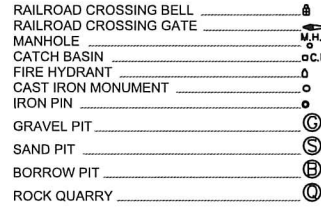
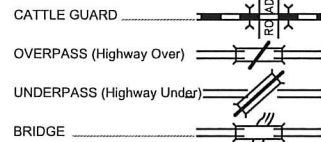
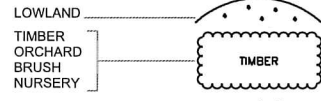
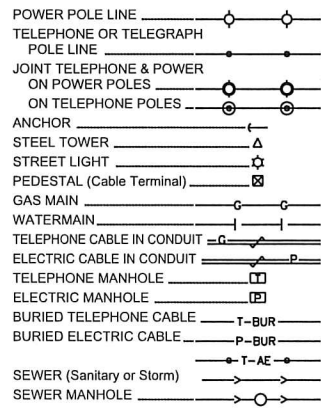


PLAN SYMBOLS

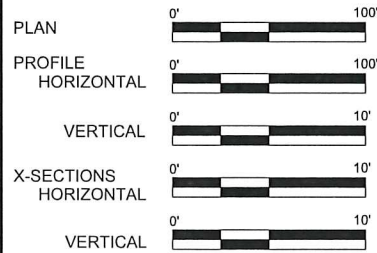
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- TOWNSHIP OR RANGE LINE _____
- SECTION LINE _____
- QUARTER LINE _____
- SIXTEENTH LINE _____
- RIGHT OF WAY LINE _____
- SLOPE EASEMENT _____
- EXISTING RIGHT OF WAY _____
- PROPERTY LINE _____
- CORPORATE OR CITY LIMITS _____
- RETAINING WALL _____
- RAILROAD _____
- RAILROAD RIGHT OF WAY _____
- RIVER OR CREEK _____
- DRAINAGE DITCH _____
- CULVERT _____
- DROP INLET _____
- GUARD RAIL _____
- BARBED WIRE FENCE _____
- WOVEN WIRE FENCE _____
- CHAIN LINK FENCE _____
- WOOD FENCE _____
- STONE WALL OR FENCE _____
- HEDGE _____



UTILITY SYMBOLS



SCALES



MINNESOTA DEPARTMENT OF TRANSPORTATION ANOKA COUNTY

CONSTRUCTION PLAN FOR BITUMINOUS SURFACING, STORM SEWER, AND CULVERT REPLACEMENT

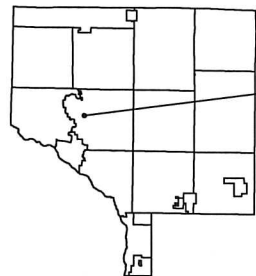
LOCATED ON C.S.A.H. 58 BETWEEN C.S.A.H. 7 AND ROUND LAKE BLVD.

C.S.A.H. 58
 GROSS LENGTH 18342 FEET 3.47 MILES
 EXCEPTIONS-LENGTH 0.00 FEET 0.000 MILES
 NET LENGTH 18342 FEET 3.47 MILES



END C.P. 14-52-85
C.S.A.H. 58 STA. 11+42

END C.P. 14-52-58
C.S.A.H. 58 STA. 194+84



PROJECT LOCATION
 CITY OF ANDOVER
 CITY OF OAK GROVE
 ANOKA COUNTY
 MN/DOT TRANSPORTATION DISTRICT - METRO
 SECTIONS 32 & 18
 TOWNSHIPS 32 NORTH
 RANGE 24 & 25 WEST

GOVERNING SPECIFICATIONS

THE 2014 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE INSTALLED IN ACCORDANCE TO THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MNMUTCD), AND PART VI, "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS."

INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	STATEMENT OF ESTIMATED QUANTITIES
3	TABULATIONS
4	TYPICAL SECTIONS
5 - 6	MISCELLANEOUS DETAILS
7 - 13	CONSTRUCTION PLAN
14	PERMANENT MARKING TABULATION
15 - 21	TEMPORARY SIGNING, PERMANENT SIGNING, AND STRIPING
22	TRAFFIC CONTROL QUANTITIES

THIS PLAN CONTAINS 22 SHEETS

Approved: 4/29/14
 ANOKA COUNTY ENGINEER

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\14-01-00\CR_58_(165th-CSA99)\Base\PROPOSED\PLAN.dgn

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 PRINT NAME: ANDREW WITTER
 SIGNATURE:
 DATE: 4/28/14 LICENSE NO. 42757

DRAWN BY KPR DATE 04/24/2014
 DESIGN BY KPR DATE 04/24/2014
 CHECKED BY DFP DATE 04/24/2014



**ANOKA COUNTY
HIGHWAY DEPT.**

COUNTY PROJECT 14-52-58

TITLE SHEET
 Sheet 1 of 22 Sheets

STATEMENT OF ESTIMATED QUANTITIES				
ITEM NO.	ITEM	NOTES	UNIT	TOTAL PROJECT QUANTITIES ESTIMATED
2021.501	MOBILIZATION		LUMP SUM	1
2101.502	CLEARING		TREE	291
2101.507	GRUBBING		TREE	291
2104.501	REMOVE PIPE CULVERTS		LIN FT	301
2104.505	REMOVE CONCRETE DRIVEWAY PAVEMENT		SQ YD	105
2104.505	REMOVE BITUMINOUS PAVEMENT		SQ YD	2551
2104.505	REMOVE BITUMINOUS PAVEMENT (DRIVEWAYS)		SQ YD	507
2104.509	REMOVE PIPE APRON		EACH	10
2104.509	REMOVE MANHOLE OR CATCH BASIN		EACH	1
2104.509	REMOVE CASTING		EACH	1
2104.511	SAWING CONCRETE PAVEMENT (FULL DEPTH)		LIN FT	37
2104.513	SAWING BIT PAVEMENT (FULL DEPTH)		LIN FT	1365
2123.503	MOTOR GRADER	1	HOUR	8
2123.509	DOZER	2	HOUR	24
2211.501	AGGREGATE BASE CLASS 5	3	TON	976
2221.501	SHOULDER BASE AGGREGATE CLASS 5	4	TON	714
2232.501	MILL BITUMINOUS SURFACE (2.0")	5	SQ YD	642
2357.502	BITUMINOUS MATERIAL FOR TACK COAT		GALLON	1893
2360.501	TYPE SP 12.5 WEARING COURSE MIX (4,B)	6	TON	85
2360.501	TYPE SP 12.5 WEARING COURSE MIX (4,E)	7	TON	5916
2360.505	TYPE SP 12.5 BITUMINOUS MIXTURE FOR PATCHING	8	TON	100
2501.511	24" PC-CS PIPE CULVERT		LIN FT	150
2501.511	15" CS PIPE CULVERT		LIN FT	412
2501.515	24" PC-CS PIPE APRON		EACH	4
2501.515	15" RC PIPE APRON		EACH	2
2501.515	18" RC PIPE APRON		EACH	1
2501.567	15" GS SAFETY APRON & GRATE DES 3148		EACH	20
2501.567	24" GS SAFETY APRON & GRATE DES 3148		EACH	3
2503.511	15" RC PIPE SEWER CLASS V		LIN FT	109
2503.511	18" RC PIPE SEWER CLASS V		LIN FT	47
2503.603	24" HDPE PIPE SEWER		LIN FT	1733
2506.501	CONSTRUCT DRAINAGE STRUCTURE DESIGN G		LIN FT	1.83
2506.501	CONSTRUCT DRAINAGE STRUCTURE DESIGN 48-4020		LIN FT	38.33
2506.516	CASTING ASSEMBLY		EACH	7
2511.501	RANDOM RIPRAP CLASS II		CU YD	8
2531.501	CONCRETE CURB AND GUTTER DESIGN B424		LIN FT	1000
2531.507	6" CONCRETE DRIVEWAY PAVEMENT	9	SQ YD	94
2531.604	CONCRETE DRAINAGE FLUME		SQ YD	10
2540.602	INSTALL MAIL BOX SUPPORT	10	EACH	75
2563.601	TRAFFIC CONTROL	11,12	LUMP SUM	1
2563.613	PORTABLE CHANGEABLE MESSAGE SIGN	13	UNIT DAY	14
2573.502	SILT FENCE, TYPE MS		LIN FT	2387
2575.523	EROSION CONTROL BLANKETS CATEGORY 0	14	SQ YD	8051
2581.501	REMOVABLE PREFORMED PAVEMENT MARKING TAPE	15	LIN FT	734
2582.502	4" SOLID LINE WHITE-EPOXY	16	LIN FT	38795
2582.502	4" SOLID LINE YELLOW-EPOXY	16	LIN FT	4865
2582.502	4" BROKEN LINE YELLOW-EPOXY	16	LIN FT	1610
2582.502	4" DOUBLE SOLID LINE YELLOW-EPOXY	16	LIN FT	11250

CONSTRUCTION NOTES	
1	INCLUDES TIME AND EQUIPMENT .
2	TO BE USED FOR DITCH GRADING AND FOR DRESSING DISTURBED AREAS AFTER CLEARING AND GRUBBING.
3	GRAVEL BASE FOR GRADE CORRECTION AREA, BITUMINOUS STREET APPROACHES, DRIVEWAYS, AND CULVERT PATCHES.
4	ITEM INCLUDES 5 TONS FOR EACH GRAVEL ENTRANCE.
5	ITEM INCLUDES 2" DEEP MILL AT BEGINNING AND END OF PROJECT, ALL PAVED ST APPROACHES, AND DRIVEWAYS; SEE DETAILS FOR DIMENSIONS
6	ITEM INCLUDES TWO 2" LIFTS FOR CULVERT REPLACEMENTS AND AT BITUMINOUS DRIVEWAYS
7	ITEM INCLUDES TWO 2" LIFTS FOR BITUMINOUS REMOVAL AREA AND 2" FOR FINAL WEAR LIFT.
8	ITEM INCLUDES BITUMINOUS PATCHING AT POTHOLES AND CURB LOCATIONS.
9	CONTRACTOR IS RESPONSIBLE FOR CONTACTING PROPERTY OWNER 48 HOURS BEFORE STARTING OPERATION.
10	MAILBOXES ARE TO BE INSTALLED AT THE EXISTING MAILBOX LOCATION OR AS DIRECTED BY THE LOCAL POSTAL AUTHORITY.
11	ALL TRAFFIC CONTROL METHODS SHALL CONFORM TO THE CURRENT "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".
12	DO NOT PASS, PASS WITH CARE AND NO CENTER STRIPE SIGNS TO BE INPLACE DURING MILLING, RECLAIMING OR PAVING OPERATIONS.
13	2 MESSAGE BOARDS, ONE ON THE EACH END OF PROJECT WILL BE INSTALLED 7 DAYS PRIOR TO ANY CONSTRUCTION; REFERENCE STRIPING PLAN FOR DETAILS.
14	SEEDING, TYPE 4 FERTILIZER, 240 SEED AND TOPSOIL ARE INCIDENTAL TO BLANKET.
15	CENTERLINE SKIPS TO BE APPLIED AS SOON AS POSSIBLE ON EACH NEW LIFT OF PAVEMENT; SKIPS MUST BE INPLACE BEFORE CONTRACTOR LEAVES FOR THE DAY. CONTRACTOR IS TO REMOVE PRIOR TO FINAL PAINT STRIPING.
16	FINAL STRIPING SHALL BE INSTALLED WITHIN 72 HOURS OF COMPLETION OF MAINLINE WEAR COURSE PAVING.

BASIS OF PLANNED QUANTITIES		
2357.502	BITUMINOUS MATERIAL FOR TACK COAT	.05 GAL/SQ YD
2211.501	AGGREGATE BASE CLASS 5	1.8 TON/CU YD
2360.501	TYPE SP 12.5 WEARING COURSE MIX	115 LB/SQ.YD./IN THICKNESS

NO	DATE	BY	CKD	APPR	REVISION	04/24/2014	12:52:34 PM
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PRINT NAME: ANDREW WITTE

SIGNATURE: *[Signature]*

DATE: 4/24/2014 LICENSE NO. 42757

DRAWN BY: KPR DATE: 04/24/2014

DESIGN BY: KPR DATE: 04/24/2014

CHECKED BY: DFF DATE: 04/24/2014



ANOKA COUNTY
HIGHWAY DEPT.

