LAX

Feb 09, 2021

PROJECT ID: 5495-00-70

WITH: N/A

COUNTY: CRAWFORD

ORDER OF SHEETS

TOTAL SHEETS = 96

N

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

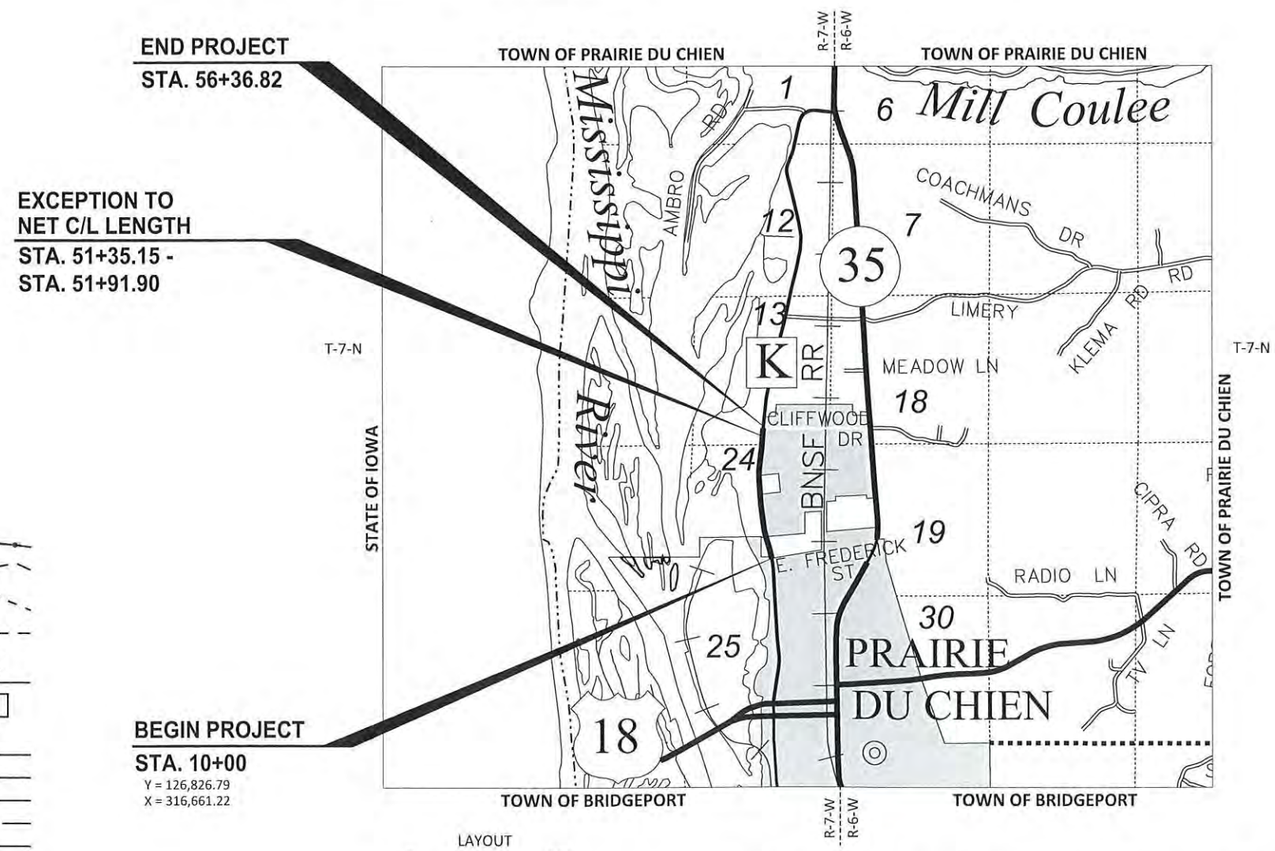
CITY PRAIRIE DU CHIEN - STH 35

E FREDERICK ST TO CLIFFWOOD DRIVE

CTH K
CRAWFORD COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
5495-00-70	WISC 2021173	1

STATE PROJECT NUMBER
5495-00-70



LAYOUT

SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 0.867 MILES

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, CRAWFORD COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCE MAY BE USED AS GROUND DISTANCES.

ELEVATION SHOWN ON THIS PLAN ARE REFERENCE TO THE NORTH AMERICAN VERTICAL DATUM OF 1988, NAVD (2012).

DESIGN DESIGNATION

A.A.D.T.	(2021)	=	1,560
A.A.D.T.	(2041)	=	2,320
D.H.V.	(2041)	=	209
D.D.		=	60/40
T.		=	VARIES 50% - 70%
DESIGN SPEED		=	25 MPH (STA. 10+00 - STA. 12+76) 35 MPH (STA. 12+76 - STA. 38+15) 45 MPH (STA. 38+15 - STA. 56+36.82)
ESALS		=	3,000,000

CONVENTIONAL SYMBOLS

PLAN
- CORPORATE LIMITS
- PROPERTY LINE
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE (300'EB')
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA

PROFILE
- GRADE LINE
- ORIGINAL GROUND
- MARSH OR ROCK PROFILE (To be noted as such) (ROCK)
- SPECIAL DITCH (LABEL)
- GRADE ELEVATION (95.36)
- CULVERT (Profile View)

UTILITIES
- ELECTRIC (E)
- FIBER OPTIC (FO)
- GAS (G)
- SANITARY SEWER (SAN)
- STORM SEWER (SS)
- TELEPHONE (T)
- WATER (W)
- UTILITY PEDESTAL
- POWER POLE
- TELEPHONE POLE

ACCEPTED FOR

COUNTY of CRAWFORD

10/21/2020 (Date) (Highway Commissioner)

ORIGINAL PLANS PREPARED BY

JEWELL associates engineers, inc
Engineers - Architects - Surveyors

WISCONSIN DANIEL J. TRACY E-47578-6 MUSCODA, WI PROFESSIONAL ENGINEER

10/19/2020 (Date) (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	JEWELL ASSOCIATES ENGINEERS, INC
Designer	JEWELL ASSOCIATES ENGINEERS, INC
Project Manager	ALEIGHA BURG, P.E.
Regional Examiner	SW REGION
Regional Supervisor	OSCAR I. WINGER

APPROVED FOR THE DEPARTMENT

DATE: 10/28/2020 Aleigha Burg, P.E. Digitally signed by Aleigha Burg, P.E. Date: 2020.10.28 08:51:46 -05'00' (Signature)

E

GENERAL NOTES

NO TREES OR SHRUBS ARE TO BE REMOVED UNLESS SUCH TREES OR SHRUBS HAVE FIRST BEEN INDICATED FOR REMOVAL BY THE ENGINEER IN THE FIELD.

EROSION CONTROL ITEMS IN THE MISC. QUAN. ARE SUGGESTED. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD. MAINTAIN EROSION CONTROL ITEMS UNTIL SUCH TIME AS THE ENGINEER DETERMINES THE MEASURE IS NO LONGER NECESSARY. PROTECT WETLANDS AND OTHER WATERWAYS THAT ARE PRESENT WITHIN THE PROJECT LIMITS.

DISTURBED AREAS SHOWN WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS ARE TO BE FERTILIZED (TYPE B), SEEDED (USE SEED MIX NO. 20), AND EROSION MAT URBAN CLASS I TYPE B AS DIRECTED BY THE ENGINEER. FERTILIZER (TYPE B) & SEEDING (SEEDING MIX NO. 20) ARE PAID FOR UNDER THE BID ITEM BARRIER SYSTEM GRADING SHAPING FINISHING.

PRIOR TO THE PLACEMENT OF GUARDRAIL, THE SHOULDERS SHALL BE PLACED, SHAPED, AND COMPACTED.

EXISTING SHOULDER AGGREGATE SHALL BE INCORPORATED INTO THE NEW SHOULDERS UNLESS OTHERWISE DIRECTED BY THE ENGINEER IN THE FIELD.

WHEN THE QUANTITY OF THE ITEM OF BASE AGGREGATE DENSE OR HMA PAVEMENT IS MEASURED FOR PAYMENT BY THE TON, THE DEPTH OR THICKNESS OF THE LAYER SHOWN ON THE PLANS IS APPROXIMATE, AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER IN THE FIELD.

REMOVAL OF ASPHALTIC SURFACES WHERE AN ABUTTING ASPHALTIC SURFACE IS TO REMAIN IN PLACE SHALL REQUIRE A VERTICAL EDGE MEETING THE APPROVAL OF THE ENGINEER IN THE FIELD.

HMA PAVEMENT QUANTITIES WERE CALCULATED USING 112 LB/SY/IN.

5.5-INCHES OF HMA PAVEMENT SHALL BE CONSTRUCTED WITH A 2 ½-INCH UPPER LAYER OF HMA PAVEMENT 4 MT 58-28 S AND A 3-INCH LOWER LAYER OF HMA PAVEMENT 4 MT 58-28 S FROM STA. 10+00 - STA. 30+38.

2.5-INCHES OF HMA PAVEMENT SHALL BE CONSTRUCTED WITH A SINGLE 2.5-INCH LAYER OF HMA PAVEMENT 4 MT 58-28 S FROM STA. 30+38 - STA. 56+36.82.

PAVING LIMITS AT INTERSECTIONS ARE TO BE DETERMINED IN THE FIELD BY THE ENGINEER.

THE EXACT LOCATIONS AND LIMITS OF PRIVATE ENTRANCES, COMMERCIAL, AND FIELD ENTRANCES SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

APPLY TACK COAT AT A RATE OF 0.07 GAL/SY TO THE MILLED SURFACE AND AT A RATE OF 0.05 GAL/SY BETWEEN LAYERS OF HMA PAVEMENT.

THE CONTRACTOR'S PAVING OPERATIONS SHALL BE CONSISTENT WITH THE PLAN TYPICAL SECTIONS AND CONSTRUCTED TO PREVENT HMA LONGITUDINAL JOINTS FROM BEING LOCATED WITHIN A DRIVING, TURNING, OR PASSING LANE.

THE LOW SIDE SHOULDER SLOPE ON SUPERELEVATED SECTIONS EQUALS THE SUPERELEVATION WHEN THE SUPERELEVATION IS GREATER THAN 0.04 FT./FT. IF THE SUPERELEVATION IS LESS THAN OR EQUALS 0.04 FT./FT., THEN THE LOW SIDE SHOULDER SLOPE IS 0.04 FT./FT. THE HIGH SIDE SHOULDER SLOPE ON THE SUPERELEVATED SECTION EQUALS THE SUPERELEVATION.

FILL EXPANSION IS VARIABLE AND IS ESTIMATED AT 25%.

ADJUST DITCH GRADING AS NECESSARY TO FIELD CONDITIONS AND AS DIRECTED BY THE ENGINEER IN THE FIELD.

CURVE DATA IS BASED ON THE ARC DEFINITION.

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT, ALL SIGNS RELATING TO THIS OPERATION SHALL BE COVERED OR REMOVED AND FACILITY RESTORED TO NORMAL OPERATIONS.

THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. THE CONTRACTOR SHALL COORDINATE HIS CONSTRUCTION ACTIVITIES WITH A CALL TO "DIGGERS HOTLINE" AND/OR A DIRECT CALL TO THE UTILITIES THAT HAVE FACILITIES IN THE AREA. NOT ALL UTILITIES ARE MEMBERS OF DIGGERS HOTLINE.

IF THERE ARE CONFLICTS WITH SIGNS OR OTHER WORK UNDER THIS PROJECT, THE CONTRACTOR WILL WORK AROUND THE UTILITY FACILITIES.

ALL RADII DIMENSIONS ON THE PLAN FOR CURB AND GUTTER ARE TO THE FLANGE OF THE CURB & GUTTER.

MILL AND PAVE ADJACENT TO MONUMENTS WITHOUT DAMAGING THE MONUMENTS.

CONTACTS

WISCONSIN DEPARTMENT OF TRANSPORTATION:

WisDOT PROJECT MANAGER
3550 MORMON COULEE ROAD
LA CROSSE, WI 54601
ATTN: ALEIGHA BURG, P.E.
PH: (608) 317-9083
EMAIL: Aleigha.Burg@dot.wi.gov

CRAWFORD COUNTY HIGHWAY DEPARTMENT:

KYLE KOZELKA, COMMISSIONER
21515 STATE HIGHWAY 27
P.O. BOX 39
SENECA, WI 54654
PH: (608) 734-9500
CELL: (608) 412-3774
EMAIL: kkozelka@crawfordcountywi.org

DESIGN CONSULTANT:

JEWELL ASSOCIATES ENGINEERS, INC.
560 SUNRISE DRIVE
SPRING GREEN, WI 53588
ATTN: DAN TRACY, P.E.
PH: (608) 459-6052
CELL: (608) 604-6905
EMAIL: dan.tracy@jewellassoc.com

WDNR LIAISON:

STATE OF WISCONSIN
DNR SERVICE CENTER
3550 MORMON COULEE ROAD
LA CROSSE, WI 54601
ATTN: KAREN KALVELAGE
PH: (608) 406-7880
EMAIL: karen.kalvelage@wisconsin.gov

UTILITIES

ELECTRICITY

ALLIANT ENERGY
ATTN: AL MUMM
2200 EAST CAMPION BLVD.
PRAIRIE DU CHIEN, WI 53821
OFFICE: (608) 732-7925
EMAIL: allanmumm@alliantenergy.com

SCENIC RIVERS ENERGY COOPERATIVE
ATTN: PHIL SCHNEIDER
231 NORTH SHERIDAN STREET
LANCASTER, WI 53813
OFFICE: (608) 723-2121 EXT: 505
EMAIL: pschneider@srec.net

COMMUNICATION LINE

CENTURYLINK
ATTN: DOUG MCGOWAN
135 NORTH BONSON STREET
PLATTEVILLE, WI 53818
OFFICE: (608) 342-4316
EMAIL: doug.mcgowan1@centurylink.com

MEDIACOM WISCONSIN, LLC
ATTN: CRAIG EGGERT
1240 HWY 52 SOUTH
CHATFIELD, MN 55923
OFFICE: (563) 419-5160
EMAIL: ceggert@mediacomcc.com

GAS

MADISON GAS & ELECTRIC
ATTN: JANE ROSSING
P.O. BOX 1231
MADISON, WI 53701
OFFICE: (608) 252-7099
EMAIL: grossing@mge.com
workplans@mge.com

SEWER

PRAIRIE DU CHIEN WASTEWATER DEPARTMENT
ATTN: LARRY GATES
P.O. BOX 324
PRAIRIE DU CHIEN, WI 53821
OFFICE: (608) 326-8534
CELL: (608) 306-0360
EMAIL: wwtf@prairieduchien-wi.gov

WATER

PRAIRIE DU CHIEN WATER DEPARTMENT
ATTN: LARRY GATES
P.O. BOX 324
PRAIRIE DU CHIEN, WI 53821
OFFICE: (608) 326-8213
CELL: (608) 306-0360
EMAIL: water@prairieduchien-wi.gov

DIGGERS HOTLINE
Dial 811 or (800) 242-8511
www.DiggersHotline.com

LIST OF STANDARD ABBREVIATIONS

ABUT	Abutment	INV	Invert	RDWY	Roadway
AC	Acre	IP	Iron Pipe or Pin	SALV	Salvaged
AGG	Aggregate	IRS	Iron Rod Set	SAN S	Sanitary Sewer
AH	Ahead	JT	Joint	SEC	Section
<	Angle	JCT	Junction	SHLDR	Shoulder
ASPH	Asphaltic	LHF	Left-Hand Forward	SHR	Shrinkage
AVG	Average	L	Length of Curve	SW	Sidewalk
ADT	Average Daily Traffic	LIN FT or LF	Linear Foot	S	South
BAD	Base Aggregate Dense			SQ	Square
BK	Back	LC	Long Chord of Curve	SF or SQ FT	Square Feet
BF	Back Face	MH	Manhole	SY or SQ YD	Square Yard
BM	Bench Mark	MB	Mailbox	STD	Standard
BR	Bridge	ML or M/L	Match Line	SDD	Standard Detail Drawings
C or C/L	Center Line	N	North	STH	State Trunk Highways
CC	Center to Center	Y	North Grid Coordinate	STA	Station
C.E.	Commercial Entrance	OD	Outside Diameter	SS	Storm Sewer
CTH	County Trunk Highway	PLE	Permanent Limited Easement	SG	Subgrade
CR	Creek			SE	Superelevation
CR	Crushed	PT	Point	SL or S/L	Survey Line
CY or CU YD	Cubic Yard	PC	Point of Curvature	SV	Septic Vent
CP	Culvert Pipe	PI	Point of Intersection	T	Tangent
C & G	Curb and Gutter	PRC	Point of Reverse Curvature	TEL	Telephone
D	Degree of Curve	PT	Point of Tangency	TEMP	Temporary
DHV	Design Hour Volume	POC	Point On Curve	TI	Temporary Interest
DIA	Diameter	POT	Point on Tangent	TLE	Temporary Limited Easement
E	East	PVC	Polyvinyl Chloride		
X	East Grid Coordinate	PCC	Portland Cement Concrete	t	Ton
ELEC	Electric (al)	LB	Pound	T or TN	Town
EL or ELEV	Elevation	PSI	Pounds Per Square Inch	TRANS	Transition
ESALS	Equivalent Single Axle Loads	P.E.	Private Entrance	TL or T/L	Transit Line
EBS	Excavation Below Subgrade	R	Radius	T	Trucks (percent of)
FF	Face to Face	RR	Railroad	TYP	Typical
F.E.	Field Entrance	R	Range	UNCL	Unclassified
F	Fill	RL or R/L	Reference Line	UG	Underground Cable
FG	Finished Grade	RP	Reference Point	USH	United States Highway
FL or F/L	Flow Line	RCCP	Reinforced Concrete Culvert Pipe Required	VAR	Variable
FT	Foot	REQD	Residence or Residential	V	Velocity or Design Speed
FTG	Footing	RES	Retaining Wall	VERT	Vertical
GN	Grid North	RW	Right	VC	Vertical Curve
HT	Height	RT	Right-Hand Forward	VOL	Volume
CWT	Hundredweight	RHF	Right-of-Way	WM	Water Main
HYD	Hydrant	R/W	Road	WV	Water Valve
INL	Inlet	RD	River	W	West
ID	Inside Diameter	R		WB	Westbound
				YD	Yard

RUNOFF COEFFICIENT TABLE

	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	.08 .22	.16 .30	.22 .38	.12 .26	.20 .34	.27 .44	.15 .30	.24 .37	.33 .50	.19 .34	.28 .41	.38 .56
MEDIAN STRIP TURF	.19 .24	.20 .26	.24 .30	.19 .25	.22 .28	.26 .33	.20 .26	.23 .30	.30 .37	.20 .27	.25 .32	.30 .40
SIDE SLOPE TURF			.25 .32			.27 .34			.28 .36			.30 .38
PAVEMENT:												
ASPHALT	.70 - .95											
CONCRETE	.80 - .95											
BRICK	.70 - .80											
DRIVES, WALKS	.75 - .85											
ROOFS	.75 - .95											
GRAVEL ROADS, SHOULDERS	.40 - .60											

TOTAL PROJECT AREA = 4.26 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.38 ACRES

PAVEMENT CORING LOG

STATION	LOCATION	EXISTING HMA PAVEMENT DEPTH (IN)	EXISTING BASE COURSE DEPTH (IN)
12+00 +/-	MAINLINE, 12' RT.	5	8
23+50 +/-	MAINLINE, 0' RT.	8	6
36+00 +/-	MAINLINE, 12' LT.	5	4
47+10 +/-	MAINLINE, 0'RT.	6	9

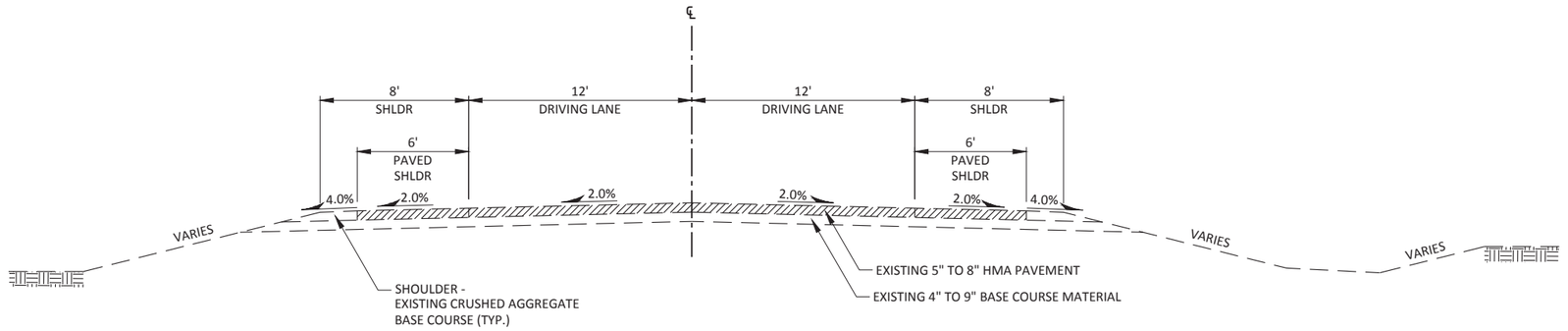
ORDER OF SECTION 2 SHEETS:

- WRITTEN MATERIAL
- TYPICAL SECTIONS
- CONSTRUCTION DETAILS (INCLUDES EROSION CONTROL PLAN)
- PERMANENT SIGNING AND PAVEMENT MARKING
- TRAFFIC CONTROL

CONTROL POINTS

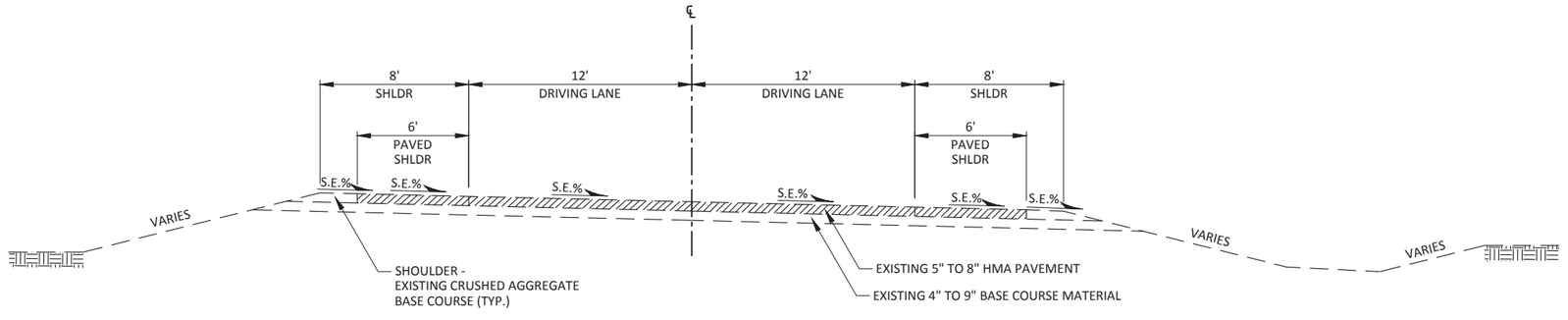
NO.	STA.	DESCRIPTION	Y	X	Z
1	13+34	¾" I.R.S., 36.6' LT.	127,138.19	316,535.49	628.18
2	31+07	¾" I.R.S., 23.9' LT.	128,893.88	316,273.49	628.88
3	47+56	¾" I.R.S., 41.9' RT.	130,533.92	316,391.85	626.21

2



TYPICAL EXISTING SECTION

STA. 10+00 - STA. 14+88
STA. 21+57 - STA. 24+73
STA. 29+33 - STA. 30+38, RT.
STA. 29+33 - STA. 32+13, LT.
STA. 40+10 - STA. 52+08, LT.
STA. 40+10 - STA. 52+13, RT.

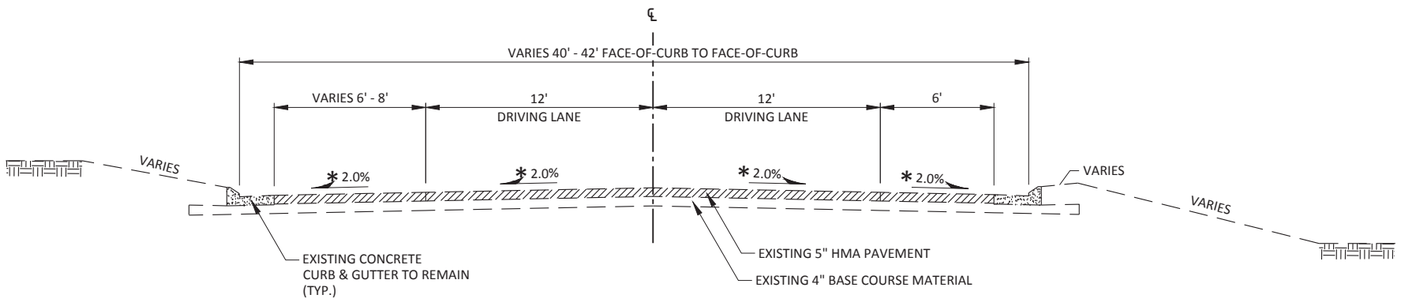


TYPICAL EXISTING SUPERELEVATED SECTION

STA. 14+88 - STA. 21+57
STA. 24+73 - STA. 29+33
STA. 37+18 - STA. 40+10, RT.
STA. 36+63 - STA. 40+10, LT.

PROJECT NO: 5495-00-70	HWY: CTH K	COUNTY: CRAWFORD	TYPICAL EXISTING SECTIONS	SHEET 3	E

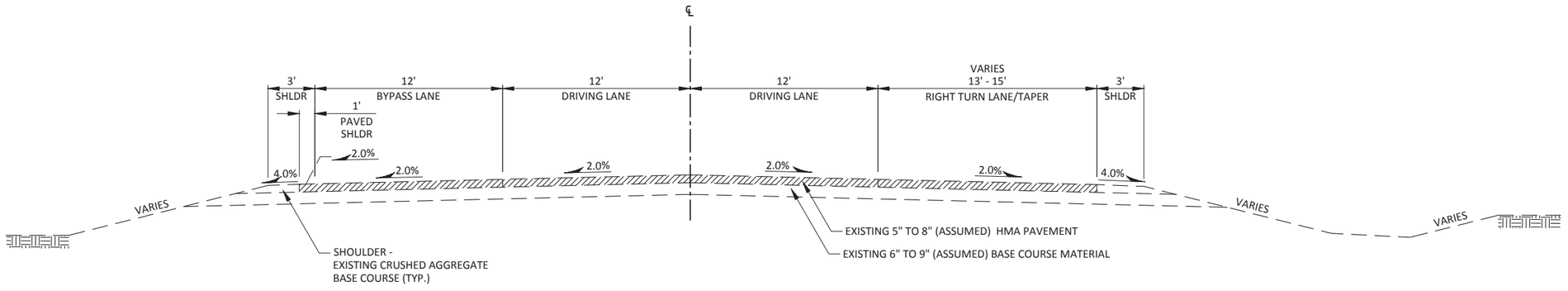
2



TYPICAL EXISTING SECTION

STA. 30+38 - STA. 37+18, RT.
STA. 32+13 - STA. 36+63, LT.

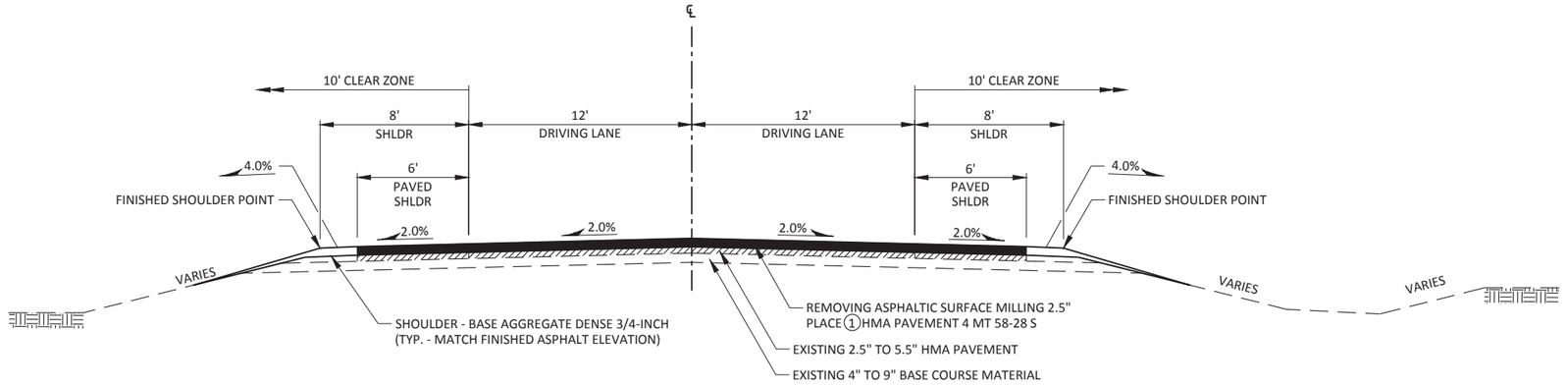
* SUPERELEVATED FROM STA. 35+55 - STA. 36+63, LT. AND STA. 35+55 - STA. 37+18, RT.



TYPICAL EXISTING SECTION

STA. 52+08 - STA. 56+36.82, LT.
STA. 52+13 - STA. 56.36.82, RT.

PROJECT NO: 5495-00-70	HWY: CTH K	COUNTY: CRAWFORD	TYPICAL EXISTING SECTIONS	SHEET 4	E



TYPICAL FINISHED SECTION

①

HMA PAVEMENT 4 MT 58-28 S

5.5"	2.5"
STA. 10+00 - STA. 14+88	STA. 30+38 - STA. 32+13, LT.
STA. 21+57 - STA. 24+73	STA. 40+10 - STA. 52+08, LT.
STA. 29+33 - STA. 30+38	STA. 40+10 - STA. 52+13, RT.

SUPERELEVATION TABLE-CURVE 1

STATION	LEFT(%)	RIGHT(%)
14+88	◄ 2.0	► 2.0
15+00	◄ 1.5	► 2.0
15+50	► 0.8	► 2.0
15+89	► 2.5	► 2.5
FULL SUPERELEVATION		
20+56	► 2.5	► 2.5
21+00	► 0.5	► 2.0
21+50	◄ 1.7	► 2.0
21+57	◄ 2.0	► 2.0

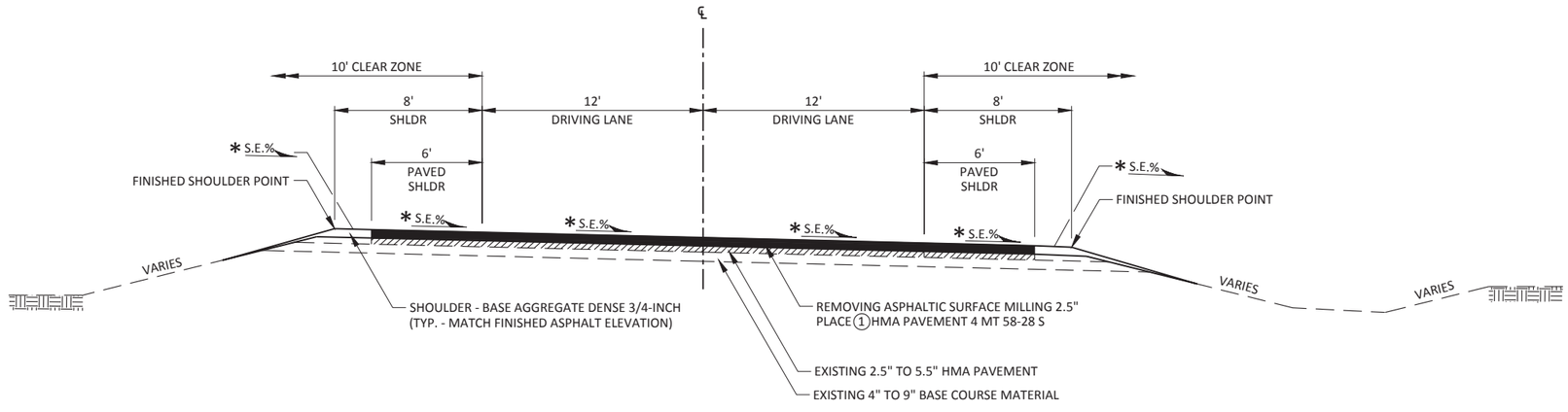
SUPERELEVATION TABLE-CURVE 2

STATION	LEFT(%)	RIGHT(%)
24+73	◄ 2.0	► 2.0
25+00	◄ 0.9	► 2.0
25+50	► 1.2	► 2.0
25+81	► 2.5	► 2.5
FULL SUPERELEVATION		
28+25	► 2.5	► 2.5
28+50	► 1.5	► 2.0
29+00	◄ 0.6	► 2.0
29+33	◄ 2.0	► 2.0

SUPERELEVATION TABLE-CURVE 3

STATION	LEFT(%)	RIGHT(%)
35+55	*MATCH EXISTING	*MATCH EXISTING
36+00	*MATCH EXISTING	*MATCH EXISTING
36+50	*MATCH EXISTING	*MATCH EXISTING
37+00	*MATCH EXISTING	*MATCH EXISTING
37+18	*MATCH EXISTING	*MATCH EXISTING
37+68	► 4.7	► 4.7
FULL SUPERELEVATION		
38+62	► 4.7	► 4.7
39+00	► 3.0	► 3.0
39+50	► 0.7	► 2.0
40+00	◄ 1.5	► 2.0
40+10	◄ 2.0	► 2.0

* SUPERELEVATION WILL MATCH INTO EXISTING CURB & GUTTER FLAGS



TYPICAL FINISHED SUPERELEVATED SECTION

①

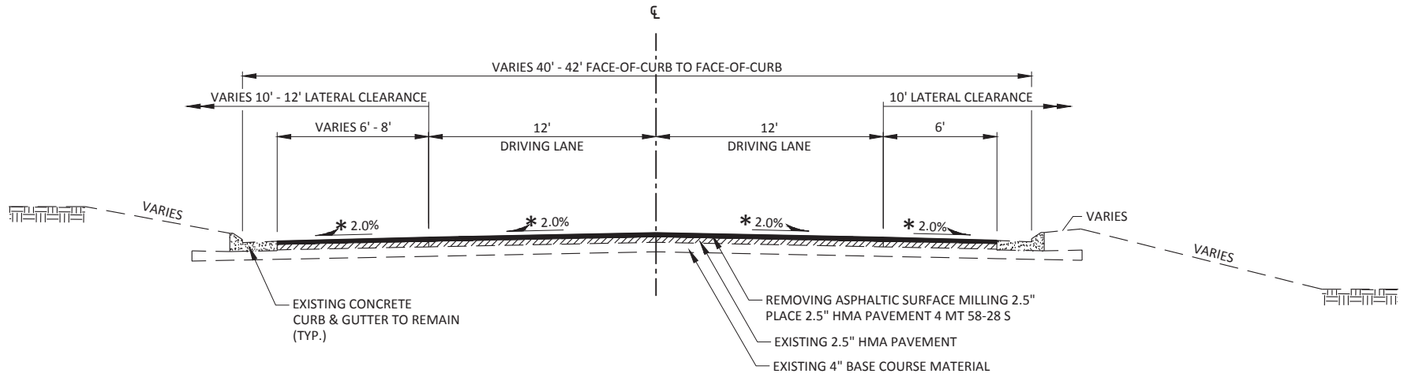
HMA PAVEMENT 4 MT 58-28 S

5.5"	2.5"
STA. 14+88 - STA. 21+57	STA. 36+63 - STA. 40+10, LT.
STA. 24+73 - STA. 29+33	STA. 37+18 - STA. 40+10, RT.

✱ SEE SUPERELEVATION TABLE

PROJECT NO: 5495-00-70	HWY: CTH K	COUNTY: CRAWFORD	TYPICAL FINISHED SECTIONS	SHEET 5	E

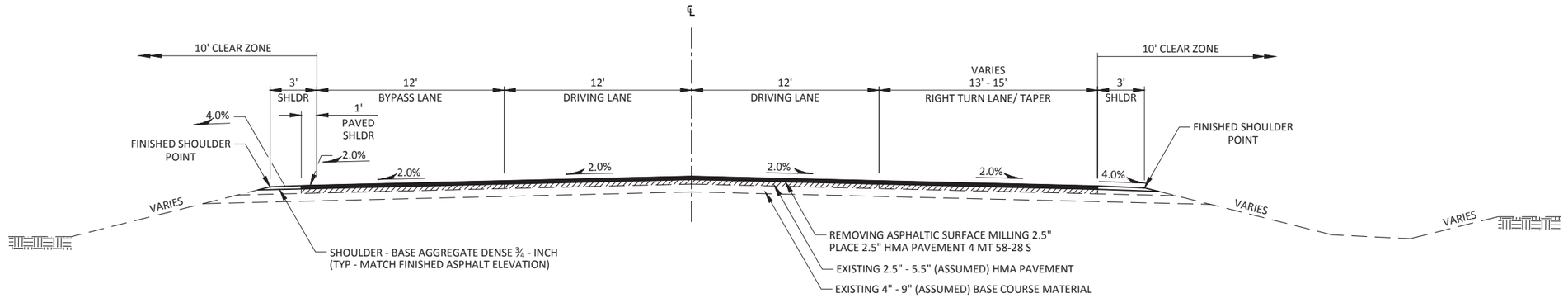
2



TYPICAL FINISHED SECTION

STA. 30+38 - STA. 37+18, RT.
STA. 32+13 - STA. 36+63, LT.

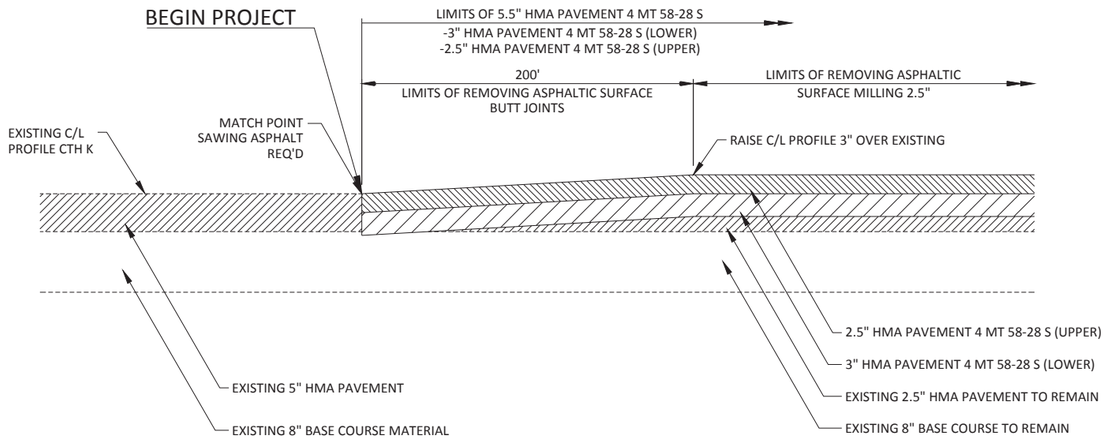
* SEE SUPERELEVATION TABLE -
- STA. 35+55 - STA. 36+63, LT.
- STA. 35+55 - STA. 37+18, RT.



TYPICAL FINISHED SECTION

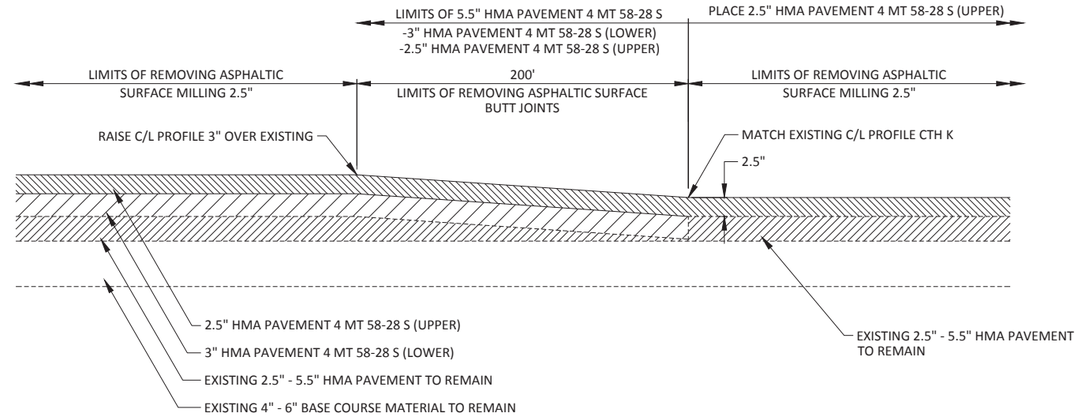
STA. 52+08 - STA. 56+36.82, LT.
STA. 52+13 - STA. 56+36.82, RT.

PROJECT NO: 5495-00-70	HWY: CTH K	COUNTY: CRAWFORD	TYPICAL FINISHED SECTIONS	SHEET 6	E



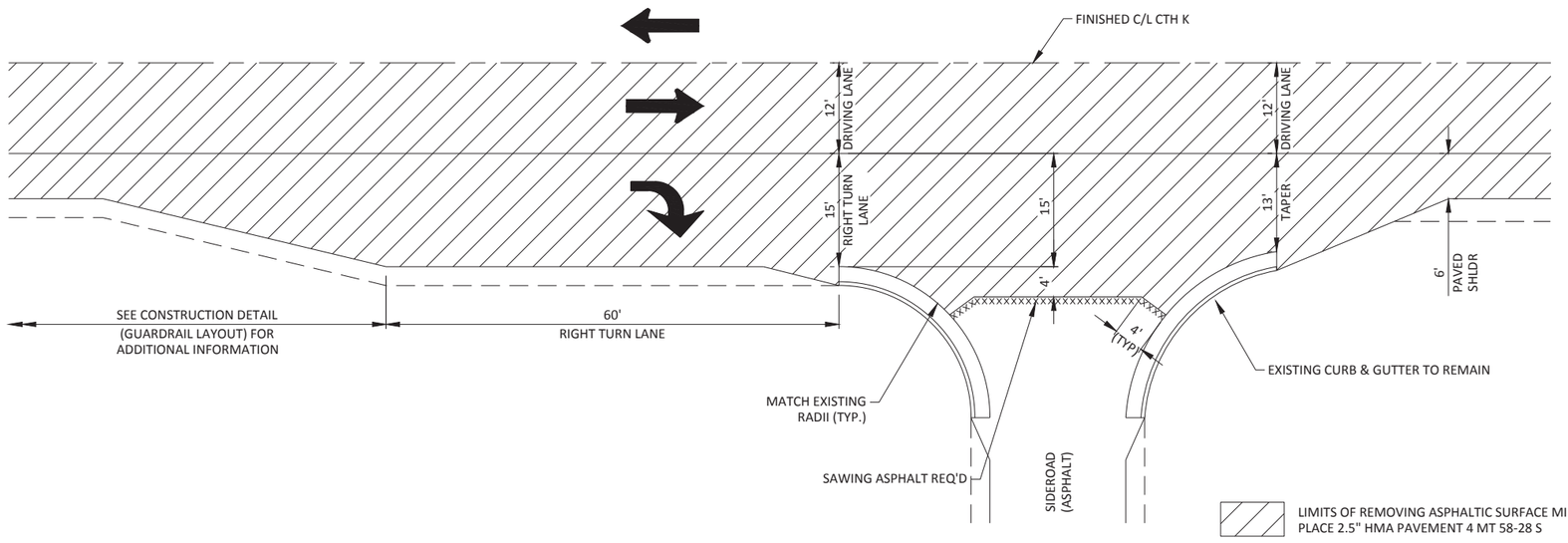
REMOVING ASPHALTIC SURFACE BUTT JOINTS

STA. 10+00 - STA. 12+00



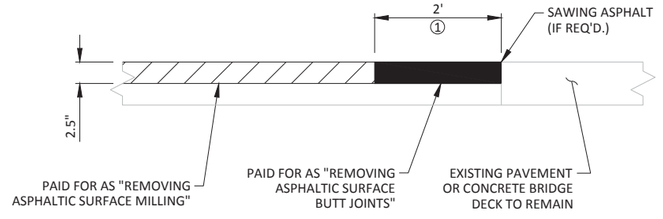
REMOVING ASPHALTIC SURFACE BUTT JOINTS

STA. 28+38 - STA. 30+38



TYPICAL RURAL SIDEROAD DETAIL WITH CURB & GUTTER

CLIFFWOOD DRIVE

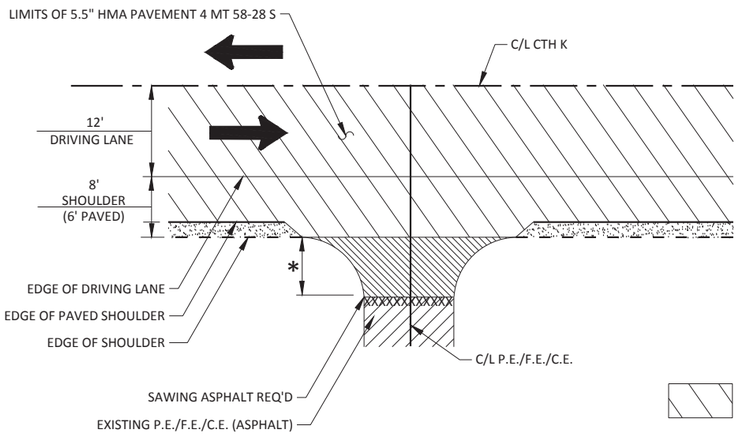


REMOVING ASPHALTIC SURFACE BUTT JOINTS DETAIL

STA. 51+35.15
STA. 51+91.90
STA. 56+36.82

① LIMITS OF REMOVING ASPHALTIC SURFACE BUTT JOINTS REQ'D.

PROJECT NO: 5495-00-70	HWY: CTH K	COUNTY: CRAWFORD	CONSTRUCTION DETAILS	SHEET 7	E



P.E./F.E./C.E. (EXISTING ASPHALT) DRIVEWAY DETAIL-RURAL

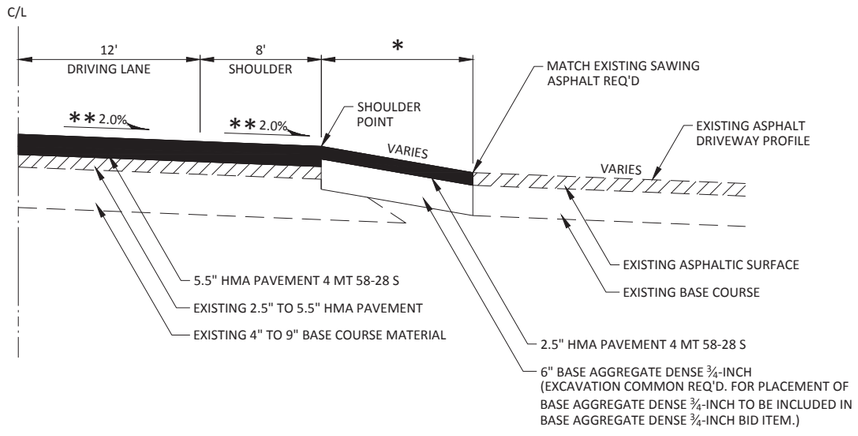
* REPLACE IN KIND TO THE RADIUS POINTS OF EACH DRIVEWAY (OR AS DIRECTED BY ENGINEER) (UNLESS NOTED OTHERWISE)

LIMITS OF REMOVING ASPHALTIC SURFACE MILLING 2.5" AND PLACE 5.5" HMA PAVEMENT 4 MT 58-28 S

LIMITS OF BASE AGGREGATE DENSE 3/4-INCH

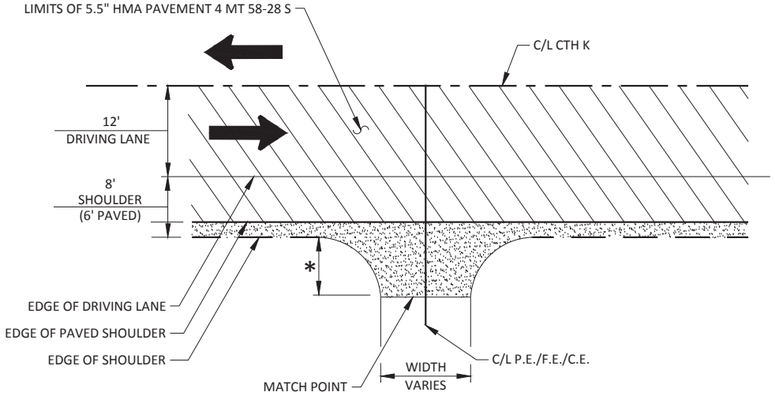
LIMITS OF REMOVING ASPHALTIC SURFACE MILLING AND PLACE 2.5" ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES OVER 6" B.A.D.

LIMITS OF EXISTING ASPHALTIC OR CONCRETE SURFACE P.E./F.E./C.E. TO REMAIN



P.E./F.E./C.E. (EXISTING ASPHALT) PROFILE

** N.C. UNLESS NOTED OTHERWISE -SEE SUPERELEVATION TABLE

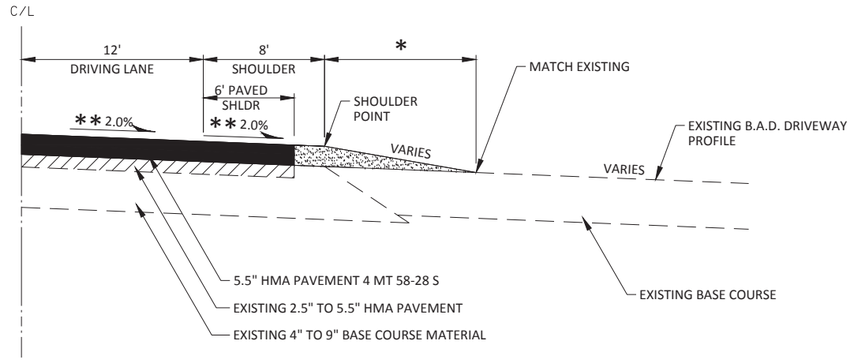


P.E./F.E./C.E. (EXISTING B.A.D.) DRIVEWAY DETAIL-RURAL

* REPLACE IN KIND TO THE RADIUS POINTS OF EACH DRIVEWAY (OR AS DIRECTED BY ENGINEER)

LIMITS OF REMOVING ASPHALTIC SURFACE MILLING 2.5"AND PLACE 5.5" HMA PAVEMENT 4 MT 58-28 S

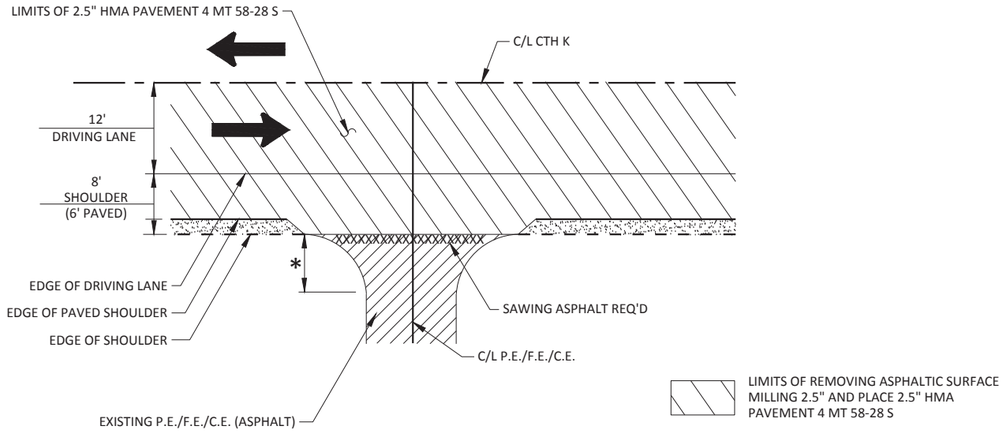
LIMITS OF BASE AGGREGATE DENSE 3/4-INCH



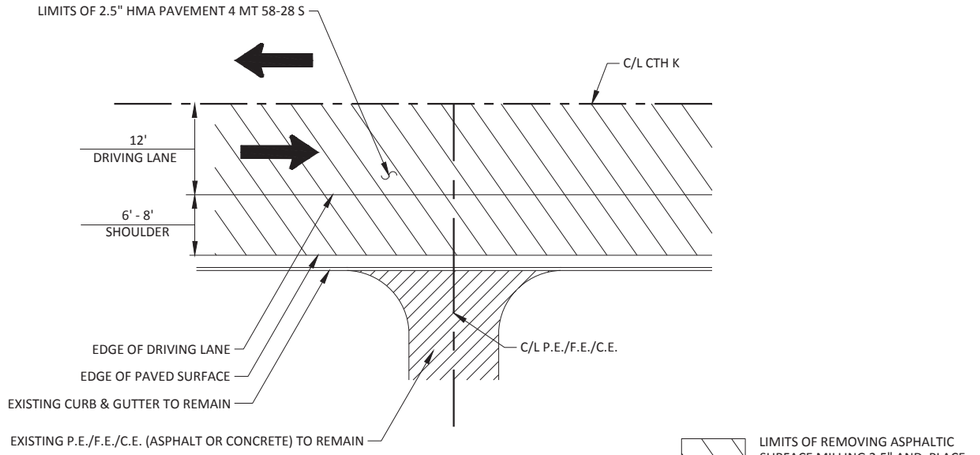
P.E./F.E./C.E. (EXISTING B.A.D.) PROFILE

** N.C. UNLESS NOTED OTHERWISE -SEE SUPERELEVATION TABLE

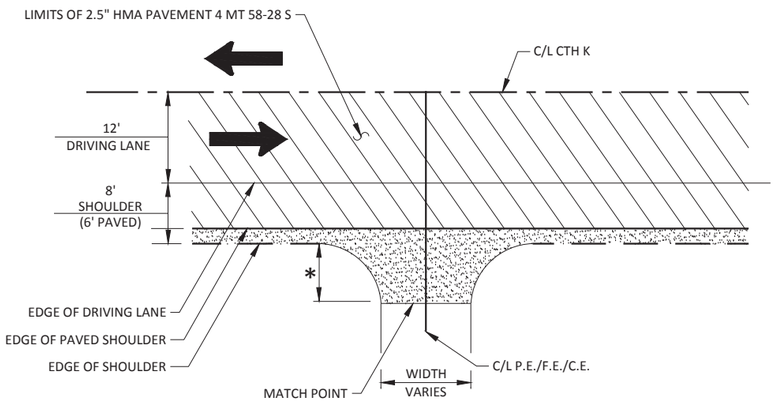
PROJECT NO: 5495-00-70	HWY: CTH K	COUNTY: CRAWFORD	CONSTRUCTION DETAILS	SHEET 8	E



P.E./F.E./C.E.
(EXISTING ASPHALT)
DRIVEWAY DETAIL-RURAL

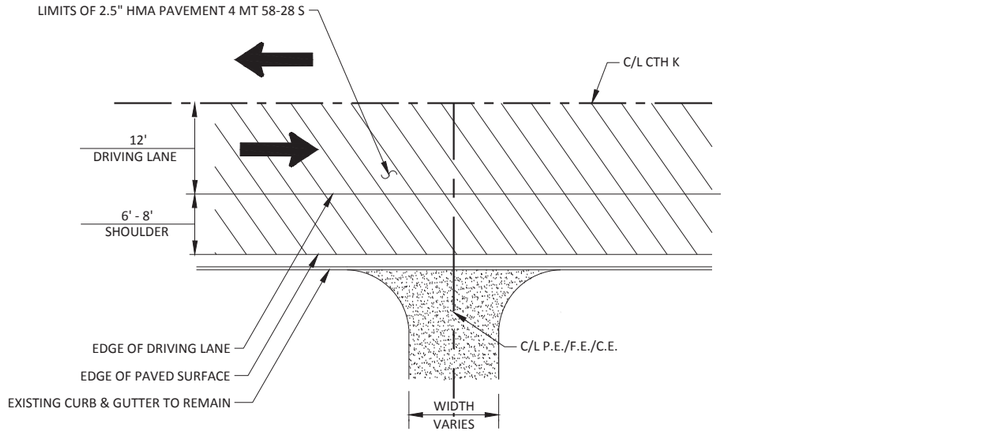


P.E./F.E./C.E.
(EXISTING ASPHALT OR CONRETE)
DRIVEWAY DETAIL - URBAN



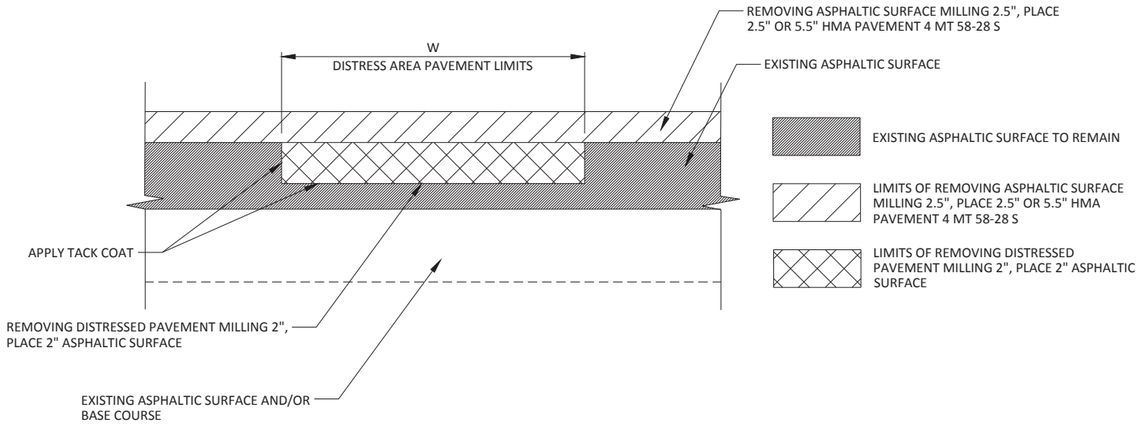
P.E./F.E./C.E. (EXISTING B.A.D.)
DRIVEWAY DETAIL-RURAL

* REPLACE IN KIND TO THE RADIUS POINTS OF EACH DRIVEWAY (OR AS DIRECTED BY ENGINEER)

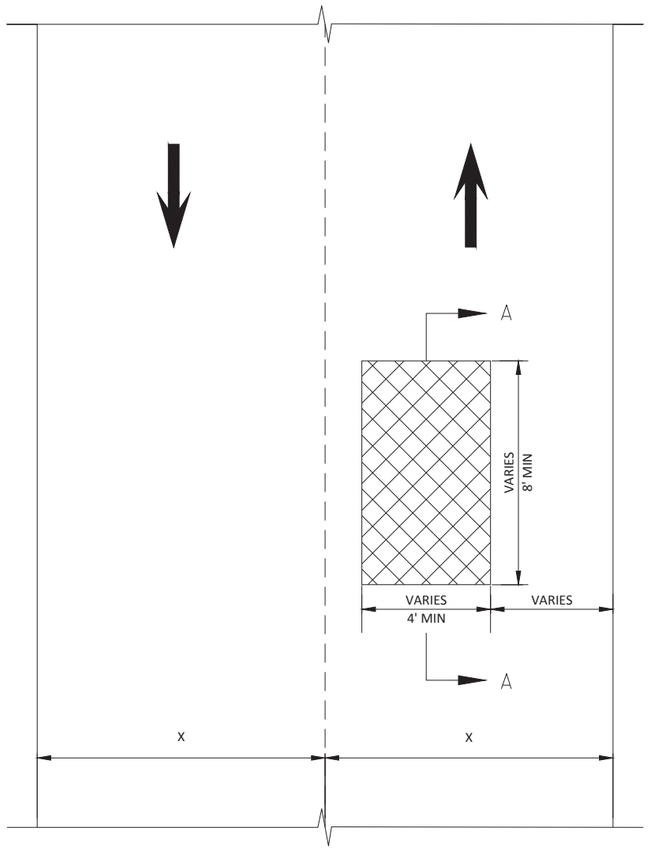


P.E./F.E./C.E. (EXISTING B.A.D.)
DRIVEWAY DETAIL-URBAN

2



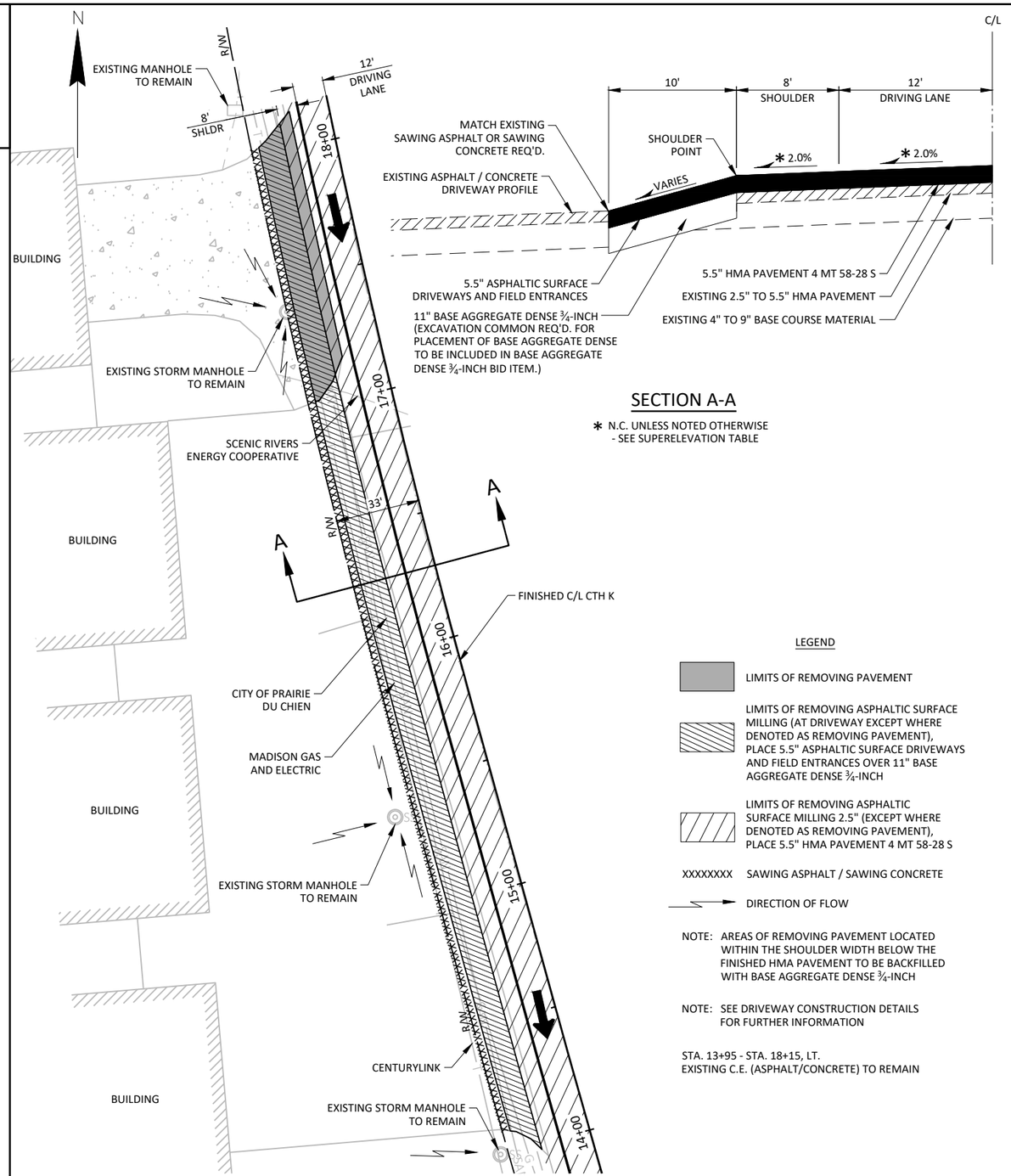
REMOVING DISTRESS PAVEMENT MILLING
SECTION A-A



STATION-STATION	W (FT)
*	*

* EXACT LOCATION AND LIMITS OF REMOVING DISTRESSED PAVEMENT MILLING TO BE DETERMINED BY THE ENGINEER IN THE FIELD

PLAN VIEW



SECTION A-A

* N.C. UNLESS NOTED OTHERWISE - SEE SUPERELEVATION TABLE

LEGEND

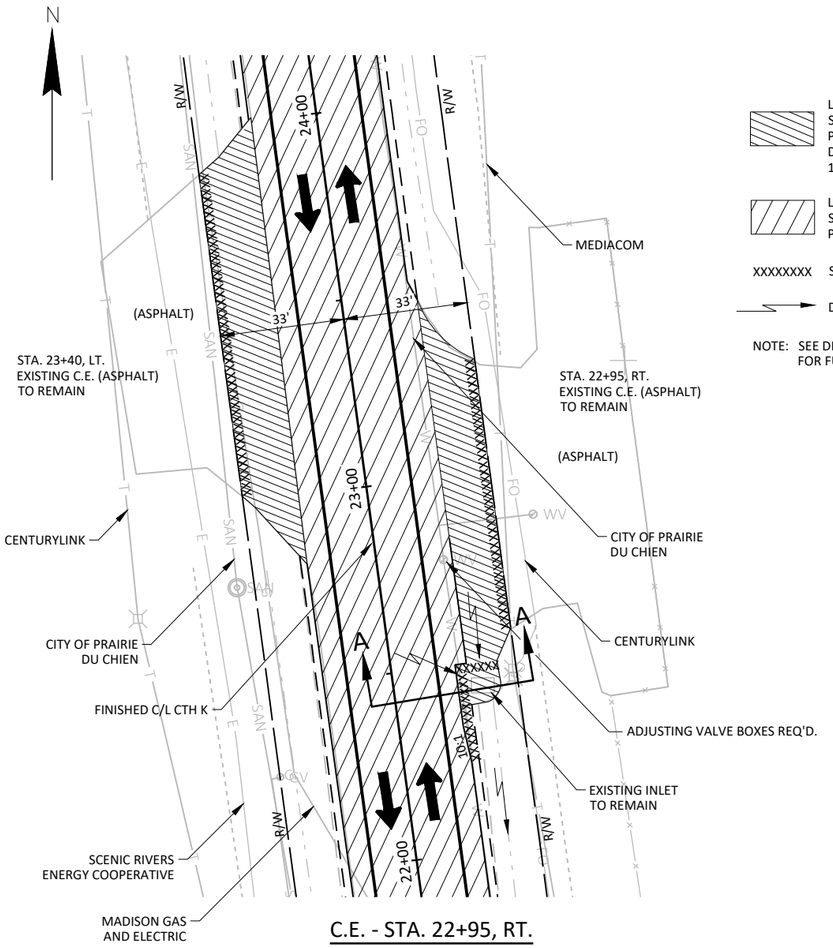
- LIMITS OF REMOVING PAVEMENT
- LIMITS OF REMOVING ASPHALTIC SURFACE MILLING (AT DRIVEWAY EXCEPT WHERE DENOTED AS REMOVING PAVEMENT), PLACE 5.5" ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES OVER 11" BASE AGGREGATE DENSE ¾-INCH
- LIMITS OF REMOVING ASPHALTIC SURFACE MILLING 2.5" (EXCEPT WHERE DENOTED AS REMOVING PAVEMENT), PLACE 5.5" HMA PAVEMENT 4 MT 58-28 S
- XXXXXXXX SAWING ASPHALT / SAWING CONCRETE
- DIRECTION OF FLOW

NOTE: AREAS OF REMOVING PAVEMENT LOCATED WITHIN THE SHOULDER WIDTH BELOW THE FINISHED HMA PAVEMENT TO BE BACKFILLED WITH BASE AGGREGATE DENSE ¾-INCH

NOTE: SEE DRIVEWAY CONSTRUCTION DETAILS FOR FURTHER INFORMATION

STA. 13+95 - STA. 18+15, LT.
EXISTING C.E. (ASPHALT/CONCRETE) TO REMAIN

C.E. - STA. 13+95 - STA. 18+15, LT.

