

MINNESOTA DEPARTMENT OF TRANSPORTATION LYON COUNTY

CONSTRUCTION PLAN FOR: BITUMINOUS OVERLAY AND AGGREGATE SHOULDERS.

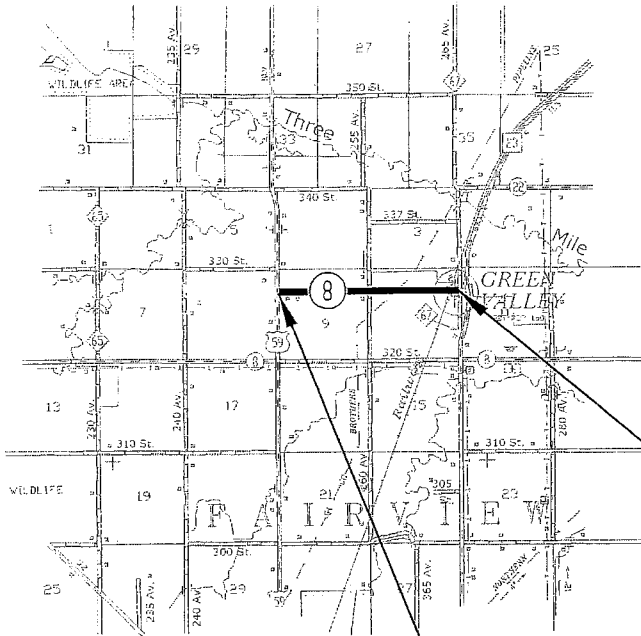
COUNTY STATE AID HIGHWAY NO. 8
 BETWEEN: U.S. 59 TO T.H. 23.
 FROM: NE. 1/16 COR. SEC. 8 T112N-R41W
 TO: NE. 1/16 COR. SEC. 10-T112N-R41W

STATE AID PROJECT 042-608-031

GROSS LENGTH	11054.80 FEET	2.094 MILES
BRIDGE LENGTH	0.00 FEET	0.000 MILES
EXCEPTIONS LENGTH	0.00 FEET	0.000 MILES
NET LENGTH	11054.80 FEET	2.094 MILES

SHEET NO. 1	TITLE SHEET
SHEET NO. 2	ESTIMATED QUANTITY SHEET
SHEET NO. 3	TYPICAL SECTIONS SHEET
SHEET NO. 4	TRAFFIC CONTROL PLAN SHEET

THIS PLAN CONTAINS 4 SHEETS



**END S.A.P. 042-608-031
 STA. 110+54.80**

**BEG. S.A.P. 042-608-031
 STA. 00+00.00**



FUNCTIONAL CLASSIFICATION:
 RURAL MAJOR COLLECTOR

DESIGN SPEED 55 MPH
 ADT 930 (2017)
 PROJ ADT 1350 (2037)
 NO. OF TRAFFIC LANES: 2
 NO. OF PARKING LANES: 2
 S.F. 130 %
 R VALUE = 10
 TON DESIGN 10
 ESALS (20 YR) = 262,000
 SHOULDER WIDTH 6.00'

STOPPING SITE DISTANCE BASED ON:
 3.5' HEIGHT OF EYE
 2.0' HEIGHT OF OBJECT

GRADED C.P. 4606 (1946)
 SURFACED S.P. 042-608-021 (1989)

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.

Signature: *Aaron VanMoer* Typed Name: Aaron VanMoer
 Design Engineer

Date: 2/16/17 License No.: 50428

Aaron VanMoer Date: 2/16/17
 Approved County Engineer

Tom J. Bunnell Date: 2/16/17
 District State Aid Engineer:
 Reviewed for Compliance with State Aid Rules/Policy

Tom J. Bunnell Date: 2/16/17
 Approved for State Aid Funding - for State Aid Engineer

GOVERNING SPECIFICATIONS
 THE 2016 EDITION OF THE MINNESOTA DEPARTMENT
 OF TRANSPORTATION "STANDARD SPECIFICATIONS
 FOR CONSTRUCTION".

