LAX

PROJECT ID: 7373-00-71

WITH: NA

COUNTY: MONROE

MARCH 2023

ORDER OF SHEETS

Section No.	1	Title
Section No.	2	Typical Sections and Details (Includes Erosion Control Plan)
Section No.	3	Estimate of Quantities
Section No.	3	Miscellaneous Quantities
Section No.	4	Right of Way Plat
Section No.	5	Plan and Profile
Section No.	6	Standard Detail Drawings
Section No.	7	Sign Plates
~~Section No.~~	~~8~~	~~Structure Plans~~
Section No.	9	Computer Earthwork Data
Section No.	9	Cross Sections

TOTAL SHEETS = 144

N

10

DESIGN DESIGNATION

A.A.D.T.	(2021)	=	1,410
A.A.D.T.	(2041)	=	2,100
D.H.V.	(2043)	=	189
D.D.		=	60/40
T.		=	10% (ASSUMED)
DESIGN SPEED		=	60 MPH
ESALS		=	440,000

CONVENTIONAL SYMBOLS

PLAN		PROFILE	
CORPORATE LIMITS		GRADE LINE	
PROPERTY LINE		ORIGINAL GROUND	
LOT LINE		MARSH OR ROCK PROFILE (To be noted as such)	ROCK
LIMITED HIGHWAY EASEMENT		SPECIAL DITCH	LABEL
EXISTING RIGHT OF WAY		GRADE ELEVATION	936
PROPOSED OR NEW R/W LINE			
SLOPE INTERCEPT		CULVERT (Profile View)	
REFERENCE LINE	300'EB'	UTILITIES	
EXISTING CULVERT		ELECTRIC	E
PROPOSED CULVERT (Box or Pipe)		FIBER OPTIC	FO
		GAS	G
COMBUSTIBLE FLUIDS	CAUTION	SANITARY SEWER	SAN
		STORM SEWER	SS
		TELEPHONE	T
MARSH AREA		WATER	W
		UTILITY PEDESTAL	
		POWER POLE	
WOODED OR SHRUB AREA		TELEPHONE POLE	

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

T OF TOMAH - T OF LA GRANGE

FLARE AVENUE TO STH 21

CTH ET

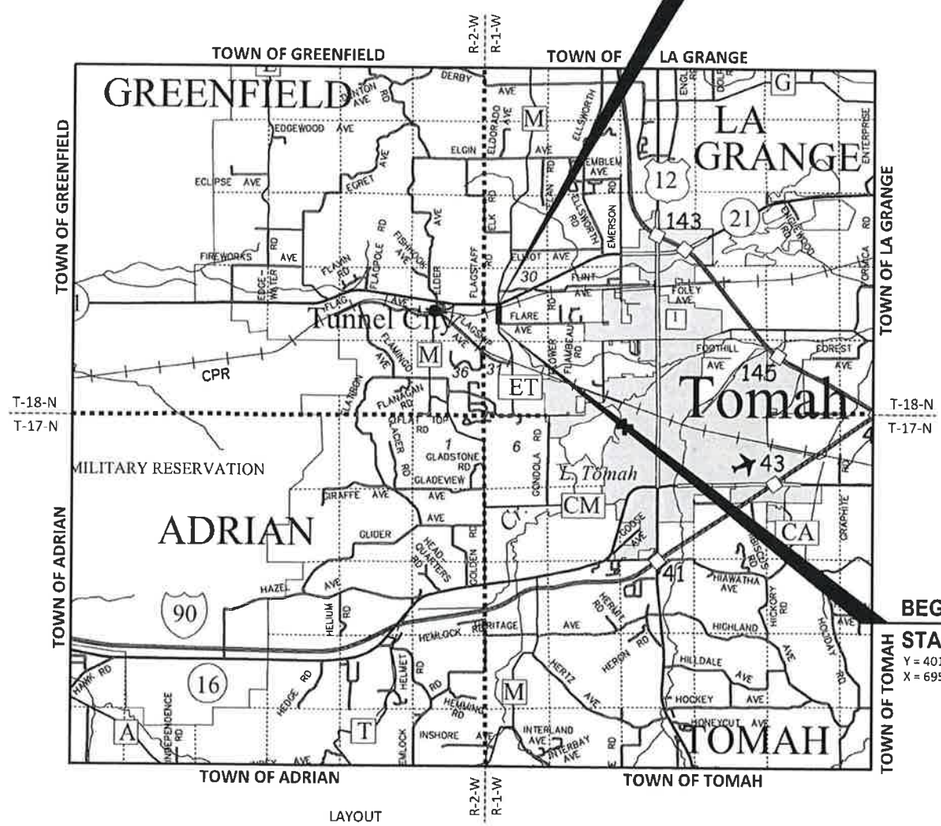
MONROE COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
7373-00-71	WISC 2023277	1

STATE PROJECT NUMBER

7373-00-71

END PROJECT
STA. 115+26.95



LAYOUT

SCALE 0 2 MI

TOTAL NET LENGTH OF CENTERLINE = 0.185 MILES

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), MONROE 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 REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988, NAVD88 (2012).

ACCEPTED FOR

COUNTY of MONROE

10/19/22 (Date) (Highway Commissioner)

ORIGINAL PLANS PREPARED BY

JEWELL associates engineers, inc
Engineers - Architects - Surveyors

WISCONSIN ANGELA L. CLARY E-32243 LONE ROCK, WI PROFESSIONAL ENGINEER

10/11/2022 (Date) Angela L Clary (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	JEWELL ASSOCIATES ENGINEERS, INC
Designer	JEWELL ASSOCIATES ENGINEERS, INC
Project Manager	VALERIE GUIDER, P.E.
Regional Examiner	SW REGION
Regional Supervisor	KYLE HEMP, P.E.

APPROVED FOR THE DEPARTMENT

DATE:_____

Valerie Guider, P.E. Digitally signed by Valerie Guider, P.E. Date: 2022.10.20 14:58:39-05'00'

(Signature)

E

FILE NAME : S:\PROJECTS\W11616-CTH ET, MONROE CO (TOMAH-STH 21)\7373-00-01\SHEETSPLAN\73730071_TITLE.DWG

PLOT DATE : 9/13/2022 11:49:34 AM PLOT BY : CODY KINTZ PLOT SCALE : 1" = 1'

LAYOUT : TITLE SHEET 1 IN EQ 2 MI

2

GENERAL NOTES

THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLAN ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

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.

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 MATTED/MULCHED AS DIRECTED BY THE ENGINEER.

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 COURSE 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.

THE EXACT LOCATION OF PRIVATE AND FIELD ENTRANCES TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

ACCURACY OF INLET AND DISCHARGE ELEVATIONS FOR DRAINAGE STRUCTURES SHALL BE VERIFIED BY THE ENGINEER IN THE FIELD.

CURB AND GUTTER ELEVATIONS ARE GIVEN ON THE FLANGE LINE, UNLESS OTHERWISE NOTED.

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

EXISTING DRIVEWAYS SHALL BE RESTORED IN KIND (UNLESS OTHERWISE NOTED) AND THEIR LOCATION VERIFIED BY THE ENGINEER IN THE FIELD.

HMA PAVMENT QUANTITIES WERE CALCULATED USING 112 LB/SY/IN. 4-INCHES OF HMA PAVEMENT SHALL BE CONSTRUCTED WITH A 1 3/4-INCH UPPER LAYER HMA PAVEMENT 4LT58-28S AND A 2 1/4-INCH LOWER LAYER HMA PAVEMENT 3LT 58-28S.

EXPANSION JOINTS SHALL BE CONSTRUCTED AT ALL RADII POINTS IN THE CURB & GUTTER.

MISCELLANEOUS REMOVAL ITEMS REQUIRING RESTORATIONS OF CONCRETE OR ASPHALT DRIVEWAYS, CONCRETE DRIVEWAYS, OR SIDE ROADS/HIGHWAYS SHALL BE REMOVED TO AN EXISTING JOINT OR SAWED AS DETERMINED BY THE ENGINEER IN THE FIELD OR AS SHOWN ON THE PLANS.

CURVE DATA IS BASED ON THE ARC DEFINITION.

THE LOCATION OF ALL PERMANENT SIGNING SHALL BE VERIFIED BY THE ENGINEER IN THE FIELD PRIOR TO PLACEMENT.

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

THE SOILS REPORT MAY BE OBTAINED FROM THE ENGINEER.

CONTACTS

DESIGN CONSULTANT:
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WDNR LIAISON:
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LA CROSSE, WI 54601
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EMAIL: karen.kalvelage@wisconsin.gov

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2101 WRIGHT STREET
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EMAIL: Valerie.Guider@dot.wi.gov

MONROE COUNTY HIGHWAY DEPARTMENT:
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CELL: (608) 487-6216
EMAIL: david.ohnstad@co.monroe.wi.us

TOWN OF LAGRANGE:
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PH: (608) 343-0775
EMAIL: townoflagrangeboardchair@gmail.com

UTILITIES

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TOMAH, WI 54660
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EMAIL: patrickmcintyre@alliantenergy.com

OAKDALE ELECTRIC COOPERATIVE
ATTN: DAN MCGARRY
P.O. BOX 40
OAKDALE, WI 54649
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CELL: (608) 343-3768
EMAIL: dmcgarry@oakdalerec.com

COMMUNICATION LINE
BRIGHTSPEED
ATTN: BRIAN STELPHLUGH
333 N FRONT STREET
LA CROSSE, WI 54601
PH: (608) 796-5142
EMAIL: brian.stelplugh@brightspeed.com

GAS/PETROLEUM
WE ENERGIES
ATTN: TRAVIS KAHL
1921 8TH STREET SOUTH
WISCONSIN RAPIDS, WI 54494
PH: (715) 421-7256
EMAIL: travis.kahl@we-energies.com

RAILROAD

UNION PACIFIC RAILROAD
ATTN: DAVID LAPLANTE
1400 DOUGLAS STREET
OMAHA, NE 68179
PH: (402) 544-8563
EMAIL: dclaplante@up.com

UNION PACIFIC RAILROAD
RESPONSE MANAGEMENT
COMMUNICATION CENTER
PH: (888) 877-7267

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	VAR	Variable
FT	Foot	REQD	Required	V	Velocity or Design Speed
FTG	Footing	RES	Residence or Residential	VERT	Vertical
GN	Grid North	RW	Retaining Wall	VC	Vertical Curve
HT	Height	RT	Right	VOL	Volume
CWT	Hundredweight	RHF	Right-Hand Forward	WM	Water Main
HYD	Hydrant	R/W	Right-of-Way	WV	Water Valve
INL	Inlet	RD	Road	W	West
ID	Inside Diameter	R	River	WB	Westbound
				YD	Yard

ORDER OF SECTION 2 SHEETS:

- WRITTEN MATERIAL
- PROJECT OVERVIEW
- TYPICAL SECTIONS
- CONSTRUCTION DETAILS
- INTERSECTION DETAILS
- PAVING DETAILS
- EROSION CONTROL PLAN
- PERMANENT SIGNING/PAVEMENT MARKING
- TRAFFIC CONTROL
- ALIGNMENT DETAILS

	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= 2.54 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 1.79 ACRES

2

BEGIN CONSTRUCTION
STA. 599'E'+60

PC: 599+90.34'E'

FINISHED C/L STH 21

602'E'

EP: 115+49.18

600'E'

STH 21

N

END CONSTRUCTION
STA. 603'E'+45

100'

P.L.

END PROJECT
STA. 115+26.95

P.L.

PACIFIC RR

P.L.

WILCOX LN

PT: 112+02.23

UNION

PC: 111+34.14

P.L.

165'

FINISHED C/L CTH ET

110'

CHICAGO AND NORTHWESTERN RAILWAY

R/W

R/W

P.L.

P.L.

108'

BEGIN PROJECT
STA. 105+50

3HF

106'

WETLAND DETERMINATION (TYP.)

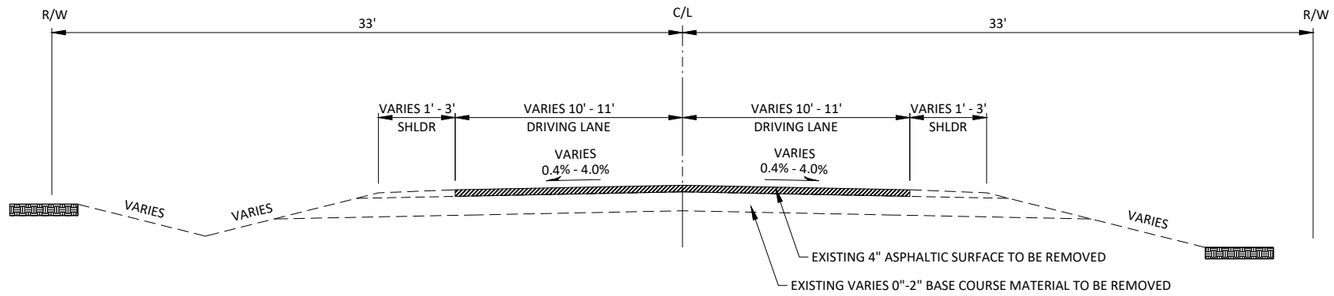
CTH ET

FLARE AVE.

PROJECT NO: 7373-00-71	HWY: CTH ET	COUNTY: MONROE	PROJECT OVERVIEW	SHEET	E

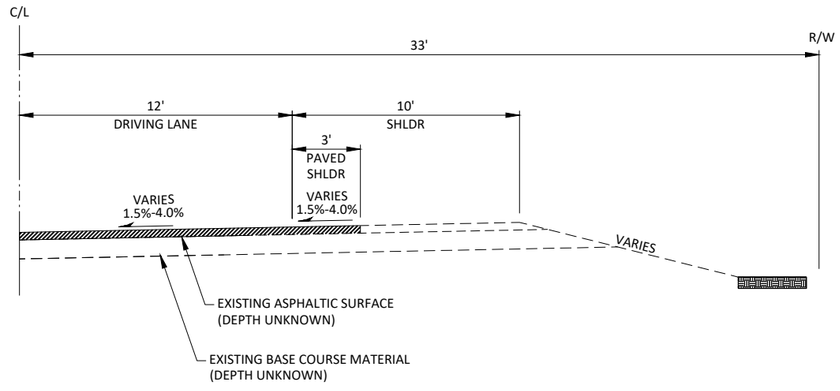
FILE NAME : S:\PROJECTS\W11616 CTH ET, MONROE CO (TOMAH-STH 21)\7373-00-71- PHASE 2\SHEETSPLAN\DETAILS\73730071_PROJECT OVERVIEW.DWG PLOT DATE : 12/22/2022 3:07:27 PM PLOT BY : KARTER ZAJICEK PLOT SCALE : 1" = 1' LAYOUT : FLARE AVE

2



TYPICAL EXISTING SECTION

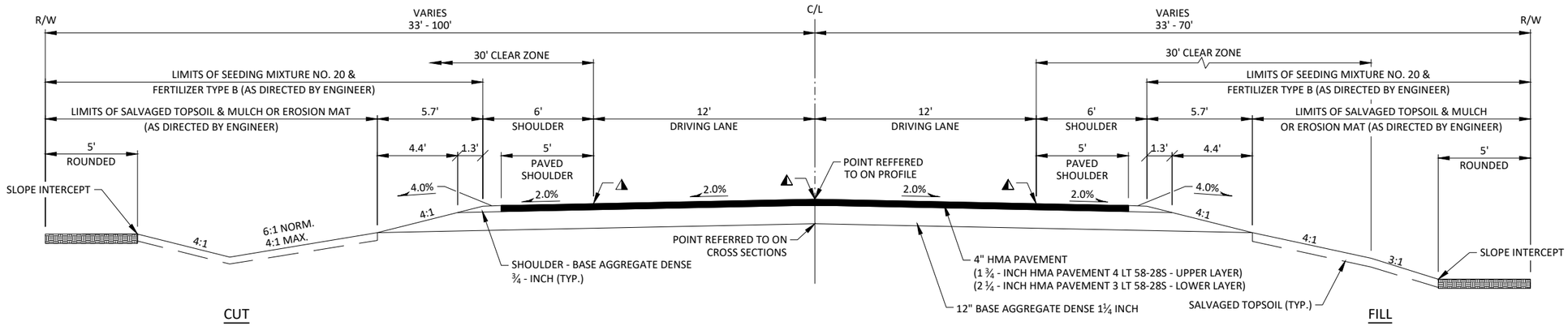
CTH ET
STA. 105+50 - STA. 115+26.95



TYPICAL EXISTING SECTION

'E'-LINE (STH 21)
STA. 599'E'+60 - STA. 603'E'+45

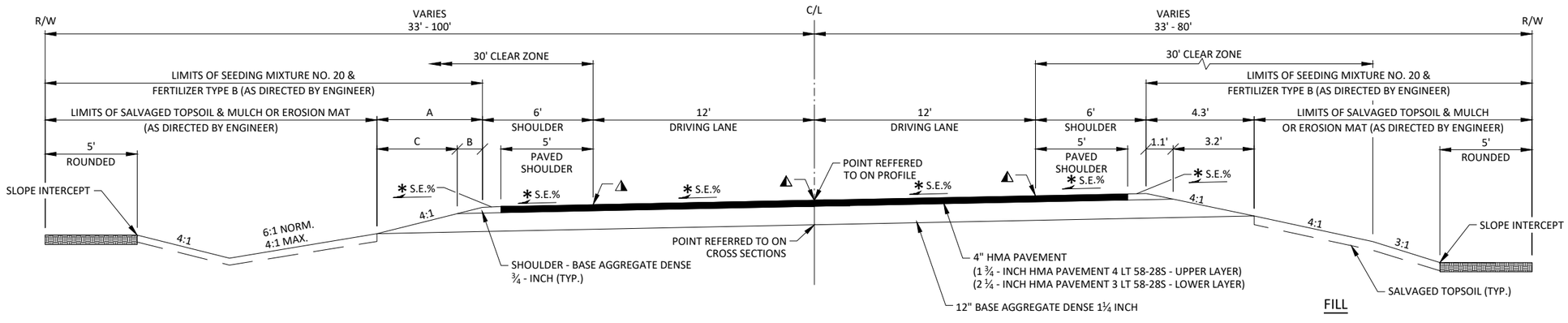
PROJECT NO: 7373-00-71	HWY: CTH ET	COUNTY: MONROE	TYPICAL EXISTING SECTIONS	SHEET 4	E



TYPICAL FINISHED SECTION

CTH ET
STA. 105+50 - STA. 111+25

⚠ ASPHALTIC CENTERLINE RUMBLE STRIP, SINUSOIDAL, 2-LANE RURAL & ASPHALTIC SHOULDER RUMBLE STRIP, SINUSOIDAL, 2-LANE RURAL REQ'D SEE MISCELLANEOUS QUANTITIES AND CONSTRUCTION DETAILS.



TYPICAL FINISHED SUPERELEVATED SECTION

CTH ET
STA. 111+25 - STA. 111+35

✱ S.E. - SEE SUPERELEVATION TABLE FOR SUPERELEVATION RATES

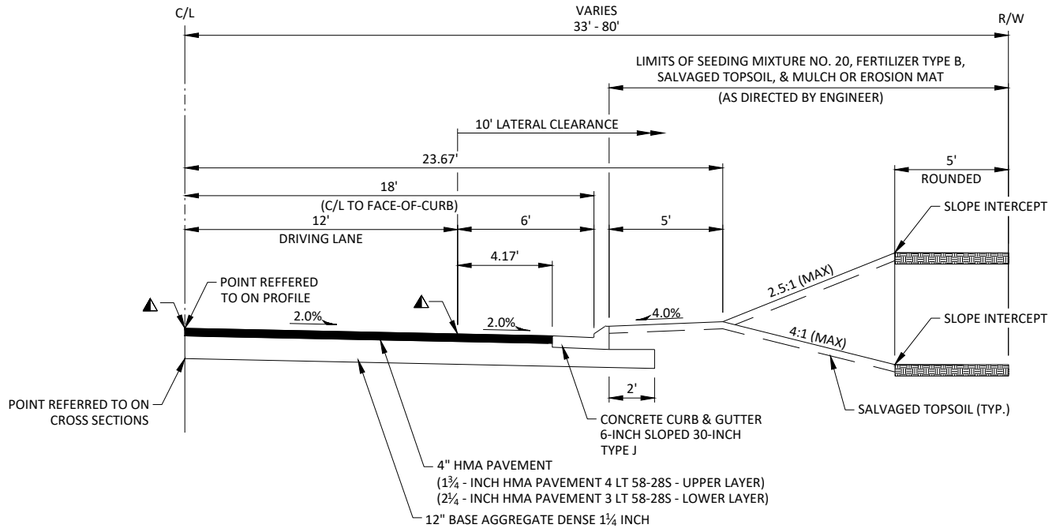
A/B/C - SEE SUPERELEVATION TABLE FOR DIMENSIONS

⚠ ASPHALTIC CENTERLINE RUMBLE STRIP, SINUSOIDAL, 2-LANE RURAL & ASPHALTIC SHOULDER RUMBLE STRIP, SINUSOIDAL, 2-LANE RURAL REQ'D. SEE MISCELLANEOUS QUANTITIES AND CONSTRUCTION DETAILS.

THE LOW SIDE SHOULDER SLOPE ON SUPERELEVATED SECTIONS EQUALS THE SUPERELEVATION WHEN 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.

NOTE: 4:1 FORESLOPE/ 6:1 BACKSLOPE -
STA. 106+50 - STA. 109+50, LT

PROJECT NO: 7373-00-71	HWY: CTH ET	COUNTY: MONROE	TYPICAL FINISHED SECTIONS	SHEET 5	E

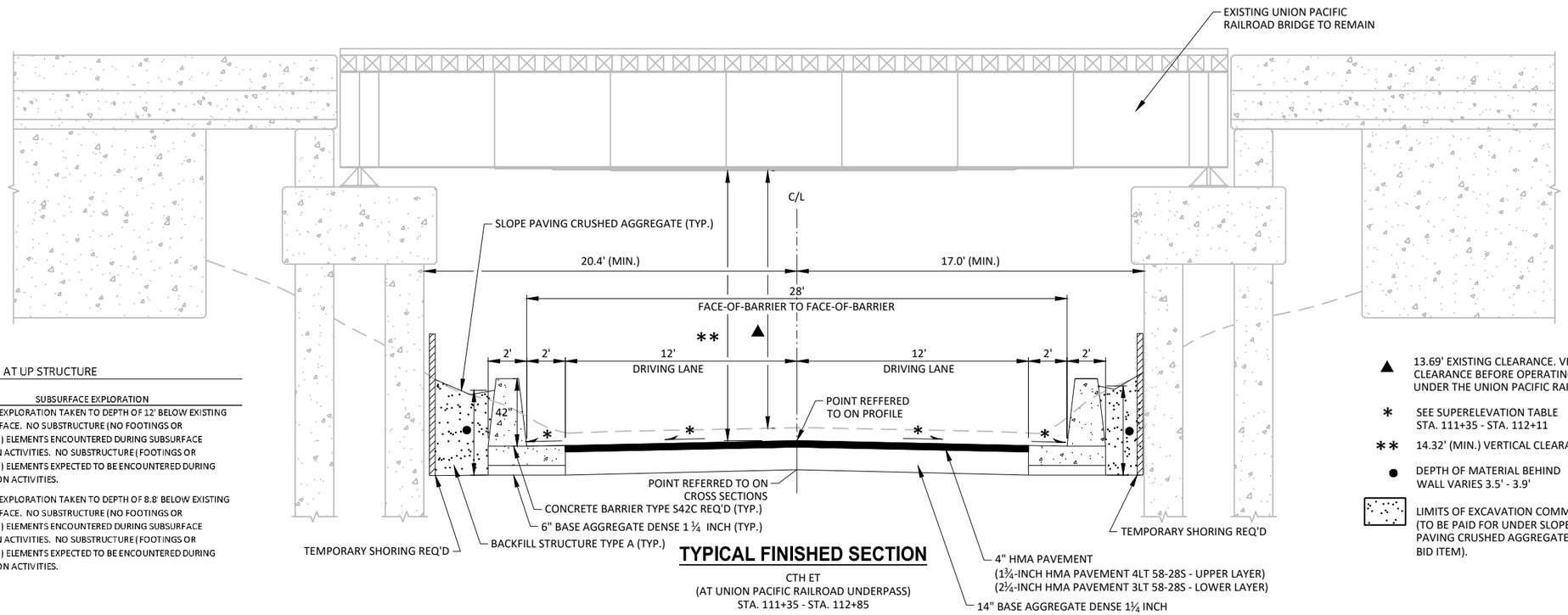


TYPICAL FINISHED HALF URBAN SECTION

CTH ET
STA. 112+85 - STA. 115+26.95

⚠ ASPHALTIC CENTERLINE RUMBLE STRIP, SINUSOIDAL, 2-LANE RURAL & ASPHALTIC SHOULDER RUMBLE STRIP, SINUSOIDAL, 2-LANE RURAL REQ'D . SEE MISCELLANEOUS QUANTITIES AND CONSTRUCTION DETAILS.

NOTE: SEE SPECIAL PROVISIONS FOR UPRR/BNSF GUIDELINES FOR TEMPORARY SHORING.



TYPICAL FINISHED SECTION

CTH ET
(AT UNION PACIFIC RAILROAD UNDERPASS)
STA. 111+35 - STA. 112+85

SOIL BORING INFORMATION AT UP STRUCTURE

	STATION	LOCATION	DESCRIPTION	SUBSURFACE EXPLORATION
Ⓐ	112+28	MAINLINE, 19.7' RT.	INSIDE FACE OF PIER	SUBSURFACE EXPLORATION TAKEN TO DEPTH OF 12' BELOW EXISTING GROUND SURFACE. NO SUBSTRUCTURE (NO FOOTINGS OR FOUNDATION) ELEMENTS ENCOUNTERED DURING SUBSURFACE EXPLORATION ACTIVITIES. NO SUBSTRUCTURE (FOOTINGS OR FOUNDATION) ELEMENTS EXPECTED TO BE ENCOUNTERED DURING CONSTRUCTION ACTIVITIES.
Ⓑ	112+15	MAINLINE, 21.3' LT.	INSIDE FACE OF PIER	SUBSURFACE EXPLORATION TAKEN TO DEPTH OF 8.8' BELOW EXISTING GROUND SURFACE. NO SUBSTRUCTURE (NO FOOTINGS OR FOUNDATION) ELEMENTS ENCOUNTERED DURING SUBSURFACE EXPLORATION ACTIVITIES. NO SUBSTRUCTURE (FOOTINGS OR FOUNDATION) ELEMENTS EXPECTED TO BE ENCOUNTERED DURING CONSTRUCTION ACTIVITIES.

▲ 13.69' EXISTING CLEARANCE. VERIFY CLEARANCE BEFORE OPERATING EQUIPMENT UNDER THE UNION PACIFIC RAILROAD BRIDGE

* SEE SUPERELEVATION TABLE STA. 111+35 - STA. 112+11

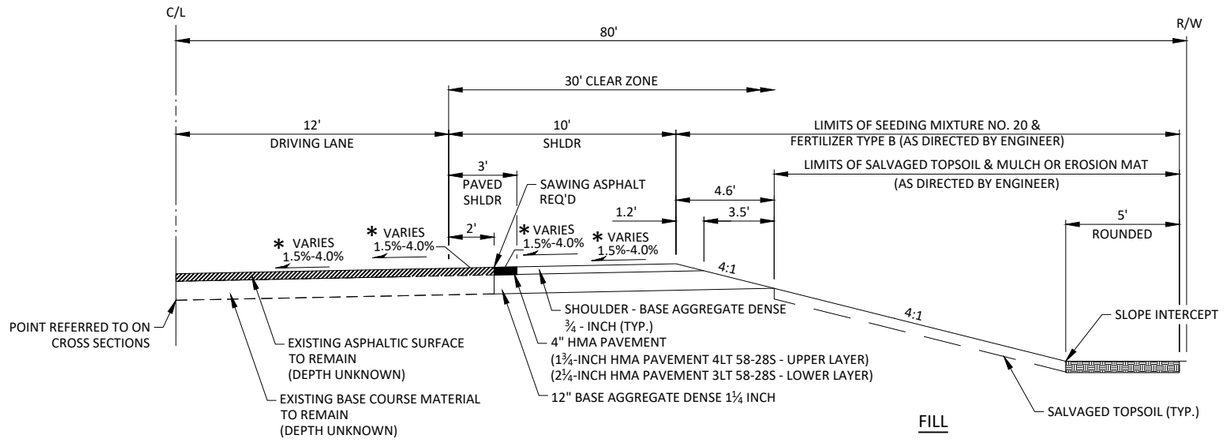
** 14.32' (MIN.) VERTICAL CLEARANCE

● DEPTH OF MATERIAL BEHIND WALL VARIES 3.5' - 3.9'

LIMITS OF EXCAVATION COMMON (TO BE PAID FOR UNDER SLOPE PAVING CRUSHED AGGREGATE BID ITEM).

PROJECT NO: 7373-00-71	HWY: CTH ET	COUNTY: MONROE	TYPICAL FINISHED SECTIONS	SHEET 6	E

2



TYPICAL FINISHED SUPERELEVATED SECTION

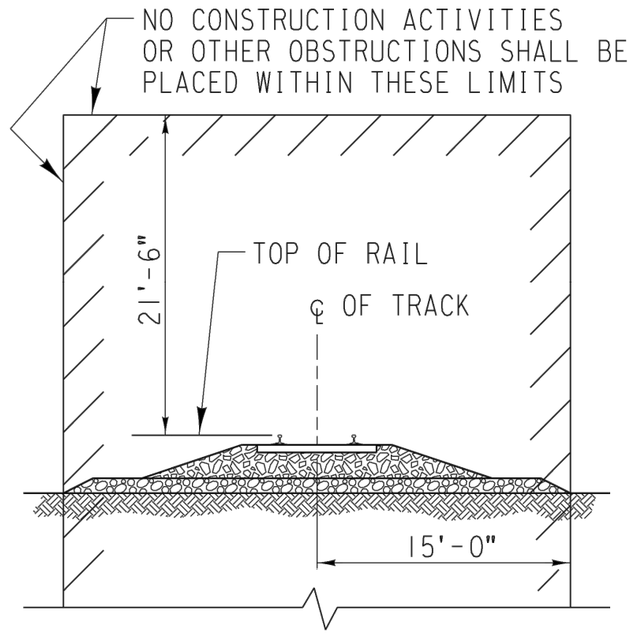
'E'-LINE (STH 21)
STA. 599'E'+60 - STA. 603'E'+45, RT

* S.E. - SEE SUPERELEVATION TABLES FOR SUPERELEVATION RATES

THE LOW SIDE SHOULDER SLOPE ON SUPERELEVATED SECTIONS EQUALS THE SUPERELEVATION WHEN 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.

PROJECT NO: 7373-00-71	HWY: CTH ET	COUNTY: MONROE	TYPICAL FINISHED SECTIONS	SHEET 7	E

2



MINIMUM CONSTRUCTION CLEARANCE ENVELOPE

(NORMAL TO RAILROAD)

DESIGN BY: RAF	CHECKED BY: AMH

APPROVED:

Rick Friesen

UPRR - SENIOR MANAGER STRUCTURES DESIGN

Hudson M. Hurst

BNSF - ASSISTANT DIRECTOR STRUCTURES DESIGN

UNION PACIFIC

BNSF RAILWAY

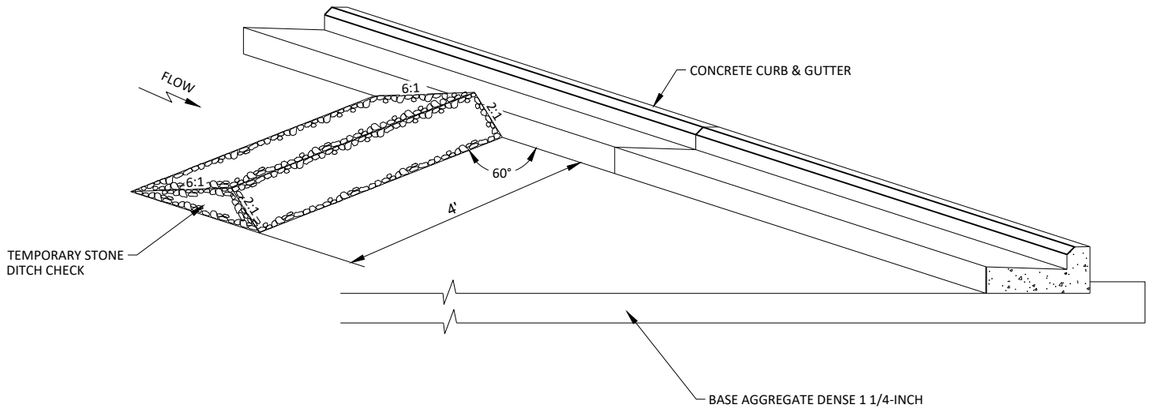
BRIDGE STANDARDS

GRADE SEPARATION GUIDELINES

TEMPORARY CLEARANCE ENVELOPE

FILE OWNER: UPRR	DATE: **1/05/16**
PLAN NO.: 711000	SHEET: 1

PROJECT NO: 7373-00-71	HWY: CTH ET	COUNTY: MONROE	UPRR MCCE	SHEET 8 E



TEMPORARY STONE DITCH CHECKS

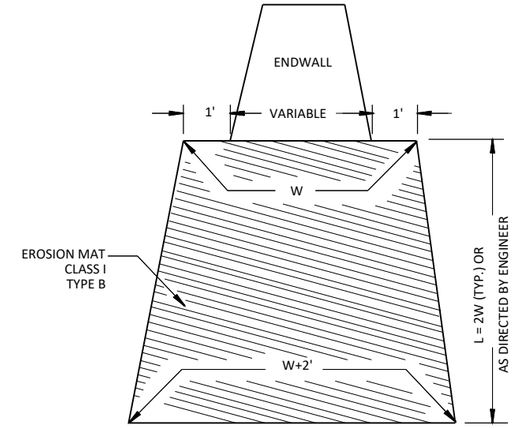
TO BE PAID FOR AS STONE DITCH CHECKS
(SEE MISCELLANEOUS QUANTITIES SHEET FOR LOCATION)

SUPERELEVATION TABLE-CURVE 13

STATION	LEFT(%)	RIGHT(%)	A (FT)	B (FT)	C (FT)
111+25	◄ 2.0	► 2.0	5.7	1.3	4.4
111+50	◄ 2.0	► 0.8	5.7	1.3	4.4
111+68	◄ 2.0	► 0.0	5.7	1.3	4.4
112+00	◄ 2.0	► 1.5	5.7	1.3	4.4
112+11	◄ 2.0	► 2.0	5.7	1.3	4.4

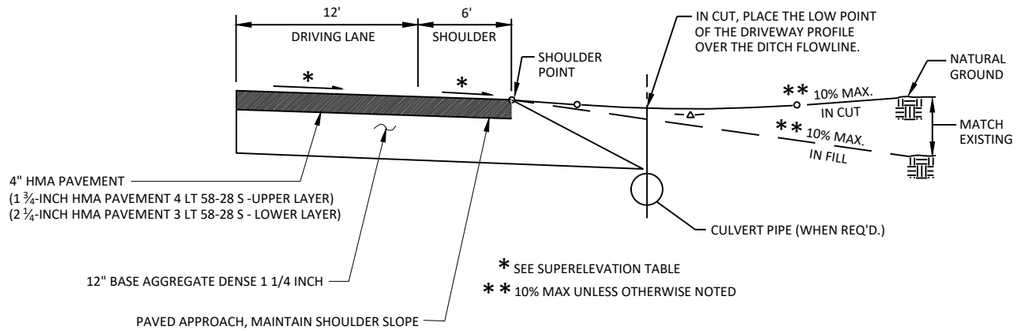
SUPERELEVATION TABLE-CURVE 17

STATION	LEFT(%)	RIGHT(%)
599'E'+60	--	MATCH EXISTING
600'E'+00	--	◄ 4.0
600'E'+50	--	◄ 4.0
601'E'+00	--	◄ 1.5
601'E'+50	--	◄ 2.0
602'E'+00	--	◄ 2.7
602'E'+50	--	◄ 2.7
603'E'+00	--	◄ 3.4
603'E'+45	--	MATCH EXISTING

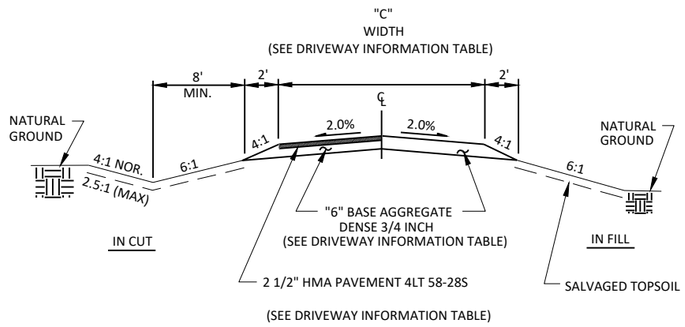


EROSION MAT CLASS I TYPE B TREATMENT AT CULVERTS

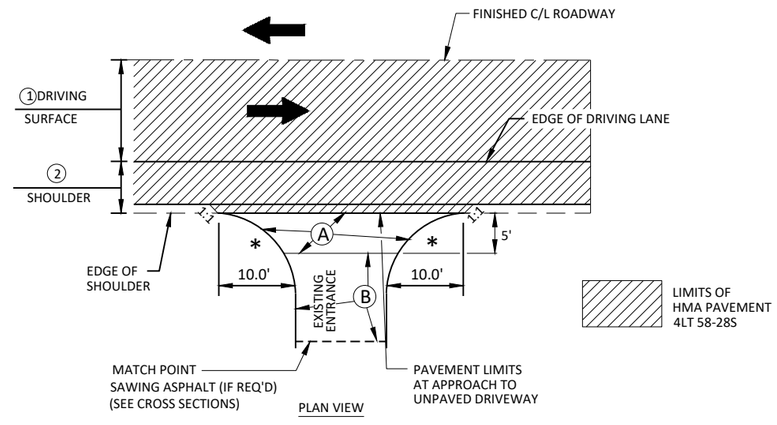
SEE EROSION CONTROL PLAN
SHEET FOR LOCATION AND DIMENSIONS



TYPICAL RURAL ENTRANCE PROFILES



TYPICAL CROSS-SECTION FOR RURAL ENTRANCE



* RADIUS = 10'

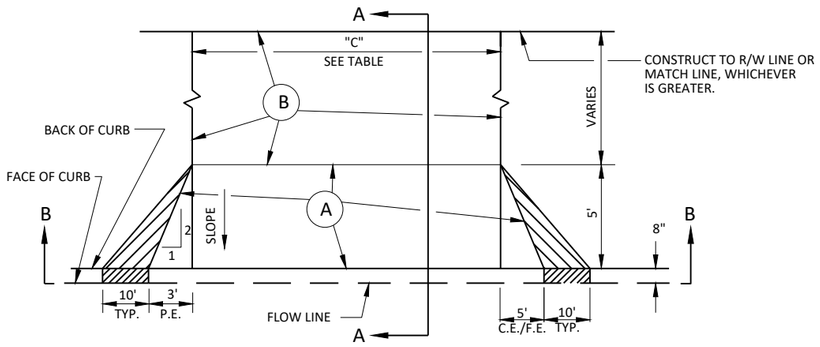
RURAL ENTRANCE DETAIL

ROADWAY	①	②
CTH ET	12'	6' (5' PAVED)

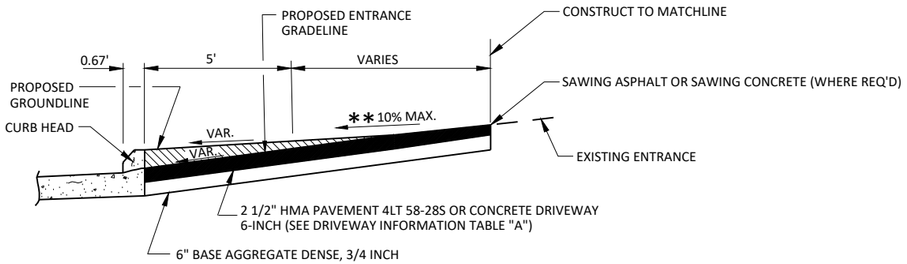
RURAL DRIVEWAY INFORMATION TABLE

ENTRANCE TYPE	STATION	TYPE	EXISTING PAVEMENT STRUCTURE	PROPOSED PAVEMENT STRUCTURE A	PROPOSED PAVEMENT STRUCTURE B	"C" WIDTH
RURAL	106+98, LT.	F.E.	B.A.D.	2 1/2" HMA PAVEMENT OVER 6" B.A.D.	8 1/2" B.A.D.	16

2

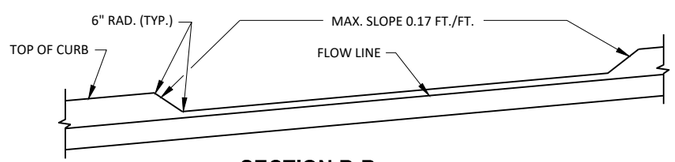


URBAN DRIVEWAY DETAIL



** 10% MAX UNLESS OTHERWISE NOTED

SECTION A-A



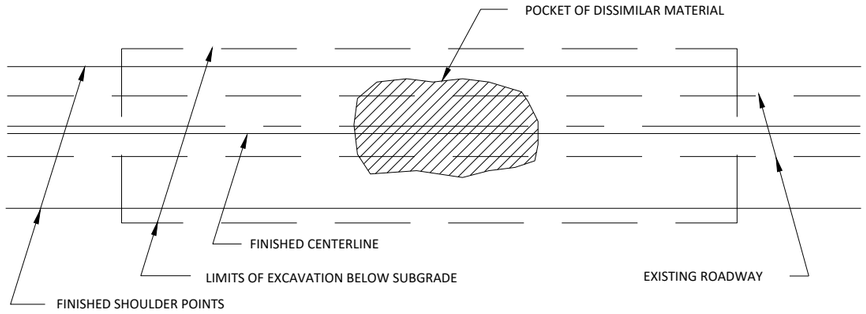
SECTION B-B

	EXISTING	PROPOSED
(A)	CRUSHED AGGREGATE BASE COURSE	2 1/2" PROPOSED HMA PAVEMENT 4LT 58-28S OVER 6" BASE AGGREGATE DENSE 3/4-INCH

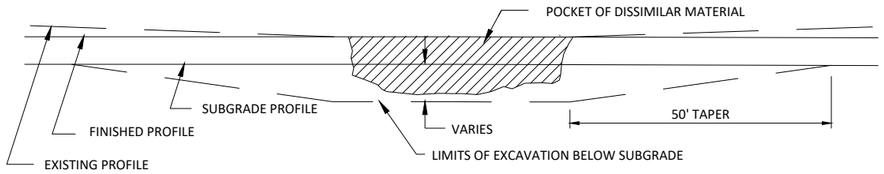
URBAN DRIVEWAY INFORMATION TABLE

ENTRANCE TYPE	STATION	TYPE	EXISTING PAVEMENT STRUCTURE	PROPOSED PAVEMENT STRUCTURE A	PROPOSED PAVEMENT STRUCTURE B
URBAN	113+28, LT.	P.E.	B.A.D.	2 1/2" HMA PAVEMENT OVER 6" B.A.D.	8 1/2" B.A.D.
URBAN	113+49, RT.	P.E.	B.A.D.	2 1/2" HMA PAVEMENT OVER 6" B.A.D.	8 1/2" B.A.D.

2

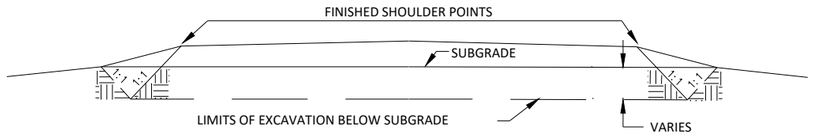


PLAN VIEW



PROFILE VIEW

RURAL EXCAVATION BELOW SUBGRADE (E.B.S.)



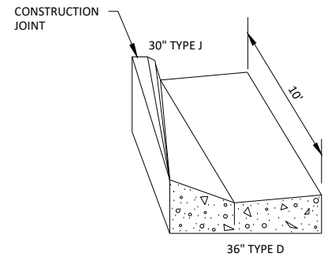
CROSS SECTION VIEW

1. EXACT LOCATION OF E.B.S. (EXCAVATION BELOW SUBGRADE) SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD. TO BE PAID FOR AS EXCAVATION COMMON.

2. E.B.S. AREA TO BE BACKFILLED WITH MATERIAL ACCEPTABLE TO THE ENGINEER. BACKFILL MUST BE HOMOGENEOUS WITH ADJOINING FILL MATERIAL.

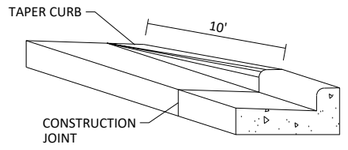
3. THE FILL SECTION WITHIN 100' OF THE MOUTH OF THE CUT MUST BE KEPT 2' BELOW SUBGRADE UNTIL E.B.S. IS COMPLETED. LATERAL LIMITS OF EXCAVATION SHALL BE THE SUBGRADE SHOULDER POINTS.

2

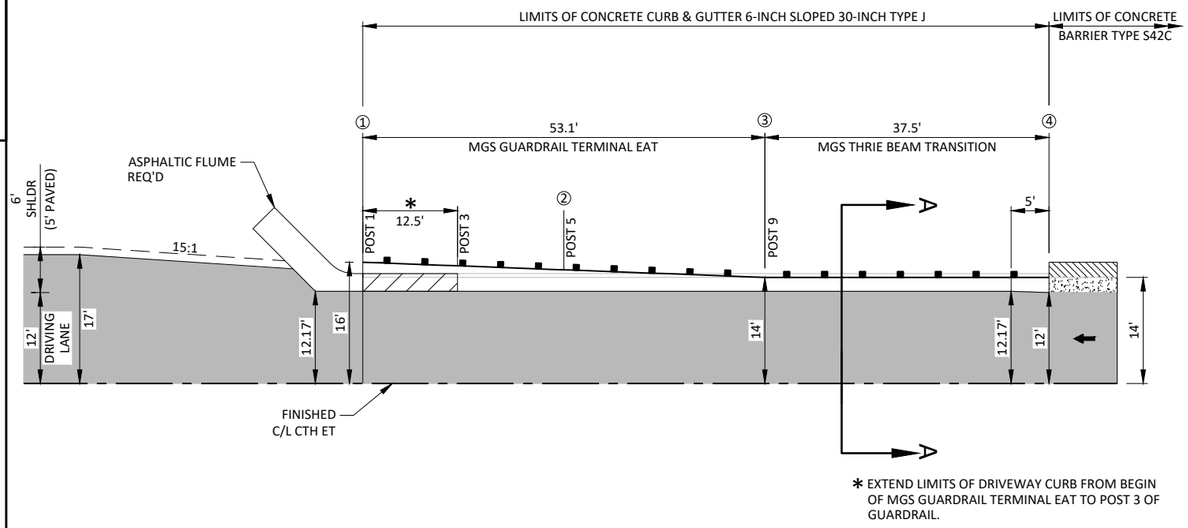


CURB & GUTTER TRANSITION DETAIL

PAID FOR AS CONCRETE CURB & GUTTER 36-INCH TYPE D



DETAIL OF CURB & GUTTER TERMINI



* EXTEND LIMITS OF DRIVEWAY CURB FROM BEGIN OF MGS GUARDRAIL TERMINAL EAT TO POST 3 OF GUARDRAIL.

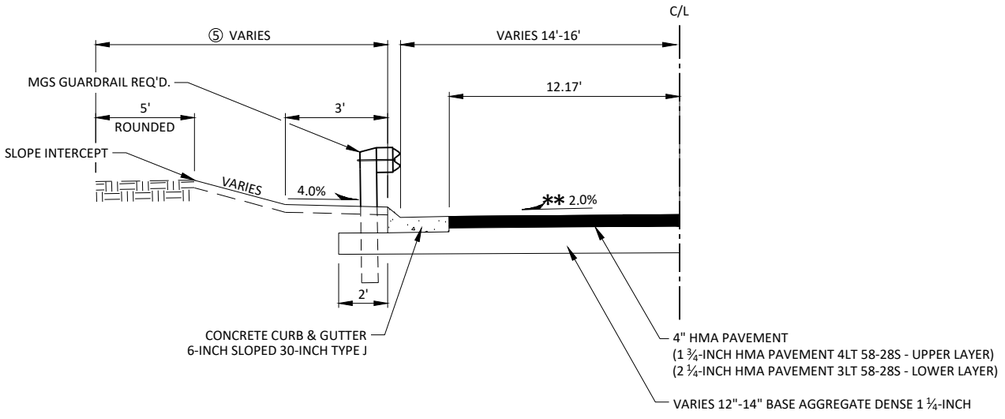
GUARDRAIL LAYOUT DETAIL

LIMITS OF HMA PAVEMENT 4 LT 58-28 S

LIMITS OF DRIVEWAY CURB

GUARDRAIL LAYOUT TABLE

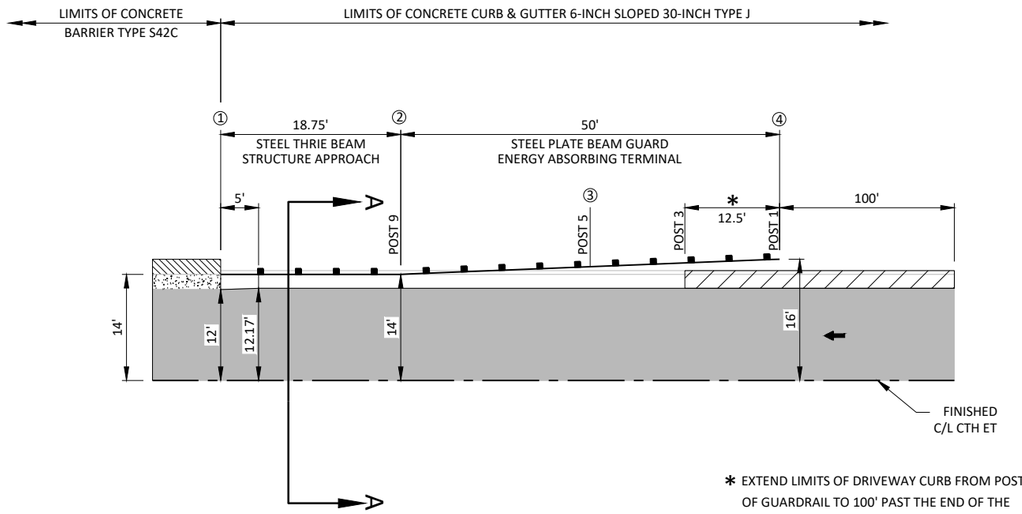
STATION-STATION	LOCATION	STATION ①	②	③	④
111+09 - 112+00	MAINLINE, LT.	111+09	111+34	111+62	112+00
111+20 - 112+10	MAINLINE, RT.	111+20	111+45	111+73	112+10



SECTION A-A

** SEE SUPERELEVATION TABLE

⑤ LIMITS OF SEEDING MIXTURE NO. 20, FERTILIZER TYPE B, SALVAGED TOPSOIL, MULCHING/ EROSION MAT (AS DIRECTED BY ENGINEER).



* EXTEND LIMITS OF DRIVEWAY CURB FROM POST 3 OF GUARDRAIL TO 100' PAST THE END OF THE STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL.

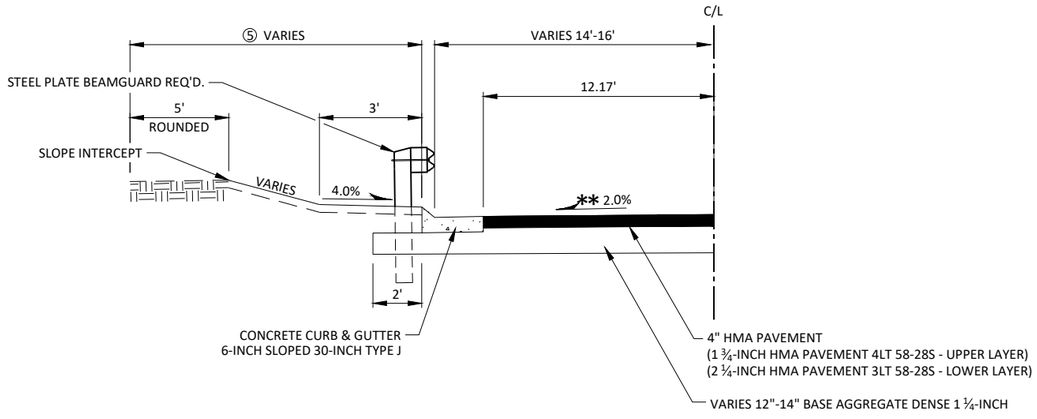
GUARDRAIL LAYOUT DETAIL

LIMITS OF HMA PAVEMENT 4 LT 58-28 S

LIMITS OF DRIVEWAY CURB

GUARDRAIL LAYOUT TABLE

STATION-STATION	LOCATION	STATION ①	②	③	④
112+50 - 113+19	MAINLINE, LT.	112+50	112+69	112+94	113+19
112+60 - 113+29	MAINLINE, RT.	112+60	112+79	113+04	113+29



SECTION A-A

** SEE SUPERELEVATION TABLE

⑤ LIMITS OF SEEDING MIXTURE NO. 20, FERTILIZER TYPE B, SALVAGED TOPSOIL, MULCHING/ EROSION MAT (AS DIRECTED BY ENGINEER).

2

CURVE 17
PI STA. = 601'E'+73.34
Y = 402,864.41
X = 695,400.53
R = 2750.00
D = 2°05'01"
DELTA = 7°36'51"
L = 365.45
T = 183.00
C = 365.18
PC STA. = 599'E'+90.34
Y = 402,840.04
X = 695,219.16
PT STA. = 55.79'E'+55.79
Y = 402,912.60
X = 695,577.06
SE = SEE SUPERELEVATION TABLE
RO = SEE SUPERELEVATION TABLE
SE TRANS = SEE SUPERELEVATION TABLE

N

END CONSTRUCTION
STA. 603'E'+45
Y=402,909.78
X=695,566.64

BEGIN CONSTRUCTION
STA. 599'E'+60
Y=402,836.00
X=695,189.09

STA. 115+49.18 (CTH ET) =
STA. 601'E'+90.27 ('E'-LINE (STH 21))
TYPE D INTERSECTION (MOD.) REQ'D.

WE ENERGIES (TYP.)

603'E'

602'E'

601'E'

600'E'

98°24'56"

PC: 599+90.34

FINISHED C/L 'E'-LINE (STH 21)

CURVE 17

EXISTING C/L 'E'-LINE (STH 21)

STA. 603+19

12' DRIVING LANE

10' SHLDR (3' PAVED)

74'

15'

14'

10'

STA. 600+18

91'

11.5

16.17'

R=55'

R=50'

~AGRICULTURAL FIELD~

LIMITS OF CONCRETE CURB & GUTTER
6-INCH SLOPED 36-INCH TYPE D

STA. 114+86.76 66.17' RT (CTH ET) =
STA. 602'E'+45.15 72.0' RT ('E'-LINE (STH 21))
Y = 402,815.45
X = 695,485.92

TIMOTHY E. LIDDANE REVOCABLE TRUST

TIMOTHY E. LIDDANE REVOCABLE TRUST

ALLIANT ENERGY (TYP.)

R/W

P.L.

STA. 114+62.05 71.17' LT (CTH ET) =
STA. 601+09.37 77.0' RT ('E'-LINE (STH 21))
Y = 402,782.64
X = 695,350.29

STA. 114+77 - STA. 115+36, RT.
CONCRETE CURB & GUTTER 6-INCH
SLOPED 36-INCH TYPE D REQ'D.

SLOPE INTERCEPT (TYP.)

STA. 114+18

EXISTING SATELLITE DISH TO REMAIN

STA. 114+52 - STA. 115+17, LT.
CONCRETE CURB & GUTTER 6-INCH
SLOPED 36-INCH TYPE D REQ'D.

RICHARD A. YARRINGTON

HOUSE

STA. 112+60 - STA. 114+77, RT.
CONCRETE CURB & GUTTER 6-INCH
SLOPED 30-INCH TYPE J REQ'D.

STA. 113+99

STA. 112+50 - STA. 114+52, LT.
CONCRETE CURB & GUTTER 6-INCH
SLOPED 30-INCH TYPE J REQ'D.

CAROLEE LINENBERG

N03°24'14"W

15:1

BRIGHTSPEED (TYP.)

STA. 111+20 - STA. 112+10, RT.
CONCRETE CURB & GUTTER 6-INCH
SLOPED 30-INCH TYPE J REQ'D.

STA. 111+09 - STA. 112+00, LT.
CONCRETE CURB & GUTTER 6-INCH
SLOPED 30-INCH TYPE J REQ'D.

12.17'

ALLIANT ENERGY (TYP.)

STA. 113+49, RT.
CONSTRUCT P.E. (B.A.D.)

OAKDALE ELECTRIC COOPERATIVE (TYP.)

STA. 113+28, LT.
CONSTRUCT P.E. (B.A.D.)

EXISTING C/L CTH ET

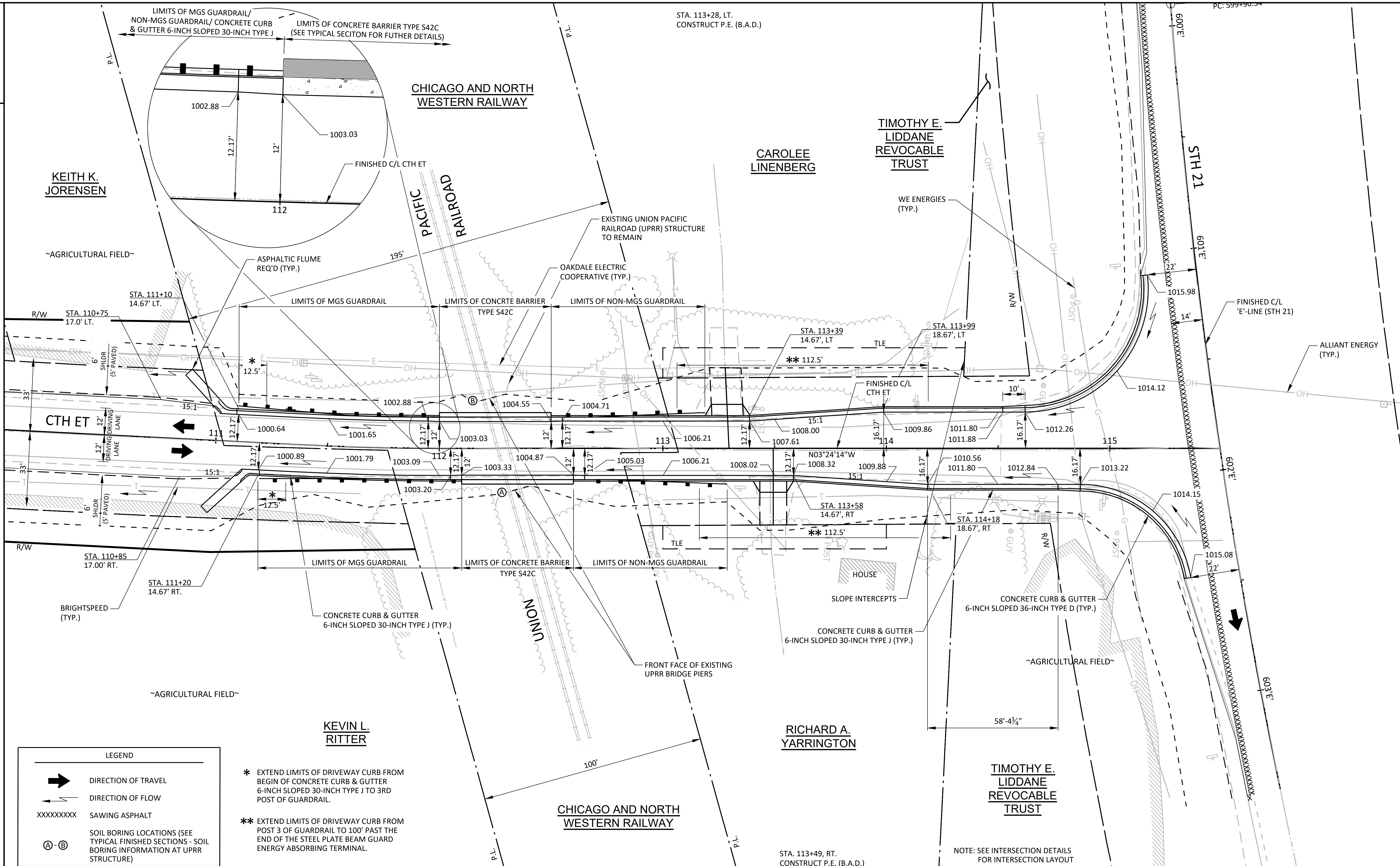
FINISHED C/L CTH ET

CHICAGO AND NORTH WESTERN RAILWAY

LEGEND
DIRECTION OF TRAVEL
DIRECTION OF FLOW
XXXXXXXXX SAWING ASPHALT

PROJECT NO: 7373-00-71	HWY: CTH ET	COUNTY: MONROE	INTERSECTION DETAILS	SHEET 14	E

FILE NAME : S:\PROJECTS\W11616 CTH ET, MONROE CO (TOMAH-STH 21)\7373-00-71- PHASE 2\SHEETSPLAN\DETAILS\INTERSECTION DETAILS.DWG
PLOT DATE : 1/18/2023 8:47:31 AM
PLOT BY : KARTER ZAJICEK
PLOT SCALE : 1" = 1'
LAYOUT : STH 21



LIMITS OF MGS GUARDRAIL/ NON-MGS GUARDRAIL/ CONCRETE CURB & GUTTER 6-INCH SLOPED 30-INCH TYPE J
LIMITS OF CONCRETE BARRIER TYPE S42C (SEE TYPICAL SECITON FOR FUTHER DETAILS)
1002.88
1003.03
12.17'
12'
FINISHED C/L CTH ET
112
STA. 113+28, LT.
CONSTRUCT P.E. (B.A.D.)
CHICAGO AND NORTH WESTERN RAILWAY
P.L.
TIMOTHY E. LIDDANE REVOCABLE TRUST
CAROLEE LINENBERG
KEITH K. JORENSEN
STH 21
PACIFIC RAILROAD
WE ENERGIES (TYP.)
EXISTING UNION PACIFIC RAILROAD (UPRR) STRUCTURE TO REMAIN
~AGRICULTURAL FIELD~
ASPHALTIC FLUME REQ'D (TYP.)
195'
OAKDALE ELECTRIC COOPERATIVE (TYP.)
STA. 111+10
14.67' LT.
LIMITS OF MGS GUARDRAIL
LIMITS OF CONCRTE BARRIER TYPE S42C
LIMITS OF NON-MGS GUARDRAIL
R/W
STA. 110+75
17.0' LT.
STA. 113+39
14.67', LT
STA. 113+99
18.67', LT
TLE
** 112.5'
* 12.5'
1015.98
22'
FINISHED C/L 'E'-LINE (STH 21)
14'
ALLIANT ENERGY (TYP.)
FINISHED C/L CTH ET
1014.12
10'
1002.88
1004.55
1004.71
CTH ET
111
1000.64
1001.65
1003.03
113
1006.21
1008.00
1009.86
114
1011.80
1011.88
1012.26
115
15:1
33'
6' SHLDR (5' PAVED)
12' DRIVING LANE
1007.61
N03°24'14"W
1008.32
1000.89
1001.79
1003.09
1003.33
1004.87
1005.03
1006.21
1008.02
1009.88
1010.56
1011.80
1012.84
1013.22
1003.20
1014.15
STA. 113+58
14.67', RT
STA. 114+18
18.67', RT
** 112.5'
TLE
1015.08
STA. 110+85
17.00' RT.
LIMITS OF MGS GUARDRAIL
LIMITS OF CONCRETE BARRIER TYPE S42C
LIMITS OF NON-MGS GUARDRAIL
HOUSE
STA. 111+20
14.67' RT.
SLOPE INTERCEPTS
CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE D (TYP.)
BRIGHTSPEED (TYP.)
CONCRETE CURB & GUTTER 6-INCH SLOPED 30-INCH TYPE J (TYP.)
UNION
CONCRETE CURB & GUTTER 6-INCH SLOPED 30-INCH TYPE J (TYP.)
FRONT FACE OF EXISTING UPRR BRIDGE PIERS
~AGRICULTURAL FIELD~
~AGRICULTURAL FIELD~
58'-4¾"
KEVIN L. RITTER
RICHARD A. YARRINGTON
100'
TIMOTHY E. LIDDANE REVOCABLE TRUST
CHICAGO AND NORTH WESTERN RAILWAY
LEGEND
DIRECTION OF TRAVEL
DIRECTION OF FLOW
XXXXXXXXX SAWING ASPHALT
Ⓐ-Ⓑ SOIL BORING LOCATIONS (SEE TYPICAL FINISHED SECTIONS - SOIL BORING INFORMATION AT UPRR STRUCTURE)
* EXTEND LIMITS OF DRIVEWAY CURB FROM BEGIN OF CONCRETE CURB & GUTTER 6-INCH SLOPED 30-INCH TYPE J TO 3RD POST OF GUARDRAIL.
** EXTEND LIMITS OF DRIVEWAY CURB FROM POST 3 OF GUARDRAIL TO 100' PAST THE END OF THE STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL.
STA. 113+49, RT.
CONSTRUCT P.E. (B.A.D.)
NOTE: SEE INTERSECTION DETAILS FOR INTERSECTION LAYOUT

PROJECT NO: 7373-00-71	HWY: CTH ET	COUNTY: MONROE	PAVING DETAILS	SHEET	E

FILE NAME : S:\PROJECTS\W11616 CTH ET, MONROE CO (TOMAH-STH 21)\7373-00-71- PHASE 2\SHEETSPLAN\DETAILS\73730071_PAVING DETAILS.DWG PLOT DATE : 1/18/2023 8:53:40 AM PLOT BY : KARTER ZAJICEK PLOT SCALE : 1" = 1' LAYOUT : LAYOUT 6

2

BEGIN PROJECT
STA. 105+50

N

SLOPE INTERCEPTS

KEITH
JORENSEN

R/W

106+00 107+00 108+00 109+00 110+00

MATCHLINE STA. 110+00

R/W

LEGEND

- MULCH
- EROSION MAT CLASS I TYPE B
- CRUSHED AGGREGATE SLOPE PAVING
- SILT FENCE
- TEMPORARY DITCH CHECK (PAID FOR AS STONE DITCH CHECKS)
- TEMPORARY STONE DITCH CHECK
- CULVERT PIPE CHECK
- FLOW ARROW
- EROSION MAT CLASS 1, TYPE B TREATMENT AT CULVERTS, W=5' L=10' SEE CONSTRUCTION DETAILS

CHICAGO AND NORTH WESTERN RAILWAY

P.L

195'

THOMAS E. BAILEY

P.L

R/W

SOD 7' X 12'

PC: 111+34.14

PT: 112+02.23

MATCHLINE STA. 110+00

110+00 111+00 112+00 113+00 114+00 115+00

SOD 7' X 12'

CHICAGO AND NORTH WESTERN RAILWAY

KEVIN L. RITTER

P.L

100'

P.L

RICHARD A. YARRINGTON

N

CAROLEE LINENBERG

TIMOTHY E. LIDDANE REVOCABLE TRUST

TLE REQ'D.

TLE REQ'D.

TIMOTHY E. LIDDANE REVOCABLE TRUST

BEGIN CONSTRUCTION
STA. 599'E'+60

EXISTING C/L 'E'-LINE (STH 21)

600+00

601+00

END PROJECT
STA. 115+26.95

602+00

603+00

END CONSTRUCTION
STA. 603'E'+45

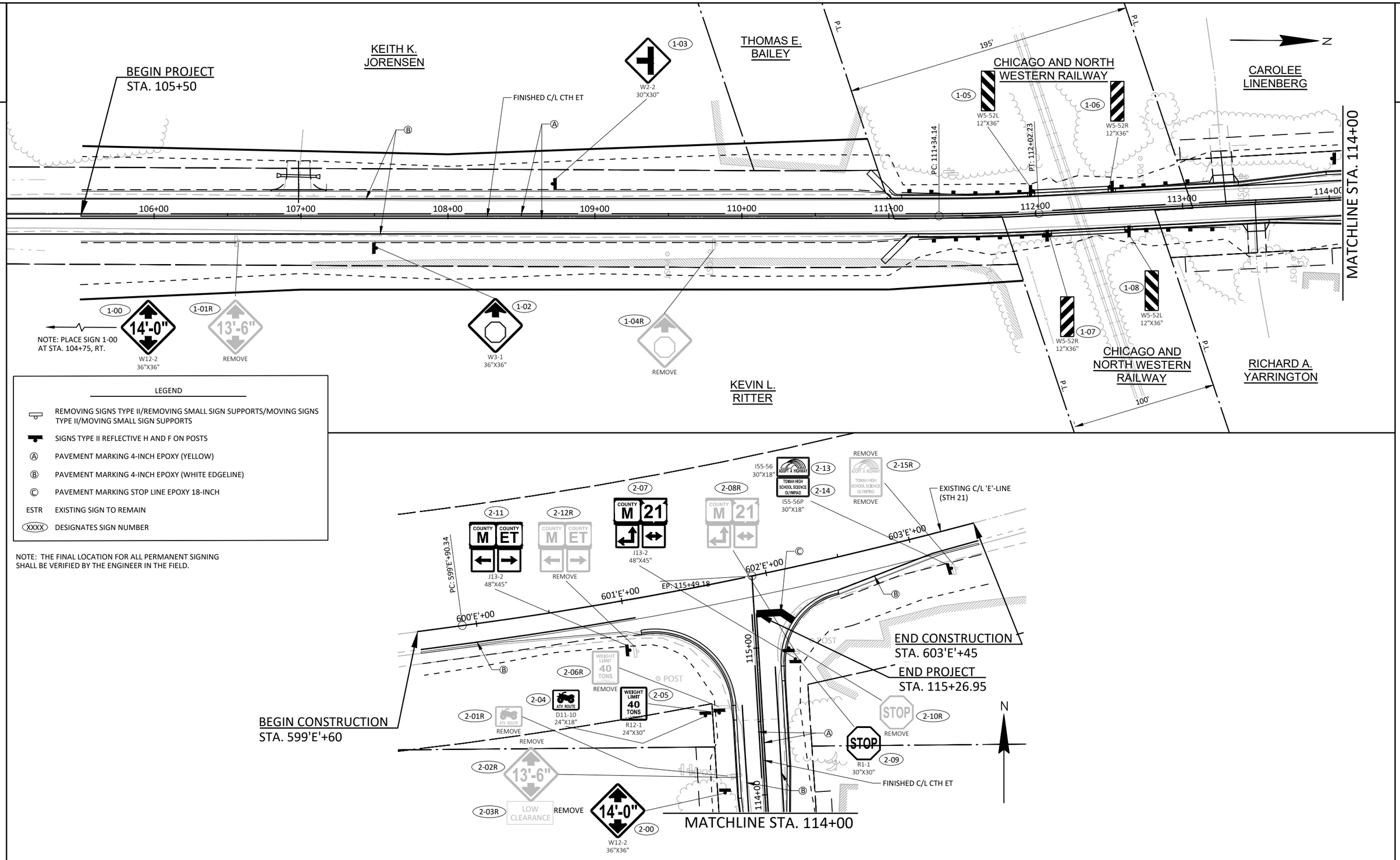
2

PROJECT NO: 7373-00-71	HWY: CTH ET	COUNTY: MONROE	EROSION CONTOL PLAN	SHEET 16	E

FILE NAME : S:\PROJECTS\W11616 CTH ET, MONROE CO (TOMAH-STH 21)\7373-00-71- PHASE 2\SHEETSPLAN\DETAILS\73730071_EROSION CONTROL.DWG
LAYOUT NAME - Layout 4

PLOT DATE : 12/22/2022 1:36 PM PLOT BY : KARTER ZAJICEK PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 44

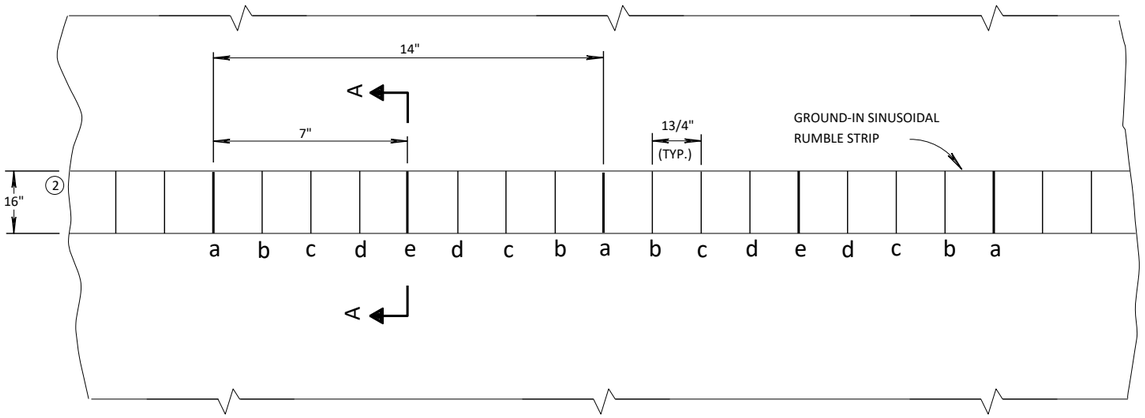


LEGEND

- 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
- Ⓐ PAVEMENT MARKING 4-INCH EPOXY (YELLOW)
- Ⓑ PAVEMENT MARKING 4-INCH EPOXY (WHITE EDGELINE)
- Ⓒ PAVEMENT MARKING STOP LINE EPOXY 18-INCH
- ESTR EXISTING SIGN TO REMAIN
- (XXXX) DESIGNATES SIGN NUMBER

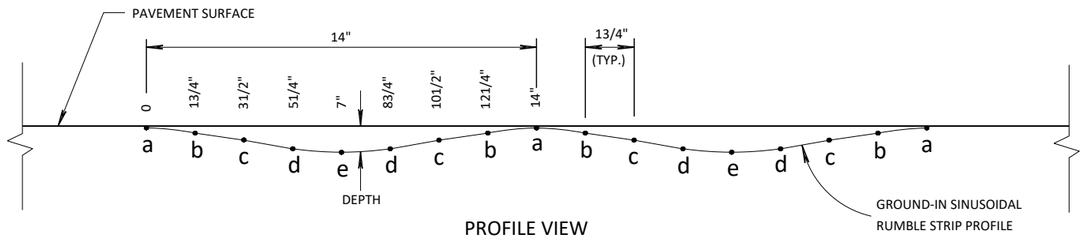
NOTE: THE FINAL LOCATION FOR ALL PERMANENT SIGNING SHALL BE VERIFIED BY THE ENGINEER IN THE FIELD.

PROJECT NO: 7373-00-71	HWY: CTH ET	COUNTY: MONROE	PERMANENT SIGNING/PAVEMENT MARKING PLAN	SHEET 17	E



PLAN VIEW

CENTERLINE WITH GROUND-IN SINUSOIDAL RUMBLE STRIP



PROFILE VIEW

GROUND-IN SINUSOIDAL RUMBLE STRIP

LOCATION	DEPTH INCHES
a	1/16"
b	5/32"
c	9/32"
d	7/16"
e	1/2"

GENERAL NOTES

DETAILS OF CONSTRUCTION SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

DO NOT MILL CENTERLINE GROOVES THROUGH ANY INTERSECTION, MARKED CROSSWALK, NON-MOTORIZED PATH CROSSING, OR SNOWMOBILE CROSSING.

INSTALL PAVEMENT MARKING AFTER THE GROOVES ARE INSTALLED.

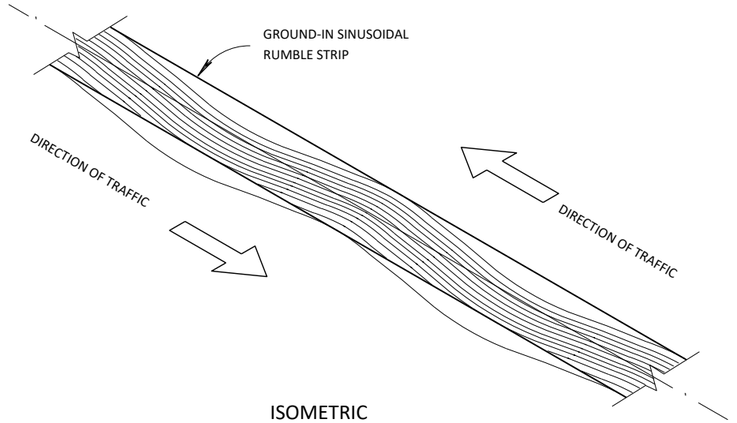
SEE SIGNING PLAN FOR SIGN REQUIREMENTS THAT MAY BE NEEDED.

THE WIDTH OF THE GROOVE WILL BE 16 INCHES.

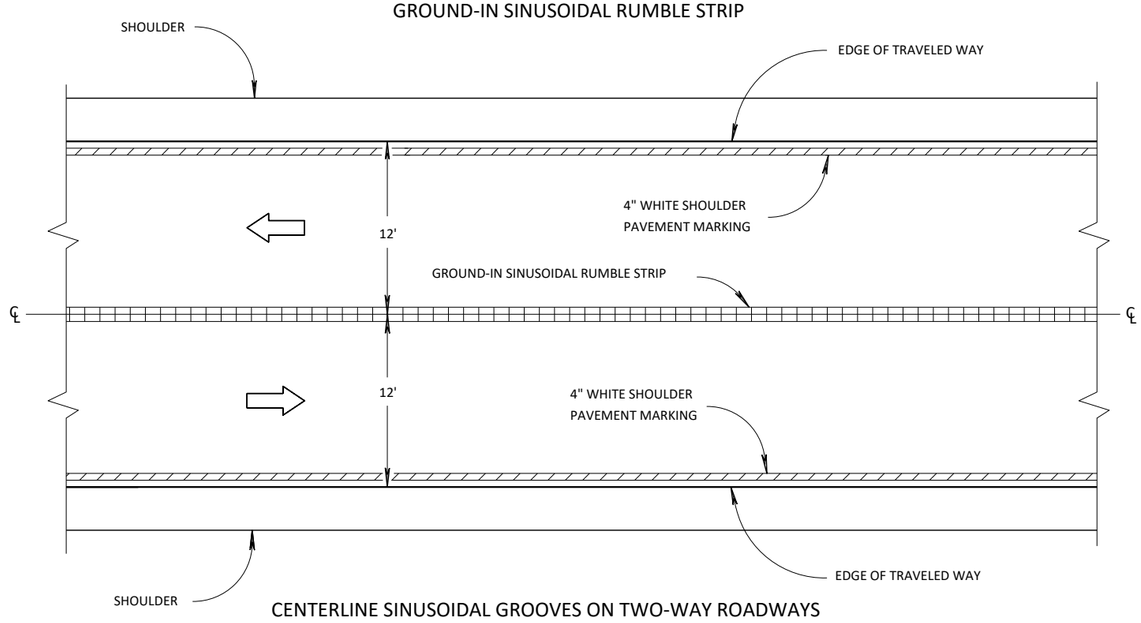
THE PAVEMENT MARKINGS WILL BE ENTIRELY INSIDE THE RUMBLE STRIP.

(1) CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS, WHEN DIRECTED BY THE ENGINEER.

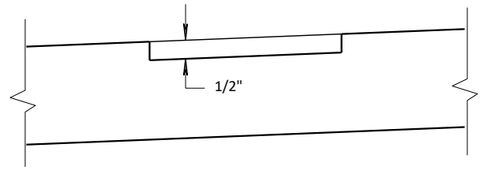
(2) SEE CONTRACT PLANS FOR SINUSOIDAL STRIP WIDTH.



ISOMETRIC

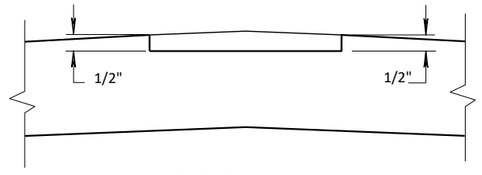


CENTERLINE SINUSOIDAL GROOVES ON TWO-WAY ROADWAYS



SECTION A-A

SUPERELEVATED ROADWAY

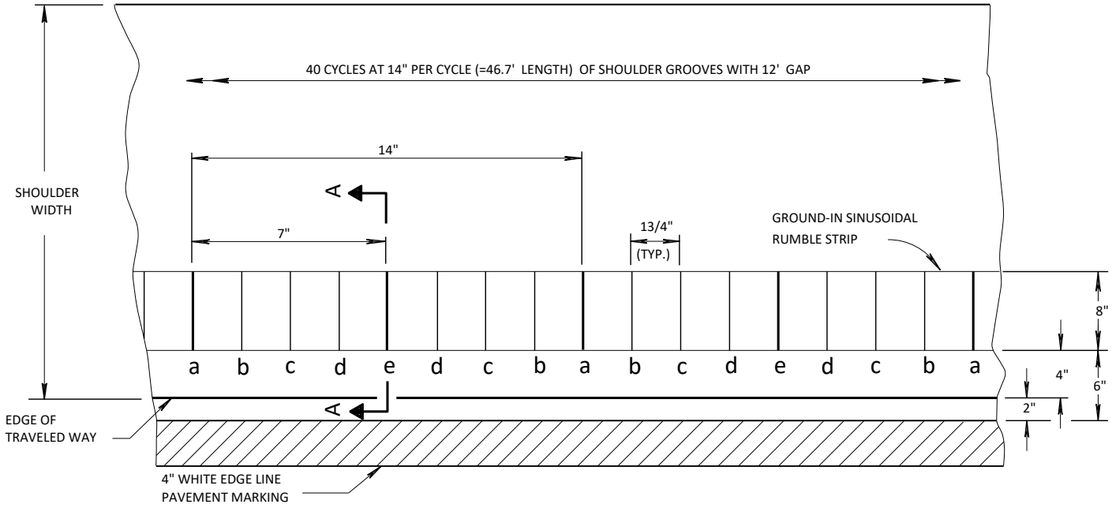


SECTION A-A

CROWNED ROADWAY

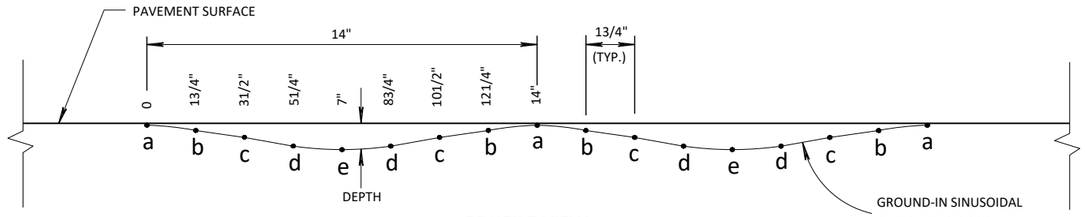
ASPHALTIC CENTERLINE RUMBLE STRIP, SINUSOIDAL, 2-LANE RURAL

PROJECT NO: 7373-00-71	HWY: CTH ET	COUNTY: MONROE	CONSTRUCTION DETAILS - CENTER LINE RUMBLE STRIPS	SHEET 18	E



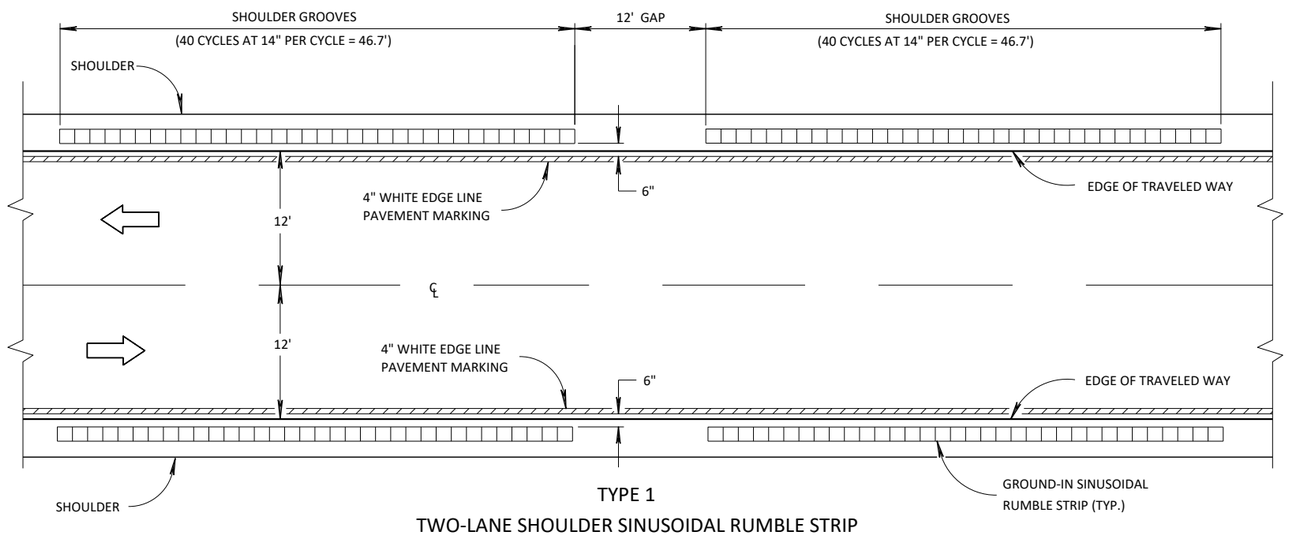
PLAN VIEW

SHOULDER WITH GROUND-IN SINUSOIDAL RUMBLE STRIP



PROFILE VIEW

GROUND-IN SINUSOIDAL RUMBLE STRIP



TYPE 1

TWO-LANE SHOULDER SINUSOIDAL RUMBLE STRIP

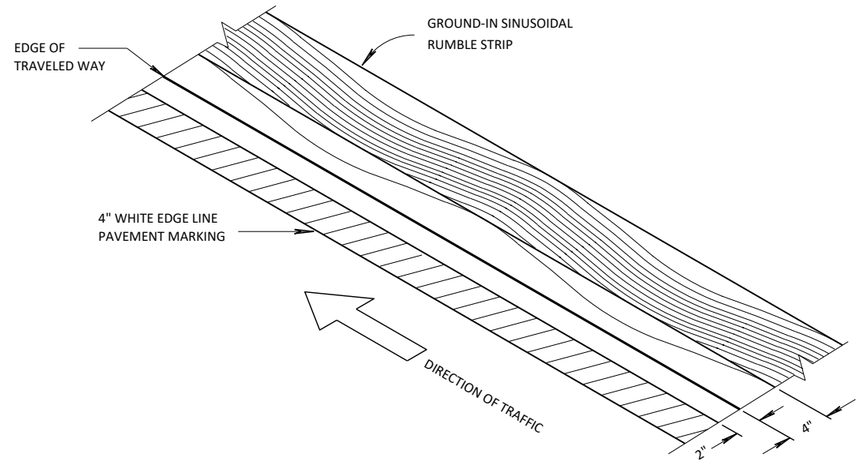
LOCATION	DEPTH INCHES
a	1/16"
b	5/32"
c	9/32"
d	7/16"
e	1/2"

GENERAL NOTES

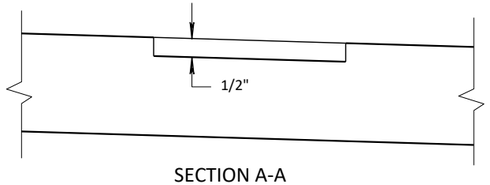
DETAILS OF CONSTRUCTION SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

DO NOT MILL SHOULDER GROOVES THROUGH ANY INTERSECTION, MARKED CROSSWALK, NON-MOTORIZED PATH CROSSING, OR SNOWMOBILE CROSSING.

(1) SHOULDER GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS, WHEN DIRECTED BY THE ENGINEER.



ISOMETRIC



SECTION A-A

ASPHALTIC SHOULDER RUMBLE STRIP, SINUSOIDAL, 2-LANE RURAL

PROJECT NO: 7373-00-71	HWY: CTH ET	COUNTY: MONROE	CONSTRUCTION DETAILS - SHOULDER RUMBLE STRIPS	SHEET 19	E

2

N

ROAD CLOSED
TO THRU TRAFFIC
1 MILES AHEAD
R11-3
60"X30"

FLAGSHIP AVE.

CANADIAN PACIFIC RR

END
ROAD WORK
G20-2A
48"X24"

BEGIN PROJECT
STA. 105+50

CTH ET

ROAD CLOSED
1000 FT
W20-3C

ROAD CLOSED
500 FT
W20-3D

FLARE AVE.

ROAD WORK
AHEAD
W20-1A

500'

100'

ROAD CLOSED
TO
THRU TRAFFIC
R11-4
60"X30"

110

115

UNION PACIFIC RR

PC: 111+34.14

PT: 112+02.23

SEE TRAFFIC CONTROL DETAIL

END CONSTRUCTION
STA. 115+26.95

600'

32'

STH 21

ROAD CLOSED
TO THRU TRAFFIC
1 MILES AHEAD
R11-3
60"X30"

LEGEND:

- POST MOUNTED SIGN
- TYPE III BARRICADE WITH/WITHOUT SIGN
- WORK AREA

* PLACE SIGN AT LAST INTERSECTION PRIOR TO CLOSURE

① TYPE III BARRICADE

R11-4
60"X30"
ROAD CLOSED
TO
THRU TRAFFIC

TYPE III BARRICADE

THE EXACT LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTEDTO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

"WO" AND "MO" SIGNS ARE THE SAME AS "W" AND "M" SIGNS, EXCEPT THE BACKGROUND IS ORANGE.

ALL "W" AND "WO" SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED.

ANY STOP SIGNS WHICH ARE REMOVED FOR A CONSTRUCTION OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED.

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

THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL NECESSARY BARRICADES, SIGNS, LIGHTS, TEMPORARY MARKINGS, FLAGGERS AND SUCH OTHER SAFETY DEVICES AS CALLED FOR ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200' CLEARANCE TO EXISTING SIGNS.

DURING HOURS OF DARKNESS, ALL BARRICADES USED TO SHIELD A HAZARD SHALL BE EQUIPPED WITH TYPE "A" (LOW INTENSITY FLASHING) LIGHTS.

DRAWINGS SHOW TRAFFIC CONTROL FOR A TYPICAL SITUATION. ADDITIONAL TRAFFIC CONTROL DEVICES MAY BE REQUIRED AND/OR LAYOUT DETAILS MODIFIED DEPENDING ON CONTRACTOR'S METHODS OR SEQUENCES OF OPERATION.

ROAD MACHINERY, FLAGGERS AHEAD, ETC. SIGNS SHALL BE USED AS NEEDED AND SHALL BE REMOVED OR COVERED AT NIGHTS, ON WEEKENDS OR WHEN THE ACTIVITY DOES NOT EXIST.

ADDITIONAL DRUMS OR TYPE III BARRICADES MAY BE REQUIRED ADJACENT TO DROP-OFFS, OPEN TRENCHES, OR PROTRUSIONS. COST TO BE INCLUDED WITH OPERATION WHICH CREATES THE HAZARD.

