STA. 232+00 TO STA. 233+50

SHEET
183
OF
253

150

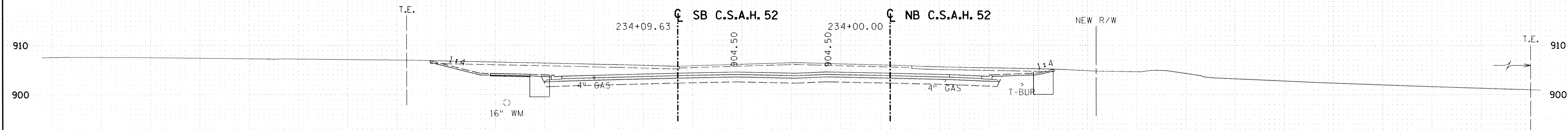
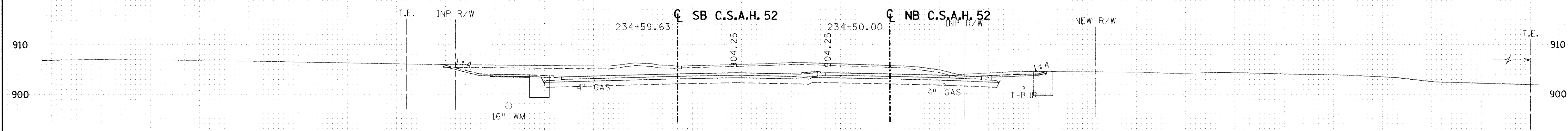
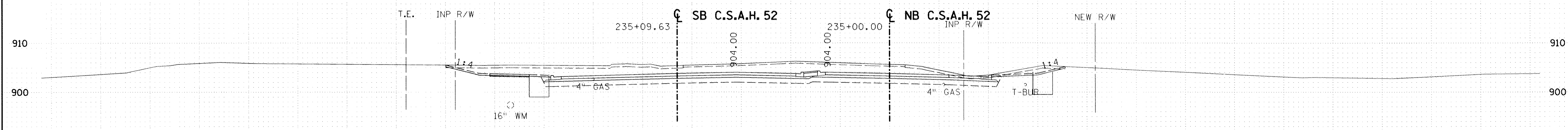
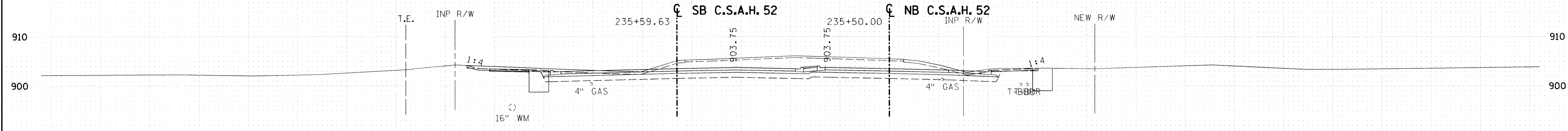
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STATE AID PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

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ANOKA COUNTY
 CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
 STA. 234+00 TO STA. 235+50

SHEET
184
OF
253

150

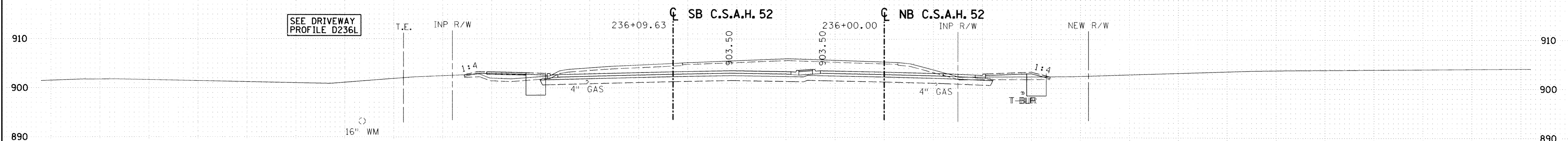
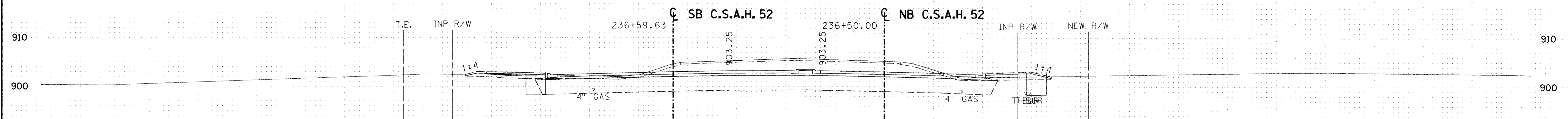
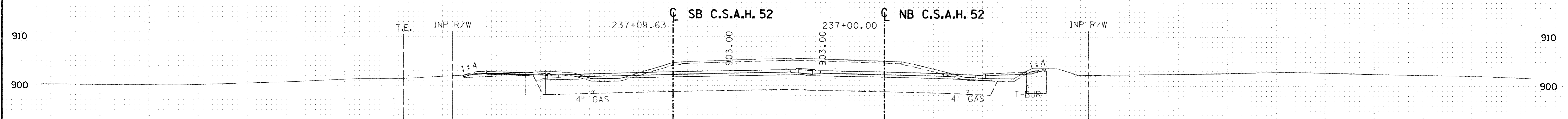
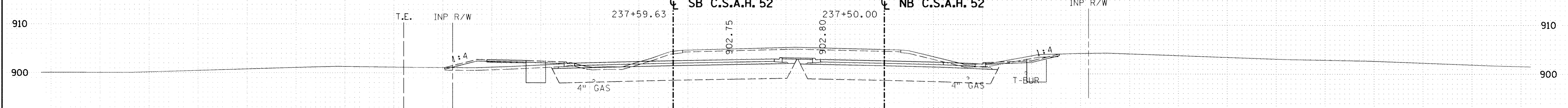
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SEE DRIVEWAY
PROFILE D236L

16" WM

150

100

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0

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100

STATE AID PROJECT NO.
S.A.P. 02-652-01
S.A.P. 106-020-019

TKDA
TOLTZ · KING · DUVALL · ANDERSON
AND ASSOCIATES, INCORPORATED
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ANOKA COUNTY
CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
STA. 236+00 TO STA. 237+50

SHEET
185
OF
253

150

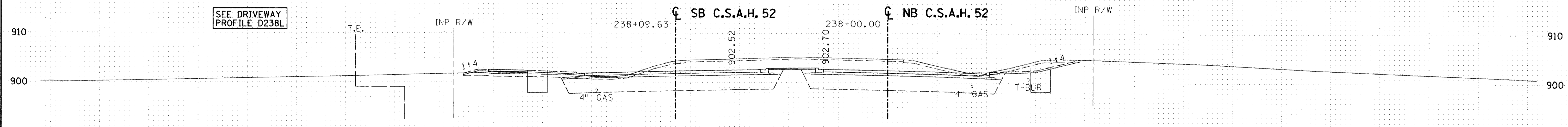
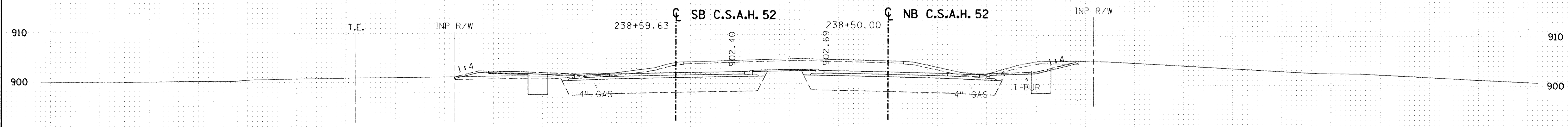
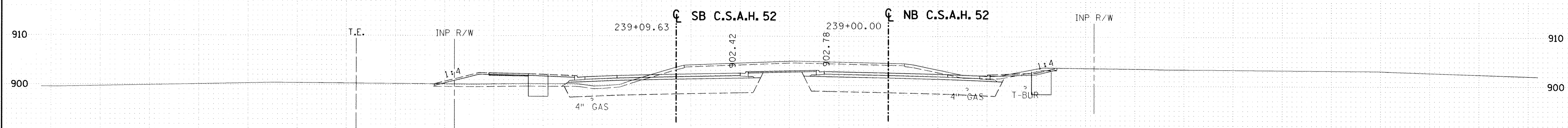
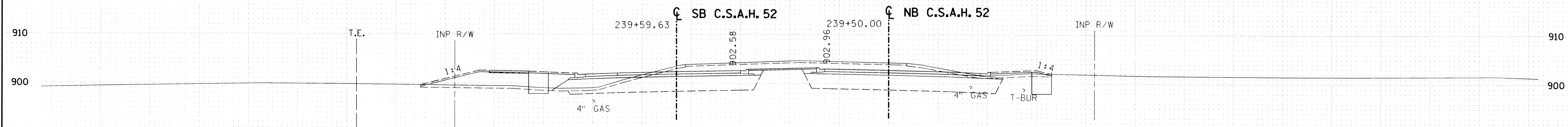
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SEE DRIVEWAY
PROFILE D238L

150

100

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STATE AID PROJECT NO.
S. A. P. 02-652-01
S. A. P. 106-020-019

TKDA
TOLTZ, KING, DUVAL, ANDERSON
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ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
STA. 238+00 TO STA. 239+50

SHEET
186
OF
253

150

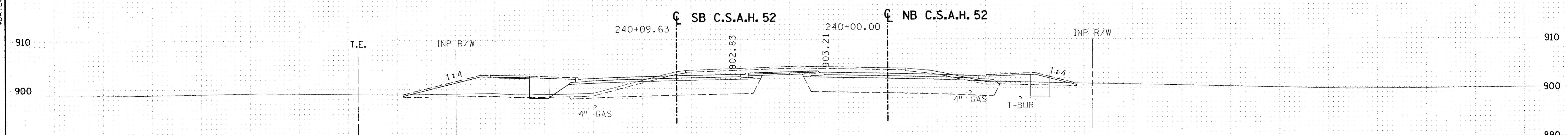
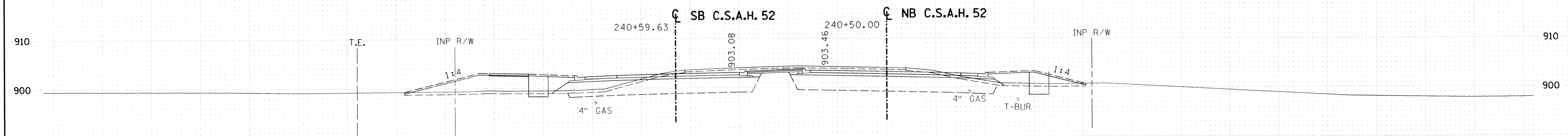
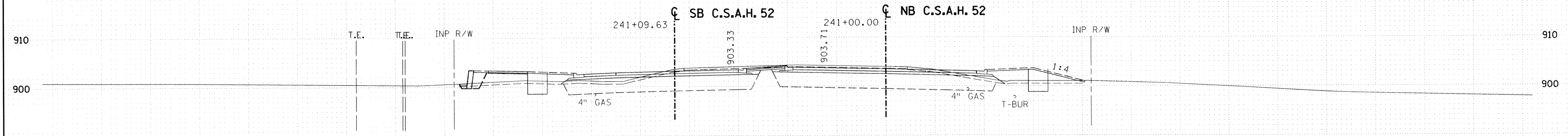
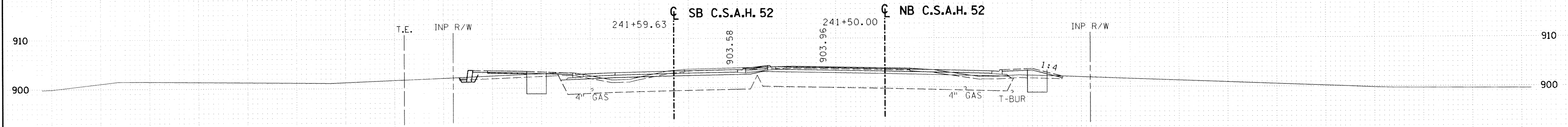
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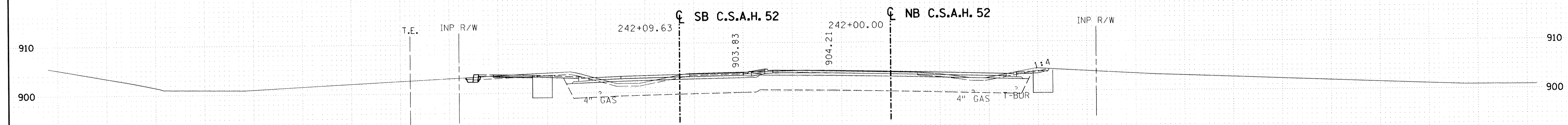
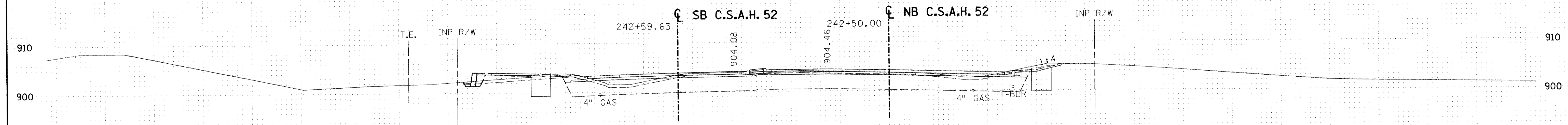
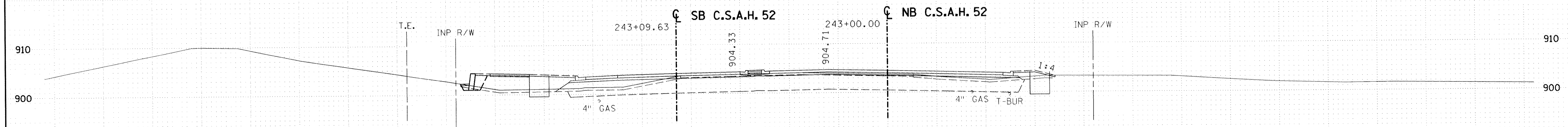
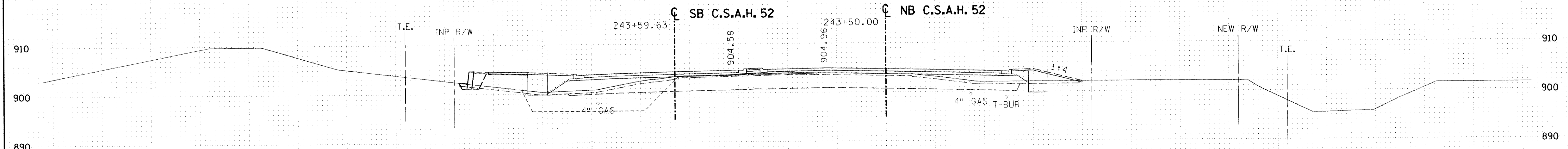
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STATE AID PROJECT NO.
 S. A. P. 02-652-01
 S. A. P. 106-020-019

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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 240+00 TO STA. 241+50

SHEET
 187
 OF
 253



STATE AID PROJECT NO.

S.A.P. 02-652-01
S.A.P. 106-020-019

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ANOKA COUNTY
CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
STA. 242+00 TO STA. 243+50

SHEET
188
OF
253

150

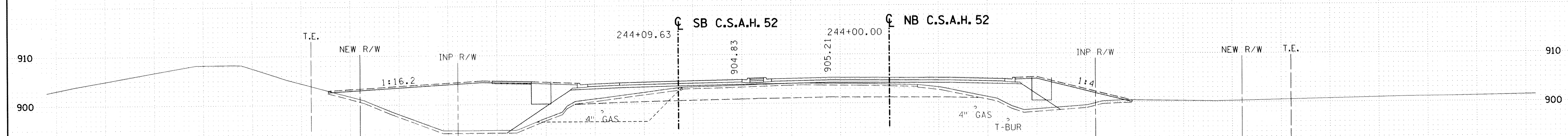
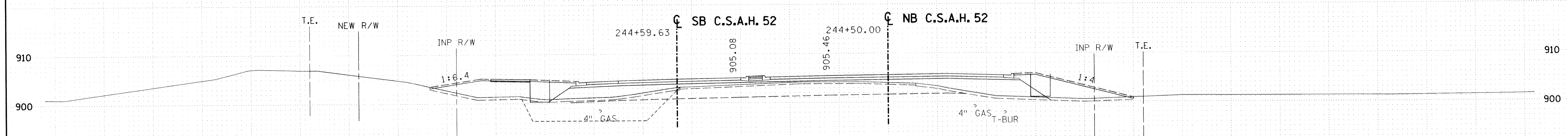
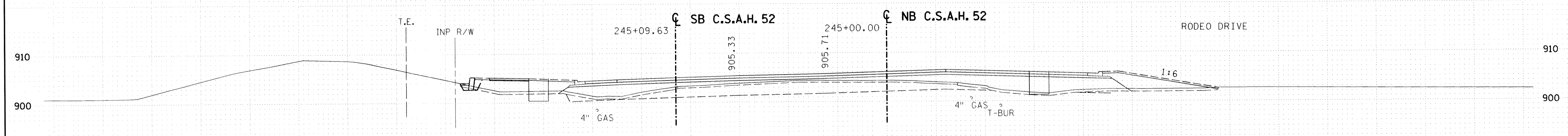
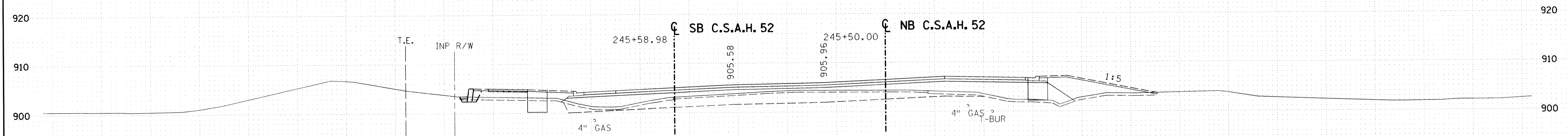
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STATE AID PROJECT NO.
 S. A. P. 02-652-01
 S. A. P. 106-020-019

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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 244+00 TO STA. 245+50

SHEET
 189
 OF
 253

150

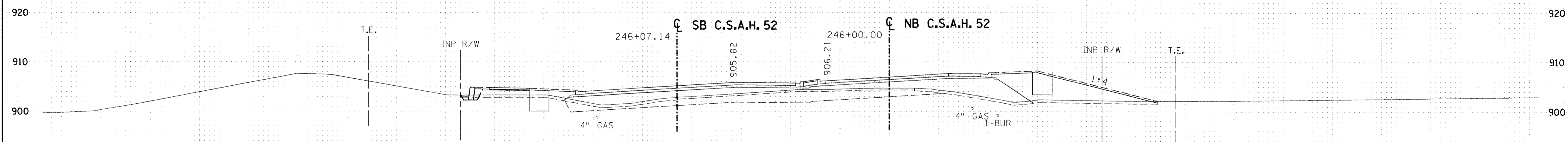
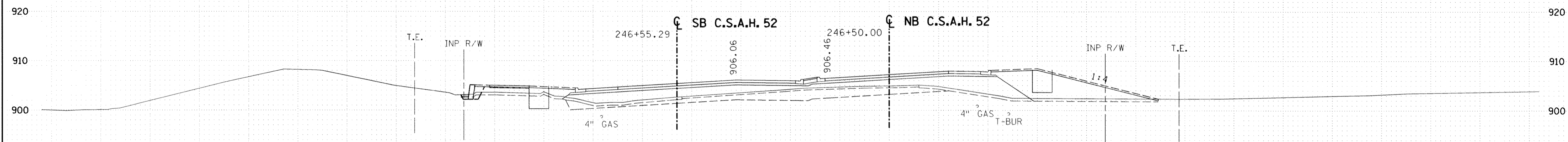
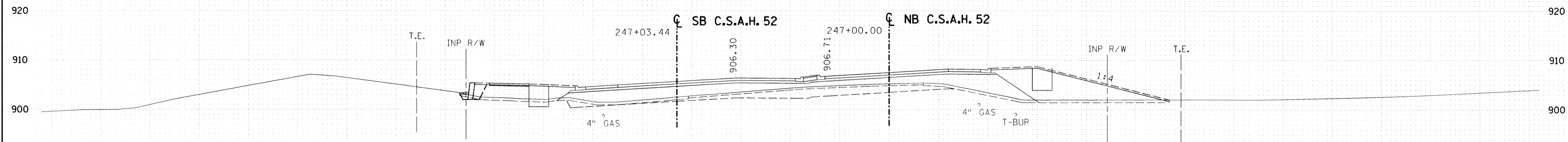
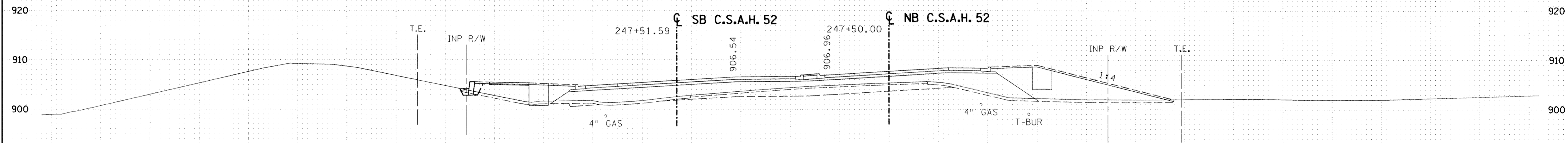
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STATE AID PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 246+00 TO STA. 247+50

SHEET
 190
 OF
 253

150

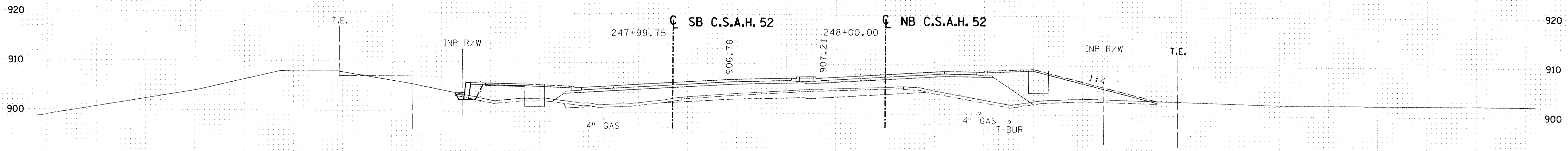
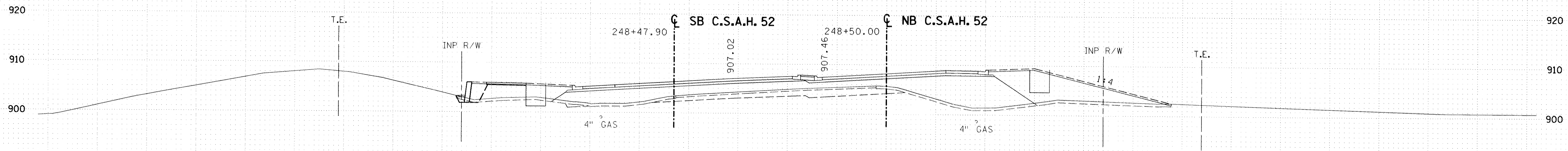
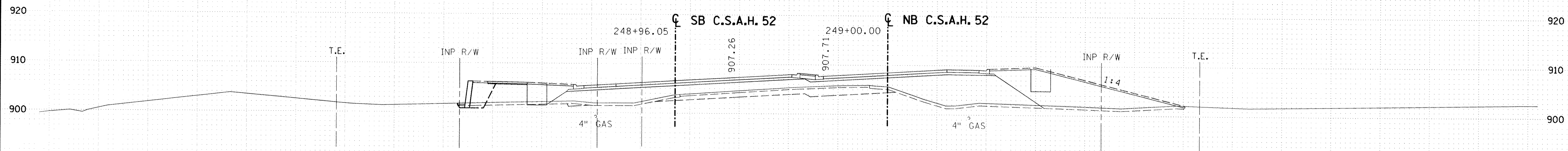
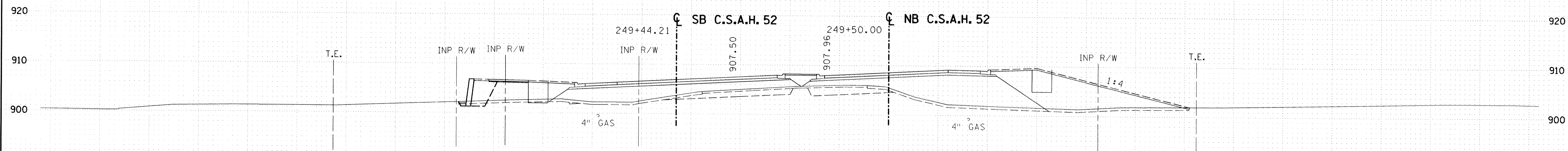
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STATE AID PROJECT NO.
 S. A. P. 02-652-01
 S. A. P. 106-020-019

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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 248+00 TO STA. 249+50

SHEET
 191
 OF
 253

150

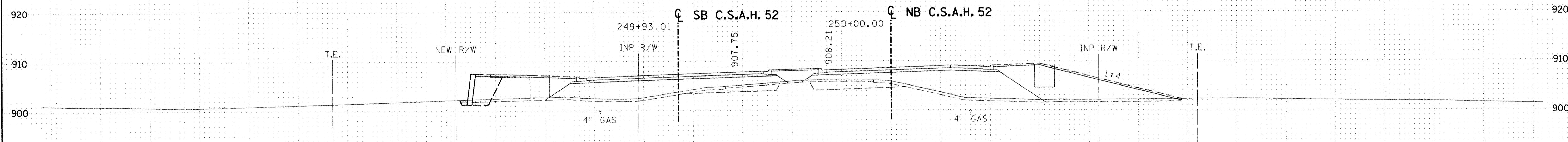
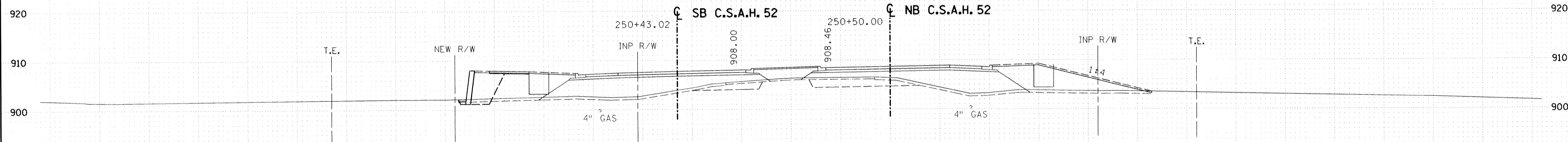
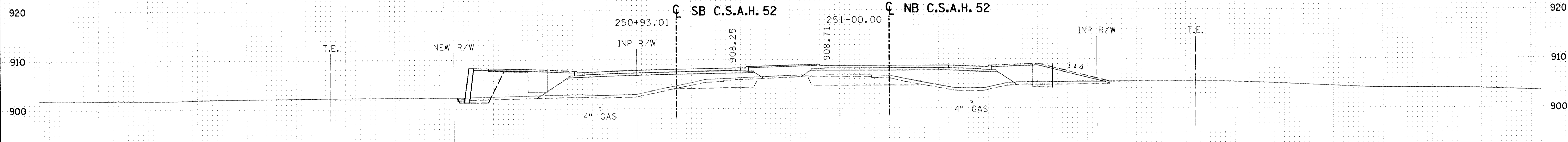
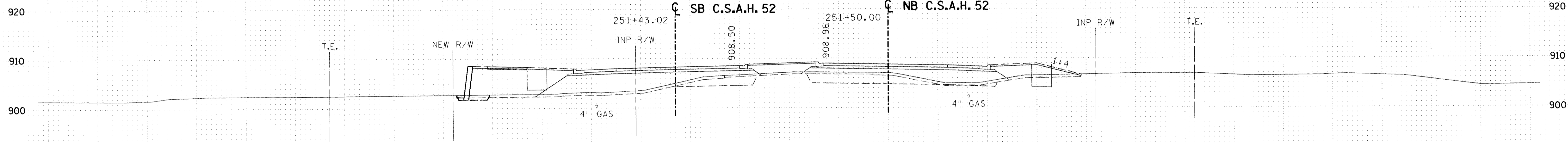
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STATE AID PROJECT NO.
 S. A. P. 02-652-01
 S. A. P. 106-020-019

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 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 250+00 TO STA. 251+50