NOTE	ITEM NO.	ITEM	UNIT	MUN.	RURAL	TOTAL ESTIMATED QUANTITY
	2021.501	MOBILIZATION	LUMP SUM		1.00	1.00
	2051.501	MAINT. & REST. OF HAUL ROADS	LUMP SUM		1.00	1.00
	2221.501	SHOULDER BASE AGGREGATE CLASS 5 MOD	TON		3750.00	3750.00
	2232.501	MILL BITUMINOUS SURFACE (1.5")	SQ YD		110.00	110.00
1	2360.501	TYPE SP12.5 WEAR COURSE MIXTURE (3,B)	TON		5575.00	5575.00
	2563.601	TRAFFIC CONTROL	LUMP SUM		1.00	1.00
2	2582.501	PAVEMENT MESSAGE PAINT	SQ FT		123.44	123.44
	2582.502	24" STOP LINE PAINT	LIN FT		56.00	56.00
3	2582.502	4" SOLID LINE PAINT	LIN FT		1500.00	1500.00
	2582.502	6" SOLID LINE PAINT	LIN FT		22110.00	22110.00

CONSTRUCTION NOTES

1. 30° SAFETY EDGE SHALL BE INCLUDED. BITUMINOUS SAFETY EDGE SHALL EXTEND AT A 30° ANGLE FROM THE TOP OF EACH COURSE. BITUMINOUS TACK COAT SHALL BE INCLUDED IN TOTAL BID PRICE.
2. RAILROAD PAVEMENT MARKING (PMS-7) AT 2 LOCATIONS.
3. YELLOW CENTERLINE PAINT INCLUDES SOLID AND SKIP LINE. SKIP LINE SHALL BE 10' PAINT AND 40' SKIP.

BASIS FOR ESTIMATED QUANTITIES

WEARING COURSE MIXTURE

BITUMINOUS MATERIAL FOR MIXTURE (MAXIMUM DENSITY)
110LBS./SQ.YD./INCH OF DEPTH

TACK COAT

BITUMINOUS MATERIAL FOR TACK COAT .05 GALS. PER SQ.YD.

SHOULDER BASE AGGREGATE CL 5 MOD

140 LBS/CU. FT.

STANDARD PLATES AS APPROVED BY THE FEDERAL HIGHWAY
ADMINISTRATION SHALL APPLY ON THIS PROJECT.

STANDARD PLATES

PLATE NO.	DESCRIPTION
8000 J	CHANNELIZERS
9000 E	APPROACHES AND ENTRANCES

CERTIFIED BY: _____

LICENSED PROFESSIONAL ENGINEER

LIC. NO. 50428

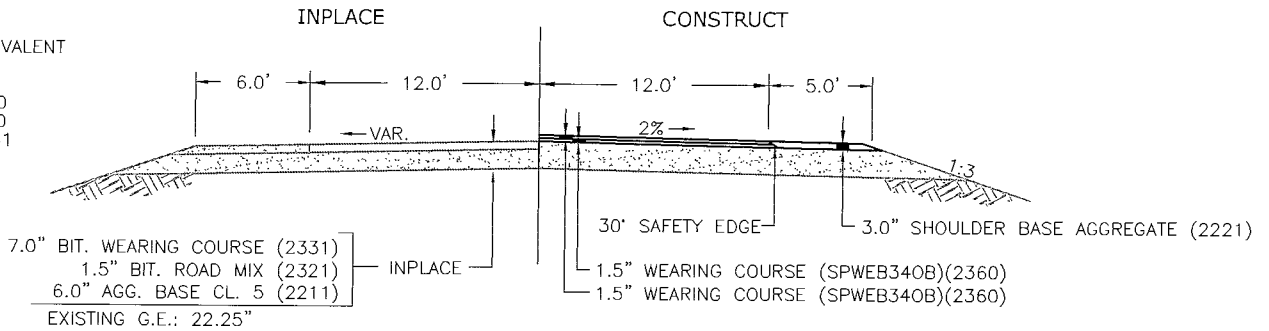
STATE AID PROJECT 042-608-031 SHEET 2 OF 4 SHEETS

