

LAX

APR 13

PROJECT ID: 5510-00-60

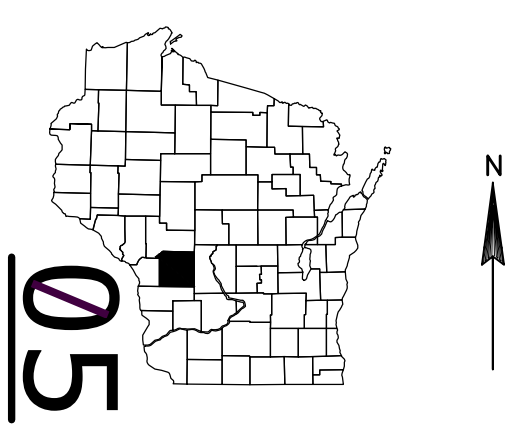
WITH:

COUNTY: MONROE

ORDER OF SHEETS

Section No. 1	Title
Section No. 2	Typical Sections and Details
Section No. 3	Estimate of Quantities
Section No. 3	Miscellaneous Quantities
Section No. 5	Plan
Section No. 6	Standard Detail Drawings
Section No. 7	Sign Plates
Section No. 8	Structure Plans

TOTAL SHEETS = 166



DESIGN DESIGNATION

A.A.D.T. (2013)	=	2,100
A.A.D.T. (2033)	=	2,700
D.H.V.	=	332
D.D.	=	62/38
T.	=	7.4%
DESIGN SPEED	=	55 MPH
ESALS	=	416,100

CONVENTIONAL SYMBOLS

PLAN	
CORPORATE LIMITS	
REFERENCE LINE	
COMBUSTIBLE FLUIDS	
UTILITIES	
ELECTRIC	— E —
FIBER OPTIC	— FO —
GAS	— G —
SANITARY SEWER	— SAN —
STORM SEWER	— SS —
TELEPHONE	— T —
WATER	— W —
UTILITY PEDESTAL	
POWER POLE	
TELEPHONE POLE	

STATE OF WISCONSIN

DEPARTMENT OF TRANSPORTATION

STATE HIGHWAY REHABILITATION-MAINTENANCE PROJECT

SPARTA - WILTON

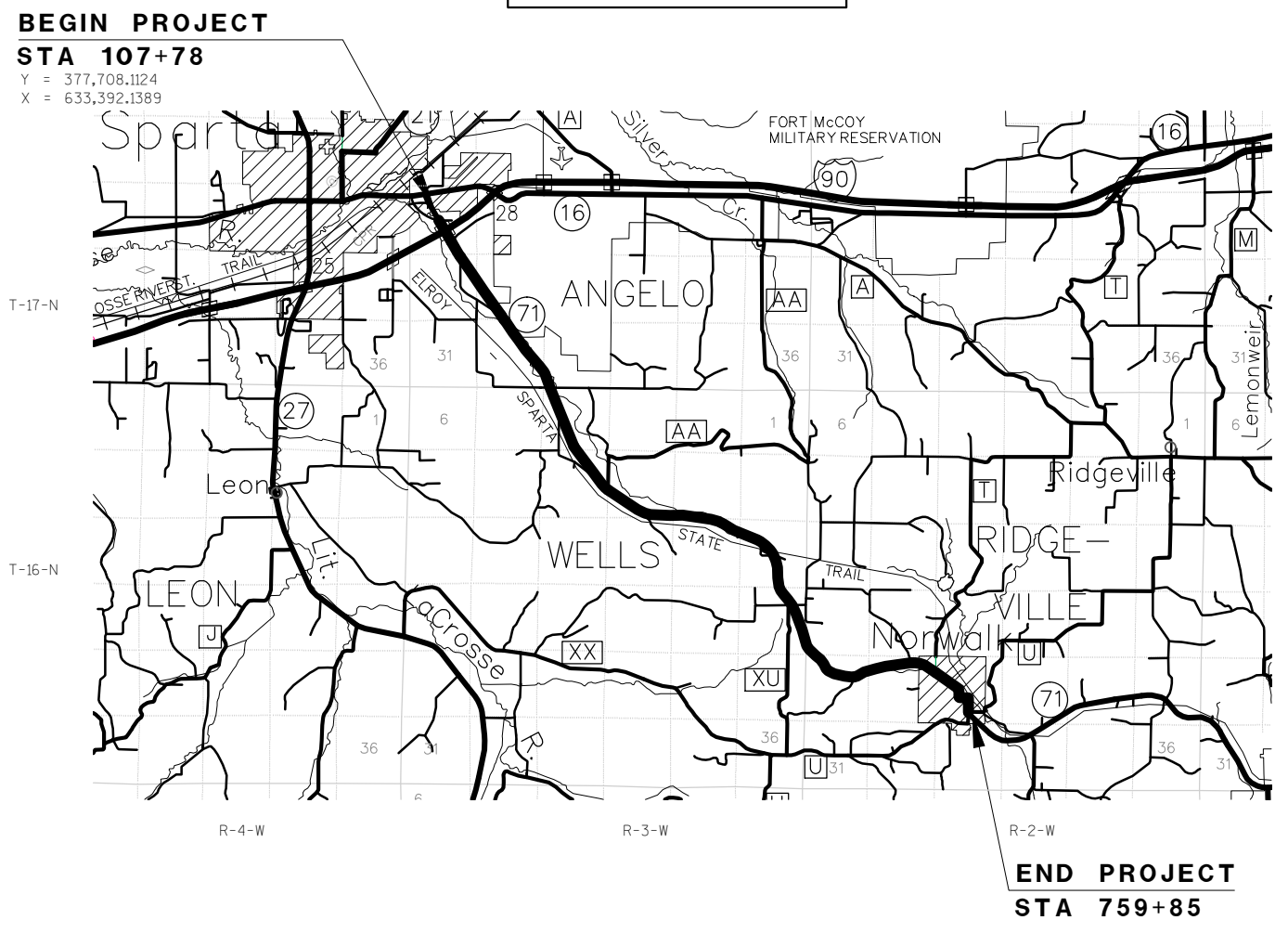
STH 16 TO CTH U

STH 71

MONROE COUNTY

STATE PROJECT NUMBER

5510-00-60



LAYOUT

SCALE 0 1.33 MI.

TOTAL NET LENGTH OF CENTERLINE = 12.350 MI.

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
5510-00-60		

SCS ENGINEERS

421 WISCONSIN DELLS PARKWAY STE. 2
WISCONSIN DELLS WI 53965
PHONE: (608) 253-9307

11/1/12
(DATE)

Gregg R. Borucki P.E.
SIGNATURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	SCS ENGINEERS
Designer	SCS ENGINEERS
Project Manager	ROBERT WINTERTON
Regional Examiner	ROBERT WINTERTON
Regional Supervisor	OSCAR WINGER
C.O. Examiner	

APPROVED FOR THE DEPARTMENT

DATE: 10-29-2012

Oscar S. Winger
(Signature)

E

GENERAL NOTES

UTILITY CONTACTS

STANDARD

ABBREVIATIONS

-THERE ARE UTILITIES WITHIN THE PROJECT LIMITS WHICH ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL COORDINATE HIS CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGERS HOTLINE AND/OR A DIRECT CALL TO THE UTILITIES THAT HAVE FACILITIES IN THE AREA. NOT ALL UTILITIES ARE MEMBERS OF DIGGERS HOTLINE.

-WHEN PORTIONS OF THE EXISTING ASPHALTIC SURFACES ARE TO BE REMOVED TO ACCOMMODATE NEW CONSTRUCTION, THE LINE OF SUCH REMOVAL SHALL BE NEATLY DELINEATED WITH A SAW CUT JOINT THROUGH THE ASPHALTIC SURFACE SO THAT REMOVAL OF THE ASPHALT SHALL BE ACCOMPLISHED WITHOUT DAMAGE TO REMAINING PORTIONS. THE LOCATION OF THE SAW JOINTS AND THE AMOUNT REMOVED AT THE SIDE ROADS WILL BE DELINEATED IN THE FIELD BY THE ENGINEER.

-PRIOR TO THE PLACEMENT OF STEEL PLATE BEAM GUARD, THE SHOULDERS SHALL BE IN PLACE, SHAPED AND COMPACTED UNLESS SHOWN OTHERWISE NOTED.

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

-WHEN THE QUANTITIES OF HMA PAVEMENT IS MEASURED FOR PAYMENT BY THE TON, THE DEPTH OF THICKNESS OF THE MATERIAL THAT IS SHOWN ON THE PLANS IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

-ASPHALT MATERIAL PG58-28 FOR THE PLANT MIXES HAS BEEN ESTIMATED AT 5.5% OF THE HMA PAVEMENT.

-3.5 INCH HMA PAVEMENT, TYPE E-1, SHALL BE CONSTRUCTED IN TWO (2) 1.75-INCH LAYERS EACH.

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

-MATCH ALL EXISTING SUPER ELEVATIONS. SUPER ELEVATIONS ARE NOT SHOWN ON THE PLANS.

-CONCRETE CURB & GUTTER 30-INCH TYPE D INSTALLATION WILL REQUIRE SAWING ASPHALT, AND REMOVING ASPHALTIC SURFACE AND ASPHALTIC CURB TO FULL DEPTH.

-THE .12.5 mm NOMINAL SIZE AGGREGATE SHALL BE USED FOR ALL HMA PAVEMENT LAYERS.

-HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON 113 LB/SY/IN.

-LIMIT THE TIME BETWEEN MILLING THE EXISTING PAVEMENT AND OVERLAYING WITH HMA PAVEMENT TO 48 HOURS. AREAS THAT HAVE ADDITIONAL MILLING REQUIRED FOR SPOT REPAIRS SHALL BE INLAID WITH 2" OF HMA PAVEMENT BEFORE TRAFFIC IS ALLOWED BACK AND PRIOR TO BEING OVERLAID.

-SAME DAY PAVING SHALL BE REQUIRED IN THE VILLAGE OF NORWALK.

-CONTRACTOR SHALL VERIFY THE LENGTH AND SIZE OF THE CULVERT PIPE REQUIRED WITH THE ENGINEER PRIOR TO ORDERING AND INSTALLING THE PIPE.

-REPLACEMENT CULVERTS SHALL BE INSTALLED TO THE SAME INVERT ELEVATIONS, OR PERCENT SLOPE AS THE EXISTING CULVERTS.

-THE CONTRACTOR SHALL CONTACT AND COORDINATE THE MOVING OR REMOVAL OF LANDOWNER MAILBOXES THAT ARE FOUND TO BE IN CONFLICT WITH CONTRACTOR CONSTRUCTION ACTIVITIES A MINIMUM OF SEVEN (7) DAYS IN ADVANCE. COORDINATION WITH LANDOWNERS WILL BE INCIDENTAL TO THE ITEM BEING CONSTRUCTED.



TO OBTAIN LOCATION OF PARTICIPANTS' UNDERGROUND FACILITIES BEFORE YOU DIG IN WISCONSIN

TOLL FREE: (800) 242-8511
TDD: (800) 542-2289
ONLINE: WWW.DIGGERSHOTLINE.COM

NANCY DOTSON
XCEL ENERGY, INC
PO BOX 8
EAU CLAIRE, WI 54702
(715) 737-2574

BILL GARSKI
WE ENERGIES
1921 8TH STREET SOUTH
WISCONSIN RAPIDS, WI 54494
(715) 421-7259

PERRY MCCLELLAN
CHARTER COMMUNICATIONS
1228 12TH AVE. SOUTH
ONALASKA, WI 54650
(608) 370-7140

TODD HANSON
CITY OF SPARTA - WATER UTILITY
201 W. OAK STREET
SPARTA, WI 54656
(608) 269-4340

MARK FLOCK
CITY OF SPARTA - SANITATION UTILITY
201 W. OAK STREET
SPARTA, WI 54656
(608) 269-4340

ROB ERICKSON
CENTURYTEL
333 N FRONT ST.
LACROSSE, WI 54601
(608) 796-5135

KURT CHILDS
DAIRYLAND POWER COOPERATIVE
PO BOX 8147
LA CROSSE, WI 54602
(608) 788-4000

SCOTT BROOKMAN
OAKDALE ELECTRIC COOP
PO BOX 128
OAKDALE, WI 54649
(608) 372-4131

TIM ORCUTT
MEDIACOM
3033 ASBURY RE
DUBUQUE, IA 52001
(515) 249-5848

TIM STATZ
MADISON GAS & ELECTRIC COMPANY
PO BOX 1231
MADISON, WI 53701-1231
(608) 252-4727

MIKE JARRETT
FORT MCCOY
1564 S. 11TH
FORT MCCOY 54656
(608) 343-2683

JASON HOGAN
ALLIANT ENERGY CORPORATION
4902 N. BILTMORE LANE, SUITE 1000
MADISON, WI 53718
(608) 458-4871

HENRY VIAN
VILLAGE OF NORWALK - WATER & SEWER
PO BOX 230
NORWALK, WI 54648
(608) 823-7760 EXT. 24

AC. ACRE
AGG. AGGREGATE
AH AHEAD
< ANGLE
AE, AEW APRON ENDWALL
ASPH. ASPHALTIC
A.D.T. AVERAGE DAILY TRAFFIC
B.F. BACK FACE
BK. BACK
BEG. BEGIN
B.M. BENCH MARK
C/L CENTER LINE
D CENTRAL ANGLE OR DELTA
C.M.C.P. CORRUGATED METAL CULVERT PIPE
C.M.P. CORRUGATED METAL PIPE
CO. COUNTY
CTH COUNTY TRUNK HIGHWAY
CR. CREEK
C.A.B.C. CRUSHED AGGREGATE BASE COURSE
C.Y. CUBIC YAR
C.P. CULVERT PIPE
C. & G. CURB AND GUTTER
D DEGREE OF CURVE
D.H.V. DESIGN HOUR VOLUME
DIA. DIAMETER
DISCH. DISCHARGE
EA EACH
E EAST
ELEC. ELECTIC (AL), ELEC. CABLE
EL., ELEV. ELEVATION
EXC. EXCAVATION
F.F. FACE TO FACT
FERT. FERTILIZER
F.E. FIELD ENTRANCE
F/L, F.L. FLOW LINE
CWT. HUNDRED WEIGHT
INL INLLET
INTER. INTERSECTION
JT. JOINT
LT LEFT
L.H.F. LEFT HAND FORWARD
L. LENGTH OF CURVE
L.F. LINEAR FOOT (FEET)
LC. LONG CHORD.
LS LUMP SUM
M.P. MARKER POST

MAX. MAXIMUM
MGAL 1000 GALLONS
MIN. MINIMUM
N.C. NORMAL CROWN OR NO CHANGE
N NORTH
NO. NUMBER
PAV'T PAVEMENT
P.L.E. PERMANENT LIMITED EASEMENT
P.C. POINT OF CURVATURE
P.I. POINT OF INTERSECTION
P.T. POINT OF TANGENCY
V.P.C. VERTICAL POINT OF CURVATURE
V.P.I. VERTICAL POINT OF INTERSECTION
V.P.T. VERTICAL POINT OF TANGENCY
PCC PORTLAND CEMENT CONCRETE
P.E. PRIVATE ENTRANCE
P.L. PROPERTY LINE
R RADIUS OR RANGE
R/L REFERENCE LINE
R.C.C.P. REINFORCED CONCRETE CULVERT PIPE
RT RIGHT
REQ'D REQUIRED
R.H.F. RIGHT HAND FORWARD
R/W RIGHT OF WAY
R. RIVER
RD. ROAD
SHLD. SHOULDER(S)
SHR. SHRINKAGE
S SOUTH
S.F. SQUARE FOOT
SDD STANDARD DETAIL DRAWING(S)
STH STATE TRUNK HIGHWAY
STA. STATION
S.E. SUPERELEVATION
S/L SURVEY LINE
T TANGENT
TEL. TELEPHONE
TEMP. TEMPORARY
T.L.E. TEMPORARY LIMITED EASEMENT
T.O.C. TOP OF CURB
T. (TRUCKS) PERCENT OF
TYP. TYPICAL
UNCL. UNCLASSIFIED
U.G. UNDERGROUND (CABLE)
V.C. VERTICAL CURVE
W WEST

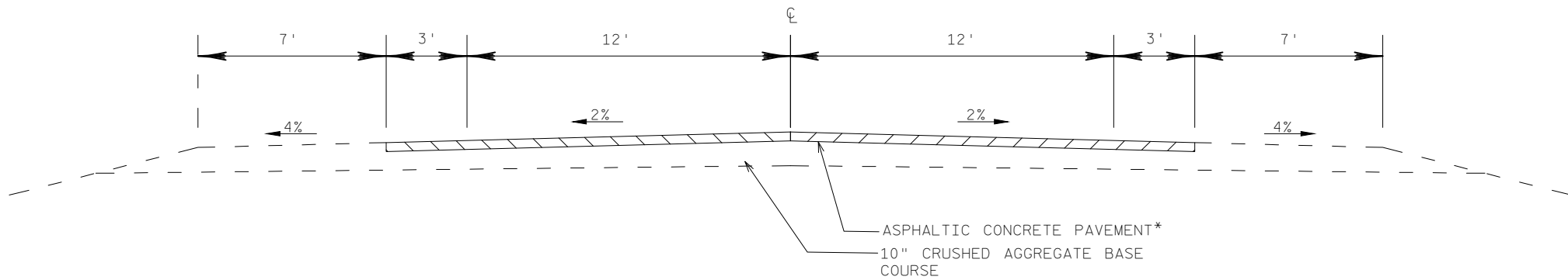
DNR CONTACT

DESIGN CONTACTS

KAREN KALVELAGE
ENVIRONMENTAL ANALYSIS AND REVIEW SPECIALIST
WISCONSIN DEPT. OF NATURAL RESOURCES
SOUTH CENTRAL REGION
3550 MORMON COULEE RD.
LA CROSSE, WI 54601
(608) 785-9115

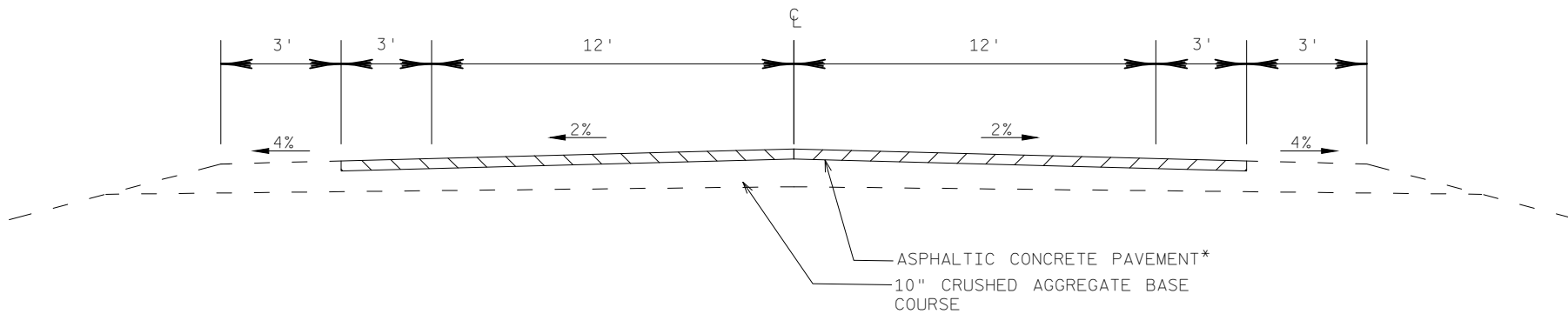
ROBERT WINTERTON
PROJECT MANAGER
WISDOT SW REGION
PROJECT DEVELOPEMNT
3550 MORMON COULEE RD.
LA CROSSE, WI 54601
(608) 789-7879

GREGG BORUCKI, PE
PROJECT DESIGNER
SCS BT SQUARED
421 WISCONSIN DELLS PKWY,
SUITE 2
WISCONSIN DELLS, WI 53965
(608) 253-9307



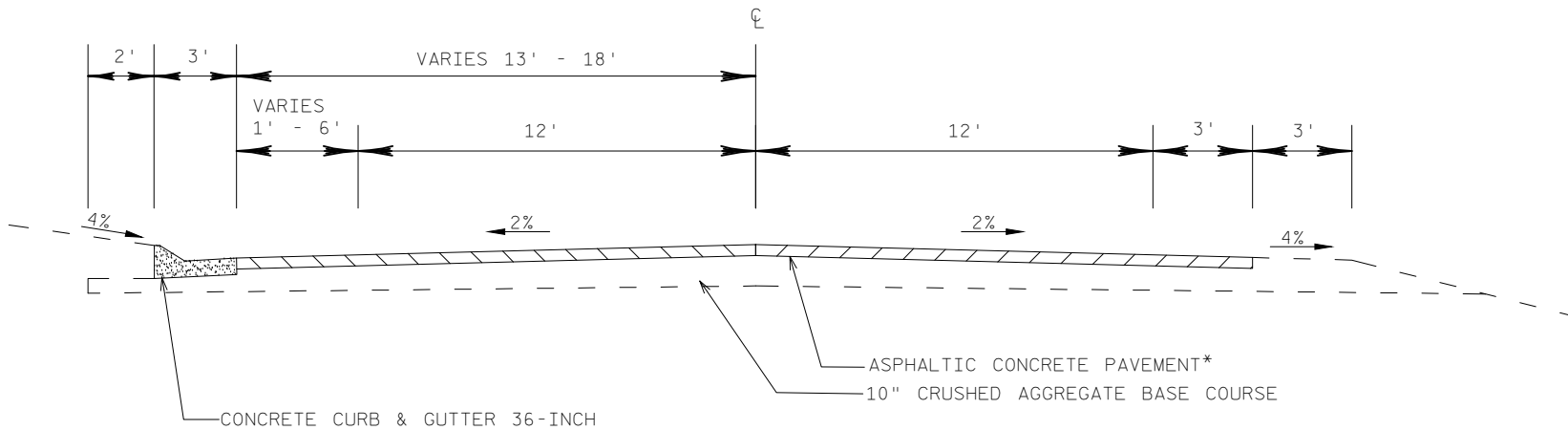
TYPICAL EXISTING SECTION

STA 107+78 TO STA 129+97



TYPICAL EXISTING SECTION

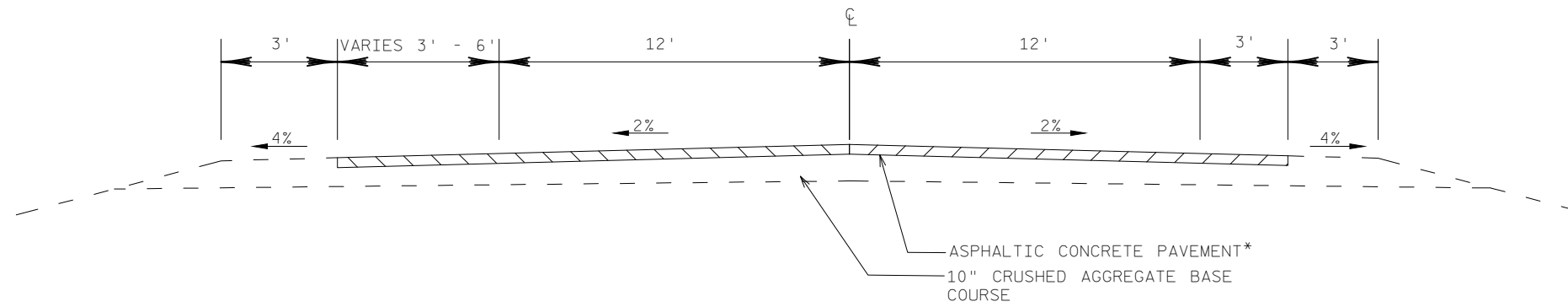
STA 129+97 TO STA 263+51
STA 267+31 TO STA 310+62
STA 312+62 TO STA 502+62
STA 596+52 TO STA 734+38



TYPICAL EXISTING SECTION

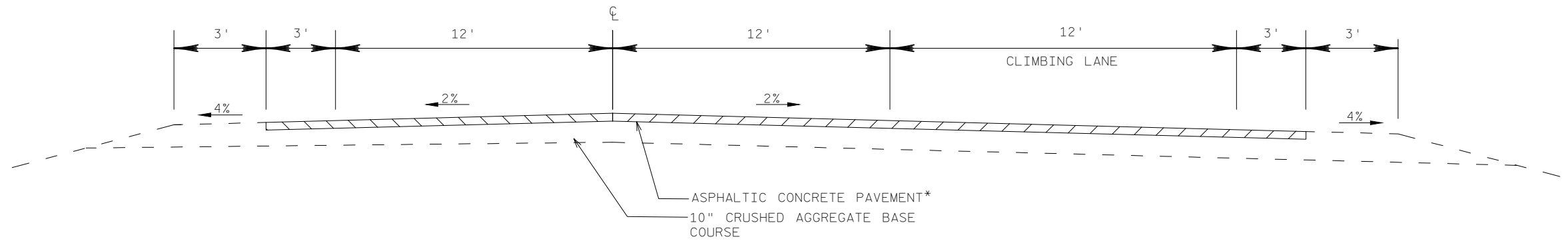
STA 263+51 TO STA 267+31

*SEE BORING LOG FOR
PAVEMENT THICKNESS



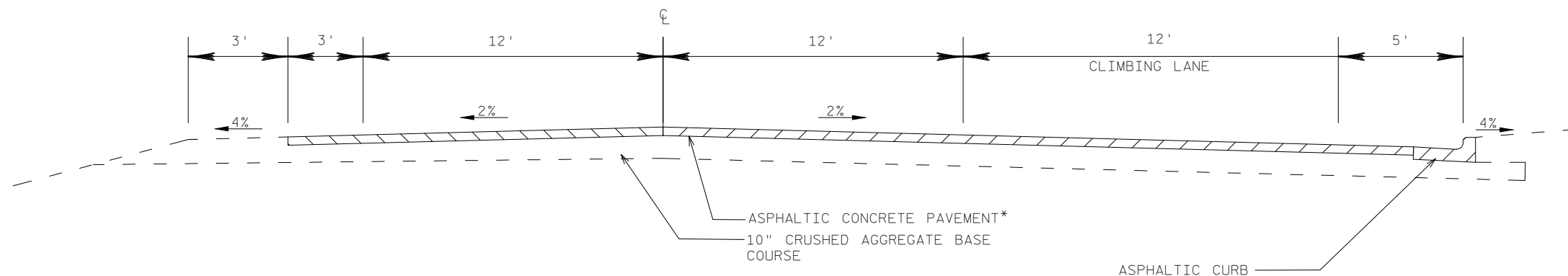
TYPICAL EXISTING SECTION

STA 310+62 TO STA 312+18



TYPICAL EXISTING SECTION

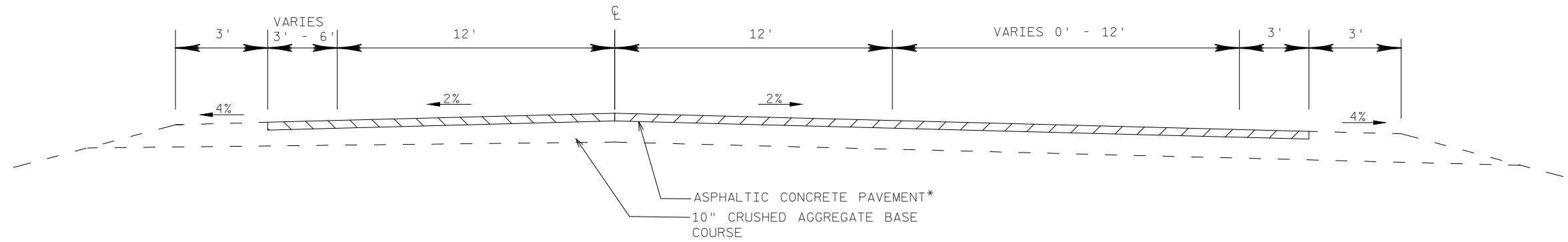
STA 502+62 TO STA 515+13
STA 524+02 TO STA 585+67



TYPICAL EXISTING SECTION

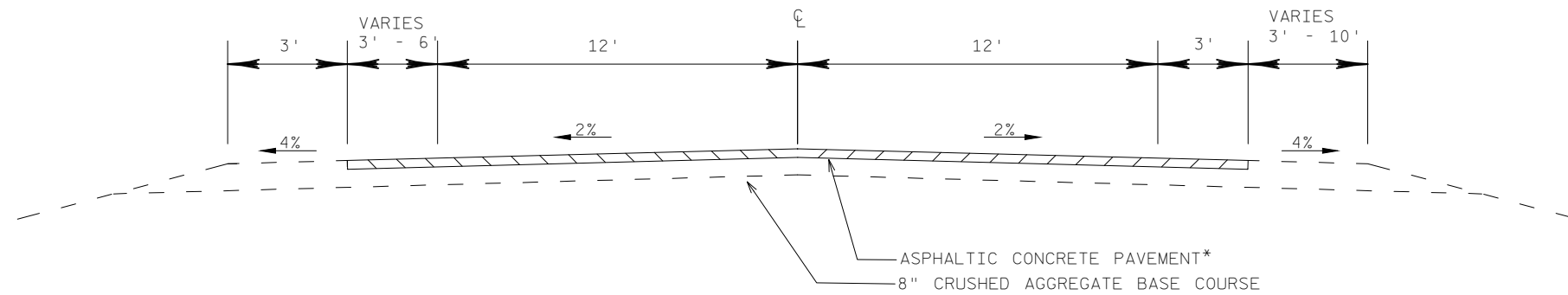
STA 515+13 TO STA 524+02

*SEE BORING LOG FOR
PAVEMENT THICKNESS



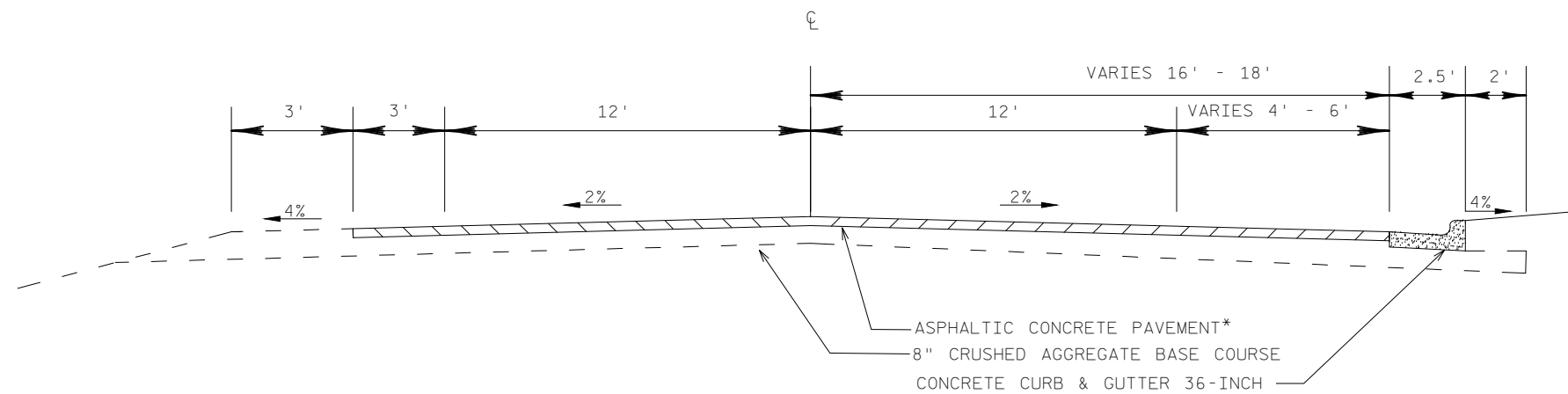
TYPICAL EXISTING SECTION

STA 585+67 TO STA 596+52



TYPICAL EXISTING SECTION

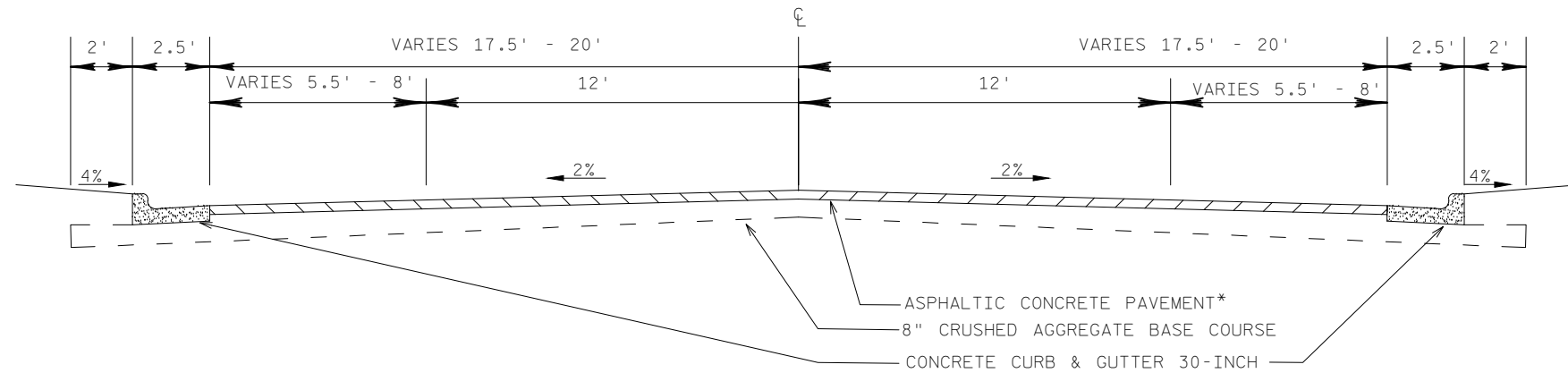
STA 734+38 TO STA 735+15



TYPICAL EXISTING SECTION

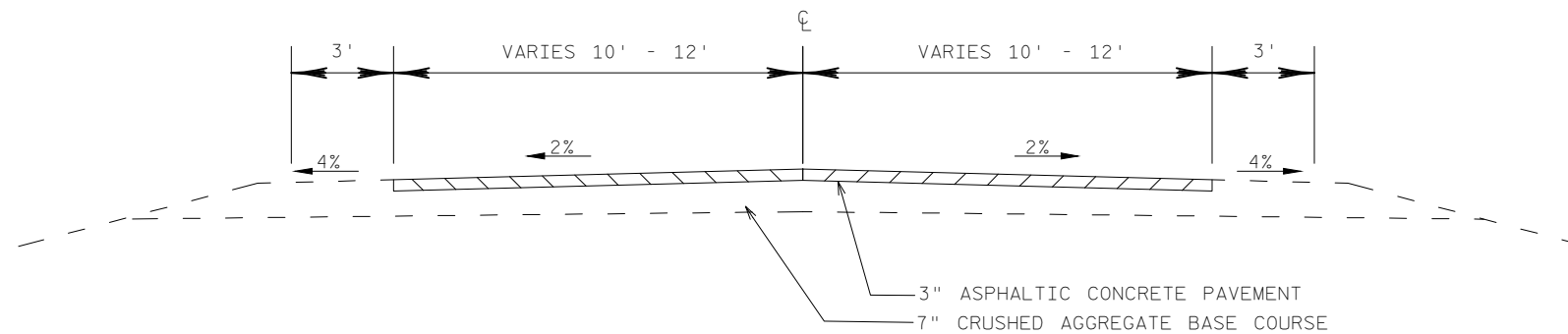
STA 735+15 TO STA 738+87

*SEE BORING LOG FOR
PAVEMENT THICKNESS



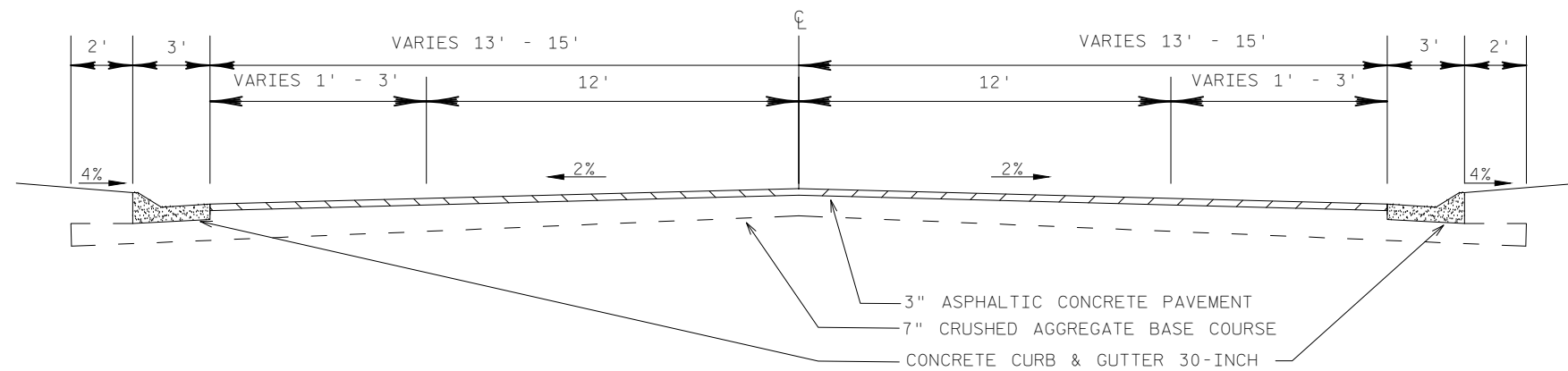
TYPICAL EXISTING SECTION

STA 738+87 TO STA 761+13



TYPICAL EXISTING SECTION

HARMONY AVE. KARLSTAD RD.
 HAVENDALE RD. KEEL RD.
 IMPERIAL RD. KENYA AVE.
 JANUS AVE. LANDMARK AVE.
 JAVELIN AVE. KENDALL AVE.
 KAPOK RD. LASSO AVE.
 KARLSBAD RD.



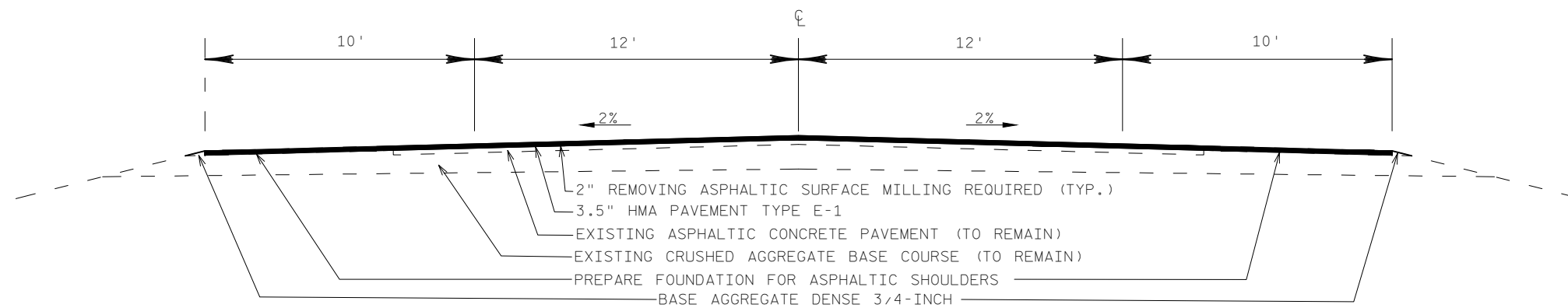
TYPICAL EXISTING SECTION

RILEY RD. CTH XU
 CTH AA CTH T
 KAYAK RD.

BORING NUMBER	*** STATION	LOCATION	ASPHALT DEPTH (INCHES)	BASE DEPTH (INCHES)	COMMENTS
B-1	102+09	4' RT	8.5	5.5	
B-2	110+85	16' RT	7.5	6	
B-3	120+83	4' LT	7	13	
B-4	131+06	9' LT	9	9	
B-5	142+25	4' RT	7	17	
B-5A	142+25	17' RT		23	SHOULDER
B-6	153+44	9' RT	9	4	
B-7	163+31	4' LT	10	5	
B-7A	163+31	17' LT		16	SHOULDER
B-8	174+21	9' LT	8	7	
B-9	184+35	4' RT	6	10	
B-10	194+91	9' RT	6.5	10.5	
B-11	205+47	4' LT	5	8	
B-12	215+86	9' LT	7	8	
B-13	226+68	4' RT	6	10	
B-14	237+35	9' RT	6	10	
B-15	247+75	4' LT	6	11	
B-16	258+15	9' LT	6	12	
B-17	268+61	4' RT	5.5	9.5	
B-18	279+22	9' RT	5	13	
B-19	289+79	4' LT	4.5	10.5	
B-19A	289+79	17' LT		12	SHOULDER
B-20	300+31	9' LT	5.5	12.5	
B-21	310+87	4' RT	5	10	
B-21A	310+87	17' RT		22	SHOULDER
B-22	321+43	9' RT	7	13	
B-23	331+99	4' LT	3.5	18.5	
B-24	342+60	9' LT	7	9	
B-25	353+11	4' RT	6.5	10.5	
B-26	363+67	9' RT	6	13	
B-27	373+84	4' LT	5	11	
B-28	384+40	9' LT	6	18	
B-29	395+01	4' RT	7.5	8.5	
B-30	405+57	9' RT	6	11	
B-31	416+47	4' LT	6	10	
B-31A	416+47	17' LT		18	SHOULDER
B-32	426+71	9' LT	6	9	
B-33	437+27	4' RT	6	10	
B-33A	437+27	17' RT		21	SHOULDER
B-34	447+99	9' RT	4.5	7.5	

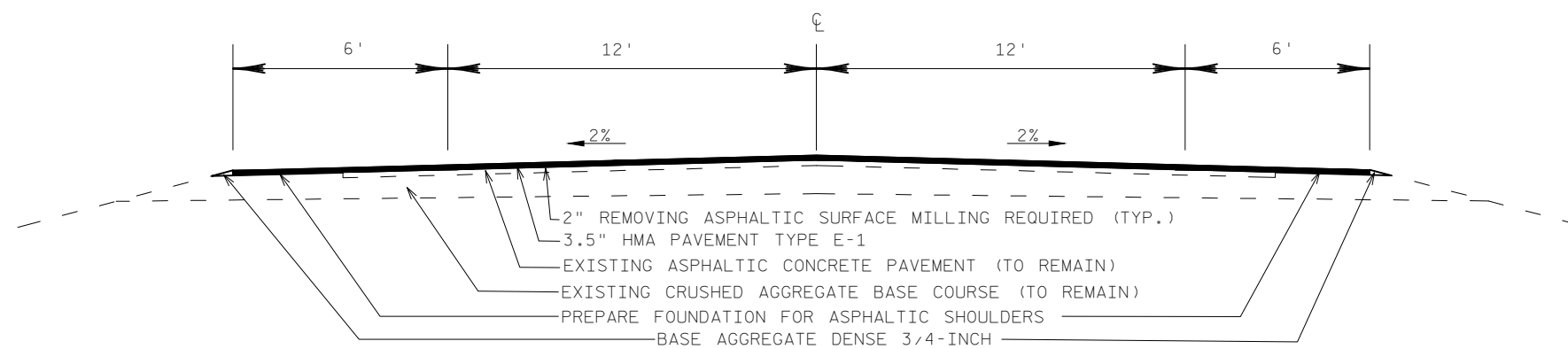
BORING NUMBER	*** STATION	LOCATION	ASPHALT DEPTH (INCHES)	BASE DEPTH (INCHES)	COMMENTS
B-35	458+39	4' LT	6	6	
B-36	469+00	9' LT	7	5	
B-37	479+45	4' RT	5	20	
B-38	490+17	9' RT	5	14	
B-39	500+62	4' LT	5.5	12.5	
B-40	510+81	9' LT	5.5	11.5	
B-41	517+45	6' RT	6	11	
B-42	528+01	18' RT	6	10	
B-43	538+73	6' LT	7	11	
B-44	549+18	6' RT	6	10	
B-45	559+74	4' LT	7	6	
B-46	573+87	6' RT	5	15	
B-46A	573+87	30' RT		11	SHOULDER
B-47	584+43	18' RT	5	10	
B-48	595+15	4' LT	4	14	
B-49	605+50	9' LT	4.5	11.5	
B-50	616+08	4' RT	5.5	10.5	
B-51	626+64	9' RT	4	12	
B-52	637+20	4' LT	5	15	
B-52A	637+20	17' LT		16	SHOULDER
B-53	647+92	9' LT	3.5	13.5	
B-54	658+53	10' RT	4	9	
B-55	668+93	4' RT	4	12	
B-56	679+44	4' LT	4	15	
B-57	690+21	9' LT	4	13	
B-58	701+56	10' RT	3.5	10	
B-59	711+12	4' RT	3.5	14.5	
B-59A	711+12	17' RT		16	SHOULDER
B-60	721+63	4' LT	3.5	11.5	
B-60A	721+63	17' LT		20	
B-61	732+75	9' LT	3.5	10.5	
B-63	744+01	17' RT	4	14	
B-64	748+66	6' RT	6	12	
B-65	754+52	6' LT	3.5	11	

**STATION SHOWN IS APPROXIMATE. LOG MILE TO STATION CONVERSION HAVE BEEN ADJUSTED AT INTERSECTIONS TO PLAN STH 71/SIDEROAD CL-CL STATIONING.



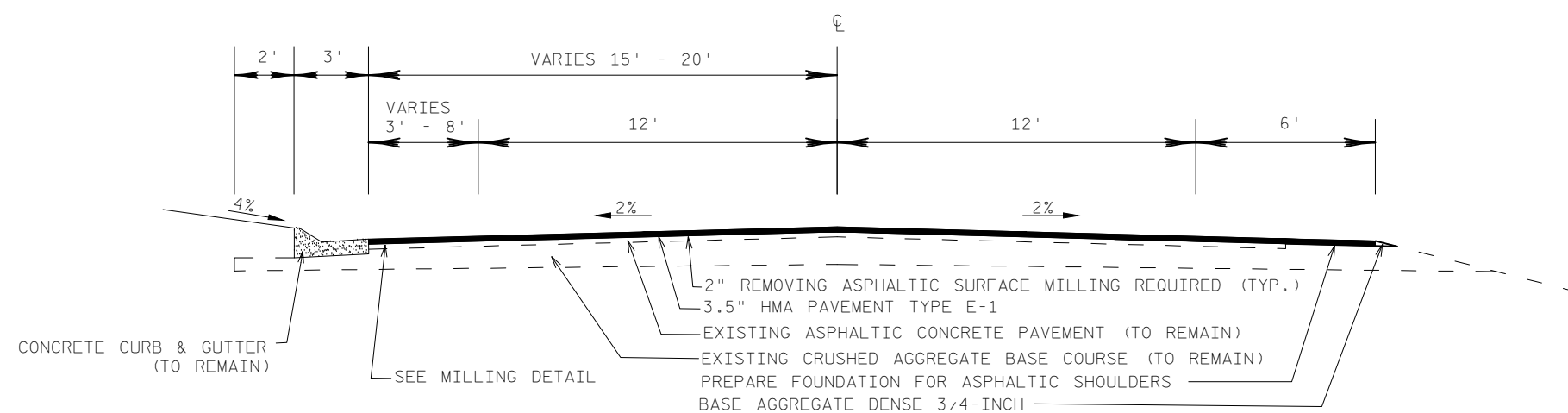
TYPICAL FINISHED SECTION

STA 107+78 TO STA 130+00



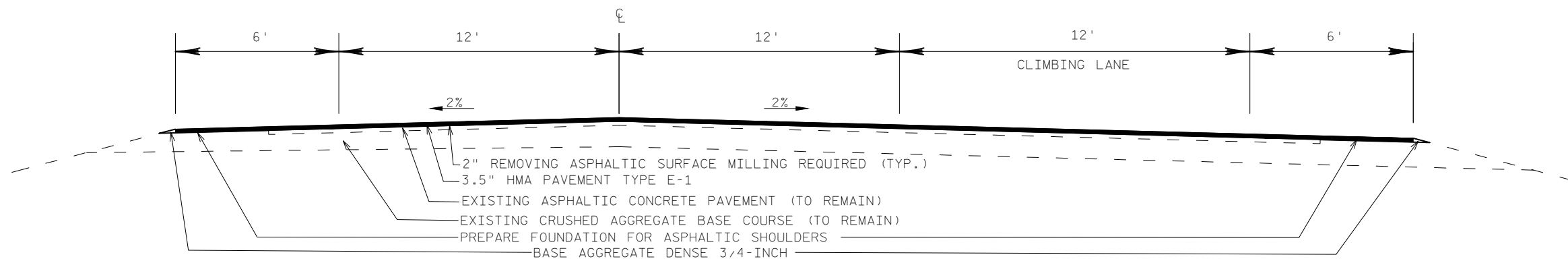
TYPICAL FINISHED SECTION

STA 130+00 TO STA 263+51
STA 267+31 TO STA 502+62
STA 596+52 TO STA 734+38



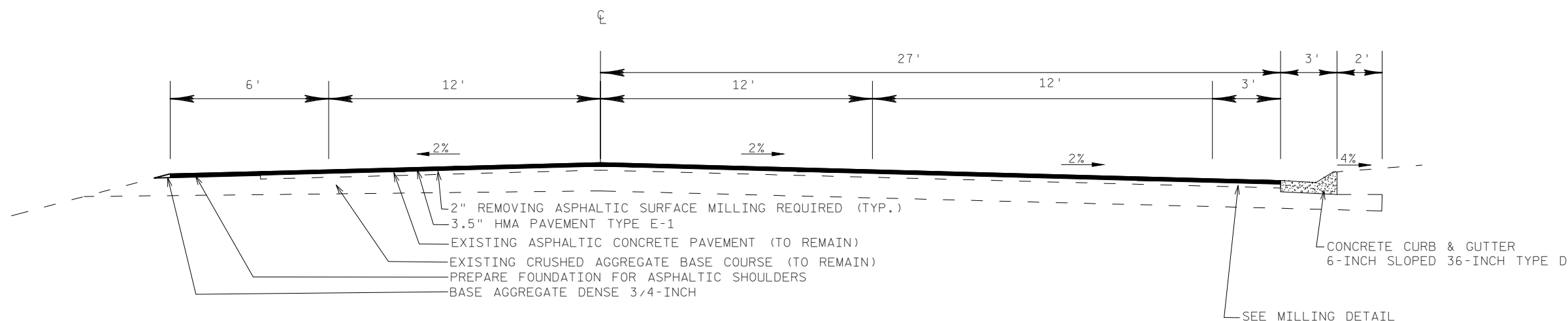
TYPICAL FINISHED SECTION

STA 263+51 TO STA 267+31



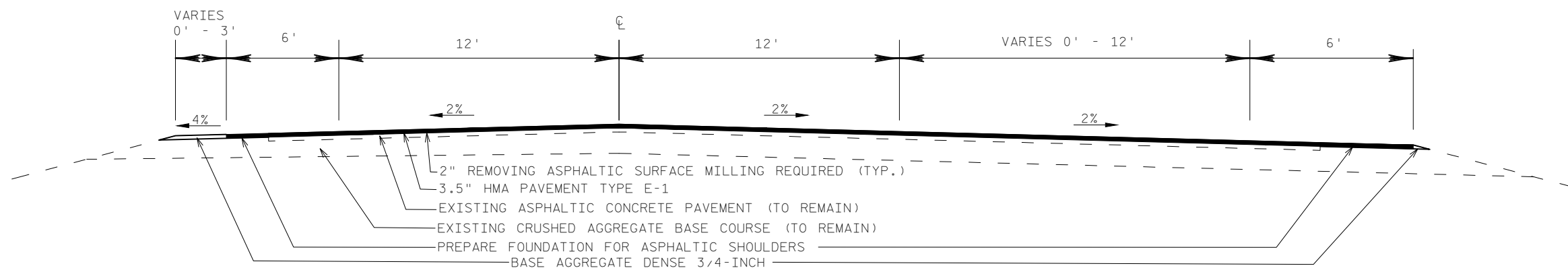
TYPICAL FINISHED SECTION

STA 502+62 TO STA 515+13
STA 524+02 TO STA 585+67



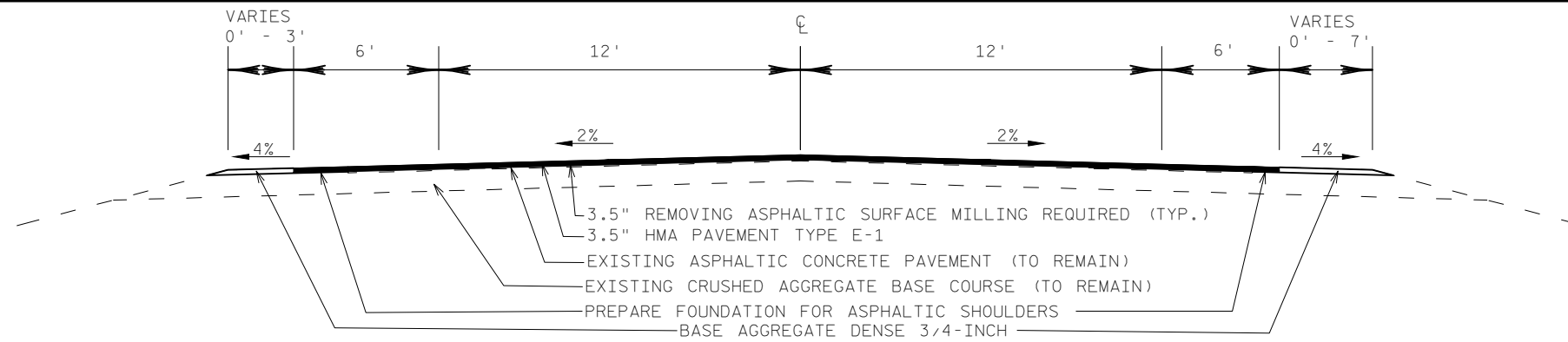
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STA 515+13 TO STA 524+02



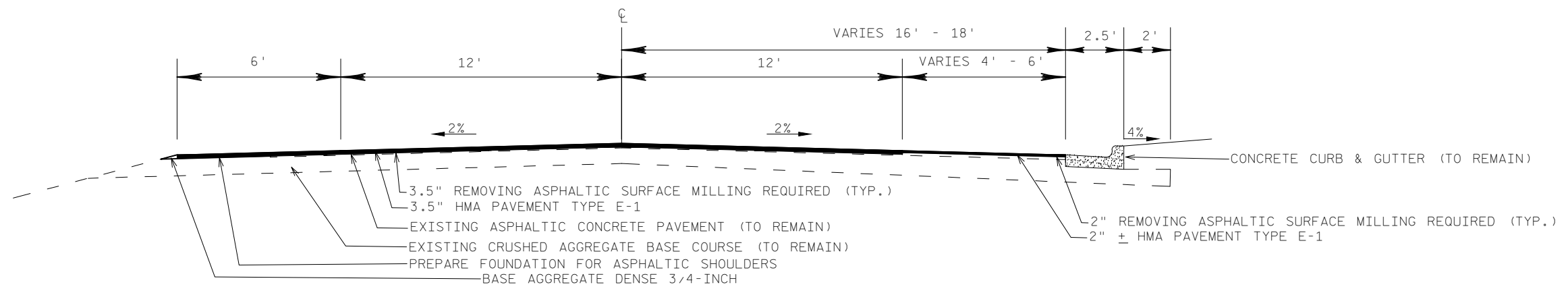
TYPICAL FINISHED SECTION

STA 585+67 TO STA 596+52



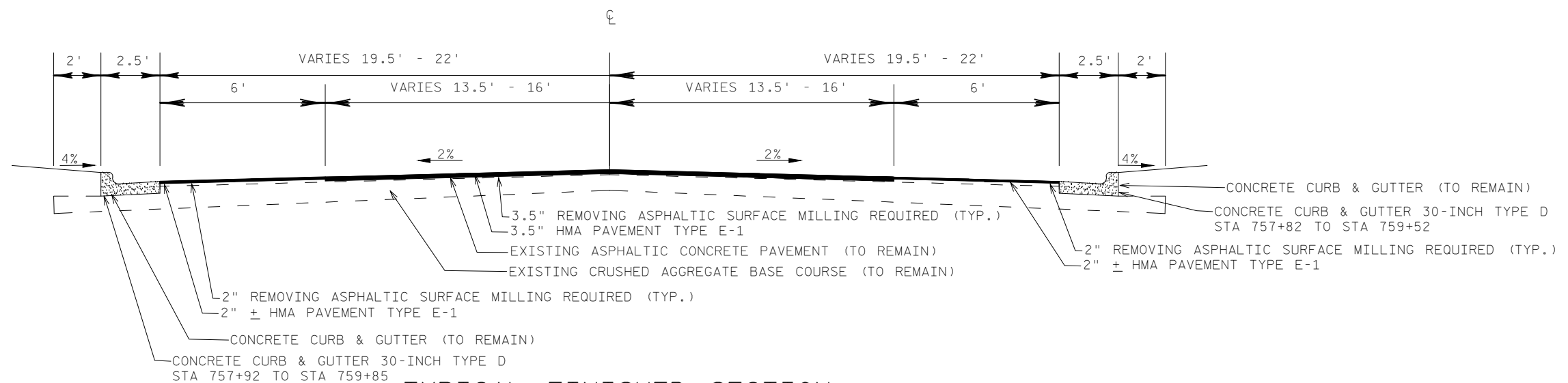
TYPICAL FINISHED SECTION

STA 734+38 TO STA 735+15
(VILLAGE OF NORWALK)



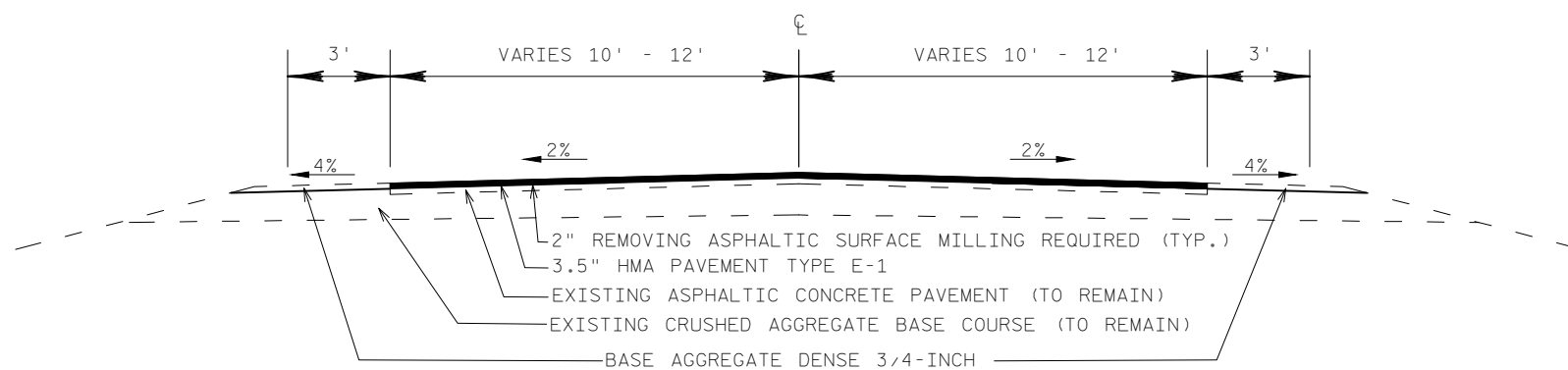
TYPICAL FINISHED SECTION

STA 735+15 TO STA 738+87
(VILLAGE OF NORWALK)



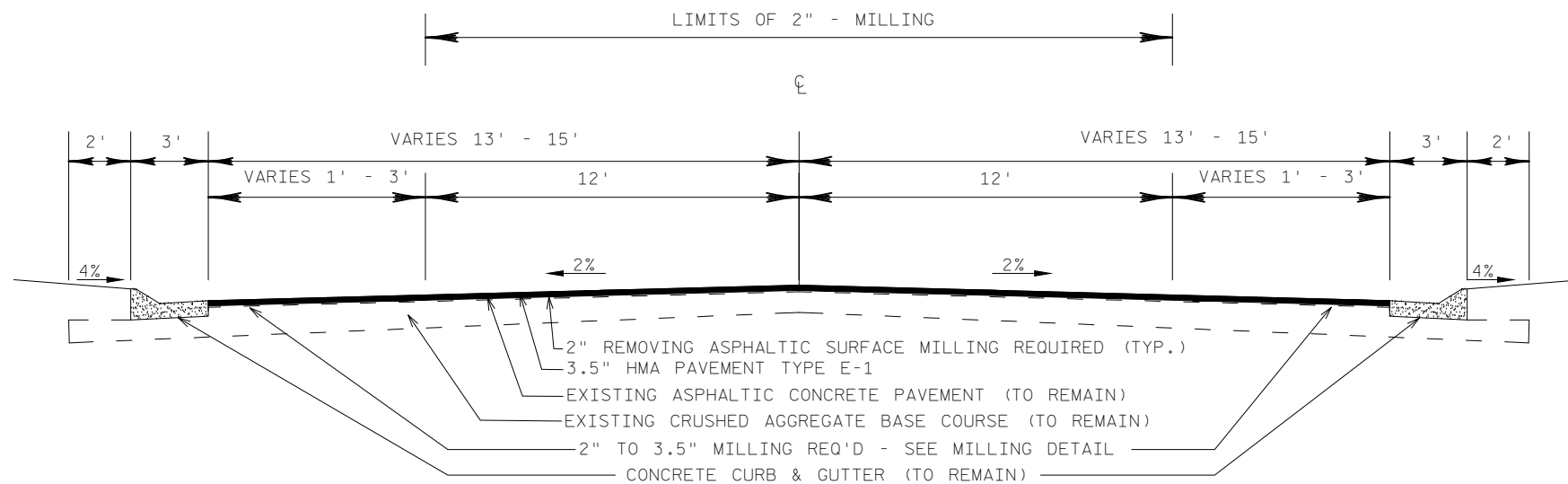
TYPICAL FINISHED SECTION

STA 738+87 TO STA 761+13
(VILLAGE OF NORWALK)



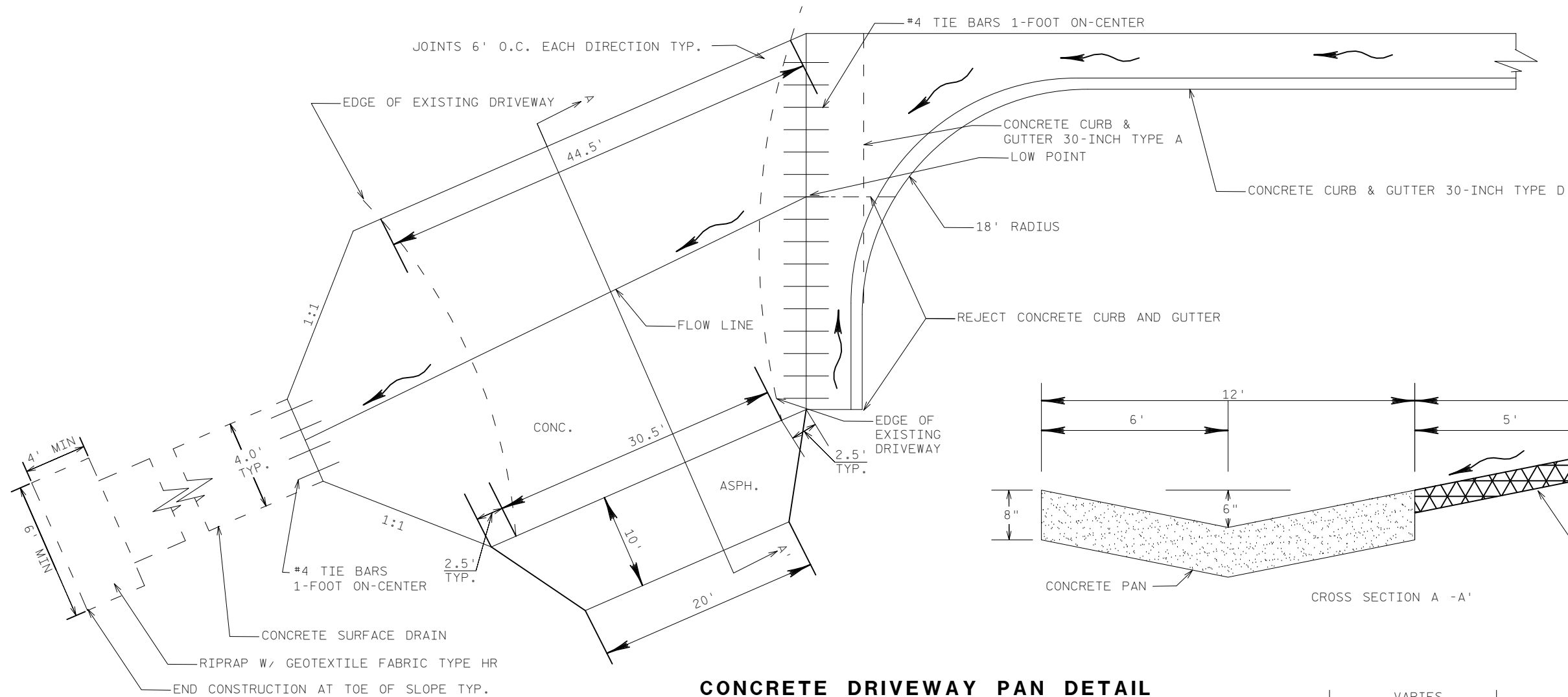
TYPICAL FINISHED SECTION

HARMONY AVE.
HAVENDALE RD.
IMPERIAL RD.
JANUS AVE.
JAVELIN AVE.
KAPOK RD.
KARLSBAD RD.
KARLSTAD RD.
KEEL RD.
KENYA AVE.
LANDMARK AVE.
KENDALL AVE.
LASSO AVE.

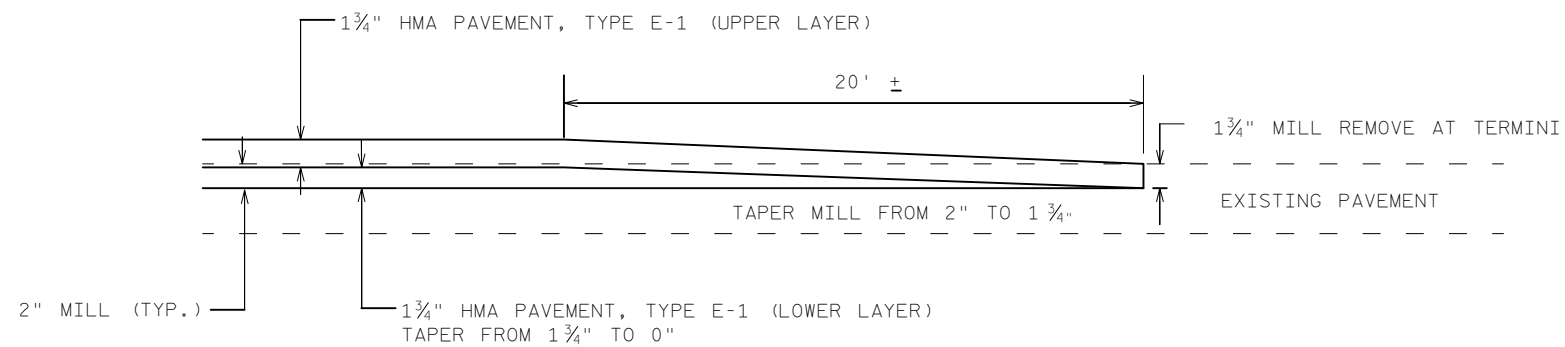


TYPICAL FINISHED SECTION

RILEY RD. CTH XU
CTH AA CTH T
KAYAK RD.



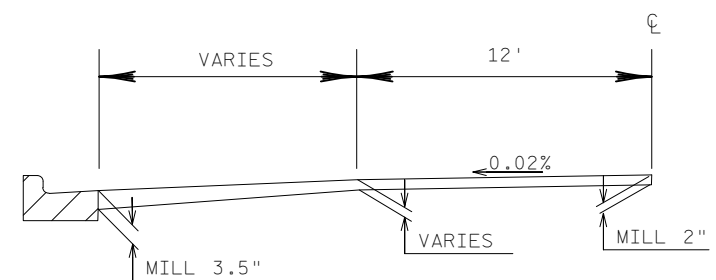
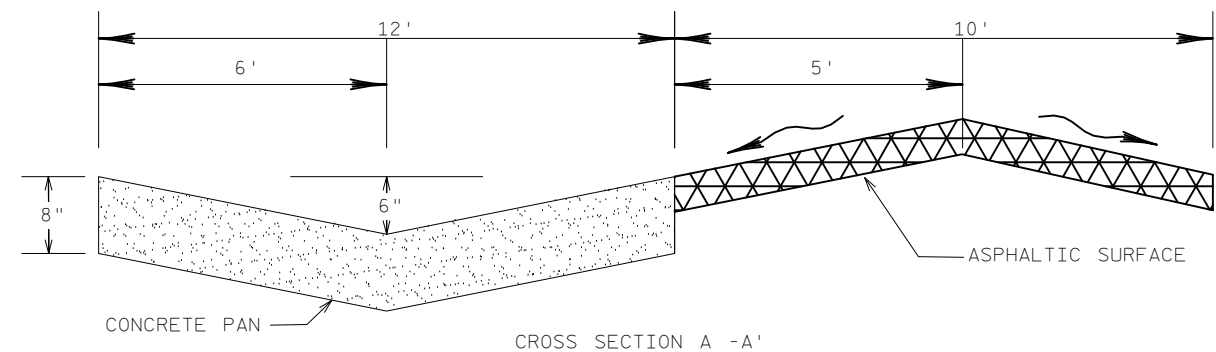
CONCRETE DRIVEWAY PAN DETAIL
STA 515+00 RT



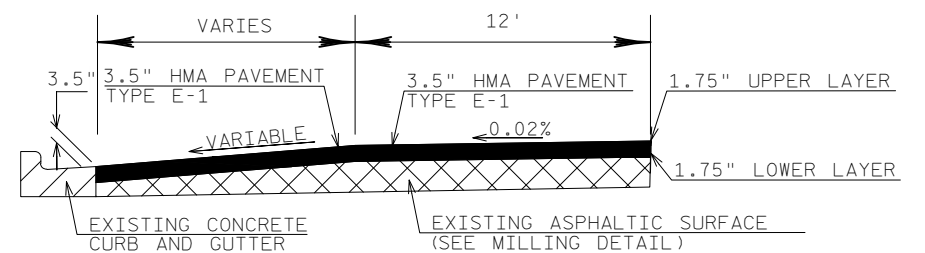
SIDE ROAD BUTT JOINT DETAIL

RILEY RD.
HARMONY AVE.
HAVENDALE RD.
IMPERIAL RD.
JANUS AVE.
JAVELIN AVE.
CTH AA
KAPOK RD.
KARLSBAD RD.

KARLSTAD RD.
KEEL RD.
KENYA AVE.
KAYAK RD.
CTH XU
LANDMARK AVE.
KENDALL AVE.
CTH T
LASSO AVE.

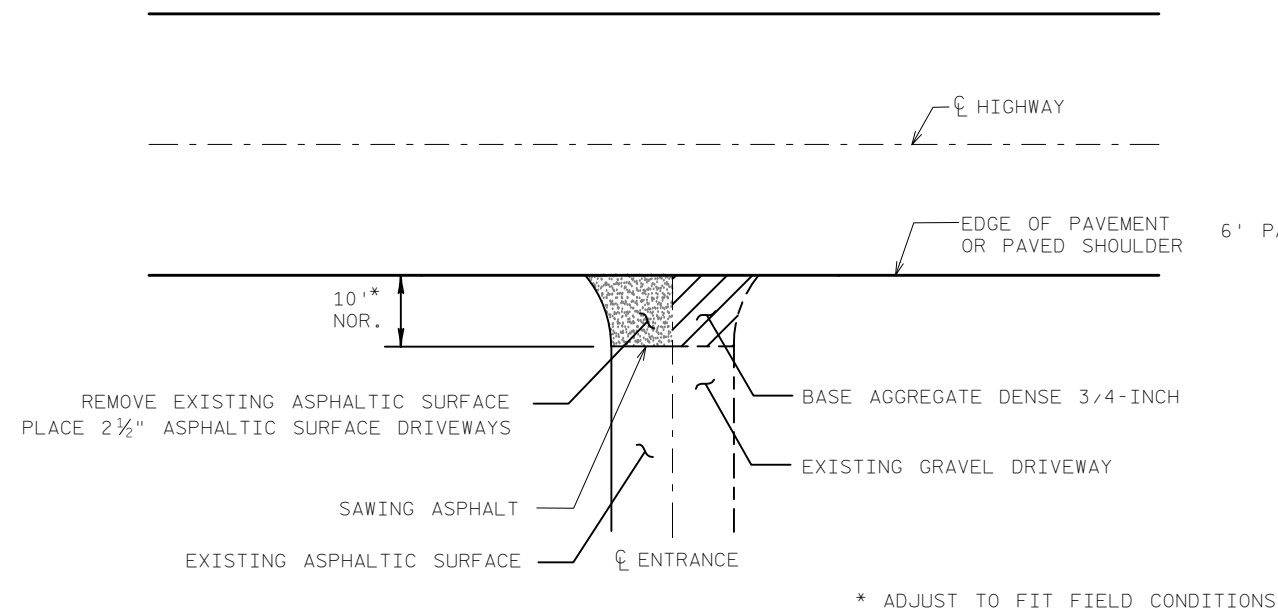


MILLING DETAIL

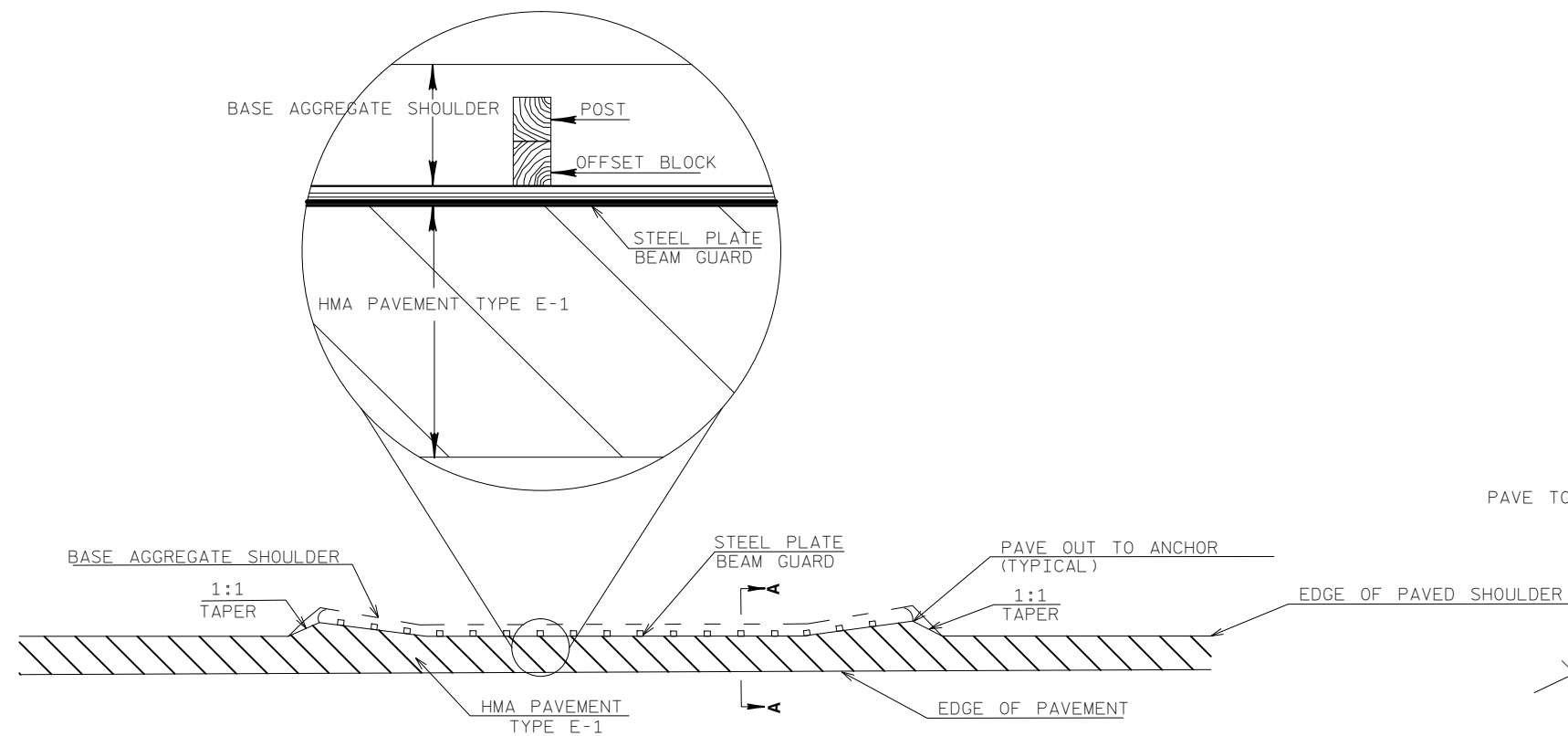


PAVING DETAIL

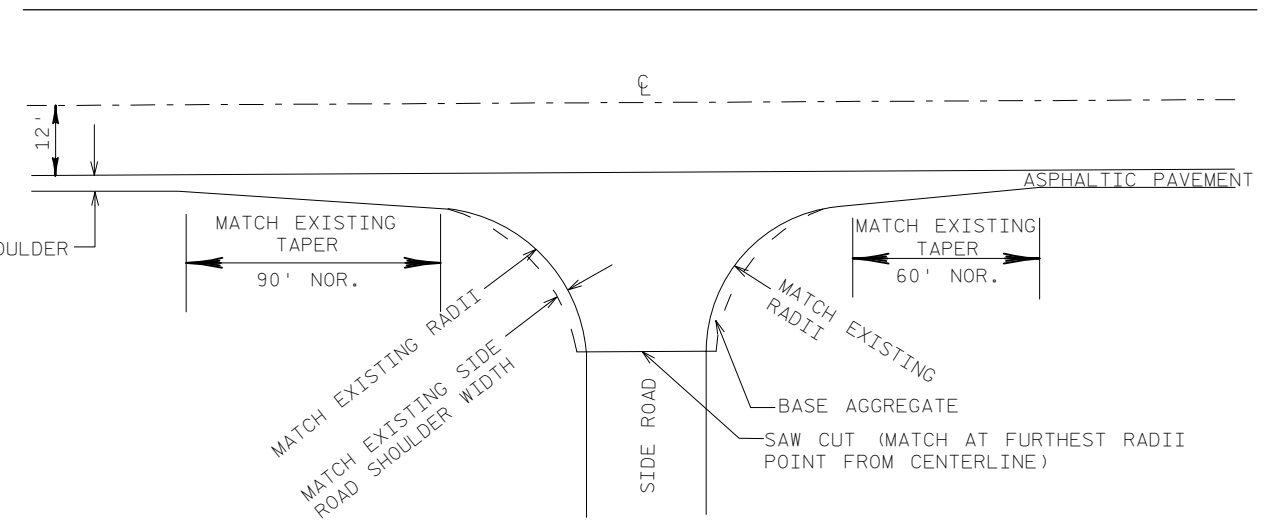
**TYPICAL CROSS SECTION AT INTERSECTIONS
AND MAINLINE AREAS WITH CURB AND GUTTER**



RURAL DRIVEWAY DETAIL

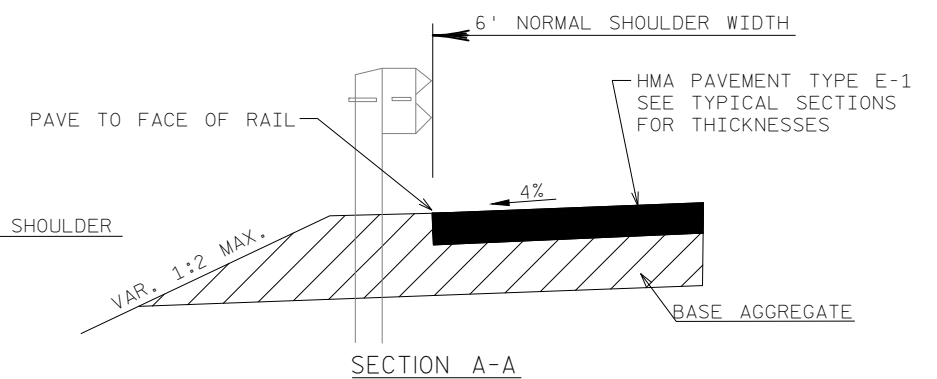


ASPHALTIC PAVING ALONG BEAM GUARD



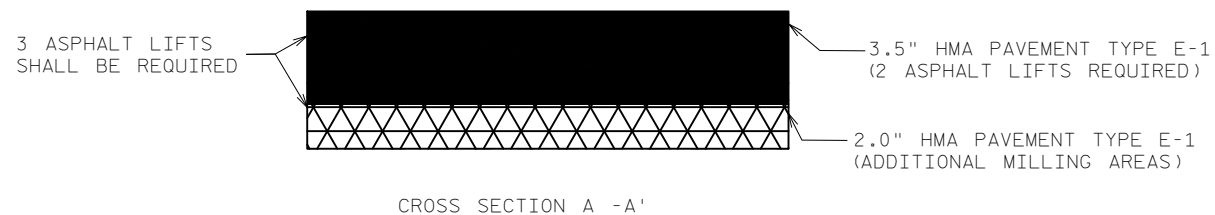
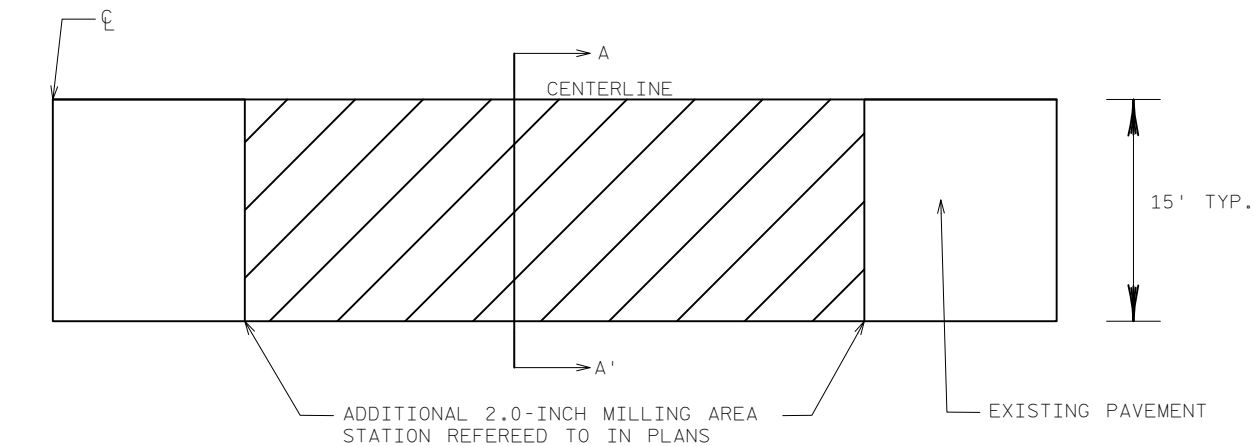
SIDE ROAD DETAIL SPECIAL

RILEY RD.
HARMONY AVE.
HAVENDALE RD.
IMPERIAL RD.
JANUS AVE.
JAVELIN AVE.
CTH AA
KAPOK RD.
KARLSBAD RD.
KARLSTAD RD.
KEEL RD.
KENYA AVE.
KAYAK RD.
CTH XU
LANDMARK AVE.
KENDALL AVE.
CTH T
LASSO AVE.

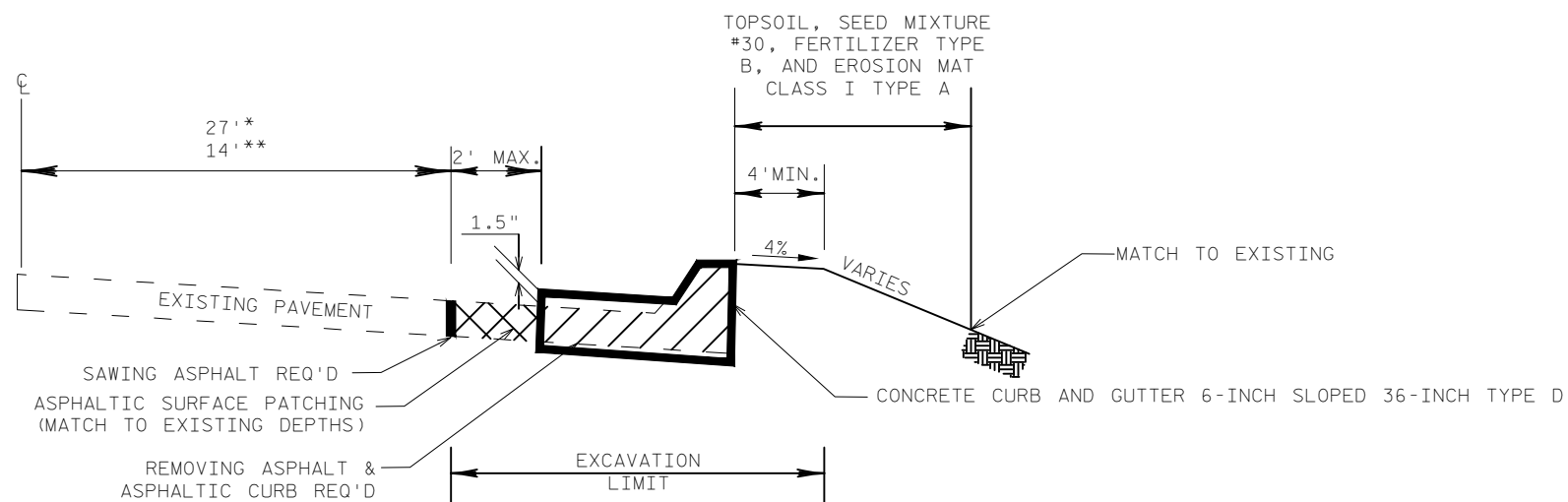


SHOULDER DETAIL AT GUARD RAIL

2



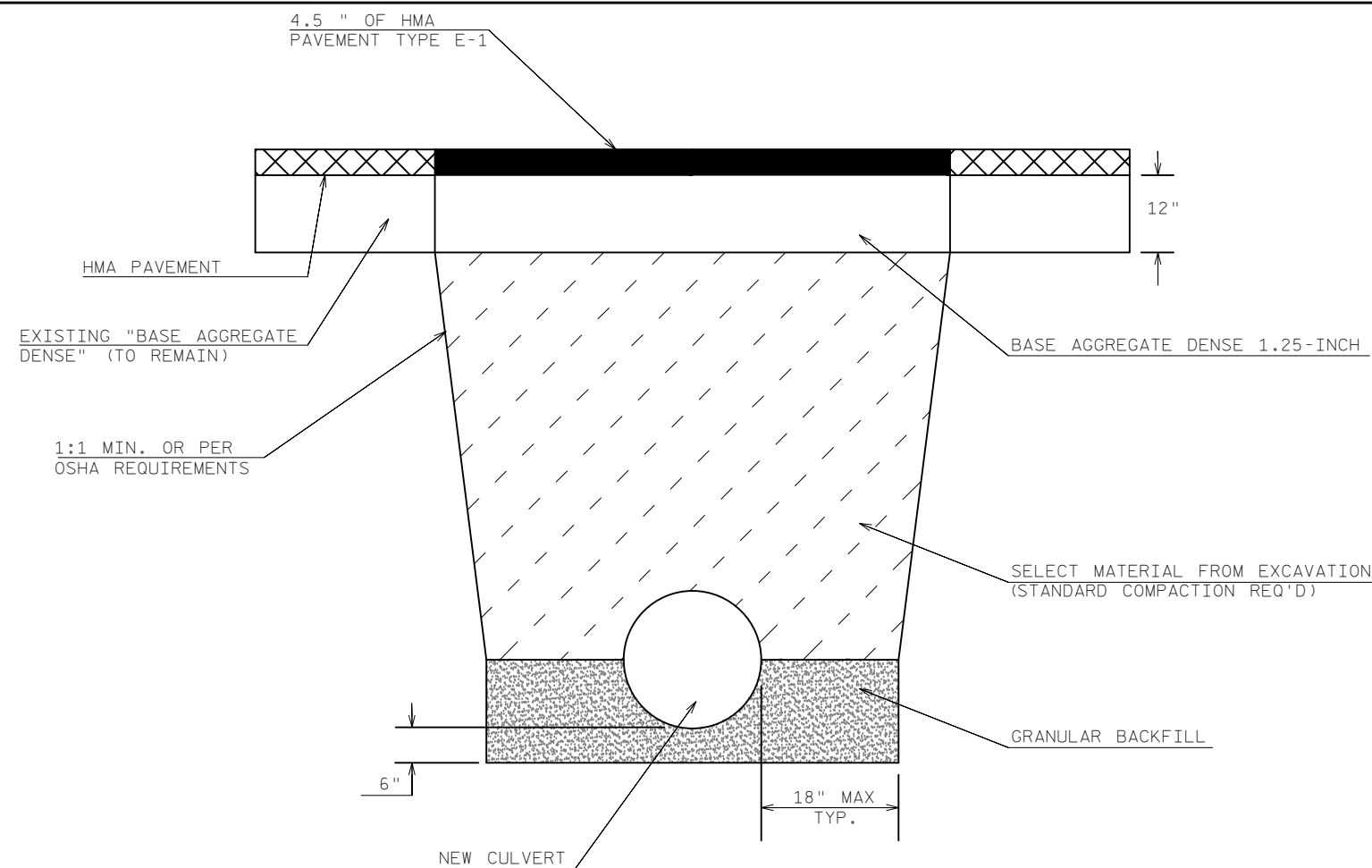
ADDITIONAL 2.0-INCH MILLING AREA



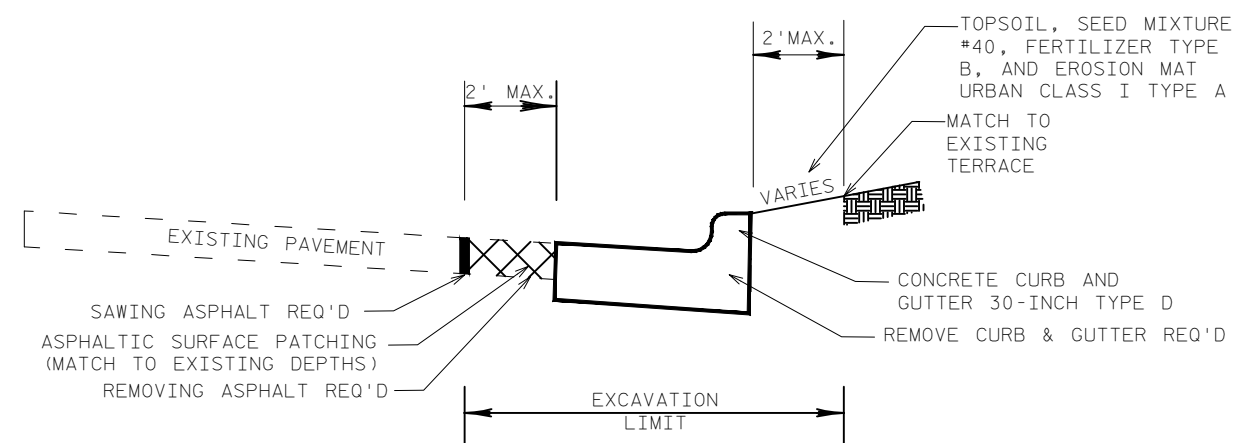
CURB AND GUTTER REPLACEMENT RURAL SECTIONS

27' TYP. STA 515+30 TO STA 524+00 RT
14' TYP. STA 536+93 TO STA 539+70 LT

2

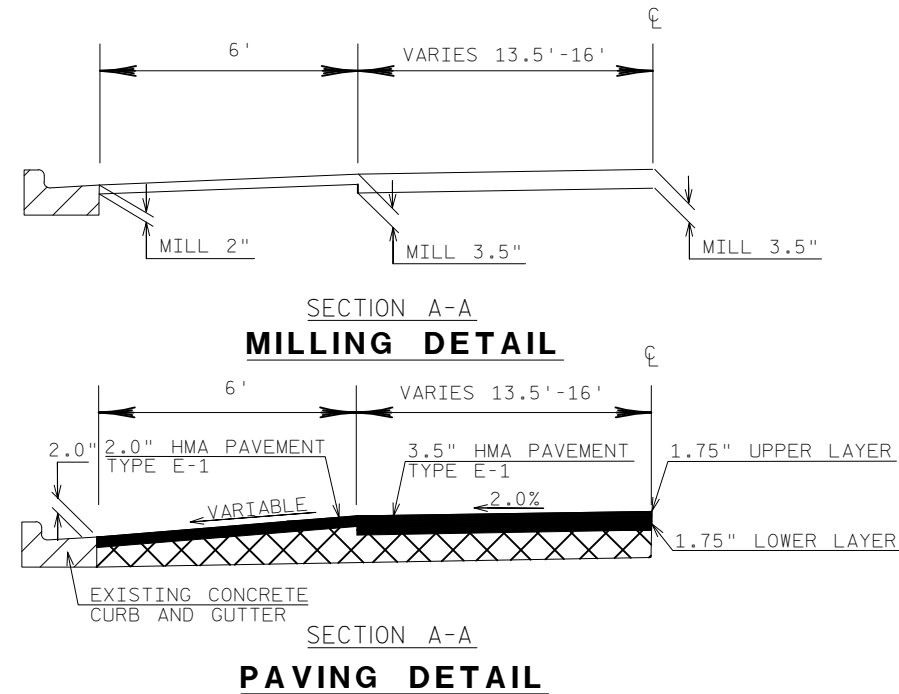
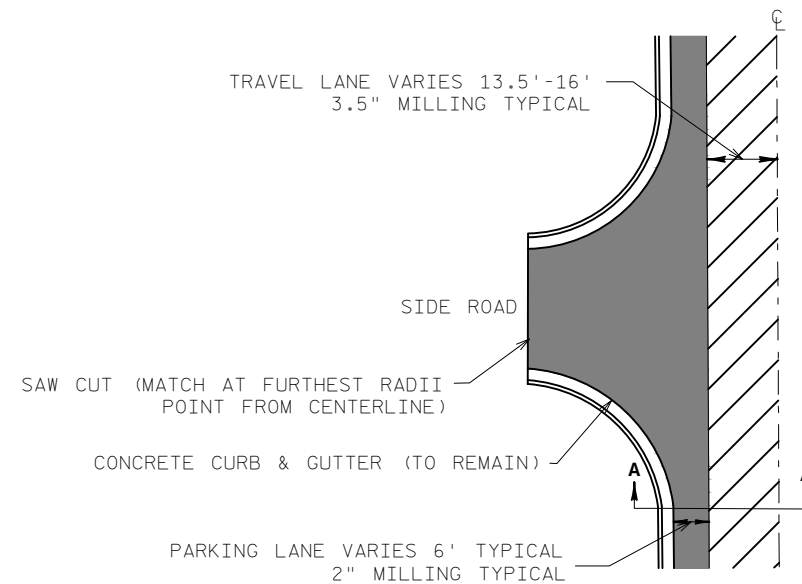


CULVERT REPLACEMENT DETAIL

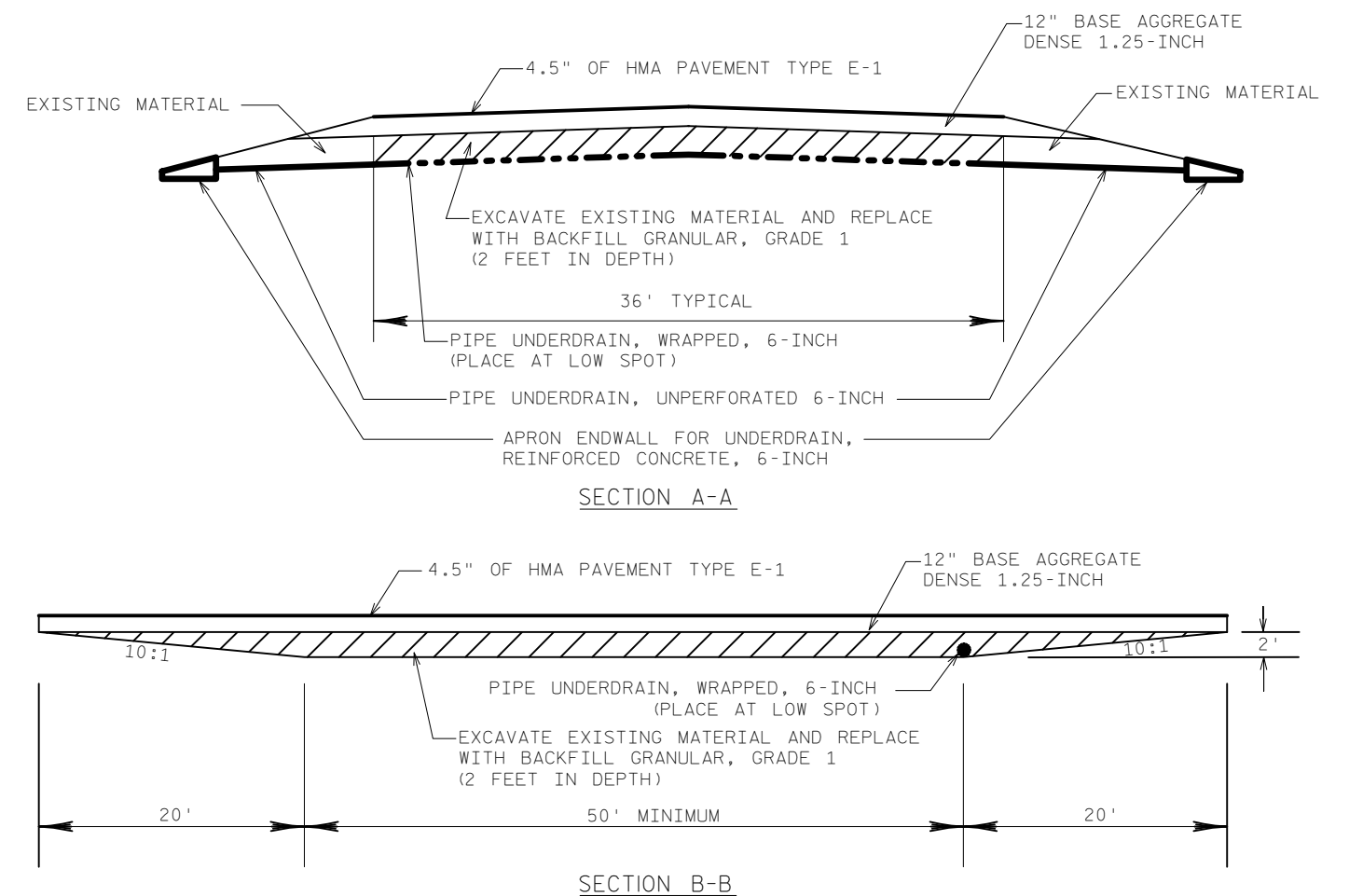
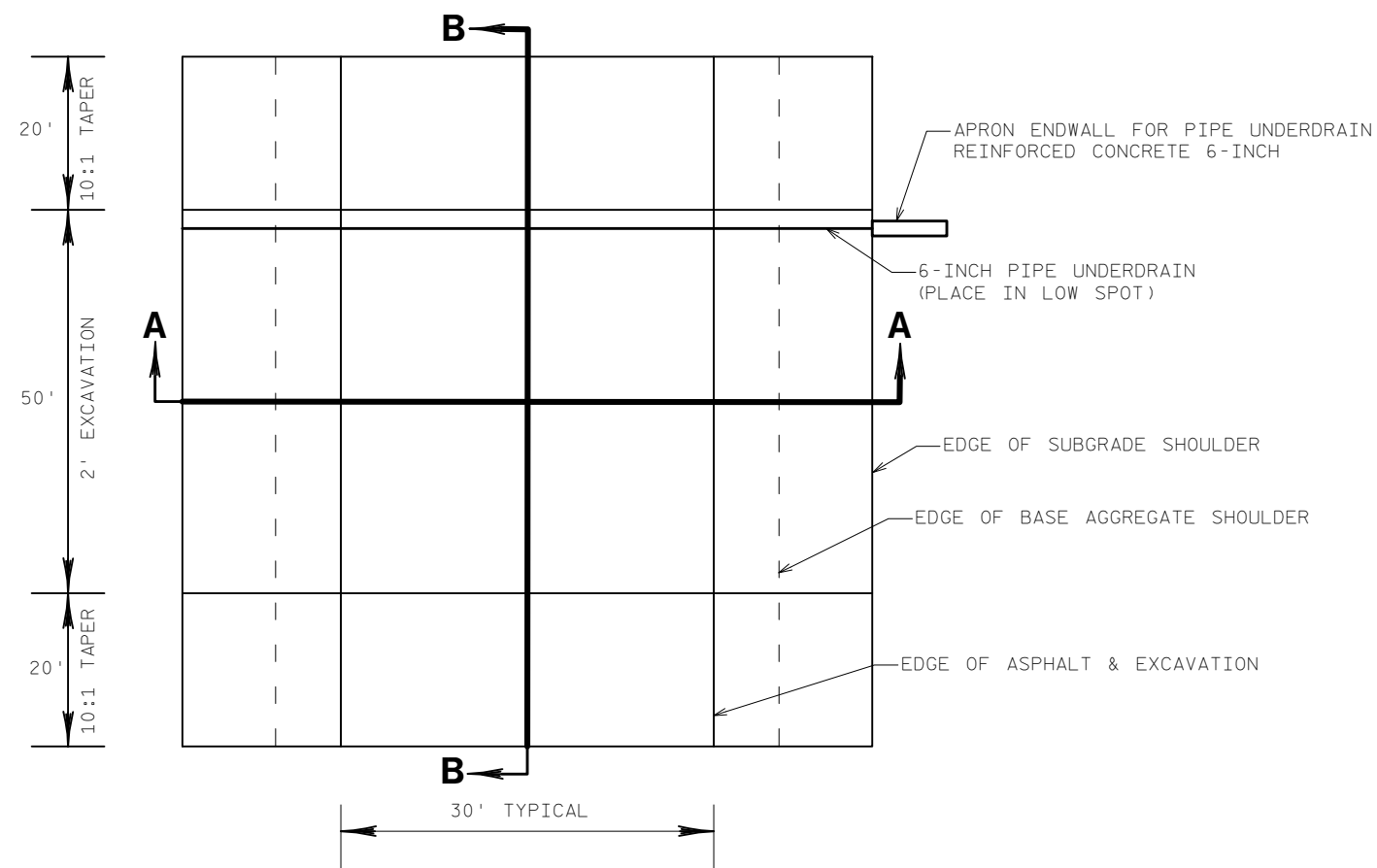


CURB AND GUTTER REPLACEMENT URBAN SECTIONS

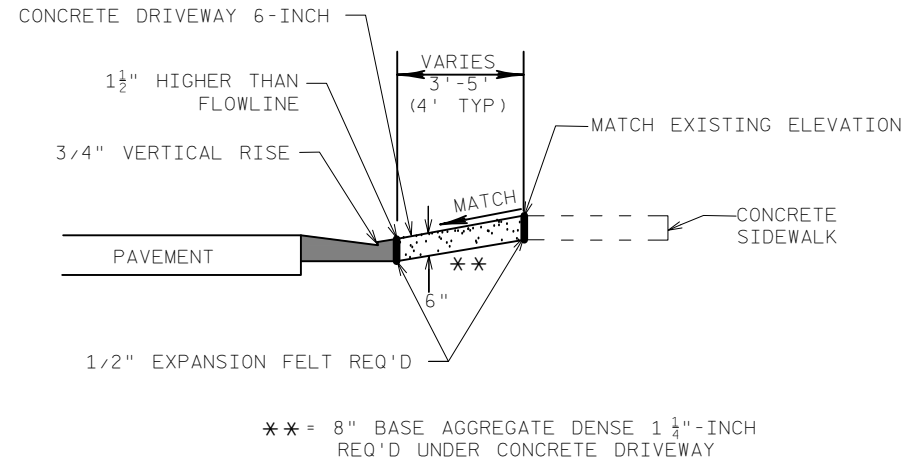
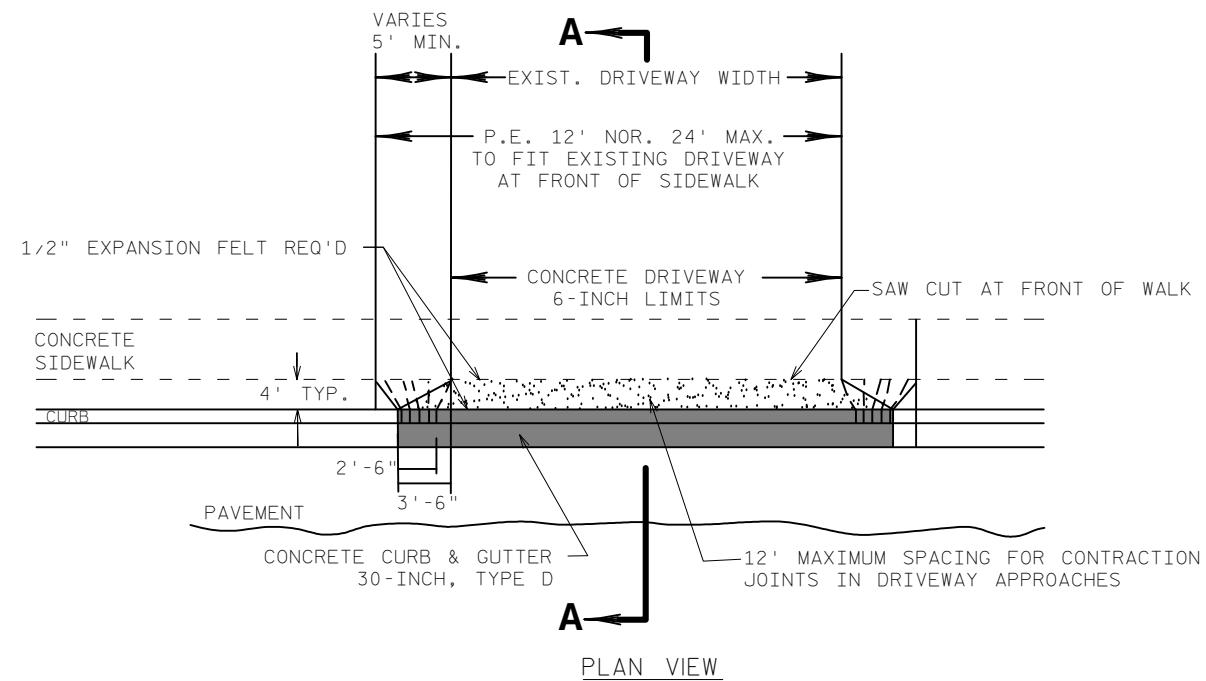
STA 757+92 TO STA 759+85 LT
STA 757+82 TO STA 759+52 RT



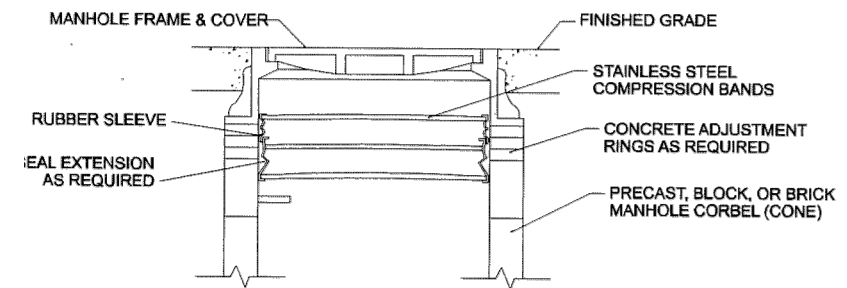
VILLAGE OF NORWALK MILLING AND PAVING DETAIL



EXCESSIVE SEASONAL ROADWAY MOVEMENT REPAIR DETAIL



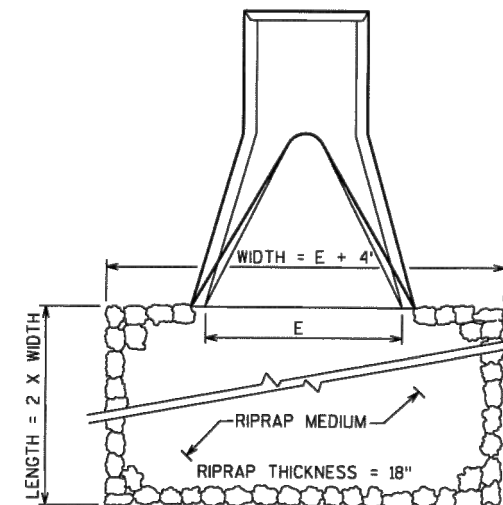
DRIVEWAY ENTRANCE DETAIL WITH SIDEWALK, CURB & GUTTER



INTERNAL RUBBER SLEEVE FRAME/CHIMNEY SEAL MANHOLE WATERPROOFING SEAL DETAIL

1. THE SEAL SHALL EXTEND FROM THE CASTING TO THE CORBEL (CONE). SEAL EXTENSION SHALL BE USED AS REQUIRED.
2. INTERNAL ADAPTOR SEAL RING MAY BE USED IN LIEU OF RUBBER SLEEVE. THE INTERNAL ADAPTOR SEAL RING SHALL BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS

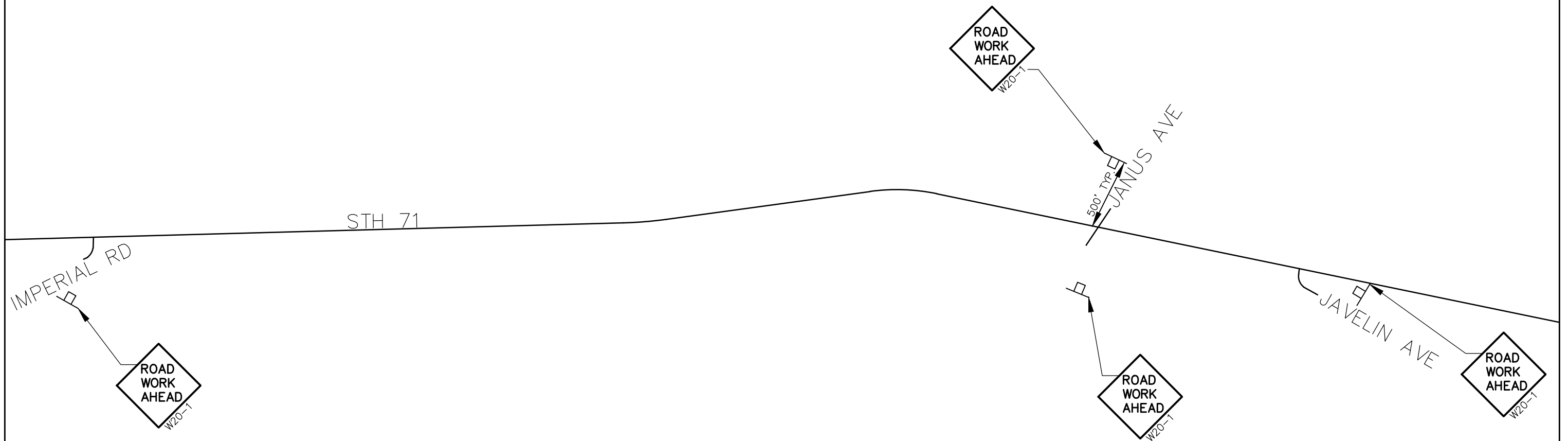
SANITARY SEWER MANHOLE CHIMNEY SEAL



TYPICAL PLACEMENT OF RIPRAP AT AT CULVERT PIPE AND STORM SEWER ENDS SEE EROSION CONTROL/STORM SEWER PLAN FOR LOCATIONS



PROJECT NO: 5510-00-60	HWY: STH 71	COUNTY: MONROE	PLAN: TRAFFIC CONTROL	SHEET	-----	E
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LEGEND