DRUMS PLACED ADJACENT TO WORK AREAS SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

PROJECT NO: 7373-00-71	HWY: CTH ET	COUNTY: MONROE	TRAFFIC CONTROL OVERVIEW	SHEET 20	E

2

THE EXACT LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTEDTO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

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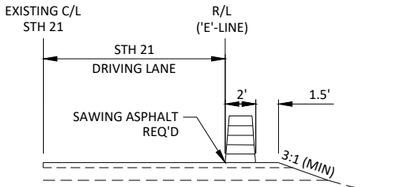
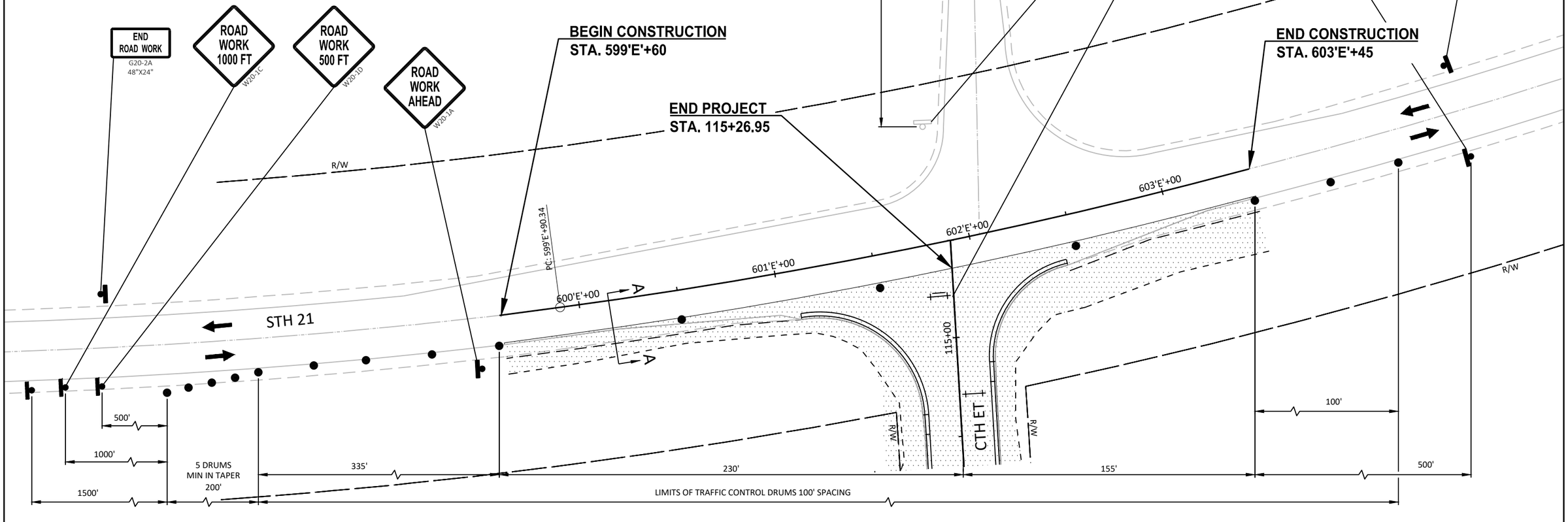
SDD TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY

LEGEND:

- POST MOUNTED SIGN
- EXISTING SIGN ON SINGLE POST
- TYPE III BARRICADE WITH/WITHOUT SIGN
- DIRECTION OF TRAFFIC FLOW
- ESTR — EXISTING SIGN TO REMAIN
- TRAFFIC CONTROL DRUM

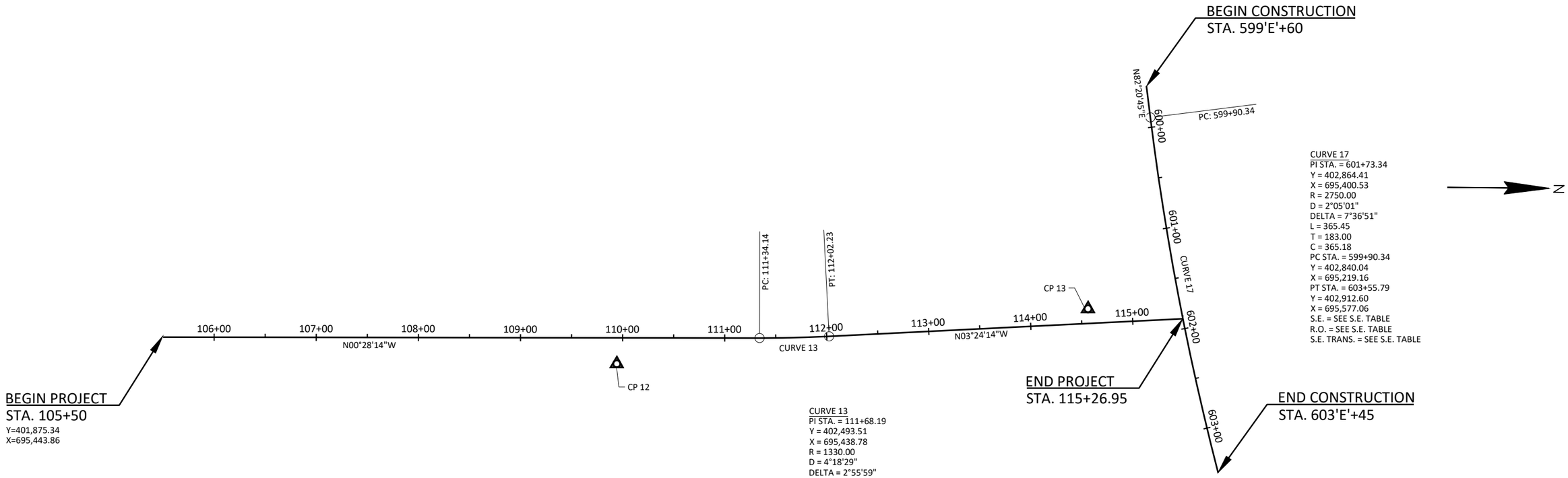


SECTION A-A

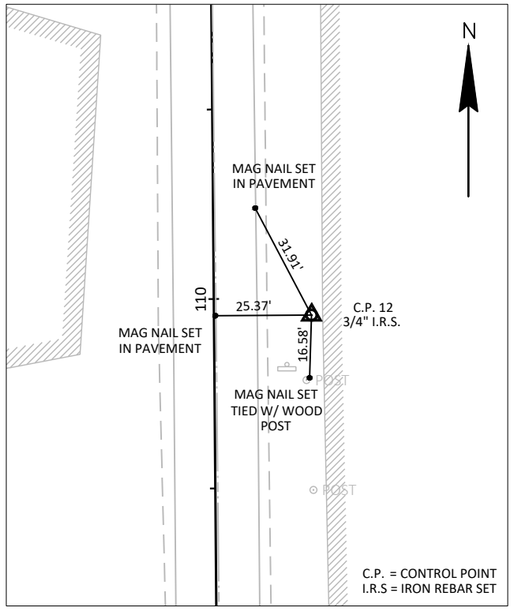


PROJECT NO: 7373-00-71	HWY: CTH ET	COUNTY: MONROE	TRAFFIC CONTROL DETAIL	SHEET 21	E

2

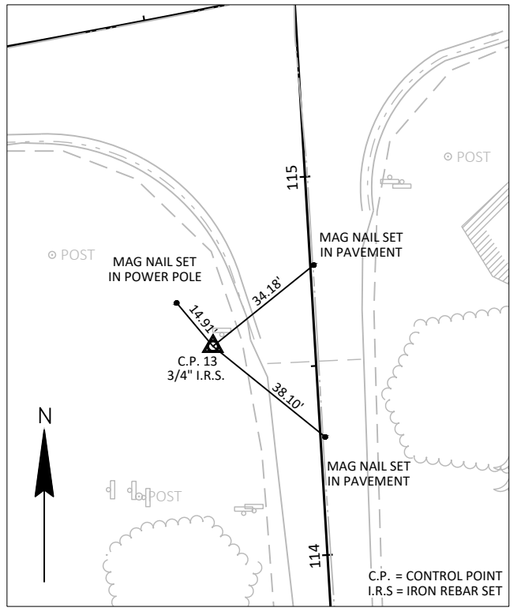

BEGIN CONSTRUCTION
STA. 599'E'+60
N82°20'45"E
PC: 599+90.34
600+00
601+00
602+00
603+00
CURVE 17
CURVE 17
PI STA. = 601+73.34
Y = 402,864.41
X = 695,400.53
R = 2750.00
D = 2°05'01"
DELTA = 7°36'51"
L = 365.45
T = 183.00
C = 365.18
PC STA. = 599+90.34
Y = 402,840.04
X = 695,219.16
PT STA. = 603+55.79
Y = 402,912.60
X = 695,577.06
S.E. = SEE S.E. TABLE
R.O. = SEE S.E. TABLE
S.E. TRANS. = SEE S.E. TABLE
N
CP 13
CP 12
PC: 111+34.14
PT: 112+02.23
106+00
107+00
108+00
109+00
110+00
111+00
112+00
113+00
114+00
115+00
N00°28'14"W
CURVE 13
N03°24'14"W
BEGIN PROJECT
STA. 105+50
Y=401,875.34
X=695,443.86
END PROJECT
STA. 115+26.95
END CONSTRUCTION
STA. 603'E'+45
CURVE 13
PI STA. = 111+68.19
Y = 402,493.51
X = 695,438.78
R = 1330.00
D = 4°18'29"
DELTA = 2°55'59"
L = 68.09
T = 34.05
C = 68.08
PC STA. = 111+34.14
Y = 402,459.46
X = 695,439.06
PT STA. = 112+02.23
Y = 402,527.50
X = 695,436.76
S.E. = SEE S.E. TABLE
R.O. = SEE S.E. TABLE
S.E. TRANS. = SEE S.E. TABLE

2



TIES TO C.P.#12

STA. 109+95.56, 25.76' RT
Y = 402,321.09
X = 695,465.96



TIES TO C.P.#13

STA. 114+56.78, 26.93' LT
Y = 402,780.00
X = 695,394.77

PROJECT NO: 7373-00-71	HWY: CTH ET	COUNTY: MONROE	CONTROL POINT TIES	SHEET 23	E

Estimate Of Quantities

7373-00-71

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	4.000	4.000
0004	201.0205	Grubbing	STA	4.000	4.000
0006	204.0150	Removing Curb & Gutter	LF	160.000	160.000
0008	205.0100	Excavation Common	CY	3,910.000	3,910.000
0010	210.1500	Backfill Structure Type A	TON	800.000	800.000
0012	213.0100	Finishing Roadway (project) 01. 7373-00-71	EACH	1.000	1.000
0014	305.0110	Base Aggregate Dense 3/4-Inch	TON	140.000	140.000
0016	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	3,575.000	3,575.000
0018	455.0605	Tack Coat	GAL	205.000	205.000
0020	460.2000	Incentive Density HMA Pavement	DOL	600.000	600.000
0022	460.5223	HMA Pavement 3 LT 58-28 S	TON	520.000	520.000
0024	460.5224	HMA Pavement 4 LT 58-28 S	TON	400.000	400.000
0026	465.0315	Asphaltic Flumes	SY	26.000	26.000
0028	511.1300	Temporary Shoring (location) 01. Union Pacific Railroad	SF	525.000	525.000
0030	521.1018	Apron Endwalls for Culvert Pipe Steel 18-Inch	EACH	2.000	2.000
0032	521.3118	Culvert Pipe Corrugated Steel 18-Inch	LF	24.000	24.000
0034	601.0415	Concrete Curb & Gutter 6-Inch Sloped 30-Inch Type J	LF	600.000	600.000
0036	601.0557	Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type D	LF	180.000	180.000
0038	603.1442	Concrete Barrier Type S42C	LF	100.000	100.000
0040	604.0500	Slope Paving Crushed Aggregate	SY	30.000	30.000
0042	614.0200	Steel Thrie Beam Structure Approach	LF	42.000	42.000
0044	614.0370	Steel Plate Beam Guard Energy Absorbing Terminal	EACH	2.000	2.000
0046	614.2500	MGS Thrie Beam Transition	LF	80.000	80.000
0048	614.2610	MGS Guardrail Terminal EAT	EACH	2.000	2.000
0050	618.0100	Maintenance And Repair of Haul Roads (project) 01. 7373-00-71	EACH	1.000	1.000
0052	619.1000	Mobilization	EACH	1.000	1.000
0054	624.0100	Water	MGAL	56.000	56.000
0056	625.0500	Salvaged Topsoil	SY	6,000.000	6,000.000
0058	627.0200	Mulching	SY	5,910.000	5,910.000
0060	628.1504	Silt Fence	LF	465.000	465.000
0062	628.1520	Silt Fence Maintenance	LF	465.000	465.000
0064	628.1905	Mobilizations Erosion Control	EACH	3.000	3.000
0066	628.1910	Mobilizations Emergency Erosion Control	EACH	1.000	1.000
0068	628.2004	Erosion Mat Class I Type B	SY	110.000	110.000
0070	628.7504	Temporary Ditch Checks	LF	100.000	100.000
0072	628.7515.S	Stone Ditch Checks	CY	1.800	1.800
0074	628.7555	Culvert Pipe Checks	EACH	2.000	2.000
0076	629.0210	Fertilizer Type B	CWT	4.000	4.000
0078	630.0120	Seeding Mixture No. 20	LB	200.000	200.000
0080	630.0200	Seeding Temporary	LB	50.000	50.000
0082	630.0500	Seed Water	MGAL	65.000	65.000
0084	631.1000	Sod Lawn	SY	25.000	25.000
0086	633.0500	Delineator Reflectors	EACH	6.000	6.000
0088	633.1000	Delineators Barrier Wall	EACH	6.000	6.000
0090	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	7.000	7.000
0092	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	2.000	2.000
0094	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	5.000	5.000
0096	637.2210	Signs Type II Reflective H	SF	50.680	50.680
0098	637.2230	Signs Type II Reflective F	SF	45.250	45.250

7373-00-71

Line	Item	Item Description	Unit	Total	Qty
0100	638.2602	Removing Signs Type II	EACH	10.000	10.000
0102	638.3000	Removing Small Sign Supports	EACH	9.000	9.000
0104	642.5001	Field Office Type B	EACH	1.000	1.000
0106	643.0300	Traffic Control Drums	DAY	660.000	660.000
0108	643.0420	Traffic Control Barricades Type III	DAY	265.000	265.000
0110	643.0705	Traffic Control Warning Lights Type A	DAY	530.000	530.000
0112	643.0715	Traffic Control Warning Lights Type C	DAY	220.000	220.000
0114	643.0900	Traffic Control Signs	DAY	660.000	660.000
0116	643.5000	Traffic Control	EACH	1.000	1.000
0118	645.0130	Geotextile Type R	SY	24.000	24.000
0120	646.1020	Marking Line Epoxy 4-Inch	LF	3,810.000	3,810.000
0122	646.3020	Marking Line Epoxy 8-Inch	LF	260.000	260.000
0124	646.6120	Marking Stop Line Epoxy 18-Inch	LF	30.000	30.000
0126	650.4500	Construction Staking Subgrade	LF	1,365.000	1,365.000
0128	650.5000	Construction Staking Base	LF	1,365.000	1,365.000
0130	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	780.000	780.000
0132	650.6000	Construction Staking Pipe Culverts	EACH	1.000	1.000
0134	650.9911	Construction Staking Supplemental Control (project) 01. 7373-00-71	EACH	1.000	1.000
0136	650.9920	Construction Staking Slope Stakes	LF	1,365.000	1,365.000
0138	690.0150	Sawing Asphalt	LF	412.000	412.000
0140	715.0603	Incentive Strength Concrete Barrier	DOL	50.000	50.000
0142	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	1,200.000	1,200.000
0144	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	600.000	600.000
0146	SPV.0090	Special 01. Asphaltic Centerline Rumble Strip, Sinusoidal, 2-Lane Rural	LF	800.000	800.000
0148	SPV.0090	Special 02. Asphaltic Shoulder Rumble Strip, Sinusoidal, 2-Lane Rural	LF	1,080.000	1,080.000

ALL BID ITEMS ARE CATEGORY 010 UNLESS OTHERWISE NOTED

3

CLEARING & GRUBBING

STATION - STATION	LOCATION	CLEARING 201.0105 (STA.)	GRUBBING 201.0205 (STA.)
111+00 - 115+00	MAINLINE, RT.	4	4
	TOTALS =	4	4

REMOVING CURB & GUTTER

STATION - STATION	LOCATION	204.0150 REMOVING CURB & GUTTER (TON)
114+58 - 115+16	MAINLINE, LT.	96
114+90 - 115+35	MAINLINE, RT.	64
	TOTALS =	160

EARTHWORK SUMMARY

CATEGORY	STATION - STATION	LOCATION	205.0100 COMMON EXCAVATION CUT (1) (CY)	AVAILABLE MATERIAL (CY) (2)	UNEXPANDED FILL (CY)	EXPANDED FILL (CY) FACTOR 1.25 (3)	MASS ORDINATE +/- (CY) (4)	WASTE (CY)
010	105+50 - 115+26.95	MAINLINE	3760	3760	140	175	3585	3585
	599+60 - 603+45	STH 21	150	150	60	75	75	75
		SUBTOTALS =	3910	3910	200	250	3660	3660
		TOTALS =	3910	3910	200	250	3660	3660

NOTES:
1.) SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN CUT
2.) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSABLE PAVEMENT MATERIAL
3.) EXPANDED FILL FACTOR 1.25: EXPANDED FILL = UNEXPANDED FILL*1.25
4.) THE MASS ORDINATE+ OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE CATEGORY. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE CATEGORY

BASE AGGREGATE DENSE

STATION - STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH (TON)	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH (TON)
11+00 - 115+27	MAINLINE	50	3,200
599'E'+60 - 603'E'+45	STH 21	52	375
-	P.E. / F.E.	38	-
	TOTALS =	140	3,575

ASPHALTIC FLUMES

STATION	LOCATION	465.0315 (SY)
111+02	MAINLINE, LT.	13
111+11	MAINLINE, RT.	13
	TOTAL =	26

HMA PAVEMENT

STATION - STATION	LOCATION	455.0605 TACK COAT (GAL)	460.5223 HMA PAVEMENT 3LT58-28S (TON)	460.5224 HMA PAVEMENT 4LT58-28S (TON)
11+00 - 115+27	MAINLINE	192	490	374
599'E'+60 - 603'E'+45	STH 21	12	30	23
-	P.E.	1	-	3
	TOTALS =	205	520	400

CONCRETE BARRIER

STATION - STATION	LOCATION	210.1500 BACKFILL STRUCTURE TYPE A (TON)	511.1300 TEMPORARY SHORING (SF)	603.1442 CONCRETE BARRIER TYPE S42C (LF)	604.0500 SLOPE PAVING CRUSHED AGGREGATE (SY)	*633.0500 DELINEATOR REFLECTORS (EACH)	*633.1000 DELINEATOR BARRIER WALL (EACH)
112+00 - 112+50	MAINLINE, LT.	800	-	50	20	3	3
112+10 - 112+60	MAINLINE, RT.	-	525	50	10	3	3
	TOTALS=	800	525	100	30	6	6

*NOTE: PLACE ONE DELINEATOR AT EACH END OF CONCRETE BARRIER AND ONE DELINEATOR IN MIDDLE OF CONCRETE BARRIER

CULVERT PIPE

STATION	LOCATION	521.3118 CULVERT PIPE CORRUGATED STEEL 18-INCH (LF)	521.1018 APRON ENDWALLS FOR CULVERT PIPE STEEL 18-INCH (EACH)	628.7555 CULVERT PIPE CHECKS (EACH)	650.6000 CONSTRUCTION STAKING CULVERT PIPES (EACH)
106+98	MAINLINE, LT.	24	2	2	1
	TOTALS =	24	2	2	1

MINIMUM THICKNESS (INCHES)	
PIPE SIZE	STEEL
18 - INCH	0.064

WATER

LOCATION	624.0100 (MGAL)
PROJECT	56
TOTALS =	56

CONCRETE CURB & GUTTER

STATION-STATION	LOCATION	601.0415 6-INCH SLOPED 30-INCH TYPE J (LF)	601.0557 6-INCH SLOPED 36-INCH TYPE D (LF)	650.5500 CONSTRUCTION STAKING CURB & GUTTER (LF)
111+09 - 112+00	MAINLINE, LT.	90	-	90
111+20 - 112+10	MAINLINE, RT.	91	-	91
112+50 - 114+52	MAINLINE, LT.	202	-	202
112+60 - 114+77	MAINLINE, RT.	217	-	217
114+52 - 115+17	MAINLINE, LT.	-	100	100
114+77 - 115+36	MAINLINE, RT.	-	80	80
	TOTALS =	600	180	780

BEAM GUARD

STATION-STATION	LOCATION	614.0200 STEEL THRIE BEAM STRUCTURE APPROACH (LF)	614.0370 STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL (EACH)	614.2500 MGS THRIE BEAM TRANSITION (LF)	614.2610 MGS GUARDRAIL TERMINAL EAT (EACH)
111+09 - 112+00	MAINLINE, LT	-	-	40	1
111+20 - 112+10	MAINLINE, RT	-	-	40	1
112+50 - 113+19	MAINLINE, LT	21	1	-	-
112+60 - 113+29	MAINLINE, RT	21	1	-	-
	TOTALS =	42	2	80	2

ALL BID ITEMS ARE CATEGORY 010 UNLESS OTHERWISE NOTED

3

FINISHING ITEMS

STATION - STATION	LOCATION	625.0500 SALVAGED TOPSOIL (SY)	627.0200 MULCHING (SY)	629.0210 FERTILIZER TYPE B (CWT)	630.0120 SEEDING MIXTURE NO. 20 (LB)	630.0200 SEEDING TEMPORARY (LB)	630.0500 SEED WATER (MGAL)
105+50 - 115+26.95	MAINLINE	4400	4325	2.9	140	-	-
599'E'+60 - 603'E'+45	STH 21	400	400	0.4	20	-	-
UNDISTRIBUTED	PROJECT	1200	1185	0.7	40	50	65
	TOTALS=	6000	5910	4.0	200	50	65

SILT FENCE

STATION - STATION	LOCATION	628.1504 SILT FENCE (LF)	628.1520 SILT FENCE MAINTENANCE (LF)
111+10 - 115+26.95	MAINLINE, RT.	159	159
111+10 - 115+26.95	MAINLINE, LT	212	212
	UNDISTIBUTED	94	94
	TOTALS =	465	465

MOBILIZATION EROSION CONTROL

PROJECT	628.1905 MOBILIZATION EROSION CONTROL (EACH)	628.1910 MOBILIZATION EMERGENCY EROSION CONTROL (EACH)
7373-00-71	3	1
TOTALS =	3	1

3

EROSION MAT

STATION - STATION	LOCATION	628.2004 EROSION MAT CLASS I TYPE B SY
111+30 - 112+60	MAINLINE, LT.	75
106+80	MAINLINE, LT.	13
	UNDISTRIBUTED	22
	TOTALS =	110

SOD LAWN

STATION	LOCATION	631.1000 (SY)
110+80	MAINLINE, LT.	10
110+90	MAINLINE, RT.	10
	UNDISTRIBUTED	5
	TOTAL =	25

TEMPORARY DITCH CHECKS

STATION	LOCATION	628.7504 (LF)
106+00	MAINLINE, LT	10
106+00	MAINLINE, RT.	10
107+50	MAINLINE, RT	10
108+00	MAINLINE, LT.	10
109+00	MAINLINE, RT.	10
110+00	MAINLINE, RT	10
110+50	MAINLINE, LT.	10
110+75	MAINLINE, RT.	10
	UNDISTRIBUTED	20
	SUBTOTAL =	100

STONE DITCH CHECKS

STATION	LOCATION	*628.7515.S STONE DITCH CHECKS (CY)	645.0130 GEOTEXTILE TYPE R (SY)
111+35	MAINLINE, LT	0.6	8
111+35	MAINLINE, RT	0.6	8
-	UNDISTRIBUTED	0.6	8
	TOTAL =	1.8	24

*TEMPORARY STONE DITCH CHECKS

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
1-00	104+75	MAINLINE	RIGHT	W12-2	LOW CLEARANCE	14'0"	36X36	-	9.00	-	-	1	-	-	-
1-01R	106+60	MAINLINE	RIGHT	W12-2	LOW CLEARANCE	13'6"	-	-	-	-	-	-	1	1	-
1-02	107+50	MAINLINE	RIGHT	W3-1	STOP AHEAD	-	36X36	-	9.00	-	-	1	-	-	-
1-03	108+75	MAINLINE	LEFT	W2-2	T - INTERSECTION	-	30X30	-	6.25	-	1	-	-	-	-
1-04R	109+85	MAINLINE	RIGHT	W3-1	STOP AHEAD	-	-	-	-	-	-	-	1	1	-
1-05	112+10	MAINLINE	LEFT	W5-52L	BRIDGE HASH MARKS	-	12X36	-	3.00	1	-	-	-	-	-
1-06	112+30	MAINLINE	LEFT	W5-52R	BRIDGE HASH MARKS	-	12X36	-	3.00	1	-	-	-	-	-
1-07	112+20	MAINLINE	RIGHT	W5-52R	BRIDGE HASH MARKS	-	12X36	-	3.00	1	-	-	-	-	-
1-08	112+45	MAINLINE	RIGHT	W5-52L	BRIDGE HASH MARKS	-	12X36	-	3.00	1	-	-	-	-	-
2-00	114+10	MAINLINE	LEFT	W12-2	LOW CLEARANCE	14'0"	36X36	-	9.00	-	-	1	-	-	-
2-01R	114+15	MAINLINE	LEFT	D11-10	ATV ROUTE	-	-	-	-	-	-	-	1	1	-
2-02R	114+15	MAINLINE	LEFT	W12-2	LOW CLEARANCE	13'6"	-	-	-	-	-	-	1	1	-
2-03R	114+15	MAINLINE	LEFT		SUPPLEMENTAL PLAQUE	LOW CLEARANCE	-	-	-	-	-	-	1	-	2-02R
2-04	114+60	MAINLINE	LEFT	D11-10	ATV ROUTE	-	24X18	3.00	-	1	-	-	-	-	-
2-05	114+60	MAINLINE	LEFT	R12-1	WEIGHT LIMIT	40 TONS	24X30	5.00	-	1	-	-	-	-	-
2-06R	114+60	MAINLINE	LEFT	R12-1	WEIGHT LIMIT	40 TONS	-	-	-	-	-	-	1	1	-
2-07	114+95	MAINLINE	RIGHT	J13-2	M1-5A, M6-6L; M1-6, M6-4	M, LEFT AND UP ARROW; 21, LEFT AND RIGHT ARROW	48X45	15.00	-	-	-	1	-	-	-
2-08R	114+95	MAINLINE	RIGHT	J13-2	M1-5A, M6-6L; M1-6, M6-4	M, LEFT AND UP ARROW; 21, LEFT AND RIGHT ARROW	-	-	-	-	-	-	1	1	-
2-09	115+00	MAINLINE	RIGHT	R1-1	STOP	-	30X30	5.18	-	1	-	-	-	-	-
2-10R	115+00	MAINLINE	RIGHT	R1-1	STOP	-	-	-	-	-	-	-	1	1	-
2-11	601'E'+05	STH 21	RIGHT	J13-2	M1-5A, M6-1; M1-5A, M6-1	M, LEFT ARROW; ET, RIGHT ARROW	48X45	15.00	-	-	-	1	-	-	-
2-12R	601'E'+05	STH 21	RIGHT	J13-2	M1-5A, M6-1; M1-5A, M6-2	M, LEFT ARROW; ET, RIGHT ARROW	-	-	-	-	-	-	1	1	-
2-13	603'E'+25	STH 21	RIGHT	I55-56	ADPOT-A-HIGHWAY	-	30X18	3.75	-	-	1	-	-	-	-
2-14	603'E'+25	STH 21	RIGHT	I55-56P	ADOPT-A-HIGHWAY SPONSOR NAME	TOMAH HIGH SCHOOL SCIENCE OLYMPIAD	30X18	3.75	-	-	-	-	-	-	2-13
2-15R	603'E'+25	STH 21	RIGHT	I55-56	ADPOT-A-HIGHWAY	TOMAH HIGH SCHOOL SCIENCE OLYMPIAD	-	-	-	-	-	-	1	1	-
						PROJECT TOTALS =		50.68	45.25	7.00	2.00	5.00	10.00	9.00	

ALL BID ITEMS ARE CATEGORY 010 UNLESS OTHERWISE NOTED

TRAFFIC CONTROL

LOCATION	643.0300 DRUMS (DAY)	643.0420 BARRICADES TYPE III (DAY)	643.0705 WARNING LIGHTS TYPE A (DAY)	643.0715 WARNING LIGHTS TYPE C (DAY)	643.0900 SIGNS (DAY)	643.5000 TRAFFIC CONTROL (EACH)
MAINLINE	-	265	530	-	395	-
STH 21	660	-	-	220	265	-
PROJECT	-	-	-	-	-	1
TOTALS =	660	265	530	220	660	1

PAVEMENT MARKING

STATION - STATION	LOCATION	DESCRIPTION	MARKING LINE 646.1020 EPOXY 4-INCH YELLOW SOLID (LF)	MARKING LINE 646.1020 EPOXY 4-INCH WHITE SOLID (LF)	MARKING LINE 646.3020 EPOXY 8-INCH WHITE SOLID (LF)	MARKING LINE 646.6120 STOP LINE EPOXY 18-INCH (LF)
105+50 - 115+23	MAINLINE	DOUBLE YELLOW	1950	-	-	-
105+50 - 114+62	MAINLINE, LT.	WHITE EDGELINE	-	920	-	-
105+50 - 114+87	MAINLINE, RT.	WHITE EDGELINE	-	940	-	-
115+23	MAINLINE	STOP BAR	-	-	-	30
599'E'+60 - 601'E'+07	STH 21, RT.	WHITE EDGELINE	-	-	150	-
602'E'+45 - 603'E'+45	STH 21, RT.	WHITE EDGELINE	-	-	110	-
		TOTALS=	1950	1860	260	30

CONSTRUCTION STAKING

STATION - STATION	LOCATION	CONSTRUCTION STAKING 650.4500 SUBGRADE (LF)	650.5000 BASE (LF)	650.9911 SUPPLEMENTAL CONTROL (01. 7373-00-70) (EACH)	650.9920 SLOPE STAKES (LF)
105+50 - 115+26.95	MAINLINE	980	980	-	980
599'E'+60 - 603'E'+45	STH 21	385	385	-	385
-	PROJECT	-	-	1	-
	TOTALS =	1365	1365	1	1365

SAWING ASPHALT

STATION - STATION	LOCATION	690.0150 SAWING ASPHALT (LF)	COMMENTS
105+50	MAINLINE	22	
599'E'+60 - 603'E'+45	STH 21, RT.	390	SAWCUT AT THE END OF CTH ET AND RIGHT EDGE OF STH 21
	TOTAL=	412	

RUMBLE STRIPS

STATION - STATION	LOCATION	SPV.0090.01 ASPHALTIC CENTERLINE RUMBLE STRIP, SINUSOIDAL, 2-LANE RURAL (LF)	SPV.0090.02 ASPHALTIC SHOULDER RUMBLE STRIP, SINUSOIDAL, 2-LANE RURAL (LF)
105+50 - 113+50	MAINLINE	800	-
105+50 - 110+85	MAINLNE, LT.	-	535
105+50 - 110+95	MAINLINE, RT.	-	545
	TOTALS=	800	1080

R/W PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS
7373-00-00		
FEDERAL PROJECT NUMBER	4.01	10

PLAT OF RIGHT-OF-WAY REQUIRED FOR

TOWN OF TOMAH – TOWN OF LA GRANGE

(CITY OF TOMAH TO STH 21)

CTH ET — MONROE COUNTY

CONSTRUCTION PROJECT NUMBER
7373-00-70

CONVENTIONAL ABBREVIATIONS

ACCESS POINT/ DRIVEWAY CONNECTION	AP	PROPERTY LINE	PL
ACCESS RIGHTS	AR	RECORDED AS	(100')
ACRES	AC	REFERENCE LINE	R/L
AND OTHERS	ET AL	RELEASE OF RIGHTS	ROR
BARN	B	REMAINING	REM.
CENTERLINE	C/L	RIGHT-OF-WAY	R/W
CERTIFIED SURVEY MAP	CSM	SECTION	SEC.
CORNER	COR	SHED	S.
CONVEYANCE OF RIGHTS	CR	STATION	STA.
DOCUMENT	DOC	TEMPORARY LIMITED EASEMENT	TLE
EASEMENT	EASE	VOLUME	V.
GARAGE	G		
HIGHWAY EASEMENT	H.E.		
HOUSE	H		
HOUSE TRAILER	H.T.		
LAND CONTRACT	LC		
MONUMENT	MON		
PAGE	P		
PERMANENT LIMITED EASEMENT	PLE		

CURVE DATA

LONG CHORD	LCH
LONG CHORD BEARING	LCB
RADIUS	R
DEGREE OF CURVE	D
CENTRAL ANGLE OR DELTA	DELTA
LENGTH OF CURVE	L
TANGENT	TAN

CONVENTIONAL SYMBOLS

FOUND SURVEY MONUMENT (WITH POINT NUMBER)	1040	PROPOSED R/W LINE
R/W MONUMENT	(SET)	EXISTING H.E. LINE
R/W STANDARD	(SET)	PROPERTY LINE
SIGN	SIGN	LOT & TIE LINES
SECTION CORNER MONUMENT		SLOPE INTERCEPTS
SECTION CORNER SYMBOL		CORPORATE LIMITS
FEE (HATCH VARIES)		NO ACCESS (BY PREVIOUS ACQUISITION/CONTROL)
TEMPORARY LIMITED EASEMENT		NO ACCESS (BY ACQUISITION)
PERMANENT LIMITED EASEMENT		NO ACCESS (BY STATUTORY AUTHORITY)
R/W BOUNDARY POINT	RW120	SECTION LINE
PARCEL NUMBER	8	QUARTER LINE
UTILITY PARCEL NUMBER	92	SIXTEENTH LINE
SIGN NUMBER (OFF PREMISE)	21-1	EXISTING CENTERLINE
BUILDING		PROPOSED REFERENCE LINE
		PARALLEL OFFSET
		ENCROACHMENT — TYPE
		HIGHWAY EASEMENT

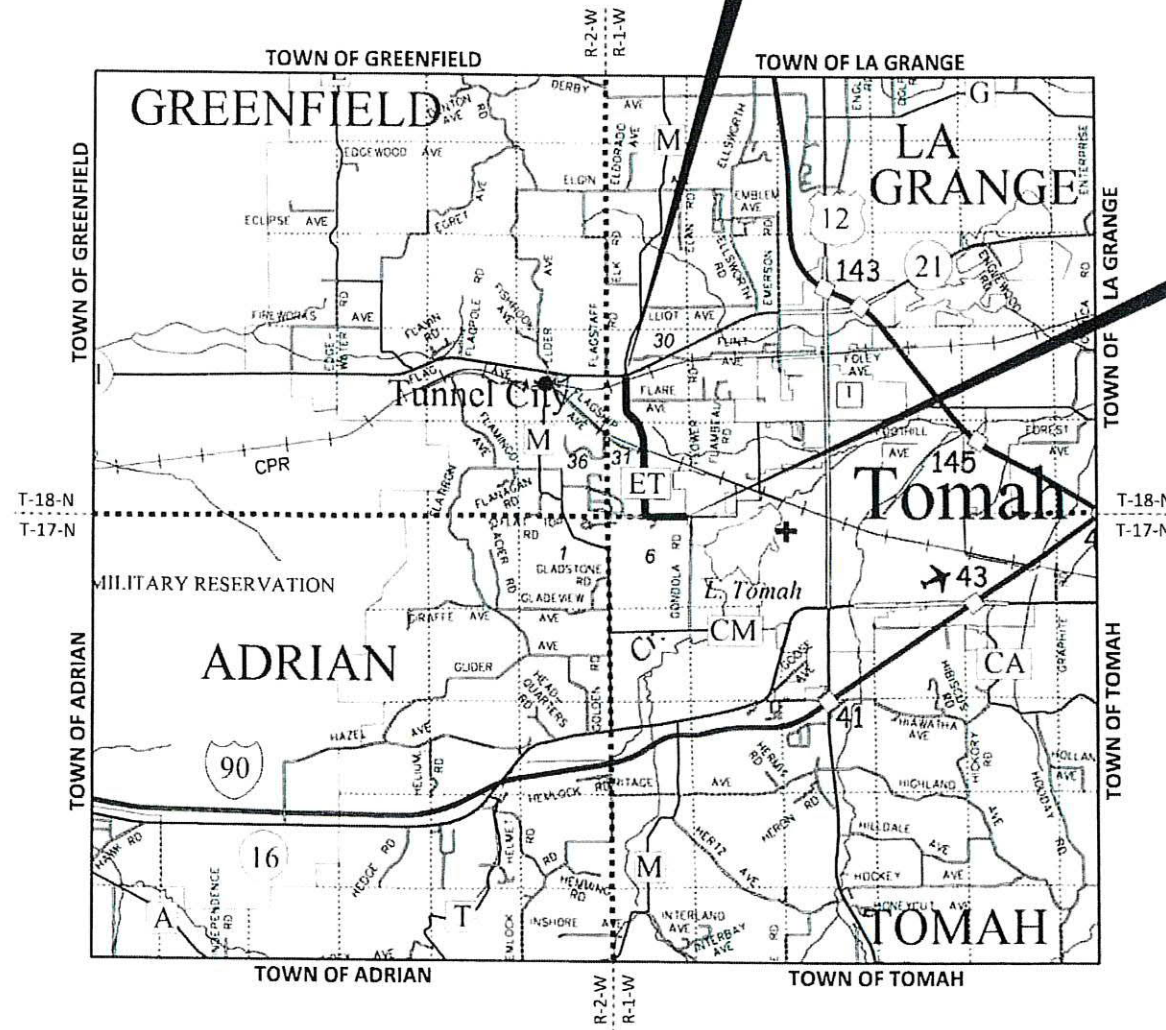
CONVENTIONAL UTILITY SYMBOLS

WATER	W	SANITARY SEWER	SAN
GAS	G	STORM SEWER	SS
TELEPHONE	T		
OVERHEAD TRANSMISSION LINES	OH		
ELECTRIC	E		
CABLE TELEVISION	TV		
FIBER OPTIC	FO		

	NON COMPENSABLE	COMPENSABLE
POWER POLE		
TELEPHONE POLE		
TELEPHONE PEDESTAL		
ELECTRIC TOWER		

END RELOCATION ORDER
STA. 115+26.95
103.82' NORTH AND 1082.47' EAST OF THE W¼ CORNER OF SECTION 30 T 18N , R 1W , TOWN OF LA GRANGE, MONROE COUNTY, WI
Y= 402851.64
X= 695417.48

BEGIN RELOCATION ORDER
STA. 11+00
30.06' SOUTH AND 319.20' WEST OF THE S.E CORNER OF SECTION 31, T 18N , R 1W , TOWN OF LA GRANGE, MONROE COUNTY, WI
Y= 394869.79
X= 698829.97



LAYOUT

SCALE 0 — 2 MI

TOTAL NET LENGTH OF CENTERLINE = 1.975 MI

NOTES

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATES, MONROE COUNTY, NAD 83 (2011) IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ALL NEW RIGHT-OF-WAY MONUMENTS WILL BE TYPE 2 MONUMENTS (TYPICALLY ¾ X 24" IRON REBARS), UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS OF PUBLIC RECORD."

FOR CURRENT ACCESS/DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE IN LACROSSE.

ALL RIGHT-OF-WAY LINES DEPICTED IN THE NON-ACQUISITION AREAS ARE INTENDED TO RE-ESTABLISH EXISTING RIGHT-OF-WAY LINES AS DETERMINED FROM PREVIOUS PROJECTS, OTHER RECORDED DOCUMENTS, OR FROM CENTERLINE OF EXISTING PAVEMENTS.

DIMENSIONING FOR THE NEW RIGHT-OF-WAY IS MEASURED ALONG AND PERPENDICULAR TO THE NEW REFERENCE LINES.

A TEMPORARY LIMITED EASEMENT (TLE) IS A RIGHT FOR CONSTRUCTION PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON, THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM DESIRABLE. ALL (TLEs) ON THIS PLAT EXPIRE AT THE COMPLETION OF THE CONSTRUCTION PROJECT FOR WHICH THIS INSTRUMENT IS GIVEN.

THIS PLAT IS A GRAPHIC REPRESENTATION AND IS FOR REFERENCE PURPOSE ONLY. DEEDS MUST BE CHECKED TO DETERMINE PROPERTY BOUNDARIES AND ACCESS RIGHTS.

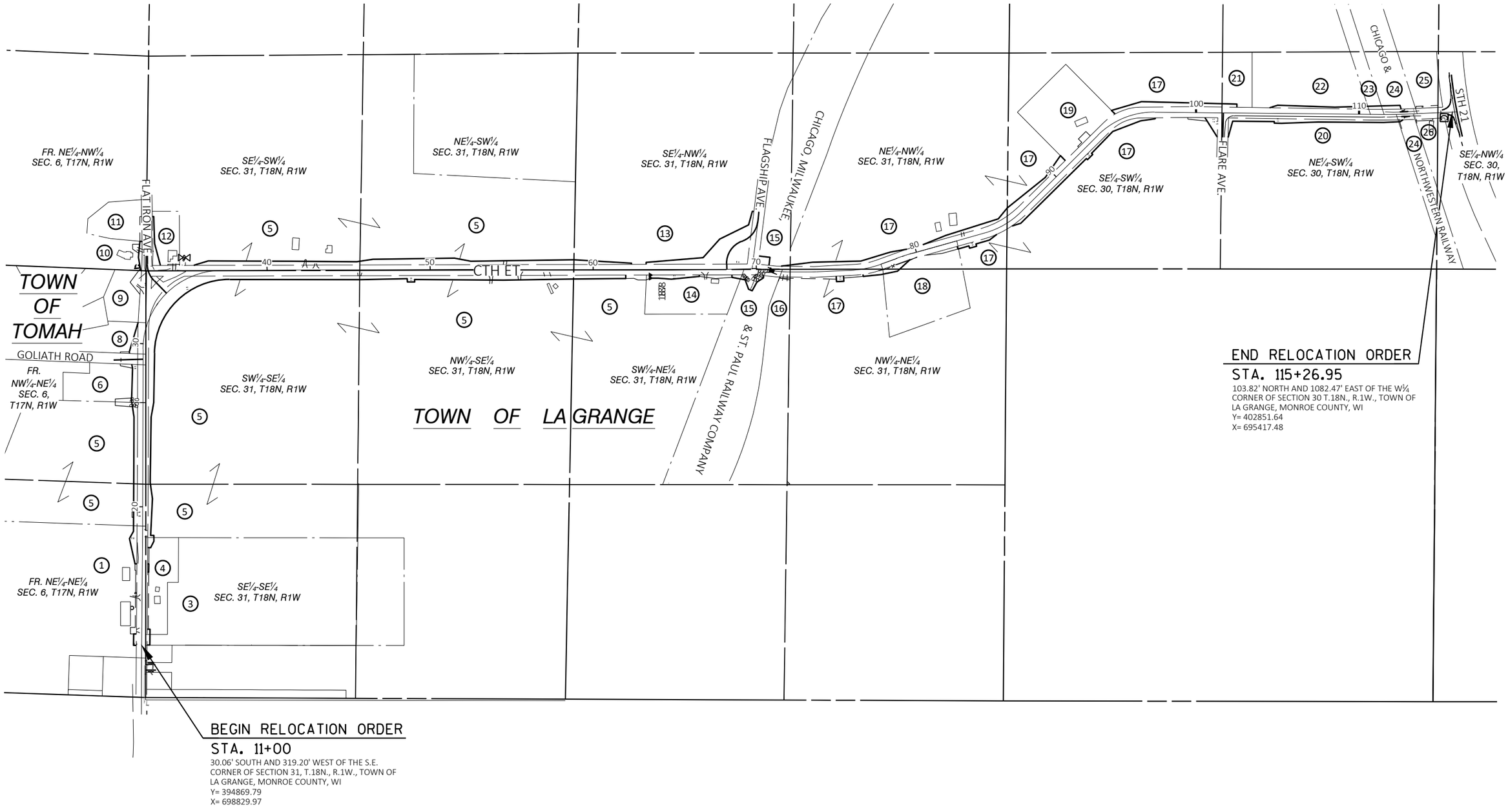
JEWELL associates engineers, inc.
Engineers - Architects - Surveyors
560 SUNRISE DRIVE
SPRING GREEN, WI 53588
PHONE : 608.588.7484
www.jewellsoc.com

I HEREBY CERTIFY THAT THIS PLAT WAS MADE FOR MONROE COUNTY, WISCONSIN AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

WISCONSIN — WESLEY L. KRAEMER — S-3026 — SPRING GREEN WIS. — LAND SURVEYOR
Wes Kraemer 9-22-20

REVISION DATE
11-18-20 (N.C.)
01-27-21 (N.C.)

APPROVED FOR MONROE COUNTY
DATE: (NAME/TITLE)
Highway Commissioner



REVISION DATE 11-18-20 (N.C.) 01-27-21	DATE: NOVEMBER 18, 2020	SCALE, FEET 0 300 600	HWY: CTH ET	R/W PROJECT NUMBER: 7373-00-00	PLAT SHEET 4.02
	GRID FACTOR N/A		COUNTY: MONROE	CONSTRUCTION PROJECT NUMBER: 7373-00-70	PS&E SHEET 30 E

S:\Projects\W11616 CTH ET, Monroe Co (Tomah-STH 21)\RW\W11616 RW PLAT.DWG PLOT DATE : 8/16/2021 4:03 PM PLOT BY : Anliker, Noah PLOT NAME : PLOT SCALE : 1:1

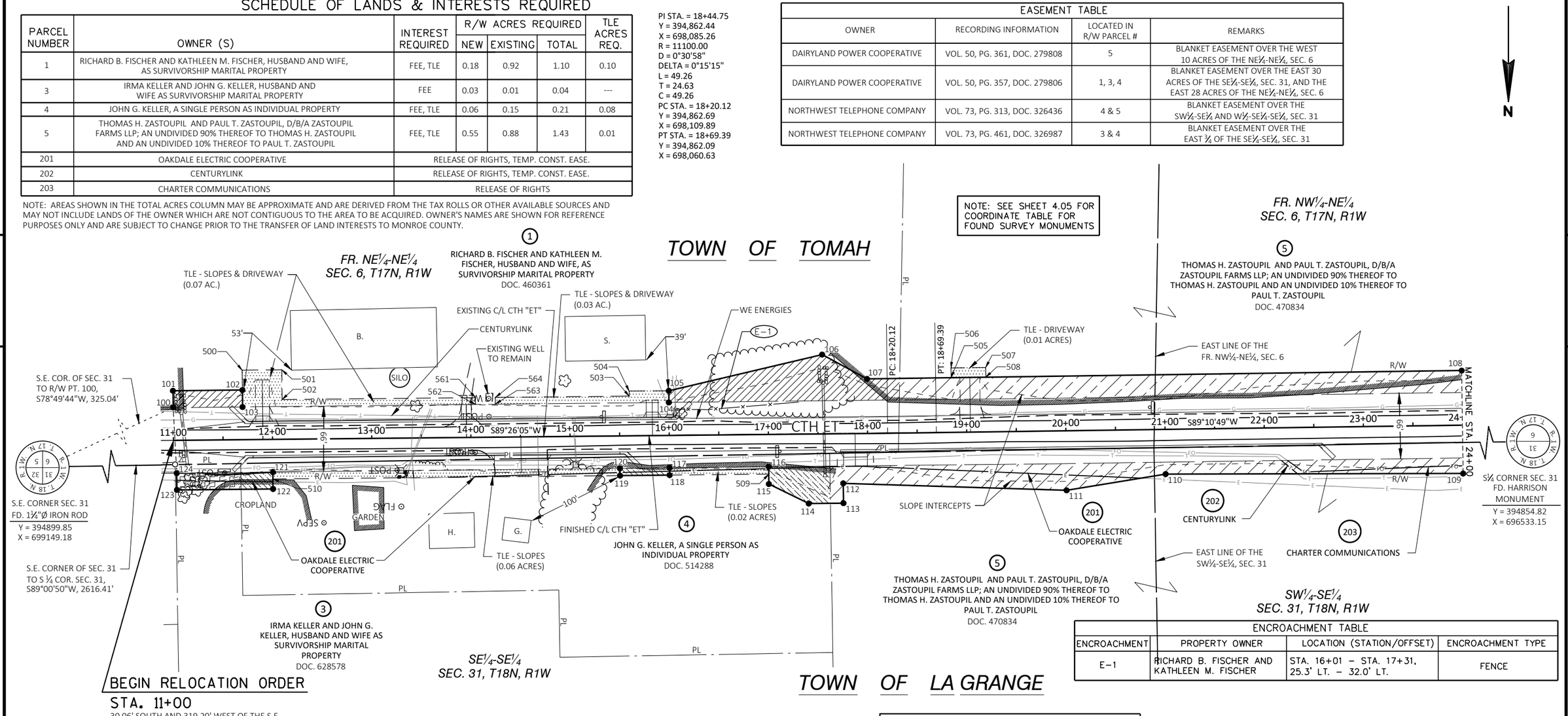
SCHEDULE OF LANDS & INTERESTS REQUIRED

PARCEL NUMBER	OWNER (S)	INTEREST REQUIRED	R/W ACRES REQUIRED			TLE ACRES REQ.
			NEW	EXISTING	TOTAL	
1	RICHARD B. FISCHER AND KATHLEEN M. FISCHER, HUSBAND AND WIFE, AS SURVIVORSHIP MARITAL PROPERTY	FEE, TLE	0.18	0.92	1.10	0.10
3	IRMA KELLER AND JOHN G. KELLER, HUSBAND AND WIFE AS SURVIVORSHIP MARITAL PROPERTY	FEE	0.03	0.01	0.04	---
4	JOHN G. KELLER, A SINGLE PERSON AS INDIVIDUAL PROPERTY	FEE, TLE	0.06	0.15	0.21	0.08
5	THOMAS H. ZASTOUPIL AND PAUL T. ZASTOUPIL, D/B/A ZASTOUPIL FARMS LLP; AN UNDIVIDED 90% THEREOF TO THOMAS H. ZASTOUPIL AND AN UNDIVIDED 10% THEREOF TO PAUL T. ZASTOUPIL	FEE, TLE	0.55	0.88	1.43	0.01
201	OAKDALE ELECTRIC COOPERATIVE	RELEASE OF RIGHTS, TEMP. CONST. EASE.				
202	CENTURYLINK	RELEASE OF RIGHTS, TEMP. CONST. EASE.				
203	CHARTER COMMUNICATIONS	RELEASE OF RIGHTS				

NOTE: AREAS SHOWN IN THE TOTAL ACRES COLUMN MAY BE APPROXIMATE AND ARE DERIVED FROM THE TAX ROLLS OR OTHER AVAILABLE SOURCES AND MAY NOT INCLUDE LANDS OF THE OWNER WHICH ARE NOT CONTIGUOUS TO THE AREA TO BE ACQUIRED. OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO MONROE COUNTY.

PI STA. = 18+44.75
Y = 394,862.44
X = 698,085.26
R = 11100.00
D = 0°30'58"
DELTA = 0°15'15"
L = 49.26
T = 24.63
C = 49.26
PC STA. = 18+20.12
Y = 394,862.69
X = 698,109.89
PT STA. = 18+69.39
Y = 394,862.09
X = 698,060.63

EASEMENT TABLE			
OWNER	RECORDING INFORMATION	LOCATED IN R/W PARCEL #	REMARKS
DAIRYLAND POWER COOPERATIVE	VOL. 50, PG. 361, DOC. 279808	5	BLANKET EASEMENT OVER THE WEST 10 ACRES OF THE NE¼-NE¼, SEC. 6
DAIRYLAND POWER COOPERATIVE	VOL. 50, PG. 357, DOC. 279806	1, 3, 4	BLANKET EASEMENT OVER THE EAST 30 ACRES OF THE SE¼-SE¼, SEC. 31, AND THE EAST 28 ACRES OF THE NE¼-NE¼, SEC. 6
NORTHWEST TELEPHONE COMPANY	VOL. 73, PG. 313, DOC. 326436	4 & 5	BLANKET EASEMENT OVER THE SW¼-SE¼ AND W½-SE¼-SE¼, SEC. 31
NORTHWEST TELEPHONE COMPANY	VOL. 73, PG. 461, DOC. 326987	3 & 4	BLANKET EASEMENT OVER THE EAST ¾ OF THE SE¼-SE¼, SEC. 31



ENCROACHMENT TABLE			
ENCROACHMENT	PROPERTY OWNER	LOCATION (STATION/OFFSET)	ENCROACHMENT TYPE
E-1	RICHARD B. FISCHER AND KATHLEEN M. FISCHER	STA. 16+01 – STA. 17+31, 25.3' LT. – 32.0' LT.	FENCE

NOTE: EXISTING C/L OF CTH ET BASED ON CENTERLINE OF EXISTING PAVEMENT.

EXISTING RIGHT-OF-WAY FOR CTH ET BASED ON THE CENTERLINE OF EXISTING PAVEMENT AND WIS. STATUTE 82.31(2).

COORDINATE TABLE – NEW R/W POINTS				
PT.#	STATION	OFFSET	Y	X
100	11+00.00	32.92' LT.	394836.88	698830.30
101	11+00.00	50.00' LT.	394819.79	698830.47
102	11+70.00	50.00' LT.	394819.10	698760.47
103	11+70.00	32.97' LT.	394836.13	698760.30
104	16+00.00	33.29' LT.	394831.57	698330.33
105	16+00.00	45.00' LT.	394819.86	698330.44
106	17+55.00	80.00' LT.	394783.33	698175.80
107	18+00.00	55.00' LT.	394807.89	698130.55
108	24+00.00	55.03' LT.	394799.48	697530.85
109	24+00.00	48.75' RT.	394903.25	697529.37
110	21+00.00	45.00' RT.	394903.79	697829.39
111	20+00.00	60.00' RT.	394920.22	697929.17
112	17+75.00	50.00' RT.	394913.13	698154.51

COORDINATE TABLE – NEW R/W POINTS				
PT.#	STATION	OFFSET	Y	X
113	17+75.00	70.00' RT.	394933.13	698154.32
114	17+40.00	70.00' RT.	394933.47	698189.32
115	17+00.00	50.00' RT.	394913.87	698229.51
116	17+00.00	32.63' RT.	394896.50	698229.68
117	16+00.00	32.71' RT.	394897.56	698329.68
118	16+00.00	40.00' RT.	394904.86	698329.60
119	15+50.00	40.00' RT.	394905.35	698379.60
120	15+50.00	32.74' RT.	394898.10	698379.67
121	12+00.00	33.01' RT.	394901.81	698729.65
122	12+00.00	50.00' RT.	394918.80	698729.49
123	11+03.00	50.00' RT.	394919.76	698826.48
124	11+03.00	33.08' RT.	394902.84	698826.65

COORDINATE TABLE – TLE POINTS				
PT.#	STATION	OFFSET	Y	X
500	11+70.00	70.00' LT.	394799.11	698760.67
501	12+10.00	70.00' LT.	394798.71	698720.67
502	12+10.00	40.00' LT.	394828.71	698720.37
503	15+60.00	40.00' LT.	394825.26	698370.39
504	15+60.00	45.00' LT.	394820.26	698370.44
505	18+85.00	55.17' LT.	394806.70	698045.80
506	18+85.00	65.00' LT.	394796.88	698045.94
507	19+20.00	65.00' LT.	394796.37	698010.95
508	19+20.00	55.16' LT.	394806.21	698010.81
509	17+00.00	40.00' RT.	394903.87	698229.61
510	12+00.00	40.00' RT.	394908.80	698729.59
561	14+05.00	40.00' LT.	394826.79	698525.38
562	14+05.00	33.15' LT.	394833.64	698525.32
563	14+25.00	33.16' LT.	394833.43	698505.32
564	14+25.00	40.00' LT.	394826.59	698505.39

RIGHT OF WAY LINE TABLE		
POINT TO POINT	BEARING	DISTANCE
100 TO 101	S00°33'55"E	17.08'
101 TO 102	S89°26'05"W	70.00'
102 TO 103	N00°33'55"W	17.03'
103 TO 104	S89°23'29"W	430.00'
104 TO 105	S00°33'55"E	11.71'
105 TO 106	S76°42'37"W	158.90'
106 TO 107	N61°30'39"W	51.48'
107 TO 108	S89°11'48"W	599.76'
108 TO 109	N00°49'11"W	103.78'
109 TO 110	N89°53'48"E	300.02'
110 TO 111	N80°38'59"E	101.12'
111 TO 112	S88°11'55"E	225.46'
112 TO 113	N00°33'55"W	20.00'

RIGHT OF WAY LINE TABLE		
POINT TO POINT	BEARING	DISTANCE
113 TO 114	N89°26'05"E	35.00'
114 TO 115	S64°00'01"E	44.72'
115 TO 116	S00°33'55"E	17.37'
116 TO 117	N89°23'29"E	100.00'
117 TO 118	N00°33'55"W	7.29'
118 TO 119	N89°26'05"E	50.00'
119 TO 120	S00°33'55"E	7.26'
120 TO 121	N89°23'29"E	350.00'
121 TO 122	N00°33'55"W	16.99'
122 TO 123	N89°26'05"E	97.00'
123 TO 124	S00°33'55"E	16.92'
124 TO 100	S03°10'05"E	66.07'

REVISION DATE 11-18-20 01-27-21 (N.C.)	DATE: NOVEMBER 18, 2020	SCALE, FEET 0 50 100	HWY: CTH ET	R/W PROJECT NUMBER: 7373-00-00	PLAT SHEET 4.03
	GRID FACTOR N/A		COUNTY: MONROE	CONSTRUCTION PROJECT NUMBER: 7373-00-70	PS&E SHEET 31 E

S:\Projects\W11616 CTH ET, Monroe Co (Tomah-STH 21)\RW\W11616 RW PLAT.DWG PLOT DATE : 8/16/2021 4:04 PM PLOT BY : Anliker, Noah PLOT NAME : PLOT SCALE : 1:1

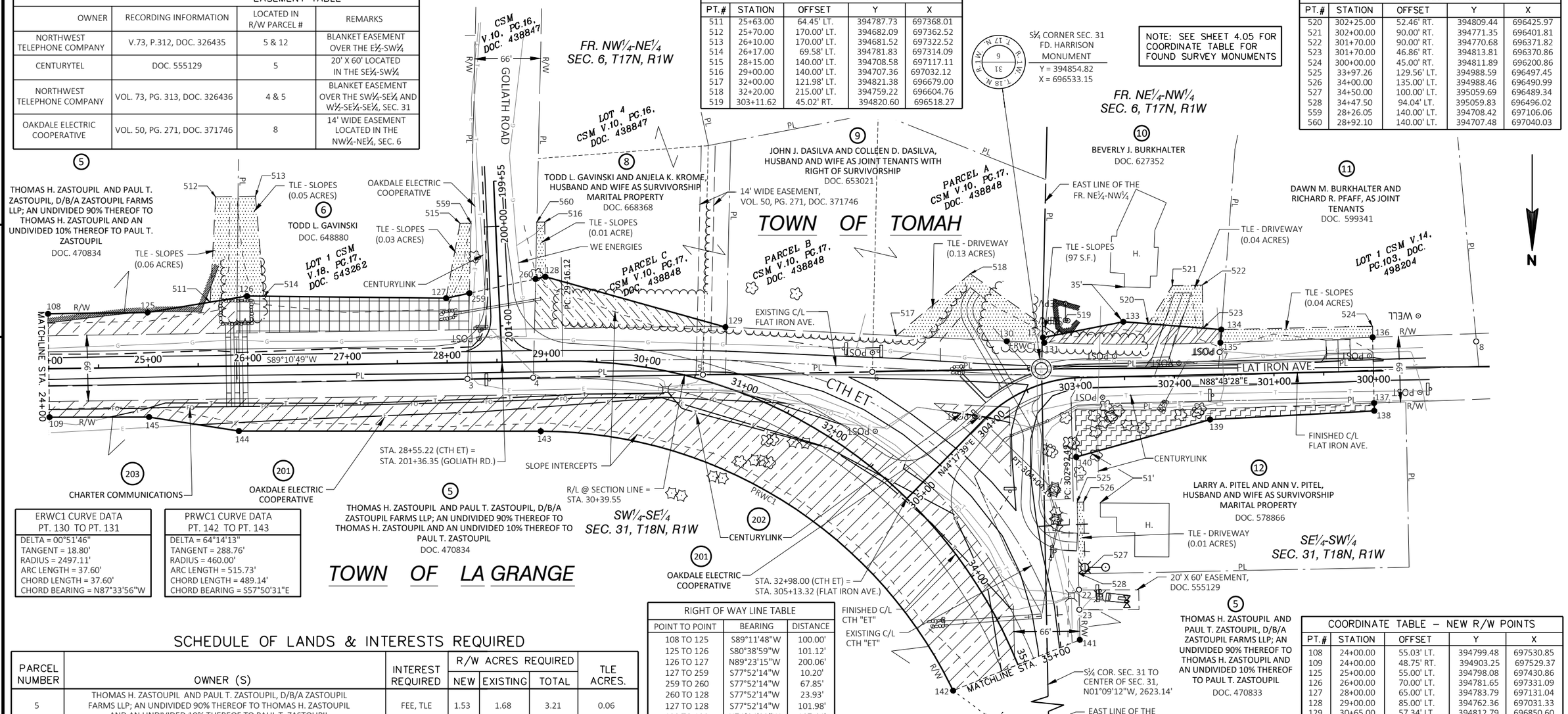
WISDOT/CADDS SHEET 75

EASEMENT TABLE			
OWNER	RECORDING INFORMATION	LOCATED IN R/W PARCEL #	REMARKS
NORTHWEST TELEPHONE COMPANY	V.73, P.312, DOC. 326435	5 & 12	BLANKET EASEMENT OVER THE E½-SW¼
CENTURYTEL	DOC. 555129	5	20' X 60' LOCATED IN THE SE¼-SW¼
NORTHWEST TELEPHONE COMPANY	VOL. 73, PG. 313, DOC. 326436	4 & 5	BLANKET EASEMENT OVER THE SW¼-SE¼ AND W½-SE¼-SE¼, SEC. 31
OAKDALE ELECTRIC COOPERATIVE	VOL. 50, PG. 271, DOC. 371746	8	14' WIDE EASEMENT LOCATED IN THE NW¼-NE¼, SEC. 6

COORDINATE TABLE – TLE POINTS				
PT.#	STATION	OFFSET	Y	X
511	25+63.00	64.45' LT.	394787.73	697368.01
512	25+70.00	170.00' LT.	394682.09	697362.52
513	26+10.00	170.00' LT.	394681.52	697322.52
514	26+17.00	69.58' LT.	394781.83	697314.09
515	28+15.00	140.00' LT.	394708.58	697117.11
516	29+00.00	140.00' LT.	394707.36	697032.12
517	32+00.00	121.98' LT.	394821.38	696679.00
518	32+20.00	215.00' LT.	394759.22	696604.76
519	303+11.62	45.02' RT.	394820.60	696518.27

COORDINATE TABLE – TLE POINTS				
PT.#	STATION	OFFSET	Y	X
520	302+25.00	52.46' RT.	394809.44	696425.97
521	302+00.00	90.00' RT.	394771.35	696401.81
522	301+70.00	90.00' RT.	394770.68	696371.82
523	301+70.00	46.86' RT.	394813.81	696370.86
524	300+00.00	45.00' RT.	394811.89	696200.86
525	33+97.26	129.56' LT.	394988.59	696497.45
526	34+00.00	135.00' LT.	394988.46	696490.99
527	34+50.00	100.00' LT.	395059.69	696489.34
528	34+47.50	94.04' LT.	395059.83	696496.02
559	28+26.05	140.00' LT.	394708.42	697106.06
560	28+92.10	140.00' LT.	394707.48	697040.03

NOTE: SEE SHEET 4.05 FOR COORDINATE TABLE FOR FOUND SURVEY MONUMENTS



ERWC1 CURVE DATA PT. 130 TO PT. 131
DELTA = 00°51'46"
TANGENT = 18.80'
RADIUS = 2497.11'
ARC LENGTH = 37.60'
CHORD LENGTH = 37.60'
CHORD BEARING = N87°33'56"W

PRWC1 CURVE DATA PT. 142 TO PT. 143
DELTA = 64°14'13"
TANGENT = 288.76'
RADIUS = 460.00'
ARC LENGTH = 515.73'
CHORD LENGTH = 489.14'
CHORD BEARING = S57°50'31"E

RIGHT OF WAY LINE TABLE		
POINT TO POINT	BEARING	DISTANCE
108 TO 125	S89°11'48"W	100.00'
125 TO 126	S80°38'59"W	101.12'
126 TO 127	N89°23'15"W	200.06'
127 TO 259	S77°52'14"W	10.20'
259 TO 260	S77°52'14"W	67.85'
260 TO 128	S77°52'14"W	23.93'
127 TO 128	S77°52'14"W	101.98'
128 TO 129	N74°24'33"W	187.64'
129 TO 130	N87°08'02"W	282.97'
130 TO 131	SEE ERWC1 CURVE DATA	
131 TO 132	S13°01'02"E	5.47'
132 TO 133	S78°56'37"W	82.15'
133 TO 134	N85°27'58"W	98.79'
134 TO 135	N04°16'26"E	13.23'
135 TO 136	S87°57'29"W	153.01'
136 TO 137	N01°16'32"W	66.01'
137 TO 138	N01°16'32"W	7.88'
138 TO 139	N86°59'19"E	165.08'
139 TO 140	N74°22'57"E	139.71'
140 TO 141	N01°09'12"W	183.57'
141 TO 142	N68°09'27"E	137.07'
142 TO 143	SEE PRWC1 CURVE DATA	
143 TO 144	S89°57'37"E	303.15'
144 TO 145	S81°08'26"E	91.30'
145 TO 109	N89°53'48"E	100.01'
109 TO 108	S00°49'11"E	103.78'

PI STA. = 33+97.46	PI STA. = 303+51.30
Y = 394,840.23	Y = 394,864.70
X = 696,532.71	X = 696,551.07
R = 485.00	R = 144.00
D = 11°48'49"	D = 39°47'19"
DELTA = 89°33'58"	DELTA = 44°25'49"
L = 758.16	L = 111.67
T = 481.34	T = 58.81
C = 683.29	C = 108.89
PC STA. = 29+16.12	PC STA. = 302+92.49
Y = 394,847.12	Y = 394,863.39
X = 697,014.00	X = 696,492.27
PT STA. = 36+74.28	PT STA. = 304+04.16
Y = 395,321.46	Y = 394,906.79
X = 696,522.18	X = 696,592.14

NOTE: EXISTING C/L OF CTH ET, GOLIATH ROAD, AND FLAT IRON AVENUE BASED ON CENTERLINE OF EXISTING PAVEMENT.

EXISTING RIGHT-OF-WAY FOR CTH ET, GOLIATH ROAD, AND FLAT IRON AVENUE BASED ON THE CENTERLINE OF EXISTING PAVEMENT AND WIS. STATUTE 82.31(2).

SCHEDULE OF LANDS & INTERESTS REQUIRED

PARCEL NUMBER	OWNER (S)	INTEREST REQUIRED	R/W ACRES REQUIRED NEW	EXISTING	TOTAL	TLE ACRES.
5	THOMAS H. ZASTOUPIL AND PAUL T. ZASTOUPIL, D/B/A ZASTOUPIL FARMS LLP; AN UNDIVIDED 90% THEREOF TO THOMAS H. ZASTOUPIL AND AN UNDIVIDED 10% THEREOF TO PAUL T. ZASTOUPIL	FEE, TLE	1.53	1.68	3.21	0.06
6	TODD L. GAVINSKI	FEE, TLE	0.18	0.26	0.44	0.08
8	TODD L. GAVINSKI AND ANJELA K. KROME, HUSBAND AND WIFE AS SURVIVORSHIP MARITAL PROPERTY	FEE, TLE	0.12	0.22	0.34	0.01
9	JOHN J. DASILVA AND COLLEEN D. DASILVA, HUSBAND AND WIFE AS JOINT TENANTS WITH RIGHT OF SURVIVORSHIP	FEE, TLE	---	0.27	0.27	0.13
10	BEVERLY J. BURKHALTER	FEE, TLE	0.07	0.10	0.17	0.04
11	DAWN M. BURKHALTER AND RICHARD R. PFAFF, AS JOINT TENANTS	FEE, TLE	---	0.10	0.10	0.04
12	LARRY A. PITEL AND ANN V. PITEL, HUSBAND AND WIFE AS SURVIVORSHIP MARITAL PROPERTY	FEE, TLE	0.12	---	0.12	0.01
201	OAKDALE ELECTRIC COOPERATIVE	RELEASE OF RIGHTS, TEMP. CONST. EASE.				
202	CENTURYLINK	RELEASE OF RIGHTS, TEMP. CONST. EASE.				
203	CHARTER COMMUNICATIONS	RELEASE OF RIGHTS				

NOTE: AREAS SHOWN IN THE TOTAL ACRES COLUMN MAY BE APPROXIMATE AND ARE DERIVED FROM THE TAX ROLLS OR OTHER AVAILABLE SOURCES AND MAY NOT INCLUDE LANDS OF THE OWNER WHICH ARE NOT CONTIGUOUS TO THE AREA TO BE ACQUIRED. OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO MONROE COUNTY.

COORDINATE TABLE – NEW R/W POINTS				
PT.#	STATION	OFFSET	Y	X
108	24+00.00	55.03' LT.	394799.48	697530.85
109	24+00.00	48.75' RT.	394903.25	697529.37
125	25+00.00	55.00' LT.	394798.08	697430.86
126	26+00.00	70.00' LT.	394781.65	697331.09
127	28+00.00	65.00' LT.	394783.79	697131.04
128	29+00.00	85.00' LT.	394762.36	697031.33
129	30+65.00	57.34' LT.	394812.79	696850.60
130	303+48.66	52.91 ' RT.	394826.94	696567.98
131	303+22.00	39.53 ' RT.	394828.54	696530.41
132	303+22.00	45.00 ' RT.	394823.21	696531.64
133	302+50.00	55.00 ' RT.	394807.46	696451.02
134	301+51.71	45.00 ' RT.	394815.26	696352.53
135	301+52.99	31.84 ' RT.	394828.45	696353.52
136	300+00.00	33.88 ' RT.	394823.00	696200.61
137	300+00.00	32.12' LT.	394888.99	696199.14
138	300+00.00	40.00' LT.	394896.87	696198.96
139	301+65.00	45.00' LT.	394905.54	696363.81
140	303+10.00	79.13' LT.	394943.15	696498.37
141	35+00.00	67.02' LT.	395126.69	696494.67
142	35+00.00	70.05' RT.	395177.69	696621.90
143	28+93.12	69.90' RT.	394917.34	697036.00
144	25+90.00	65.35' RT.	394917.13	697339.15
145	25+00.00	50.00' RT.	394903.07	697429.36
259	28+23.47	69.69' LT.	394778.76	697107.64
260	28+90.00	83.00' LT.	394764.50	697041.30

REVISION DATE	11-18-20 (N.C.) 01-27-21 (N.C.)	DATE: NOVEMBER 18, 2020	SCALE, FEET 0 50 100	HWY: CTH ET	R/W PROJECT NUMBER: 7373-00-00	PLAT SHEET 4.04	
		GRID FACTOR N/A		COUNTY: MONROE	CONSTRUCTION PROJECT NUMBER: 7373-00-70	PS&E SHEET 32	E

S:\Projects\W11616 CTH ET, Monroe Co (Tomah-STH 21)\RW\W11616 RW PLAT.DWG PLOT DATE : 8/16/2021 4:04 PM PLOT BY : Anliker, Noah PLOT NAME : PLOT SCALE : 1:1

WISDOT/CADDS SHEET 75

SCHEDULE OF LANDS & INTERESTS REQUIRED

PARCEL NUMBER	OWNER (S)	INTEREST REQUIRED	R/W ACRES REQUIRED			TLE ACRES OR S.F. REQ.
			NEW	EXISTING	TOTAL	
5	THOMAS H. ZASTOUPIL AND PAUL T. ZASTOUPIL, D/B/A ZASTOUPIL FARMS LLP; AN UNDIVIDED 90% THEREOF TO THOMAS H. ZASTOUPIL AND AN UNDIVIDED 10% THEREOF TO PAUL T. ZASTOUPIL	FEE	1.12	1.56	2.68	---
201	OAKDALE ELECTRIC COOPERATIVE	RELEASE OF RIGHTS				
202	CENTURYLINK	RELEASE OF RIGHTS				

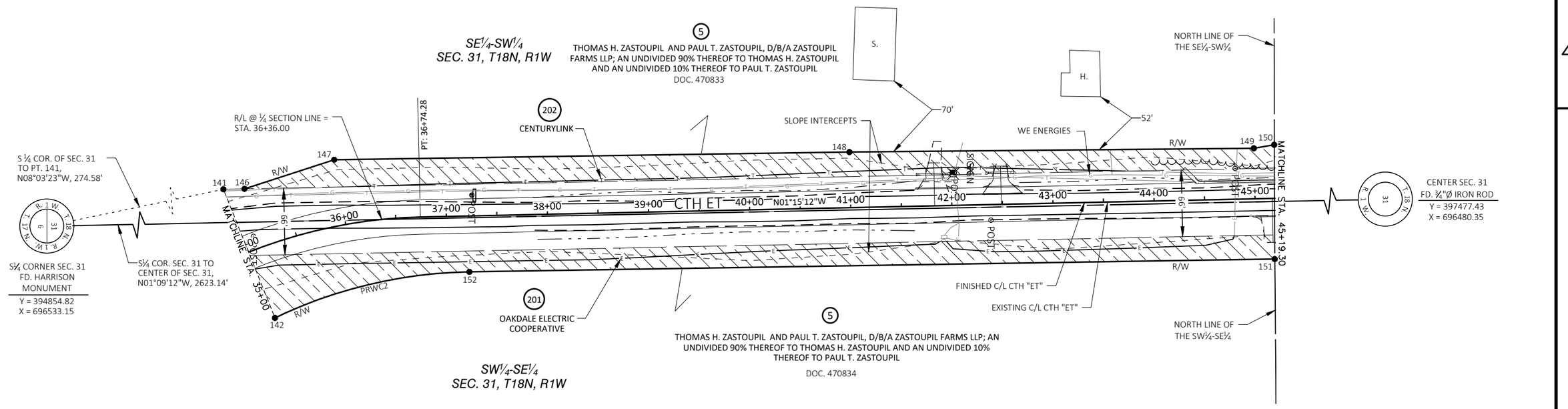
NOTE: AREAS SHOWN IN THE TOTAL ACRES COLUMN MAY BE APPROXIMATE AND ARE DERIVED FROM THE TAX ROLLS OR OTHER AVAILABLE SOURCES AND MAY NOT INCLUDE LANDS OF THE OWNER WHICH ARE NOT CONTIGUOUS TO THE AREA TO BE ACQUIRED. OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO MONROE COUNTY.

PI STA. = 33+97.46
Y = 394,840.23
X = 696,532.71
R = 485.00
D = 11°48'49"
DELTA = 89°33'58"
L = 758.16
T = 481.34
C = 683.29
PC STA. = 29+16.12
Y = 394,847.12
X = 697,014.00
PT STA. = 36+74.28
Y = 395,321.46
X = 696,522.18

RIGHT OF WAY LINE TABLE		
POINT TO POINT	BEARING	DISTANCE
141 TO 146	N01°09'12"W	20.86'
146 TO 147	N17°58'14"W	93.30'
147 TO 148	N00°51'11"W	509.64'
148 TO 149	N00°32'14"W	400.03'
149 TO 150	N09°47'03"W	20.44'
150 TO 151	N89°43'58"E	113.05'
151 TO 152	S00°54'42"E	796.64'
152 TO 142	SEE PRWC2 CURVE DATA	
142 TO 141	S68°09'27"W	137.07'

PRWC2 CURVE DATA PT. 152 TO PT. 142
DELTA = 24°48'43"
TANGENT = 101.19'
RADIUS = 460.00'
ARC LENGTH = 199.20'
CHORD LENGTH = 197.65'
CHORD BEARING = S13°19'03"E

COORDINATE TABLE – NEW R/W POINTS				
PT.#	STATION	OFFSET	Y	X
141	35+00.00	67.02' LT.	395126.69	696494.67
142	35+00.00	70.05' RT.	395177.69	696621.90
146	35+17.37	60.00' LT.	395147.55	696494.25
147	36+00.00	65.00' LT.	395236.29	696465.47
148	41+00.00	55.00' LT.	395745.87	696457.88
149	45+00.00	50.00' LT.	396145.89	696454.13
150	45+20.22	53.03' LT.	396166.03	696450.66
151	45+18.27	60.00' RT.	396166.56	696563.70
152	37+21.65	55.25' RT.	395370.02	696576.38



TOWN OF LA GRANGE

COORDINATE TABLE–FOUND SURVEY MONUMENTS				
PT.#	STATION	OFFSET	Y	X
1	10+22.26	25.47' RT.	394896.03	698907.46
2	11+01.55	24.35' RT.	394894.12	698828.18
3	28+20.38	16.34' RT.	394864.83	697109.50
4	28+86.40	16.10' RT.	394863.64	697043.49
5	30+57.40	5.06' LT.	394860.69	696873.05
6	31+99.50	78.29' LT.	394857.83	696703.10
7	33+70.74	333.79' LT.	394838.03	696354.12
8	34+39.39	556.13' LT.	394827.28	696096.49
9	58+31.10	34.08' LT.	397477.47	696447.39
10	62+76.59	29.99' RT.	397923.87	696504.66
11	68+61.23	35.97' RT.	398509.12	696492.86
12	69+23.72	3.92' RT.	398570.15	696458.44
13	70+53.73	216.43' RT.	398677.05	696679.83
14	77+19.85	33.00' RT.	399371.71	696443.46
15	78+92.74	32.08' RT.	399531.76	696382.35
16	82+04.98	33.37' RT.	399830.28	696293.45
17	90+59.52	32.14' LT.	400478.67	695756.91
18	93+86.53	36.95' LT.	400711.01	695519.20
19	94+65.25	45.52' LT.	400778.49	695466.29
20	101+08.49	35.61' LT.	401433.55	695411.88
21	102+93.54	3.78' LT.	401618.85	695442.18
22	34+60.17	86.96' LT.	395076.43	696495.41
23	34+75.78	78.67' LT.	395096.50	696494.98

NOTE: EXISTING C/L OF CTH ET BASED ON CENTERLINE OF EXISTING PAVEMENT.

EXISTING RIGHT–OF–WAY FOR CTH ET BASED ON COUNTY RECORDS AND ASSOCIATED FOUND SURVEY MONUMENTATION, THE NORTH–SOUTH QUARTER SECTION LINE OF SECTION 31, THE CENTERLINE OF EXISTING PAVEMENT, AND WIS. STATUTE 82.31(2).

EASEMENT TABLE			
OWNER	RECORDING INFORMATION	LOCATED IN R/W PARCEL #	REMARKS
NORTHWEST TELEPHONE COMPANY	V.73, P.312, DOC. 326435	5 & 12	BLANKET EASEMENT OVER THE E½-SW¼

REVISION DATE 11-18-20 (N.C.)
01-27-21 (N.C.)

DATE: NOVEMBER 18, 2020
GRID FACTOR N/A
SCALE, FEET 0 50 100
HWY: CTH ET
COUNTY: MONROE
R/W PROJECT NUMBER: 7373–00–00
CONSTRUCTION PROJECT NUMBER: 7373–00–70
PLAT SHEET 4.05
PS&E SHEET 33
E

S:\Projects\W11616 CTH ET, Monroe Co (Tomah–STH 21)\RW\W11616 RW PLAT.DWG PLOT DATE : 8/16/2021 4:05 PM PLOT BY : Anliker, Noah PLOT NAME : PLOT SCALE : 1:1

WISDOT/CADDS SHEET 75

SCHEDULE OF LANDS & INTERESTS REQUIRED

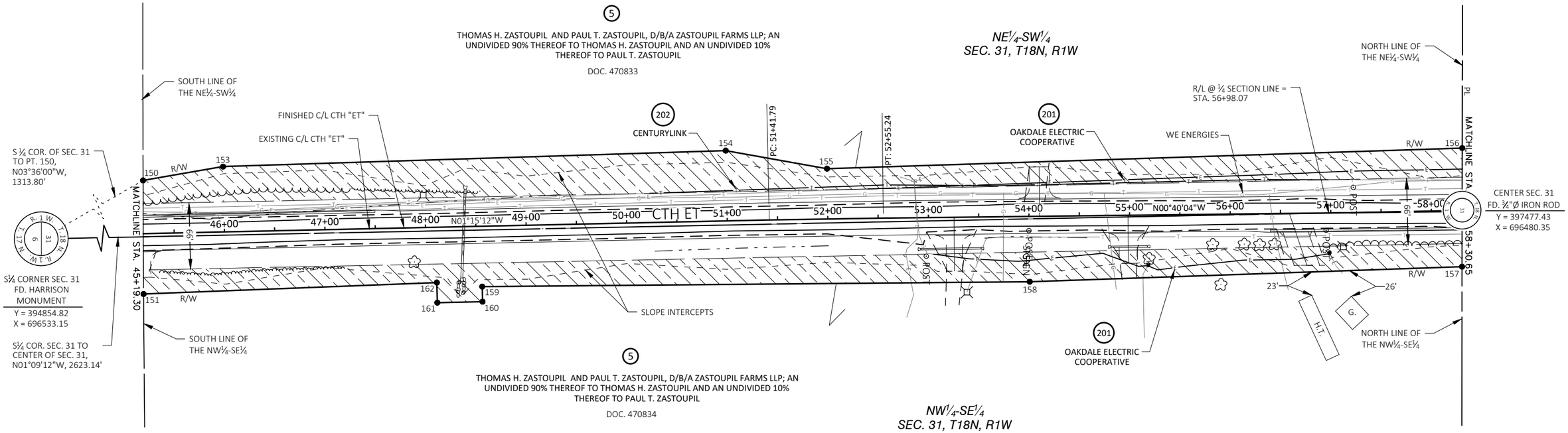
PARCEL NUMBER	OWNER (S)	INTEREST REQUIRED	R/W ACRES REQUIRED			TLE ACRES OR S.F. REQ.
			NEW	EXISTING	TOTAL	
5	THOMAS H. ZASTOUPIL AND PAUL T. ZASTOUPIL, D/B/A ZASTOUPIL FARMS LLP; AN UNDIVIDED 90% THEREOF TO THOMAS H. ZASTOUPIL AND AN UNDIVIDED 10% THEREOF TO PAUL T. ZASTOUPIL	FEE	1.70	1.99	3.69	---
201	OAKDALE ELECTRIC COOPERATIVE	RELEASE OF RIGHTS				
202	CENTURYLINK	RELEASE OF RIGHTS				

NOTE: AREAS SHOWN IN THE TOTAL ACRES COLUMN MAY BE APPROXIMATE AND ARE DERIVED FROM THE TAX ROLLS OR OTHER AVAILABLE SOURCES AND MAY NOT INCLUDE LANDS OF THE OWNER WHICH ARE NOT CONTIGUOUS TO THE AREA TO BE ACQUIRED. OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO MONROE COUNTY.

PI STA. = 51+98.52
Y = 396,845.33
X = 696,488.84
R = 11100.00
D = 0°30'58"
DELTA = 0°35'08"
L = 113.45
T = 56.72
C = 113.45
PC STA. = 51+41.79
Y = 396,788.62
X = 696,490.08
PT STA. = 52+55.24
Y = 396,902.05
X = 696,488.18

RIGHT OF WAY LINE TABLE		
POINT TO POINT	BEARING	DISTANCE
150 TO 153	N09°47'03"W	80.68'
153 TO 154	N01°49'35"W	500.03'
154 TO 155	N10°06'43"E	102.27'
155 TO 156	N01°51'33"W	631.88'
156 TO 157	S89°54'01"E	118.01'
157 TO 158	S02°00'01"E	430.03'
158 TO 159	S00°30'39"E	544.37'
159 TO 160	N88°44'48"E	15.00'
160 TO 161	S01°15'12"E	45.00'
161 TO 162	S88°44'48"W	20.00'
162 TO 151	S02°14'07"E	291.77'
151 TO 150	S89°43'58"W	113.05'

COORDINATE TABLE – NEW R/W POINTS				
PT.#	STATION	OFFSET	Y	X
150	45+20.22	53.03' LT.	396166.03	696450.66
151	45+18.27	60.00' RT.	396166.56	696563.70
153	46+00.00	65.00' LT.	396245.53	696436.95
154	51+00.00	70.00' LT.	396745.30	696421.01
155	52+00.00	50.00' LT.	396845.98	696438.97
156	58+31.50	63.00' LT.	397477.53	696418.47
157	58+29.92	55.00' RT.	397477.33	696536.48
158	54+00.00	65.00' RT.	397047.56	696551.49
159	48+55.00	60.00' RT.	396503.21	696556.34
160	48+55.00	75.00' RT.	396503.53	696571.33
161	48+10.00	75.00' RT.	396458.55	696572.32
162	48+10.00	55.00' RT.	396458.11	696552.32



TOWN OF LA GRANGE

NOTE: EXISTING C/L OF CTH ET BASED ON CENTERLINE OF EXISTING PAVEMENT.

EXISTING RIGHT-OF-WAY FOR CTH ET BASED ON COUNTY RECORDS AND ASSOCIATED FOUND SURVEY MONUMENTATION, THE NORTH-SOUTH QUARTER SECTION LINE OF SECTION 31, THE CENTERLINE OF EXISTING PAVEMENT, AND WIS. STATUTE 82.31(2).

EASEMENT TABLE			
OWNER	RECORDING INFORMATION	LOCATED IN R/W PARCEL #	REMARKS
NORTHWEST TELEPHONE COMPANY	V.73, P.312, DOC. 326435	5 & 12	BLANKET EASEMENT OVER THE E½-SW¼
NORTHWEST TELEPHONE COMPANY	V.75, P.470, DOC. 330433	5	20' WIDE EASEMENT CENTERED ON FIRST LINE INSTALLED IN NW¼-SE¼

REVISION DATE 11-18-20 (N.C.)
01-27-21 (N.C.)

DATE: NOVEMBER 18, 2020
GRID FACTOR N/A

SCALE, FEET
0 50 100

HWY: CTH ET
COUNTY: MONROE

R/W PROJECT NUMBER: 7373-00-00
CONSTRUCTION PROJECT NUMBER: 7373-00-70

PLAT SHEET 4.06
PS&E SHEET 34

E

S:\Projects\W11616 CTH ET, Monroe Co (Tomah-STH 21)\RW\W11616 RW PLAT.DWG PLOT DATE : 8/16/2021 4:05 PM PLOT BY : Anliker, Noah PLOT NAME : PLOT SCALE : 1:1

WISDOT/CADDS SHEET 75

SCHEDULE OF LANDS & INTERESTS REQUIRED

PARCEL NUMBER	OWNER (S)	INTEREST REQUIRED	R/W ACRES REQUIRED			TLE ACRES OR S.F. REQ.	PERMIT
			NEW	EXISTING	TOTAL		
5	THOMAS H. ZASTOUPIL AND PAUL T. ZASTOUPIL, D/B/A ZASTOUPIL FARMS LLP; AN UNDIVIDED 90% THEREOF TO THOMAS H. ZASTOUPIL AND AN UNDIVIDED 10% THEREOF TO PAUL T. ZASTOUPIL	FEE, TLE	0.16	0.79	0.95	0.07	
13	THE THOMAS E. CLAY FAMILY IRREVOCABLE TRUST	FEE	1.44	1.07	2.51	---	
14	ARTHUR G. TRALMER AND MARY M. TRALMER, HUSBAND AND WIFE AS SURVIVORSHIP MARITAL PROPERTY	FEE, TLE	0.16	---	0.16	0.09	
15	CHICAGO, MILWAUKEE, & ST. PAUL RAILWAY COMPANY	PERMIT	---	---	---	---	0.25
16	DANIEL RICHOLSON, A SINGLE INDIVIDUAL	FEE, TLE	---	0.06	0.06	0.01	
201	OAKDALE ELECTRIC COOPERATIVE	RELEASE OF RIGHTS, TEMP. CONST. EASE.					
202	CENTURYLINK	RELEASE OF RIGHTS					
204	WE ENERGIES	RELEASE OF RIGHTS					
206	NORTHERN NATURAL GAS COMPANY	TEMP. CONST. EASE.					

NOTE: AREAS SHOWN IN THE TOTAL ACRES COLUMN MAY BE APPROXIMATE AND ARE DERIVED FROM THE TAX ROLLS OR OTHER AVAILABLE SOURCES AND MAY NOT INCLUDE LANDS OF THE OWNER WHICH ARE NOT CONTIGUOUS TO THE AREA TO BE ACQUIRED. OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO MONROE COUNTY.

NOTE: EXISTING C/L OF CTH ET AND FLAGSHIP AVENUE BASED ON CENTERLINE OF EXISTING PAVEMENT.

EXISTING RIGHT-OF-WAY FOR CTH ET BASED ON COUNTY RECORDS AND ASSOCIATED FOUND SURVEY MONUMENTATION, THE NORTH-SOUTH QUARTER SECTION LINE OF SECTION 31, THE CENTERLINE OF EXISTING PAVEMENT, AND WIS. STATUTE 82.31(2). EXISTING RIGHT-OF-WAY FOR FLAGSHIP AVENUE BASED ON COUNTY RECORDS AND ASSOCIATED FOUND SURVEY MONUMENTATION.

PI STA. = 60+58.59
Y = 397,705.35
X = 696,478.81
R = 11100.00
D = 0°30'58"
DELTA = 0°25'15"
L = 81.53
T = 40.77
C = 81.53
PC STA. = 60+17.83
Y = 397,664.58
X = 696,479.29
PT STA. = 60+99.36
Y = 397,746.11
X = 696,478.04

PI STA. = 65+57.03
Y = 398,203.70
X = 696,469.34
R = 11100.00
D = 0°30'58"
DELTA = 1°15'04"
L = 242.37
T = 121.19
C = 242.36
PC STA. = 64+35.85
Y = 398,082.53
X = 696,471.65
PT STA. = 66+78.21
Y = 398,324.78
X = 696,464.40

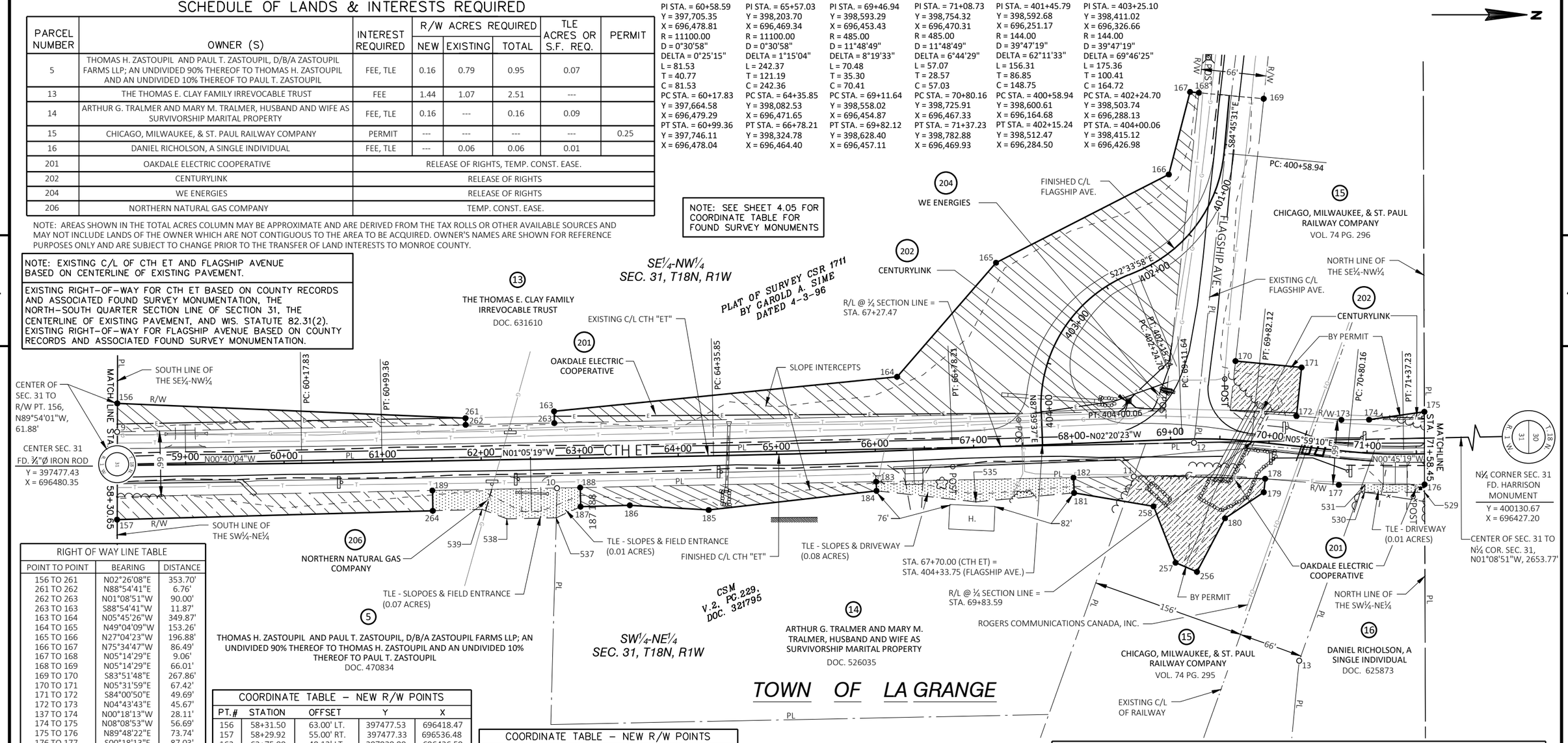
PI STA. = 69+46.94
Y = 398,593.29
X = 696,453.43
R = 485.00
D = 11°48'49"
DELTA = 8°19'33"
L = 70.48
T = 35.30
C = 70.41
PC STA. = 69+11.64
Y = 398,558.02
X = 696,454.87
PT STA. = 69+82.12
Y = 398,628.40
X = 696,457.11

PI STA. = 71+08.73
Y = 398,754.32
X = 696,470.31
R = 485.00
D = 11°48'49"
DELTA = 6°44'29"
L = 57.07
T = 28.57
C = 57.03
PC STA. = 70+80.16
Y = 398,725.91
X = 696,467.33
PT STA. = 71+37.23
Y = 398,782.88
X = 696,469.93

PI STA. = 401+45.79
Y = 398,592.68
X = 696,251.17
R = 144.00
D = 39°47'19"
DELTA = 62°11'33"
L = 156.31
T = 86.85
C = 148.75
PC STA. = 400+58.94
Y = 398,600.61
X = 696,164.68
PT STA. = 402+15.24
Y = 398,512.47
X = 696,284.50

PI STA. = 403+25.10
Y = 398,411.02
X = 696,326.66
R = 144.00
D = 39°47'19"
DELTA = 69°46'25"
L = 175.36
T = 100.41
C = 164.72
PC STA. = 402+24.70
Y = 398,503.74
X = 696,288.13
PT STA. = 404+00.06
Y = 398,415.12
X = 696,426.98

NOTE: SEE SHEET 4.05 FOR COORDINATE TABLE FOR FOUND SURVEY MONUMENTS



RIGHT OF WAY LINE TABLE		
POINT TO POINT	BEARING	DISTANCE
156 TO 261	N02°26'08"E	353.70'
261 TO 262	N88°54'41"E	6.76'
262 TO 263	N01°08'51"W	90.00'
263 TO 163	S88°54'41"W	11.87'
163 TO 164	N05°45'26"W	349.87'
164 TO 165	N49°04'09"W	153.26'
165 TO 166	N27°04'23"W	196.88'
166 TO 167	N75°34'47"W	86.49'
167 TO 168	N05°14'29"E	9.06'
168 TO 169	N05°14'29"E	66.01'
169 TO 170	S83°51'48"E	267.86'
170 TO 171	N05°31'59"E	67.42'
171 TO 172	S84°00'50"E	49.69'
172 TO 173	N04°43'43"E	45.67'
137 TO 174	N00°18'13"W	28.11'
174 TO 175	N08°08'53"W	56.69'
175 TO 176	N89°48'22"E	73.74'
176 TO 177	S00°18'13"E	87.03'
177 TO 178	S04°43'43"W	75.03'
178 TO 179	S84°00'50"E	13.75'
179 TO 180	S33°56'37"E	47.40'
180 TO 256	S62°20'05"E	61.34'
256 TO 257	S23°07'16"W	23.57'
257 TO 258	S68°40'46"W	61.49'
258 TO 181	S09°33'23"W	81.76'
181 TO 182	S87°39'37"W	15.48'
182 TO 183	S01°08'51"E	200.26'
183 TO 184	N88°03'51"E	9.37'
184 TO 185	S06°31'11"E	171.35'
185 TO 186	S03°26'43"W	80.25'
186 TO 187	S01°36'07"E	50.00'
187 TO 188	S88°54'41"W	19.39'
188 TO 189	S01°08'51"E	150.00'
189 TO 264	N88°54'41"E	20.57'
264 TO 157	S01°36'07"E	320.50'
157 TO 156	N89°54'01"W	118.01'

COORDINATE TABLE – NEW R/W POINTS				
PT.#	STATION	OFFSET	Y	X
156	58+31.50	63.00' LT.	397477.53	696418.47
157	58+29.92	55.00' RT.	397477.33	696536.48
163	62+75.00	48.13' LT.	397920.80	696426.59
164	66+25.00	75.00' LT.	398268.91	696391.49
165	403+00.00	95.00' RT.	398369.32	696275.70
166	401+00.00	50.00' RT.	398544.62	696186.10
167	400+00.00	40.00' RT.	398566.16	696102.33
168	400+00.00	30.94' RT.	398575.18	696103.16
169	400+00.00	35.07' LT.	398640.92	696109.19
170	69+61.05	80.00' LT.	398612.28	696375.52
171	70+25.00	80.00' LT.	398679.39	696382.02
172	70+25.00	30.31' LT.	398674.21	696431.43
173	70+70.66	31.31' LT.	398719.72	696435.20
174	71+00.00	34.02' LT.	398747.84	696435.05
175	71+58.86	42.64' LT.	398803.95	696427.02
176	71+58.14	31.10' RT.	398804.20	696500.75
177	70+75.01	34.61' RT.	398717.17	696501.21
178	70+00.00	36.25' RT.	398642.40	696495.03
179	70+00.00	50.00' RT.	398640.97	696508.70
180	69+60.00	80.00' RT.	398601.65	696535.16

COORDINATE TABLE – NEW R/W POINTS				
PT.#	STATION	OFFSET	Y	X
181	68+00.00	50.00' RT.	398448.51	696509.38
182	68+00.00	34.52' RT.	398447.88	696493.91
183	66+00.00	30.63' RT.	398247.66	696497.92
184	66+00.00	40.00' RT.	398247.98	696507.29
185	64+30.00	55.00' RT.	398077.73	696526.75
186	63+50.00	48.66' RT.	397997.63	696521.93
187	63+00.00	49.10' RT.	397947.64	696523.32
188	63+00.00	29.72' RT.	397947.28	696503.94
189	61+50.00	29.87' RT.	397797.31	696506.95
256	69+25.00	135.00' RT.	398573.17	696589.49
257	69+00.00	125.00' RT.	398551.49	696580.24
258	68+80.00	66.85' RT.	398529.13	696522.96
261	61+85.00	42.92' LT.	397830.92	696433.50
262	61+85.00	36.16' LT.	397831.05	696440.26
263	62+75.00	36.26' LT.	397921.03	696438.45
264	61+50.00	50.45' RT.	397797.70	696527.52

COORDINATE TABLE – TLE POINTS				
PT.#	STATION	OFFSET	Y	X
529	71+58.06	39.21' RT.	398804.23	696508.87
530	71+00.00	40.00' RT.	398743.13	696508.92
531	71+00.00	32.14' RT.	398743.63	696501.07
535	67+00.00	55.00' RT.	398348.80	696518.46
537	62+75.00	60.00' RT.	397922.86	696534.69
538	62+25.00	60.00' RT.	397872.87	696535.64
539	62+00.00	50.00' RT.	397847.68	696526.12

EASEMENT TABLE			
OWNER	RECORDING INFORMATION	LOCATED IN R/W PARCEL #	REMARKS
WISCONSIN TELEPHONE COMPANY	V.213, P.14, DOC. 272459	13	10' WIDE EASEMENT CENTERED ON FIRST LINE INSTALLED IN SE¼-NW¼, SEC. 31, SOUTH OF RAILROAD R/W
NORTHERN NATURAL GAS COMPANY	V.48, P.91, DOC. 274537	13	BLANKET EASEMENT OVER SE¼-NW¼, SEC. 31, EXCEPT LAND NORTH OF RAILROAD
NORTHERN NATURAL GAS COMPANY	V.48, P.93, DOC. 274538	5, 14, 15, & 16	BLANKET EASEMENT OVER SW¼-NE¼, SEC. 31
WISCONSIN TELEPHONE COMPANY	V.213, P.23, DOC. 272463	5 & 14	10' WIDE EASEMENT CENTERED ON FIRST LINE INSTALLED IN SW¼-NE¼, SEC. 31, SOUTH OF RAILROAD R/W
NORTHWEST TELEPHONE COMPANY	V.75, P.470, DOC. 330433	5 & 16	20' WIDE EASEMENT CENTERED ON FIRST LINE INSTALLED IN SW¼-NE¼ EXCEPT IN PARCELS 14 & 15

REVISION DATE 11-18-20
01-27-21 (N.C)

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SCALE, FEET 0 50 100
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R/W PROJECT NUMBER: 7373-00-00
CONSTRUCTION PROJECT NUMBER: 7373-00-70
PLAT SHEET 4.07
PS&E SHEET 35
E

S:\Projects\W11616 CTH ET, Monroe Co (Tomah-STH 21)\RW\W11616 RW PLAT.DWG PLOT DATE : 8/16/2021 4:05 PM PLOT BY : Anliker, Noah PLOT NAME : PLOT SCALE : 1:1

WISDOT/CADDS SHEET 75

SCHEDULE OF LANDS & INTERESTS REQUIRED

PARCEL NUMBER	OWNER (S)	INTEREST REQUIRED	R/W ACRES REQUIRED			TLE ACRES OR S.F. REQ.
			NEW	EXISTING	TOTAL	
17	THOMAS E. BAILEY AND JOAN A. BAILEY, HIS WIFE AS JOINT TENANTS	FEE, TLE	0.75	1.72	2.47	0.10
18	THOMAS J. BAILEY AND RENEE E. BAILEY, HUSBAND AND WIFE AS SURVIVORSHIP MARITAL PROPERTY	FEE, TLE	0.12	0.37	0.49	0.06
201	OAKDALE ELECTRIC COOPERATIVE	RELEASE OF RIGHTS, TEMP. CONST. EASE.				
202	CENTURYLINK	RELEASE OF RIGHTS				
205	ALLIANT ENERGY	RELEASE OF RIGHTS				

NOTE: AREAS SHOWN IN THE TOTAL ACRES COLUMN MAY BE APPROXIMATE AND ARE DERIVED FROM THE TAX ROLLS OR OTHER AVAILABLE SOURCES AND MAY NOT INCLUDE LANDS OF THE OWNER WHICH ARE NOT CONTIGUOUS TO THE AREA TO BE ACQUIRED. OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO MONROE COUNTY.