COUNTY PROJECT 14-52-58

STATEMENT OF ESTIMATED QUANTITIES
Sheet 2 of 22 Sheets

STORM DRAINAGE TAB														
STATION	OFFSET	FROM	TO	SLOPE %	15" RC PIPE SEWER	15" RC PIPE APRON	18" RC PIPE SEWER	18" RC PIPE APRON	24" HDPE SEWER	24" GS SAFETY APRON	G	48-4020	INVERT ELEVATION	TOP CASTING
191+21.00	22' LT	100								1			902.46	
188+87.00	22' LT	100	101	0.35					234			9.59	903.16	912.75
185+87.00	22' LT	101	102	0.35					301			10.08	904.21	914.29
182+85.00	22' LT	102	103	0.35					302			5.73	905.27	911.00
179+61.00	22' LT	103	104	0.35					323			5.60	906.40	912.00
176+87.00	22' LT	104	105	0.35					273			3.74	907.36	911.10
173+87.00	22' LT	105	106	0.35					300			3.59	908.41	912.00
173+88.00	25' RT	106	107	0.35			47	1					908.57	
33+13.00	35.0' LT	108				1							871.90	
33+13.00	19.2' RT	108	109		53					1.83			872.91	874.74
33+70.00	19.1' RT	109	110		56	1							873.08	
TOTALS					109	2	47	1	1733	1	1.83	38.33		

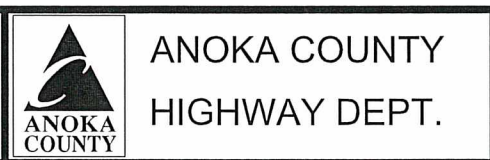
CULVERT TAB														
FROM	STATION	OFFSET	TO	STATION	OFFSET		SLOPE %	15" CS CULVERT	15" GS SAFETY APRON	24" PC-CS CULVERT	24" CP-CS APRON	24" GS SAFETY APRON	DOWN INV	UP INV
200	173+23.20	22.8' RT	201	172+51.20	20.0' RT		0.30	72	2				908.76	908.98
202	170+53.20	38.2' RT	203	170+23.70	37.7' RT		0.30	28	2				909.58	909.66
204	174+63.10	18.0' RT	205	174+98.00	18.0' RT		0.30	36	2				909.25	909.36
206	175+38.40	18.0' RT	207	175+70.40	18.0' RT		0.30	32	2				909.48	909.57
208	176+29.90	18.0' RT	209	176+63.90	18.0' RT		0.30	34	2				909.75	909.86
210	178+15.20	18.0' RT	211	178+45.20	18.0' RT		0.30	30	2				910.31	910.40
212	179+10.80	18.0' RT	213	179+42.80	18.0' RT		0.30	32	2				910.60	910.69
214	180+39.30	18.0' RT	215	181+05.30	18.0' RT		0.30	66	2				910.98	911.18
216	192+84.80	33.4' LT	217	192+56.80	33.5' LT		0.30			28		2	899.01	899.10
218	32+42.70	23.1' LT	219	32+44.24	16.8' RT			40	2				871.58	873.41
220	39+09.30	24.5' LT	221	39+10.20	17.5' RT			42	2				868.85	870.35
222	42+49.40	32.8' RT	223	42+49.10	35.1' LT					68	2		866.65	867.08
224	57+21.10	21.0' RT	225	57+22.00	32.0' LT					54	2		864.63	864.93
TOTALS								412	20	150	4	2		

CASTING ASSEMBLIES SUMMARY					
ASSEMBLY	RING OR FRAME CASTING	COVER OR GRATE CASTING	CURB BOX	QUANTITY	
	A-7	715		6	
	A-7	720		1	
ALL CASTING HIEGHTS ARE TO BE VERIFIED IN THE FIELD.					

NO	DATE	BY	CKD	APPR	REVISION	04/24/2014	12:52:38 PM
NAME: P:\14-01-00\CR_58 (165th-CSAH9)\Base\PROPOSED\PLAN.dgn							

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 PRINT NAME: ANDREW WITTER
 SIGNATURE: *[Signature]*
 DATE: 4/28/14 LICENSE NO. 42757

DRAWN BY: KPR DATE: 04/24/2014
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 CHECKED BY: DFF DATE: 04/24/2014

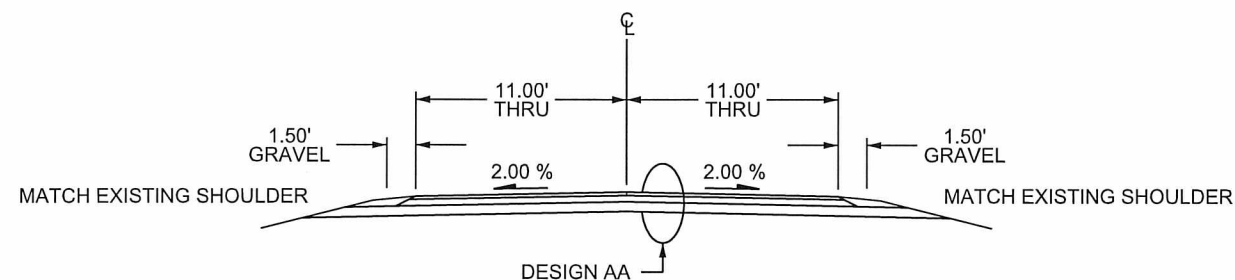


COUNTY PROJECT 14-52-58

COUNTY ROAD 58

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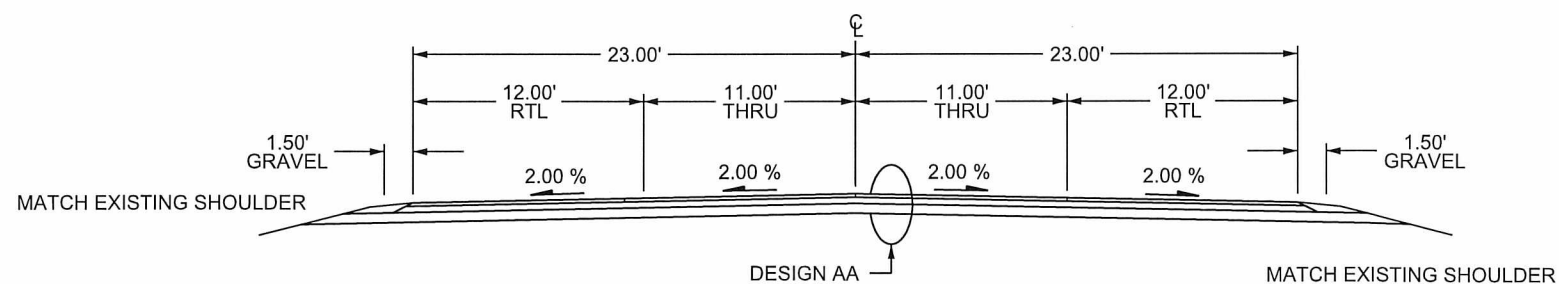
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 149+87 - 167+38
 173+98 - 181+88
 191+87 - 194+84



COUNTY ROAD 58

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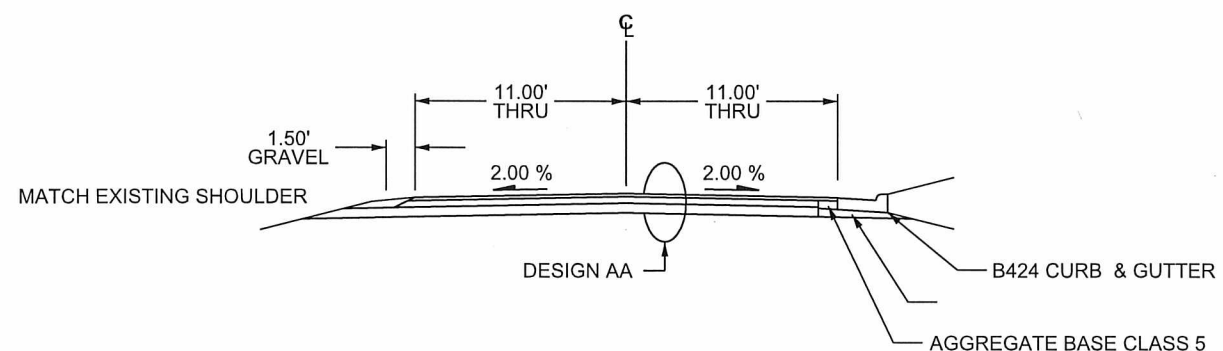
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COUNTY ROAD 58

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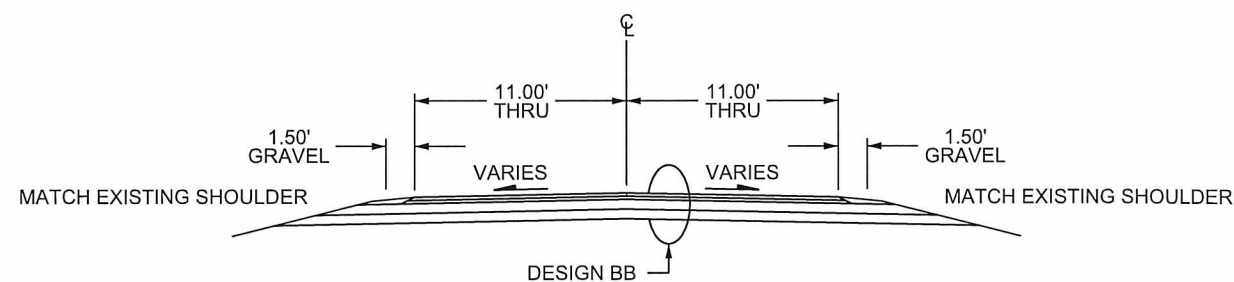
181+88 - 191+87



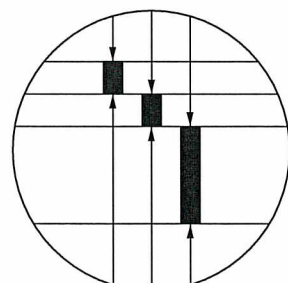
COUNTY ROAD 58

PROPOSED

167+38 - 173+98

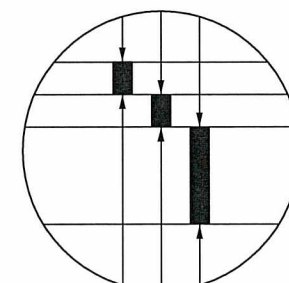


DESIGN AA
 OVERLAY SECTION



2.0" BITUMINOUS WEAR(SPWEB440E)
 EXISTING BITUMINOUS
 EXISTING BASE

DESIGN BB
 RECLAIM SECTION



2.0" BITUMINOUS WEAR(SPWEB440E)
 2.0" BITUMINOUS WEAR(SPWEB440E)
 AGGRAGATE BASE CLASS 5

NO	DATE	BY	CKD	APPR	REVISION	DATE	TIME
						04/24/2014	12:52:42 PM

NAME: P:\14-01-00\CR_58_(165th-CSAH9)\Base\PROPOSED\PLAN.dgn

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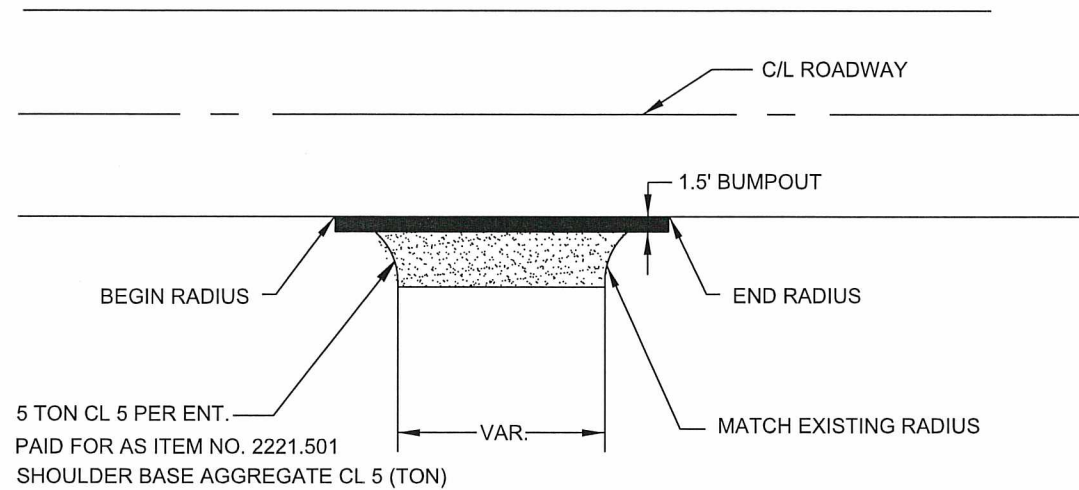
ANOKA COUNTY
 HIGHWAY DEPT.

COUNTY PROJECT 14-52-58

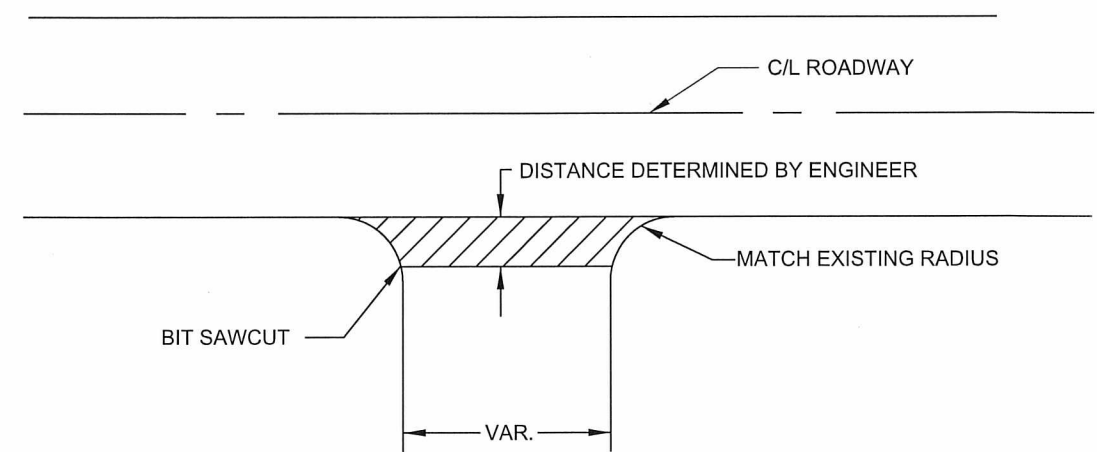
TYPICAL SECTIONS

Sheet 4 of 22 Sheets

GRAVEL DRIVEWAYS, FIELD ENTRANCES, AND STREET APPROACHES

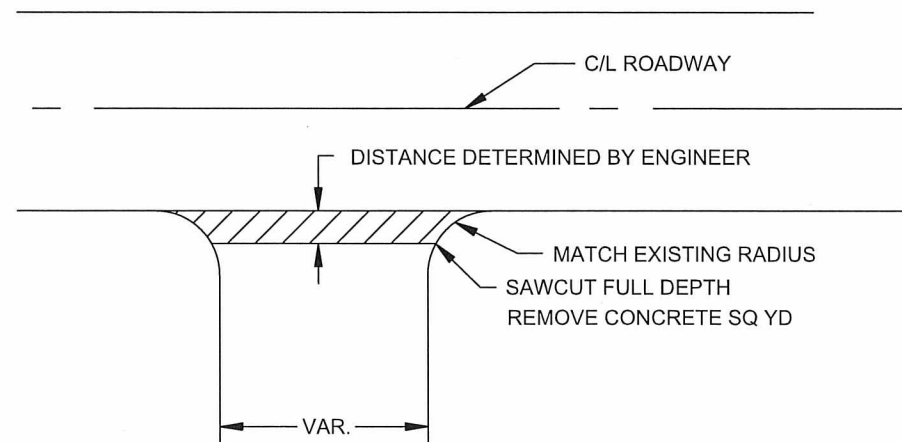


PAVED DRIVEWAYS AND STREET APPROACHES



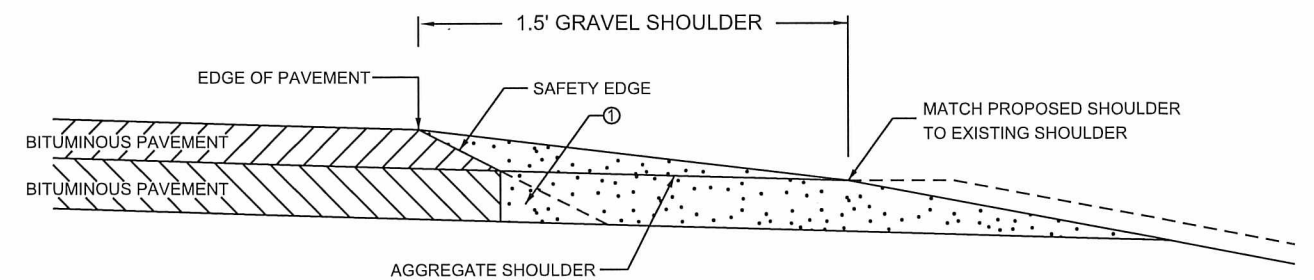
DRIVEWAYS AND STREET APPROACHES BUMPOUT AND PAVED WITH MAINLINE PAID AS MAINLINE.

