

PLAN SYMBOLS

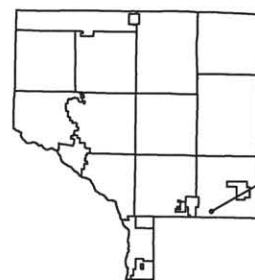
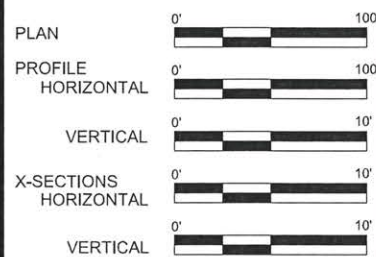
- COUNTY LINE _____
- TOWNSHIP OR RANGE LINE _____
- SECTION LINE _____
- QUARTER LINE _____
- SIXTEENTH LINE _____
- RIGHT OF WAY LINE _____
- SLOPE EASEMENT _____
- EXISTING RIGHT OF WAY _____
- PROPERTY LINE _____
- CORPORATE OR CITY LIMITS _____
- RETAINING WALL _____
- RAILROAD _____
- RAILROAD 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 _____

- LOWLAND _____
- TIMBER _____
- ORCHARD _____
- BRUSH _____
- NURSERY _____
- CATTLE GUARD _____
- OVERPASS (Highway Over) _____
- UNDERPASS (Highway Under) _____
- BRIDGE _____
- BUILDING (One Story Frame) _____
- F-FRAME C-CONCRETE _____
- S-STONE T-TILE _____
- B-BRICK ST-STUCCO _____
- 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 _____
- SEWER (Sanitary or Storm) _____
- SEWER MANHOLE _____

SCALES



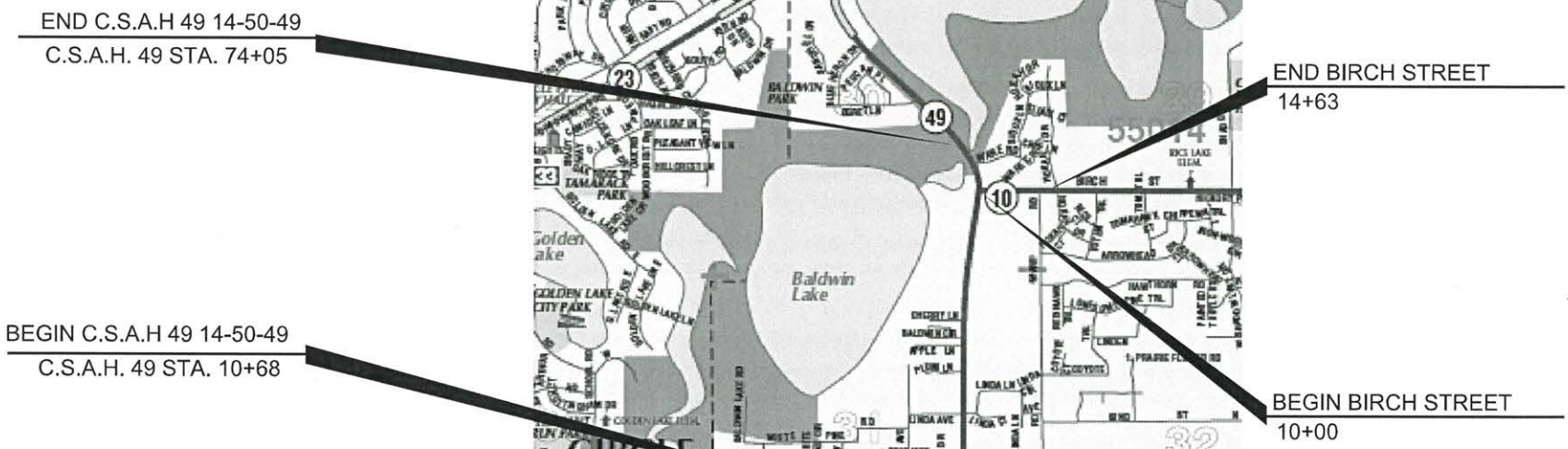
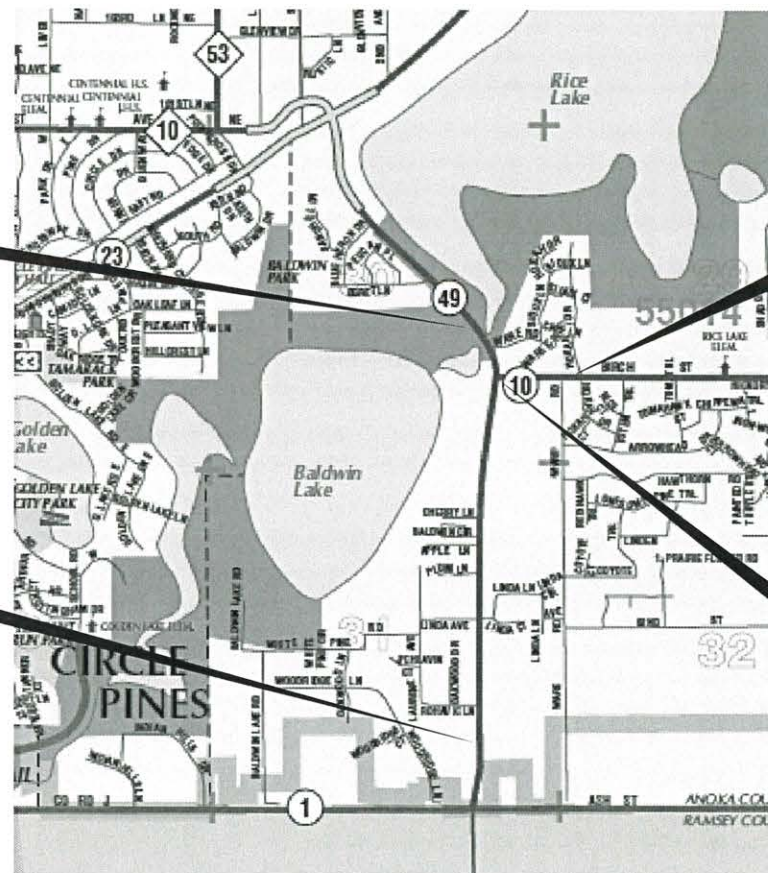
PROJECT LOCATION

CITY OF LINO LAKES
 ANOKA COUNTY
 MN/DOT TRANSPORTATION DISTRICT - METRO
 SECTION 30 & 31
 TOWNSHIP 30 NORTH
 RANGE 23 WEST

MINNESOTA DEPARTMENT OF TRANSPORTATION ANOKA COUNTY

CONSTRUCTION PLAN FOR _____ BITUMINOUS OVERLAY
 LOCATED ON C.S.A.H. 49 BETWEEN 850' NORTH OF ASH STREET AND 250' NORTH OF WARE RD.

C.S.A.H. 51	
CSAH 49 LENGTH	6337 FEET = 1.20 MILES
BIRCH STREET-LENGTH	463 FEET = 0.09 MILES
NET LENGTH	6800 FEET = 1.29 MILES



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 QUANTITIES
3-4	PROPOSED TYPICAL SECTION
5-6	MISCELLANEOUS DETAILS
7-9	CONSTRUCTION PLAN
10-16	TRAFFIC PLAN

THIS PLAN CONTAINS 16 SHEETS

Approved:  4/29/14
 ANOKA COUNTY ENGINEER

NO	DATE	BY	CKD	APPR	REVISION	04/23/2014	10:50:46 AM
NAME: P:14-01-00\CSAH_49_(SouthCL-NotWareRd)\Base\PROPOSED\1_title.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 WITMER
 SIGNATURE: 
 DATE: 4/23/14 LICENSE NO. 42757

DRAWN BY: RT DATE: 04/23/2014
 DESIGN BY: RT DATE: 04/23/2014
 CHECKED BY: DF DATE: 04/23/2014



ANOKA COUNTY
 HIGHWAY DEPT.