SHEET
 192
 OF
 253

\$DATE\$

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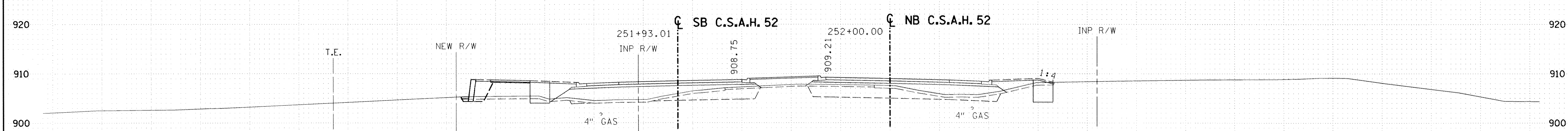
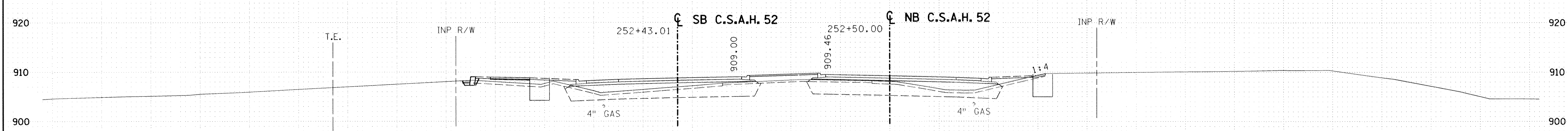
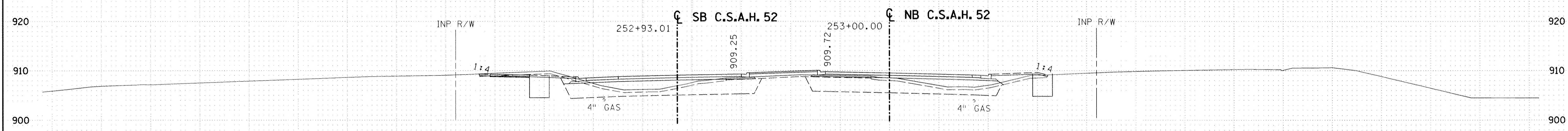
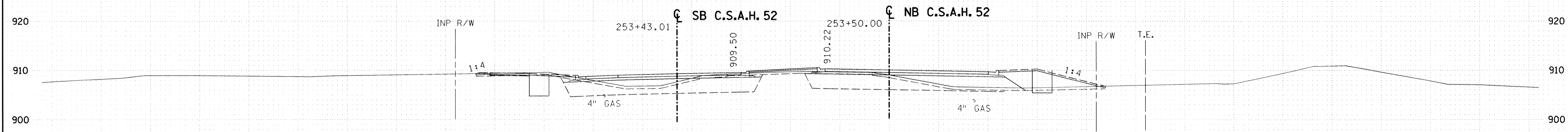
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STATE AID PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

TKDA
 TOLTZ, KING, DUVAL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 252+00 TO STA. 253+50

SHEET
 193
 OF
 253

150

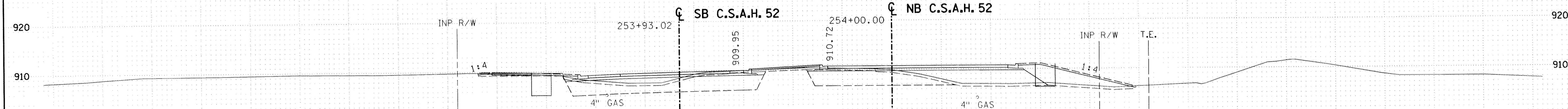
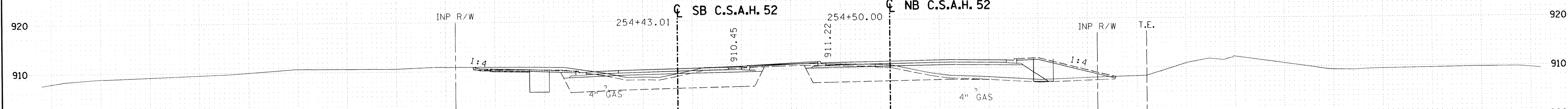
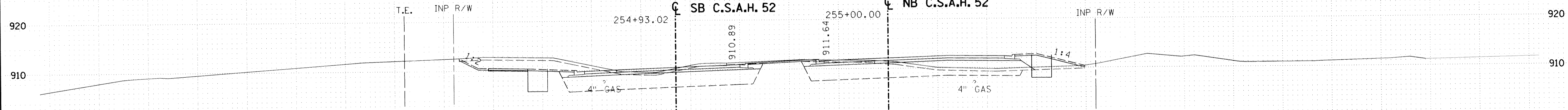
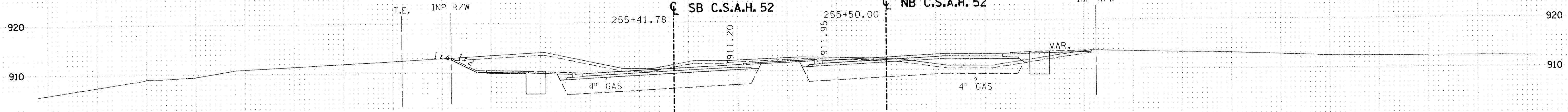
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STATE AID PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 254+00 TO STA. 255+50

SHEET
 194
 OF
 253

150

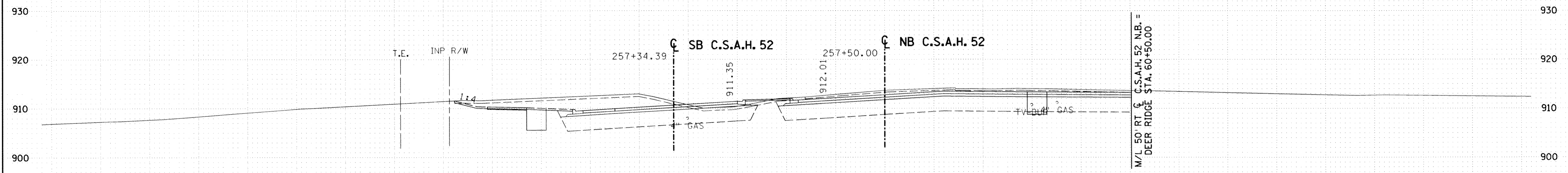
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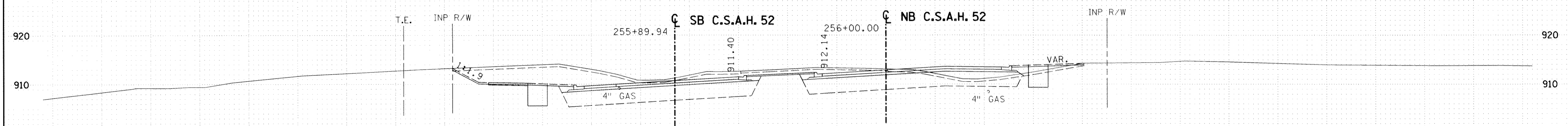
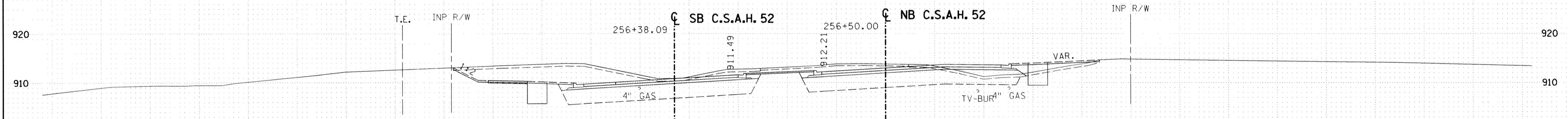
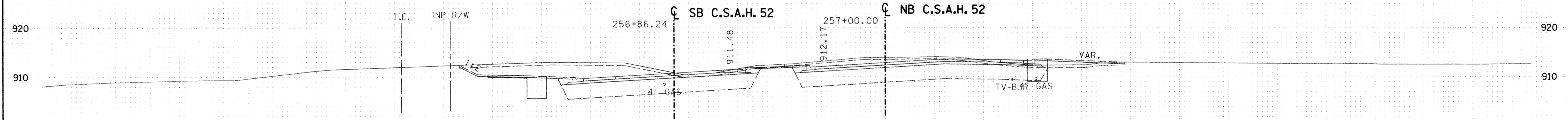
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M/L 50' RT C C.S.A.H. 52 N.B. =
DEER RIDGE STA. 60+50.00



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STATE AID PROJECT NO.
S.A.P. 02-652-01
S.A.P. 106-020-019

TKDA
TOLTZ, KING, DUVALL, ANDERSON
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ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
STA. 256+00 TO STA. 257+50

SHEET
195
OF
253

150

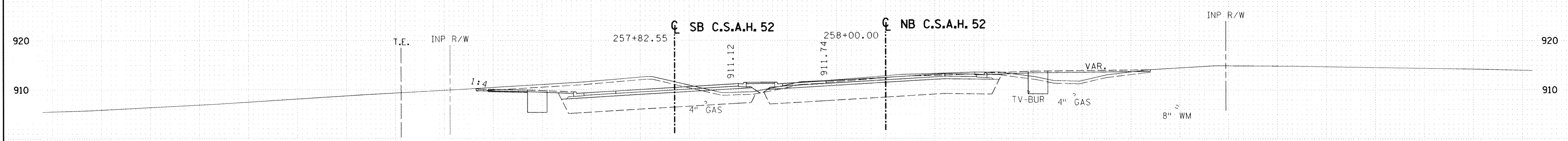
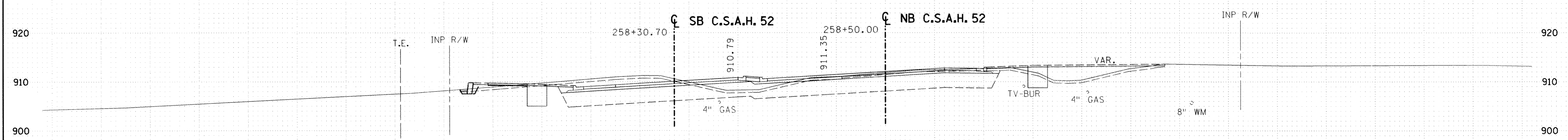
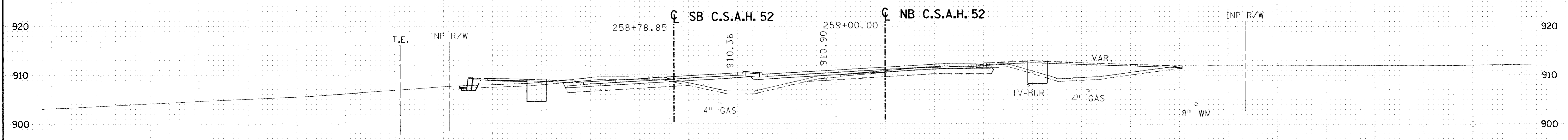
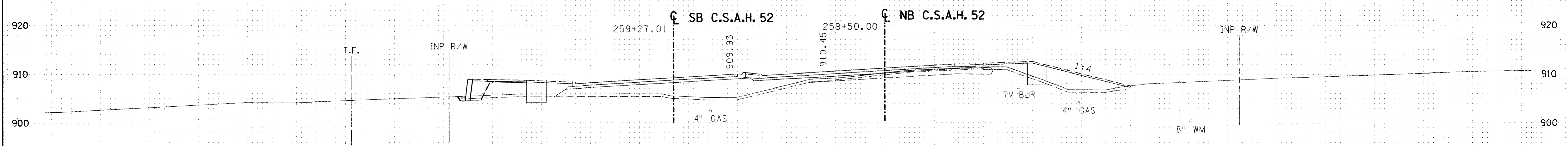
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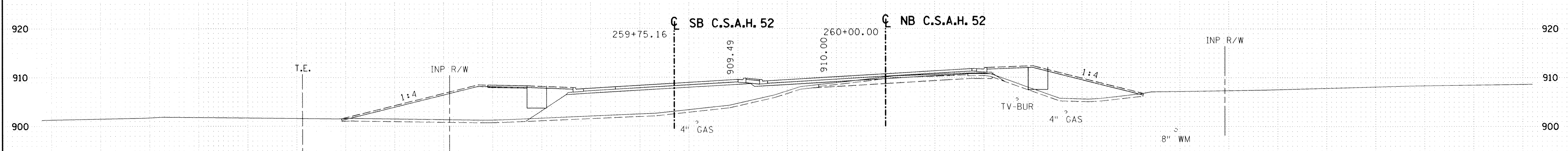
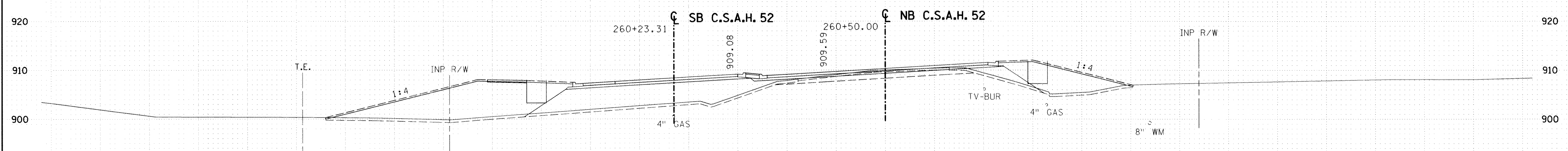
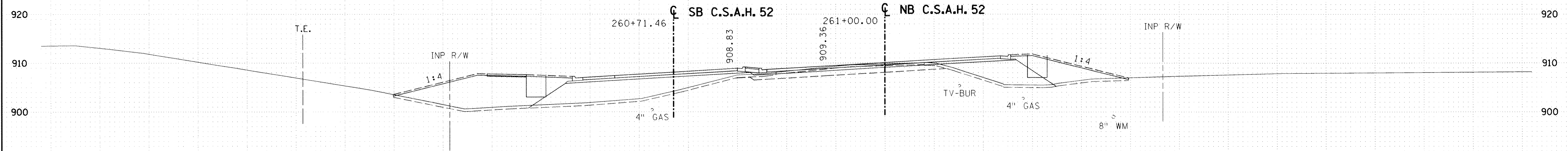
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STATE AID PROJECT NO.
S.A.P. 02-652-01
S.A.P. 106-020-019

TKDA
TOLTZ, KING, DUWALL, ANDERSON
AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
STA. 258+00 TO STA. 259+50

SHEET
196
OF
253



STATE AID PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

TKDA
 TOLTZ, KING, DUVAL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
 STA. 260+00 TO STA. 261+00

SHEET
 197
 OF
 253

150

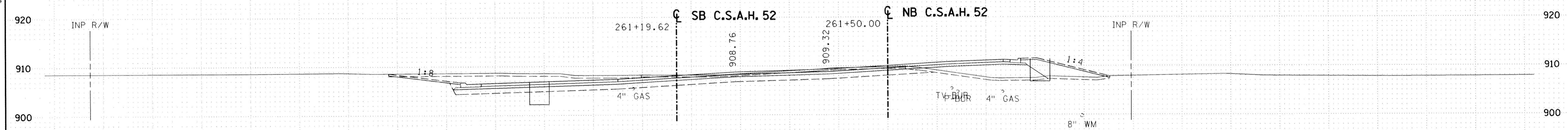
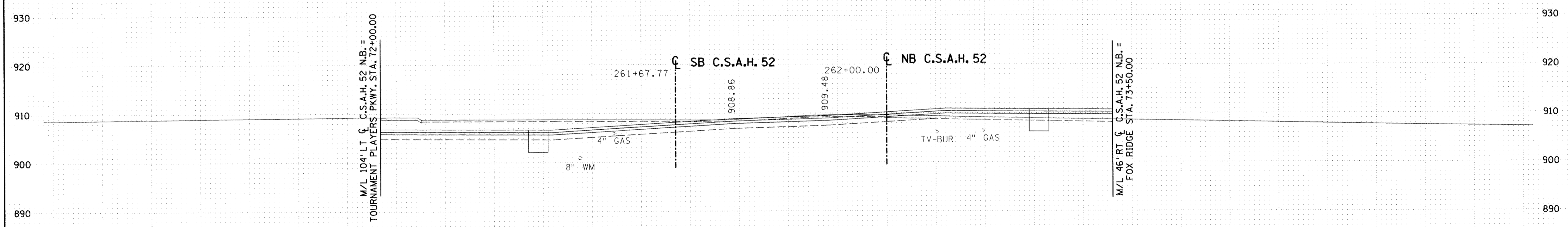
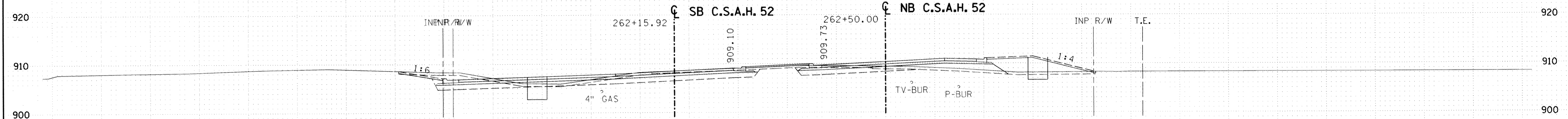
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STATE AID PROJECT NO.
 S. A. P. 02-652-01
 S. A. P. 106-020-019

TKDA
 TOLTZ, KING, DUVAL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 261+50 TO STA. 262+50

SHEET
 198
 OF
 253

150

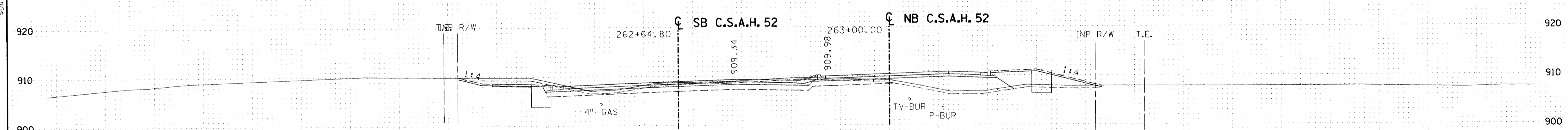
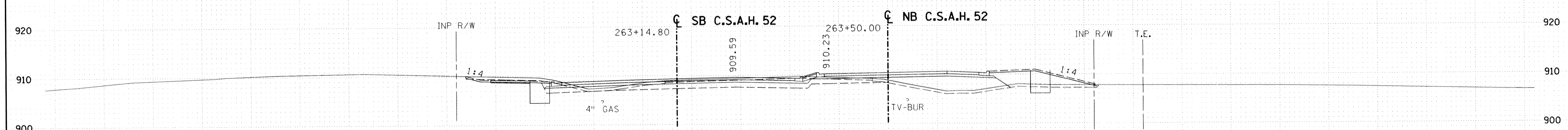
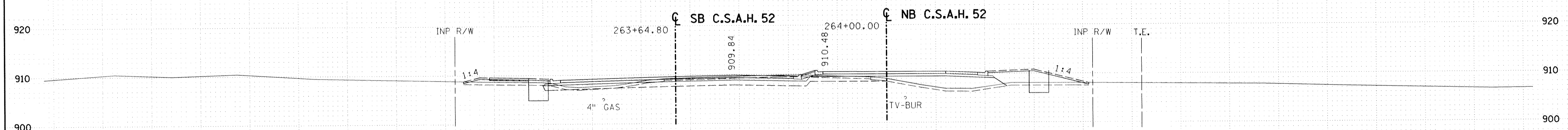
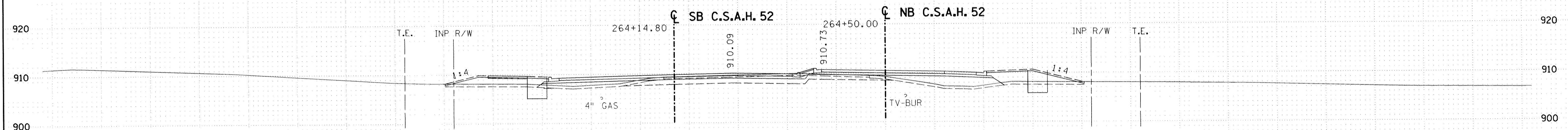
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STATE AID PROJECT NO.

S. A. P. 02-652-01
S. A. P. 106-020-019

TKDA

TOLTZ, KING, DUVALL, ANDERSON
AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
STA. 263+00 TO STA. 264+50

SHEET
199
OF
253

150

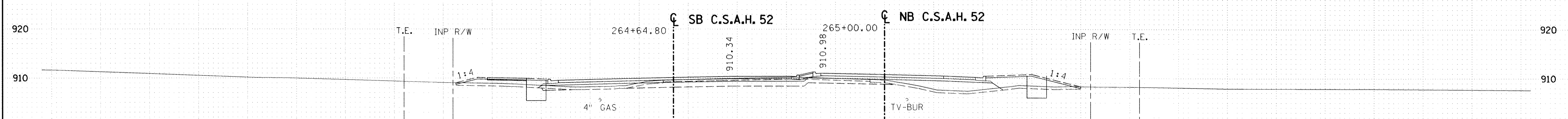
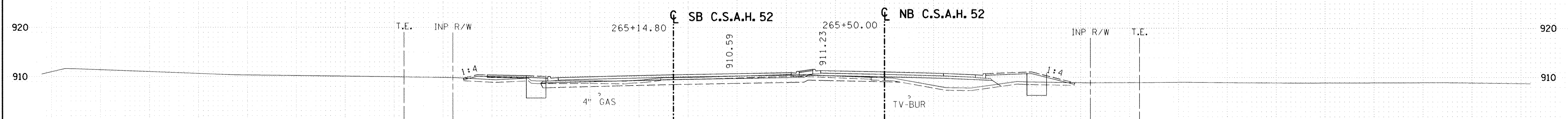
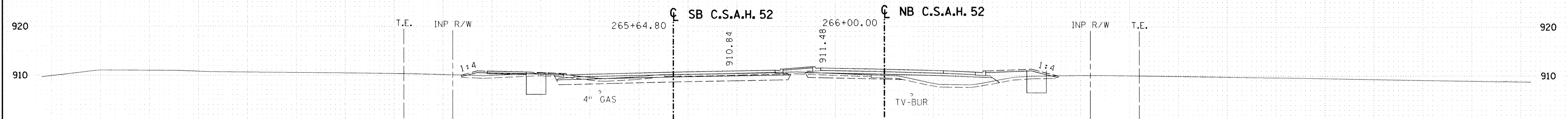
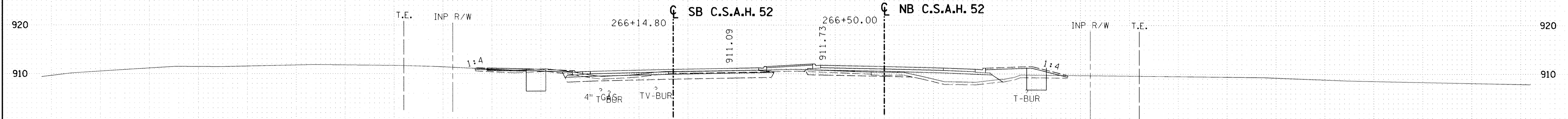
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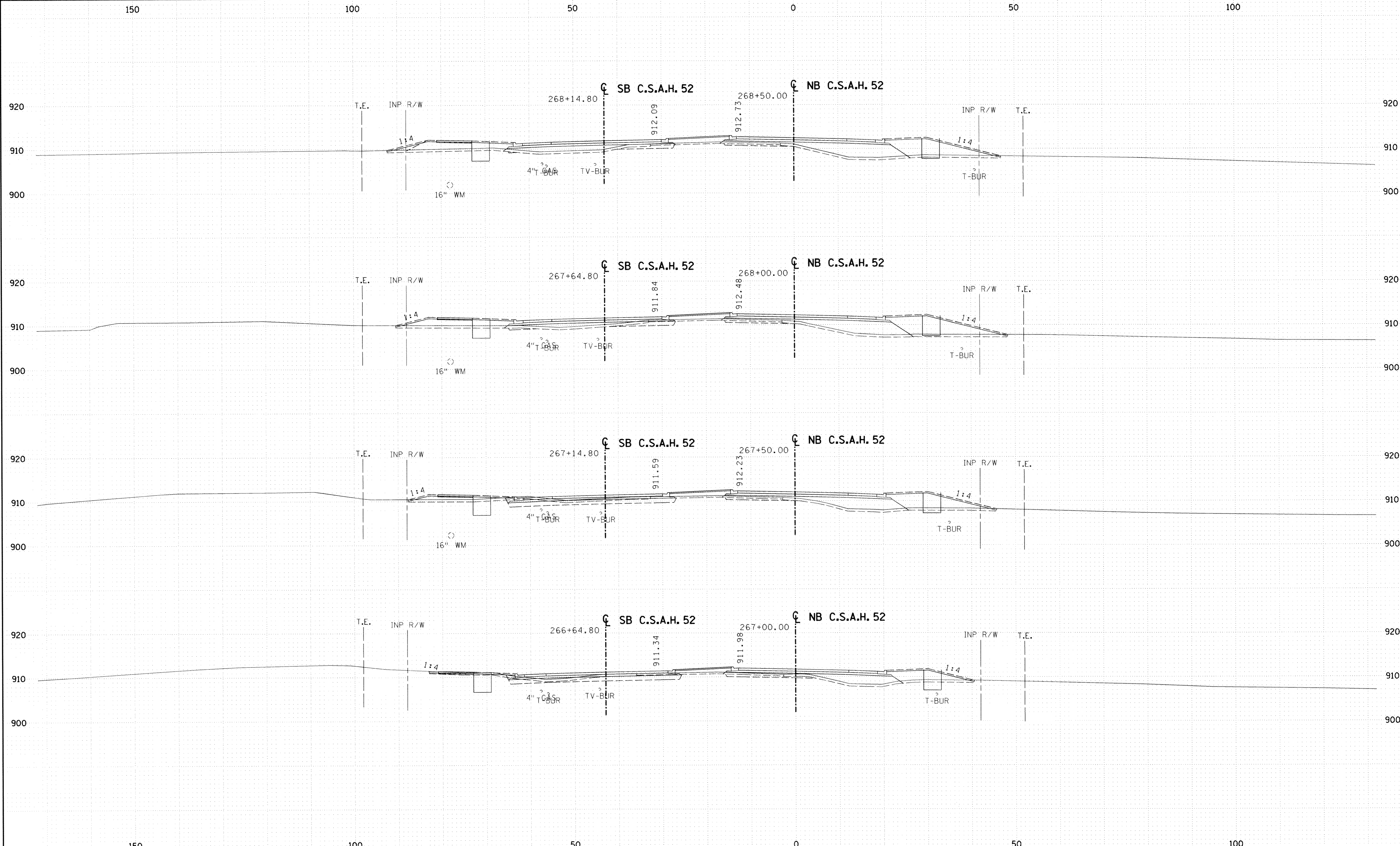
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STATE AID PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 265+00 TO STA. 266+50

SHEET
 200
 OF
 253



STATE AID PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

TKDA
 TOLTZ, KING, DUVAL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 267+00 TO STA. 268+50