CONCRETE DR. WAYS



SHOULDER DETAIL

BITUMINOUS SAFETY EDGE
GRAVEL SHOULDER



SAFETY EDGE TO BE USED IN ALL NON-CURB AREAS ON SHOULDER.

① OPTIONAL DESIGN EXTENDS SAFETY EDGE DEEPER THAN 6" AND WIDER THAN 10.5". SEE SPECIAL PROVISIONS.

NOT TO SCALE

NO	DATE	BY	CKD	APPR	REVISION	2014/04/24	12:52:51 PM
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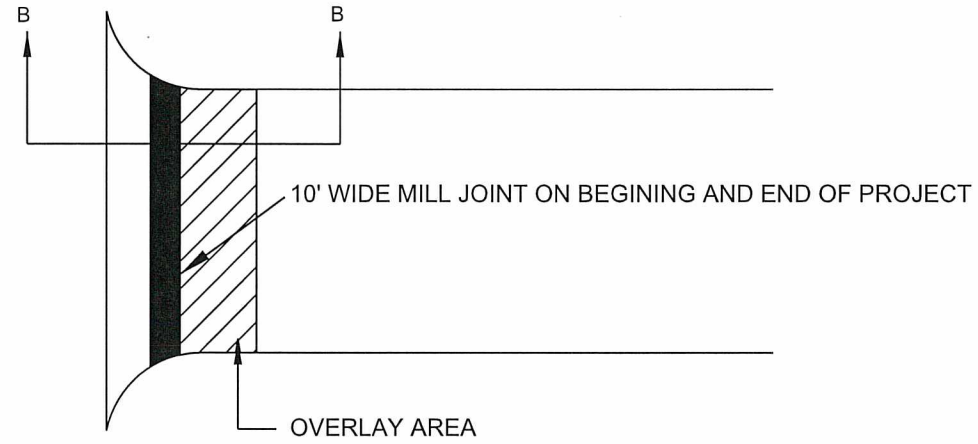
ANOKA COUNTY
HIGHWAY DEPT.

COUNTY PROJECT 14-52-58

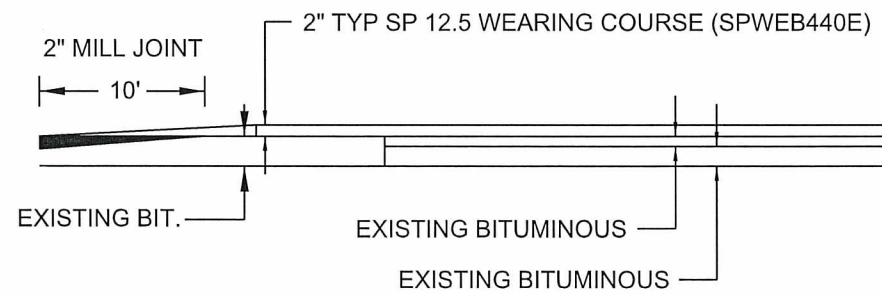
MISCELLANEOUS DETAILS

Sheet 5 of 22 Sheets

MAINLINE
JOINT DETAILS



JOINT DETAILS B - B

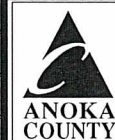


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 SIGNATURE: *Andrew Witter*
 DATE: 4/28/14 LICENSE NO. 42757

DRAWN BY KPR DATE 04/24/2014
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 CHECKED BY DFF DATE 04/24/2014



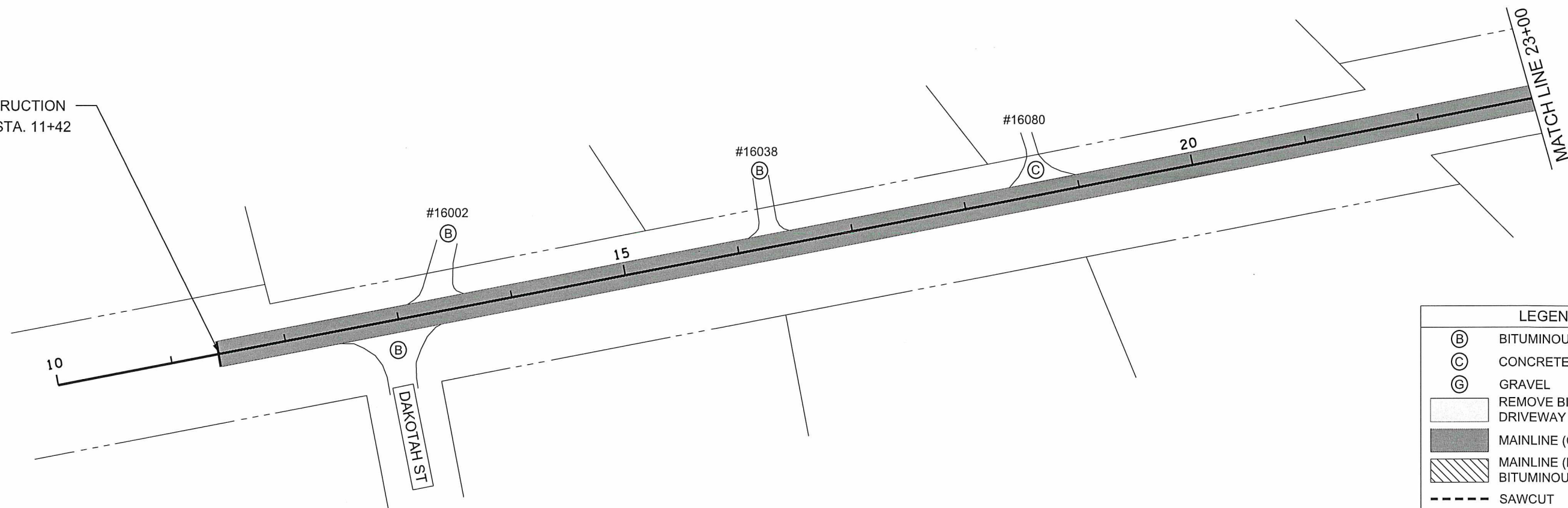
ANOKA COUNTY
HIGHWAY DEPT.

COUNTY PROJECT 14-52-58

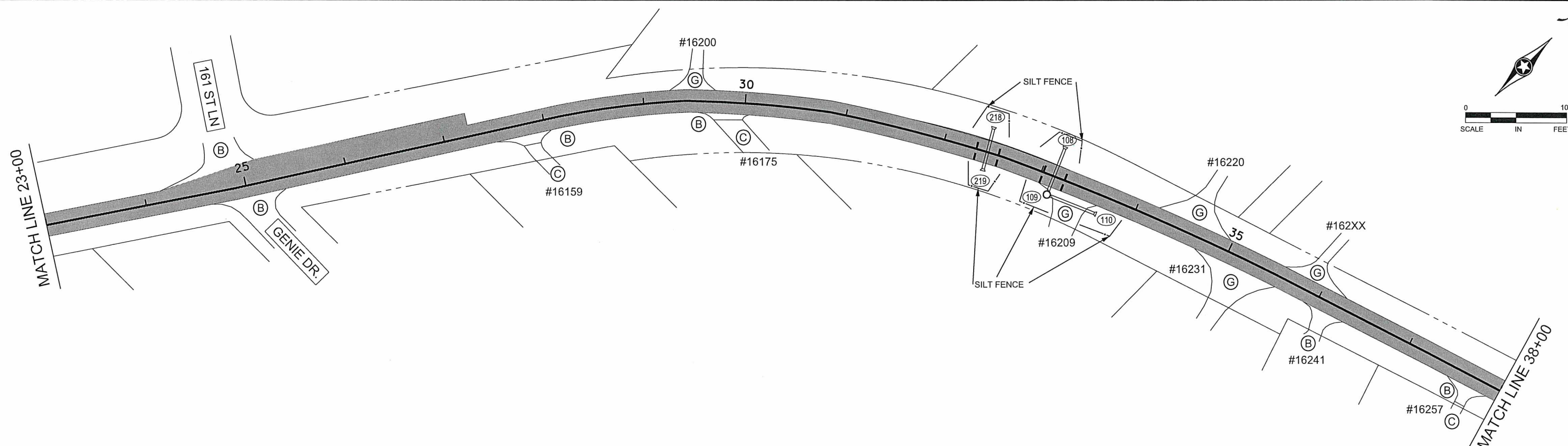
MISCELLANEOUS DETAILS

Sheet 6 of 22 Sheets

BEGIN CONSTRUCTION
C.P. 14-52-58 STA. 11+42



LEGEND	
(B)	BITUMINOUS
(C)	CONCRETE
(G)	GRAVEL
[White box]	REMOVE BITUMINOUS DRIVEWAY PAVEMENT
[Dark grey box]	MAINLINE (OVERLAY)
[Hatched box]	MAINLINE (REMOVE BITUMINOUS PAVEMENT)
[Dashed line]	SAWCUT
[Thin solid line]	R/W



NO	DATE	BY	CKD	APPR	REVISION	04/24/2014	12:53:07 PM
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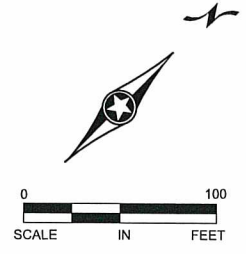
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 DESIGN BY: KPR DATE: 04/24/2014
 CHECKED BY: DFF DATE: 04/24/2014

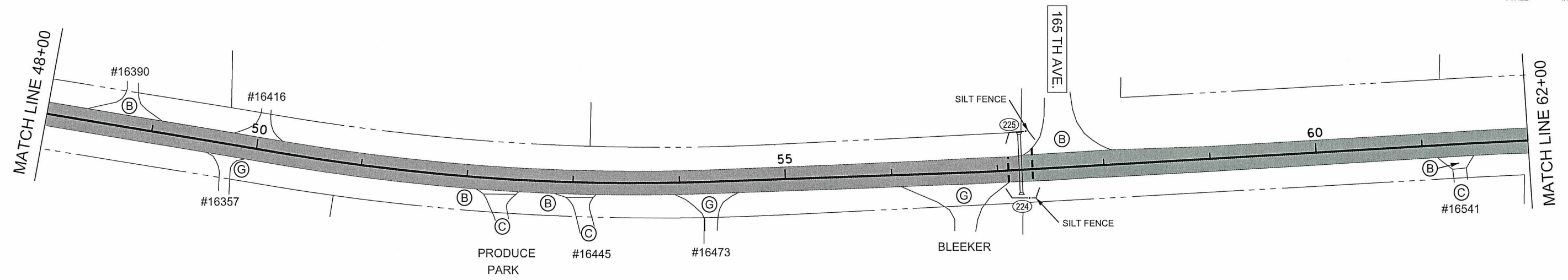
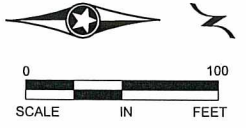
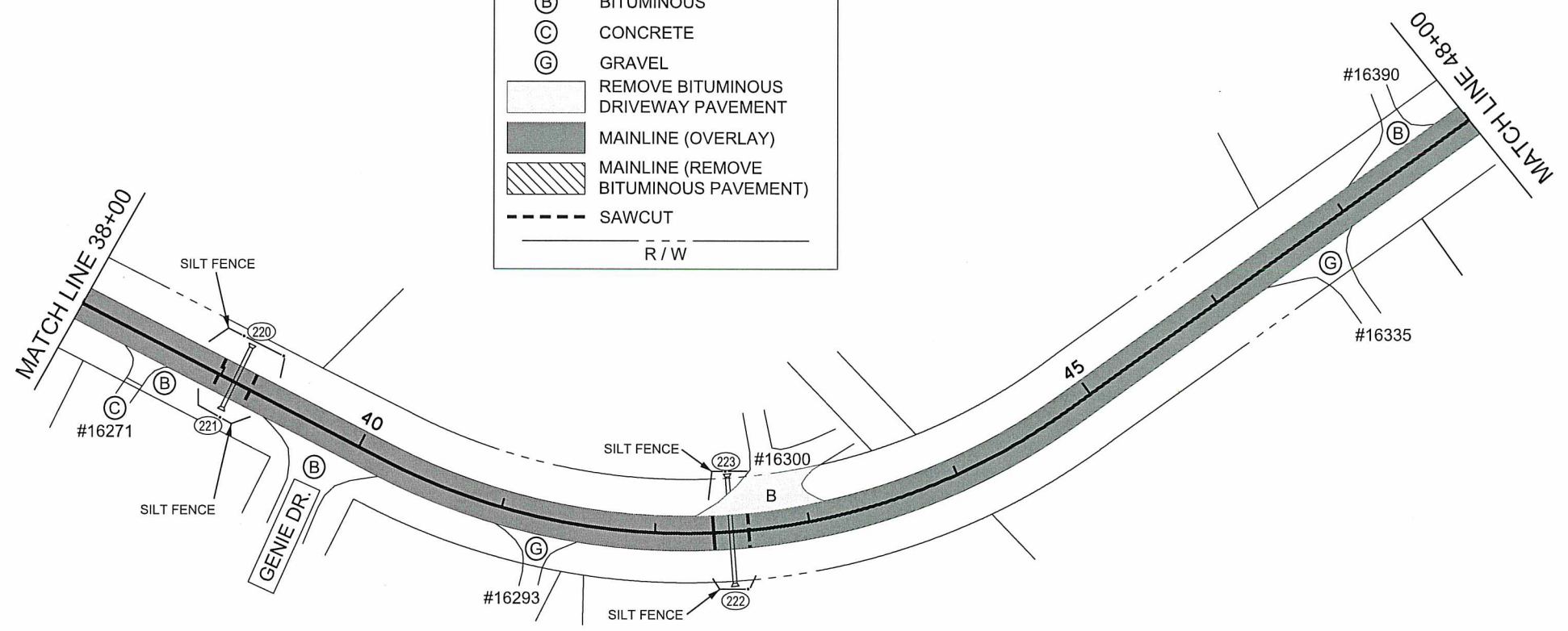
ANOKA COUNTY
HIGHWAY DEPT.

