



DESIGN DESIGNATION

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PLAN NOT TO SCALE

## GOVERNING SPECIFICATIONS

THE 2020 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION", SHALL GOVERN.

## CONSTRUCTION PLAN FOR BITUMINOUS OVERLAY & AGGR. SHOULDER

COUNTY STATE AID HIGHWAY NO. 39

BETWEEN: T.H. 30 AND CSAH 10  
FROM: THE W. 1/4 COR. OF SEC. 6-105-26  
TO: A PT. 133.61' W. & 113.44' N. OF THE E. 1/4  
COR. OF SEC. 12-106-27

GROSS LENGTH	26,915.00	FEET	5.098	MILES
NET LENGTH	26.915.00	FEET	5.098	MILES

OVERLAYED IN: 2009 UNDER SAP 007-639-003  
SURFACED IN: 1992 UNDER SAP 007-639-002  
GRADED IN: 1991 UNDER SAP 007-639-001

The subsurface utility information in this plan is utility quality level "D". this utility quality level was determined according to the guidelines of CI/ASCE 38-02, entitled "Standard Guidelines for the Collection and depiction of Existing Subsurface Utility Data."

ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS AND ORDINANCES WILL BE COMPLIED WITH, IN THE CONSTRUCTION OF THIS PROJECT.

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT 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.

*John Stiles*  
COUNTY ENGINEER

RYAN THILGES

DATE 2/6/2025

LIC. No. 45887

William D. Rahab

Digitally signed by Willy Rabenberg  
Date: 2025.02.13 10:04:16 -06'00'

DISTRICT STATE AID CHECK: REVIEWED FOR  
COMPLIANCE WITH STATE-AID RULES/POLICY

DATE \_\_\_\_\_

William D. Ralston

Digitally signed by Willy Rabenberg

Date: 2025.02.13 10:04:36 -06'00'

STATE AID ENGINEER: APPROVED FOR STATE AID FUNDING

DATE \_\_\_\_\_

S.A.P. 007-639-004 SHEET No. 1 OF 8 SHEETS

# ESTIMATED QUANTITY

SAP 007-639-004

ITEM NO.	ITEM	UNIT	CSAH # 39	NON. PART.	TOTAL
2106.619	MINOR GRADING	RD STA	512		512
2118.509	AGGREGATE SURFACING, CL-2	TON	119		119
2221.509	SHOULDER AGGREGATE BASE, CL-1	TON	3753		3753
2232.504	MILL BITUMINOUS SURFACE	SQ YD	267		267
2360.509	TYPE SP 9.5 WEARING COURSE MIX (2,B)	TON	7231		7231
2360.509	TYPE SP 12.5 WEARING COURSE MIX (2,B)	TON	1445		1445
2580.503	INTERIM PAVEMENT MARKING	LIN. FT.	2153		2153
2582.503	4" SOLID LINE - PAINT	LIN. FT.	54704		54704
2582.503	24" SOLID LINE - PAINT	LIN. FT.	24		24
2582.503	4" BROKEN LINE - PAINT	LIN. FT.	5316		5316
2582.503	4" DOUBLE SOLID LINE - PAINT	LIN. FT.	261		261
2582.518	PAVEMENT MESSAGE - PAINT	SQ. FT.	99.72		99.72

SEE SPECIAL PROVISIONS 1402 FOR ADJUSTMENTS FOR INCREASED AND DECREASED QUANTITIES

## BASIS FOR PLANNED QUANTITIES

AGGREGATE SHOULDERING, & SURFACING

COMPACTED DRY DENSITY – 140 LBS. PER CU. FT.

BITUMINOUS SURFACE

BITUM. MAT'L FOR TACK COAT 0.05 GALS. PER SQ. YD.

TACK COAT WILL BE CONSIDERED INCIDENTAL.

BITUM. COURSES, 113 LBS. PER 1" / SQ. YD.

