

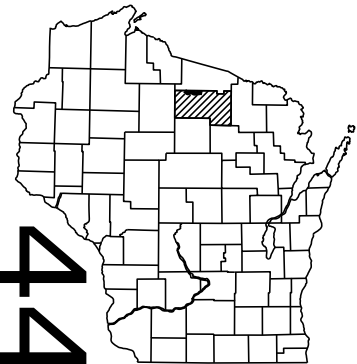
PROJECT ID: 9070-03-60
WITH:

COUNTY: ONEIDA

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. 4	Right of Way Plat
Section No. 5	Plan and Profile
Section No. 6	Standard Detail Drawings
Section No. 7	Sign Plates
Section No. 8	Structure Plans
Section No. 9	Computer Earthwork Data
Section No. 9	Cross Sections

TOTAL SHEETS = 114



44

DESIGN DESIGNATION

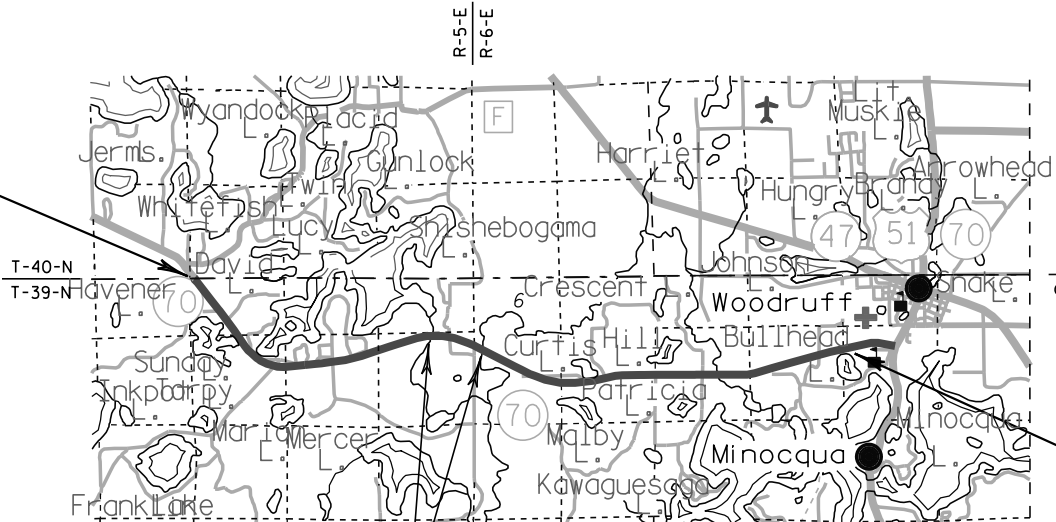
A.D.T. 2010	=	5,000
A.D.T. 2020	=	5,700
D.H.V. 2010	=	12.2
D.	=	61/39
T.	=	13%
DESIGN SPEED	=	60 MPH
ESALS	=	1,430,800

CONVENTIONAL SIGNS

COUNTY LINE	
CORPORATE LIMITS	
PROPERTY LINE	
LOT LINE	
LIMITED EASEMENT	
EXISTING RIGHT OF WAY	
PROPOSED OR NEW R/W LINE	
SURVEY LINE	
SLOPE INTERCEPT	
ORIGINAL GROUND	
MARSH OR ROCK PROFILE	
EXISTING CULVERT	
PROPOSED CULVERT (Box or Pipe)	
CULVERT (Profile View)	

COMBUSTIBLE FLUIDS	
UNDERGROUND UTILITIES	
GAS	
ELECTRIC	
TELEPHONE OR TELEGRAPH	
SERVICE PEDESTAL	
CABLE MARKER	
POWER POLE	
TELEPHONE POLE	
RAILROAD	
MARSH AREA	
WOODED OR SHRUB AREA	

BEGIN PROJECT
STA. 80+00
X 2,004,667.012
Y 266,796.124



EXCEPTION TO NET CENTERLINE LENGTH

BRIDGE B-43-13
STA. 230+84 - STA. 231+23
BRIDGE B-43-9
STA. 261+50 - STA. 265+10

LAYOUT
SCALE 0 1 MI.

TOTAL NET LENGTH OF CENTERLINE = 6.458 MI.

"COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), 'ONEIDA' COUNTY."

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
9070-03-60		

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY	
Surveyor	AL OLENIK
Designer	TINA A. FLATER
Project Manager	JIM L. VOLKMANN
Regional Examiner	
Regional Supervisor	ANNA M. WISNER
C.O. Examiner	

APPROVED FOR THE DEPARTMENT
DATE: 3/22/13

E

GENERAL NOTES

- 1. WHEN THE QUANTITY OF THE ITEM, BASE AGGREGATE DENSE IS MEASURED BY THE TON, THE DEPTH OR OR THICKNESS SHOWN ON THE PLANS IS APPROXIMATE. THE ACTUAL DEPTH WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.
- 2. ACTUAL CONSTRUCTION LIMITS OF TOWN ROADS, COMMERCIAL AND PRIVATE ENTRANCES SHALL BE DETERMINED BY THE ENGINEER.
- 3. THERE ARE UTILITIES LOCATED WITHIN PROJECT LIMITS THAT ARE NOT SHOWN ON THE PLANS.
- 4. LENGTH OF RUNOFF SHALL BE COMPUTED WITH TWO-THIRDS OF THE TOTAL RUNOFF ON THE TANGENT APPROACH AND ONE-THIRD WITHIN THE CURVE. SEE PLAN FOR RATE OF SUPERELEVATION.

UTILITIES

CHARTER COMMUNICATIONS OF WI LLC
MARK OLEJNICZAK
821 LINCOLN ST
RHINELANDER, WI 54501
OFFICE: 715-420-0301 EXT 61162
MOBILE: 715-370-4106

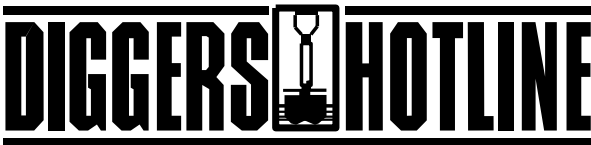
FRONTIER COMMUNICATIONS
CAL KLADE
1851 N 14TH AVE
WAUSAU, WI 54401
OFFICE: 715-675-9737
MOBILE:715-573-2110

WISCONSIN PUBLIC SERVICE-ELECTRIC
RICH REITZ
2027 NAVAJO ST
PO BOX 160
RHINELANDER, WI 54501
OFFICE: 715-369-7111

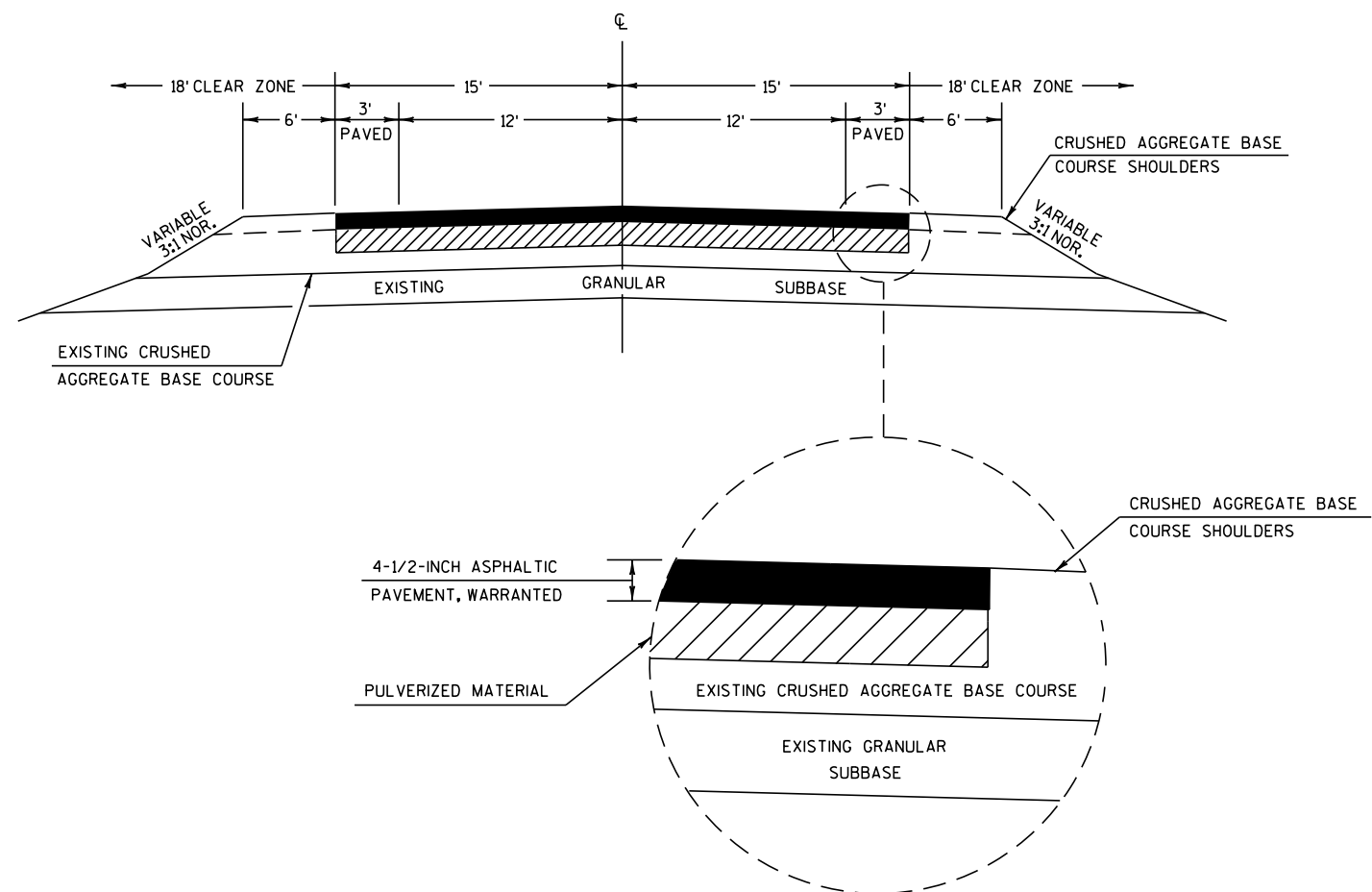
WISCONSIN PUBLIC SERVICE-GAS
ADAM LAWNICZAK
2027 NAVAJO ST
PO BOX 160
RHINELANDER, WI 54501
OFFICE: 715-369-7111
MOBILE:715-493-2702

WISCONSIN DEPARTMENT OF
NATURAL RESOURCES

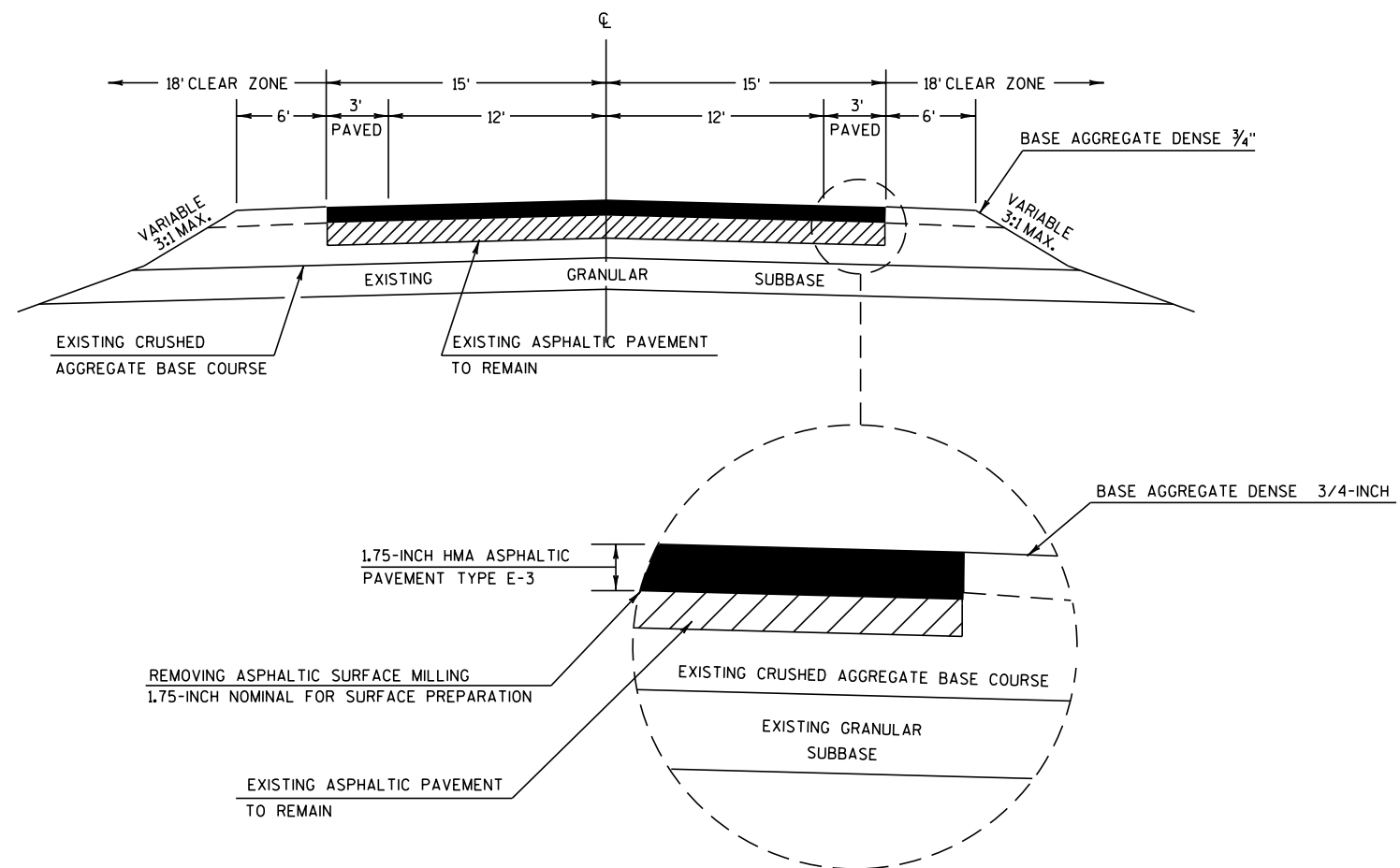
NORTH CENTRAL DISTRICT
107 SUTLIFF AVENUE
RHINELANDER, WI. 54501
JON SIMONSEN
TELE: 715-365-8916



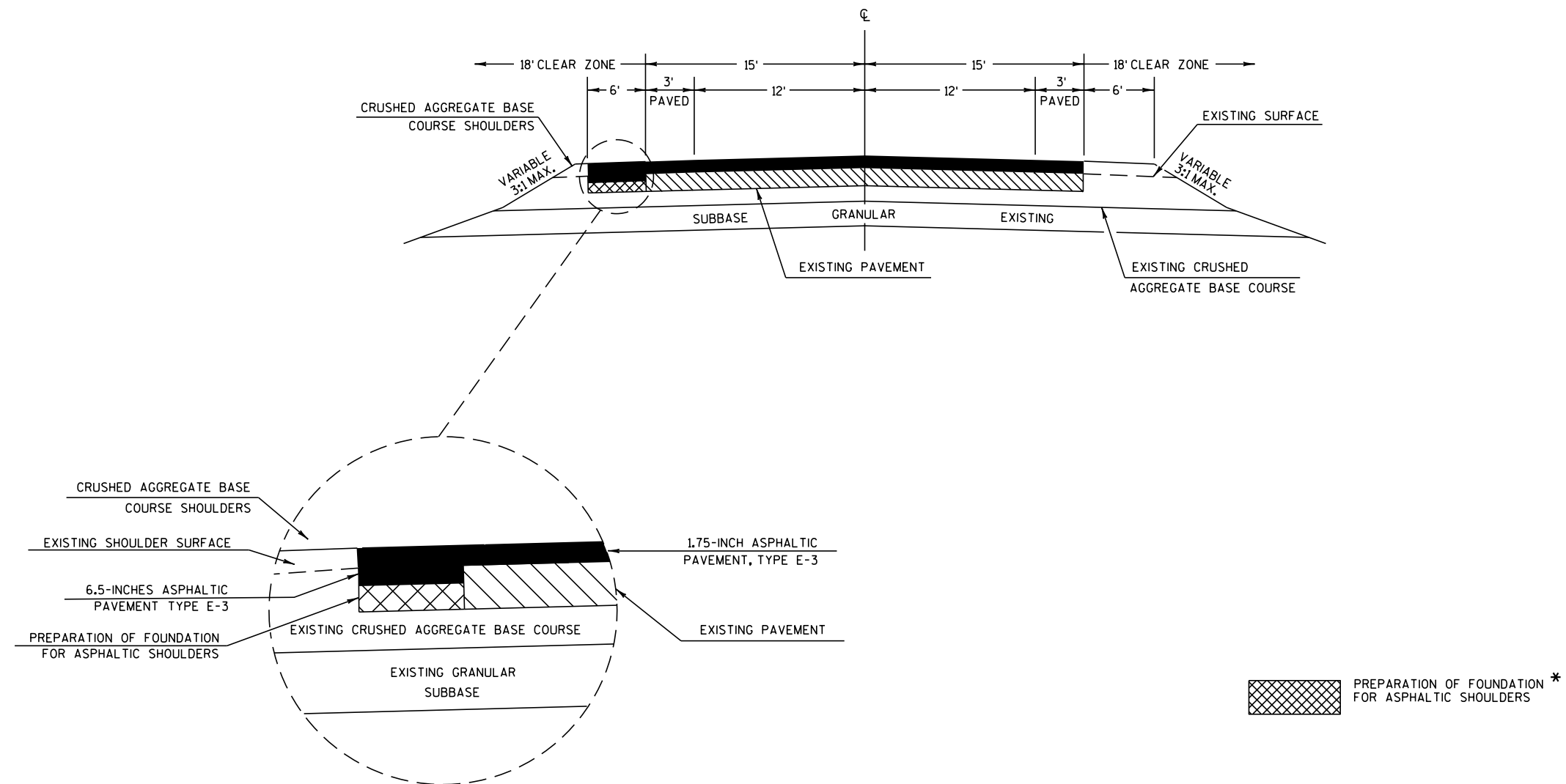
Call 811 3 Work Days Before You Dig
Or Toll Free (800) 242-8511
Hearing Impaired TDD (800) 542-2289
www.DiggersHotline.com

**EXISTING TYPICAL SECTION**

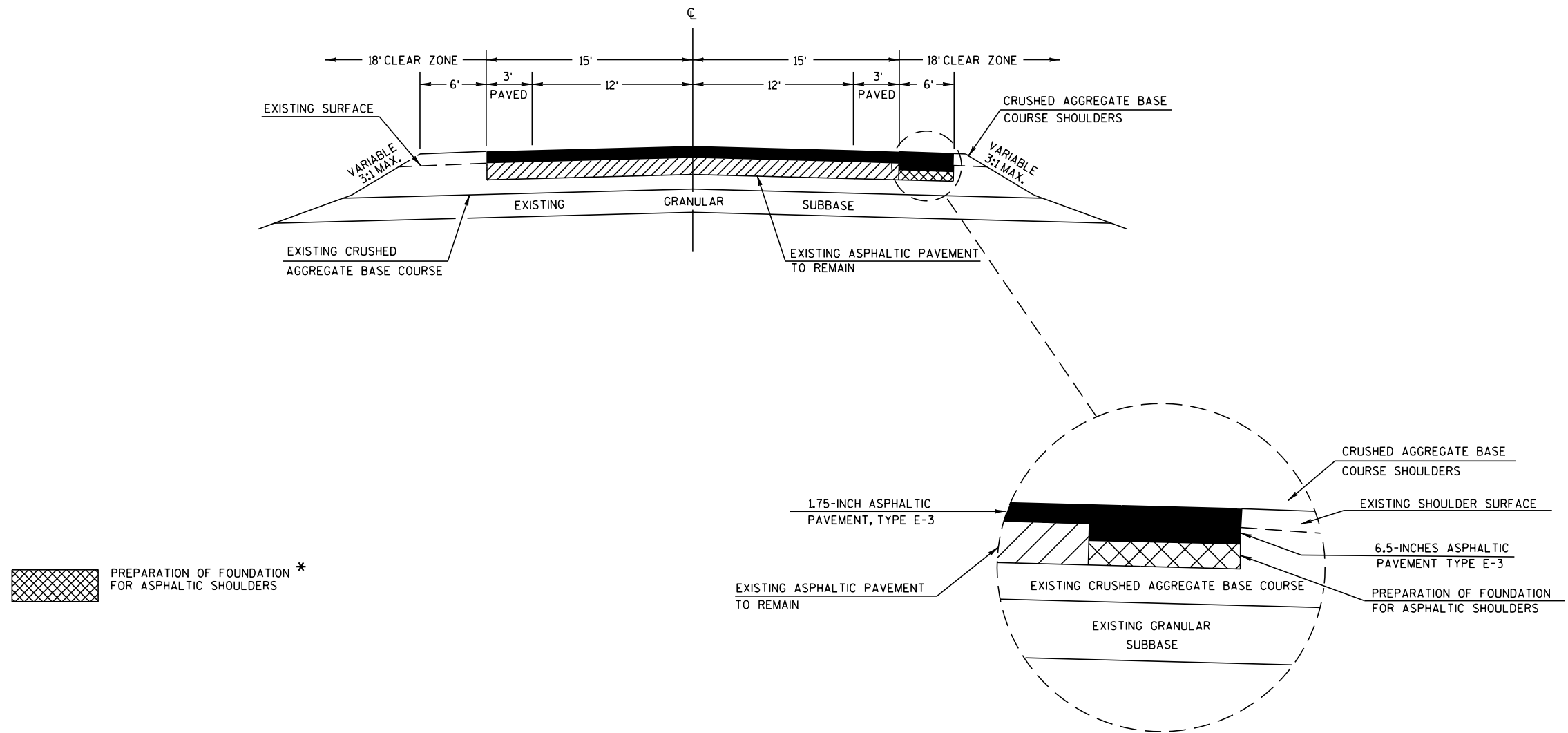
STA. 80+00 - STA. 230+83
STA. 231+23 - STA. 261+50
STA. 265+00 - STA. 421+00

**PROPOSED TYPICAL SECTION**

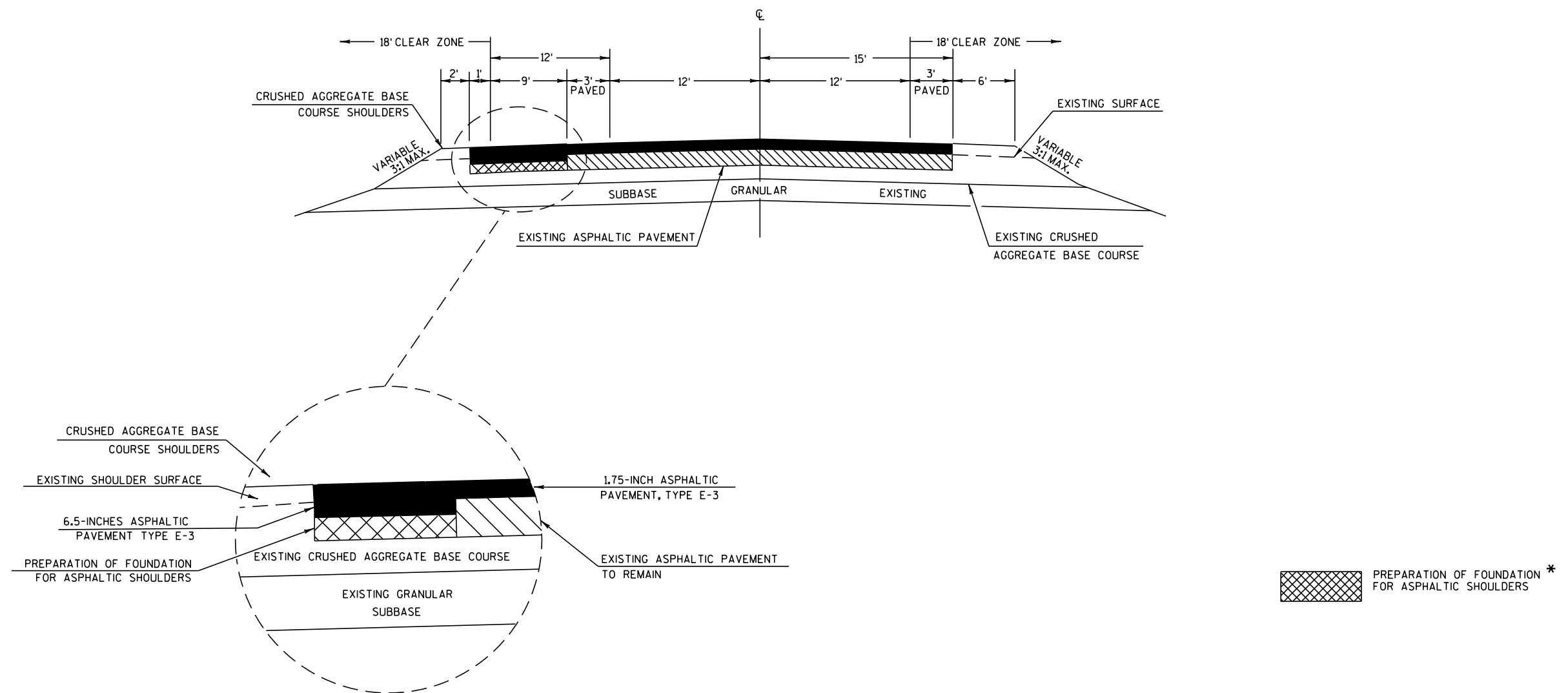
STA 80+00 - STA 140+02
STA 145+02 - STA 230+83
STA 231+23 - STA 261+50
STA 265+00 - STA 360+69
STA 368+61 - STA 421+00

**PROPOSED TYPICAL SECTION**

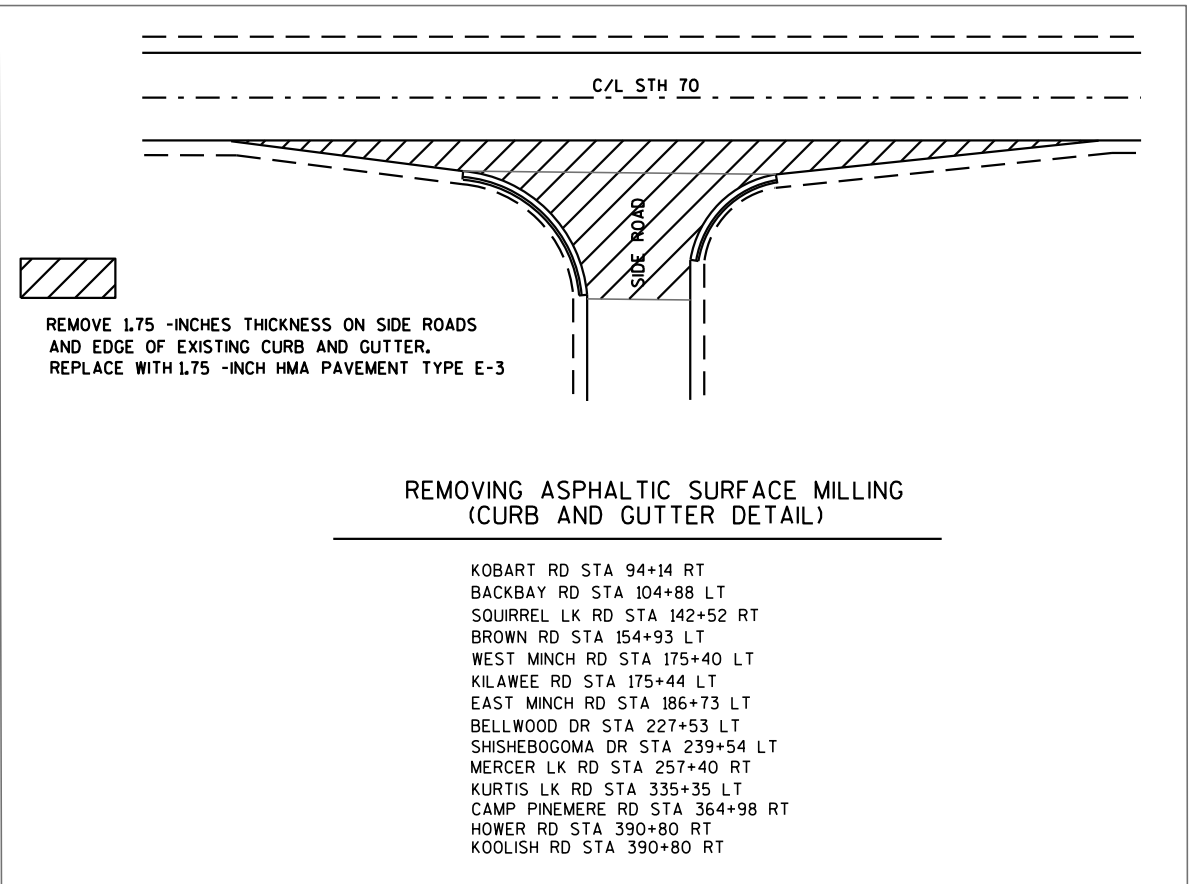
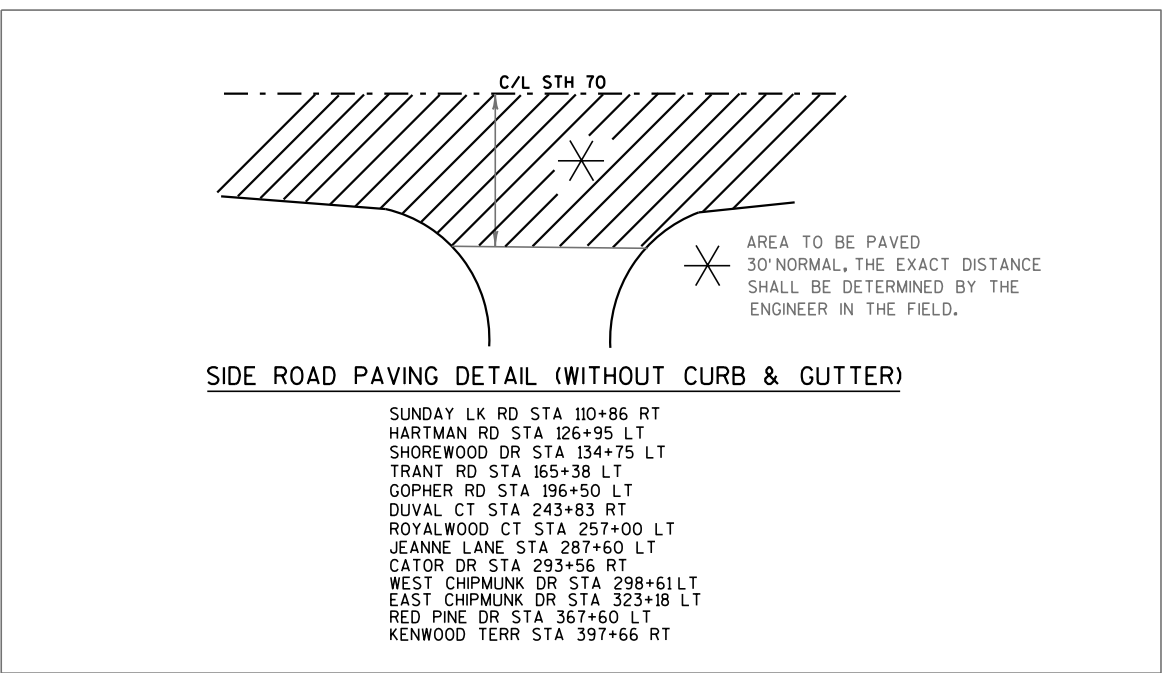
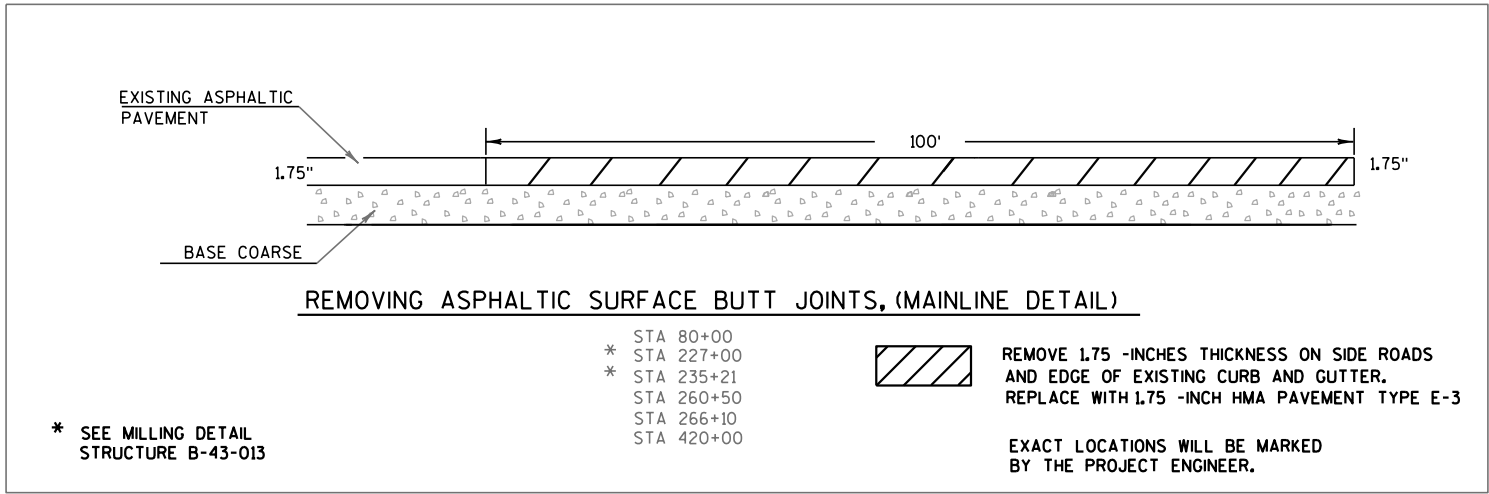
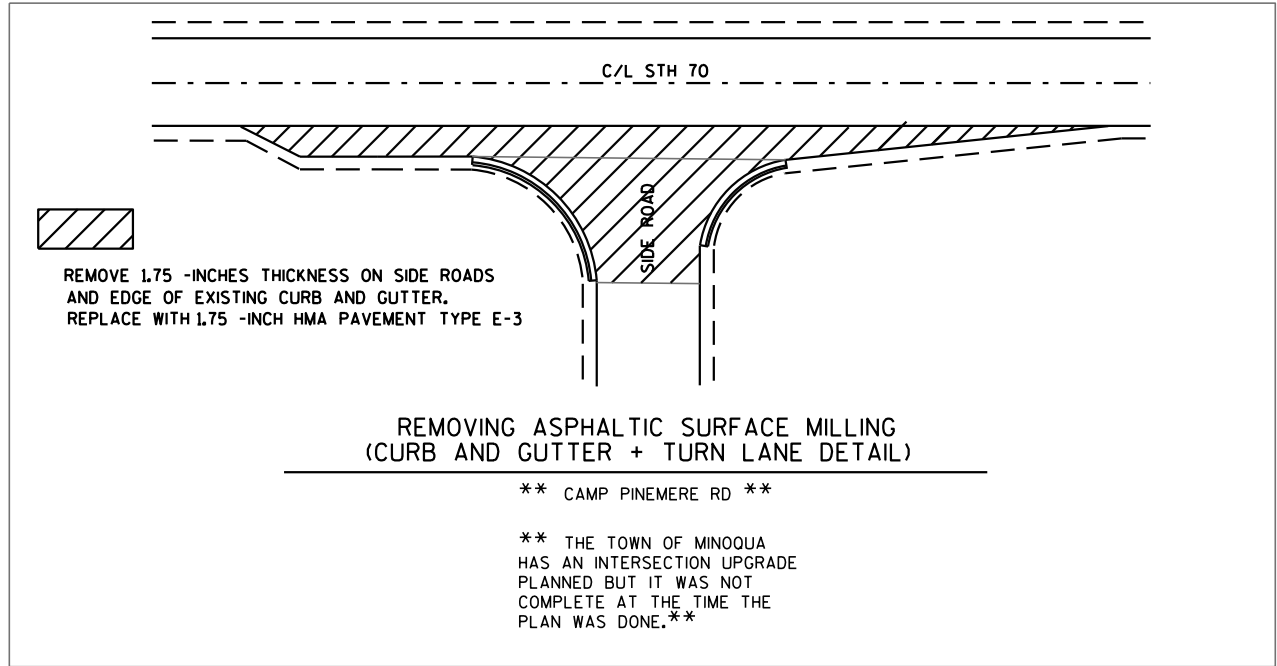
STA. 140+02 - 145+02

**PROPOSED TYPICAL SECTION**

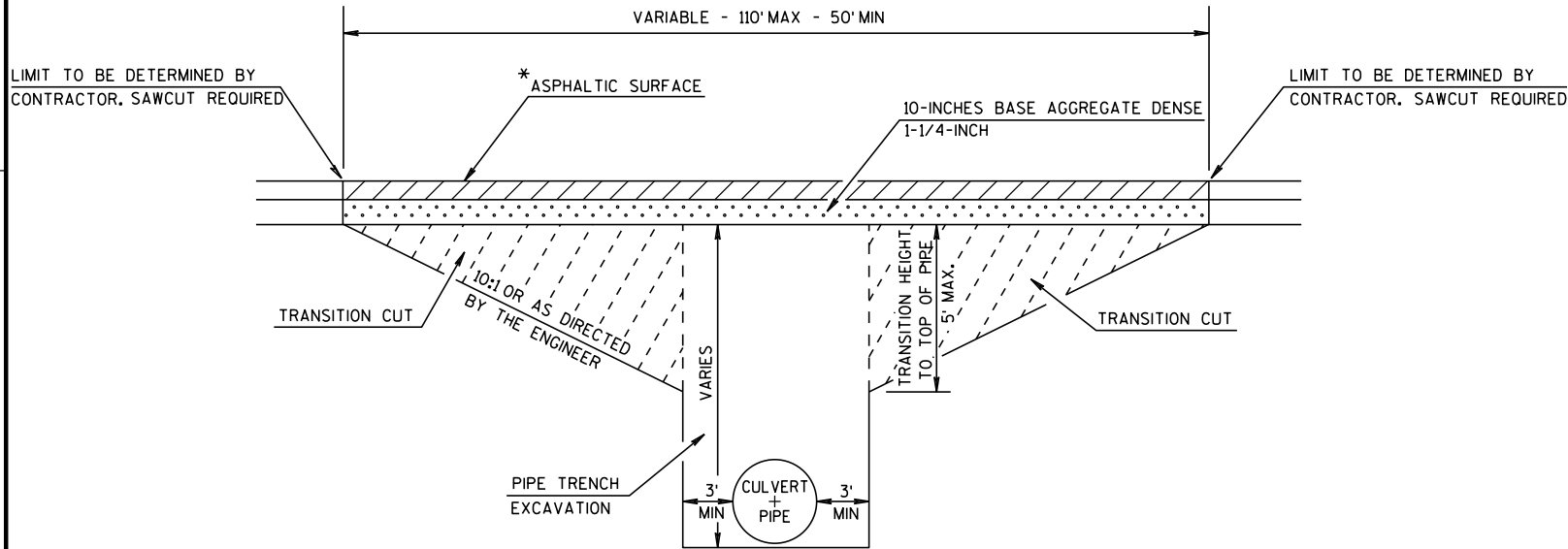
STA 232+27 - STA 243+90

**PROPOSED TYPICAL SECTION**

STA 360+69 - STA 368+61



LEVELS ON - 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63



NOTE: MATERIAL REMOVED IN THE TRANSITION CUT AND PIPE TRENCH EXCAVATIONS TO BE REUSED AS BACKFILL UNLESS DETERMINED TO BE UNUSABLE BY THE ENGINEER IN WHICH CASE GRANULAR BACKFILL WILL BE USED.

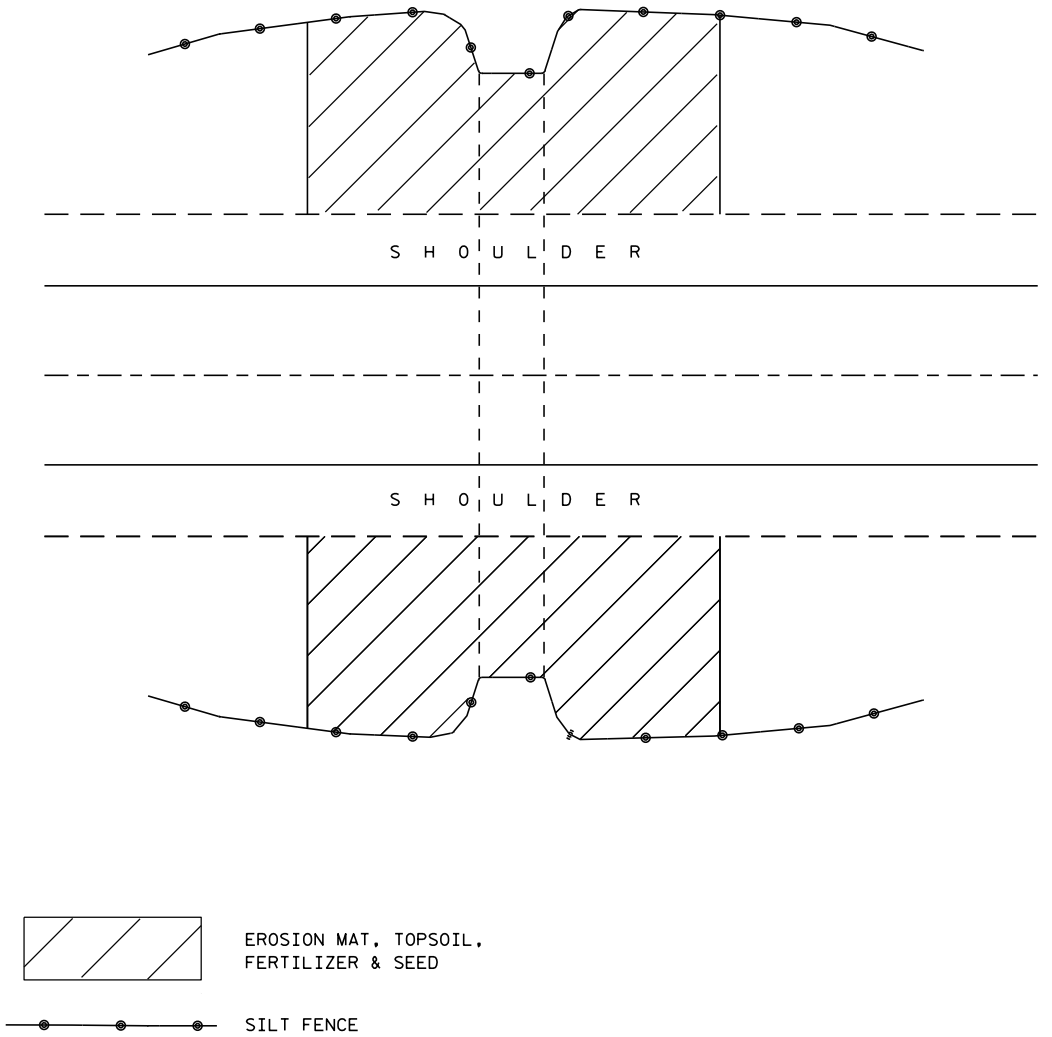
TRANSITION CUT WIDTH WILL BE 2' OUTSIDE EDGE OF PAVEMENT ON EACH SIDE OF CENTERLINE.

COMPLETE PIPE REPLACEMENT THROUGH ASPHALTIC SURFACE PATCHING PRIOR TO MILLING AND OVERLAYING THE EXISTING ASPHALT.

* MATCH EXISTING, 4-1/2" NOMINAL

CULVERT PIPE TRANSITION

LOCATIONS	CULVERT ID #	SIZE	TRANSITION HEIGHT	LENGTH OF TRANSITION CUT	CUT VOLUME
STA. 250+53	43-070-007	30"	9'	110'	280 CY
STA. 405+44	43-070-012	24"	5'	108'	280 CY



DETAIL FOR EROSION CONTROL

STA. 250+53 LT & RT
STA. 405+44 LT & RT

PROJECT NO: 9070-03-60

HWY: STH 70

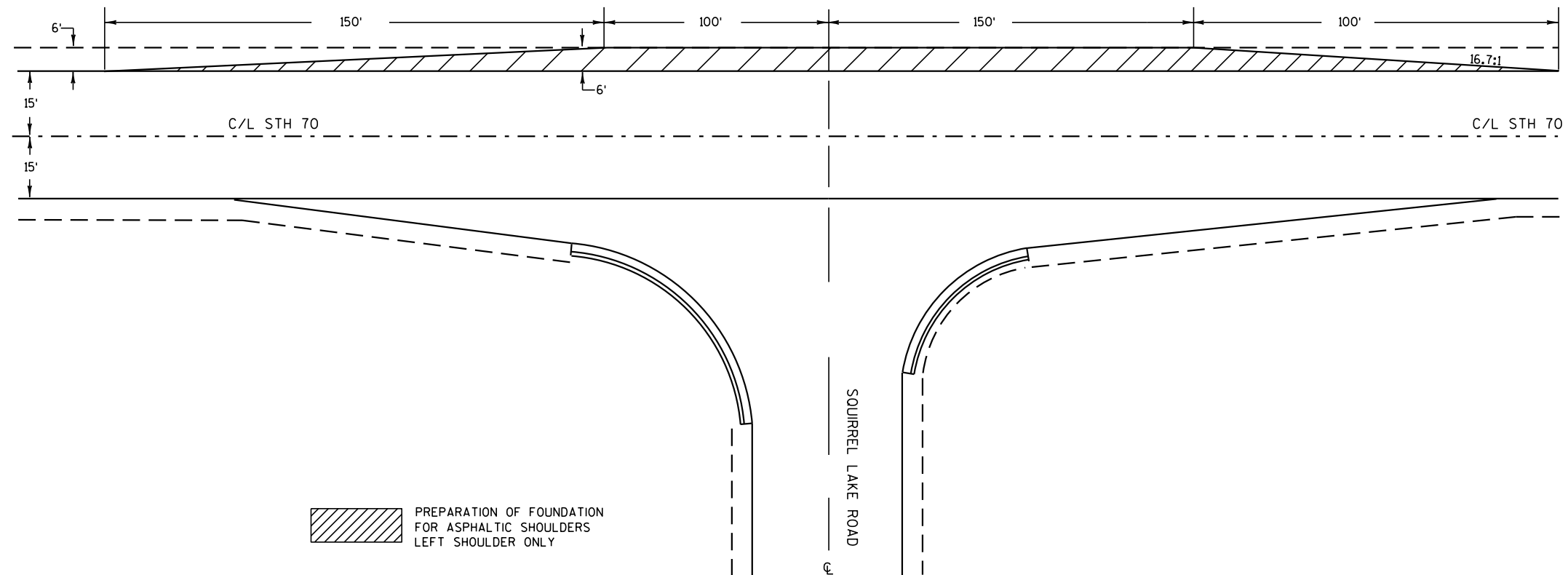
COUNTY: ONEIDA

CONSTRUCTION DETAILS

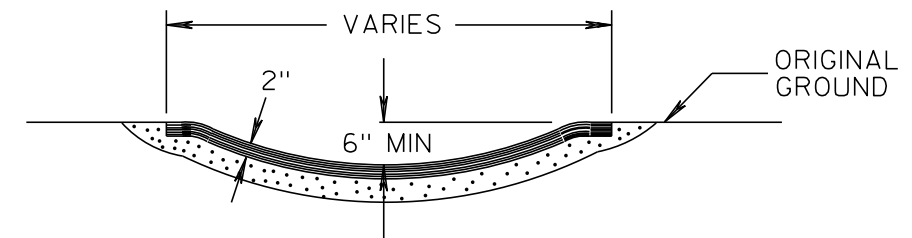
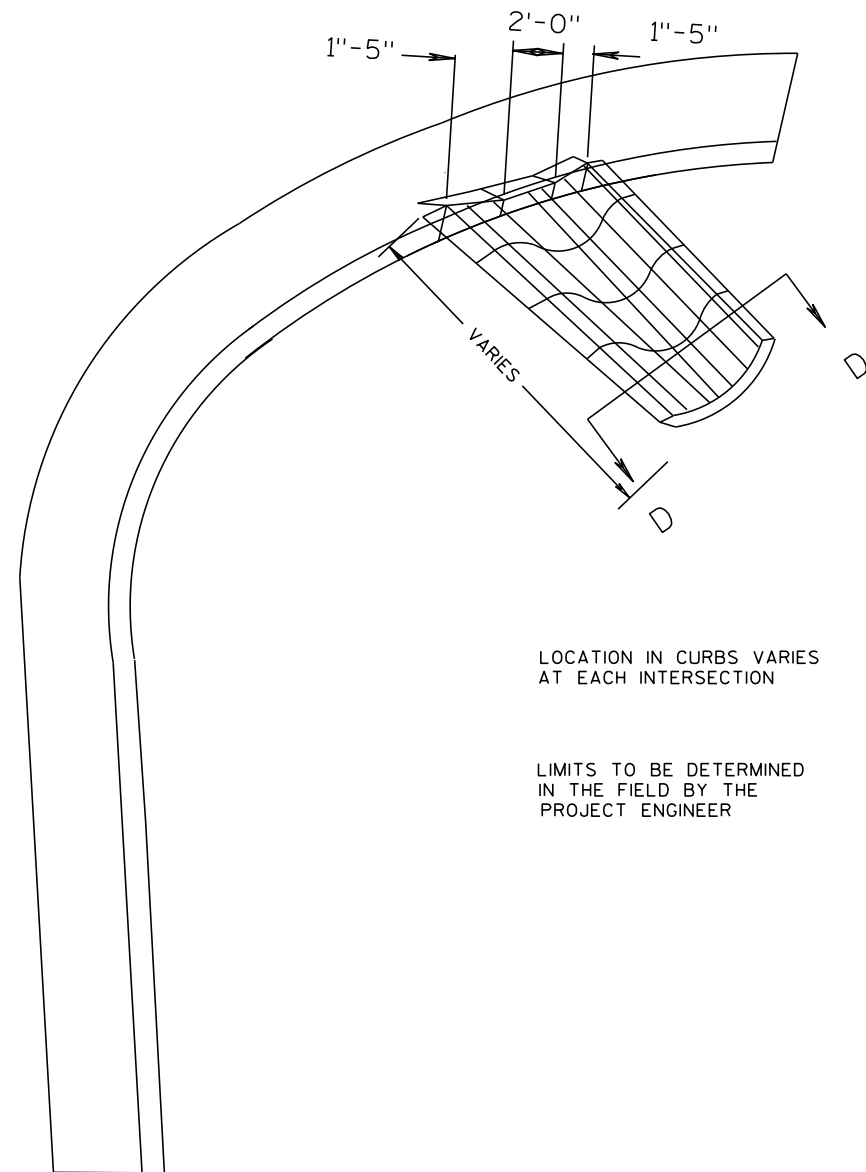
SCALE, FEET

SHEET NO:

E



SHOULDER PAVING DETAIL
STA. 140+02 - STA. 145+02 (SQUIRREL LK RD)

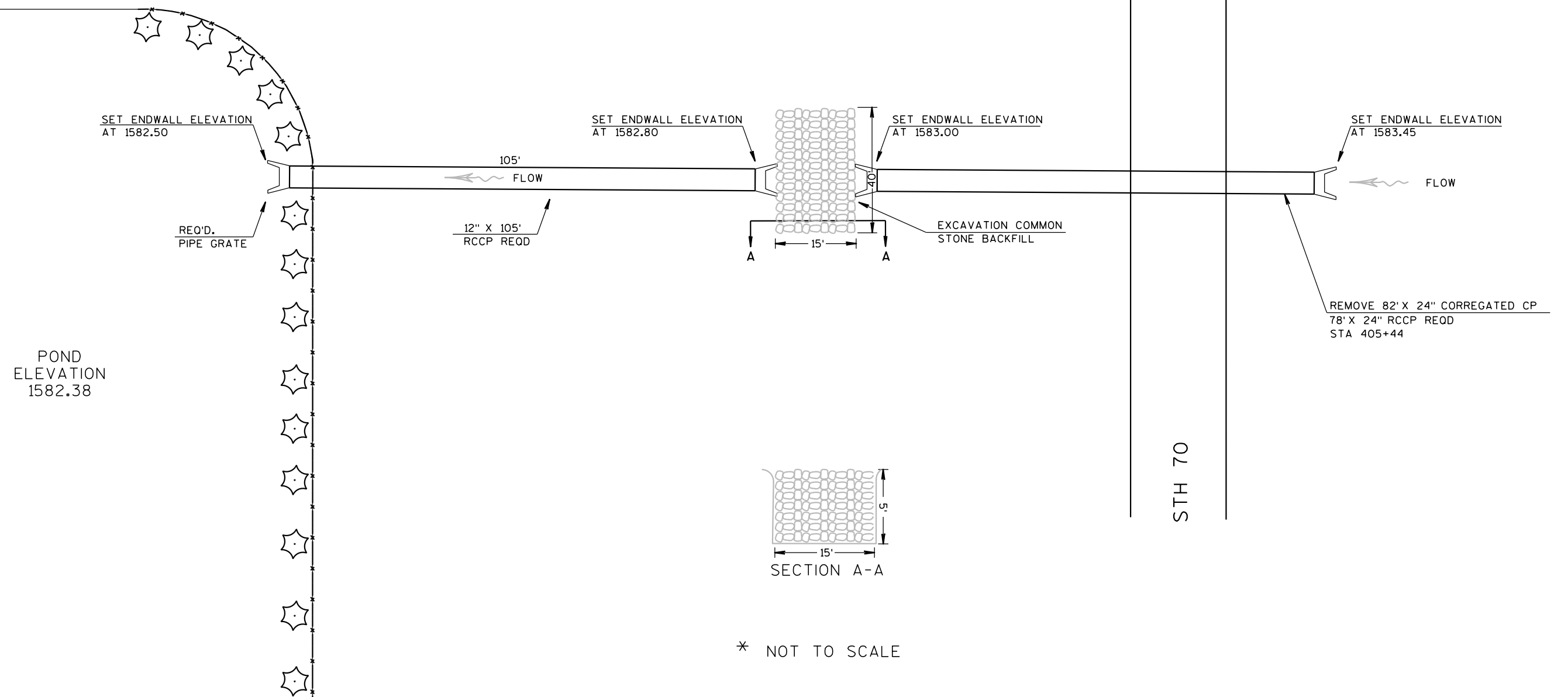


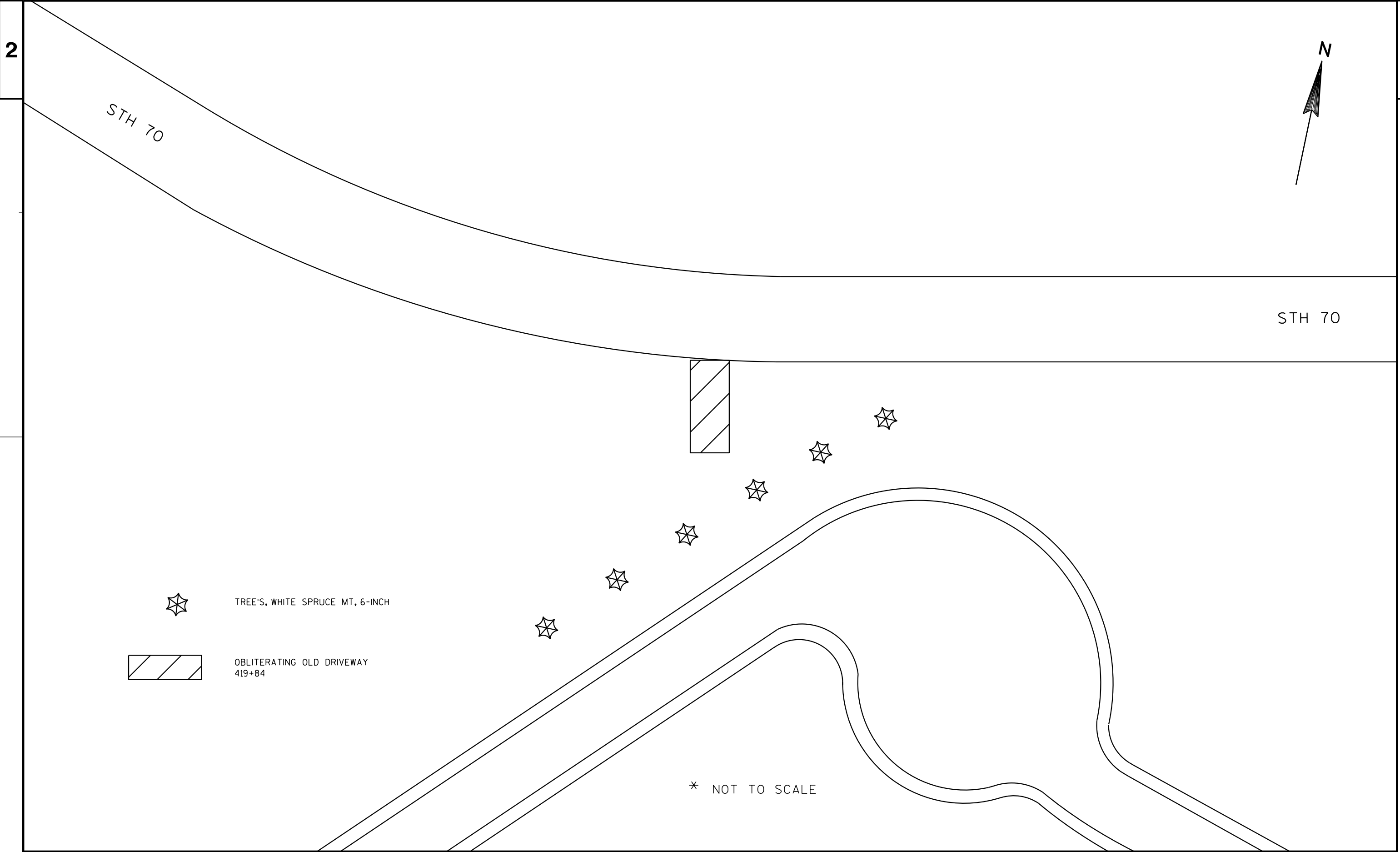
ASPHALTIC FLUME DETAIL AT RURAL INTERSECTIONS

KOBART RD
BACKBAY RD
SQUIRREL LK RD
BROWN RD

KILAWEE RD
W. MINCH RD
E. MINCH RD
BELLWOOD RD

SHISHIBOGAMA TR
KOOLISH RD
HOWER RD





PROJECT NO: 9070-03-60

HWY: STH 70

COUNTY: ONEIDA

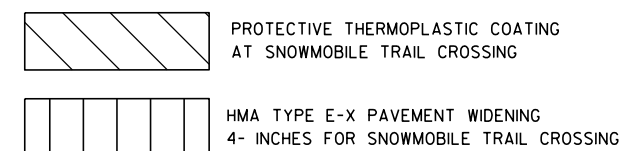
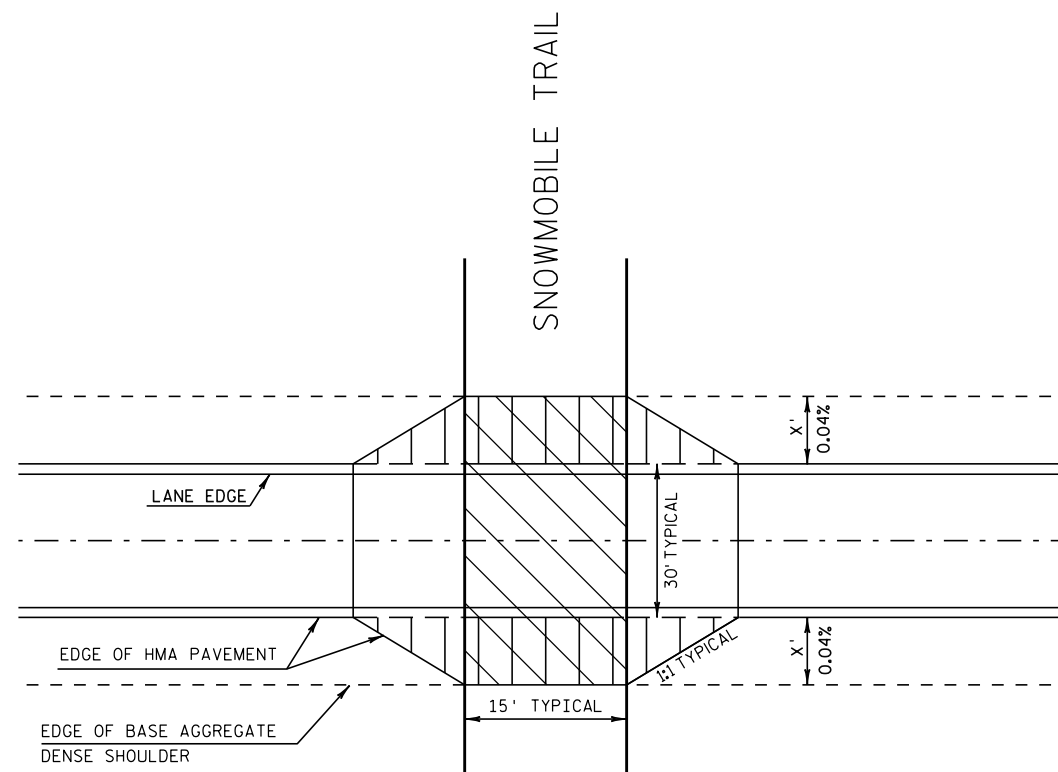
CONSTRUCTION DETAIL

SHEET

E

2

2

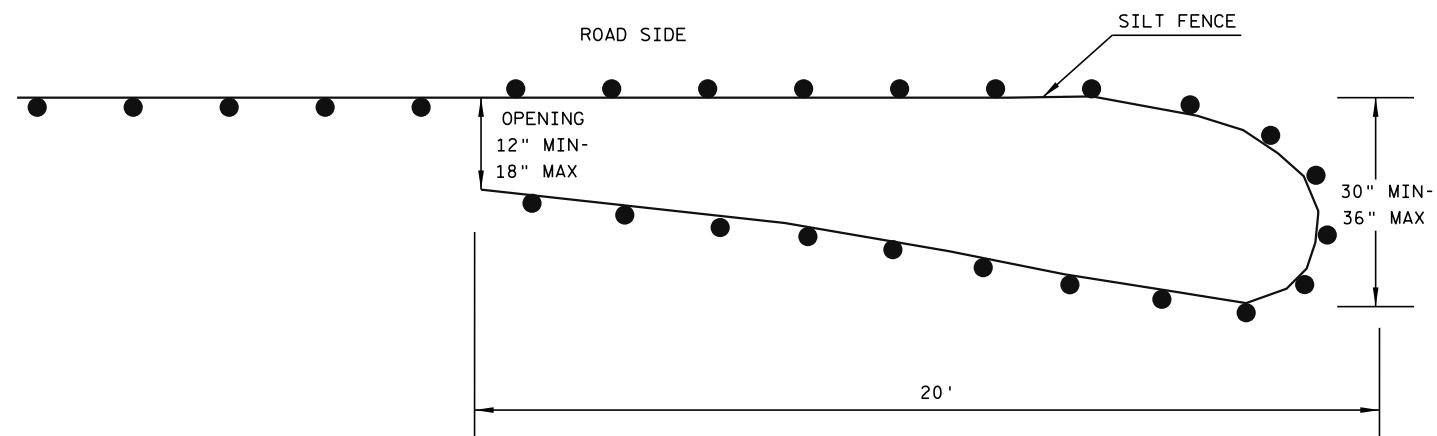


NOTE: PREPARATION FOR PAVEMENT WIDENING FALLS UNDER
PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS.

EXACT LOCATIONS TO BE MARKED
IN THE FIELD BY THE PROJECT PERSONAL.

SNOWMOBILE TRAIL CROSSING DETAIL

STA 365+43
(EXACT LOCATION TO BE DETERMINED IN THE FIELD)

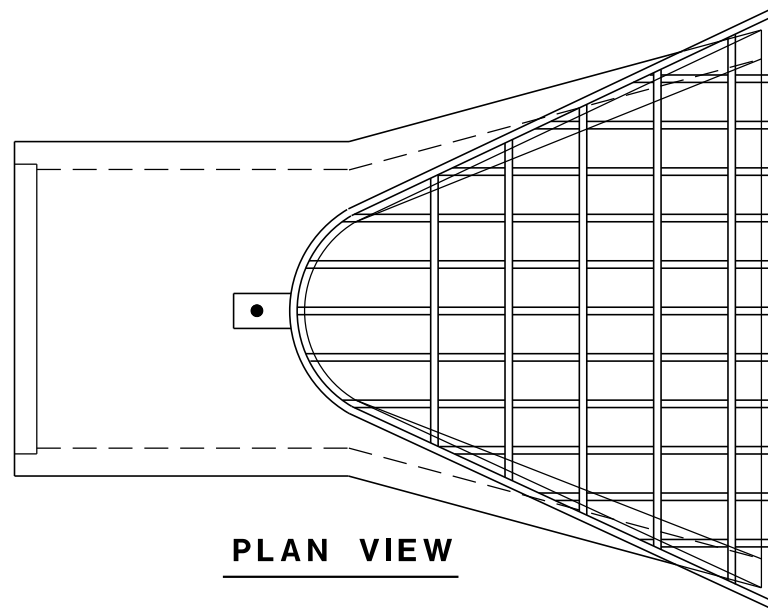


PLAN VIEW

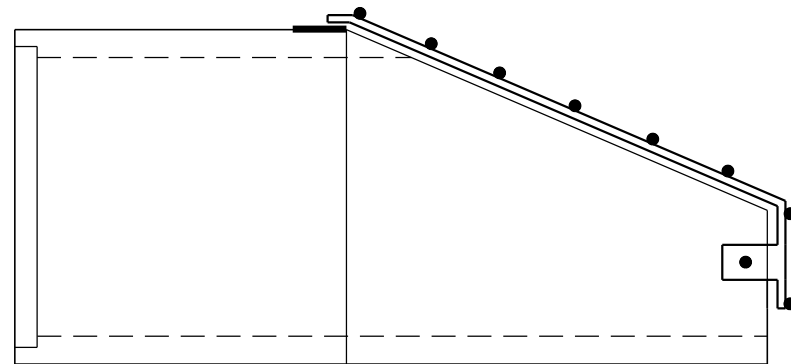
GENERAL NOTES:

SILT FENCE POSTS FOR THE TURN-AROUND SHOULD BE ON THE OUTSIDE OF THE TURN-AROUND AND TRENCHED IN ACCORDING TO SILT FENCE REQUIREMENTS.

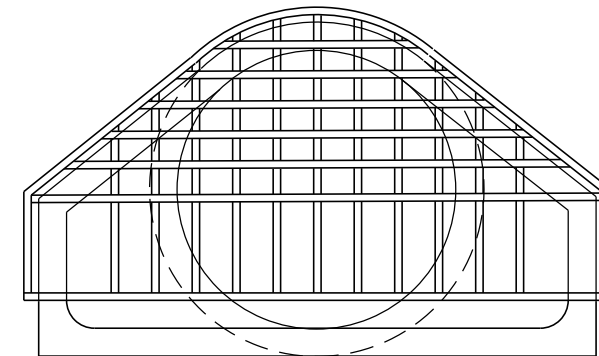
TEMPORARY SMALL ANIMAL TURN-AROUND



PLAN VIEW



SIDE VIEW

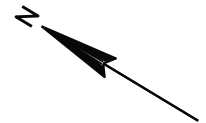


END VIEW

* 6" SPACING MIN.