COUNTY PROJECT 14-52-58

CONSTRUCTION PLAN
 STA 11+42 TO 38+00
 Sheet 7 of 22 Sheets



LEGEND	
(B)	BITUMINOUS
(C)	CONCRETE
(G)	GRAVEL
[Pattern]	REMOVE BITUMINOUS DRIVEWAY PAVEMENT
[Pattern]	MAINLINE (OVERLAY)
[Pattern]	MAINLINE (REMOVE BITUMINOUS PAVEMENT)
[Symbol]	SAWCUT
[Symbol]	R/W



NO	DATE	BY	CKD	APPR	REVISION	DATE	TIME

NAME: P:\14-01-00\CR_58_(165th-CSAH9)\Base\PROPOSED\PLAN.dgn

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

PRINT NAME: ANDREW WITTE

SIGNATURE: *[Signature]*

DATE: 4/24/14 LICENSE NO. 42757

DRAWN BY: KPR DATE: 04/24/2014

DESIGN BY: KPR DATE: 04/24/2014

CHECKED BY: DFF DATE: 04/24/2014



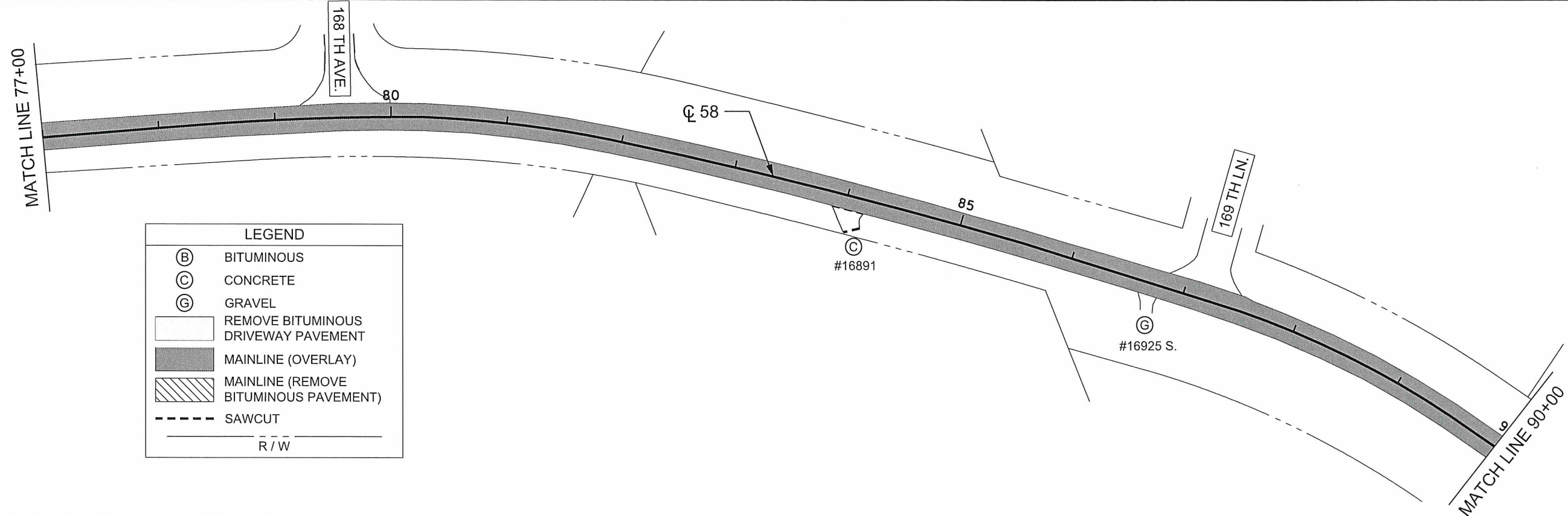
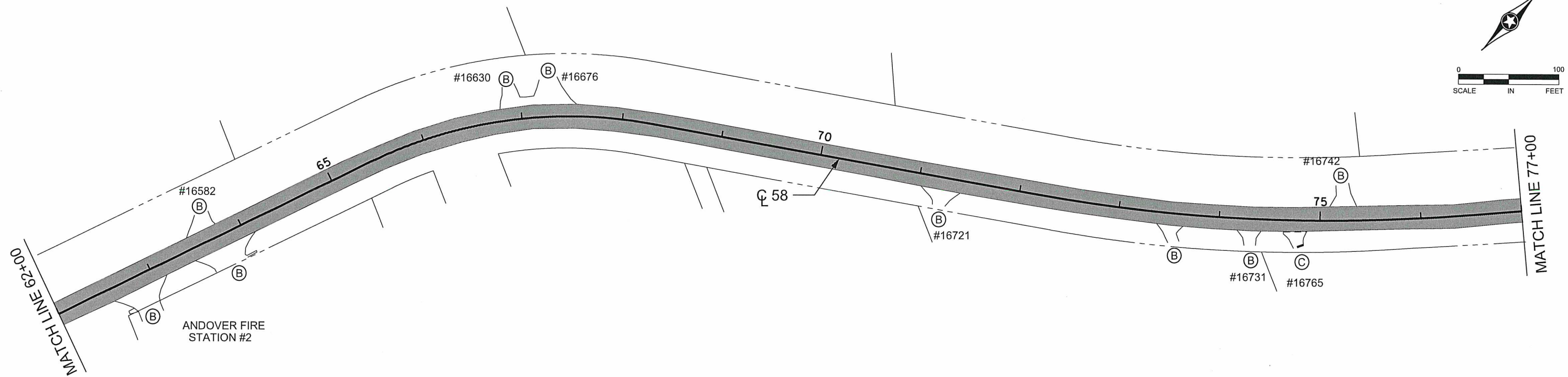
**ANOKA COUNTY
HIGHWAY DEPT.**

COUNTY PROJECT 14-52-58

CONSTRUCTION PLAN

STA 38+00 TO 62+00

Sheet 8 of 22 Sheets




LEGEND	
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(C)	CONCRETE
(G)	GRAVEL
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	MAINLINE (OVERLAY)
	MAINLINE (REMOVE BITUMINOUS PAVEMENT)
	SAWCUT
	R / W

NO	DATE	BY	CKD	APPR	REVISION	04/24/2014	12:53:18 PM
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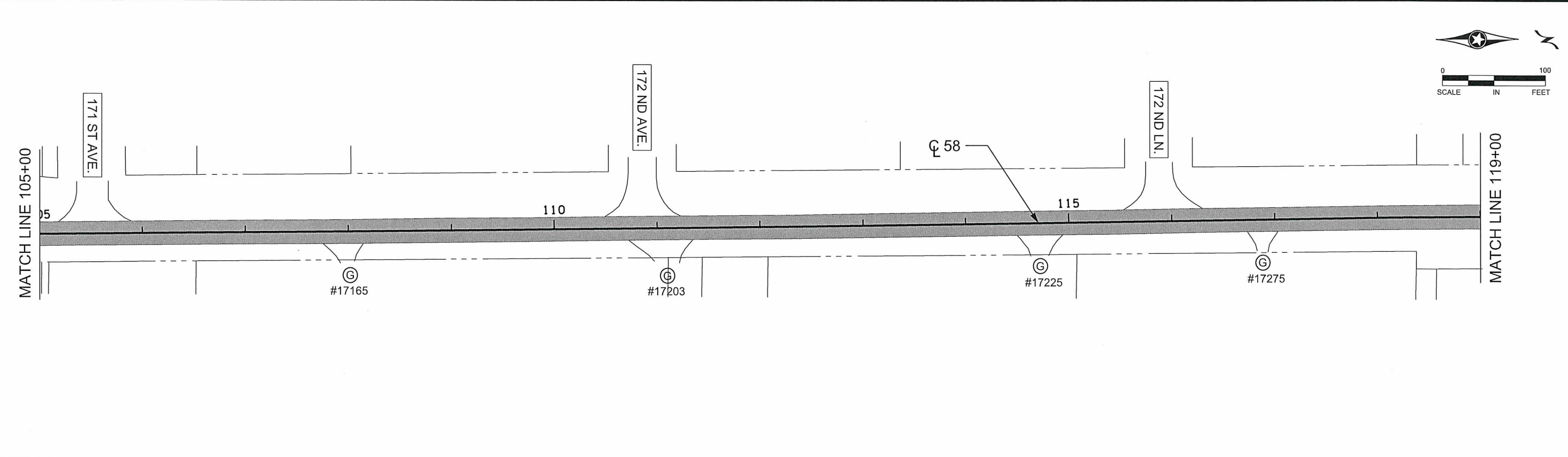
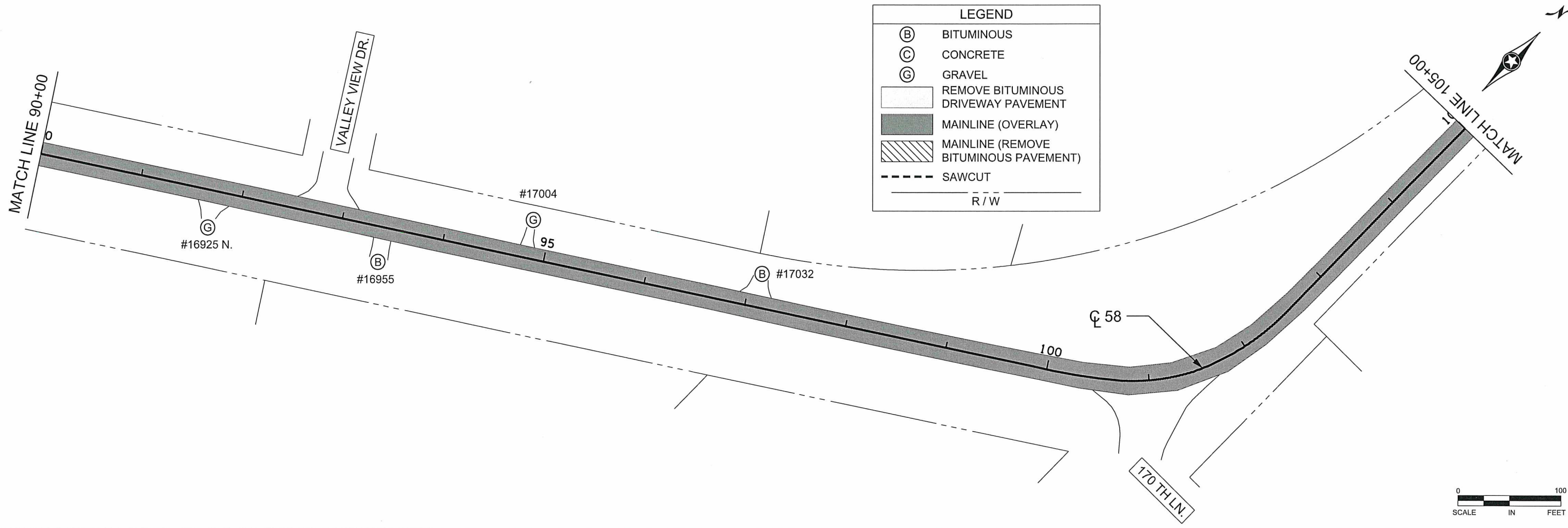
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 PRINT NAME: ANDREW WITTER
 SIGNATURE: *[Signature]*
 DATE: 4/20/14 LICENSE NO. 42757

DRAWN BY: KPR DATE: 04/24/2014
 DESIGN BY: KPR DATE: 04/24/2014
 CHECKED BY: DFF DATE: 04/24/2014

 ANOKA COUNTY
 HIGHWAY DEPT.