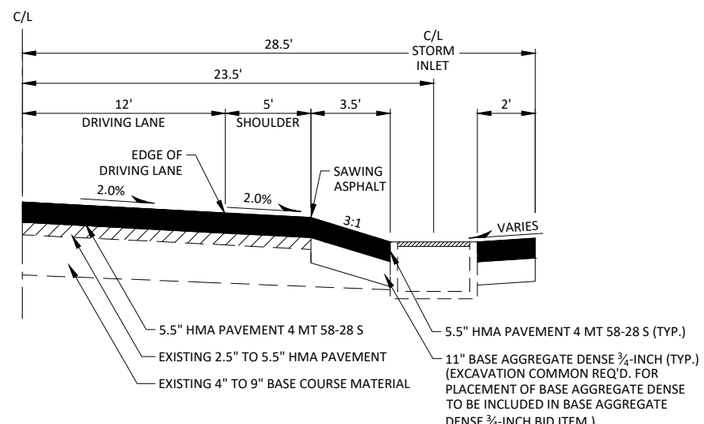


LEGEND

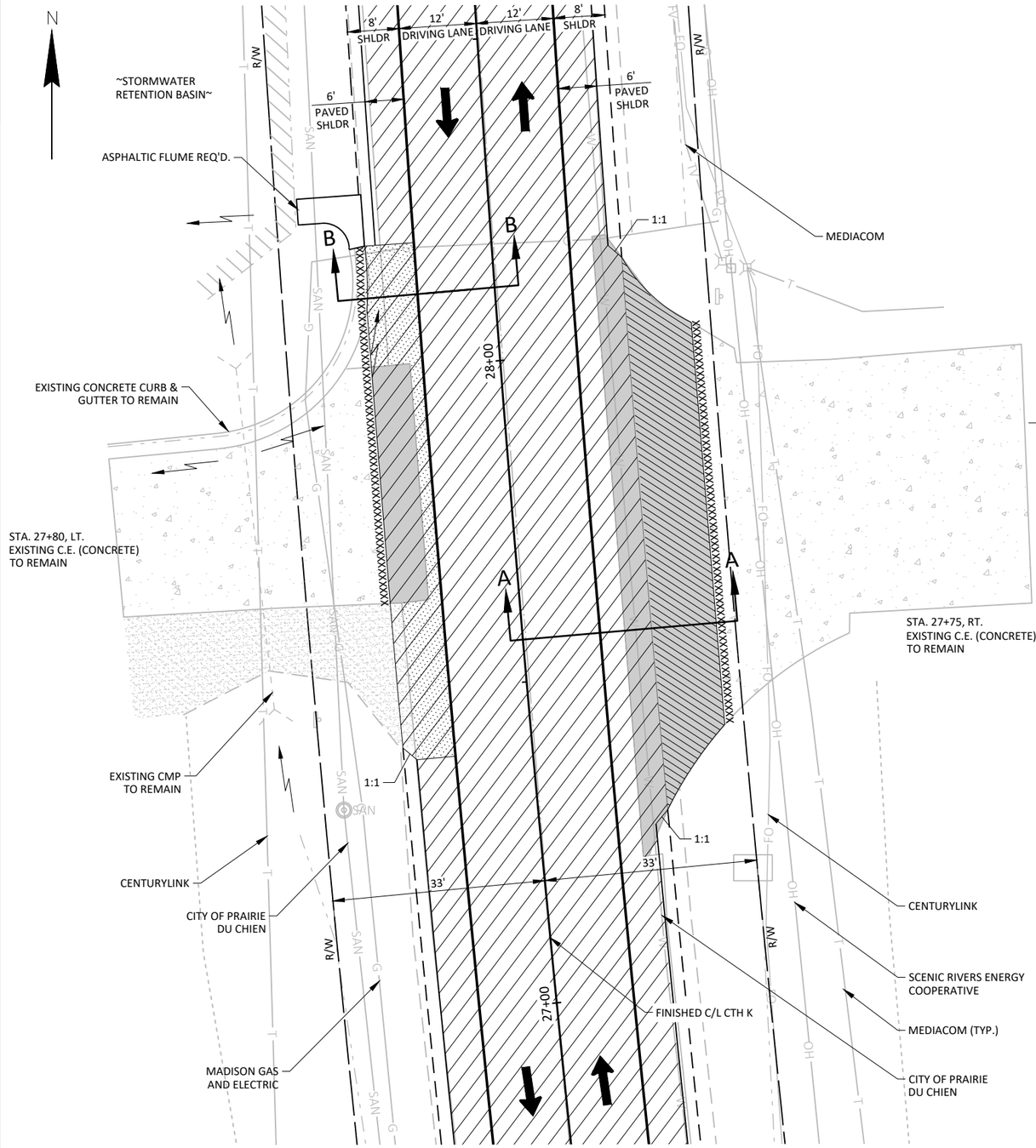
- LIMITS OF REMOVING ASPHALTIC SURFACE MILLING (AT DRIVEWAY), PLACE 5.5" ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES OVER 11" BASE AGGREGATE DENSE ¾-INCH
- LIMITS OF REMOVING ASPHALTIC SURFACE MILLING 2.5", PLACE 5.5" HMA PAVEMENT 4 MT 58-28 S
- XXXXXXXX SAWING ASPHALT
- DIRECTION OF FLOW

NOTE: SEE DRIVEWAY CONSTRUCTION DETAILS FOR FURTHER INFORMATION

C.E. - STA. 22+95, RT.



SECTION A-A

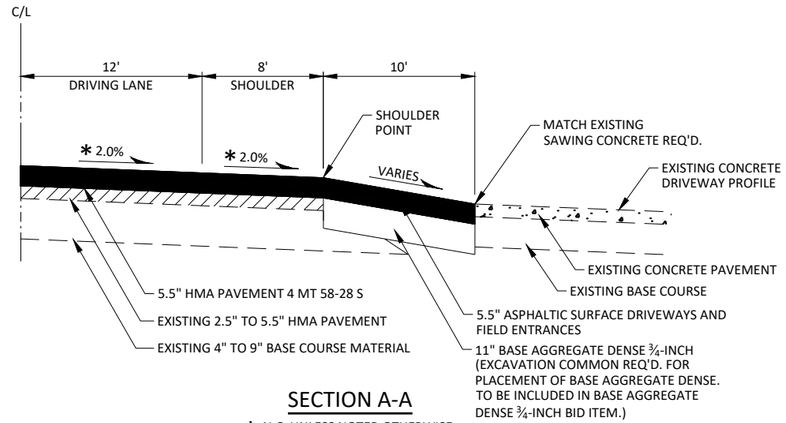


C.E. - STA. 27+75, RT. / C.E. - STA. 27+80, LT.

LEGEND

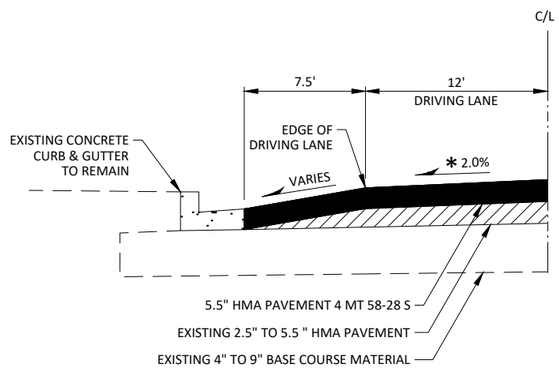
- EXISTING CONCRETE PAVEMENT
- EXISTING B.A.D.
- LIMITS OF REMOVING PAVEMENT
- PLACE 5.5" ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES OVER 11" BASE AGGREGATE DENSE ¾-INCH
- LIMITS OF REMOVING ASPHALTIC SURFACE MILLING 2.5" (EXCEPT WHERE DENOTED AS REMOVING PAVEMENT), PLACE 5.5" HMA PAVEMENT 4 MT 58-28 S
- REMOVING ASPHALTIC SURFACE BUTT JOINTS -STA. 27+80, LT. - 80'x8'
- XXXXXXXX SAWING ASPHALT / SAWING CONCRETE
- DIRECTION OF FLOW

NOTE: AREAS OF REMOVING PAVEMENT LOCATED WITHIN THE SHOULDER WIDTH BELOW THE FINISHED HMA PAVEMENT TO BE BACKFILLED WITH BASE AGGREGATE DENSE ¾-INCH



SECTION A-A

* N.C. UNLESS NOTED OTHERWISE - SEE SUPERELEVATION TABLE



SECTION B-B

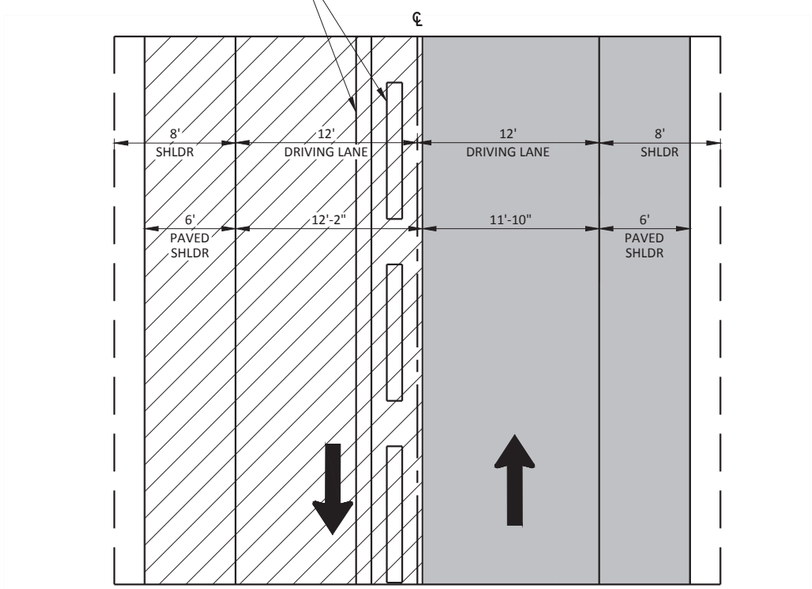
* N.C. UNLESS NOTED OTHERWISE - SEE SUPERELEVATION TABLE

2

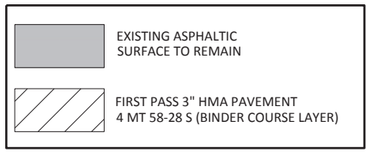
PROJECT NO: 5495-00-70	HWY: CTH K	COUNTY: CRAWFORD	CONSTRUCTION DETAILS	SHEET 12	E

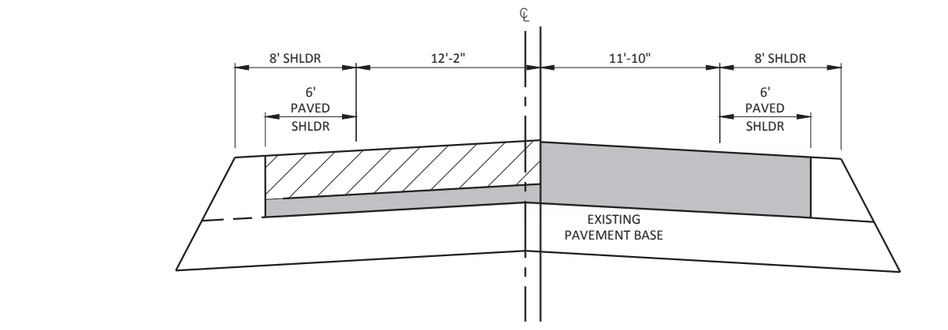
2

TEMPORARY MARKING LINE PAINT 4-INCH TO BE PLACED ON LOWER LEVEL PAVEMENT SAME DAY AS PAVING OPERATION (ALL TEMPORARY MARKING LINE PAINT IS TO MATCH EXISTING CENTERLINE CONDITIONS)



PLAN VIEW



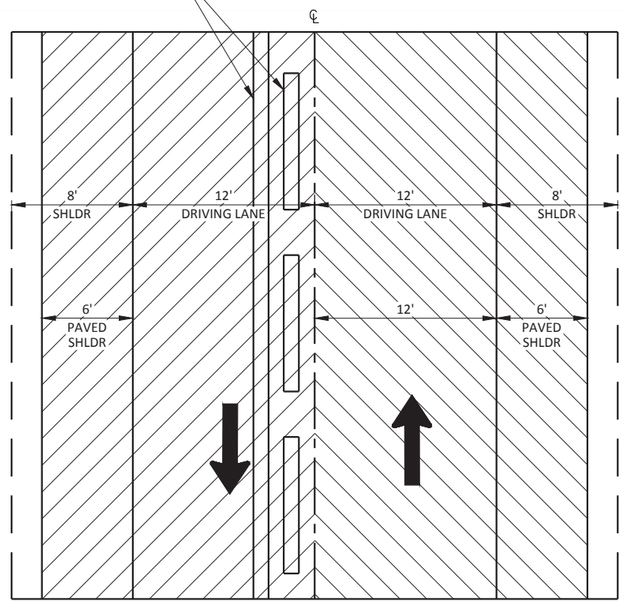


CROSS SECTION VIEW

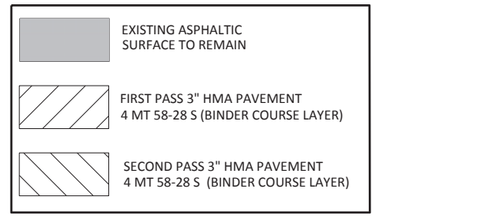
FIRST PASS DETAIL

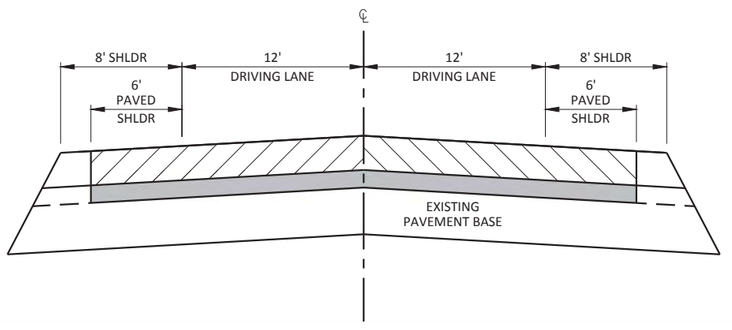
(TYPICAL MULTI-LIFT PAVING OPERATIONS)

TEMPORARY MARKING LINE PAINT 4-INCH PLACED AFTER FIRST PASS TO REMAIN FOR SECOND PASS.



PLAN VIEW





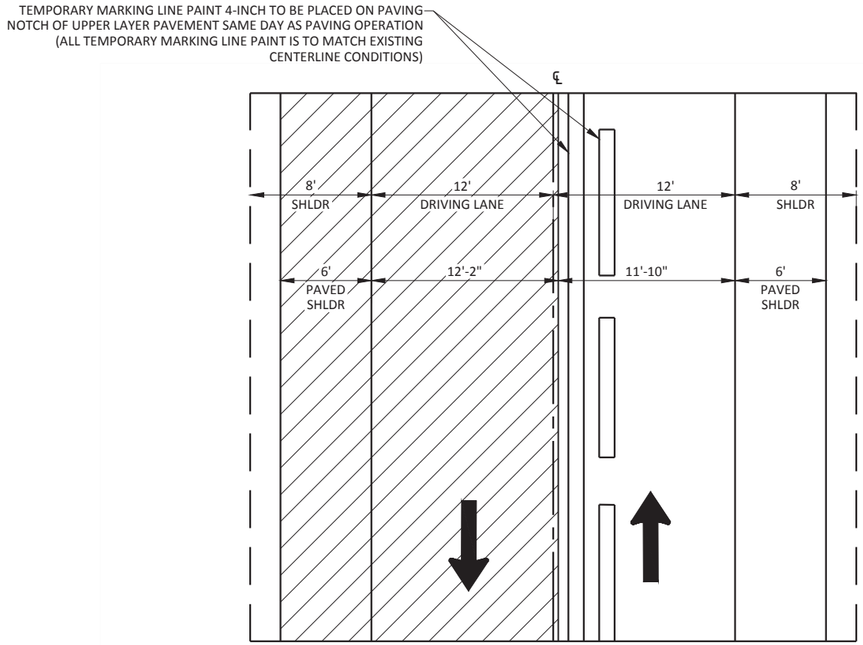
CROSS SECTION VIEW

SECOND PASS DETAIL

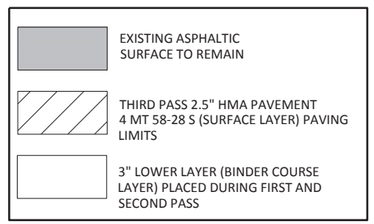
(TYPICAL MULTI-LIFT PAVING OPERATIONS)

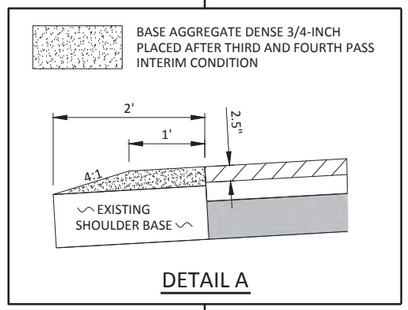
2

PROJECT NO: 5495-00-70	HWY: CTH K	COUNTY: CRAWFORD	CONSTRUCTION DETAILS: PAVING SEQUENCE OF OPERATIONS (RURAL)	SHEET 13	E

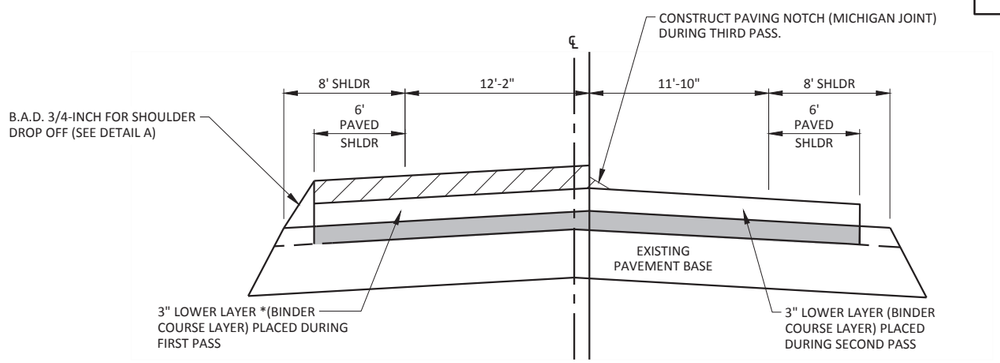


PLAN VIEW





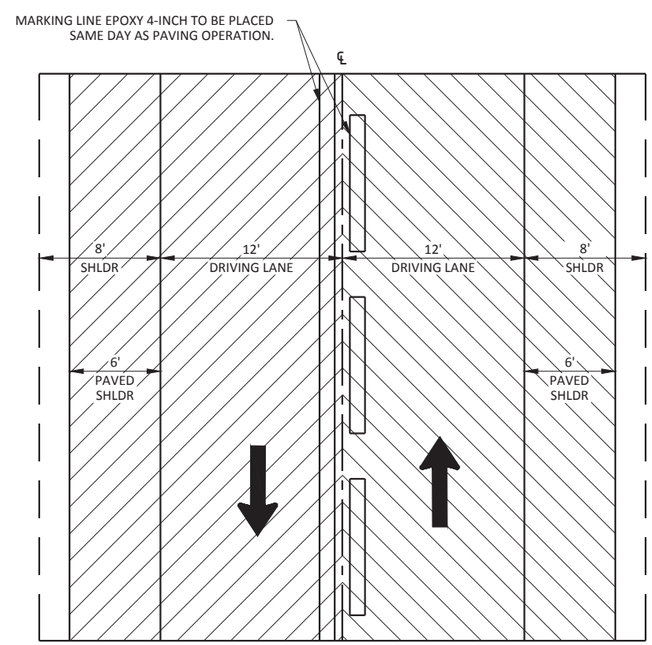
DETAIL A



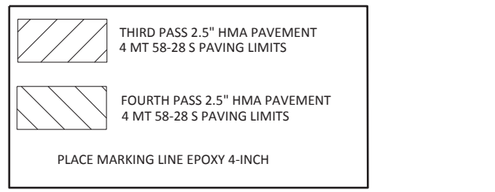
CROSS SECTION VIEW

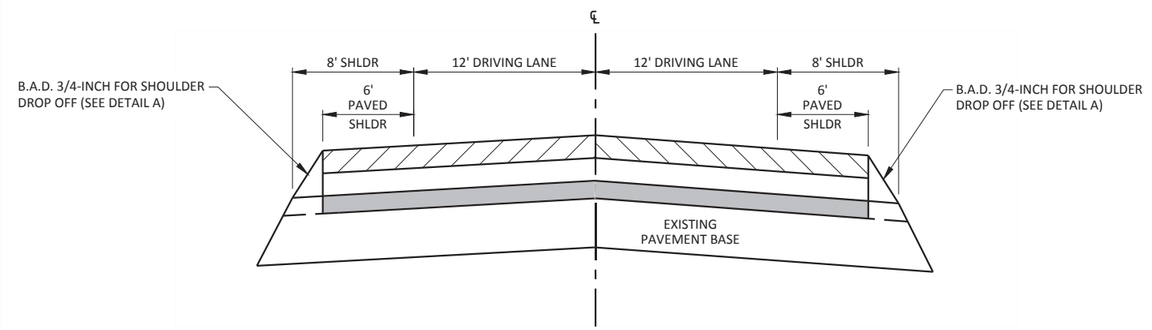
THIRD PASS DETAIL

(TYPICAL MULTI-LIFT PAVING OPERATIONS)



PLAN VIEW



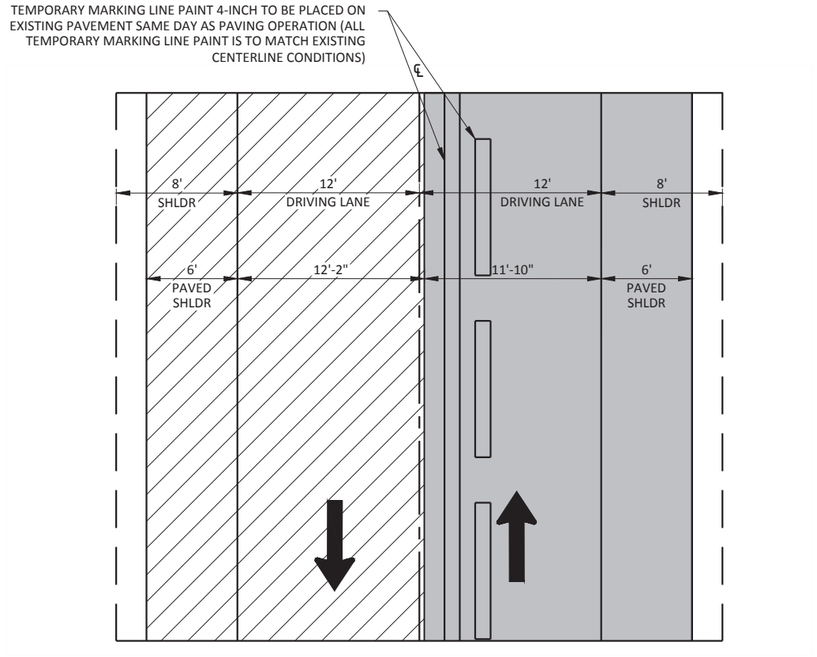


CROSS SECTION VIEW

FOURTH PASS DETAIL

(TYPICAL MULTI-LIFT PAVING OPERATIONS)

PROJECT NO: 5495-00-70	HWY: CTH K	COUNTY: CRAWFORD	CONSTRUCTION DETAILS: PAVING SEQUENCE OF OPERATIONS (RURAL)	SHEET 14	E

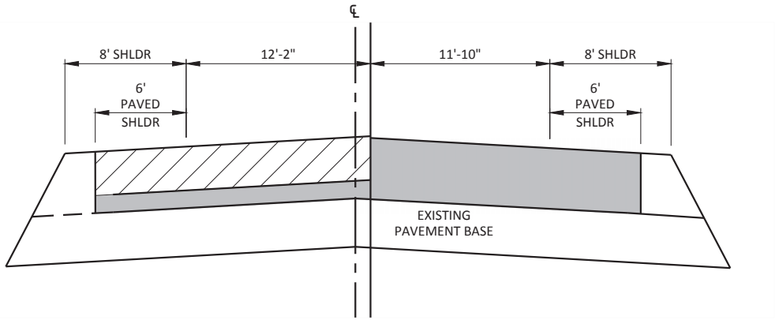


PLAN VIEW

EXISTING ASPHALTIC SURFACE TO REMAIN

FIRST PASS 2.5" HMA PAVEMENT 4 MT 58-28 S PAVING LIMITS

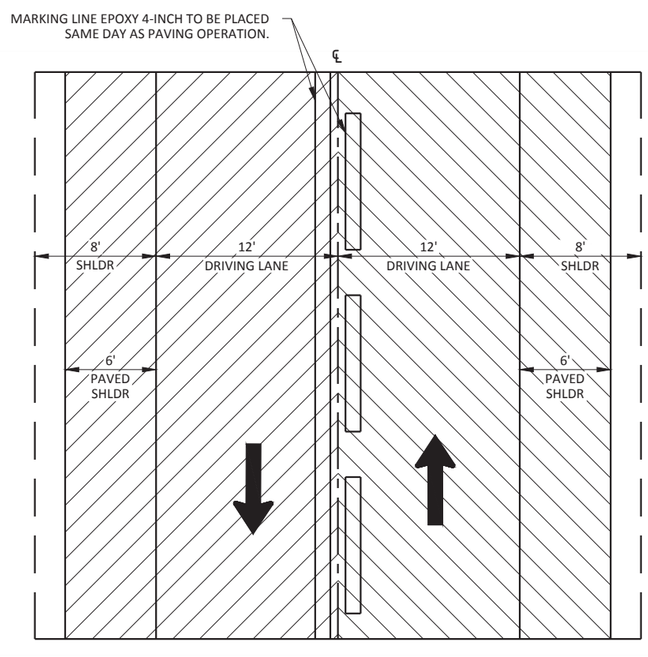
NOTE: PAVING SEQUENCE OF OPERATIONS IN URBAN SECTIONS (CONCRETE CURB & GUTTER) SIMILAR



CROSS SECTION VIEW

FIRST PASS DETAIL

(TYPICAL SINGLE-LIFT PAVING OPERATIONS)



PLAN VIEW

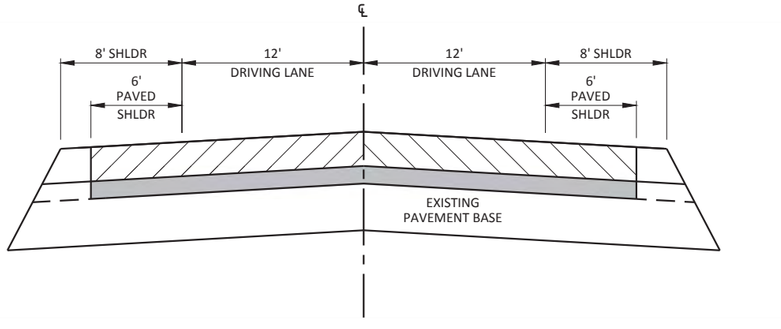
FIRST PASS 2.5" HMA PAVEMENT 4 MT 58-28 S PAVING LIMITS

SECOND PASS 2.5" HMA PAVEMENT 4 MT 58-28 S PAVING LIMITS

NOTE: LOCATING NO PASSING ZONES REQUIRED (STA. 36+40 - STA. 56+36.82) PRIOR TO PLACEMENT OF MARKING LINE EPOXY 4-INCH.

PLACE MARKING LINE EPOXY 4-INCH

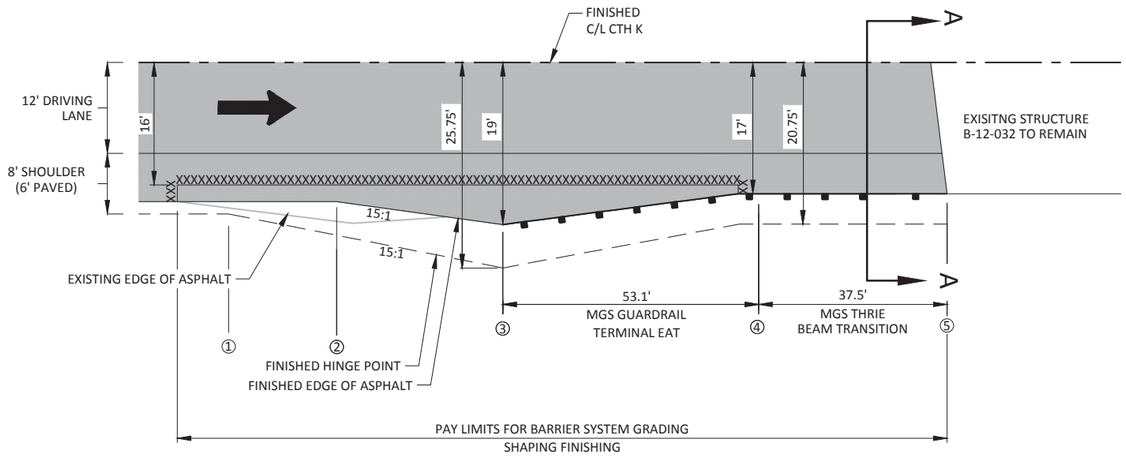
NOTE: PAVING SEQUENCE OF OPERATIONS IN URBAN SECTIONS (CONCRETE CURB & GUTTER) SIMILAR



CROSS SECTION VIEW

SECOND PASS DETAIL

(TYPICAL SINGLE-LIFT PAVING OPERATIONS)

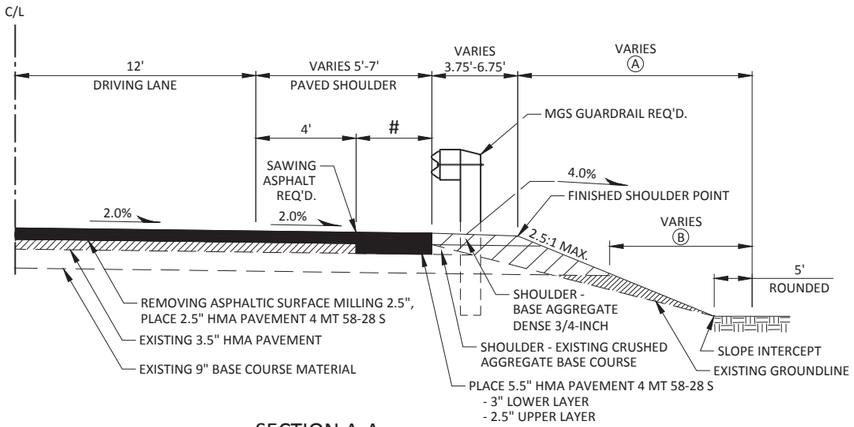


LIMITS OF HMA PAVEMENT
4 MT 58-28 S

XXXXXXXX SAWING ASPHALT

BEAMGUARD LAYOUT DETAIL

STATION-STATION	LOCATION	BEAMGUARD LAYOUT TABLE STATION ①	②	③	④	⑤
49+56 - 51+33	MAINLINE, LT.	49+56	50+27	50+42	50+95	51+33
49+61 - 51+38	MAINLINE, RT.	49+61	50+32	50+47	51+00	51+38
51+89 - 53+83	MAINLINE, LT.	53+22	53+83	52+80	52+27	51+89



SECTION A-A

BASE AGGREGATE DENSE 3/4-INCH REQ'D.

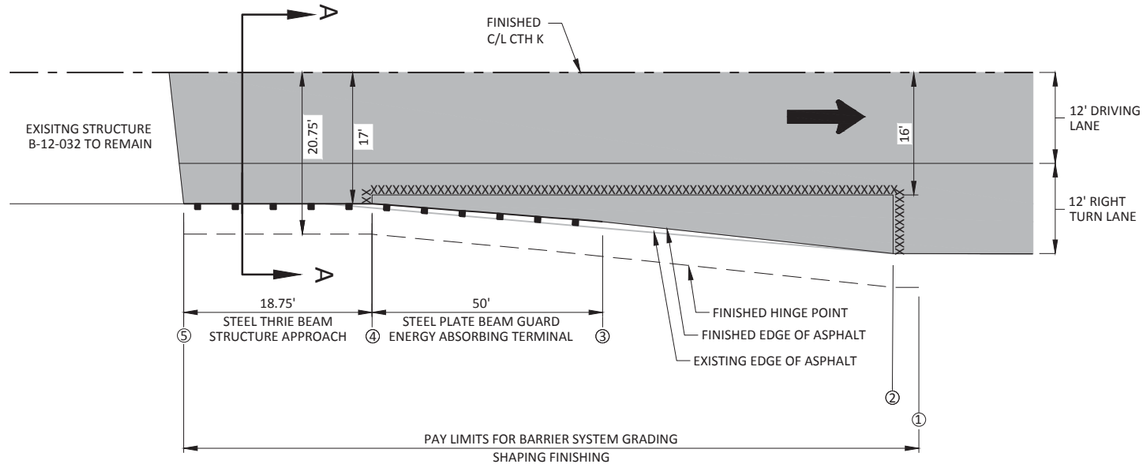
BORROW MATERIAL (PAID FOR UNDER BARRIER
SYSTEM GRADING SHAPING FINISHING)

Ⓐ LIMITS OF FERTILIZER TYPE B AND SEEDING MIXTURE NO. 30 (AS DIRECTED BY THE ENGINEER). PAID FOR UNDER BARRIER SYSTEM GRADING SHAPING FINISHING BID ITEM. LIMITS OF EROSION MAT URBAN CLASS I TYPE B (AS DIRECTED BY THE ENGINEER).

Ⓑ LIMITS OF SALVAGED TOPSOIL (AS DIRECTED BY THE ENGINEER). PAID FOR UNDER BARRIER SYSTEM GRADING SHAPING FINISHING BID ITEM.

\# PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS
STA. 49+20 - STA. 50+92, LT.
STA. 49+28 - STA. 50+97, RT.
STA. 52+30 - STA. 53+83, LT.

REMOVE ASPHALTIC SURFACE QUANTITIES TO BE INCLUDED IN THE EXCAVATION COMMON QUANTITIES.
EXCAVATION COMMON QUANTITIES PAID FOR UNDER THE BARRIER SYSTEM GRADING SHAPING AND FINISHING BID ITEM.

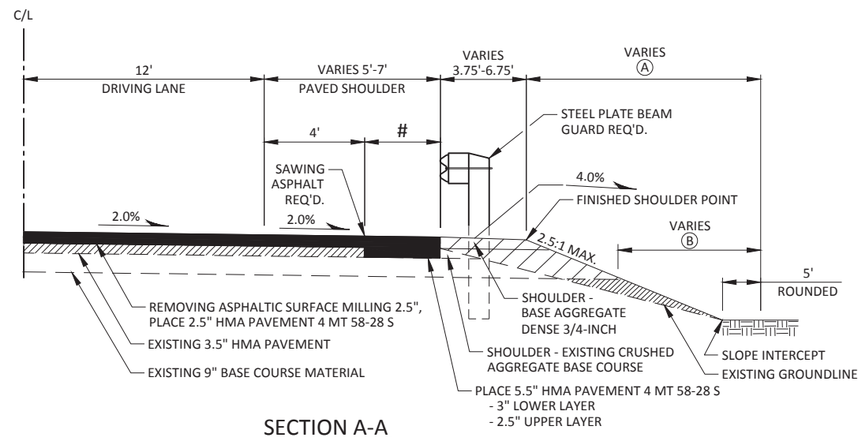


LIMITS OF HMA PAVEMENT
4 MT 58-28 S

XXXXXXXX SAWING ASPHALT

BEAMGUARD LAYOUT DETAIL

STATION-STATION	LOCATION	BEAMGUARD LAYOUT TABLE STATION ①	②	③	④	⑤
51+94 - 53+34	MAINLINE, RT.	52+72	53+34	52+63	52+13	51+94



SECTION A-A

BASE AGGREGATE DENSE 3/4-INCH REQ'D.

BORROW MATERIAL (PAID FOR UNDER BARRIER
SYSTEM GRADING SHAPING FINISHING)

Ⓐ LIMITS OF FERTILIZER TYPE B AND SEEDING MIXTURE NO. 30 (AS DIRECTED BY THE ENGINEER). PAID FOR UNDER BARRIER SYSTEM GRADING SHAPING FINISHING BID ITEM. LIMITS OF EROSION MAT URBAN CLASS I TYPE B (AS DIRECTED BY THE ENGINEER).

Ⓑ LIMITS OF SALVAGED TOPSOIL (AS DIRECTED BY THE ENGINEER). PAID FOR UNDER BARRIER SYSTEM GRADING SHAPING FINISHING BID ITEM.

\# PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS
STA. 52+13 - STA. 53+34, RT.

REMOVE ASPHALTIC SURFACE QUANTITIES TO BE INCLUDED IN THE EXCAVATION COMMON QUANTITIES.
EXCAVATION COMMON QUANTITIES PAID FOR UNDER THE BARRIER SYSTEM GRADING SHAPING AND FINISHING BID ITEM.

STA. 50+00 - STA. 51+33, LT.
SALVAGED RAIL REQ'D.

LEGEND
XXXXXXX SAWING ASPHALT
DIRECTION OF TRAVEL
SILT FENCE
DIRECTION OF FLOW
EXISTING RIPRAP TO REMAIN

N

EXISTING STRUCTURE B-12-032 TO REMAIN
(SINGLE-SPAN 36-INCH PRESTRESSED GIRDER STRUCTURE)

PAY LIMITS FOR BARRIER SYSTEM GRADING SHAPING FINISHING

R/W

CENTURYLINK

FINISHED HINGE POINT (TYP.)

SLOPE INTERCEPTS (TYP.)

FINISHED EDGE OF ASPHALT (TYP.)

53.1'
MGS GUARDRAIL TERMINAL EAT

37.5'
MGS THRIE BEAM TRANSITION

POST 1
STA. 50+42
19.0' LT.

POST 5
STA. 50+67
18.0' LT.

POST 9
STA. 50+92
17.0' LT.

15:1

15:1

CAMPBELL COULEE CREEK

50'

6' PAVED SHLDR

8' SHLDR

12' DRIVING LANE

12' DRIVING LANE

16'

FINISHED C/L CTH K

49+00

50+00

51+00

CTH K

6' PAVED SHLDR

8' SHLDR

16'

15:1

15:1

50'

MADISON GAS & ELECTRIC

SCENIC RIVERS ENERGY COOPERATIVE

POST 1
STA. 50+47
19.0' LT.

POST 5
STA. 50+72
18.0' LT.

POST 9
STA. 50+97
17.0' LT.

53.1'
MGS GUARDRAIL TERMINAL EAT

37.5'
MGS THRIE BEAM TRANSITION

R/W

R/W

PAY LIMITS FOR BARRIER SYSTEM GRADING SHAPING FINISHING

MATCH LINE STA. 51+60

NET EXCEPTION
TO C/L LENGTH
STA. 51+35.15

STA. 50+18 - STA. 51+38, RT.
SALVAGED RAIL REQ'D.

PROJECT NO: 5495-00-70	HWY: CTH K	COUNTY: CRAWFORD	CONSTRUCTION DETAILS (GUARDRAIL LAYOUT)	SHEET 17	E

STA. 51+90 - STA. 53+84, LT.
SALVAGED RAIL REQ'D.

N

NET EXCEPTION
TO C/L LENGTH
STA. 51+91.90

EXISTING STRUCTURE B-12-032 TO REMAIN
(SINGLE-SPAN 36-INCH PRESTRESSED GIRDER STRUCTURE)

LEGEND
XXXXXXX SAWING ASPHALT
DIRECTION OF TRAVEL
SILT FENCE
DIRECTION OF FLOW
EXISTING RIPRAP TO REMAIN

170' TEE BYPASS LANE TAPER
230' TEE BYPASS LANE (FULL WIDTH)
PAY LIMITS FOR BARRIER SYSTEM GRADING SHAPING FINISHING
FINISHED HINGE POINT (TYP.)
FINISHED EDGE OF ASPHALT (TYP.)
37.5'
MGS THRIE BEAM TRANSITION
53.1'
MGS GUARDRAIL TERMINAL EAT
POST 9 STA. 52+30 17.0' LT.
POST 5 STA. 52+55 18.0' LT.
POST 1 STA. 52+80 19.0' LT.
CENTURYLINK
R/W
CAMPBELL COULEE CREEK
33'
32:1
15:1
2' PAVED SHLDR
12' DRIVING LANE
12' BYPASS LANE
16'
FINISHED C/L CTH K
52+00
53+00
54+00
MATCH LINE STA. 51+60
CTH K
12' DRIVING LANE
12' RIGHT TURN LANE
10:1
10:1
POST 9 STA. 52+13 17.0' RT.
POST 5 STA. 52+38 18.0' RT.
POST 1 STA. 52+63 19.0' RT.
18.75'
STEEL THRIE BEAM STRUCTURE APPROACH
50'
STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
SLOPE INTERCEPTS (TYP.)
6'-8½"
MADISON GAS & ELECTRIC
PAY LIMITS FOR BARRIER SYSTEM GRADING SHAPING FINISHING
SCENIC RIVERS ENERGY COOPERATIVE
120'
RIGHT TURN LANE TAPER
75'
RIGHT TURN LANE
CLIFFWOOD DRIVE

STA. 51+94 - STA. 53+01, RT.
SALVAGED RAIL REQ'D.

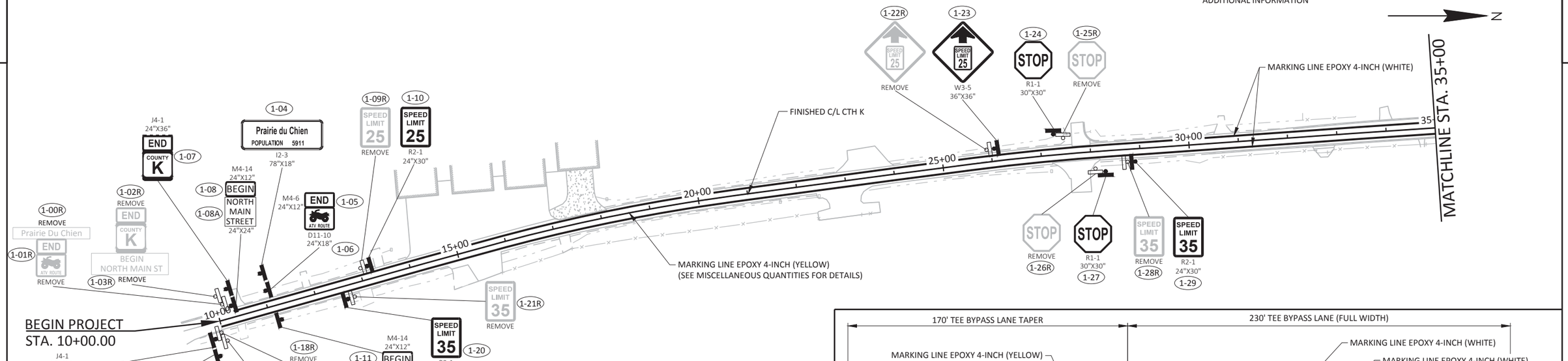
PROJECT NO: 5495-00-70	HWY: CTH K	COUNTY: CRAWFORD	CONSTRUCTION DETAILS (GUARDRAIL LAYOUT)	SHEET E

FILE NAME : S:\PROJECTS\C54560 CRAWFORD CO - CTH K PAVEMENT IMPROVEMENT\SHEETSPLAN\DETAILS\54950000_CONSTRUCTION DETAILS.DWG
PLOT DATE : 10/26/2020 11:40:49 AM
PLOT BY : THEODORE HERBERS
PLOT SCALE : 0.994277
LAYOUT : BEAMGUARD LAYOUT

2

NOTE: REFER TO STANDARD DETAIL DRAWING "LONGITUDINAL MARKING (MAINLINE)" FOR ADDITIONAL INFORMATION

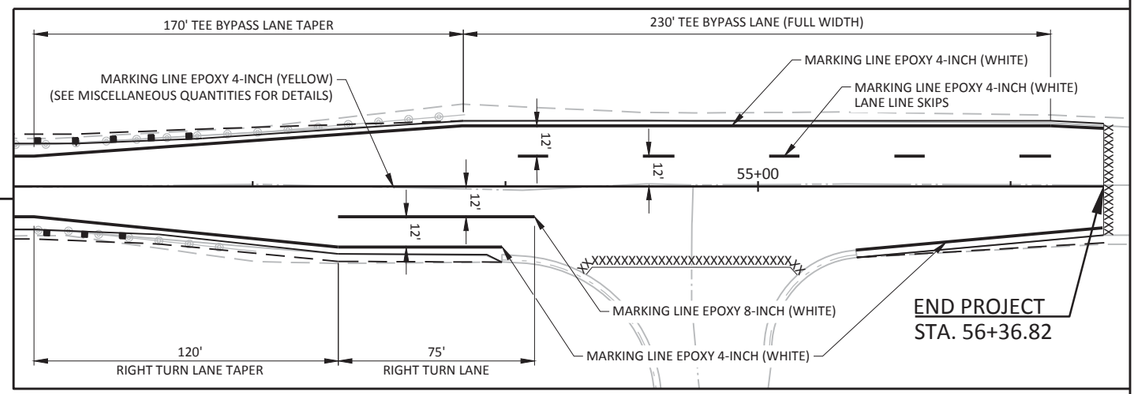
N



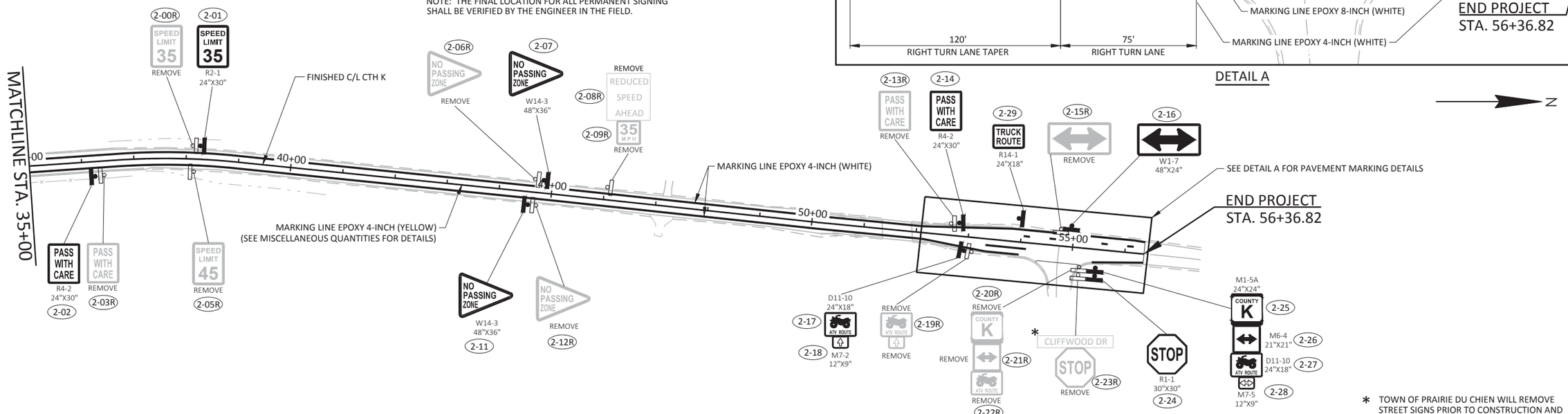
LEGEND

- REMOVING SIGNS TYPE II/REMOVING SMALL SIGN SUPPORTS/MOVING SIGNS TYPE II/MOVING SMALL SIGN SUPPORTS
- SIGNS TYPE II REFLECTIVE H AND F ON POSTS
- (XXXX) DESIGNATES SIGN NUMBER

NOTE: THE FINAL LOCATION FOR ALL PERMANENT SIGNING SHALL BE VERIFIED BY THE ENGINEER IN THE FIELD.



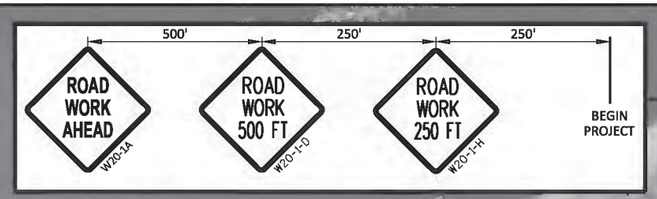
DETAIL A



* TOWN OF PRAIRIE DU CHIEN WILL REMOVE STREET SIGNS PRIOR TO CONSTRUCTION AND RE-ERECT POST CONSTRUCTION

PROJECT NO: 5495-00-70	HWY: CTH K	COUNTY: CRAWFORD	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 19	E

2



ROADWORK BEGINS XX/XX/XX

PORTABLE CHANGEABLE MESSAGE SIGN AT THE LIMITS OF THE PROJECT FOR 7 CALENDAR DAYS PRIOR TO BEGINNING OF PROJECT.

BEGIN PROJECT
STA. 10+00.00

10+00

15+00

20+00

25+00

30+00

MATCHLINE STA. 30+00

FINISHED C/L CTH K

N

W PINE STREET

W MILLER STREET

FREDERICK STREET

Ⓐ ROAD WORK AHEAD W20-1A

Ⓑ END ROAD WORK G20-2A 48"X24"

Ⓒ ROAD WORK NEXT 1 MILES G20-1 60"X24"

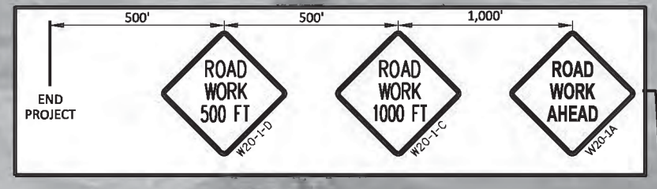
TRAFFIC NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

FOR MOVING OPERATION STA. 10+00 TO STA. 56+36.82 SEE STANDARD DETAIL DRAWING "TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION". COSTS FOR FLAGGING AND ASSOCIATED SIGNS FOR MOVING OPERATIONS ARE INCIDENTAL TO THE CONTRACT.

SEE STANDARD DETAIL DRAWINGS FOR PAVEMENT MARKING LAYOUT.



MATCHLINE STA. 30+00

35+00

40+00

45+00

50+00

55+00

FINISHED C/L CTH K

ROADWORK BEGINS XX/XX/XX

PORTABLE CHANGEABLE MESSAGE SIGN AT THE LIMITS OF THE PROJECT FOR 7 CALENDAR DAYS PRIOR TO BEGINNING OF PROJECT.