TYPICAL SECTION

STA. 0+00.00 TO STA. 106+04.80

NOT TO SCALE

GRANULAR EQUIVALENT
10 TON
R VALUE: 10
ESAL'S: 262,000
REQUIRED 24.90
ON PLANS 27.31

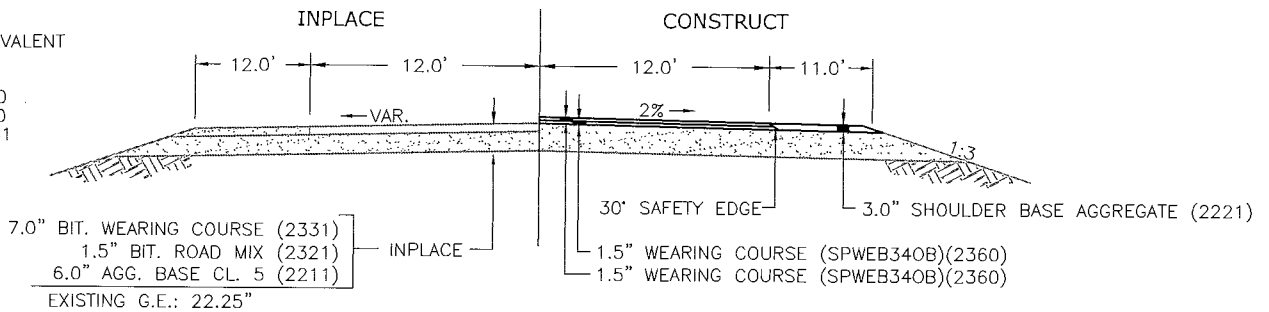


TYPICAL SECTION

STA. 106+04.80 TO STA. 110+54.80

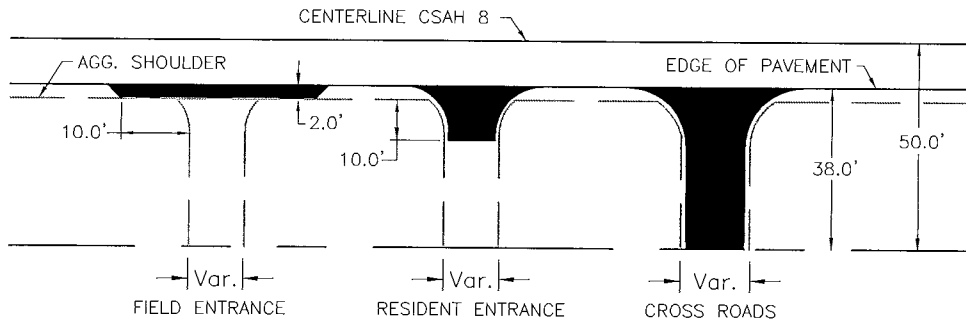
NOT TO SCALE

GRANULAR EQUIVALENT
10 TON
R VALUE: 10
ESAL'S: 262,000
REQUIRED 24.90
ON PLANS 27.31



TYPICAL AUXILIARY APPROACH PAVING

STANDARD PLATE 9000E SHALL APPLY. FIELD ADJUST AS DIRECTED BY THE ENGINEER.



ENTRANCE TYPE	#	EST. TONS
FIELD ENTRANCE	6	30
RESIDENT ENTRANCE	16	400
CROSS ROADS	5	150
		580










CERTIFIED BY:

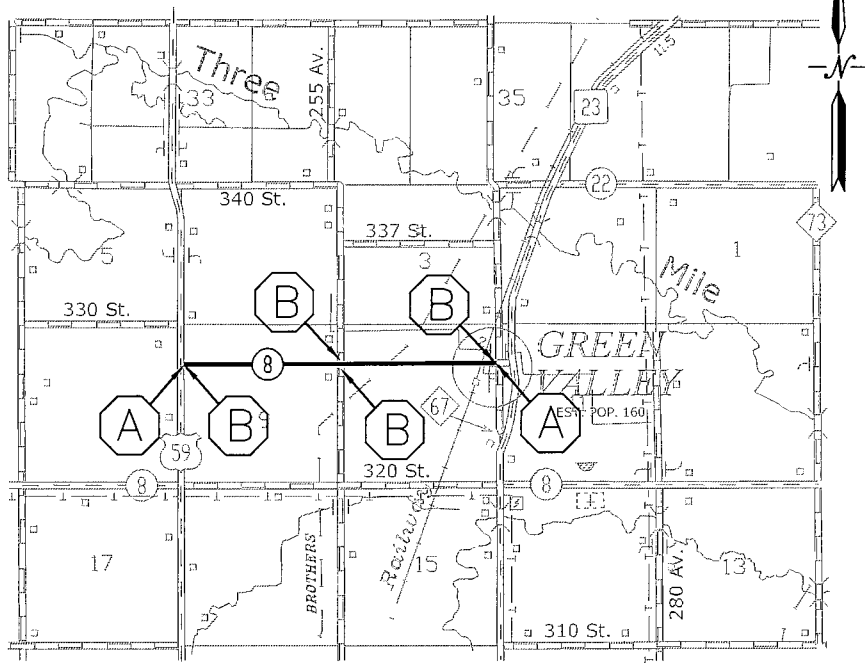
LICENSED PROFESSIONAL ENGINEER

LIC. NO. 50428

STATE AID PROJECT 042-608-031 SHEET 3 OF 4 SHEETS

TEMPORARY TRAFFIC CONTROL PLAN

TEMPORARY TRAFFIC CONTROL SIGNS			
INSERT	SIGN	QUANTITY	NOTES
(A)	 G20-1 NEXT 2.0 MILES	2	INSTALL ON TYPE 3 BARRICADE BLACK ON ORANGE 48"x24"
(B)	 W8-12	4	INSTALL 1/MILE MINIMUM BLACK ON ORANGE 48"x48"
	 W8-9	AS NEEDED	INSTALL 1/MILE MINIMUM BLACK ON ORANGE 48"x48"
	 W8-11	AS NEEDED	INSTALL 1/MILE MINIMUM BLACK ON ORANGE 48"x48"
	 W8-1A	AS NEEDED	BLACK ON ORANGE 48"x48"
	 W8-1A	AS NEEDED	BLACK ON ORANGE 48"x48"
	 W20-1	AS NEEDED	BLACK ON ORANGE 48"x48"
	 R4-1	2	INSTALL AT NO PASSING ZONE BLACK ON WHITE 24"x30"
	 R4-2	0	INSTALL AT NO PASSING ZONE BLACK ON WHITE 24"x30"




SIGN SPECIFIC NOTES:

1. R4-1 AND R4-2 SIGNS TO BE INSTALLED AT ENDS OF SOLID YELLOW LINES. R4-1 SIGNS TO BE INSTALLED OPPOSITE INPLACE NO PASSING ZONE SIGNS. R4-2 SIGNS TO BE INSTALLED AT THE TERMINATION OF SOLID YELLOW LINE. SIGNS SHALL BE INSTALLED PRIOR TO REMOVING CENTERLINE MARKINGS AND SHALL REMAIN INPLACE UNTIL FINAL STRIPING IS RESTORED.

GENERAL TEMPORARY TRAFFIC CONTROL NOTES:

1. TRAFFIC CONTROL SHALL MEET THE REQUIREMENTS OF THE CURRENT EDITION OF THE MnMUTCD, INCLUDING THE FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.
2. ALL NECESSARY TRAFFIC CONTROL DEVICES ON THIS PROJECT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR THE IMMEDIATE REPAIR OR REPLACEMENT OF ALL TRAFFIC CONTROL DEVICES THAT BECOME DAMAGED, MOVED, OR DESTROYED.
3. ALL INPLACE REGULATORY AND WARNING SIGNS TO REMAIN INPLACE THROUGHOUT CONSTRUCTION.
4. THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN, AND REMOVE ALL TRAFFIC CONTROL DEVICES REQUIRED TO PROVIDE SAFE MOVEMENT OF LOCAL VEHICULAR TRAFFIC THROUGHOUT THE PROJECT. THE ENGINEER WILL HAVE THE RIGHT TO MODIFY THE REQUIREMENTS OF TRAFFIC CONTROL AS DEEMED NECESSARY DUE TO FIELD CONDITIONS. THE STREET SHALL REMAIN OPEN TO LOCAL TRAFFIC AT ALL TIMES.

CERTIFIED BY:  LIC. NO. 50428
 LICENSED PROFESSIONAL ENGINEER