COUNTY PROJECT 14-50-49

TITLE SHEET
 Sheet 1 of 16 Sheets

STATEMENT OF ESTIMATED QUANTITIES				
ITEM NO.	ITEM	NOTES	UNIT	TOTAL PROJECT QUANTITIES ESTIMATED
2021.501	MOBILIZATION		LUMP SUM	1
2104.501	REMOVE PIPE CULVERTS		LIN FT	133
2104.503	REMOVE CONCRETE DRIVEWAY PAVEMENT	9	SQ FT	156
2104.503	REMOVE BITUMINOUS PAVEMENT		SQ FT	1117
2104.503	REMOVE CONCRETE WALK		SQ FT	400
2104.511	SAWING CONCRETE PAVEMENT (FULL DEPTH)		LIN FT	26
2104.513	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)		LIN FT	146
2211.501	AGGREGATE BASE CLASS 5		TON	43
2221.501	SHOULDER BASE AGGREGATE CLASS 5		TON	196
2232.501	MILL BITUMINOUS SURFACE (2.0")	3	SQ YD	379
2357.502	BITUMINOUS MATERIAL FOR TACK COAT		GAL	1594
2360.501	TYPE SP 12.5 WEARING COURSE MIX (4 , E)		TON	3668
2501.515	36" RC PIPE APRON		EACH	2
2501.515	24" RC PIPE APRON		EACH	3
2501.561	36" RC PIPE CULVERT DES 3006 CL III		LIN FT	80
2501.561	24" RC PIPE CULVERT DES 3006 CL III		LIN FT	8
2521.501	6" CONCRETE WALK		SQ FT	482
2531.507	6" CONCRETE DRIVEWAY PAVEMENT	8	SQ YD	17
2531.618	TRUNCATED DOMES		SQ FT	78
2540.602	INSTALL MAIL BOX SUPPORT	1	EACH	25
2545.602	ADJUST HANDHOLE		EACH	2
2550.602	LOOP DETECTOR DESIGN NMC		EACH	1
2563.601	TRAFFIC CONTROL	4,6	LUMP SUM	1
2563.613	PORTABLE CHANGEABLE MESSAGE SIGN	5	UNIT DAY	14
2581.501	REMOVABLE PREFORM PAVEMENT MARKING TAPE	2	LIN FT	91
2582.502	4" SOLID LINE WHITE - EPOXY	7	LIN FT	16760
2582.502	4" SOLID LINE YELLOW - EPOXY	7	LIN FT	920
2582.502	4" BROKEN LINE YELLOW-EPOXY	7	LIN FT	830
2582.502	4" DOUBLE SOLID LINE YELLOW - EPOXY	7	LIN FT	4405
2582.601	PAVEMENT MESSAGE (RT ARROW) PREFORMED THERMOPLASTIC		EACH	4
2582.601	PAVEMENT MESSAGE (LT ARROW) PREFORMED THERMOPLASTIC		EACH	3
2582.602	24" SOLID LINE WHITE-PREFORMED THERMOPLASTIC	7	LIN FT	72
2582.602	24" SOLID LINE YELLOW-PREFORMED THERMOPLASTIC	7	LIN FT	713
2582.618	3 X 6 ZEBRA CROSSWALK -PREFORMED THERMOPLASTIC		SQ FT	378

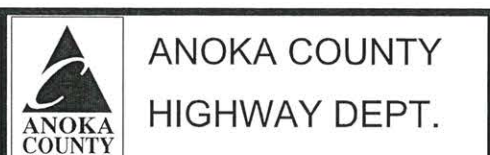
CONSTRUCTION NOTES	
1	MAILBOXES ARE TO BE INSTALLED AT THE EXISTING MAILBOX LOCATION OR AS DIRECTED BY THE LOCAL POSTAL AUTHORITY,
2	CENTERLINE SKIPS TO BE APPLIED AS SOON AS POSSIBLE ON EACH NEW LIFT OF PAVEMENT; TO BE INPLACE BEFORE CONTRACTOR LEAVES FOR THE DAY. CONTRACTOR IS TO REMOVE PRIOR TO FINAL PAINT STRIPING.
3	ITEM INCLUDES 2" DEEP MILL AT BEGINNING AND END OF PROJECT, ALL PAVED ST APPROACHES, AND DRIVEWAYS; SEE DETAILS FOR DIMENSIONS
4	ALL TRAFFIC CONTROL METHODS SHALL CONFORM TO THE CURRENT "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL
5	2 MESSAGE BOARDS, ONE ON THE EACH END OF PROJECT WILL BE INSTALLED 7 DAYS PRIOR TO ANY CONSTRUCTION; REFERANCE STRIPING PLAN FOR DETAILS.
6	DO NOT PASS, PASS WITH CARE AND NO CENTER STRIPE SIGNS TO BE INPLACE DURING MILLING, RECLAIMING OR PAVING
7	FINAL STRIPING SHALL BE INSTALLED WITHIN 72 HOURS OF COMPLETION OF MAINLINE WEAR COURSE PAVING.
8	STREET APPROACHES AND DRIVEWAYS ARE TO BE PAVED AFTER MAINLINE PAVING BUT BEFORE FINAL STRIPING.
9	CONTRACTOR IS RESPONSIBLE FOR CONTACTING PROPERTY OWNER(S) 48 HOURS BEFORE STARTING OPERATION.

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	ALL BITUMINOUS PAVEMENT	115 / SQ.YD. / IN THICKNESS

NO	DATE	BY	CKD	APPR	REVISION	04/24/2014	9:00:07 AM
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 SIGNATURE: *Andrew Witter*
 DATE: 4/28/14 LICENSE NO. 42757

DRAWN BY: RT DATE 04/24/2014
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 CHECKED BY: DF DATE 04/24/2014



COUNTY PROJECT 14-50-49

STATEMENT OF ESTIMATED QUANTITIES
 Sheet 2 of 16 Sheets

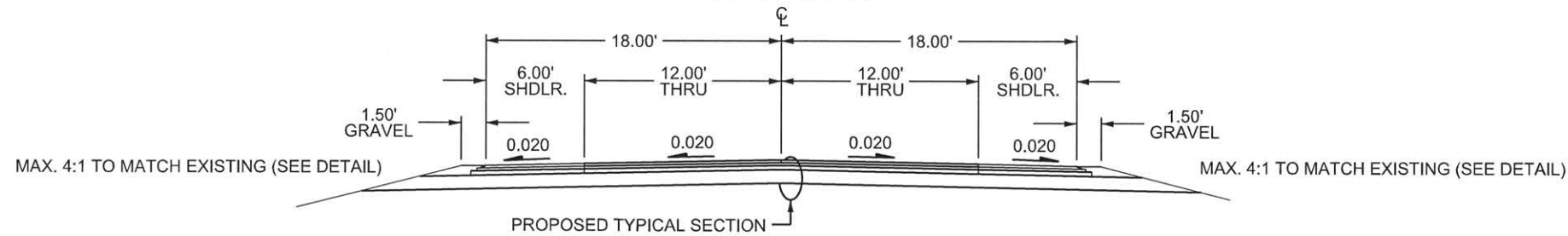
HODGSON RD (C.S.A.H 49)

PROPOSED

10+68 - 26+00

30+75 - 63+00

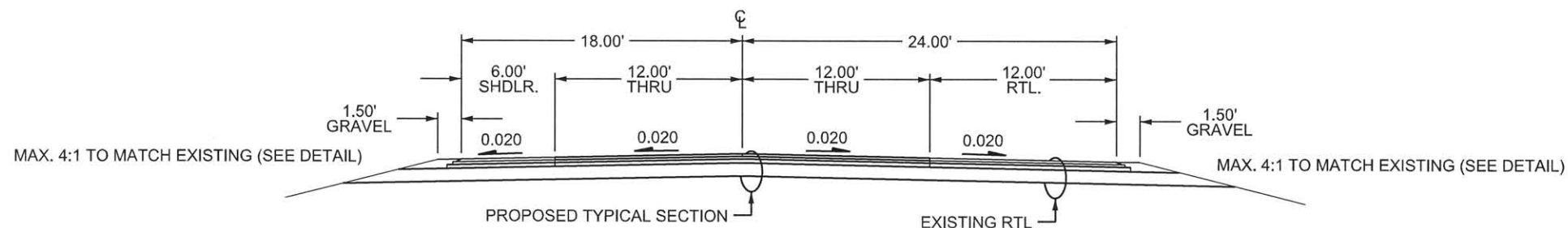
71+00 - 74+05



HODGSON RD (C.S.A.H 49)

PROPOSED

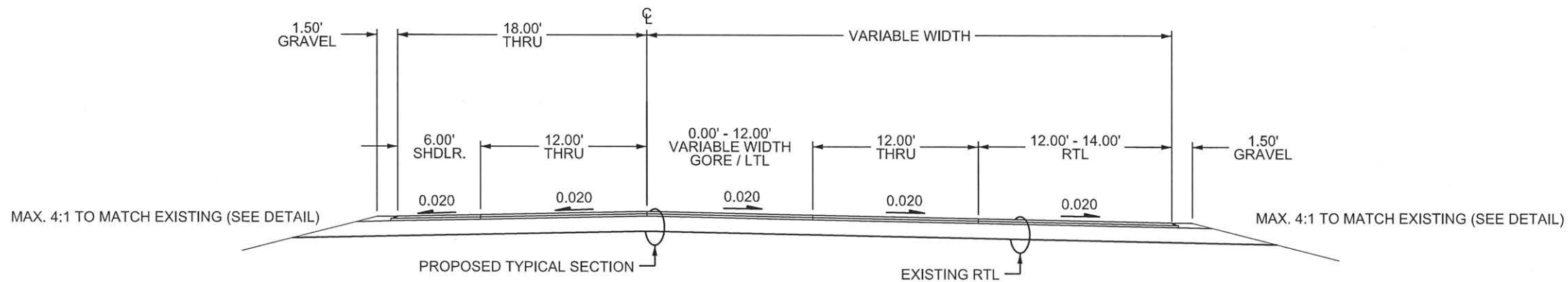
26+00 - 30+75



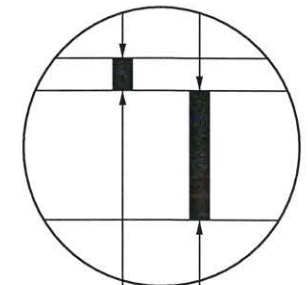
HODGSON RD (C.S.A.H 49)

PROPOSED

63+00 - 72+00



**2" OVERLAY
PROPOSED OVERLAY**



2.0" TYPE SP 12.5 WEARING COURSE (SPWEB440E)

EXISTING BITUMINOUS 5-9.5"

NOT TO SCALE

NO	DATE	BY	CKD	APPR	REVISION
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 PRINT NAME: ANDREW WITTER
 SIGNATURE: *[Signature]*
 DATE: 9/23/14 LICENSE NO. 42757

DRAWN BY RT DATE 04/23/2014
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 CHECKED BY DF DATE 04/23/2014



