

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.....

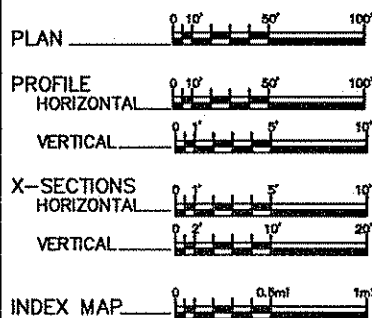
- BUILDING (One Story Frame).....
- F-FRAME C-CONCRETE.....
- S-STONE T-TILE.....
- B-BRICK ST-STUCCO.....

- 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.....
- AERIAL TELEPHONE CABLE.....
- SEWER (Sanitary or Storm).....
- SEWER MANHOLE.....

SCALES



MINNESOTA DEPARTMENT OF TRANSPORTATION

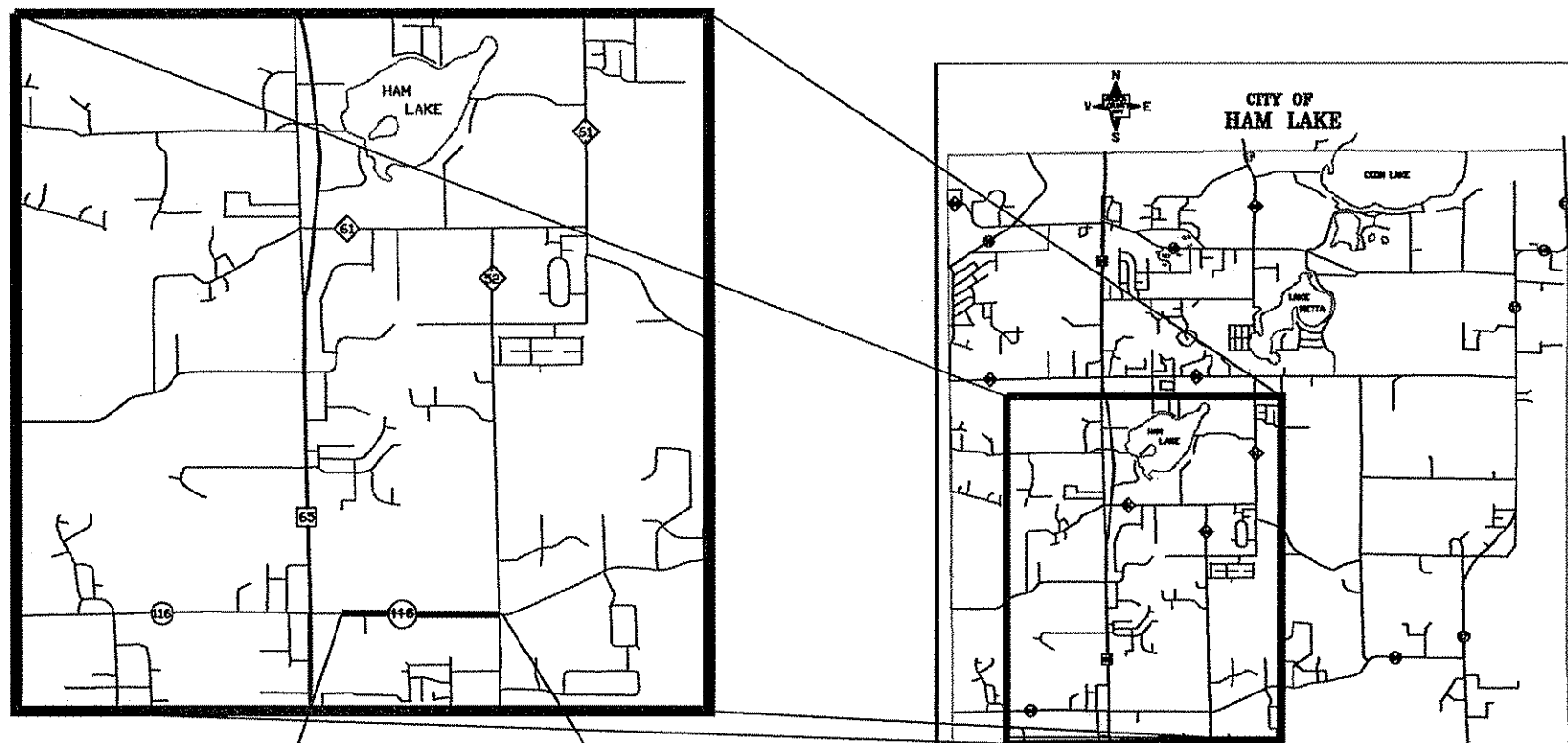
ANOKA COUNTY

CONSTRUCTION PLAN FOR BITUMINOUS OVERLAY & AGGREGATE SHOULDERING

LOCATED ON CSAH 116 FROM EVELETH ST TO E. OF CSAH 52

COUNTY PROJ. NO. 03-15-116  
C.S.A.H. 116

GROSS LENGTH 3788.00 FEET 0.710 MILES  
BRIDGES-LENGTH 0.00 FEET 0.000 MILES  
EXCEPTIONS-LENGTH 0.00 FEET 0.000 MILES  
NET LENGTH 3788.00 FEET 0.710 MILES



BEGIN C.P. 03-15-116  
STA. 10+00

END C.P. 03-15-116  
STA. 47+88

MINN. PROJ. NO. \_\_\_\_\_  
MINN. PROJ. NO. \_\_\_\_\_

GOVERNING SPECIFICATIONS

THE 2000 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MMUTCD, INCLUDING "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS - JANUARY, 2001."

INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	STATEMENT OF ESTIMATED QUANTITIES
3	TABULATIONS
4	TYPICAL
5-6	DETAILS
7	STRIPING PLAN

THIS PLAN CONTAINS 7 SHEETS

DESIGN DESIGNATION

ESAL <sub>20</sub>	706,429
R VALUE	70
ADT (2002)	4902
Proj. ADT (2022)	7353
Proj. HCADT (2022)	434
Soil Factor	NA
TON DESIGN	

Functional Classification RELIEVER  
No. of Traffic Lanes 2 No. of Parking Lanes 0  
Design Speed 50 MPH  
Based on Stopping Sight Distance  
Height of eye 3.5' Height of object 0.5'  
Design Speed not achieved at:  
STA. \_\_\_\_\_ TO STA. \_\_\_\_\_ MPH  
STA. \_\_\_\_\_ TO STA. \_\_\_\_\_ MPH  
STA. \_\_\_\_\_ TO STA. \_\_\_\_\_ MPH

Approved 4/29/2003 *[Signature]*  
ANOKA COUNTY ENGINEER

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: MARK DALY  
SIGNATURE: *[Signature]*  
DATE: 4/29/2003 LICENSE NO. 21763

DRAWN BY J.F. DATE 4/29/03  
DESIGN BY G.A. DATE 4/29/03  
CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_



ANOKA COUNTY  
HIGHWAY DEPT.

STATE PROJECT NO. \_\_\_\_\_  
STATE PROJECT NO. \_\_\_\_\_  
STATE AID PROJECT NO. \_\_\_\_\_  
COUNTY PROJECT NO. 03-15-116

TITLE SHEET

Sheet 1 of 7 Sheets


NO	DATE	BY	CHKD	APPR	REVISION

NAME: S:\SDSKPROJ\02-000-00\PLAN\01-TITLE.DWG

A. STATEMENT OF ESTIMATED QUANTITIES					
TAB.	ITEM NO.	ITEM	NOTE NO.	UNIT	QTY.
	2021.501	MOBILIZATION		LUMP SUM	1.00
H.	2104.503	REMOVE CONCRETE DRIVEWAY PAVEMENT	3	SQ YD	72.00
J.	2104.511	SAWING CONCRETE PAVEMENT ( FULL DEPTH )		LIN FT	48.00
L.	2211.501	AGGREGATE BASS CLASS-5	2	TON	10.00
K.	2221.501	AGGREGATE SHOULDERING CLASS-7B	2	TON	240.00
G.	2232.501	MILL BITUMINOUS SURFACE ( 1 1/2" )		SQ YD	98.00
D.	2350.609	TYPE LV 3 WEARING COURSE MIXTURE	1	TON	1155.00
E.	2350.609	TYPE LV 4 WEARING COURSE MIXTURE, STREET APPR. & ENT.	1	TON	38.00
F.	2357.502	BITUMINOUS MATERIAL FOR TACK COAT		GALLON	620.00
I.	2531.507	6" CONCRETE DRIVEWAY PAVEMENT		SQ YD	72.00
N.	2540.602	INSTALL MAIL BOX SUPPORT		EACH	7.00
	2563.601	TRAFFIC CONTROL		LUMP SUM	1.00
	2563.604	CONSTRUCTION SIGN SPECIAL ( DIAMOND GRADE )	4	SQ FT	112.00
O.	2564.603	4" SOLID LINE WHITE-EPOXY		LIN FT	7399.00
O.	2564.603	4" SOLID LINE YELLOW-EPOXY		LIN FT	1865.00
O.	2564.603	4" BROKEN LINE YELLOW-EPOXY		LIN FT	750.00
O.	2564.603	4" BROKEN LINE WHITE-EPOXY		LIN FT	40.00
M.	2580.501	TEMPORARY LANE MARKING		LIN FT	301.00

C. CONSTRUCTION NOTES	
NOTE NO.	
1	INCLUDES QUANTITY FOR ADDING 1/4" TO THE DESIGN THICKNESS.
2	RECYCLED GLASS WILL NOT BE ALLOWED IN CL-5 OR CL-7B.
3	AS DIRECTED BY THE ENGINEER.
4	2 - 8' X 7' SIGNS, SEE SPECIAL PROVISIONS.

B. BASIS OF ESTIMATED QUANTITIES	
SPEC NO.	RATE
2350	LV 3 WEARING COURSE MIXTURE ( LVWE35030B ) LV 4 WEARING COURSE MIXTURE, STREET APPR. & ENT. ( LVWE45030B ) 110 LBS / SQ YD / INCH
2357	BITUMINOUS MATERIAL FOR TACK COAT 0.05 GAL SQ / YD / PER LIFT APPLIED

<table border="1"> <thead> <tr> <th>NO</th> <th>DATE</th> <th>BY</th> <th>CKD</th> <th>APPR</th> <th>REVISION</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>					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 LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. PRINT NAME: <u>MARK DALY</u> SIGNATURE: <u><i>Mark Daly</i></u> DATE: <u>4/29/03</u> LICENSE NO. <u>21763</u>		DRAWN BY: <u>J.F.</u> DATE: <u>4/29/03</u> DESIGN BY: <u>G.A.</u> DATE: <u>4/29/03</u> CHECKED BY: _____ DATE: _____		 <b>ANOKA COUNTY HIGHWAY DEPT.</b>		STATE PROJECT NO. _____ STATE AID PROJECT NO. _____ CITY PROJECT NO. _____ COUNTY PROJECT NO. <u>03-15-116</u>		<b>STATEMENT OF ESTIMATED QUANTITIES</b> Sheet <u>2</u> of <u>7</u> Sheets	
NO	DATE	BY	CKD	APPR	REVISION																					

D. TYPE LV3 WEARING COURSE MAIN LINE (1.75")					
	STA.	STA.	L'	W'	SQ. YDS.
C/L	1024	1261	237.0	36.5	961.2
C/L	1261	1508	247.0	47.5	1303.6
C/L	1508	2026	518.0	36.0	2072.0
C/L	2026	4733	2707.0	24.0	7218.7
C/L	E.LEG BUNKER				153.0
C/L	S.LEG OF RADISSON				166.0
C/L	N.LEG OF RADISSON				111.0
1.5' KICK OUTS		LOC			
1)	HSE. # 1659	LT.	23	1.5	3.8
2)	HSE. # 1719	LT.	35	1.5	5.8
					<b>SQ. YDS. LV3 (1.75") = 11995.1</b>
					<b>TONS = 1155.0</b>

E. TYPE LV4 WEAR COURSE ENT. / ST. APPR. (1.75")					
	LOC	L'	W'	SQ. YDS.	
1)	ISANTI ST.	RT.	56	28	174.2
2)	HSE. # 1641	LT.	25	10	27.8
3)	HSE. # 1642	RT.	15	10	16.7
4)	HSE. # 1660	RT.	17	10	18.9
5)	HSE. # 1740	RT.	70	10	77.8
6)	HSE. # 1740	RT.	64	10	71.1
					<b>SQ. YDS. LV4 (1.75") = 386.4</b>
					<b>TONS = 37.2</b>

F. BITUMINOUS MATERIAL FOR TACK 0.05 GAL/SQ YD			
	SQ YDS	GAL / SQ YD	GALLONS
MV3 WEAR MAIN LINE	11995.0	0.05	599.8
LV4 WEAR BIT DR.	386	0.05	19.3
			<b>GALLONS = 619.1</b>

G. MILL BITUMINOUS SURFACE BUTT JOINTS					
	STA. / ADDR.	LOC	L'	W'	SQ. YDS.
1)	10+24	C/L	36	4.0	16.0
2)	47+88	C/L	25	4.0	11.1
3)	S.LEG RADISSON	C/L	34	4.0	15.1
4)	N.LEG RADISSON	C/L	25	4.0	11.1
5)	ISANTI ST.	RT.	28	4.0	12.4
6)	HSE. # 1641	LT.	25	1.5	4.2
7)	HSE. # 1642	RT.	15	1.5	2.5
8)	HSE. # 1660	RT.	17	1.5	2.8
9)	HSE. # 1740	RT.	70	1.5	11.7
10)	HSE. # 1740	RT.	64	1.5	10.7
					<b>SQ. YDS. = 97.6</b>

H. REMOVE CONCRETE DRIVEWAY PAVEMENT					
	STA. / ADDR.	LOC	L'	W'	SQ. YDS.
	HSE. # 1719	LT.	20	10.0	22.2
	HSE. # 2065	LT.	24	10.0	26.7
	HSE. # 2065	LT.	20	10.0	22.2
					<b>SQ. YDS. = 71.1</b>

I. 6" CONCRETE DRIVEWAY PAVEMENT					
	STA. / ADDR.	LOC	L'	W'	SQ. YDS.
	HSE. # 1719	LT.	20	10.0	22.2
	HSE. # 2065	LT.	24	10.0	26.7
	HSE. # 2065	LT.	20	10.0	22.2
					<b>SQ. YDS. = 71.1</b>

J. SAWING CONCRETE PAVEMENT (FULL DEPTH)					
	STA. / ADDR.	LOC	LENGTH		
	HSE. # 1719	LT.	12		
	HSE. # 2065	LT.	24		
	HSE. # 2065	LT.	12		
					<b>LIN. FT. = 48.0</b>

K. AGGR. SHLD CL-7B/C 3.5' SHLD. 1.5"DEPTH						
LOC.	STA.	STA.	L-IN STA.	DEPTH	CU. YDS./STA.)	CU.YDS.( CV )
LT	1024	4788	37.6	1.5	1.74	65.5
RT	1024	4788	37.6	1.5	1.74	65.5
					<b>CU. YDS. (CV) = 131.0</b>	
						<b>TONS 235.8</b>

L. AGGREGATE BASE CLASS 5		
STA. / ADDR.	LOC.	TON
HSE. # 1659	LT.	5
HSE. # 1719	LT.	5
		<b>TONS = 10</b>

M. TEMPORARY LANE MARKING (4' / 50' / LIFT)						
STA.	STA.	LOC.	LENGTH	TAPE LENGTH	LIFTS	LIN. FT.
1024	4788	C/L	3764	301.0	1	301.1
						<b>LIN. FT. = 301.1</b>

N. MAILBOXES		
		LOC.
# 1641		LT.
# 1642		LT.
# 1659		LT.
# 1660		LT.
# 1740		LT.
# 1719		LT.
# 2065		LT.

O. PERMANENT STRIPING	
DISCRIPTION	LIN. FT.
4" SOLID LINE WHITE-EPOXY	7399
4" SOLID LINE YELLOW-EPOXY	1865
4" BROKEN LINE YELLOW-EPOXY	750
4" BROKEN LINE WHITE-EPOXY	40

NO	DATE	BY	CHKD	APPR	REVISION

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PRINT NAME: MARK DALY

SIGNATURE: [Signature]

DATE: 4/17/2003 LICENSE NO. 21763

DRAWN BY: J.F. DATE: 4/1/03

DESIGN BY: G.A. DATE: 4/1/03

CHECKED BY: \_\_\_\_\_ DATE: \_\_\_\_\_



**ANOKA COUNTY**  
**HIGHWAY DEPT.**

STATE PROJECT NO. \_\_\_\_\_

STATE AID PROJECT NO. \_\_\_\_\_

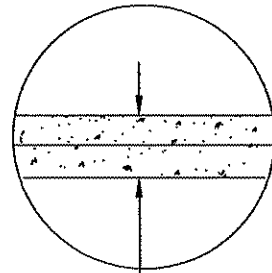
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COUNTY PROJECT NO. 03-15-16

**TABULATIONS**

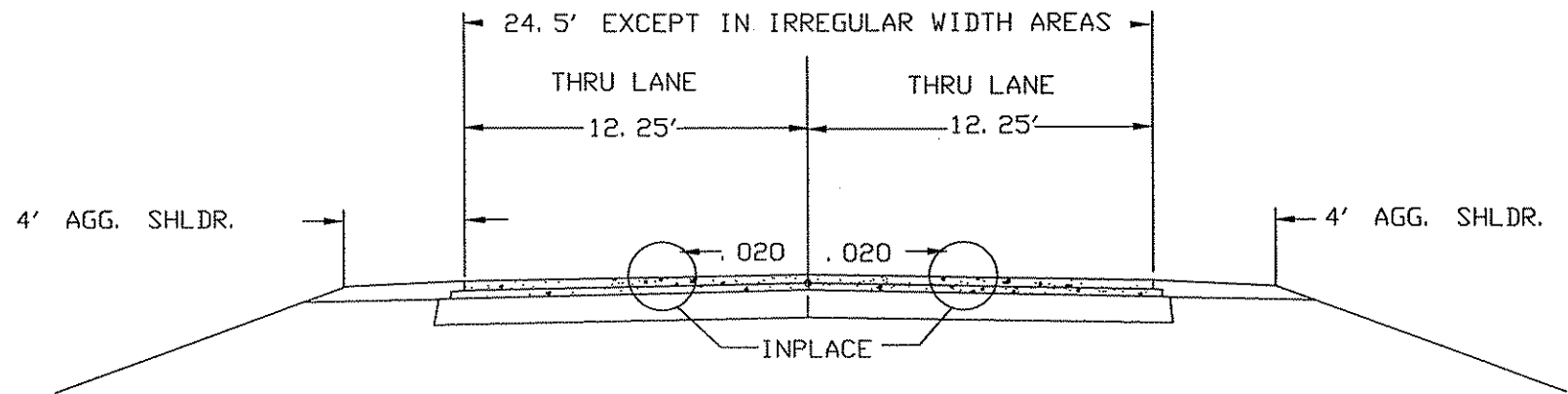
Sheet 3 of 7 Sheets

INPLACE  
10+00 - 47+88

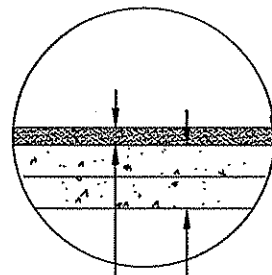


INPLACE BIT SURFACING

EXISTING ROADWAY  
C/L

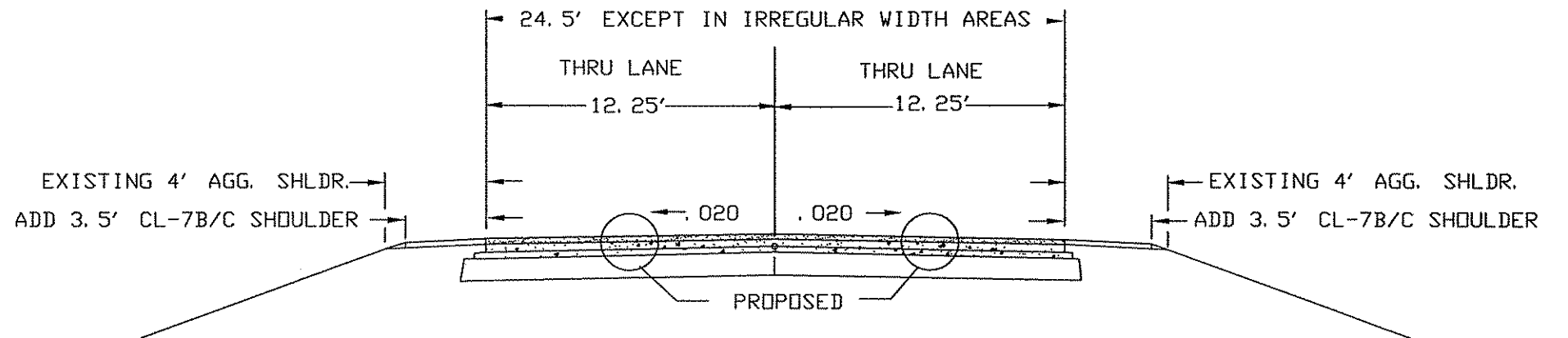


PROPOSED  
10+00 - 47+88



1.5" LV 3 WEARING COURSE (LVWE35030B)  
INPLACE BIT SURFACING

PROPOSED CONSTRUCTION  
MATCH EXISTING BIT. WIDTHS  
C/L



- \* NOTE. - 1.5" LV 3 WEARING COURSE OVERLAY TO MATCH EXISTING BIT WIDTHS.
- \* ADD 3.5' WIDE, 1.5" DEPTH CL-7B/C AGG. SHLDR.