SHEET
 201
 OF
 253

\$DATE\$
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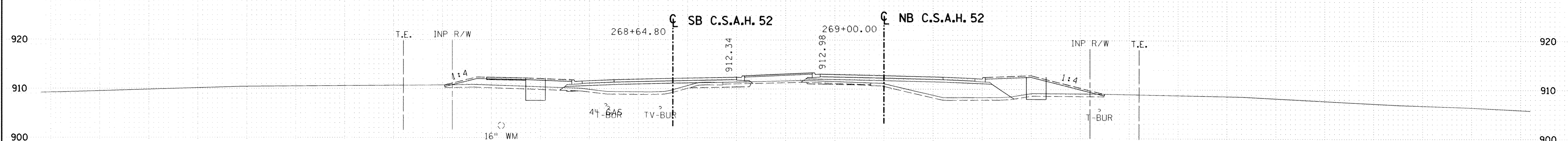
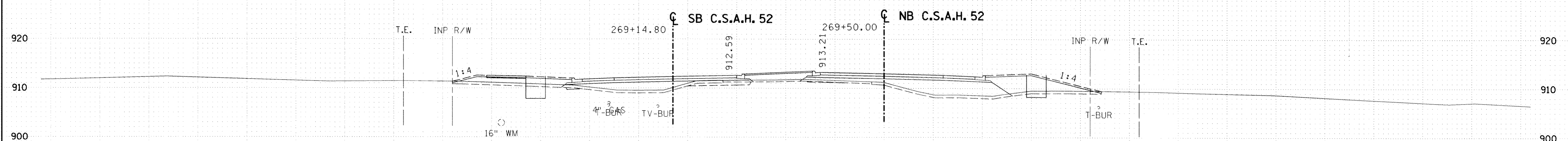
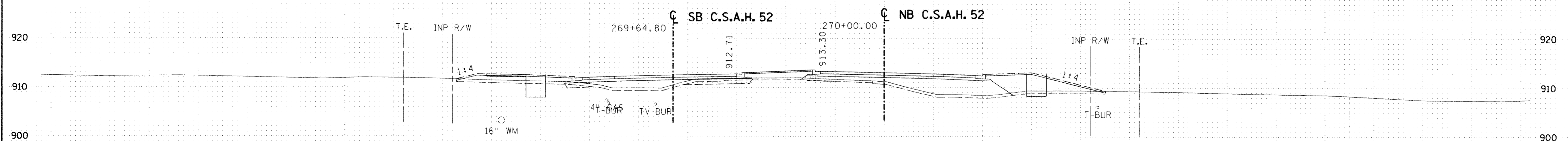
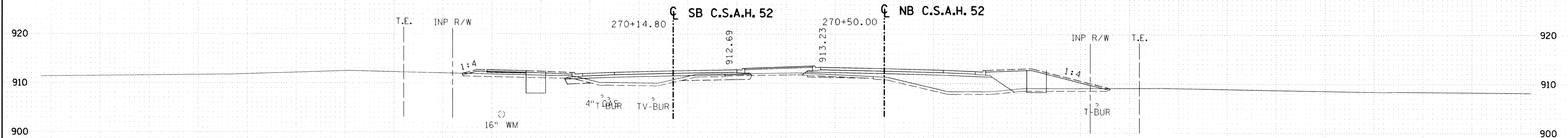
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STATE AID PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 269+00 TO STA. 270+50

SHEET
 202
 OF
 253

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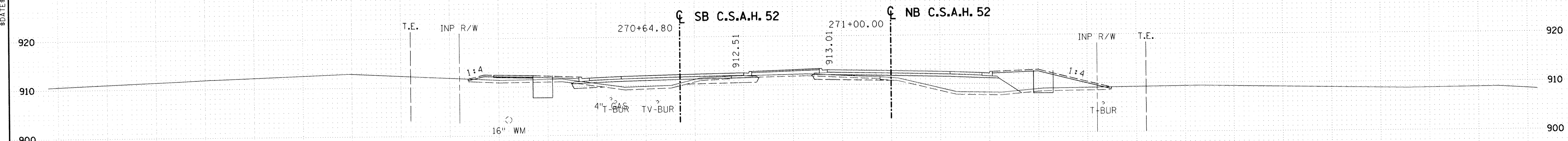
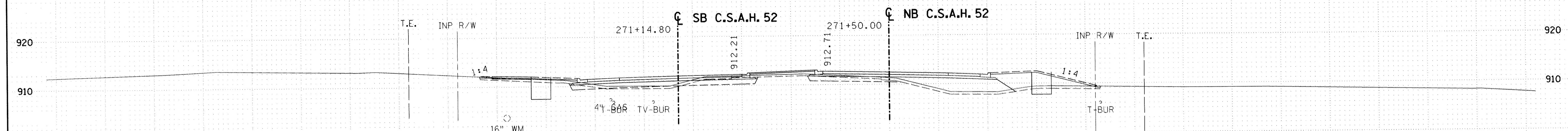
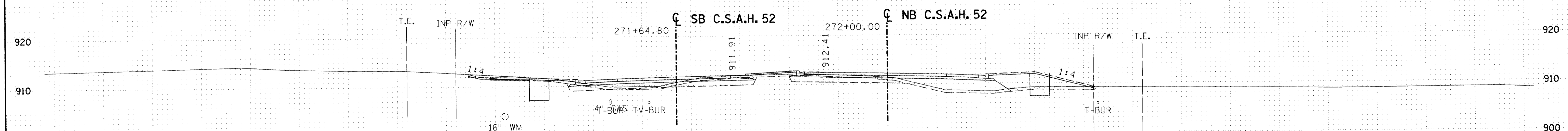
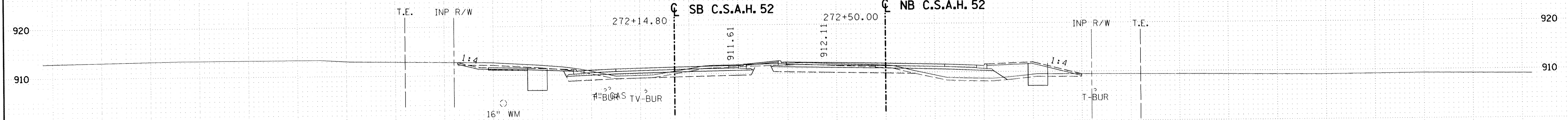
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STATE AID PROJECT NO.

S. A. P. 02-652-01
S. A. P. 106-020-019

TKDA

TOLTZ, KING, DUVAL, ANDERSON
AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
STA. 271+00 TO STA. 272+50

SHEET
203
OF
253

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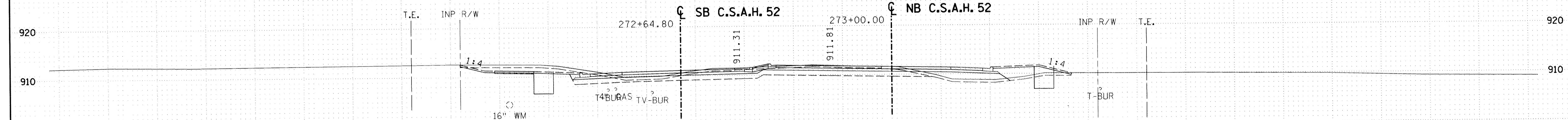
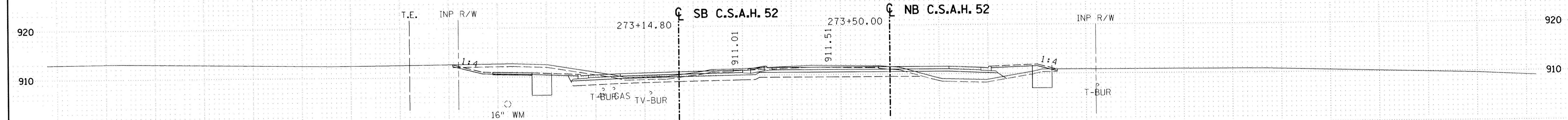
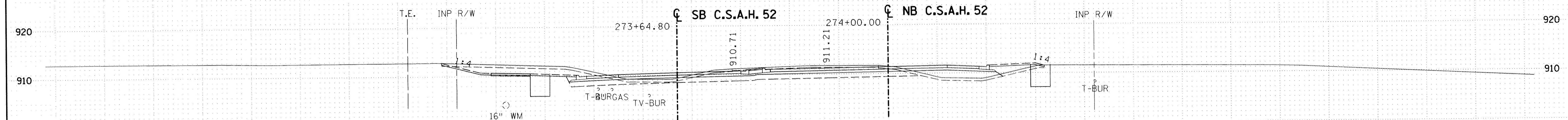
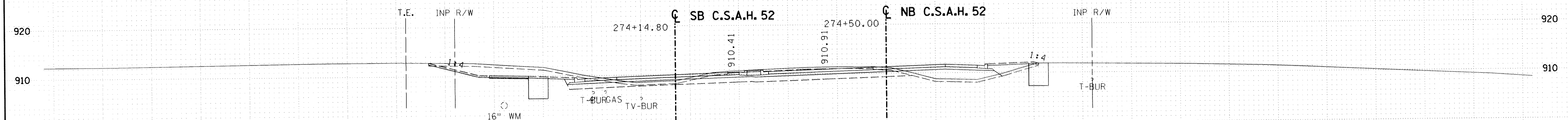
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STATE AID PROJECT NO.

S.A.P. 02-652-01
S.A.P. 106-020-019

TKDA

ENGINEERS • ARCHITECTS • PLANNERS

TOLTZ, KING, DUVAL, ANDERSON
AND ASSOCIATES, INCORPORATED

SAINT PAUL, MINNESOTA

ANOKA COUNTY
CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
STA. 273+00 TO STA. 274+50

SHEET
204
OF
253

150

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ARNOLD PALMER DRIVE

INP R/W

276+08.14

SB C.S.A.H. 52

909.25

276+50.00

NB C.S.A.H. 52

INP R/W

T.E.

1:4

16" WM

T-BUR

4" GAS TV-BUR

920

910

900

920

910

900

INP R/W

275+59.98

SB C.S.A.H. 52

909.54

276+00.00

NB C.S.A.H. 52

INP R/W

T.E.

1:4

16" WM

T-BUR

4" GAS TV-BUR

920

910

900

920

910

900

T.E.

INP R/W

275+11.83

SB C.S.A.H. 52

909.83

275+50.00

NB C.S.A.H. 52

INP R/W

T.E.

1:4

16" WM

T-BUR

4" GAS TV-BUR

920

910

900

920

910

900

T.E.

INP R/W

274+63.68

SB C.S.A.H. 52

910.12

275+00.00

NB C.S.A.H. 52

INP R/W

1:4

16" WM

T-BUR

4" GAS TV-BUR

920

910

900

920

910

900

150

100

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STATE AID PROJECT NO.

S.A.P. 02-652-01
S.A.P. 106-020-019

TKDA

ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

TOLTZ, KING, DUVALL, ANDERSON
AND ASSOCIATES, INCORPORATED

ANOKA COUNTY
CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
STA. 275+00 TO STA. 276+50

SHEET
205
OF
253

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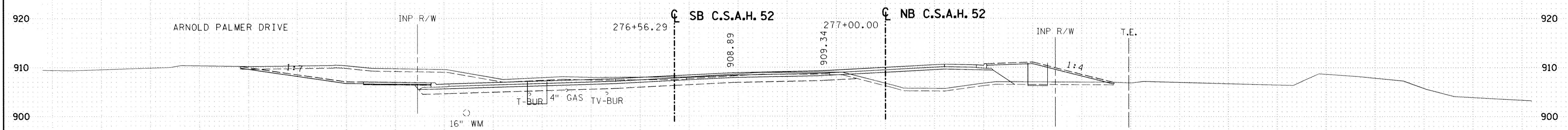
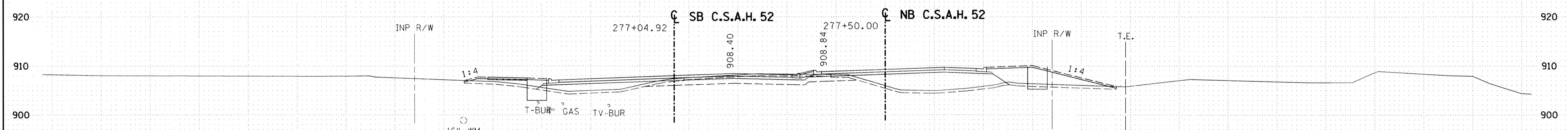
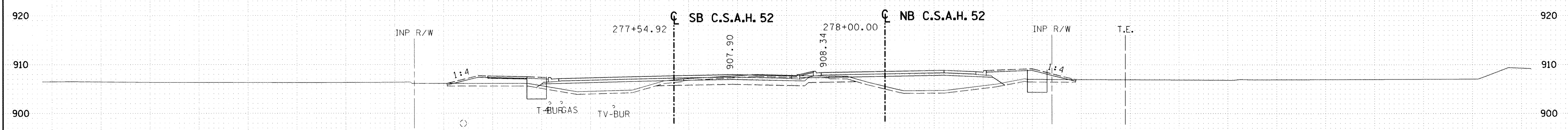
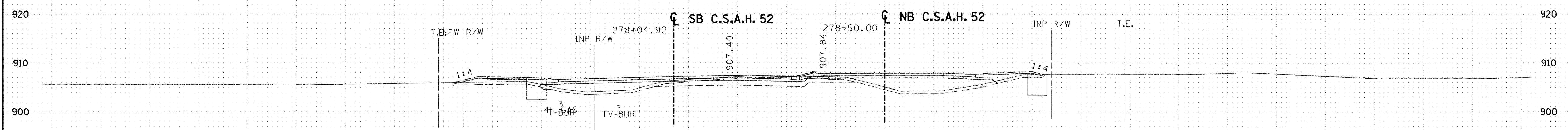
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STATE AID PROJECT NO. S.A.P. 02-652-01 S.A.P. 106-020-019	 TKDA <small>TOLTZ, KING, DUVAL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA</small>	ANOKA COUNTY CROSS SECTIONS C.S.A.H. 52 RECONSTRUCTION STA. 277+00 TO STA. 278+50	SHEET 206 OF 253
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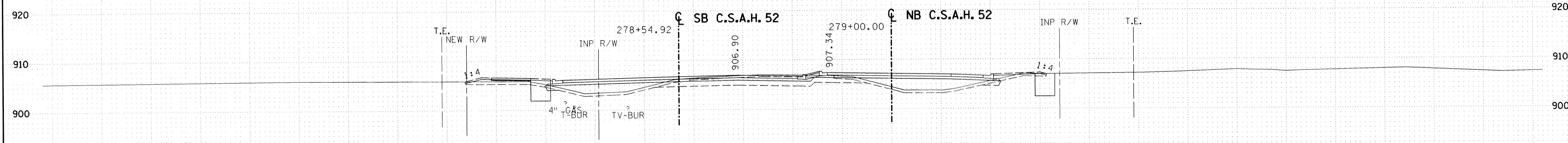
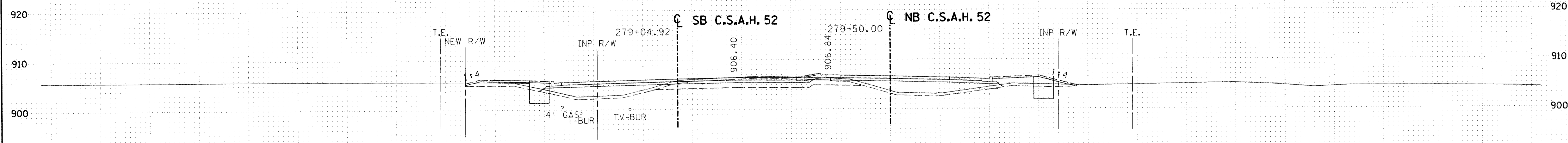
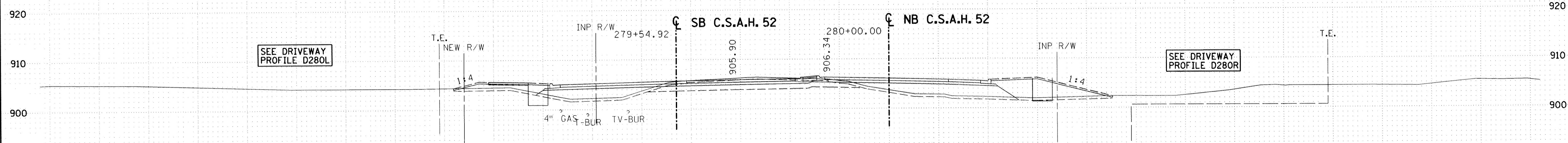
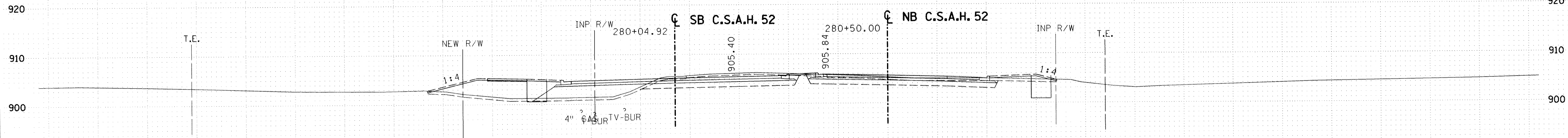
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STATE AID PROJECT NO.
 S. A. P. 02-652-01
 S. A. P. 106-020-019

TKDA TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 279+00 TO STA. 280+50

SHEET
 207
 OF
 253

150

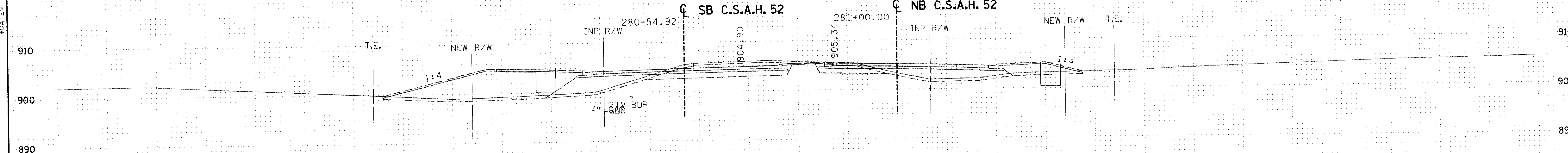
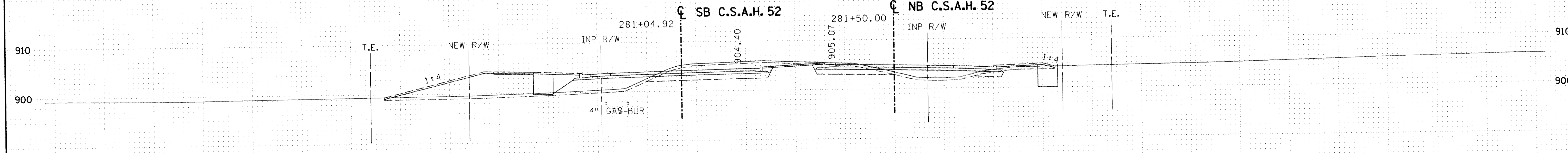
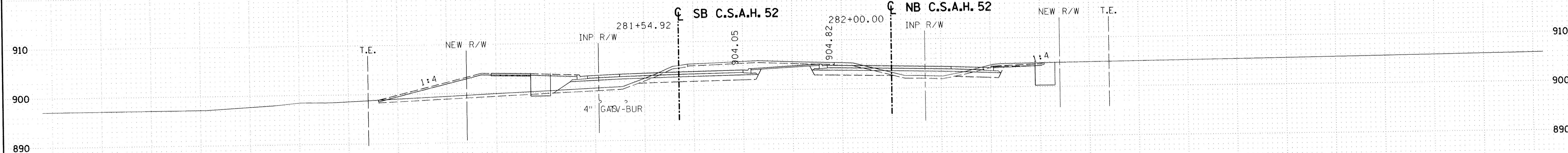
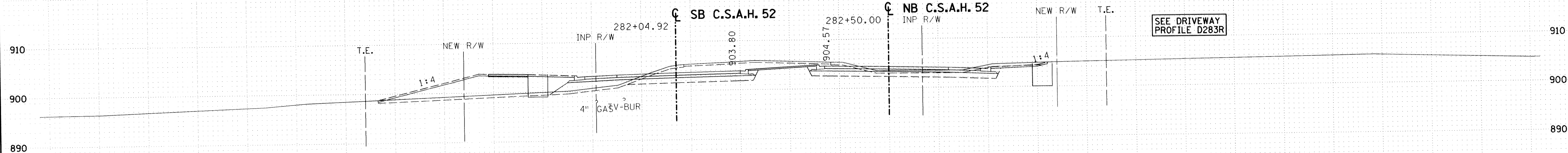
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STATE AID PROJECT NO.

S.A.P. 02-652-01
S.A.P. 106-020-019

TKDA

ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

TOLZ, KING, DUVAL, ANDERSON
AND ASSOCIATES, INCORPORATED

ANOKA COUNTY

CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
STA. 281+00 TO STA. 282+50

SHEET
208
OF
253

150

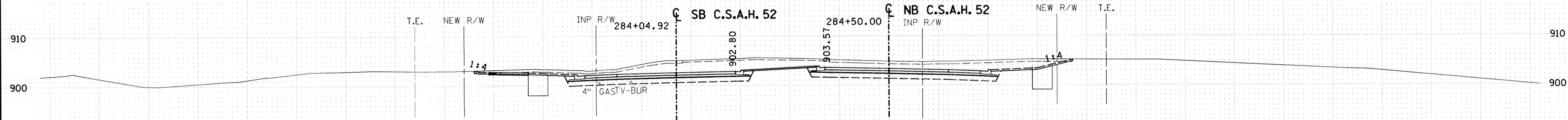
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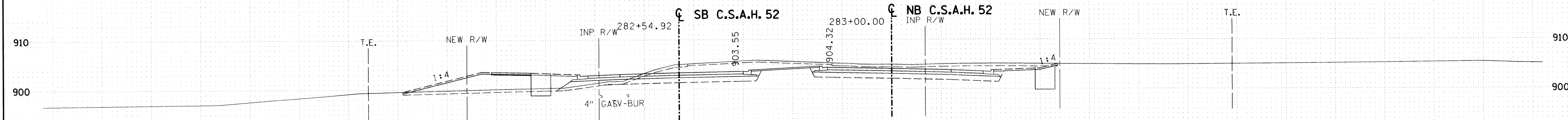
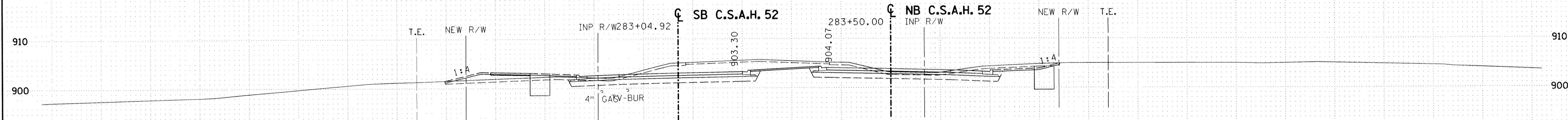
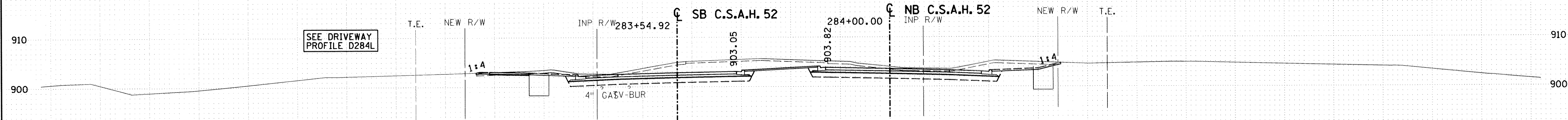
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SEE DRIVEWAY PROFILE D284L



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STATE AID PROJECT NO. S. A. P. 02-652-01 S. A. P. 106-020-019	TKDA <small>TOLTZ, KING, DUVAL, ANDERSON AND ASSOCIATES, INCORPORATED</small> <small>ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA</small>	ANOKA COUNTY CROSS SECTIONS C.S.A.H. 52 RECONSTRUCTION STA. 283+00 TO STA. 284+50	SHEET 209 OF 253
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150

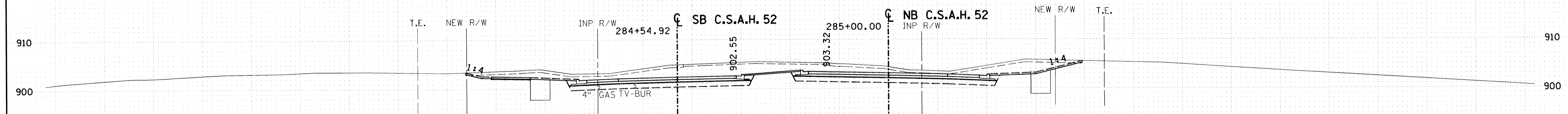
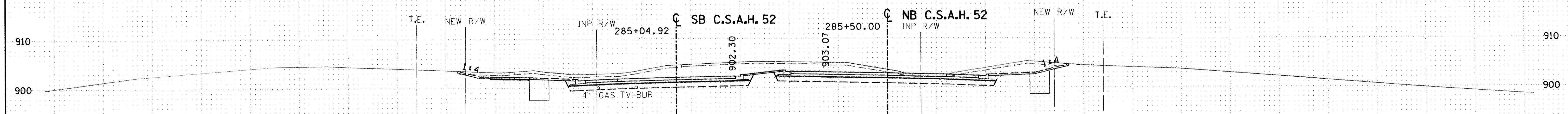
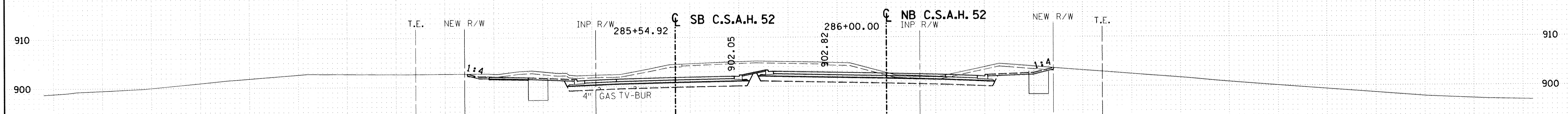
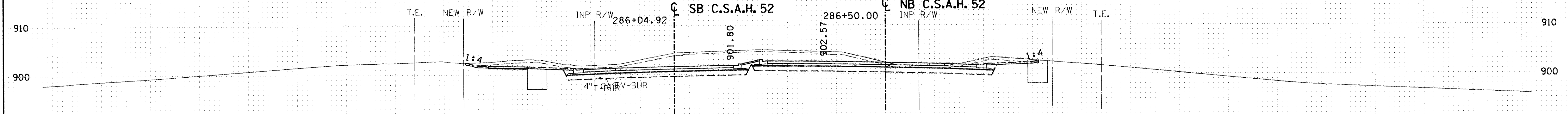
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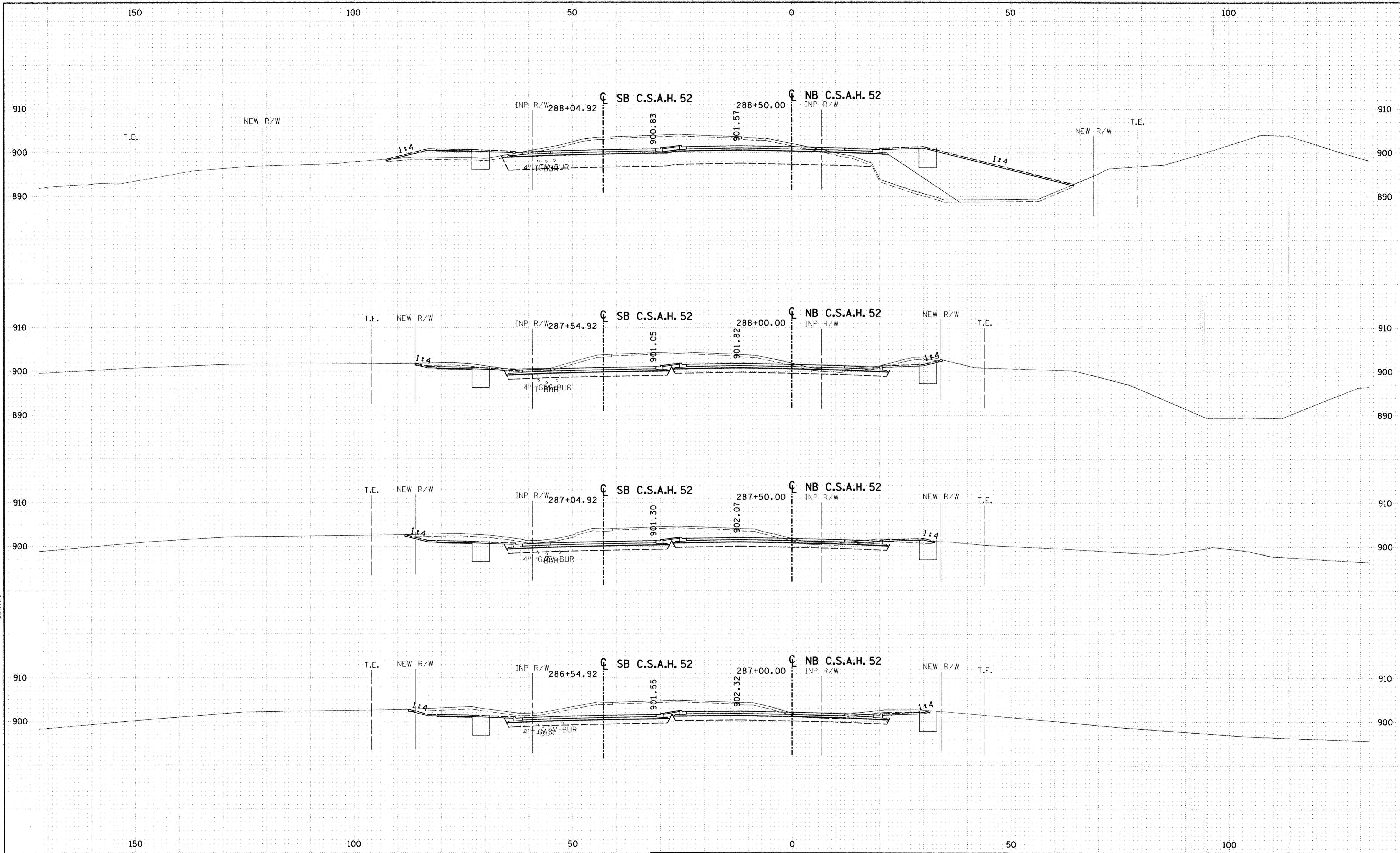
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STATE AID PROJECT NO.
 S. A. P. 02-652-01
 S. A. P. 106-020-019