* CONNECTOR PLATE WITH BOLT ATTACHED
AT THREE POINTS TO ENDWALL

PIPE GRATE FOR APRON ENDWALLS



MIDWEST GUARDRAIL TERMINAL REQUIRED
BARRIER SYSTEM GRADING SHAPING
FINISHING REQUIRED
STA 112+93 RT
STA 116+43 RT

STA 112+93 - STA 116+43 RT
350 LF MIDWEST GUARDRAIL SYSTEM 3
REQUIRED

STA 112+93 - STA 116+43 RT
REMOVE STEEL PLATE BEAMGAURD 355 LF

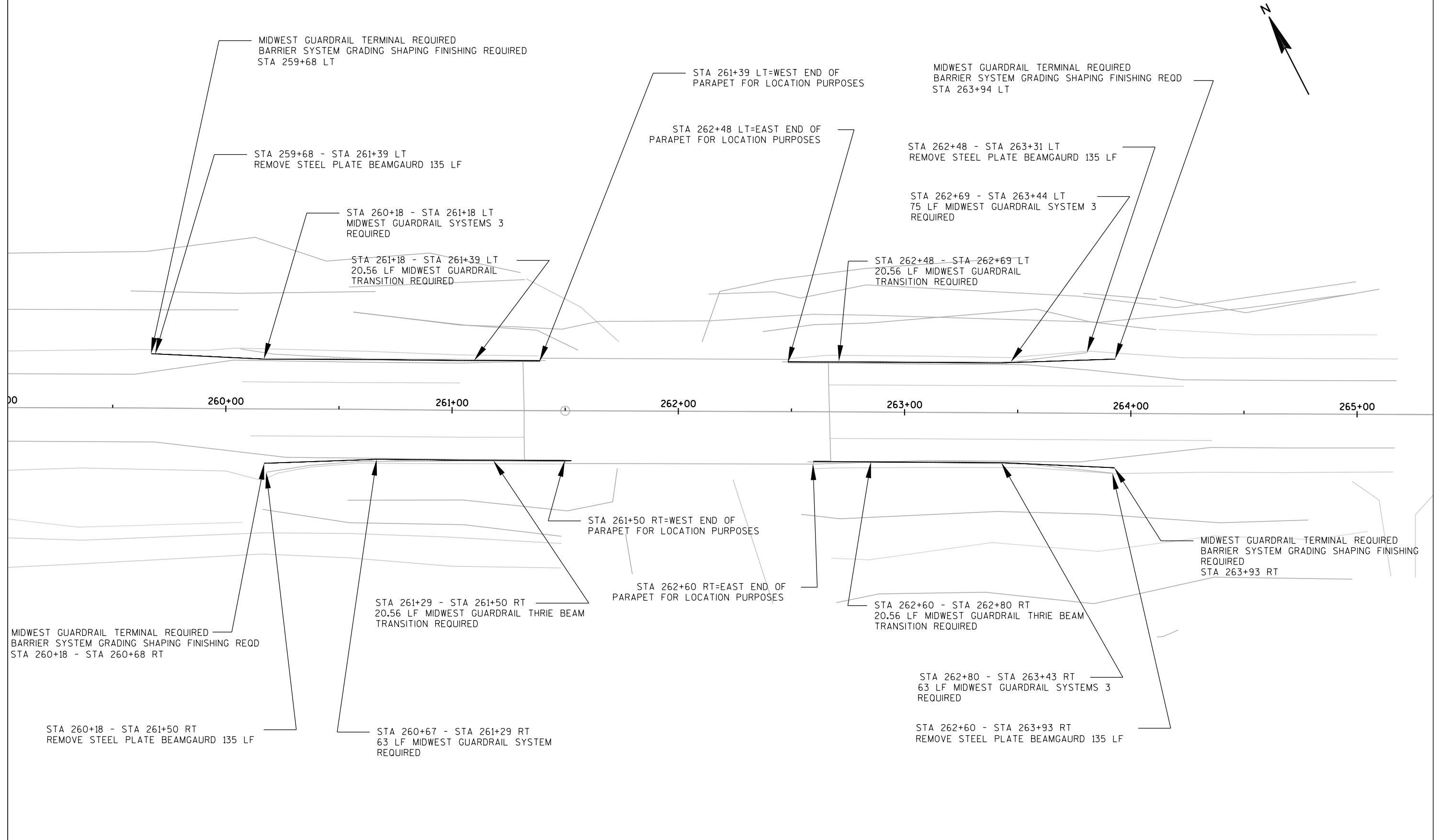
MIDWEST GUARDRAIL TERMINAL REQUIRED
BARRIER SYSTEM GRADING SHAPING
FINISHING REQUIRED
STA 118+57 RT
STA 121+44 RT

STA 118+57 - STA 121+44 RT
288 LF MIDWEST GUARDRAIL SYSTEM 3
REQUIRED

STA 118+57 - STA 121+44 RT
REMOVE STEEL PLATE BEAMGAURD 370 LF

SUNDAY LAKE

SUNDAY LAKE





CURTIS LAKE

STA 325+50 -STA 330+41 LT
REMOVE STEEL PLATE BEAMGUARD 490 LF

325+00

326+00

327+00

328+00

329+00

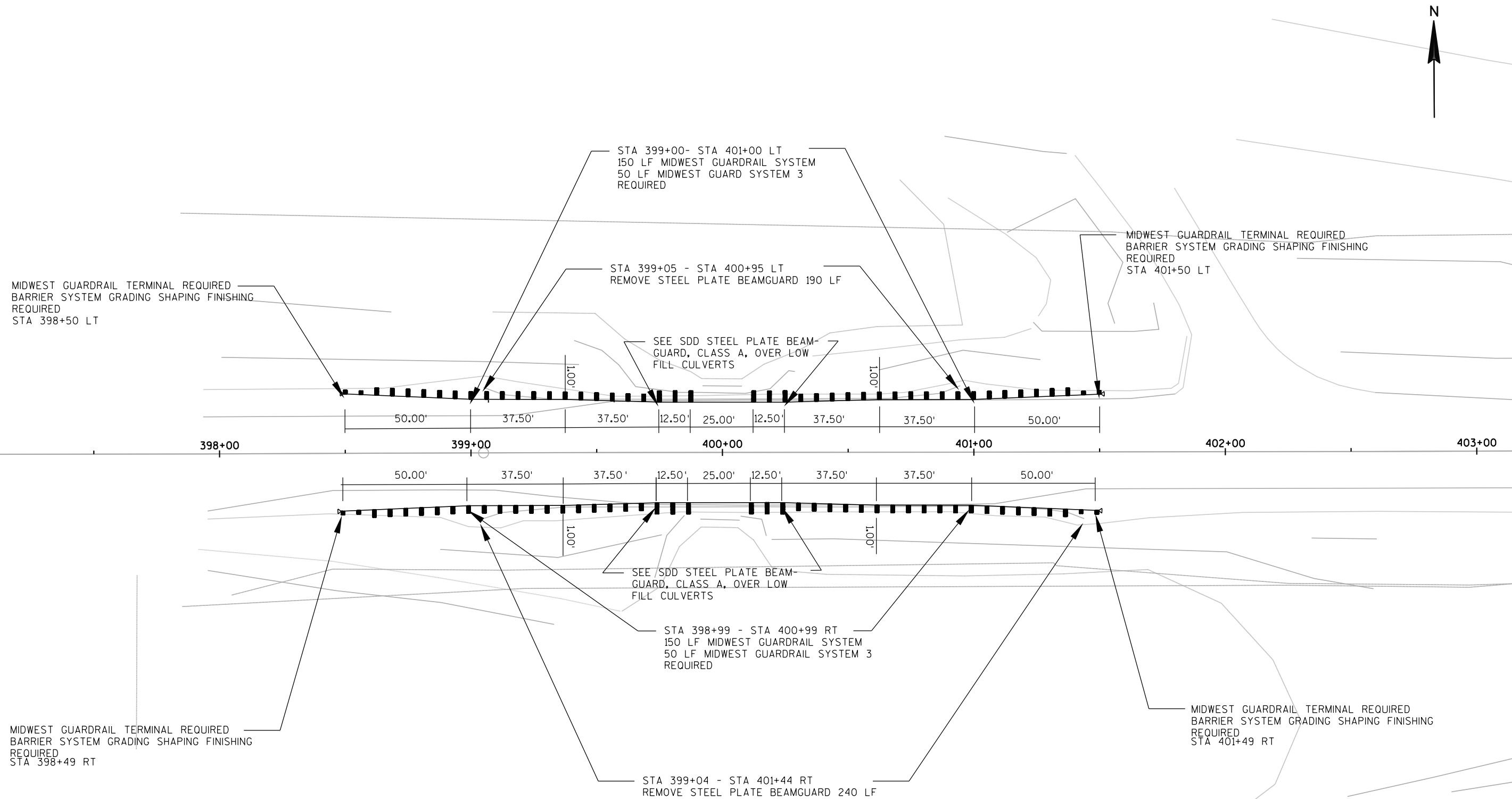
330+00

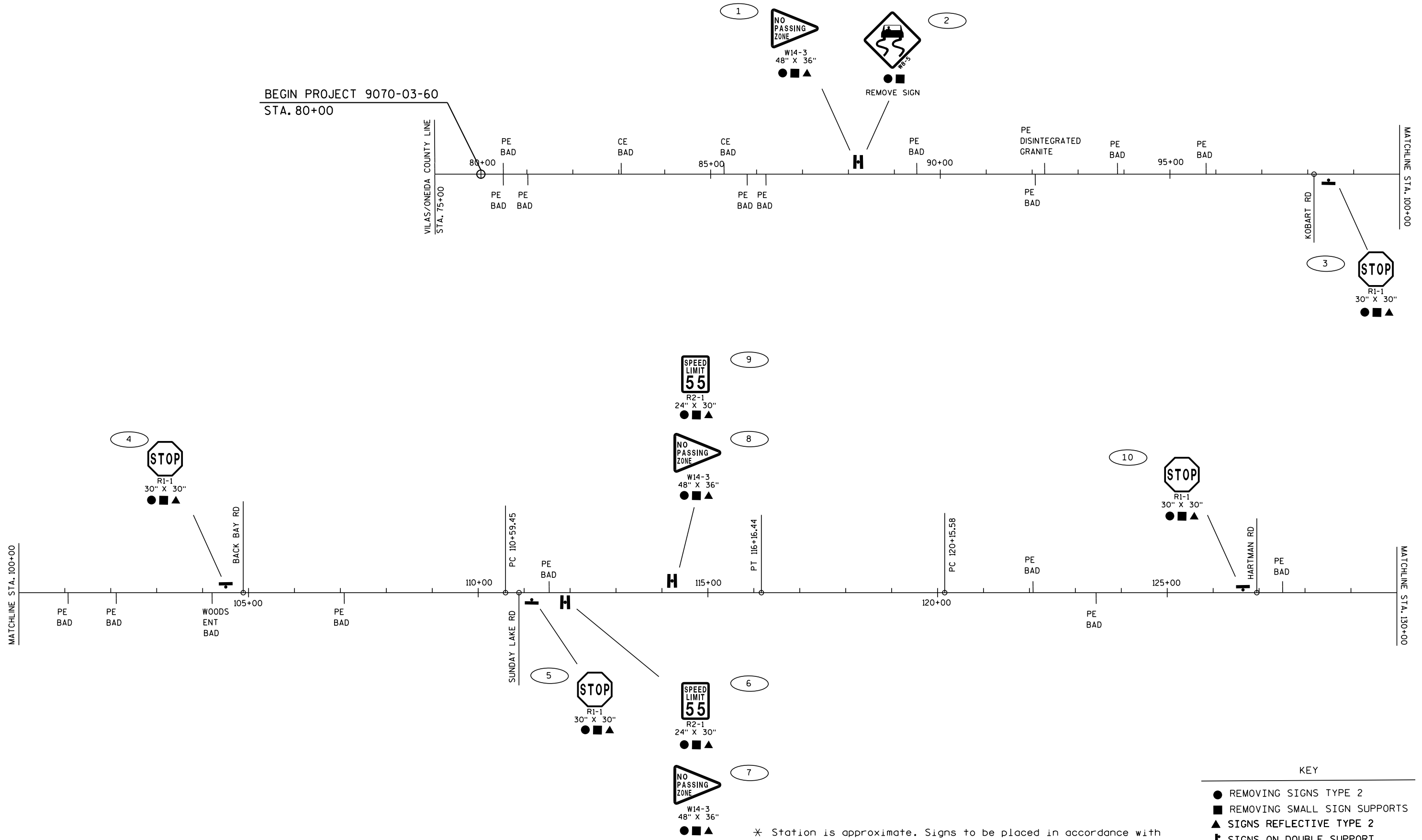
331+00

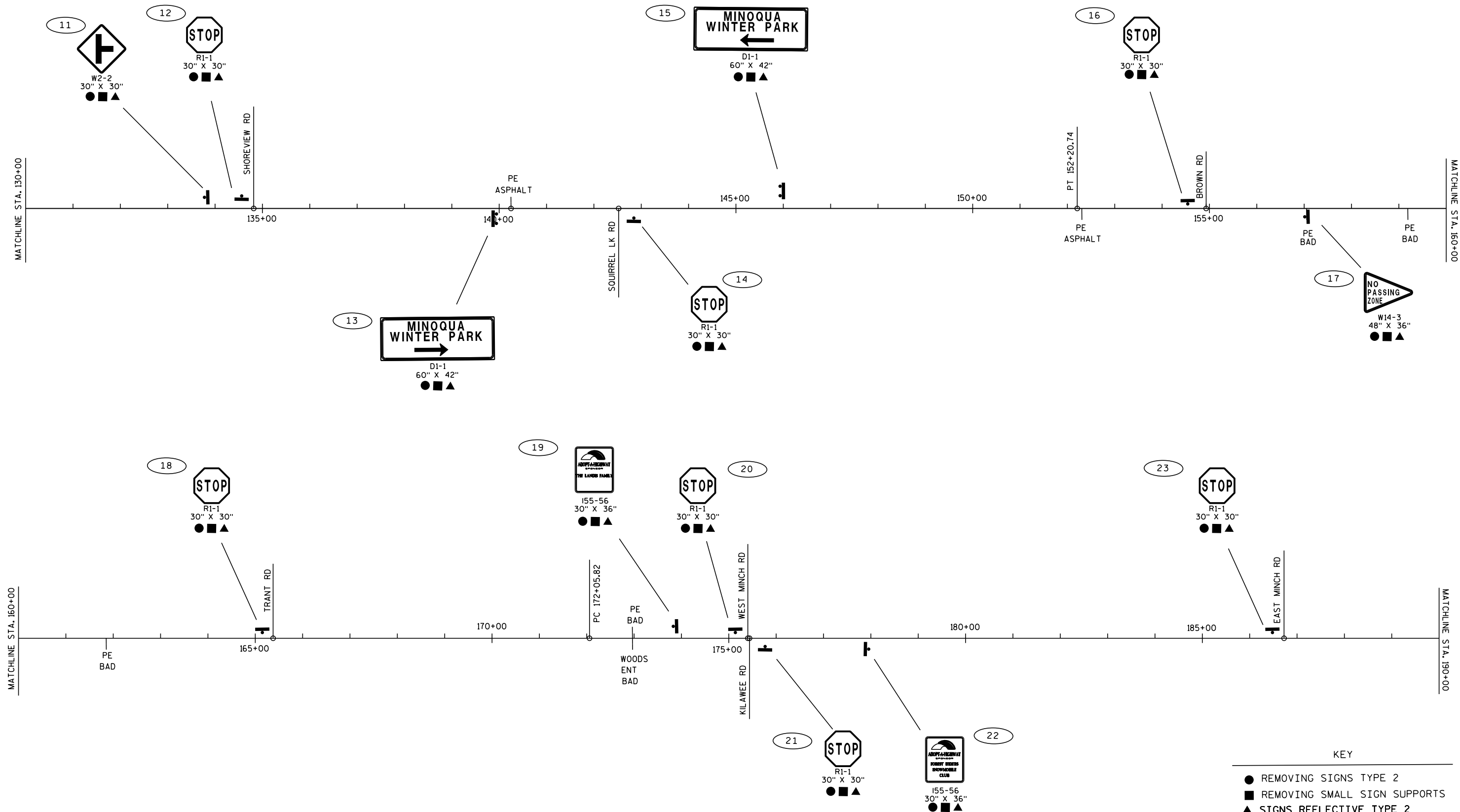
STA 326+82 - STA 330+19 LT
337 LF MIDWEST GUARDRAIL SYSTEM 3
REQUIRED

MIDWEST GUARDRAIL TERMINAL REQUIRED
BARRIER SYSTEM GRADING SHAPING FIINISHING
REQUIRED
STA 326+32 LT

MIDWEST GUARDRAIL TERMINAL REQUIRED
BARRIER SYSTEM GRADING SHAPING FINISHING
REQUIRED
STA 330+69 LT







* Station is approximate. Signs to be placed in accordance with current standards at existing locations unless otherwise directed by the engineer. There are signs within the project limits not shown on the plan which are to remain.

KEY

- REMOVING SIGNS TYPE 2
- REMOVING SMALL SIGN SUPPORTS
- ▲ SIGNS REFLECTIVE TYPE 2
- ┌ SIGNS ON DOUBLE SUPPORT
- └ SIGNS ON SINGLE SUPPORT

PROJECT NO: 9070-03-60

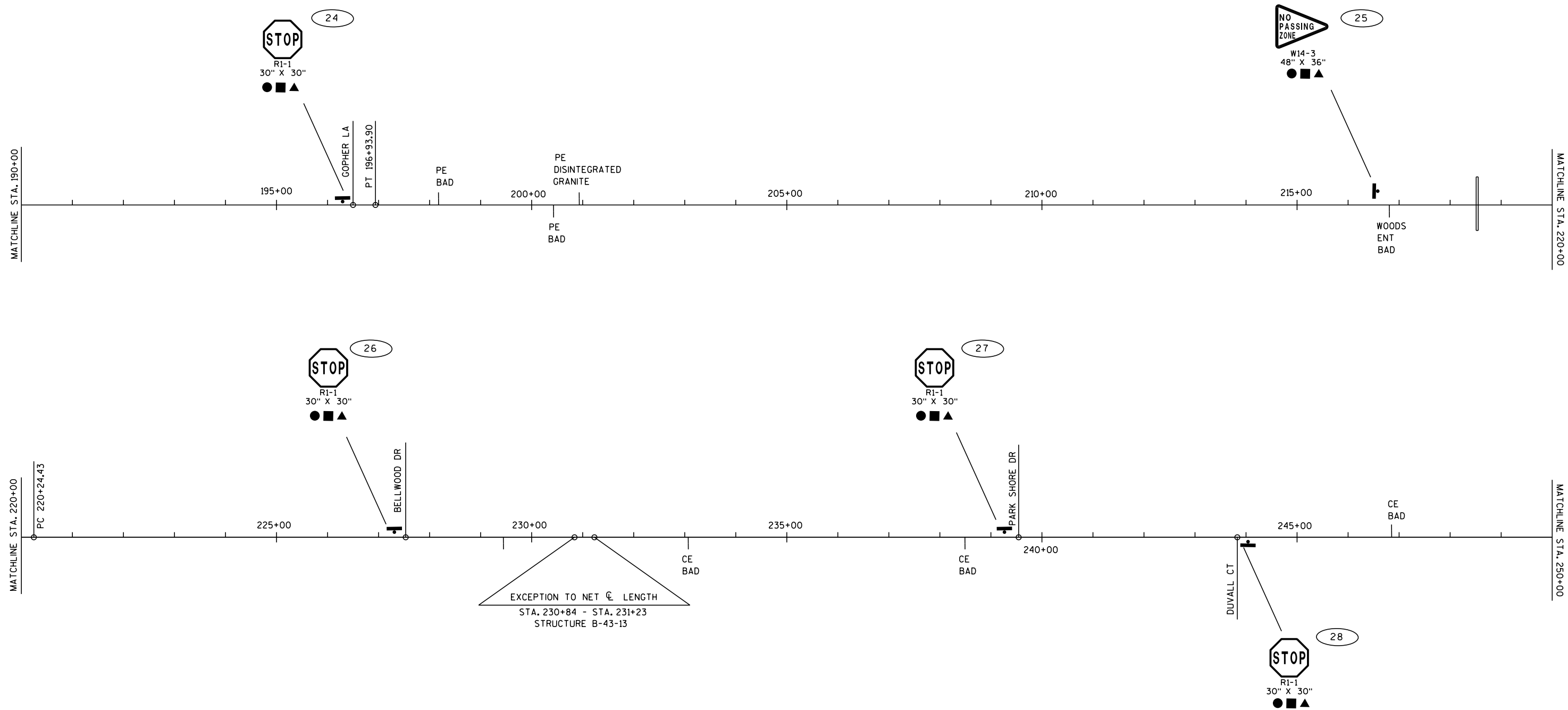
HWY: STH 70

COUNTY: ONEIDA

PERMANENT SIGNING

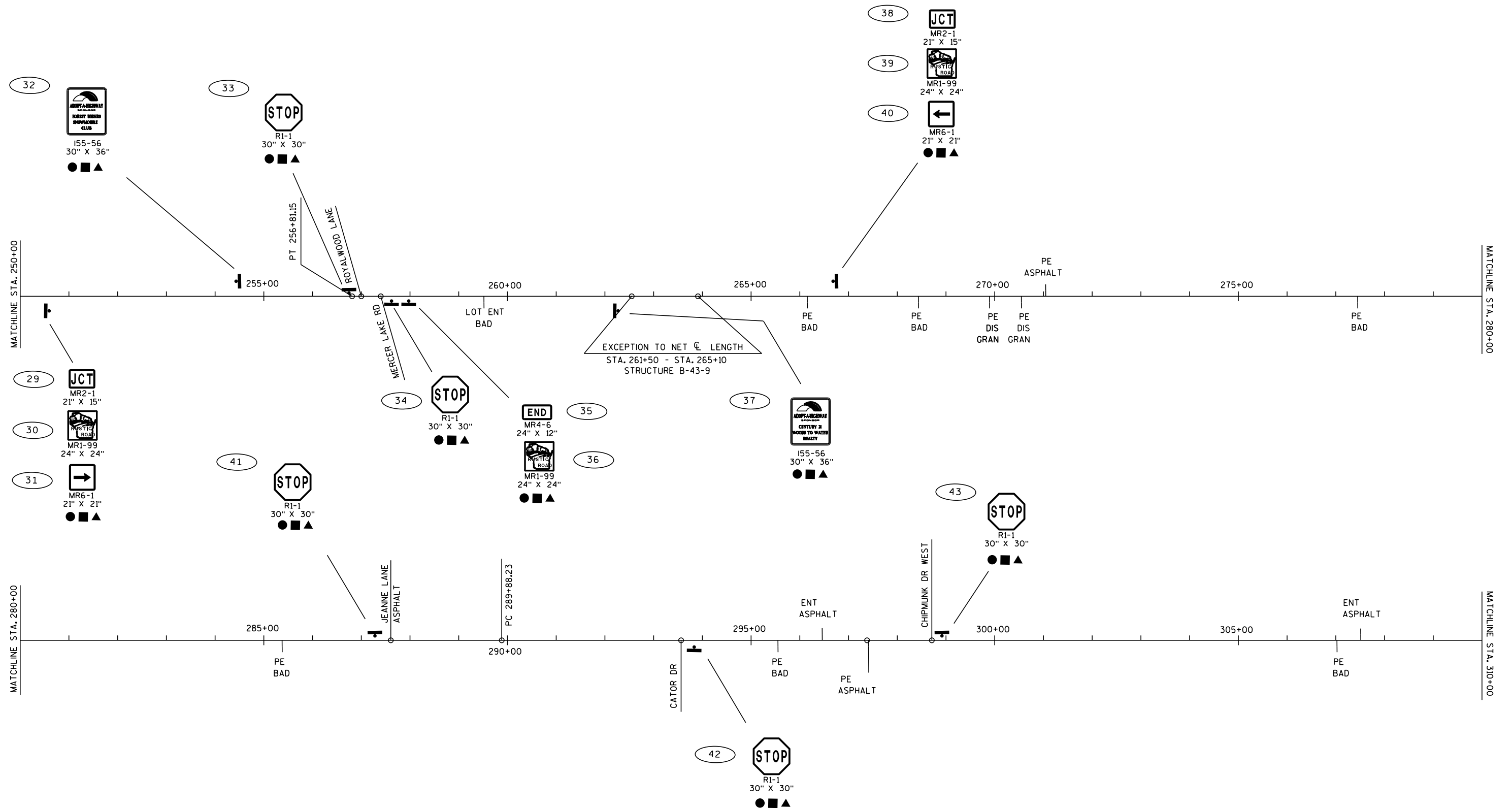
SHEET

E



* Station is approximate. Signs to be placed in accordance with current standards at existing locations unless otherwise directed by the engineer. There are signs within the project limits not shown on the plan which are to remain.

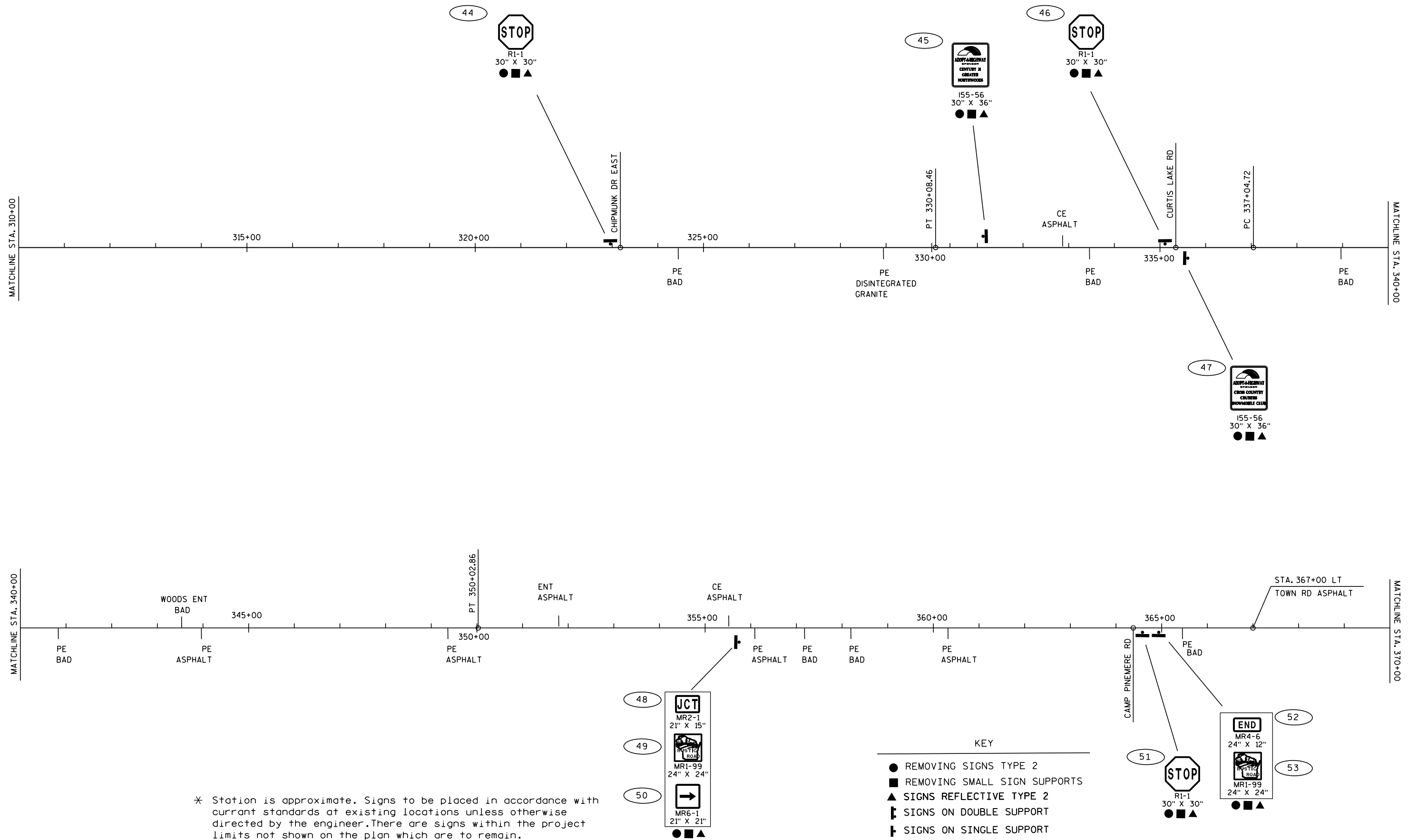
- KEY
- REMOVING SIGNS TYPE 2
 - REMOVING SMALL SIGN SUPPORTS
 - ▲ SIGNS REFLECTIVE TYPE 2
 - ┌ SIGNS ON DOUBLE SUPPORT
 - └ SIGNS ON SINGLE SUPPORT

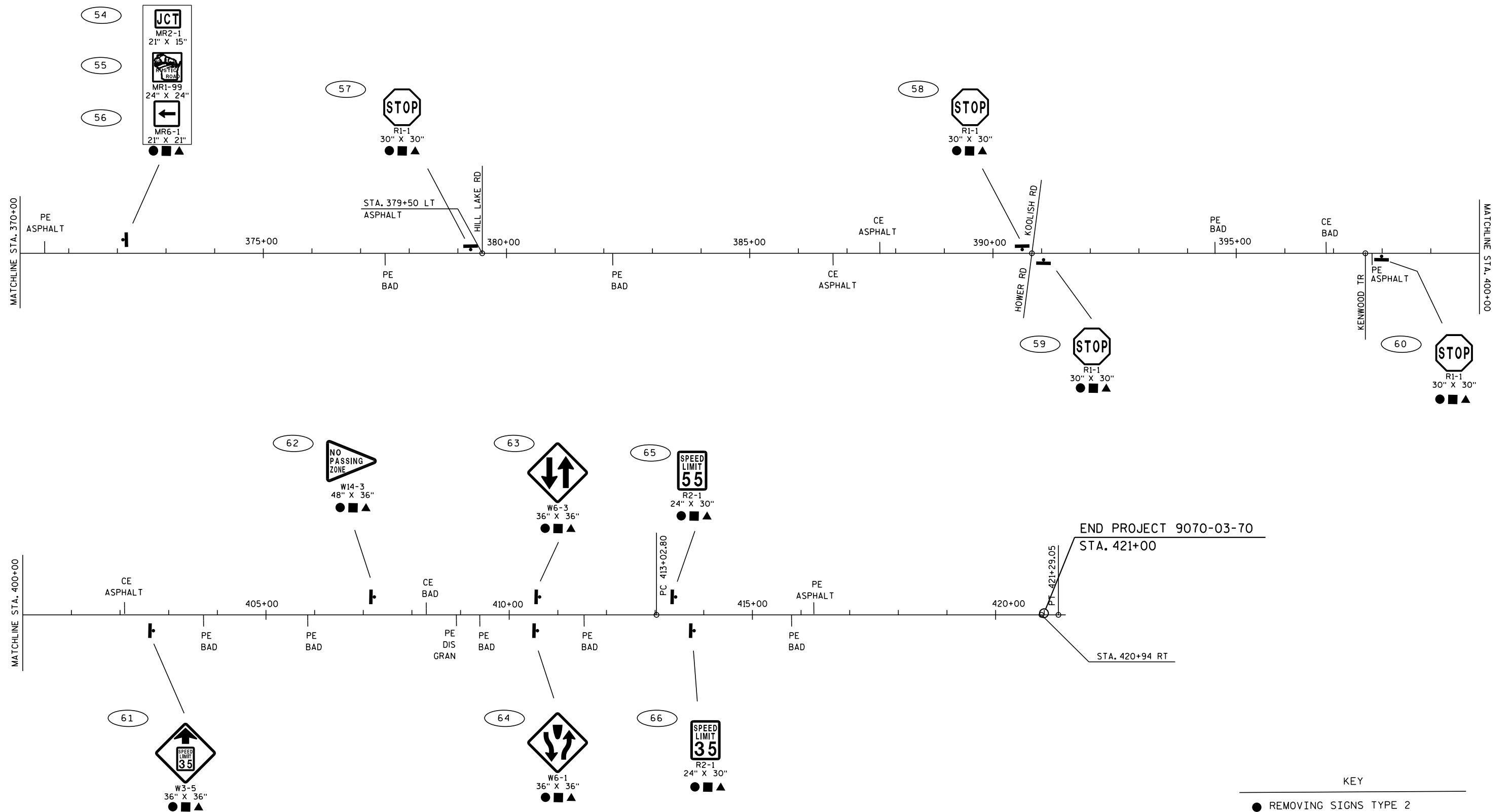


KEY

- REMOVING SIGNS TYPE 2
- REMOVING SMALL SIGN SUPPORTS
- ▲ SIGNS REFLECTIVE TYPE 2
- ⌋ SIGNS ON DOUBLE SUPPORT
- ⌋ SIGNS ON SINGLE SUPPORT

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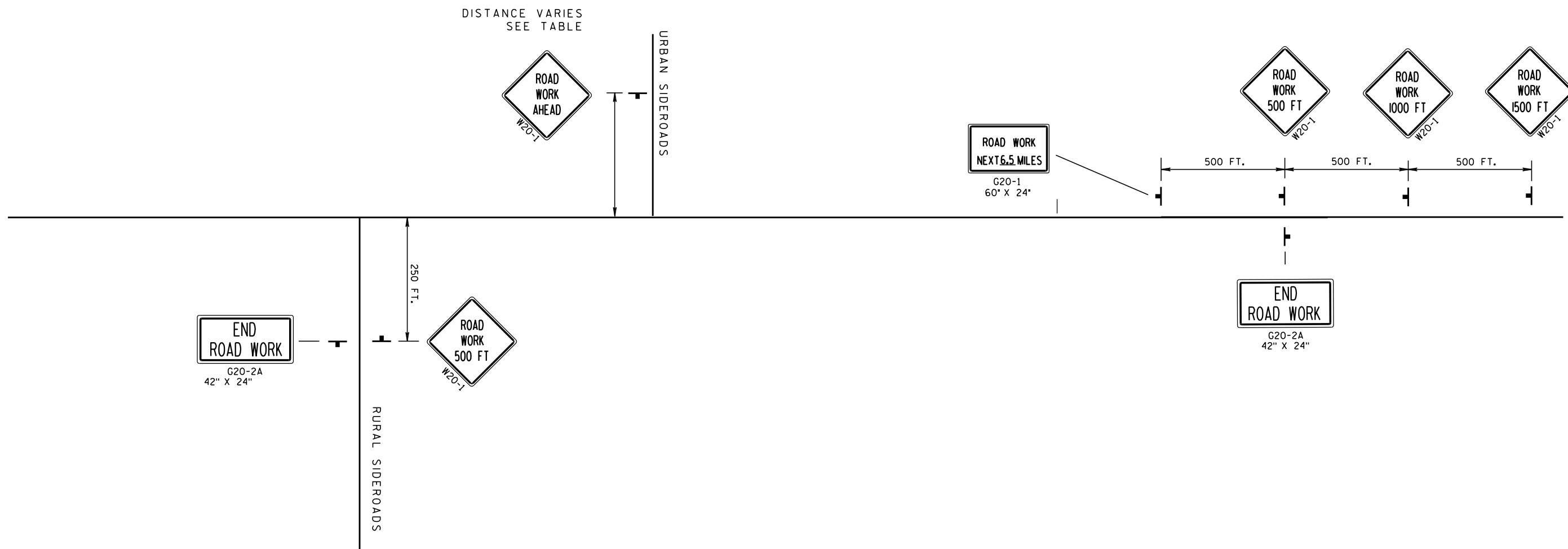
KEY

- REMOVING SIGNS TYPE 2
- REMOVING SMALL SIGN SUPPORTS
- ▲ SIGNS REFLECTIVE TYPE 2
- ┌ SIGNS ON DOUBLE SUPPORT
- └ SIGNS ON SINGLE SUPPORT

SIDE ROAD SPEED LIMIT	SIGN PLACEMENT FROM INTERSECTION
25MPH	200 '
35MPH	300 '
45MPH	400 '
55MPH	500 '

GENERAL NOTES

1. ALL SIGNS AND DEVICES SHALL BE IN CONFORMANCE WITH THE WISCONSIN MANUAL OF TRAFFIC CONTROL DEVICES (WMTCD).
2. THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.
3. ALL SIGNS ARE 48 INCHES X 48 INCHES UNLESS OTHERWISE NOTED.
4. "WO" SIGNS ARE THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.



DATE 27MAR13		E S T I M A T E O F Q U A N T I T I E S			
LINE				9070-03-60	
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0010	203.0100	REMOVING SMALL PIPE CULVERTS	EACH	2.000	2.000
0020	204.0115	REMOVING ASPHALTIC SURFACE BUTT JOINTS	SY	1,010.000	1,010.000
0030	204.0120	REMOVING ASPHALTIC SURFACE MILLING	SY	120,495.000	120,495.000
0040	204.0165	REMOVING GUARDRAIL	LF	2,190.000	2,190.000
0050	205.0100	EXCAVATION COMMON	CY	115.000	115.000
0060	209.0100	BACKFILL GRANULAR	CY	60.000	60.000
0070	211.0400	PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS	STA	26.000	26.000
0080	213.0100	FINISHING ROADWAY (PROJECT) 01. 9070-03-60	EACH	1.000	1.000
0090	305.0110	BASE AGGREGATE DENSE 3/4-INCH	TON	3,010.000	3,010.000
0100	305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	115.000	115.000
0110	440.4410.S	INCENTIVE IRI RIDE	DOL	34,100.000	34,100.000
0120	455.0105	ASPHALTIC MATERIAL PG58-28	TON	700.000	700.000
0130	455.0605	TACK COAT	GAL	3,085.000	3,085.000
0140	460.1103	HMA PAVEMENT TYPE E-3	TON	12,460.000	12,460.000
0150	460.2000	INCENTIVE DENSITY HMA PAVEMENT	DOL	7,584.000	7,584.000
0160	465.0105	ASPHALTIC SURFACE	TON	110.000	110.000
0170	465.0120	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES	TON	50.000	50.000
0180	465.0315	ASPHALTIC FLUMES	SY	26.000	26.000
0190	465.0475.S	ASPHALT CENTER LINE RUMBLE STRIP 2-LANE RURAL	LF	21,300.000	21,300.000
0200	522.0124	CULVERT PIPE REINFORCED CONCRETE CLASS III 24-INCH	LF	82.000	82.000
0210	522.0130	CULVERT PIPE REINFORCED CONCRETE CLASS III 30-INCH	LF	104.000	104.000
0220	522.0312	CULVERT PIPE REINFORCED CONCRETE CLASS IV 12-INCH	LF	105.000	105.000
0230	522.1012	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 12-INCH	EACH	2.000	2.000
0240	522.1024	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH	EACH	2.000	2.000
0250	522.1030	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 30-INCH	EACH	2.000	2.000
0260	606.0300	RIPRAP HEAVY	CY	93.000	93.000
0270	611.9800.S	PIPE GRATES	EACH	2.000	2.000
0280	614.0010	BARRIER SYSTEM GRADING SHAPING FINISHING	EACH	14.000	14.000
0290	614.2300	MGS GUARDRAIL 3	LF	1,276.000	1,276.000
0300	614.2330	MGS GUARDRAIL 3 K	LF	300.000	300.000
0310	614.2340	MGS GUARDRAIL 3 L	LF	100.000	100.000
0320	614.2500	MGS THRIE BEAM TRANSITION	LF	82.000	82.000
0330	614.2610	MGS GUARDRAIL TERMINAL EAT	EACH	14.000	14.000
0340	618.0100	MAINTENANCE AND REPAIR OF HAUL ROADS (PROJECT) 01. 9070-03-60	EACH	1.000	1.000
0350	619.1000	MOBILIZATION	EACH	1.000	1.000
0360	625.0100	TOPSOIL	SY	520.000	520.000
0370	627.0200	MULCHING	SY	260.000	260.000
0380	628.1504	SILT FENCE	LF	400.000	400.000
0390	628.1520	SILT FENCE MAINTENANCE	LF	200.000	200.000
0400	628.1905	MOBILIZATIONS EROSION CONTROL	EACH	4.000	4.000
0410	628.1910	MOBILIZATIONS EMERGENCY EROSION CONTROL	EACH	2.000	2.000
0420	628.2006	EROSION MAT URBAN CLASS I TYPE A	SY	2,370.000	2,370.000
0430	628.7504	TEMPORARY DITCH CHECKS	LF	25.000	25.000
0440	629.0210	FERTILIZER TYPE B	CWT	0.600	0.600
0450	630.0130	SEEDING MIXTURE NO. 30	LB	11.000	11.000

DATE 27MAR13		E S T I M A T E O F Q U A N T I T I E S			
LINE				9070-03-60	
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0460	630.0400	SEEDING NURSE CROP	LB	4.000	4.000
0470	632.0101	TREES (SPECIES, ROOT, SIZE) 01. WHITE SPRUCE, MT, 6 INCH	EACH	6.000	6.000
0480	632.9101	LANDSCAPE PLANTING SURVEILLANCE AND CARE CYCLES	EACH	15.000	15.000
0490	633.5200	MARKERS CULVERT END	EACH	24.000	24.000
0500	634.0616	POSTS WOOD 4X6-INCH X 16-FT	EACH	54.000	54.000
0510	637.0202	SIGNS REFLECTIVE TYPE II	SF	351.000	351.000
0520	638.2602	REMOVING SIGNS TYPE II	EACH	66.000	66.000
0530	638.3000	REMOVING SMALL SIGN SUPPORTS	EACH	59.000	59.000
0540	642.5201	FIELD OFFICE TYPE C	EACH	1.000	1.000
0550	643.0100	TRAFFIC CONTROL (PROJECT) 01. 9070-03-60	EACH	1.000	1.000
0560	643.0300	TRAFFIC CONTROL DRUMS	DAY	4,500.000	4,500.000
0570	643.0705	TRAFFIC CONTROL WARNING LIGHTS TYPE A	DAY	2,250.000	2,250.000
0580	643.0900	TRAFFIC CONTROL SIGNS	DAY	1,665.000	1,665.000
0590	645.0120	GEOTEXTILE FABRIC TYPE HR	SY	220.000	220.000
0600	645.0130	GEOTEXTILE FABRIC TYPE R	SY	45.000	45.000
0610	646.0106	PAVEMENT MARKING EPOXY 4-INCH	LF	63,560.000	63,560.000
0620	646.0406	PAVEMENT MARKING SAME DAY EPOXY 4-INCH	LF	22,510.000	22,510.000
0630	647.0746	PAVEMENT MARKING DIAGONAL EPOXY 24-INCH	LF	630.000	630.000
0640	649.0100	TEMPORARY PAVEMENT MARKING 4-INCH	LF	2,350.000	2,350.000
0650	650.6000	CONSTRUCTION STAKING PIPE CULVERTS	EACH	3.000	3.000
0660	650.8000	CONSTRUCTION STAKING RESURFACING REFERENCE	LF	34,100.000	34,100.000
0670	SPV.0035	SPECIAL 01. STONE BACKFILL	CY	150.000	150.000
0680	SPV.0060	SPECIAL 01.TEMPORARY SMALL ANIMAL TURNAROUND	EACH	8.000	8.000
0690	SPV.0060	SPECIAL 02. CLEANING ASPHALTIC FLUMES	EACH	2.000	2.000
0700	SPV.0060	SPECIAL 03. CULVERT PIPE TRANSISTIONS	EACH	2.000	2.000
0710	SPV.0090	SPECIAL 01. OBLITERATING DRIVEWAYS	LF	30.000	30.000
0720	SPV.0180	SPECIAL 01. THERMOPLASTIC COATINGS AT SNOWMOBILE CROSSINGS	SY	77.000	77.000
0730	SPV.0195	SPECIAL 01. DISINTEGRATED GRANITE BASE AGGREGATE	TON	40.000	40.000

3

MILLING			SHOULDER WORK			BASE AGGREGATE DENSE			
	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS	204.0120 REMOVING ASPHALTIC SURFACE MILLING		211.0400 PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS		305.0110 BASE AGGREGATE DENSE 3/4 INCH	305.0120 BASE AGGREGATE DENSE 1 1/4 INCH	SPV.0195.01 DISINTEGRATED GRANITE BASE AGGREGATE	
LOCATION	S.Y.	S.Y.	LOCATION	STATION	REMARKS	LOCATION	TON	TON	TON
MAINLINE	1010	112690	140+02 - 145+02 LT	5	SQUIRREL LK ROAD	SHOULDERS	2500		
INTERSECTIONS		7350	232+27 - 243+90 RT	12	BLACK BEAR BAR	DRIVEWAYS	200		30
ENTRANCES		455	360+69 - 368+61 LT	8	CAMP PINEMERE RD	UNDISTRIBUTED	300		10
				1	SNOWMOBILE CROSSING	360+69 - 368+61 L	10	115	
TOTAL	1010	120495	TOTAL	26		TOTAL	3010	115	40

3

PAVING ITEMS					ASPHALTIC FLUMES			RIP RAP		
	455.0105 ASPHALTIC MATERIAL PG58-28	455.0605 TACK COAT	460.1103 HMA PAVEMENT TYPE E-3	465.0120 ASPHALTIC SURFACE FOR DRIVEWAYS AND FIELD ENTRANCES		465.0315 ASPHALTIC FLUMES SY	SPV.0060.02 CLEANING FLUMES EACH		606.0300 RIPRAP HEAVY	645.0120 GEOTEXTILE FABRIC TYPE HR
LOCATION	TON	GAL	TON	TON	LOCATION	SY	EACH	LOCATION	CY	SY
140+02-145+02 LT	5	10	80		KOBART RD	3		261+00 - 261+39 LT	26	60
232+27-243+90 RT	15	10	250		BACK BAY RD	3		262+48 - 263+00 LT	52	120
MAINLINE	625	2850	11150		SQUIRREL LAKE RD	5		UNDISTRIBUTED	15	40
INTERSECTIONS	40	175	700		BROWN RD	4				
ENTRANCES				50	KILAWEE RD	4				
360+69 - 368+61 LT	15	40	280		EAST MINCH	3				
					BELLWOOD RD	4				
TOTAL	700	3085	12460	50	KOOLISH ROD		1	TOTAL	93	220
					HOWER RD		1			
					TOTAL	26	2			

CULVERT PIPE ITEMS									RUMBLE STRIPS	
	203.0100 REMOVING SMALL PIPE CULVERTS	522.0124 CULVERT PIPE CONCRETE CLASS III 24 INCH	522.0130 CULVERT PIPE CONCRETE CLASS III 30 INCH	522.1024 APRON ENDWALLS FOR RCCP 24 INCH	522.1030 APRON ENDWALLS FOR RCCP 30 INCH	SPV.0060.03 CULVERT PIPE TRANSITION	209.0100 BACKFILL GRANULAR	465.0105 ASPHALTIC SURFACE		465.0475.S L.F.
LOCATION	EACH	LF	LF	EACH	EACH	EACH	C.Y.	DEPTH FEET	PROJECT	
250+53	1		104		2	1		9		
405+44	1	82		2		1		5		
UNDISTRIBUTED							60			21300
TOTAL	2	82	104	2	2	2	60	110		

3

DRAINAGE PIPE			
	522.0312 CULVERT PIPE REINFORCED CONCRETE CLASS V 12 INCH	522.1012 APRON ENDWALLS FOR CULVERT PIPE RCCP 12 INCH	611.9800.S PIPE GRATE
LOCATION			
405+44 LT	105	2	2
TOTAL	105	2	2

TRAFFIC CONTROL			
	643.0300 DRUMS	643.0705 WARNING LIGHT TYPE A	643.0900 SIGNS
LOCATION	DAYS	DAYS	DAYS
PROJECT			1665
BEAM GUARD REPLACEMENT	4500	2250	
TOTAL	4500	2250	1665

STAKING		
	650.6000 CONSTRUCTION STAKING PIPE CULVERTS	650.8000 CONSTRUCTION STAKING RESURFACING REFERENCE
LOCATION	EACH	LF
PROJECT		34100
250+55 CL	1	
405+44 CL	1	
405+44 LT	1	
TOTAL	3	34100

3

LANDSCAPE PLANTING		
	632.0101 WHITE SPRUCE MT 6 INCH	632.9101 LANDSCAPING PLANTING SURVEILLANCE AND CARE CYCLES
LOCATION		
419+84 RT	6	15
TOTAL	6	15

DRAINAGE PIPE		
	SPV.035.01 STONE BACKFILL	205.0100 EXCAVATION COMMON
LOCATION	CY	CY
405+44 LT	150	115
TOTAL	150	115

PAVEMENT MARKING				
	646.0106 PAVEMENT MARKING EPOXY 4 INCH	646.0406 PAVEMENT MARKING SAME DAY EPOXY 4 INCH	647.0746 PAVEMENT MARKING DIAGONAL EPOXY INCH	649.0100 TEMPORARY PAVEMENT MARKING 4 INCH
LOCATION	LF	LF	LF	LF
MAINLINE	63560	22510	630	2350
TOTAL	63560	22510	630	2350

EROSION CONTROL					
	628.1504 SILT FENCE	628.1520 SILT FENCE MAINTENANCE	628.2006 ERROSION MAT CLASS I TYPE A SY	628.7504 TEMPORARY DITCH CHECKS	SPV.0060.02 TEMPORARY SMALL ANIMAL TURNAROUND EACH
LOCATION	LF	LF		LF	
113+00 – 115+00 RT			440		
250+55 LT & RT	100	50			
259+00 – 261+00 LT			610		1
260+42 – 261+53 RT			200		1
263+00 – 263+68 LT			120		1
263+00 – 264+00 RT			120		1
326+00 – 327+35			300		
328+50 – 32+950			40		
397+50 – 399+50 LT			150		1
398+50 – 399+50 RT			100		1
400+43 –401+50 LT			100		1
400+43 – 402+50 RT			190		1
405+44 LT & RT	300	150			
406+00–420+00 LT				25	
TOTAL	400	200	2370	25	8

LANDSCAPING ITEMS					
	625.0100 TOPSOIL	627.0200 MULCHING	629.0210 FERTILIZER TYPE B	630.0130 SEEDING MIXTURE 30	630.0400 NURSE CROP SEEDING
LOCATION	SY	SY	CWT	LB	LB
250+55	300	100	0.20	6	8
405+44	120	60	0.1	3	4
UNDISTRIBUTED	100	100	0.3	2	3
TOTAL	520	260	0.60	11	15

BEAMGUARD ITEMS							
	204.0165 REMOVING GUARDRAIL	614.0010 BARRIER SYSTEM GRADING SHAPING FINISHING	614.2330 MIDWEST GUARDRAIL SYSTEM	614.2500 MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSISTION	614.2340 MIDWEST GUARDRAIL SYSTEM 3 L	614.2300 MIDWEST GUARDRAIL SYSTEM 3	614.0370 MIDWEST GUARDRAIL TERMINAL EAT
LOCATION	LF	EACH	LF	LF	LF	LF	EACH
112+93 - 116+43 RT	355	2				350	2
118+57 - 121+44 RT	370	2				288	2
260+06 - 261+39 LT	135	1		20.56		100	1
260+18 - 261+50 RT	135	1		20.56		63	1
262+48 - 263+31 LT	135	1		20.56		75	1
262+60 - 263+93 RT	135	1		20.56		63	1
325+50 - 330+41 LT	490	2				337	2
398+50 - 401+50 LT	190	2	150		50		2
398+50 - 401+50 RT	245	2	150		50		2
TOTAL	2190	14	300	82	100	1276	14

OBLITERATING DRIVEWAYS	
	SPV.0090.01
LOCATION	EACH
419+84 RT	30
TOTAL	30

MARKER POSTS	
	633.5200 MARKERS CULVERT END
LOCATION	EACH
113+33	2
133+33	2
163+43	2
179+80	2
193+00	2
218+30	2
250+53	2
329+75	2
344+53	2
400+00	2
405+44	2
419+51	2
TOTAL	24

SNOWMOBILE CROSSINGS	
	THERMOPLASTIC COATING AT SNOWMOBILE TRAIL CROSSINGS
LOCATION	SY
365+43	77
TOTAL	77

GRADING, SHAPING, & FINISHING FOR BARRIER								
		** *COMMON EXCAVATION CY	** * BORROW CY	** * TOPSOIL SY	** *MULCH SY	** * FERTILIZER TYPE B CWT	** * SEEDING NO. 20 LBS.	** *NURSE CROP SEEDING LBS
STATION								
112+93	RT	22	34	270	270	0.5	22	5
116+43	RT	23	34	270	270	0.5	22	5
118+57	RT	23	34	270	270	0.5	22	5
121+44	RT	21	34	270	270	0.5	22	5
260+06	LT	49	468	468	468	1.0	40	8
260+18	RT	49	468	468	468	1.0	40	8
263+31	LT	49	468	468	468	1.0	40	8
263+93	LT	49	468	468	468	1.0	40	8
325+50	LT	18	200	200	200	0.4	16	3
331+89	LT	18	200	200	200	0.4	16	3
397+30	RT	14	165	165	135	0.3	13	2
398+50	LT	14	165	165	135	0.3	13	2
401+50	RT	14	165	165	135	0.3	13	2
402+70	LT	14	165	165	165	0.3	13	2
TOTAL		377	3066	4012	3922	8	332	66
* ITEMS AND QUANTITIES LISTED FOR BID INFORMATION ONLY								
** ITEMS FOUND ELSEWHERE IN PLAN								

SIGNING									
SIGN NUMBER									
	638.2602 638.3000 637.0202 634.0616								
	REMOVING REMOVING SIGNS WOOD								
	SIGNS SMALL SIGN REFLECTIVE POSTS								
	STATION	LOCATION	SIGN CODE	SIZE INCHES	TYPE II EACH	SUPPORTS EACH	TYPE II S.F.	16 FOOT EACH	Description
1	88+30	LT	W14-3	48X36	1	1	6	1	NO PASSING WEST FACING
2	88+30	LT	W8-5	36X36	1		9		SLIPPERY WHEN WET
3	98+14	RT	R1-1	30X30	1	1	5	1	STOP ON KOBART RD
4	104+88	LT	R1-1	30X30	1	1	5	1	STOP ON BACK BAY RD
5	110+86	RT	R1-1	30X30	1	1	5	1	STOP ON SUNDAY LAKE RD
6	112+00	RT	R2-1	24X30	1	1	5	1	SPEED 55 MPH
7	112+00	RT	W14-3	48X36	1		6		NO PASSING EAST FACING
8	114+25	LT	W14-3	48X36	1	1	6	1	NO PASSING WEST FACING
9	114+25	LT	R2-1	24X30	1		8		SPEED 55 MPH
10	126+95	LT	R1-R	30X30	1	1	5	1	STOP ON HARTMAN RD
11	133+90	LT	W2-2	30X30	1	1	5	1	SIDE RD SYMBOL
12	134+75	LT	R1-1	30X30	1	1	1	1	STOP ON SHOREVIEW
13	139+95	RT	D1-1	60X42	1	2	17.5	2	MINOCQUA WINTER PARK RT ARROW
14	142+52	RT	R1-1	30X30	1	1	5	1	STOP ON SQUIRREL LK RD
15	146+00	LT	D1-1	60X42	1	2	17.5	2	MINOCQUA WINTER PARK LT ARROW
16	154+93	LT	R1-1	30X30	1	1	5	1	STOP ON BROWN RD
17	157+05	RT	W14-3	48X36	1	1	6	1	NO PASSING EAST FACING
18	165+38	LT	R1-1	30X30	1	1	5	1	STOP TRANT RD
19	173+95	LT	155-56	30X36	1	1	6	1	ADOPT A HIGHWAY (THE LANDIS FAMILY)
20	175+40	LT	R1-1	30X30	1	1	5	1	STOP ON WEST MINCH RD
21	175+44	RT	R1-1	30X30	1	1	5	1	STOP ON KILAWEE RD
22	177+95	RT	155-56	30X36	1	1	6	1	ADOPT A HIGHWAY (FOREST RIDERS SNOWMOBILE CLUB)
23	186+75	LT	R1-1	30X30	1	1	5	1	STOP ON EAST MINCH RD
24	196+50	LT	R1-1	30X30	1	1	5	1	STOP ON GOPHER LN
25	216+50	LT	W14-3	48X36	1	1	6	1	NO PASSING WEST FACING
26	227+53	LT	R1-1	30X30	1	1	5	1	STOP ON BELLWOOD DR
27	239+54	LT	R1-1	30X30	1	1	5	1	STOP ON PARK SHORE DR
28	243+83	RT	R1-1	30X30	1	1	5	1	STOP ON DUVALL CT
29	250+50	RT	MR2-1	21X15	1	1	2.2	1	JCT
30	250+50	RT	MR1-99	24X24	1		4		RUSTIC ROAD
31	250+50	RT	MR6-1	21X21	1		3.06		RIGHT ARROW
32	245+50	LT	155-56	30X36	1	1	6	1	ADOPT A HIGHWAY (FOREST RIDERS SNOWMOBILE CLUB)
33	257+00	LT	R1-1	30X30	1	1	5	1	STOP ON ROYALWOOD LA
34	257+40	RT	R1-1	30X30	1	1	5	1	STOP ON MERCER LK RD
35	257+45	RT	MR4-5	24X12	1	1	2	1	END
36	257+45	RT	MR1-99	24X24	1		4		RUSTIC ROAD
37	262+20	RT	155-56	30X36	1	1	6	1	ADOPT A HIGHWAY (CENTURY 21 GREATER NORTHWOODS)
38	266+75	LT	MR2-1	21X15	1	1	2.2	1	JCT
39	266+75	LT	MR1-99	24X24	1		4		RUSTIC ROAD
40	266+75	LT	MR6-1	21X21	1		3.06		LEFT ARROW
45	287+60	LT	R1-1	30X30	1	1	5	1	STOP ON JEANNE LN
42	293+56	RT	R1-1	30X30	1	1	5	1	STOP ON CATOR DR

SIGN NUMBER									Description
					638.2602	638.3000	637.0202	634.0616	
					REMOVING	REMOVING	SIGNS	WOOD	
					SIGNS	SMALL SIGN	REFLECTIVE	POSTS	
	STATION	LOCATION	SIGN CODE	SIZE INCHES	TYPE II EACH	SUPPORTS EACH	TYPE II S.F.	16 FOOT EACH	
43	298+71	LT	R1-1	30X30	1	1	5	1	STOP ON CHIPMUNK DR WEST
44	323+18	LT	R1-1	30X30	1	1	5	1	STOP ON CHIPMUNK DR EAST
45	331+15	LT	155-56	30X36	1	1	6	1	ADOPT A HIGHWAY (CENTURY 21 GREATER NORTHWOODS)
46	335+35	LT	R1-1	30X30	1	1	5	1	STOP CURTIS LK RD
47	335+50	RT	155-56	30X36	1	1	6	1	ADOPT A HIGHWAY (CROSS COUNTRY CRUISERS SNOWMOBILE CL)
48	355+60	RT	MR2-1	21X15	1	1	2.2	1	JCT
49	355+60	RT	MR1-99	24X24	1	1	4		RUSTIC ROAD
50	355+60	RT	MR6-1	21X21	1	1	3.06		RIGHT ARROW
51	364+38	RT	R1-1	30X30	1	1	5		STOP ON CAMP PINEMERE RD
52	364+55	RT	MR4-6	24X12	1	1	2	1	END
53	364+55	RT	MR1-99	24X24	1		4		RUSTIC RD
54	372+10	LT	MR2-1	21X15	1	1	2.2	1	JCT
55	372+10	LT	MR1-99	24X24	1	1	4		RUSTIC ROAD
56	372+10	LT	MR6-1	21X21	1	1	3.06		LEFT ARROW
57	379+50	LT	R1-1	30X30	1	1	5	1	STOP ON HILL LK RD
58	390+80	LT	R1-1	30X30	1	1	5	1	STOP ON KOOLISH RD
59	390+80	RT	R1-1	30X30	1	1	5	1	STOP ON HOWER RD
60	397+66	LT	R1-1	30X30	1	1	5	1	STOP ON KENWOOD TERR
61	402+60	RT	W3-5	36X36	1	1	9	1	REDUCED SPEED AHEAD 35MPH
62	407+10	LT	W14-3	48X36	1	1	6	1	NO PASSING WEST FACING
63	410+45	RT	W6-1	36X36	1	1	9	1	DIVIDED ROAD
64	410+50	LT	W6-3	36X36	1	1	9	1	TWO WAY TRAFFIC
65	413+30	LT	R2-1	24X30	1	1	5	1	SPEED 55 MPH
66	413+75	RT	R2-1	24X30	1	1	5	1	SPEED 35 MPH
PAGE TOTAL					24	23	119.52	18	
GRAND TOTAL					66	59	351.04	54	

PLANT DATA CHART

QUANTITY	PLANT CODE	COMMON NAME	SCIENTIFIC NAME	TYPE	AVE. MATURE HEIGHT	SIZE WHEN PLANTED	ROOT ZONE MODE						GUY OR BRACE	FERT. PACK. REQ'D.	RODENT PROTECTION REQUIRED
								MIN. BALL OR POT SIZE		ROOT SPREAD	MIN. HOLE SIZE				
								MIN. CONT. SIZE	MIN. CONT. DEPTH		MIN. HOLE DIA.	MIN. HOLE DEPTH			
	CONIFEROUS (EVERGREEN) TREES														
6	WS	SPRUCE, WHITE	PICEA GLAUCA	4E	30	-	MT	-	-	-	56	19	GUY	4	YES

TRANSPORTATION PROJECT PLAT NO: 9070-03-20 - 4.01

THAT PART OF THE SW1/4 OF THE NE1/4, SECTION 9, TOWNSHIP 39 NORTH, RANGE 6 EAST, TOWN OF MINOCQUA, ONEIDA COUNTY, WISCONSIN

RELOCATION ORDER STH 70, ONEIDA COUNTY

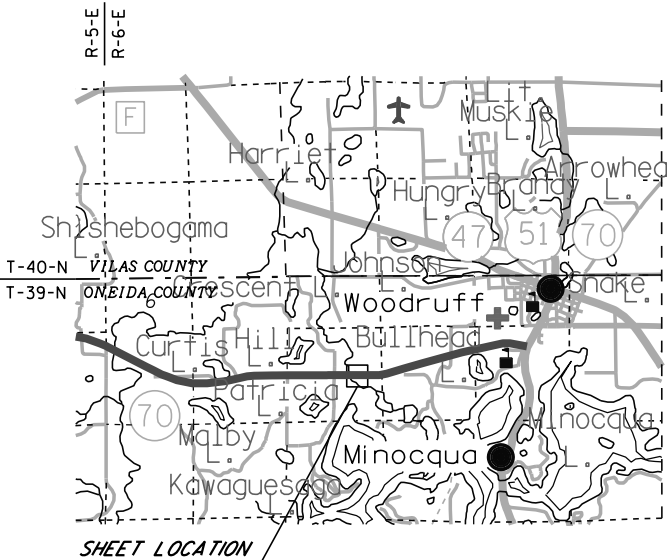
TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 84.02 (3) AND 84.09, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION HEREBY ORDERS THAT:

1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAY OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.

2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE STATE OF WISCONSIN, PURSUANT TO THE PROVISIONS OF SECTION 84.09 (1) OR (2), WISCONSIN STATUTES.

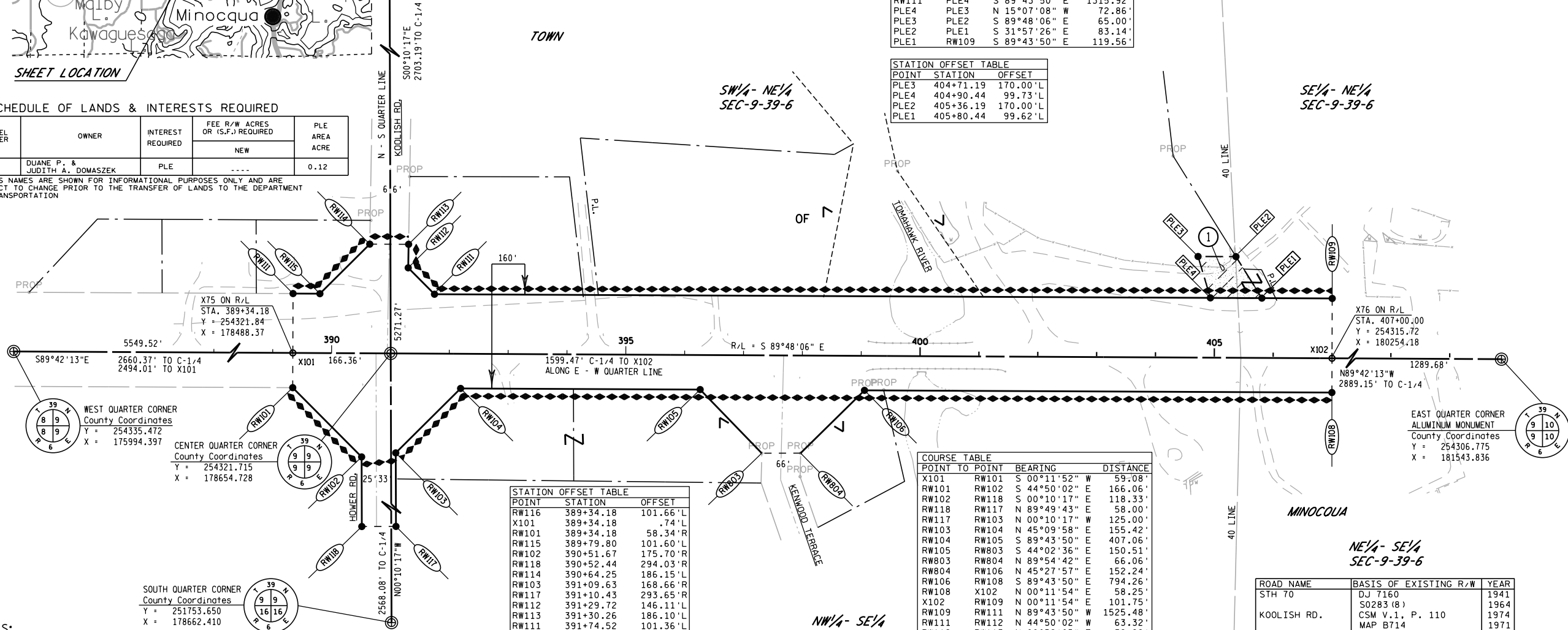
RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER
AMENDMENT NO:



SCHEDULE OF LANDS & INTERESTS REQUIRED

PARCEL NUMBER	OWNER	INTEREST REQUIRED	FEE R/W ACRES OR (S.F.) REQUIRED	PLE AREA ACRE
1	DUANE P. & JUDITH A. DOMASZEK	PLE	NEW	0.12

OWNERS NAMES ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LANDS TO THE DEPARTMENT OF TRANSPORTATION



NOTES:

COORDINATES AND BEARINGS SHOWN ON THIS PLAT ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM, ONEIDA COUNTY ZONE, NAD83 (1993) ADJUSTMENT. THE COORDINATES SHOWN ARE GRID COORDINATES AND ARE TO BE USED AS GRID OR GROUND VALUES ON THIS PLAT.

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

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

PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES, EXCLUDING RIGHT-OF-WAY LINES, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

A **PERMANENT LIMITED EASEMENT (PLE)** IS A RIGHT FOR CONSTRUCTION AND MAINTENANCE PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON AND THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM NECESSARY OR DESIRABLE, BUT WITHOUT PREJUDICE TO THE OWNER'S RIGHT TO MAKE OR CONSTRUCT IMPROVEMENT ON SAID LANDS OR TO FLATTEN THE SLOPES, PROVIDING SAID ACTIVITIES WILL NOT IMPAIR OR OTHERWISE ADVERSELY AFFECT THE HIGHWAY FACILITIES.