COUNTY PROJECT 14-52-58

CONSTRUCTION PLAN
 STA 62+00 TO 90+00
 Sheet 9 of 22 Sheets

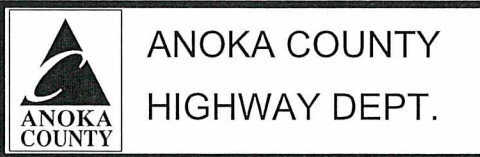


NO	DATE	BY	CKD	APPR	REVISION	04/24/2014	12:53:22 PM
NAME: P:\14-01-00\CR_58_(165th-CSAH9)\Base\PROPOSED\PLAN.dgn							

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

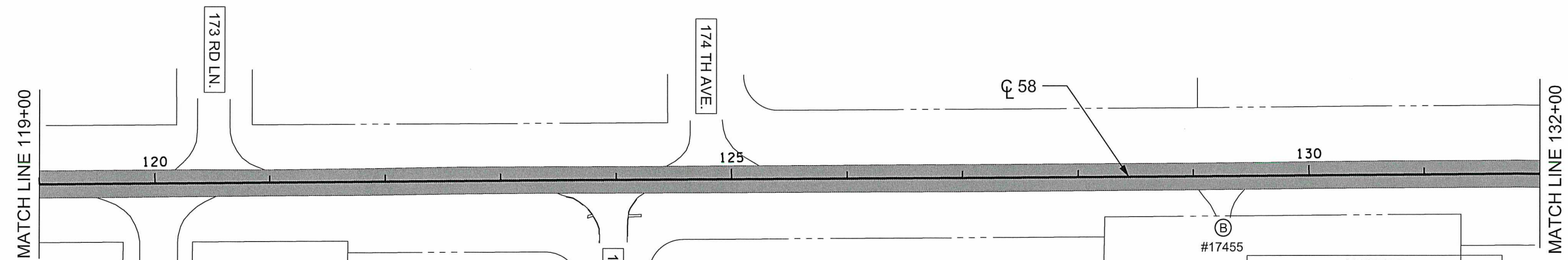
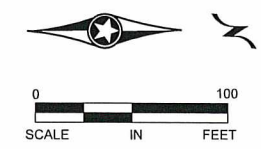
PRINT NAME: ANDREW WITTER
 SIGNATURE: *Andrew Witter*
 DATE: 4/20/14 LICENSE NO. 42757

DRAWN BY: KPR DATE: 04/24/2014
 DESIGN BY: KPR DATE: 04/24/2014
 CHECKED BY: DFF DATE: 04/24/2014



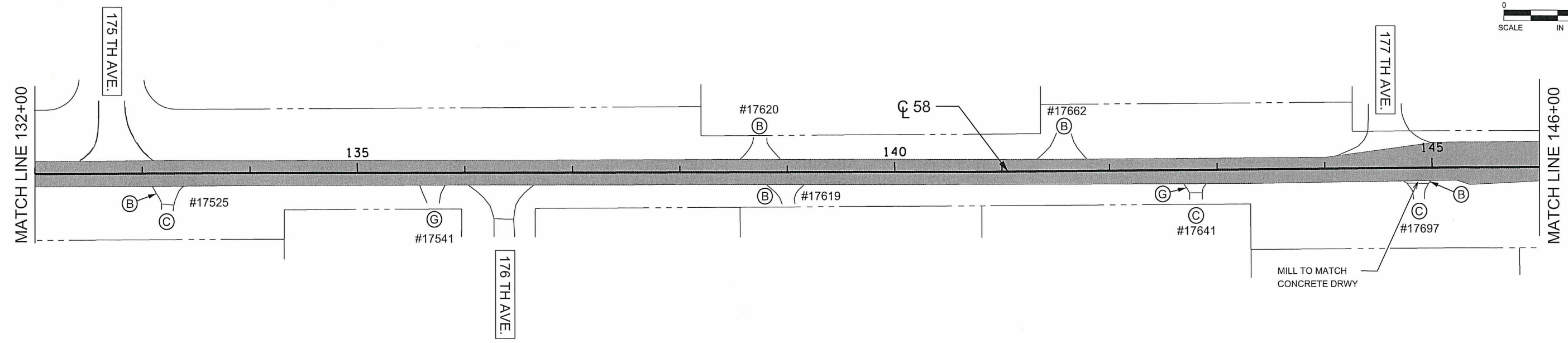
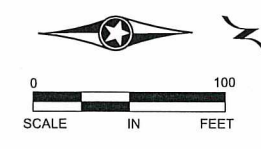
COUNTY PROJECT 14-52-58

CONSTRUCTION PLAN
 STA 90+00 TO 119+00
 Sheet 10 of 22 Sheets



LEGEND

- (B) BITUMINOUS
- (C) CONCRETE
- (G) GRAVEL
- [White Box] REMOVE BITUMINOUS DRIVEWAY PAVEMENT
- [Dark Grey Box] MAINLINE (OVERLAY)
- [Hatched Box] MAINLINE (REMOVE BITUMINOUS PAVEMENT)
- [Dashed Line] SAWCUT
- [Solid Line] R / W



NO	DATE	BY	CKD	APPR	REVISION	04/24/2014	12:53:26 PM

NAME: P:\14-01-00\CR_58_(165th-CSAH9)\Base\PROPOSED\PLAN.dgn

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

PRINT NAME: ANDREW WITTER

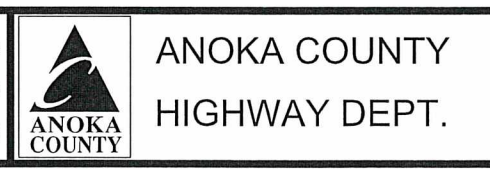
SIGNATURE: *Andrew Witter*

DATE: 4/28/14 LICENSE NO. 42757

DRAWN BY: KPR DATE: 04/24/2014

DESIGN BY: KPR DATE: 04/24/2014

CHECKED BY: DFF DATE: 04/24/2014

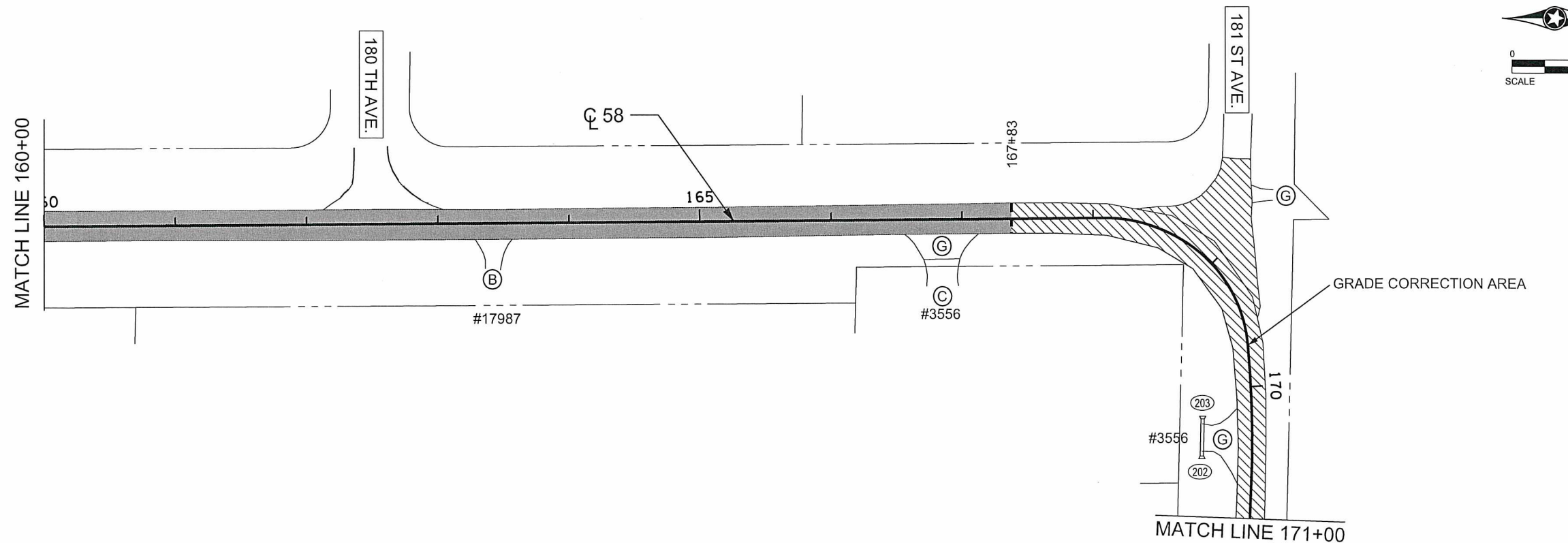
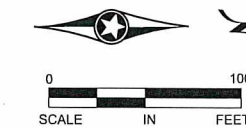
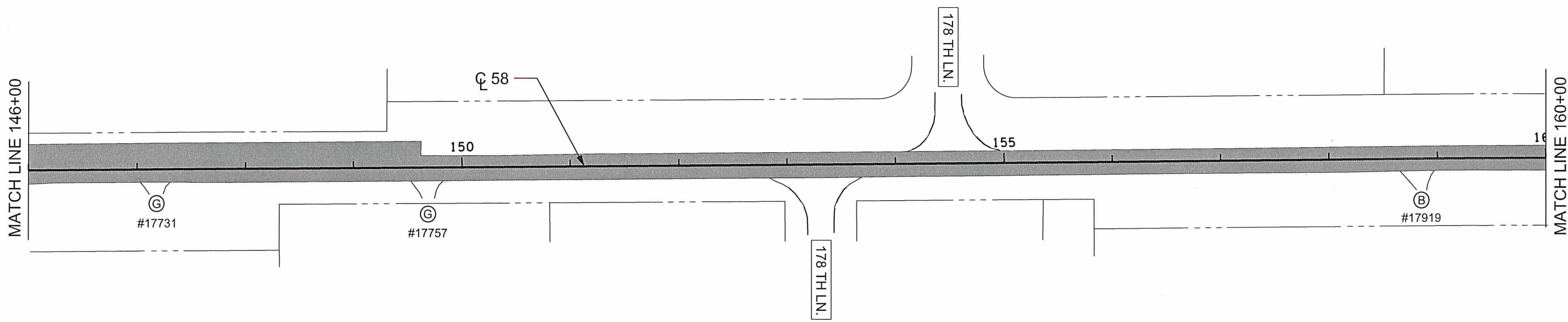
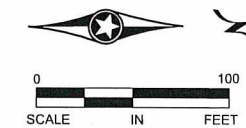


COUNTY PROJECT 14-52-58

CONSTRUCTION PLAN

STA 119+00 TO 146+00

Sheet 11 of 22 Sheets



LEGEND	
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(C)	CONCRETE
(G)	GRAVEL
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[Dark grey box]	MAINLINE (OVERLAY)
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NO	DATE	BY	CKD	APPR	REVISION	04/24/2014	12:53:30 PM
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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 LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 PRINT NAME: ANDREW WITTER
 SIGNATURE: *[Signature]*
 DATE: 4/24/14 LICENSE NO. 42757

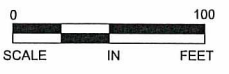
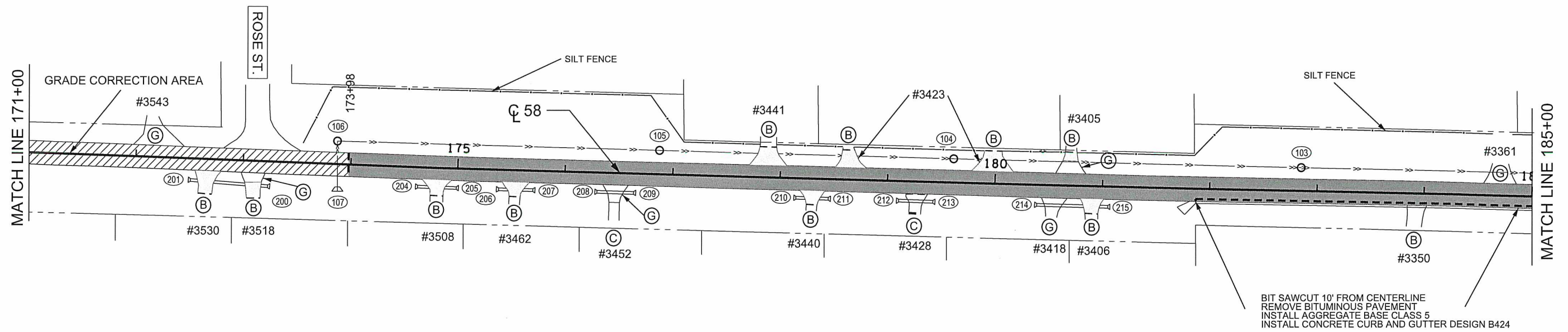
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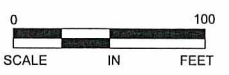
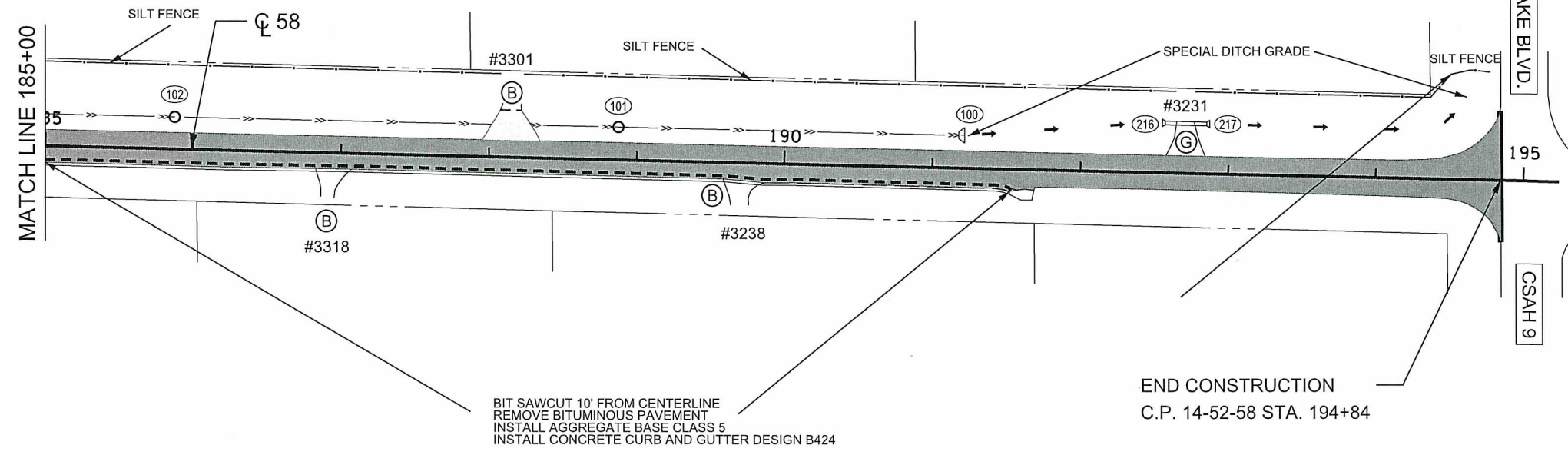
**ANOKA COUNTY
HIGHWAY DEPT.**

COUNTY PROJECT 14-52-58

CONSTRUCTION PLAN
 STA 146+00 TO 171+00
 Sheet 12 of 22 Sheets



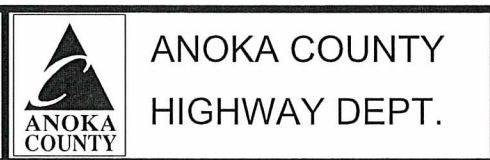
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(C)	CONCRETE
(G)	GRAVEL
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[Grey box]	MAINLINE (OVERLAY)
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NO	DATE	BY	CKD	APPR	REVISION	04/24/2014	12:53:37 PM
NAME: P:\14-01-00\CR_58 (165th-CSAH9)\Base\PROPOSED\PLAN.dgn							

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 PRINT NAME: ANDREW WITTER
 SIGNATURE: *[Signature]*
 DATE: 4/28/14 LICENSE NO. 42757

DRAWN BY: KPR DATE: 04/24/2014
 DESIGN BY: KPR DATE: 04/24/2014
 CHECKED BY: DFF DATE: 04/24/2014



COUNTY PROJECT 14-52-58

CONSTRUCTION PLAN
 STA 171+00 TO 194+84
 Sheet 13 of 22 Sheets

PERMANENT PAVEMENT MARKING PLAN
NOTES AND GUIDELINES

GENERAL INFORMATION:

THE ENGINEER'S INVOLVEMENT IN THE APPLICATION OF THE MATERIAL SHALL BE LIMITED TO FIELD CONSULTATION AND INSPECTION. ANOKA COUNTY HIGHWAY DEPARTMENT WILL PLACE NECESSARY "SPOTTING" AT APPROPRIATE POINTS TO PROVIDE HORIZONTAL CONTROL FOR STRIPING AND TO DETERMINE NECESSARY STARTING AND CUTOFF POINTS, LONGITUDINAL JOINTS, PAVEMENT EDGES AND EXISTING MARKINGS MAY SERVE AS HORIZONTAL CONTROL WHEN SO DIRECTED.