TKDA
 TOLTZ, KING, DUVAL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 285+00 TO STA. 286+50

SHEET
 210
 OF
 253



\$FILES\$

STATE AID PROJECT NO. S.A.P. 02-652-01 S.A.P. 106-020-019	TKDA <small>TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA</small>	ANOKA COUNTY CROSS SECTIONS C.S.A.H. 52 RECONSTRUCTION STA. 287+00 TO STA. 288+50	SHEET 211 OF 253
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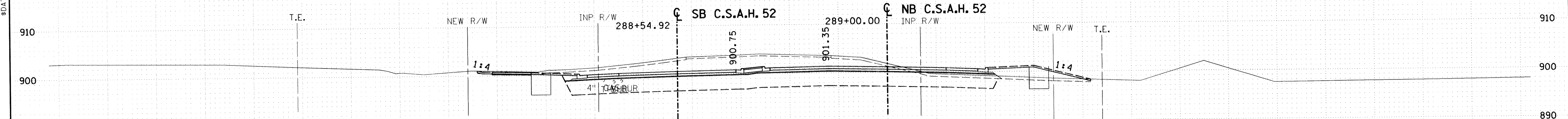
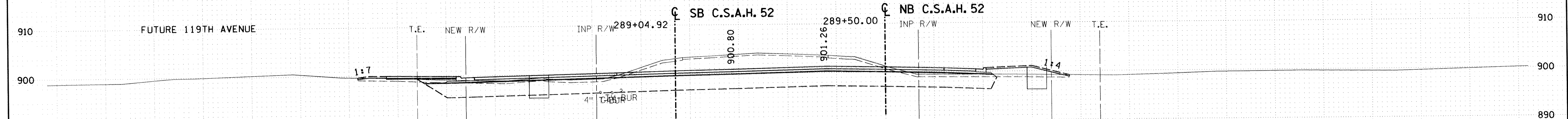
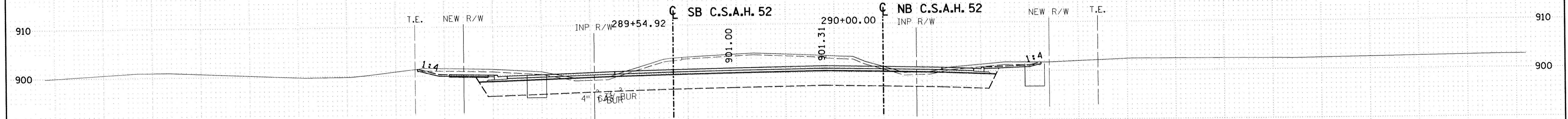
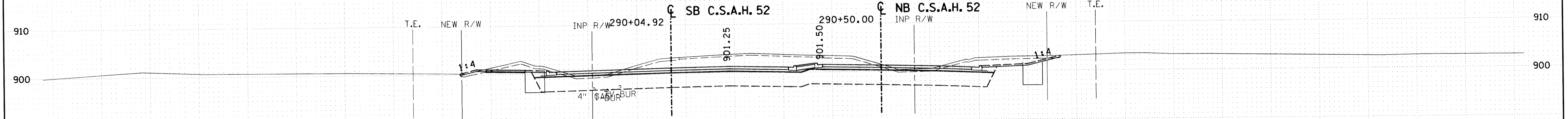
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STATE AID PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 289+00 TO STA. 290+50

SHEET
 212
 OF
 253

\$DATE\$ \$FILE\$

150

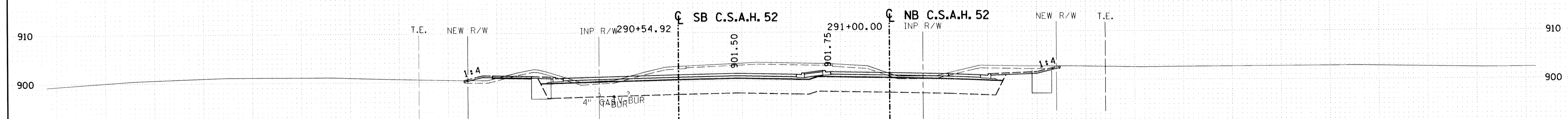
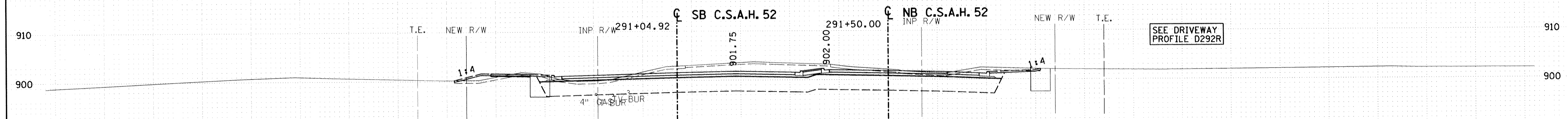
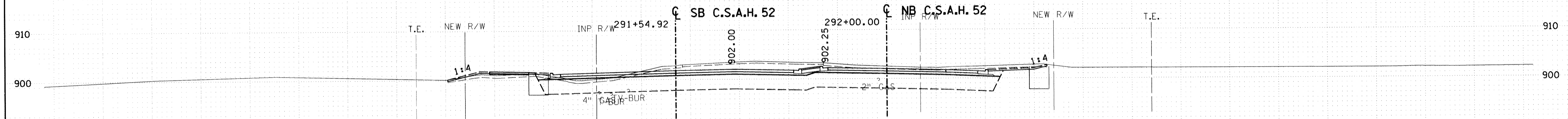
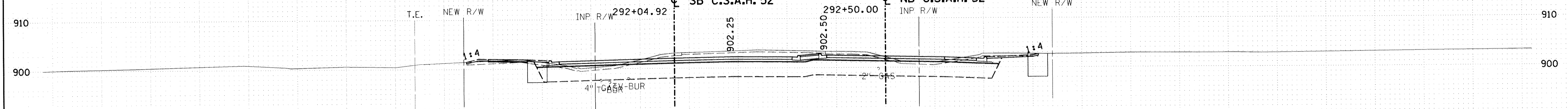
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STATE AID PROJECT NO.
 S. A. P. 02-652-01
 S. A. P. 106-020-019

TKDA TOLTZ, KING, DUWALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 291+00 TO STA. 292+50

SHEET
 213
 OF
 253

150

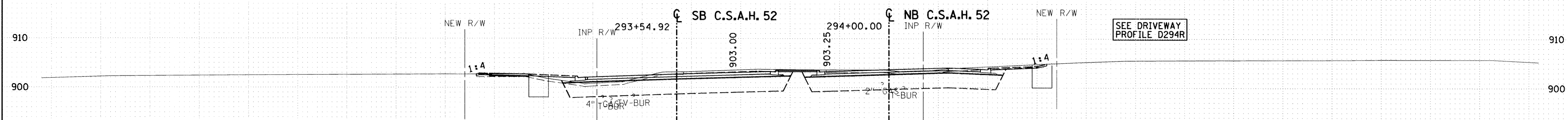
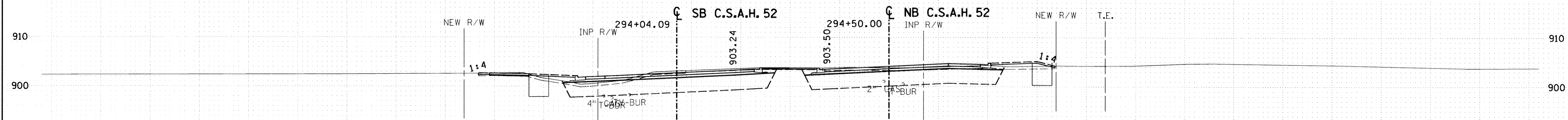
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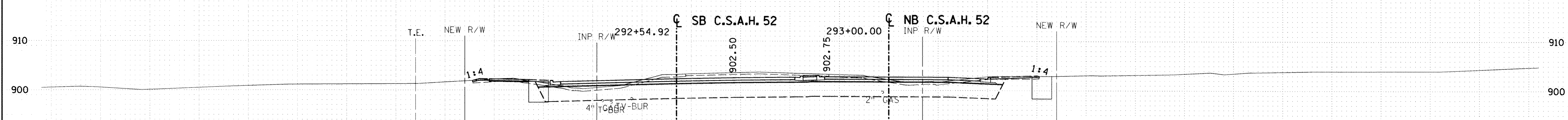
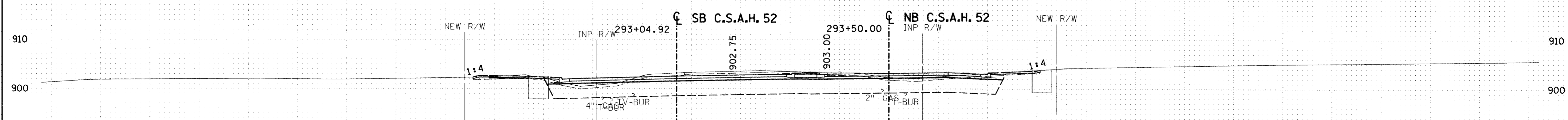
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SEE DRIVEWAY
PROFILE D294R



150

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STATE AID PROJECT NO.
S.A.P. 02-652-01
S.A.P. 106-020-019

TKDA
TOLTZ, KING, DUVALL, ANDERSON
AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
STA. 293+00 TO STA. 294+50

SHEET
214
OF
253

150

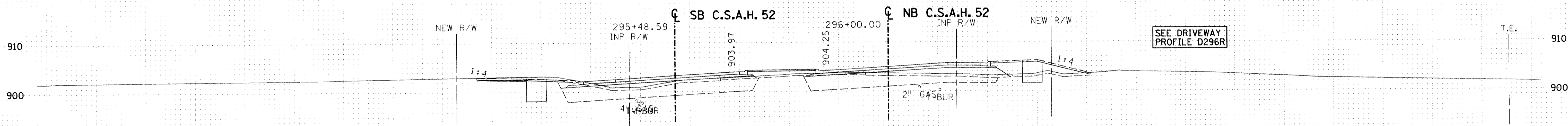
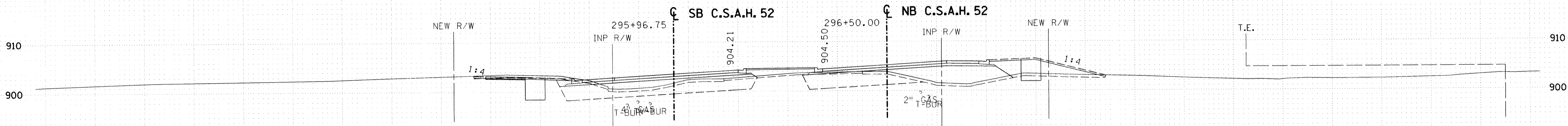
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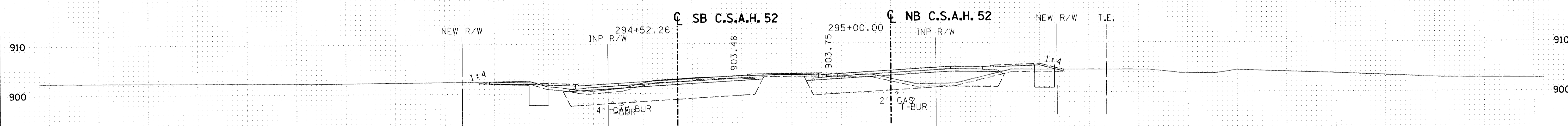
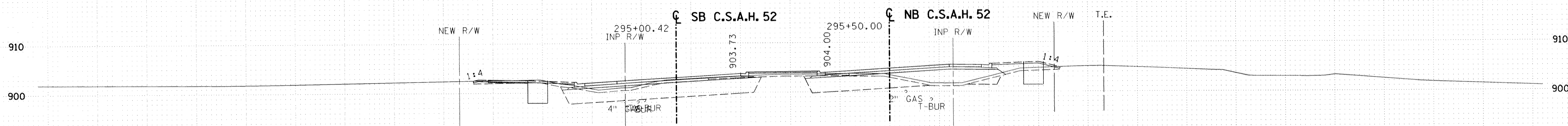
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SEE DRIVEWAY PROFILE D296R



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\$FILE\$

150


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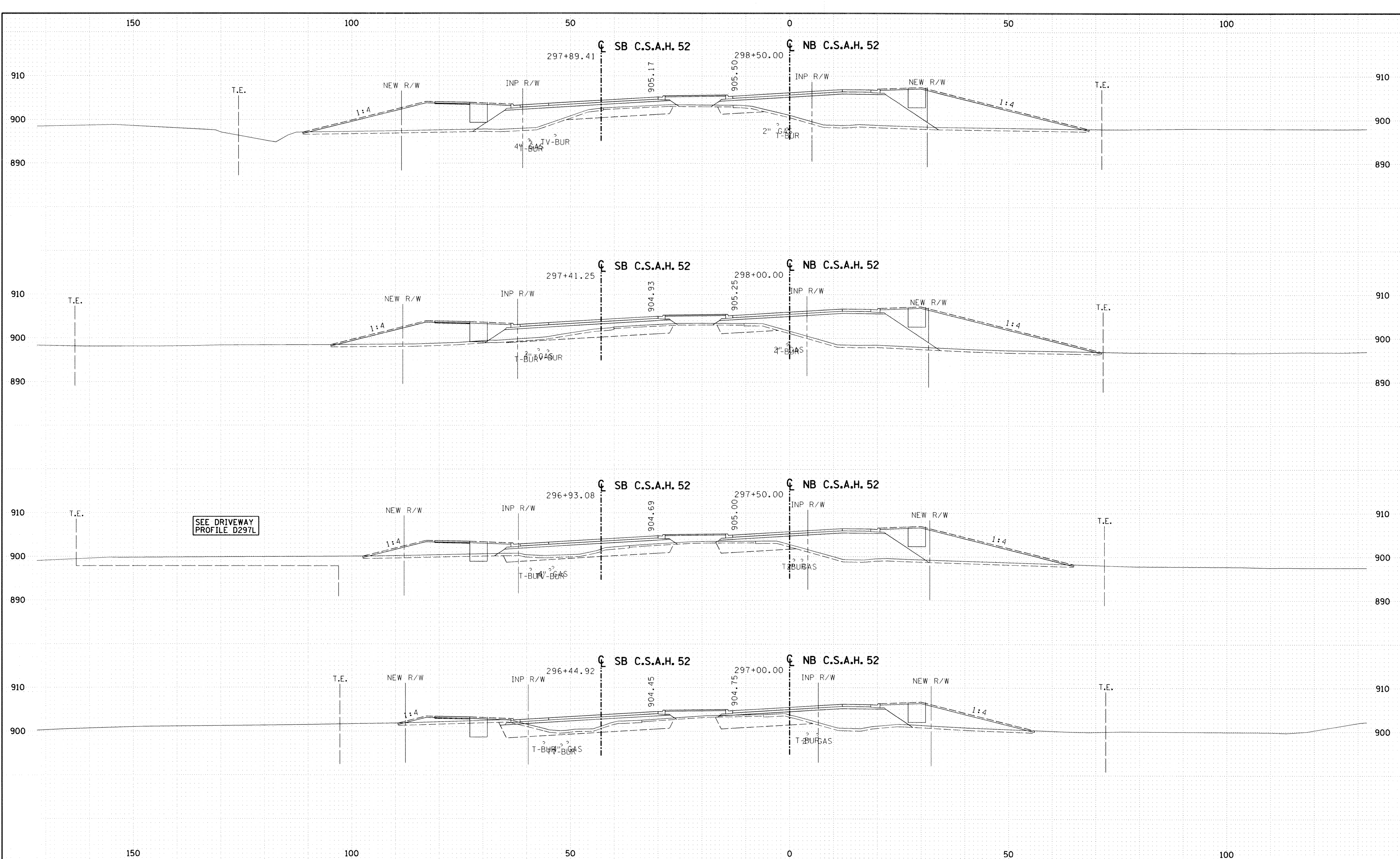
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STATE AID PROJECT NO. S. A. P. 02-652-01 S. A. P. 106-020-019	 TKDA <small>TOLTZ, KING, DUWALL, ANDERSON AND ASSOCIATES, INCORPORATED</small> <small>ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA</small>	ANOKA COUNTY CROSS SECTIONS C.S.A.H. 52 RECONSTRUCTION STA. 295+00 TO STA. 296+50	SHEET 215 OF 253
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SEE DRIVEWAY PROFILE D297L

STATE AID PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 297+00 TO STA. 298+50

SHEET
 216
 OF
 253

150

100

50

0

50

100

SEE DRIVEWAY
PROFILE D300L

T.E.

NEW R/W

INP R/W

299+86.93

SB C.S.A.H. 52

906.16

300+50.00

NB C.S.A.H. 52

INP R/W

NEW R/W

T.E.

T.E.

NEW R/W

INP R/W

299+36.93

SB C.S.A.H. 52

905.91

300+00.00

NB C.S.A.H. 52

INP R/W

NEW R/W

T.E.

T.E.

NEW R/W

INP R/W

298+86.93

SB C.S.A.H. 52

905.66

299+50.00

NB C.S.A.H. 52

INP R/W

NEW R/W

T.E.

T.E.

NEW R/W

INP R/W

298+37.58

SB C.S.A.H. 52

905.41

299+00.00

NB C.S.A.H. 52

INP R/W

NEW R/W

T.E.

150

100

50

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100

STATE AID PROJECT NO.

S. A. P. 02-652-01
S. A. P. 106-020-019

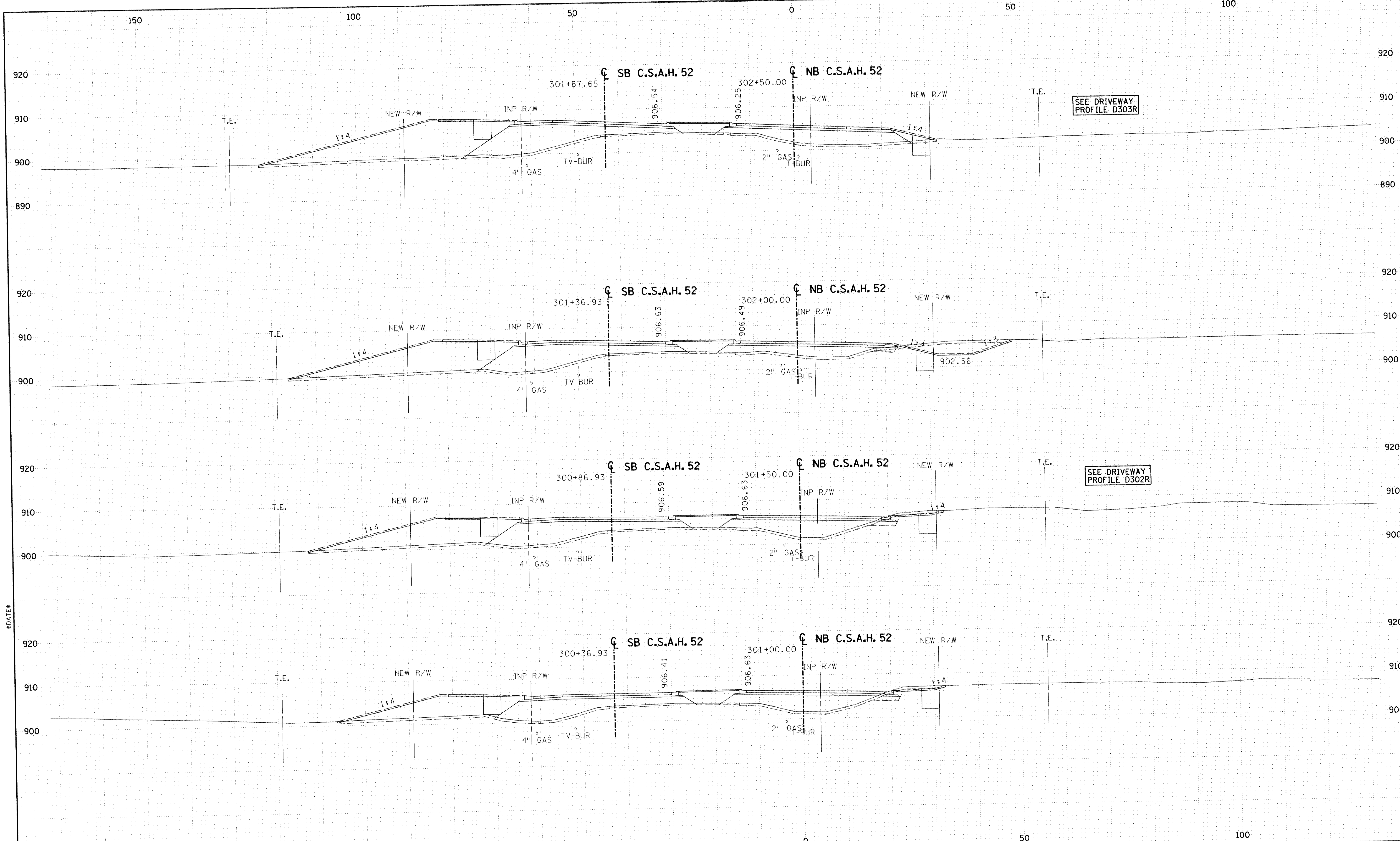
TKDA

TOLTZ, KING, DUWALL, ANDERSON
AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY

CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
STA. 299+00 TO STA. 300+50

SHEET
217
OF
253



STATE AID PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

TKDA
 TOLIZ, KING, DUWALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 301+00 TO STA. 302+50

SHEET
 21
 OF
 25

150

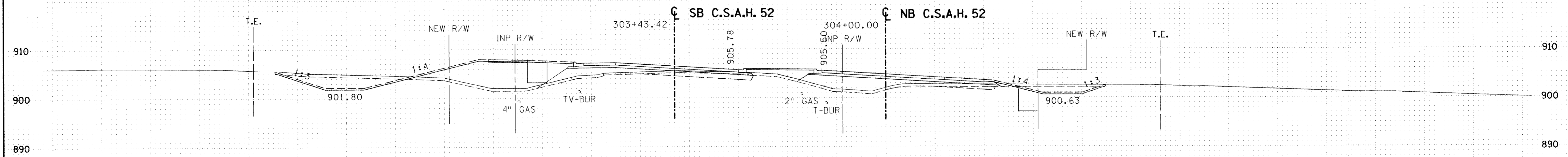
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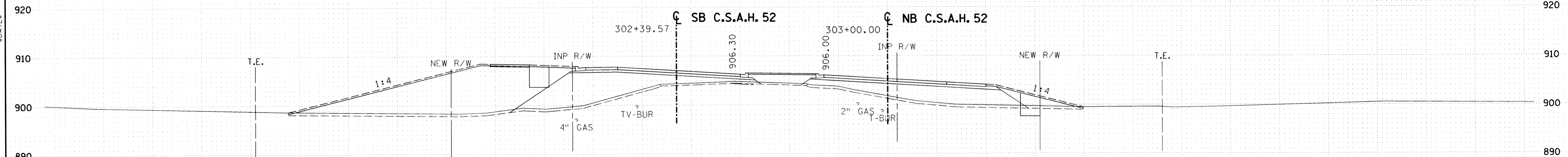
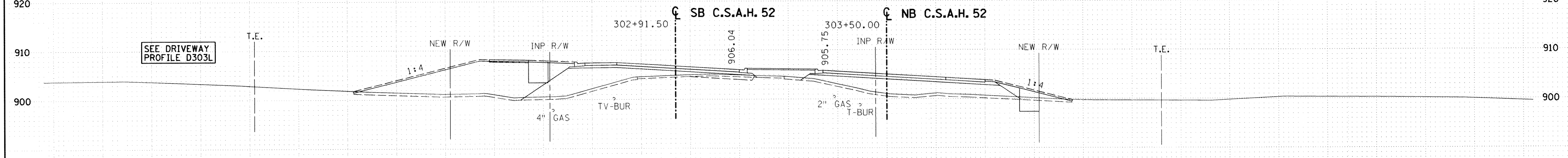
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SEE DRIVEWAY PROFILE D303L



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STATE AID PROJECT NO.
 S. A. P. 02-652-01
 S. A. P. 106-020-019

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 303+00 TO STA. 304+00

SHEET
 219
 OF
 253

150

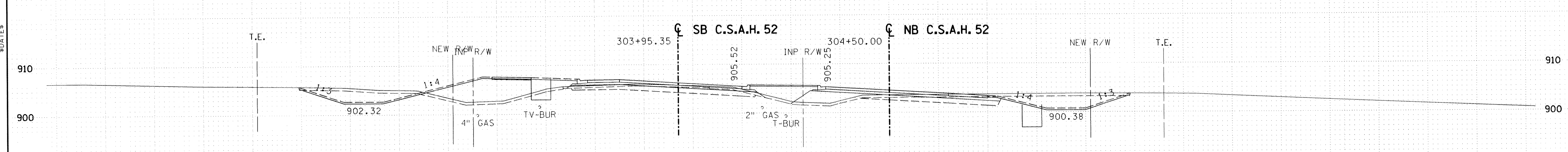
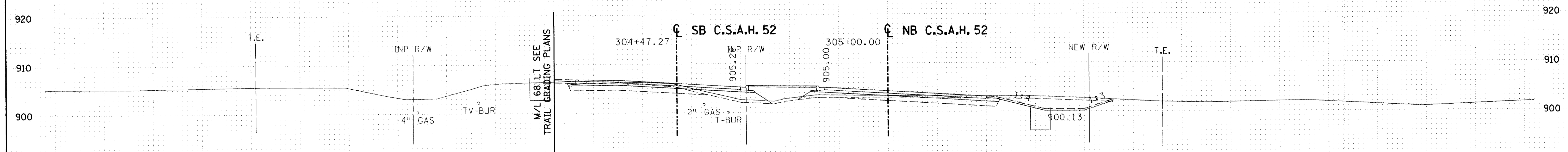
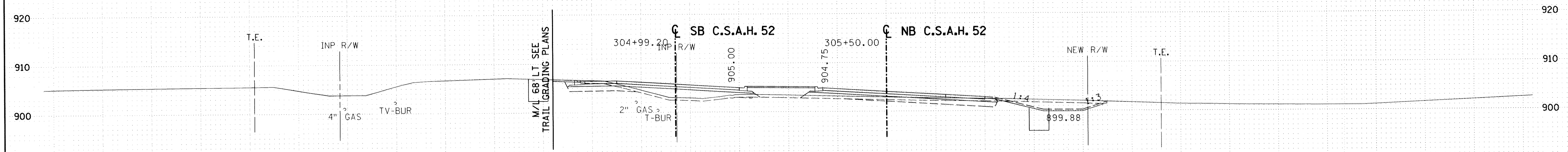
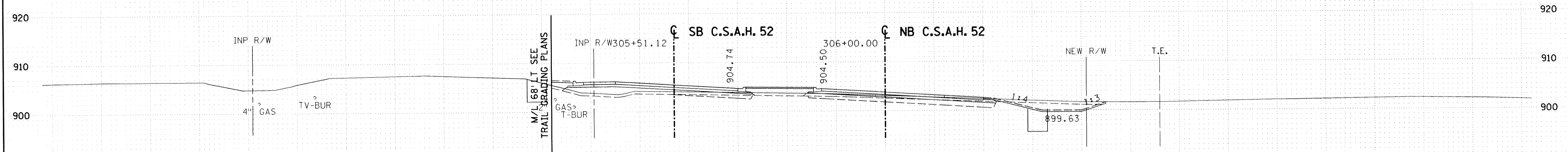
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STATE AID PROJECT NO.