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

POINT	STATION	OFFSET
RW116	389+34.18	101.66' L
X101	389+34.18	74' L
RW101	389+34.18	58.34' R
RW115	389+79.80	101.60' L
RW102	390+51.67	175.70' R
RW118	390+52.44	294.03' R
RW114	390+64.25	186.15' L
RW103	391+09.63	168.66' R
RW117	391+10.43	293.65' R
RW112	391+29.72	146.11' L
RW113	391+30.26	186.10' L
RW111	391+74.52	101.36' L
RW104	392+19.46	58.70' R
RW105	396+26.52	59.20' R
RW803	397+31.53	167.02' R
RW804	397+97.59	166.69' R
RW106	399+05.74	59.55' R
X102	407+00.00	2.28' R
RW108	407+00.00	60.53' R
RW109	407+00.00	99.47' L

POINT TO POINT	BEARING	DISTANCE
X101	RW101	S 00°11'52" W 59.08'
RW101	RW102	S 44°50'02" E 166.06'
RW102	RW118	S 00°10'17" E 118.33'
RW118	RW117	N 89°49'43" E 58.00'
RW117	RW103	N 00°10'17" W 125.00'
RW103	RW104	N 45°09'58" E 155.42'
RW104	RW105	S 89°43'50" E 407.06'
RW105	RW803	S 44°02'36" E 150.51'
RW803	RW804	N 89°54'42" E 66.06'
RW804	RW106	N 45°27'57" E 152.24'
RW106	RW108	S 89°43'50" E 794.26'
RW108	X102	N 00°11'54" E 58.25'
X102	RW109	N 00°11'54" E 101.75'
RW109	RW111	N 89°43'50" W 1525.48'
RW111	RW112	N 44°50'02" W 63.32'
RW112	RW113	N 00°58'05" E 39.99'
RW113	RW114	N 89°45'34" W 66.01'
RW114	RW115	S 45°09'58" W 119.50'
RW115	RW116	N 89°43'50" W 45.63'
RW116	X101	S 00°11'52" W 100.92'

CONVENTIONAL SYMBOLS

FOUND IRON PIPE/PIN
R/W MONUMENT
R/W STANDARD
SIGN
SECTION CORNER MONUMENT
SECTION CORNER SYMBOL
PERMANENT LIMITED EASEMENT
R/W BOUNDARY POINT
PARCEL NUMBER

PROPOSED R/W LINE
PROPERTY LINE
RESTRICTED ACCESS
(BY PREVIOUS ACQUISITION/CONTROL)
RESTRICTED ACCESS
(BY ACQUISITION)
NO ACCESS
(BY STATUTORY AUTHORITY)
SECTION LINE
QUARTER LINE
SIXTEENTH LINE
EXISTING CENTERLINE
PROPOSED REFERENCE LINE
PARALLEL OFFSET

ACCESS POINT/
DRIVEWAY CONNECTION
ACCESS RIGHTS
ACRES
AND OTHERS
CENTERLINE
CERTIFIED SURVEY MAP
CORNER
DOCUMENT
EASEMENT
HIGHWAY EASEMENT
LAND CONTRACT
MONUMENT
PAGE
PERMANENT LIMITED EASEMENT
PROPERTY LINE
RECORDED AS

AP
REFERENCE LINE
RELEASE OF RIGHTS
REMAINING
RIGHT-OF-WAY
SECTION
STATION
TEMPORARY LIMITED EASEMENT
VOLUME
CURVE DATA
LONG CHORD
LONG CHORD BEARING
RADIUS
DEGREE OF CURVE
CENTRAL ANGLE OR DELTA
LENGTH OF CURVE
TANGENT

R/L
ROR
REM.
R/W
SEC.
STA.
TLE
V.
LCH
LCB
R
D
DELTA
L
TAN

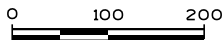
CONVENTIONAL ABBREVIATIONS

AP
REFERENCE LINE
RELEASE OF RIGHTS
REMAINING
RIGHT-OF-WAY
SECTION
STATION
TEMPORARY LIMITED EASEMENT
VOLUME
CURVE DATA
LONG CHORD
LONG CHORD BEARING
RADIUS
DEGREE OF CURVE
CENTRAL ANGLE OR DELTA
LENGTH OF CURVE
TANGENT

ROAD NAME	BASIS OF EXISTING R/W	YEAR
STH 70	DJ 7160	1941
	S0283 (8)	1964
KOOLISH RD.	CSM V.1, P. 110	1974
	MAP B714	1971
HOWER RD.	PINE HILL ESTATES	1978
KENWOOD TERRACE	PINE HILL ESTATES	1978

ROAD NAME	BASIS OF EXISTING ACCESS CONTROL	YEAR
STH 70	9070-06-29	2002

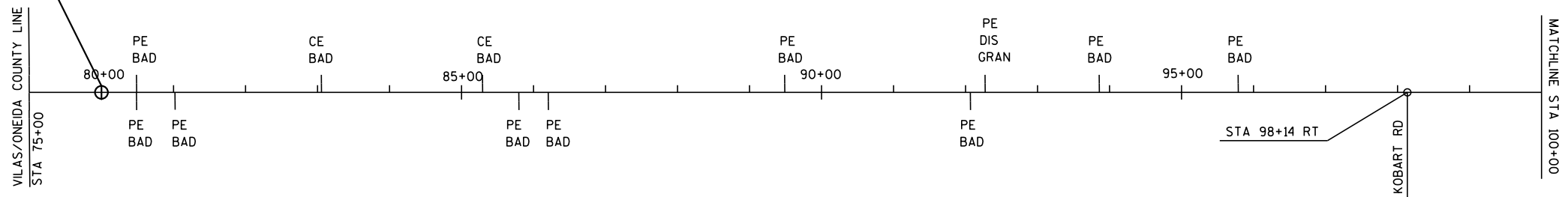
SCALE, FEET



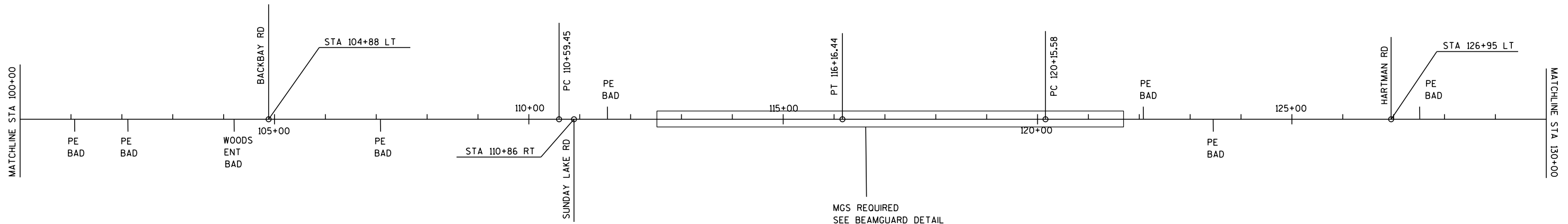
I HEREBY CERTIFY THAT THIS PLAT MEETS ALL REQUIREMENTS OF SECTION 84.095, WISCONSIN STATUTES, THIS PLAT WAS PREPARED BY OR UNDER THE DIRECTION OF

PRINTED NAME SIGNATURE DATE
THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE WISCONSIN DEPARTMENT OF TRANSPORTATION
PRINTED NAME SIGNATURE DATE

BEGIN PROJECT 9070-03-60
STA 80+00

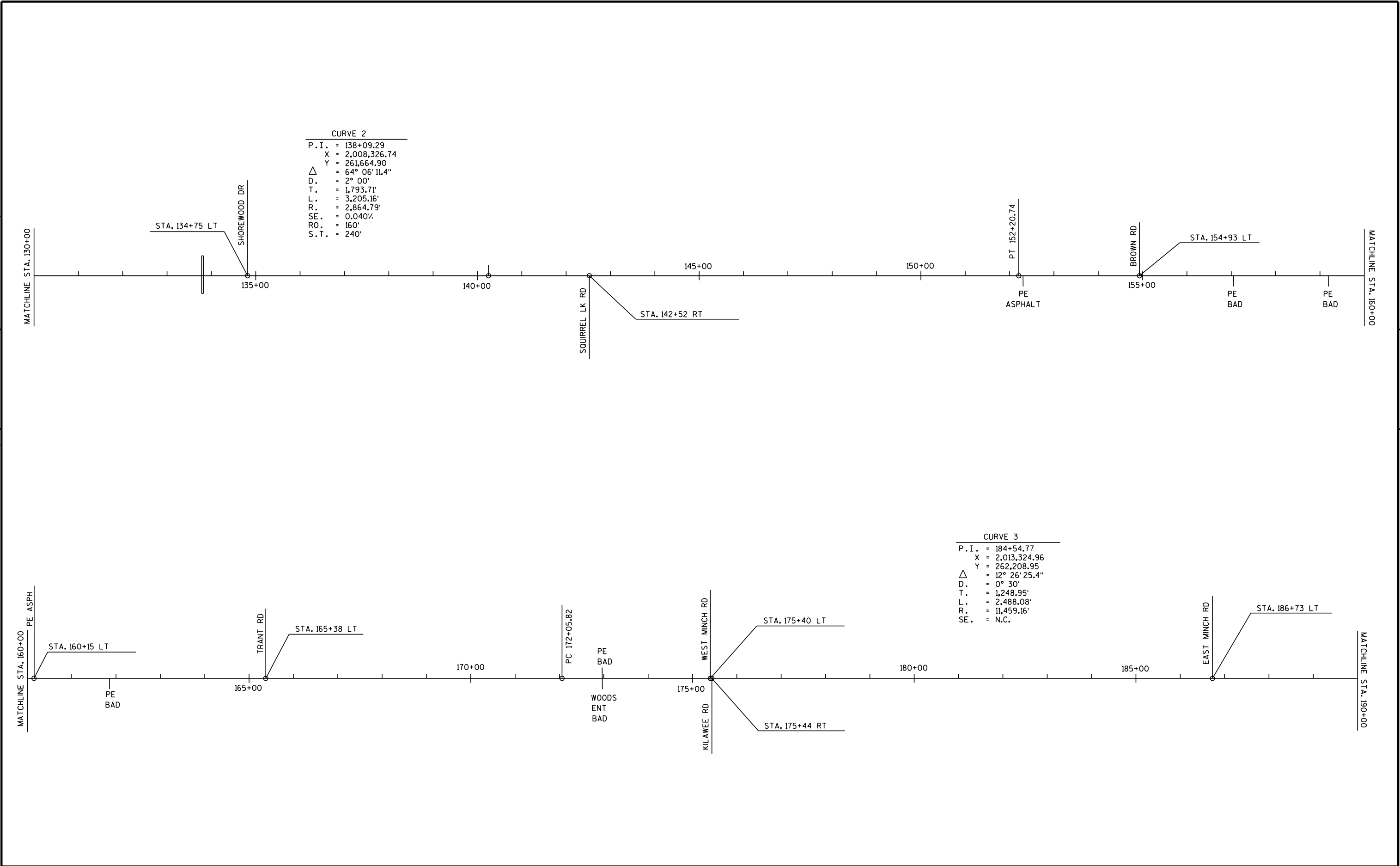


CURVE 1	
P. I. =	113+38.17
X =	2,007,013.03
Y =	263,758.41
Δ =	5° 34' 11.6"
D. =	1° 00'
T. =	278.71'
L. =	556.99'
R. =	5,729.58'
SE. =	0.023%
RO. =	160'
S.T. =	300'

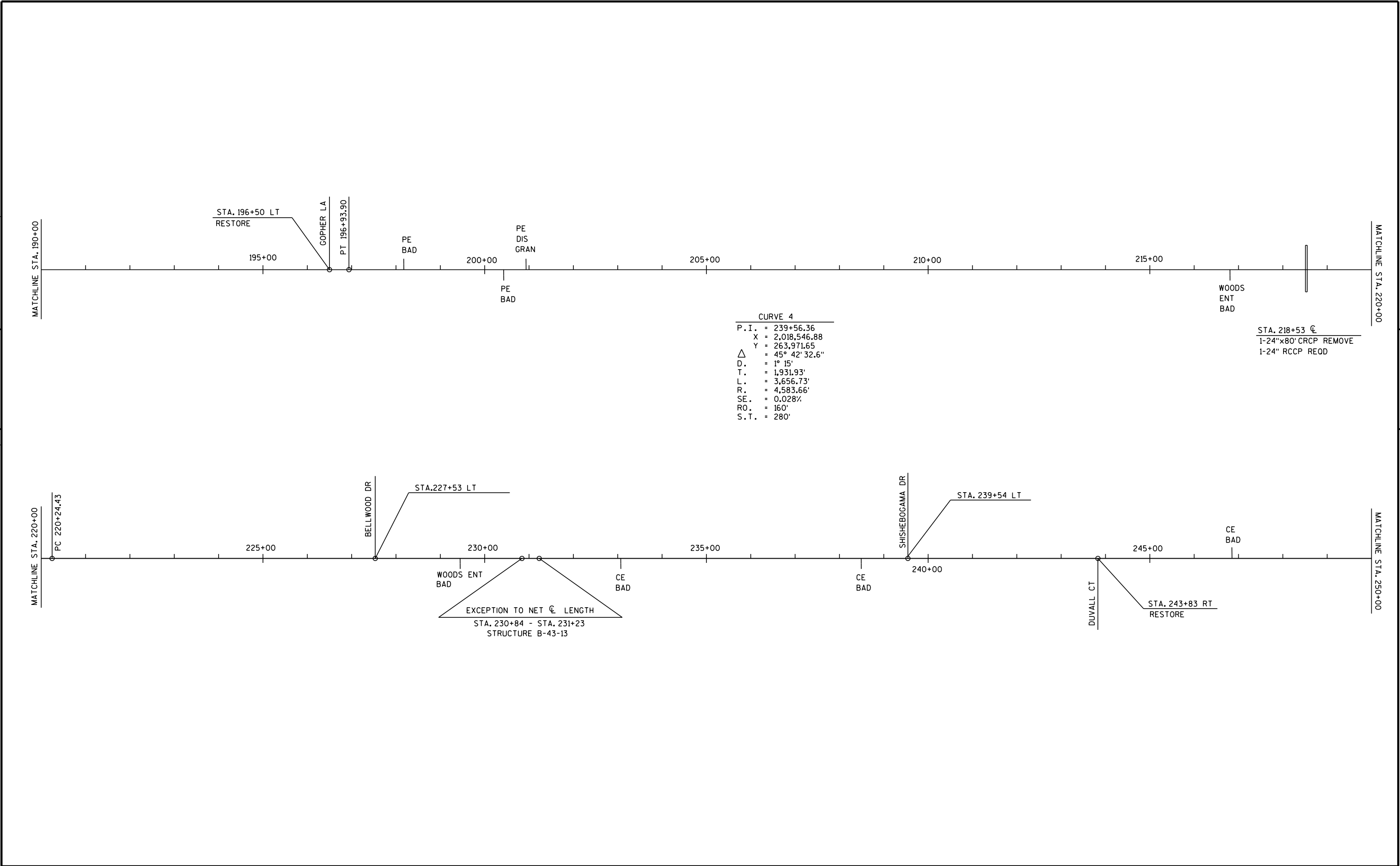


BAD = BASE AGGREGATE DENSE
DIS GRAN AGG = DISINTEGRATED GRANITE AGGREGATE

5

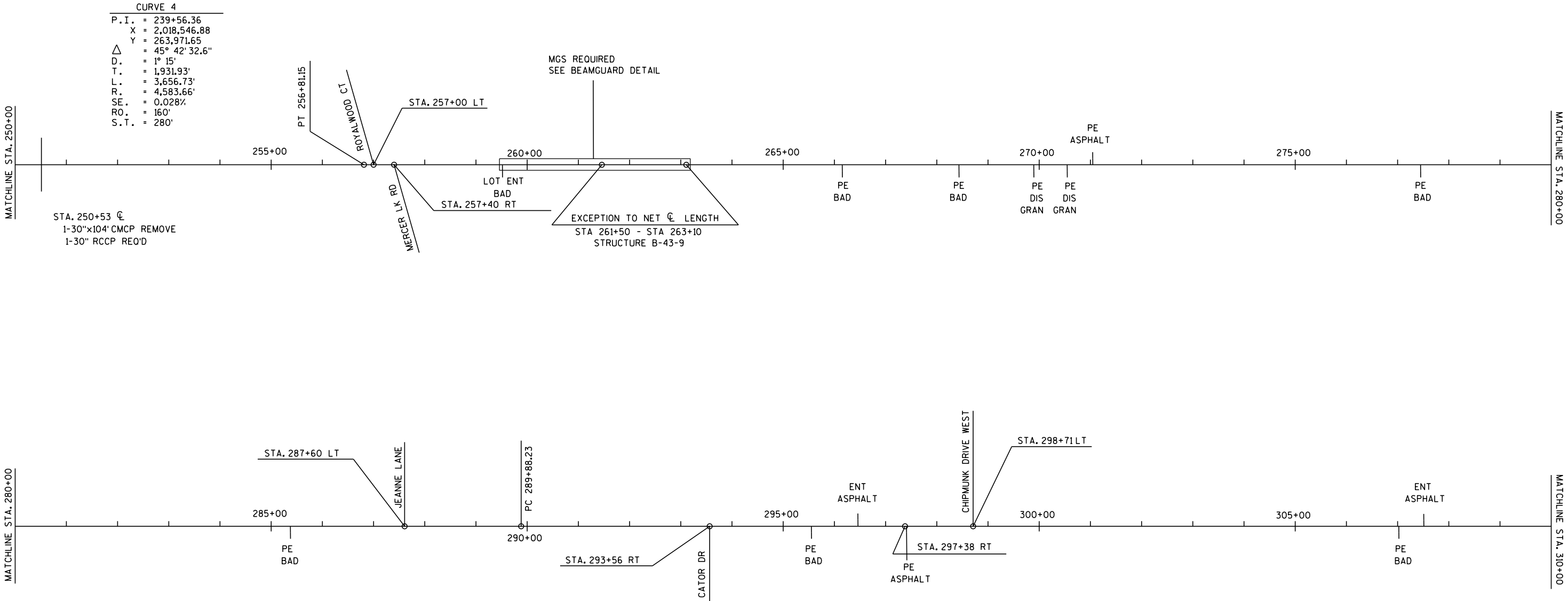


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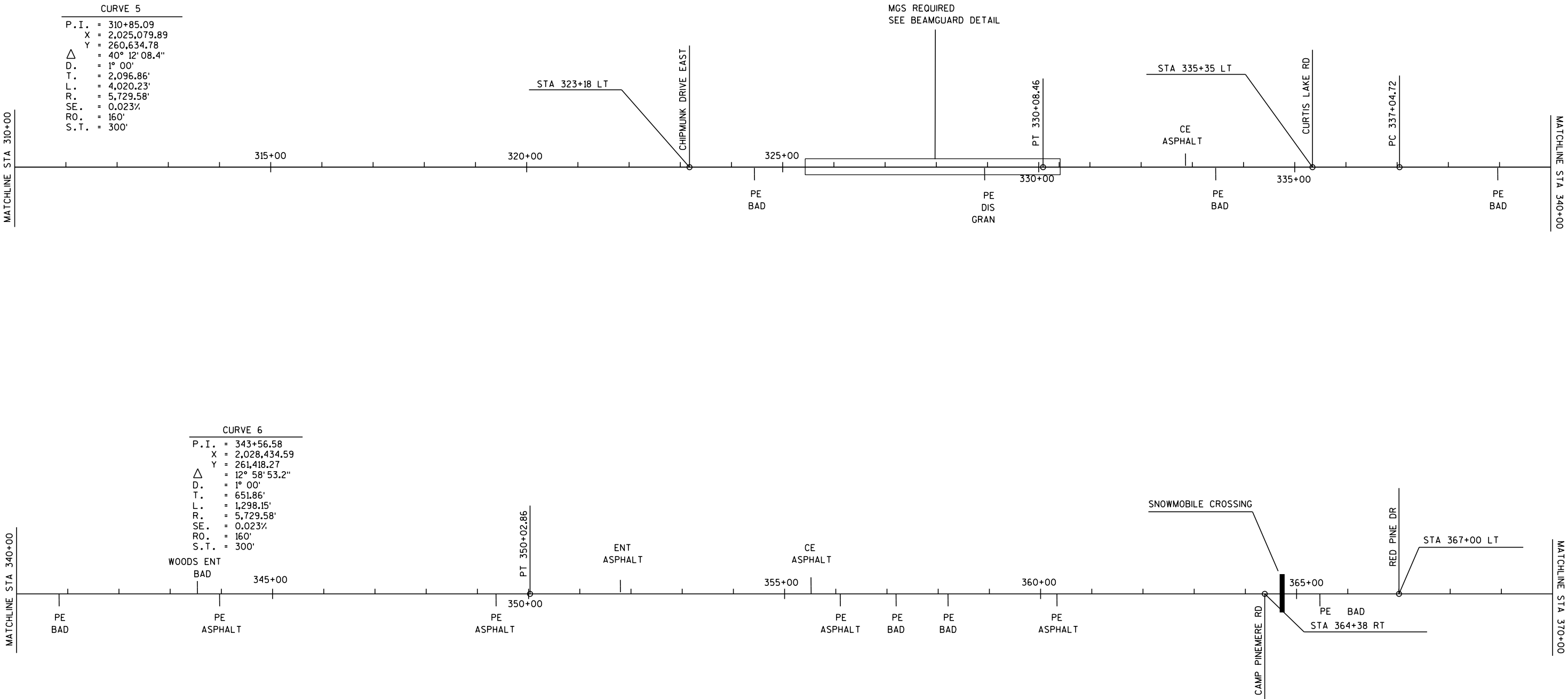
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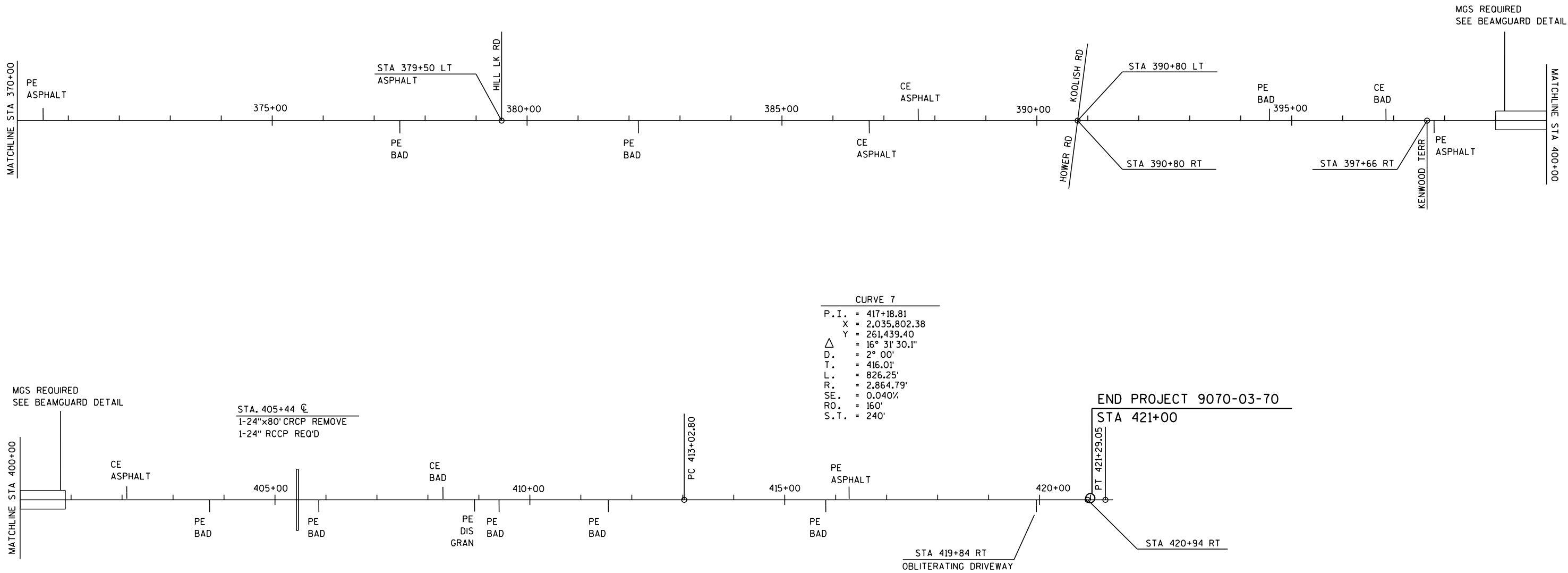
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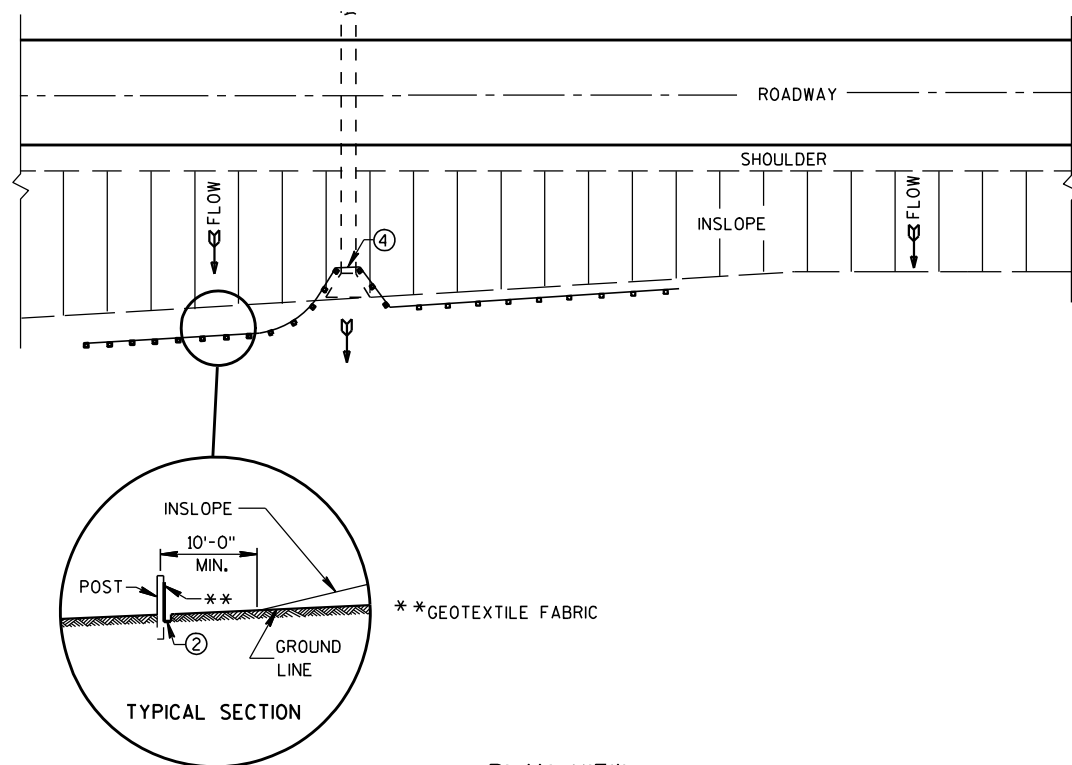
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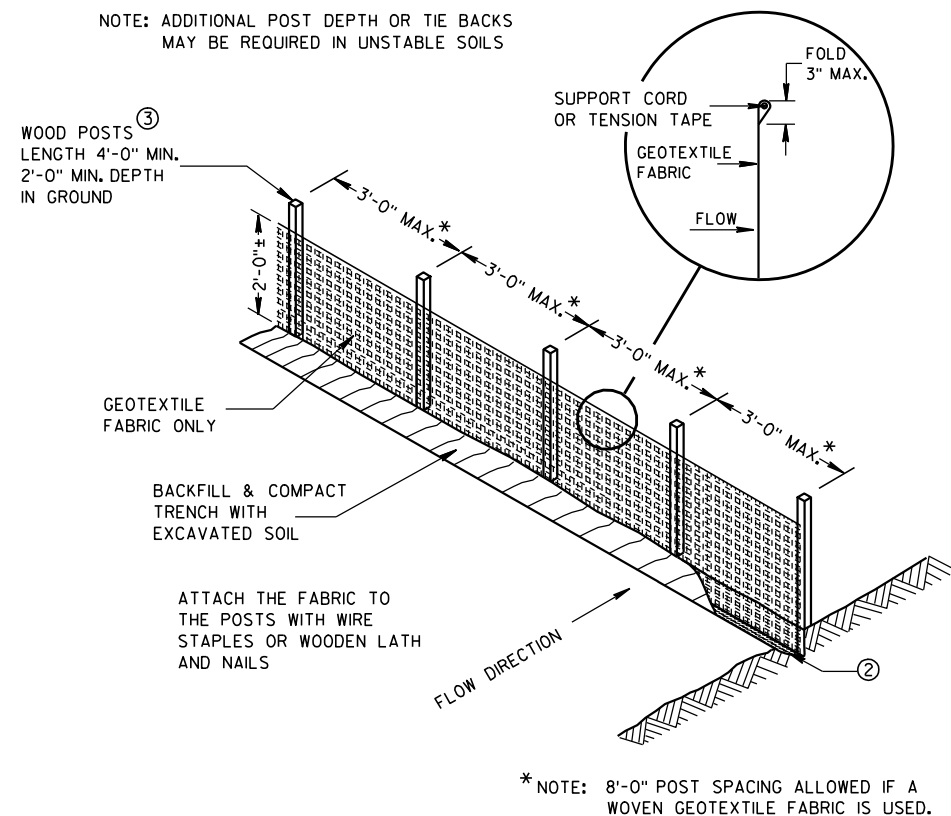
Standard Detail Drawing List

08E09-06	SILT FENCE
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
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
14A02-01	TREE PLANTING DETAIL
14B42-02A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-02B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-02C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B43-02A	MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)
14B43-02B	MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)
14B43-02C	MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)
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)
14B45-03C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C08-15A	PAVEMENT MARKING (MAINLINE)
15C08-15B	PAVEMENT MARKING (INTERSECTIONS)
15C08-15E	PAVEMENT MARKING (LEFT TURN LANE)
15C12-03	TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)
15C19-01A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY

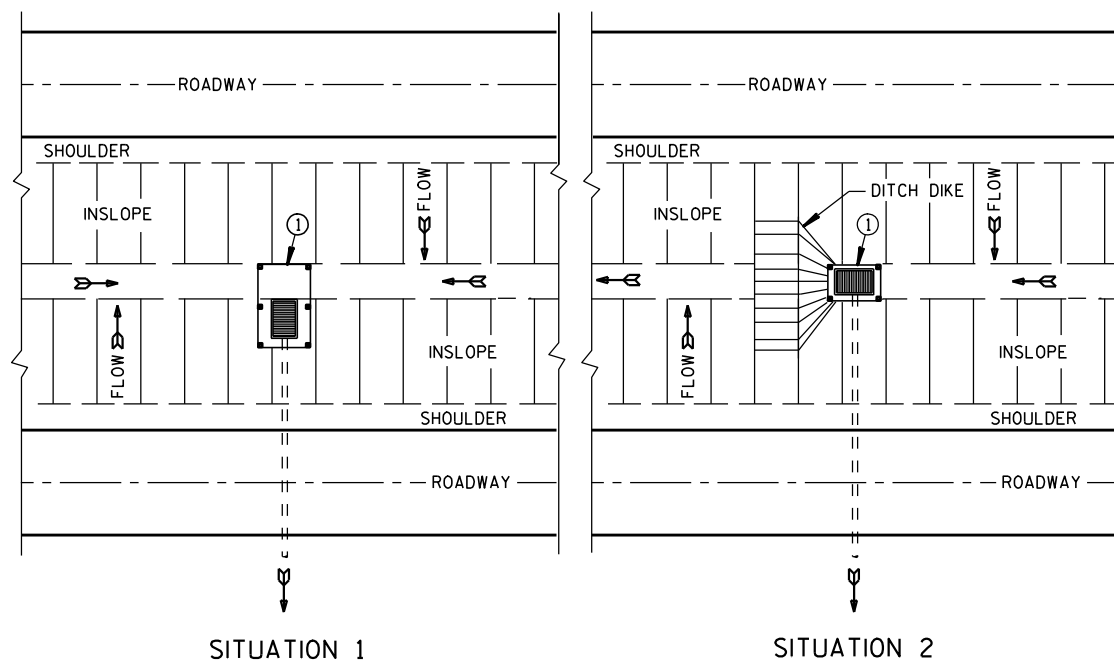


TYPICAL APPLICATION OF SILT FENCE

NOTE: ADDITIONAL POST DEPTH OR TIE BACKS MAY BE REQUIRED IN UNSTABLE SOILS

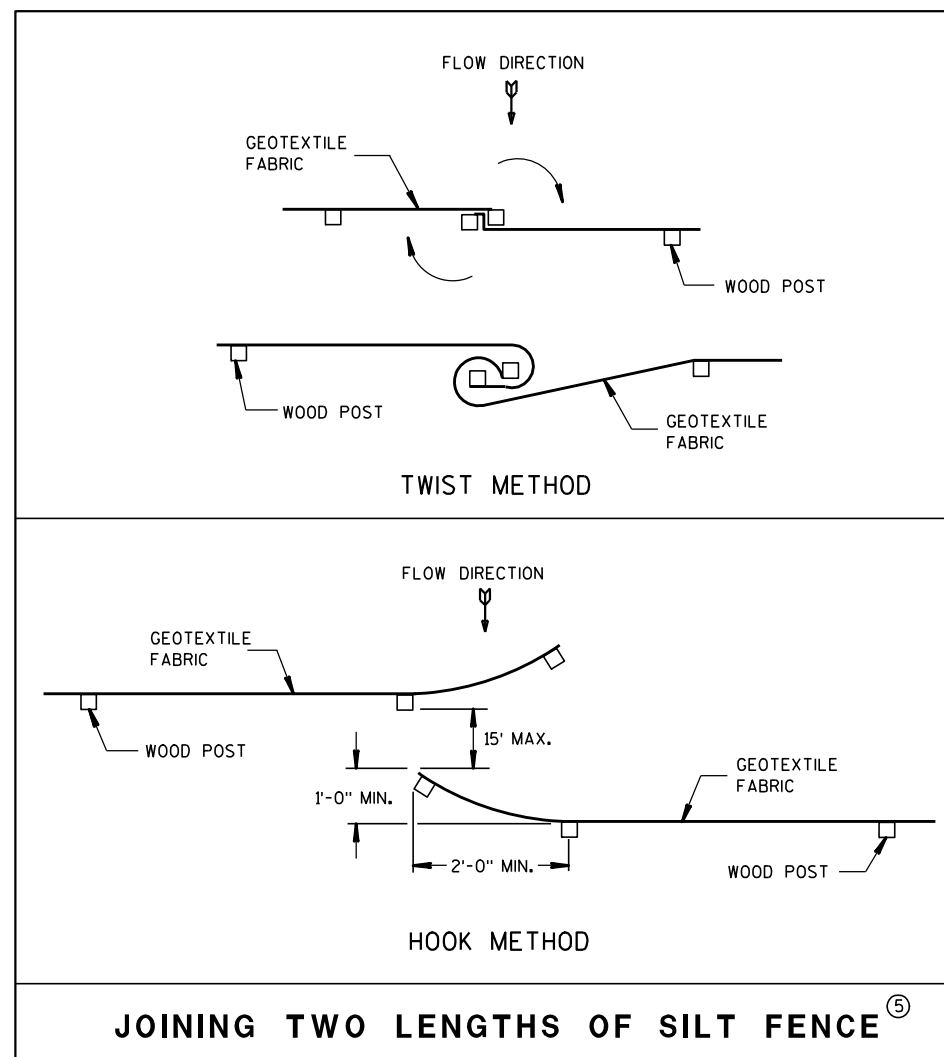


SILT FENCE



PLAN VIEW

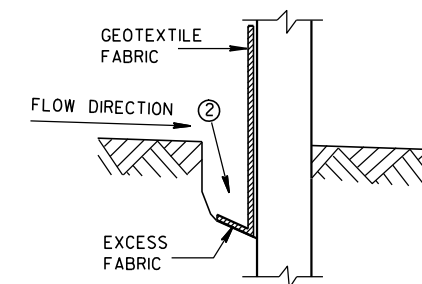
SILT FENCE AT MEDIAN SURFACE DRAINS



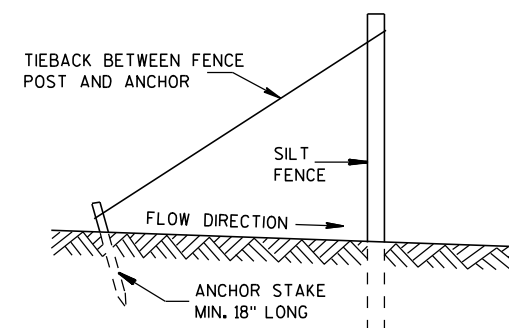
GENERAL NOTES

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

- ① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- ② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- ③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1 1/8" X 1 1/8" OF OAK OR HICKORY.
- ④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
- ⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



TRENCH DETAIL



SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

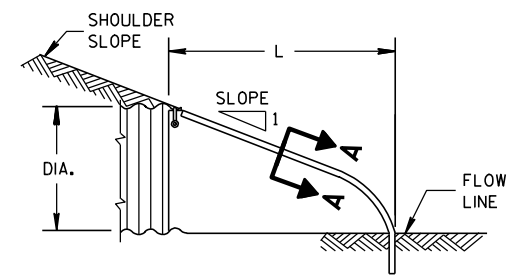
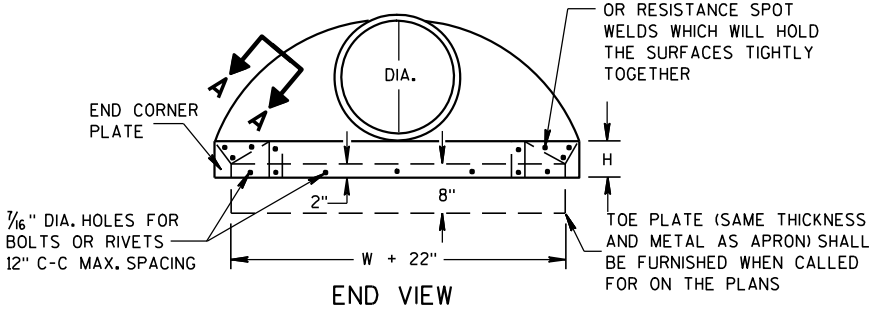
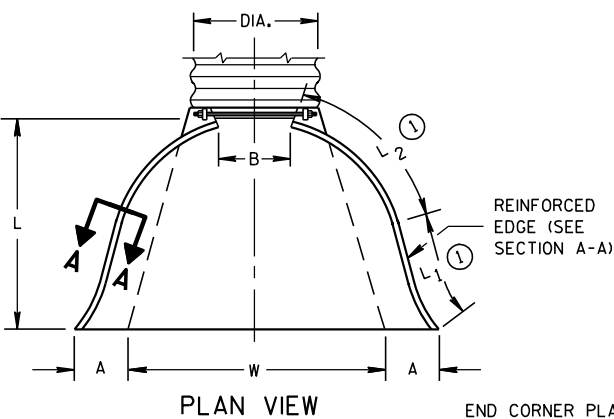
4-29-05
DATE

FHWA

/S/ Beth Canestra
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.

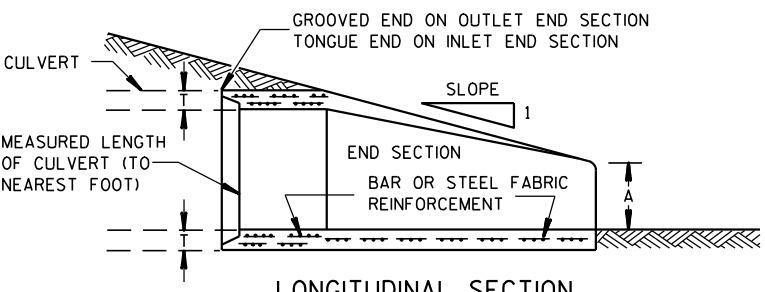
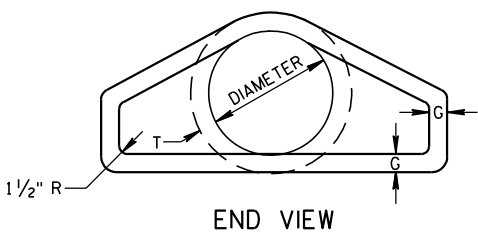
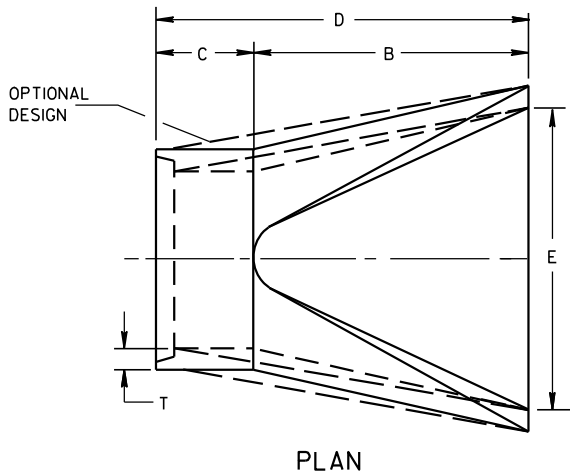
* EXCEPT CENTER PANEL
SEE GENERAL NOTES



SIDE ELEVATION
METAL ENDWALLS

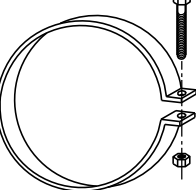
REINFORCED CONCRETE APRON ENDWALLS											
PIPE DIA. (IN.)	DIMENSIONS (Inches)							APPROX. SLOPE			
	T	A	B	C	D	E	G				
12	2	4	24	48 1/8	72 1/8	24	2	3 to 1			
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1			
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1			
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1			
24	3	9 1/2	43 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	98 1/4	90	5 1/2	2 2/5 to 1			
60	6	30-35	60	39	99	96	5	2 to 1			
66	6 1/2	24-30	72-78	21-27	99	102	5 1/2	2 to 1			
72	7	24-36	78	21	99	108	6	2 to 1			
78	7 1/2	24-36	78	21	99	114	6 1/2	2 to 1			
84	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2 to 1			
90	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	1 1/2 to 1			

* MINIMUM
** MAXIMUM

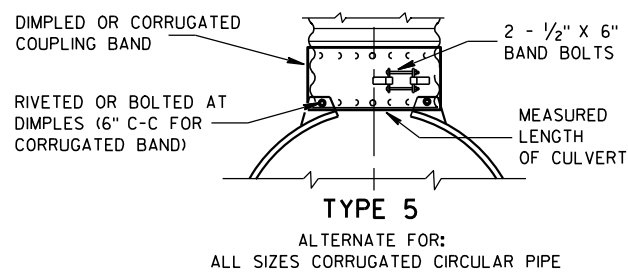
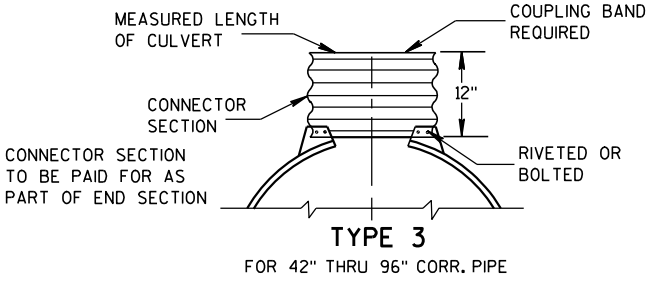
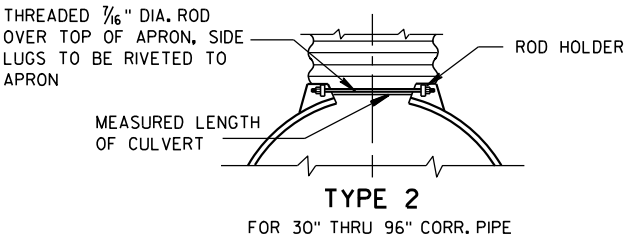
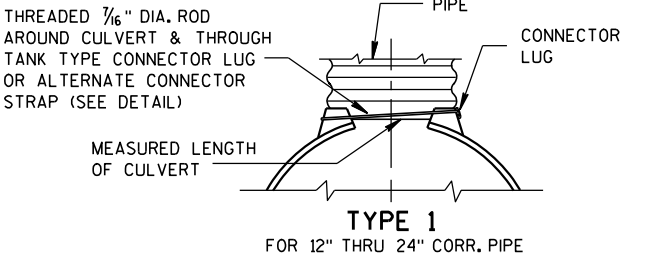


LONGITUDINAL SECTION
CONCRETE ENDWALLS

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



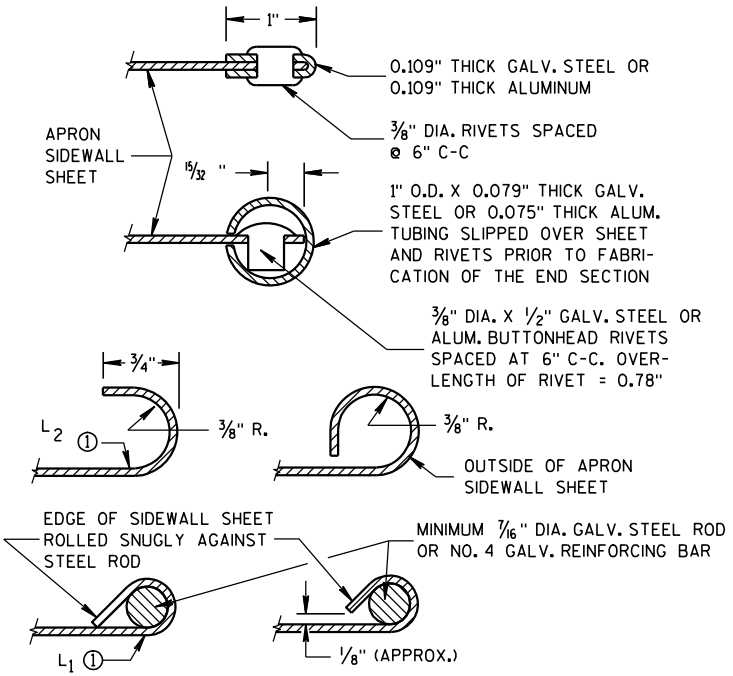
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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.

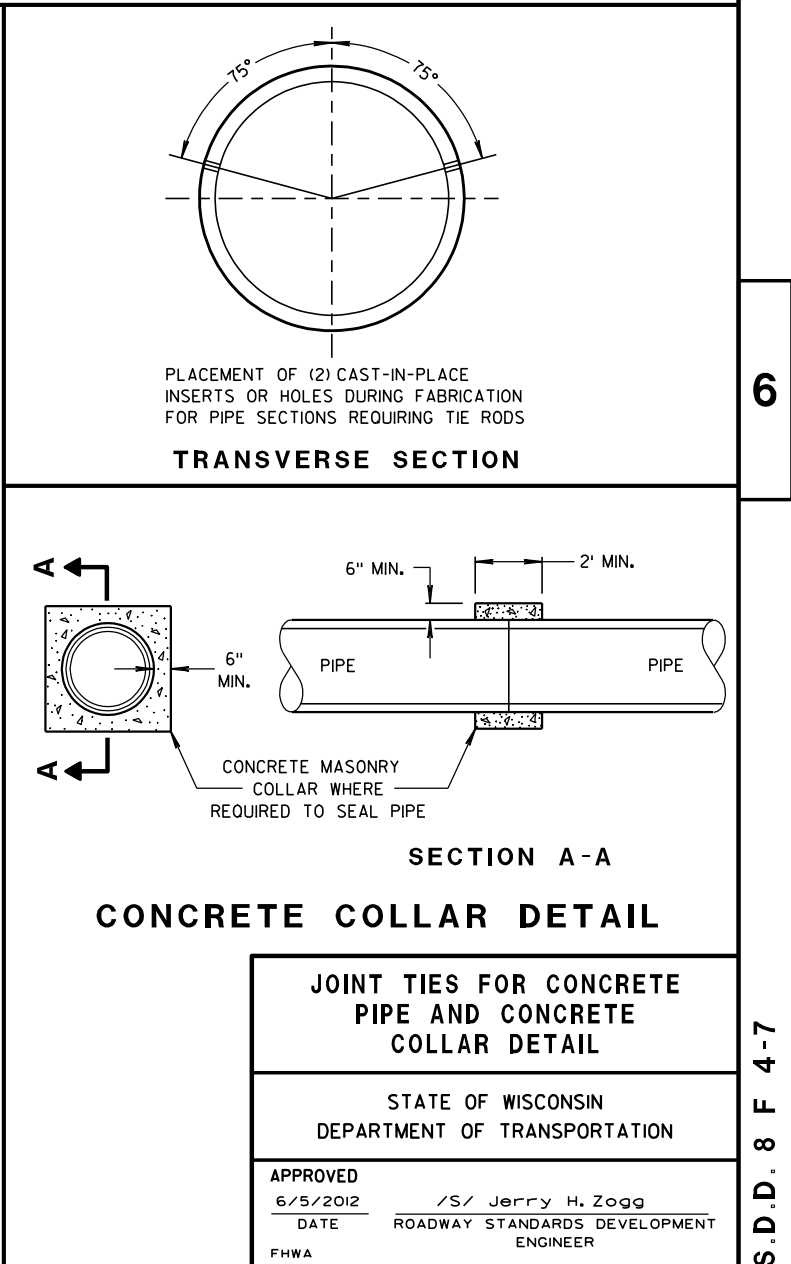
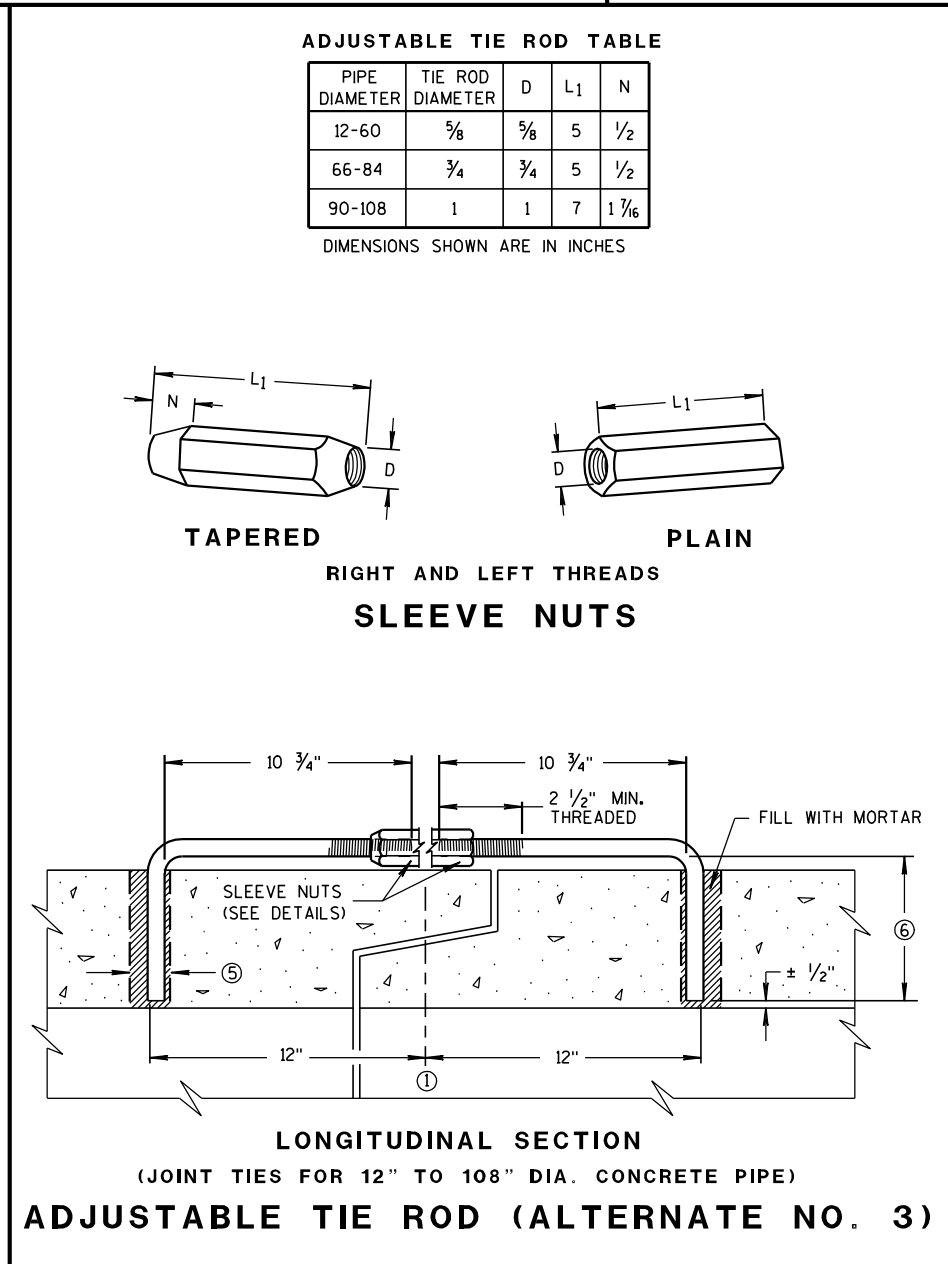
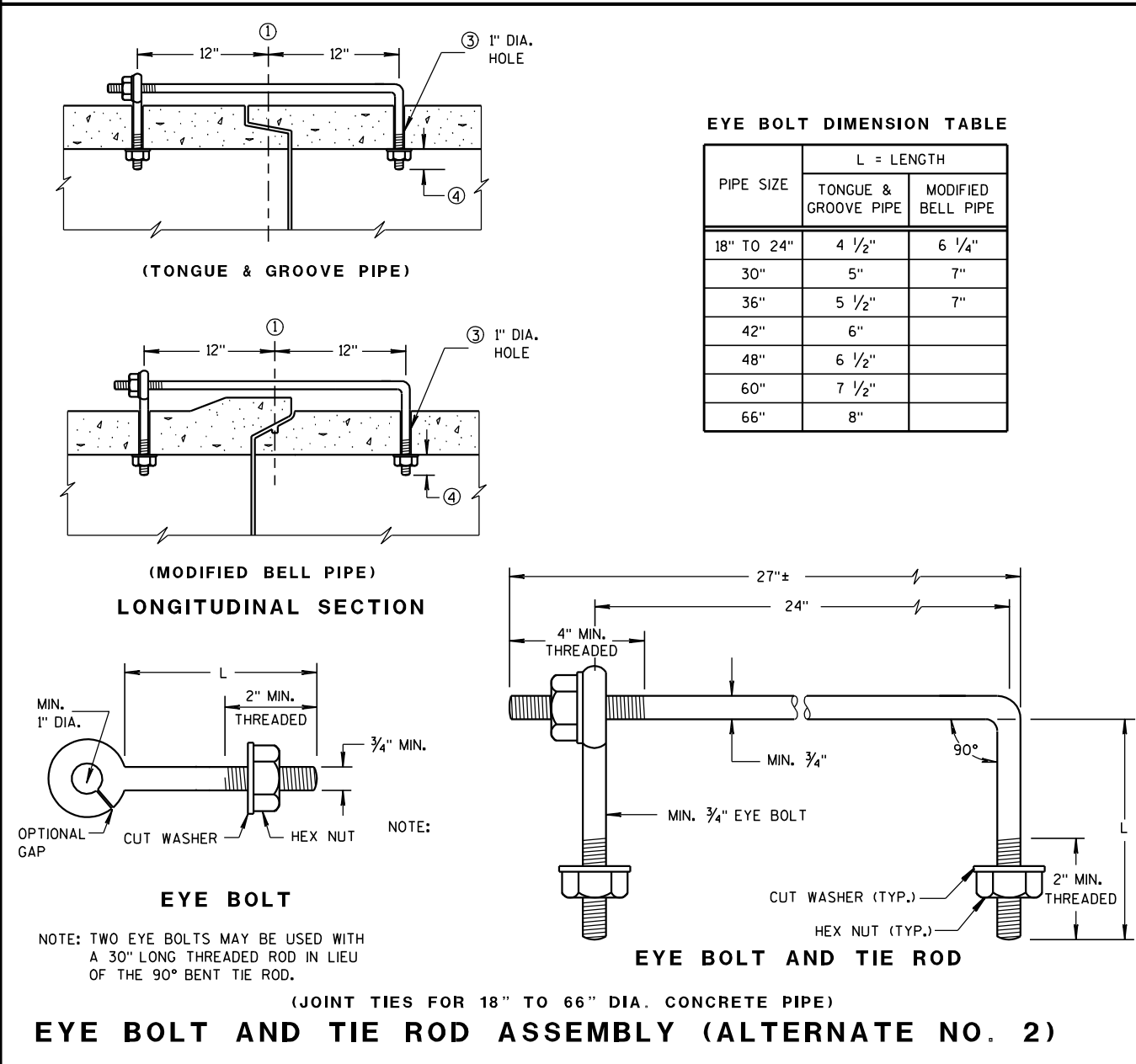
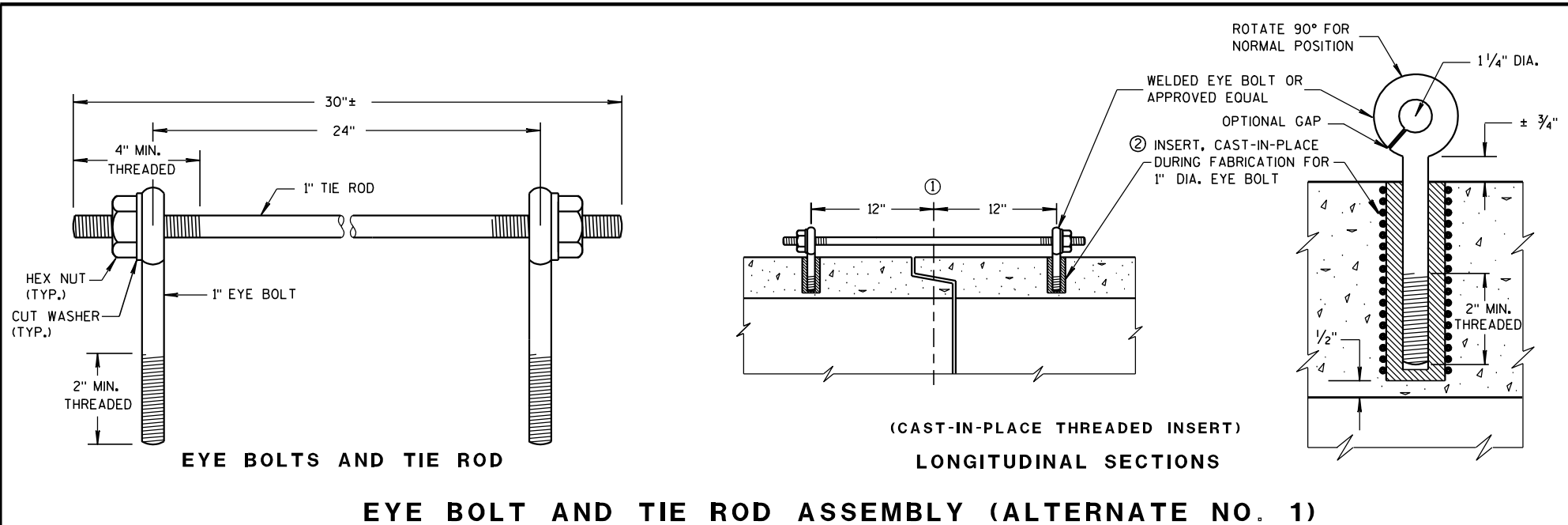
WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

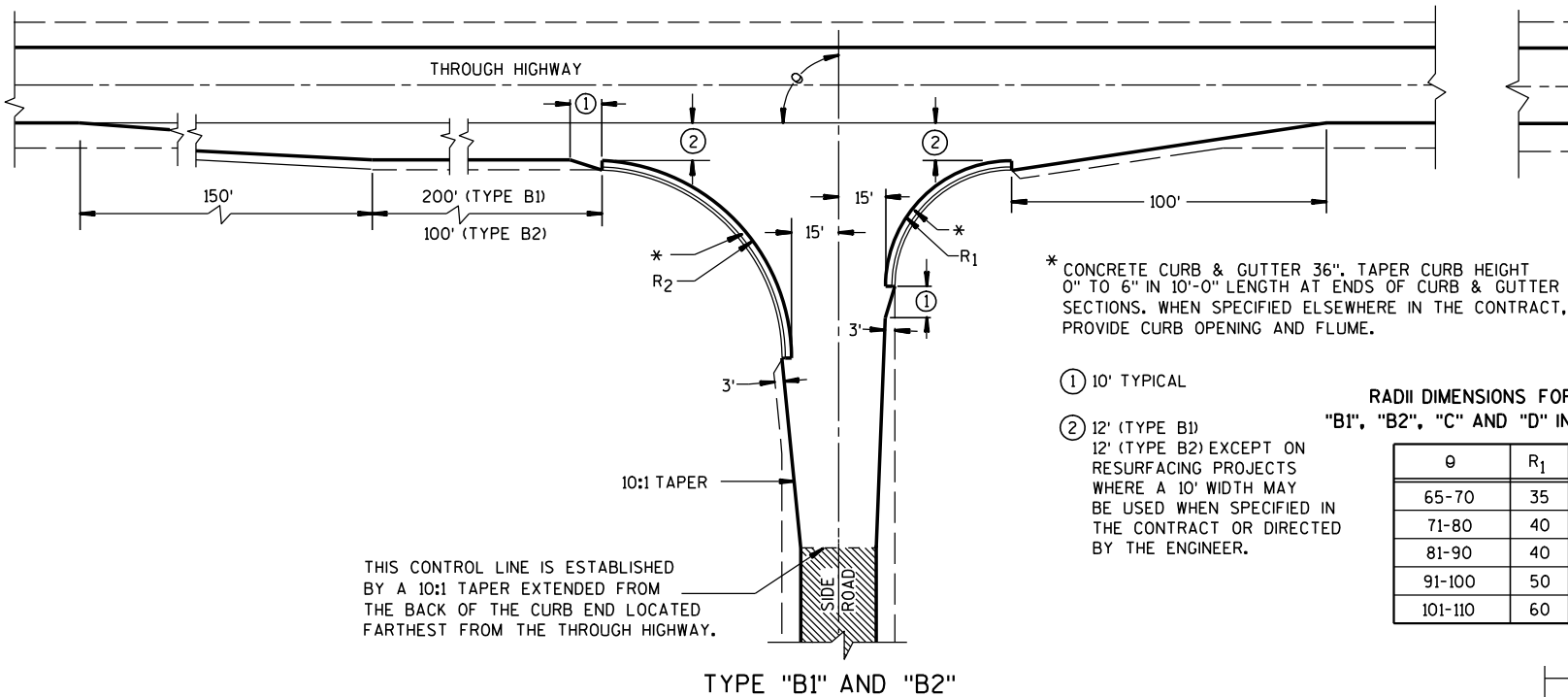
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

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

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

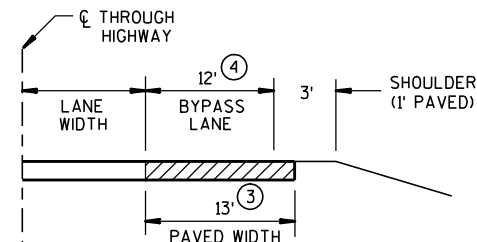
SIDE ROAD SURFACING NOTE

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.

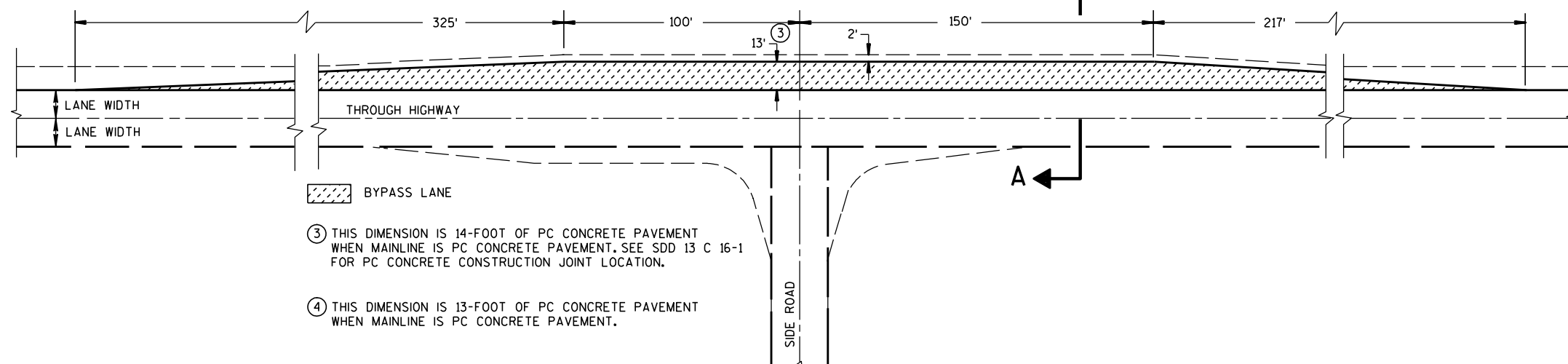
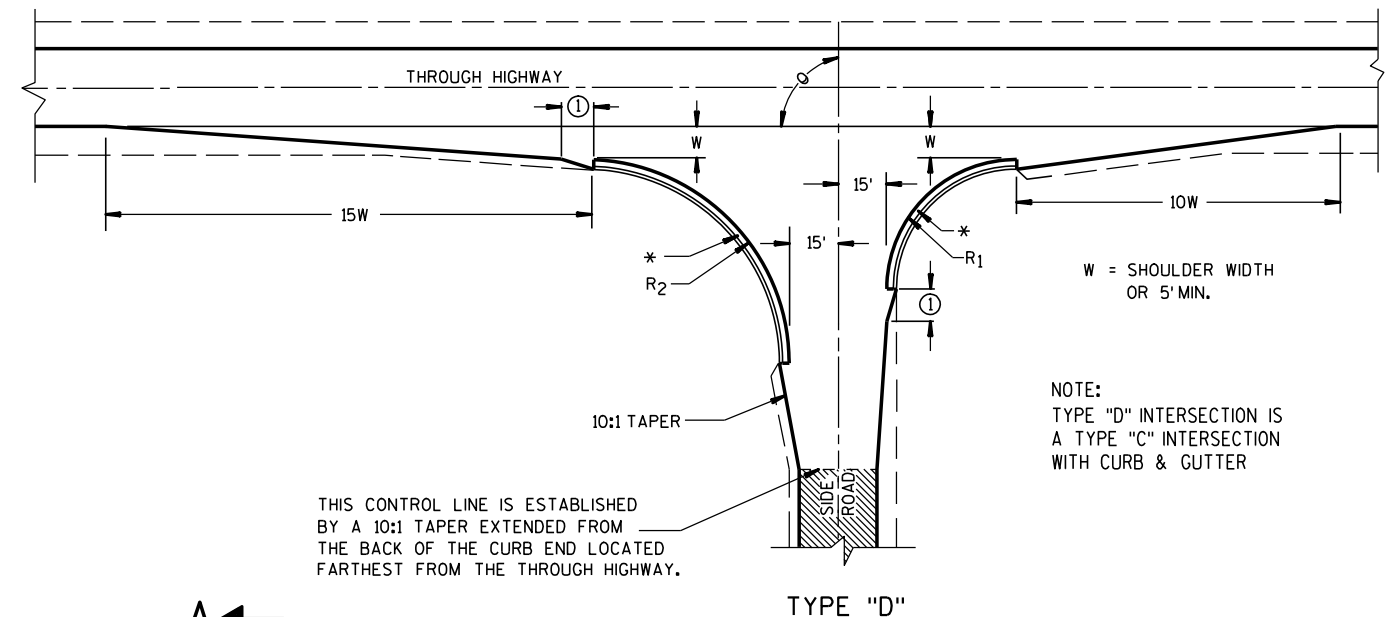
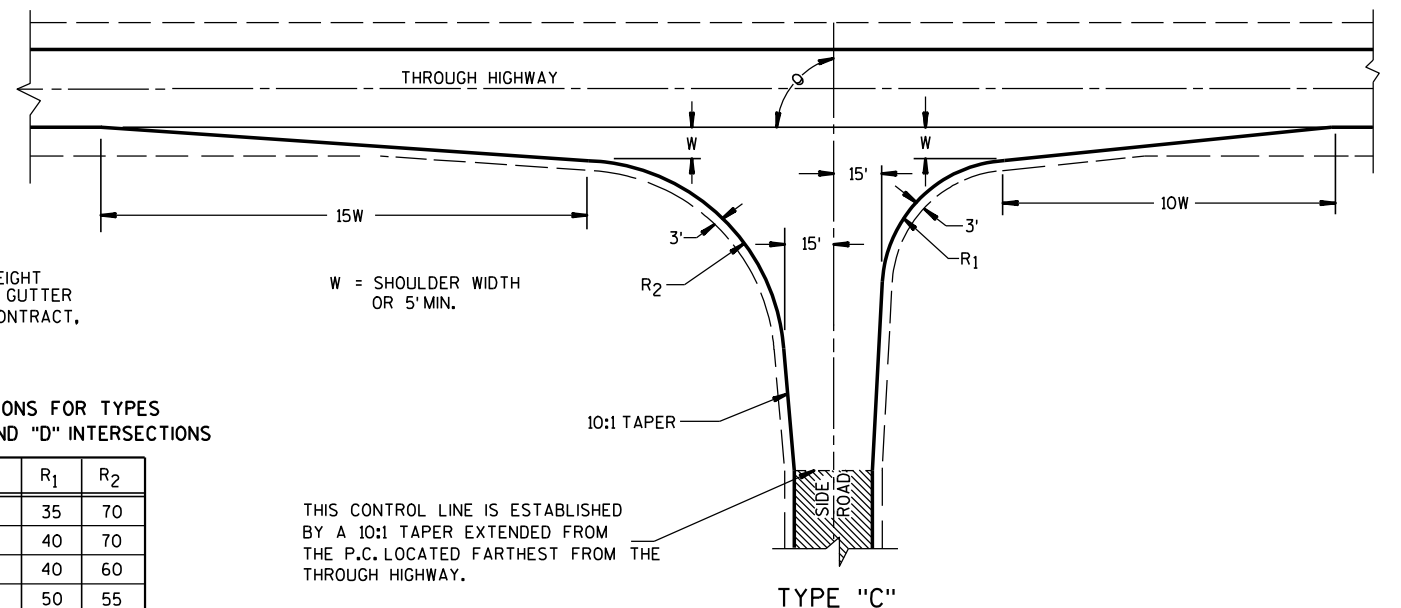
WHEN THE SIDE ROAD IS PRESENTLY PAVED, NEW PAVEMENT SHALL BE PLACED TO THE LIMITS OF DESIGN AS SHOWN AND BEYOND, IF NECESSARY, TO MEET EXISTING PAVEMENT.

