

MINNESOTA DEPARTMENT OF TRANSPORTATION LYON COUNTY

CONSTRUCTION PLAN FOR: BITUMINOUS PAVEMENT, AGGREGATE BASE, AND AGGREGATE SHOULDERS.

COUNTY STATE AID HIGHWAY NO. 10

STATE AID PROJECT NO. 042-610-040

BETWEEN: C.S.A.H. 24 AND C.S.A.H. 17,
(1.0 MILES EAST OF MINNEOTA)

GROSS LENGTH 24,613.71 FEET 4.662 MILES

FROM: N.E. COR. SEC. 30 T113N-R42W

BRIDGE LENGTH 80.00 FEET 0.015 MILES

TO: N.E. COR. SEC. 9 T113N-R42W

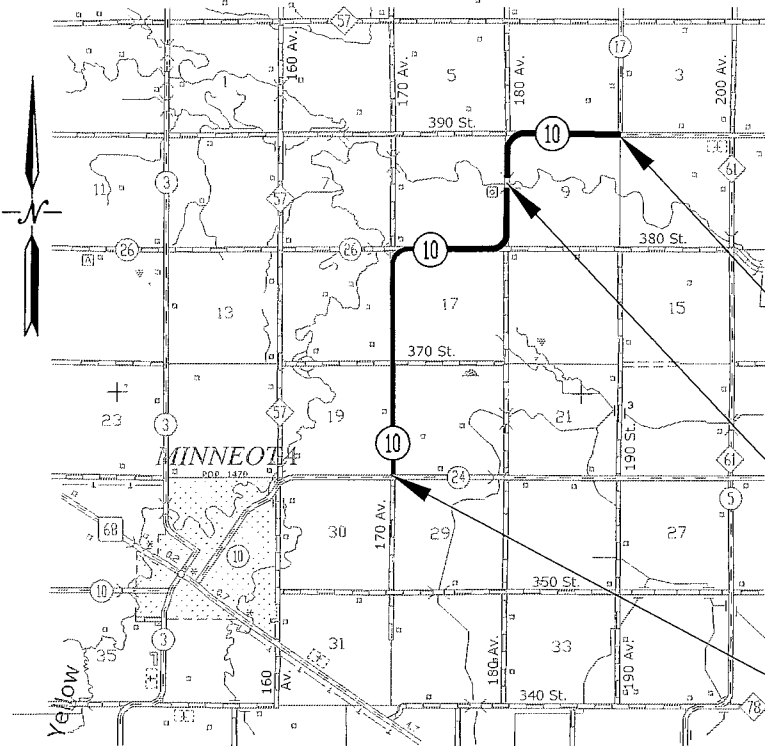
EXCEPTIONS LENGTH 0.00 FEET 0.000 MILES

NET LENGTH 24,613.71 FEET 4.662 MILES

YELLOW MEDICINE COUNTY

SHEET NO. 1 TITLE SHEET
SHEET NO. 2 ESTIMATED QUANTITY SHEET
SHEET NO. 3-4 TYPICAL SECTIONS SHEET
SHEET NO. 5 TRAFFIC CONTROL PLAN SHEET
SHEET NO. 6 SIGN INSTALLATION TYPICAL SHEET

THIS PLAN CONTAINS 6 SHEETS



END S.A.P. 042-610-040
STA. 246+13.71

BRIDGE #42521
STA. 176+40.00 TO STA. 177+20.00

BEG. S.A.P. 042-610-040
STA. 0+00.00

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.

FUNCTIONAL CLASSIFICATION:
RURAL MINOR COLLECTOR

DESIGN SPEED: 60 MPH

ADT: 290(2017)

PROJ ADT: 380(2037)

NO. OF TRAFFIC LANES:

S.F. 130 %

R VALUE: 10

TON DESIGN: 10

ESALS (20 YR): 117,000

SHOULDER WIDTH: 6.0'

GRADED: 042-610-039 (2016)

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

Date: 2/15/17 License No.: 50428

A. VanMoer Date: 2/15/17
Approved County Engineer

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

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

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

Tom M. Brummett Date: 2/16/17
Approved for State Aid Funding - for State Aid Engineer