S.A.P. 02-652-01
S.A.P. 106-020-019

TKDA

TOLTZ, KING, DUVALL, ANDERSON
AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
STA. 304+50 TO STA. 306+00

SHEET
220
OF
253

150

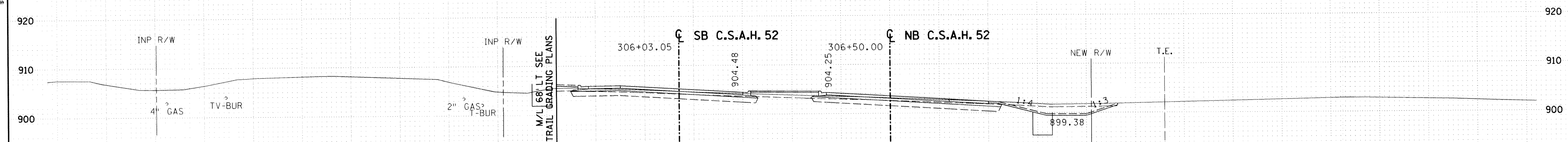
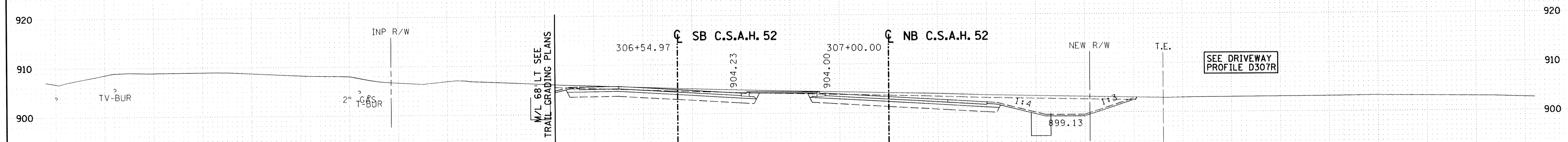
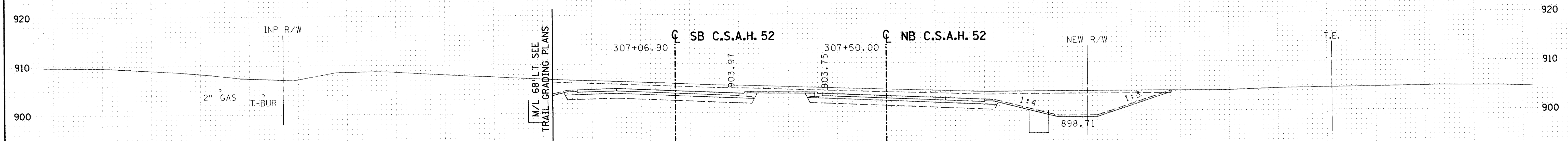
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STATE AID PROJECT NO.

S.A.P. 02-652-01
S.A.P. 106-020-019

TKDA

TOLTZ, KING, DUVALL, ANDERSON
AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY

CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
STA. 306+50 TO STA. 307+50

SHEET
221
OF
253

150

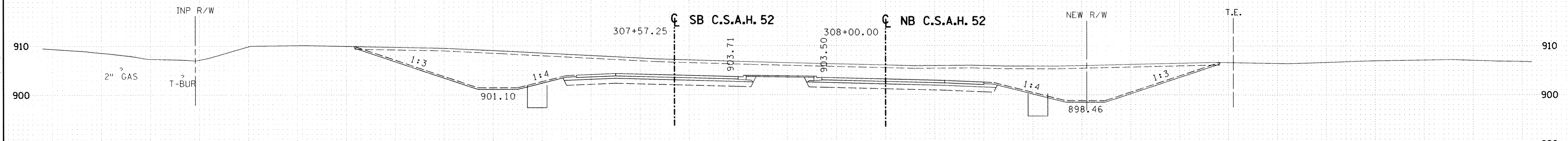
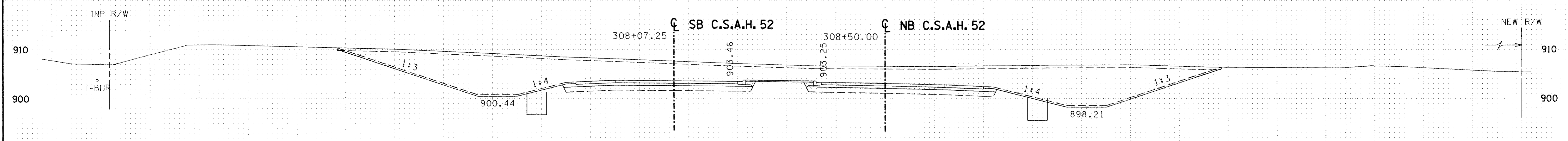
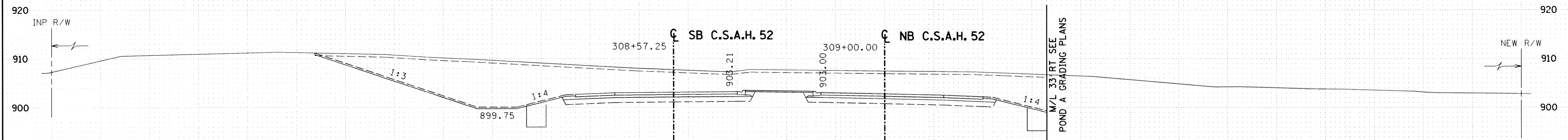
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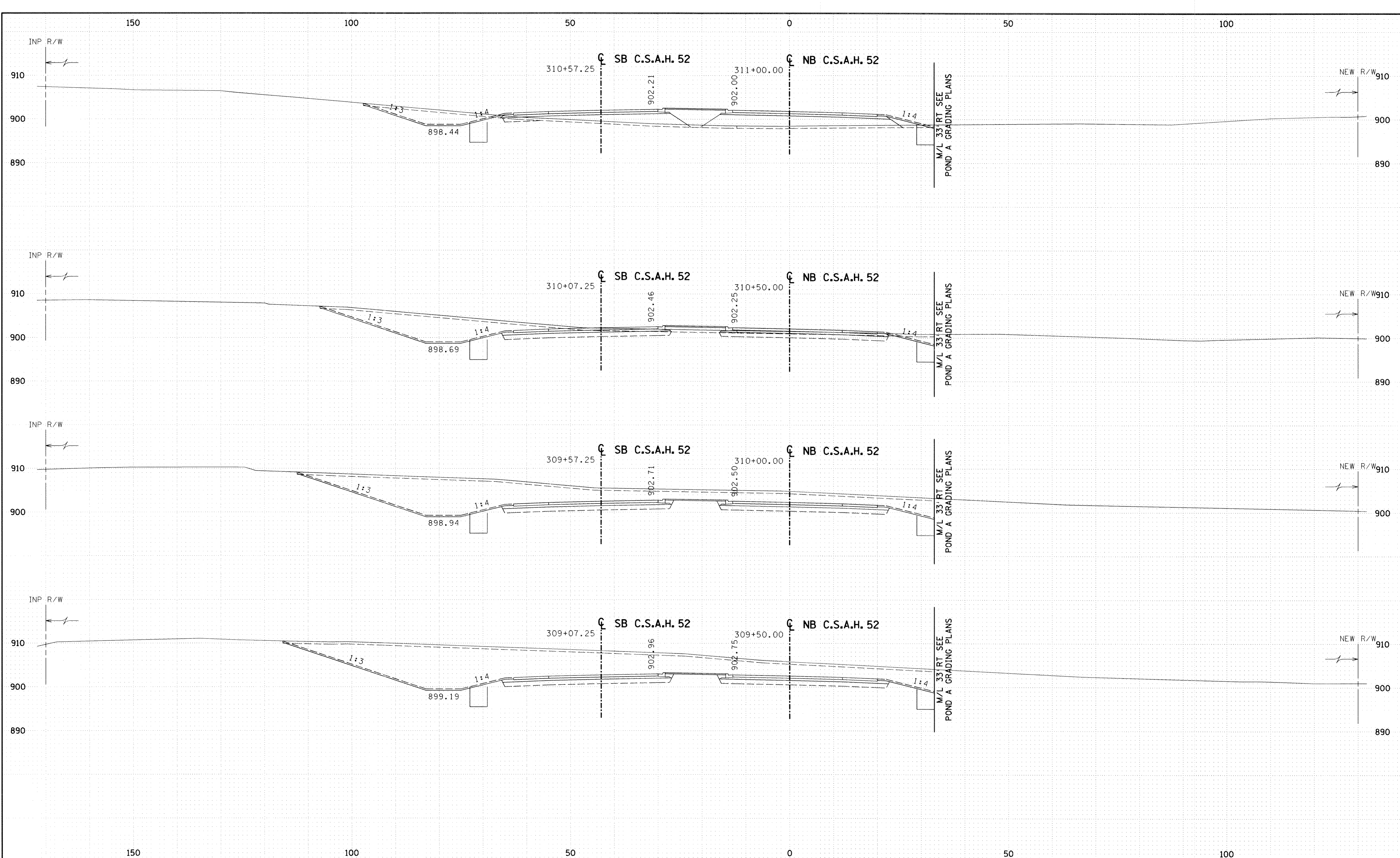
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STATE AID PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

TKDA
 TOLTZ, KING, DUVAL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS • ARCHITECTS • PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 308+00 TO STA. 309+00

SHEET
 222
 OF
 253



STATE AID PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 309+50 TO STA. 311+00

SHEET
 223
 OF
 253

150

100

50

0

50

100

INP R/W

NEW R/W

312+07.25 SB C.S.A.H. 52 312+50.00 NB C.S.A.H. 52

1:3 898.07 1:4

901.85

902.00

1:4

M/L 33' RT SEE POND A GRADING PLANS

INP R/W

NEW R/W

311+57.25 SB C.S.A.H. 52 312+00.00 NB C.S.A.H. 52

1:3 898.05 1:4

901.82

901.83

1:4

M/L 33' RT SEE POND A GRADING PLANS

INP R/W

NEW R/W

311+07.25 SB C.S.A.H. 52 311+50.00 NB C.S.A.H. 52

1:3 898.19 1:4

901.97

901.83

1:4

M/L 33' RT SEE POND A GRADING PLANS

150

100

50

0

50

100

STATE AID PROJECT NO.

S.A.P. 02-652-01
S.A.P. 106-020-019

TKDA

TOLTZ, KING, DUWALL, ANDERSON
AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
STA. 311+50 TO STA. 312+50

SHEET
224
OF
253

150

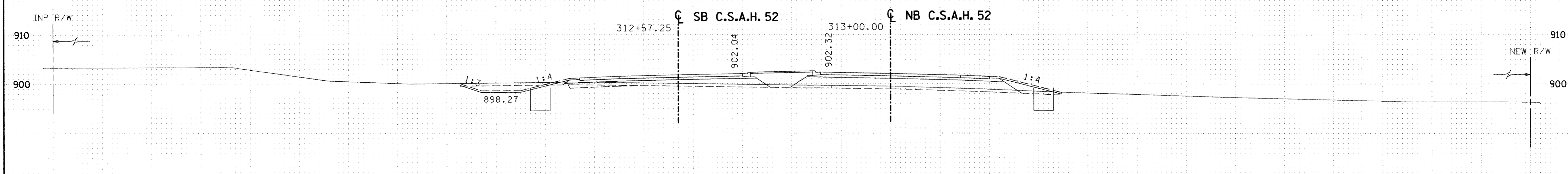
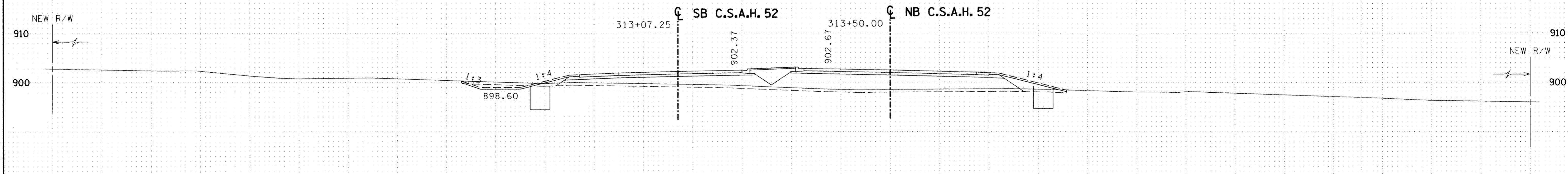
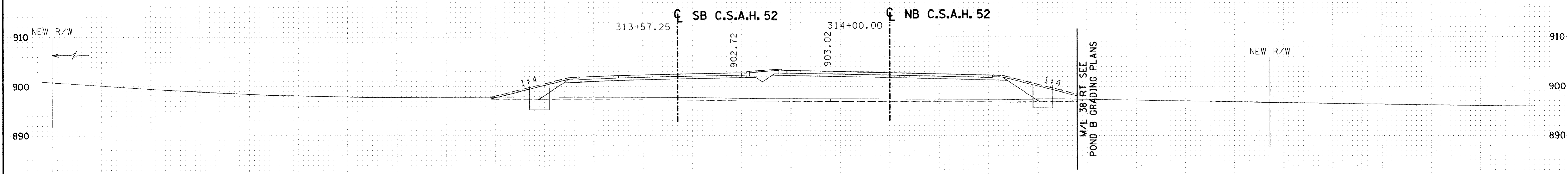
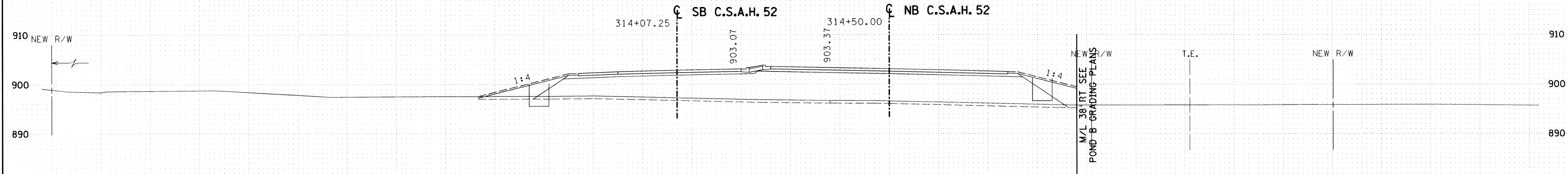
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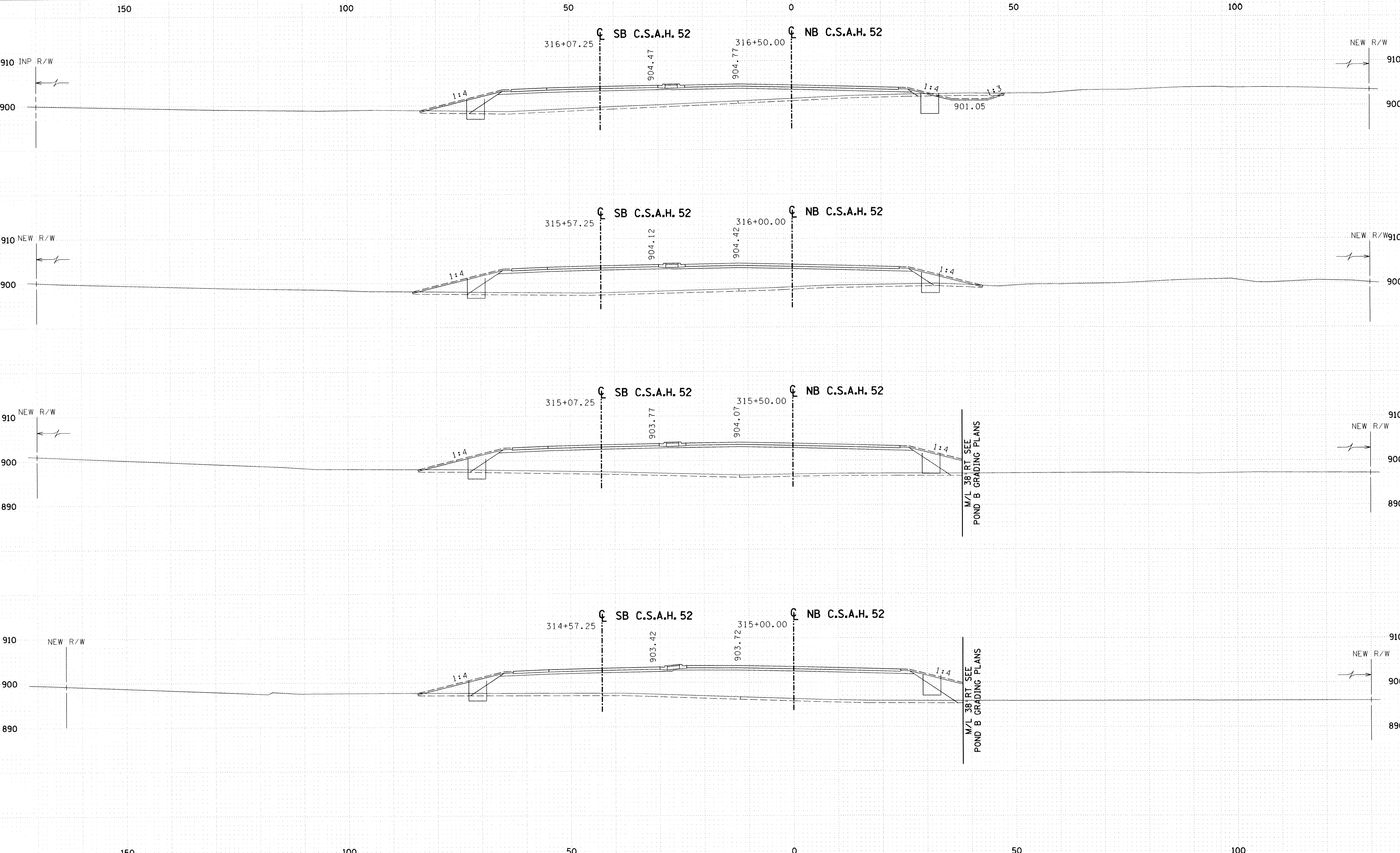
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STATE AID PROJECT NO.
 S. A. P. 02-652-01
 S. A. P. 106-020-019

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 313+00 TO STA. 314+50

SHEET
 225
 OF
 253

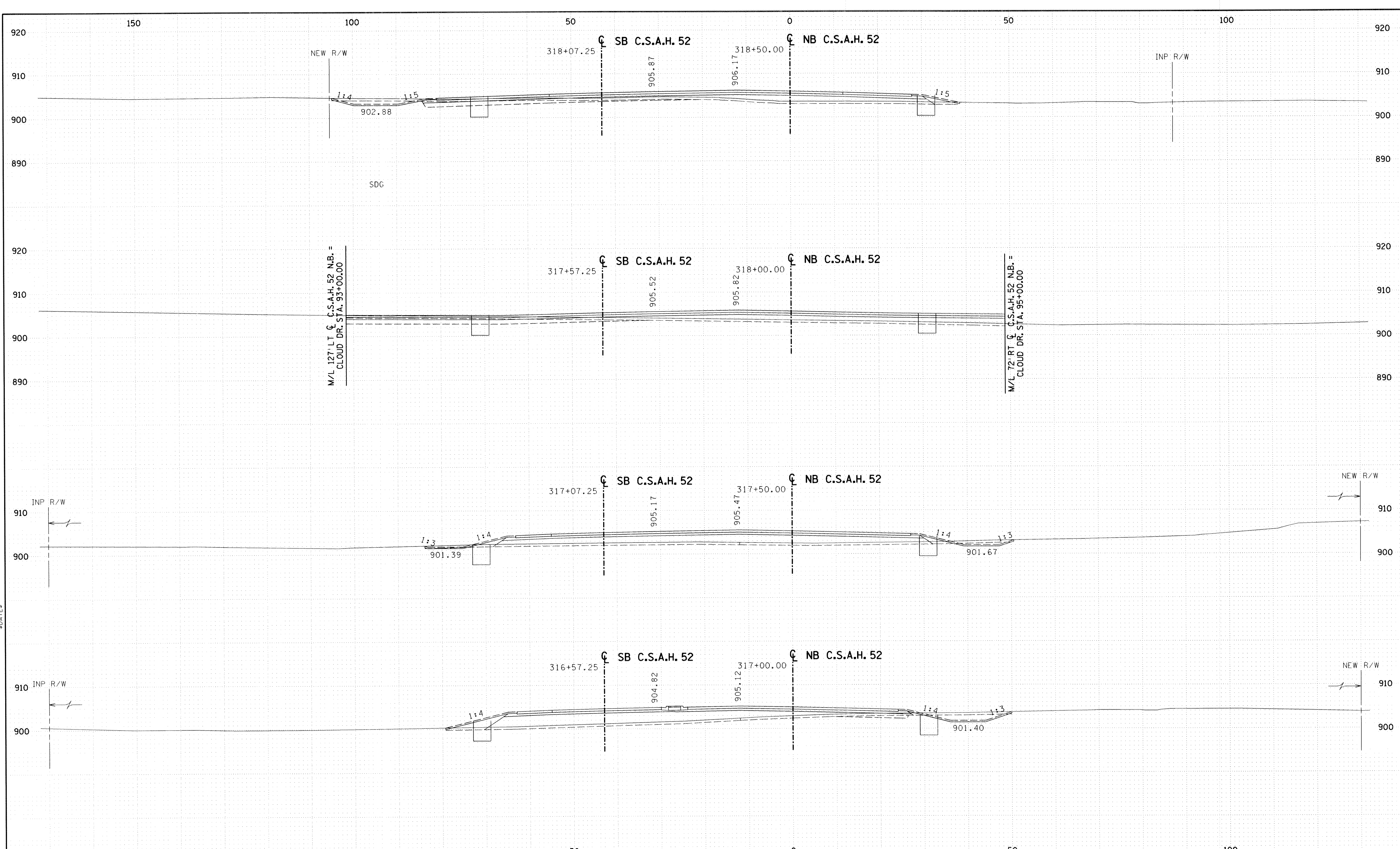


STATE AID PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS • ARCHITECTS • PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 315+00 TO STA. 316+50

SHEET
 226
 OF
 253



STATE AID PROJECT NO.
 S. A. P. 02-652-01
 S. A. P. 106-020-019

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS • ARCHITECTS • PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 317+00 TO STA. 318+50

SHEET
 227
 OF
 253

150

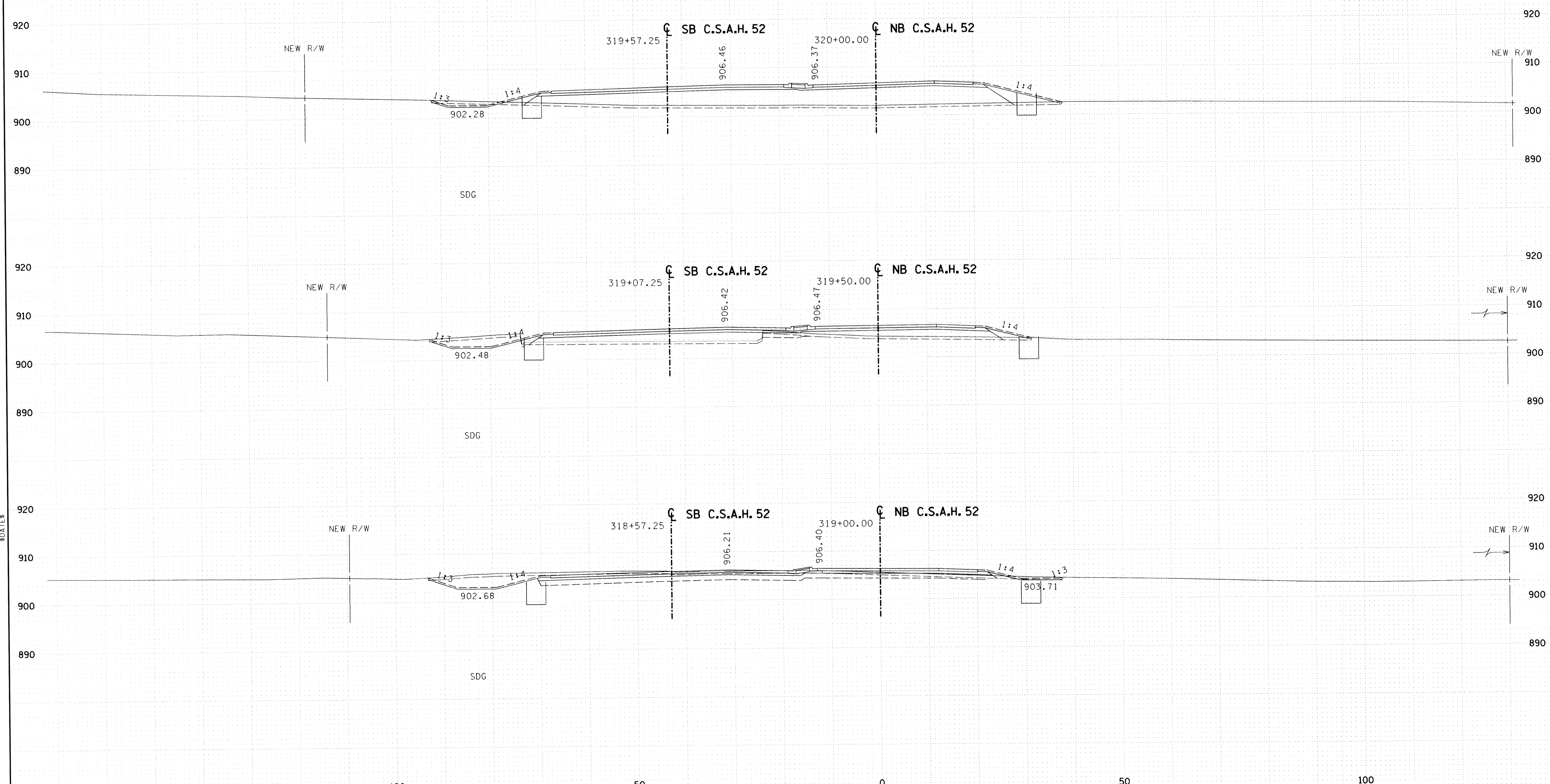
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STATE AID PROJECT NO.