CLIFFWOOD DRIVE

END PROJECT
STA. 56+36.82

Z

PROJECT NO: 5495-00-70	HWY: CTH K	COUNTY: CRAWFORD	TRAFFIC CONTROL	SHEET	E

FILE NAME : S:\PROJECTS\CS4560 CRAWFORD CO - CTH K PAVEMENT IMPROVEMENT\SHEETSPLAN\DETAILS\TRAFFIC CONTROL.DWG PLOT DATE : 9/9/2020 3:53:39 PM PLOT BY : TRACY, DAN PLOT SCALE : 1" = 1' LAYOUT : LAYOUT1

5495-00-70

Line	Item	Item Description	Unit	Total	Qty
0002	204.0100	Removing Concrete Pavement	SY	315.000	315.000
0004	204.0115	Removing Asphaltic Surface Butt Joints	SY	1,700.000	1,700.000
0006	204.0120	Removing Asphaltic Surface Milling	SY	18,600.000	18,600.000
0008	204.0180	Removing Delineators and Markers	EACH	3.000	3.000
0010	211.0400	Prepare Foundation for Asphaltic Shoulders	STA	8.000	8.000
0012	213.0100	Finishing Roadway (project) 01. 5495-00-70	EACH	1.000	1.000
0014	305.0110	Base Aggregate Dense 3/4-Inch	TON	1,480.000	1,480.000
0016	305.0500	Shaping Shoulders	STA	81.000	81.000
0018	455.0605	Tack Coat	GAL	1,880.000	1,880.000
0020	460.2000	Incentive Density HMA Pavement	DOL	2,660.000	2,660.000
0022	460.6224	HMA Pavement 4 MT 58-28 S	TON	4,150.000	4,150.000
0024	465.0105	Asphaltic Surface	TON	50.000	50.000
0026	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	275.000	275.000
0028	465.0315	Asphaltic Flumes	SY	24.000	24.000
0030	614.0010	Barrier System Grading Shaping Finishing	EACH	4.000	4.000
0032	614.0200	Steel Thrie Beam Structure Approach	LF	21.000	21.000
0034	614.0370	Steel Plate Beam Guard Energy Absorbing Terminal	EACH	1.000	1.000
0036	614.0920	Salvaged Rail	LF	560.000	560.000
0038	614.2500	MGS Thrie Beam Transition	LF	120.000	120.000
0040	614.2610	MGS Guardrail Terminal EAT	EACH	3.000	3.000
0042	618.0100	Maintenance And Repair of Haul Roads (project) 01. 5495-00-70	EACH	1.000	1.000
0044	619.1000	Mobilization	EACH	1.000	1.000
0046	624.0100	Water	MGAL	23.000	23.000
0048	628.1504	Silt Fence	LF	1,000.000	1,000.000
0050	628.1520	Silt Fence Maintenance	LF	1,000.000	1,000.000
0052	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0054	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0056	628.2008	Erosion Mat Urban Class I Type B	SY	930.000	930.000
0058	628.7010	Inlet Protection Type B	EACH	6.000	6.000
0060	630.0500	Seed Water	MGAL	10.000	10.000
0062	633.5200	Markers Culvert End	EACH	5.000	5.000
0064	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	10.000	10.000
0066	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	15.000	15.000
0068	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	1.000	1.000
0070	637.2210	Signs Type II Reflective H	SF	111.480	111.480
0072	637.2230	Signs Type II Reflective F	SF	28.120	28.120
0074	638.2602	Removing Signs Type II	EACH	28.000	28.000
0076	638.3000	Removing Small Sign Supports	EACH	21.000	21.000
0078	642.5001	Field Office Type B	EACH	1.000	1.000

5495-00-70

Line	Item	Item Description	Unit	Total	Qty
0080	643.0300	Traffic Control Drums	DAY	200.000	200.000
0082	643.0900	Traffic Control Signs	DAY	660.000	660.000
0084	643.1050	Traffic Control Signs PCMS	DAY	14.000	14.000
0086	643.5000	Traffic Control	EACH	1.000	1.000
0088	646.1020	Marking Line Epoxy 4-Inch	LF	17,260.000	17,260.000
0090	646.3020	Marking Line Epoxy 8-Inch	LF	75.000	75.000
0092	648.0100	Locating No-Passing Zones	MI	0.380	0.380
0094	649.0105	Temporary Marking Line Paint 4-Inch	LF	12,140.000	12,140.000
0096	650.8000	Construction Staking Resurfacing Reference	LF	4,637.000	4,637.000
0098	650.9910	Construction Staking Supplemental Control (project) 02. 5495-00-70	LS	1.000	1.000
0100	690.0150	Sawing Asphalt	LF	1,365.000	1,365.000
0102	690.0250	Sawing Concrete	LF	205.000	205.000
0104	740.0440	Incentive IRI Ride	DOL	3,520.000	3,520.000
0106	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	1,200.000	1,200.000
0108	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	600.000	600.000
0110	SPV.0060	Special 01. Adjusting Valve Boxes	EACH	1.000	1.000
0112	SPV.0060	Special 02. Landmark Reference Monuments Special	EACH	3.000	3.000
0114	SPV.0060	Special 03. Verify Landmark Reference Monuments	EACH	3.000	3.000
0116	SPV.0180	Special 01. Removing Distressed Pavement Milling	SY	410.000	410.000

REMOVING PAVEMENT

STATION - STATION	LOCATION	204.0100 (SY)
17+00 - 18+15	MAINLINE, LT.	165
27+75	MAINLINE, RT.	125
27+86	MAINLINE, LT.	25
	TOTAL =	315

BARRIER SYSTEM GRADING SHAPING FINISHING & EROSION MAT

STATION - STATION	LOCATION	614.0010 BARRIER SYSTEM GRADING SHAPING FINISHING (EACH)	FOR INFORMATIONAL PURPOSES ONLY: EXCAVATION COMMON (CY)	BORROW (CY)	SALVAGED TOPSOIL (SY)	FERTILIZER TYPE B (CWT)	SEEDING MIXTURE NO. 20 (LB)	SEEDING TEMPORARY (LB)	CONSTRUCTION STAKING SLOPE STAKES (LF)	628.2008 EROSION MAT URBAN CLASS I TYPE B (SY)	630.0500 SEED WATER (MGAL)
49+20 - 51+33	MAINLINE, LT.	1	1	59	250	0.2	7	-	212	250	-
49+28 - 51+38	MAINLINE, RT.	1	2	26	130	0.1	4	-	210	130	-
51+89 - 53+83	MAINLINE, LT.	1	0	11	217	0.2	6	-	194	217	-
51+94 - 53+34	MAINLINE, RT.	1	0	14	148	0.1	4	-	140	148	-
	UNDISTRIBUTED	-	-	-	-	-	-	11	-	185	10
	TOTALS =	4	3	110	745	0.6	21	11	756	930	10

REMOVING ASPHALTIC SURFACE BUTT JOINTS

STATION - STATION	LOCATION	204.0115 (SY)
10+00 - 12+00	MAINLINE	800
27+80	C.E., LT.	74
28+38 - 30+38	MAINLINE	800
51+35.15	MAINLINE	8
51+91.90	MAINLINE	8
56+36.82	MAINLINE	10
	TOTAL =	1700

BASE AGGREGATE DENSE

STATION - STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH (TON)
10+00 - 56+36.82	MAINLINE	800
-	P.E. / F.E. / C.E.	635
-	UNDISTRIBUTED	45
	TOTALS =	1480

HMA PAVEMENT

STATION - STATION	LOCATION	455.0605 TACK COAT (GAL)	460.2000 INCENTIVE DENSITY HMA PAVEMENT (DOL)	460.6224 HMA PAVEMENT 4MT58-28S (TON)	465.0105 ASPHALTIC SURFACE (TON)	465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES (TON)	SPV.0180.01 REMOVING DISTRESSED PAVEMENT MILLING (SY)
10+00 - 30+38	MAINLINE	1004	-	2600	-	-	-
10+45	P.E., LT.	2	-	-	-	5	-
13+95 - 18+15	C.E., LT.	23	-	-	-	140	-
15+50	C.E., RT.	6	-	-	-	30	-
22+95	C.E., RT.	10	-	-	-	45	-
23+40	C.E., LT.	15	-	-	-	55	-
30+38 - 56+36.82	MAINLINE	790	-	1550	-	-	-
-	UNDISTRIBUTED	30	-	-	50	-	410
-	PROJECT	-	2660	-	-	-	-
	TOTALS =	1880	2660	4150	50	275	410

REMOVING ASPHALTIC SURFACE MILLING

STATION - STATION	LOCATION	204.0120 (SY)
10+45	P.E., LT.	25
12+00 - 28+38	MAINLINE	6801
13+95 - 17+00	C.E., LT.	334
15+50	C.E., RT.	80
22+95	C.E., RT.	135
23+40	C.E., LT.	175
30+38 - 56+36.82	MAINLINE	11050
	TOTAL =	18600

SHAPING SHOULDERS

STATION - STATION	LOCATION	305.0500 (STA.)
10+00 - 56+36.82	MAINLINE	81
	TOTAL:	81

ASPHALTIC FLUMES

STATION	LOCATION	465.0315 (SY)
28+25	MAINLINE, LT.	6
30+38	MAINLINE, RT.	6
32+13	MAINLINE, LT.	6
37+19	MAINLINE, RT.	6
	TOTAL =	24

MGS GUARDRAIL/STEEL PLATE BEAMGUARD

STATION - STATION	LOCATION	614.0200 STEEL THRIE BEAM STRUCTURE APPROACH (LF)	614.0370 STEEL PLATE BEAM GUARD EAT (EACH)	614.2500 MGS THRIE BEAM TRANSITION (LF)	614.2610 MGS GUARDRAIL TERMINAL EAT (EACH)
50+42 - 51+33	MAINLINE, LT.	-	-	40	1
50+47 - 51+38	MAINLINE, RT.	-	-	40	1
51+89 - 52+80	MAINLINE, LT.	-	-	40	1
51+94 - 52+63	MAINLINE, RT.	21	1	-	-
	TOTALS =	21	1	120	3

REMOVING DELINEATORS AND MARKERS

STATION	LOCATION	204.0180 (EACH)
13+71	MAINLINE	2
31+35	MAINLINE, LT.	1
	TOTAL =	3

PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS

STATION - STATION	LOCATION	211.0400 (STA.)
49+20 - 50+92	MAINLINE, LT.	2
49+28 - 50+97	MAINLINE, RT.	2
52+13 - 53+34	MAINLINE, RT.	2
52+30 - 53+83	MAINLINE, LT.	2
	TOTAL =	8

WATER

LOCATION	624.0100 (MGAL)
PROJECT	23
TOTAL =	23

SALVAGED RAIL

STATION - STATION	LOCATION	614.0920 (LF)
50+00 - 51+33	MAINLINE, LT	135
50+18 - 51+38	MAINLINE, RT.	120
51+90 - 53+84	MAINLINE, LT	195
51+94 - 53+01	MAINLINE, RT.	110
	TOTALS =	560

3

PAVEMENT MARKING

STATION - STATION	LOCATION	DESCRIPTION	646.1020 MARKING LINE EPOXY 4-INCH YELLOW SOLID (LF)	646.1020 MARKING LINE EPOXY 4-INCH YELLOW 12.5' SKIPS (LF)	646.1020 MARKING LINE EPOXY 4-INCH WHITE SOLID (LF)	646.1020 MARKING LINE EPOXY 4-INCH WHITE 12.5' SKIPS (LF)	646.3020 MARKING LINE EPOXY 8-INCH WHITE SOLID (LF)	649.0105 TEMPORARY MARKING LINE PAINT 4-INCH YELLOW SOLID (LF)	649.0105 TEMPORARY MARKING LINE PAINT 4-INCH YELLOW 12.5' SKIPS (LF)
10+00 - 56+36.82	MAINLINE	WHITE EDGELINES	-	-	9135	-	-	-	-
10+00 - 30+38	MAINLINE	DOUBLE YELLOW	-	-	-	-	-	8154	-
10+00 - 36+40	MAINLINE	DOUBLE YELLOW	5280	-	-	-	-	-	-
30+38 - 36+40	MAINLINE	DOUBLE YELLOW	-	-	-	-	-	1204	-
36+40 - 44+70	MAINLINE	NB PASSING ONLY	830	213	-	-	-	830	213
44+70 - 52+65	MAINLINE	SB PASSING ONLY	795	200	-	-	-	795	200
52+65 - 56+36.82	MAINLINE	DOUBLE YELLOW	744	-	-	-	-	744	-
53+34 - 54+09	MAINLINE, RT.	TURN LANE	-	-	-	-	75	-	-
54+05 - 56+16	MAINLINE	BYPASS LANE	-	-	-	63	-	-	-
		SUBTOTALS =	7649	413	9135	63	75	11727	413
		TOTALS=	17260				75	12140	

SAWING ASPHALT AND SAWING CONCRETE

STATION - STATION	LOCATION	690.0150 SAWING ASPHALT (LF)	690.0250 SAWING CONCRETE (LF)	COMMENTS
10+00	MAINLINE	34	-	-
10+45	MAINLINE, LT.	13	-	P.E.
14+08 - 17+02	MAINLINE, LT.	295	-	C.E.
15+50	MAINLINE, RT.	68	-	C.E.
17+00 - 18+15	MAINLINE, LT.	-	102	C.E.
22+95	MAINLINE, RT.	72	-	C.E.
23+40	MAINLINE, LT.	86	-	C.E.
27+75	MAINLINE, RT.	-	63	C.E.
27+80	MAINLINE, LT.	19	40	C.E.
49+28 - 50+97	MAINLINE, RT.	172	-	BEAMGUARD
49+20 - 50+92	MAINLINE, LT.	176	-	BEAMGUARD
52+13 - 53+34	MAINLINE, RT.	133	-	BEAMGUARD
52+30 - 53+83	MAINLINE, LT.	164	-	BEAMGUARD
54+32 - 55+17	MAINLINE, RT.	89	-	SIDEROAD (CLIFFWOOD DRIVE)
56+36.82	MAINLINE	44	-	-
	TOTAL=	1365	205	

3

SILT FENCE

STATION - STATION	LOCATION	628.1504 SILT FENCE (LF)	628.1520 SILT FENCE MAINTENANCE (LF)
49+20 - 51+33	MAINLINE, LT	219	219
49+27 - 51+38	MAINLINE, RT.	218	218
51+89 - 54+07	MAINLINE, LT	218	218
51+94 - 53+37	MAINLINE, RT.	147	147
-	UNDISTRIBUTED	198	198
	TOTALS =	1000	1000

INLET PROTECTION TYPE B

STATION	LOCATION	628.7010 (EACH)
15+38	MAINLINE, LT.	1
17+38	MAINLINE, LT.	1
18+19	MAINLINE, LT.	1
21+64	MAINLINE, RT.	1
22+44	MAINLINE, RT.	1
27+18	MAINLINE, RT.	1
	TOTAL =	6

MOBILIZATION EROSION CONTROL

PROJECT	628.1905 MOBILIZATION EROSION CONTROL (EACH)	628.1910 MOBILIZATION EMERGENCY EROSION CONTROL (EACH)
5495-00-70	2	2
TOTALS =	2	2

MARKERS CULVERT END

STATION	LOCATION	633.5200 (EACH)
13+71	MAINLINE	2
28+21	MAINLINE	2
31+35	MAINLINE, LT.	1
	TOTAL =	5

TRAFFIC CONTROL

LOCATION	643.0300 DRUMS (DAY)	643.0900 SIGNS (DAY)	643.1050 SIGNS PCMS (DAY)	643.5000 TRAFFIC CONTROL (EACH)
PROJECT	-	660	14	1
UNDISTRIBUTED	200	-	-	-
TOTALS =	200	660	14	1

LOCATING NO PASSING ZONES

PROJECT	STATION - STATION	LOCATION	648.0100 (MI)
5495-00-70	36+40 - 56+36.82	MAINLINE	0.38
		TOTAL =	0.38

NOTE: LOCATING NO PASSING ZONES NOT REQUIRED
STA. 10+00 - STA. 36+40 (TO REMAIN DOUBLE YELLOW)

CONSTRUCTION STAKING

STATION - STATION	LOCATION	CONSTRUCTION STAKING 650.8000 RESURFACING REFERENCE (LF)	CONSTRUCTION STAKING 650.9910 SUPPLEMENTAL CONTROL (LS)
10+00 - 56+36.82	MAINLINE	4637	-
-	PROJECT	-	1
	TOTALS =	4637	1

ADJUSTING VALVE BOXES

STATION	LOCATION	SPV.0060.01 (EACH)
22+78	MAINLINE, 17.7' RT.	1
	TOTAL:	1

SECTION CORNERS

STATION	LOCATION	LANDMARK REFERENCE MONUMENTS SPECIAL SPV.0060.02 (EACH)	VERIFY LANDMARK REFERENCE MONUMENTS SPV.0060.03 (EACH)
12+38	MAINLINE, 4.4' LT.	1	1
15+87	MAINLINE, 7.7' LT.	1	1
19+80	MAINLINE, 35.5' LT.	1	1
	TOTAL:	3	3

PERMANENT SIGNING

SIGN NUMBER	APPROX. STATION	LOCATION	POSITIION	SIGN CODE	SIGN DESCRIPTION	ORDER LINES	SIZE (INCH X INCH)	637.2210 SIGNS TYPE II REFLECTIVE H (SF)	637.2230 SIGNS TYPE II REFLECTIVE F (SF)	POSTS WOOD 4X6 INCH 634.0614 14 FT (EACH)	634.0616 16 FT (EACH)	634.0618 18 FT (EACH)	638.2602 REMOVING SIGNS TYPE II (EACH)	638.3000 REMOVING SMALL SIGN SUPPORTS (EACH)	SIGN MOUNTED ON SAME POST AS
1-00R	10+12	MAINLINE	LEFT	I2-3	MUNICIPALITY POPULATION SIGN	PRAIRIE DU CHIEN	48X15	-	-	-	-	-	1	1	-
1-01R	10+12	MAINLINE	LEFT	D11-10	ATV ROUTE W/ SYMBOL	-	24X18	-	-	-	-	-	1	-	1-00R
1-02R	10+12	MAINLINE	LEFT	J4-1	REASSURANCE ASSEMBLY	END, K	24X36	-	-	-	-	-	1	1	-
1-03R	10+12	MAINLINE	LEFT	-	STREET SIGN	BEGIN NORTH MAIN ST	24X36	-	-	-	-	-	1	-	1-02R
1-04	11+10	MAINLINE	LEFT	I2-3	MUNICIPALITY POPULATION SIGN	PRAIRIE DU CHIEN	78X18	9.75	-	2	-	-	-	-	-
1-05	11+10	MAINLINE	LEFT	M4-6	END	END	24X12	2.00	-	-	1	-	-	-	-
1-06	11+10	MAINLINE	LEFT	D11-10	ATV ROUTE W/ SYMBOL	-	24X18	3.00	-	-	-	-	-	-	1-05
1-07	10+12	MAINLINE	LEFT	J4-1	REASSURANCE ASSEMBLY	END, K	24X36	6.00	-	-	1	-	-	-	-
1-08	10+12	MAINLINE	LEFT	-	BEGIN	BEGIN	24X12	2.00	-	-	1	-	-	-	-
1-08A	10+12	MAINLINE	LEFT	-	STREET SIGN	NORTH MAIN ST	24X24	4.00	-	-	-	-	-	-	1-08
1-09R	13+02	MAINLINE	LEFT	R2-1	SPEED LIMIT __	25	-	-	-	-	-	-	1	1	-
1-10	13+02	MAINLINE	LEFT	R2-1	SPEED LIMIT __	25	24X30	5.00	-	-	1	-	-	-	-
1-11	11+10	MAINLINE	RIGHT	M4-14	BEGIN	BEGIN	24X12	2.00	-	-	1	-	-	-	-
1-12	11+10	MAINLINE	RIGHT	D11-10	ATV ROUTE W/ SYMBOL	-	24X18	3.00	-	-	-	-	-	-	1-11
1-13	11+10	MAINLINE	RIGHT	M7-2	ARROW PLAQUE	UP ARROW	12X9	0.75	-	-	-	-	-	-	1-11
1-14	9+97	MAINLINE	RIGHT	J4-1	REASSURANCE ASSEMBLY	NORTH, K	24X36	6.00	-	-	1	-	-	-	-
1-15	9+97	MAINLINE	RIGHT	D2-1	DISTANCE SIGN	HWY 35	66X15	6.88	-	-	2	-	-	-	-
1-16R	10+00	MAINLINE	RIGHT	M4-14	BEGIN	BEGIN	24X12	-	-	-	-	-	1	2	-
1-17R	10+00	MAINLINE	RIGHT	D11-10	ATV ROUTE W/ SYMBOL	-	24X30	-	-	-	-	-	1	-	1-16R
1-18R	10+00	MAINLINE	RIGHT	J4-1	REASSURANCE ASSEMBLY	NORTH, K	24X36	-	-	-	-	-	1	-	1-16R
1-19R	10+00	MAINLINE	RIGHT	-	DISTANCE SIGN	STH 35 3	36X15	-	-	-	-	-	1	-	1-18R
1-20	12+75	MAINLINE	RIGHT	R2-1	SPEED LIMIT __	35	24X30	5.00	-	-	1	-	-	-	-
1-21R	12+75	MAINLINE	RIGHT	R2-1	SPEED LIMIT __	35	24X30	-	-	-	-	-	1	1	-
1-22R	25+91	MAINLINE	LEFT	W3-5	SPEED REDUCTION AHEAD __ MPH	25	36X36	-	-	-	-	-	1	1	-
1-23	25+91	MAINLINE	LEFT	W3-5	SPEED REDUCTION AHEAD __ MPH	25	36X36	-	9.00	-	1	-	-	-	-
1-24	27+47	MAINLINE	LEFT	R1-1	STOP	-	30X30	5.18	-	1	-	-	-	-	-
1-25R	27+47	MAINLINE	LEFT	R1-1	STOP	-	30X30	-	-	-	-	-	1	1	-
1-26R	28+07	MAINLINE	RIGHT	R1-1	STOP	-	30X30	-	-	-	-	-	1	1	-
1-27	28+07	MAINLINE	RIGHT	R1-1	STOP	-	30X30	5.18	-	1	-	-	-	-	-
1-28R	28+74	MAINLINE	RIGHT	R2-1	SPEED LIMIT __	35	24X30	-	-	-	-	-	1	1	-
1-29	28+74	MAINLINE	RIGHT	R2-1	SPEED LIMIT __	35	24X30	5.00	-	1	-	-	-	-	-
1-30	10+00	MAINLINE	RIGHT	R14-1	TRUCK ROUTE	-	24X18	3.00	-	-	1	-	-	-	-
2-00R	38+11	MAINLINE	LEFT	R2-1	SPEED LIMIT __	35	24X30	-	-	-	-	-	1	1	-
2-01	38+11	MAINLINE	LEFT	R2-1	SPEED LIMIT __	35	24X30	5.00	-	-	1	-	-	-	-
2-02	36+41	MAINLINE	RIGHT	R4-2	PASS WITH CARE	-	24X30	5.00	-	-	1	-	-	-	-
2-03R	36+41	MAINLINE	RIGHT	R4-2	PASS WITH CARE	-	24X30	-	-	-	-	-	1	1	-
2-05R	38+15	MAINLINE	RIGHT	R2-1	SPEED LIMIT __	45	24X30	-	-	-	-	-	1	1	-
2-06R	44+66	MAINLINE	LEFT	W14-3	NO PASSING ZONE	-	48X36	-	-	-	-	-	1	1	-
2-07	44+66	MAINLINE	LEFT	W14-3	NO PASSING ZONE	-	48X36	-	5.56	-	1	-	-	-	-
2-08R	46+05	MAINLINE	LEFT	-	REDUCED SPEED AHEAD	-	24X30	-	-	-	-	-	1	1	-
2-09R	46+05	MAINLINE	LEFT	W13-1	__ MPH	35	18X18	-	-	-	-	-	1	-	2-08R
2-11	44+73	MAINLINE	RIGHT	W14-3	NO PASSING ZONE	-	48X36	-	5.56	-	1	-	-	-	-
2-12R	44+73	MAINLINE	RIGHT	W14-3	NO PASSING ZONE	-	48X36	-	-	-	-	-	1	1	-
2-13R	52+65	MAINLINE	LEFT	R4-2	PASS WITH CARE	-	24X30	-	-	-	-	-	1	1	-
2-14	52+65	MAINLINE	LEFT	R4-2	PASS WITH CARE	-	24X30	5.00	-	1	-	-	-	-	-
2-15R	54+75	MAINLINE	LEFT	W1-7	TWO DIRECTION LARGE ARROW	-	48X24	-	-	-	-	-	1	1	-
2-16	54+75	MAINLINE	LEFT	W1-7	TWO DIRECTION LARGE ARROW	-	48X24	-	8.00	1	-	-	-	-	-
2-17	53+09	MAINLINE	RIGHT	D11-10	ATV ROUTE W/ SYMBOL	-	24X18	3.00	-	1	-	-	-	-	-
2-18	53+09	MAINLINE	RIGHT	M7-2	ARROW PLAQUE	UP ARROW	12X9	0.75	-	-	-	-	-	-	2-17
2-19R	53+09	MAINLINE	RIGHT	D11-10	ATV ROUTE W/ SYMBOL	-	24X30	-	-	-	-	-	1	1	-
2-20R	55+15	MAINLINE	RIGHT	M1-5A	CTH ROUTE MARKER	K	24X24	-	-	-	-	-	1	1	-
2-21R	55+15	MAINLINE	RIGHT	M6-4	DOUBLE DIRECTION ARROW	LEFT AND RIGHT ARROW	21X21	-	-	-	-	-	1	-	2-20R
2-22R	55+15	MAINLINE	RIGHT	D11-10	ATV ROUTE W/ SYMBOL	-	24X18	-	-	-	-	-	1	-	2-20R
2-23R	55+12	MAINLINE	RIGHT	R1-1	STOP	-	30X30	-	-	-	-	-	1	1	-
2-24	55+12	MAINLINE	RIGHT	R1-1	STOP	-	30X30	5.18	-	1	-	-	-	-	-
2-25	55+15	MAINLINE	RIGHT	M1-5A	CTH ROUTE MARKER	K	24X24	4.00	-	-	-	1	-	-	-
2-26	55+15	MAINLINE	RIGHT	M6-4	DOUBLE DIRECTION ARROW	LEFT AND RIGHT ARROW	21X21	3.06	-	-	-	-	-	-	2-25
2-27	55+15	MAINLINE	RIGHT	D11-10	ATV ROUTE W/ SYMBOL	-	24X18	3.00	-	-	-	-	-	-	2-25
2-28	55+15	MAINLINE	RIGHT	M7-5	ARROW PLAQUE	LEFT AND RIGHT ARROW	12X9	0.75	-	-	-	-	-	-	2-25
2-29	54+00	MAINLINE	LEFT	R14-1	TRUCK ROUTE	-	24X18	3.00	-	1	-	-	-	-	-
						PROJECT TOTALS =		111.48	28.12	10	15	1	28	21	

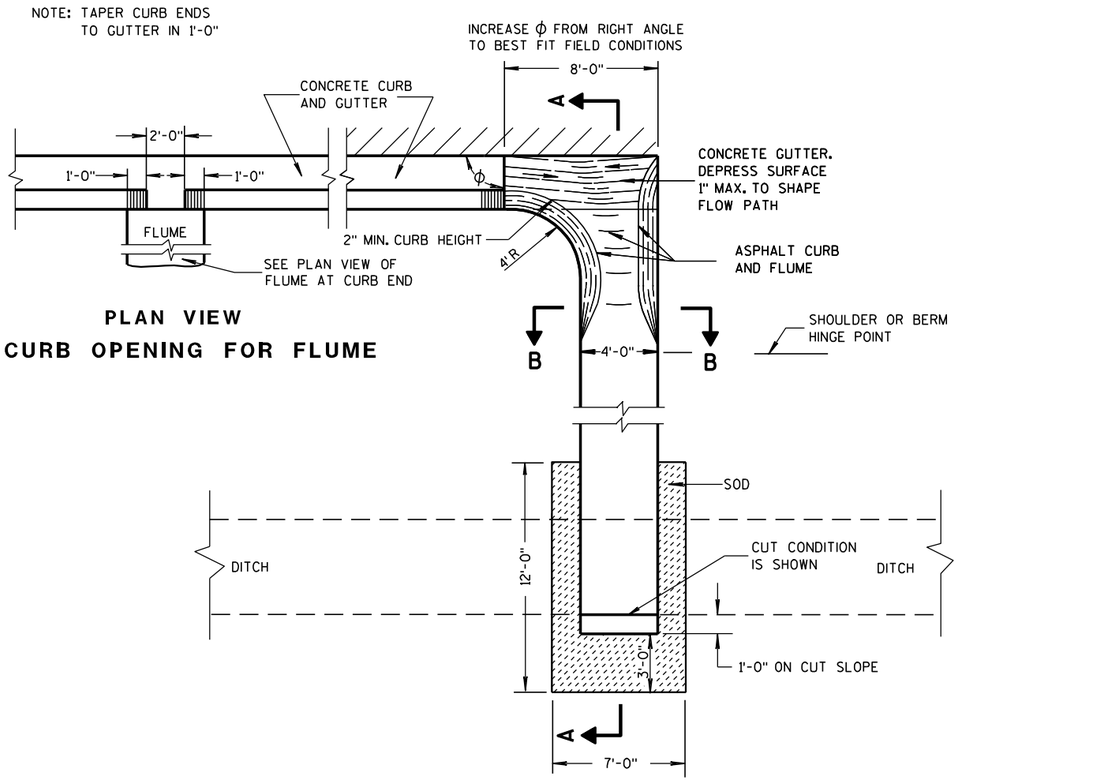
PROJECT NO: 5495-00-70	HWY: CTH K	COUNTY: CRAWFORD	PLAN VIEWS	SHEET	E

FILE NAME : S:\PROJECTS\C54560 CRAWFORD CO - CTH K PAVEMENT IMPROVEMENT\SHEETSPLAN\PLAN & PROFILE SHEETS\PLAN VIEWS.DWG
PLOT DATE : 12/2/2020 8:21:26 AM
PLOT BY : TRACY, DAN
PLOT SCALE : 1" = 1'
LAYOUT : LAYOUT1

Standard Detail Drawing List

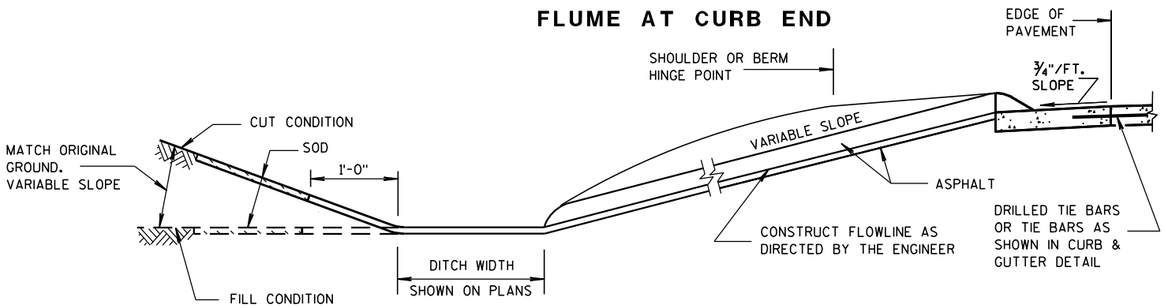
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08D20-01	DRIVEWAYS WITH CURB & GUTTER RETURNS
08D21-01	DRIVEWAYS WITHOUT CURB & GUTTER
08D22-01	DRIVEWAYS WITHOUT CURB & GUTTER RESURFACING PROJECTS RURAL
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
13C19-02	HMA LONGITUDINAL JOINTS
14B15-11A	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-11B	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-11C	STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS
14B20-11A	STEEL THRIE BEAM STRUCTURE APPROACH
14B20-11E	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO BRIDGE RAILING TYPES "F" AND "W"
14B24-09A	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B24-09B	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B24-09C	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B42-06A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-05A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05G	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C05-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C06-09	SIGNING & MARKING FOR TWO LANE BRIDGES
15C08-20A	LONGITUDINAL MARKING (MAINLINE)
15C11-07B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-07	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C19-06A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C35-04A	PAVEMENT MARKING (INTERSECTIONS)
15D28-04	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS
15D39-02	TRAFFIC CONTROL, DROP-OFF SIGNING
16A01-07	LANDMARK REFERENCE MONUMENTS AND COVERS

ASPHALTIC FLUME

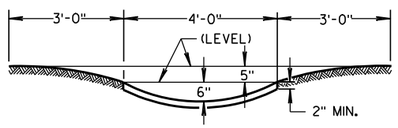


PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



SECTION A-A



SECTION B-B

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

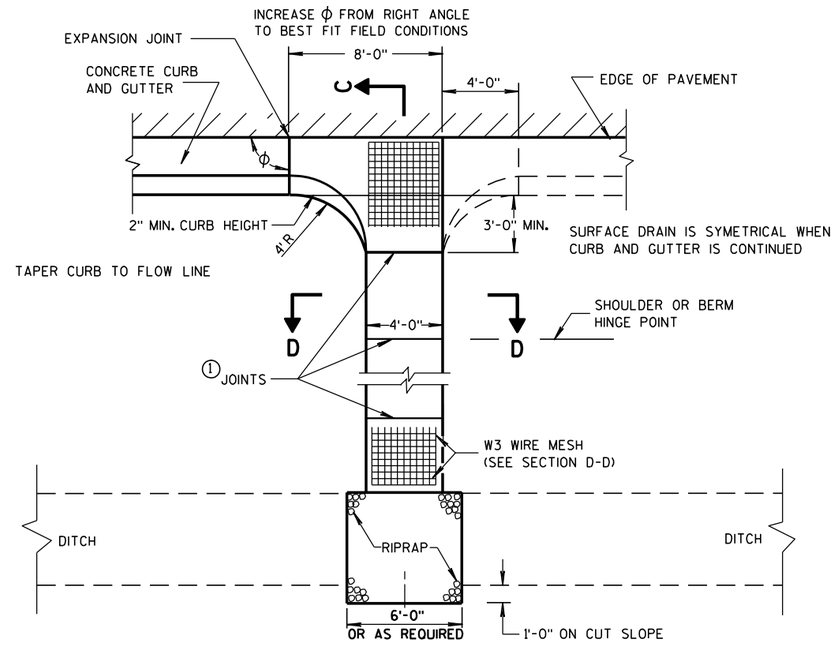
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

① JOINTS SHALL BE $\frac{1}{8}$ TO $\frac{1}{4}$ INCH WIDE BY $1\frac{1}{2}$ INCHES DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.

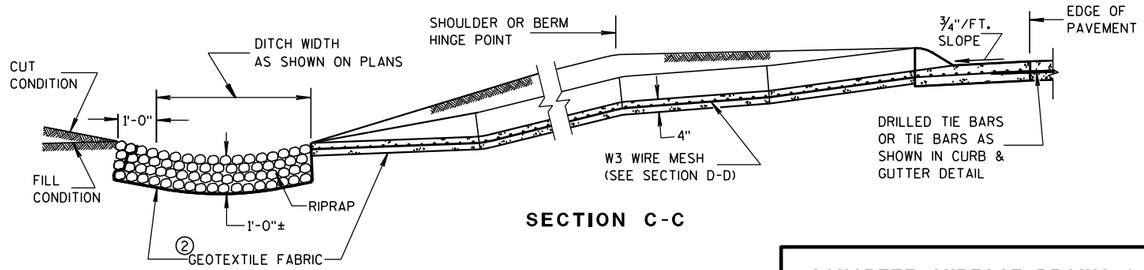
② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.

③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED

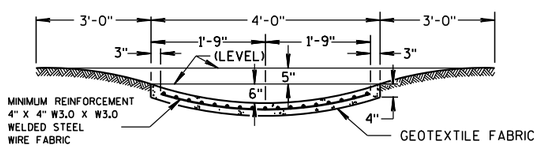
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

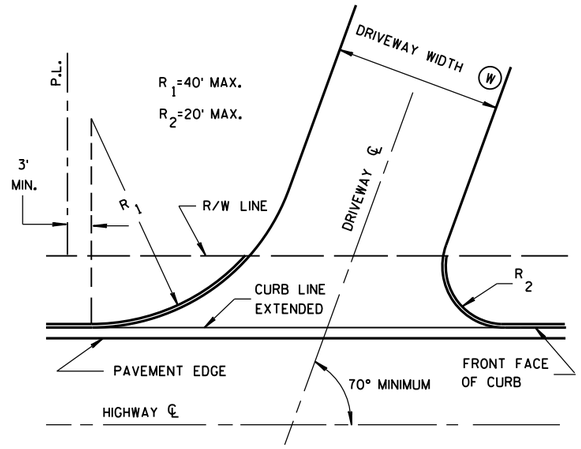
APPROVED
9-4-08 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
28
MENT
FHWA

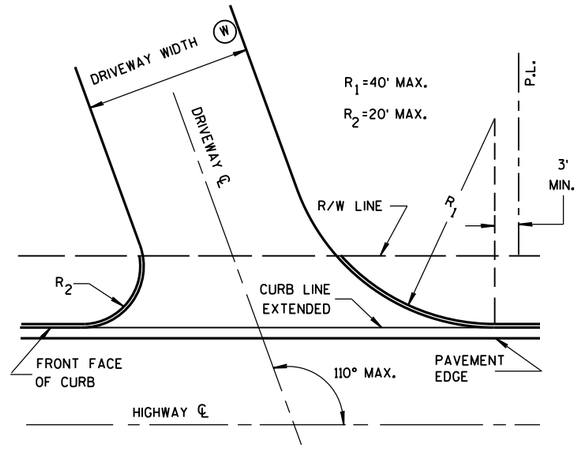
6

S.D.D. 8 D 4-5

6

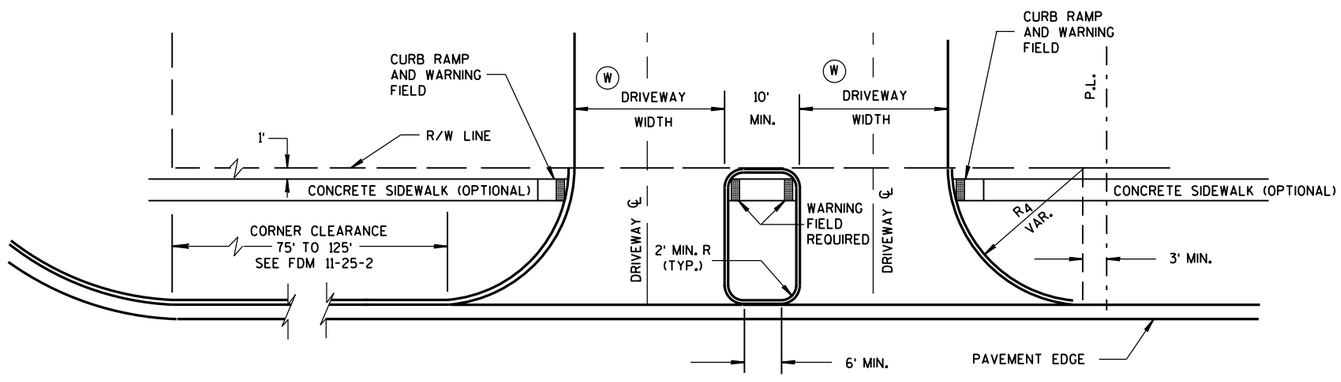
S.D.D. 8 D 4-5





SKEWED DRIVEWAY DETAILS
(COMMERCIAL AND NON-COMMERCIAL)

SIDEWALK NOT SHOWN



DRIVEWAY LOCATION AND SPACING DETAILS

SIDEWALK SHOWN

NOTES

A MAXIMUM RADIUS OF 10 FEET SHALL BE USED FOR NON-COMMERCIAL PRIVATE ENTRANCES. RADII FOR COMMERCIAL DRIVEWAYS SHALL BE DETERMINED BY THE ENGINEER BASED ON TRAFFIC AND DRIVEWAY PERMIT RESTRICTIONS.

THE MINIMUM ANGLE OF INTERSECTION BETWEEN THE DRIVEWAY AND HIGHWAY CENTERLINES SHALL BE 70°.

ALL CURVILINEAR PRIVATE ENTRANCE OUTLINES SHALL BE CONTAINED WITHIN THE HIGHWAY R/W.

NO DRIVEWAY SHALL BE BUILT WITHIN 3 FEET OF THE PROPERTY LINE EXCEPT FOR EXISTING JOINT DRIVEWAY SHARED BY TWO OWNERS.

Ⓦ DRIVEWAY WIDTHS:

COMMERCIAL - 35' MAX., 16' MIN.

RESIDENTIAL AND NON-COMMERCIAL - 24' MAX., 12' MIN.

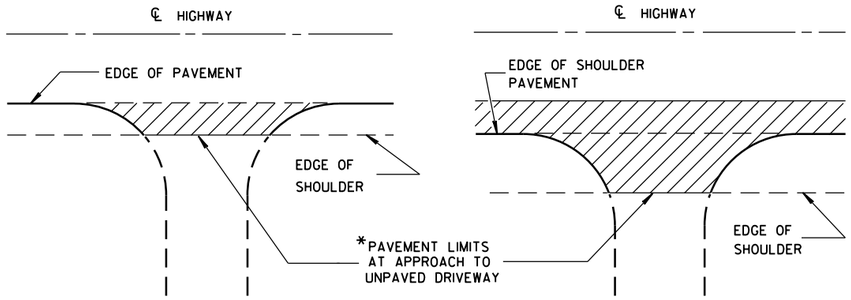
DRIVEWAYS WITH CURB & GUTTER RETURNS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December, 2016 — DATE
/S/ Rodney Taylor
ROADWAY STANDARDS UNIT SUPERV
FHWA
ENT

6

S.D.D. 8 D 20-1

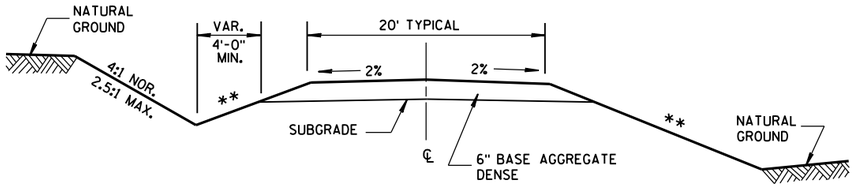


*WHERE DRIVEWAY IS PAVED, APPROACH PAVEMENT SHOULD BE EXTENDED TO MATCH DRIVEWAY PAVEMENT.

PLAN VIEW
(UNPAVED SHOULDER ON HIGHWAY)

PLAN VIEW
(PAVED SHOULDER ON HIGHWAY)

RURAL DRIVEWAY INTERSECTION DETAIL
(NO CURB & GUTTER OR SIDEWALK)

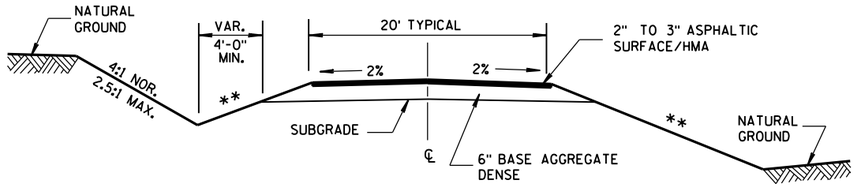


IN CUT **IN FILL**

TYPICAL CROSS SECTION FOR PRIVATE DRIVE OR FIELD ENTRANCE AGGREGATE SURFACE

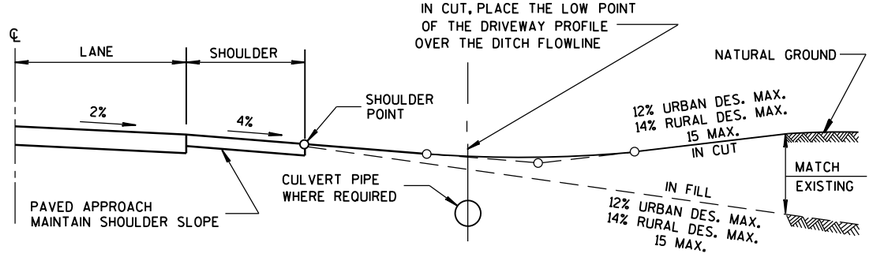
** SLOPE CAN VARY WITH SPEED. SEE 11-45-2.6.2.

POSTED SPEED MPH	MAX. SLOPE
<35	4:1
≥35 TO <60	6:1
≥60	10:1



IN CUT **IN FILL**

TYPICAL CROSS SECTION FOR PRIVATE DRIVE OR FIELD ENTRANCE ASPHALTIC SURFACE



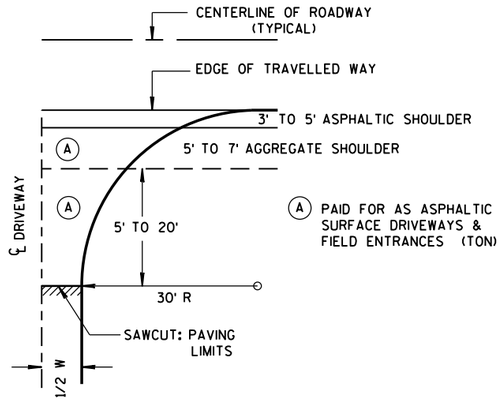
TYPICAL DRIVEWAY PROFILES

DRIVEWAYS WITHOUT CURB & GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

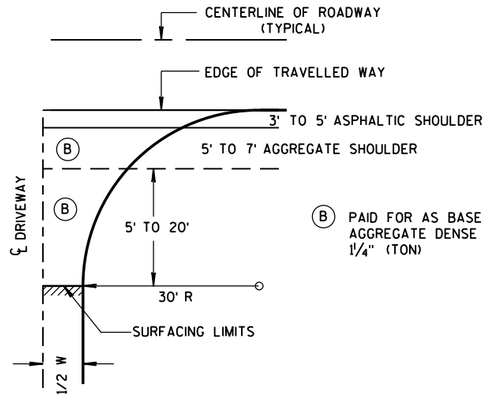
APPROVED
December, 2016 /S/ Rodney Taylor
DATE ROADWAY STANDARDS UNIT SUPERV
FHWA

6 S.D.D. 8 D 21-1



PLAN VIEW
HALF SECTION

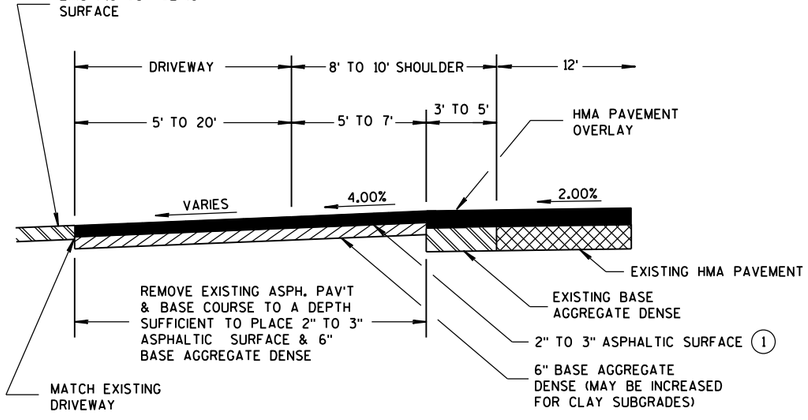
W MIN. = 16'
W MAX. = 24'



PLAN VIEW
HALF SECTION

GENERAL NOTES

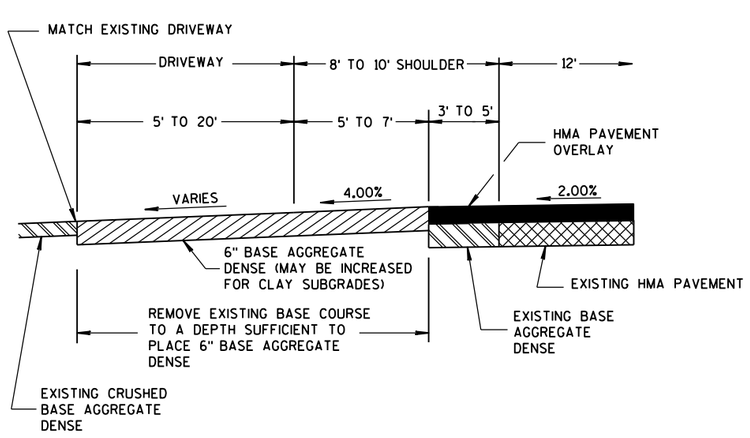
(1) DESIGN WILL DETERMINE FINAL DRIVEWAY ASPHALTIC THICKNESS BASED ON TYPE OF USAGE AND LOADINGS.



PROFILE VIEW

RURAL ENTRANCE WITH ASPHALTIC SURFACE

RESURFACING PROJECTS



PROFILE VIEW

RURAL ENTRANCE WITH AGGREGATE SURFACE

6" BASE AGGREGATE DENSE
RESURFACING PROJECTS

DRIVEWAYS WITHOUT CURB & GUTTER RESURFACING PROJECTS RURAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December, 2016 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS UNIT SUPERV
ENT
FHWA

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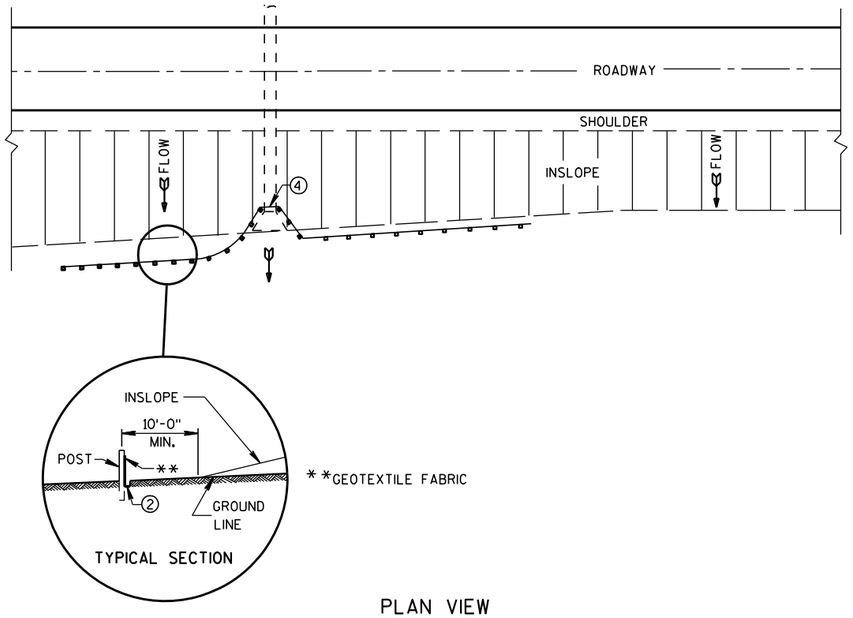
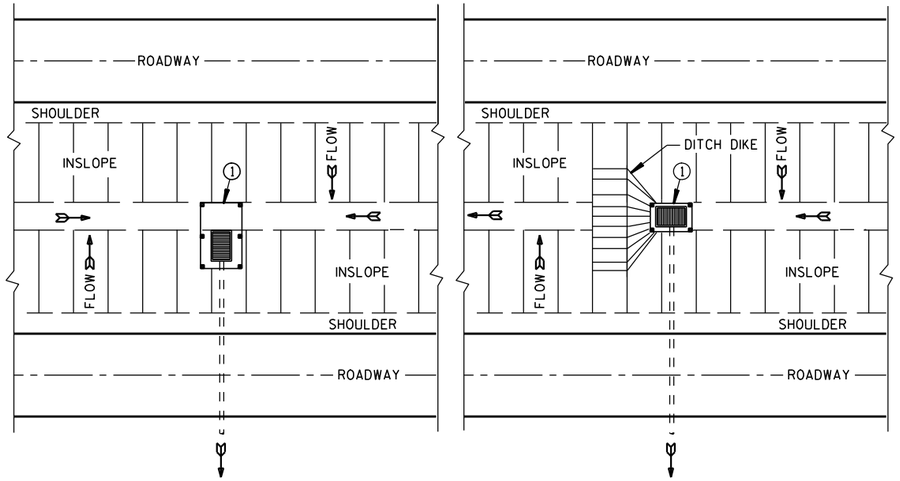


PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

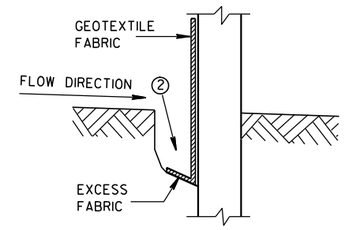
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.

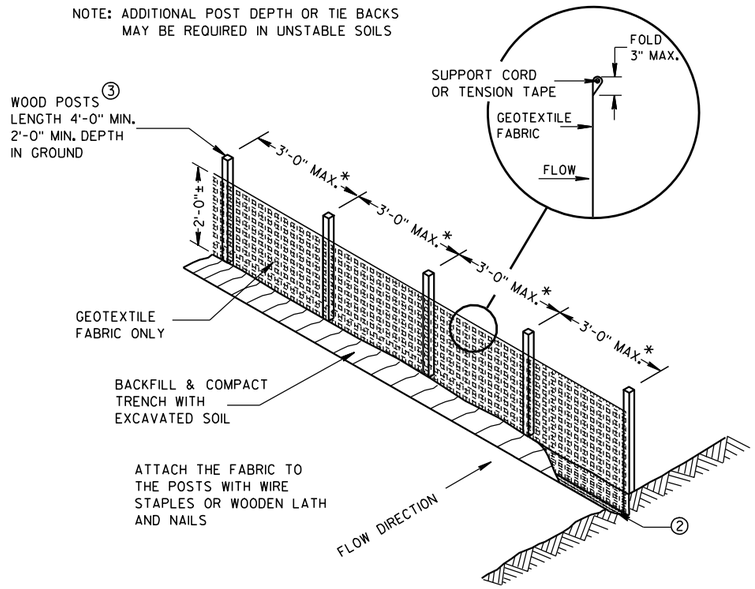
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.

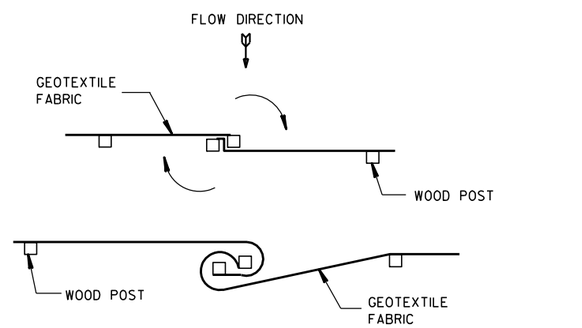
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



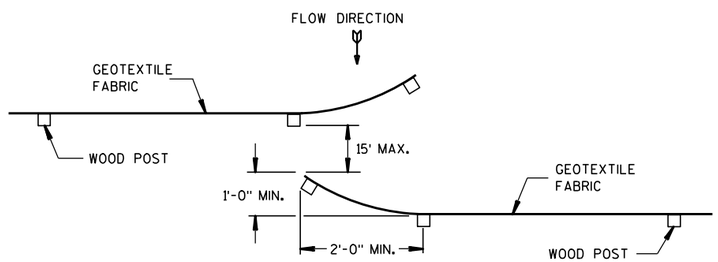
TRENCH DETAIL



SILT FENCE

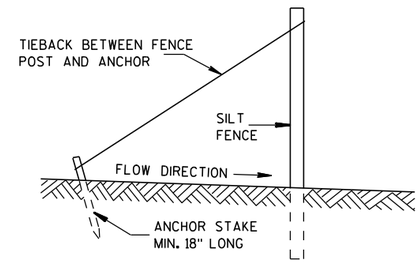


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

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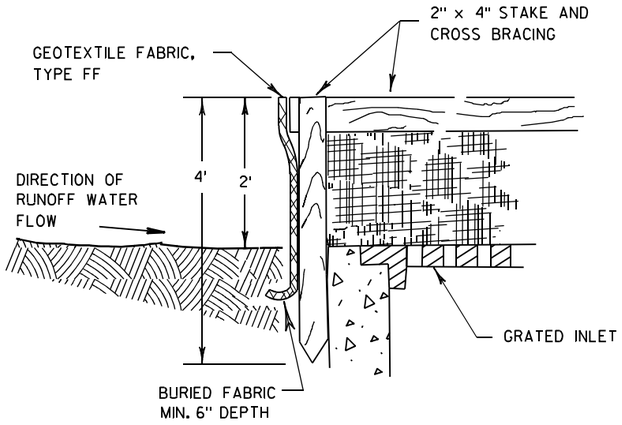
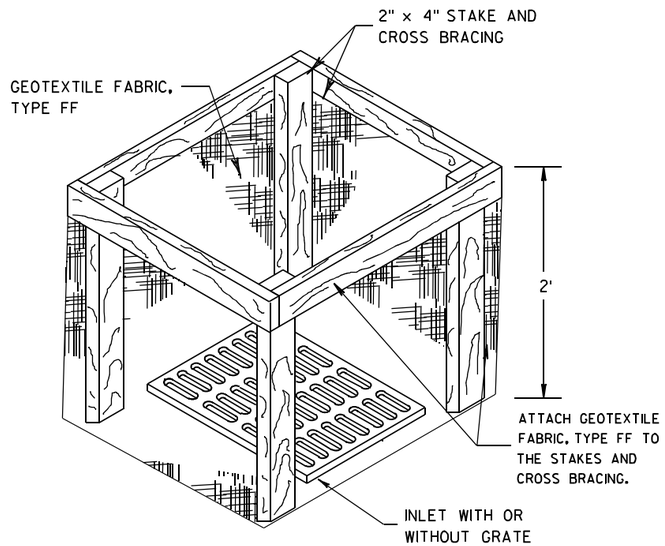
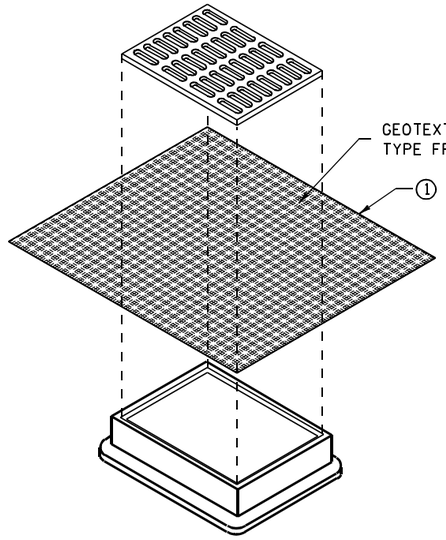
S.D.D. 8 E 9-6



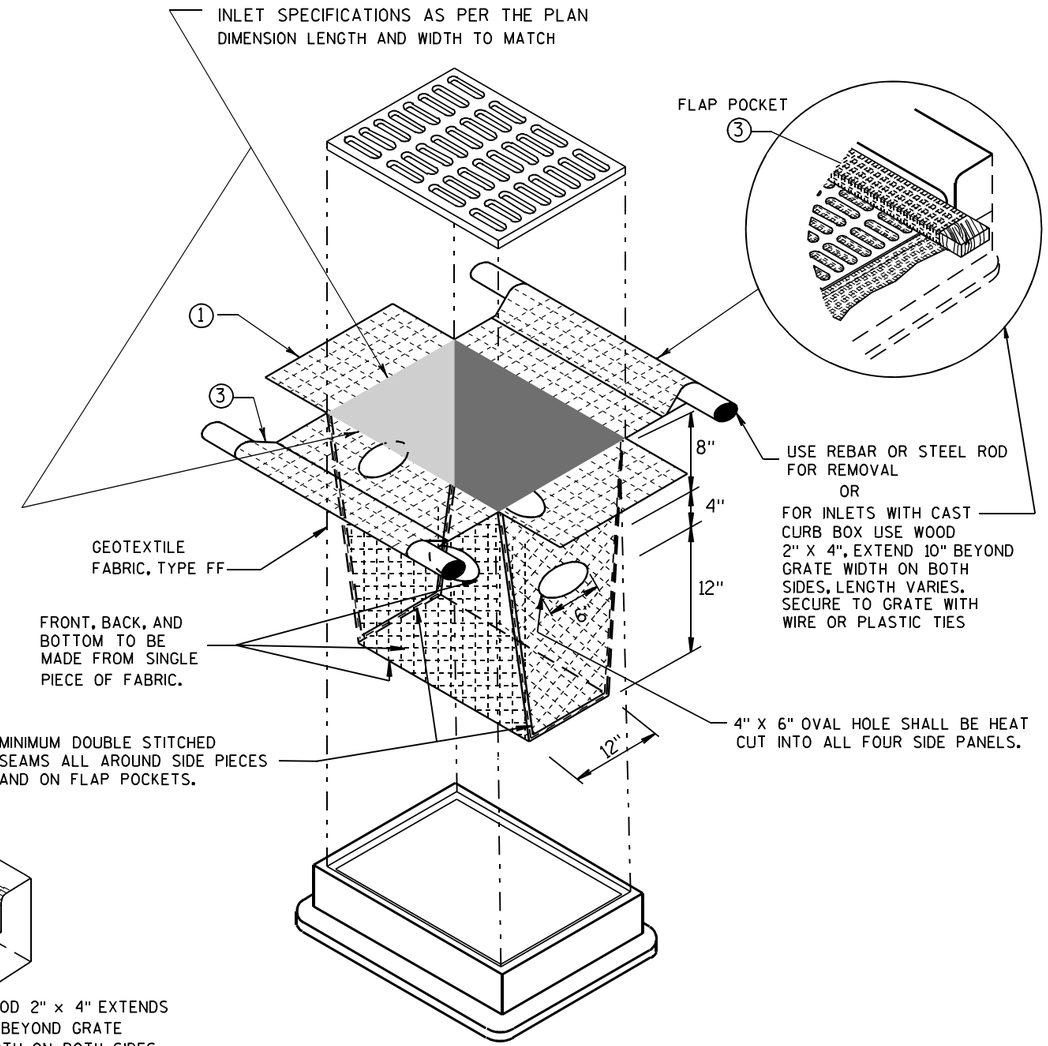


INLET PROTECTION, TYPE A



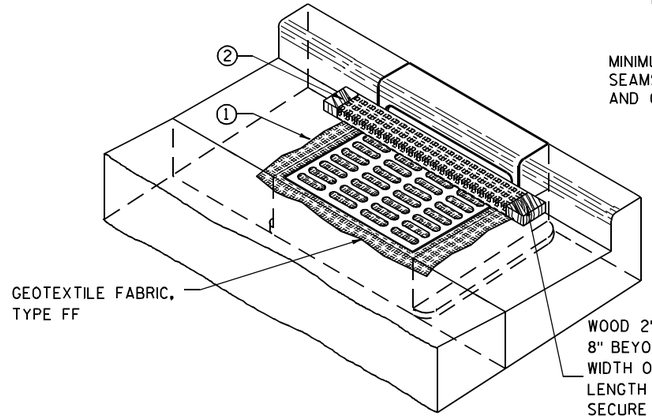
INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



INLET PROTECTION, TYPE D

(CAN BE INSTALLED IN ANY INLET TYPE WITH
OR WITHOUT A CURB BOX AS PER NOTE ②)



INLET PROTECTION, TYPE C (WITH CURB BOX)

GENERAL NOTES

INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.

② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.

③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.

INSTALLATION NOTES

TYPE B & C

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

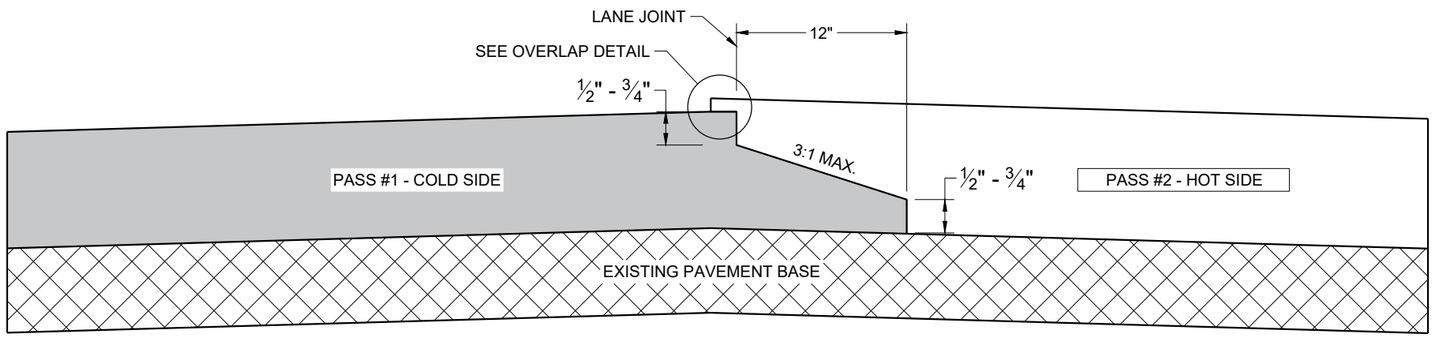
TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.