NOTE	ITEM NO.	ITEM	UNIT	RURAL	TOTAL ESTIMATED QUANTITY
	2021.501	MOBILIZATION	LUMP SUM	1.00	1.00
	2051.501	MAINTENANCE & RESTORATION OF HAUL ROADS	LUMP SUM	1.00	1.00
	2123.503	MOTOR GRADER	hour	20.00	20.00
1	2211.501	AGGREGATE BASE CLASS 5 MOD	TON	16,000.00	16,000.00
2	2221.501	SHOULDER BASE AGGREGATE CLASS 5 MOD	TON	9,050.00	9,050.00
3	2232.501	MILL BITUMINOUS SURFACE (2.0")	SQ YD	315.00	315.00
4	2360.501	TYPE SP12.5 WEARING COURSE MIXTURE (3,C)	TON	6,125.00	6,125.00
	2360.502	TYPE SP12.5 NON WEAR COURSE MIXTURE (3,C)	TON	11,825.00	11,825.00
	2563.601	TRAFFIC CONTROL	LUMP SUM	1.00	1.00
5	2564.533	FURNISH SIGN PANELS TYPE C	SQ FT	48.00	48.00
6	2564.536	INSTALL SIGN PANEL TYPE SPECIAL	EACH	8.00	8.00
	2573.550	EROSION CONTROL SUPERVISOR	LUMP SUM	1.00	1.00
	2574.508	FERTILIZER TYPE 2	POUND	3,620.00	3,620.00
	2575.501	SEEDING	ACRE	18.10	18.10
	2575.502	SEED MIXTURE 25-142	POUND	1,085.00	1,085.00
	2575.511	MULCH MATERIAL TYPE 1	TON	36.20	36.20
	2575.519	DISK ANCHORING	ACRE	18.10	18.10
	2582.502	24" STOP LINE PAINT	LIN FT	84.00	84.00
7	2582.502	4" SOLID LINE PAINT	LIN FT	17,500.00	17,500.00

CONSTRUCTION NOTES

1. INCLUDES 600 TONS FOR 5 CROSS-ROADS AND 100 TONS FOR 9 RESIDENTIAL DRIVEWAYS.
2. INCLUDES 720 TONS FOR 36 FIELD ENTRANCES.
3. MILL 2.0" AT BRIDGE #42521. SEE SHEET 4 FOR DETAILS. THE CONTRACTOR SHALL PROVIDE A LOAD RATING TO PERFORM MILLING OPERATIONS. SEE PROPOSAL FOR DETAILS.
4. 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 WITH THE TOTAL BID PRICE.
5. FURNISH 8 W14-3 SIGNS (36"x48")(BLACK ON YELLOW). SIGNS SHALL BE DIAMOND GRADE (DG3).
6. SEE SHEET 6 FOR DETAILS. INSTALL AS DIRECTED BY THE ENGINEER.
7. YELLOW CENTER LINE PAINT. TOTAL QUANTITY INCLUDES SOLID AND BROKEN LINES.

BASIS FOR ESTIMATED QUANTITIES

CLASS 5 AGGREGATE BASE MOD

CLASS 5 MOD QUANTITIES BASED ON 1.89 TONS PER C.Y. COMPACTED VOLUME ASSUMED

SHOULDERING BASE AGGREGATE CL 5 MOD

SHOULDERING QUANTITIES BASED ON 1.89 TONS PER C.Y. COMPACTED VOLUME ASSUMED

NON-WEAR COURSE MIXTURE

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

WEARING COURSE MIXTURE

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

TACK COAT

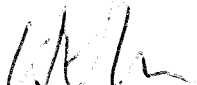
BITUMINOUS MATERIAL FOR TACK COAT .05 GALS. PER SQ.YD.