S.A.P. 02-652-01
S.A.P. 106-020-019

TKDA

TOLTZ, KING, DUVAL, ANDERSON
AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
STA. 319+00 TO STA. 320+00

SHEET
228
OF
253

150

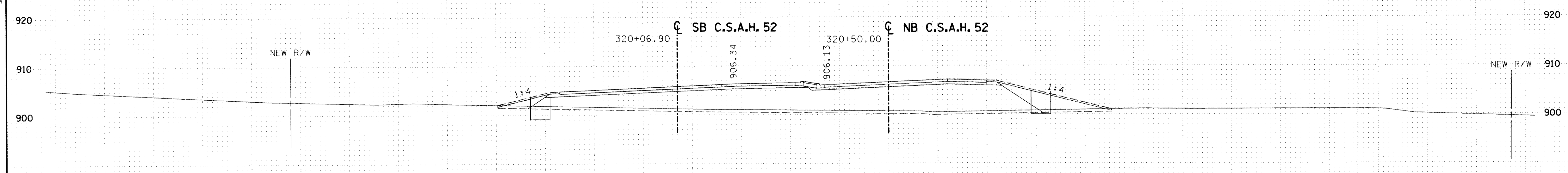
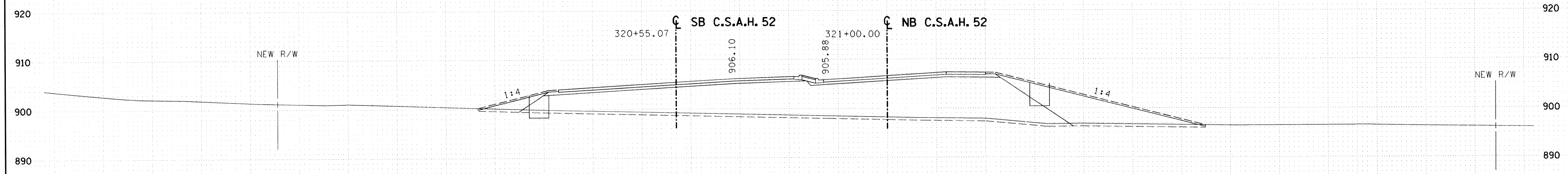
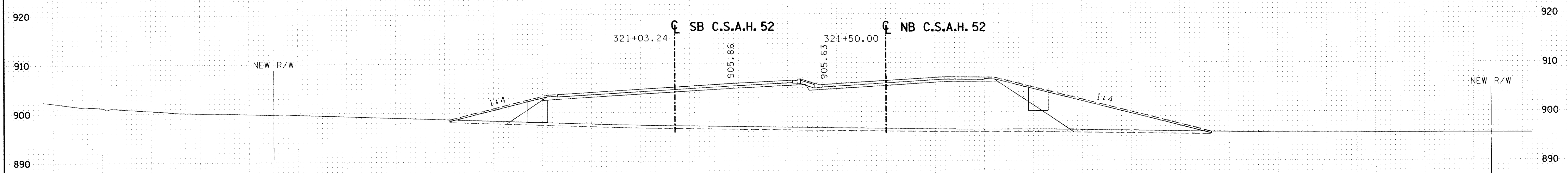
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STATE AID PROJECT NO.
 S. A. P. 02-652-01
 S. A. P. 106-020-019

TKDA
 TOLTZ, KING, DUVAL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS • ARCHITECTS • PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 320+50 TO STA. 321+50

SHEET
 229
 OF
 253

150

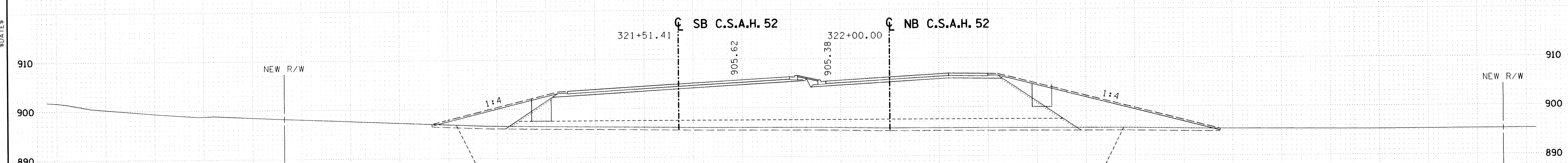
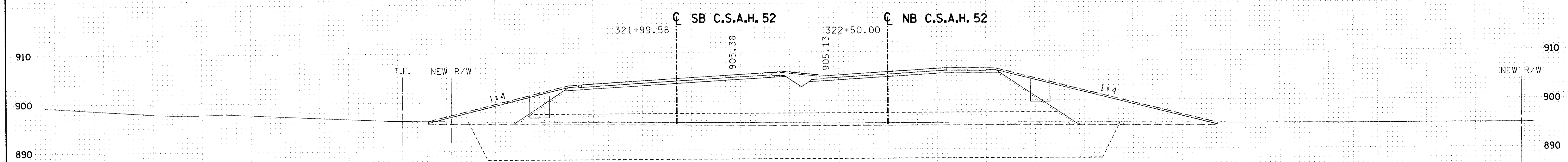
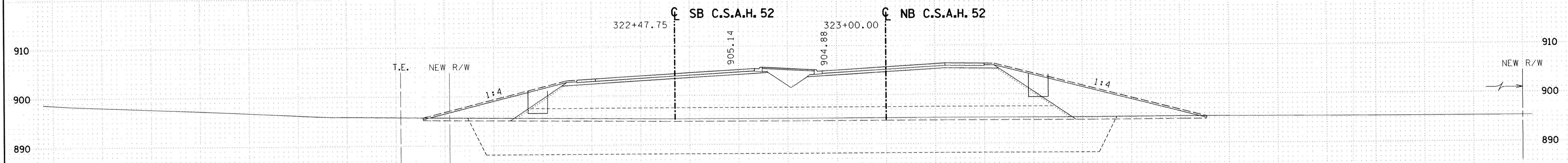
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STATE AID PROJECT NO.

S.A.P. 02-652-01
S.A.P. 106-020-019

TKDA

TOLTZ, KING, DUVALL, ANDERSON
AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
STA. 322+00 TO STA. 323+00

SHEET
230
OF
253

150

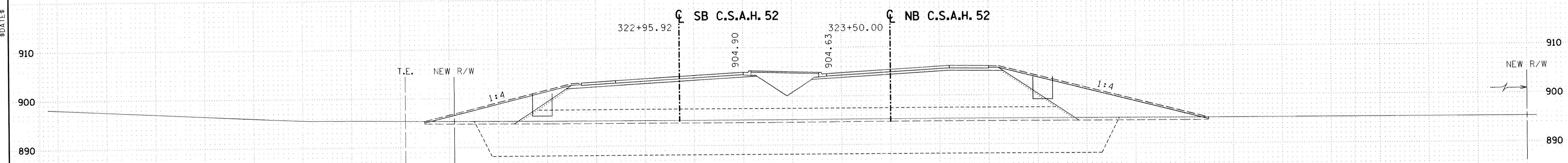
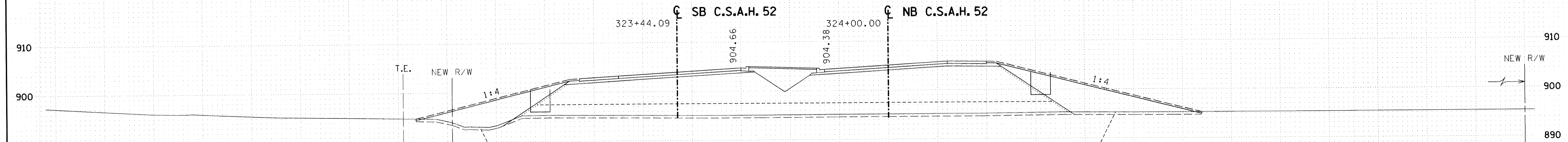
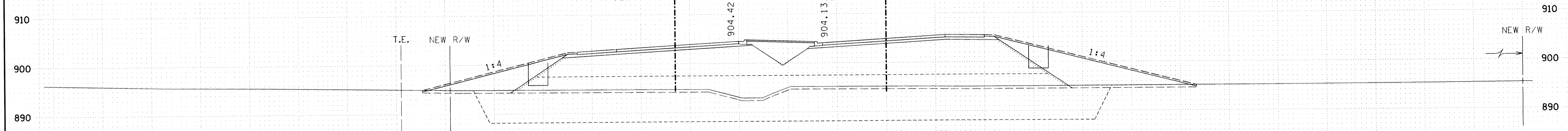
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STATE AID PROJECT NO.

S.A.P. 02-652-01
S.A.P. 106-020-019

TKDA

TOLTZ, KING, DUVALL, ANDERSON
AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
STA. 323+50 TO STA. 324+50

SHEET
231
OF
253

150

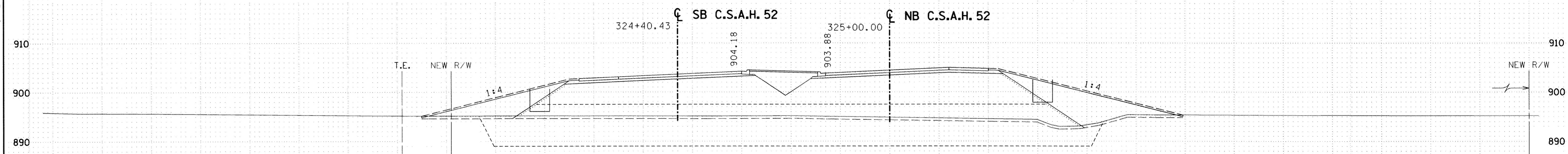
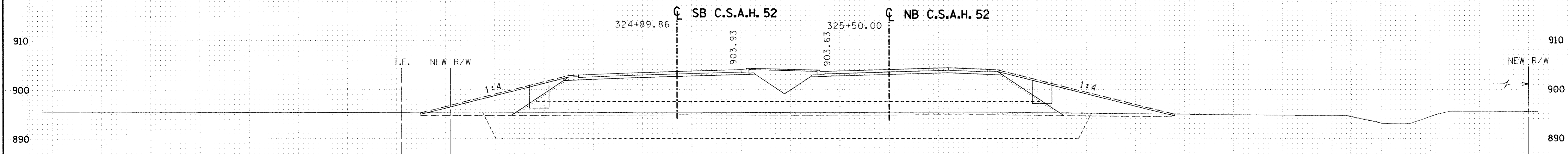
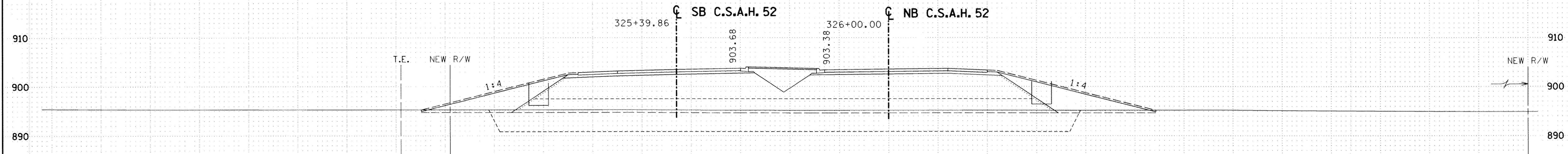
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STATE AID PROJECT NO. S. A. P. 02-652-01 S. A. P. 106-020-019	TKDA <small>TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA</small>	ANOKA COUNTY CROSS SECTIONS C.S.A.H. 52 RECONSTRUCTION STA. 325+00 TO STA. 326+00	SHEET 232 OF 253
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150

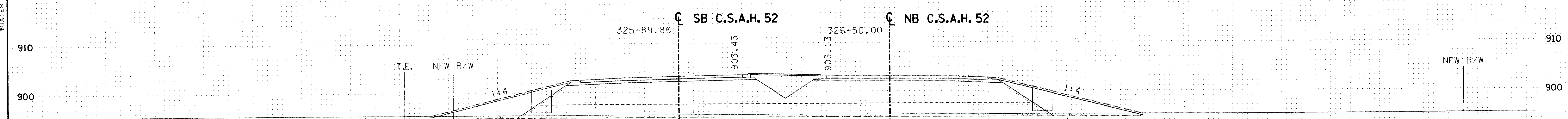
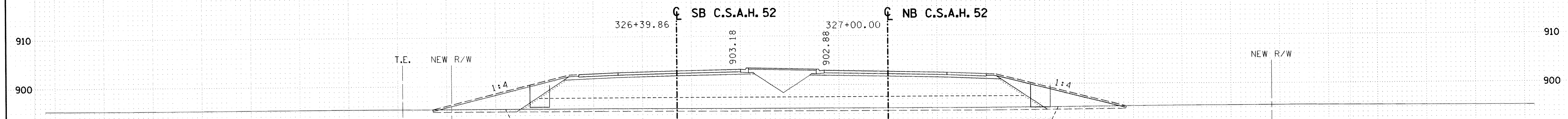
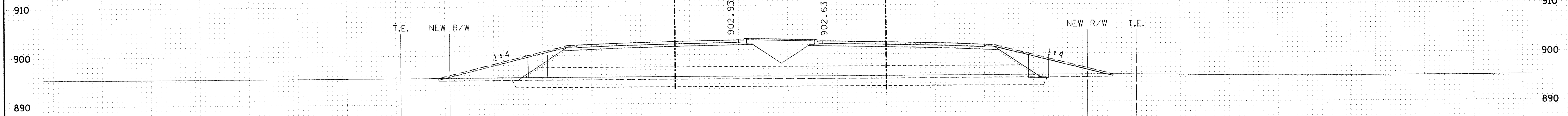
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STATE AID PROJECT NO.

S. A. P. 02-652-01
S. A. P. 106-020-019

TKDA

TOLTZ, KING, DUVALL, ANDERSON
AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
STA. 326+50 TO STA. 327+50

SHEET
233
OF
253

\$FILE\$

150

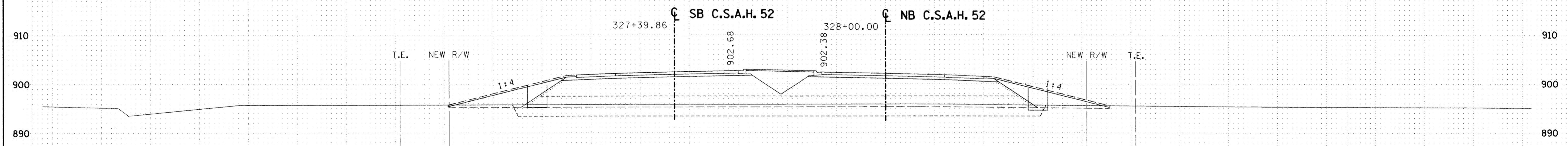
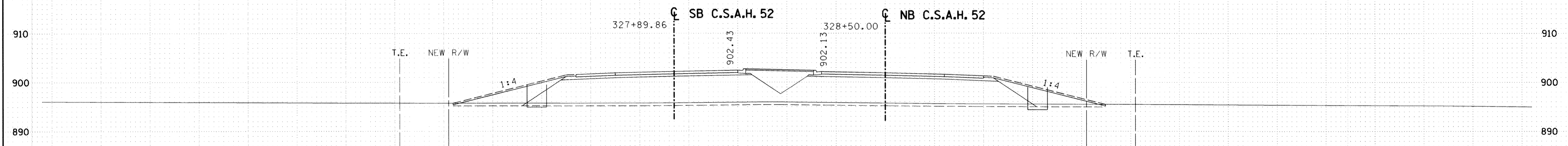
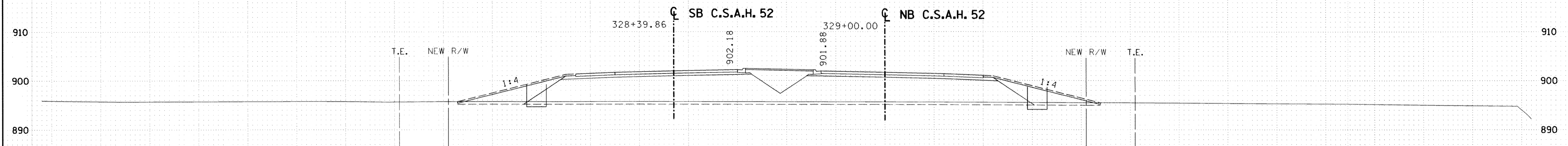
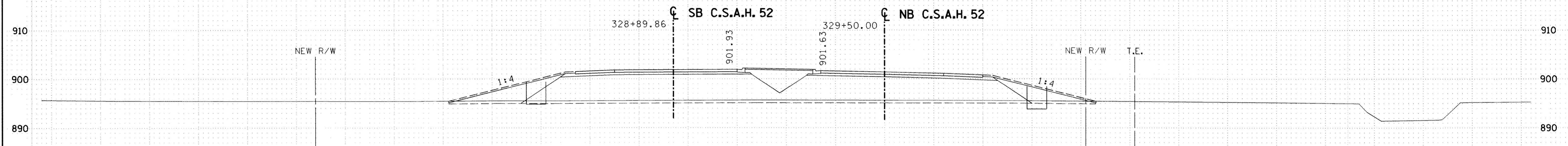
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STATE AID PROJECT NO.
 S. A. P. 02-652-01
 S. A. P. 106-020-019

TKDA
 TOLTZ, KING, DUVAL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS • ARCHITECTS • PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 328+00 TO STA. 329+50

SHEET
 234
 OF
 253

150

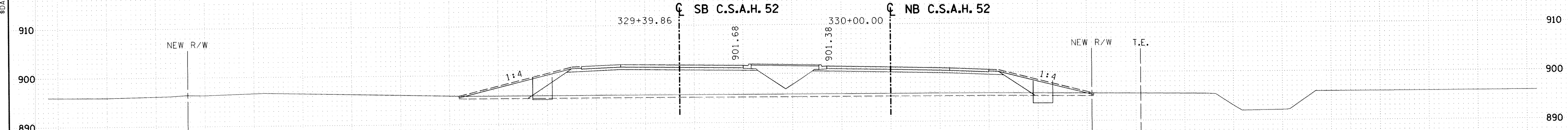
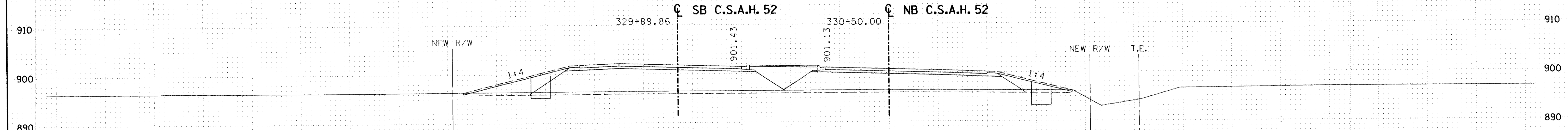
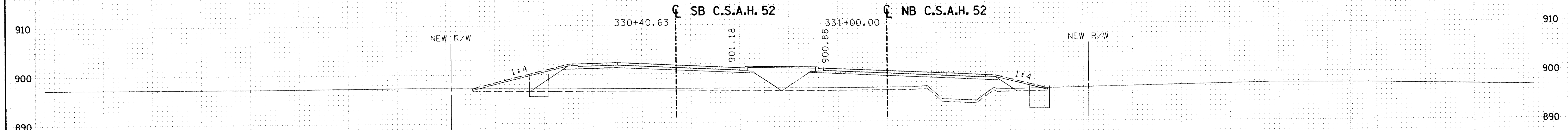
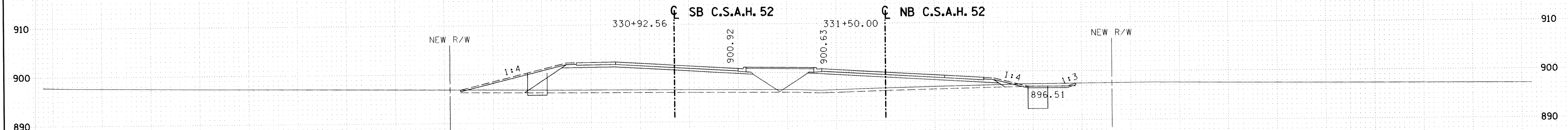
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STATE AID PROJECT NO.

S.A.P. 02-652-01
S.A.P. 106-020-019

TKDA

ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

TOLTZ, KING, DUVALL, ANDERSON
AND ASSOCIATES, INCORPORATED

ANOKA COUNTY
CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
STA. 330+00 TO STA. 331+50

SHEET
235
OF
253

150

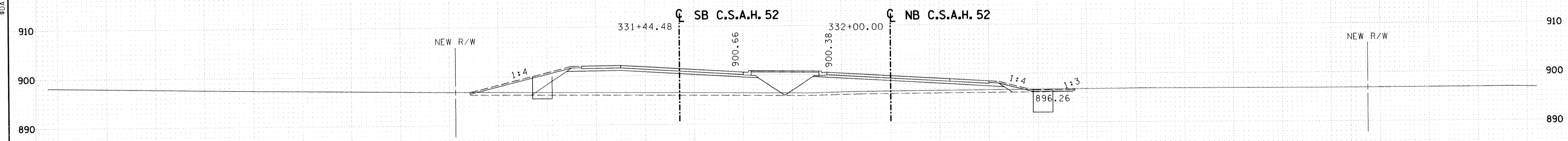
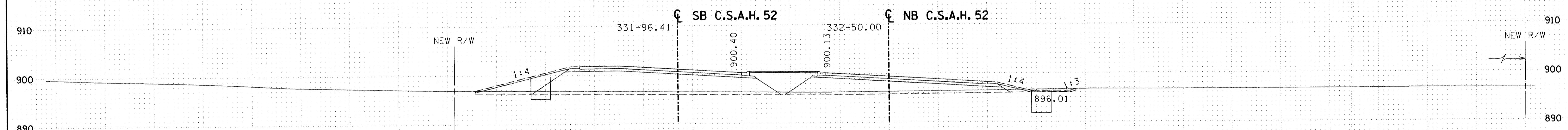
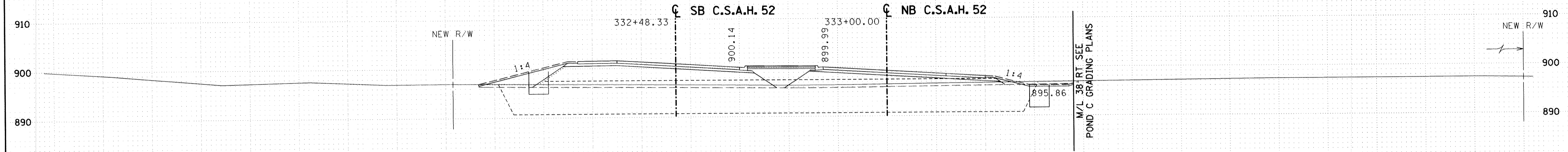
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STATE AID PROJECT NO.

S.A.P. 02-652-01
S.A.P. 106-020-019

TKDA

TOLTZ, KING, DUVALL, ANDERSON
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ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
STA. 332+00 TO STA. 333+00

SHEET
236
OF
253

150

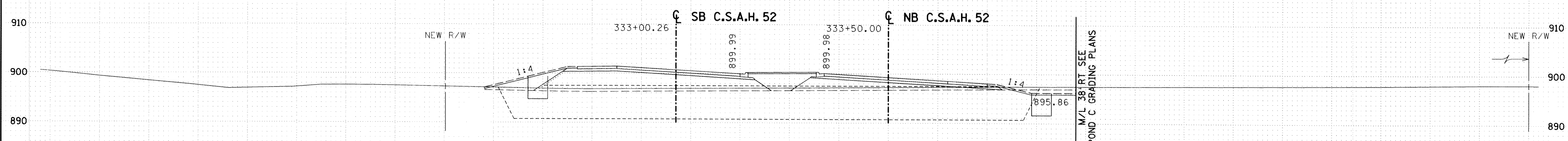
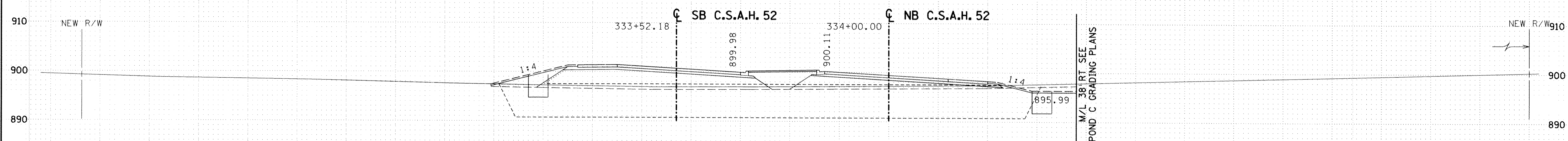
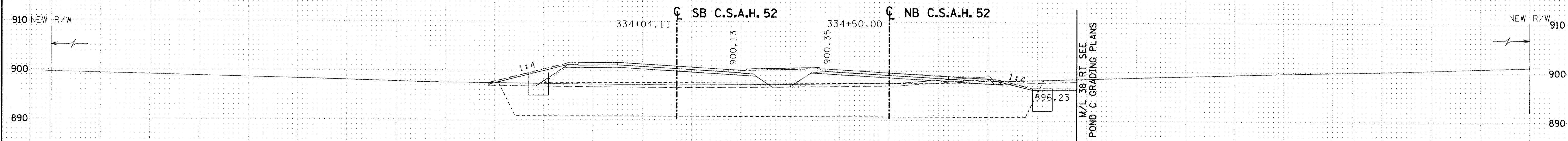
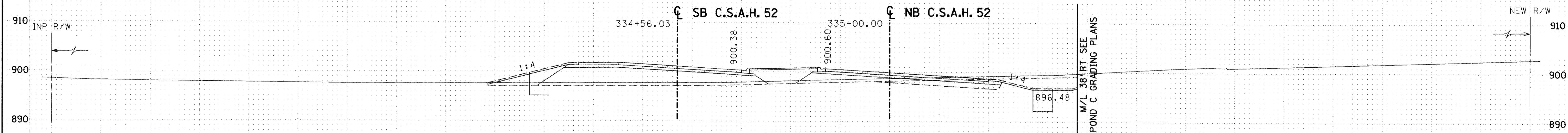
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STATE AID PROJECT NO.
 S. A. P. 02-652-01
 S. A. P. 106-020-019

TKDA
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 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 333+50 TO STA. 335+00

SHEET
 237
 OF
 253

150

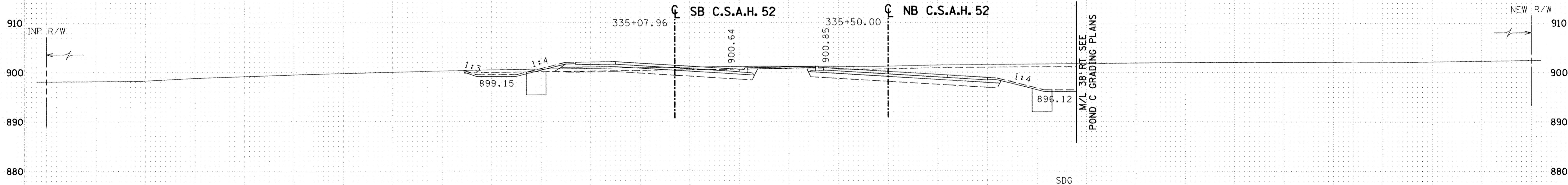
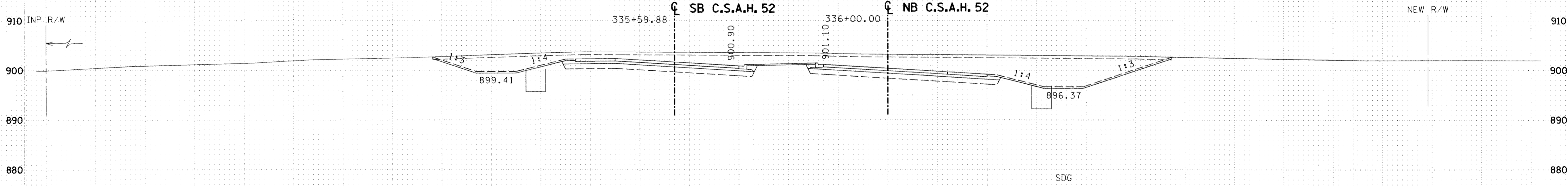
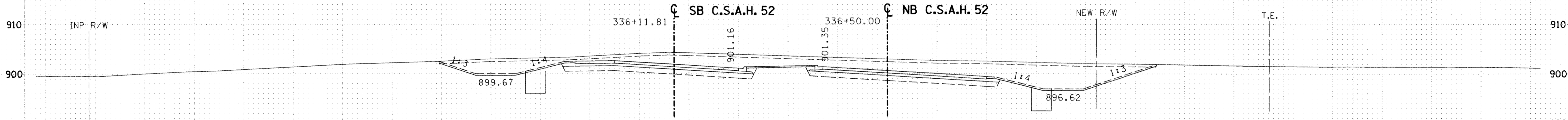
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STATE AID PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

TKDA
 TOLTZ, KING, DUVAL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 335+50 TO STA. 336+50

SHEET
 238
 OF
 253

150

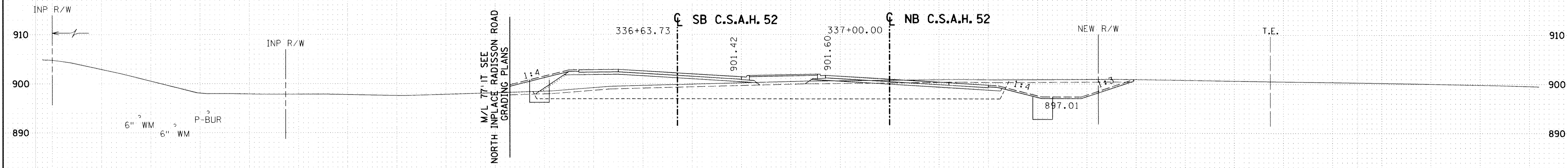
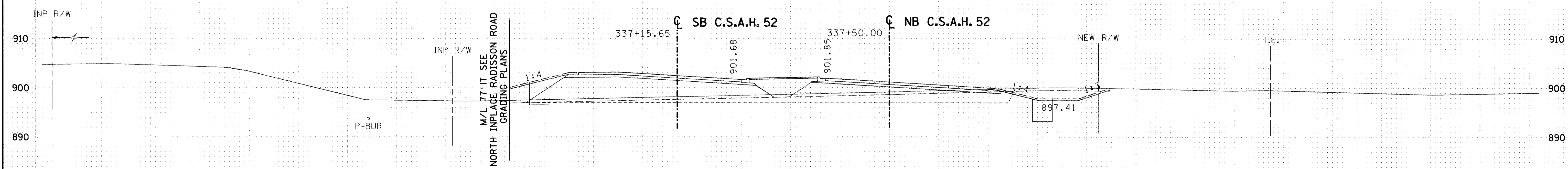
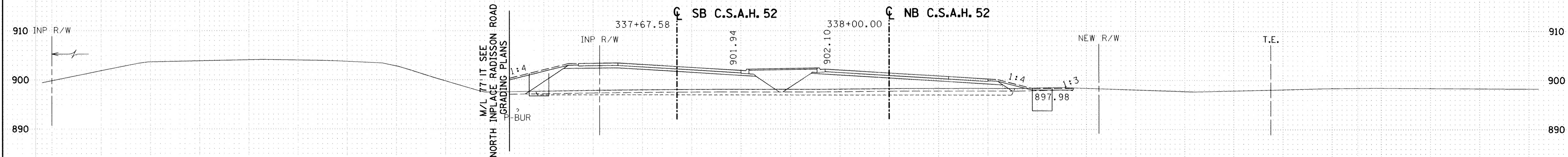
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STATE AID PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