PI STA. = 72+87.62
Y = 398,933.26
X = 696,467.95
R = 1330.00
D = 4°18'29"
DELTA = 2°42'58"
L = 63.05
T = 31.53
C = 63.04
PC STA. = 72+56.09
Y = 398,901.73
X = 696,468.37
PT STA. = 73+19.14
Y = 398,964.73
X = 696,466.04

PI STA. = 76+25.22
Y = 399,270.26
X = 696,447.51
R = 643.00
D = 8°54'39"
DELTA = 17°46'12"
L = 199.42
T = 100.52
C = 198.62
PC STA. = 75+24.71
Y = 399,169.92
X = 696,453.60
PT STA. = 77+24.13
Y = 399,363.95
X = 696,411.09

PI STA. = 78+72.25
Y = 399,502.00
X = 696,357.43
R = 1330.00
D = 4°18'29"
DELTA = 4°29'11"
L = 104.14
T = 52.10
C = 104.12
PC STA. = 78+20.15
Y = 399,453.44
X = 696,376.30
PT STA. = 79+24.29
Y = 399,551.89
X = 696,342.41

PI STA. = 85+20.16
Y = 400,122.46
X = 696,170.63
R = 500.00
D = 11°27'33"
DELTA = 29°08'34"
L = 254.32
T = 129.97
C = 251.59
PC STA. = 83+90.18
Y = 399,998.00
X = 696,208.10
PT STA. = 86+44.50
Y = 400,212.91
X = 696,077.30

EASEMENT TABLE			
OWNER	RECORDING INFORMATION	LOCATED IN R/W PARCEL #	REMARKS
NORTHWEST TELEPHONE COMPANY	V.74, P.453, DOC. 329011	17 & 18	20' WIDE EASEMENT CENTERED ON FIRST LINE INSTALLED IN NW¼-NE¼ AND IN NE¼-NW¼, SEC. 31
NORTHWEST TELEPHONE COMPANY	V.176, P.560, DOC. 430842	17 & 18	14' WIDE EASEMENT ACROSS PART OF THE NE¼-NW¼, SEC. 31

ENCROACHMENT TABLE			
ENCROACHMENT	PROPERTY OWNER	LOCATION (STATION/OFFSET)	ENCROACHMENT TYPE
E-2	THOMAS E. BAILEY AND JOAN A. BAILEY	STA. 76+93 – STA. 76+96, 32.6' RT. – 33.00' RT.	FENCE
E-3	THOMAS J. BAILEY AND RENEE E. BAILEY	STA. 79+23 – STA. 79+46, 29.6' RT. – 33.00' RT.	FENCE

RIGHT OF WAY LINE TABLE		
POINT TO POINT	BEARING	DISTANCE
175 TO 190	N08°08'53"W	140.31'
190 TO 191	N02°17'06"W	293.19'
191 TO 192	N17°55'01"W	189.96'
192 TO 193	N10°52'28"W	103.67'
193 TO 194	N16°34'41"W	100.62'
194 TO 195	N23°07'17"W	150.93'
195 TO 196	N18°35'08"W	338.40'
196 TO 197	N51°29'01"W	86.57'
197 TO 198	N89°37'52"E	129.28'
198 TO 199	SEE ERWC2 CURVE DATA	
199 TO 200	S39°24'10"E	57.06'
200 TO 201	S16°49'32"E	85.98'
201 TO 202	N73°14'42"E	15.00'
202 TO 203	S16°45'18"E	45.00'
203 TO 204	S73°14'42"W	15.00'

RIGHT OF WAY LINE TABLE		
POINT TO POINT	BEARING	DISTANCE
204 TO 205	S16°45'18"E	70.00'
205 TO 206	S73°14'42"W	16.65'
206 TO 207	S16°34'41"E	299.41'
207 TO 208	S43°39'54"E	106.04'
208 TO 209	S12°37'26"E	103.41'
209 TO 210	S06°45'24"E	109.09'
210 TO 211	S79°49'09"W	11.91'
211 TO 212	SEE ERWC3 CURVE DATA	
212 TO 213	S04°01'35"E	77.49'
213 TO 214	N86°31'43"E	33.73'
214 TO 215	S03°28'17"E	45.00'
215 TO 216	S86°31'43"W	33.29'
216 TO 217	S04°01'35"E	136.76'
217 TO 176	S00°18'13"E	146.67'
176 TO 175	S89°48'22"W	73.74'

ERWC2 CURVE DATA PT. 198 TO PT. 199
DELTA = 06°44'41"
TANGENT = 35.39'
RADIUS = 600.64'
ARC LENGTH = 70.71'
CHORD LENGTH = 70.67'
CHORD BEARING = S28°12'01"E

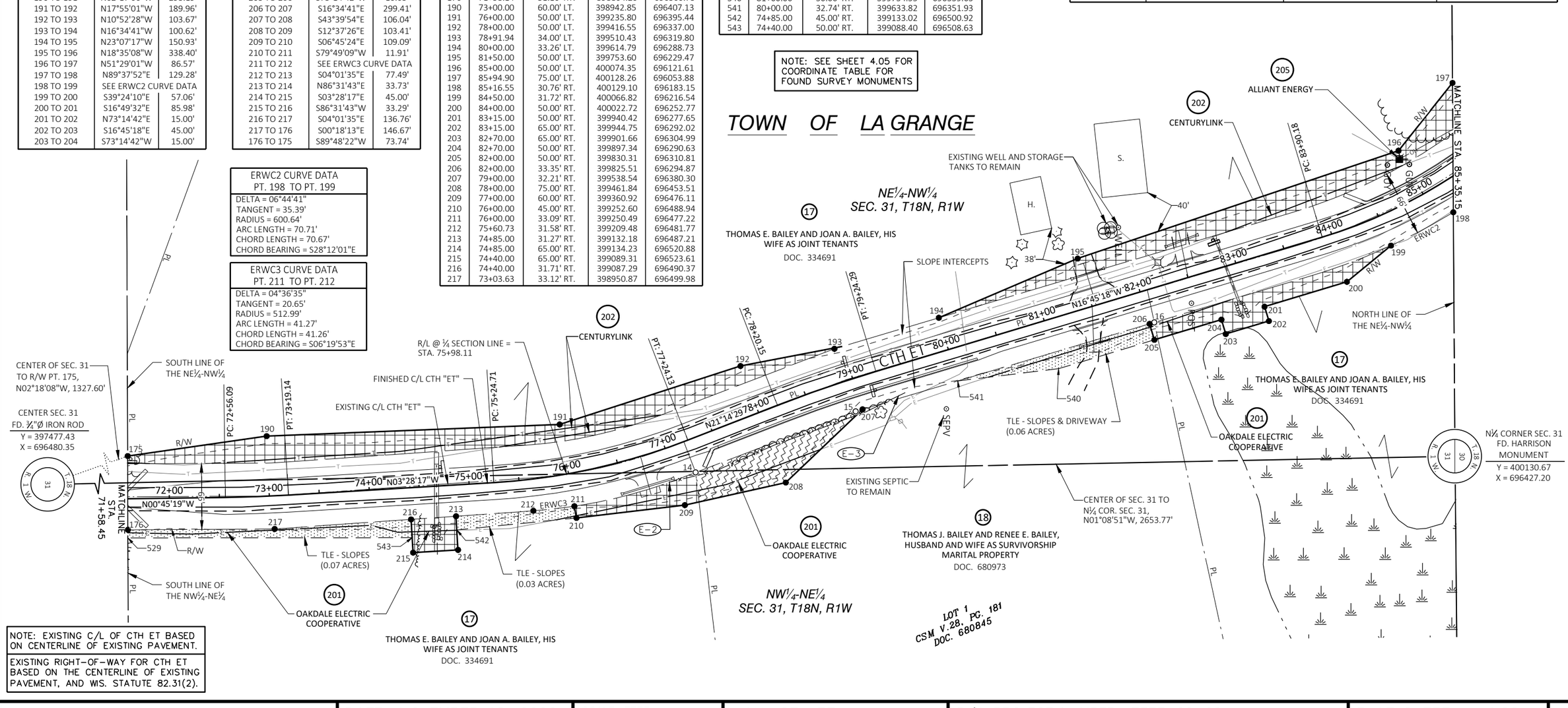
ERWC3 CURVE DATA PT. 211 TO PT. 212
DELTA = 04°36'35"
TANGENT = 20.65'
RADIUS = 512.99'
ARC LENGTH = 41.27'
CHORD LENGTH = 41.26'
CHORD BEARING = S06°19'53"E

COORDINATE TABLE – NEW R/W POINTS				
PT.#	STATION	OFFSET	Y	X
175	71+58.86	42.64' LT.	398803.95	696427.02
176	71+58.14	31.10' RT.	398804.20	696500.75
190	73+00.00	60.00' LT.	398942.85	696407.13
191	76+00.00	50.00' LT.	399235.80	696395.44
192	78+00.00	50.00' LT.	399416.55	696337.00
193	78+91.94	34.00' LT.	399510.43	696319.80
194	80+00.00	33.26' LT.	399614.79	696288.73
195	81+50.00	50.00' LT.	399753.60	696229.47
196	85+00.00	50.00' LT.	400074.35	696121.61
197	85+94.90	75.00' LT.	400128.26	696053.88
198	85+16.55	30.76' RT.	400129.10	696183.15
199	84+50.00	31.72' RT.	400066.82	696216.54
200	84+00.00	50.00' RT.	400022.72	696252.77
201	83+15.00	50.00' RT.	399940.42	696277.65
202	83+15.00	65.00' RT.	399944.75	696292.02
203	82+70.00	65.00' RT.	399901.66	696304.99
204	82+70.00	50.00' RT.	399897.34	696290.63
205	82+00.00	50.00' RT.	399830.31	696310.81
206	82+00.00	33.35' RT.	399825.51	696294.87
207	79+00.00	32.21' RT.	399538.54	696380.30
208	78+00.00	75.00' RT.	399461.84	696453.51
209	77+00.00	60.00' RT.	399360.92	696476.11
210	76+00.00	45.00' RT.	399252.60	696488.94
211	76+00.00	33.09' RT.	399250.49	696477.22
212	75+60.73	31.58' RT.	399209.48	696481.77
213	74+85.00	31.27' RT.	399132.18	696487.21
214	74+85.00	65.00' RT.	399134.23	696520.88
215	74+40.00	65.00' RT.	399089.31	696523.61
216	74+40.00	31.71' RT.	399087.29	696490.37
217	73+03.63	33.12' RT.	398950.87	696499.98

COORDINATE TABLE – TLE POINTS				
PT.#	STATION	OFFSET	Y	X
529	71+58.06	39.21' RT.	398804.23	696508.87
540	81+00.00	50.00' RT.	399734.55	696339.63
541	80+00.00	32.74' RT.	399633.82	696351.93
542	74+85.00	45.00' RT.	399133.02	696500.92
543	74+40.00	50.00' RT.	399088.40	696508.63

NOTE: SEE SHEET 4.05 FOR COORDINATE TABLE FOR FOUND SURVEY MONUMENTS

TOWN OF LA GRANGE



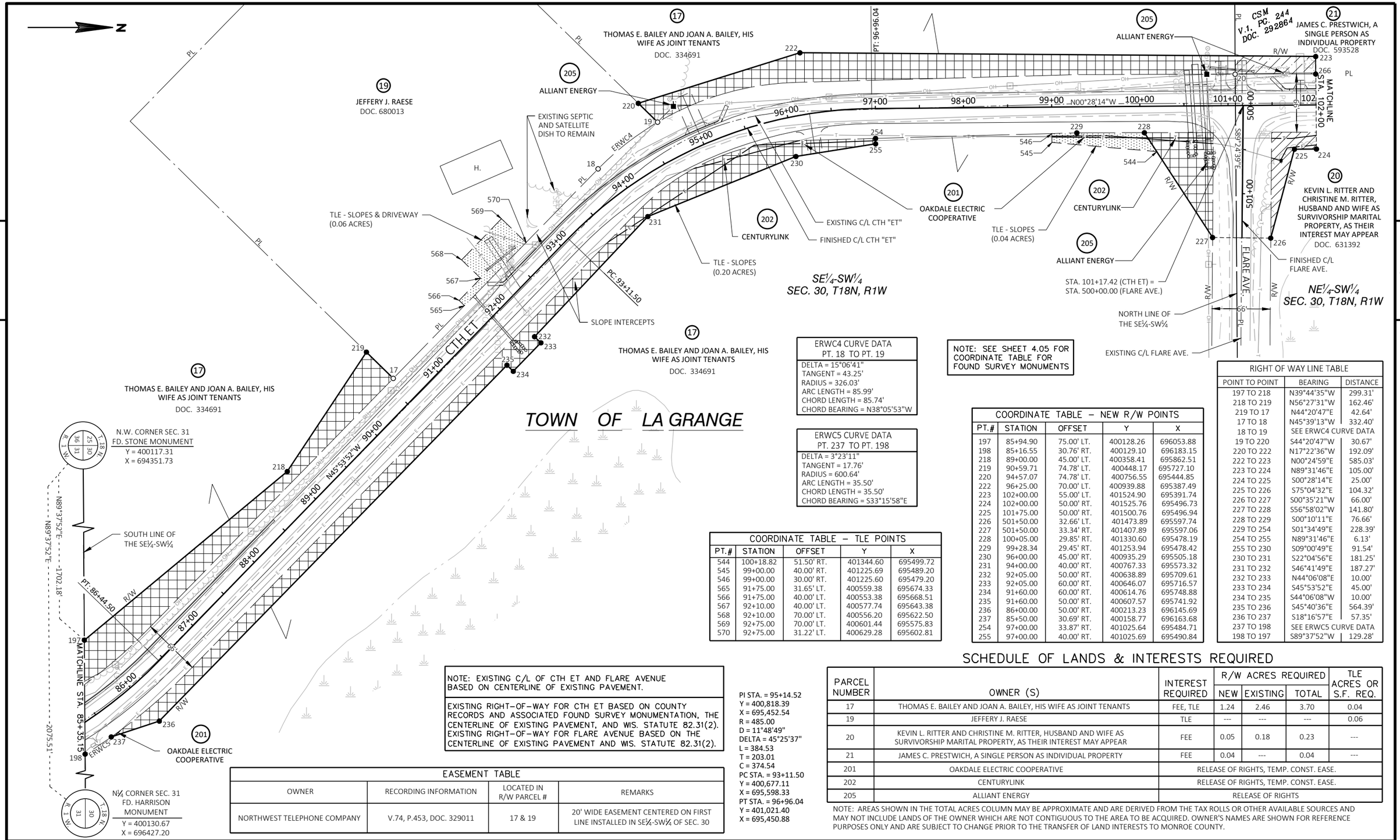
NOTE: EXISTING C/L OF CTH ET BASED ON CENTERLINE OF EXISTING PAVEMENT.

EXISTING RIGHT-OF-WAY FOR CTH ET BASED ON THE CENTERLINE OF EXISTING PAVEMENT, AND WIS. STATUTE 82.31(2).

REVISION DATE 11-18-20 01-27-21 (N.C)	DATE: NOVEMBER 18, 2020 GRID FACTOR N/A	SCALE, FEET 0 50 100	HWY: CTH ET COUNTY: MONROE	R/W PROJECT NUMBER: 7373-00-00 CONSTRUCTION PROJECT NUMBER: 7373-00-70	PLAT SHEET 4.08 PS&E SHEET 36 E

S:\Projects\W11616 CTH ET, Monroe Co (Tomah-STH 21)\RW\W11616 RW PLAT.DWG PLOT DATE : 8/16/2021 4:06 PM PLOT BY : Anliker, Noah PLOT NAME : PLOT SCALE : 1:1

WISDOT/CADDS SHEET 75



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4

ERWC4 CURVE DATA PT. 18 TO PT. 19
DELTA = 15°06'41"
TANGENT = 43.25'
RADIUS = 326.03'
ARC LENGTH = 85.99'
CHORD LENGTH = 85.74'
CHORD BEARING = N38°05'53"W

ERWC5 CURVE DATA PT. 237 TO PT. 198
DELTA = 3°23'11"
TANGENT = 17.76'
RADIUS = 600.64'
ARC LENGTH = 35.50'
CHORD LENGTH = 35.50'
CHORD BEARING = S33°15'58"E

NOTE: SEE SHEET 4.05 FOR COORDINATE TABLE FOR FOUND SURVEY MONUMENTS

RIGHT OF WAY LINE TABLE		
POINT TO POINT	BEARING	DISTANCE
197 TO 218	N39°44'35"W	299.31'
218 TO 219	N56°27'31"W	162.46'
219 TO 17	N44°20'47"E	42.64'
17 TO 18	N45°39'13"W	332.40'
18 TO 19	SEE ERWC4 CURVE DATA	
19 TO 220	S44°20'47"W	30.67'
220 TO 222	N17°22'36"W	192.09'
222 TO 223	N00°24'59"E	585.03'
223 TO 224	N89°31'46"E	105.00'
224 TO 225	S00°28'14"E	25.00'
225 TO 226	S75°04'32"E	104.32'
226 TO 227	S00°35'21"W	66.00'
227 TO 228	S56°58'02"W	141.80'
228 TO 229	S00°10'11"E	76.66'
229 TO 254	S01°34'49"E	228.39'
254 TO 255	N89°31'46"E	6.13'
255 TO 230	S09°00'49"E	91.54'
230 TO 231	S22°04'56"E	181.25'
231 TO 232	S46°41'49"E	187.27'
232 TO 233	N44°06'08"E	10.00'
233 TO 234	S45°53'52"E	45.00'
234 TO 235	S44°06'08"W	10.00'
235 TO 236	S45°40'36"E	564.39'
236 TO 237	S18°16'57"E	57.35'
237 TO 198	SEE ERWC5 CURVE DATA	
198 TO 197	S89°37'52"W	129.28'

COORDINATE TABLE – NEW R/W POINTS				
PT.#	STATION	OFFSET	Y	X
197	85+94.90	75.00' LT.	400128.26	696053.88
198	85+16.55	30.76' RT.	400129.10	696183.15
218	89+00.00	45.00' LT.	400358.41	695862.51
219	90+59.71	74.78' LT.	400448.17	695727.10
220	94+57.07	74.78' LT.	400756.55	695444.85
222	96+25.00	70.00' LT.	400939.88	695387.49
223	102+00.00	55.00' LT.	401524.90	695391.74
224	102+00.00	50.00' RT.	401525.76	695496.73
225	101+75.00	50.00' RT.	401500.76	695496.94
226	501+50.00	32.66' LT.	401473.89	695597.74
227	501+50.00	33.34' RT.	401407.89	695597.06
228	100+05.00	29.85' RT.	401330.60	695478.19
229	99+28.34	29.45' RT.	401253.94	695478.42
230	96+00.00	45.00' RT.	400935.29	695505.18
231	94+00.00	40.00' RT.	400767.33	695573.32
232	92+05.00	50.00' RT.	400638.89	695709.61
233	92+05.00	60.00' RT.	400646.07	695716.57
234	91+60.00	60.00' RT.	400614.76	695748.88
235	91+60.00	50.00' RT.	400607.57	695741.92
236	86+00.00	50.00' RT.	400213.23	696145.69
237	85+50.00	30.69' RT.	400158.77	696163.68
254	97+00.00	33.87' RT.	401025.64	695484.71
255	97+00.00	40.00' RT.	401025.69	695490.84

COORDINATE TABLE – TLE POINTS				
PT.#	STATION	OFFSET	Y	X
544	100+18.82	51.50' RT.	401344.60	695499.72
545	99+00.00	40.00' RT.	401225.69	695489.20
546	99+00.00	30.00' RT.	401225.60	695479.20
565	91+75.00	31.65' LT.	400559.38	695674.33
566	91+75.00	40.00' LT.	400553.38	695668.51
567	92+10.00	40.00' LT.	400577.74	695643.38
568	92+10.00	70.00' LT.	400556.20	695622.50
569	92+75.00	70.00' LT.	400601.44	695575.83
570	92+75.00	31.22' LT.	400629.28	695602.81

NOTE: EXISTING C/L OF CTH ET AND FLARE AVENUE BASED ON CENTERLINE OF EXISTING PAVEMENT.

EXISTING RIGHT-OF-WAY FOR CTH ET BASED ON COUNTY RECORDS AND ASSOCIATED FOUND SURVEY MONUMENTATION, THE CENTERLINE OF EXISTING PAVEMENT, AND WIS. STATUTE 82.31(2). EXISTING RIGHT-OF-WAY FOR FLARE AVENUE BASED ON THE CENTERLINE OF EXISTING PAVEMENT AND WIS. STATUTE 82.31(2).

PI STA. = 95+14.52
Y = 400,818.39
X = 695,452.54
R = 485.00
D = 11°48'49"
DELTA = 45°25'37"
L = 384.53
T = 203.01
C = 374.54
PC STA. = 93+11.50
Y = 400,677.11
X = 695,598.33
PT STA. = 96+96.04
Y = 401,021.40
X = 695,450.88

EASEMENT TABLE			
OWNER	RECORDING INFORMATION	LOCATED IN R/W PARCEL #	REMARKS
NORTHWEST TELEPHONE COMPANY	V.74, P.453, DOC. 329011	17 & 19	20' WIDE EASEMENT CENTERED ON FIRST LINE INSTALLED IN SE¼-SW¼ OF SEC. 30

SCHEDULE OF LANDS & INTERESTS REQUIRED

PARCEL NUMBER	OWNER (S)	INTEREST REQUIRED	R/W ACRES REQUIRED NEW	EXISTING	TOTAL	TLE ACRES OR S.F. REQ.
17	THOMAS E. BAILEY AND JOAN A. BAILEY, HIS WIFE AS JOINT TENANTS	FEE, TLE	1.24	2.46	3.70	0.04
19	JEFFERY J. RAESE	TLE	---	---	---	0.06
20	KEVIN L. RITTER AND CHRISTINE M. RITTER, HUSBAND AND WIFE AS SURVIVORSHIP MARITAL PROPERTY, AS THEIR INTEREST MAY APPEAR	FEE	0.05	0.18	0.23	---
21	JAMES C. PRESTWICH, A SINGLE PERSON AS INDIVIDUAL PROPERTY	FEE	0.04	---	0.04	---
201	OAKDALE ELECTRIC COOPERATIVE	RELEASE OF RIGHTS, TEMP. CONST. EASE.				
202	CENTURYLINK	RELEASE OF RIGHTS, TEMP. CONST. EASE.				
205	ALLIANT ENERGY	RELEASE OF RIGHTS				

NOTE: AREAS SHOWN IN THE TOTAL ACRES COLUMN MAY BE APPROXIMATE AND ARE DERIVED FROM THE TAX ROLLS OR OTHER AVAILABLE SOURCES AND MAY NOT INCLUDE LANDS OF THE OWNER WHICH ARE NOT CONTIGUOUS TO THE AREA TO BE ACQUIRED. OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO MONROE COUNTY.

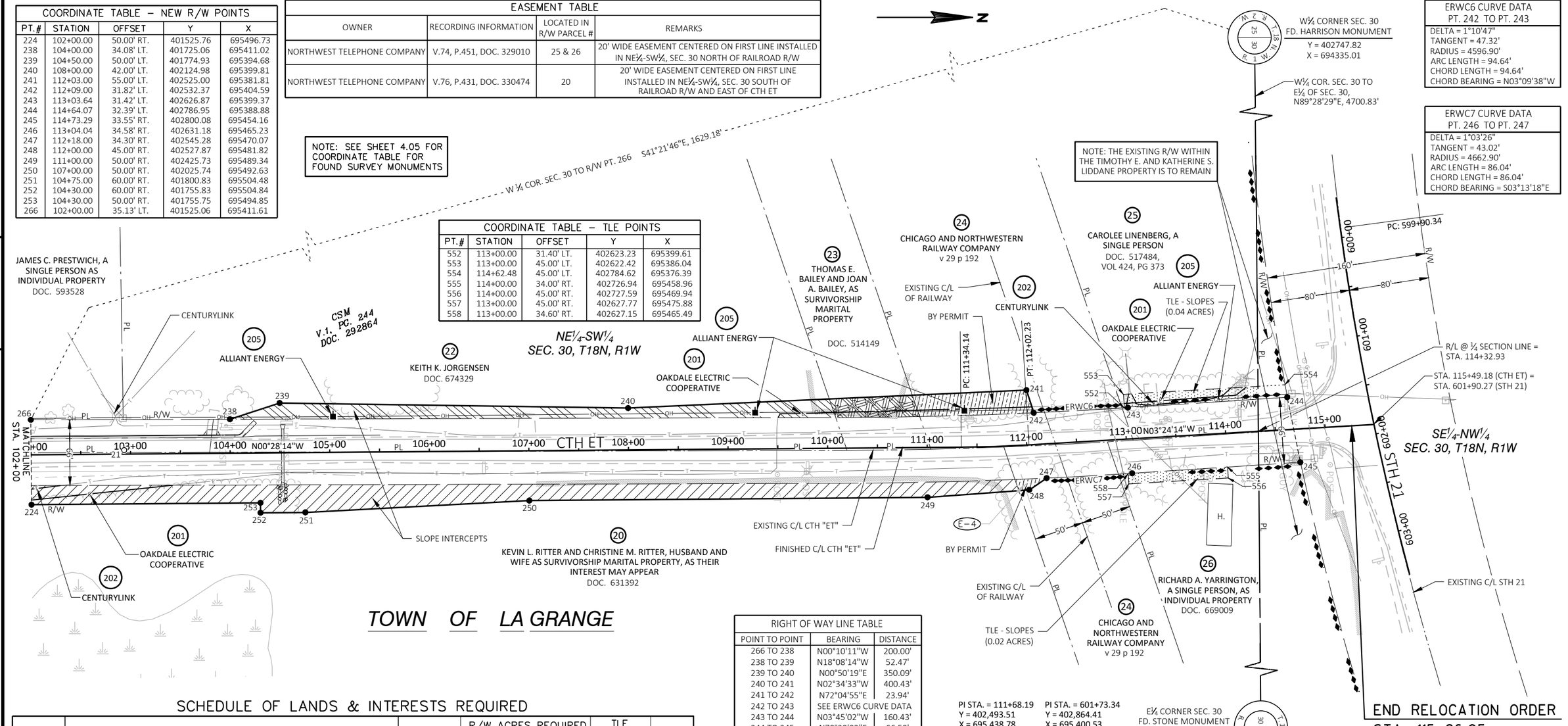
REVISION DATE	DATE: NOVEMBER 18, 2020	SCALE: FEET 0 50 100	HWY: CTH ET	R/W PROJECT NUMBER: 7373-00-00	PLAT SHEET 4.09	
11-18-20 01-27-21	GRID FACTOR N/A		COUNTY: MONROE	CONSTRUCTION PROJECT NUMBER: 7373-00-70	PS&E SHEET 37	E

COORDINATE TABLE – NEW R/W POINTS				
PT.#	STATION	OFFSET	Y	X
224	102+00.00	50.00' RT.	401525.76	695496.73
238	104+00.00	34.08' LT.	401725.06	695411.02
239	104+50.00	50.00' LT.	401774.93	695394.68
240	108+00.00	42.00' LT.	402124.98	695399.81
241	112+03.00	55.00' LT.	402525.00	695381.81
242	112+09.00	31.82' LT.	402532.37	695404.59
243	113+03.64	31.42' LT.	402626.87	695399.37
244	114+64.07	32.39' LT.	402786.95	695388.88
245	114+73.29	33.55' RT.	402800.08	695454.16
246	113+04.04	34.58' RT.	402631.18	695465.23
247	112+18.00	34.30' RT.	402545.28	695470.07
248	112+00.00	45.00' RT.	402527.87	695481.82
249	111+00.00	50.00' RT.	402425.73	695489.34
250	107+00.00	50.00' RT.	402025.74	695492.63
251	104+75.00	60.00' RT.	401800.83	695504.48
252	104+30.00	60.00' RT.	401755.83	695504.84
253	104+30.00	50.00' RT.	401755.75	695494.85
266	102+00.00	35.13' LT.	401525.06	695411.61

EASEMENT TABLE			
OWNER	RECORDING INFORMATION	LOCATED IN R/W PARCEL #	REMARKS
NORTHWEST TELEPHONE COMPANY	V.74, P.451, DOC. 329010	25 & 26	20' WIDE EASEMENT CENTERED ON FIRST LINE INSTALLED IN NE¼-SW¼, SEC. 30 NORTH OF RAILROAD R/W
NORTHWEST TELEPHONE COMPANY	V.76, P.431, DOC. 330474	20	20' WIDE EASEMENT CENTERED ON FIRST LINE INSTALLED IN NE¼-SW¼, SEC. 30 SOUTH OF RAILROAD R/W AND EAST OF CTH ET

NOTE: SEE SHEET 4.05 FOR COORDINATE TABLE FOR FOUND SURVEY MONUMENTS

COORDINATE TABLE – TLE POINTS				
PT.#	STATION	OFFSET	Y	X
552	113+00.00	31.40' LT.	402623.23	695399.61
553	113+00.00	45.00' LT.	402622.42	695386.04
554	114+62.48	45.00' LT.	402784.62	695376.39
555	114+00.00	34.00' RT.	402726.94	695458.96
556	114+00.00	45.00' RT.	402727.59	695469.94
557	113+00.00	45.00' RT.	402627.77	695475.88
558	113+00.00	34.60' RT.	402627.15	695465.49



TOWN OF LA GRANGE

ERWC6 CURVE DATA PT. 242 TO PT. 243
DELTA = 1°10'47"
TANGENT = 47.32'
RADIUS = 4596.90'
ARC LENGTH = 94.64'
CHORD LENGTH = 94.64'
CHORD BEARING = N03°09'38"W

ERWC7 CURVE DATA PT. 246 TO PT. 247
DELTA = 1°03'26"
TANGENT = 43.02'
RADIUS = 4662.90'
ARC LENGTH = 86.04'
CHORD LENGTH = 86.04'
CHORD BEARING = S03°13'18"E

RIGHT OF WAY LINE TABLE		
POINT TO POINT	BEARING	DISTANCE
266 TO 238	N00°10'11"W	200.00'
238 TO 239	N18°08'14"W	52.47'
239 TO 240	N00°50'19"E	350.09'
240 TO 241	N02°34'33"W	400.43'
241 TO 242	N72°04'55"E	23.94'
242 TO 243	SEE ERWC6 CURVE DATA	
243 TO 244	N03°45'02"W	160.43'
244 TO 245	N78°38'03"E	66.59'
245 TO 246	S03°45'02"E	169.26'
246 TO 247	SEE ERWC7 CURVE DATA	
247 TO 248	S34°00'52"E	21.00'
248 TO 249	S04°12'48"E	102.42'
249 TO 250	S00°28'14"E	400.00'
250 TO 251	S03°00'56"E	225.22'
251 TO 252	S00°28'14"E	45.00'
252 TO 253	S89°31'46"W	10.00'
253 TO 224	S00°28'14"E	230.00'
224 TO 266	S89°31'46"W	85.13'

PI STA. = 111+68.19
Y = 402,493.51
X = 695,438.78
R = 1330.00
D = 4°18'29"
DELTA = 2°55'59"
L = 68.09
T = 34.05
C = 68.08
PC STA. = 111+34.14
Y = 402,459.46
X = 695,439.06
PT STA. = 112+02.23
Y = 402,527.50
X = 695,436.76

PI STA. = 601+73.34
Y = 402,864.41
X = 695,400.53
R = 2750.00
D = 2°05'01"
DELTA = 7°36'51"
L = 365.45
T = 183.00
C = 365.18
PC STA. = 599+90.34
Y = 402,840.04
X = 695,219.16
PT STA. = 603+55.79
Y = 402,912.60
X = 695,577.06

SCHEDULE OF LANDS & INTERESTS REQUIRED

PARCEL NUMBER	OWNER (S)	INTEREST REQUIRED	R/W ACRES REQUIRED			TLE ACRES OR S.F. REQ.	PERMIT
			NEW	EXISTING	TOTAL		
20	KEVIN L. RITTER AND CHRISTINE M. RITTER, HUSBAND AND WIFE AS SURVIVORSHIP MARITAL PROPERTY, AS THEIR INTEREST MAY APPEAR	FEE	0.41	0.74	1.15	---	
22	KEITH K. JORGENSEN	FEE	0.18	---	0.18	---	
23	THOMAS E. BAILEY AND JOAN A. BAILEY, AS SURVIVORSHIP MARITAL PROPERTY	FEE	0.04	0.06	0.10	---	
24	CHICAGO AND NORTHWESTERN RAILWAY COMPANY	PERMIT	---	---	---	---	0.06
25	CAROLEE LINENBERG, A SINGLE PERSON	FEE, TLE	---	0.10	0.10	0.04	
26	RICHARD A. YARRINGTON, A SINGLE PERSON, AS INDIVIDUAL PROPERTY	FEE, TLE	---	0.11	0.11	0.02	
201	OAKDALE ELECTRIC COOPERATIVE	RELEASE OF RIGHTS, TEMP. CONST. EASE.					
202	CENTURYLINK	RELEASE OF RIGHTS, TEMP. CONST. EASE.					
205	ALLIANT ENERGY	RELEASE OF RIGHTS, TEMP. CONST. EASE.					

NOTE: AREAS SHOWN IN THE TOTAL ACRES COLUMN MAY BE APPROXIMATE AND ARE DERIVED FROM THE TAX ROLLS OR OTHER AVAILABLE SOURCES AND MAY NOT INCLUDE LANDS OF THE OWNER WHICH ARE NOT CONTIGUOUS TO THE AREA TO BE ACQUIRED. OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO MONROE COUNTY.

ENCROACHMENT TABLE			
ENCROACHMENT	PROPERTY OWNER	LOCATION (STATION/OFFSET)	ENCROACHMENT TYPE
E-4	KEVIN L. RITTER AND CHRISTINE M. RITTER	STA. 111+92 – STA. 111+94, 29.1' RT. – 33.00' RT.	FENCE

NOTE: EXISTING C/L OF CTH ET AND STH 21 BASED ON CENTERLINE OF EXISTING PAVEMENT.

EXISTING RIGHT-OF-WAY FOR CTH ET BASED ON COUNTY RECORDS AND ASSOCIATED FOUND SURVEY MONUMENTATION, THE CENTERLINE OF EXISTING PAVEMENT, AND WIS. STATUTE 82.31(2). EXISTING RIGHT-OF-WAY FOR STH 21 BASED ON R/W PLAT DIVISION JOB 5755.

REVISION DATE 11-18-20, 01-27-21

DATE: NOVEMBER 18, 2020

GRID FACTOR N/A

SCALE, FEET 0 50 100

HWY: CTH ET

COUNTY: MONROE

R/W PROJECT NUMBER: 7373-00-00

CONSTRUCTION PROJECT NUMBER: 7373-00-70

PLAT SHEET 4.10

PS&E SHEET 38 E

S:\Projects\W11616 CTH ET, Monroe Co (Tomah-STH 21)\RW\W11616 RW PLAT.DWG PLOT DATE : 9/20/2022 1:51 PM PLOT BY : Karter Zajicek PLOT NAME : PLOT SCALE : 1:1

WISDOT/CADDS SHEET 75

BEGIN PROJECT
STA. 105+50
Y=401,875.34
X=695,443.86

STA. 106+98, LT.
CONSTRUCT F.E. (B.A.D.)
(1) CULVERT PIPE CORRUGATED STEEL 18-INCH
(2) APRON ENDWALLS FOR CULVERT PIPE STEEL REQ'D

STA. 106+98, LT.
REMOVING SMALL PIPE CULVERTS REQ'D

STA. 111+00 - STA. 115+00
CLEARING & GRUBBING REQ'D.

STA. 111+09, LT.
ASPHALTIC FLUME REQ'D.

STA. 111+09 - STA. 112+00, LT.
CONCRETE CURB & GUTTER 6-INCH
SLOPED 30-INCH TYPE J

STA. 113+28, LT.
CONSTRUCT P.E. (B.A.D.)

STA. 112+50 - STA. 114+52, LT.
CONCRETE CURB & GUTTER 6-INCH
SLOPED 30-INCH TYPE J

STA. 114+52 - STA. 115+17, LT.
CONCRETE CURB & GUTTER 6-INCH
SLOPED 36-INCH TYPE D

STA. 114+58 - STA. 115+16, LT.
REMOVING CURB & GUTTER REQ'D.

STA. 115+49.18 (CTH ET) =
STA. 601'E'+90.27 ('E'-LINE (STH 21))
TYPE D INTERSECTION (MOD.) REQ'D.

STA. 111+20 - STA. 112+10, RT.
CONCRETE CURB & GUTTER 6-INCH
SLOPED 30-INCH TYPE J

STA. 111+92 - STA. 111+94, RT.
REMOVING FENCE BY OTHERS

STA. 111+20, RT.
ASPHALTIC FLUME REQ'D.

CURVE 13
PI STA. = 111+68.19
Y = 402,493.51
X = 695,438.78
R = 1330.00
D = 4°18'29"
DELTA = 2°55'59"
L = 68.09
T = 34.05
C = 68.08
PC STA. = 111+34.14
Y = 402,459.46
X = 695,439.06
PT STA. = 112+02.23
Y = 402,527.50
X = 695,436.76
S.E. = SEE S.E. TABLE
RO = SEE S.E. TABLE
S.E. TRANS = SEE S.E. TABLE

STA. 113+49, RT.
CONSTRUCT P.E. (B.A.D.)

STA. 114+90 - STA. 115+35, RT.
REMOVING CURB & GUTTER REQ'D.

STA. 112+60 - STA. 114+77, RT.
CONCRETE CURB & GUTTER 6-INCH
SLOPED 30-INCH TYPE J

STA. 114+77 - STA. 115+36, RT.
CONCRETE CURB & GUTTER 6-INCH
SLOPED 36-INCH TYPE D

END CONSTRUCTION
STA. 603'E'+45

END PROJECT
STA. 115+26.95
Y=402,851.64
X=695,417.48

MATCH EXISTING
STA. 105+50
EL. = 995.89

MATCH EXISTING
STA. 115+26.95
EL. = 1015.10

LEGEND	
⟵	DIRECTION OF FLOW
XXXXXXXXX	SAWING ASPHALT

SEE MISCELLANEOUS QUANTITIES SHEET FOR EARTHWORK SUMMARY

BENCH MARKS

NO.	STA.	DESCRIPTION	ELEV.
12	109+96	3/4" IRON REBAR SET, 25.8' RT.	997.67
13	114+57	3/4" IRON REBAR SET, 26.9' LT.	1011.99

SEE TYPICAL FINISHED SECTION AT UNION PACIFIC RAILROAD UNDERPASS AND CROSS SECTIONS FOR VERTICAL CLEARANCE UNDER STRUCTURE

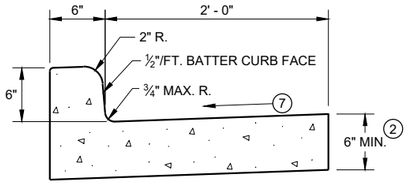
STATION	EXISTING C/L ELEVATION	FINISHED C/L ELEVATION
103+50	996.60	996.60
104+00	996.37	996.37
104+50	996.15	996.15
105+00	995.93	995.93
105+50	995.91	995.89
106+00	996.09	995.85
106+50	996.23	995.82
107+00	996.34	995.80
107+50	996.70	995.91
108+00	997.16	996.17
108+50	997.67	996.56
109+00	998.21	997.09
109+50	998.94	997.77
110+00	999.71	998.59
110+50	1000.70	999.55
111+00	1001.73	1000.64
111+50	1002.90	1001.88
112+00	1004.24	1003.27
112+50	1005.29	1004.79
113+00	1006.52	1006.45
113+50	1008.11	1008.26
114+00	1009.99	1010.18
114+50	1012.19	1012.12
115+00	1014.00	1014.05
115+50		
116+00		
116+50		
117+00		

PROJECT NO: 7373-00-71	HWY: CTH ET	COUNTY: MONROE	PLAN AND PROFILE: CTH ET	SHEET 39	E

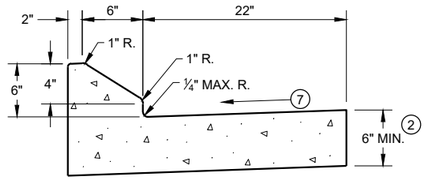
Standard Detail Drawing List

08D01-22A	CONCRETE CURB & GUTTER
08D01-22B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D04-06	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E15-01	CULVERT PIPE CHECK
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
09A01-13A	AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND D AND TEE INTERSECTION BYPASS LANE
13C19-03	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
14B20-11B	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SQUARE END PARAPETS
14B20-11C	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO VERTICAL FACED PARAPETS
14B20-11D	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SLOPED END PARAPETS
14B20-11E	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO BRIDGE RAILING TYPES "F" AND "W"
14B20-11F	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO BRIDGE RAILING TYPE "M"
14B20-11G	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTOR PLATE DETAIL
14B20-11H	STEEL THRIE BEAM STRUCTURE APPROACH, SINGLE SLOPE ATTACHMENT
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
14B32-10A	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-10B	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-10C	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-10D	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-10E	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-10F	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-10G	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-10H	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B33-02G	CONCRETE BARRIER SINGLE SLOPE 42" THRIE BEAM ANCHOR
14B33-02H	CONCRETE BARRIER SINGLE SLOPE 42" THRIE BEAM ANCHOR
14B41-03A	SINGLE SLOPE ROADSIDE RETAINING WALL
14B41-03B	SINGLE SLOPE ROADSIDE RETAINING WALL
14B42-07A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07D	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)
14B45-05D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05E	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05F	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05G	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05H	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05I	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05J	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05K	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05L	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
15A04-07B	BARRIER WALL DELINEATOR WITH REFLECTIVE SHEETING
15C02-08A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-08B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C08-22A	LONGITUDINAL MARKING (MAINLINE)
15C11-09B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-09A	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C19-07A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C33-04	STOP LINE AND CROSSWALK PAVEMENT MARKING
15C35-05A	PAVEMENT MARKING (INTERSECTIONS)
15D28-04	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY

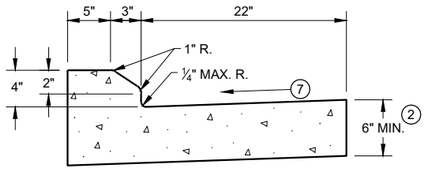
6



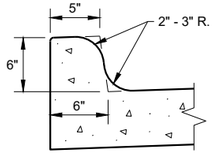
TYPES A (1) & D



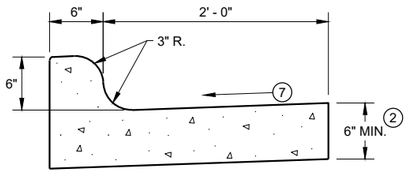
6" SLOPED CURB TYPES G (1) & J



4" SLOPED CURB TYPES G (1) & J

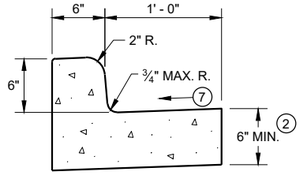


TYPES K (1) & L
(OPTIONAL CURB SHAPE)



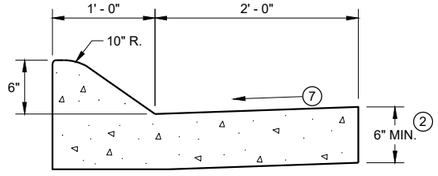
TYPES K (1) & L

CONCRETE CURB AND GUTTER 30"

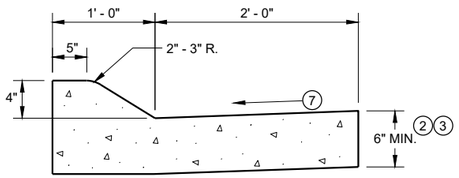


TYPES A (1) & D

CONCRETE CURB AND GUTTER 18"

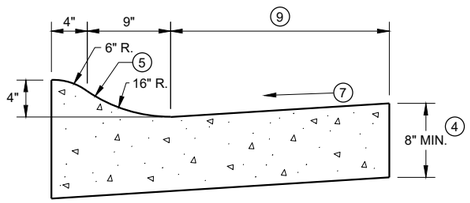


6" SLOPED CURB TYPES A (1) & D



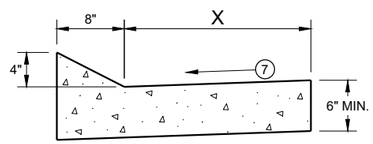
4" SLOPED CURB TYPES A (1) & D

CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R (1) & T

TBT & TBTT	X
30"	22"
36"	28"

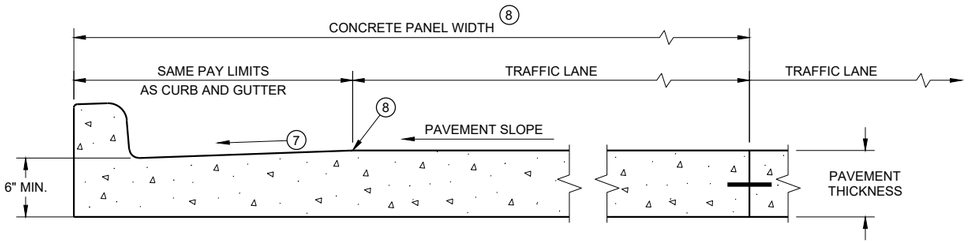


TYPES TBT & TBTT (1)

CONCRETE CURB AND GUTTER

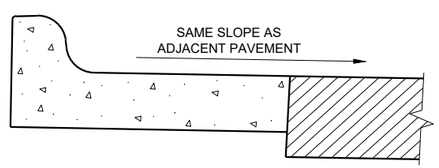
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

PAVEMENT THICKNESS	MAXIMUM PANEL WIDTH
LESS THAN 10"	12'
10" & ABOVE	15'



PARTIAL SECTION OF PAVEMENT * WITH INTEGRAL CURB AND GUTTER

* BIKE LANE IS NOT SHOWN



REVERSE SLOPE GUTTER (6)
(TYPICAL FOR ALL CURB & GUTTER TYPES)

GENERAL NOTES

DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.

(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(3) USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.

(4) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(5) UNLESS OTHERWISE NOTED, FOR STAKING PURPOSES THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

(6) WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.

(7) USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.

(8) INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.

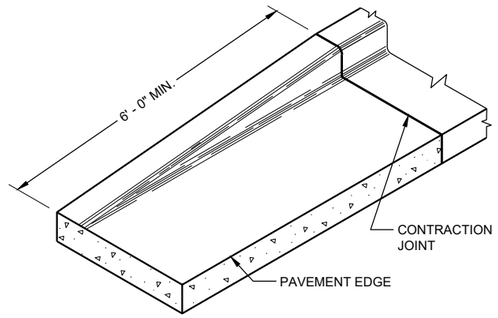
(9) CONCRETE CURB AND GUTTER 4-INCH SLOPED 30-INCH TYPE "R" AND "T" = 17 INCHES
CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE "R" AND "T" = 23 INCHES

CONCRETE CURB AND GUTTER

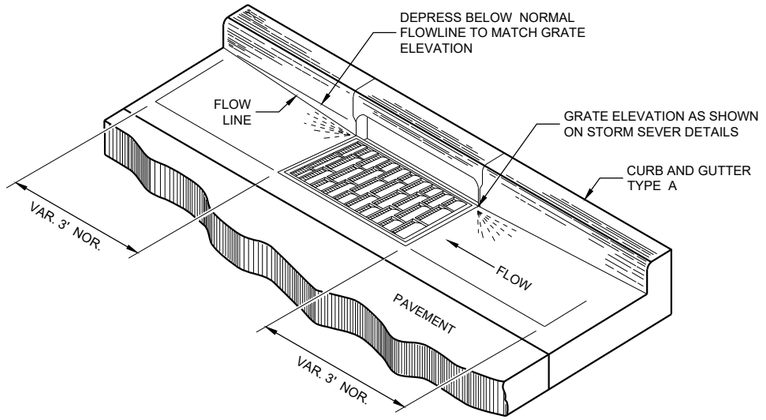
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 08D01 - 22a
SDD 08D01 - 22a



END SECTIONCURB AND GUTTER



DETAIL OF CURB AND GUTTER AT INLETS
(TYPICAL H INLET COVER SHOWN)

GENERAL NOTES

DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

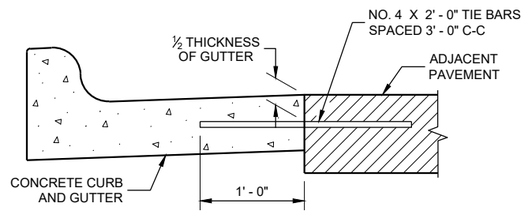
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

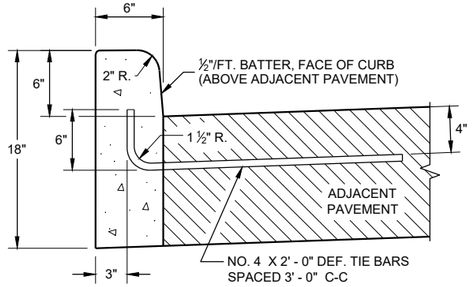
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.

(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

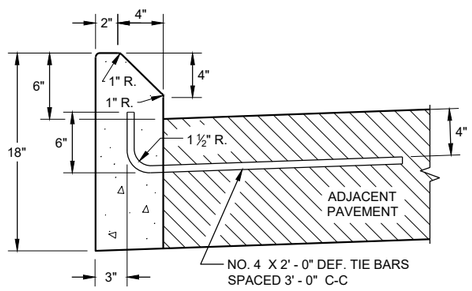
(9) REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.



TYPICAL TIE BAR LOCATION (1)

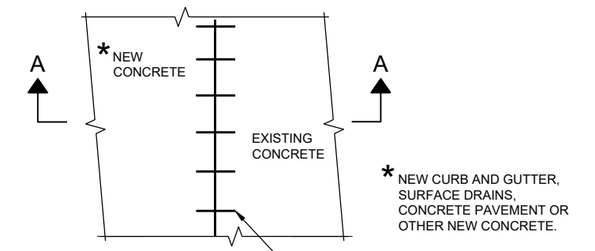


TYPES A (1) & D

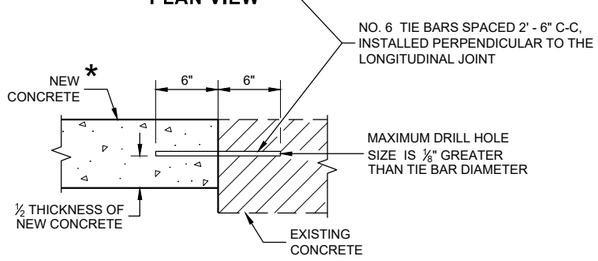


TYPES G (1) & J

CONCRETE CURB

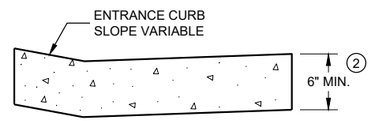


PLAN VIEW



SECTION A - A

TIE BARS DRILLED INTO EXISTING PAVEMENT



DRIVEWAY ENTRANCE CURB (9)
(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2021 — DATE
/S/ Rodnery Taylor — ROADWAY STANDARDS DEVE ENGINEER

FHWA

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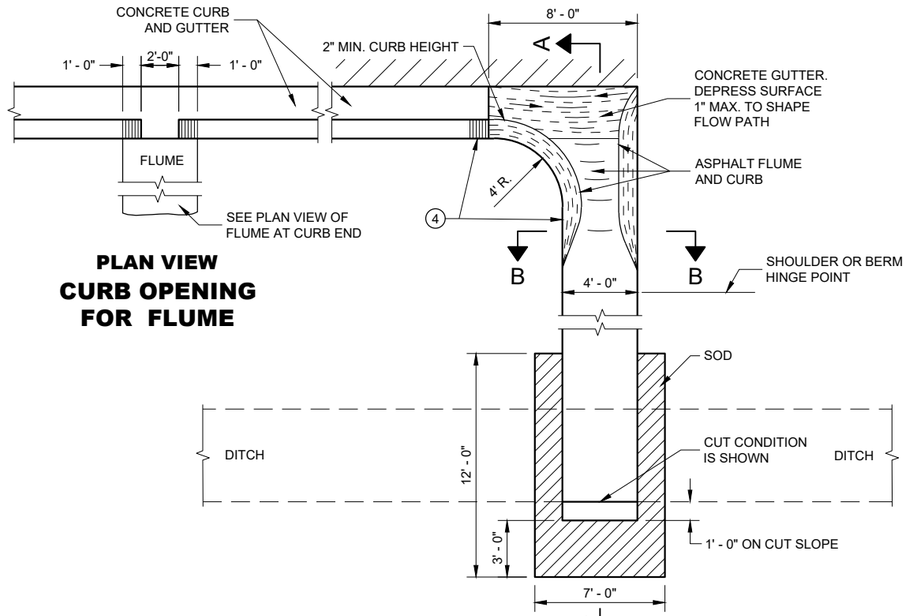
SDD08D01 - 22b

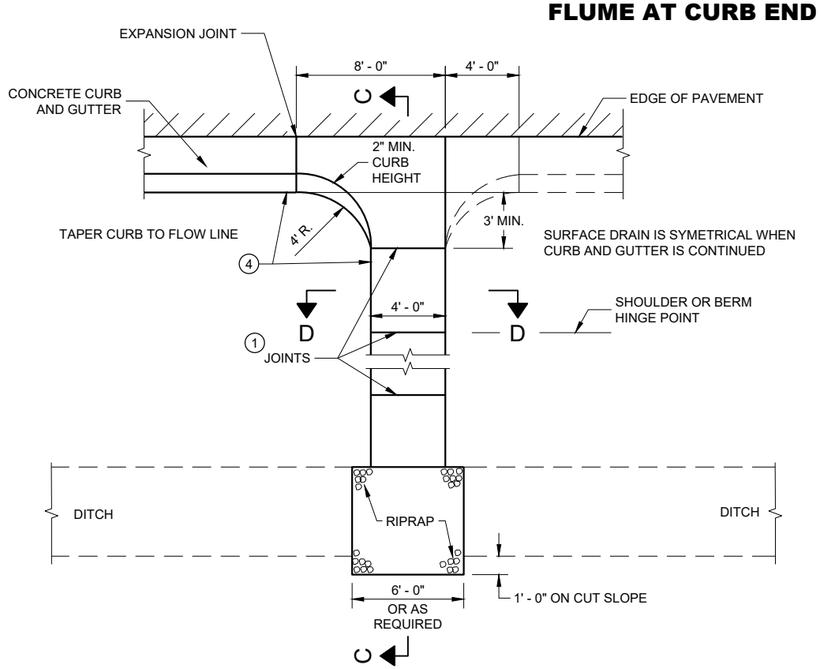
NOTE: TAPER CURB ENDS TO GUTTER IN 1' - 0"

ASPHALTIC FLUME



PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



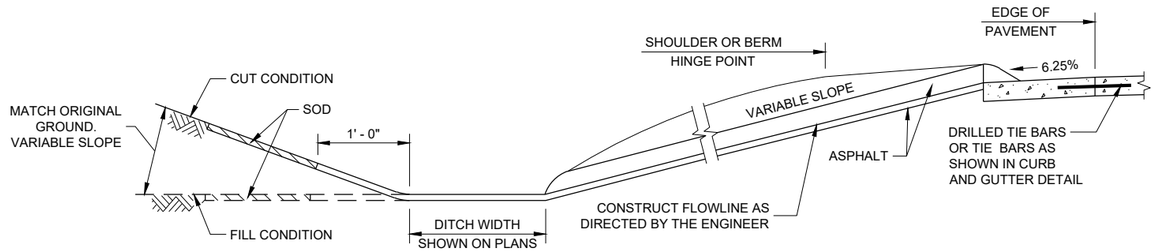
PLAN VIEW
CONCRETE SURFACE DRAIN

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.

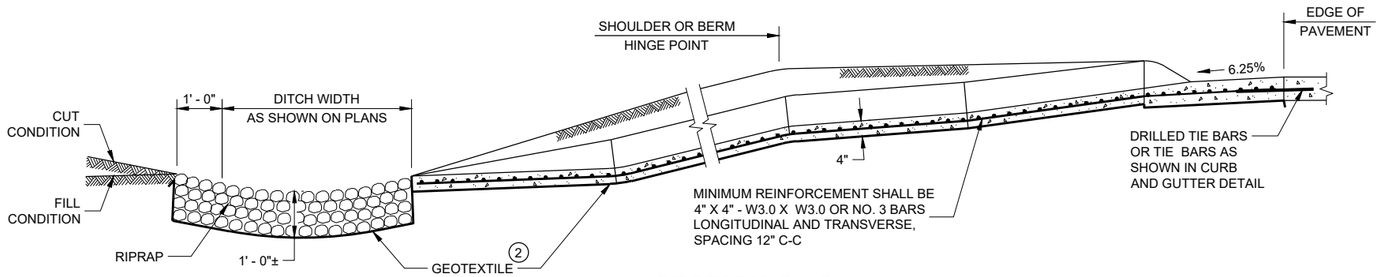
4" X 4" - W3.0 X W3.0 CONCRETE REINFORCEMENT SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

1. JOINTS SHALL BE ⅛" TO ¼" WIDE BY 1½" DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.
2. GEOTEXTILE 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.
4. ANGLE OF FLUME IN RELATION TO BACK OF CURB TO BE CONSTRUCTED PER THE PLAN DETAILS OR AS DIRECTED BY THE ENGINEER. ANGLE OF FLUME MAY BE OTHER THAN 90 DEGREES AS SHOWN.

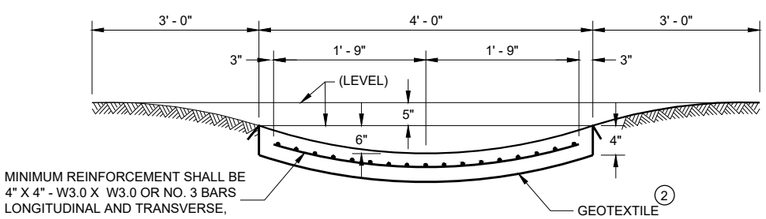


SECTION A - A

SECTION B - B



SECTION C - C



SECTION D - D

CONCRETE SURFACE DRAINS AND ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

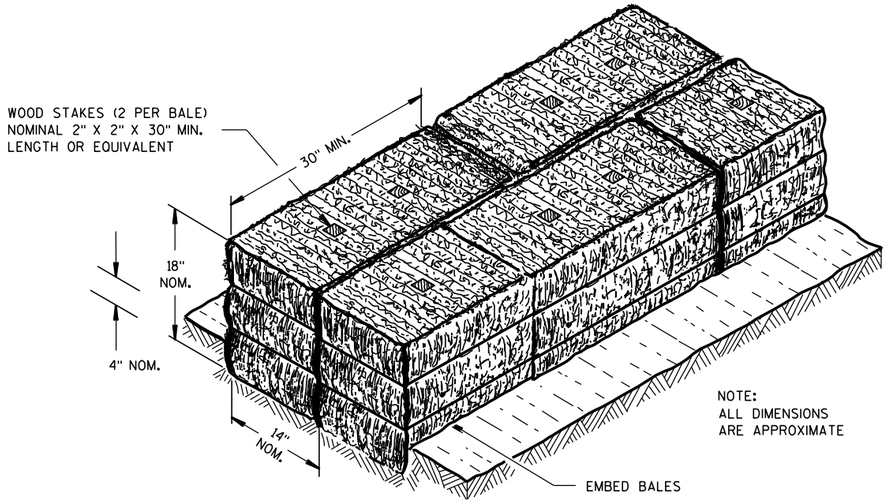
APPROVED
November 2021
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

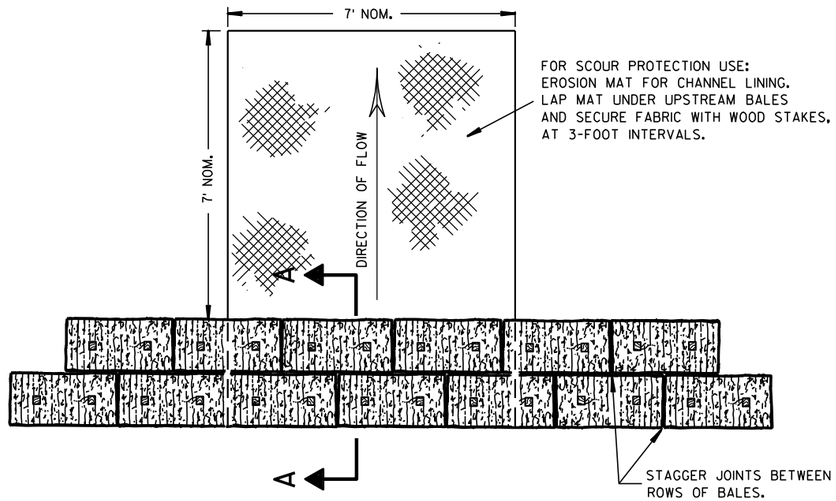
FHWA

6

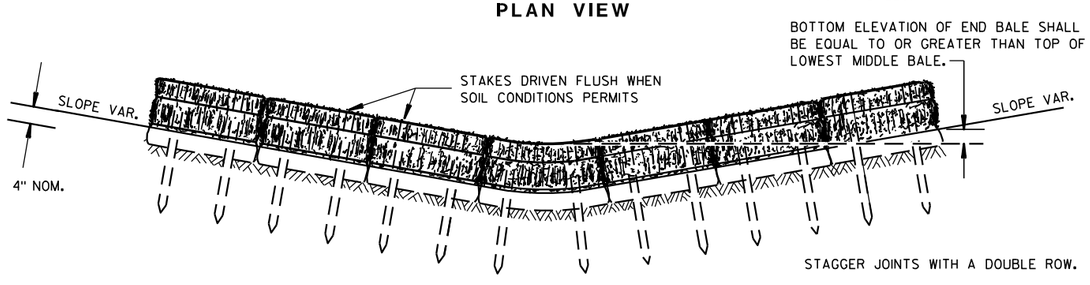
SDD 08D04 - 06



SECTION A-A



PLAN VIEW



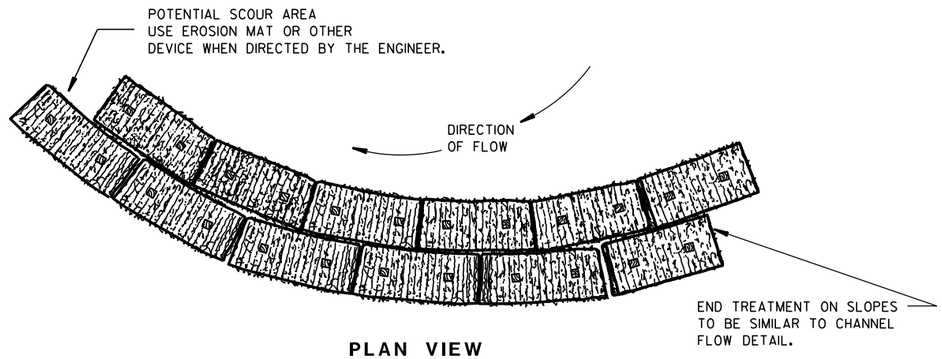
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

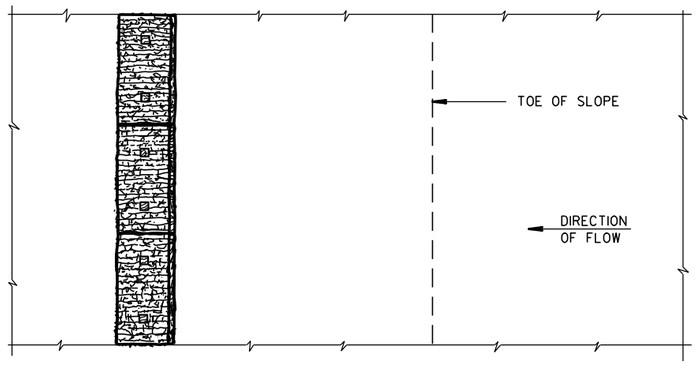
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

(1) TEMPORARY DITCH CHECKS EITHER EROSION BALES OR MANUFACTURED SHALL BE PAID FOR UNDER THE BID ITEM OF TEMPORARY DITCH CHECK. THE DEPARTMENT WILL NOT PAY FOR TEMPORARY DITCH CHECKS CONSTRUCTED OF A SINGLE ROW OF EROSION BALES.

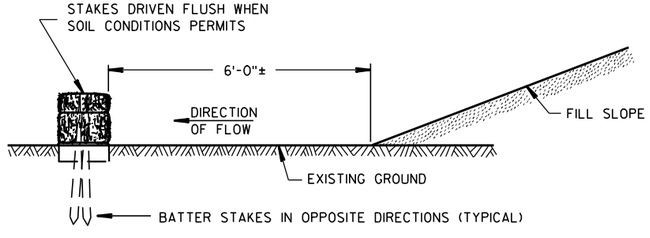


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

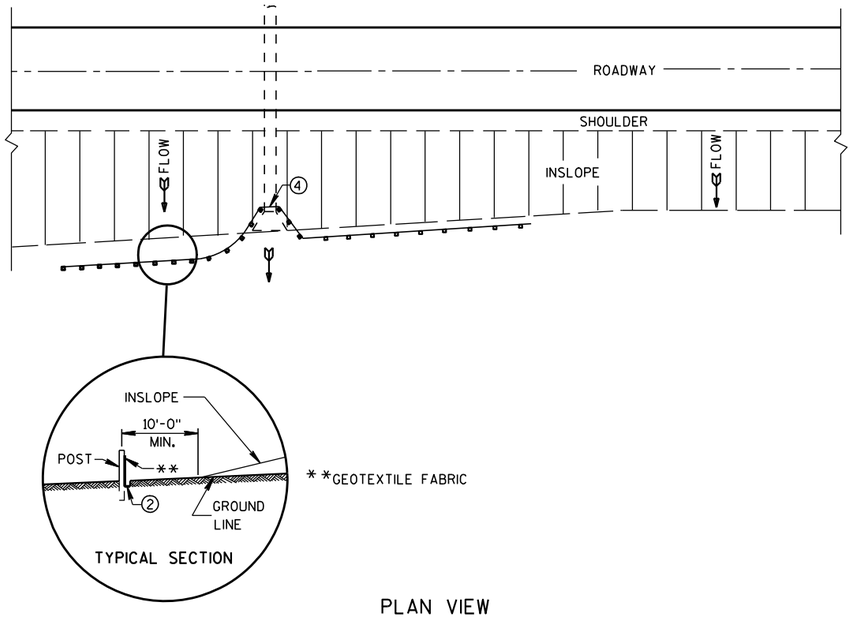
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/04/02 DATE — /S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER

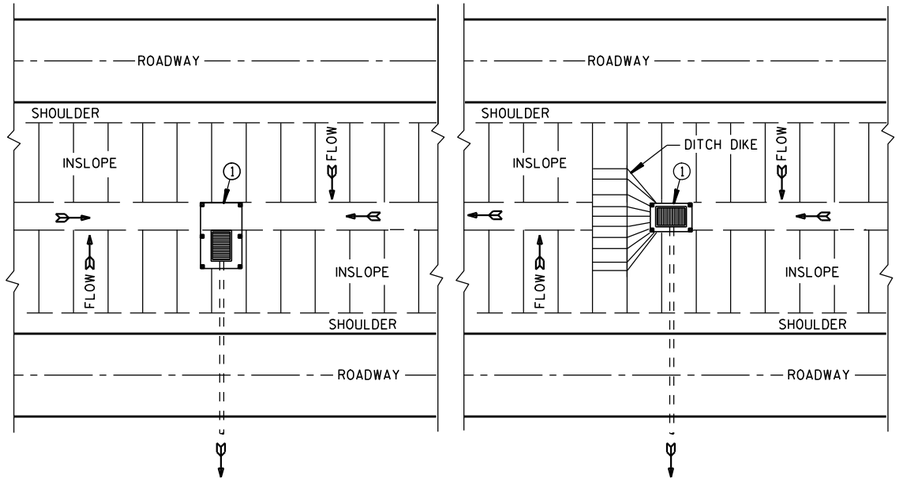
FHWA

6
S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



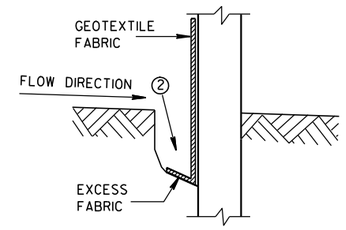
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

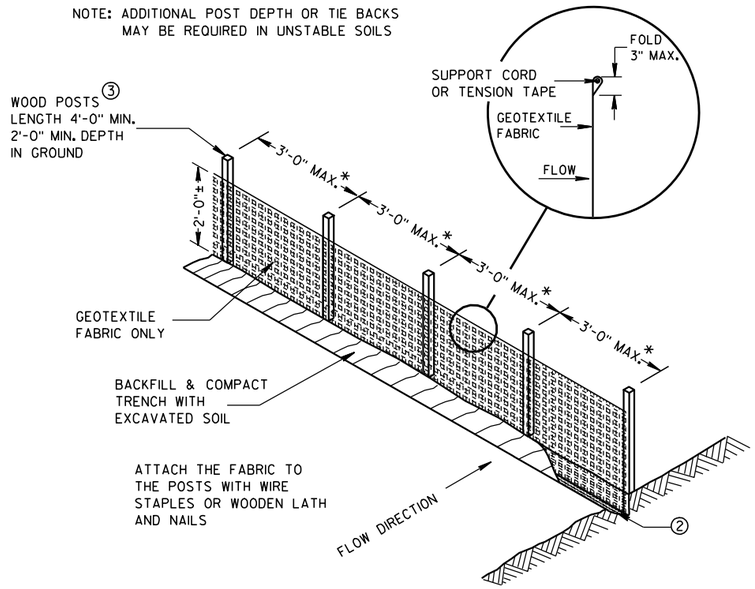
GENERAL NOTES

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.

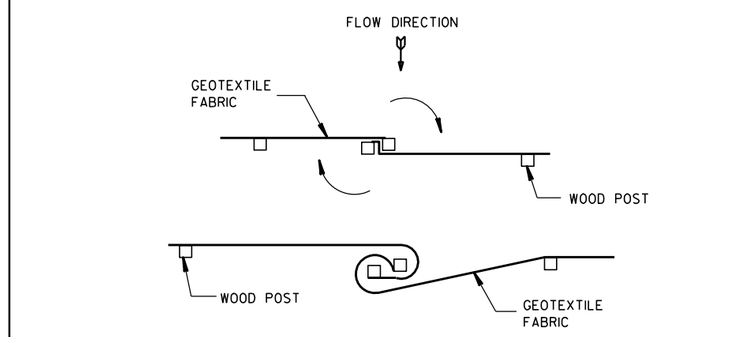


TRENCH DETAIL

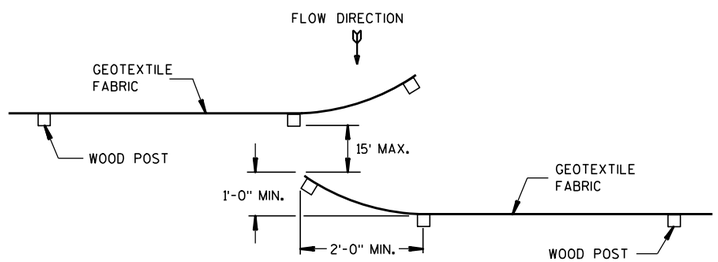


*NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

SILT FENCE

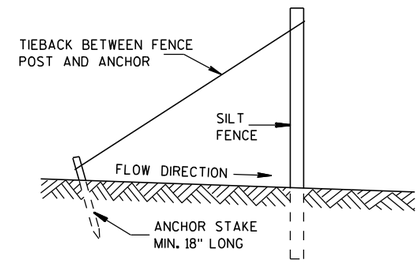


TWIST METHOD



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

6

S.D.D. 8 E 9-6

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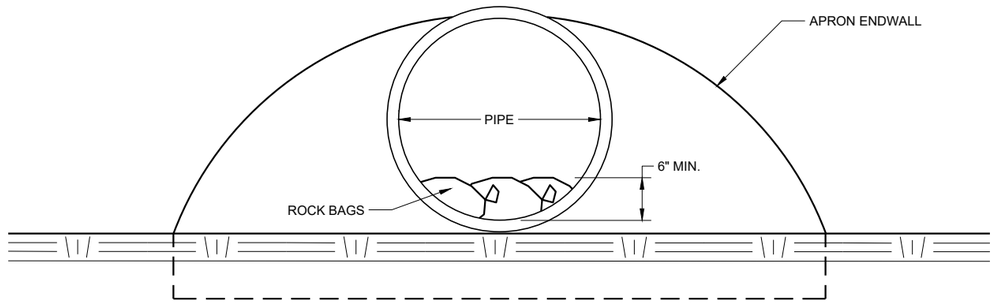
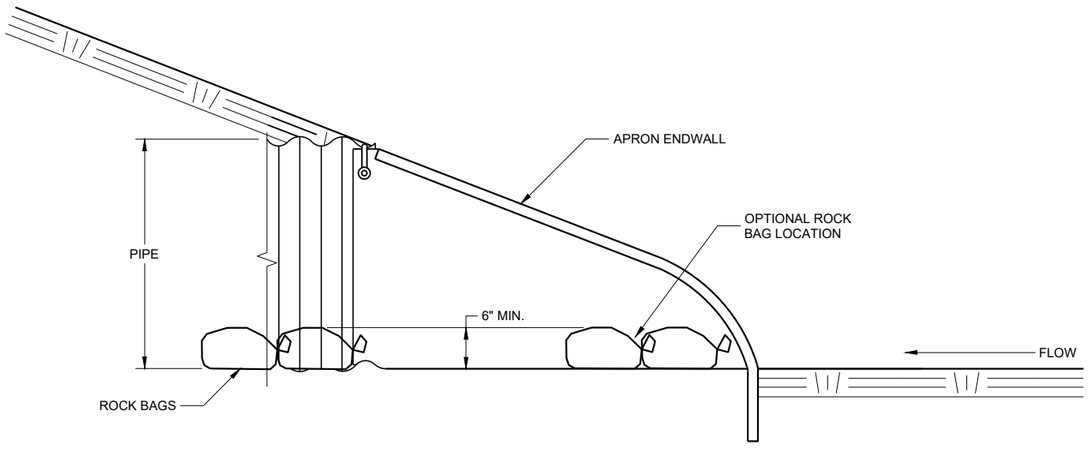
S.D.D. 8 E 9-6



END VIEW



SIDE VIEW

CULVERT PIPE CHECK

(INSTALL ON INLET END ONLY)

CULVERT PIPE CHECK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019
DATE

/S/ Daniel Schave
EROSION CONTROL ENGI

FHWA

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SDD 08E15 - 01

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SDD 08E15 - 01

METAL APRON ENDWALLS

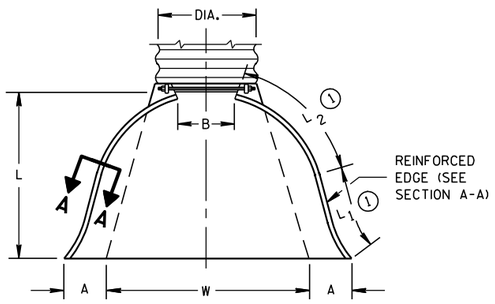
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1 Pc.
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1 Pc.
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2 Pc.
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2 Pc.
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1	3 Pc.
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1	3 Pc.
60	.109×	.105×	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109×	.105×	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109×	.105×	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109×	.105×	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109×	.105×	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109×	.105×	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109×	.105×	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

× EXCEPT CENTER PANEL SEE GENERAL NOTES

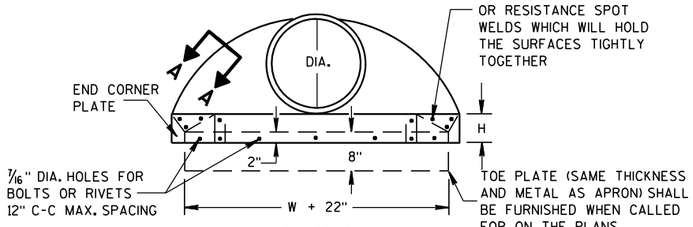
REINFORCED CONCRETE APRON ENDWALLS

PIPE DIA. (IN.)	DIMENSIONS (Inches) T	A	B	C	D	E	G	APPROX. SLOPE
12	2	4	24	48 7/8	72 1/8	24	2	3 to 1
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1
24	3	9 1/2	43 1/2	30	73 1/2	48	3	3 to 1
27	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	3 to 1
30	3 1/2	12	54	19 3/4	73 1/2	60	3 1/2	3 to 1
36	4	15	63	34 3/4	97 3/4	72	4	3 to 1
42	4 1/2	21	63	35	98	78	4 1/2	3 to 1
48	5	24	72	26	98	84	5	3 to 1
54	5 1/2	27	65	* 33 1/4 - ** 35	* 98 1/4 - ** 100	90	5 1/2	2 2/5 to 1
60	6	* 30 - ** 35	60	39	99	96	5	2 to 1
66	6 1/2	* 24 - ** 30	* 72 - ** 78	* 21 - ** 27	99	102	5 1/2	2 to 1
72	7	* 24 - ** 36	78	21	99	108	6	2 to 1
78	7 1/2	* 24 - ** 36	78	21	99	114	6 1/2	2 to 1
84	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2 to 1
90	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	1 1/2 to 1

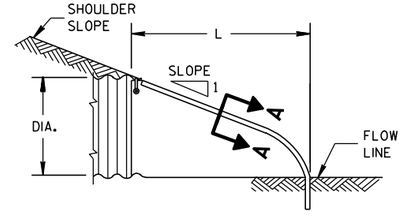
*MINIMUM
**MAXIMUM



PLAN VIEW

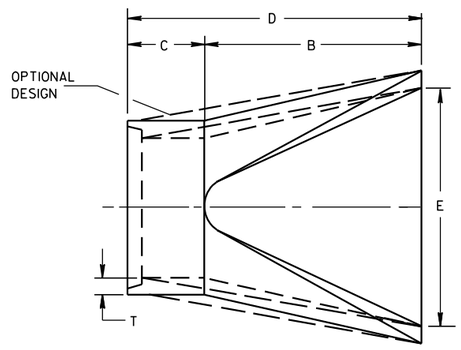


END VIEW

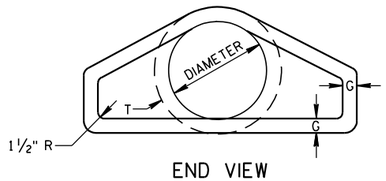


SIDE ELEVATION

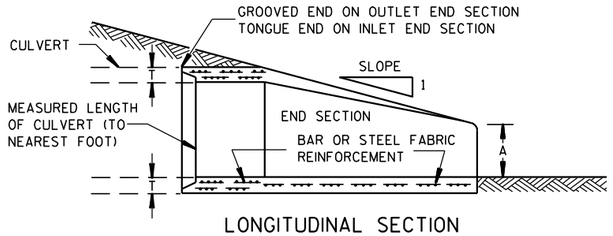
METAL ENDWALLS



PLAN

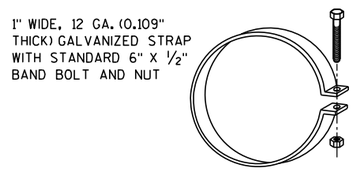


END VIEW



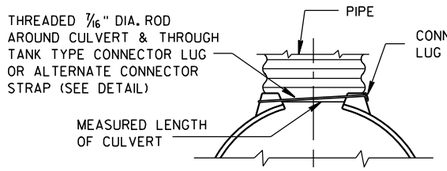
LONGITUDINAL SECTION

CONCRETE ENDWALLS

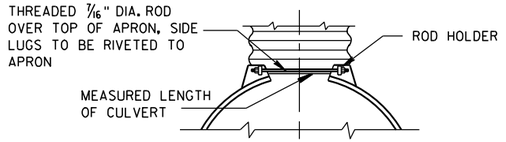


ALTERNATE FOR TYPE 1 CONNECTION

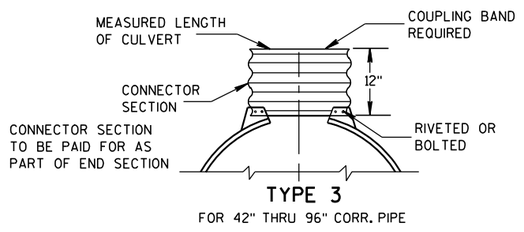
END SECTION CONNECTOR STRAP



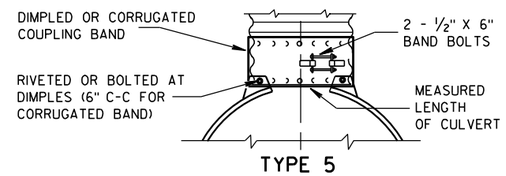
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

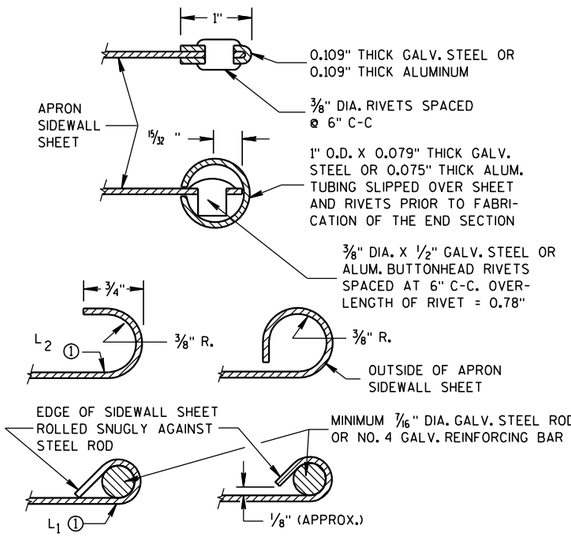
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5 AS APPLICABLE.

FOR HELICALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2 OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO CIRCUMFERENTIAL CORRUGATIONS AT EACH END USE ENDWALL CONNECTION DETAILS 1, 2 OR 3.

CONNECTION DETAILS



SECTION A-A

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.

CONCRETE CULVERT ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/30/94 — DATE
/S/ Rory L. Rhinesmith — CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

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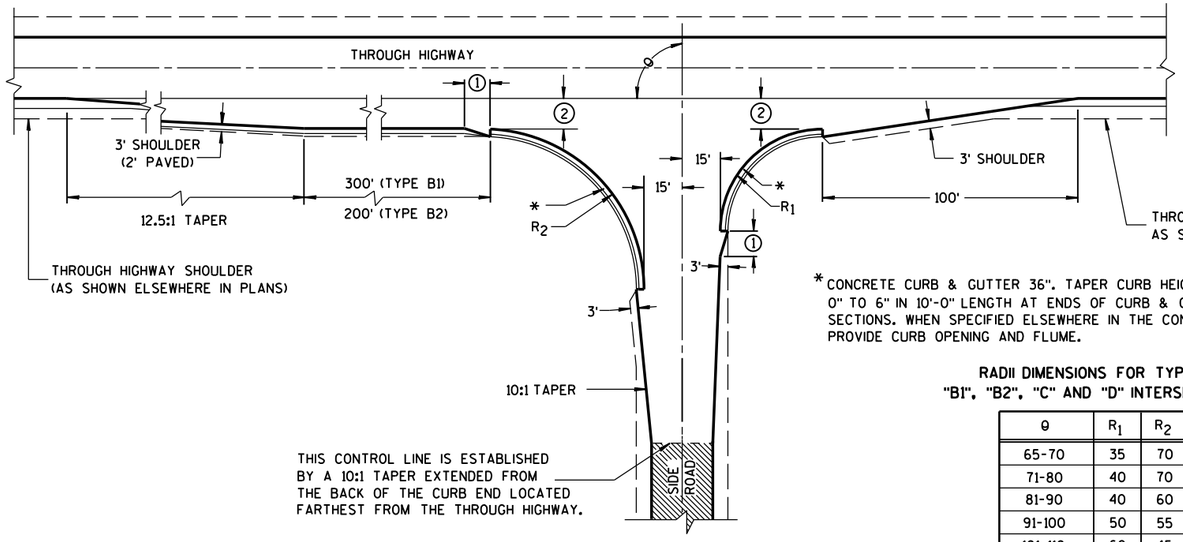
S.D.D. 8 F 1-11

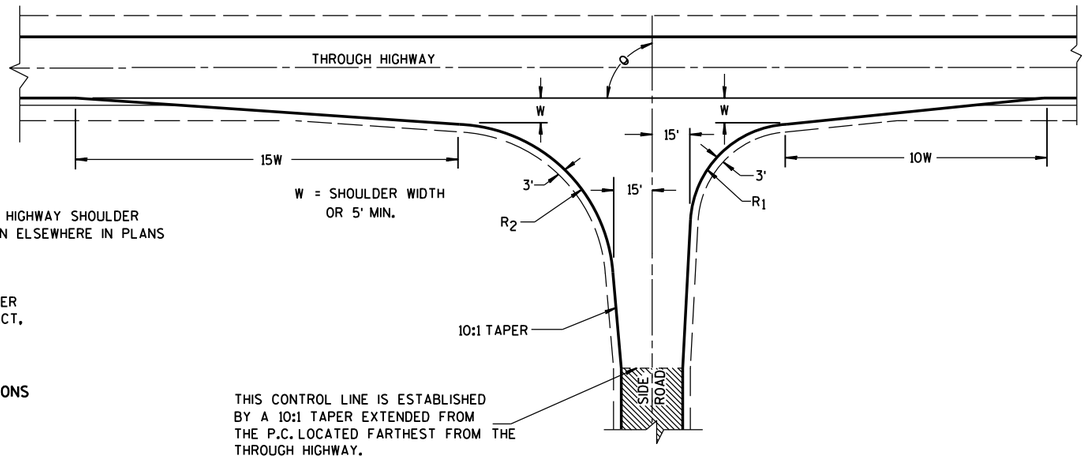


TYPE "B1" AND "B2"

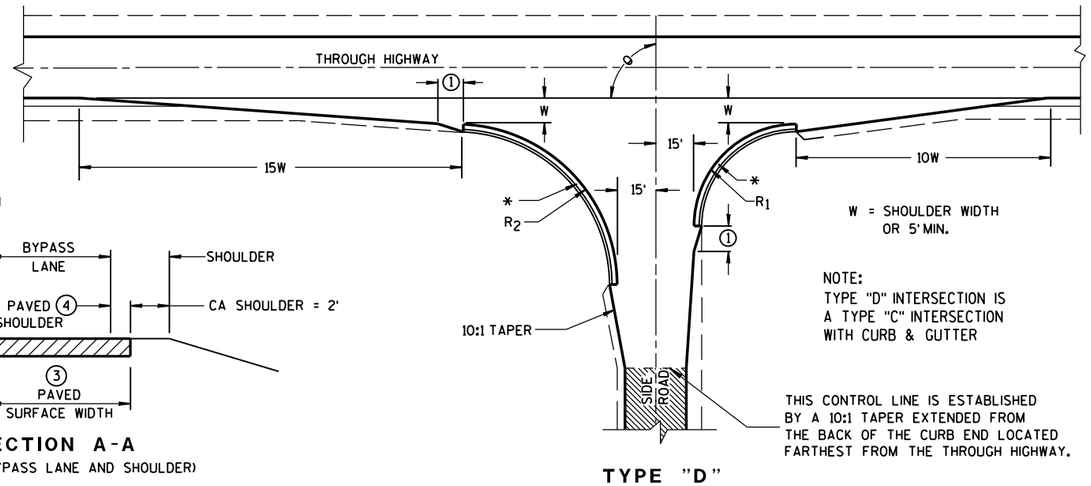
*CONCRETE CURB & GUTTER 36". TAPER CURB HEIGHT 0" TO 6" IN 10'-0" LENGTH AT ENDS OF CURB & GUTTER SECTIONS. WHEN SPECIFIED ELSEWHERE IN THE CONTRACT, PROVIDE CURB OPENING AND FLUME.

RADII DIMENSIONS FOR TYPES "B1", "B2", "C" AND "D" INTERSECTIONS

θ	R_1	R_2
65-70	35	70
71-80	40	70
81-90	40	60
91-100	50	55
101-110	60	45



TYPE "C"



TYPE "D"

GENERAL NOTES

DESIGNS MAY BE USED INTERCHANGEABLY IN COMBINATION OR SEPARATELY FOR ANY ONE COMPLETE INTERSECTION DEPENDING UPON INTERSECTION ANGLE AND SURFACING OF EACH APPROACH ROADWAY.