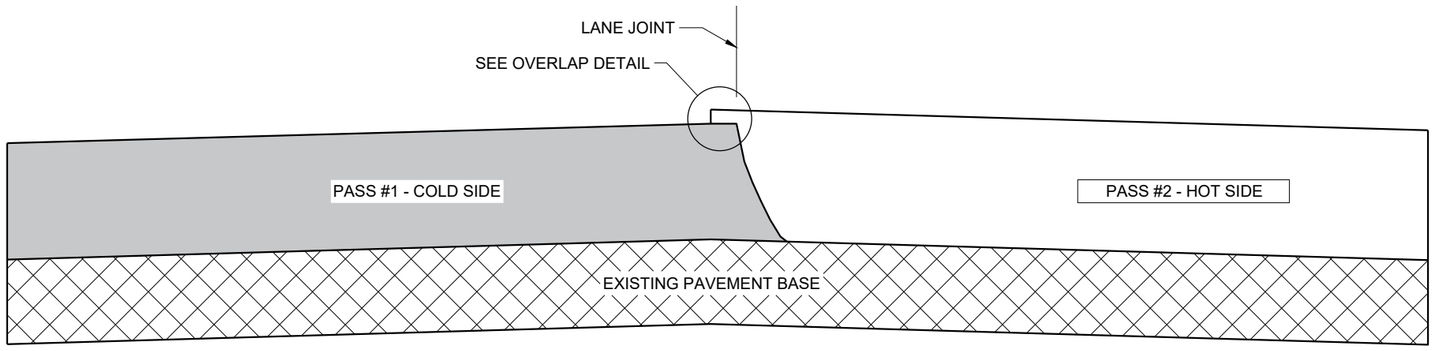
INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

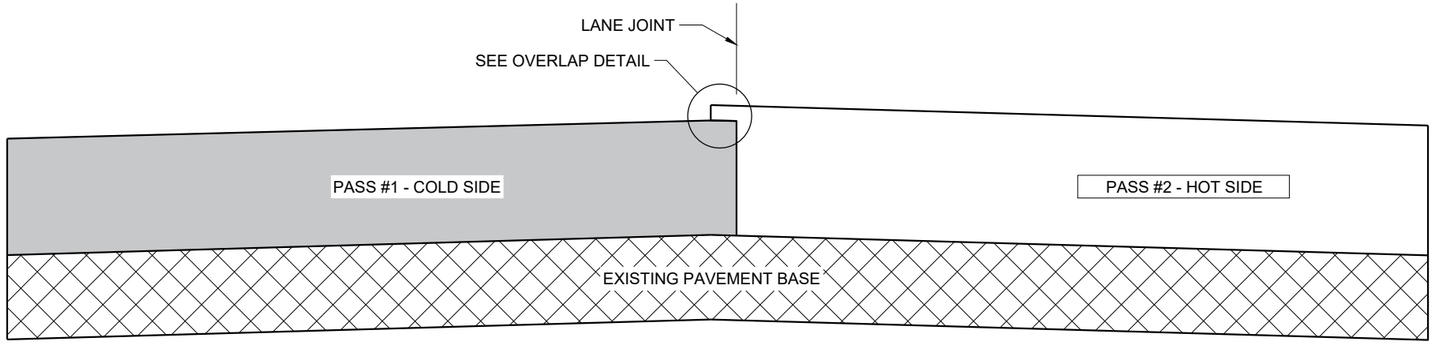
APPROVED
10/16/02
DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA



TYPICAL PAVEMENT CROSS SECTION
OF NOTCHED WEDGE LONGITUDINAL JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL LONGITUDINAL JOINT



TYPICAL PAVEMENT CROSS SECTION
OF MILLED LONGITUDINAL JOINT

GENERAL NOTES

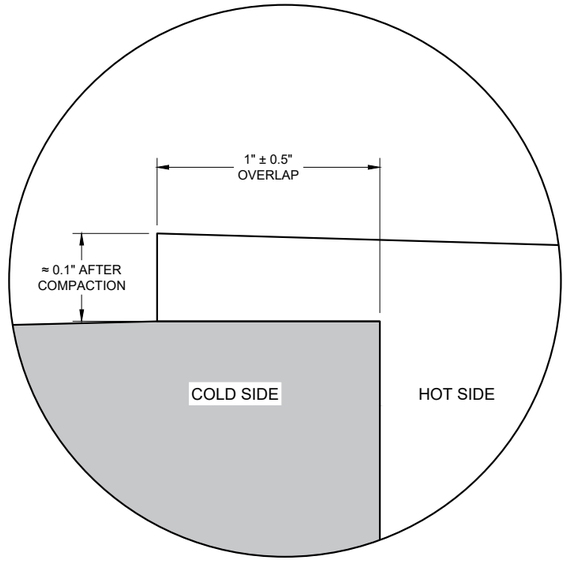
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

FOR ALL LONGITUDINAL JOINTS, ENSURE THE PAVER SCREED OVERLAPS THE PREVIOUSLY PLACED PAVEMENT BY 1" ± 0.5" AND THE HOT SIDE OF THE JOINT REMAINS HIGHER THAN THE COLD SIDE BY APPROXIMATELY 0.1" AFTER FINAL COMPACTION.

ONLY REMOVE THE LONGITUDINAL NOTCHED WEDGE JOINT FOR SMA PAVEMENT OR AS DIRECTED BY THE ENGINEER TO ADDRESS SPECIFIC LENGTHS OF JOINT DAMAGED BY TRAFFIC.

WHEN MILLING BACK OR REMOVING ANY LONGITUDINAL JOINT, LIMIT THE MATERIAL REMOVED TO 2" FROM THE TOP NOTCH OR FROM THE VERTICAL JOINT EDGE ON THE COLD SIDE OF THE JOINT.

USE LONGITUDINAL MILLED JOINT AS PLANS SHOW OR THE AS THE ENGINEER DIRECTS.



OVERLAP DETAIL (TYPICAL)

6

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SDD 13C19 - 02

SDD 13C19 - 02

HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE

/S/ Steven Hefel
HMA PAVEMENT ENGIN

FHWA

GENERAL NOTES

(1) W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POSTS WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS. APPROVED PLASTIC BLOCKOUT DESIGNS MAY VARY FROM THIS TYPICAL DETAIL WHEN USED IN CONJUNCTION WITH STEEL POSTS.

DO NOT MIX STEEL POSTS AND WOOD POSTS IN A SINGLE INSTALLATION.

(2) USE STRUCTURAL STEEL POSTS CONFORMING TO ASTM A 36. GALVANIZED POSTS ACCORDING TO AASHTO M 111. EITHER SET THE POSTS IN DRILLED HOLES OR DRIVE TO GRADE. REMOVE MUSHROOMING CAUSED BY DRIVING AND REPAIR DAMAGED SPELTER COATING ON GALVANIZED POSTS.

(3) INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

(4) USE EITHER WOOD OR APPROVED PLASTIC BLOCKOUTS ON WOOD POSTS.

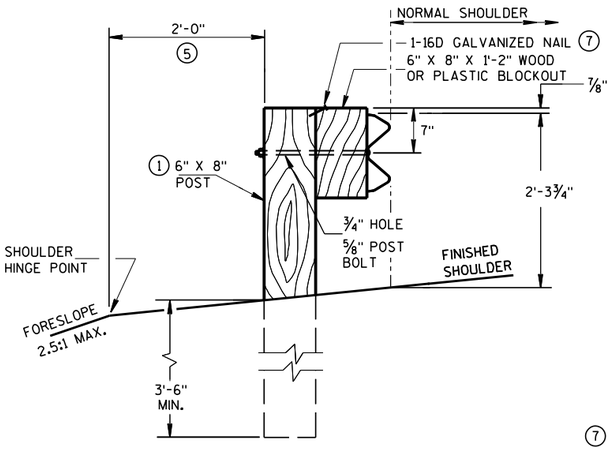
(5) IF THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING, W BEAM (LHW).

(6) IF ROCK IS ENCOUNTERED DURING EXCAVATION, THE ENGINEER MAY APPROVE USING A 12 INCH DIAMETER POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE APPROXIMATELY 2½ INCHES DEEP. CUT THE POSTS TO LENGTH AND PLACE IN YHE HOLE. BACKFILL WITH MATERIAL EXCAVATED FROM THE HOLE AND COMPACT ADEQUATEY.

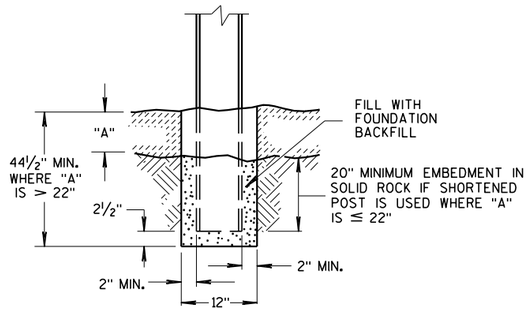
(7) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

INSTALL BEAM GUARD SECTIONS AND ALL NECESSARY HARDWARE ACCORDING TO THE APPLICABLE PLAN AND CURRENT STANDARD AND SUPPLEMENTAL SPECIFICATIONS.

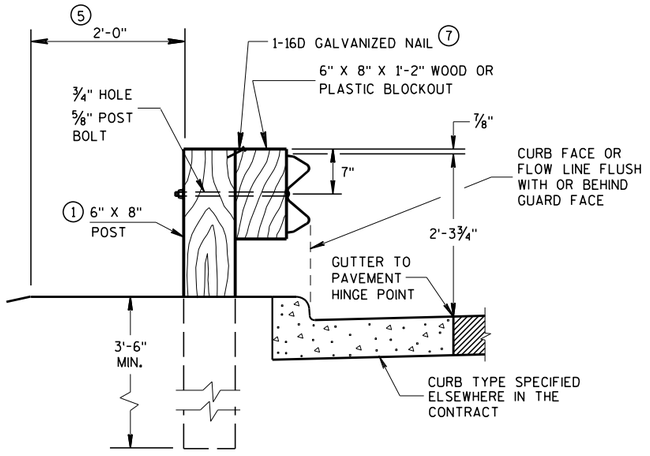
ALL DIMENSIONS ARE SUBJECT TO MANUFACTURER'S TOLERANCES EXCEPT WHERE ALLOWABLE TOLERANCES ARE SHOWN.



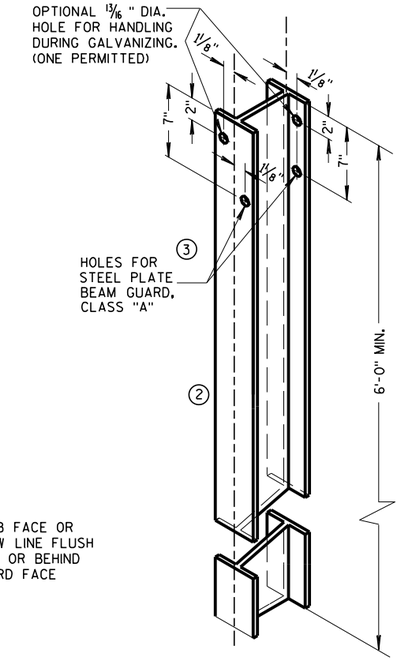
END VIEW
LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



END VIEW
SETTING STEEL OR WOOD POST IN ROCK (6)

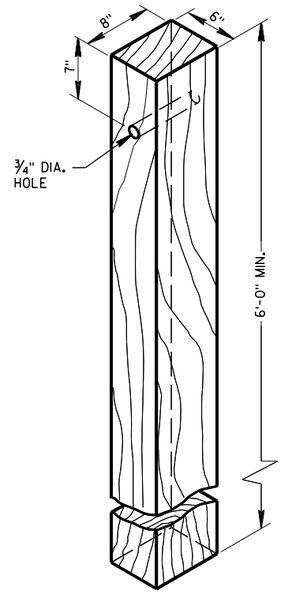


END VIEW
LOCATED ALONG A CURBED ROADWAY

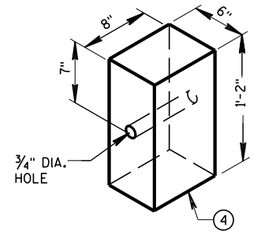


STEEL POST &
HOLE PUNCHING DETAIL
(W6 X 9) (1)

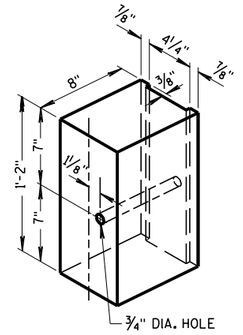
ALL HOLES 13/16" DIAMETER EXCEPT AS NOTED



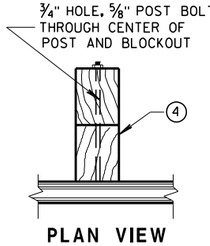
WOOD POST
(6"X8") NOMINAL



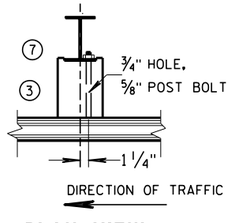
WOOD OR PLASTIC
BLOCKOUT FOR
WOOD POSTS



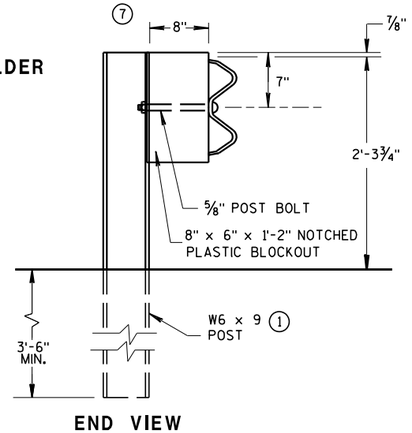
TYPICAL NOTCHED
PLASTIC BLOCKOUT
FOR STEEL POSTS (1)



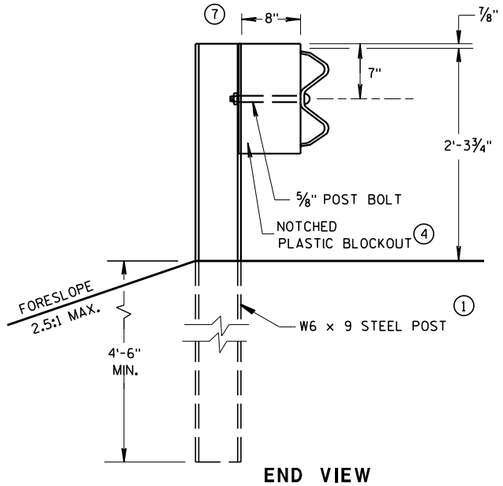
PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



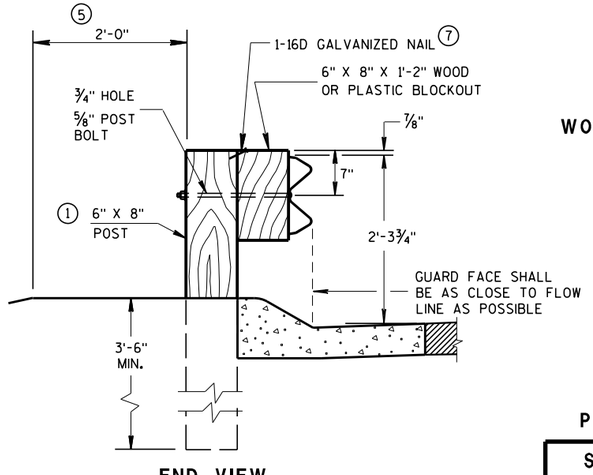
PLAN VIEW
STEEL POST, NOTCHED
PLASTIC BLOCKOUT & BEAM



END VIEW
STEEL POST & NOTCHED
PLASTIC BLOCKOUT ALTERNATIVE
STANDARD INSTALLATION



END VIEW
LONGER POST AT HALF
POST SPACING W BEAM
(LHW)



END VIEW
LOCATED ALONG A
MOUNTABLE CURBED ROADWAY

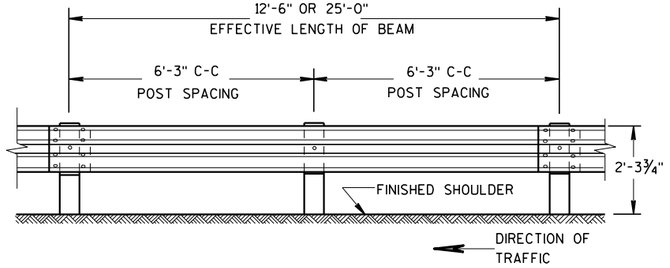
TYPICAL INSTALLATION OF STEEL PLATE BEAM GUARD

STEEL PLATE BEAM GUARD,
CLASS "A"
INSTALLATION & ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

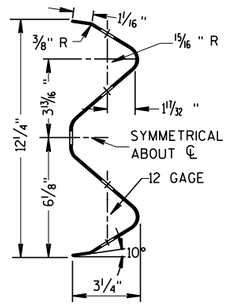
S.D.D. 14 B 15-11a

S.D.D. 14 B 15-11a

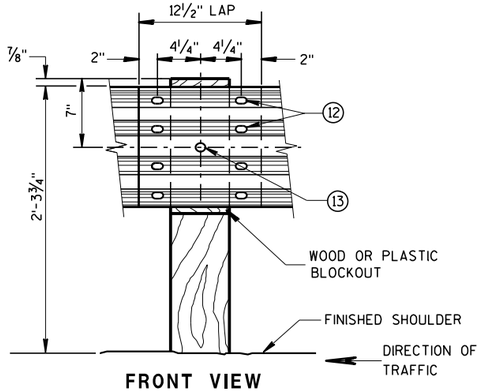


FRONT VIEW

POST SPACING STANDARD INSTALLATION



SECTION THRU W BEAM



FRONT VIEW

BEAM SPLICE AT WOOD POST AND POST MOUNTING DETAIL

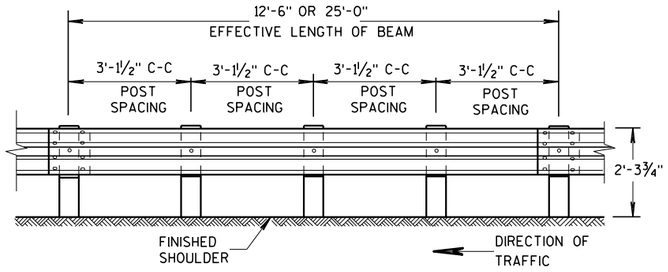
GENERAL NOTES

FURNISH GUARDRAIL DEFLECTORS FROM APPROVED PRODUCTS LIST.

(9) DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINA. START REFLECTORS AT POST #9 AND SPACE EVENLY EVERY 100 FEET (MAX.) TO THE END OF GUARDRAIL RUN, USING A MINIMUM OF 3 REFLECTORS.

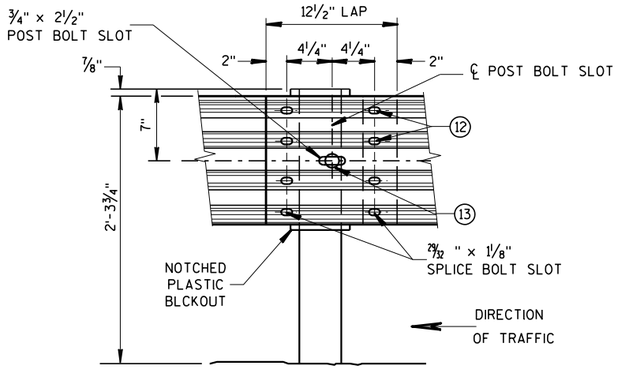
(12) 8 -⅝" ϕ X 2" BUTTON HEAD BOLTS WITH OVAL SHOULDERS & RECESS NUTS.

(13) ⅝" DIA. BUTTON HEAD BOLT AND RECESS NUT WITH ⅝" DIA. F844 FLAT WASHER UNDER NUT.



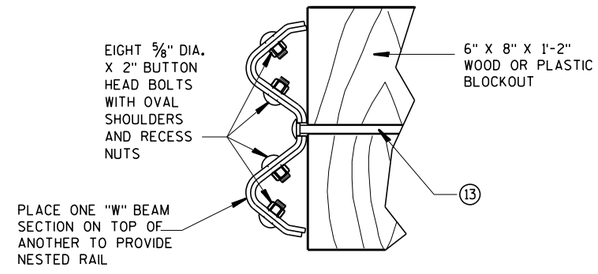
FRONT VIEW

POST SPACING FOR LONGER POST AT HALF POST SPACING W BEAM (LHW)



FRONT VIEW

BEAM SPLICE AT STEEL POST

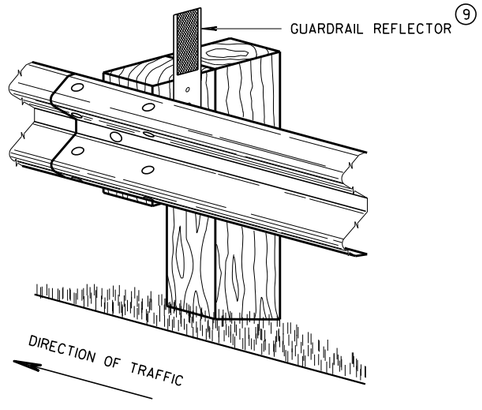


NESTED W BEAM (NW)

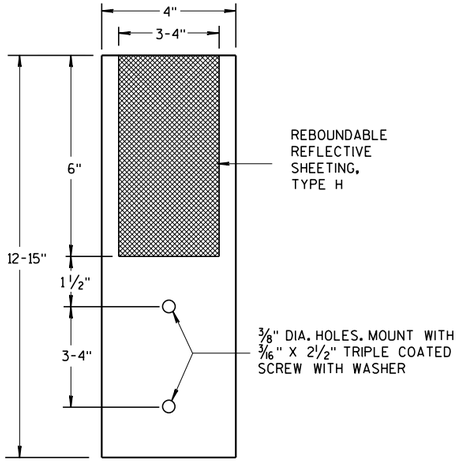
USE ALL OTHER STANDARD BEAM GUARD DETAILS FOR CONSTRUCTING NESTED W BEAM (NW)

TYPICAL SPLICING DETAILS OF STEEL PLATE BEAM GUARD

* USE DOUBLE SIDED WHITE GUADRAIL REFLECTORS ON ROADWAYS WITH BI-DIRECTIONAL TRAFFIC (NO MEDIAN). USE SINGLE SIDED WHITE (RIGHT SIDE) AND SINGLE SIDED YELLOW (LEFT SIDE) ON ROADWAYS WITH MEDIAN SEPARATION.



4" X 12" GUARDRAIL REFLECTOR DETAIL AND TYPICAL INSTALLATION *



4"x 12" GUARDRAIL REFLECTOR

STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS

STATE OF WISCO 36
DEPARTMENT OF TRANSPORTATION

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S.D.D. 14 B 15-11b

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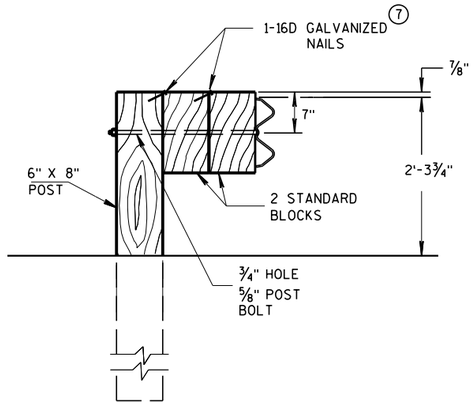
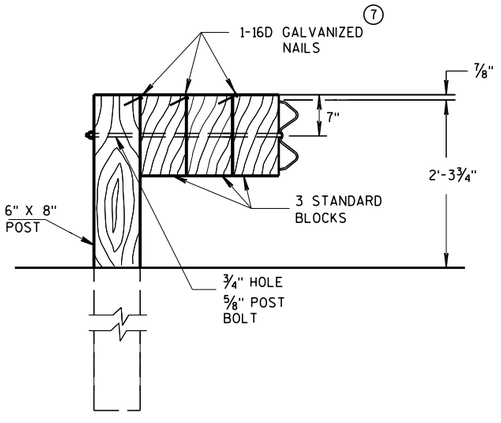
S.D.D. 14 B 15-11b



DETAIL FOR DOUBLE BLOCKS

THE NUMBER OF DOUBLE BLOCK POSTS WITHIN A BARRIER RUN IS UNLIMITED

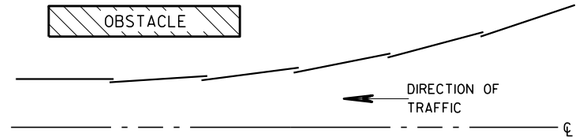


DETAIL FOR TRIPLE BLOCKS

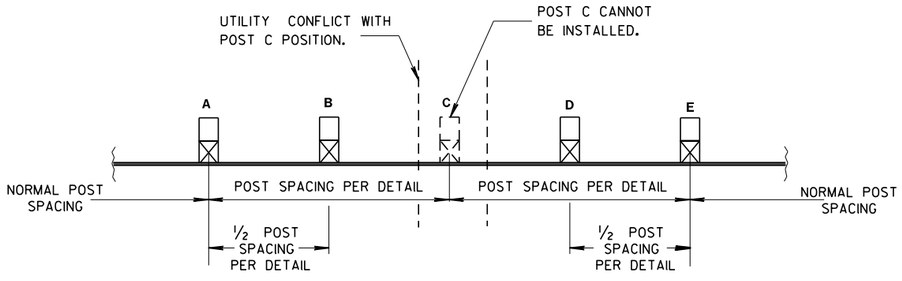
TRIPLE BLOCK DETAIL IS LIMITED TO ONE LOCATION WITHIN A BEAM GUARD RUN.

NOTES: USE DOUBLE OR TRIPLE BLOCKS WHEN UNDERGROUND OBSTACLES PREVENT THE POST FROM BEING INSTALLED.

DO NOT USE EXTRA BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.



PLAN VIEW
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION

STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS UNIT SUPERVISOR
37
FHWA

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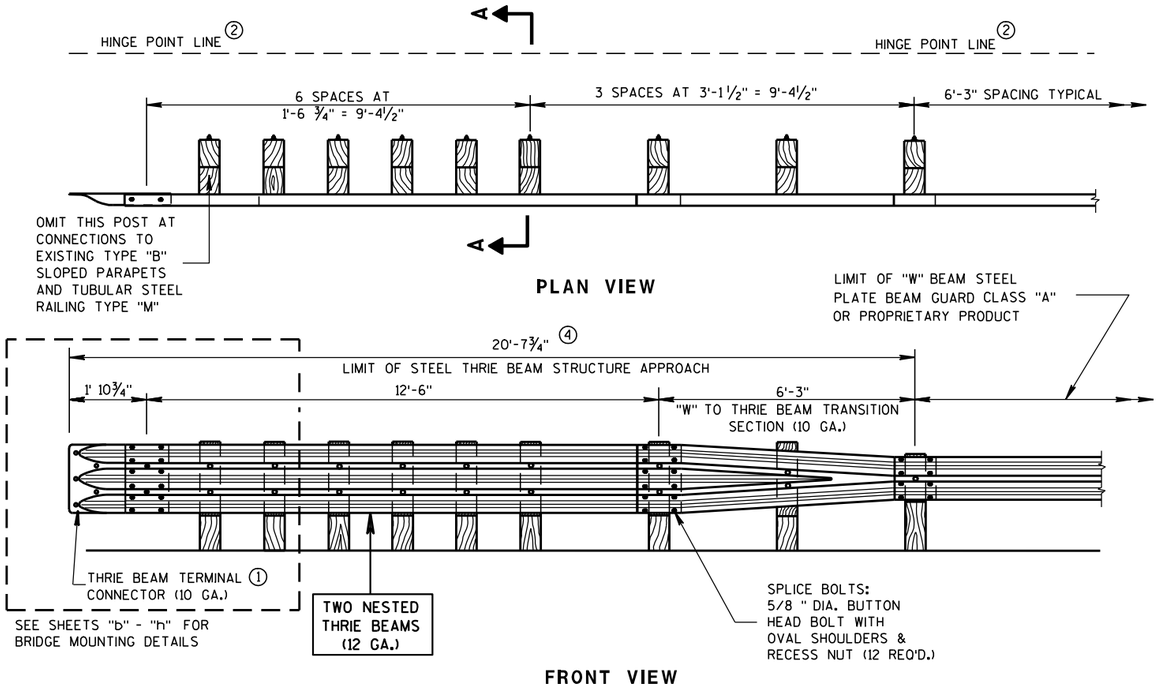
S.D.D. 14 B 15-11c



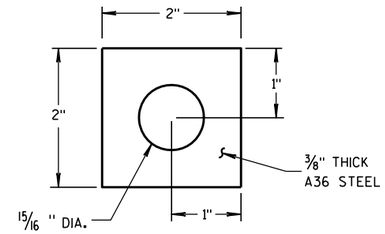


PLATE WASHER DETAIL

GENERAL NOTES

BOLT THE THRIE BEAM TO ALL POSTS AND BLOCKOUTS. DRILL OR PUNCH BOLT HOLES IN THE BEAM IF THE POST SPACING IS LESS THAN 6'-3".

DO NOT USE STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS IN THE STEEL THRIE BEAM STRUCTURAL APPROACH AND THE TRANSITION SECTION OF STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATIONS.

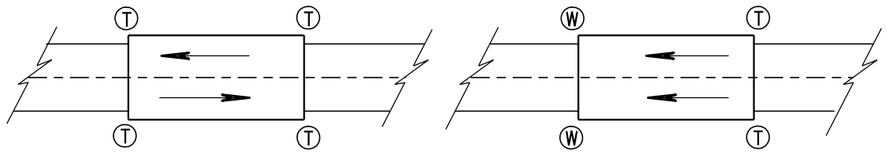
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2 1/2" , AND 12" DIAMETER AROUND POST. SEE 14B15 FOR MORE DETAILS.

① BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

② MINIMUM EMBEDMENT SHALL BE 4'-0". WHERE EXISTING CONDITIONS DO NOT PERMIT THE APPROPRIATE EARTHWORK SHOWN ON THE PLAN TYPICAL SECTIONS OR DETAILS, THE ENGINEER MAY ALLOW THE REDUCTION OR ELIMINATION OF THE 2 FOOT DISTANCE TO THE HINGE POINT. OTHERWISE BUILD AS THE PLAN SHOWS OR AS THE ENGINEER DIRECTS. IF THE 2 FOOT DISTANCE TO THE HINGE POINT IS REDUCED OR ELIMINATED, INCREASE THE POST EMBEDMENT DEPTH TO 4'-6" OR MORE.

③ POST BOLTS ARE 5/8" DIAMETER ASTM A307 BUTTON HEAD BOLT. A POST BOLT REQUIRES A 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX AND A 5/8" DIAMETER F844 FLAT WASHER. LENGTH OF POST BOLT MAY VARY.

④ ALL WOOD POSTS MUST BE 6" X 8" AND AT LEAST 7'-0" LONG.



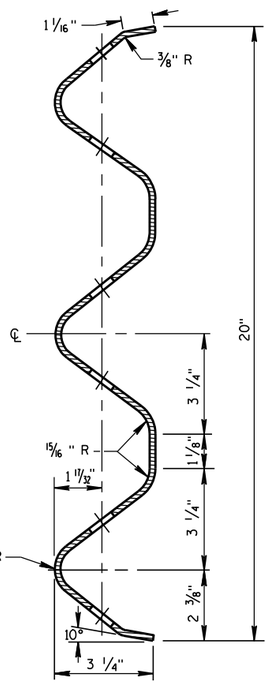
TWO WAY TRAFFIC

ONE WAY TRAFFIC

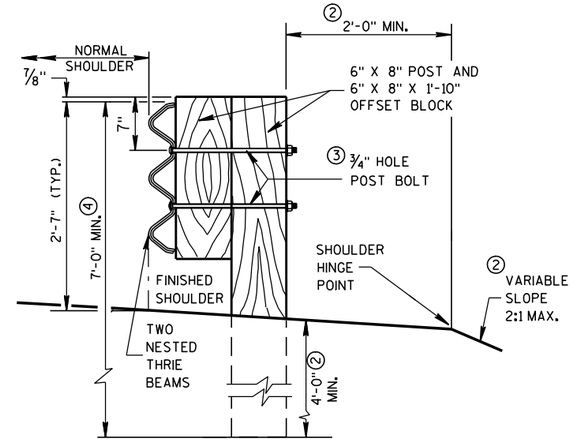
(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

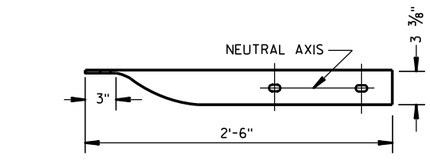
TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE

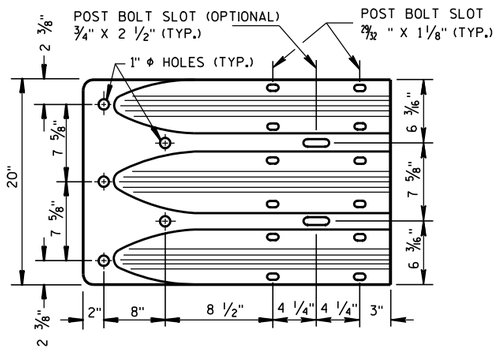


SECTION THRU THRIE BEAM RAIL ELEMENT

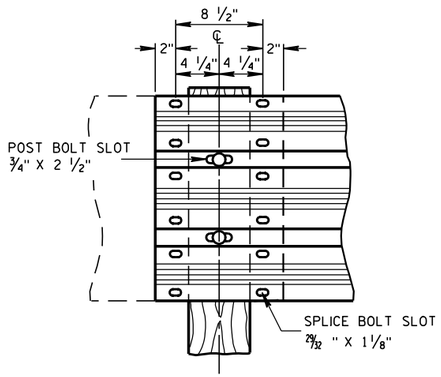


SECTION A-A





THRIE BEAM TERMINAL CONNECTOR



THRIE BEAM SPLICE

STEEL THRIE BEAM STRUCTURE APPROACH

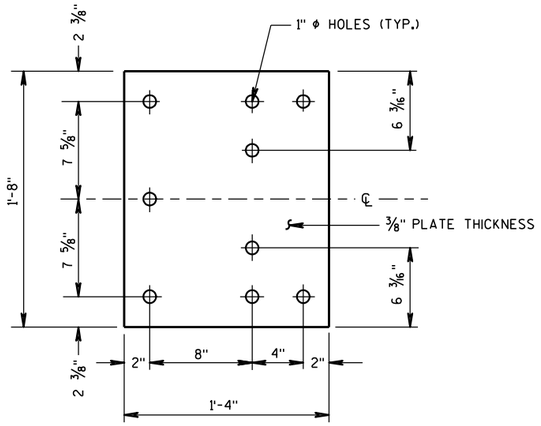
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

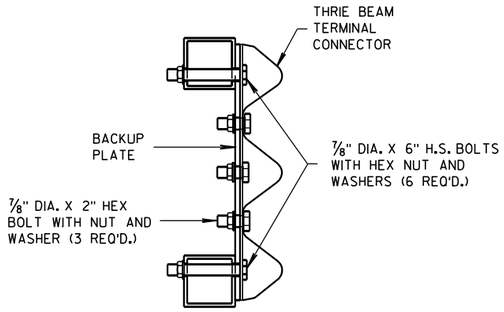
8/31/2012 — DATE

/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER

FHWA



BACK-UP PLATE DETAIL



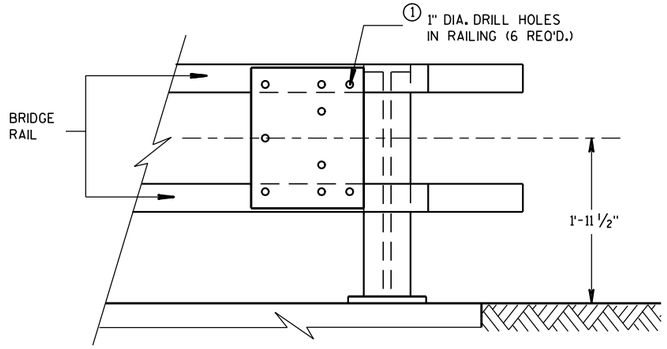
SECTION G-G

GENERAL NOTES

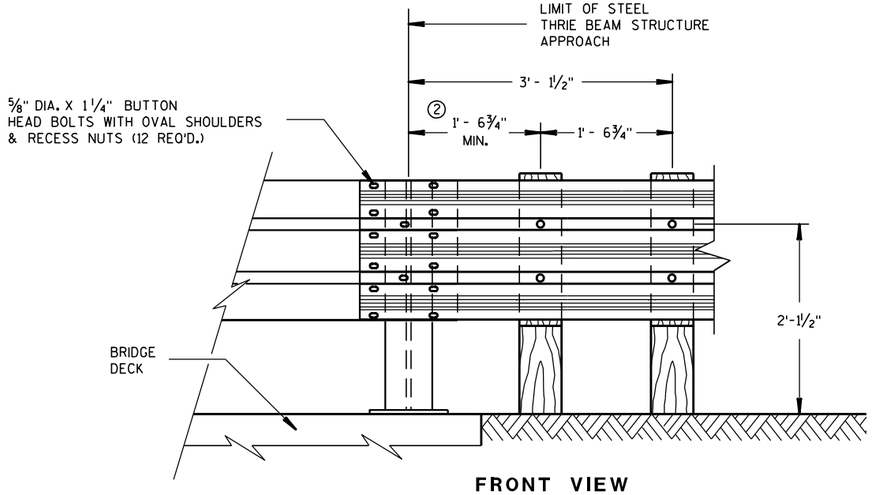
BOLTS, PLATES, NUTS AND WASHERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATION A 325 AND BE GALVANIZED IN ACCORDANCE WITH ASTM A 153.

① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

② VARY THIS DIMENSION DEPENDING ON ABUTMENT TYPE, WINGWALL DETAILS, AND ANGLE OF SKEW. PLACE THE FIRST WOOD POST OFF THE BRIDGE SHALL AS CLOSE AS FEASIBLE TO THE STEEL END POST.

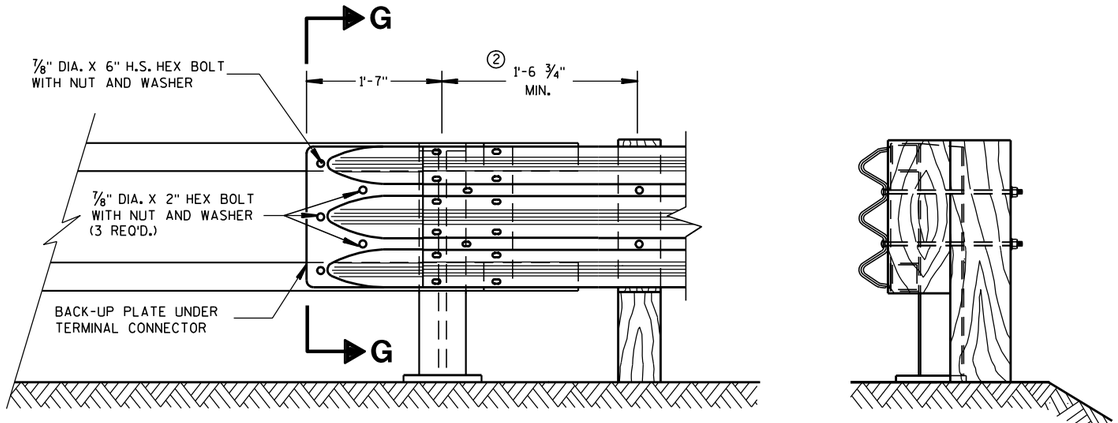


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING



FRONT VIEW

THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"



FRONT VIEW

END VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"

STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO BRIDGE RAILING TYPES "F" AND "W"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/31/2012 — DATE

/S/ Jerry H ... — ROADWAY STANDARDS ENGINEER — ENT

FHWA

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S.D.D. 14 B 20-11e

BILL OF MATERIALS

NOTE NO.	DESCRIPTION
①	WOOD BREAKAWAY TERMINAL POST: 5½" X 7½" X 3'-9"
②	STEEL TUBE TS 8" X 6" X 0.188", 6'-0"
④	WOOD BREAKAWAY CRT POST: 6" X 8" X 6'-0"
⑤	WOOD OFFSET BLOCKS: 6' X 8" X 1'-2"
⑥	PIPE SLEEVE: 2" X 5 ½" STANDARD PIPE
⑦	BEARING PLATE
⑧	BCT CABLE ASSEMBLY
⑨	CABLE ANCHOR BOX
⑩	STRUT & YOKE
⑪	STEEL PLATE BEAM, END PANEL 12 GA.
⑫	STEEL PLATE BEAM: 12 GA. 13'-6½"
⑬	IMPACT HEAD
⑭	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE F PER SECTION 637 OF THE STANDARD SPECIFICATIONS

GENERAL NOTES

FOLLOW MANUFACTURE'S BOLTING RECOMMENDATIONS.

(A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE (HPL), AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.

(B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED.

(D) THE TOP OF THE STEEL TUBE ON POSTS 1 AND 2 SHALL NOT BE MORE THAN 3" ABOVE THE FINISH GROUND ELEVATION.

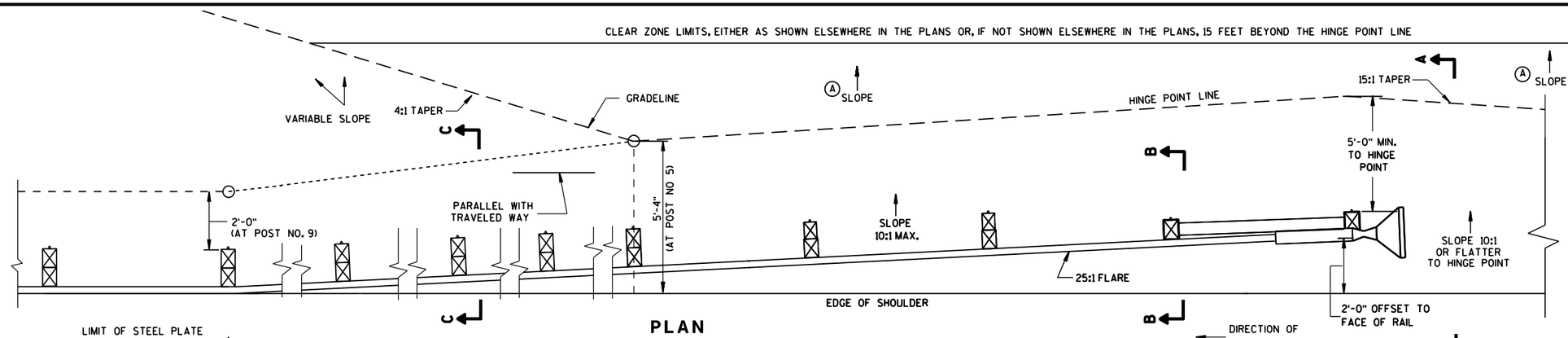
(E) THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST 3 THROUGH 8 SHALL BE ¾" ABOVE THE FINISHED GROUND LINE.

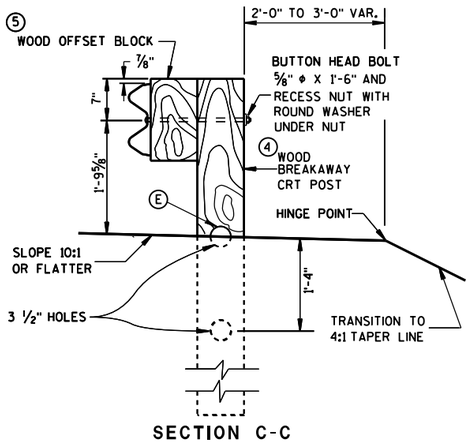
(F) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS. ONE SCREW PER CORNER.

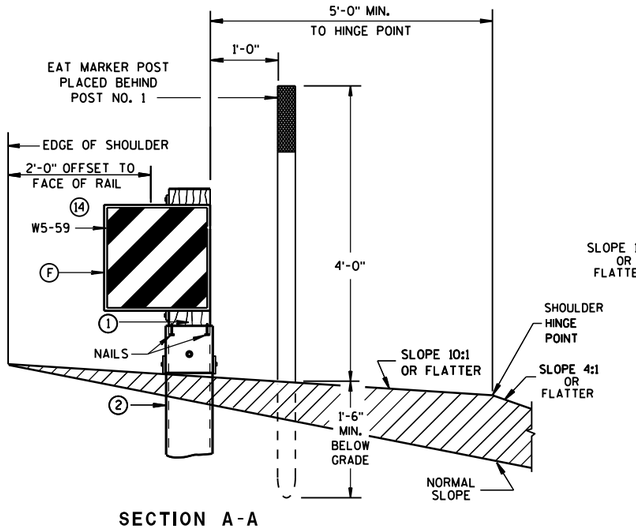
STEEL POSTS SHALL NOT BE ALLOWED FOR USE WITH ENERGY ABSORBING TERMINALS.

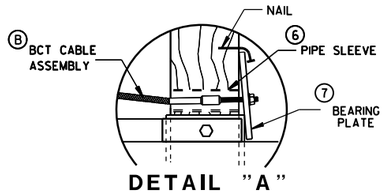
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

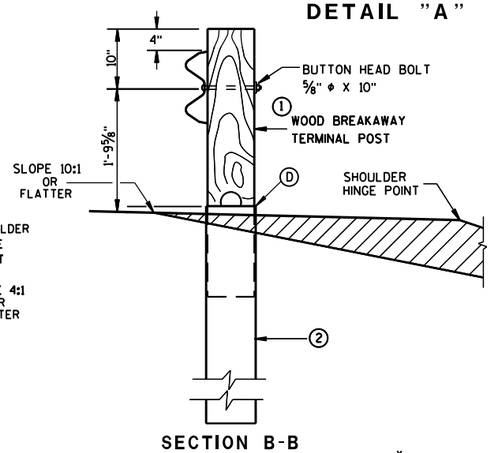
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

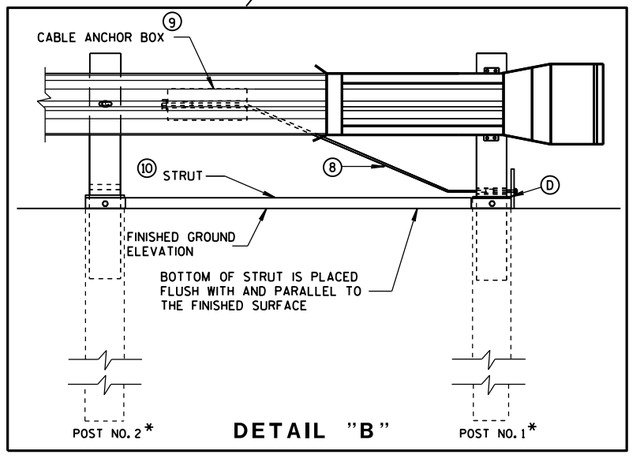










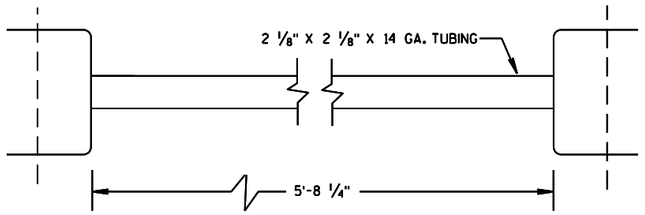


STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL

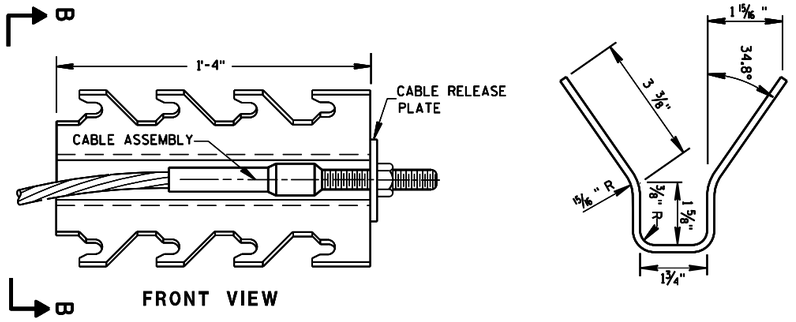
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

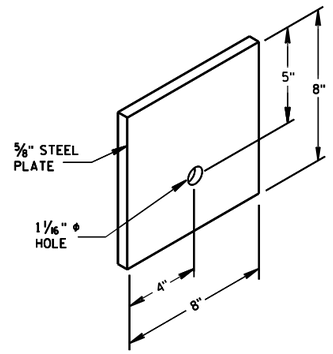
S.D.D. 14 B 24-9a



⑩ STRUT DETAIL



⑨ CABLE ANCHOR BOX



⑦ STEEL BEARING PLATE

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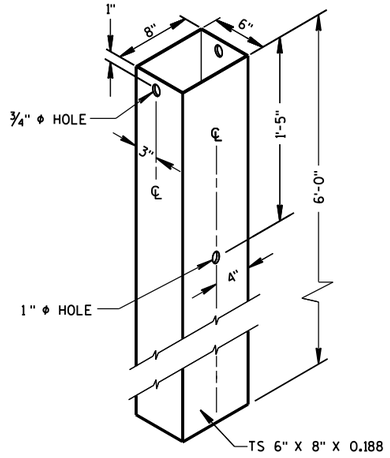
S.D.D. 14 B 24-9b

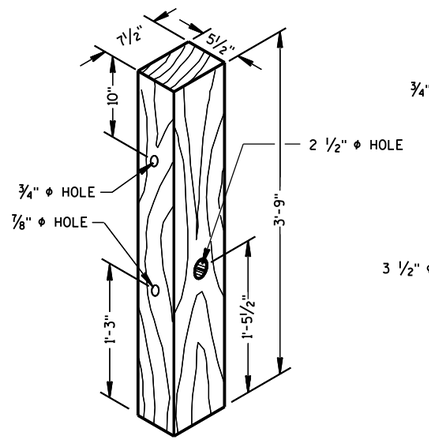
S.D.D. 14 B 24-9b

STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

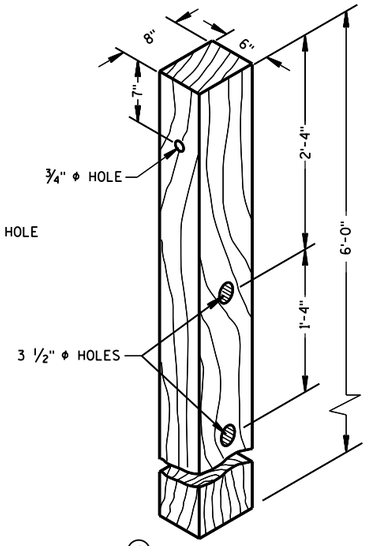
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI



② 72" STEEL TUBE
(POSTS NO. 1-2



① TERMINAL POST

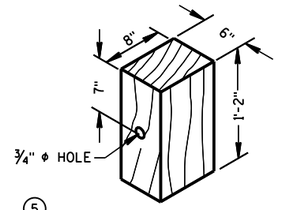


④ CRT POST
(POSTS NO'S 5-8)

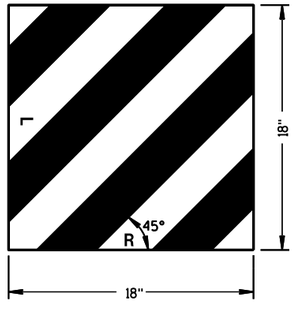
WOOD BREAKAWAY POSTS

GENERAL NOTES

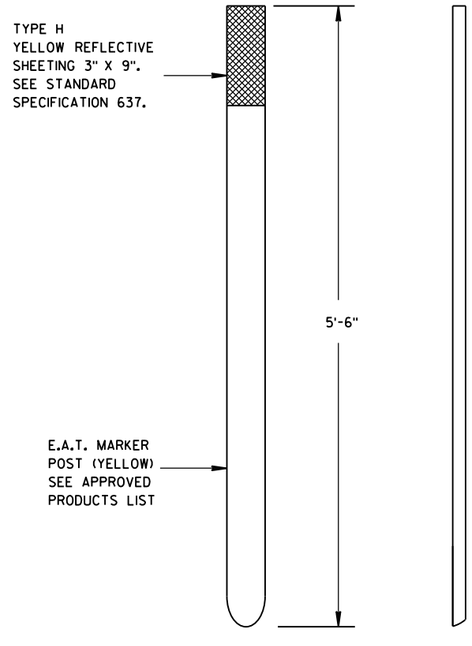
WHEN ROCK IS ENCOUNTERED DURING EXCAVATION, A 12 INCH DIA. POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK MAY BE USED IF APPROVED BY THE ENGINEER. GRANULAR MATERIAL SHALL BE PLACED IN THE BOTTOM OF THE HOLE APPROXIMATELY 2 ½" INCHES DEEP TO PROVIDE DRAINAGE. THE SOIL TUBES SHALL BE FIELD CUT TO LENGTH, PLACED IN THE HOLE AND BACKFILLED WITH ADEQUATELY COMPACTED MATERIAL EXCAVATED FROM THE HOLE.



⑤ WOOD OFFSET BLOCK
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



⑭ REFLECTIVE SHEETING DETAILS



E.A.T. MARKER POST

STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017
DATE
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS UNIT SUPERV.
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S.D.D. 14 B 24-9c

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S.D.D. 14 B 24-9c

(1) WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

(2) USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.

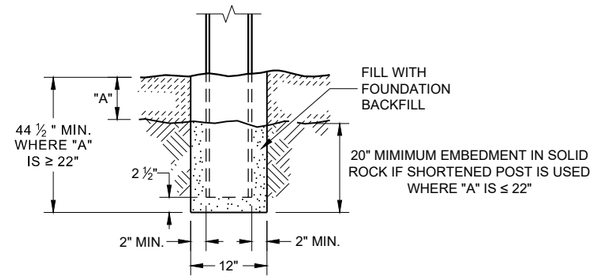
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.

(4) WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).

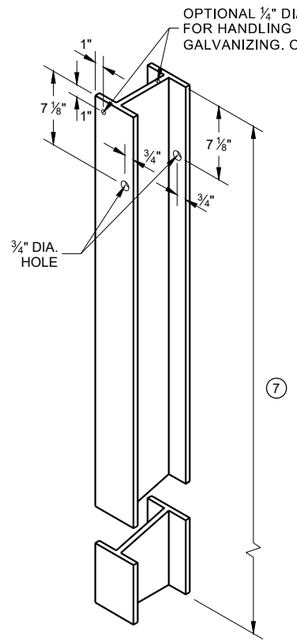
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS +1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

(6) WHEN USING STEEL POST AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

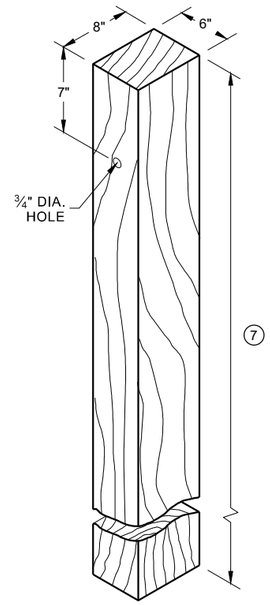
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



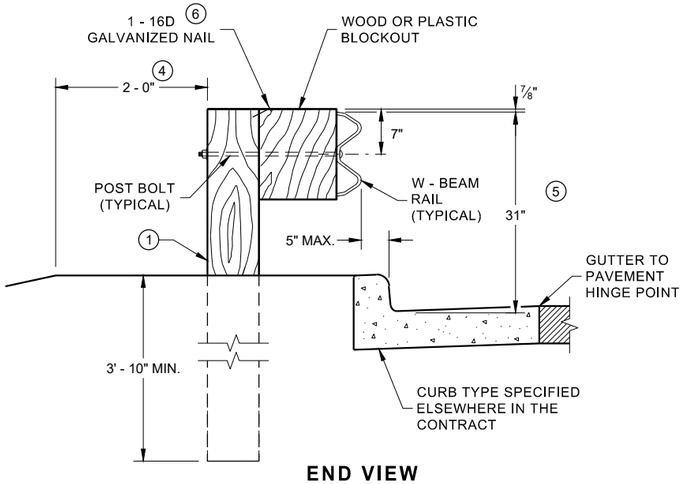
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



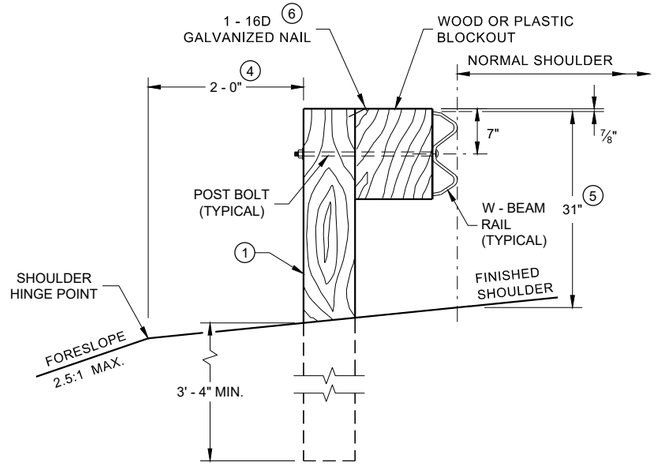
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



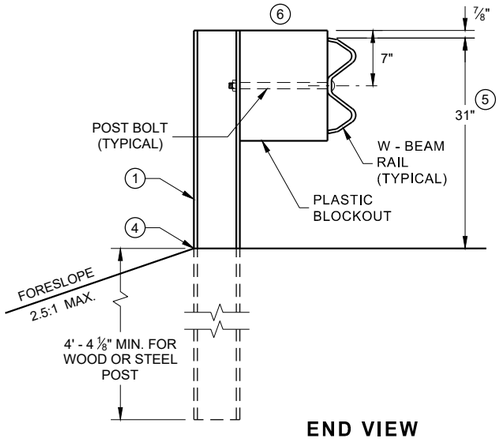
WOOD POST (6" X 8") NOMINAL (1)



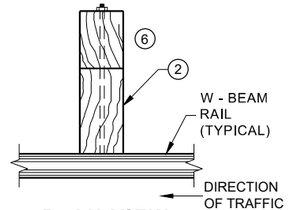
END VIEW
LOCATED ALONG A CURBED ROADWAY



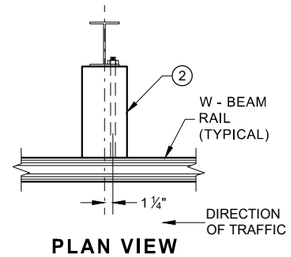
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



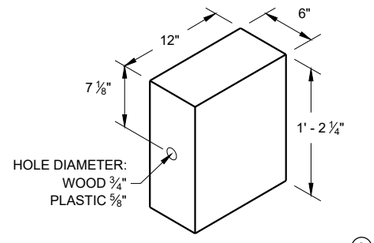
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, PLASTIC BLOCKOUT & BEAM



WOOD OR PLASTIC BLOCKOUT (2)

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B42 - 06a

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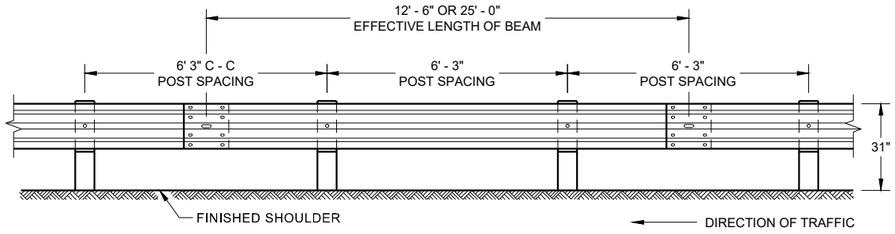
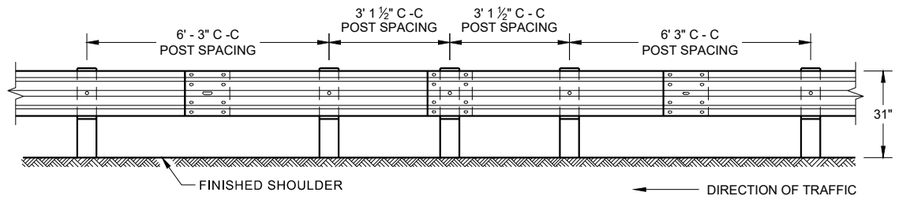
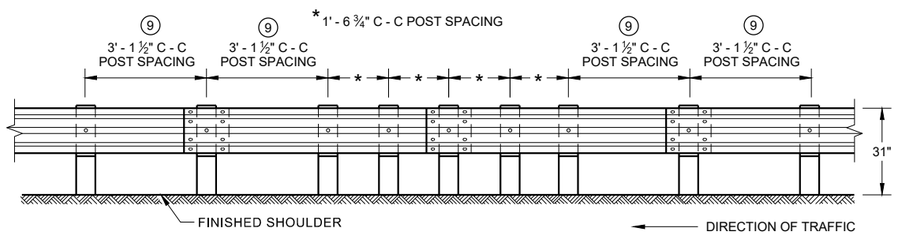


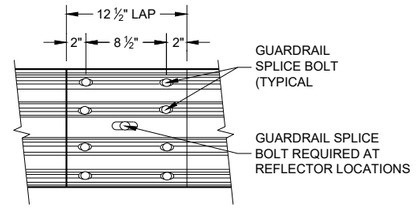
FRONT VIEW
POST SPACING STANDARD INSTALLATION



FRONT VIEW
HALF POST SPACING (HS) AND HALF POST SPACING WITH LONGER POSTS (K)



FRONT VIEW
QUARTER POST SPACING (QS)



FRONT VIEW
MID-SPAN BEAM SPLICE

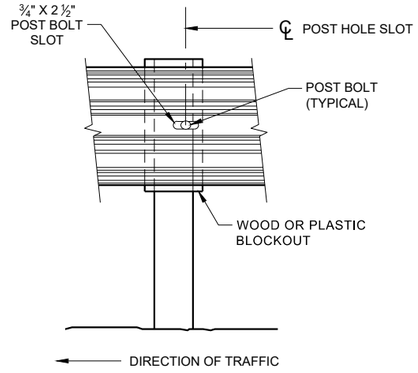
GENERAL NOTES

⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

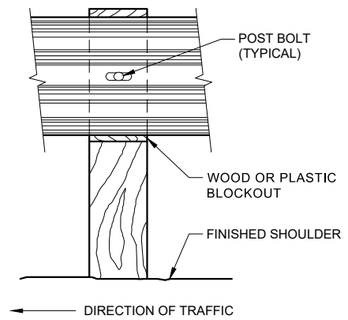
⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

POST BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND ⅝" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

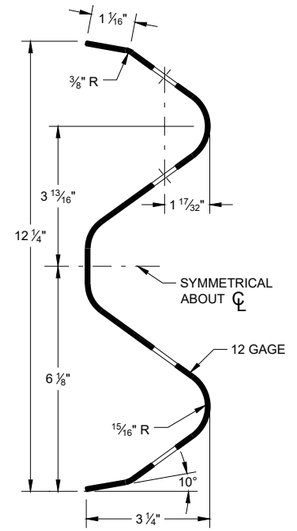
GUARD RAIL SPLICE BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



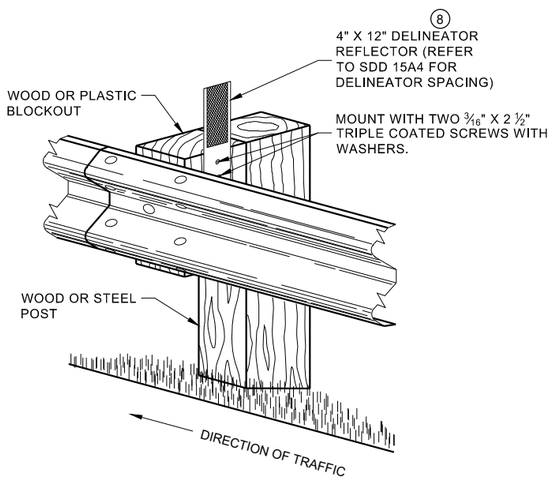
FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL

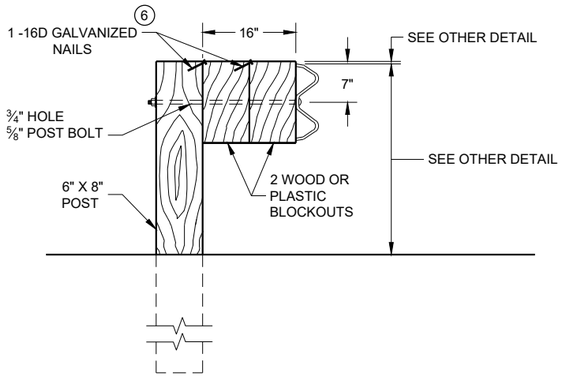


ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 14B42 - 06b

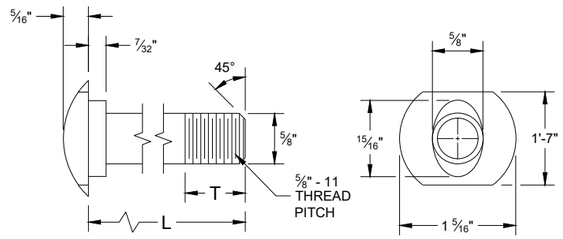


DETAIL FOR 16" BLOCKOUT DEPTH

IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.