**ANOKA COUNTY
HIGHWAY DEPT.**

STATE PROJECT NO. _____
 STATE AID PROJECT NO. _____
 CITY PROJECT NO. _____
 COUNTY PROJECT NO. 14-50-49

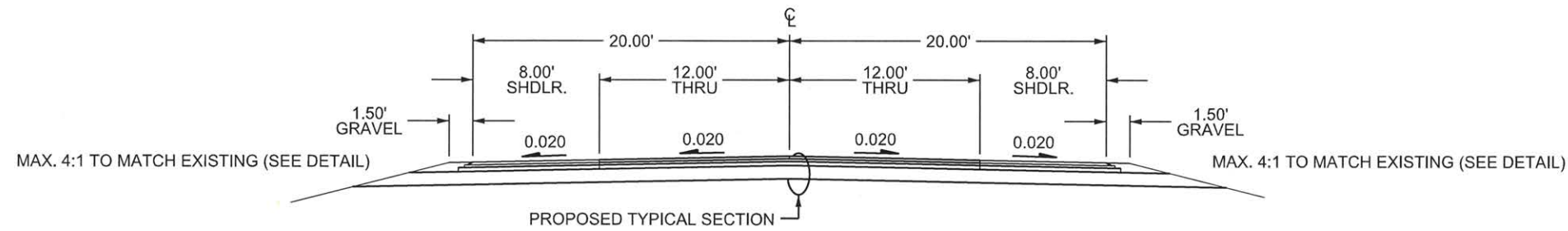
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Sheet 3 of 16 Sheets

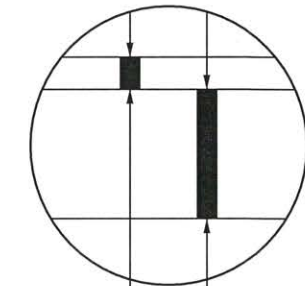
HODGSON RD (C.S.A.H 49)

PROPOSED

72+00 - 74+05



**2" OVERLAY
PROPOSED OVERLAY**



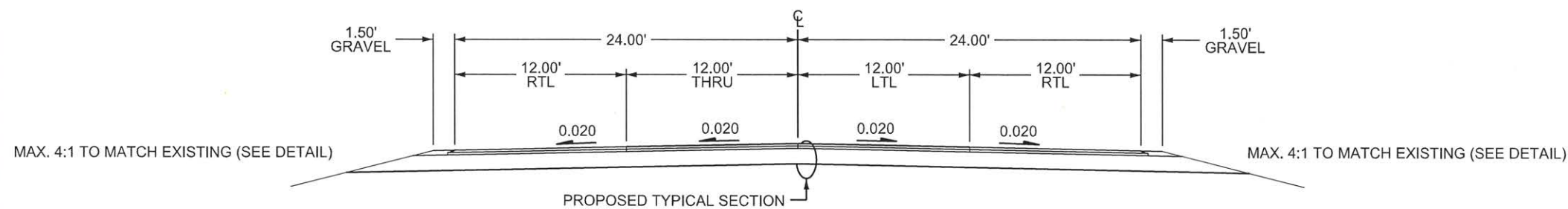
2.0" TYPE SP 12.5 WEARING COURSE (SPWEB440E)

EXISTING BITUMINOUS 5-9.5"

BIRCH ST (C.S.A.H 34)

PROPOSED

10+68 - 14+63



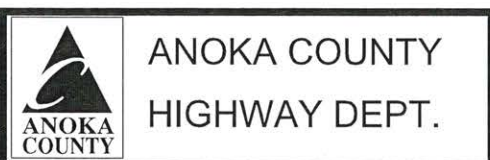
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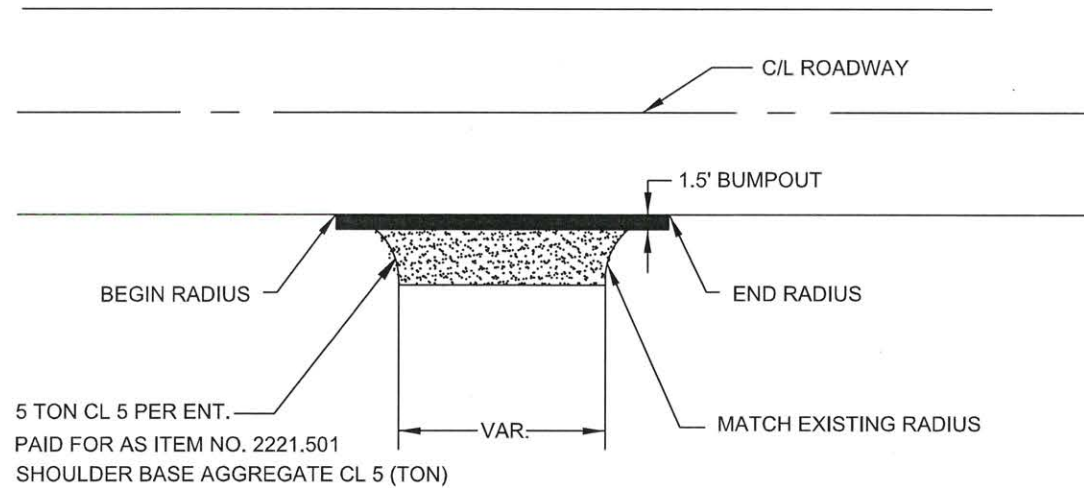


STATE PROJECT NO. _____
 STATE AID PROJECT NO. _____
 CITY PROJECT NO. _____
 COUNTY PROJECT NO. 14-50-49

PROPOSED TYPICAL SECTION
 Sheet 4 of 16 Sheets

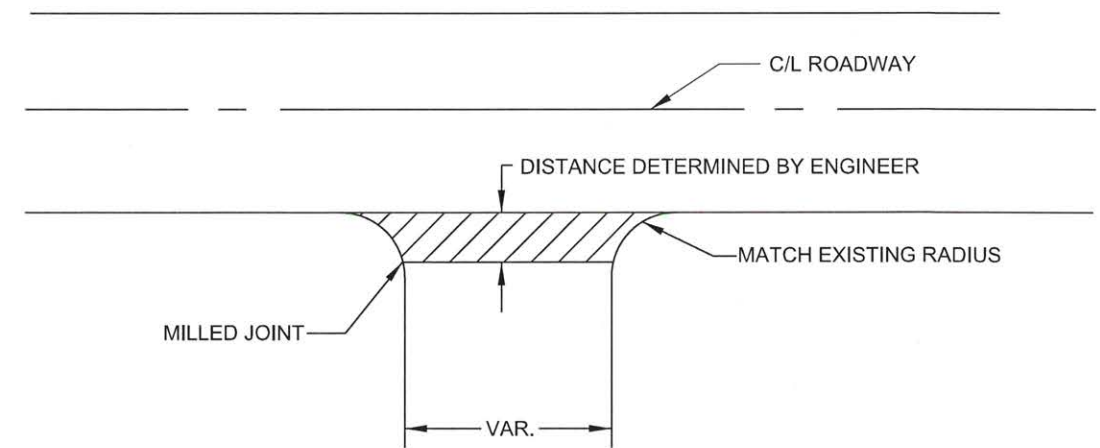
DRIVEWAY DETAIL

GRAVEL DRIVEWAY AND FIELD ENTRANCE



ST. APPROACH / DRIVEWAY DETAIL

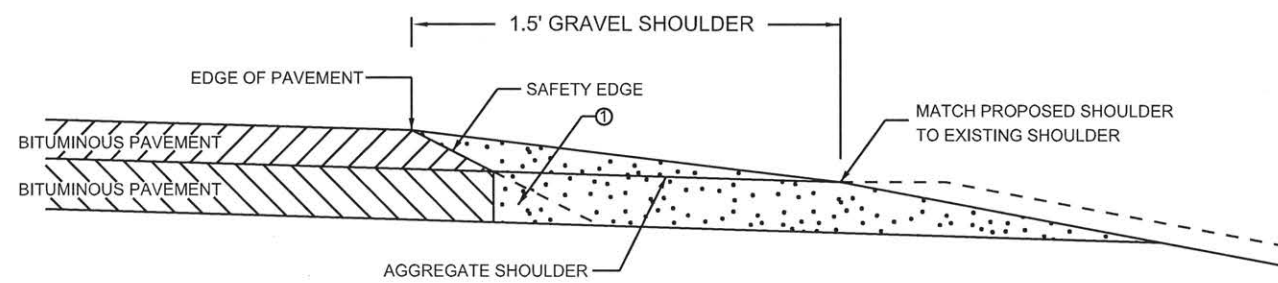
BITUMINOUS DRIVEWAY



STREET APPROACH / DRIVEWAYS BUMPED OUT AND PAVED WITH MAINLINE PAID AS MAINLINE.

SHOULDER DETAIL

BITUMINOUS SAFETY EDGE GRAVEL SHOULDER

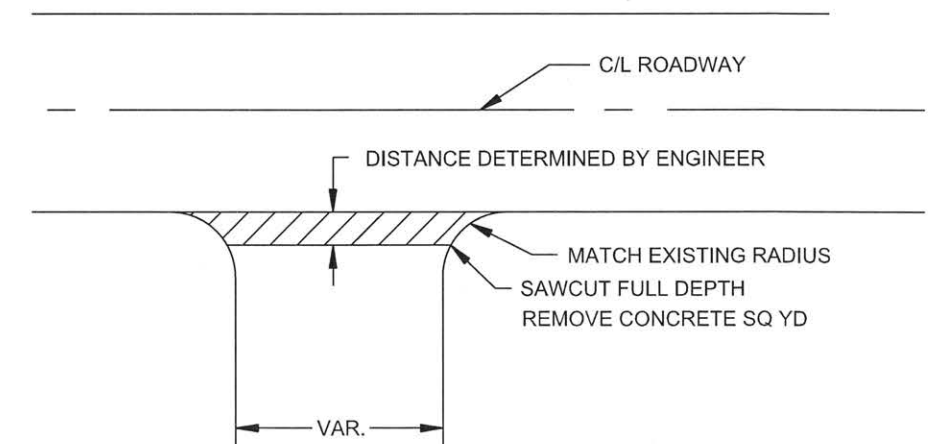


SAFETY EDGE TO BE USED IN ALL NON-CURB AREAS ON SHOULDER.