SIDE ROAD SURFACING NOTE

WHEN THE SIDE ROAD IS NOT PRESENTLY PAVED, PAVEMENT SHALL BE PLACED TO THE LIMITS SHOWN UNLESS OTHERWISE PROVIDED IN THE CONTRACT. WHERE THE CONSTRUCTION LIMITS ARE BEYOND THE PAVING LIMITS, CRUSHED AGGREGATE SURFACING SHALL BE PLACED BETWEEN THE PAVING LIMITS AND CONSTRUCTION LIMITS.

WHEN THE SIDE ROAD IS PRESENTLY PAVED, NEW PAVEMENT SHALL BE PLACED TO THE LIMITS OF DESIGN AS SHOWN AND BEYOND, IF NECESSARY, TO MEET EXISTING PAVEMENT.

WHEN THE SIDE ROAD IS THE CONSTRUCTION PROJECT, THE INTERSECTION SURFACING SHALL BE THE SAME AS FOR THE PROJECT.

EXISTING PAVED SURFACE

BYPASS LANE

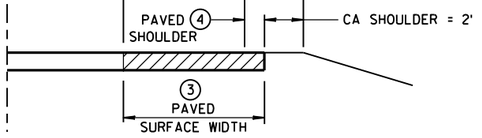
(1) 10-FT TYPICAL.

(2) 12-FT** PLUS ADDITIONAL WIDTH FOR BIKE LANE IF SHOWN ELSEWHERE IN THE PLAN.

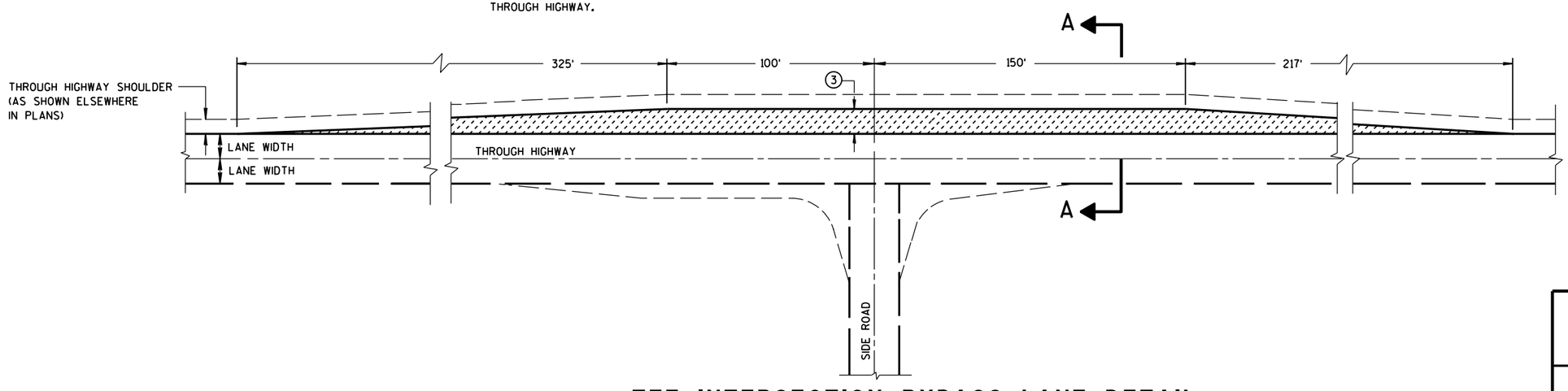
**10-FT MAY BE USED ON TYPE B2 ON RESURFACING PROJECTS IF SPECIFIED IN THE CONTRACT.

(3) BYPASS LANE PAVED SURFACE WIDTH OUTSIDE OF TRAVEL LANE
-ASPHALT = 12-FT PLUS PAVED SHOULDER WIDTH.
-PC CPNCRETE = 13-FT PLUS PAVED SHOULDER WIDTH.

(4) BYPASS LANE PAVED SHOULDER WIDTH = THE GREATER OF 1-FT OR THE PAVED SHOULDER WIDTH OF THE THROUGH HIGHWAY.

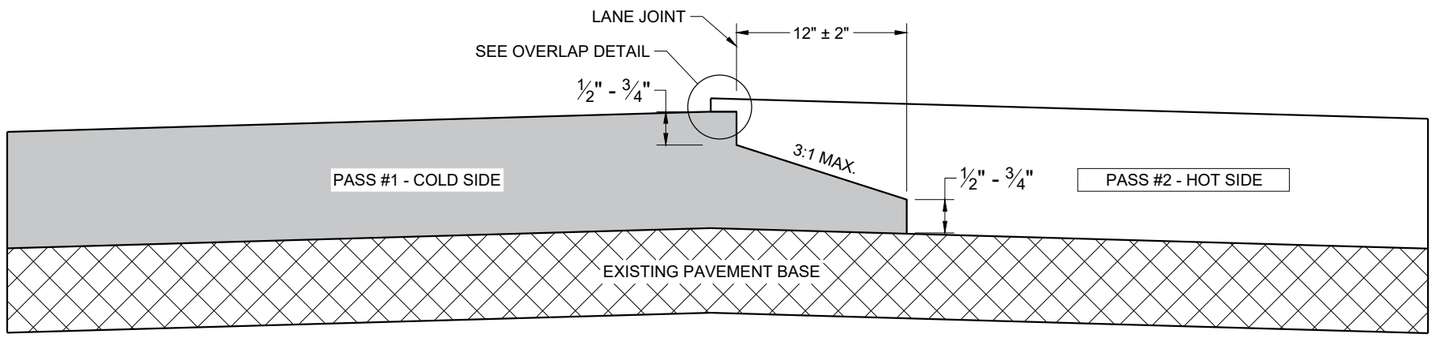


SECTION A-A
(SHOWING BYPASS LANE AND SHOULDER)

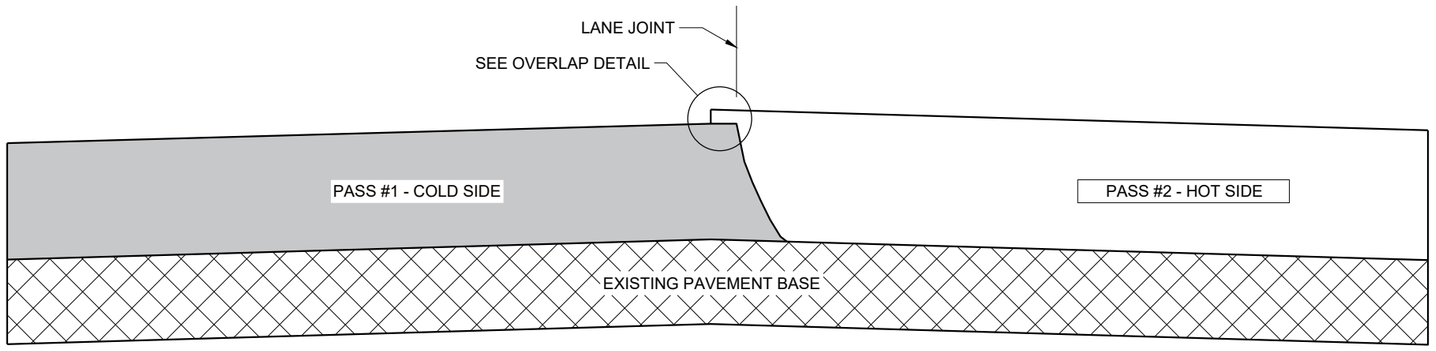


TEE INTERSECTION BYPASS LANE DETAIL

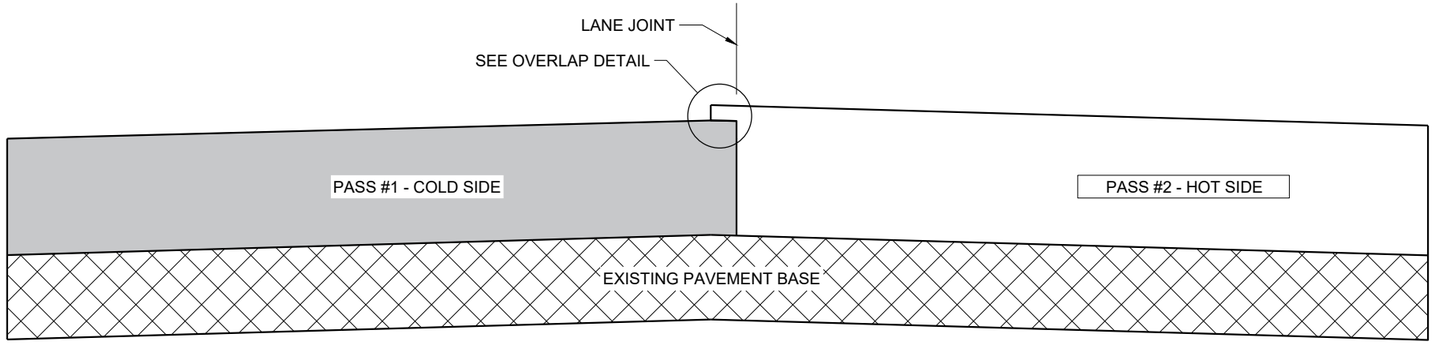
AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND "D" AND TEE INTERSECTION BYPASS LANE



TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)

GENERAL NOTES

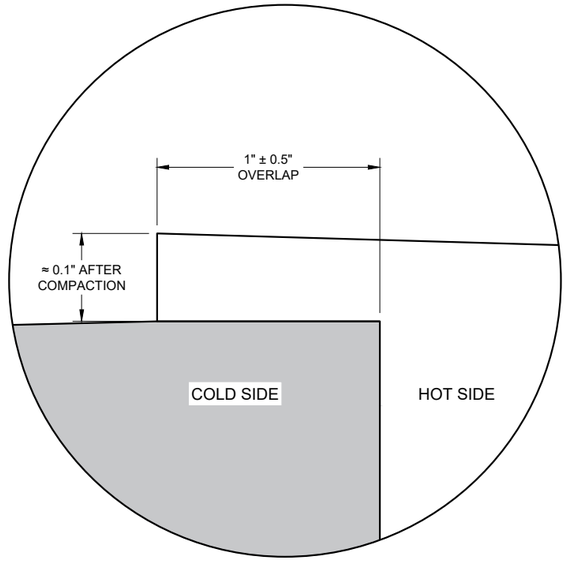
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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. (IT WILL BE FLUSH WHEN PAVING IN ECHELON.)

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)

HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2020
DATE

/S/ Steven Hefel
HMA PAVEMENT ENGIN

FHWA

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SDD 13C19 - 03

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SDD 13C19 - 03

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.

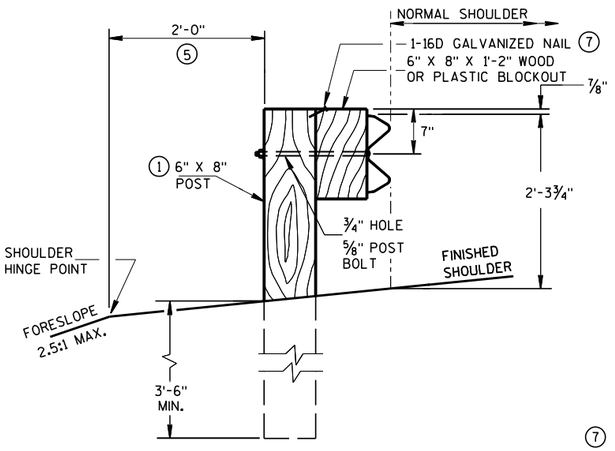
(5) IF THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING, W BEAM (LHW).

(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.

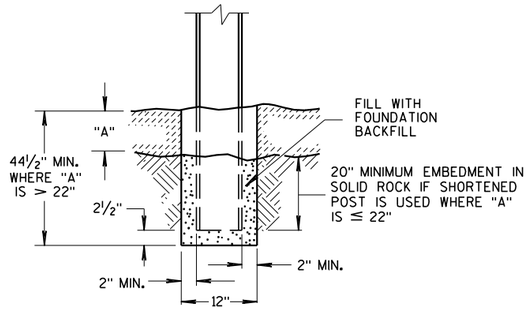
(7) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

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

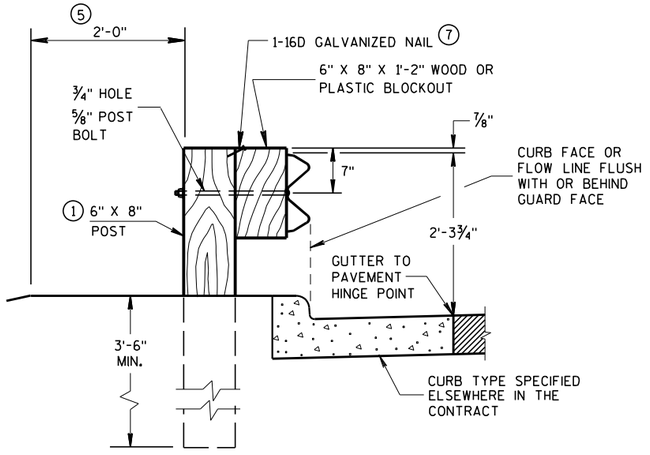
ALL DIMENSIONS ARE SUBJECT TO MANUFACTURER'S TOLERANCES EXCEPT WHERE ALLOWABLE TOLERANCES ARE SHOWN.



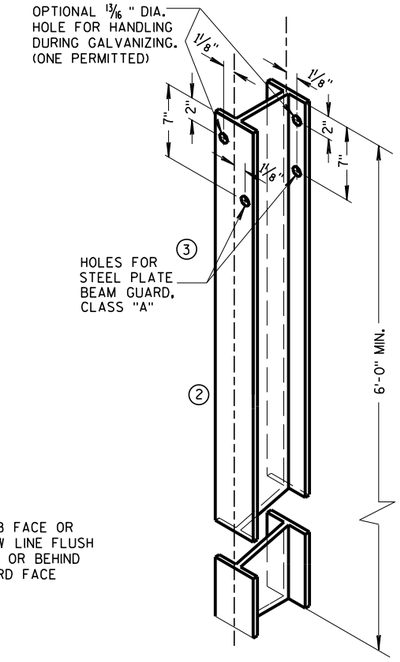
END VIEW
LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



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

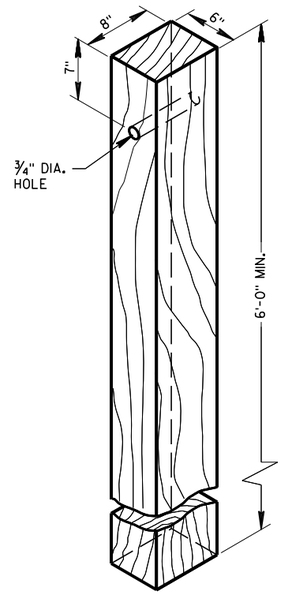


END VIEW
LOCATED ALONG A CURBED ROADWAY

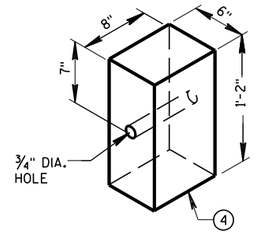


STEEL POST &
HOLE PUNCHING DETAIL
(W6 X 9) (1)

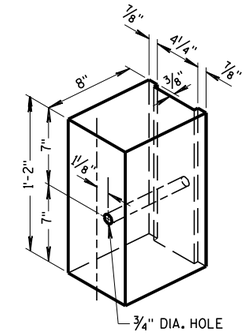
ALL HOLES 13/16" DIAMETER EXCEPT AS NOTED



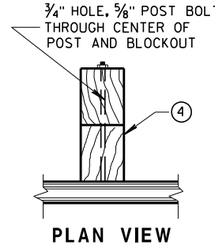
WOOD POST
(6"X8") NOMINAL



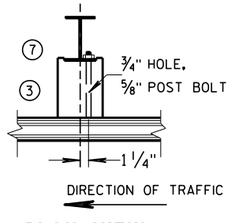
WOOD OR PLASTIC
BLOCKOUT FOR
WOOD POSTS



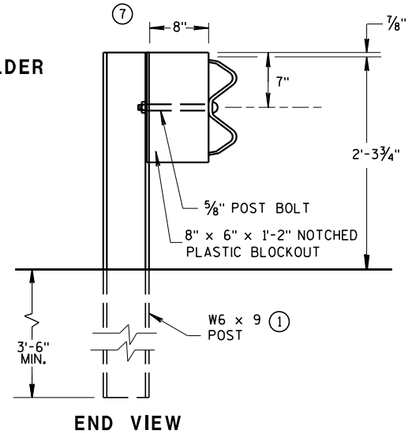
TYPICAL NOTCHED
PLASTIC BLOCKOUT
FOR STEEL POSTS (1)



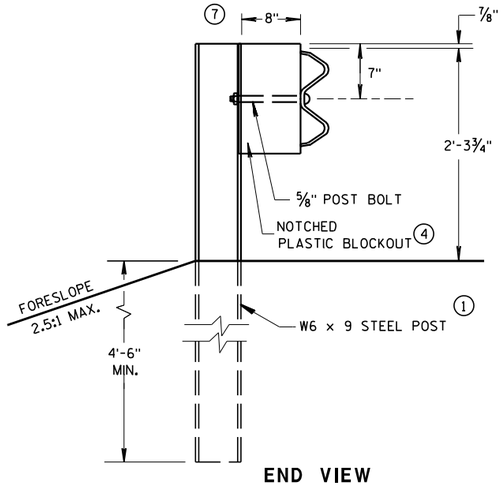
PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



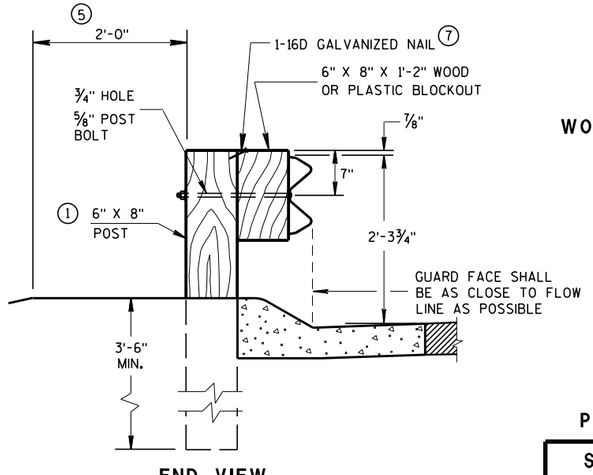
PLAN VIEW
STEEL POST, NOTCHED
PLASTIC BLOCKOUT & BEAM



END VIEW
STEEL POST & NOTCHED
PLASTIC BLOCKOUT ALTERNATIVE
STANDARD INSTALLATION



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



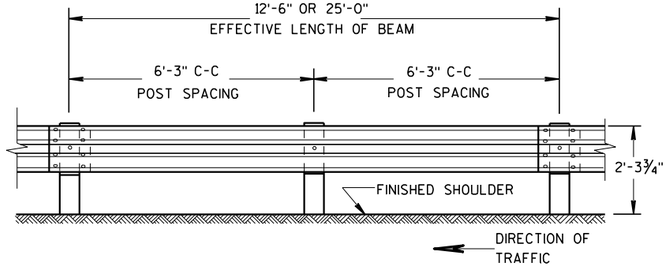
END VIEW
LOCATED ALONG A
MOUNTABLE CURBED ROADWAY

TYPICAL INSTALLATION OF STEEL PLATE BEAM GUARD

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

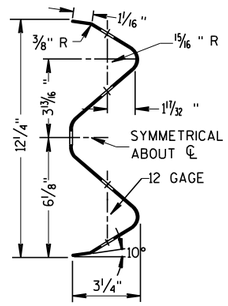
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 14 B 15-11a

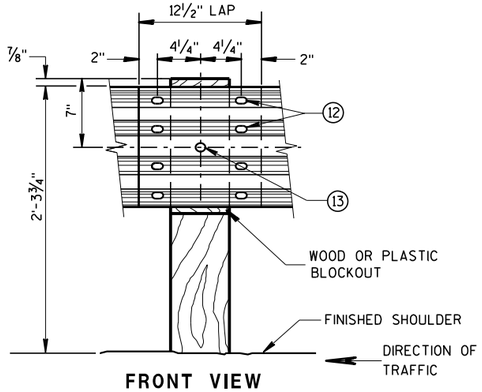


FRONT VIEW

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.

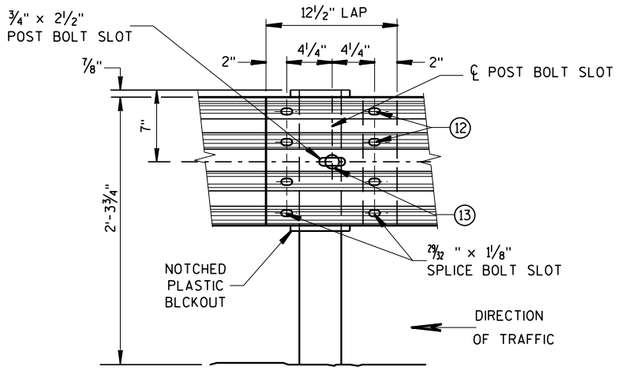
(9) DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINA. START REFLECTORS AT POST #9 AND SPACE EVENLY EVERY 100 FEET (MAX.) TO THE END OF GUARDRAIL RUN, USING A MINIMUM OF 3 REFLECTORS.

(12) 8 -5/8" ϕ X 2" BUTTON HEAD BOLTS WITH OVAL SHOULDERS & RECESS NUTS.

(13) 5/8" DIA. BUTTON HEAD BOLT AND RECESS NUT WITH 5/8" DIA. F844 FLAT WASHER UNDER NUT.

FRONT VIEW

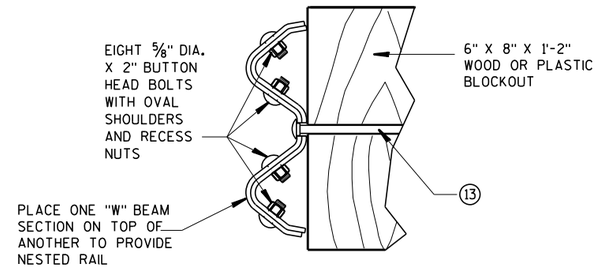
POST SPACING FOR LONGER POST AT HALF POST SPACING W BEAM (LHW)



FRONT VIEW

BEAM SPLICE AT STEEL POST

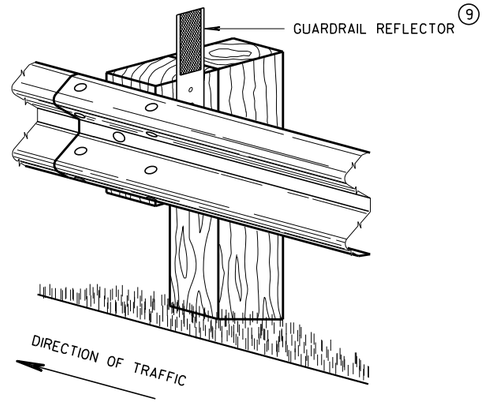
TYPICAL SPLICING DETAILS OF STEEL PLATE BEAM GUARD



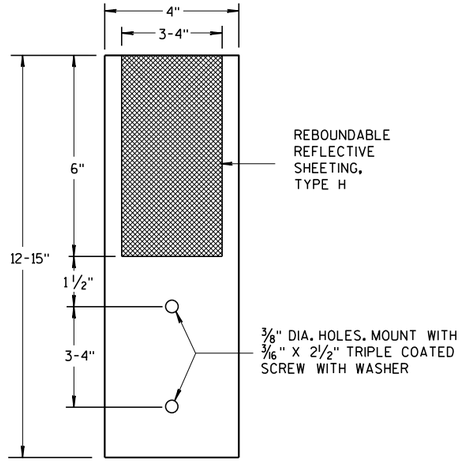
NESTED W BEAM (NW)

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

* 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 51
DEPARTMENT OF TRANSPORTATION

6

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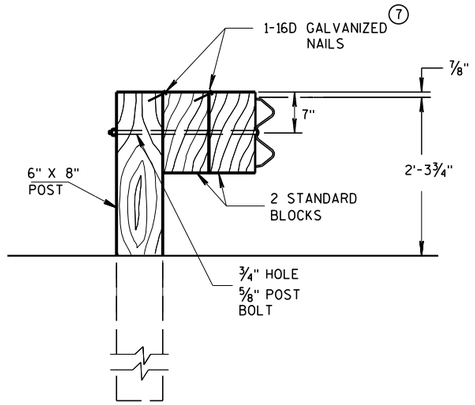
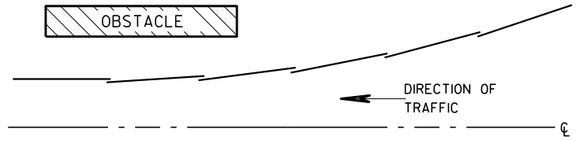
S.D.D. 14 B 15-11b

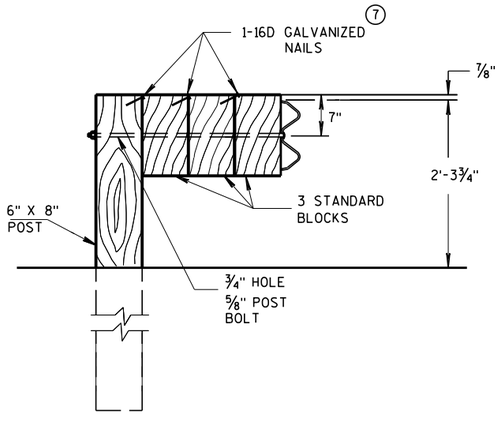


DETAIL FOR DOUBLE BLOCKS

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

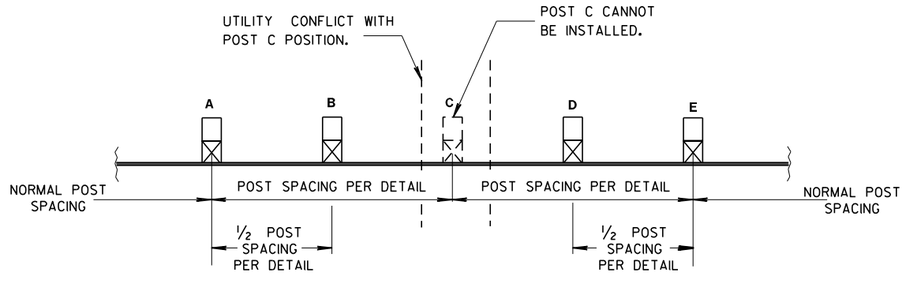


PLAN VIEW
BEAM LAPPING DETAIL



DETAIL FOR TRIPLE BLOCKS

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



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION

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.

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 52
FHWA

6

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

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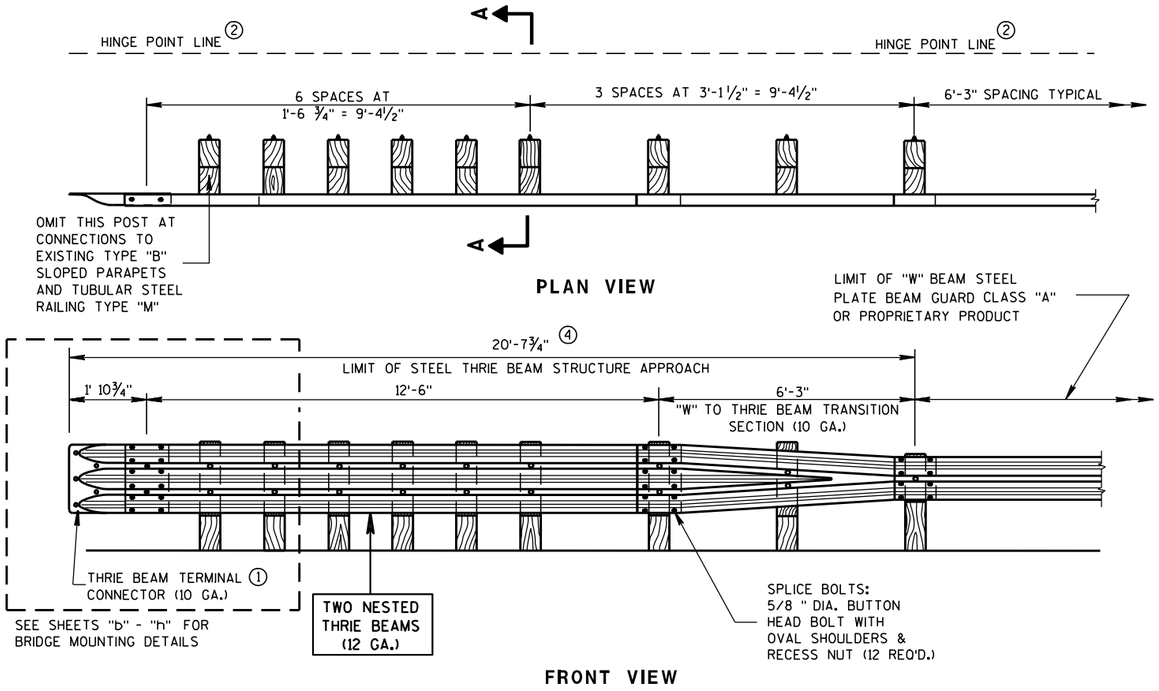
S.D.D. 14 B 15-11c



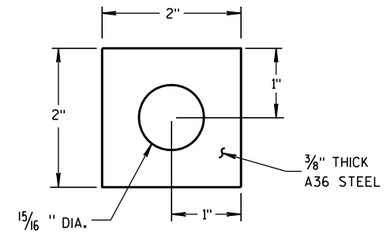


PLATE WASHER DETAIL

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.

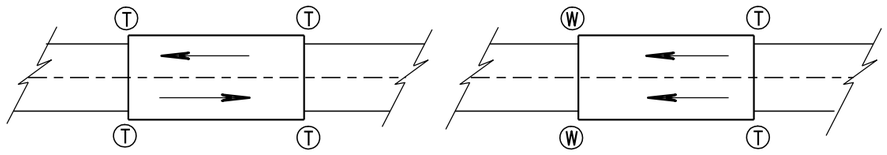
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2 1/2" , AND 12" DIAMETER AROUND POST. SEE 14B15 FOR MORE DETAILS.

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.



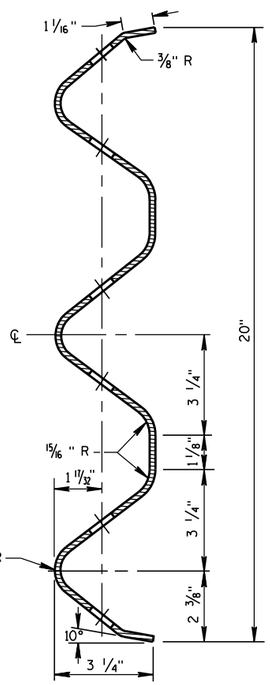
TWO WAY TRAFFIC

ONE WAY TRAFFIC

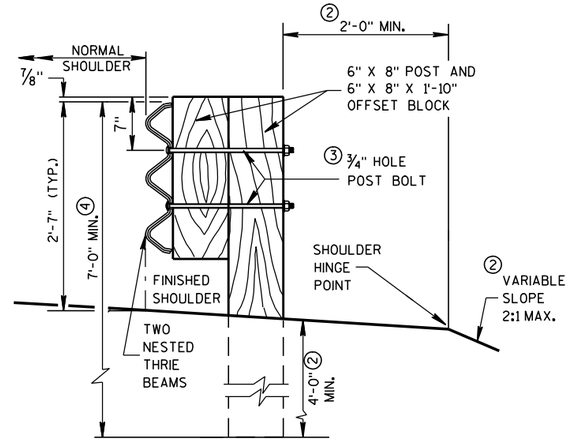
T THRIE BEAM CONNECTION

W W-BEAM CONNECTION WHEN REQUIRED

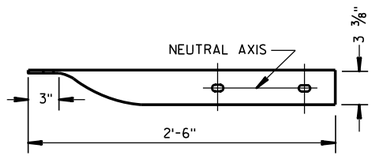
TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE

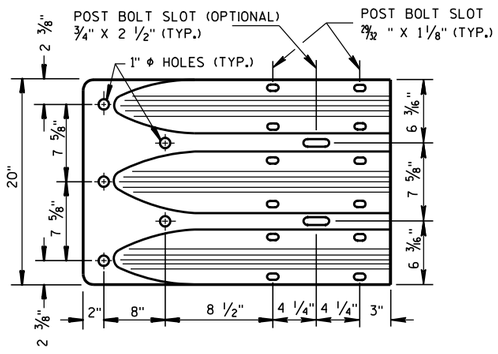


SECTION THRU THRIE BEAM RAIL ELEMENT

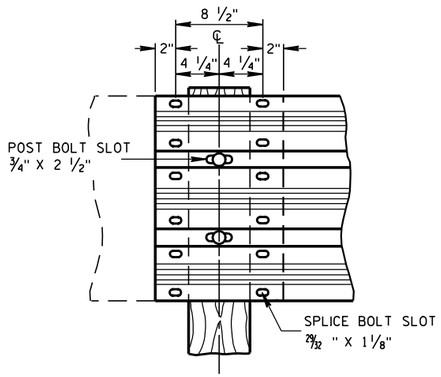


SECTION A-A





THRIE BEAM TERMINAL CONNECTOR



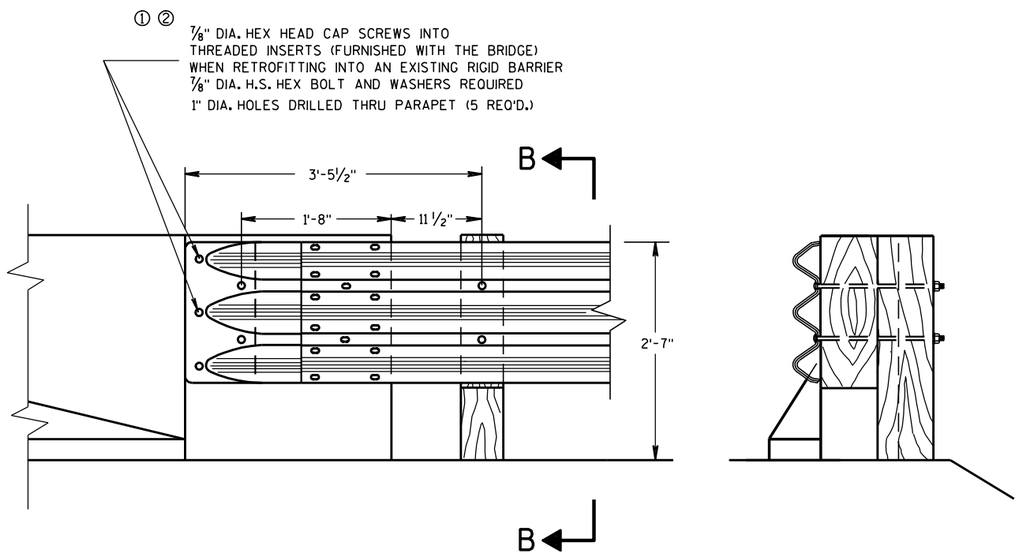
THRIE BEAM SPLICE

STEEL THRIE BEAM STRUCTURE APPROACH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/31/2012 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

FHWA



FRONT VIEW

SECTION B-B

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A325, A449 AND GALVANIZED PER STANDARD SPECIFICATIONS 614.

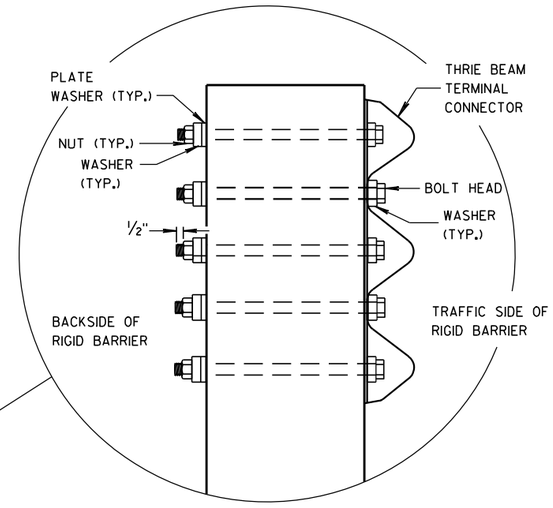
① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

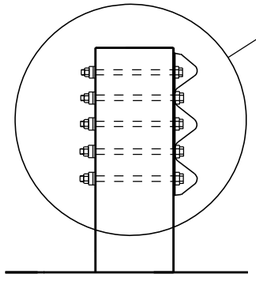
② BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM TERMINAL CONNECTOR. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X ⅝" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

③ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 ½".

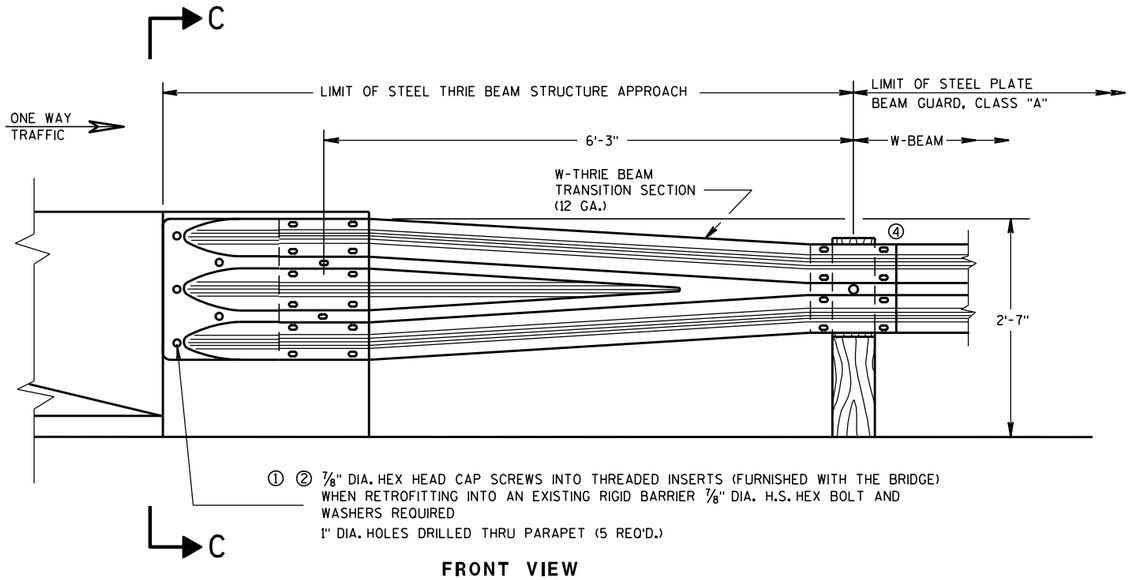
④ W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POST WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS.

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.





SECTION C-C



① ② ⅞" DIA. HEX HEAD CAP SCREWS INTO THREADED INSERTS (FURNISHED WITH THE BRIDGE) WHEN RETROFITTING INTO AN EXISTING RIGID BARRIER ⅞" DIA. H.S. HEX BOLT AND WASHERS REQUIRED
1" DIA. HOLES DRILLED THRU PARAPET (5 REQ'D.)

FRONT VIEW

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SQUARE END PARAPETS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/31/2012
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

FHWA

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

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GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A325, A449 AND GALVANIZED PER STANDARD SPECIFICATIONS 614.

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

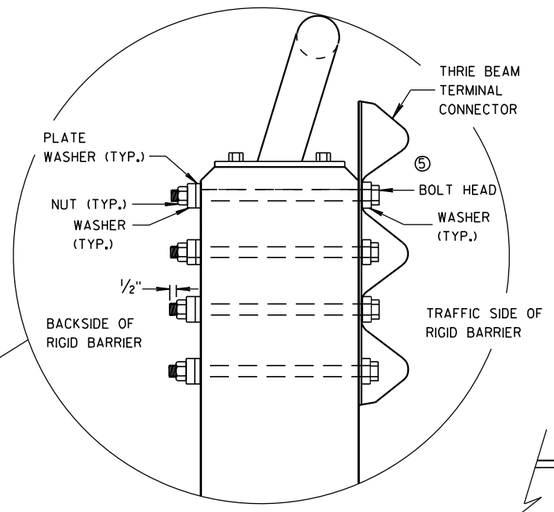
② BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM TERMINAL CONNECTOR. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X ⅝" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

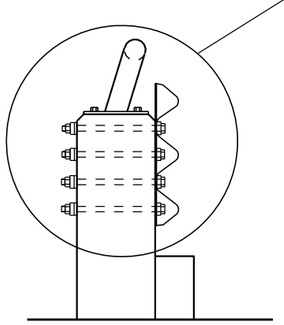
③ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 ½".

④ W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POST WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS.

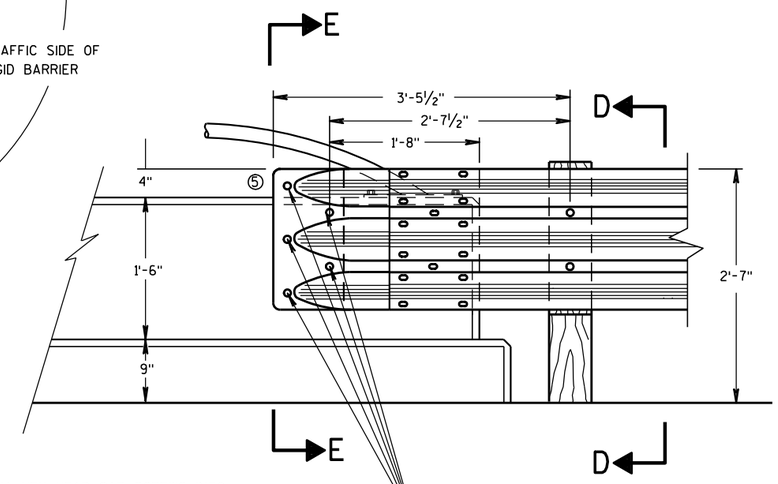
⑤ BOLT, NUT AND WASHERS NOT REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PAPAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE EDGE OF PARAPET.

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.





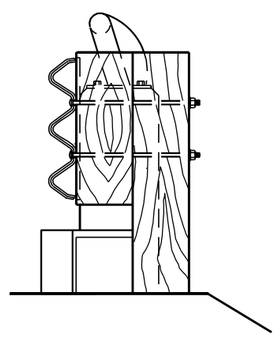
SECTION E-E



① ② ⅞" DIA. HEX HEAD CAP SCREWS INTO THREADED INSERTS (FURNISHED WITH THE BRIDGE) WHEN RETROFITTING INTO AN EXISTING RIGID BARRIER ⅞" DIA. H.S. HEX BOLT AND WASHERS REQUIRED

1" DIA. HOLES DRILLED THRU PARAPET (4 REQ'D.)

FRONT VIEW

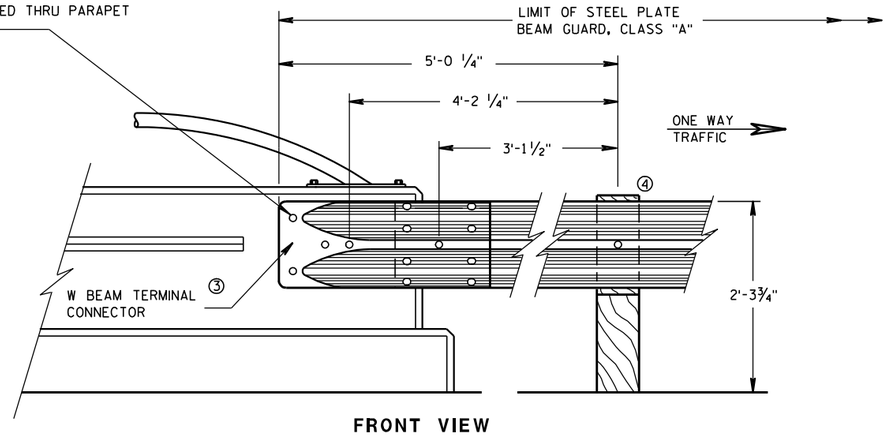


SECTION D-D

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS

① ② ⅞" DIA. HEX HEAD CAP SCREWS INTO THREADED INSERTS (FURNISHED WITH THE BRIDGE) WHEN RETROFITTING INTO AN EXISTING RIGID BARRIER
⅞" DIA. HEX BOLT AND WASHERS REQUIRED

1" DIA. HOLES DRILLED THRU PARAPET (4 REQ'D.)



FRONT VIEW

W BEAM CONNECTION TO VERTICAL FACE PARAPET
(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO VERTICAL FACED PARAPETS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/31/2012 — DATE
/S/ Jerry H. Zaa — ROADWAY STANDARDS ENGINEER
FHWA

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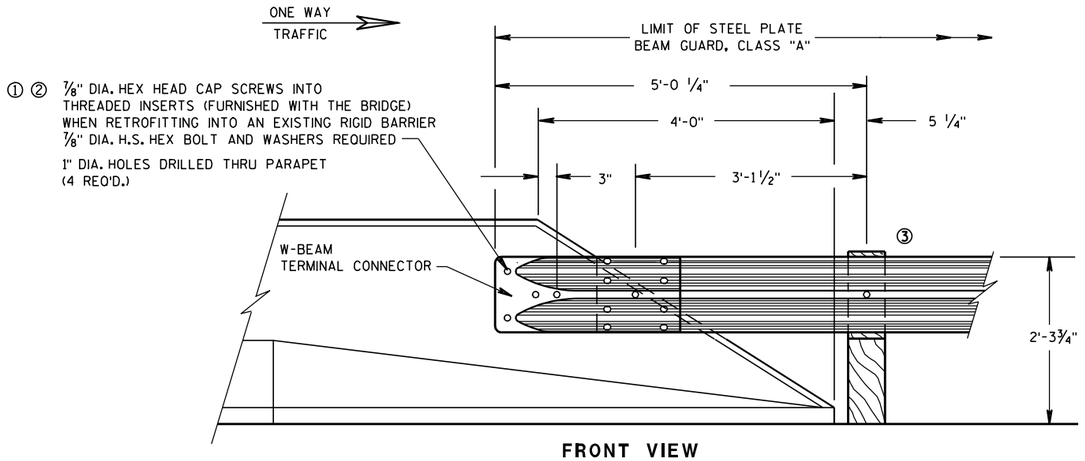
S.D.D. 14 B 20-11c



FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

(USE ONLY AT TRAFFIC EXIT END OF ONE WAY BRIDGE)

GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

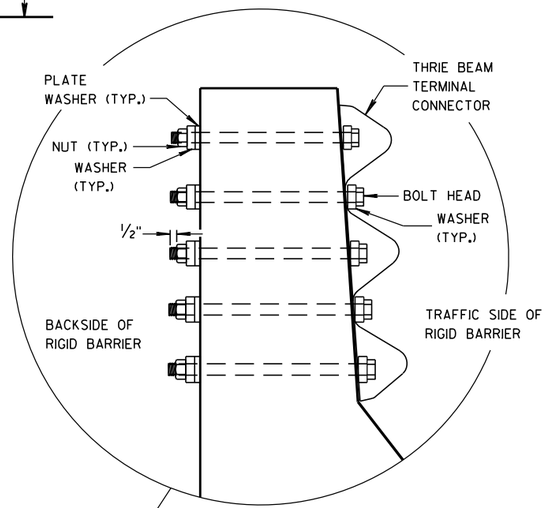
BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A325, A449 AND GALVANIZED PER STANDARD SPECIFICATIONS 614.

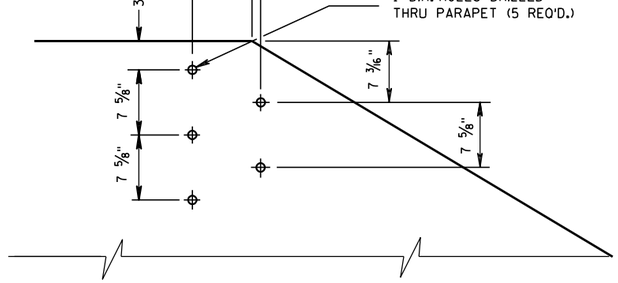
① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

② BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM TERMINAL CONNECTOR. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

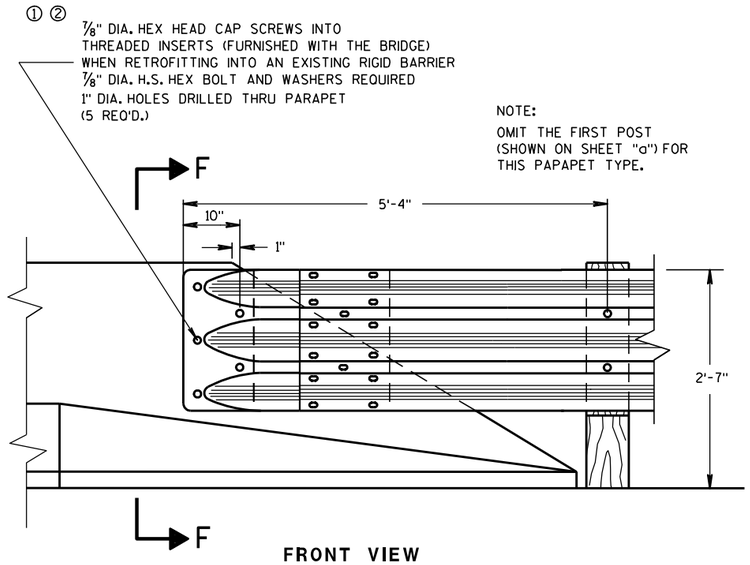
③ W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POST WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS.

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.

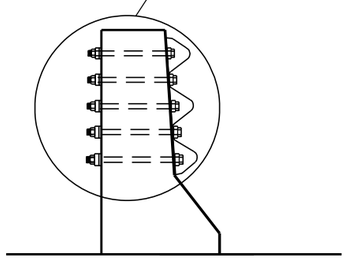




DRILL HOLE LOCATION AND PATTERN FOR THRIE BEAM CONNECTION



FRONT VIEW



SECTION F-F

THRIE BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS

STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SLOPED END PARAPETS

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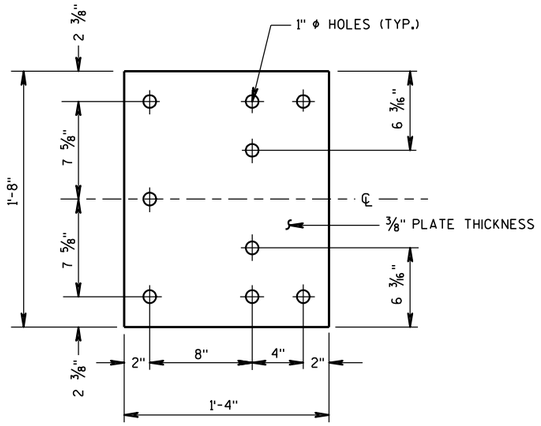
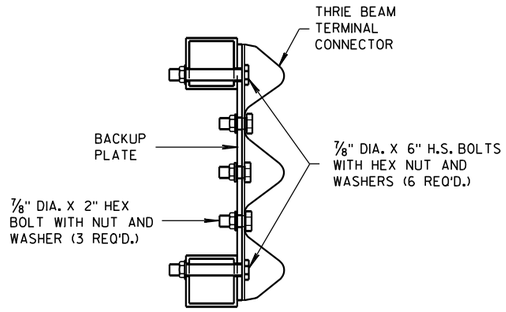


BACK-UP PLATE DETAIL



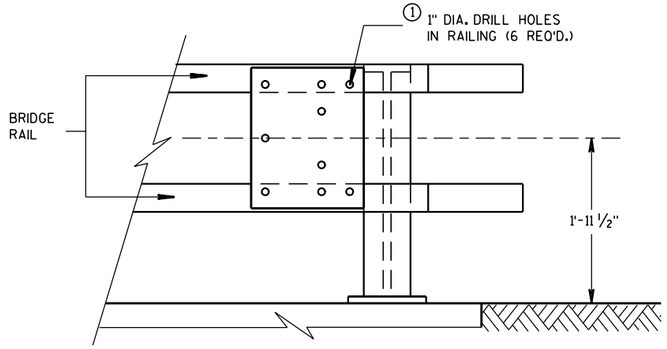
SECTION G-G

GENERAL NOTES

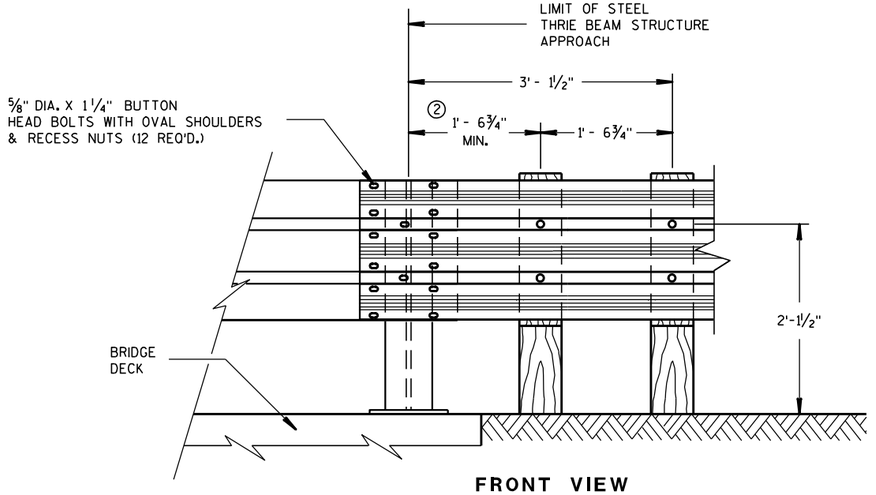
BOLTS, PLATES, NUTS AND WASHERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATION A 325 AND BE GALVANIZED IN ACCORDANCE WITH ASTM A 153.

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.

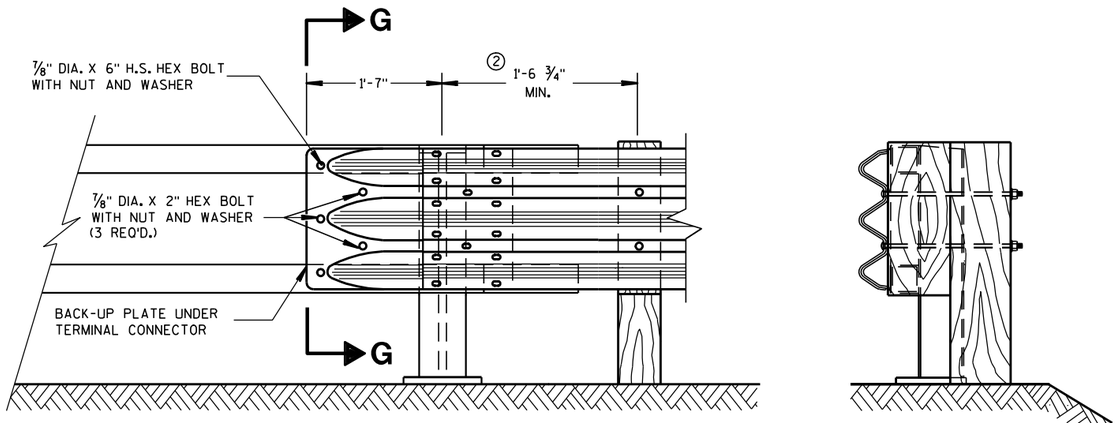


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING



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"

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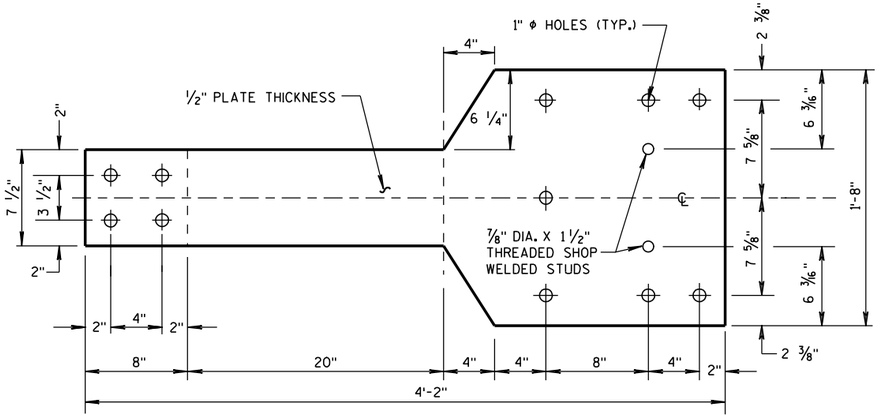
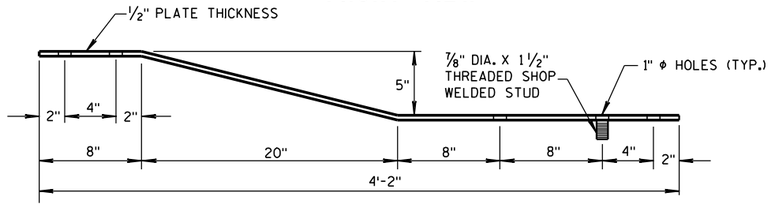
GENERAL NOTES

① VARY THIS DIMENSION DEPENDING ON ABUTMENT TYPE, WINGWALL DETAILS, AND ANGLE OF SKEW. PLACE THE FIRST WOOD POST OFF THE BRIDGE SHALL BE AS CLOSE AS FEASIBLE TO THE STEEL END POST.

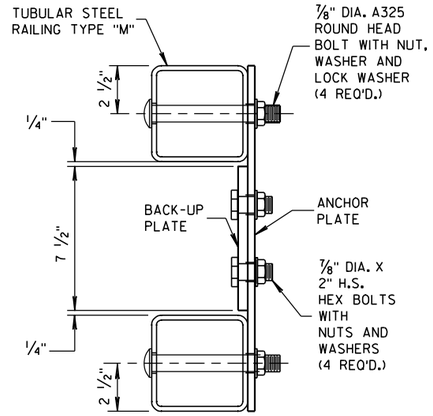


FRONT VIEW

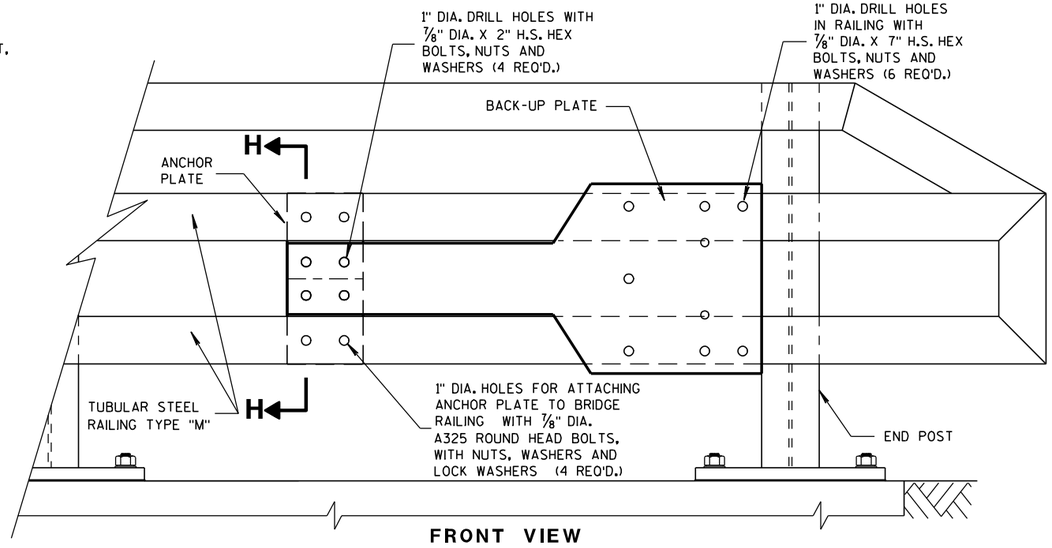


PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

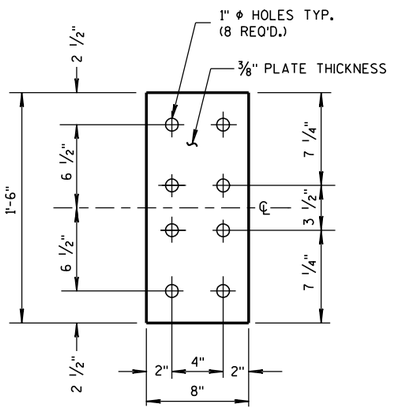


SECTION H-H



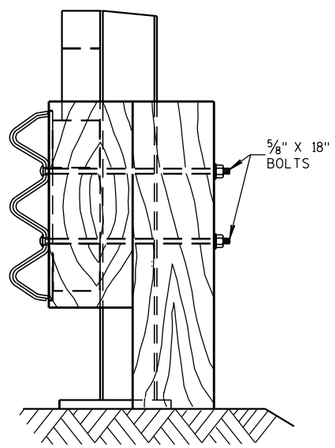
FRONT VIEW

ANCHOR AND BACK-UP PLATE MOUNTING TO BRIDGE RAILING, TYPE "M"

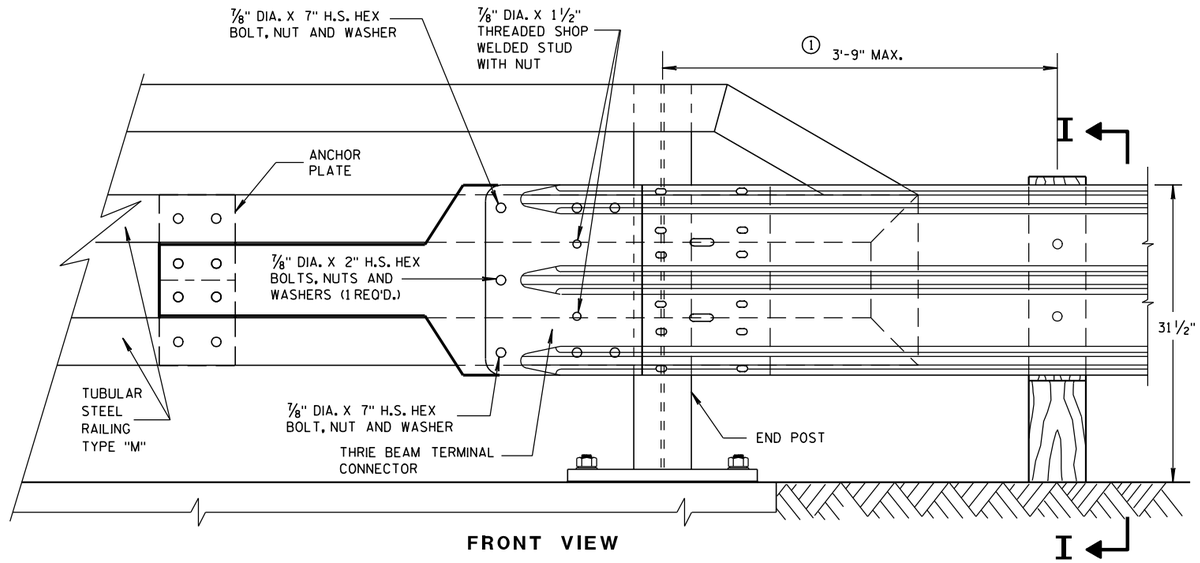


FRONT VIEW

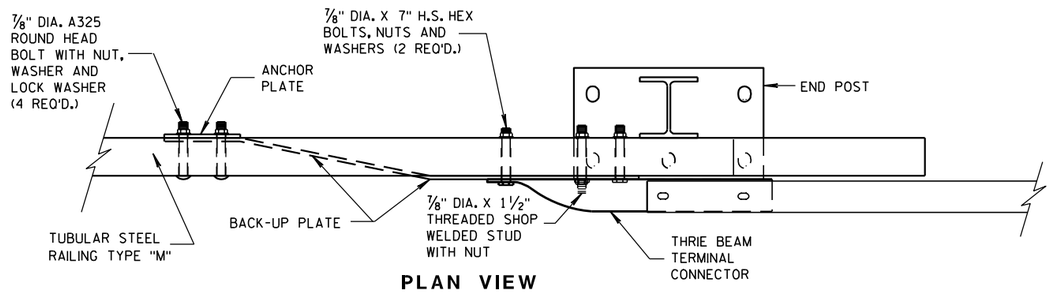
ANCHOR PLATE DETAIL, TYPE "M"



SECTION I-I



FRONT VIEW



PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO BRIDGE RAILING TYPE "M"

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GENERAL NOTES

COVER PLATE PANELS ARE 3/16" THICK.

ALL STIFFENERS ARE 1/4" THICK.

CONNECTOR PLATE SHALL BE FABRICATED FROM ASTM GRADE A36 STEEL AND GALVANIZED.

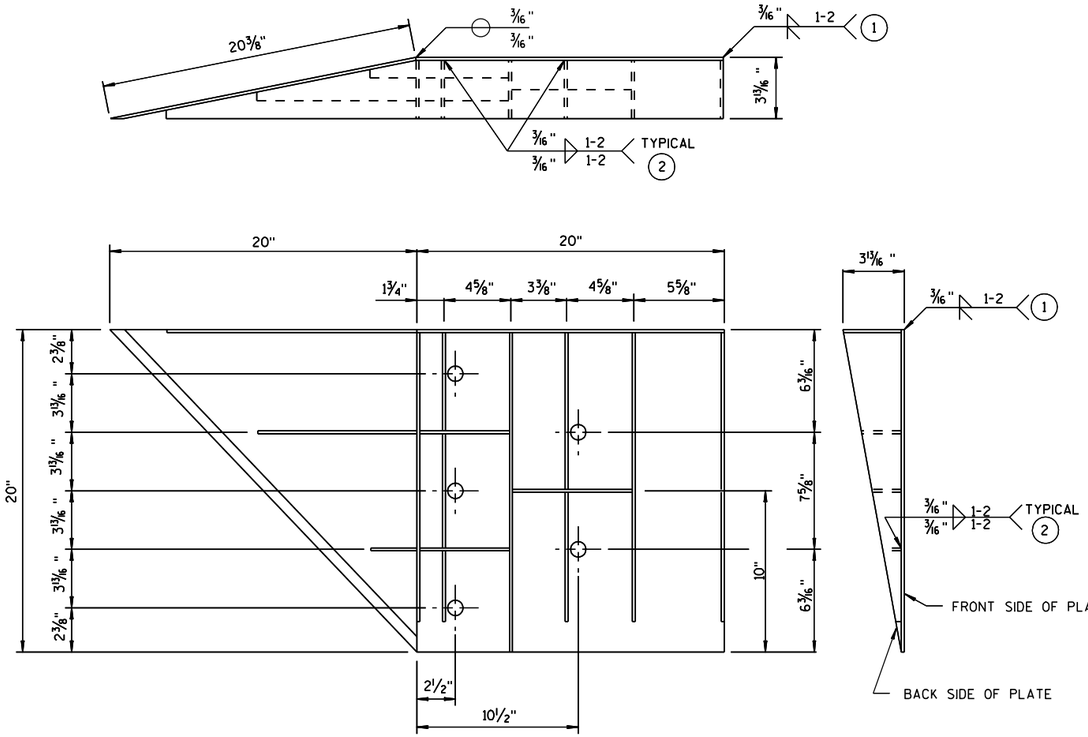
FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.

ALL HOLE DIAMETERS SHALL BE 1".

FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

(1) STIFFENERS LOCATED AT THE OUTSIDE EDGES OF THE COVER PLATES SHALL BE WELDED AS FOLLOWS:
SINGLE BEVEL GROOVE WELD ON EXTERNAL SIDES AND 3/16" FILLET WELD BY 1" LONG SPACED AT 2" ON INTERNAL SIDES.

(2) STIFFENERS LOCATED ON THE INSIDE OF THE COVER PLATE SHALL BE WELDED AS FOLLOWS:
3/16" FILLET WELD BY 1" LONG SPACED AT 2".



WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

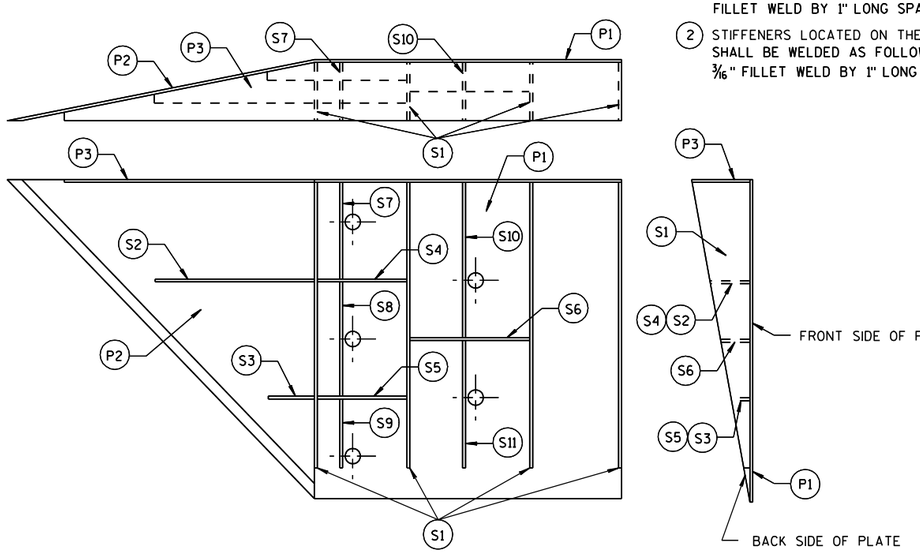


PLATE AND STIFFENER IDENTIFICATION

(VIEWED FROM BACK SIDE OF PLATE)

CONNECTOR PLATE DIMENSION (PER ASSEMBLY)

PLATE	QUANTITY	SHAPE	SIZE (A x B x C x D)	THICKNESS
P1	1		20" x 20"	3/16"
P2	1		20" x 20" x 28 9/16"	3/16"
P3	1		39" x 3 5/8" x 20" x 19 5/16"	3/16"
S1	4		18 7/16" x 3 5/8" x 18 3/4"	1/4"
S2	1		10 1/4" x 2 7/16" x 10 3/8" x 1/2"	1/4"
S3	1		3" x 1 1/16" x 3 1/8" x 1/2"	1/4"
S4	1		6 1/8" x 2 7/16"	1/4"
S5	1		6 1/8" x 1 1/16"	1/4"
S6	1		7 3/4" x 1 3/4"	1/4"
S7	1		2 9/16" x 6" x 3 5/8" x 5 7/8"	1/4"
S8	1		1 5/32" x 7 1/2" x 2 1/2" x 7 3/8"	1/4"
S9	1		6 1/16" x 6 3/16" x 1 3/32"	1/4"
S10	1		1 7/8" x 9 7/8" x 3 5/8" x 9 11/16"	1/4"
S11	1		8 1/2" x 8 3/4" x 1 13/16"	1/4"

STEEL THRIE BEAM STRUCTURE APPROACH

STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTOR PLATE DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/31/2012 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
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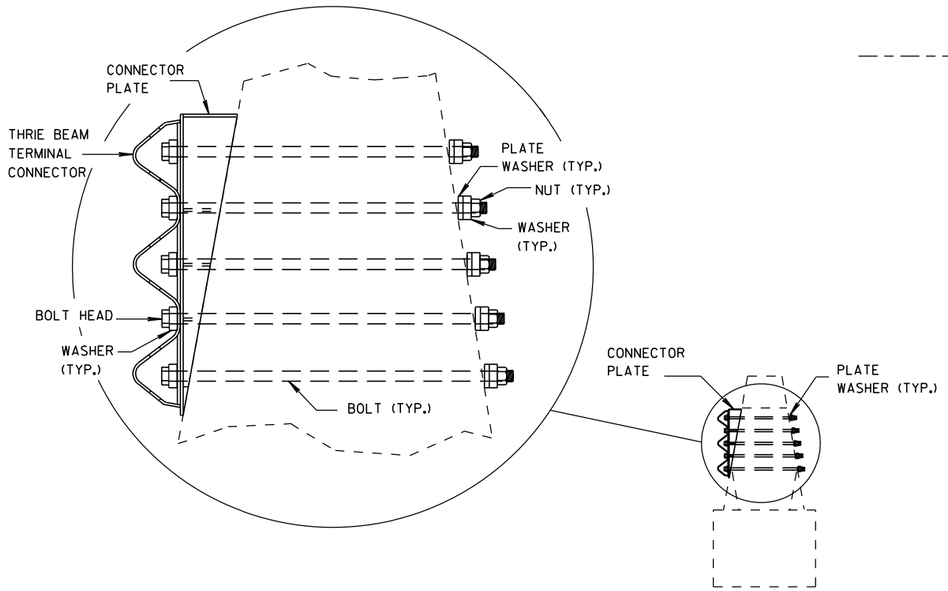
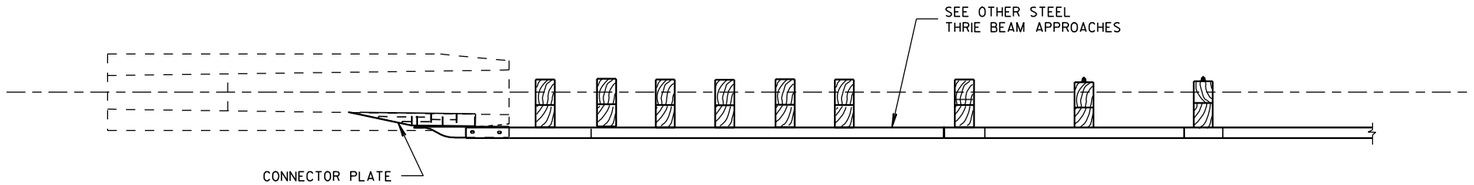
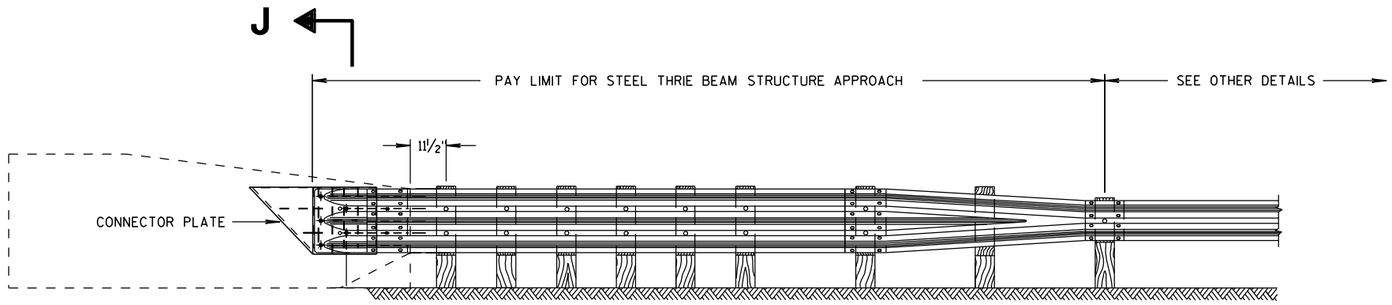


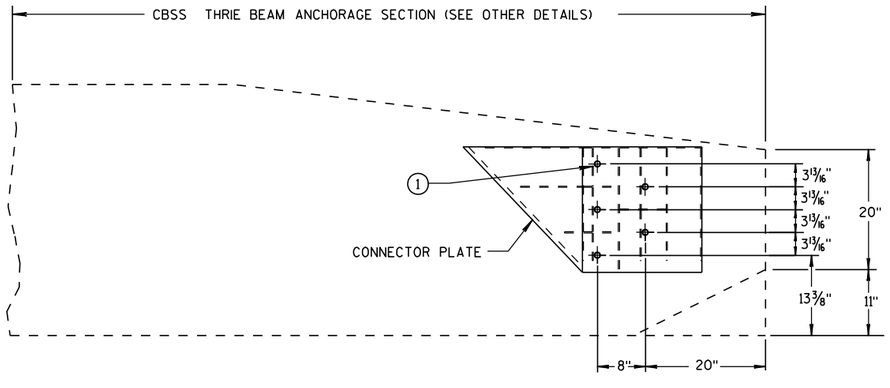
SECTION J-J



PLAN VIEW



FRONT VIEW



CONNECTOR PLATE LOCATION

GENERAL NOTES

CONSTRUCT PER STANDARD SPECIFICATION 614.

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

(1) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM TERMINAL CONNECTOR. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

STEEL THRIE BEAM STRUCTURE APPROACH

STEEL THRIE BEAM STRUCTURE APPROACH, SINGLE SLOPE ATTACHMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/31/2012
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

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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.

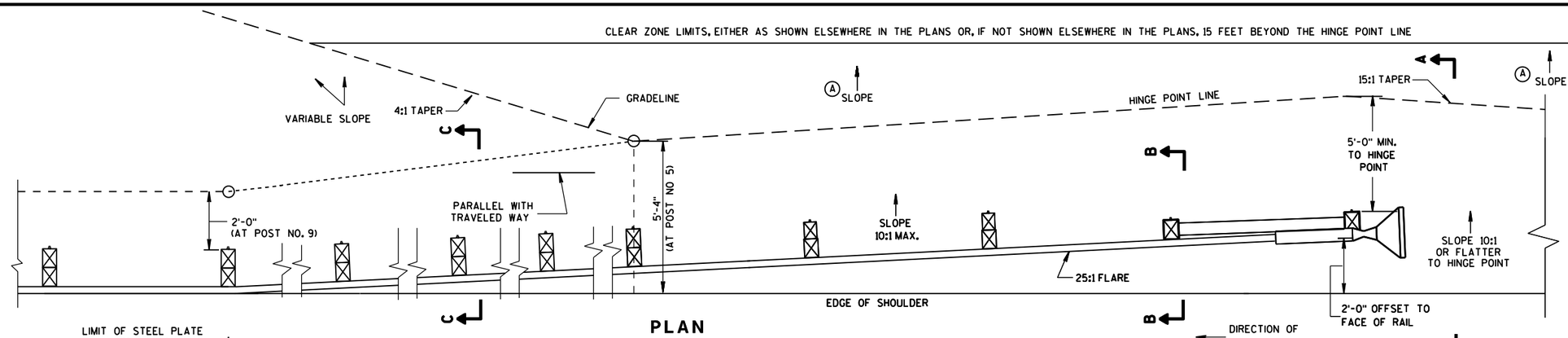
(E) THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST 3 THROUGH 8 SHALL BE ¾" ABOVE THE FINISHED GROUND LINE.

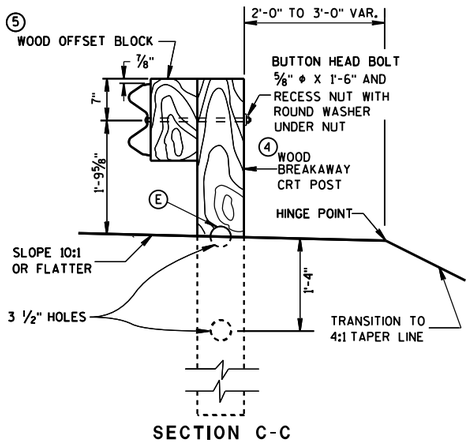
(F) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS. ONE SCREW PER CORNER.

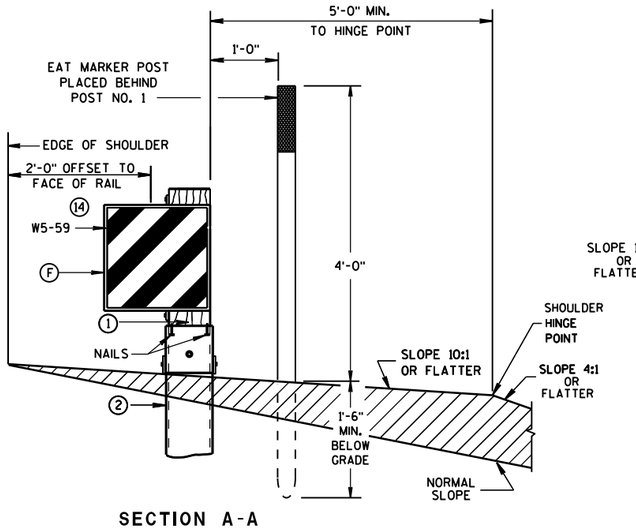
STEEL POSTS SHALL NOT BE ALLOWED FOR USE WITH ENERGY ABSORBING TERMINALS.

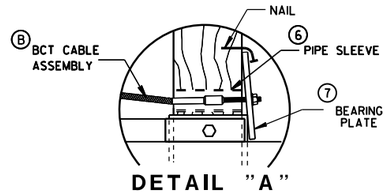
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

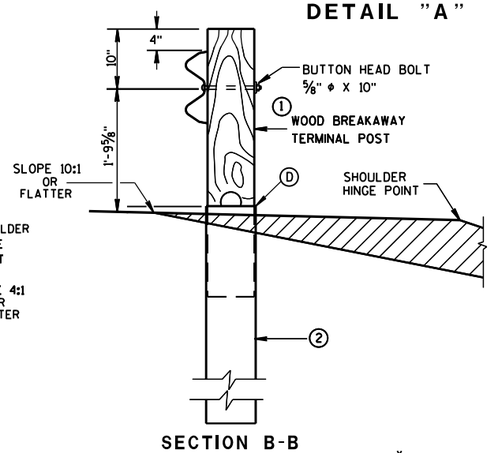
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

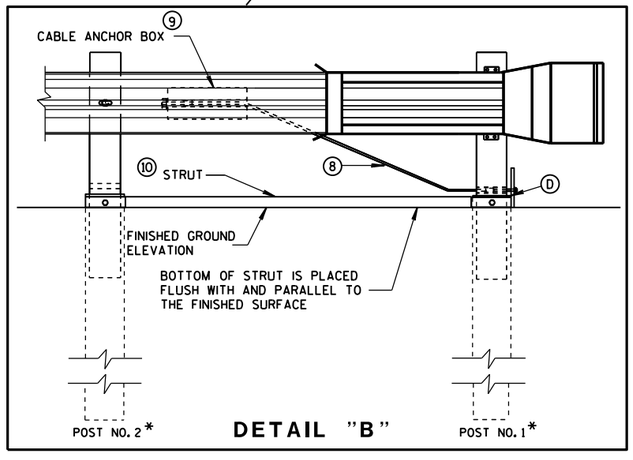












STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL

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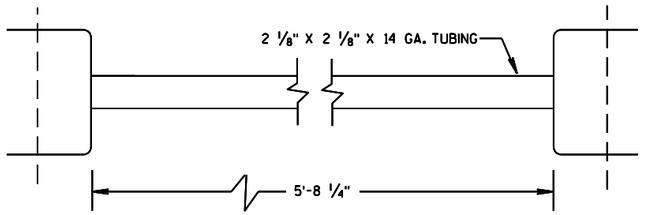
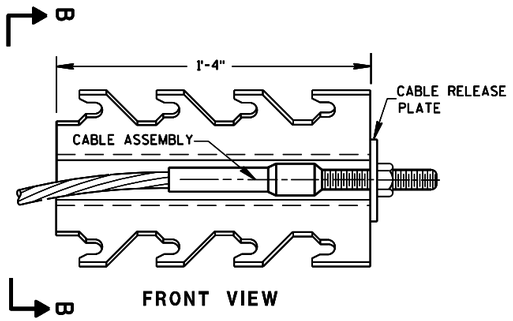
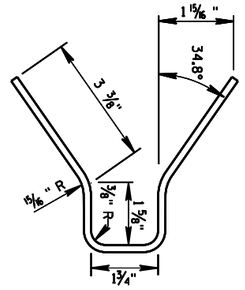
S.D.D. 14 B 24-9a



⑩ STRUT DETAIL

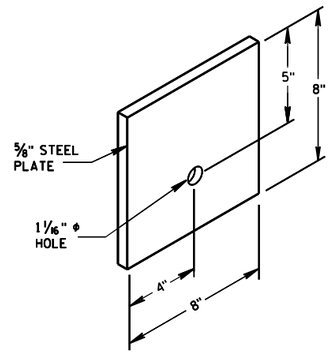


FRONT VIEW



SECTION B-B

⑨ CABLE ANCHOR BOX



⑦ STEEL BEARING PLATE

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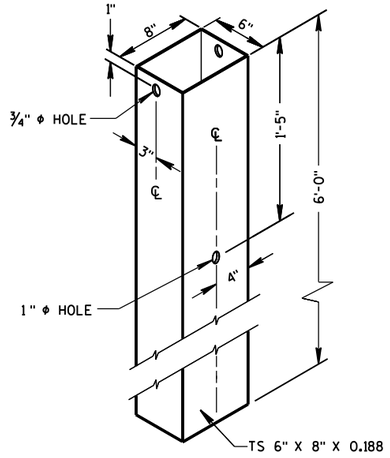
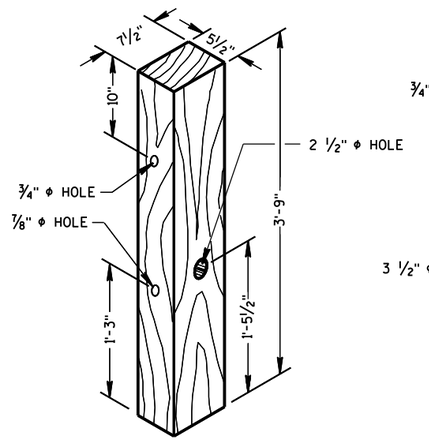
S.D.D. 14 B 24-9b

STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

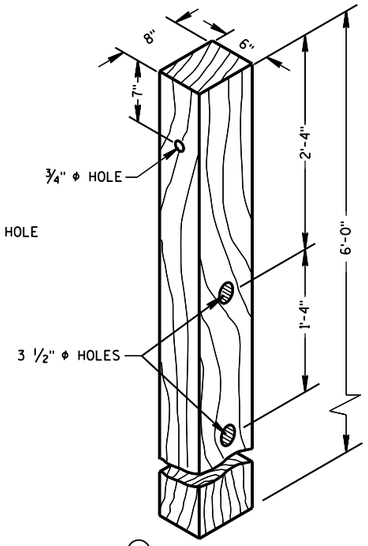
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI



② 72" STEEL TUBE
(POSTS NO. 1-2



① TERMINAL POST

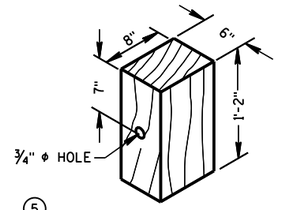


④ CRT POST
(POSTS NO'S 5-8

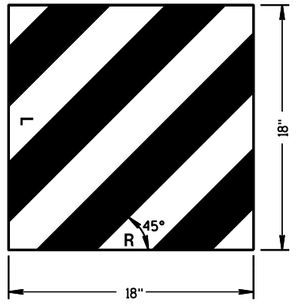
WOOD BREAKAWAY POSTS

GENERAL NOTES

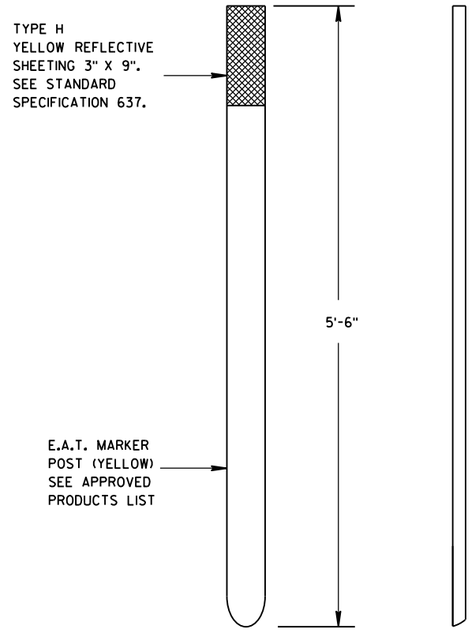
WHEN ROCK IS ENCOUNTERED DURING EXCAVATION, A 12 INCH DIA. POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK MAY BE USED IF APPROVED BY THE ENGINEER. GRANULAR MATERIAL SHALL BE PLACED IN THE BOTTOM OF THE HOLE APPROXIMATELY 2 1/2" INCHES DEEP TO PROVIDE DRAINAGE. THE SOIL TUBES SHALL BE FIELD CUT TO LENGTH, 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

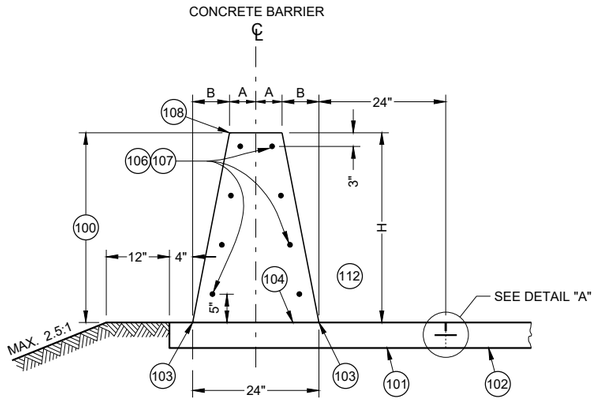
/S/ Rodney Taylor
ROADWAY STANDARDS UNIT SUPERV
ENT

6

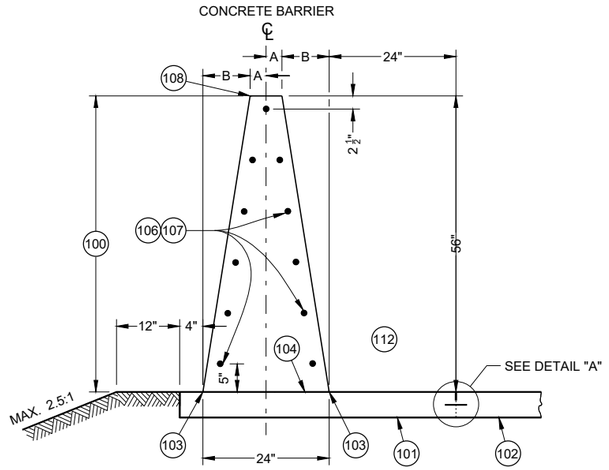
S.D.D. 14 B 24-9c

6

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



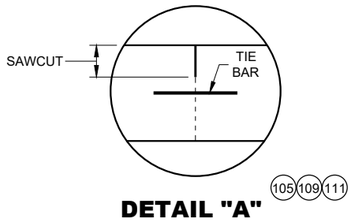
32 - INCH, 36 - INCH OR 42 - INCH SINGLE SLOPE CONCRETE BARRIER
(TYPE S32, TYPE S36, TYPE S42)



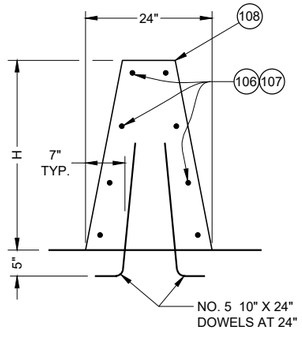
56 - INCH SINGLE SLOPE CONCRETE BARRIER
(TYPE S56)

TABLE "A"

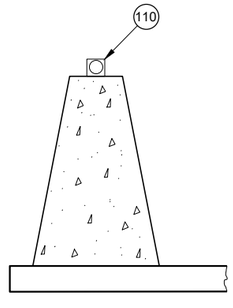
BARRIER HEIGHT H INCHES	A INCHES	B INCHES	NUMBER OF NO. 5 BARS EACH
32	7	5	8
36	6 ¼	5 ¾	8
42	5 ¼	6 ¾	10
56	3	9	11



DETAIL "A"



SINGLE SLOPE CONCRETE BARRIER ON BRIDGE
(NON OUTER PARAPET APPLICATION)



DELINEATION

GENERAL NOTES

WHERE THE CONCRETE BARRIER IS ADDED TO THE FACE OF EXISTING CONCRETE STRUCTURE, MATCH EXISTING WEEP HOLES.

LOCATE EXPANSION JOINTS IN CONCRETE BARRIER SHALL AT ALL DECK AND PRINCIPAL WALL JOINTS. FILL EXPANSION JOINT WITH EXPANSION JOINT MATERIAL. SEAL THE EXPANSION JOINT CONFORMING TO STANDARD SPECIFICATION 415.2.6.

PLACE BARRIER PERPENDICULAR TO SHOULDER GRADE, UNLESS INDICATED IN PLAN.

4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATION 501.

2" CLEAR COVER TYPICAL

ANCHORS ARE REQUIRED AT CONCRETE BARRIER ENDS AND AT INTERRUPTIONS IN CONCRETE BARRIER. ANCHOR MAY BE AS SHOWN IN THIS SDD OR DETAIL SHOWN ON SDD 14B33. ANCHORS INCIDENTAL TO CBSS.

PROVIDE A 1" DEEP CONTRACTION JOINT IN BARRIER PAD AND BARRIER. JOINT IS TO MATCH ADJACENT CONCRETE JOINTS. NO DOWEL BARS ARE REQUIRED FOR BARRIER PAD. IF ADJACENT TO ASPHALT, CONTRACTION JOINT IS REQUIRED EVERY 15'.

ALL REBAR SHALL BE EPOXY COATED M31 TYPE S. SEE STANDARD SPECIFICATION 505.

CONCRETE BARRIER, UPPER CONCRETE BARRIER, LOWER CONCRETE BARRIER, CONCRETE BARRIER PAD, AND FOOTINGS ARE TERMS USED TO DESCRIBE PARTS OF SINGLE SLOPE CONCRETE BARRIER BID ITEMS. THESE PARTS ARE INCIDENTAL TO THE SINGLE SLOPE CONCRETE BARRIER BID ITEMS.

(100) CONCRETE BARRIER

(101) CONCRETE BARRIER PAD

(102) PAVEMENT

(103) WHERE VERTICAL ROADWAY OFFSET IS GREATER THAN 1 ½", USE TYPE A SINGLE SLOPE BARRIER.

(104) OPTIONAL CONSTRUCTION JOINT.

(105) CONSTRUCTION JOINTS MAY BE ELIMINATED WHEN CONCRETE SHOULDER IS LESS THAT 10'.

(106) STAGGER LAPPING OF LONGITUDINAL STEEL. MINIMUM OVERLAP OF STEEL IS 2' BARS AT LAPS TO BE FIRMLY TIED OR CONNECTED.

(107) NO. 5 CONTINUOUS BARS EVENLY SPACED (SEE TABLE "A").

(108) USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS OTHERWISE NOTED.

(109) CONCRETE BARRIER PAD UNDER CBSS MAY BE PLACED SEPARATELY OR PLACED WITH CONCRETE SHOULDER AND SAWED ⅓ DEPTH. CONCRETE BARRIER PAD AND SAWING OF CONCRETE SHOULDER IS INCIDENTAL TO CONCRETE BARRIER BID ITEM. CONCRETE BARRIER PAD MINIMUM DEPTH IS 6", OR EQUAL TO THE DEPTH OF THE CONCRETE SHOULDER.

(110) SEE SDD 15A04 FOR DELINEATOR DETAILS AND SPACING.