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

EXISTING SURFACE



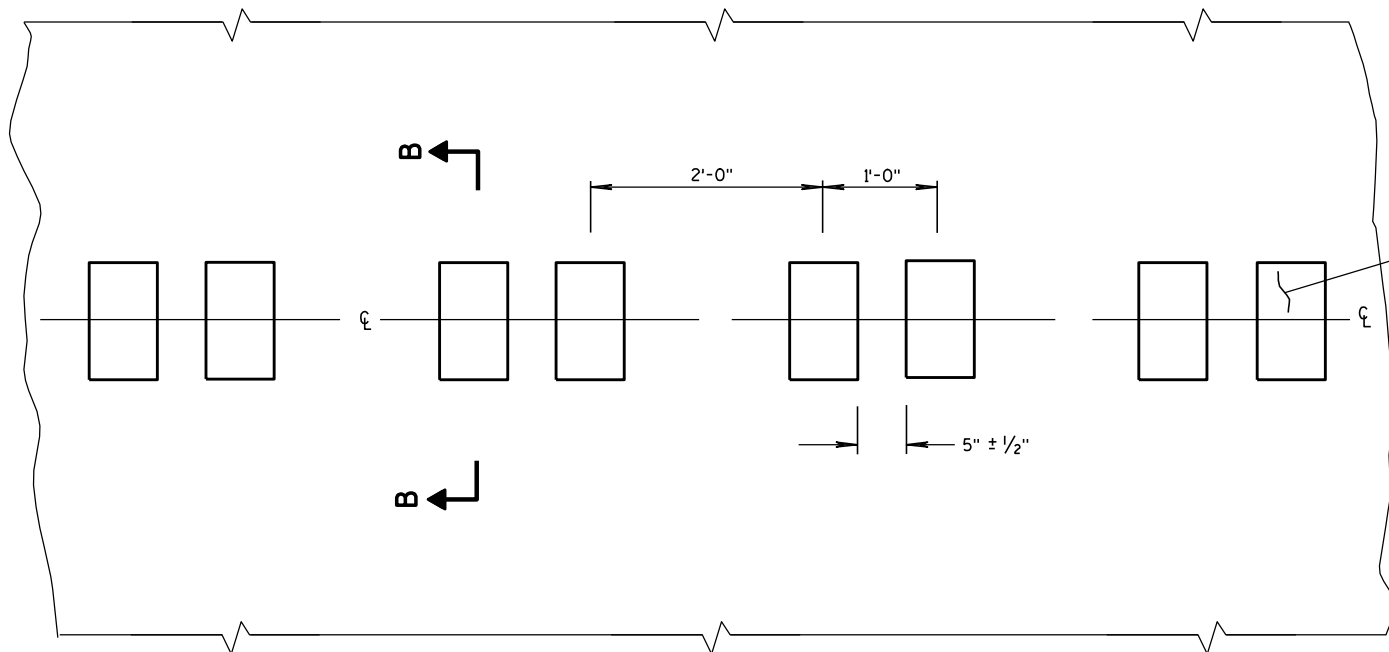
SECTION A-A
(SHOWING BYPASS LANE AND SHOULDER)



TEE INTERSECTION BYPASS LANE DETAIL

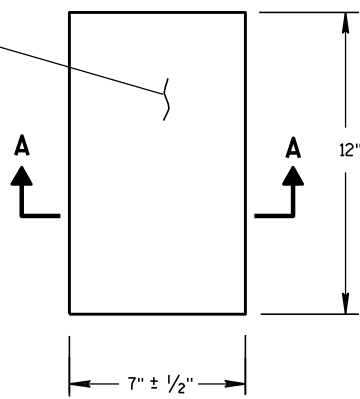
AT-GRADE SIDE ROAD
INTERSECTION, TYPES "B1", "B2",
"C" AND "D" AND TEE
INTERSECTION BYPASS LANE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



PLAN VIEW
CENTER LINE WITH GROOVES

6
PLACEMENT DETAIL FOR MILLED RUMBLE STRIP

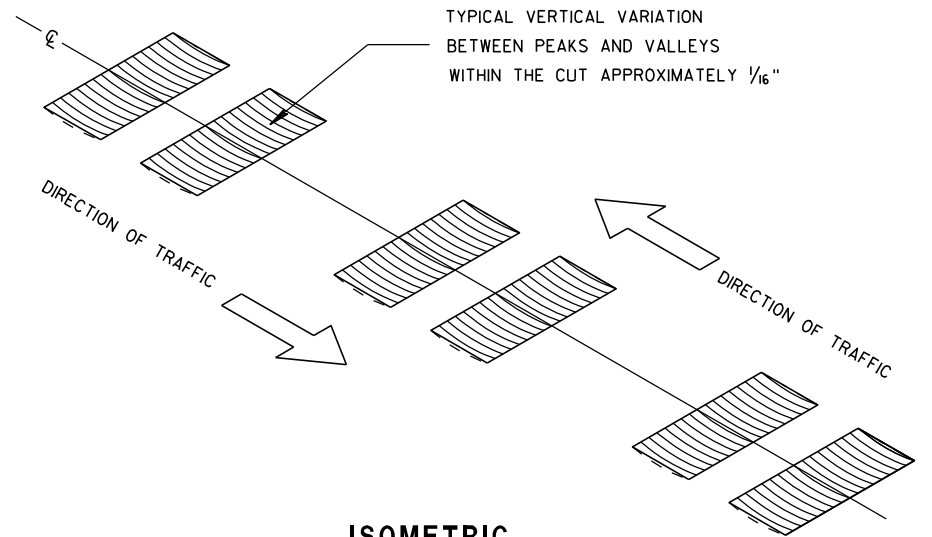


PLAN VIEW
(SINGLE GROOVE)

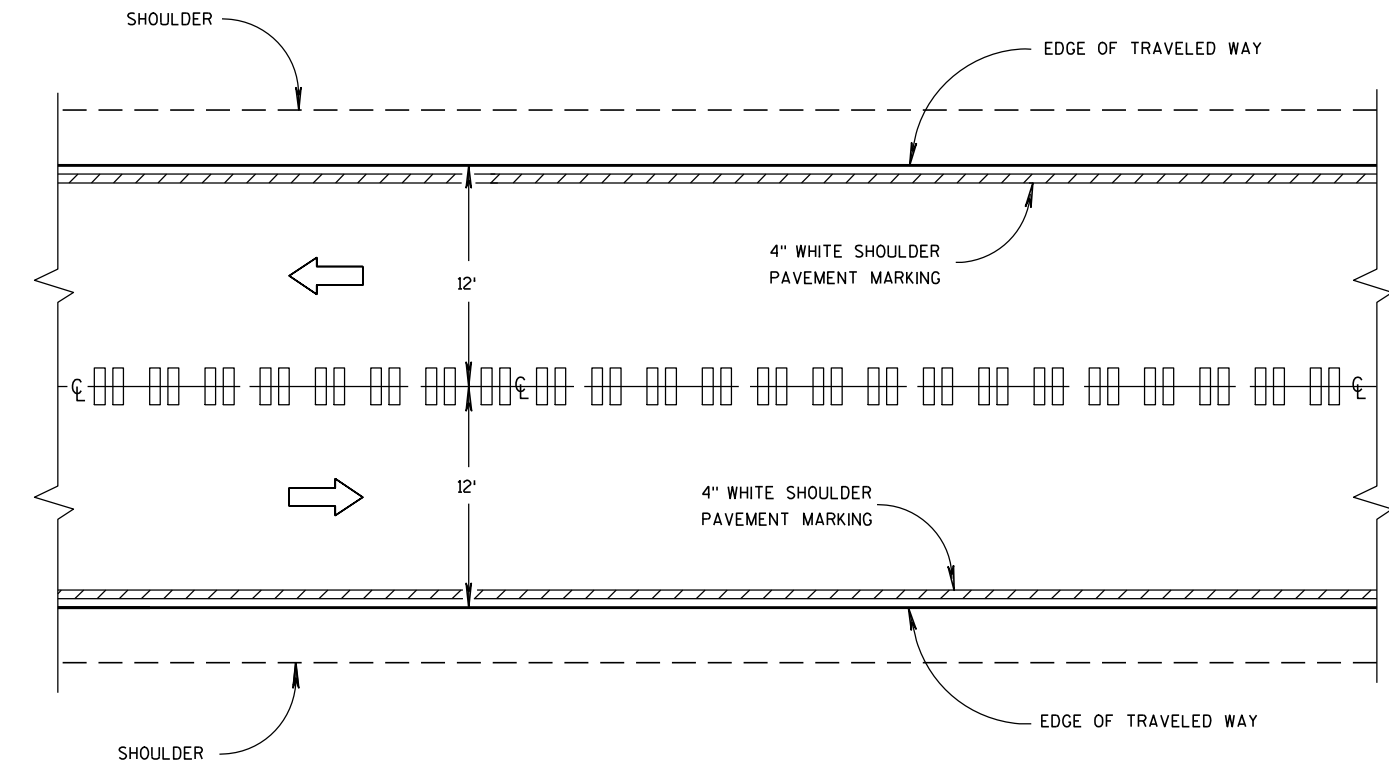
GENERAL NOTES

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.

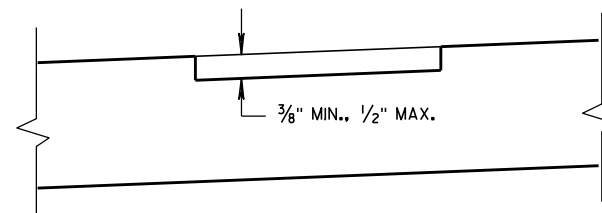
- ① CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS, WHEN DIRECTED BY THE ENGINEER.



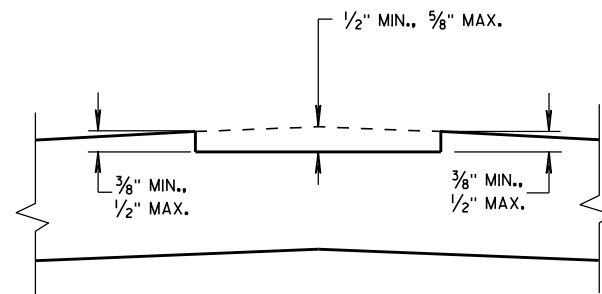
ISOMETRIC



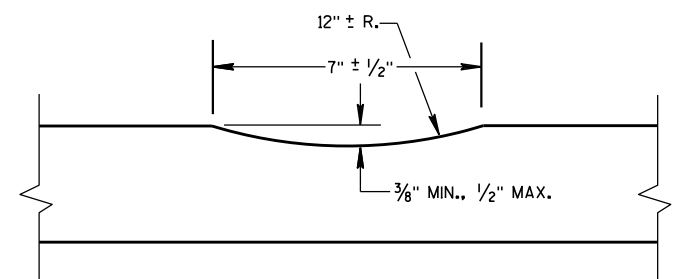
CENTER LINE GROOVES ON TWO-WAY ROADWAYS



SECTION B-B
SUPERELEVATED ROADWAY



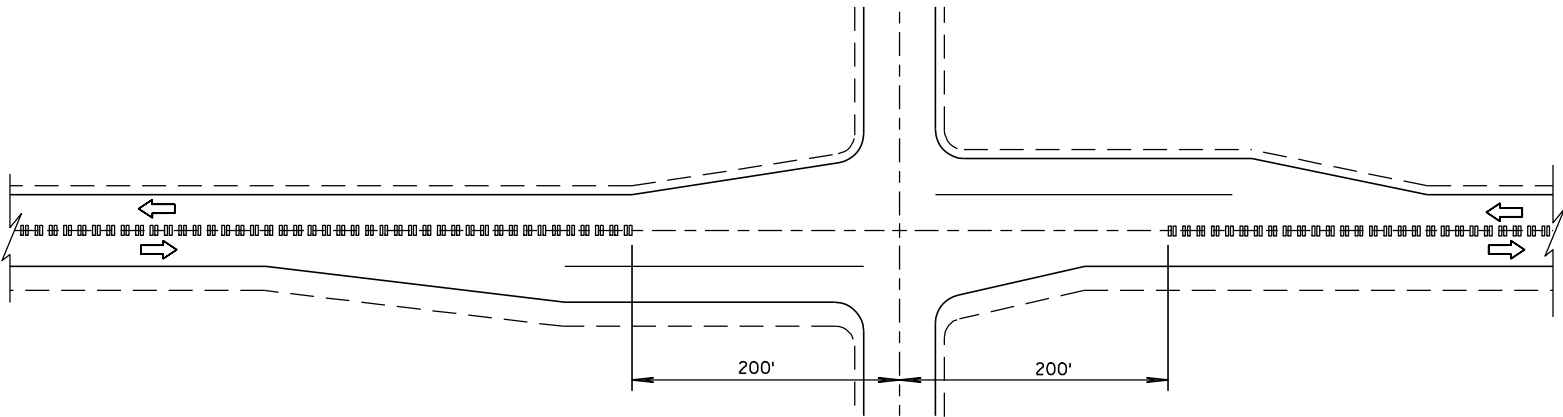
SECTION B-B
CROWNED ROADWAY



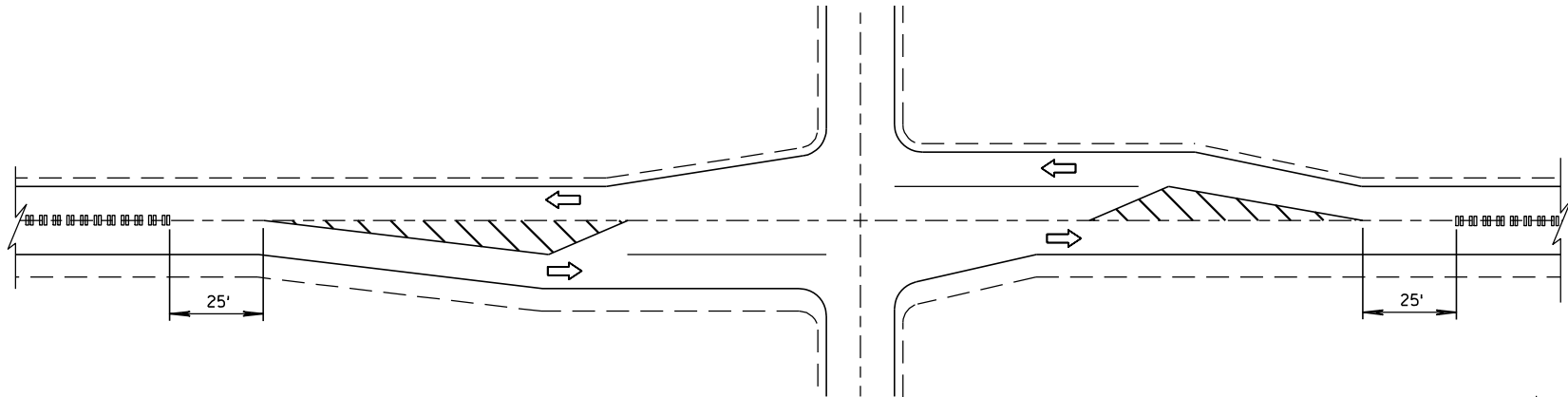
SECTION A-A

2-LANE RURAL
CENTER LINE RUMBLE STRIP,
MILLING

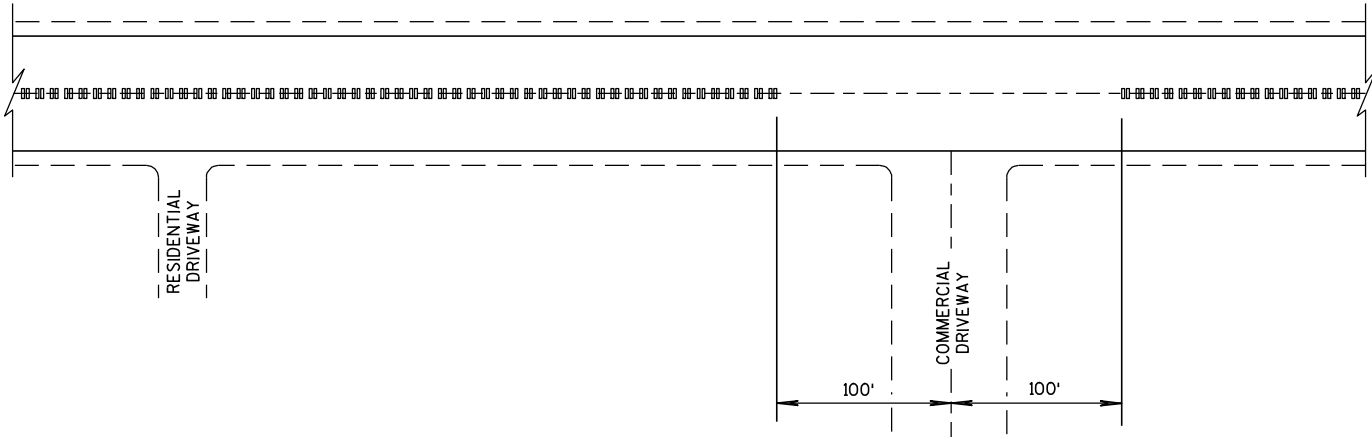
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



CENTER LINE GROOVES AT INTERSECTIONS

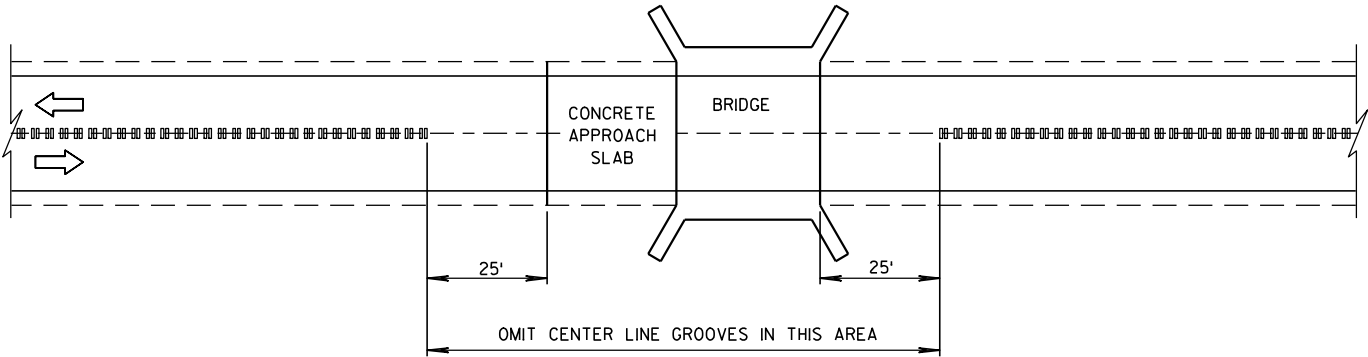


CENTER LINE GROOVES AT INTERSECTIONS
(WITH LEFT TURN LANES)

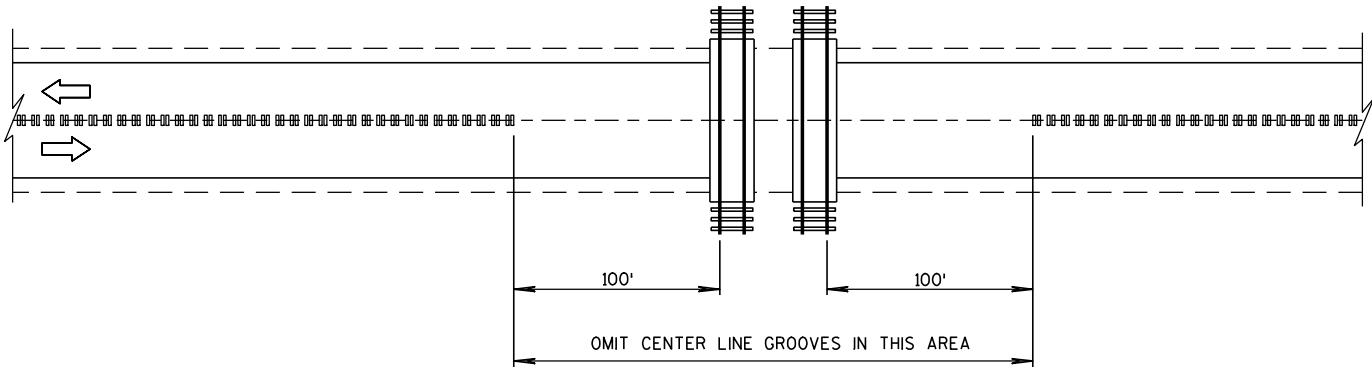


CENTER LINE GROOVES AT DRIVEWAYS¹

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

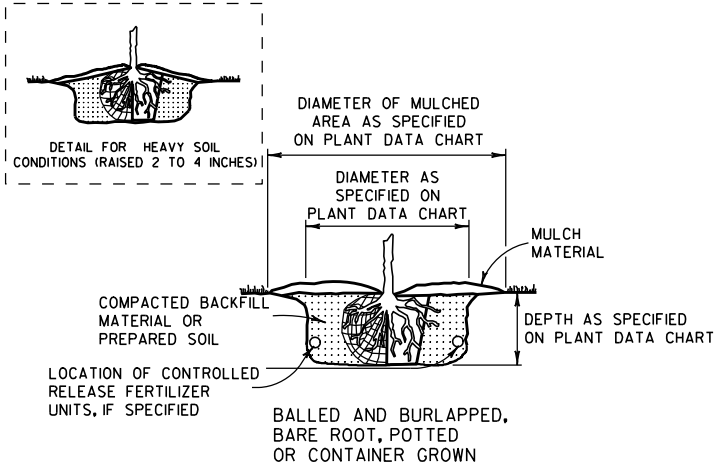
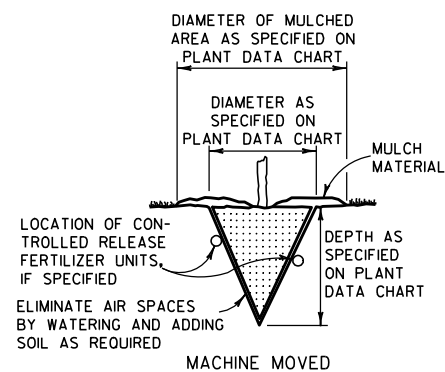


CENTER LINE GROOVES AT BRIDGES

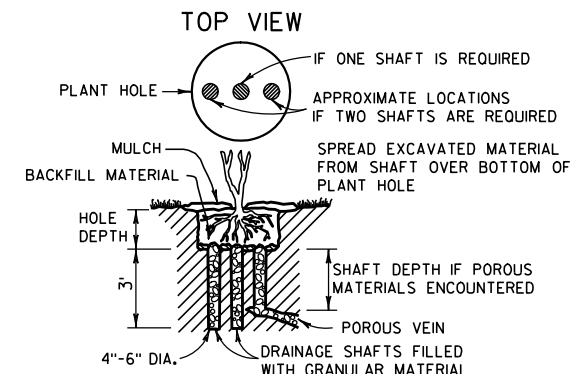
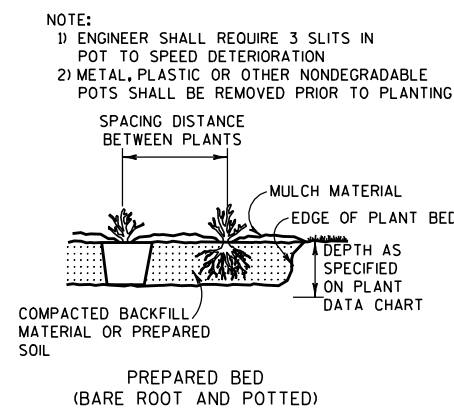


CENTER LINE GROOVES AT RAILROADS

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	



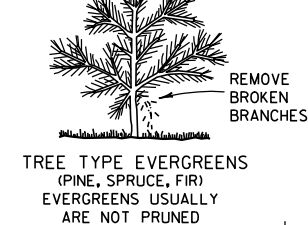
ACCOMMODATE ROOTS
(SMOOTH AND STAGHORN SUMAC)



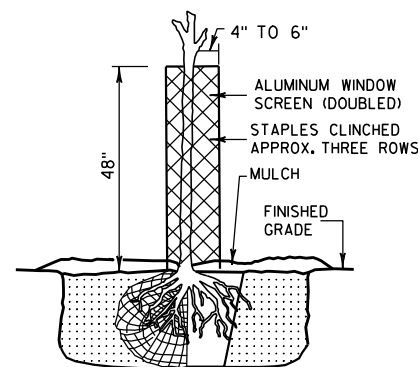
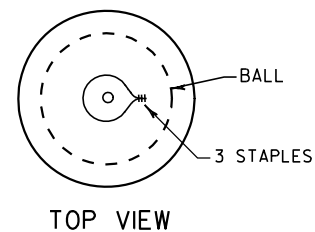
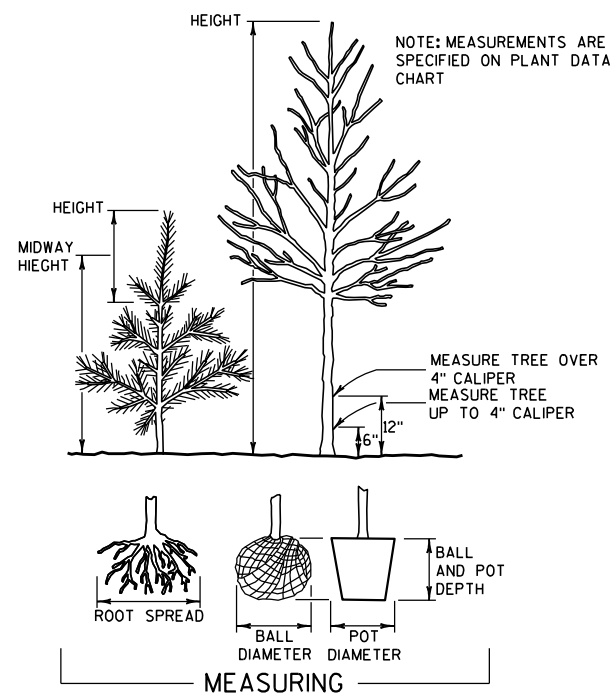
NOTE:
DRAINAGE SHAFT AS SPECIFIED ON
PLANT DATA CHART

DRAINING

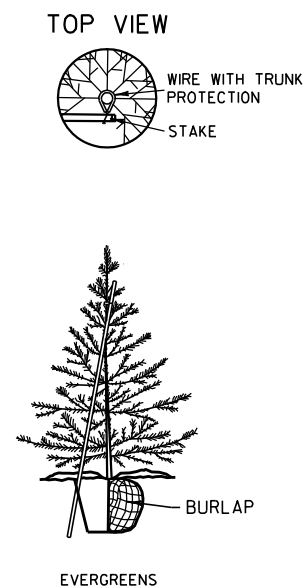
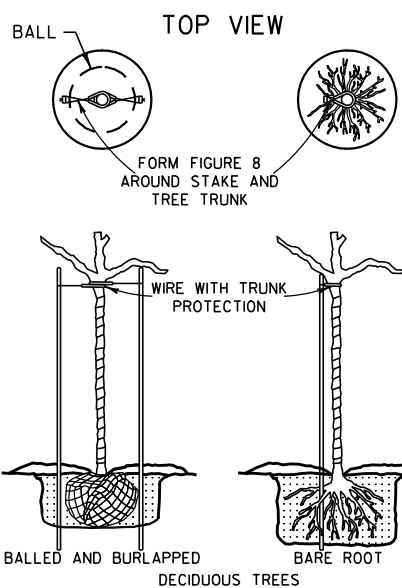
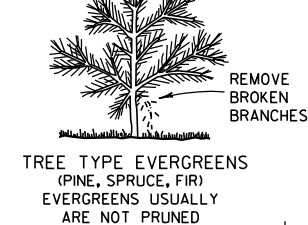
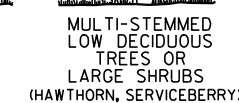
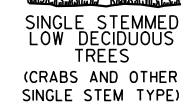
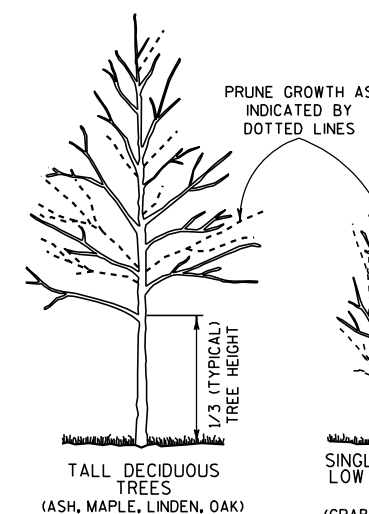
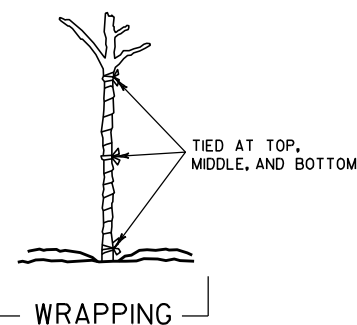
NOTE: WHEN PRUNING, PRESERVE CHARACTER AND SHAPE OF TREE. AVOID LEAVING STUBS - REMOVE BRANCH OR TWIG BACK TO THE NEAREST CROTCH
1) PRUNE TO REMOVE DEAD AND BROKEN BRANCHES
2) PRUNE TO REMOVE BRANCHES THAT TOUCH OR ARE TOO CLOSE TO OTHER BRANCHES



PRUNING

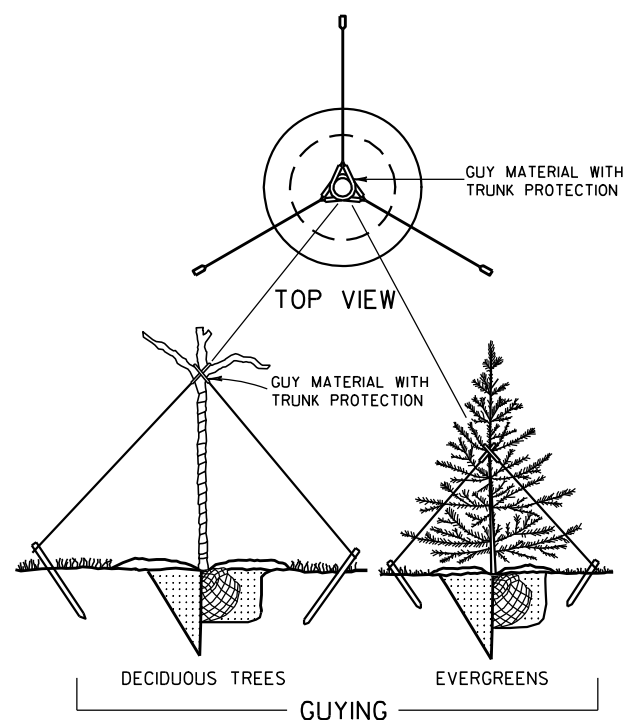


RODENT PROTECTION



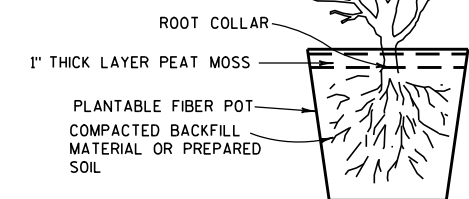
NOTE: BRACING STAKE
1) SHALL BE DRIVEN INTO THE GROUND AS CLOSE TO THE TREE AS POSSIBLE WITHOUT DAMAGING THE BRANCHES.
2) MAY BE DRIVEN AT SUCH AN ANGLE THAT IT DOES NOT PENETRATE THE BALL OR POT.
3) SHALL NOT PROTRUDE ABOVE THE TOP OF THE TREE; AND
4) SHALL HAVE A HOLE NEAR THE TOP TO HOLD THE WIRE IN PLACE.

BRACING



GUYING

PRUNE LARGER SHRUBS BY REMOVING FROM ONE-THIRD TO ONE-HALF TOP GROWTH AS INDICATED BY DOTTED LINE



POTTING

NOTES

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

BRACING, WRAPPING, GUYING, RODENT PROTECTION, FERTILIZER AND MULCH SHALL BE USED ONLY WHEN SPECIFIED ON THE PLANT DATA CHART (PART OF PLAN) OR SPECIAL PROVISIONS.

TREE PLANTING DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4/11/94

DATE

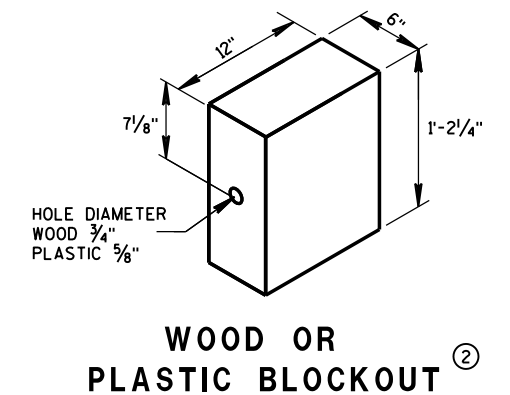
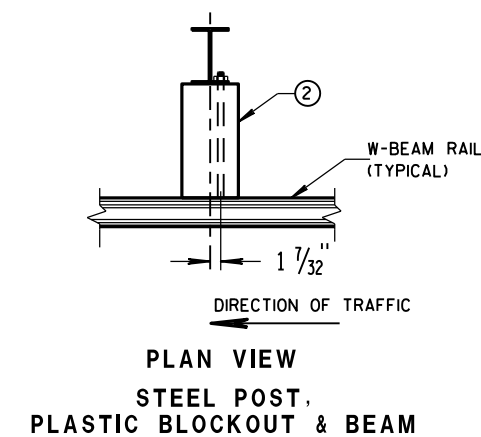
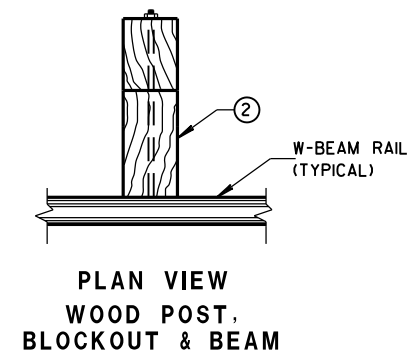
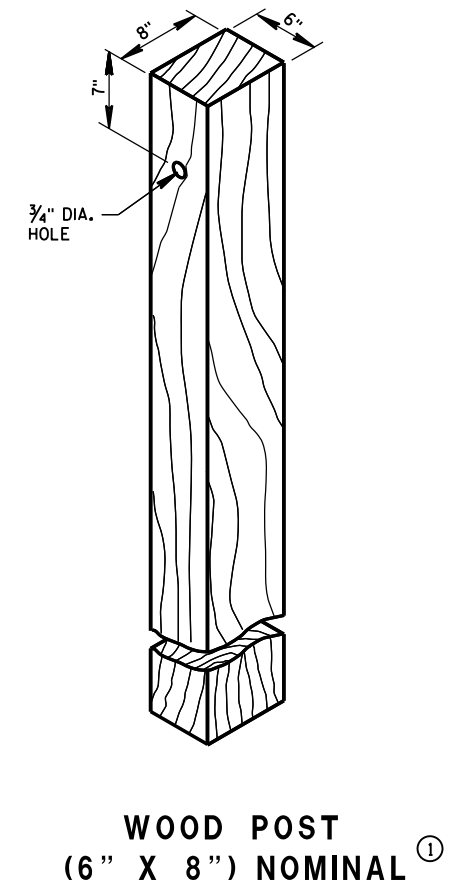
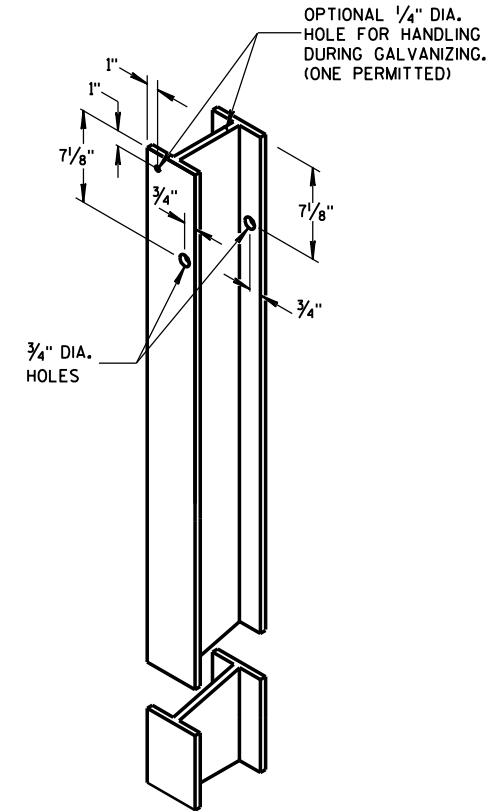
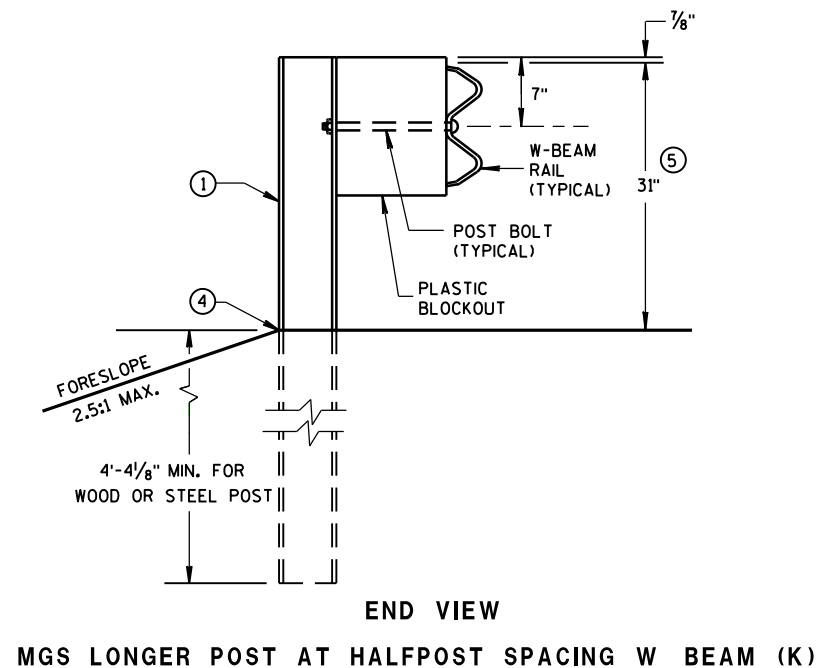
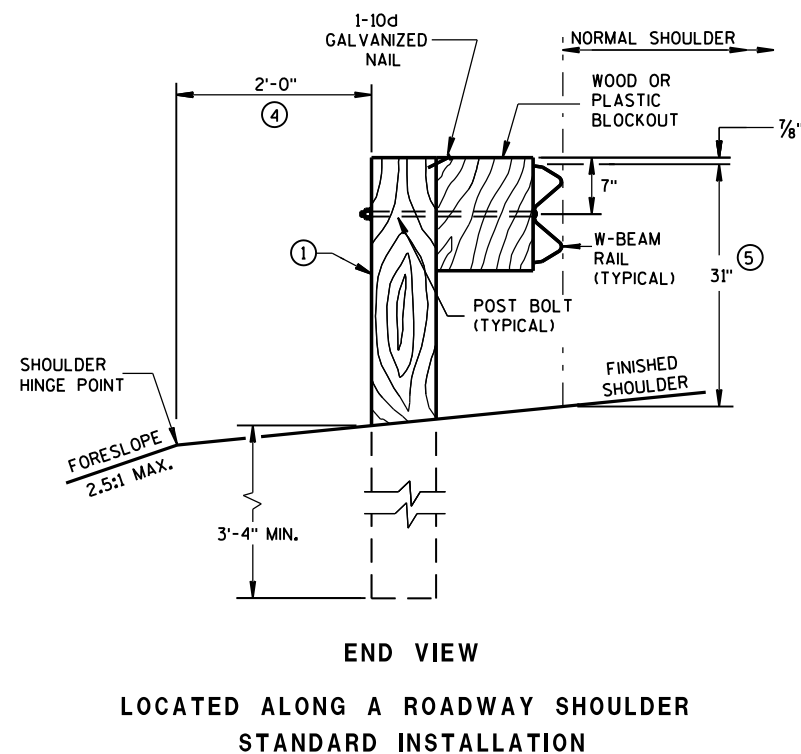
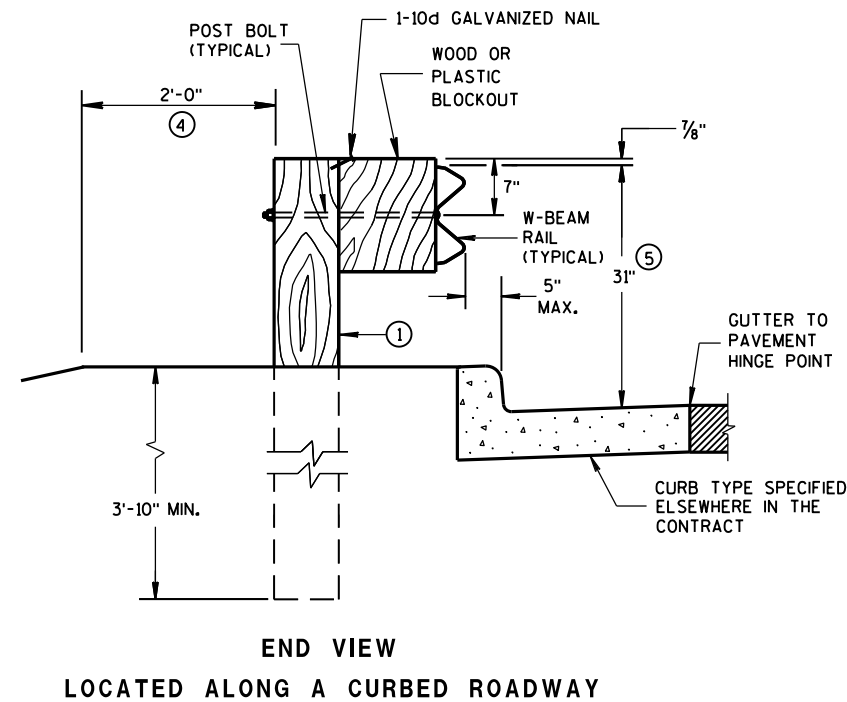
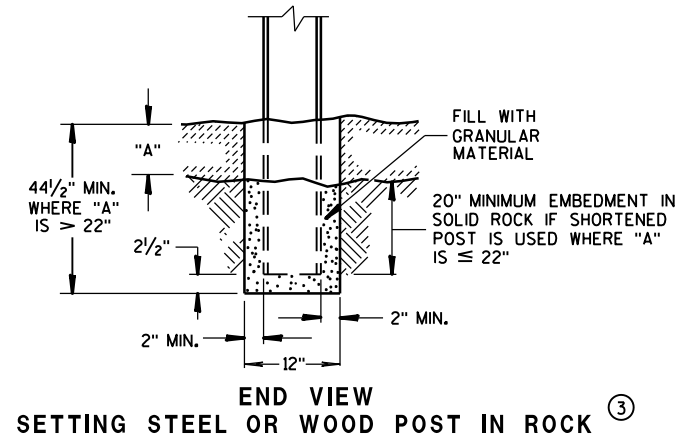
/S/ Rory L. Rhinesmith

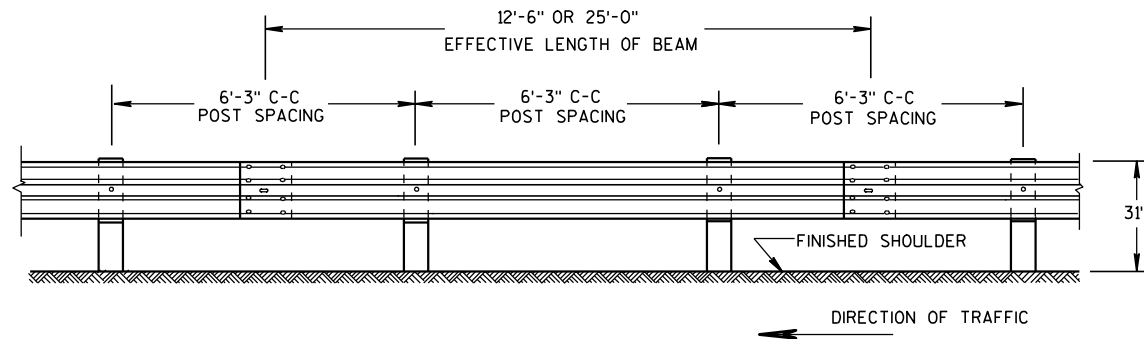
CHIEF METHODS DEVELOPMENT ENGINEER

FHWA

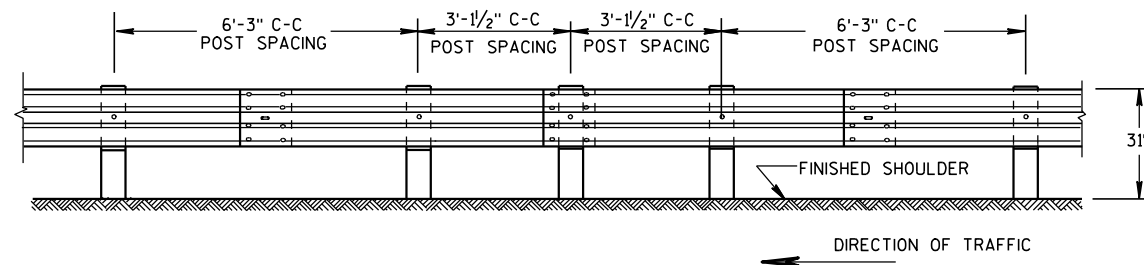
6

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

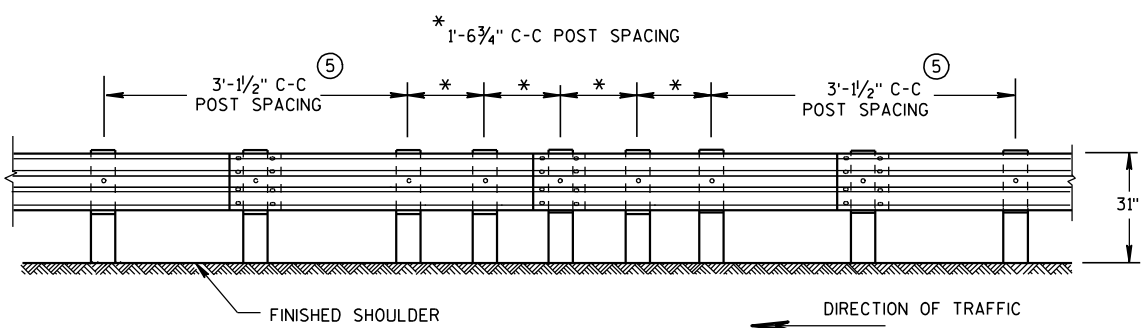




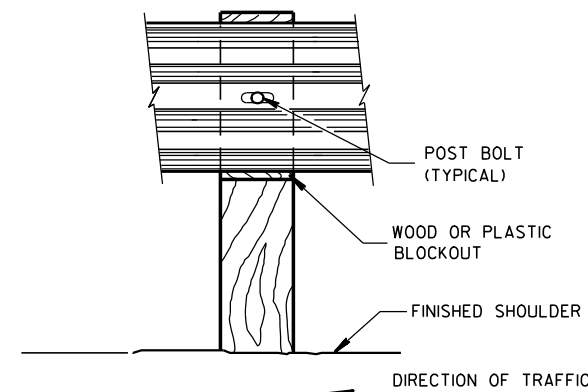
FRONT VIEW
POST SPACING STANDARD INSTALLATION



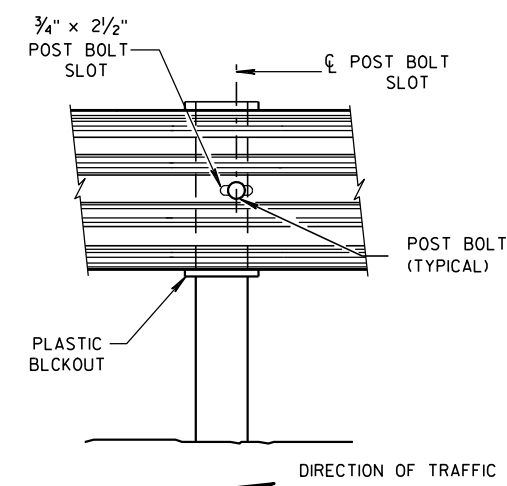
FRONT VIEW
**HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)**



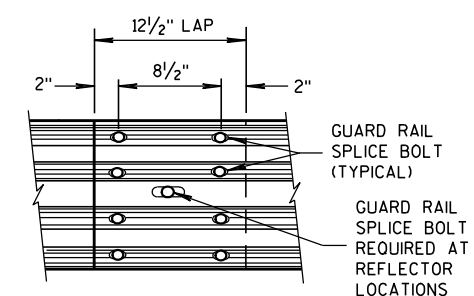
FRONT VIEW
QUARTER POST SPACING (QS)



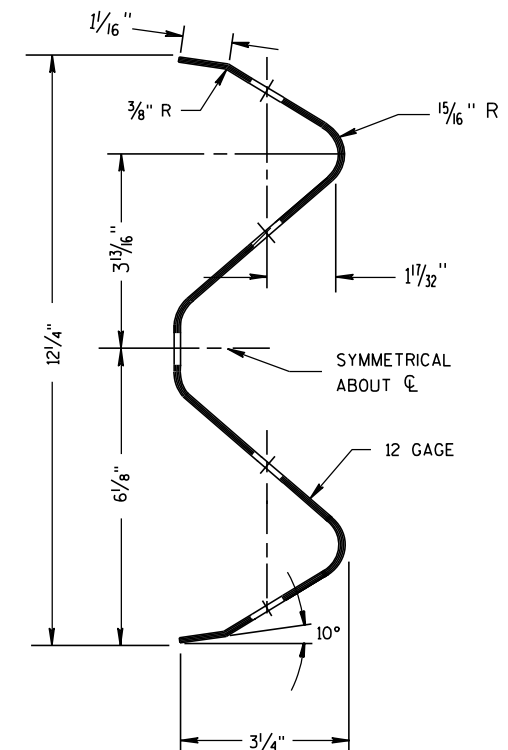
FRONT VIEW AT WOOD POST



FRONT VIEW AT STEEL POST



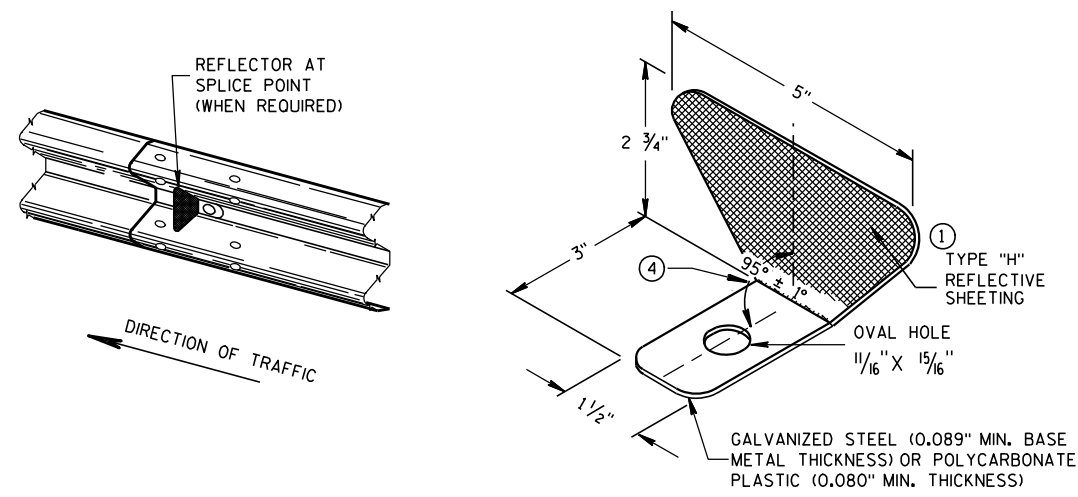
**FRONT VIEW
MID-SPAN BEAM SPLICE**



SECTION THRU W-BEAM RAIL

REFLECTOR SPACING

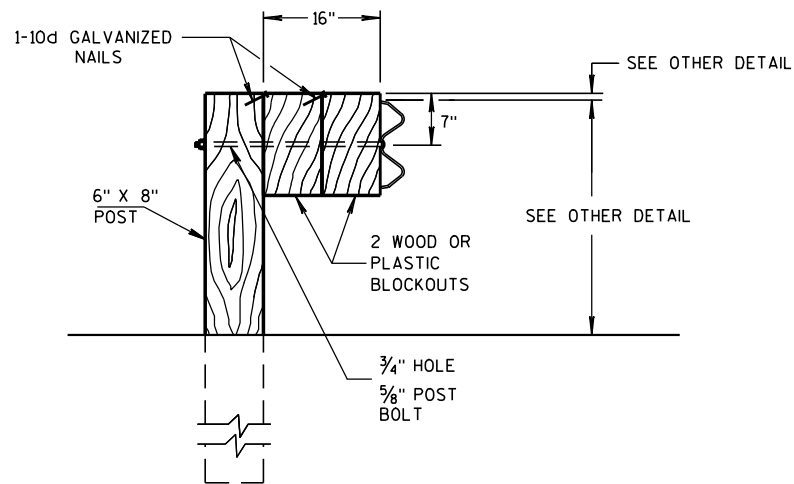
	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200'	50' C-C	1	3
	> 200'	100' C-C	1	
TWO WAY TRAFFIC	< 200'	25' C-C	1	6
	> 200'	50' C-C	1	
TWO WAY TRAFFIC	< 200'	50' C-C	2	3
	> 200'	100' C-C	2	



ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION

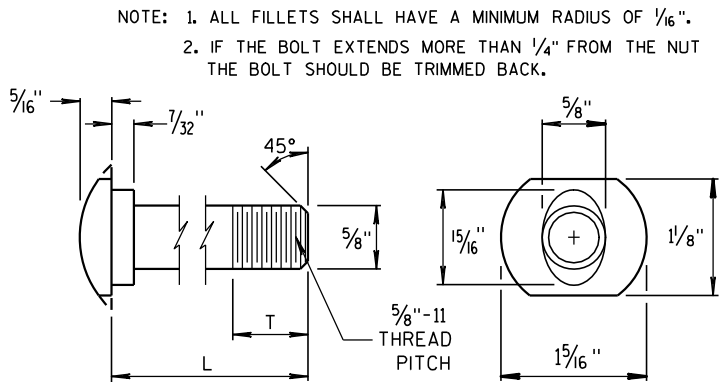
GENERAL NOTES

- 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.

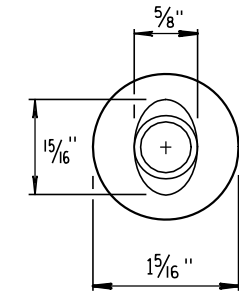


DETAIL FOR 16" BLOCKOUT DEPTH

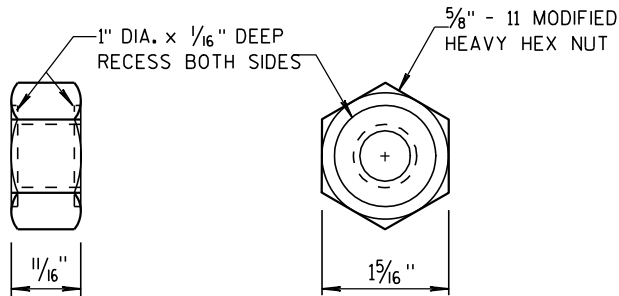
IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.



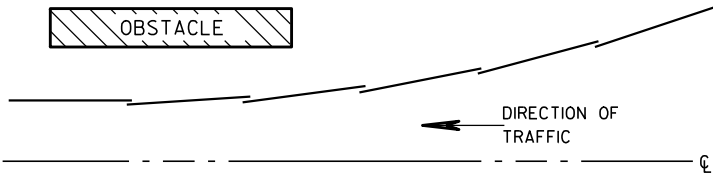
POST BOLT TABLE



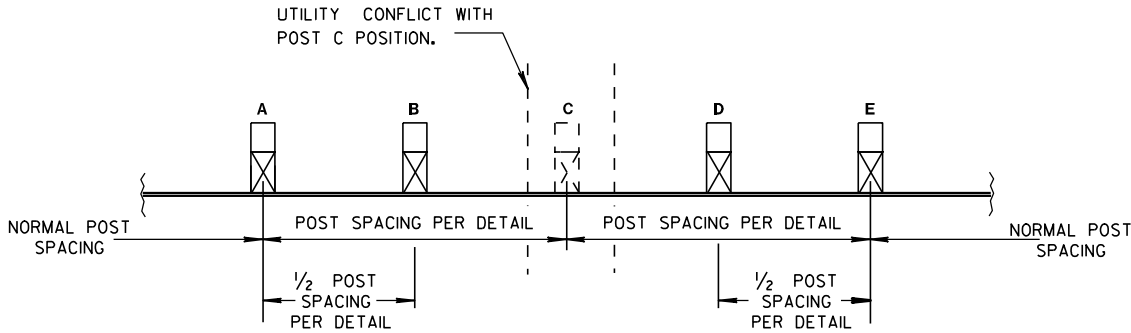
ALTERNATE BOLT HEAD



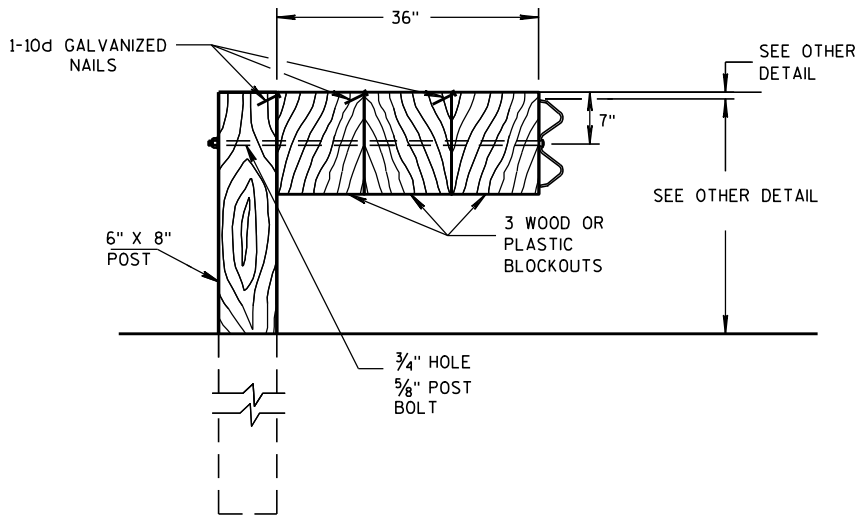
POST BOLT AND RECESS NUT



PLAN VIEW
BEAM LAPPING DETAIL



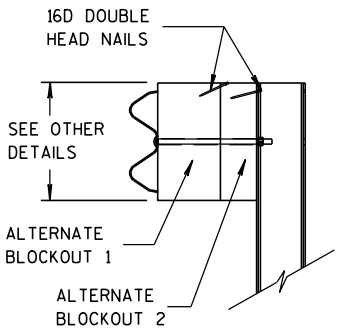
POST DRIVING FOR CONTINUOUS
UNDERGROUND OBSTRUCTION



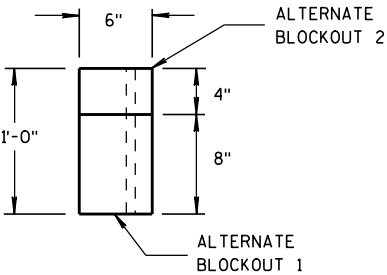
DETAIL FOR 36" BLOCKOUT DEPTH

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.



SIDE VIEW



TOP VIEW

ALTERNATE WOOD
BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/15/2011
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA

GENERAL NOTES

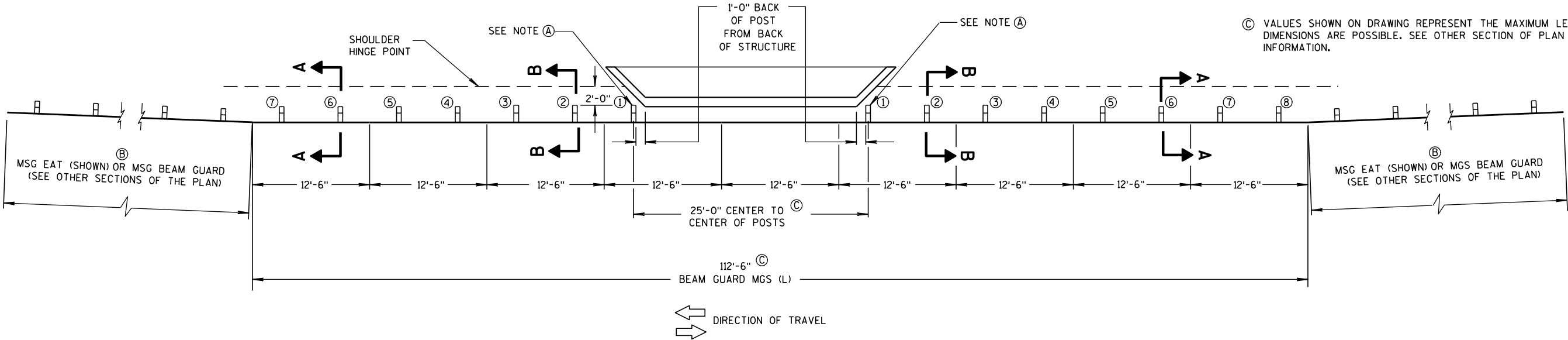
POSTS 1 THROUGH 3 ARE CRT POSTS.
ALL OTHER POSTS SHALL BE WOOD OR STEEL.

SEE SDD 14 B 42 FOR MORE DETAILS.

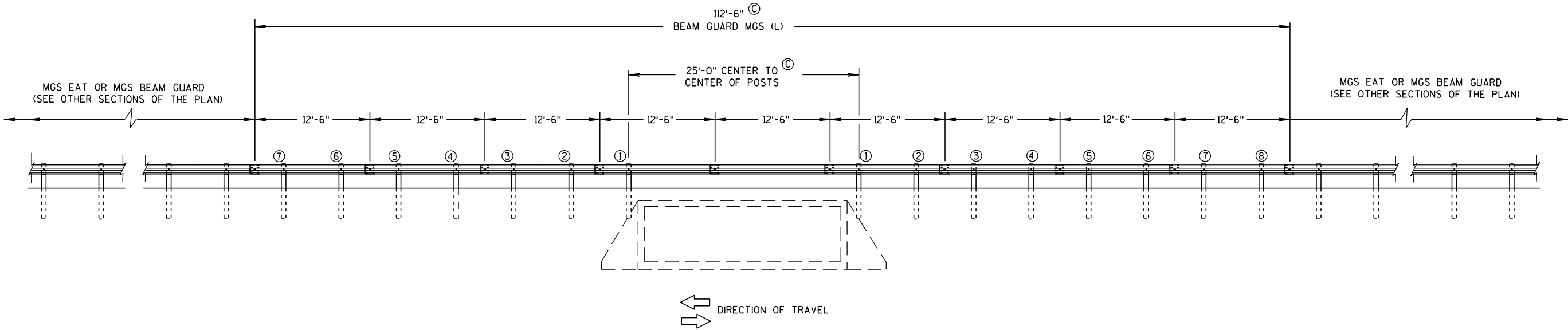
Ⓐ THE MINIMUM OFFSET FROM BACK OF POST TO BACK OF STRUCTURE IS ZERO.
LARGER OFFSETS ARE ACCEPTABLE.

Ⓑ FLARE FOR MGS EAT SHOWN, IF INSTALLING MGS NO FLARE NEEDED.

Ⓒ VALUES SHOWN ON DRAWING REPRESENT THE MAXIMUM LENGTH. SHORTER
DIMENSIONS ARE POSSIBLE. SEE OTHER SECTION OF PLAN FOR MORE
INFORMATION.



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L) TWO-WAY TRAFFIC

MIDWEST GUARDRAIL SYSTEM
LONG SPAN MGS (L)

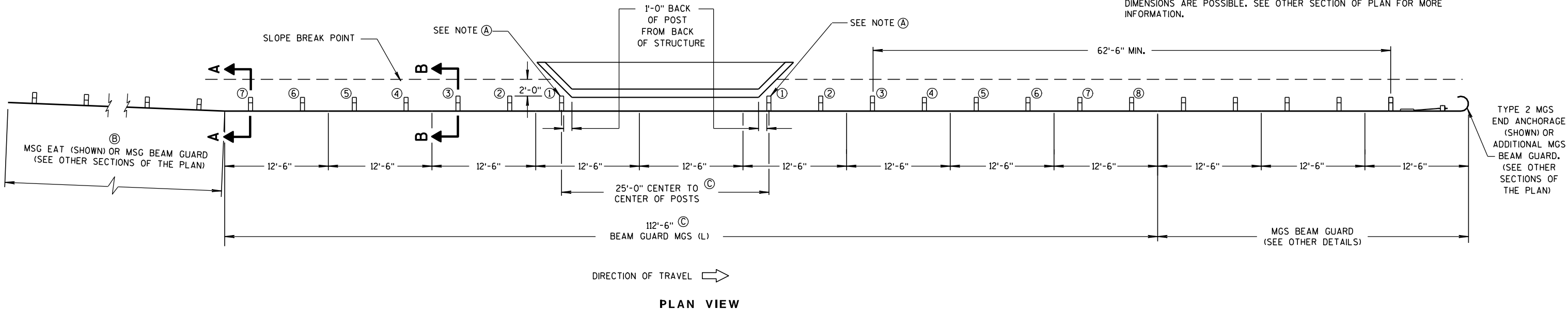
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

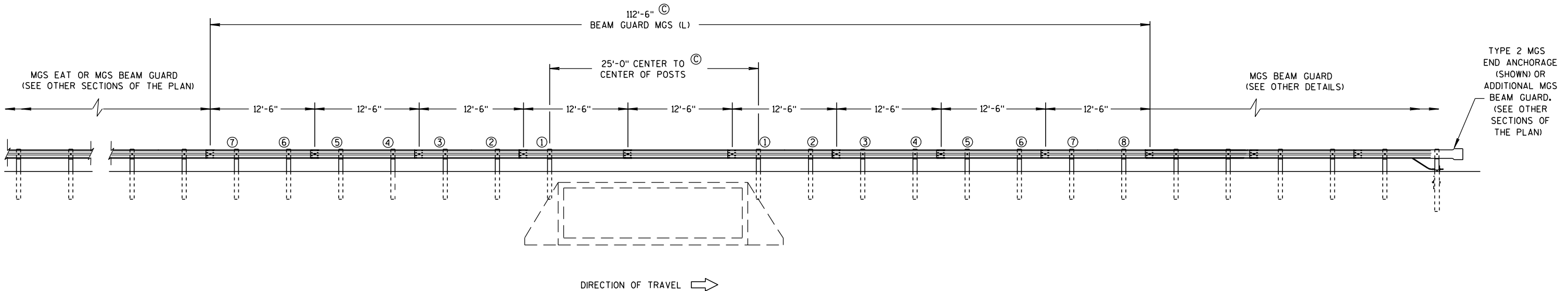
POSTS 1 THROUGH 3 ARE CRT POSTS.
ALL OTHER POSTS SHALL BE WOOD OR STEEL.