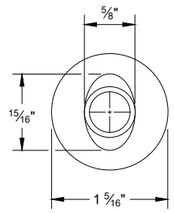
NOTE:

1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 3⁄16".
2. IF THE BOLT EXTENDS MORE THAN ¼" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

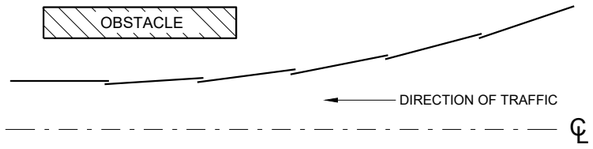


POST BOLT TABLE

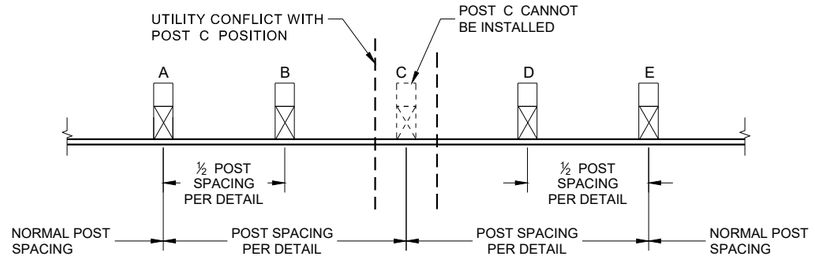
L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1⁄16"
18"	4"
21"	4 1⁄16"
25"	4"



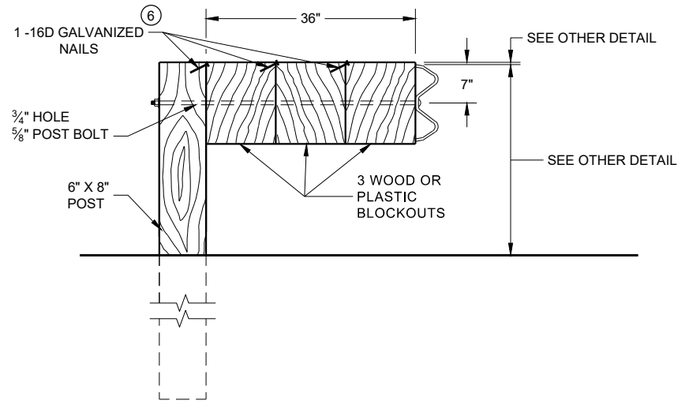
ALTERNATE BOLT HEAD



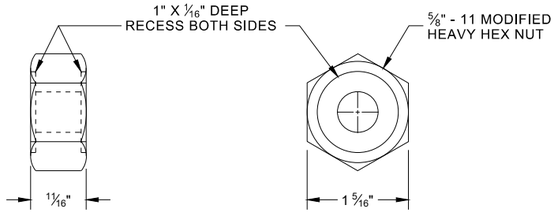
PLAN VIEW
BEAM LAPPING DETAIL



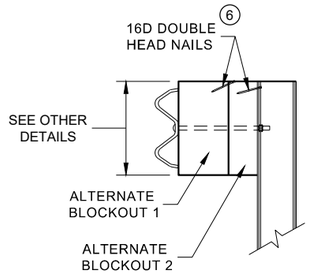
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



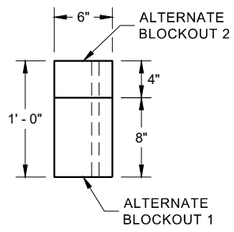
DETAIL FOR 36" BLOCKOUT DEPTH



POST BOLT, SPLICE BOLT AND RECESS NUT



SIDE VIEW



PLAN VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.

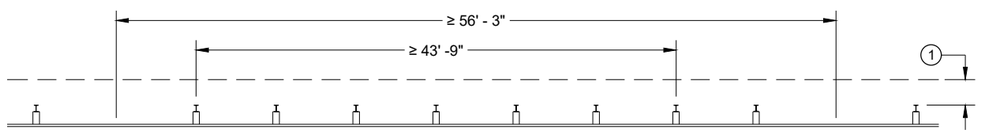
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

(6) WHEN USING STEEL POST AD WOOD BLOCKOUTS, INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

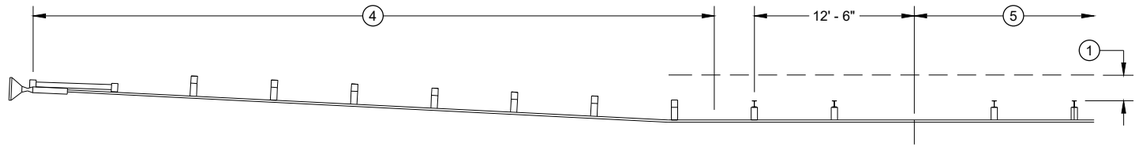
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

6

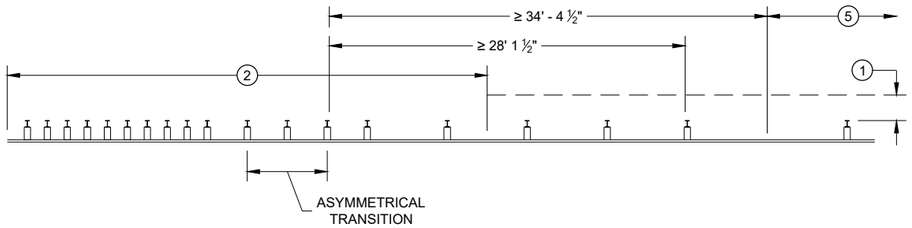
SDD 14B42 - 06c



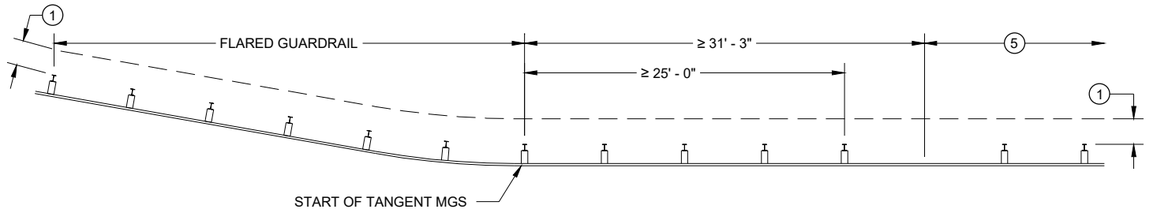
MISSING POST IN NORMAL BEAM GUARD RUN



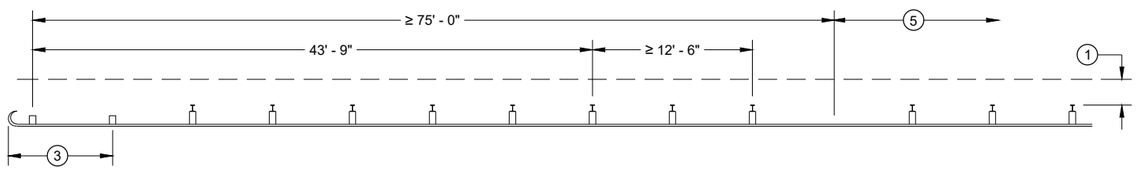
MISSING POST IN NORMAL BEAM GUARD RUN NEAR EAT



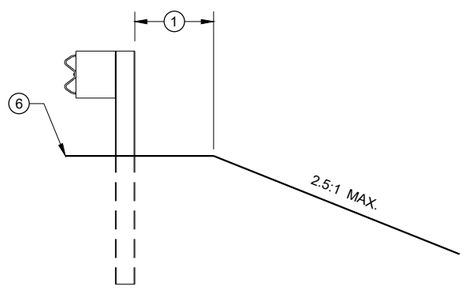
MISSING POST NEAR APPROACH THRIE BEAM TRANSITION



MISSING POST IN NORMAL BEAM GUARD RUN NEAR FLARED BEAM GUARD



MISSING POST IN NORMAL BEAM GUARD RUN NEAR TYPE 2 TERMINAL



CROSS SECTION VIEW

1. MINIMUM OF 2 FEET OF GRADING BEHIND POST.
2. SEE SDD 14B45 FOR MORE DETAILS.
3. SEE SDD 14B47 FOR MORE DETAILS.
4. SEE SDD 14B44 FOR MORE DETAILS.
5. SEE MISSING POST IN NORMAL BEAM GUARD RUN FOR DISTANCE TO NEXT MISSING POST AND AREA FOR WELL DRAINED, COMPACTED SOILS.
6. SEE PLAN FOR SHOULDER DESIGN.

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE UNIT SUPERVISOR
FHWA

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SDD 14B42 - 06d

GENERAL NOTES

(A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE (HPL) AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.

(B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED

(C) DIFFERENT MANUFACTURERS REQUIRE DIFFERENT PERFORATED W - BEAM RAIL END PANELS. SEE MANUFACTURER'S INFORMATION.

(D) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF - TAPPING SCREWS. ONE SCREW PER CORNER.

(E) HARDWARE MAY VARY BETWEEN MANUFACTURER. SEE MANUFACTURER'S DRAWING FOR INFORMATION.

DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

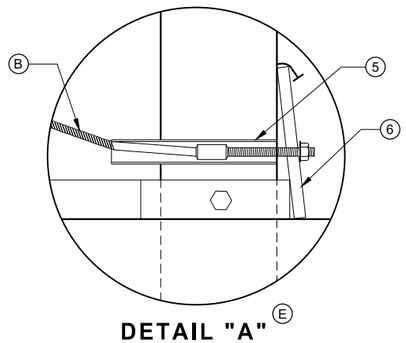
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

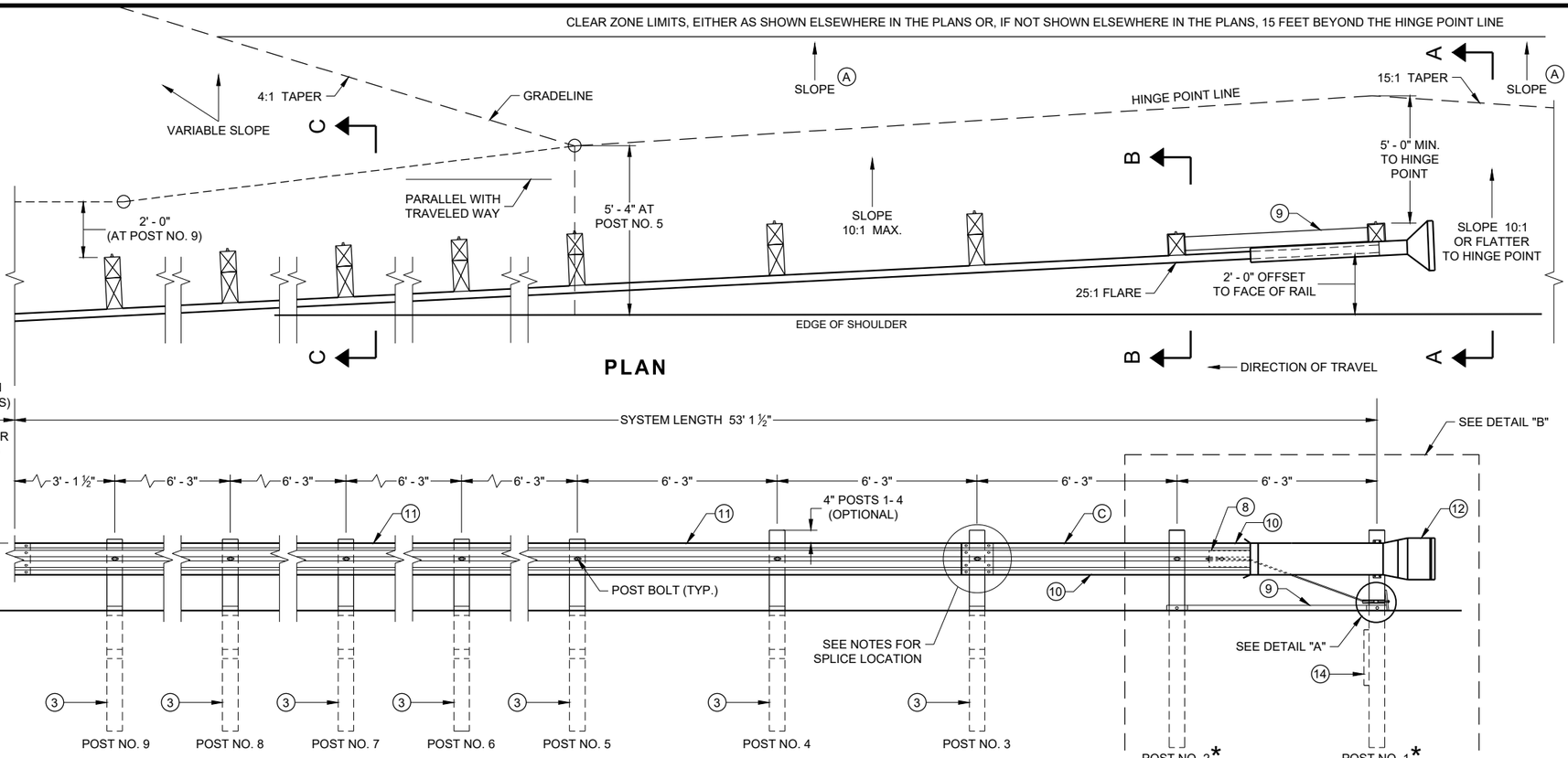
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

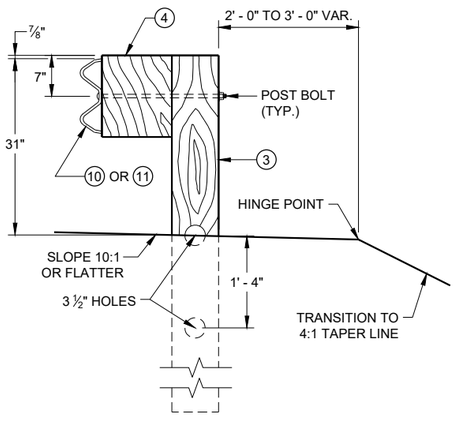
SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

THE CENTER OF THE UPPER 3 ½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.

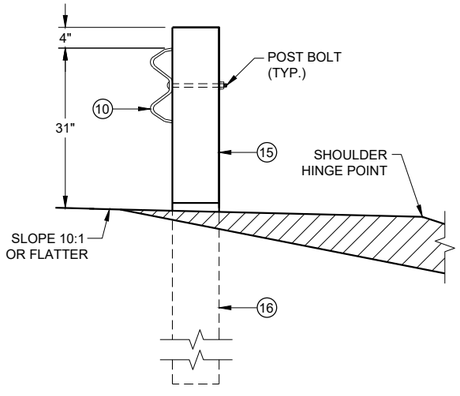


DETAIL "A" (E)

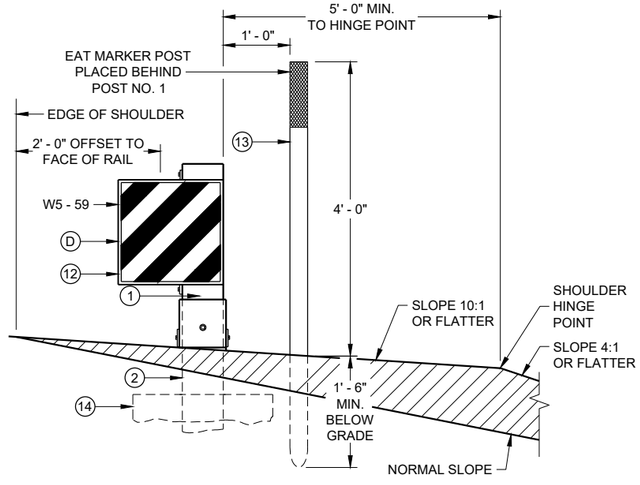




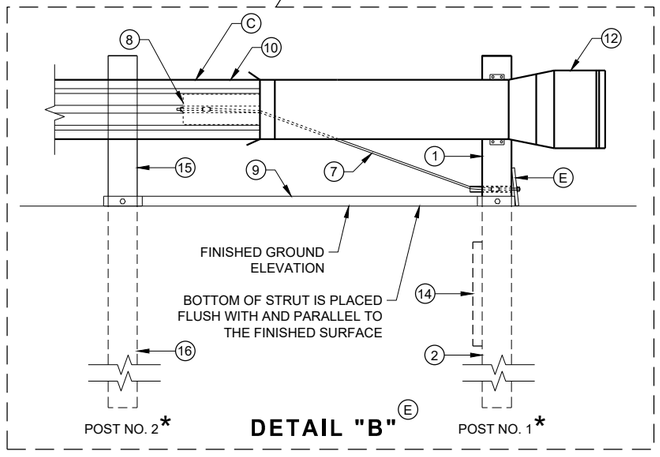
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2*



SECTION A - A
TYPICAL AT POST NO. 1*



MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a

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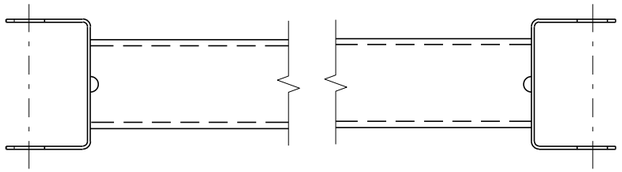
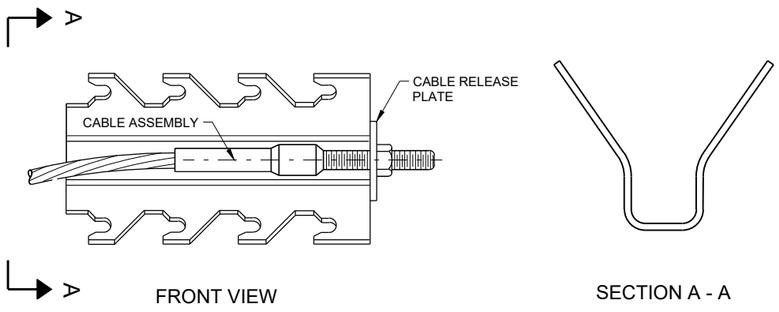


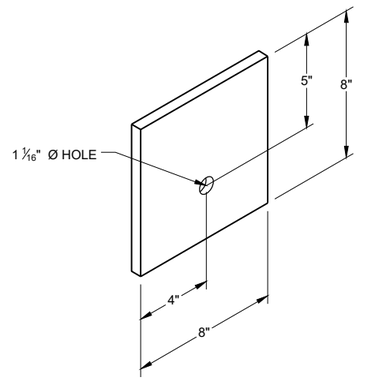
GENERIC GROUND STRUT (9) (E)

BILL OF MATERIALS

PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUGACTURER'S DETAILS FOR MORE INFORMATION.
(1)	UPPER POST NO. 1 6" X 6" TUBE
(2)	LOWER POST NO. 1
(3)	WOOD CRT
(4)	WOOD BLOCKOUT
(5)	PIPE SLEEVE
(6)	BEARING PLATE
(7)	BCT CABLE ASSEMBLY
(8)	ANCHOR CABLE BOX
(9)	GROUND STRUT
(10)	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
(11)	STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
(12)	IMPACT HEAD
(13)	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)
(14)	SOIL PLATE
(15)	UPPER POST NO. 2
(16)	LOWER POST NO. 2



GENERIC ANCHOR CABLE BOX (9) (E)



BEARING PLATE (6) (E)

6

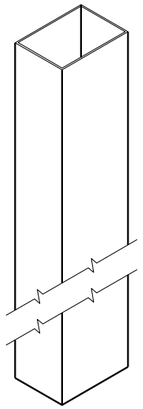
6

SDD 14B44 - 04b

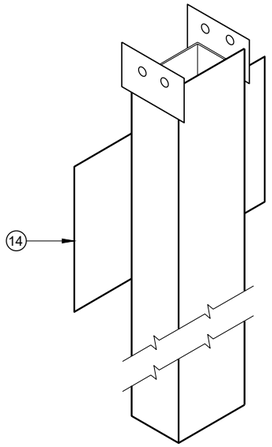
SDD 14B44 - 04b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

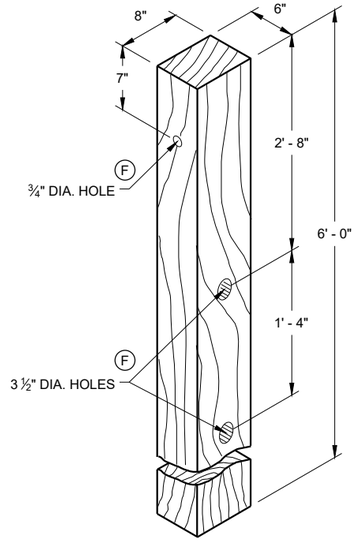
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



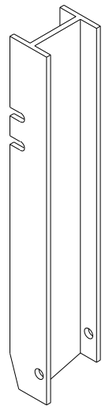
UPPER POST NO. 1 (1) (E)



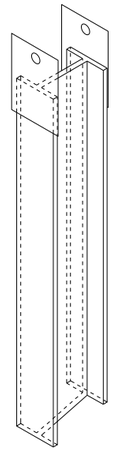
LOWER POST NO. 1 (2) (E)



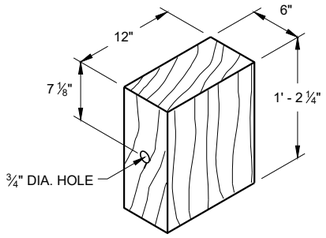
WOOD CRT POST (3) (E)
POSTS NUMBER 3-9



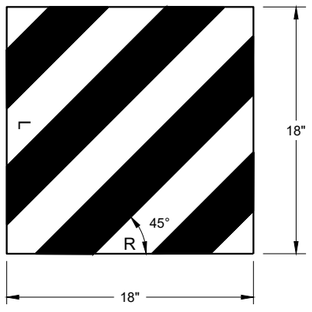
UPPER POST NO. 2 (15) (E)



LOWER POST NO. 2 (16) (E)

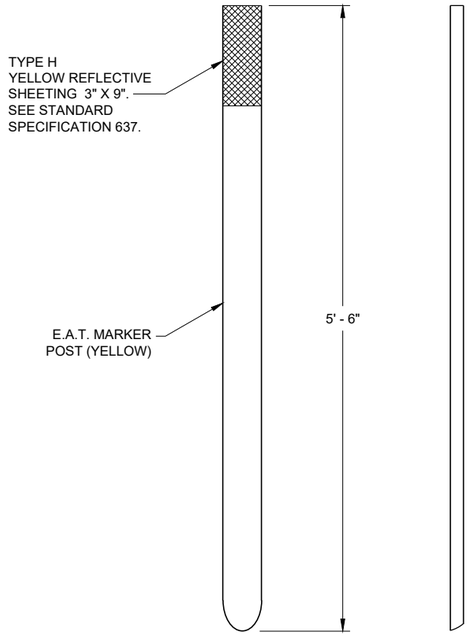


WOOD BLOCKOUT (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



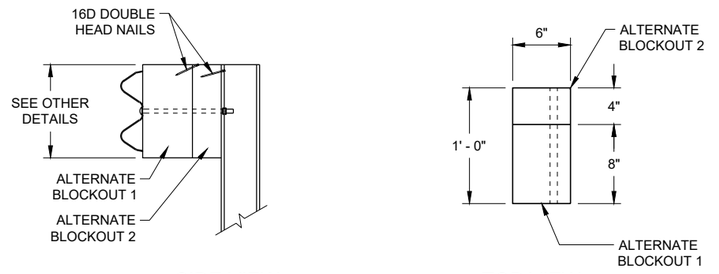
W5 - 59

REFLECTIVE SHEETING DETAIL (E)



FRONT VIEW SIDE VIEW

E.A.T. MARKER POST (13)



SIDE VIEW TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

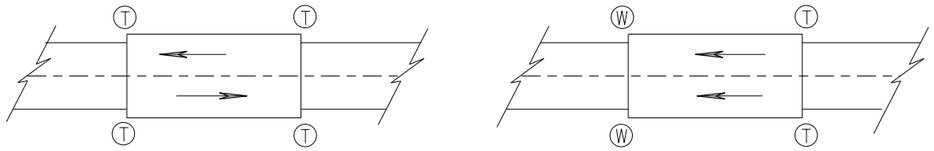
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE UNIT SUPERVISOR

FHWA

6

SDD 14B44 - 04c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE

GENERAL NOTES

IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

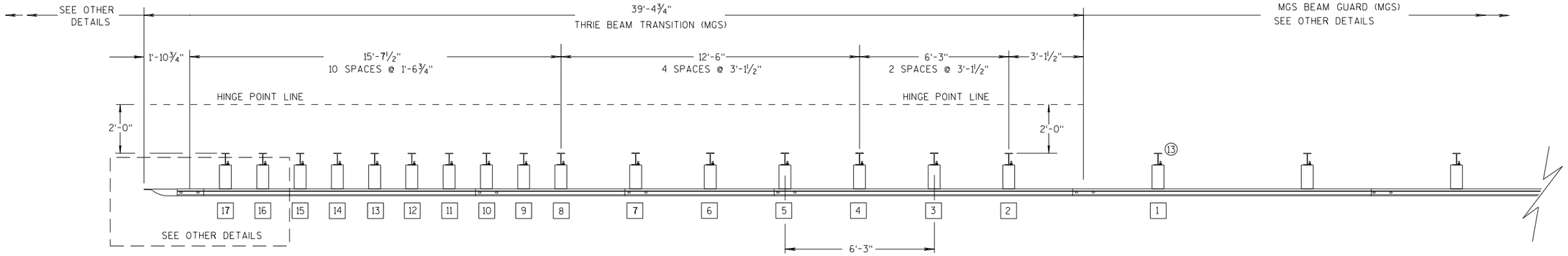
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

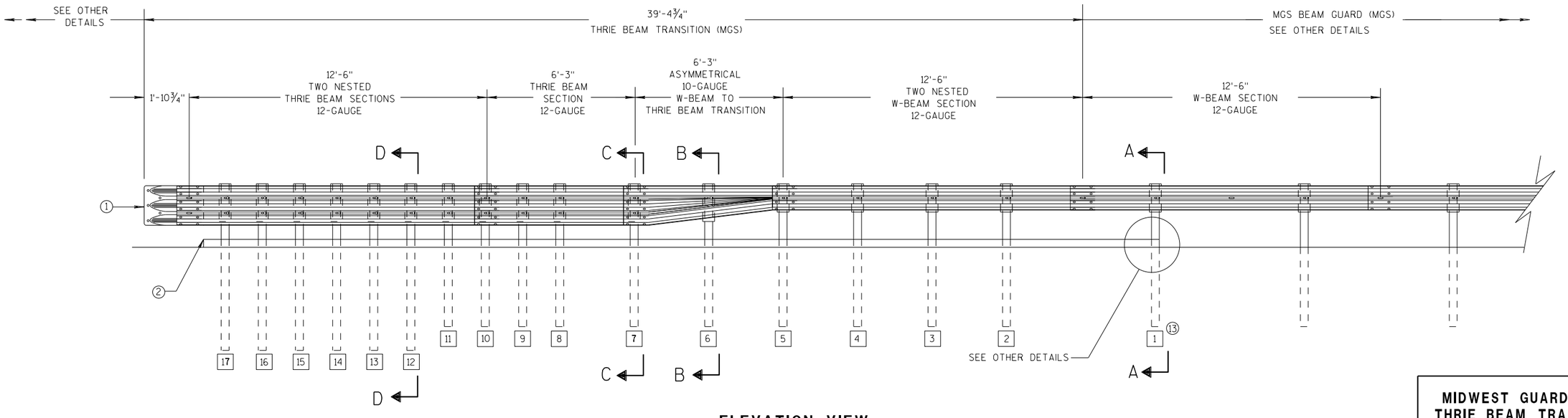
(1) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

(2) OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD14B42



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 14 B 45-5a

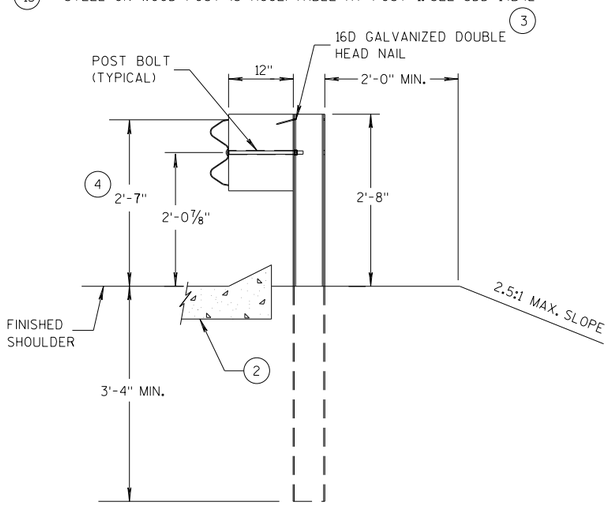
GENERAL NOTES

(2) OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

(3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

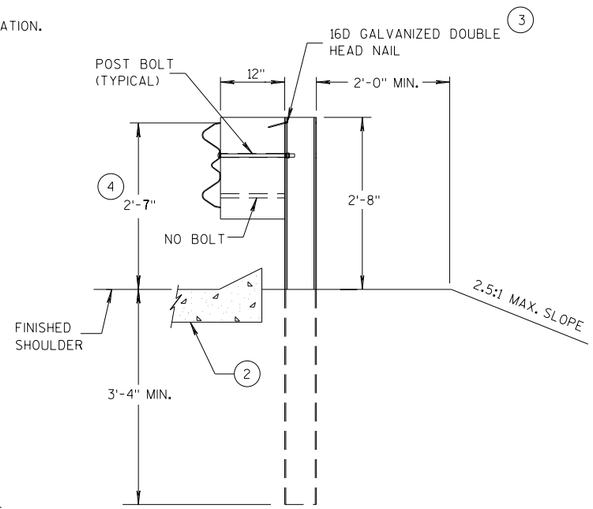
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42



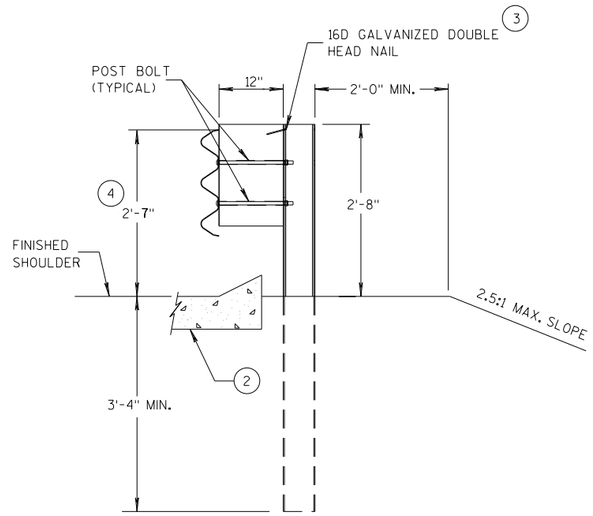
SECTION A-A (13)

POSTS 1-5



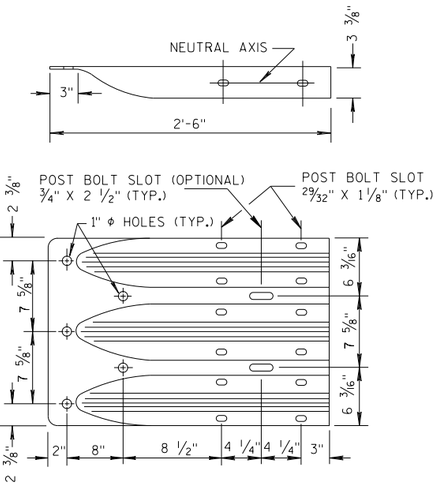
SECTION B-B

POST 6

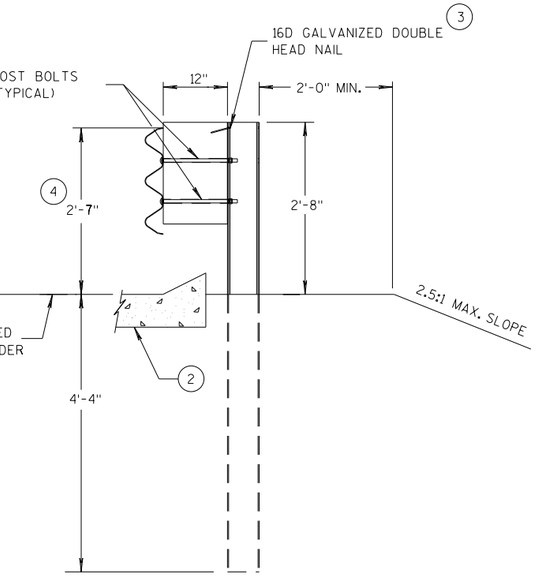


SECTION C-C

POSTS 7-11

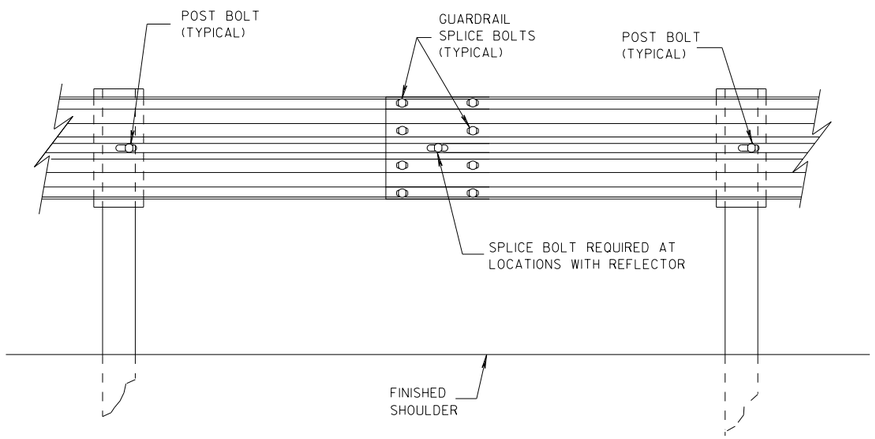


THRIE BEAM TERMINAL CONNECTOR



SECTION D-D

POSTS 12-17



SPLICE DETAIL

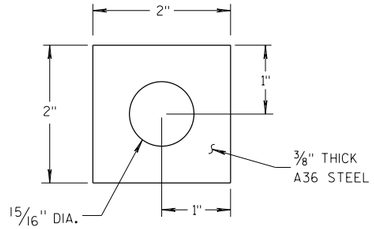
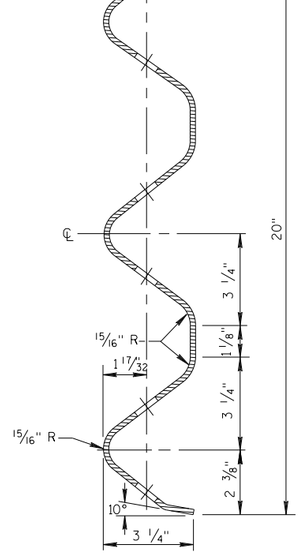


PLATE WASHER DETAIL



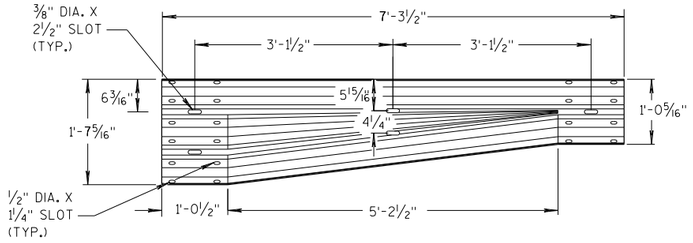
SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

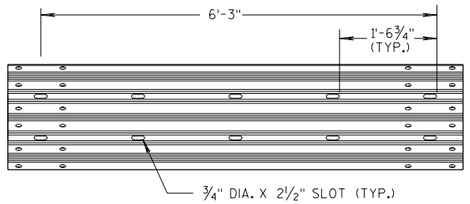
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOF

6

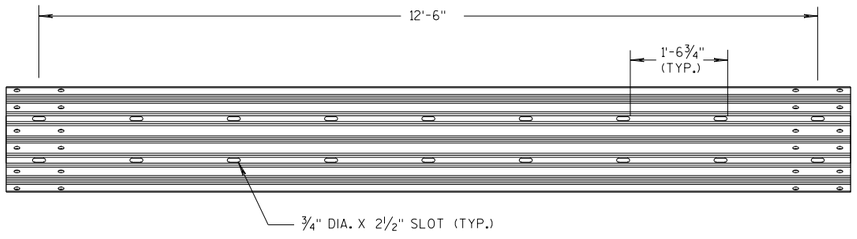
S.D.D. 14 B 45-5b



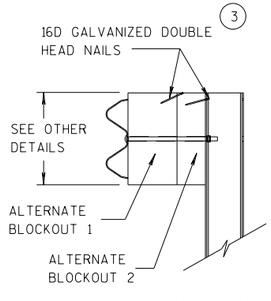
W-BEAM TO THRIE BEAM TRANSITION SECTION



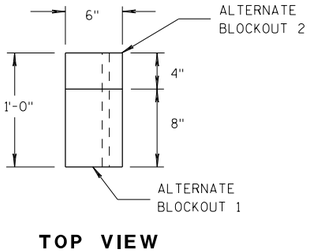
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

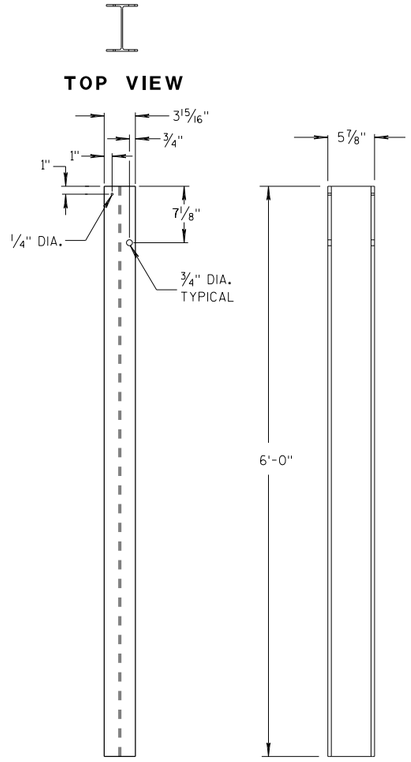


SIDE VIEW



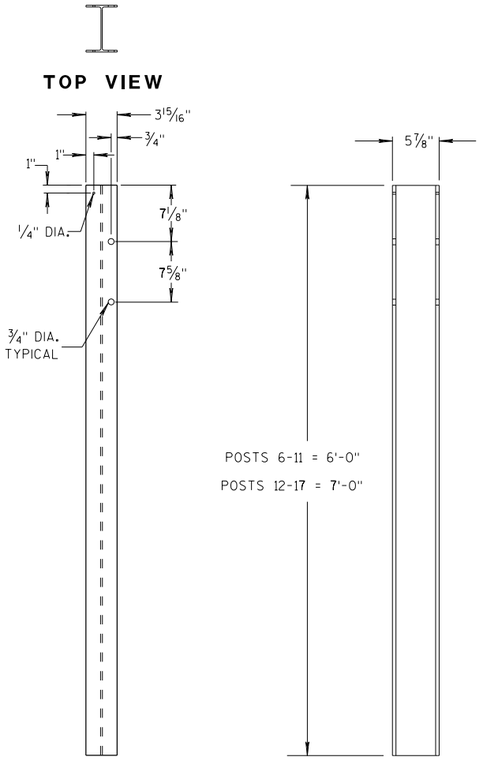
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



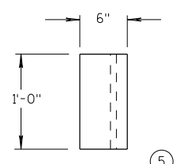
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5 (13)

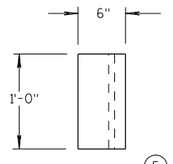


FRONT VIEW SIDE VIEW

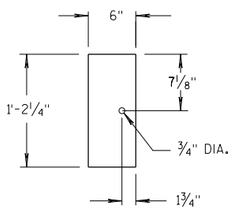
STEEL POSTS 6-17



TOP VIEW (5)

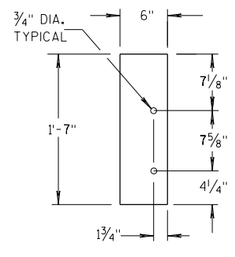


TOP VIEW (5)



FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-17

GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

BOLT HOLES FOR POST ARE ON FRONT AND OF SIDE OF POST.

(3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

(5) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.

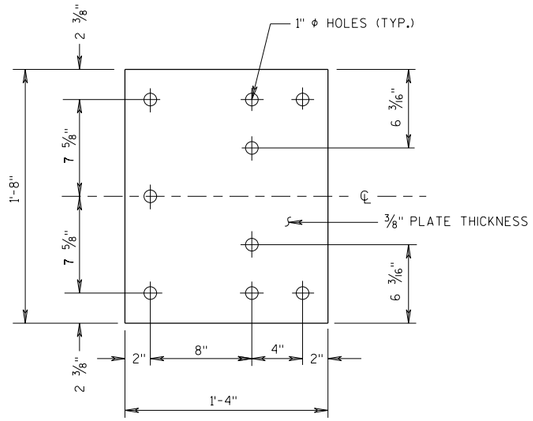
(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

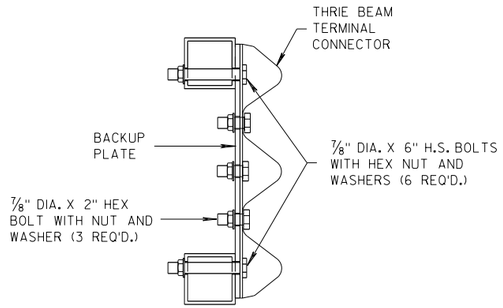
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

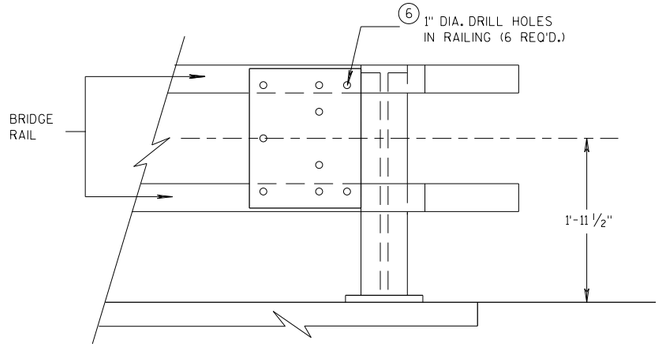
S.D.D. 14 B 45-5c



BACK-UP PLATE DETAIL



SECTION J-J

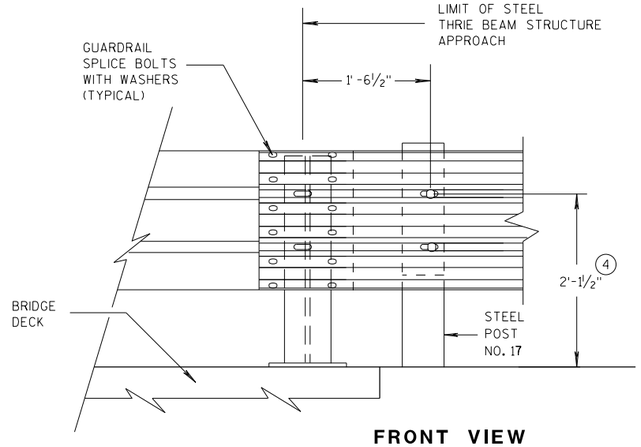


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

GENERAL NOTES

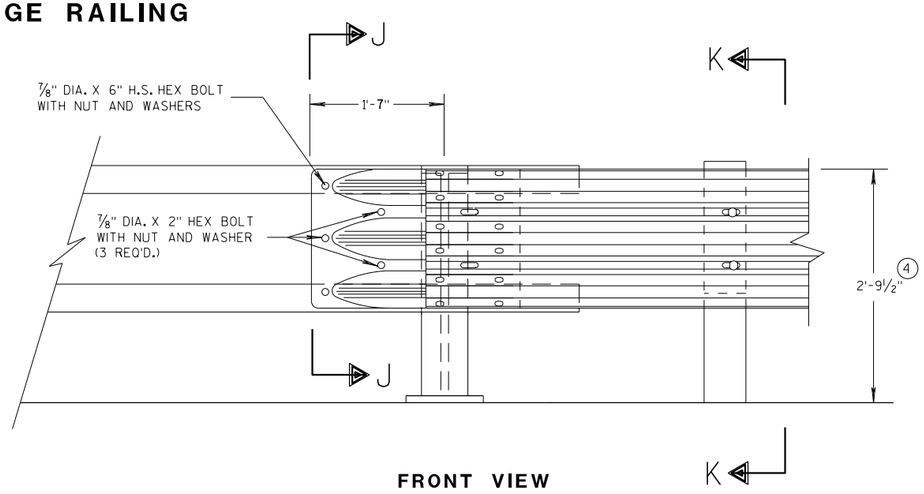
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

⑥ DRILLING HOLES THROUGH THE PAPRPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

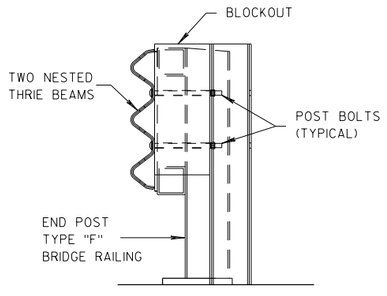


FRONT VIEW

THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"



FRONT VIEW



SECTION K-K

THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED 07/2018 — DATE — FHWA

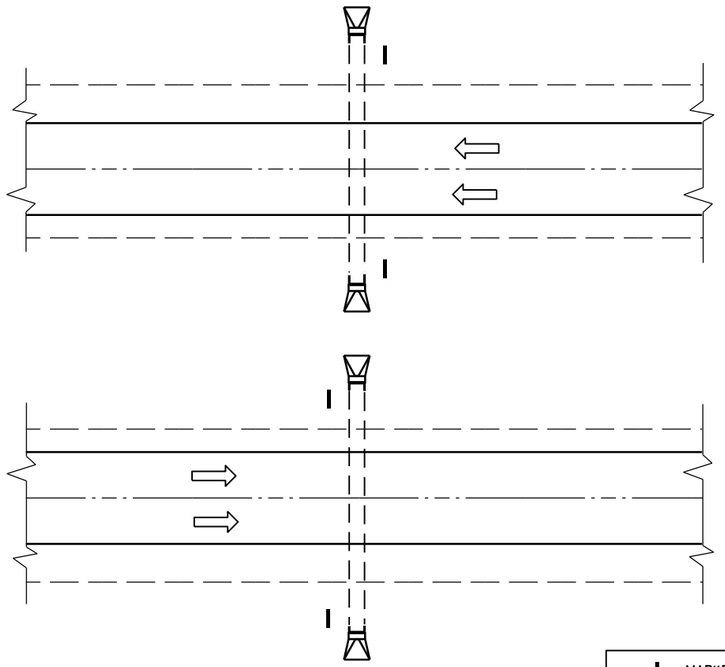
/S/ Rodney Taylor 53 — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

6

S.D.D. 14 B 45-5g

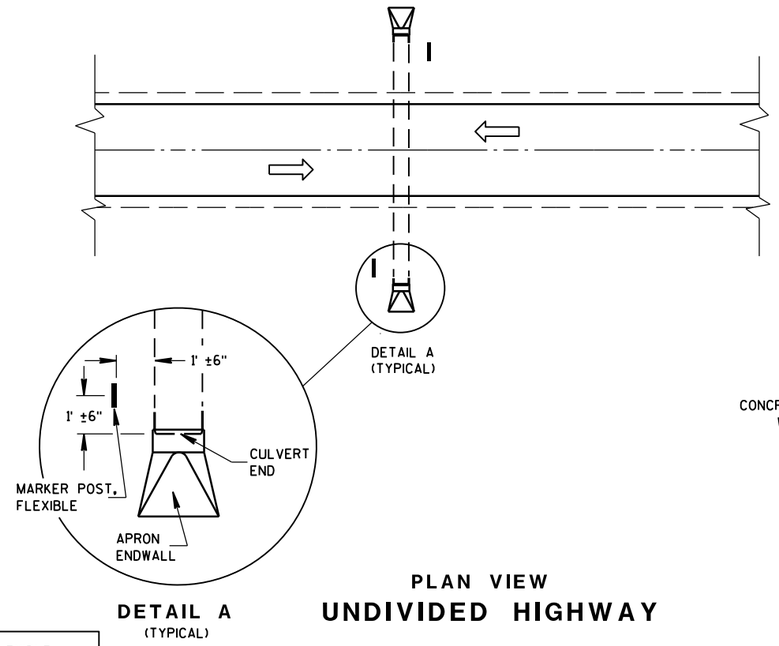
6

S.D.D. 14 B 45-5g



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

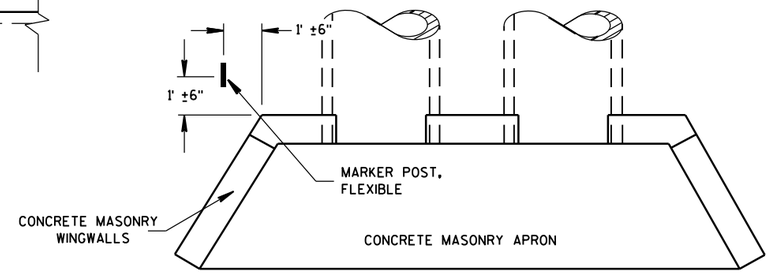
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

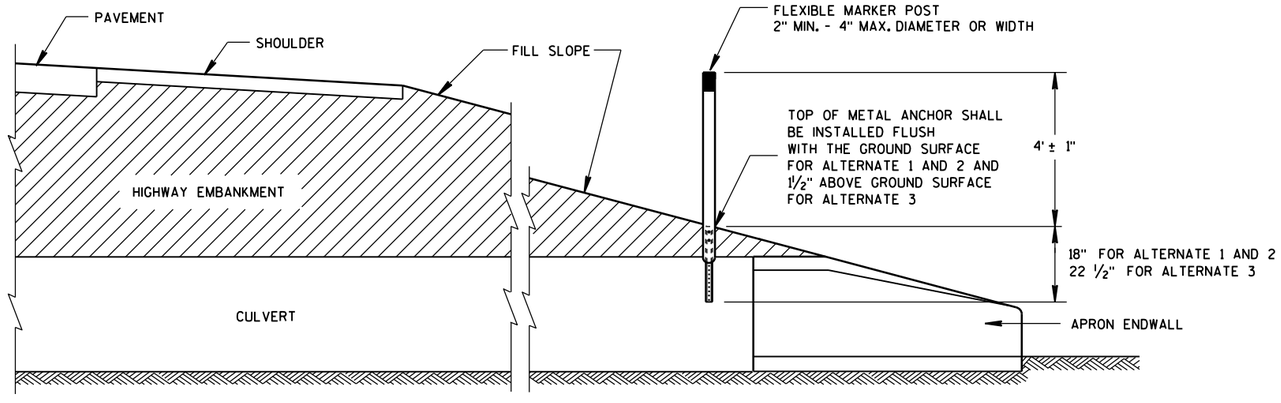
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

FLEXIBLE MARKER POST LOCATION



CROSS SECTION

FLEXIBLE MARKER POST

FLEXIBLE MARKER POST FOR CULVERT END

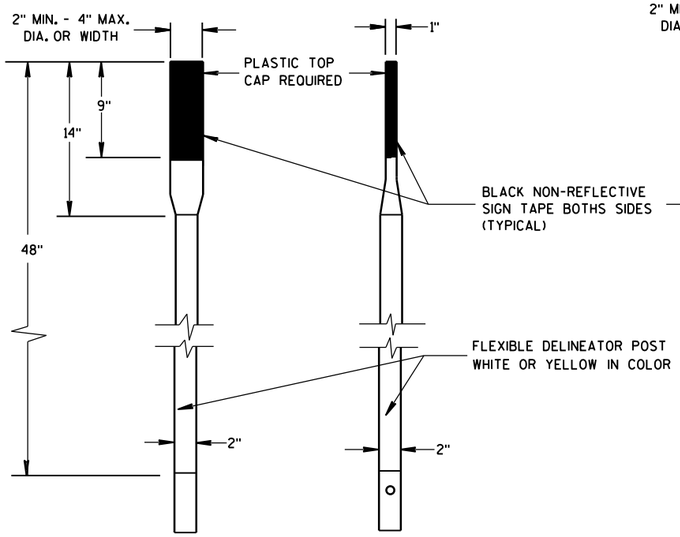
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

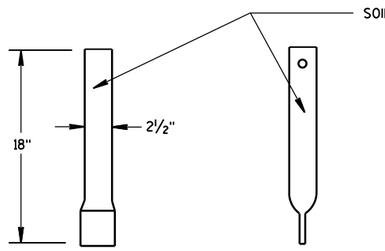
6

S.D.D. 15 A 3-2a

6

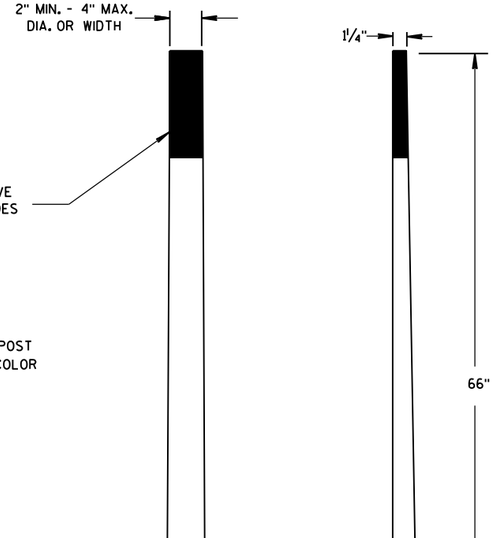
S.D.D. 15 A 3-2a





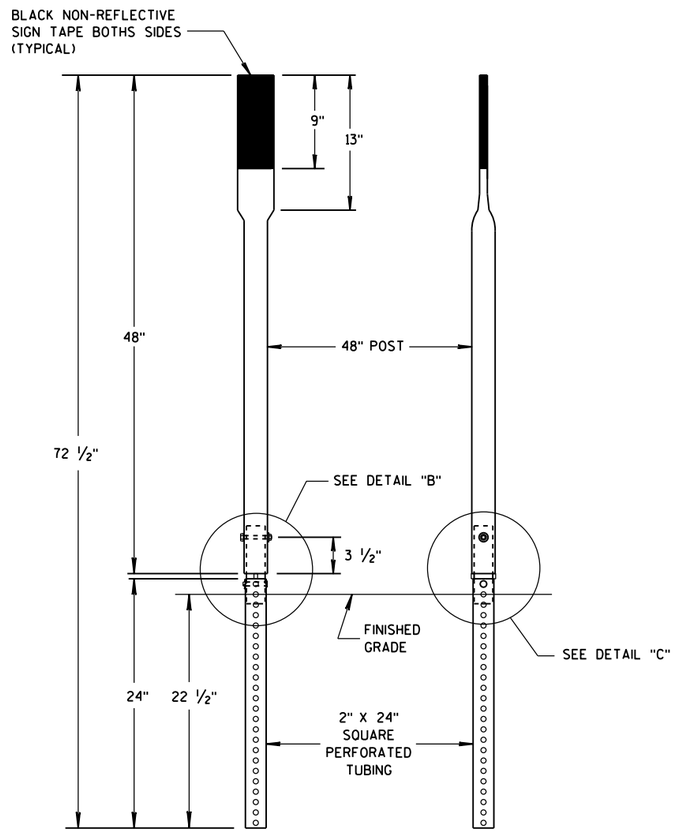
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

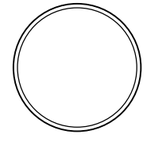
ALTERNATE 2



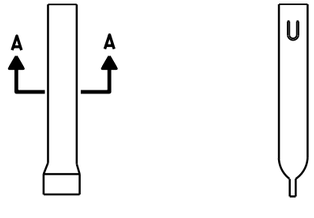
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POSTS

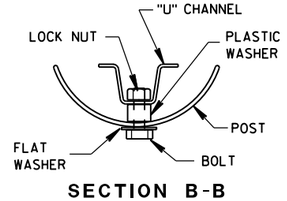


SECTION A-A

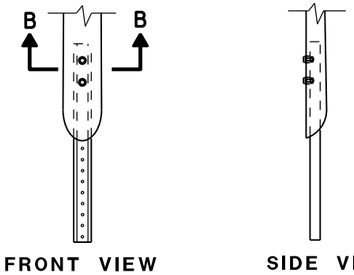


FRONT VIEW SIDE VIEW

ALTERNATE 1

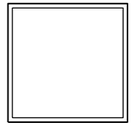


SECTION B-B

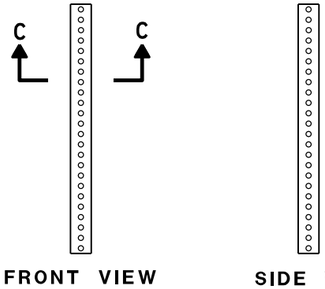


FRONT VIEW SIDE VIEW

ALTERNATE 2



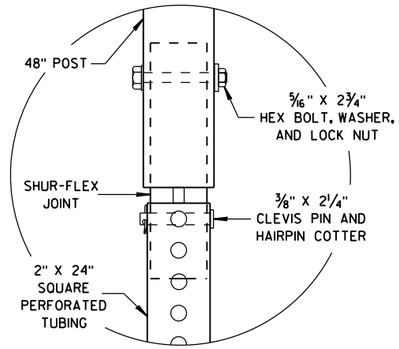
SECTION C-C



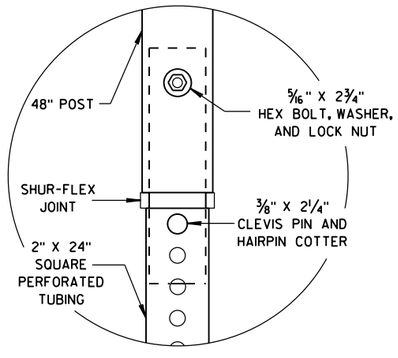
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/1/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6

S.D.D. 15 A 3-2b

6

S.D.D. 15 A 3-2b

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

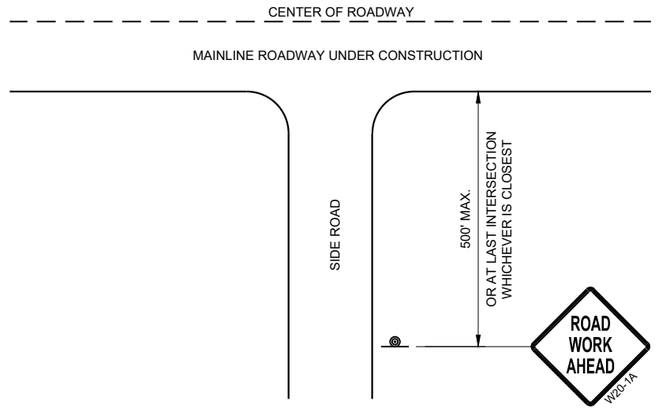
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS REESTABLISHED.

* OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS

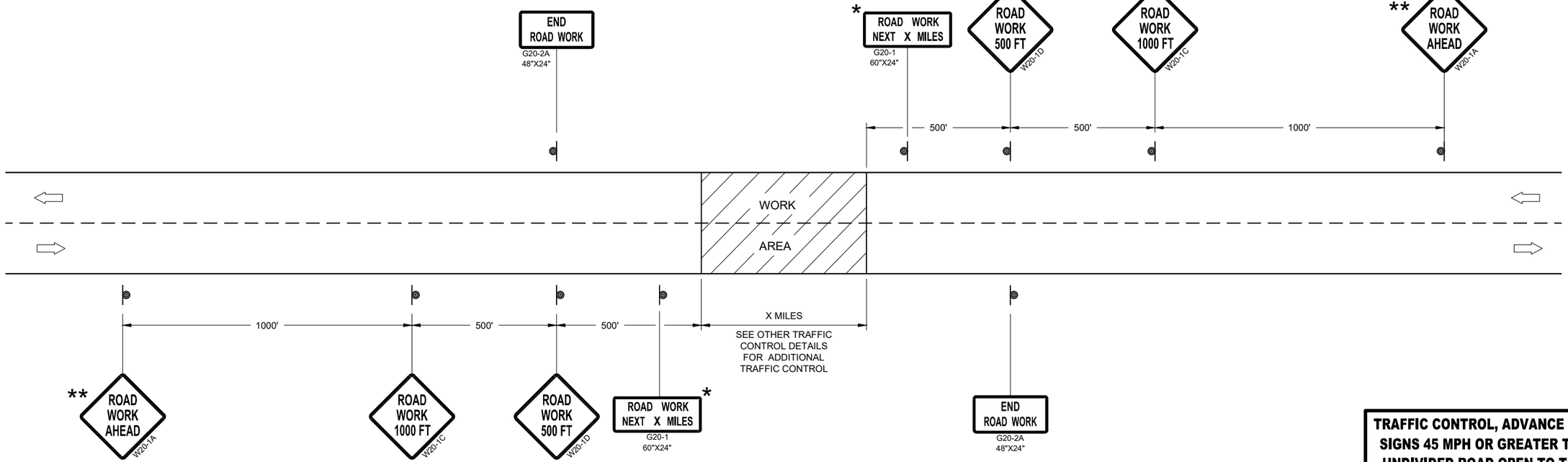
** PLACE AN ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.



TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL

LEGEND

- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA



TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 MPH OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFICE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15C04 - 05

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.

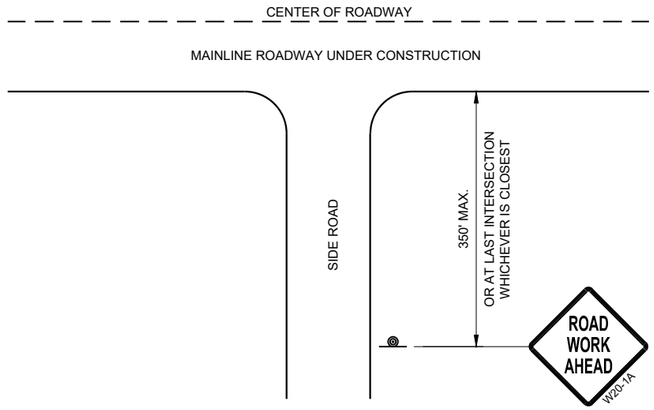
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"X36" SIGNS MAY BE USED INSTEAD OF 48" X 48" SIGNS.

SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS REESTABLISHED.

* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FEET" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.



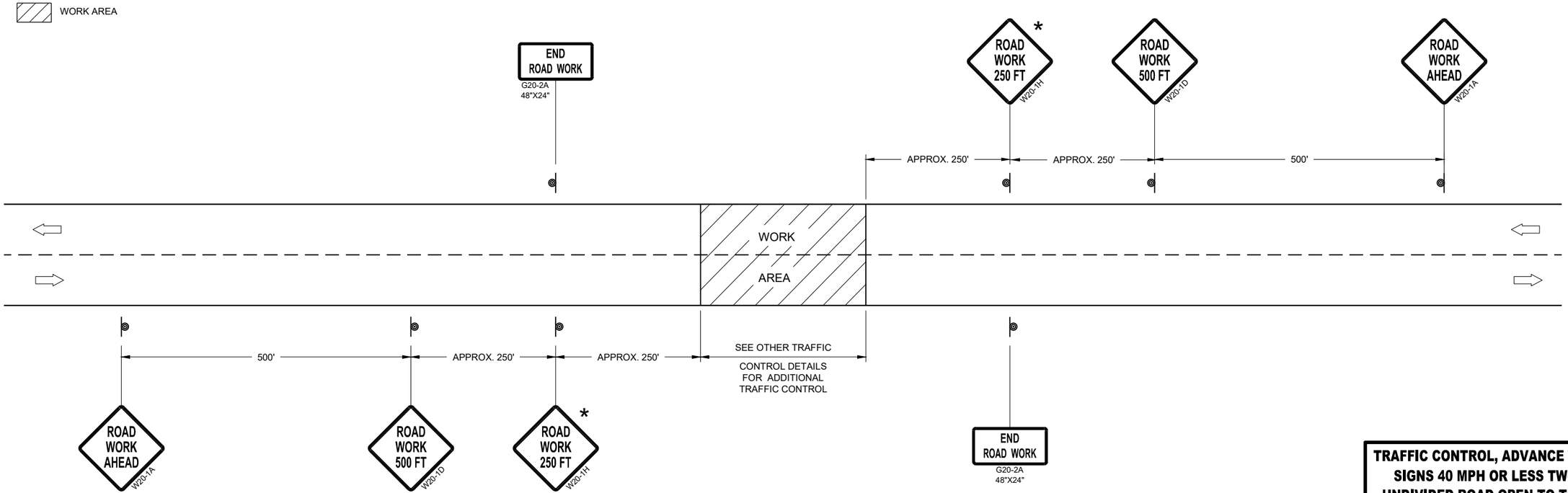
TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL

LEGEND

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC

WORK AREA



TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40MPH OR LESS

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 MPH OR LESS TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFICE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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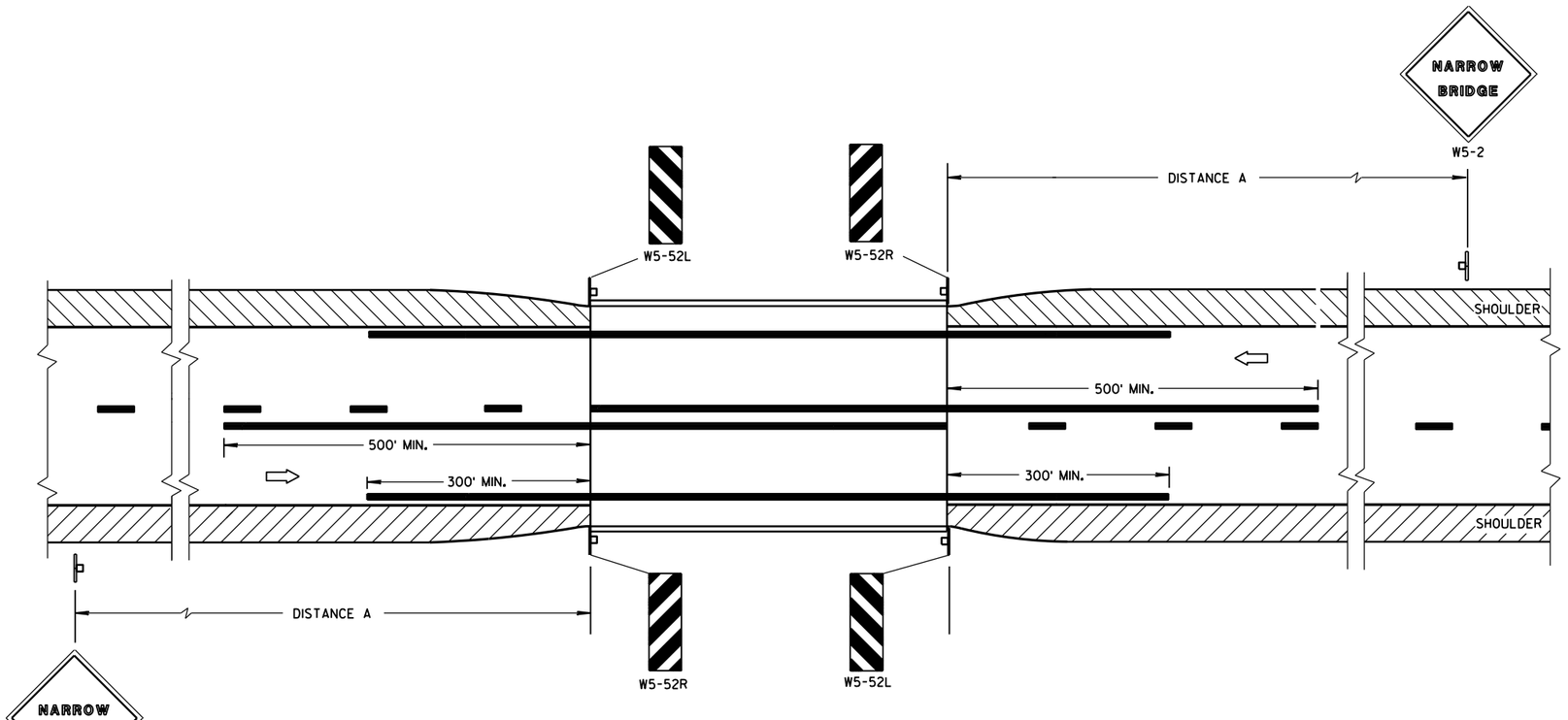
SDD 15C05 - 05



SITUATION 1

WARRANTING CRITERIA:
BRIDGE WIDTH IS AT LEAST 16 FEET BUT LESS THAN 24 FEET.

DISTANCE TABLE

POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
25	150'
30	200'
35	250'
40	300'
45	400'
50	550'
55	750'

GENERAL NOTES

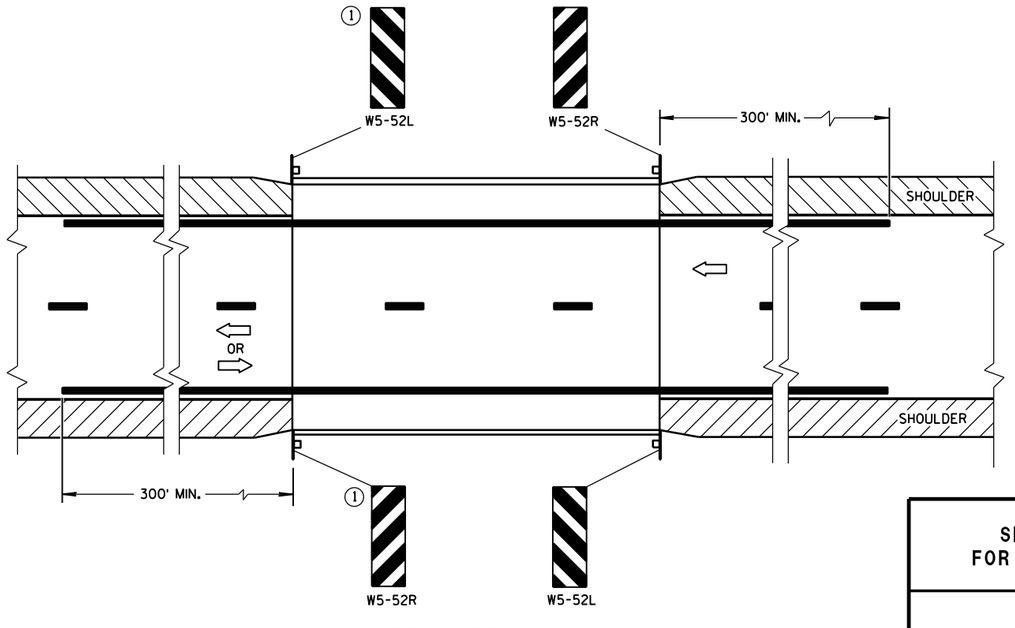
DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

LOCATE W5-52 SIGN POST(S) BEHIND GUARDRAIL WHEN PRESENT.

PLACE THE EDGE OF THE W5-52 SIGN IN LINE WITH FACE OF CURB OR PARAPET.

(1) OMIT ON ONE-WAY TRAVELLED WAYS.

⇨ DIRECTION OF TRAFFIC



SITUATION 2

WARRANTING CRITERIA:

1. BRIDGE WIDTH IS AT LEAST 24 FEET AND
2. BRIDGE SHOULDER WIDTH IS LESS THAN 6 FEET.

SIGNING & MARKING FOR TWO LANE BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MARKING ENGINEER
FHWA

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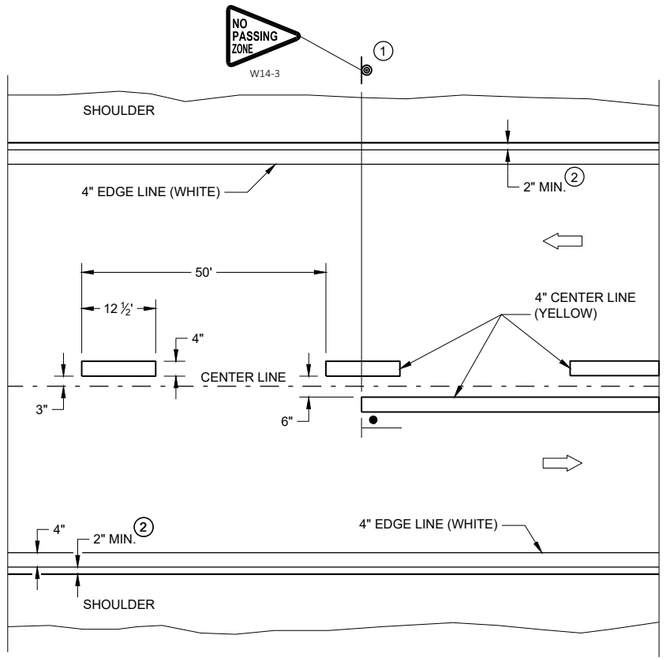
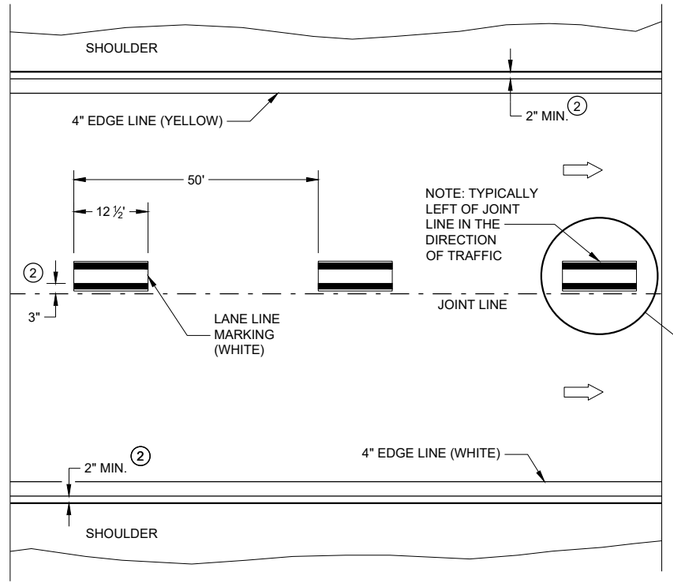
S.D.D. 15 C 6-9

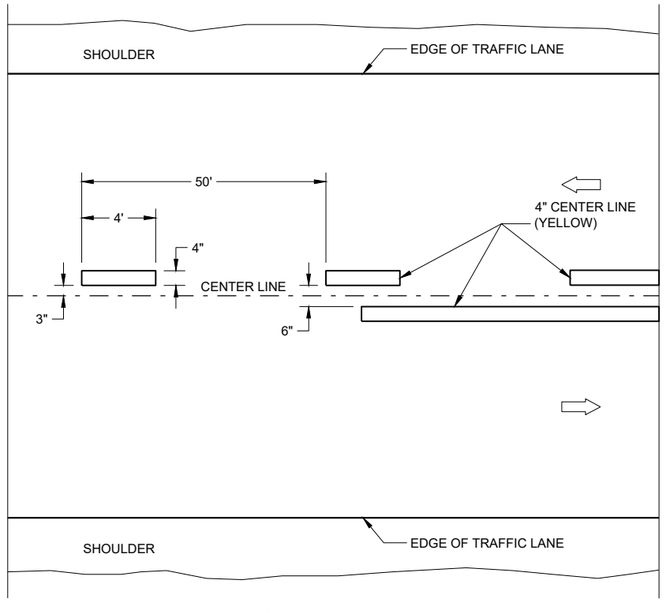


TWO WAY TRAFFIC

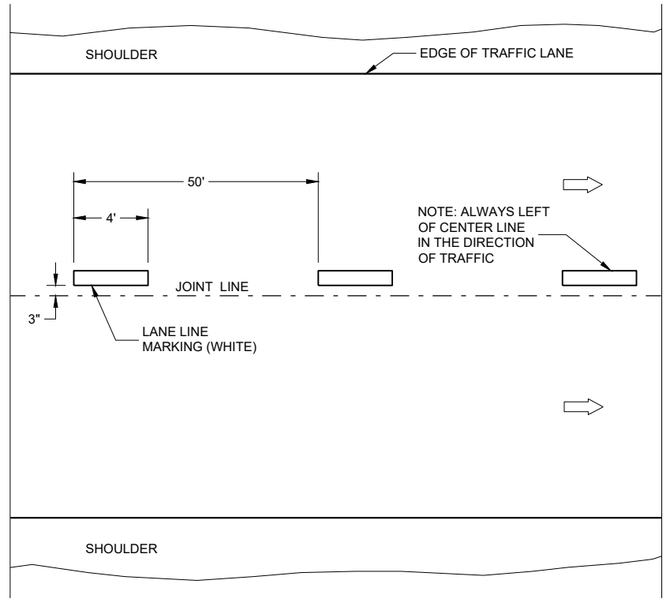


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

GENERAL NOTES

DETAILS OF CONSTRUCTION NO SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

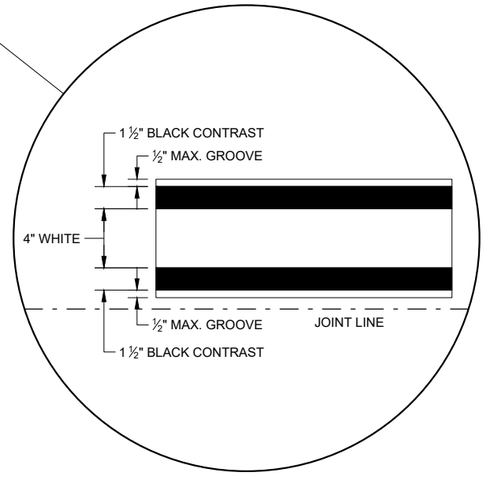
1. LOCATE THE NO PASSING ZONE W14-3 SIGN WITH 50 FEET OF THE "T" MARKING
2. MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC



LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE

/S/ Matthew Rauch
STATEWIDE SIGNING AND M
ENGINEER

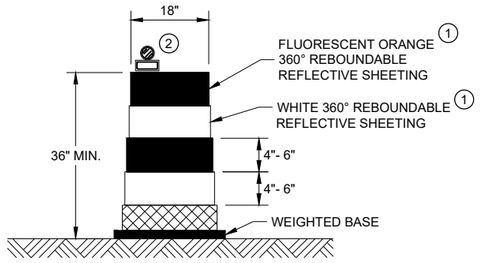
FHWA

SDD 15C08 - 20a

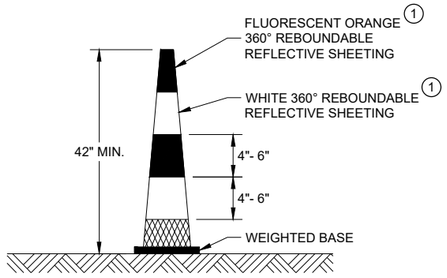
SDD 15C08 - 20a

GENERAL NOTES

1. REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
2. LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.

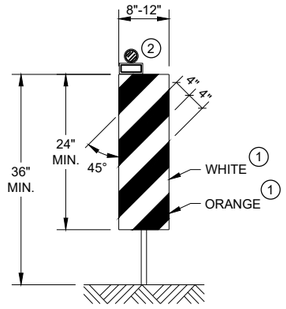


DRUM



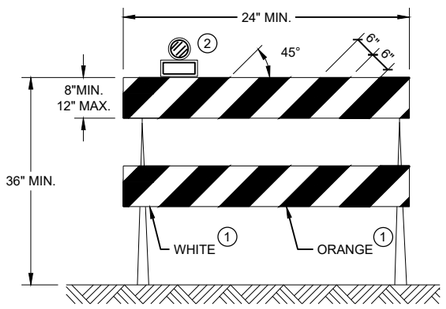
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS



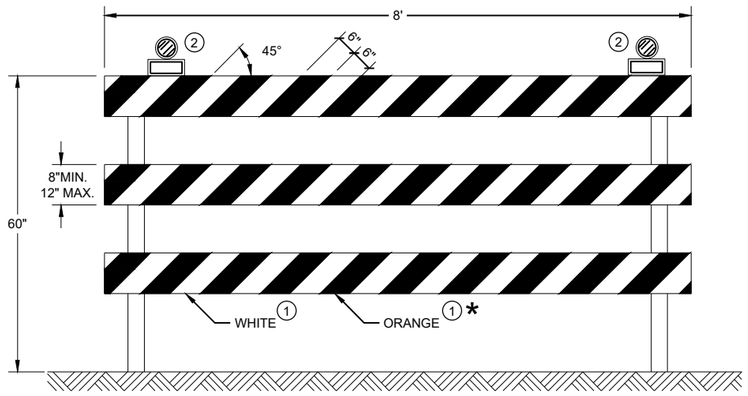
VERTICAL PANEL

THE STRIPES SHALL SLOPE DOWNWARD TO
THE TRAFFIC SIDE FOR CHANNELIZATION.



TYPE II BARRICADE

FOR RAILS LESS THAN 36" LONG, 4" WIDE STRIPES
MAY BE USED. ALL STRIPES SHALL SLOPE DOWNWARD
TO THE TRAFFIC SIDE FOR CHANNELIZATION.



TYPE III BARRICADE

IF SIGN MOUNTED, DO NOT COVER MORE THAN 50% OF THE TOP
TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS.

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15C11 - 07b

6

SDD 15C11 - 07b

LEGEND

SIGN ON PORTABLE OR PERMANENT SUPPORT

TEMPORARY PORTABLE RUMBLE STRIP ARRAY

DIRECTION OF TRAFFIC

WORK AREA

FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

GENERAL NOTES

DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS, DEVICES, AND LOCATION OF ALL FLAGGERS SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

WHEN A SIDE ROAD OR RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

FLAGGING

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT REMOVE TEMPORARY PORTABLE RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.

(1) FOR MOVING WORK OPERATIONS, POST ADDITIONAL W20-7A FLAGGER SIGNS AT APPROXIMATELY 3,500' INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.

(2) SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

WHEN THE DISTANCE BETWEEN FLAGGERS EXCEEDS 2 MILES, A PILOT CAR IS REQUIRED. WHEN CURVES REDUCE SIGHT DISTANCE BELOW 400', A PILOT CAR IS REQUIRED.

TEMPORARY PORTABLE RUMBLE STRIPS

UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

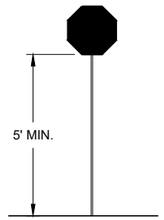
(3) EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS SPACED ACCORDING TO MANUFACTURER'S RECOMMENDATION, PLACED TRANSVERSE ACROSS THE LANE AT LOCATIONS SHOWN.

ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FOR THE APPROVED PRODUCTS LIST.

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

DO NOT INSTALL TEMPORARY PORTABLE RUMBLE STRIPS ON GRAVEL, MILLED SURFACES, OR ASPHALT THAT HAS BEEN PAVED LESS THAN 12 HOURS.



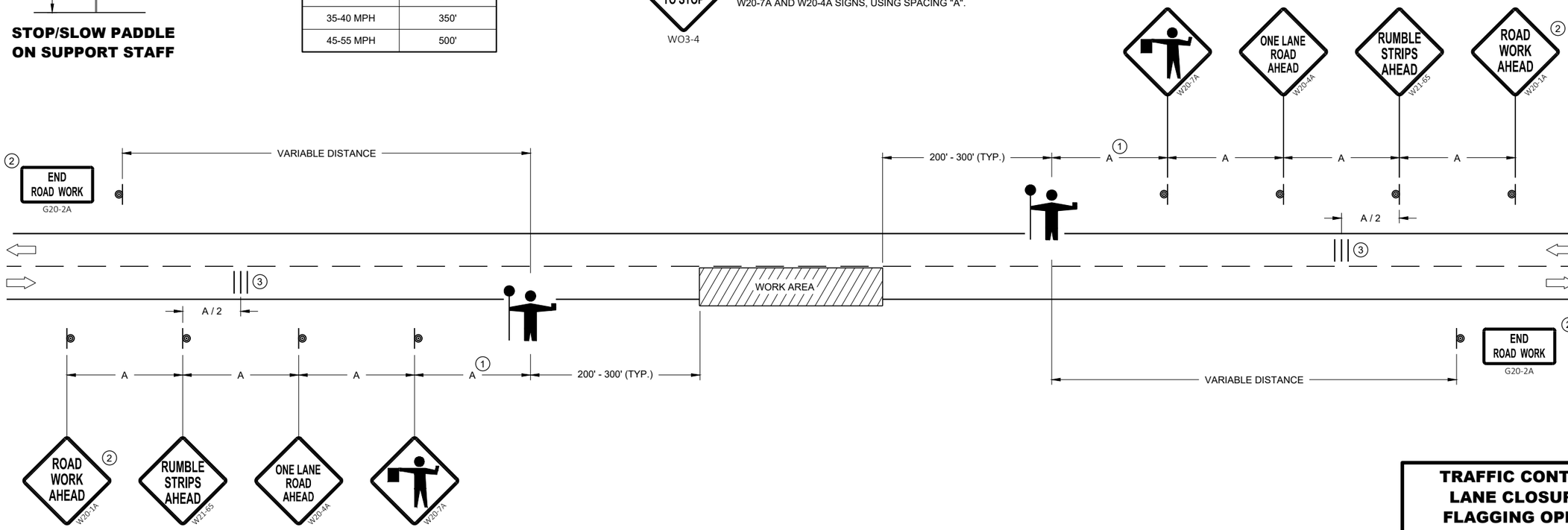
STOP/SLOW PADDLE ON SUPPORT STAFF

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

SPEED LIMIT	SPACING "A"
25-30 MPH	200'
35-40 MPH	350'
45-55 MPH	500'

WO3-4

USE OF WO3-4 SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7A AND W20-4A SIGNS, USING SPACING "A".



TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15C12 - 07

LEGEND

V1 LEAD VEHICLE

V2 MARKING VEHICLE

V3 SHADOW VEHICLE

TRUCK MOUNTED ATTENUATOR (TMA)

SIGN ON TEMPORARY SUPPORT

DIRECTION OF TRAFFIC

FLASHING ARROW PANEL (CAUTION)

GENERAL NOTES

ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

ALL VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL OPERATING IN CAUTION MODE. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE SPECIFIED.

DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL AND HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

THE WORK AND SHADOW VEHICLES SHOULD PULL OVER PERIODICALLY TO ALLOW TRAFFIC TO PASS.

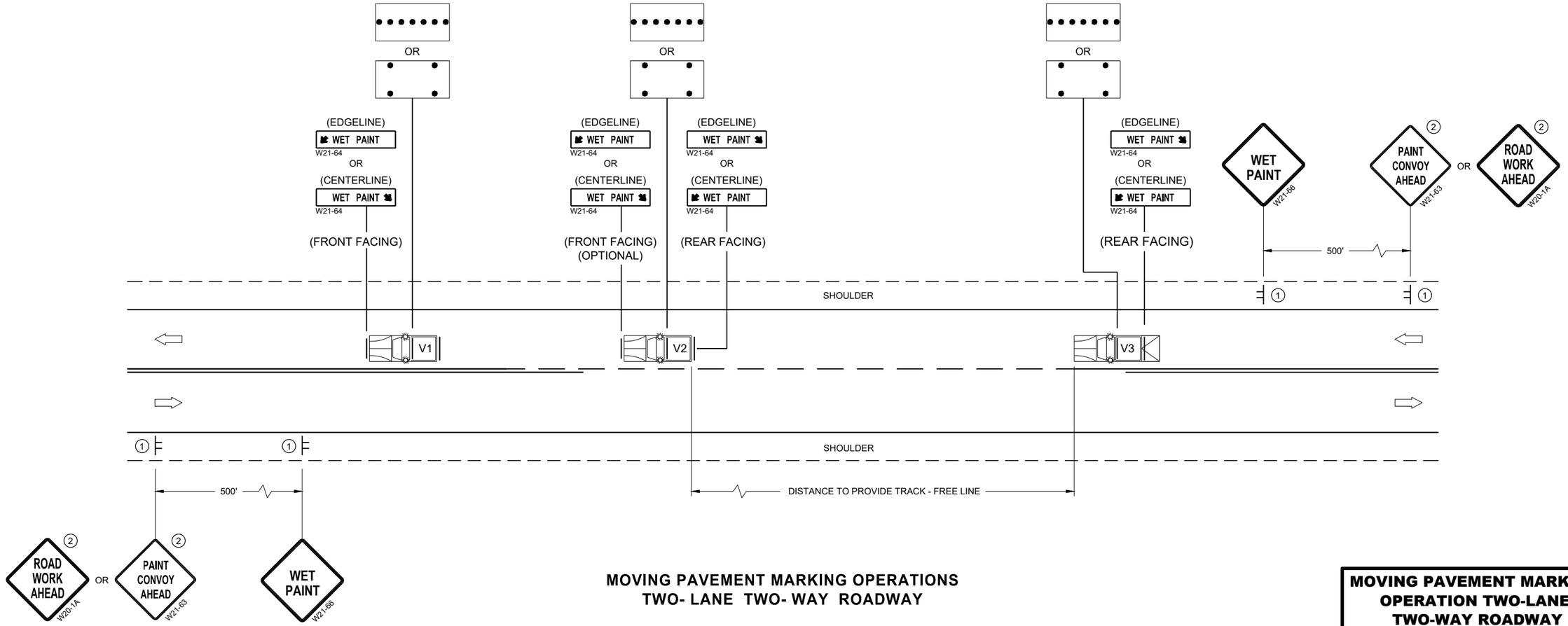
WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR LAY STATIONARY SIGNS AND SUPPORTS FLAT ON THE GRADE WITH UPRIGHTS ORIENTED PARALLEL TO AND DOWNSTREAM FROM TRAFFIC.

CONES SHOULD BE USED BETWEEN THE MARKING AND SHADOW VEHICLE AT 100 FOOT SPACING. CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

CONES SHALL BE A MINIMUM OF 18" FOR WET PAVEMENT MARKING .

(1) SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.

(2) IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1A OR W21-63 ARE NOT REQUIRED.



MOVING PAVEMENT MARKING OPERATIONS TWO- LANE TWO- WAY ROADWAY

MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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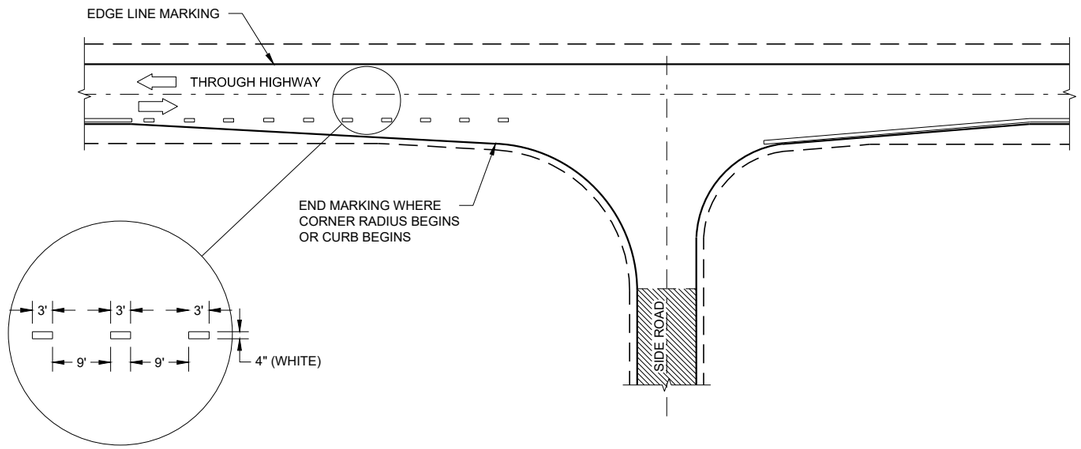
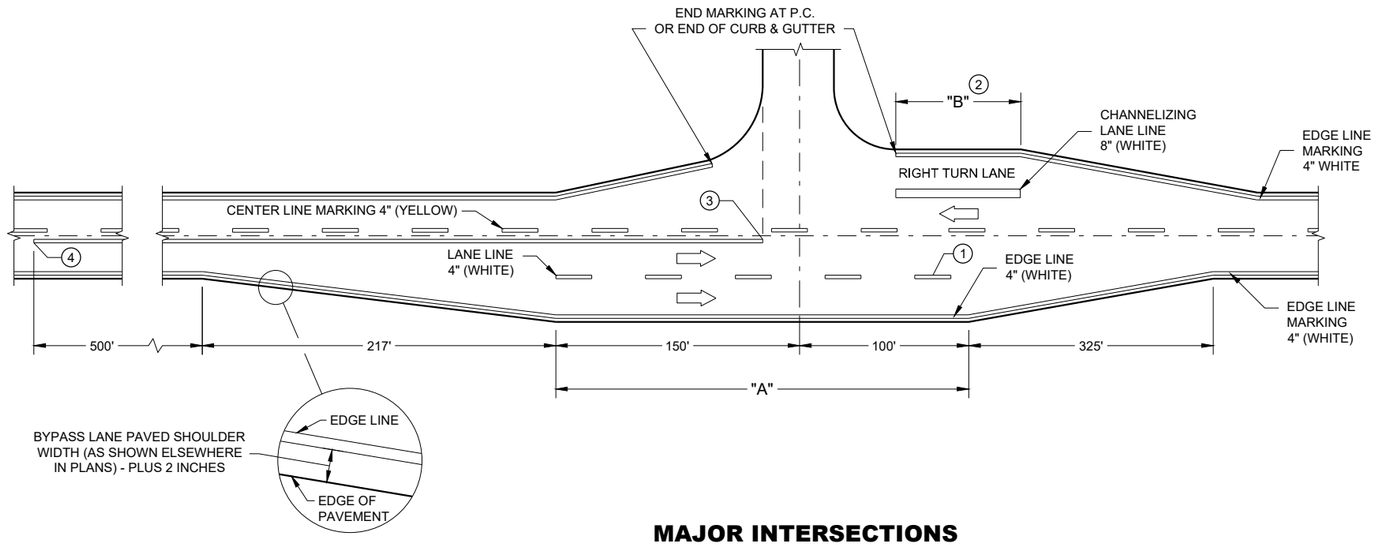
SDD 15C19 - 06a

6

SDD 15C19 - 06a



MINOR INTERSECTION



MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)

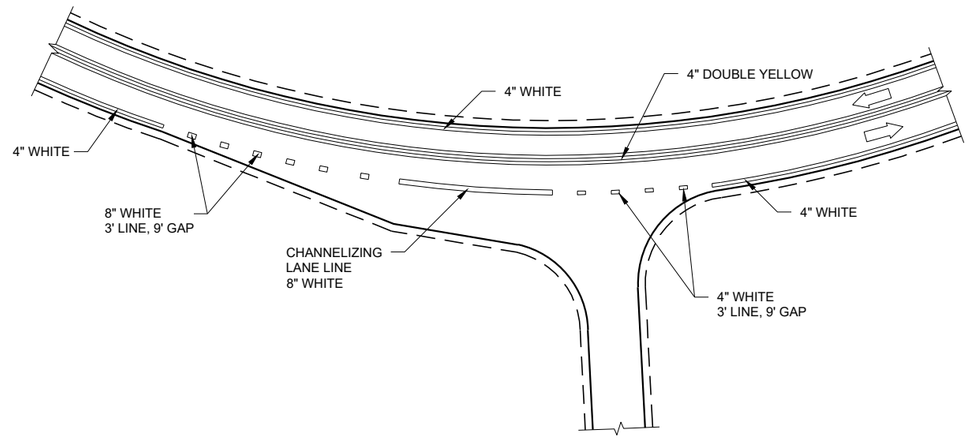
GENERAL NOTES

OMIT EDGE LINES THROUGH INTERSECTIONS. CONTINUE EDGE LINES THROUGH DRIVEWAYS.

1. WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
2. WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
3. BARRIER LINE ENDS AT SIDE ROAD PAVEMENT / SURFACE EDGE EXTENSION.
4. BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.

LEGEND

DIRECTION OF TRAVEL



INTERSECTION ON OUTSIDE OF CURVE

PAVEMENT MARKING (INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 15C35 - 04a

6

SDD 15C35 - 04a

LEGEND

SIGN ON PERMANENT SUPPORT

TRAFFIC CONTROL DRUM

DIRECTION OF TRAFFIC

WORK ZONE

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY THE REGIONAL TRAFFIC UNIT.

"WO" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE.

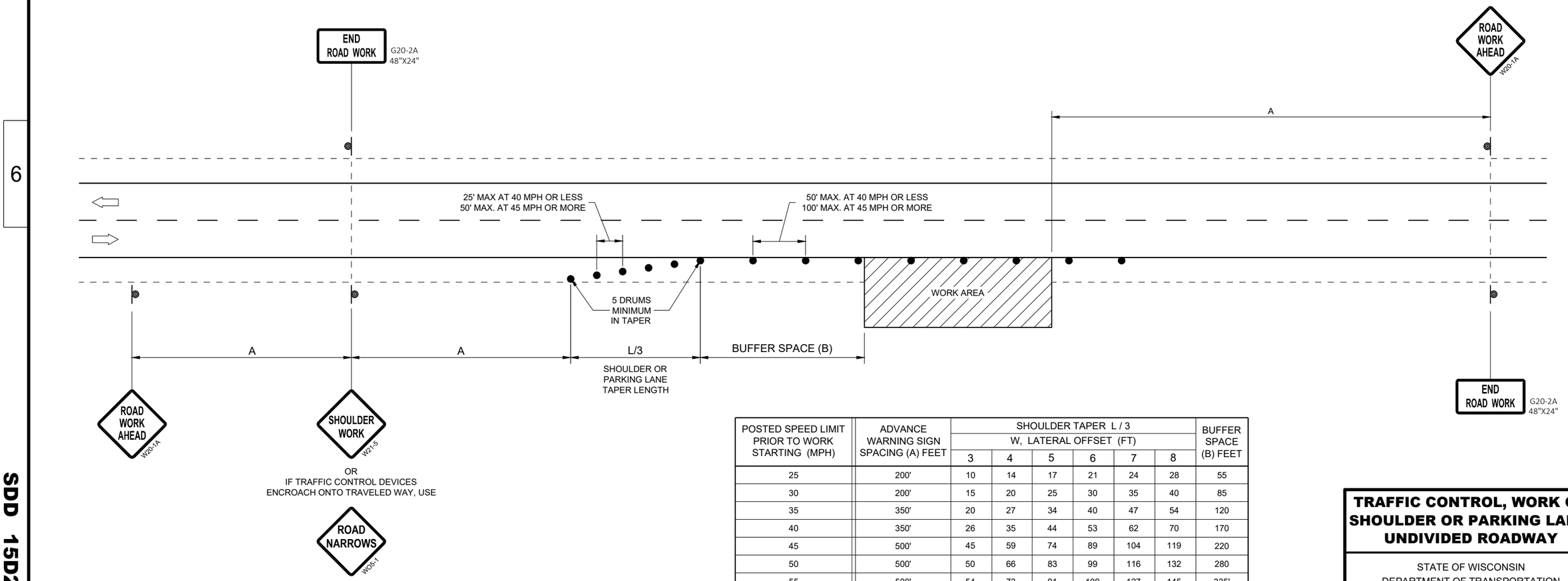
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

W20-1A AND G20-2A SIGNS ARE NOT REQUIRED IF THE WORK AREA IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT. G20-2A SIGNS MAY ALSO BE OMITTED IF DURATION OF WORK IS LESS THAN 7 CONTINUOUS DAYS AND NIGHTS.



POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	SHOULDER TAPER L / 3 W, LATERAL OFFSET (FT)						BUFFER SPACE (B) FEET
		3	4	5	6	7	8	
25	200'	10	14	17	21	24	28	55
30	200'	15	20	25	30	35	40	85
35	350'	20	27	34	40	47	54	120
40	350'	26	35	44	53	62	70	170
45	500'	45	59	74	89	104	119	220
50	500'	50	66	83	99	116	132	280
55	500'	54	73	91	109	127	145	335'

TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

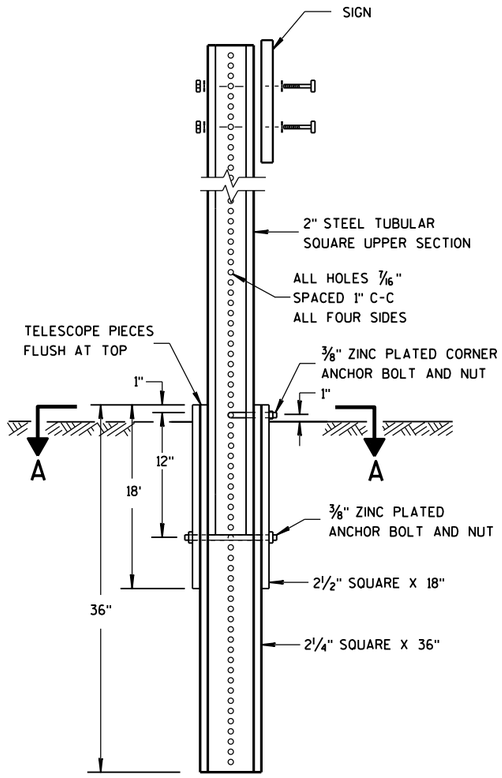
APPROVED
May 2020
DATE

/S/ Andrew Heidtke
STATEWIDE WORK ZONE T SAFETY ENGINEER

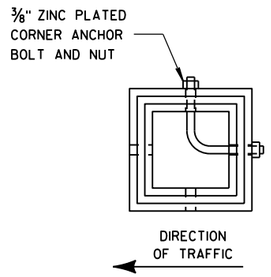
FHWA

SDD 15D28 - 04

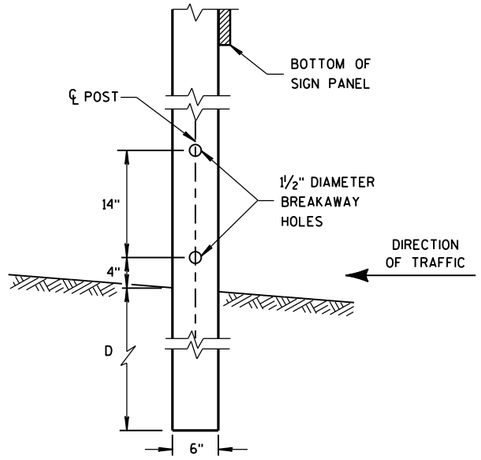
SDD 15D28 - 04



DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



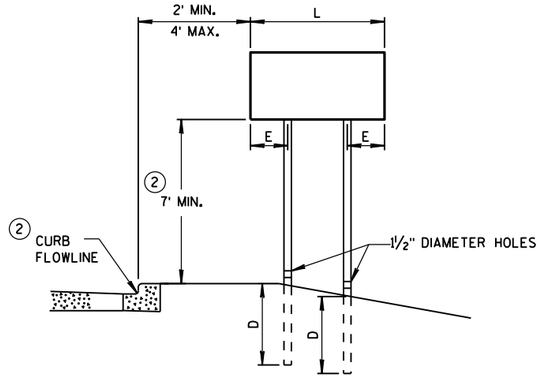
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

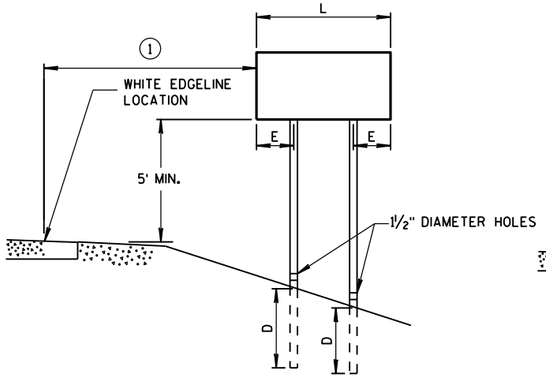
(1) 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

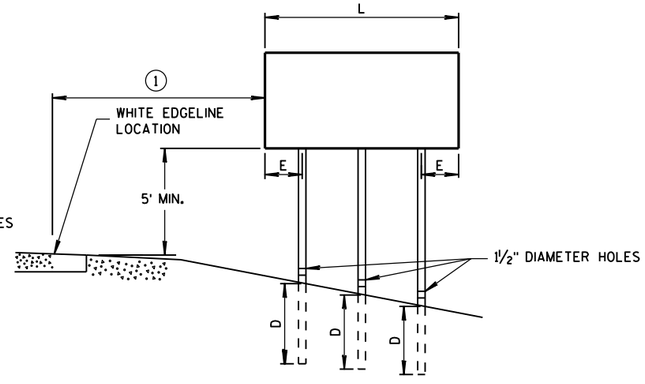
(2) THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.

(3) FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.



URBAN AREA





RURAL AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

TUBULAR STEEL POSTS

AREA OF SIGN INSTALLATION (SQ. FT.)	NUMBER OF REQUIRED TUBULAR STEEL POSTS
9 OR LESS	1
GREATER THAN 9 LESS THAN OR EQUAL TO 18	2
GREATER THAN 18 LESS THAN OR EQUAL TO 27	3

SIGNS WIDER THAN 3 FEET OR LARGER THAN 9 SQ. FT. SHALL BE MOUNTED ON MULTIPLE POSTS (SEE ABOVE TABLE).

SIGNS LARGER THAN 27 SQ. FT. SHALL NOT BE MOUNTED ON TUBULAR STEEL POSTS.

WOOD POST EMBEDMENT DEPTH

AREA OF SIGN INSTALLATION (SQ. FT.)	D (MIN)
20 OR LESS	4'
GREATER THAN 20	5'

4" X 6" WOOD POST

POST SPACING REQUIREMENTS		NUMBER OF WOOD POSTS REQUIRED
L	E	
48" OR LESS AND LESS THAN 20 SQ. FT.	-	1
LESS THAN 60"	12"	2
60" TO 120"	L/5	2
GREATER THAN 120" LESS THAN 168"	12"	3
168" AND GREATER	12"	4

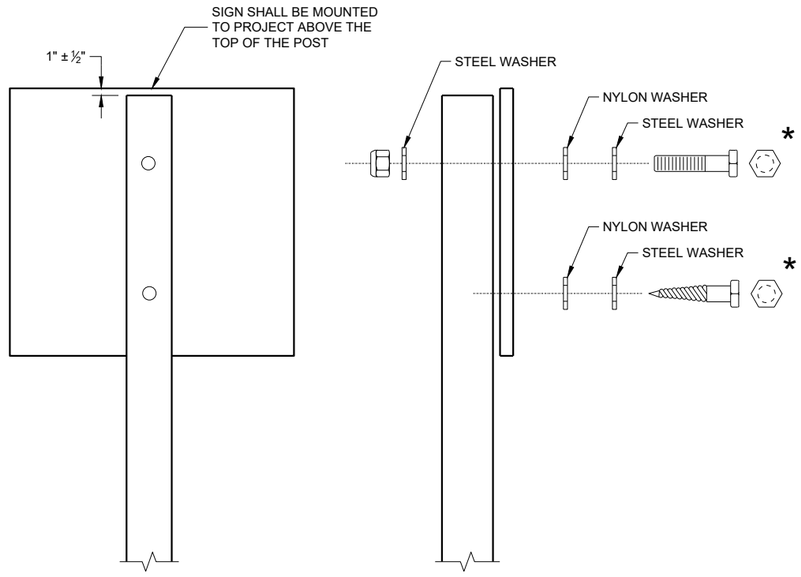
SEE NOTE (3)

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 15 D 38-2a



NUTS, BOLTS AND LAGS USED FOR MOUNTING SIGNS SHALL HAVE HEXAGONAL HEADS AND SHALL BE EITHER:

A. HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: A 153, CLASS D, OR SC 3
B. ELECTRO-GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: B 633, TYPE III, SC 3

THREADS ON BOLTS AND NUTS SHALL BE MANUFACTURED WITH SUFFICIENT ALLOWANCE FOR THE CADMIUM PLATE OR GALVANIZED COATING TO PERMIT THE NUTS TO RUN FREELY ON THE BOLTS.

WOOD POST (4" x 6")
LAG SCREWS - ⅜" x 3"
MACHINE BOLTS - 5/16" x 6 ½" OR 7" LENGTH W/NUTS

SQUARE STEEL POST (2" x 2")
MACHINE BOLTS - ⅜" x 3 ¼" LENGTH W/NUTS
RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL O.D. FLANGE 0.720 - 0.765 INCH, GRIP RANGE 0.042 - 0.375 INCH

WASHERS (ALL POSTS) -
1 ¼" O.D. x ⅜" I.D. x 1/16" STEEL
1 ¼" O.D. x ⅜" I.D. x 0.080 NYLON

* TWO DIFFERENT FASTENING SYSTEMS ARE SHOWN FOR ILLUSTRATION PURPOSES. ON ANY INDIVIDUAL SIGN, EITHER ONE OR THE OTHER SYSTEM SHALL BE USED. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

6

6

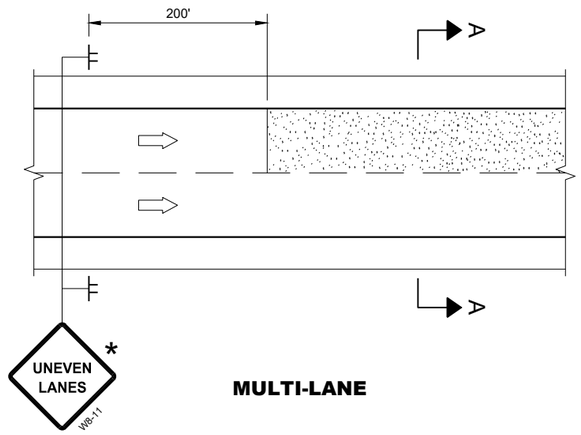
SDD 15D38 - 02b

SDD15D38 - 02b

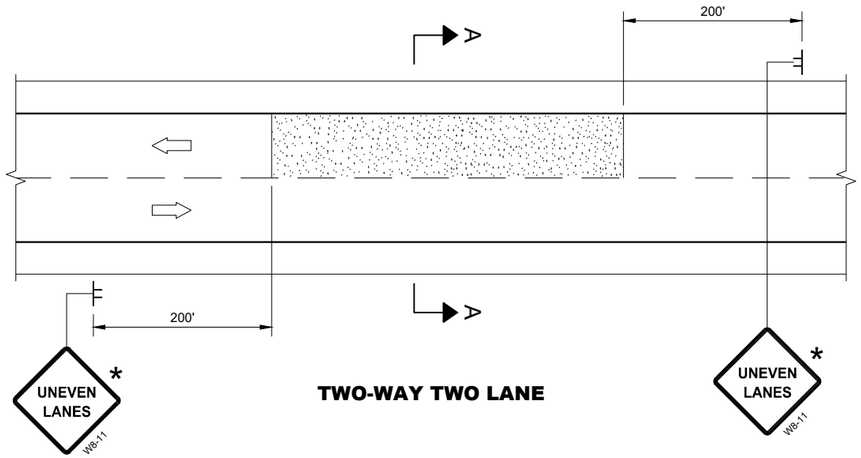
ATTACHMENT OF SIGNS TO POSTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE
FHWA



MULTI-LANE



TWO-WAY TWO LANE

GENERAL NOTES

FOR SPOT LOCATIONS USE ENGINEERING JUDGEMENT WHEN PLACING ADDITIONAL SIGNS.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

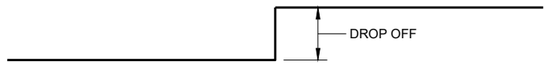
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

* IF THE DROP-OFF IS CONTINUOUS ALONG THE PROJECT, PLACE ADDITIONAL SIGNS EVERY 1 MILE AND AFTER EVERY ENTRANCE RAMP.

(1) USE CLOSER SPACING WHEN DELINEATING DROP-OFF.

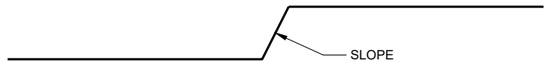
LEGEND

- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- WORK AREA WITH DROP-OFF
- MILLED SURFACE

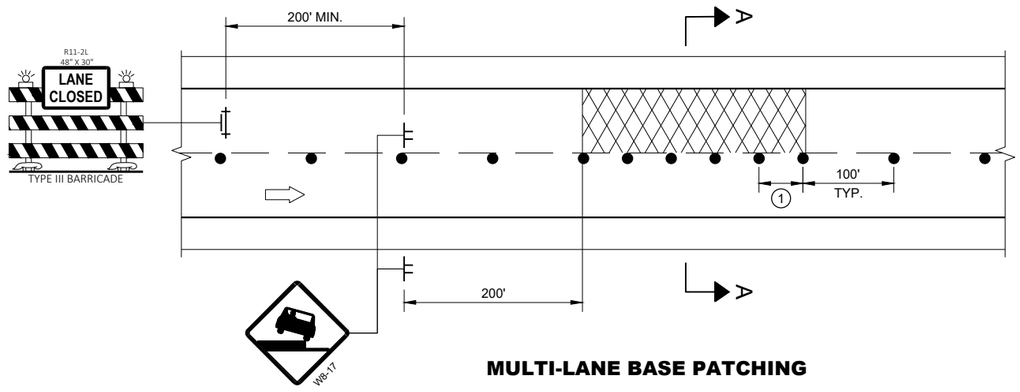


SECTION A - A

OR

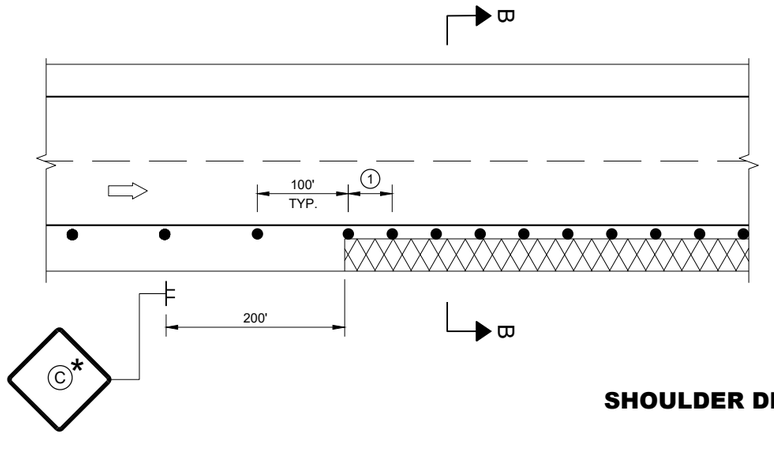


SECTION A - A

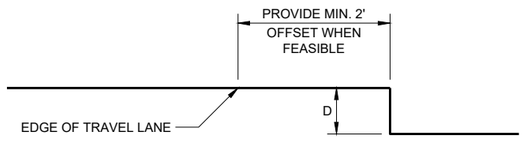


MULTI-LANE BASE PATCHING

ADJACENT LANE DROP-OFFS



SHOULDER DROP-OFFS



SECTION B - B

D	SIGN (C)
< 2" WITH A SLOPE STEEPER THAN 3:1	LOW SHOULDER WO8-9
2" < 6" WITH A SLOPE STEEPER THAN 3:1	SHOULDER DROP - OFF W8-9A PROVIDE A 3:1 OR FLATTER SLOPE OF MATERIAL ADJACENT TO THE PAVEMENT

TRAFFIC CONTROL, DROP-OFF SIGNING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

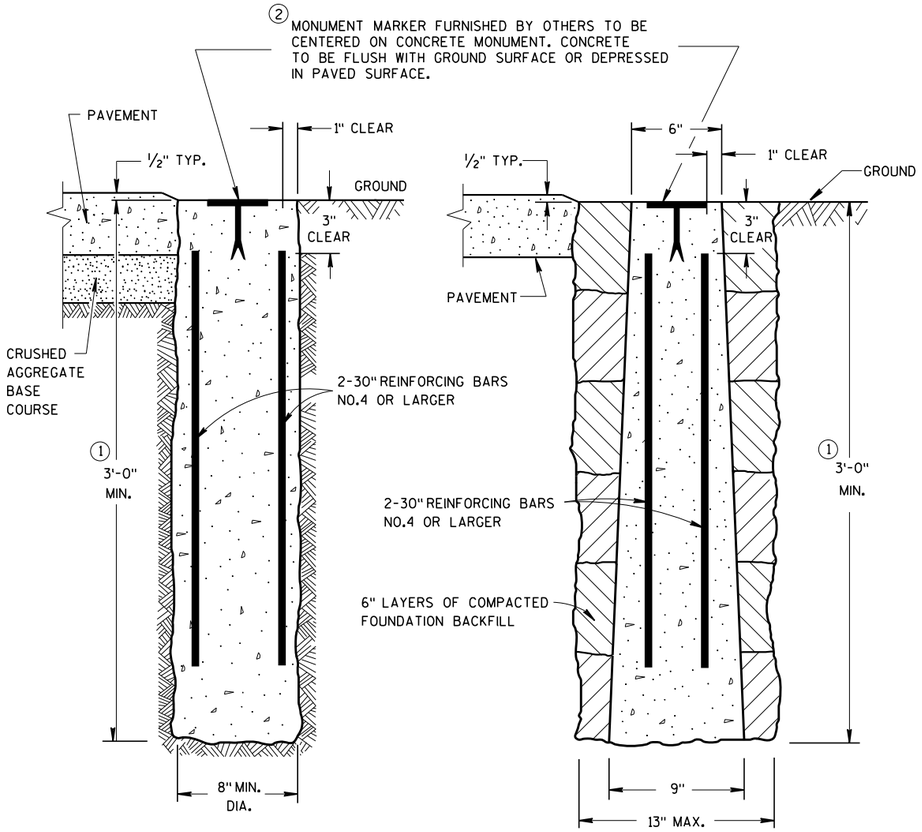
APPROVED
March 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15D39 - 02

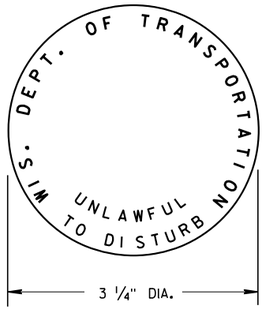


CAST-IN-PLACE

PRECAST

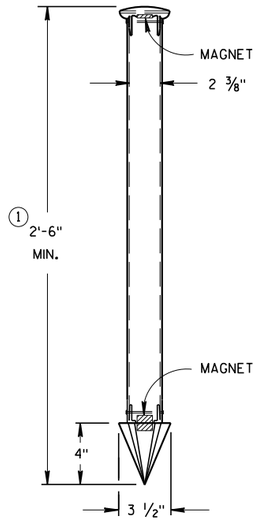
CONCRETE MONUMENTS

TYPE A



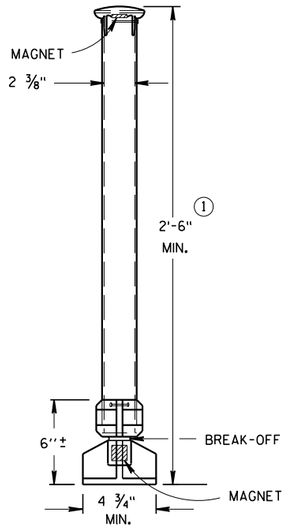
② **WIS DOT MONUMENT MARKER LOGO**

FOR TYPES "A", "C", & "D"



TYPE C

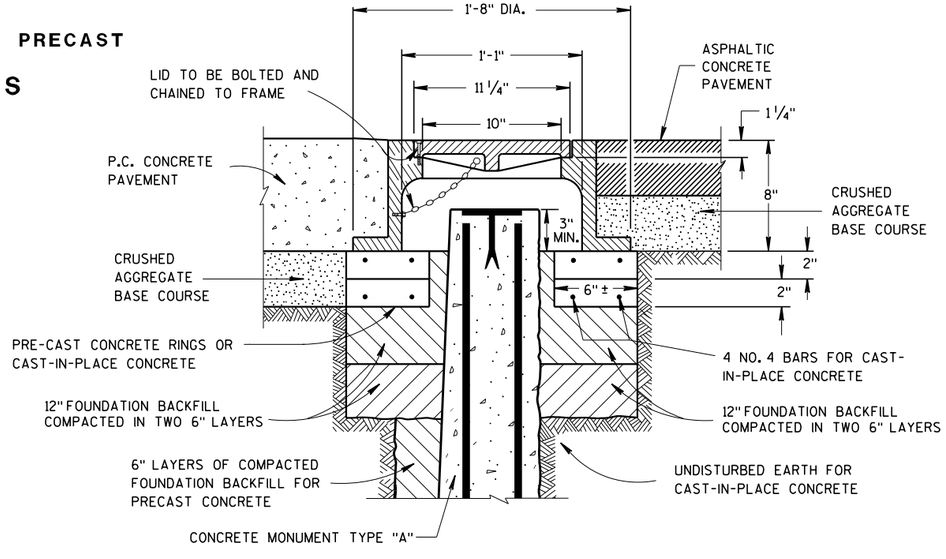
DRIVE-IN MONUMENT



TYPE D
NON-DRIVEN
BREAK-OFF MONUMENT

ALUMINUM MONUMENTS

(INCLUDES MARKER)



CAST IRON MONUMENT COVER

(APPROXIMATE WEIGHT 95 LBS)

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

DETAILED DRAWINGS OF PROPOSED ALTERNATE DESIGNS FOR METAL MONUMENTS OR MONUMENT COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

PERMANENT MAGNETS SHALL BE INSERTED NEAR THE TOP AND BOTTOM OF ALL ALUMINUM MONUMENTS SO THE MONUMENT CAN EASILY BE DETECTED BY A METAL DETECTOR.

THE CAST IRON MONUMENT COVER SHALL BE A "NON-ROCKING" TYPE. ADJUSTMENT OF THE COVER TO GRADE MAY BE ACCOMPLISHED BY THE USE OF MORTAR AND BRICK, OR BY EITHER PRECAST OR CAST-IN-PLACE REINFORCED CONCRETE GRADE RINGS.

MONUMENTS SHALL BE LOCATED AND PLACED AT THE DIRECTION OF THE ENGINEER.

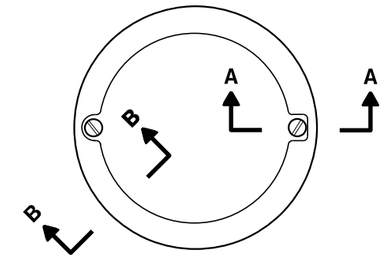
ALUMINUM MONUMENTS AND MONUMENT COVERS SHALL BE MADE FROM AN ALUMINUM AND MAGNESIUM ALLOY AS DETERMINED BY THE MANUFACTURER.

THE MONUMENT COVERS DETAILED ON THIS DRAWING ARE NOT EQUAL ALTERNATES. MONUMENT COVERS SHALL BE CAST IRON UNLESS ALUMINUM IS SPECIFIED ELSEWHERE IN THE CONTRACT.