(111) SEE SDD 13C01 FOR DETAILS TYPING CONCRETE BARRIER TO ADJACENT CONCRETE

(112) TRAFFIC SIDE

CONCRETE BARRIER SINGLE SLOPE (CBSS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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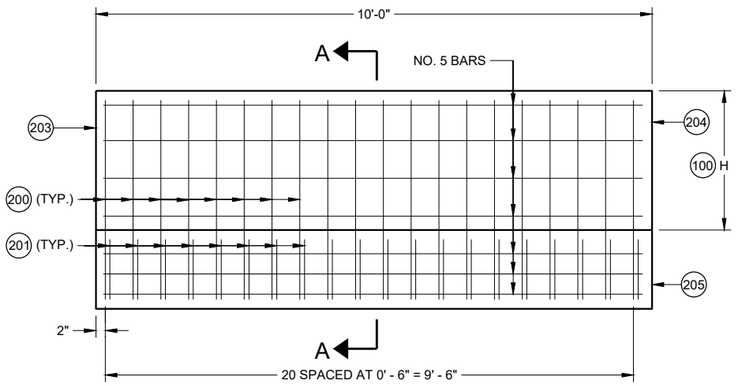
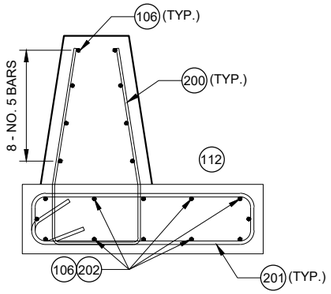
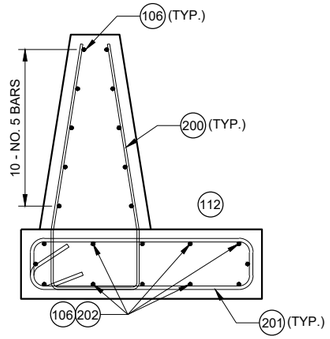
SDD 14B32 - 10a



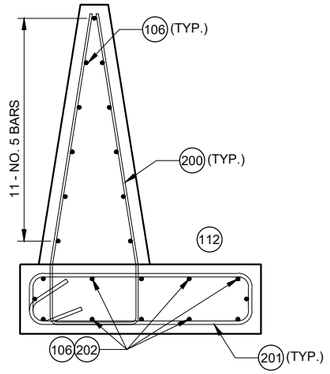
END ANCHOR SINGLE SLOPE CONCRETE BARRIER



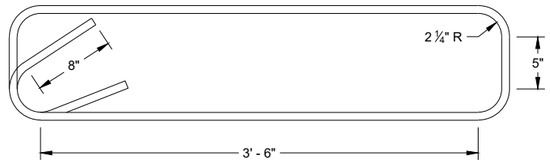
32" AND 36" CBSS



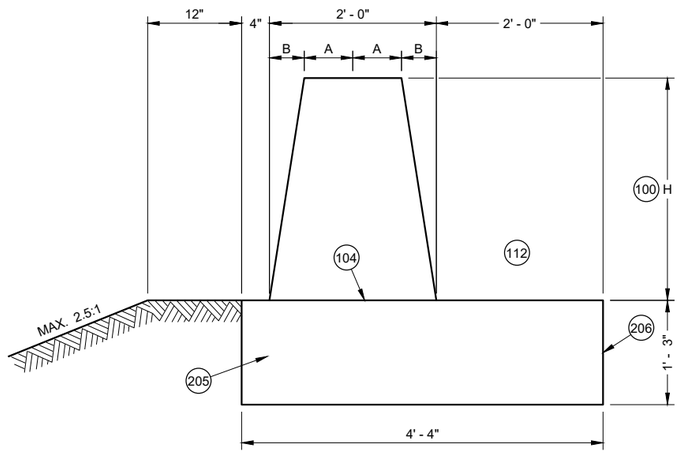
42" CBSS



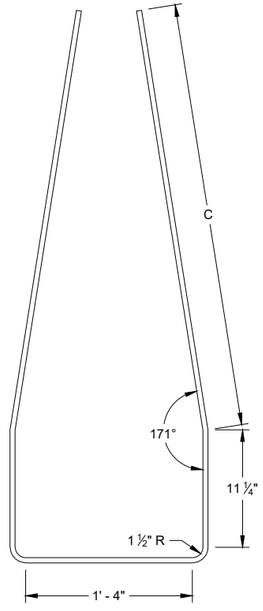
56" CBSS



STIRRUP BAR BENDING DETAIL



SECTION A - A



V1 BAR BENDING DETAIL

TABLE "B"

BARRIER HEIGHT H INCHES	C INCHES
32	2' - 6"
36	2' - 11"
42	3' - 4"
56	4' - 6 ½"

GENERAL NOTES

200 V1 BARS ARE NO. 5 BARS. (SEE BAR BENDING DETAIL)

201 STIRRUPS ARE NO. 6 BARS. (SEE BAR BENDING DETAIL)

202 TWELVE (12) NO. 5 BARS EVENLY SPACED

203 END OF INSTALLATION OR EXPANSION JOINT.

204 SEE COLD JOINT DETAIL TO CONNECT END ANCHOR SINGLE SLOPE CONCRETE BARRIER TO SINGLE SLOPE CONCRETE BARRIER.

205 FOOTING

206 DO NOT TIE TO FOOTING TO ADJACENT PAVEMENT.

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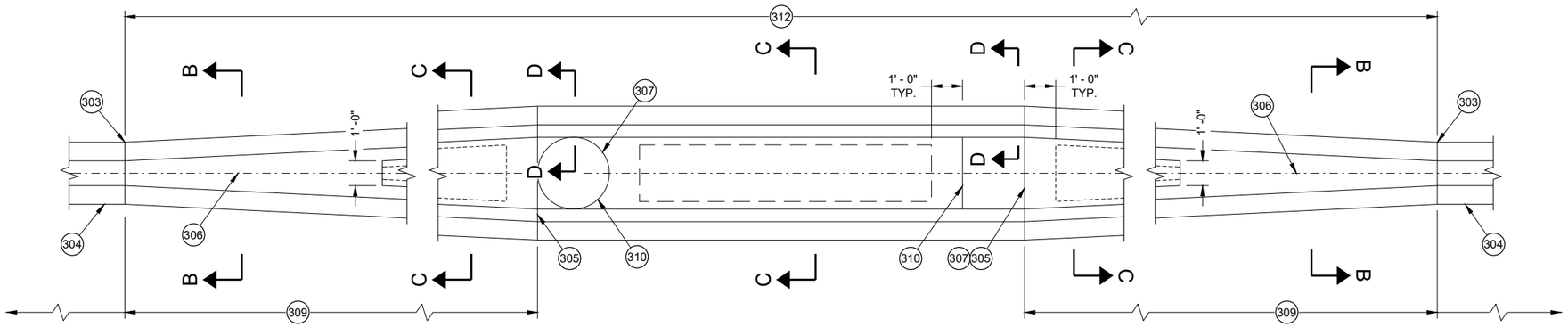
SDD 14B32 - 10b

CONCRETE BARRIER SINGLE SLOPE (CBSS)

6

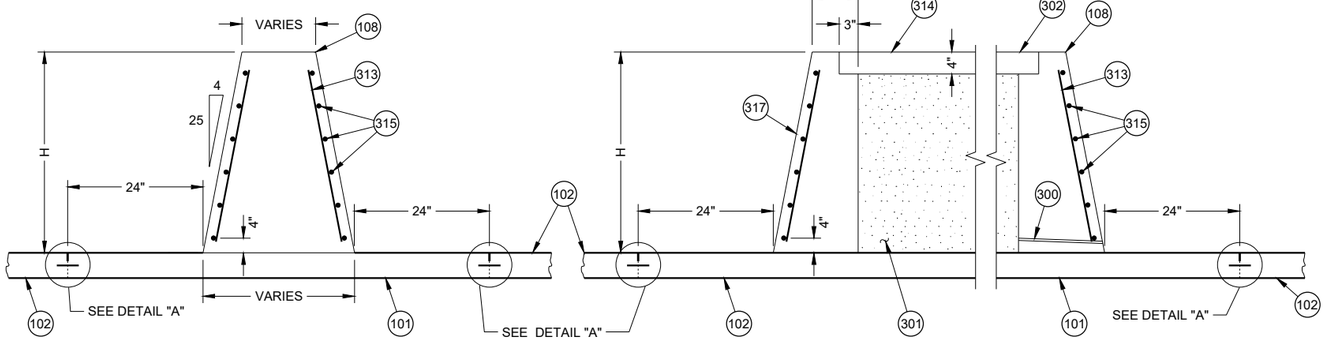
SDD 14B32 - 10b



LARGE FIXED OBJECTS PROTECTION
(TYPE S32, TYPE S36, TYPE S42, TYPE S56)

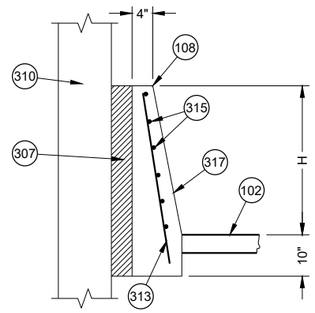
TABLE "C"

BARRIER HEIGHT H INCHES	BAR SIZE	NUMBER OF BARS EACH
32	4	6
36	4	6
42	5	6
56	5	6

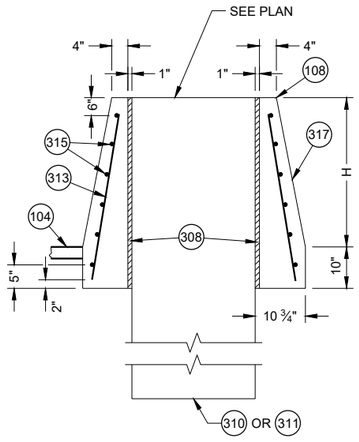


SECTION B - B

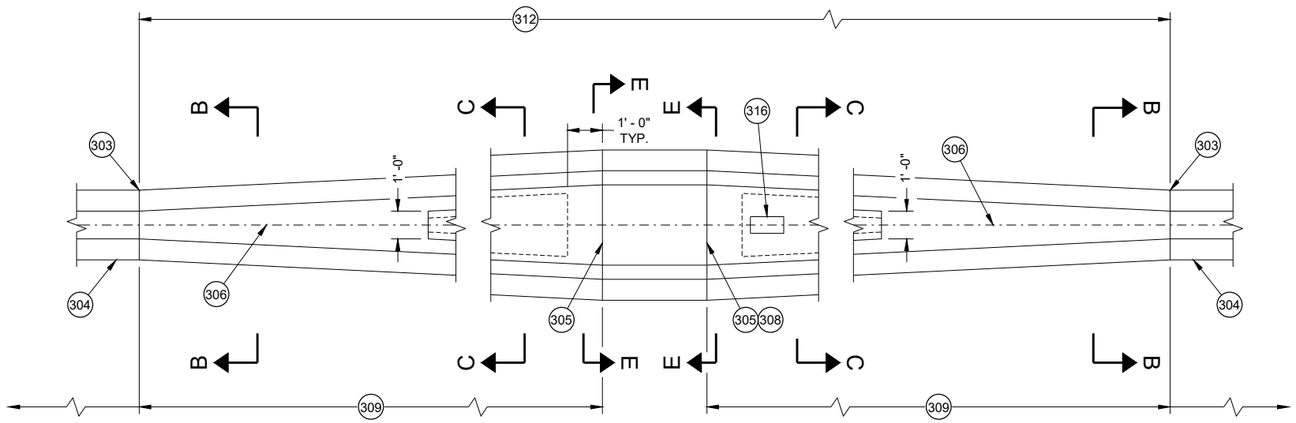
SECTION C - C



SECTION D - D



SECTION E - E



SMALL FIXED OBJECTS PROTECTION
(TYPE S32, TYPE S36, TYPE S42, TYPE S56)

GENERAL NOTES

(300) INSTALL 1 INCH DIAMETER DRAIN PIPE EVERY 20 FEET OF CROSS SECTION B -B. MINIMUM ONE DRAIN CAVITY.

(301) BETWEEN CONCRETE BARRIER WALLS FILL WITH FOUNDATION BACKFILL.

(302) LEVEL THE TOP OF CONCRETE BARRIER CAP ACROSS TOP OF BARRIER. ADJUST HEIGHT OF CONCRETE BARRIER WALL ON LOW SIDE OF OFFSET OR SUPERELEVATED ROADWAYS TO PROVIDE LEVEL GRADE ACROSS TOP OF CONCRETE CAP.

(303) USE COLD JOINTS BETWEEN FIXED OBJECT PROTECTION AND CONCRETE BARRIER ANCHOR.

(304) INSTALL END ANCHOR SINGLE SLOPE CONCRETE BARRIER.

(305) SEE COLD JOINT DETAIL

(306) CENTERLINE OF CONCRETE BARRIER.

(307) INSTALL 4" EXPANDED POLYSTYRENE BETWEEN COLUMN AND CONCRETE BARRIER.

(308) INSTALL 1" EXPANDED POLYSTYRENE BETWEEN PEDESTAL AND CONCRETE BARRIER.

(309) 20:1 MIN. TRANSITION.

(310) COLUMN

(311) PEDESTAL

(312) LIMITS OF PAYMENT FOR LARGE FIXED OBJECT PROTECTION (SEE PLAN)

(313) NO. 4 BARS SPACED 12" CENTER TO CENTER (TYP.)

(314) USE NO. 3 BAR SPACED 12 INCHES CENTER TO CENTER (PLACED IN EACH DIRECTION) OR EQUIVALENT WIRE MESH.

(315) SEE TABLE "C" FOR BAR INFORMATION

(316) ELECTRICAL PULL BOX FOR SIGN FLUSH WITH TOP OF CONCRETE BARRIER.

(317) VARIABLE SLOPE

CONCRETE BARRIER SINGLE SLOPE (CBSS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD 14B32 - 10c

GENERAL NOTES

400 END ANCHOR SINGLE SLOPE CONCRETE BARRIER.

401 PARAPET, SIGN BRIDGE BASE, LIGHT POLE BASE OR OTHER OBJECT SINGLE SLOPE CONCRETE BARRIER CANNOT TIE INTO.

402 JOINT SEAL CONFORMING TO STANDARD SPECIFICATION 415.2.6

403 EXPANSION JOINT MATERIAL.

404 INLET (SEE PLAN)

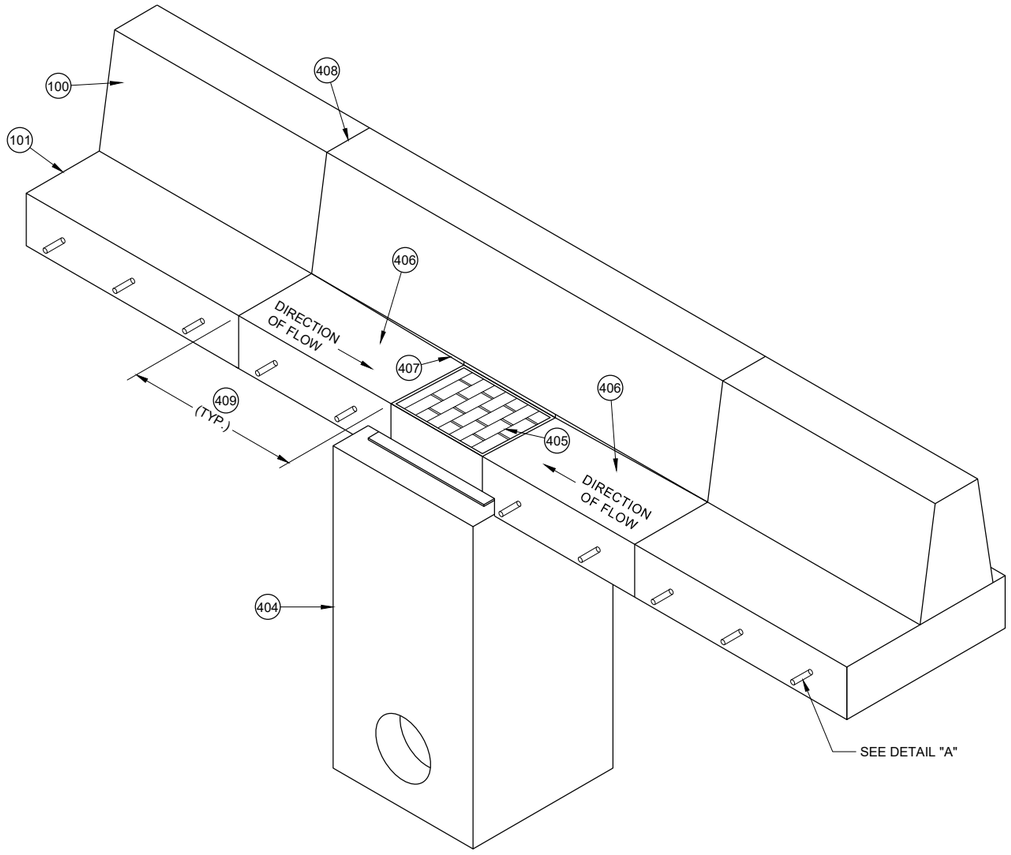
405 INLET COVER BW (SEE PLAN)

406 WARP PAN TO MATCH INLET COVER.

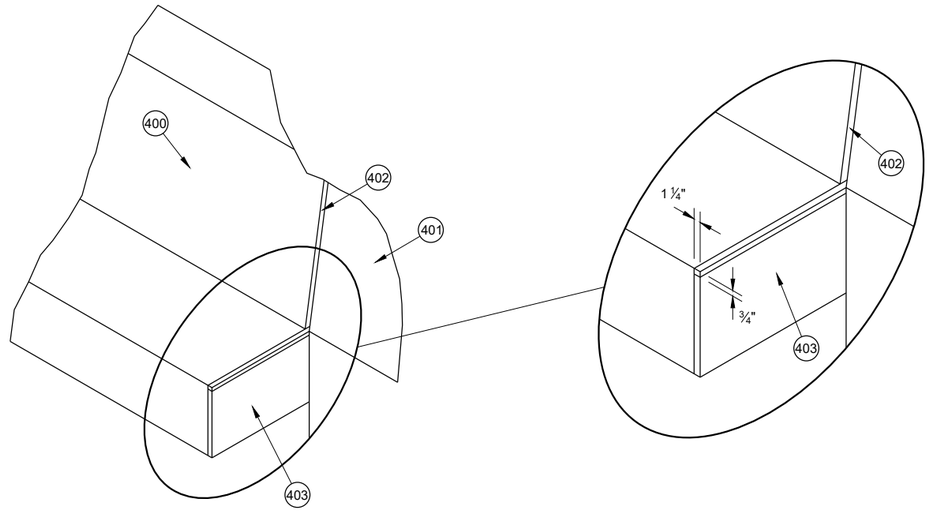
407 EXTEND BARRIER SLOPE TO INLET. SEE PLAN FOR THE LENGTH OF EXTENSION.

408 CONTRACTION JOINT.

409 3' (TYP.)



DRAINAGE DETAIL



EXPANSION JOINT DETAIL

6

CONCRETE BARRIER SINGLE SLOPE (CBSS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B32 - 10d

GENERAL NOTES

USE COLD JOINT TO CONNECT MULTIPLE HEIGHT TRANSITIONS.

(500) SEE TABLE "A" FOR DIMENSIONS

(501) SEE TABLE "D"

(502) MULTIPLE HEIGHT TRANSITION MAY BE USED IN SEQUENCE TO GET APPROPRIATE HEIGHT.

(503) COLD JOINT

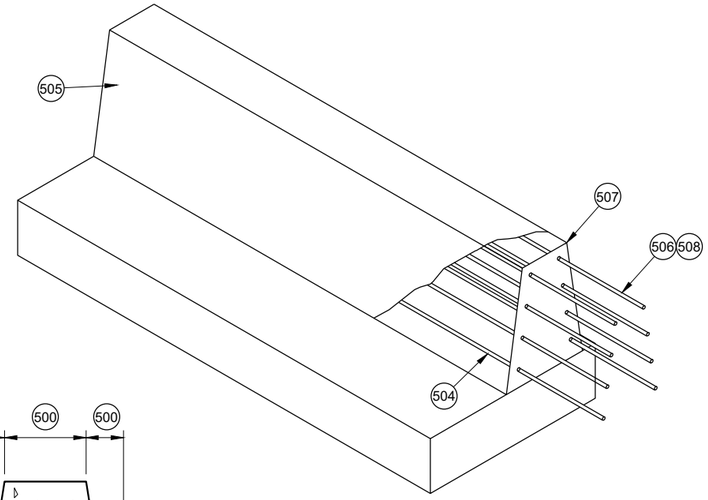
(504) BARRIER REBAR (SEE OTHER DETAILS FOR BAR SIZE, QUANTITY AND LOCATION).

(505) SINGLE SLOPE BARRIER SHOWN. SIMILAR DETAIL CAN BE USED FOR COLD JOINT IN END ANCHORS AND TRANSITIONS.

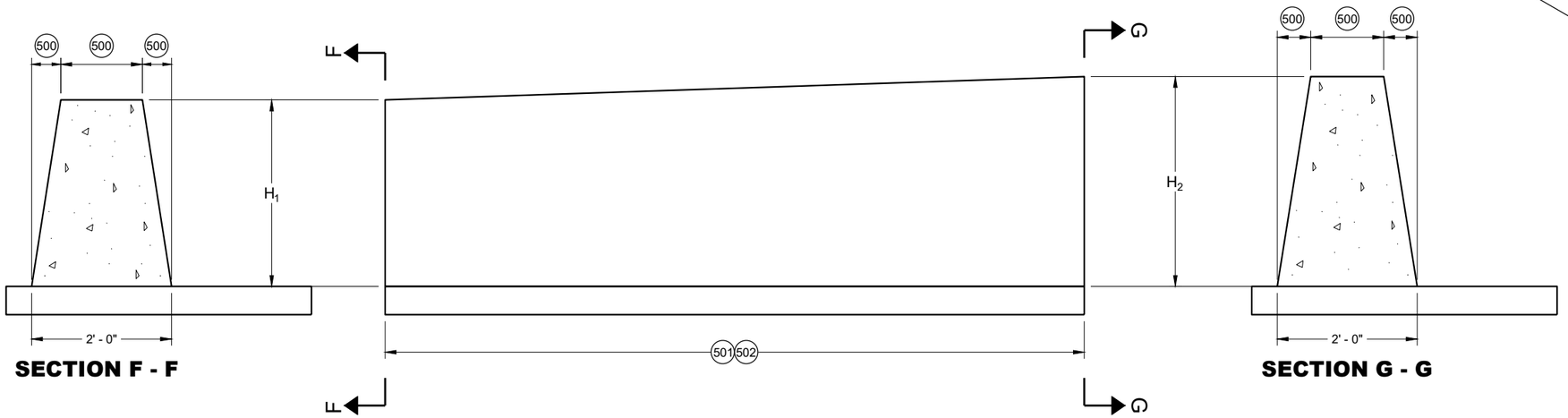
(506) NO. 5 REBAR FOR SPLICE. 3' OF SPLICE REBAR IS LAPPED AND TIED TO BARRIER REBAR. EXTEND 3' OF SPLICE REBAR BEYOND END OF POUR. ALL BARS ARE FIRMLY TIED OR CONNECTED. EVERY REBAR IN THE BARRIER SECTION REQUIRES A SPLICE BAR.

(507) END OF POUR.

(508) LAP AND TIE 3' OF NEXT POUR'S REBAR TO SPLICE REBAR.



COLD JOINT DETAIL



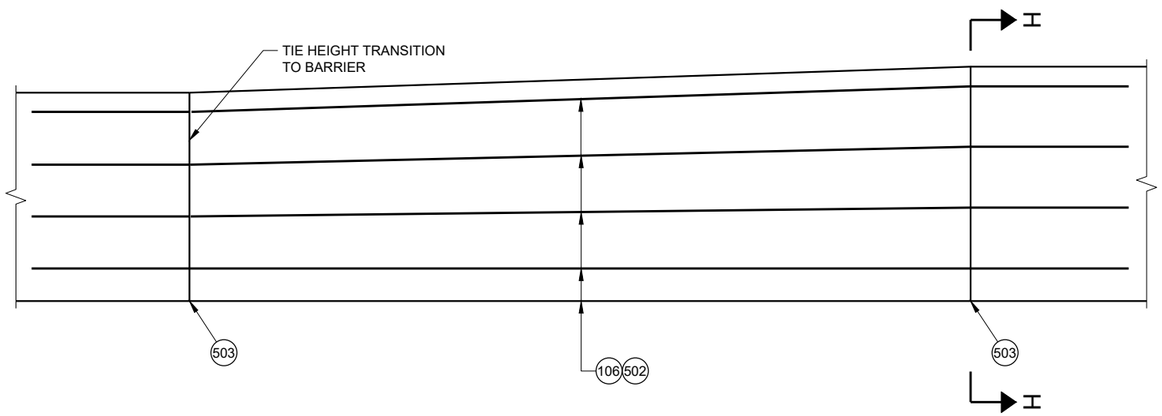
SECTION F - F

SECTION G - G

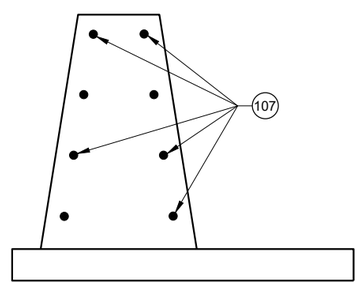
DOUBLE COLD JOINT HEIGHT TRANSITION

TABLE "D"

H_1	H_2	L	NUMBER OF NO. 5 BARS
32"	36"	10' - 0"	8
36"	42"	10' - 6"	10
42"	56"	24' - 6"	11



STEEL REINFORCEMENT DETAIL



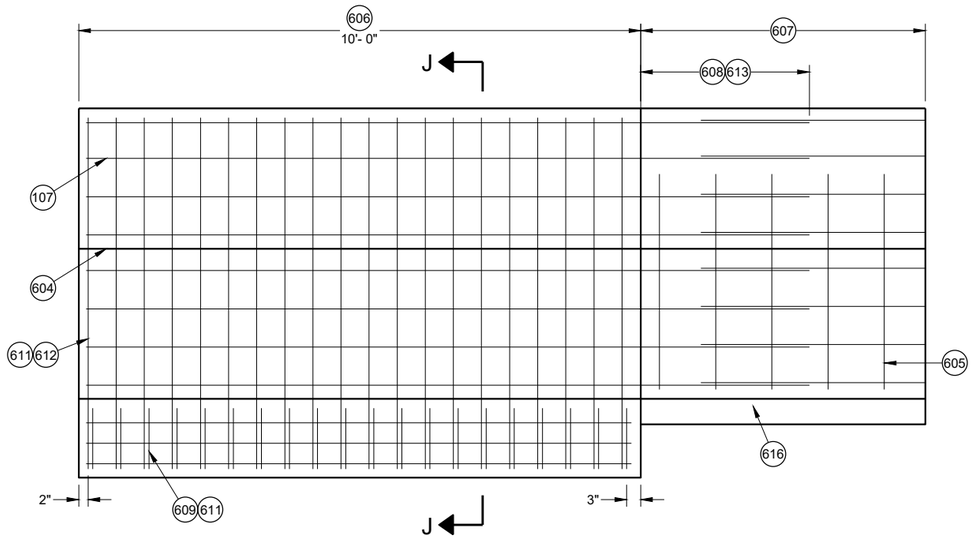
SECTION H - H

CONCRETE BARRIER SINGLE SLOPE (CBSS)

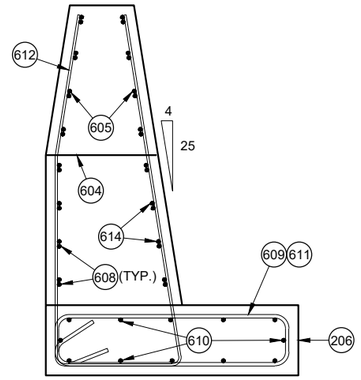
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B32 - 10e

SDD 14B32 - 10e



END ANCHOR MEDIAN BARRIER AND RETAINING WALL



SECTION J - J
END ANCHOR AND MEDIAN WALL END ANCHOR REINFORCEMENT DETAIL

GENERAL NOTES

600 UPPER CONCRETE BARRIER

601 LOWER CONCRETE BARRIER

602 MAX HEIGHT 36".

603 VERTICAL OFFSET FROM TOP ROADWAY SURFACES

604 OPTIONAL CONSTRUCTION JOINT WHEN HEIGHT IS GREATER THAN 1 ½".

605 NO. 4 BARRIER LOOP BARS ARE NOT REQUIRED FOR ROADWAY OFFSETS ARE LESS THAN 1'- 0", EXCEPT WHEN USED IN ANCHORS. BARRIER LOOP BARS ARE SPACED 12" CENTER TO CENTER OUTSIDE OF MEDIAN BARRIER AND RETAINING WALL END ANCHOR.

606 SINGLE SLOPE CONCRETE BARRIER AND RETAINING WALL ANCHOR

607 SINGLE SLOPE CONCRETE BARRIER AND RETAINING WALL (SEE OTHER DETAILS)

608 NO. 5 REBAR 3' OF LAP OF LONGITUDINAL STEEL.

609 NO. 6 REBAR END ANCHOR FOOTING LOOP

610 TWELVE (12) NO. 5 BARS EVENLY SPACED.

611 SS ANCHOR END LOOP AND END ANCHOR FOOTING LOOP ARE SPACED 6" CENTER TO CENTER.

612 END ANCHOR LOOP BAR IS NO. 5 REBAR.

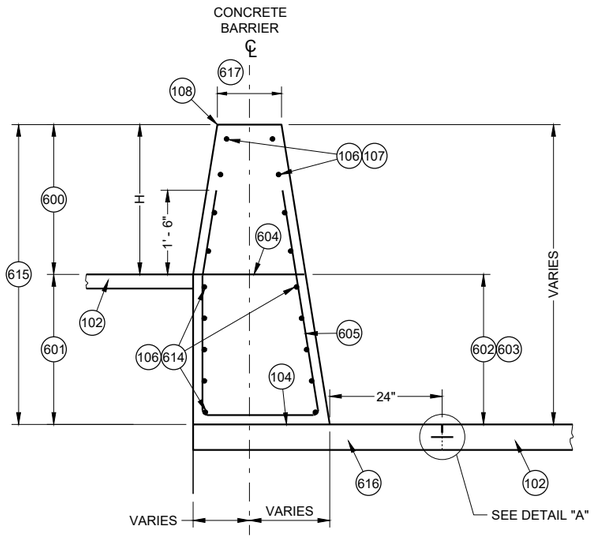
613 SEE COLD JOINT DETAIL.

614 SEE TABLE "E" FOR REQUIRED REBAR

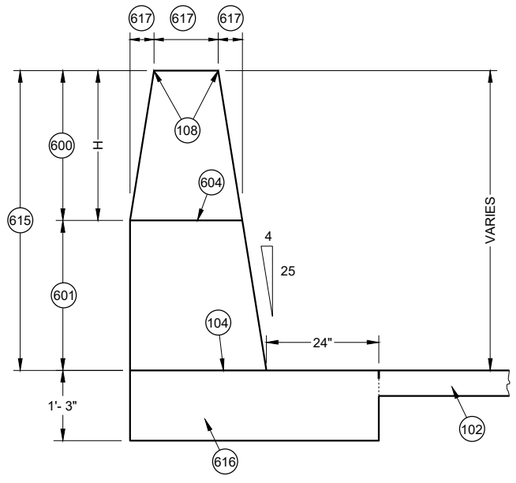
615 TOTAL BARRIER HEIGHT (SEE PLAN FOR HEIGHT)

616 FOR SOME LOCATIONS, NO PAN IS NEEDED. SEE OTHER DETAILS.

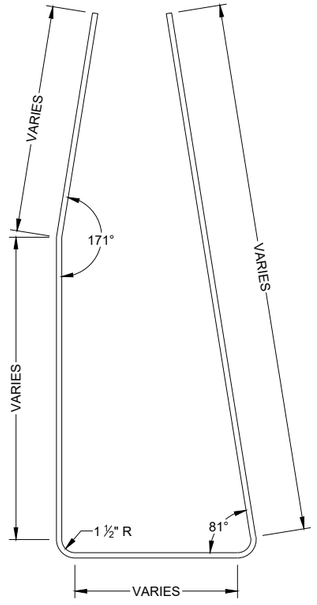
617 SEE TABLE "A" FOR DIMENSIONS



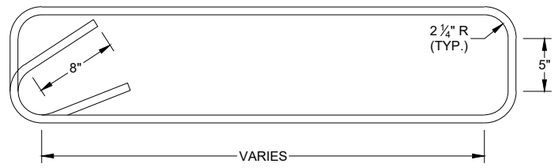
SINGLE SLOPE CONCRETE BARRIER AND RETAINING WALL
(TYPE S32A, TYPE S36A, TYPE S42A, TYPE S56A)
(BETWEEN ADJACENT ROADWAYS)



SECTION J - J
MEDIAN BARRIER AND RETAINING WALL END ANCHOR DIMENSIONS



LOOP BAR BENDING DETAIL



END ANCHOR STIRRUP BAR BENDING DETAIL

TABLE "E"

HEIGHT BETWEEN ROADWAY	QUANTITY OF NO. 6 BARS
0 TO 3"	0
GREATER THAN 3" TO 8"	2
GREATER THAN 8" TO 12"	4
GREATER THAN 12" TO 36"	8

CONCRETE BARRIER SINGLE SLOPE (CBSS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD 14B32 - 10f

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SDD 14B32 - 10f

GENERAL NOTES

700 END ANCHOR SINGLE SLOPE CONCRETE BARRIER

701 SEE EXPANSION JOINT DETAIL

702 END ANCHOR SINGLE SLOPE CONCRETE BARRIER AND RETAINING WALL

703 PAY LIMIT FOR SINGLE SLOPE CONCRETE BARRIER AND RETAINING WALL

704 SEE COLD JOINT DETAIL

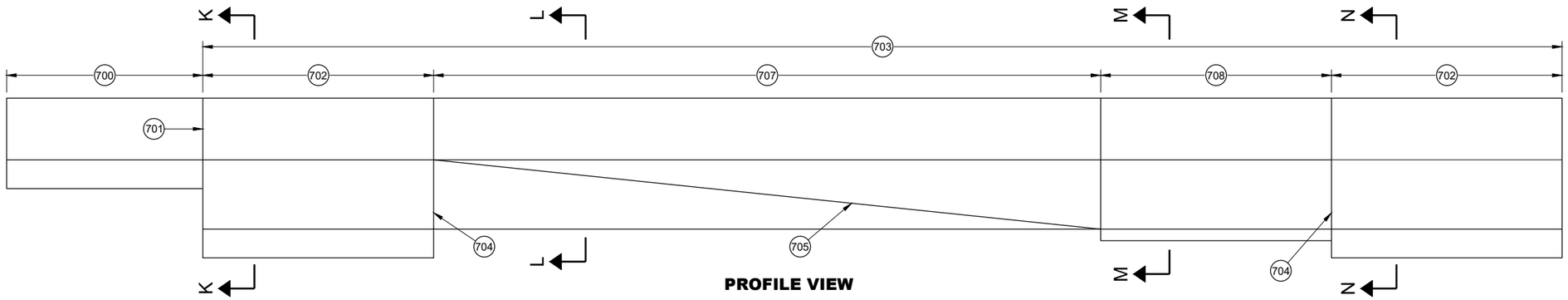
705 LOW SIDE SHOULDER

706 HIGH SIDE SHOULDER

707 SINGLE SLOPE CONCRETE BARRIER AND RETAINING WALL INSTALLED WITHOUT A PAN.

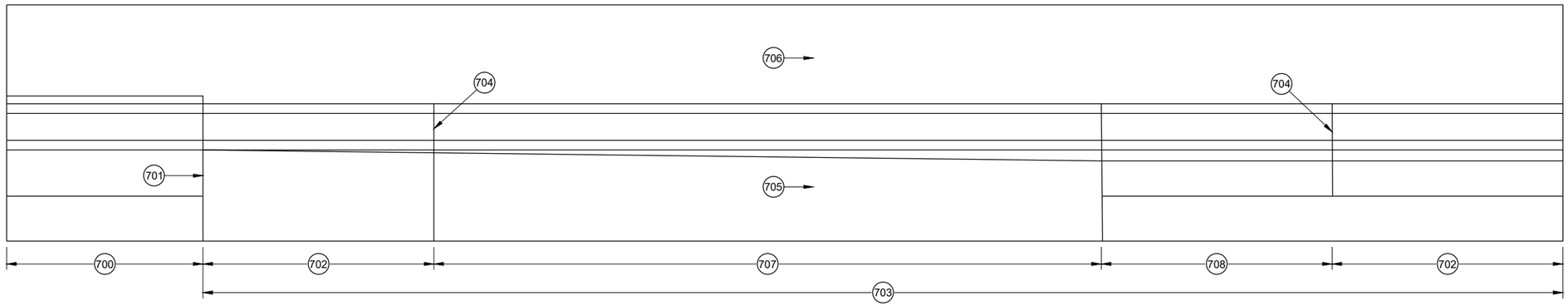
708 SINGLE SLOPE CONCRETE BARRIER AND RETAINING WALL INSTALLED WITH A PAN.

709 EXCAVATION AND COMPACTION



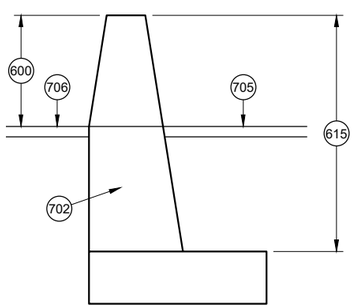
PROFILE VIEW

SINGLE SLOPE CONCRETE BARRIER AND RETAINING WALL

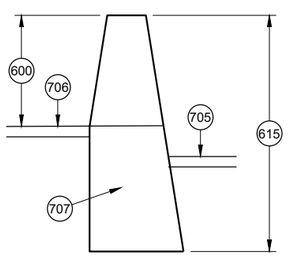


PLAN VIEW

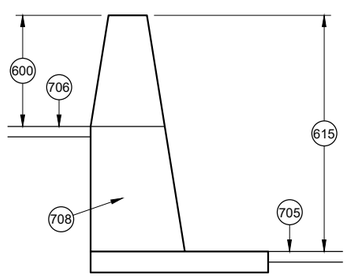
SINGLE SLOPE CONCRETE BARRIER AND RETAINING WALL



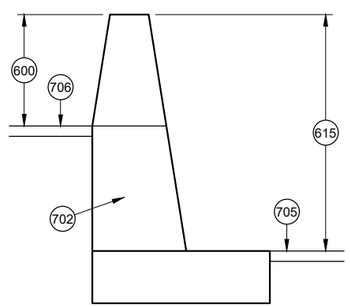
SECTION K - K



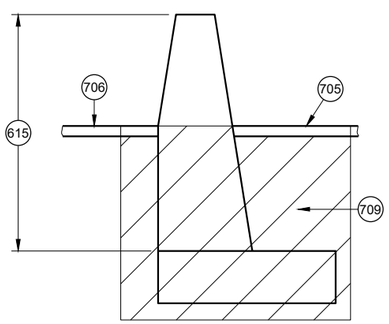
SECTION L - L



SECTION M - M



SECTION N - N

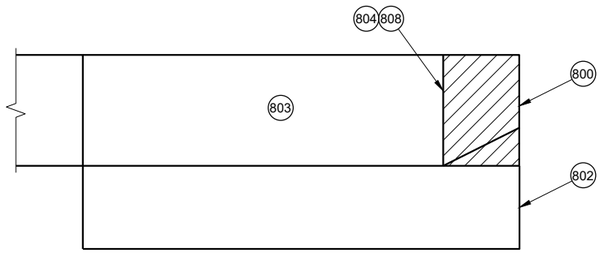


CONCRETE BARRIER
SINGLE SLOPE (CBSS)

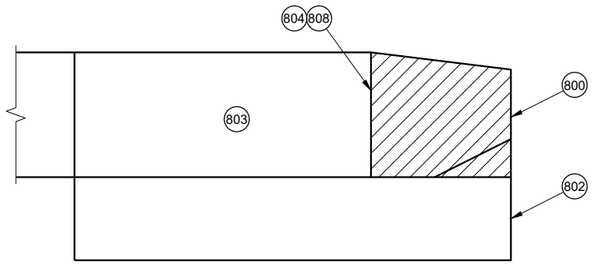
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

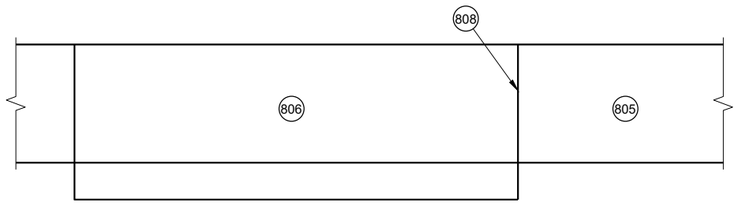
SDD 14B32 - 10g



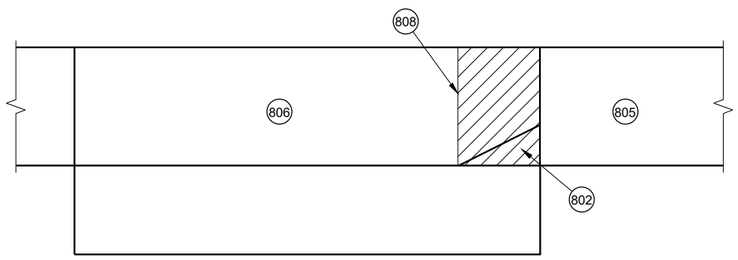
REMOVAL AREA OF
32" CONCRETE THRIE BEAM ANCHORAGE



REMOVAL AREA OF CONCRETE THRIE BEAM
ANCHORAGE WITH HEIGHT GREATER THAN 32"



CONCRETE BARRIER EXTENSION NEAR END ANCHORAGE



CONCRETE BARRIER EXTENSION NEAR THRIE BEAM TERMINAL

GENERAL NOTES

END ANCHORAGE MAY OR MAY NOT BE PRESENT ON EXISTING BARRIER.

REMOVE THRIE BEAM ANCHORAGE AS SHOWN.

800 AREA OF BARRIER REMOVAL AN NEW CONCRETE AND STEEL IS INSTALLED.

801 MINIMUM LENGTH OF REMOVAL IS 15'

802 FOOTING BELOW GROUND MAY REMAIN IN PLACE.

803 CONCRETE BARRIER SINGLE SLOPE THRIE BEAM ANCHOR TO REMAIN.

804 SAW CUT

805 NEW SINGLE SLOPE CONCRETE BARRIER.

806 CONCRETE BARRIE SINGLE SLOPE TO REMAIN.

807 SINGLE SLOPE CONCRETE BARRIER OR CONCRETE BARRIER SINGLE SLOPE THRIE BEAM ANCHOR TO REMAIN.

808 SEE CONNECTION DETAIL.

809 NO. 5 CONTINUOUS BAR.

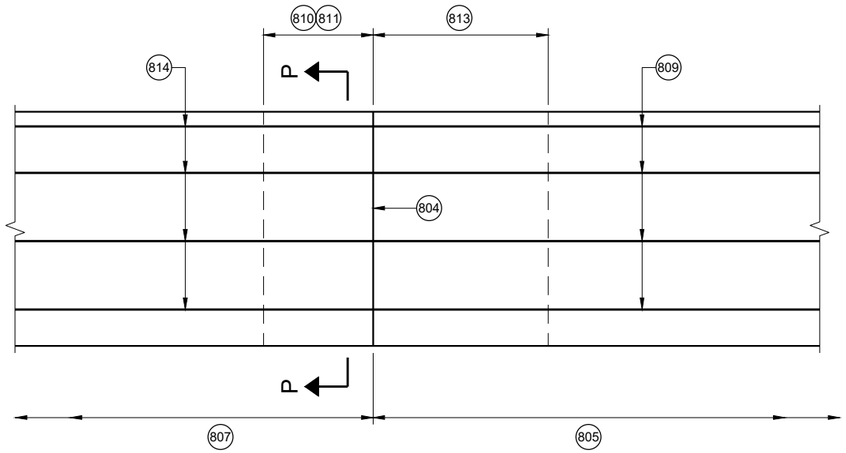
810 3" MIN. DRILL HOLES. USES NO. 5 ADHESIVE ANCHORS.

811 THE NUMBER OF DRILL HOLES IS EQUAL TO THE NUMBER OF HORIZONTAL REBAR IN BARRIER. DRILL HOLES ARE TO BE A MINIMUM OF 4" FROM EDGE OF CONCRETE.

812 EXISTING REBAR IN EXISTING BARRIER OR END ANCHOR.

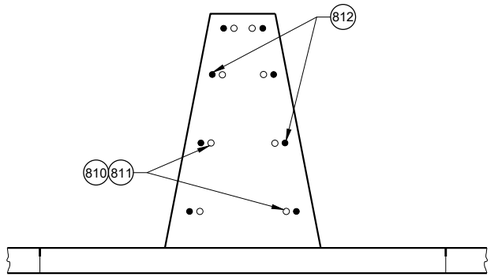
813 3" BAR OVERLAP

814 EXISTING REINFORCEMENT

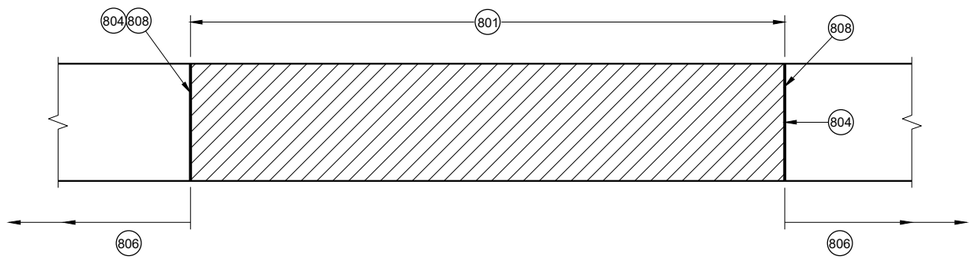


CONNECTION DETAIL

SINGLE SLOPE CONCRETE BARRIER TO
NEW SINGLE SLOPE CONCRETE BARRIER



SECTION P - P



BARRIER REMOVAL AND REPLACEMENT

RETROFIT OR REPAIR SINGLE SLOPE CONCRETE BARRIER

CONCRETE BARRIER
SINGLE SLOPE (CBSS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE
UNIT SUPERVISOR

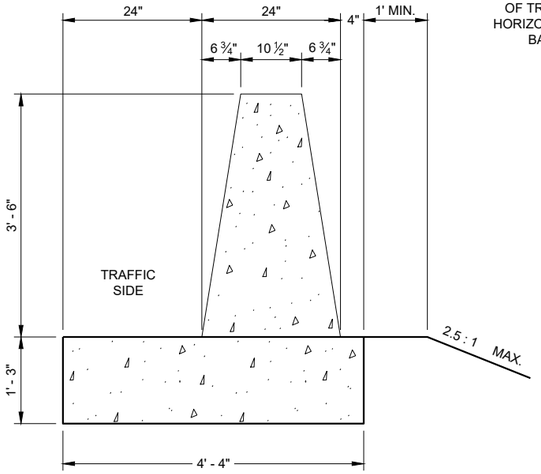
FHWA

6

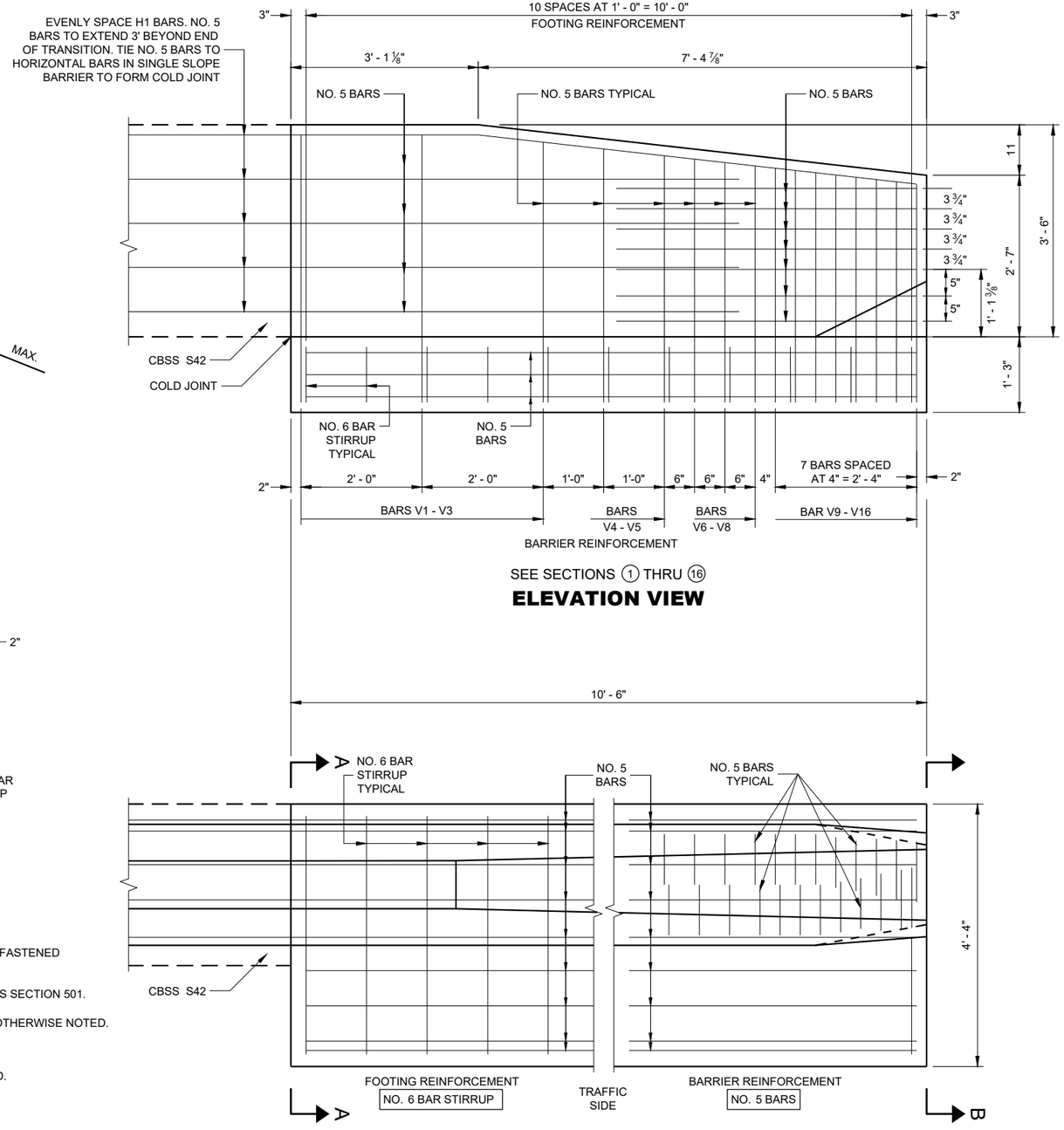
SDD 14B32 - 10h

6

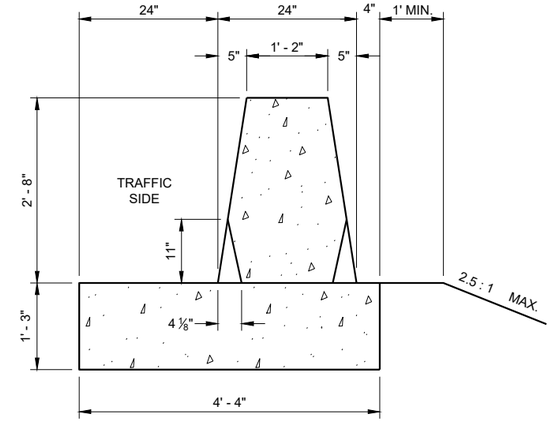
SDD 14B32 - 10h



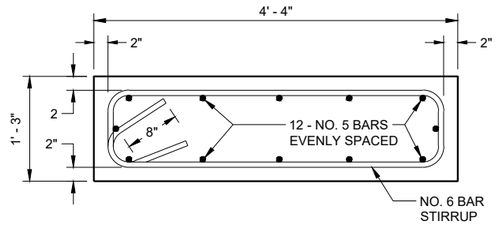
SECTION A - A



ELEVATION VIEW

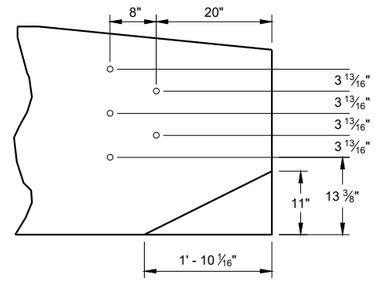


SECTION B - B



TYPICAL FOOTING

PLAN VIEW



PVC PIPE LOCATIONS

GENERAL NOTES

CONSTRUCT PER STANDARD SPECIFICATION 603.

SPLICES OF LONGITUDINAL BARS TO BE 2' LONG AND FIRMLY TIED AND FASTENED TOGETHER UNLESS OTHERWISE NOTED.

4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATIONS SECTION 501.

USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS OTHERWISE NOTED.

THRIE BEAM ANCHOR INCIDENTAL TO CONCRETE BARRIER ITEM.

INSTALL SCHEDULE 40 PVC PIPE 1" DIAMETER AT LOCATIONS INDICATED.

EXTEND PVC PIPE COMPLETELY THROUGH BARRIER.

CUT ENDS OF PVC PIPE FLUSH WITH FINISHED FACE OF BARRIER.

THE NUMBER IN BAR DESIGNATION REPRESENTS THE BARS LOCATION.

2" CLEAR COVER TYPICAL.

CONCRETE BARRIER
SINGLE SLOPE 42"
THRIE BEAM ANCHOR

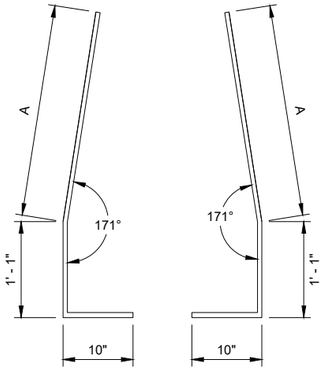
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B33 - 02g

SDD 14B33 - 02g

BAR CHART
BAR POSITIONS
1 - 11

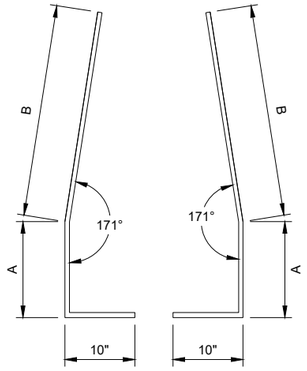
BAR	A
V1	3' - 4 ½"
V2	3' - 4 ½"
V3	3' - 2 ½"
V4	3' - 1"
V5	2' - 11 ½"
V6	2' - 11"
V7	2' - 10 ½"
V8	2' - 9 ½"
V9	2' - 9"
V10	2' - 8 ½"
V11	2' - 8"



BAR BENDING DETAIL
SECTIONS V1 - V4

BAR CHART
BAR POSITIONS
12 - 13

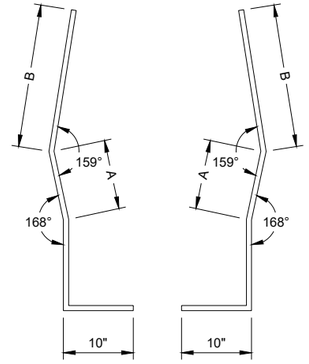
BAR	A	B
V12	1' - 3"	2' - 6"
V13	1' - 8"	2' - 1 ½"



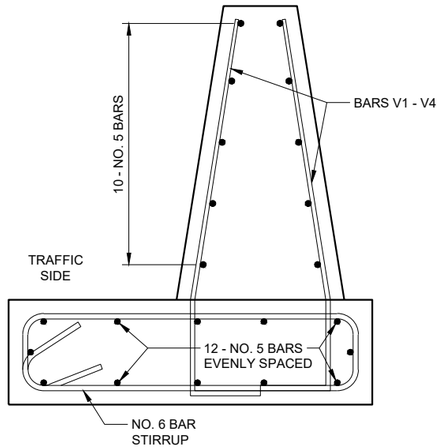
BAR BENDING DETAIL
SECTIONS V12 - V13

BAR CHART
BAR POSITIONS
14 - 16

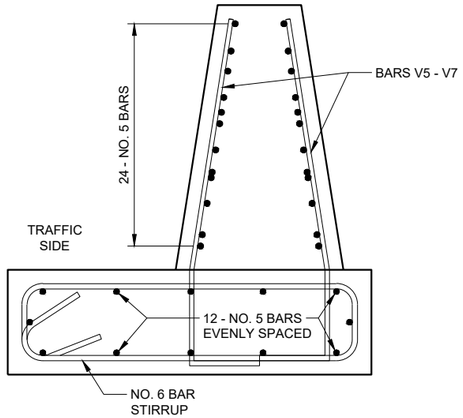
BAR	A	B
V14	6"	2' - 1"
V15	8"	1' - 11"
V16	10"	1' - 8 ½"



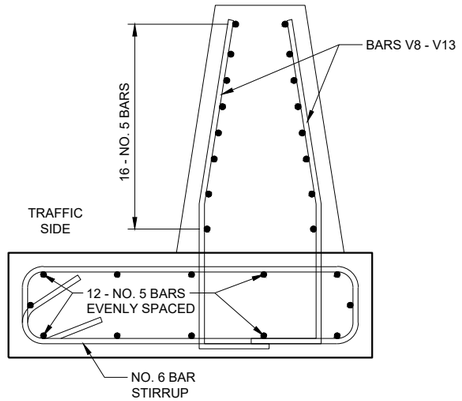
BAR BENDING DETAIL
SECTIONS V14 - V16



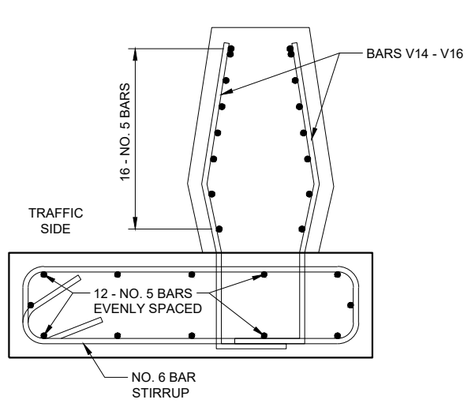
BAR DETAIL
SECTIONS 1 - 4



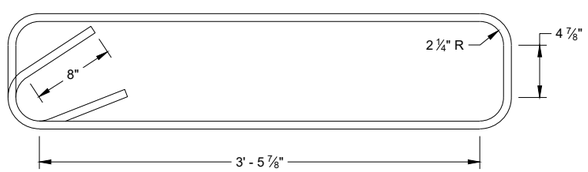
BAR DETAIL
SECTIONS 5 - 7



BAR DETAIL
SECTIONS 8 - 13



BAR DETAIL
SECTIONS 14 - 16



STIRRUP BAR
BENDING DETAIL

CONCRETE BARRIER
SINGLE SLOPE 42"
THRIE BEAM ANCHOR

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

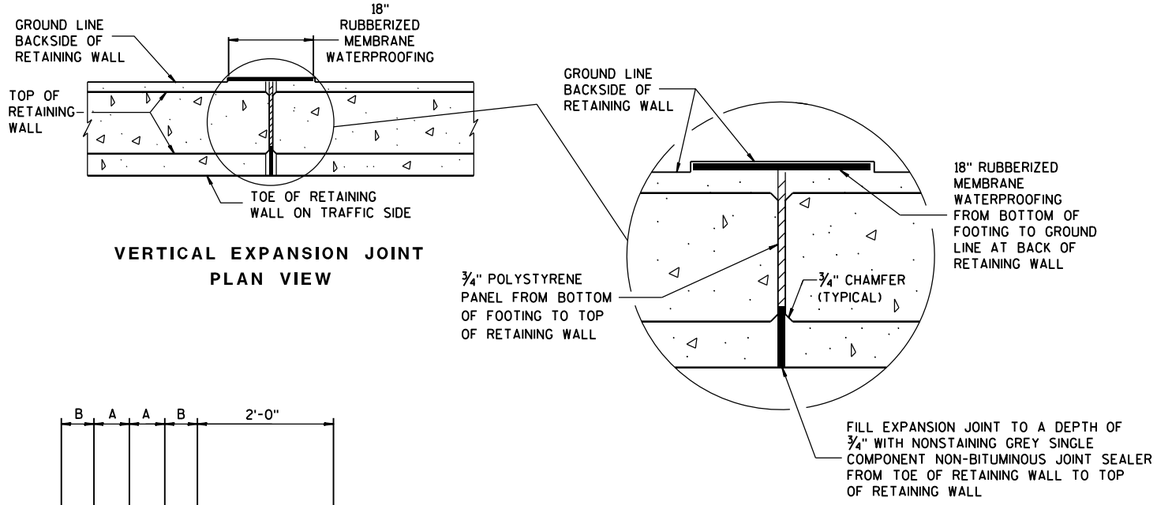
APPROVED
February 2020
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE
ENGINEER

FHWA

6

SDD 14B33 - 02h



VERTICAL EXPANSION JOINT
PLAN VIEW

DELINEATION

GENERAL NOTES

PROVIDE EXPANSION JOINTS WHERE THERE ARE EXISTING EXPANSION JOINTS OR AT THE END OF EACH POUR.

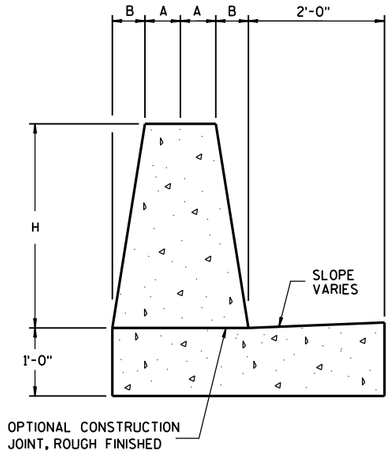
NO HORIZONTAL STEEL CROSSES EXPANSION JOINTS.

CONSTRUCT PER STANDARD SPECIFICATION 603. SPLICES OF LONGITUDINAL BARS TO BE 2' LONG AND FIRMLY TIED AND FASETENED TOGETHER UNLESS NOTED OTHERWISES.

4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATIONS 501.

USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS NOTED OTHERWISE.

ALL STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR.



ROADSIDE RETAINING WALL

BARRIER WALL DIMENSIONS

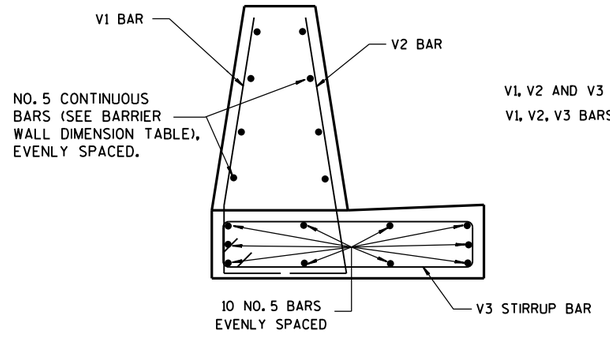
BARRIER HEIGHT H INCHES	A INCHES	B INCHES	NUMBER OF NO. 5 BARS EACH
32	7	5	8
36	6¼	5¾	8
42	5¼	6¾	10
56	3	9	11

V1 BAR
BENDING DETAIL

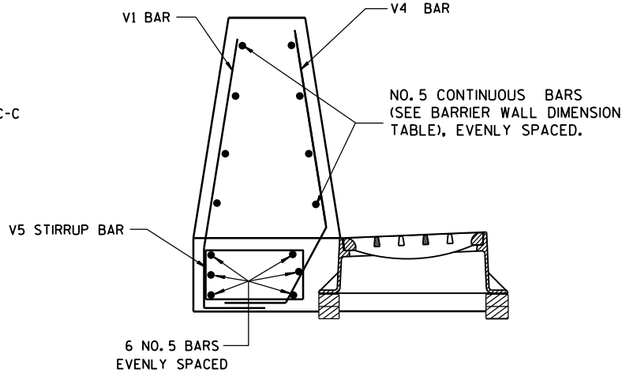
V2 BAR
BENDING DETAIL

BAR CHART
ROADSIDE RETAINING WALL

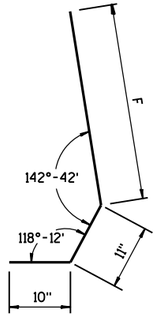
BARRIER HEIGHT	V1 BAR D	V2 BAR E	V4 BAR F
32"	2'-5½"	3'-4½"	2'-6½"
36"	2'-9½"	3'-9¾"	2'-10¾"
42"	3'-3½"	4'-2½"	3'-4¾"
56"	4'-5¾"	5'-4¾"	4'-6¾"



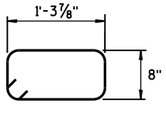
ROADSIDE RETAINING WALL
NORMAL BAR PLACEMENT



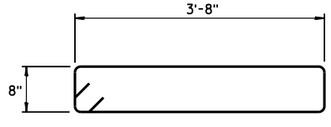
ROADSIDE RETAINING WALL
BAR PLACEMENT NEAR
INLET



V4 BAR
BENDING DETAIL



V5 STIRRUP BAR
BENDING DETAIL



V3 STIRRUP BAR
BENDING DETAIL

SINGLE SLOPE
ROADSIDE RETAINING WALL

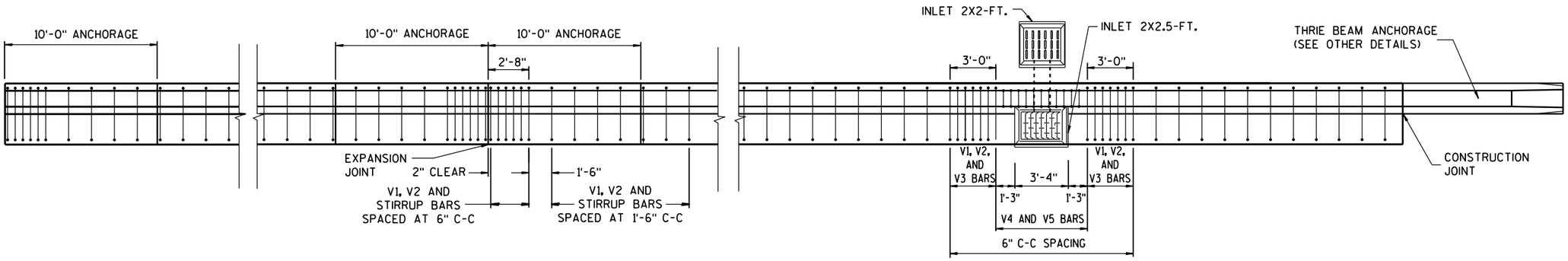
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 14 B 41-3a

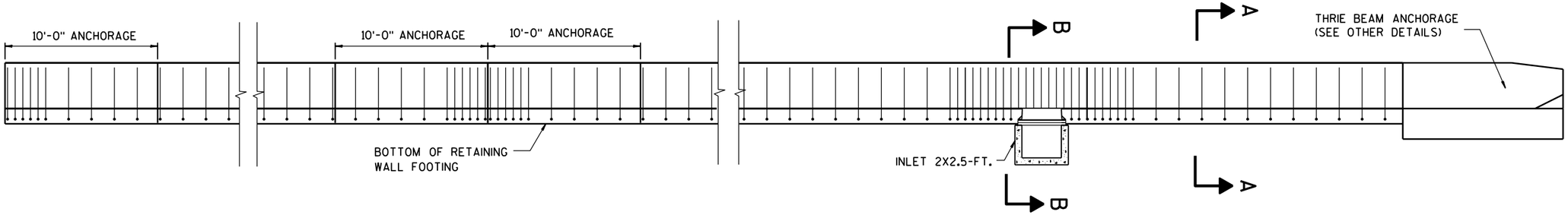
6

S.D.D. 14 B 41-3a



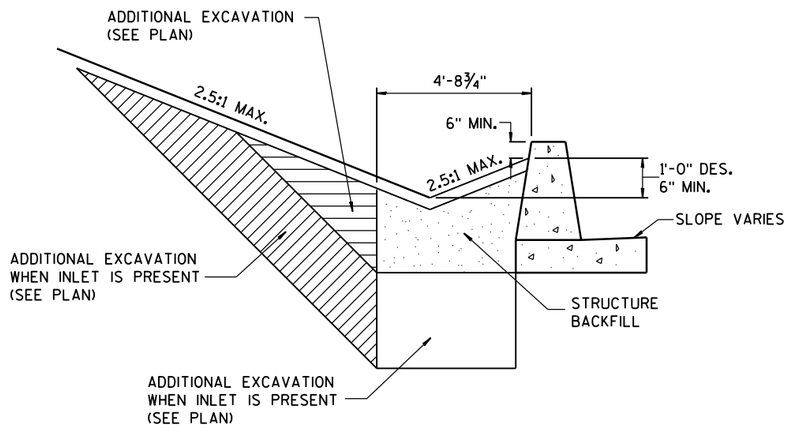
PLAN VIEW

NOTE: HORIZONTAL BARS ARE NOT SHOWN. SEE OTHER DETAILS FOR HORIZONTAL BARS.

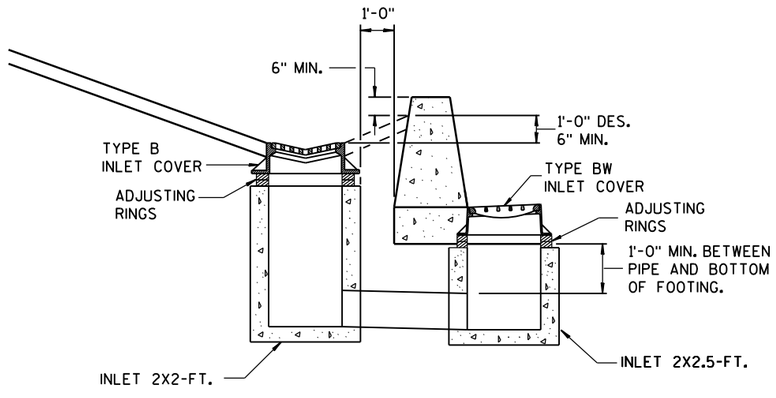


ELEVATION VIEW

NOTE: HORIZONTAL BARS ARE NOT SHOWN. SEE OTHER DETAILS FOR HORIZONTAL BARS.

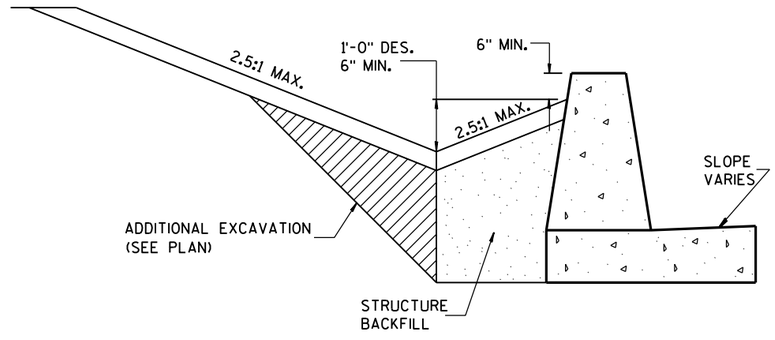


SECTION A-A



SECTION B-B

MINIMUM DESIGN OF EARTH WORK FOR INLET



MINIMUM DESIGN OF EARTH WORK

SINGLE SLOPE ROADSIDE RETAINING WALL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS UNIT SUPERV... 75 ENT
FHWA

6

S.D.D. 14 B 41-3b

6

S.D.D. 14 B 41-3b

(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.

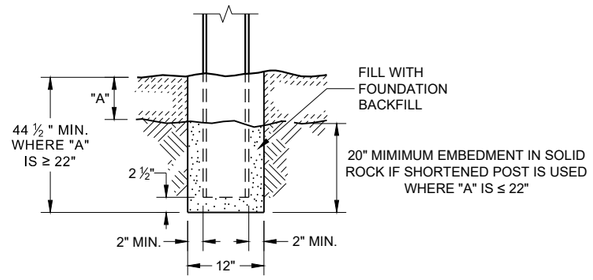
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL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

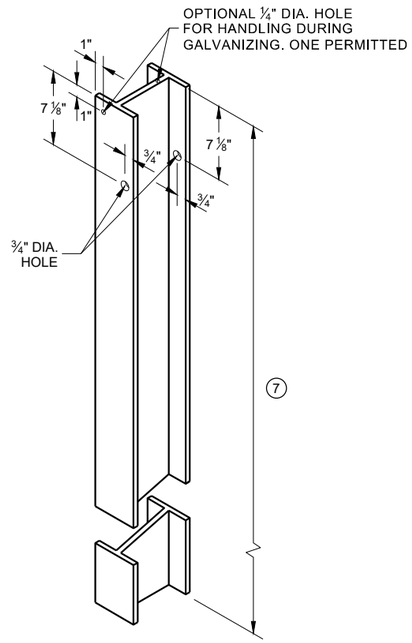
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ±1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

(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.

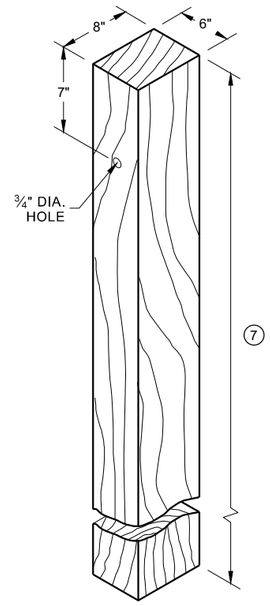
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



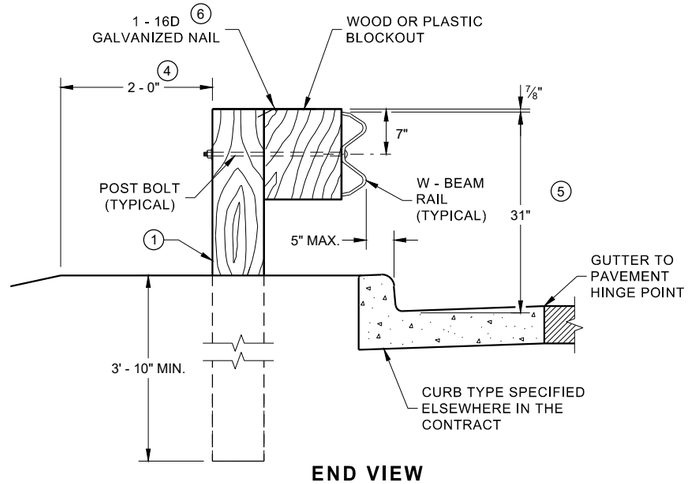
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



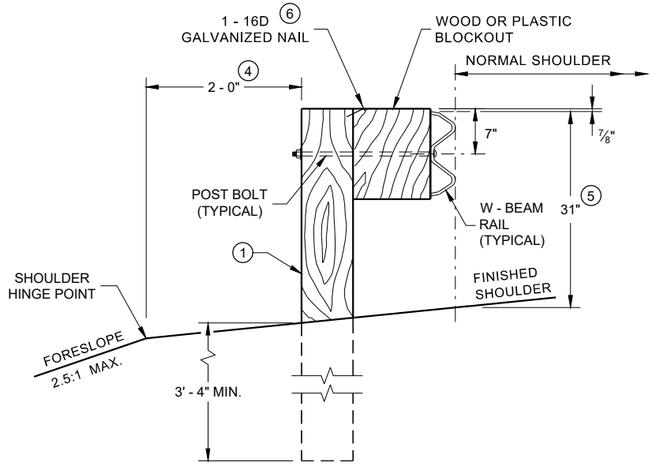
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



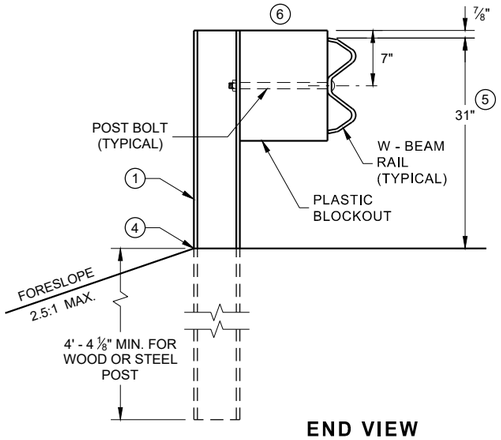
WOOD POST (6" X 8") NOMINAL (1)



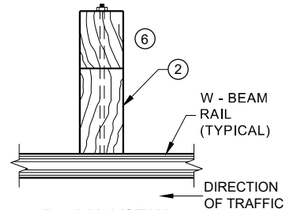
END VIEW
LOCATED ALONG A CURBED ROADWAY



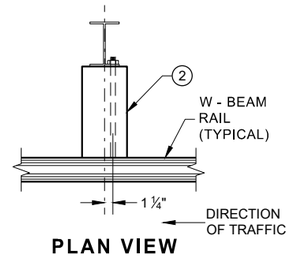
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



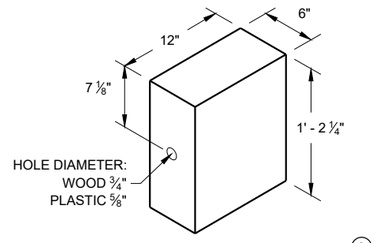
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



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 - 07a

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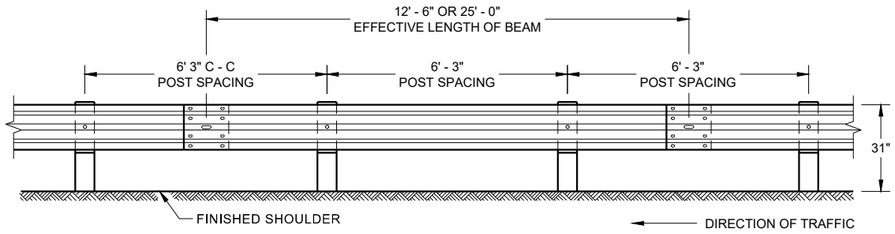
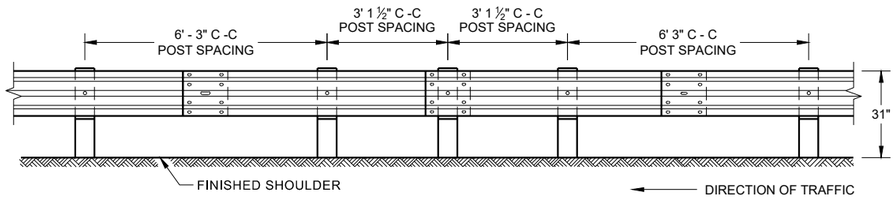
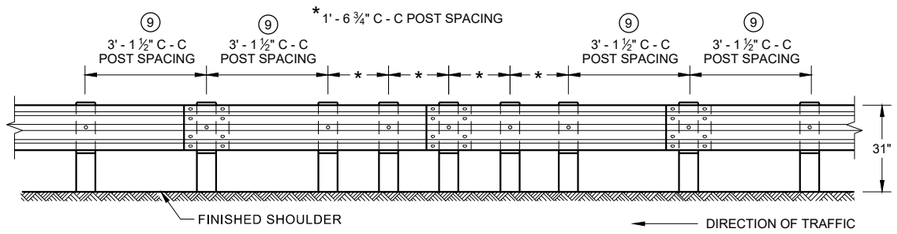


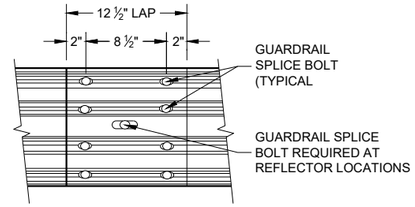
FRONT VIEW
POST SPACING STANDARD INSTALLATION



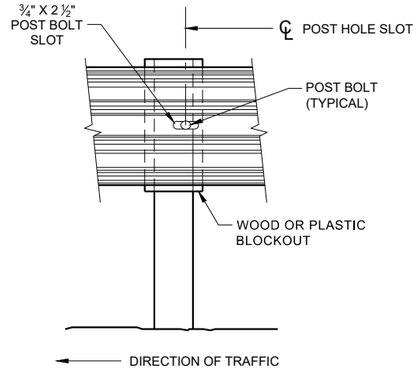
FRONT VIEW
HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)



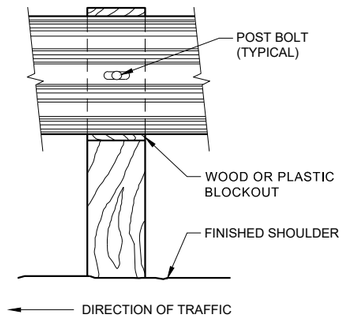
FRONT VIEW
QUARTER POST SPACING (QS)



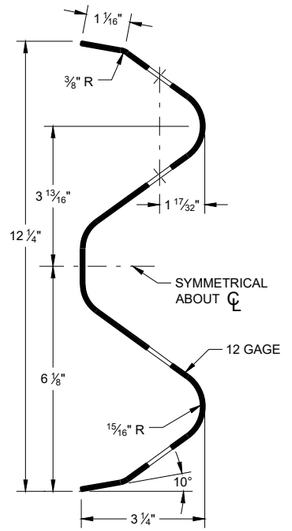
FRONT VIEW
MID-SPAN BEAM SPLICE



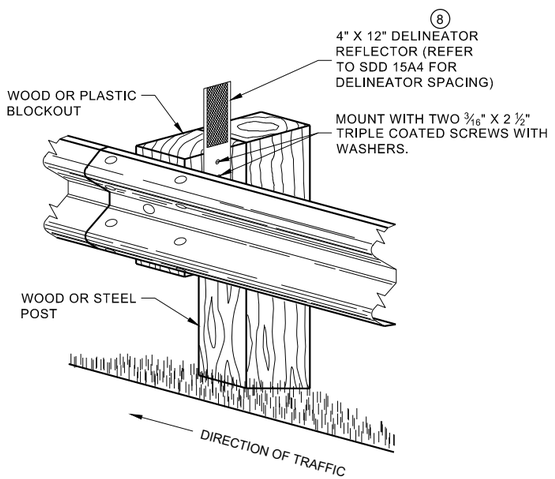
FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION

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.

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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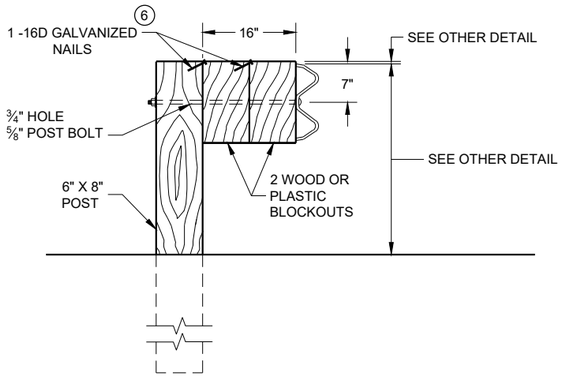
SDD 14B42 - 07b

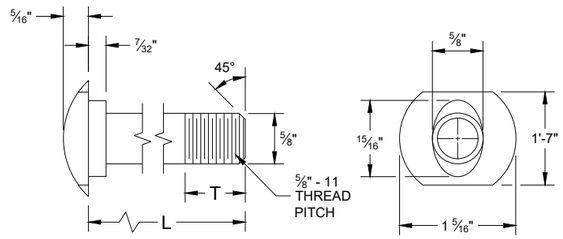


DETAIL FOR 16" BLOCKOUT DEPTH

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.

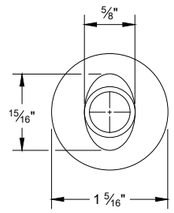
NOTE:

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.

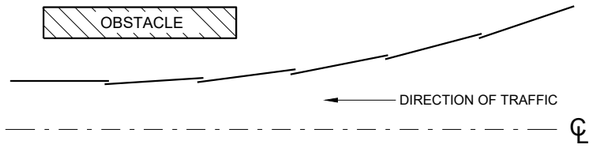


POST BOLT TABLE

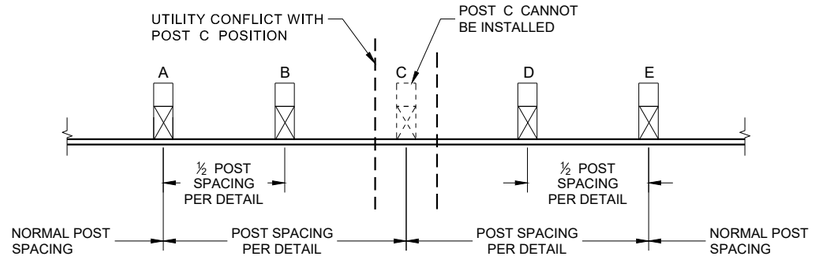
L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1⁄16"
18"	4"
21"	4 1⁄16"
25"	4"



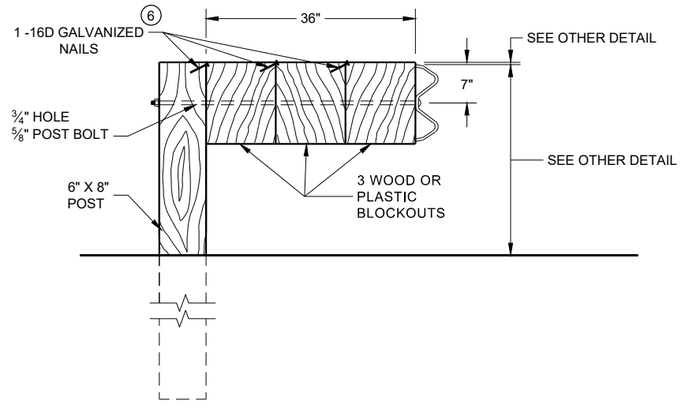
ALTERNATE BOLT HEAD



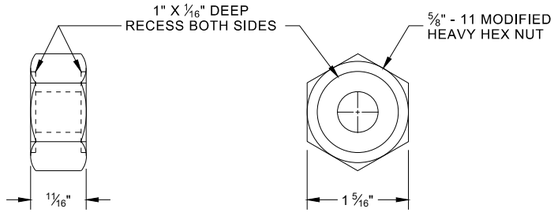
PLAN VIEW
BEAM LAPPING DETAIL



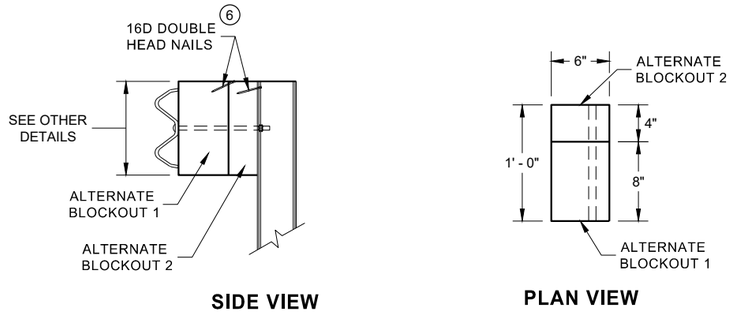
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



DETAIL FOR 36" BLOCKOUT DEPTH



POST BOLT, SPLICE BOLT AND RECESS NUT



SIDE VIEW

PLAN VIEW

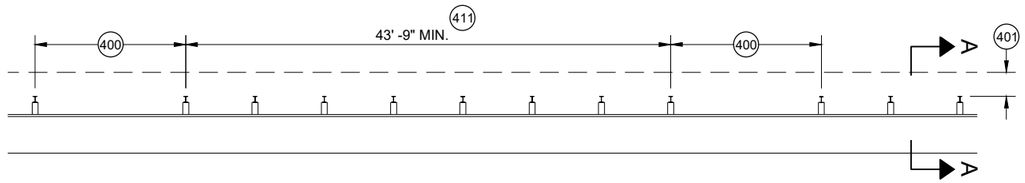
ALTERNATE WOOD BLOCKOUT DETAIL

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.

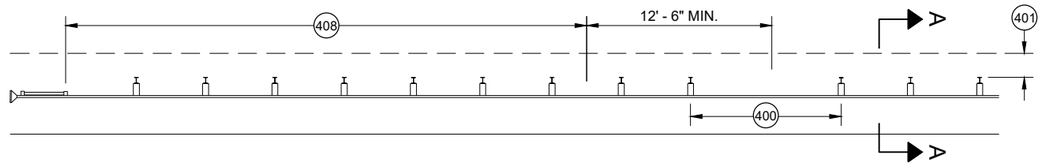
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

(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.

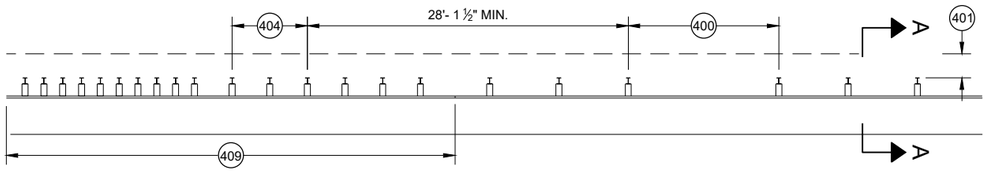
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL



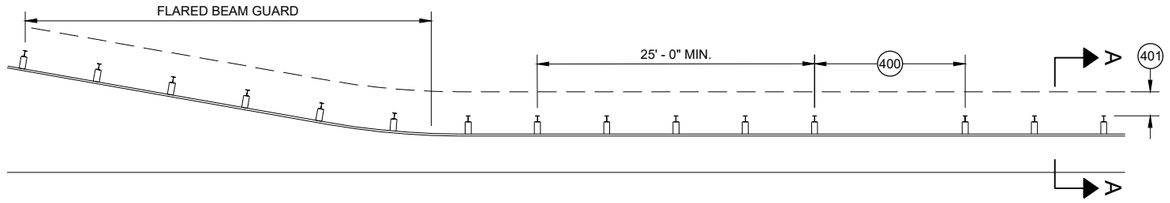
MISSING POST IN MGS GUARDRAIL



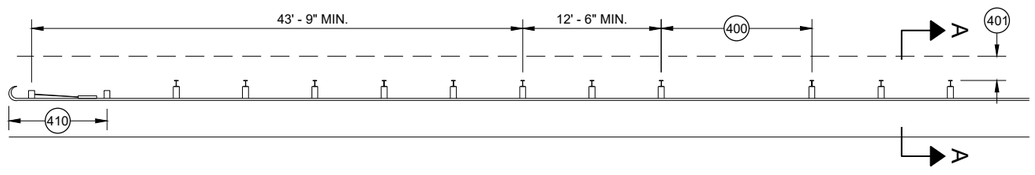
MISSING POST IN MGS GUARDRAIL NEAR EAT



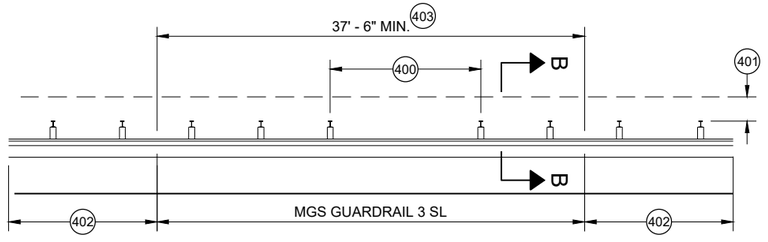
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

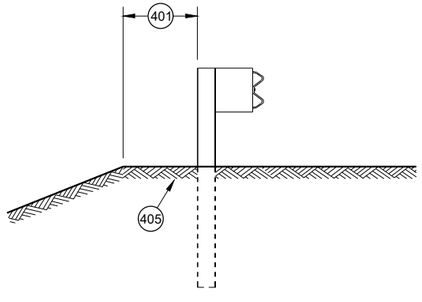


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

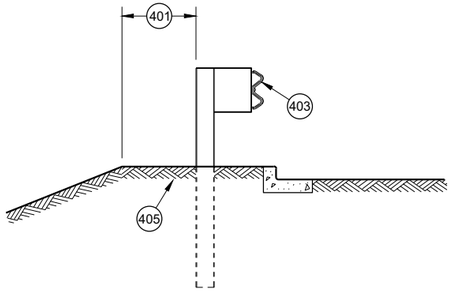


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL) 407

(400) MAX SPAN 12' - 6"
(401) 2' MIN.
(402) MGS GUARDRAIL 3
(403) NESTING BEAM GUARD
(404) ASYMMETRIC TRANSITION
(405) SOIL WELL DRAINED AND COMPACTED
(406) SEE OTHER DRAWINGS IN THIS SDD
(407) SEE OTHER DRAWINGS FOR MIN. SPACING BETWEEN SPANS
(408) SEE SDD 14B44
(409) SEE SDD 14B45
(410) SEE SDD 14B47
(411) MINIMUM DISTANCE BETWEEN MISSING POST SPANS.



SECTION A - A 406



SECTION B - B 406

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2021
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVE
UNIT SUPERVISOR

FHWA

6

SDD 14B42 - 07d

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.