THE FOLLOWING STANDARD PLATES AS APPROVED BY THE FHWA SHALL APPLY

STANDARD PLATES	
PLATE No.	DESCRIPTION
8000K	TEMPORARY CHANNELIZERS

## MILL BITUM. SURFACE

LOCATION	STATION TO STATION	LENGTH	WIDTH	SQ.YD.
	1 + 75 TO 1 + 91	16	100	178
	270 + 74 TO 270 + 90	16	50	89
<b>TOTAL</b>				<b>267</b>

MILLINGS SHALL BECOME THE PROPERTY OF THE CONTRACTOR

ALL CENTERLINE MILLING WILL BE STARTING AT 1.5" DEPTH AND TAPERING TO 0". WILL BE MARKED BY THE ENGINEER.

ANY ADDITIONAL SKID LOADER MILLING FOR HEADERS ON INTERSECTING ROADS AND DRIVEWAYS WILL BE CONSIDERED INCIDENTAL TO THE PLACEMENT OF THE BITUMINOUS PAVEMENT.

## CSAH 39 SUPERPAVE BITUM. CALCULATIONS

LOCATION							LENGTH FEET	AVER WIDTH FEET	DEPTH INCHES	WEAR TON
BITUM. WEAR										
SP 9.5	STA	1 + 75	TO	STA	265 + 92		26417	28.5	1.5	7090
SP 9.5	STA	265 + 92	TO	STA	270 + 90		498	30	1.5	141
SP 12.5	STA	1 + 75	TO	STA	265 + 92	LT	25465	2.25	2	719
SP 12.5	STA	1 + 75	TO	STA	265 + 92	RT	25703	2.25	2	726
SP 9.5	7	INTERSECTIONS @			40	TONS				280
SP 9.5	11	DRIVEWAYS @			25	TONS				275
SP 9.5	6	MAILBOX PADS @			175	LENGTH	1050	5	1.5	49
TOTAL										9280

**SHLD. & SURF. QUANTITIES**  
**ROAD #           CSAH**  
**PROJECT #       SAP 007-639-004**

LOCATION	LENGTH FEET	AVER WIDTH FEET	DEPTH INCHES	AGGR. SHLD. TON	AGGR. SURF. TON
<b>SHOULDER CL-1</b>					
STA 1 + 75 TO STA 265 + 92 RT	26417	5.5	2	1695	
STA 265 + 92 TO STA 269 + 35 RT	343	3.5	2	14	
STA 1 + 75 TO STA 265 + 92 LT	26417	5.5	2	1695	
STA 265 + 92 TO STA 270 + 90 LT	498	1.5	2	9	
MATERIAL FOR FIELD ENTRANCES				340	
<b>AGGR. SURFACING CL-2</b>					
11 DRIVEWAYS @	7	TONS			77
6 INTERSECTIONS @	7	TONS			42
<b>TOTAL</b>				<b>3753</b>	<b>119</b>

**MINOR GRADING**

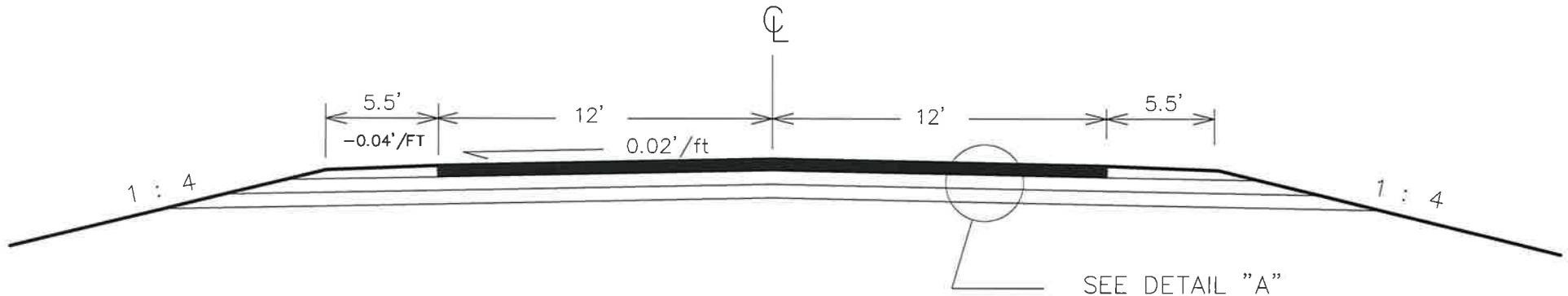
LOCATION	STATION TO STATION	SQ.YD.
LT	1 + 75 TO 270 + 90	256
RT	1 + 75 TO 270 + 90	256
		<b>512</b>

NOTE: ALL BITUMINOUS CLEAN OUT PILES AND ANY EXTRA AGGREGATE/GRASS GENERATED FROM NOTCHED OUT AREAS MUST BE PICKED UP AND DISPOSED OF BEFORE THE SHOULDER BASE CL-1 OR AGGREGATE SURFACING CL-2 CAN BE PLACED ON SITE. THIS WORK SHALL BE CONSIDERED INCIDENTAL.

Station           to Station           LOC.				WHITE - PAINT			YELLOW - PAINT		
				4" SOLID	24" SOLID	PVT MSG STOP AHEAD	4" BROKEN	4" SOLID	4" DBL
				LIN FT	LIN FT	SQ. FT.	LIN FT	LIN FT	LIN FT
2 + 15			LT		12				
2 + 15	to	9 + 71	CL					756	
8 + 67			LT			49.86			
2 + 15	to	270 + 57	LT	26,633					
2 + 15	to	270 + 57	RT	26,553					
2 + 15	to	267 + 96	CL				5,316		
260 + 34	to	267 + 96	CL					762	
264 + 35			RT			49.86			
267 + 96	to	270 + 57	CL						261
270 + 57			RT		12				
<b>TOTALS</b>				<b>53,186</b>	<b>24</b>	<b>99.72</b>	<b>5,316</b>	<b>1,518</b>	<b>261</b>

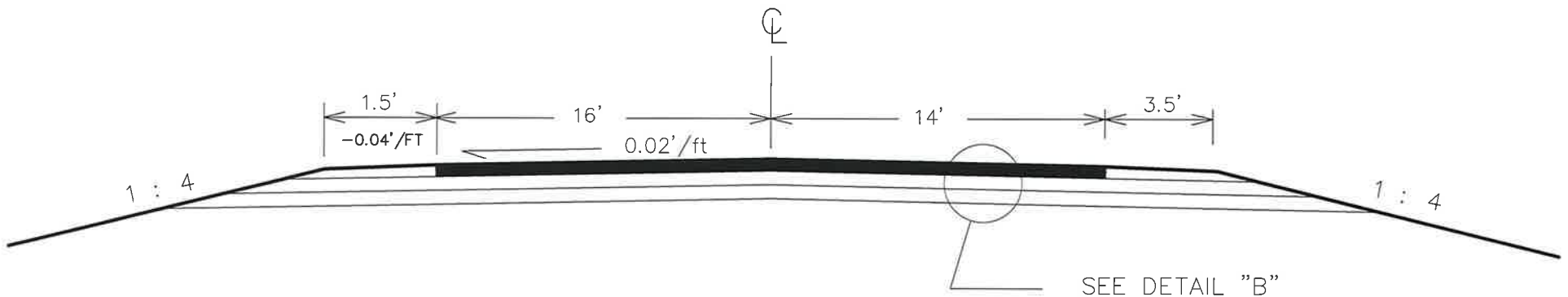
# TYPICAL SECTION

STA 1 + 75 TO STA 265 + 92

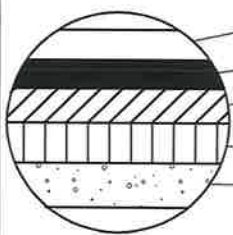


# TYPICAL SECTION

STA 265 + 92 TO STA 270 + 90

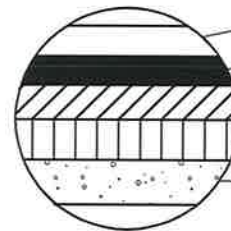


## DETAIL "A"



- 1.5" WEARING COURSE MIXTURE (2360)
- INPLACE 2" WEARING COURSE MIXTURE (2360)
- INPLACE 1.5" WEARING COURSE MIXTURE
- INPLACE 2" BINDER COURSE MIXTURE
- INPLACE 12" AGGR. BASE CL-5 (2211)

## DETAIL "B"



- 1.5" WEARING COURSE MIXTURE (2360)
- INPLACE 2" WEARING COURSE MIXTURE (2360)
- INPLACE 2" WEARING COURSE MIXTURE
- INPLACE 2" BINDER COURSE MIXTURE
- INPLACE 12" AGGR. BASE CL-5 (2211)

CERT. BY

*Ayan Chilges*  
PROFESSIONAL ENGINEER

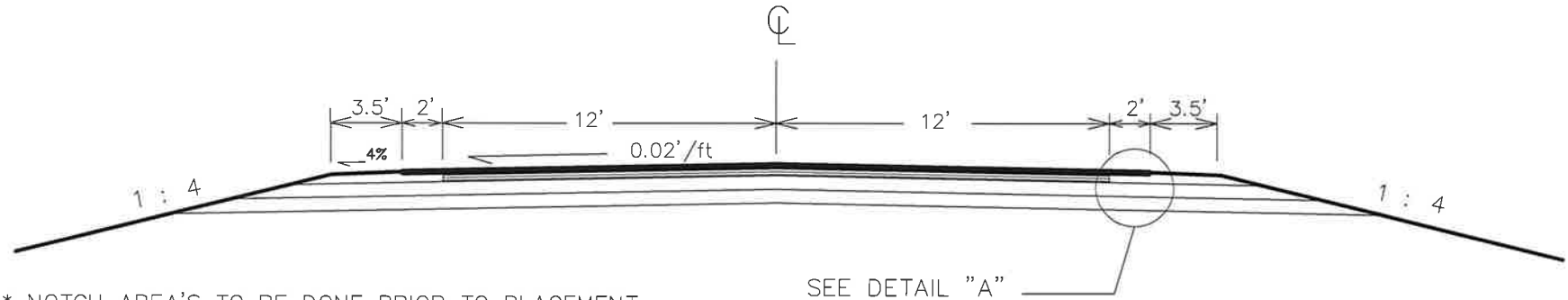
LIC. No. 45887 MAR. 10, 2025

S.A.P. 007-639-004

SHEET No. 6 OF 8 SHEETS

# TYPICAL NOTCHING SECTION

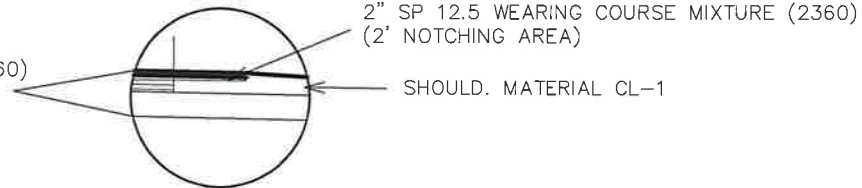
STA 1 + 75 TO STA 265 + 92



- \* NOTCH AREA'S TO BE DONE PRIOR TO PLACEMENT OF BITUMINOUS WEAR AT A DEPTH OF 2" AND A WIDTH OF 2'. WIDTH AND STATION MAY VARY AS DIRECTED BY THE ENGINEER.

SEE DETAIL "A"

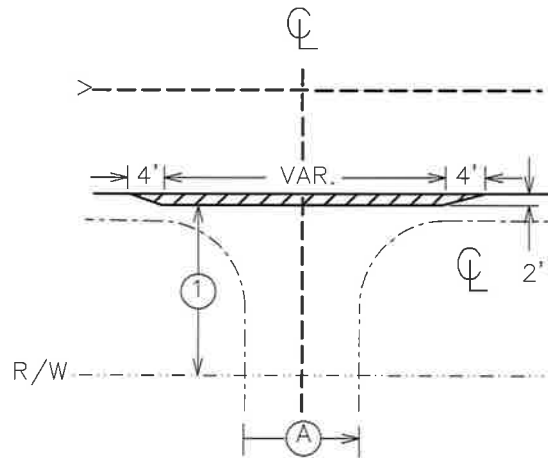
1.5" SP 9.5 WEARING COURSE MIXTURE (2360)  
& INPLACE MATERIAL





# BITUMINOUS APPROACHES AND ENTRANCES DETAIL

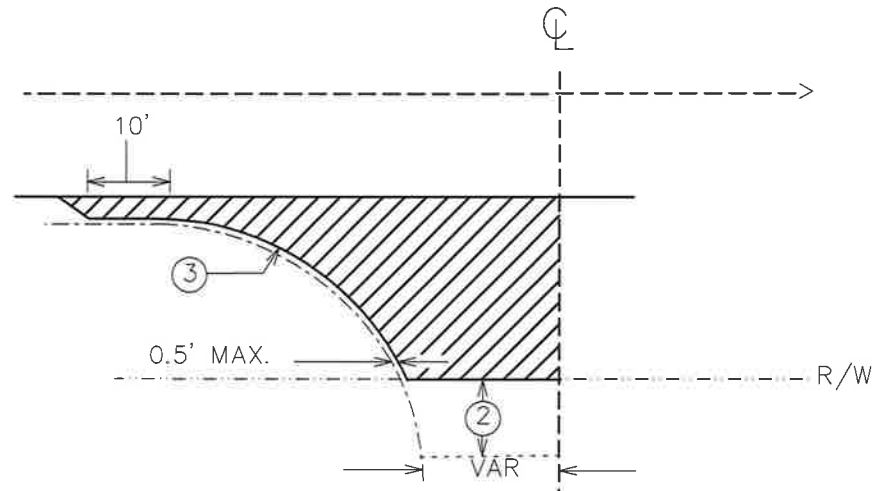
## FIELD ENTRANCE



(A) 20' FOR SINGLE F.E.  
28' FOR DOUBLE F.E.

MINIMUM DEPTH 1.5" OF BIT

## ROAD APPROACH



MINIMUM DEPTH 1.5" OF BIT

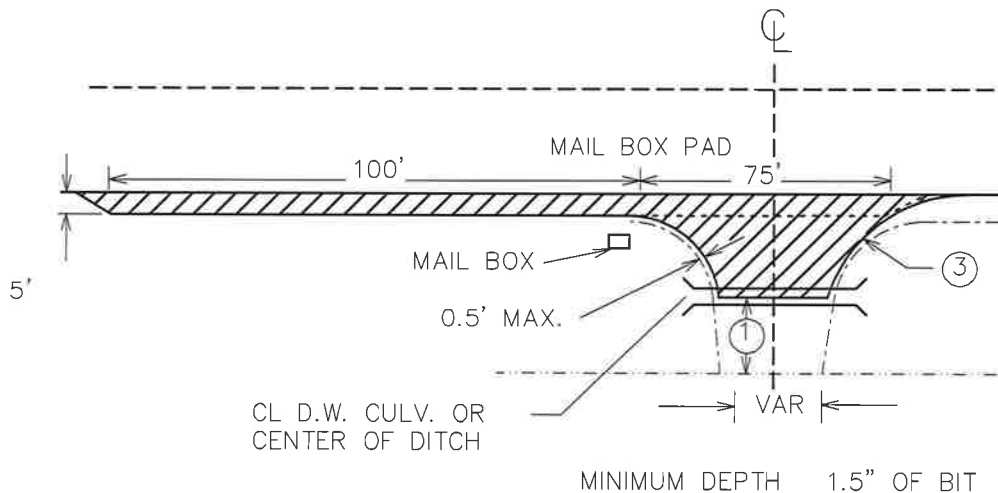
- ① FINISH WITH AGGR. MATERIAL FROM EDGE OF BITUM. TO A MIN. OF 10' BEHIND BITUM.
- ② FINISH WITH AGGR. MATERIAL, MIN. OF 10'.
- ③ BITUM. RADIUS TO BE STAKED IN FIELD BY THE ENGINEER - 25' MIN. (FOR FARM D.W. CONSIDER 30' TO 40' MAX.)

CONTRACTOR WILL BE REQUIRED TO SHAPE & NOTCH ALL DRIVEWAYS, INTERSECTIONS & MAIL BOX PADS THAT ARE NOT ALREADY PAVED AS DIRECTED BY THE ENGINEER. WORK SHALL BE DONE INCIDENTAL TO THE WEAR.

CONTRACTOR WILL BE REQUIRED TO HAND FINISH SHOULDERS ON ALL APPROACHES AND ENTRANCES AS DIRECTED BY THE ENGINEER.

ANY ADDITIONAL WORK ASSOCIATED WITH BRIDGE WINGWALL PAVING AND SKID LOADER MILLING FOR HEADERS ON INTERSECTING ROADS WILL BE CONSIDERED INCIDENTAL TO PLACEMENT OF THE BITUMINOUS PAVEMENT.

## FARM & OTHER ENTRANCES



MINIMUM DEPTH 1.5" OF BIT