EDGE LINES AND LANE LINES ARE TO BE BROKEN ONLY AT INTERSECTIONS WITH PUBLIC ROADS AND AT PRIVATE ENTRANCES IF THEY ARE CONTROLLED BY A YIELD SIGN, STOP SIGN OR TRAFFIC SIGNAL. THE BREAK POINT IS TO BE AT THE START OF THE RADIUS FOR THE INTERSECTION OR AT MARKED STOP LINES OR CROSSWALKS.

A TOLERANCE OF 1/4 INCH UNDER OR 1/4 INCH OVER THE SPECIFIED WIDTH WILL BE ALLOWED FOR STRIPING PROVIDED THE VARIATION IS GRADUAL AND DOES NOT DETRACT FROM THE GENERAL APPEARANCE. BROKEN LINE SEGMENTS MAY VARY UP TO ONE-HALF FOOT FROM THE SPECIFIED LENGTHS PROVIDED THE OVER AND UNDER VARIATIONS ARE REASONABLY COMPENSATORY. ALIGNMENT DEVIATIONS FROM THE CONTROL GUIDE SHALL NOT EXCEED 1 INCH. MATERIAL SHALL NOT BE APPLIED OVER LONGITUDINAL JOINTS, ESTABLISHMENT OF APPLICATION TOLERANCES SHALL NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY TO COMPLY AS CLOSELY AS PRACTICABLE WITH THE PLANNED DIMENSIONS.

EPOXY:

THE ROAD SURFACE SHALL BE CLEANED AT THE DIRECTION OF THE ENGINEER JUST PRIOR TO APPLICATION. PAVEMENT CLEANING SHALL CONSIST OF AT LEAST BRUSHING WITH A ROTARY BROOM (NON-METALLIC) OR AS RECOMMENDED BY THE MATERIAL MANUFACTURER AND ACCEPTABLE TO THE ENGINEER. NEW PORTLAND CEMENT CONCRETE SURFACES SHALL BE SANDBLAST CLEANED TO REMOVE ANY SURFACE TREATMENT AND/OR LAITANCE ON LOW SPEED (SPEED LIMIT 35 MPH OR LESS) URBAN PORTLAND CEMENT CONCRETE ROADWAYS. SANDBLAST CLEANING SHALL BE USED FOR ALL EPOXY PAVEMENT MARKINGS.

THE EPOXY MARKING APPLICATION SHALL IMMEDIATELY FOLLOW THE PAVEMENT CLEANING. GLASS BEANS SHALL BE APPLIED IMMEDIATELY AFTER APPLICATION OF THE EPOXY RESIN LINE TO PROVIDE AN IMMEDIATE NO-TRACK SYSTEM.

AN EPOLY RESIN LINE 4" WIDE AND 15 MILL THICKNESS (WET), REQUIRES AN APPLICATION RATE OF ONE (1) GALLON OF COMPONENTS FOR 320 FEET OF LINE. GLASS BEADS SHALL BE APPLIED AT A POUND PER GALLON RATE SUFFICIENT TO ACHIEVE AN ACCEPTABLE NO-TRACK SYSTEM.

OPERATIONS SHALL BE CONDUCTED ONLY WHEN THE ROAD PAVEMENT SURFACE TEMPERATURES ARE 50 DEGREES FAHRENHEIT OR GREATER.

PERMANENT PAVEMENT MARKINGS SHALL NOT BE PLACED OVER TEMPORARY TAPE MARKINGS.

PREFORMED THERMOPLASTIC:

THE PREFORMED THERMOPLASTIC MARKINGS SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS ON CLEAN AND DRY SURFACES. SEE SPECIAL PROVISIONS FOR PREFORMED THERMOPLASTIC MARKING SPECIFICATIONS.

PAINT:

AT THE TIME OF APPLYING THE MARKING MATERIAL, THE APPLICATION AREA SHALL BE FREE OF CONTAMINATION. THE CONTRACTOR SHALL CLEAN THE ROADWAY SURFACE PRIOR TO THE LINE APPLICAITON IN A MANNER AND TO THE EXTENT REQUIRED BY THE ENGINEER.

GLASS BEADS SHALL BE APPLIED IMMEDIATELY AFTER APPLICATION OF THE PAINT LINE.

EXCEPT WHEN USED AS A TEMPORARY MARKING, PAVEMENT MARKINGS SHALL ONLY BE APPLIED IN SEASONABLE WEATHER WHEN AIR TEMPERATURE IS 50 DEGREES FARHENHEIT OR HIGHER AND SHALL NOT BE APPLIED WHEN THE WIND OR OTHER CONDITIONS CAUSE A FILM OR DUST TO BE DEPOSITED ON THE PAVEMENT SURFACE AFTER CLEANING AND BEFORE THE MARKING MATERIAL CAN BE APPLIED.

THE FILLING OF TANKS, POURING OF MATERIALS OR CLEANING OF EQUIPMENT SHALL NOT BE PERFORMED ON UNPROTECTED PAVEMENT SURFACES UNLESS ADEQUATE PROVISIONS ARE MADE TO PREVENT SPILLAGE OF MATERIAL.

PAVEMENT MARKING TABULATION		
ITEM	UNIT	TOTAL QUANTITY
4" SOLID LINE WHITE - EPOXY PAINT	LIN FT	38795
4" SOLID LINE YELLOW - EPOXY PAINT	LIN FT	4865
4" BROKEN LINE YELLOW - EPOXY PAINT	LIN FT	1610
4" DOUBLE YELLOW - EPOXY PAINT	LIN FT	11250

SYMBOLS & MATERIALS LEGEND

■ CROSSWALK BLOCK WHITE PREFORMED THERMOPLASTIC

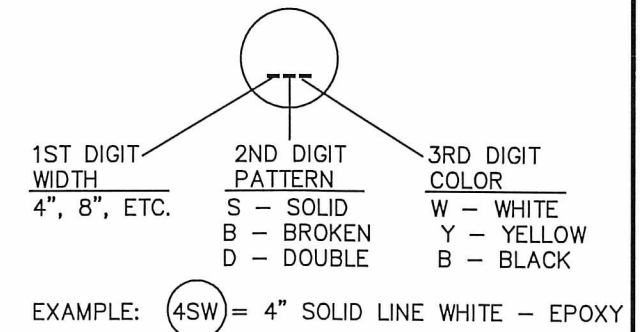
↩ PAVEMENT MESSAGE (LEFT ARROW) PREFORMED THERMOPLASTIC

STRIPING KEY

○ CIRCLE - EPOXY □ SQUARE PREFORMED THERMOPLASTIC

△ TRIANGLE - PAINT

⬠ PENTAGON - REMOVABLE PREFORMED PLASTIC MARKING



NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\13-01-00\CSAH 18\Base\TRAFFIC\Perm pvmt mrkg guide notes_guidelines.dwg

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 PRINT NAME: ANDREW WITTER
 SIGNATURE: *[Signature]*
 DATE: 4/21/14 LICENSE NO. 42757

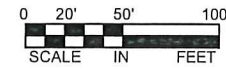
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 DESIGN BY: MTH DATE: 4-7-14
 CHECKED BY: JR DATE: 4-7-14



ANOKA COUNTY
HIGHWAY DEPT.

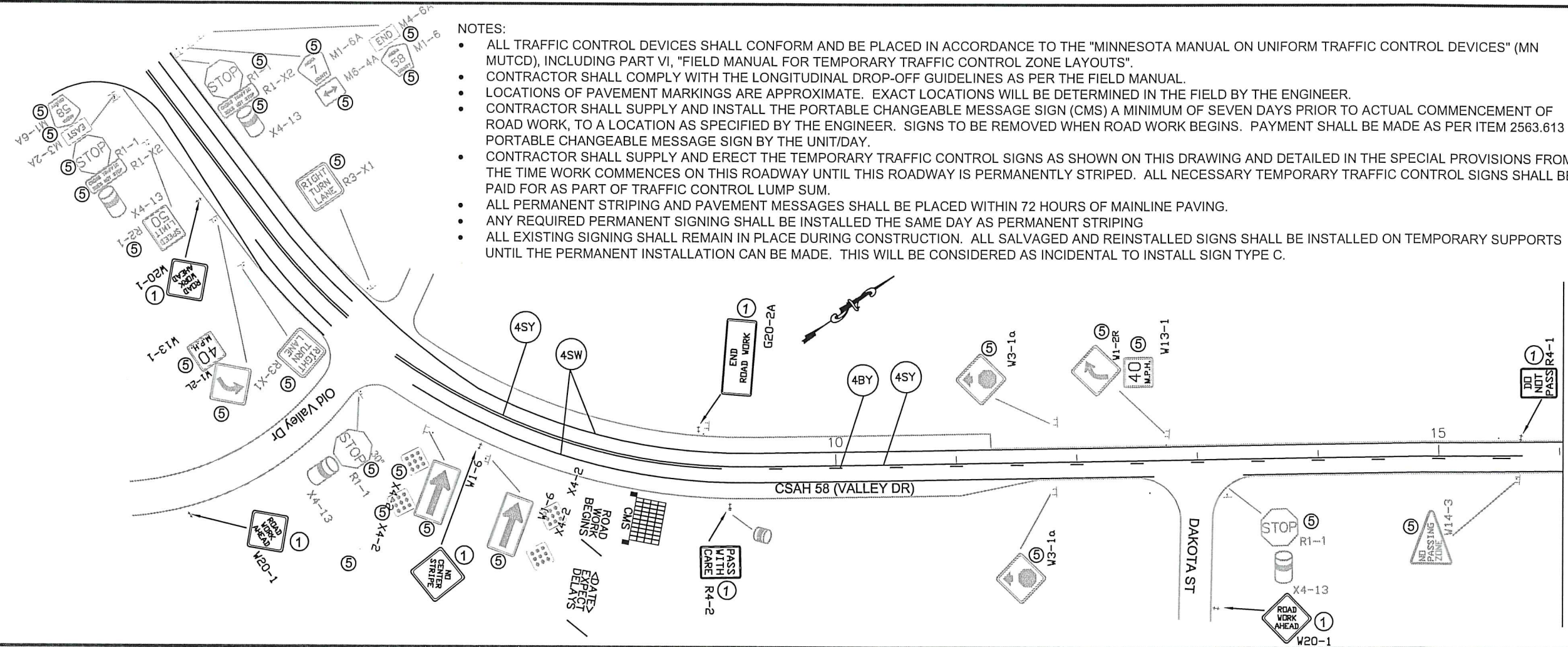
STATE PROJECT NO. _____
 STATE AID PROJECT NO. _____
 STATE AID PROJECT NO. _____
 COUNTY PROJECT NO. 14-52-58

PERMANENT MARKING TABULATION
 Sheet 14 of 22 Sheets



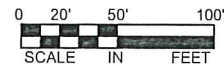
NOTES:

- ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE PLACED IN ACCORDANCE TO THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MN MUTCD), INCLUDING PART VI, "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS".
- CONTRACTOR SHALL COMPLY WITH THE LONGITUDINAL DROP-OFF GUIDELINES AS PER THE FIELD MANUAL.
- LOCATIONS OF PAVEMENT MARKINGS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- CONTRACTOR SHALL SUPPLY AND INSTALL THE PORTABLE CHANGEABLE MESSAGE SIGN (CMS) A MINIMUM OF SEVEN DAYS PRIOR TO ACTUAL COMMENCEMENT OF ROAD WORK, TO A LOCATION AS SPECIFIED BY THE ENGINEER. SIGNS TO BE REMOVED WHEN ROAD WORK BEGINS. PAYMENT SHALL BE MADE AS PER ITEM 2563.613 PORTABLE CHANGEABLE MESSAGE SIGN BY THE UNIT/DAY.
- CONTRACTOR SHALL SUPPLY AND ERECT THE TEMPORARY TRAFFIC CONTROL SIGNS AS SHOWN ON THIS DRAWING AND DETAILED IN THE SPECIAL PROVISIONS FROM THE TIME WORK COMMENCES ON THIS ROADWAY UNTIL THIS ROADWAY IS PERMANENTLY STRIPED. ALL NECESSARY TEMPORARY TRAFFIC CONTROL SIGNS SHALL BE PAID FOR AS PART OF TRAFFIC CONTROL LUMP SUM.
- ALL PERMANENT STRIPING AND PAVEMENT MESSAGES SHALL BE PLACED WITHIN 72 HOURS OF MAINLINE PAVING.
- ANY REQUIRED PERMANENT SIGNING SHALL BE INSTALLED THE SAME DAY AS PERMANENT STRIPING
- ALL EXISTING SIGNING SHALL REMAIN IN PLACE DURING CONSTRUCTION. ALL SALVAGED AND REINSTALLED SIGNS SHALL BE INSTALLED ON TEMPORARY SUPPORTS UNTIL THE PERMANENT INSTALLATION CAN BE MADE. THIS WILL BE CONSIDERED AS INCIDENTAL TO INSTALL SIGN TYPE C.



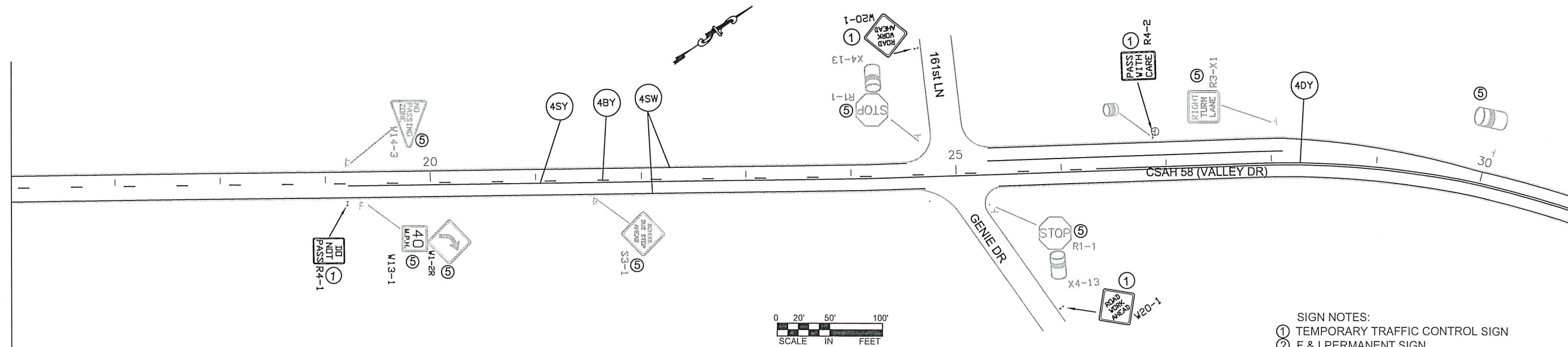
STATION 16+00

STATION 16+00



- SIGN NOTES:
- ① TEMPORARY TRAFFIC CONTROL SIGN
 - ② F & I PERMANENT SIGN
 - ③ SALVAGE PERMANENT SIGN
 - ④ RE-INSTALL PERMANENT SIGN
 - ⑤ RETAIN INPLACE SIGN

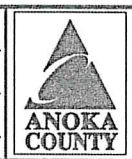
STATION 31+00



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.
 PRINT NAME: ANDREW WITTER
 SIGNATURE: *[Signature]*
 DATE: 4/28/14 REG. NO. 42757

DRAWN BY: RLB DATE: 4/7/14
 DESIGN BY: RLB DATE: 4/7/14
 CHECKED BY: JR DATE: 4/7/14



ANOKA COUNTY
 HIGHWAY DEPT.

STATE PROJECT NO. _____
 STATE AID PROJECT NO. _____
 STATE AID PROJECT NO. _____
 COUNTY PROJECT NO. 14-52-58

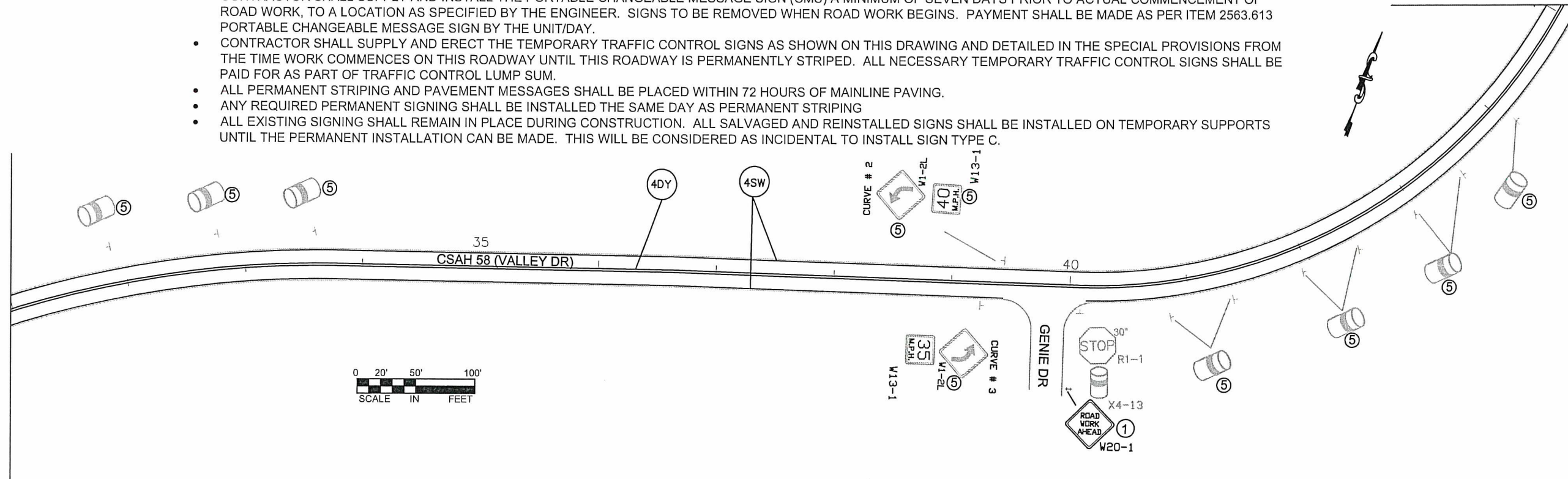
TEMPORARY SIGNING
 PERMANENT SIGNING
 AND STRIPING
 Sheet 15 of 22 Sheets

NOTES:

- ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE PLACED IN ACCORDANCE TO THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MN MUTCD), INCLUDING PART VI, "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS".
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- ALL PERMANENT STRIPING AND PAVEMENT MESSAGES SHALL BE PLACED WITHIN 72 HOURS OF MAINLINE PAVING.
- ANY REQUIRED PERMANENT SIGNING SHALL BE INSTALLED THE SAME DAY AS PERMANENT STRIPING
- ALL EXISTING SIGNING SHALL REMAIN IN PLACE DURING CONSTRUCTION. ALL SALVAGED AND REINSTALLED SIGNS SHALL BE INSTALLED ON TEMPORARY SUPPORTS UNTIL THE PERMANENT INSTALLATION CAN BE MADE. THIS WILL BE CONSIDERED AS INCIDENTAL TO INSTALL SIGN TYPE C.

STATION 31+00

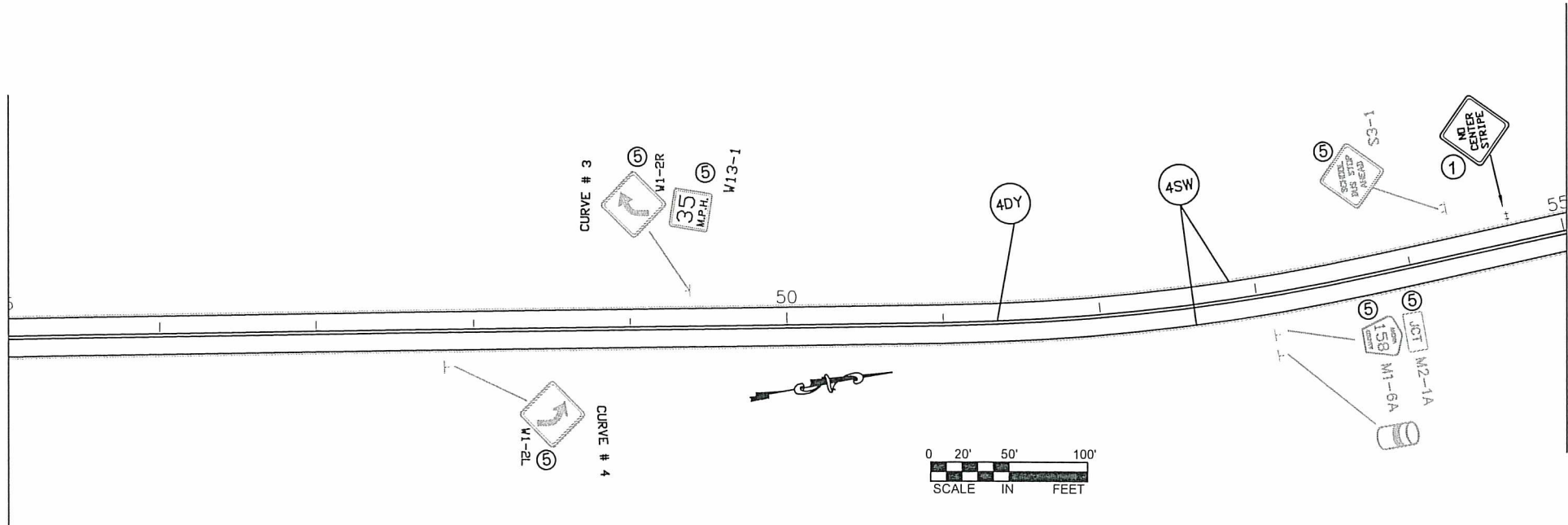
STATION 45+00



- SIGN NOTES:
- ① TEMPORARY TRAFFIC CONTROL SIGN
 - ② F & I PERMANENT SIGN
 - ③ SALVAGE PERMANENT SIGN
 - ④ RE-INSTALL PERMANENT SIGN
 - ⑤ RETAIN INPLACE SIGN

STATION 45+00

STATION 55+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.
 PRINT NAME: ANDREW WITTER
 SIGNATURE: *[Signature]*
 DATE: 4/7/14 REG. NO. 42757

DRAWN BY: RLB DATE: 4/7/14
 DESIGN BY: RLB DATE: 4/7/14
 CHECKED BY: JR DATE: 4/7/14



ANOKA COUNTY
 HIGHWAY DEPT.

STATE PROJECT NO. _____
 STATE AID PROJECT NO. _____
 STATE AID PROJECT NO. _____
 COUNTY PROJECT NO. 14-52-58

TEMPORARY SIGNING
 PERMANENT SIGNING
 AND STRIPING
 Sheet 16 of 22 Sheets

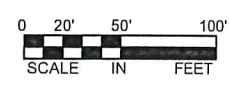
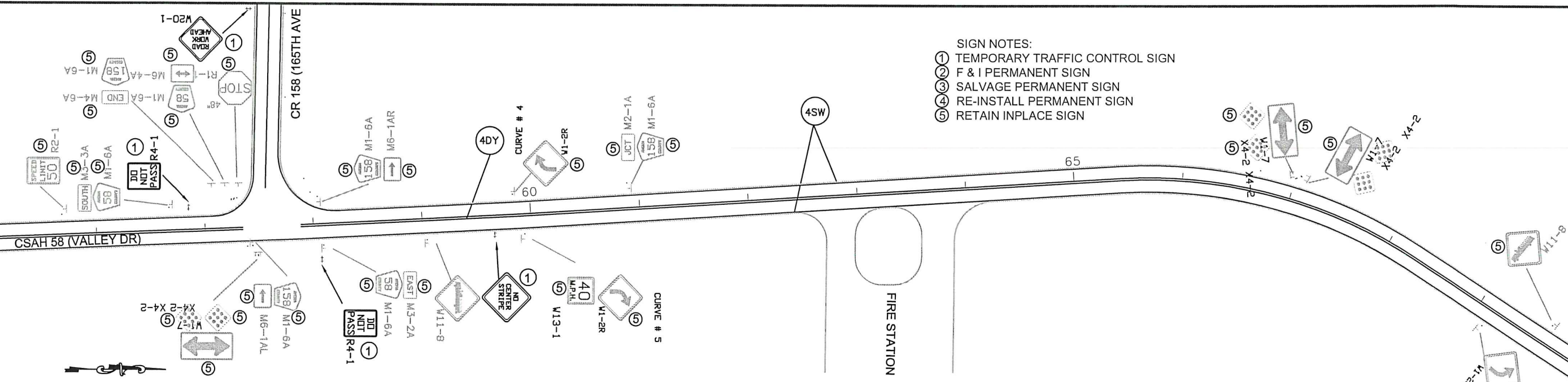
NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-617-19\base\Traffic\Curves from CSAH 18 to CSAH 22.dwg

STATION 55+00

STATION 70+00

- SIGN NOTES:
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 - ③ SALVAGE PERMANENT SIGN
 - ④ RE-INSTALL PERMANENT SIGN
 - ⑤ RETAIN INPLACE SIGN

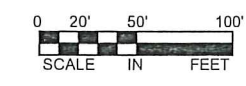
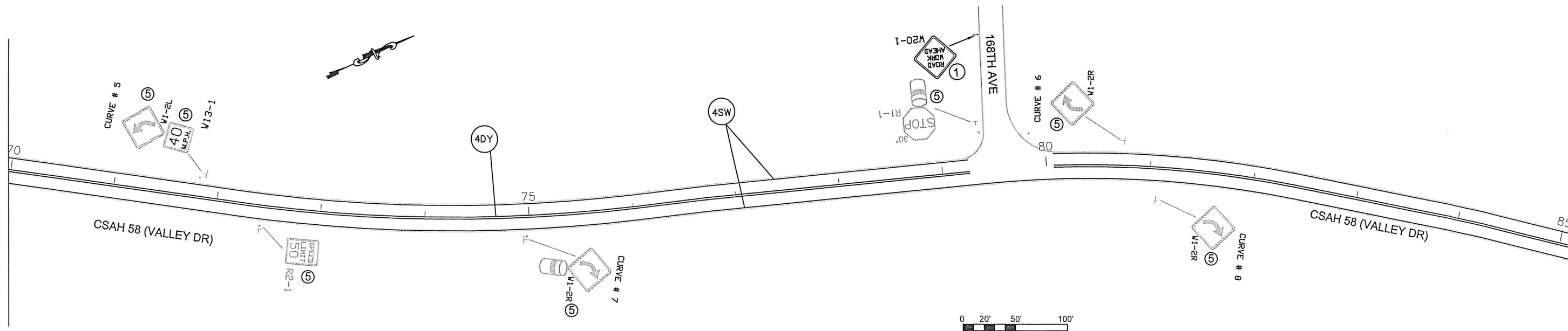