SEE SDD 14 B 42 FOR MORE DETAILS.

- Ⓐ THE MINIMUM OFFSET FROM BACK OF POST TO BACK OF STRUCTURE IS ZERO.
LARGER OFFSETS ARE ACCEPTABLE.
- Ⓑ FLARE FOR MGS EAT SHOWN. IF INSTALLING MGS NO FLARE NEEDED.
- Ⓒ VALUES SHOWN ON DRAWING REPRESENT THE MAXIMUM LENGTH. SHORTER
DIMENSIONS ARE POSSIBLE. SEE OTHER SECTION OF PLAN FOR MORE
INFORMATION.



PLAN VIEW

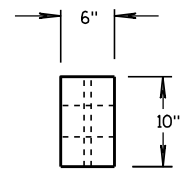


ELEVATION VIEW

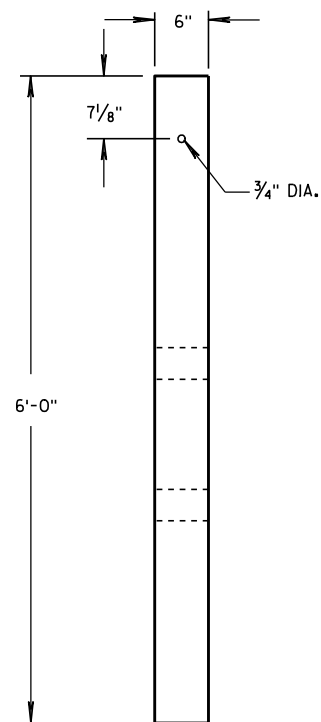
MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L) ONE-WAY TRAFFIC

MIDWEST GUARDRAIL SYSTEM
LONG SPAN MGS (L)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

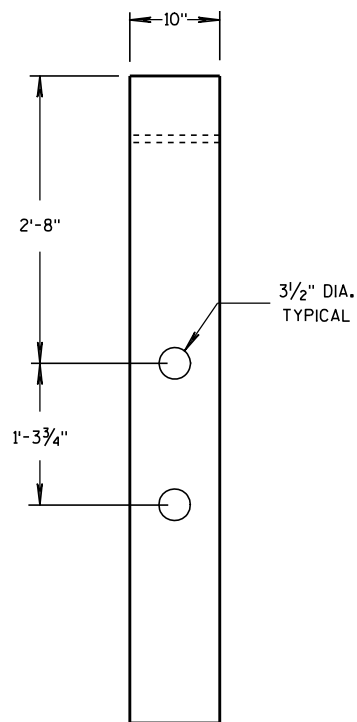


PLAN VIEW

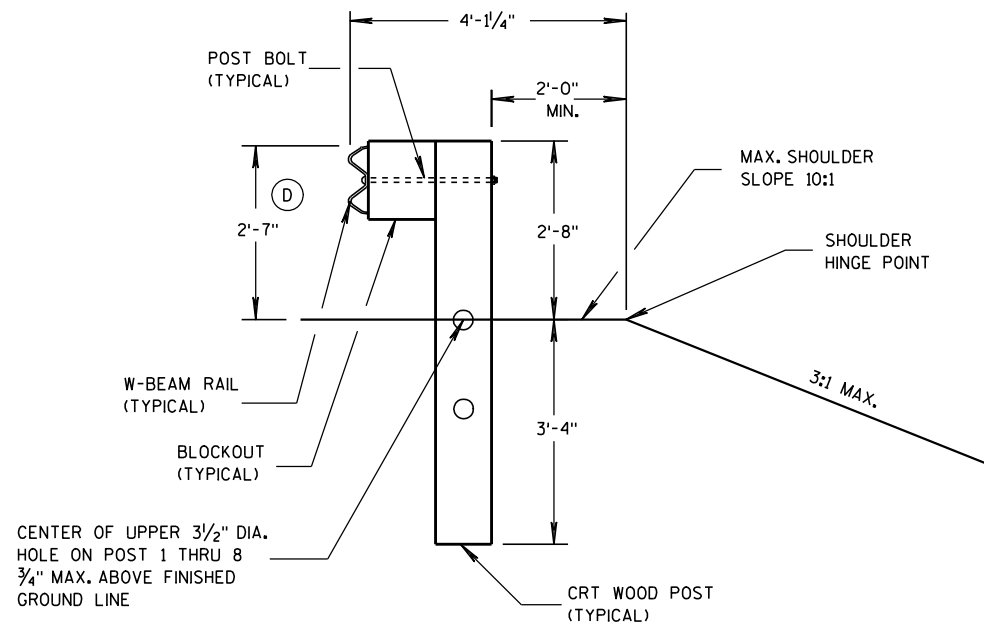


FRONT VIEW

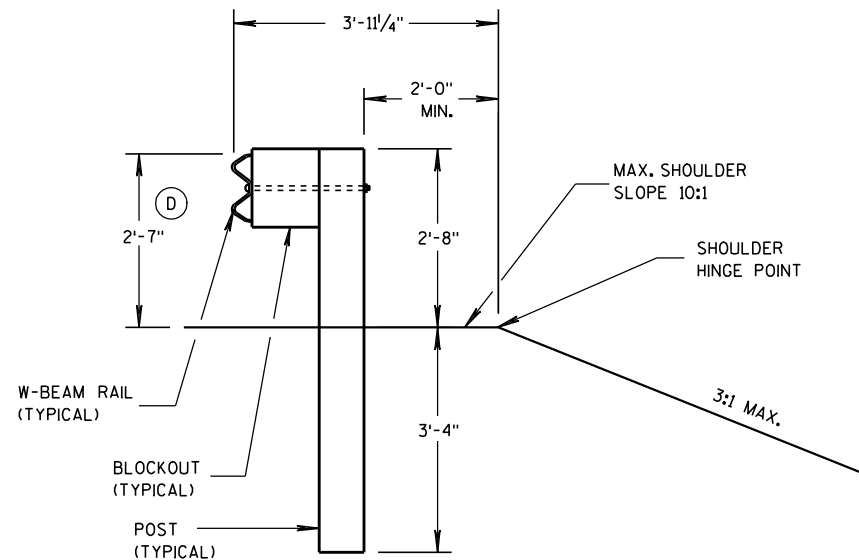
CRT WOOD POST



SIDE VIEW

SECTION B-B
POSTS NO. 1-3

SEE OTHER DETAILS

SECTION A-A
POSTS NO. 4-8

SEE OTHER DETAILS

GENERAL NOTES

- (D) TOLERANCE FOR TOP OF W-BEAM RAIL IS $\pm 1"$.

MIDWEST GUARDRAIL SYSTEM
LONG SPAN MGS (L)STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/31/2012

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.

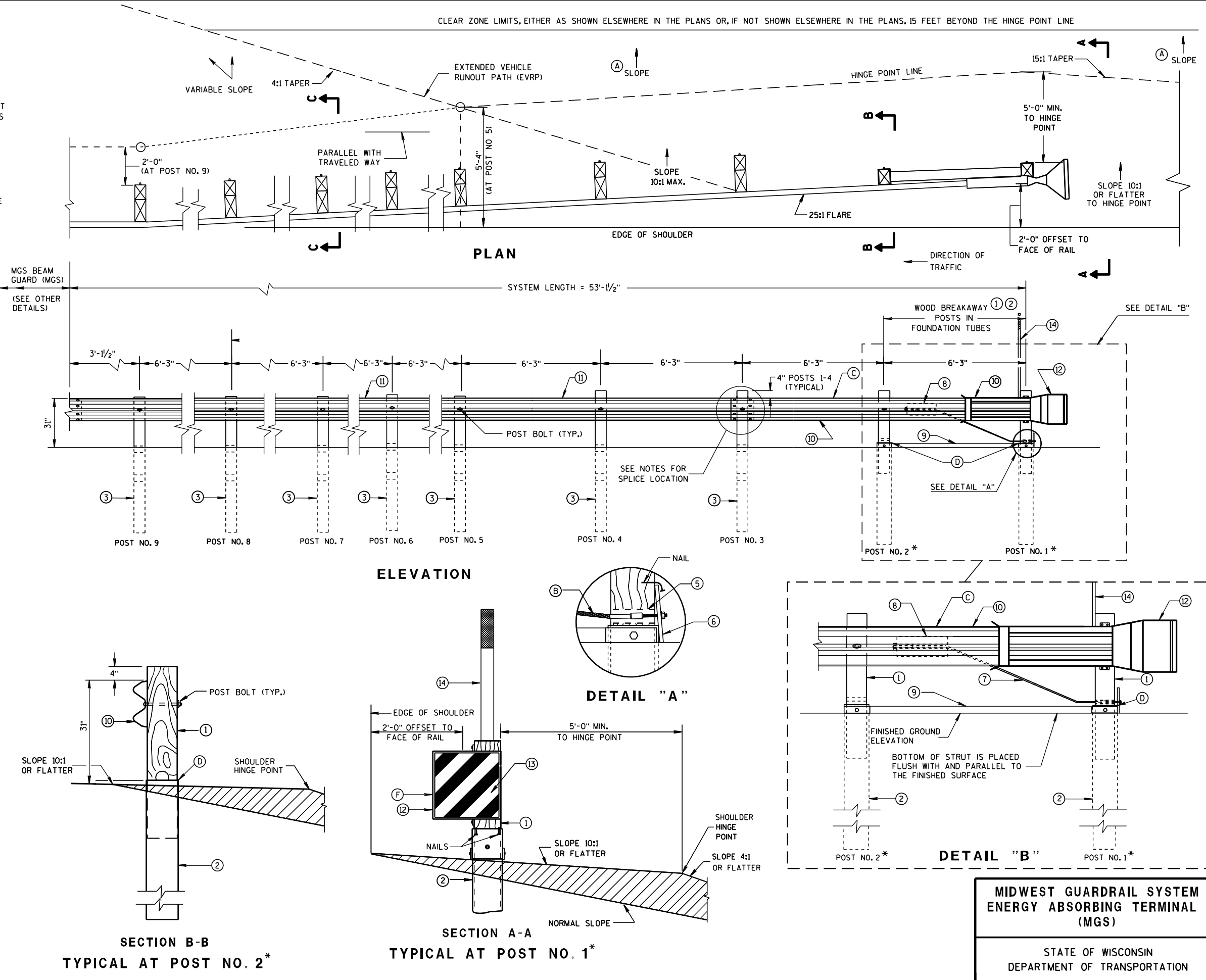
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

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.

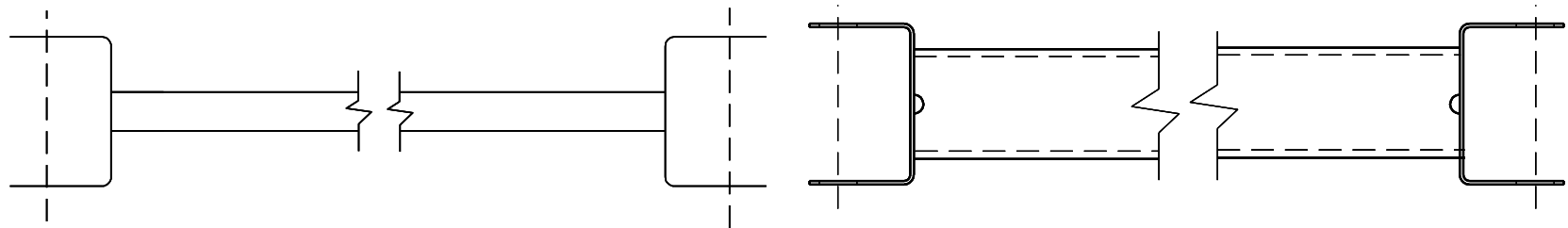
THE CENTER OF THE UPPER 3/2" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE ($\pm \frac{3}{4}$ ")



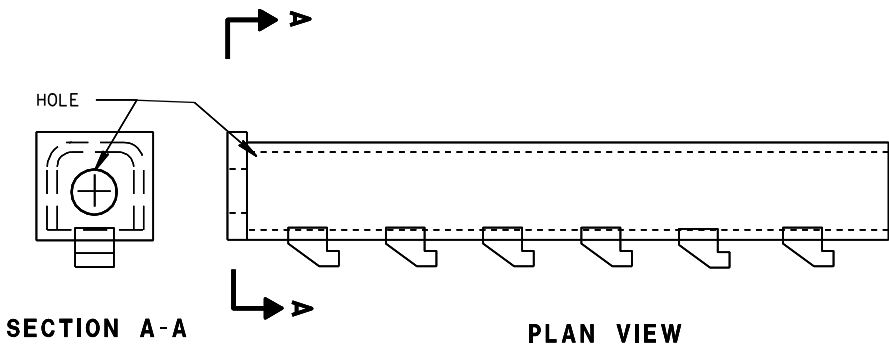
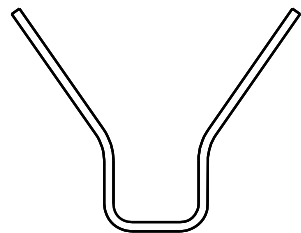
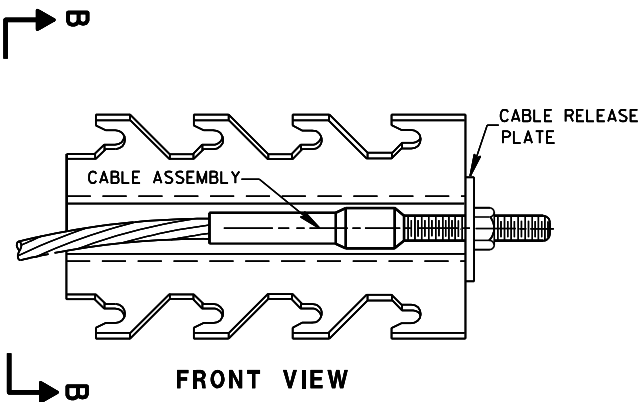
MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

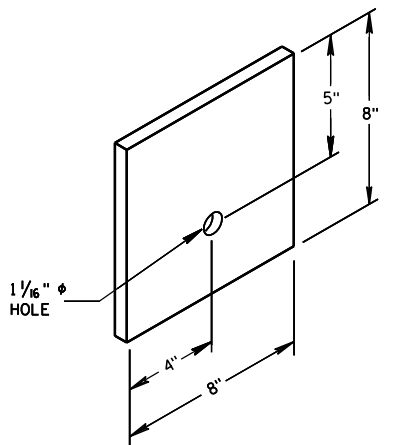
BILL OF MATERIALS	
PART NO.	DESCRIPTION
MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.	
①	WOOD BREAKAWAY POST
②	6" X 8" X 0.188", 6'-0" LONG FOUNDATION TUBE AT POSTS 1 AND 2
③	WOOD CRT
④	WOOD BLOCKOUT
⑤	PIPE SLEEVE
⑥	BEARING PLATE
⑦	BCT CABLE ASSEMBLY
⑧	ANCHOR 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)



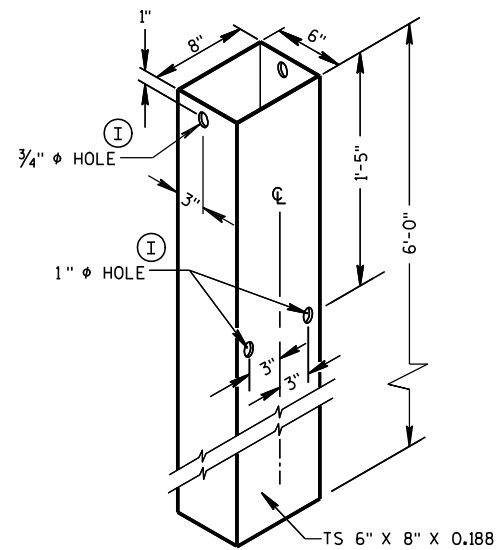
⑨ ⑨
GENERIC GROUND STRUT



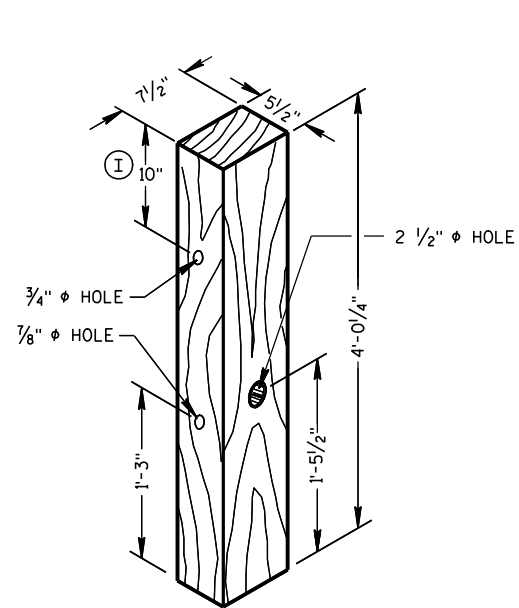
⑧ ⑧
GENERIC ANCHOR CABLE BOX



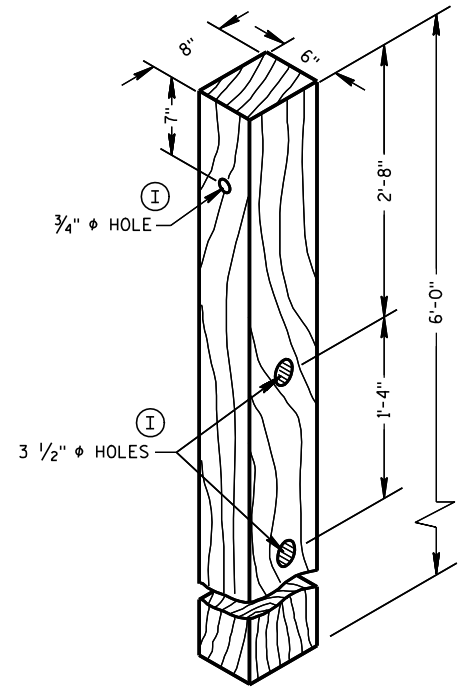
⑥
BEARING PLATE



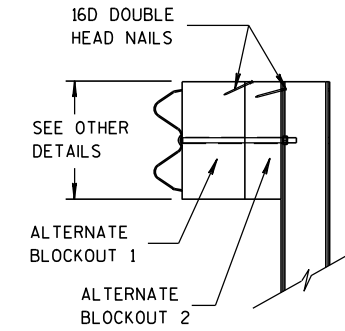
FOUNDATION TUBE ②



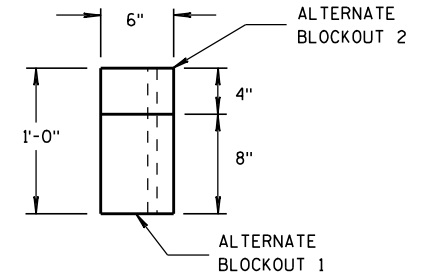
WOOD BREAKAWAY POST ①



WOOD CRT POST ③

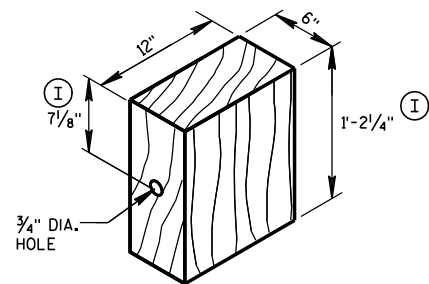


SIDE VIEW



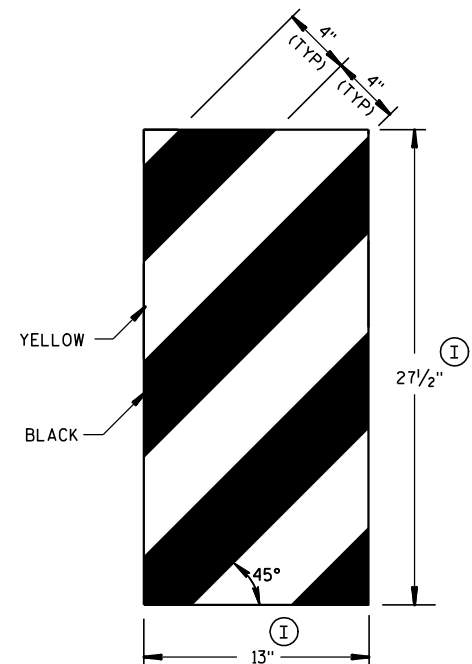
TOP VIEW

ALTERNATE WOOD
BLOCKOUT DETAIL

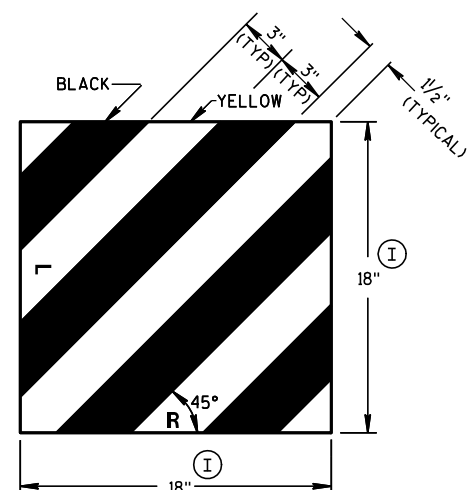


WOOD BLOCKOUT ④

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



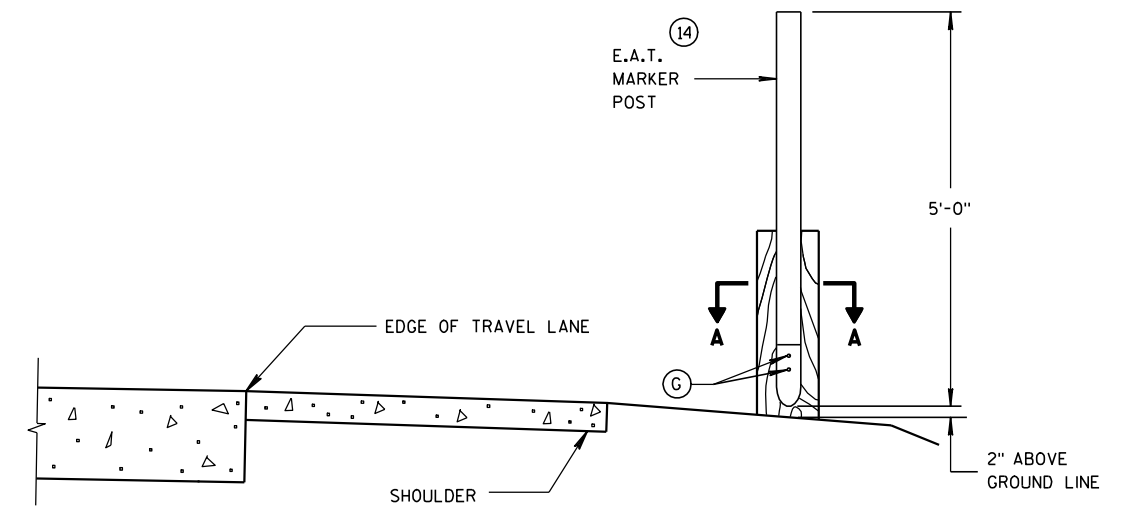
GENERIC REFLECTIVE SHEETING ⑬ ④



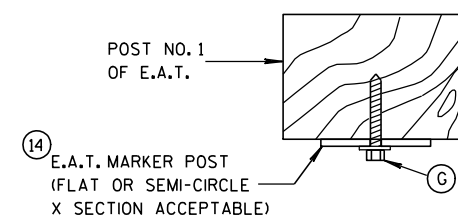
FRONT VIEW

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

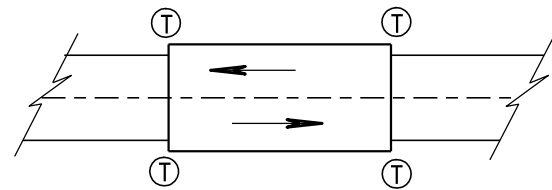
APPROVED

5/23/2011

DATE

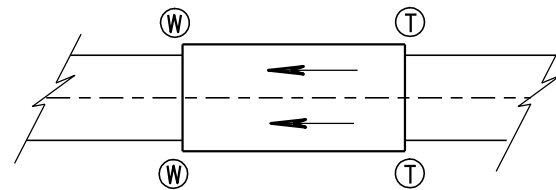
FHWA

/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".

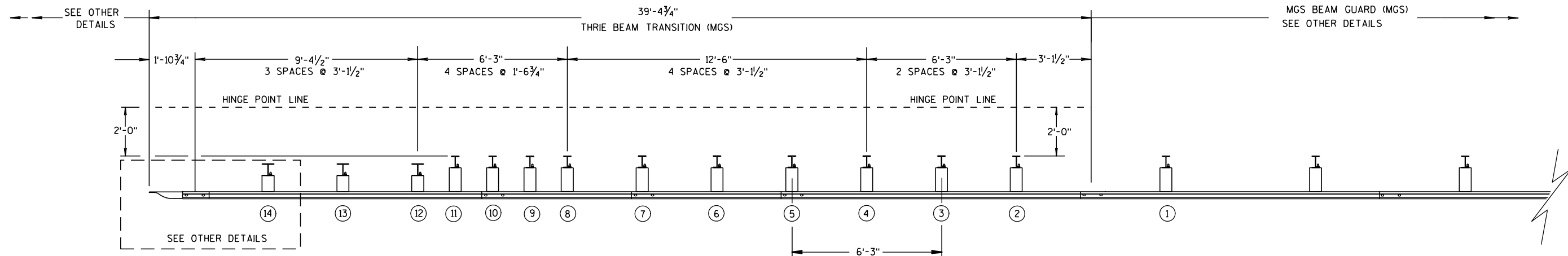
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2 1/2", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

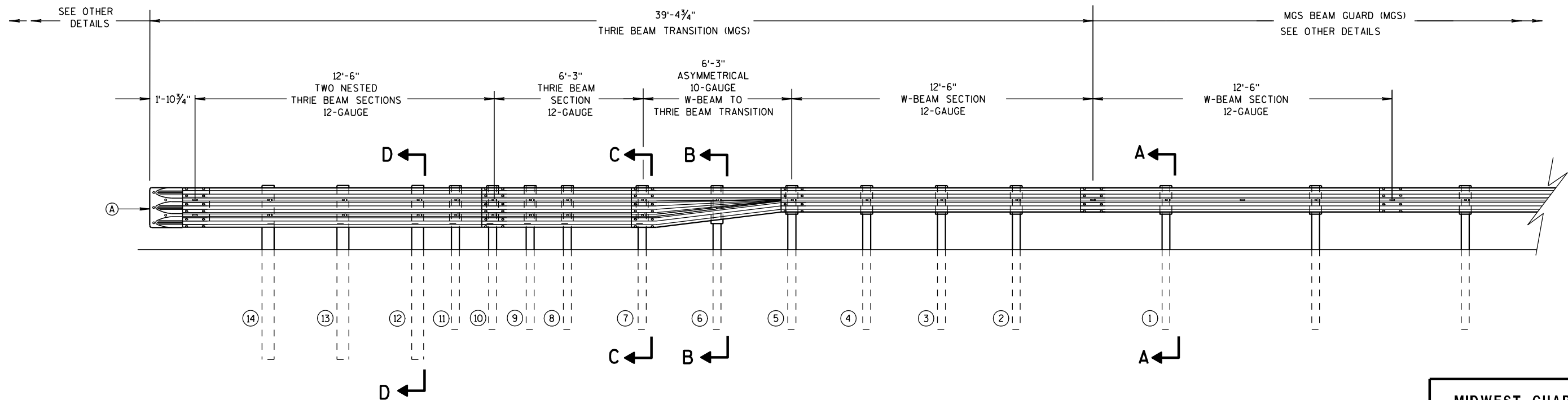
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

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

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



PLAN VIEW

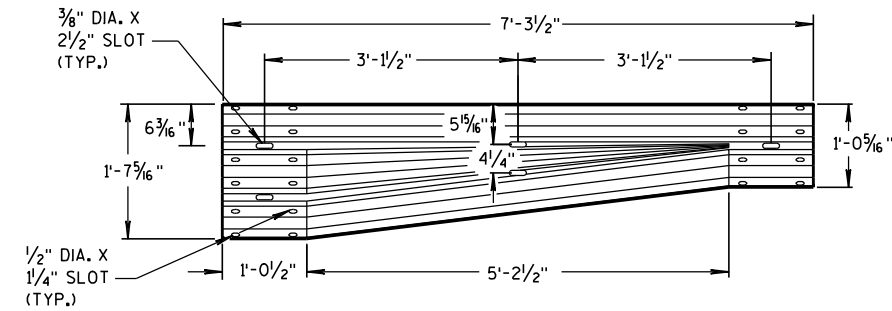


ELEVATION VIEW

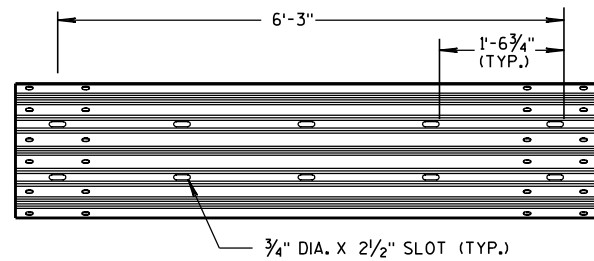
MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

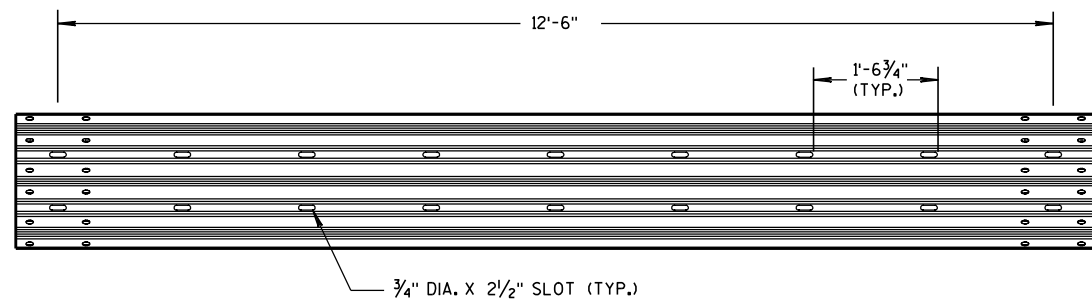
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



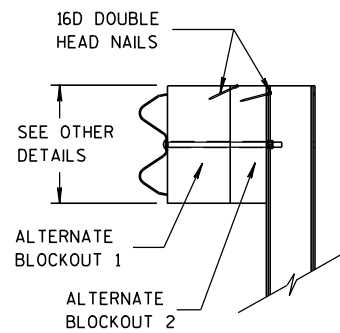
W-BEAM TO THRIE BEAM TRANSITION SECTION



6'-3" THRIE BEAM SECTION

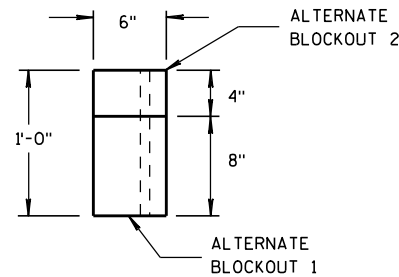


12'-6" THRIE BEAM SECTION

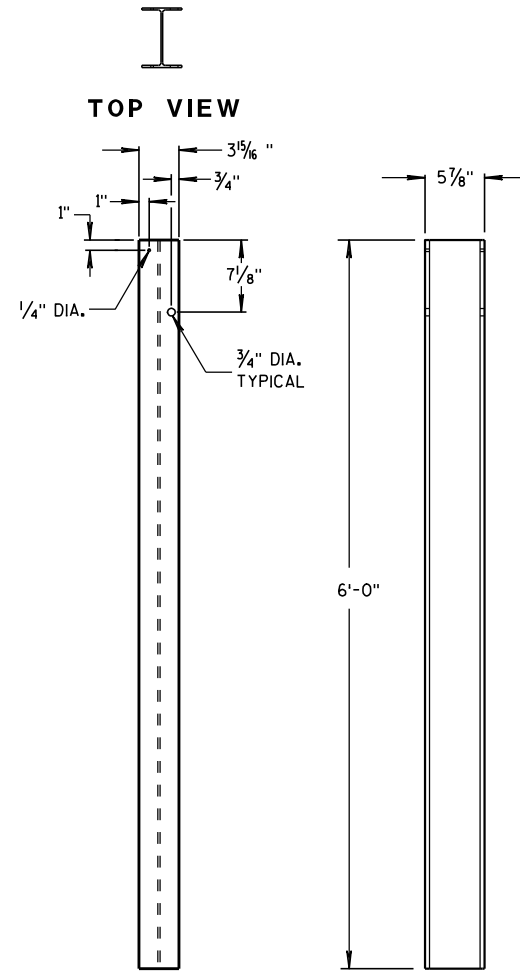


SIDE VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



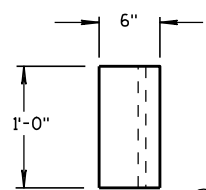
TOP VIEW



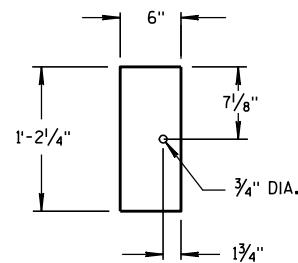
FRONT VIEW

SIDE VIEW

STEEL POSTS 1-5

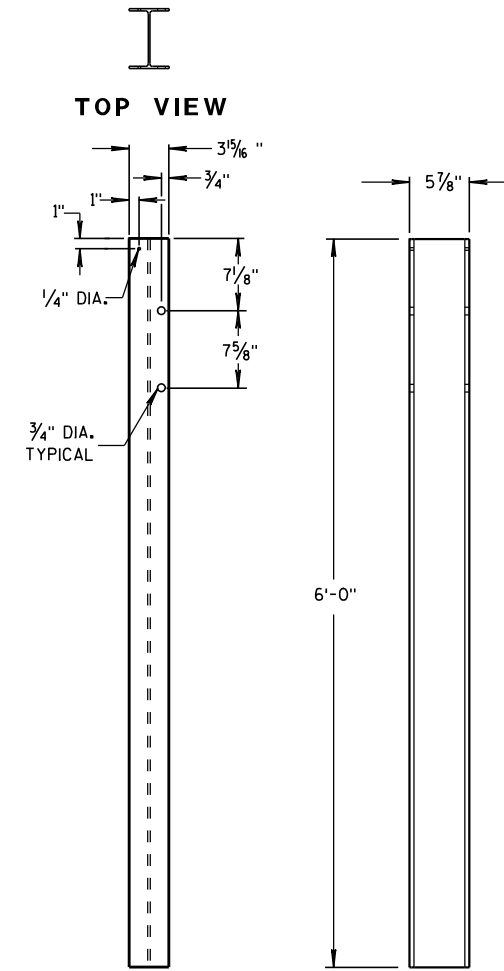


TOP VIEW



FRONT VIEW

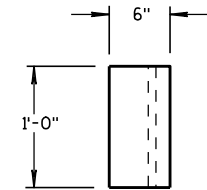
BLOCKOUT POSTS 1-5



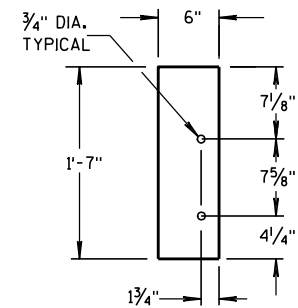
FRONT VIEW

SIDE VIEW

STEEL POSTS 6-11

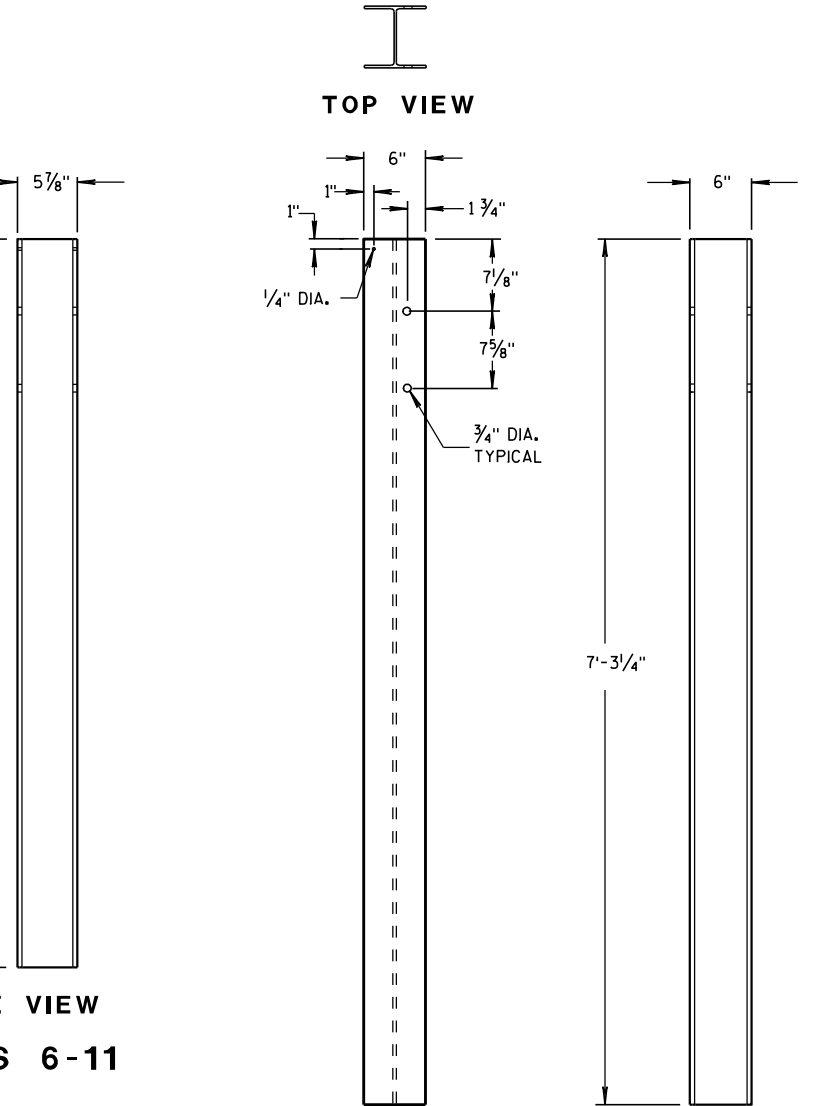


TOP VIEW



FRONT VIEW

BLOCKOUT POSTS 6-11



FRONT VIEW

SIDE VIEW

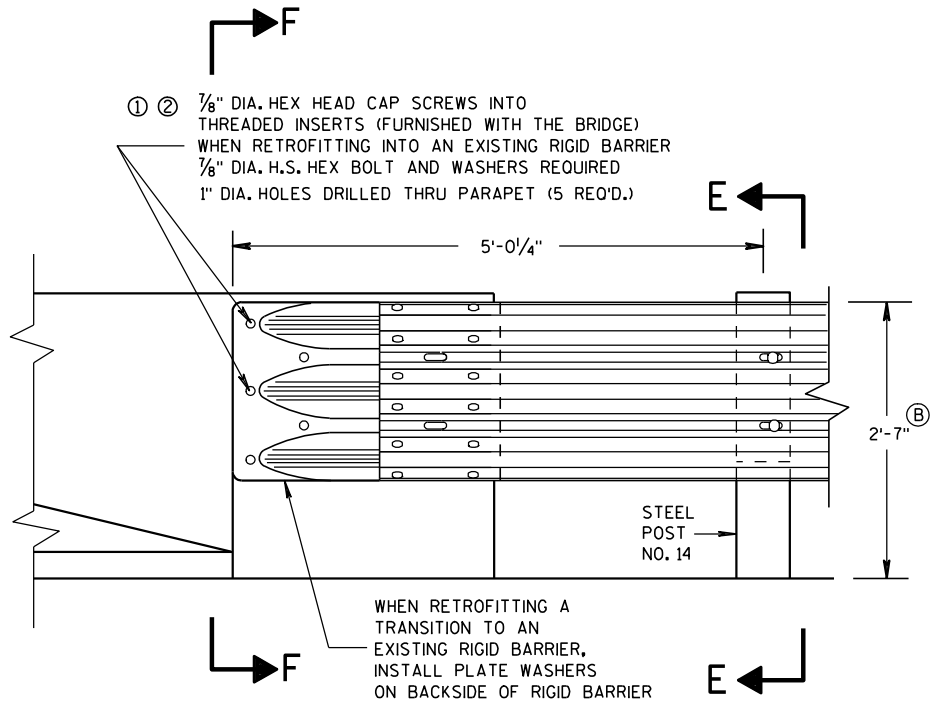
STEEL POSTS 12-14

STEEL POST SIZES

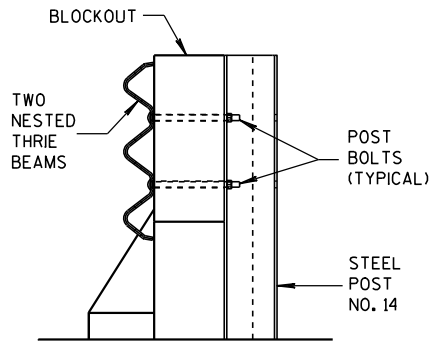
POST NUMBER	SECTION TYPE	LENGTH
①	W6x9	72"
②	W6x9	72"
③	W6x9	72"
④	W6x9	72"
⑤	W6x9	72"
⑥	W6x9	72"
⑦	W6x9	72"
⑧	W6x9	72"
⑨	W6x9	72"
⑩	W6x9	72"
⑪	W6x9	72"
⑫	W6x15	87 1/8"
⑬	W6x15	87 1/8"
⑭	W6x15	87 1/8"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



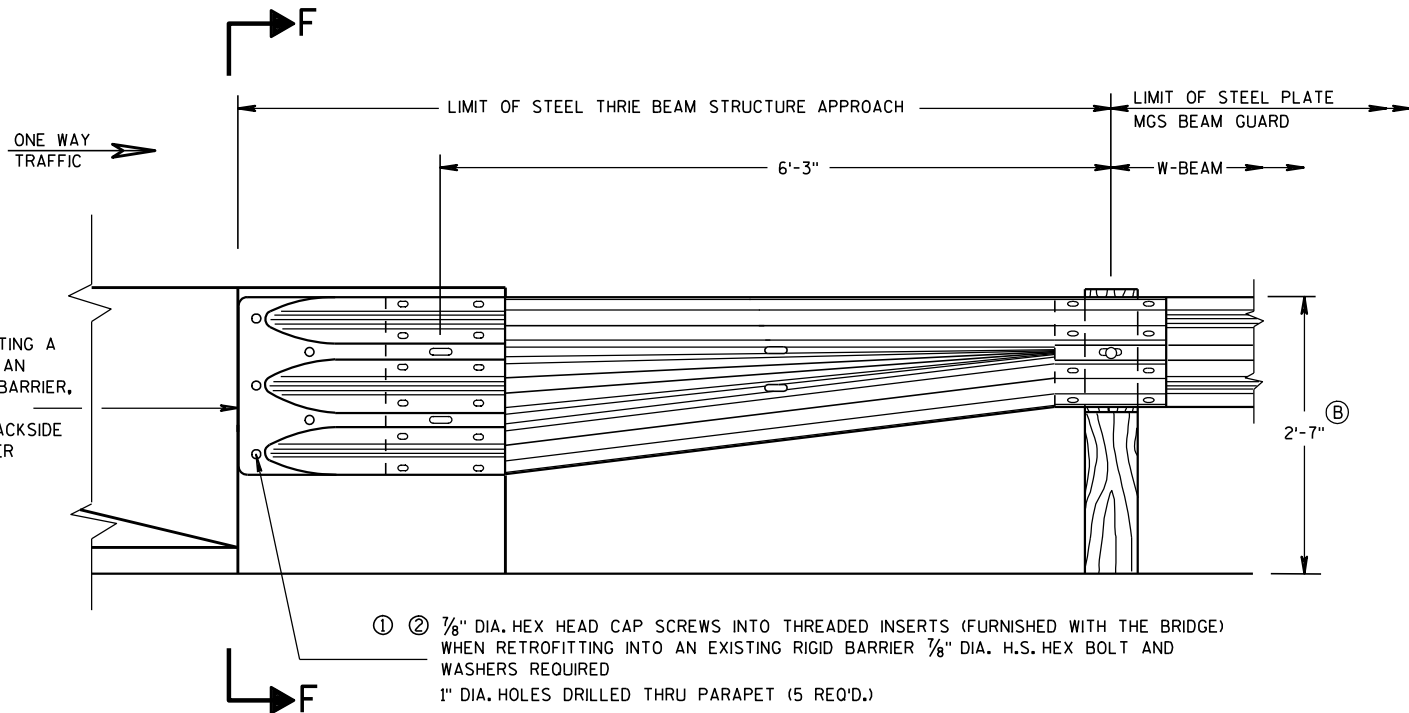
FRONT VIEW
THRIE BEAM CONNECTION TO BRIDGE
PARAPET WITH SQUARE ENDS



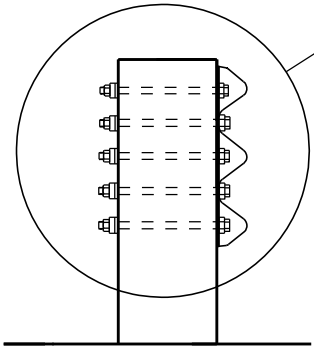
SECTION E-E

GENERAL NOTES

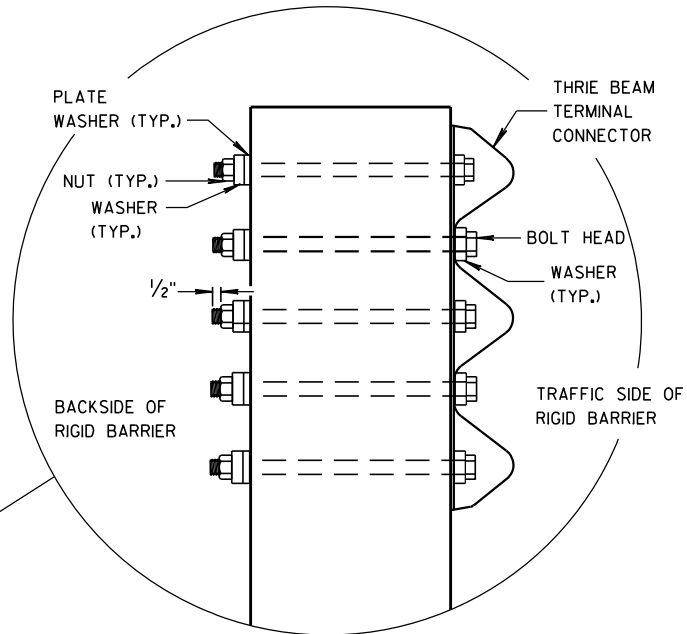
- THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.
- ① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
 - ② BOLTS MAY BE A325 BOLTS OR 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".
- ② TOLERANCE FOR TOP OF BEAM IS ± 1".



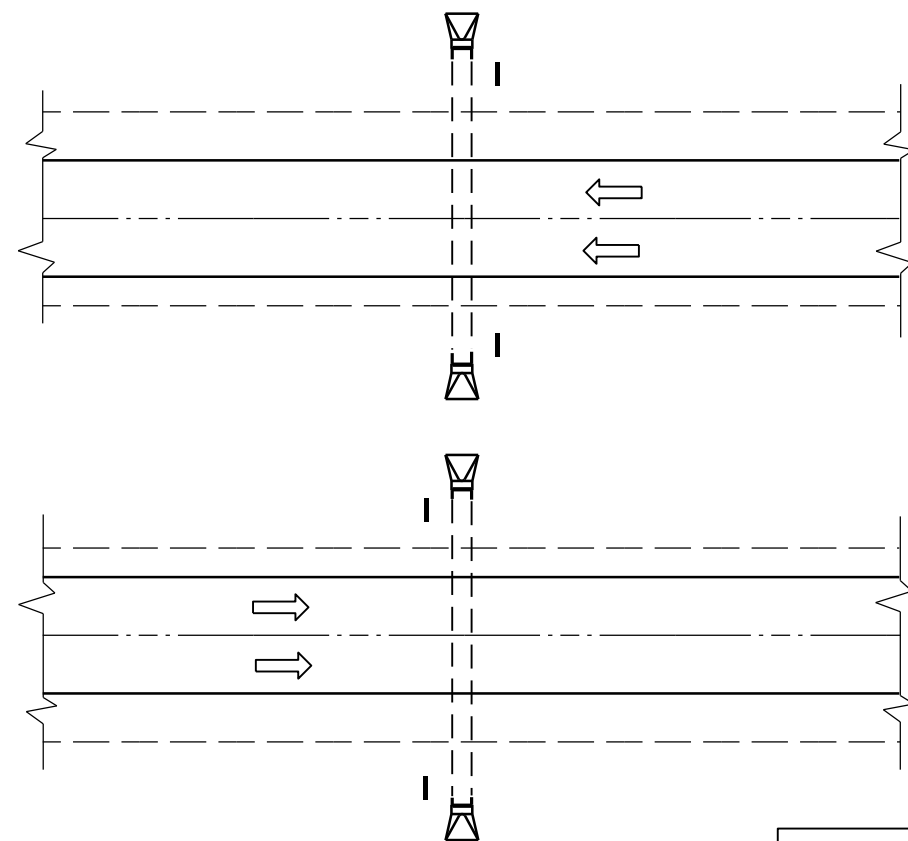
FRONT VIEW
W BEAM TRANSITION AND CONNECTION TO
BRIDGE PARAPETS WITH SQUARE ENDS
(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)



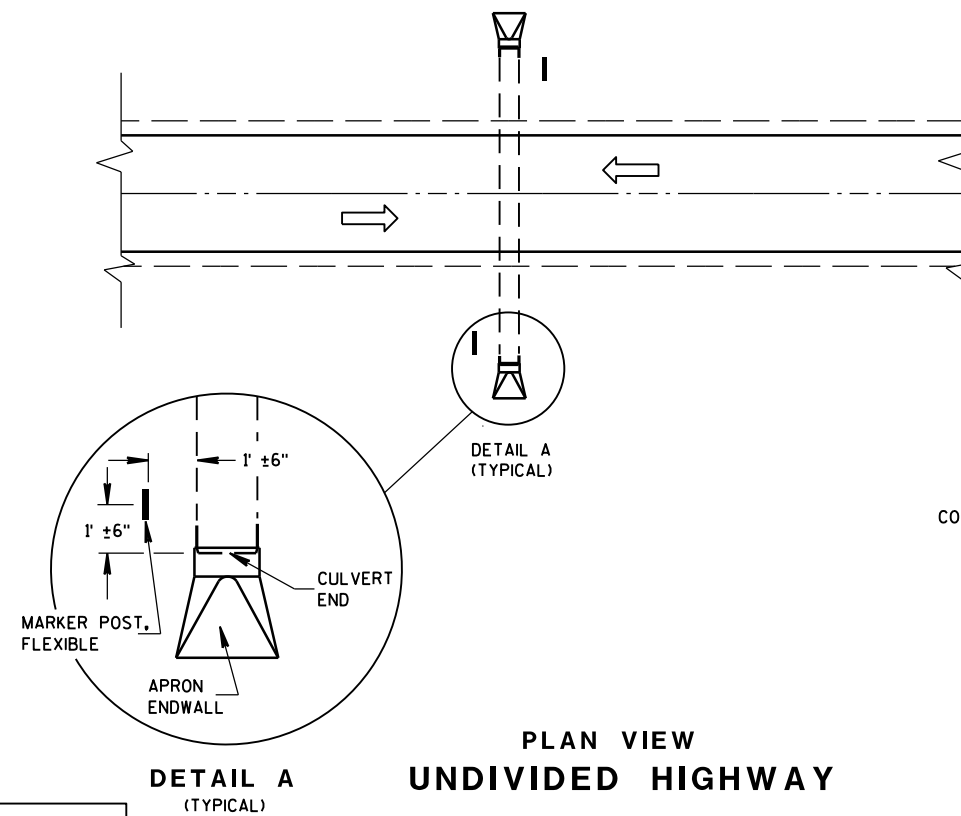
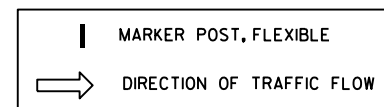
SECTION F-F



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	



PLAN VIEW
DIVIDED HIGHWAY

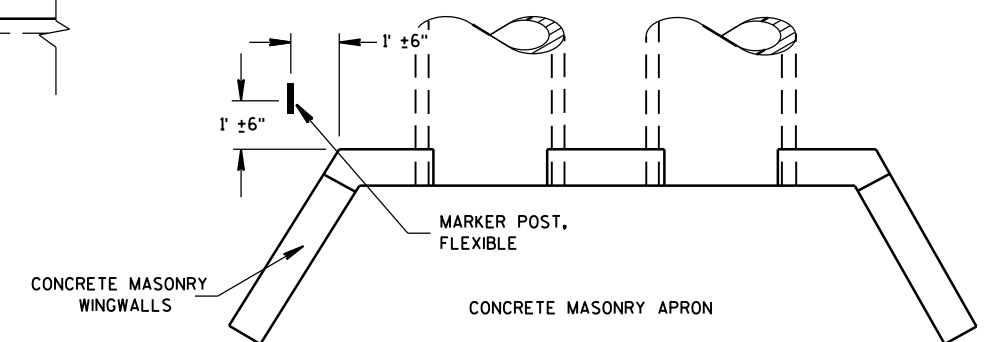


PLAN VIEW
UNDIVIDED HIGHWAY

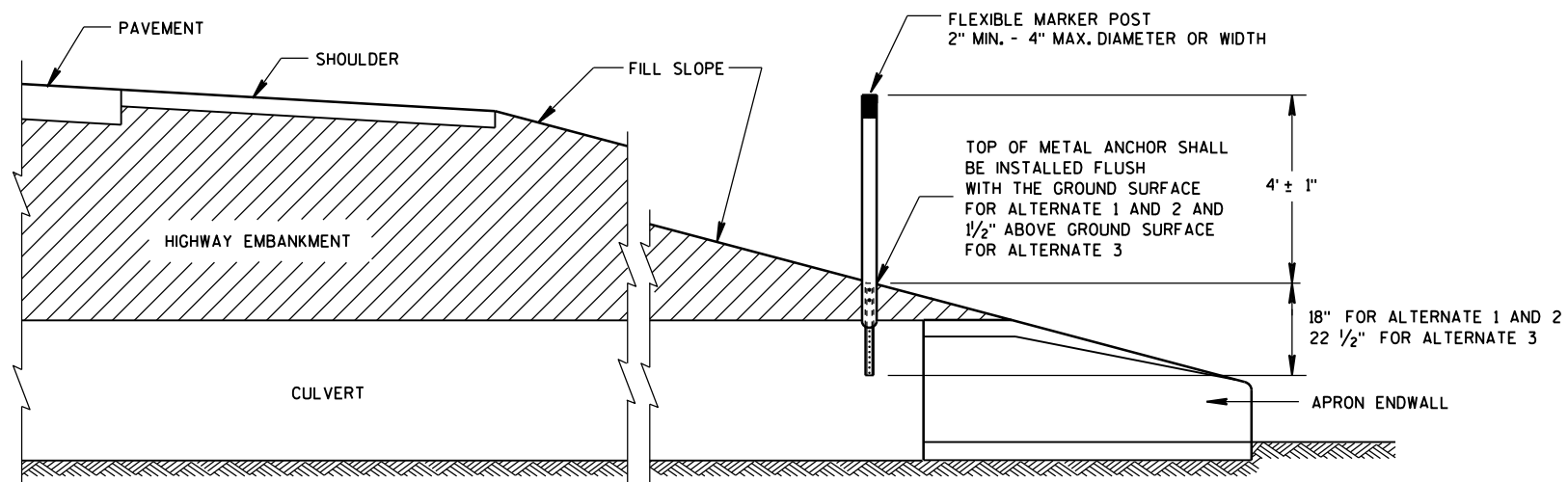
FLEXIBLE MARKER POST LOCATION

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.



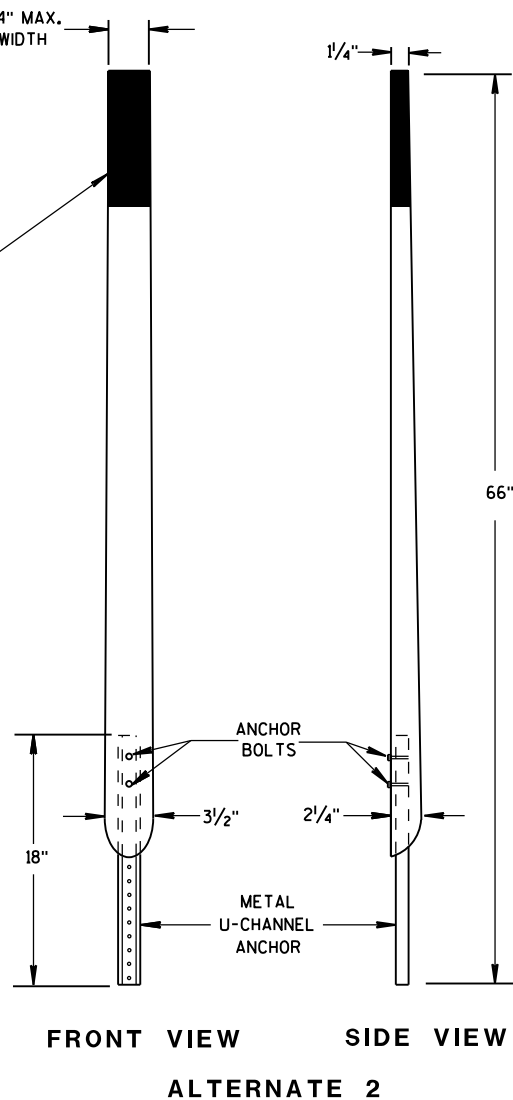
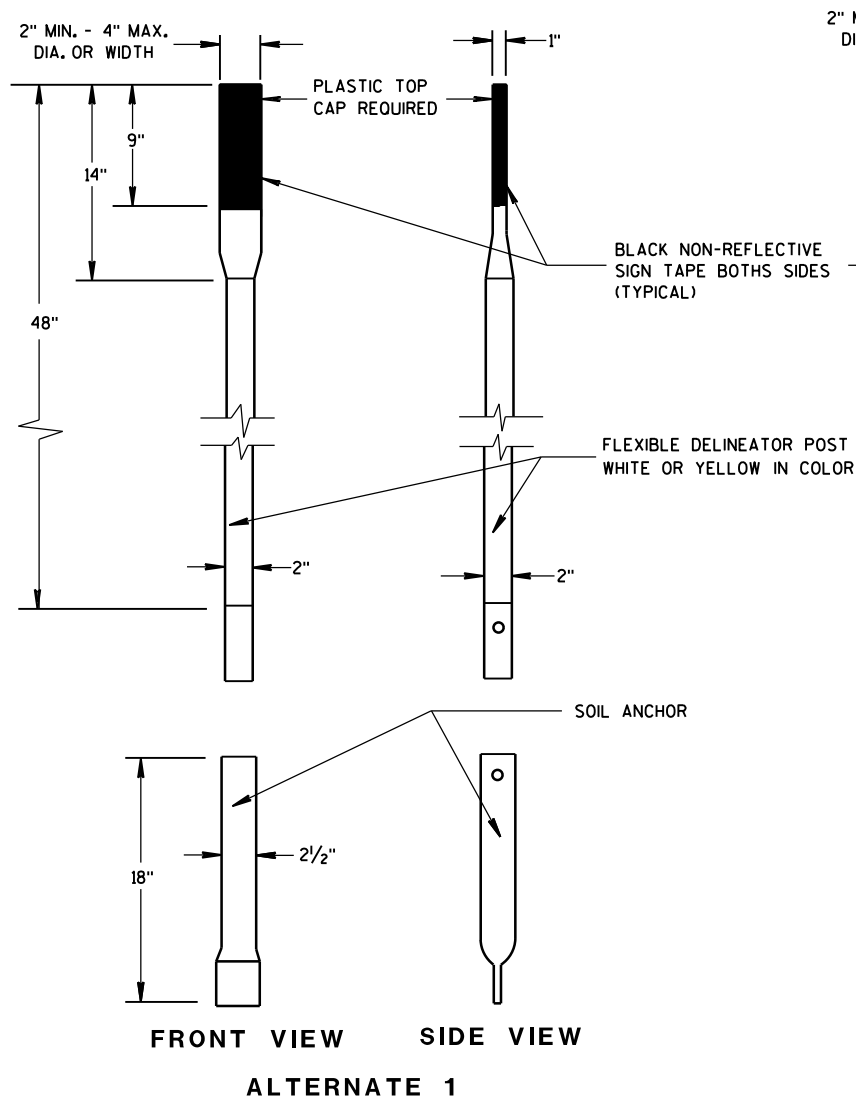
PLAN VIEW
CONCRETE MASONRY ENDWALLS FOR
CULVERT PIPE AND PIPE ARCH



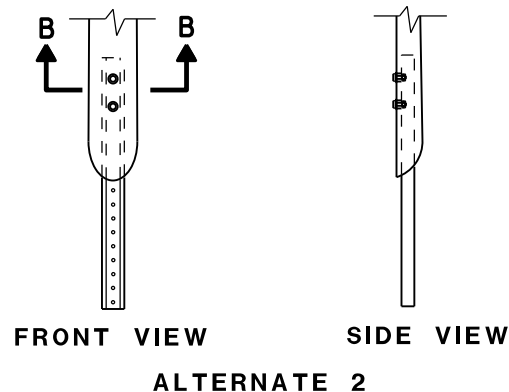
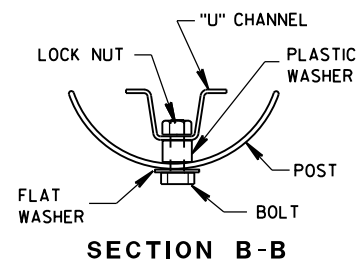
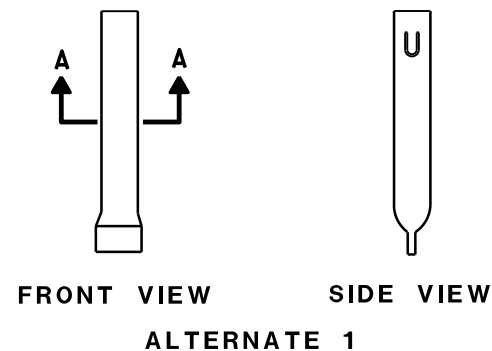
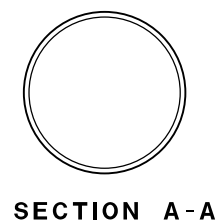
CROSS SECTION
FLEXIBLE MARKER POST

FLEXIBLE MARKER POST
FOR CULVERT END

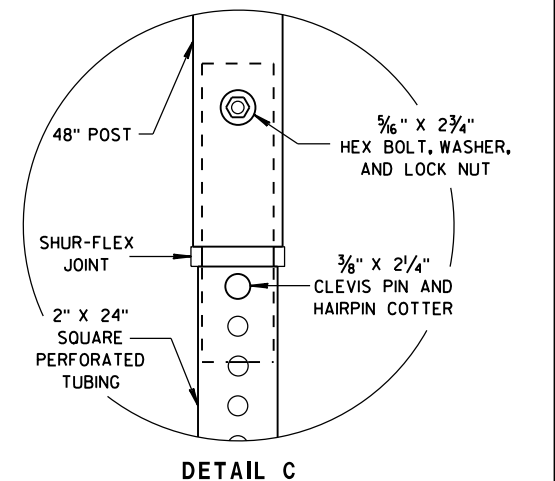
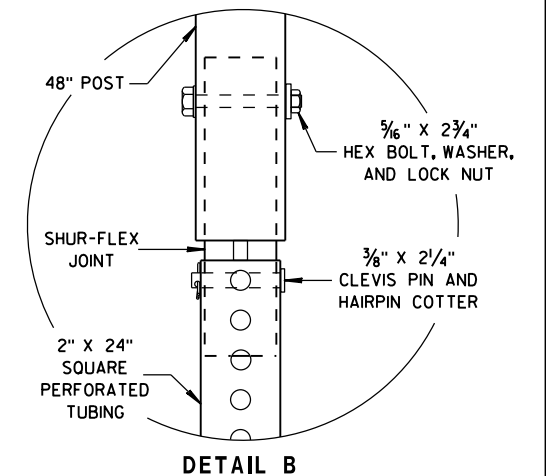
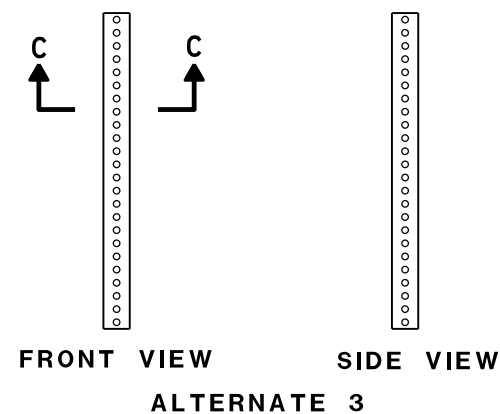
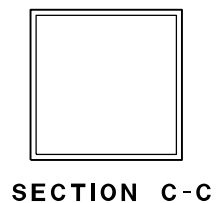
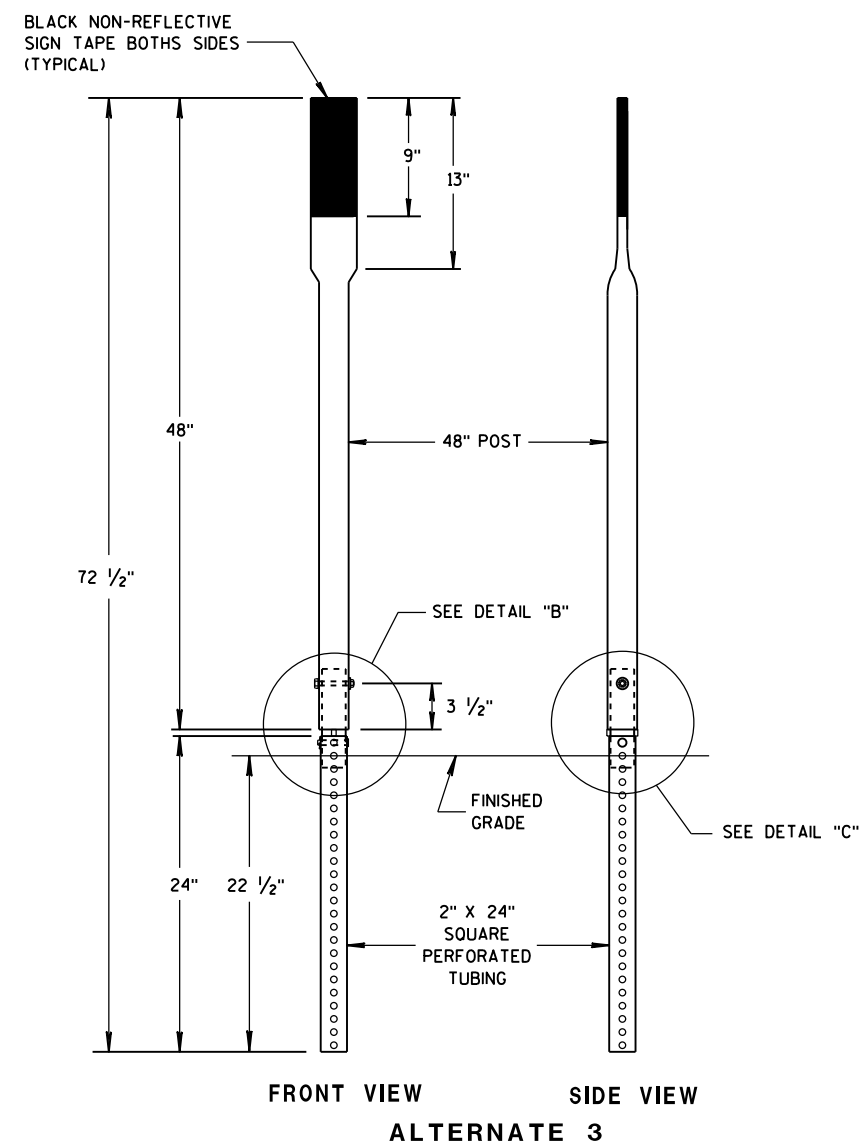
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



FLEXIBLE MARKER POSTS



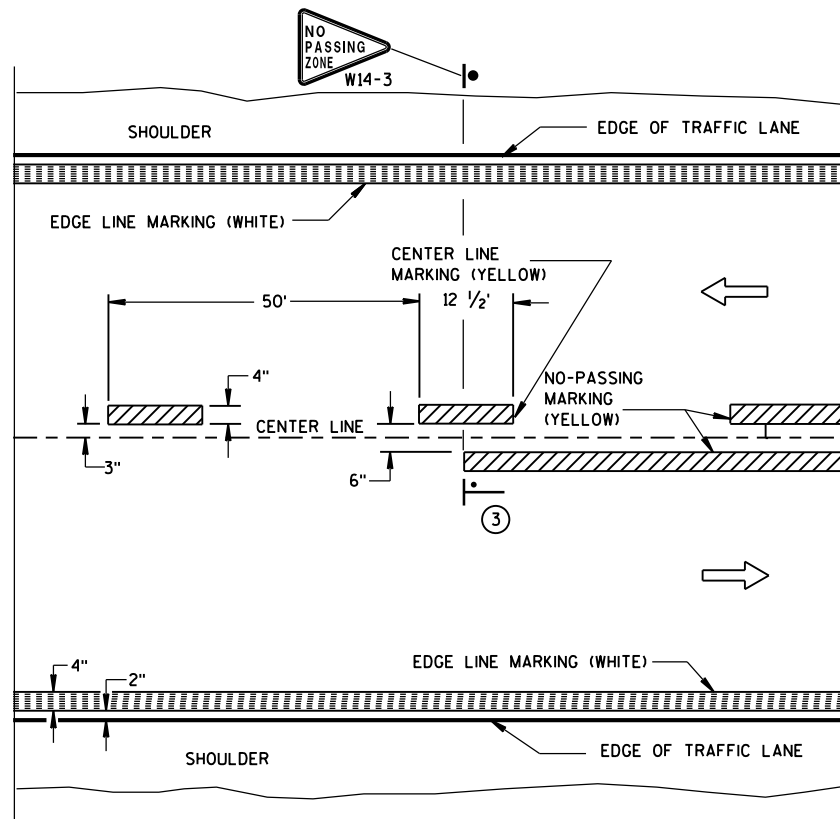
FLEXIBLE MARKER POST ANCHORS



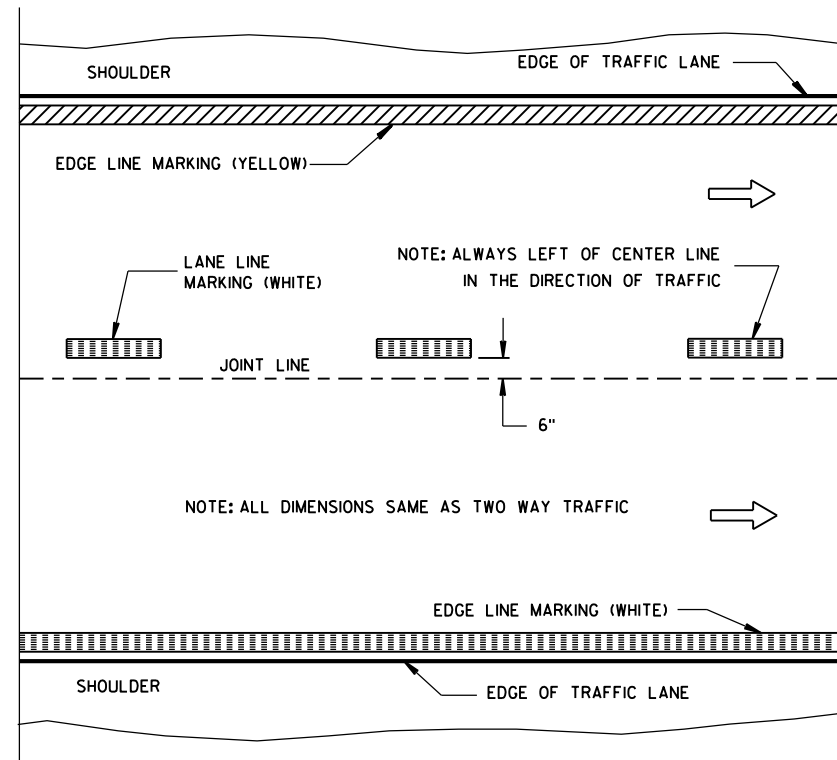
FLEXIBLE MARKER POST FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

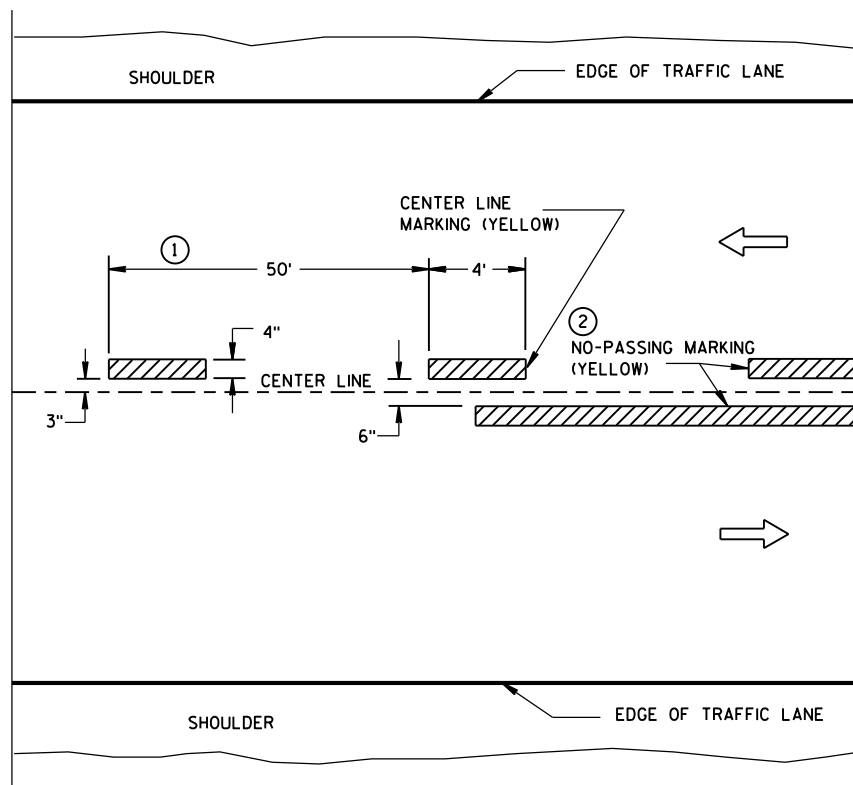


TWO WAY TRAFFIC

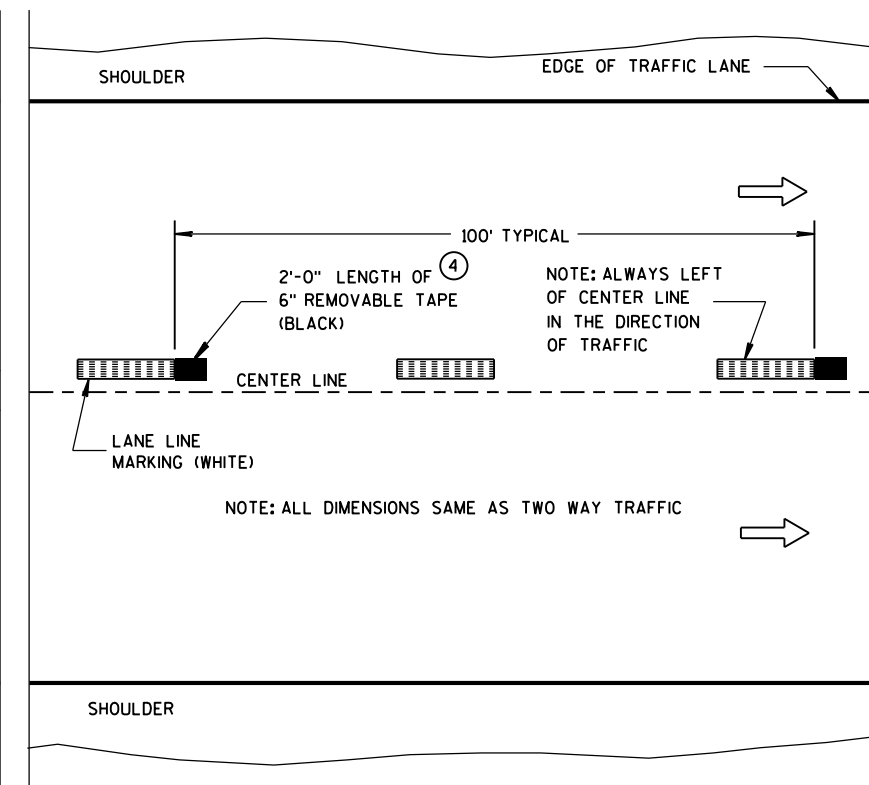


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

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

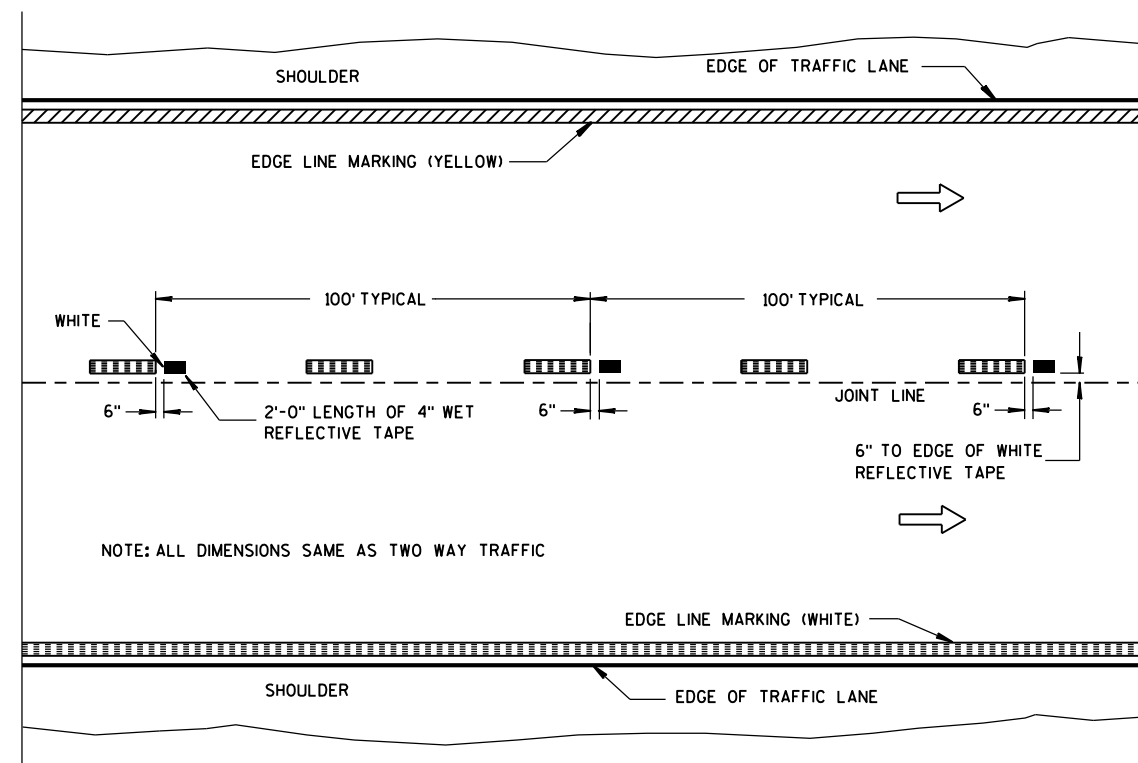
GENERAL NOTES

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

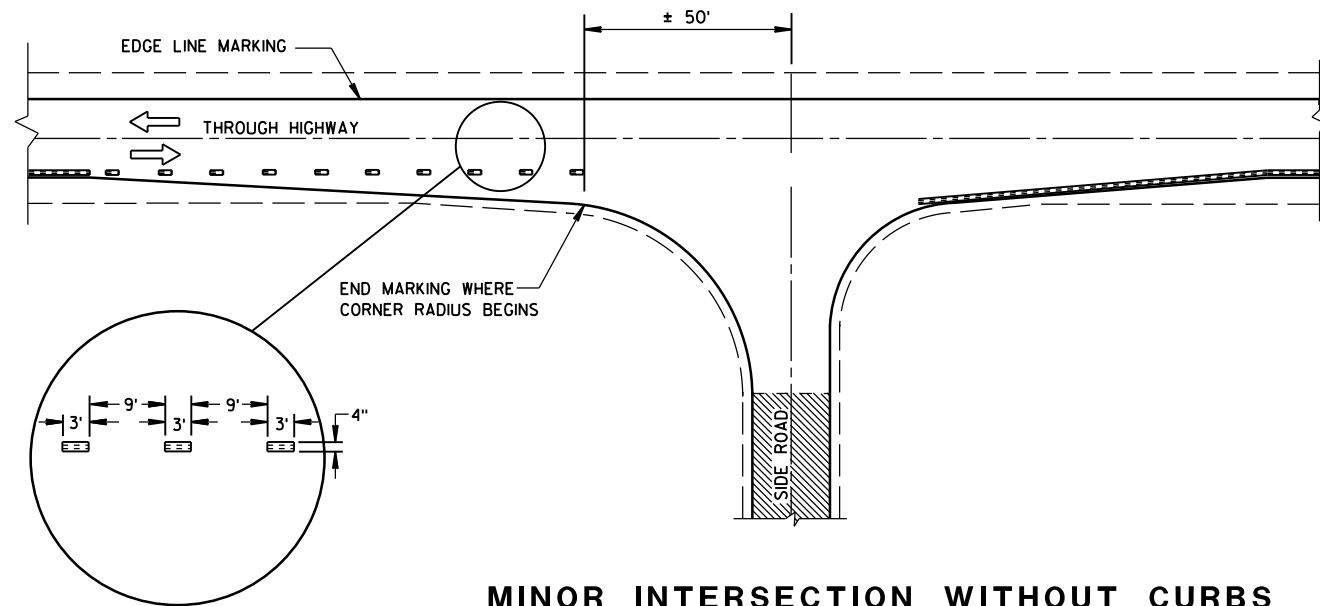
LEGEND

- "T" MARKING
- POST MOUNTED SIGN

PAVEMENT MARKING
(MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

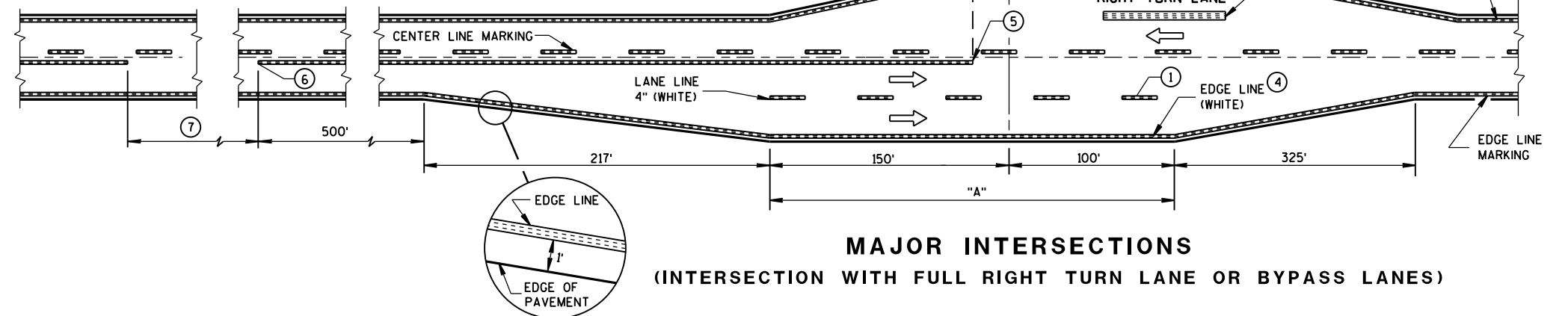
APPROVED
10-1-2012 /S/ Travis Feltes
DATE STATE TRAFFIC ENGINEER OF DESIGN
FHWA



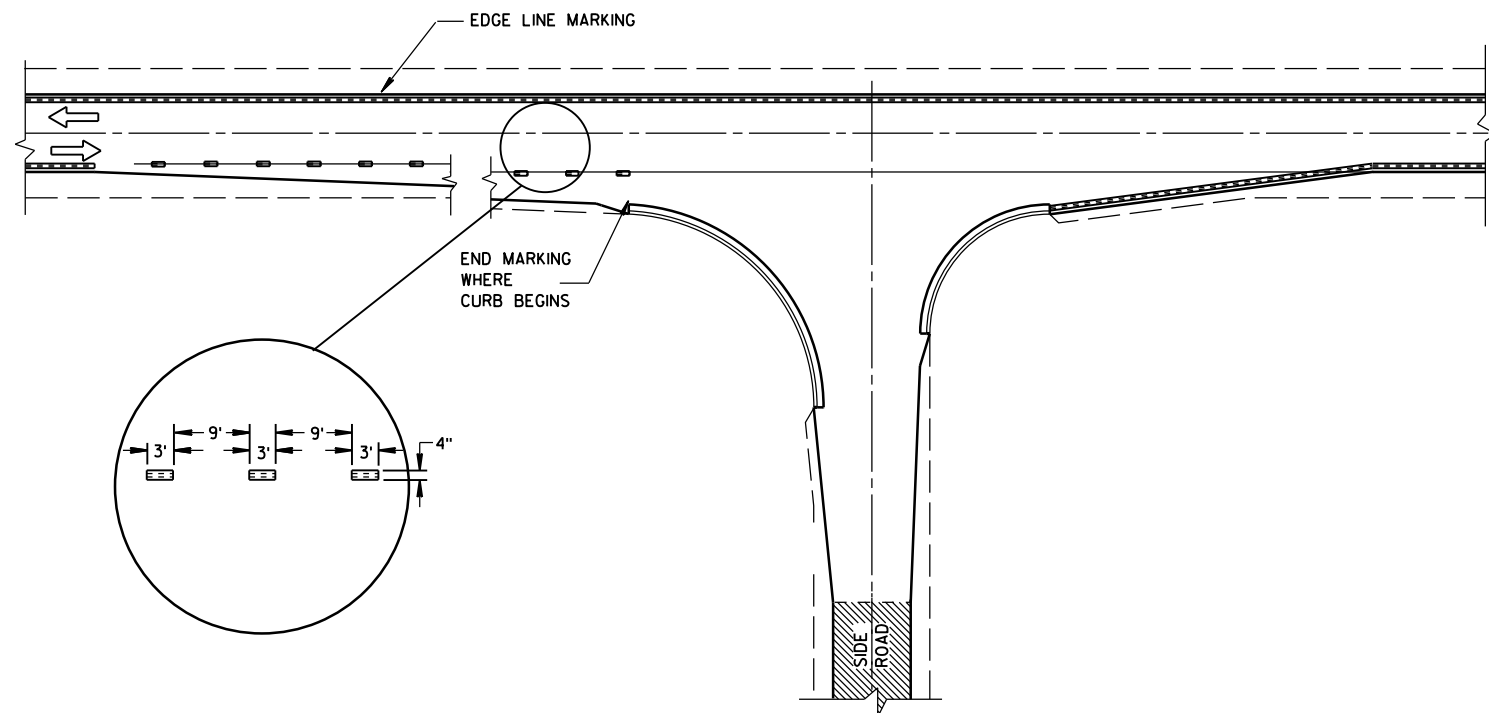
MINOR INTERSECTION WITHOUT CURBS

⑦

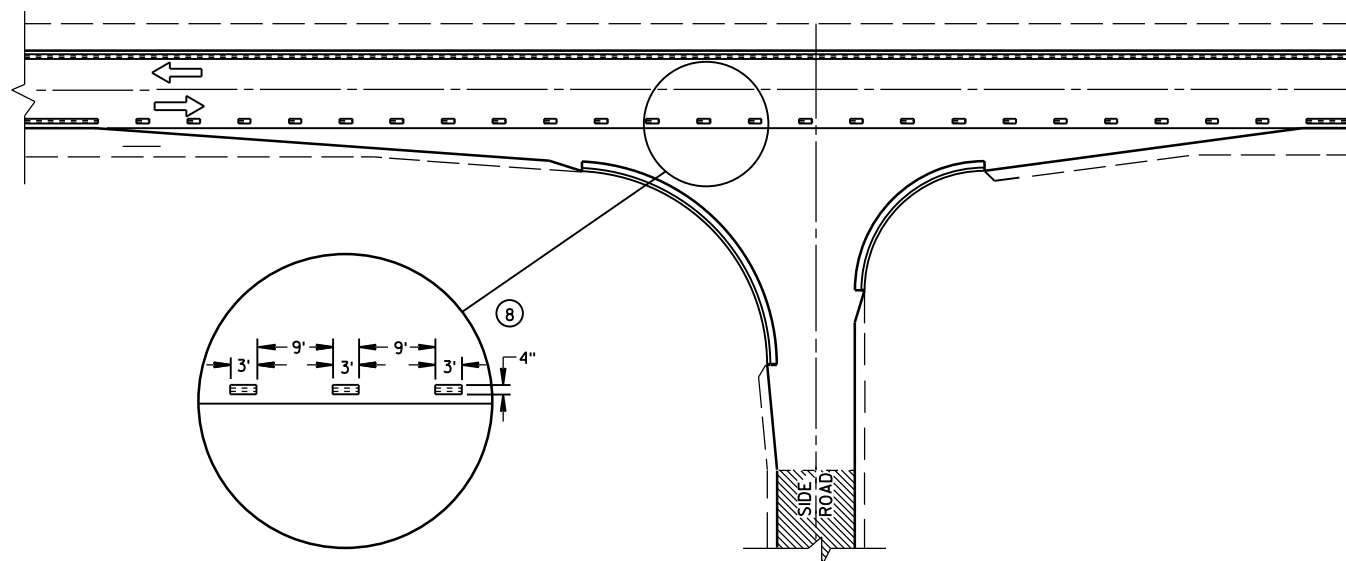
POSTED SPEED (MPH)	MINIMUM DISTANCE BETWEEN ZONES (FEET)
25 - 30	528
35 - 40	528
45 - 50	686
55	792



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



MINOR INTERSECTION WITH CURBS
(TYPICAL MARKING)



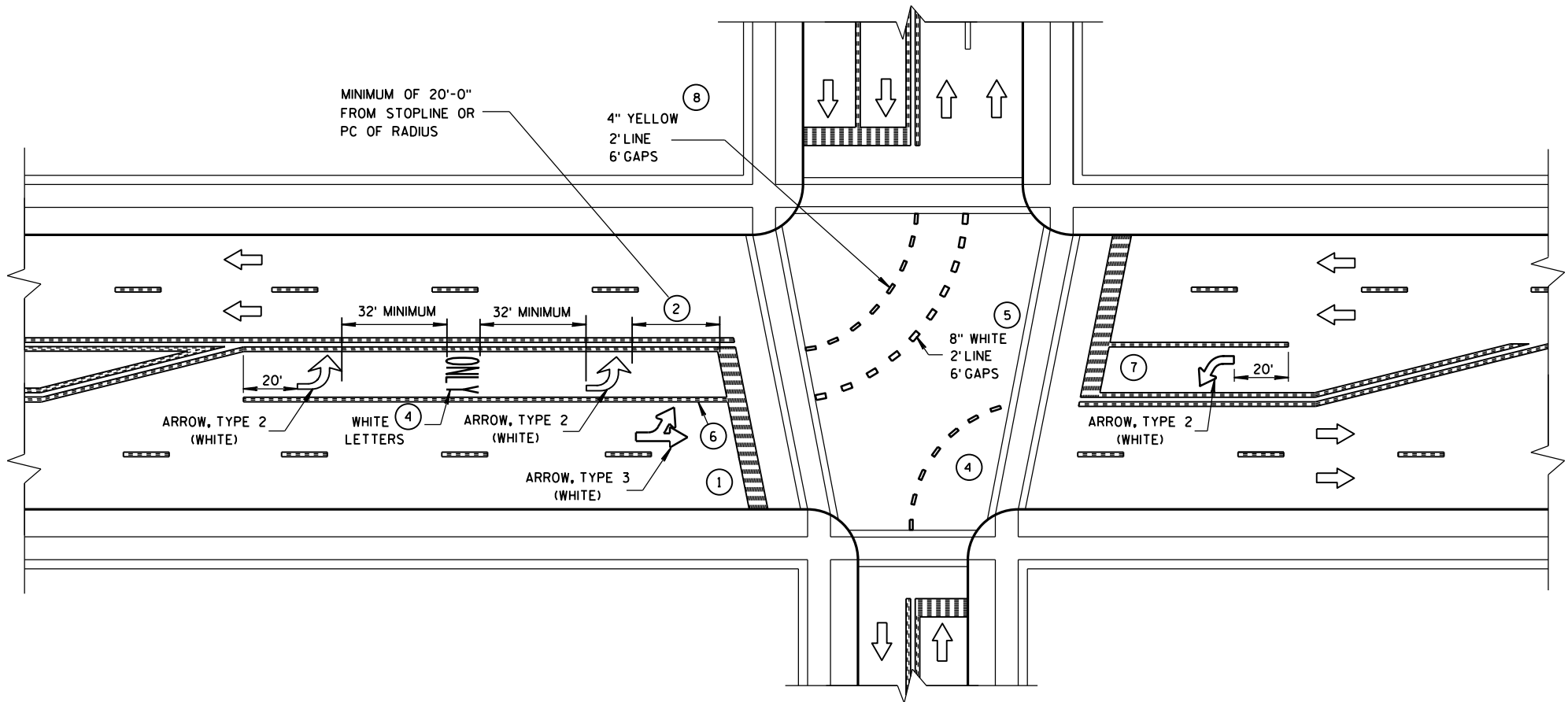
MINOR INTERSECTION WITH CURBS
③ (FOR SPECIAL CONDITIONS AS SPECIFIED)

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)

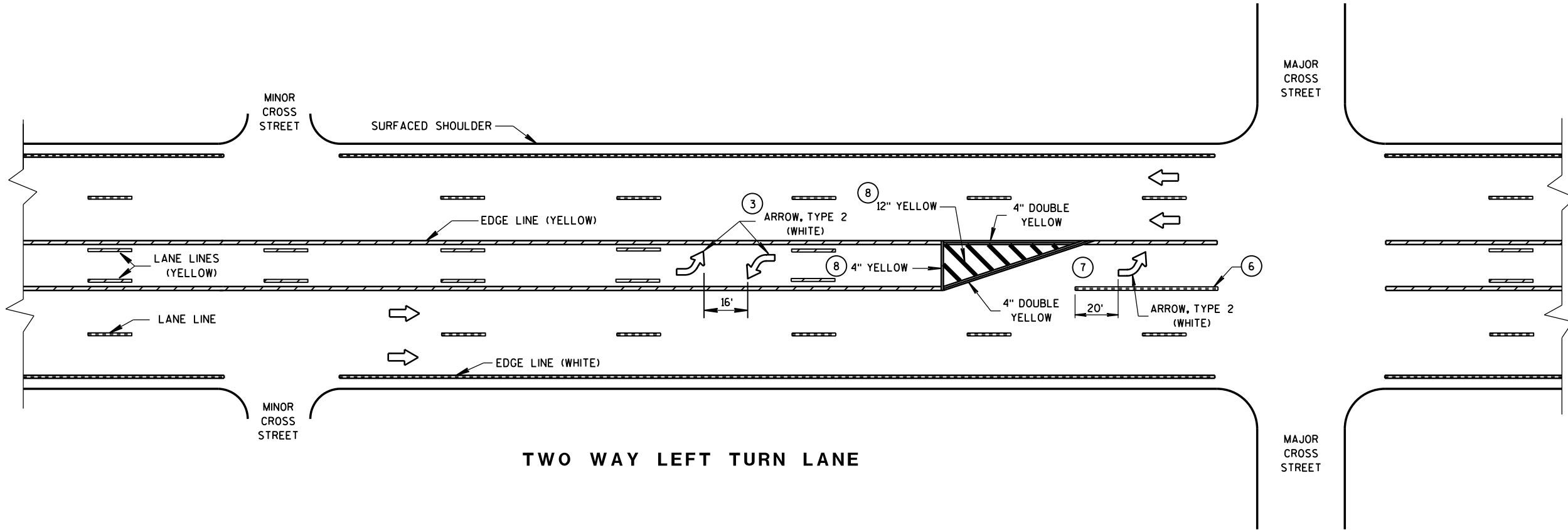
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



GENERAL NOTES

- ① STOP BAR IS REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.
- ② DISTANCE MAY BE ADJUSTED TO ACCOMODATE SHORT LEFT TURN LANES. AS APPROVED BY THE ENGINEER.
- ③ A SET OF ARROWS IS REQUIRED EVERY 400' OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
- ④ ADD EXTRA ARROW AND ONLY PER 160' OR WHEN ON A CURVE.
- ⑤ 8" WHITE WITH 2' LINE 6' GAPS FOR DUAL TURN LANE.
- ⑥ 8" WHITE
- ⑦ ADD SECOND ARROW WHEN TURN BAY IS GREATER THAN OR EQUAL TO 108'.
- ⑧ REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.

NOTE:
ARROW SYMBOL (➡)
SHOWS DIRECTION OF TRAVEL



TWO WAY LEFT TURN LANE

PAVEMENT MARKING (LEFT TURN LANE)
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

BE
PREPARED
TO STOP

W3-4

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

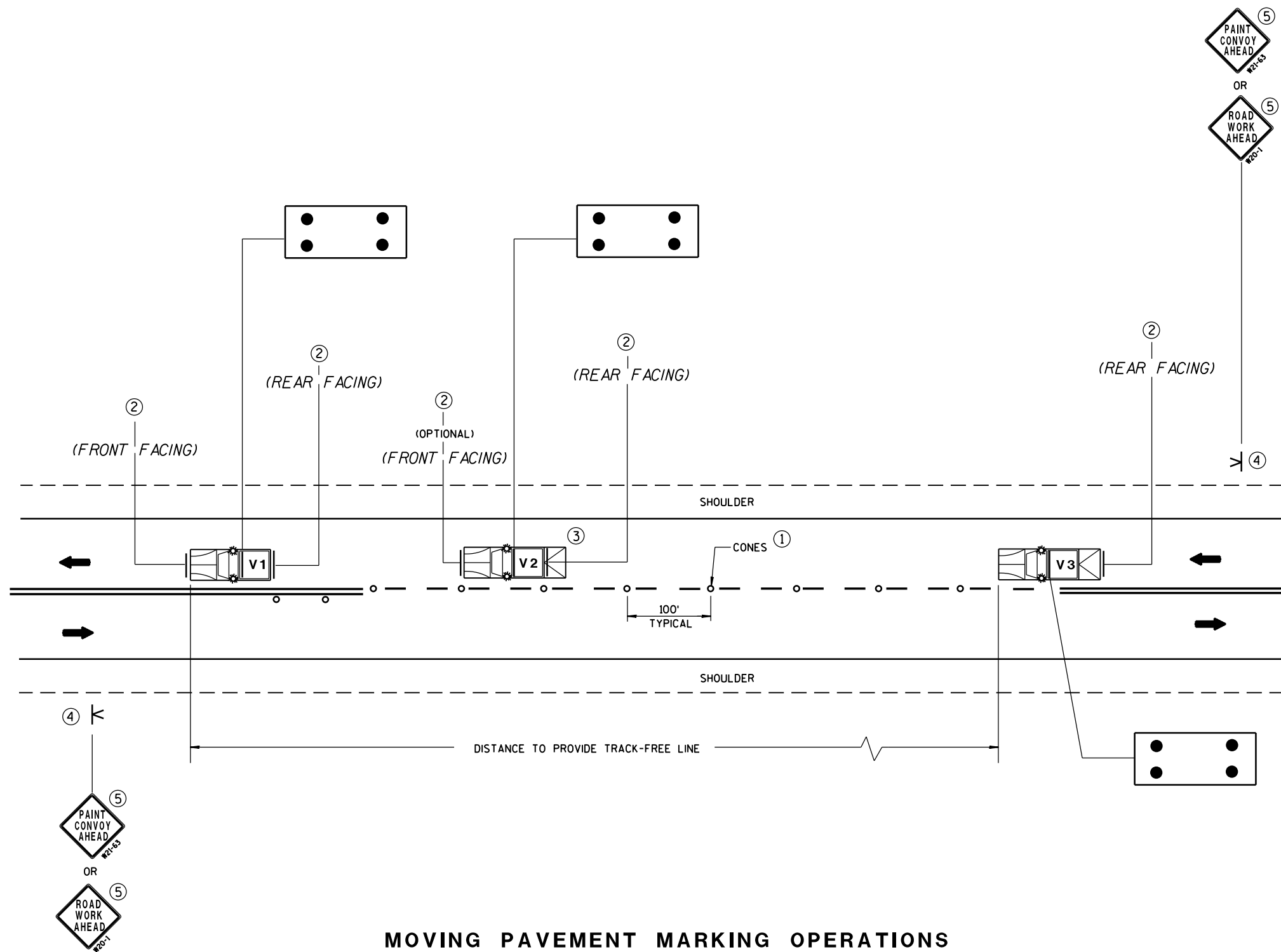
FHWA

6

6

S.D.D. 15 C 12-3

S.D.D. 15 C 12-3



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 EDGE LINE 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

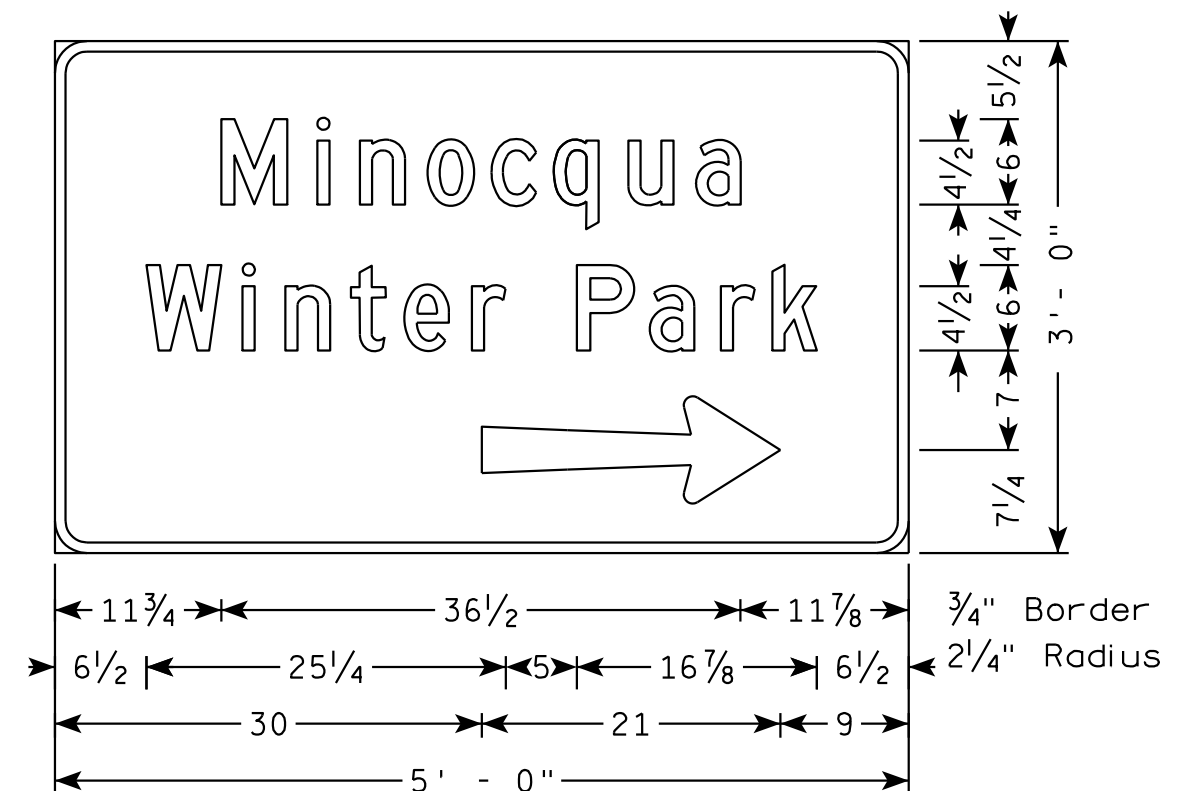
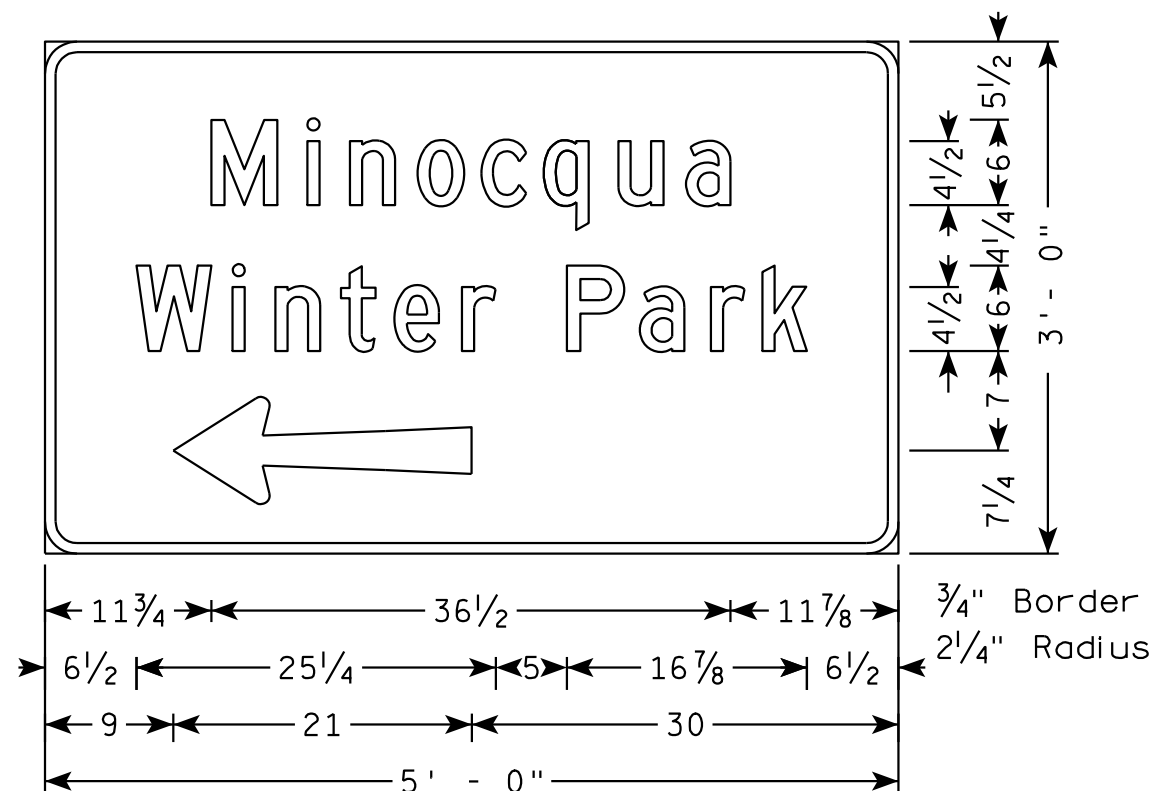
12/6/2011
DATE

FHWA

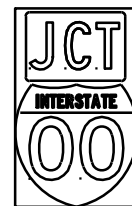
/S/ Thomas N. Notbohm
STATE TRAFFIC ENGINEER OF DESIGN

NOTES

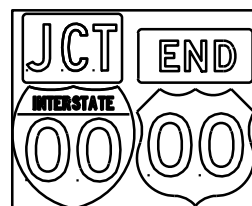
1. All Signs - Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Brown
Message - White
3. Message Series - D



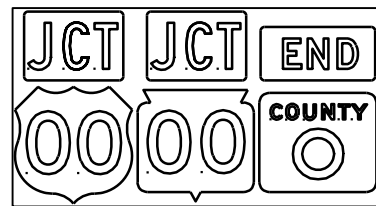
TYPICAL ASSEMBLIES



J1-1



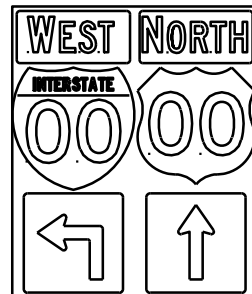
J1-2



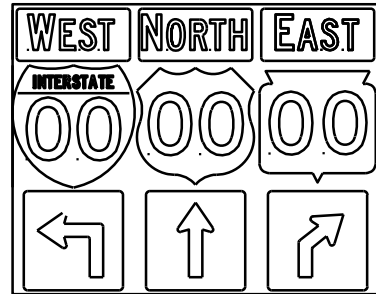
J1-3



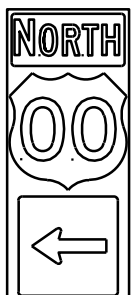
J2-1



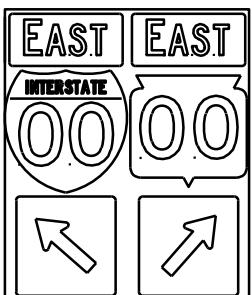
J2-2



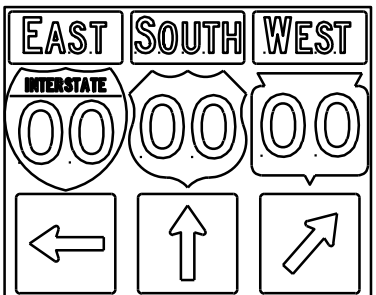
J2-3



J3-1



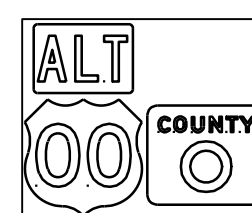
J3-2



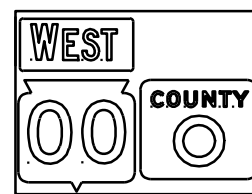
J3-3



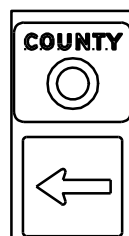
J4-1



J4-2



J4-2



J13-1



J12-1



J32-1



J33-1



J23-1



J22-1

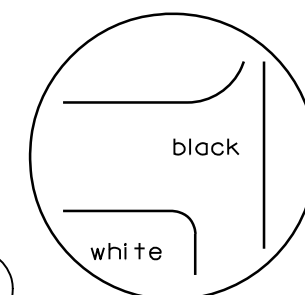
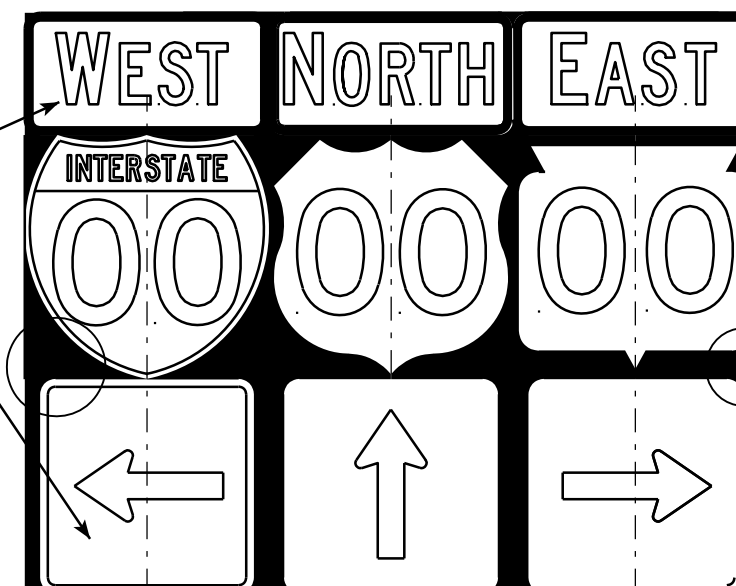
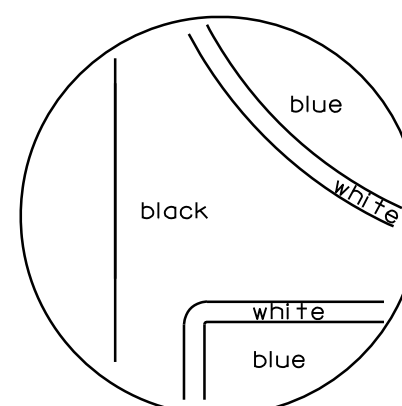


JV

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.

[blue background with interstate]



[black background]

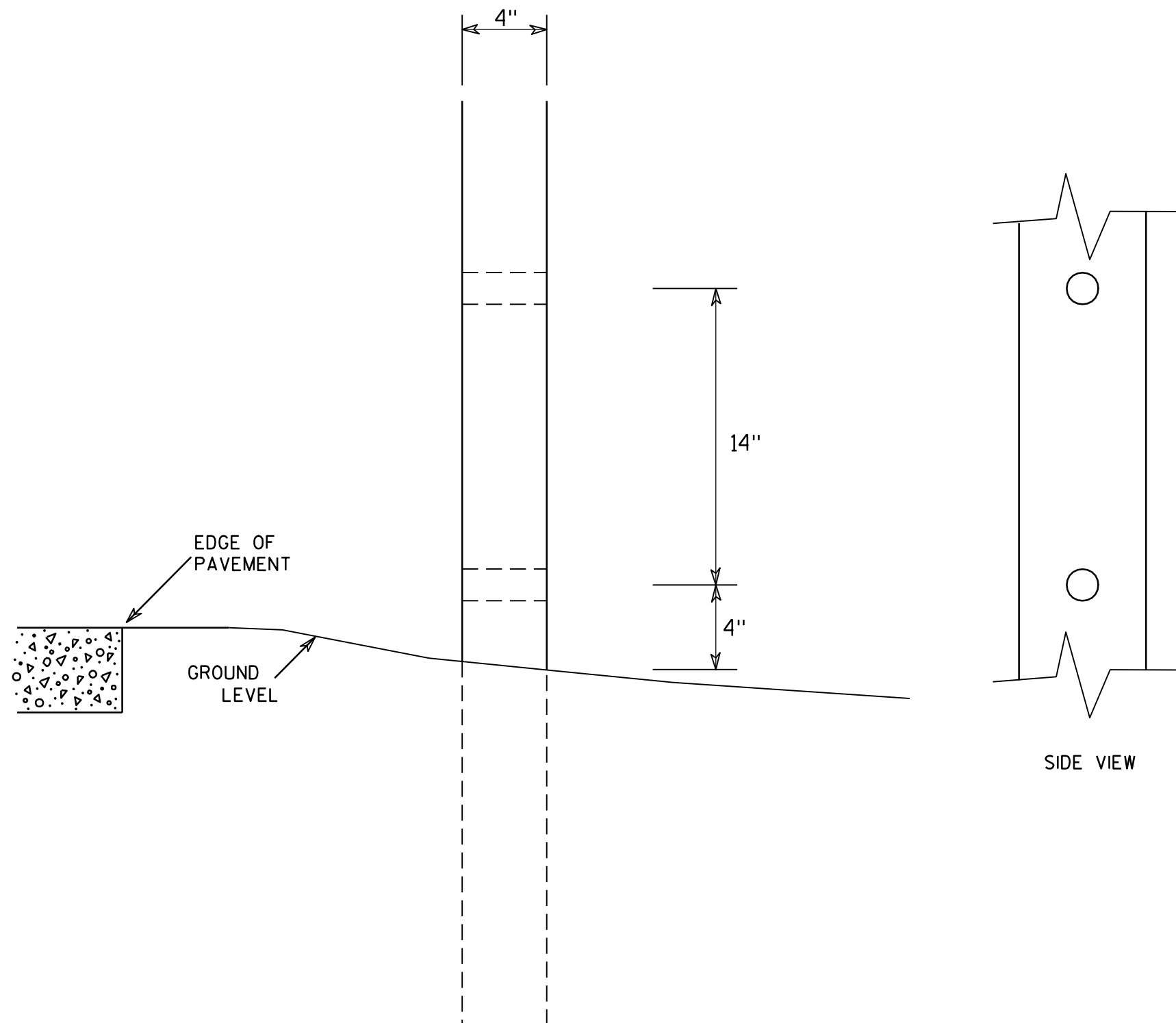
ROUTE MARKERS & COMPONENTS IN TYPICAL ASSEMBLIES	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 10/21/09	PLATE NO. A2-1S.6

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:

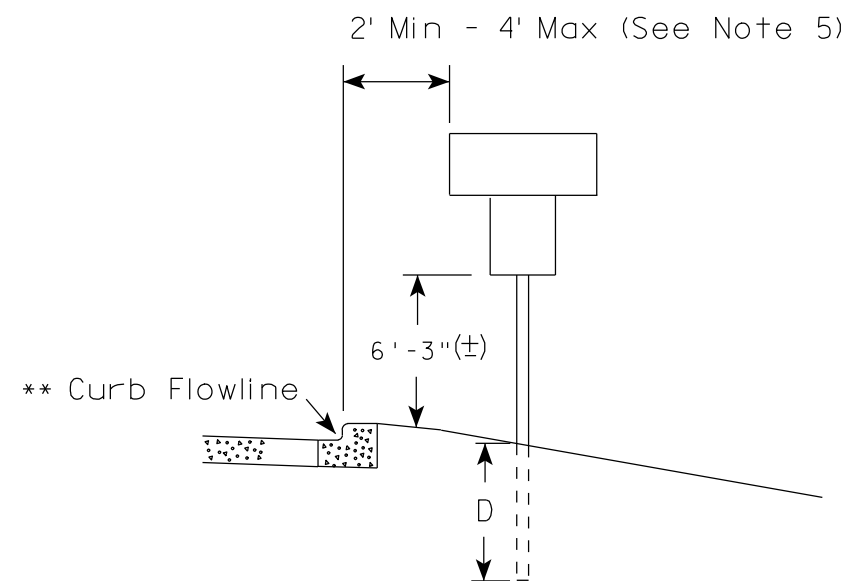
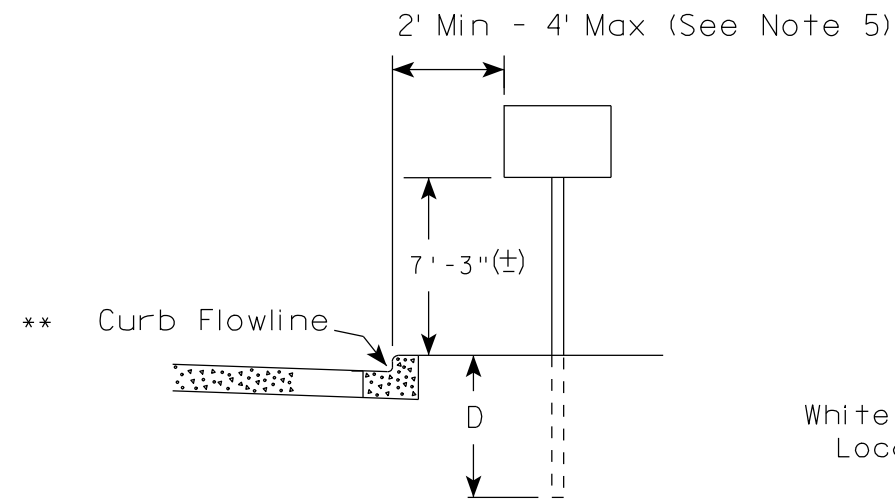
HWY:

COUNTY:

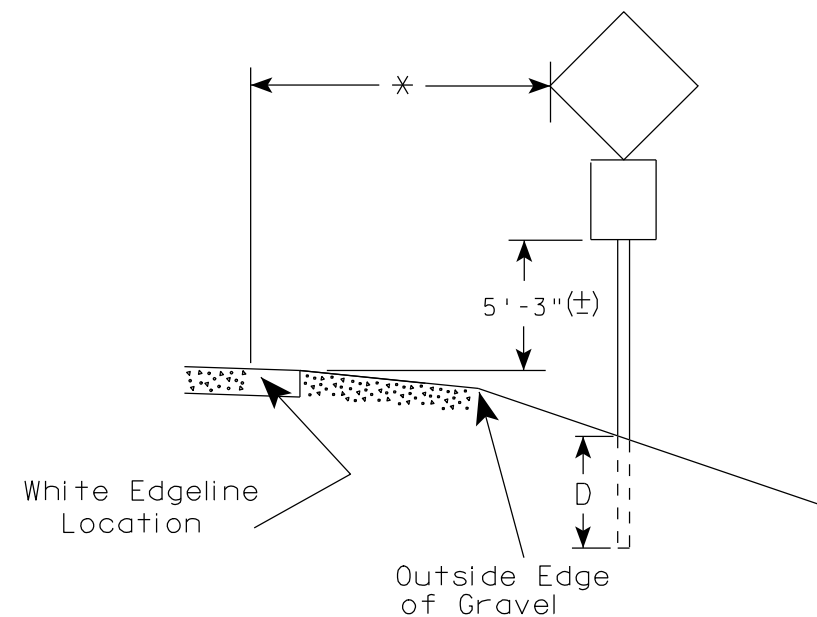
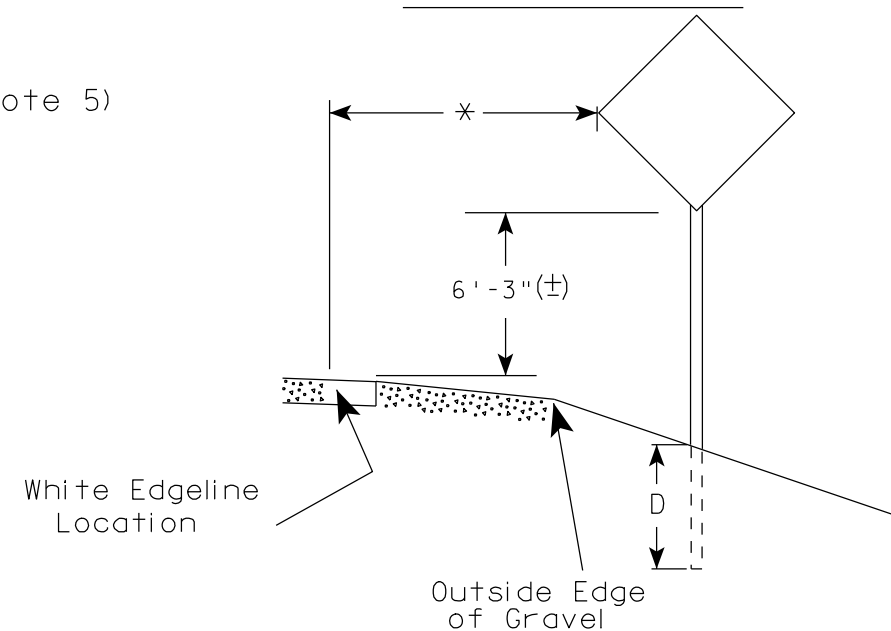
SHEET NO:

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" (±).

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

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

GENERAL NOTES

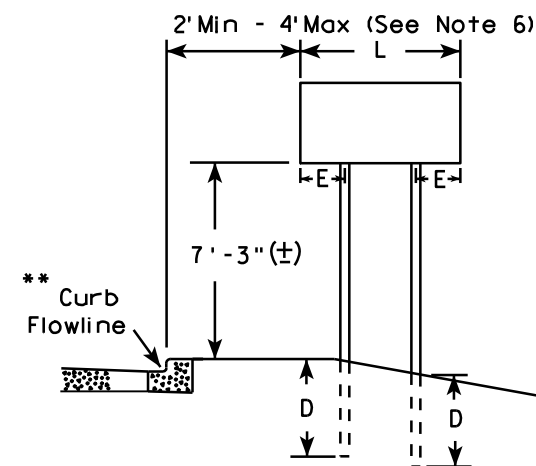
- For multiple post installations, individual post spacing shall be greater than 3'-6".
- See tables below for required number of posts.
- For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
- The (±) tolerance for mounting height is 3 inches.
- 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.

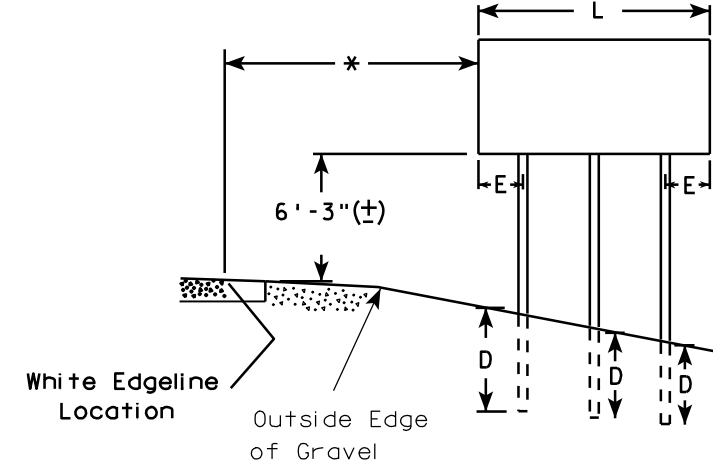
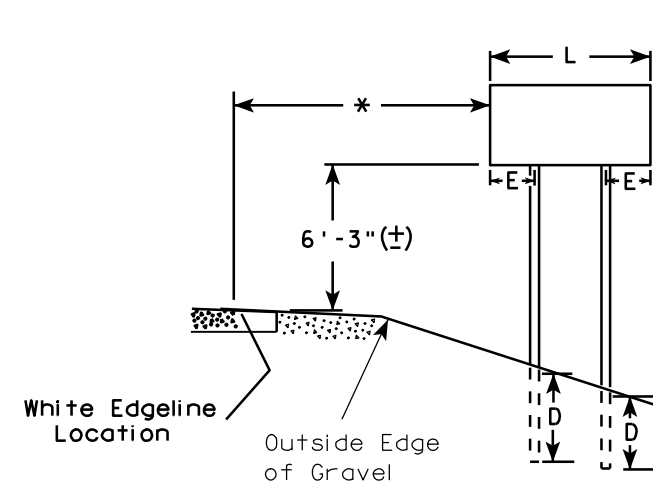
** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs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

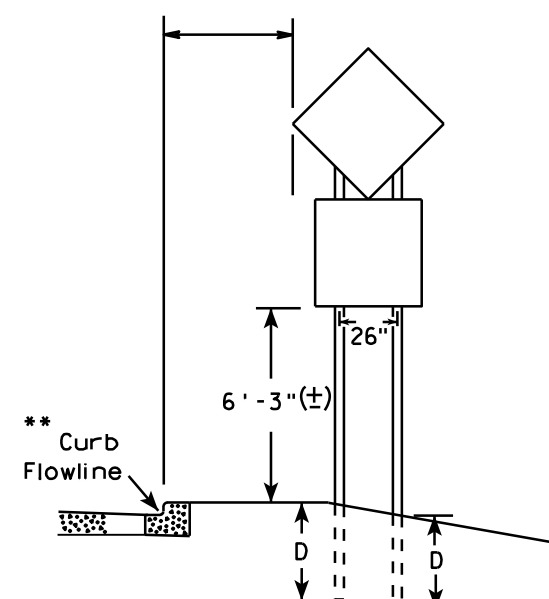
URBAN AREA



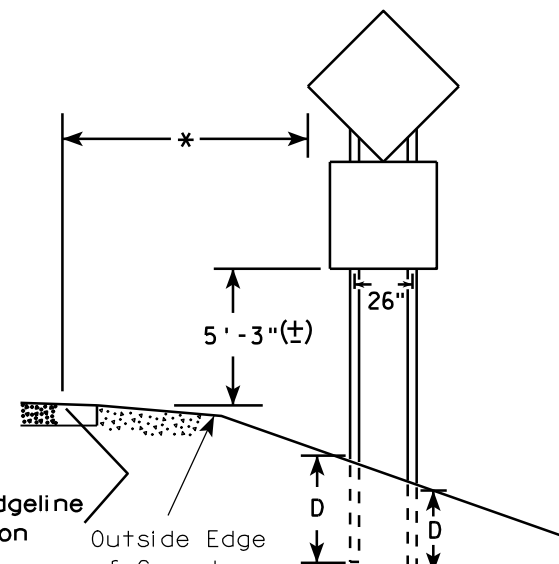
RURAL AREA (See Note 3)



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

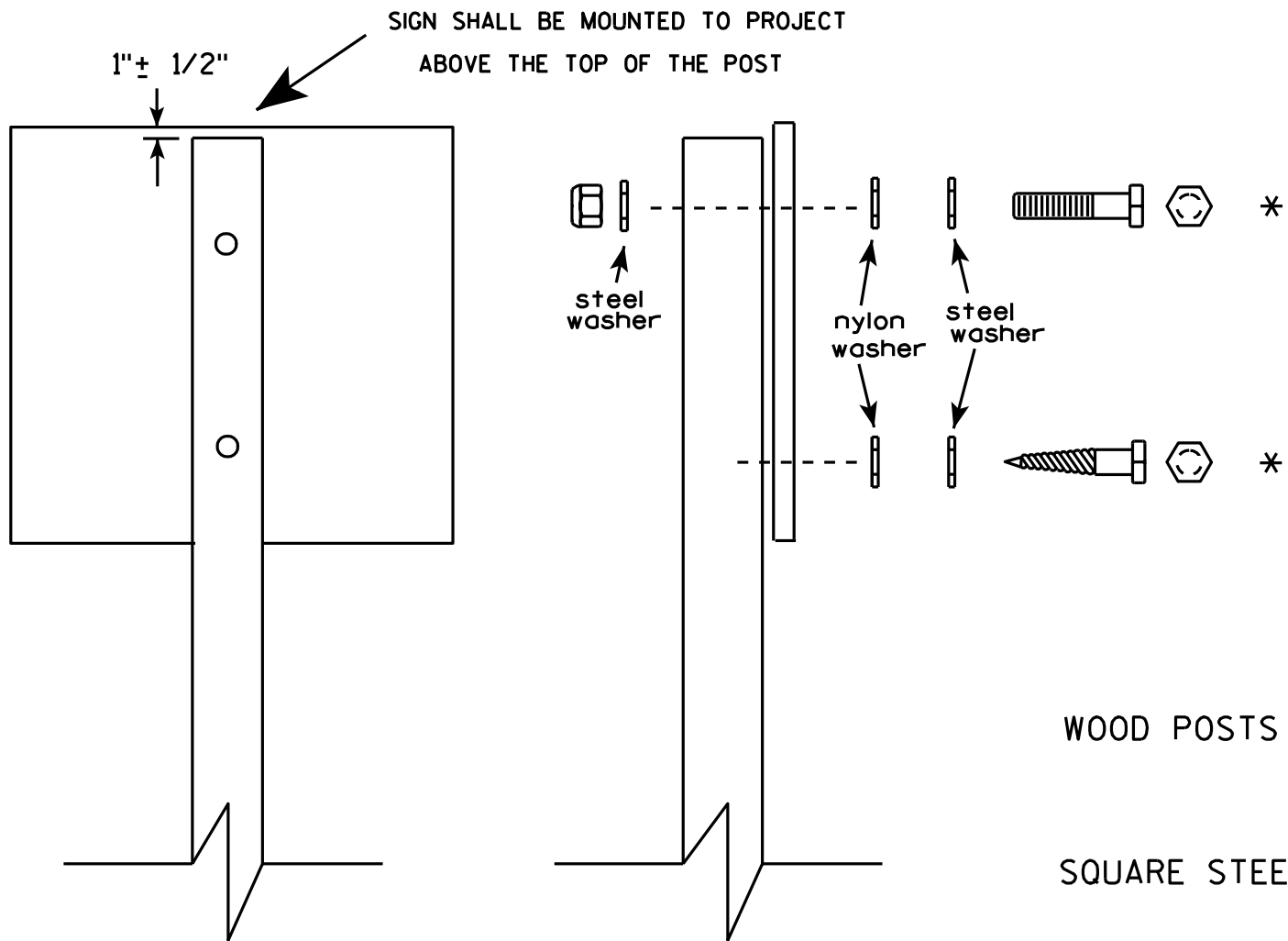
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

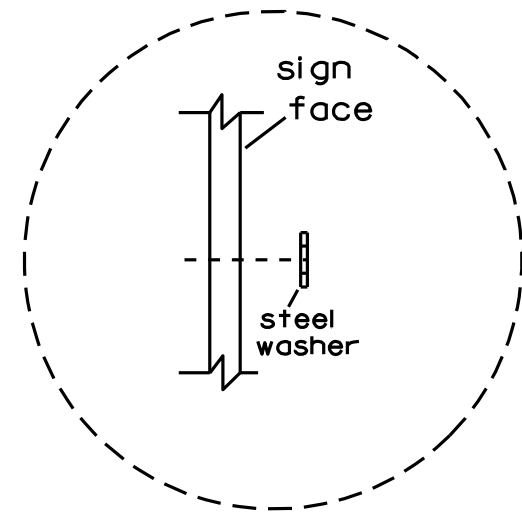


Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

- 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

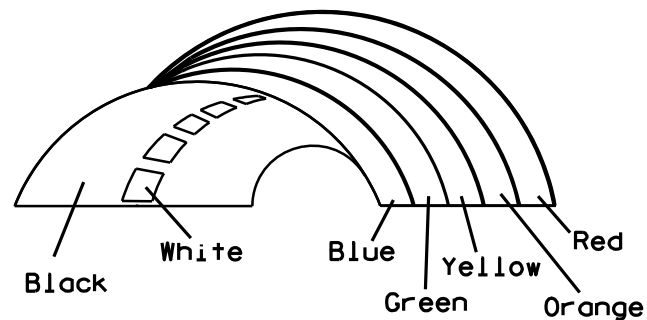
* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require 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:
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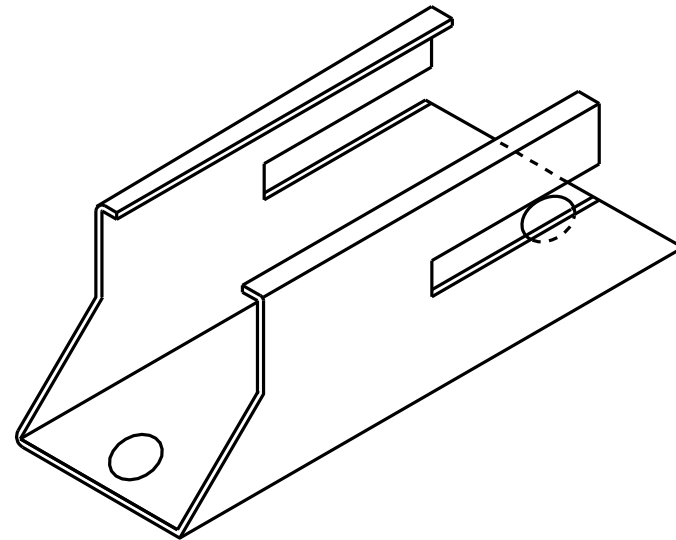
STANDARD SIGN
I55-56

WISCONSIN DEPT OF TRANSPORTATION

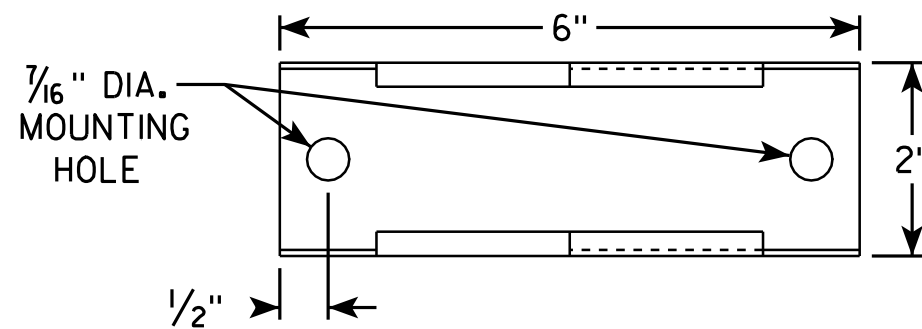
APPROVED *Matthew R. Rauch*
For State Traffic Engineer

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

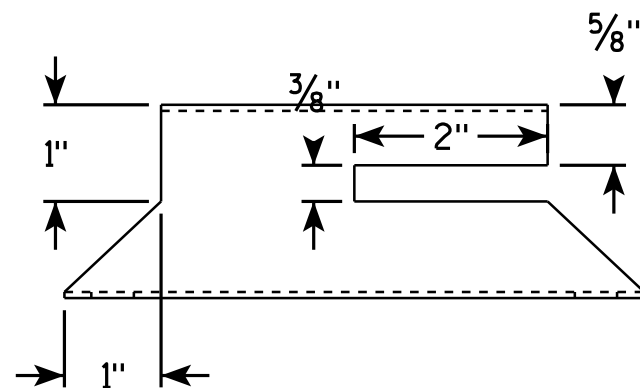
ISOMETRIC VIEW



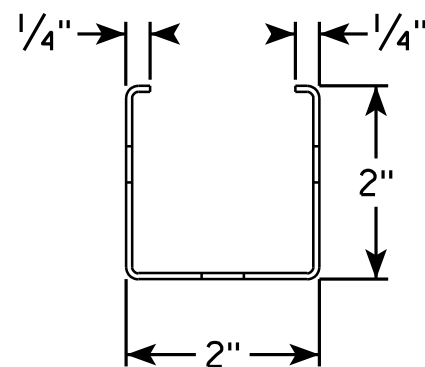
TOP VIEW



SIDE VIEW



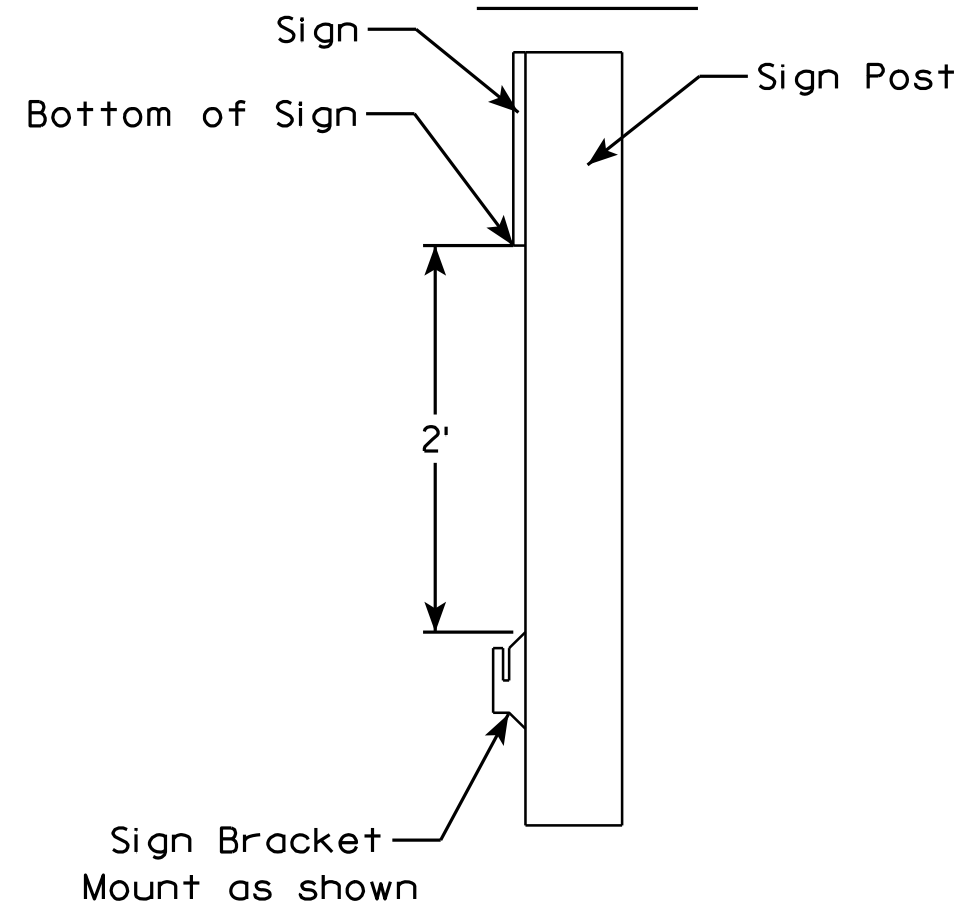
END VIEW



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:

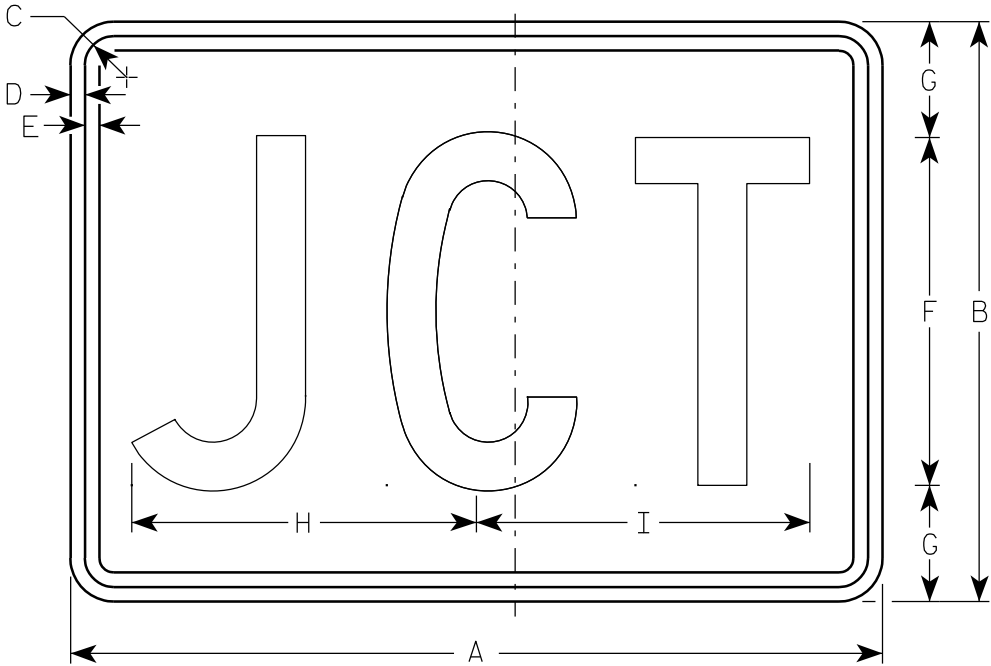
COUNTY:

SHEET NO:

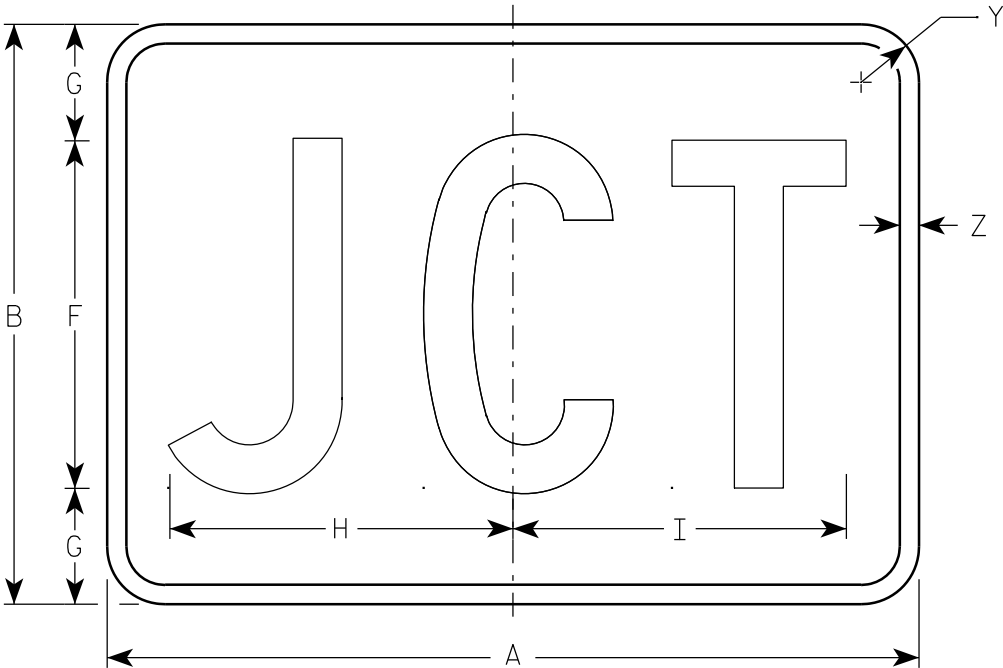
E

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

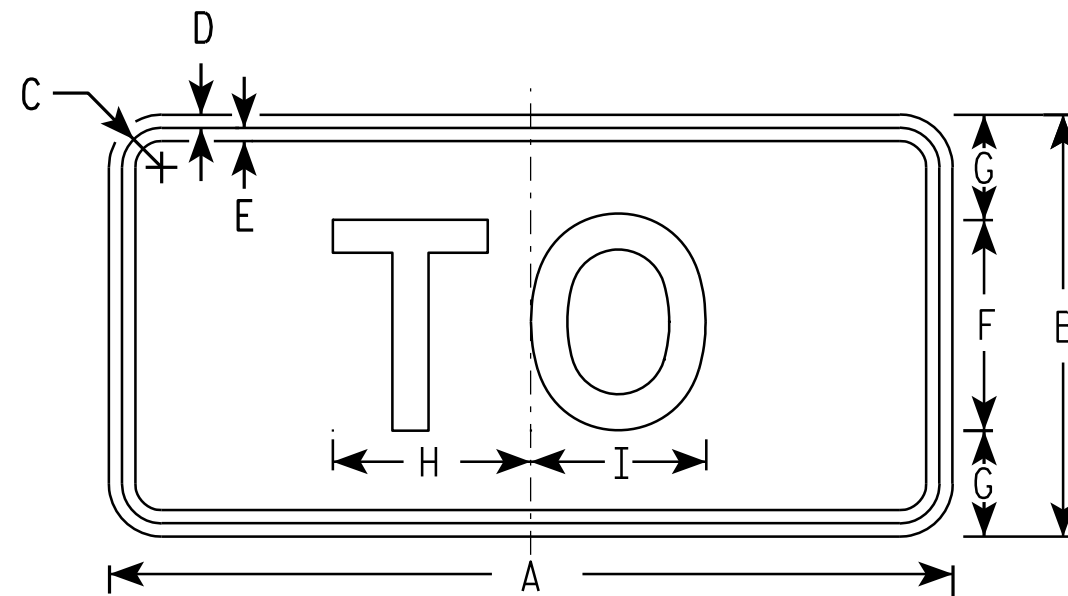
STANDARD SIGN
M2-1

WISCONSIN DEPT OF TRANSPORTATION

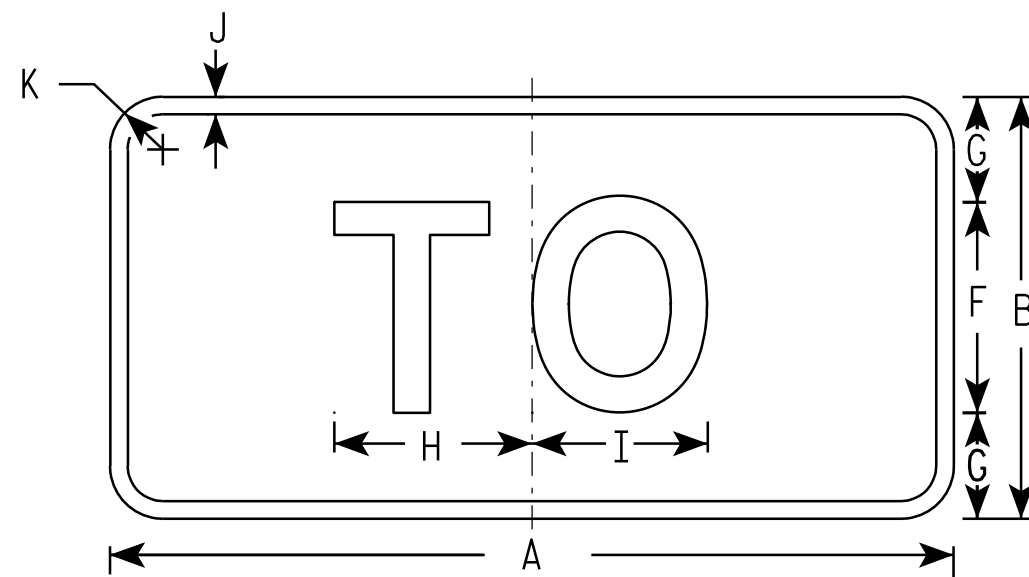
APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 3/16/10 PLATE NO. M2-1.10

PROJECT NO: HWY: COUNTY: SHEET NO: E



M4-5
MK4-5
MM4-5



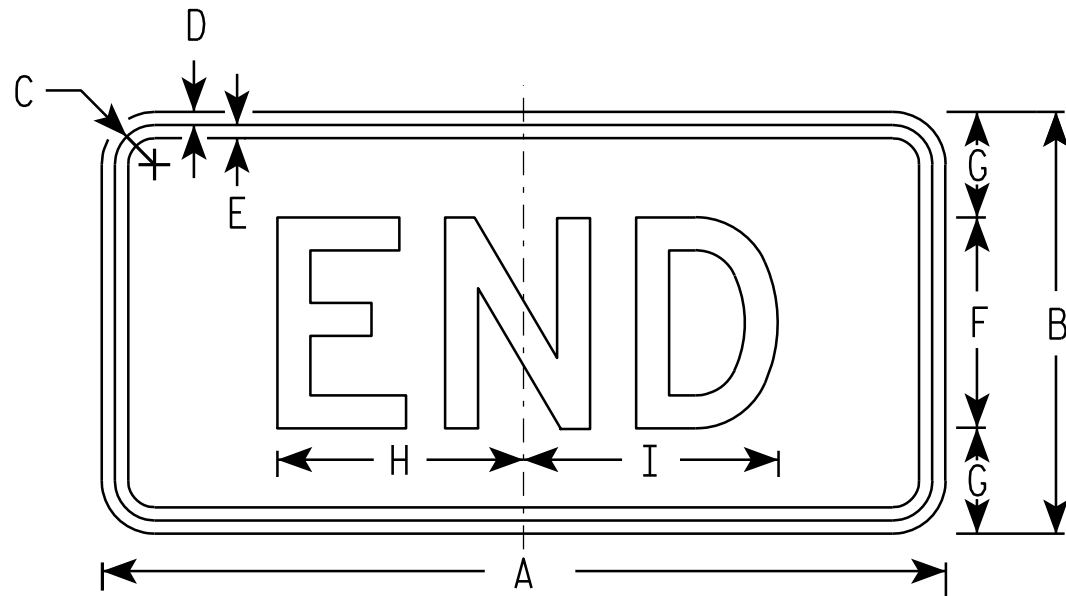
MB4-5
MG4-5
MN4-5

NOTES

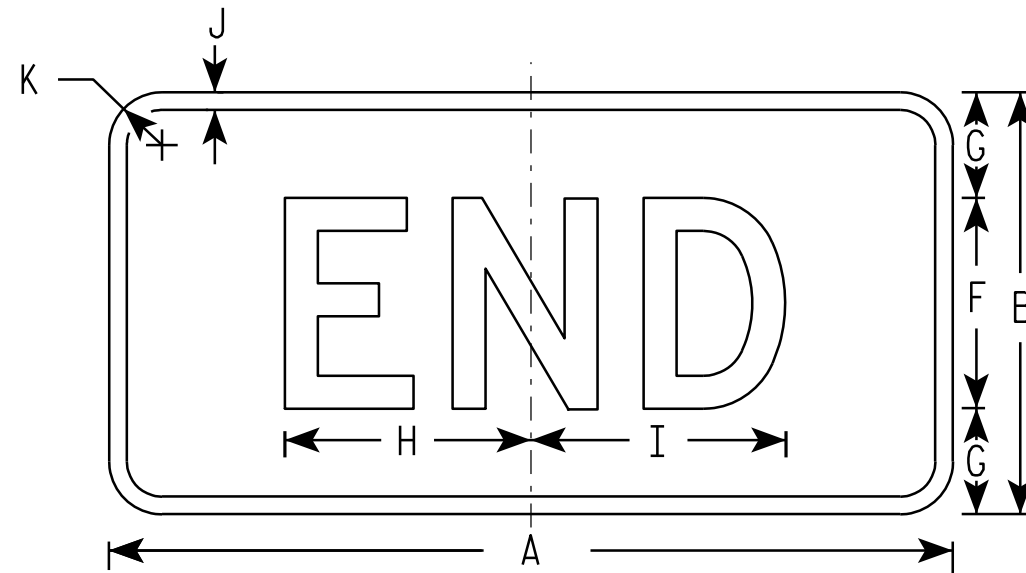
1. Sign is Type II - See Note 5 - reference
WIS DOT Standard Specification for HIGHWAY
and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - See note 5
Message - See note 5
3. Message Series - E
4. Corners may be square or rounded when base
material is plywood but borders shall be rounded
as shown. When base material is metal, the
corners and borders shall be rounded.
5. M4-5 Background - White - Type H Reflective
(Detour or temporary Signs - Reflective)
Message - Black
MB4-5 Background - Blue
Message - White - Type H Reflective
(Detour or temporary Signs - Reflective)
MG4-5 Background - Green
Message - White - Type H Reflective
MK4-5 Background - Green
Message - White - Type H Reflective
MM4-5 Background - White - Type H Reflective
Message - Green
MN4-5 Background - Brown
Message - White - Type H 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	12	1 1/8	3/8	3/8	6	3	5 3/8	5 1/4	1/2	1 1/2																2.00
3	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5
4	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5
5	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5

PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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M4-6
MK4-6
MM4-6
MR4-6



MB4-6
MG4-6
MN4-6

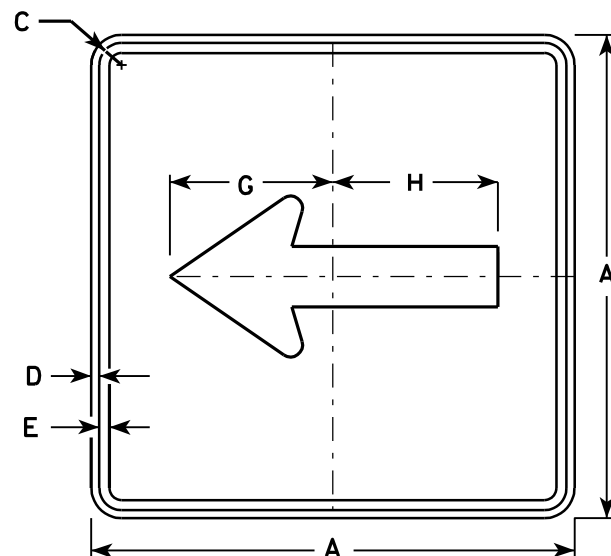
NOTES

- Sign is Type II - See Note 5 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - See note 5
Message - See note 5
- Message Series - D
- 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.
- M4-6 Background - White - Type H Reflective
(Detour or temporary Signs - Reflective)
Message - Black
MB4-6 Background - Blue
Message - White - Type H Reflective
(Detour or temporary Signs - Reflective)
MG4-6 Background - Green
Message - White - Type H Reflective
MK4-6 Background - Green
Message - White - Type H Reflective
MM4-6 Background - White - Type H Reflective
Message - Green
MN4-6 Background - Brown
Message - White - Type H Reflective
MR4-6 Background - Brown
Message - Yellow - Type H Reflective

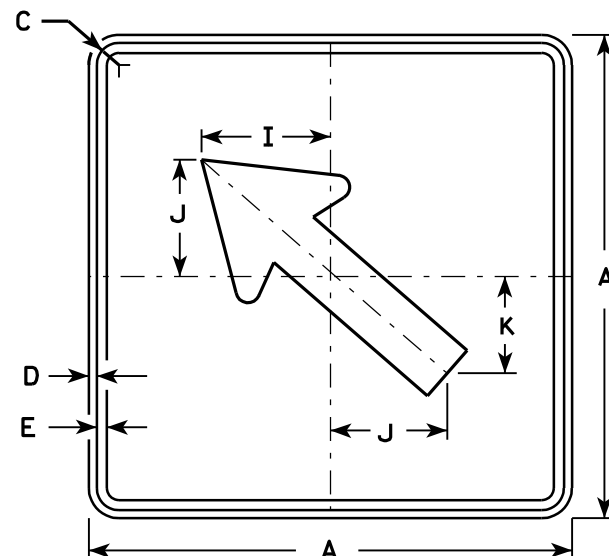
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	3	7	7 1/4	1/2	1 1/2																2.00
3	36	18	1 1/8	3/8	1/2	9	4 1/2	12	11 7/8	1/2	1 1/2																4.5
4	36	18	1 1/8	3/8	1/2	9	4 1/2	12	11 7/8	1/2	1 1/2																4.5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

PROJECT NO: HWY: COUNTY: SHEET NO: E

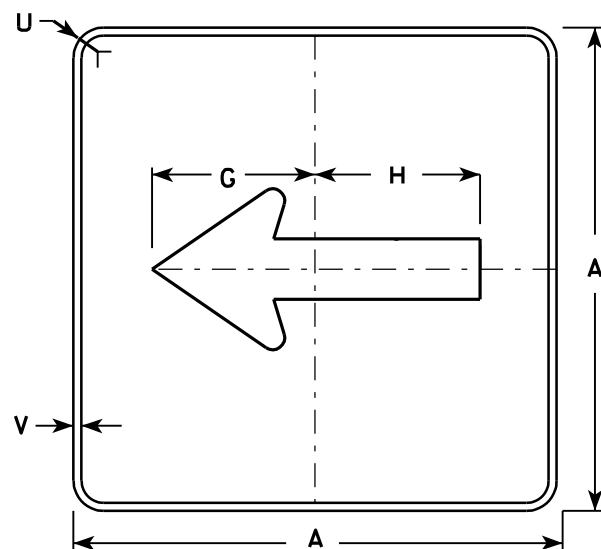
STANDARD SIGN M4 - 6	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 11/10/10	PLATE NO. M4-6.7



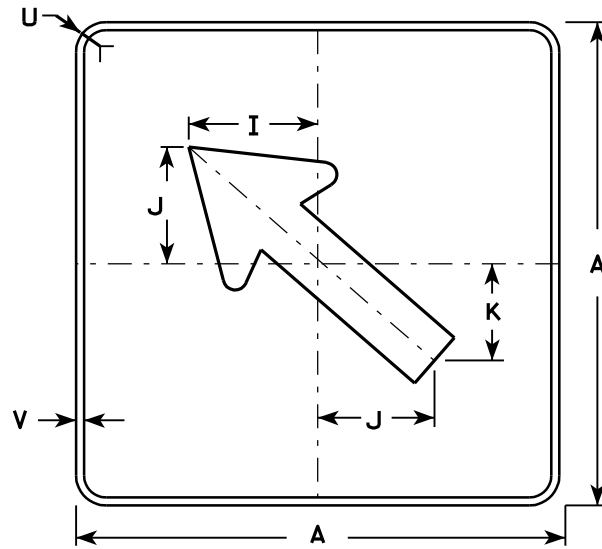
M6-1
MK6-1
MM6-1
MO6-1
MR6-1



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



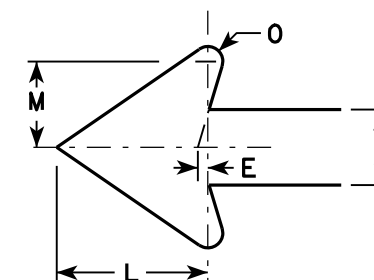
MB6-1
MG6-1
MN6-1



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

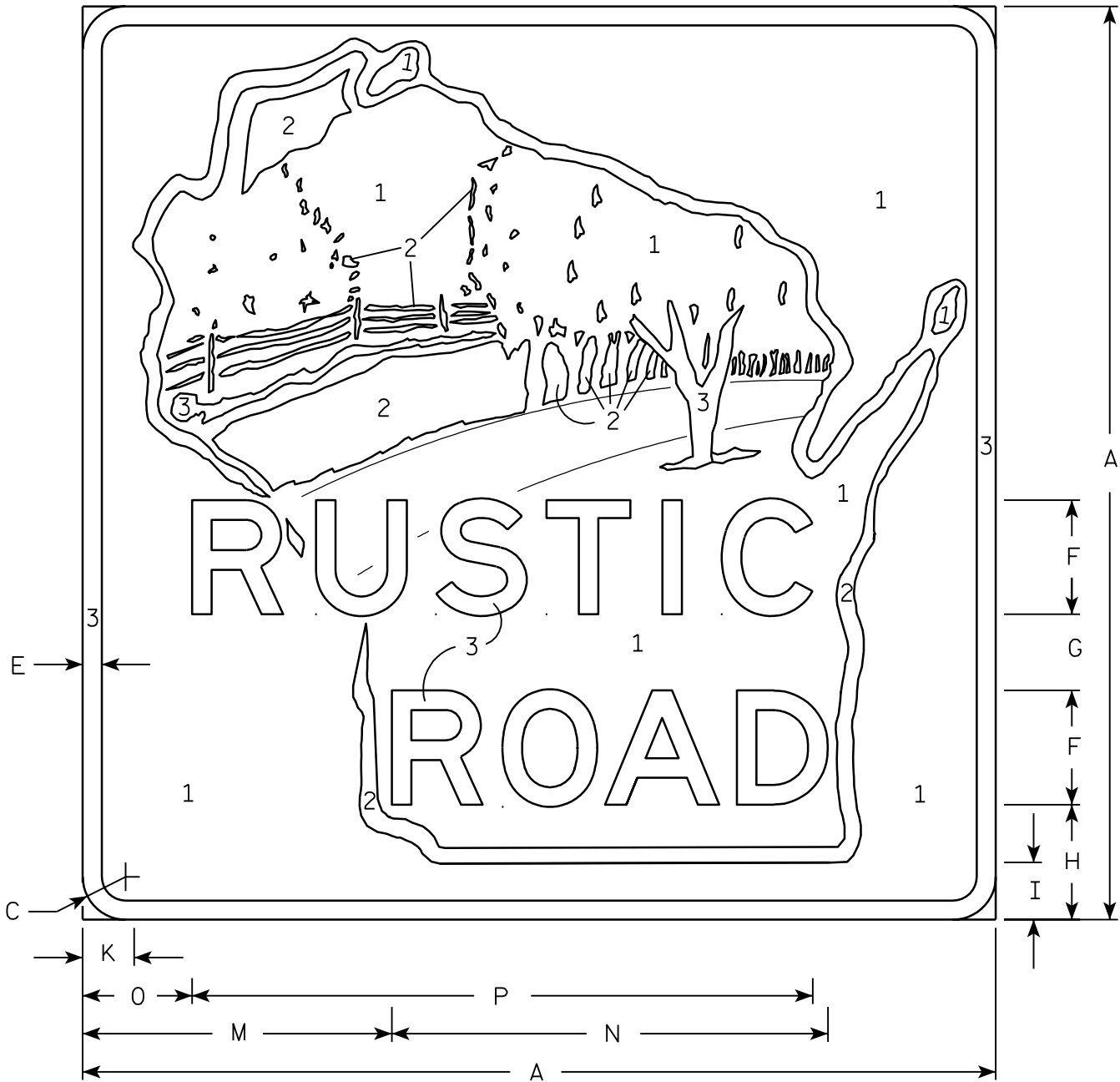
7

Metric equivalent
for this sign is:

SIZE	
1	
2	600 mm X 600 mm
3	
4	
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.	Area m ²
1																												
2	24		1 ⅛		½	3	2	3	1 ½		1 ⅜		8 ⅛	11 ¼	2 ⅞	16 ¼											4.0	0.36
3																												
4																												
5																												

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

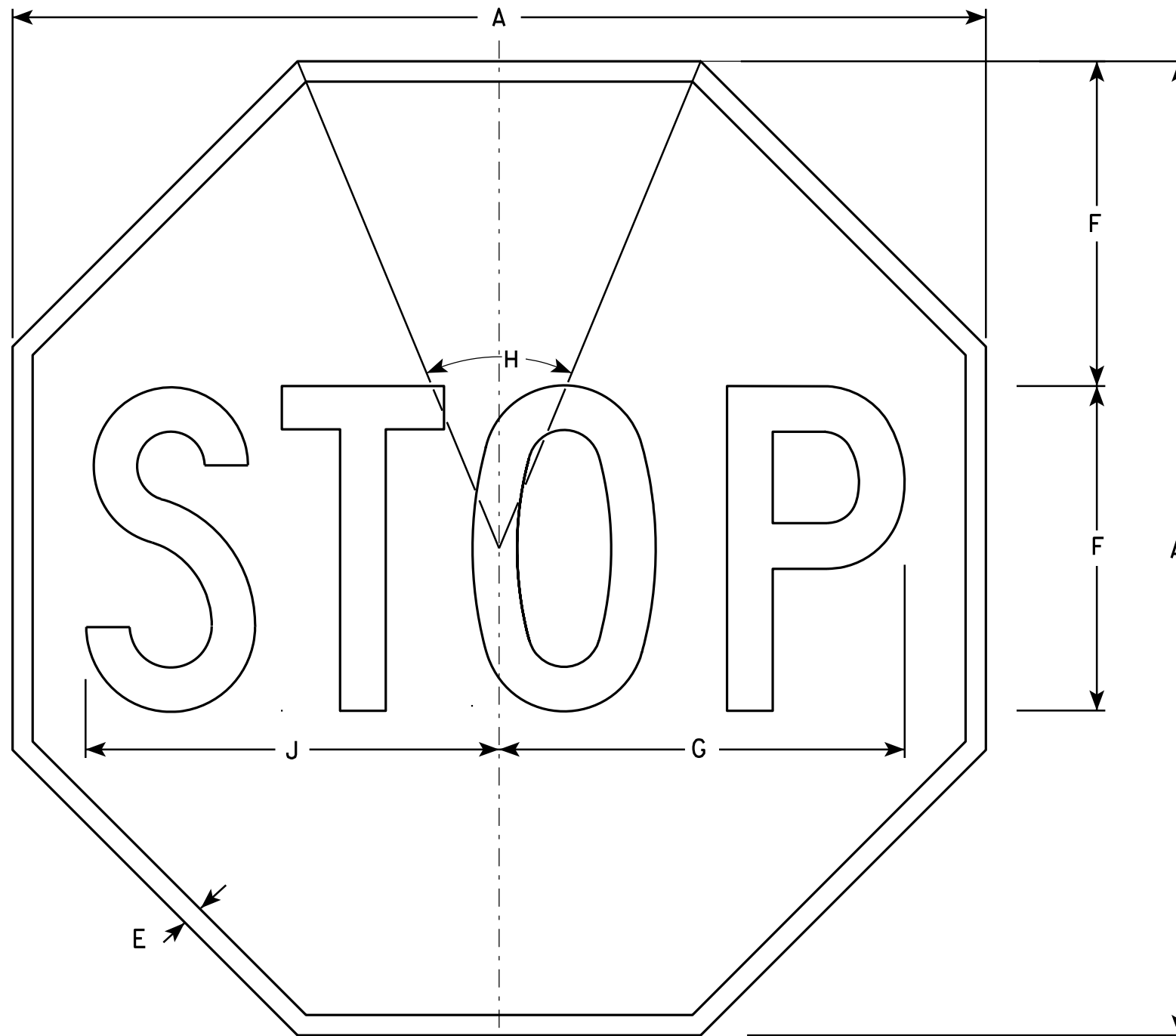
- Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
 - Color:
Background - See note 5
Message - See note 5.
 - Message Series - Modified E
 - Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
 - The sign will be color coded by numerical designation Numeral *1 Brown
2 Type H Reflective White
3 Reflective Yellow
- Exact color descriptions will be furnished upon request.

STANDARD SIGN
MR1-99

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 10/18/05 PLATE NO. MR1-99.5



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

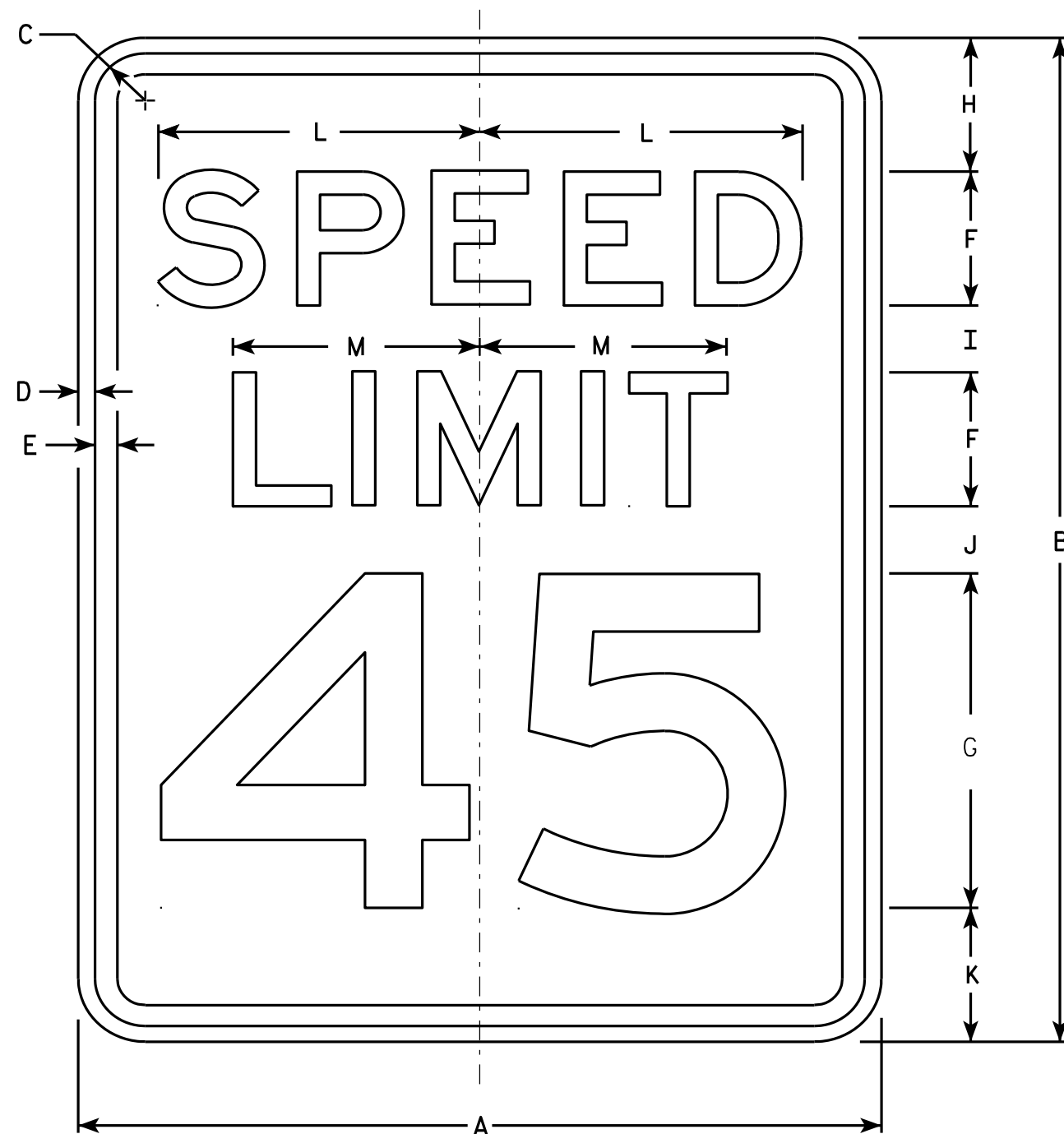
STANDARD SIGN
R1 - 1

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:

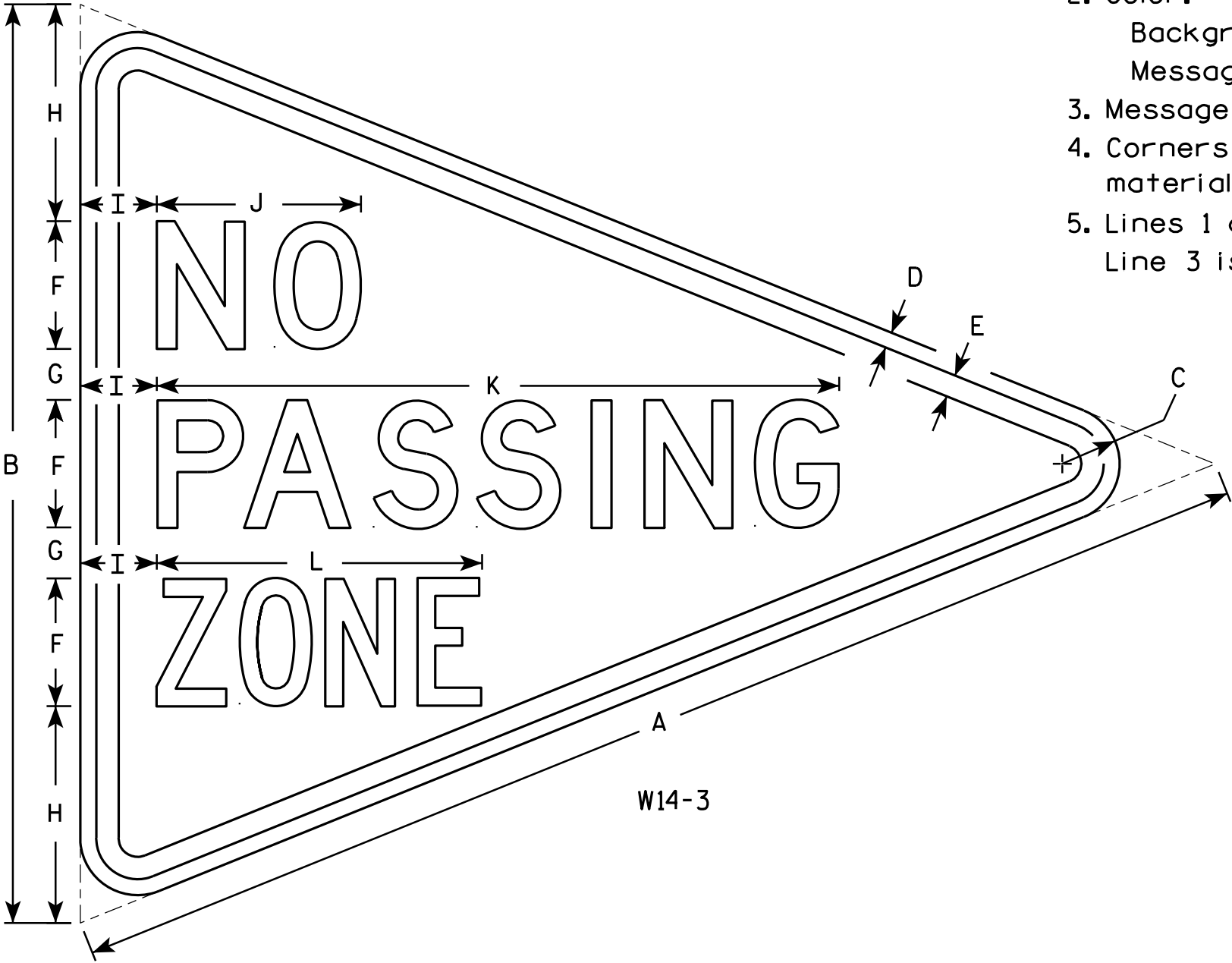
COUNTY:

SHEET NO:

E

NOTES

- 1. Sign is Type II - Type 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

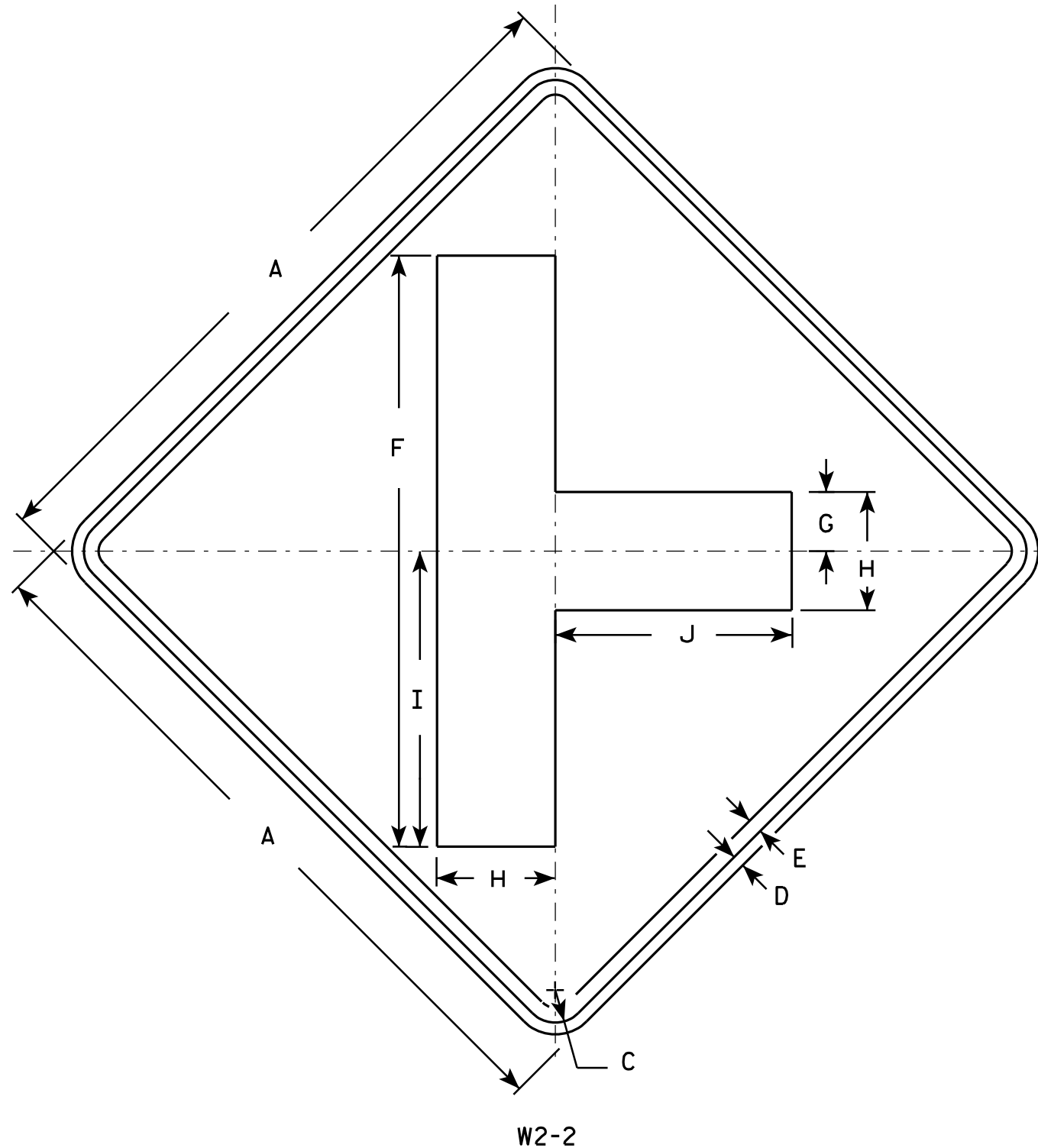
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	36	2 1/4	5/8	7/8	5	2	8 1/2	3	8	26 3/4	12 3/4															6.0
2M	48	36	2 1/4	5/8	7/8	5	2	8 1/2	3	8	26 3/4	12 3/4															6.0
3	64	48	3	3/4	1 1/4	6	3	12	4	10 3/4	33 5/8	16 1/2														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



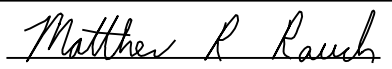
NOTES

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.

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																											

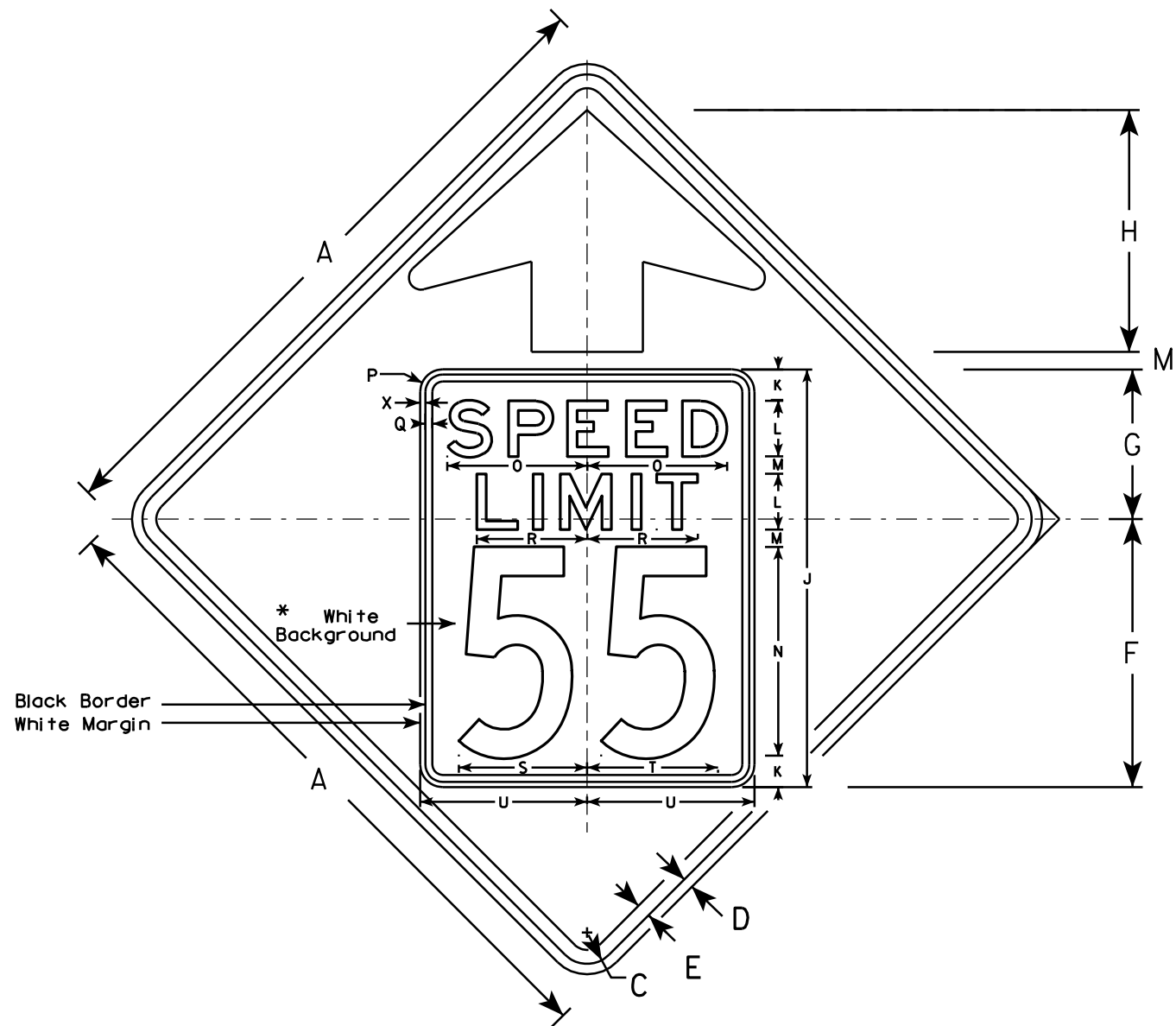
STANDARD SIGN W2-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED 
for State Traffic Engineer

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

PROJECT NO: HWY: COUNTY: SHEET NO: E

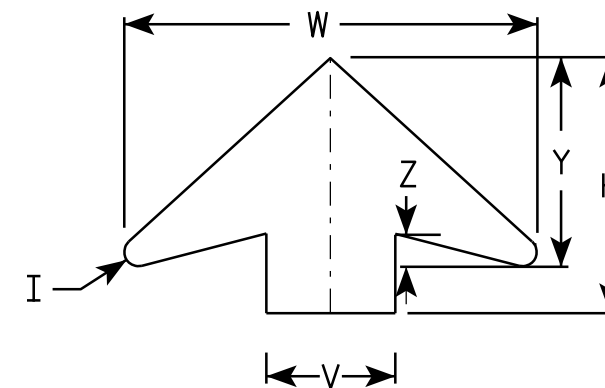


W3-5

NOTES

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

*Speed Limit Sign shall have a White Background



ARROW DETAIL

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

STANDARD SIGN

W3-5

WISCONSIN DEPT OF TRANSPORTATION

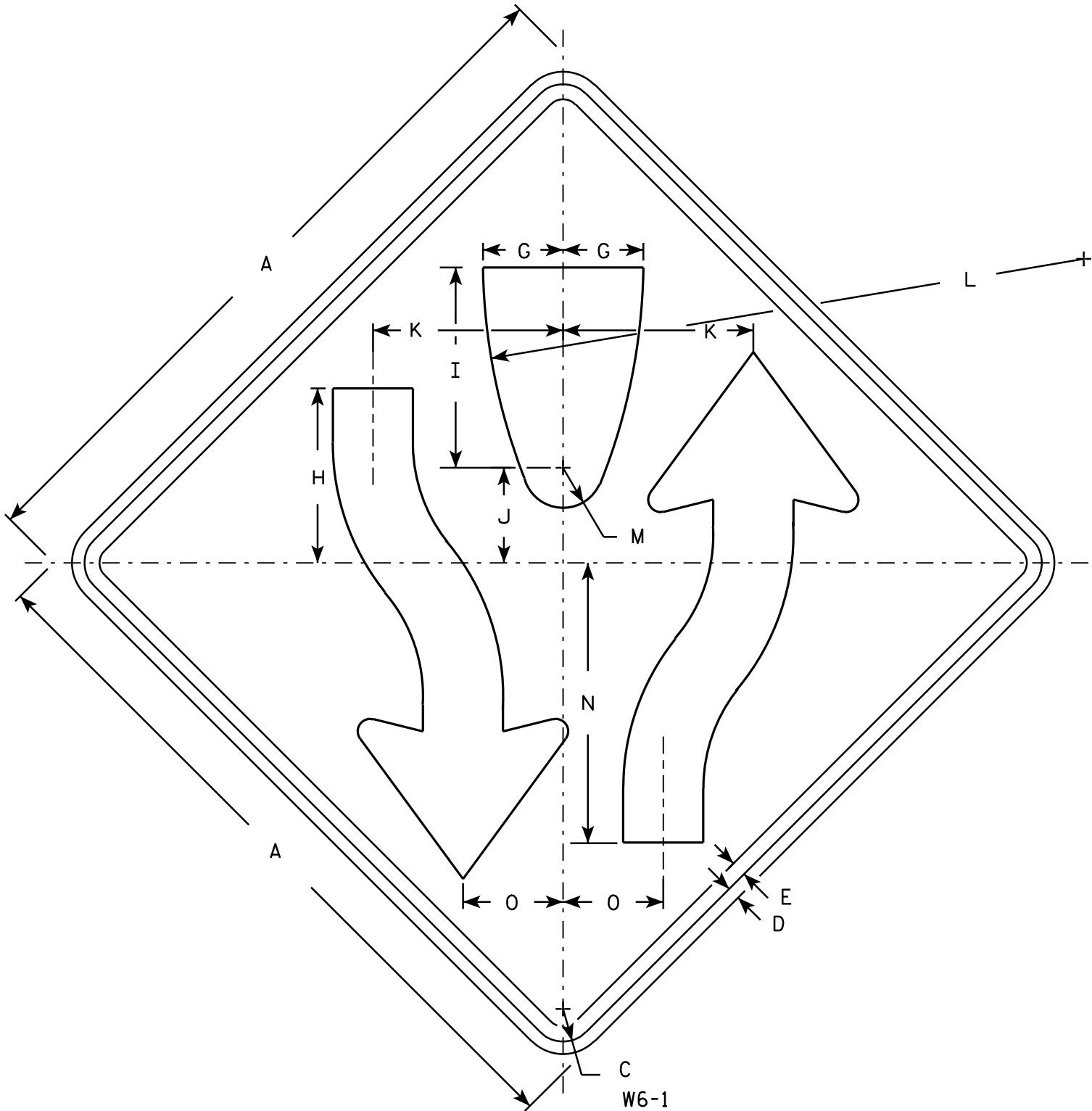
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

PROJECT NO:

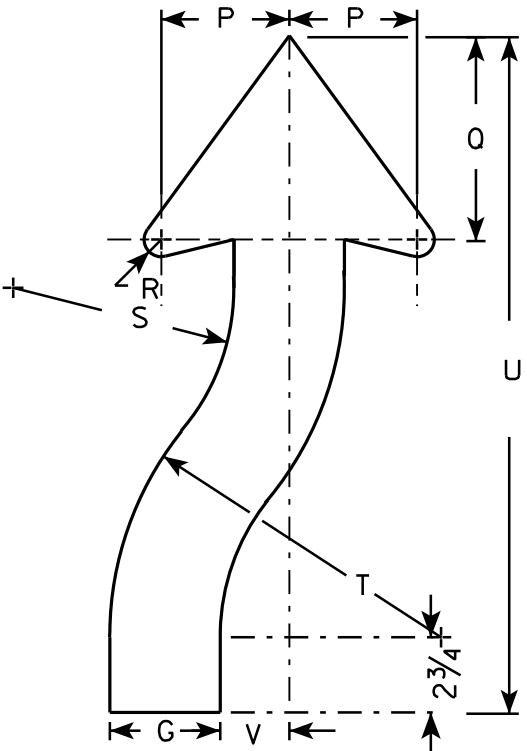
SHEET NO:

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.
- 4. W6-2 same as W6-1 but is rotated 180° when mounted.



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		3 1/4	8	8 1/4	4 1/8	7 7/8	25	1 3/4	11 5/8	4 1/8	3 7/8	6 3/4	5/8	6 5/8	9 7/8	21 5/8	2					6.25
2S	36		1 5/8	5/8	3/4		4	8 3/4	10	4 3/4	9 1/2	30	2	14	5	4 5/8	7 3/8	7/8	8	12	24 1/2	2 1/2					9.0
2M	36		1 5/8	5/8	3/4		4	8 3/4	10	4 3/4	9 1/2	30	2	14	5	4 5/8	7 3/8	7/8	8	12	24 1/2	2 1/2					9.0
3																											
4	48		2 1/4	3/4	1		5 3/8	11 5/8	13 3/8	6 3/8	12 5/8	40	2 5/8	18 5/8	6 5/8	6 1/4	9 7/8	1 1/4	10 5/8	16	32 5/8	3 3/8					16.0
5	48		2 1/4	3/4	1		5 3/8	11 5/8	13 3/8	6 3/8	12 5/8	40	2 5/8	18 5/8	6 5/8	6 1/4	9 7/8	1 1/4	10 5/8	16	32 5/8	3 3/8					16.0

STANDARD SIGN
W6-1 & W6-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/22/11 PLATE NO. W6-1.13

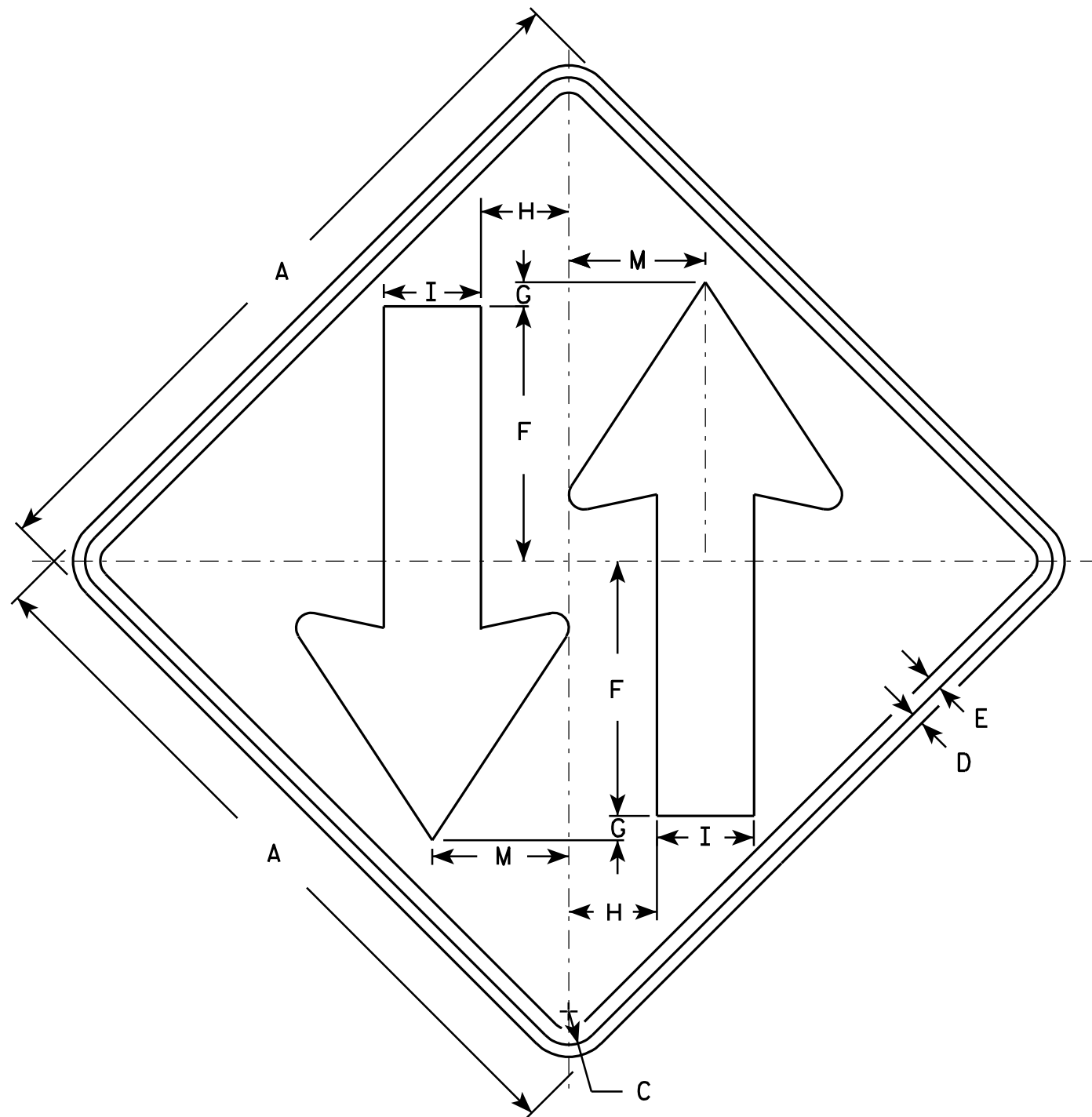
PROJECT NO:

HWY:

COUNTY:

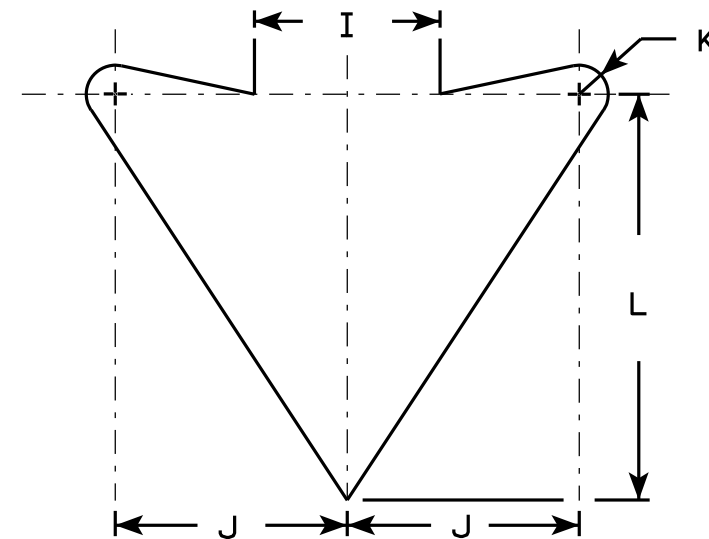
SHEET NO:

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 - 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.



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	10 1/2	1	3 5/8	4	5	5/8	8 3/4	5 5/8														6.25
2S	36		1 5/8	5/8	3/4	12	1	4 1/4	5	6	3/4	10 1/2	6 3/4														9.0
2M	36		1 5/8	5/8	3/4	12	1	4 1/4	5	6	3/4	10 1/2	6 3/4														9.0
3																											
4	48		2 1/4	3/4	1	15 1/2	1	6	6	8	1	14	9														16.0
5	48		2 1/4	3/4	1	15 1/2	1	6	6	8	1	14	9														16.0

STANDARD SIGN
W6-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R. Rauch
for State Traffic Engineer

DATE 3/22/11

PLATE NO. W6-3.9

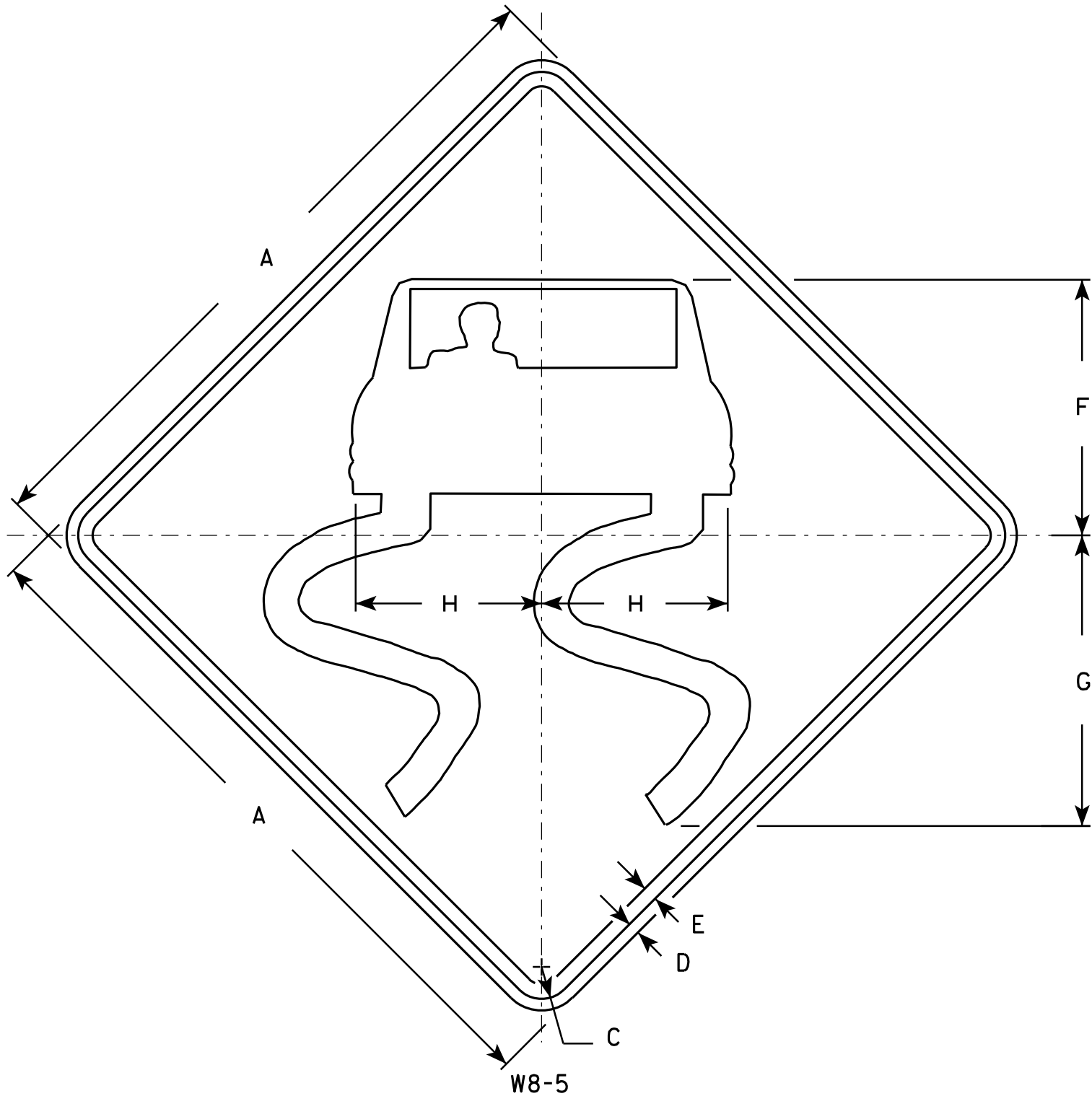
PROJECT NO:

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	8 3/4	9 7/8	6 3/8																			4.0
2S	30		1 3/8	1/2	5/8	11	12 1/2	8																			6.25
2M	36		1 5/8	5/8	3/4	13	14 7/8	9 1/2																			9.0
3	36		1 5/8	5/8	3/4	13	14 7/8	9 1/2																			9.0
4	36		1 5/8	5/8	3/4	13	14 7/8	9 1/2																			9.0
5	48		2 1/4	3/4	1	17 3/8	19 3/4	12 5/8																			16.0

STANDARD SIGN
W8-5

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 4/18/11 PLATE NO. W8-5.11

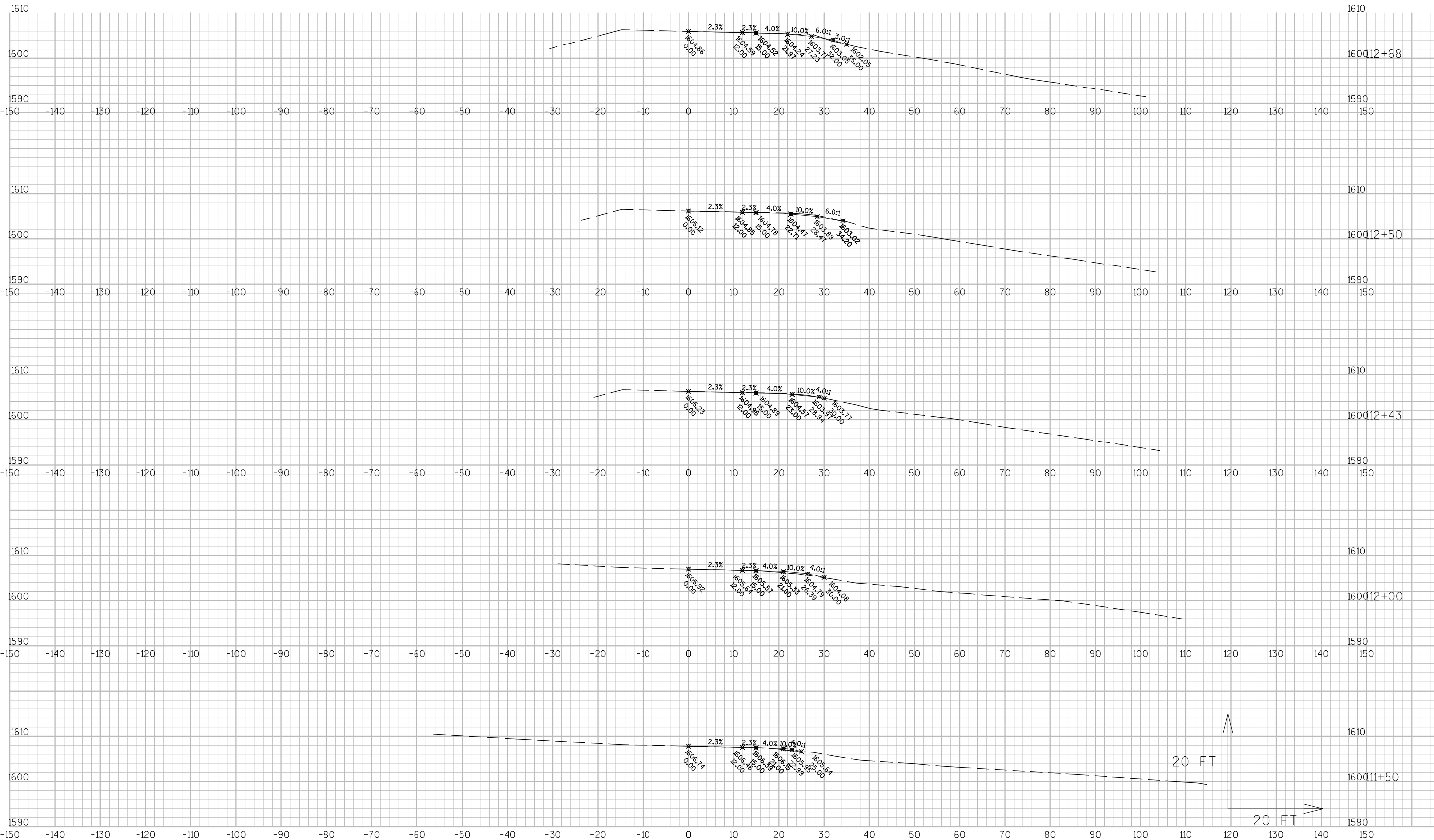
PROJECT NO:

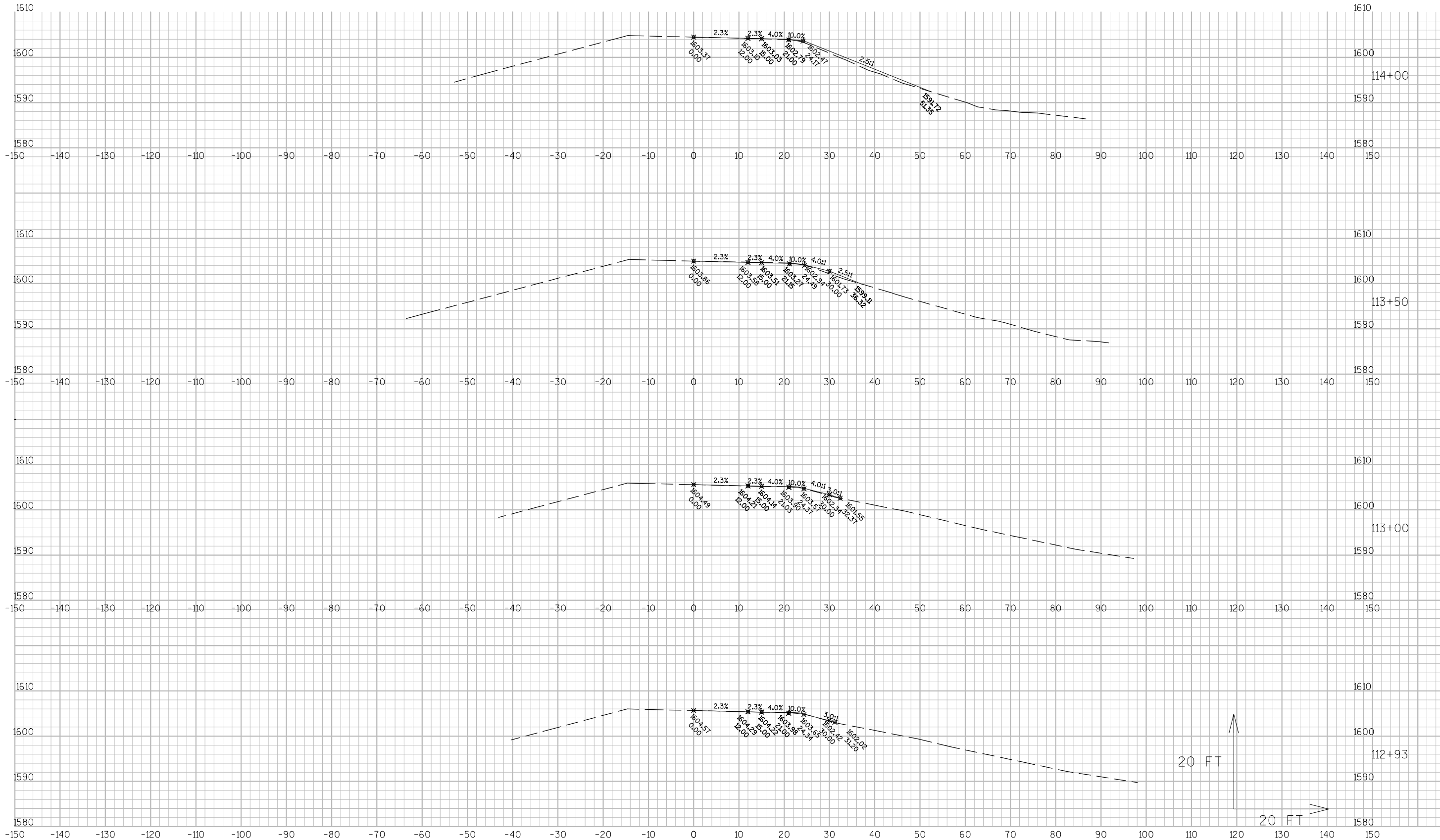
HWY:

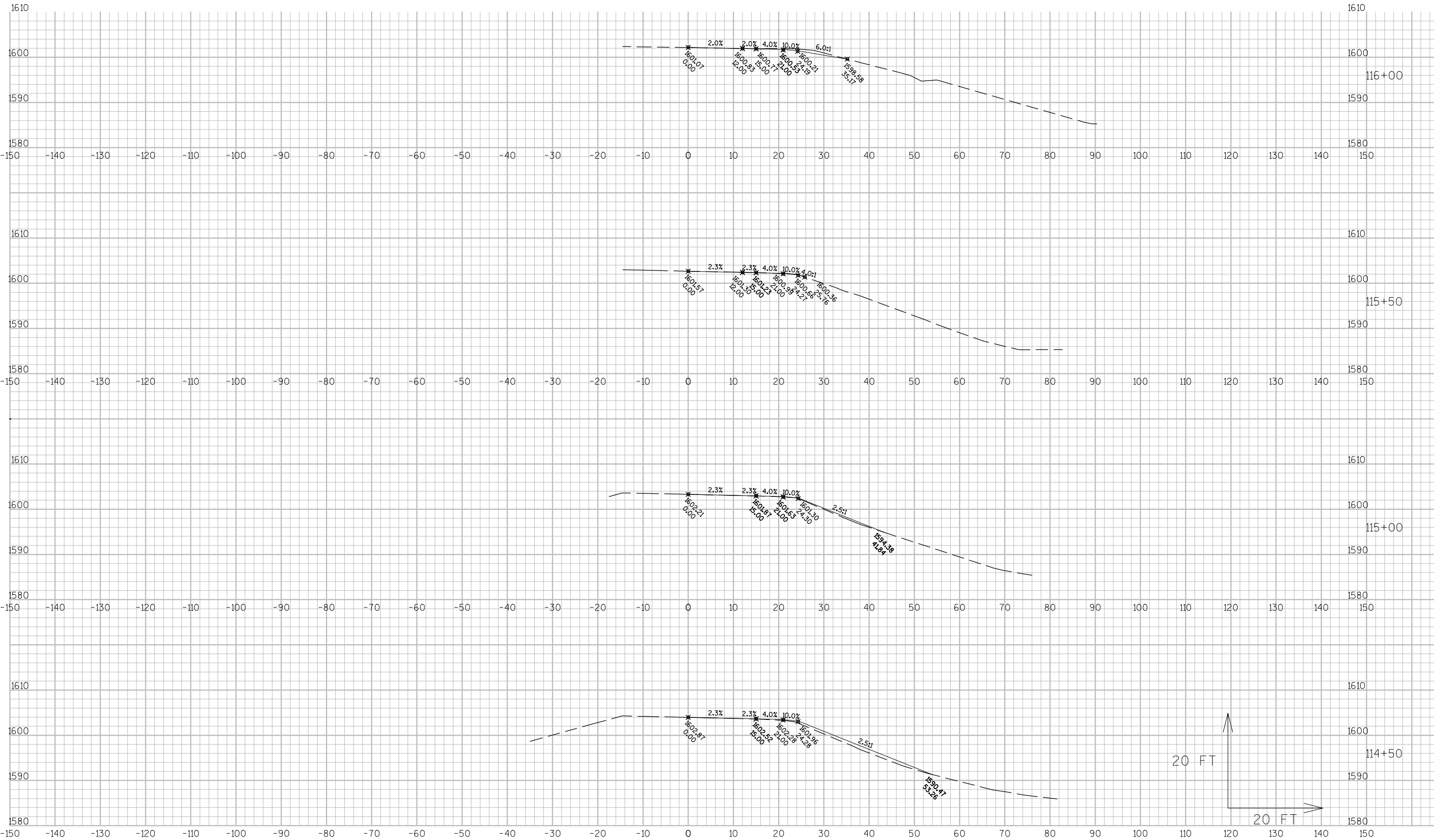
COUNTY:

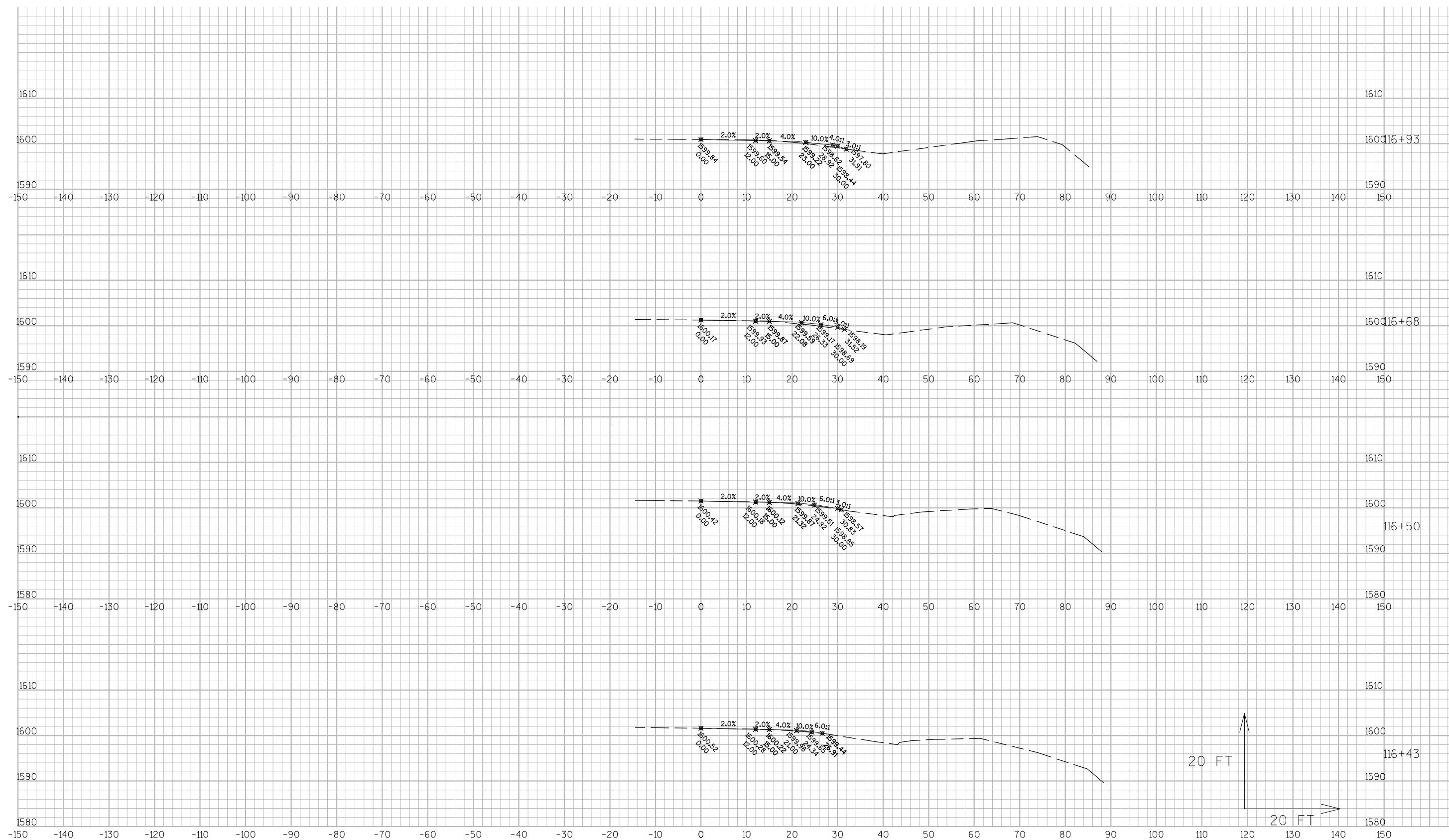
SHEET NO:

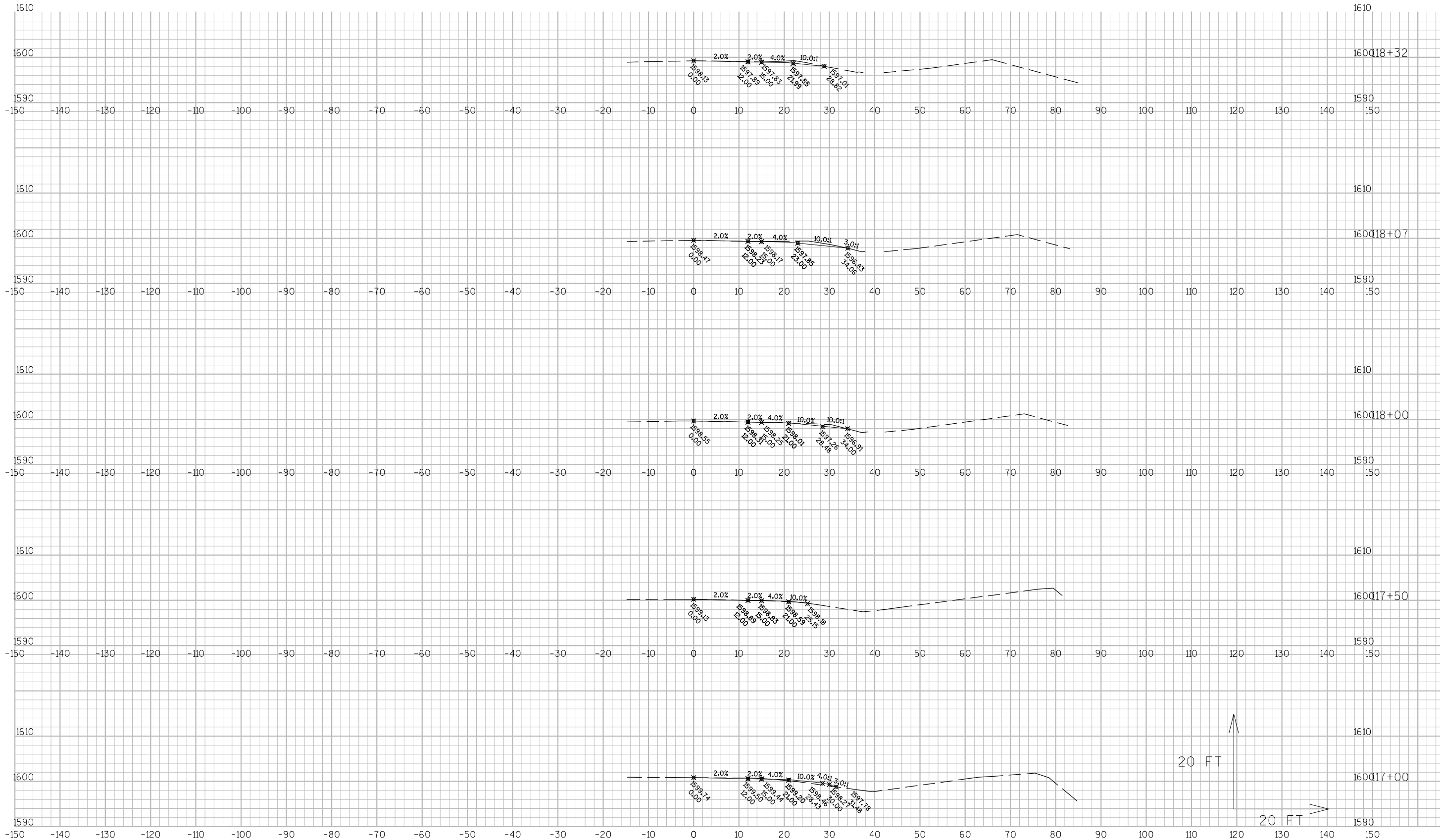
E

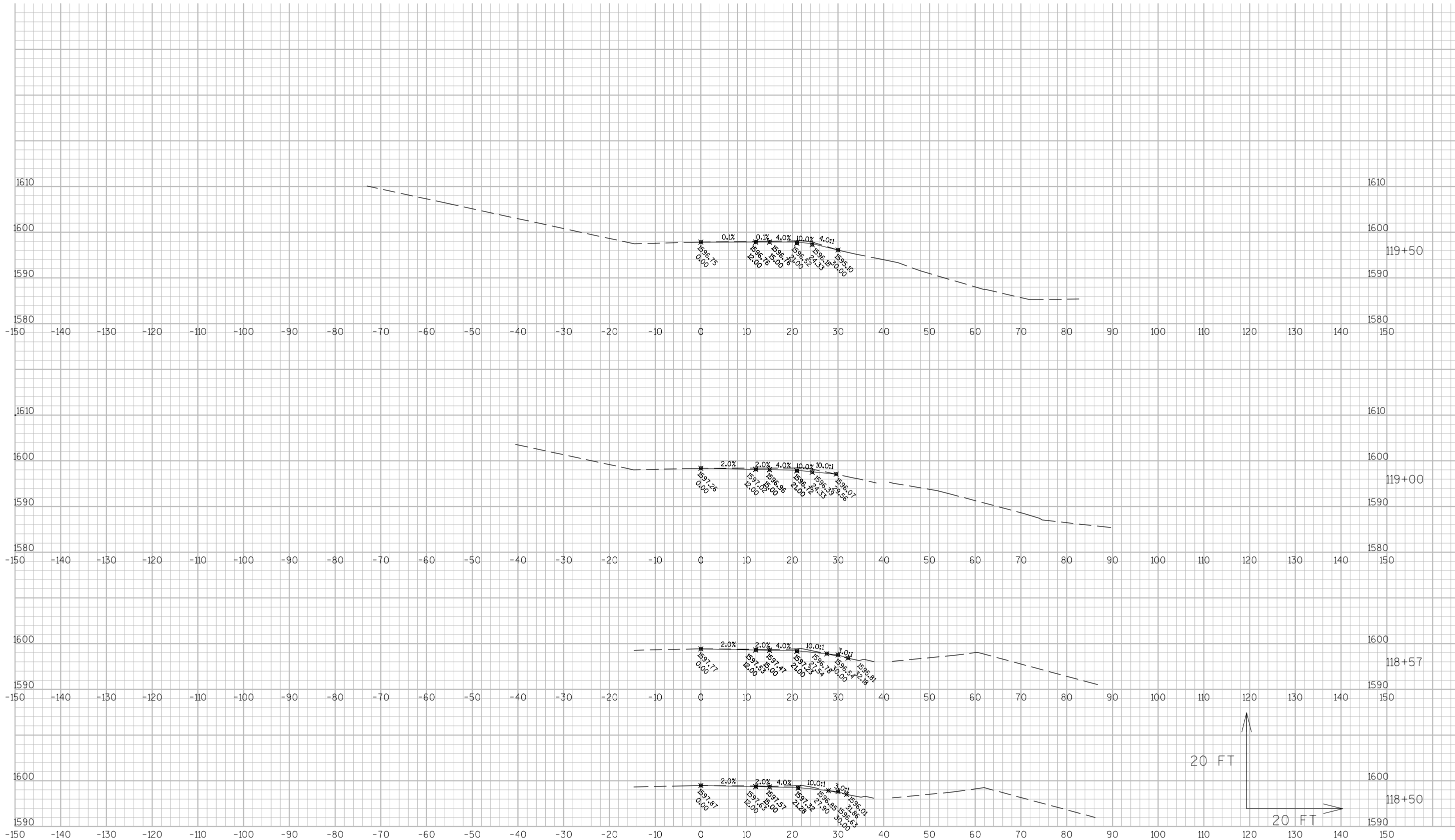


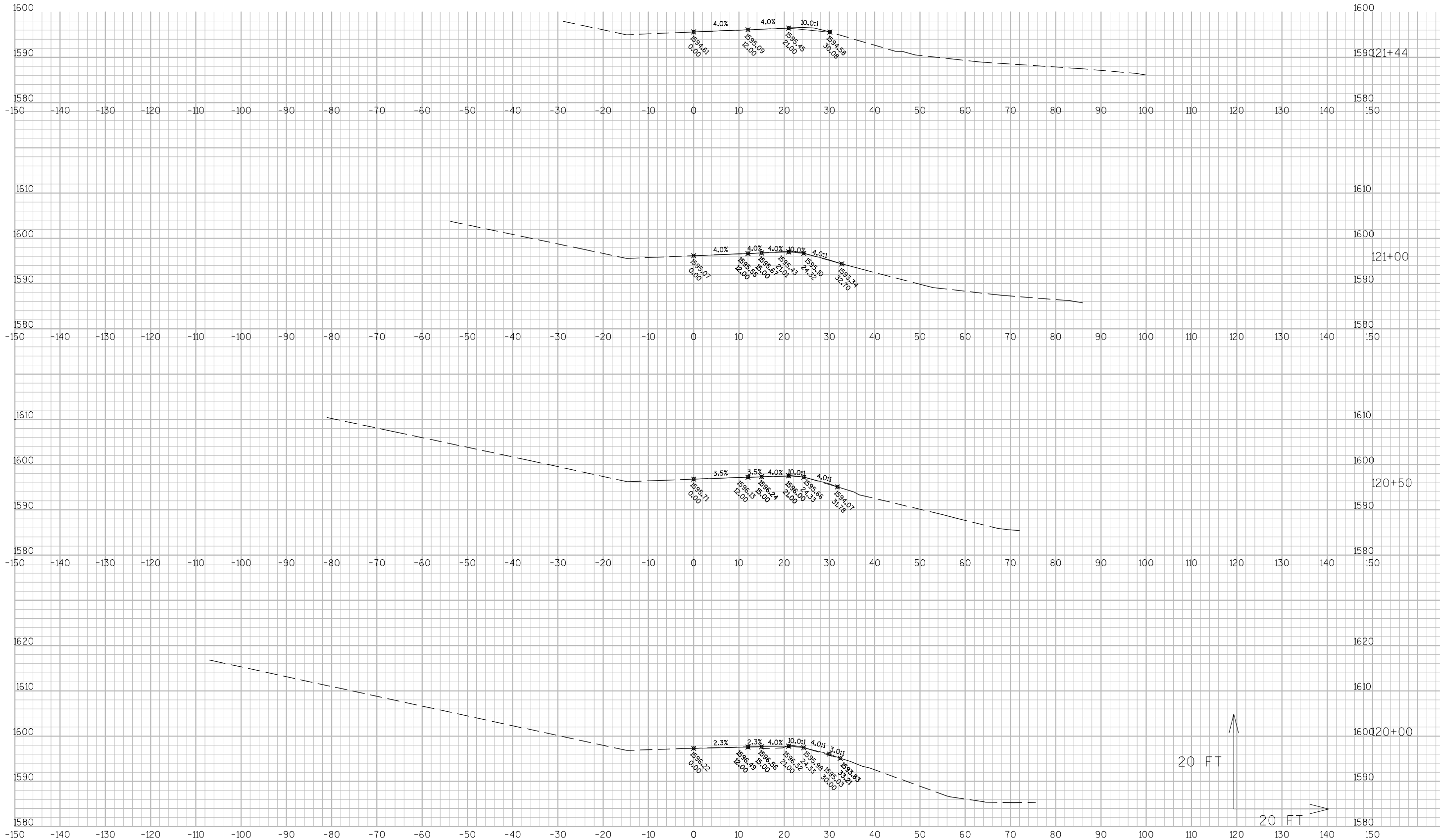


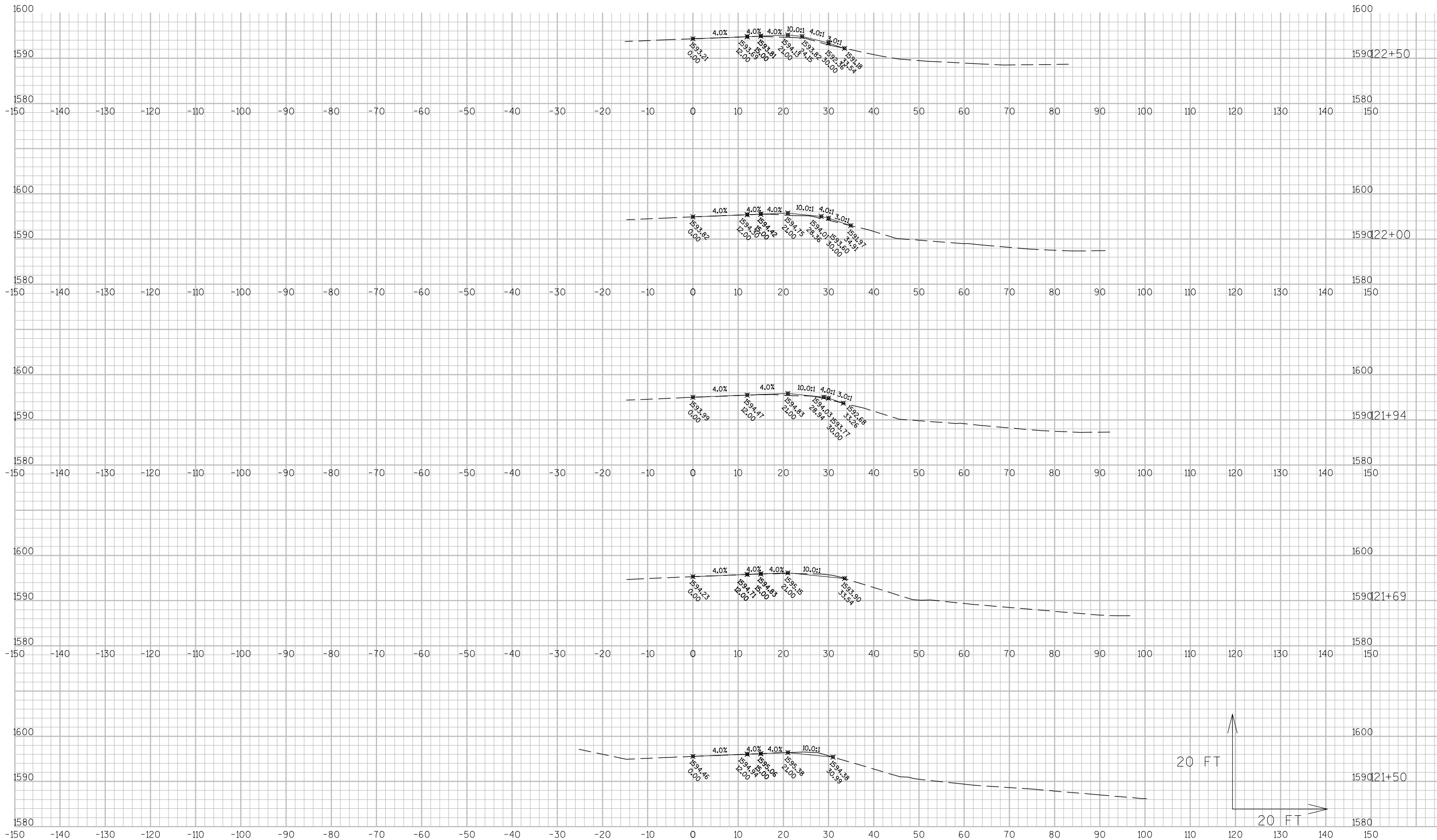


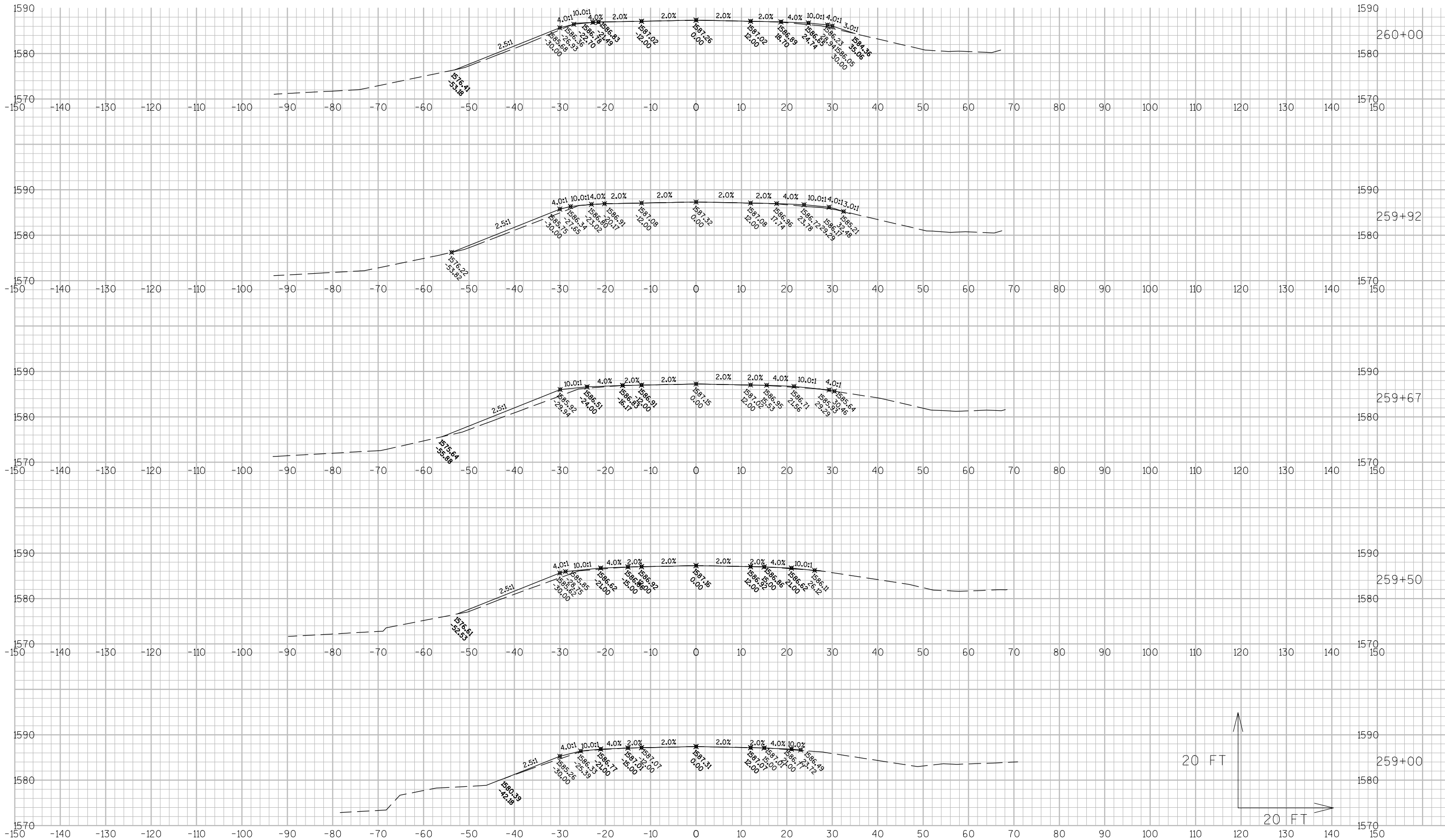


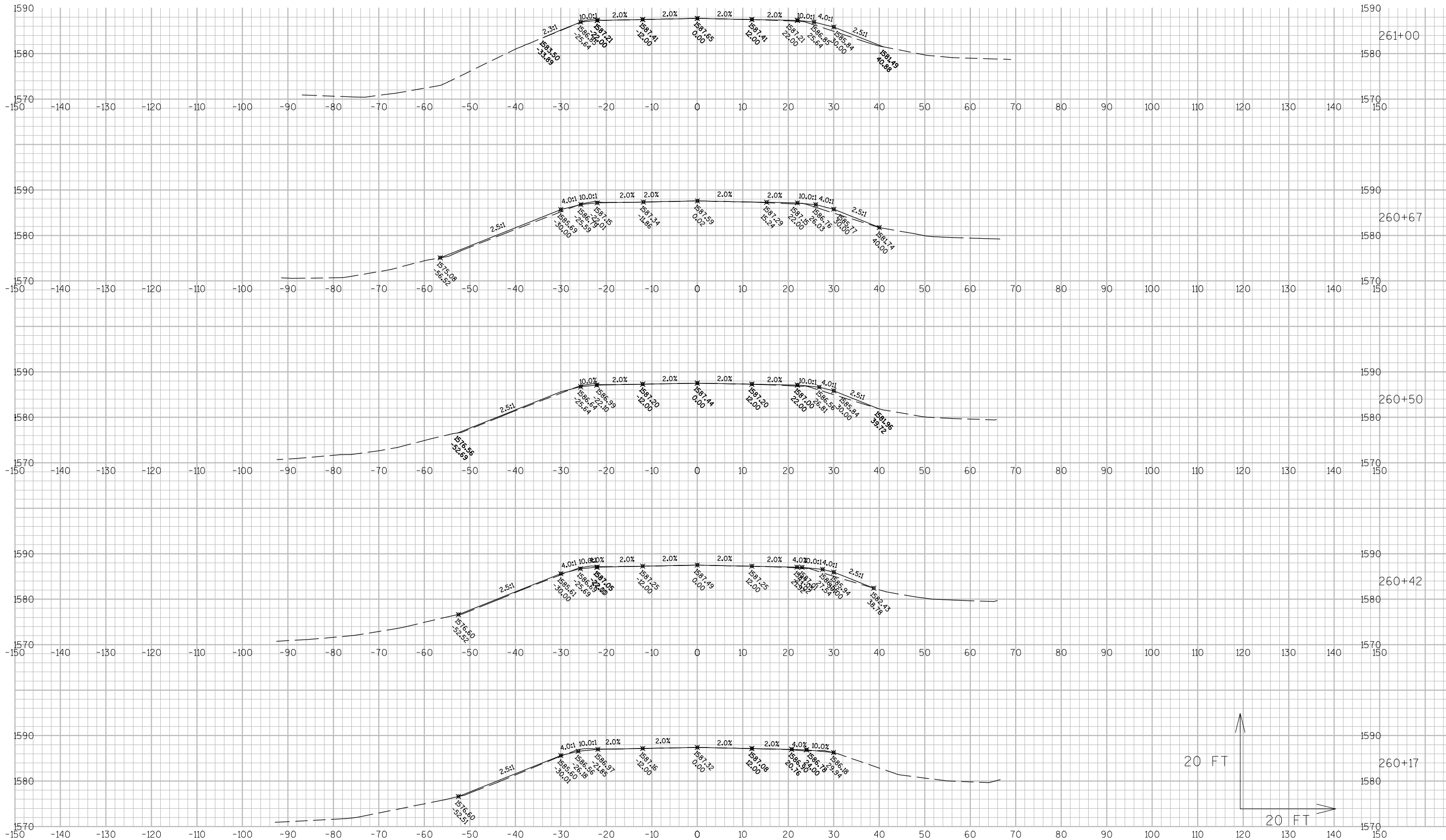


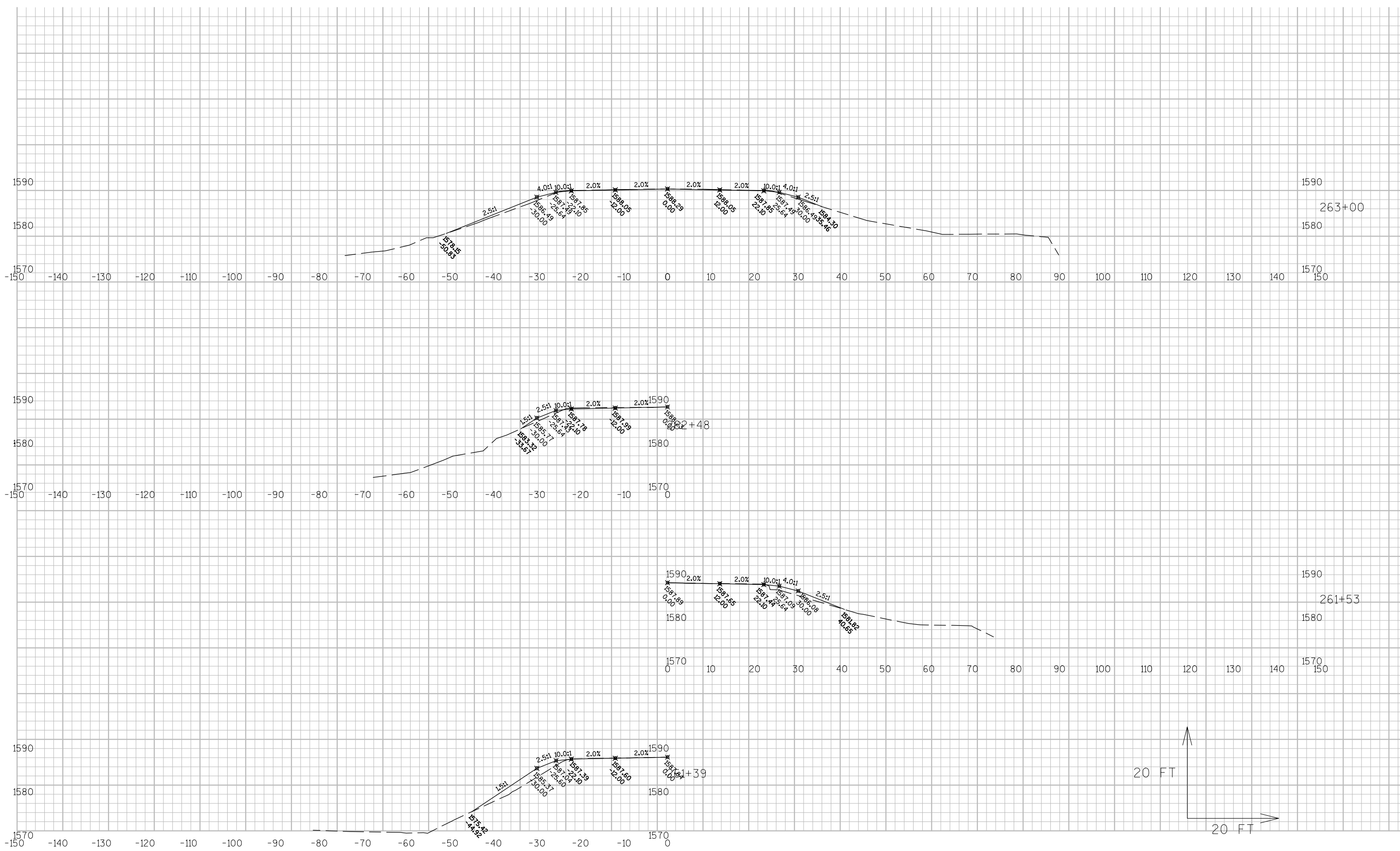


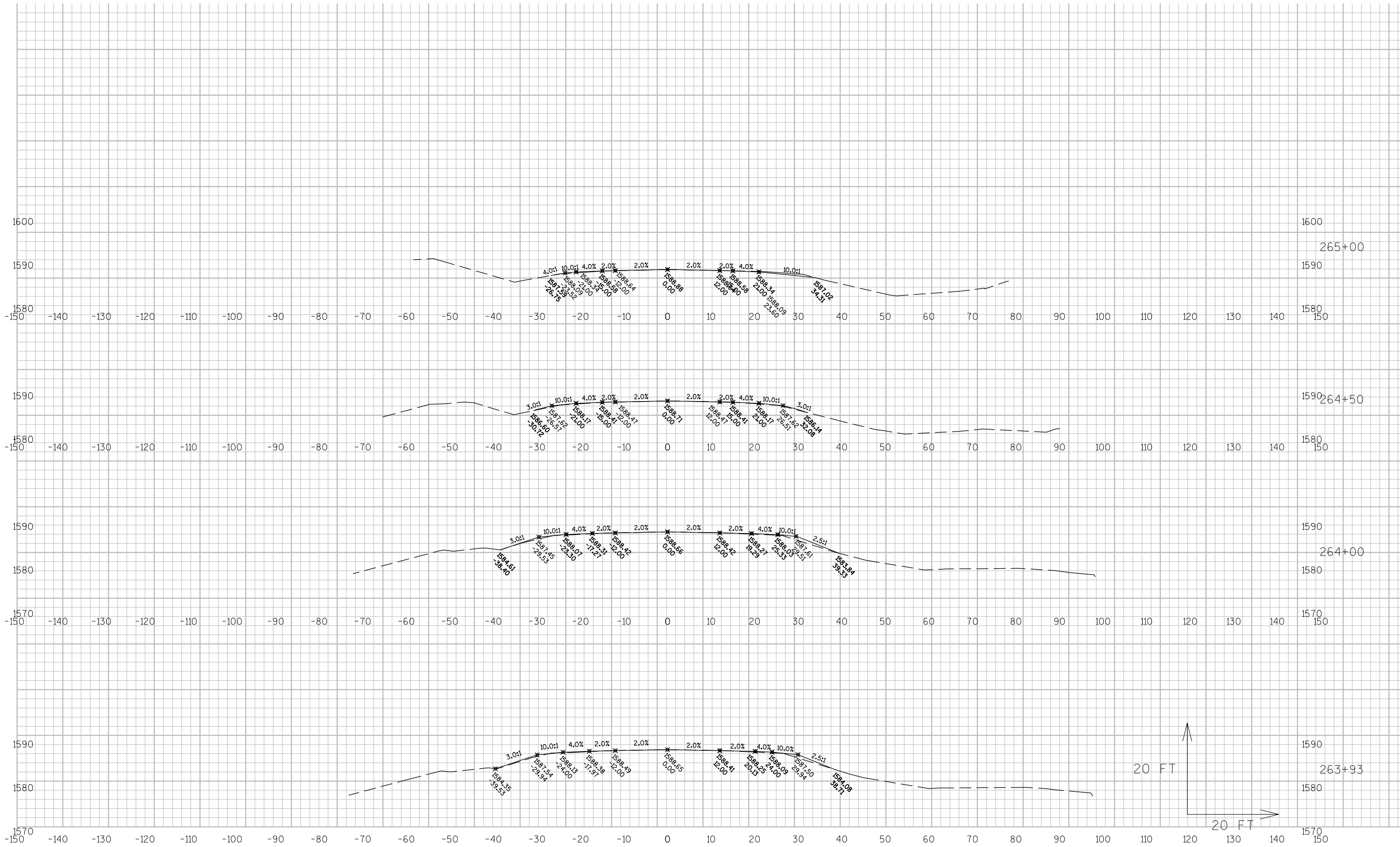


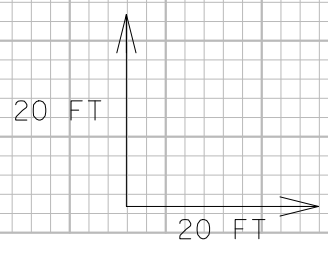
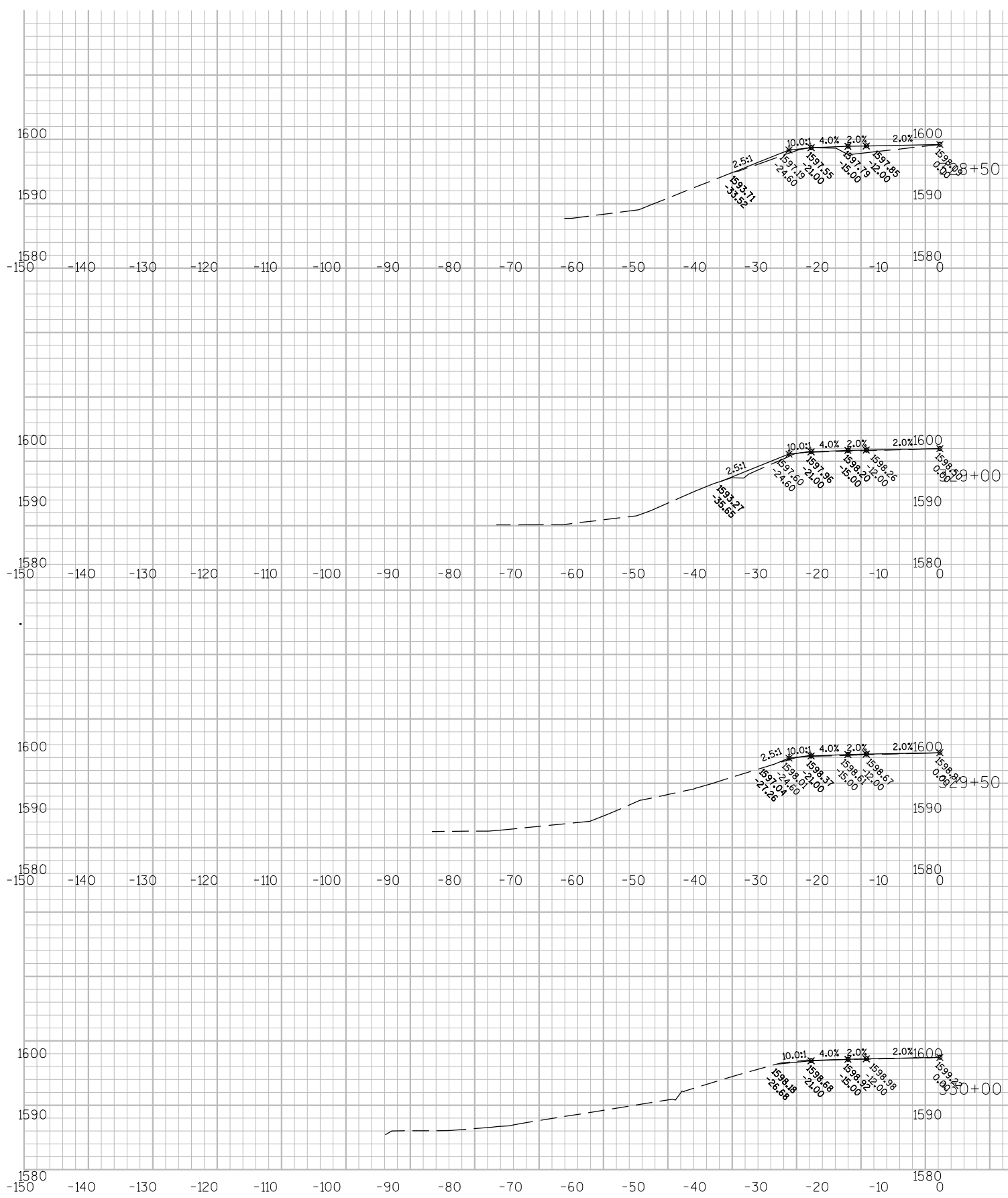


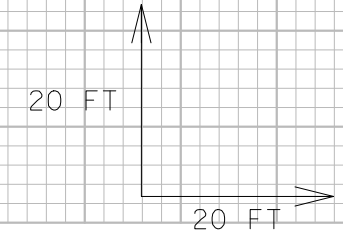
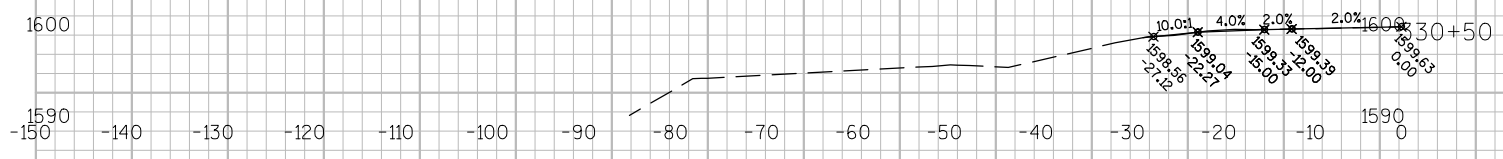
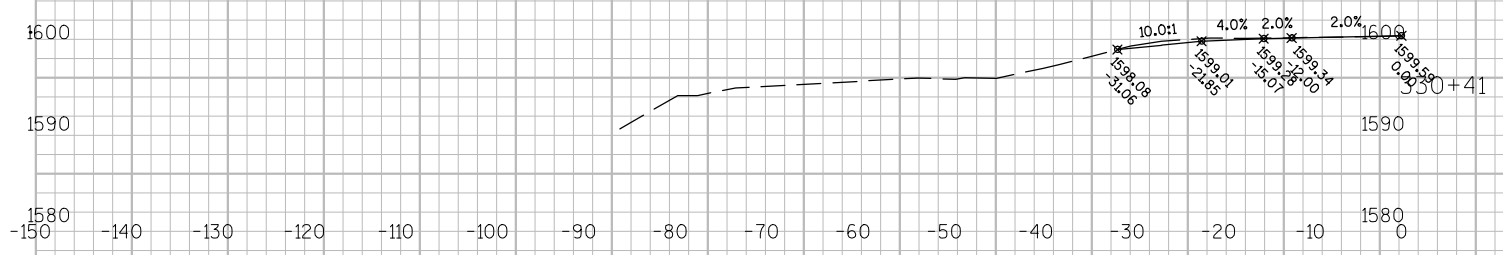
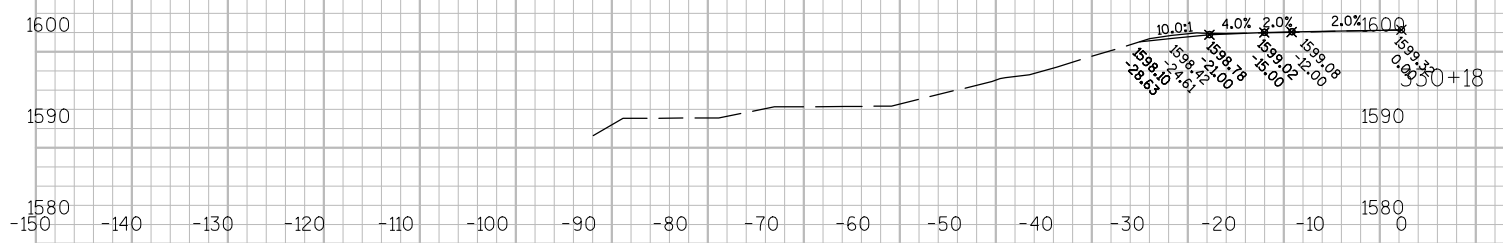
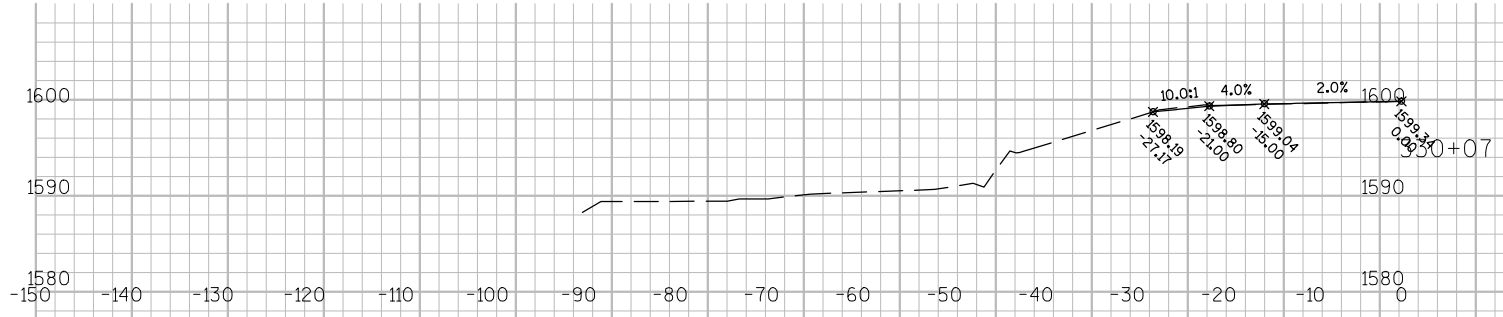


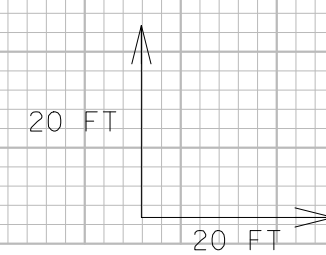
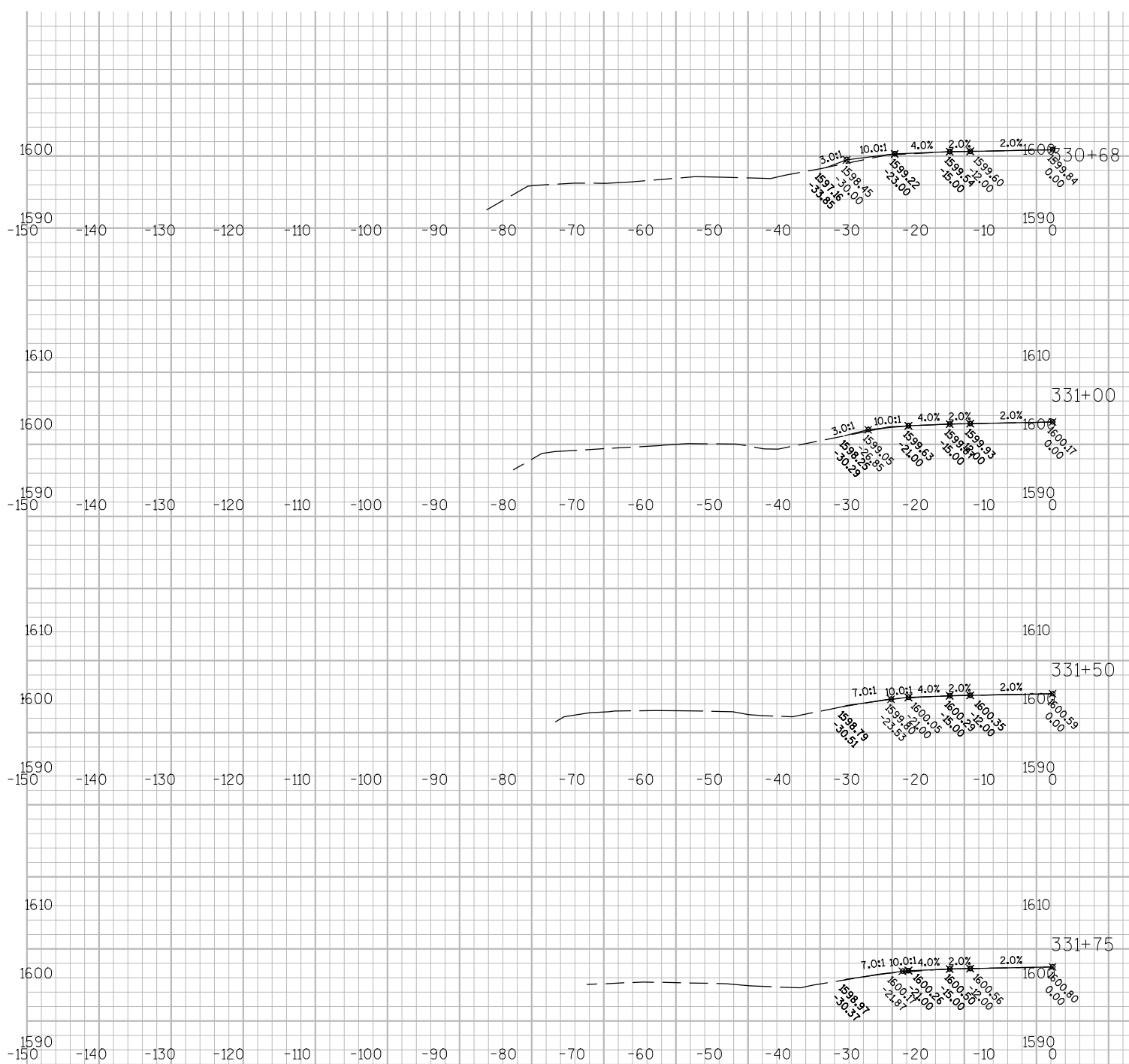


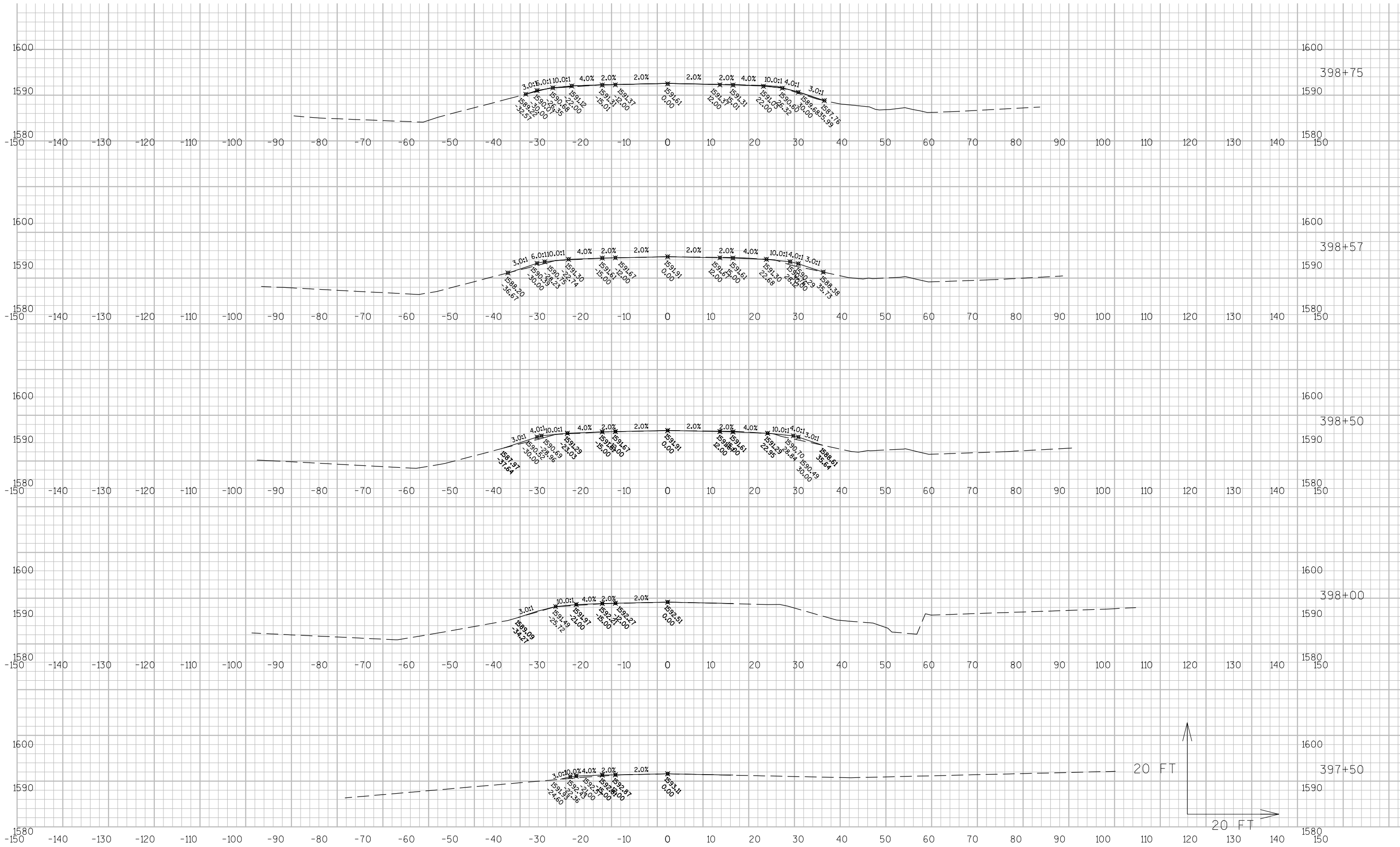


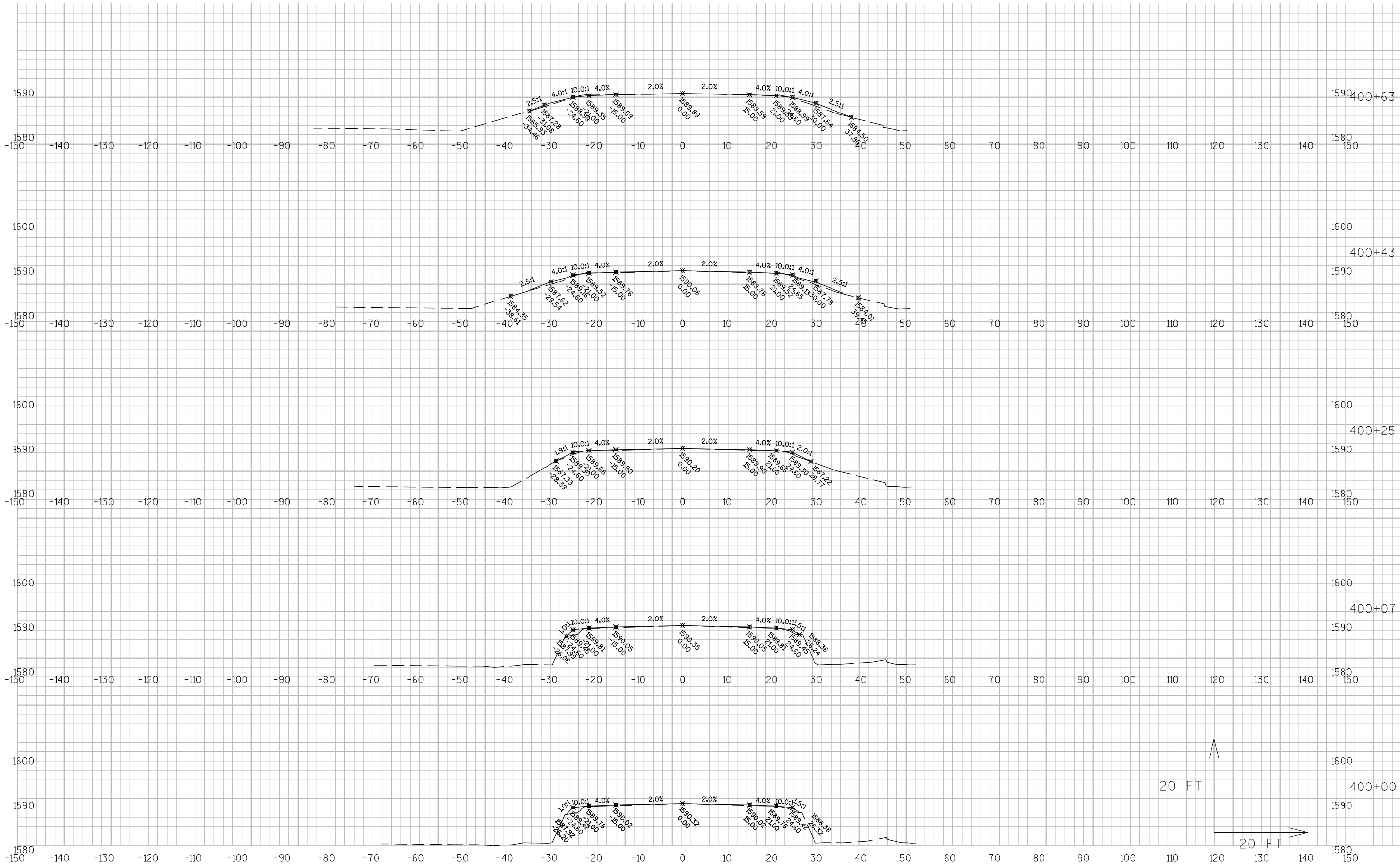


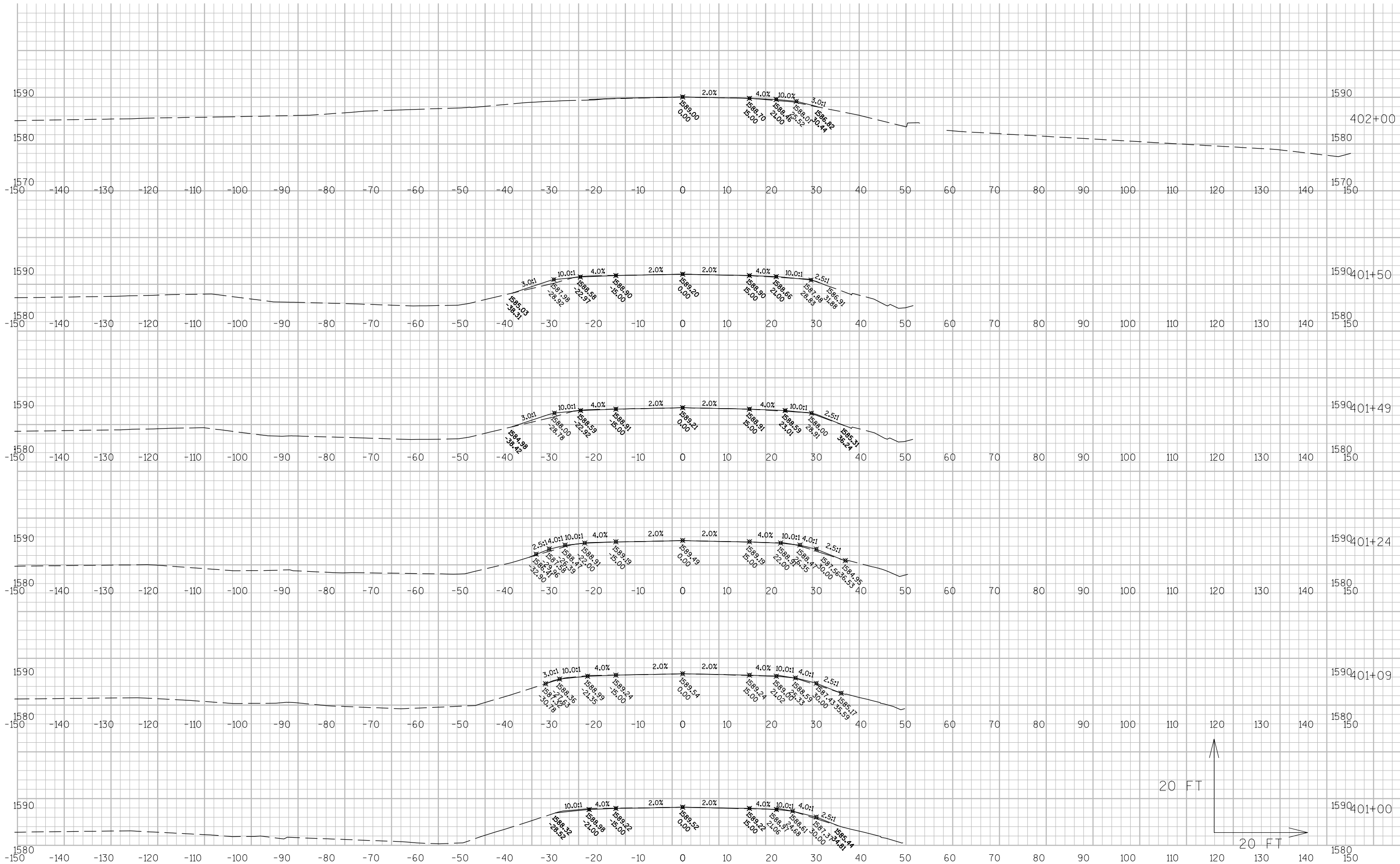


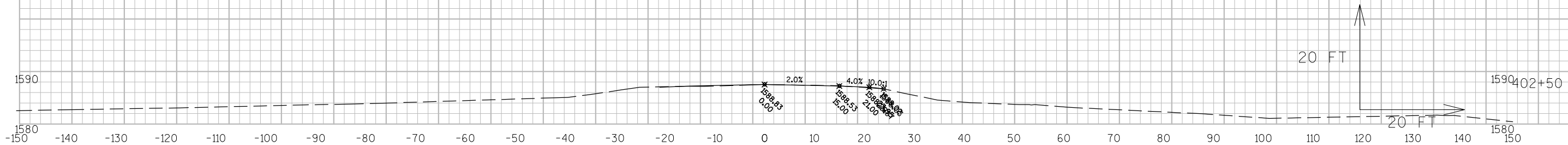


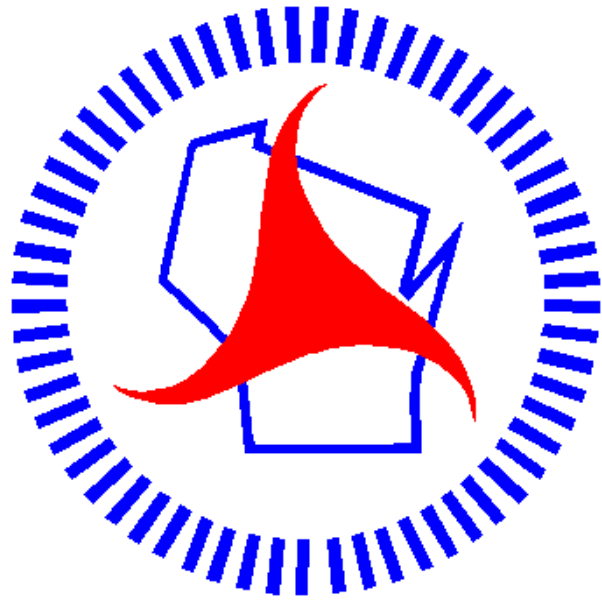












Wisconsin Department of Transportation

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