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PRINT NAME: MARK DALY  
SIGNATURE: *Mark Daly*  
DATE: 4/29/2002 LICENSE NO. 21763

DRAWN BY: J.F. DATE: 4/29/03  
DESIGN BY: G.A. DATE: 4/29/03  
CHECKED BY: \_\_\_\_\_ DATE: \_\_\_\_\_



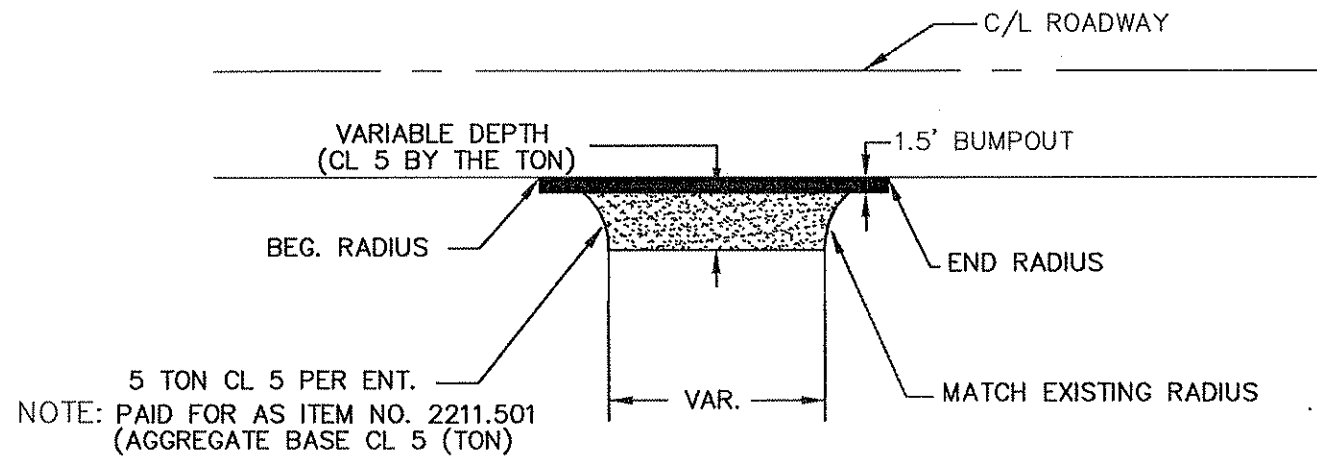
ANOKA COUNTY  
HIGHWAY DEPT.

STATE PROJECT NO. \_\_\_\_\_  
STATE AID PROJECT NO. \_\_\_\_\_  
CITY PROJECT NO. \_\_\_\_\_  
COUNTY PROJECT NO. 03-15-116

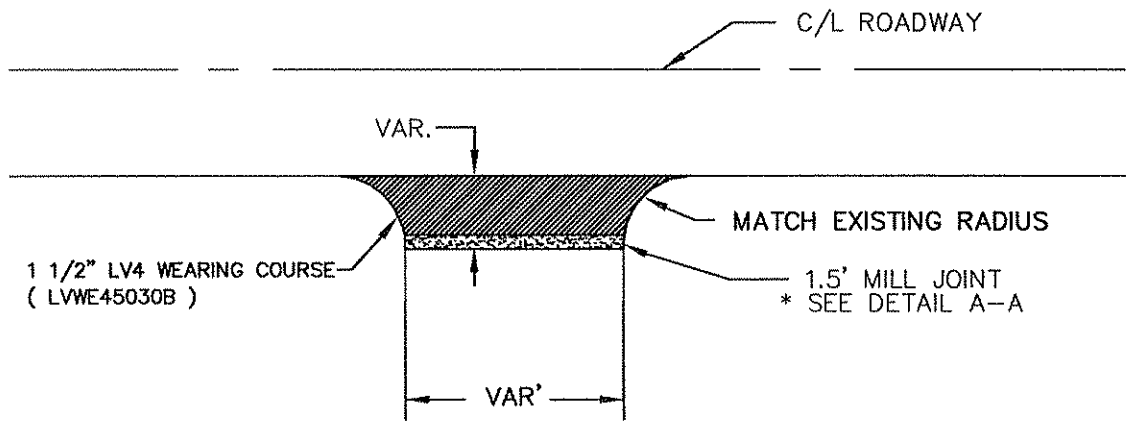
TYPICAL

Sheet 4 of 7 Sheets

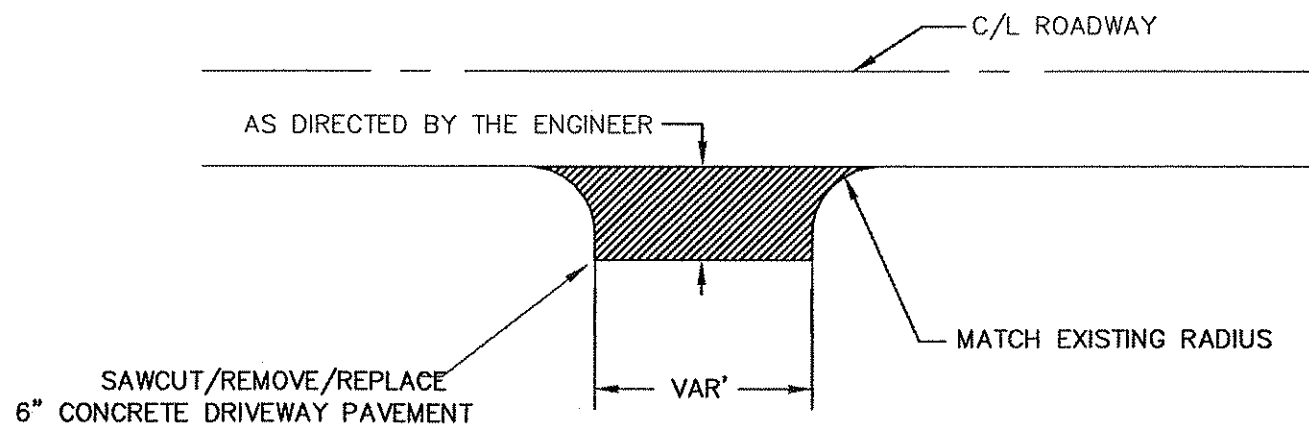
FIELD AND UNPAVED ENTRANCES



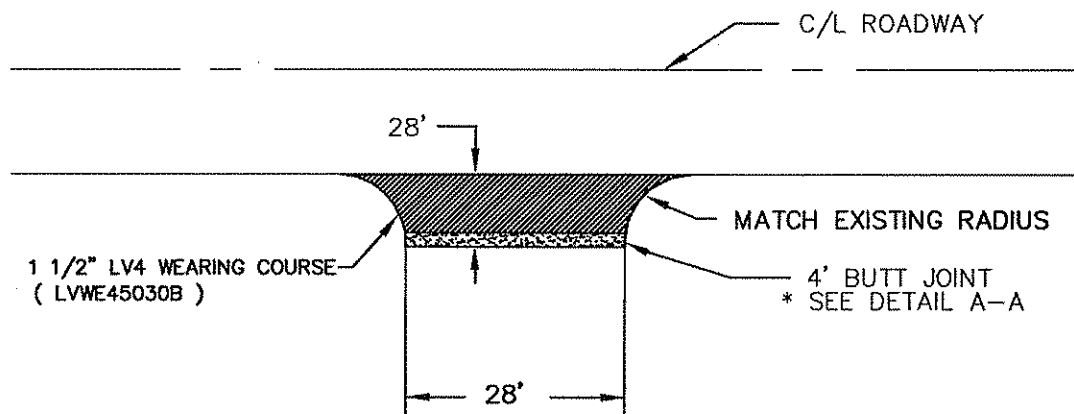
PAVED DRIVEWAYS



CONCRETE ENTRANCES



PAVED STREET APPROACH ( ISANTI ST NE.)



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ANOKA COUNTY  
 HIGHWAY DEPT.

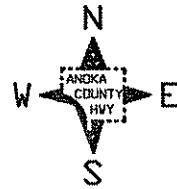
STATE PROJECT NO. \_\_\_\_\_  
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 COUNTY PROJECT NO. 03-15-116