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STATION 70+00

STATION 85+00



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PRINT NAME: ANDREW WITTER

SIGNATURE: [Signature]

DATE: 4/28/14 REG. NO. 42757

DRAWN BY: RLB DATE 4/7/14

DESIGN BY: RLB DATE 4/7/14

CHECKED BY: JR DATE 4/7/14



ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____

STATE AID PROJECT NO. _____

STATE AID PROJECT NO. _____

COUNTY PROJECT NO. 14-52-58

TEMPORARY SIGNING
PERMANENT SIGNING
AND STRIPING

Sheet 17 of 22 Sheets

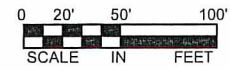
STATION 85+00

STATION 100+00

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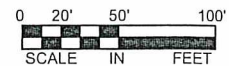
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STATION 100+00

STATION 115+00



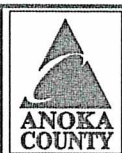
NO	DATE	BY	CKD	APPR	REVISION

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SIGNATURE: *[Signature]*
DATE: 4/7/14 REG. NO. 42757

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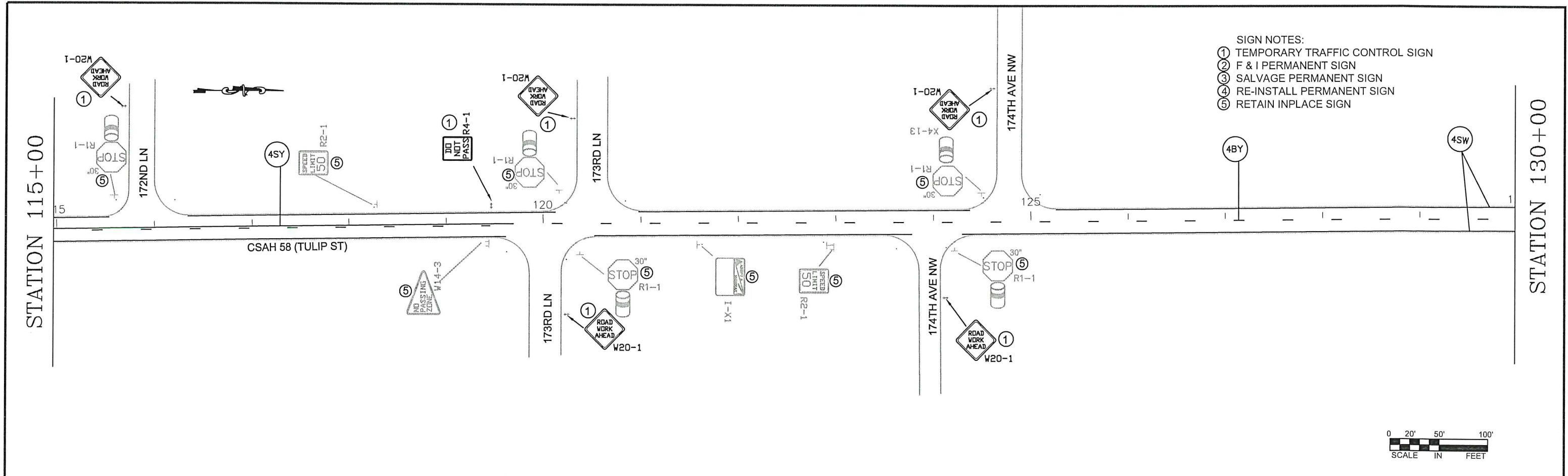


ANOKA COUNTY
HIGHWAY DEPT.

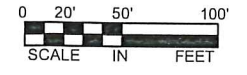
STATE PROJECT NO. _____
STATE AID PROJECT NO. _____
STATE AID PROJECT NO. _____
COUNTY PROJECT NO. 14-52-58

TEMPORARY SIGNING
PERMANENT SIGNING
AND STRIPING

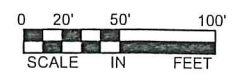
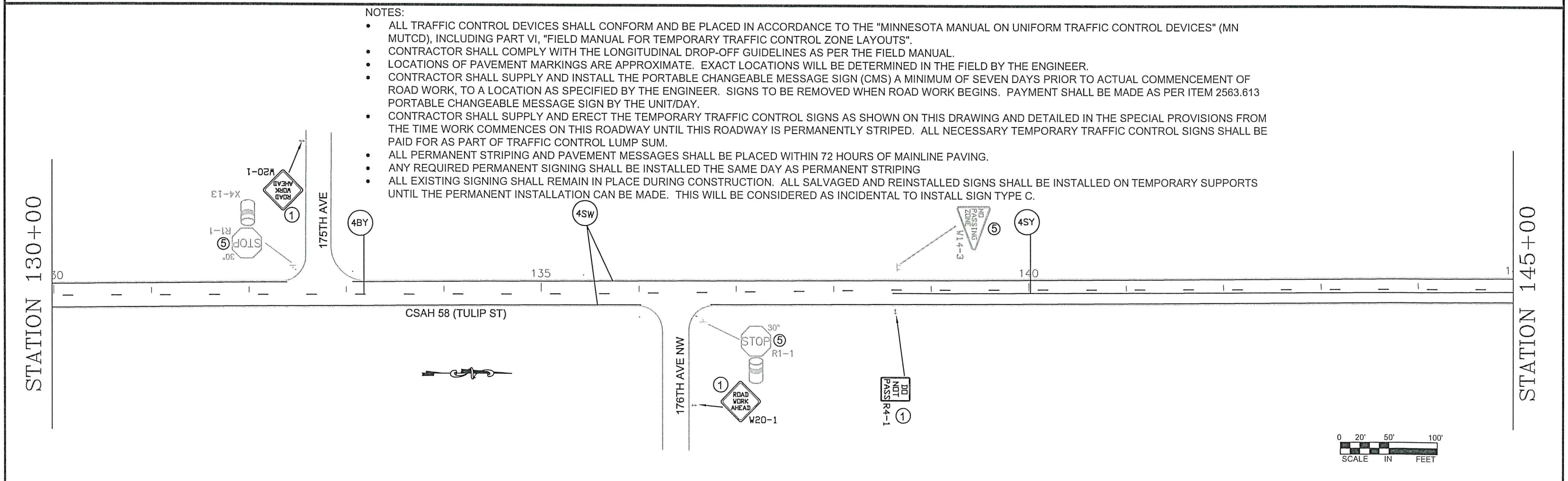
Sheet 18 of 22 Sheets



- SIGN NOTES:
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SIGNATURE: *Andrew Witter*

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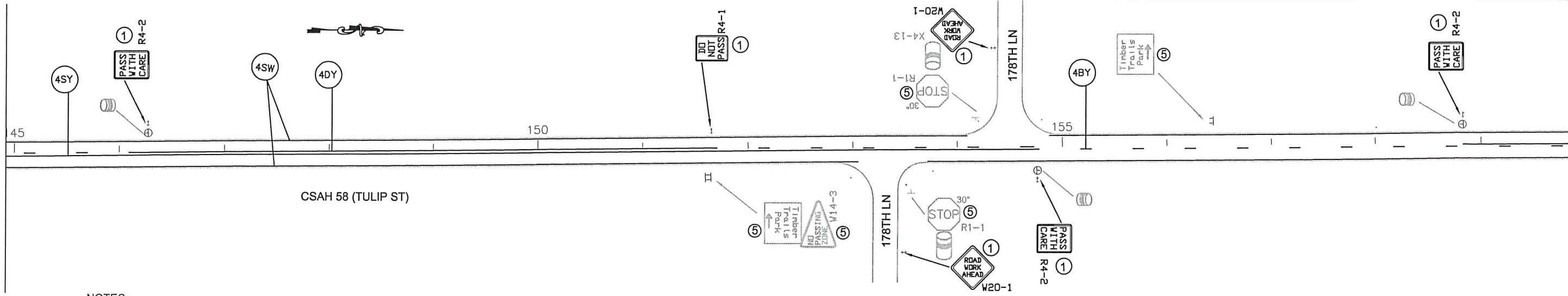
COUNTY PROJECT NO. 14-52-58

TEMPORARY SIGNING
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Sheet 19 of 22 Sheets

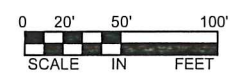
STATION 145+00

STATION 160+00



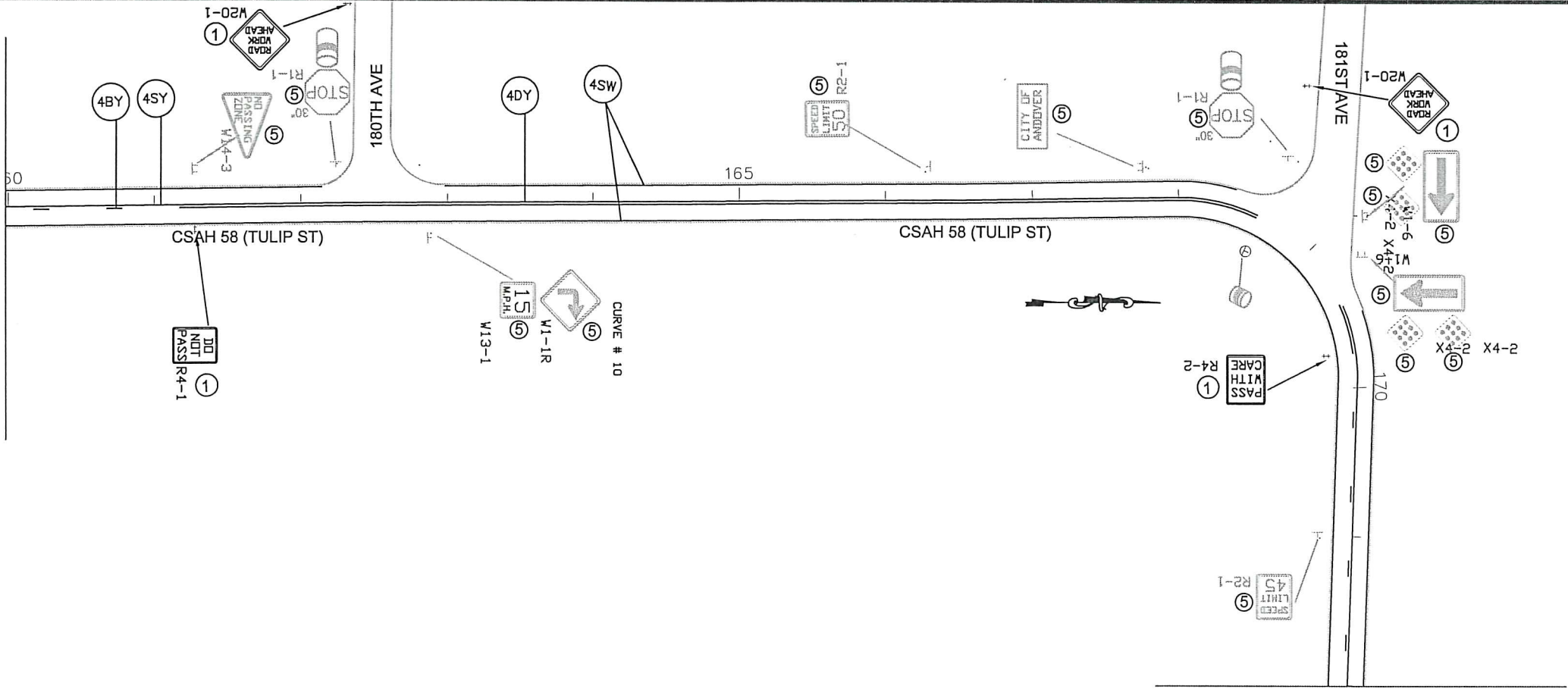
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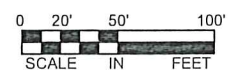


STATION 160+00

STATION 172+00



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TEMPORARY SIGNING
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Sheet 20 of 22 Sheets

TEMPORARY TRAFFIC CONTROL SIGNS						
M.U.T.C.D. CODE	SIZE	PANEL AREA FT. ²	INSERT	QUANTITY		MOUNTING HEIGHT TO PAVEMENT EDGE FT.
					No. POST	
W8-12	48" x 48"	16.00		4	2	7.0'
R4-1	24" x 30"	5.00		10	1	7.0'
R4-2	24" x 30"	5.00		8	1	7.0'
G20-2A	48" x 24"	8.00		4	2	7.0'
W8-1A	48" x 48"	16.00		AS NEEDED		
W8-1A	48" x 48"	16.00		AS NEEDED		
W8-8	48" x 48"	16.00		AS NEEDED		
W8-9	48" x 48"	16.00		AS NEEDED		
	48" x 48"	16.00		AS NEEDED		
W8-11	48" x 48"	16.00		AS NEEDED		
W20-1	48" x 48"	16.00		AS NEEDED (ESTIMATED 28)		
CMS sign to be installed a minimum of seven days prior to actual commencement of road work. Signs to be removed when road work begins.				2		

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CHANGEABLE MESSAGE BOARD - MESSAGE SEQUENCE LAYOUT

		R	O	A	D		
		W	O	R	K		
		B	E	G	I	N	S

	<	D	A	T	E	>	
		E	X	P	E	C	T
		D	E	L	A	Y	S

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TRAFFIC CONTROL
 QUANTITY
 Sheet 22 of 22 Sheets