 POST MOUNTED SIGN

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED

PROJECT NO: 5510-00-60

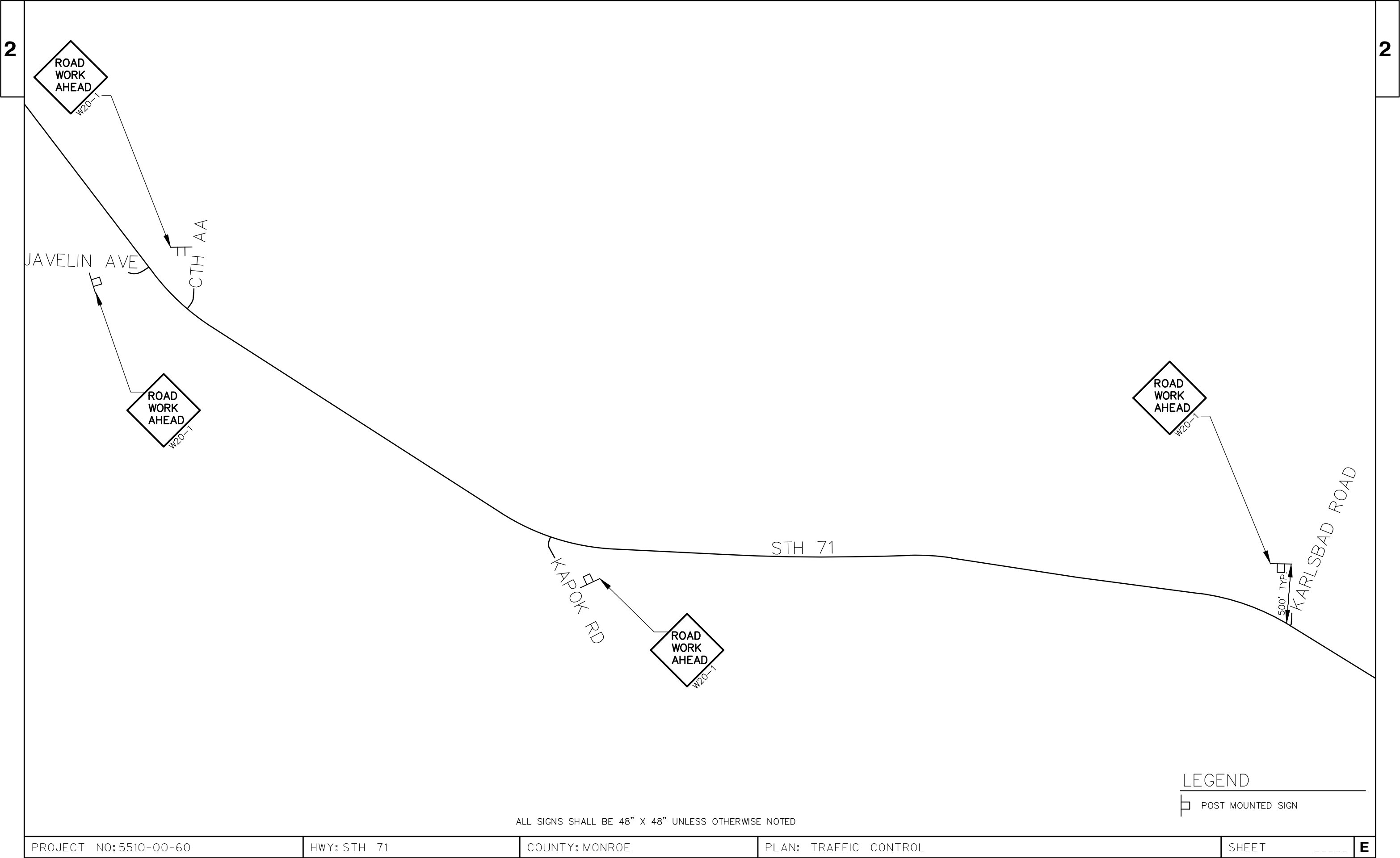
HWY: STH 71

COUNTY: MONROE

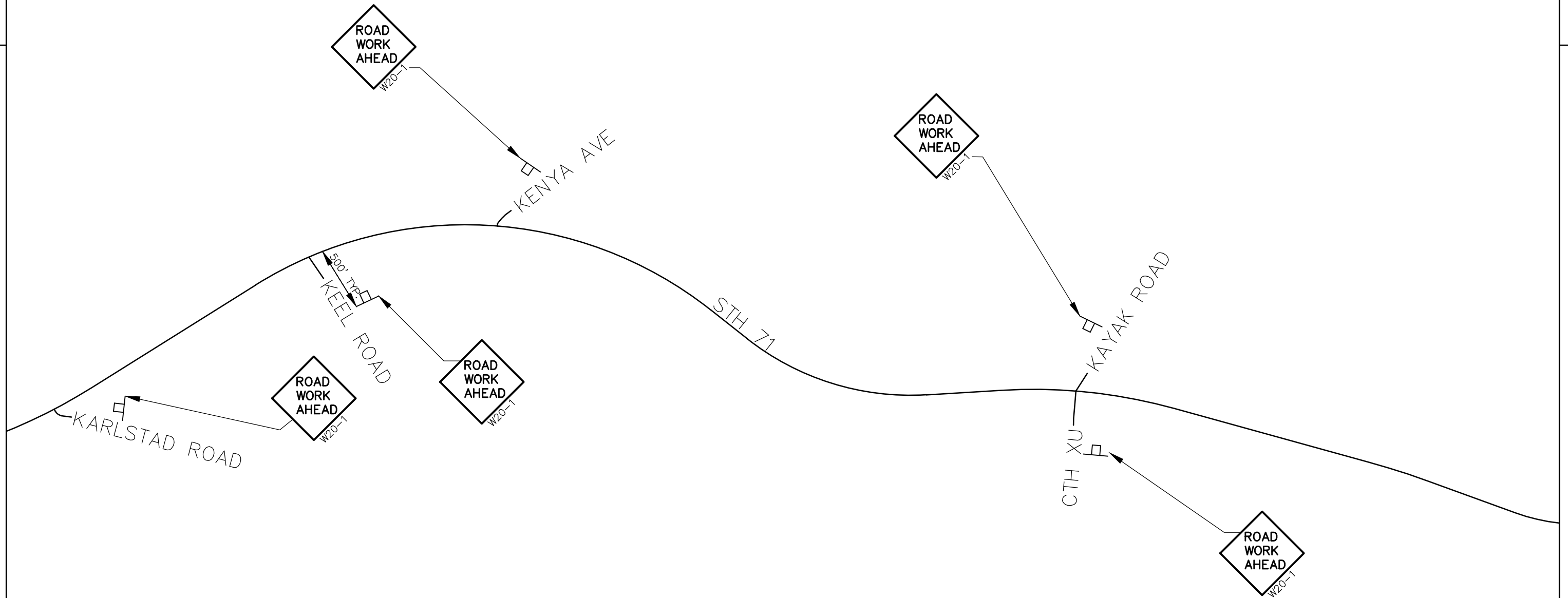
PLAN: TRAFFIC CONTROL

SHEET -----

E



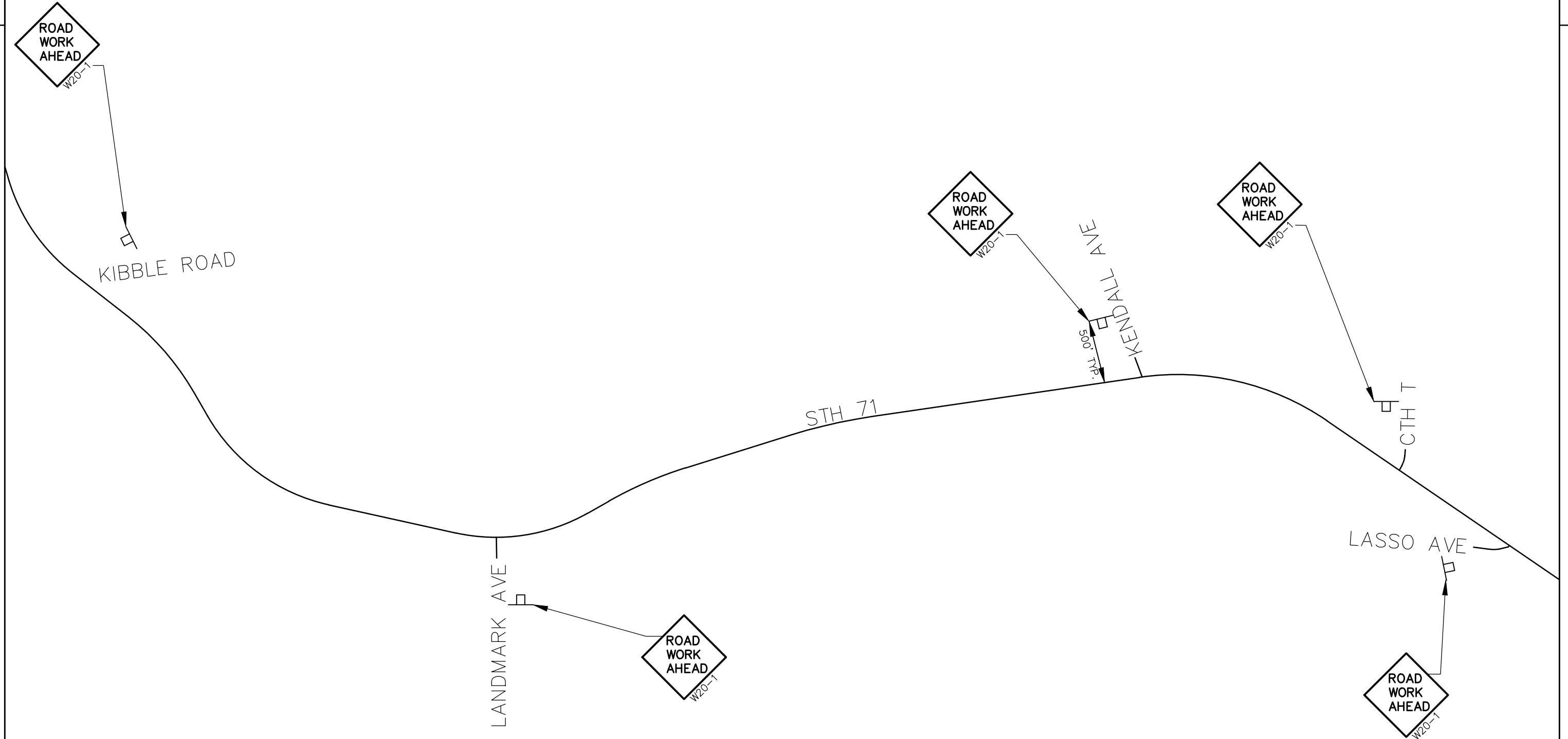
PROJECT NO: 5510-00-60	HWY: STH 71	COUNTY: MONROE	PLAN: TRAFFIC CONTROL	SHEET	-----E
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ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED

LEGEND

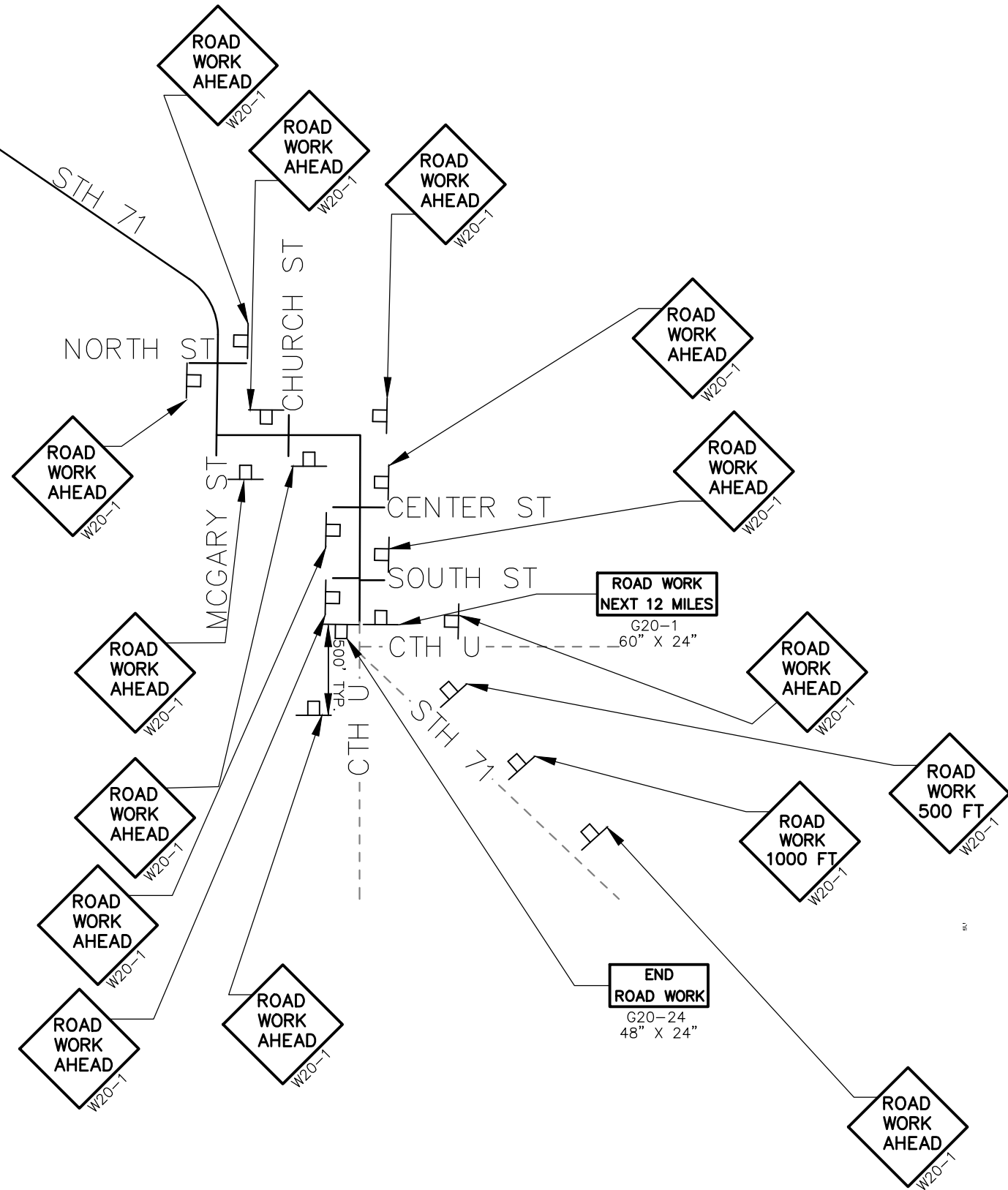
□ POST MOUNTED SIGN



LEGEND

 POST MOUNTED SIGN

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED



LEGEND

POST MOUNTED SIGN

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED

PROJECT NO: 5510-00-60

HWY: STH 71

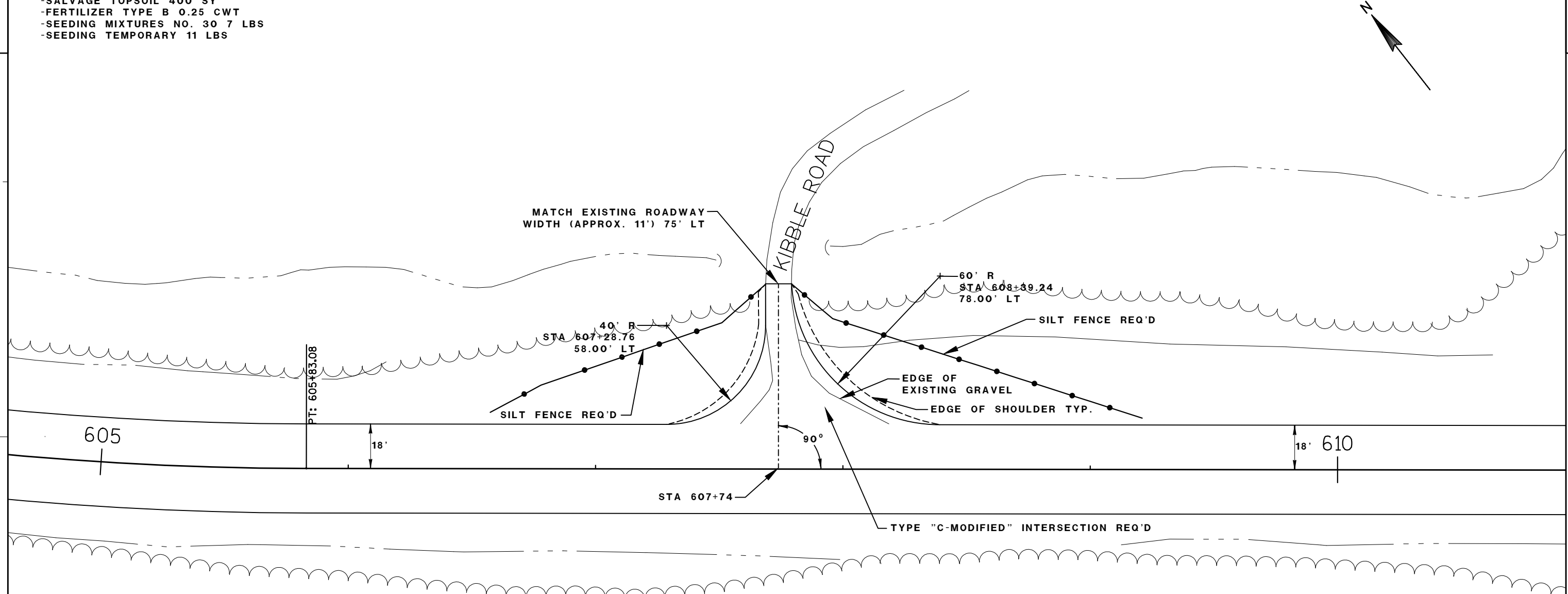
COUNTY: MONROE

PLAN: TRAFFIC CONTROL

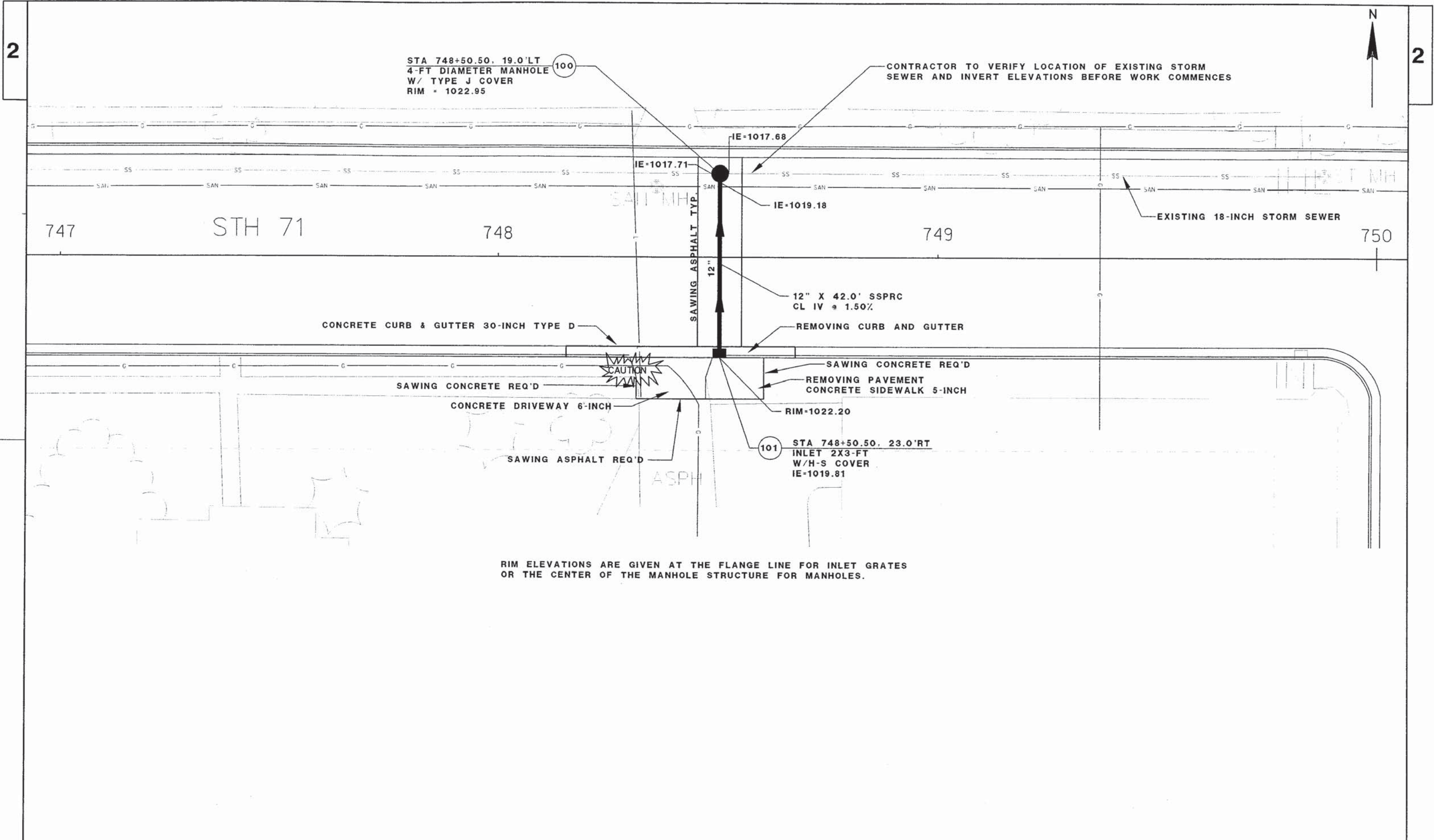
SHEET _____

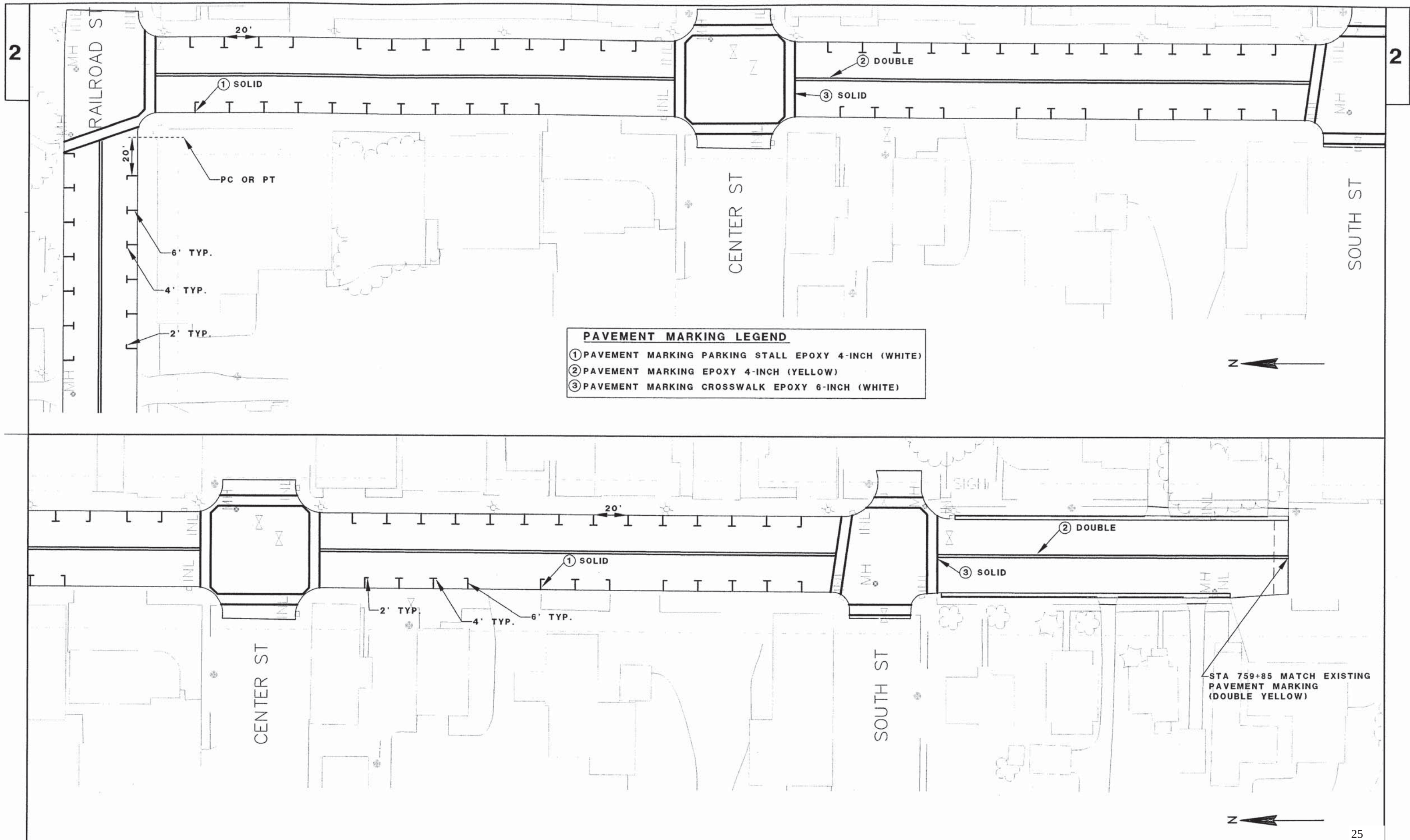
E

ESTIMATED QUANTITIES FOR INFORMATIONAL PURPOSES ONLY
-COMMON EXCAVATION 160 CY
-FILL 40 CY
-SALVAGE TOPSOIL 400 SY
-FERTILIZER TYPE B 0.25 CWT
-SEEDING MIXTURES NO. 30 7 LBS
-SEEDING TEMPORARY 11 LBS



GRADING SHAPING & FINISHING INTERSECTION
KIBBLE ROAD





DATE 05FEB13		E S T I M A T E O F Q U A N T I T I E S			
LINE				5510-00-60	
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0010	203.0100	REMOVING SMALL PIPE CULVERTS	EACH	8.000	8.000
0020	204.0100	REMOVING PAVEMENT	SY	42.000	42.000
0030	204.0110	REMOVING ASPHALTIC SURFACE	SY	3,265.000	3,265.000
0040	204.0150	REMOVING CURB & GUTTER	LF	430.000	430.000
0050	204.0155	REMOVING CONCRETE SIDEWALK	SY	14.000	14.000
0060	204.0165	REMOVING GUARDRAIL	LF	10,516.000	10,516.000
0070	204.0180	REMOVING DELINEATORS AND MARKERS	EACH	99.000	99.000
0080	205.0100	EXCAVATION COMMON	CY	3,100.000	3,100.000
0090	205.9015.S	GRADING SHAPING & FINISHING INTERSECTION (LOCATION) 01. KIBBLE ROAD	LS	1.000	1.000
0100	209.0100	BACKFILL GRANULAR	CY	1,900.000	1,900.000
0110	211.0100	PREPARE FOUNDATION FOR ASPHALTIC PAVING (PROJECT) 01. 5510-00-60	LS	1.000	1.000
0120	211.0400	PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS	STA	1,238.000	1,238.000
0130	213.0100	FINISHING ROADWAY (PROJECT) 01. 5510-00-60	EACH	1.000	1.000
0140	305.0110	BASE AGGREGATE DENSE 3/4-INCH	TON	4,010.000	4,010.000
0150	305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	3,175.000	3,175.000
0160	416.0160	CONCRETE DRIVEWAY 6-INCH	SY	42.000	42.000
0170	416.1010	CONCRETE SURFACE DRAINS	CY	1.500	1.500
0180	440.4410.S	INCENTIVE IRI RIDE	DOL	49,400.000	49,400.000
0190	455.0105	ASPHALTIC MATERIAL PG58-28	TON	3,175.000	3,175.000
0200	455.0605	TACK COAT	GAL	14,340.000	14,340.000
0210	460.1101	HMA PAVEMENT TYPE E-1	TON	57,725.000	57,725.000
0220	460.2000	INCENTIVE DENSITY HMA PAVEMENT	DOL	36,736.000	36,736.000
0230	465.0110	ASPHALTIC SURFACE PATCHING	TON	100.000	100.000
0240	465.0120	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES	TON	330.000	330.000
0250	465.0475.S	ASPHALT CENTER LINE RUMBLE STRIP 2-LANE RURAL	LF	53,010.000	53,010.000
0260	490.0200	SALVAGED ASPHALTIC PAVEMENT MILLING	SY	256,160.000	256,160.000
0270	521.0118	CULVERT PIPE CORRUGATED STEEL 18-INCH	LF	8.000	8.000
0280	521.1036	APRON ENDWALLS FOR CULVERT PIPE STEEL 36-INCH	EACH	1.000	1.000
0290	521.1518	APRON ENDWALLS FOR CULVERT PIPE SLOPED SIDE DRAINS STEEL 18-INCH 6 TO 1	EACH	2.000	2.000
0300	522.0324	CULVERT PIPE REINFORCED CONCRETE CLASS IV 24-INCH	LF	678.000	678.000
0310	522.1024	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH	EACH	16.000	16.000
0320	601.0411	CONCRETE CURB & GUTTER 30-INCH TYPE D	LF	415.000	415.000
0330	601.0555	CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE A	LF	25.000	25.000
0340	601.0557	CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE D	LF	1,162.000	1,162.000
0350	602.0410	CONCRETE SIDEWALK 5-INCH	SF	125.000	125.000
0360	606.0200	RIPRAP MEDIUM	CY	32.000	32.000
0370	608.0412	STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 12-INCH	LF	42.000	42.000
0380	611.0530	MANHOLE COVERS TYPE J	EACH	1.000	1.000
0390	611.0639	INLET COVERS TYPE H-S	EACH	1.000	1.000
0400	611.2004	MANHOLES 4-FT DIAMETER	EACH	1.000	1.000
0410	611.3230	INLETS 2X3-FT	EACH	1.000	1.000
0420	611.8110	ADJUSTING MANHOLE COVERS	EACH	14.000	14.000
0430	611.8115	ADJUSTING INLET COVERS	EACH	3.000	3.000

DATE 05FEB13		E S T I M A T E O F Q U A N T I T I E S			
LINE				5510-00-60	
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0440	612.0206	PIPE UNDERDRAIN UNPERFORATED 6-INCH	LF	180.000	180.000
0450	612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	360.000	360.000
0460	612.0806	APRON ENDWALLS FOR UNDERDRAIN REINFORCED CONCRETE 6-INCH	EACH	20.000	20.000
0470	614.0010	BARRIER SYSTEM GRADING SHAPING FINISHING	EACH	68.000	68.000
0480	614.2300	MGS GUARDRAIL 3	LF	11,863.000	11,863.000
0490	614.2500	MGS THRIE BEAM TRANSITION	LF	888.000	888.000
0500	614.2610	MGS GUARDRAIL TERMINAL EAT	EACH	58.000	58.000
0510	614.2620	MGS GUARDRAIL TERMINAL TYPE 2	EACH	10.000	10.000
0520	616.0700.S	FENCE SAFETY	LF	1,935.000	1,935.000
0530	618.0100	MAINTENANCE AND REPAIR OF HAUL ROADS (PROJECT) 01. 5510-00-60	EACH	1.000	1.000
0540	619.1000	MOBILIZATION	EACH	1.000	1.000
0550	625.0100	TOPSOIL	SY	3,430.000	3,430.000
0560	628.1504	SILT FENCE	LF	300.000	300.000
0570	628.1520	SILT FENCE MAINTENANCE	LF	600.000	600.000
0580	628.1905	MOBILIZATIONS EROSION CONTROL	EACH	6.000	6.000
0590	628.1910	MOBILIZATIONS EMERGENCY EROSION CONTROL	EACH	2.000	2.000
0600	628.2002	EROSION MAT CLASS I TYPE A	SY	3,180.000	3,180.000
0610	628.2006	EROSION MAT URBAN CLASS I TYPE A	SY	570.000	570.000
0620	629.0210	FERTILIZER TYPE B	CWT	2.300	2.300
0630	630.0130	SEEDING MIXTURE NO. 30	LB	65.000	65.000
0640	630.0140	SEEDING MIXTURE NO. 40	LB	3.000	3.000
0650	630.0200	SEEDING TEMPORARY	LB	103.000	103.000
0660	633.5200	MARKERS CULVERT END	EACH	102.000	102.000
0670	634.0614	POSTS WOOD 4X6-INCH X 14-FT	EACH	52.000	52.000
0680	634.0616	POSTS WOOD 4X6-INCH X 16-FT	EACH	64.000	64.000
0690	634.0618	POSTS WOOD 4X6-INCH X 18-FT	EACH	10.000	10.000
0700	637.0202	SIGNS REFLECTIVE TYPE II	SF	920.220	920.220
0710	638.2602	REMOVING SIGNS TYPE II	EACH	136.000	136.000
0720	638.3000	REMOVING SMALL SIGN SUPPORTS	EACH	98.000	98.000
0730	642.5001	FIELD OFFICE TYPE B	EACH	1.000	1.000
0740	643.0100	TRAFFIC CONTROL (PROJECT) 01. 5510-00-60	EACH	1.000	1.000
0750	643.0300	TRAFFIC CONTROL DRUMS	DAY	16,630.000	16,630.000
0760	643.0900	TRAFFIC CONTROL SIGNS	DAY	5,842.000	5,842.000
0770	645.0120	GEOTEXTILE FABRIC TYPE HR	SY	63.000	63.000
0780	646.0106	PAVEMENT MARKING EPOXY 4-INCH	LF	204,025.000	204,025.000
0790	646.0805.S	PAVEMENT MARKING OUTFALL	EACH	20.000	20.000
0800	647.0656	PAVEMENT MARKING PARKING STALL EPOXY	LF	3,550.000	3,550.000
0810	647.0766	PAVEMENT MARKING CROSSWALK EPOXY 6-INCH	LF	900.000	900.000
0820	648.0100	LOCATING NO-PASSING ZONES	MI	11.870	11.870
0830	649.0100	TEMPORARY PAVEMENT MARKING 4-INCH	LF	235,150.000	235,150.000
0840	650.4000	CONSTRUCTION STAKING STORM SEWER	EACH	2.000	2.000
0850	650.5500	CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER	LF	1,602.000	1,602.000
0860	650.6000	CONSTRUCTION STAKING PIPE CULVERTS	EACH	8.000	8.000
0870	650.8000	CONSTRUCTION STAKING RESURFACING REFERENCE	LF	65,280.000	65,280.000
0880	650.9910	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 01. 5510-00-60	LS	1.000	1.000
0890	690.0150	SAWING ASPHALT	LF	2,961.000	2,961.000
0900	690.0250	SAWING CONCRETE	LF	75.000	75.000
0910	SPV.0060	SPECIAL 01. ADJUSTING WATER VALVE BOX	EACH	14.000	14.000

DATE 05FEB13		E S T I M A T E O F Q U A N T I T I E S			
LINE		5510-00-60			
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0920	SPV.0060	SPECIAL 02. SANITARY SEWER MANHOLE CHIMNEY SEAL	EACH	8.000	8.000

3

3

REMOVING ASPHALTIC SURFACE

CATEGORY	STATION	LOCATION	204.0110	REMARKS
			SY	
0010	107+78 - 734+50	LT & RT	1,370	DRIVEWAY & FE APRONS
0010	166+90	RT	29	PAVED DRIVEWAY
0010	172+92	RT	23	PAVED DRIVEWAY
0010	174+80	RT	24	PAVED DRIVEWAY
0010	220+00	LT & RT	70	20' W FOR CULVERT REPLACEMENT
0010	259+70	LT	74	PAVED DRIVEWAY
0010	280+80	LT	33	PAVED DRIVEWAY
0010	286+05	LT & RT	80	20' W FOR CULVERT REPLACEMENT
0010	289+90	LT	33	PAVED DRIVEWAY
0010	291+30	LT	32	PAVED DRIVEWAY
0010	375+13	RT	39	PAVED DRIVEWAY
0010	378+68	RT	45	PAVED DRIVEWAY
0010	383+00	RT	39	PAVED DRIVEWAY
0010	469+26	RT	30	PAVED DRIVEWAY
0010	500+00	LT & RT	70	20' W FOR CULVERT REPLACEMENT
0010	515+05 - 524+00	RT	348	ASPHALT CURB REMOVAL
0010	536+93 - 539+70	LT	108	ASPHALT CURB REMOVAL
0010	564+13	LT & RT	110	20' W FOR CULVERT REPLACEMENT
0010	569+99	LT & RT	93	20' W FOR CULVERT REPLACEMENT
0010	576+50	LT & RT	93	20' W FOR CULVERT REPLACEMENT
0010	668+65	LT	142	PAVED DRIVEWAY
0010	681+73	LT & RT	70	20' W FOR CULVERT REPLACEMENT
0010	682+00	LT	46	PAVED DRIVEWAY
0010	684+30	LT	47	PAVED DRIVEWAY
0010	690+30	LT	48	PAVED DRIVEWAY
0010	710+90	LT & RT	72	20' W FOR CULVERT REPLACEMENT
0010	748+15 - 748+67	RT	6	CONCRETE CURB & GUTTER REMOVAL
0010	748+45 - 748+55	LT & RT	50	10' W FOR STORM SEWER
0010	757+92 - 759+85	LT	22	CONCRETE CURB & GUTTER REMOVAL
0010	757+82 - 759+52	RT	19	CONCRETE CURB & GUTTER REMOVAL
			3,265	

REMOVING CURB & GUTTER

CATEGORY	STATION TO STATION	LOCATION	204.0150
			LF
0010	564+02 - 564+7	LT	5
0010	564+00 - 564+10	RT	10
0010	748+15 - 748+67	RT	52
0010	757+92 - 759+85	LT	193
0010	757+82 - 759+52	RT	170
TOTAL			430

3

REMOVING GUARDRAIL				
CATEGORY	STATION TO STATION	LOCATION	204.0165 LF	REMARKS
0010	130+17 - 130+92	LT	75	—
0010	130+18 - 130+92	RT	74	—
0010	134+18 - 135+55	LT	137	—
0010	134+18 - 135+55	RT	137	—
0010	222+59 - 223+46	RT	87	—
0010	222+75 - 223+66	LT	91	—
0010	224+03 - 222+92	RT	89	—
0010	224+24 - 225+10	LT	86	—
0010	252+04 - 252+83	LT	79	—
0010	252+19 - 252+97	RT	78	—
0010	253+37 - 254+18	LT	81	—
0010	253+51 - 254+29	RT	78	—
0010	268+48 - 269+37	RT	89	—
0010	268+52 - 269+42	LT	90	—
0010	269+79 - 270+68	RT	89	—
0010	269+84 - 270+76	LT	92	—
0010	310+71 - 312+03	LT	132	—
0010	327+21 - 328+21	LT	100	—
0010	352+92 - 354+28	RT	136	—
0010	353+00 - 354+14	LT	114	—
0010	418+38 - 419+69	LT	140	35' O/S LT
0010	418+42 - 419+95	RT	153	—
0010	470+49 - 471+30	LT	81	—
0010	470+69 - 471+50	RT	81	—
0010	471+53 - 471+83	LT	46	41' O/S LT
0010	471+75 - 472+54	RT	79	—
0010	489+96 - 490+78	RT	82	—
0010	490+18 - 490+91	LT	73	—
0010	491+03 - 491+82	RT	79	—
0010	491+24 - 492+06	LT	82	—
0010	513+52 - 520+16	LT	1,125	161' O/S LT (ALL OF KENYA AVE)
0010	515+11 - 527+00	RT	1,189	—
0010	521+39 - 539+97	LT	2,250	170' O/S LT (ALL OF KENYA AVE)
0010	534+86 - 543+58	RT	872	—
0010	585+97 - 595+97	LT	1,000	—
0010	653+30 - 654+73	RT	143	—
0010	688+42 - 689+97	RT	155	—
0010	688+42 - 689+97	LT	155	—
0010	699+73 - 701+13	LT	140	—
0010	700+19 - 701+37	RT	118	—
0010	718+48 - 718+95	RT	47	—
0010	718+61 - 719+08	LT	47	—
0010	720+02 - 720+49	RT	47	—
0010	720+15 - 720+62	LT	47	—
0010	734+69 - 735+91	LT	122	—
0010	735+95 - 738+06	LT	229	50' O/S LT
TOTAL			10,516	

GRADING, SHAPING & FINISHING INTERSECTION 01. KIBBLE ROAD

CATEGORY	STATION	LOCATION	205.9015.S LS	REMARKS
0010	607+75	LT	1	KIBBLE ROAD
TOTAL			1	

PREPARATION OF FOUNDATION FOR ASPHALTIC SHOULDERS

CATEGORY	STATION - STATION	LOCATION	211.0400 STA
0010	107+78 - 132+00	LT	25
0010	107+78 - 132+00	RT	25
0010	133+00 - 264+00	LT	131
0010	133+00 - 467+00	RT	334
0010	266+00 - 537+00	LT	271
0010	469+00 - 515+00	RT	46
0010	524+00 - 564+00	RT	40
0010	539+00 - 734+70	LT	196
0010	565+00 - 734+40	RT	170
TOTAL			1238

BASE AGGREGATE DENSE 3/4-INCH

CATEGORY	LOCATION	305.0110 TON	REMARKS
0010	107+78 - 738+50	4010	SHOULDERS
TOTAL		4010	

BASE AGGREGATE DENSE 1 1/4-INCH

CATEGORY	LOCATION	305.0120 TON	REMARKS
0010	220+00	55	CULVERT REPLACEMENT
0010	286+50	55	CULVERT REPLACEMENT
0010	500+00	55	CULVERT REPLACEMENT
0010	564+13	70	CULVERT REPLACEMENT
0010	569+99	70	CULVERT REPLACEMENT
0010	576+50	70	CULVERT REPLACEMENT
0010	607+75	260	KIBBLE ROAD
0010	681+73	55	CULVERT REPLACEMENT
0010	710+90	55	CULVERT REPLACEMENT
0010	748+45 - 748+55	30	STORM SEWER IN NORWALK
TOTAL		775	

*** ADDITIONAL QUANTITIES LISTED ELSEWHERE

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* EXCESSIVE SEASONAL ROADWAY MOVEMENT REPAIR											

			205.0100	209.0100	305.0120	612.0206	612.0406	612.0806	646.0805.S	***	
			EXCAVATION	BACKFILL	BASE	PIPE UNDERDRAIN	PIPE	APRON ENDWALLS FOR	PAVEMENT	690.0150	
			COMMON	GRANULAR	AGGREGATE	UNPERFORATED 6-	UNDERDRAIN	UNDERDRAIN	MARKING	SAWING ASPHALT	
CATEGORY	STATION - STATION	LOCATION	CY	GRADE 1	DENSE	INCH	6-INCH	CONCRETE 6-INCH	OUTFALLS	LF	REMARKS
					1 1/4-INCH	LF	LF	EACH	EACH		
0010	278+80 - 279+70	LT & RT	310	190	240	18	36	2	2	30	250 ' NORTH OF JANUS AVE
0010	281+00 - 283+00	LT & RT	620	380	480	36	72	4	4	60	AT JANUS AVE INTERSECTION (2 LOCATIONS)
0010	289+90 - 290+80	LT & RT	310	190	240	18	36	2	2	30	850' SOUTH OF JANUS AVE
0010	298+70 - 299+60	LT & RT	310	190	240	18	36	2	2	30	250' SOUTH OF N. JAVELIN RD
0010	300+55 - 301+45	LT & RT	310	190	240	18	36	2	2	30	430' SOUTH OF N. JAVELIN RD.
0010	377+20 - 378+10	LT & RT	310	190	240	18	36	2	2	30	380' SOUTH OF CHT AA
0010	383+60 - 384+50	LT & RT	310	190	240	18	36	2	2	30	CULVERT 1000' SOUTH OF CTH AA
0010	394+20 - 395+10	LT & RT	310	190	240	18	36	2	2	30	CULVERT 2050' SOUTH OF CTH AA
0010	497+65 - 498+55	LT & RT	310	190	240	18	36	2	2	30	750' NORTH OF KEEL RD
TOTAL			3100	1900	2400	180	360	20	20	300	
*LOCATIONS OF EXCESSIVE SEASONAL ROADWAY MOVEMENT ARE TO BE VERIFIED WITH REGION MAINTENANCE ENGINEER PRIOR TO WORK BEGINNING											
SEE ASPHALT SUMMARY TABLE FOR HMA PAVEMENT ITEMS											
*** ADDITIONAL QUANTIES LISTED ELSEWHERE											
CONCRETE PAVEMENT SUMMARY											
			204.0100	204.0155	416.0160	416.1010	602.0410				
			REMOVING	REMOVING	CONCRETE	CONCRETE	CONCRETE				
			PAVEMENT	CONCRETE	DRIVEWAY	SURFACE	SIDEWALK				
CATEGORY	STATION	LOCATION	SY	SIDEWALK	6-INCH	DRAINS	5-INCH				
				SY	SY	CY	SF				
0010	514+28	RT				1.5					
0010	748+35	RT	18	14	18		125				
0010	758+78	RT	5		5						
0010	759+12	LT	8		8						
0010	759+30	RT	5		5						
0010	759+78	LT	6		6						
TOTAL			42	14	42	1.5	125				
PROJECT NO: 5510-00-60			HWY: STH 71			COUNTY: MONROE			MISCELLANEOUS QUANTITIES		
									SHEET ----- E		

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ASPHALT SUMMARY

CATEGORY	STATION TO STATION	LOCATION	455.0105 ASPHALTIC MATERIAL PG58- 28 TON*	455.0605 TACK COAT GAL**	460.1101 HMA PAVEMENT TYPE E-1 TON***	465.0110 ASPHALTIC SURFACE PATCHING TON	465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES TON***	REMARKS
0010	107+78 - 734+40	LT & RT	2,717	12,470	49,420			STH 71 - MAINLINE
0010	734+40 - 759+85	LT & RT	120	535	2,180			STH 71 - MAINLINE & SIDE STREETS- VLLAGE OF NORWALK
0010	503+00 - 590+50	RT	118	535	2,110			STH 71 - CLIMBING LANE
0010	INTERSECTIONS	LT & RT	95	435	1,720			INTERSECTIONS
0010	287+75 - 290+50	RT	3	12	61			STH 71 - ADDITIONAL 2" MILLING AREA
0010	296+92 - 298+70	LT & RT	4	16	76			STH 71 - ADDITIONAL 2" MILLING AREA
0010	299+60 - 300+55	LT & RT	2	8	41			STH 71 - ADDITIONAL 2" MILLING AREA
0010	301+45 - 301+92	LT & RT	1	4	23			STH 71 - ADDITIONAL 2" MILLING AREA
0010	493+46 - 497+53	LT	4	16	81			STH 71 - ADDITIONAL 2" MILLING AREA
0010	576+00 - 579+40	LT	4	16	77			STH 71 - ADDITIONAL 2" MILLING AREA
0010	668+36 - 672+93	RT	5	19	93			STH 71 - ADDITIONAL 2" MILLING AREA
0010	278+80 - 498+55	LT & RT	47	90	850			EXCESSIVE SEASONAL ROADWAY MOVEMENT REPAIR
0010	220+00	LT & RT	1		17			CULVERT REPLACEMENT
0010	286+50	LT & RT	1		17			CULVERT REPLACEMENT
0010	500+00	LT & RT	1		17			CULVERT REPLACEMENT
0010	564+13	LT & RT	1		25			CULVERT REPLACEMENT
0010	569+99	LT & RT	1		25			CULVERT REPLACEMENT
0010	576+50	LT & RT	1		25			CULVERT REPLACEMENT
0010	681+73	LT & RT	1		17			CULVERT REPLACEMENT
0010	710+90	LT & RT	1		17			CULVERT REPLACEMENT
0010	108+78 - 734+40						330	DRIVEWAYS & FE'S
0010	UNDISTRIBUTED		47	184	833			STH 71 - ADDITIONAL 2" MILLING AREA
0010	UNDISTRIBUTED					100		
TOTAL			3,175	14,340	57,725	100	330	

* QUANTITY BASED ON 5.5% ASPHALT CONTENT
** QUANTITY BASED ON 0.025 GAL/SY APPLICATION RATE
*** QUANTITY BASED ON 113 LBS/SY/INCH

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SALVAGED ASPHALTIC PAVEMENT MILLING

CATEGORY	STATION TO STATION	LOCATION	490.0200 SY	REMARKS
0010	108+78 - 734+40	LT & RT	208,875	STH 71 - MAINLINE
0010	734+40 - 759+85	LT & RT	12,590	STH 71 - MAINLINE & SIDE STREETS- VILLAGE OF NORWALK
0010	263+50 - 267+37	LT	232	WIDENING @ EXISTING C&G
0010	466+50 - 469+50	RT	145	WIDENING @ EXISTING C&G
0010	503+00 - 590+50	RT	11,170	STH 71 - CLIMBING LANE
0010	INTERSECTIONS		8,878	INTERSECTIONS
0010	STH 71	LT & RT	3,509	WIDENING @ EXISTING BEAMGUARD
0010	287+75 - 289+90	RT	390	STH 71 - ADDITIONAL 2" MILLING
0010	296+92 - 298+70	LT & RT	622	STH 71 - ADDITIONAL 2" MILLING
0010	299+60 - 300+55	LT & RT	317	STH 71 - ADDITIONAL 2" MILLING
0010	301+45 - 301+92	LT & RT	157	STH 71 - ADDITIONAL 2" MILLING
0010	493+46 - 497+53	LT	645	STH 71 - ADDITIONAL 2" MILLING
0010	576+00 - 579+40	LT	620	STH 71 - ADDITIONAL 2" MILLING
0010	668+36 - 672+93	RT	760	STH 71 - ADDITIONAL 2" MILLING
0010	UNDISTRIBUTED		7,250	STH 71 - ADDITIONAL 2" MILLING
TOTAL			256,160	

CULVERT PIPE SUMMARY

CATEGORY	STATION TO STATION	LOCATION	203.0100 REMOVING SMALL PIPE CULVERTS EACH	*** 521.0118 CULVERT PIPE CORRUGATED STEEL 18-INCH LF	522.0324 CULVERT PIPE REINFORCED CONCRETE CLASS IV 24-INCH LF	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH EACH	521.1036 APRON ENDWALLS FOR CULVERT PIPE STEEL 36-INCH EACH	521.1518 APRON ENDWALLS FOR CULVERT PIPE SLOPED SIDE DRAINS STEEL 18-INCH 6 TO 1 EACH
0010	220+00	LT & RT	1		70	2		
0010	286+05	LT & RT	1		94	2		
0010	500+00	LT & RT	1		70	2		
0010	537+35	RT					1	
0010	544+50	LT		8				2
0010	564+13	LT & RT	1		110	2		
0010	569+99	LT & RT	1		106	2		
0010	576+50	LT & RT	1		102	2		
0010	681+73	LT & RT	1		62	2		
0010	710+90	LT & RT	1		64	2		
TOTAL			8	8	678	16	1	2

*** MINIMUM THICKNESS - 0.064"

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CONCRETE CURB & GUTTER

CATEGORY	STATION TO STATION	LOCATION	601.0411	601.0555	601.0557	REMARKS
			CONCRETE CURB & GUTTER 30-INCH TYPE D LF	CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE A LF	CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE D LF	
0010	515+30 - 524+00	RT			870	
0010	515+05 - 515+30	RT		25		DRIVEWAY @ TRAIL PARKING AREA
0010	536+93 - 539+70	LT			277	
0010	564+02 - 564+07	LT			5	CULVERT REPLACEMENT
0010	564+00 - 564+10	RT			10	CULVERT REPLACEMENT
0010	748+15 - 748+67	RT	52			
0010	757+92 - 759+85	LT	193			
0010	757+82 - 759+52	RT	170			
TOTAL			415	25	1162	

STORM SEWER STRUCTURE SUMMARY

CATEGORY	STRUCTURE NUMBER	STATION	OFFSET	611.2004	611.3230	611.0530	611.0639	REMARKS
				MANHOLE 4-FT DIAMETER EACH	INLETS 2X3-FT EACH	MANHOLE COVERS TYPE J EACH	INLET COVERS TYPE H-S EACH	
0010	100	748+50	19.0' LT	1		1		FLAT TOP SLAB
0010	101	748+50	23.0' RT		1		1	
TOTAL				1	1	1	1	

STATIONS AND OFFSETS ARE TO THE CENTER OF THE STRUCTURES

STORM SEWER PIPE REINFORCED CONCRETE CLASS IV, 12-INCH

STRUCTURE NUMBER	STATION	OFFSET	FROM STRUCTURE	TO STRUCTURE	INLET ELEVATION	DISCHARGE ELEVATION	SLOPE	608.0412
								STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 12-INCH LF
100	748+50	19.0' LT	100	101	1019.81	1019.18	1.50%	42
TOTAL								42

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ADJUSTING MANHOLE COVERS

		611.8110 ADJUSTING MANHOLE COVERS EACH		SPV.0060.02 SANITARY SEWER MANHOLE CHIMNEY SEAL EACH		REMARKS
CATEGORY	STATION	LOCATION				
0010	739+42	18.0' RT	1			
0010	743+27	16.0' LT	1			
0010	746+40	16.0' LT	1			
0010	749+88	17.5' LT	1			
0010	757+73	27.0' LT	1			
0010	759+42	18.0' RT	1			
0020	736+47	17.5' RT	1	1		
0020	739+15	12.5' RT	1	1		
0020	742+90	8.0' RT	1	1		
0020	746+46	9.0' RT	1	1		
0020	748+37	16.5' RT	1	1		
0020	751+21	LT	1	1		RAILROAD STREET
0020	753+74	25.0' LT	1	1		
0020	757+44	15.0' RT	1	1		
TOTAL 0010			6	-		
TOTAL 0020			8	8		
TOTAL			14	8		

ADJUSTING INLET COVERS

		611.8115 EACH	
CATEGORY	STATION	LOCATION	
0010	758+02	LT	1
0010	759+40	LT	1
0010	759+40	RT	1
TOTAL			3

FENCE SAFETY

		616.0700.S LF		REMARKS
CATEGORY	STATION TO STATION	LOCATION		
0010	230+00 - 236+05	LT	605	
0010	264+00 - 266+80	LT	280	
0010	641+50 - 646+00	LT	450	
0010	641+55 - 646+00	RT	600	EXTEND FENCING 75' SOUTH ON LANDMARK AVE.
TOTAL			1935	

MARKERS

		204.0180 REMOVING DELINEATORS AND MARKERS EACH		633.5200 MARKERS CULVERT END EACH		REMARKS
CATEGORY	STATION	LOCATION				
0010	109+03	LT & RT	2	2		
0010	125+25	LT & RT	2	2		
0010	138+84	LT & RT	2	2		
0010	141+00	LT & RT	2	2		
0010	142+50	LT & RT	2	2		
0010	192+57	LT & RT	2	2		
0010	220+01	LT & RT	2	2		
0010	281+53	LT & RT	1	2		EXISTING LT
0010	286+13	LT & RT	2	2		
0010	300+88	LT & RT	2	2		
0010	310+46	LT & RT	1	2		EXISTING RT
0010	327+52	LT & RT	2	2		
0010	337+34	LT & RT	1	2		EXISTING RT
0010	365+71	LT & RT	2	2		
0010	380+50	LT & RT	2	2		
0010	384+05	LT & RT	2	2		
0010	388+21	LT & RT	2	2		
0010	394+64	LT & RT	2	2		
0010	404+32	LT & RT	2	2		
0010	435+40	LT & RT	2	2		
0010	443+70	LT & RT	2	2		
0010	448+30	LT & RT	2	2		
0010	456+94	LT & RT	2	2		
0010	463+32	LT & RT	2	2		
0010	485+80	LT & RT	2	2		
0010	500+00	LT & RT	2	2		
0010	505+86	LT & RT	2	2		
0010	511+70	LT & RT	2	2		
0010	537+35	LT & RT	2	2		
0010	564+13	LT & RT	2	2		
0010	569+99	LT & RT	2	2		
0010	576+50	LT & RT	2	2		
0010	587+48	LT & RT	2	2		
0010	591+01	LT & RT	2	2		
0010	595+61	LT & RT	2	2		
0010	600+50	LT & RT	2	2		
0010	609+20	LT & RT	2	2		
0010	625+95	LT & RT	2	2		
0010	635+94	LT & RT	2	2		
0010	638+56	LT & RT	2	2		

CONTINUED ON NEXT SHEET

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MARKERS

CATEGORY	STATION	LOCATION	204.0180	633.5200	REMARKS
			REMOVING DELINEATORS AND MARKERS EACH	MARKERS CULVERT END EACH	
0010	644+10	LT & RT	2	2	
0010	649+95	LT & RT	2	2	
0010	654+15	LT & RT	2	2	
0010	662+44	LT & RT	2	2	
0010	657+80	LT & RT	2	2	
0010	674+85	LT & RT	2	2	
0010	681+63	LT & RT	2	2	
0010	691+94	LT & RT	2	2	
0010	710+90	LT & RT	2	2	
0010	713+76	LT & RT	2	2	
0010	734+23	LT & RT	2	2	
TOTAL			99	102	

EROSION CONTROL MOBILIZATIONS

CATEGORY	LOCATION	628.1905	628.1910
		MOBILIZATIONS EROSION CONTROL EACH	MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
0010	PROJECT 5510-00-60	6	2
TOTAL		6	2

EROSION CONTROL SUMMARY

CATEGORY	STATION TO STATION	LOCATION	606.0200	628.1504	628.1520	628.2002	628.2006	645.0120	REMARKS
			RIPRAP MEDIUM CY	SILT FENCE LF	SILT FENCE MAINTENANCE LF	EROSION MAT CLASS I TYPE A SY	EROSION MAT URBAN CLASS I TYPE A SY	GEOTEXTILE FABRIC TYPE HR SY	
0010	371+10	LT	15					30	30" CULVERT
0010	443+60	LT	15					30	24" CULVERT
0010	514+28	RT	2			90		3	
0010	515+07 - 524+03	RT				1500			
0010	536+93 - 539+68	LT				460			
0010	569+99	LT & RT				70			
0010	576+50	LT & RT				60			
0010	606+50 - 609+60	LT		300	600		400		KIBBLE ROAD INTERSECTION
0010	757+82 - 759+85	RT & LT					170		VILLAGE OF NORWALK
0010	CULVERT REPLACEMENTS	RT & LT				1000			CULVERT REPLACEMENTS
TOTAL			32	300	600	3180	570	63	

GUARDRAIL SUMMARY

CATEGORY	STATION TO STATION	LOCATION	614.0010 BARRIER SYSTEM GRADING SHAPING FINISHING EACH	614.2300 MGS GUARDRAIL 3 LF	614.2500 MGS THRIE BEAM TRANSITION LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH	614.2620 MGS GUARDRAIL TERMINAL TYPE 2 EACH	REMARKS
0010	130+17 - 135+56	RT & LT	4	225	100	4		No Terminal Connector and no 12'6" two nested Thrie Beam Section 12-Gauge (Connect to existing thrie beam)
0010	222+20 - 225+49	RT & LT	4	75	157.6	4		
0010	251+82 - 254+65	RT & LT	4	50	157.6	4		
0010	268+10 - 270+84	RT & LT	4	75	157.6	4		
0010	310+60 - 311+98	LT	2	37.5		2		
0010	327+21 - 328+81	LT	2	125		1	1	Type 2, 40' LT
0010	352+94 - 354+58	RT & LT	4	150		3	1	Type 2, 36' LT
0010	417+89 - 420+36	RT & LT	4	262.5		3	1	Type 2, 36' LT
0010	470+28 - 472+91	RT & LT	4	50		3	1	Bend Thrie Beam Transition; Type 2, 36' LT
0010	489+63 - 492+38	RT & LT	4	50	157.6	4		
0010	513+43 - 520+63	LT	2	687.5		2		EAT STA 520+63, 162' LT KENYA AVE
0010	515+09 - 543+63	RT	2	2787.5		1	1	Type 2, 44' RT
0010	521+42 - 544+60	LT	2	2612.5		2		EAT STA 521+42, 172' LT KENYA AVE
0010	545+03 - 556+82	LT	2	1125		1	1	Type 2, 29' LT
0010	546+10 - 556+68	RT	2	987.5		2		
0010	576+88 - 583+03	LT	2	512.5		2		
0010	585+55 - 596+42	LT	2	987.5		2		
0010	652+93 - 655+18	RT	2	125		2		
0010	688+10 - 690+33	RT & LT	4	287.5		3	1	Type 2, 35' LT
0010	699+38 - 701+96	RT & LT	4	237.5		3	1	Type 2, 34' RT
0010	718+05 - 720+83	RT & LT	4	125	157.6	3	1	Type 2, 36' LT
0010	734+01 - 735+91	LT	2	100		2		
0010	735+92 - 738+10	LT	2	187.5		1	1	Type 2, 52' LT
TOTAL			68	11,863	888	58	10	

***QUANTITIES PER TERMINIAL

SALVAGED TOPSOIL SY	SEED LBS	FERTILIZER CWT	MULCH SY	CUT CY	FILL CY
115	*3.1*	*0.1*	*115*	*2*	*35*

***FOR INFORMATIONAL PURPOSES ONLY - QUANTITIES ARE APPROXIMATE

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RESTORATION SUMMARY

CATEGORY	STATION TO STATION	LOCATION	625.0100 TOPSOIL SY	629.0210 FERTILIZER TYPE B CWT	630.0130 SEEDING MIXTURE NO. 30 LB	630.0140 SEEDING MIXTURE NO. 40 LB	630.0200 SEEDING TEMPORARY LB	REMARKS
0010	514+28	RT	90	0.06	2		3	
0010	515+07 - 524+03	RT	1500	0.95	28		42	
0010	536+93 - 539+68	LT	460	0.29	8		12	
0010	569+99	LT & RT	70	0.04	1		1	
0010	576+50	LT & RT	60	0.04	1		1	
0010	757+82 - 759+85	LT & RT	170	0.11		3	5	VILLAGE OF NORWALK
0010	VARIOUS LOCATIONS	LT & RT	80	0.05	1		1	EXCESSIVE SEASONAL MOVEMENT REPAIR
0010	CULVERT REPLACEMENTS	LT & RT	1000	0.50	18		30	CULVERT REPLACEMENTS
0010	UNDISTRIBUTED			0.26	5		8	UNDISTRIBUTED
TOTAL			3430	2.30	65	3	103	

PAVEMENT MARKING SUMMARY

CATEGORY	STATION TO STATION	LOCATION	646.0106 EPOXY 4-INCH LF	647.0656 PARKING STALL EPOXY 4-INCH LF	647.0766 CROSSWALK EPOXY 6-INCH LF	648.0100 LOCATING NO-PASSING ZONES MI	649.0100 TEMPORARY PAVEMENT MARKING 4-INCH	REMARKS
0010	107+78 - 759+85	LT & RT	123,975					EDGE LINE
0010	107+78 - 734+50	CL					73,000	CENTERLINE - MILLING
0010	506+00 - 588+00	RT					2,050	LANE LINE -CLIMBING LANE-MILLING
0010	107+78 - 759+85	CL					78,000	CENTERLINE - BINDER
0010	506+00 - 588+00	RT					2,050	LANE LINE -CLIMBING LANE-BINDER
0010	107+78 - 759+85	CL	78000				78000	CENTERLINE - SURFACE
0010	506+00 - 588+00	RT	2,050				2,050	LANE LINE -CLIMBING LANE-SURFACE
0010	107+78 - 734+50	CL				11.87		MAINLINE
0010	750+00 - 760+00	LT & RT			900			VILLAGE OF NORWALK
0010	734+50 - 757+85	LT & RT		3550				VILLAGE OF NORWALK PARKING
TOTAL 0010			204,025	3,550	900	11.87	235,150	

TRAFFIC CONTROL

CATEGORY	LOCATION	SERVICE DAYS	QTY	643.0300 TRAFFIC CONTROL DRUMS DAYS	643.0900 TRAFFIC CONTROL SIGNS DAYS	REMARKS
0010	STH 71	100	46		4600	PROJECT ADVANCE WARNING
0010	STH 71	75	200	15,000		GUARDRAIL REMOVAL LOCATIONS
0010	STH 71	75	8		600	LANE CLOSURE MOVABLE OPERATION
0010	STH 71	75	8		600	LANE CLOSURE MOVABLE OPERATION
0010	503+00 - 525+00	14	45	630		CLIMBING LANE CLOSURE
0010	503+00 - 525+00	14	3		42	CLIMBING LANE CLOSURE
0010	STH 71			1000		UNDISTRIBUTED
TOTAL				16,630	5842	

3

3

PERMANENT SIGNING

SIGN NUMBER	STATION	LOCATION	SIGN CODE	SIZE	DESCRIPTION	ORDER LINES	634.0614 POSTS WOOD 4x6-INCH x14 FT EACH	634.0616 POSTS WOOD 4x6-INCH x16FT EACH	634.0618 POSTS WOOD 4x6-INCH x18 FT EACH	637.0202 SIGNS REFLECTIVE TYPE II SF	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	NOTES
101	107+50	STH 71, Left	J3-3	72" x 57"	Directional Assembly	West, West, East STH 16, STH 71, STH 16			2	28.50			
102R	108+35	STH 71, Left	J2-1	24" x 57"	Route Turn Assembly	Adv Arr Lt Turn, Adv Arr Lt Turn, Adv Arr Rt Turn West STH 71 Advance Arrow Left Turn					3	1	
103	109+00	STH 71, Left	W3-1	36" x 36"	Stop Ahead			1		9.00			
104	111+00	STH 71, Left	J1-1	24" x 39"	Junction Assembly	JCT STH 16		1		6.50			
105R	111+40	STH 71, Left	W3-1	36" x 36"	Stop Ahead						1	1	
106R	113RR+55	Riley Rd, Left	R1-1	30" x 30"	Stop						1	1	
107	113RR+55	Riley Rd, Left	R1-1	30" x 30"	Stop		1			5.18			
108R	112RR+20	Riley Rd, Right	R1-1	30" x 30"	Stop						1	1	
109	112RR+20	Riley Rd, Right	R1-1	30" x 30"	Stop		1			5.18			
110R	114+80	STH 71, Left	J1-1	24" x 39"	Junction Assembly	JCT STH 16					1	1	
111	115+00	STH 71, Right	W8-70	36" x 36"	Centerline Rumble Strips				1	9.00			
112	115+00	STH 71, Right	W57-51	30" x 15"	Next _ Miles	11 1/2				3.13			Mount with 111
113R	121HA+95	Harmony Ave, Left	R1-1	30" x 30"	Stop						1	1	
114	121HA+95	Harmony Ave, Left	R1-1	30" x 30"	Stop		1			5.18			
115R	121HA+05	Harmony Ave, Right	R1-1	30" x 30"	Stop						1	1	
116	121HA+05	Harmony Ave, Right	R1-1	30" x 30"	Stop		1			5.18			
117R	122+20	STH 71, Right	W2-2	30" x 30"	Side Road (90 Degrees)	Side Road, Left					1	1	
118	128+00	STH 71, Right	W2-2	30" x 30"	Side Road (90 Degrees)	Side Road, Left		1		6.25			
201R	137HR+10	Havendale Rd, Left	R1-1	30" x 30"	Stop						1	1	
202	137HR+10	Havendale Rd, Left	R1-1	30" x 30"	Stop		1			5.18			
203R	156IR+45	Imperial Rd, Right	R1-1	30" x 30"	Stop						1	1	
204	156IR+45	Imperial Rd, Right	R1-1	30" x 30"	Stop		1			5.18			
401R	208IR+35	Imperial Rd, Right	R1-1	30" x 30"	Stop						1	1	
402	208IR+35	Imperial Rd, Right	R1-1	30" x 30"	Stop		1			5.18			
403R	209+60	STH 71, Right	I55-56	30" x 36"	Adopt A Highway	Earth Club Sparta High School Earth Club Sparta High School					1	1	
404	209+60	STH 71, Right	I55-56	30" x 36"	Adopt A Highway			1		7.50			
601R	258+50	STH 71, Left	W14-3	48" x 36"	No Passing Zone						1	1	
602	258+50	STH 71, Left	W14-3	48" x 36"	No Passing Zone			1		6.00			
603R	279+50	STH 71, Right	W14-3	48" x 36"	No Passing Zone						1	1	
604	279+50	STH 71, Right	W14-3	48" x 36"	No Passing Zone			1		6.00			
701R	282JA+20	Janus Ave, Left	R1-1	30" x 30"	Stop						1	1	
702	282JA+20	Janus Ave, Left	R1-1	30" x 30"	Stop		1			5.18			
703R	281JA+45	Janus Ave, Right	R1-1	30" x 30"	Stop						1	1	
704	281JA+45	Janus Ave, Right	R1-1	30" x 30"	Stop		1			5.18			
705R	296JA+35	Javelin Ave, Right	R1-1	30" x 30"	Stop						1	1	
706	296JA+35	Javelin Ave, Right	R1-1	30" x 30"	Stop		1			5.18			
801R	321+35	STH 71, Left	W14-3	48" x 36"	No Passing Zone						1	1	
802	321+35	STH 71, Left	W14-3	48" x 36"	No Passing Zone			1		6.00			
803R	321+35	STH 71, Right	I55-56	30" x 36"	Adopt A Highway	Earth Club Sparta High School Earth Club Sparta High School					1		Mounted on back of 801R
804	322+00	STH 71, Right	I55-56	30" x 36"	Adopt A Highway			1		7.50			
901R	341+00	STH 71, Right	W14-3	48" x 36"	No Passing Zone						1	1	
902	341+00	STH 71, Right	W14-3	48" x 36"	No Passing Zone			1		6.00			
903R	359+00	STH 71, Left	W14-3	48" x 36"	No Passing Zone						1	1	
904	359+00	STH 71, Left	W14-3	48" x 36"	No Passing Zone			1		6.00			
905	364+00	STH 71, Right	J1-1	24" x 39"	Junction Assembly	JCT AA		1		6.50			
906R	365+00	STH 71, Right	M2-1	21" x 15"	Junction Marker	JCT AA					1	1	
907R	365+00	STH 71, Right	M1-5A	24" x 24"	County Marker						1		
908R	368JA+80	Javelin Ave, Right	R1-1	30" x 30"	Stop						1	1	
909	368JA+80	Javelin Ave, Right	R1-1	30" x 30"	Stop		1			5.18			
1001	370+50	STH 71, Left	W8-70	36" x 36"	Centerline Rumble Strips				1	9.00			
1002	370+50	STH 71, Left	W57-51	30" x 15"	Next _ Miles	5				3.13			Mount with 1001
Sheet Totals							11	11	4	182.98	26	22	

STATE PROJECT NO: 5510-00-60

HWY: STH 71

COUNTY: MONROE

MISCELLANEOUS QUANTITIES

SHEET NO:

E

FILE NAME : _____

PLOT DATE : _____

PLOT BY : _____

PLOT NAME : _____

ORG DATE : _____

ORIGINATOR : DIST _

PLOT SCALE : 1:1

3

PERMANENT SIGNING

SIGN NUMBER	STATION	LOCATION	SIGN CODE	SIZE	DESCRIPTION	ORDER LINES	634.0614 POSTS WOOD 4x6-INCH x14 FT EACH	634.0616 POSTS WOOD 4x6-INCH x16FT EACH	634.0618 POSTS WOOD 4x6-INCH x18 FT EACH	637.0202 SIGNS REFLECTIVE TYPE II SF	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	NOTES
1003	372+50	STH 71, Left	J4-1	24" x 36"	Reassurance Assembly	West STH 71		1		6.00			
1004R	372+80	STH 71, Right	M1-5A	24" x 24"	County Marker	AA					1	1	
1005R	372+80	STH 71, Right	M6-1	21" x 21"	Arrow (Left)						1		Mounted with 1004R
1006	373+25	STH 71, Right	J13-1	24" x 45"	Directional without Cardinal	AA		1		7.50			
						Arrow Left							
1007R	373+25	STH 71, Left	M1-6	24" x 24"	State Route Marker	71					1	1	
1008R	373+40	STH 71, Left	M6-4	21" x 21"	Directional Arrows Left-Right						1		Mounted with 1007R
1009	373+40	STH 71, Left	J13-1	24" x 45"	Directional without Cardinal	STH 71		1		7.50			
						Directional Arrows Left-Right							
1010R	374CTHAA+65	CTH AA, Left	R1-1	30" x 30"	Stop						1	1	
1011	374CTHAA+65	CTH AA, Left	R1-1	30" x 30"	Stop		1			5.18			
1012	373+70	STH 71, Right	W1-7	48" x 24"			1			8.00			
1013	374+60	STH 71, Right	J4-1	24" x 36"	Reassurance Assembly	East STH 71		1		6.00			
						AA							
1014	375+00	STH 71, Left	J13-1	24" x 45"	Directional without Cardinal	AA		1		7.50			
						Arrow Right							
1015R	376+50	STH 71, Left	M1-5A	21" x 21"	County Marker	AA					1	1	
1016R	376+50	STH 71, Left	M6-1	24" x 24"	Arrow Right						1		Mounted with 1015R
1017	377+00	STH 71, Right	W8-70	36" x 36"	Centerline Rumble Strips				1	9.00			
1018	377+00	STH 71, Right	W57-51	30" x 15"	Next _ Miles	6 1/2				3.13			Mount with 1017
1019R	382+55	STH 71, Right	W14-3	48" x 36"	No Passing Zone						1	1	
1020	382+55	STH 71, Right	W14-3	48" x 36"	No Passing Zone			1		6.00			
1021R	384+00	STH 71, Left	M2-1	21" x 15"	Junction Marker	JCT					1	1	
1022R	384+00	STH 71, Left	M1-5A	24" x 24"	County Marker	AA					1		Mounted with 1021R
1023	384+00	STH 71, Left	J1-1	24" x 39"	Junction Assembly	JCT		1		6.50			
						AA							
1101R	403+00	STH 71, Left	W14-3	48" x 36"	No Passing Zone						1	1	
1102	403+00	STH 71, Left	W14-3	48" x 36"	No Passing Zone			1		6.00			
1103R	409KR+25	Kapok Rd, Right	R1-1	30" x 30"	Stop		1				1	1	
1104	409KR+25	Kapok Rd, Right	R1-1	30" x 30"	Stop					5.18			
1201	450+50	STH 71, Right	R4-51	36" x 48"	Passing Lane Ahead _ Miles	1		1		12.00			
1301R	472KR+60	Karlstad Rd, Left	R1-1	30" x 30"	Stop						1	1	
1302	472KR+60	Karlstad Rd, Left	R1-1	30" x 30"	Stop		1			5.18			
1303	476+85	STH 71, Right	R4-51	36" x 48"	Passing Lane Ahead _ Miles	1/2		1		12.00			
1304R	483KR+80	Karlstad Rd, Right	R1-1	30" x 30"	Stop						1	1	
1305	483KR+80	Karlstad Rd, Right	R1-1	30" x 30"	Stop		1			5.18			
1401R	491+10	STH 71, Right	W14-3	48" x 36"	No Passing Zone						1	1	
1402	491+10	STH 71, Right	W14-3	48" x 36"	No Passing Zone			1		6.00			
1403R	493+10	STH 71, Left	W14-3	48" x 36"	No Passing Zone						1	1	
1404	493+10	STH 71, Left	W14-3	48" x 36"	No Passing Zone			1		6.00			
1405	503+30	STH 71, Right	R4-3	24" x 30"	Slower Traffic Keep Right			1		5.00			
1406R	505KR+15	Kapok Rd, Right	R1-1	30" x 30"	Stop						1	1	
1407	505KR+15	Kapok Rd, Right	R1-1	30" x 30"	Stop		1			5.18			
1408R	507+40	STH 71, Right	R4-3	24" x 30"	Slower Traffic Keep Right						1	1	
1409R	519KA+80	Kenya Ave, Left	R1-1	30" x 30"	Stop						1	1	
1410	519KA+80	Kenya Ave, Left	R1-1	30" x 30"	Stop		1			5.18			
1501	537+00	STH 71, Left	R3-72	30" x 36"	Oncoming Traffic uses Center Lane			1		7.50			
1502R	550+00	STH 71, Right	M2-1	21" x 15"	Junction Marker	JCT					1	1	
1503R	550+00	STH 71, Right	M1-5A	24" x 24"	County Marker	XU					1		Mounted with 1502R
1601	553+50	STH 71, Right	J1-1	24" x 39"	Junction Assembly	JCT XU		1		6.50			
1602	561+50	STH 71, Left	W8-70	36" x 36"	Centerline Rumble Strips				1	9.00			
1603	561+50	STH 71, Left	W57-51	30" x 15"	Next _ Miles	8 1/2				3.13			Mount with 1602
1604	563+50	STH 71, Left	J4-1	24" x 36"	Reassurance Assembly	West STH 71		1		6.00			
						XU							
1605R	563+60	STH 71, Right	M1-5A	24" x 24"	County Marker	XU					1	1	
1606R	563+60	STH 71, Right	M6-1	24" x 24"	Arrow Right						1		Mounted with 1605R
1607	563+60	STH 71, Right	J13-1	24" x 45"	Directional without Cardinal	XU		1		7.50			
						Arrow Left							
1608R	564KD+90	Kayak Rd, Left	M1-6	24" x 24"	State Route Marker	71					1	1	
1609R	564KD+90	Kayak Rd, Left	M6-4	21" x 21"	Directional Arrows Left-Right						1		Mounted with 1608R
1610R	564KD+90	Kayak Rd, Left	R1-1	30" x 30"	Stop						1	1	
1611	564KD+90	Kayak Rd, Left	R1-1	30" x 30"	Stop		1			5.18			
Sheet Totals							8	17	2	190.01	26	19	

STATE PROJECT NO: 5510-00-60

HWY: STH 71

COUNTY: MONROE

MISCELLANEOUS QUANTITIES

SHEET NO:

E

FILE NAME : _____

PLOT DATE : _____

PLOT BY : _____

PLOT NAME : _____

ORG DATE : _____

ORIGINATOR : DIST _

PLOT SCALE : 1:1

3

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3

PERMANENT SIGNING

SIGN NUMBER	STATION	LOCATION	SIGN CODE	SIZE	DESCRIPTION	ORDER LINES	634.0614 POSTS WOOD 4x6-INCH x14 FT EACH	634.0616 POSTS WOOD 4x6-INCH x16FT EACH	634.0618 POSTS WOOD 4x6-INCH x18 FT EACH	637.0202 SIGNS REFLECTIVE TYPE II SF	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	NOTES
1612R	563CTHXU+90	CTH XU, Right	R1-1	30" x 30"	Stop						1	1	
1613	563CTHXU+90	CTH XU, Right	R1-1	30" x 30"	Stop		1			5.18			
1614R	563CTHXU+90	CTH XU, Right	M1-6	24" x 24"	State Route Marker	71					1	1	
1615R	563CTHXU+90	CTH XU, Right	M6-4	21" x 21"	Directional Arrows Left-Right						1		Mounted with 1614R
1616	563CTHXU+90	CTH XU, Right	J13-1	24" x 45"	Directional without Cardinal	STH 71 Directional Arrows Left-Right XU		1		7.50			
1617R	565+70	STH 71, Left	M1-5A	24" x 24"	County Marker						1	1	
1618R	565+70	STH 71, Left	M6-1	24" x 24"	Arrow Left						1		Mounted with 1617R
1619	565+70	STH 71, Left	J13-1	24" x 45"	Directional without Cardinal	XU Arrow Left East STH 71		1		7.50			
1620	566+00	STH 71, Right	J4-1	24" x 36"	Reassurance Assembly			1		6.00			
1621	568+00	STH 71, Right	W8-70	36" x 36"	Centerline Rumble Strips				1	9.00			
1622	568+00	STH 71, Right	W57-51	30" x 15"	Next _ Miles	3				3.13			Mount with 1621
1623R	574+30	STH 71, Left	M2-1	21" x 15"	Junction Marker	JCT					1	1	
1624R	574+30	STH 71, Left	M1-5A	24" x 24"	County Marker	XU					1		Mounted with 1623R
1625	574+30	STH 71, Left	J1-1	24" x 39"	Junction Assembly	JCT XU		1		6.50			
1626	575+00	STH 71, Right	W9-1	36" x 36"	Right Lane Ends			1		9.00			
1627R	578+70	STH 71, Right	W9-1	36" x 36"	Right Lane Ends						1	1	
1628	579+25	STH 71, Right	W4-2R	36" x 36"	Lane Reduction Transition Symbol-Right			1		9.00			
1629	579+25	STH 71, Left	W4-2R	36" x 36"	Lane Reduction Transition Symbol-Right			1		9.00			
1701R	583+65	STH 71, Right	W4-2R	36" x 36"	Lane Reduction Transition Symbol-Right						1	1	
1702R	583+65	STH 71, Left	W4-2R	36" x 36"	Lane Reduction Transition Symbol-Right						1	1	
1703	590+50	STH 71, Left	R3-72	30" x 36"	Oncoming Traffic Uses Center Lane			1		7.50			
1704R	591+10	STH 71, Left	R3-72	30" x 36"	Oncoming Traffic Uses Center Lane						1	1	
1705R	607+65	STH 71, Left	R1-1	30" x 30"	Stop						1	1	
1706	607+65	STH 71, Left	R1-1	30" x 30"	Stop		1			5.18			
1901R	643LA+20	Land-Mark Ave, Right	R1-1	30" x 30"	Stop						1	1	
1902	643LA+20	Land-Mark Ave, Right	R1-1	30" x 30"	Stop		1			5.18			
1903R	666+85	STH 71, Right	W14-3	48" x 36"	No Passing Zone						1	1	
1904	666+85	STH 71, Right	W14-3	48" x 36"	No Passing Zone			1		6.00			
2001R	684+70	STH 71, Left	W14-3	48" x 36"	No Passing Zone						1	1	
2002	684+70	STH 71, Left	W14-3	48" x 36"	No Passing Zone			1		6.00			
2003R	692KA+75	Kendall Ave, Left	R1-1	30" x 30"	Stop						1	1	
2004	692KA+75	Kendall Ave, Left	R1-1	30" x 30"	Stop		1			5.18			
2005	698+50	STH 71, Right	I2-3	60" x 24"	Community Population Name Sign	Norwalk Population 638	2			10.00			
2101R	703+00	STH 71, Right	M2-1	21" x 15"	Junction Marker	JCT					1	1	
2102R	703+00	STH 71, Right	M1-5A	24" x 24"	County Marker	T					1		Mounted with 2101R
2103	703+00	STH 71, Right	J1-1	24" x 39"	Junction Assembly	JCT T		1		6.50			
2104	711+50	STH 71, Left	J4-1	24" x 36"	Reassurance Assembly	West STH 71		1		6.00			
2105	712+25	STH 71, Right	J13-1	24" x 45"	Directional without Cardinal	County T Directional Arrows Left Arrow/Up Arrow Combo		1		7.50			
2106R	713CTHT+30	CTH T, Left	M1-6	24" x 24"	State Route Marker	71					1	1	
2107R	713CTHT+30	CTH T, Left	M6-4	21" x 21"	Directional Arrows Left-Right						1		Mounted with 2106R
2108	713CTHT+30	CTH T, Left	J13-1	24" x 45"	Directional without Cardinal	71 Directional Arrows Left-Right		1		7.50			
2109R	713CTHT+30	CTHT T, Left	R1-1	30" x 30"	Stop						1	1	
2110	713CTHT+30	CTH T, Left	R1-1	30" x 30"	Stop		1			5.18			
2111	712+50	STH 71, Right	W1-7	48" x 24"	Night Arrow, Double		1			8.00			
2112R	712+70	STH 71, Right	M1-5A	24" x 24"	County Marker	T					1	1	
2113R	712+70	STH 71, Right	M6-6	21" x 21"	Directional Arrows Left Arrow/Up Arrow Combo						1		Mounted with 2112R
2114	713+50	STH 71, Left	J13-1	24" x 45"	Directional without Cardinal	T Arrow Right East, Blank STH 71, County T		1		7.50			
2115	713+60	STH 71, Right	J4-2	48" x 36"	Reassurance Assembly			1		12.00			
2116R	714+00	STH 71, Left	M1-5A	24" x 24"	County Marker						1	1	
2117R	714+00	STH 71, Left	M6-1	21" x 21"	Arrow Right	T					1		Mounted with 2116R
2118R	715+00	STH 71, Right	W14-3	48" x 36"	No Passing Zone						1	1	
2119	715+00	STH 71, Right	W14-3	48" x 36"	No Passing Zone			1		6.00			
2120R	721+90	STH 71, Left	M1-5A	24" x 24"	County Marker	T					1	1	
2121R	721+90	STH 71, Left	M5-1R	21" x 21"	Advance Arrow Right Turn						1		Mounted with 2120R
Sheet Totals							8	17	1	183.025	28	20	

STATE PROJECT NO: 5510-00-60

HWY: STH 71

COUNTY: MONROE

MISCELLANEOUS QUANTITIES

SHEET NO:

E

FILE NAME : _____

PLOT DATE : _____

PLOT BY : _____

PLOT NAME : _____

ORG DATE : _____

ORIGINATOR : DIST _

PLOT SCALE : 1:1

3

PERMANENT SIGNING

SIGN NUMBER	STATION	LOCATION	SIGN CODE	SIZE	DESCRIPTION	ORDER LINES	634.0614 POSTS WOOD 4x6-INCH x14 FT EACH	634.0616 POSTS WOOD 4x6-INCH x16FT EACH	634.0618 POSTS WOOD 4x6-INCH x18 FT EACH	637.0202 SIGNS REFLECTIVE TYPE II SF	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	NOTES
2122	721+90	STH 71, Left	J13-1	24" x 45"	Directional without Cardinal	T Advance Arrow Right Turn		1		7.50			
2123R	722LA+00	Lasso Ave	R1-1	30" x 30"	Stop						1	1	
2124	722LA+00	Lasso Ave	R1-1	30" x 30"	Stop		1			5.18			
2125R	724+10	STH 71, Left	W14-3	48" x 36"	No Passing Zone						1	1	
2126	724+10	STH 71, Left	W14-3	48" x 36"	No Passing Zone			1		6.00			
2127R	724+10	STH 71, Left	J4-1	24" x 36"	Reassurance Assembly	West 71					1		Mounted on back of 2125R
2128	724+50	STH 71, Left	J4-2	48" x 36"	Reassurance Assembly	West, Blank STH 71, County T		1		12.00			
2129R	725+00	STH 71, Right	W1-1	36" x 36"	Right Turn						1	1	
2130R	725+00	STH 71, Right	W13-1	24" x 24"	Advisory Speed Plate	25 M.P.H.					1		
2131	725+50	STH 71, Left	D2-1	66" x 15"	Destination/Distance	Sparta 13	1			6.88			
2132	728+00	STH 71, Right	W3-5	36" x 36"	Speed Limit Ahead (Arrow)	25		1		9.00			
2133R	730+00	STH 71, Right	I2-3	66" x 24"	Community Population Name Sign	Norwalk Population 638					1	1	
2134	730+00	STH 71, Right	W1-1	36" x 36"	Right Turn				1	9.00			
2135	730+00	STH 71, Right	W13-1	24" x 24"	Advisory Speed Plate	25 M.P.H.				4.00			Mount with 2134
2201R	730+00	STH 71, Left	D2-1	66" x 15"	Destination/Distance (One)	Sparta 13					1	1	
2202R	730+80	STH 71, Right	R2-5A	24" X 30"	Reduce Speed Ahead						1	1	
2203R	730+80	STH 71, Right	W13-1-W	18" x 18"	Advisory Speed Plate (White)	25					1		Mounted with 2202R
2204R	734+35	STH 71, Right	R2-1	24" x 30"	Speed Limit (25)	25					1	1	
2205R	734+35	STH 71, Right	R7-1L	18" x 24"	No Parking Anytime - Left Arrow						1		Mounted with 2204R
2206R	734+65	STH 71, Left	R2-1	24" x 30"	Speed Limit (55)	55					1	1	
2207R	734+65	STH 71, Left	R7-1R	18" x 24"	No Parking Anytime - Right Arrow						1		Mounted with 2206R
2208R	735+90	STH 71, Left	W1-6	48" x 24"	Night Arrow (Single)						1	1	
2209R	735+90	STH 71, Left	R7-1D	18" x 24"	No Parking Anytime - Double Arrow						1		Mounted with 2208R
2210R	736+80	STH 71, Left	W1-6	48" x 24"	Night Arrow (Single)						1	1	
2211R	738+80	STH 71, Right	R7-1R	18" x 24"	No Parking Anytime - Right Arrow						1		Mounted with 2210R
2212R	738+90	STH 71, Left	W11-6	30" x 30"	Snowmobile Crossing Symbol						1	1	
2213R	739NS+60	North Street, Left	R1-1	30" x 30"	Stop						1	1	
2214R	739NS+60	North Street, Left	R7-1L	18" x 24"	No Parking Anytime - Left Arrow						1		Mounted on back of 2213R
2215R	738NS+20	North Street, Right	R1-1	30" x 30"	Stop						1	1	
2216R	740+25	STH 71, Right	R2-1	24" x 30"	Speed Limit (25)	25					1	1	
2217R	742+40	STH 71, Left	R2-1	24" x 30"	Speed Limit (25)	25					1	1	
2218R	742+60	STH 71, Right	M1-6	24" x 24"	State Route Marker	71					1	1	
2219R	742+60	STH 71, Right	M6-1	21" x 21"	Arrow Right						1		Mounted with 2218R
2220R	742+90	STH 71, Right	M1-6	24" x 24"	State Route Marker	71					1	1	
2221R	742+90	STH 71, Right	M6-1	21" x 21"	Arrow Left						1		Mounted with 2220R
2222R	742+90	STH 71, Right	R1-1	30" x 30"	Stop						1	1	
2223R	743+15	STH 71, Right	R1-1	30" x 30"	Stop						1	1	
2224R	743+40	STH 71, Left	R1-1	30" x 30"	Stop						1	1	
2225R	743+40	STH 71, Left	R1-10P	24" x 18"	Except Right Turn						1		Mounted with 2224R
2226R	746+20	STH 71, Right	SP City Sign	54" x 30"	Triple Destination, Arrow	Elroy - Sparta, Up Arrow State Trail, Up Arrow Parking, Up Arrow					1	1	
2227R	746+30	STH 71, Left	W3-1	36" x 36"	Stop Ahead						1	1	
2228R	746+35	STH 71, Left	R1-1	30" x 30"	Stop						1	1	
2229R	746+80	STH 71, Right	R1-1	30" x 30"	Stop						1	1	
2230R	747+05	STH 71, Right	W3-1	36" x 36"	Stop Ahead						1	1	
2231R	748+20	STH 71, Right	M3-2	24" x 12"	East Cardinal Route Marker						1		Mounted with 2232R
2232R	748+20	STH 71, Right	M1-6	24" x 24"	State Route Marker	71					1	1	
2233R	748+20	STH 71, Right	M5-1R	21" x 21"	Advance Arrow Right Turn						1		Mounted with 2232R
2234R	749+85	STH 71, Right	R1-1	30" x 30"	Stop						1	1	
2235R	749+85	STH 71, Right	R1-10P	24" x 18"	Except Right Turn						1		Mounted with 2234R
2236R	748+90	STH 71, Left	M3-2	24" x 12"	East Cardinal Route Marker						1		Mounted with 2237R
2237R	748+90	STH 71, Left	M1-6	24" x 24"	State Route Marker	71					1	1	
2238R	748+90	STH 71, Left	M6-1	21" x 21"	Arrow Right						1		Mounted with 2237R
2239R	750RS+60	Railroad St. Left	R1-1	30" x 30"	Stop						1	1	
2240R	750+65	STH 71, Left	M1-6	24" x 24"	State Route Marker	71					1	1	
2241R	750+65	STH 71, Left	M6-1	21" x 21"	Arrow Left						1		Mounted with 2240R
2242R	752+60	STH 71, Left	M1-6	24" x 24"	State Route Marker	71					1	1	
2243R	752+60	STH 71, Left	M5-1L	21" x 21"	Advance Arrow Left						1		Mounted with 2242R
2244R	754CS+25	Center St. Left	R1-1	30" x 30"	Stop						1	1	
2245R	753CS+50	Center St. Right	R1-1	30" x 30"	Stop						1	1	
2246R	757+20	STH 71, Right	M2-1	21" x 15"	Junction Marker	Jct U					1	1	
2247R	502+70	STH 71, Right	M1-5A	24" x 24"	County Marker						1		Mounted with 2246R
Sheet Totals							2	4	1	59.555	53	34	

STATE PROJECT NO: 5510-00-60

HWY: STH 71

COUNTY: MONROE

MISCELLANEOUS QUANTITIES

SHEET NO:

E

3

PERMANENT SIGNING

SIGN NUMBER	STATION	LOCATION	SIGN CODE	SIZE	DESCRIPTION	ORDER LINES	634.0614 POSTS WOOD 4x6-INCH x14 FT EACH	634.0616 POSTS WOOD 4x6-INCH x16FT EACH	634.0618 POSTS WOOD 4x6-INCH x18 FT EACH	637.0202 SIGNS REFLECTIVE TYPE II SF	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	NOTES
2248R	758SS+05	South St. Left	R1-1	30" x 30"	Stop						1	1	
2249R	757SS+15	South St. Right	R1-1	30" x 30"	Stop						1	1	
2250R	759+45	STH 71, Right	D1-1	48" x 15"	One Destination (Arrow)	Up Arrow, St Marys					1	1	
2301	730+00	STH 71, Left	W8-70	36" x 36"	Centerline Rumble Strips				1	9.00			
2302	730+00	STH 71, Left	W57-51	30" x 15"	Next _ Miles	11 1/2				3.13			Mount with 2301
2303	734+00	STH 71, Right	R2-1	24" x 30"	Speed Limit (25)			1		5.00			
2304	734+00	STH 71, Right	R7-1L	18" x 24"	No Parking Anytime - Left Arrow					3.00			Mount with 2303
2305	734+00	STH 71, Left	R2-1	24" x 30"	Speed Limit (55)			1		5.00			
2306	734+00	STH 71, Left	R7-1L	18" x 24"	No Parking Anytime - Right Arrow					3.00			Mount with 2305
2307	735+90	STH 71, Left	W1-6	48" x 24"	Night Arrow (Single)		1			8.00			
2308	735+90	STH 71, Left	R7-1D	18" x 24"	No Parking Anytime - Double Arrow					3.00			Mount with 2307
2309	736+35	STH 71, Right	R7-1D	18" x 24"	No Parking Anytime - Double Arrow		1			3.00			
2310	736+85	STH 71, Left	W1-6	48" x 24"	Night Arrow (Single)		1			8.00			
2311	738+80	STH 71, Right	R7-1R	18" x 24"	No Parking Anytime - Right Arrow		1			3.00			
2312	738+90	STH 71, Left	W11-6	30" x 30"	Snowmobile Crossing Symbol				1	6.25			
2313	738+90	STH 71, Left	R7-1L	18" x 24"	No Parking Anytime - Left Arrow					3.00			Mount with 2312
2314	739NS+60	North Street, Left	R1-1	30" x 30"	Stop		1			5.18			
2315	738NS+20	North Street, Right	R1-1	30" x 30"	Stop		1			5.18			
2316	739+80	STH 71, Right	R2-1	24" x 30"	Speed Limit (25)		1			5.00			
2317	740+80	STH 71, Right	J2-1	24" x 57"	Route Turn Assembly	East STH 71		1		9.50			
						Advance Arrow Left Turn							
2318	740+80	STH 71, Left	J4-2	48" x 36"	Reassurance Assembly	West, Blank STH 71, County T		1		12.00			8' Mounting Height
2319	741+90	STH 71, Left	R2-1	24" x 30"	Speed Limit (25)	25	1			5.00			
2320	742+50	STH 71, Right	J3-1	24" x 57"	Directional Assembly	East STH 71		1		9.50			
						Arrow Left							
2321	742+90	STH 71, Right	R1-1	30" x 30"	Stop		1			5.18			
2322	743+15	STH 71, Right	R1-1	30" x 30"	Stop		1			5.18			
2323	743+40	STH 71, Left	R1-1	36" x 36"	Stop		1			7.46			
2324	743+40	STH 71, Left	R1-10P	24" x 18"	Except Right Turn					3.00			Mount with 2323
2325	743+40	STH 71, Left	J3-1	24" x 57"	Directional Assembly	West STH 71		1		9.50			
						Arrow Right							
2326	745+35	STH 71, Left	J2-1	24" x 57"	Route Turn Assembly	West STH 71		1		9.50			
						Advance Arrow Right Turn							
2327	746+20	STH 71, Right	D1-3	54" x 30"	Triple Destination, Arrow	Up Arrow, Elroy - Sparta Up Arrow, State Trail		1		11.25			8' Mounting Height
						Up Arrow, Parking							
						Sheet Totals	11	8	2	164.805	3	3	

STATE PROJECT NO: 5510-00-60

HWY: STH 71

COUNTY: MONROE

MISCELLANEOUS QUANTITIES

SHEET NO:

E

FILE NAME : _____

PLOT DATE : _____

PLOT BY : _____

PLOT NAME : _____

ORG DATE : _____

ORIGINATOR : DIST _

PLOT SCALE : 1:1

3

PERMANENT SIGNING

SIGN NUMBER	STATION	LOCATION	SIGN CODE	SIZE	DESCRIPTION	ORDER LINES	634.0614 POSTS WOOD 4x6-INCH x14 FT EACH	634.0616 POSTS WOOD 4x6-INCH x16FT EACH	634.0618 POSTS WOOD 4x6-INCH x18 FT EACH	637.0202 SIGNS REFLECTIVE TYPE II SF	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	NOTES
2328	746+25	STH 71, Left	W3-1	36" x 36"	Stop Ahead			1		9.00			
2329	746CS+95	Church St Left	R1-1	30" x 30"	Stop		1			5.18			
2330	746CS+25	Church St Right	R1-1	30" x 30"	Stop		1			5.18			
2331	747+05	STH 71, Right	W3-1	36" x 36"	Stop Ahead			1		9.00			
2332	748+25	STH 71, Right	J2-1	24" x 57"	Route Turn Assembly	East STH 71 Advance Arrow Right Turn 25		1		9.50			
2333	748+25	STH 71, Left	R2-1	24" x 30"	Speed Limit (25)		1			5.00			
2334	749+80	STH 71, Right	R1-1	36" x 36"	Stop		1			7.46			
2335	749+80	STH 71, Right	R1-10P	24" x 18"	Except Right Turn					3.00			Mount with 2334
2336	750RS+60	Railroad St. Left	R1-1	30" x 30"	Stop		1			5.18			
2337	750+65	STH 71, Left	J3-1	24" x 57"	Directional Assembly	West STH 71 Arrow Left 25		1		9.50			
2338	751+45	STH 71, Right	R2-1	24" x 30"	Speed Limit (25)		1			5.00			
2339	751+65	STH 71, Left	D1-3	54" x 30"	Triple Destination, Arrow	Elroy - Sparta, Arrow Right State Trail, Arrow Right Parking, Arrow Right West STH 71 Advance Arrow Left Turn East, Blank STH 71, County T		1		11.25			8' Mounting Height
2340	752+65	STH 71, Left	J2-1	24" x 57"	Route Turn Assembly			1		9.50			
2341	753+35	STH 71, Right	J4-2	48" x 36"	Reassurance Assembly			1		12.00			8' Mounting Height
2342	754CS+25	Center St. Left	R1-1	30" x 30"	Stop		1			5.18			
2343	753CS+50	Center St. Right	R1-1	30" x 30"	Stop		1			5.18			
2344	757+20	STH 71, Right	J1-1	24" x 39"	Junction Assembly	Jct U	1			6.50			
2345	758SS+05	South St. Left	R1-1	30" x 30"	Stop		1			5.18			
2346	757SS+15	South St. Right	R1-1	30" x 30"	Stop		1			5.18			
2347	759+45	STH 71, Right	D1-1	66" x 15"	One Destination (Arrow)	Up Arrow, St Marys	1			6.88			8' Mounting Height
						Sheet Totals	12	7	0	139.845	0	0	
						Signing Totals	52	64	10	920.22	136	98	

3

3

CONSTRUCTION STAKING SUMMARY

CATEGORY	STATION TO STATION	LOCATION	650.4000	650.5500	650.6000	650.8000
			CONSTRUCTION STAKING STORM SEWER EACH	CONSTRUCTION STAKING CURB, GUTTER AND CURB & GUTTER LF	CONSTRUCTION STAKING PIPE CULVERTS EACH	CONSTRUCTION STAKING RESURFACING REFERENCE LF
0010	107+78 - 759+85	STH 71				65,280
0010	220+00	LT & RT			1	
0010	286+05	LT & RT			1	
0010	500+00	LT & RT			1	
0010	515+05 - 524+00	RT		895		
0010	536+93 - 539+70	LT		277		
0010	564+02 - 564+07	LT		5		
0010	564+00 - 564+10	RT		10		
0010	564+13	LT & RT			1	
0010	569+99	LT & RT			1	
0010	576+50	LT & RT			1	
0010	681+73	LT & RT			1	
0010	710+90	LT & RT			1	
0010	748+50	LT & RT	2			
0010	748+15 - 748+67	RT		52		
0010	757+92 - 759+85	LT		193		
0010	757+82 - 759+52	RT		170		
TOTAL			2	1602	8	65,280

ADJUSTING WATER VALVE BOX

CATEGORY	STATION	LOCATION	SPV.0060.01 EACH
0020	739+29	16.5' RT	1
0020	739+31	27.5' LT	1
0020	739+33	33.5' RT	1
0020	739+54	2' LT	1
0020	739+59	18' LT	1
0020	746+64	33' RT	1
0020	746+65	33.5' LT	1
0020	750+46	12' LT	1
0020	750+54	21' LT	1
0020	753+87	18' LT	1
0020	753+99	9' LT	1
0020	757+49	33' RT	1
0020	757+49	33' LT	1
0020	757+87	12' LT	1
TOTAL			14

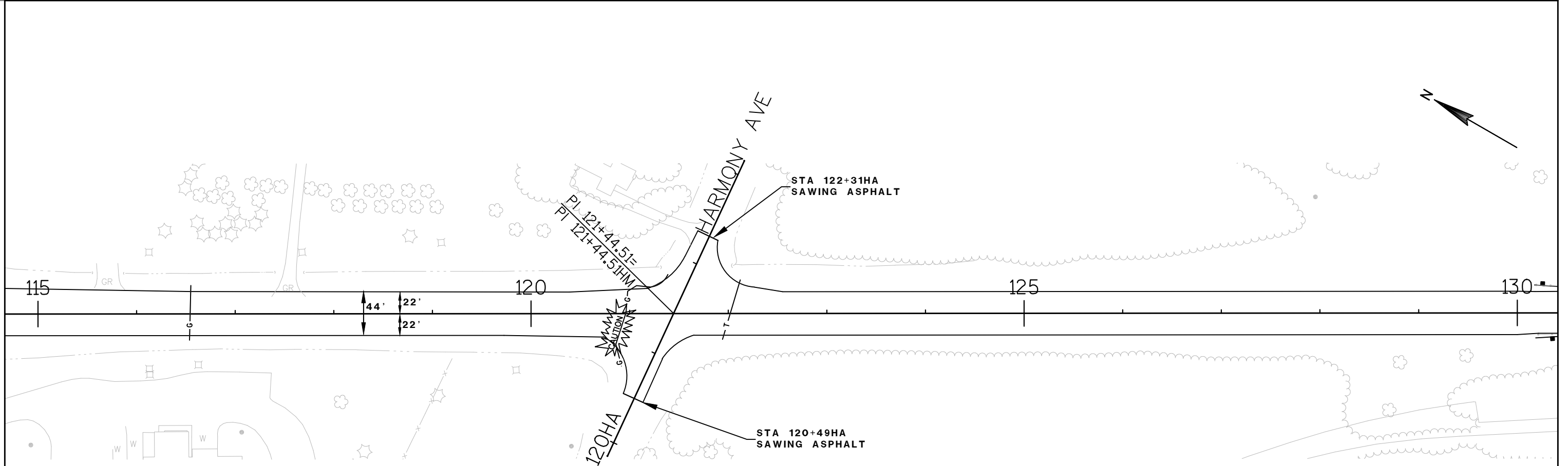
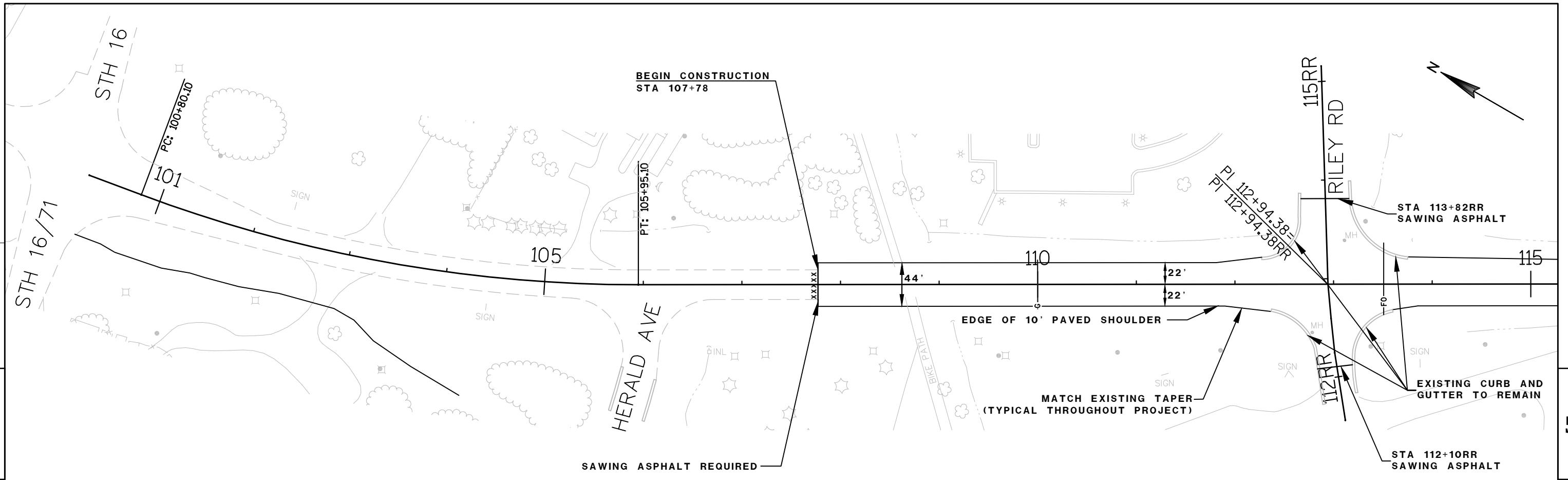
ASPHALTIC CENTER LINE RUMBLE STRIP 2-LANE RURAL

CATEGORY	STATION TO STATION	LOCATION	465.0475.S LF
0010	114+94 - 119+44	CL	450
0010	123+44 - 131+12	CL	768
0010	134+00 - 134+45	CL	45
0010	138+45 - 155+54	CL	1,709
0010	159+54 - 206+68	CL	4,714
0010	210+68 - 223+26	CL	1,258
0010	224+41 - 252+64	CL	2,823
0010	253+72 - 269+14	CL	1,542
0010	270+06 - 279+83	CL	977
0010	283+83 - 294+68	CL	1,085
0010	298+68 - 367+10	CL	6,842
0010	375+82 - 407+60	CL	3,178
0010	411+60 - 470+06	CL	5,846
0010	474+06 - 482+08	CL	802
0010	486+08 - 490+58	CL	450
0010	491+43 - 503+55	CL	1,212
0010	507+55 - 517+55	CL	1,000
0010	521+55 - 562+52	CL	4,097
0010	566+52 - 605+80	CL	3,928
0010	609+80 - 641+80	CL	3,200
0010	645+80 - 690+27	CL	4,447
0010	694+27 - 710+70	CL	1,643
0010	714+70 - 718+98	CL	428
0010	724+34 - 730+00	CL	566
TOTAL			53,010

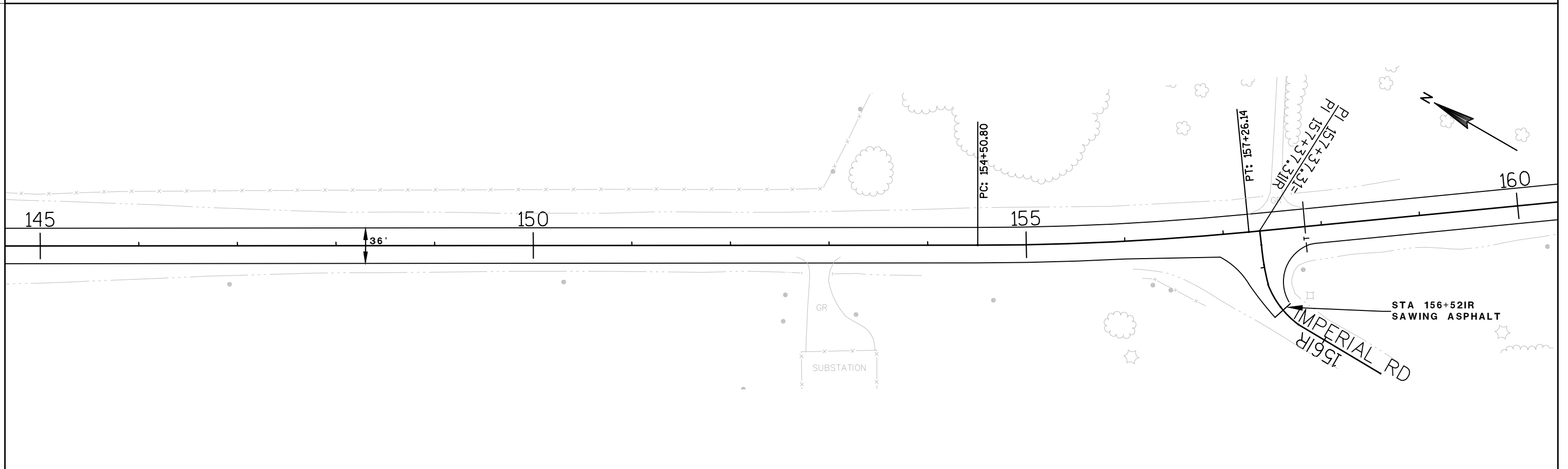
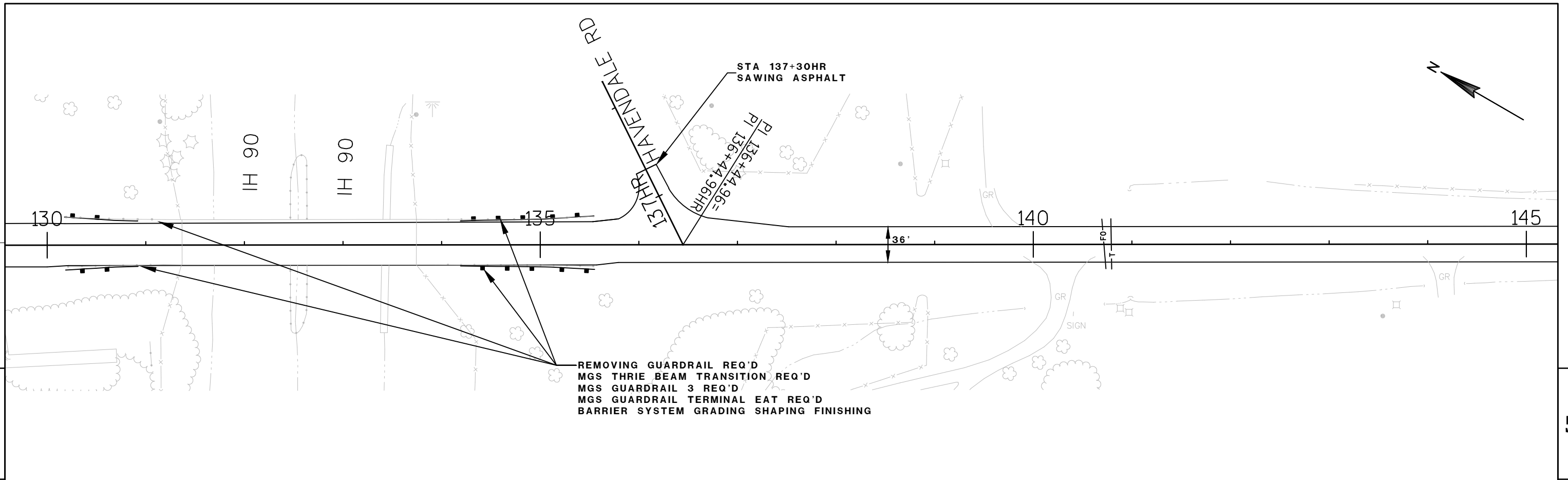
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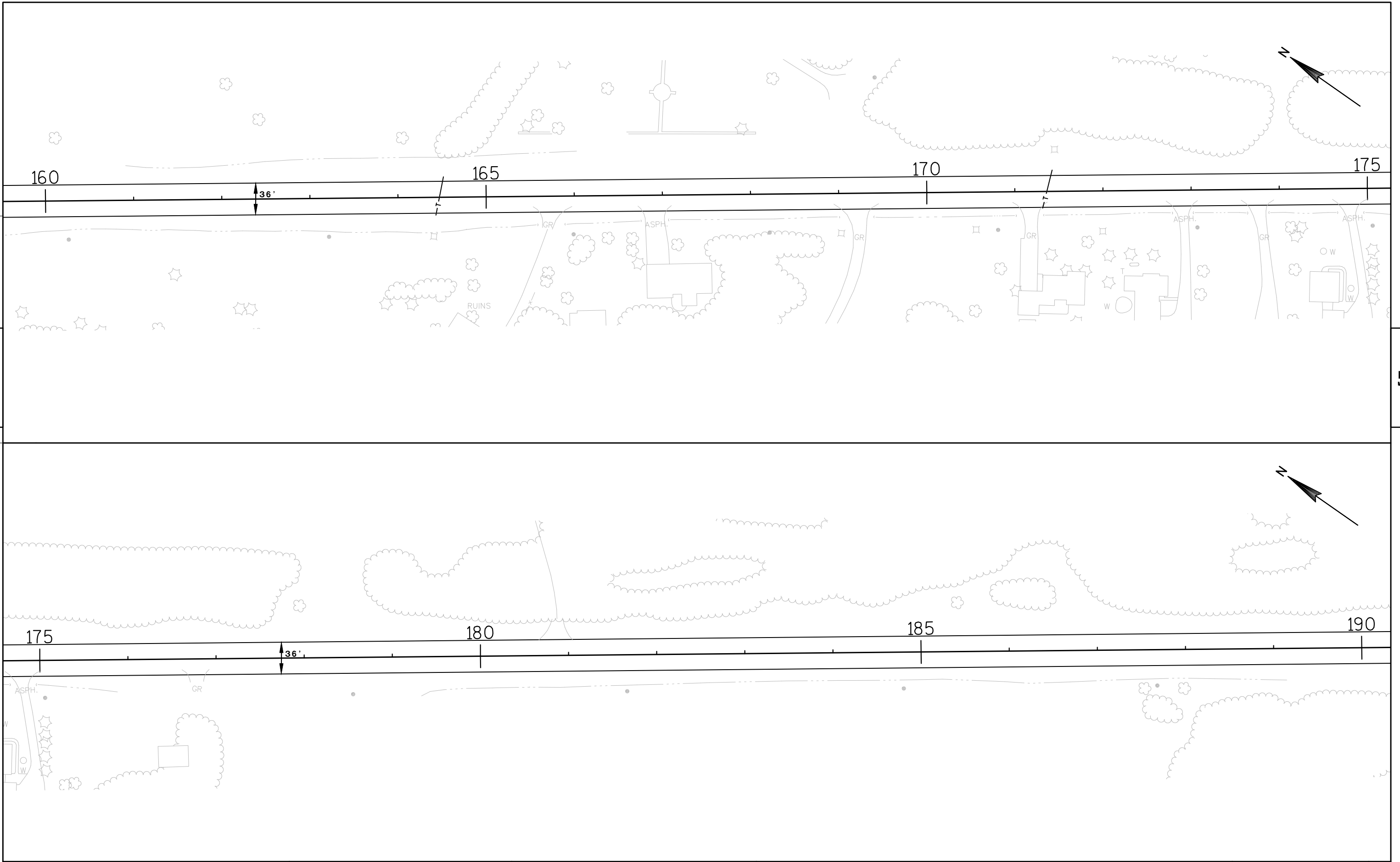
SAWING SUMMARY

690.0150 690.0250					
SAWING SAWING					
ASPHALT CONCRETE					
CATEGORY	STATION TO STATION	LOCATION	LF	LF	REMARKS
0010	166+90	RT	23		PE
0010	172+92	RT	16		PE
0010	174+80	RT	18		PE
0010	220+00	LT & RT	60		CULVERT REPLACEMENT
0010	259+70	LT	40		PE
0010	280+80	LT	20		PE
0010	286+05	LT & RT	60		CULVERT REPLACEMENT
0010	289+90	LT	22		PE
0010	291+30	LT	20		PE
0010	375+13	RT	22		PE
0010	378+68	RT	27		PE
0010	383+00	RT	24		PE
0010	469+26	RT	22		PE
0010	500+00	LT & RT	60		CULVERT REPLACEMENT
0010	515+05 - 524+00	RT	895		ASPHALT CURB REMOVAL
0010	536+93 - 539+70	LT	277		ASPHALT CURB REMOVAL
0010	564+13	LT & RT	84		CULVERT REPLACEMENT
0010	569+99	LT & RT	84		CULVERT REPLACEMENT
0010	576+50	LT & RT	84		CULVERT REPLACEMENT
0010	668+65	LT	88		CE
0010	681+73	LT & RT	60		CULVERT REPLACEMENT
0010	682+00	LT	24		PE
0010	684+30	LT	24		PE
0010	690+30	LT	25		PE
0010	710+90	LT & RT	60		CULVERT REPLACEMENT
0010	748+15 - 748+67	RT	52		CONCRETE CURB & GUTTER REMOVAL
0010	748+35	RT	17		ALLEY ENTRANCE
0010	748+45 - 748+55	LT & RT	90		STORM SEWER PIPE ADDITION
0010	748+55	RT		30	SIDEWALK REPLACEMENT
0010	757+92 - 759+85	LT	193		CONCRETE CURB & GUTTER REMOVAL
0010	757+82 - 759+52	RT	170		CONCRETE CURB & GUTTER REMOVAL
0010	758+78	RT		10	PE
0010	759+12	LT		12	PE
0010	759+30	RT		11	PE
0010	759+78	LT		12	PE
TOTAL			2661	75	