DETAILS

Sheet 5 of 7 Sheets

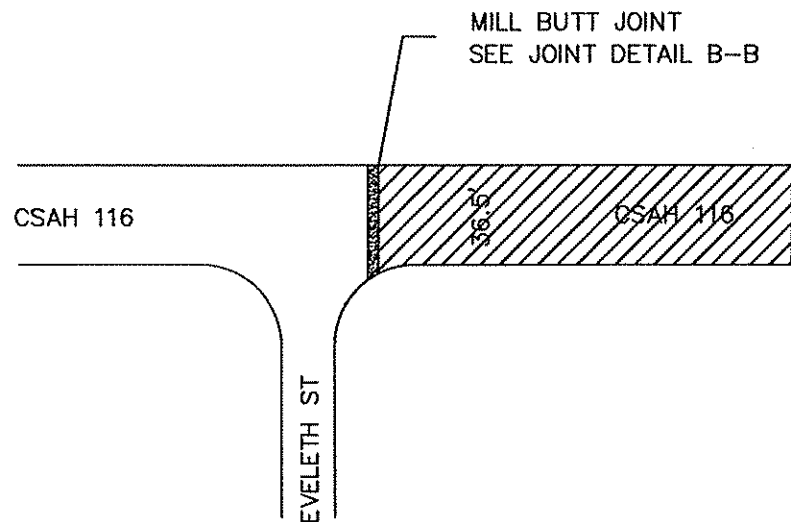
NO	DATE	BY	CHKD	APPR	REVISION

NAME: S:\SDSKPRO\A\000000\000000\028000.DWG



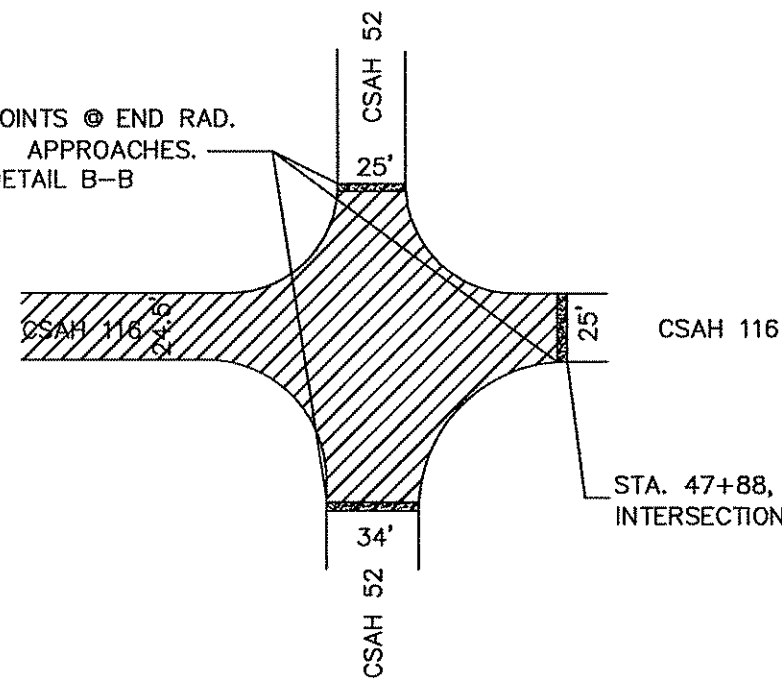
CSAH 116 // EVELETH ST. INTERSECTION

STA. 10+24 BEGIN OVERLAY 24' EAST OF BEG. RAD EVELETH ST.

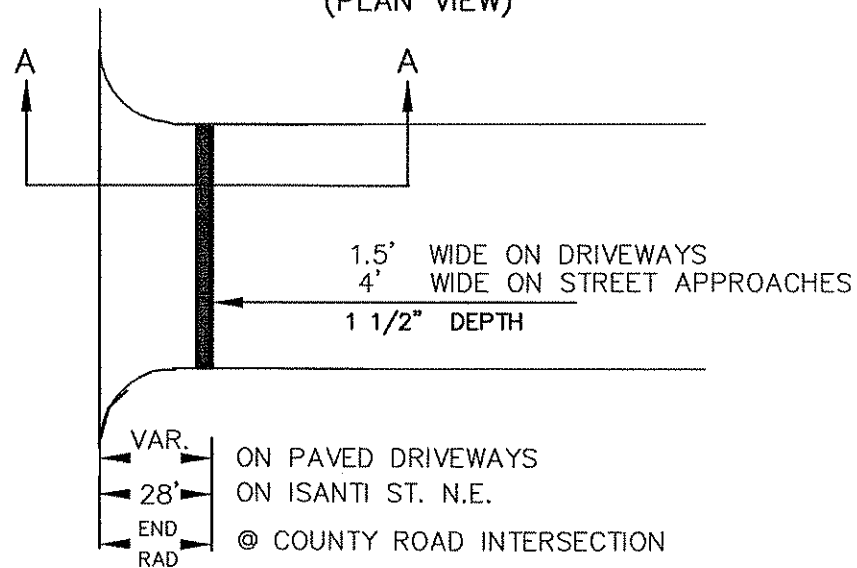


CSAH 116 // CSAH 52 INTERSECTION

MILL BUTT JOINTS @ END RAD. OF AJJOINING APPROACHES. SEE JOINT DETAIL B-B

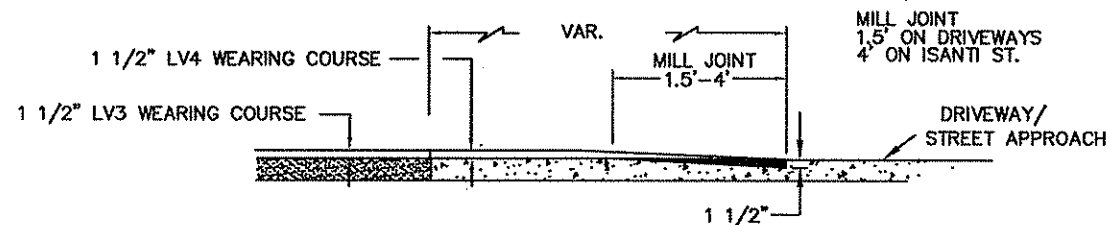


BUTT JOINTS (PLAN VIEW)



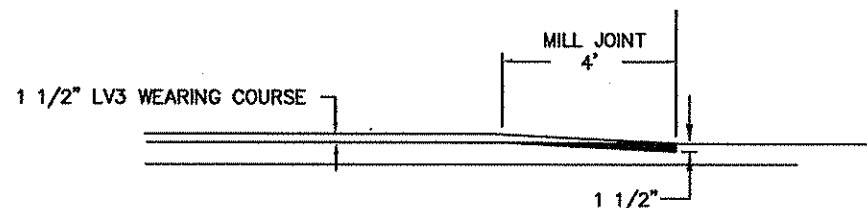
MILLING DETAILS A-A

DRIVEWAYS & ISANTI ST.



MILLING DETAILS B-B

JOINTS @ EVELETH ST & CSAH 52



IRREGULAR BIT WIDTHS.

STA. 10+24 - STA. 12+61 BIT.WIDTH 36.5'  
 STA. 12+61 - STA. 15+08 BIT.WIDTH 47.5' ( E.B. RTL)  
 STA. 15+08 - STA. 20+26 BIT.WIDTH 36' ( W.B. BYPASS AREA)  
 STA. 20+26 - CSAH 52 INTERSECTION BIT.WIDTH 24.5'

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 PRINT NAME: MARK DALY  
 SIGNATURE: *Mark Daly*  
 DATE: 4/17/2003 LICENSE NO. 21763

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 CHECKED BY: DATE:



ANOKA COUNTY  
 HIGHWAY DEPT.

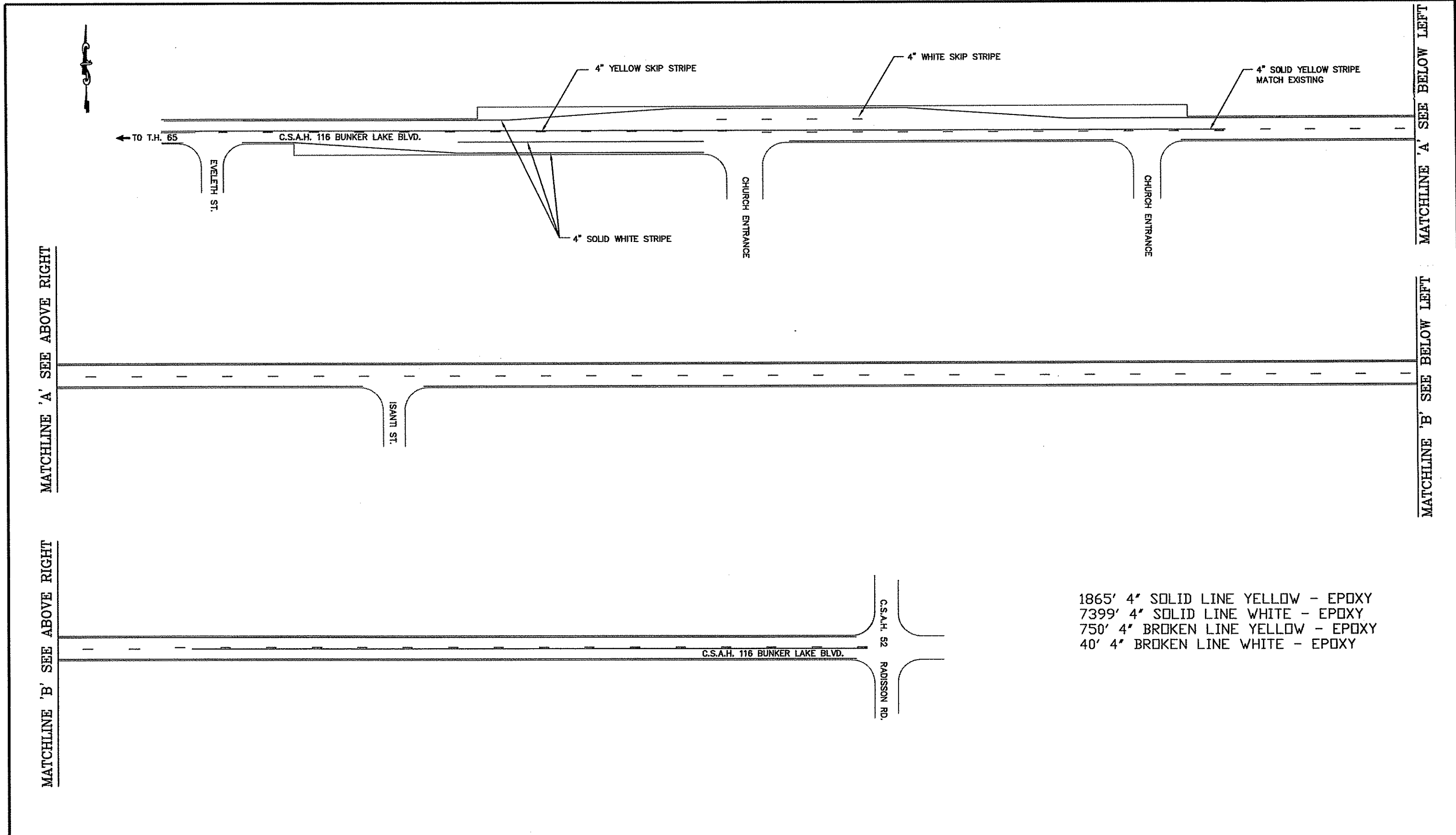
STATE PROJECT NO. \_\_\_\_\_  
 STATE AID PROJECT NO. \_\_\_\_\_  
 STATE AID PROJECT NO. \_\_\_\_\_  
 COUNTY PROJECT NO. 03-15-116

DETAILS

Sheet 6 of 7 Sheets

NO	DATE	BY	CHKD	APPR	REVISION

NAME: S:\SDS\PROJ\0000001\0000001\028000.DWG



1865' 4" SOLID LINE YELLOW - EPOXY  
 7399' 4" SOLID LINE WHITE - EPOXY  
 750' 4" BROKEN LINE YELLOW - EPOXY  
 40' 4" BROKEN LINE WHITE - EPOXY

C.S.A.H. 116 BUNKER LAKE BLVD.  
 BETWEEN EVELETH ST. AND C.S.A.H. 52

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.  
 PRINT NAME: MARK DALY  
 SIGNATURE: *[Signature]*  
 DATE: 4/17/2003 REG. NO. 21783

DRAWN BY: DM DATE: 04/23/03  
 DESIGN BY: DATE: \_\_\_\_\_  
 CHECKED BY: DATE: \_\_\_\_\_



ANOKA COUNTY  
 HIGHWAY DEPT.

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PERMANENT STRIPING  
 Sheet 7 of 7 Sheets