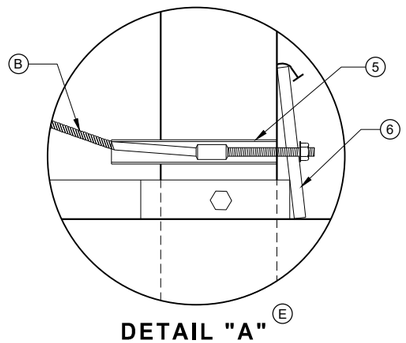
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

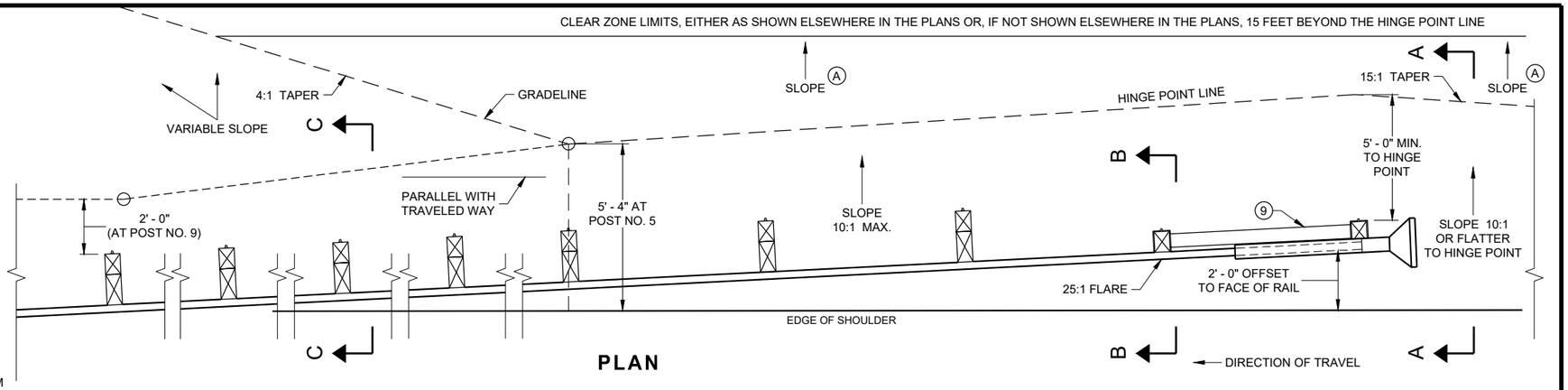
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

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

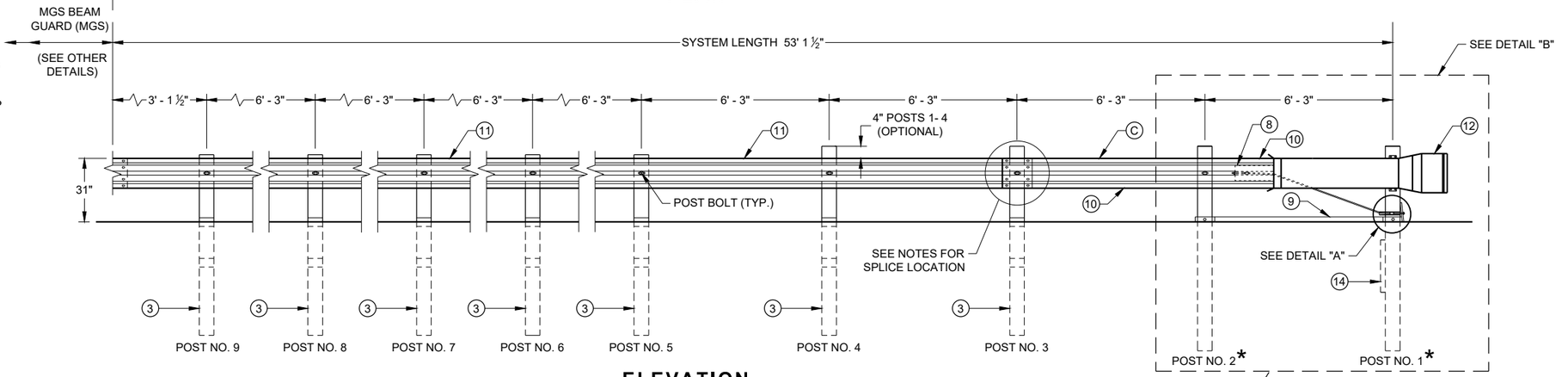
THE CENTER OF THE UPPER 3 ½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.



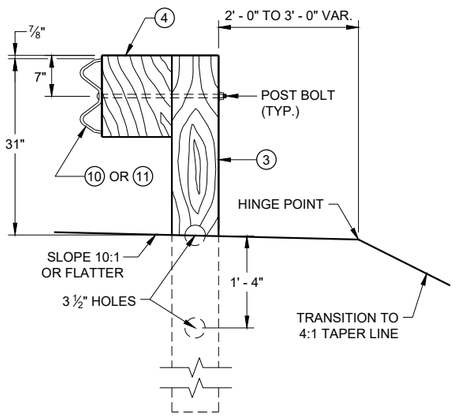
DETAIL "A" (E)



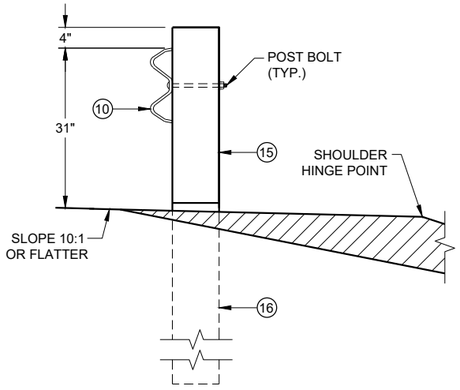
PLAN



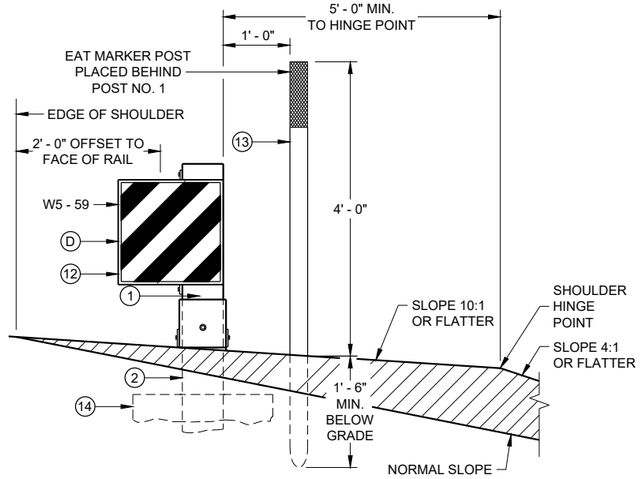
ELEVATION



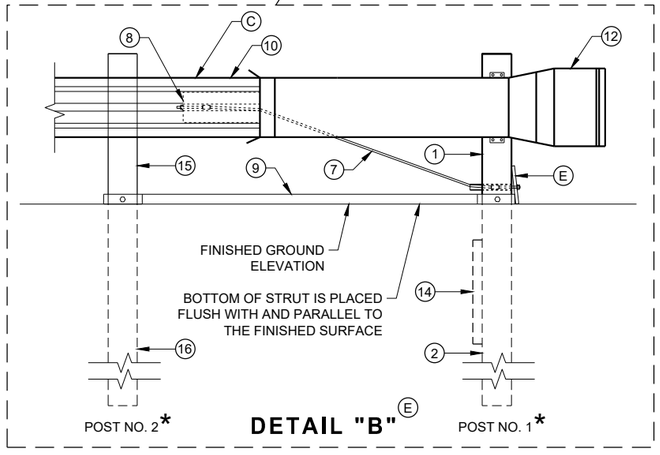
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2*



SECTION A - A
TYPICAL AT POST NO. 1*



DETAIL "B" (E)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a

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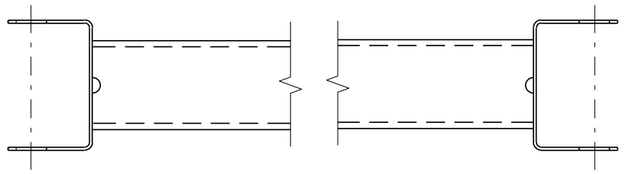
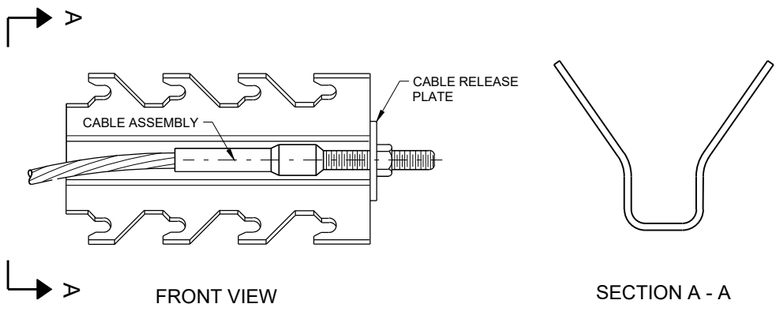


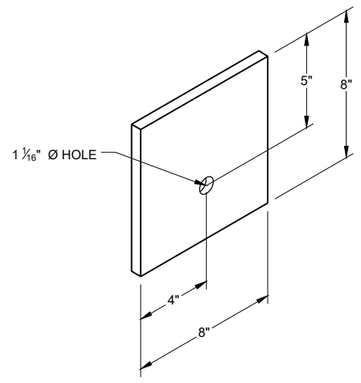
GENERIC GROUND STRUT (9) (E)

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

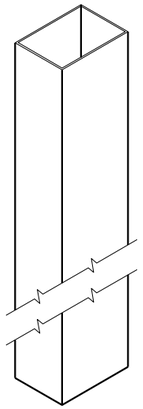
6

SDD 14B44 - 04b

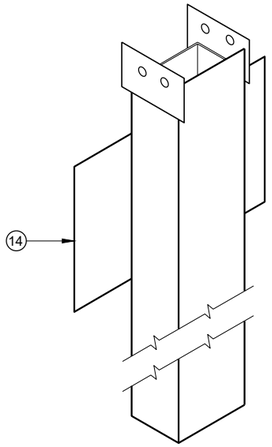
SDD 14B44 - 04b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

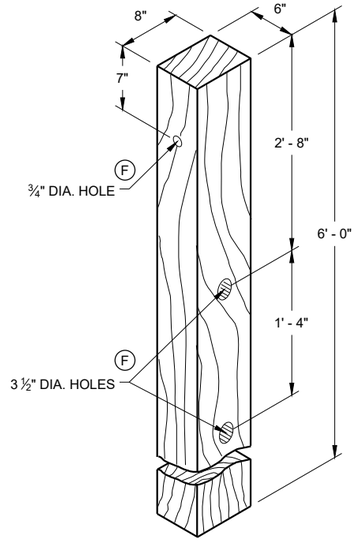
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



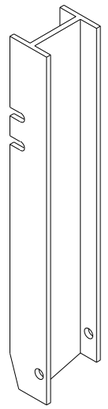
UPPER POST NO. 1 (1) (E)



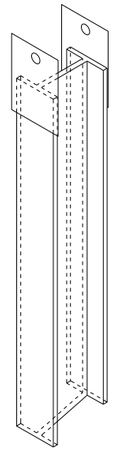
LOWER POST NO. 1 (2) (E)



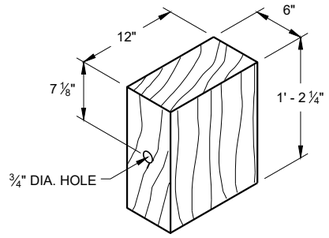
WOOD CRT POST (3) (E)
POSTS NUMBER 3-9



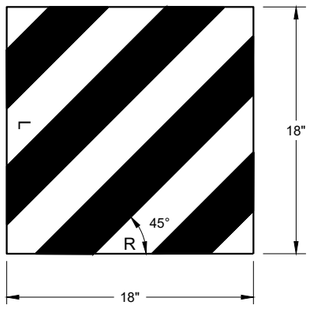
UPPER POST NO. 2 (15) (E)



LOWER POST NO. 2 (16) (E)

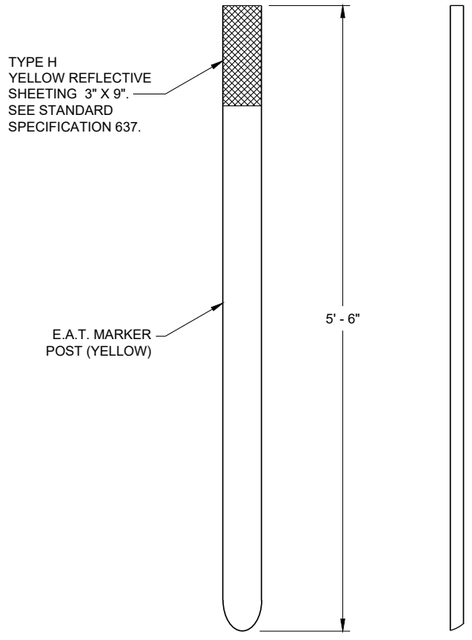


WOOD BLOCKOUT (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



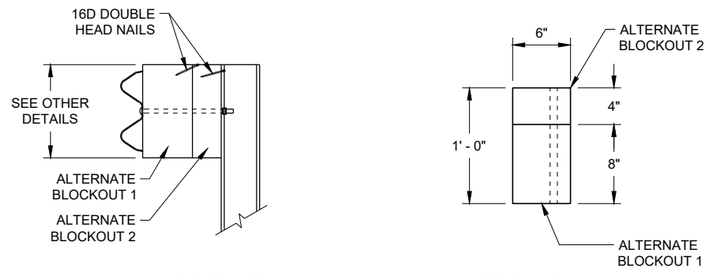
W5 - 59

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)

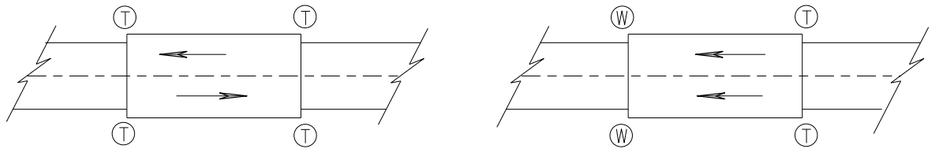
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

6

SDD 14B44 - 04c
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.

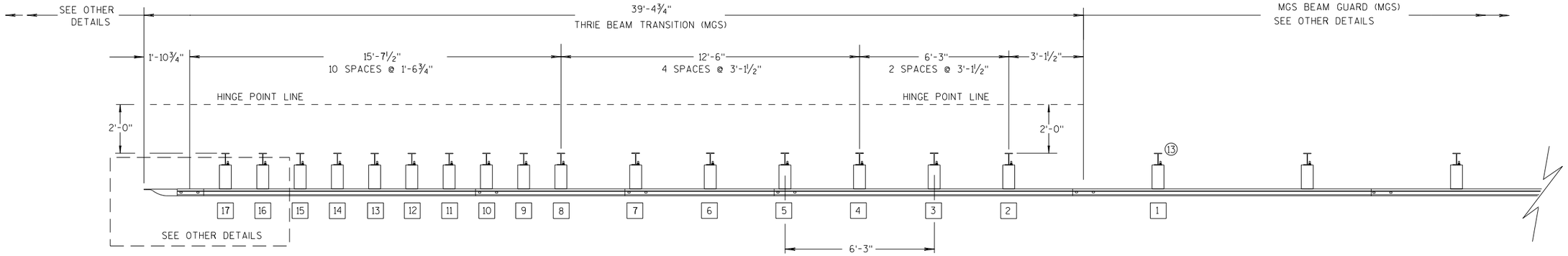
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

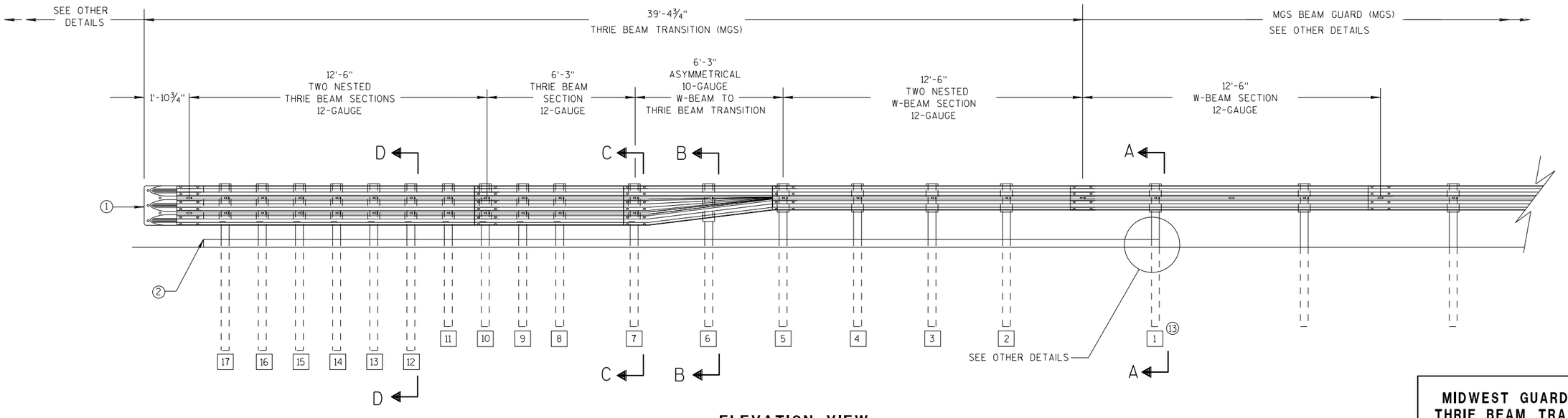
(1) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

(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

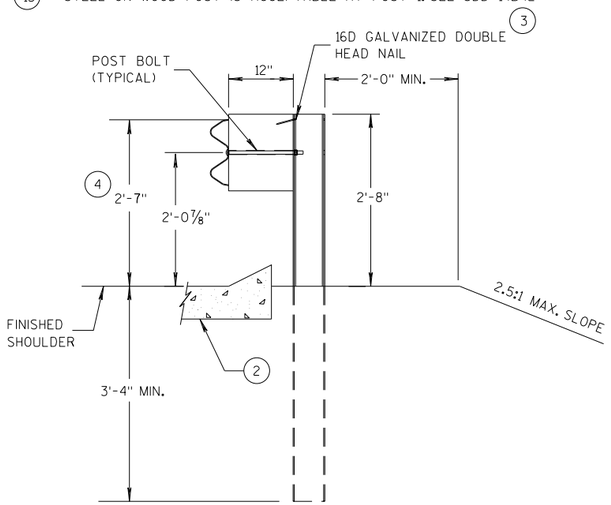
GENERAL NOTES

(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.

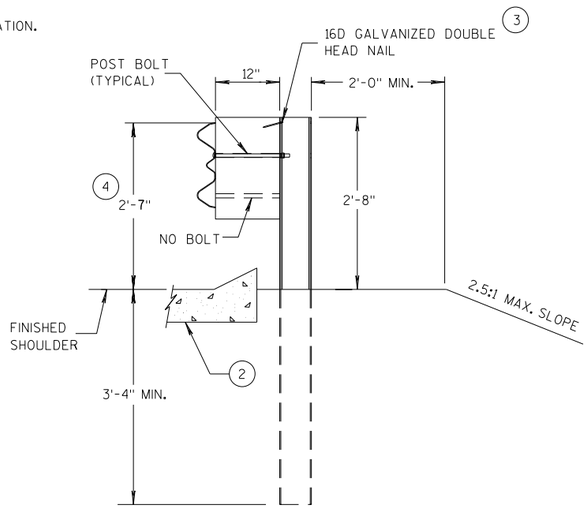
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

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



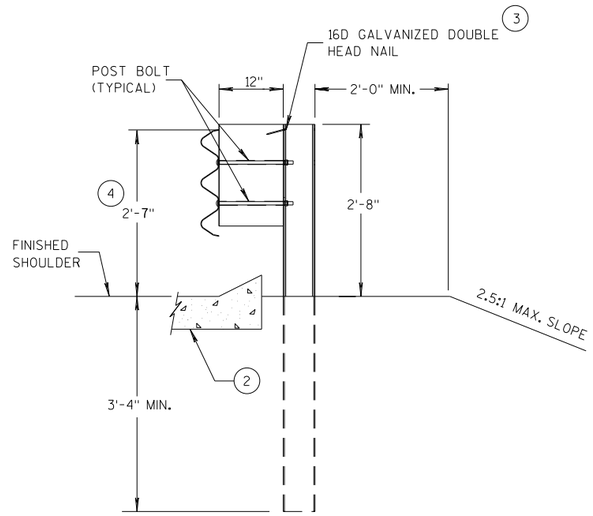
SECTION A-A (13)

POSTS 1-5



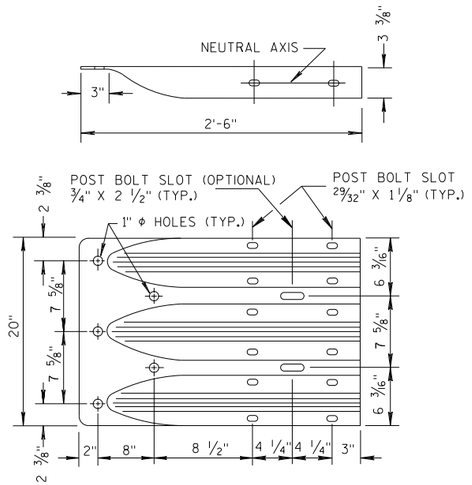
SECTION B-B

POST 6

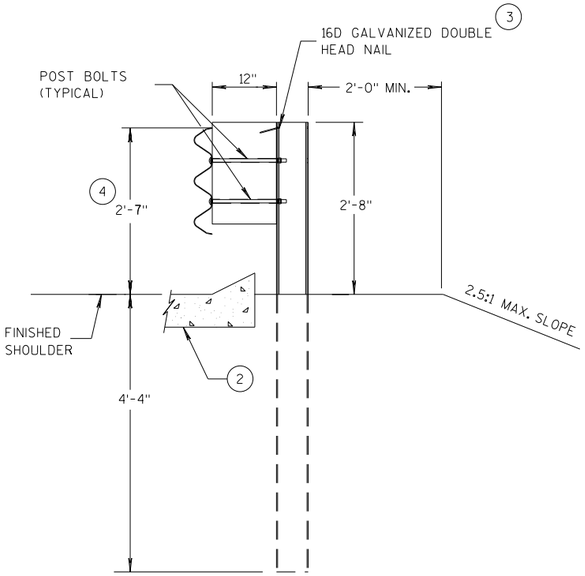


SECTION C-C

POSTS 7-11

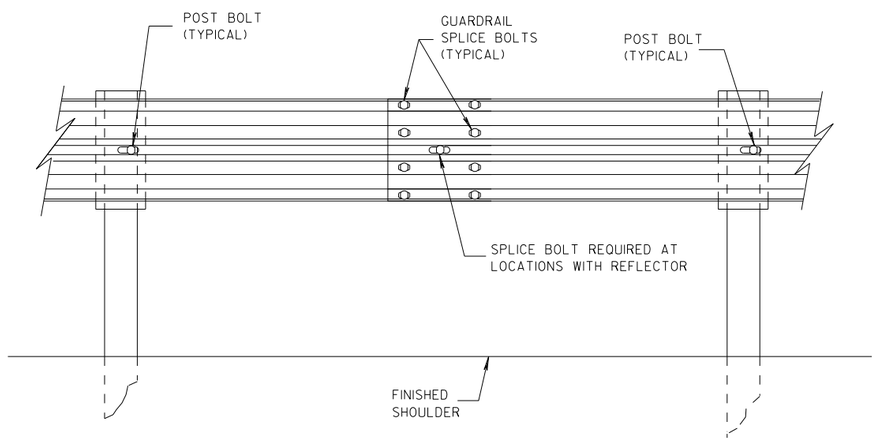


THRIE BEAM TERMINAL CONNECTOR



SECTION D-D

POSTS 12-17



SPLICE DETAIL

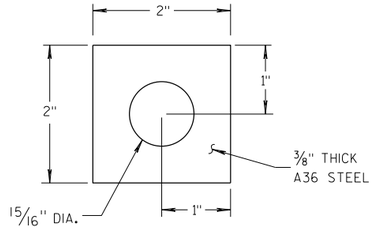
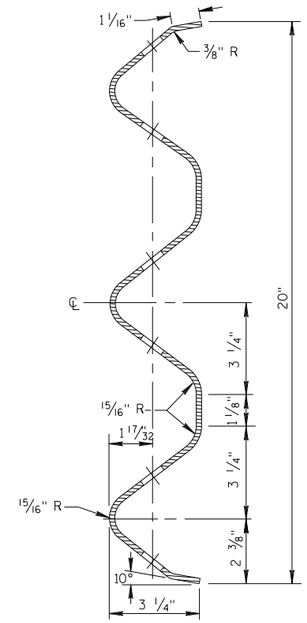


PLATE WASHER DETAIL



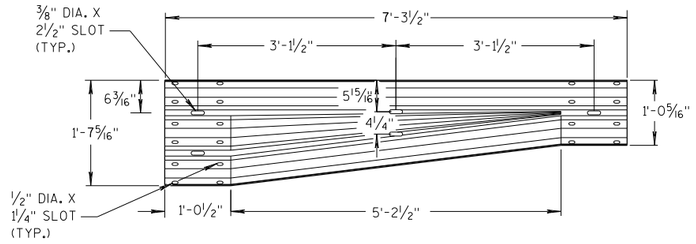
SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

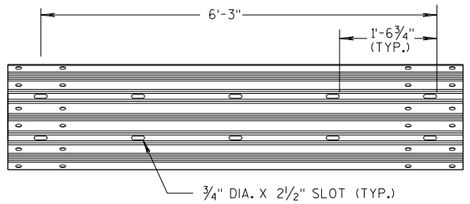
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOF

6

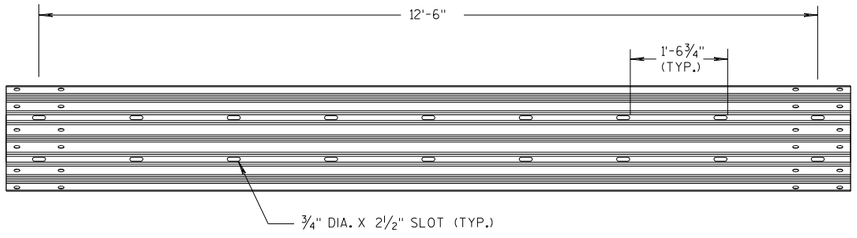
S.D.D. 14 B 45-5b



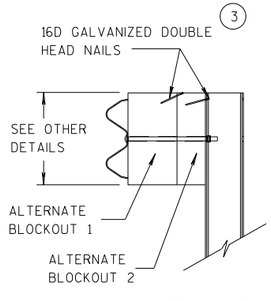
W-BEAM TO THRIE BEAM TRANSITION SECTION



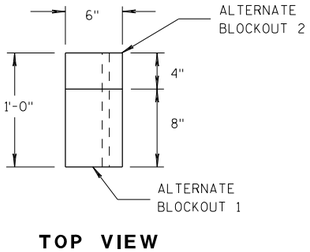
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

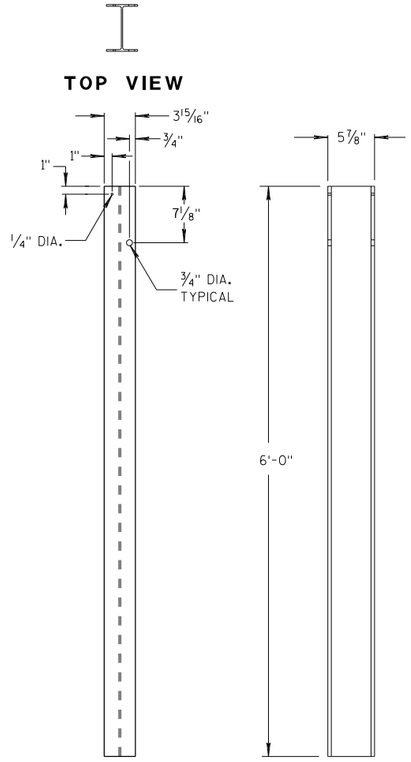


SIDE VIEW



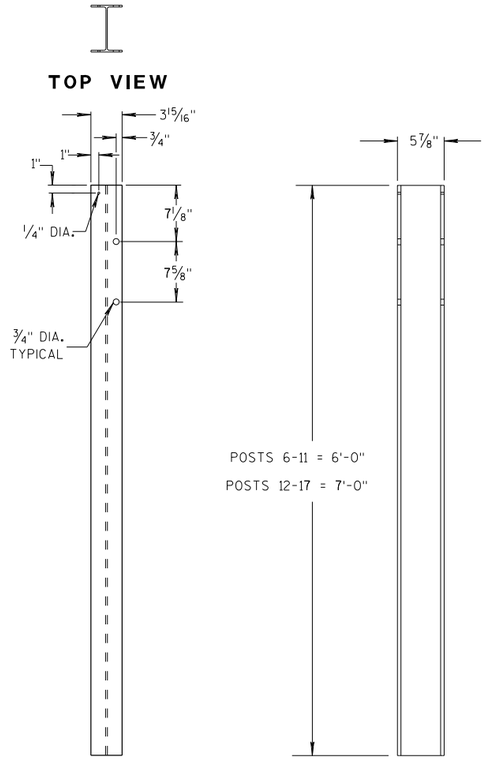
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



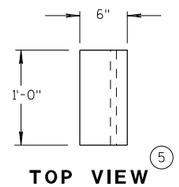
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5 (13)

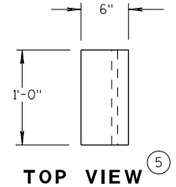


FRONT VIEW SIDE VIEW

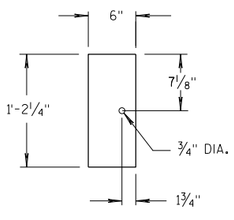
STEEL POSTS 6-17



TOP VIEW (5)

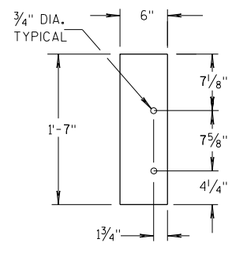


TOP VIEW (5)



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.

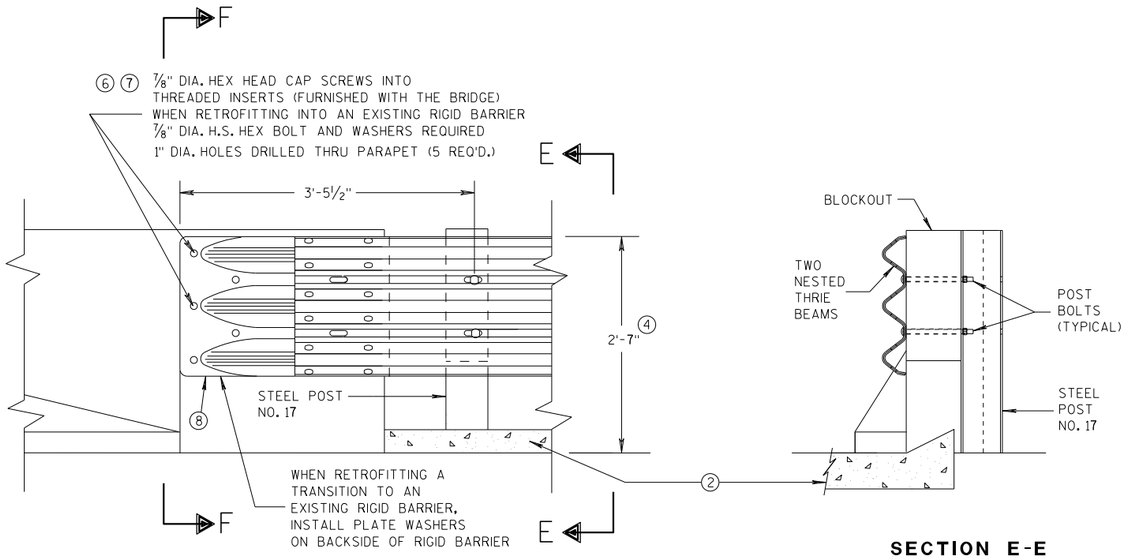
(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOF

6

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



FRONT VIEW

SECTION E-E

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

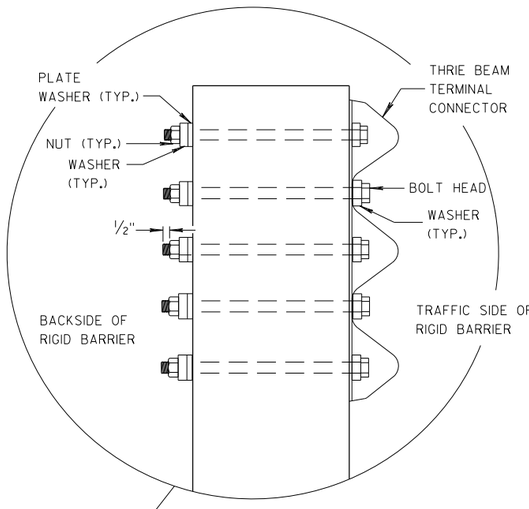
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

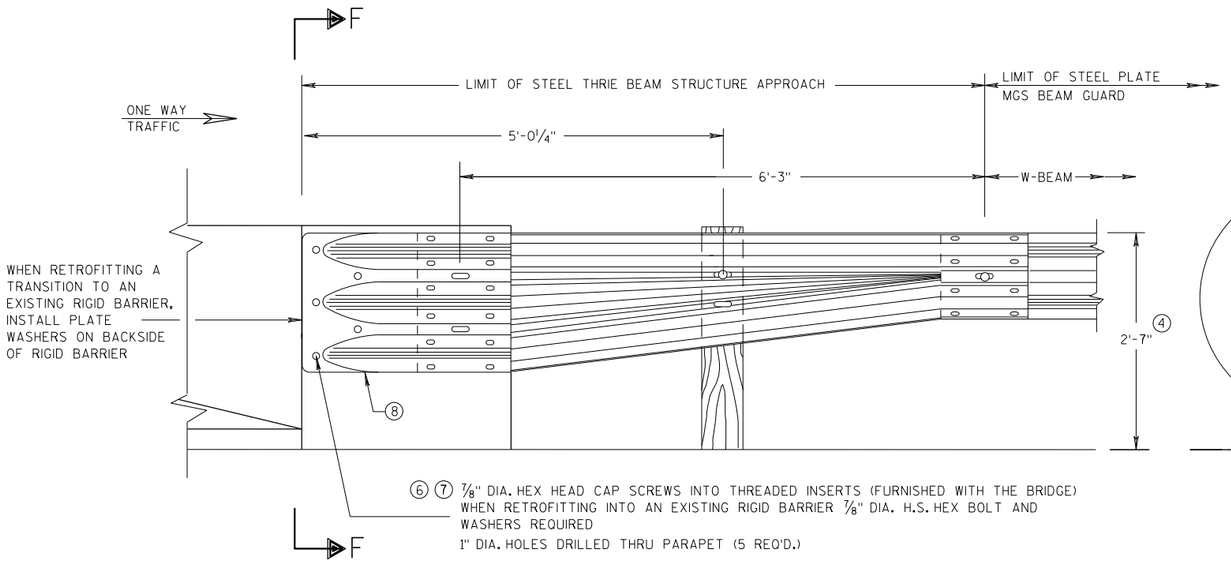
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

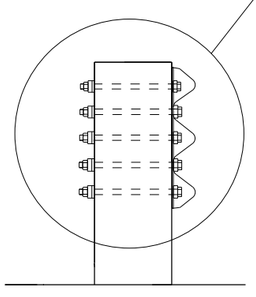
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

⑧ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

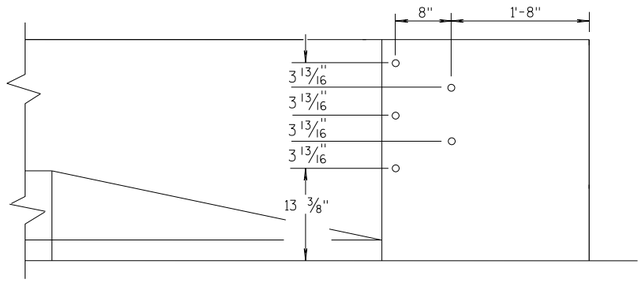




FRONT VIEW



SECTION F-F



DRILL HOLE LOCATION

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
07/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS D[illegible] UNIT SUPERVIS[illegible]
[illegible]NT
FHWA

6

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

6

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

GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

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

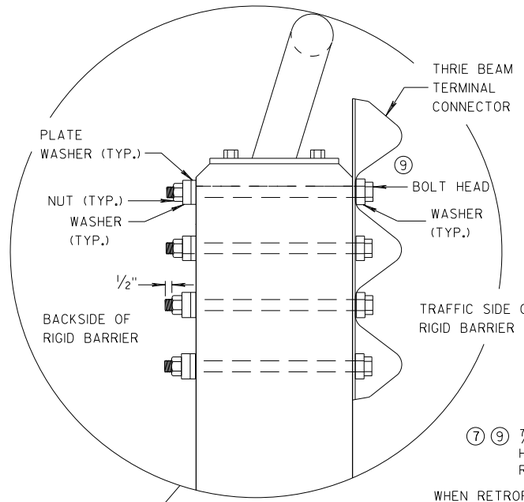
(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

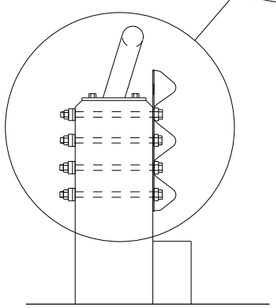
(6) DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(7) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

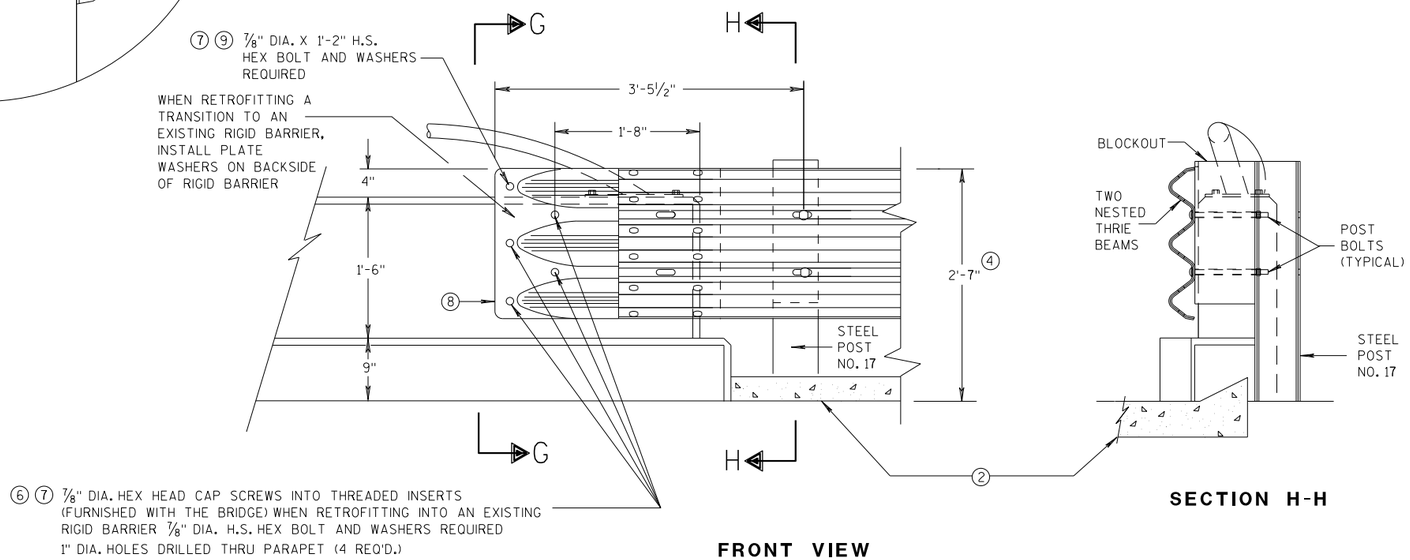
(8) THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 ½".

(9) BOLT, NUT AND WASHERS NOT REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PAPAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE EDGE OF PARAPET.





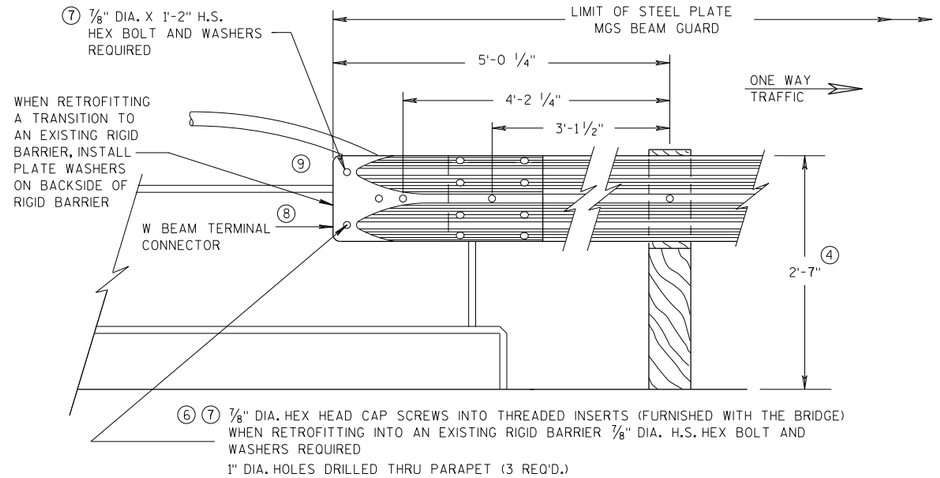
SECTION G-G



FRONT VIEW

SECTION H-H

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS



FRONT VIEW

W BEAM CONNECTION TO VERTICAL FACE PARAPET

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
07/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS D UNIT SUPERVIS — NT
FHWA

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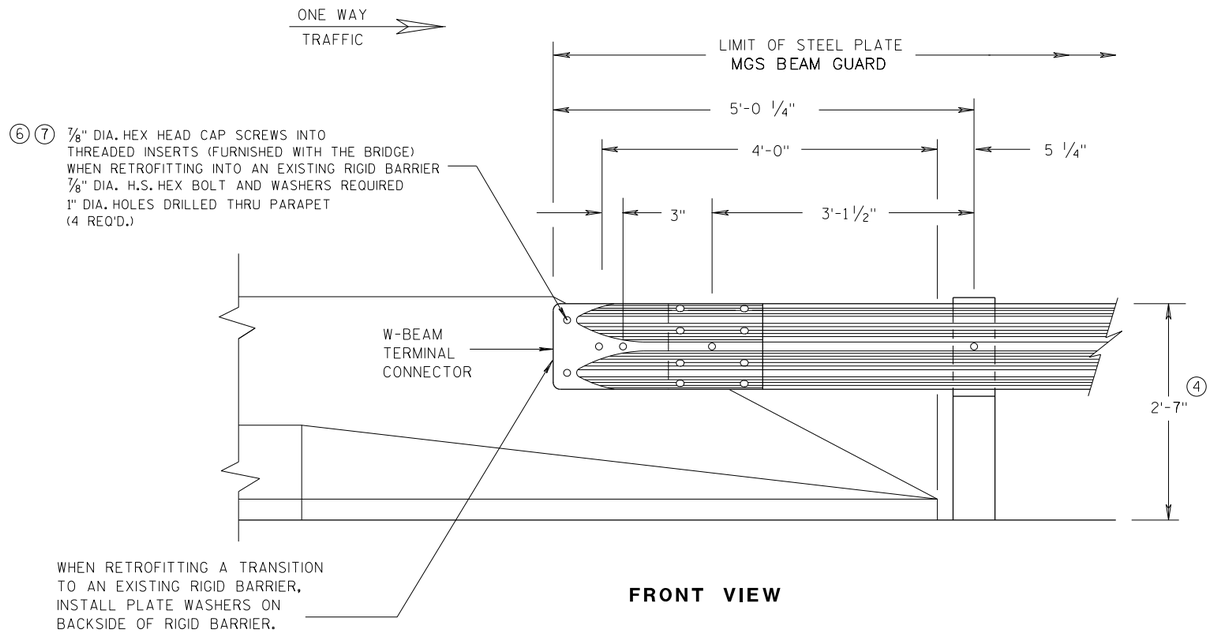
S.D.D. 14 B 45-5e

6

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



FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

(USE ONLY AT TRAFFIC EXIT END OF ONE WAY BRIDGE)

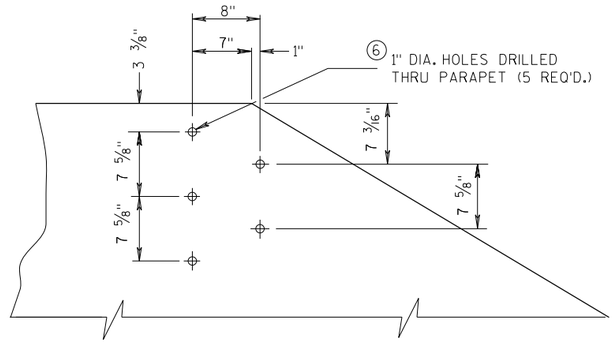
GENERAL NOTES

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

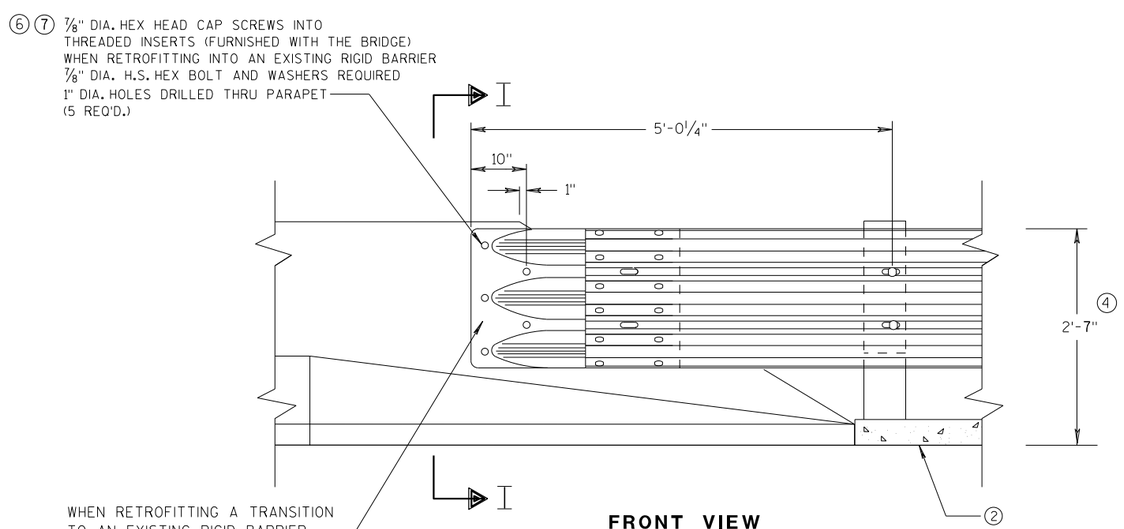
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

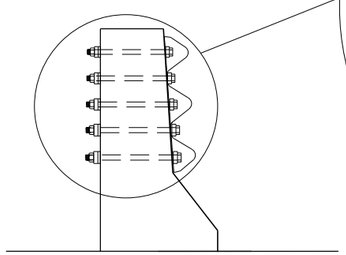
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



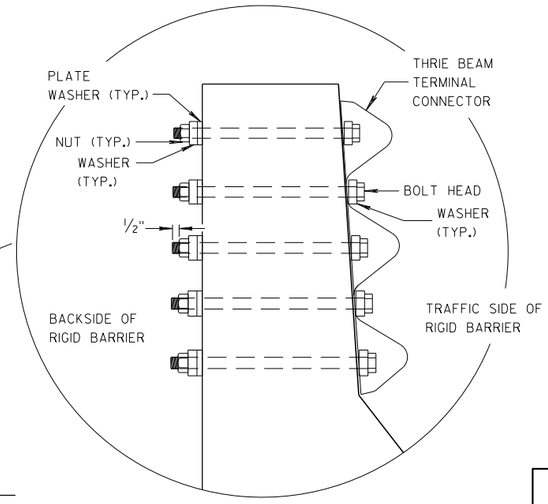
DRILL HOLE LOCATION AND PATTERN
FOR THRIE BEAM CONNECTION



FRONT VIEW



SECTION I-I



THRIE BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
07/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS [illegible] UNIT SUPERVI[illegible]ENT
FHWA

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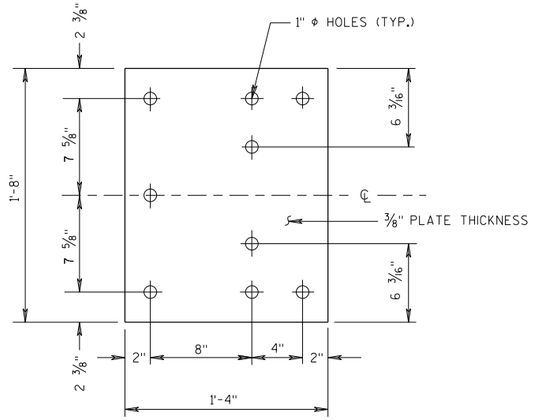
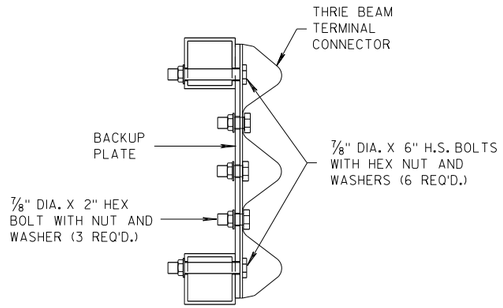
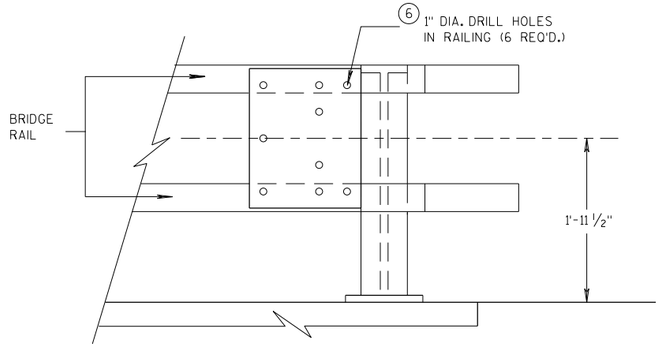


BACK-UP PLATE DETAIL



SECTION J-J

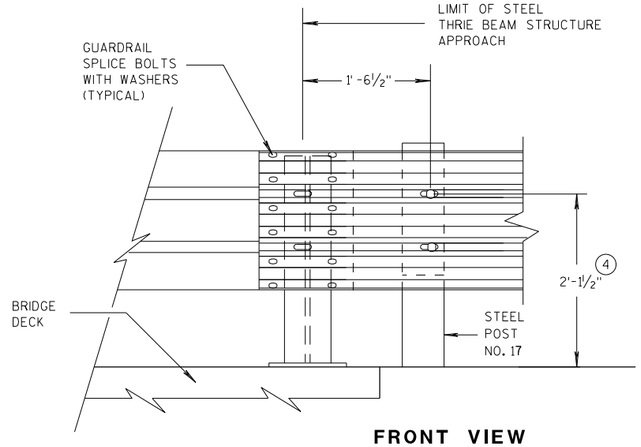


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

GENERAL NOTES

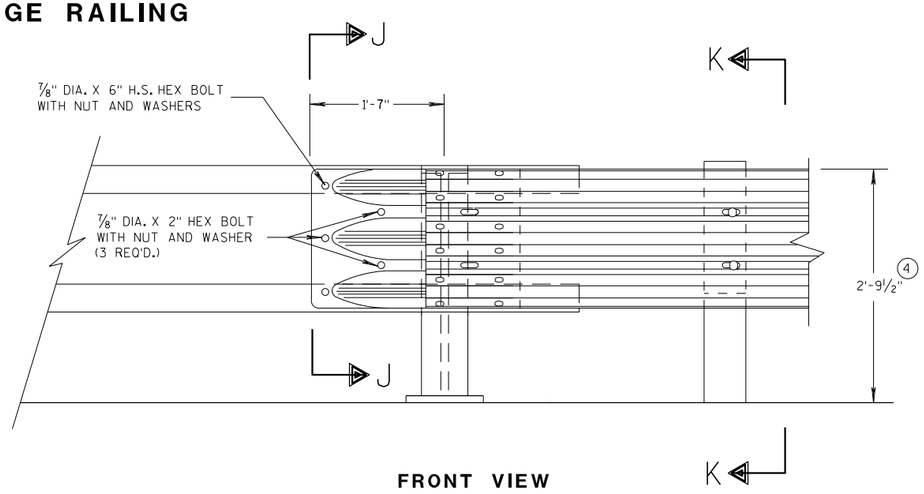
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

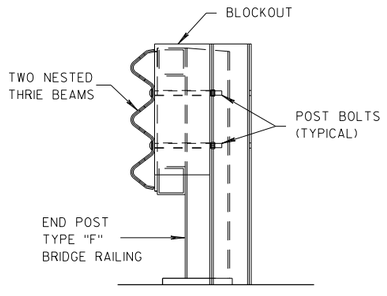


FRONT VIEW

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 89 — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

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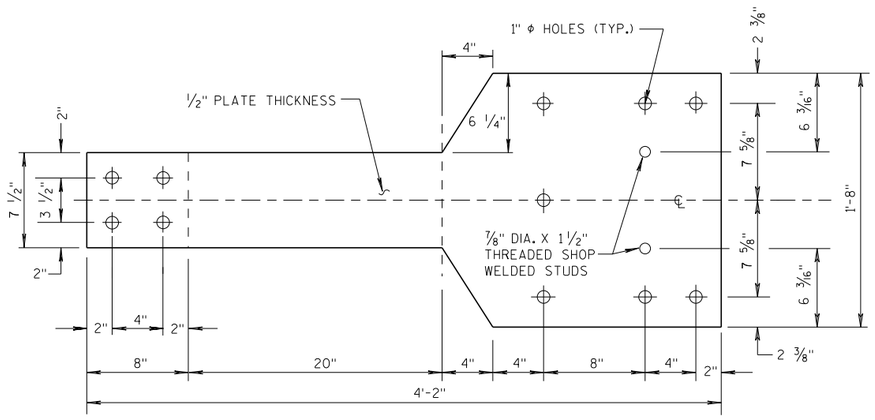
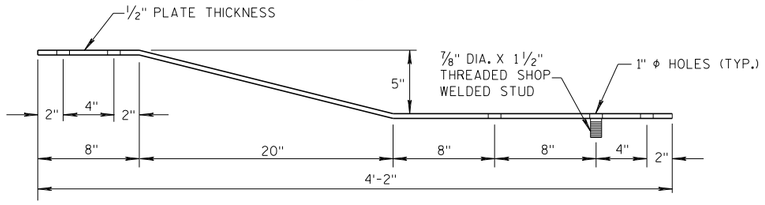
GENERAL NOTES

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

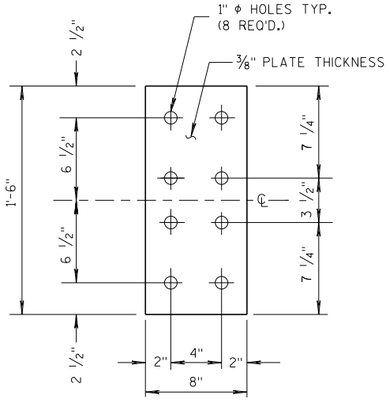


FRONT VIEW



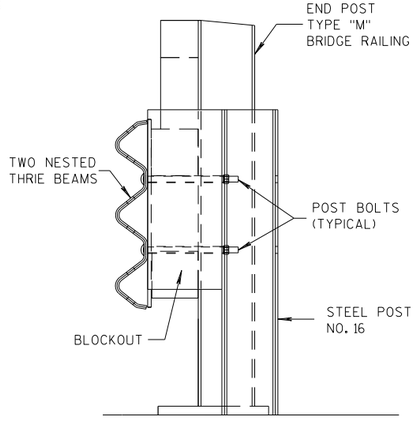
PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

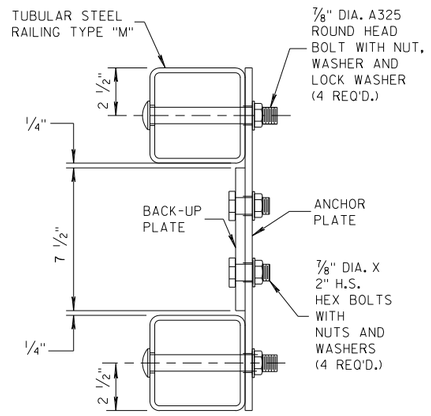


FRONT VIEW

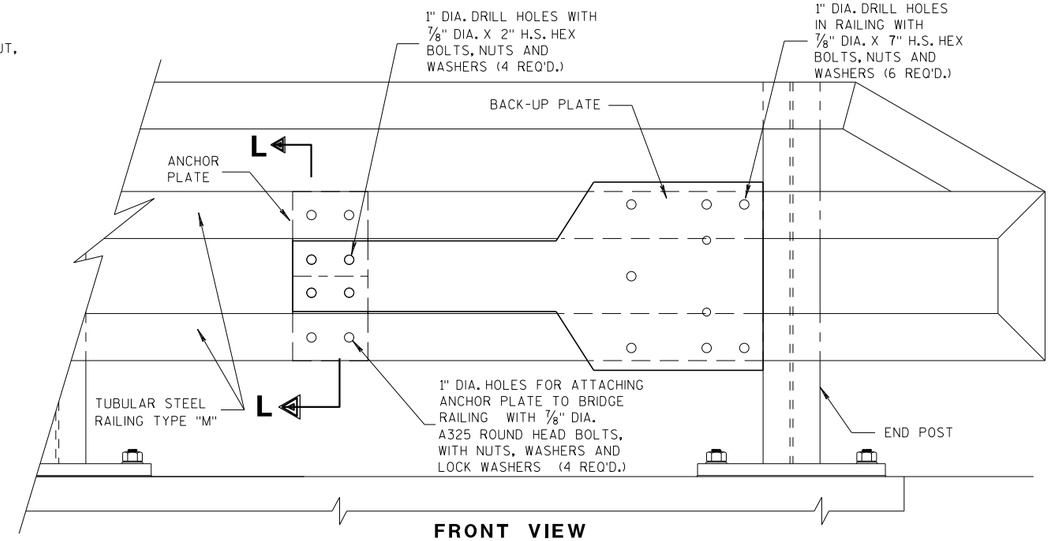
ANCHOR PLATE DETAIL, TYPE "M"



SECTION M-M

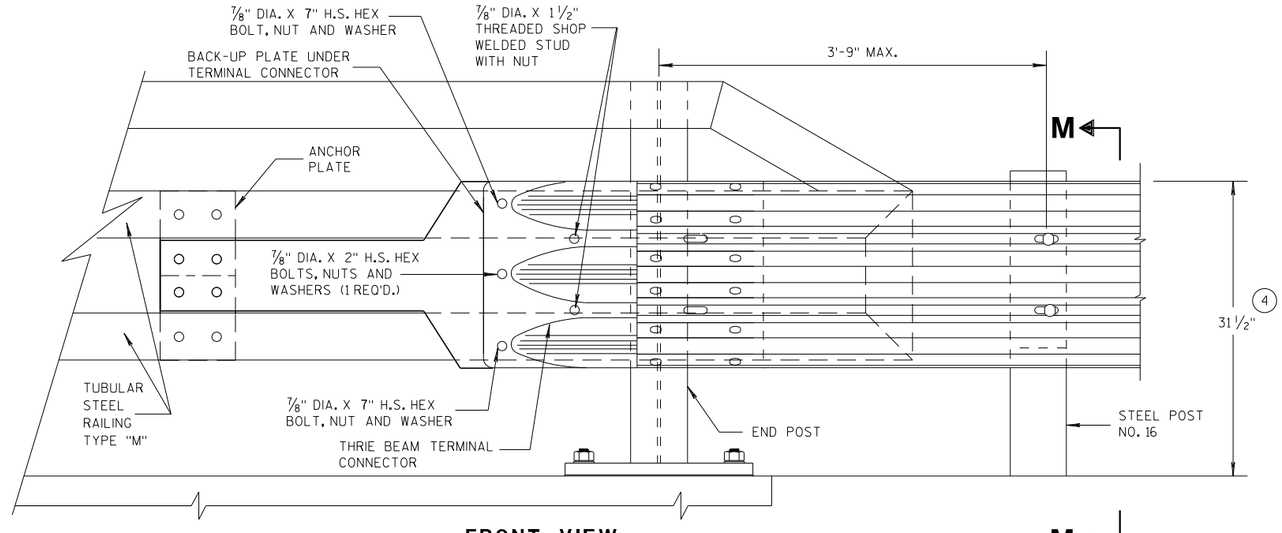


SECTION L-L

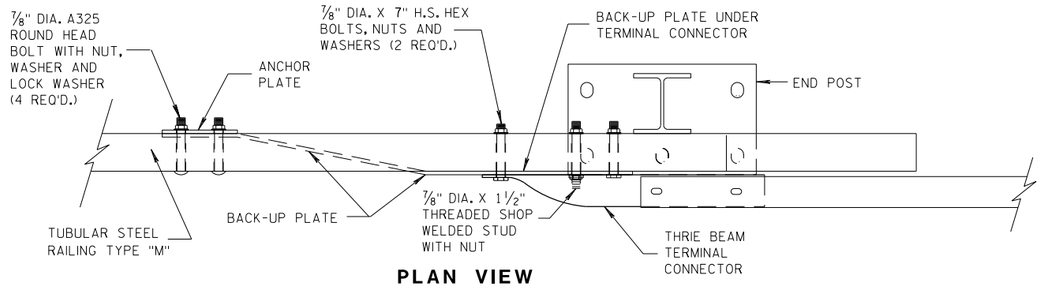


FRONT VIEW

ANCHOR AND BACK-UP PLATE MOUNTING TO BRIDGE RAILING, TYPE "M"



FRONT VIEW



PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
07/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS UNIT SUPERVISOR
FHWA

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

GENERAL NOTES

COVER PLATE PANELS ARE 3/16" THICK.

ALL STIFFENERS ARE 1/4" THICK.

CONNECTOR PLATE SHALL BE FABRICATED FROM ASTM GRADE A36 STEEL AND GALVANIZED.

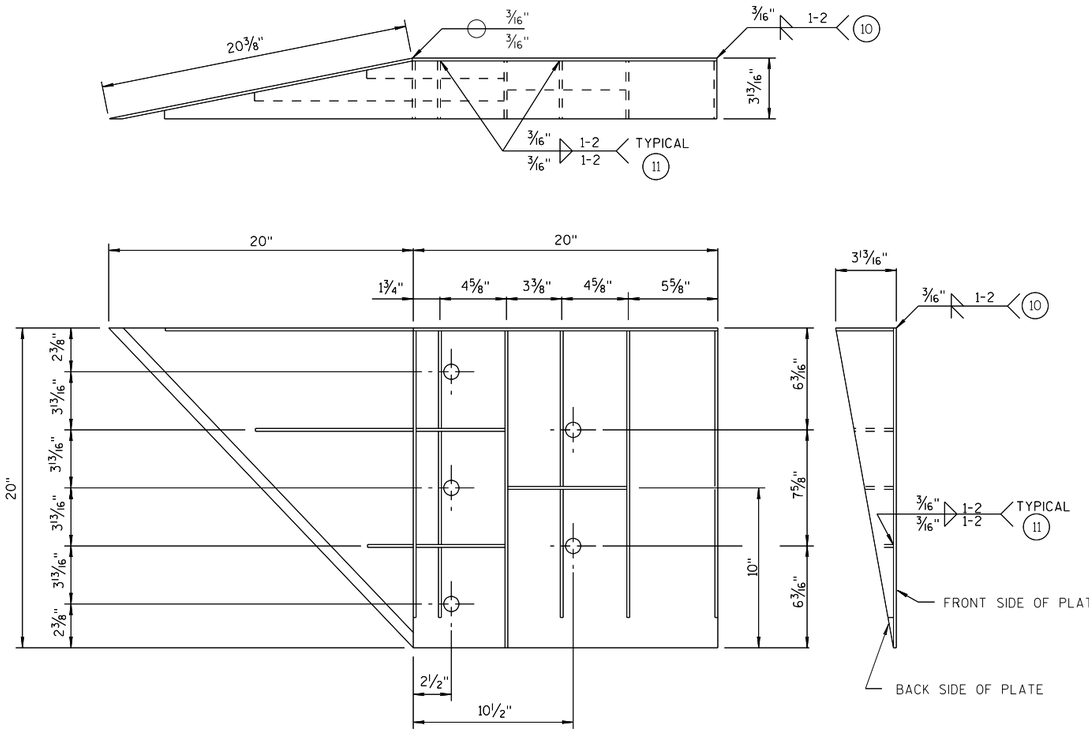
FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.

ALL HOLE DIAMETERS SHALL BE 1".

FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

(10) STIFFENERS LOCATED AT THE OUTSIDE EDGES OF THE COVER PLATES SHALL BE WELDED AS FOLLOWS:
SINGLE BEVEL GROOVE WELD ON EXTERNAL SIDES AND 3/16" FILLET WELD BY 1" LONG SPACED AT 2" ON INTERNAL SIDES.

(11) STIFFENERS LOCATED ON THE INSIDE OF THE COVER PLATE SHALL BE WELDED AS FOLLOWS:
3/16" FILLET WELD BY 1" LONG SPACED AT 2".



WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

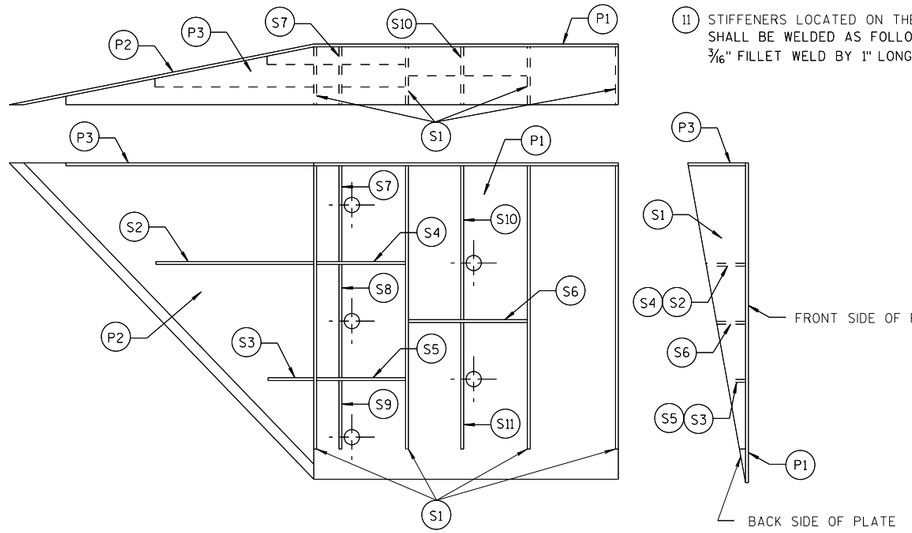


PLATE AND STIFFENER IDENTIFICATION

(VIEWED FROM BACK SIDE OF PLATE)

CONNECTOR PLATE DIMENSION (PER ASSEMBLY)

PLATE	QUANTITY	SHAPE	SIZE (A x B x C x D)	THICKNESS
P1	1		20" x 20"	3/16"
P2	1		20" x 20" x 28 9/16"	3/16"
P3	1		39" x 3 5/8" x 20" x 19 5/16"	3/16"
S1	4		18 7/16" x 3 5/8" x 18 3/4"	1/4"
S2	1		10 1/4" x 2 7/16" x 10 3/8" x 1/2"	1/4"
S3	1		3" x 1 1/16" x 3 1/8" x 1/2"	1/4"
S4	1		6 1/8" x 2 7/16"	1/4"
S5	1		6 1/8" x 1 1/16"	1/4"
S6	1		7 3/4" x 1 3/4"	1/4"
S7	1		2 9/16" x 6" x 3 5/8" x 5 7/8"	1/4"
S8	1		1 5/32" x 7 1/2" x 2 1/2" x 7 3/8"	1/4"
S9	1		6 1/16" x 6 3/16" x 1 3/32"	1/4"
S10	1		1 7/8" x 9 7/8" x 3 5/8" x 9 11/16"	1/4"
S11	1		8 1/2" x 8 3/4" x 1 13/16"	1/4"

SINGLE SLOPE CONNECTION PLATE

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018
DATE
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR

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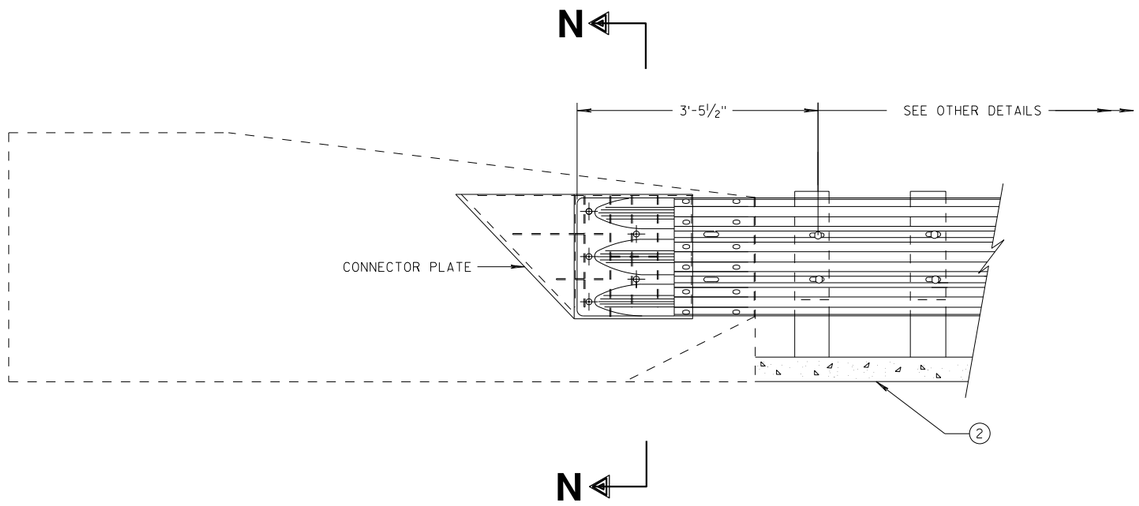
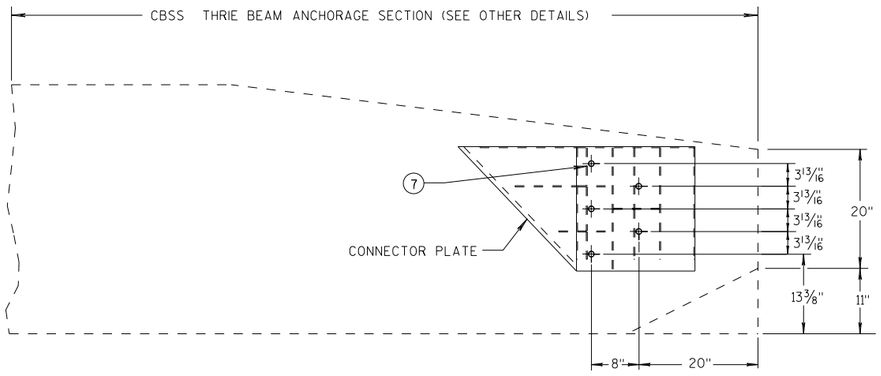
S.D.D. 14 B 45-5i



THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER



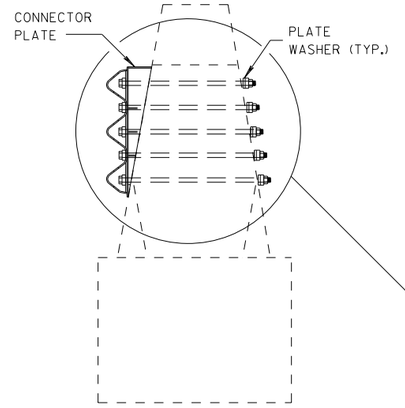
SINGLE SLOPE CONNECTION PLATE PLACEMENT

GENERAL NOTES

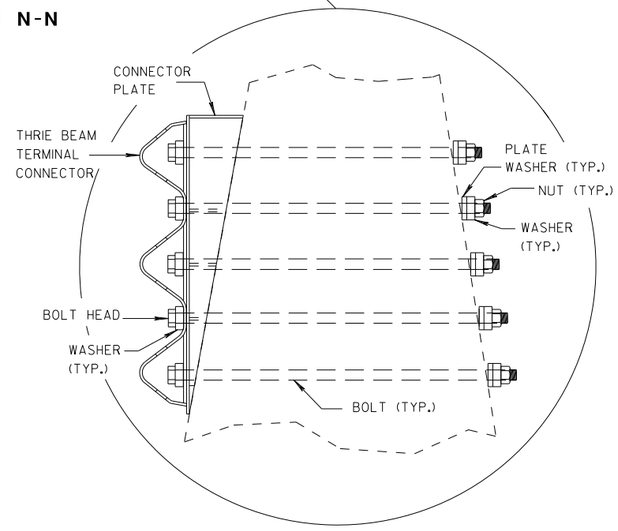
CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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

(7) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



SECTION N-N



MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DI
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FHWA

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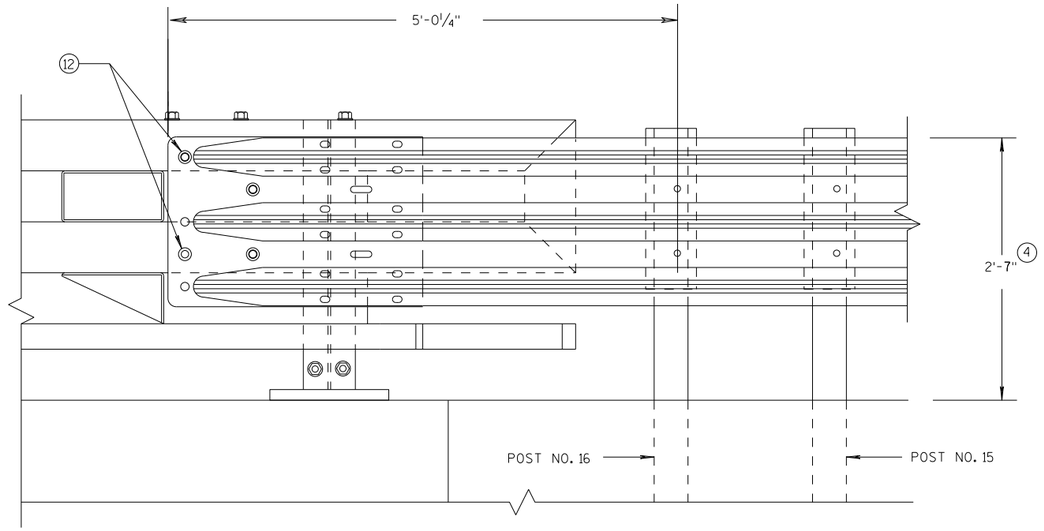
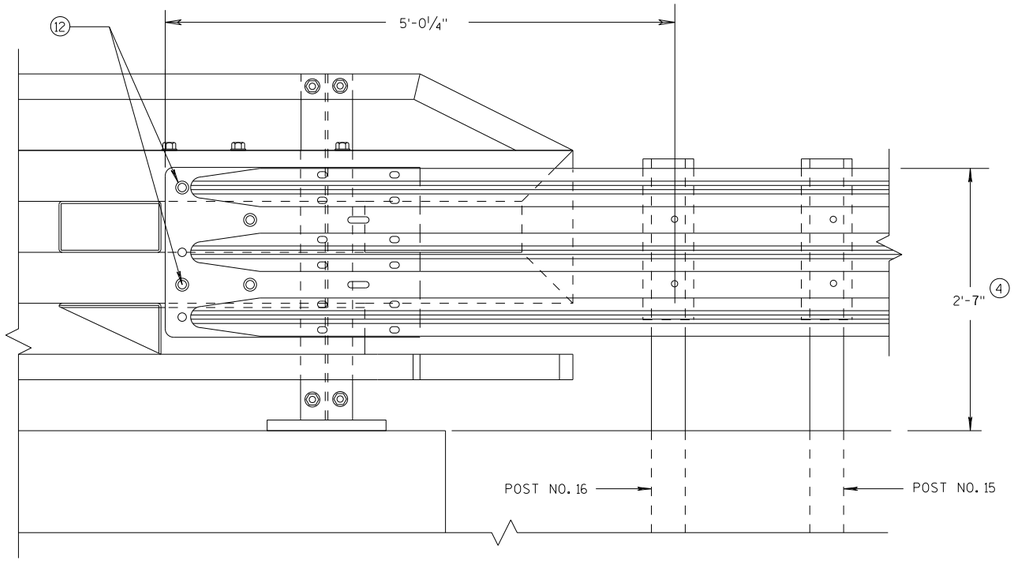
S.D.D. 14 B 45-5j



ELEVATION OF DETAIL AT NY3 END POST

THRIE BEAM RAIL ATTACHMENT



ELEVATION OF DETAIL AT NY4 END POST

THRIE BEAM RAIL ATTACHMENT

GENERAL NOTES

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

(12) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND 1/2-INCH BEYOND NUT.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018
DATE
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS D
UNIT SUPERVIS

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

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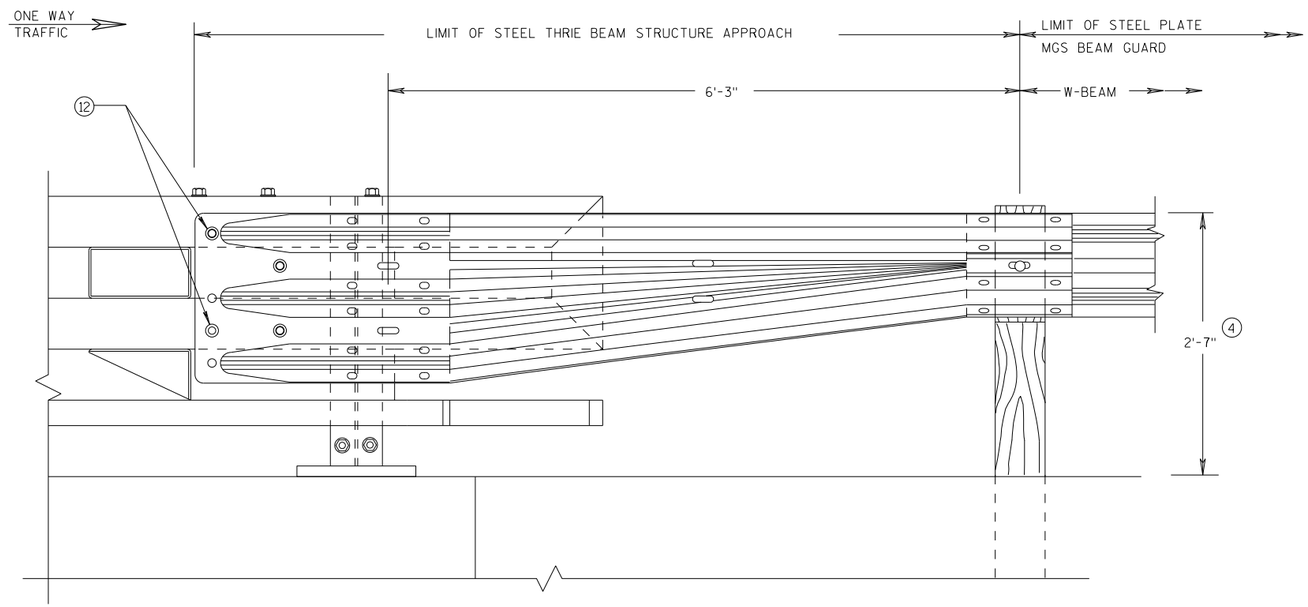
S.D.D. 14 B 45-5k



FRONT VIEW

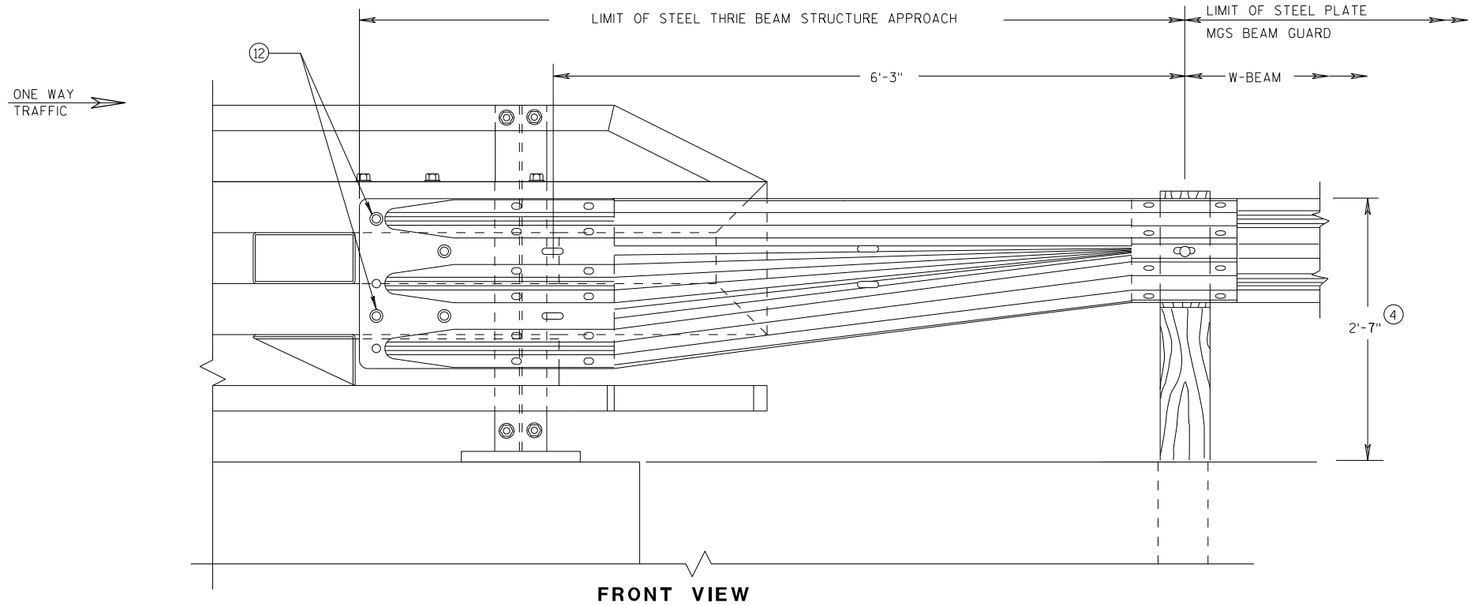
W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY3"

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

GENERAL NOTES

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

(12) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND 1/2-INCH BEYOND NUT.



FRONT VIEW

W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY4"

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018 DATE
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS D
UNIT SUPERVIS

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

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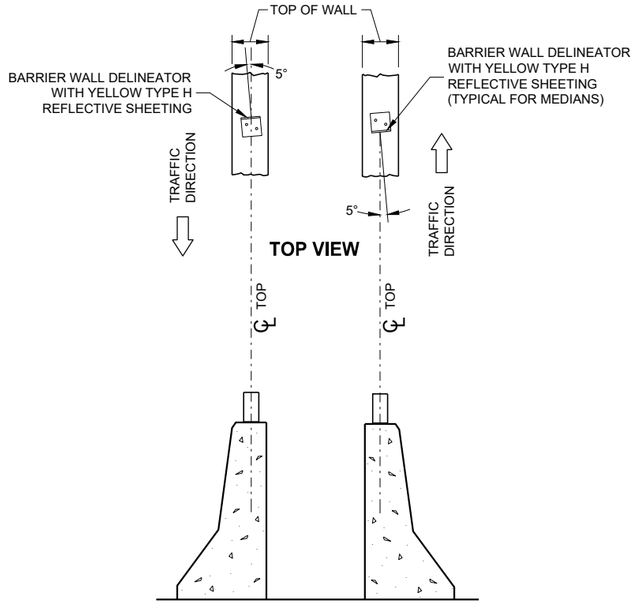
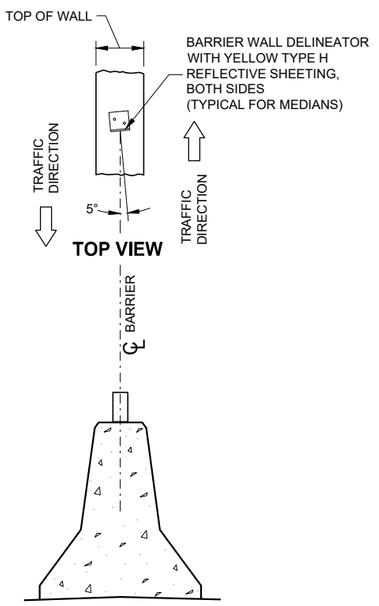
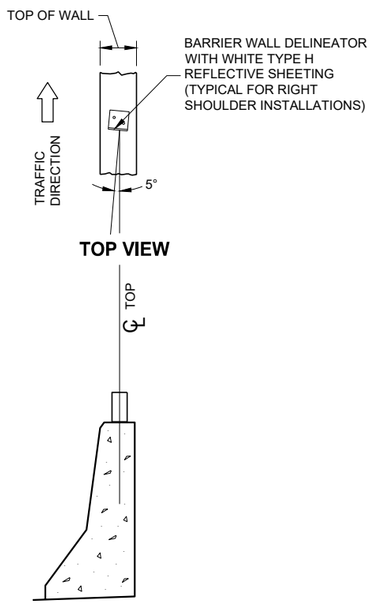
S.D.D. 14 B 45-5L



SIDE VIEW
DOUBLE BARRIERS IN MEDIAN



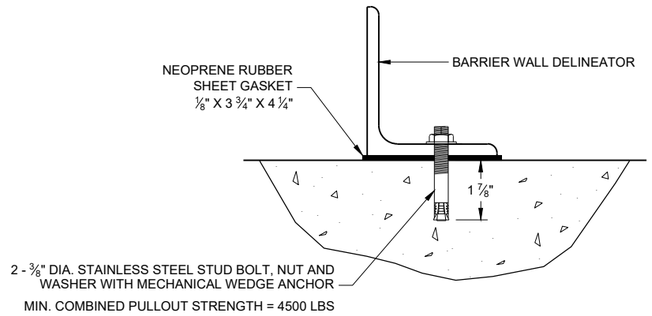
SIDE VIEW
MEDIAN BARRIER



SIDE VIEW
TO RIGHT OF TRAFFIC FLOW

BARRIER WALL DELINEATOR

LOCATION AND AIMING DETAILS FOR BARRIER WALL DELINEATOR MOUNTED ON CONCRETE BARRIERS



BARRIER WALL DELINEATOR MOUNTING DETAIL

REFLECTOR SPACING TABLE

REFLECTOR SPACING	MINIMUM NUMBER OF REFLECTORS
100' C-C	3

BARRIER WALL DELINEATOR WITH REFLECTIVE SHEETING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2021 — DATE
/S/ Matthew Rauch — STATE SIGNING AND MAF ENGINEER
FHWA

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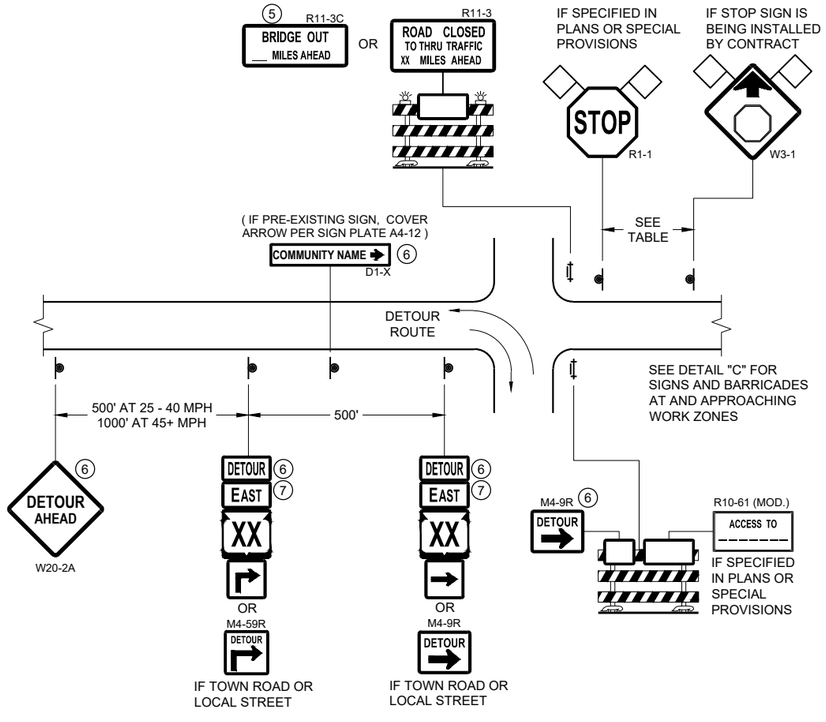
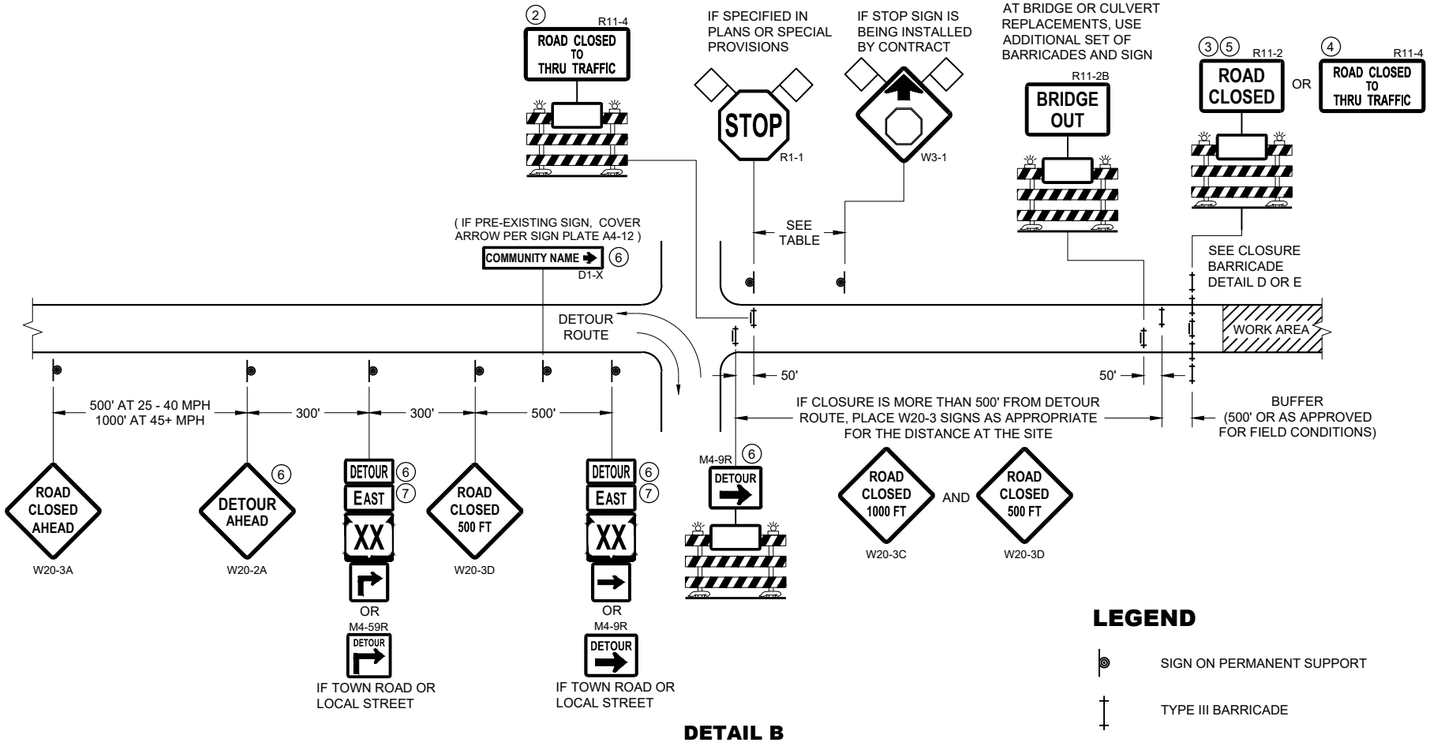
SDD 15A04 - 07b



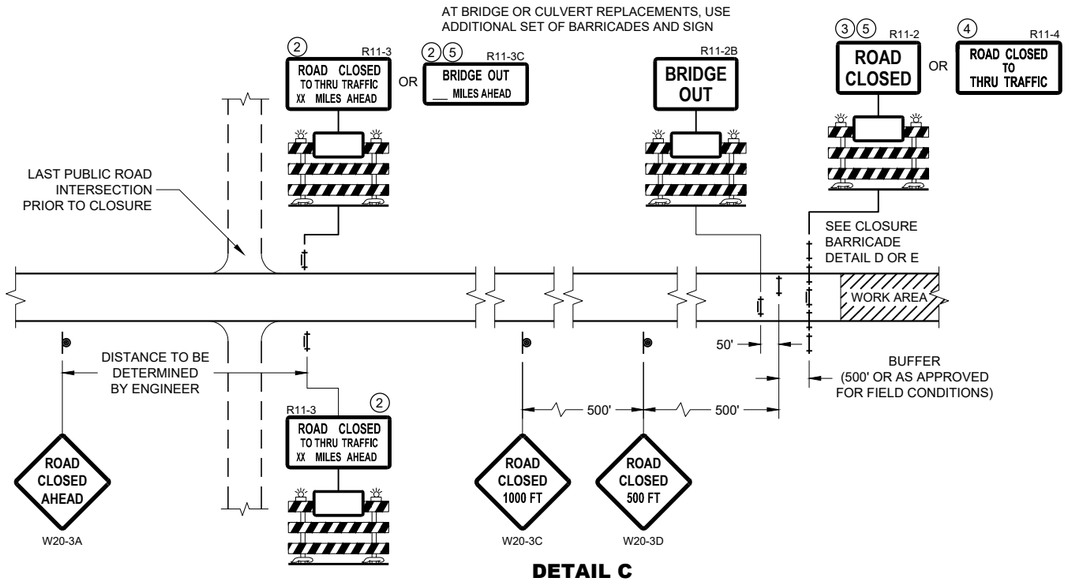
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN OR EQUAL TO ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

SEE SDD 15C2-SHEET "b"
FOR GENERAL NOTES
AND FOOTNOTES ① THROUGH ⑦

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- FLAGS, 16" X 16" MIN. (ORANGE)
- DETOUR — M4 - 8
- EAST — M3 - X
- XX — M1 - 4 OR XX — M1 - 6 OR COUNTY X — M1 - 5A
- M05 - 1 OR M06 - 1

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

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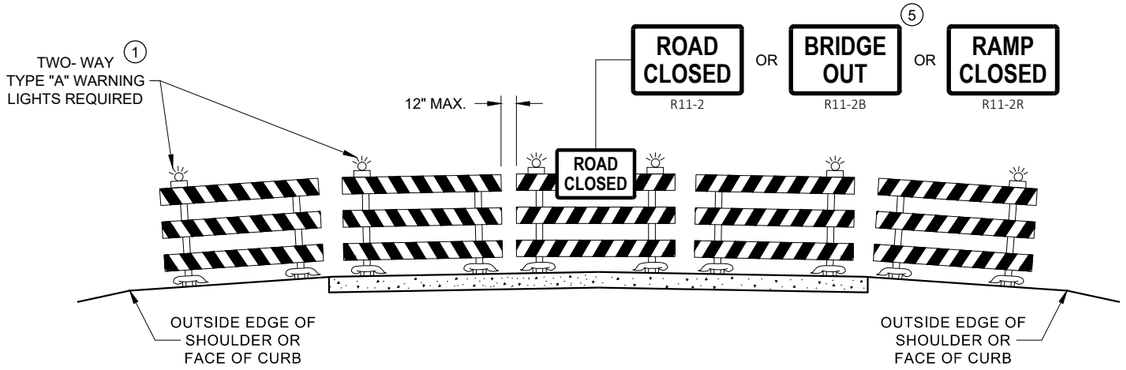
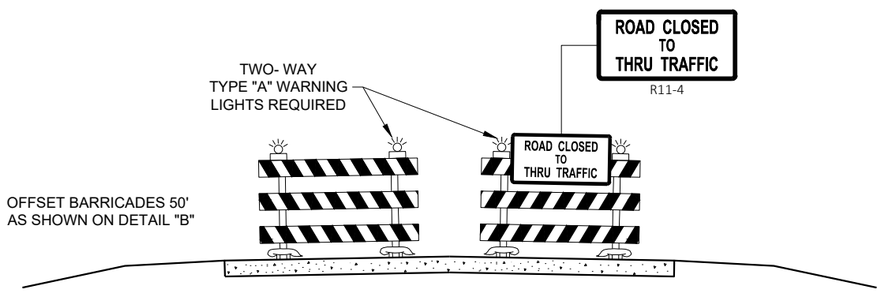
SDD 15C02 - 08a

SDD 15C02 - 08a



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

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

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL "D" FOR FULL ROAD CLOSURES.