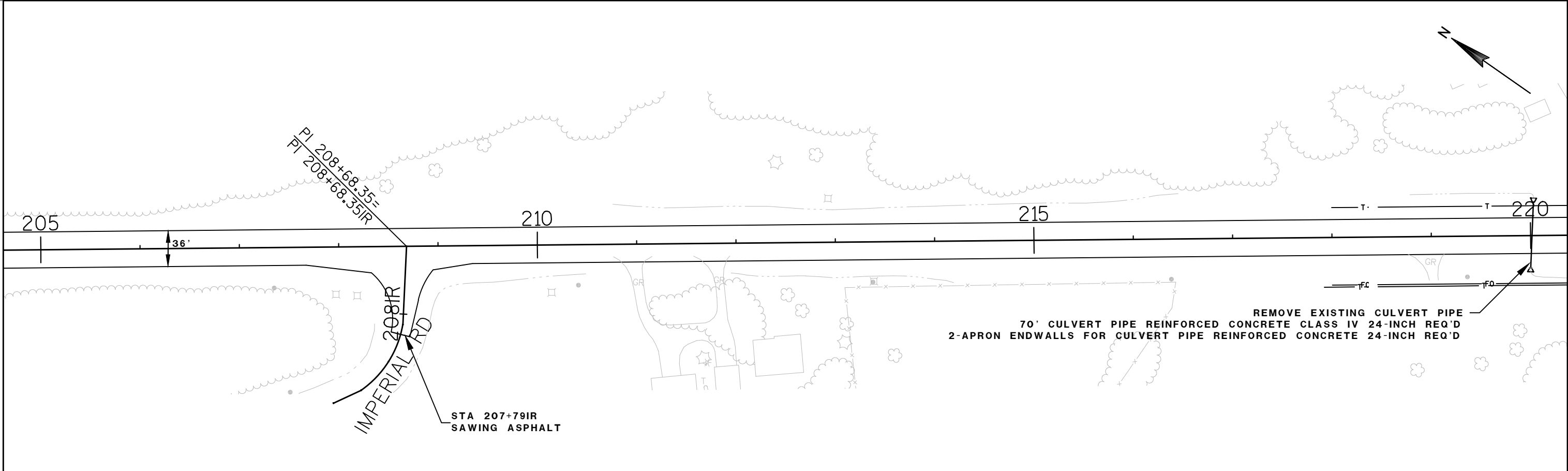
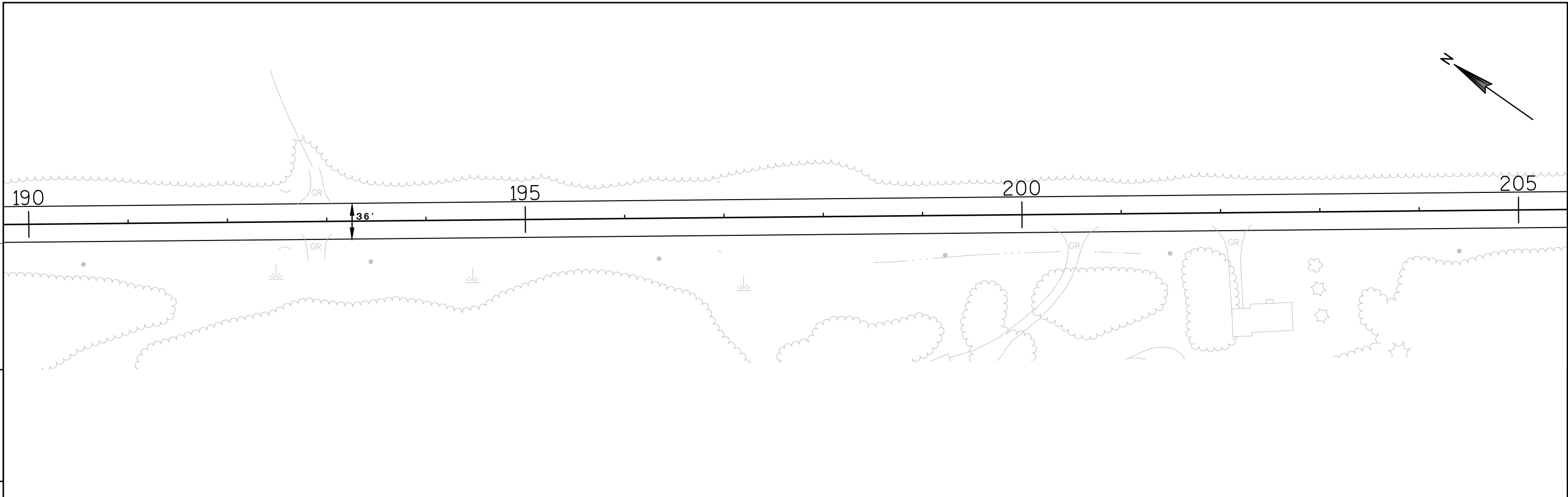


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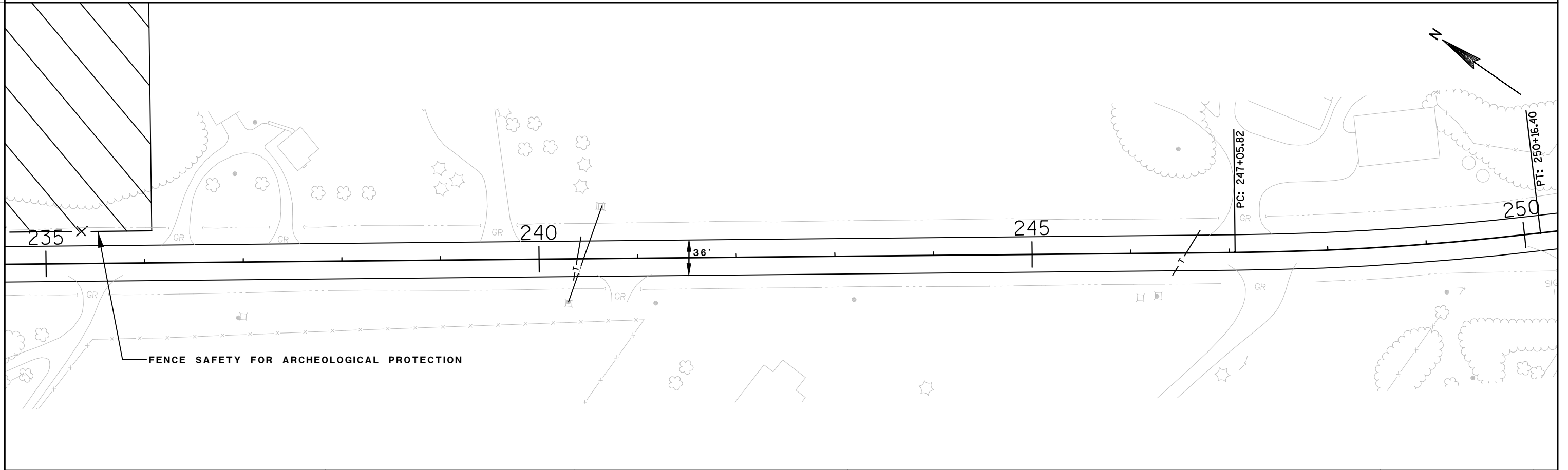
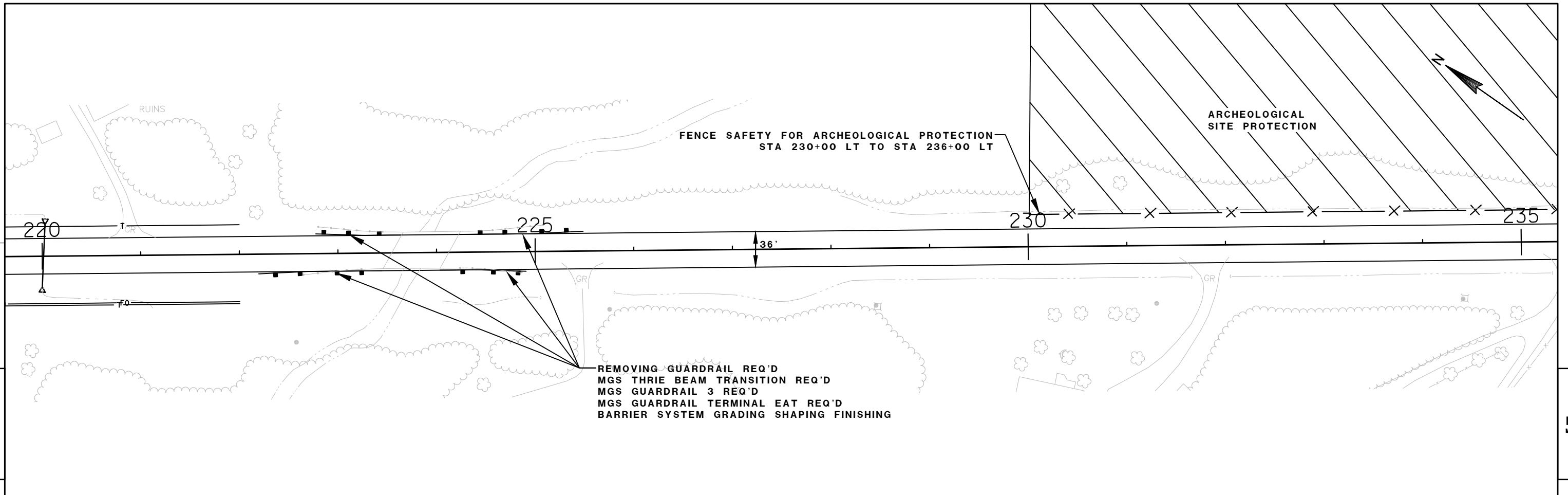




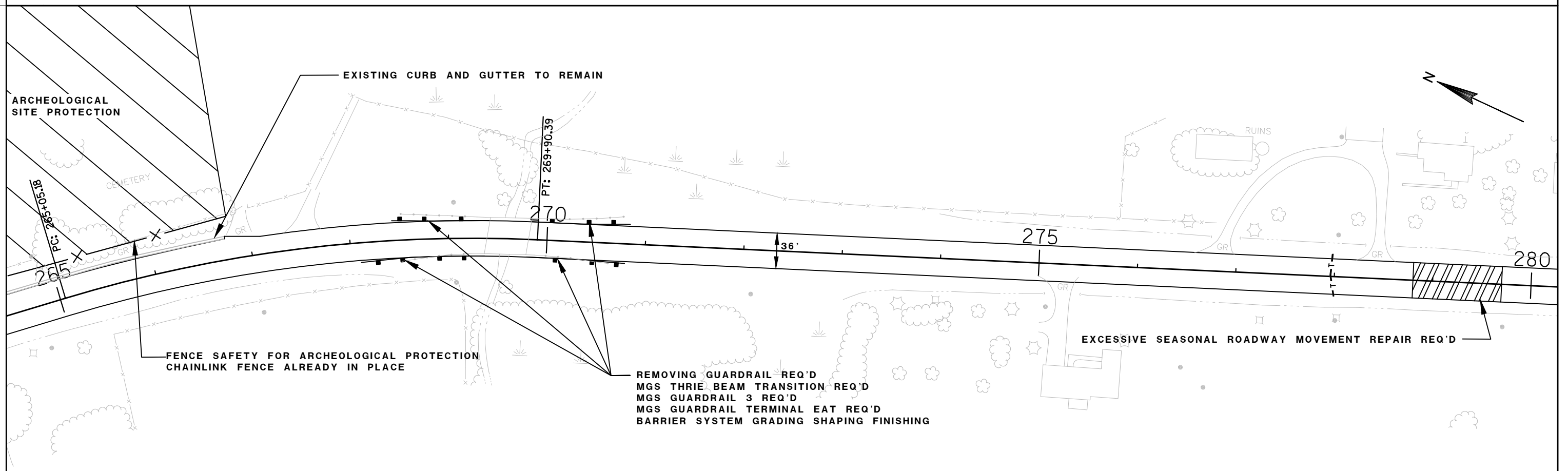
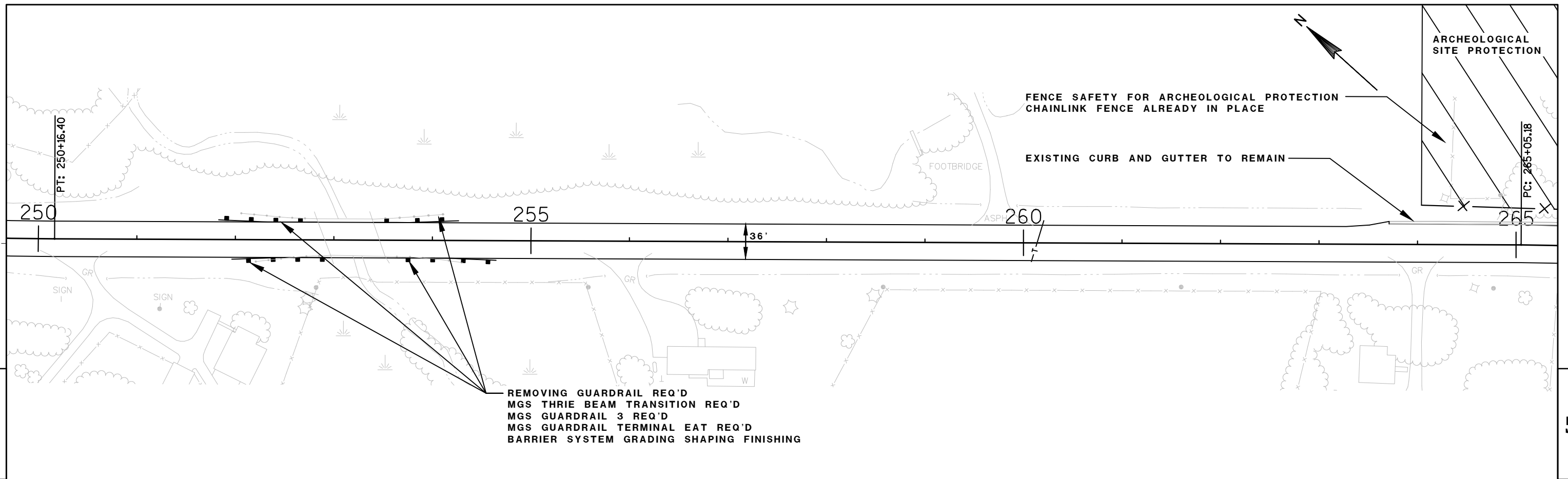
PROJECT NO:5510-00-60	HWY:STH 71	COUNTY:MONROE	SPLIT PLAN	SHEET	E
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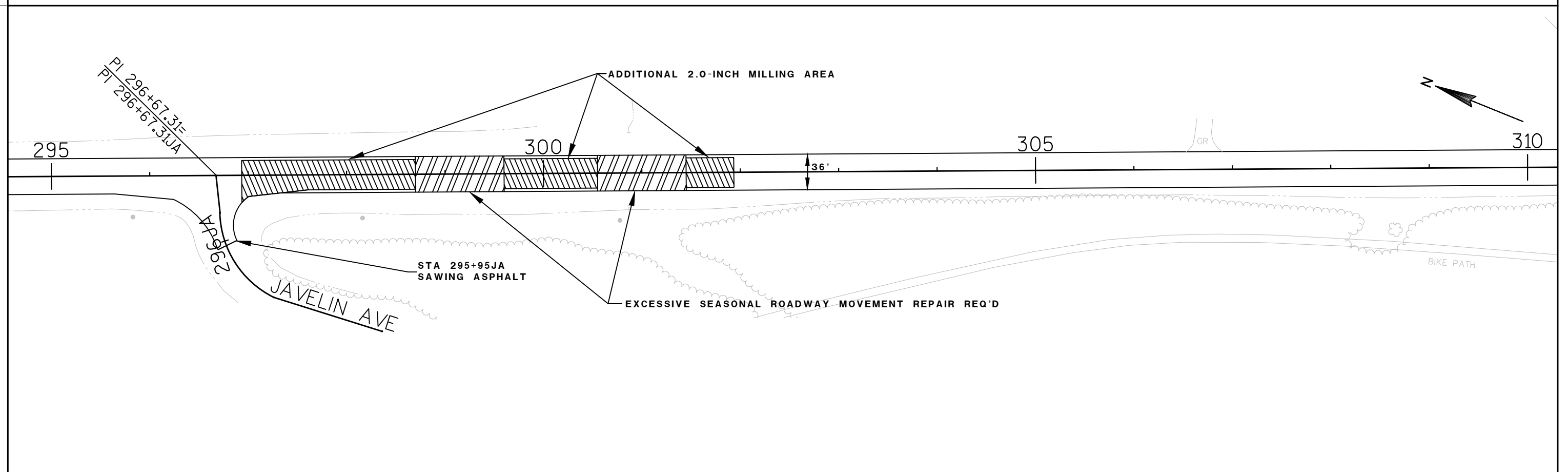
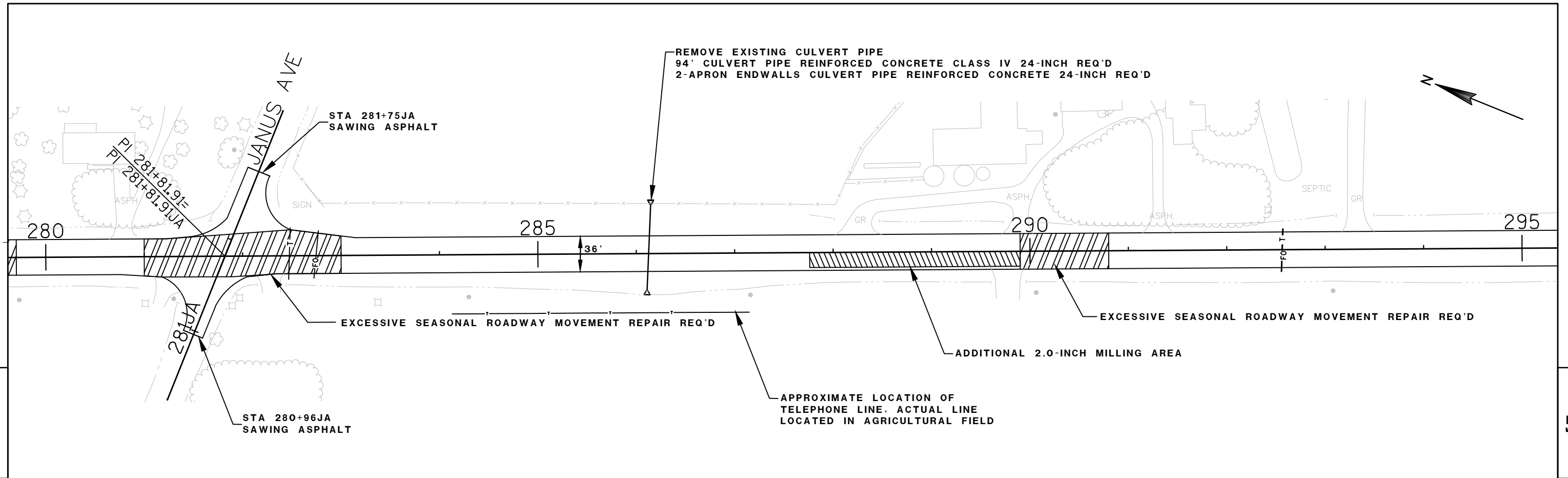
PROJECT NO:5510-00-60	HWY:STH 71	COUNTY:MONROE	SPLIT PLAN	SHEET	E
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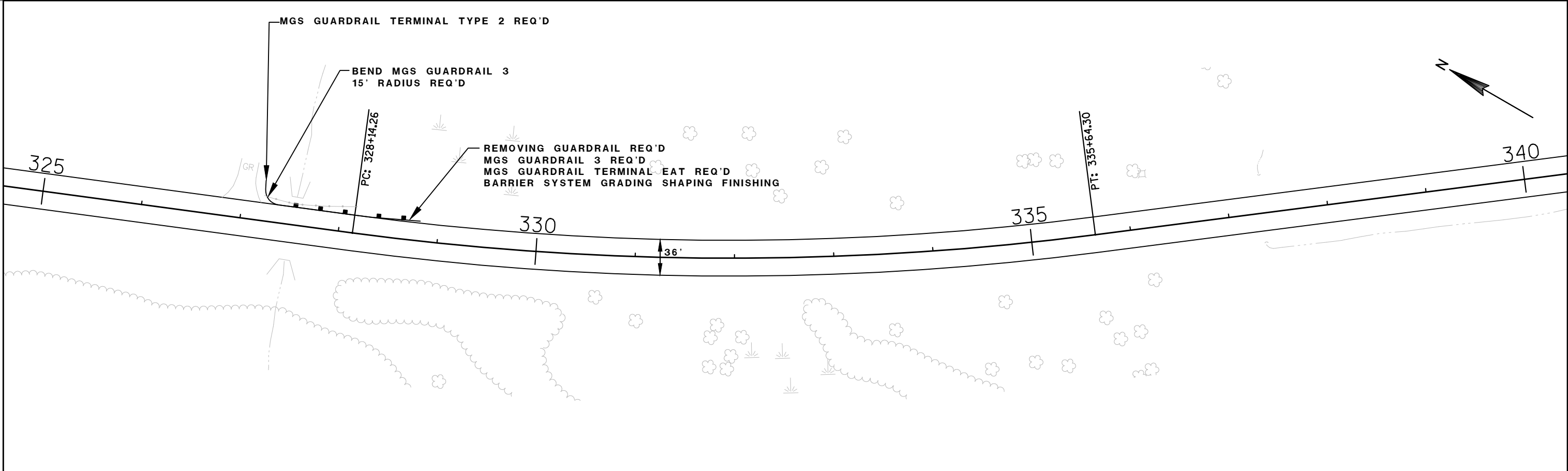
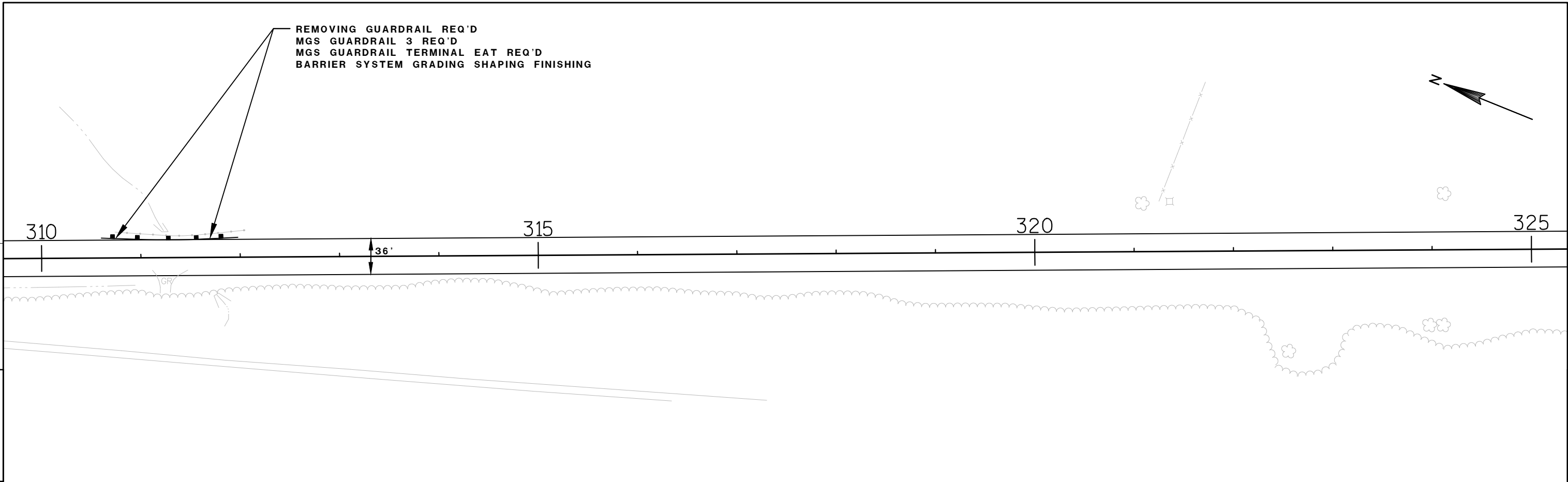
PROJECT NO:5510-00-60	HWY:STH 71	COUNTY:MONROE	SPLIT PLAN	SHEET	E
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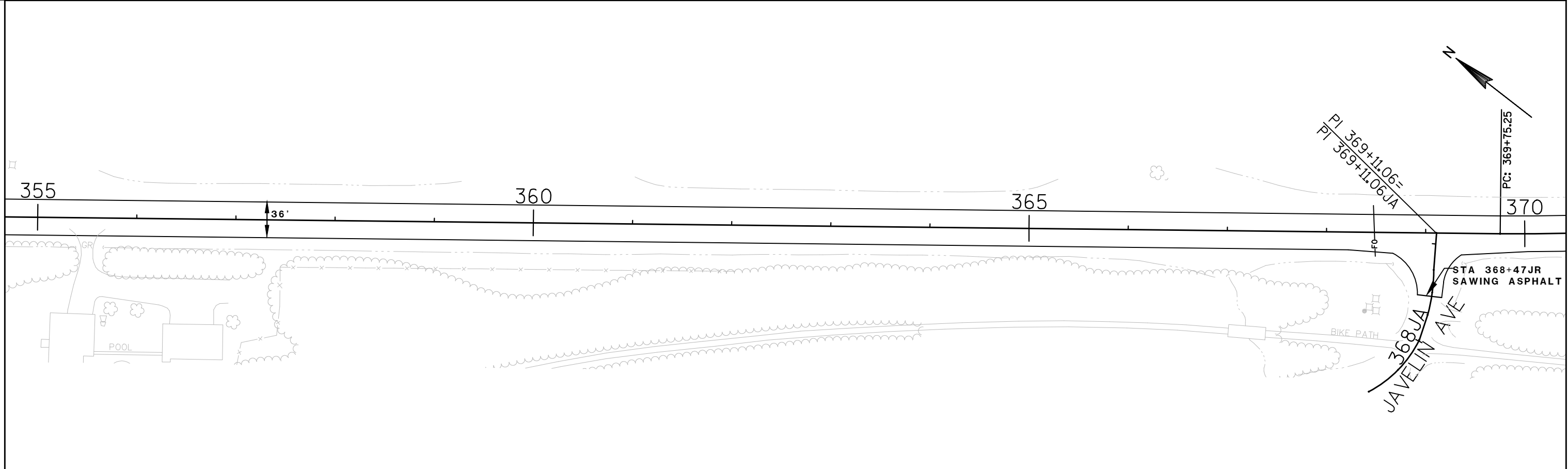
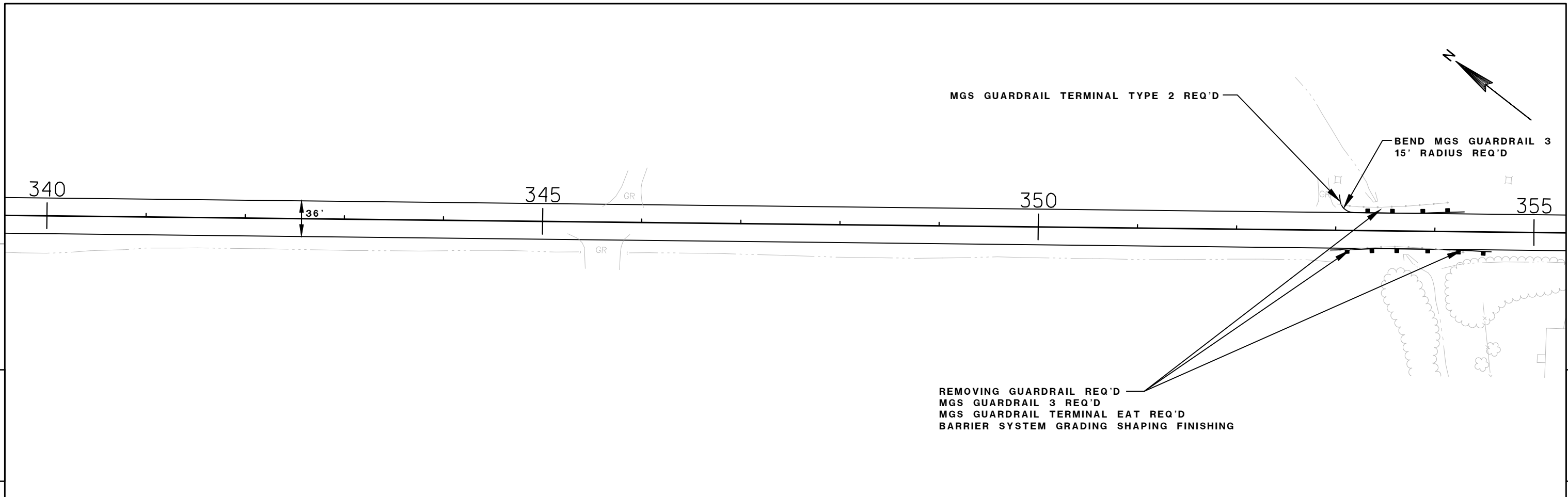
PROJECT NO:5510-00-60	HWY:STH 71	COUNTY:MONROE	SPLIT PLAN	SHEET	E
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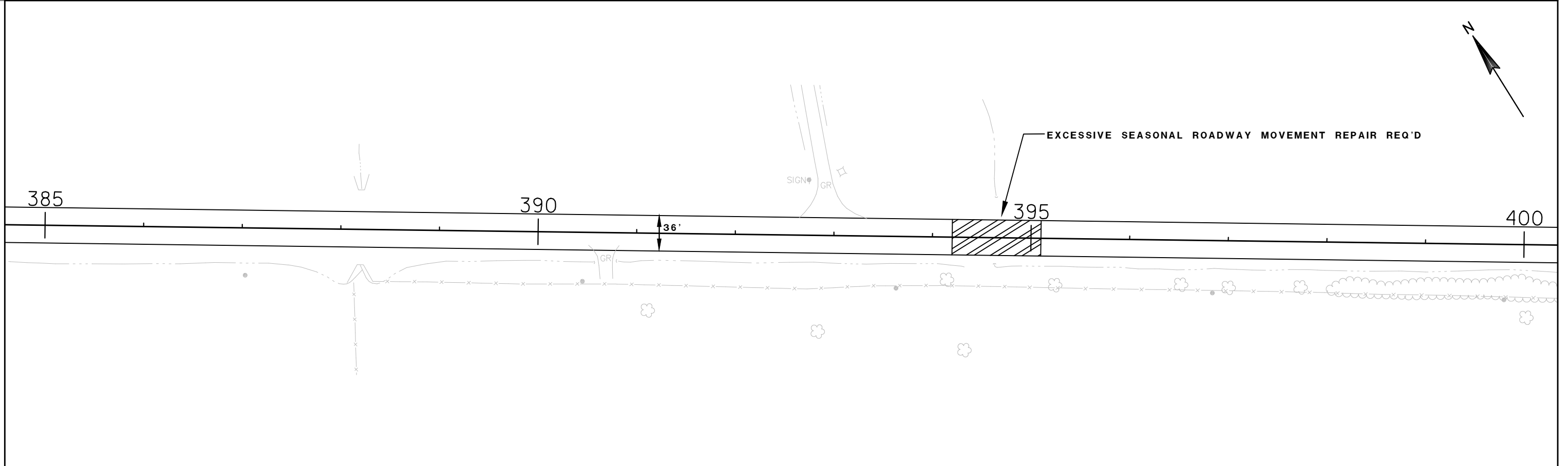
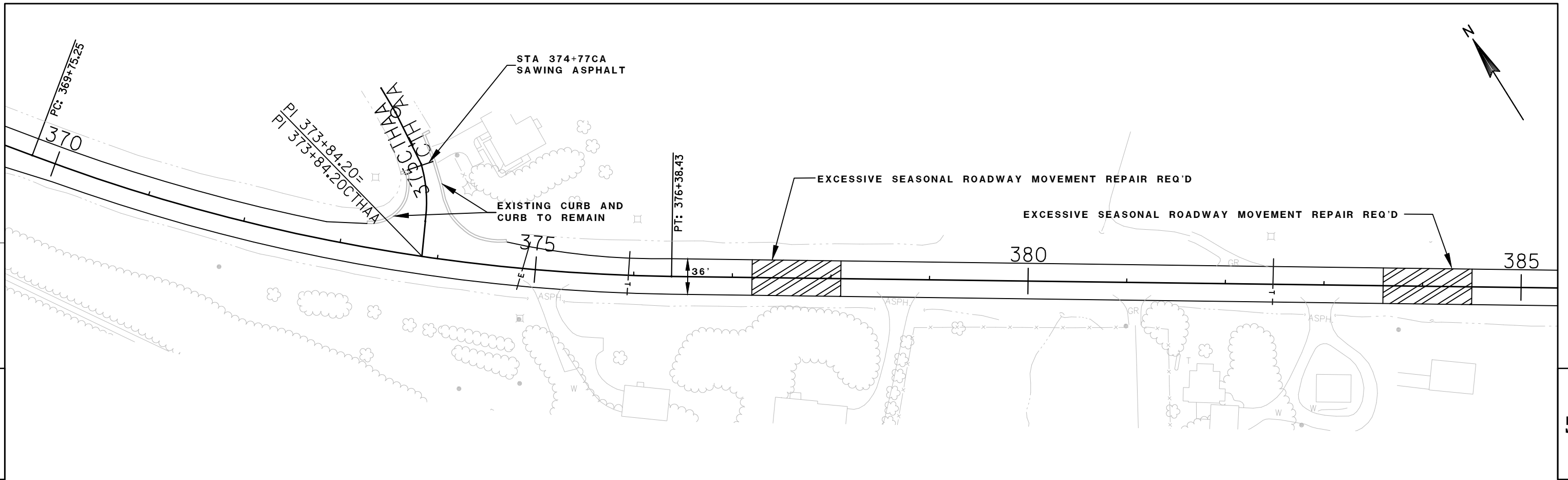
PROJECT NO:5510-00-60	HWY:STH 71	COUNTY:MONROE	SPLIT PLAN	SHEET	E
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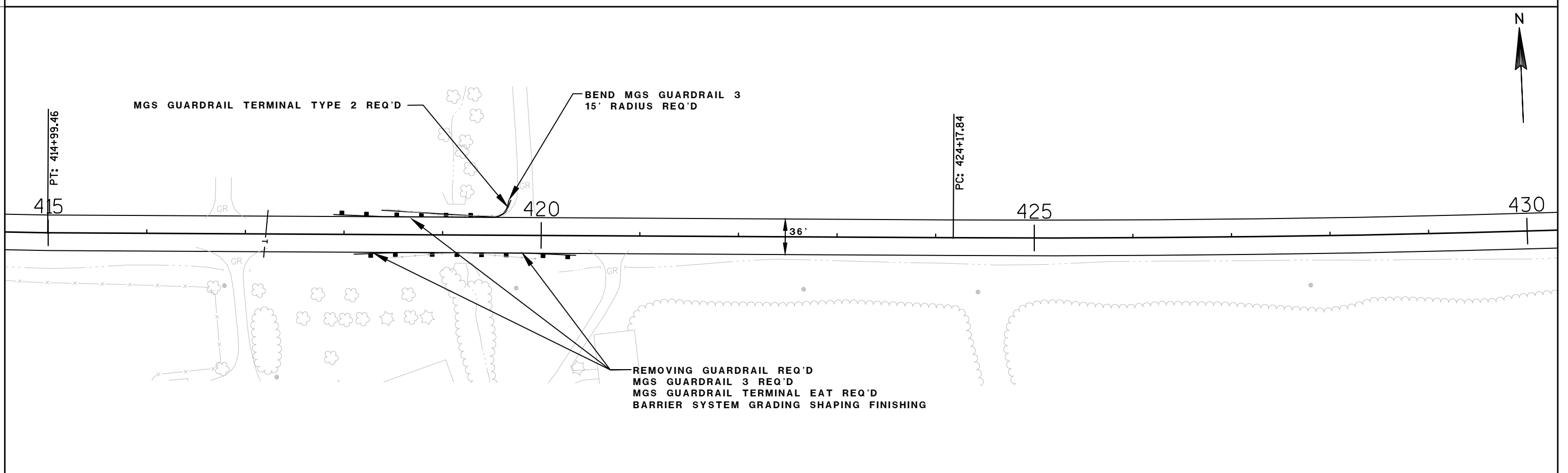
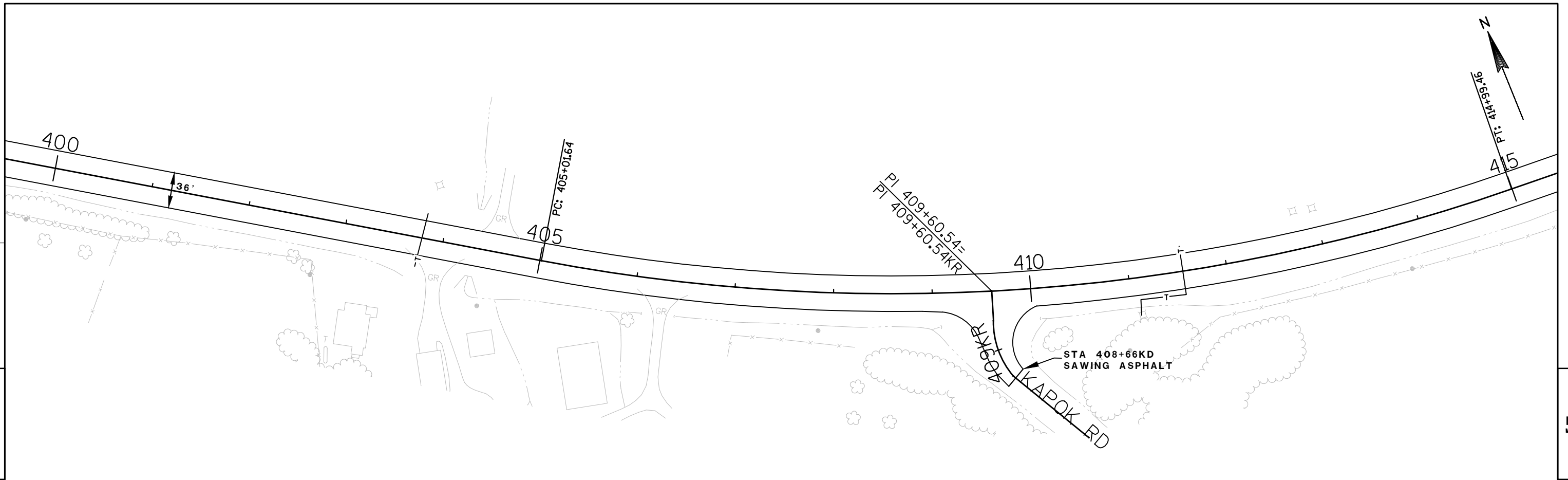
PROJECT NO:5510-00-60	HWY:STH 71	COUNTY:MONROE	SPLIT PLAN	SHEET	E
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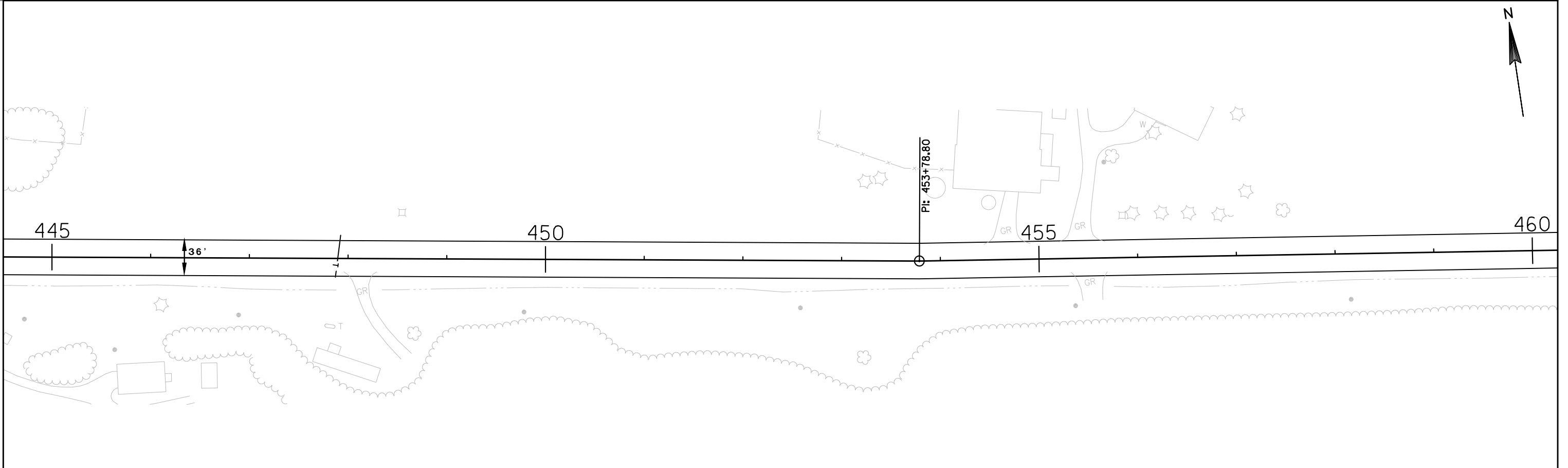
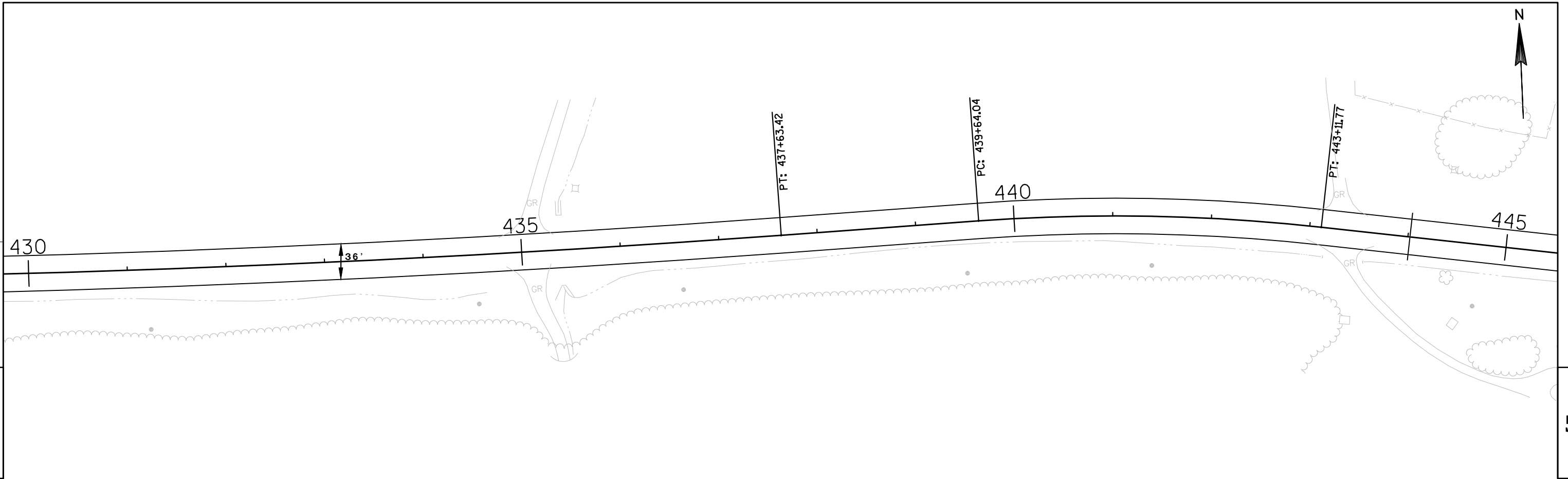
PROJECT NO:5510-00-60	HWY:STH 71	COUNTY:MONROE	SPLIT PLAN	SHEET	E
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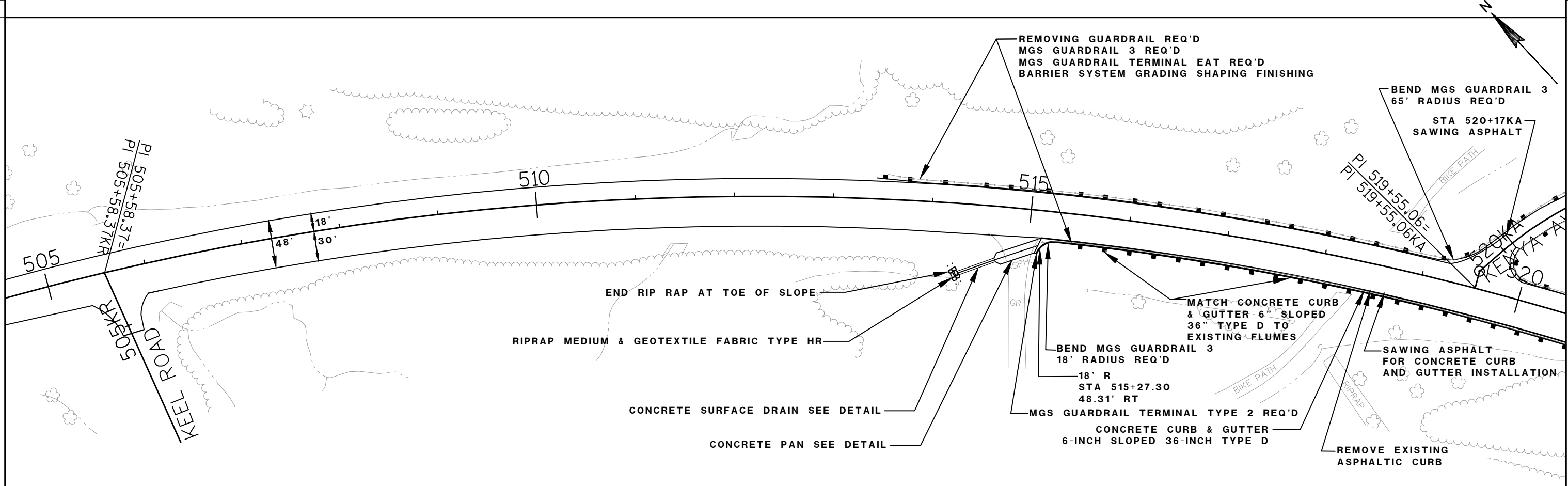
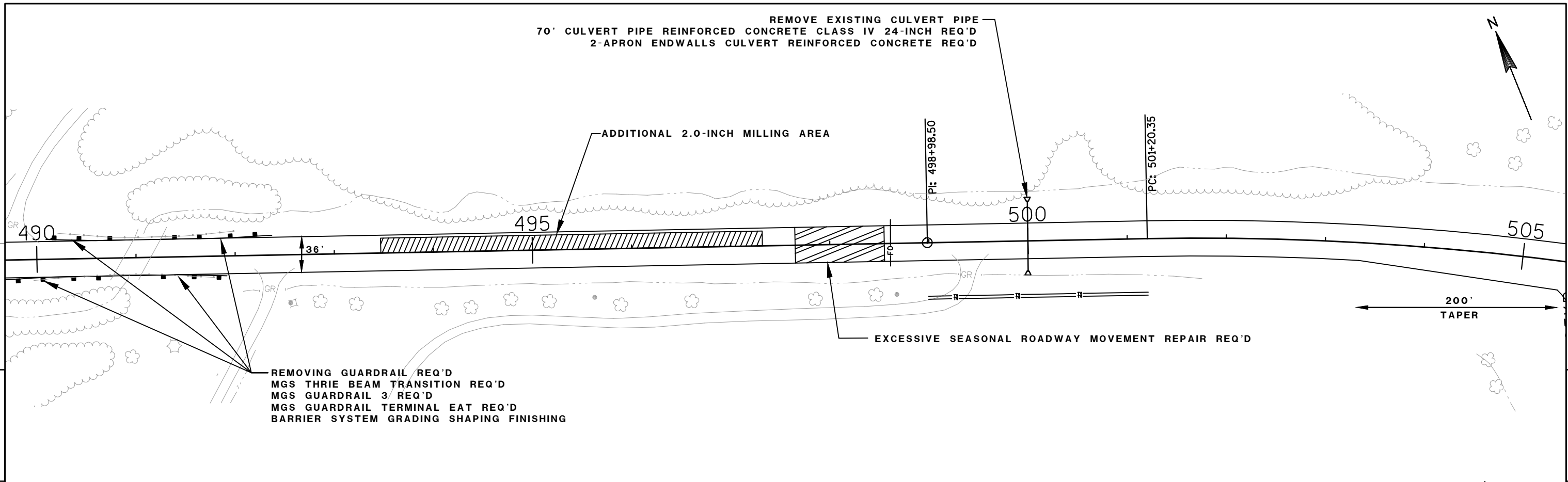
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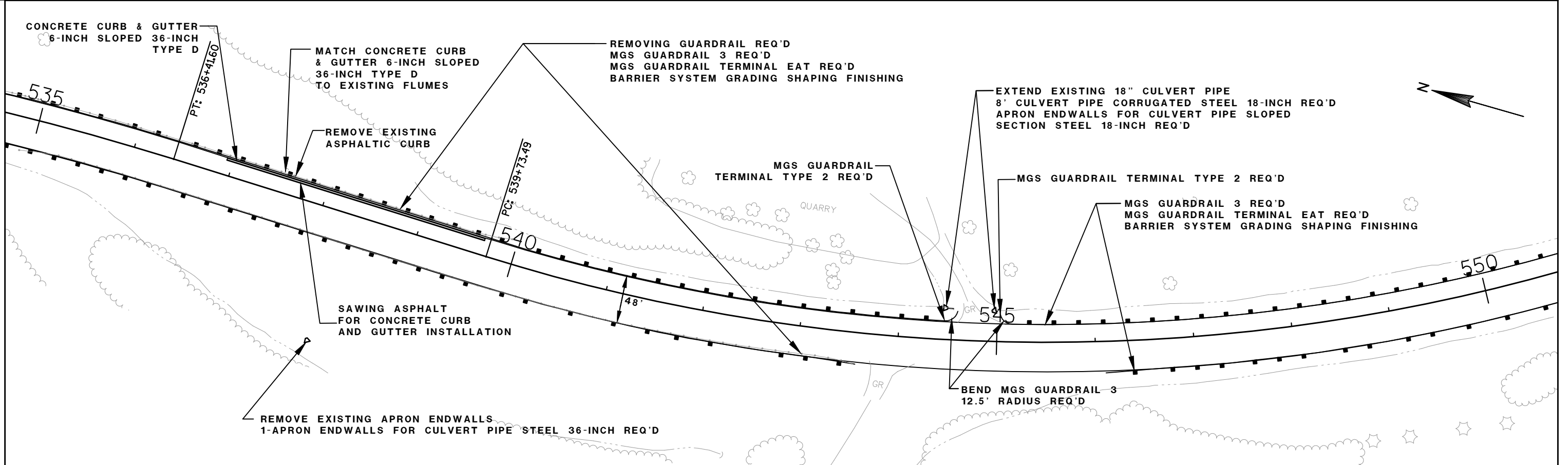
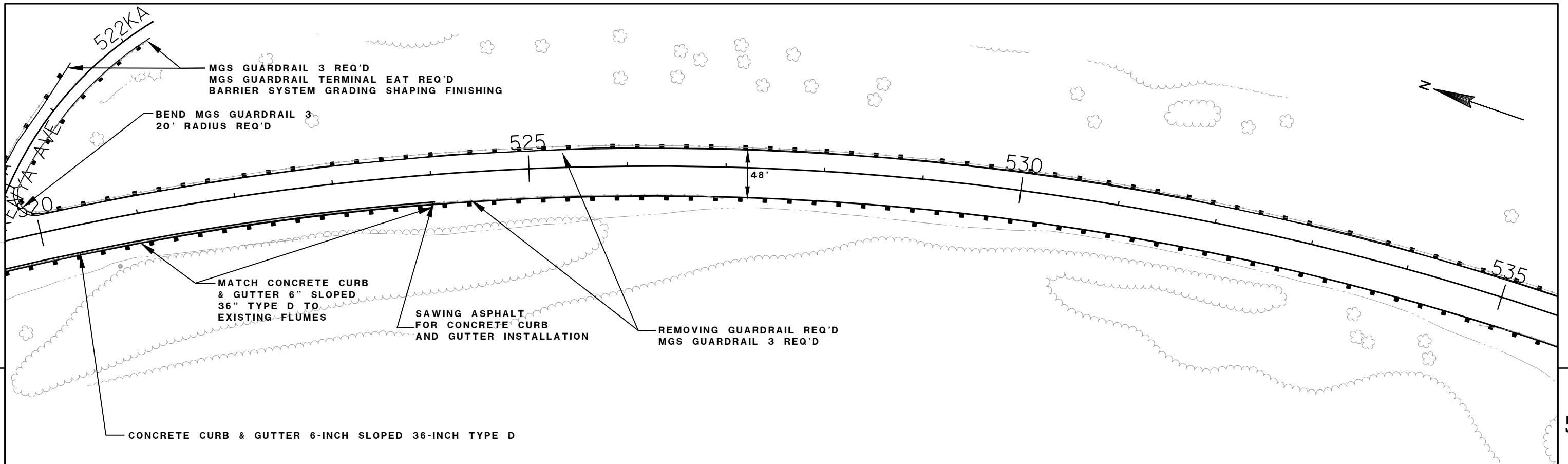
PROJECT NO:5510-00-60	HWY:STH 71	COUNTY:MONROE	SPLIT PLAN	SHEET	E
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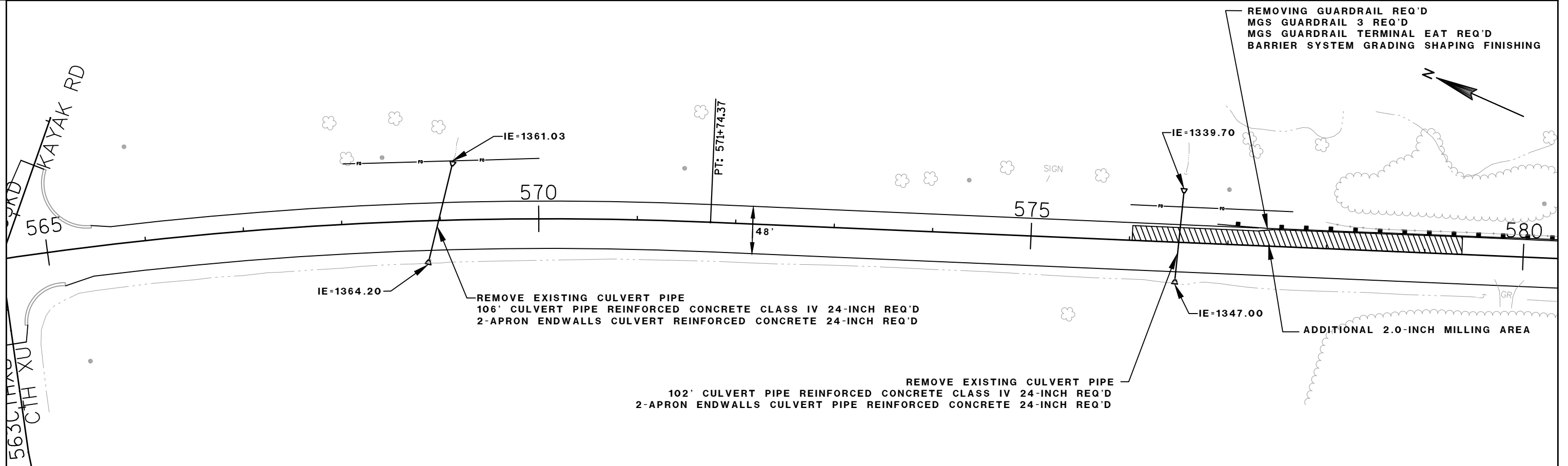
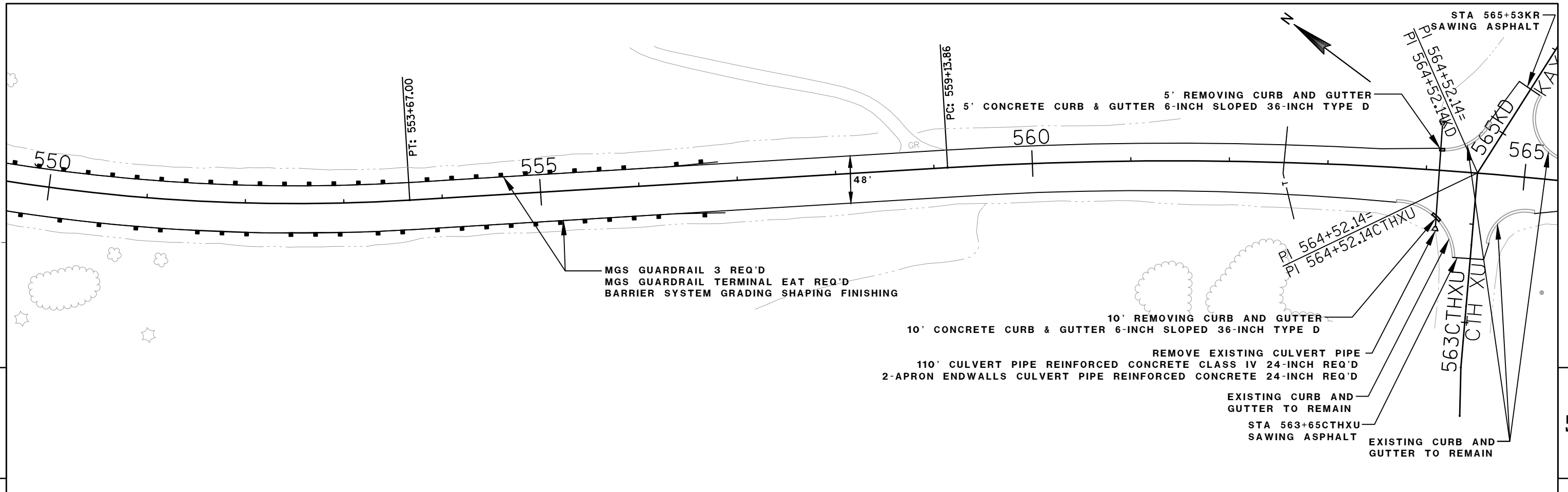


PROJECT NO:5510-00-60	HWY:STH 71	COUNTY:MONROE	SPLIT PLAN	SHEET	E
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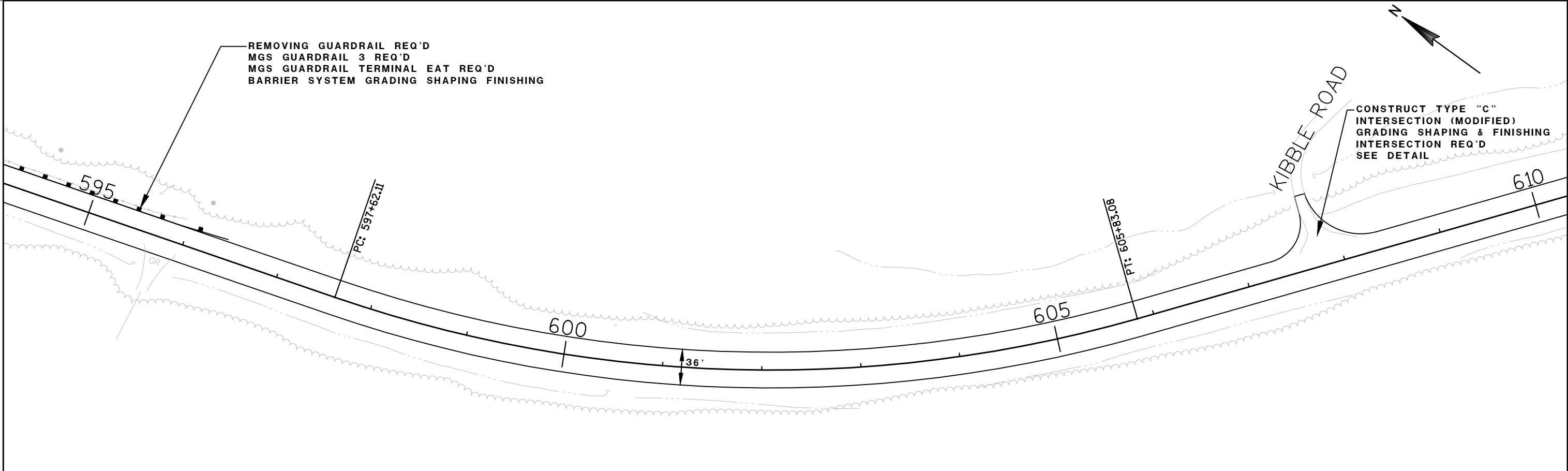
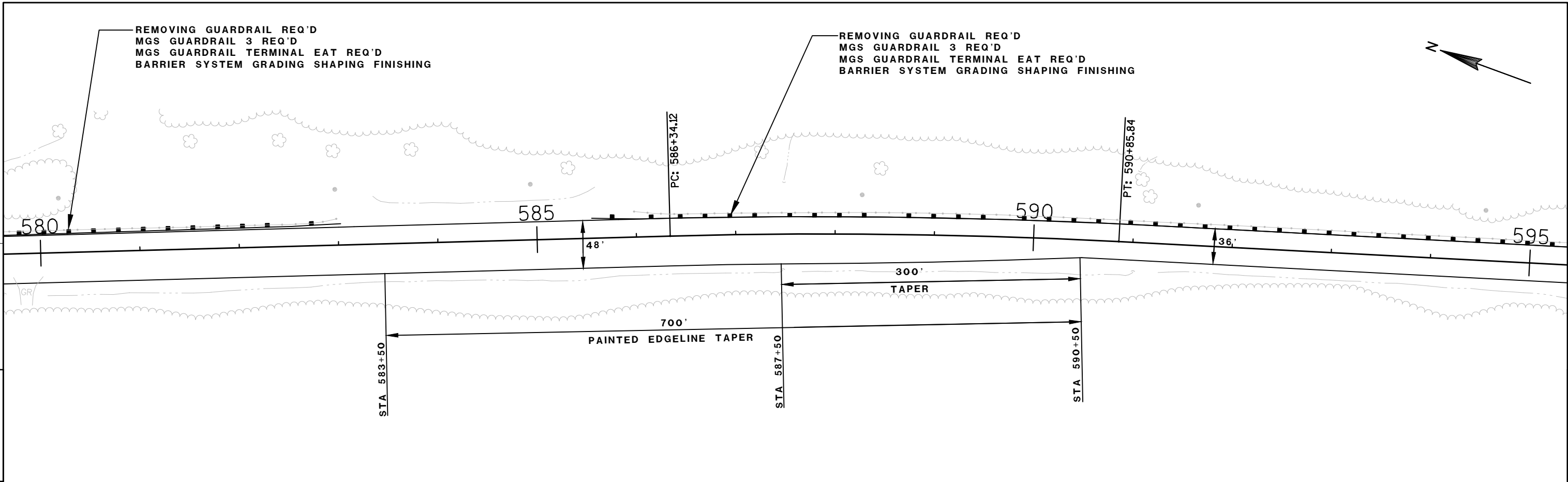


PROJECT NO: 5510-00-60	HWY: STH 71	COUNTY: MONROE	SPLIT PLAN	SHEET	E
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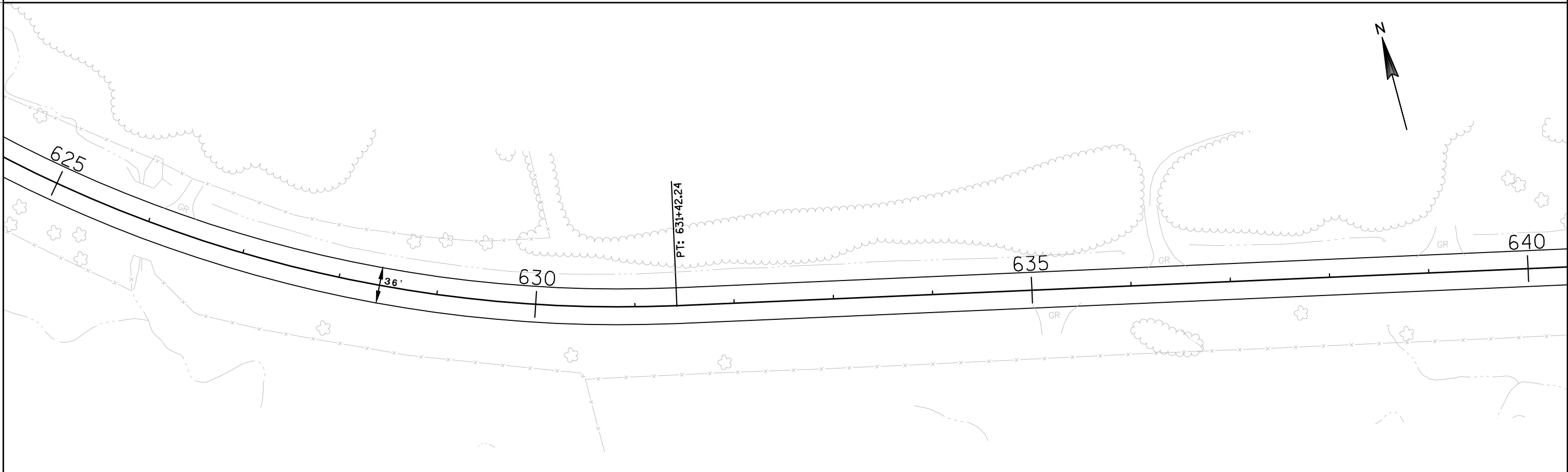
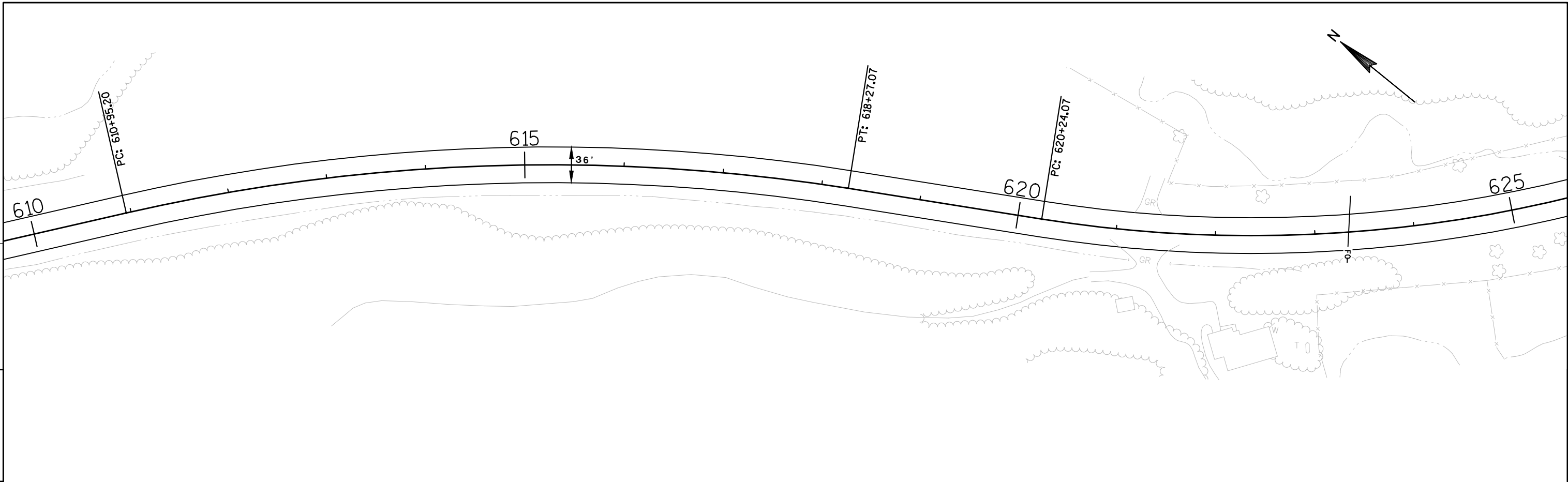




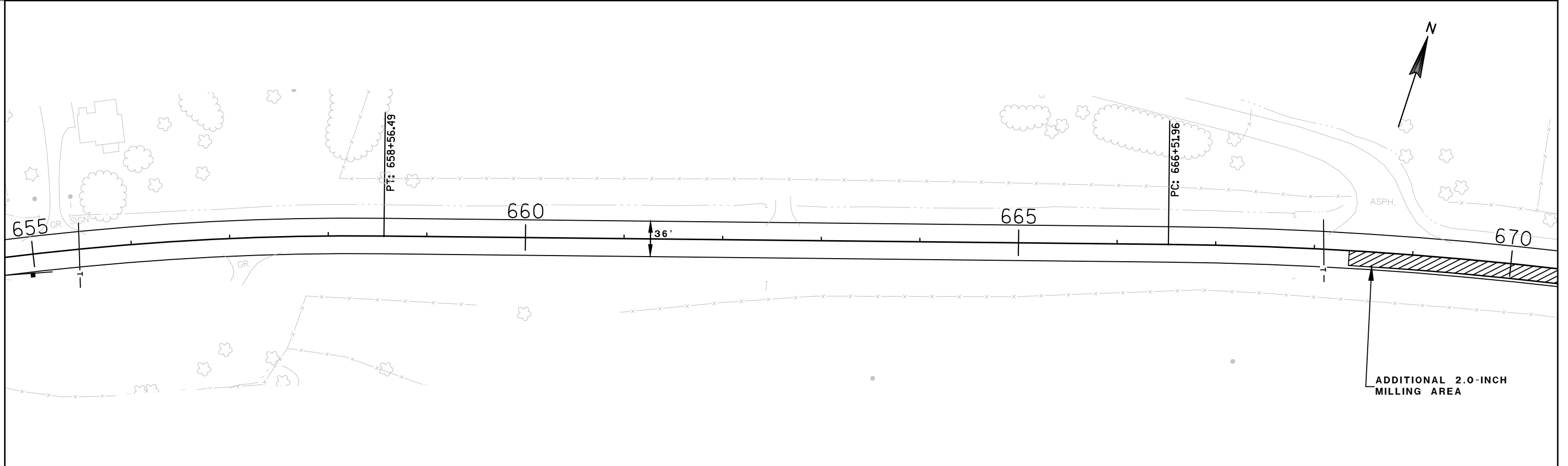
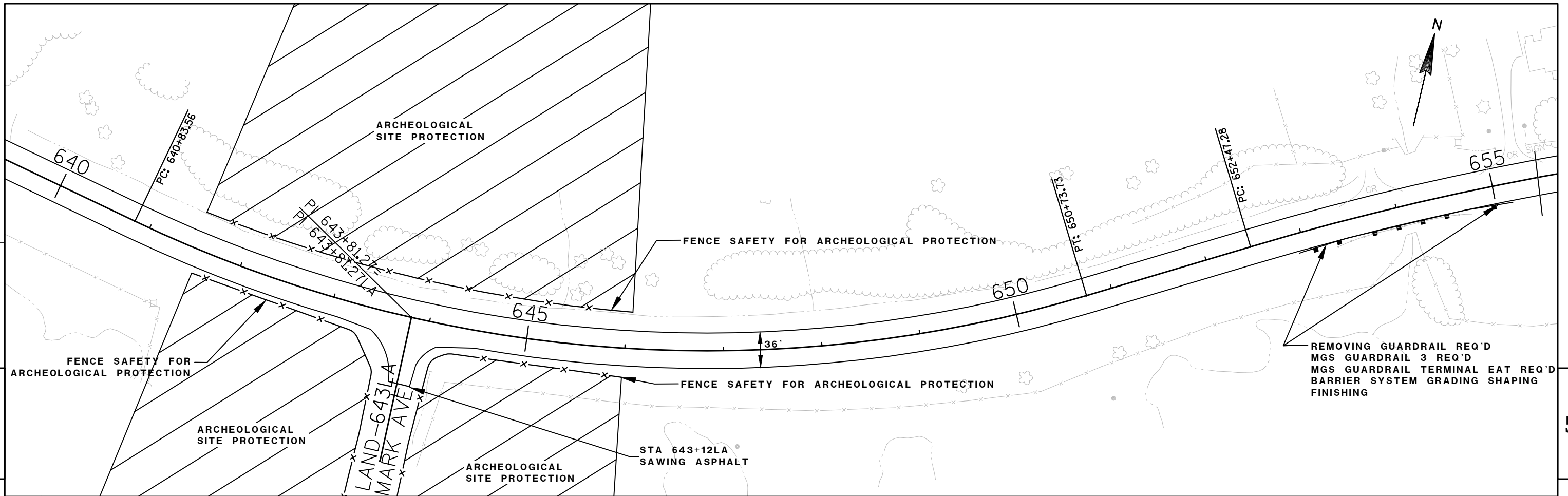
PROJECT NO:5510-00-60	HWY:STH 71	COUNTY:MONROE	SPLIT PLAN	SHEET	E
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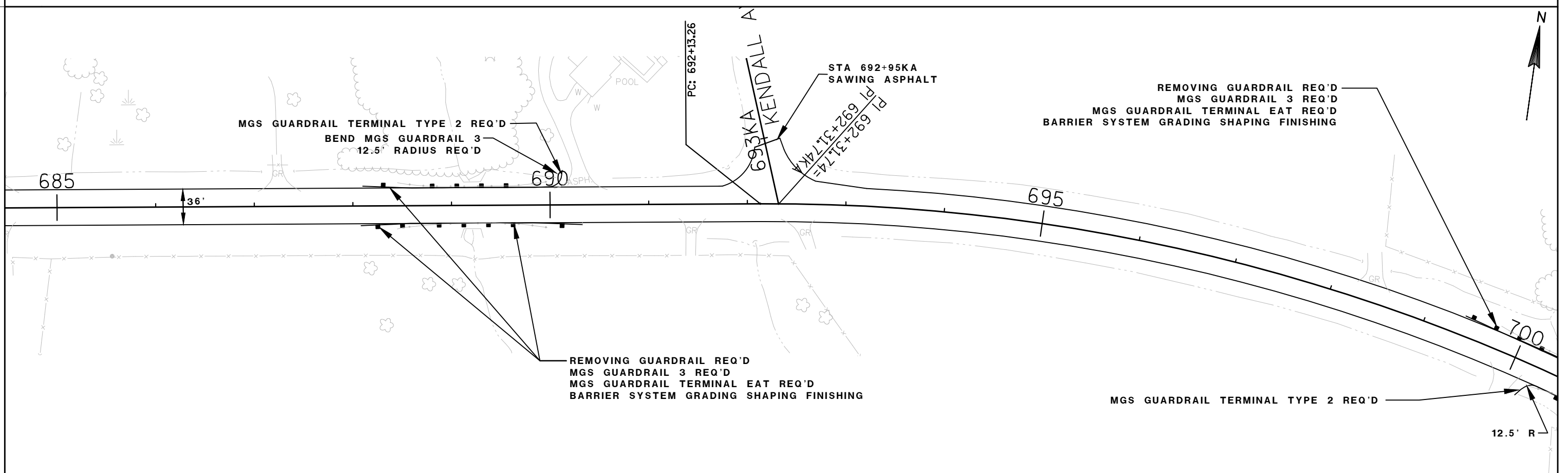
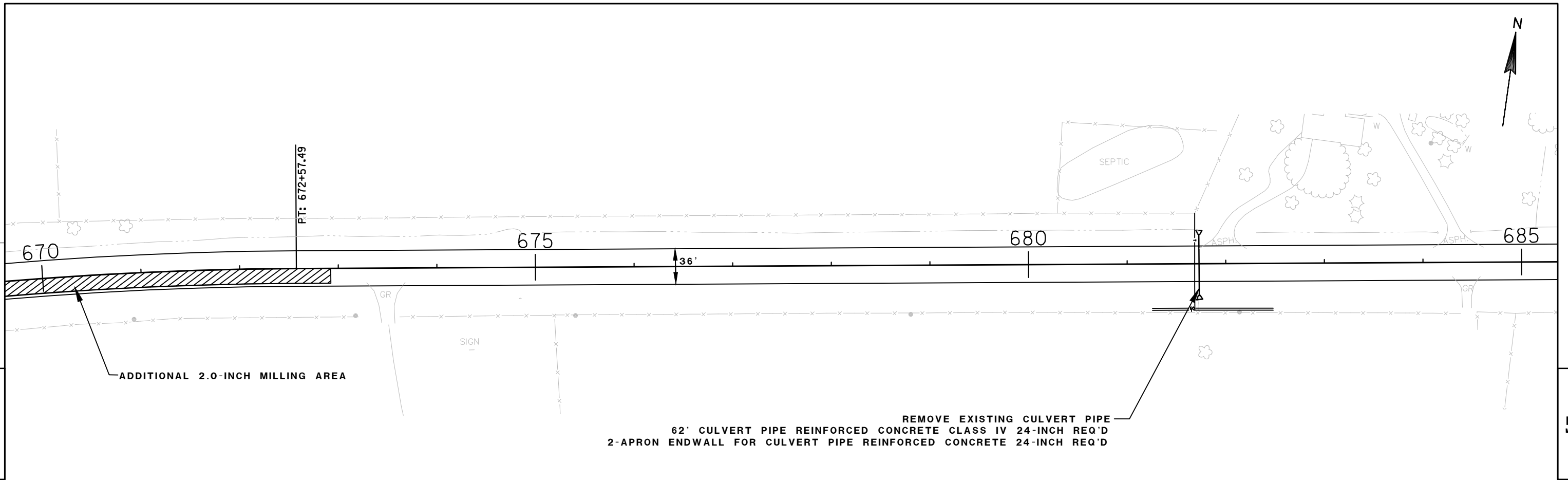
PROJECT NO:5510-00-60	HWY:STH 71	COUNTY:MONROE	SPLIT PLAN	SHEET	E
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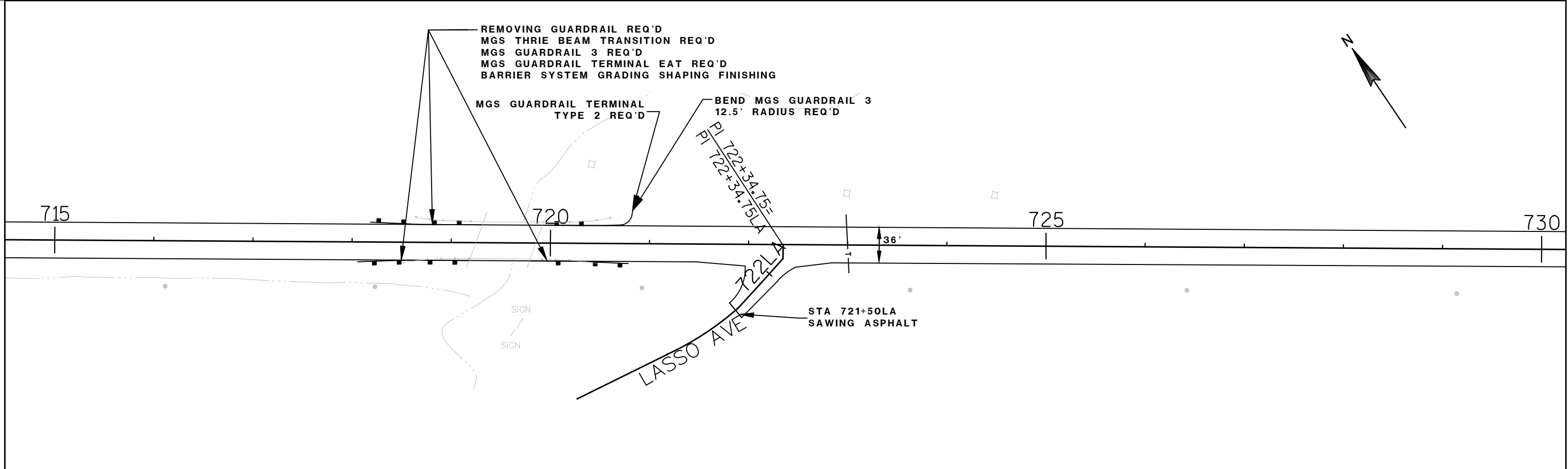
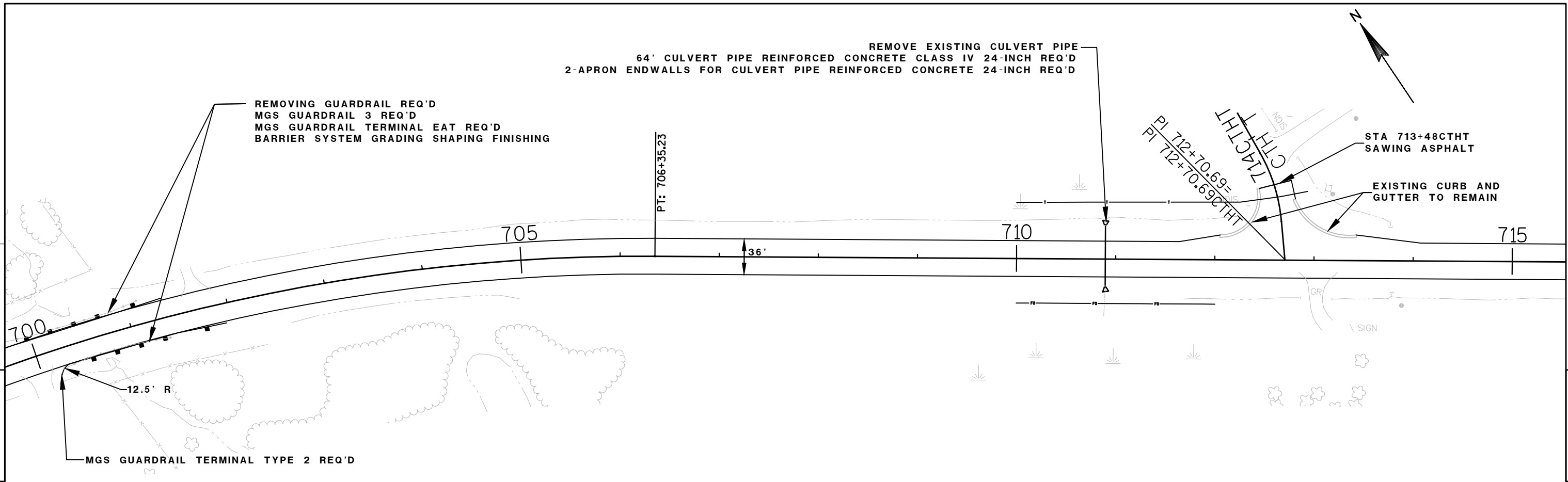


PROJECT NO:5510-00-60	HWY:STH 71	COUNTY:MONROE	SPLIT PLAN	SHEET	E
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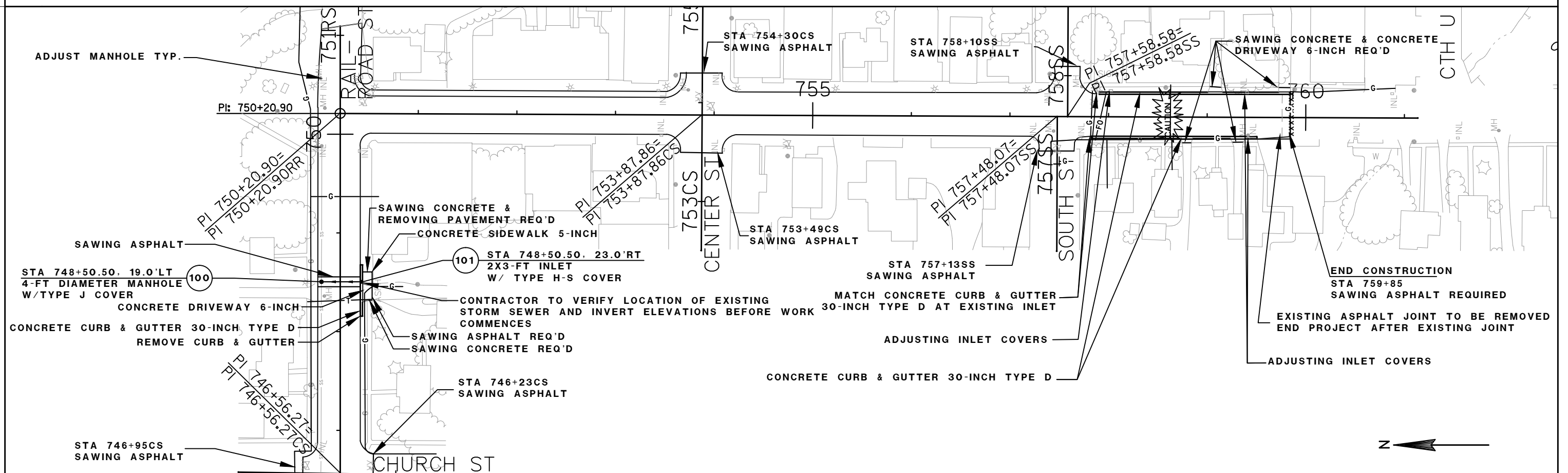
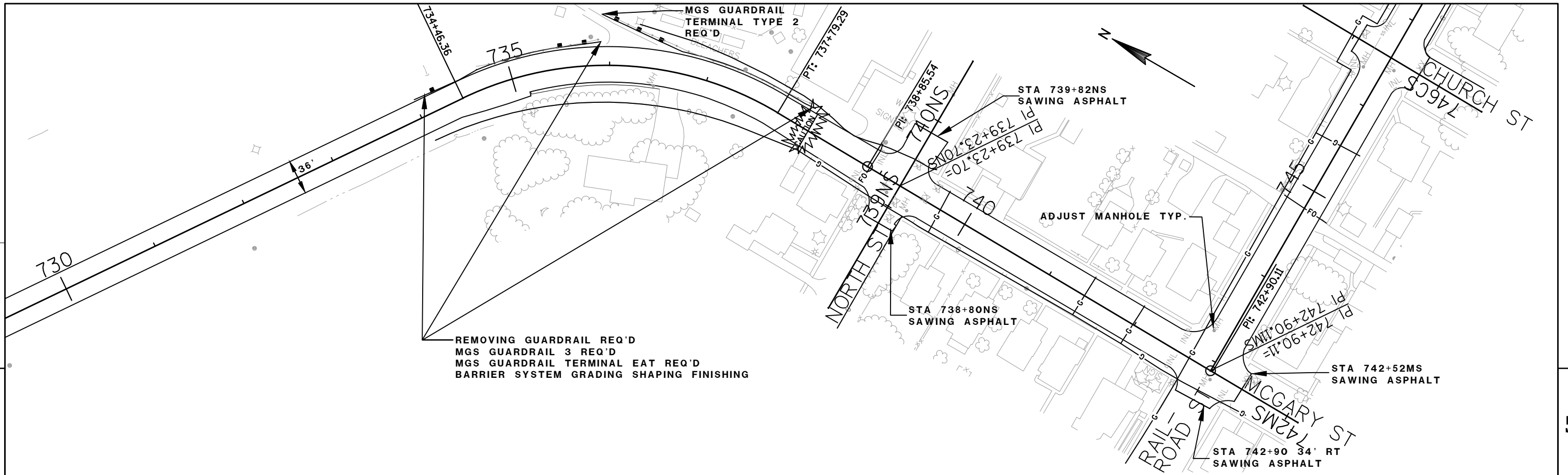


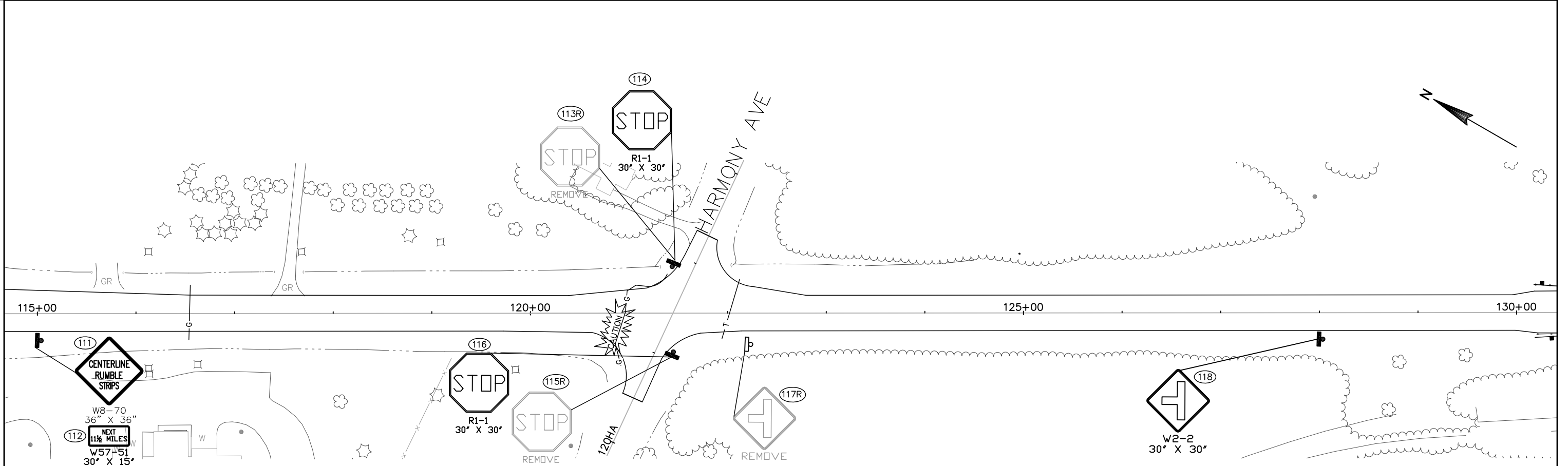
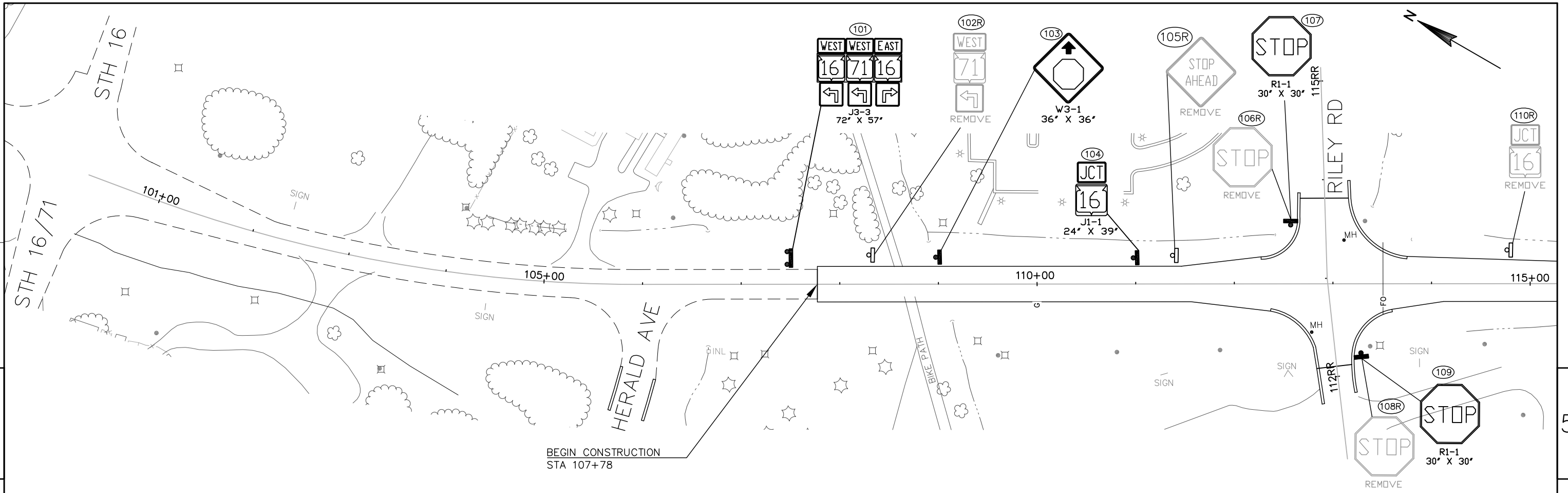
PROJECT NO:5510-00-60	HWY:STH 71	COUNTY:MONROE	SPLIT PLAN	SHEET	E
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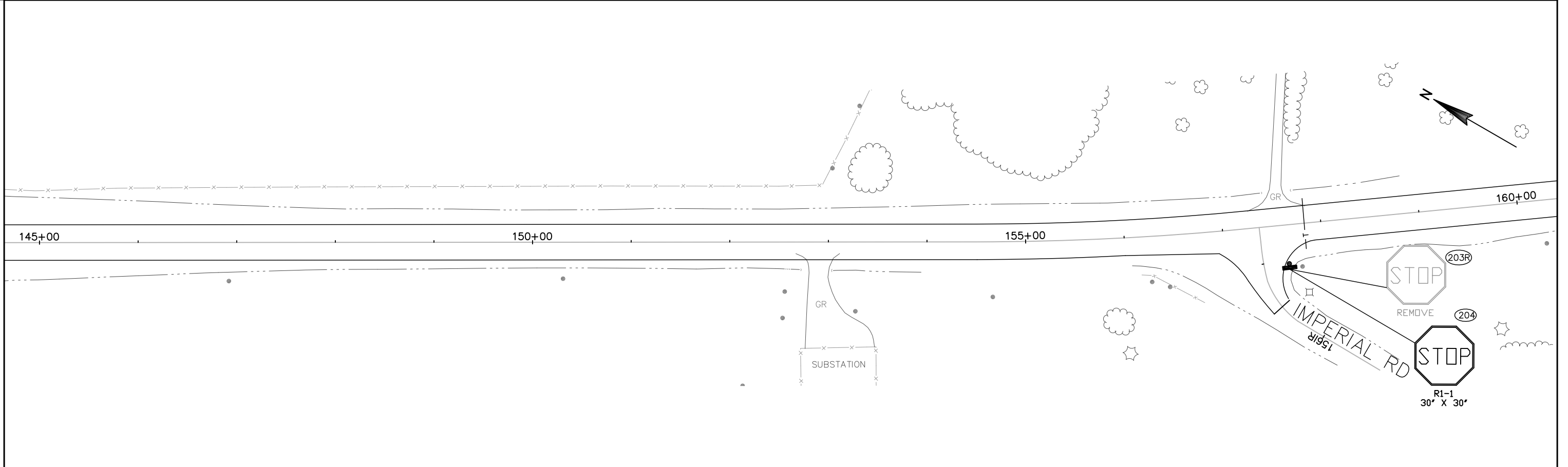
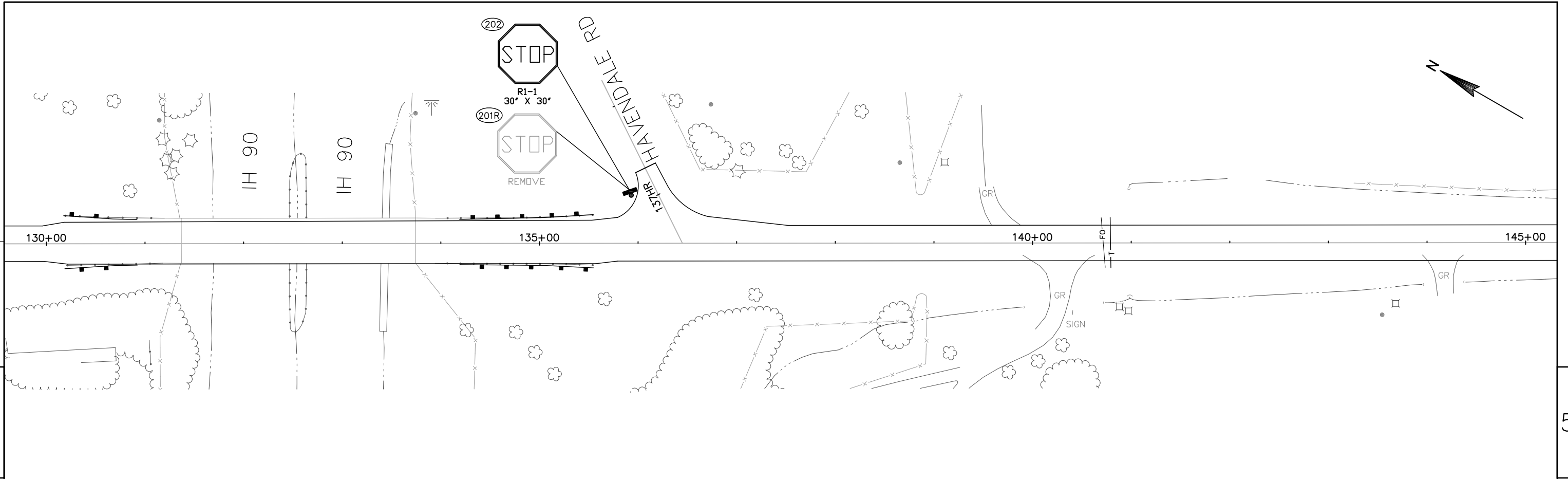


PROJECT NO: 5510-00-60	HWY: STH 71	COUNTY: MONROE	SPLIT PLAN	SHEET	E
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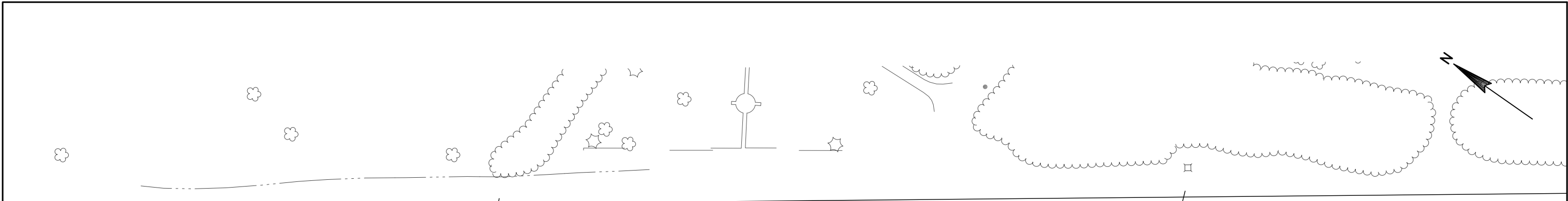




PROJECT NO: 5510-00-60	HWY: STH 71	COUNTY: MONROE	PERMANENT SIGNING	SHEET	E
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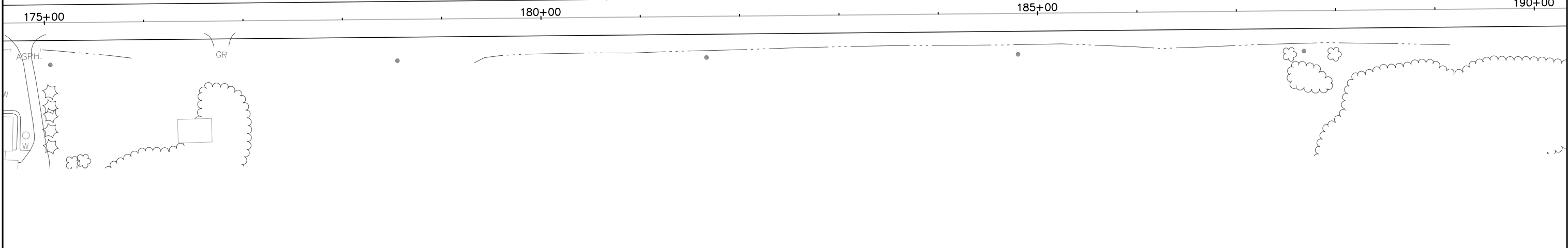
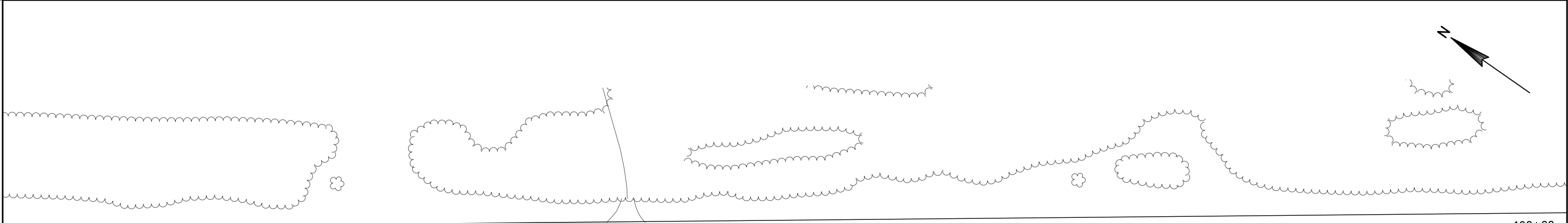
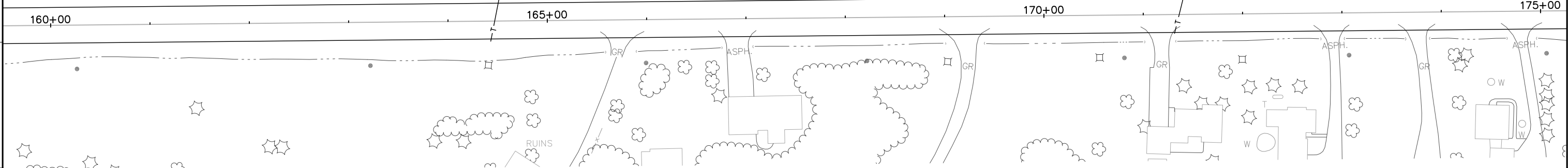


PROJECT NO: 5510-00-60	HWY: STH 71	COUNTY: MONROE	PERMANENT SIGNING	SHEET	E
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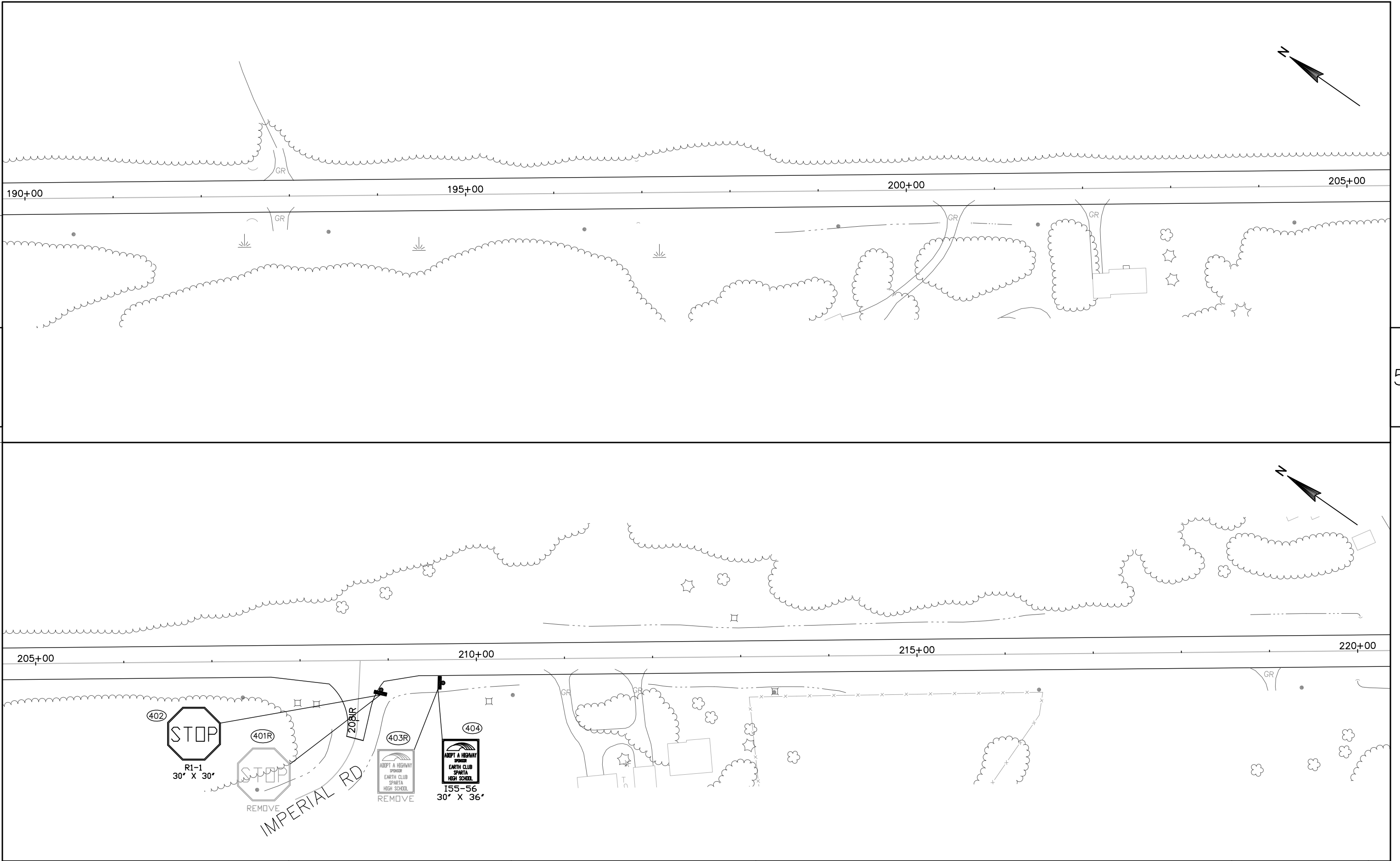


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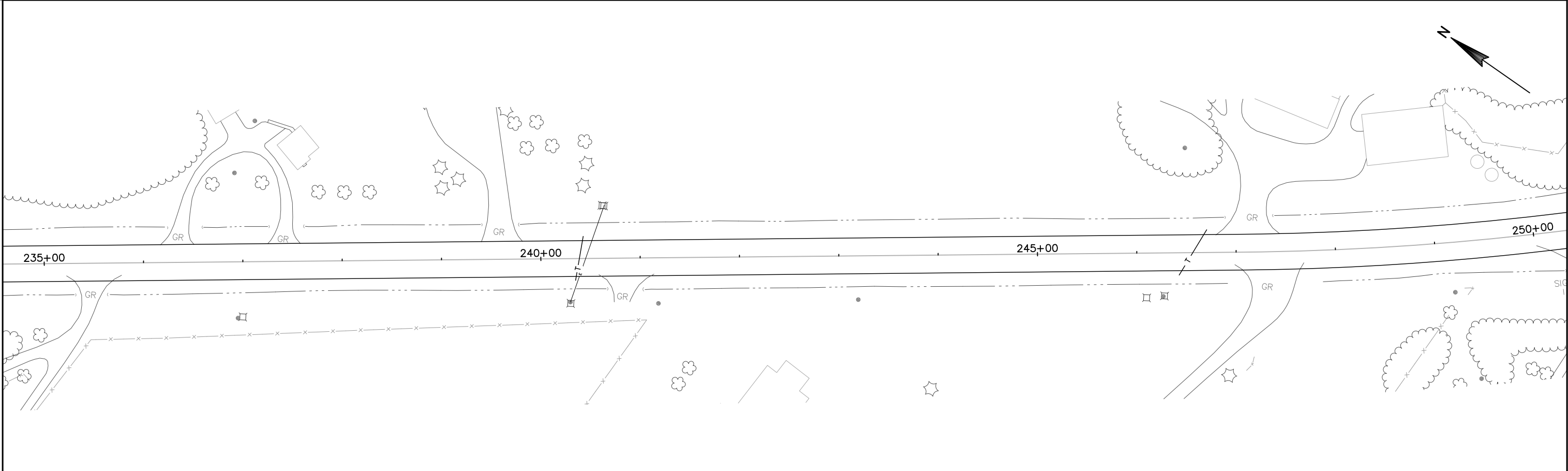
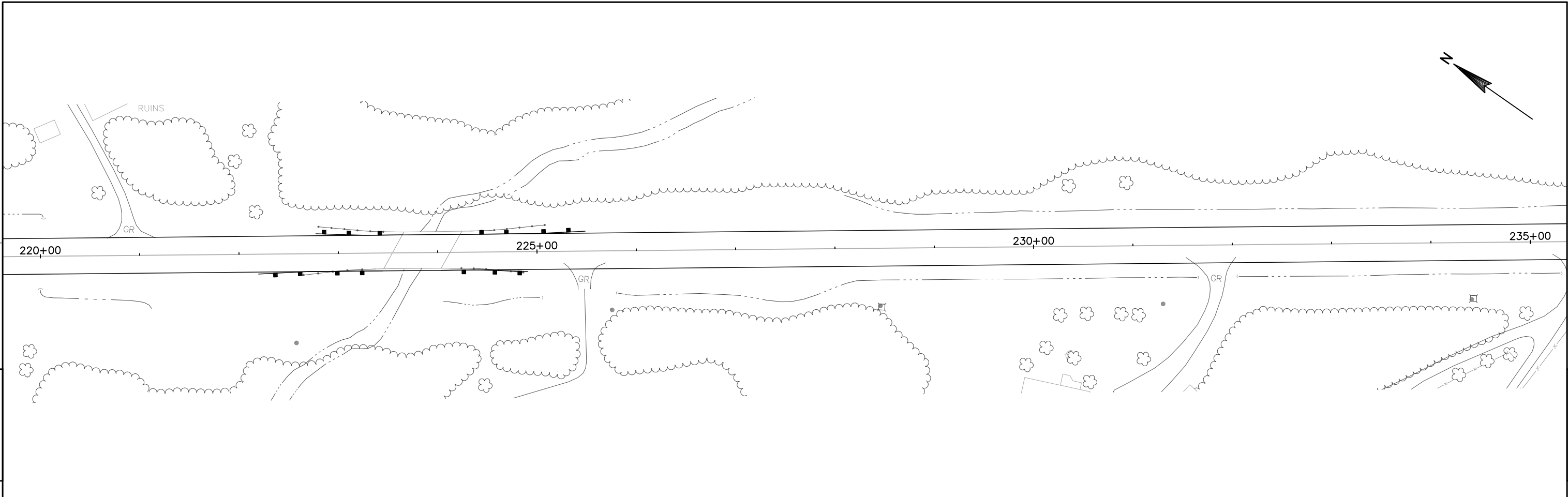
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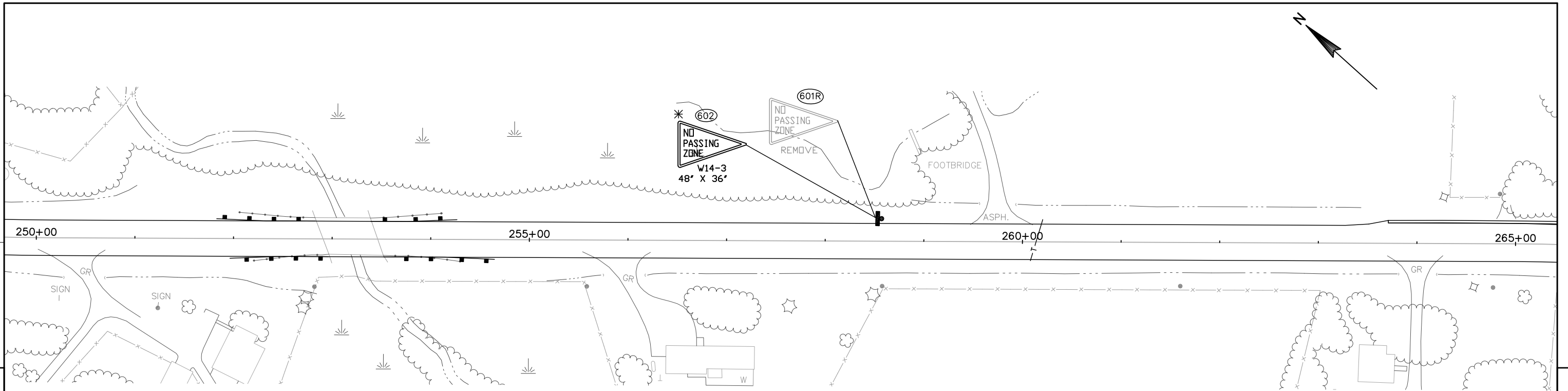
PROJECT NO: 5510-00-60	HWY: STH 71	COUNTY: MONROE	PERMANENT SIGNING	SHEET	E
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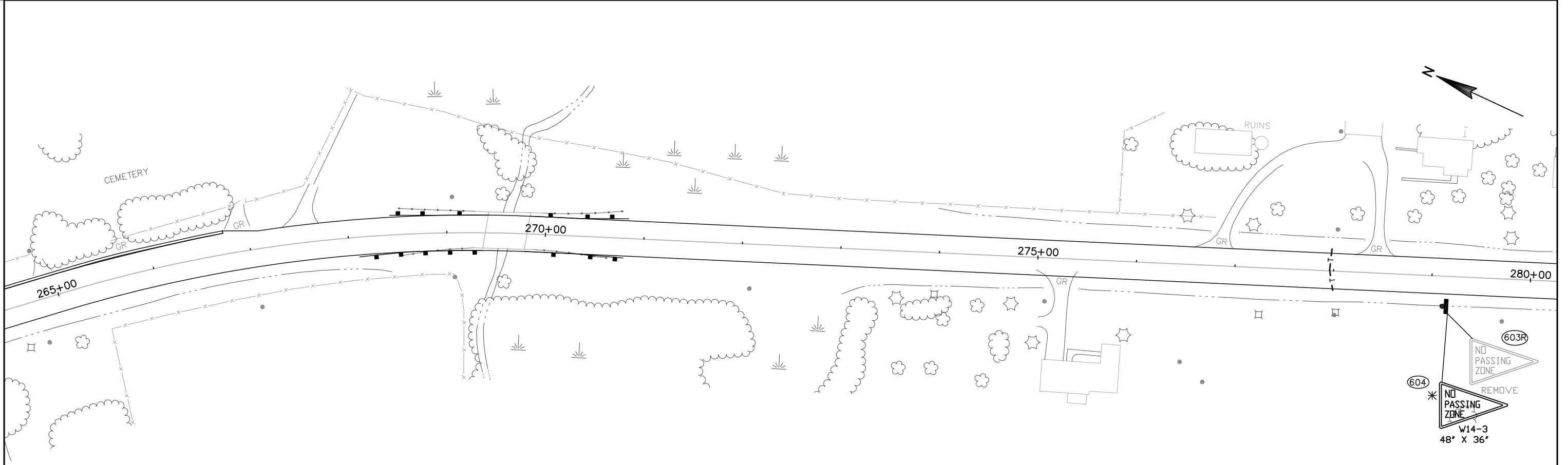
PROJECT NO: 5510-00-60	HWY: STH 71	COUNTY: MONROE	PERMANENT SIGNING	SHEET	E
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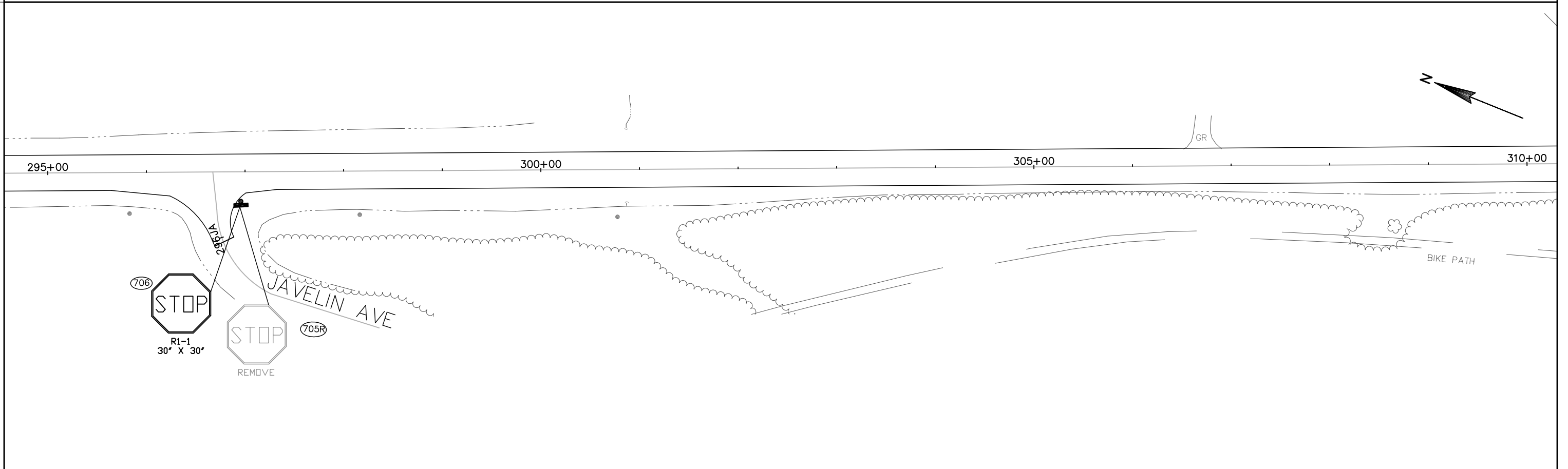
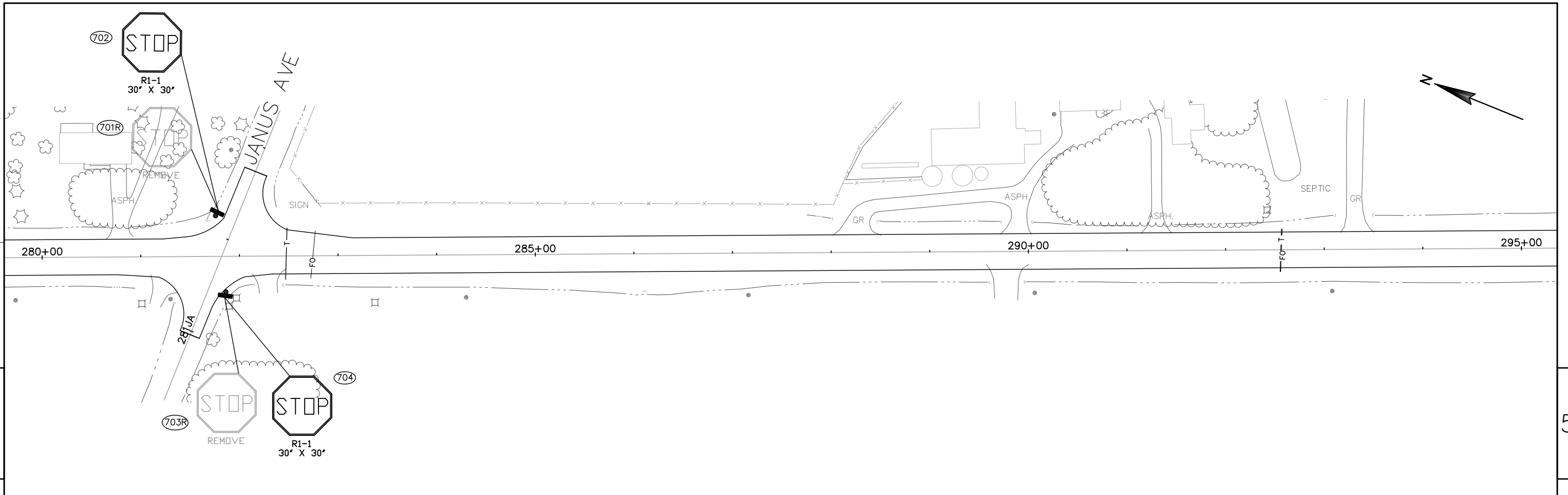
PROJECT NO: 5510-00-60	HWY: STH 71	COUNTY: MONROE	PERMANENT SIGNING	SHEET	E
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* FINAL LOCATIONS OF W14-3 "NO PASSING ZONE" SIGNS
TO BE DETERMINED AFTER LOCATING NO PASSING
ZONES IS COMPLETED.