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

DRIVEWAY DETAIL

CONCRETE DRIVEWAY



NO	DATE	BY	CKD	APPR	REVISION	TIME
	04/23/2014					10:50:58 AM

NAME: P:\14-01-00\CSAH_49_(SouthCL-NotWareRd)\Base\PROPOSED4_CONST.DETAILS.dgn

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PRINT NAME: ANDREW WITTEK
 SIGNATURE: *Andrew Wittek*
 DATE: 4/28/14 LICENSE NO. 42757

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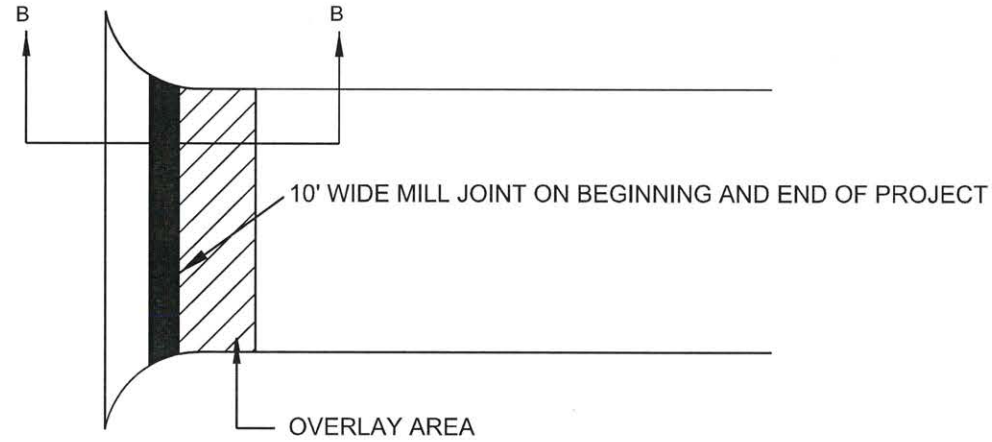
ANOKA COUNTY
HIGHWAY DEPT.

COUNTY PROJECT 14-50-49

MISCELLANEOUS DETAILS
 Sheet 5 of 16 Sheets

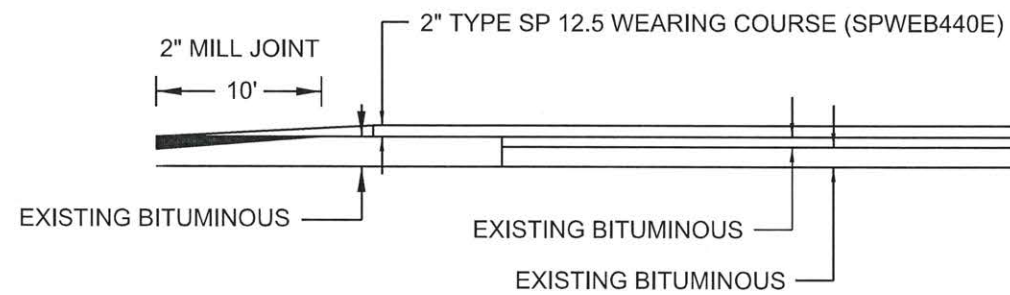
MAINLINE

JOINT DETAIL



JOINT DETAIL

B - B'



NO	DATE	BY	CKD	APPR	REVISION	04/23/2014	10:50:58 AM

NAME: P:\14-01-00\CSAH_49_(SouthCL-NotWareRd)\Base\PROPOSED\4_CONST.DETAILS.dgn

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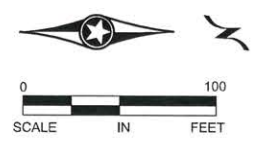


ANOKA COUNTY
HIGHWAY DEPT.

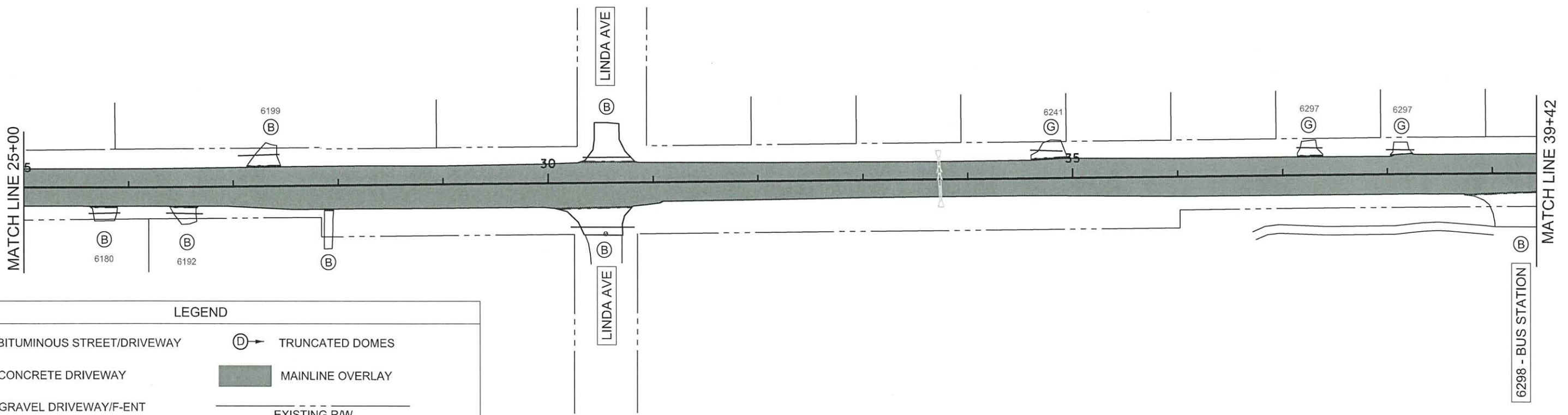
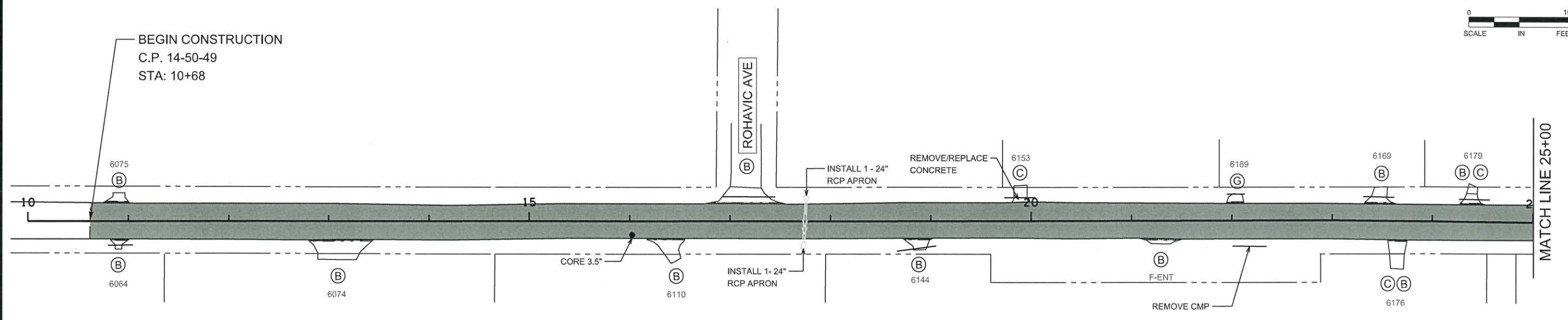
COUNTY PROJECT 14-50-49

MISCELLANEOUS DETAILS

Sheet 6 of 16 Sheets



BEGIN CONSTRUCTION
C.P. 14-50-49
STA: 10+68



LEGEND	
(B)	BITUMINOUS STREET/DRIVEWAY
(C)	CONCRETE DRIVEWAY
(G)	GRAVEL DRIVEWAY/F-ENT
(D)	TRUNCATED DOMES
[Shaded Area]	MAINLINE OVERLAY
[Dashed Line]	EXISTING R/W