TYPE "A" LOW - INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11 - 2, R11 - 3, M4 - 9, R11 - 4, AND R10 - 61 SIGNS PLACED ON THE BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE RAIL OR BOTTOM RAILS.

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
- R11 - 2 SHALL BE 48" X 30"
- R11 - 3 SHALL, R11 - 4 AND R10 - 61 SHALL BE 60 " X 30"
- M4 - 9 SHALL BE 30" X 24"
- M3 - X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4 - 8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1 - 4, M1 - 5A AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- MO5 - 1 AND MO6 - 1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- D1 - X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1 - 1 SHALL BE 36" X 36"

(1) TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING.

(2) THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT AN INTERSECTION.

(3) FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "D".

(4) FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "E".

(5) FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11 - 2 AND R11 - 3 SIGNS.

(6) INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.

(7) "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEER
FHWA

6

SDD 15C02 - 08b

6

SDD 15C02 - 08b

GENERAL NOTES

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

(1) LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING

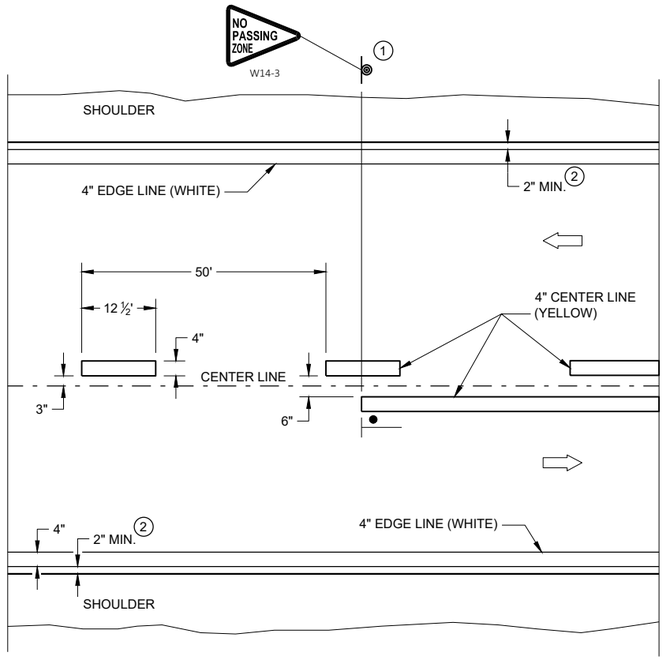
(2) MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

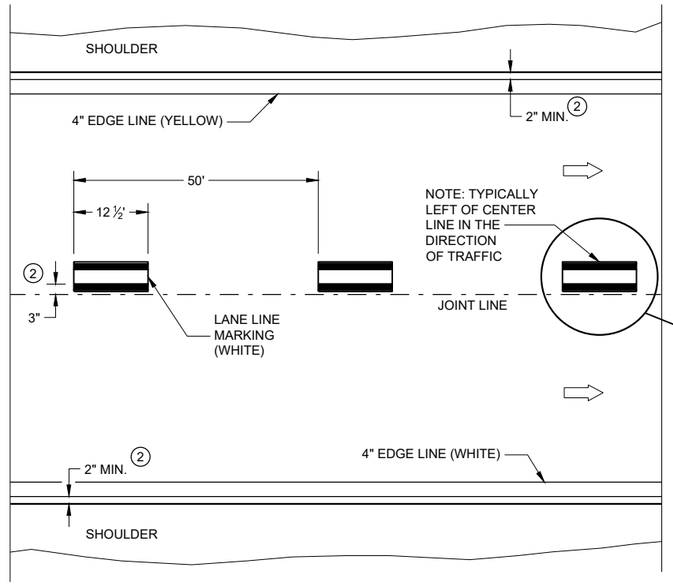
"T" MARKING

SIGN ON PERMANENT SUPPORT

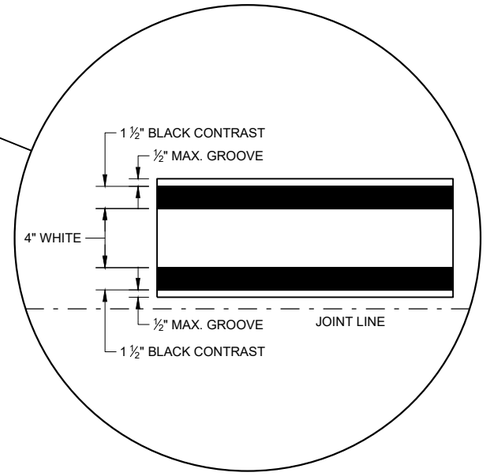
DIRECTION OF TRAFFIC



TWO WAY TRAFFIC



ONE WAY TRAFFIC



PERMANENT PAVEMENT MARKING

PERMANENT LONGITUDINAL PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022 — DATE
/S/ Jeannie Silver — STATEWIDE SIGNING AND M ENGINEER

FHWA

6

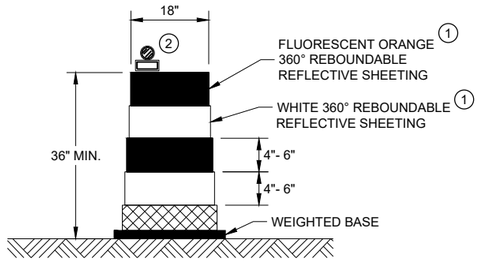
SDD 15C08 - 22a

6

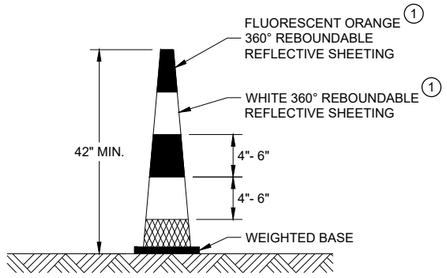
SDD 15C08 - 22a

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.

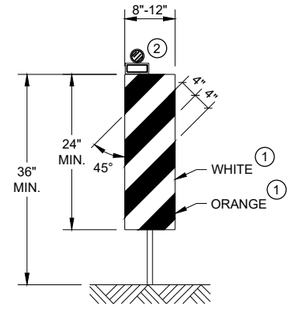


DRUM



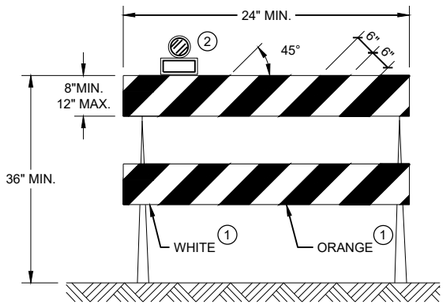
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS



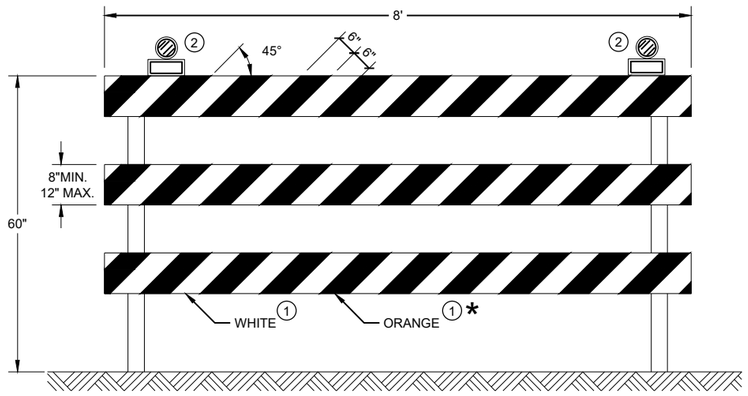
VERTICAL PANEL

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
May 2021 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER
FHWA

6

SDD15C11 - 09b

6

SDD15C11 - 09b

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.

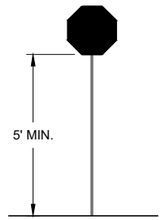
(3) EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER

ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FROM 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.



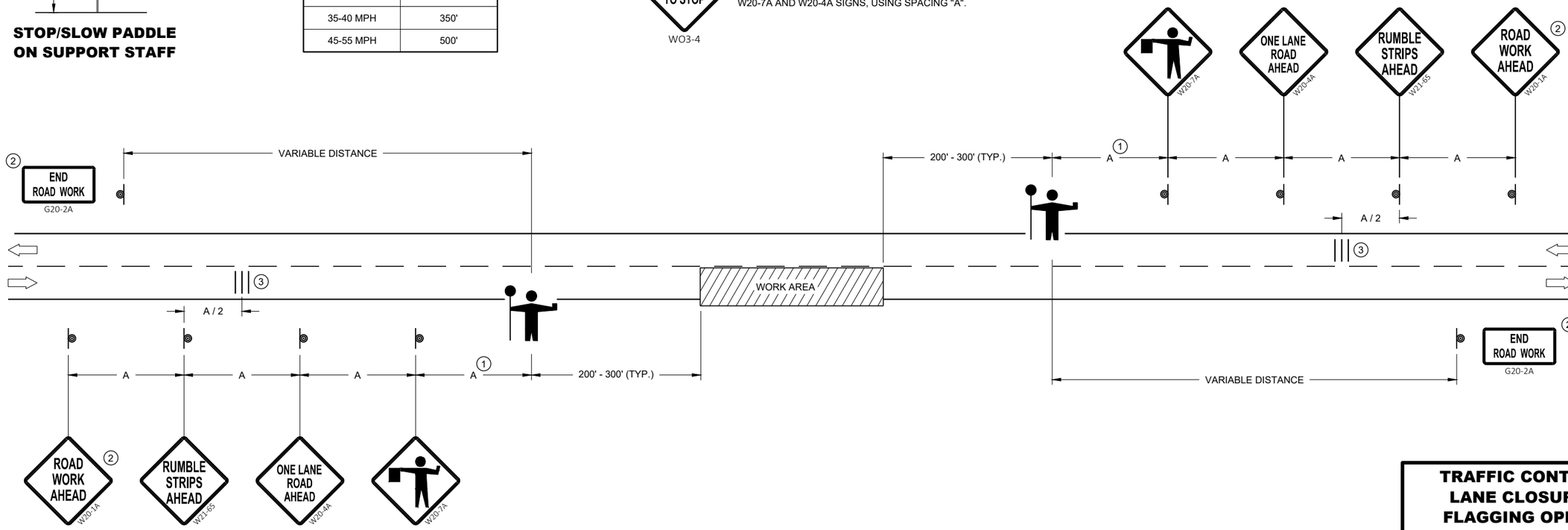
STOP/SLOW PADDLE ON SUPPORT STAFF

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

6

SDD 15C12 - 09a

6

SDD 15C12 - 09a

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.

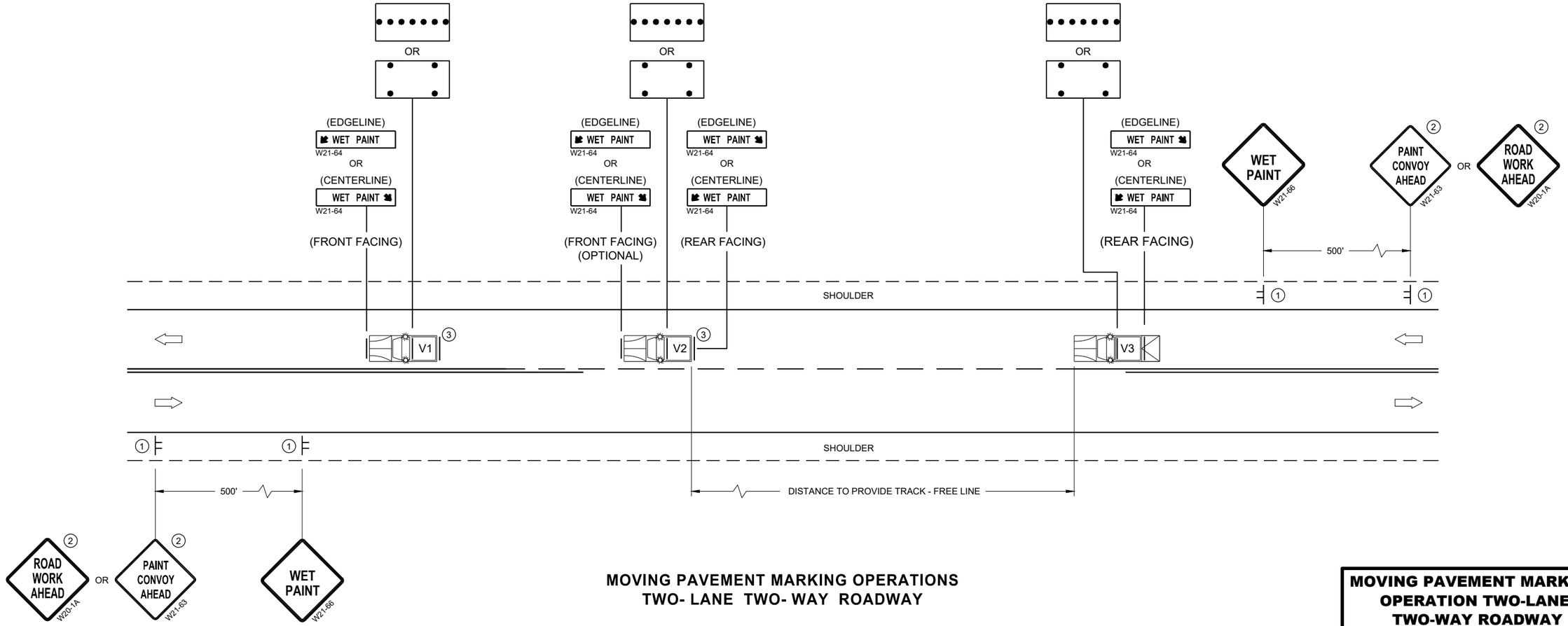
CONES SHOULD BE USED BETWEEN THE MARKING AND SHADOW VEHICLE AT 100 FOOT SPACING. CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

CONES SHALL BE A MINIMUM OF 28" 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.

(3) V1 AND V2 CAN BE SWITCHED SO THAT THE MARKER IS THE LEAD VEHICLE.



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
May 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15C19 - 07a

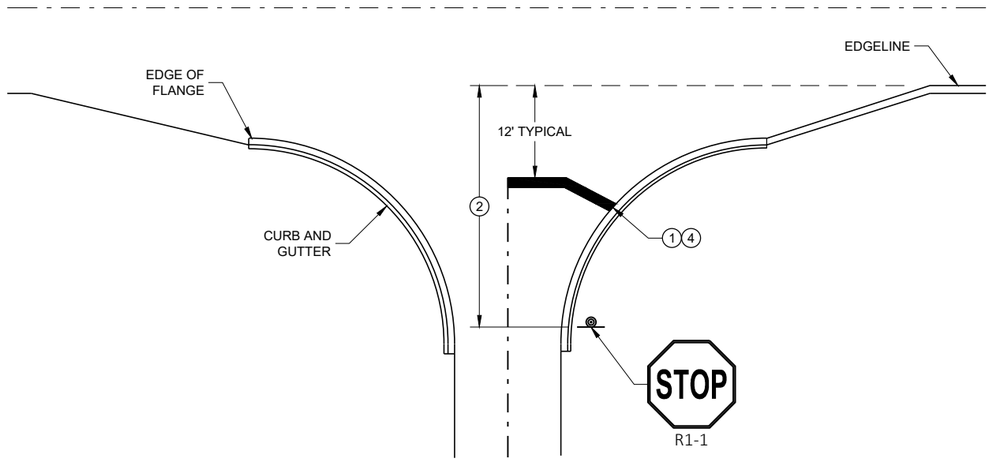
6

SDD 15C19 - 07a

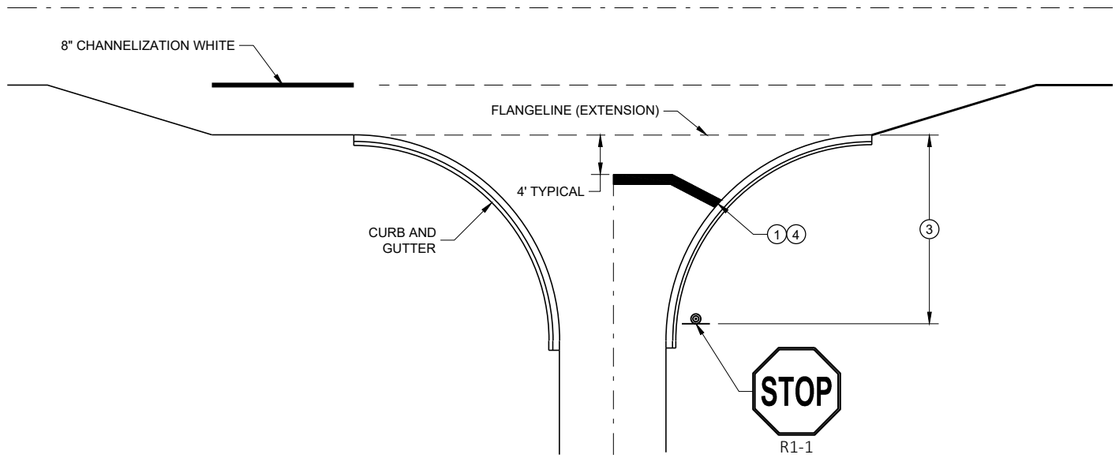
GENERAL NOTES

STOP SIGN SHALL BE PLACED A MINIMUM OF 6 FEET TO A MAXIMUM OF 50 FEET FROM THE EDGELINE LOCATION.

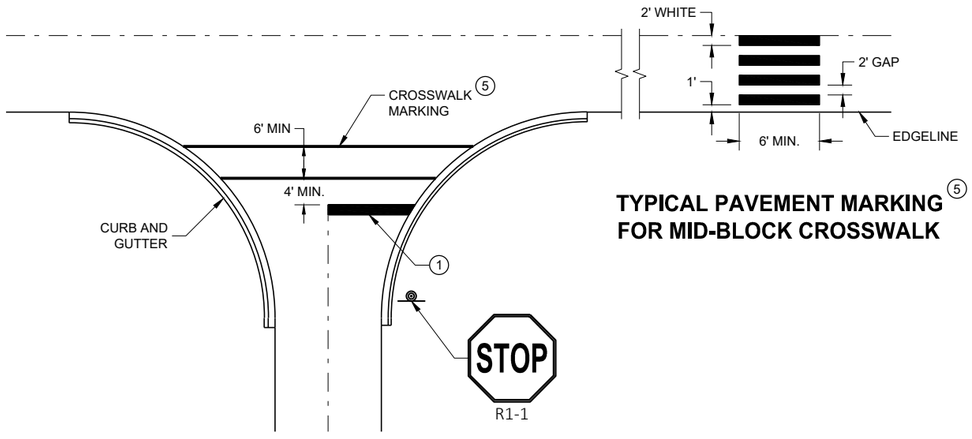
1. 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
2. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
3. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION.
4. MOVE CLOSER TO THE EDGE OF TRAVEL LINE AS NEEDED FOR VISIBILITY AND SIGHT LINES (NO CLOSER THAN 4 FEET).
5. LADDER BAR CROSSWALKS SHOULD ONLY BE USED FOR MID BLOCK CROSSINGS. USE 2 - 6" TRANSVERSE LINES INSTEAD.



TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER

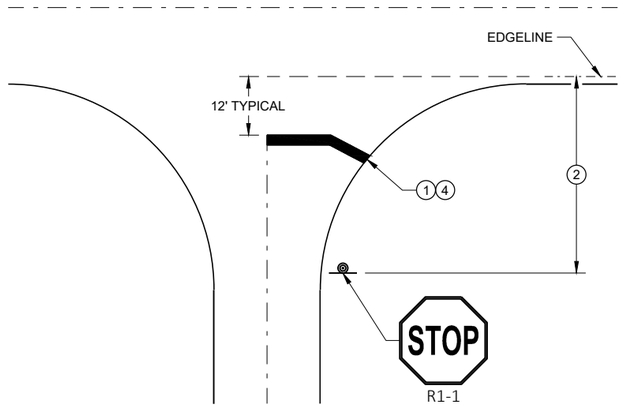


TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL PAVEMENT MARKING FOR MID-BLOCK CROSSWALK 5

TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019 — DATE
/S/ Matthew Rauch — STATE SIGNING AND MARKING ENGINEER

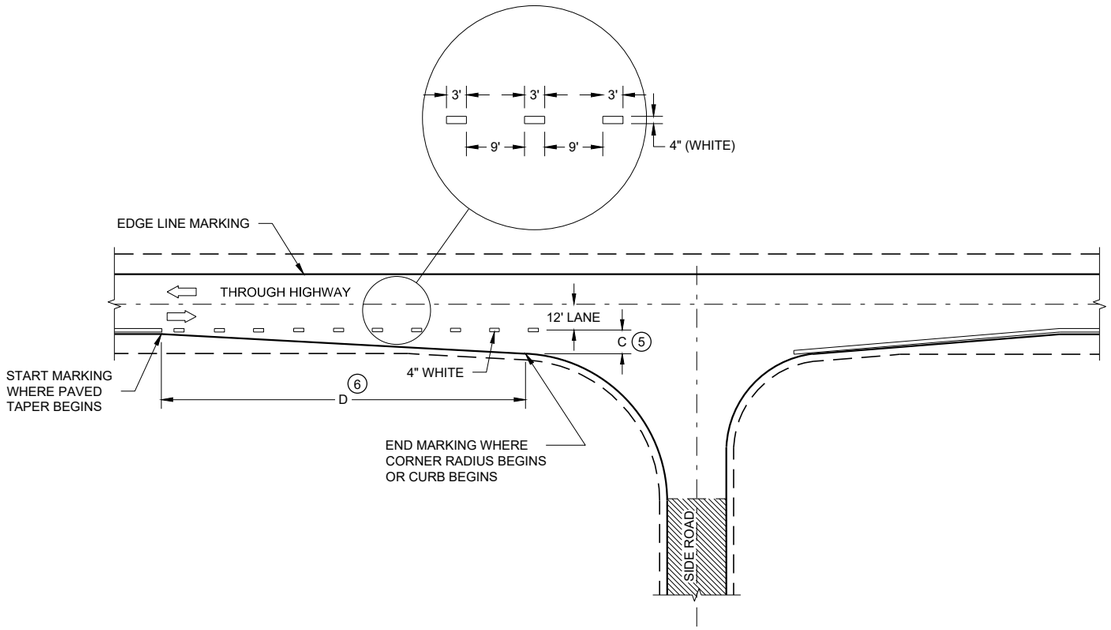
FHWA

6

SDD 15C33 - 04

6

SDD 15C33 - 04



MINOR INTERSECTION

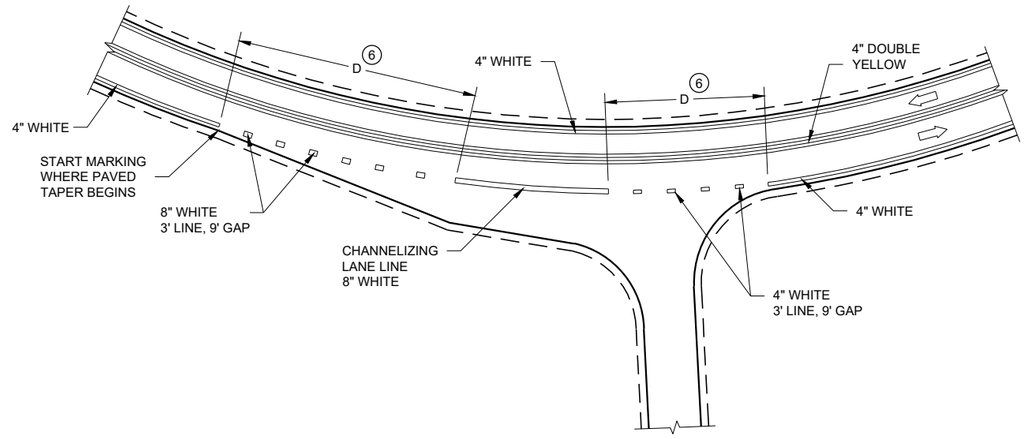
GENERAL NOTES

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

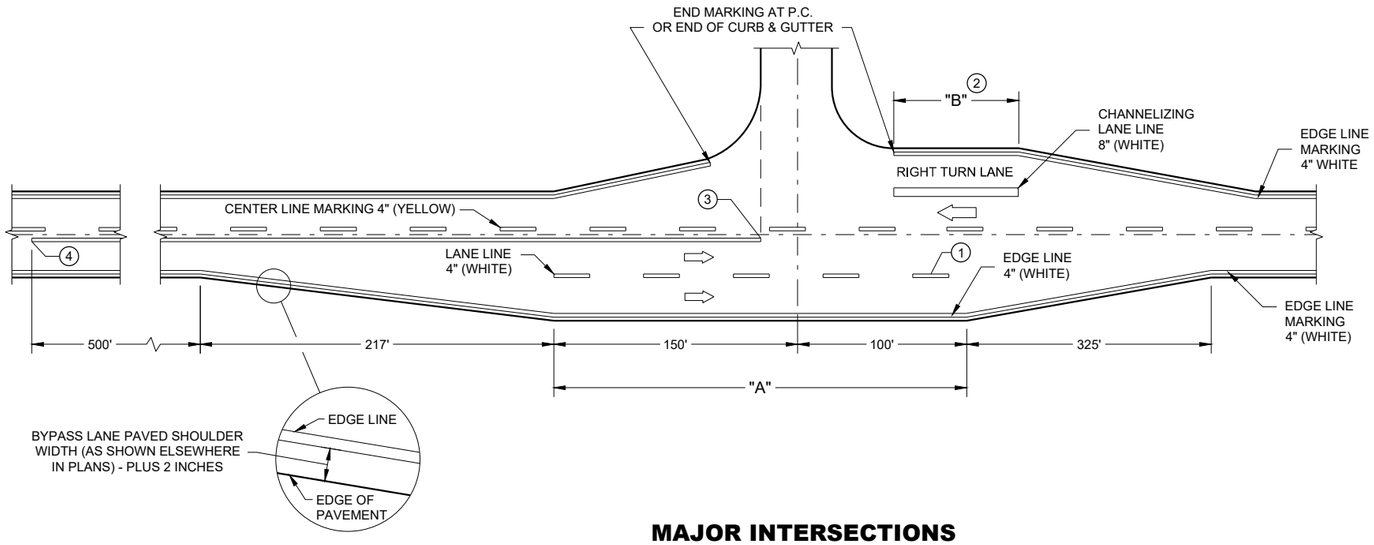
1. WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
2. WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
3. BARRIER LINE ENDS AT SIDE ROAD PAVEMENT / SURFACE EDGE EXTENSION.
4. BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.
5. WHEN DISTANCE "C" IS LESS THAN 4 FEET, OMIT DOTTED EXTENSION.
6. WHEN DISTANCE "D" IS LESS THAN 50 FEET, OMIT DOTTED EXTENSION.

LEGEND

DIRECTION OF TRAVEL



INTERSECTION ON OUTSIDE OF CURVE



MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)

PAVEMENT MARKING (INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA

6

SDD 15C35 - 05a
SDD15C35 - 05a

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.

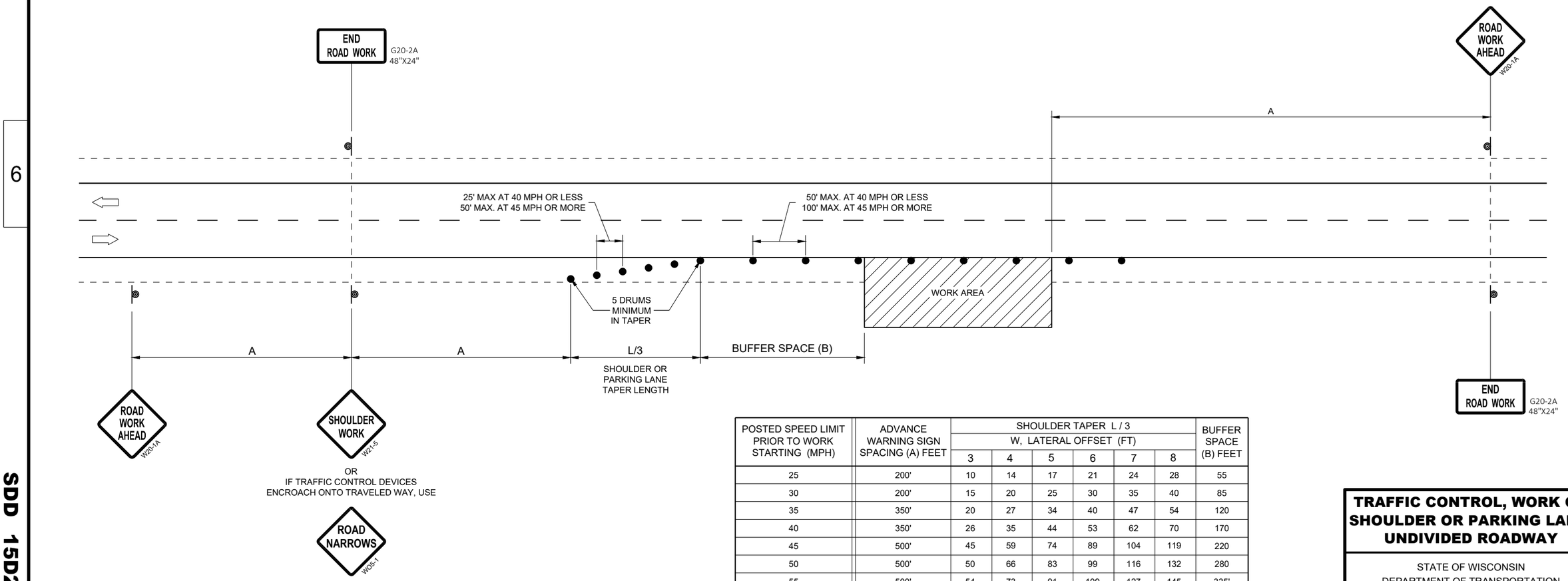
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

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

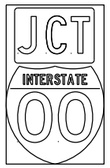
/S/ Andrew Heidtke
STATEWIDE WORK ZONE T SAFETY ENGINEER

FHWA

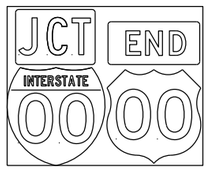
SDD 15D28 - 04

SDD 15D28 - 04

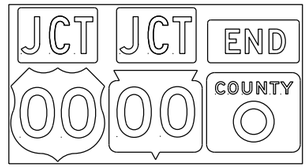
TYPICAL ASSEMBLIES



J1-1



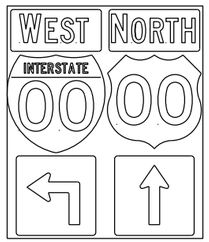
J1-2



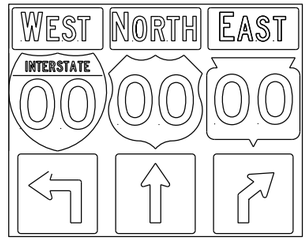
J1-3

JR1-1

J2-1

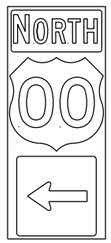


J2-2

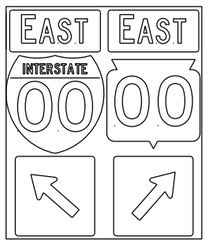


J2-3

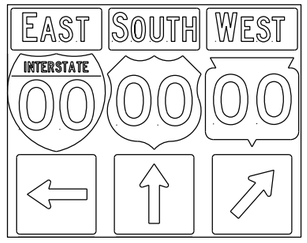
JV
(Typical Vertical J-Assembly
See Note 10 and 11)



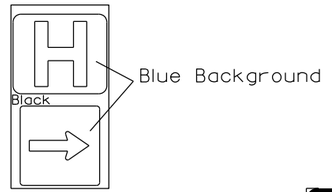
J3-1



J3-2

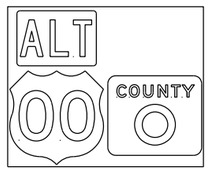


J3-3

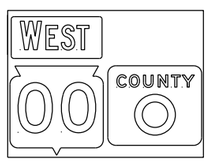


JH-1

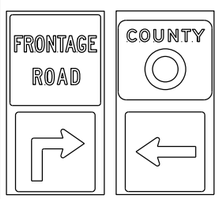
J4-1



J4-2

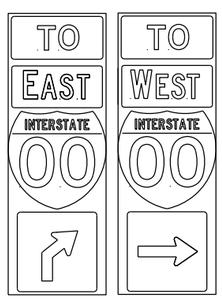


J4-2



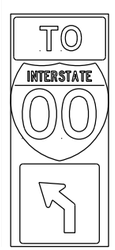
J12-1

J13-1

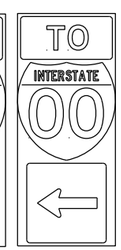


J32-1

J33-1



J22-1

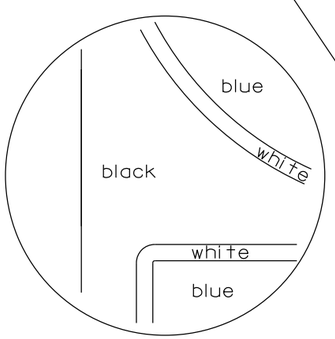


J23-1

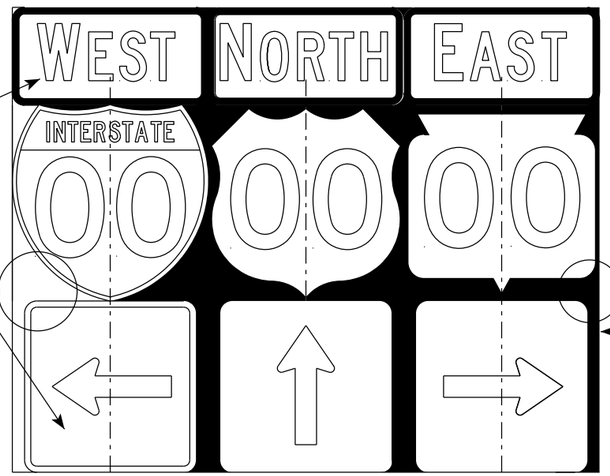
JR13-1

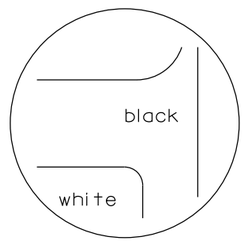
JR23-1

JR99-1



blue background
with interstate





black background

NOTES

1. Signs are Type II - Type H Reflective
2. Color:
   Background - Black Non-reflective
   Message - see Note 5
3. Message Series - See Note 5
4. Corners shall be square or rounded if base material is plywood. If base material is metal the corners shall be rounded.
5. The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
6. Certain marker heads require the component pieces to be the same color. As an example, all the components used with an M1-1 Interstate marker shall be blue.
7. Single panel j-assemblies shall only be used with route marker shields that are same size. If the route marker shields are different size use multiple piece component.
8. Route assemblies that have 24 inch route shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have one horizontal splice between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 inches or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
9. Route assemblies that have 36 inch shields and have dimensions greater than 48 inchs (both vertical and horizontal) shall have two horizontal splices. One horizontal splice shall be between the cardinal direction and route shields and the other horizontal splice shall be between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
10. All Vertical J Assemblies are given a Sign Code of JV
11. For JV Assemblies that have a mixture of Interstate and non Interstate shields, arrows and cardinals shall be white on blue.

ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/21 PLATE NO. A2-1S.9

PROJECT NO:

SHEET NO: 105 **E**

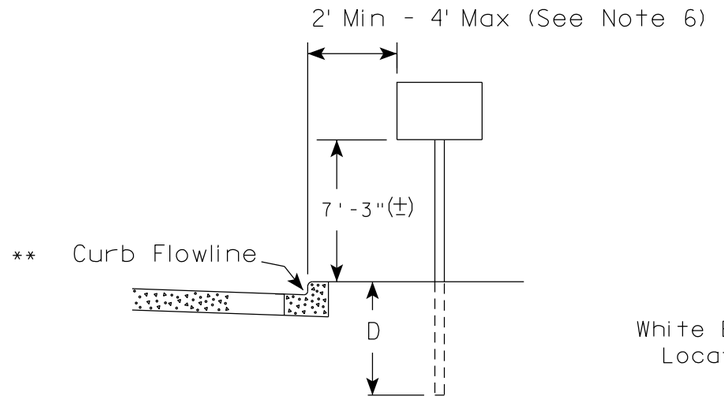
FILE NAME : C:\CAEfiles\Projects\tr_stdplate_A21S.dgn PLOT DATE : 18-MAR 2021 1:37 PLOT BY : mscj9h PLOT NAME :

WISDOT/CADDS SHEET 42

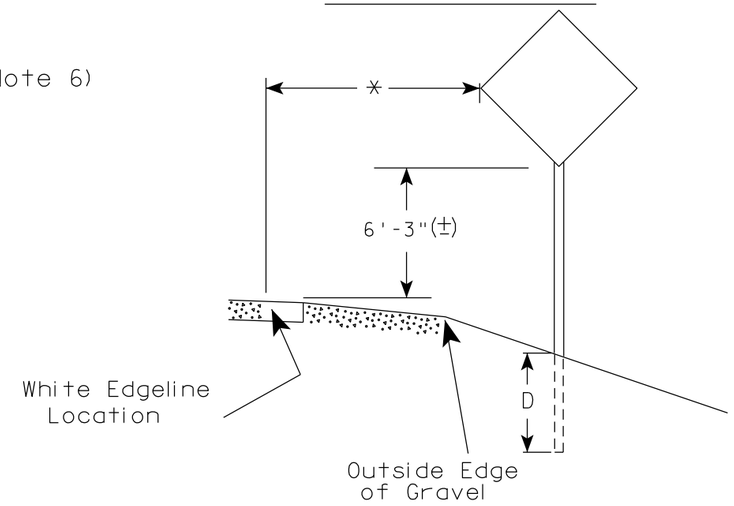
7

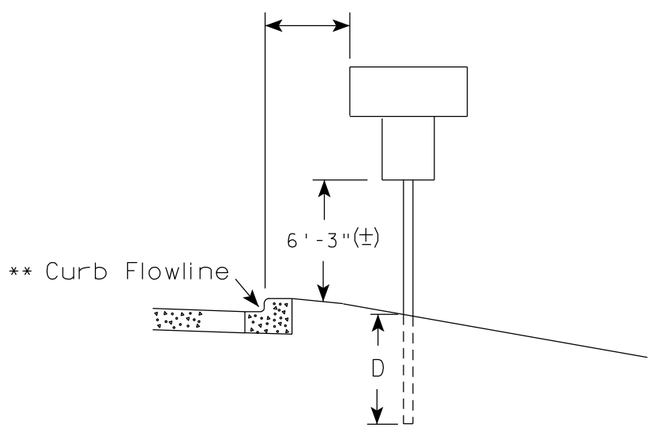
7

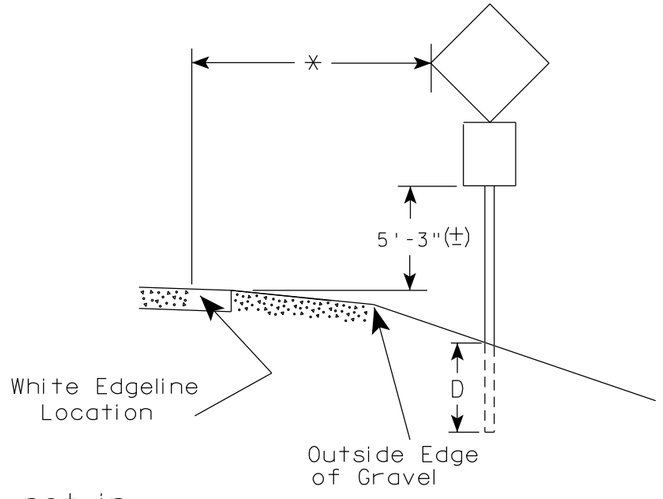
URBAN AREA



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.

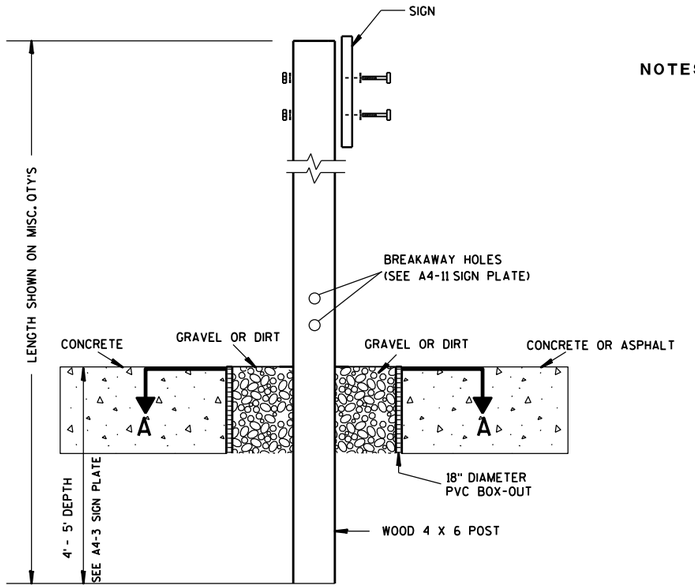
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

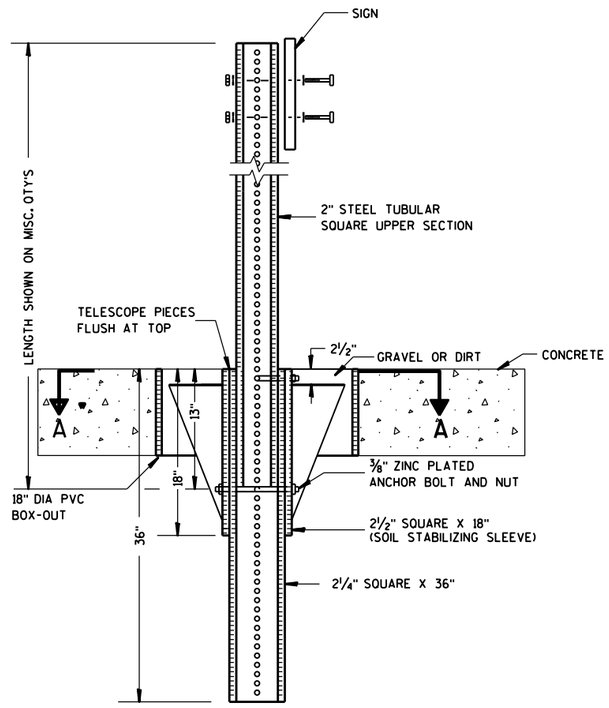
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 106	E



ELEVATION VIEW

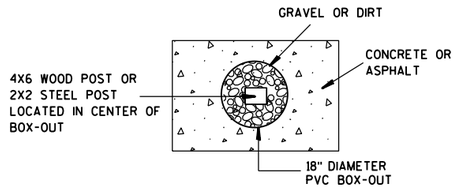
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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

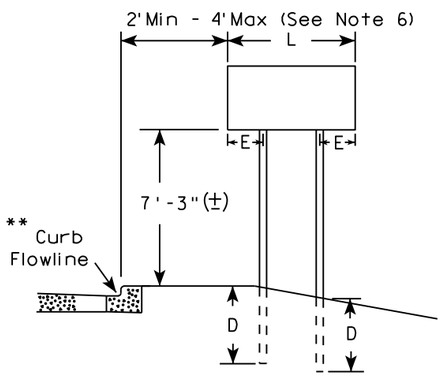
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

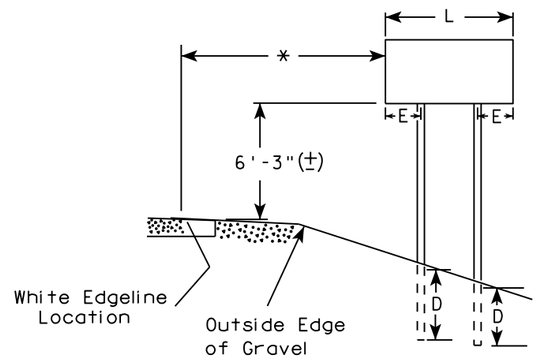
DATE 1/27/14 PLATE NO. A4-3B.1

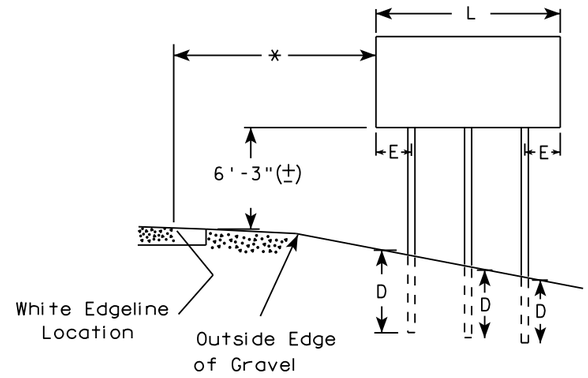
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

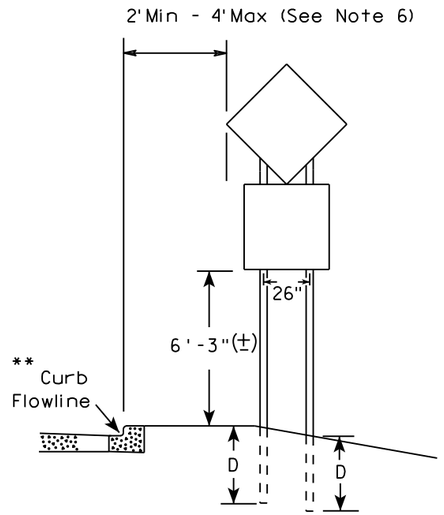
URBAN AREA



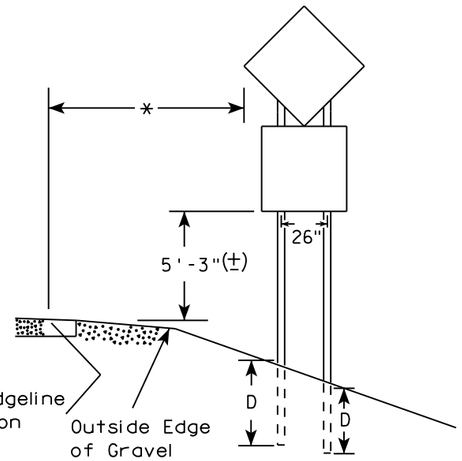
RURAL AREA (See Note 3)







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'

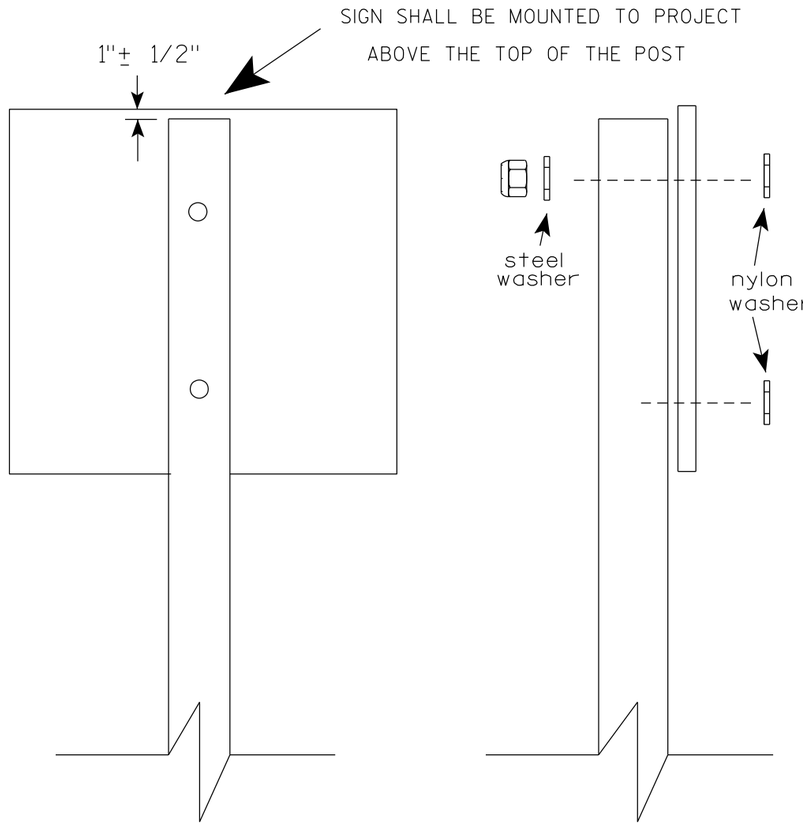
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

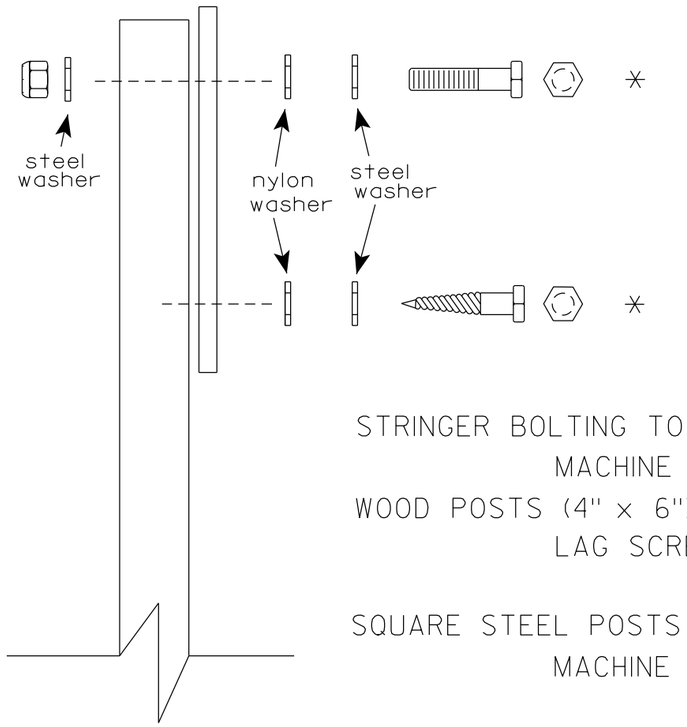
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 108	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

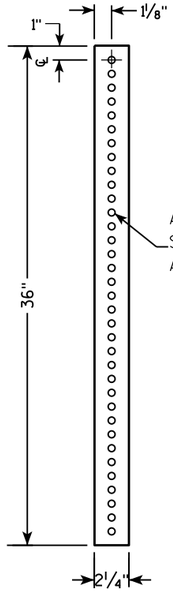
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

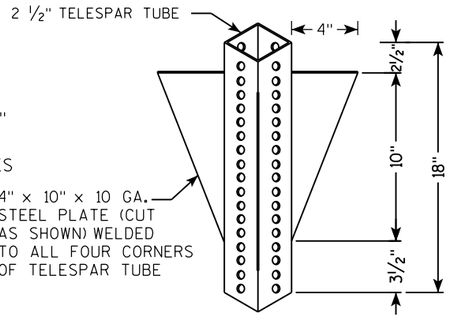
DATE 4/1/2020 PLATE NO. A4-8.9

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

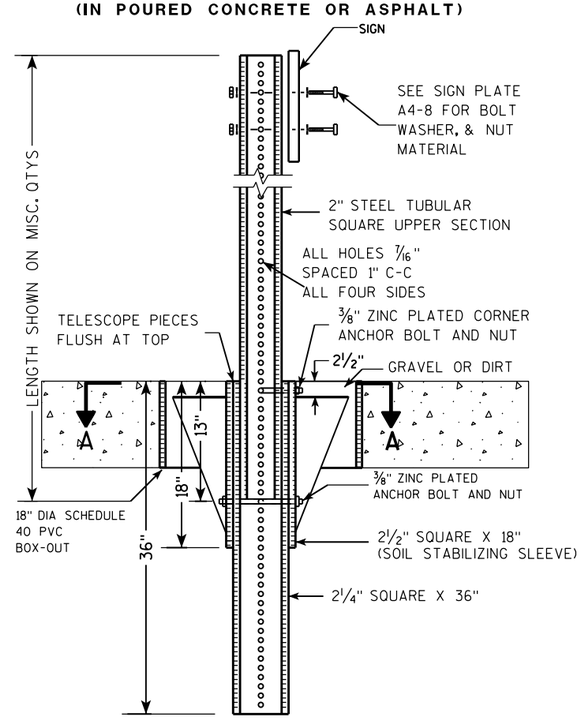
2 ¼ " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



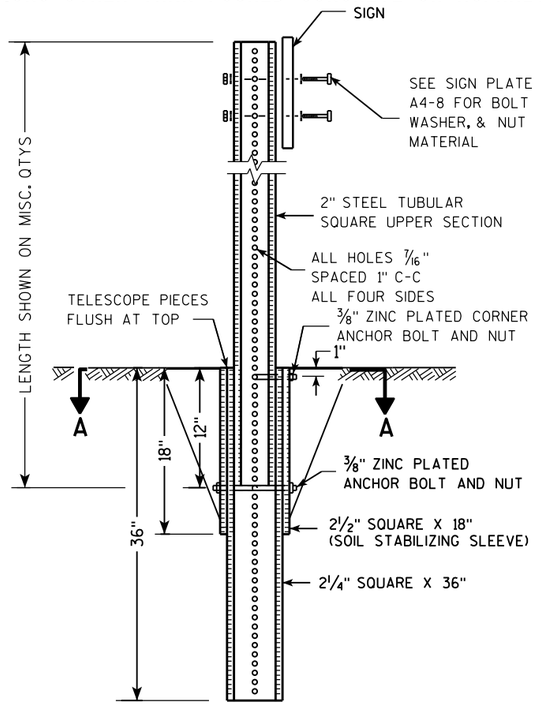
2 ½ " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

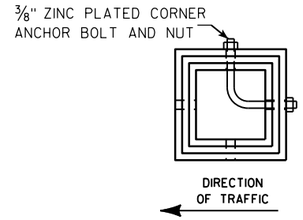


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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).

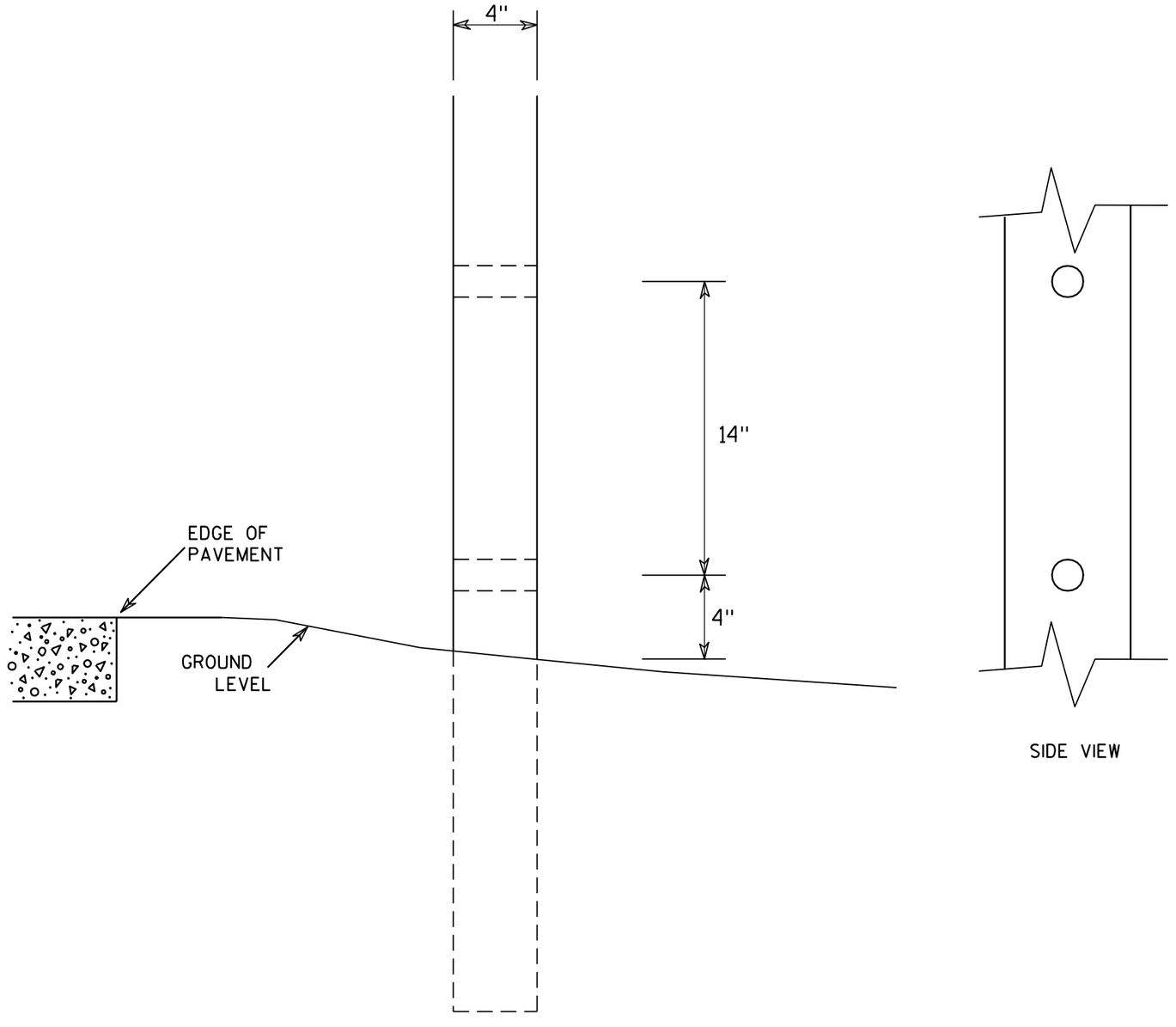
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 110 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

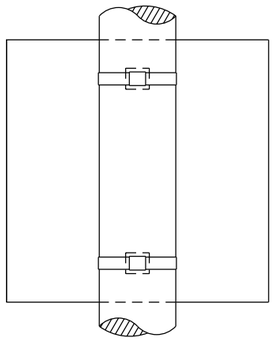
APPROVED Chester J Spang for State Traffic Engineer

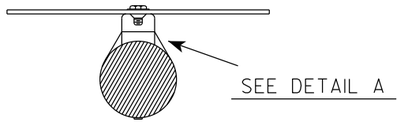
DATE 3/27/97 PLATE NO. A4-11.2

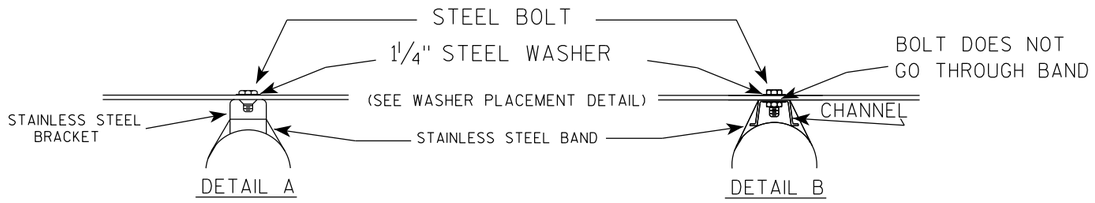
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 111	E

BANDING

SINGLE SIGN



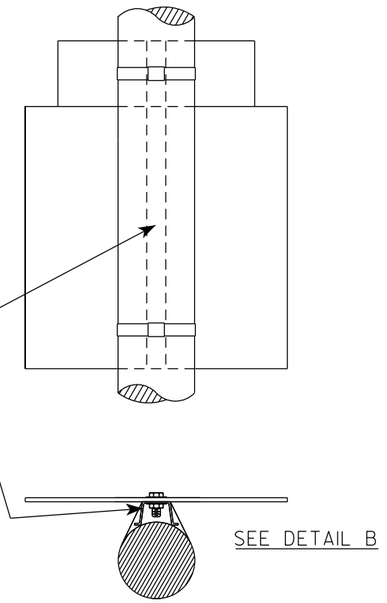




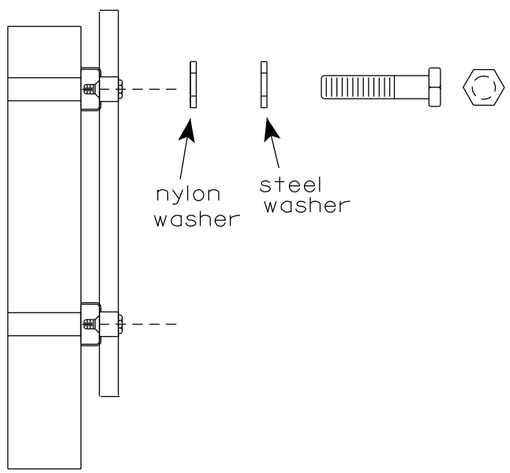
GENERAL NOTES

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



WASHER PLACEMENT



WASHERS (ALL POSTS) -
1-1/4" O.D. X ⅜" I.D. X 1/16" STEEL
1-1/4" O.D. X ⅜" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

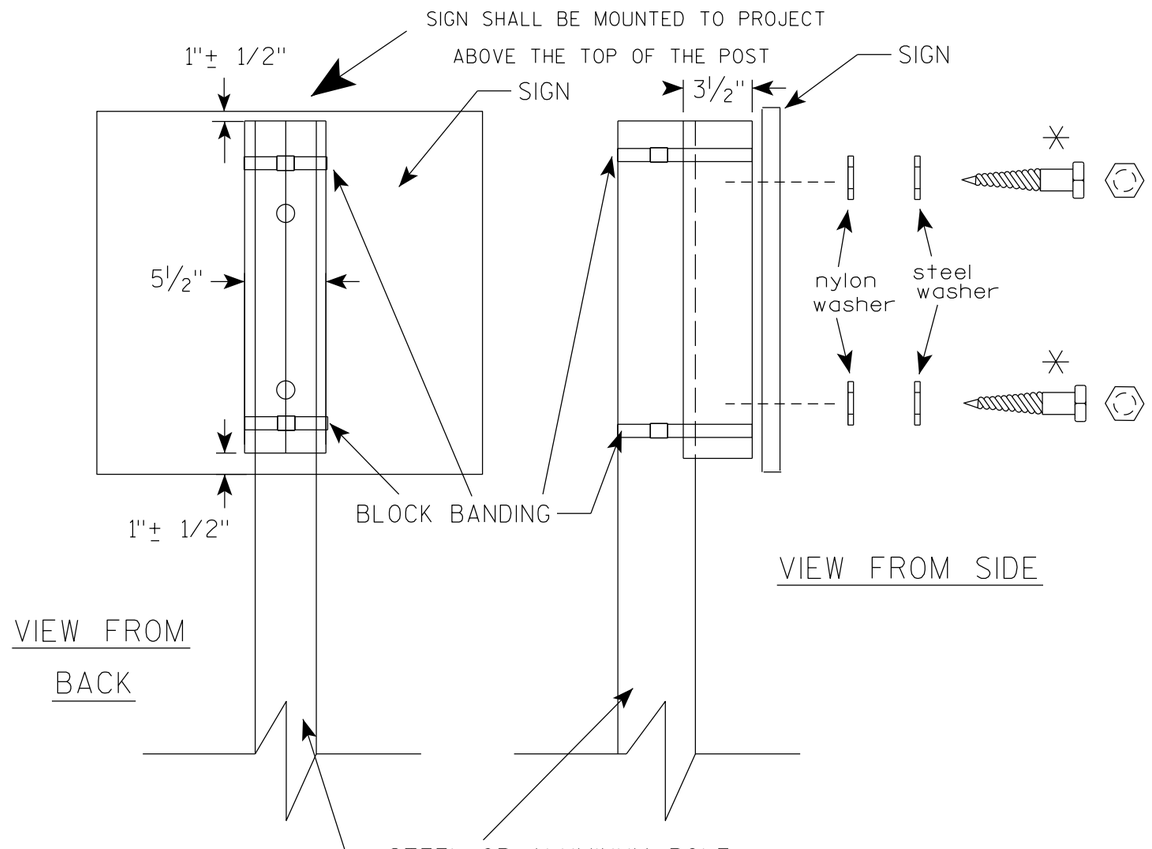
DATE 6/10/19 PLATE NO. A5-9.4

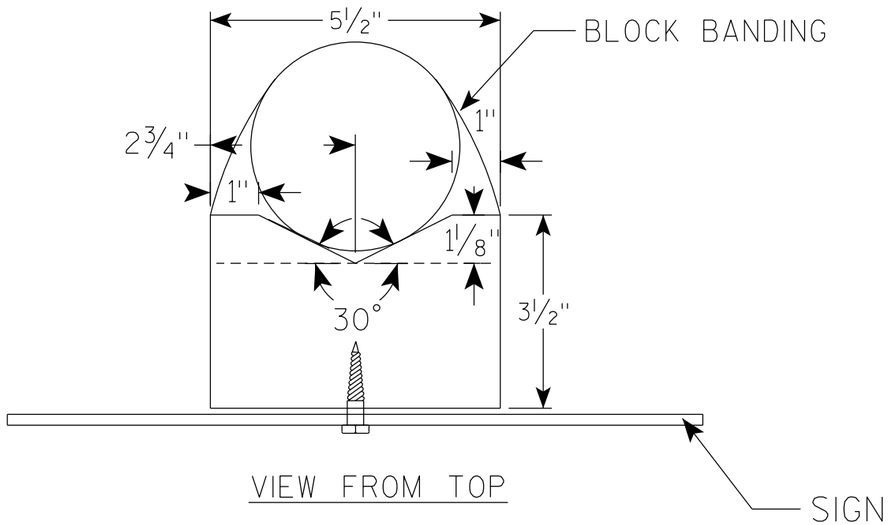
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 112	E

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)

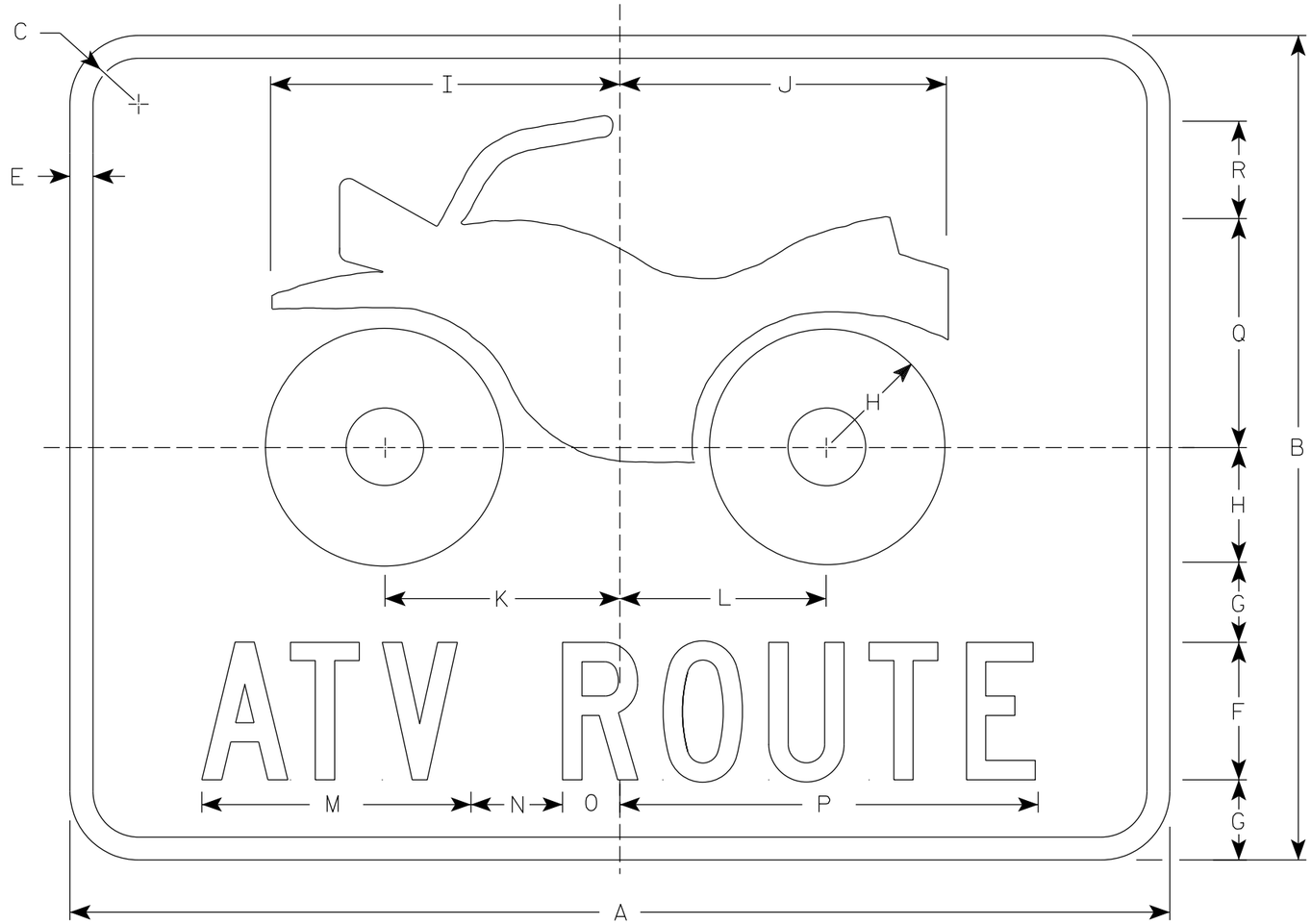
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/19/2022 PLATE NO. A5-10.3

PROJECT NO:

SHEET NO: 113 E



D11-10

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - Green
   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																											
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

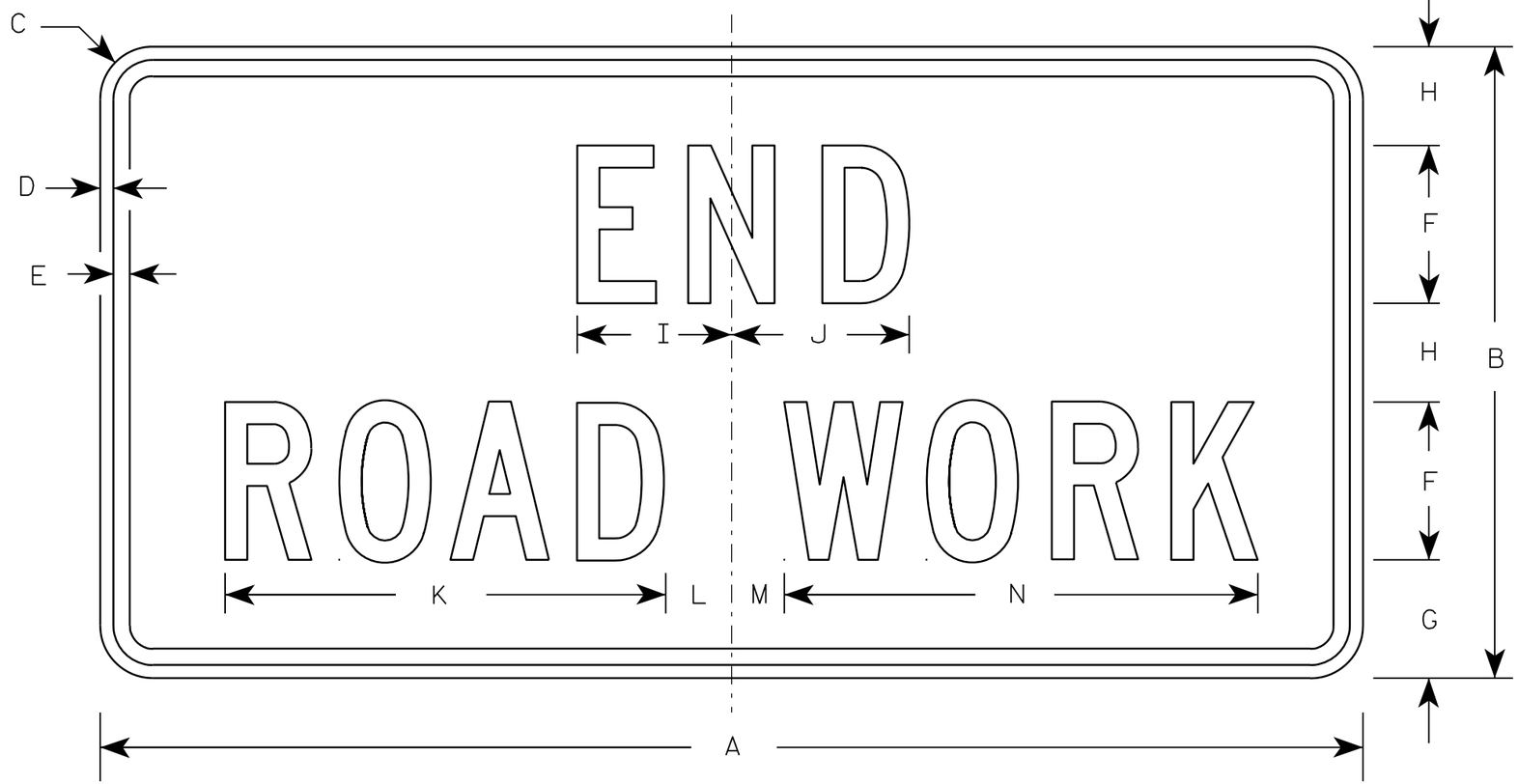
DATE 3/25/19 PLATE NO. D11-10.5

PROJECT NO:

SHEET NO: 114 E

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

WISDOT/CADDS SHEET 42



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

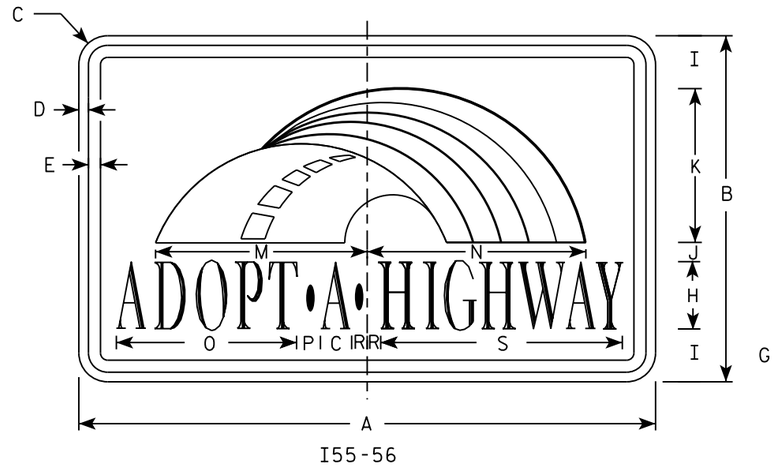
STANDARD SIGN
G20-2A

WISCONSIN DEPT OF TRANSPORTATION

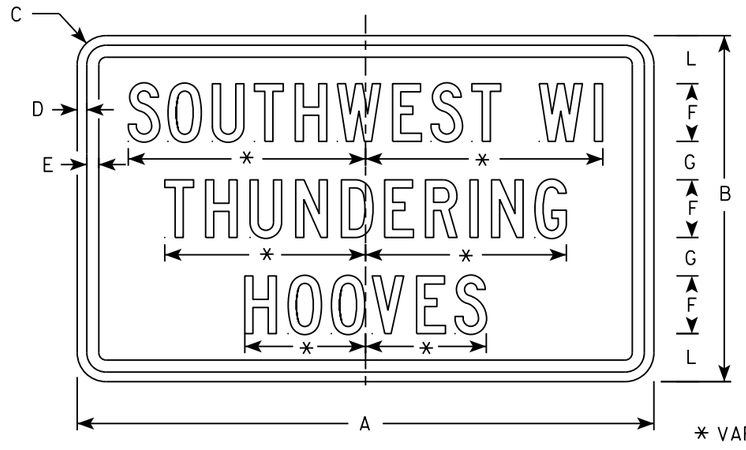
APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 115	E



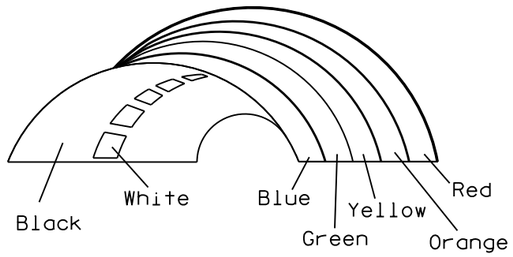
I55-56



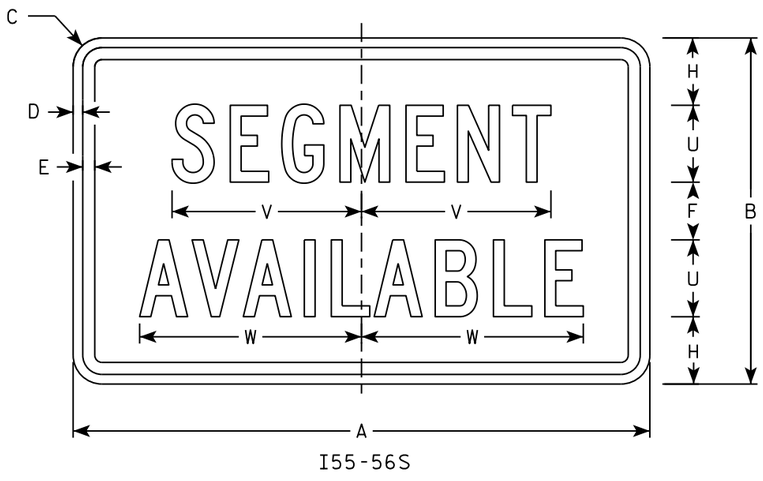
I55-56P

* VARIES

Background Colors of Symbol*



*1/4" Black Border between each color of rainbow and border of rainbow



I55-56S

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - (See Note 4)
3. Message Series - (See Note 5)
4. Border - Blue
   Adopt a Highway - Red
   All other Text - Blue
5. Adopt a Highway - Dutch 8011L
   All other Text - Series C
6. Contractor shall provide and install a new post bracket in accordance with the I55-56B sign 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																											
2	30	18	1 1/2	1/2	5/8	3	2	3 1/2	2 3/4	1	8	2 1/2	11 1/4	11 1/8	9 3/8	1 1/4		3/4	12 5/8	7 1/2	4	9 7/8	11 1/2				3.75
3																											
4																											
5																											

STANDARD SIGN
I55-56

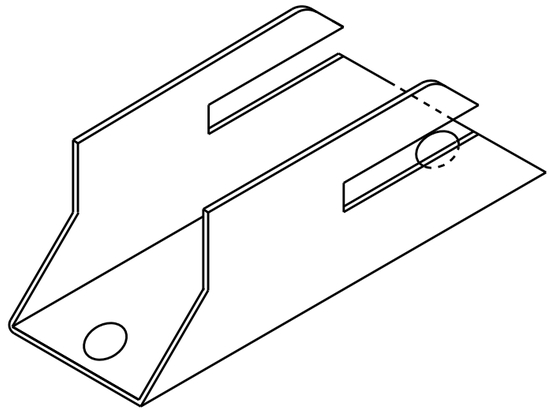
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

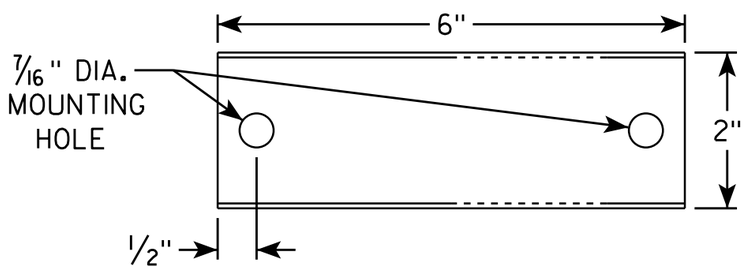
DATE 2/20/18 PLATE NO. I55-56.4

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 116 | E

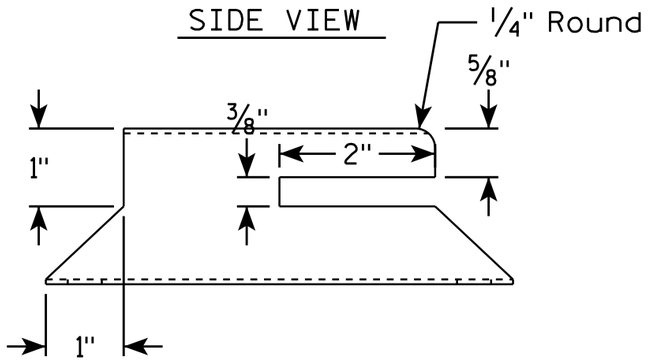
ISOMETRIC VIEW



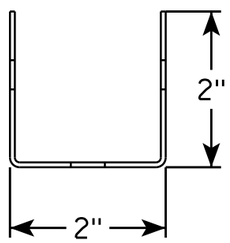
TOP VIEW



SIDE VIEW



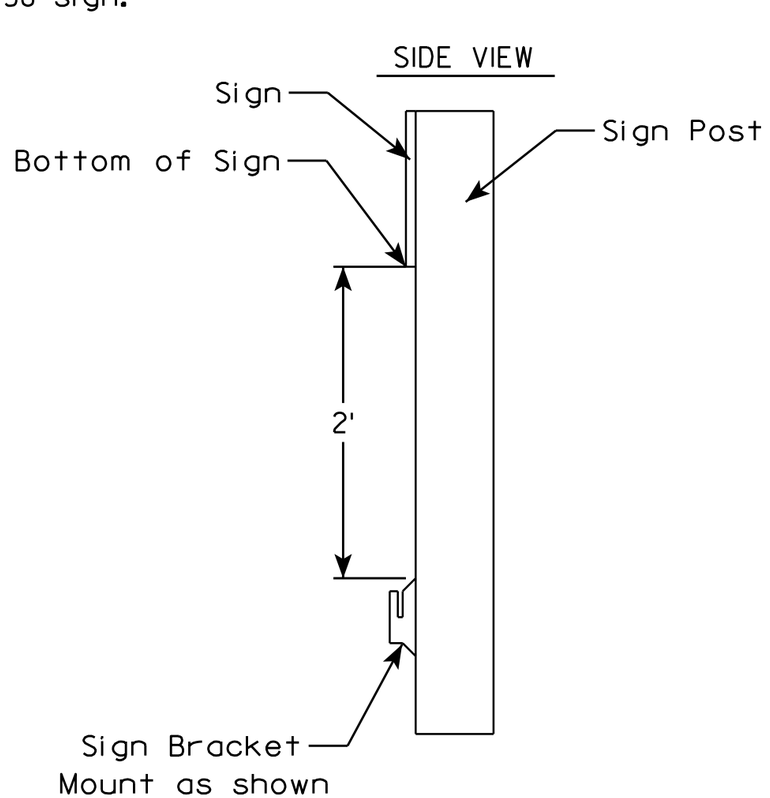
END VIEW



NOTES

1. Must be capable of permanent attachment to a wood or steel channel sign post utilizing the fastening hardware specified on the A4-8 sign plate.
2. Shall be entirely primed and painted with two coats of a black powder coated enamel paint.
3. Shall be made with 12 gauge steel, and incorporate no welds, no hinged components, no threaded lock-type components, and no parts which are loose or can be separated from the main body.
4. Shall have rounded edges with at least 1/8" radii.
5. Shall not have unrounded and uncoated metal edges which can contact the back surface of the roll-up sign.
6. Top of bracket shall be mounted 2' below the bottom of the I55-56 sign.
7. Cost of bracket and fastening hardware shall be incidental to the I55-56 sign.

SIDE VIEW



7

7

ROLLUP SIGN BRACKET
I55-56B

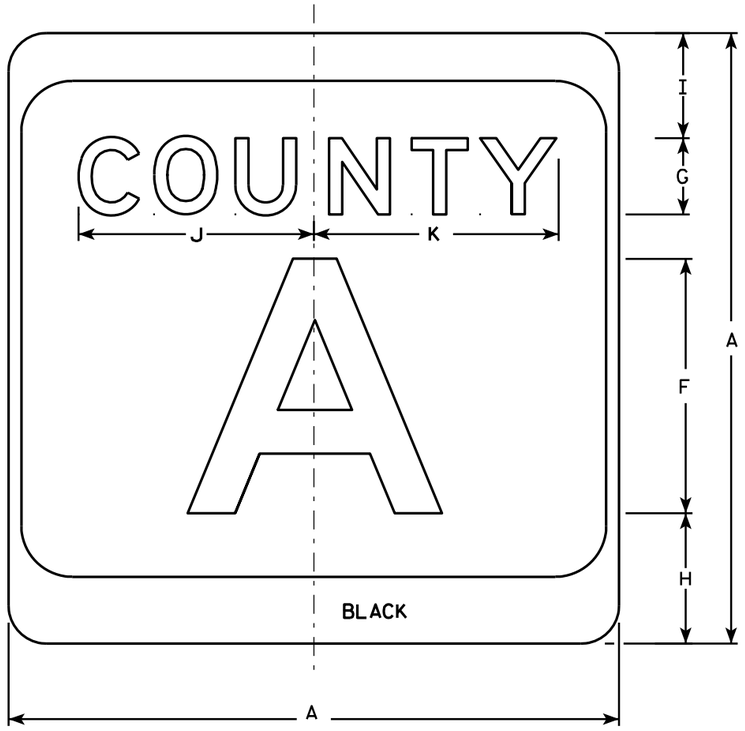
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

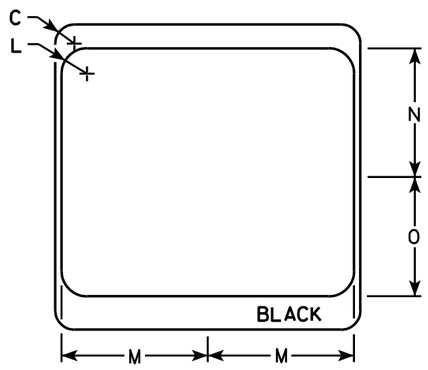
DATE 4/26/16 PLATE I55-56B.2

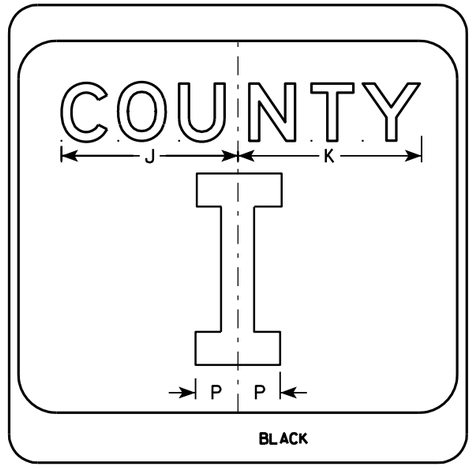
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

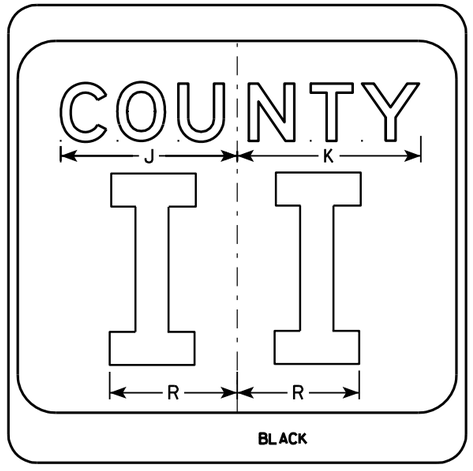
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\I5556B.DGN PLOT DATE : 26-APR-2016 17:29 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 1.945842:1.000000 WISDOT/CADDS SHEET 42



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

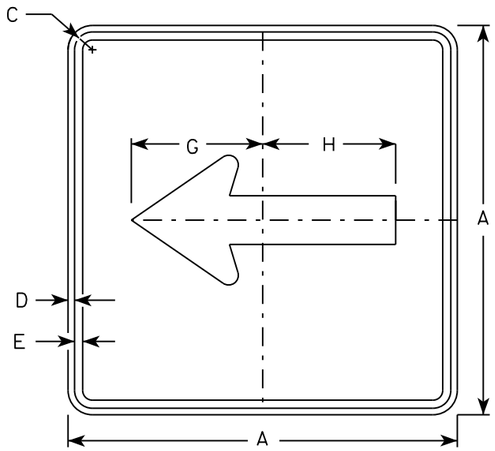
CTH MARKER
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

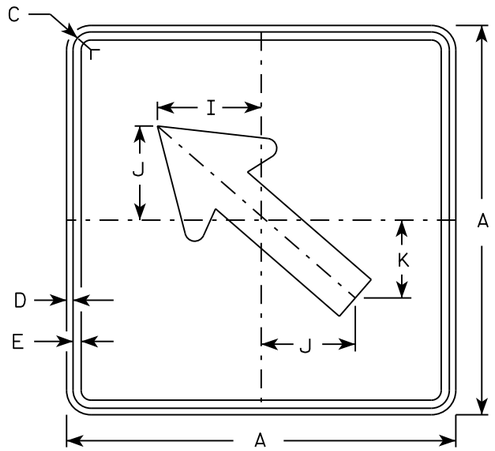
APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 118	E



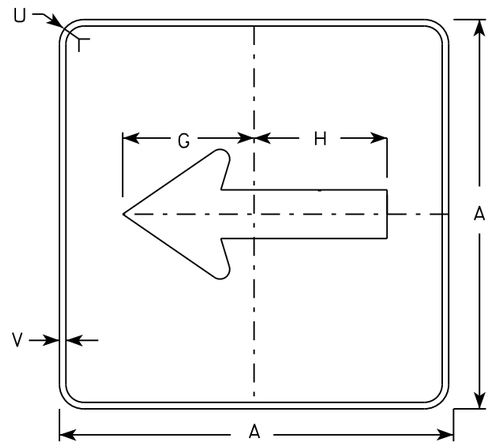
M6-1
MM6-1
MO6-1
MP6-1



M6-2
MM6-2
MO6-2
MP6-2

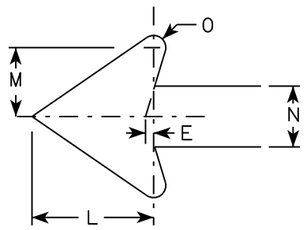
NOTES

1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See note 4
   Message - See note 4
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.
4. M6-1 and M6-2 Background - White
   Message - Black
   MB6-1 and MB6-2 Background - Blue
   Message - White
   MK6-1 and MK6-2 Background - Green
   Message - White
   MM6-1 and MM6-2 Background - White
   Message - Green
   MN6-1 and MN6-2 Background - Brown
   Message - White
   MO6-1 and MO6-2 Background - Orange - Type F Reflective
   Message - Black
   MP6-1 and MP6-2 Background - White
   Message - Blue
   MR6-1 and MR6-2 Background - Brown
   Message - Yellow



MB6-1
MK6-1
MN6-1
MR6-1

MB6-2
MK6-2
MN6-2
MR6-2



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	21		1 1/8	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2						1 1/2	1/2						3.06
3	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25
4	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25
5	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25

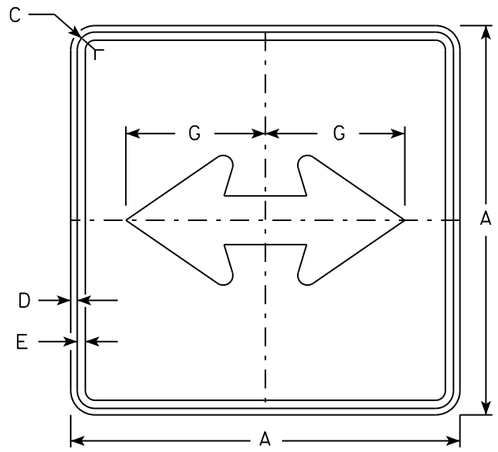
STANDARD SIGN M6-1 & M6-2 SERIES

WISCONSIN DEPT OF TRANSPORTATION

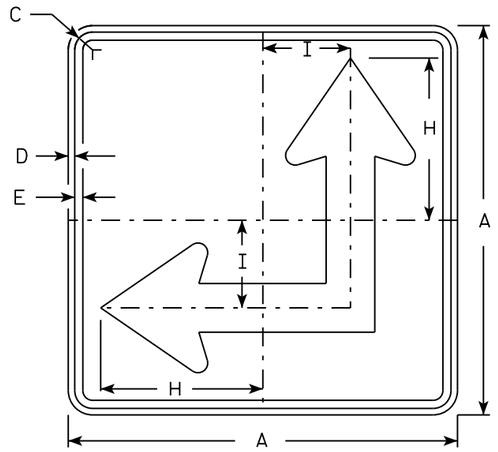
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE 119 M6-1.15

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



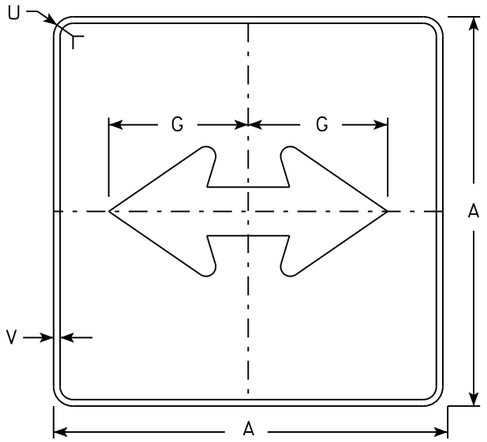
M6-4
MM6-4
MO6-4
MP6-4



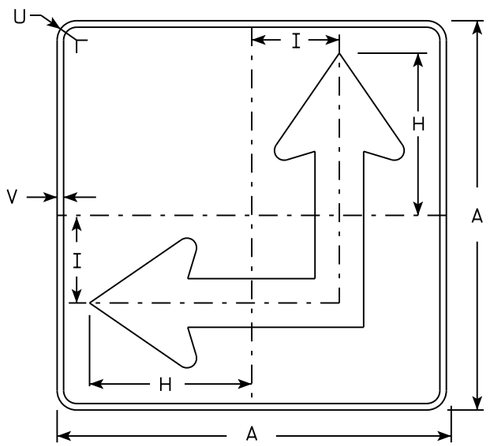
M6-6
MM6-6
MO6-6
MP6-6

NOTES

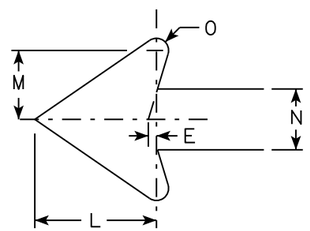
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See Note 4
   Message - See Note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-4 and M6-6 Background - White
   Message - Black
   MB6-4 and MB6-6 Background - Blue
   Message - White
   MK6-4 and MK6-6 Background - Green
   Message - White
   MM6-4 and MM6-6 Background - White
   Message - Green
   MN6-4 and MN6-6 Background - Brown
   Message - White
   MO6-4 and MO6-6 Background - Orange - Type F Reflective
   Message - Black
   MP6-4 and MP6-6 Background - White
   Message - Blue
   MR6-4 and MR6-6 Background - Brown
   Message - Yellow
5. M6-6R same as M6-6L except arrow points ahead and right.