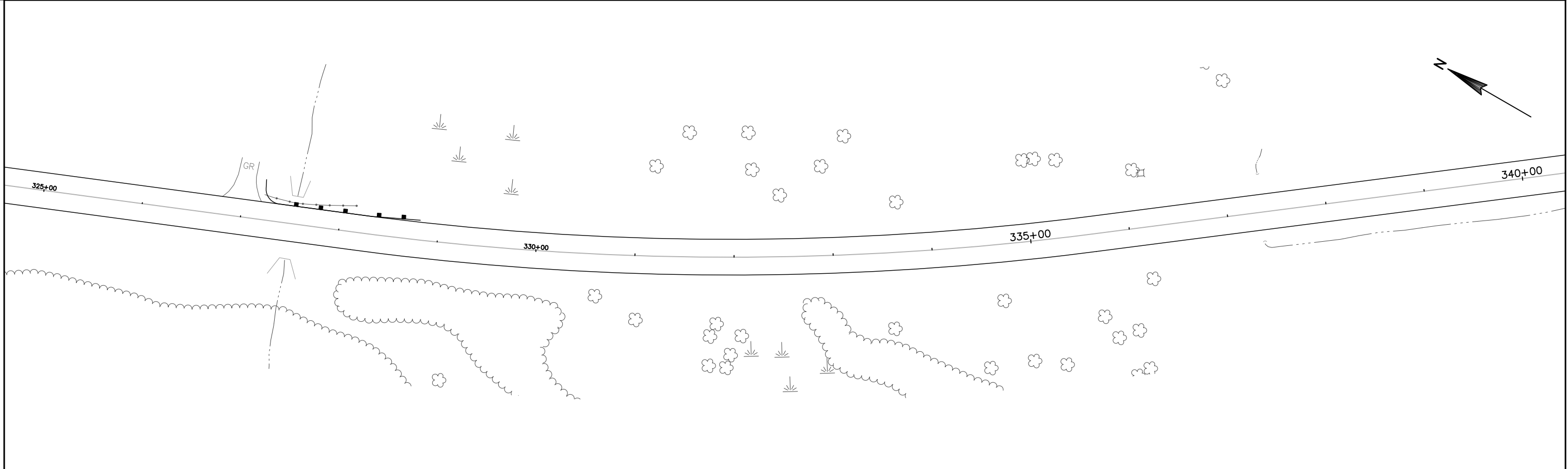
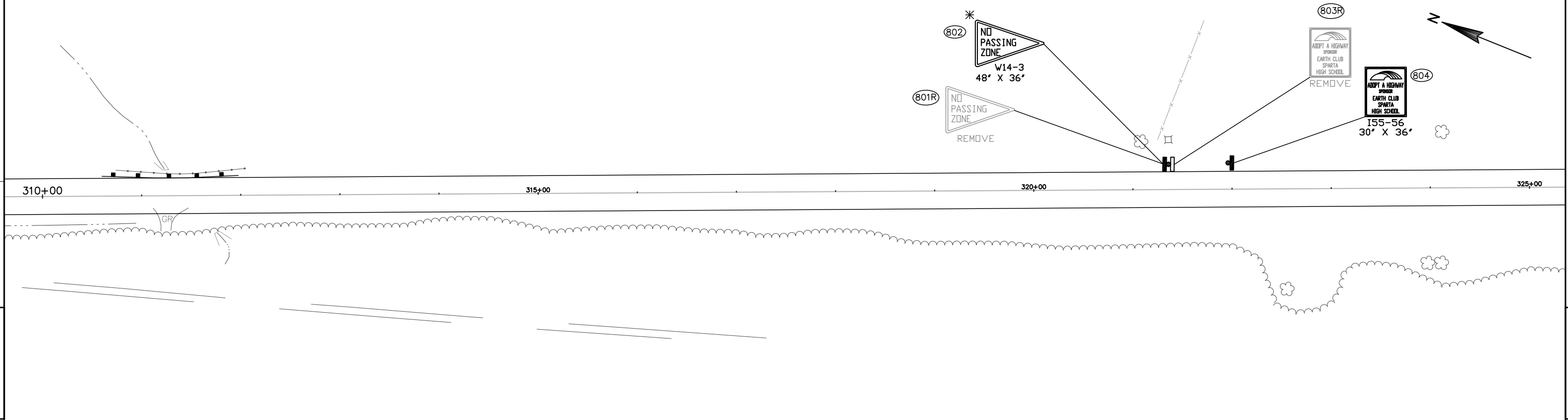


PROJECT NO: 5510-00-60	HWY: STH 71	COUNTY: MONROE	PERMANENT SIGNING	SHEET	E
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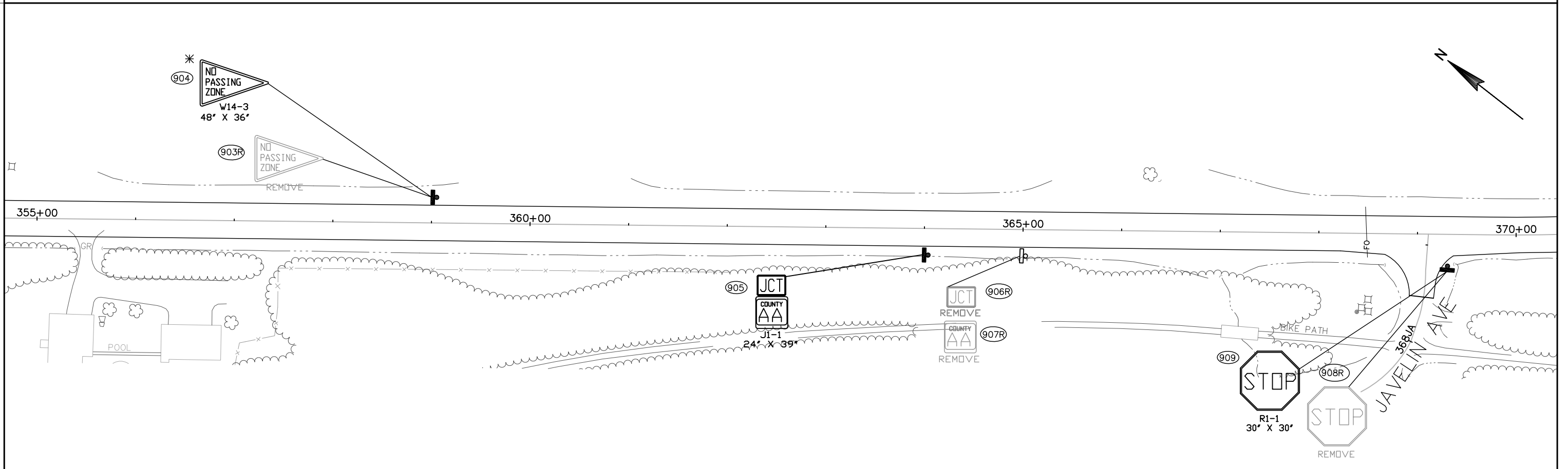
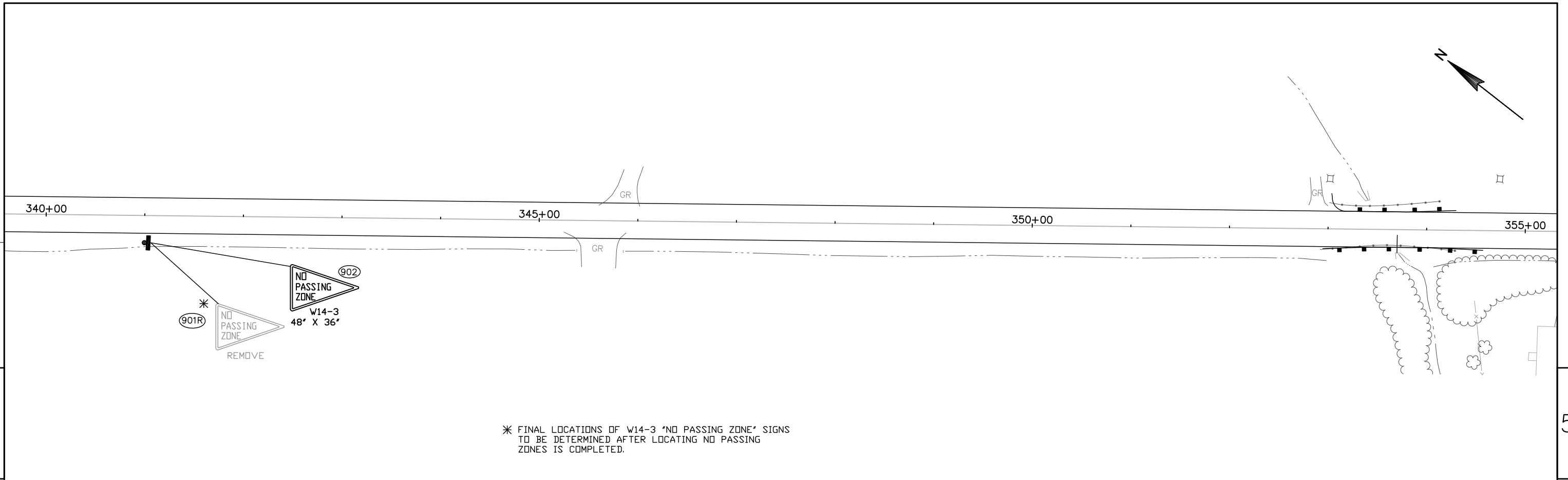


PROJECT NO: 5510-00-60	HWY: STH 71	COUNTY: MONROE	PERMANENT SIGNING	SHEET	E
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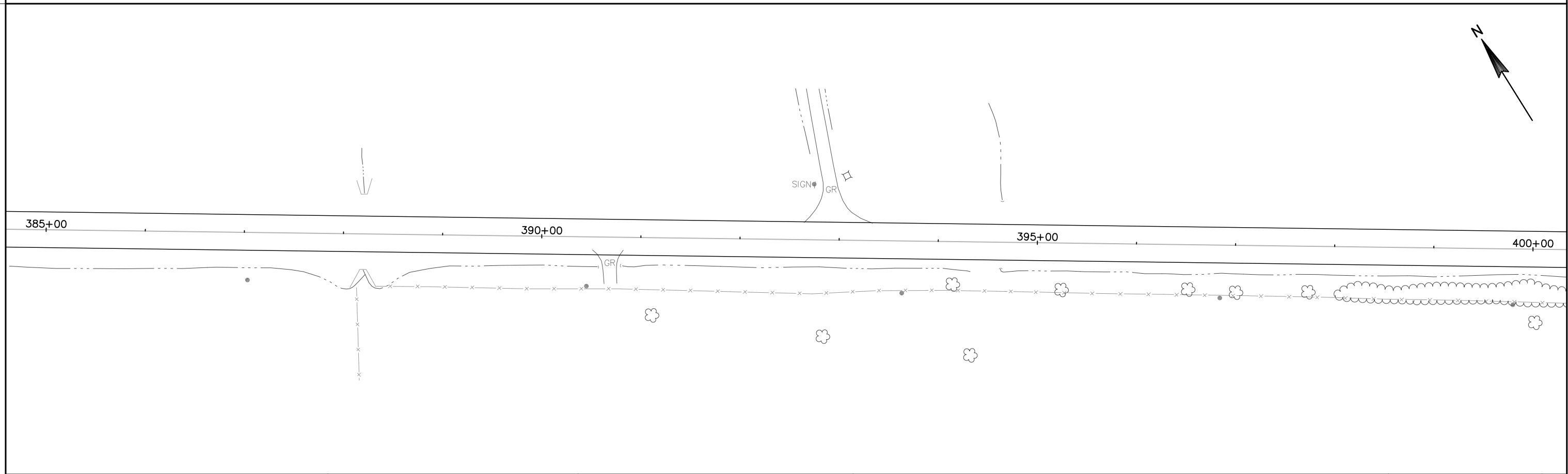
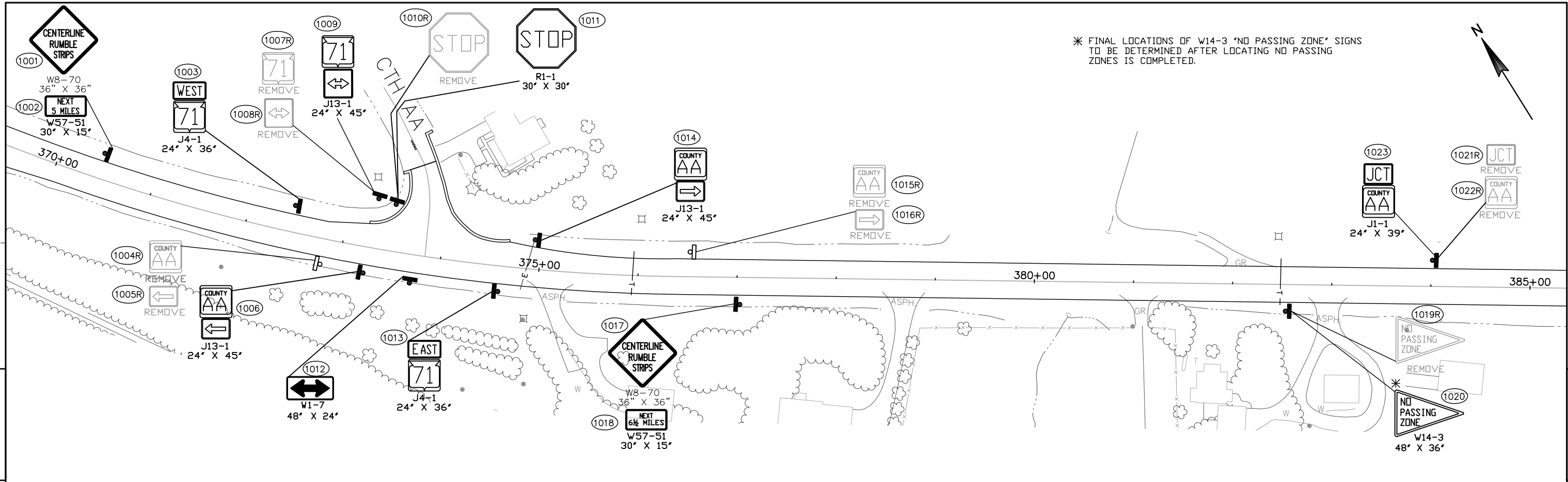
* FINAL LOCATIONS OF W14-3 'NO PASSING ZONE' SIGNS
TO BE DETERMINED AFTER LOCATING NO PASSING
ZONES IS COMPLETED.



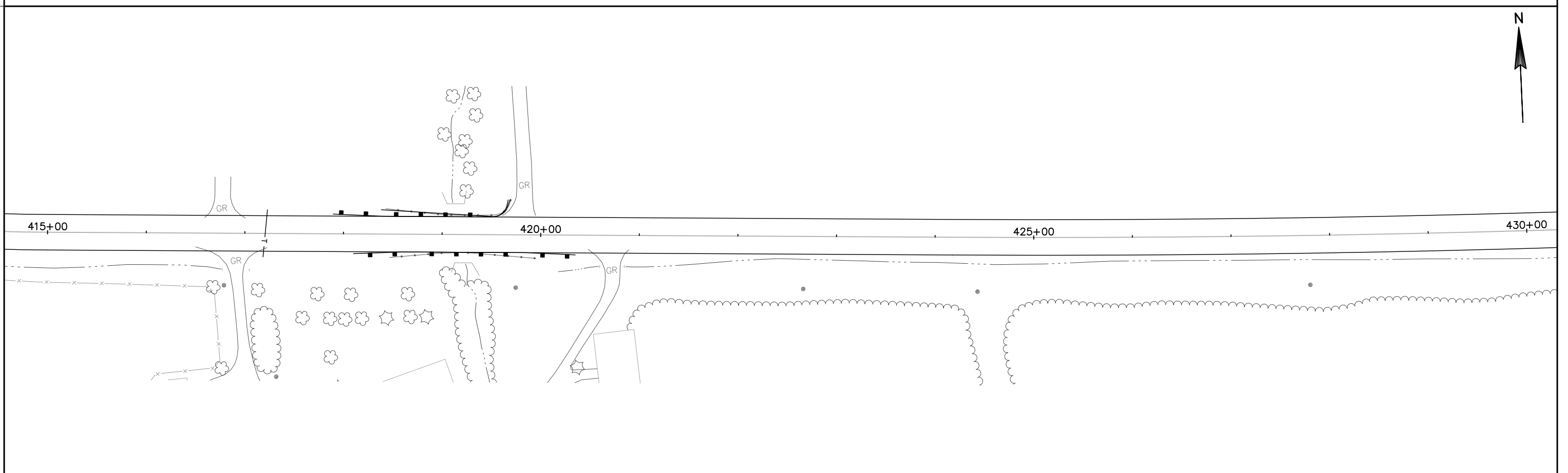
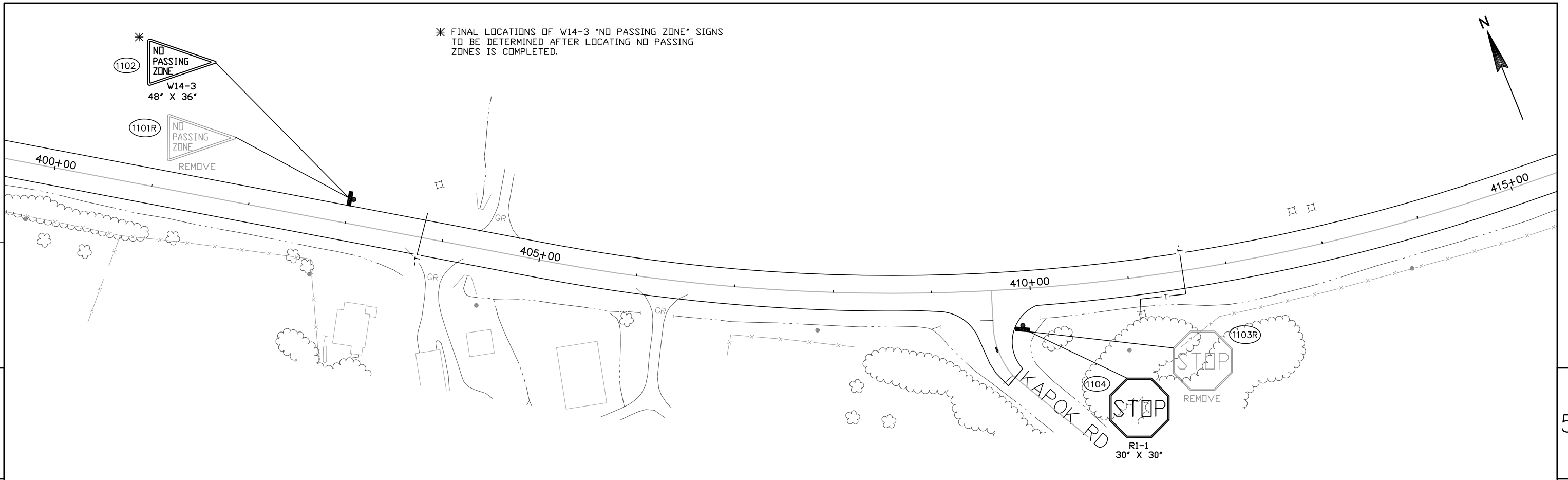
PROJECT NO: 5510-00-60	HWY: STH 71	COUNTY: MONROE	PERMANENT SIGNING	SHEET	E
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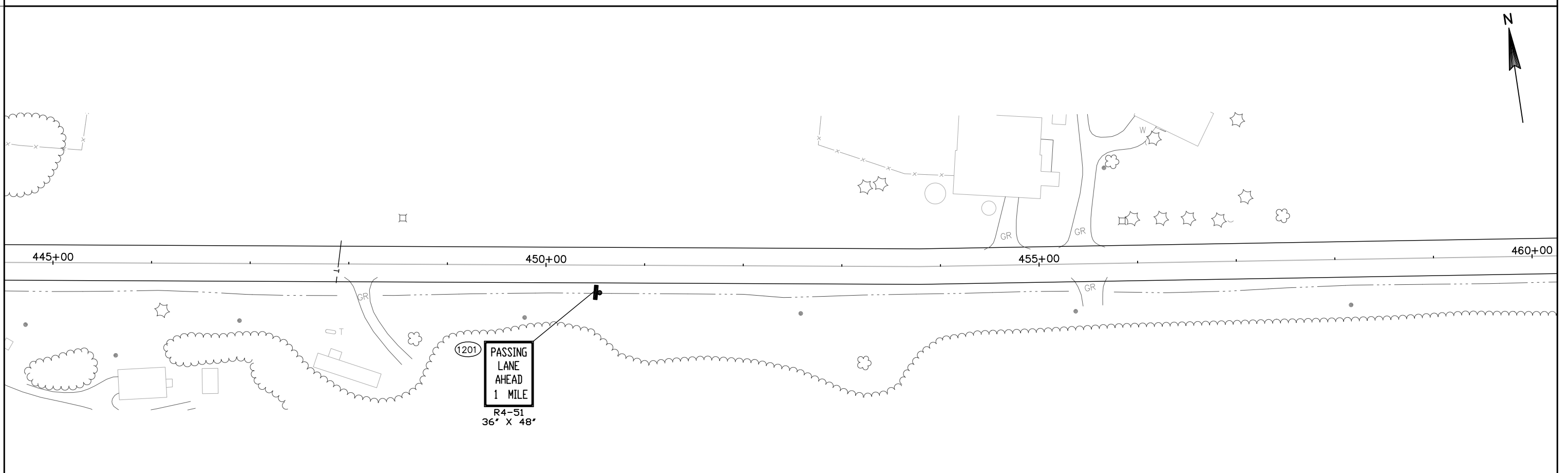
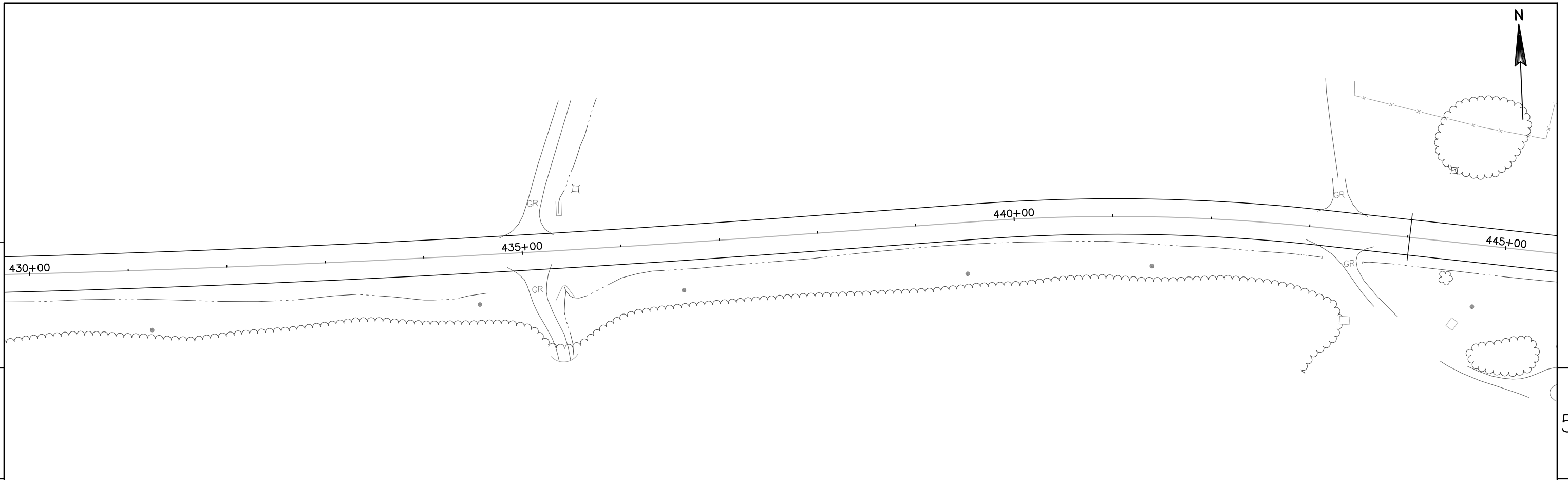
PROJECT NO: 5510-00-60	HWY: STH 71	COUNTY: MONROE	PERMANENT SIGNING	SHEET	E
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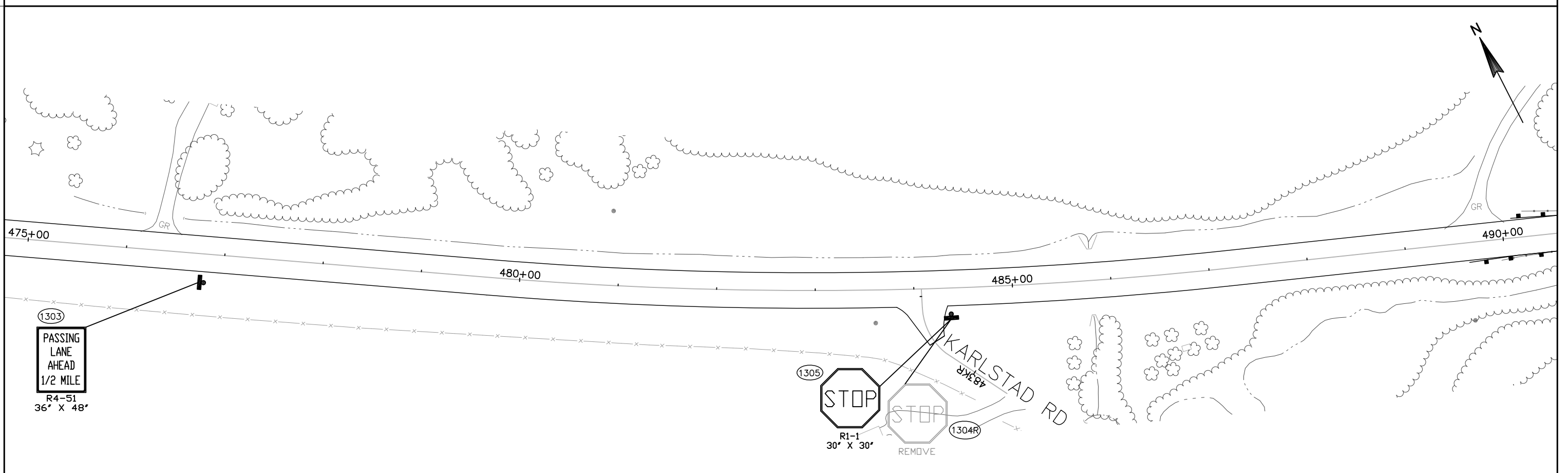
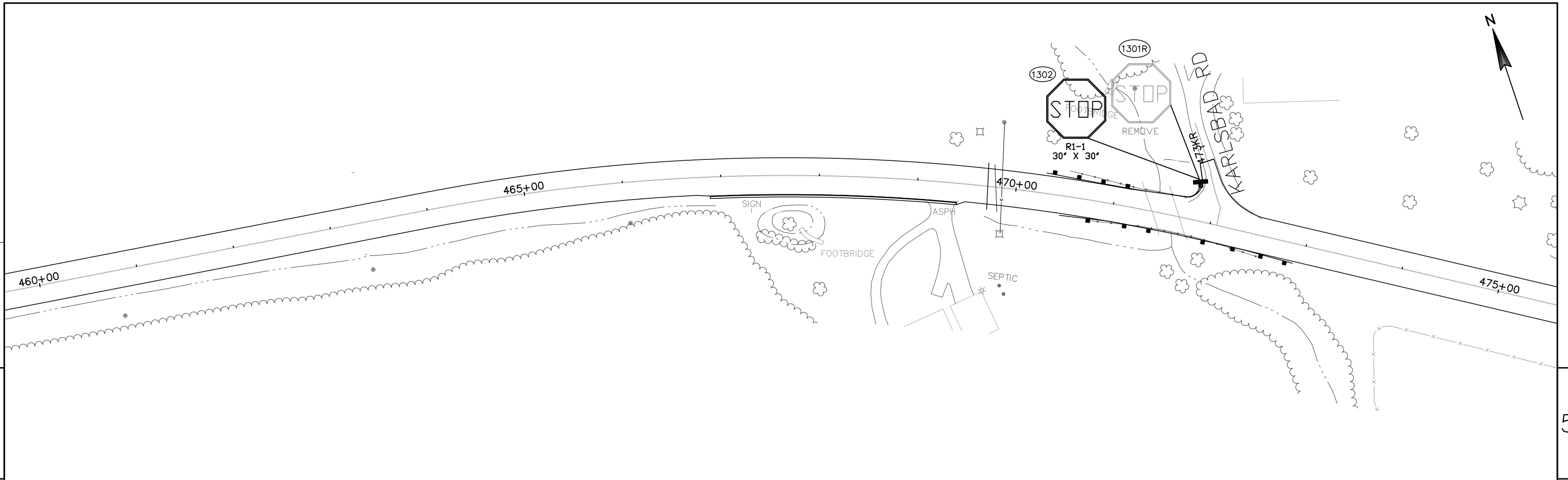
PROJECT NO: 5510-00-60	HWY: STH 71	COUNTY: MONROE	PERMANENT SIGNING	SHEET	E
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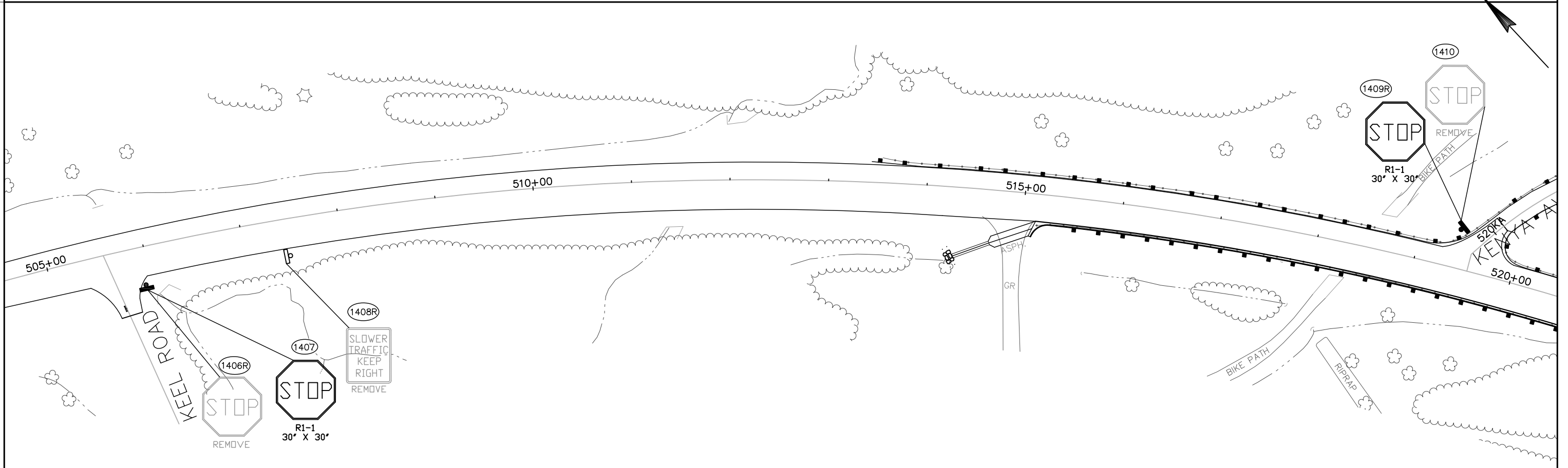
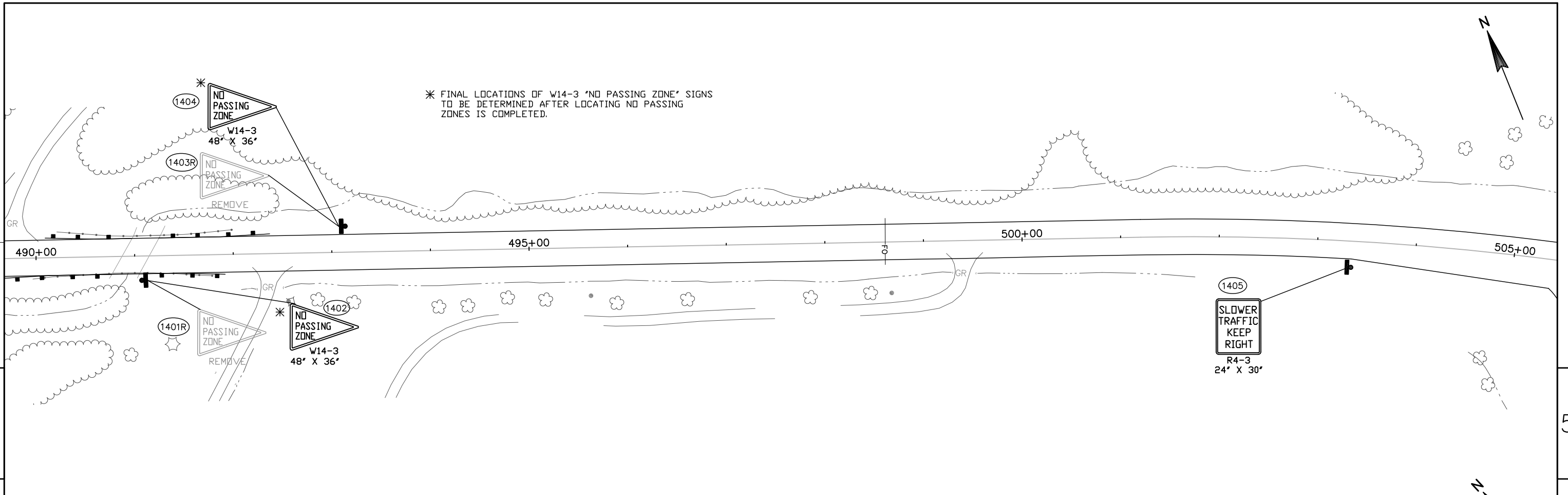


PROJECT NO: 5510-00-60	HWY: STH 71	COUNTY: MONROE	PERMANENT SIGNING	SHEET	E
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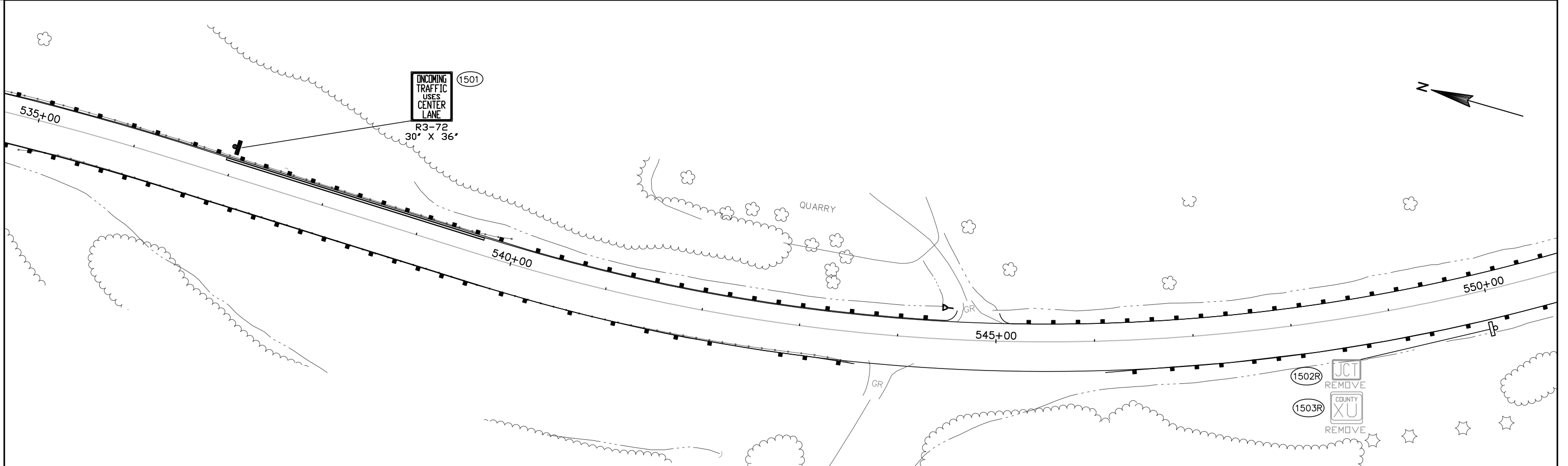
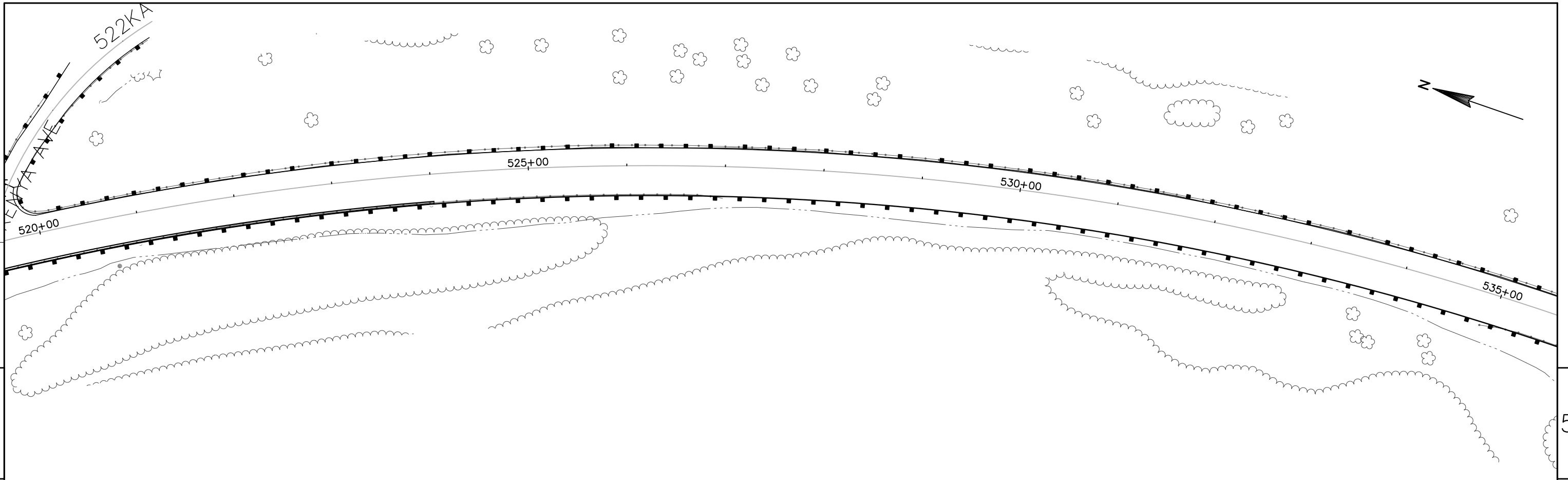


PROJECT NO: 5510-00-60	HWY: STH 71	COUNTY: MONROE	PERMANENT SIGNING	SHEET	E
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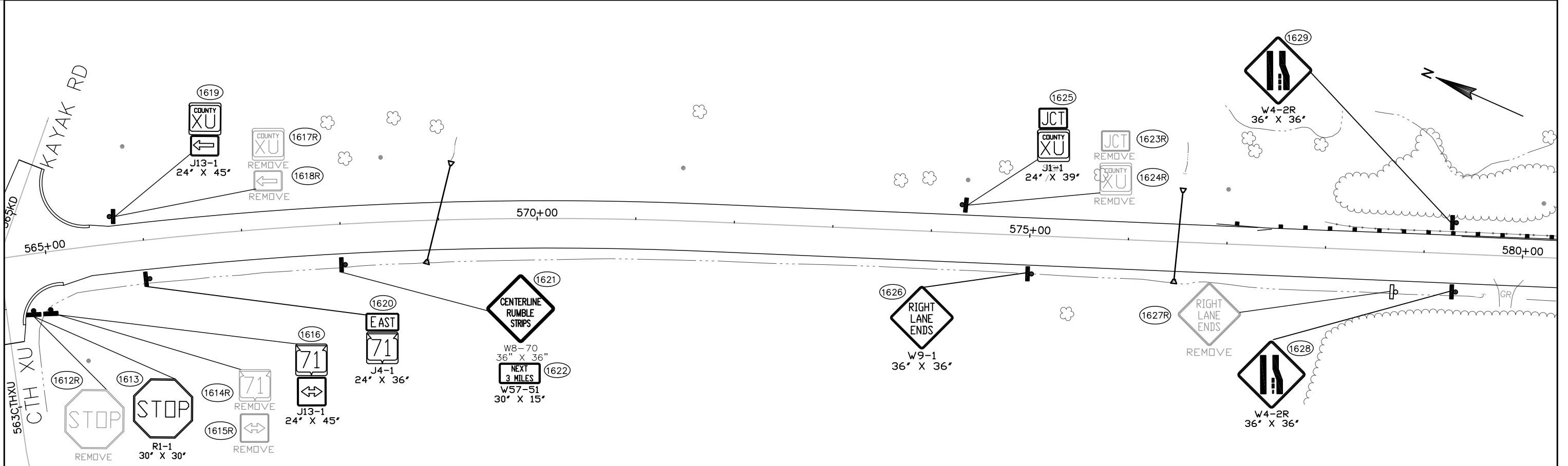
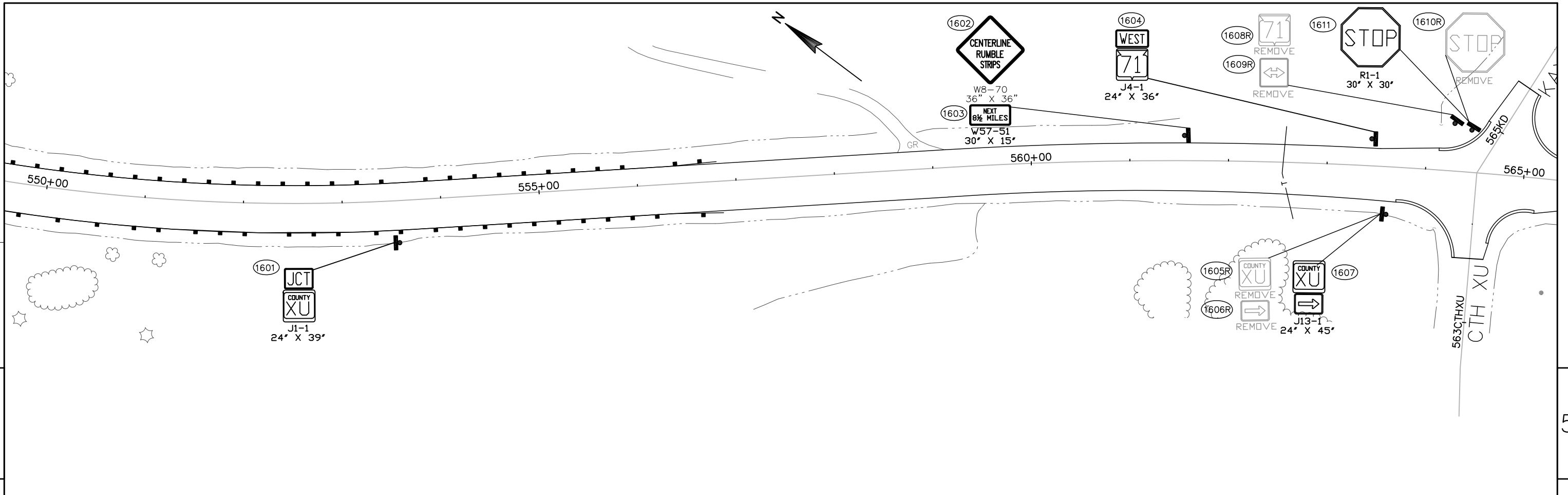




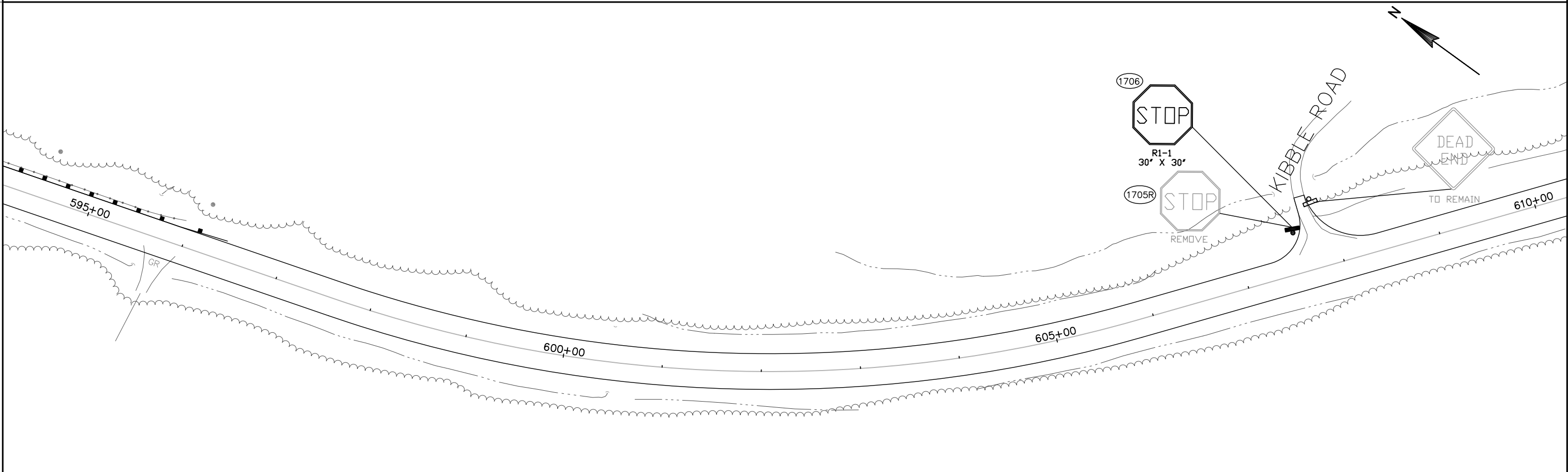
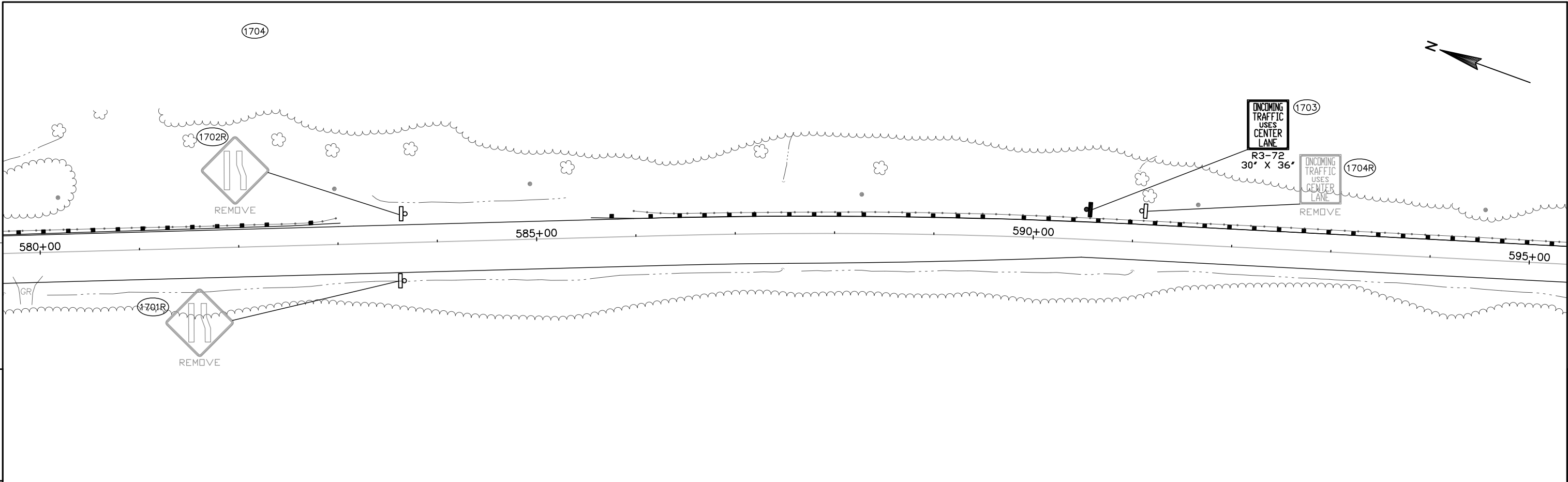
PROJECT NO: 5510-00-60	HWY: STH 71	COUNTY: MONROE	PERMANENT SIGNING	SHEET	E
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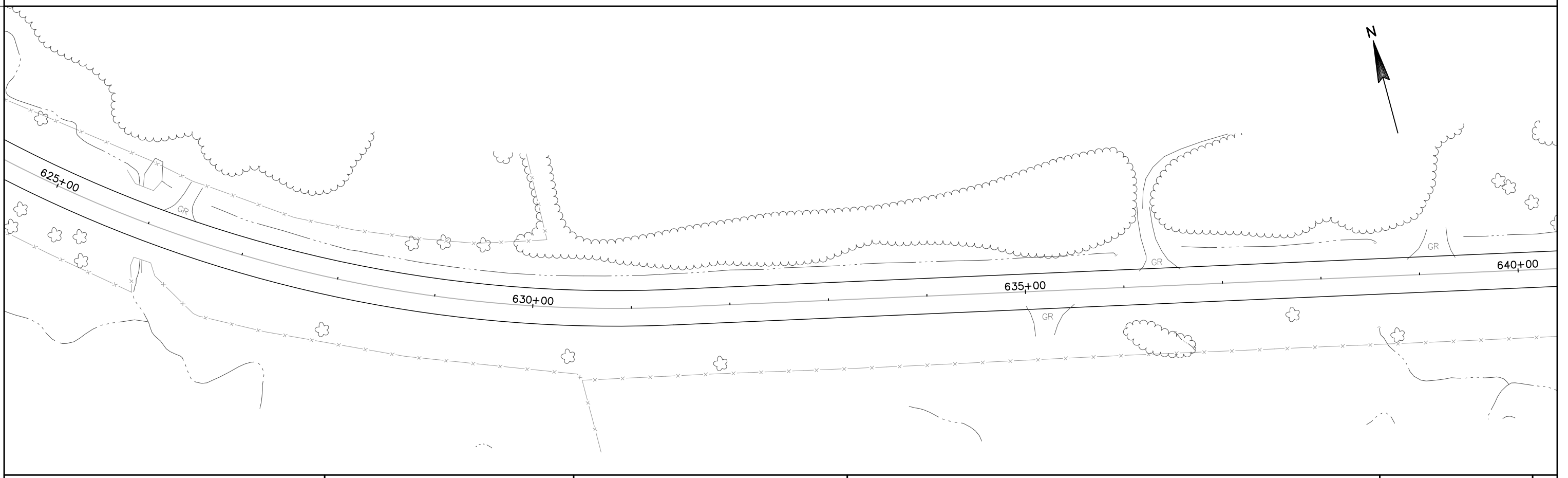
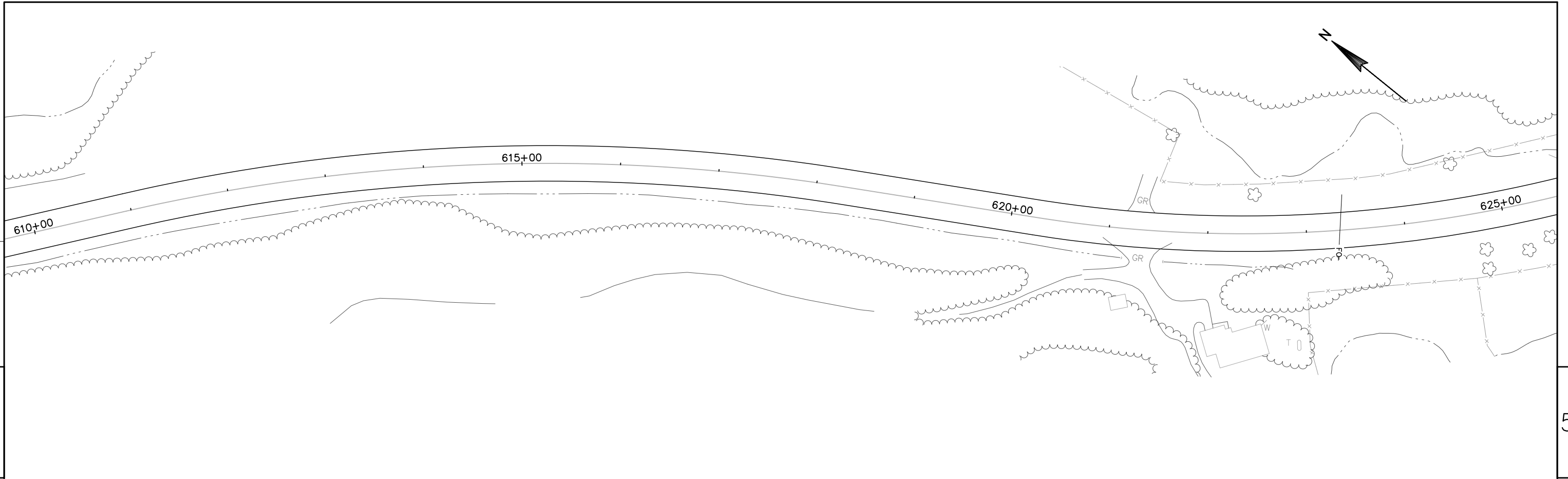
PROJECT NO: 5510-00-60	HWY: STH 71	COUNTY: MONROE	PERMANENT SIGNING	SHEET	E
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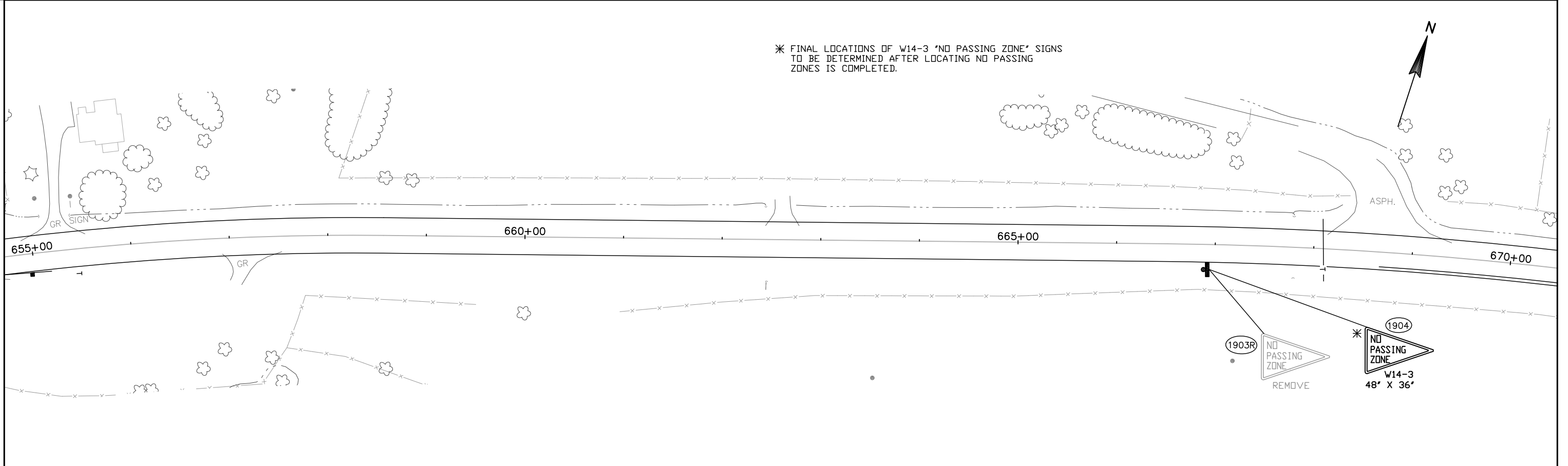
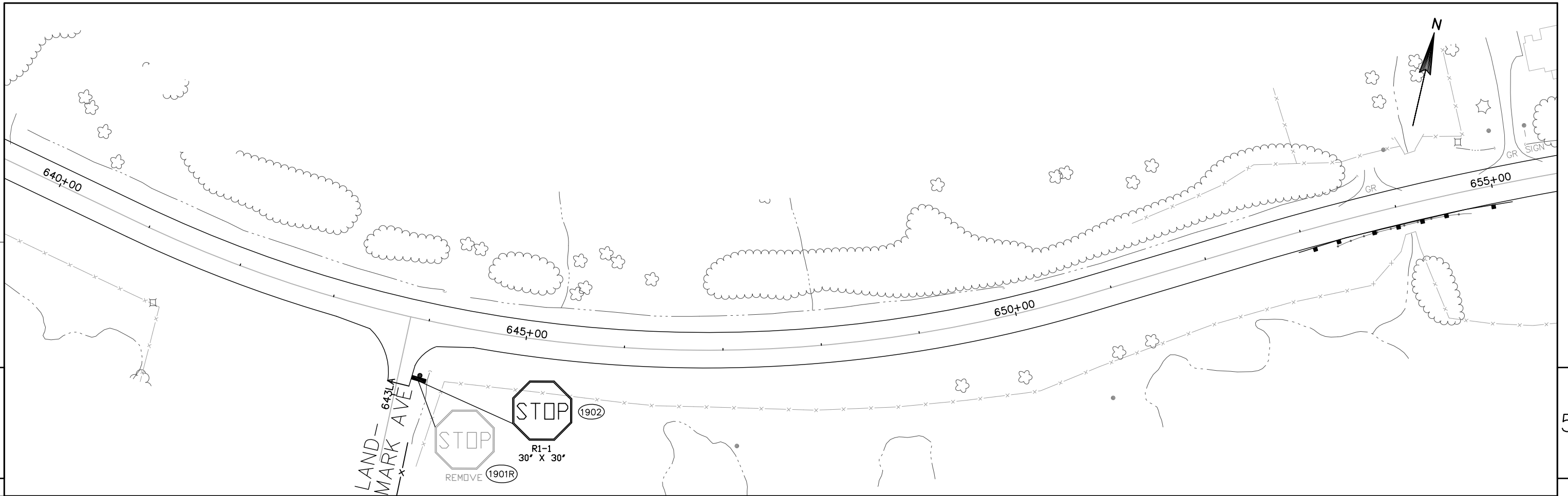
PROJECT NO: 5510-00-60	HWY: STH 71	COUNTY: MONROE	PERMANENT SIGNING	SHEET	E
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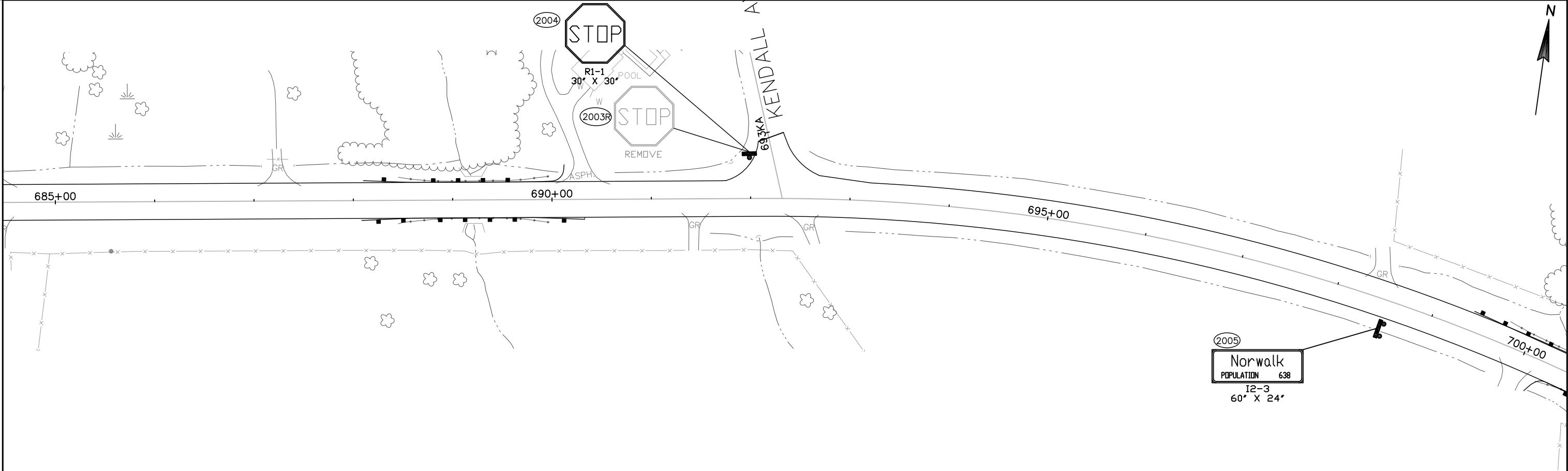
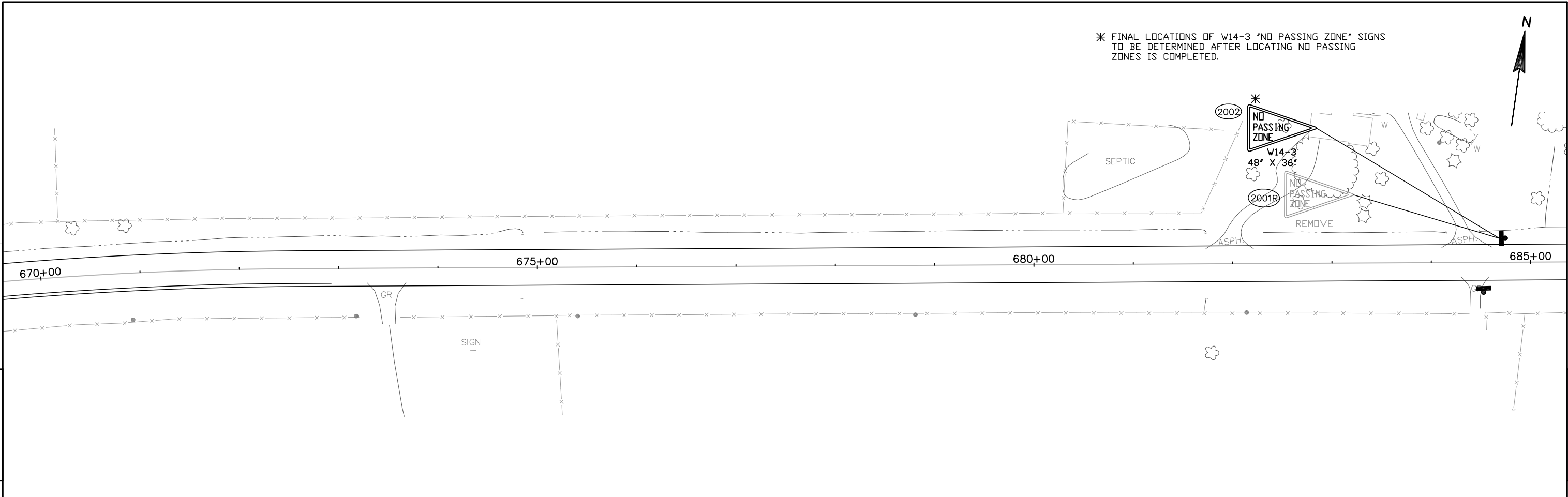
PROJECT NO: 5510-00-60	HWY: STH 71	COUNTY: MONROE	PERMANENT SIGNING	SHEET	E
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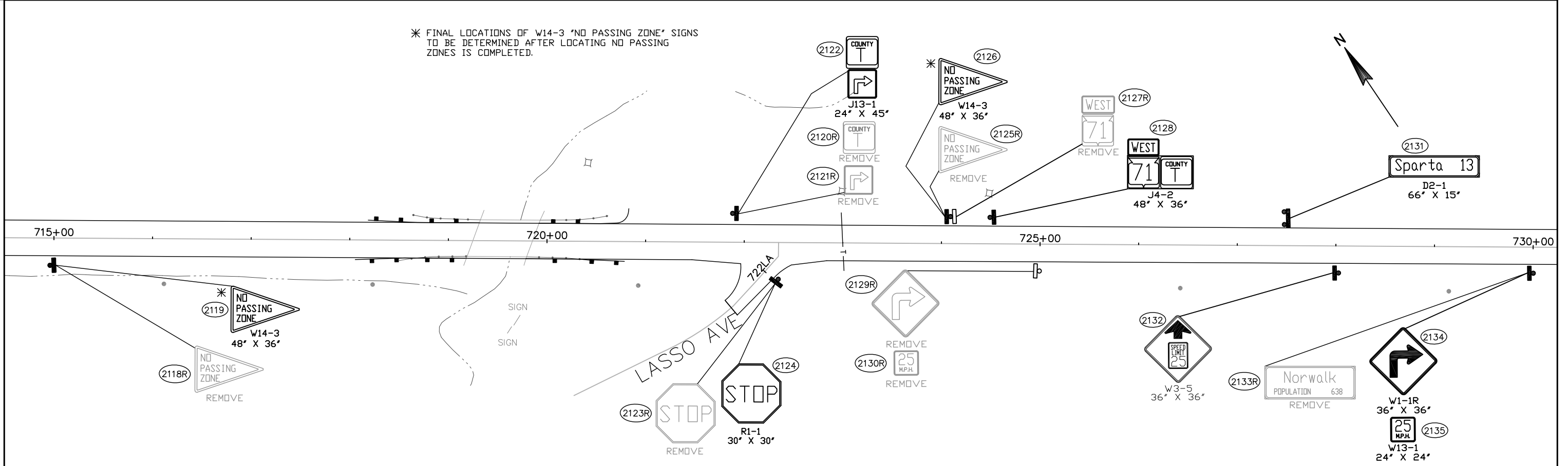
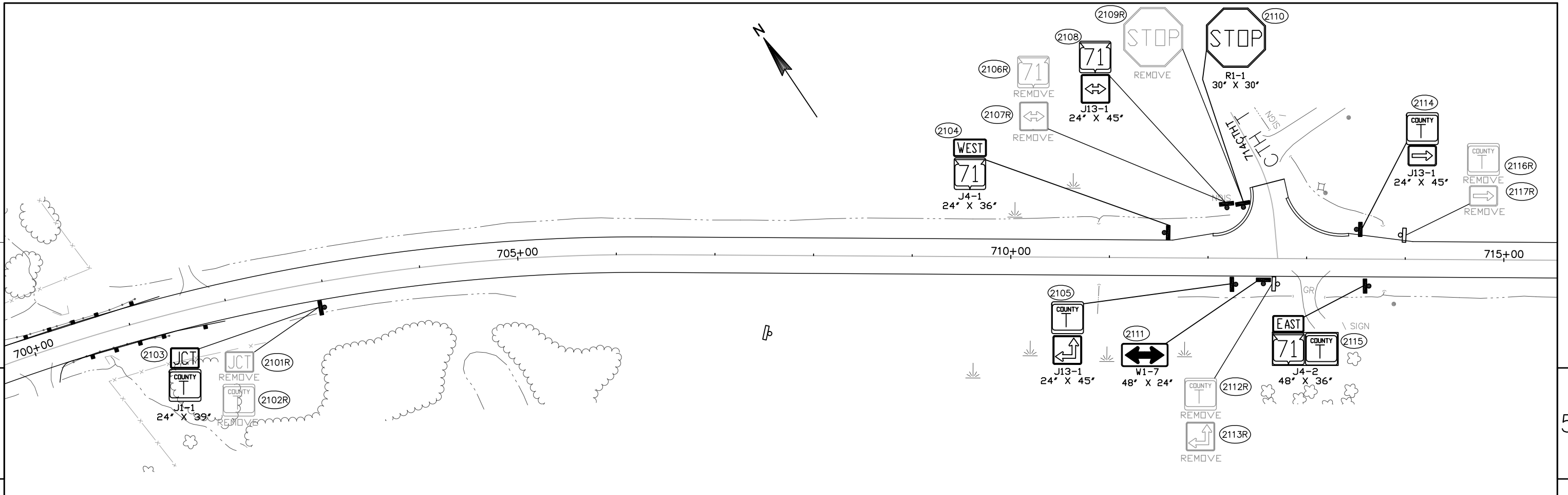
PROJECT NO: 5510-00-60	HWY: STH 71	COUNTY: MONROE	PERMANENT SIGNING	SHEET	E
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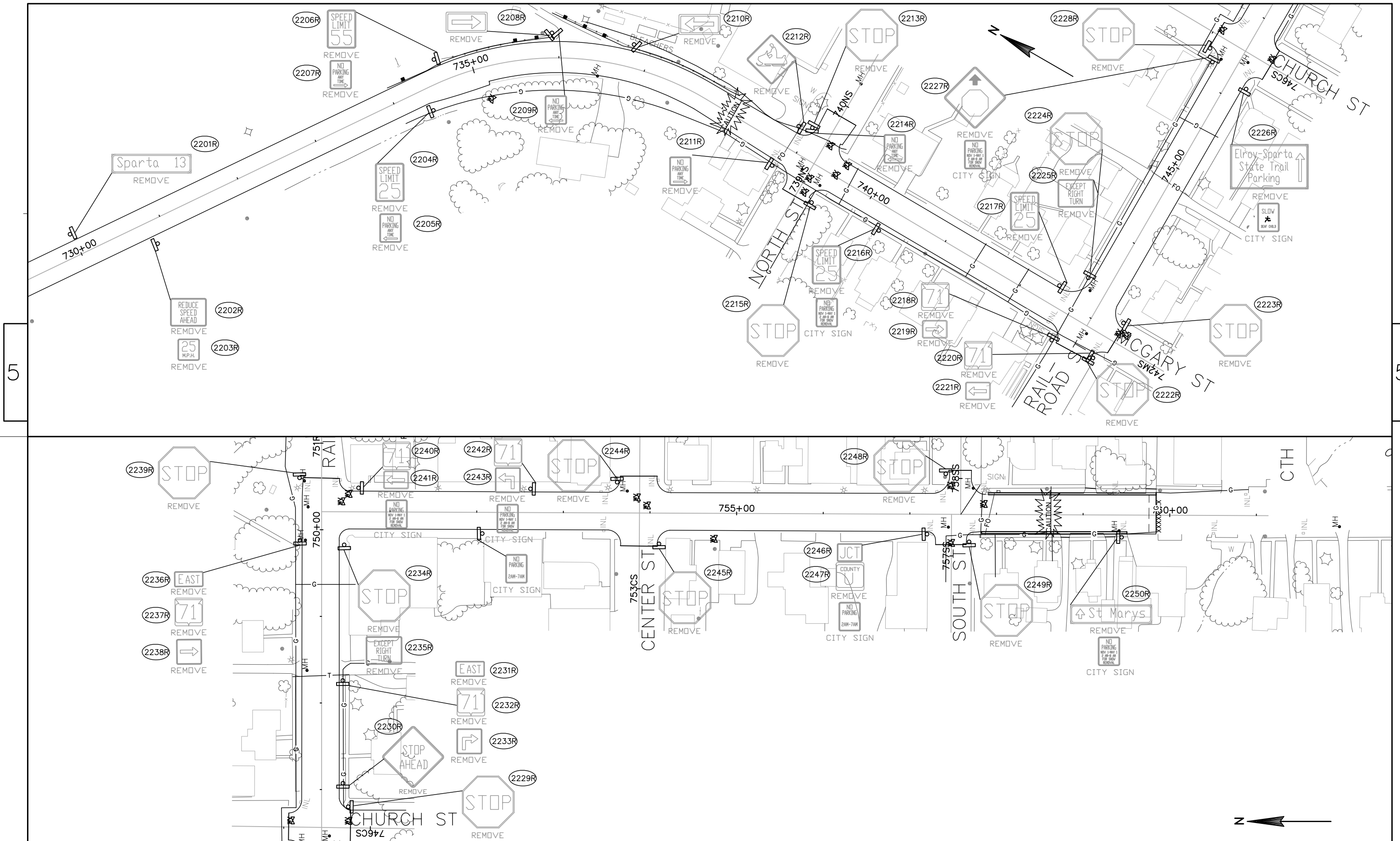
PROJECT NO: 5510-00-60	HWY: STH 71	COUNTY: MONROE	PERMANENT SIGNING	SHEET	E
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PROJECT NO: 5510-00-60	HWY: STH 71	COUNTY: MONROE	PERMANENT SIGNING	SHEET	E
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PROJECT NO: 5510-00-60	HWY: STH 71	COUNTY: MONROE	PERMANENT SIGNING	SHEET	E
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PROJECT NO: 5510-00-60

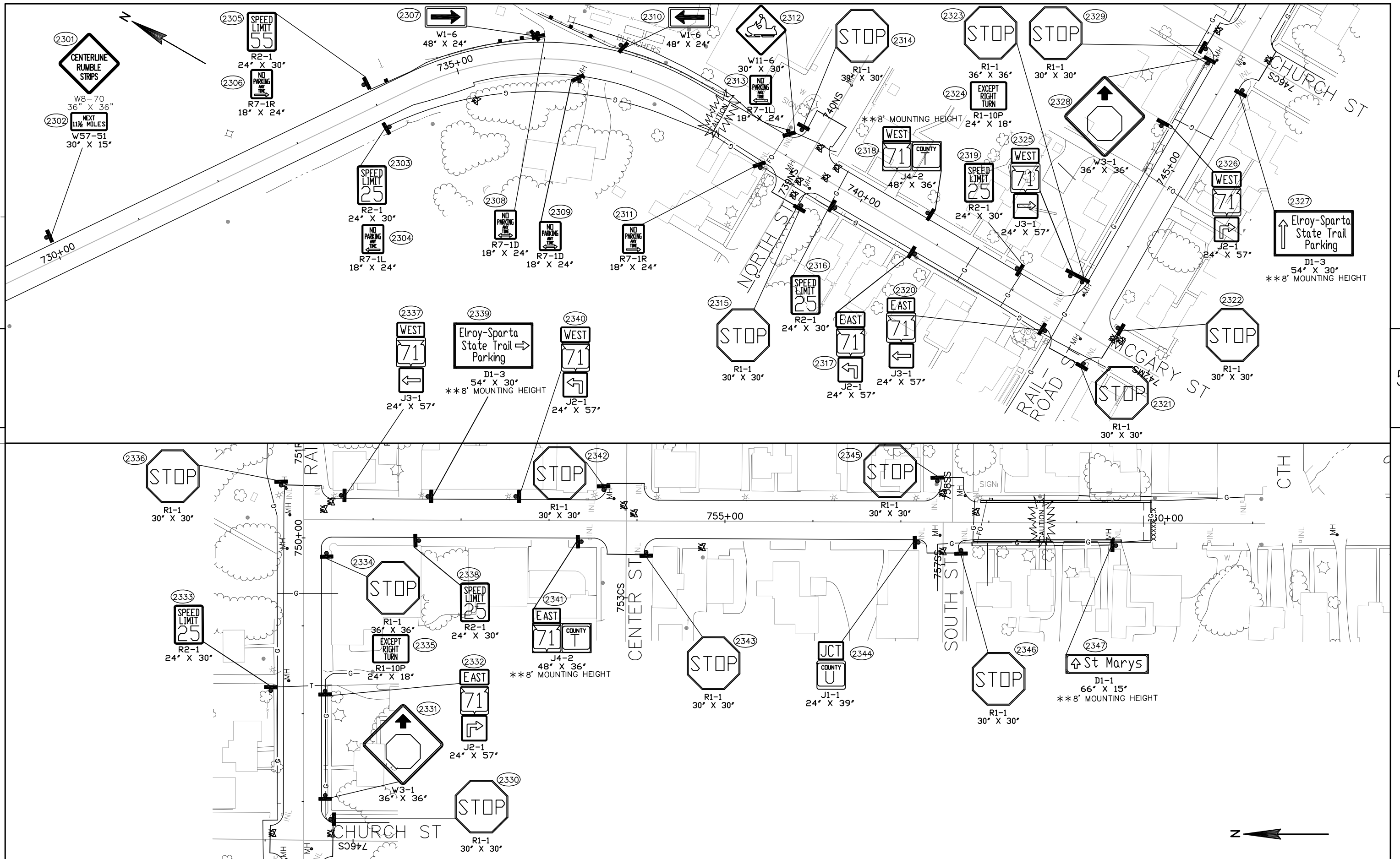
HWY: STH 71

COUNTY: MONROE

PERMANENT SIGNING

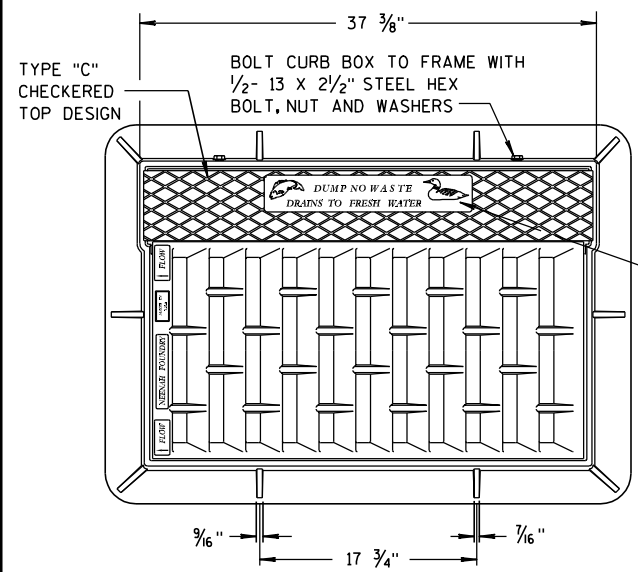
SHEET

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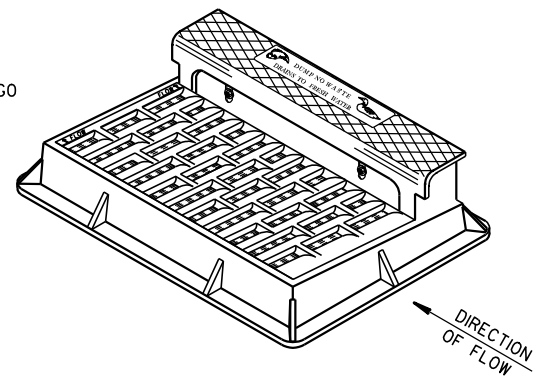


Standard Detail Drawing List

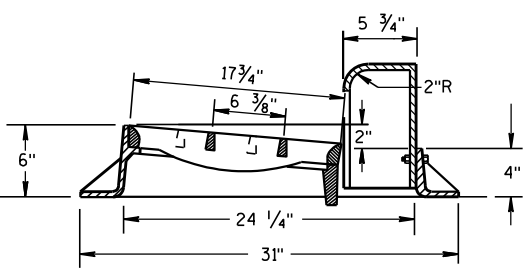
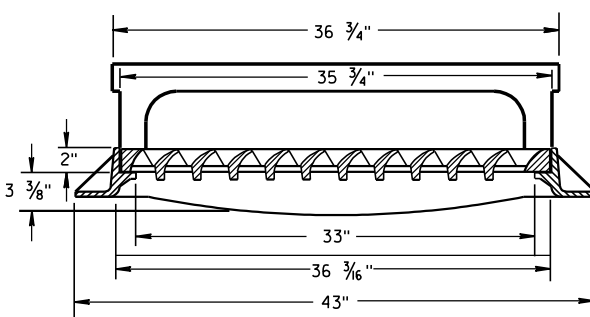
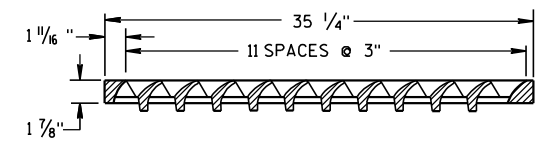
08A05-18A	INLET COVERS TYPE A, H, A-S, & H-S
08A05-18D	INLET COVER, TYPE BW, Z MANHOLE COVERS, TYPE K, J, J-S, L & M
08B09-01	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER
08C07-01	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08D01-17	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08D15-04A	EDGEDRAIN OUTLET AND OUTFALL MARKERS
08E09-06	SILT FENCE
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
08F06-04	REINFORCED CONCRETE APRON ENDWALL FOR PIPE UNDERDRAIN
08F07-04	STEEL APRON ENDWALLS FOR CULVERT PIPE AND PIPE ARCH SLOPED SIDE FRAINS
09A01-12A	AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND D AND TEE INTERSECTION BYPASS LANE
13A11-01A	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
13A11-01B	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
14B42-02A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-02B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-02C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-01A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-01B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-01C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-03A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03G	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B47-01A	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-01B	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-01C	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
15A03-01	MARKER POSTS, FLEXIBLE, FOR CULVERT END
15C04-01	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C08-15A	PAVEMENT MARKING (MAINLINE)
15C08-15B	PAVEMENT MARKING (INTERSECTIONS)
15C08-15C	PAVEMENT MARKING (CLIMBING LANE & PASSING LANE)
15C08-15D	PAVEMENT MARKING (CLIMBING LANE & PASSING LANE)
15C08-15F	PAVEMENT MARKING (ISLANDS, STOP LINE & CROSS WALK)
15C12-03	TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)
15C19-01A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY



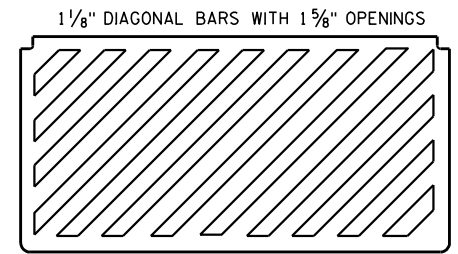
NOTE:
GRATE IS REVERSIBLE.



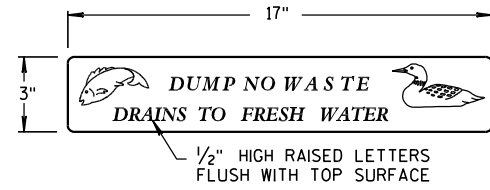
NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"



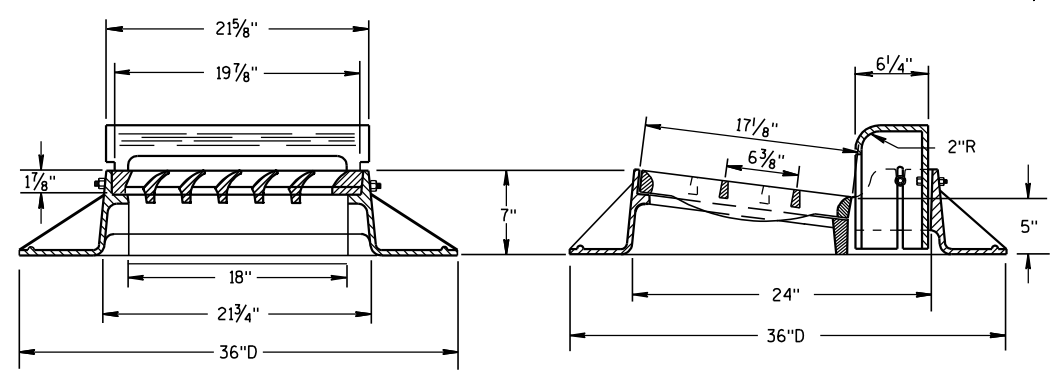
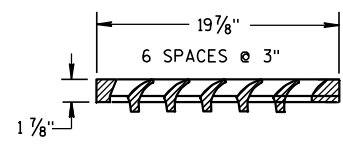
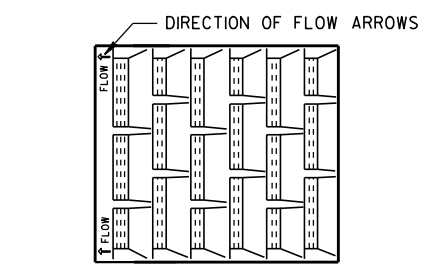
TYPE "H"
(APPROXIMATE WEIGHT 441 LBS.)
FRAME..... 181 LBS.
GRATE..... 146 LBS.
CURB BOX..... 114 LBS.



SPECIAL GRATE FOR TYPE "H" COVER
(MEASURES 35 1/4" X 17 3/4" X 2")
(APPROXIMATE WEIGHT 159 LBS.)
GRATE..... 159 LBS.
(NOTED AS TYPE H-S ON DRAINAGE TABLE)



LOGO DETAIL



TYPE "A"
(APPROXIMATE WEIGHT 340 LBS.)
FRAME..... 185 LBS.
GRATE..... 71 LBS.
CURB BOX..... 84 LBS.

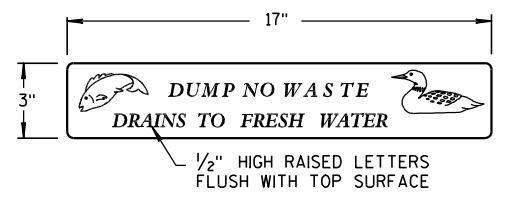
GENERAL NOTES

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

DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

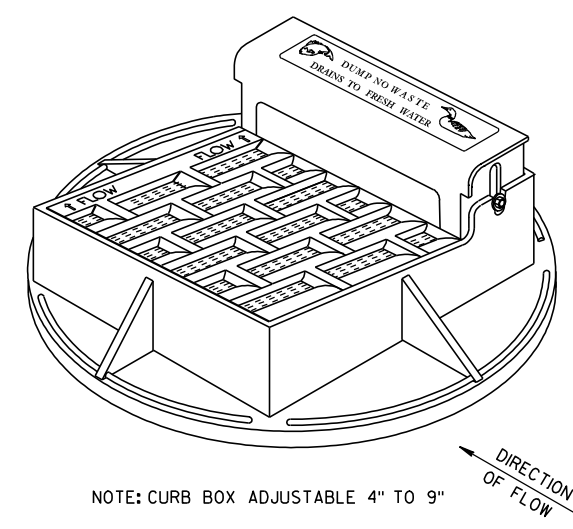
ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

THE ACTUAL WEIGHT OF COVERS MAY VARY WITHIN 5 PERCENT, PLUS OR MINUS, OF THE APPROXIMATE WEIGHT.

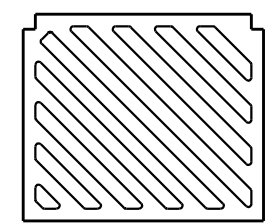


LOGO DETAIL

NOTE:
GRATE IS REVERSIBLE.



1" DIAGONAL BARS WITH 1 1/2" OPENINGS

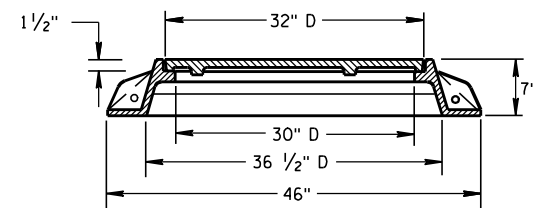
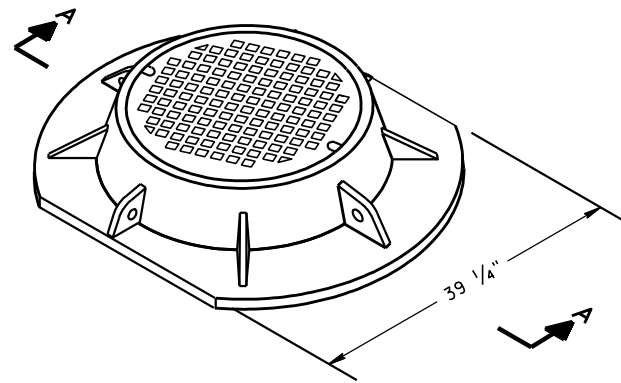


SPECIAL GRATE FOR TYPE "A" COVER
(MEASURES 19 3/4" X 17" X 1 7/8")
GRATE..... 84 LBS.
(NOTED AS TYPE A-S ON DRAINAGE TABLE)

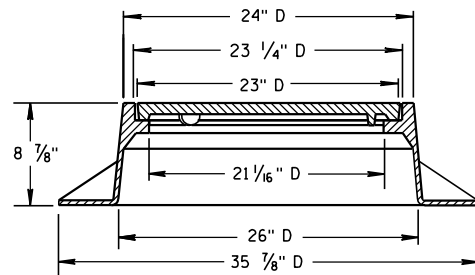
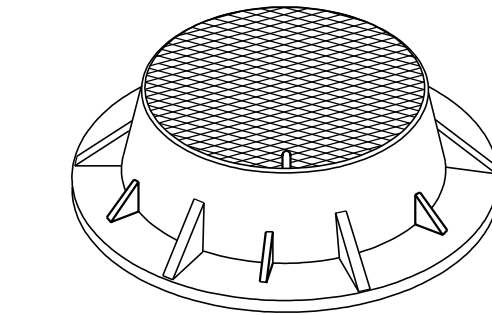
**INLET COVERS
TYPE A, H, A-S, & H-S**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

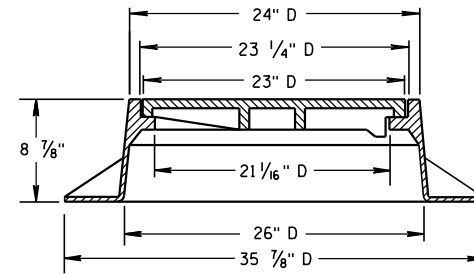
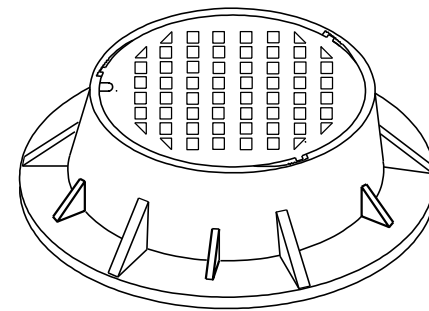
APPROVED
6/5/2012 /S/ Jerry H. Zogg
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA ENGINEER



SECTION A-A
TYPE "K"
(APPROXIMATE WEIGHT 439 LBS.)
FRAME.....216 LBS.
LID.....223 LBS.



TYPE "J"
(APPROXIMATE WEIGHT 267 LBS.)
FRAME.....152 LBS.
LID.....115 LBS.



TYPE "J" SPECIAL
TYPE "B" NON-ROCKING SELF-SEAL LID
(APPROXIMATE WEIGHT 267 LBS.)
FRAME.....158 LBS.
LID.....109 LBS.
(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)

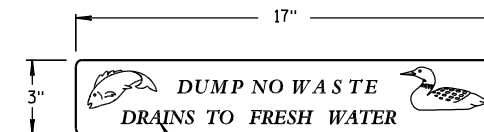
GENERAL NOTES

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.

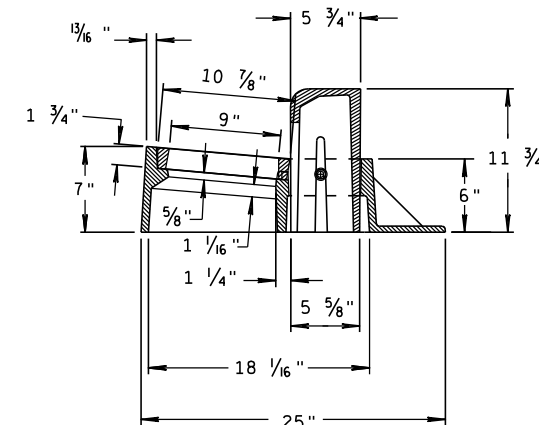
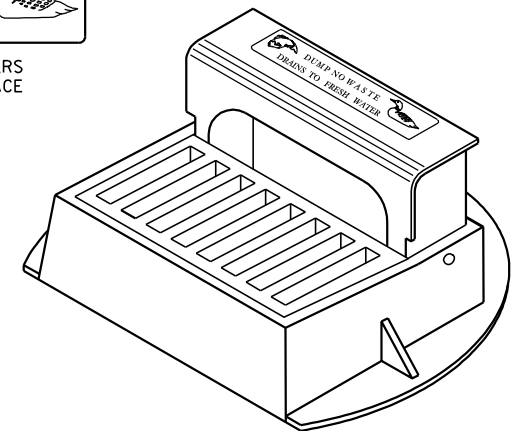
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

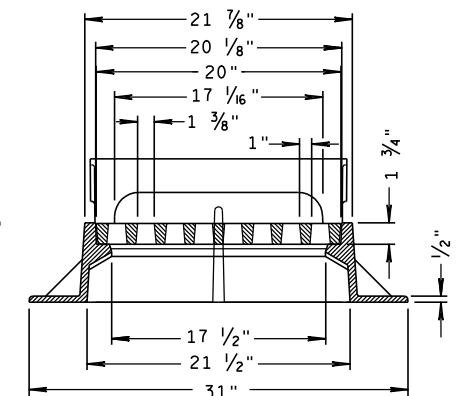
THE ACTUAL WEIGHT OF COVERS MAY VARY WITHIN 5 PERCENT, PLUS OR MINUS, OF THE APPROXIMATE WEIGHT.



LOGO DETAIL



INLET COVER TYPE "Z"
(APPROXIMATE WEIGHT 344 LBS.)
FRAME.....206 LBS.
GRATE.....46 LBS.
CURB BOX.....92 LBS.



INLET COVERS, TYPE BW, Z
MANHOLE COVERS, TYPE
K, J, J-S, L & M

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

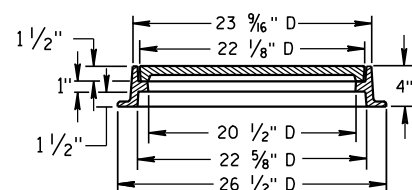
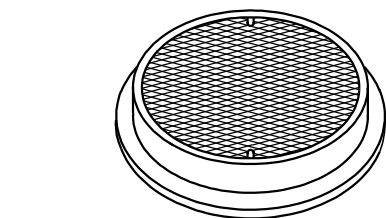
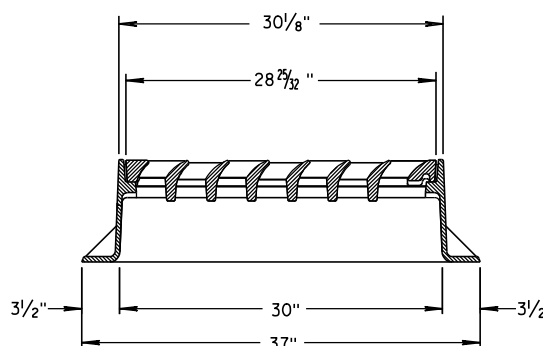
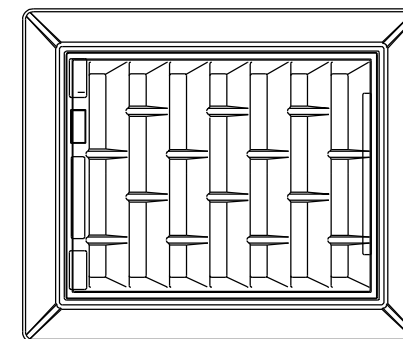
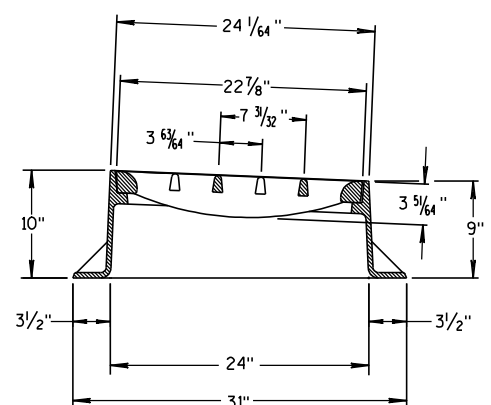
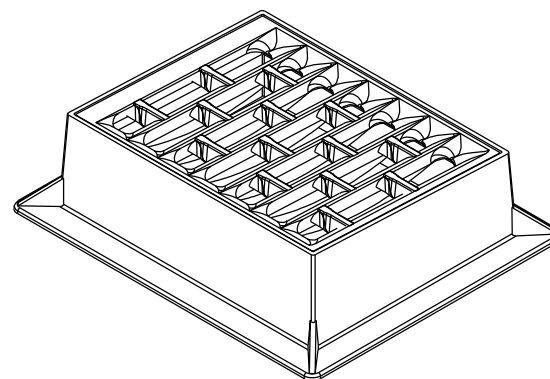
6/5/2012

DATE

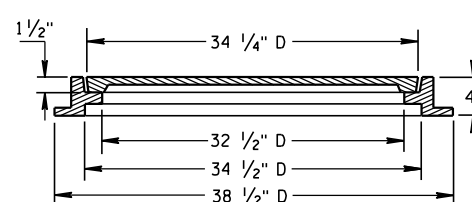
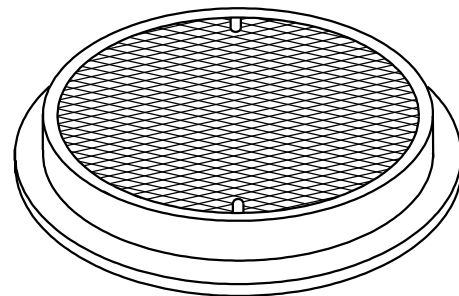
FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

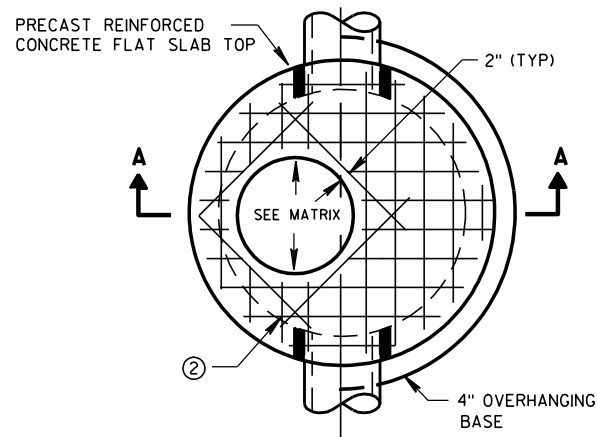
INLET COVER TYPE "BW"



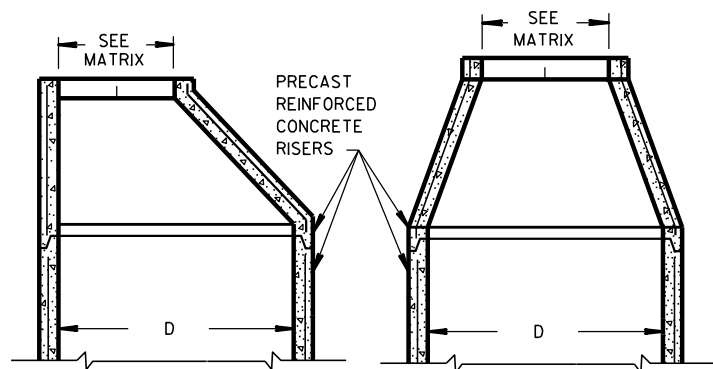
TYPE "L"
(APPROXIMATE WEIGHT 158 LBS.)
FRAME.....81 LBS.
LID.....77 LBS.



TYPE "M"
(APPROXIMATE WEIGHT 377 LBS.)
FRAME.....125 LBS.
LID.....252 LBS.

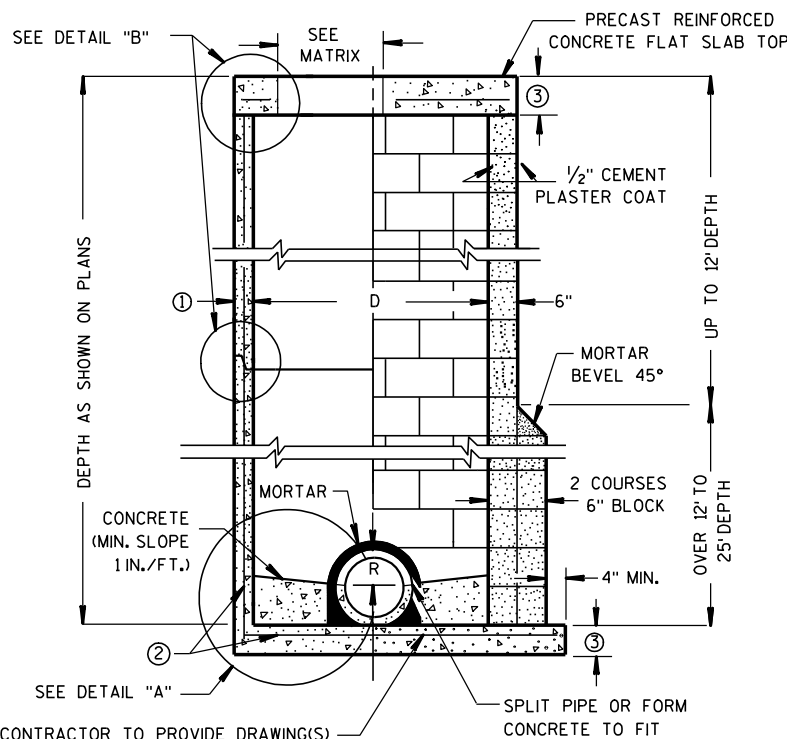


PLAN VIEW CIRCULAR OPENING



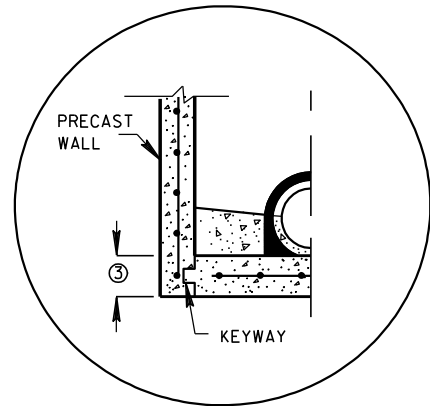
OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

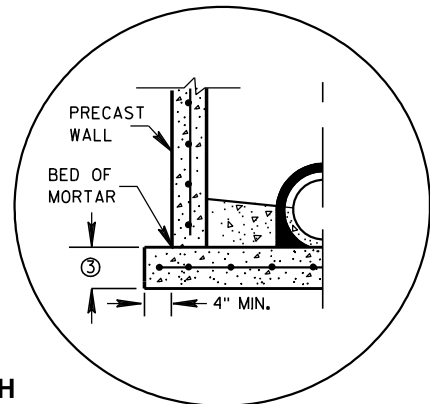


CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES

PRECAST REINFORCED CONCRETE BLOCK WITH CONCRETE WITH MONOLITHIC BASE CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ②



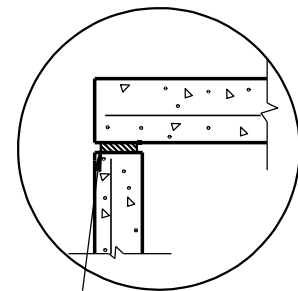
PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



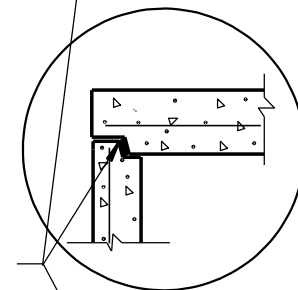
SEPERATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"

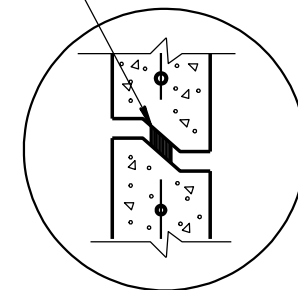
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C990 (TYP)



TOP WITH PLAIN END JOINT

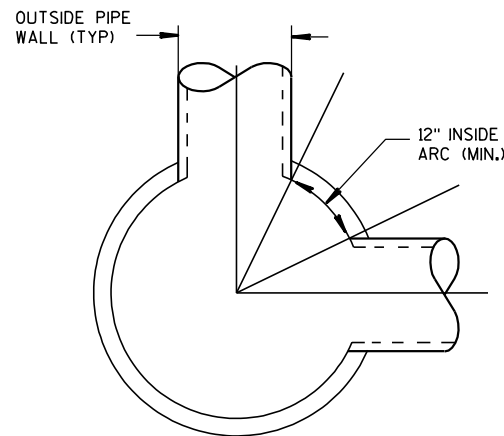


TOP WITH TONGUE AND GROOVE JOINT



RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"



DETAIL "C"

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. UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST MANHOLE UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF GRANULAR BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

PRECAST REINFORCED CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES. THE CONE TOPS SHALL BE INSTALLED ON A BED OF MORTAR.

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES, AND CONCENTRIC CONE TOPS SHALL BE USED ONLY ON STRUCTURES 5 FEET OR LESS IN DEPTH, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

STEPS MEETING AASHTO M199 AND THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH: 16 INCH C-C MAXIMUM SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM LENGTH OF 10 INCHES; MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF 1/2" AND MEET THE REQUIREMENTS OF ASTM A615.

CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED. CONCRETE BLOCK WILL NOT BE PERMITTED FOR STRUCTURES GREATER THAN 4 FEET IN DIAMETER.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

ALL PRECAST MANHOLE UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M 199.

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPERATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

- ① MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT, 5 INCHES FOR 4-FT, 6 INCHES FOR 5-FT, 7 INCHES FOR 6-FT, 8 INCHES FOR 7-FT AND 9 INCHES FOR 8-FT DIAMETER PRECAST MANHOLES.
- ② FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.
- ③ PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER OF 48" AND LESS SHALL HAVE A MINIMUM THICKNESS OF 6". PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER LARGER THAN 48" SHALL HAVE A MINIMUM THICKNESS OF 8".

MANHOLE COVER OPENING MATRIX

MANHOLE COVER TYPE	C	ALL J'S	K	L	M
OPENING SIZE (FT)					
2 DIA.	X	X		X	
3 DIA.			X		X

PIPE MATRIX

MANHOLE SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18
5-FT	36	24
6-FT	42	36
7-FT	48	36
8-FT	60	42

MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/5/2012

DATE

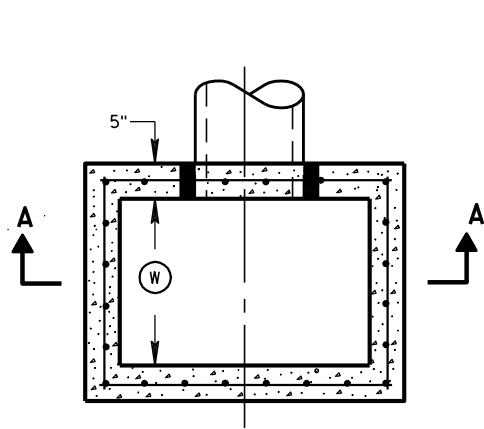
FHWA

/S/ Jerry H. Zogg

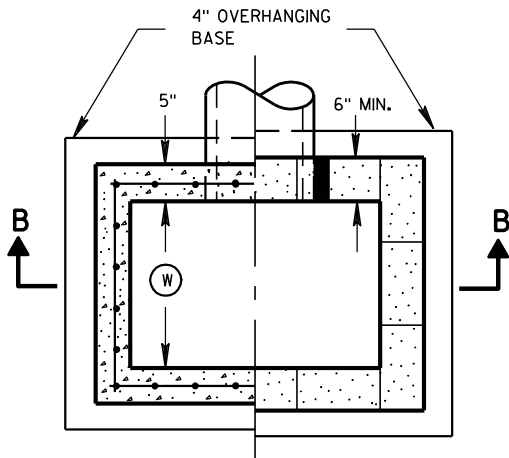
ROADWAY STANDARDS DEVELOPMENT

ENGINEER

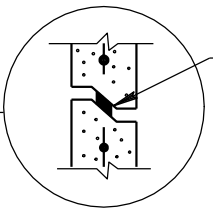
MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER



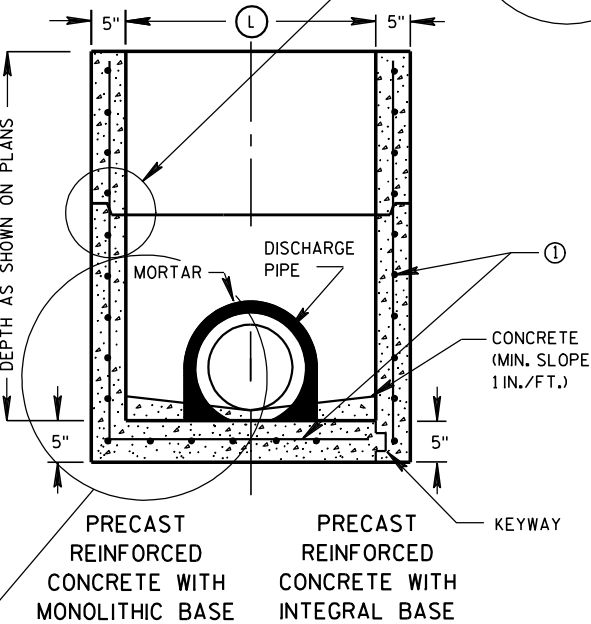
PLAN VIEW



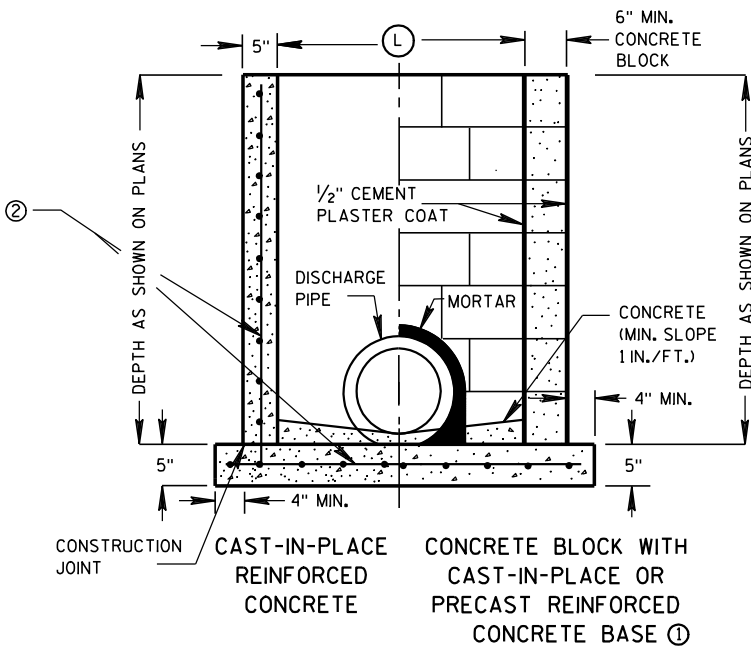
PLAN VIEW



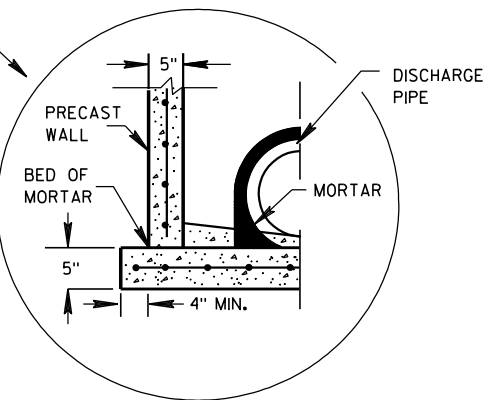
RISER JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)



SECTION A-A



SECTION B-B



SEPERATE PRECAST REINFORCED CONCRETE BASE OPTION

INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

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.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST INLET UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATES THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF GRANULAR BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

4" OVERHANGING BASES ARE REQUIRED FOR CAST-IN-PLACE REINFORCED CONCRETE AND CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPERATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3 INCH CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

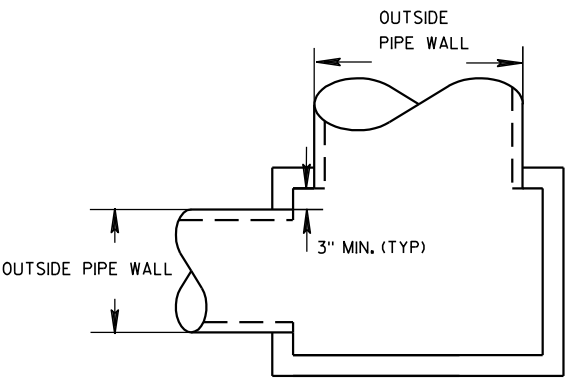
- ① FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.
- ② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

INLET SIZE		INLET COVER TYPE	ALL A'S	ALL B'S	BW	F	ALL H'S	S	T	V	WM
	WIDTH (FT)	LENGTH (FT)									
2X2-FT	2	2	X	X				X		X	
2X2.5-FT	2	2.5			X			X	X	X	X
2X3-FT	2	3					X				
2.5X3-FT	2.5	3				X					

PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER	
	WIDTH (IN)	LENGTH (IN)
2X2-FT	12	12
2X2.5-FT	12	18
2X3-FT	12	24
2.5X3-FT	18	24

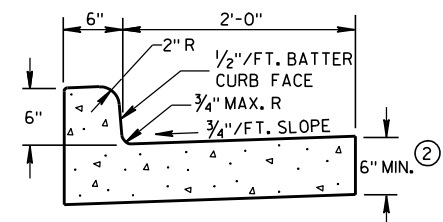


DETAIL "A"

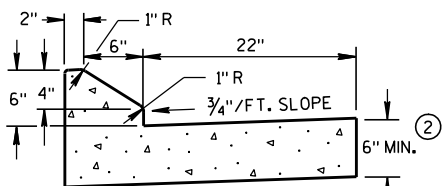
INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

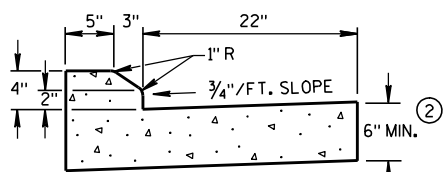
APPROVED
6/5/2012 /S/ Jerry H. Zogg
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA ENGINEER



TYPES A & D ①

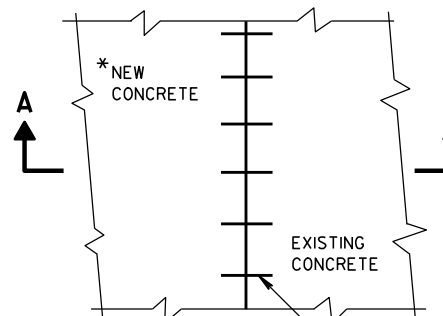


6" SLOPED CURB TYPES G & J ①



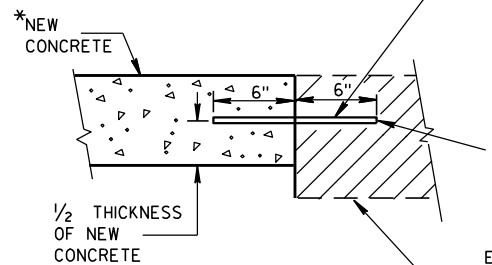
4" SLOPED CURB TYPES G & J ①

CONCRETE CURB & GUTTER 30"



PLAN VIEW

* NEW CURB & GUTTER,
SURFACE DRAINS,
CONCRETE PAVEMENT
OR OTHER NEW CONCRETE.