NO	DATE	BY	CKD	APPR	REVISION	

NAME: P:\14-01-00\CSAH_49_(SouthCL-NotWareRd)\Base\PROPOSED\8_PLAN_LAYOUT.dgn

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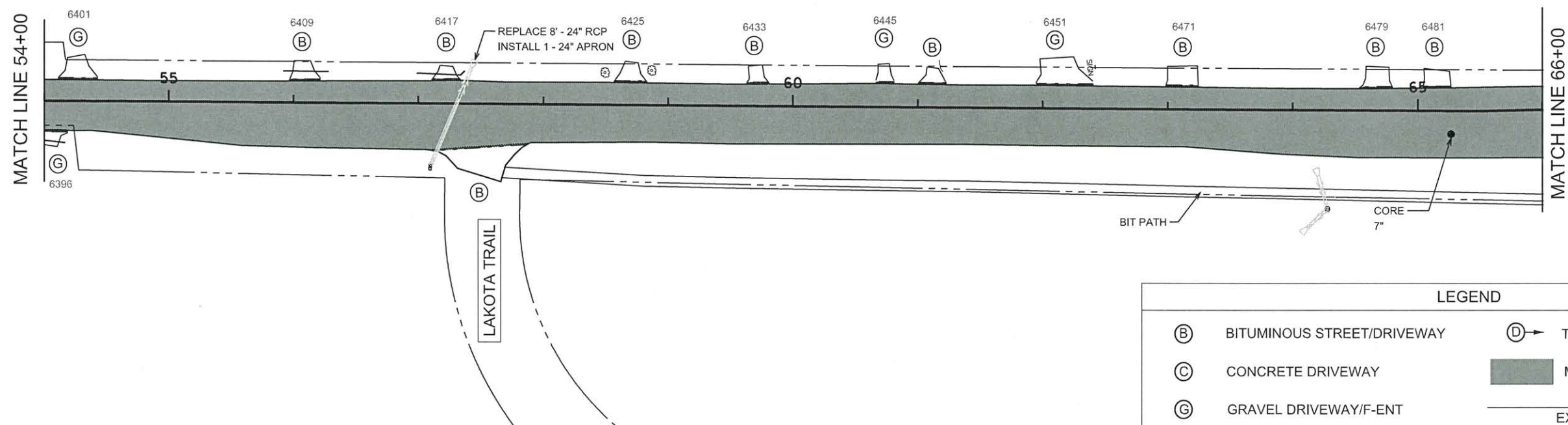
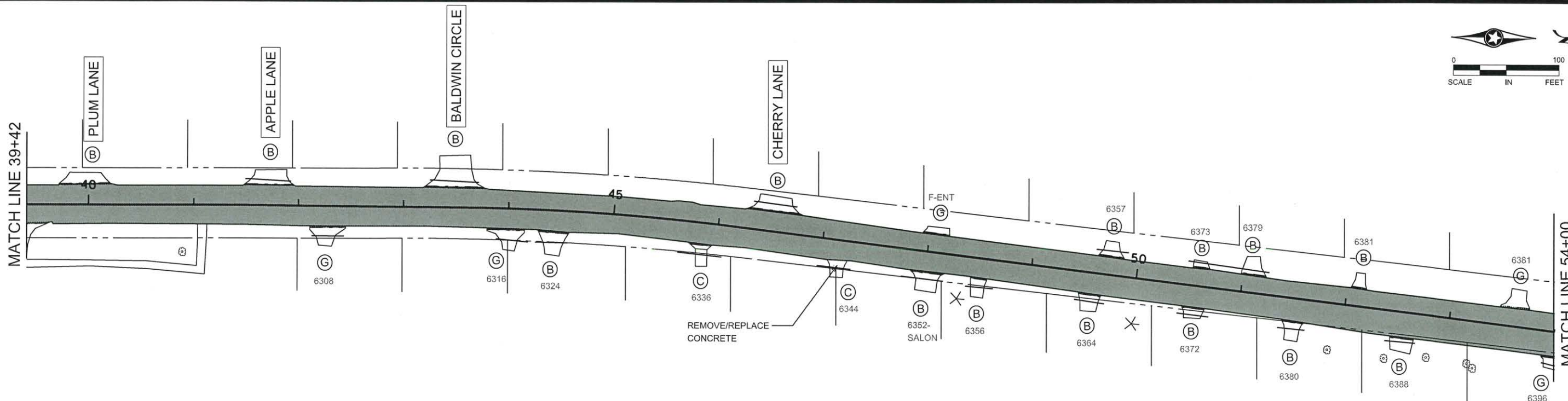
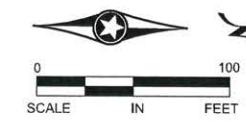


COUNTY PROJECT 14-50-49

CONSTRUCTION PLAN

STA 10+67.91 TO 39+42

Sheet 7 of 16 Sheets



LEGEND	
(B)	BITUMINOUS STREET/DRIVEWAY
(C)	CONCRETE DRIVEWAY
(G)	GRAVEL DRIVEWAY/F-ENT
(D) →	TRUNCATED DOMES
[Shaded Area]	MAINLINE OVERLAY
---	EXISTING R/W

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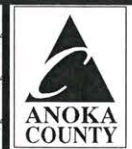
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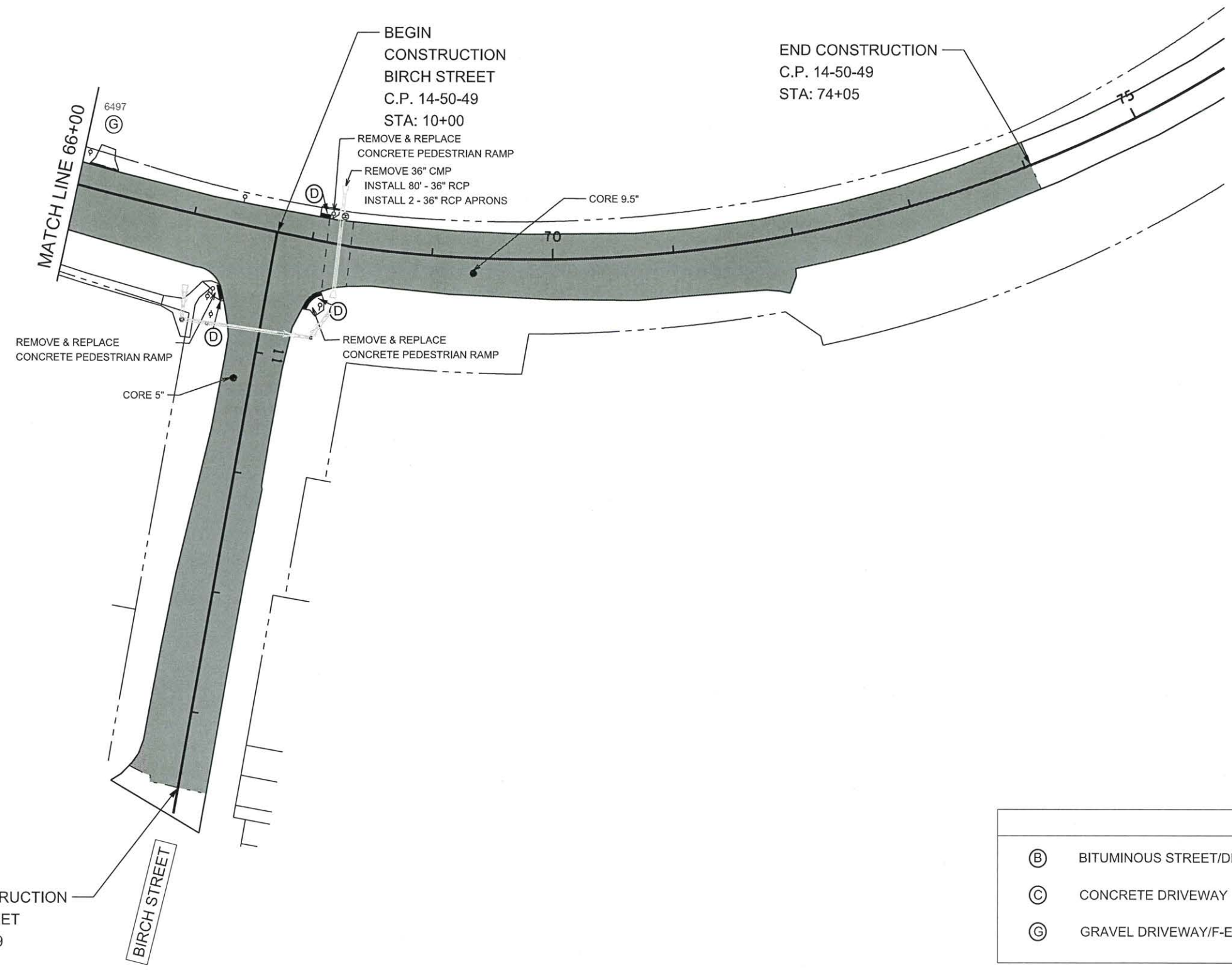
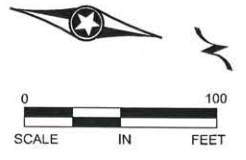
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ANOKA COUNTY
HIGHWAY DEPT.

COUNTY PROJECT 14-50-49

CONSTRUCTION PLAN
STA 30+42 TO 66+00
Sheet 8 of 16 Sheets



END CONSTRUCTION
 BIRCH STREET
 C.P. 14-50-49
 STA: 14+63

END CONSTRUCTION
 C.P. 14-50-49
 STA: 74+05

LEGEND	
(B)	BITUMINOUS STREET/DRIVEWAY
(C)	CONCRETE DRIVEWAY
(G)	GRAVEL DRIVEWAY/F-ENT
(D)	TRUNCATED DOMES
[Shaded Area]	MAINLINE OVERLAY
[Dashed Line]	EXISTING R/W

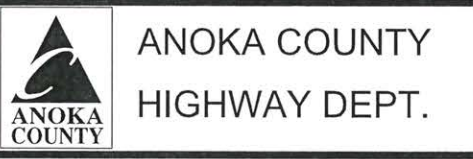
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COUNTY PROJECT 14-50-49

CONSTRUCTION PLAN
 STA 66+00 TO 14+63.05
 Sheet 9 of 16 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 EPOXY 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 APPLICATION 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
24" YELLOW THERMO- PLASTIC	LIN FT	713
24" WHITE THERMO- PLASTIC	LIN FT	72
3' X 6' THERMO- PLASTIC ZEBRA CROSSWALK	SQ FT	378
PAVEMENT MESSAGE (RT ARROW) THERMO- PLASTIC	EACH	4
PAVEMENT MESSAGE (LT ARROW) THERMO- PLASTIC	EACH	3
4" SOLID LINE WHITE - EPOXY PAINT	LIN FT	16760
4" SOLID LINE YELLOW - EPOXY PAINT	LIN FT	920
4" BROKEN LINE YELLOW - EPOXY PAINT	LIN FT	830
4" DOUBLE YELLOW - EPOXY PAINT	LIN FT	4405