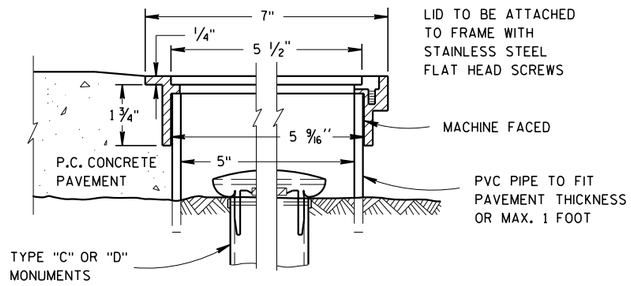
MONUMENT SHALL BE CAST-IN-PLACE CONCRETE UNLESS PRECAST CONCRETE OR ALUMINUM MONUMENTS ARE SPECIFIED IN THE CONTRACT OR PERMITTED BY THE ENGINEER

① MINIMUM LENGTH SHALL BE 4'-0" FOR MONUMENTS INSTALLED IN PAVED AREAS.

② AN OFFICIAL COUNTY MONUMENT MARKER SUPPLIED BY A COUNTY MAY BE REQUIRED FOR SOME SECTION CORNERS AND WITNESS MONUMENTS INSTEAD OF THIS WIS DOT MARKER.



TOP VIEW



SECTION B-B SECTION A-A

ALUMINUM MONUMENT COVER

(APPROXIMATE WEIGHT 2 LBS)
(FOR CONCRETE PAVEMENT ONLY)

LANDMARK REFERENCE MONUMENTS AND COVERS

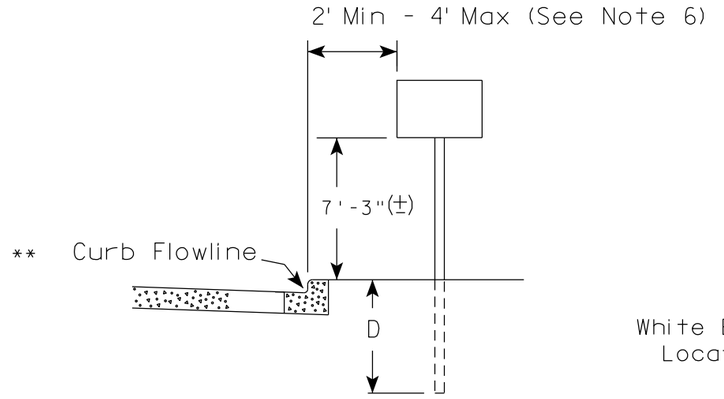
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 — DATE
/S/ Raymond A. Kumagai — CHIEF SURVEYING AND MAPPING ENGINEER
FHWA

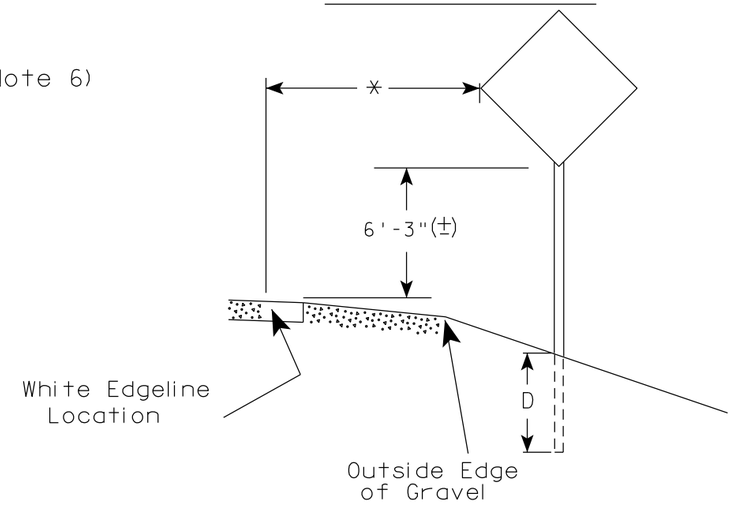
6

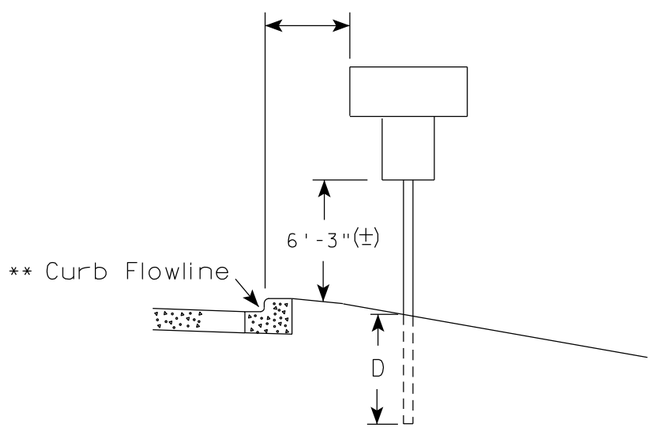
S.D.D. 16 A 1-7

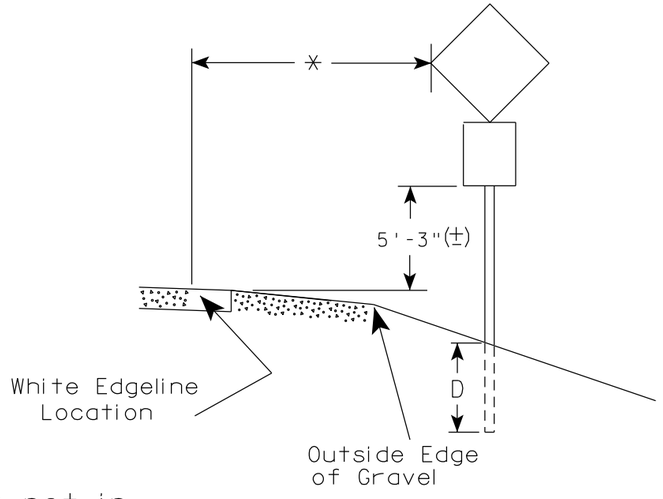
URBAN AREA



RURAL AREA (See Note 2)







** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

POST EMBEDMENT DEPTH

Area of Sign Installation (Sq.Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on or behind barrier wall, see A4-10 sign plate.
   The Double Arrow sign (W12-1D) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
5. Offset distance shall be consistent with existing signs or consistent throughout length of project.
6. The (±) tolerance for mounting height is 3 inches.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directd by the Engineer.

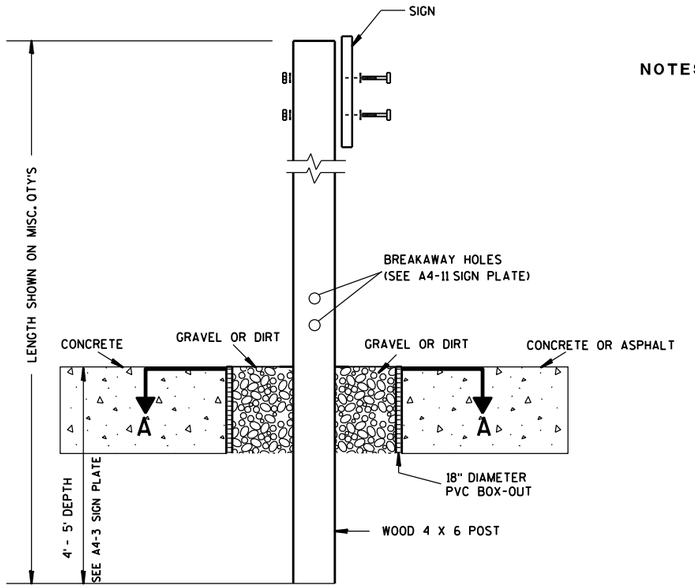
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/13/2020 PLATE NO. A4-3.22

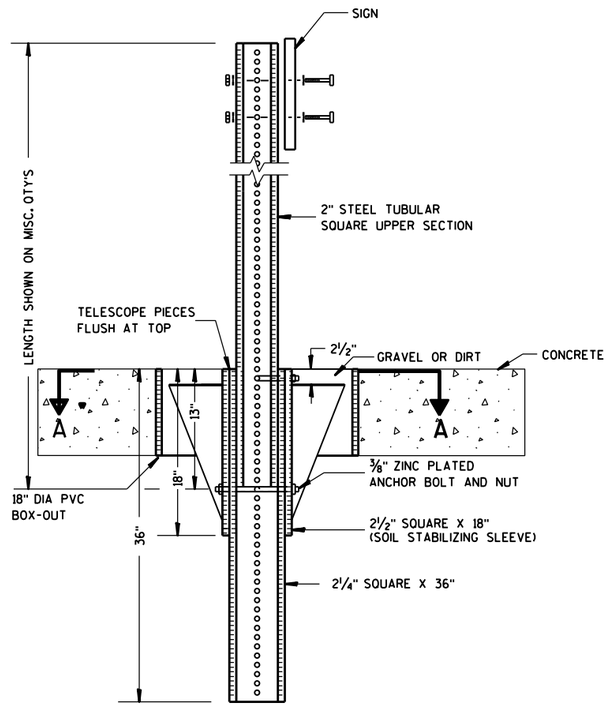
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 69	E



ELEVATION VIEW

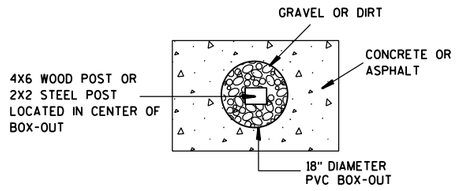
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

NOTES:
1. ALL MATERIAL TO BE APPROVED BY ENGINEER PRIOR TO INSTALLATION
2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



ELEVATION VIEW

DETAIL OF STEEL 2 X 2 SIGN POST IN BOX-OUT



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

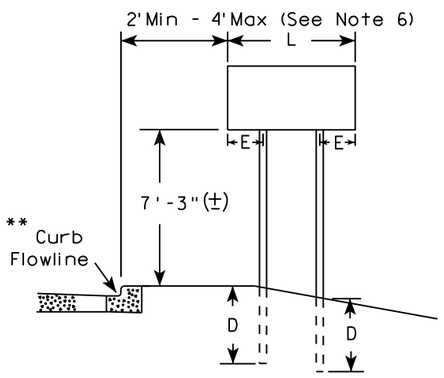
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/27/14 PLATE NO. A4-3B.1

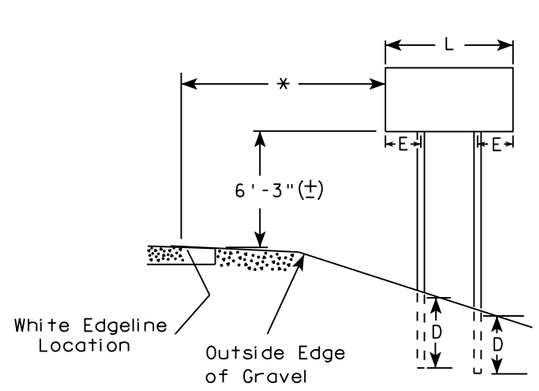
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

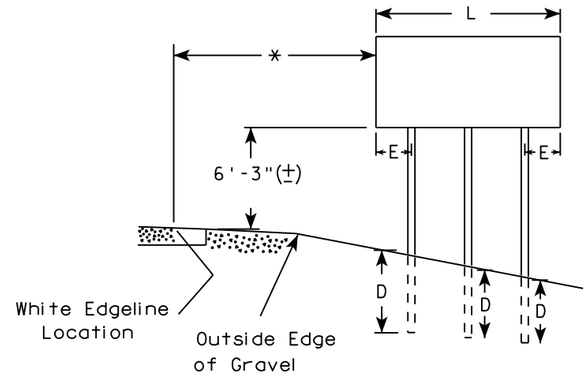
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

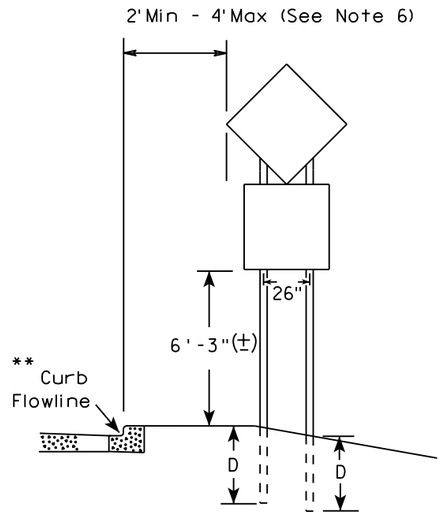
URBAN AREA



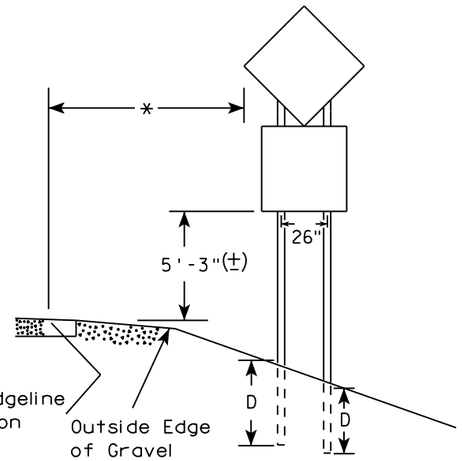
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
Greater than 48" Less than 60"	12"
60" to 108"	L/5

***

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 108" to 144"	12"

GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. J-Assemblies are considered to be one sign for mounting height.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4"-3" (±).

* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

*** See A4-3 sign plate for signs 4' or less in width and less than 20 S.F. in area.

POST EMBEDMENT DEPTH

Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

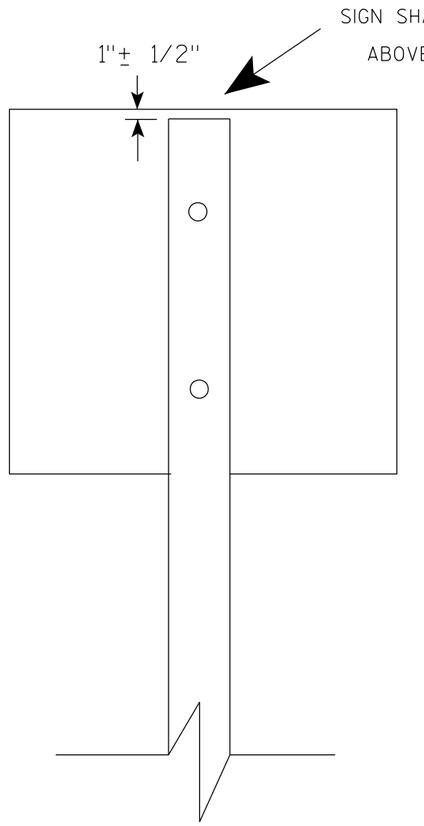
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

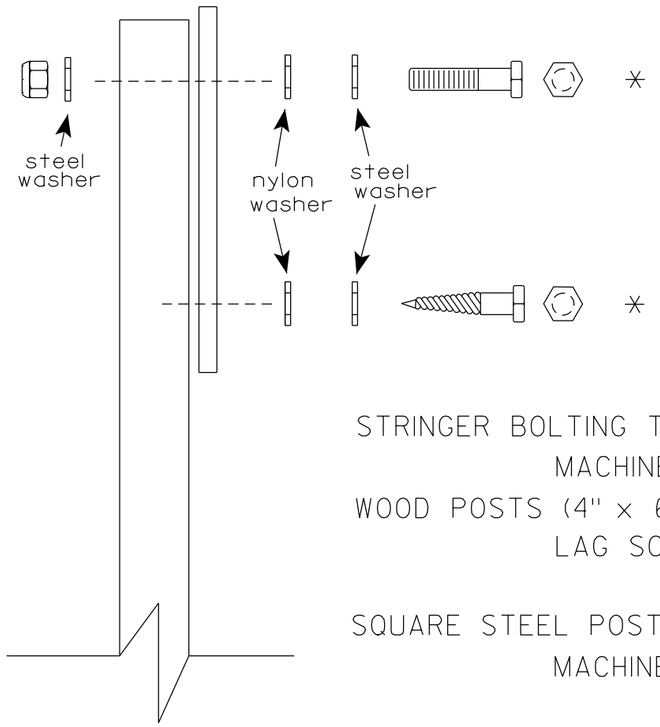
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 8/21/17 PLATE NO. A4-4.15

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 71	E





Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3

b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)

MACHINE BOLTS - 5/16" X 1-3/4" Length w/ lock nuts

WOOD POSTS (4" x 6")

LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)
3/8" X 4" (STRINGERS ON BACK OF SIGN)

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)

RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -

1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON

* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require the use of 3 fasteners.

ATTACHMENT OF SIGNS TO POSTS

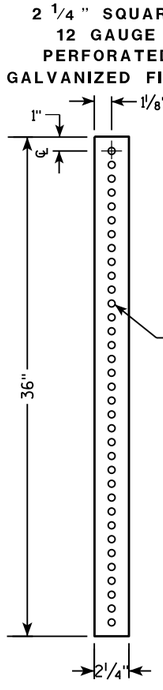
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

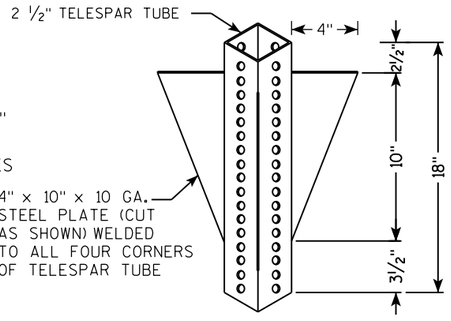
DATE 4/1/2020 PLATE NO. A4-8.9

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

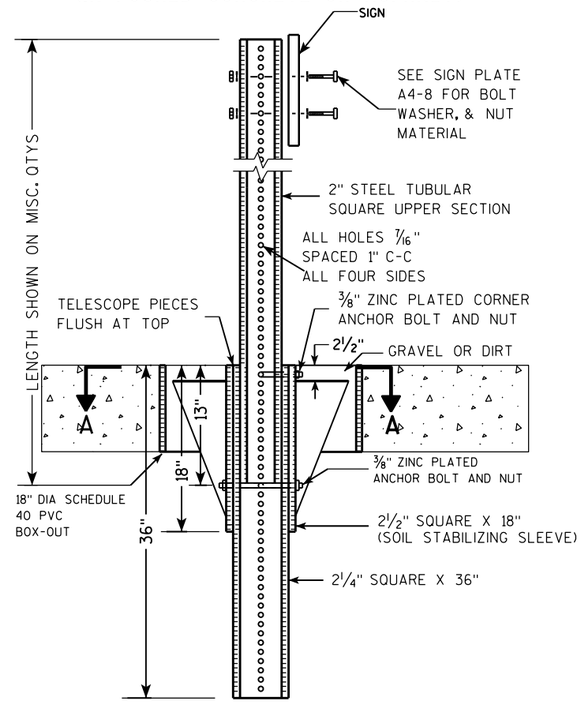
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



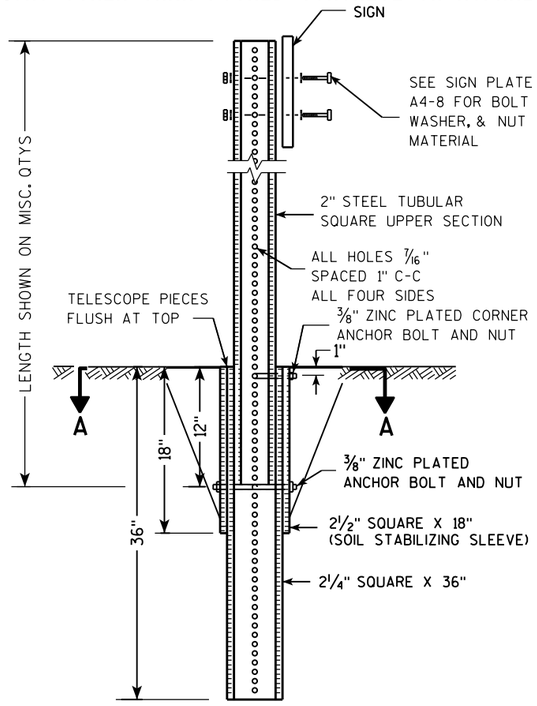
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

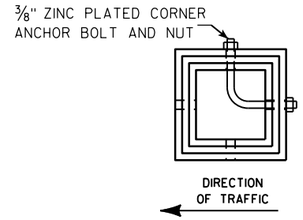


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



DETAIL OF TUBULAR STEEL SIGN POST
(IN LOCATIONS OTHER THAN POURED CONCRETE OR ASPHALT)





SECTION A-A

Area of Sign Installation (Sq. Ft.)	Number of Required Posts
9 or less	1
Greater than 9 less than or equal to 18	2
Greater than 18 less than or equal to 27	3

Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

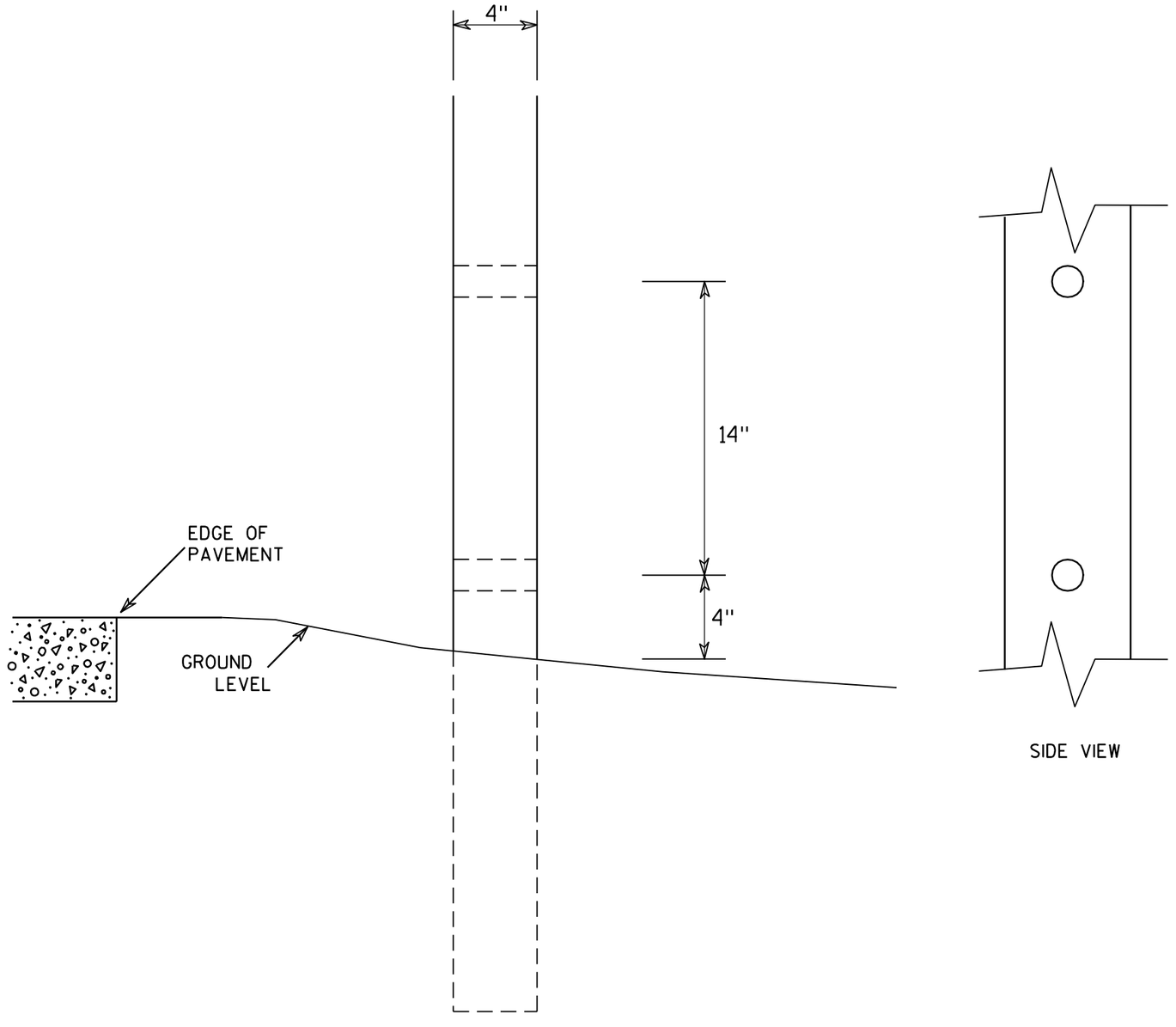
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 73 A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



SIDE VIEW

GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1½" diameter holes drilled perpendicular to the roadway centerline.

7

7

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

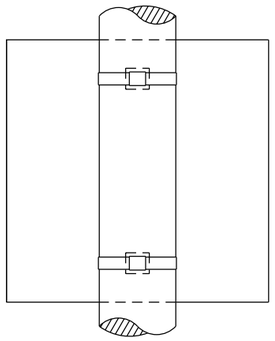
APPROVED Chester J Spang for State Traffic Engineer

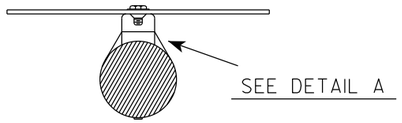
DATE 3/27/97 PLATE NO. A4-11.2

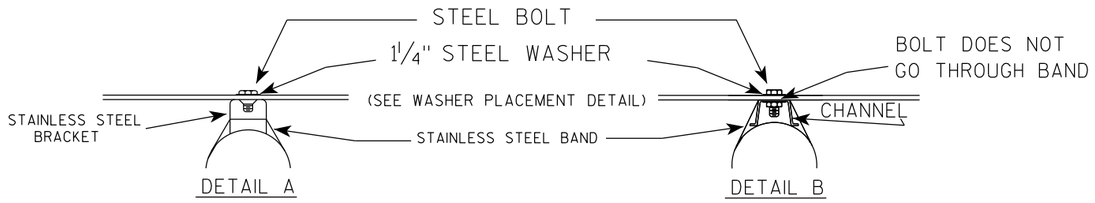
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 74	E

BANDING

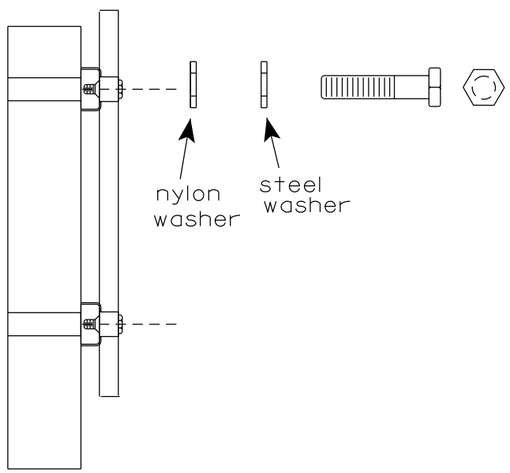
SINGLE SIGN







WASHER PLACEMENT

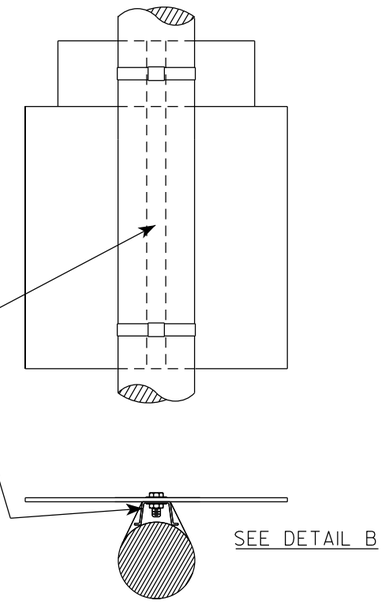


WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be ¾" in width and 0.025" thickness.
4. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
   b. Electro-galvanized in accordance with ASTM designation: B 633, Type III, SC 3

"J" ASSEMBLY



STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

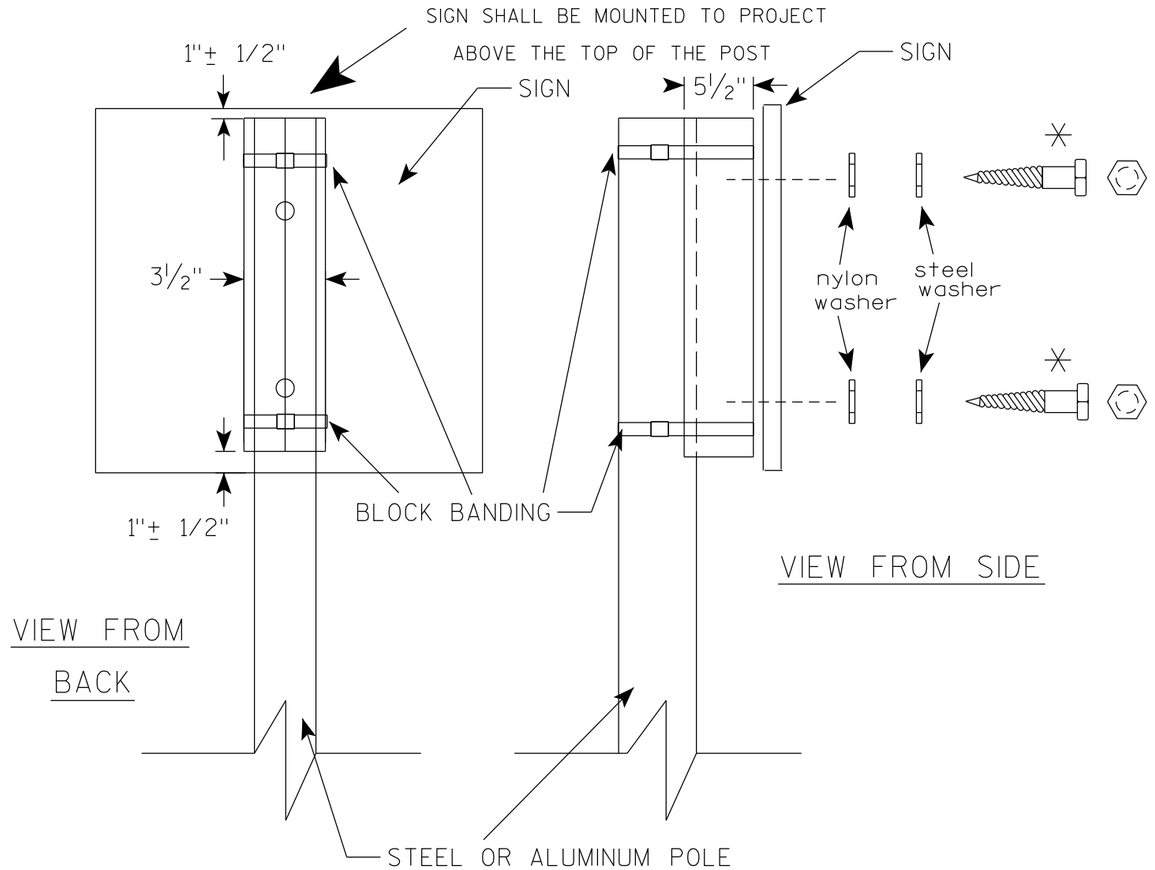
DATE 6/10/19 PLATE NO. A5-9.4

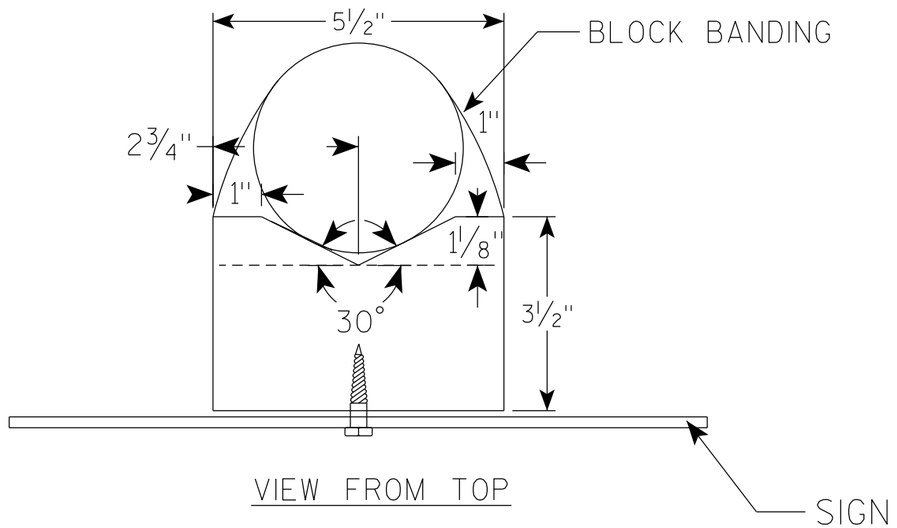
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 75	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A59.dgn PLOT DATE : 10-JUN 2019 4:10 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

7

7





GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WisDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, ¾" WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORNALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
   b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✳ LAG BOLTS SHALL BE ⅜" X 2½"

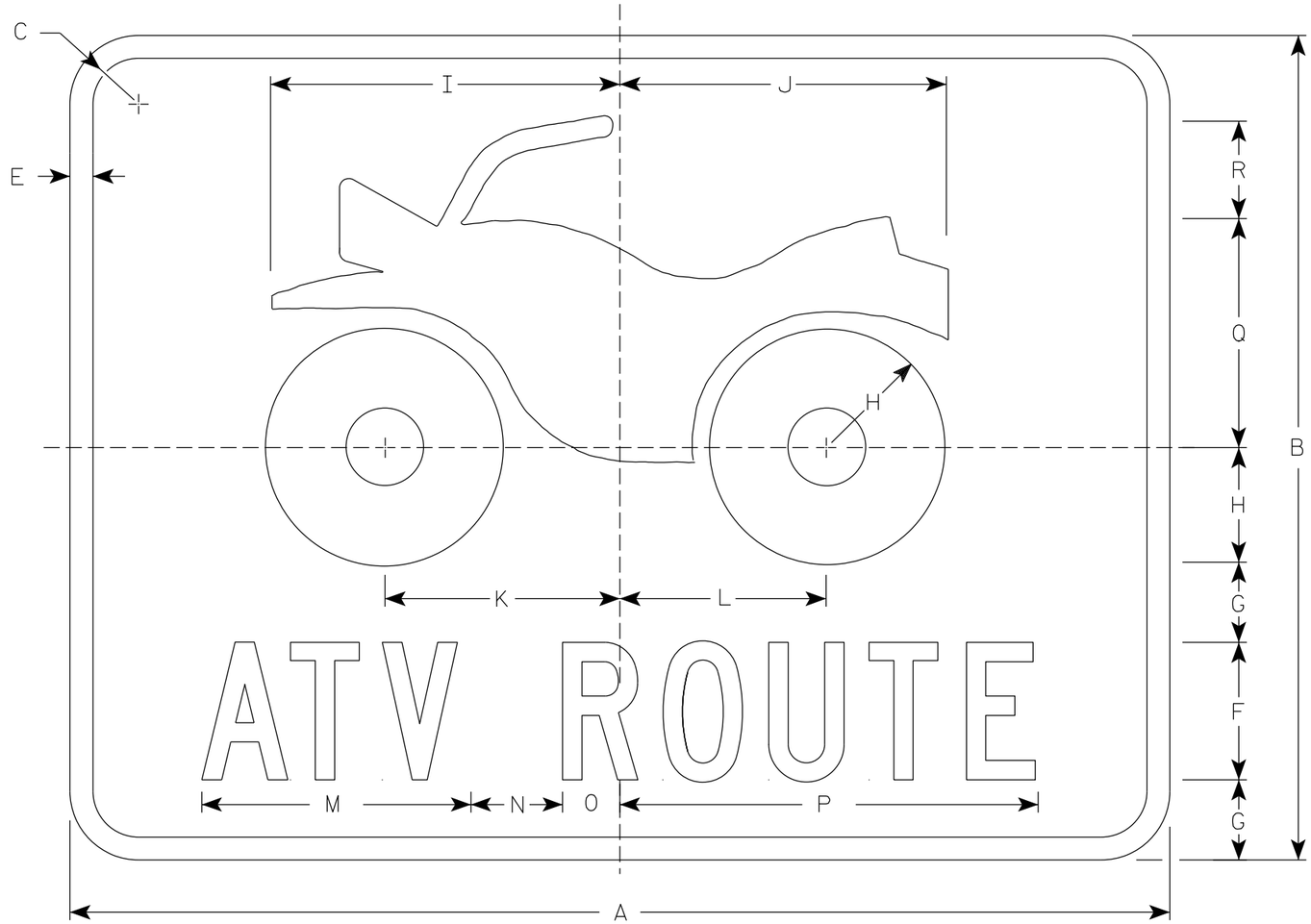
BLOCK BANDING DETAIL (V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 6/10/19 PLATE NO. A5-10.2

PROJECT NO: | SHEET NO: 76 | E



NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - C

D11-10

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	18	1 1/8		1/2	3	1 3/4	2 1/2	7 5/8	7 1/8	5 1/8	5 1/2	5 7/8	2	1 1/4	9 1/8	5	2 1/8									3.0
3																											
4																											
5																											

STANDARD SIGN
D11-10

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

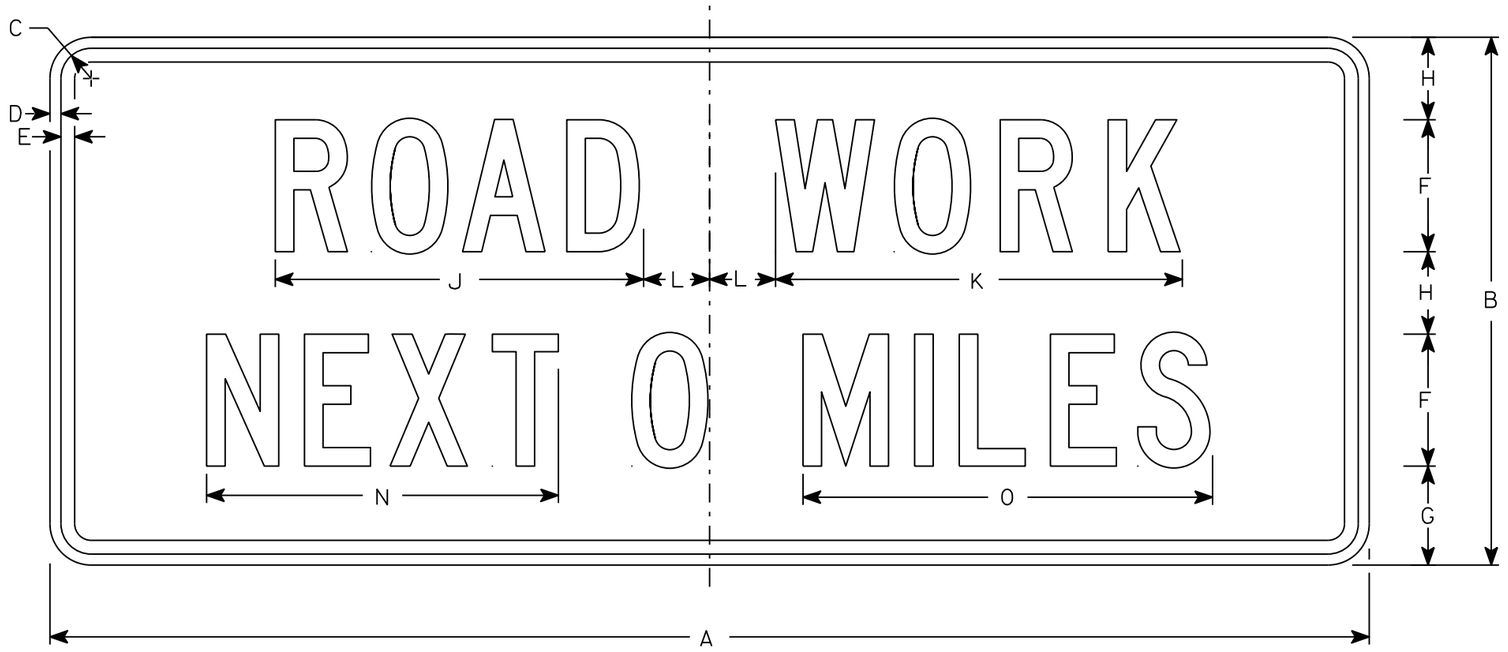
DATE 3/25/19 PLATE NO. D11-10.5

PROJECT NO:

SHEET NO: 77 E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\D1110.DGN PLOT DATE : 25-MAR-2019 PLOT BY : dotc4c

WISDOT/CADDS SHEET 42



G20-1

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Round distance to nearest whole Mile and substitute appropriate numerals and optically adjust spacing to achieve proper balance

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	60	24	1 3/8	1/2	5/8	6	4 1/2	3 3/4		16 3/4	18 1/2	3		16	18 5/8												10
3																											
4	60	24	1 3/8	1/2	5/8	6	4 1/2	3 3/4		16 3/4	18 1/2	3		16	18 5/8												10
5																											

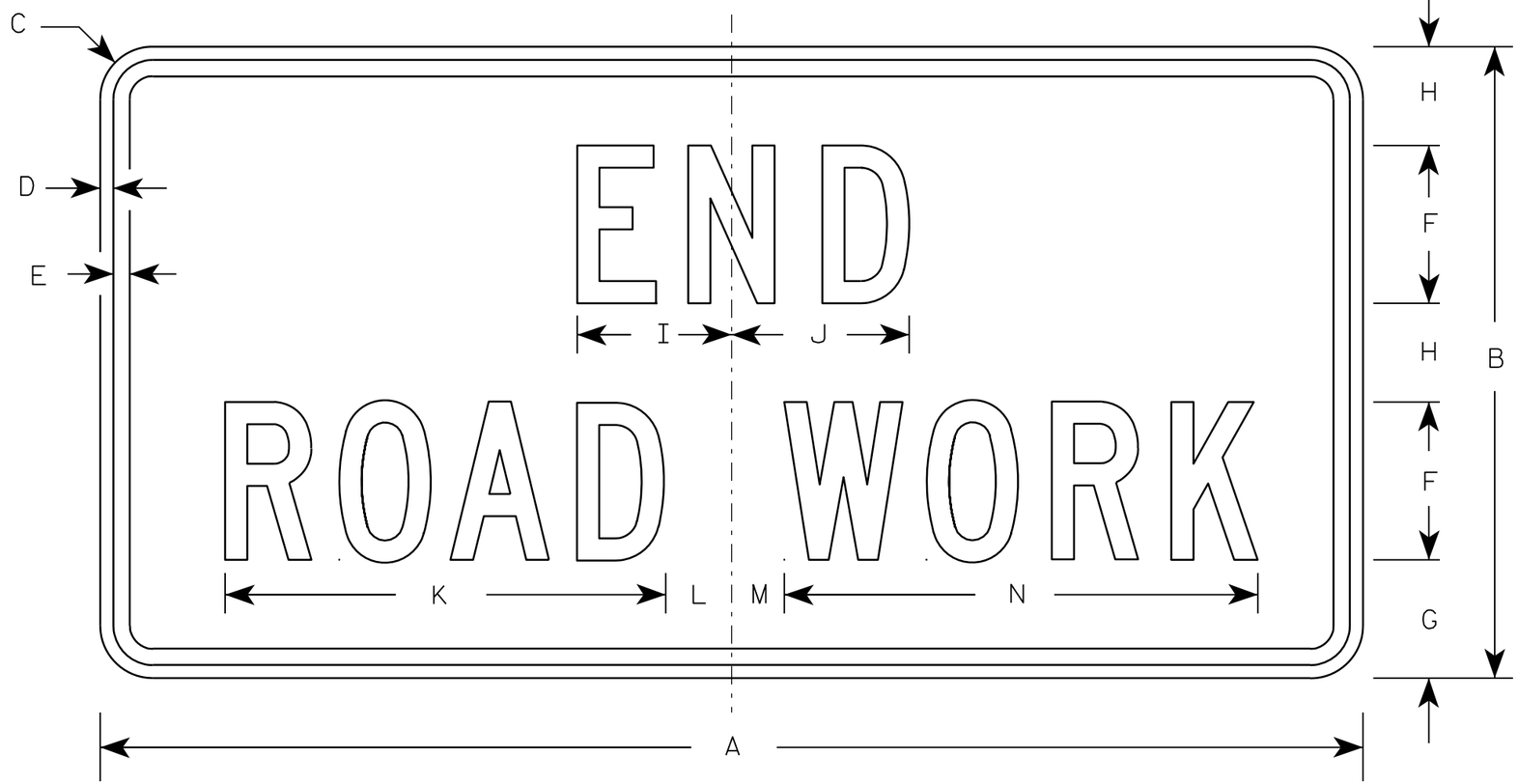
STANDARD SIGN
G20-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/14/17 PLATE NO. G20-1.8

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 78 | E



G20-2A

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

Metric equivalent for this sign is:

SIZE	
1	900 mm X 450 mm
2	1200 mm X 600 mm
3	1200 mm X 600 mm
4	1200 mm X 600 mm
5	1200 mm X 600 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1	36	18	1 1/8	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5	0.41
2	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
3	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
4	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
5	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72

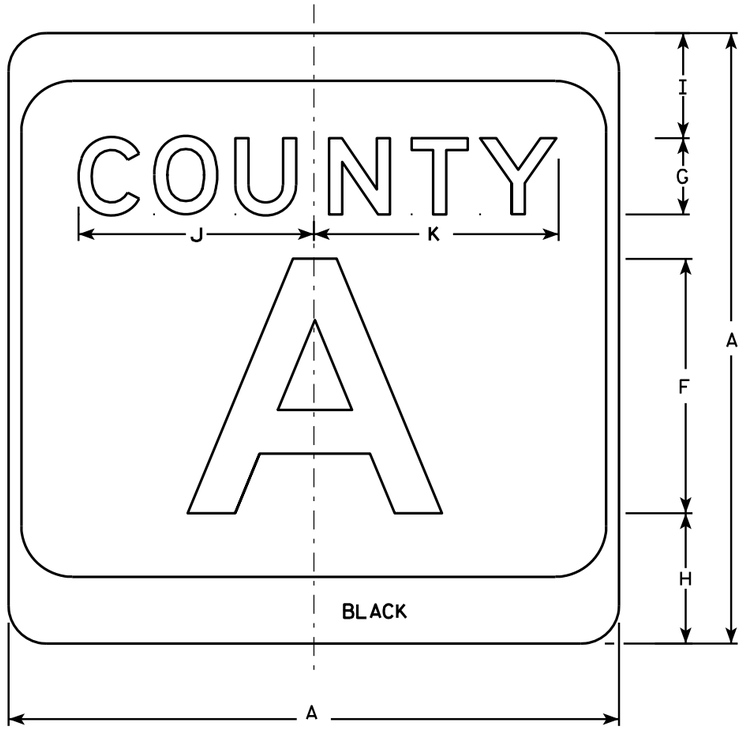
STANDARD SIGN
G20-2A

WISCONSIN DEPT OF TRANSPORTATION

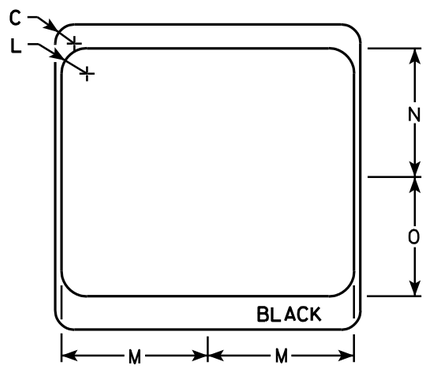
APPROVED Matthew R Rauch
for State Traffic Engineer

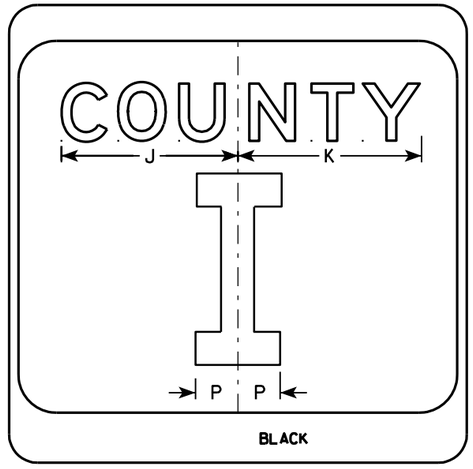
DATE 9/30/09 PLATE NO. G20-2A.8

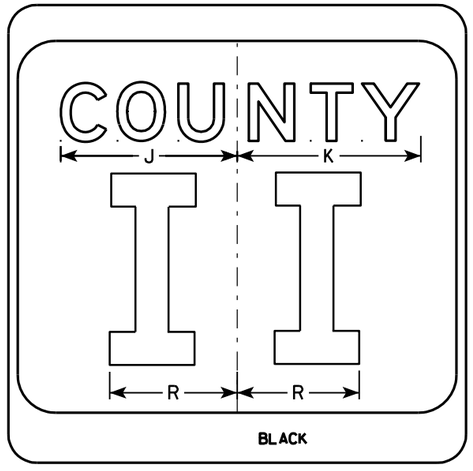
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 79	E



M1-5A







NOTES

1. Sign is Type II - see Note 7 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White & Black - See Note 7
   Message - Black
3. Message Series - see Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Message Series E for 1 letter.
   Message Series D for 2 letters unless message is too big then Series C.
   Message Series C for 3 letters unless message is too big then Series B.
6. Substitute appropriate letters & optically center to achieve proper balance.
7. Permanent Signs
   Background - Type H Reflective
   Detour or temporary Signs
   Background - Reflective

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 5/8									4.0
3	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
4	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
5	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0

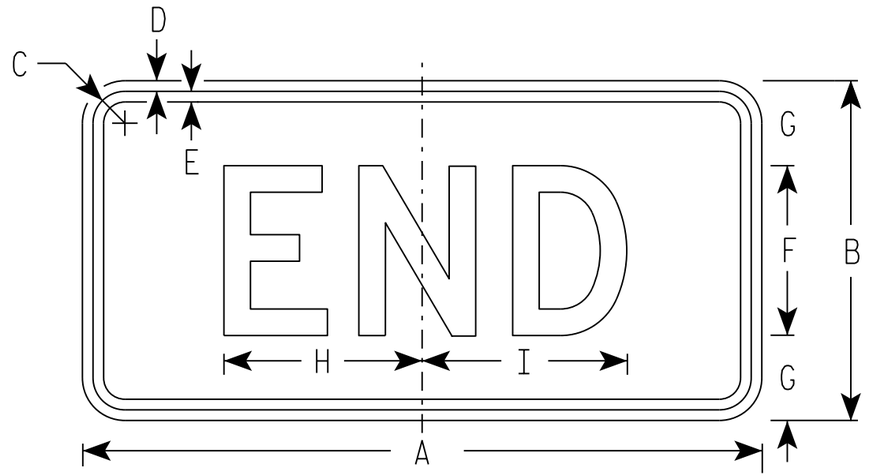
CTH MARKER
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

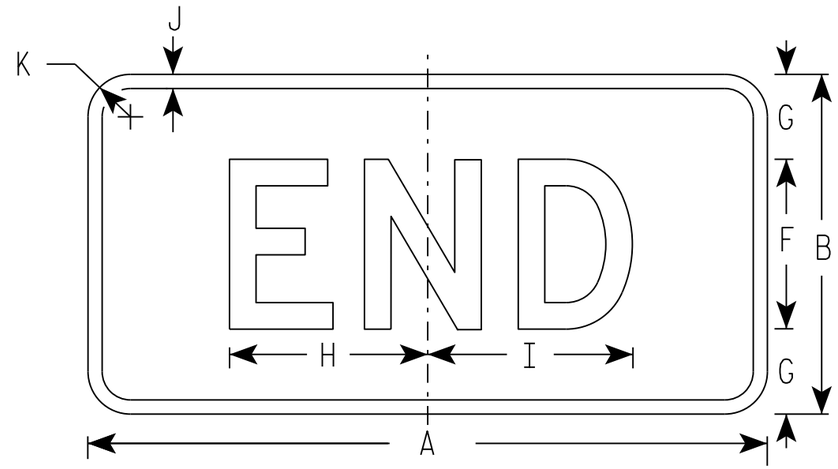
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/27/11 PLATE NO. M1-5A.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 80	E



M4-6
MM4-6
MP4-6



MB4-6
MK4-6
MN4-6
MR4-6

NOTES

1. Sign is Type II - Type H
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-6 Background - White
   Message - Black

   MB4-6 Background - Blue
   Message - White

   MK4-6 Background - Green
   Message - White

   MM4-6 Background - White
   Message - Green

   MN4-6 Background - Brown
   Message - White

   MP4-6 Background - White
   Message - Blue

   MR4-6 Background - Brown
   Message - Yellow

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	3	7	7 1/4	1/2	1 1/2																2.00
3	36	18	1 1/8	3/8	1/2	9	4 1/2	12	11 7/8	1/2	1 1/2																4.5
4	36	18	1 1/8	3/8	1/2	9	4 1/2	12	11 7/8	1/2	1 1/2																4.5
5	36	18	1 1/8	3/8	1/2	9	4 1/2	12	11 7/8	1/2	1 1/2																4.5

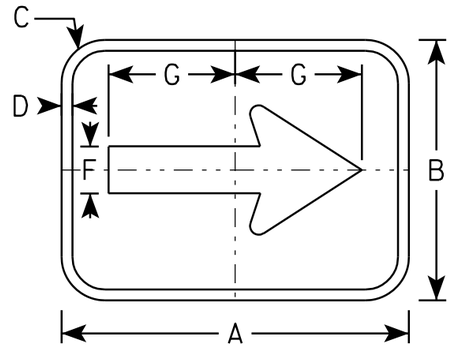
STANDARD SIGN
M4-6

WISCONSIN DEPT OF TRANSPORTATION

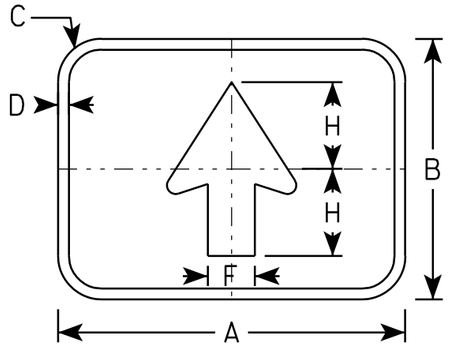
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE 81 '14-7.9

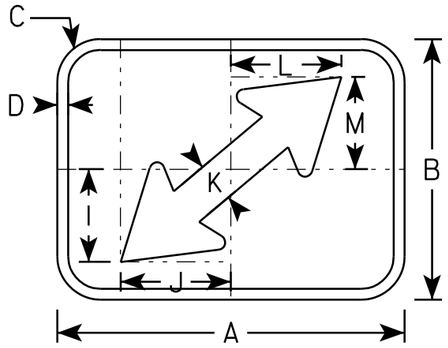
PROJECT NO: | HWY: | COUNTY: | SHEET NO: E



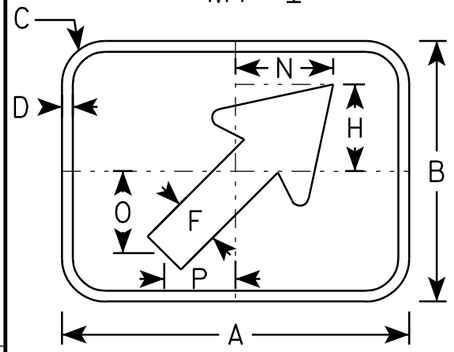
M7-1



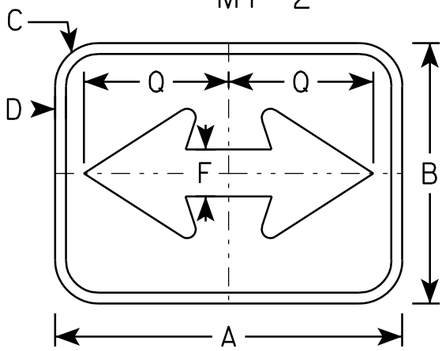
M7-2



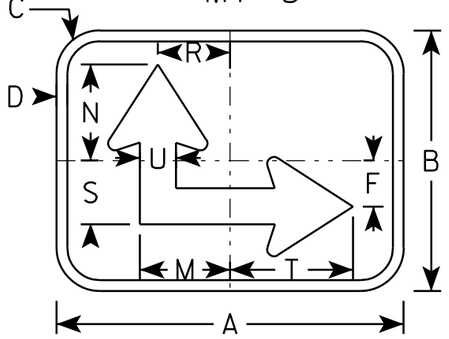
M7-3



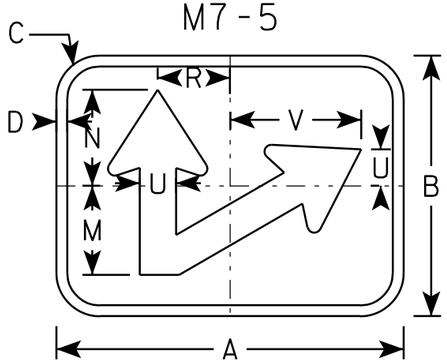
M7-4



M7-5



M7-6



M7-7

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Green
   Message -White
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	12	9	1 1/2	3/8		1 5/8	4 3/8	3	3 1/4	3 3/4	1 3/8	3 7/8	3 1/8	3 3/8	2 7/8	2 1/2	5	2 1/2	2 1/4	4 1/4	1 1/4	4 1/2					.75
3																											
4																											
5																											

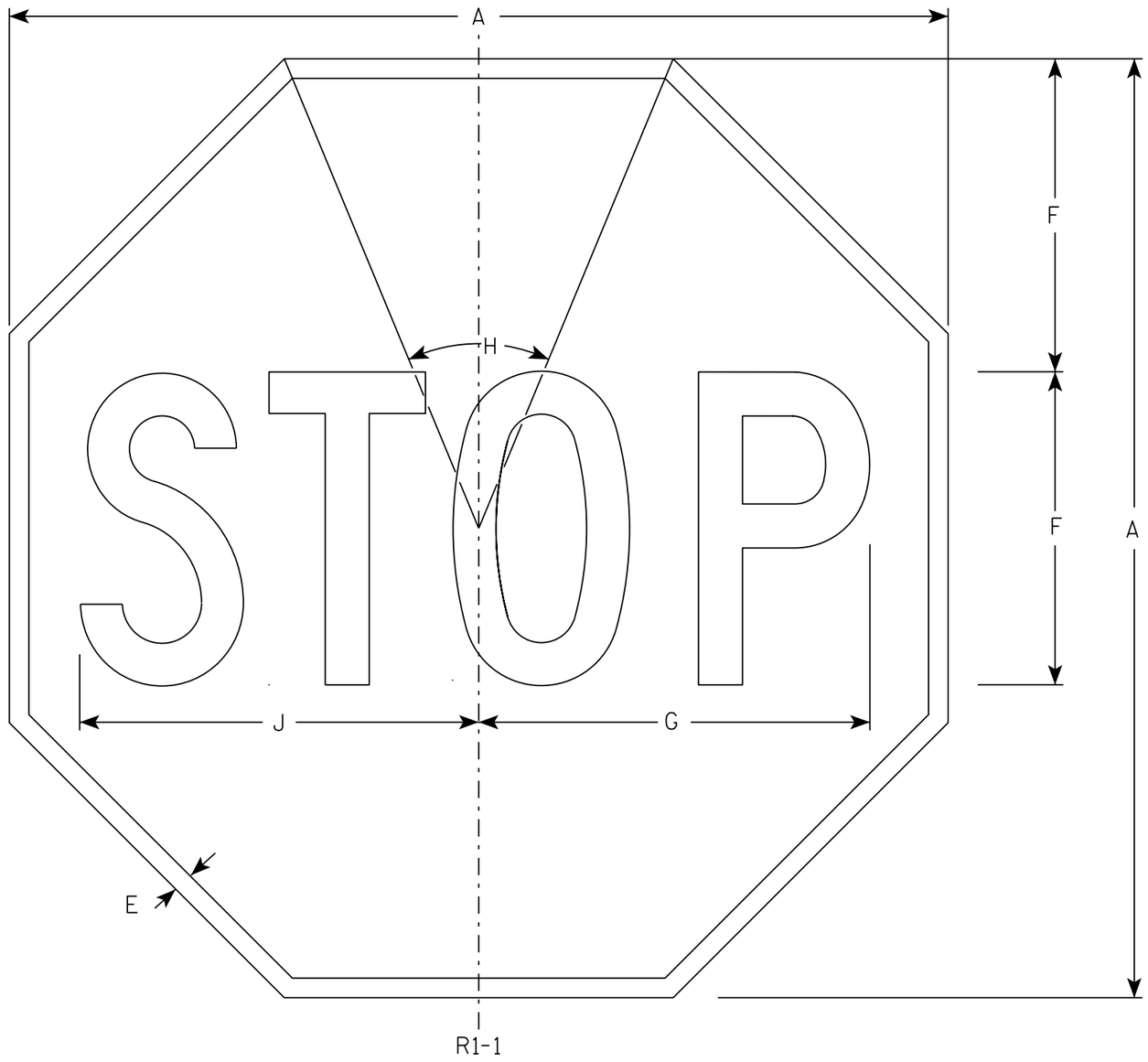
STANDARD SIGN
M7 SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 05/04/10 PLATE NO. M7-1.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 82	E



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
   Message - White
3. Message Series - C

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2S	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2M	36				3/4	12	15	45°		15 3/8																	7.46
3	36				3/4	12	15	45°		15 3/8																	7.46
4	48				1	16	20	45°		20 1/2																	13.25
5	48				1	16	20	45°		20 1/2																	13.25
6	18				3/8	6	7 3/4	45°		7 3/4																	1.86
7	12				1/4	4	5	45°		5 1/8																	0.78