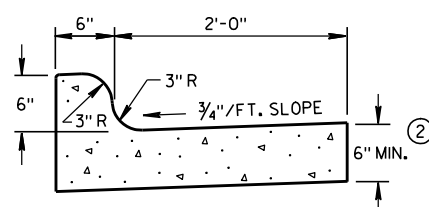


SECTION A-A
TIE BARS DRILLED
INTO EXISTING PAVEMENT

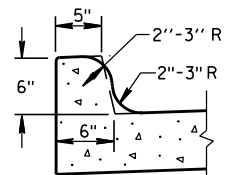
NO. 6 TIE BARS SPACED 2'-6" C-C,
INSTALLED PERPENDICULAR
TO THE LONGITUDINAL JOINT.

MAXIMUM DRILL HOLE
SIZE IS 1/8" GREATER
THAN TIE BAR DIAMETER

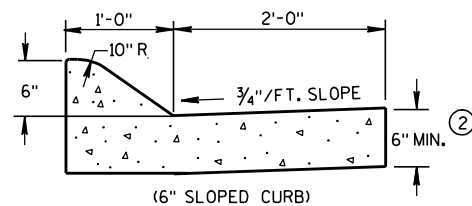
EXISTING
CONCRETE



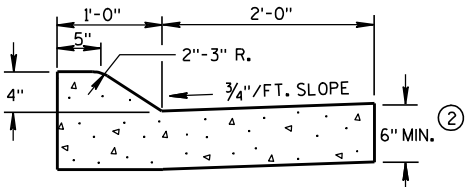
TYPES K & L ①



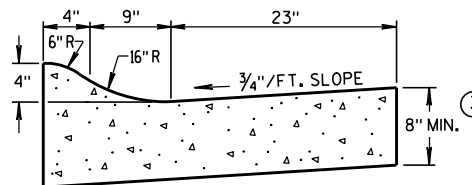
OPTIONAL CURB SHAPE
FOR TYPES K & L ①



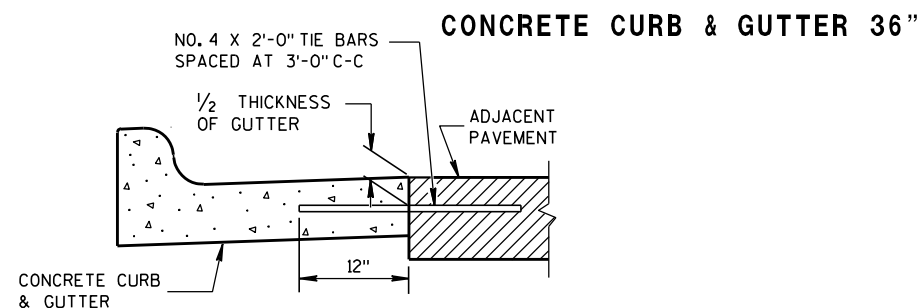
(6" SLOPED CURB)



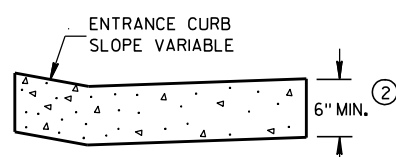
TYPES A & D ①



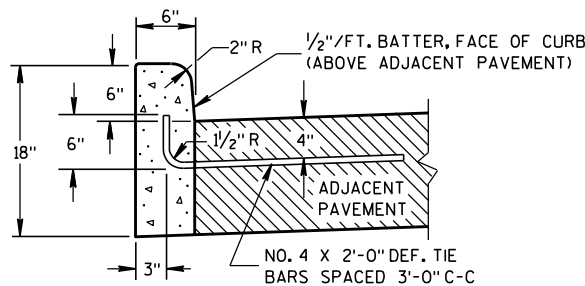
4" SLOPED CURB TYPES R & T ① ④



TYPICAL TIE BAR LOCATION ①

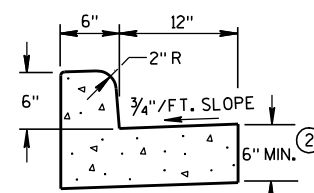


DRIVEWAY ENTRANCE CURB
(WHEN DIRECTED BY THE ENGINEER)

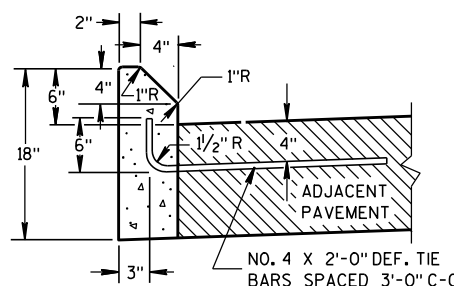


TYPES A & D ①

CONCRETE CURB



TYPES A & D
CONCRETE CURB & GUTTER 18"



TYPES G & J ①

GENERAL NOTES

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

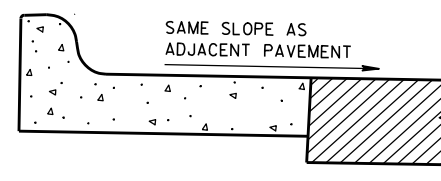
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

INTEGRAL CURB & GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB & GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE. A LONGITUDINAL CONSTRUCTION JOINT IS NOT REQUIRED WITH INTEGRAL CURB AND GUTTER.

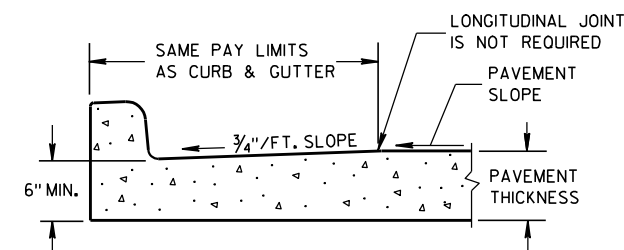
WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

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

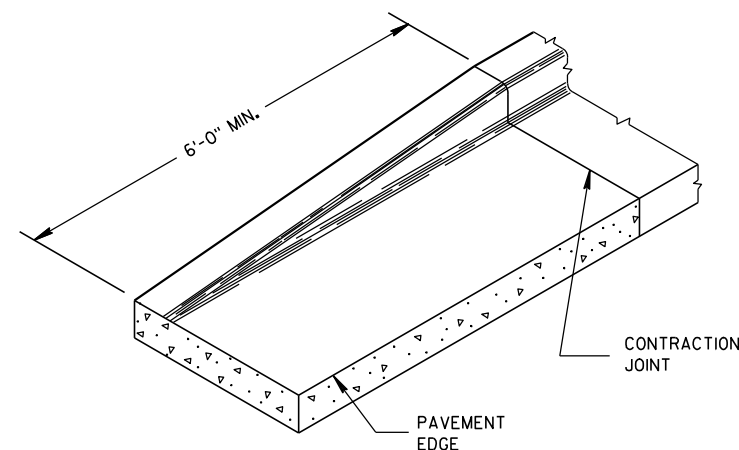
- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K AND R.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ④ THE FACE OF CURB IS 6" FROM THE BACK OF CURB.
- ⑤ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.



REVERSE SLOPE GUTTER ⑤
(TYPICAL FOR ALL CURB & GUTTER TYPES)



PARTIAL SECTION OF PAVEMENT
WITH INTEGRAL CURB & GUTTER



END SECTION CURB & GUTTER

CONCRETE CURB, CONCRETE
CURB & GUTTER AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

9/4/08

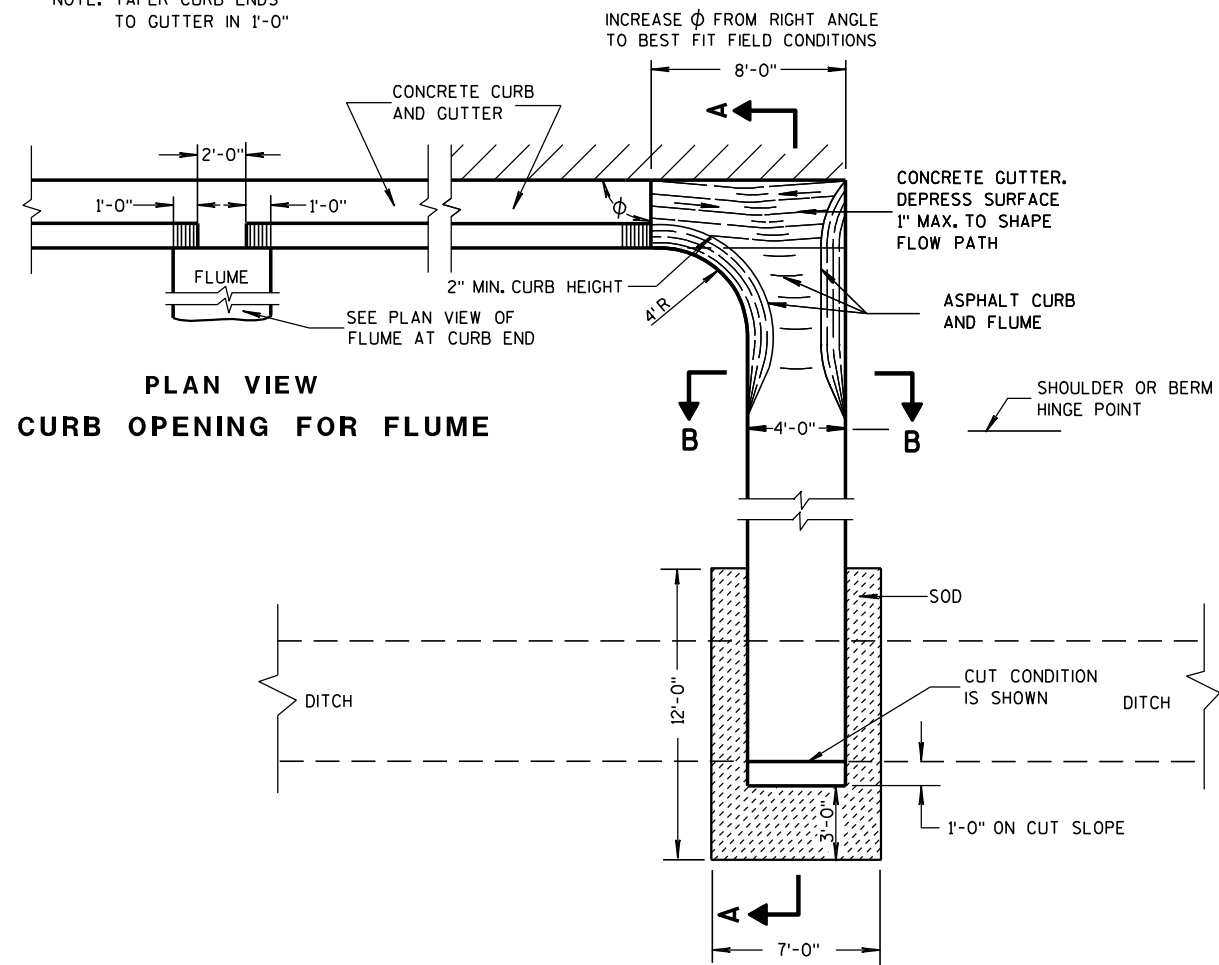
DATE

FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

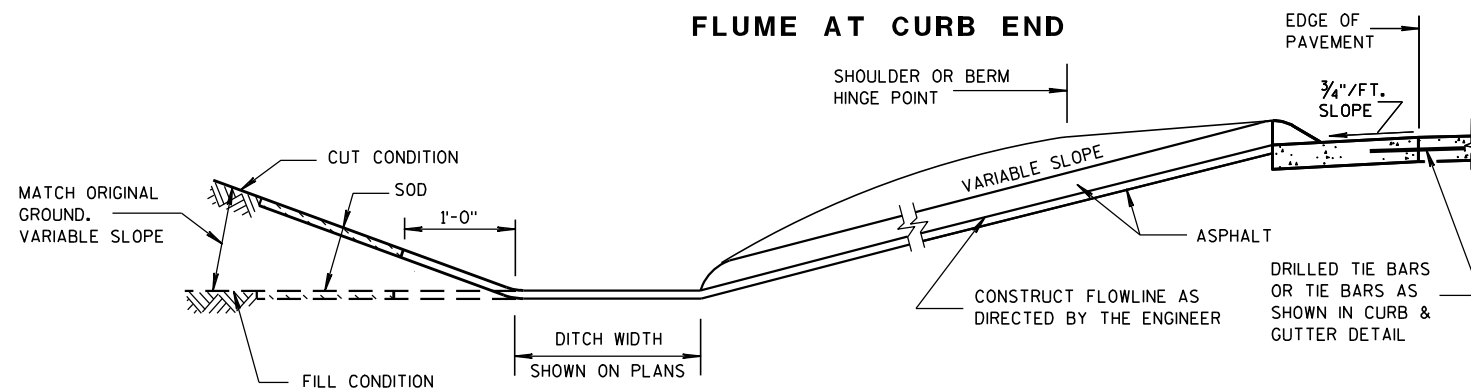
ASPHALTIC FLUME

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

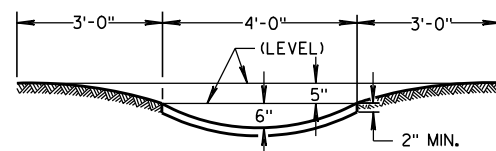


PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



SECTION A-A



SECTION B-B

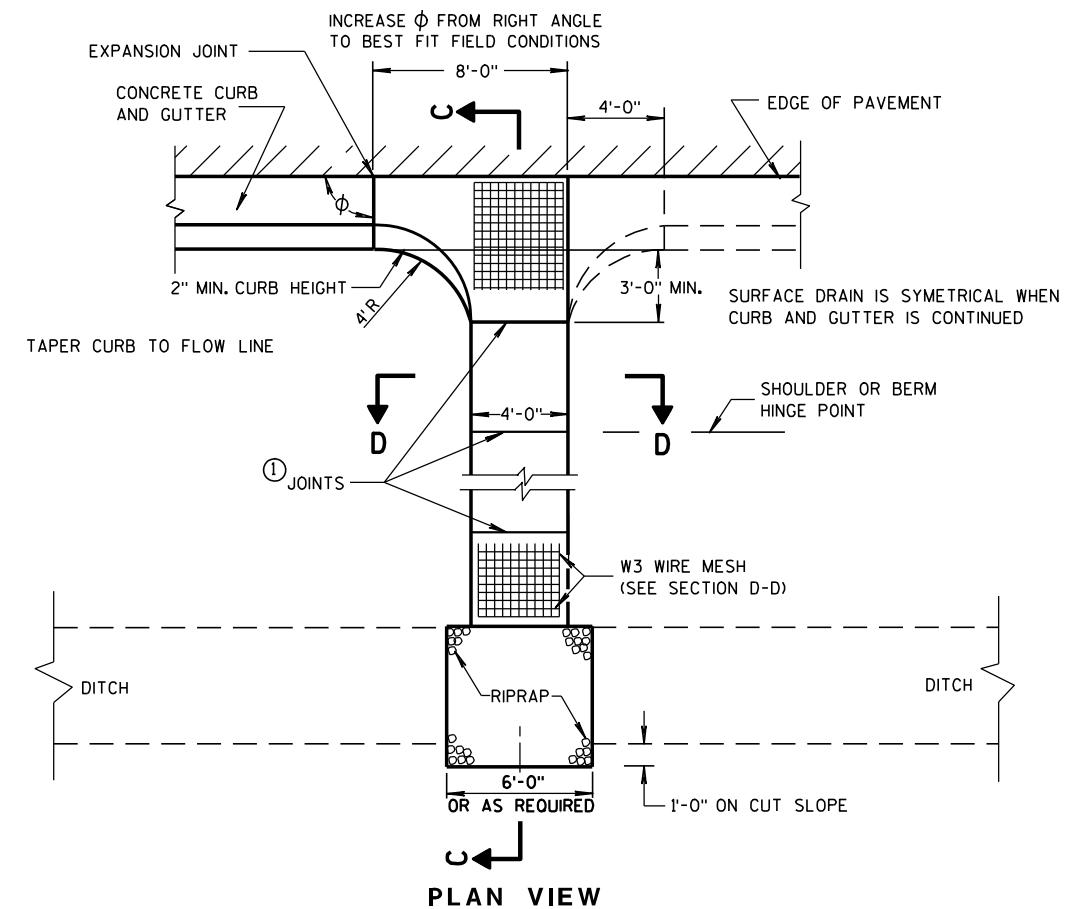
GENERAL NOTES

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

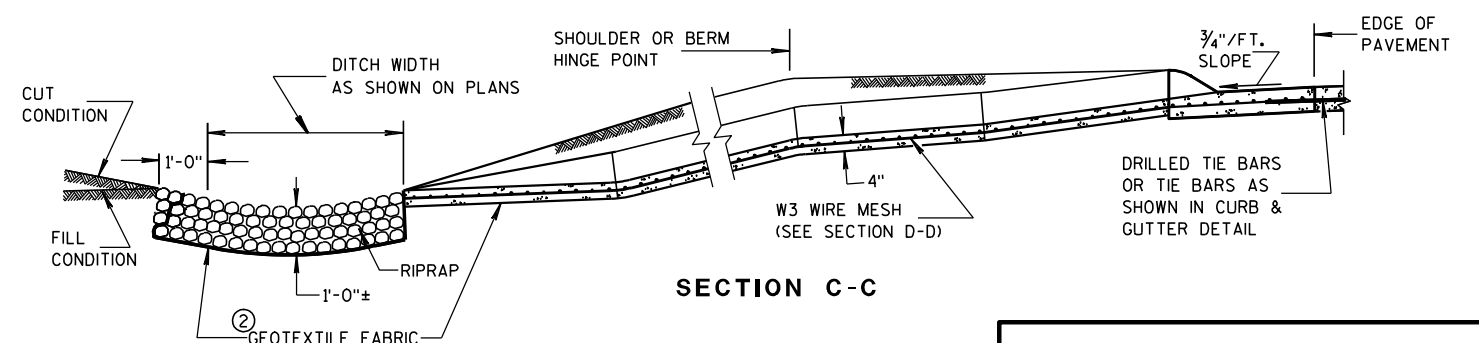
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

- ① JOINTS SHALL BE 1/8" TO 1/4" INCH WIDE BY 1 1/2" INCHES DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.
- ② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.
- ③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED

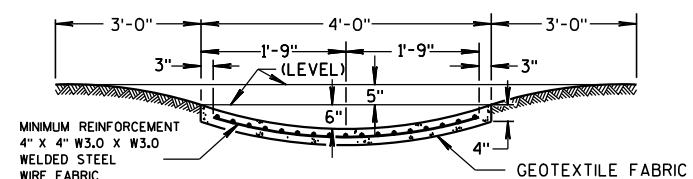
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

9-4-08

DATE

FHWA

/S/ Jerry H. Zogg

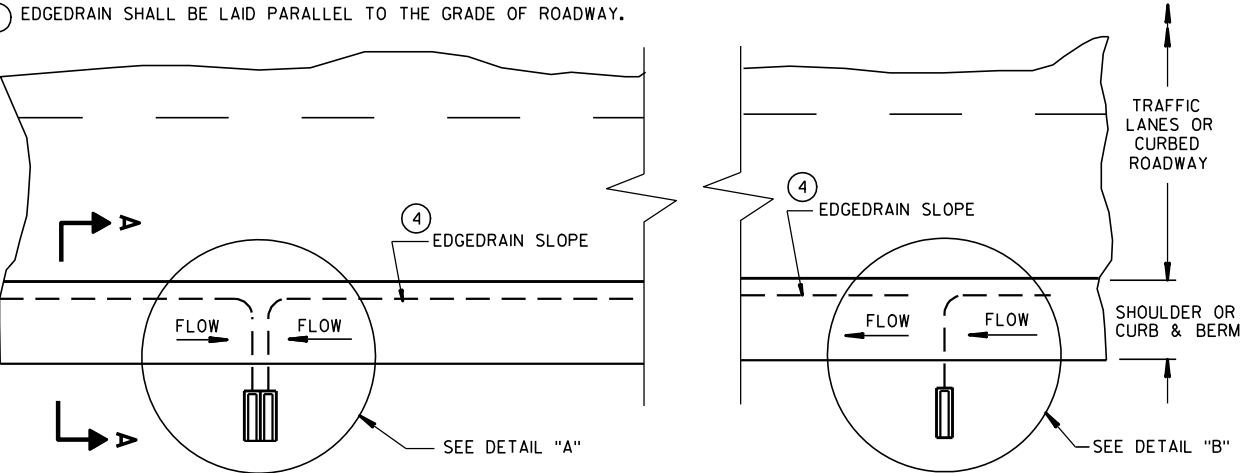
ROADWAY STANDARDS DEVELOPMENT

ENGINEER

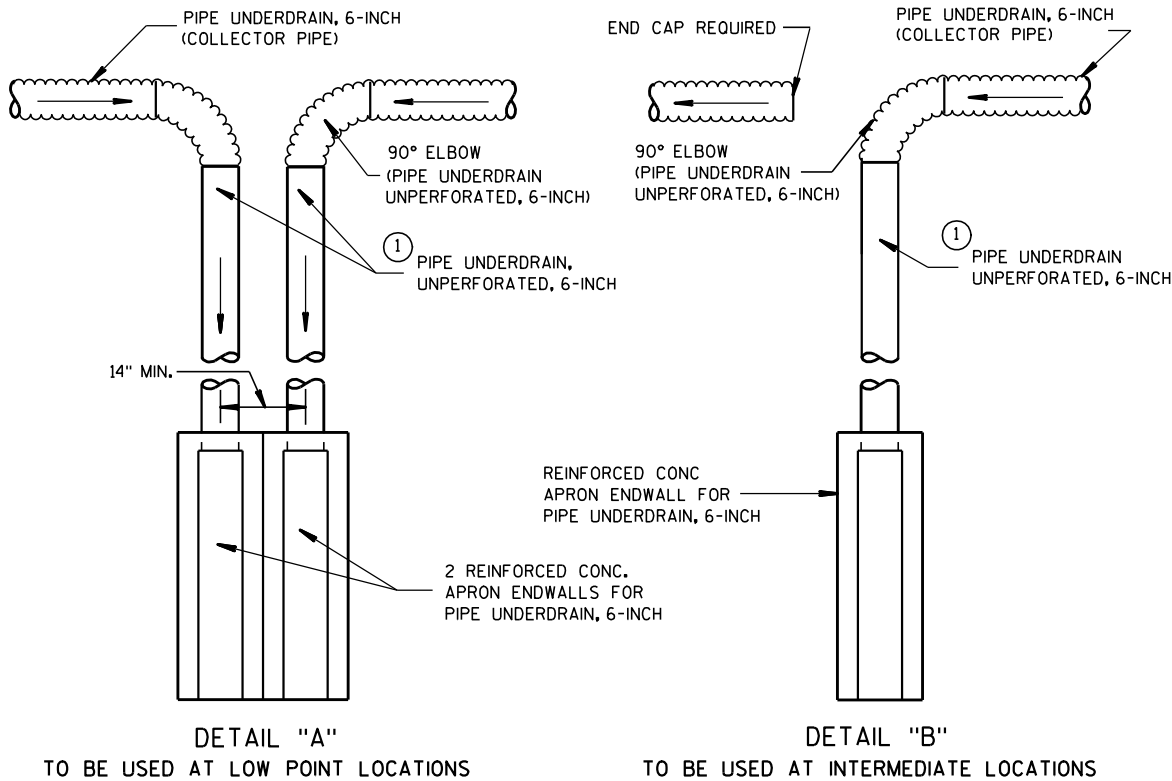
GENERAL NOTES

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.

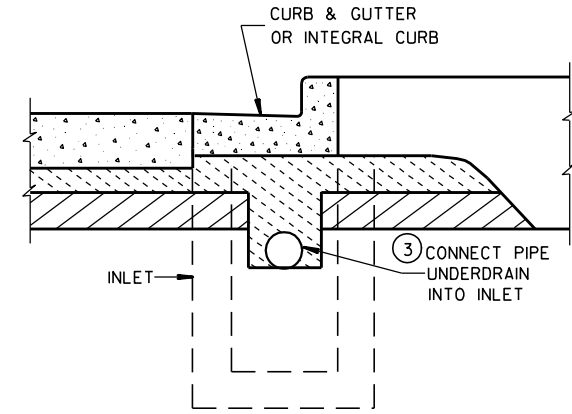
- 1 UNPERFORATED PIPE UNDERDRAIN AND FITTINGS FURNISHED FOR OUTFALL PIPE SHALL MEET THE REQUIREMENTS OF ONE OF THE FOLLOWING SPECIFICATIONS:
POLYVINYL CHLORIDE (PVC) PLASTIC DRAIN, WASTE, AND VENT PIPE AND FITTINGS, ASTM D 2665, SCHEDULE 40 PVC.
TYPE PSM POLYVINYL CHLORIDE (PVC) SEWER PIPE AND FITTINGS, ASTM D 3034, SDR 23.5 PVC SEWER PIPE.
- 2 MAXIMUM SPACING OF EDGEDRAIN OUTLETS SHALL BE 250 FEET UNLESS OTHERWISE SPECIFIED IN THE CONTRACT OR DIRECTED BY THE ENGINEER.
- 3 EDGEDRAIN SHALL BE CONNECTED TO INLETS REGARDLESS OF FLOW DIRECTION FOR DRAINAGE AND MAINTENANCE ACCESS.
- 4 EDGEDRAIN SHALL BE LAID PARALLEL TO THE GRADE OF ROADWAY.



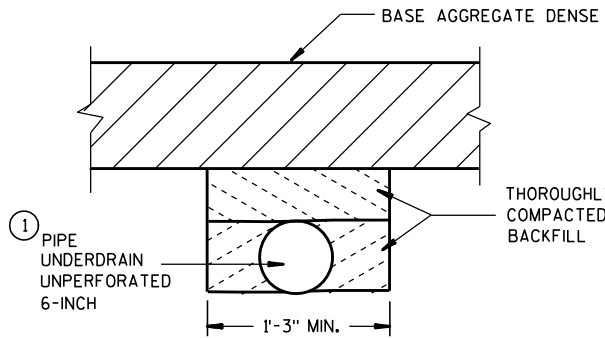
PLAN VIEW
ROADWAY WITH SHOULDERS OR CURBS
(EDGEDRAIN OUTLETS TO ROADSIDE) 2



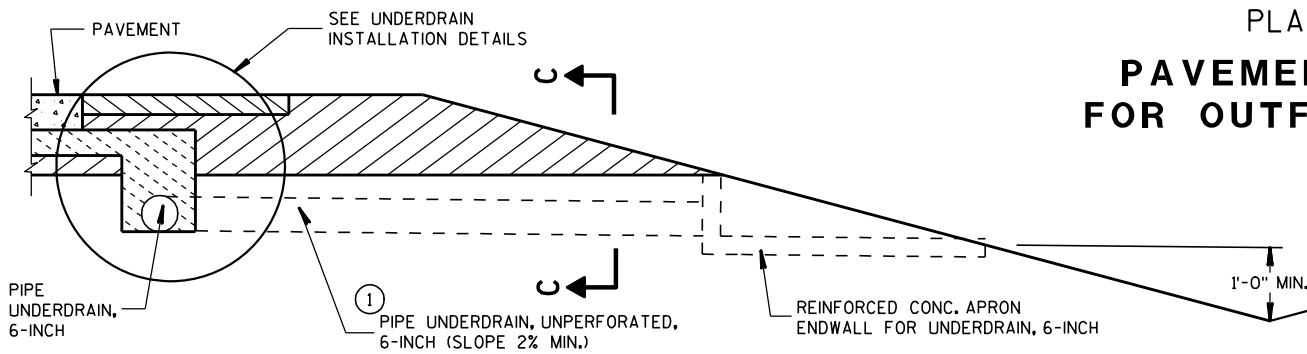
TYPICAL DRAIN OUT DETAILS



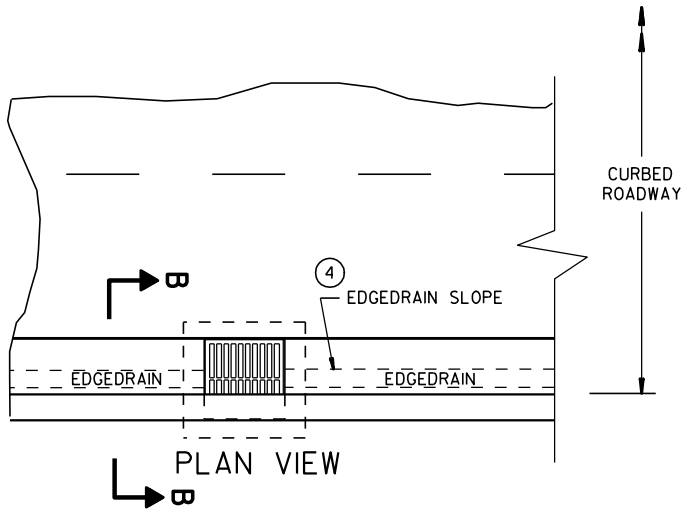
SECTION B-B
URBAN CROSS SECTION



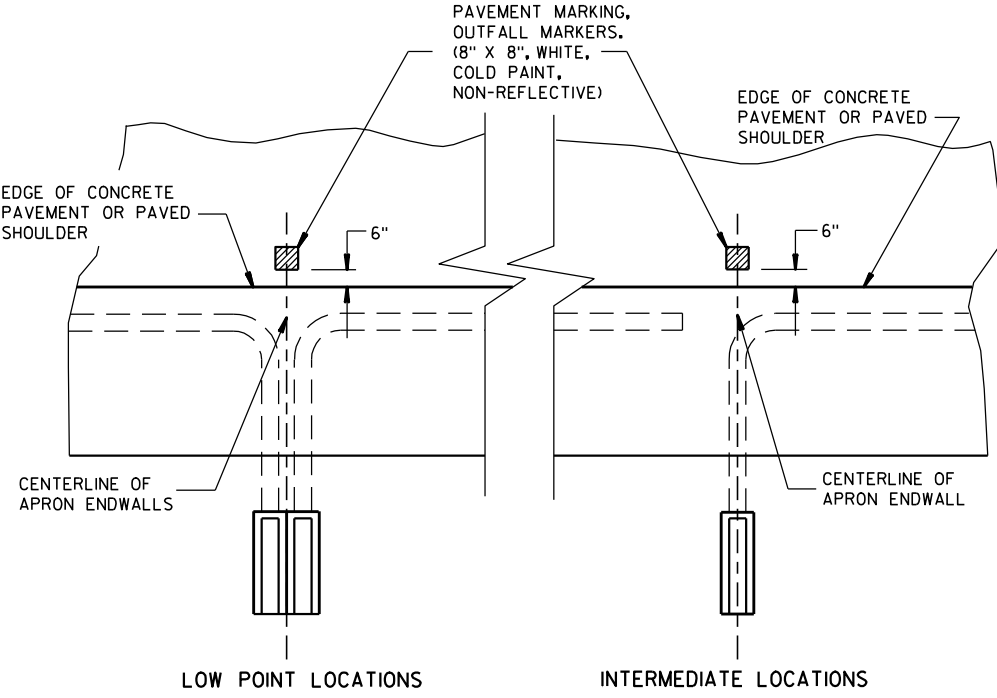
SECTION C-C
(TRENCH FOR OUTFALL PIPE)



SECTION A-A
RURAL CROSS SECTION



ROADWAY WITH CURBS
(EDGEDRAIN CONNECTS INTO INLET STRUCTURE)



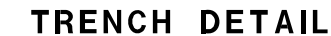
PLAN VIEW
PAVEMENT MARKING
FOR OUTFALL MARKERS

EDGEDRAIN OUTLET
AND OUTFALL MARKERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



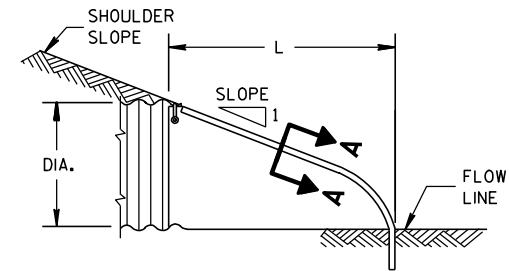
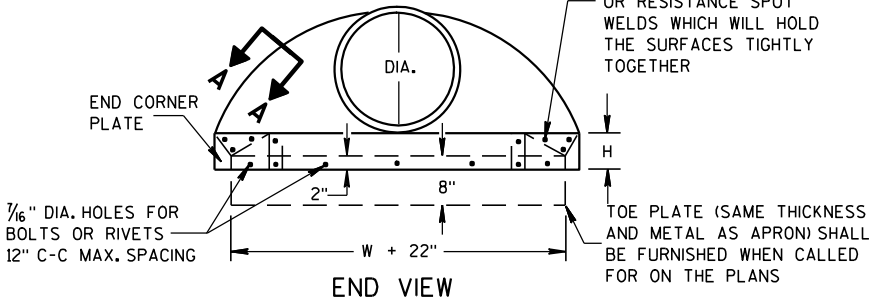
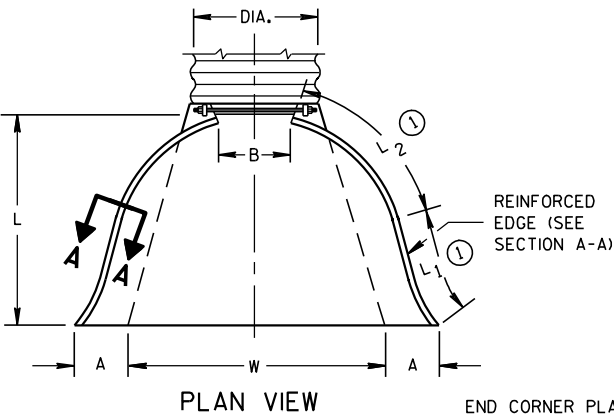
- ① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- ② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- ③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1½" X 1½" 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.



SILT FENCE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED <u>4-29-05</u> <u>DATE</u>	<u>/S/ Beth Canestra</u> CHIEF ROADWAY DEVELOPMENT ENGINEER

METAL APRON ENDWALLS											
PIPE DIA. (IN.)	MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY
	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")		
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	.109x	.105x	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109x	.105x	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109x	.105x	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109x	.105x	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109x	.105x	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109x	.105x	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109x	.105x	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

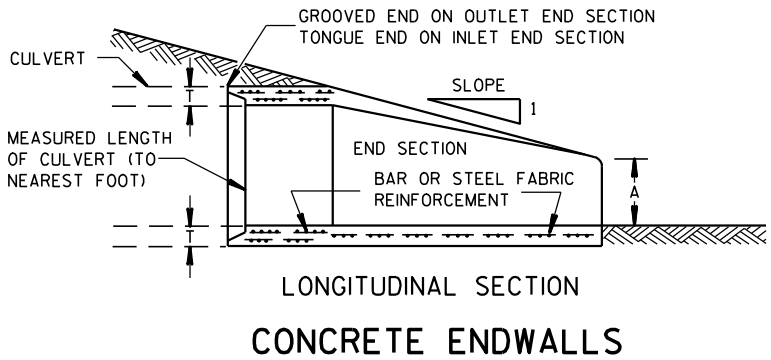
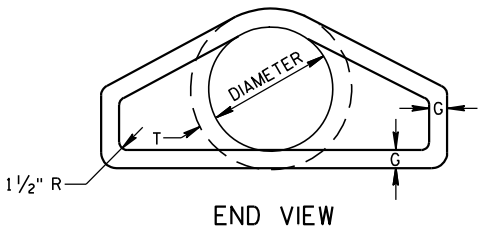
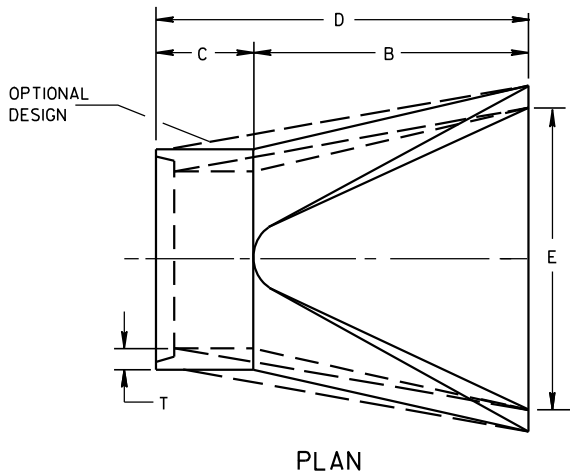
* EXCEPT CENTER PANEL
SEE GENERAL NOTES



SIDE ELEVATION
METAL ENDWALLS

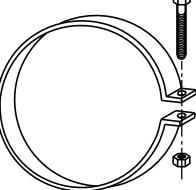
REINFORCED CONCRETE APRON ENDWALLS											
PIPE DIA. (IN.)	DIMENSIONS (Inches)							APPROX. SLOPE			
	T	A	B	C	D	E	G				
12	2	4	24	48 1/8	72 1/8	24	2	3 to 1			
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1			
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1			
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1			
24	3	9 1/2	43 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 1/2 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

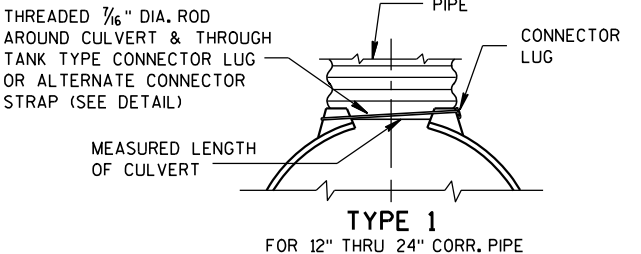


LONGITUDINAL SECTION
CONCRETE ENDWALLS

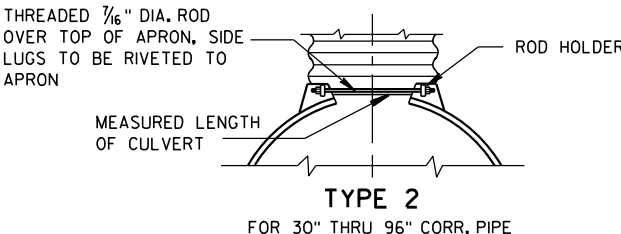
1" WIDE, 12 GA. (0.109" THICK) GALVANIZED STRAP WITH STANDARD 6" X 1/2" BAND BOLT AND NUT



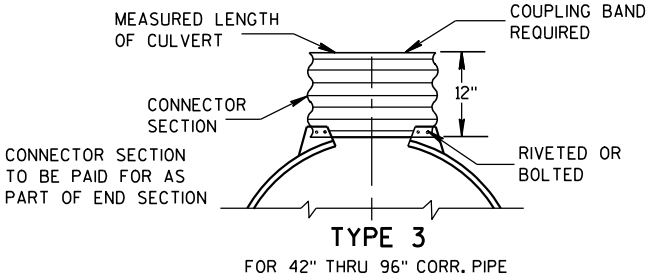
ALTERNATE FOR TYPE 1 CONNECTION
END SECTION CONNECTOR STRAP



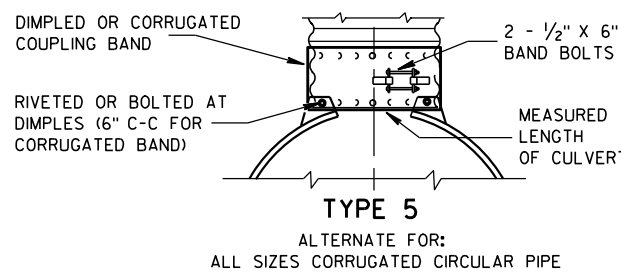
TYPE 1
FOR 12" THRU 24" CORR. PIPE



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

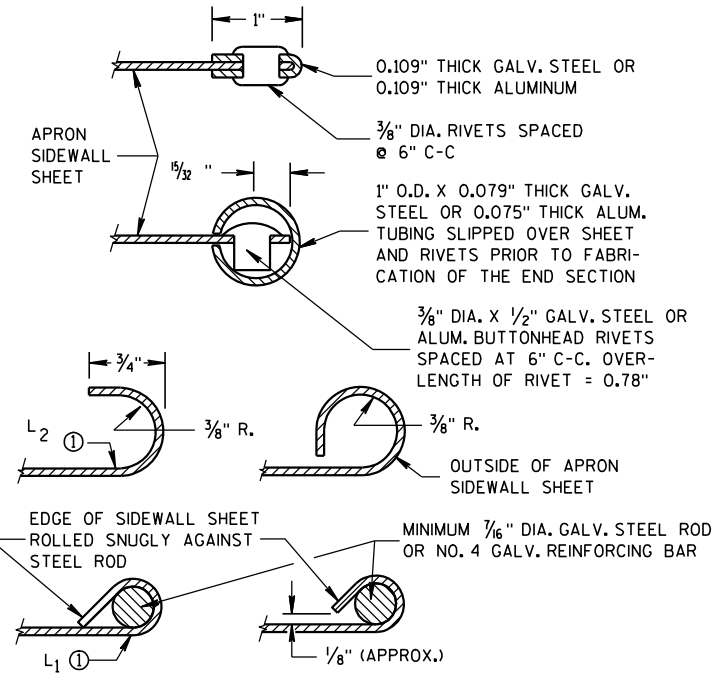
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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.

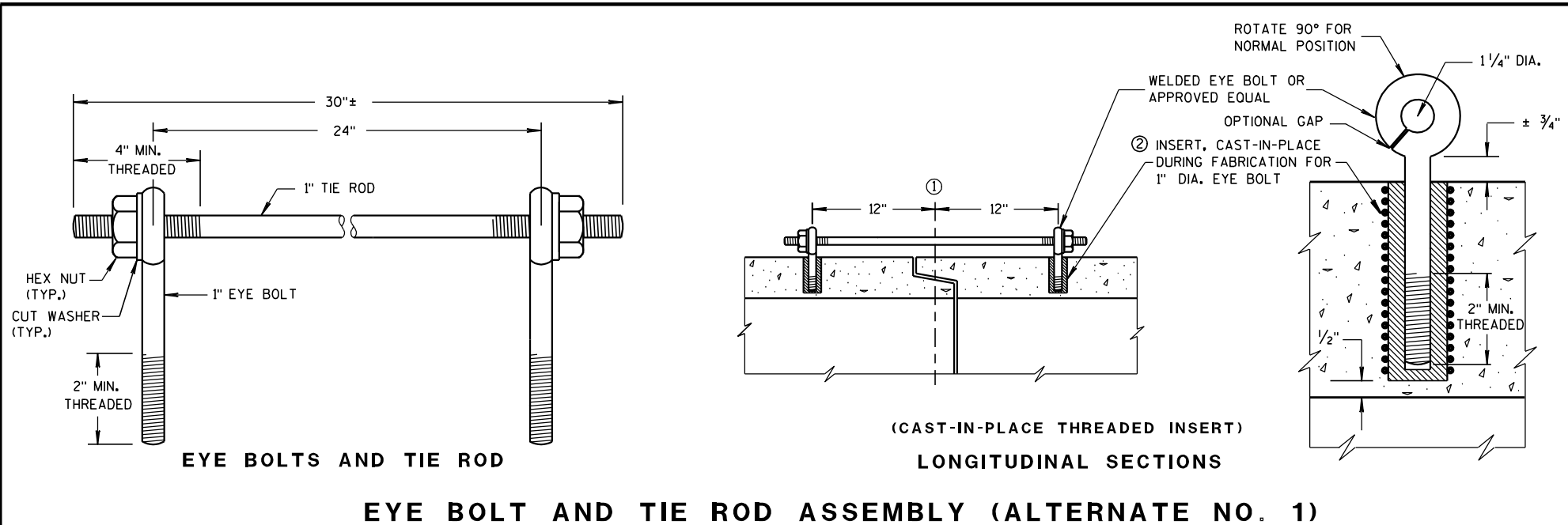
WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

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



GENERAL NOTES

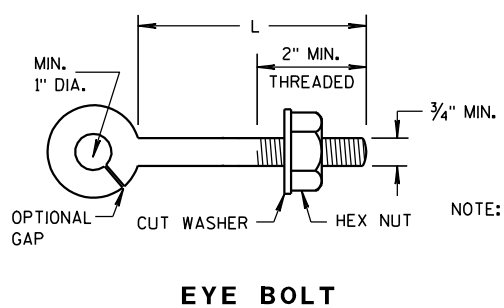
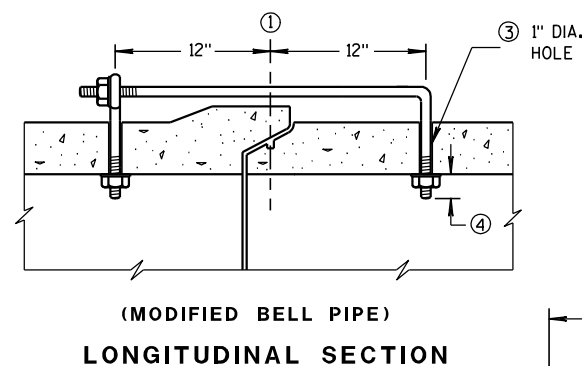
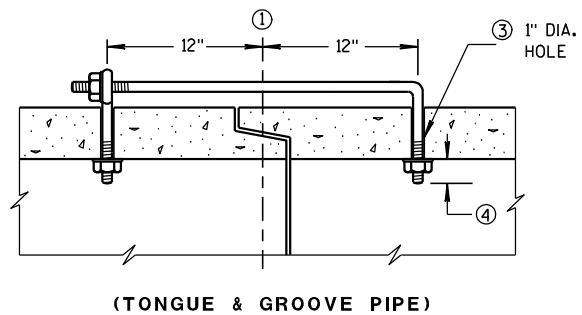
DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

CONCRETE CULVERT AND STORM SEWER PIPE SHALL BE TIED TOGETHER IN THE MANNER ILLUSTRATED BY THIS DETAIL AT LOCATIONS DESIGNATED IN THE STANDARD SPECIFICATIONS AND THE PLAN. THE CONTRACTOR MAY USE EITHER ALTERNATE 1, 2 OR 3 FOR DRAINAGE STRUCTURES. ONLY ALTERNATE 1 AND 3 MAY BE USED FOR CATTLE PASSES, UNLESS OTHERWISE STATED IN THE CONTRACT. THE MATERIALS, FABRICATION AND WORK NECESSARY TO TIE THE PIPE BY THIS DETAIL WILL BE CONSIDERED INCIDENTAL TO THE PIPE AND APRON ENDWALLS IF REQUIRED.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR JOINT TIES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

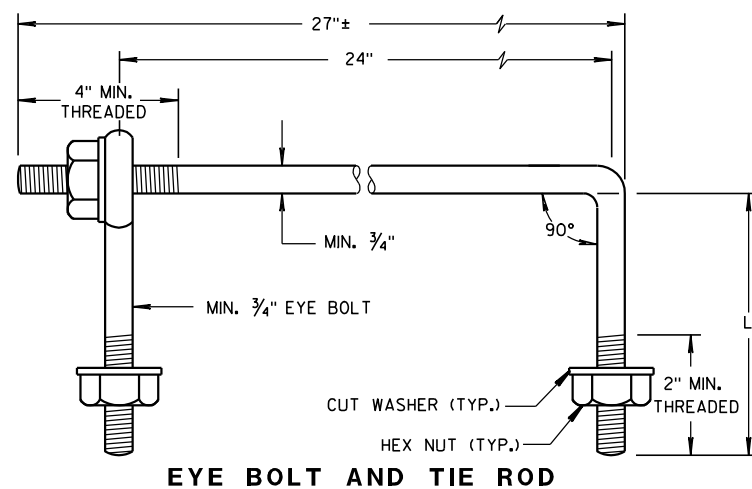
JOINT TIES TO BE HOT-DIP GALVANIZED PER ASTM A 153.

- ① ϕ OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.
- ② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.
- ③ HOLES SHALL BE CAST-IN-PLACE OR DRILLED 12 INCHES FROM ϕ OF TONGUE AND GROOVE.
- ④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.
- ⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.
- ⑥ LENGTH ADEQUATE TO EXTEND TO WITHIN 1/2 INCH OF THE INNER SURFACE OF THE PIPE.



NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.

(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)
EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 2)



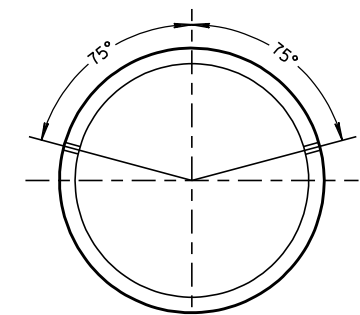
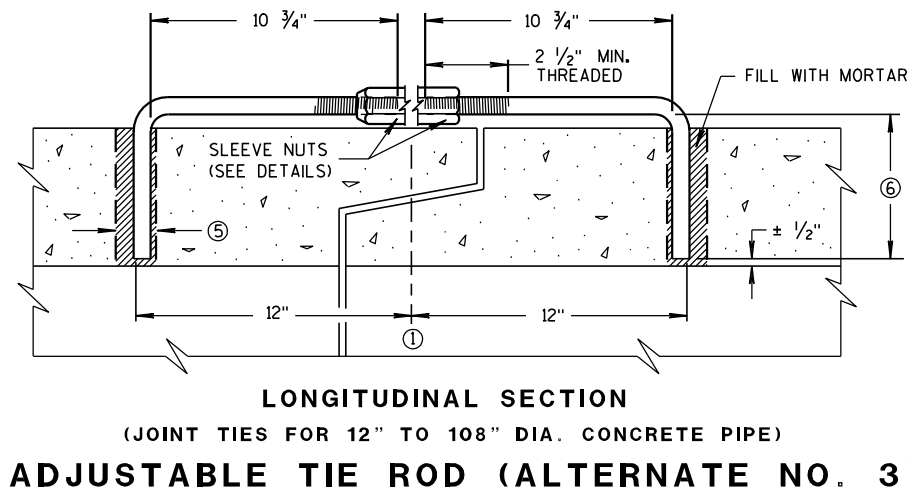
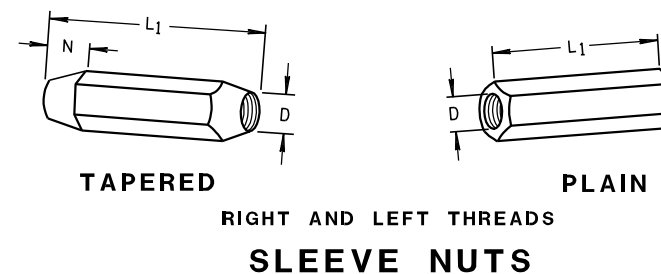
EYE BOLT DIMENSION TABLE

PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	

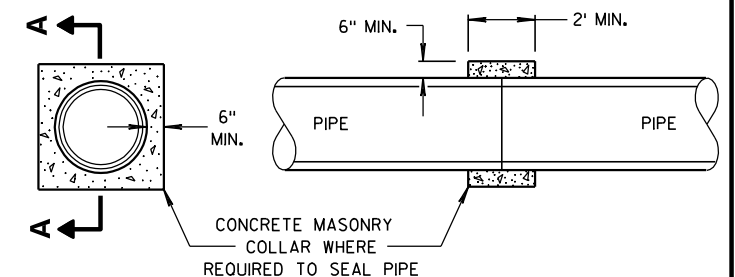
ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L ₁	N
12-60	5/8	5/8	5	1/2
66-84	3/4	3/4	5	1/2
90-108	1	1	7	1 1/16

DIMENSIONS SHOWN ARE IN INCHES



PLACEMENT OF (2) CAST-IN-PLACE INSERTS OR HOLES DURING FABRICATION FOR PIPE SECTIONS REQUIRING TIE RODS



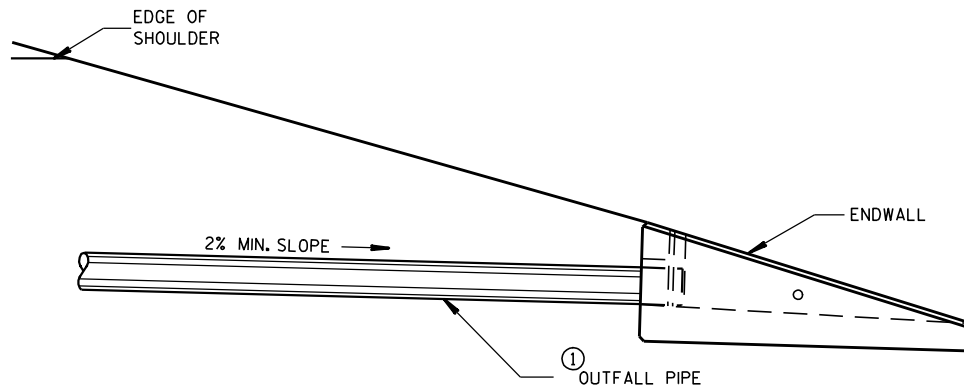
JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

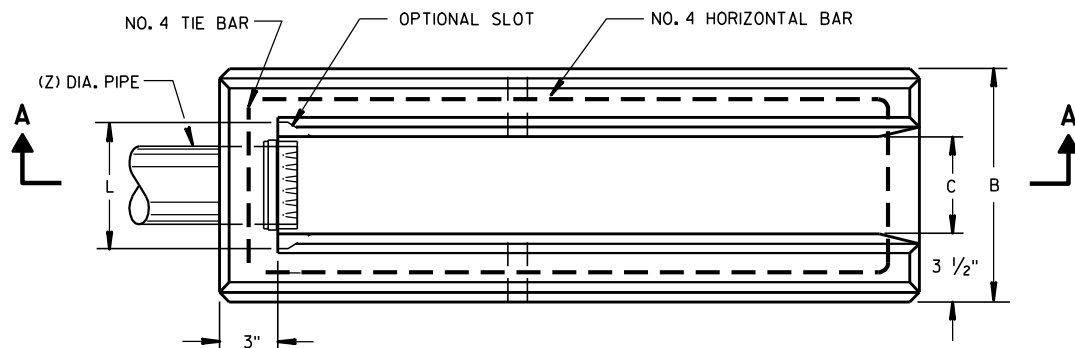
APPROVED
6/5/2012 /S/ Jerry H. Zogg
DATE ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

DIMENSIONS IN INCHES											
PIPE DIA.	A	B	C	D	E	F	G	H	J	L	Z
**4	6	12	5 1/4	9	8	32	36	11	2 3/8	6 1/2	4
6	8	14	7 1/4	11	10	42	44	13	3 5/8	8 1/2	6

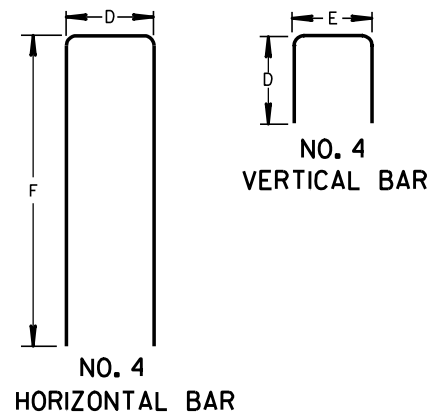
** APRON ENDWALL FOR 6 INCH DIAMETER PIPE MAY BE SUBSTITUTED FOR THIS SIZE PROVIDED THE HOLE IN THE HEADWALL IS SIZED AND LOCATED TO CONFORM TO THE 4 INCH DIAMETER PIPE DIMENSIONS (C & J)



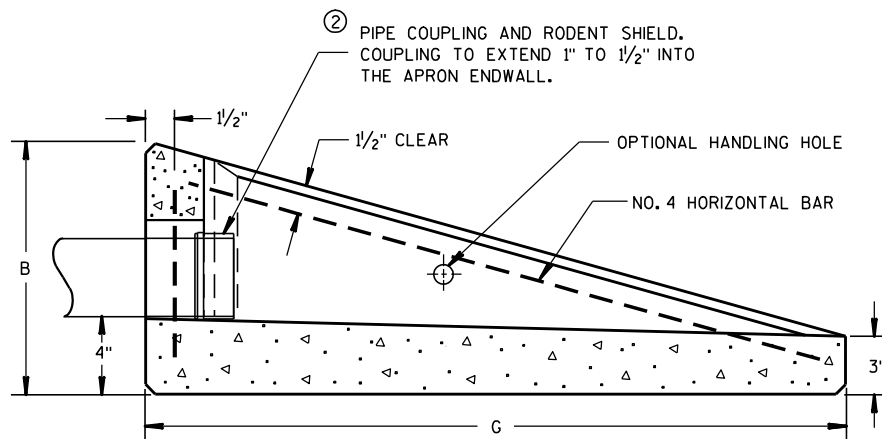
INSTALLATION DETAIL



PLAN VIEW

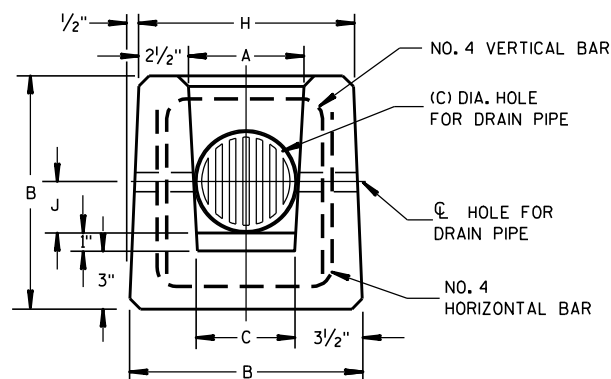


BAR STEEL REINFORCEMENT DETAILS



SECTION A-A

CONCRETE APRON ENDWALL FOR UNDERDRAIN



END VIEW

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.

ALTERNATIVE DESIGNS WHICH PROVIDE EQUIVALENT CAPACITY AND STRENGTH MAY BE USED WHEN APPROVED BY THE ENGINEER. ENDWALL MAY BE EITHER PRECAST OR CAST-IN-PLACE CONCRETE.

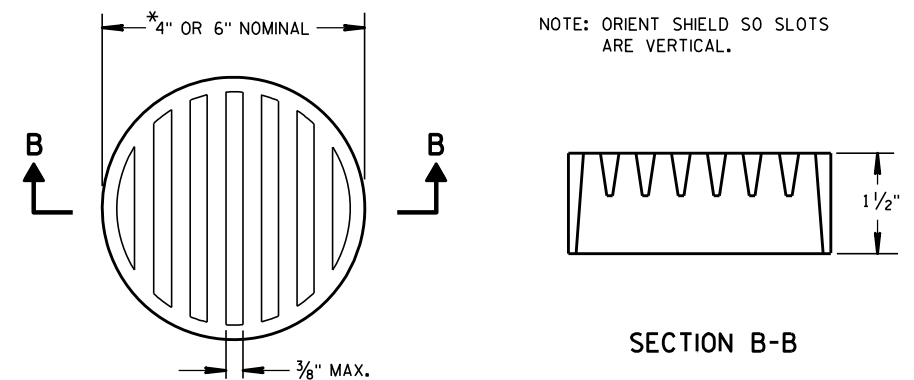
THE UNDERDRAIN PIPE SHALL BE FULLY INSERTED AND SEALED INTO THE ENDWALL WITH CEMENT MORTAR PRIOR TO BACKFILLING AROUND THE STRUCTURE.

THE UPPERMOST POINT OF THE ENDWALL SHALL BE PLACED FLUSH WITH THE ROADWAY SLOPE. ADJACENT EMBANKMENT SLOPES SHALL BE SHAPED TO FIT THE SIDES AND TOE OF THE ENDWALL. EXACT PLACEMENT OF THE OUTFALL PIPE AND ENDWALL SHALL BE DETERMINED BY THE ENGINEER TO MATCH THE ELEVATIONS AND FLOW DIRECTION OF THE ROADSIDE DITCH.

- ① THE OUTFALL PIPE UNDERDRAIN AND FITTINGS SHALL CONFORM TO THE REQUIREMENTS OF THE SPECIFICATION FOR POLY (VINYL CHORIDE) (PVC) PLASTIC DRAIN, WASTE AND VENT PIPE AND FITTINGS, ASTM DESIGNATION: D 2665, SCHEDULE 40 PVC OR THE STANDARD SPECIFICATION FOR TYPE PSM POLY (VINYL CHORIDE) (PVC) SEWER PIPE AND FITTINGS, ASTM DESIGNATION: D 3034, TYPE PSM SDR 23.5 PVC SEWER PIPE, ALL JOINTS SHALL BE SOLVENT WELDED.

THE OUTFALL PIPE INCLUDING ALL FITTINGS AND THE RODENT SHIELD SHALL BE MEASURED AND PAID FOR AS PIPE UNDERDRAIN UNPERFORATED.

- ② THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE OUTFALL PIPE. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.



② RODENT SHIELD

*NOTE: DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING.

REINFORCED CONCRETE APRON ENDWALL FOR PIPE UNDERDRAIN

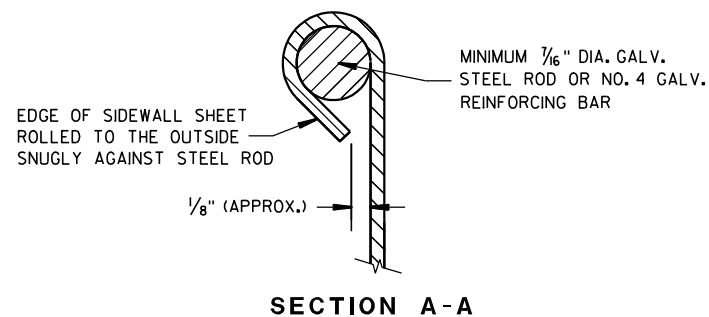
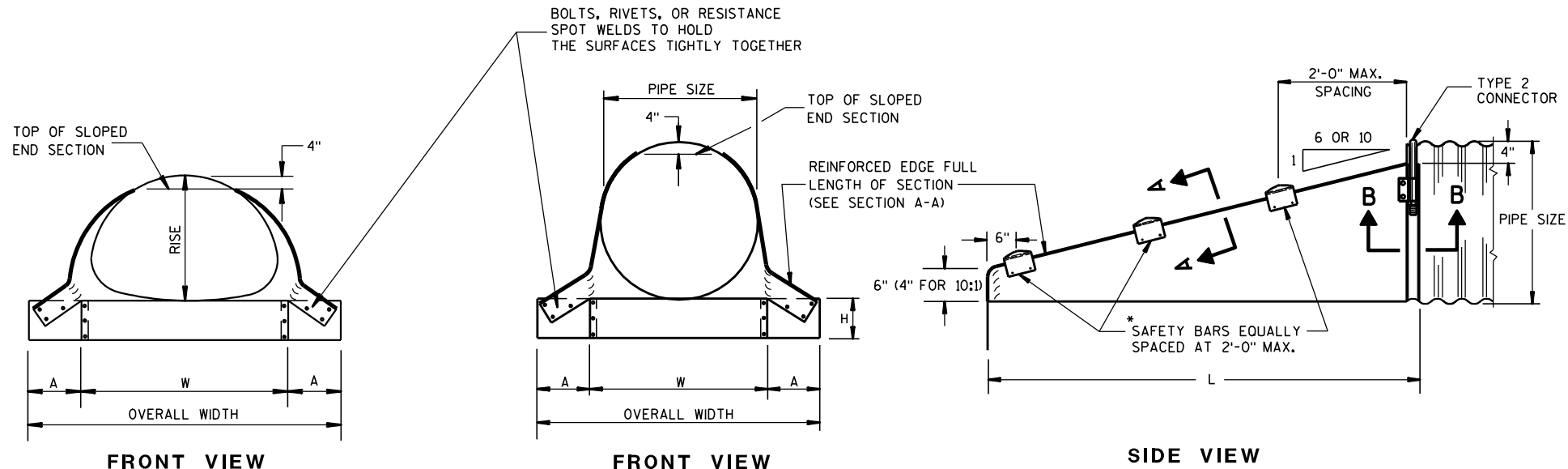
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/10/98
DATE

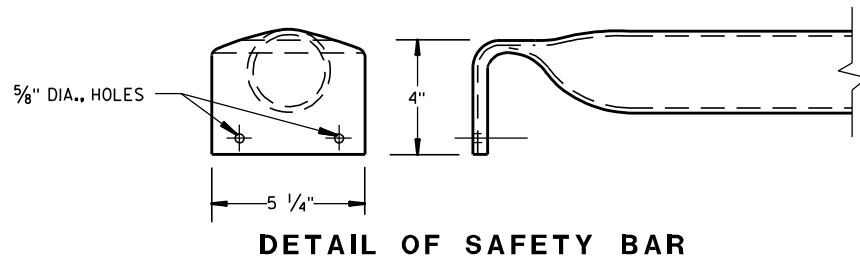
FHWA

/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER

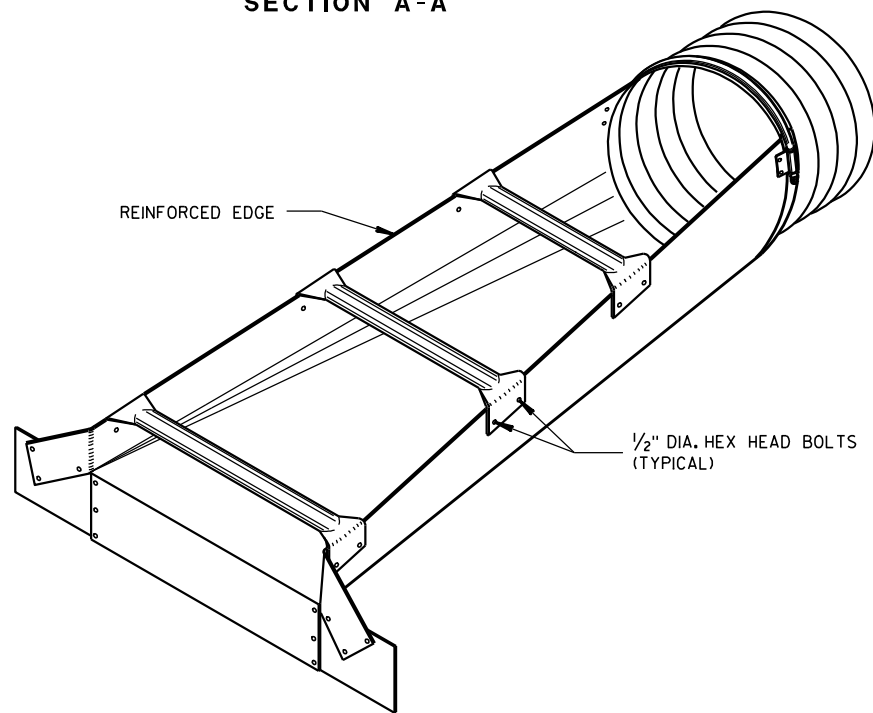


*NOTE:
THREE SAFETY BARS ARE SHOWN.
ACTUAL NUMBER OF BARS REQUIRED AT
A 2'-0" C-C MAX. SPACING WILL VARY
DEPENDING ON THE LENGTH OF THE
END SECTION.

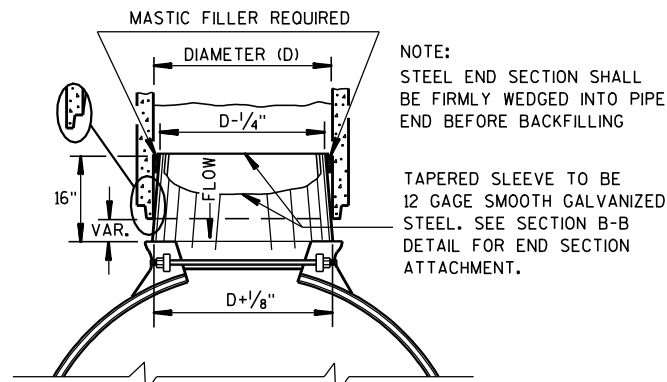
3" GALVANIZED PIPE, FLATTEN
ENDS, THEN BEND OUTSIDE 4"
TO MATCH END SECTION SIDES.



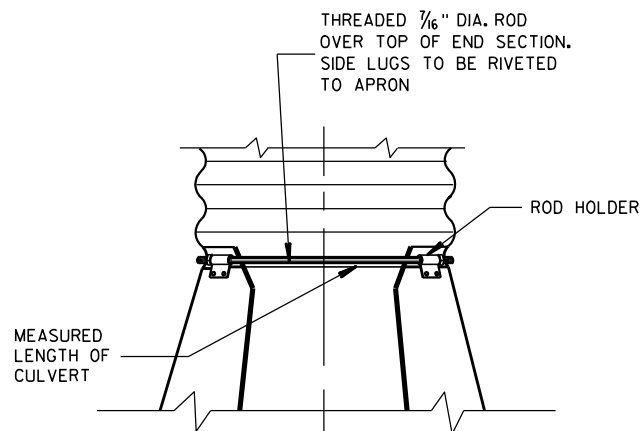
DETAIL OF SAFETY BAR



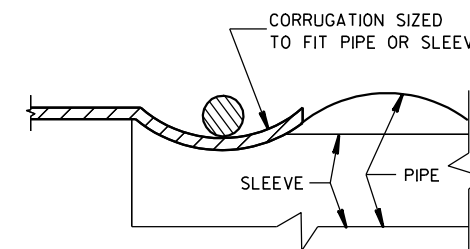
ISOMETRIC VIEW



STEEL ADAPTER SLEEVE FOR
CONCRETE PIPE



TYPE 2
CONNECTION DETAIL



SECTION B-B

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.

SLOPED END SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS, SECTION 521 FOR STEEL APRON ENDWALLS.

SAFETY BARS SHALL BE FABRICATED FROM GALVANIZED STEEL PIPE MEETING THE REQUIREMENTS OF ASTM A-53, GRADE B, SCHEDULE 40 OR APPROVED EQUAL.

STEEL APRON ENDWALLS FOR CULVERT PIPE SLOPED SIDE DRAINS

PIPE DIA. (IN.)	MIN. THICK. (Inches)	DIMENSIONS (Inches)				L DIMENSIONS			
		A	H	W	OVERALL WIDTH	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES
15	.064	8	6	21	37	6:1	30	10:1	70
18	.064	8	6	24	40	6:1	48	10:1	100
21	.064	8	6	27	43	6:1	66	10:1	130
24	.064	8	6	30	46	6:1	84	10:1	160
30	.109	12	9	36	60	6:1	120	10:1	220
36	.109	12	9	42	66	6:1	156	10:1	280
42	.109	16	12	48	80	6:1	192	—	—
48	.109	16	12	54	86	6:1	228	—	—
54	.109	16	12	60	92	6:1	264	—	—
60	.109	16	12	66	98	6:1	300	—	—

STEEL APRON ENDWALLS FOR PIPE ARCH SLOPED SIDE DRAINS

EQUIV. DIA. (Inches)	(Inches)		MIN. THICK. (Inches) ①	DIMENSIONS (Inches)				L DIMENSIONS			
	SPAN	RISE		A	H	W	OVERALL WIDTH	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES
15	17	13	.064 *	7	6	30	44	6:1	30	10:1 ②	70
18	21	15	.064 *	8	6	27	43	6:1	30	10:1	70
21	24	18	.064 *	8	6	30	46	6:1	48	10:1	100
24	28	20	.064 *	8	6	34	50	6:1	60	10:1	120
30	35	24	.079 *	12	9	41	65	6:1	84	10:1	160
36	42	29	.109 *	12	9	48	72	6:1	114	10:1	210
42	49	33	.109	16	12	55	87	6:1	138	—	—
48	57	38	.109	16	12	63	95	6:1	168	—	—
54	64	43	.109	16	12	70	102	6:1	198	—	—

① * MINIMUM THICKNESS OF ALL 10:1 SLOPED SIDE DRAINS IS 0.109".
② ACTUAL SLOPE GREATER THAN 10:1.

STEEL APRON ENDWALLS FOR CULVERT PIPE AND PIPE ARCH SLOPED SIDE DRAINS

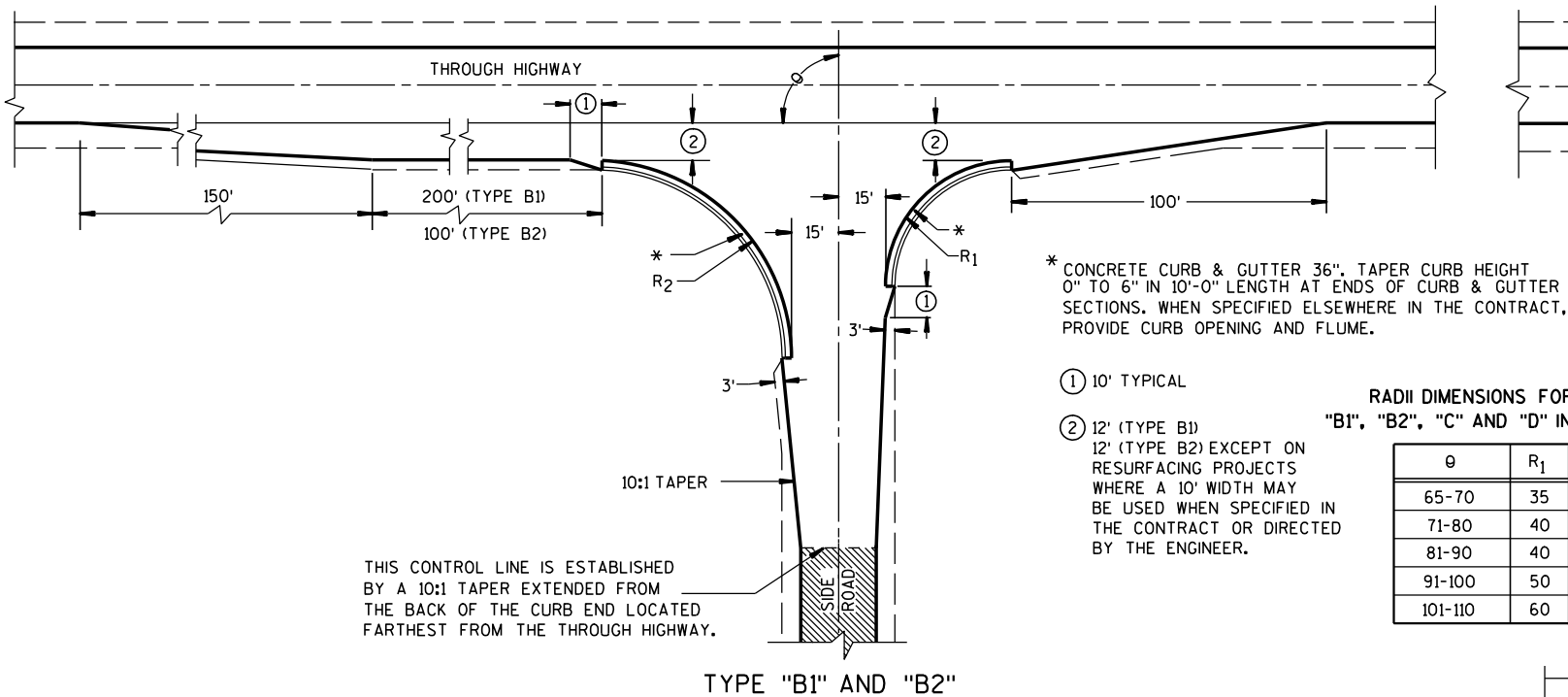
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/5/2012
DATE

FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



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.

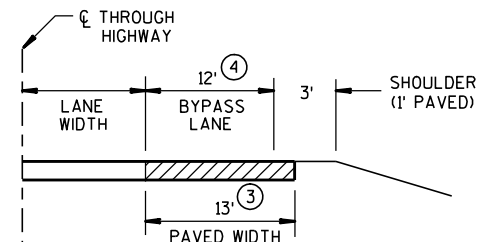
SIDE ROAD SURFACING NOTE

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.

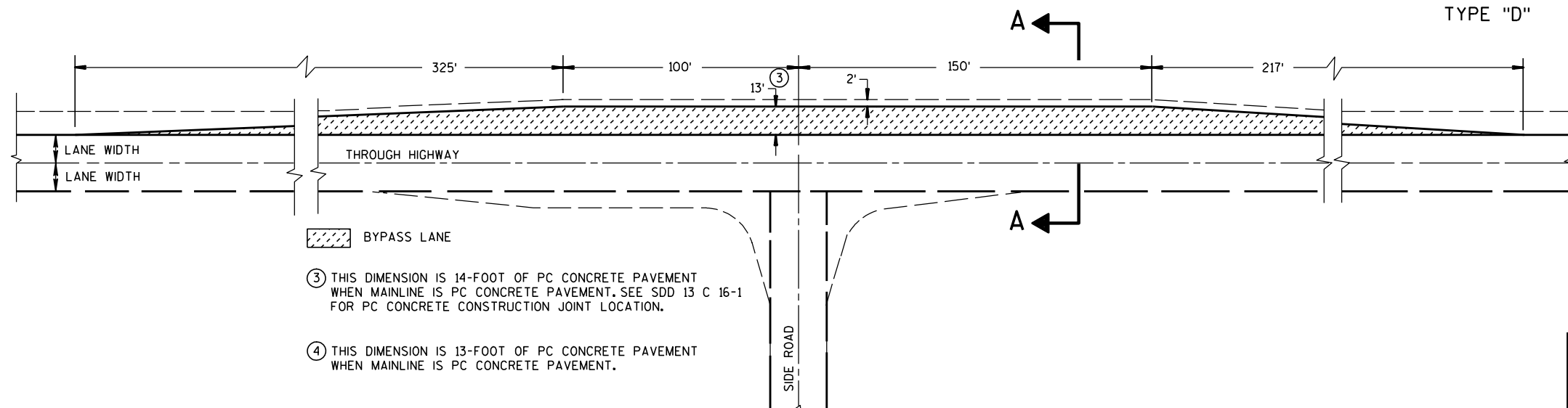
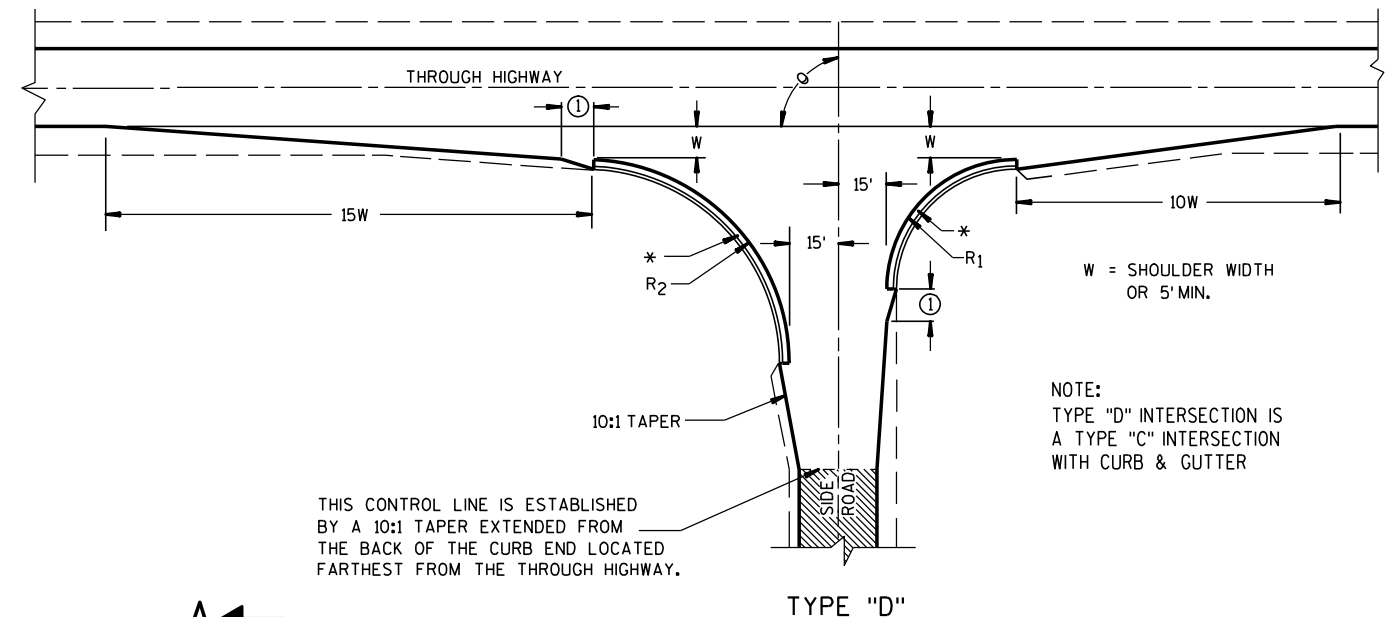
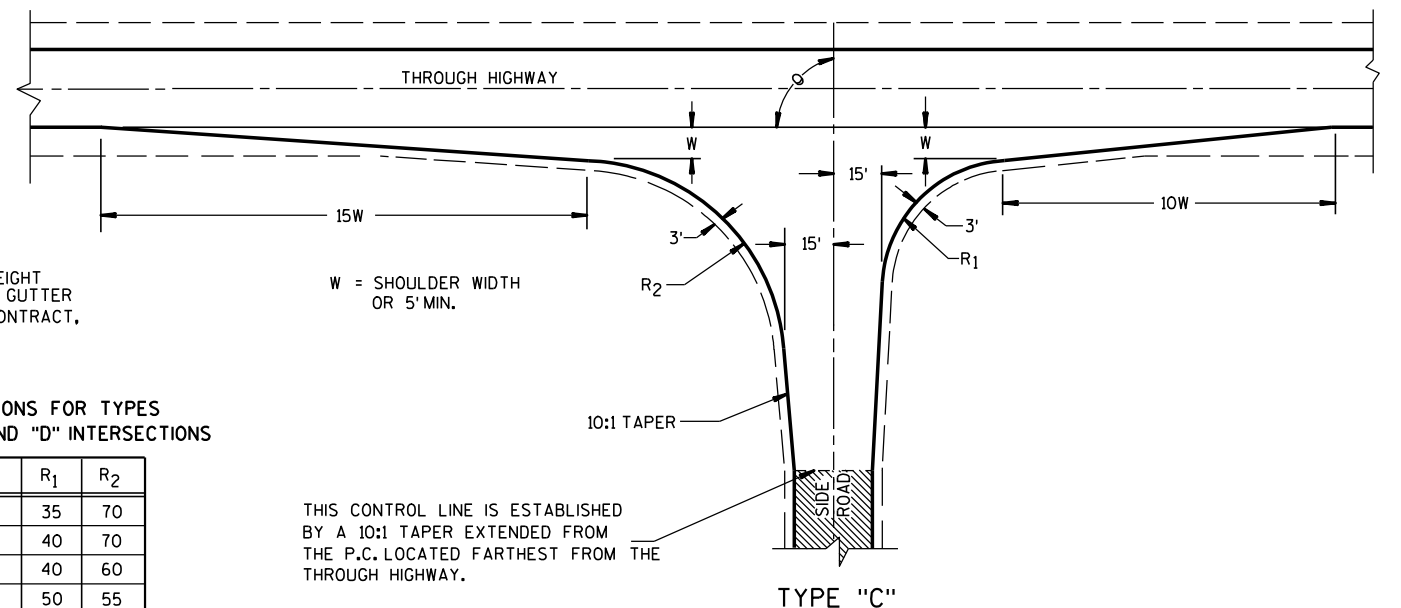
WHEN THE SIDE ROAD IS THE CONSTRUCTION PROJECT, THE INTERSECTION SURFACING SHALL BE THE SAME AS FOR THE PROJECT.

EXISTING SURFACE



SECTION A-A

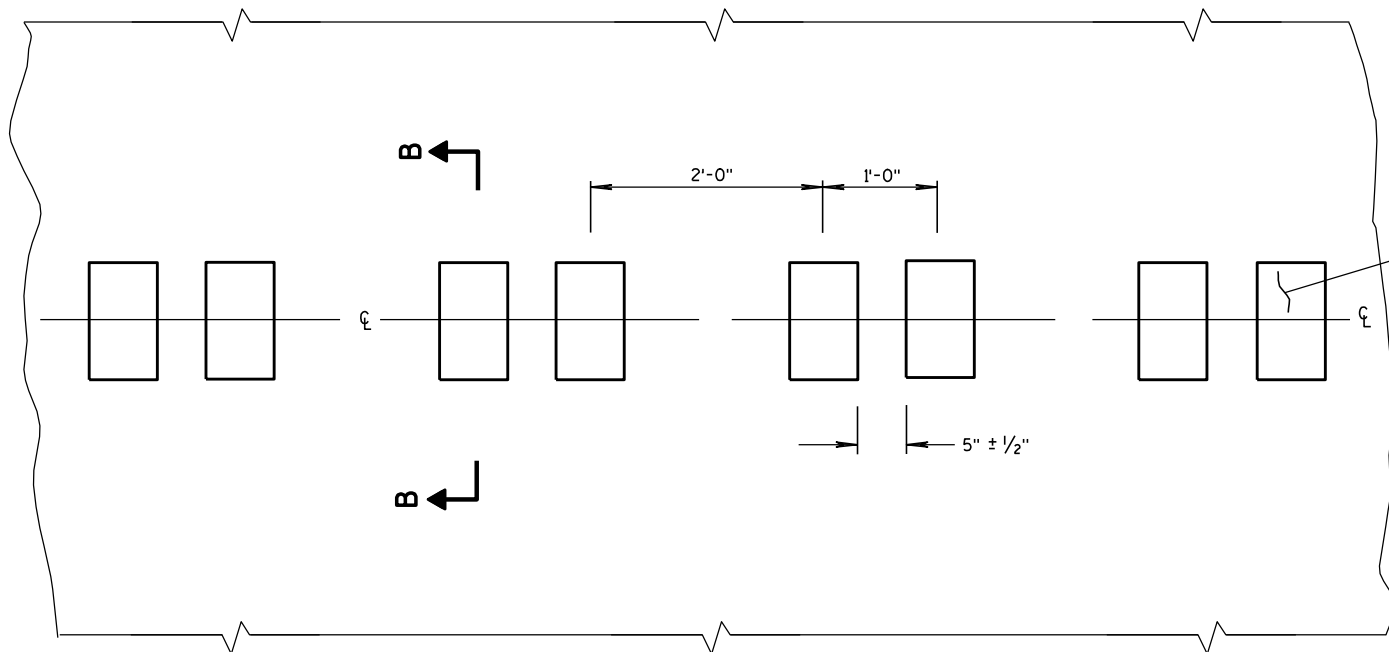
(SHOWING BYPASS LANE AND SHOULDER)



TEE INTERSECTION BYPASS LANE DETAIL

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

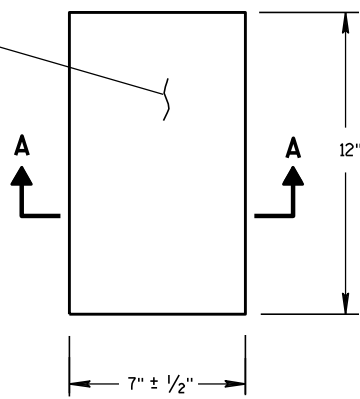


PLAN VIEW
CENTER LINE WITH GROOVES

6

6

PLACEMENT DETAIL FOR MILLED RUMBLE STRIP



PLAN VIEW
(SINGLE GROOVE)

GENERAL NOTES

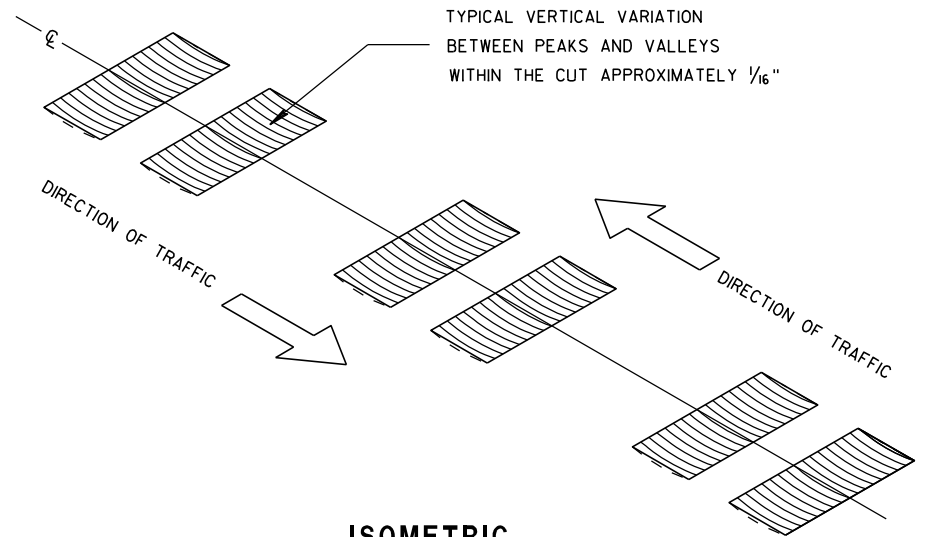
DETAILS OF CONSTRUCTION SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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

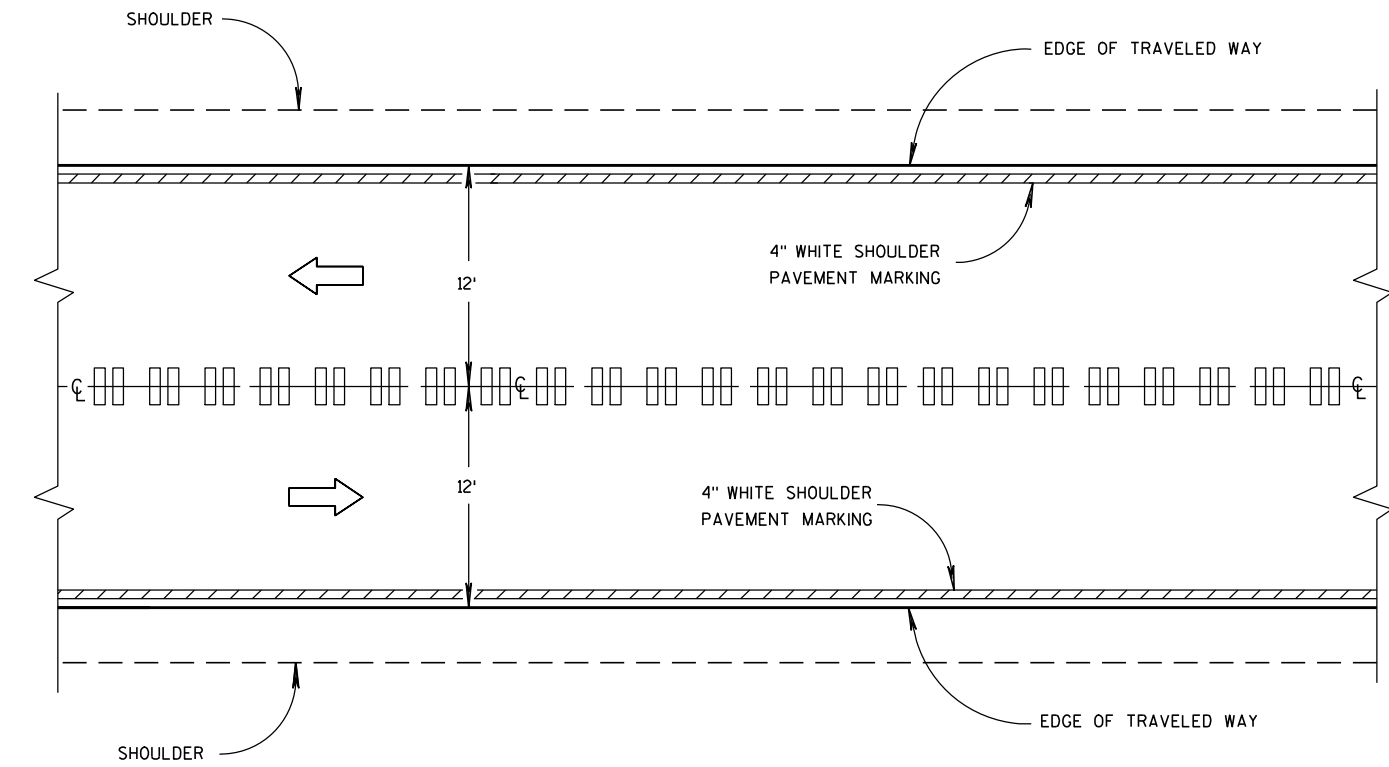
INSTALL PAVEMENT MARKING AFTER THE GROOVES ARE INSTALLED.

SEE SIGNING PLAN FOR SIGN REQUIREMENTS THAT MAY BE NEEDED.

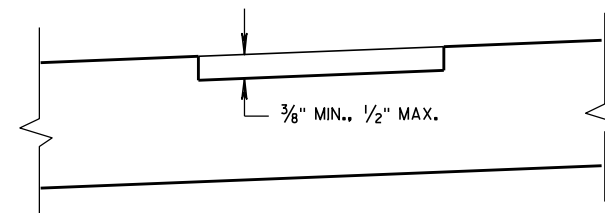
- ① CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS, WHEN DIRECTED BY THE ENGINEER.



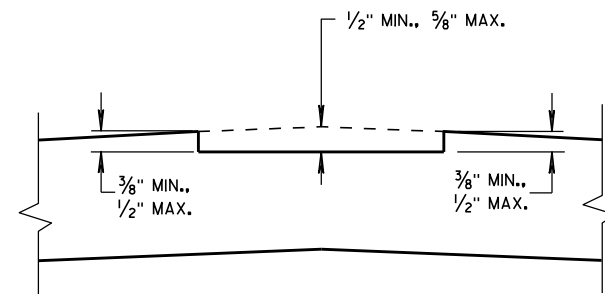
ISOMETRIC



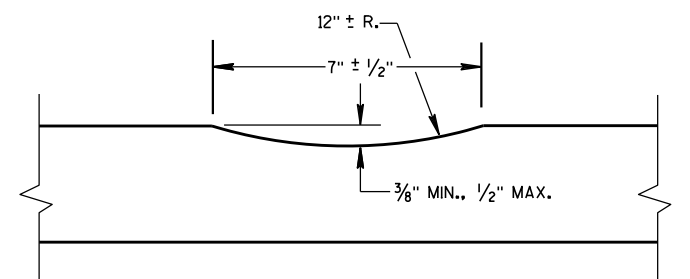
CENTER LINE GROOVES ON TWO-WAY ROADWAYS



SECTION B-B
SUPERELEVATED ROADWAY



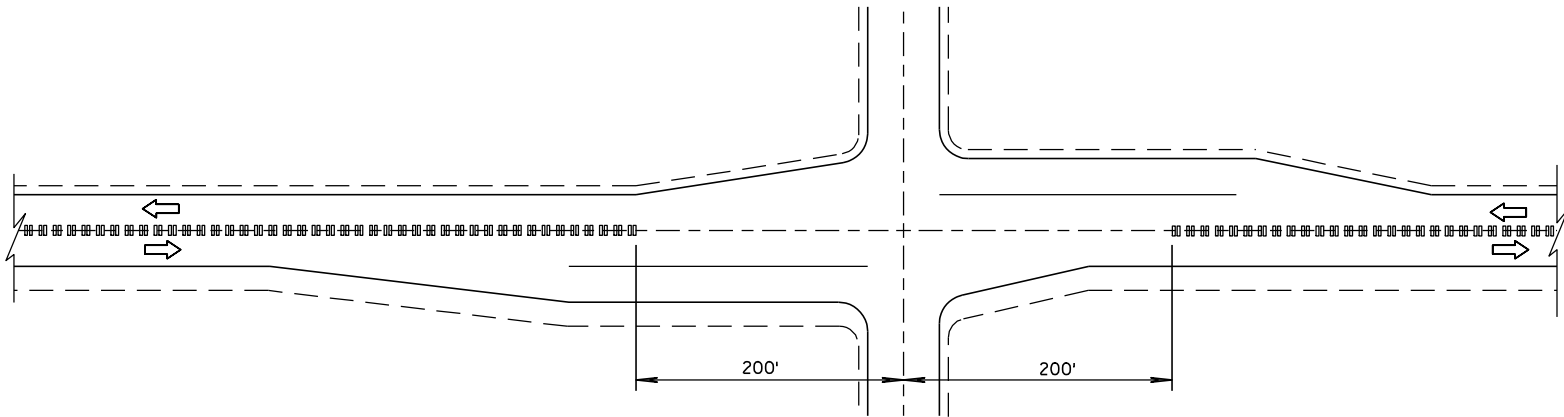
SECTION B-B
CROWNED ROADWAY



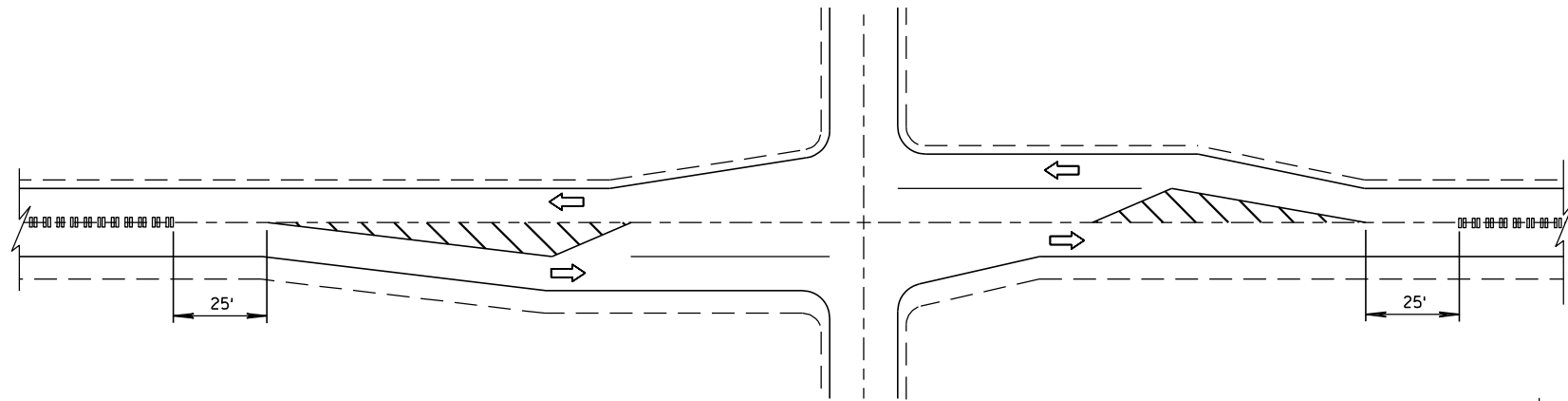
SECTION A-A

2-LANE RURAL
CENTER LINE RUMBLE STRIP,
MILLING

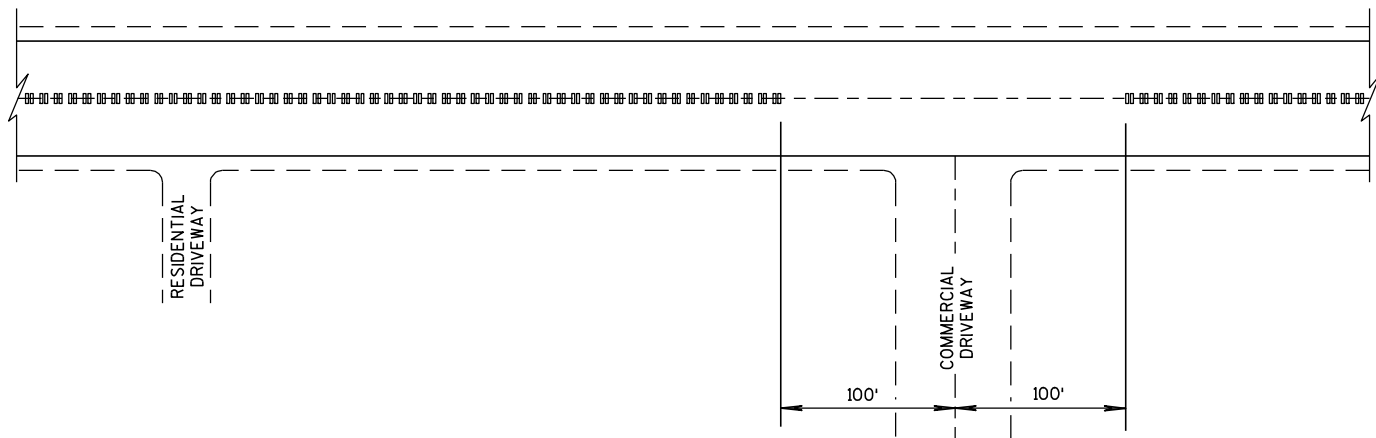
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



CENTER LINE GROOVES AT INTERSECTIONS

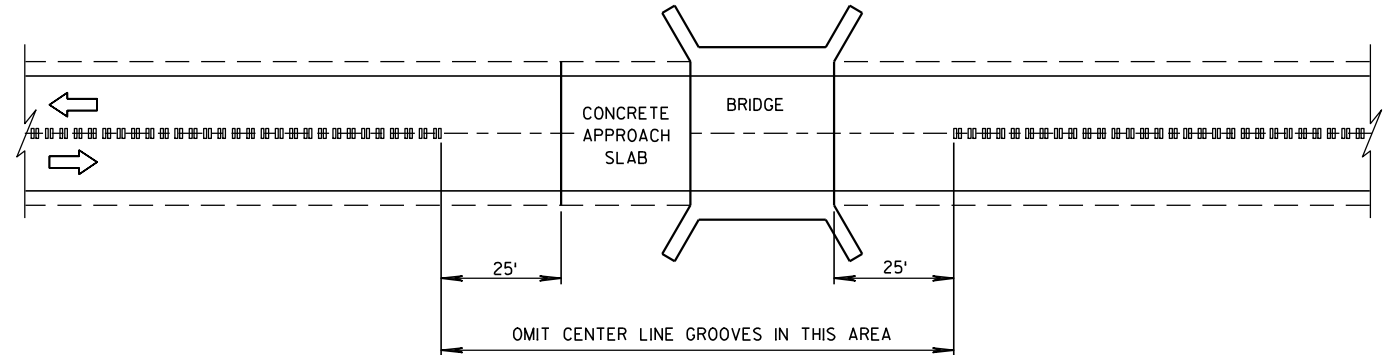


CENTER LINE GROOVES AT INTERSECTIONS
(WITH LEFT TURN LANES)

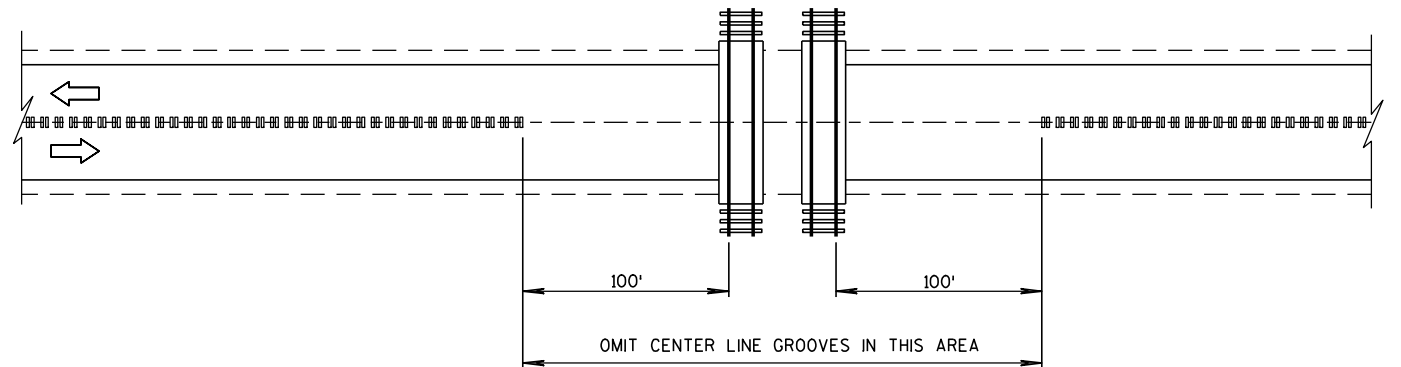


CENTER LINE GROOVES AT DRIVEWAYS ¹

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



CENTER LINE GROOVES AT BRIDGES

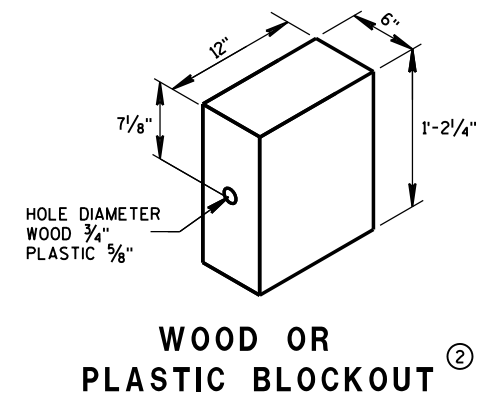
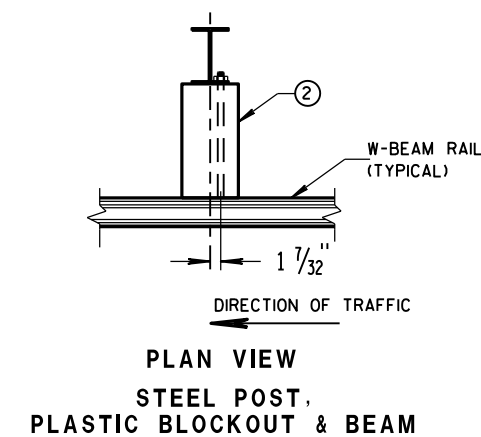
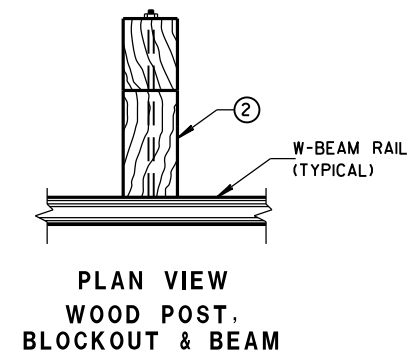
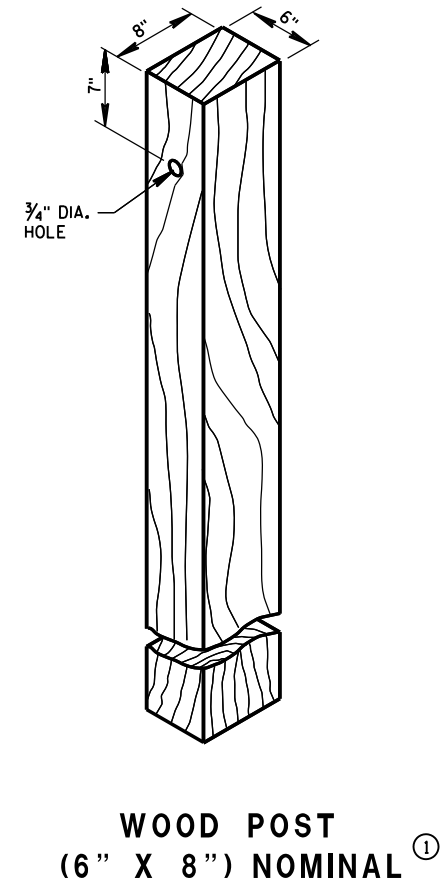
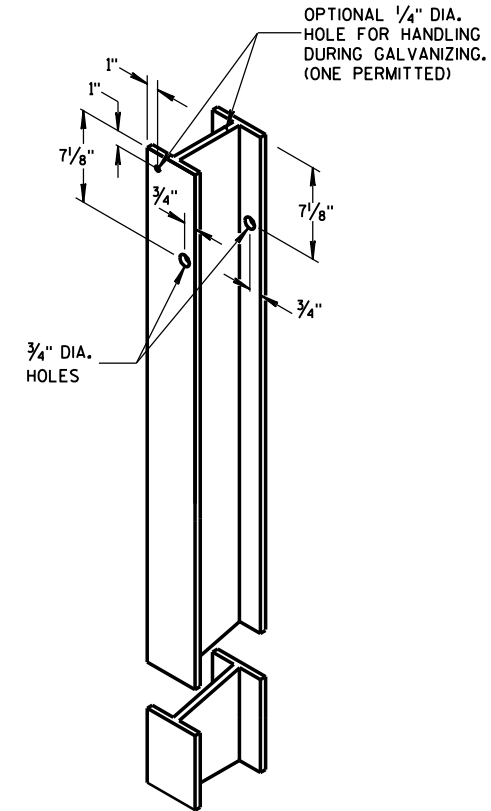
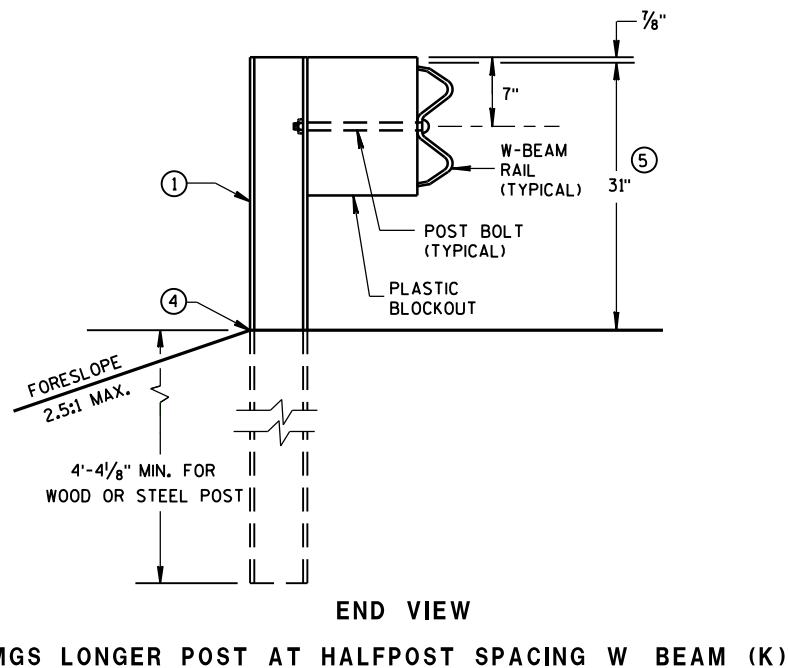
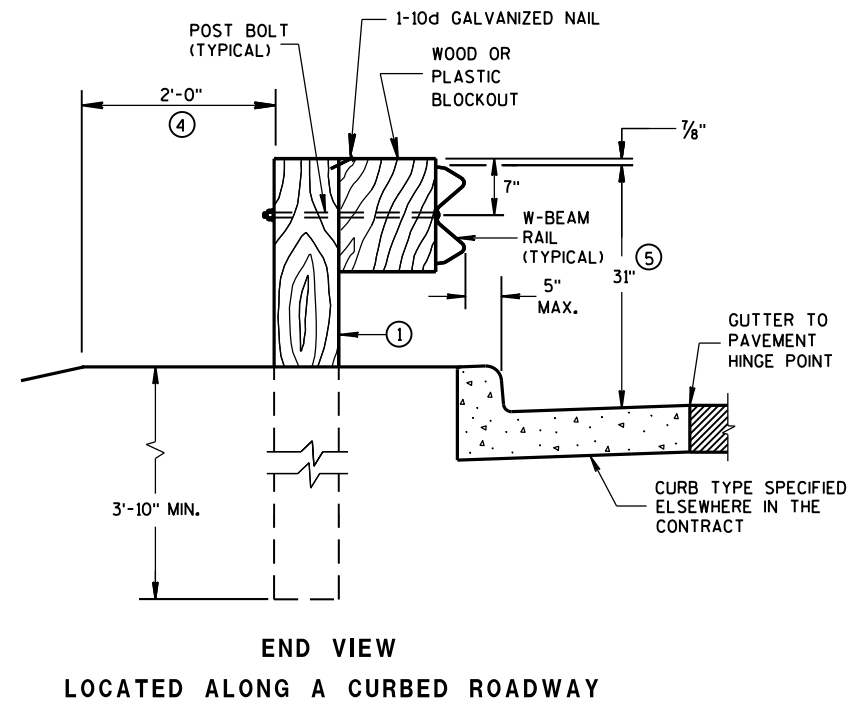
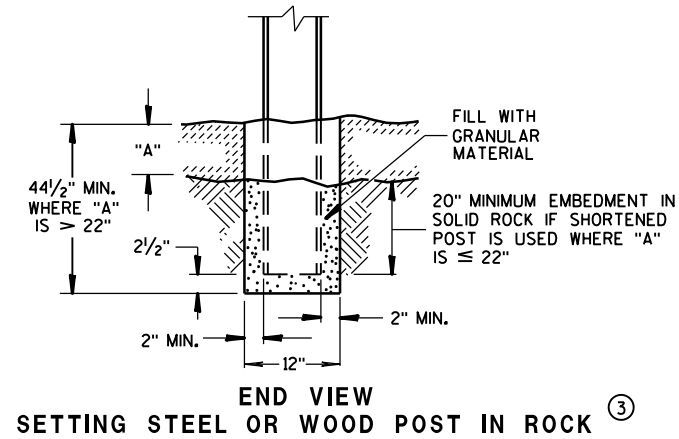


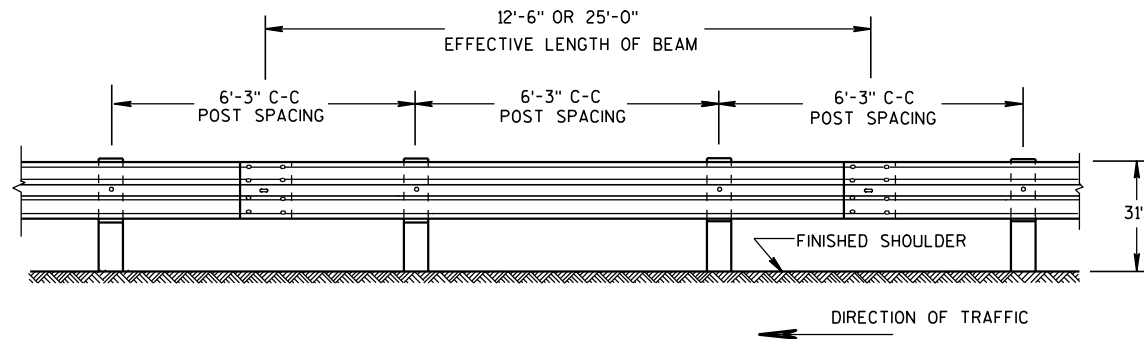
CENTER LINE GROOVES AT RAILROADS

2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 8/28/2012 DATE	/S/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	

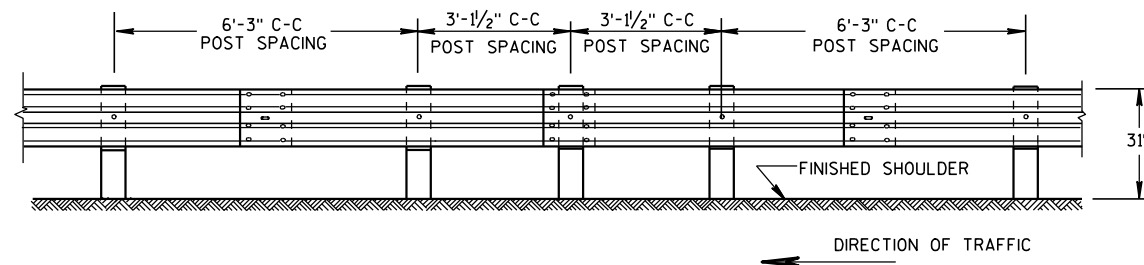
6

- S.D.D. 14 B 42-2a**

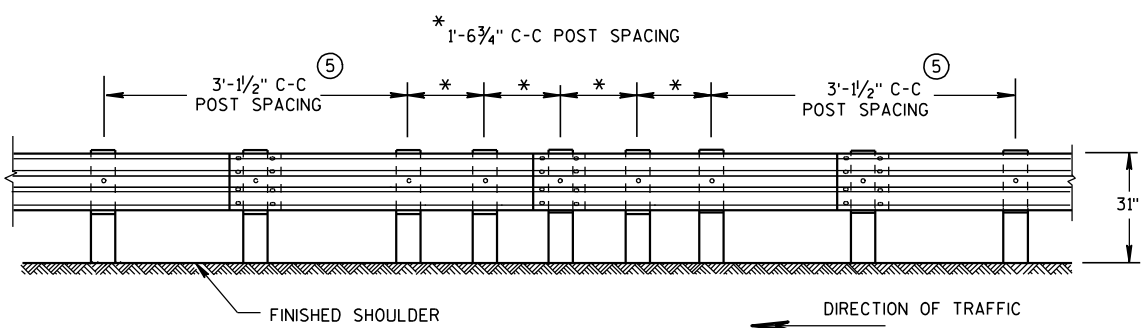




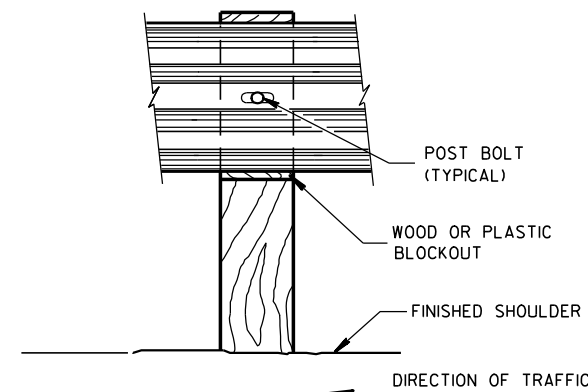
FRONT VIEW
POST SPACING STANDARD INSTALLATION



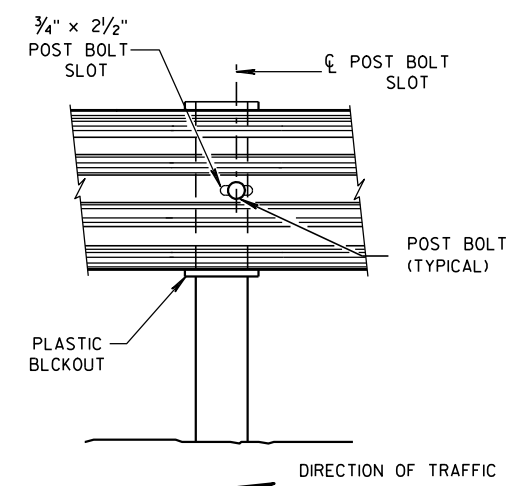
FRONT VIEW
**HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)**



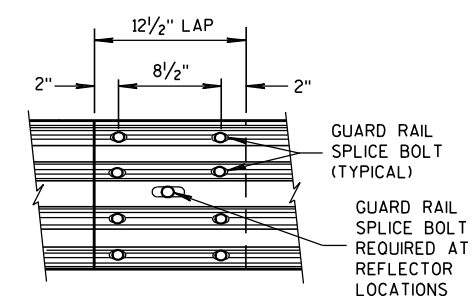
FRONT VIEW
QUARTER POST SPACING (QS)



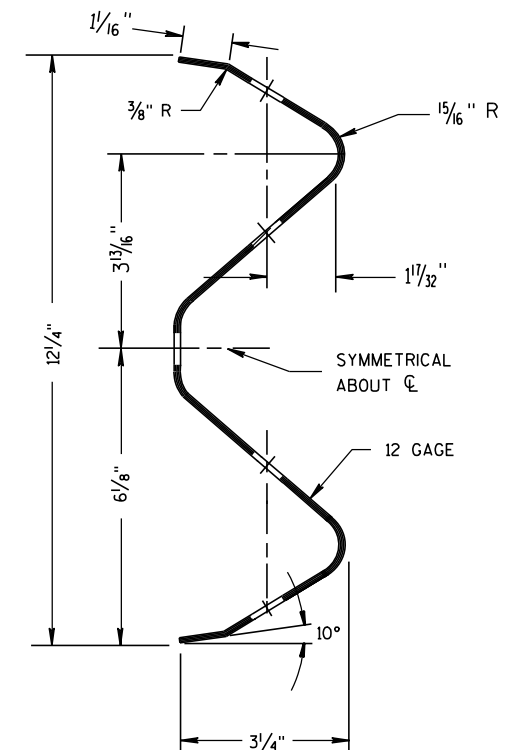
FRONT VIEW AT WOOD POST



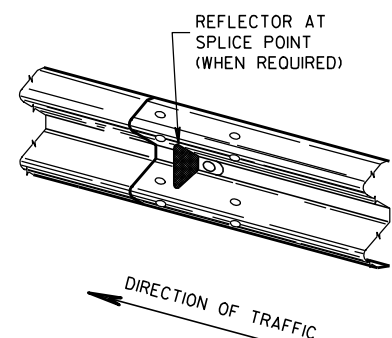
FRONT VIEW AT STEEL POST



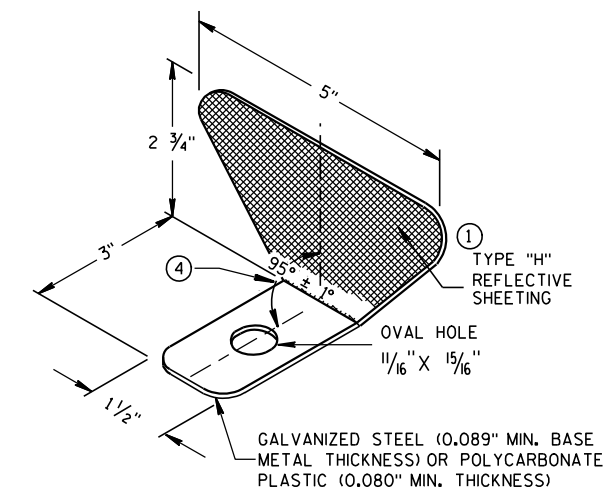
**FRONT VIEW
MID-SPAN BEAM SPLICE**



SECTION THRU W-BEAM RAIL



ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION



GENERAL NOTES

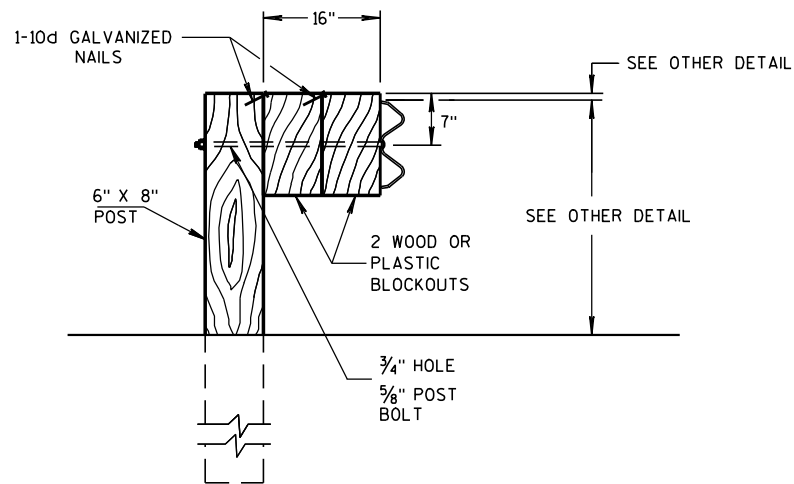
- ① PROVIDE TYPE "H" SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH TYPE "H" YELLOW REFLECTIVE SHEETING.
 - ② DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL. RAIL SPLICE LOCATIONS ARE THE ONLY ACCEPTABLE LOCATIONS FOR REFLECTORS.
 - ③ REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.
 - ④ PROVIDE AN ANGLE OF BEND OF 90° ± 1° FOR TWO-SIDED REFLECTORS.
 - ⑤ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.
- POST BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND 5/8" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.
- GUARD RAIL SPLICE BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.