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

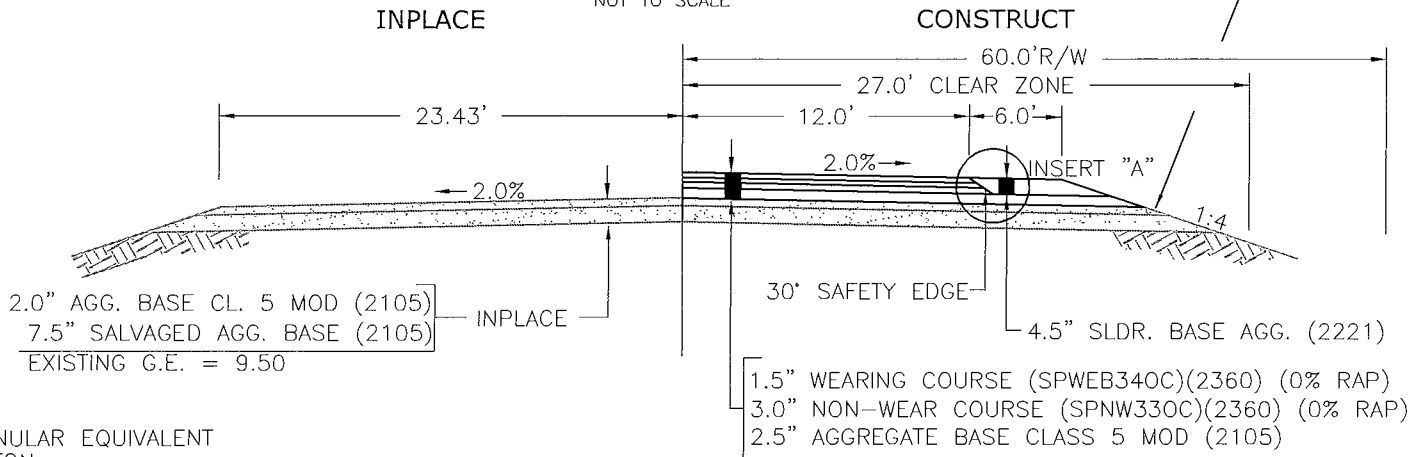
STATE AID PROJECT NO. 042-610-040

SHEET 2 OF 6 SHEETS

TYPICAL SECTIONS

STA. 0+00.00 TO STA. 176+40.00
 STA. 177+20.00 TO STA. 246+13.71
 NOT TO SCALE

PLACE 3" TOPSOIL TO FINISHED
 AGGREGATE SHOULDER LINE.
 SEE INSERT "B"



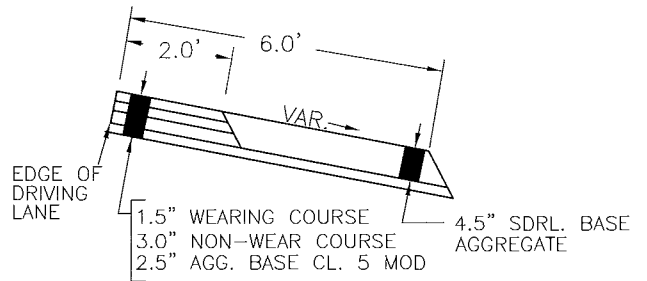
GRANULAR EQUIVALENT
 10 TON
 R VALUE: 10
 ESAL'S: 117,000
 G.E. REQUIRED 20.00
 G.E. ON PLANS 22.125

SECTION NOTES:

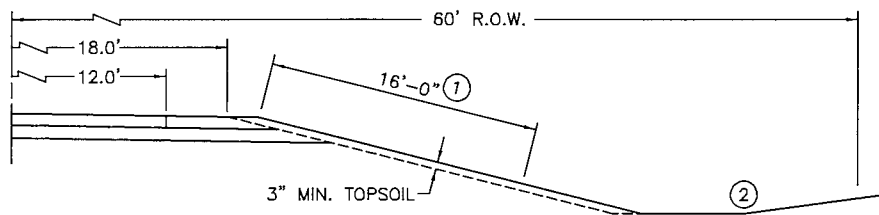
- 30' BITUMINOUS SAFETY EDGE SHALL BE INCLUDED WITH THE TOTAL BID PRICE FOR BITUMINOUS WEARING COURSE (2360).

**INSERT "A"
 INSIDE SUPER SHOULDER PAVEMENT**

STA. 91+07.00 TO STA. 114+76.00 RT
 STA. 137+82.00 TO STA. 161+15.00 LT
 STA. 185+02.00 TO STA. 208+53.00 RT
 NOT TO SCALE



**INSERT B
 TYPICAL BOTH SIDES
 NOT TO SCALE**



GENERAL CONSTRUCTION NOTES (INSERT B):

- THE CONTRACTOR IS REQUIRED TO PLACE TOPSOIL, SEED, MULCH AND FERTILIZE THE INSLOPE TO THE FINISHED SHOULDER. THE CONTRACTOR SHALL LIMIT THE IMPACTED AREA TO 16' AS SHOWN. TOPSOIL ON THE EXISTING INSLOPE SHALL BE SUFFICIENT TO COMPLETE THE ENTIRE TOPSOIL PLACEMENT.
 MOTOR GRADER HOURS PROVIDED FOR TOPSOIL PLACEMENT AND SHAPING.
 CONTRACTOR IS REQUIRED TO WORK AROUND EXISTING SIGNS AND MAILBOX SUPPORTS.
- THE CONTRACTOR SHALL PROTECT ALL VEGETATED AREAS OUTSIDE THE REQUIRED SEEDING AREA (INSLOPE). ANY DAMAGE CAUSED BY THE CONTRACTOR'S OPERATION OUTSIDE OF THE PROPOSED SEEDING AREA SHALL BE REPAIRED BY THE CONTRACTOR AT NO EXPENSE TO THE AGENCY.