SYMBOLS & MATERIALS LEGEND

■ CROSSWALK BLOCK WHITE PREFORMED THERMOPLASTIC

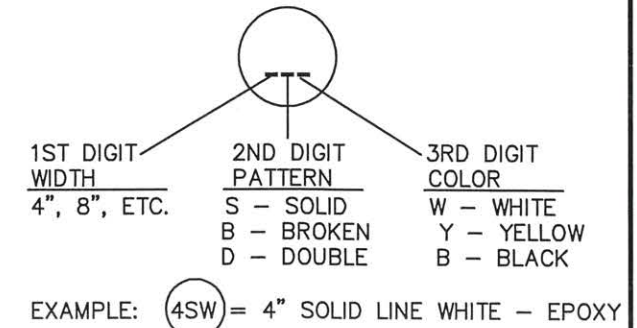
↩ PAVEMENT MESSAGE (LEFT ARROW) PREFORMED THERMOPLASTIC

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: 4/28/14 LICENSE NO. 42757

DRAWN BY: RLB DATE: 3-25-14
DESIGN BY: RLB DATE: 3-25-14
CHECKED BY: JR DATE: 3-25-14



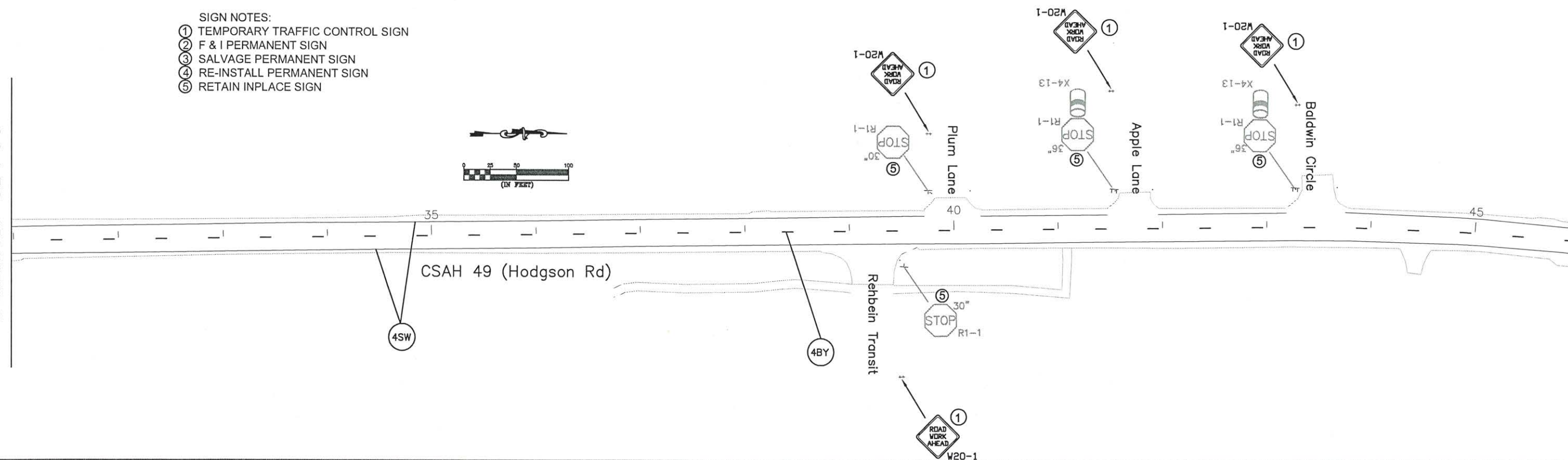
**ANOKA COUNTY
HIGHWAY DEPT.**

STATE PROJECT NO. _____
STATE AID PROJECT NO. _____
STATE AID PROJECT NO. _____
COUNTY PROJECT NO. 14-50-49

**PERMANENT MARKING
TABULATION**
Sheet 10 of 16 Sheets

- 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

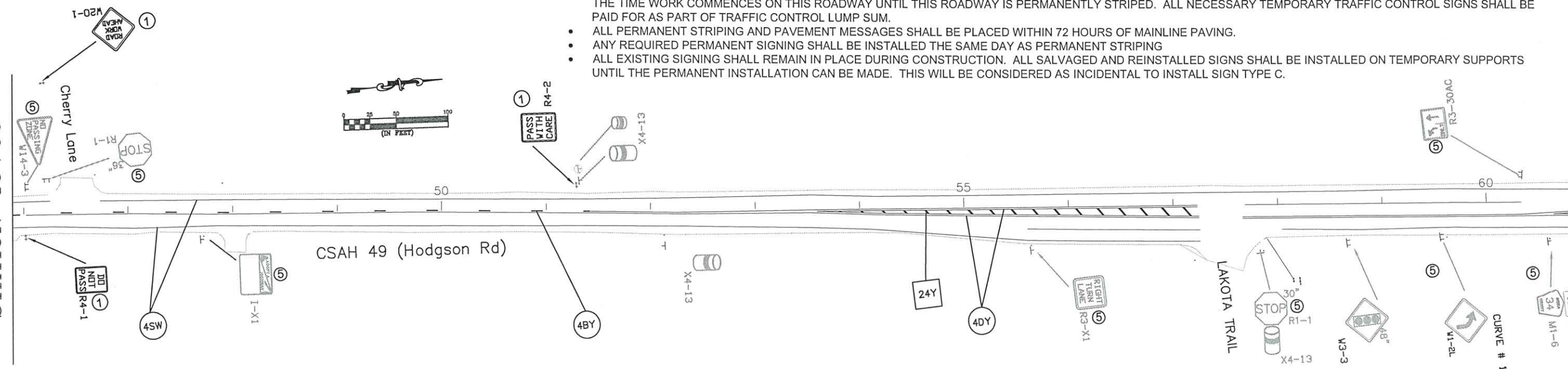


STATION 46+00

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 46+00



STATION 61+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: *Andrew Witter*
 DATE: 4/28/14 REG. NO. 42757

DRAWN BY: RLB DATE: 1/7/14
 DESIGN BY: RLB DATE: 1/7/14
 CHECKED BY: JR DATE: 1/7/14



ANOKA COUNTY
 HIGHWAY DEPT.

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 STATE AID PROJECT NO. _____
 COUNTY PROJECT NO. 14-50-49