REFLECTOR SPACING

	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200'	50' C-C	1	3
	> 200'	100' C-C	1	
TWO WAY TRAFFIC	< 200'	25' C-C	1 ③	6
	> 200'	50' C-C	1	
TWO WAY TRAFFIC	< 200'	50' C-C	2 ④	3
	> 200'	100' C-C	2	

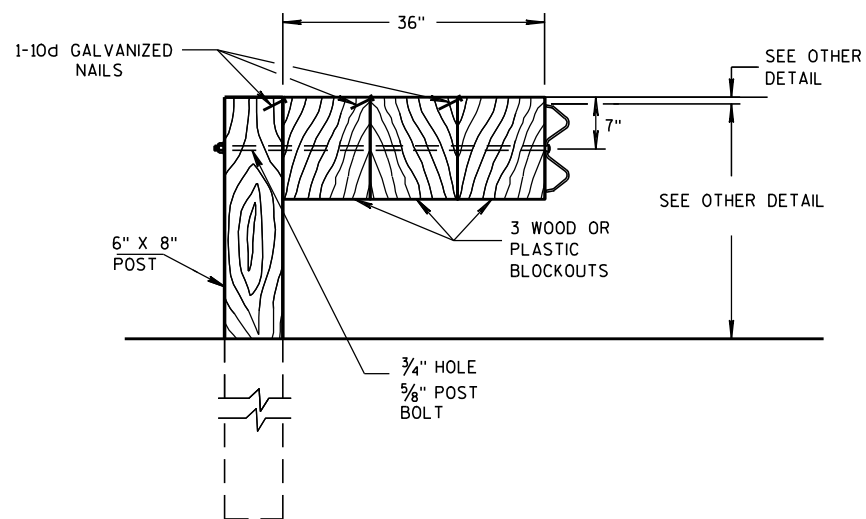
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



DETAIL FOR 16" BLOCKOUT DEPTH

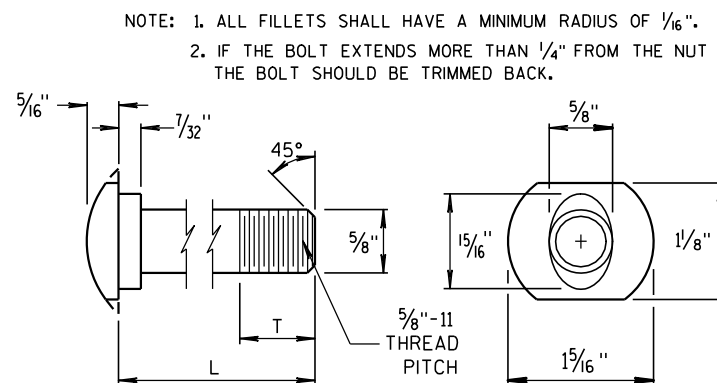
IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.



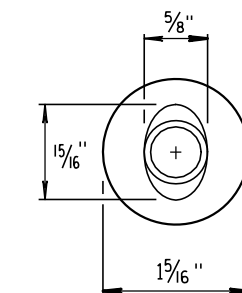
DETAIL FOR 36" BLOCKOUT DEPTH

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.

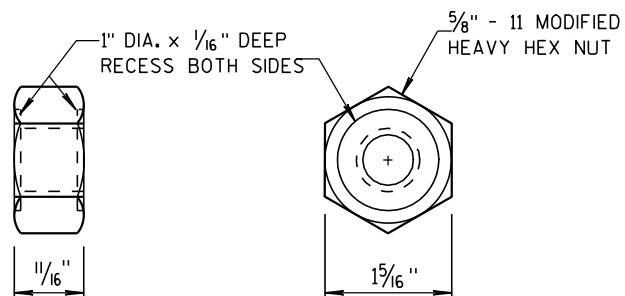
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.



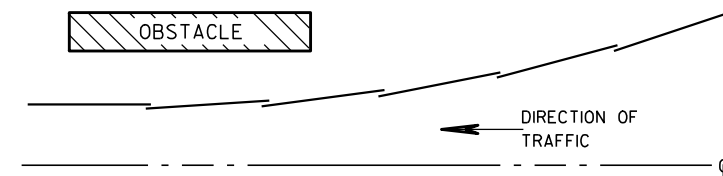
POST BOLT TABLE



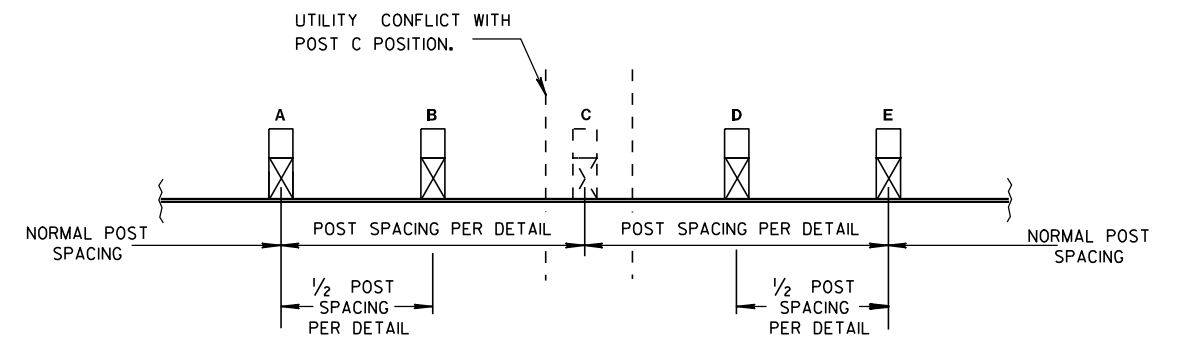
ALTERNATE BOLT HEAD



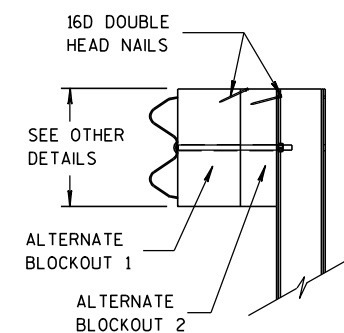
POST BOLT AND RECESS NUT



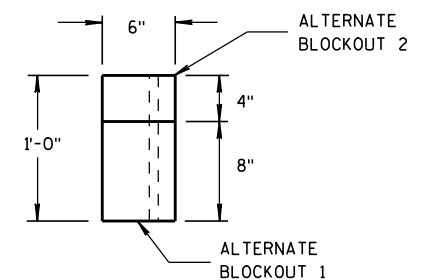
PLAN VIEW
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS
UNDERGROUND OBSTRUCTION



SIDE VIEW



TOP VIEW

ALTERNATE WOOD
BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/15/2011
DATE

FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

GENERAL NOTES

- (A) THE SLOPE IN THE AREA BOUNDED BY THE EXTENDED VEHICLE RUNOUT PATH (EVRP), 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 MANUFACTURES REQUIRE DIFFERENT PERFORATED W-BEAM RAIL END PANELS. SEE MANUFACTURES INFORMATION.
- (D) THE TOP OF THE STEEL TUBE ON POST 1 AND POST 2 SHALL NOT BE MORE THAN 3" ABOVE THE FINISH GROUND ELEVATION.
- (E) SHEETING IS ATTACHED TO 0.040 ALUMINUM SHEET AND ATTACHED TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS. ONE SCREW PER CORNER OF E.A.T.
- (F) 1/2" DIAMETER X 3" LONG LAG BOLT AND WASHER.
- (H) HARDWARE VARIES BETWEEN DIFFERENT MANUFACTURES. SEE MANUFACTURE'S DRAWING FOR INFORMATION.
- (I) DIMENSIONS MAY VARY. SEE MANUFACTURE'S INFORMATION.

SEE SDD 14B42 FOR MORE INFORMATION.

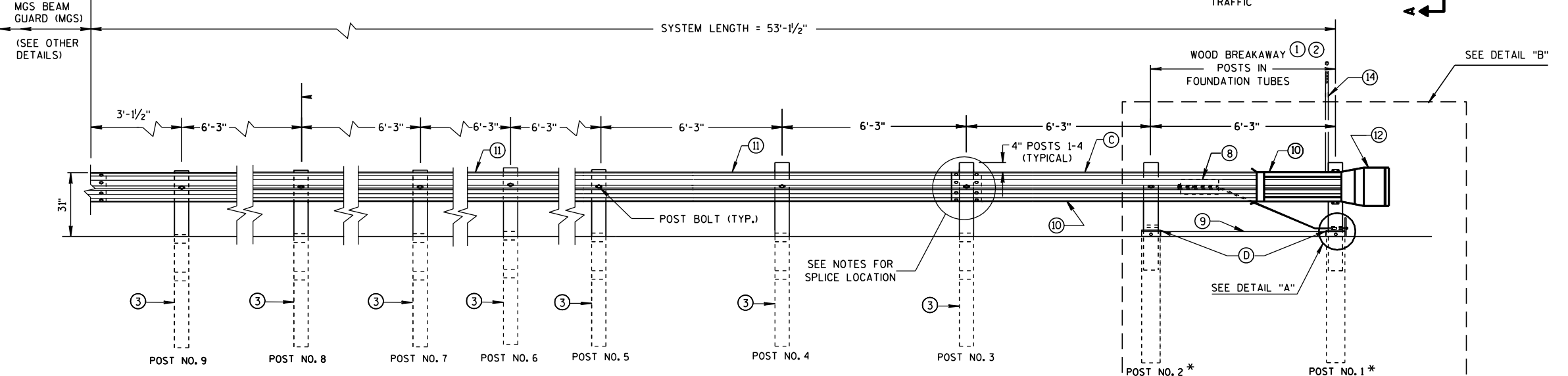
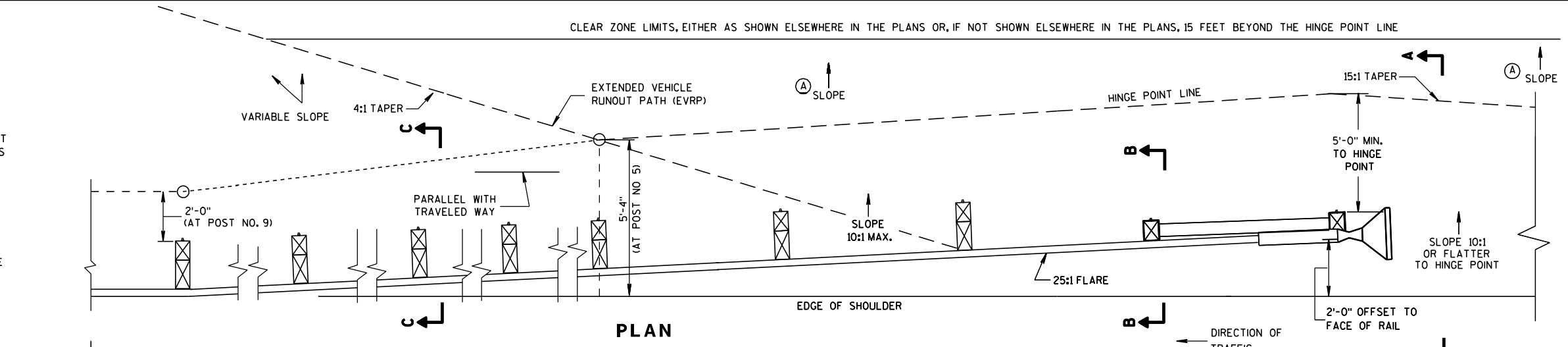
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

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

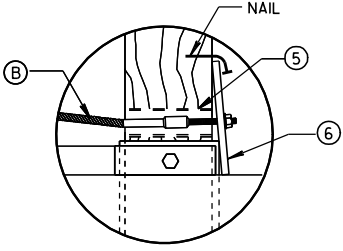
W-BEAM RAIL SPLICES ARE LOCATED AT POST NUMBER 3, AND BETWEEN POST 5 AND 6, BETWEEN POSTS 7 AND 8, AND MIDDLE OF THE SPAN AFTER POST 9.

PATTERN AND COLORS ON REFLECTIVE SHEETING TYPE H ARE TO CONFORM TO OM3-L OR OM3-R OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

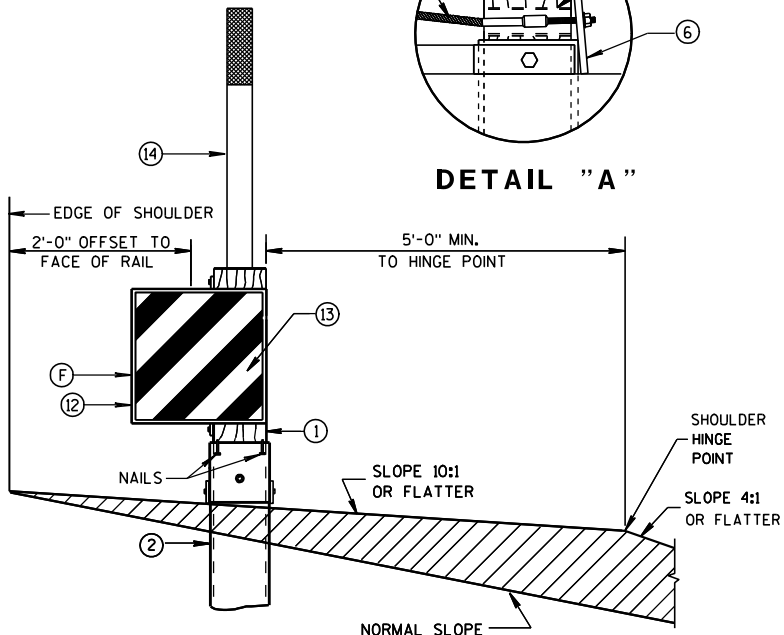
THE CENTER OF THE UPPER 3/2" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE ($\pm \frac{3}{4}$ ")



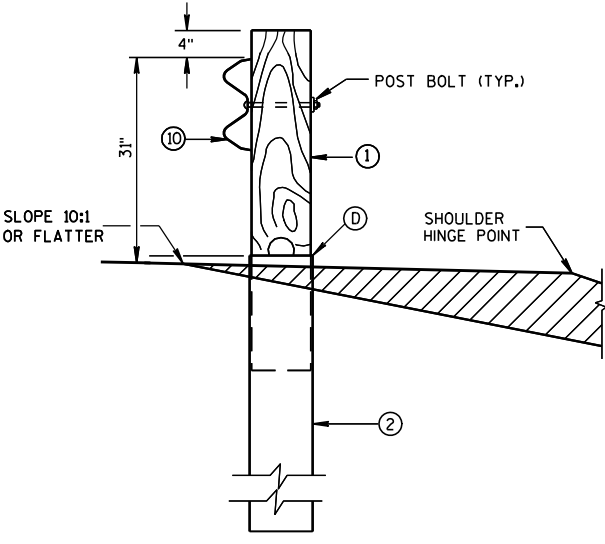
ELEVATION



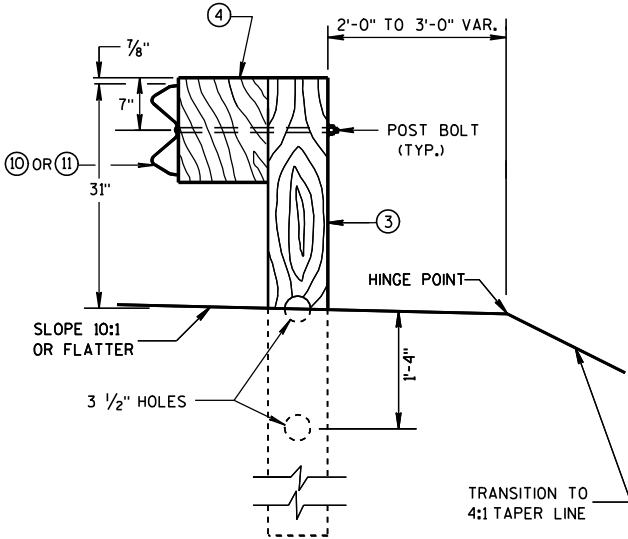
DETAIL "A"



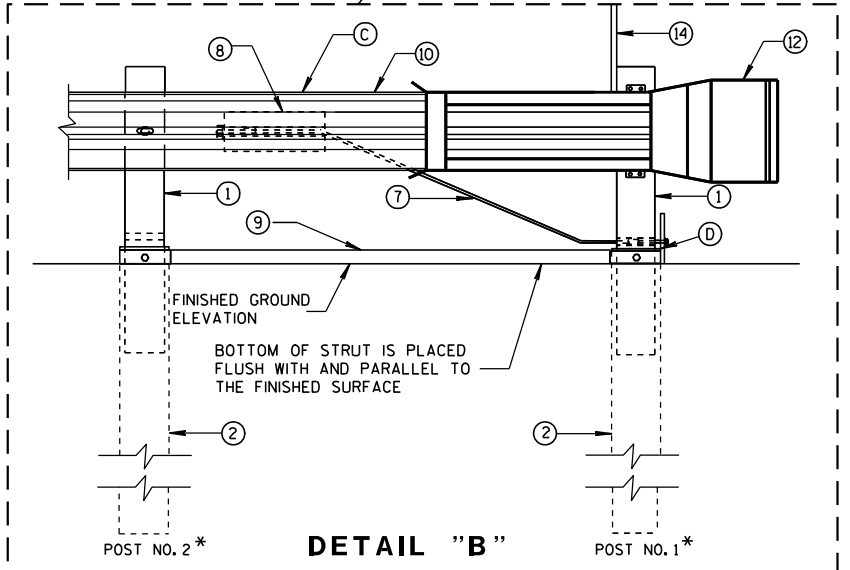
SECTION A-A
TYPICAL AT POST NO. 1*



SECTION B-B
TYPICAL AT POST NO. 2*



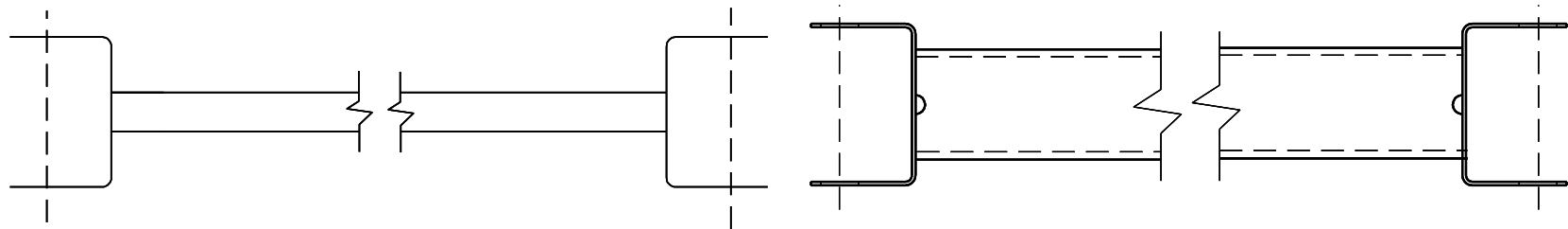
SECTION C-C
TYPICAL AT POST NOS. 3-9



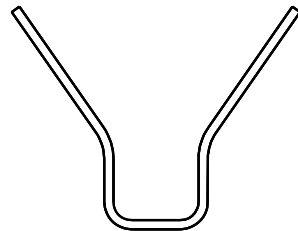
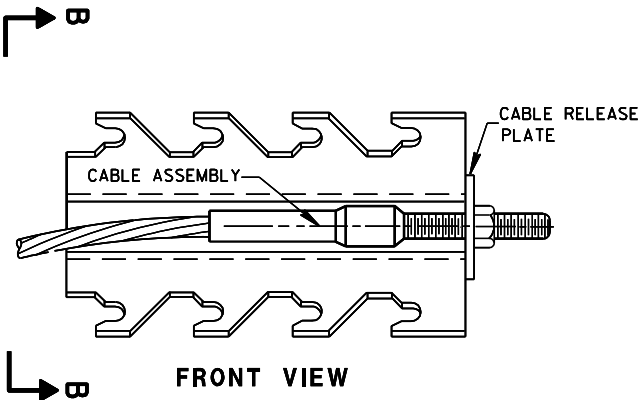
DETAIL "B"

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

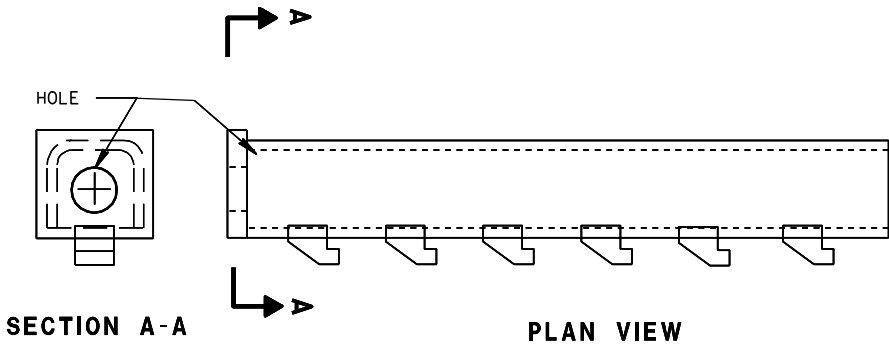
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



9 H
GENERIC GROUND STRUT

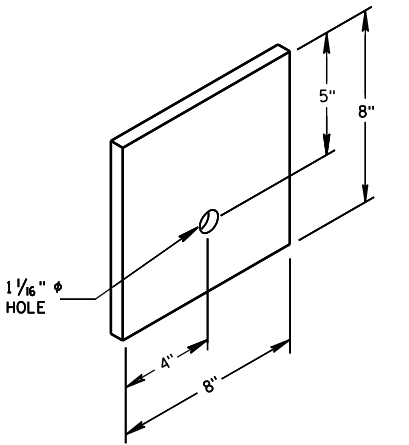


SECTION B-B
8 H
GENERIC ANCHOR CABLE BOX



BILL OF MATERIALS

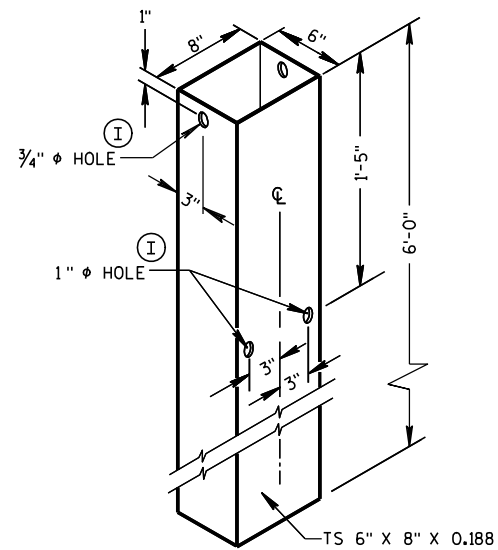
PART NO.	DESCRIPTION
MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.	
①	WOOD BREAKAWAY POST
②	6" X 8" X 0.188", 6'-0" LONG FOUNDATION TUBE AT POSTS 1 AND 2
③	WOOD CRT
④	WOOD BLOCKOUT
⑤	PIPE SLEEVE
⑥	BEARING PLATE
⑦	BCT CABLE ASSEMBLY
⑧	ANCHOR CABLE BOX
⑨	GROUND STRUT
⑩	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
⑪	STANDARD W-BEAM RAIL, MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
⑫	END SECTION EAT
⑬	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE H (ONLY THE SHEETING IS SUPPLIED BY THE MANUFACTURER)
⑭	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)



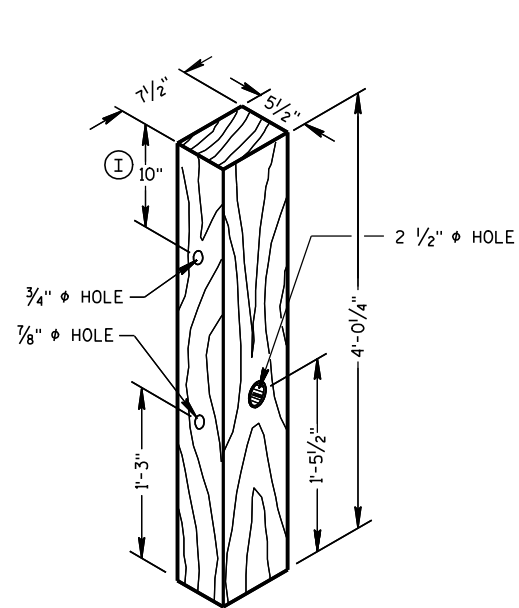
6
BEARING PLATE

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

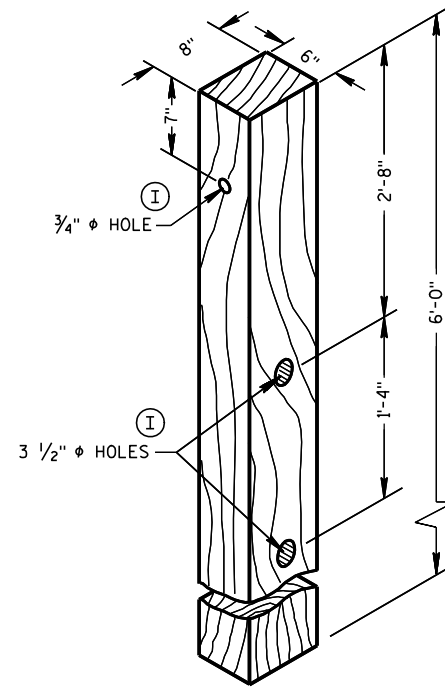
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



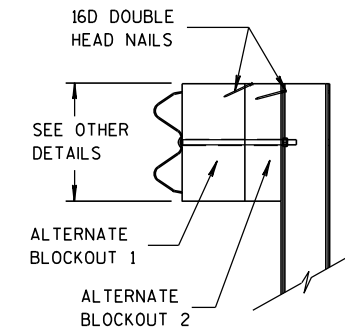
FOUNDATION TUBE^②



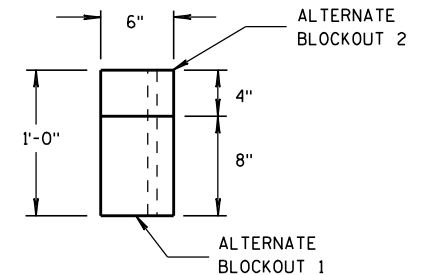
WOOD BREAKAWAY POST^①



WOOD CRT POST^③

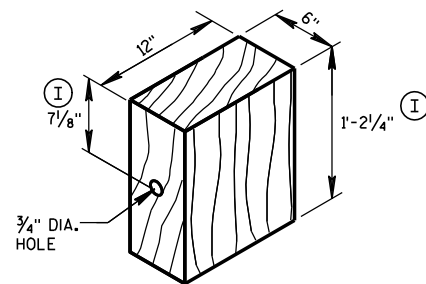


SIDE VIEW



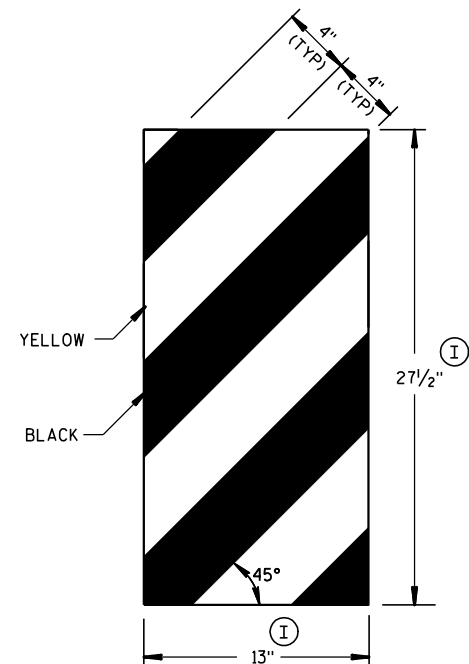
TOP VIEW

ALTERNATE WOOD
BLOCKOUT DETAIL

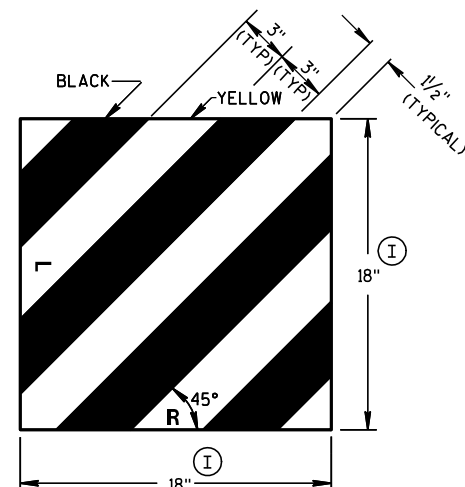


WOOD BLOCKOUT^④
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2

YELLOW REFLECTIVE TAPE
3" X 9" TYPE H
REFLECTIVE SHEETING



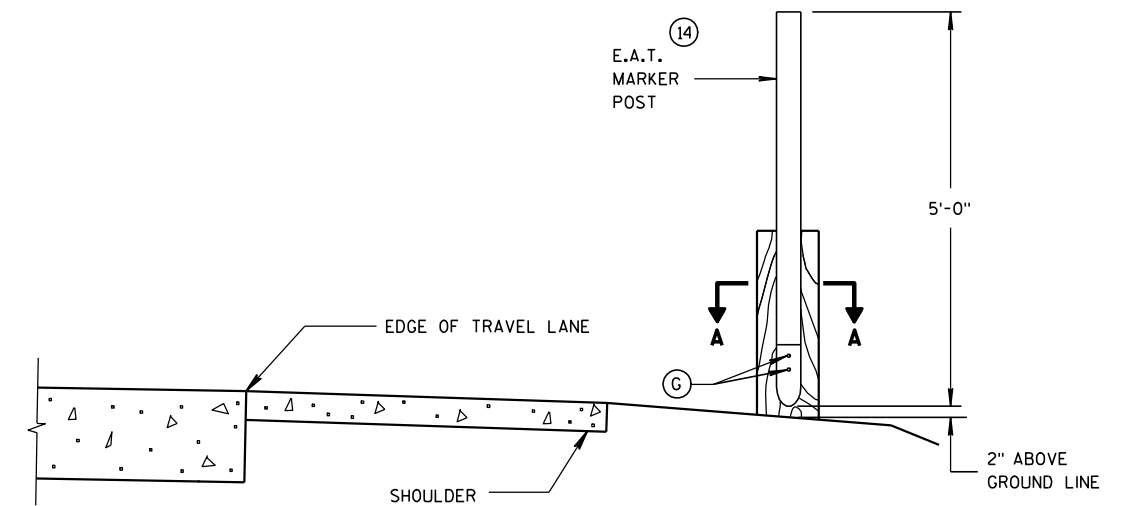
GENERIC REFLECTIVE SHEETING^{⑬ ①}



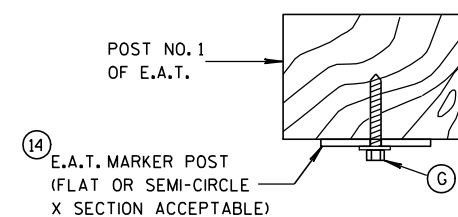
FRONT VIEW

SIDE VIEW

E.A.T. MARKER POST^⑭



TYPICAL INSTALLATION OF E.A.T.
MARKER POST BACKSIDE OF POST NO. 1
(E.A.T. AND RAIL REMOVED FOR CLARITY)



SECTION A-A

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

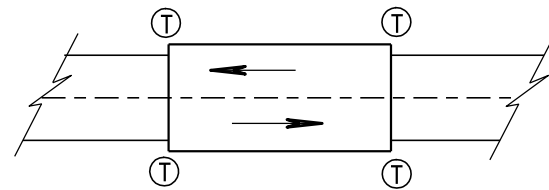
APPROVED

5/23/2011

DATE

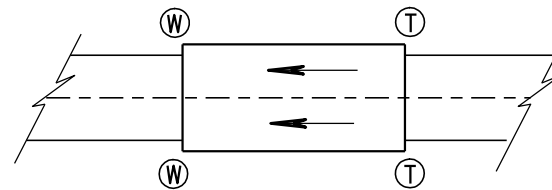
FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



TWO WAY TRAFFIC

Ⓣ THRIE BEAM CONNECTION



ONE WAY TRAFFIC

Ⓦ W-BEAM CONNECTION WHEN REQUIRED

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".

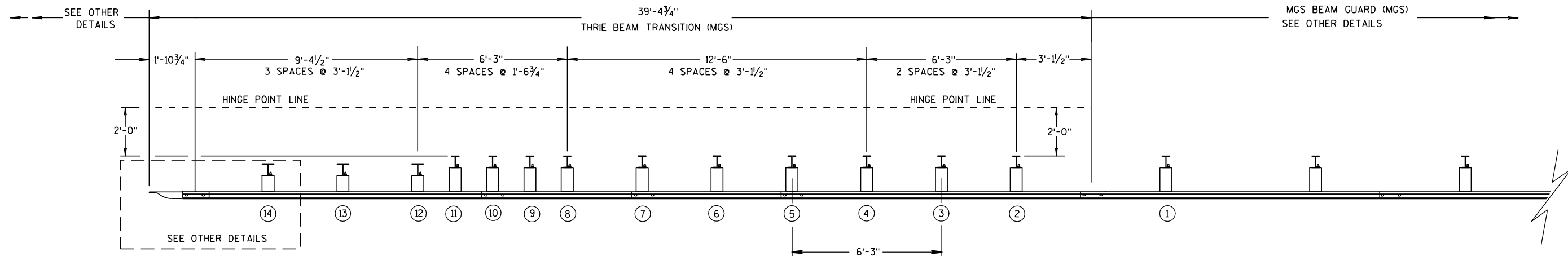
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2 1/2", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

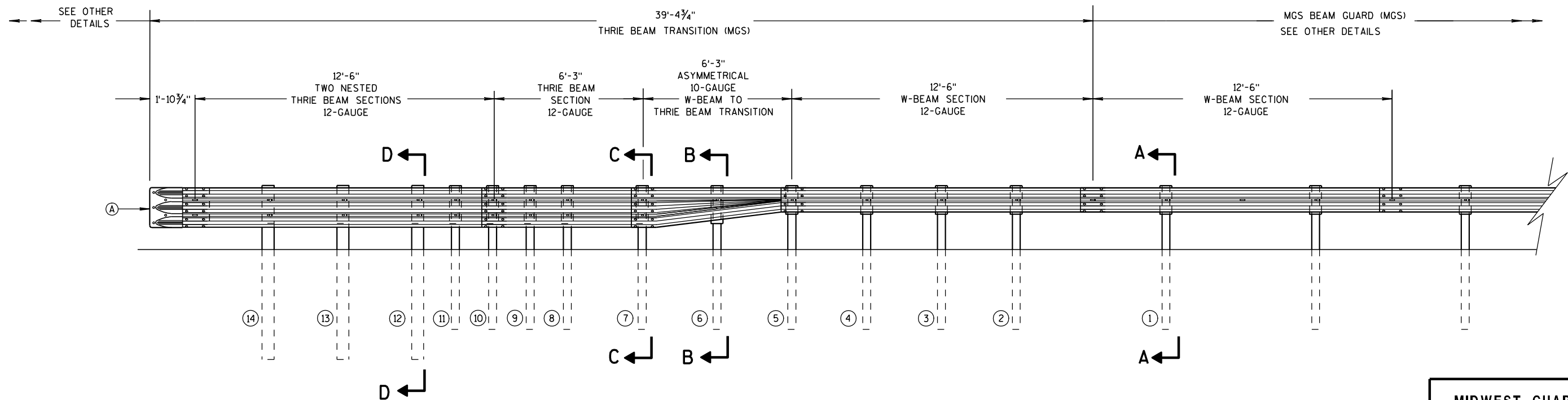
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

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

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



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

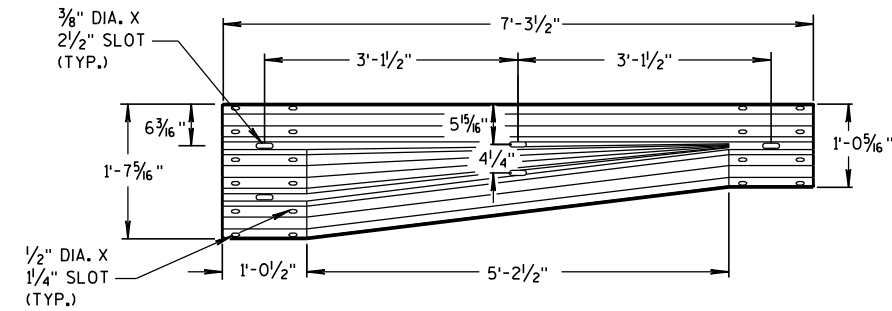
6

S.D.D. 14 B 45-3b

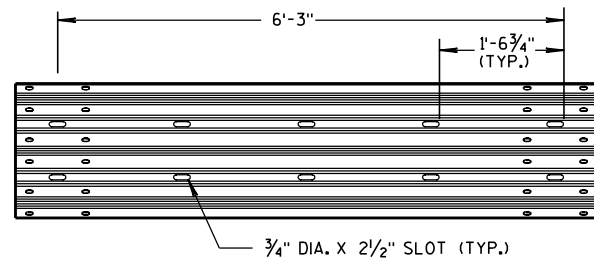


STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

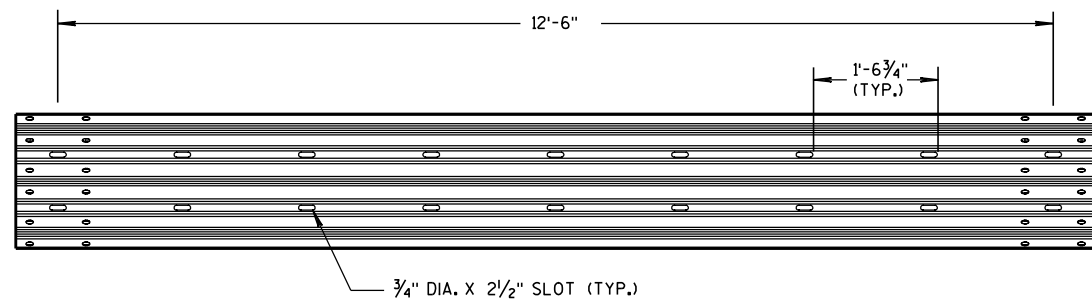
S.D.D. 14 B 45-3b



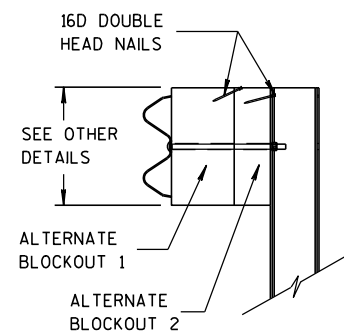
W-BEAM TO THRIE BEAM TRANSITION SECTION



6'-3" THRIE BEAM SECTION

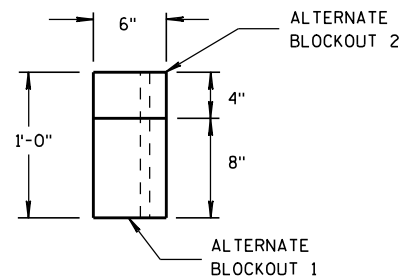


12'-6" THRIE BEAM SECTION

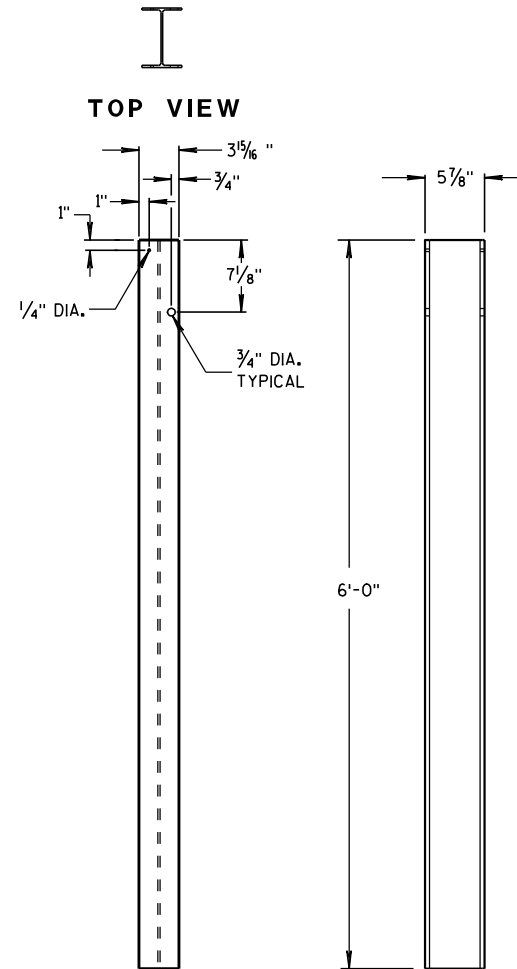


SIDE VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



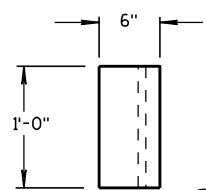
TOP VIEW



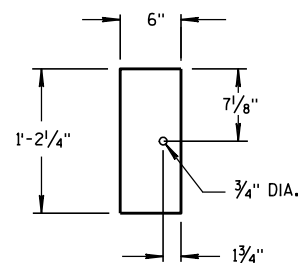
FRONT VIEW

SIDE VIEW

STEEL POSTS 1-5

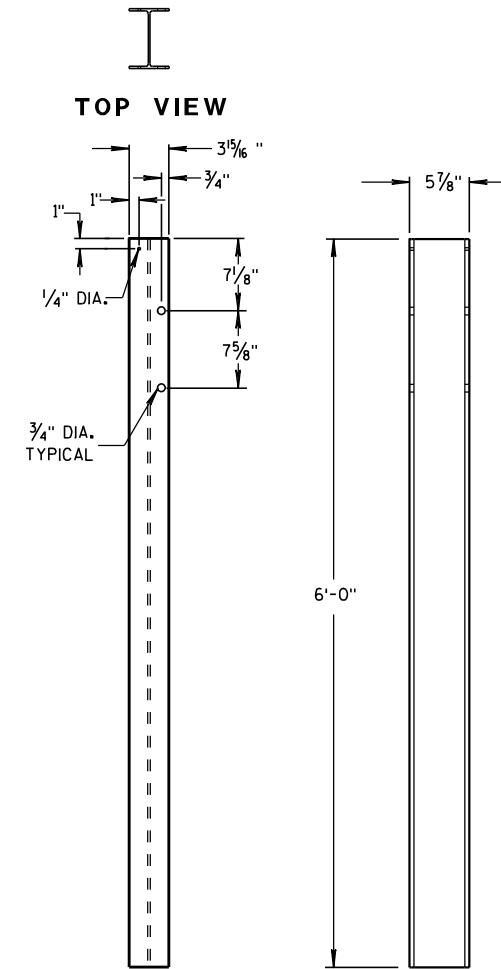


TOP VIEW



FRONT VIEW

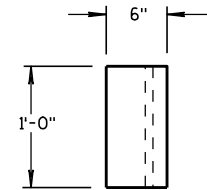
BLOCKOUT POSTS 1-5



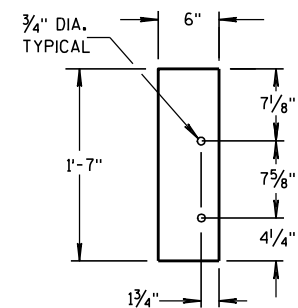
FRONT VIEW

SIDE VIEW

STEEL POSTS 6-11

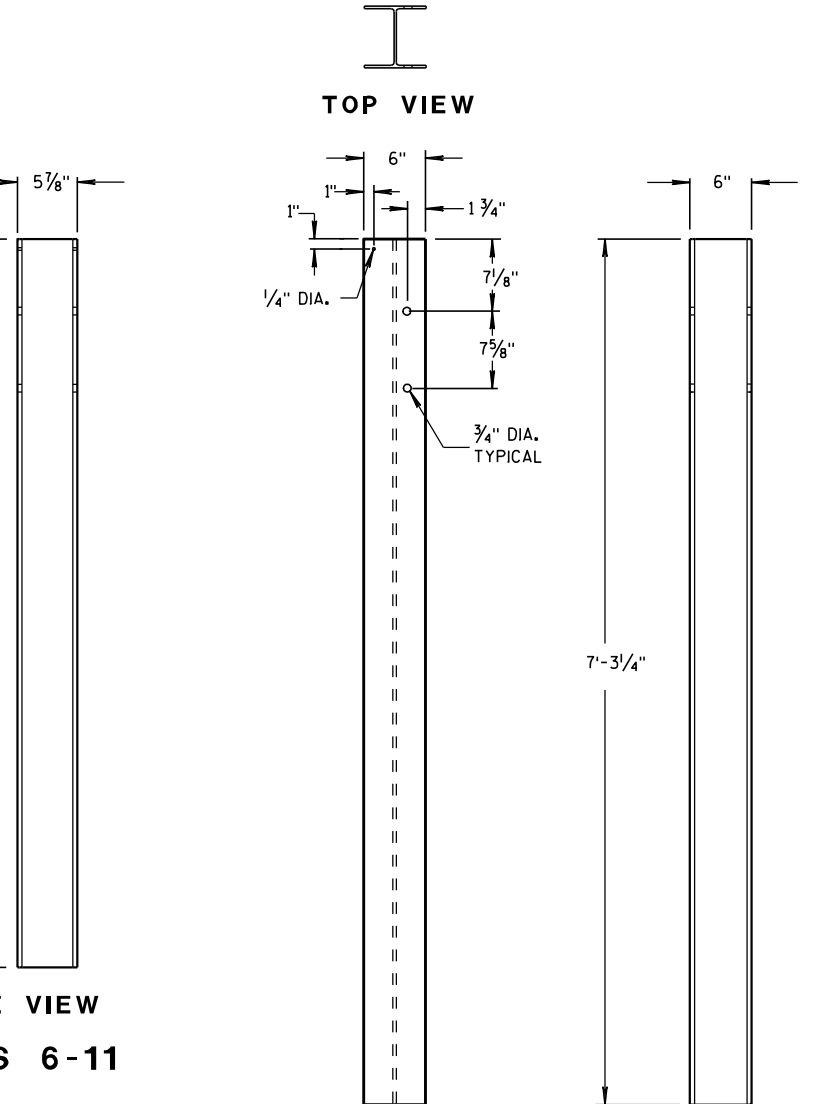


TOP VIEW



FRONT VIEW

BLOCKOUT POSTS 6-11



FRONT VIEW

SIDE VIEW

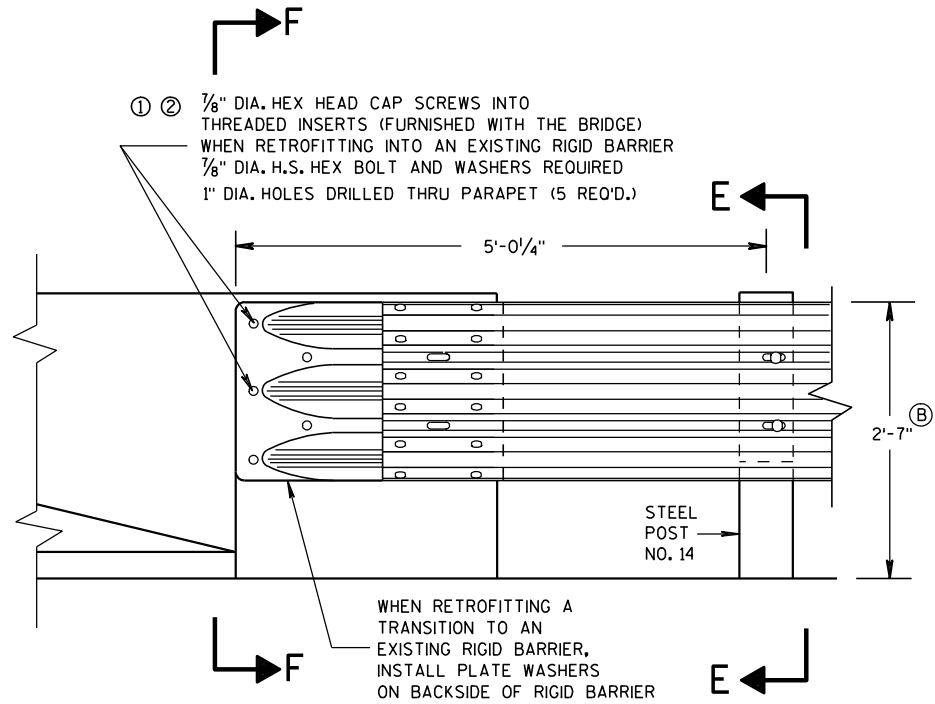
STEEL POSTS 12-14

STEEL POST SIZES

POST NUMBER	SECTION TYPE	LENGTH
①	W6x9	72"
②	W6x9	72"
③	W6x9	72"
④	W6x9	72"
⑤	W6x9	72"
⑥	W6x9	72"
⑦	W6x9	72"
⑧	W6x9	72"
⑨	W6x9	72"
⑩	W6x9	72"
⑪	W6x9	72"
⑫	W6x15	87 1/8"
⑬	W6x15	87 1/8"
⑭	W6x15	87 1/8"

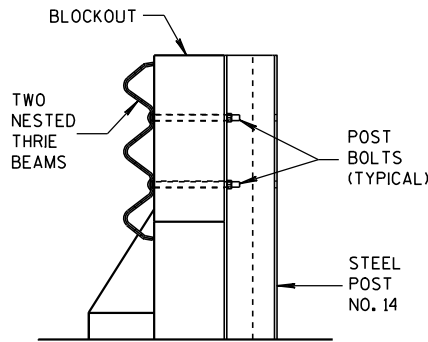
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



FRONT VIEW

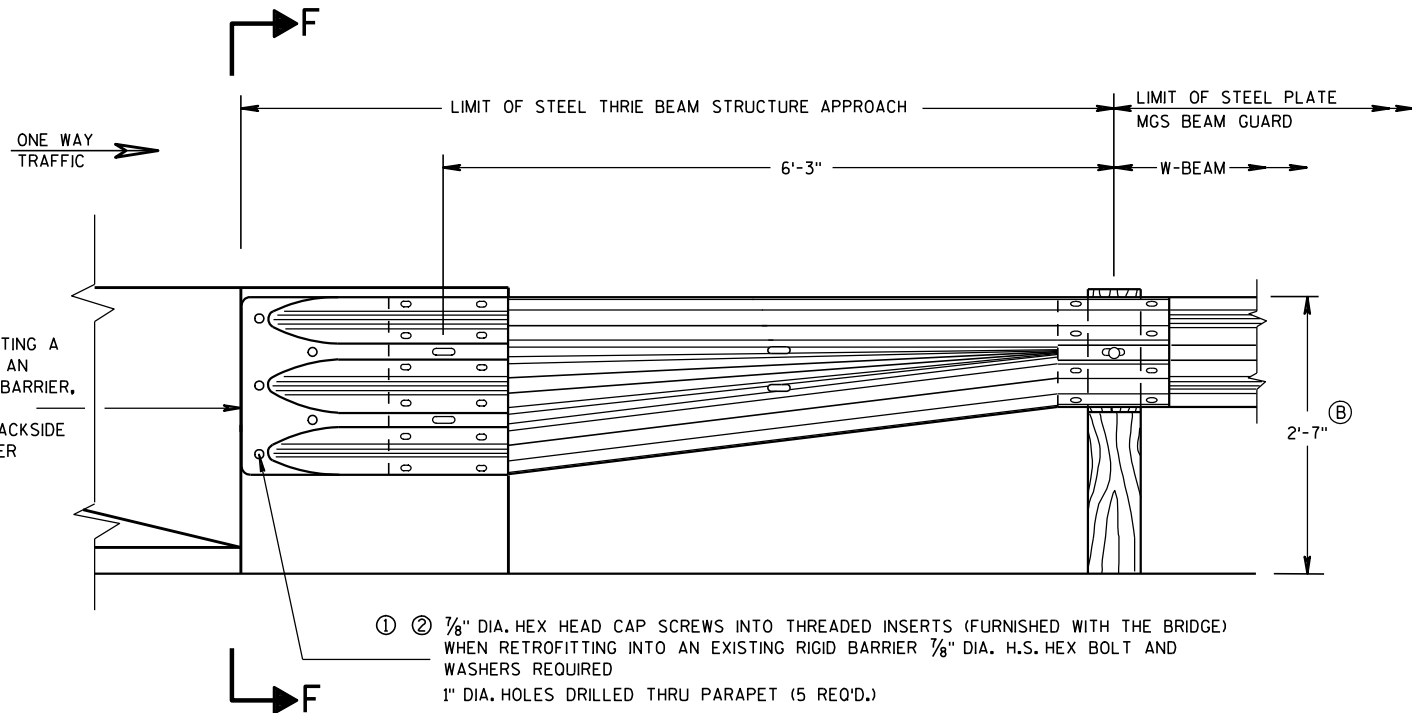
THRIE BEAM CONNECTION TO BRIDGE
PARAPET WITH SQUARE ENDS



SECTION E-E

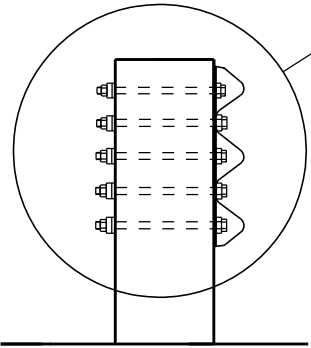
GENERAL NOTES

- THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.
- 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 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 5/8" 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 1/2".
 - ⓑ TOLERANCE FOR TOP OF BEAM IS ± 1".

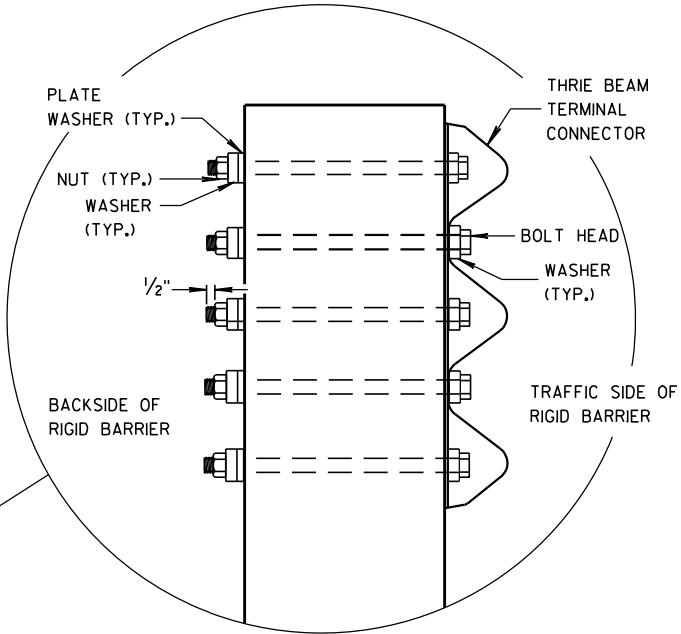


FRONT VIEW

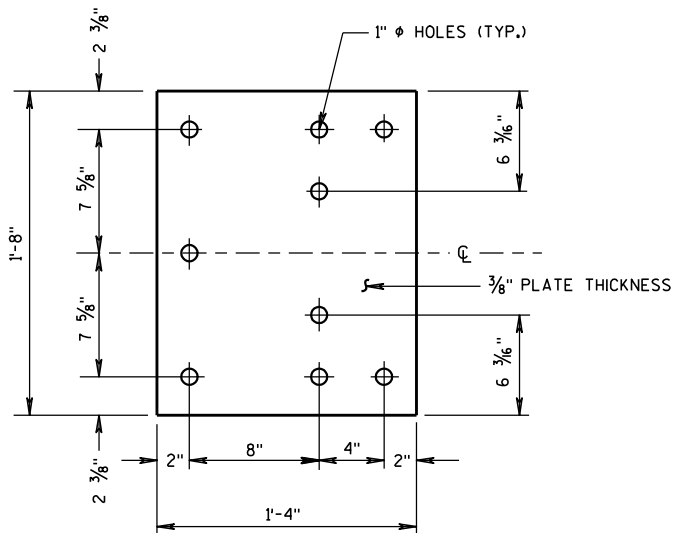
W BEAM TRANSITION AND CONNECTION TO
BRIDGE PARAPETS WITH SQUARE ENDS
(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)



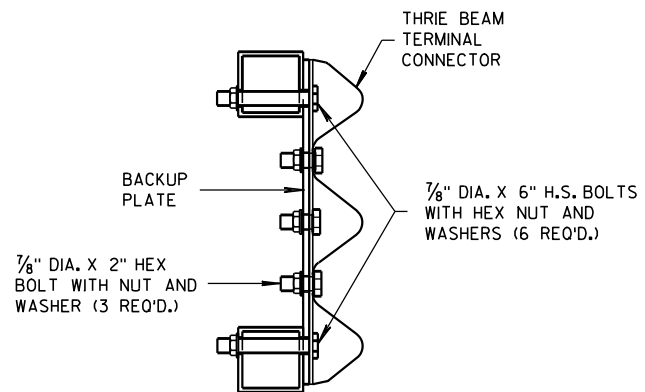
SECTION F-F



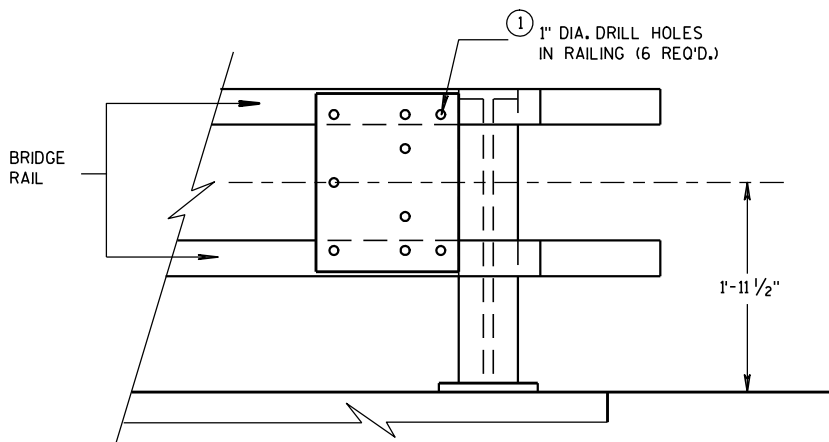
MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 8/31/2012 DATE	/S/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	



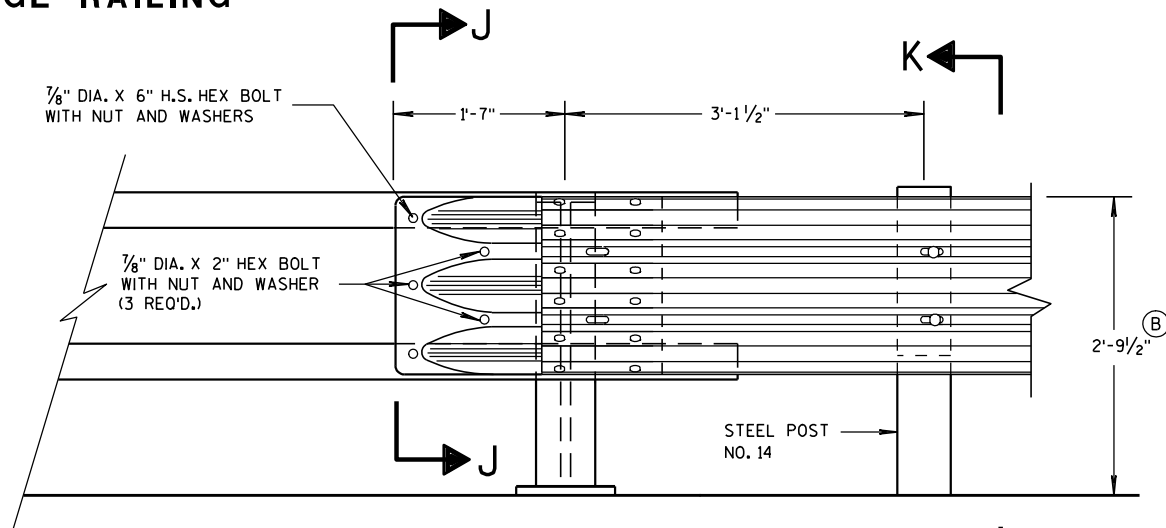
BACK-UP PLATE DETAIL



SECTION J-J

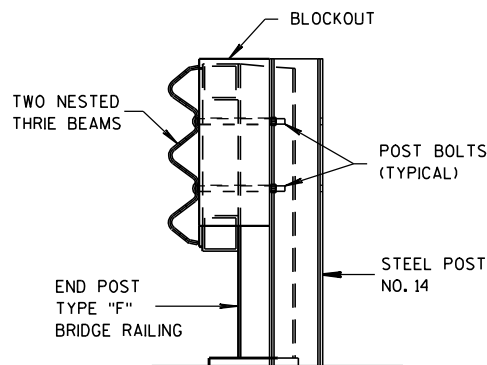


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING



FRONT VIEW

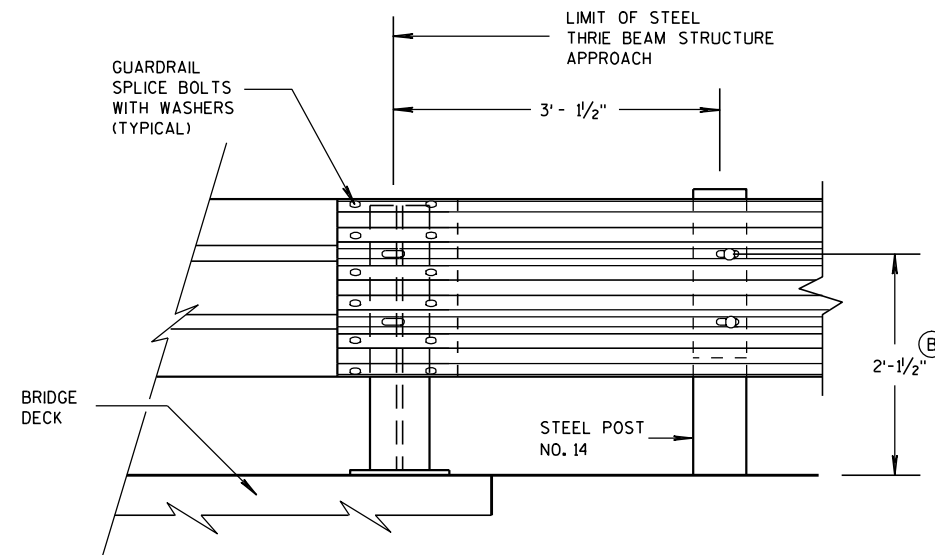
THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"



SECTION K-K

GENERAL NOTES

- ① DRILLING HOLES THROUGH THE PAPER, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
- ② TOLERANCE FOR TOP OF BEAM IS $\pm 1"$.



FRONT VIEW

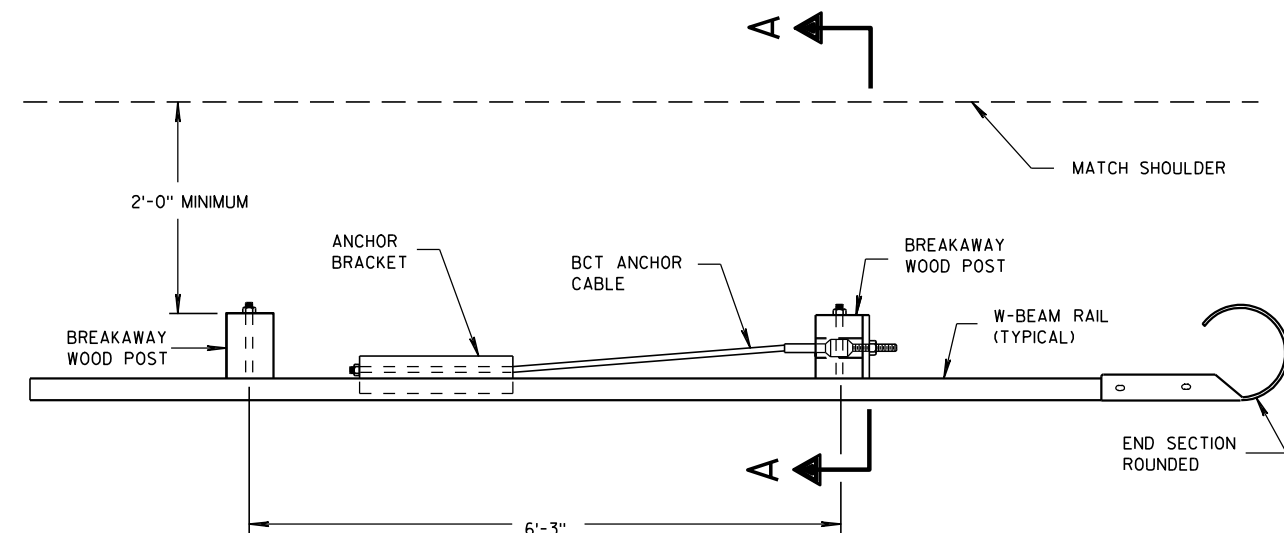
THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"

**MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)**

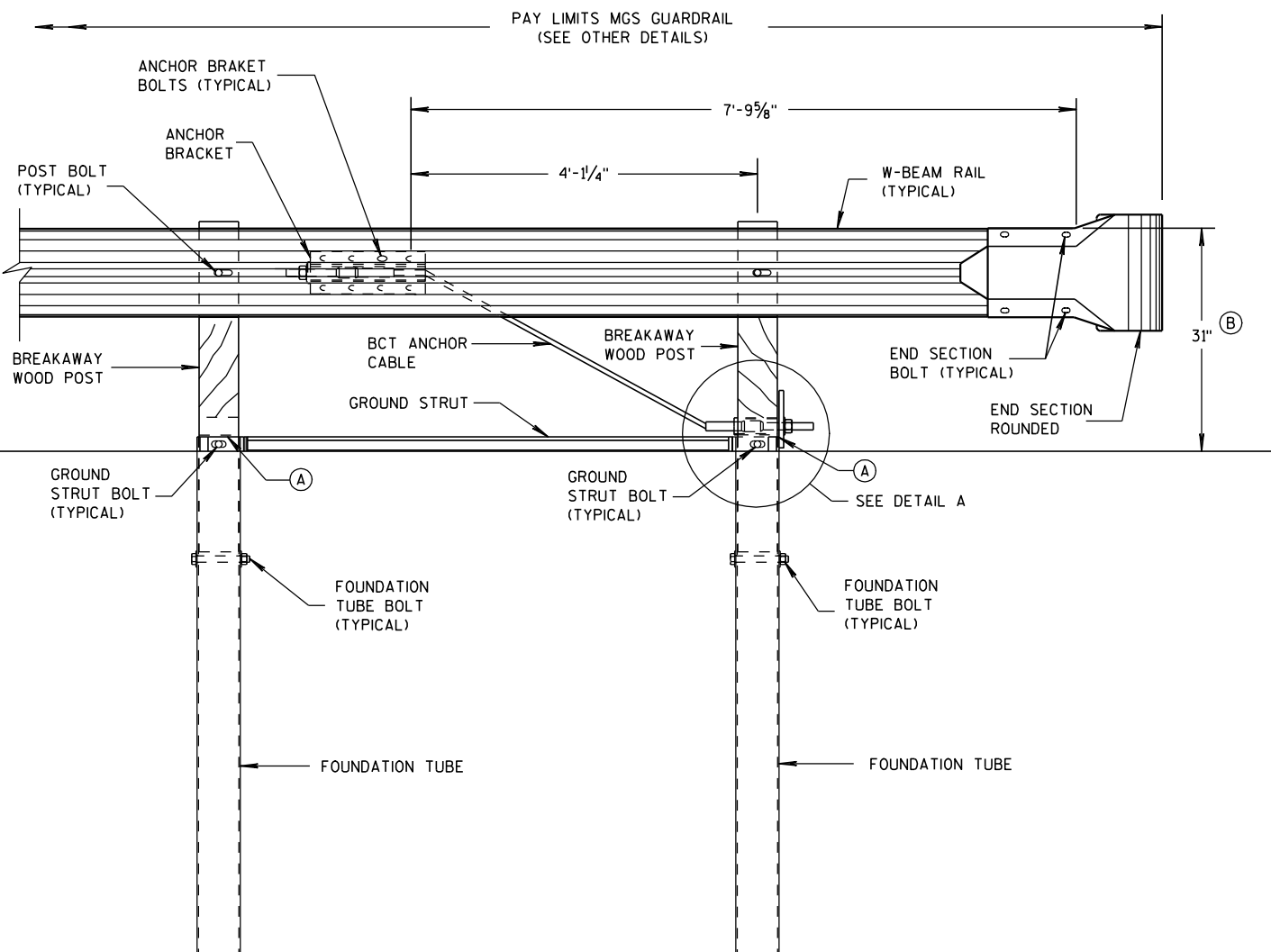
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/31/2012
DATE
FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

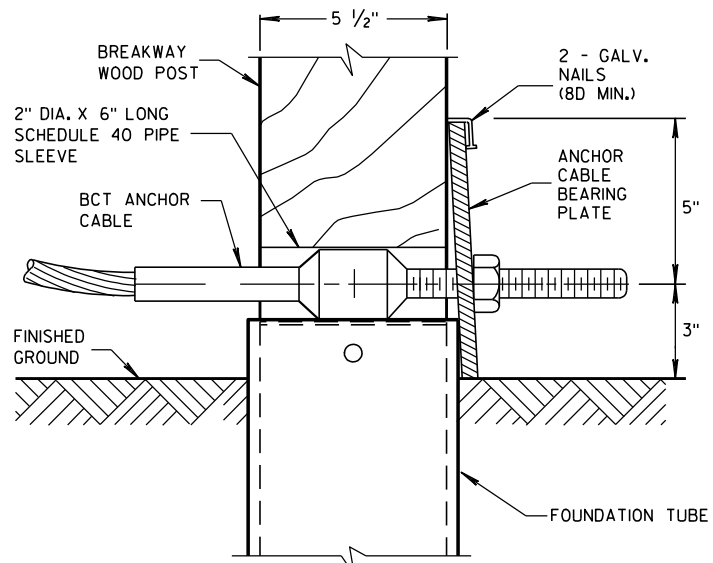


PLAN VIEW



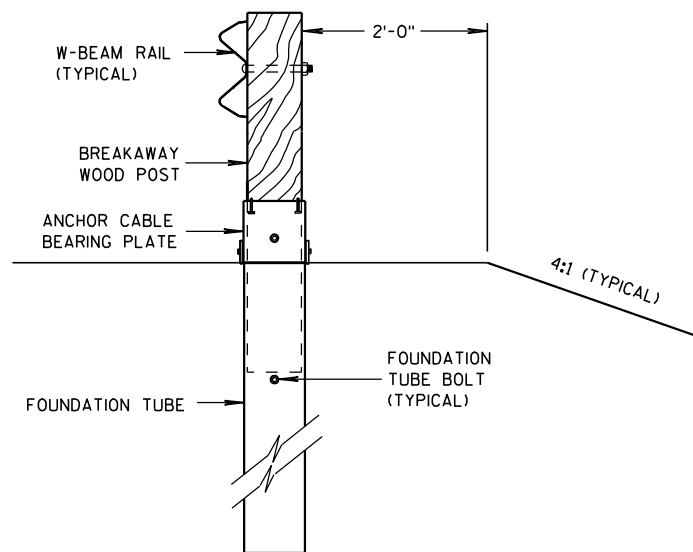
FRONT VIEW

END RAIL DETAIL



DETAIL A

POST NO. 1
GROUND STRUT NOT SHOWN FOR CLARITY.



SECTION A-A

GENERAL NOTES

SEE SDD 14 B 42 FOR MORE INFORMATION.

POST BOLTS ARE A $\frac{5}{8}$ " DIAMETER X 10" LONG GUARDRAIL BOLT. A POST BOLT REQUIRES A $\frac{5}{8}$ " DIAMETER DH MODIFIED (RECESSED) HEAVY HEX NUT AND $\frac{5}{8}$ " DIAMETER FLAT WASHER.

FOUNDATION TUBE BOLTS ARE A $\frac{7}{8}$ " DIAMETER X $7\frac{1}{2}$ " LONG HEAVY HEX HEAD BOLT. A FOUNDATION TUBE BOLT REQUIRES A $\frac{7}{8}$ " DIAMETER DH HEAVY HEX NUT AND A $\frac{5}{8}$ " DIAMETER FLAT WASHER.

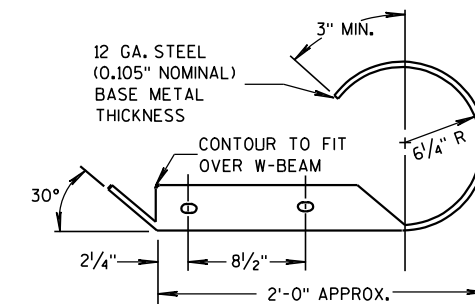
GROUND STRUT BOLTS ARE A $\frac{5}{8}$ " DIAMETER X 10" LONG HEAVY HEX HEAD BOLT. A GROUND STRUT BOLT REQUIRES A $\frac{5}{8}$ " DIAMETER DH HEAVY HEX NUT AND A $\frac{5}{8}$ " DIAMETER FLAT WASHER.

ANCHOR BRACKET BOLTS ARE A $\frac{5}{8}$ " DIAMETER X $1\frac{1}{2}$ " LONG HEAVY HEX HEAD BOLT. AN ANCHOR BRACKET BOLT REQUIRES A $\frac{5}{8}$ " DIAMETER DH HEAVY HEX NUT AND A FLAT WASHER.

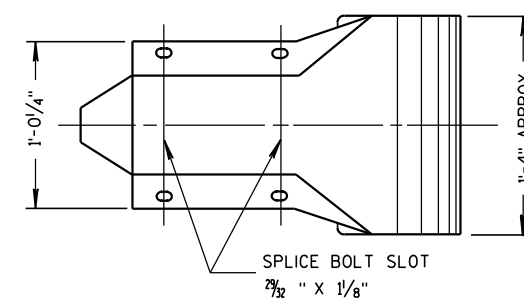
END SECTION BOLTS ARE A $\frac{5}{8}$ " DIAMETER X $1\frac{1}{2}$ " HEAVY HEX HEAD BOLT. AN END SECTION BOLT REQUIRES $\frac{5}{8}$ " DIAMETER DH HEAVY HEX NUT AND A $\frac{5}{8}$ " DIAMETER FLAT WASHER.

W-BEAM END SECTION ROUNDED HAS THE SAME MATERIAL PROPERTIES AS STANDARD STEEL RAIL.

- (A) TOP OF FOUNDATION TUBE SHALL BE NO MORE THAN 3" ABOVE FINISHED GROUND.
- (B) FOR NEW CONSTRUCTION TOP OF RAIL IS $31" \pm 1"$.
FOR EXISTING INSTALLATIONS TOP OF RAIL IS BETWEEN $27\frac{3}{4}"$ TO $32" \pm 1"$.



PLAN VIEW

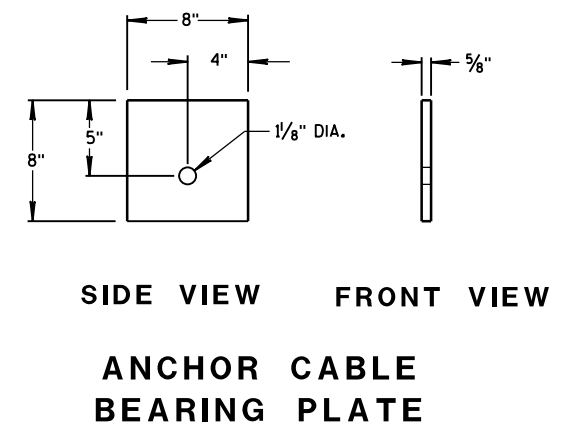
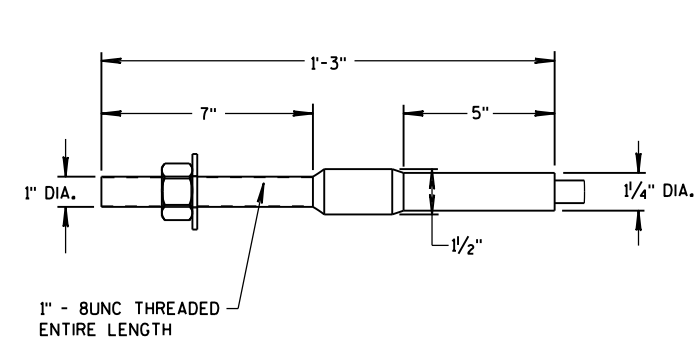
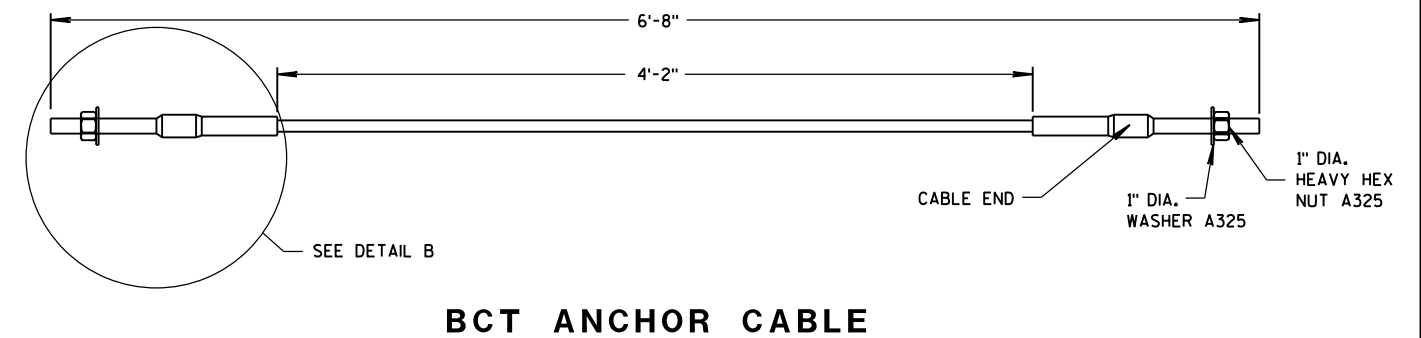
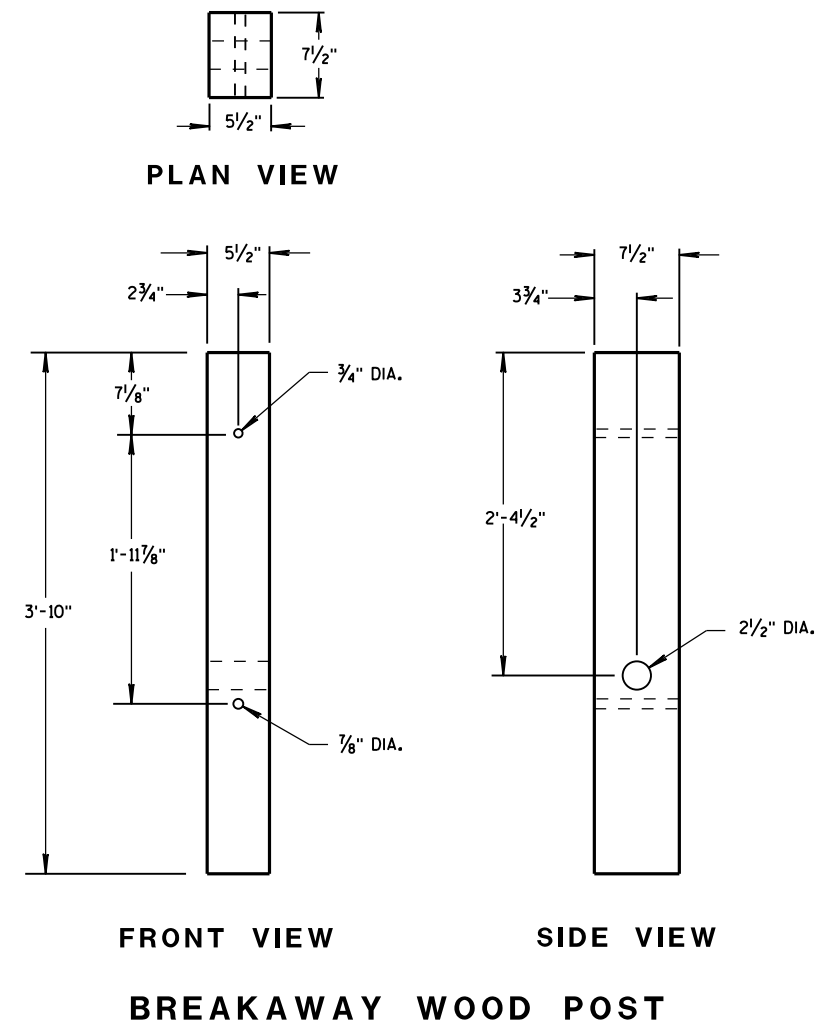
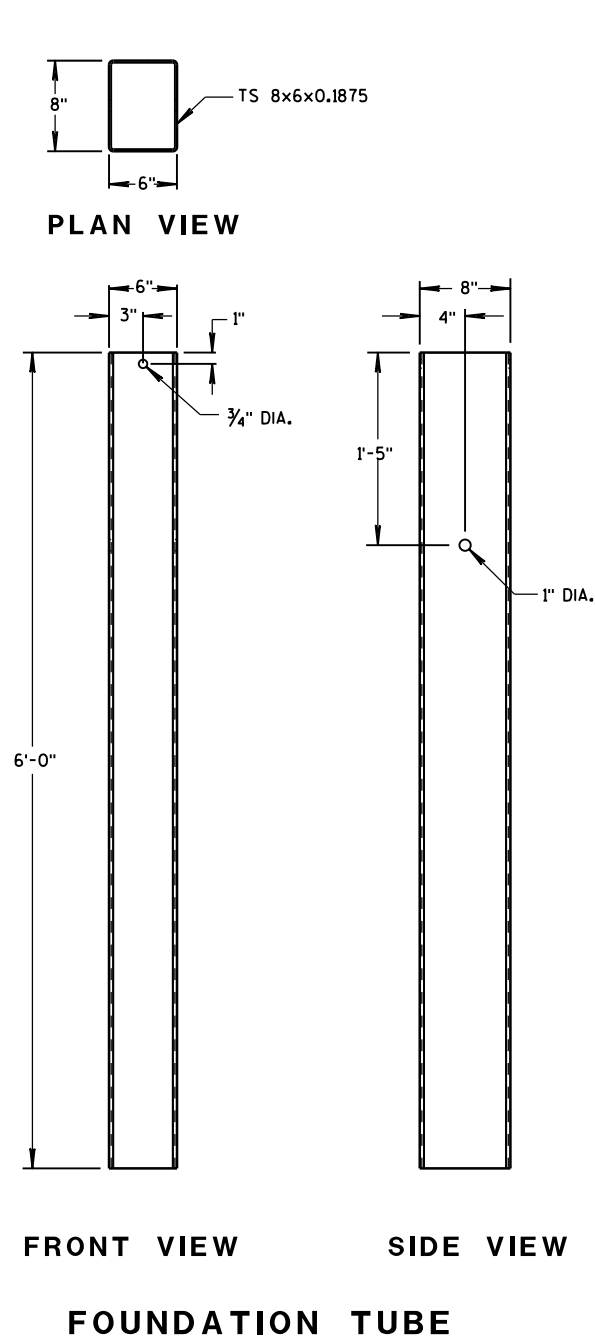


FRONT VIEW

W BEAM END
SECTION ROUNDED

MIDWEST GUARDRAIL
SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

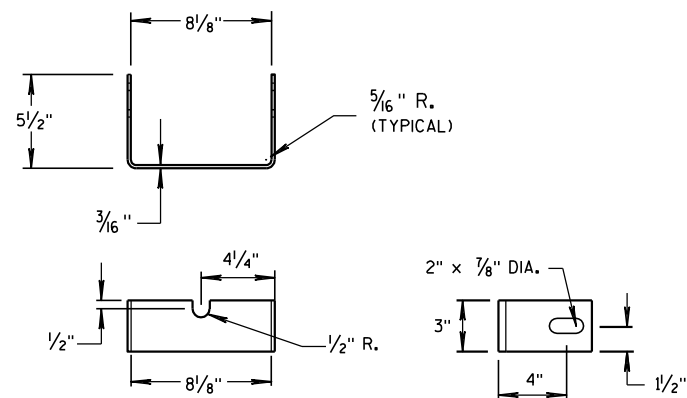


MIDWEST GUARDRAIL
SYSTEM (MGS) TYPE 2 TERMINAL

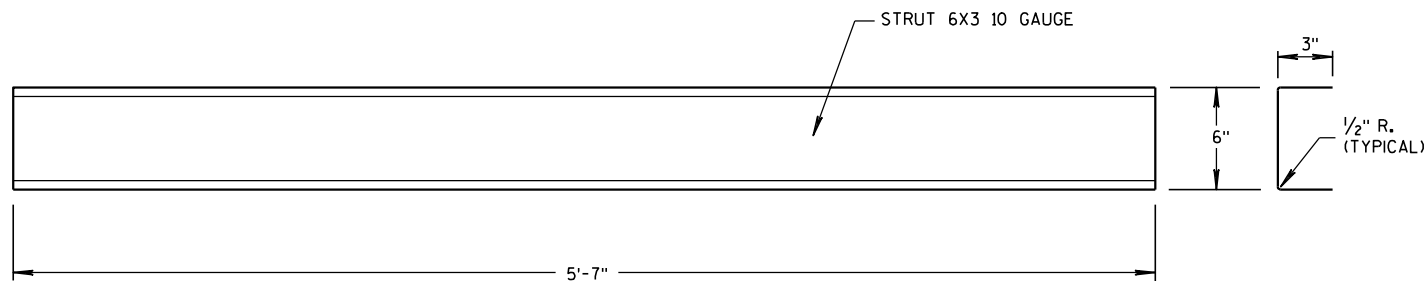
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

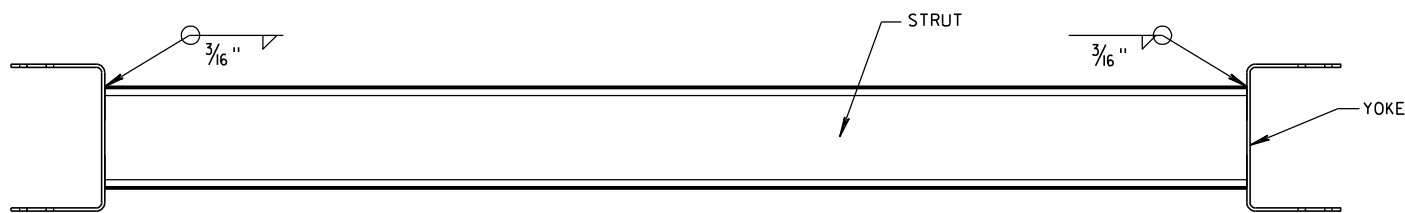
BCT ANCHOR CABLE IS A 3/8" DIAMETER 6X19 IWRC IPS GALVANIZED WIRE ROPE. THE SWAGED FITTINGS AND STUD ARE REQUIRED. THE END FITTING SHALL BE MACHINED FROM HOT-ROLLED CARBON STEEL CONFORMING TO ASTM A576 GRADE 1035 AND GALVANIZED ACCORDING TO ASTM A123. THE TREADED STUD SHOULD CONFORM TO ASTM A325 OR SAE GRADE 5. MINIMUM BREAKING STRENGTH OF WIRE ROPE IS 43,000 LB. WIRE ROPE IS TO BE TAUT.