CERTIFIED BY:

LICENSED PROFESSIONAL ENGINEER

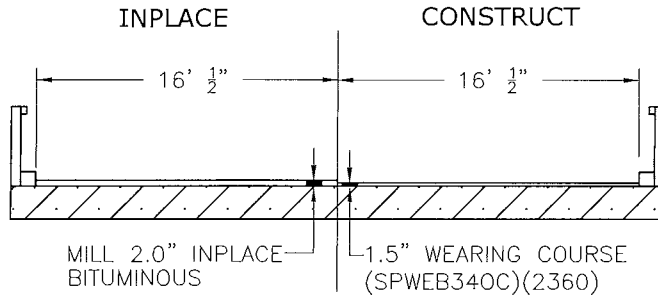
LIC. NO. 50428

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SHEET 3 OF 6 SHEETS

TYPICAL SECTION BRIDGE #42521 PAVING

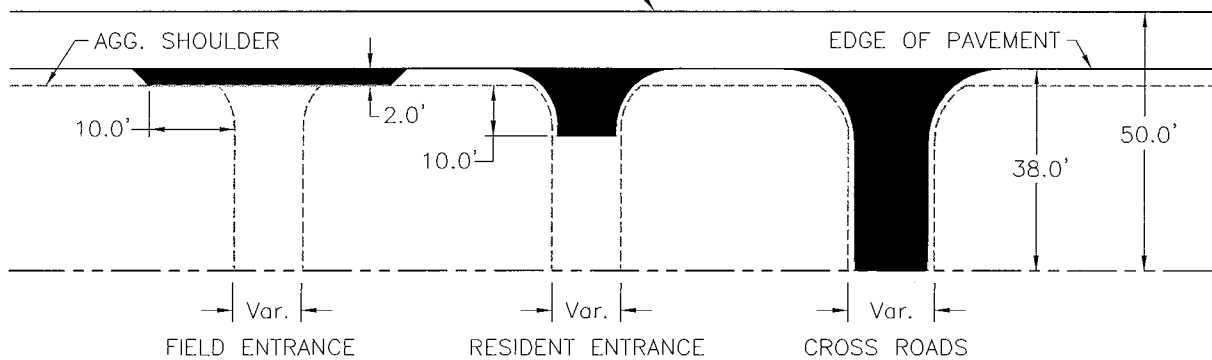
STA. 176+40.00 TO STA. 177+20.00
NOT TO SCALE



TYPICAL AUXILIARY APPROACH PAVING

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

CENTERLINE CSAH 10



ENTRANCE TYPE	#	WEAR	NON-WEAR
FIELD ENTRANCE	36	90	90
RESIDENT ENTRANCE	9	225	0
CROSS ROADS	5	125	125
		440	215

CERTIFIED BY:

LICENSED PROFESSIONAL ENGINEER










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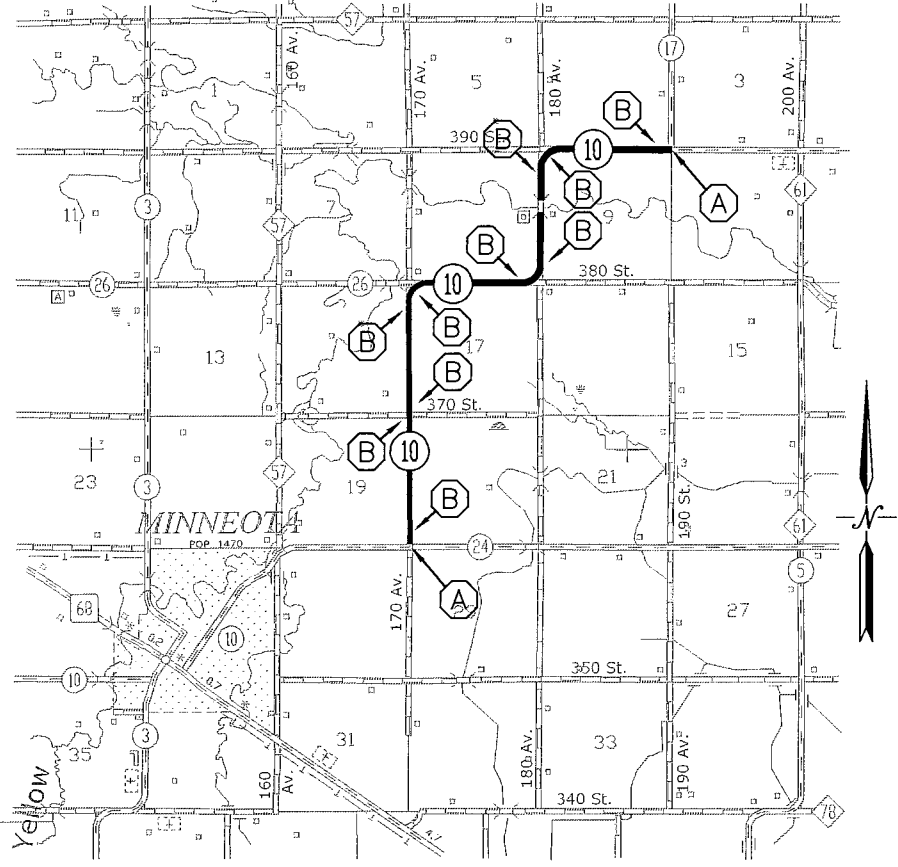
STATE AID PROJECT NO. 042-610-040