TKDA
 TOLTZ, KING, DUVAL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 337+00 TO STA. 338+00

SHEET
 239
 OF
 253

150

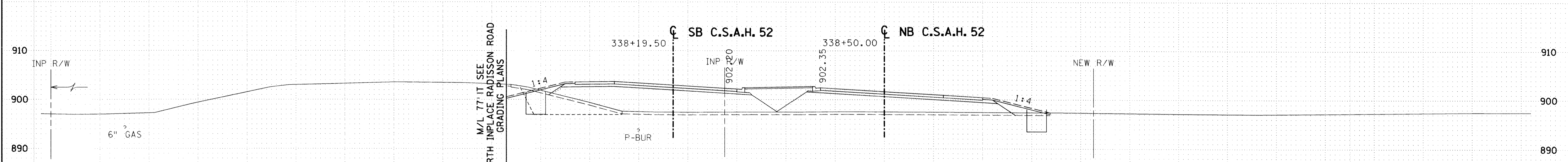
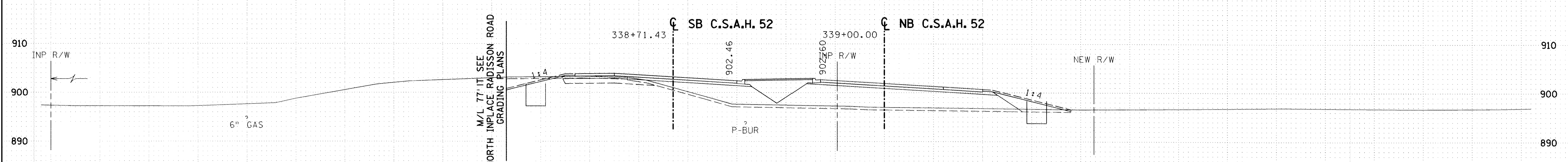
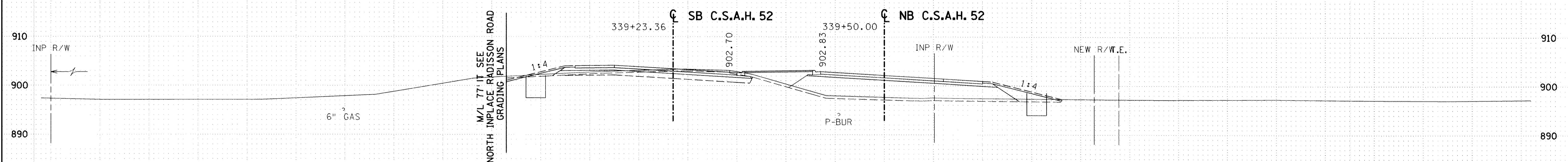
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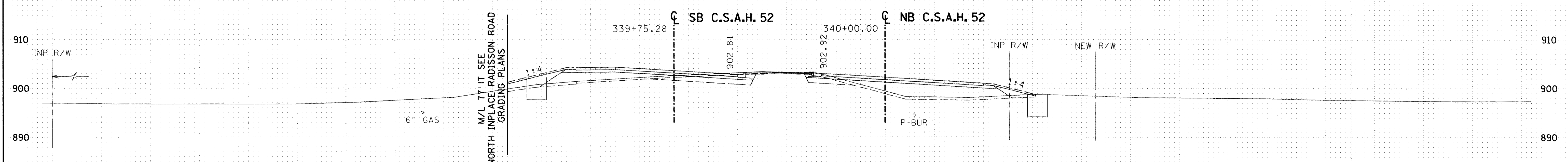
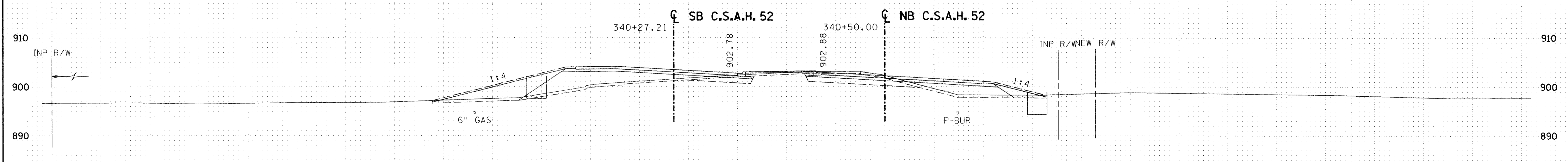
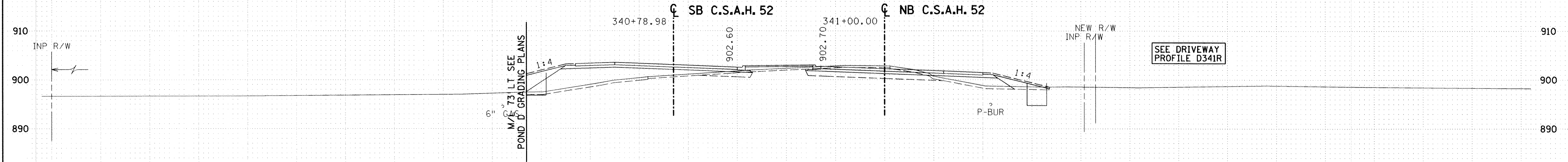
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STATE AID PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 338+50 TO STA. 339+50

SHEET
 240
 OF
 253

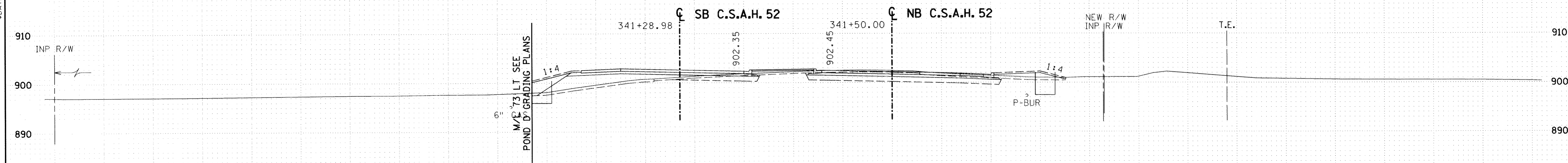
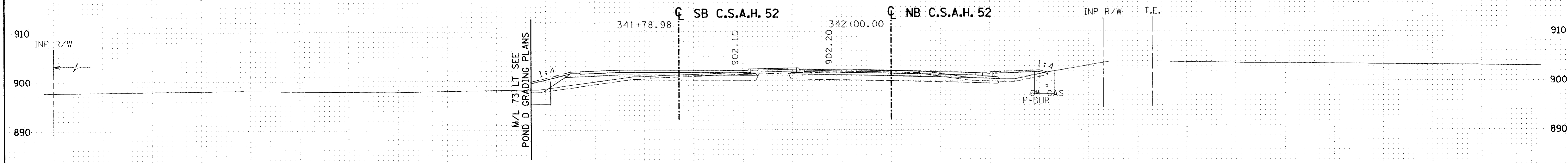
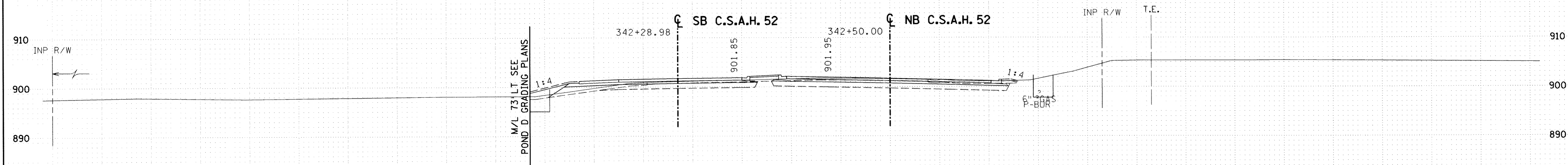


STATE AID PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

TKDA
 TOLTZ, KING, DUVAL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 340+00 TO STA. 341+00

SHEET
 241
 OF
 253



STATE AID PROJECT NO. S.A.P. 02-652-01 S.A.P. 106-020-019	TKDA <small>TOLTZ, KING, DUVAL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA</small>	ANOKA COUNTY CROSS SECTIONS C.S.A.H. 52 RECONSTRUCTION STA. 341+50 TO STA. 342+50	SHEET 242 OF 253
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150

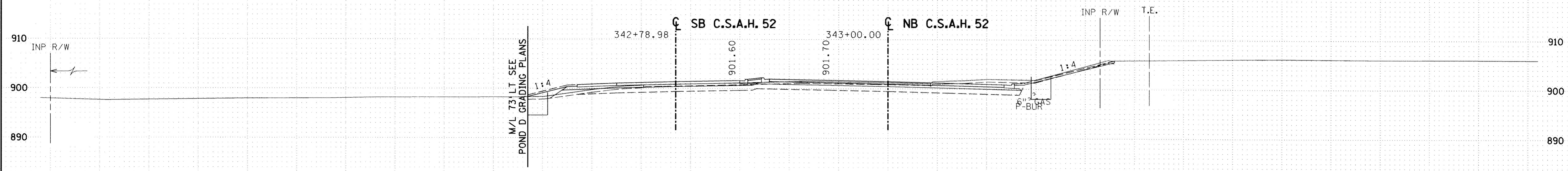
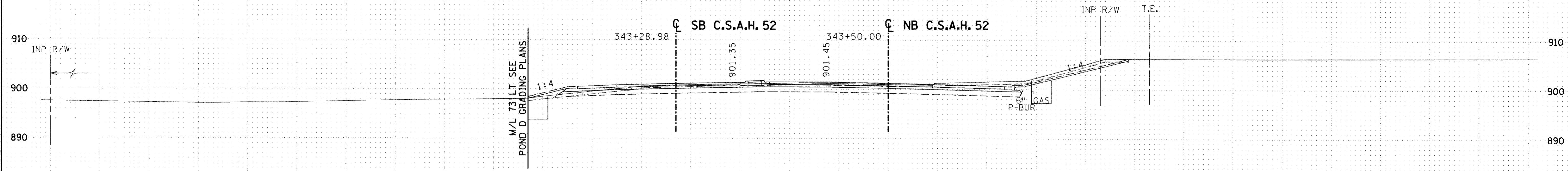
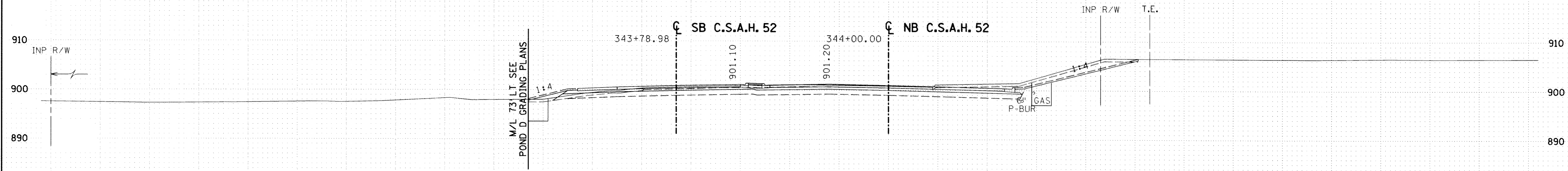
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STATE AID PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 343+00 TO STA. 344+00

SHEET
 243
 OF
 253

150

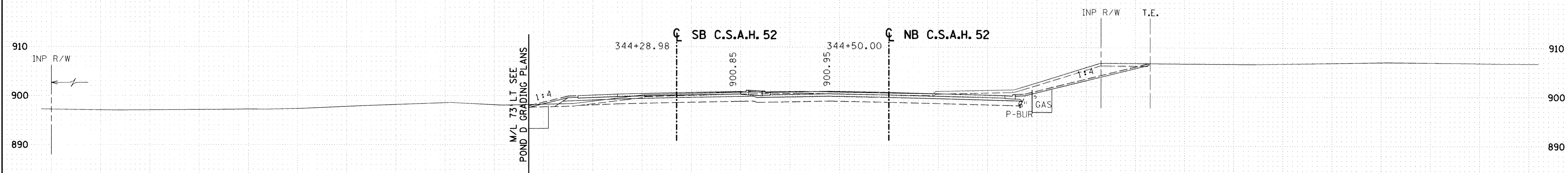
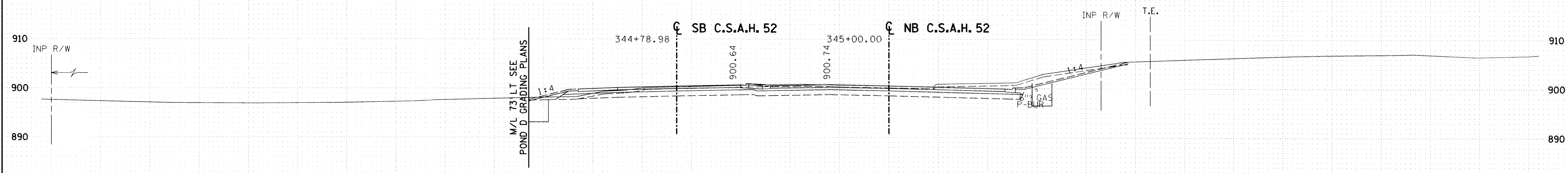
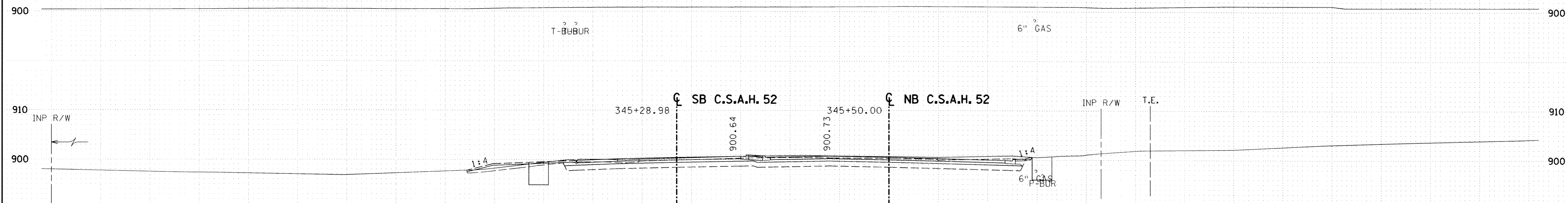
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STATE AID PROJECT NO. S. A. P. 02-652-01 S. A. P. 106-020-019	TKDA TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA	ANOKA COUNTY CROSS SECTIONS C.S.A.H. 52 RECONSTRUCTION STA. 344+50 TO STA. 345+50	SHEET 244 OF 253
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150

100

50

0

50

100

910

900

910

900

INP R/W

348+50.01 C.S.A.H. 52

INP R/W

T-BUR T-BUR 3" GAS
6" WM

902.69

1:4

910

900

910

900

INP R/W

348+00.00 C.S.A.H. 52

INP R/W

T-BUR T-BUR T-BUR 3" GAS
6" WM

902.44

1:4

910

900

910

900

INP R/W

347+50.00 C.S.A.H. 52

INP R/W

T-BUR T-BUR T-BUR 3" GAS
6" WM

902.16

1:4

890

890

910

900

910

900

347+00.00 C.S.A.H. 52

T-BUR 3" GAS T-BUR T-BUR 3" GAS
6" WM

901.56

1:6.163

3" GAS

3" GAS

150

100

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100

STATE AID PROJECT NO.

S.A.P. 02-652-01
S.A.P. 106-020-019

TKDA

TOLTZ, KING, DUVALL, ANDERSON
AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY

CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
STA. 347+00 TO STA. 348+50

SHEET
245
OF
253

150

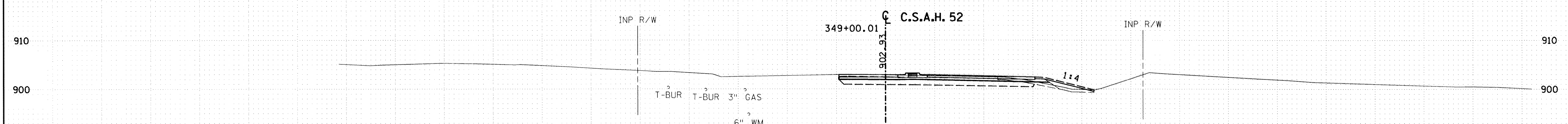
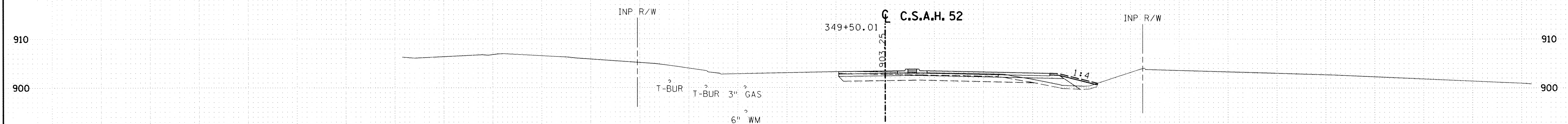
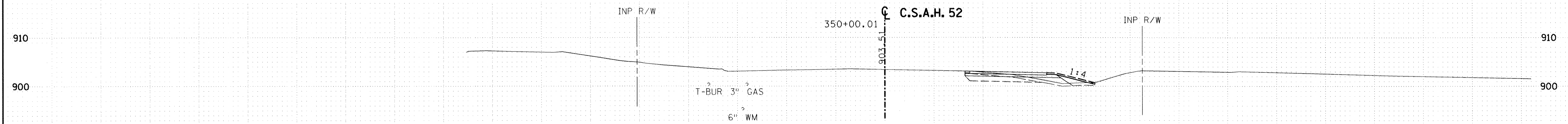
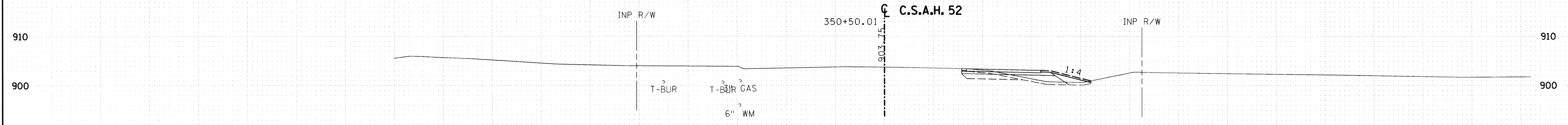
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STATE AID PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

TKDA
 TOLTZ, KING, DUVAL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 349+00 TO STA. 350+50

SHEET
 246
 OF
 253

150

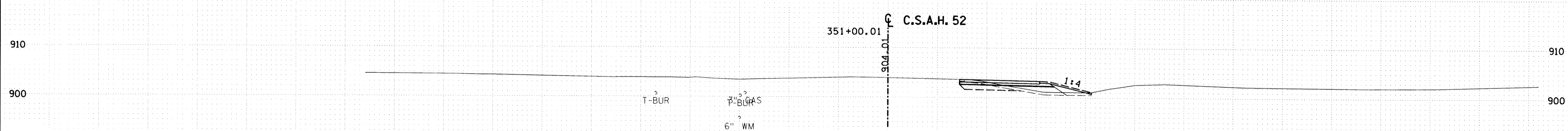
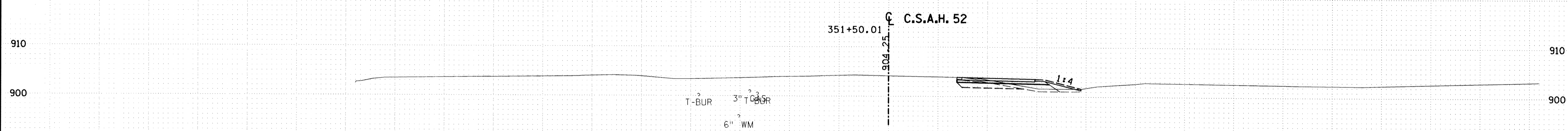
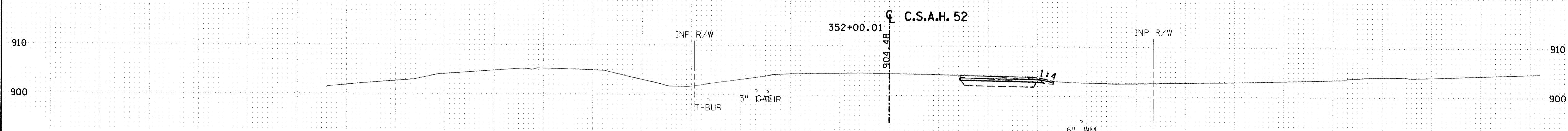
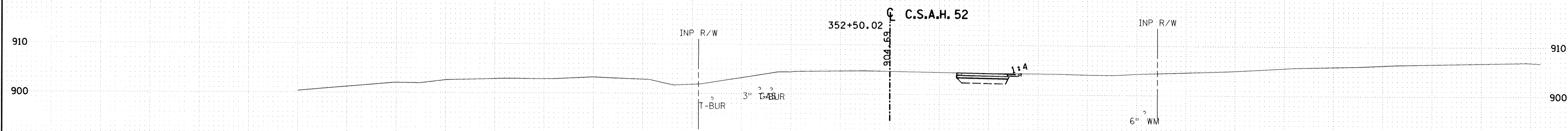
100

50

0

50

100



150

100

50

0

50

100

STATE AID PROJECT NO.
 S. A. P. 02-652-01
 S. A. P. 106-020-019

TKDA
 TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES, INCORPORATED
 ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 351+00 TO STA. 352+50

SHEET
 247
 OF
 253

150

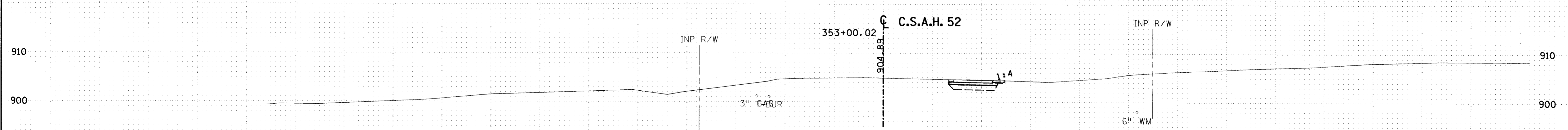
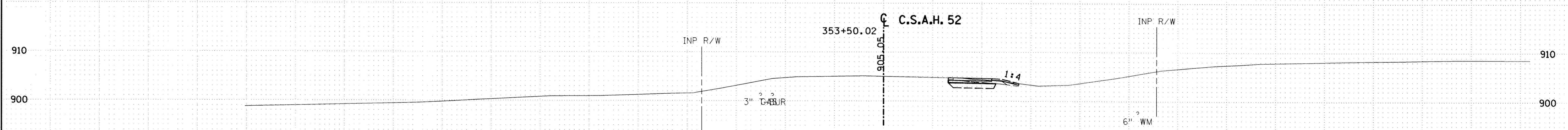
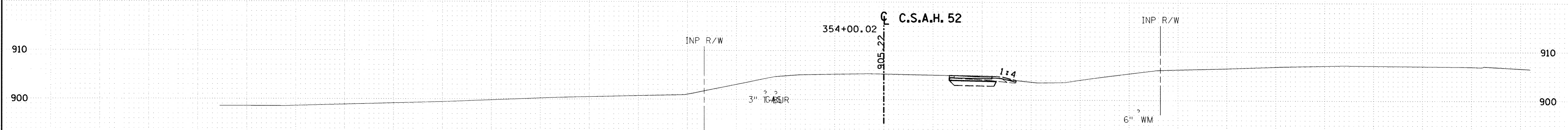
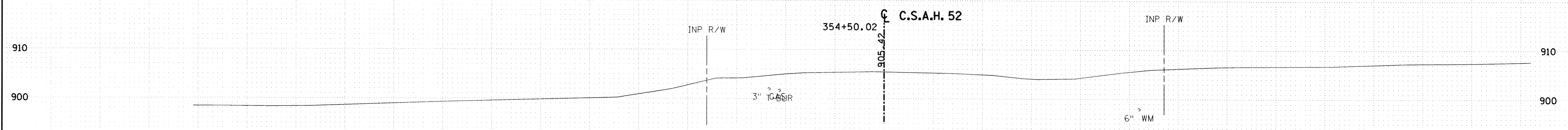
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100