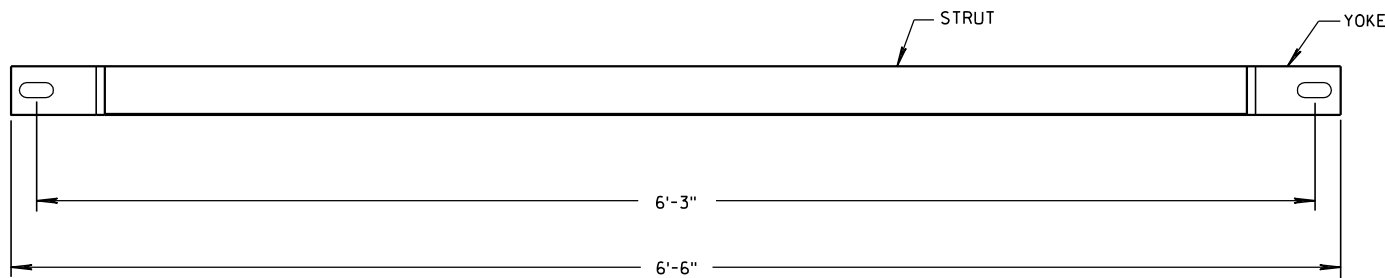
YOKE DETAIL



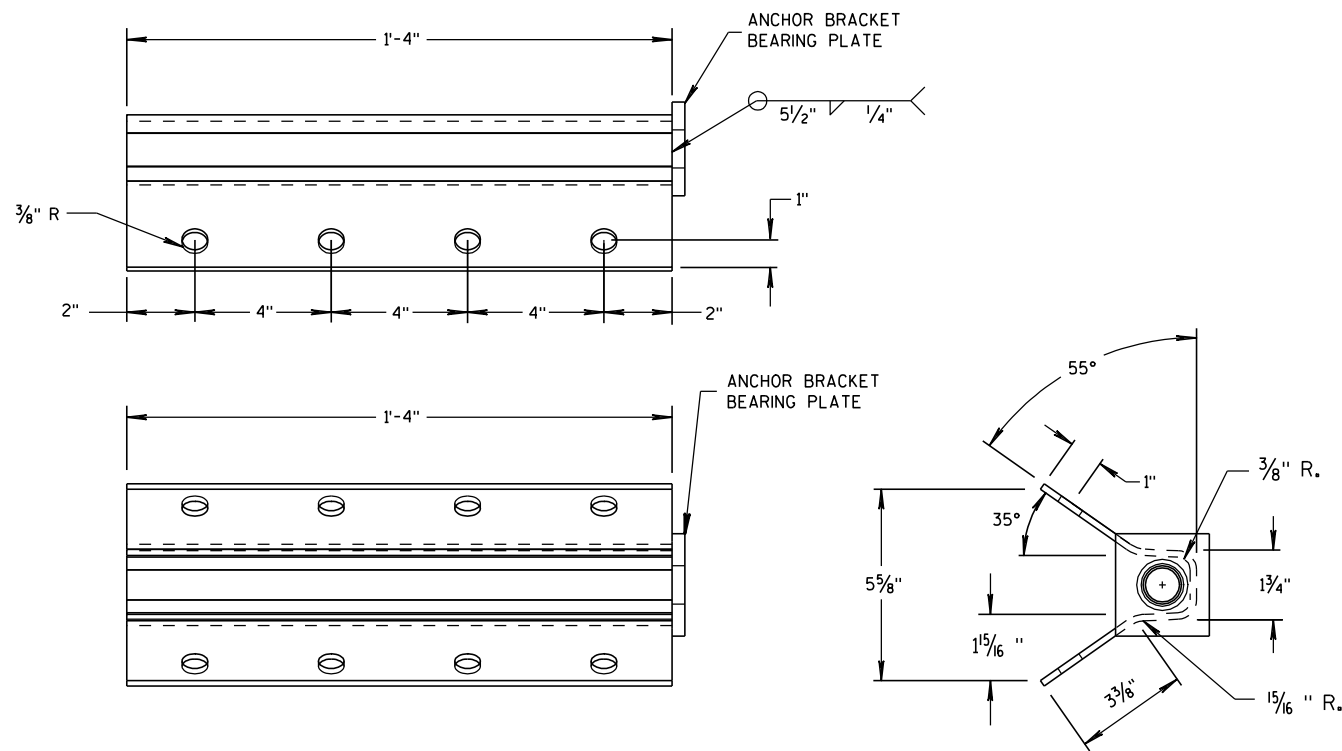
STRUT DETAIL



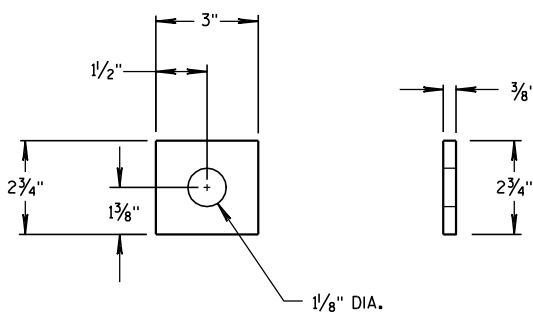
PLAN VIEW



FRONT VIEW
GROUND STRUT DETAIL



ANCHOR BRACKET

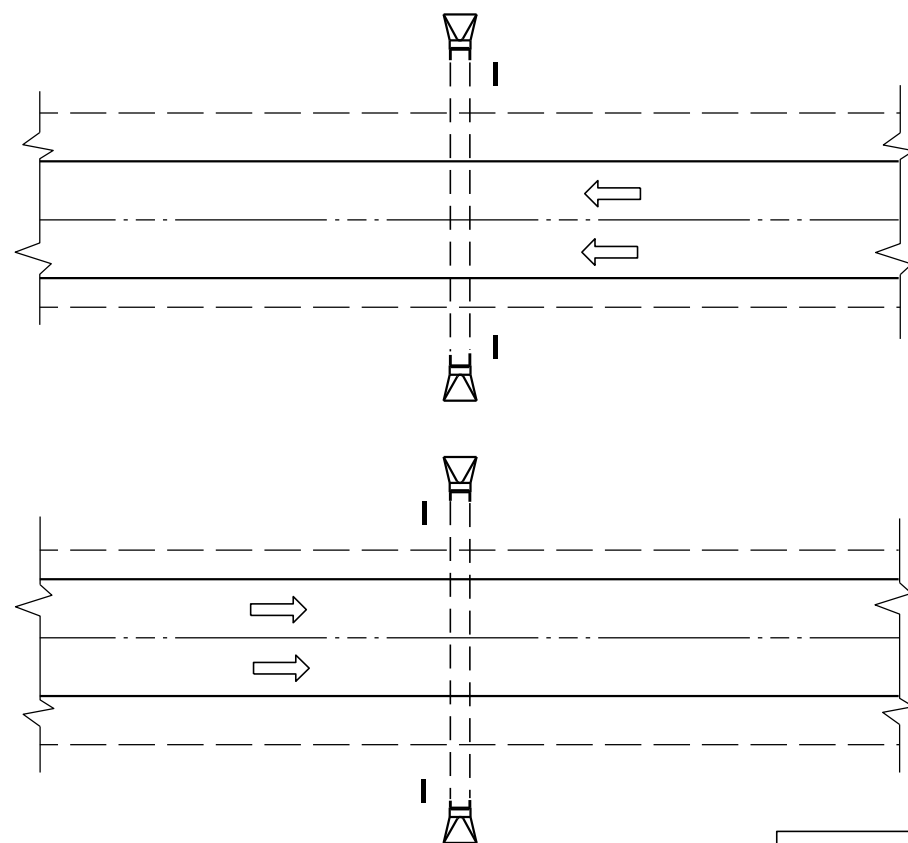


ANCHOR BRACKET
BEARING PLATE

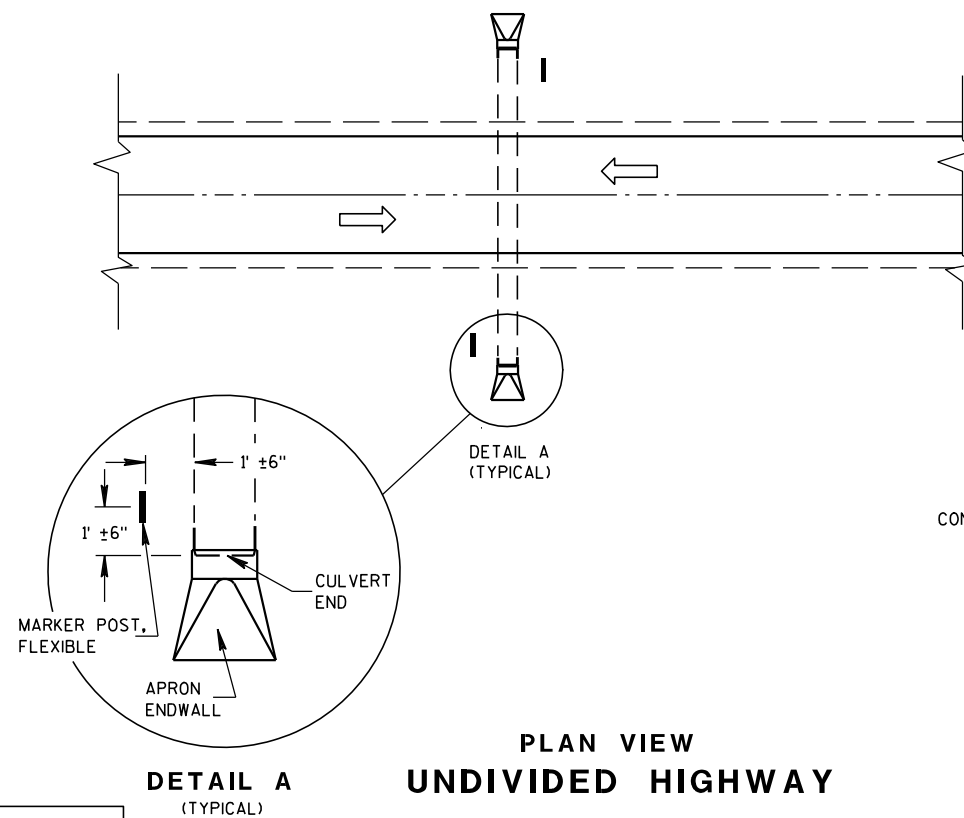
MIDWEST GUARDRAIL
SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/23/2011 DATE /S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA

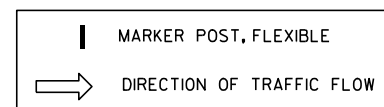


PLAN VIEW
DIVIDED HIGHWAY

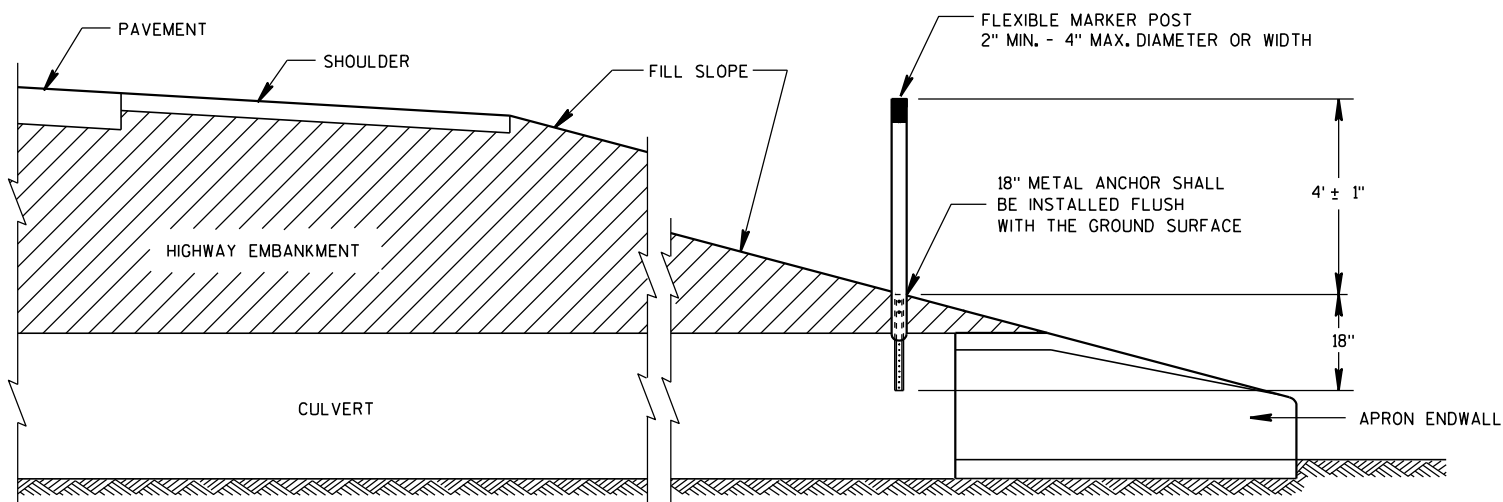


PLAN VIEW
UNDIVIDED HIGHWAY

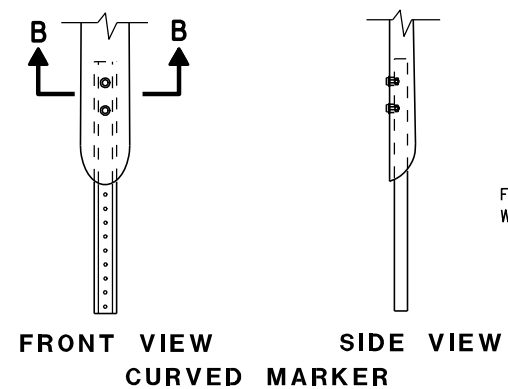
DETAIL A
(TYPICAL)



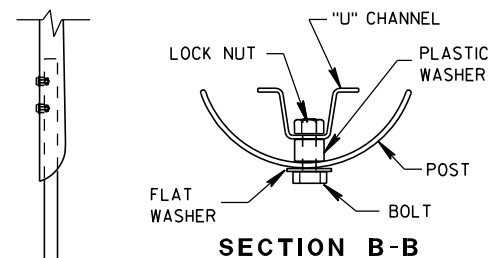
FLEXIBLE MARKER POST LOCATION



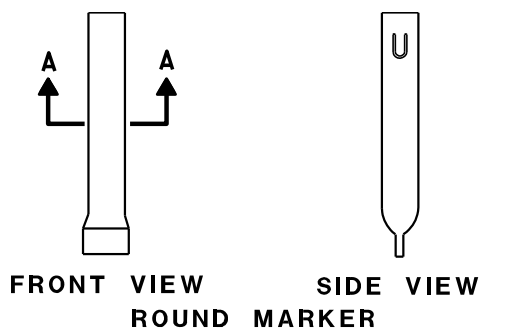
CROSS SECTION
FLEXIBLE MARKER POST



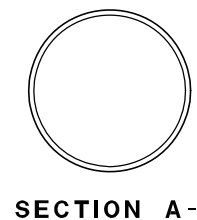
FRONT VIEW
CURVED MARKER



SECTION B-B



FRONT VIEW
ROUND MARKER

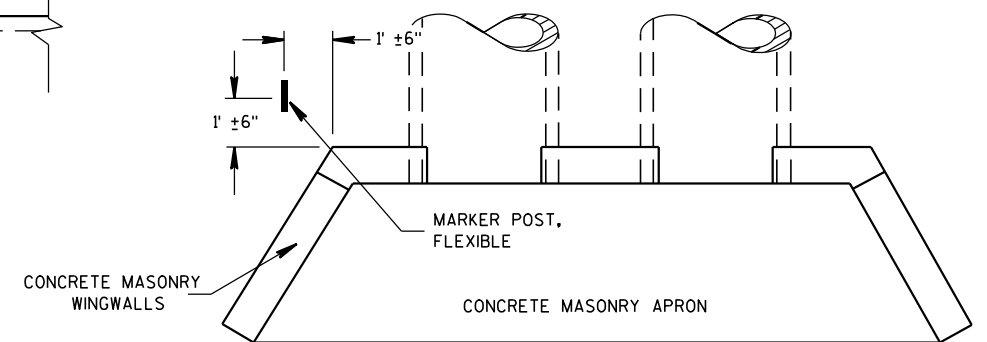


SECTION A-A

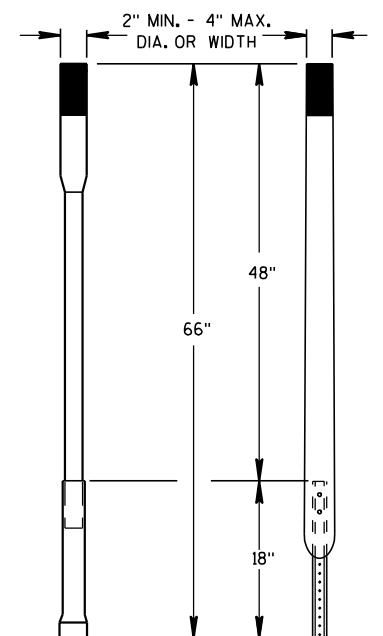
FLEXIBLE MARKER POST ANCHORS

GENERAL NOTES

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



PLAN VIEW
CONCRETE MASONRY ENDWALLS FOR
CULVERT PIPE AND PIPE ARCH



ALTERNATE 1 ALTERNATE 2
FLEXIBLE MARKER POST

MARKER POST, FLEXIBLE,
FOR CULVERT END

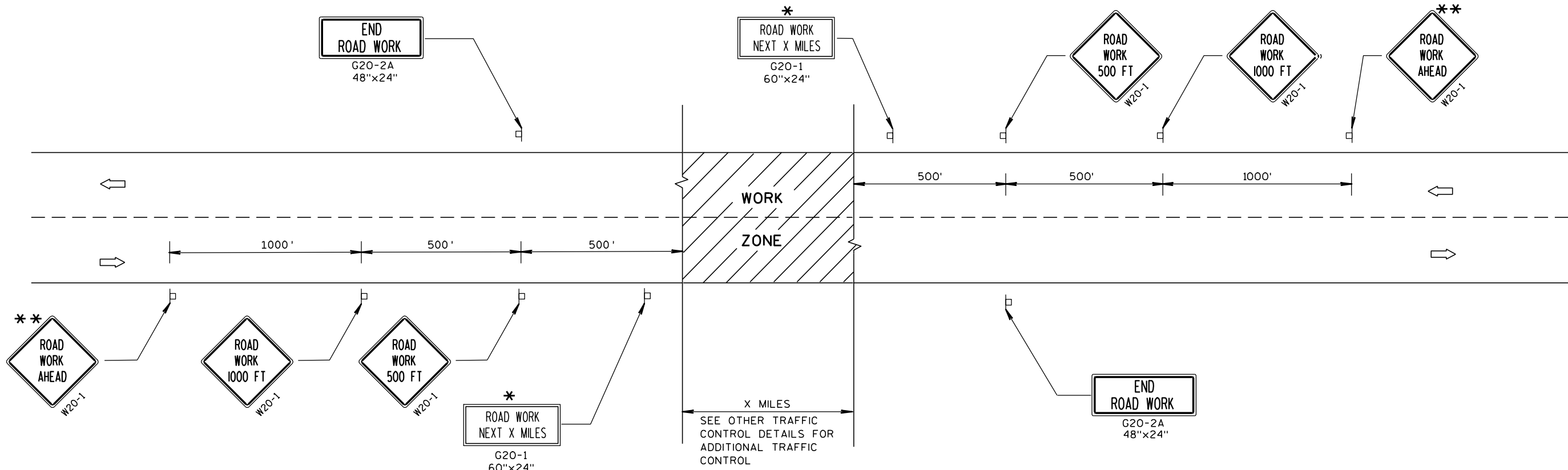
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

10/1/98
DATE

FHWA

/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER



TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL

GENERAL NOTES

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

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

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

LEGEND

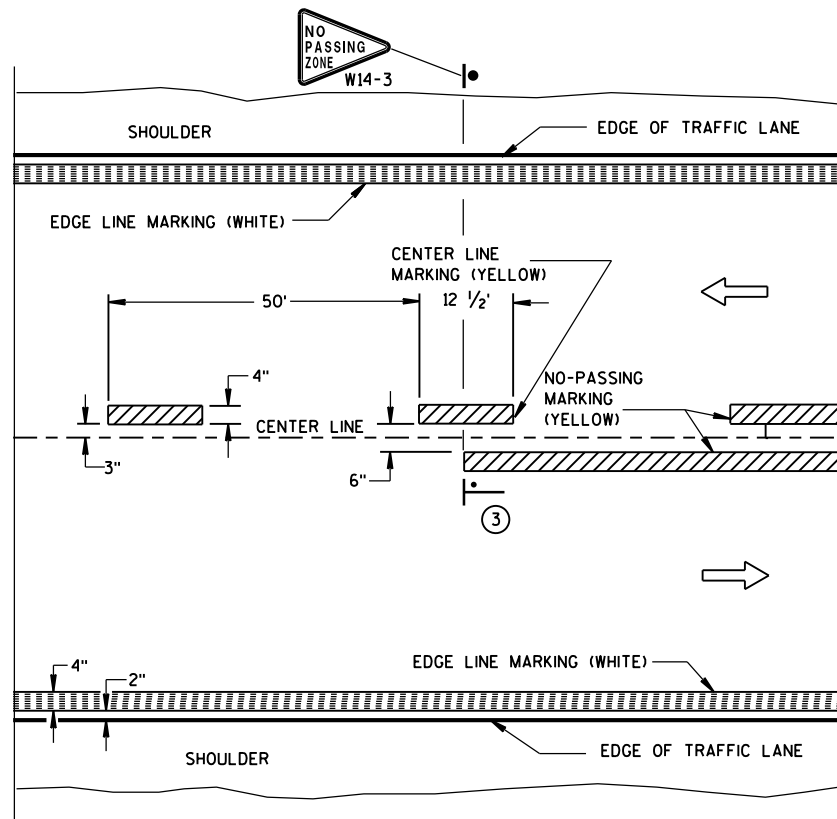
┆ POST MOUNTED SIGN

➡ DIRECTION OF TRAFFIC FLOW

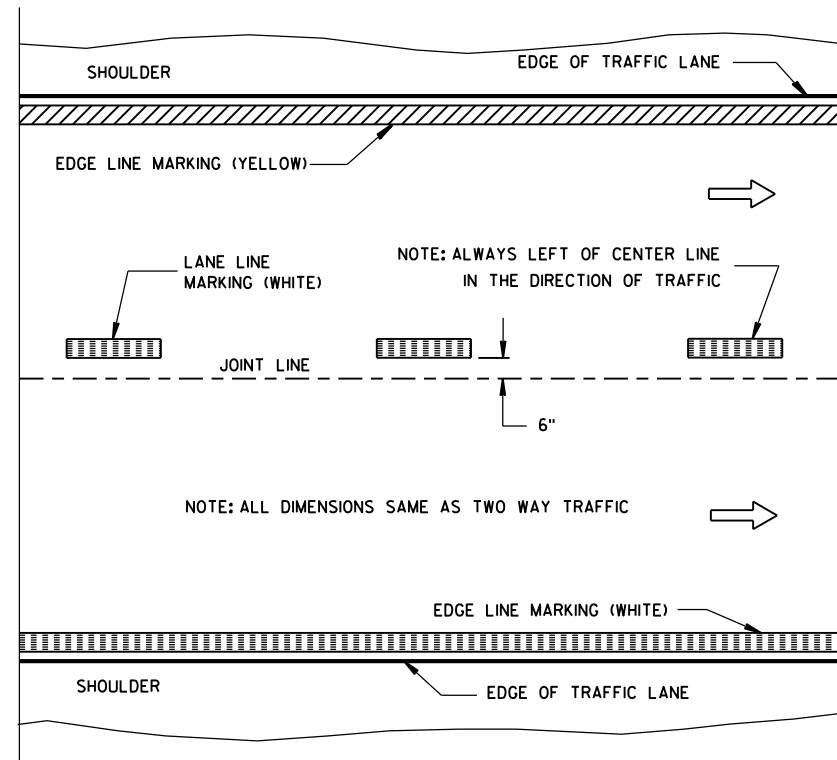
TRAFFIC CONTROL, ADVANCE
WARNING SIGNS 45 M.P.H.
OR GREATER TWO-WAY
UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/23/00 /S/ Chester J. Spang
DATE CHIEF SIGNS AND MARKING ENGINEER
FHWA

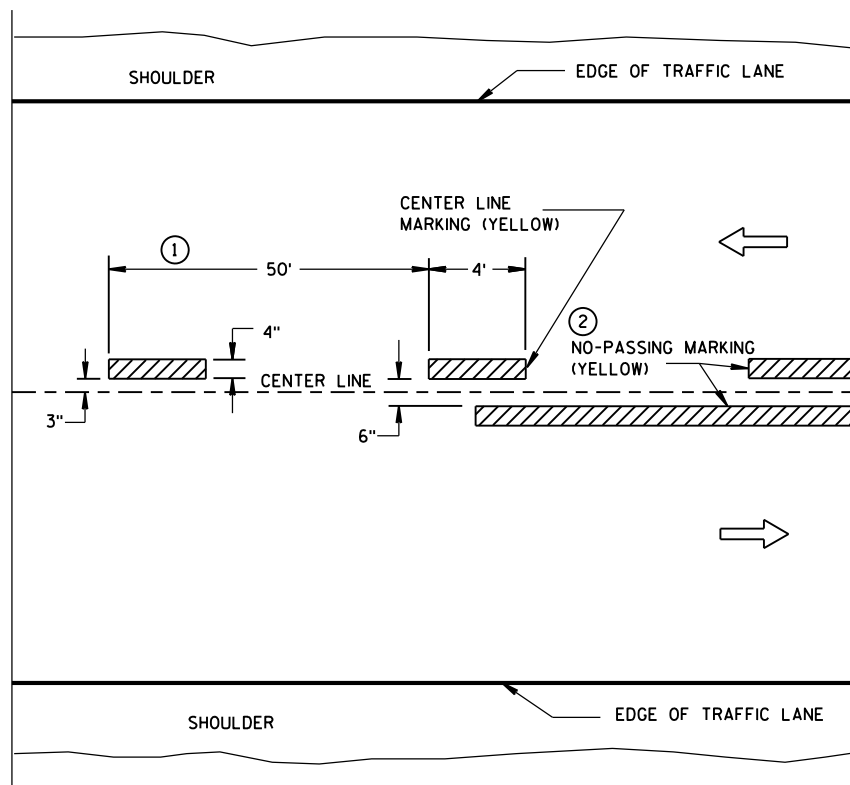


TWO WAY TRAFFIC

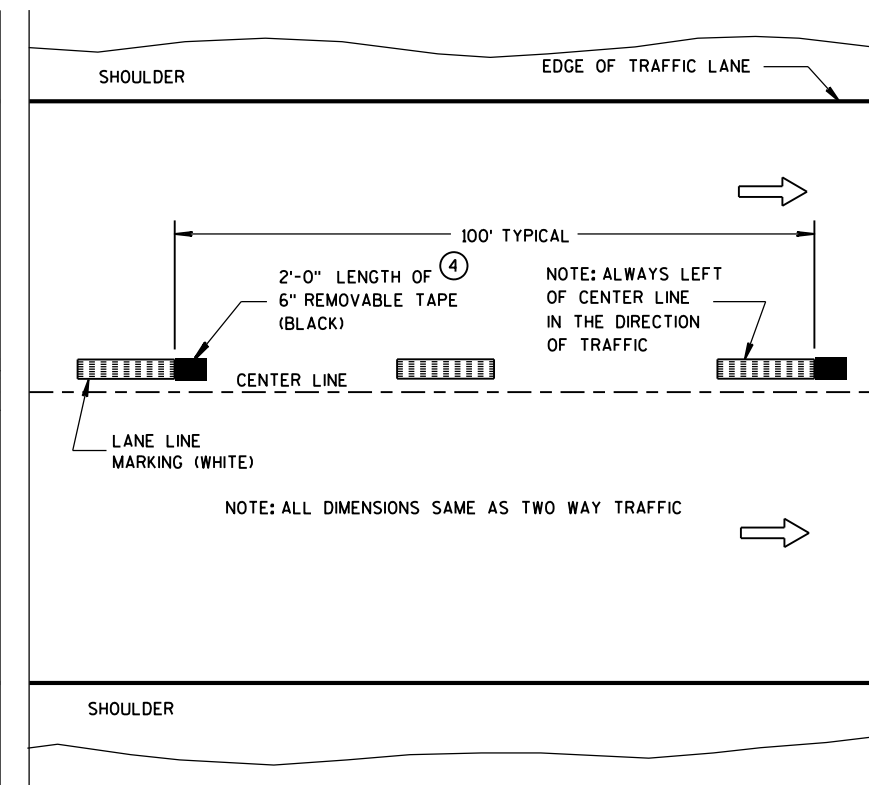


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING
(SHOWS CYCLE FOR TEMPORARY CENTER LINE OR TEMPORARY LANE LINE MARKING)

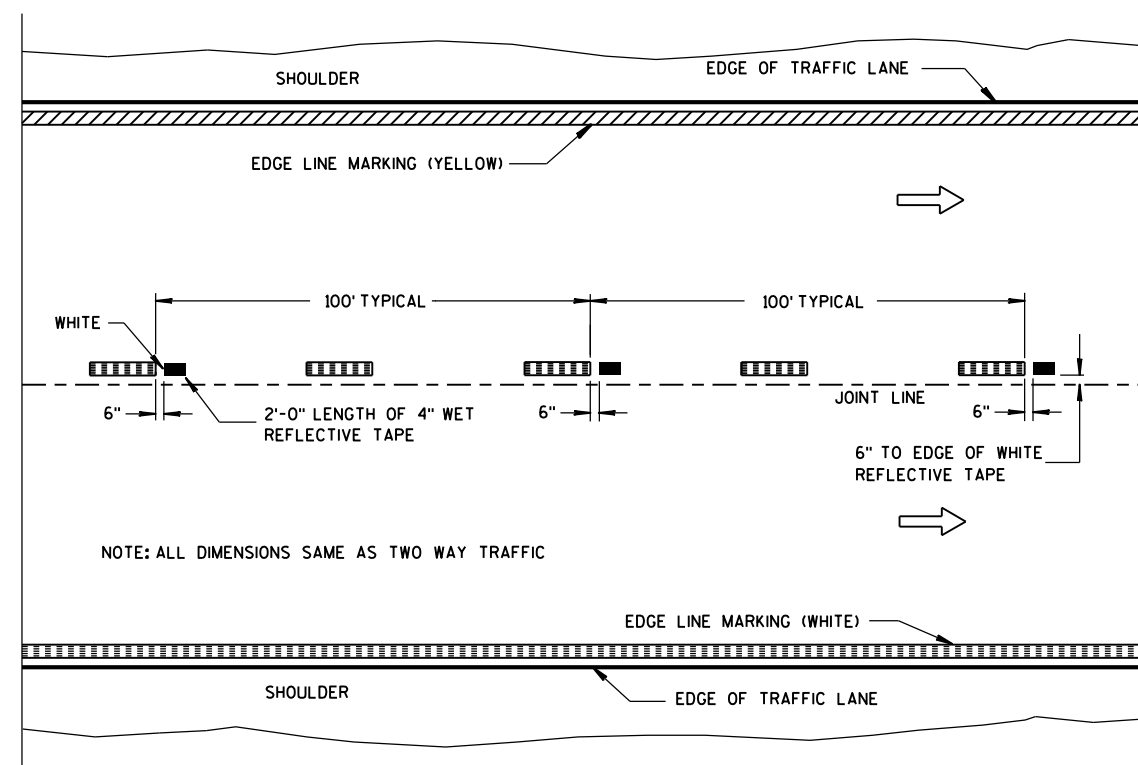
GENERAL NOTES

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

- ① HALF CYCLE LENGTHS (25'±) WITH 2' MINIMUM STRIPE LENGTHS SHALL BE PROVIDED ON ROADWAYS (INCLUDING TEMPORARY TRAVELED WAYS) WITH REVERSE CURVATURE, CURVATURE OF OVER 5 DEGREES OR WHEN DIRECTED BY THE ENGINEER TO MARK UNUSUAL ALIGNMENT OF THE TRAVELED WAY.
- ② NO PASSING ZONE TEMPORARY PAVEMENT MARKING IS REQUIRED TO BE PLACED, WHERE APPROPRIATE, ALONG WITH CENTERLINE TEMPORARY PAVEMENT MARKING WHEN A SAME DAY PERMANENT PAVEMENT MARKING ITEM IS INCLUDED IN THE CONTRACT.
- ③ NO PASSING ZONE MARKINGS ARE PLACED ACCORDING TO "T" MARKINGS. IF EXISTING NO PASSING ZONE W14-3 SIGNS ARE BEYOND 50 FEET IN EITHER DIRECTION, THE SIGNS SHALL BE MOVED TO THE "T" MARKINGS.
- ④ CONCRETE ONLY.

NOTE

ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL



**WET REFLECTIVE TAPE SUPPLEMENT TO
SPRAYED OR NON WET REFLECTIVE TAPE LANE LINE**

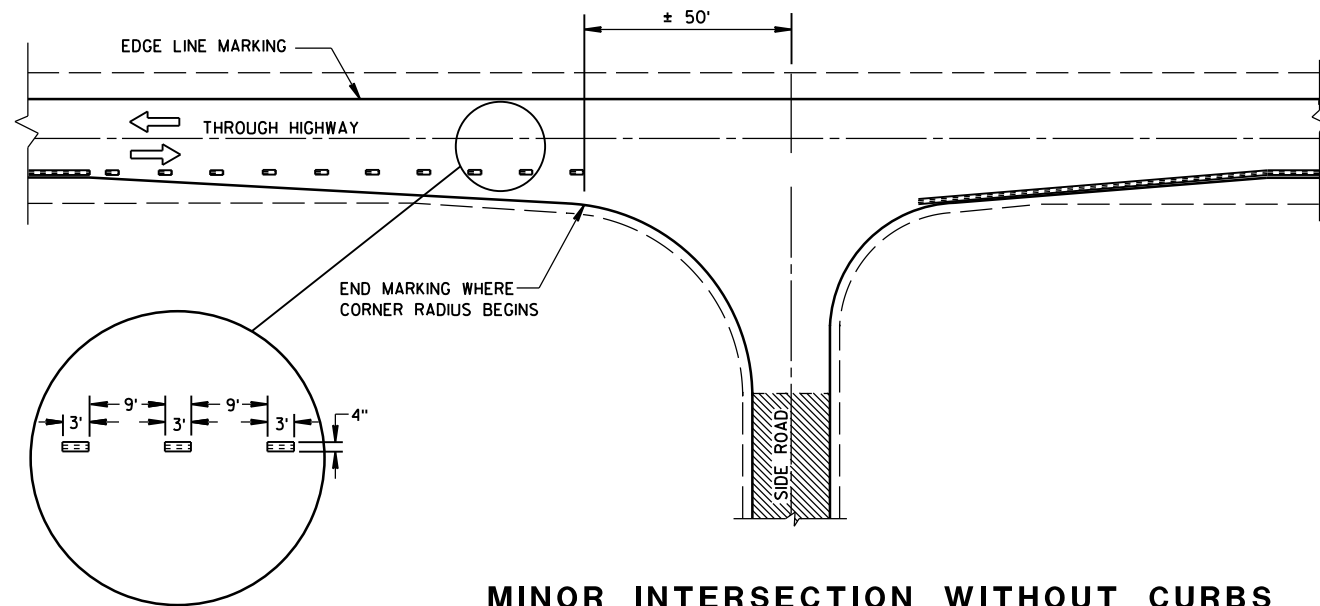
LEGEND

- "T" MARKING
- POST MOUNTED SIGN

PAVEMENT MARKING
(MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

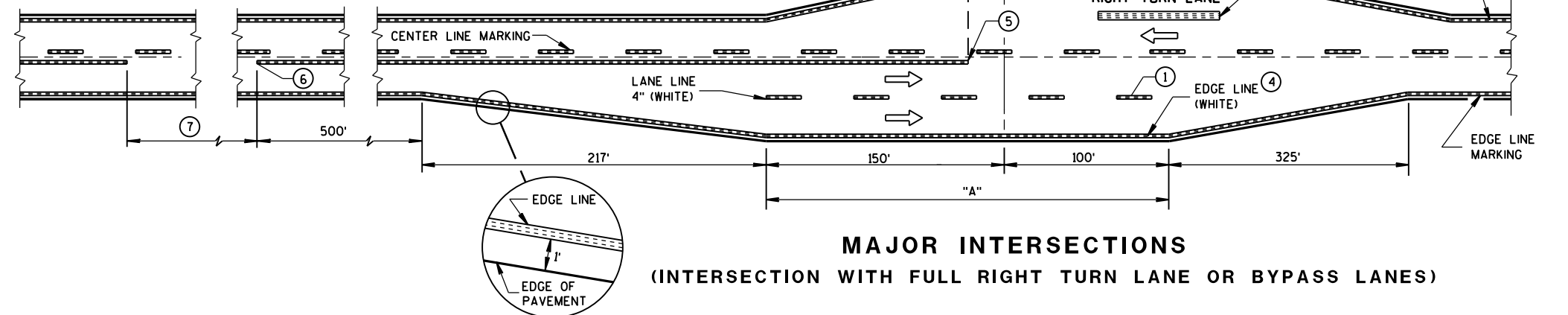
APPROVED
10-1-2012 /S/ Travis Feltes
DATE STATE TRAFFIC ENGINEER OF DESIGN
FHWA



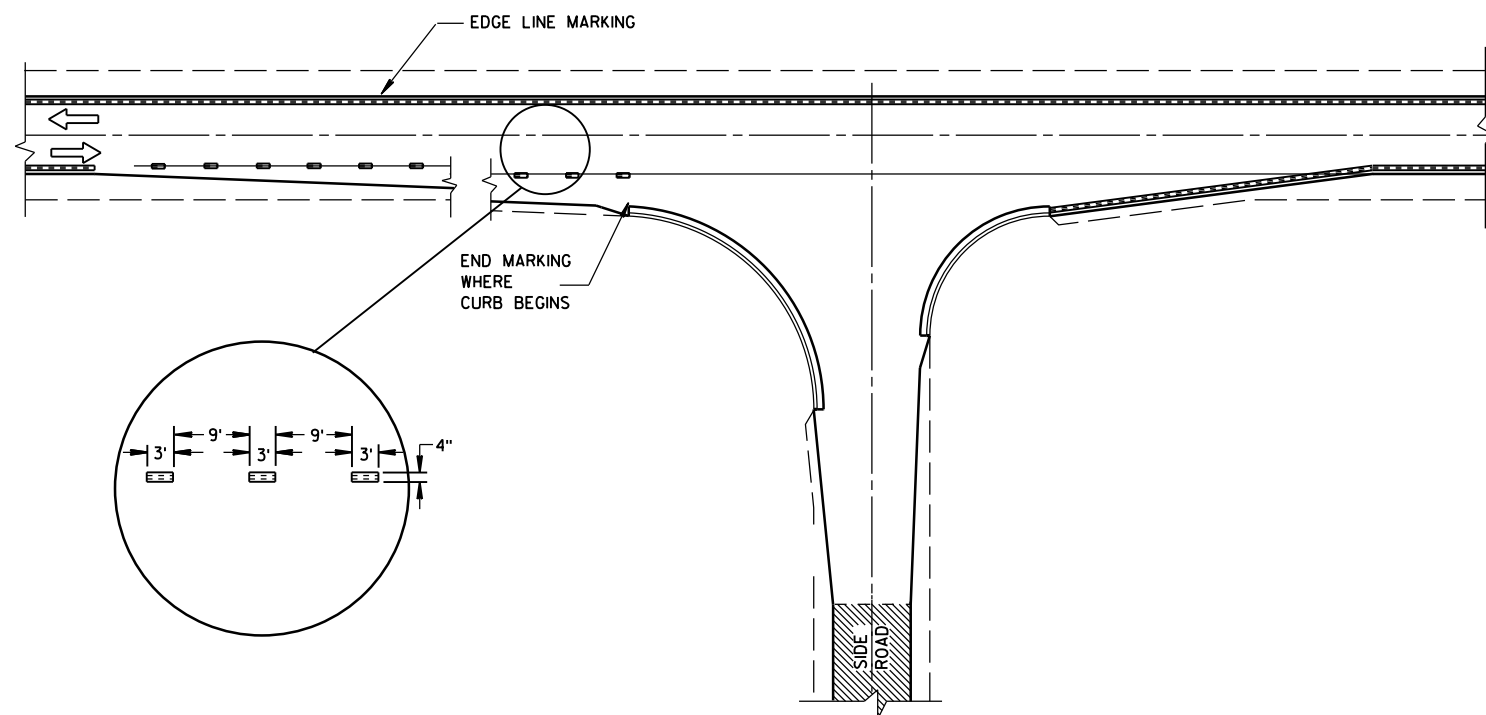
MINOR INTERSECTION WITHOUT CURBS

⑦

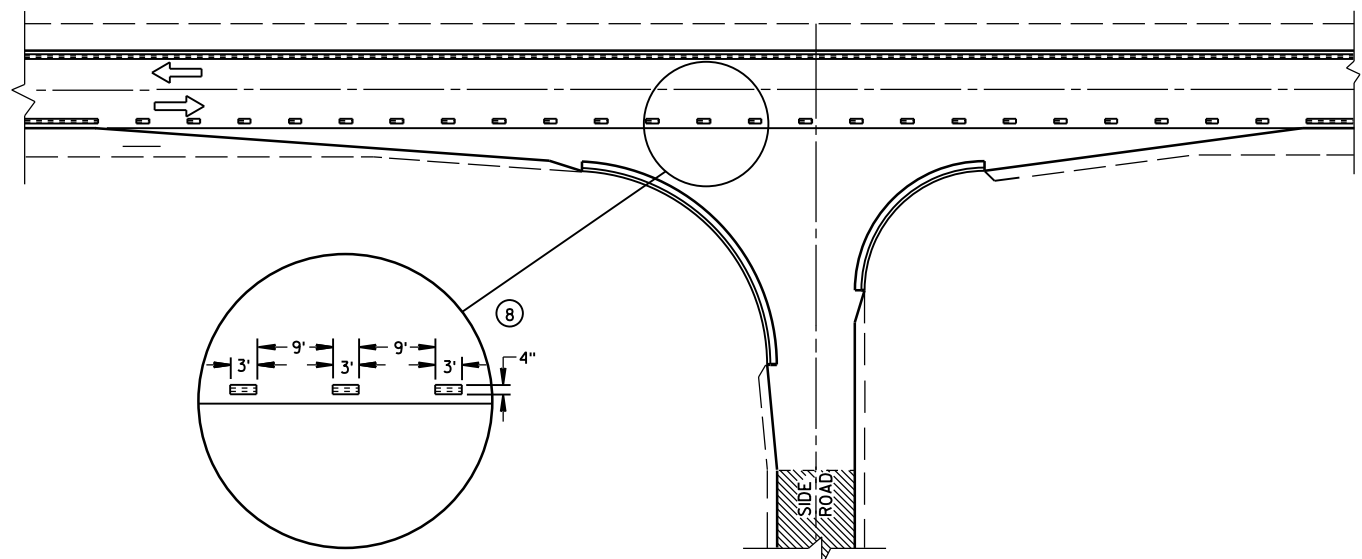
POSTED SPEED (MPH)	MINIMUM DISTANCE BETWEEN ZONES (FEET)
25 - 30	528
35 - 40	528
45 - 50	686
55	792



MAJOR INTERSECTIONS
(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANES)



MINOR INTERSECTION WITH CURBS
(TYPICAL MARKING)



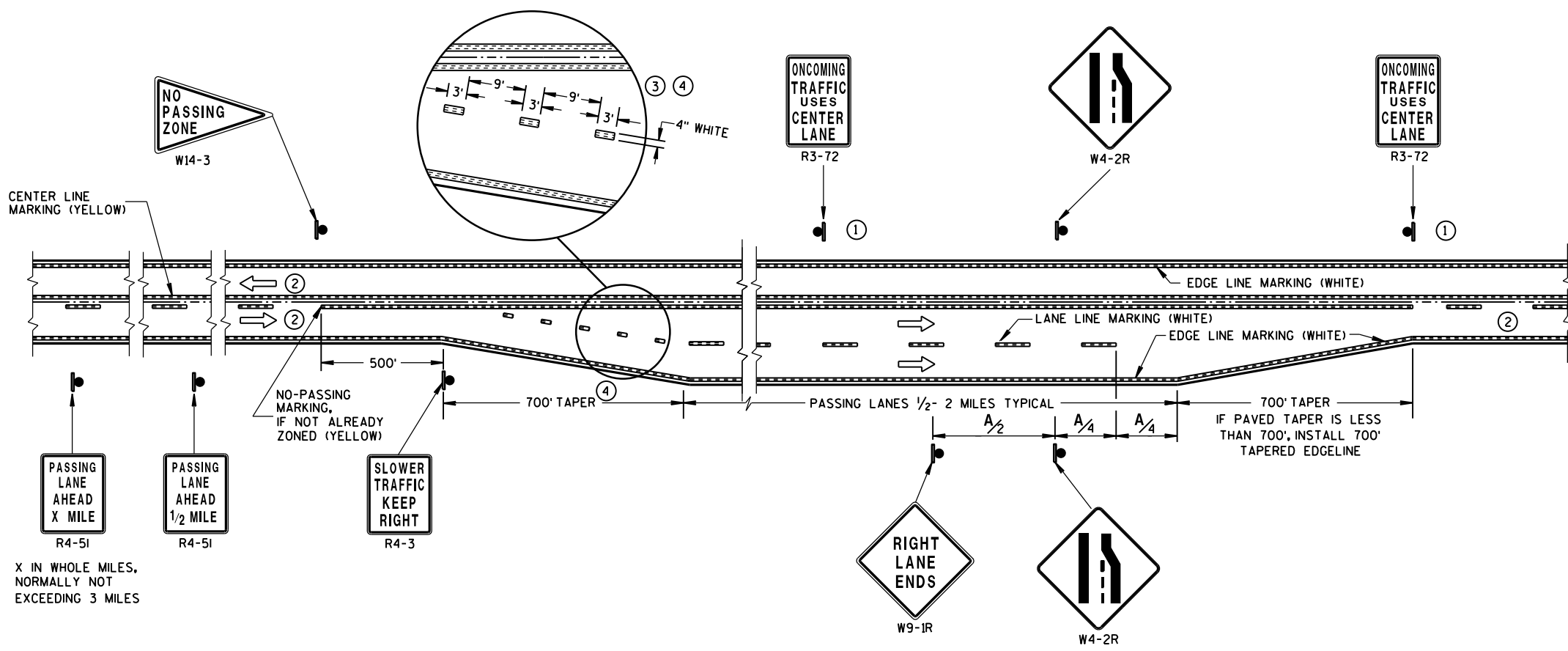
MINOR INTERSECTION WITH CURBS
③ (FOR SPECIAL CONDITIONS AS SPECIFIED)

GENERAL NOTES

- EDGE LINES SHALL BE OMITTED THROUGH INTERSECTIONS. EDGE LINES SHALL BE CONTINUED 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 ALTERNATIVE MARKING SHALL BE PROVIDED WHEN SPECIFIED IN THE CONTRACT. TYPICAL SITUATIONS WHERE THIS MARKING MAY BE REQUIRED ARE WHERE THE INTERSECTION IS ON A SHARP HORIZONTAL CURVE OR CREST VERTICAL CURVE IN AN UNLIGHTED AREA SUCH THAT THE EDGE LINE MAY BE MISLEADING TO THE MOTORIST OR DISAPPEAR FROM SIGHT.
 - ④ THE EDGE LINE IN THE TAPER AREAS OF THE BYPASS LANE AND THE BYPASS LANE SHALL BE LOCATED 1-FOOT FROM EDGE OF PAVEMENT TO THE OUTSIDE EDGE OF EDGE LINE.
 - ⑤ BARRIER LINE ENDS AT SIDE ROAD PAVEMENT/SURFACE EDGE EXTENSION.
 - ⑥ BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.
 - ⑦ IF THE DISTANCE BETWEEN 2 SUCCESSIVE NO-PASSING ZONES IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES, CONNECT THE 2 ZONES.
 - ⑧ 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.
- ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL

PAVEMENT MARKING
(INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



**SOLID DOUBLE-YELLOW LINE
(THROUGHOUT ENTIRE PASSING/CLIMBING LANE)**

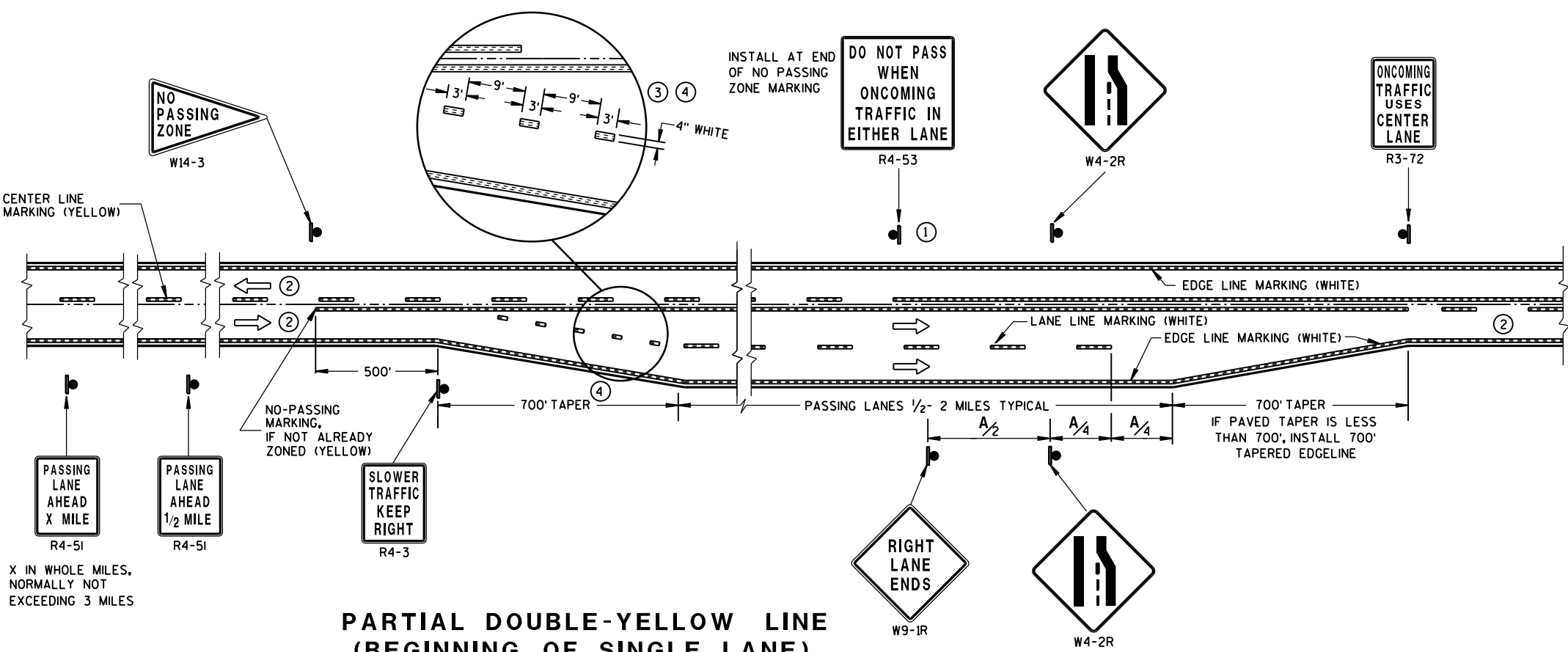
GENERAL NOTES

- ① SIGN SHALL BE REPEATED AT 1 MILE INCREMENTS OR AT THE DISCRETION OF THE REGIONAL TRAFFIC ENGINEER.
- ② THERE MAY BE SOLID YELLOW ON THE CENTERLINE DUE TO SIGHT CONDITIONS.
- ③ THE TAPER LENGTH OF THE DOTTED LINE PAVEMENT MARKING SHALL BE 700 FEET, 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE-GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.
- ④ WHEN THE ENTRANCE TAPER IS LESS THAN 700 FEET OR THE SHOULDER WIDTH IN THE PASSING/CLIMBING LANE IS LESS THAN THE ADJACENT HIGHWAY, DO NOT INSTALL DOTTED LINE PAVEMENT MARKING.

ARROW SYMBOL (➡) SHOWS DIRECTION OF TRAVEL

DISTANCE TABLE

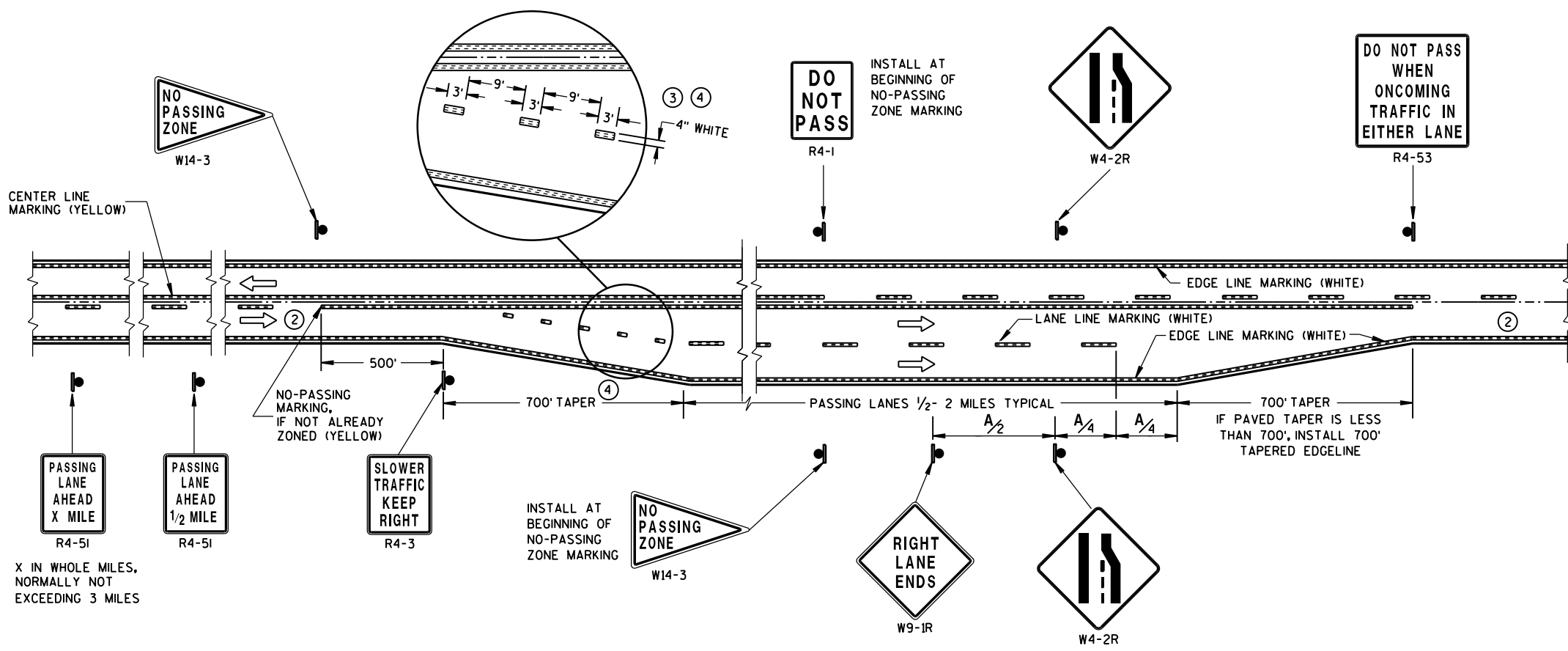
POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
45	750
50	850
55	950



**PARTIAL DOUBLE-YELLOW LINE
(BEGINNING OF SINGLE LANE)**

**PAVEMENT MARKING & SIGNING
(CLIMBING LANE & PASSING LANE)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



**SOLID DOUBLE-YELLOW LINE
(END OF SINGLE LANE)**

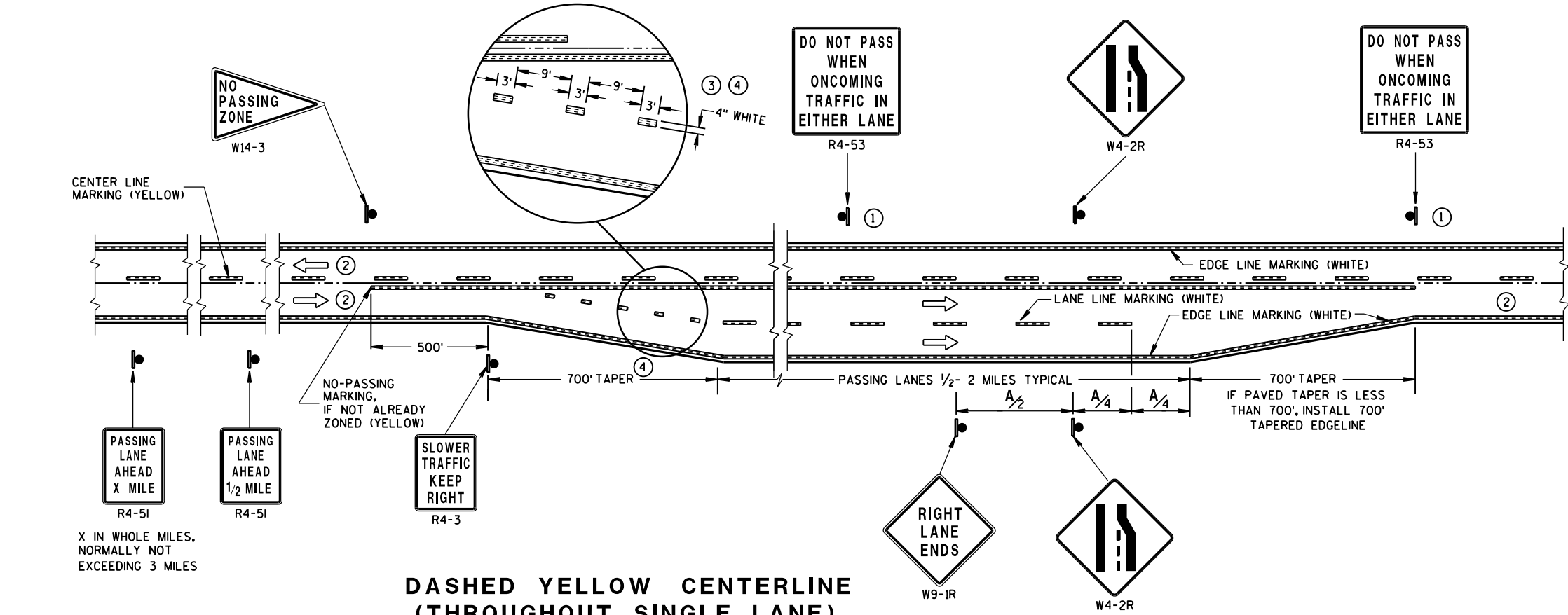
GENERAL NOTES

- ① SIGN SHALL BE REPEATED AT 1/2 MILE INCREMENTS OR AT THE DISCRETION OF THE REGIONAL TRAFFIC ENGINEER.
- ② THERE MAY BE SOLID YELLOW ON THE CENTERLINE DUE TO SIGHT CONDITIONS.
- ③ THE TAPER LENGTH OF THE DOTTED LINE PAVEMENT MARKING SHALL BE 700 FEET, 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE-GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.
- ④ WHEN THE ENTRANCE TAPER IS LESS THAN 700 FEET OR THE SHOULDER WIDTH IN THE PASSING/CLIMBING LANE IS LESS THAN THE ADJACENT HIGHWAY, DO NOT INSTALL DOTTED LINE PAVEMENT MARKING.

ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL

DISTANCE TABLE

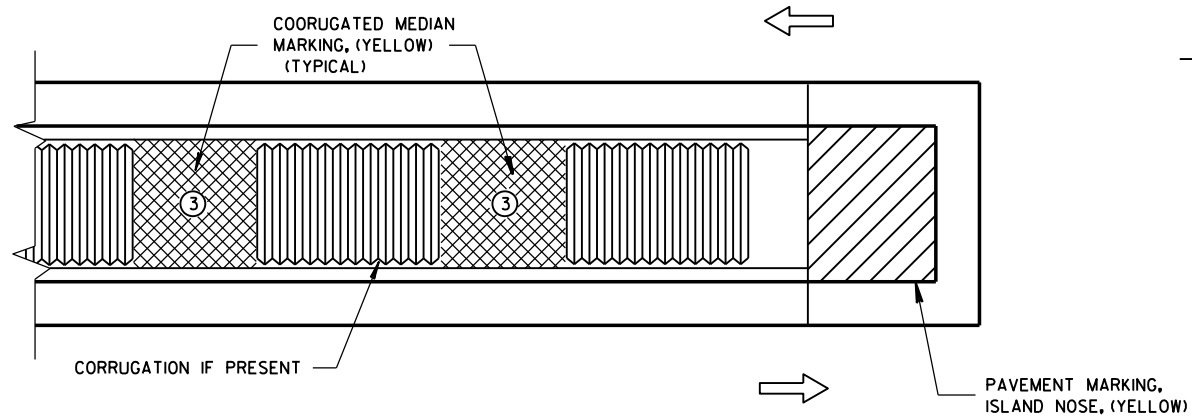
POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
45	750
50	850
55	950



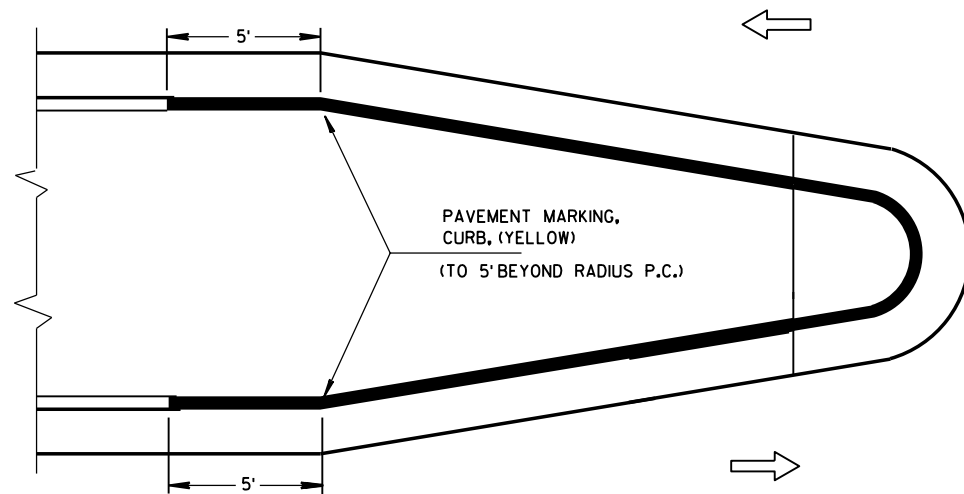
**DASHED YELLOW CENTERLINE
(THROUGHOUT SINGLE LANE)**

**PAVEMENT MARKING & SIGNING
(CLIMBING LANE &
PASSING LANE)**

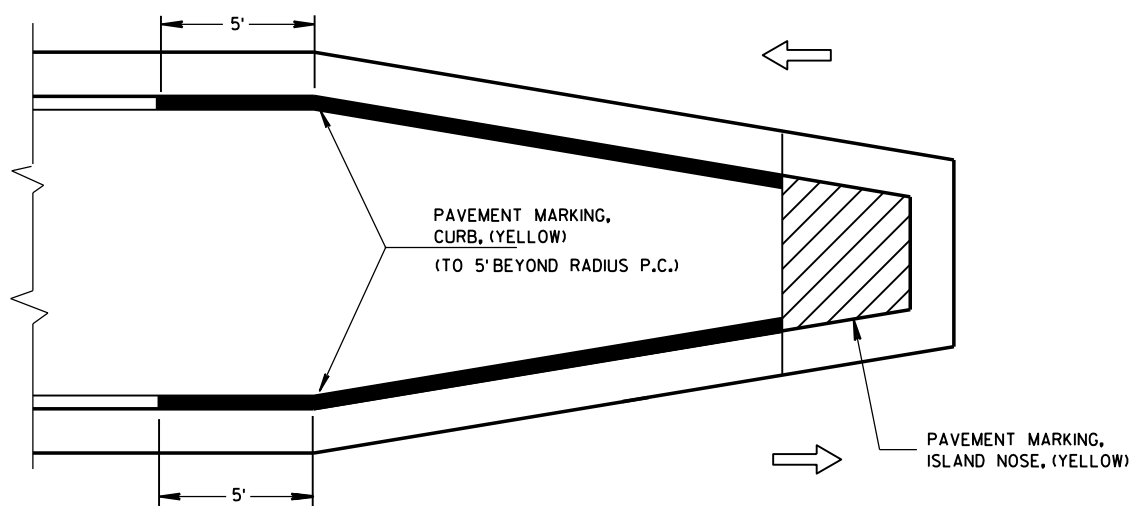
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



MEDIAN ISLAND WITH SQUARE BLUNT NOSE

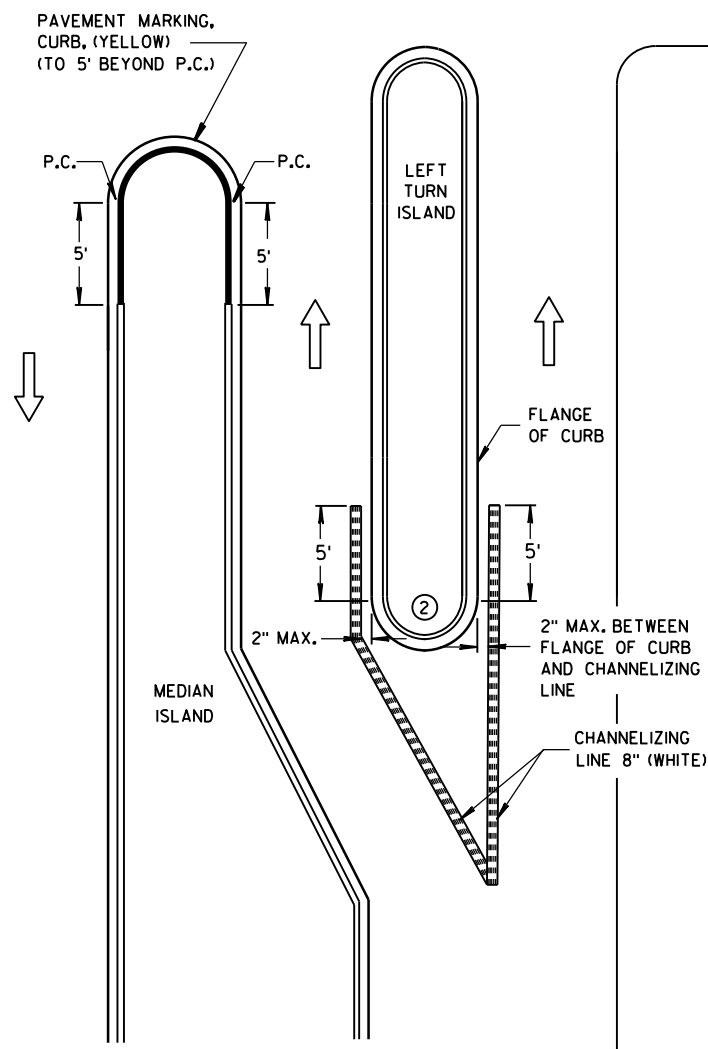


MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

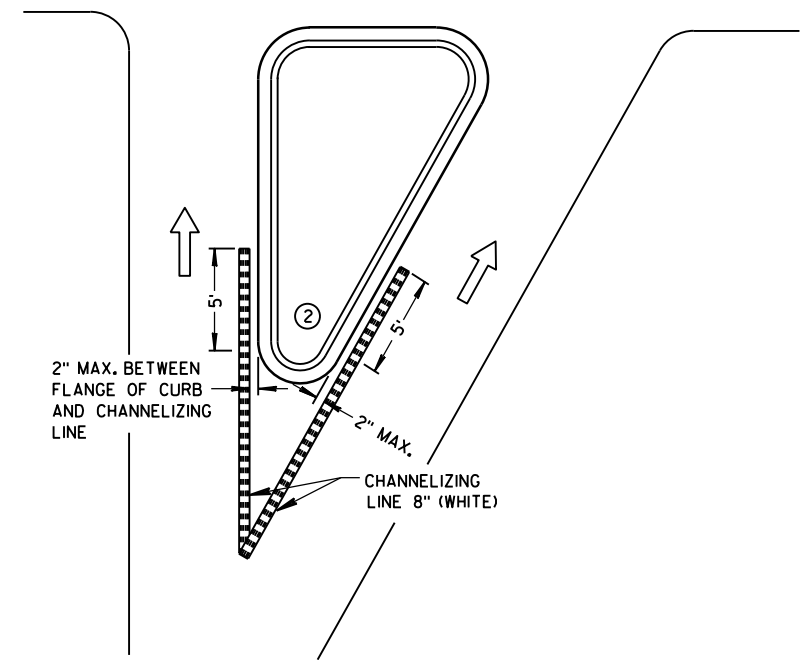
TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS



LEFT TURN & MEDIAN ISLAND

GENERAL NOTES

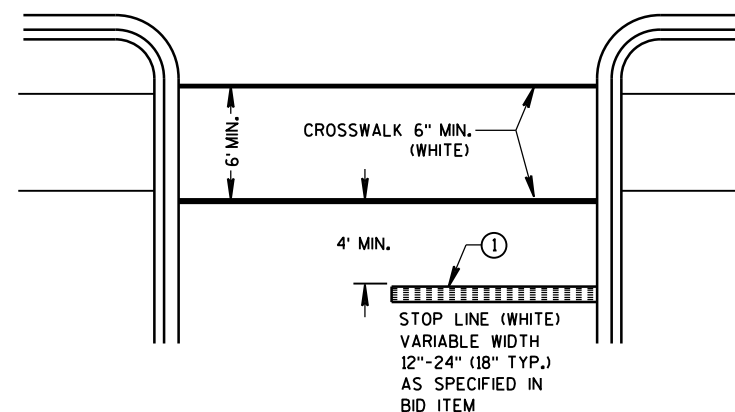
- ① STOP LINE IS REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.
- ② DO NOT MARK CURB NOSES THAT SEPARATE LANES OF TRAFFIC TRAVELING IN THE SAME DIRECTION.
- ③ WHEN CONCRETE CORRUGATED MEDIAN IS CONSTRUCTED TO SEPARATE TRAFFIC OPERATING IN THE OPPOSING DIRECTION YELLOW PAVEMENT MARKING SHALL BE APPLIED TO THE FLAT PORTION OF THE CONCRETE CORRUGATED MEDIAN. THE ITEM OF PAVEMENT MARKING, CONCRETE CORRUGATED MEDIAN, WILL BE MEASURED IN PLACE AND ACCEPTED IN ACCORDANCE WITH THE CONTRACT AND PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT.



RIGHT TURN ISLAND

LEGEND

- ISLAND NOSE MARKING
- CURB MARKING
- CORRUGATED MEDIAN MARKING
- DIRECTION OF TRAVEL



STOP LINE AND CROSSWALK

PAVEMENT MARKING (ISLANDS, STOP LINE & CROSS WALK)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

TWO-LANE ROADWAY

SYMBOLS



WORK AREA



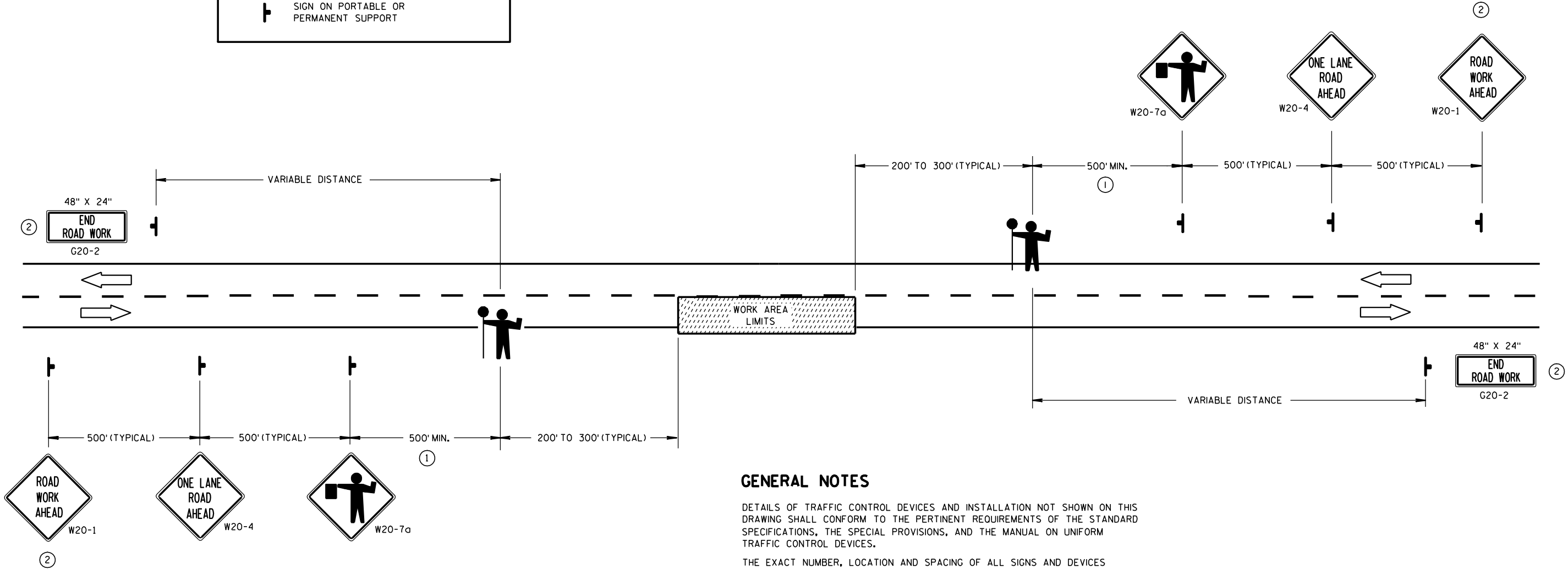
FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF



SIGN ON PORTABLE OR PERMANENT SUPPORT



USE OF THE "BE PREPARED TO STOP" SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7a AND W20-4 SIGNS. A 500' TYPICAL SPACING SHALL BE PROVIDED BETWEEN THE SIGNS.



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.

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES (AND THE 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.

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, THE "FLAGGER AHEAD", THE "ROAD WORK AHEAD" AND THE ONE LANE ROAD AHEAD" SIGNS SHALL BE COVERED OR REMOVED AND THE HIGHWAY RESTORED TO NORMAL OPERATION.

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

- ① FOR A MOVING WORK OPERATION, SIGNING FOR BOTH DIRECTIONS SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3500 FOOT 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.

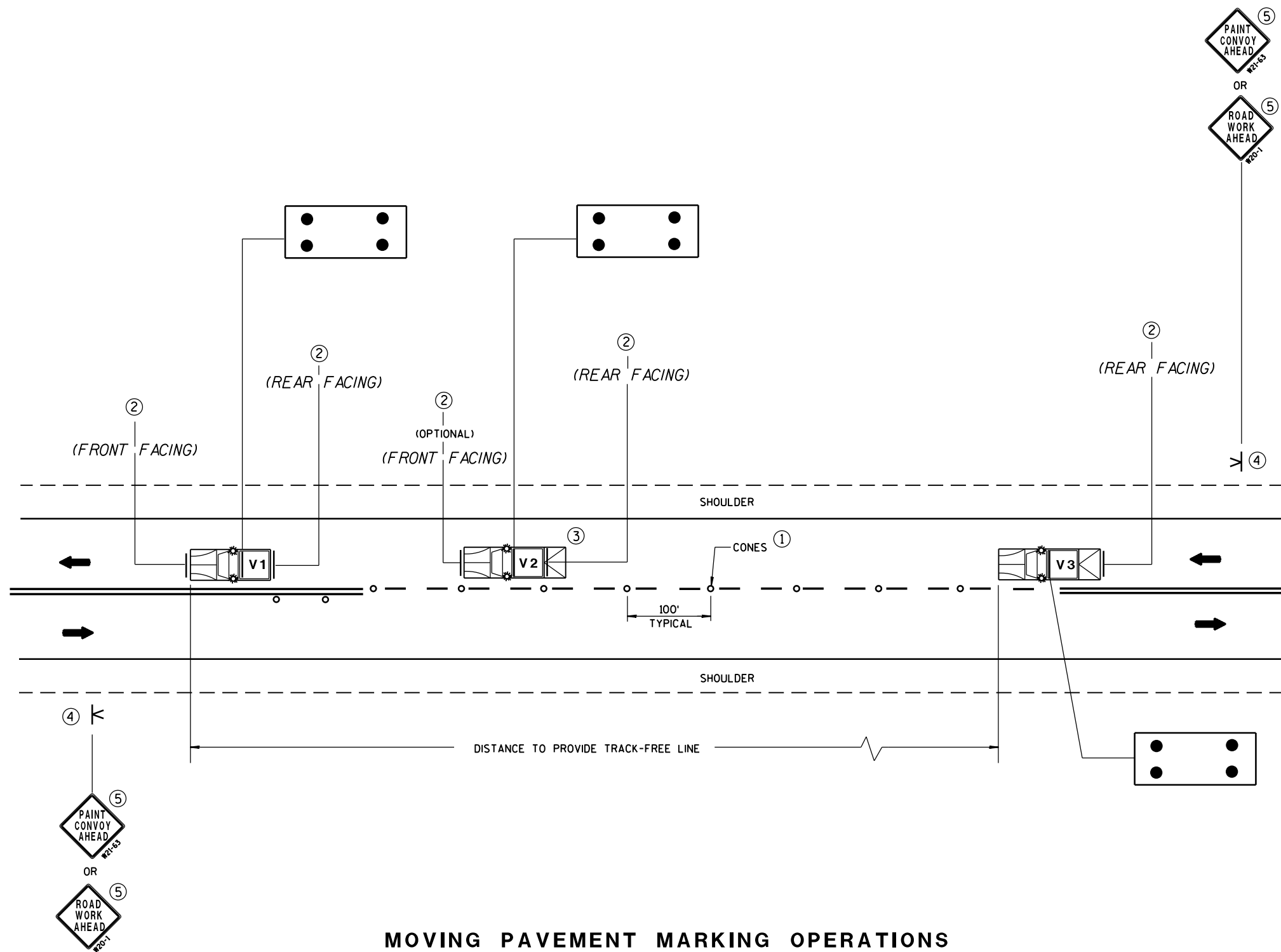
TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9/5/06
DATE

/S/ Thomas N. Notbohm
STATE TRAFFIC ENGINEER OF DESIGN

FHWA



MOVING PAVEMENT MARKING OPERATIONS TWO-LANE TWO-WAY ROADWAY

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.

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.

IF SPEED LIMIT IS 40 MPH OR LESS STATIONARY SIGNS MAY BE OMITTED IF CONES ARE USED.

ALTERNATE SIGN MESSAGES, SUCH AS "PAINT CREW AHEAD" OR "ROAD PAINTING AHEAD" MAY BE USED.

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 OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

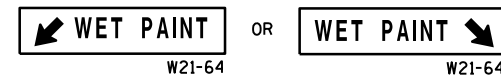
THE WORK AND SHADOW VEHICLES SHOULD PULL OVER PERIODICALLY TO ALLOW TRAFFIC TO PASS.

THIS DRAWING SHALL BE USED FOR CENTERLINE OR EDGELINE MARKING.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR TURN THE STATIONARY WARNING SIGNS AWAY FROM TRAFFIC.

① CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

② USE STANDARD SIGN W21-64 WITH APPROPRIATE ARROW.



③ OPTIONAL TRUCK-MOUNTED ATTENUATOR.

④ SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.

⑤ IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1 OR W21-63 ARE NOT REQUIRED.

LEGEND

V1 LEAD VEHICLE

V2 SHADOW VEHICLE

V3 TRAIL VEHICLE WITH TMA

TMA TRUCK-MOUNTED ATTENUATOR

K SIGN ON PORTABLE SUPPORT

→ DIRECTION OF TRAVEL

○ CONES

⋮ FLASHING ARROW PANEL (CAUTION)

MOVING PAVEMENT MARKING
OPERATION
TWO-LANE TWO-WAY ROADWAY

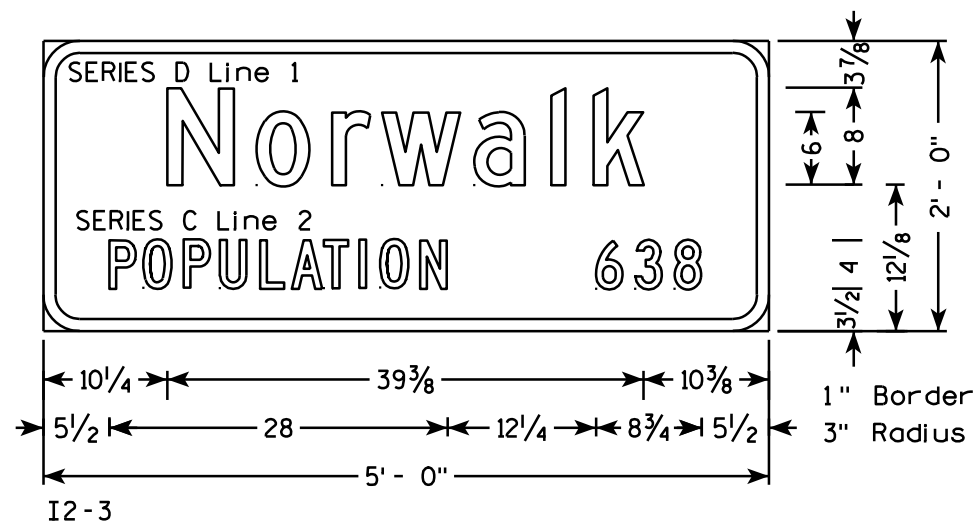
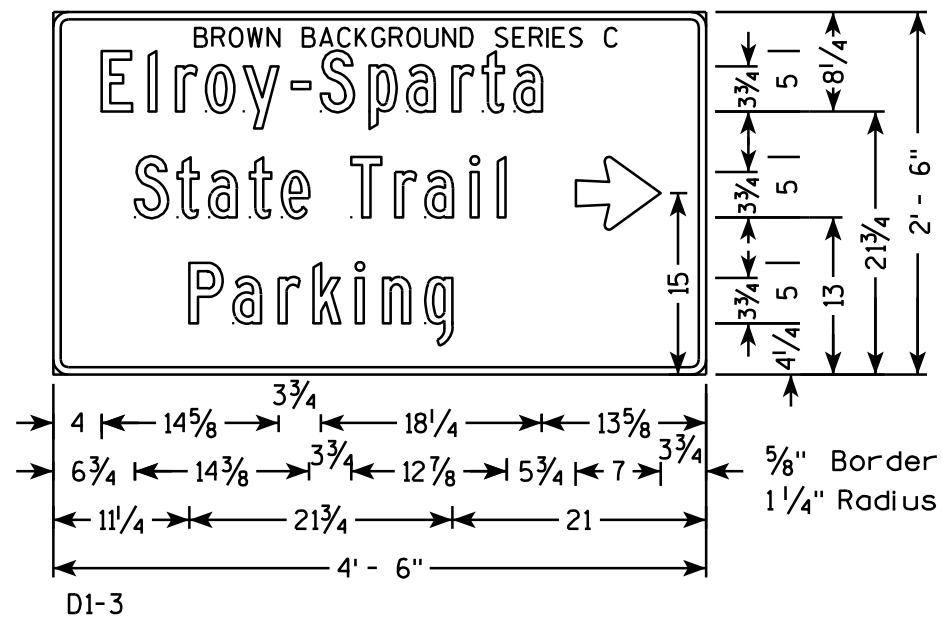
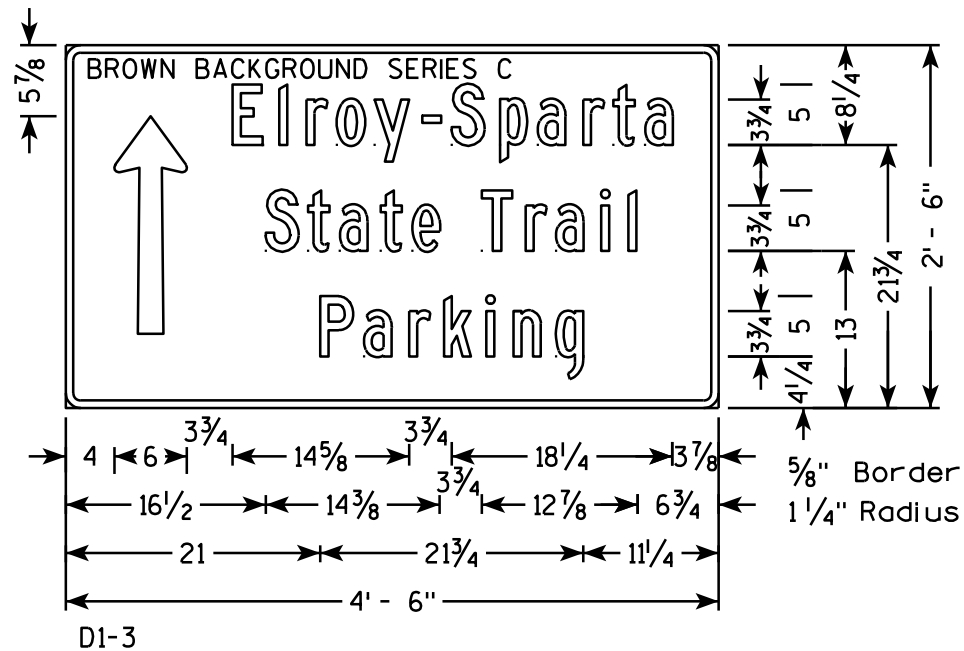
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

12/6/2011
DATE

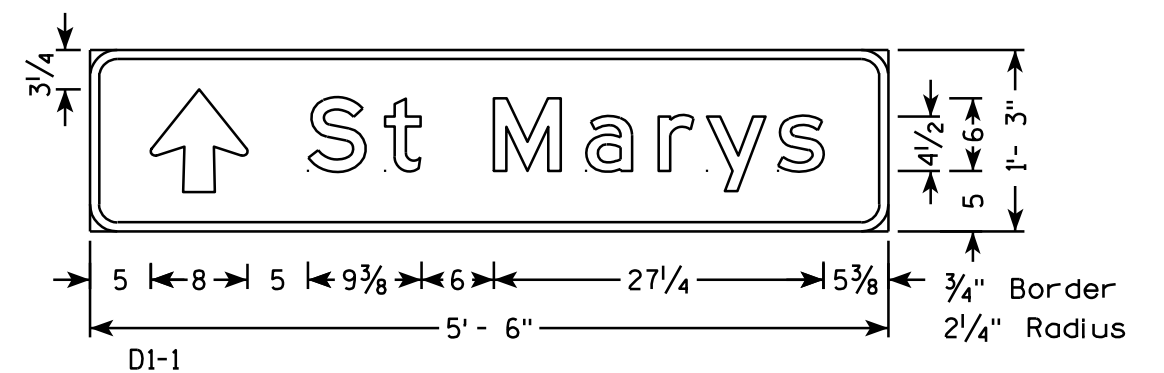
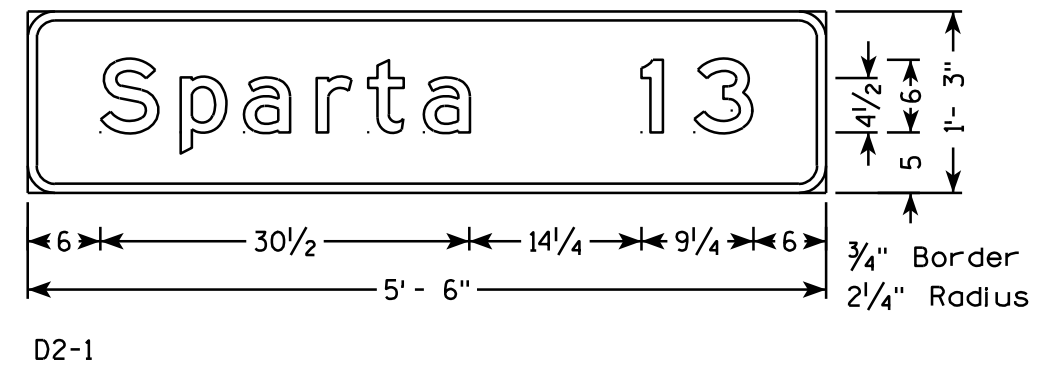
FHWA

/S/ Thomas N. Notbohm
STATE TRAFFIC ENGINEER OF DESIGN

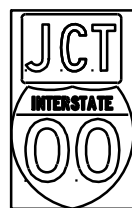


NOTES

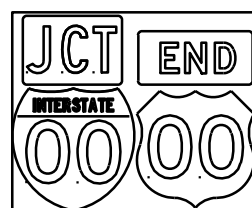
1. All Signs Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - GREEN except as Shown
Message - WHITE
3. Message Series - E except as Shown



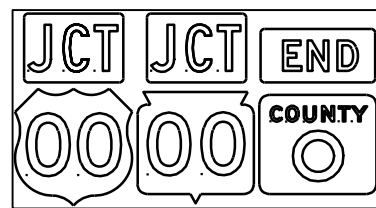
TYPICAL ASSEMBLIES



J1-1



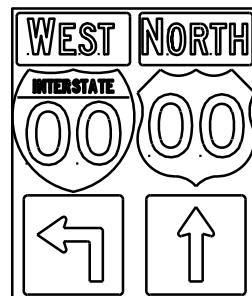
J1-2



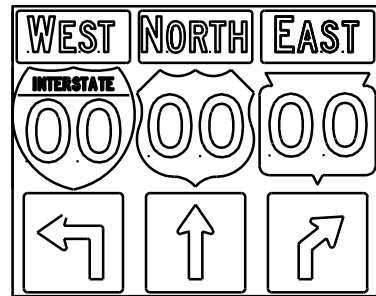
J1-3



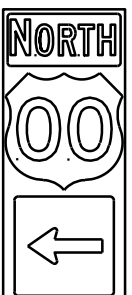
J2-1



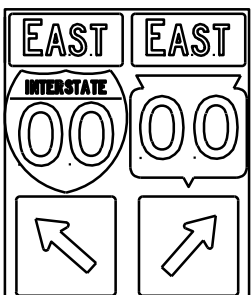
J2-2



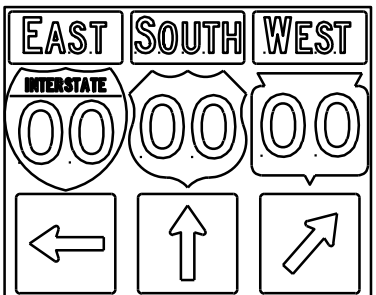
J2-3



J3-1



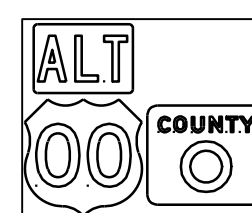
J3-2



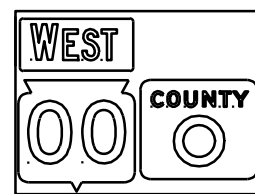
J3-3



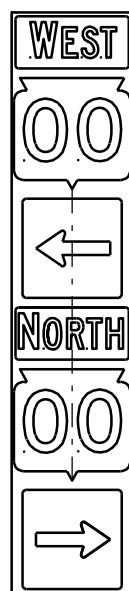
J4-1



J4-2

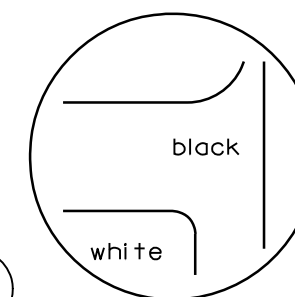
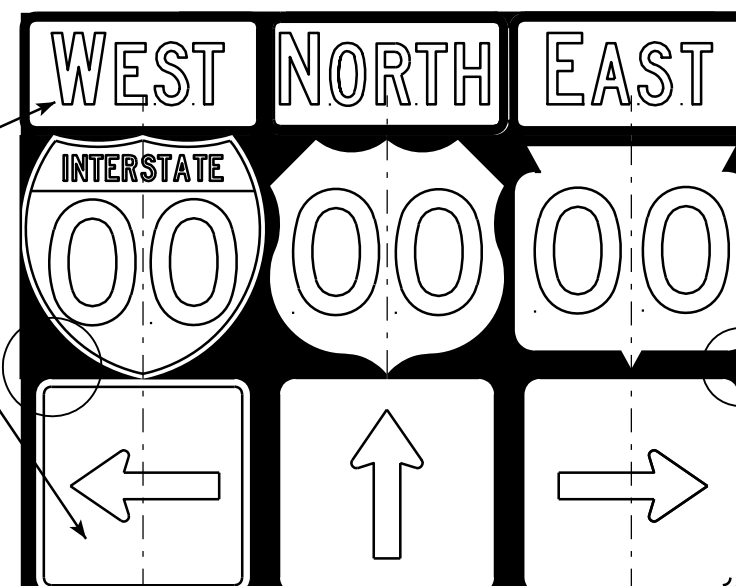
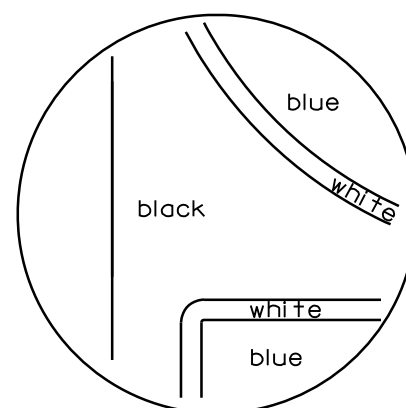


J4-2



JV

[blue background with interstate]



[black background]



J13-1



J12-1



J32-1



J33-1



J23-1



J22-1

NOTES

- Signs are Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - Black Non-reflective
Message - see Note 5
- Message Series - See Note 5
- Corners shall be square since base material is plywood.
- The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
- 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.
- 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.
- 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.
- Route assemblies that have 36 inch shields and have dimensions greater than 48 inches (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.

ROUTE MARKERS & COMPONENTS IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R. Rauch
For State Traffic Engineer

DATE 10/21/09

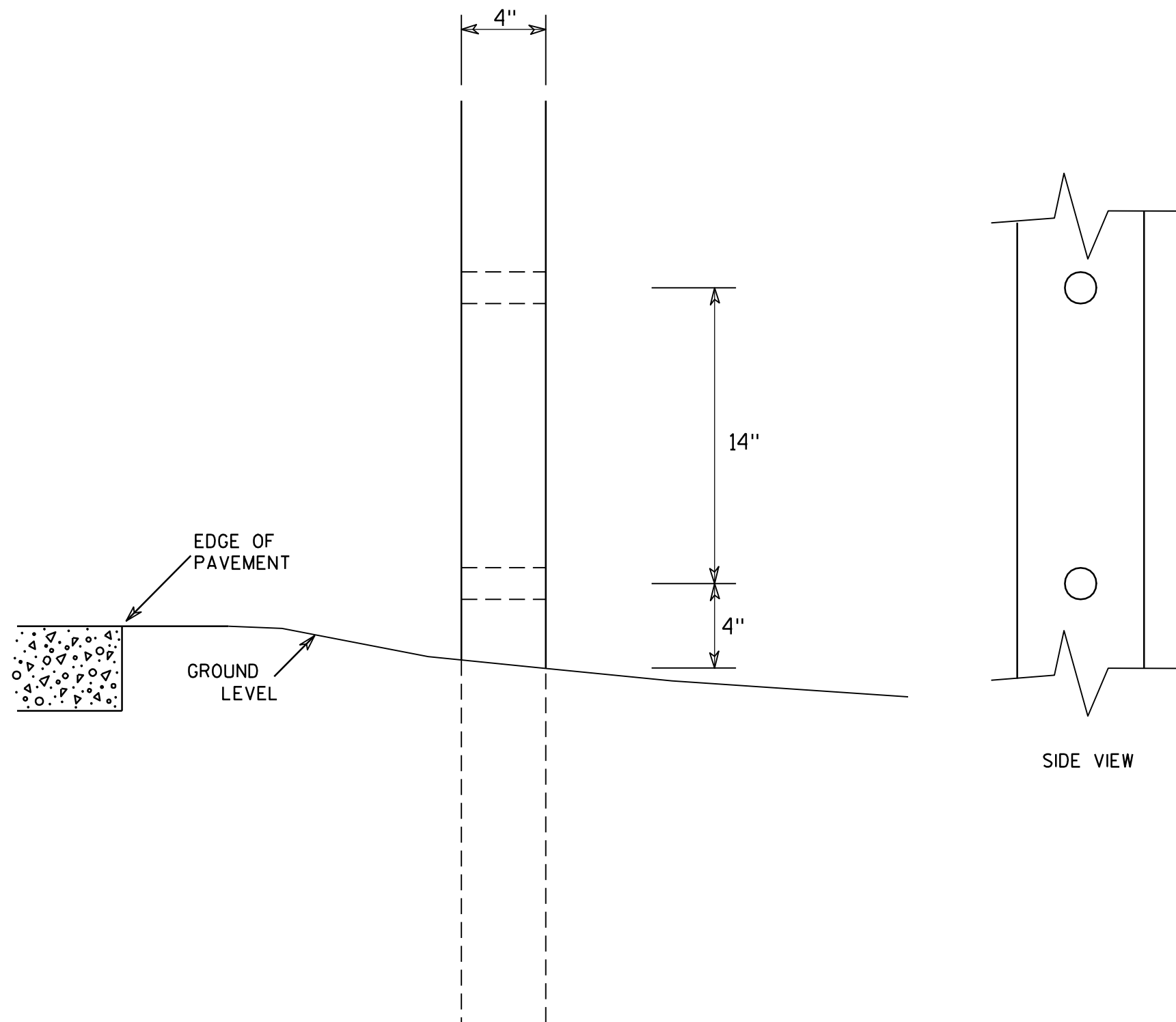
PLATE NO. A2-1S.6

PROJECT NO:

SHEET NO:

E

7

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

**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:

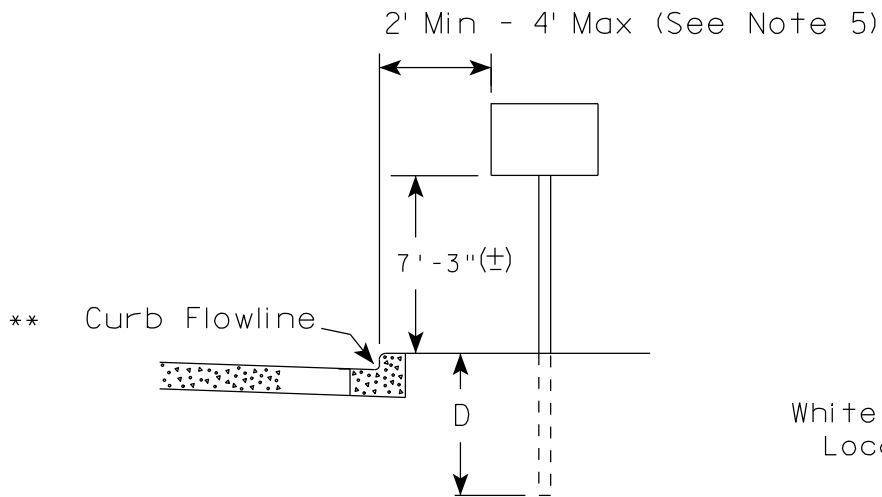
HWY:

COUNTY:

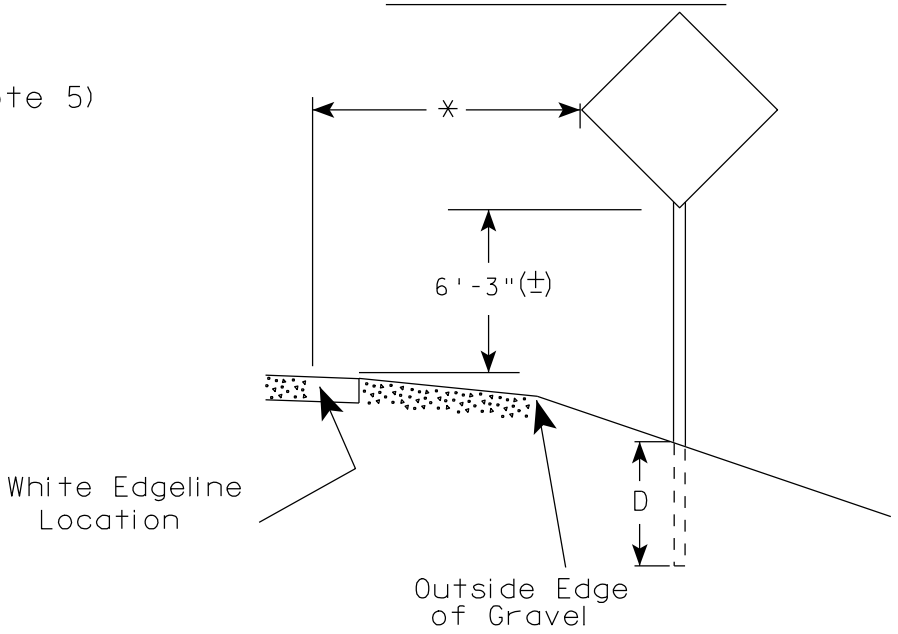
SHEET NO:

E

URBAN AREA



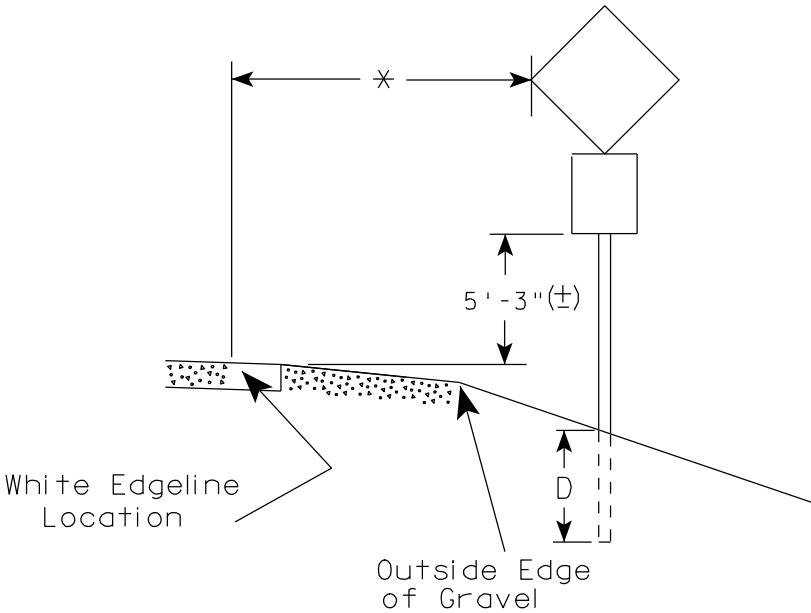
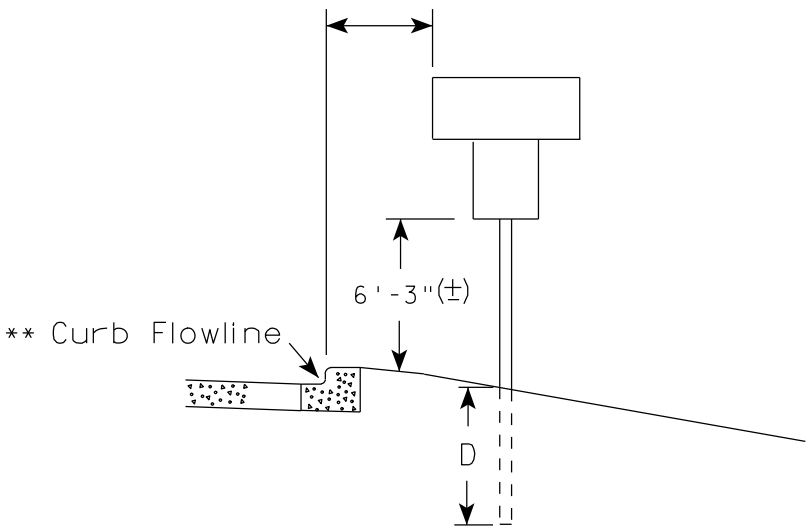
RURAL AREA (See Note 2)



GENERAL NOTES

1. Signs wider than 4 feet or larger than 20 sq. ft. shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
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 J assemblies (A4-5) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding stop signs (R1-1F) shall be mounted at a height of 5'-3" (±) or as directed by the Engineer.
9. 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) & End of Road Markers (W5-56 & W5-56A) shall be mounted at a height of 4'-3" (±).

2' Min - 4' Max (See Note 5)



POST EMBEDMENT DEPTH

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

✱✱ 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.

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 9/21/2011 PLATE NO. A4-3.16

GENERAL NOTES

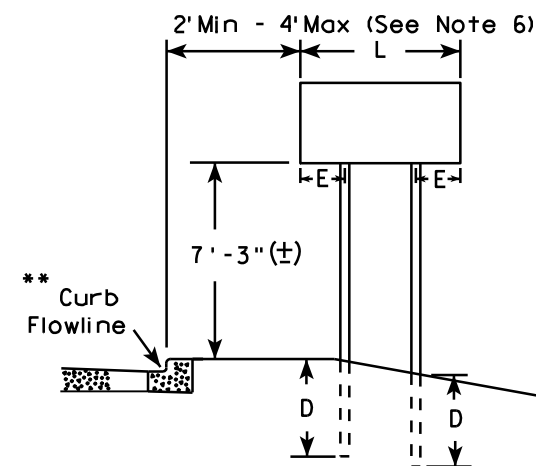
- For multiple post installations, individual post spacing shall be greater than 3'-6".
- See tables below for required number of posts.
- For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
- The (±) tolerance for mounting height is 3 inches.
- Minimum mounting height for J assemblies (A4-5) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
- Offset distance shall be consistent with existing signs or consistent throughout length of project.
- Folding stop signs (R1-1F) shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
- 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) & End of Road Markers (W5-56 & W5-56A) 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.

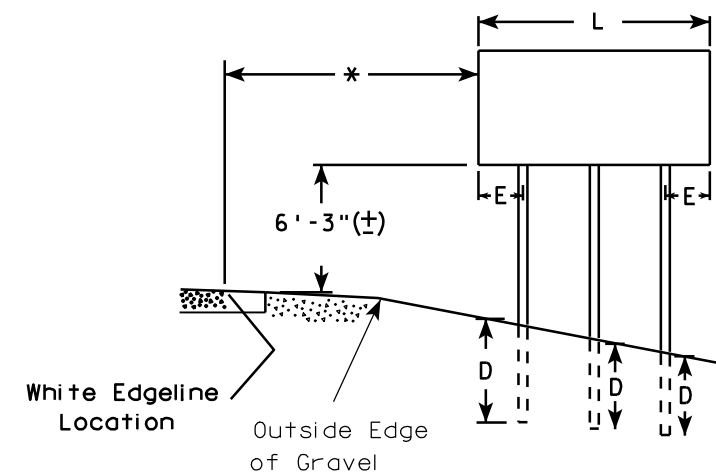
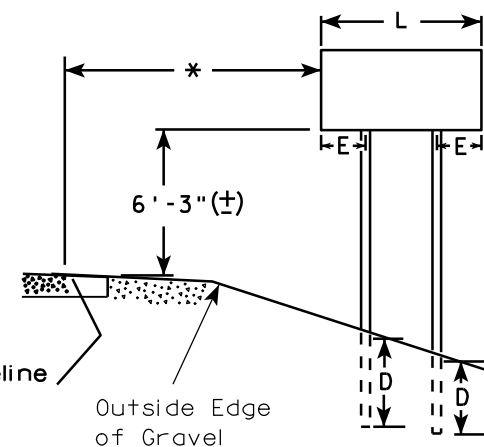
** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs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

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

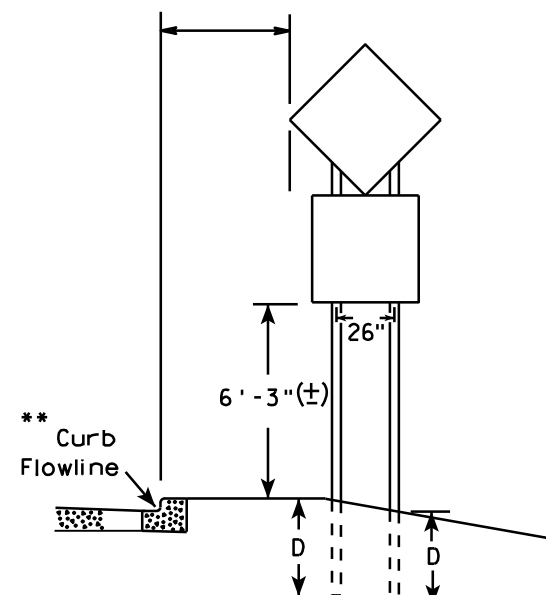
URBAN AREA



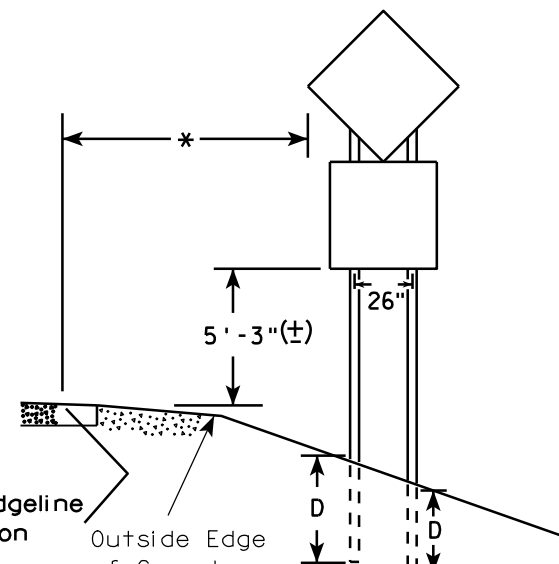
RURAL AREA (See Note 3)



2' Min - 4' Max (See Note 6)



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 120"	L/5

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 120" less than 168"	12"

SIGN SHAPE OTHER THAN DIAMOND (FOUR POSTS REQUIRED)	
L	E
168" and greater	12"

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 9/21/2011 PLATE NO. A4-4.11

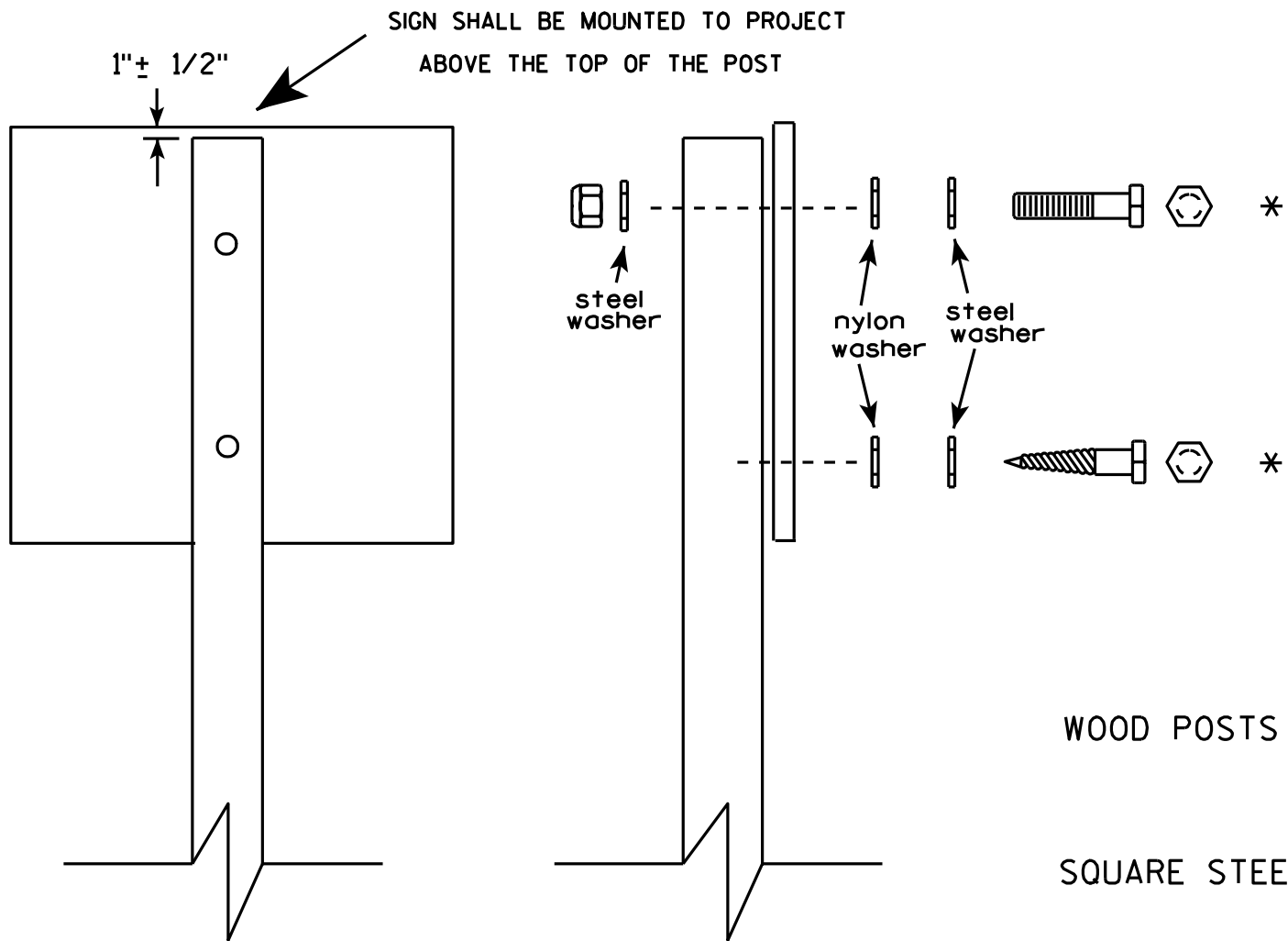
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

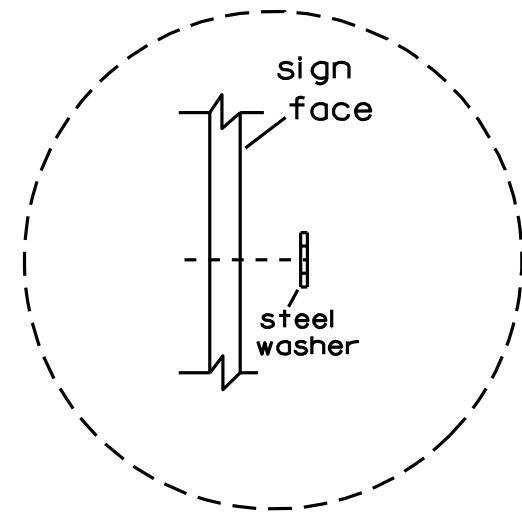


Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

- 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.

- WOOD POSTS (4" x 4" or 4" x 6")
LAG SCREWS - 3/8" X 3"
MACHINE BOLTS - 5/16" X 6-1/2" or 7" Length w/ nuts
- SQUARE STEEL POSTS (2" x 2")
MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts
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 for all Type H signs.