SHEET 4 OF 6 SHEETS

TEMPORARY TRAFFIC CONTROL PLAN

YELLOW MEDICINE COUNTY

TEMPORARY TRAFFIC CONTROL SIGNS			
INSERT	SIGN	QUANTITY	NOTES
(A)	 G20-1 NEXT 5.0 MILES	2	INSTALL ON TYPE 3 BARRICADE BLACK ON ORANGE 48"x24"
(B)	 W8-12	10	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	9	INSTALL AT NO PASSING ZONE BLACK ON WHITE 24"x30"
	 R4-2	8	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:

[Signature]

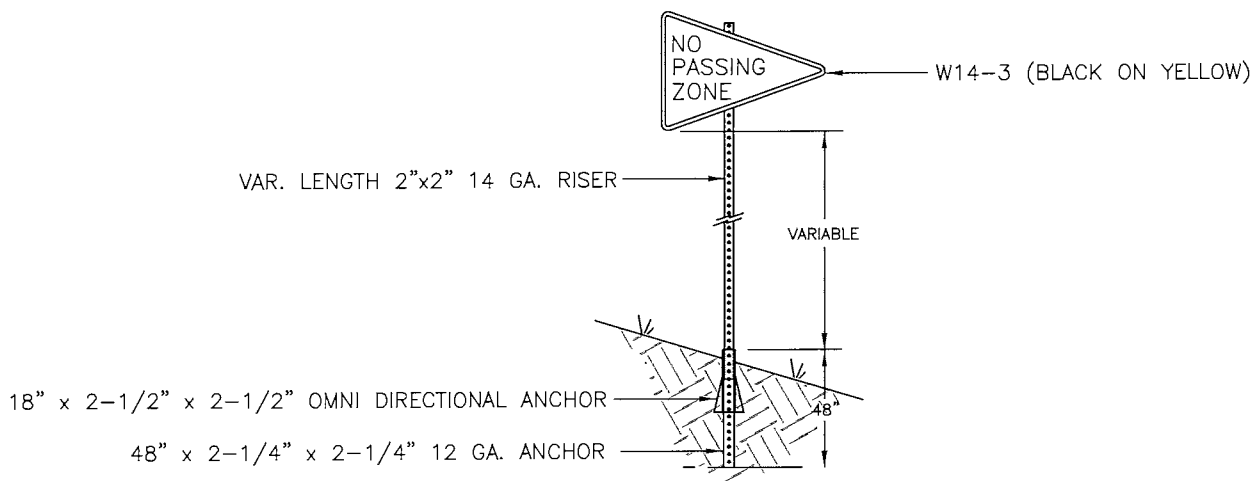
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LICENSED PROFESSIONAL ENGINEER

STATE AID PROJECT NO. 042-610-040

SHEET 5 OF 6 SHEETS

Sign Installation - Sign Panel Type Special (2564.536)
 Single Breakaway Anchor
 Typical all location



SIGN INSTALLATION NOTES:

- (1) ALL SQUARE POSTS SHALL BE GALVANIZED AND PRE-PUNCHED.
- (2) STAINLESS BOLTS, WASHERS, AND NYLON LOCK NUTS REQUIRED. USE NYLON WASHERS AGAINST SIGN SHEETING.
- (3) INSTALL ANCHOR INTO THE GROUND LEAVING 1" TO 2" ABOVE THE EXISTING SURFACE. INSTALL THE SIGN POST 6" TO 8" INTO THE ANCHOR. INSTALL OMNI DIRECTIONAL ANCHOR.
- (4) TOTAL BID PRICE FOR 2564.536 "INSTALL SIGN PANEL TYPE SPECIAL" SHALL INCLUDE ALL MATERIALS AND LABOR TO INSTALL ANCHOR, RISER, AND SIGNS.

Height and Lateral Location of Rural Roadside Signs
 NOT TO SCALE