STANDARD SIGN

R1-1

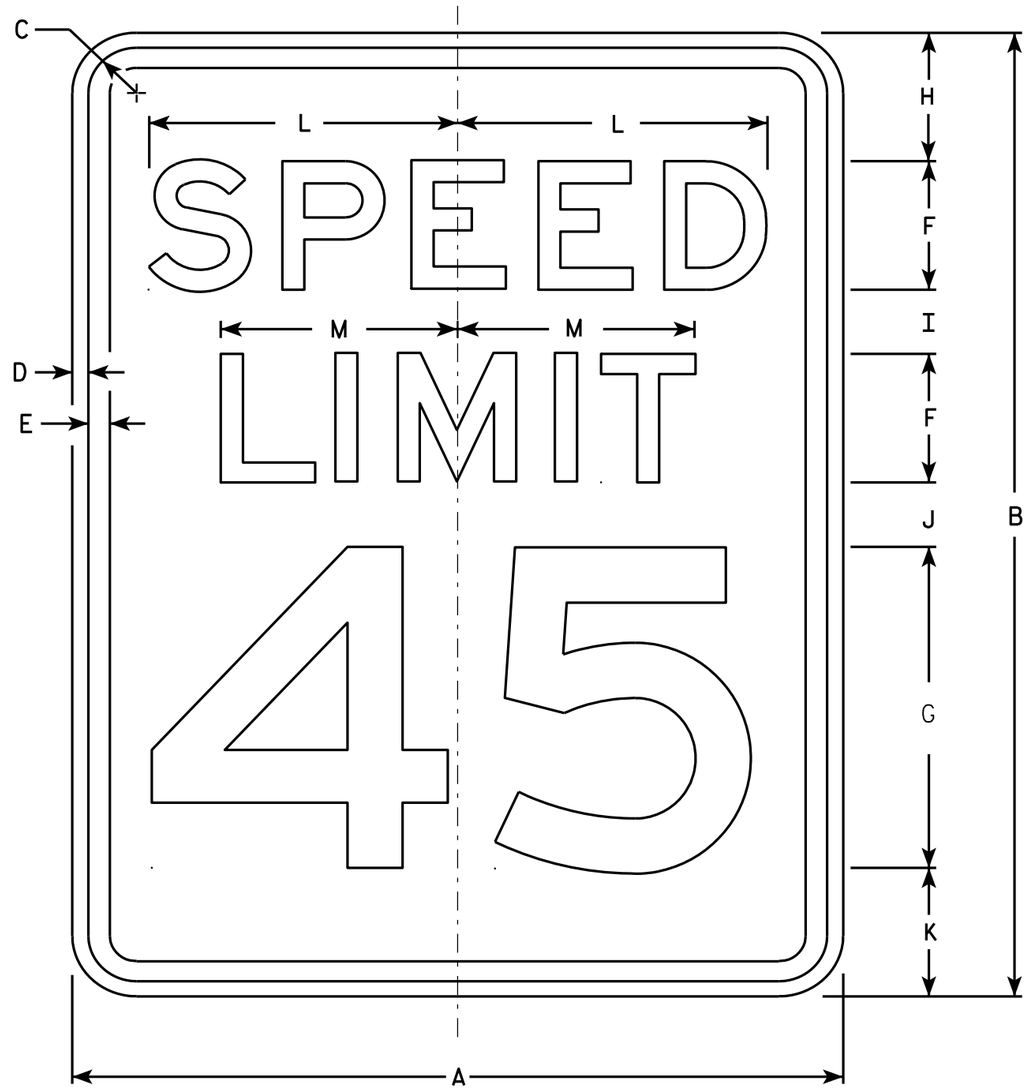
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch

for State Traffic Engineer

DATE 11/12/15 PLATE NO. R1-1.13

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 83	E



R2-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/8	3/8	1/2	4	10	3	2 1/4	3 3/8	3 3/8	9 5/8	7 3/8														5.0
2M	30	36	1 3/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	2 1/4	3/4	1	8	20	6	4 1/2	6 3/4	6 3/4	19 1/4	14 5/8														20.0

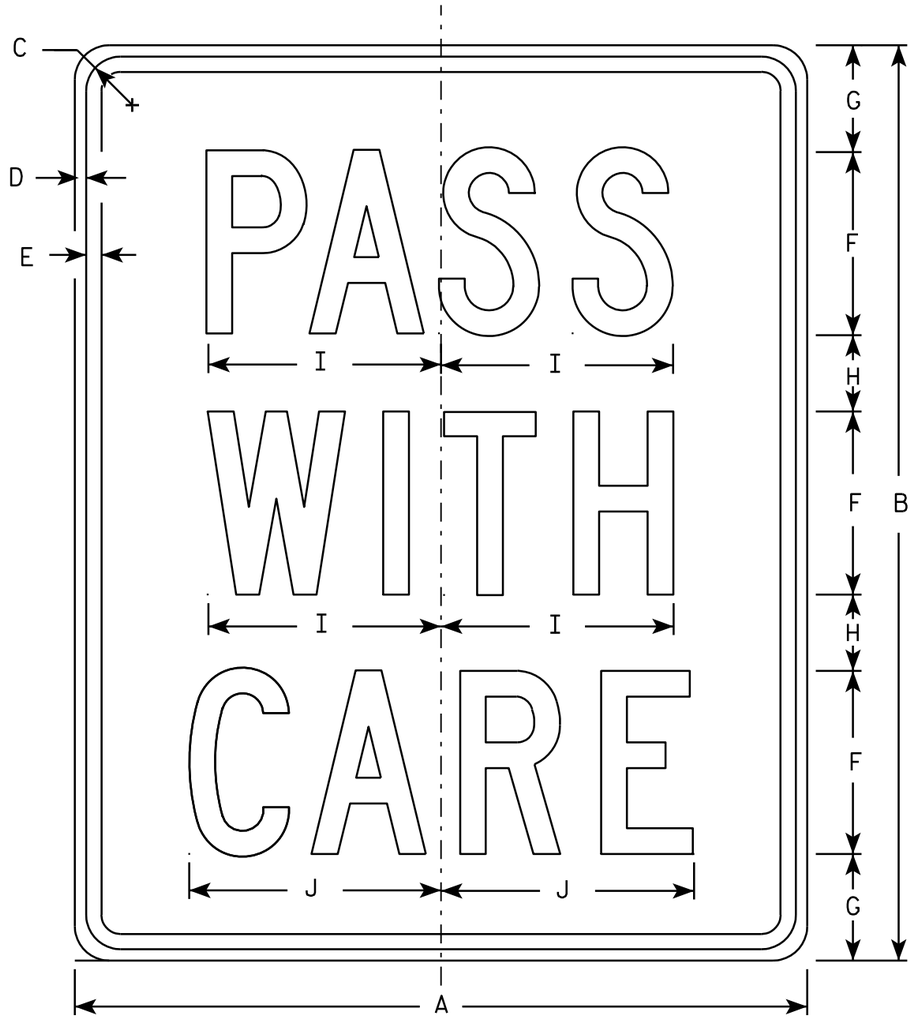
STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 84	E



R4-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	5	2 3/4	1 3/4	6 3/8	6 7/8																	3.0
2S	24	30	1 1/8	3/8	1/2	6	3 1/2	2 1/2	7 5/8	8 1/4																	5.0
2M	24	30	1 1/8	3/8	1/2	6	3 1/2	2 1/2	7 5/8	8 1/4																	5.0
3	36	48	1 3/8	1/2	5/8	10	5 1/2	3 1/2	12 3/4	13 3/4																	12.0
4																											
5																											

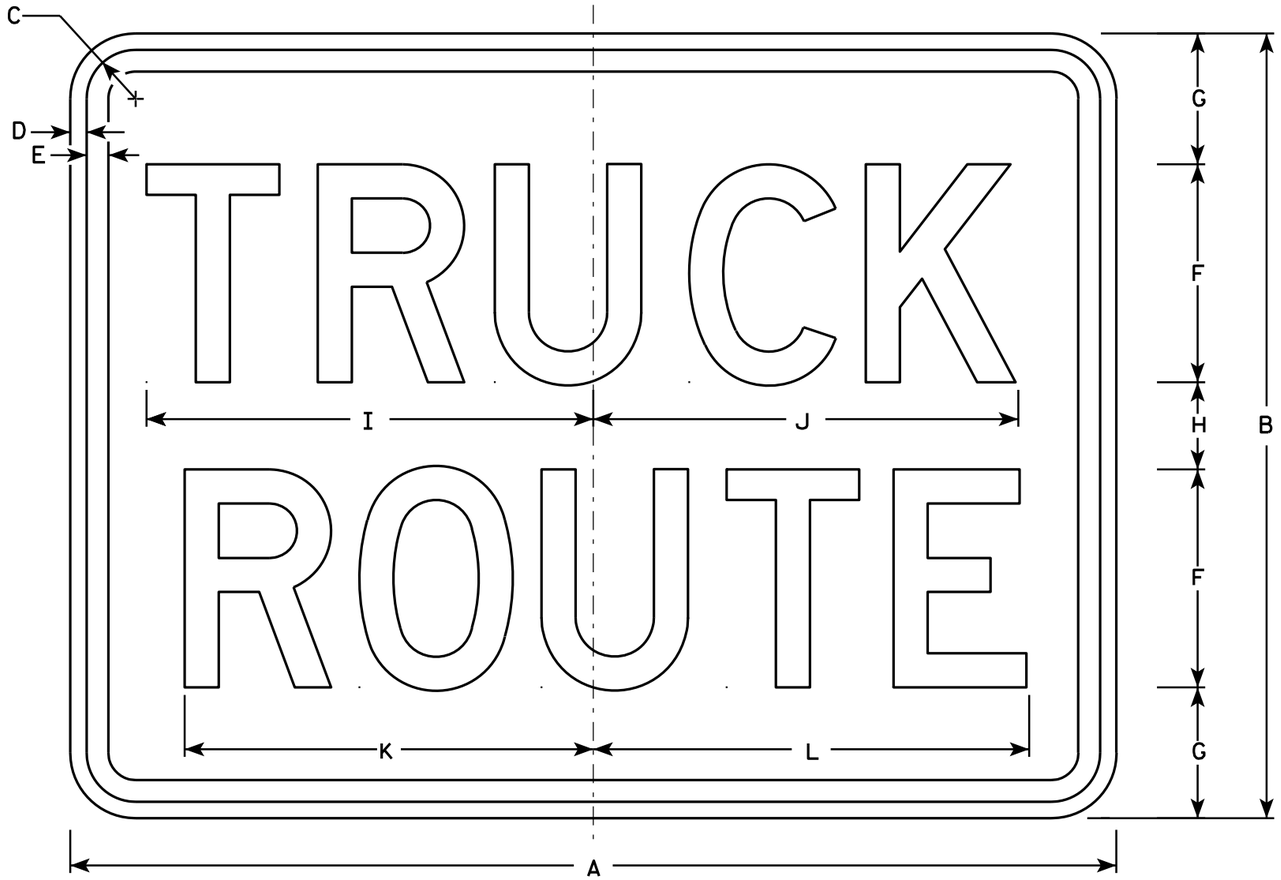
STANDARD SIGN
R4-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-2.6

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 85	E



R14-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	18	1 1/8	3/8	1/2	5	3	2	10 1/4	9 3/4	9 3/8	10															3.0
2	24	18	1 1/8	3/8	1/2	5	3	2	10 1/4	9 3/4	9 3/8	10															3.0
3	30	24	1 1/8	3/8	1/2	6	4	4	12 1/4	11 3/4	11 1/4	12															5.0
4																											
5																											

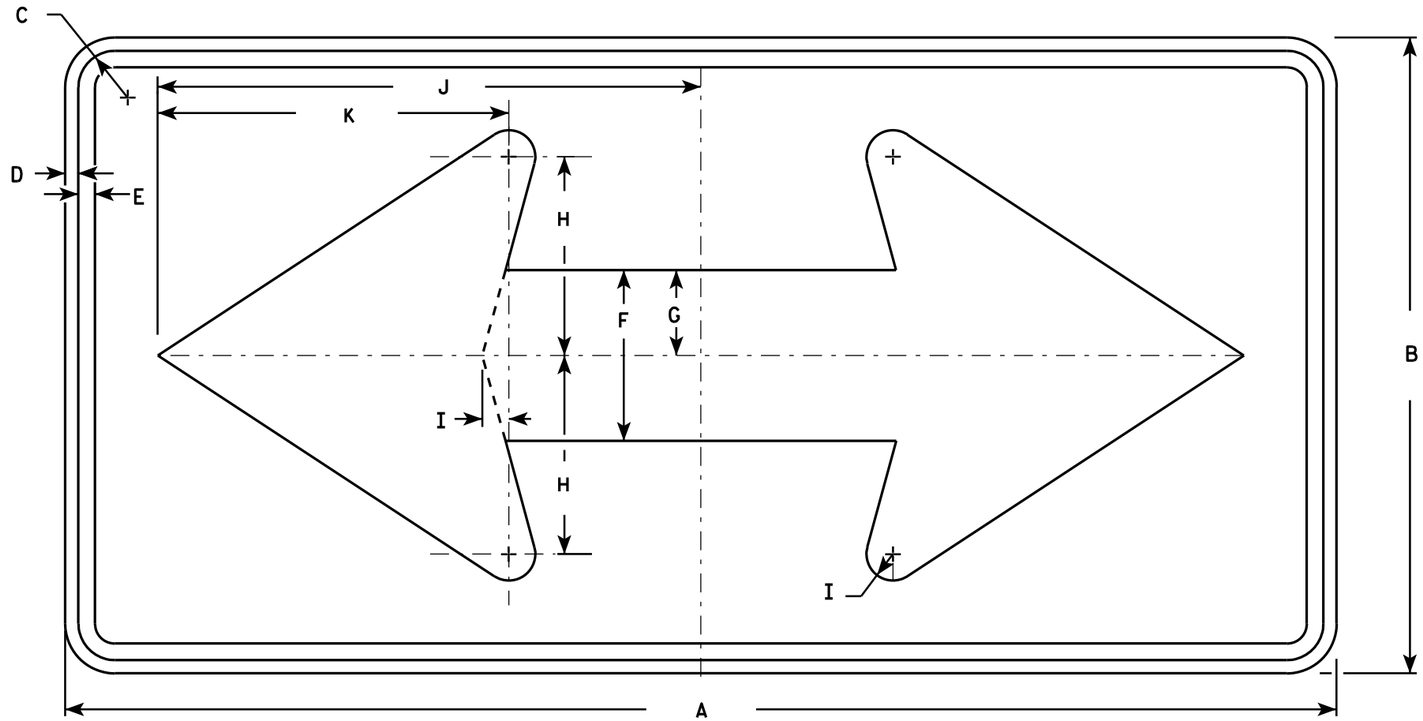
STANDARD SIGN
R14-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R14-1.6

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 86	E



W1-7

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 1/8	3/8	1/2	5	2 1/2	5 3/4	3/4	15 5/8	10 1/8																4.5
2S	48	24	1 3/8	1/2	5/8	6 1/2	3 1/4	7 1/2	1	20 1/2	13 1/4																8.0
2M	48	24	1 3/8	1/2	5/8	6 1/2	3 1/4	7 1/2	1	20 1/2	13 1/4																8.0
3	60	30	1 3/8	1/2	5/8	8	4	9 1/4	1 1/4	25 3/8	16 1/4																12.5
4	60	30	1 3/8	1/2	5/8	8	4	9 1/4	1 1/4	25 3/8	16 1/4																12.5
5	96	48	2 1/4	3/4	1	13	6 1/2	15	2	41	26 1/2																32.0

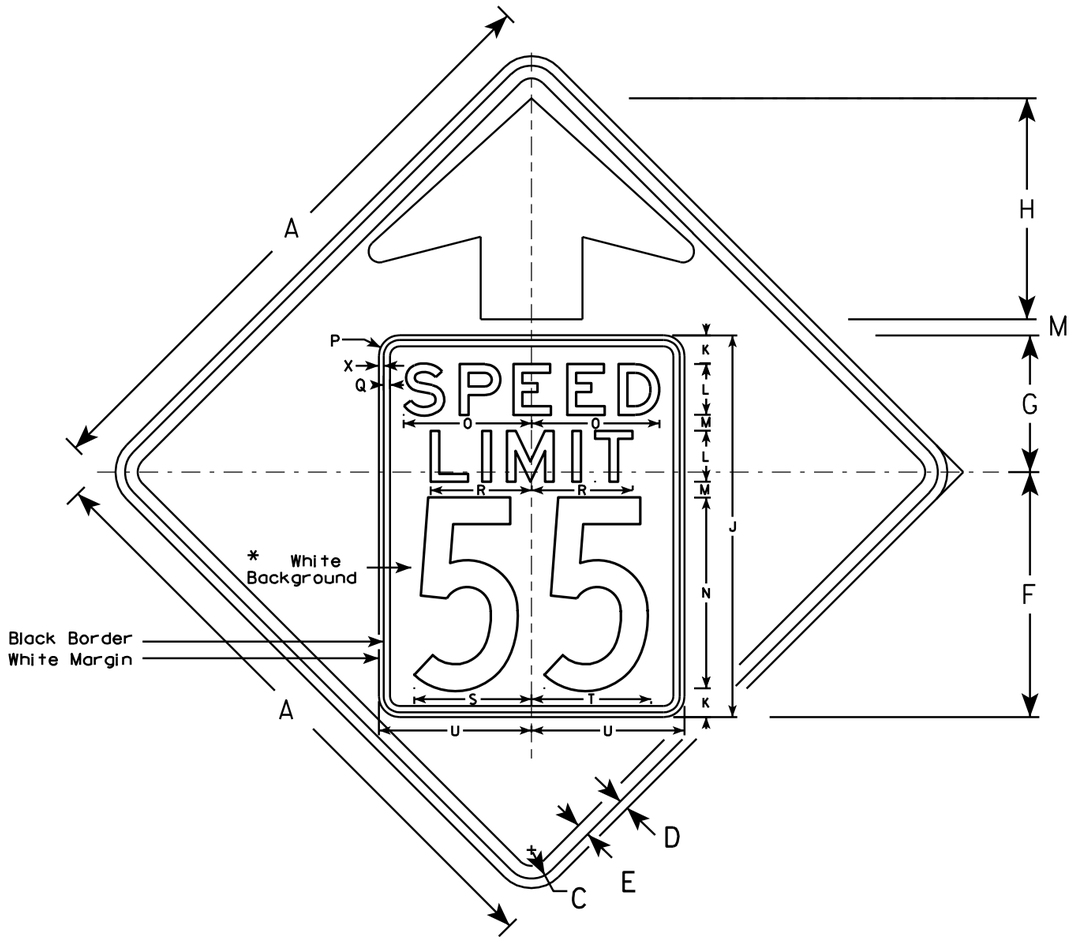
STANDARD SIGN
W1-7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W1-7.7

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 87 | E

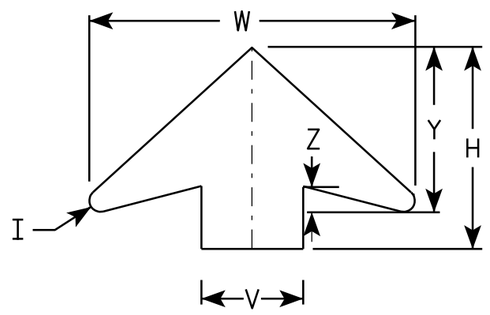


W3-5

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color: *
   Background - YELLOW*
   Message - BLACK
3. Message Series - C for numbers Series E for wording
4. Substitute appropriate numerals and optically adjust spacing to achieve proper balance

*Speed Limit Sign shall have a White Background



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	36		1 5/8	5/8	3/4	14 1/2	9 1/2	11 1/2	5/8	24	2	3	1	12	7 1/8	1 1/2	3/8	5 3/4	7 1/4	7 1/8	9	6	19 1/4	3/8	9 3/4	1 5/8	9.0
2M	36		1 5/8	5/8	3/4	14 1/2	9 1/2	11 1/2	5/8	24	2	3	1	12	7 1/8	1 1/2	3/8	5 3/4	7 1/4	7 1/8	9	6	19 1/4	3/8	9 3/4	1 5/8	9.0
3	36		1 5/8	5/8	3/4	14 1/2	9 1/2	11 1/2	5/8	24	2	3	1	12	7 1/8	1 1/2	3/8	5 3/4	7 1/4	7 1/8	9	6	19 1/4	3/8	9 3/4	1 5/8	9.0
4	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0
5	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0

STANDARD SIGN
W3-5

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

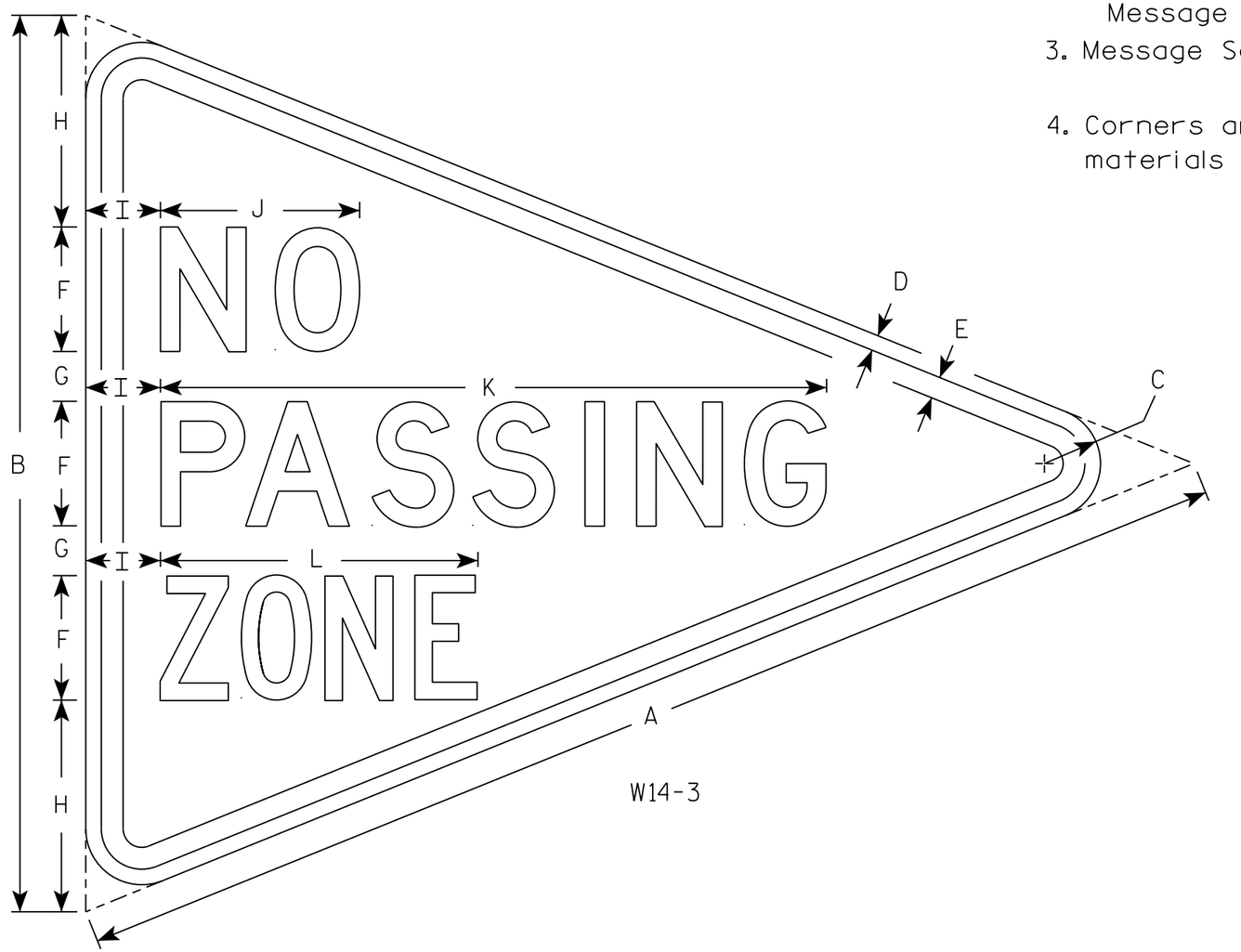
DATE 5/29/12 PLATE NO. W3-5.5

PROJECT NO:

SHEET NO: 88 E

NOTES

1. Sign is Type II- Type F Reflective
2. Color:
   Background - Yellow
   Message - Black
3. Message Series - Lines 1 and 2 are Series D.
   Line 3 is series C.
4. Corners and borders shall be rounded on all base materials for this sign.



W14-3

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	36	2 1/4	5/8	7/8	5	2	8 1/2	3	8	26 3/4	12 3/4															5.56
2M																											
3																											
4																											
5																											

STANDARD SIGN
W14-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

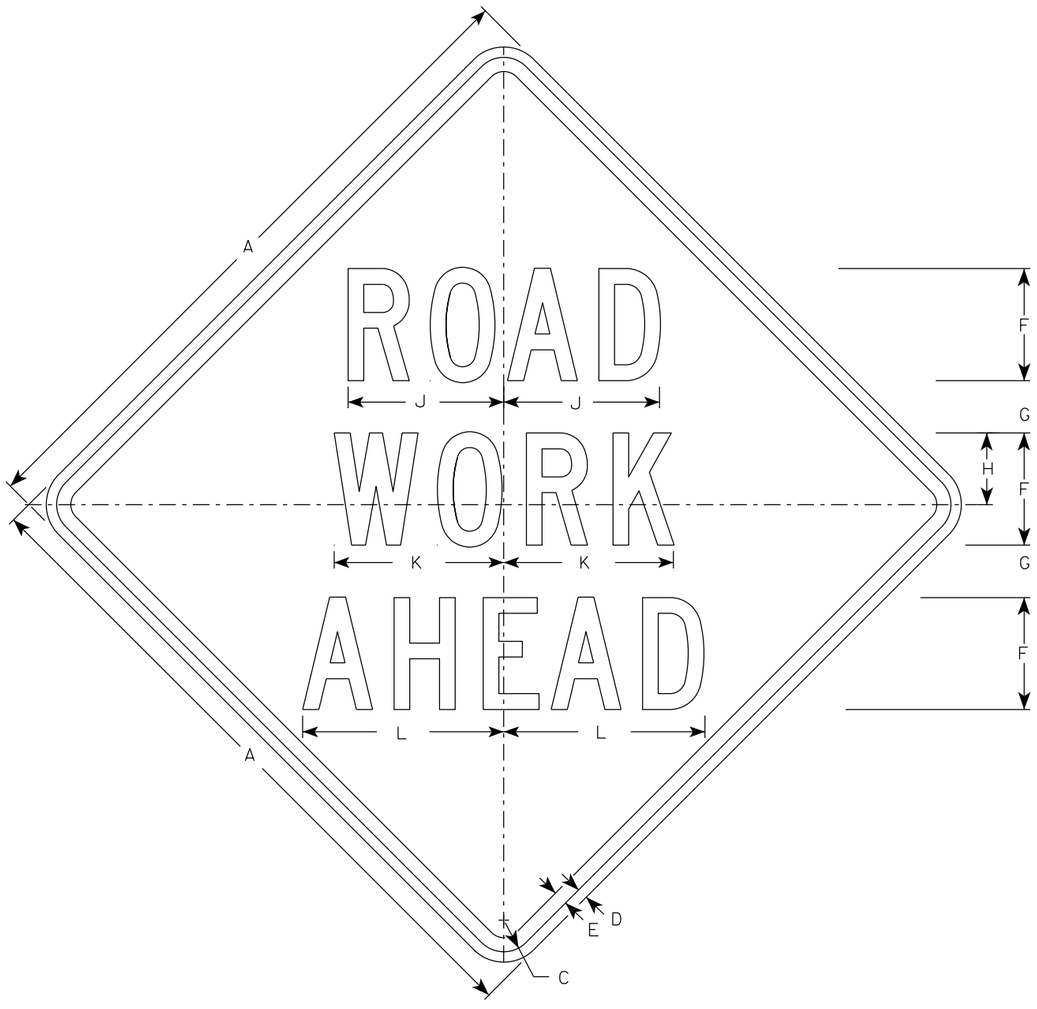
DATE 3/21/17 PLATE NO. W14-3.10

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 89 | E

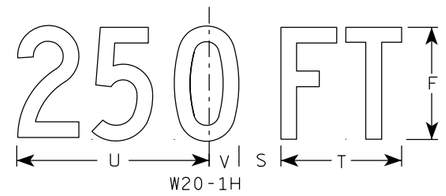
7

NOTES

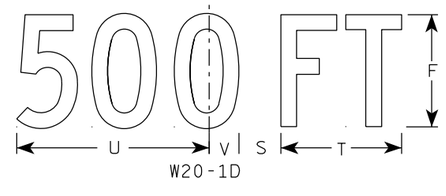
1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



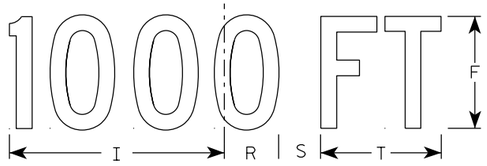
W20-1A



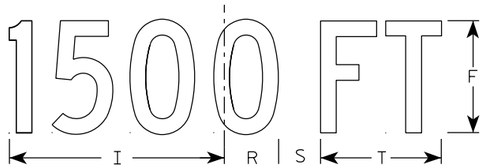
W20-1H



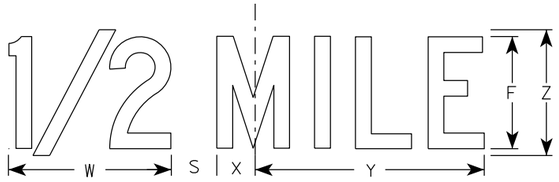
W20-1D



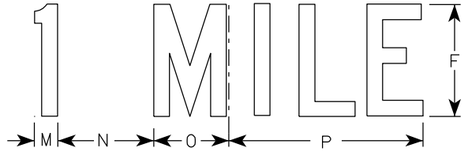
W20-1C



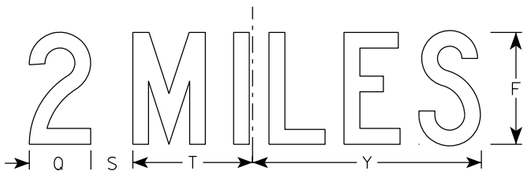
W20-1B



W20-1G



W20-1F



W20-1E

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9	3 1/4	2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
2M	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
3	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
4	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
5	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0

STANDARD SIGN
W20-1A, B, C, D, E, F, G & H

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

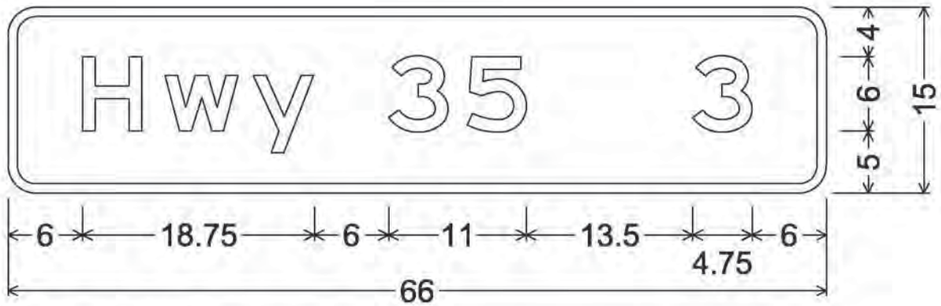
DATE 3/25/2020 PLATE NO. W20-1.11

PROJECT NO:

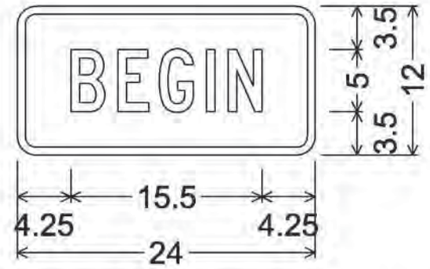
SHEET NO: 90 E

NOTES

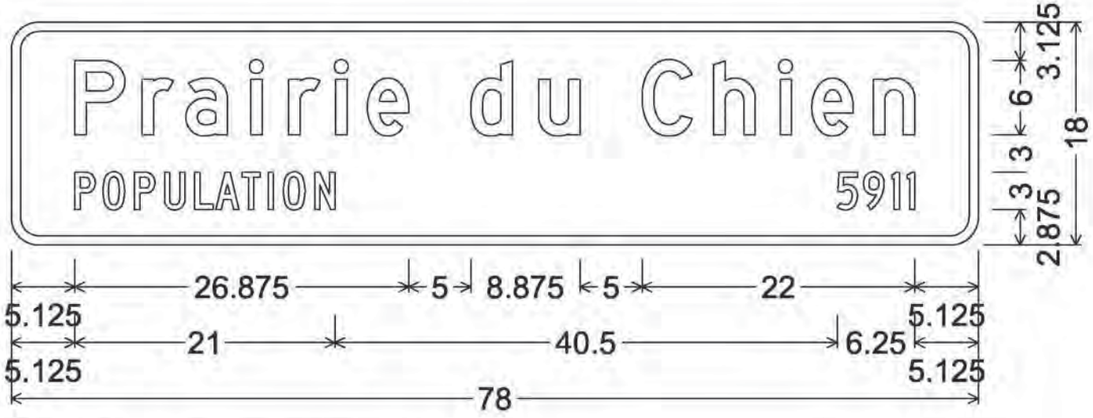
1. All Signs Type II - Type H Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - E except as noted.



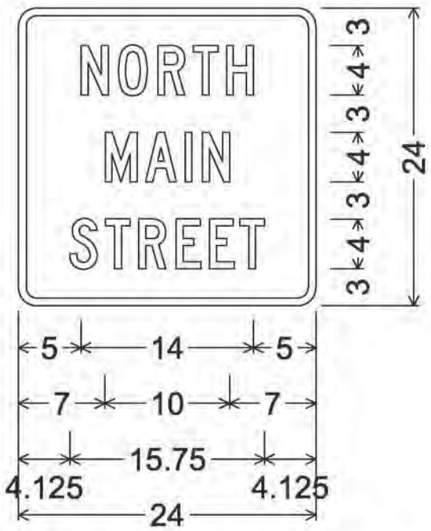
D2-1; 2.250" Radius, 0.750" Border



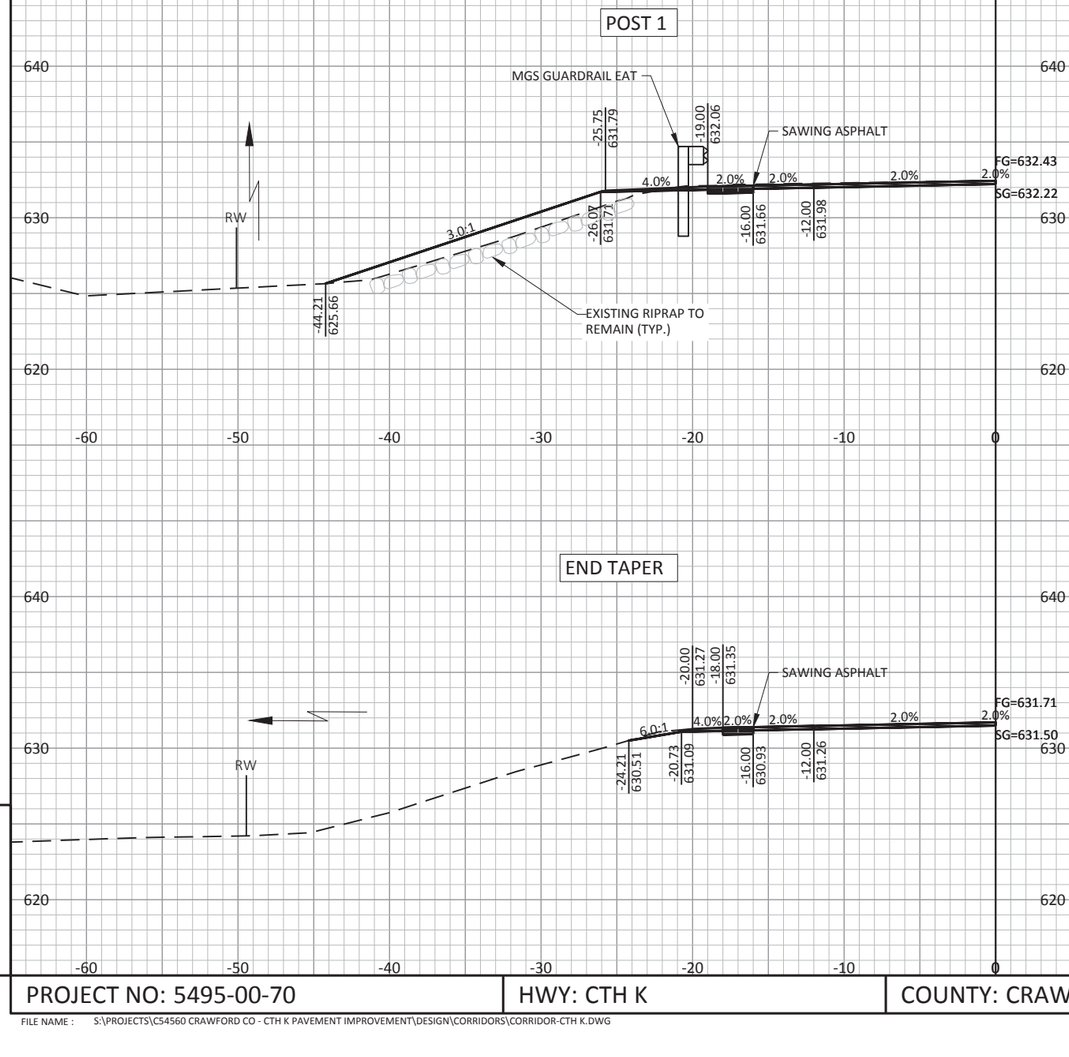
1.500" Radius, 0.625" Border
"BEGIN", C;

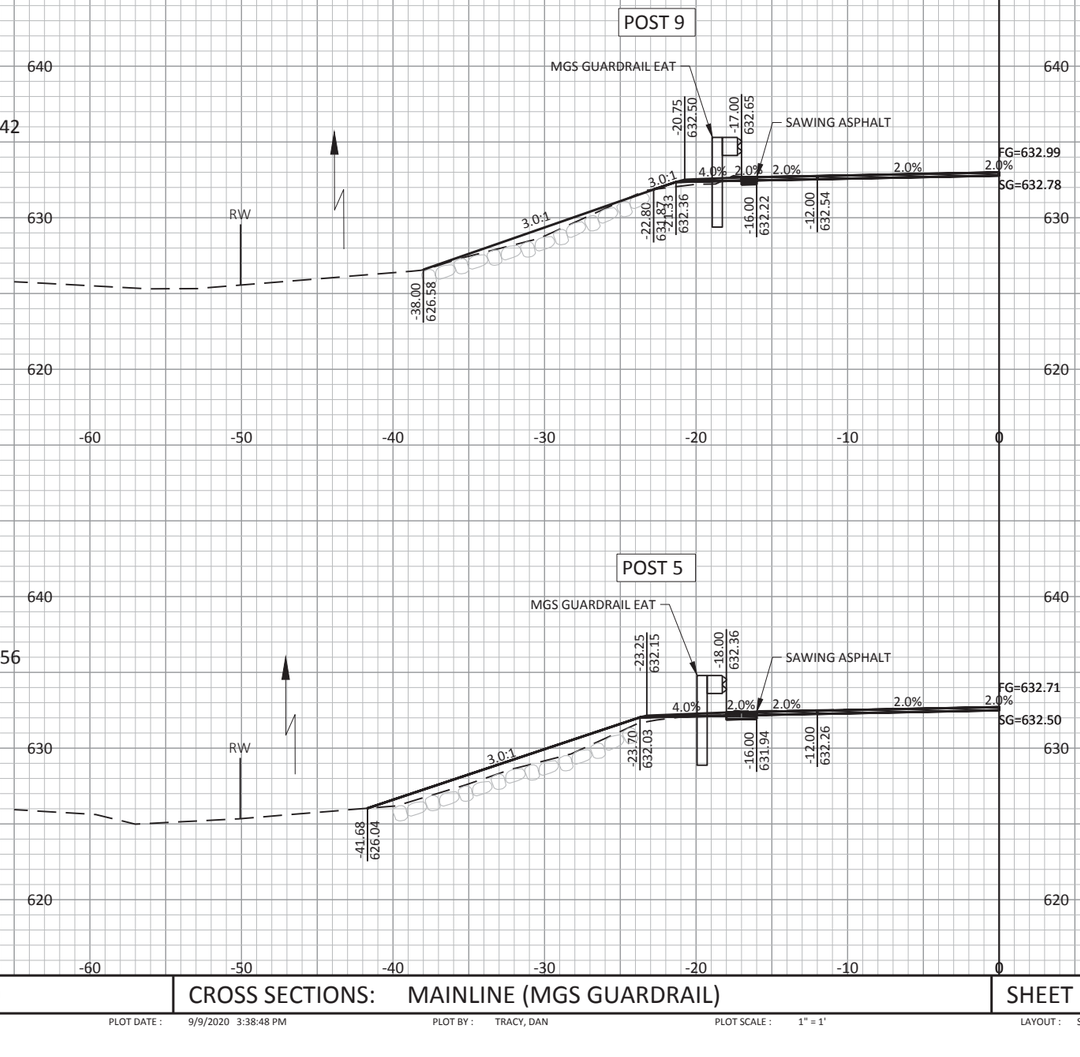


I2-3; 2.250" Radius, 0.750" Border
"Prairie", D; "du", D; "Chien", D; "POPULATION", C; "5911", C;



1.500" Radius, 0.625" Border
"NORTH", C; "MAIN", C; "STREET", C;





50+42

50+92

49+56

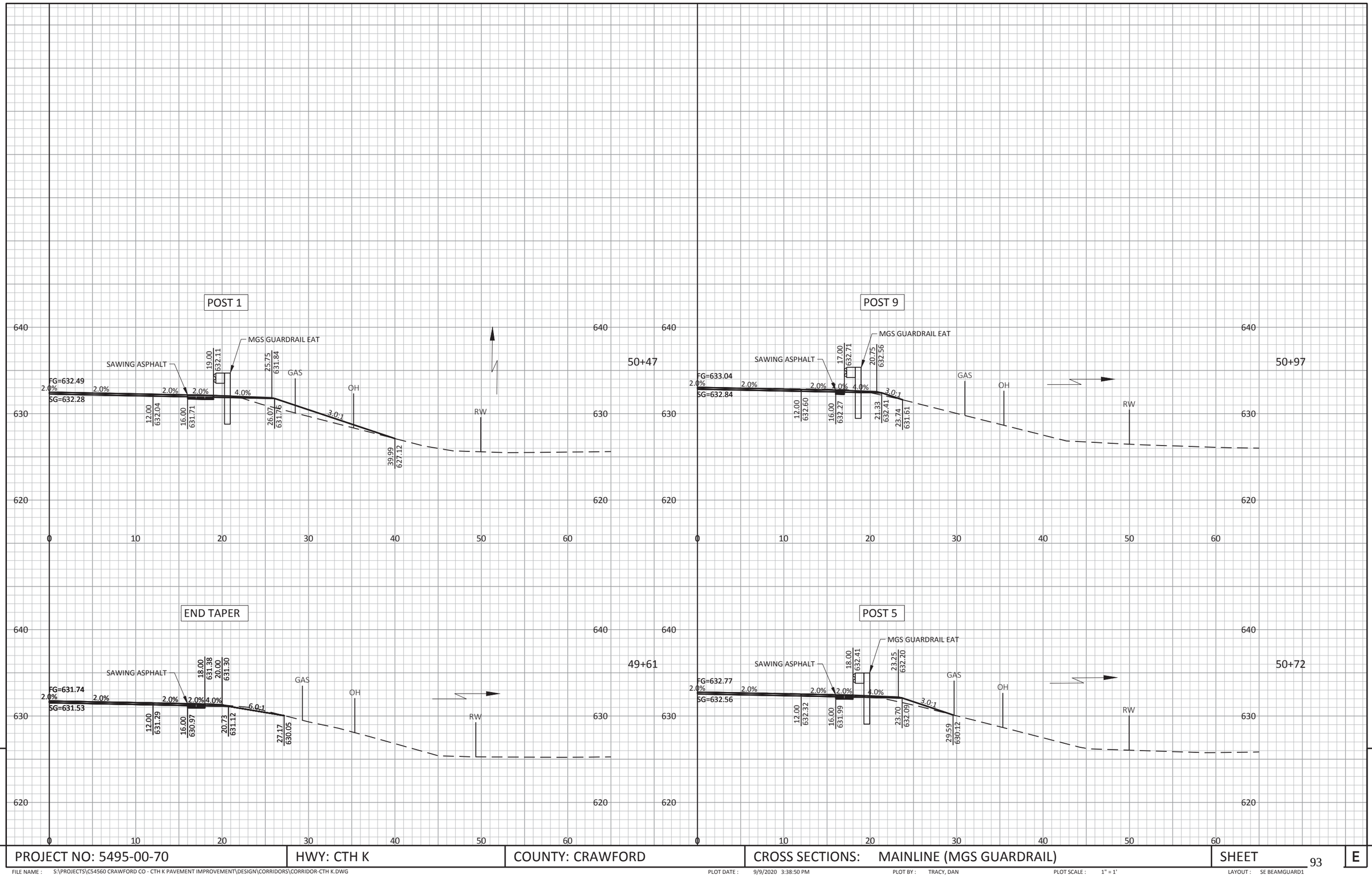
50+67

9

9

PROJECT NO: 5495-00-70	HWY: CTH K	COUNTY: CRAWFORD	CROSS SECTIONS: MAINLINE (MGS GUARDRAIL)	SHEET	E

FILE NAME : S:\PROJECTS\C54560 CRAWFORD CO - CTH K PAVEMENT IMPROVEMENT\DESIGN\CORRIDORS\CORRIDOR-CTH K.DWG
PLOT DATE : 9/9/2020 3:38:48 PM
PLOT BY : TRACY, DAN
PLOT SCALE : 1" = 1'
LAYOUT : SW BEAMGUARD1

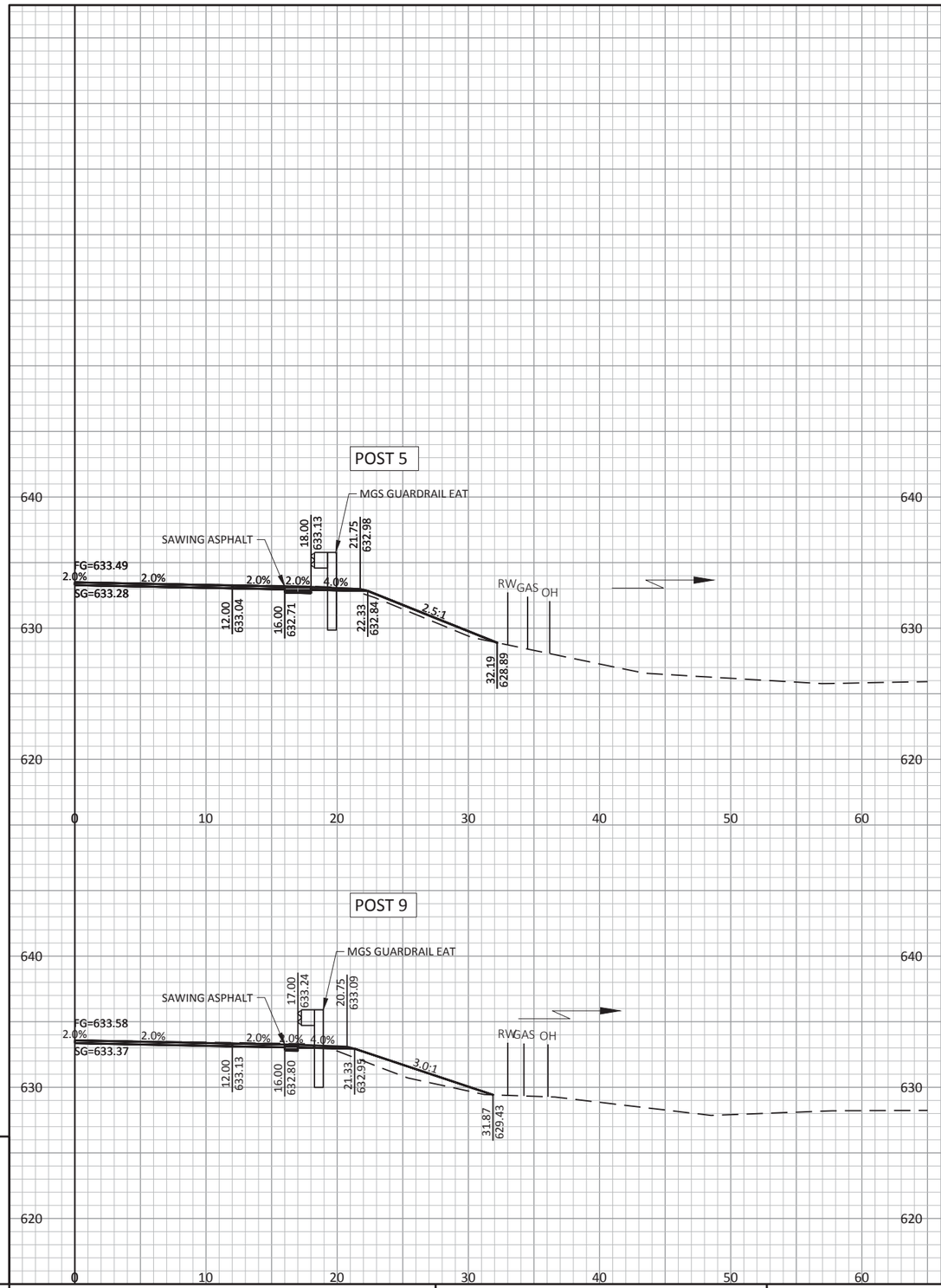


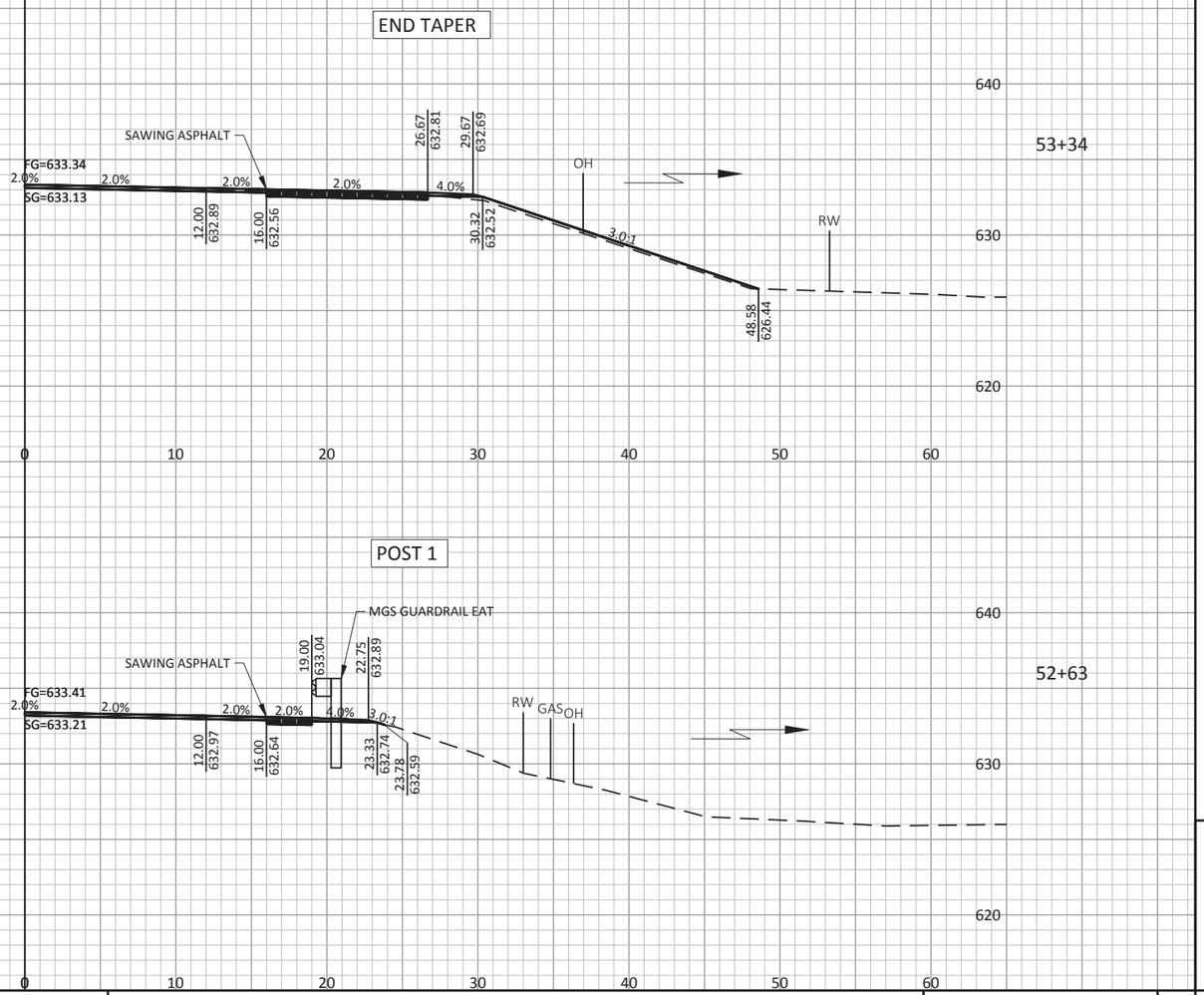
9

PROJECT NO: 5495-00-70	HWY: CTH K	COUNTY: CRAWFORD	CROSS SECTIONS: MAINLINE (MGS GUARDRAIL)	SHEET	E

FILE NAME : S:\PROJECTS\C54560 CRAWFORD CO - CTH K PAVEMENT IMPROVEMENT\DESIGN\CORRIDORS\CORRIDOR-CTH K.DWG PLOT DATE : 9/9/2020 3:38:50 PM PLOT BY : TRACY, DAN PLOT SCALE : 1" = 1' LAYOUT : SE BEAMGUARD1

9



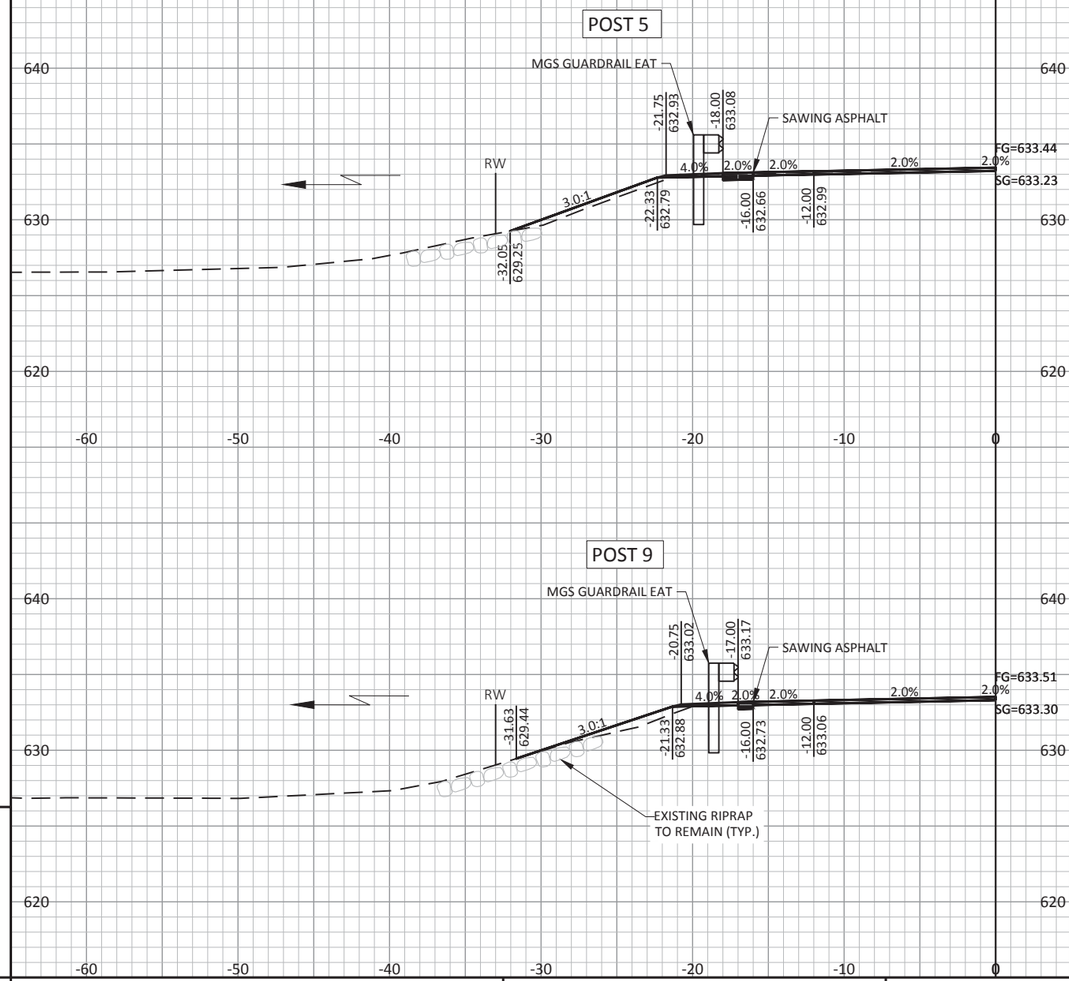


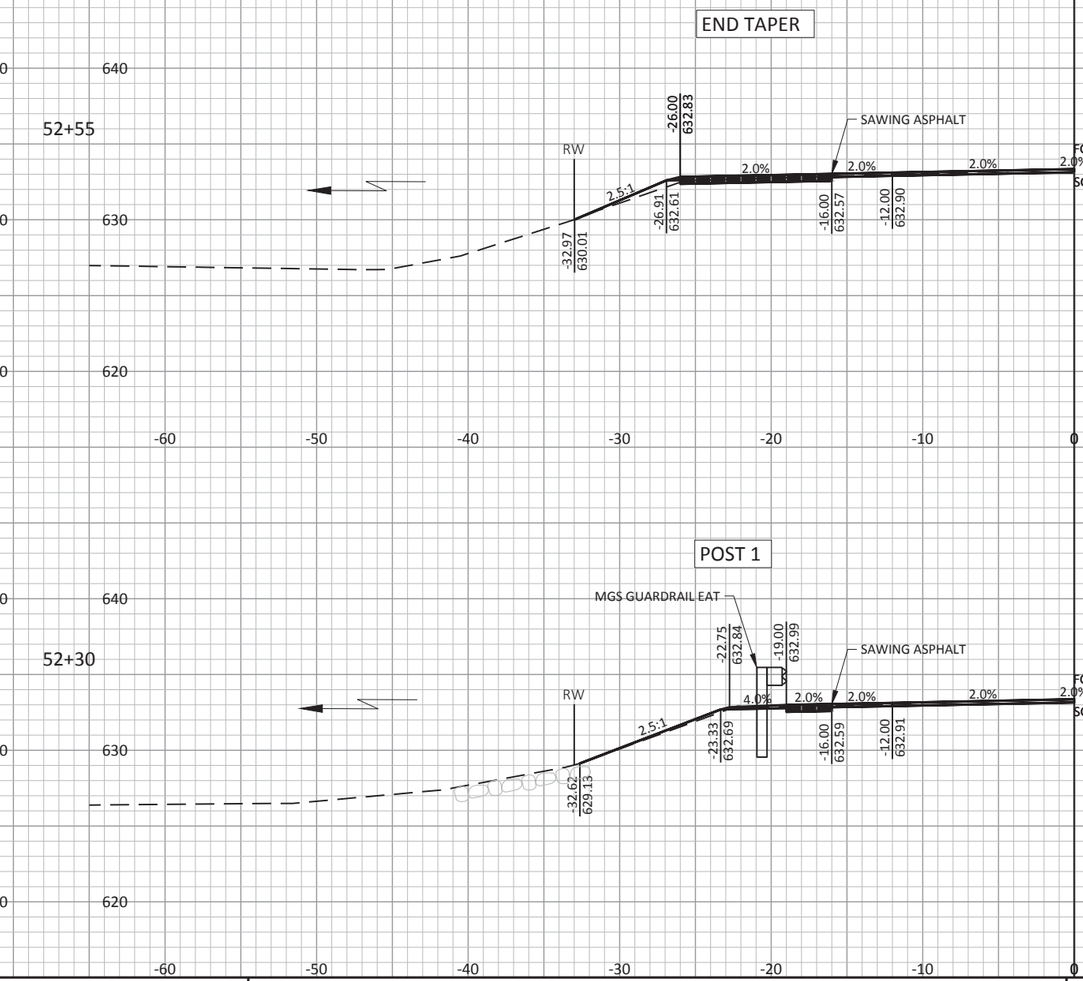
9

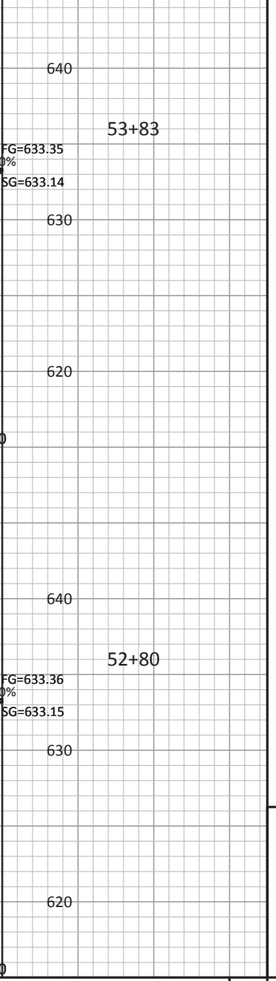
9

PROJECT NO: 5495-00-70	HWY: CTH K	COUNTY: CRAWFORD	CROSS SECTIONS: MAINLINE (MGS GUARDRAIL)	SHEET 94	E

FILE NAME : S:\PROJECTS\C54560 CRAWFORD CO - CTH K PAVEMENT IMPROVEMENT\DESIGN\CORRIDORS\CORRIDOR-CTH K.DWG
PLOT DATE : 9/9/2020 3:38:51 PM
PLOT BY : TRACY, DAN
PLOT SCALE : 1" = 1'
LAYOUT : NE BEAMGUARD1







9

9

PROJECT NO: 5495-00-70	HWY: CTH K	COUNTY: CRAWFORD	CROSS SECTIONS: MAINLINE (MGS GUARDRAIL)	SHEET	E

FILE NAME : S:\PROJECTS\C54560 CRAWFORD CO - CTH K PAVEMENT IMPROVEMENT\DESIGN\CORRIDORS\CORRIDOR-CTH K.DWG PLOT DATE : 9/9/2020 3:38:53 PM PLOT BY : TRACY, DAN PLOT SCALE : 1" = 1' LAYOUT : NW BEAMGUARD1

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