Washer Placement when Sign Has Other Than Type H or Type F Face

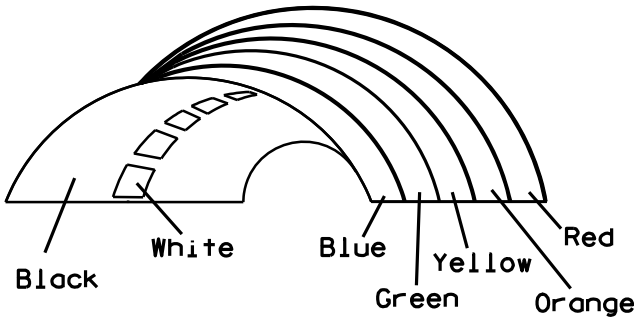
* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require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

ATTACHMENT OF SIGNS TO POSTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 3/23/10	PLATE NO. A4-8.7



* VARIES

Background Colors of Symbol*



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

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 - (See Note 5)
3. Message Series - (See Note 6)
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. Border - Blue
Line 1 - Red
Line 2 - Black
Line 3-5 - Blue
6. Line 1 - Dutch 8011L
Line 2 - Series E
Line 3-5 - Series C
7. 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	36	1 1/2	1/2	5/8	3	2	3 1/2	2 7/8	1	8	2 1/8	11 1/4	11 1/8	9 3/8	1 1/4		3/4	12 5/8	7 1/2							7.5
3																											
4																											
5																											

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

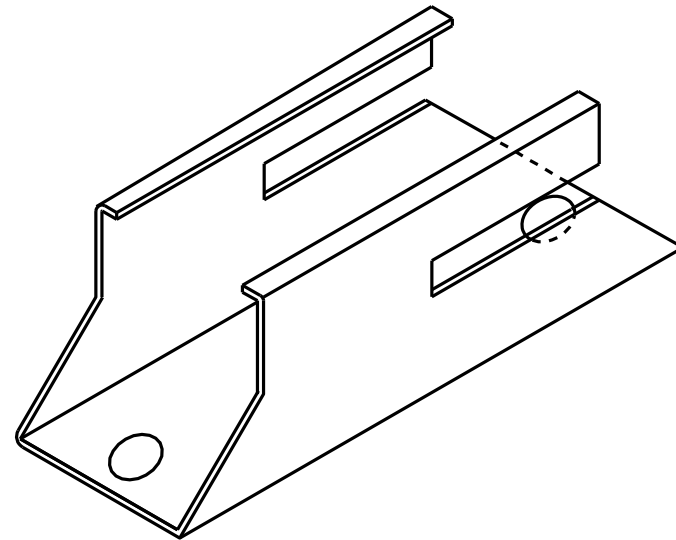
STANDARD SIGN
I55-56

WISCONSIN DEPT OF TRANSPORTATION

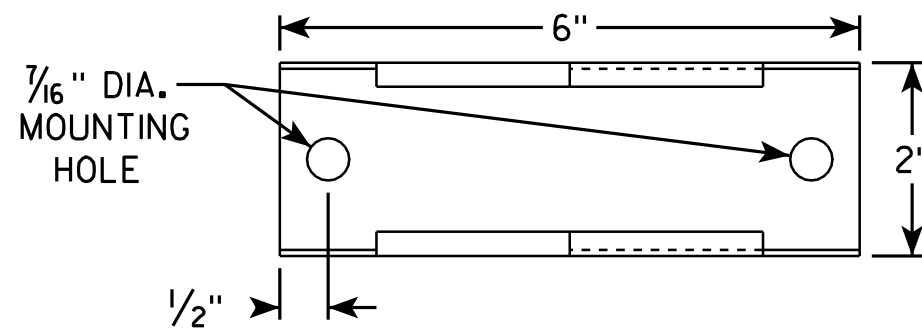
APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 4/27/11 PLATE NO. I55-56.3

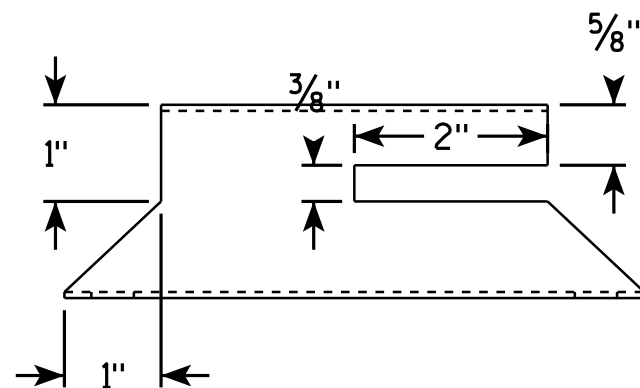
ISOMETRIC VIEW



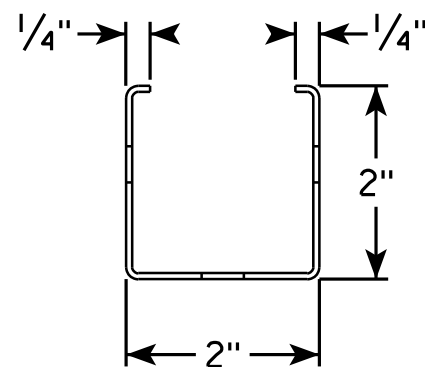
TOP VIEW



SIDE VIEW



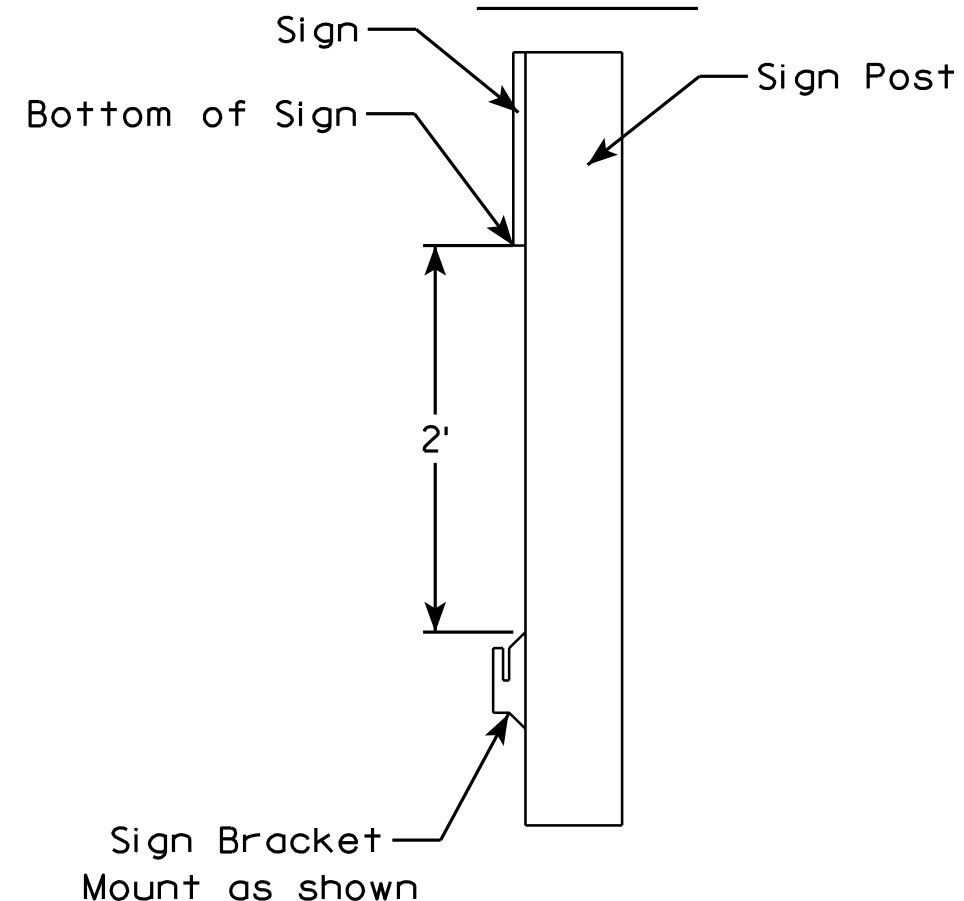
END VIEW



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



ROLLUP SIGN BRACKET
I55-56B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 2/5/10 PLATE NO. I55-56B.1

PROJECT NO:

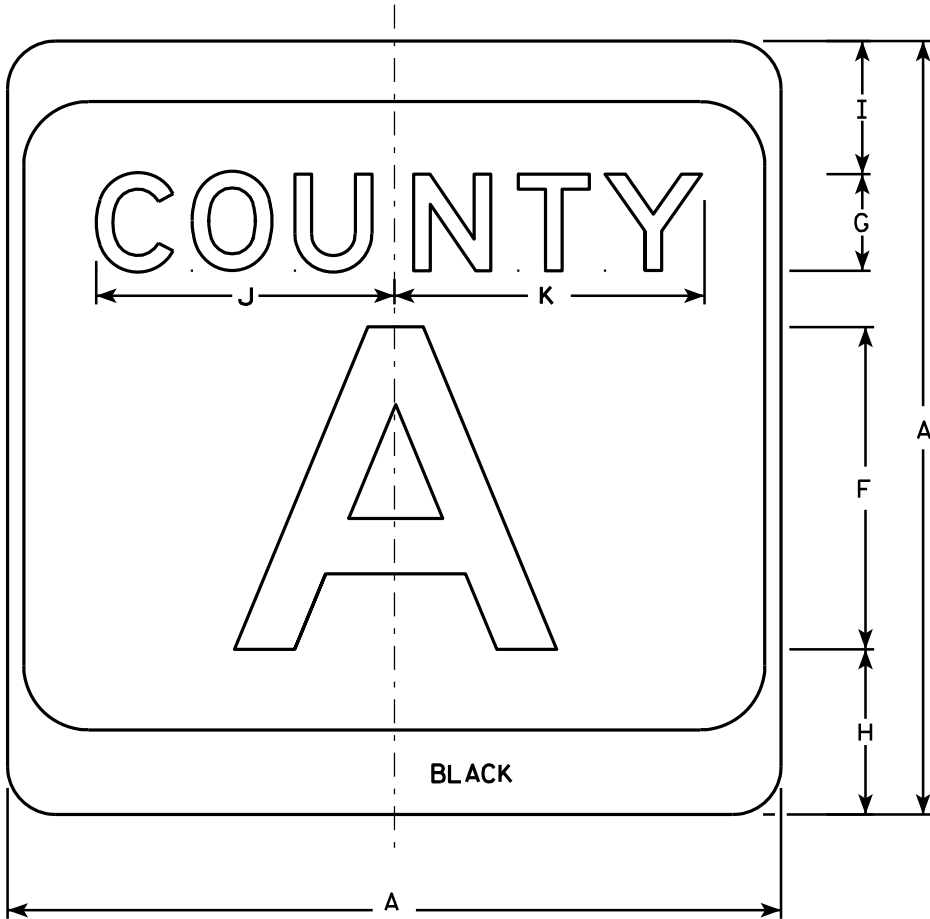
HWY:

COUNTY:

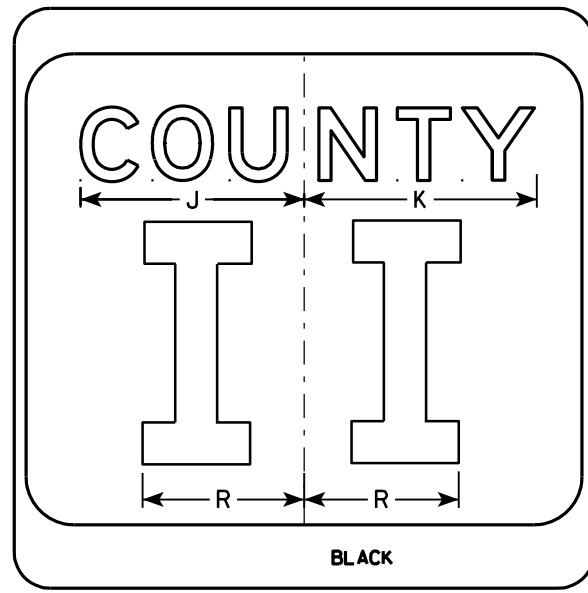
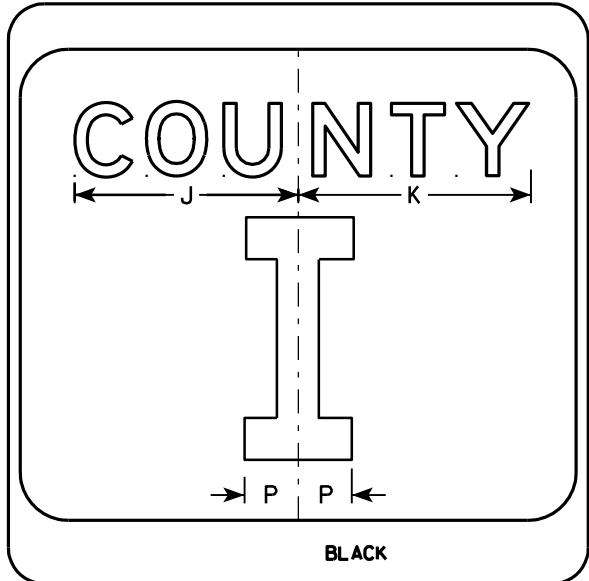
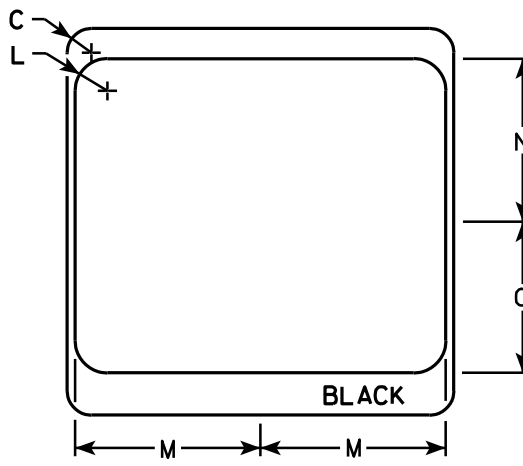
SHEET NO:

E

7



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:

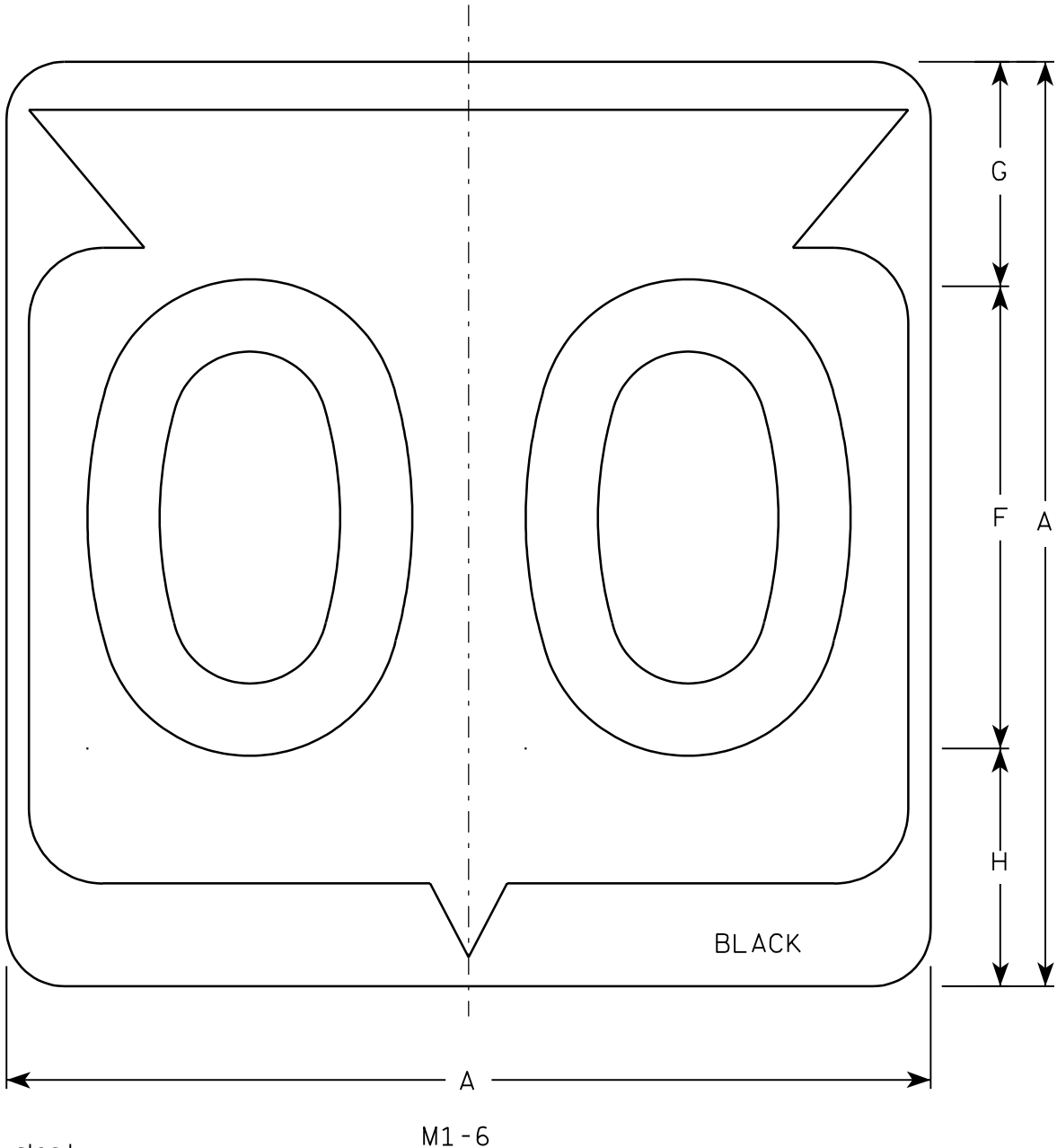
COUNTY:

SHEET NO:

E

7

7



Metric equivalent
for this sign is:

SIZE	
1	
2	600 mm X 600 mm
3	900 mm X 900 mm
4	900 mm X 900 mm
5	900 mm X 900 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 m ²
1																												
2	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0	.36
3	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81
4	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81
5	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81

PROJECT NO:

HWY:

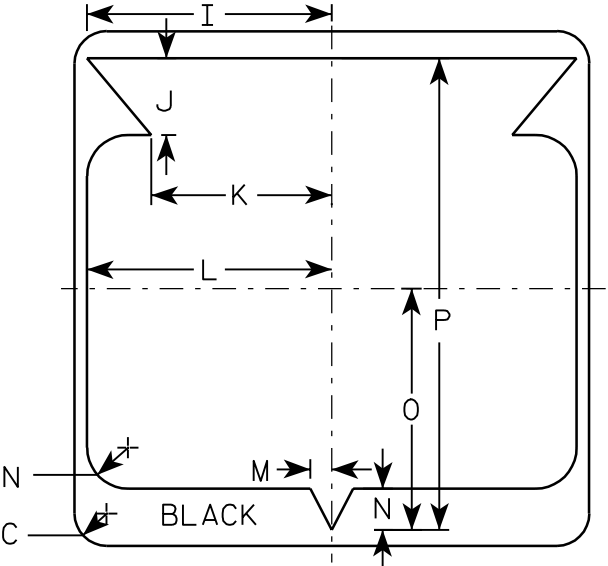
COUNTY:

SHEET NO:

E

NOTES

1. Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White & Black - See Note 6
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. Substitute appropriate Series numerals and adjust spacing as per plate A10-1.
6. Permanent Signs
Background - Type H Reflective
Detour or temporary Signs
Background - Reflective



STATE ROUTE MARKER
M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

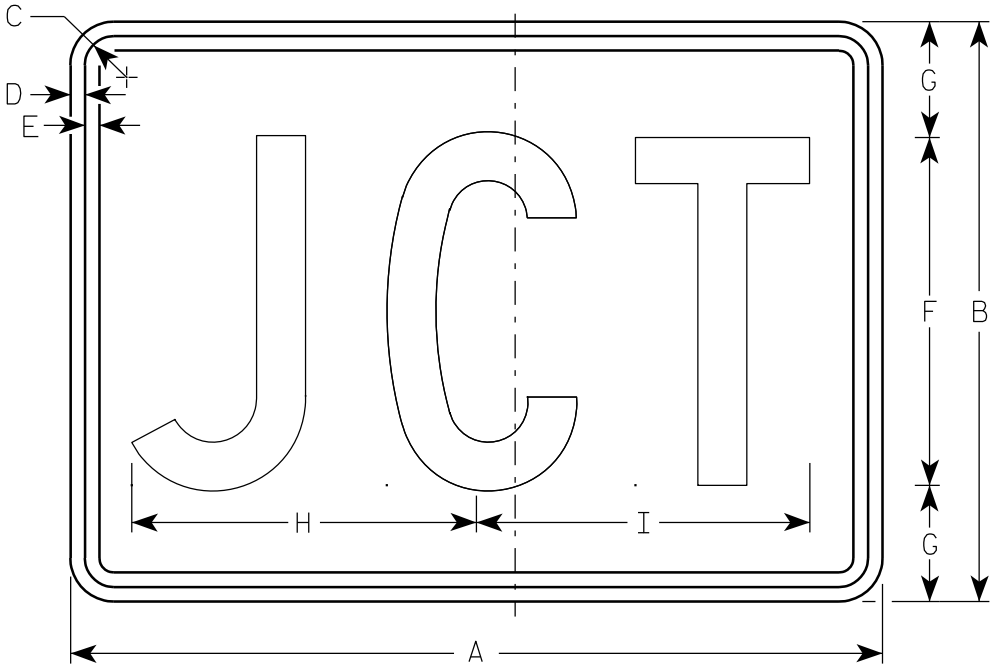
Chester J. Spang
for State Traffic Engineer

DATE 3/20/02

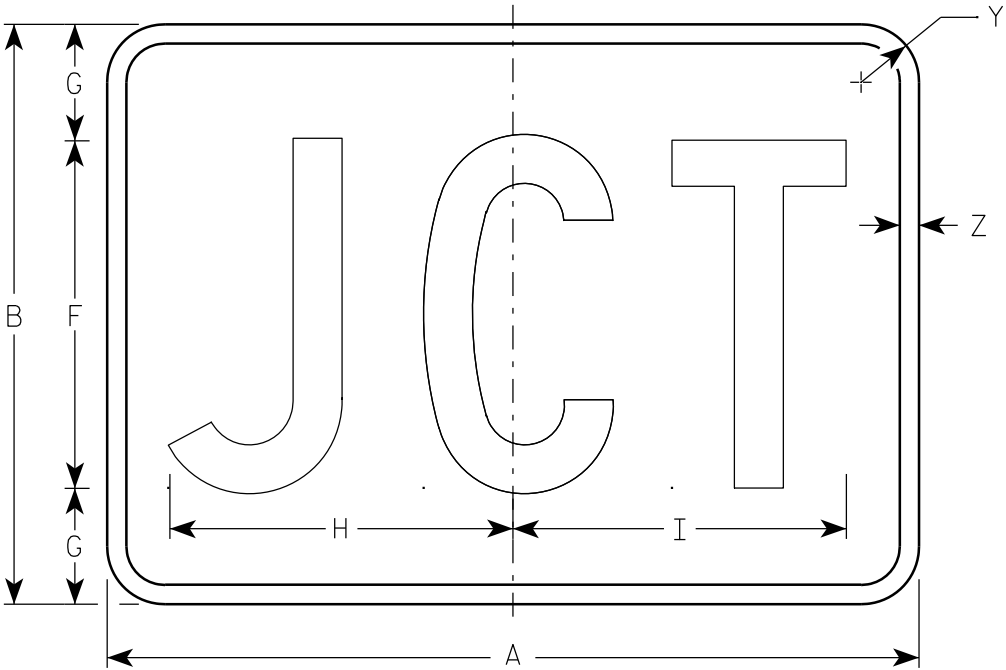
PLATE NO. M1-6.9

NOTES

1. Sign is Type II - See Note 5 - reference
WIS DOT Standard Specification for HIGHWAY
and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - See note 5
Message - See note 5
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. M2-1 Background - White - Type H Reflective
(Detour or temporary Signs - Reflective)
Message - Black
MB2-1 Background - Blue
Message - White - Type H Reflective
(Detour or temporary Signs - Reflective)
MG2-1 Background - Green
Message - White - Type H Reflective
MK2-1 Background - Green
Message - White - Type H Reflective
MM2-1 Background - White - Type H Reflective
Message - Green
MN2-1 Background - Brown
Message - White - Type H Reflective
MR2-1 Background - Brown
Message - Yellow - Type H Reflective



M2-1
MK2-1
MM2-1
MR2-1



MB2-1
MG2-1
MN2-1

Metric equivalent
for this sign is:

SIZE	
1	
2	525 mm X 375 mm
3	750 mm X 525 mm
4	750 mm X 525 mm
5	750 mm X 525 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 m ²
1																												
2	21	15	1 1/8	3/8	3/8	9	3	8 7/8	8 5/8																1 1/2	1/2	2.20	0.20
3	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40	0.20
4	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40	0.20
5	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40	0.20

STANDARD SIGN
M2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R. Rauch
for State Traffic Engineer

DATE 3/16/10

PLATE NO. M2-1.10

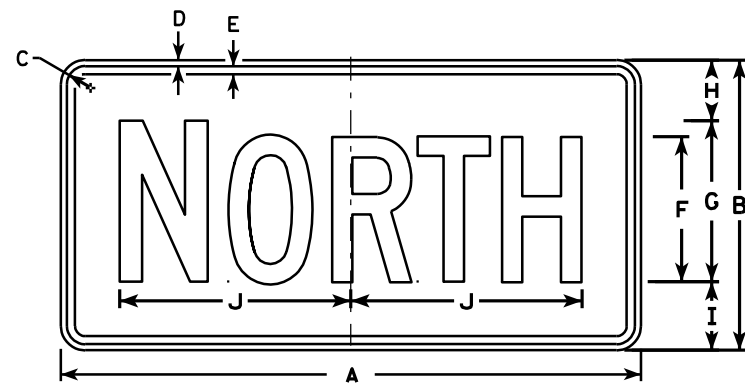
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

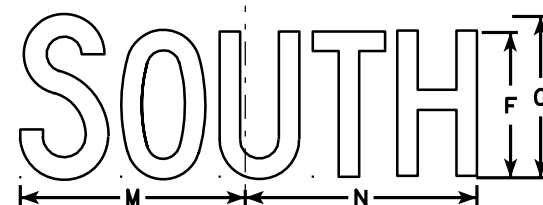
E



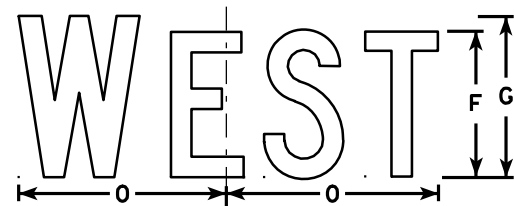
M3-1
MK3-1
M03-1



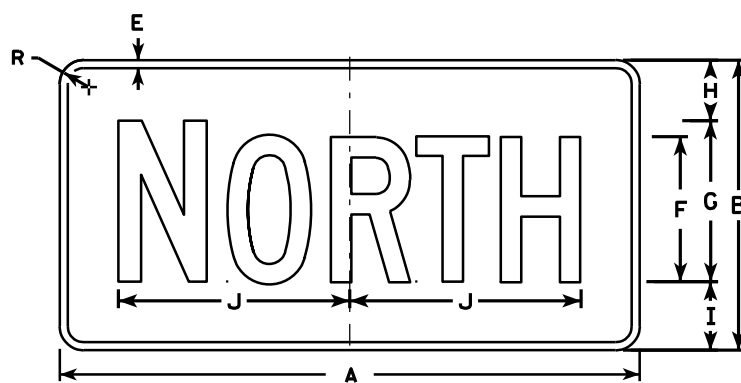
M3-2
MK3-2
M03-2



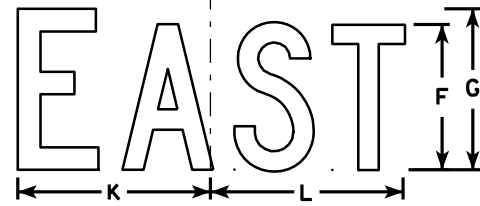
M3-3
MK3-3
M03-3



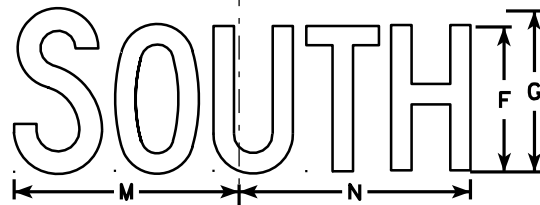
M3-4
MK3-4
M03-4



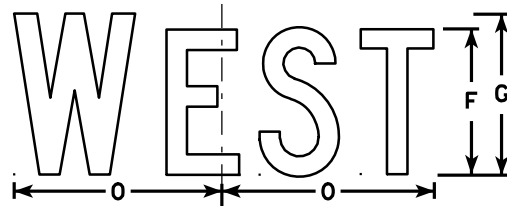
MB3-1
MG3-1
MM3-1
MN3-1



MB3-2
MG3-2
MM3-2
MN3-2



MB3-3
MG3-3
MM3-3
MN3-3



MB3-4
MG3-4
MM3-4
MN3-4

NOTES

1. All Signs Type II - See Note 5 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - See note 5
Message - See note 5
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. M3-1 thru M3-4 Background - White - Type H Reflective (Detour or temporary signs - Reflective)
Message - Black
MB3-1 thru MB3-4 Background - Blue
Message - White - Type H Reflective (Detour or temporary signs - Reflective)
MG3-1 thru MG3-4 Background - Green
Message - White - Type H Reflective
MK3-1 thru MK3-4 Background - Green
Message - White - Type H Reflective
MM3-1 thru MM3-4 Background - White - Type H Reflective
Message - Green
MN3-1 thru MN3-4 Background - Brown
Message - White - Type H Reflective
M03-1 thru M03-4 Background - Orange - Reflective
Message - Black
6. Note the first letter of each direction is larger than the remainder of the message.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
5	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5

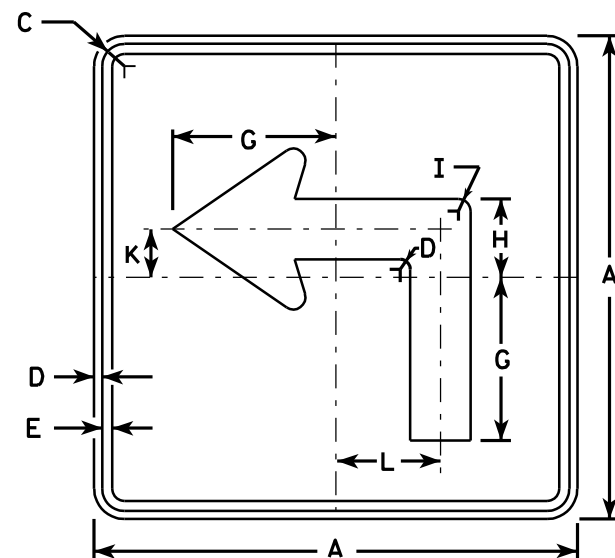
PROJECT NO: HWY: COUNTY: SHEET NO: E

STANDARD SIGNS M3-1 thru M3-4 SERIES

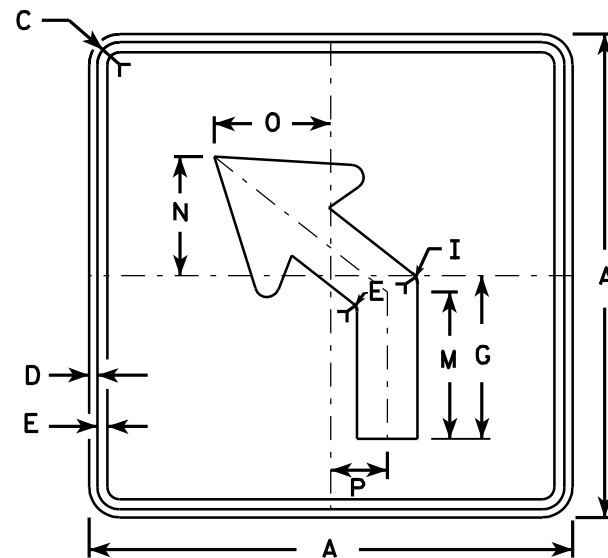
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

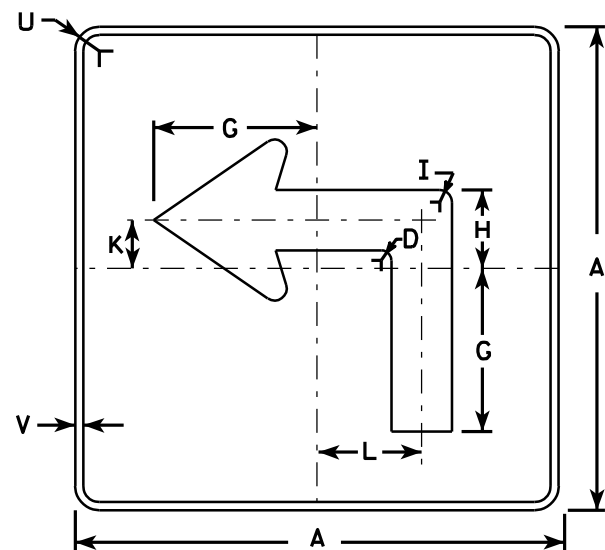
DATE 11/10/10 PLATE NO. M3-1.12



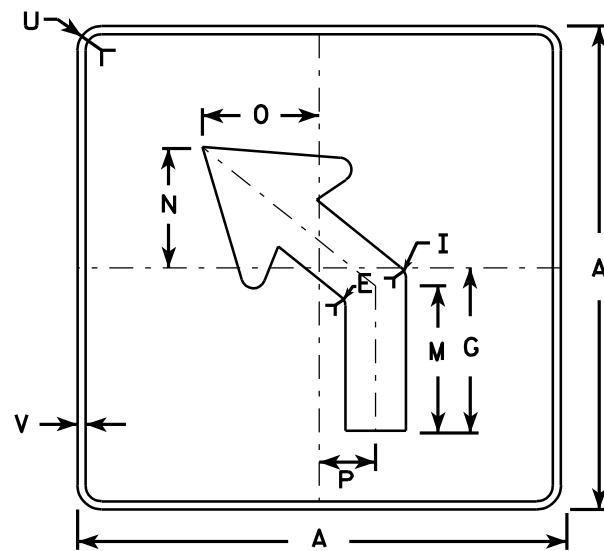
M5-1L
MK5-1L
MM5-1L
MO5-1L
MR5-1L



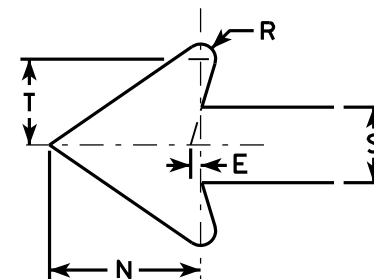
M5-2L
MK5-2L
MM5-2L
MO5-2L
MR5-2L



MB5-1L
MG5-1L
MN5-1L



MB5-2L
MG5-2L
MN5-2L



Metric equivalent
for this sign is:

SIZE	
1	
2	525 mm X 525 mm
3	750 mm X 750 mm
4	750 mm X 750 mm
5	750 mm X 750 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 m ²
1																												
2	21		1 1/8	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3	1 1/2	1/2					3.06	0.28
3	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25	0.56
4	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25	0.56
5	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25	0.56

PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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NOTES

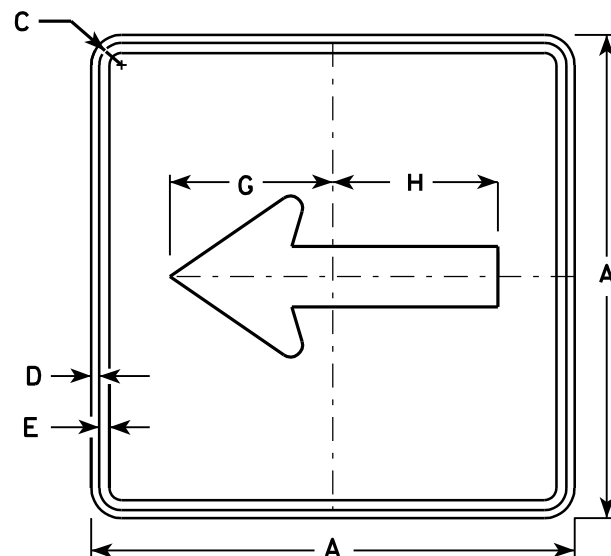
- Signs are Type II - See Note 4 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - See note 4
Message - See note 4
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- M5-1 and M5-2 Background - White - Type H Reflective (Detour or temporary Signs - Reflective) Message - Black
MB5-1 and MB5-2 Background - Blue Message - White - Type H Reflective (Detour or temporary Signs - Reflective)
MG5-1 and MG5-2 Background - Green Message - White - Type H Reflective
MK5-1 and MK5-2 Background - Green Message - White Type H Reflective
MM5-1 and MM5-2 Background - White - Type H Reflective Message - Green
MN5-1 and MN5-2 Background - Brown Message - White - Type H Reflective
MO5-1 and MO5-2 Background - Orange - Reflective Message - Black
MR5-1 and MR5-2 Background - Brown Message - Yellow - Type H Reflective
- M5-1R same as M5-1L except arrow points right.
- M5-2R same as M5-2L except arrow tilts right.

STANDARD SIGN
M5-1 & M5-2

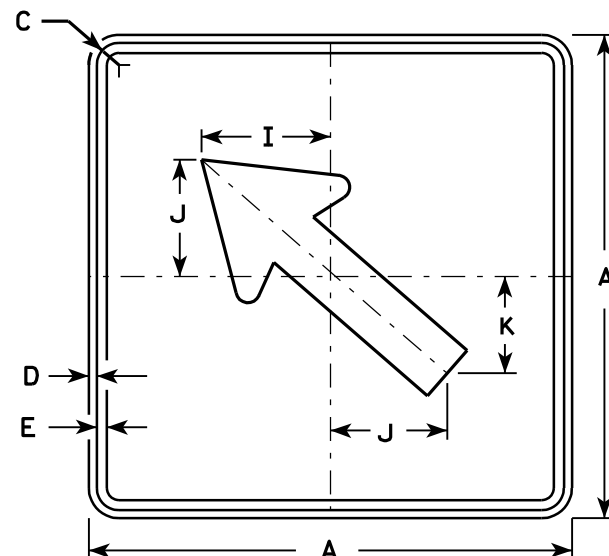
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

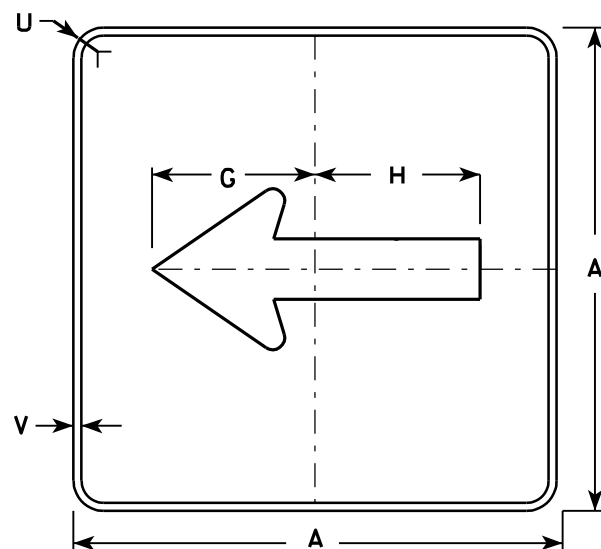
DATE 3/16/10 PLATE NO. M5-1.11



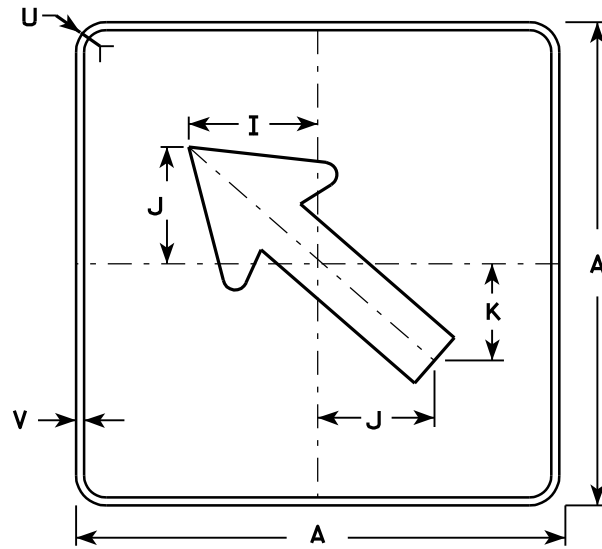
M6-1
MK6-1
MM6-1
MO6-1
MR6-1



M6-2
MK6-2
MM6-2
MO6-2
MR6-2



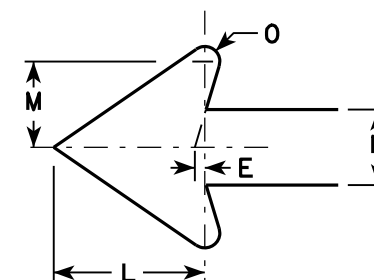
MB6-1
MG6-1
MN6-1



MB6-2
MG6-2
MN6-2

NOTES

- Signs are Type II - See Note 4 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - See note 4
Message - See note 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.
- M6-1 and M6-2 Background - White - Type H Reflective
(Detour or temporary Signs - Reflective)
Message - Black
MB6-1 and MB6-2 Background - Blue
Message - White - Type H Reflective
(Detour or temporary Signs - Reflective)
MG6-1 and MG6-2 Background - Green
Message - White - Type H Reflective
MK6-1 and MK6-2 Background - Green
Message - White - Type H Reflective
MM6-1 and MM6-2 Background - White - Type H Reflective
Message - Green
MN6-1 and MN6-2 Background - Brown
Message - White - Type H Reflective
MO6-1 and MO6-2 Background - Orange - Reflective
Message - Black
MR6-1 and MR6-2 Background - Brown
Message - Yellow - Type H Reflective



Metric equivalent
for this sign is:

SIZE	
1	
2	525 mm X 525 mm
3	750 mm X 750 mm
4	750 mm X 750 mm
5	750 mm X 750 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																												
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	0.28
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	0.56
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	0.56
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	0.56

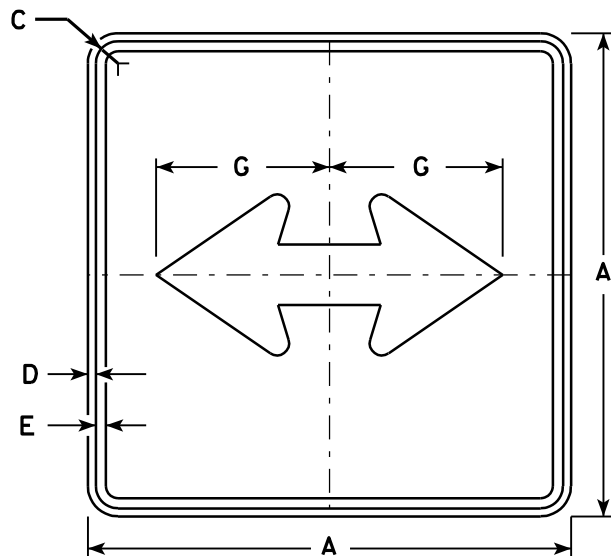
PROJECT NO: HWY: COUNTY: SHEET NO: E

STANDARD SIGN M6-1 & M6-2 SERIES

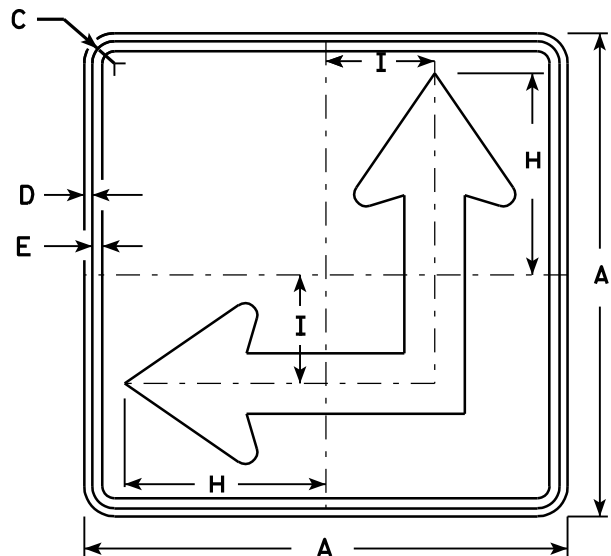
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

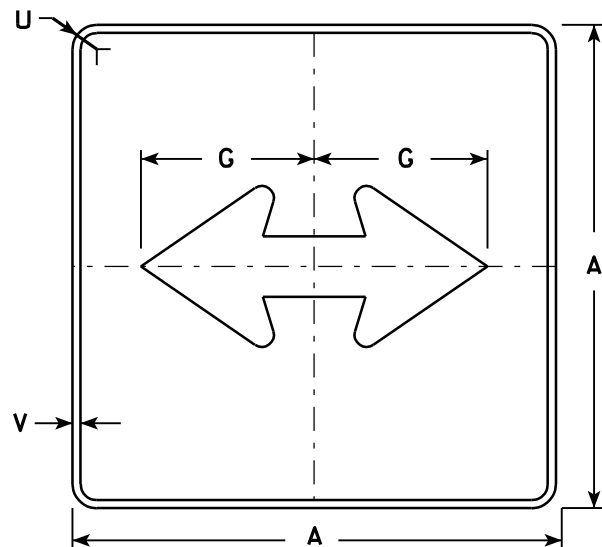
DATE 3/16/10 PLATE NO. M6-1.12



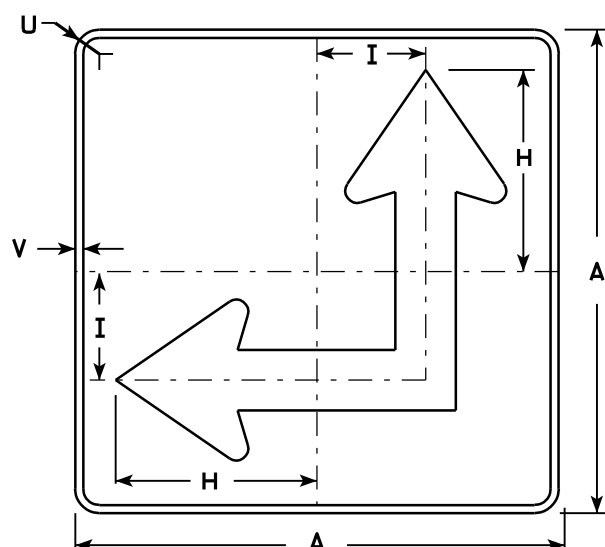
M6 - 4
MK6 - 4
MM6 - 4
MO6 - 4
MR6 - 4



M6 - 6
MK6 - 6
MM6 - 6
MO6 - 6
MR6 - 6



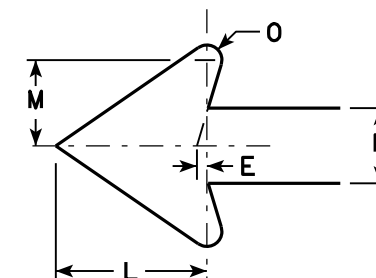
MB6 - 4
MG6 - 4
MN6 - 4



MB6 - 6
MG6 - 6
MN6 - 6

NOTES

- Signs are Type II - See Note 4 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - See Note 4
Message - See Note 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.
- M6-4 and M6-6 Background - White - Type H Reflective
(Detour or temporary Signs - Reflective)
Message - Black
MB6-4 and MB6-6 Background - Blue
Message - White - Type H Reflective
(Detour or temporary Signs - Reflective)
MG6-4 and MG6-6 Background - Green
Message - White - Type H Reflective
MK6-4 and MK6-6 Background - Green
Message - White - Type H Reflective
MM6-4 and MM6-6 Background - White - Type H Reflective
Message - Green
MN6-4 and MN6-6 Background - Brown
Message - White - Type H Reflective
MO6-4 and MO6-6 Background - Orange - Reflective
Message - Black
MR6-4 and MR6-6 Background - Brown
Message - Yellow - Type H Reflective
- M6-6R same as M6-6L except arrow points ahead and right.



Metric equivalent
for this sign is:

SIZE	
1	
2	525 mm X 525 mm
3	750 mm X 750 mm
4	750 mm X 750 mm
5	750 mm X 750 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 m ²
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	0.28
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	0.56
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	0.56
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	0.56

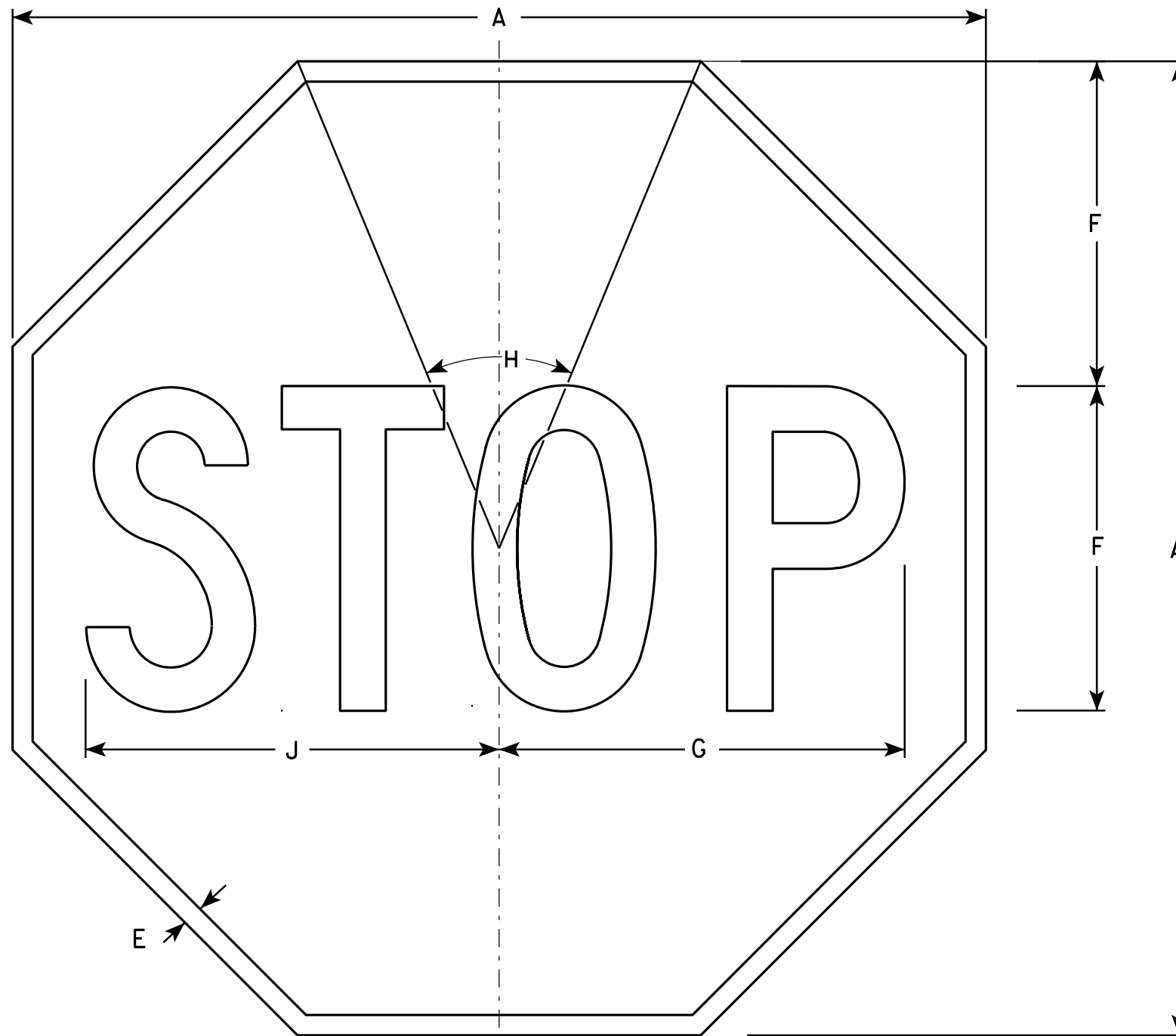
PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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STANDARD SIGN
M6 - 4 & M6 - 6
SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/16/10 PLATE NO. M6-4.7



NOTES

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

R1-1

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				3/8	8	10	45°		10 1/4																	3.31
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

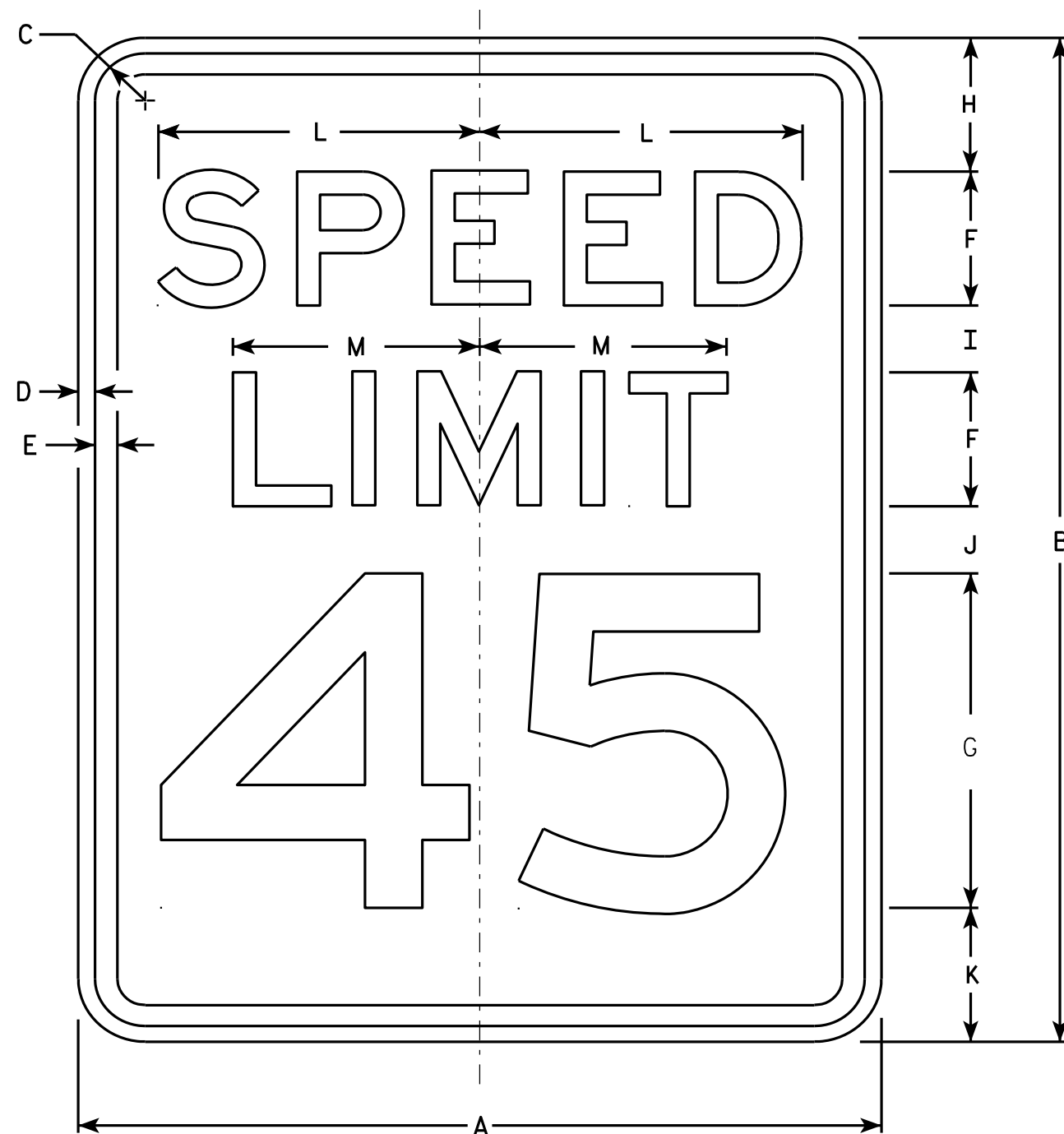
STANDARD SIGN
R1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 12/03/10 PLATE NO. R1-1.12

PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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R2-1

NOTES

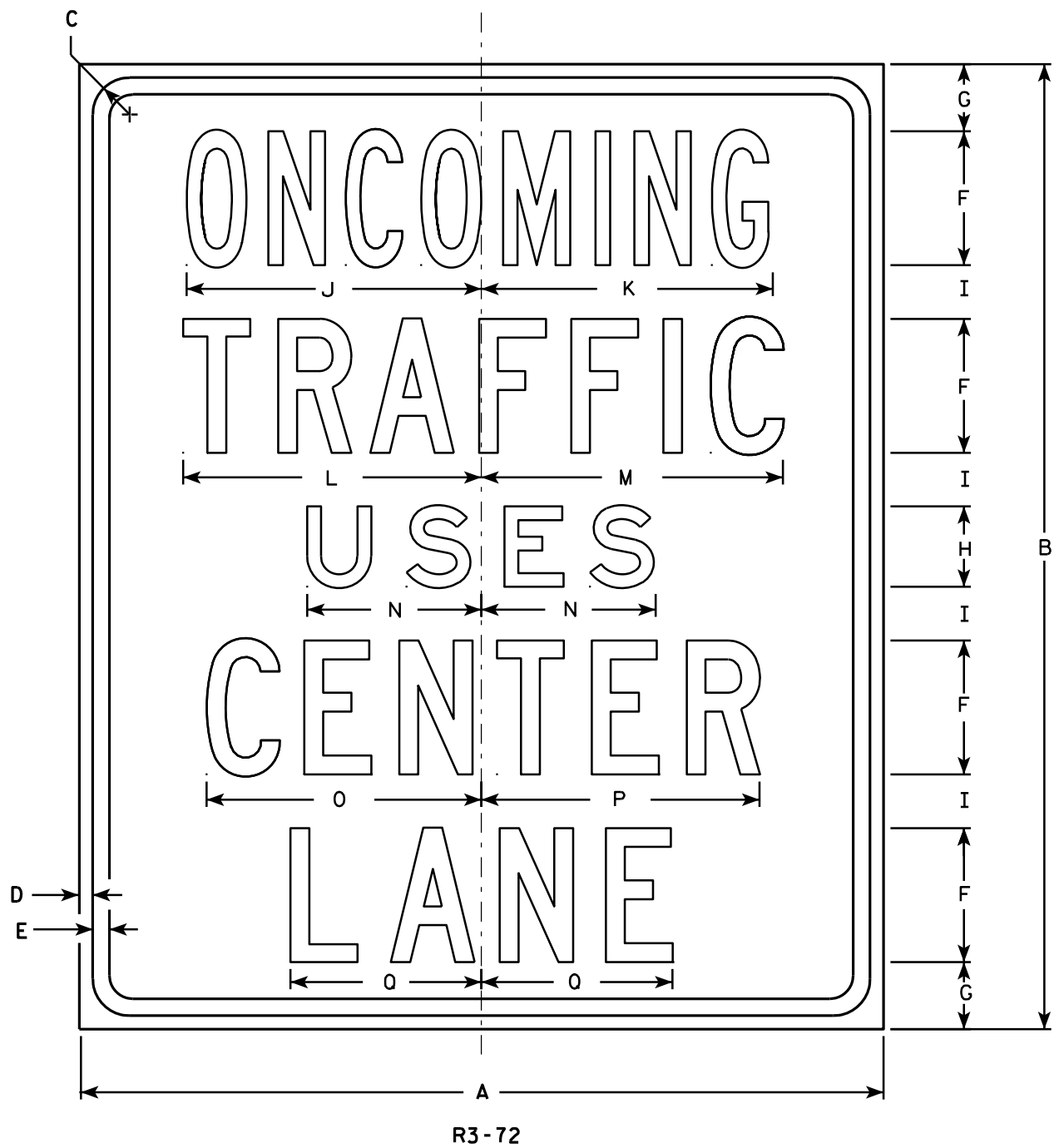
1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as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

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

STANDARD SIGN R2-1

WISCONSIN DEPT OF TRANSPORTATION
APPROVED *Matthew R. Rauch*
For State Traffic Engineer
DATE 5/26/10 PLATE NO. R2-1.13

PROJECT NO: HWY: COUNTY: SHEET NO: 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 - White
Message - Black
3. Message Series - Line 1 is Series B, Lines 2, 4 and 5 are Series C, and Line 3 is Series E.
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

R3-72

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	36	1 3/8	1/2	5/8	5	2 1/2	3	2	11	10 7/8	11 1/8	11 1/4	6 1/2	10 1/4	10 3/8	7 1/8										7.50
2S	30	36	1 3/8	1/2	5/8	5	2 1/2	3	2	11	10 7/8	11 1/8	11 1/4	6 1/2	10 1/4	10 3/8	7 1/8										7.50
2M	30	36	1 3/8	1/2	5/8	5	2 1/2	3	2	11	10 7/8	11 1/8	11 1/4	6 1/2	10 1/4	10 3/8	7 1/8										7.50
3																											
4																											
5																											

STANDARD SIGN R3-72

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R3-72.5

PROJECT NO: HWY: COUNTY: SHEET NO: E



R4-3

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	30	1 1/8	3/8	1/2	4	3 5/8	2 1/4	9 3/4	10	6 1/4	6 3/4	7 1/8	7 5/8													5.0
2M	24	30	1 1/8	3/8	1/2	4	3 5/8	2 1/4	9 3/4	10	6 1/4	6 3/4	7 1/8	7 5/8													5.0
3	36	48	1 5/8	5/8	3/4	6	6	4	14 5/8	15	9 3/8	10	10 3/4	11 3/8													12.0
4	36	48	1 5/8	5/8	3/4	6	6	4	14 5/8	15	9 3/8	10	10 3/4	11 3/8													12.0
5	48	60	2 1/4	3/4	1	8	7 1/4	4 1/2	19 1/2	20	12 1/2	13 1/2	14 1/4	15 1/4													20.0

STANDARD SIGN R4-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-3.8

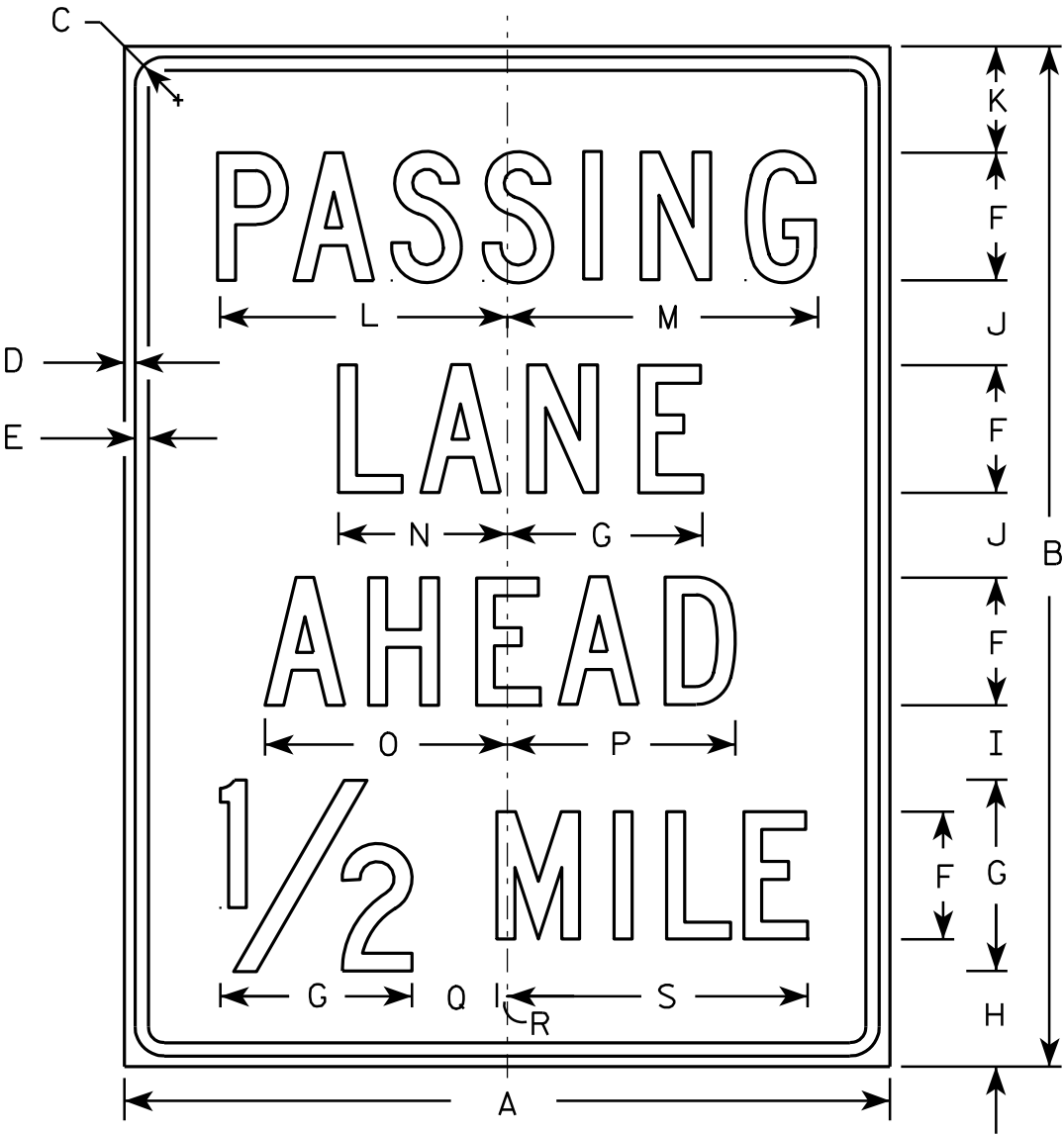
PROJECT NO:

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 - 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.



R4-51

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	36	48	1 ³ / ₈	¹ / ₂	⁵ / ₈	6	9	4 ¹ / ₂	3 ¹ / ₂	4	5	13 ⁵ / ₈	14 ¹ / ₂	8	11 ³ / ₈	10 ³ / ₄	4	¹ / ₂	14 ¹ / ₈								12.0
2M	36	48	1 ³ / ₈	¹ / ₂	⁵ / ₈	6	9	4 ¹ / ₂	3 ¹ / ₂	4	5	13 ⁵ / ₈	14 ¹ / ₂	8	11 ³ / ₈	10 ³ / ₄	4	¹ / ₂	14 ¹ / ₈								12.0
3																											
4																											
5																											

STANDARD SIGN
R4-51

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

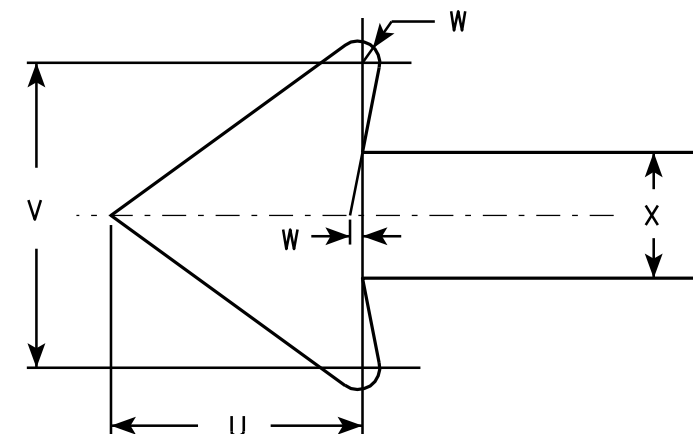
DATE 3/29/2011 PLATE NO. R4-51.4



R7-1

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 - Red
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, 3 and 4 are series C, line 2 is series B.
6. R7-1D (double arrow)
R7-1L (left arrow)
R7-1R (right arrow)



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	12	18	1 1/8	3/8	3/8	3	1 7/8	2	7/8	5/8	1 1/2	2 1/2	2	2	4 7/8	4 7/8	2 1/4	2 1/8	2 1/2	3 7/8	1 1/2	1 3/4	1/8	3/4			1.5
2S	18	24	1 1/8	3/8	1/2	4	2 1/2	2 1/2	1 1/4	1	2	3 1/4	2 3/4	2 5/8	7 1/8	7	2 3/4	2 5/8	3 1/8	5 7/8	2 1/4	2 5/8	1/4	1 1/8			3.0
2M	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3 1/4	3 1/4	3 3/4	7 3/4	3	3 1/2	1/4	1 1/2			5.0
3	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3 1/4	3 1/4	3 3/4	7 3/4	3	3 1/2	1/4	1 1/2			5.0
4																											
5																											

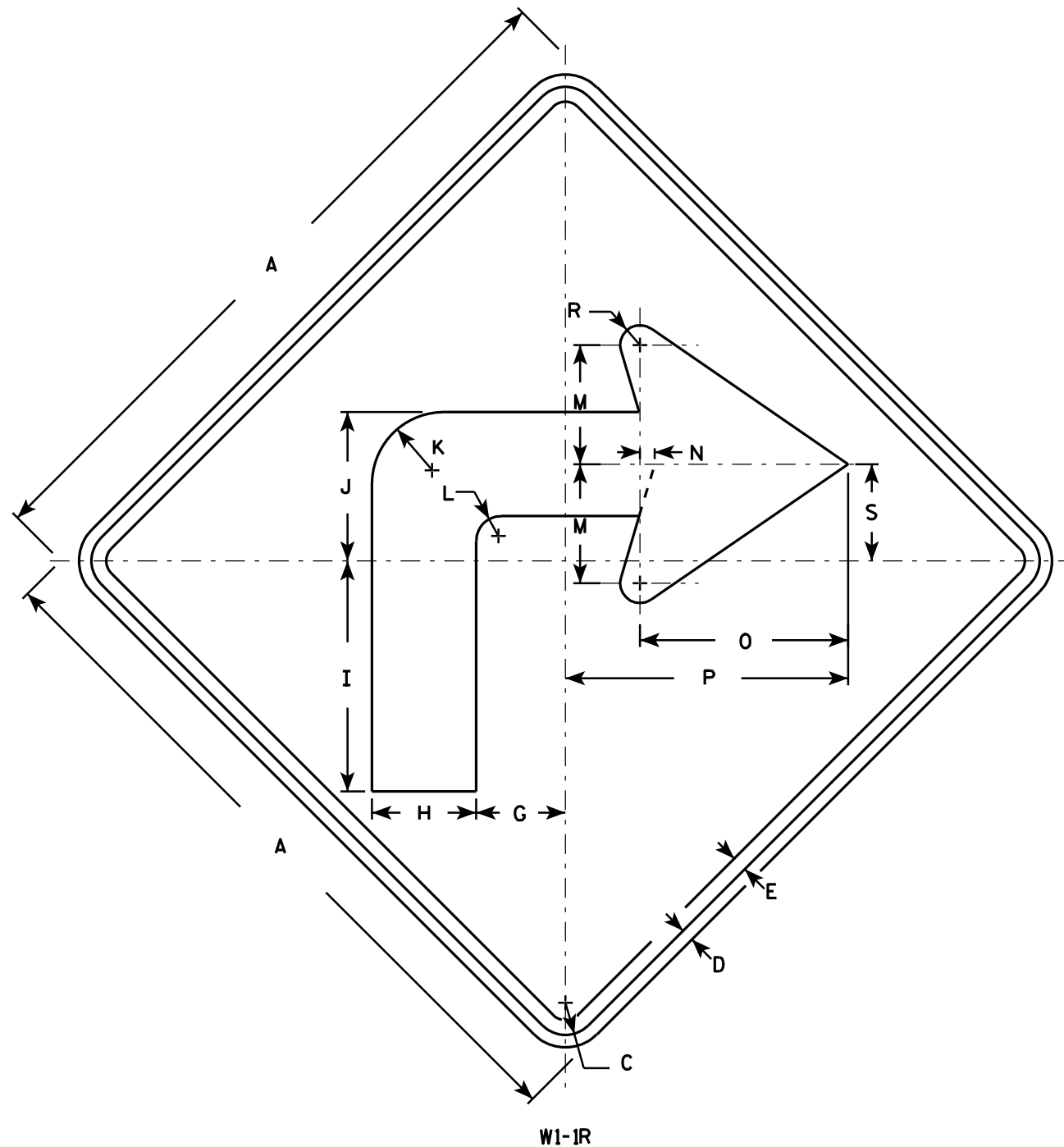
STANDARD SIGN R7-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R7-1.9

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**



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. W1-1L is the same as W1-1R except the arrow is reversed along the vertical centerline.

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		3	3 1/2	7 3/4	5	2 1/2	7/8	4	1/2	7	9 1/2		5/8	3 1/4								4.0
2S	36		1 5/8	5/8	3/4		4 1/2	5 1/4	11 5/8	7 1/2	3 5/8	1 1/4	6	3/4	10 1/2	14 1/4		1	4 7/8								9.0
2M	36		1 5/8	5/8	3/4		4 1/2	5 1/4	11 5/8	7 1/2	3 5/8	1 1/4	6	3/4	10 1/2	14 1/4		1	4 7/8								9.0
3	36		1 5/8	5/8	3/4		4 1/2	5 1/4	11 5/8	7 1/2	3 5/8	1 1/4	6	3/4	10 1/2	14 1/4		1	4 7/8								9.0
4	48		2 1/4	3/4	1		6	7	15 1/2	10	4 7/8	1 5/8	8	1	14	19		1 1/4	6 1/2								16.0
5	48		2 1/4	3/4	1		6	7	15 1/2	10	4 7/8	1 5/8	8	1	14	19		1 1/4	6 1/2								16.0

STANDARD SIGN

W1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/15/12 PLATE NO. W1-1.11

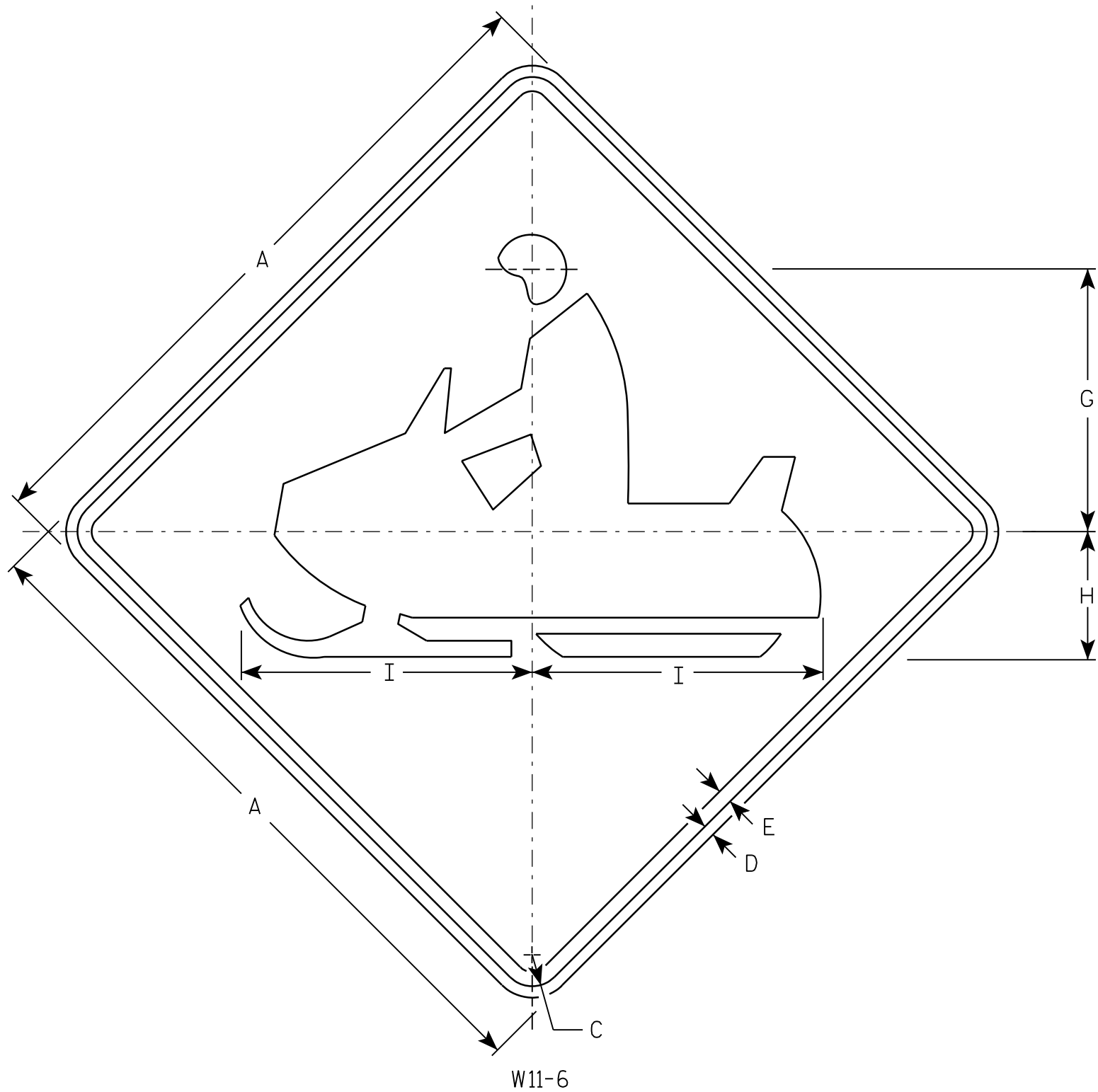
PROJECT NO:

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 - Yellow
Message - Black
- 3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2		9 1/2	4 1/2	10 1/4																		4.0
2S	30		1 3/8	1/2	5/8		11 1/2	5 5/8	12 3/4																		6.25
2M	30		1 3/8	1/2	5/8		11 1/2	5 5/8	12 3/4																		6.25
3	36		1 5/8	5/8	3/4		14 1/8	6 3/4	15 1/4																		9.0
4	48		2 1/4	3/4	1		19	9	20 1/2																		16.0
5																											

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

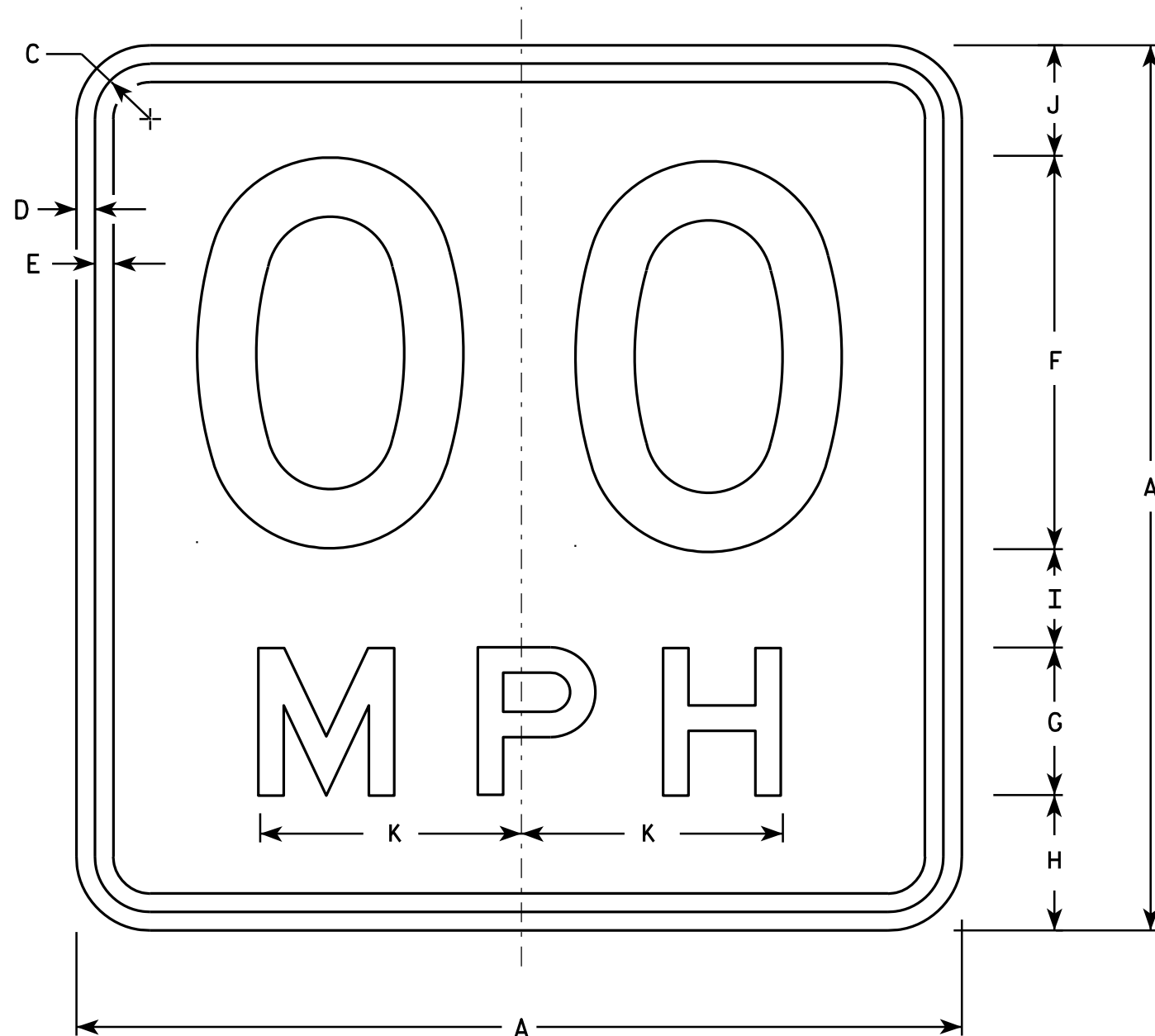
E

STANDARD SIGN
W11-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/16/11 PLATE NO. W11-6.7



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Yellow
Message - Black
3. Message Series - See Note 6
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically space about centerline to achieve proper balance.
6. Line 1 is Series D
Line 2 is Series E

W13-1

- * For 30" x 30" Warning Signs, use 18" x 18" W13-1 signs.
For 36" x 36" Warning Signs, use 24" x 24" W13-1 signs.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area Sq. Ft.
1	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
* 2S	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
* 2M	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
3	24		1 1/8	3/8	1/2	10	4	4	2 3/4	3 1/4	6 5/8																4.00
4	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
5	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00

STANDARD SIGN

W13-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 5/31/12 PLATE NO. W13-1.16

PROJECT NO:

HWY:

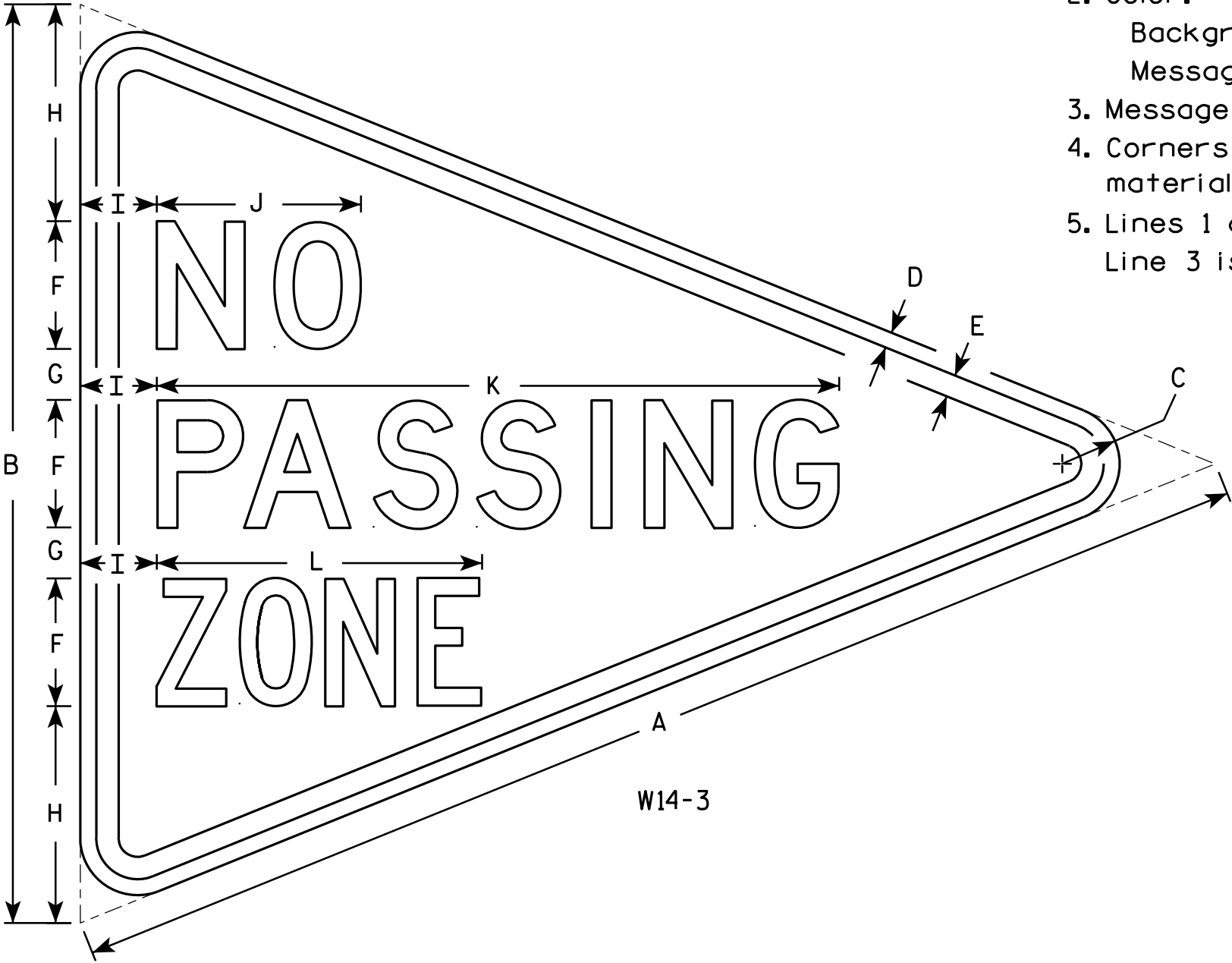
COUNTY:

SHEET NO:

E

NOTES

- 1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
Background - Yellow
Message - Black
- 3. Message Series - See note 5
- 4. Corners and borders shall be rounded on all base materials for this sign.
- 5. Lines 1 and 2 are Series D.
Line 3 is series C.



W14-3

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	36	2 1/4	5/8	7/8	5	2	8 1/2	3	8	26 3/4	12 3/4															6.0
2M	48	36	2 1/4	5/8	7/8	5	2	8 1/2	3	8	26 3/4	12 3/4															6.0
3	64	48	3	3/4	1 1/4	6	3	12	4	10 3/4	33 5/8	16 1/2															10.7
4																											
5																											

STANDARD SIGN
W14-3

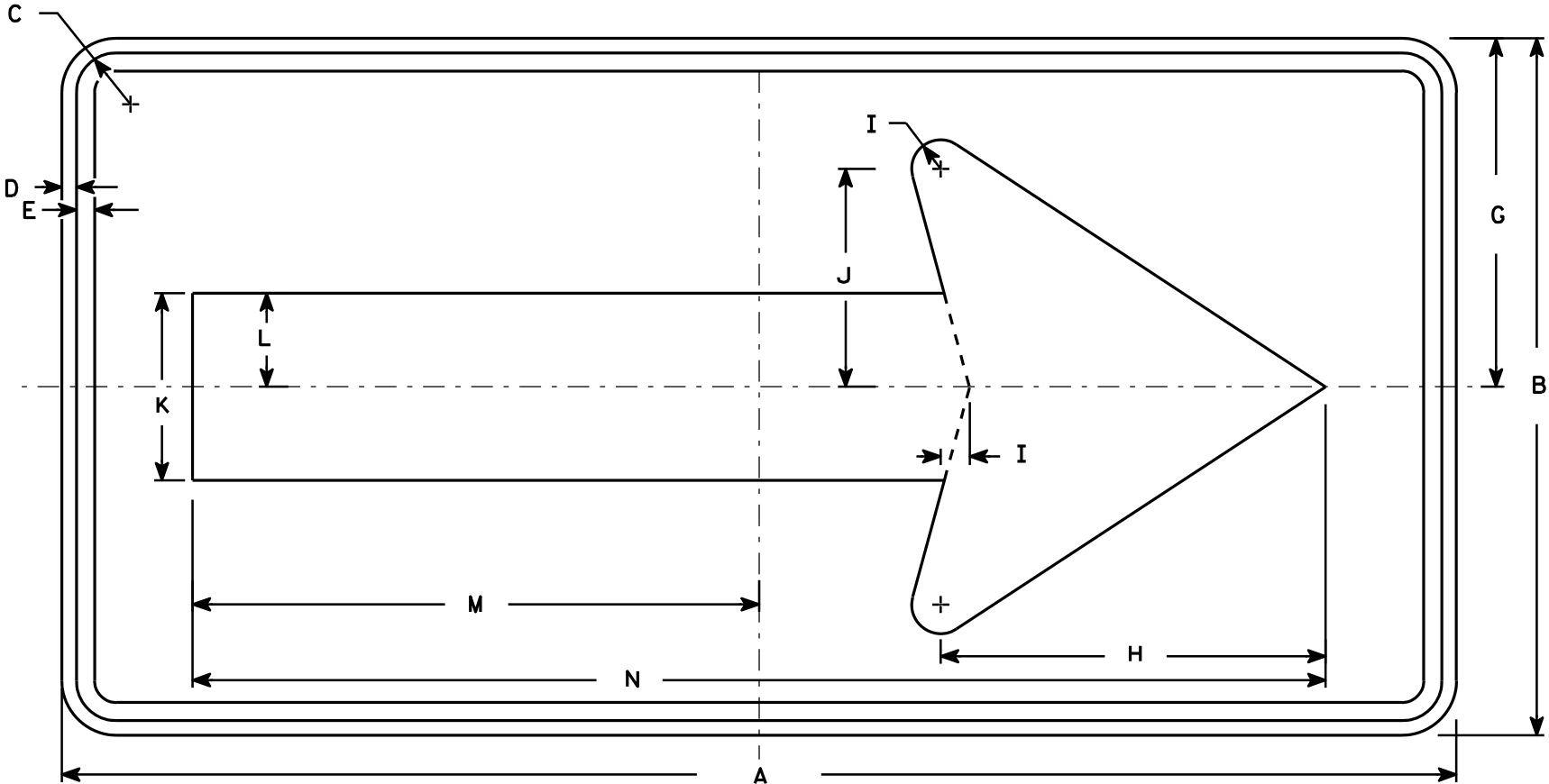
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 6/7/10 PLATE NO. W14-3.9

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.



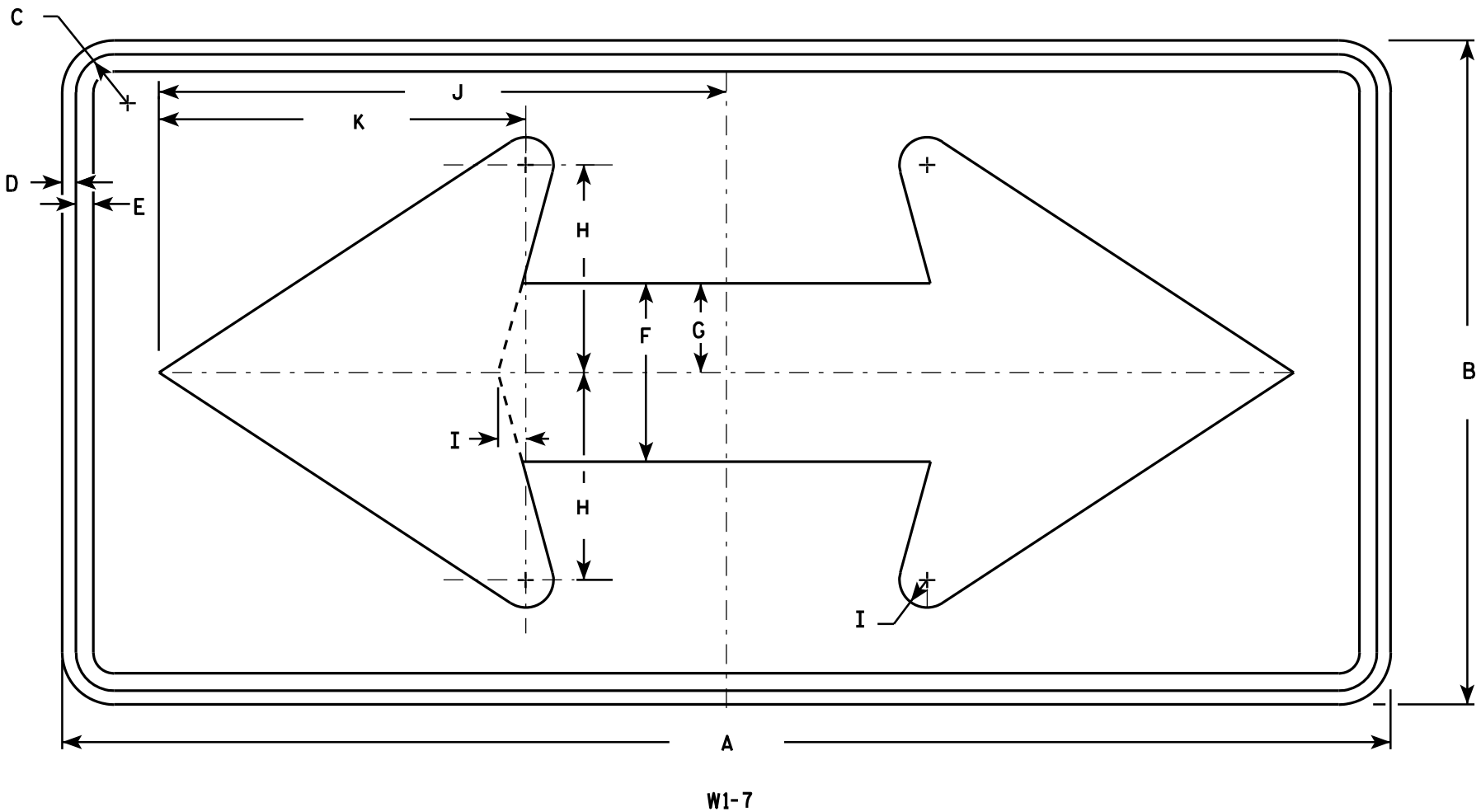
W1-6

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	36	18	1 1/8	3/8	3/8		9	10	3/4	5 5/8	4 3/4	2 3/8	14 5/8	29 1/4													4.5
2S	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
5	96	48	2 1/4	3/4	1		24	26 1/2	2	15	13	6 1/2	39	78													32.0

STANDARD SIGN
W1-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 6/7/10 PLATE NO. W1-6.8



NOTES

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

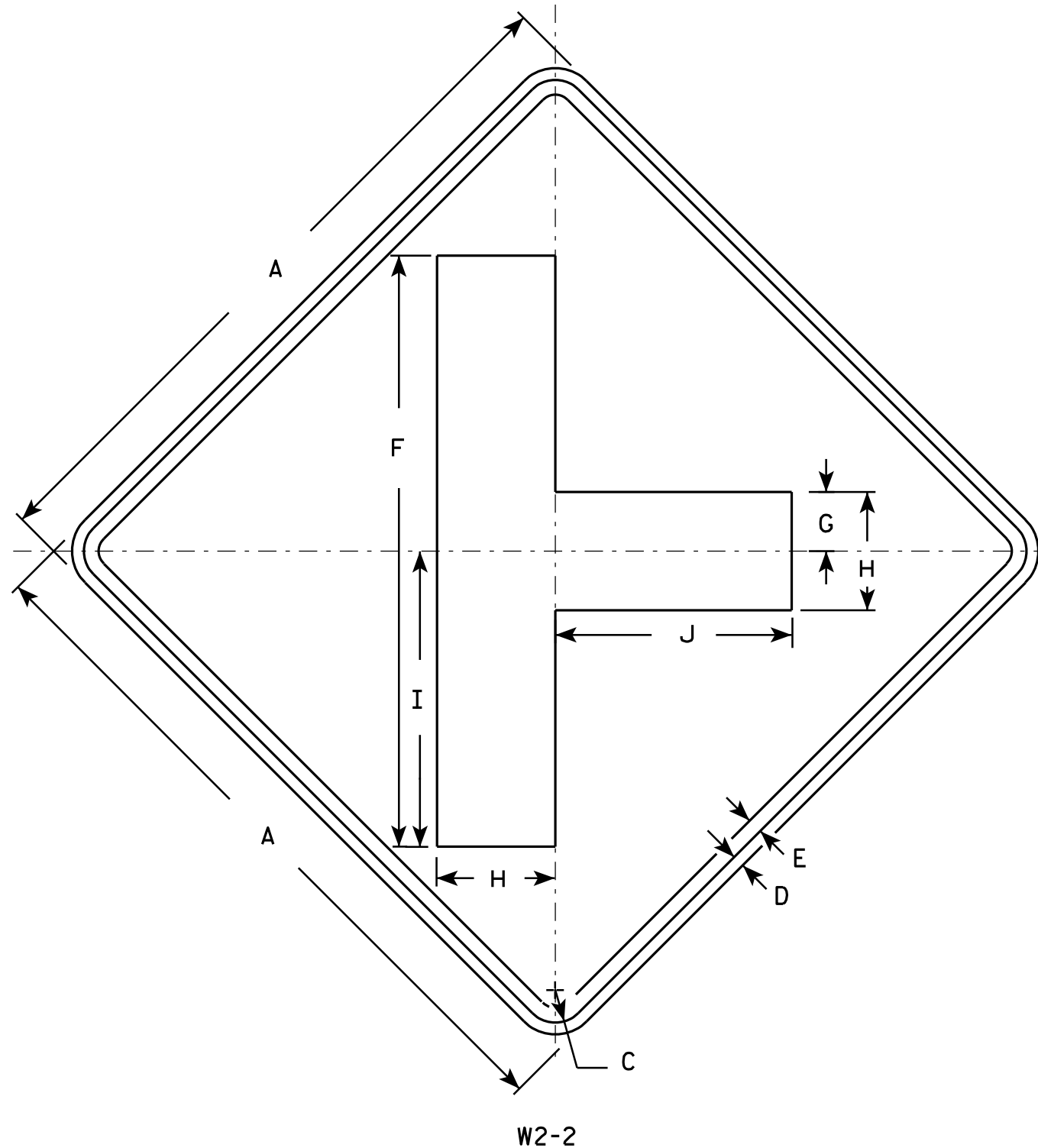
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 1/8	3/8	1/2	5	2 1/2	5 3/4	3/4	15 5/8	10 1/8																4.5
2S	48	24	1 3/8	1/2	5/8	6 1/2	3 1/4	7 1/2	1	20 1/2	13 1/4																8.0
2M	48	24	1 3/8	1/2	5/8	6 1/2	3 1/4	7 1/2	1	20 1/2	13 1/4																8.0
3	60	30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

STANDARD SIGN
W1 - 7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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



NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	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																											

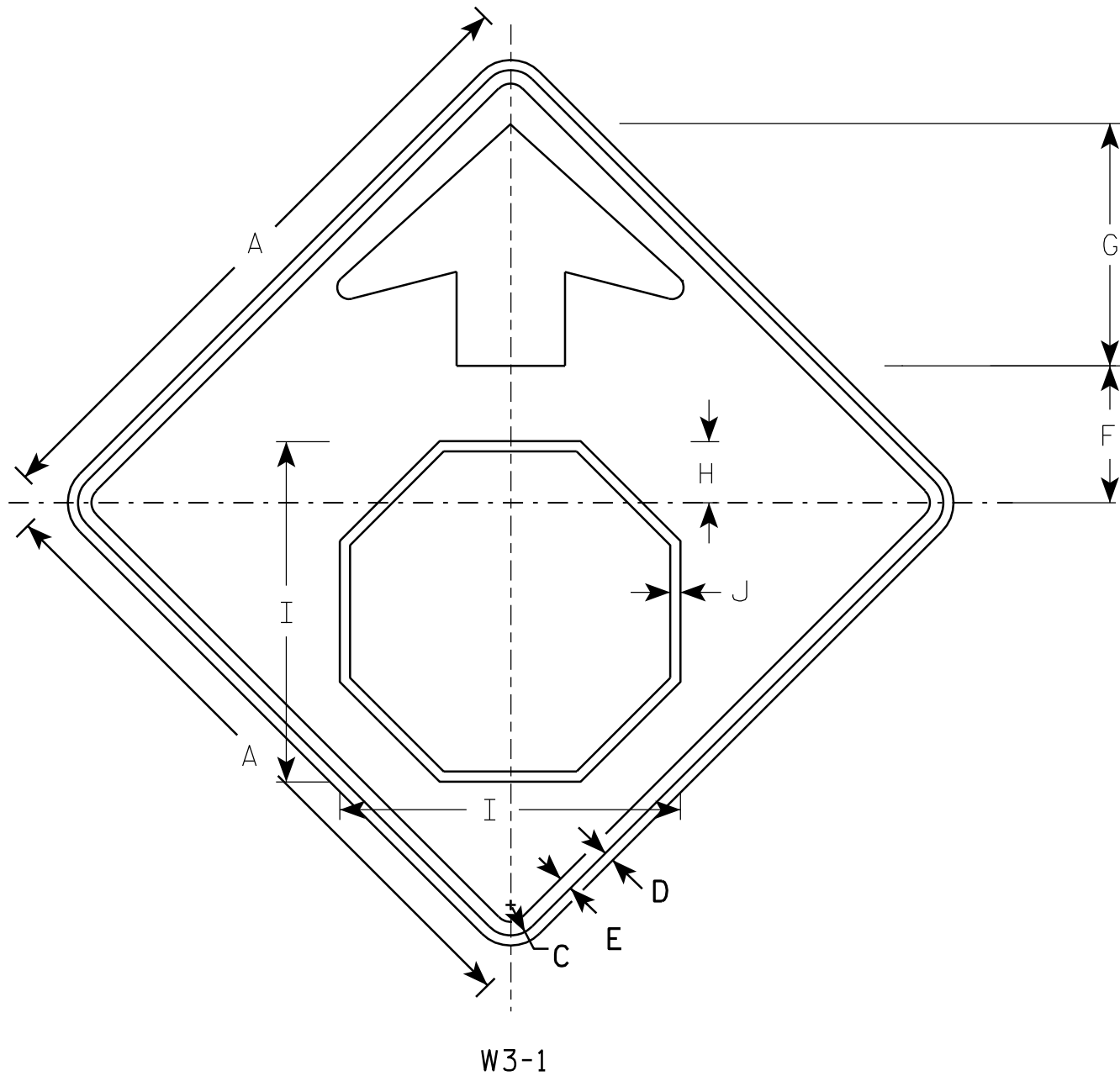
STANDARD SIGN W2-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

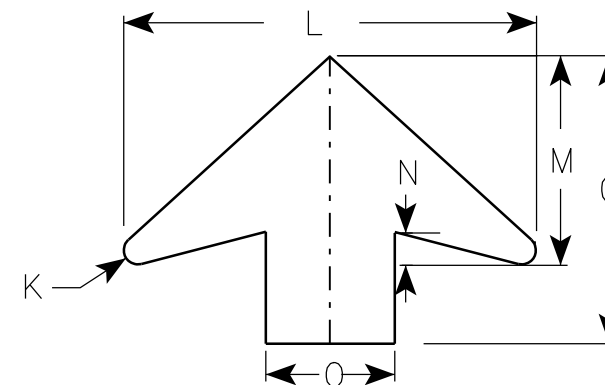
DATE 5/29/12 PLATE NO. W2-2.6

PROJECT NO: HWY: COUNTY: SHEET NO: E



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

PROJECT NO:

SHEET NO:

E

STANDARD SIGN
W3-1

WISCONSIN DEPT OF TRANSPORTATION

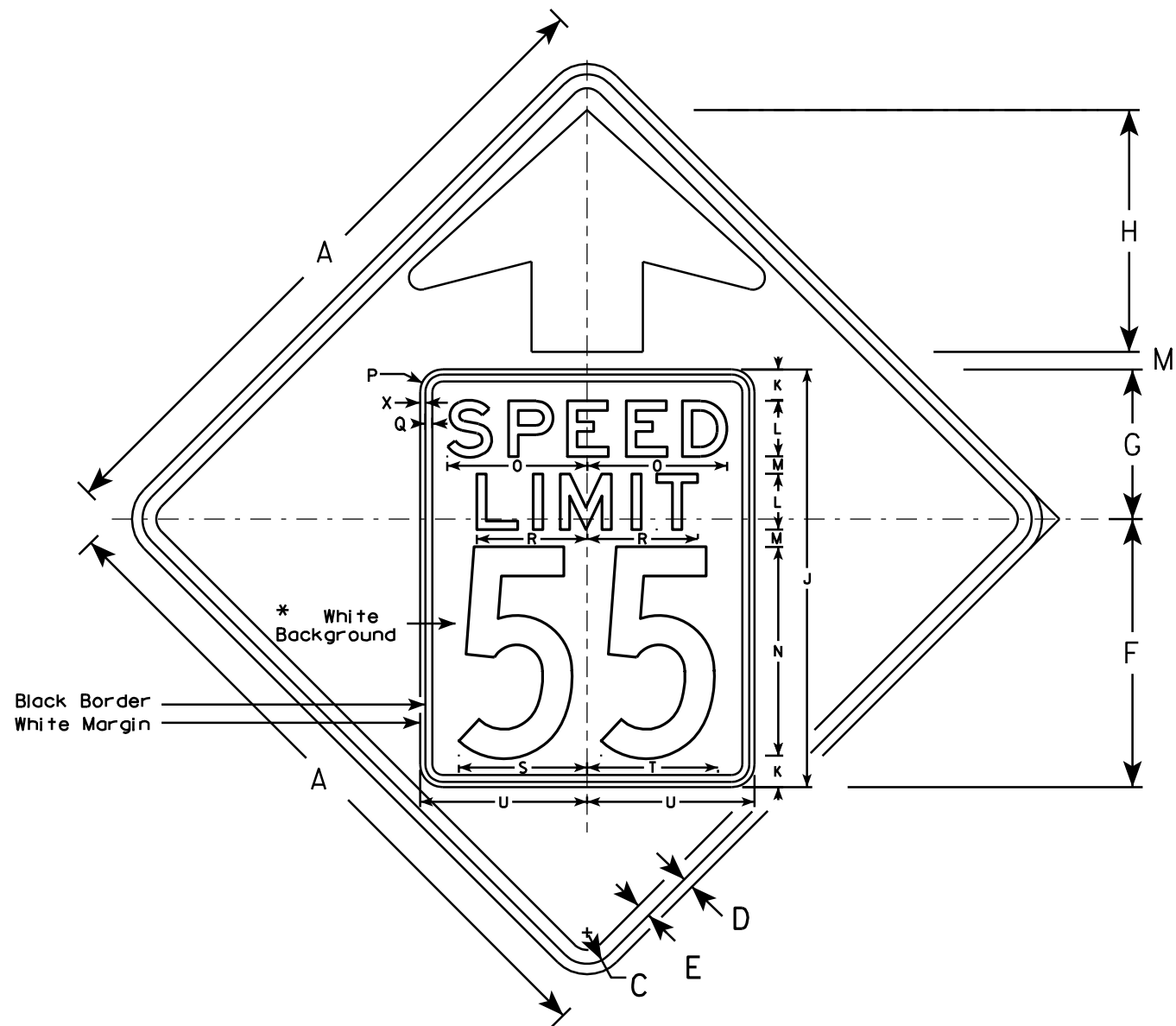
APPROVED

Matthew R. Rauch

for State Traffic Engineer

DATE 6/7/10

PLATE NO. W3-1.12

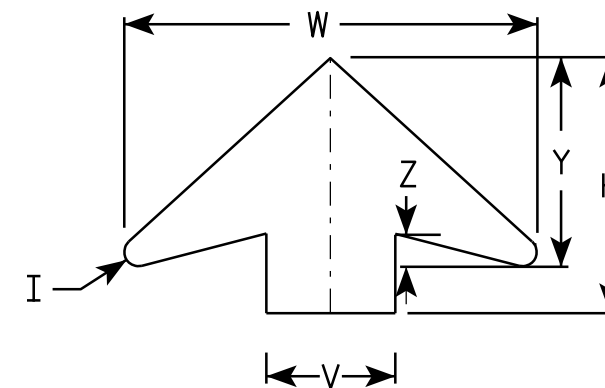


W3-5

NOTES

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

*Speed Limit Sign shall have a White Background



ARROW DETAIL

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

STANDARD SIGN

W3-5

WISCONSIN DEPT OF TRANSPORTATION

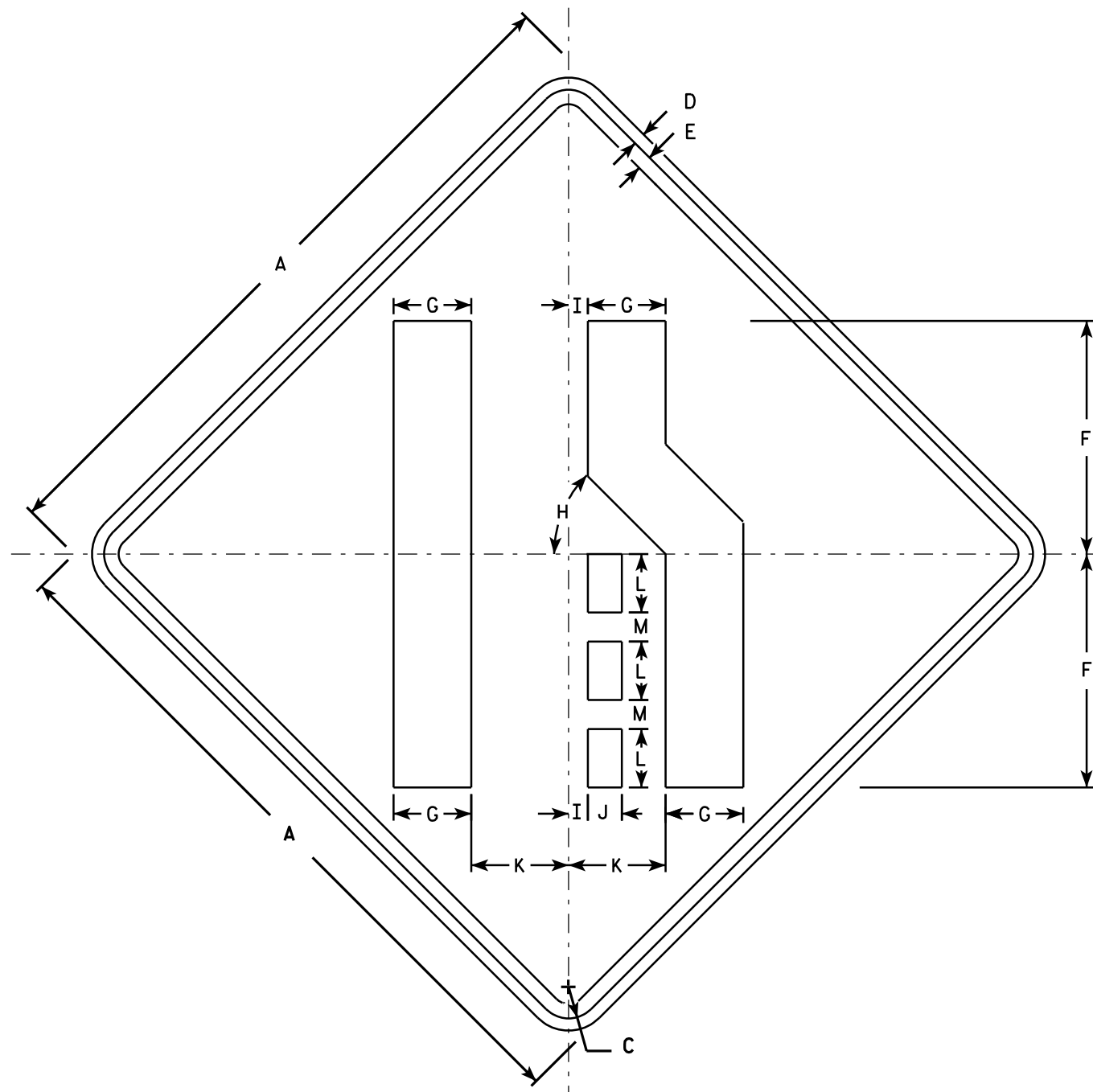
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

PROJECT NO:

SHEET NO:

E



W4-2R

NOTES

1. Sign is Type II - Type H 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. W4-2L is the same as W4-2R except the symbol is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	10	3 3/8	45°	7/8	1 1/2	4 1/4	2 1/2	1 1/4														6.25
2S	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
2M	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
3	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
4	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
5	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0

STANDARD SIGN W4-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

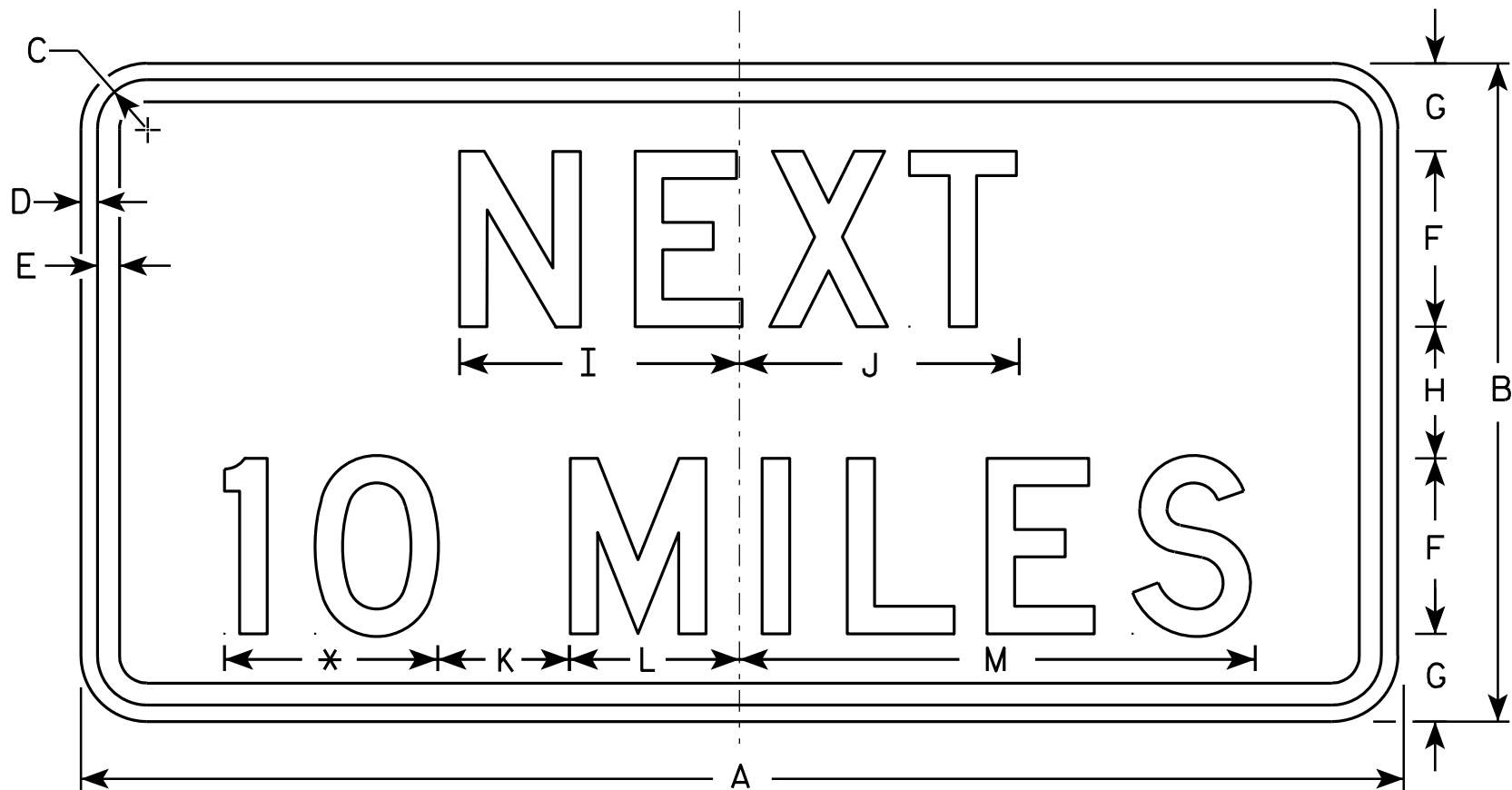
Matthew R. Rauch
for State Traffic Engineer

DATE 2/29/2012 PLATE NO. W4-2.13

PROJECT NO:

SHEET NO:

E



W57-51

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

* 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	24	12	1 1/8	3/8	3/8	3	1 3/4	2 1/2	5	5 1/8	3	2 3/4	9 5/8														2.0
2S	30	15	1 1/8	3/8	1/2	4	2	3	6 3/8	6 3/8	3	3 7/8	11 3/4														3.13
2M	36	18	1 1/8	3/8	1/2	5	2 5/8	2 3/4	7 7/8	8	5	4 1/8	15 3/8														4.5
3	36	18	1 1/8	3/8	1/2	5	2 5/8	2 3/4	7 7/8	8	5	4 1/8	15 3/8														4.5
4	48	24	1 3/8	1/2	5/8	6	3 1/2	5	10	10 1/8	6	5 5/8	19														8.0
5	48	24	1 3/8	1/2	5/8	6	3 1/2	5	10	10 1/8	6	5 5/8	19														8.0

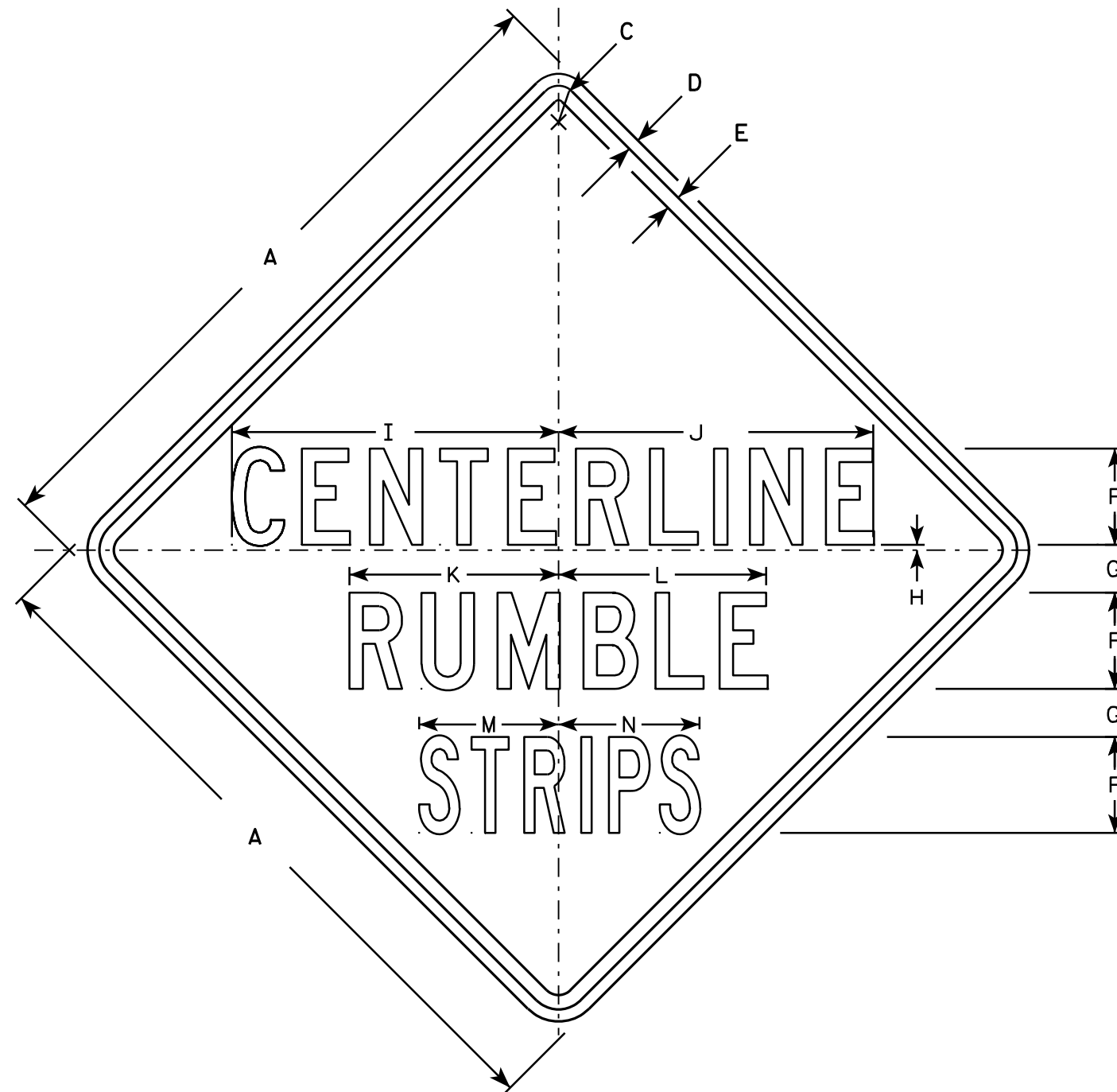
PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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STANDARD SIGN
W57-51

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 4/18/11 PLATE NO. W57-51.8



W8-70

NOTES

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

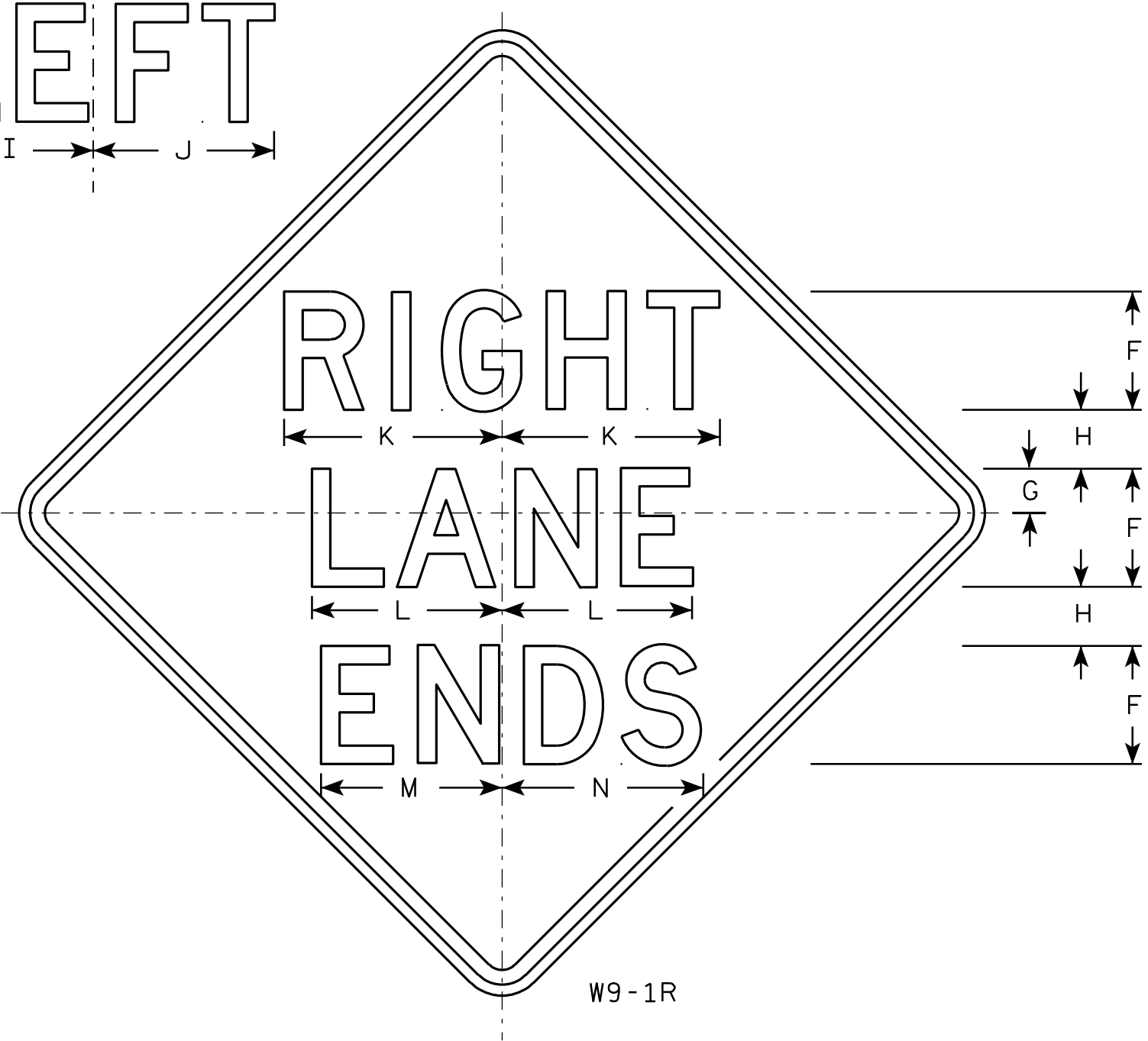
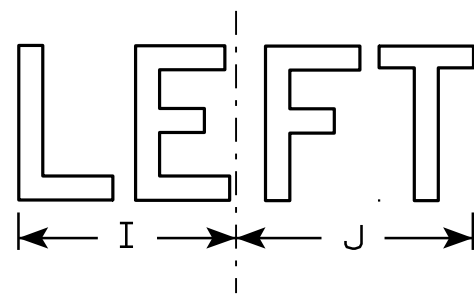
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	36		1 5⁄8	5⁄8	3⁄4	5	2 1⁄2	1⁄4	17	16 3⁄8	10 7⁄8	10 3⁄4	7 1⁄4	7 3⁄8													9.0
2M	36		1 5⁄8	5⁄8	3⁄4	5	2 1⁄2	1⁄4	17	16 3⁄8	10 7⁄8	10 3⁄4	7 1⁄4	7 3⁄8													9.0
3	36		1 5⁄8	5⁄8	3⁄4	5	2 1⁄2	1⁄4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

STANDARD SIGN
W8-70

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 3/23/11 PLATE NO. W8-70.2



W9-1R

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Yellow
Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. W9-1L same as W9-1R except the word Left replaces Right.

7

7

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 1⁄2	2 1⁄2	7 1⁄8	7 5⁄8	9 1⁄4	8 1⁄8	7 5⁄8	8 5⁄8													6.25
2S	36		1 5⁄8	5⁄8	3⁄4	6	2	3	8 1⁄2	9 1⁄8	11	9 3⁄4	9	10 3⁄8													9.0
2M	36		1 5⁄8	5⁄8	3⁄4	6	2	3	8 1⁄2	9 1⁄8	11	9 3⁄4	9	10 3⁄8													9.0
3	36		1 5⁄8	5⁄8	3⁄4	6	2	3	8 1⁄2	9 1⁄8	11	9 3⁄4	9	10 3⁄8													9.0
4	36		1 5⁄8	5⁄8	3⁄4	6	2	3	8 1⁄2	9 1⁄8	11	9 3⁄4	9	10 3⁄8													9.0
5	48		2 1⁄4	3⁄4	1	8	3	4	11 1⁄4	12 1⁄4	14 3⁄4	12 7⁄8	12 1⁄4	13 5⁄8													16.0

PROJECT NO:				SHEET NO:	E
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STANDARD SIGN

W9-1

WISCONSIN DEPT OF TRANSPORTATION

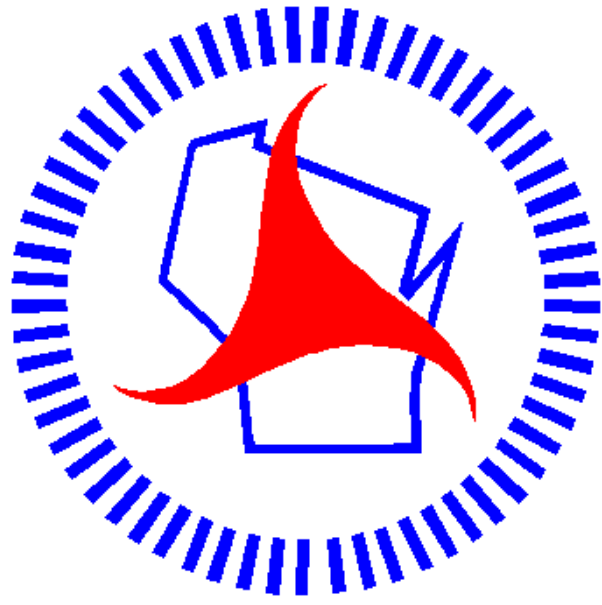
APPROVED

for State Traffic Engineer

DATE 12/20/10

PLATE NO. W9-1.7

Notes



Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

<http://www.dot.wisconsin.gov>