150

100

50

0

50

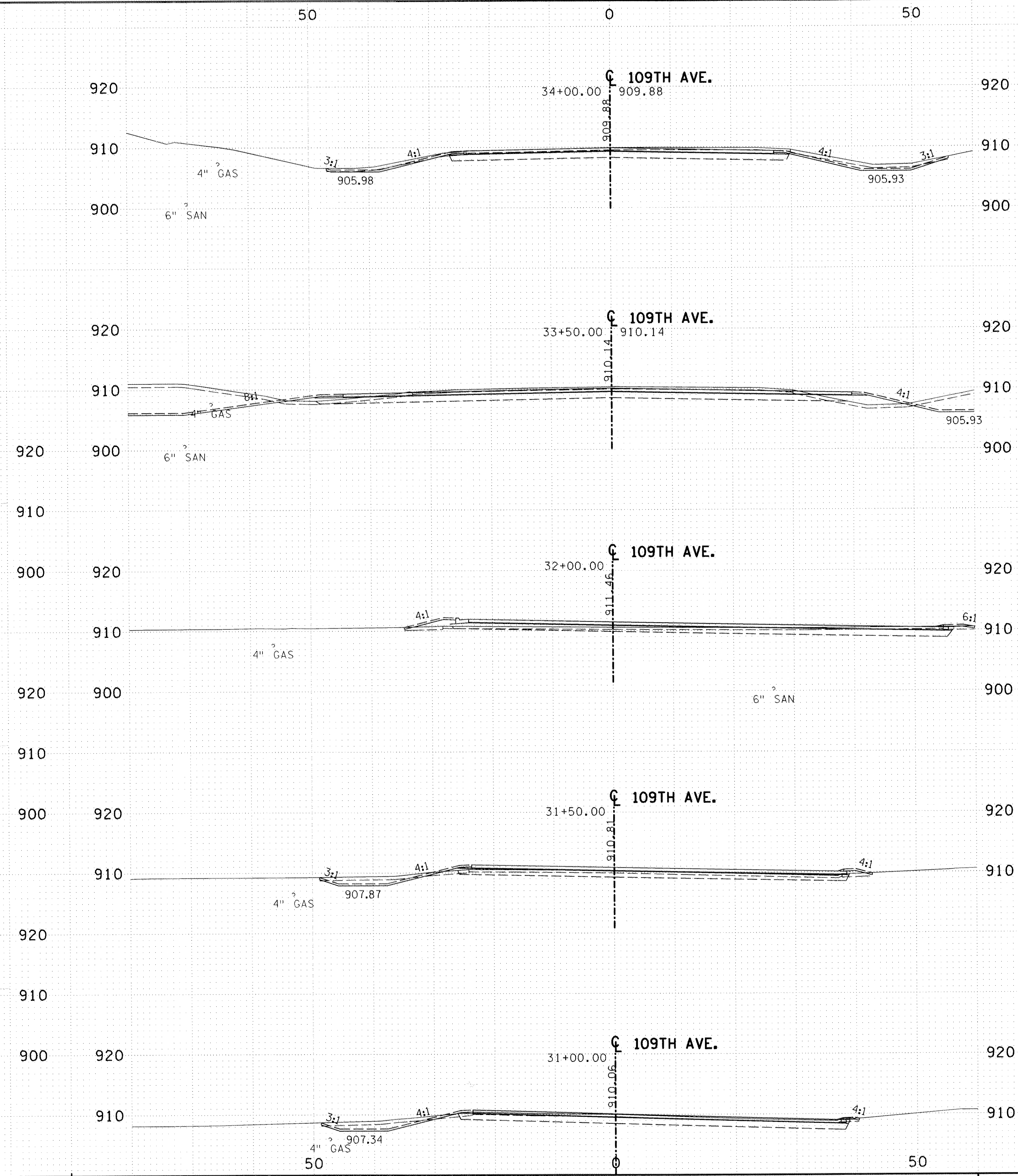
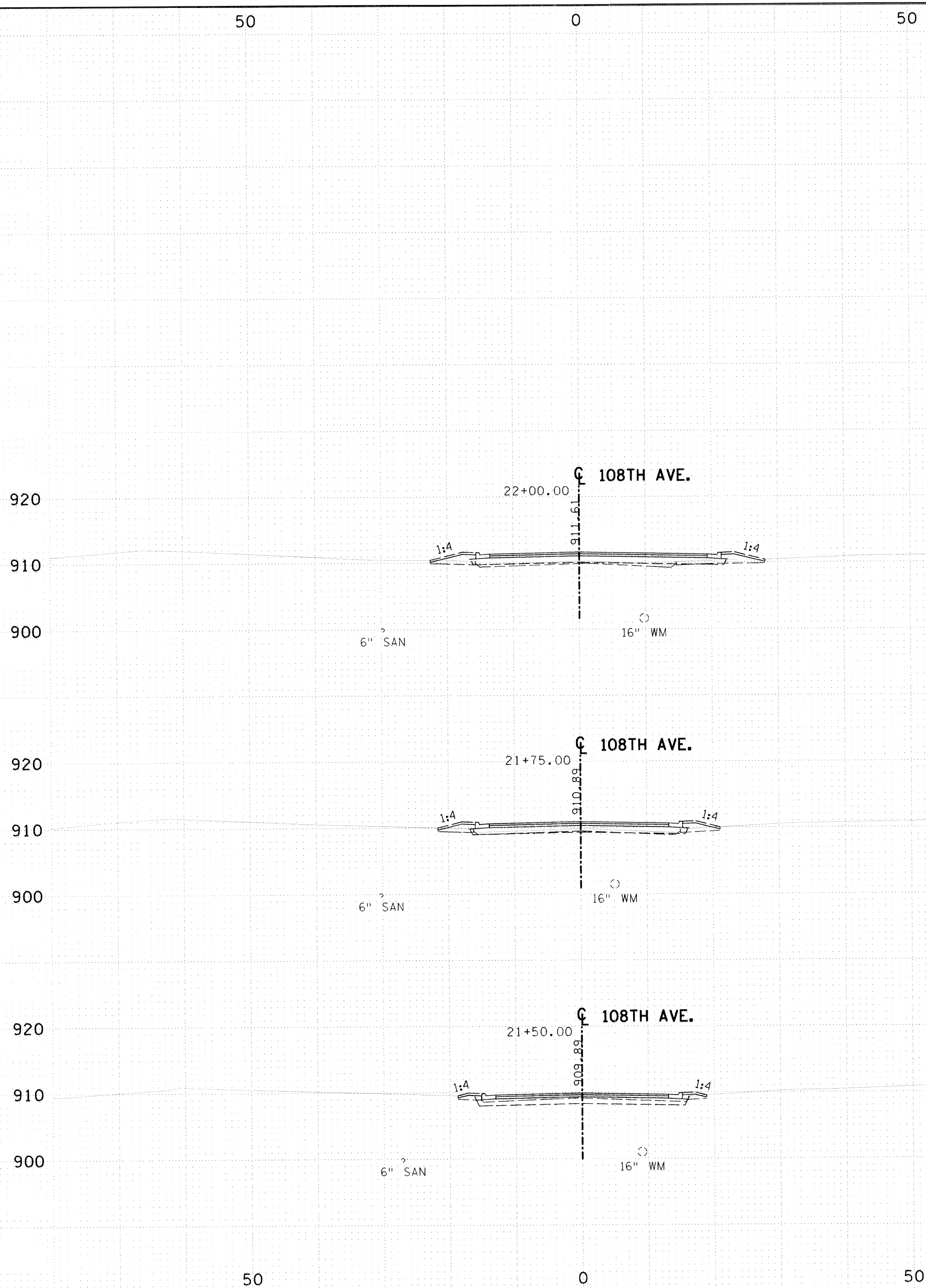
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STATE AID PROJECT NO.
 S. A. P. 02-652-01
 S. A. P. 106-020-019

TKDA
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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 STA. 353+00 TO STA. 354+50

SHEET
 248
 OF
 253



STATE AID PROJECT NO.
 S.A.P. 02-652-01
 S.A.P. 106-020-019

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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 108TH LANE, 109TH AVE

SHEET
 249
 OF
 253

50

0

50

50

0

50

920

910

900

890

41+50.00 DWY C 907.83

907.83

8" SAN

3" GAS

1:4

920

910

900

890

920

910

900

890

43+50.00 RADISSON WOOD DR. 907.97

907.97

21" SAN

20" WM

1:4

920

910

900

890

920

910

900

890

43+25.00 RADISSON WOOD DR. 907.58

907.58

21" SAN

20" WM

1:4

920

910

900

890

41+00.00 DWY C 907.33

907.33

8" SAN

3" GAS

1:4

920

910

900

890

920

910

900

890

43+00.00 RADISSON WOOD DR. 907.21

907.21

8" SAN

20" WM

1:4

920

910

900

890

40+50.00 DWY C 906.83

906.83

8" SAN

3" GAS

1:4

50

0

50

50

0

50

STATE AID PROJECT NO.

S.A.P. 02-652-01
S.A.P. 106-020-019

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ANOKA COUNTY

CROSS SECTIONS

C.S.A.H. 52 RECONSTRUCTION
DRIVEWAY C, RADISSON WOOD DRIVE

SHEET
250
OF
253

50

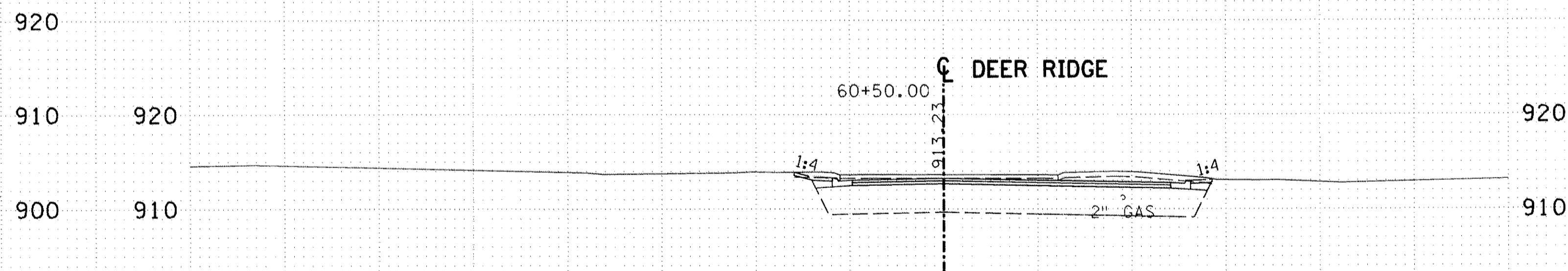
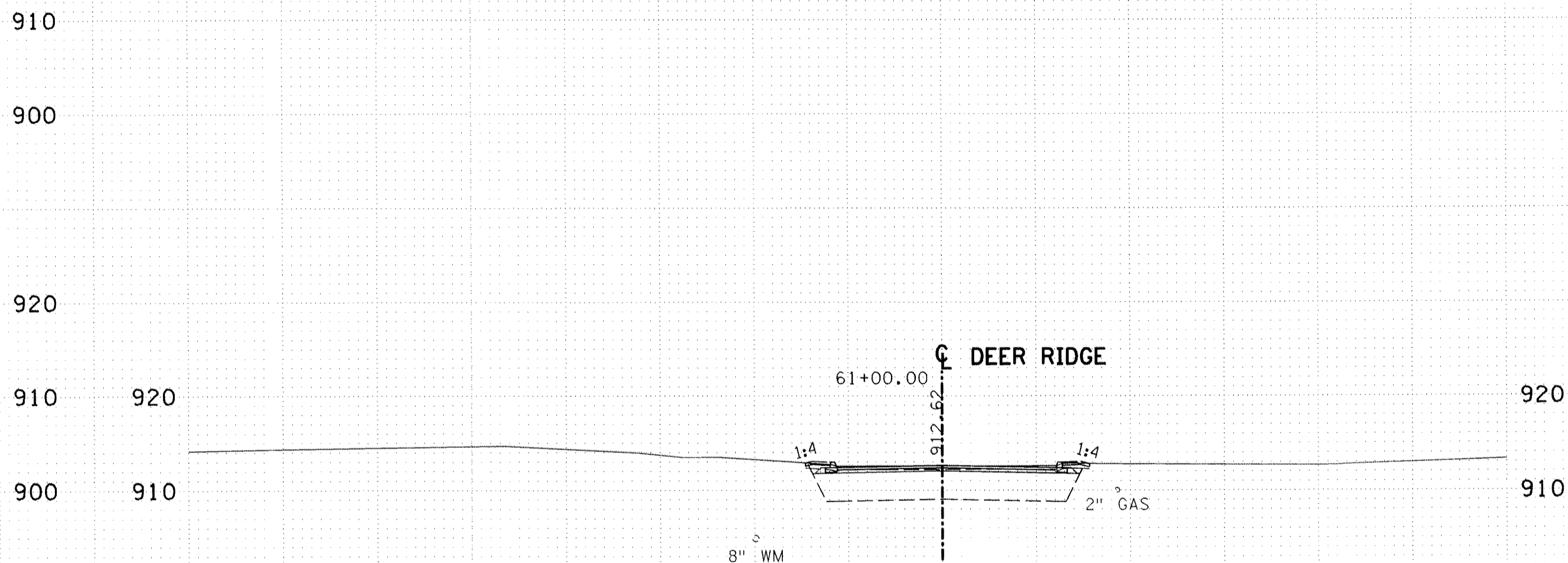
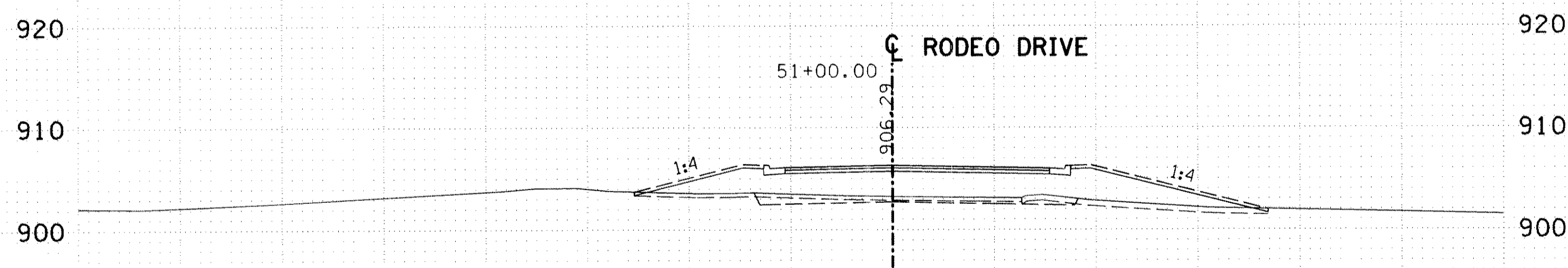
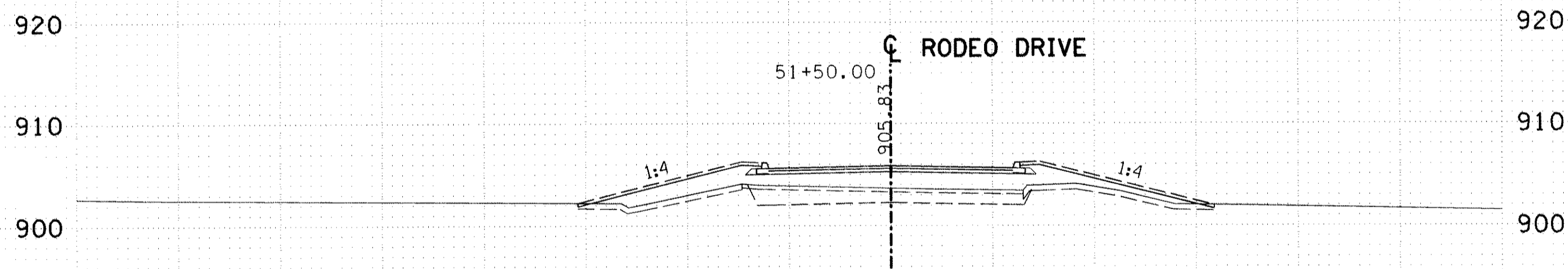
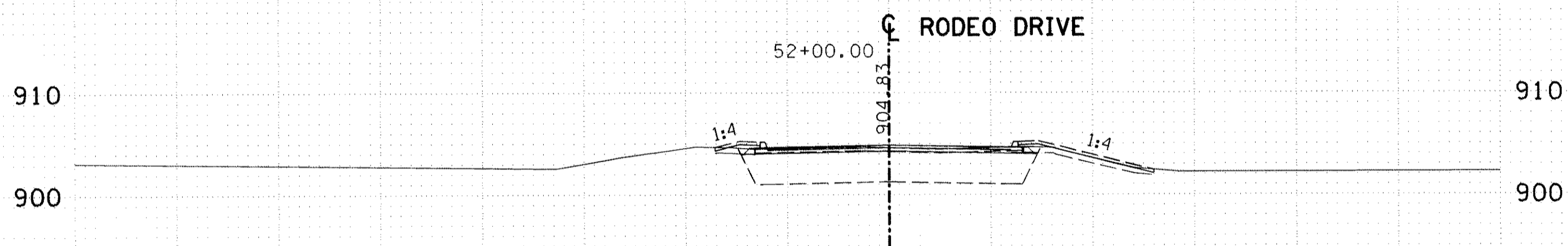
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50

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50

0

50

STATE AID PROJECT NO.

S. A. P. 02-652-01
S. A. P. 106-020-019

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ANOKA COUNTY

CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
RODEO DRIVE, DEER RIDGE

SHEET
251
OF
253

50

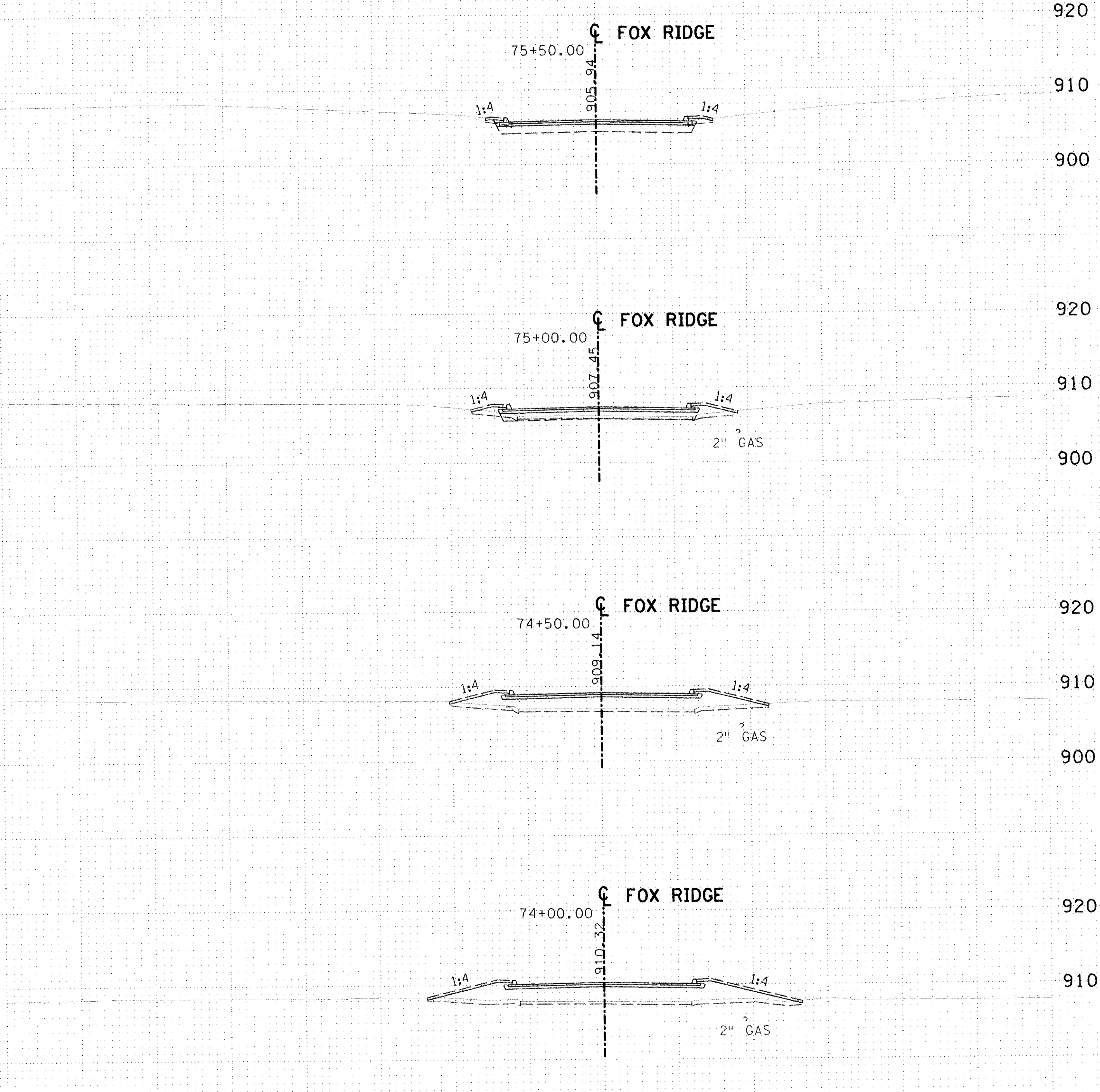
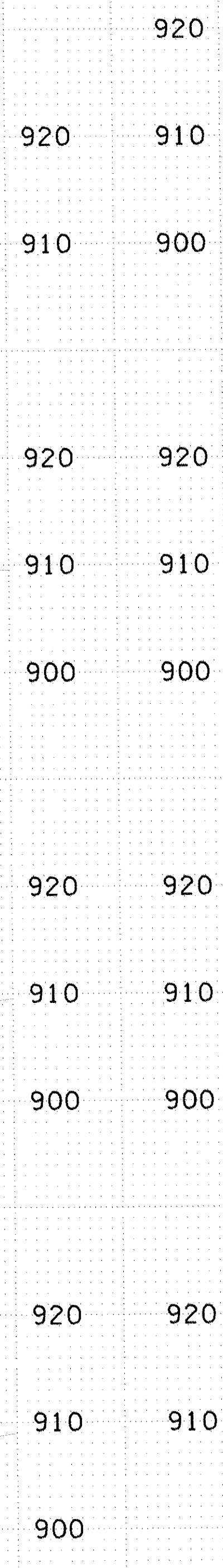
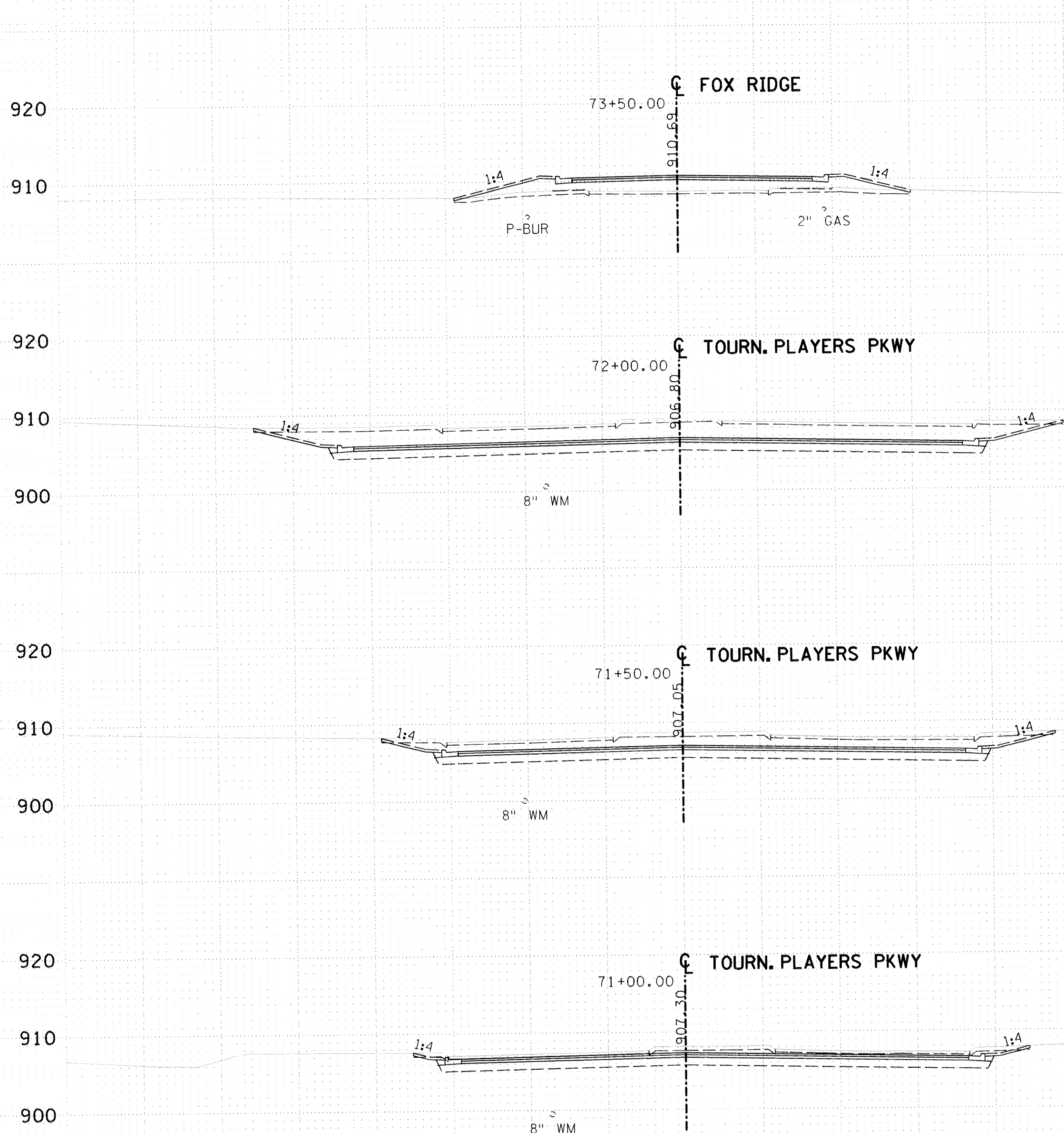
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50

0

50

STATE AID PROJECT NO.

S.A.P. 02-652-01
S.A.P. 106-020-019

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TOLTZ, KING, DUVALL, ANDERSON
AND ASSOCIATES, INCORPORATED
ENGINEERS-ARCHITECTS-PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
CROSS SECTIONS
C.S.A.H. 52 RECONSTRUCTION
TOURNAMENT PLAYERS PKWY., FOX RIDGE

SHEET
252
OF
253

50

0

50

50

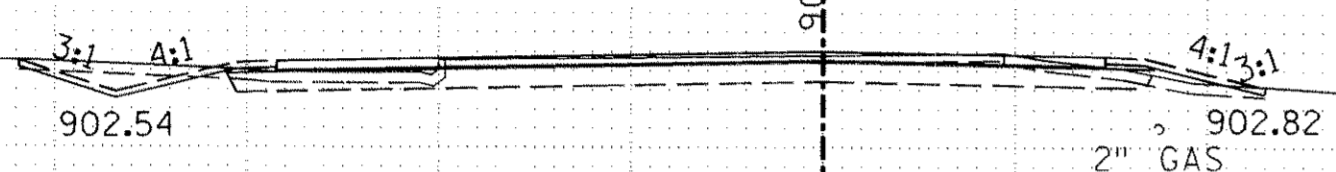
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CLOUD DRIVE

93+25.00 905.02

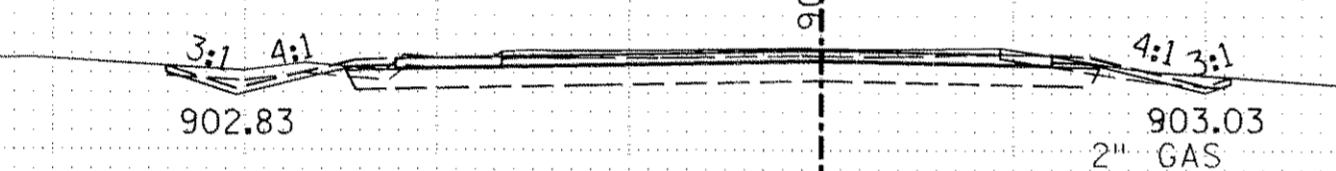
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CLOUD DRIVE

93+00.00 905.18

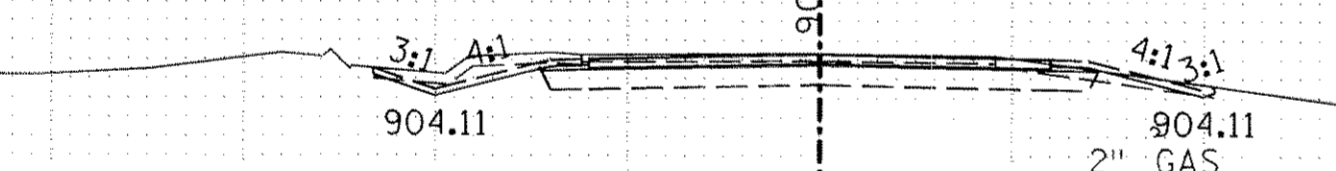
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CLOUD DRIVE

92+50.00 906.26

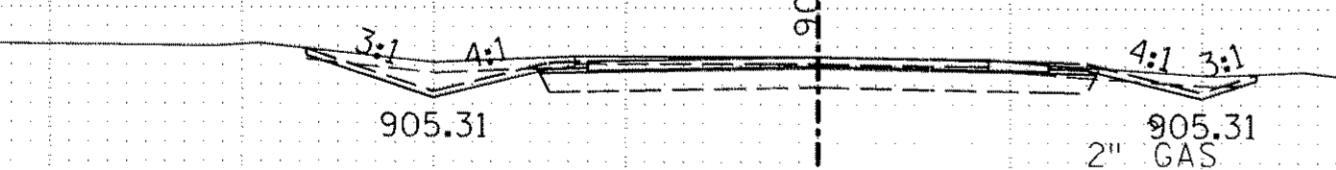
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CLOUD DRIVE

92+00.00 907.46

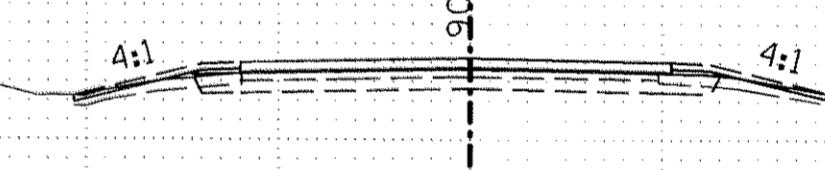
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CLOUD DRIVE

95+50.00 904.22

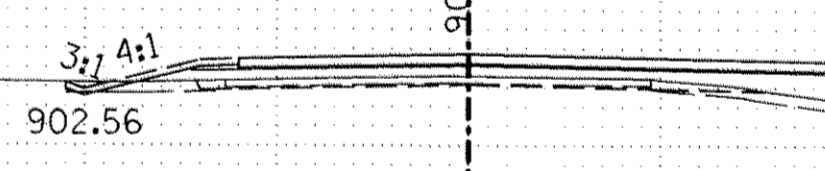
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CLOUD DRIVE

95+00.00 904.72

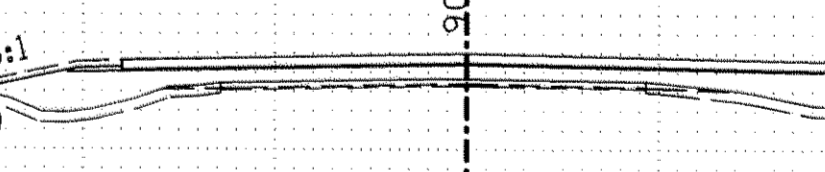
904.72



CLOUD DRIVE

94+75.00 904.97

904.97



8DATES

8FILES

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0

50

50

0

50

STATE AID PROJECT NO.
 S. A. P. 02-652-01
 S. A. P. 106-020-019

TKDA
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ANOKA COUNTY
 CROSS SECTIONS
 C.S.A.H. 52 RECONSTRUCTION
 CLOUD DRIVE

SHEET
 253
 OF
 253