TEMPORARY SIGNING
 PERMANENT SIGNING
 AND STRIPING

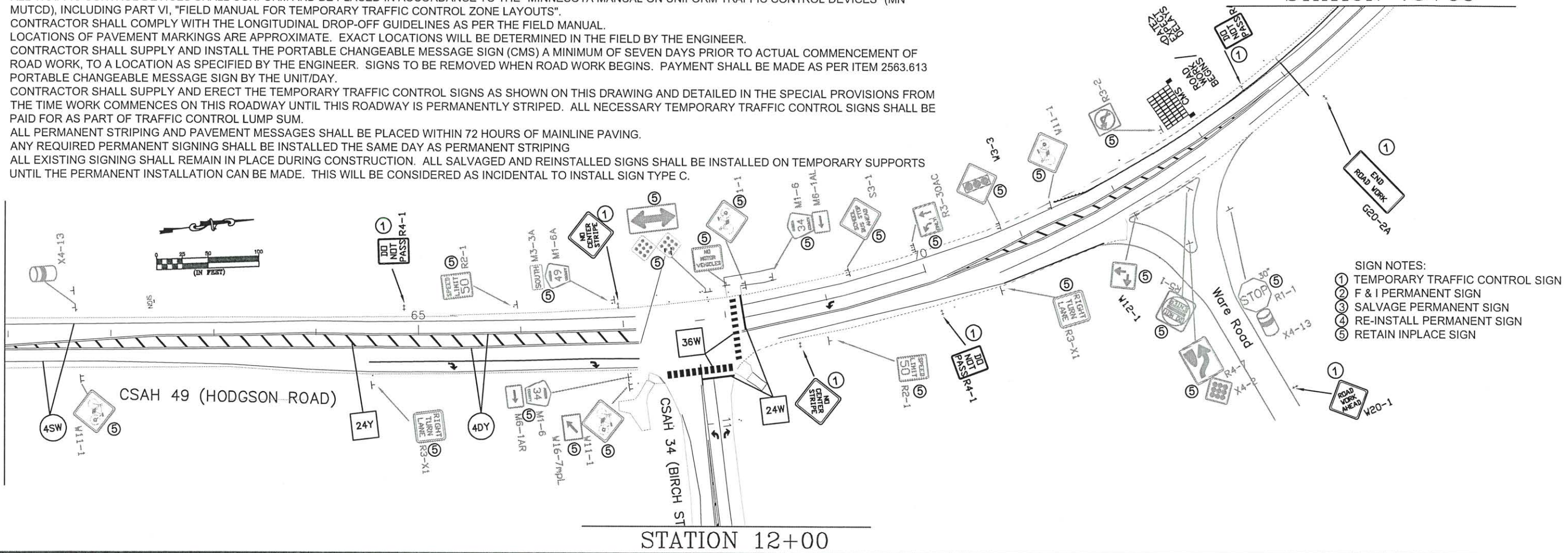
Sheet 12 of 16 Sheets

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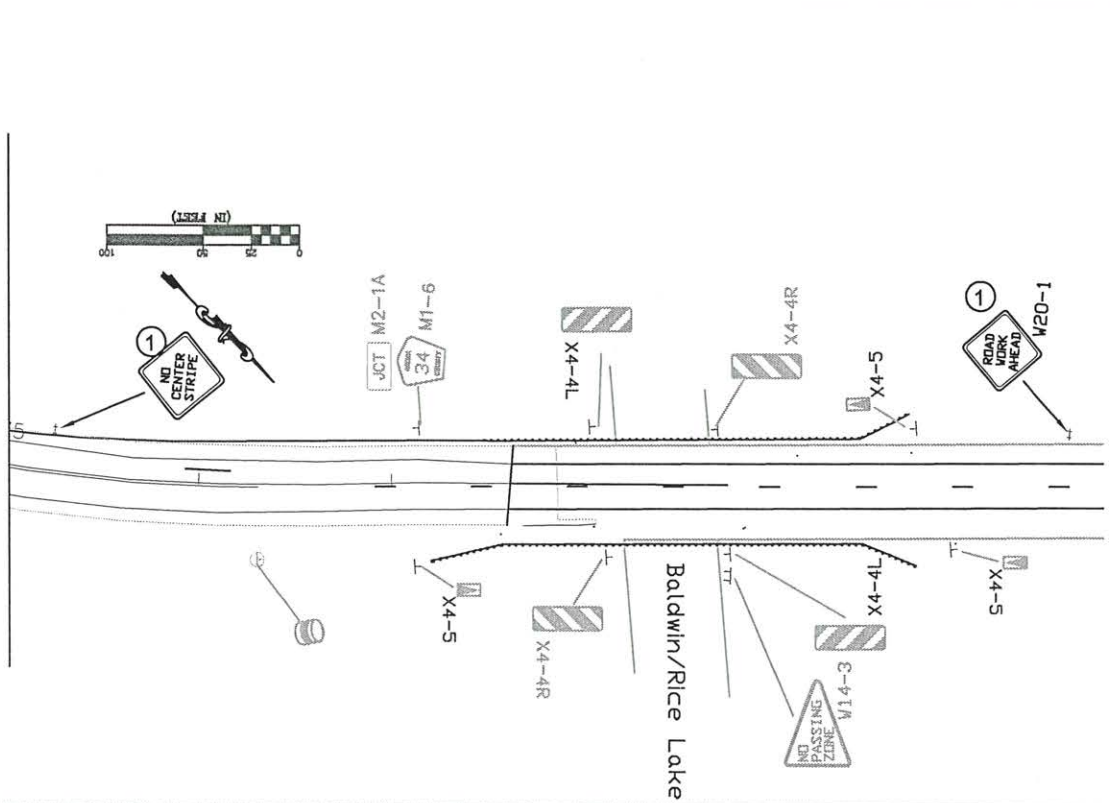
STATION 75+00

STATION 61+00

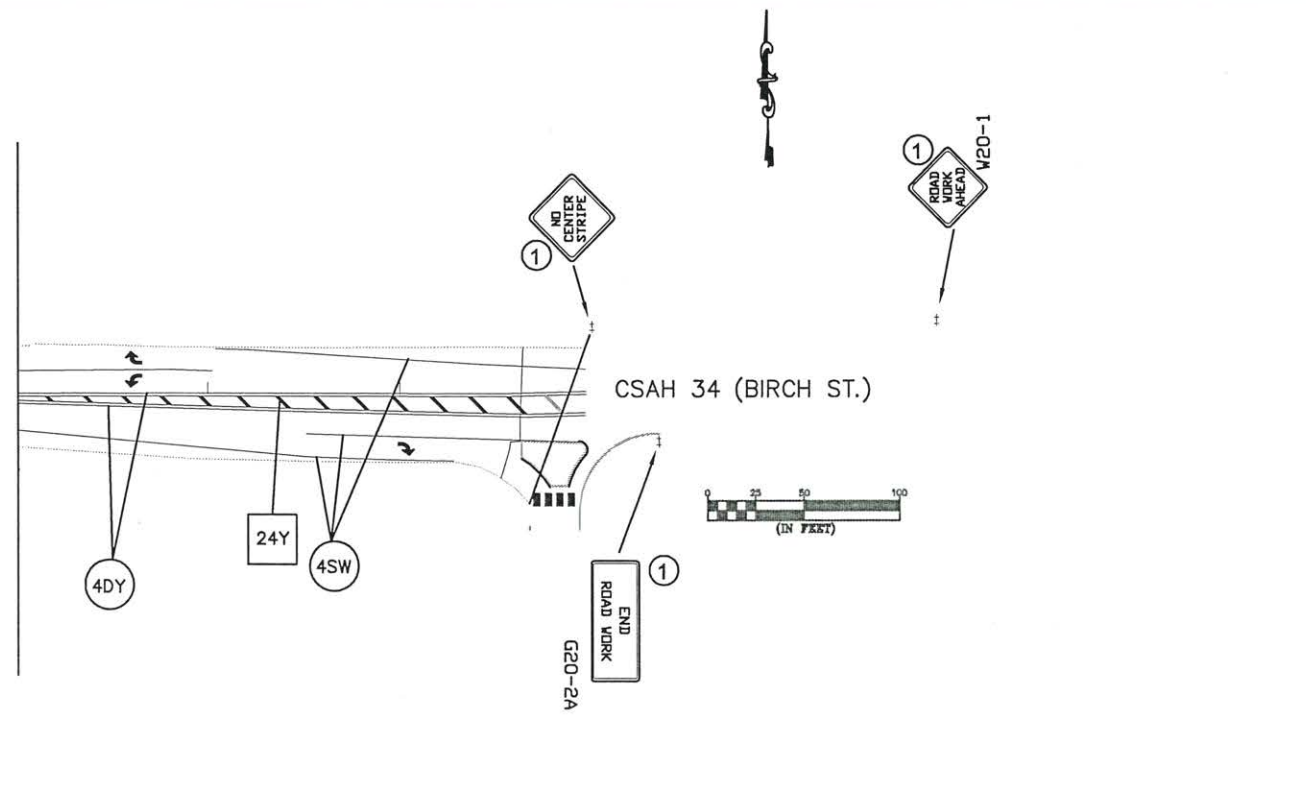


STATION 12+00

STATION 75+00



STATION 12+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: 4/28/14 REG. NO. 42757

DRAWN BY: RLB DATE: 1/7/14
 DESIGN BY: RLB DATE: 1/7/14
 CHECKED BY: JR DATE: 1/7/14

ANOKA COUNTY
HIGHWAY DEPT.

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TEMPORARY SIGNING
 PERMANENT SIGNING
 AND STRIPING
 Sheet 13 of 16 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		5	2	7.0'
R4-1	24" x 30"	5.00		5	1	7.0'
R4-2	24" x 30"	5.00		2	1	7.0'
G20-2A	48" x 24"	8.00		3	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 12)		
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

NO	DATE	BY	CKD	APPR	REVISION

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

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PRINT NAME: ANDREW WITTER

SIGNATURE:

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

DRAWN BY: RLB DATE: 1/7/14

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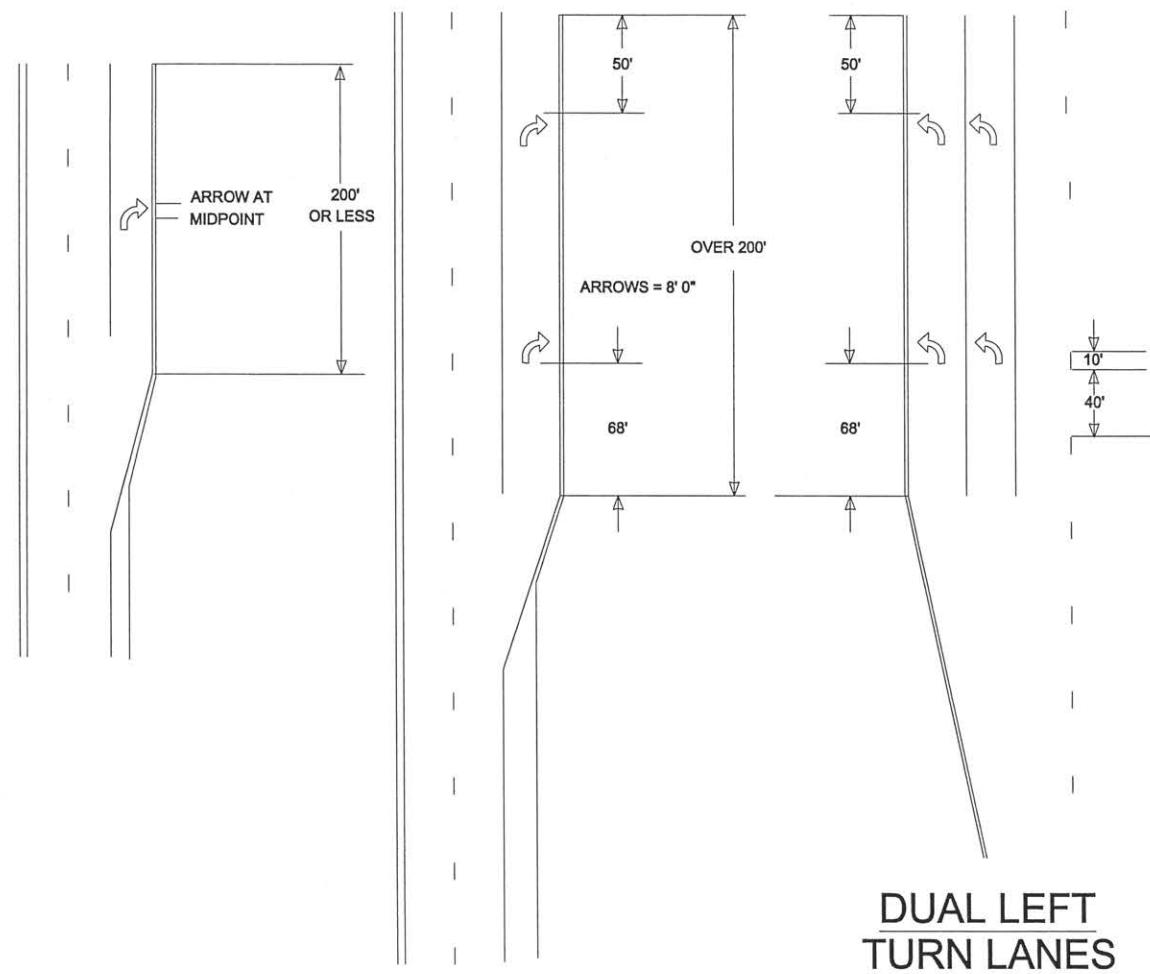
ANOKA COUNTY
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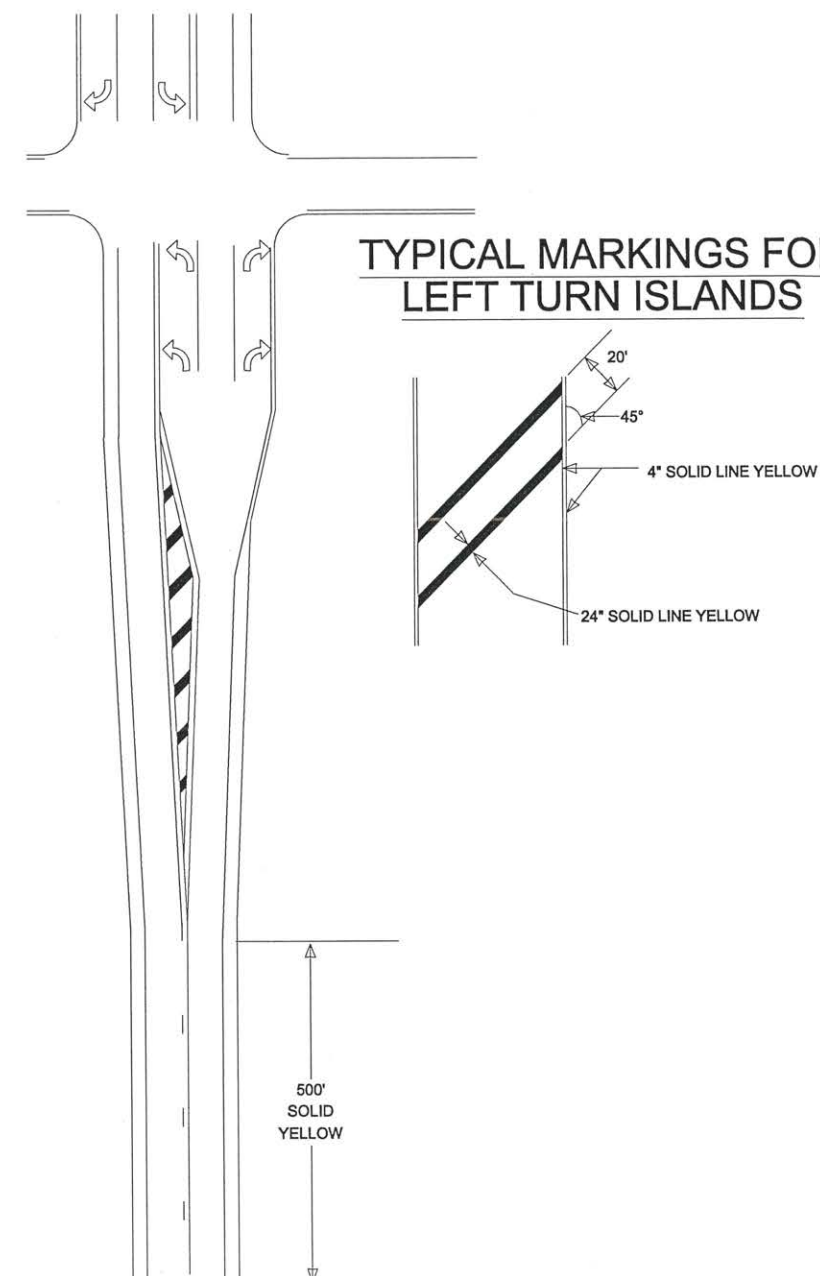
TRAFFIC CONTROL
QUANTITY

Sheet 14 of 16 Sheets

**TYPICAL MESSAGE PLACEMENT
FOR TURN LANES**



**TYPICAL MARKINGS FOR
LEFT TURN ISLANDS**



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: 2/6/14
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**ANOKA COUNTY
HIGHWAY DEPT.**

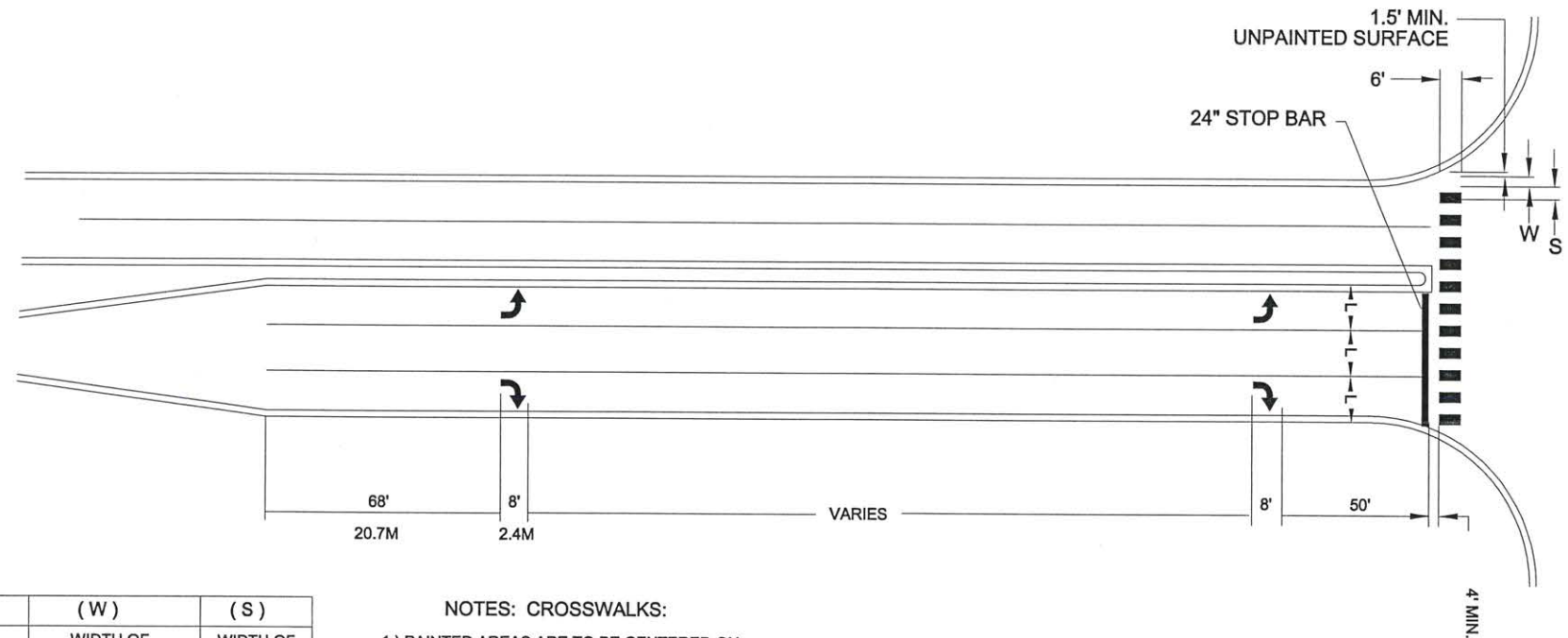
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**SIGNING & STRIPING
DETAILS**

Sheet 15 of 16 Sheets

NO	DATE	BY	CKD	APPR	REVISION

MARKINGS FOR PEDESTRIAN CROSSWALKS



(L)	(W)	(S)
WIDTH OF INSIDE LANE	WIDTH OF PAINTED AREAS	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: CROSSWALKS:

- 1.) PAINTED AREAS ARE TO BE CENTERED ON CENTER AND LANE LINES, EVEN IF INTERSECTION IS NOT ALIGNED.
- 2.) 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 ENGR.
- 3.) ZEBRA CROSSWALKS ARE TO BE PARALLEL TO THE DRIVING LANE OR LANES. EVEN IF THE STREET IS ON AN ANGLE TO THE INTERSECTION.
- 4.) A MIN. OF 1.5' (450mm) CLEAR DISTANCE MUST BE LEFT ADJACENT TO THE CURB. IF LAST PAINTED AREA FALLS INTO THIS AREA, IT MUST BE OMITTED.
- 5.) ON TWO LANE STREETS, USE SPACING SHOWN FOR AN 11' (3.3mm) INSIDE LANE.

NO	DATE	BY	CKD	APPR	REVISION

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PRINT NAME: ANDREW WITTER

SIGNATURE: *[Signature]*

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

DRAWN BY RLB DATE 2/6/14

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**ANOKA COUNTY
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SIGNING & STRIPING
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Sheet 16 of 16 Sheets