MB6-4
MK6-4
MN6-4
MR6-4



MB6-6
MK6-6
MN6-6
MR6-6



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	21		1 1/8	3/8	3/8		7 1/2	8 3/4	4 1/4			5 1/4	3	2 5/8	1/2						1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25

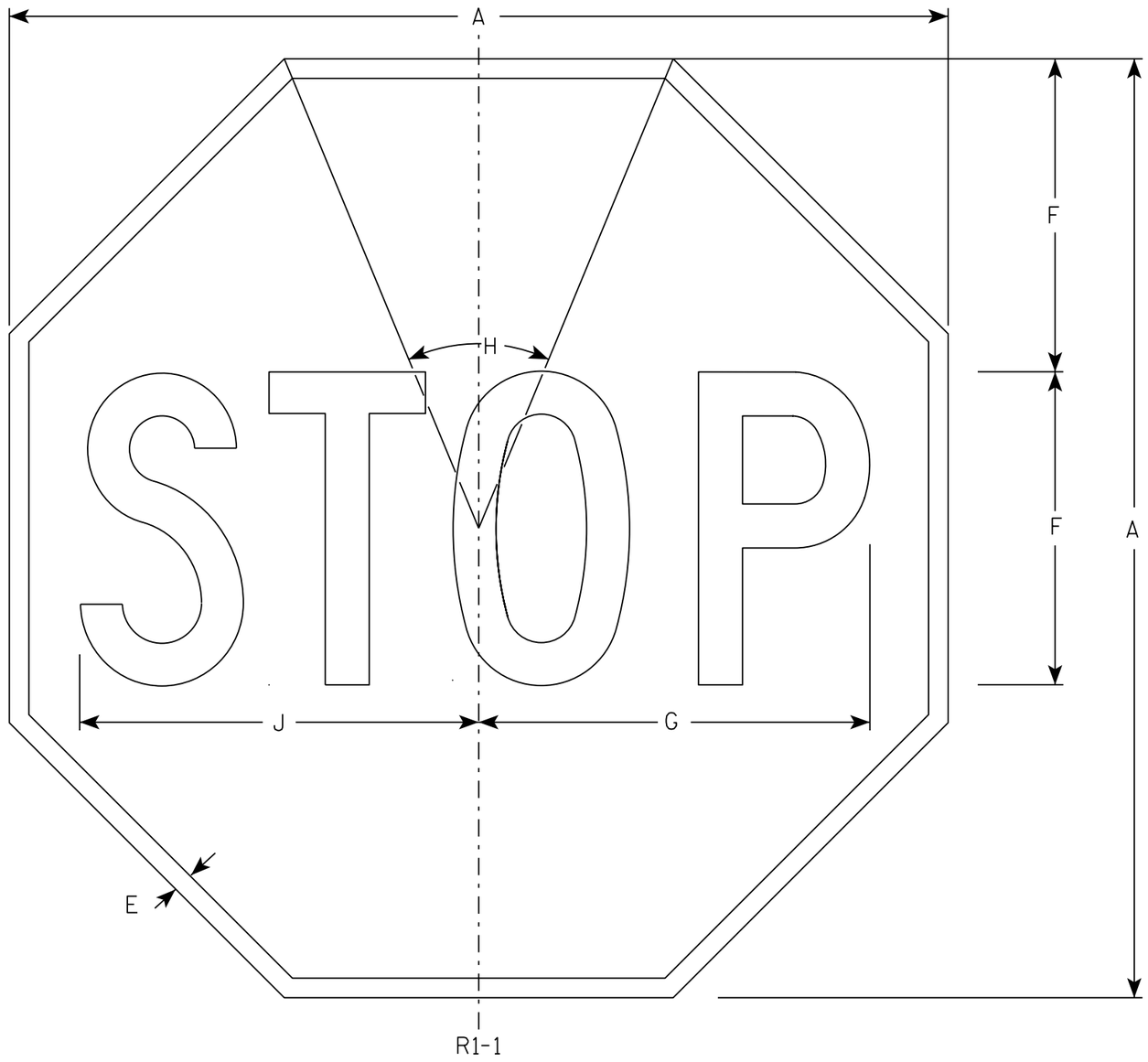
STANDARD SIGN
M6-4 & M6-6
SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE 120 M6-4.10

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

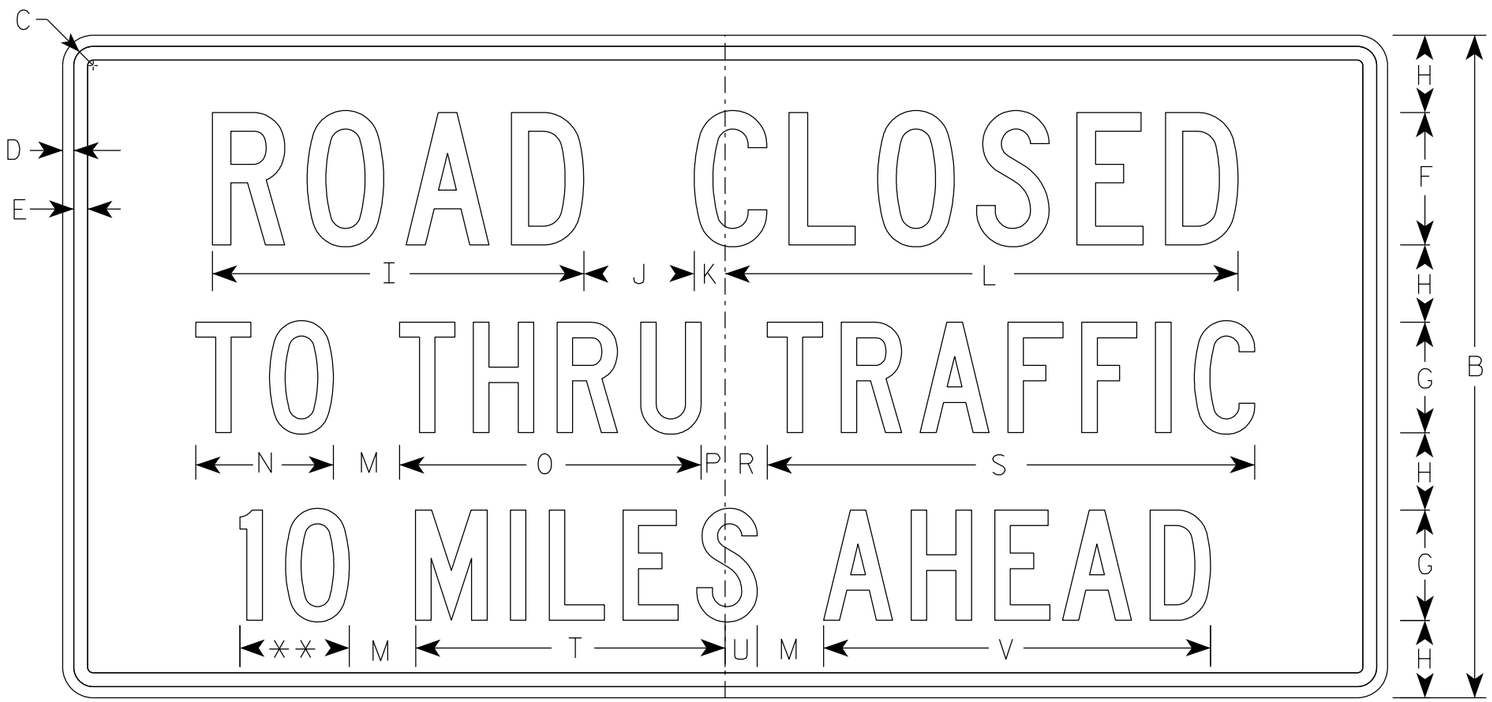
APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 121	E

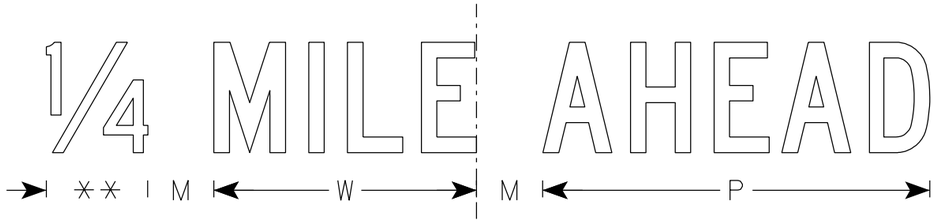
NOTES

1. Sign is Type II - Type H Reflective
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.
5. Substitute appropriate numerals to nearest quarter mile and optically adjust spacing to achieve proper balance.



R11-3

** See Note 5



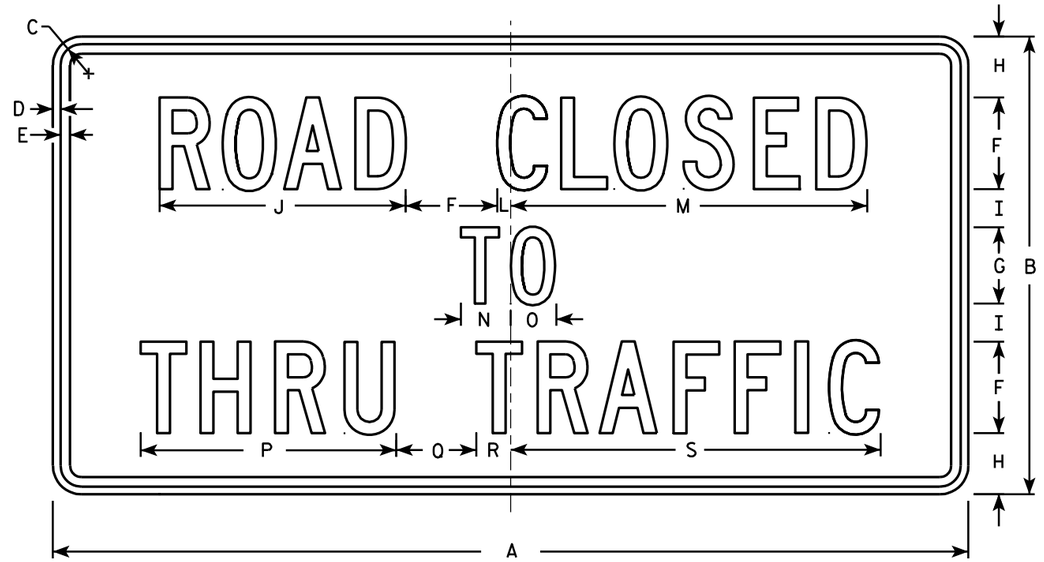
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 1/4	3/8	3/8	4	3	2	11 1/4	3	1 1/8	15 3/8	2	3 3/4	8 1/4	5/8		1 3/8	13 1/4	8 3/8	7/8	10 1/2	7 1/8				4.5
2S	60	30	1 3/8	1/2	5/8	6	5	3 1/2	16 7/8	5	1 3/8	23 1/4	3	6 1/4	13 5/8	1 1/8		1 7/8	22 1/8	14	1 1/2	17 1/2	11 7/8				12.5
2M	60	30	1 3/8	1/2	5/8	6	5	3 1/2	16 7/8	5	1 3/8	23 1/4	3	6 1/4	13 5/8	1 1/8		1 7/8	22 1/8	14	1 1/2	17 1/2	11 7/8				12.5
3																											
4																											
5																											

STANDARD SIGN
R11-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer
DATE 6/14/2021 PLATE NO. R11-3.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 122	E



R11-4

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																											
2S	60	30	1 3/8	1/2	5/8	6	5	4	2 1/2	16 1/8		7/8	23 3/8	3 1/4	3	16 3/4	5 1/4	2 1/4	24 1/4								12.5
2M	60	30	1 3/8	1/2	5/8	6	5	4	2 1/2	16 1/8		7/8	23 3/8	3 1/4	3	16 3/4	5 1/4	2 1/4	24 1/4								12.5
3																											
4																											
5																											

STANDARD SIGN
R11 - 4

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-4.3

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 123 | E

R12-1

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 - 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. Lines 1, 2 & 3 are series E
   Lines 4, 5, & 6 are series D.
6. Substitute appropriate numeral and optically adjust spacing to achieve proper balance.
7. Substitute name of county or town on County Trunk and Town Highways respectively. Community name on City or Village Streets including Connecting Highways is optional.

* Varies (see note 6)

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	24	30	1 1/8	3/8	1/2	3	6	4	3	1 1/4	2 1/4	1 3/8	3/4	1/2	1 7/8	9	9 1/2	6	6 1/2	7 1/8	6 7/8	3 1/4	3 5/8	7 3/4			5.0
2S	24	30	1 1/8	3/8	1/2	3	6	4	3	1 1/4	2 1/4	1 3/8	3/4	1/2	1 7/8	9	9 1/2	6	6 1/2	7 1/8	6 7/8	3 1/4	3 5/8	7 3/4			5.0
2M	24	30	1 1/8	3/8	1/2	3	6	4	3	1 1/4	2 1/4	1 3/8	3/4	1/2	1 7/8	9	9 1/2	6	6 1/2	7 1/8	6 7/8	3 1/4	3 5/8	7 3/4			5.0
3	36	48	1 3/8	1/2	5/8	6	10	8	4 1/2	2 1/2	2 1/4	1 1/2	3/4	1/2	3	13 1/2	14 1/4	9	9 3/4	10 5/8	10 1/4	3 1/4	3 5/8	7 3/4			12.0
4	48	60	2 1/4	3/4	1	6	12	8	6	2 1/2	4 1/2	2 3/4	1 1/2	1	3 3/4	18	19	12	13	14 1/4	13 3/4	6 1/2	7 1/4	15 1/2			20.0
5																											

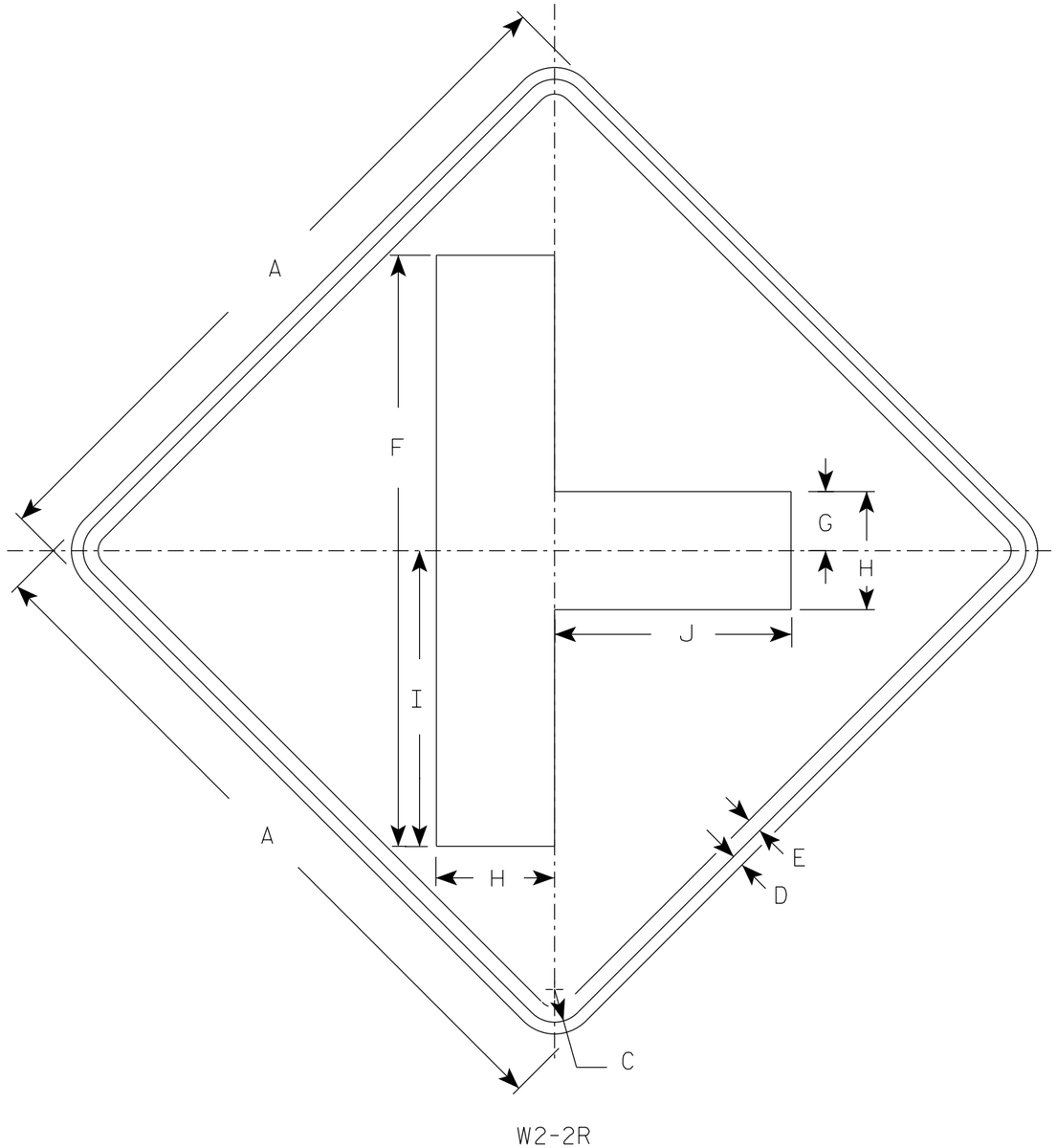
STANDARD SIGN
R12-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R12-1.8

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 124 | E



W2-2R

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Yellow
   Message - Black
3. W2-2L same as W2-2R but is rotated 180° when mounted.

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	24		1 1/8	3/8	1/2	20	2	4	10	8																	4.0
2S	30		1 3/8	1/2	5/8	25	2 1/2	5	12 1/2	10																	6.25
2M	30		1 3/8	1/2	5/8	25	2 1/2	5	12 1/2	10																	6.25
3	36		1 5/8	5/8	3/4	30	3	6	15	12																	9.0
4	48		2 1/4	3/4	1	40	4	8	20	16																	16.0
5																											

STANDARD SIGN

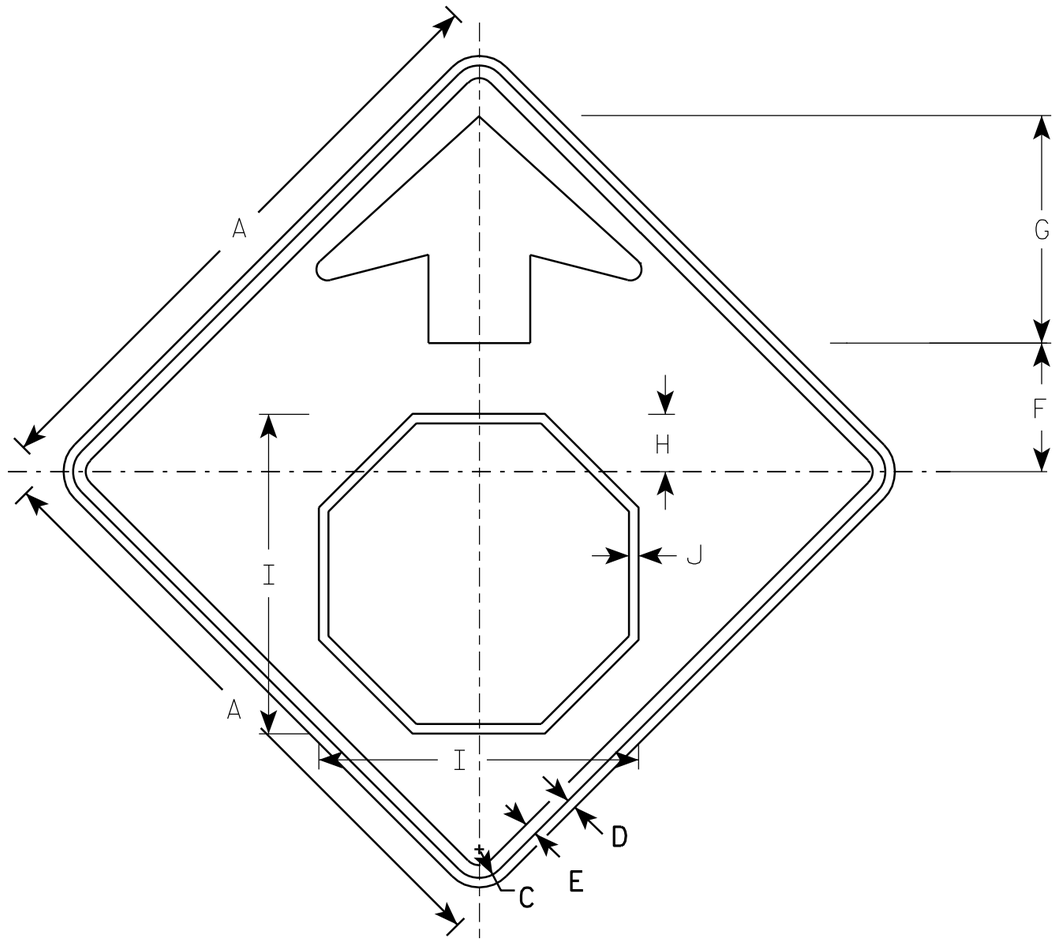
W2-2 L&R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 11/18/2021 PLATE NO. W2-2.7

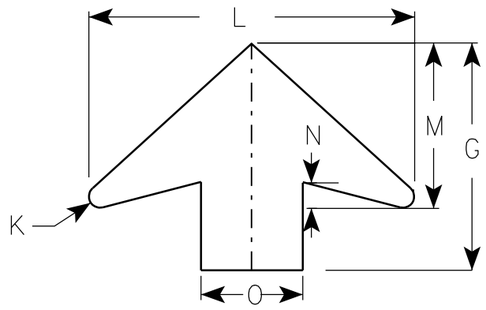
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 125 | E



W3-1

NOTES

1. All Signs Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - YELLOW
   Arrow & Border - BLACK
   Stop Symbol - WHITE BORDER ON RED 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	30		1 3/8	1/2	5/8	6 1/4	11 1/4	2 7/8	15 3/4	1/2	1/2	16	8	1 1/4	5												6.25
2S	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
2M	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
3	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
4	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0
5	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0

STANDARD SIGN
W3-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W3-1.12

PROJECT NO:

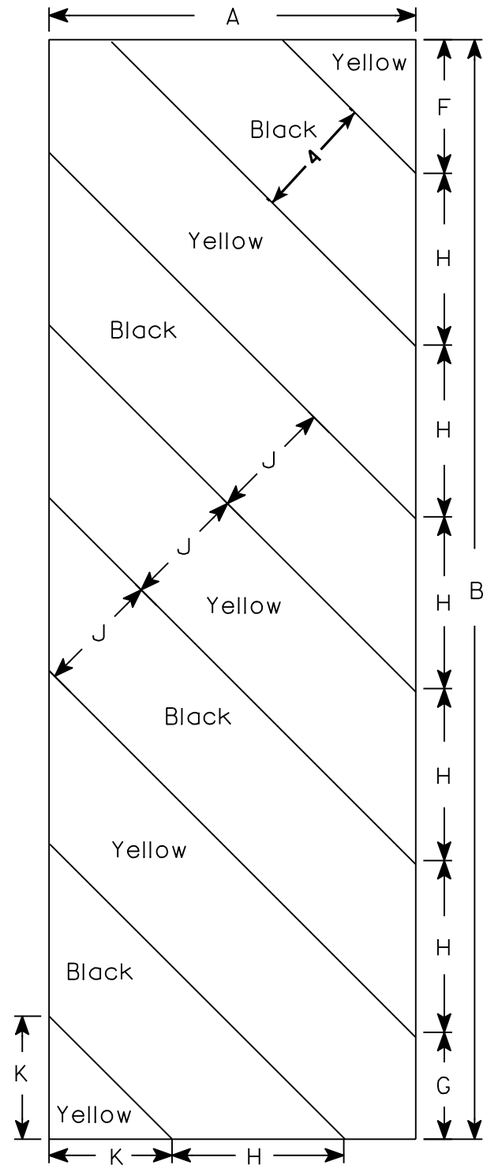
SHEET NO: 126 E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W31.DGN PLOT DATE : 07-JUN-2010 12:59 PLOT BY : ditjph

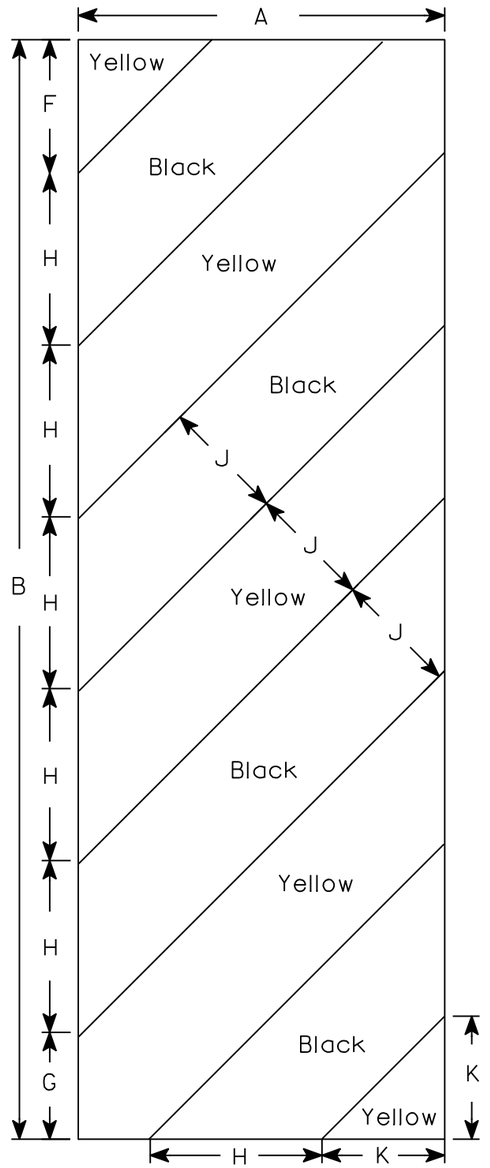
WISDOT/CADDS SHEET 42

7

7



W5-52L



W5-52R

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.
4. Alternate colors of stripes as shown.

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	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
2M	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
3	18	54				6	5 1/2	8 1/2	45°	6	6 9/16																6.75
4																											
5																											

STANDARD SIGN

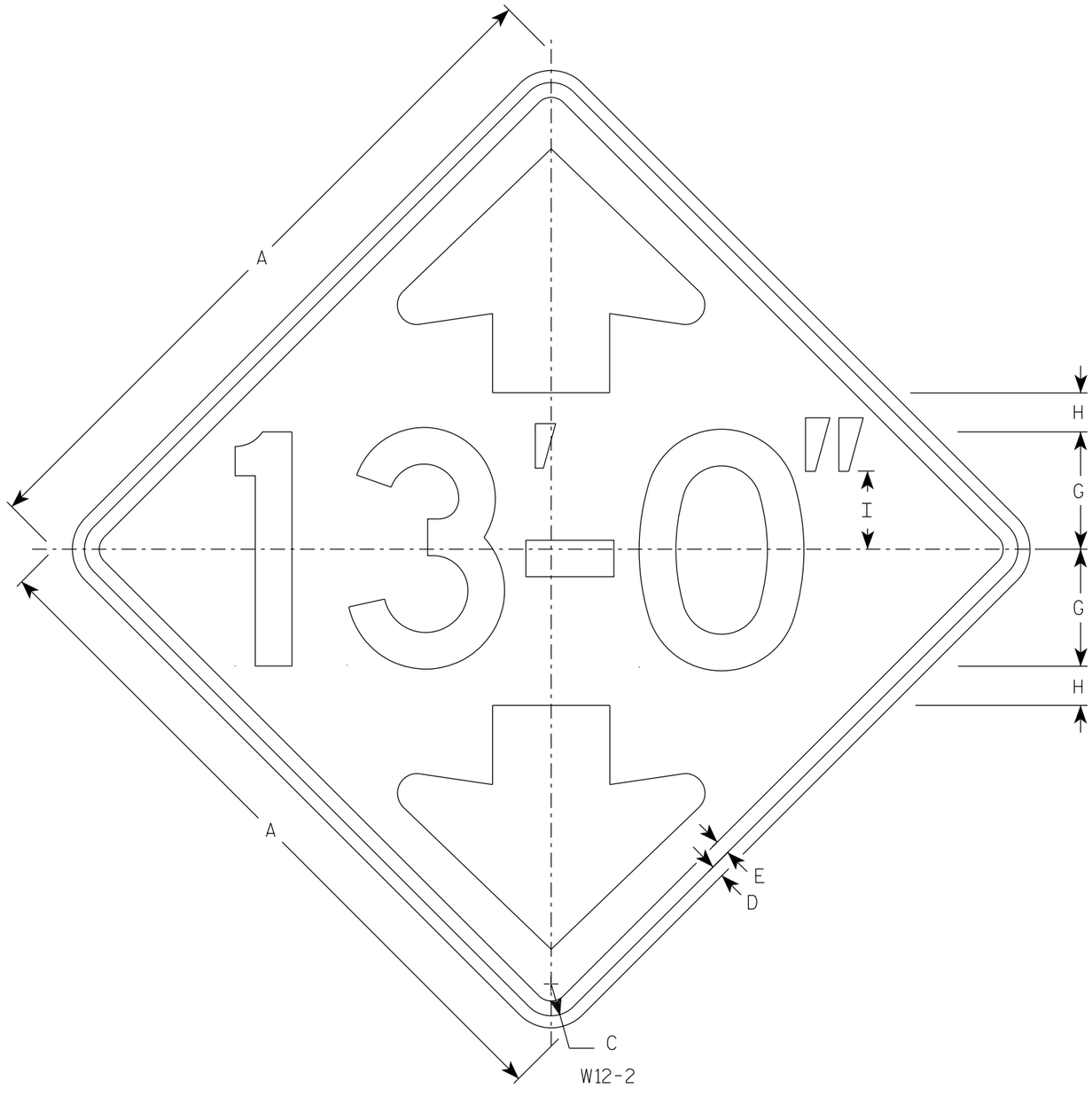
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

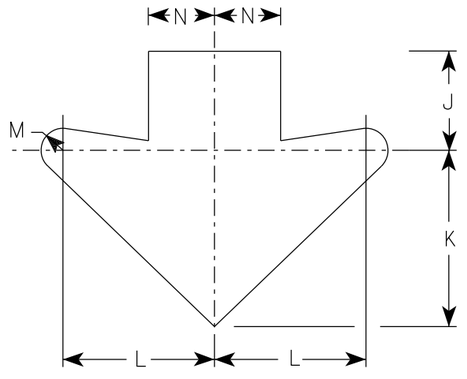
DATE 5/29/12 PLATE NO. W5-52.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 127	E

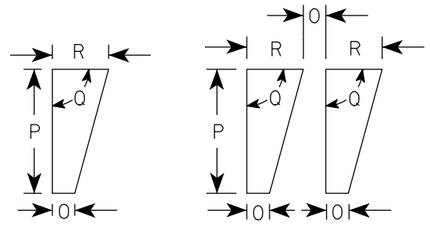


NOTES

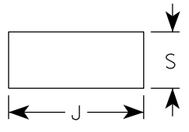
1. Sign is Type II - Type F Reflective
2. Color:
   Background - Yellow
   Message - Black
3. Message Series - D
4. Substitute appropriate numerals and optically adjust spacing of numerals, hyphen, foot & inch marks to achieve proper balance.



Arrow Detail



Foot Mark & Inch Mark Detail



Hyphen 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	30		1 3/8	1/2	5/8		5	1 5/8	3 3/8	3 3/4	6 5/8	5 3/4	3/4	2 1/2	1/2	2 1/4	90°	1	1 5/8								6.25
2S	36		1 5/8	5/8	3/4		6	2	4	4 1/2	8	6 7/8	1	3	1/2	2 3/4	90°	1 1/4	1 7/8								9.00
2M	36		1 5/8	5/8	3/4		6	2	4	4 1/2	8	6 7/8	1	3	1/2	2 3/4	90°	1 1/4	1 7/8								9.00
3	36		1 5/8	5/8	3/4		6	2	4	4 1/2	8	6 7/8	1	3	1/2	2 3/4	90°	1 1/4	1 7/8								9.00
4	36		1 5/8	5/8	3/4		6	2	4	4 1/2	8	6 7/8	1	3	1/2	2 3/4	90°	1 1/4	1 7/8								9.00
5	48		2 1/4	3/4	1		8	2 5/8	5 1/2	5 7/8	10 5/8	9 1/4	1 3/8	4	5/8	3 5/8	90°	1 5/8	2 1/2								16.00

STANDARD SIGN
W12-2

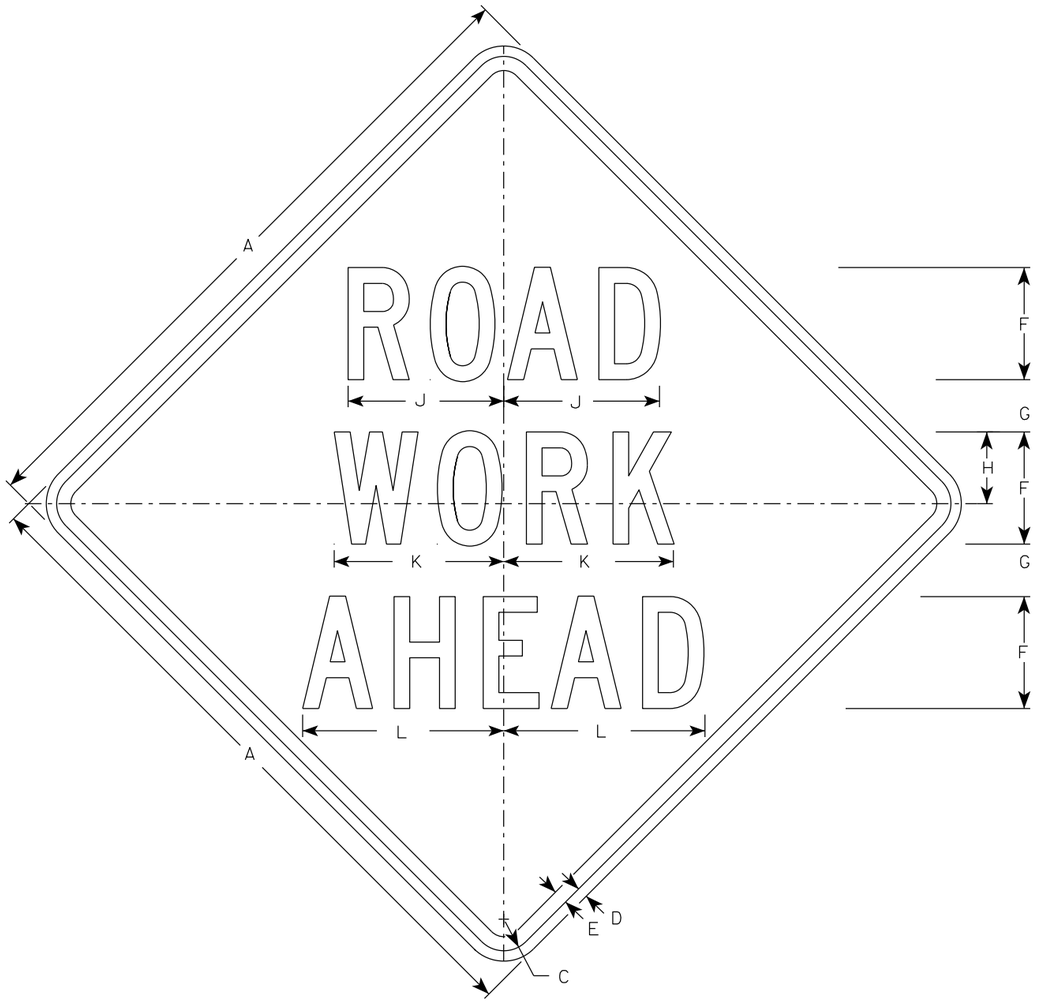
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

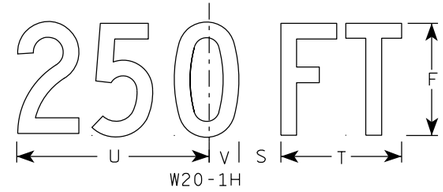
DATE 12/06/2021 PLATE NO. W12-2.10

PROJECT NO:	HWY:	COUNTY:	SHEET NO: E

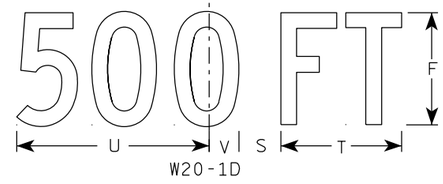
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W122.dgn PLOT DATE : 06-DEC 2021 11:05 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42



W20-1A

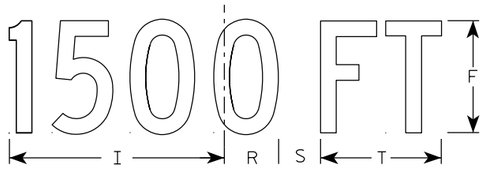


W20-1H



W20-1D

W20-1C

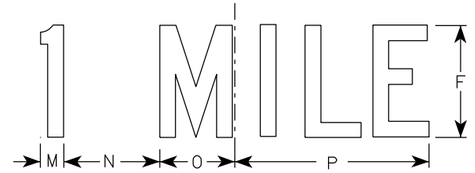


W20-1B

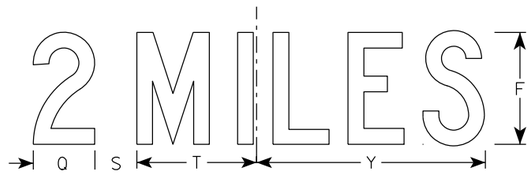
NOTES

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.

W20-1G



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

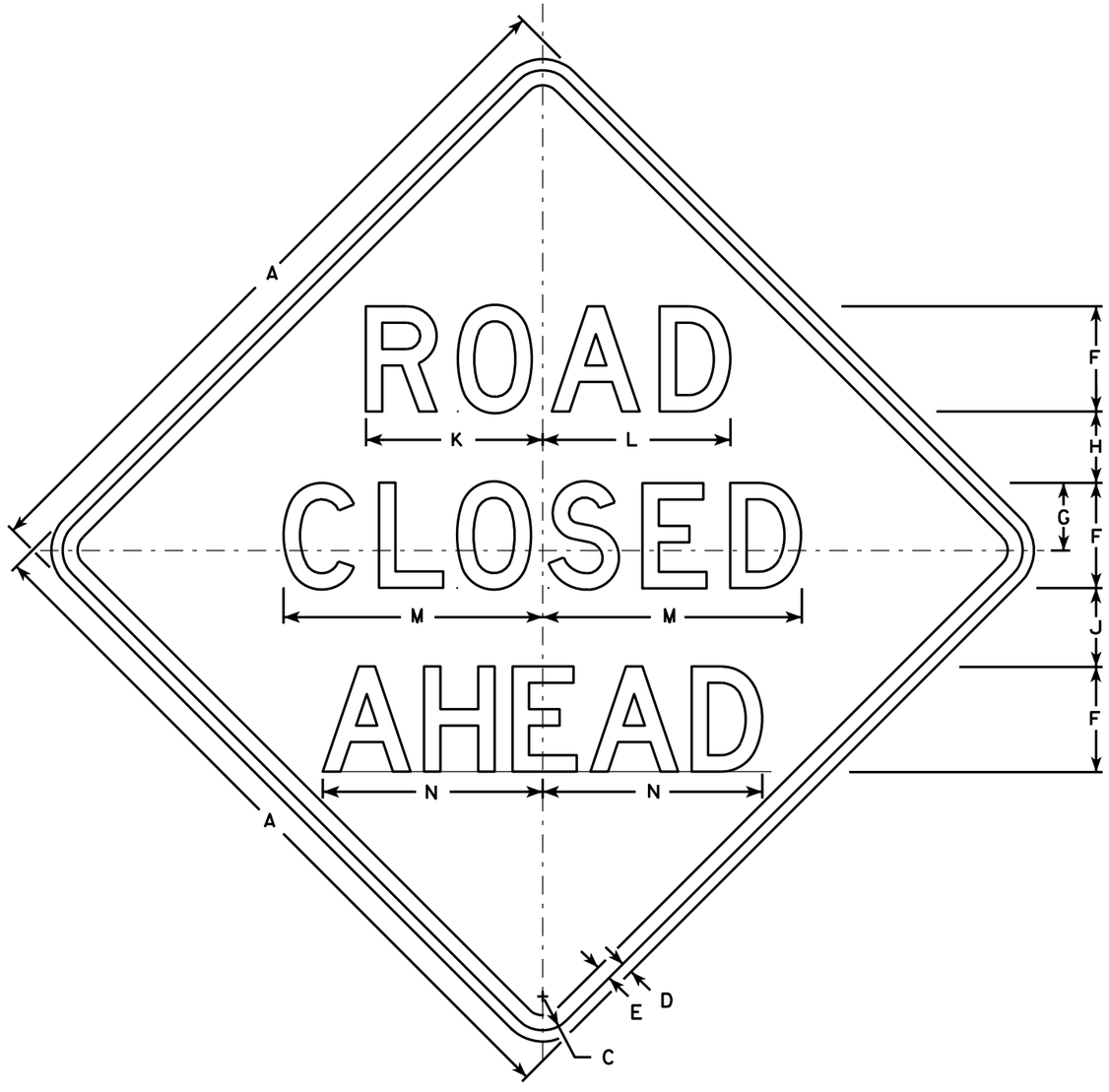
PROJECT NO:

SHEET NO: E

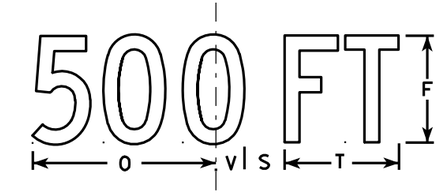
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W201.DGN PLOT DATE : 25-MARCH-2020 PLOT BY : dotc4c

WISDOT/CADDS SHEET 42

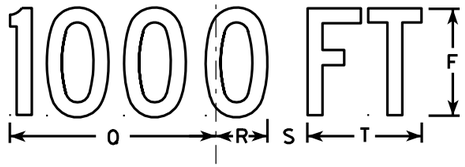
7



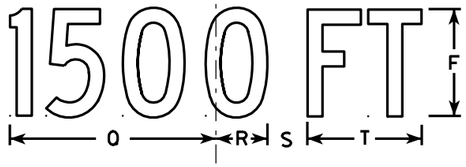
W20-3A



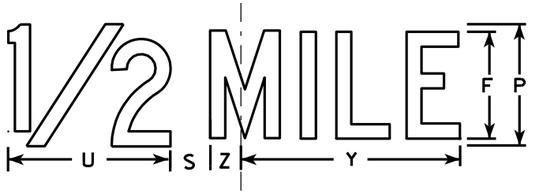
W20-3D



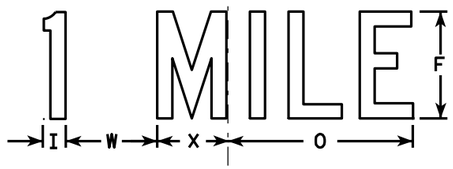
W20-3C



W20-3B



W20-3G



W20-3F

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 - 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. Lines 1 and 2 are Series D.
   Line 3 is Series D for AHEAD and Series C for all other distances.

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	3 3/8	3 1/2	1 1/8	4	8 3/8	8 7/8	12 1/2	11	9	6	10 1/8	2 1/2	1 7/8	5 5/8	8	1 3/8	4 1/2	3 1/2	10 3/4	1 3/4	9.0
2S	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
2M	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
3	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
4	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
5	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0

STANDARD SIGN
W20-3A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer
DATE 3/18/11 PLATE NO. W20-3.7

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 130 | E

EARTHWORK - MAINLINE

STATION	AREA (SF) CUT	AREA (SF) FILL	INCREMENTAL VOLUME (CY) CUT NOTE 1	INCREMENTAL VOLUME (CY) FILL NOTE 3	INCREMENTAL VOLUME (CY) FILL (25%) NOTE 5	CUMULATIVE VOLUME (CY) CUT 1.00 NOTE 1	CUMULATIVE VOLUME (CY) FILL NOTE 3	CUMULATIVE VOLUME (CY) FILL (25%) NOTE 5	CUMULATIVE VOLUME (CY) MASS ORDINATE NOTE 6
105+50	0	0	0	0	0	0	0	0	0
106+00	86	2	80	2	3	80	0	3	77
107+00	93.4	0	332	4	5	412	4	8	404
108+00	112.2	0	381	0	0	793	4	8	785
109+00	122	0	434	0	0	1227	4	8	1219
110+00	155	0	513	0	0	1740	4	8	1732
111+00	165	0	593	0	0	2333	4	8	2325
112+00	100	4	491	7	9	2824	11	17	2807
113+00	55	9.3	287	25	31	3111	36	48	3063
114+00	65	10	222	36	45	3333	72	93	3240
115+00	102	20	309	56	70	3642	128	163	3479
115+27	135	0	118	10	12	3760	138	175	3585
MAINLINE COLUMN SUBTOTALS =			3760	140	175	3760	138	175	3585

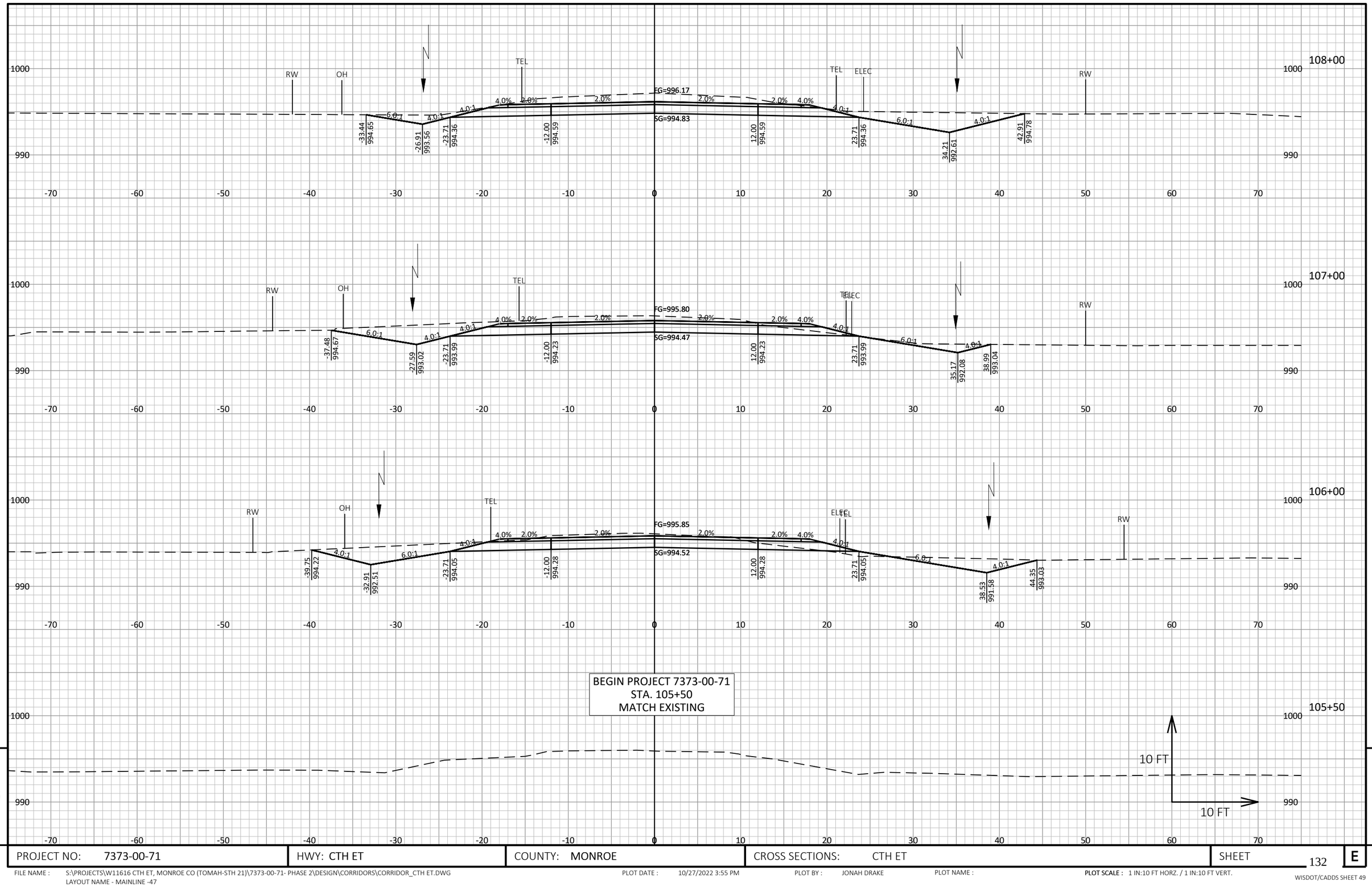
EARTHWORK - STH 21

STATION	AREA (SF) CUT	AREA (SF) FILL	INCREMENTAL VOLUME (CY) CUT NOTE 1	INCREMENTAL VOLUME (CY) FILL NOTE 3	INCREMENTAL VOLUME (CY) FILL (25%) NOTE 5	CUMULATIVE VOLUME (CY) CUT 1.00 NOTE 1	CUMULATIVE VOLUME (CY) FILL NOTE 3	CUMULATIVE VOLUME (CY) FILL (25%) NOTE 5	CUMULATIVE VOLUME (CY) MASS ORDINATE NOTE 6
599'E'+60	10	1	0	0	0	0	0	0	0
600'E'+00	11	0	16	1	1	16	1	1	15
600'E'+50	12	0	21	0	0	37	1	1	36
601'E'+00	20	0	30	0	0	67	1	1	66
601'E'+00	4	0	0	0	0	67	1	1	66
601'E'+50	4	0	7	0	0	74	1	1	73
602'E'+00	14	0	17	0	0	91	1	1	90
602'E'+50	14	0	26	0	0	117	1	1	116
602'E'+50	17	25	0	0	0	117	1	1	116
603'E'+00	10	20	25	42	53	142	43	54	88
603'E'+45	0	0	8	17	21	150	60	75	75
COLUMN SUBTOTALS =			150	60	75	150	60	75	75

EARTHWORK SUMMARY

CATEGORY	STATION - STATION	LOCATION	205.0100 COMMON N CUT (1) (CY)	AVAILABLE MATERIAL (CY) (2)	UNEXPANDED FILL (CY)	EXPANDED FILL (CY) FACTOR 1.25 (3)	MASS ORDINATE +/- (CY) (4)	WASTE (CY)
010	105+50 - 115+26.95	MAINLINE	3760	3760	140	175	3585	3585
	599+60 - 603+45	STH 21	150	150	60	75	75	75
		SUBTOTALS =	3910	3910	200	250	3660	3660
		TOTALS =	3910	3910	200	250	3660	3660

NOTES:
1.) SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN CUT
2.) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSABLE PAVEMENT MATERIAL
3.) EXPANDED FILL FACTOR 1.25: EXPANDED FILL = UNEXPANDED FILL*1.25
4.) THE MASS ORDINATE+ OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE CATEGORY. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE CATEGORY

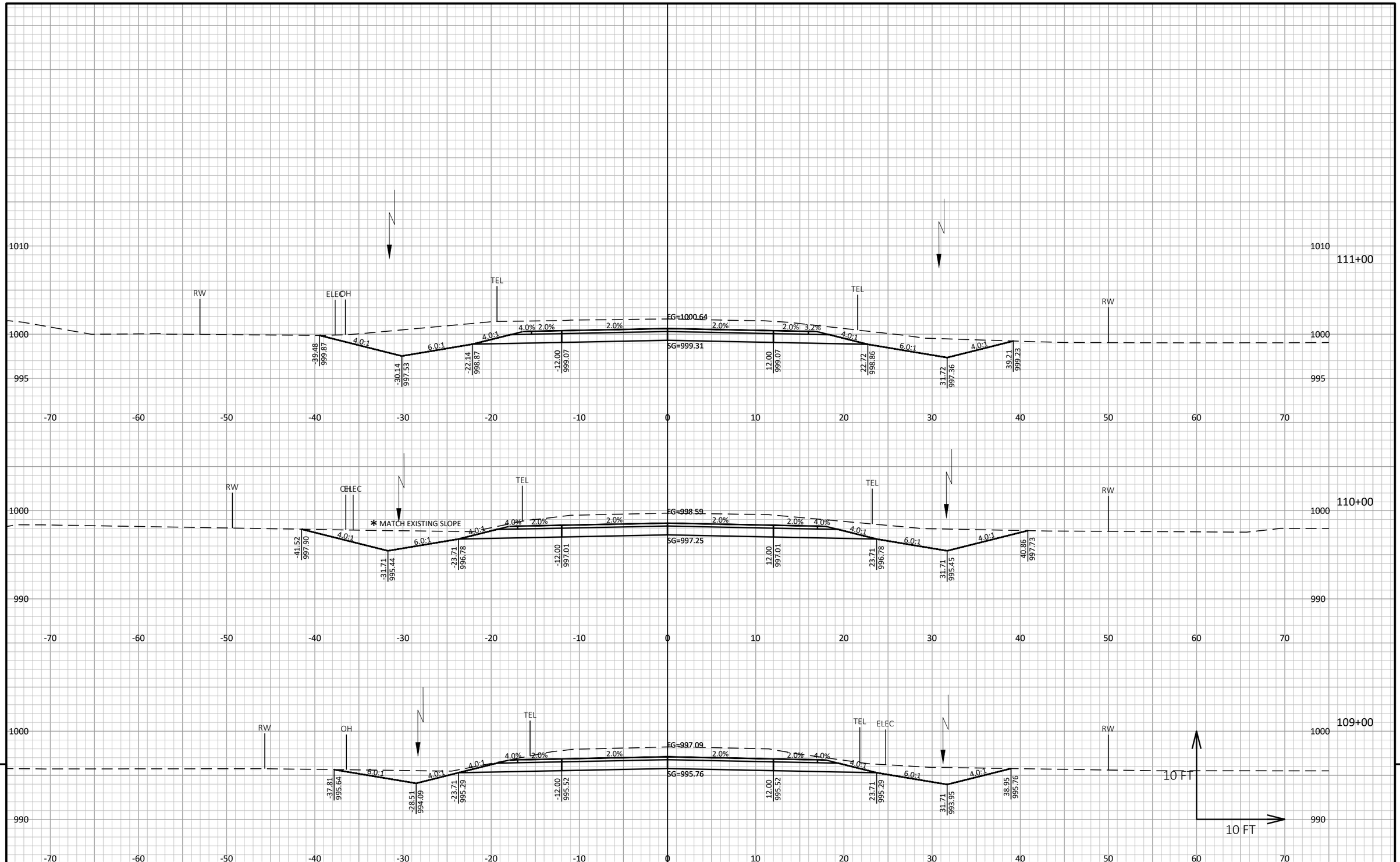


PROJECT NO: 7373-00-71	HWY: CTH ET	COUNTY: MONROE	CROSS SECTIONS: CTH ET	SHEET 132	E

FILE NAME : S:\PROJECTS\W11616 CTH ET, MONROE CO (TOMAH-STH 21)\7373-00-71- PHASE 2\DESIGN\CORRIDORS\CORRIDOR_CTH ET.DWG
LAYOUT NAME - MAINLINE -47

PLOT DATE : 10/27/2022 3:55 PM PLOT BY : JONAH DRAKE PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

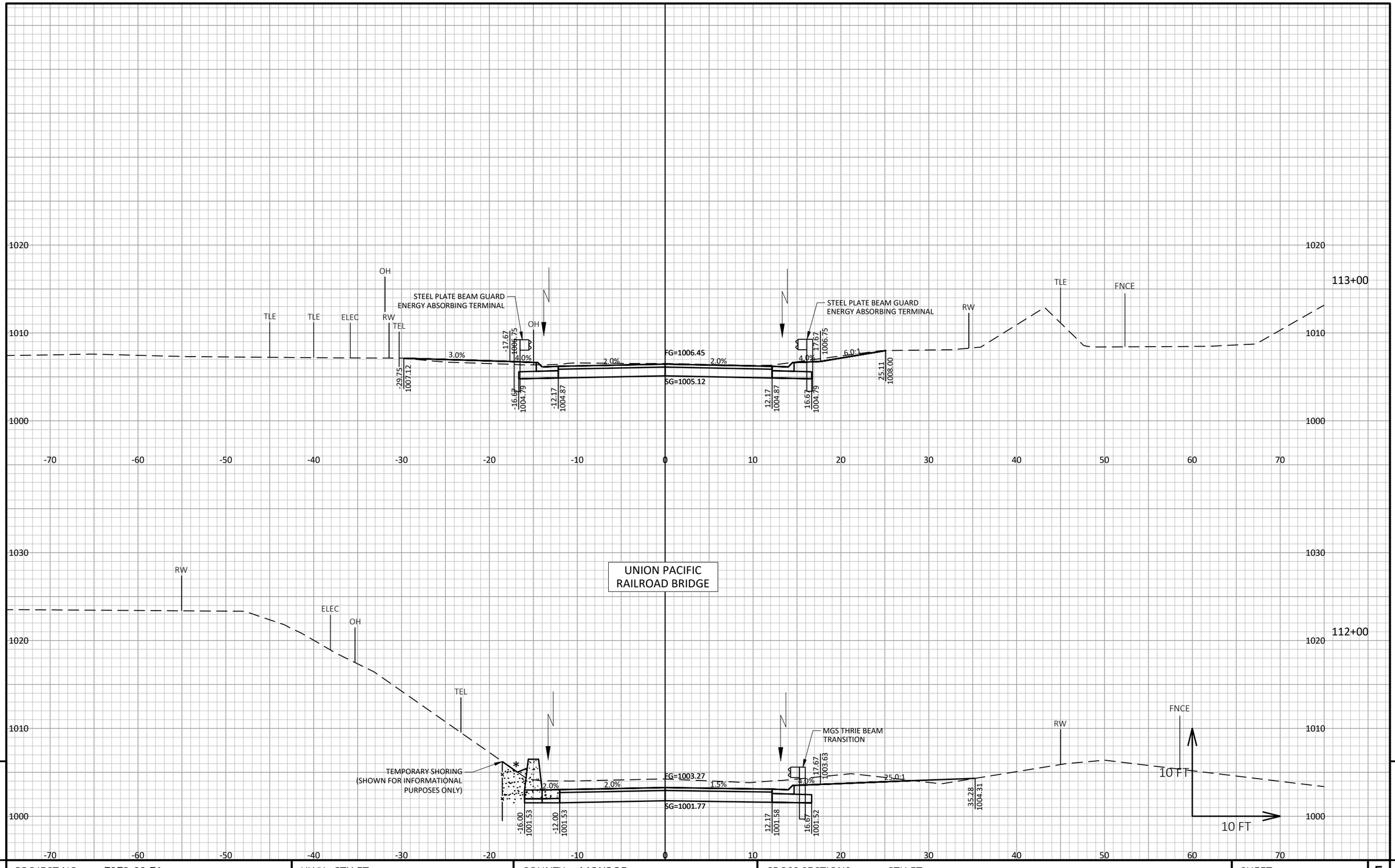


PROJECT NO: 7373-00-71	HWY: CTH ET	COUNTY: MONROE	CROSS SECTIONS: CTH ET	SHEET 133 E

FILE NAME : S:\PROJECTS\W11616 CTH ET, MONROE CO (TOMAH-STH 21)\7373-00-71- PHASE 2\DESIGN\CORRIDORS\CORRIDOR_CTH ET.DWG
LAYOUT NAME - MAINLINE -48

PLOT DATE : 10/27/2022 3:55 PM PLOT BY : JONAH DRAKE PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 7373-00-71	HWY: CTH ET	COUNTY: MONROE	CROSS SECTIONS: CTH ET	SHEET 134	E

FILE NAME : S:\PROJECTS\W11616 CTH ET, MONROE CO (TOMAH-STH 21)\7373-00-71- PHASE 2\DESIGN\CORRIDORS\CORRIDOR_CTH ET.DWG
LAYOUT NAME - MAINLINE -49

PLOT DATE : 10/27/2022 3:55 PM PLOT BY : JONAH DRAKE PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

END PROJECT 7373-00-71
STA. 115+26.95
MATCH 'E'-LINE (STH 21)

115+27

SAWING ASPHALT REQ'D.
OH
GAS
0.8%
0.8%
FG=1015.10
0.1%
0.1%
VARIES
FG=1013.77
-59.38 1014.25
-12.00 1013.86
12.00 1013.78
36.43 1013.82
43.93 1013.67
64.37 1014.05
MATCH LINE STA. 602'E'+50 ('E'-LINE)

115+00

OH
GAS
OH
4.0%
2.0%
2.0%
FG=1014.05
2.0%
2.0%
4.0%
4.0:1
SG=1012.72
-44.60 1014.17
-37.60 1011.97
-31.35 1012.09
-12.00 1012.48
12.00 1012.48
17.96 1012.36
22.96 1012.26
25.96 1014.31
36.50 1011.68

114+00

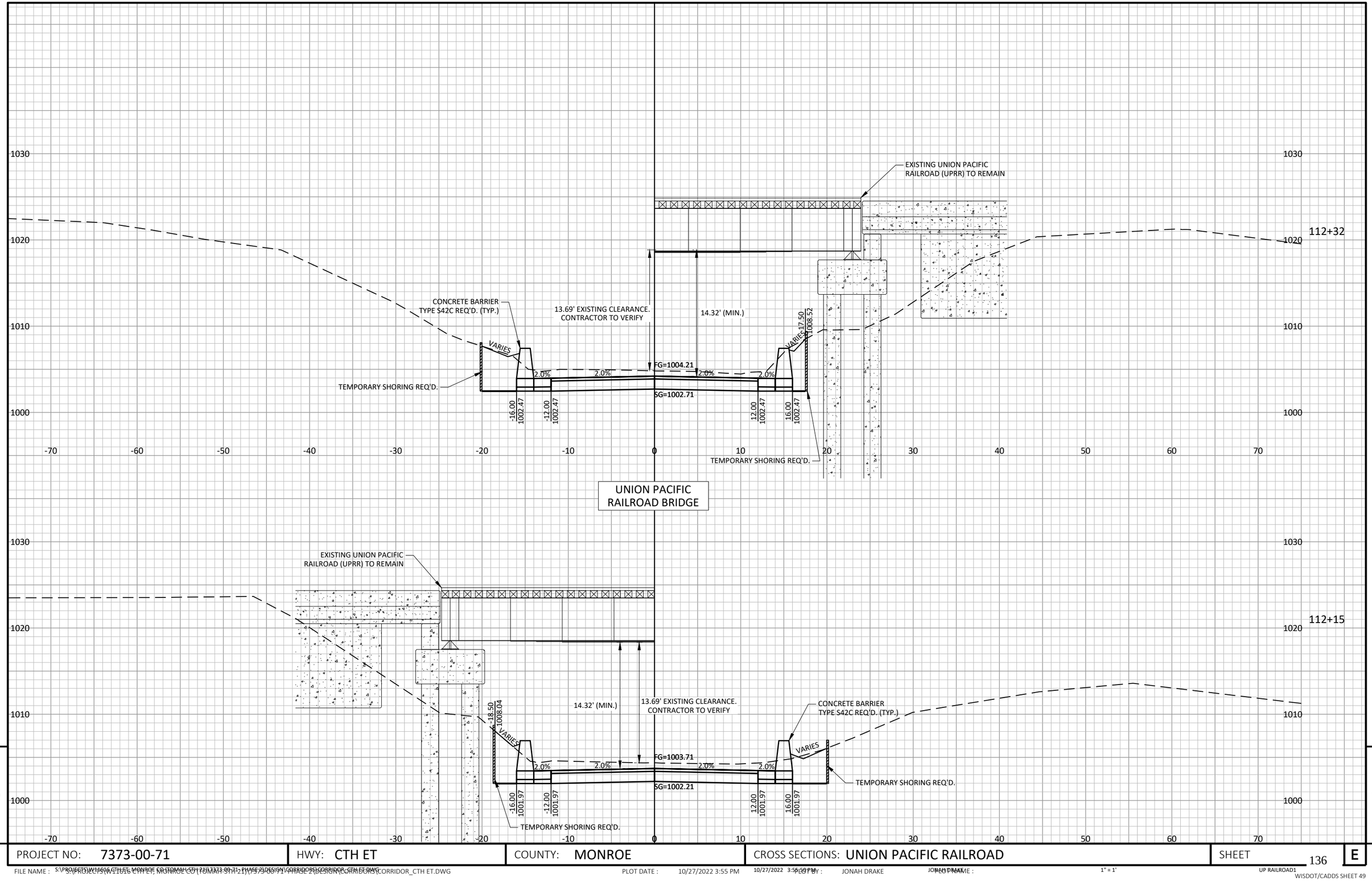
TLE
TEL
ELEC
OH
RW
25.0:1
4.0%
2.0%
2.0%
FG=1010.18
2.0%
2.0%
2.0%
TEL
RW
TLE
HOUSE
5.0:1
SG=1008.85
-36.13 1010.98
-21.67 1010.40
-20.01 1008.43
-16.17 1008.52
-12.00 1008.61
12.00 1008.61
14.94 1008.55
19.44 1008.46
20.44 1010.37
31.69 1012.62
10 FT
10 FT

1020
1010
1000
-70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70

9

PROJECT NO: 7373-00-71	HWY: CTH ET	COUNTY: MONROE	CROSS SECTIONS: CTH ET	SHEET 135	E

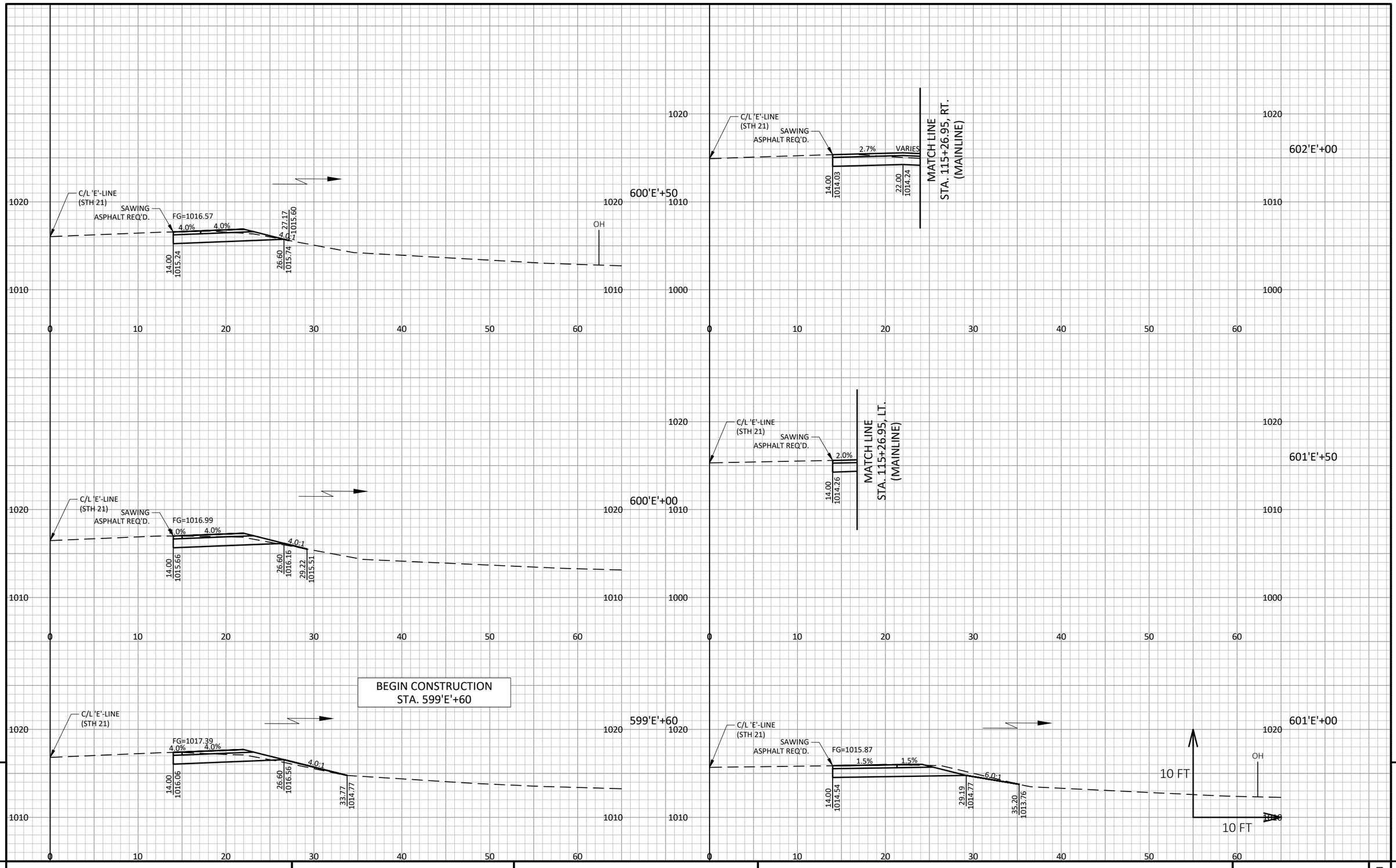
FILE NAME : S:\PROJECTS\W11616 CTH ET, MONROE CO (TOMAH-STH 21)\7373-00-71- PHASE 2\DESIGN\CORRIDORS\CORRIDOR_CTH ET.DWG
LAYOUT NAME - MAINLINE -50
PLOT DATE : 10/27/2022 3:55 PM
PLOT BY : JONAH DRAKE
PLOT NAME :
PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.
WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 7373-00-71	HWY: CTH ET	COUNTY: MONROE	CROSS SECTIONS: UNION PACIFIC RAILROAD	SHEET 136	E



9

9

PROJECT NO: 7373-00-71	HWY: CTH ET	COUNTY: MONROE	CROSS SECTIONS: STH 21	SHEET 137	E

FILE NAME : S:\PROJECTS\W11616 CTH ET, MONROE CO (TOMAH-STH 21)\7373-00-71- PHASE 2\DESIGN\CORRIDORS\CORRIDOR_CTH ET.DWG
LAYOUT NAME - STH 21 - 1

PLOT DATE : 10/27/2022 3:55 PM PLOT BY : JONAH DRAKE PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

END CONSTRUCTION
STA. 603'E'+45

603'E'+45

C/L 'E'-LINE
(STH 21)

1020
1010
1000

0 10 20 30 40 50 60

C/L 'E'-LINE
(STH 21)
SAWING
ASPHALT REQ'D.
FG=1014.53
3.4%
3.4%
4.0:1
OH
14.00
1013.19
26.69
1013.68
41.30
1009.97

603'E'+00

C/L 'E'-LINE
(STH 21)
SAWING
ASPHALT REQ'D.
FG=1014.88
2.7%
2.7%
4.0:1
GAS
14.00
1013.54
32.13
1014.03
46.66
1010.40

602'E'+50

10 FT
10 FT

9

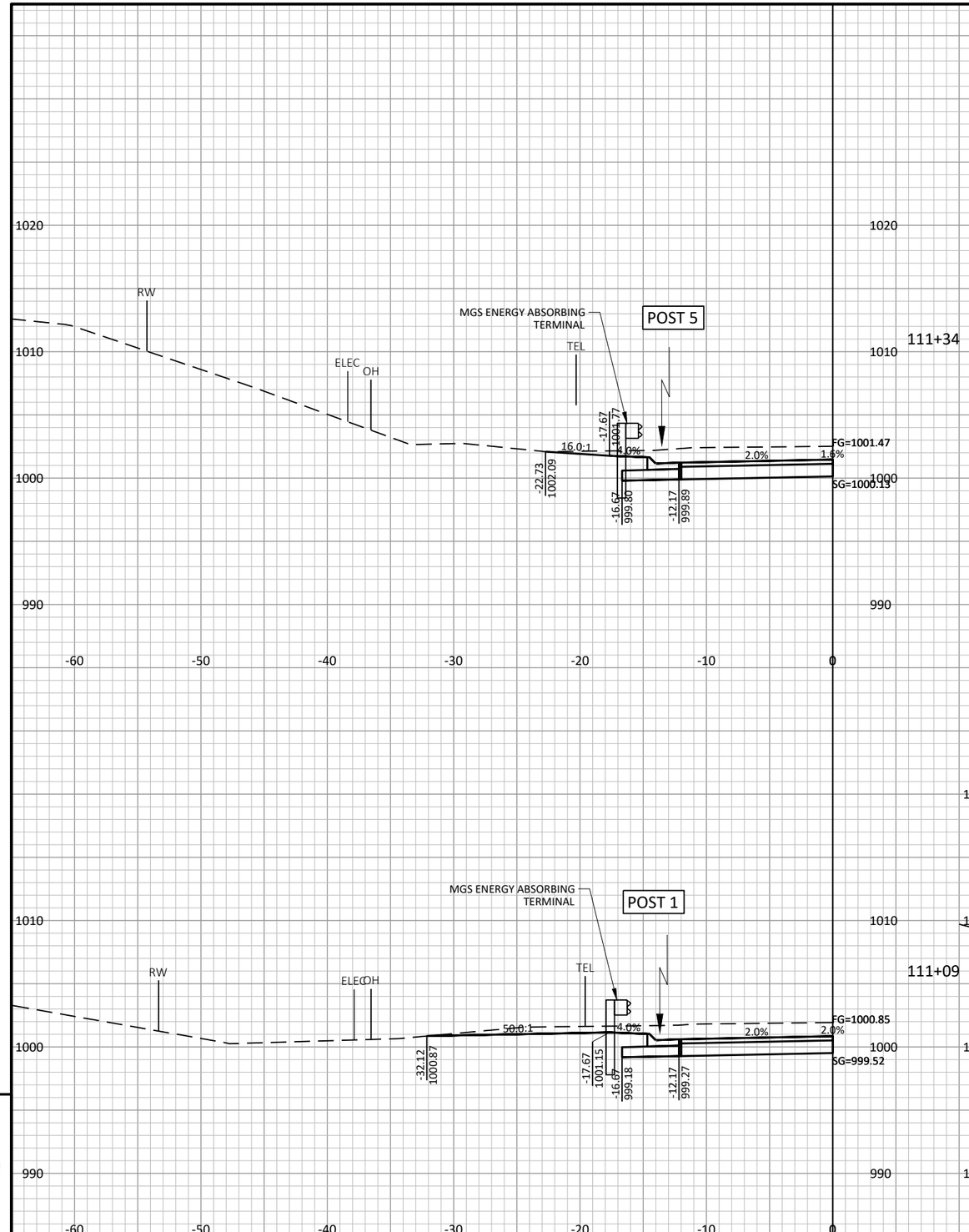
9

PROJECT NO: 7373-00-71	HWY: CTH ET	COUNTY: MONROE	CROSS SECTIONS: STH 21	SHEET 138	E

FILE NAME : S:\PROJECTS\W11616 CTH ET, MONROE CO (TOMAH-STH 21)\7373-00-71- PHASE 2\DESIGN\CORRIDORS\CORRIDOR_CTH ET.DWG
LAYOUT NAME - STH 21 - 2

PLOT DATE : 10/27/2022 3:56 PM PLOT BY : JONAH DRAKE PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



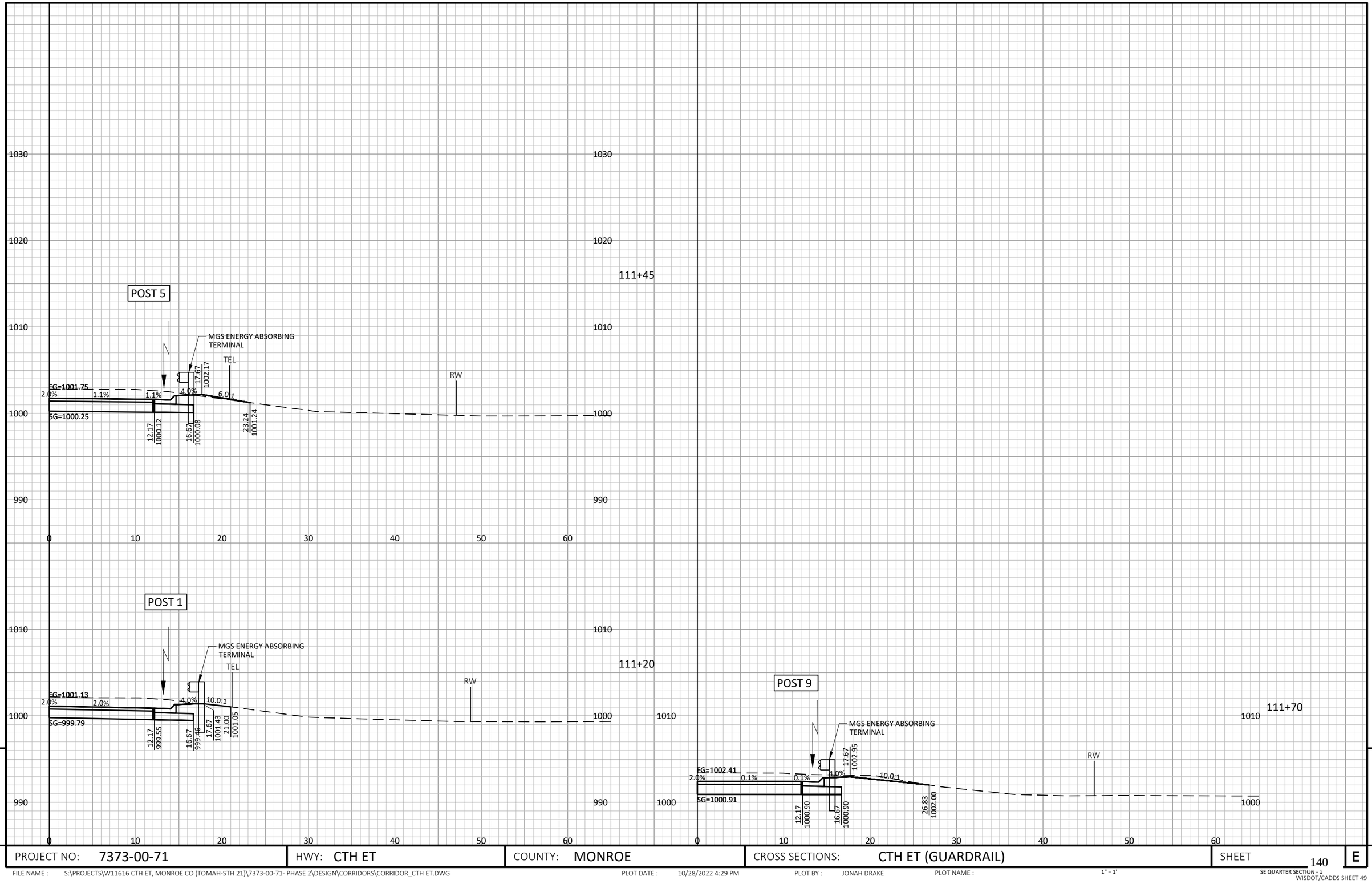
9

9

PROJECT NO: 7373-00-71	HWY: CTH ET	COUNTY: MONROE	CROSS SECTIONS: CTH ET (GUARDRAIL)	SHEET 139	E

FILE NAME : S:\PROJECTS\W11616 CTH ET, MONROE CO (TOMAH-STH 21)\7373-00-71- PHASE 2\DESIGN\CORRIDORS\CORRIDOR_CTH ET.DWG PLOT DATE : 10/28/2022 4:29 PM PLOT BY : JONAH DRAKE PLOT NAME : 1" = 1'

SW QUARTER SECTION - 1
WISDOT/CADDS SHEET 49



9

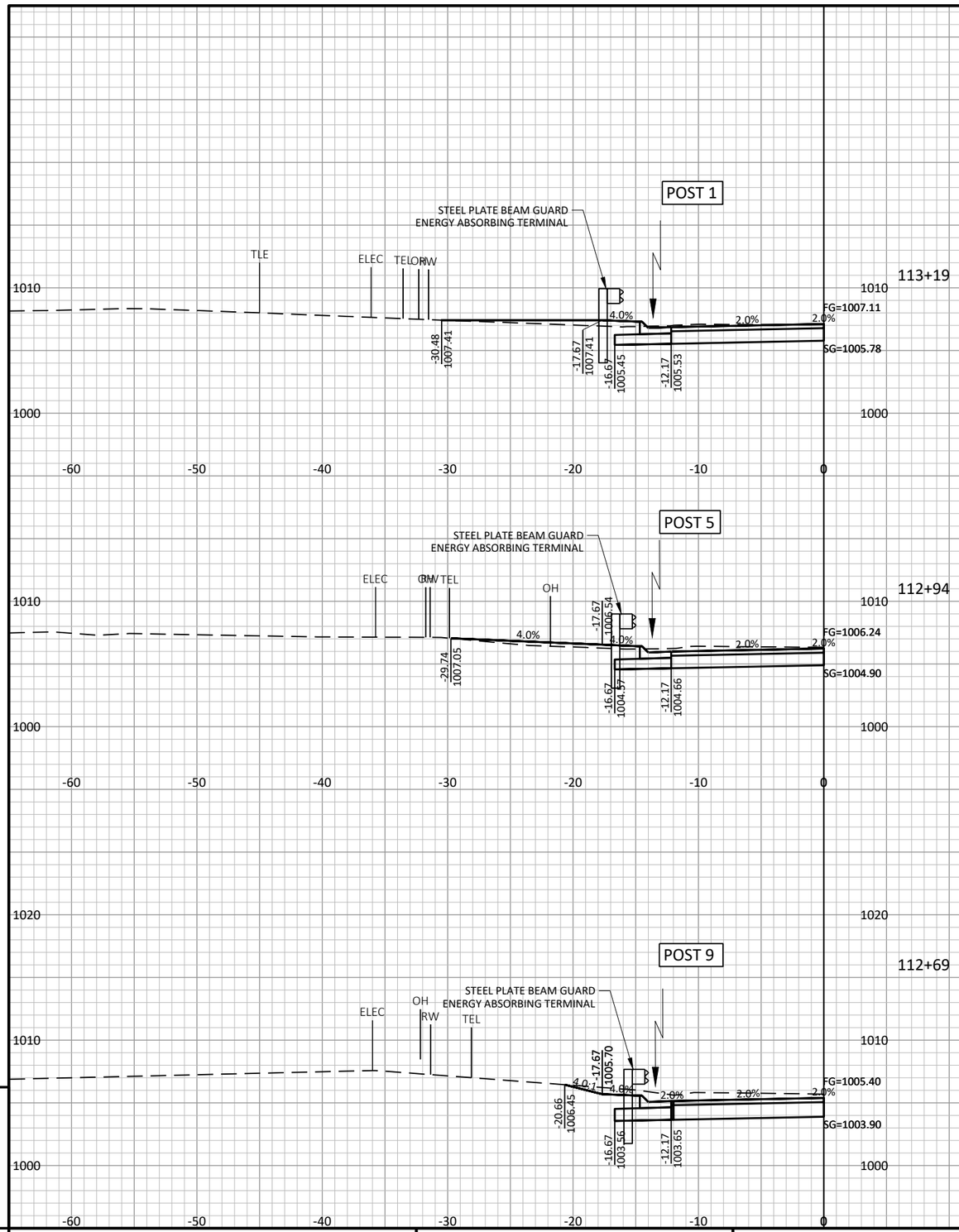
9

PROJECT NO: 7373-00-71	HWY: CTH ET	COUNTY: MONROE	CROSS SECTIONS: CTH ET (GUARDRAIL)	SHEET 140	E

FILE NAME : S:\PROJECTS\W11616 CTH ET, MONROE CO (TOMAH-STH 21)\7373-00-71- PHASE 2\DESIGN\CORRIDORS\CORRIDOR_CTH ET.DWG PLOT DATE : 10/28/2022 4:29 PM PLOT BY : JONAH DRAKE PLOT NAME : 1" = 1'

SE QUARTER SECTION - 1

WISDOT/CADDS SHEET 49



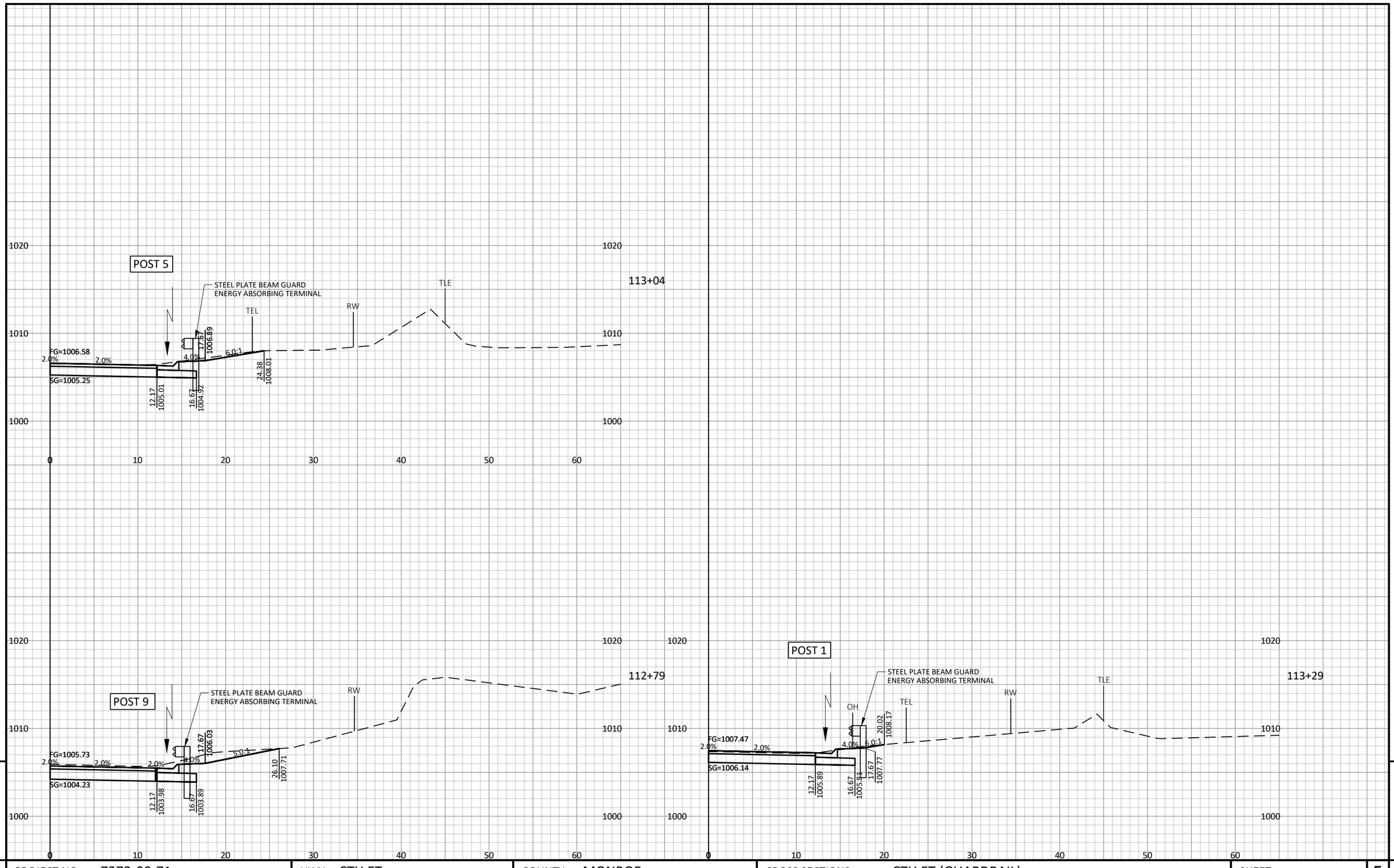
9

9

PROJECT NO: 7373-00-71	HWY: CTH ET	COUNTY: MONROE	CROSS SECTIONS: CTH ET (GUARDRAIL)	SHEET 141	E

FILE NAME : S:\PROJECTS\W11616 CTH ET, MONROE CO (TOMAH-STH 21)\7373-00-71- PHASE 2\DESIGN\CORRIDORS\CORRIDOR_CTH ET.DWG PLOT DATE : 10/31/2022 7:53 AM PLOT BY : JONAH DRAKE PLOT NAME : 1" = 1'

NW QUARTER SECTION - 1
WISDOT/CADDS SHEET 49



9

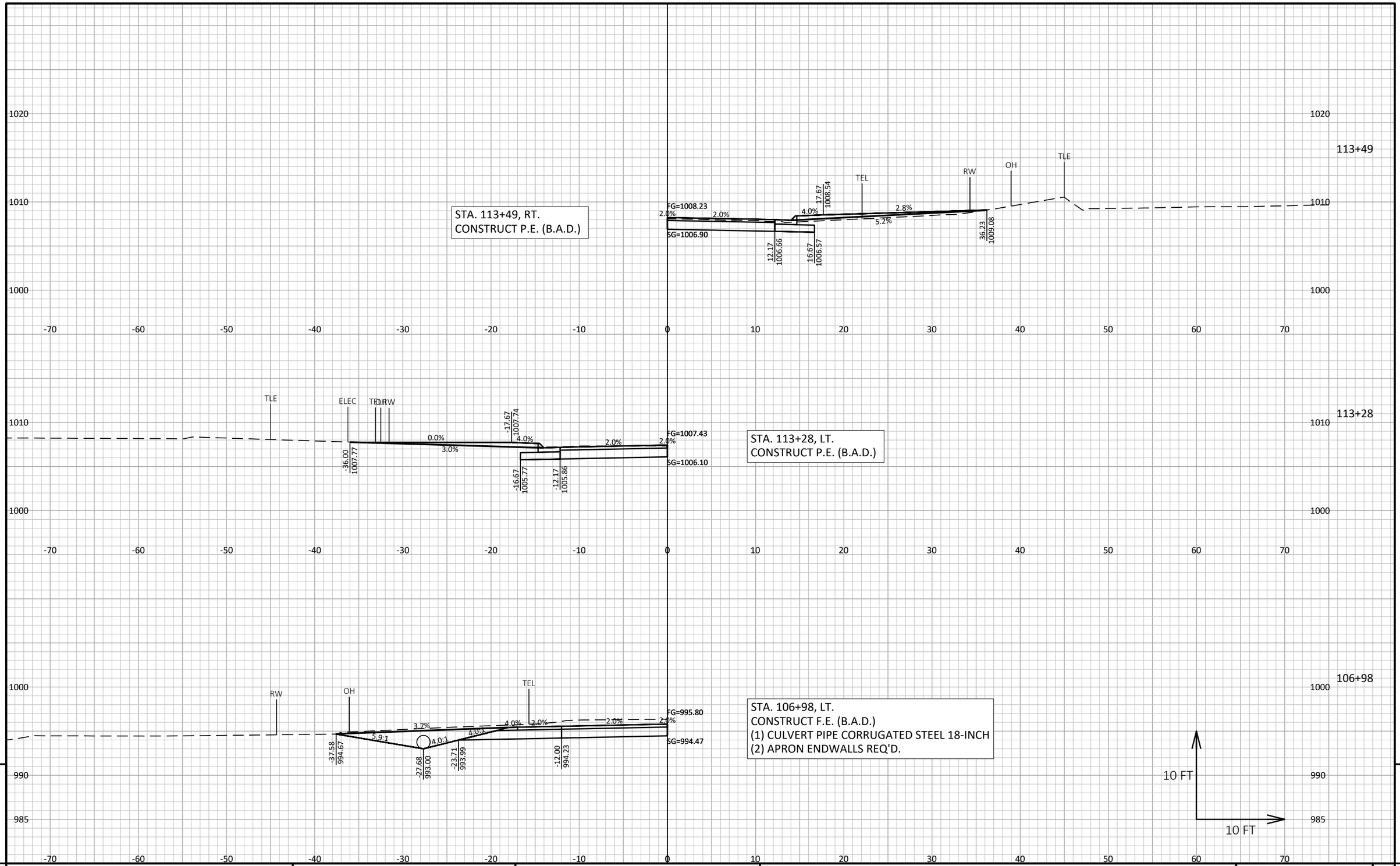
9

PROJECT NO: 7373-00-71	HWY: CTH ET	COUNTY: MONROE	CROSS SECTIONS: CTH ET (GUARDRAIL)	SHEET 142	E

FILE NAME : S:\PROJECTS\W11616 CTH ET, MONROE CO (TOMAH-STH 21)\7373-00-71- PHASE 2\DESIGN\CORRIDORS\CORRIDOR_CTH ET.DWG PLOT DATE : 10/31/2022 7:53 AM PLOT BY : JONAH DRAKE PLOT NAME : 1" = 1'

NE QUARTER SECTION - 1

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 7373-00-71	HWY: CTH ET	COUNTY: MONROE	CROSS SECTIONS: DRIVEWAYS	SHEET 143	E

FILE NAME : S:\PROJECTS\W11616 CTH ET, MONROE CO (TOMAH-STH 21)\7373-00-71- PHASE 2\DESIGN\CORRIDORS\CORRIDOR_CTH ET.DWG
LAYOUT NAME - DRIVEWAY - 12

PLOT DATE : 10/28/2022 1:49 PM PLOT BY : JONAH DRAKE PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov