

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
5660-00-72	WISC 2019679	1
5944-01-72	WISC 2019680	1

ORDER OF SHEETS

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

MONROE-EVANSVILLE

28TH AVENUE TO WEISS LANE

STH 59
GREEN COUNTY

STATE PROJECT NUMBER 5660-00-72

ARGYLE-MONROE

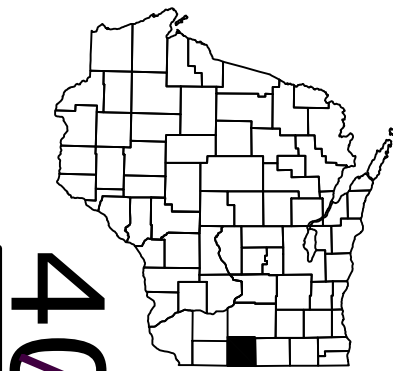
CTH N TO STH 11 EB & WB

STH 81
GREEN COUNTY

STATE PROJECT NUMBER 5944-01-72

PROJECT ID: 5660-00-72

COUNTY: GREEN



40



END PROJECT 5660-00-72
STA. 207+13.23BW

BEGIN PROJECT 5660-00-72
STA. 175+99.39BW
X=608068.5768
Y=142267.2095

T-2-N

END PROJECT 5944-01-72
STA. 41+93.09SB

STH 59 EXCLUDING
STA. 15+82.98SB TO
STA. 25+97.30SB

BEGIN PROJECT 5944-01-72
STA. 4+65.00SB

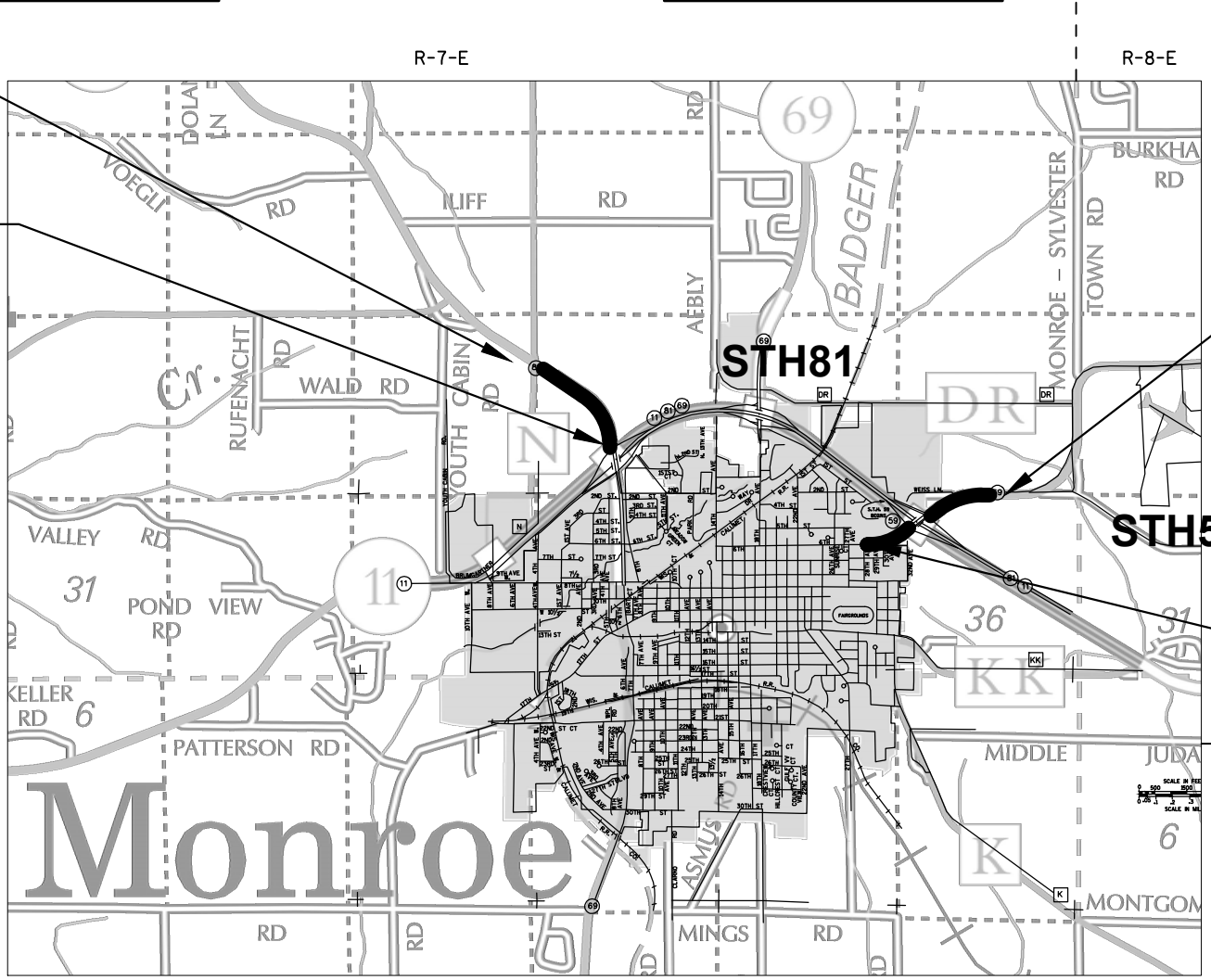
X=615617.1405
Y=139054.7092

T-1-N

DESIGN DESIGNATION	STH 59	STH 81
A.A.D.T.	= 3,650 (2020)	= 6,200 (2020)
A.A.D.T.	= 4,200 (2040)	= 7,000 (2040)
D.H.V.	= 476	= 1092
D.D.	= 60/40	= 59/41
T.	= 21%	= 12.7%
DESIGN SPEED	= 30MPH&60MPH	= 60MPH
ESALS	= 990,000	= 1,500,000

CONVENTIONAL SYMBOLS

<p>PLAN</p> <p>CORPORATE LIMITS</p> <p>PROPERTY LINE</p> <p>LOT LINE</p> <p>LIMITED HIGHWAY EASEMENT</p> <p>EXISTING RIGHT OF WAY</p> <p>PROPOSED OR NEW R/W LINE</p> <p>SLOPE INTERCEPT</p> <p>REFERENCE LINE</p> <p>EXISTING CULVERT</p> <p>PROPOSED CULVERT (Box or Pipe)</p> <p>COMBUSTIBLE FLUIDS</p> <p>MARSH AREA</p> <p>WOODED OR SHRUB AREA</p>		<p>PROFILE</p> <p>GRADE LINE</p> <p>ORIGINAL GROUND</p> <p>MARSH OR ROCK PROFILE (To be noted as such)</p> <p>SPECIAL DITCH</p> <p>GRADE ELEVATION</p> <p>CULVERT (Profile View)</p> <p>UTILITIES</p> <p>ELECTRIC</p> <p>FIBER OPTIC</p> <p>GAS</p> <p>SANITARY SEWER</p> <p>STORM SEWER</p> <p>TELEPHONE</p> <p>WATER</p> <p>UTILITY PEDESTAL</p> <p>POWER POLE</p> <p>TELEPHONE POLE</p>	
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LAYOUT SCALE 0

LENGTH OF CENTERLINE STH 59 = 0.514 MI.
LENGTH OF CENTERLINE STH 81 = 0.590 MI.
TOTAL NET LENGTH OF CENTERLINE = 1.104 MI.

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

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN DATUM OF 2012 (NAVD 88)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor: WisDOT

Designer: RICHARD J. OLSON

Project Manager: CHRISTOPHER HAZARD

Regional Examiner: SW REGION

Regional Supervisor: KURT JOHNSON

APPROVED FOR THE DEPARTMENT

DATE: 12/6/19

(Signature)

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GENERAL NOTES

NO TREES OR SHRUBS ARE TO BE REMOVED WITHOUT APPROVAL OF THE ENGINEER.

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT AREAS WITHIN THE FINISHED SHOULDER POINTS, SHALL BE SEEDED, FERTILIZED, AND MULCHED AS DIRECTED BY THE ENGINEER. ALL OTHER DISTURBED AREAS SHALL BE SEEDED, FERTILIZED, AND MULCHED AT THE CONTRACTORS EXPENSE.

THE LOCATION OF FIELD ENTRANCES WILL BE DETERMINED BY THE ENGINEER.

ALL CURB AND GUTTER RADII ARE MEASURED TO THE FLANGE OF CURB UNLESS OTHERWISE NOTED.

EXCAVATION BELOW SUBGRADE (EBS) IS NOT USED TO BALANCE YARDAGE AND IS NOT SHOWN ON THE CROSS SECTIONS, BUT IS MEASURED AND PAID FOR AS COMMON EXCAVATION.

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

SAWCUTS AS SHOWN ON THE PLANS ARE AT SUGGESTED LOCATIONS AND MAY BE ADJUSTED AT THE DISCRETION OF THE ENGINEER TO BETTER SUIT FIELD CONDITIONS

ASPHALTIC SURFACE/HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON 112 LB/SY/IN PER THE PAVEMENT REPORT.

THE HMA SHALL BE PLACED IN TWO LAYERS; 5" HMA - 3" LOWER LAYER AND 2" UPPER LAYER AND 4 1/2" HMA - 2 1/2" LOWER LAYER AND 2" UPPER LAYER. CONSTRUCT THE PAVED SHOULDERS WITH THE SAME MIX TYPE AND THICKNESS AS THE MAINLINE. APPLY TACK COAT BETWEEN LAYERS OF HMA PAVEMENT AT A RATE OF 0.05 GAL/SY.

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

THERE MAY BE AREAS OF SHALLOW BEDROCK WITHIN THIS PROJECT. EXISTING BEDROCK DEPTHS ARE BASED ON A LIMITED NUMBER OF BORINGS COMPLETED FOR THE SOILS REPORT. A COPY OF THE SOILS REPORT IS AVAILABLE UPON REQUEST FROM THE DEPARTMENT. SOME OF THE BORINGS INDICATED HARD DRILLING AND/OR AUGER REFUSAL WITHIN LESS THAN 5' OF THE EXISTING SURFACE. HARD DRILLING AND/OR AUGER REFUSAL DEPTHS HAVE BEEN INCLUDED IN THE PLAN SHEET CROSS SECTIONS.

EROSION CONTROL FEATURES AS SHOWN ON THE PLANS, SHALL BE ADJUSTED TO FIT EXISTING FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

GRADING IS NOT ALLOWED IN DELINEATED WETLAND AREAS. DO NOT STORE EQUIPMENT OR MATERIAL IN ENVIRONMENTALLY SENSITIVE AREAS, WETLANDS OR WATERWAYS.

NUMBER, LOCATIONS, AND SPACING OF TEMPORARY AND PERMANENT SIGNS AND DEVICES AS SHOWN ON THE PLANS, SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.

UTILITY CONTACTS

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mkennison@cityofmonroe.org

Nicole Smullen
We Energies - Gas/Petroleum
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jerry.myers@tsdtelecom.com

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Highway Commissioner
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1110 18th ave
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agerber@cityofmonroe.org

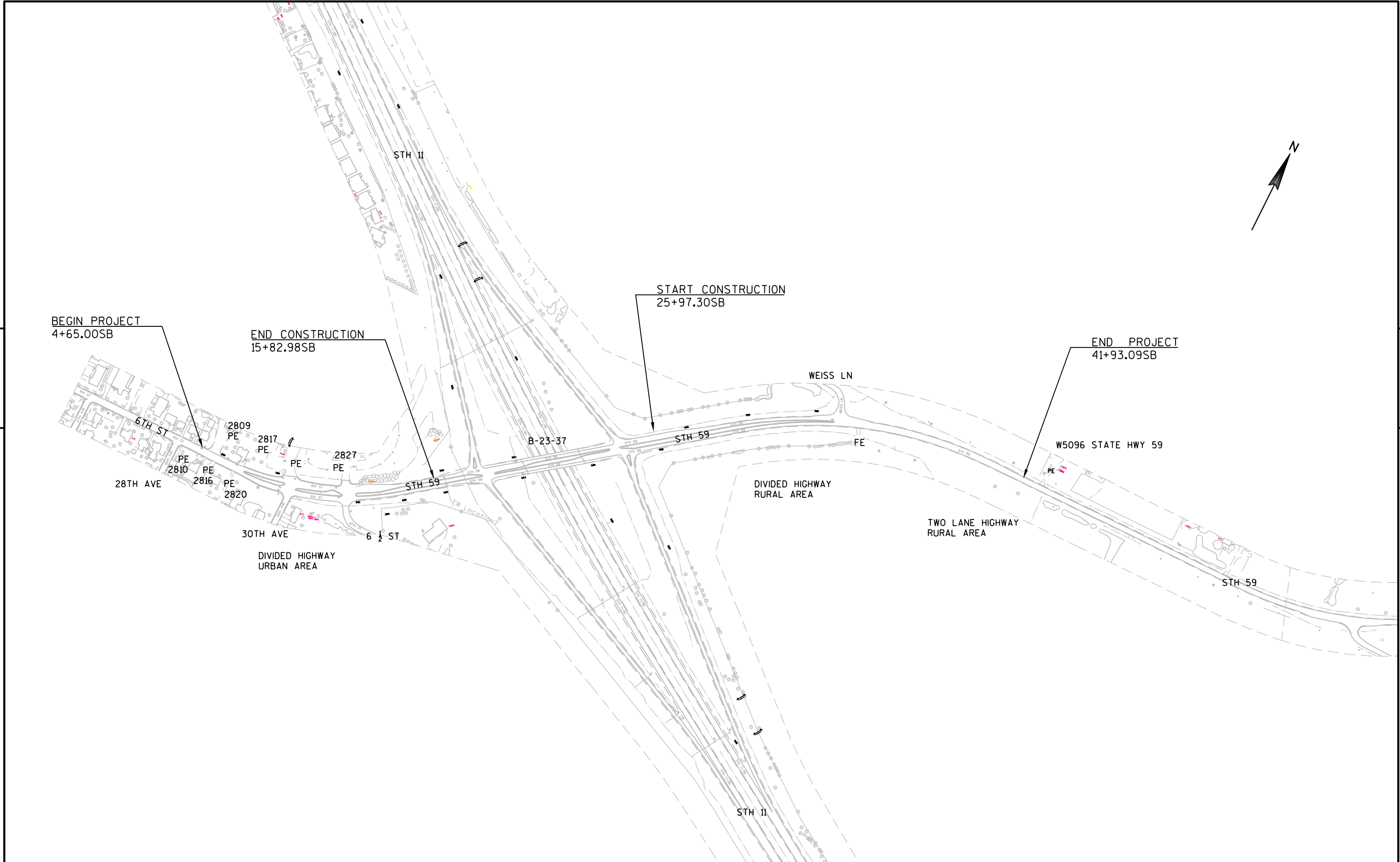
Todd Hasse
Town of Monroe
Town Chairman
W5820 Liff Rd.
Monroe, WI 53566
(608) 325-5321

ORDER OF SECTION 2 SHEETS

- GENERAL NOTES
- PROJECT OVERVIEW
- TYPICAL SECTIONS
- CONSTRUCTION DETAILS
- PLAN DETAILS
- EROSION CONTROL
- PAVEMENT MARKING
- TRAFFIC CONTROL AND CONSTRUCTION STAGING
- ALIGNMENT



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



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PROJECT NO:5660-00-72	HWY:STH 59	COUNTY:GREEN	PROJECT OVERVIEW - STH 59	SHEET	E
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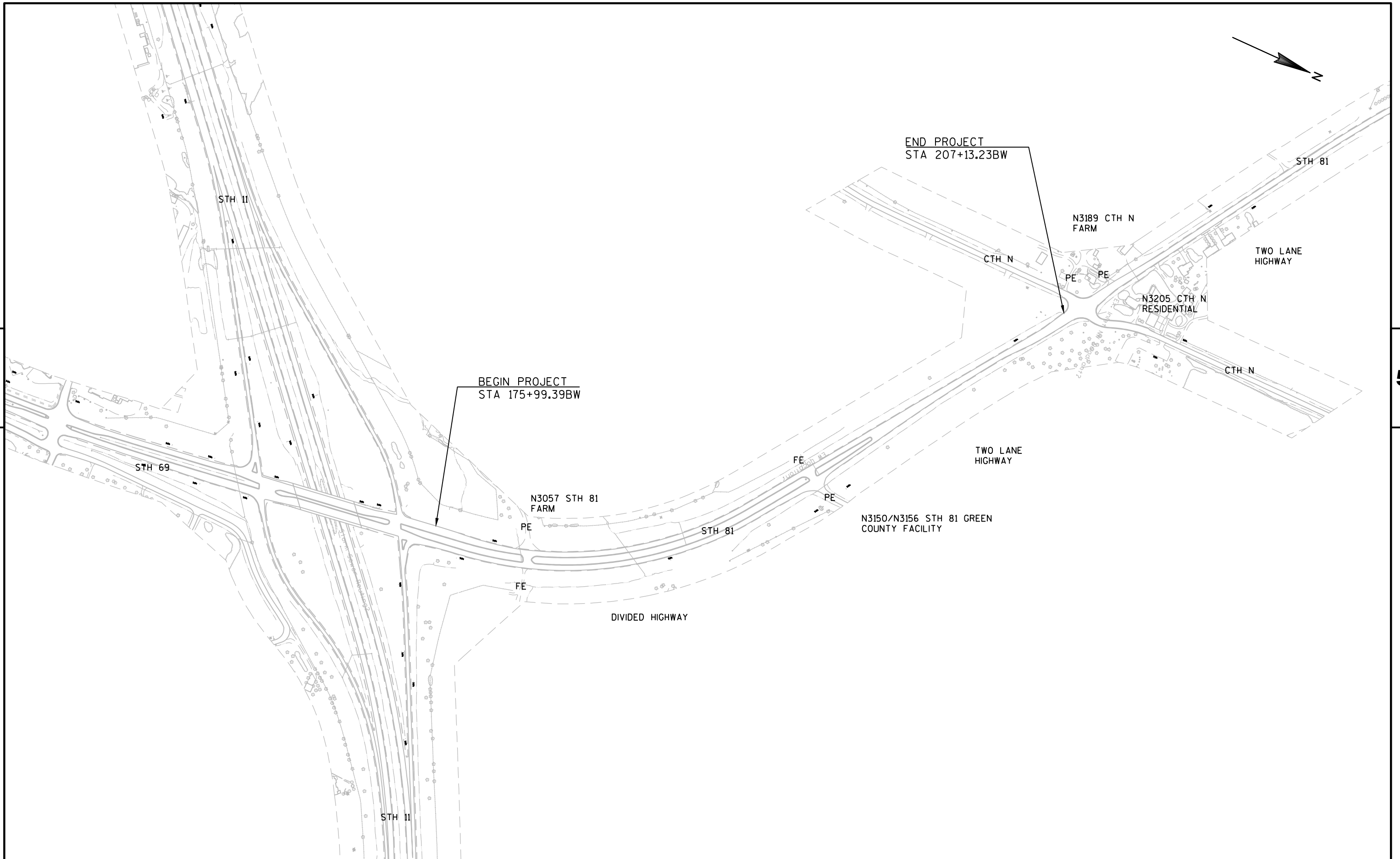
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LAYOUT NAME - SHEET - (3)

PLOT DATE : 1/4/2019 1:24 PM

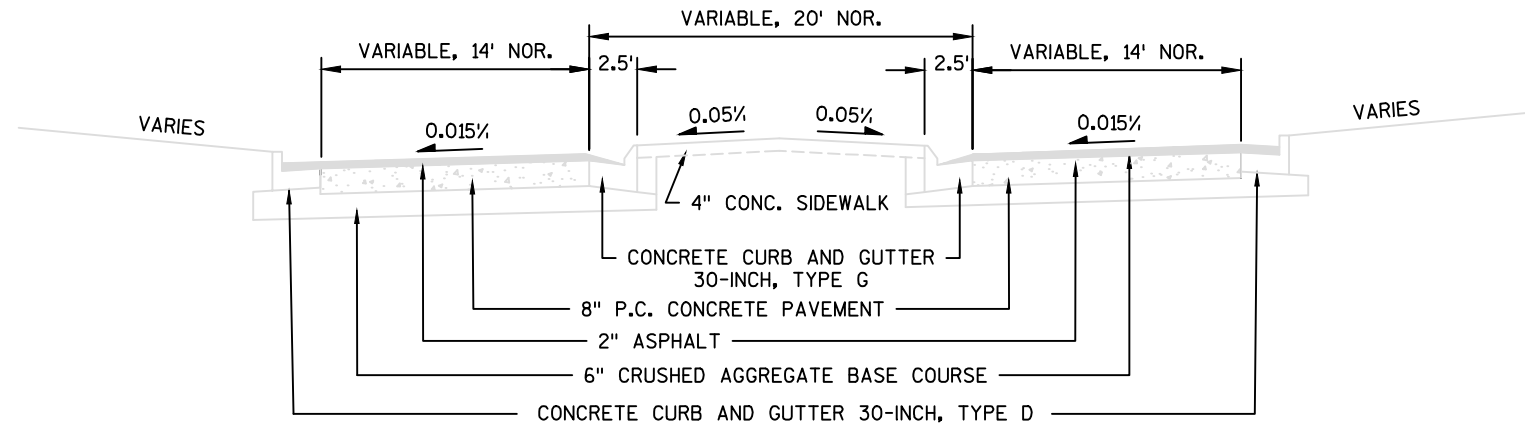
PLOT BY : OLSON, RICHARD J PLOT NAME :

PLOT SCALE : 1 IN:400 FT

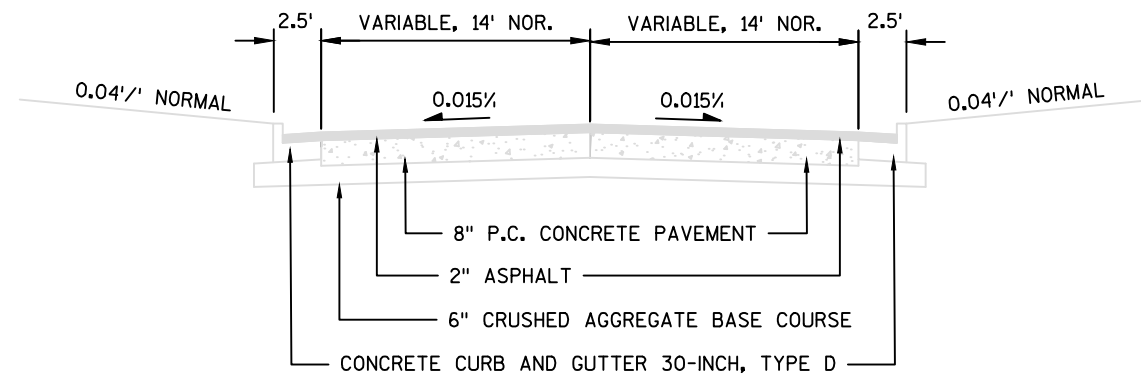
WISDOT/CADS SHEET 44



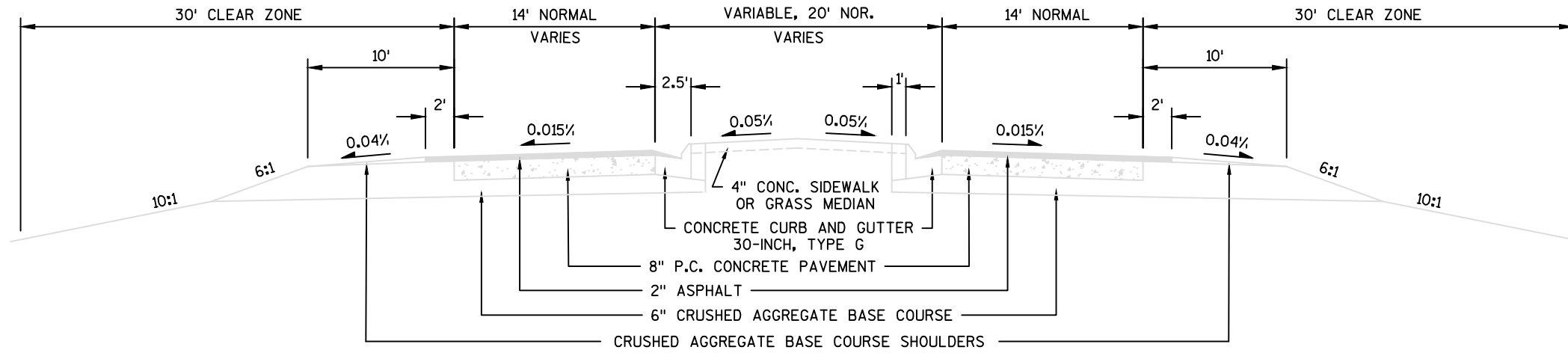
PROJECT NO:5944-01-72	HWY:STH 81	COUNTY:GREEN	PROJECT OVERVIEW - STH 81	SHEET	E
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TYPICAL EXISTING SECTION - STH 59
 STA 6+80SB TO STA 9+25SB

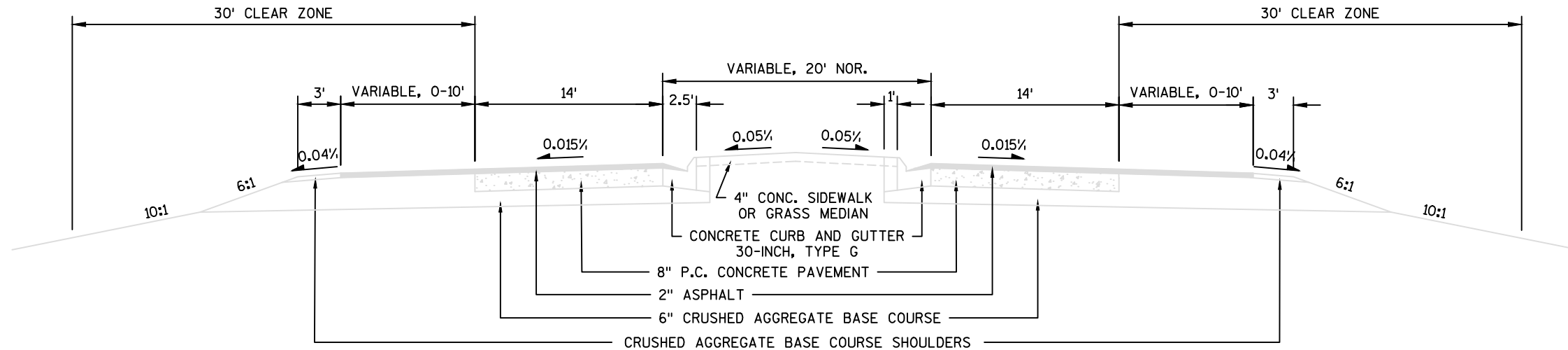


TYPICAL EXISTING SECTION - STH 59
 STA 4+65.36SB TO STA 6+80SB



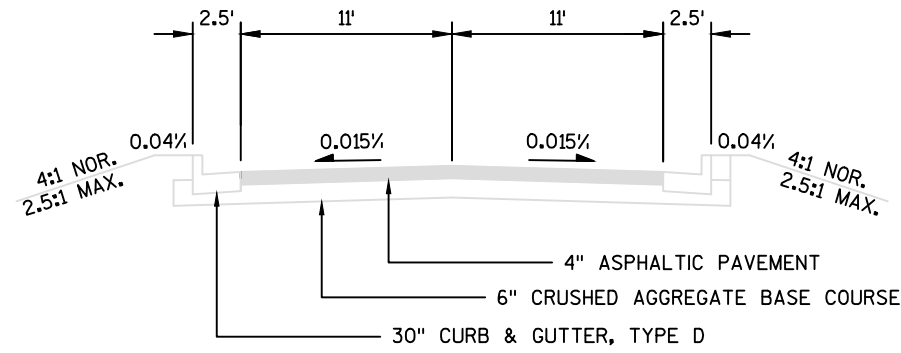
TYPICAL EXISTING SECTION - STH 59

STA 11+90SB TO STA 15+82.98SB
STA 25+97.30SB TO STA 33+75SB

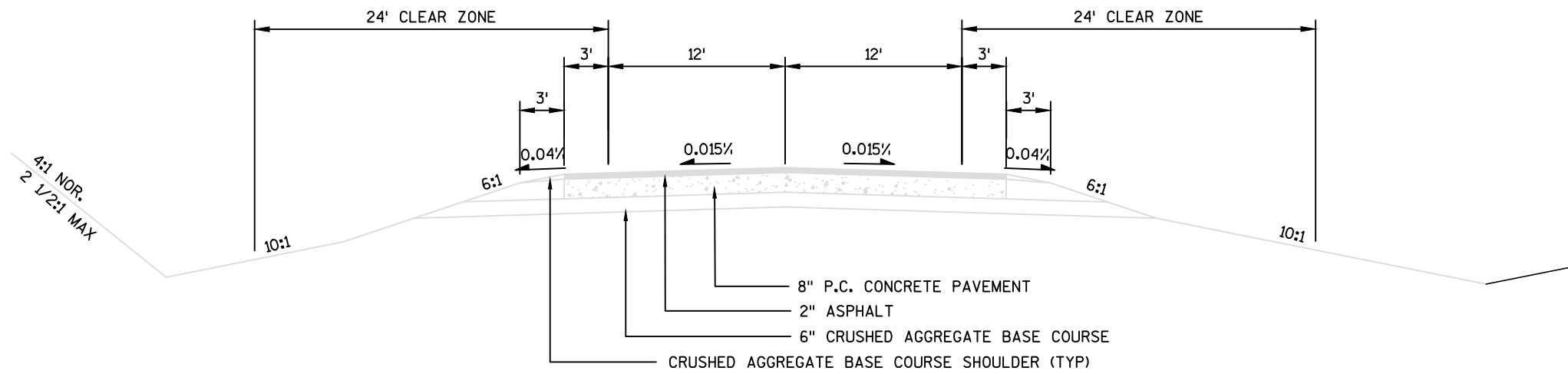


TYPICAL EXISTING SECTION - STH 59

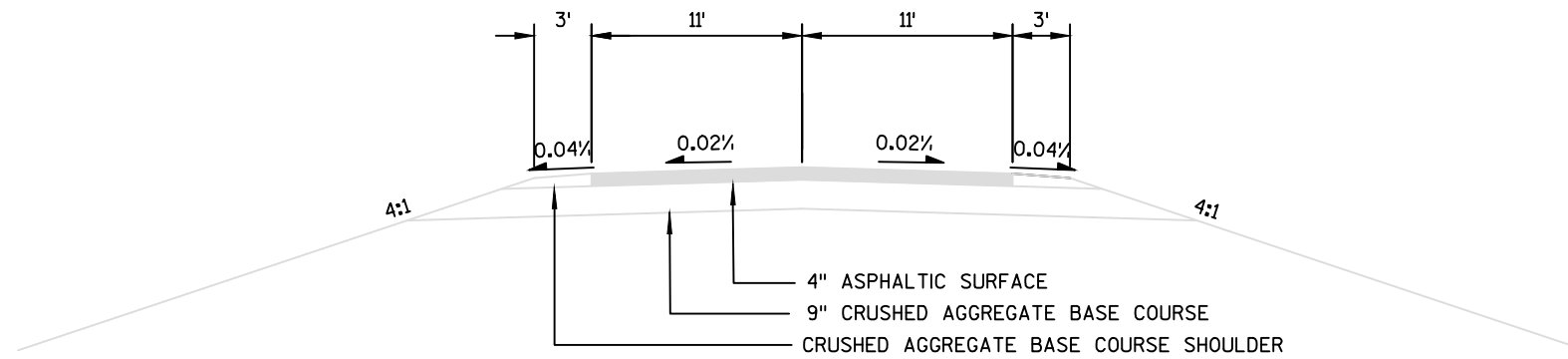
STA 9+25SB TO STA 11+90SB



TYPICAL EXISTING SECTION - 30TH AVENUE
 STA 50+00SB TO STA 50+57.85SB

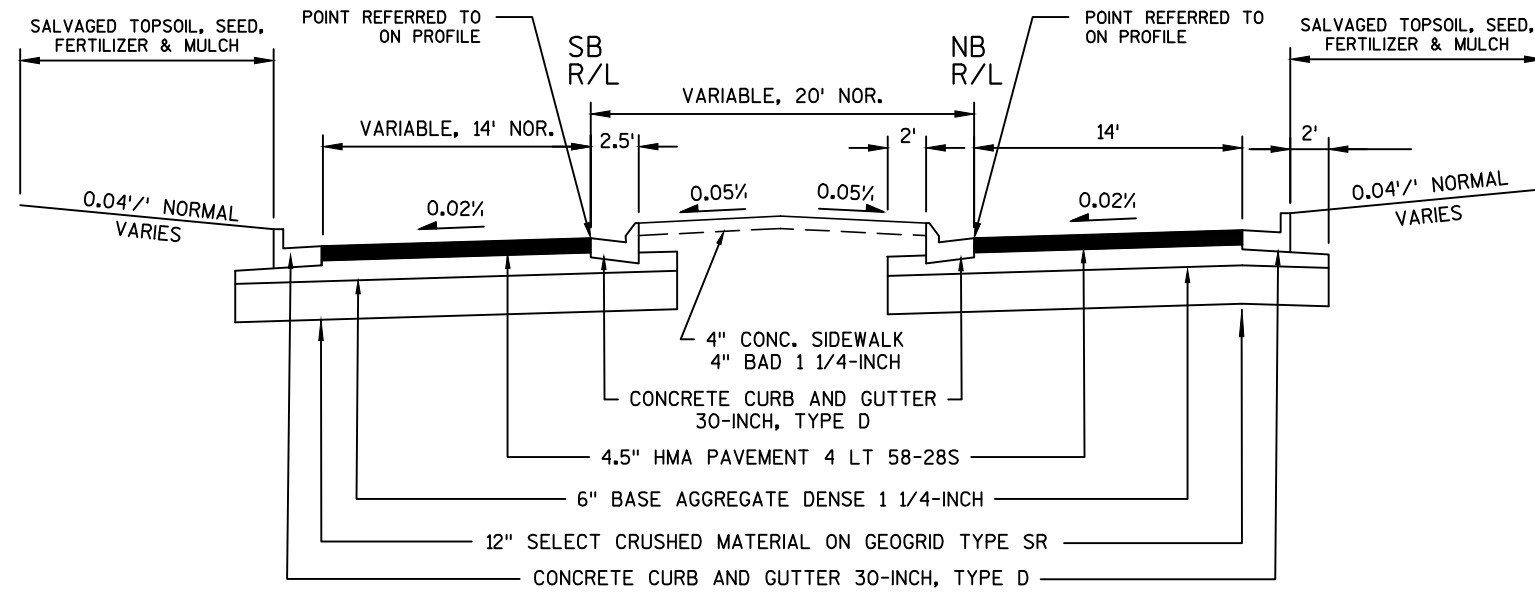


TYPICAL EXISTING SECTION - STH 59
 STA 33+75SB TO STA 41+93.09SB

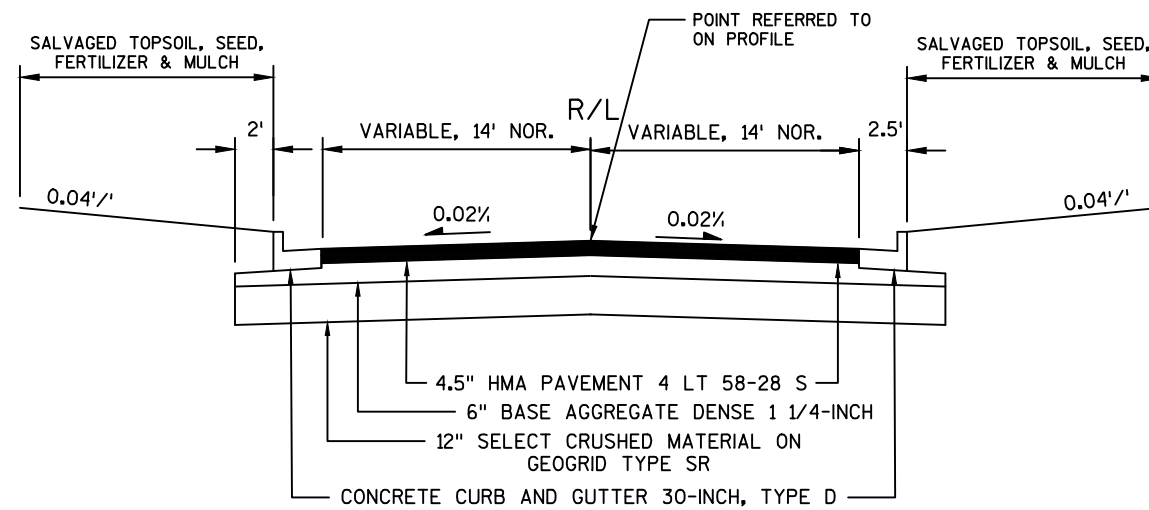


TYPICAL EXISTING SECTION - STH 59 SIDEROAD

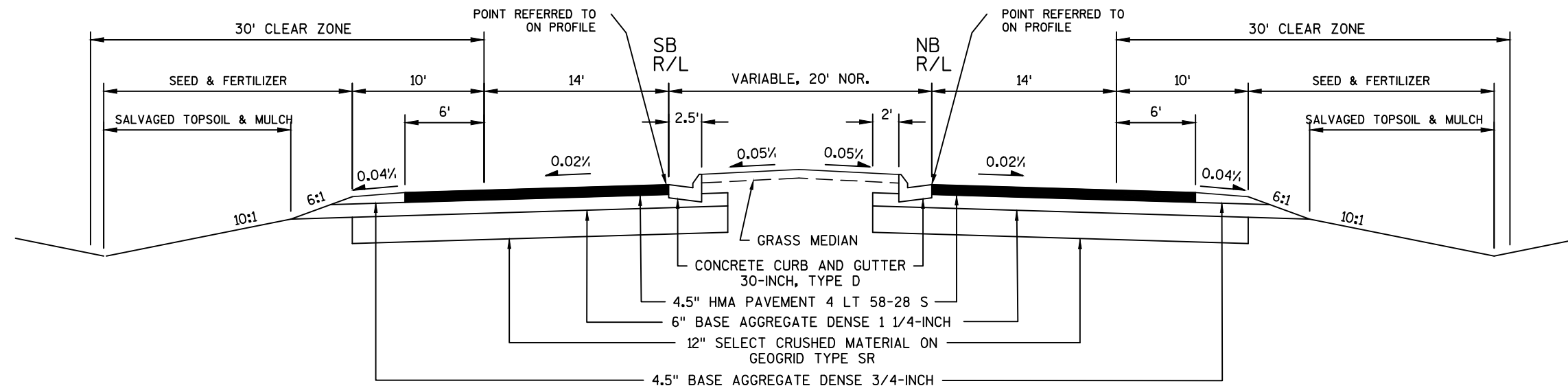
WEISS LANE, STA 70+00 TO STA 70+80.51
 6 1/2 STREET, STA 60+00 TO STA 60+60.47



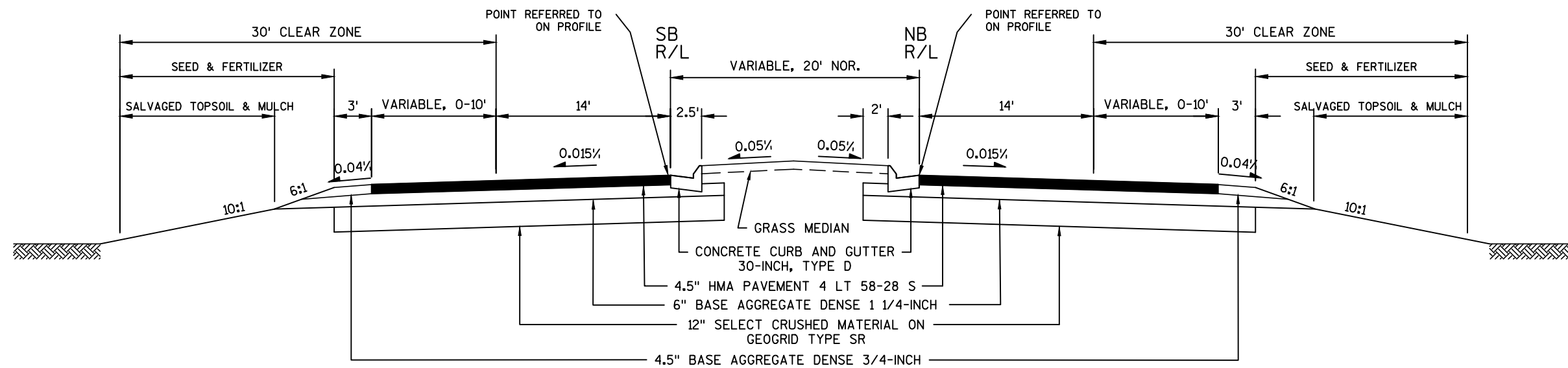
TYPICAL FINISHED SECTION - STH 59
 STA 6+80SB TO STA 9+25SB



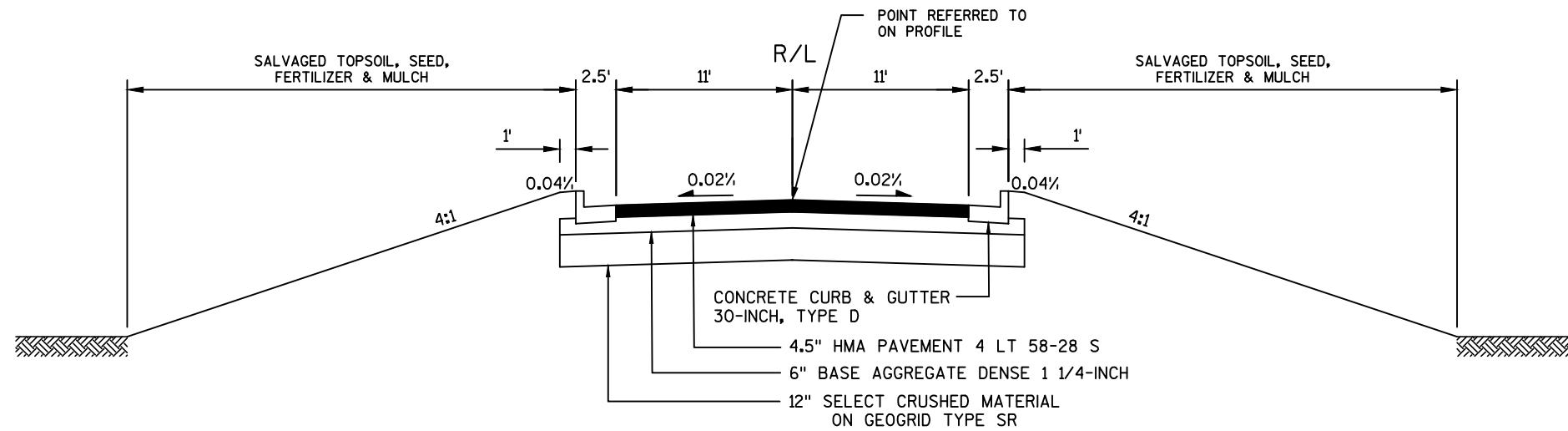
TYPICAL FINISHED SECTION - STH 59
 STA 4+65SB TO STA 6+80SB



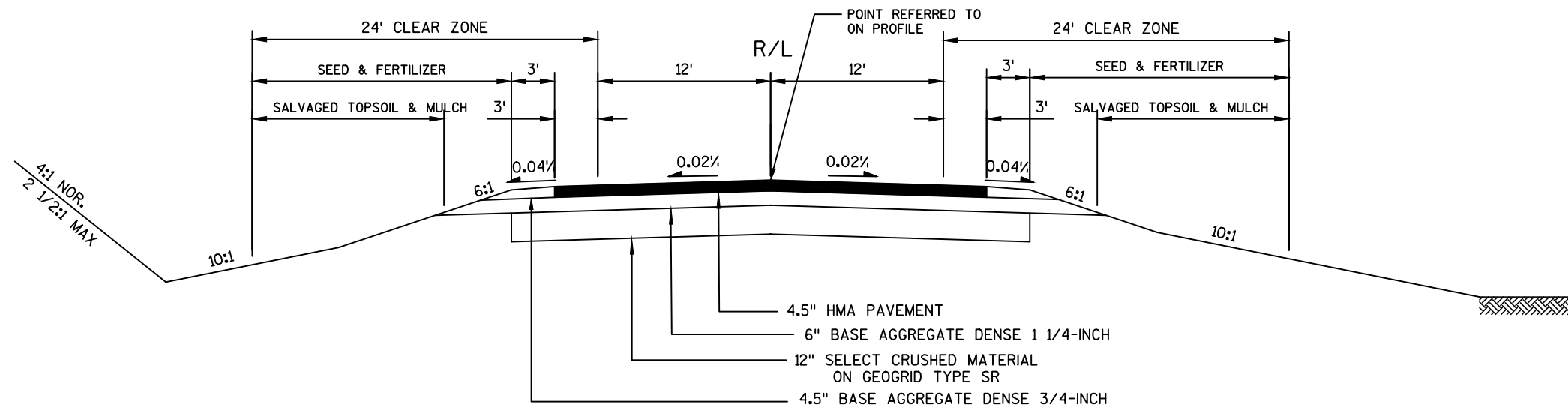
TYPICAL FINISHED SECTION - STH 59
 STA 26+97.30SB TO STA 33+75SB



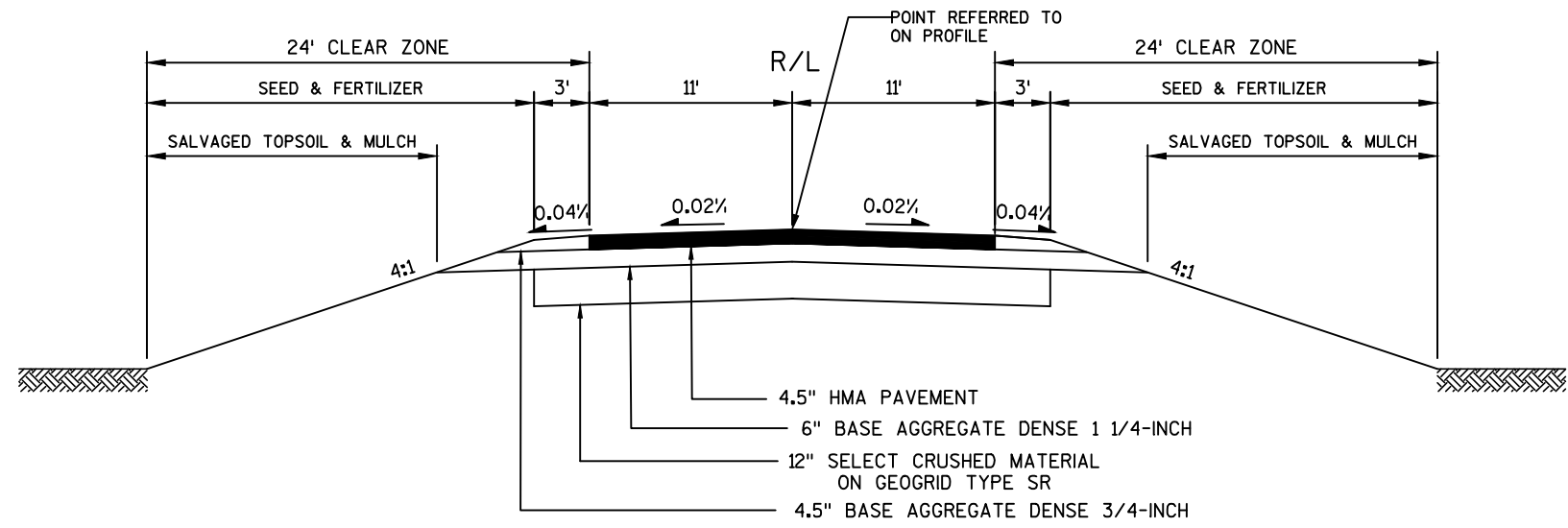
TYPICAL EXISTING SECTION - STH 59
 STA 9+25SB TO STA 11+90SB



TYPICAL FINISHED SECTION - 30TH AVENUE
 STA 50+00 TO STA 50+57.85

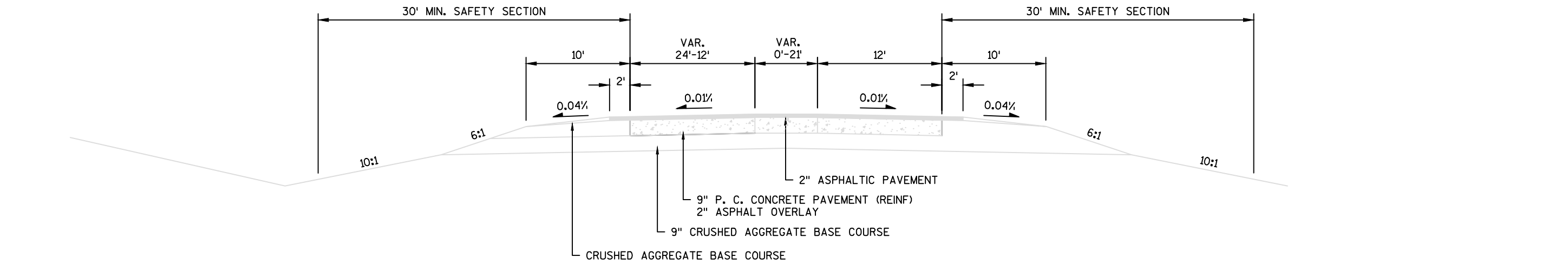


TYPICAL FINISHED SECTION - STH 59
 STA 33+75B TO STA 41+93.09SB



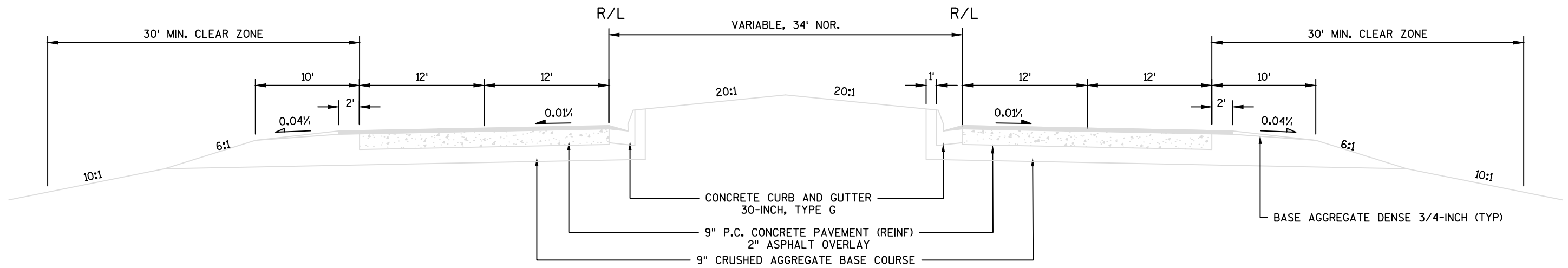
TYPICAL FINISHED SECTION - STH 59 SIDEROAD

WEISS LANE, STA 70+00 TO STA 70+80.51
 6 1/2 STREET, STA 60+00 TO STA 60+60.47



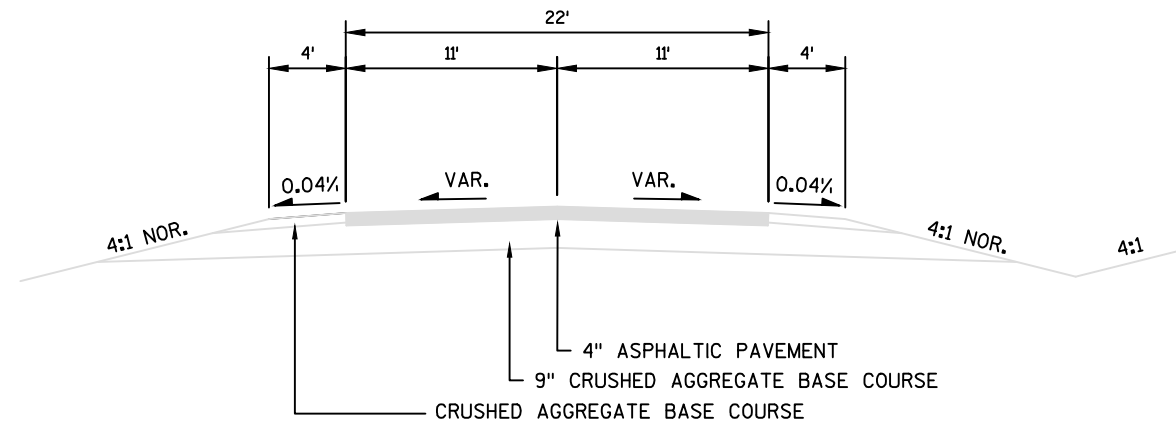
EXISTING TYPICAL SECTION

S.T.H. 81
STA 196+70BW TO STA 202+951BW

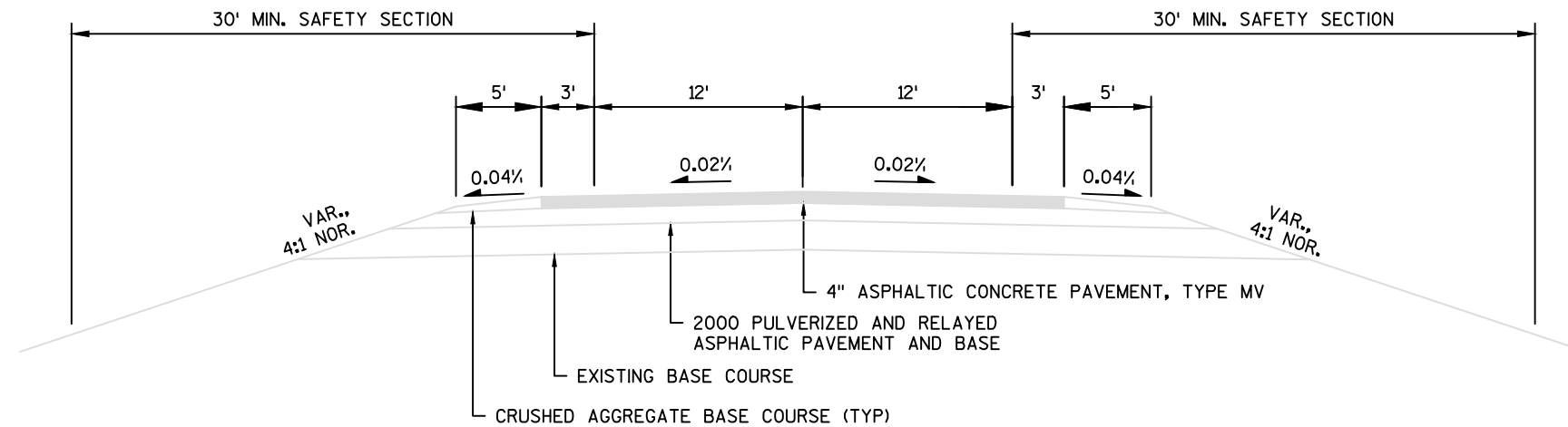


EXISTING TYPICAL SECTION

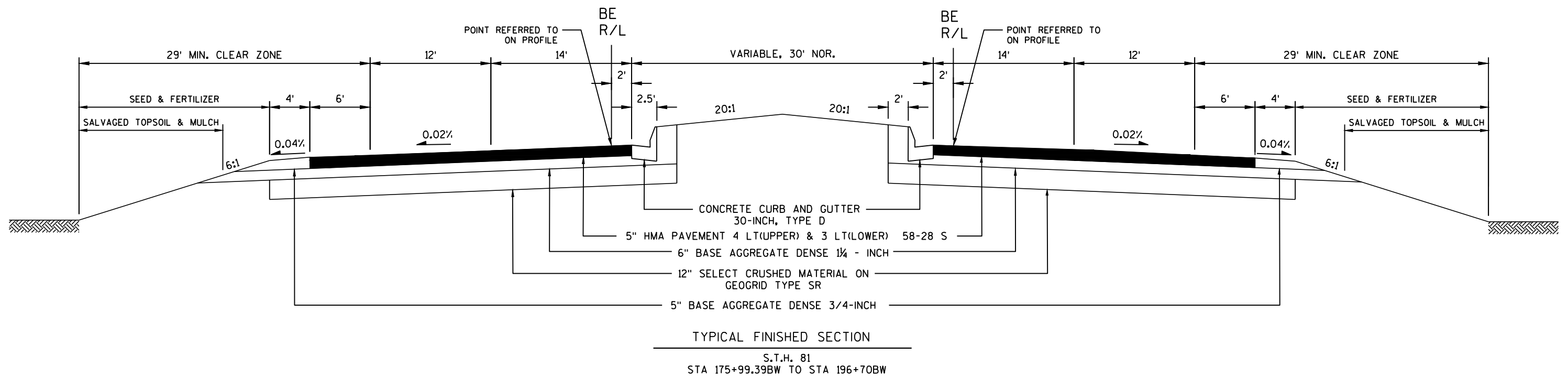
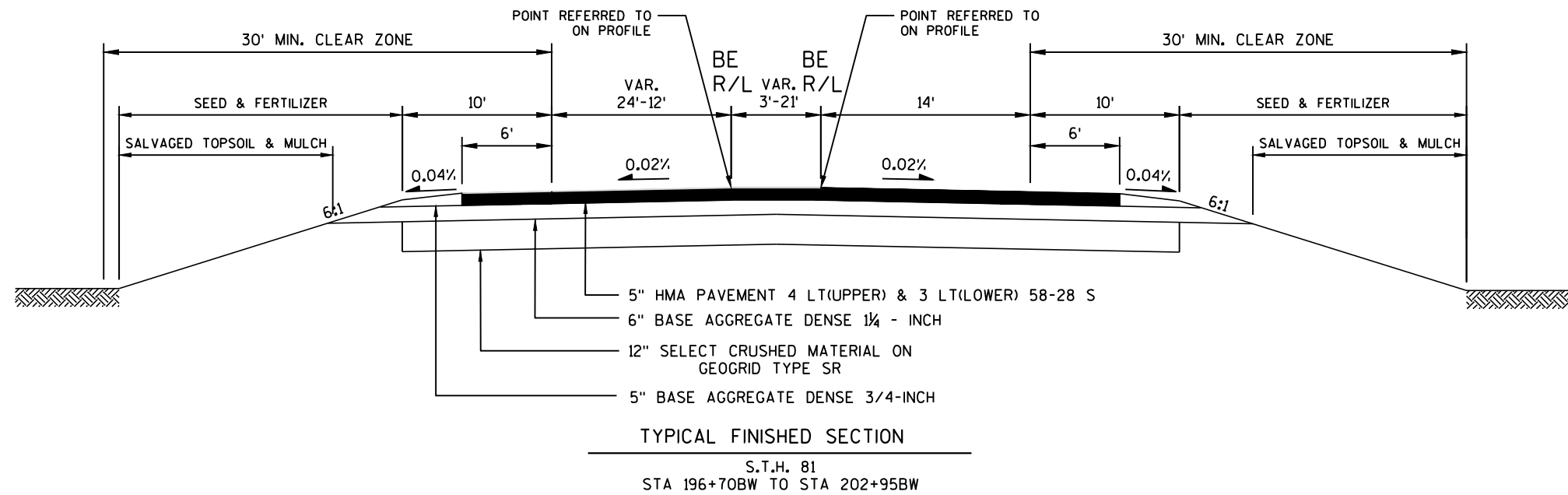
S.T.H. 81
STA 175+99.398W TO STA 196+70BW

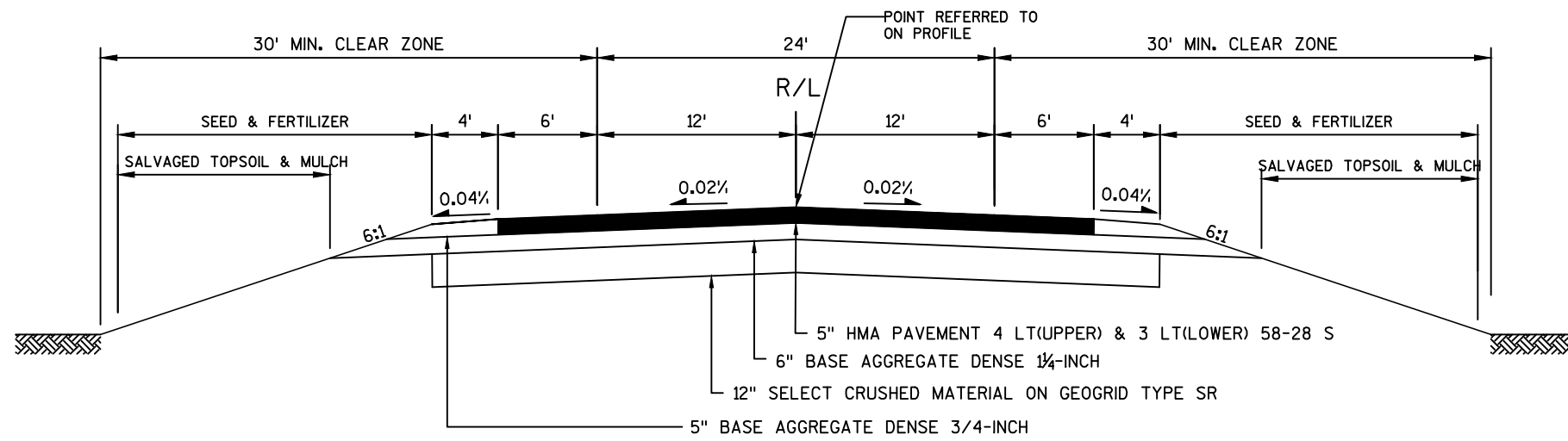


TYPICAL EXISTING SECTION - STH 81 SIDEROAD
 CTH N-DETOUR ROUTE-STH 81 TO 2ND ST N

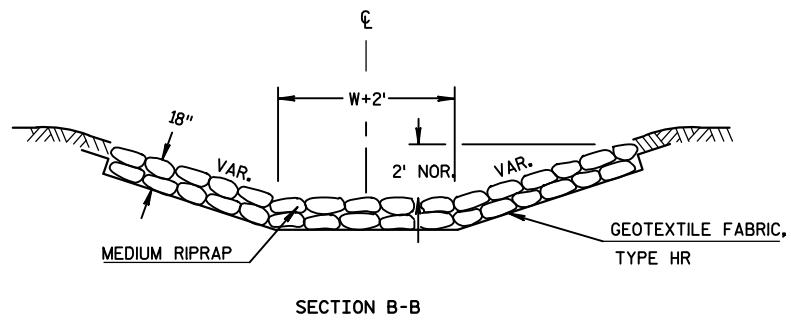
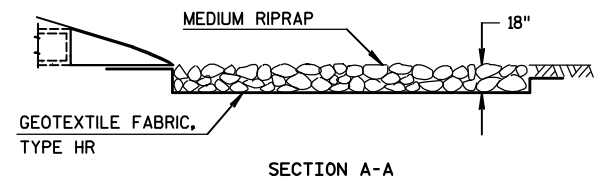
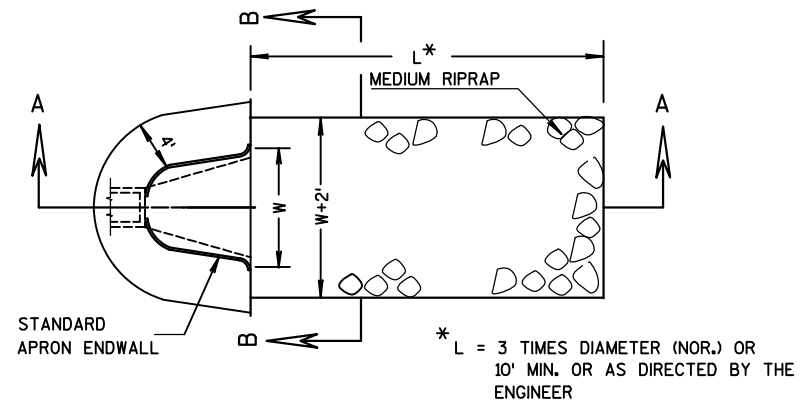


EXISTING TYPICAL SECTION
 S.T.H. 81
 STA 202+95BW TO STA 207+13.23BW

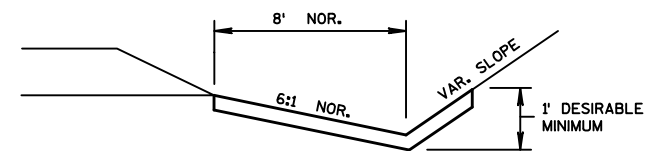




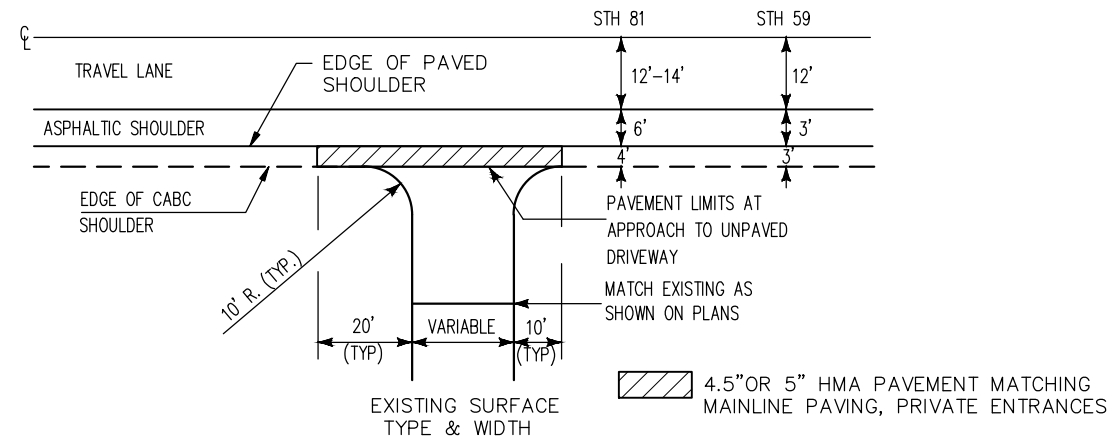
TYPICAL FINISHED SECTION
 S.T.H. 81
 STA 201+95BW TO STA 207+13.23BW



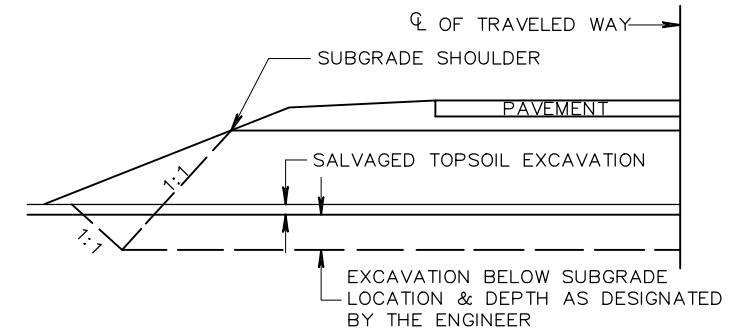
MEDIUM RIPRAP AND GEOTEXTILE FABRIC



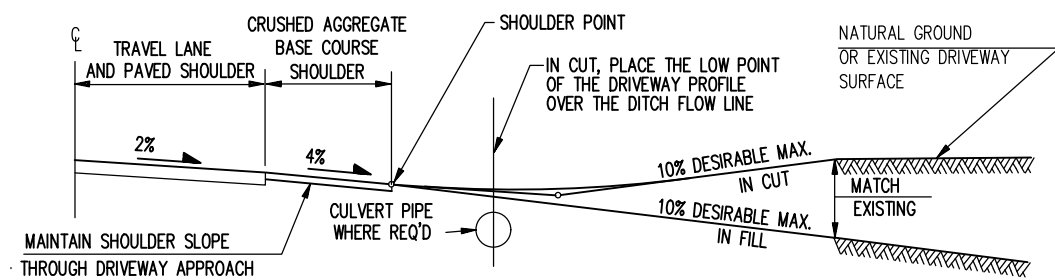
EROSION MAT DETAIL FOR DITCHES



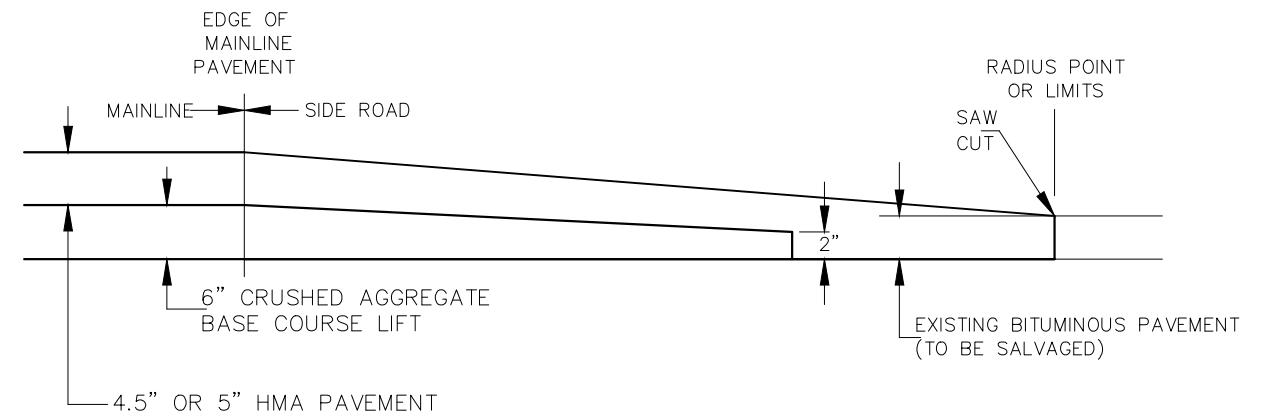
PLAN VIEW - RURAL DRIVEWAY



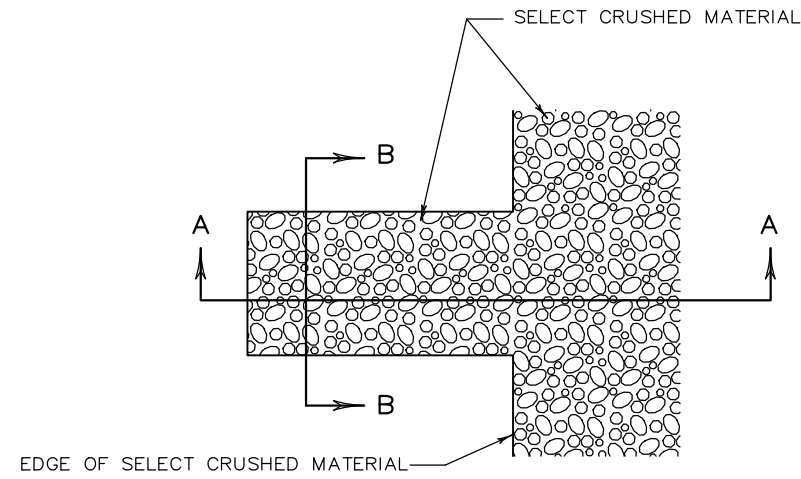
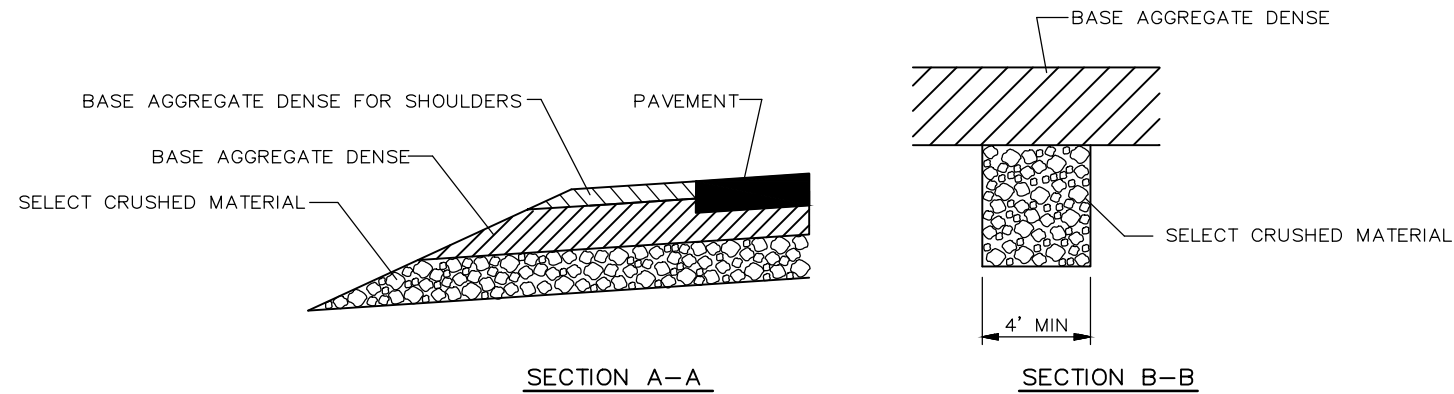
DETAIL FOR EXCAVATION BELOW SUBGRADE



PROFILE VIEW
TYPICAL RURAL DRIVEWAY DETAILS



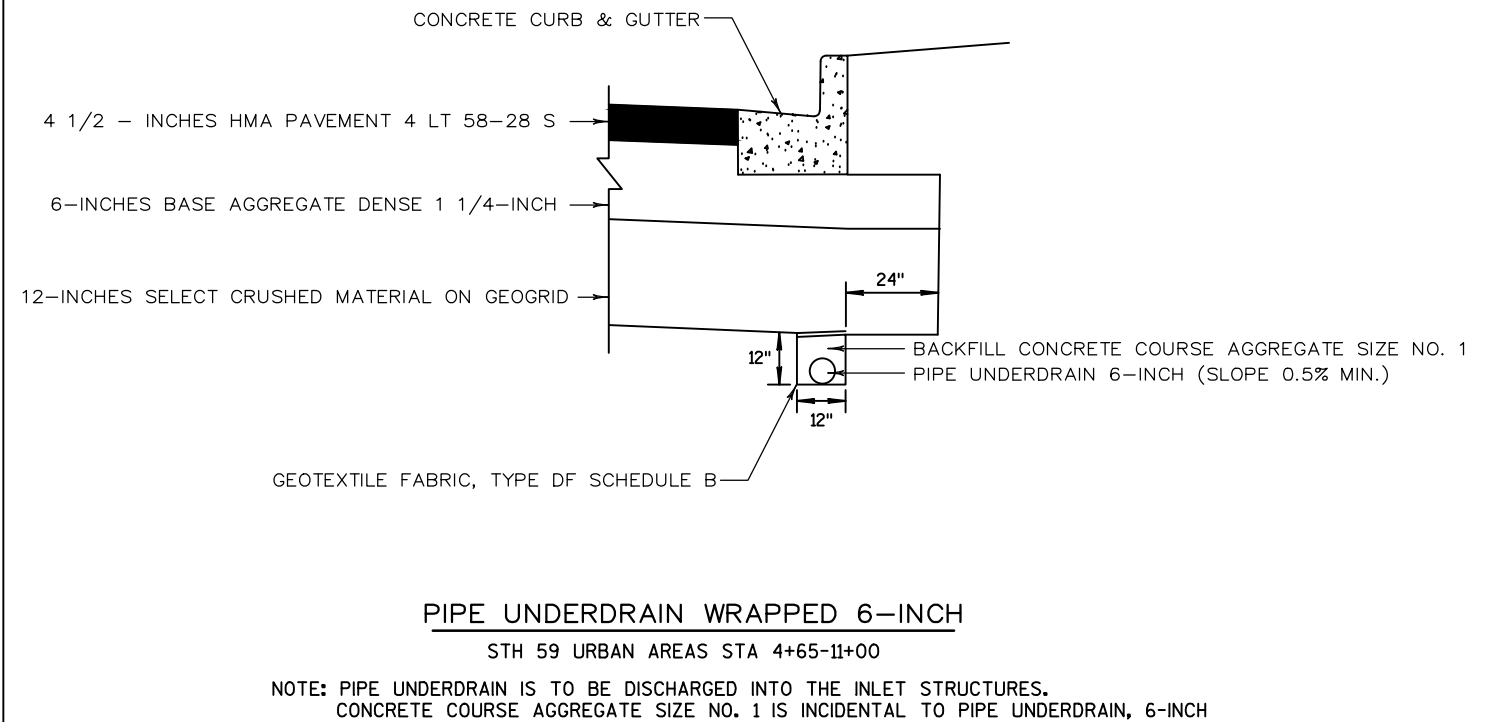
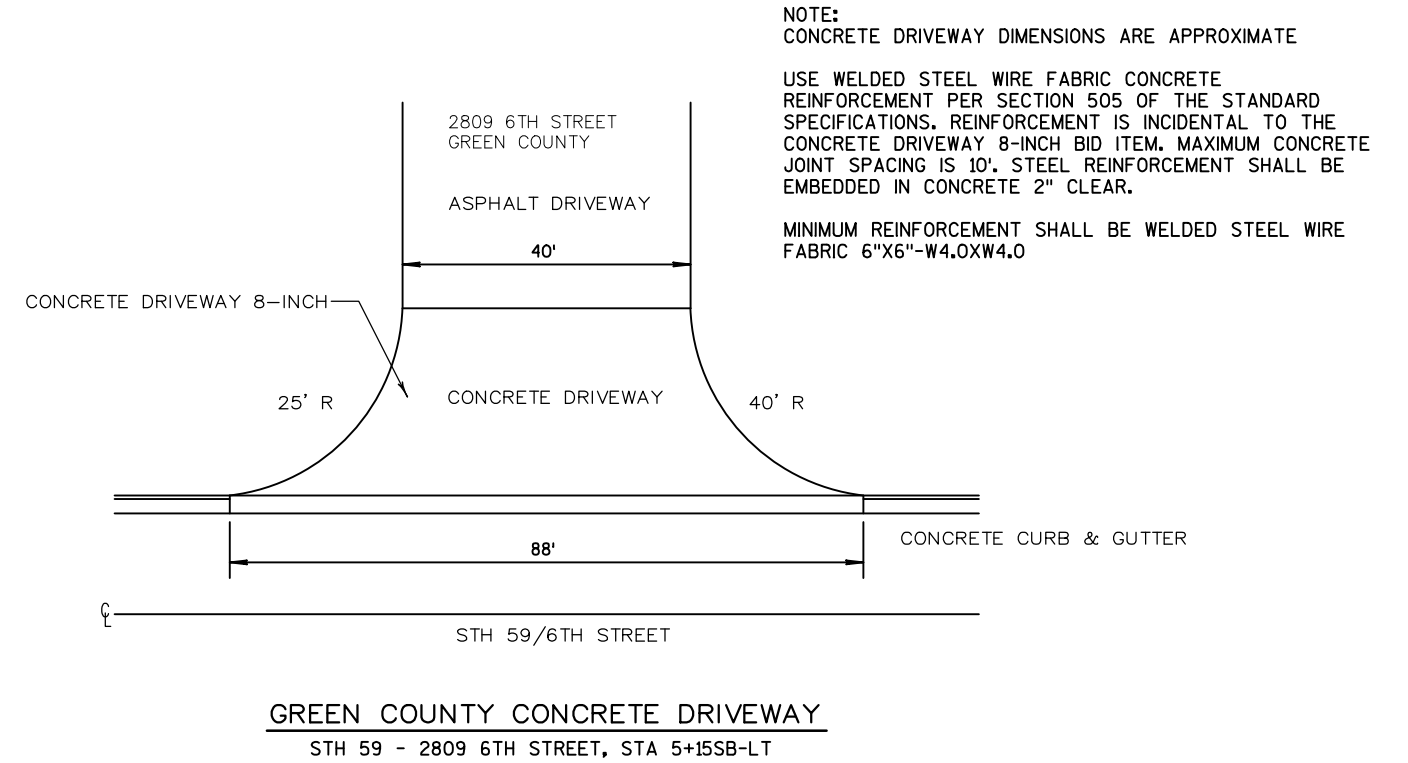
BUTT JOINT DETAIL FOR
SIDE ROAD INTERSECTIONS

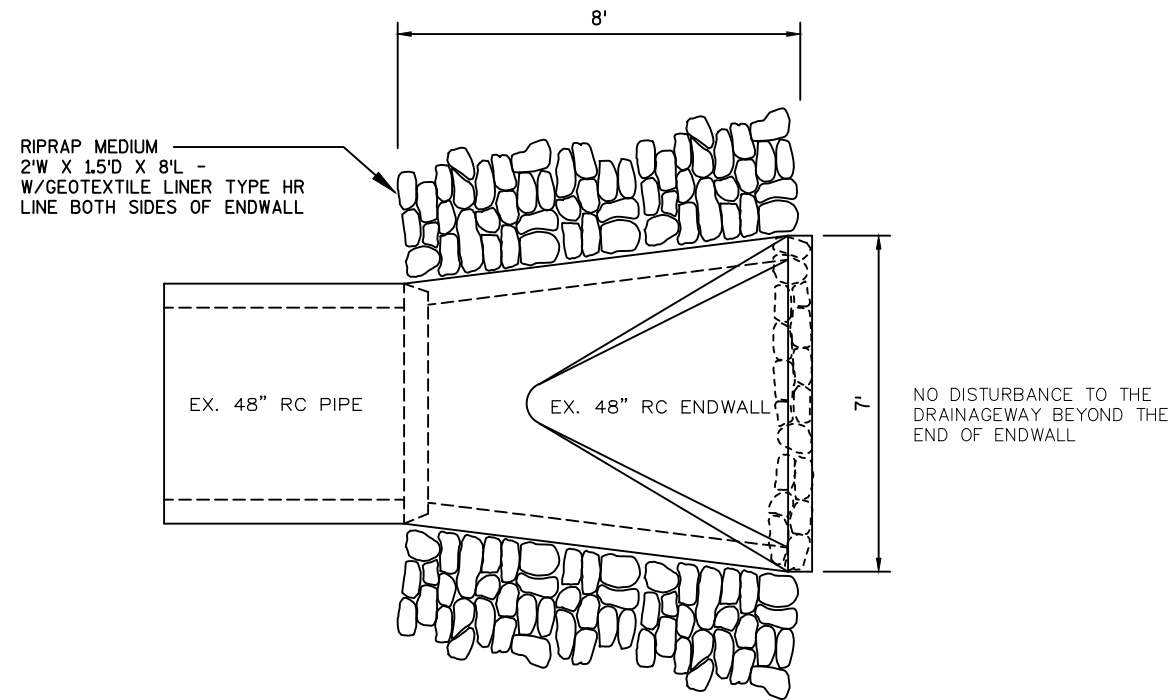


DETAIL FOR FRENCH DRAINS

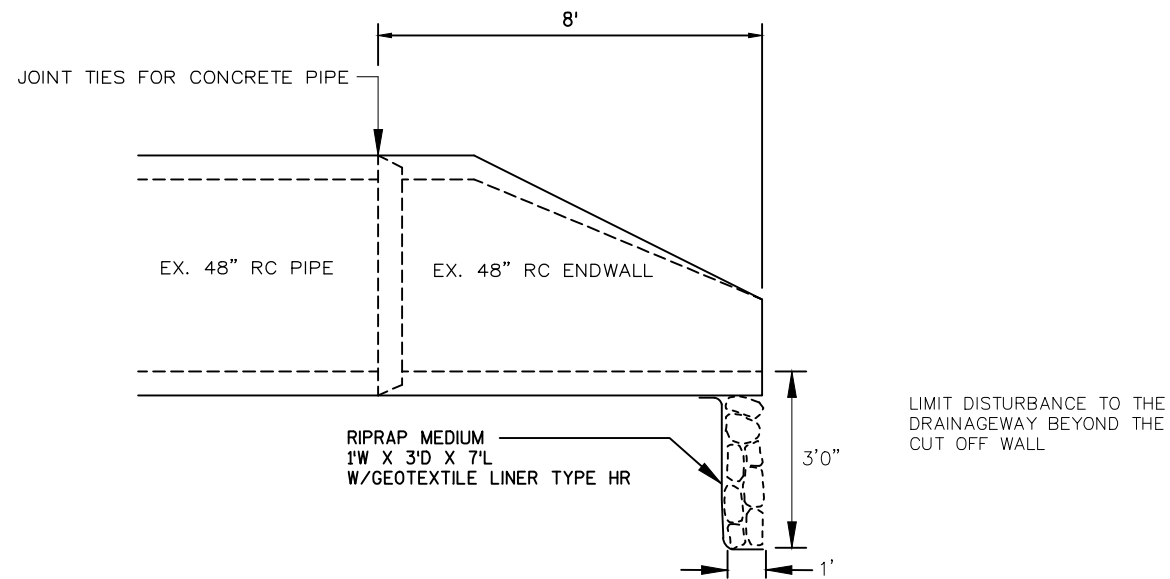
DRAINS ARE TO BE CONSTRUCTED AT LEAST EVERY 250' AND AT EACH SAG VERTICAL CURVE IN THE PROFILE.
(LOCATIONS TO BE DETERMINED IN THE FIELD BY THE ENGINEER)

EXCAVATION REQUIRED TO CONSTRUCT FRENCH DRAINS SHALL BE CONSIDERED INCIDENTAL TO THE ITEM SELECT CRUSHED MATERIAL.
DO NOT COVER FRENCH DRAINS WITH TOPSOIL



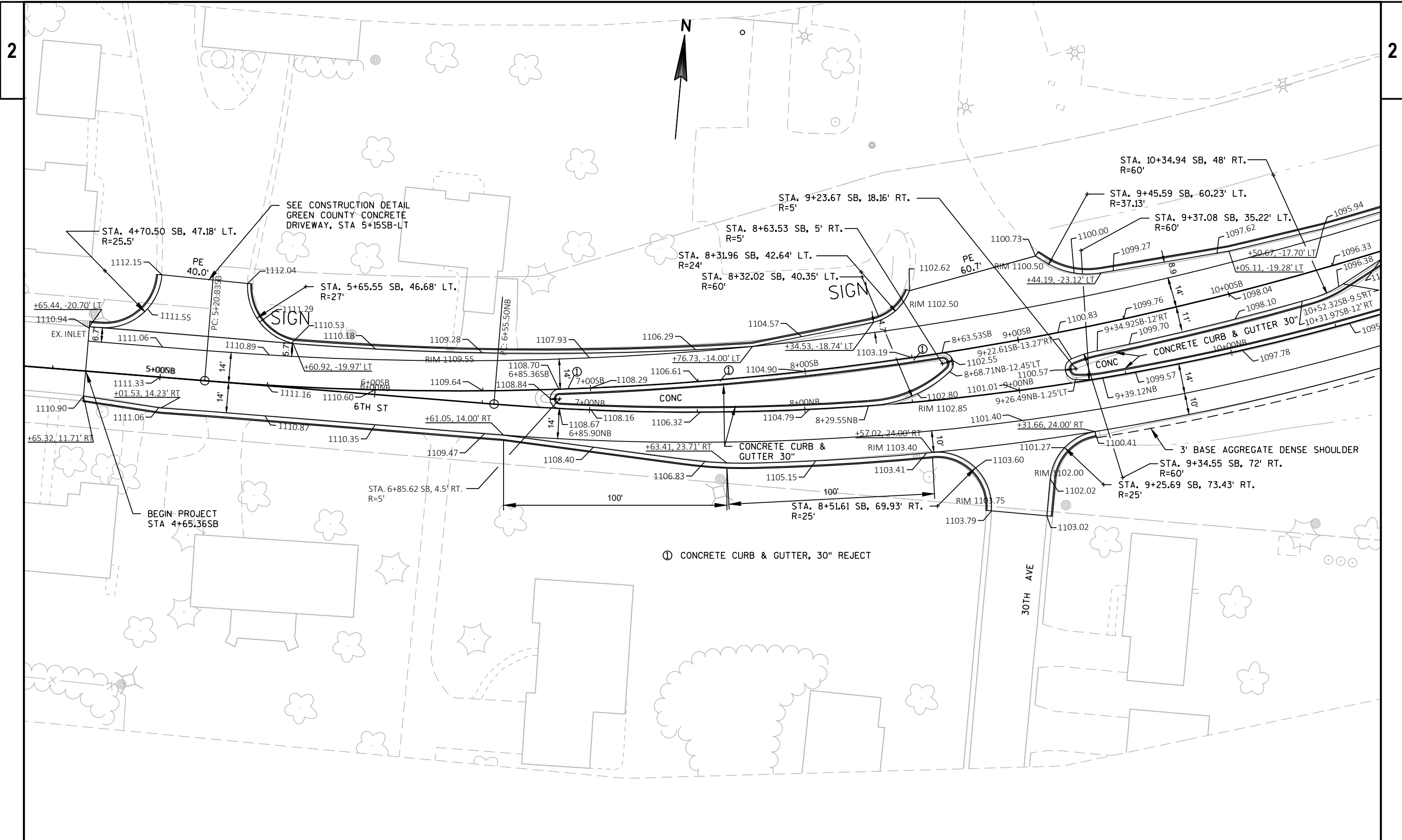


PLAN



LONGITUDINAL SECTION

SALVAGED RC ENDWALL DETAIL
STH 81 - STA 185+12BE-78' RT



PROJECT NO: 5660-00-72

HWY: STH 59

COUNTY: GREEN

PLAN DETAILS

SHEET

E

FILE NAME : N:\PDS\C3D\56600002\SHEETSPLAN\021201_PD.DWG
LAYOUT NAME - 1

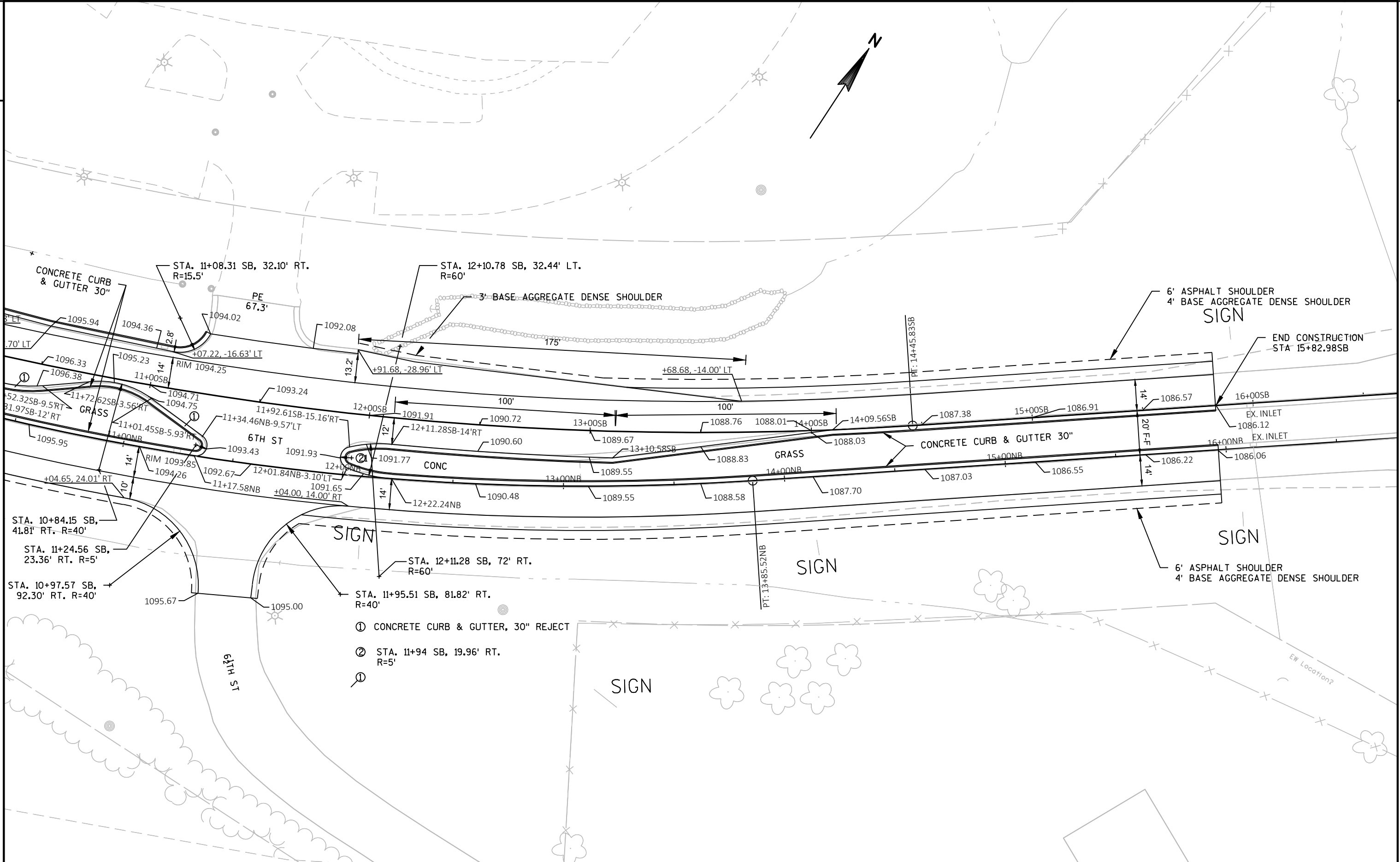
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PLOT BY : OLSON, RICHARD J

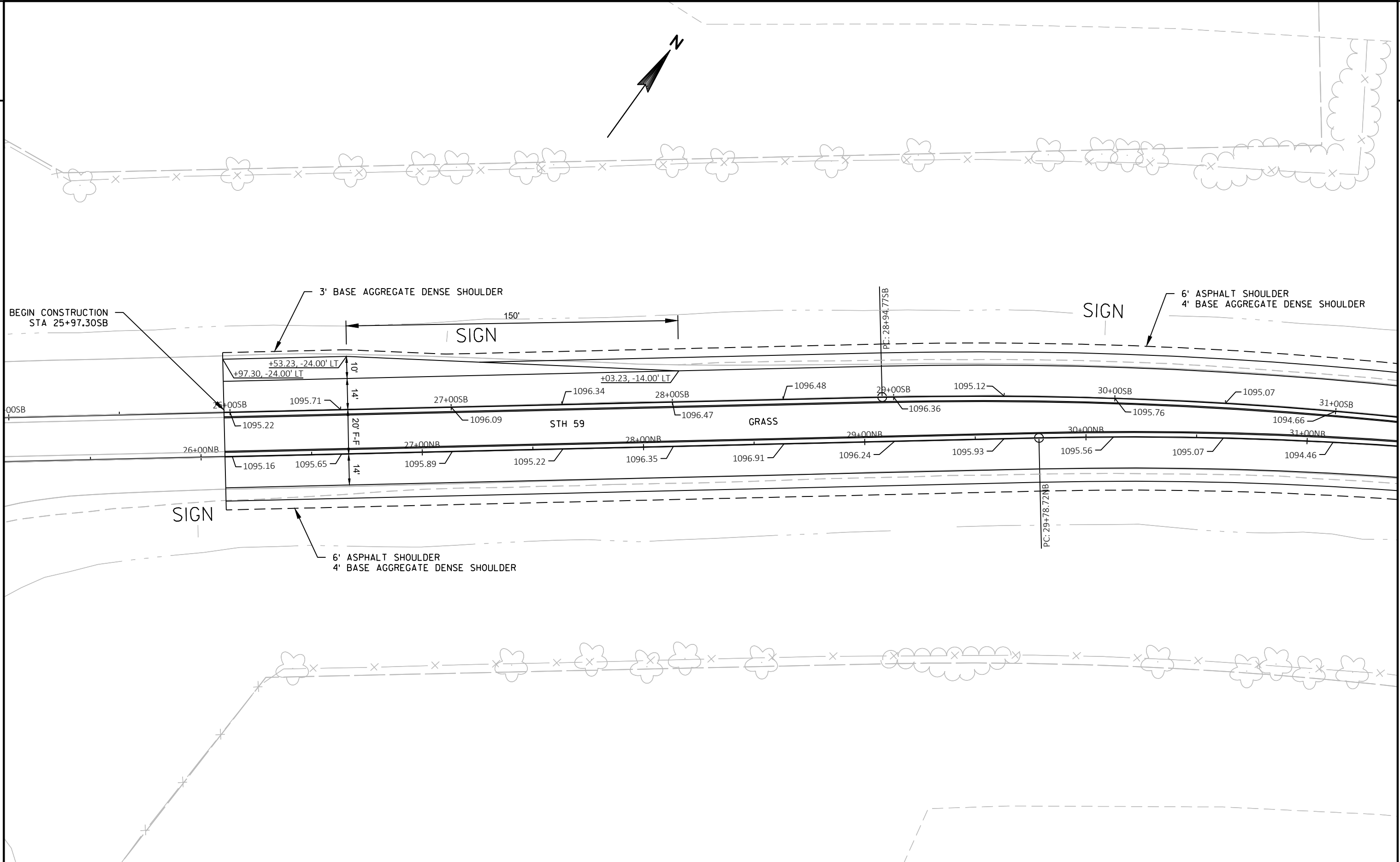
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PLOT SCALE : 1 IN=40 FT

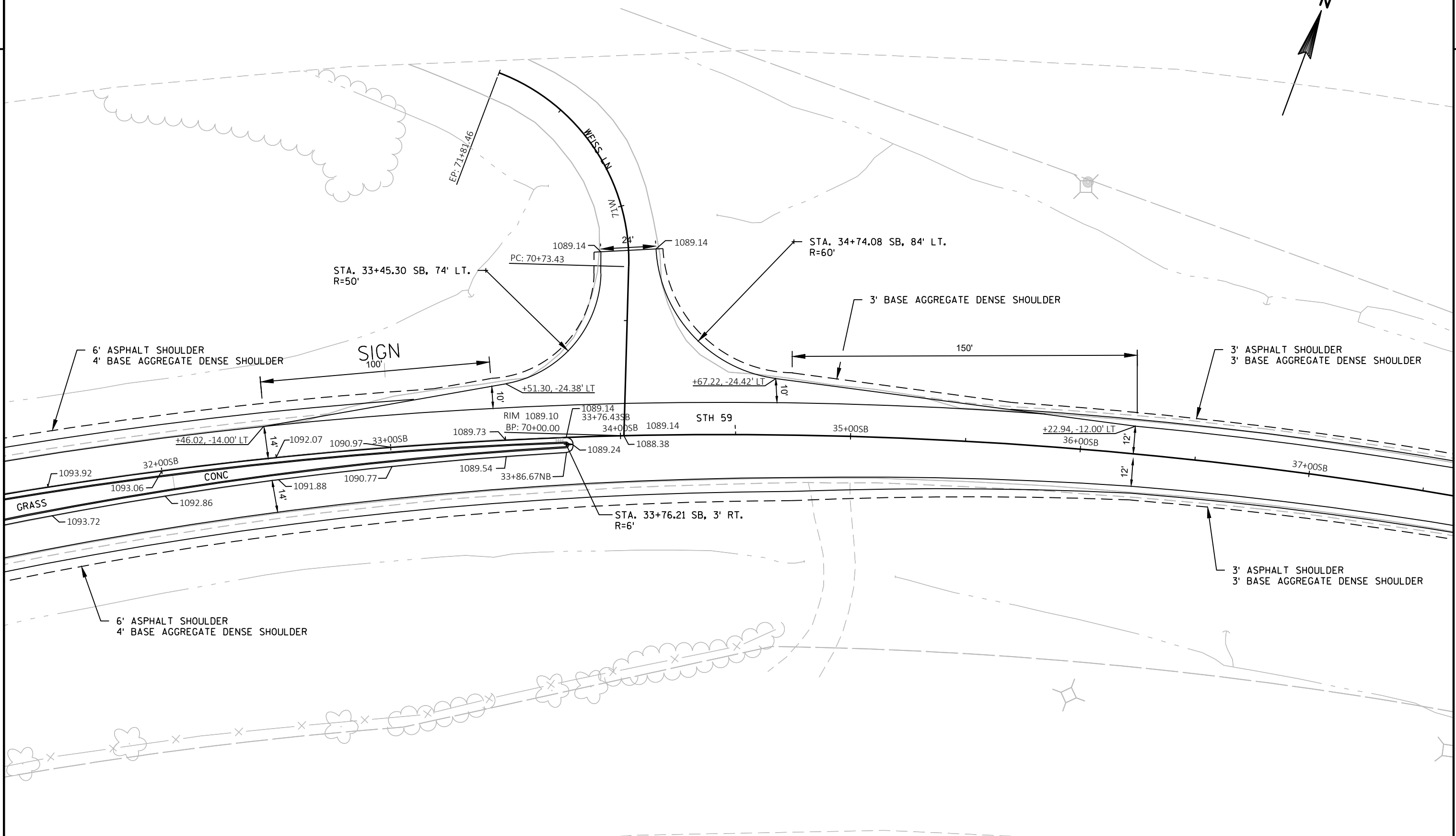
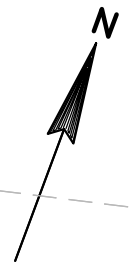
WISDOT/CABDS SHEET 44



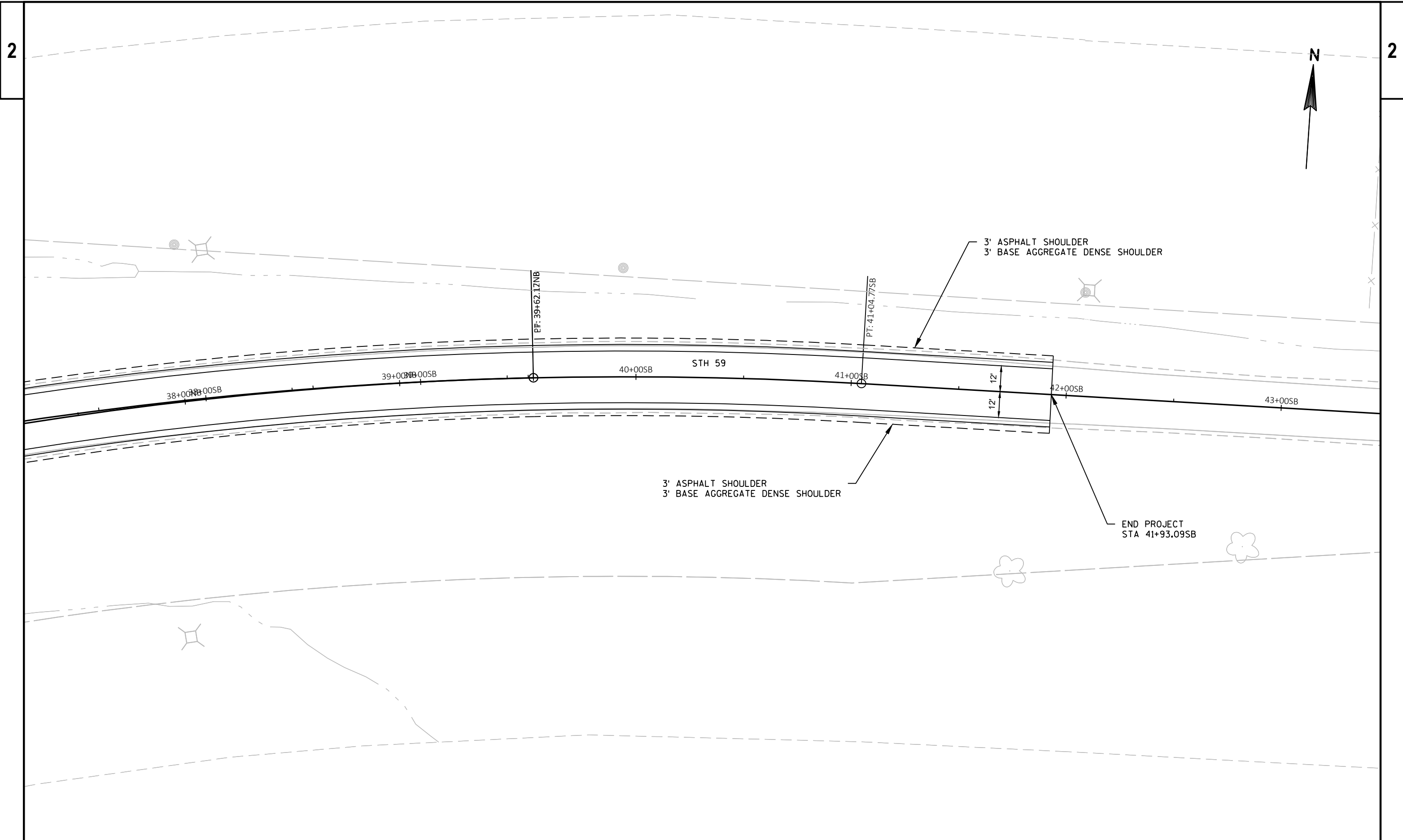
PROJECT NO: 5660-00-72	HWY: STH 59	COUNTY: GREEN	PLAN DETAILS	SHEET	E
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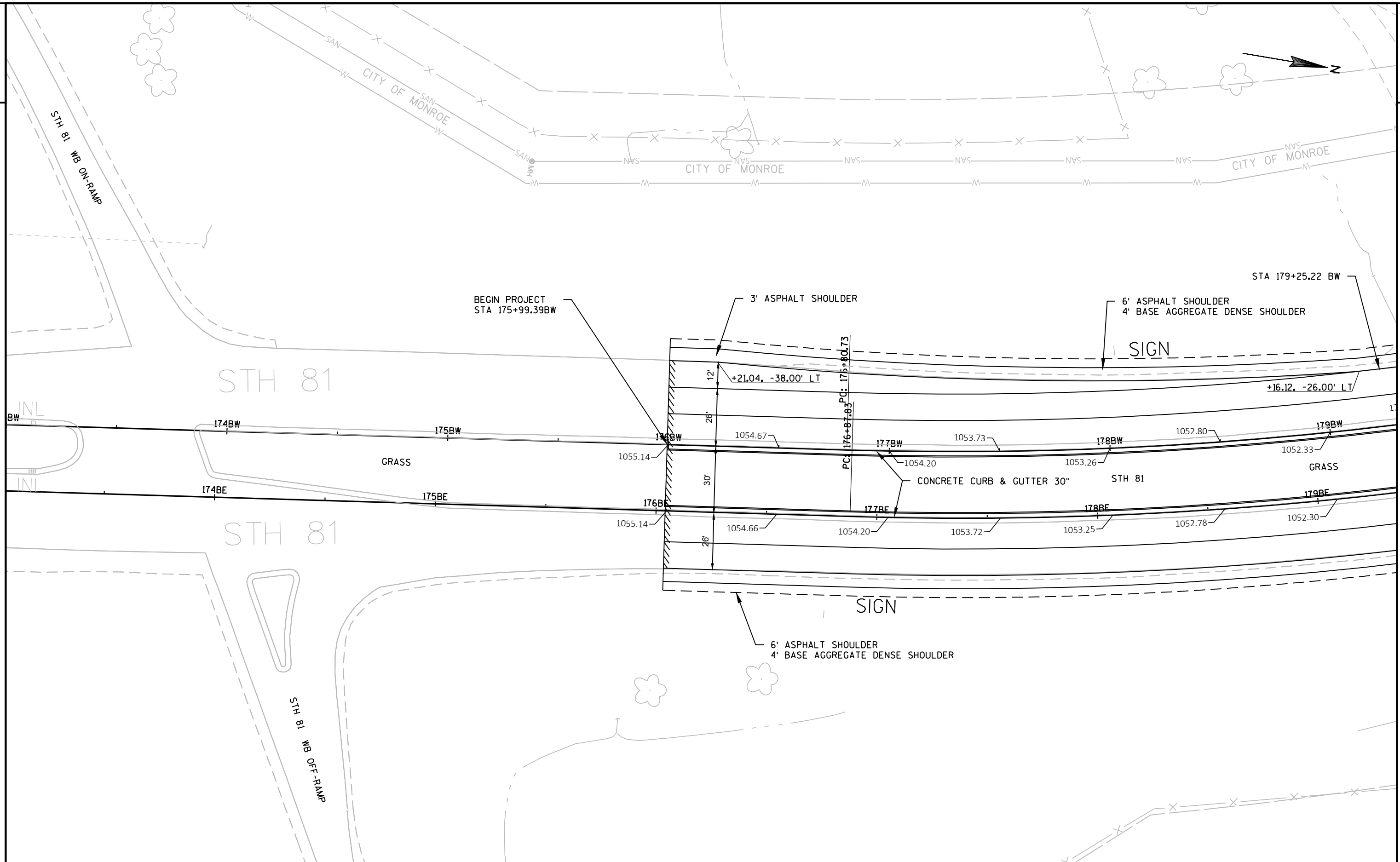


PROJECT NO: 5660-00-72	HWY: STH 59	COUNTY: GREEN	PLAN DETAILS	SHEET	E
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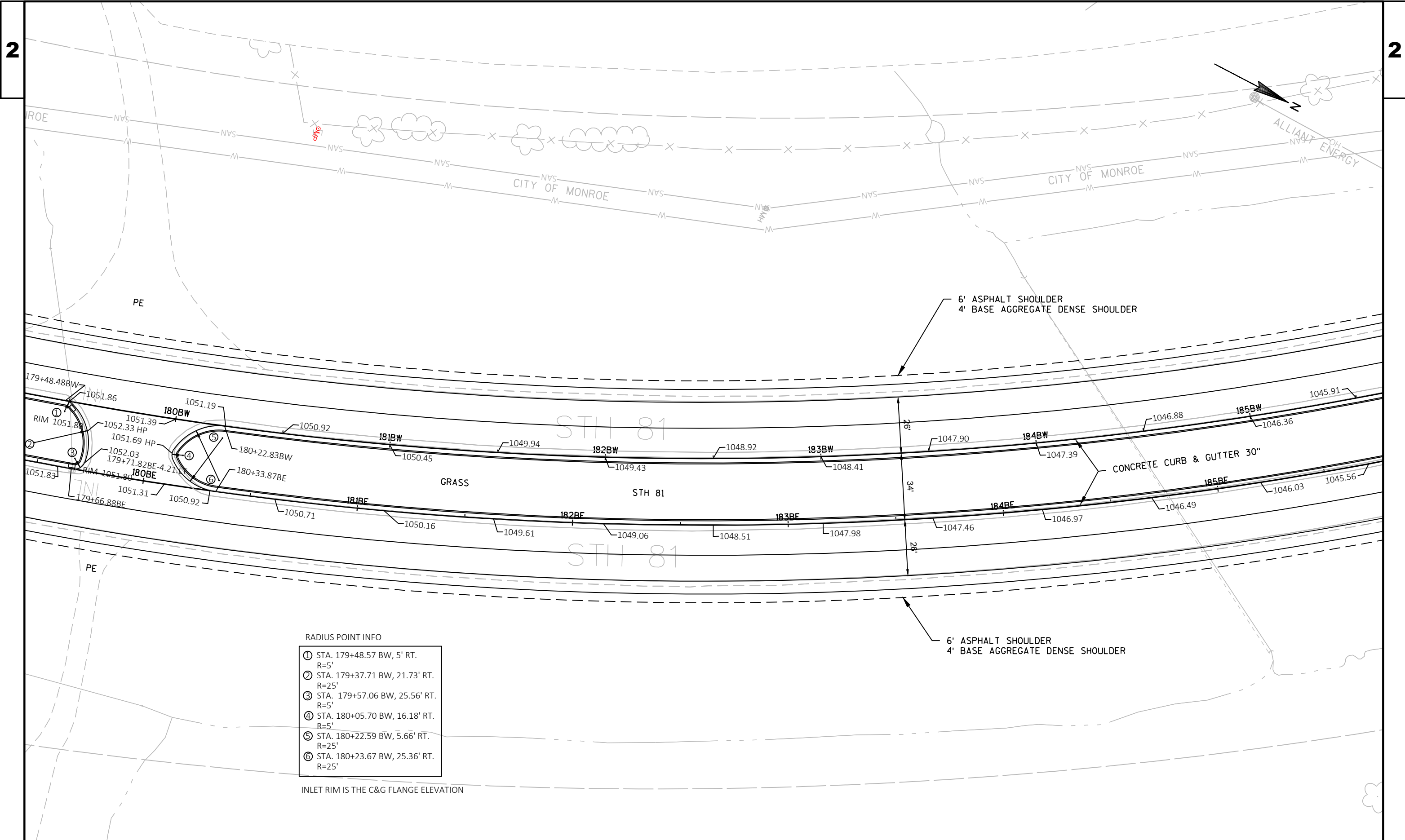


PROJECT NO: 5660-00-72	HWY: STH 59	COUNTY: GREEN	PLAN DETAILS	SHEET	E
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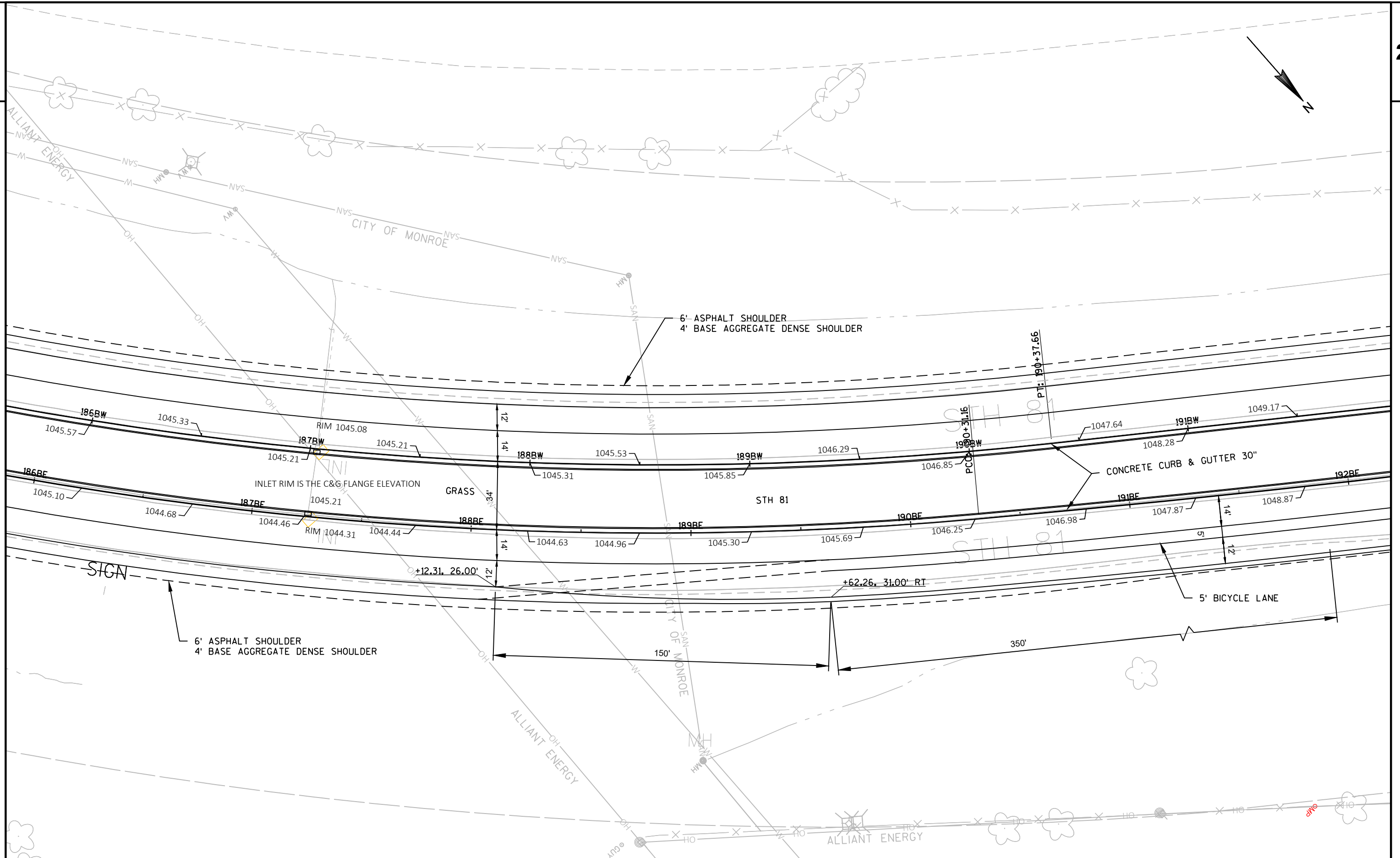
PROJECT NO:5944-01-72	HWY:STH 81	COUNTY:GREEN	PLAN DETAILS	SHEET	E
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RADIUS POINT INFO

①	STA. 179+48.57 BW, 5' RT. R=5'
②	STA. 179+37.71 BW, 21.73' RT. R=25'
③	STA. 179+57.06 BW, 25.56' RT. R=5'
④	STA. 180+05.70 BW, 16.18' RT. R=5'
⑤	STA. 180+22.59 BW, 5.66' RT. R=25'
⑥	STA. 180+23.67 BW, 25.36' RT. R=25'

INLET RIM IS THE C&G FLANGE ELEVATION

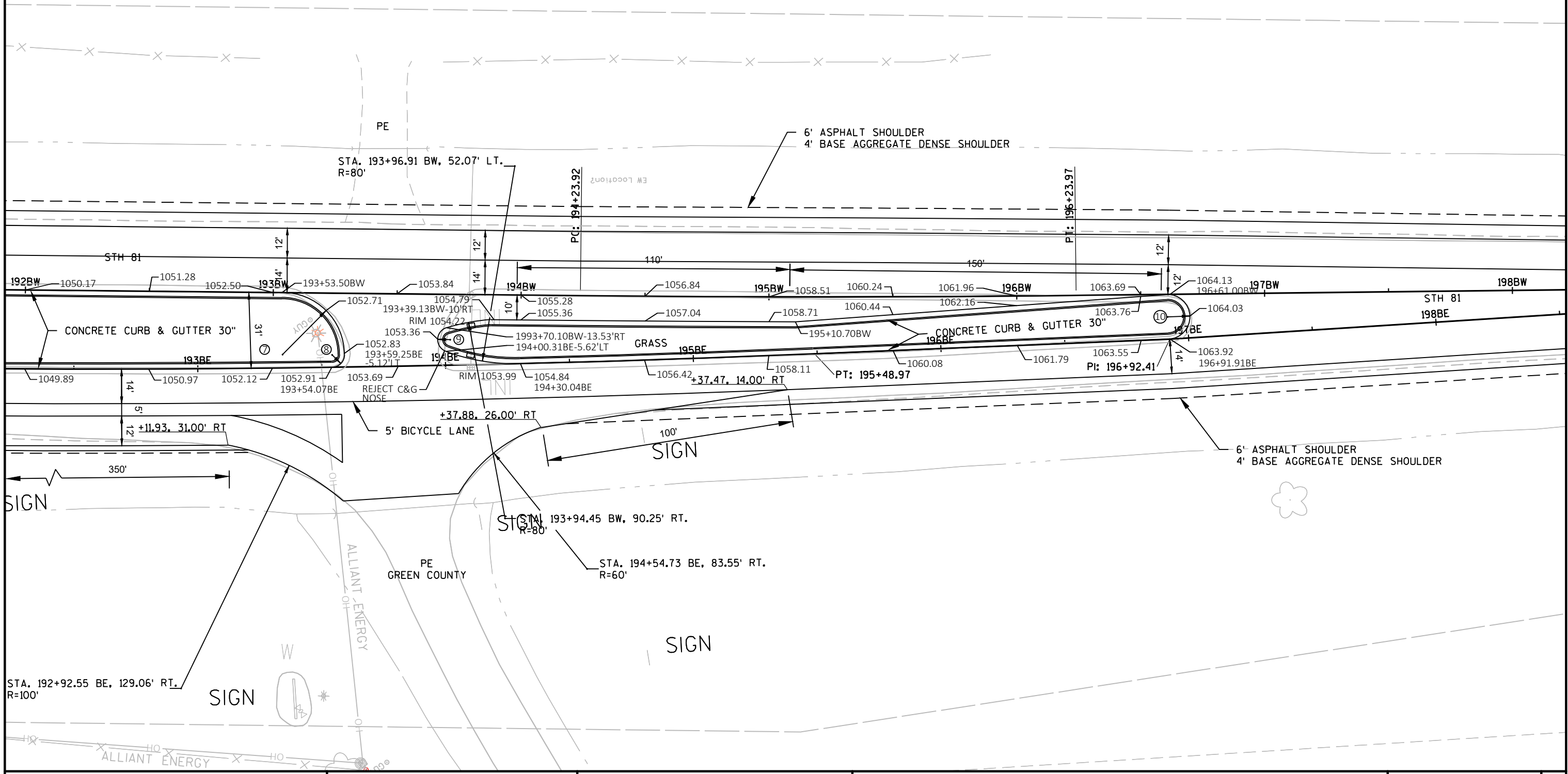
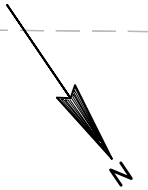


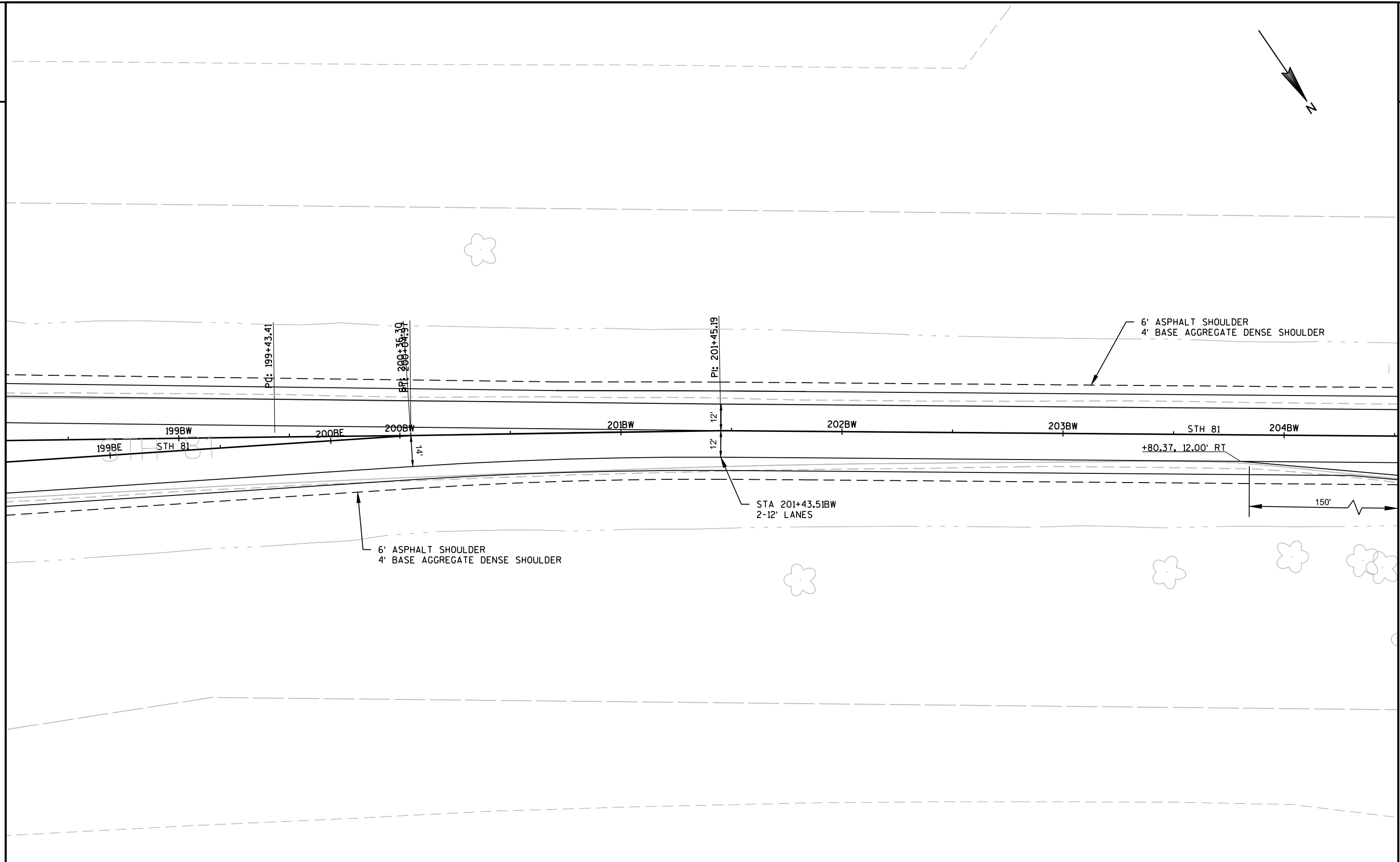
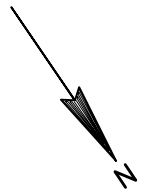
PROJECT NO:5944-01-72	HWY:STH 81	COUNTY:GREEN	PLAN DETAILS	SHEET	E
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RADIUS POINT INFO

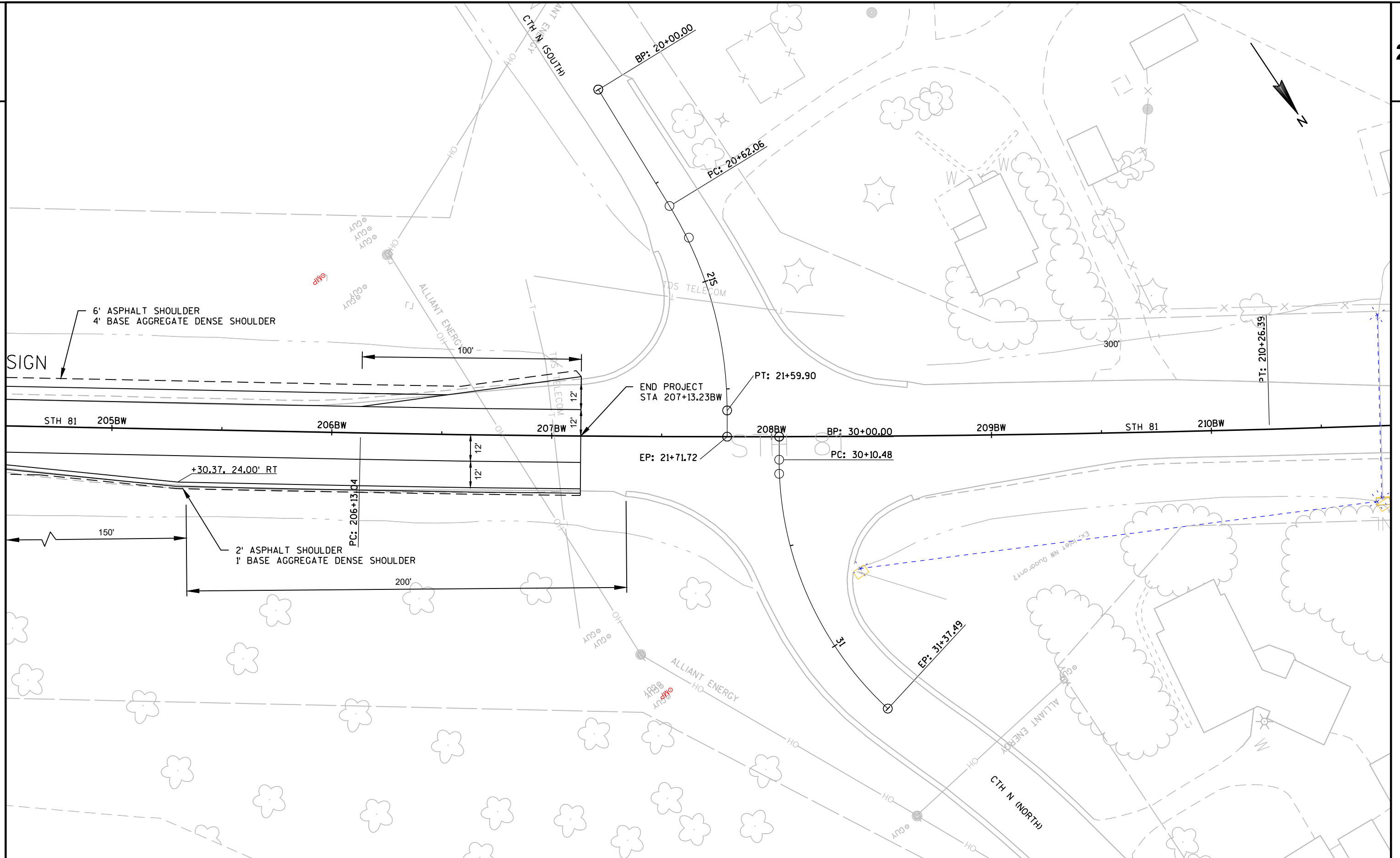
⑦	STA. 193+03.97 BW, 24.96' RT. R=25'
⑧	STA. 193+23.98 BW, 24.94' RT. R=5'
⑨	STA. 193+71.58 BW, 18.31' RT. R=5'
⑩	STA. 196+60.78 BW, 9.10' RT. R=9'

INLET RIM IS THE C&G FLANGE ELEVATION



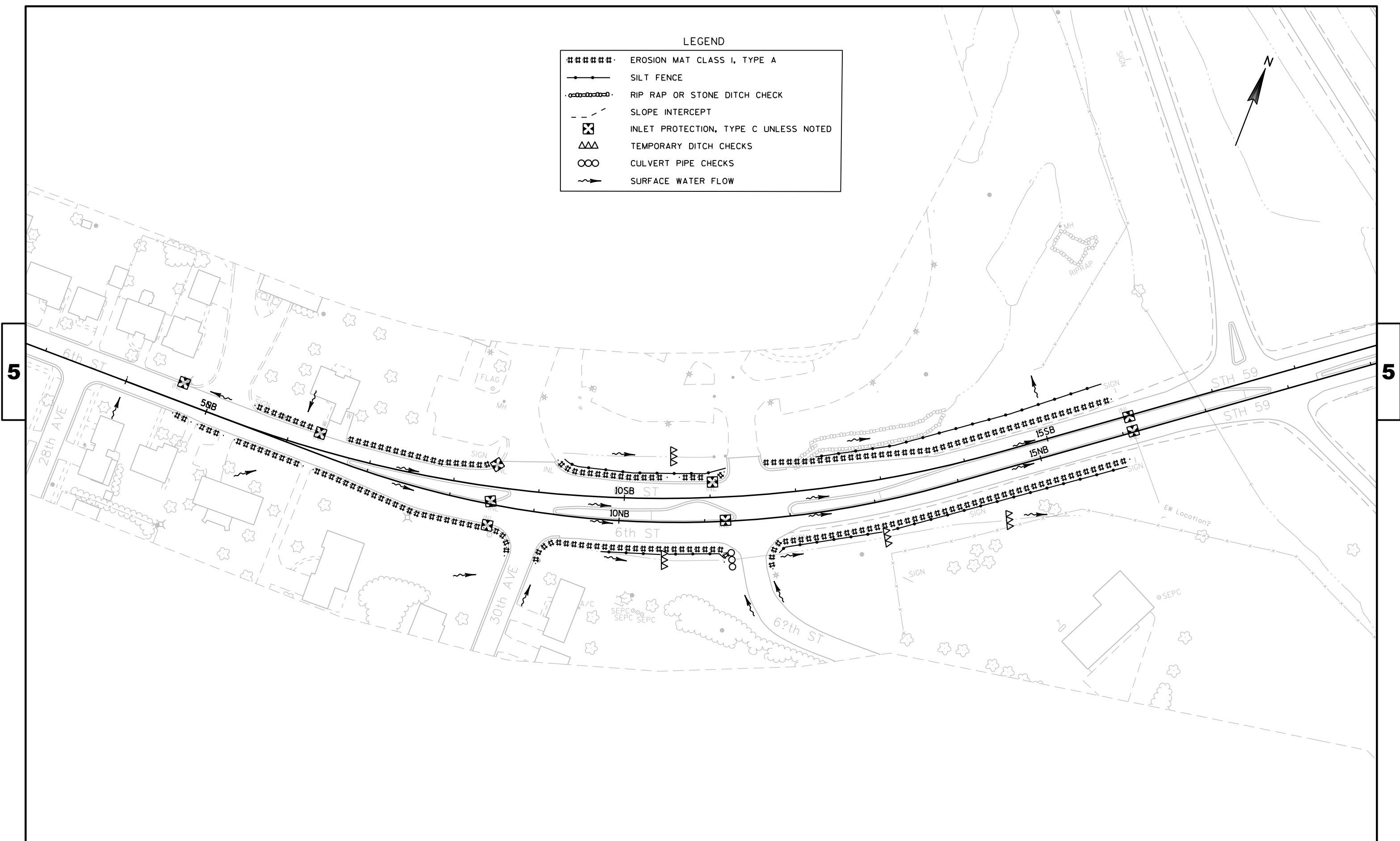


PROJECT NO:5944-01-72	HWY:STH 81	COUNTY:GREEN	PLAN DETAILS	SHEET	E
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LEGEND

#####	EROSION MAT CLASS I, TYPE A
—●—	SILT FENCE
—○—	RIP RAP OR STONE DITCH CHECK
- - -	SLOPE INTERCEPT
⊠	INLET PROTECTION, TYPE C UNLESS NOTED
△△	TEMPORARY DITCH CHECKS
○○	CULVERT PIPE CHECKS
→	SURFACE WATER FLOW

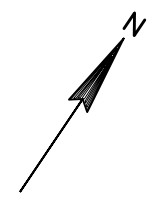


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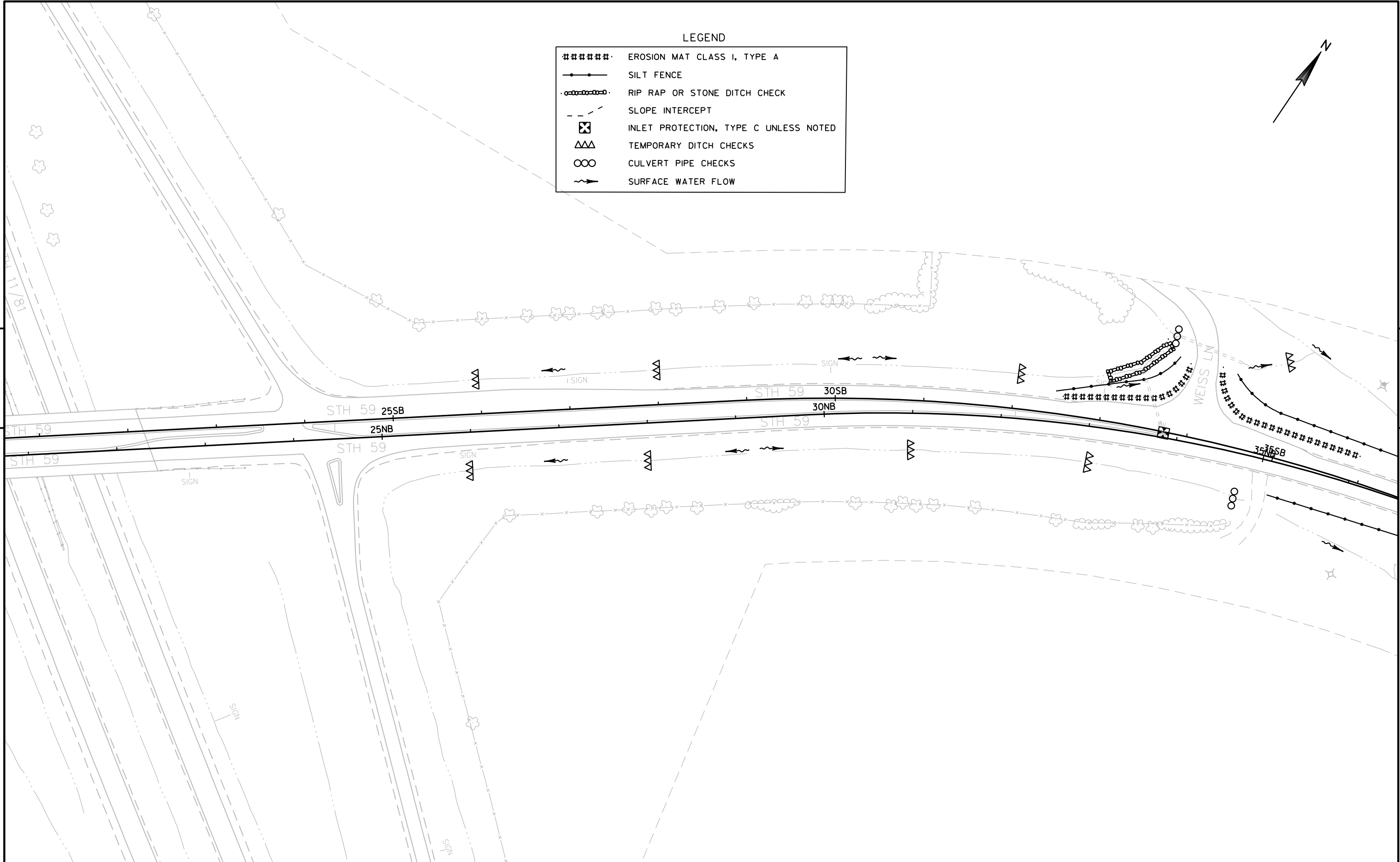
LEGEND

#####	EROSION MAT CLASS I, TYPE A
—●—	SILT FENCE
—○—	RIP RAP OR STONE DITCH CHECK
- - -	SLOPE INTERCEPT
⊠	INLET PROTECTION, TYPE C UNLESS NOTED
△△	TEMPORARY DITCH CHECKS
○○	CULVERT PIPE CHECKS
~>	SURFACE WATER FLOW



5

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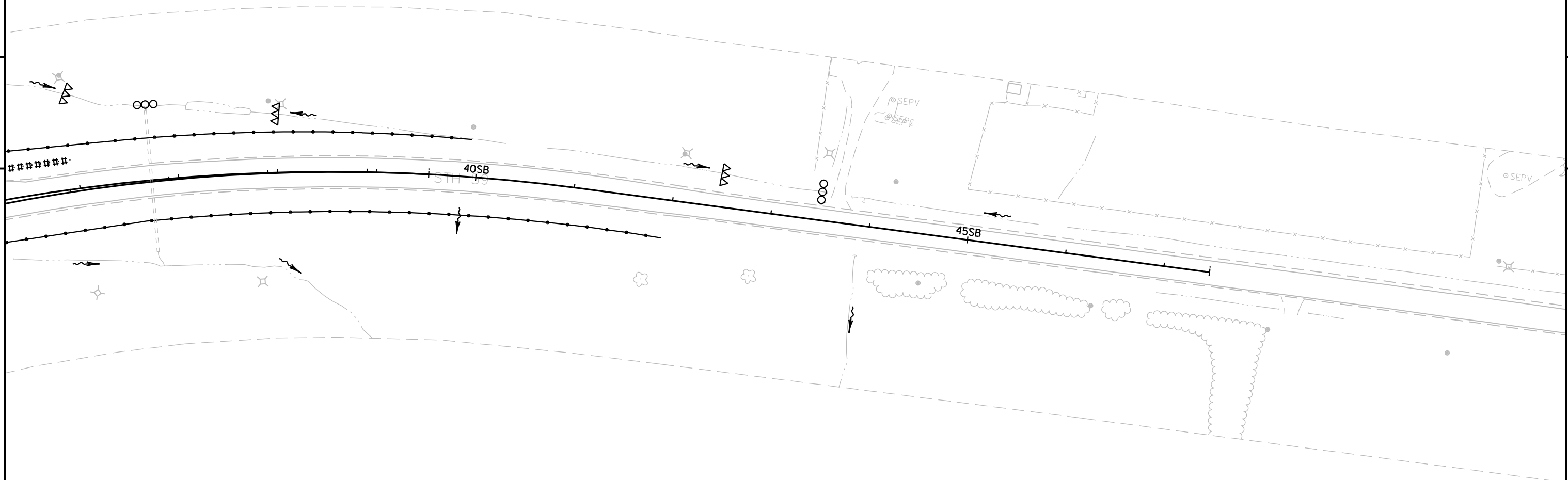
LEGEND

#####	EROSION MAT CLASS I, TYPE A
—●—	SILT FENCE
—○—	RIP RAP OR STONE DITCH CHECK
- - -	SLOPE INTERCEPT
⊠	INLET PROTECTION, TYPE C UNLESS NOTED
△△	TEMPORARY DITCH CHECKS
○○	CULVERT PIPE CHECKS
~>	SURFACE WATER FLOW



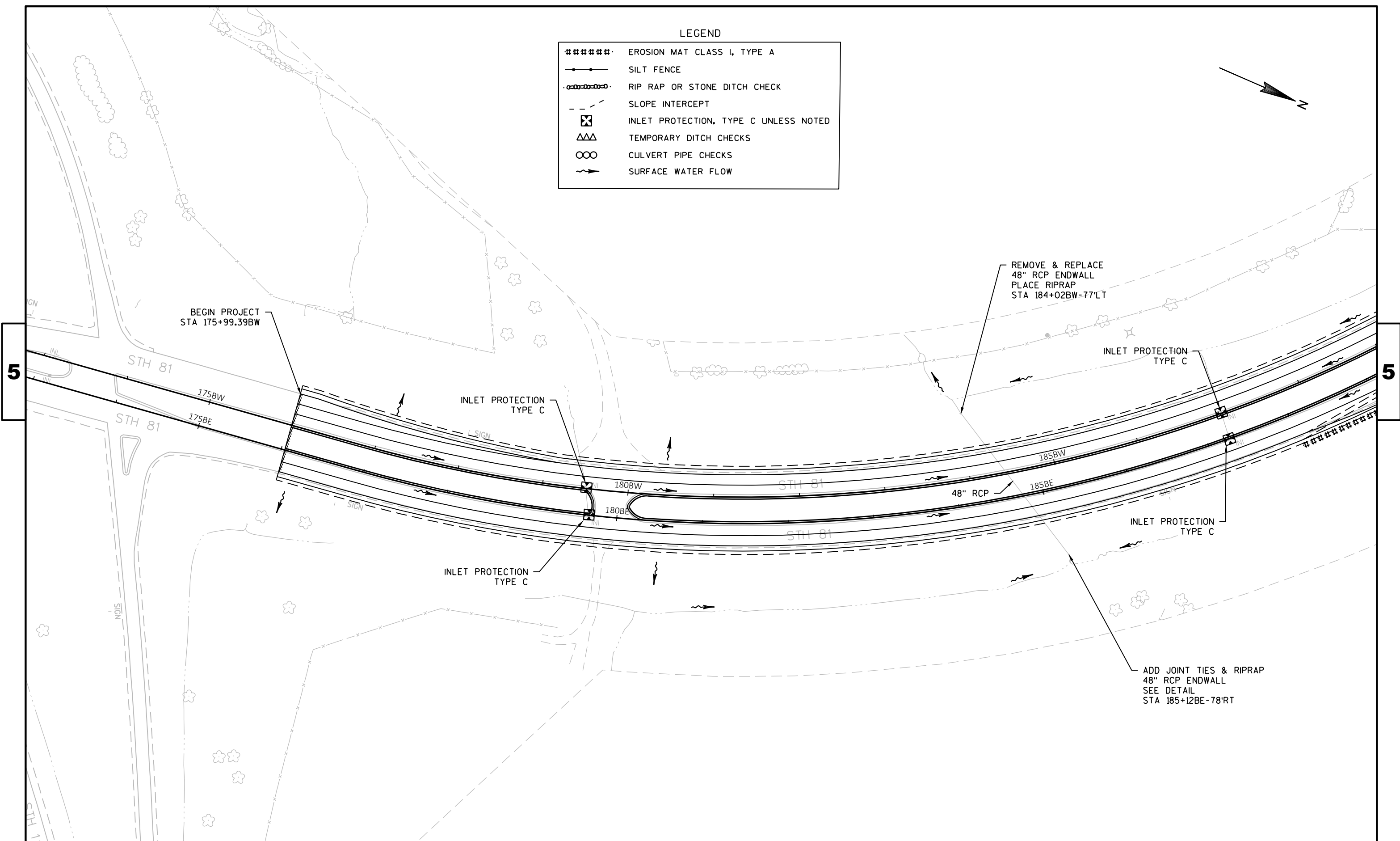
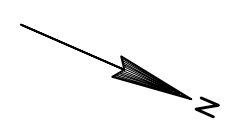
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LEGEND

#####	EROSION MAT CLASS I, TYPE A
—●—	SILT FENCE
—○—○—○—	RIP RAP OR STONE DITCH CHECK
- - -	SLOPE INTERCEPT
⊠	INLET PROTECTION, TYPE C UNLESS NOTED
△△△	TEMPORARY DITCH CHECKS
○○	CULVERT PIPE CHECKS
~>	SURFACE WATER FLOW

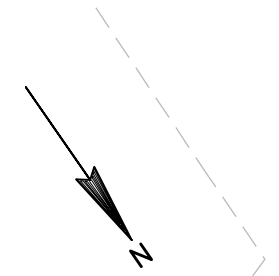


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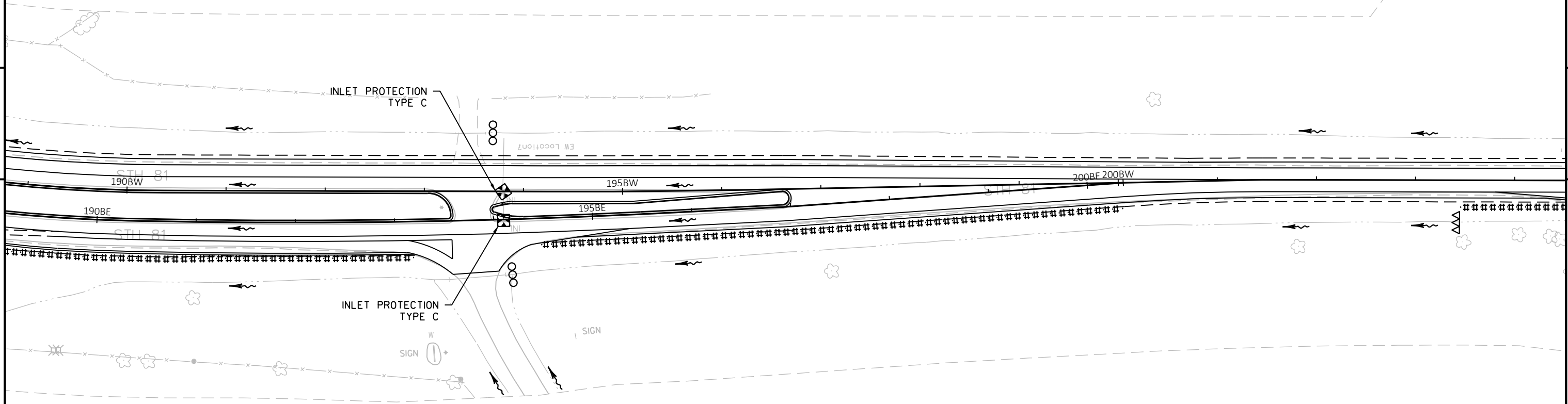
LEGEND

#####	EROSION MAT CLASS I, TYPE A
—●—	SILT FENCE
—○—○—○—	RIP RAP OR STONE DITCH CHECK
- - -	SLOPE INTERCEPT
⊠	INLET PROTECTION, TYPE C UNLESS NOTED
△△△	TEMPORARY DITCH CHECKS
○○	CULVERT PIPE CHECKS
~>	SURFACE WATER FLOW



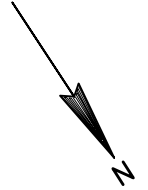
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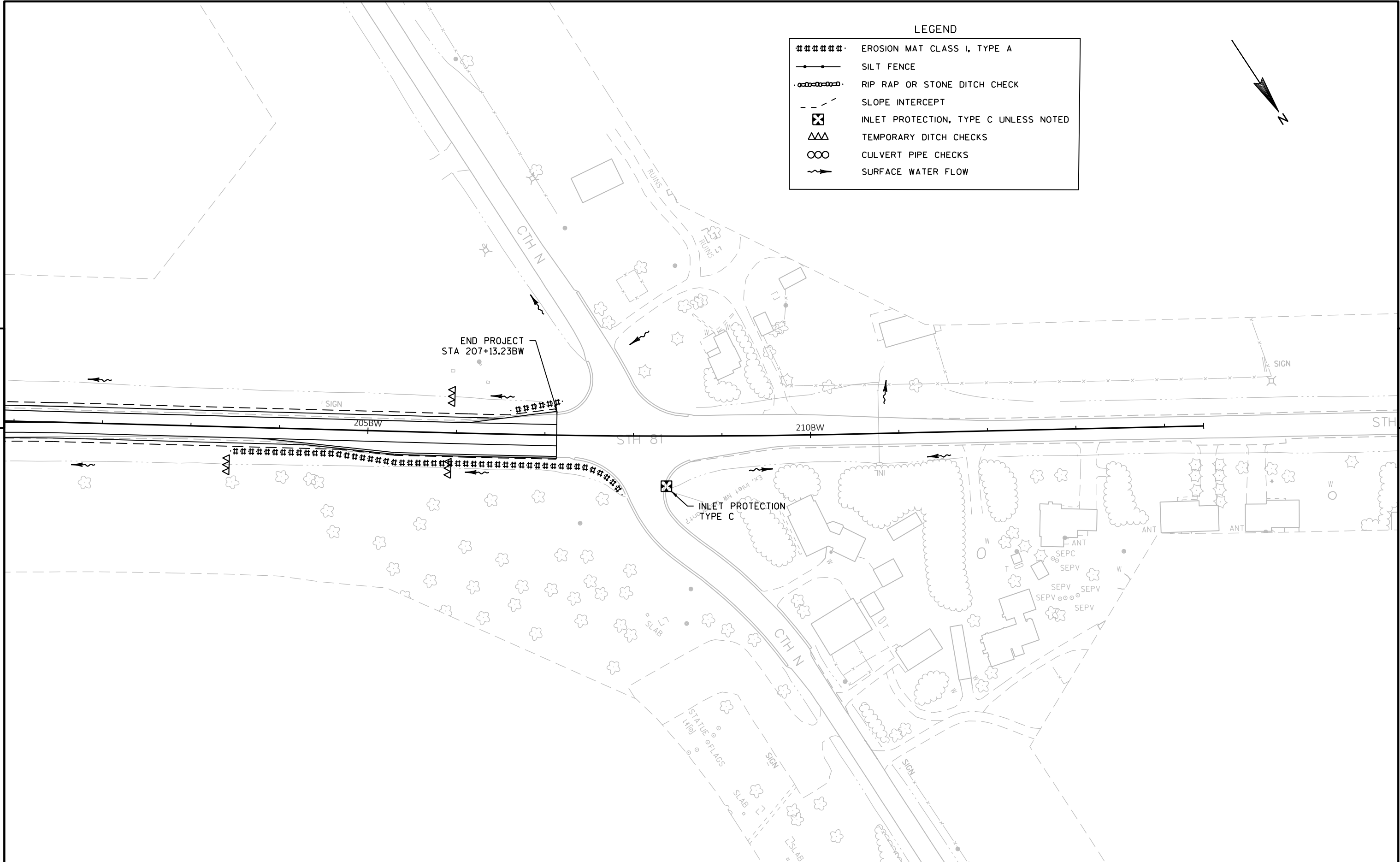
LEGEND

#####	EROSION MAT CLASS I, TYPE A
—●—	SILT FENCE
—○—○—○—	RIP RAP OR STONE DITCH CHECK
- - -	SLOPE INTERCEPT
⊠	INLET PROTECTION, TYPE C UNLESS NOTED
△△△	TEMPORARY DITCH CHECKS
○○○	CULVERT PIPE CHECKS
~>	SURFACE WATER FLOW

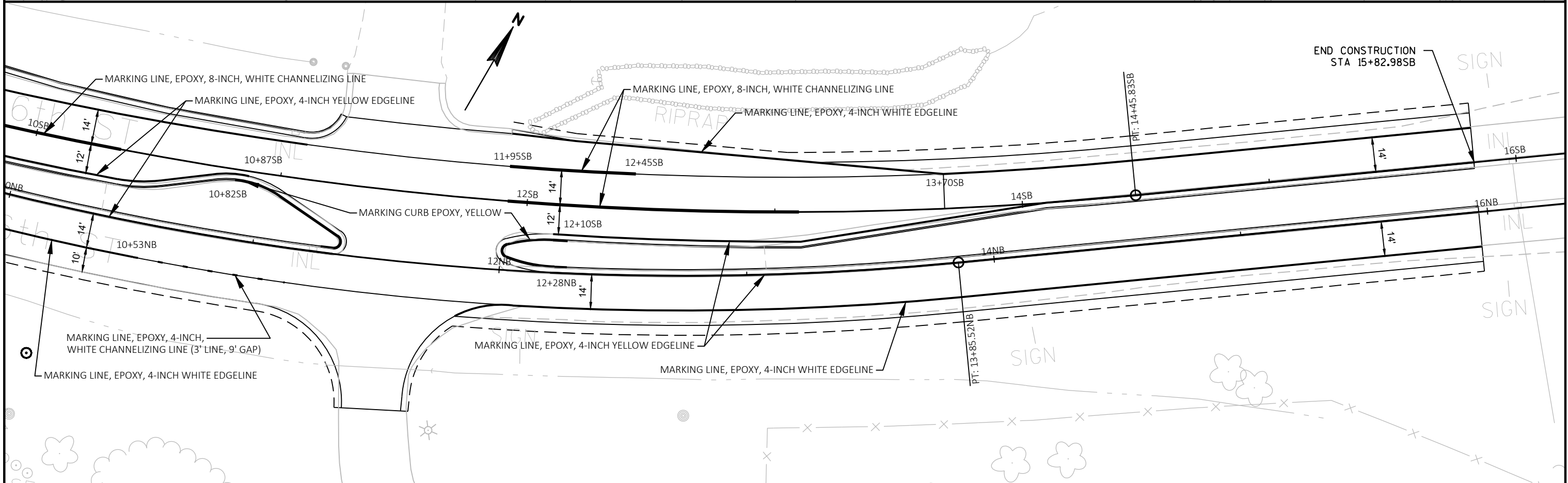
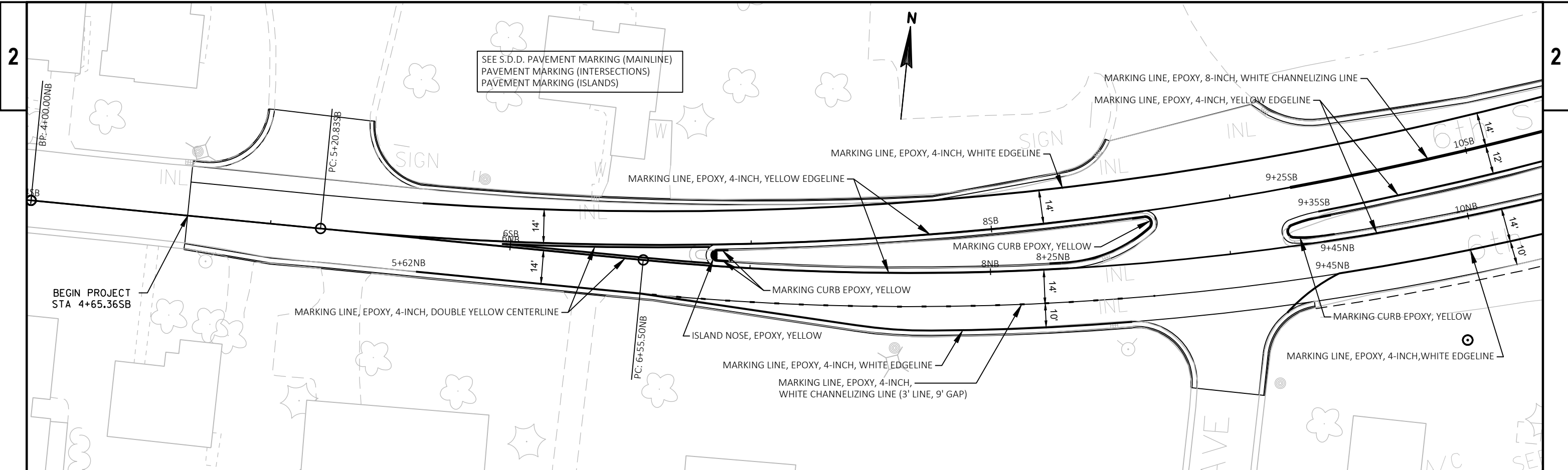


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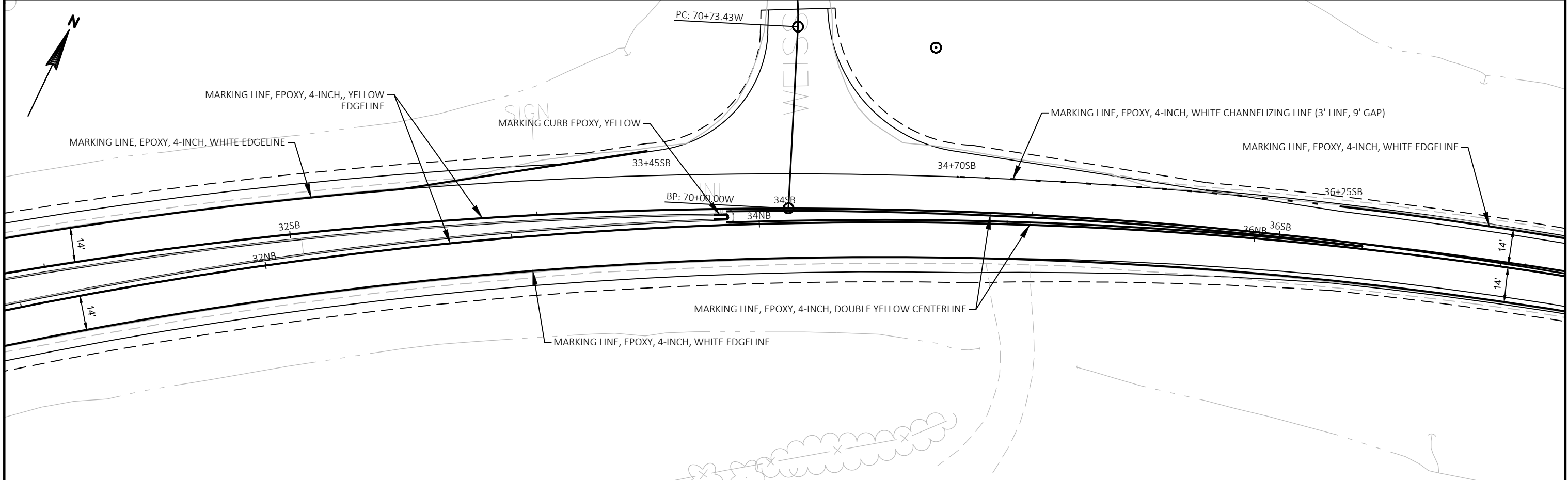
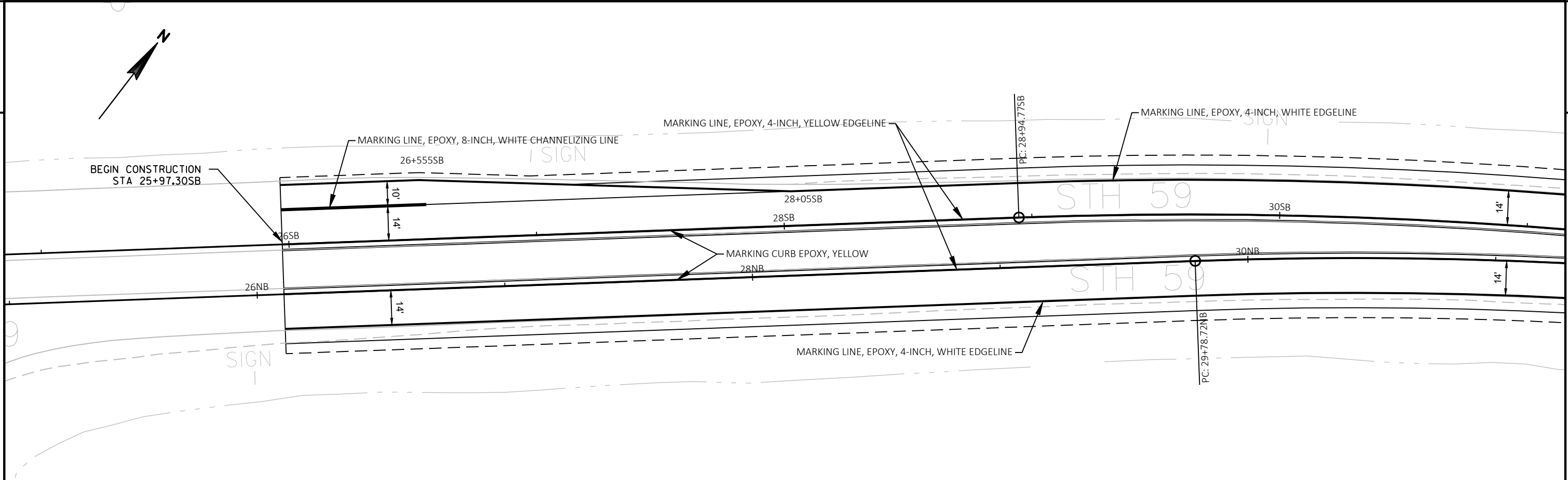
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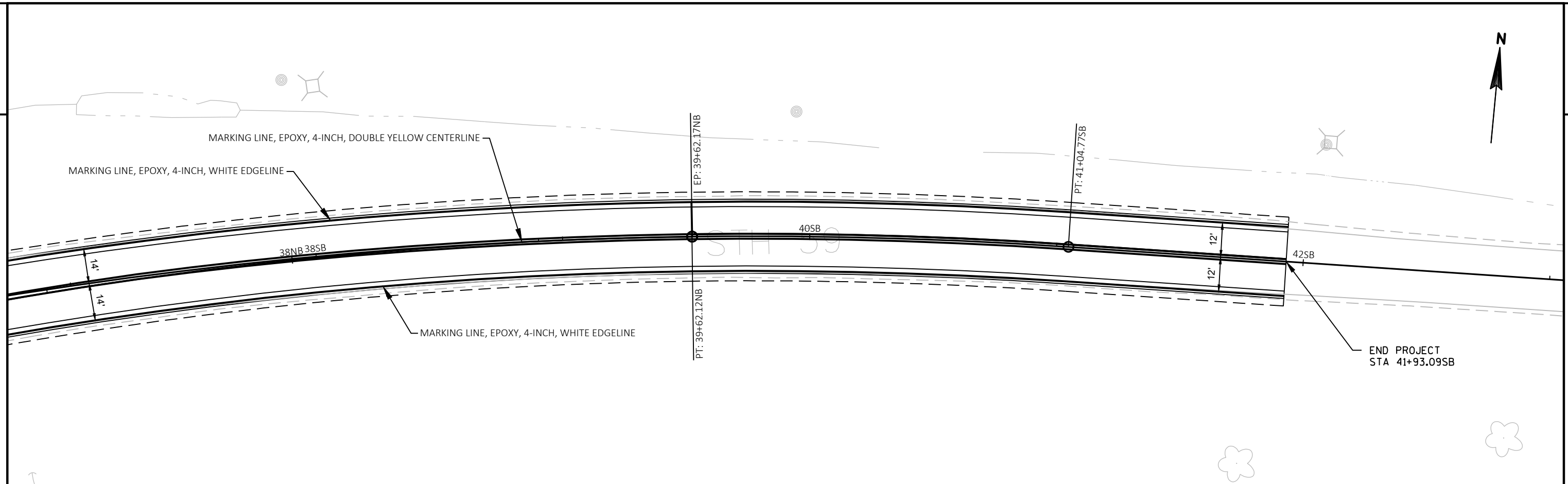
PROJECT NO: 5944-01-72	HWY: STH 81	COUNTY: GREEN	EROSION CONTROL	SHEET	E
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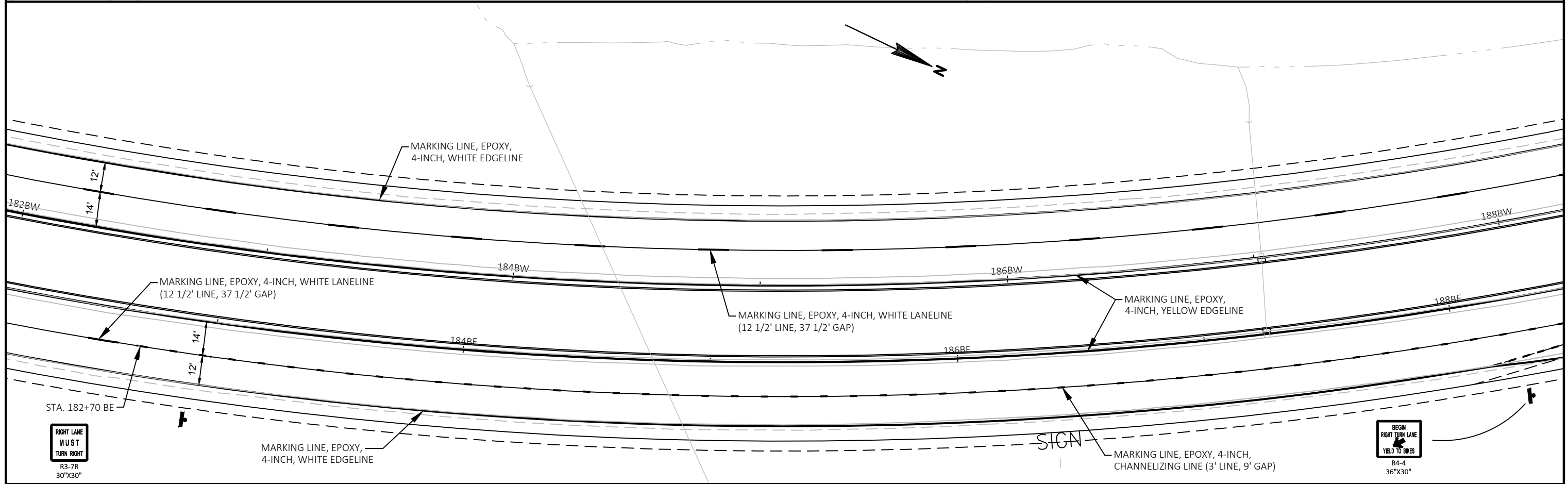
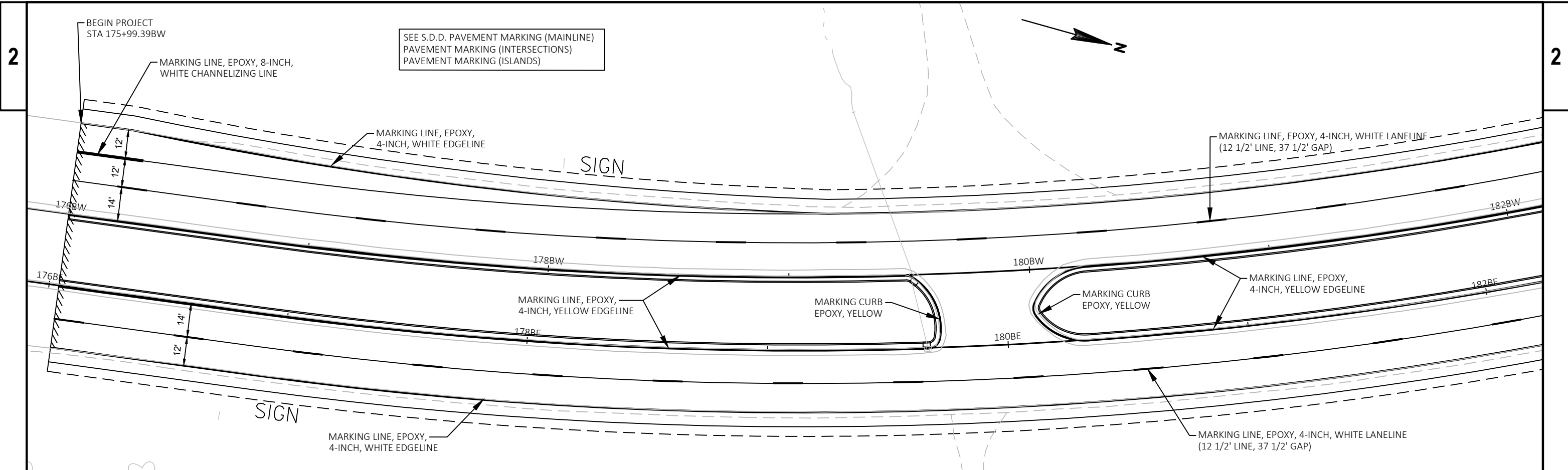


PROJECT NO: 5660-00-72	HWY: STH 59	COUNTY: GREEN	PAVEMENT MARKING	SHEET	E
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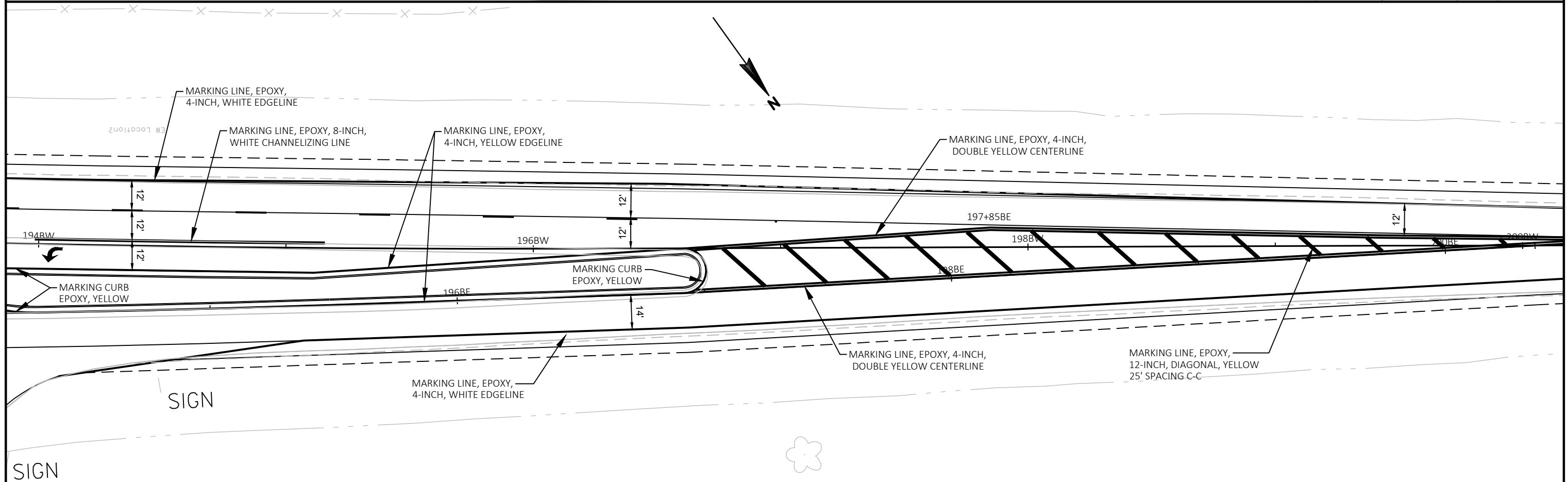
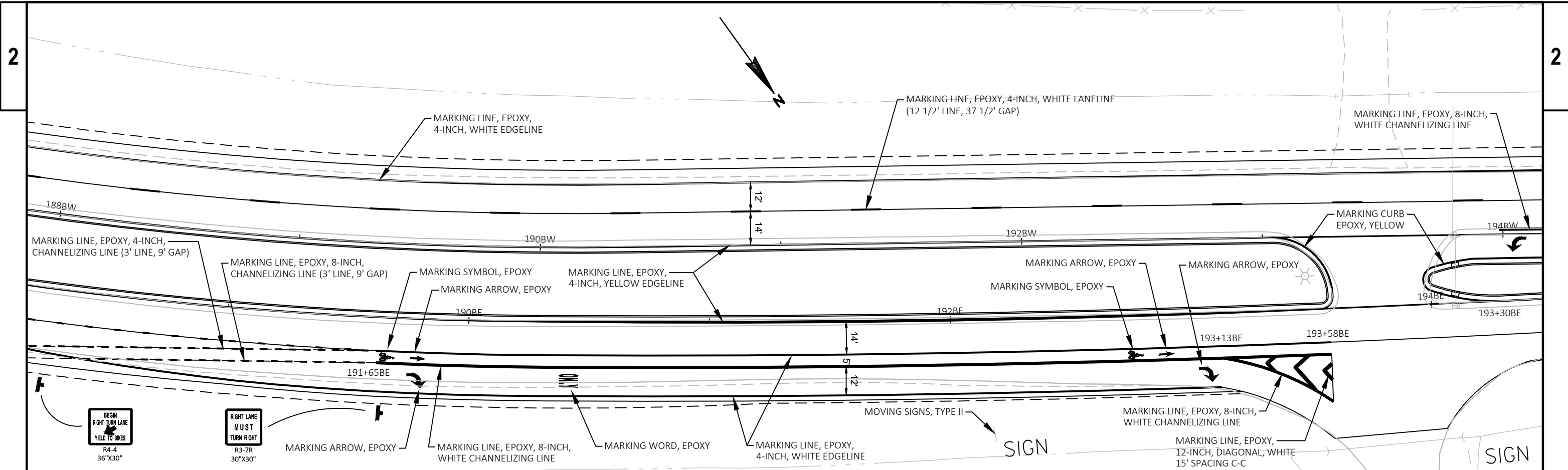


PROJECT NO: 5660-00-72	HWY: STH 59	COUNTY: GREEN	PAVEMENT MARKING	SHEET	E
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PROJECT NO: 5944-01-72	HWY: STH 81	COUNTY: GREEN	PAVEMENT MARKING	SHEET	E
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PROJECT NO: 5944-01-72	HWY: STH 81	COUNTY: GREEN	PAVEMENT MARKING	SHEET	E
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FILE NAME : N:\PDS\C3D\59440102\SHEETSP\PLAN\024501_PM.DWG
LAYOUT NAME - 3

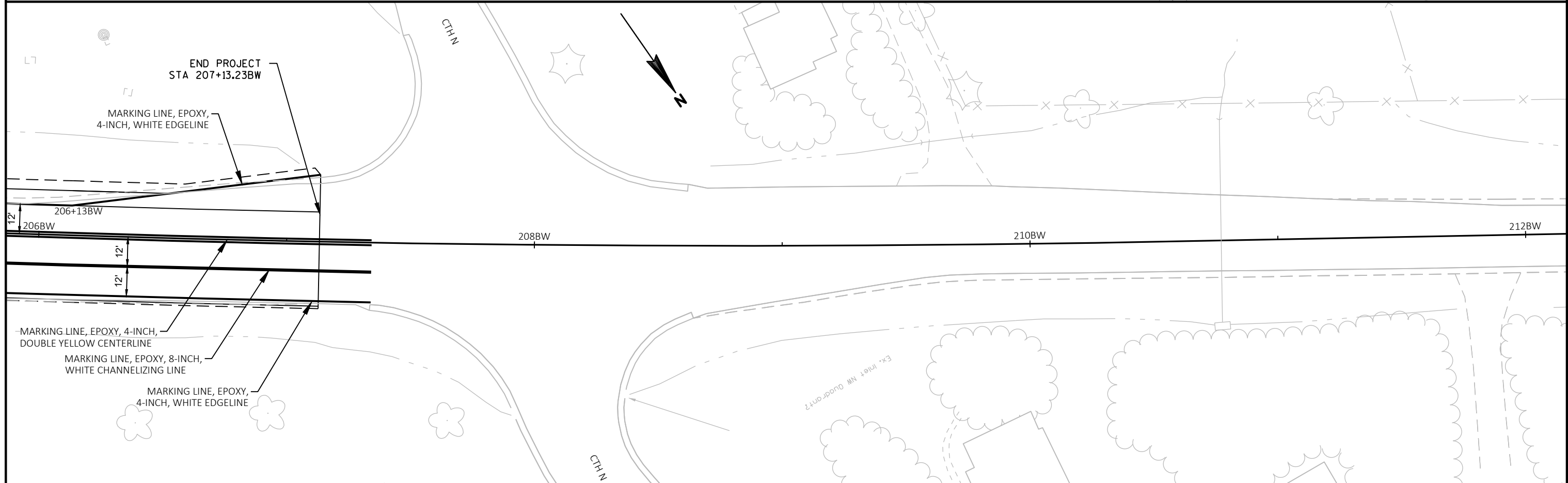
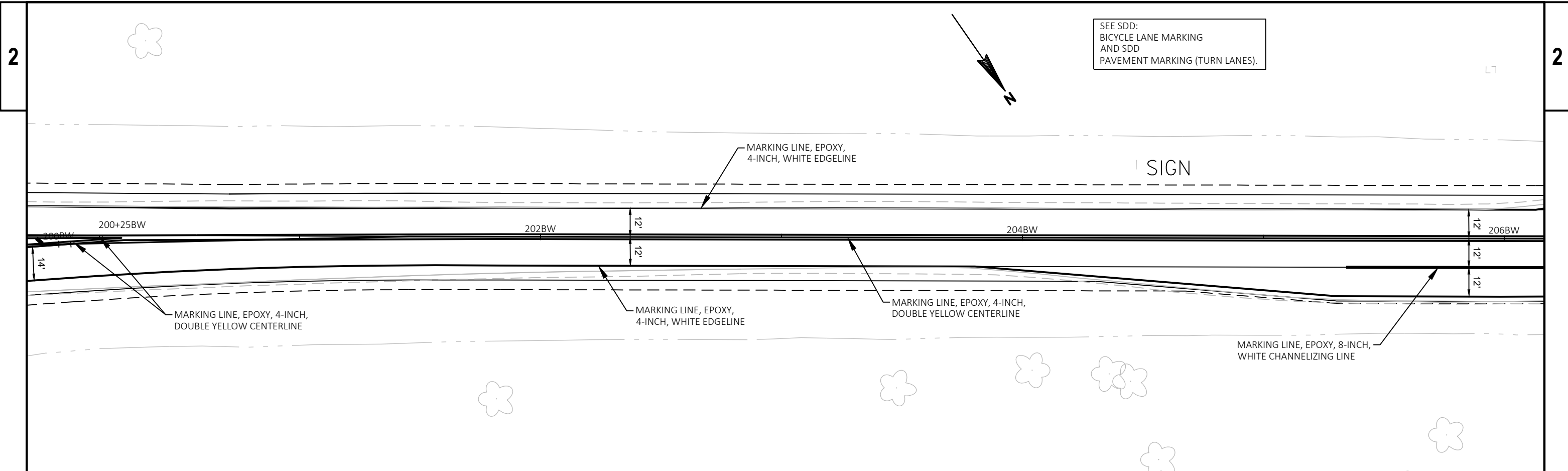
PLOT DATE : 2/4/2019 1:17 PM

PLOT BY : OLSON, RICHARD J

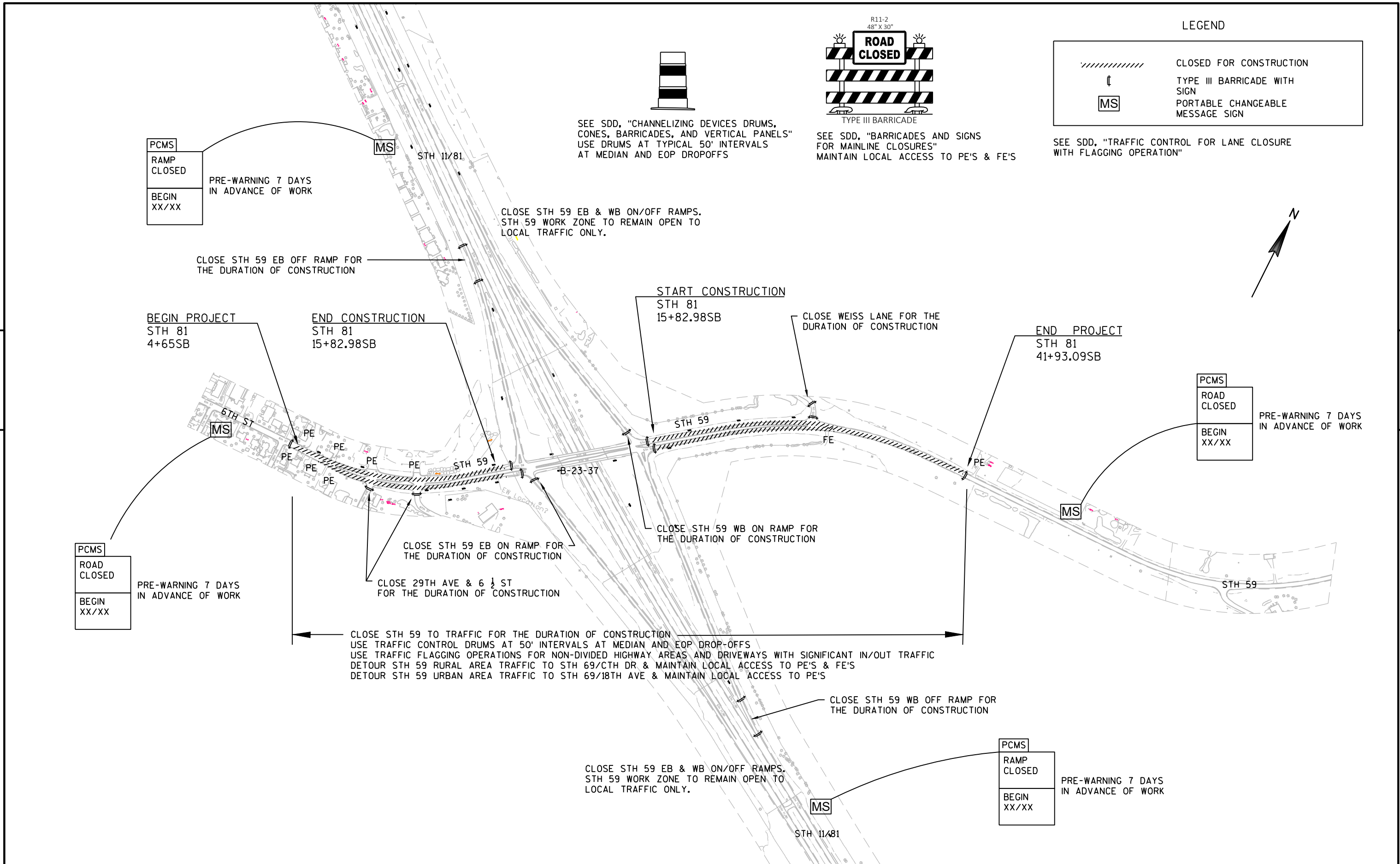
PLOT NAME :

PLOT SCALE : 1 IN=40 FT

WISDOT/CADD SHEET 44



PROJECT NO: 5944-01-72	HWY: STH 81	COUNTY: GREEN	PAVEMENT MARKING	SHEET	E
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LEGEND

- ● ● DETOUR ROUTE
- Ⓟ/Ⓟ EXISTING SIGN
- Ⓟ/Ⓟ PROPOSED SIGN
- ▨ WORK ZONE

NOTE:
ALL SIGNS SHOWN ON DETOUR SHEETS
SHALL BE PAID FOR AS TRAFFIC CONTROL
DETOUR SIGNS UNLESS OTHERWISE NOTED.



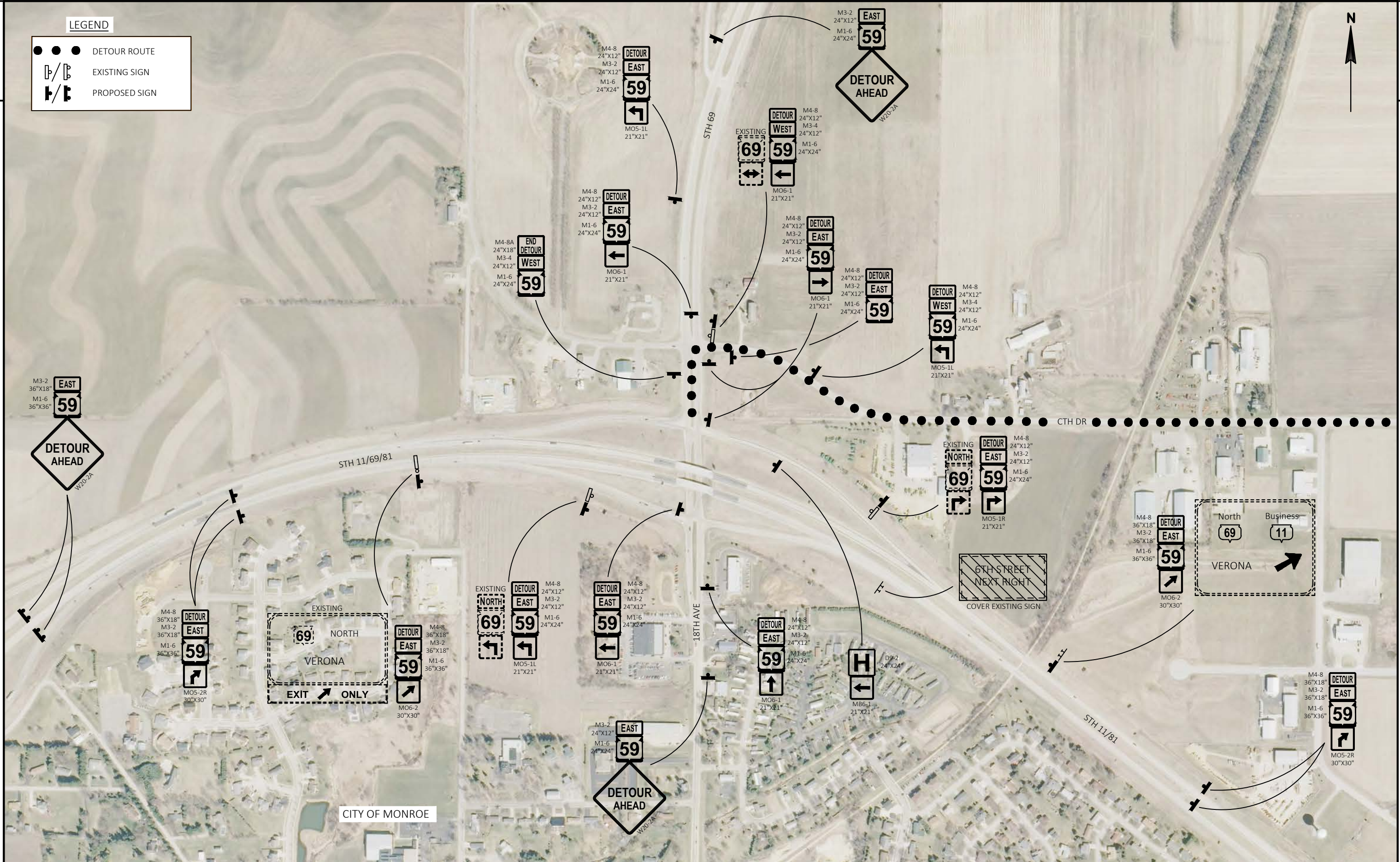
CTH DR/STH 69 DETOUR

STH 59 WORK ZONE

CITY OF MONROE

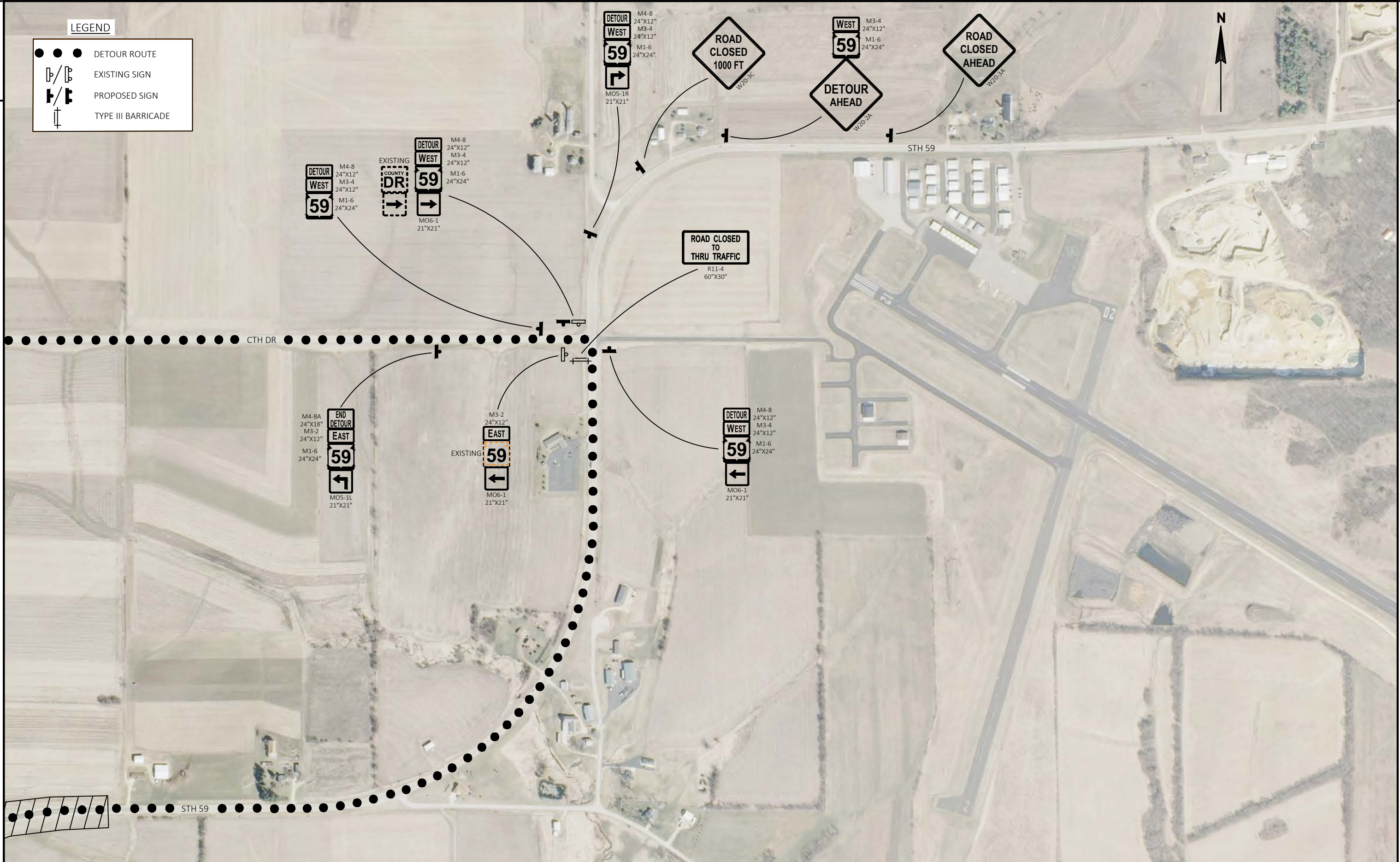
LEGEND

- ● ● DETOUR ROUTE
- ▭/▭ EXISTING SIGN
- ▭/▭ PROPOSED SIGN



LEGEND

- ● ● DETOUR ROUTE
- ▭/▭ EXISTING SIGN
- ▭/▭ PROPOSED SIGN
- ⊥ TYPE III BARRICADE



PROJECT NO: 5660-00-72

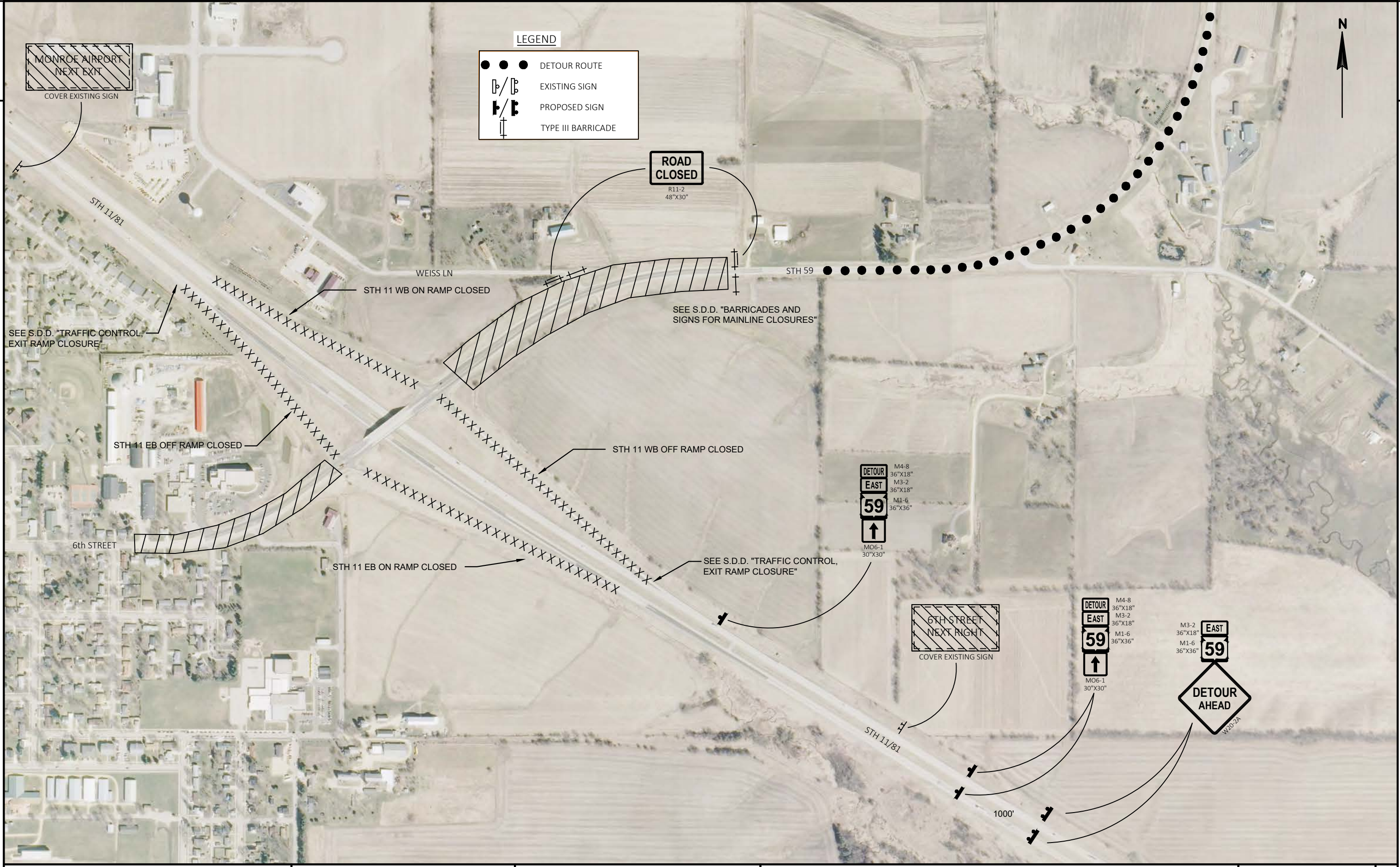
HWY: STH 59

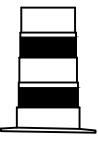
COUNTY: GREEN

DETOUR

SHEET

E





SEE SDD, "CHANNELIZING DEVICES DRUMS, CONES, BARRICADES, AND VERTICAL PANELS"
USE DRUMS AT TYPICAL 50' INTERVALS AT MEDIAN AND EOP DROPOFFS

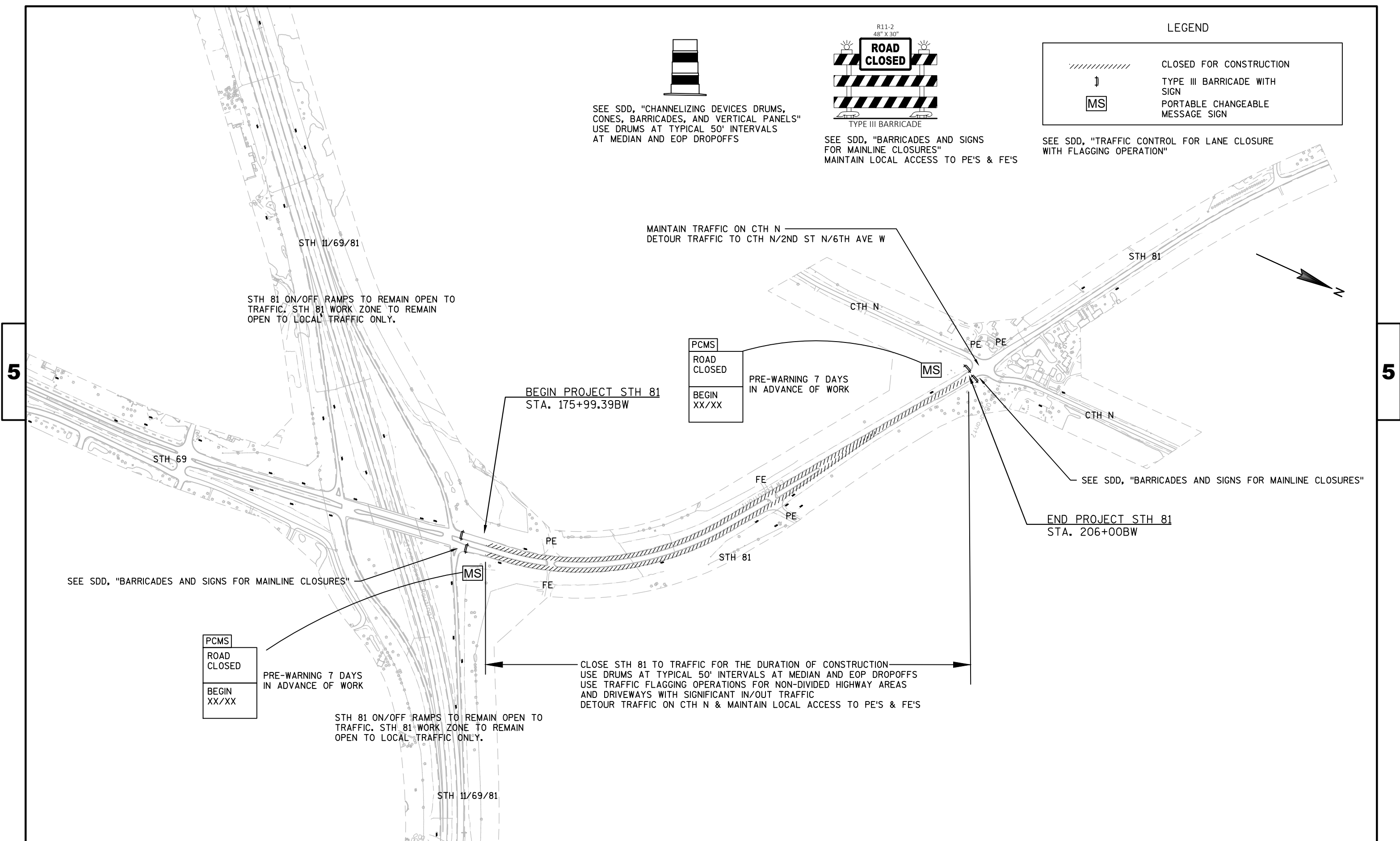


SEE SDD, "BARRICADES AND SIGNS FOR MAINLINE CLOSURES"
MAINTAIN LOCAL ACCESS TO PE'S & FE'S

LEGEND

	CLOSED FOR CONSTRUCTION
	TYPE III BARRICADE WITH SIGN
	PORTABLE CHANGEABLE MESSAGE SIGN

SEE SDD, "TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION"



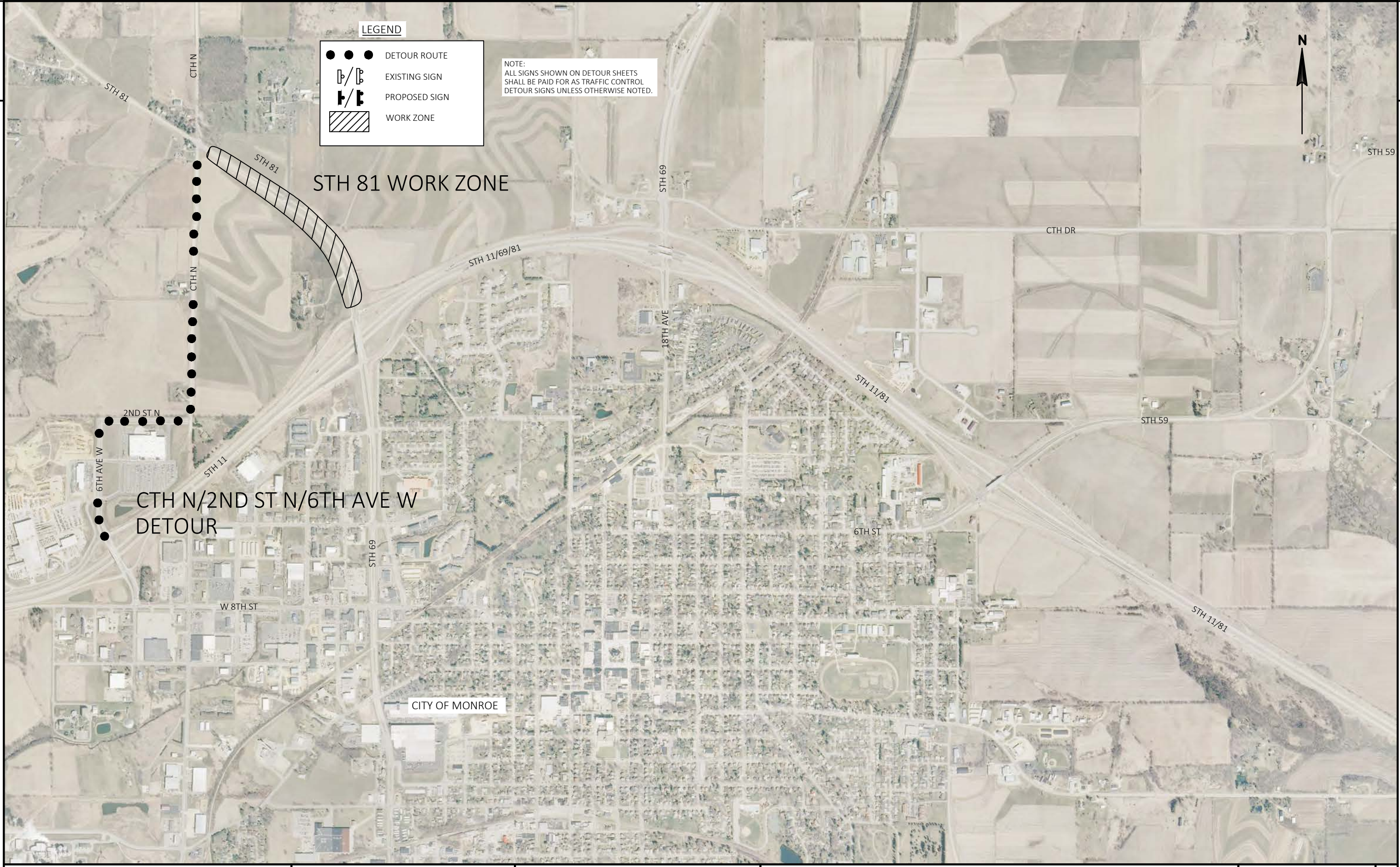
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LEGEND

- ● ● DETOUR ROUTE
- ▮/▮ EXISTING SIGN
- ▮/▮ PROPOSED SIGN
- ▨ WORK ZONE

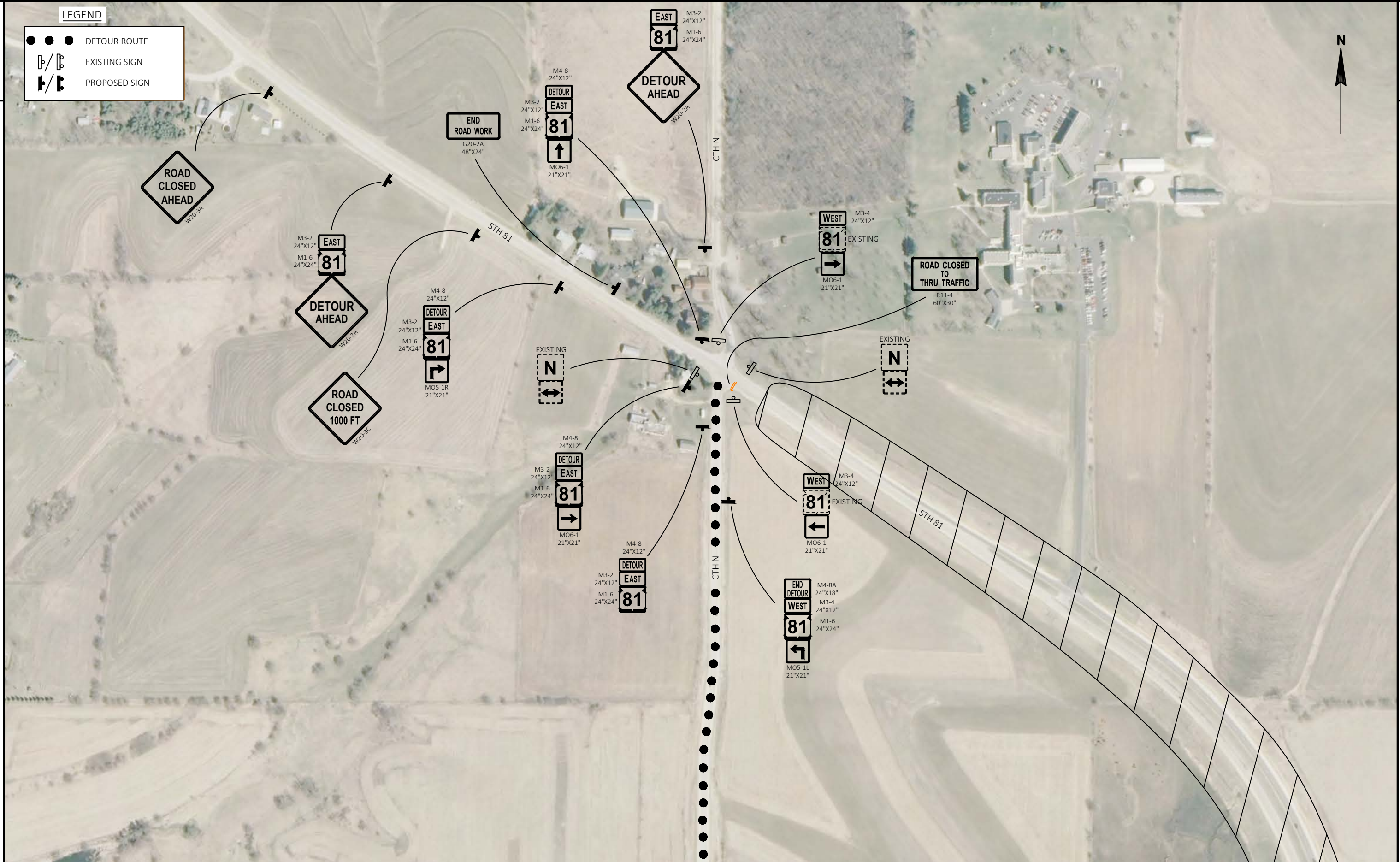
NOTE:
ALL SIGNS SHOWN ON DETOUR SHEETS
SHALL BE PAID FOR AS TRAFFIC CONTROL
DETOUR SIGNS UNLESS OTHERWISE NOTED.



PROJECT NO: 5944-01-72	HWY: STH 81	COUNTY: GREEN	DETOUR STH 81	SHEET	E
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LEGEND

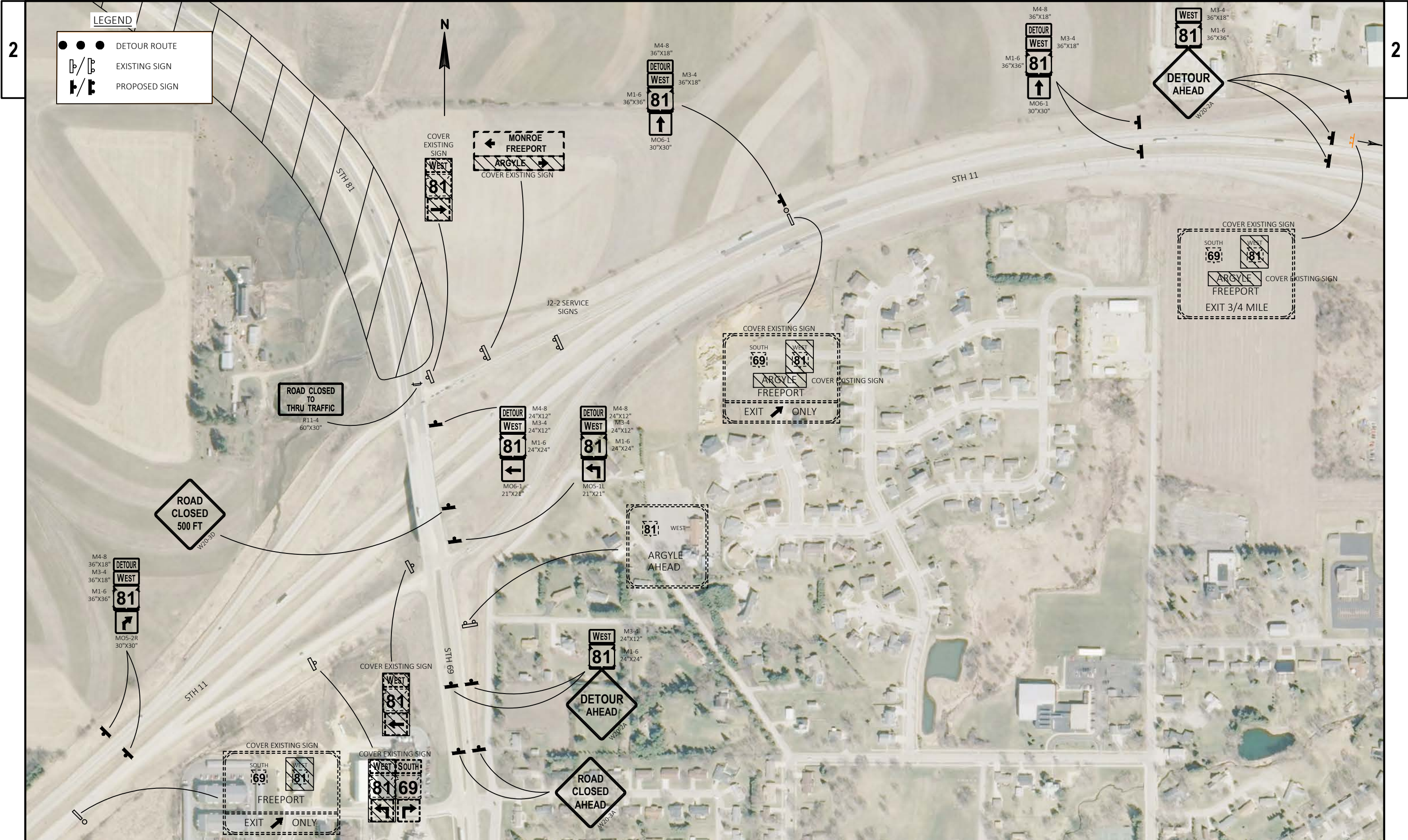
- ● ● DETOUR ROUTE
- ▭/▭ EXISTING SIGN
- ▭/▭ PROPOSED SIGN





LEGEND

- ● ● DETOUR ROUTE
- ▭/▭ EXISTING SIGN
- ▭/▭ PROPOSED SIGN

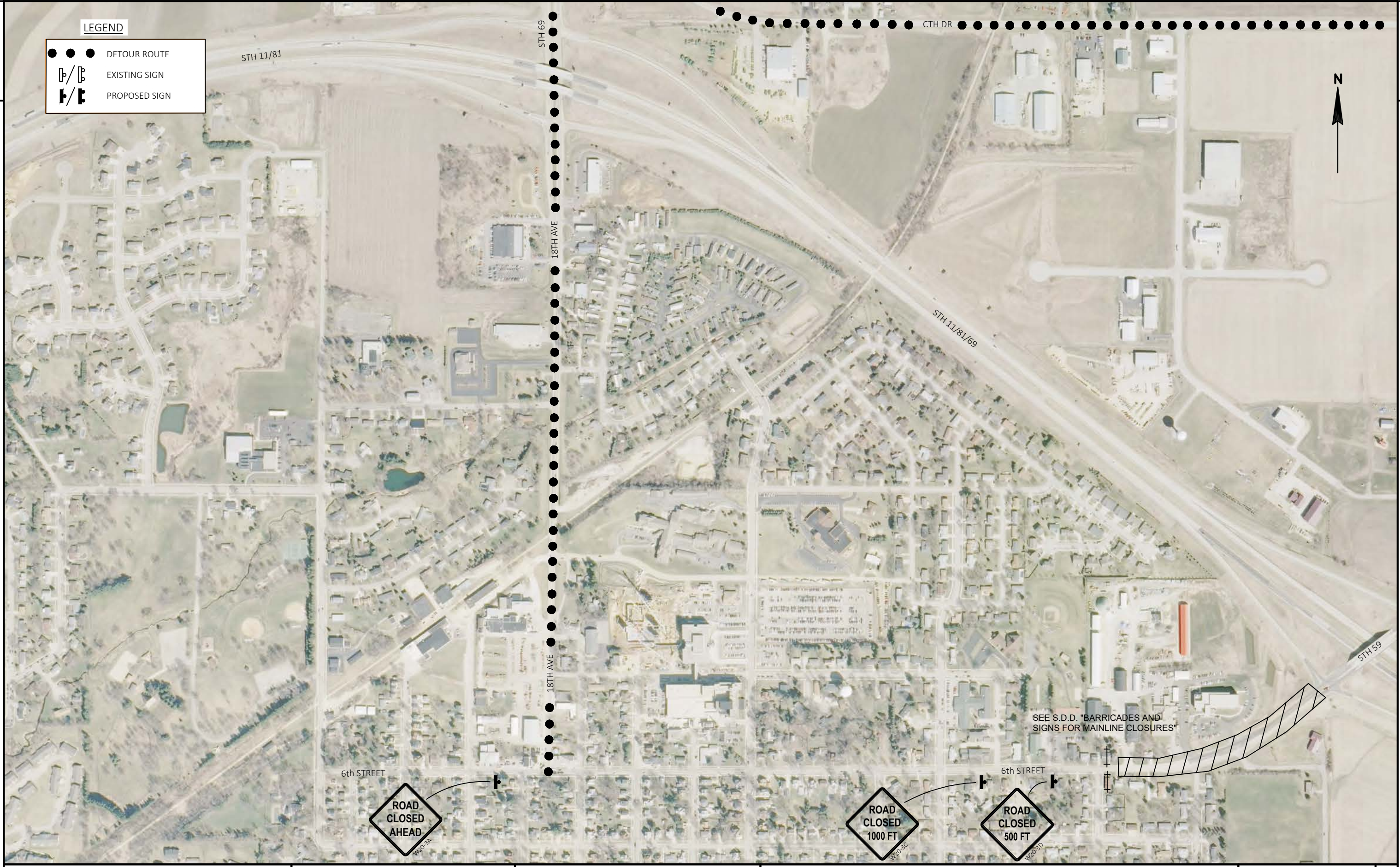


PROJECT NO: 5944-01-72	HWY: STH 81	COUNTY: GREEN	DETOUR STH 81	SHEET E
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FILE NAME : N:\PDS\C3D\59440102\SHEETSP\027002_DTSTH81.DWG PLOT DATE : 4/9/2019 10:18 AM PLOT BY : OLSON, RICHARD J PLOT NAME : LAYOUT NAME - detour (4) PLOT SCALE : ##### WISDOT/CADD SHEET 42

LEGEND

- ● ● DETOUR ROUTE
- ▮/▮ EXISTING SIGN
- ▮/▮ PROPOSED SIGN



PI STA = 35+21.01SB
 Y = 140596.881
 X = 618190.698
 DELTA = 36°25'43"
 D = 3°00'38"
 T = 626.24'
 L = 1210.00'
 R = 1903.12'
 PC STA = 28+94.77SB
 Y = 140219.854
 X = 617690.671
 PT STA = 41+04.77SB
 Y = 140603.310
 X = 618816.904
 BK = N52°58'59.8"E
 AH = N89°24'42.5"E
 SE=5.50%

PI STA = 47+46.27
 Y = 140609.8951
 X = 619458.3734

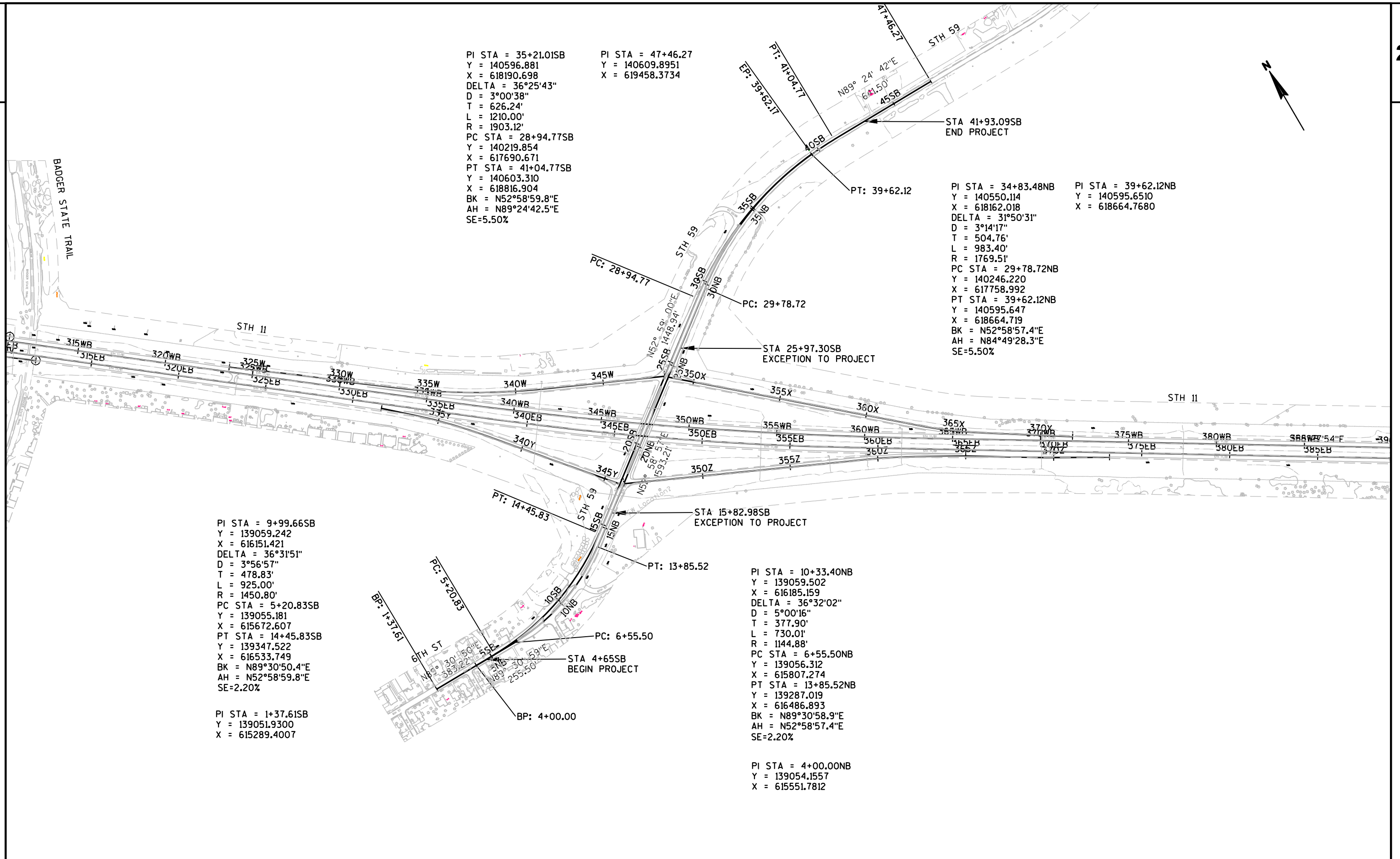
PI STA = 34+83.48NB
 Y = 140550.114
 X = 618162.018
 DELTA = 31°50'31"
 D = 3°14'17"
 T = 504.76'
 L = 983.40'
 R = 1769.51'
 PC STA = 29+78.72NB
 Y = 140246.220
 X = 617758.992
 PT STA = 39+62.12NB
 Y = 140595.647
 X = 618664.719
 BK = N52°58'57.4"E
 AH = N84°49'28.3"E
 SE=5.50%

PI STA = 9+99.66SB
 Y = 139059.242
 X = 616151.421
 DELTA = 36°31'51"
 D = 3°56'57"
 T = 478.83'
 L = 925.00'
 R = 1450.80'
 PC STA = 5+20.83SB
 Y = 139055.181
 X = 615672.607
 PT STA = 14+45.83SB
 Y = 139347.522
 X = 616533.749
 BK = N89°30'50.4"E
 AH = N52°58'59.8"E
 SE=2.20%

PI STA = 1+37.61SB
 Y = 139051.9300
 X = 615289.4007

PI STA = 10+33.40NB
 Y = 139059.502
 X = 616185.159
 DELTA = 36°32'02"
 D = 5°00'16"
 T = 377.90'
 L = 730.01'
 R = 1144.88'
 PC STA = 6+55.50NB
 Y = 139056.312
 X = 615807.274
 PT STA = 13+85.52NB
 Y = 139287.019
 X = 616486.893
 BK = N89°30'58.9"E
 AH = N52°58'57.4"E
 SE=2.20%

PI STA = 4+00.00NB
 Y = 139054.1557
 X = 615551.7812



PI STA = 163+42.20BW
 Y = 141022.252
 X = 608243.532

PI STA = 184+00.44BW
 Y = 143060.916
 X = 607960.343
 DELTA = 47°14'29"
 D = 3°28'53"
 T = 719.71'
 L = 1356.93'
 R = 1645.72'
 PC STA = 176+80.73BW
 PT STA = 190+37.66BW
 SE=5.90%

PI STA = 195+23.95BW
 Y = 143750.063
 X = 606970.646
 DELTA = 1°15'28"
 D = 0°37'44"
 T = 100.03'
 L = 200.04'
 R = 9112.01'
 PC STA = 194+23.92BW
 PT STA = 196+23.97BW
 SE=2.00%

PI STA = 199+74.19BW
 Y = 143999.178
 X = 606595.590
 DELTA = 0°19'04"
 D = 0°30'58"
 T = 30.78'
 L = 61.56'
 R = 11103.53'
 PC STA = 199+43.41BW
 PT STA = 200+04.97BW

PI STA = 201+45.19BW
 Y = 144093.652
 X = 606453.053

PI STA = 208+19.76BW
 Y = 144478.875
 X = 605899.306
 DELTA = 2°45'54"
 D = 0°40'08"
 T = 206.72'
 L = 413.35'
 R = 8565.35'
 PC STA = 206+13.04BW
 PT STA = 210+26.39BW
 SE=2.00%

PI STA = 214+48.34BW
 Y = 144809.655
 X = 605369.411

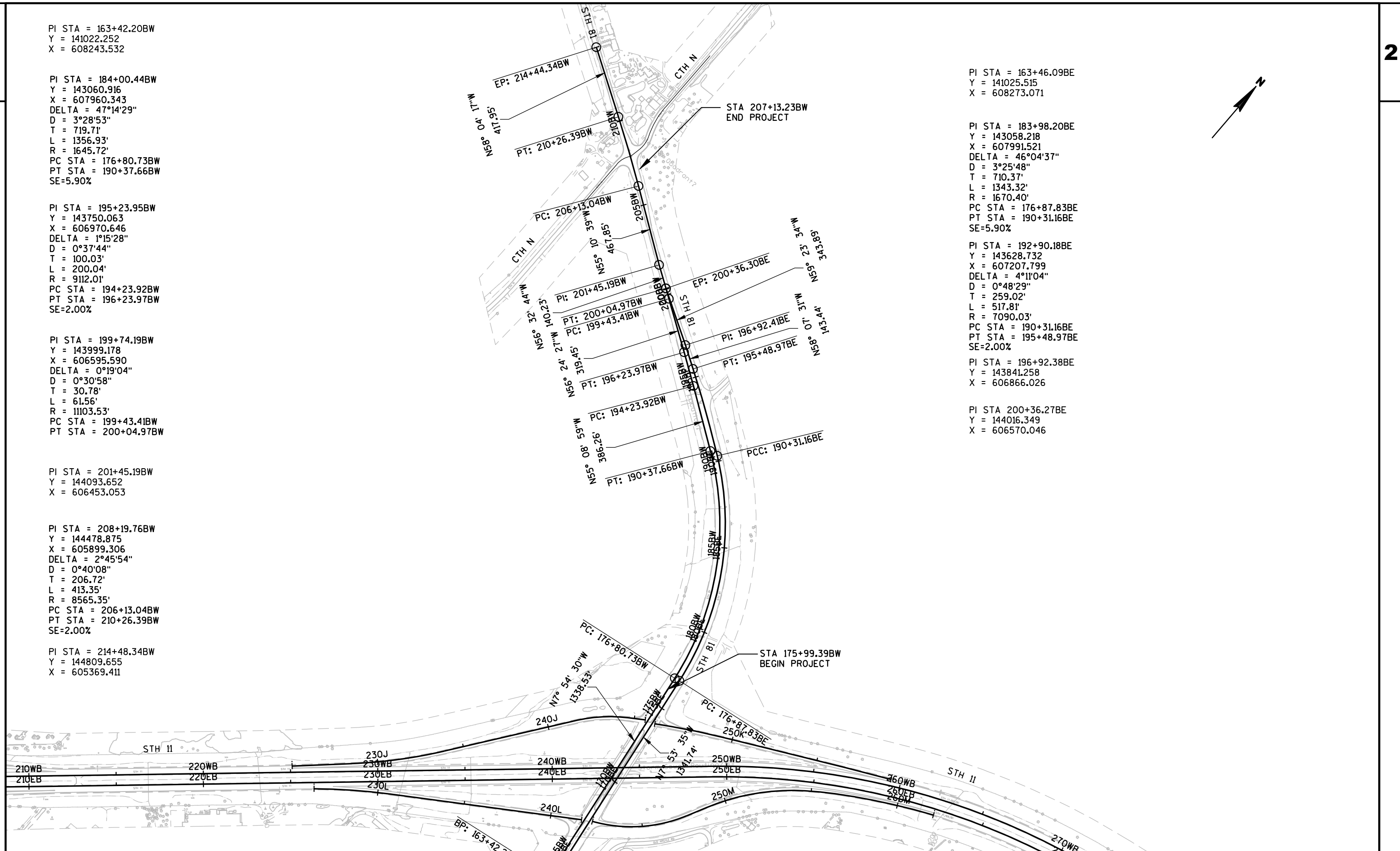
PI STA = 163+46.09BE
 Y = 141025.515
 X = 608273.071

PI STA = 183+98.20BE
 Y = 143058.218
 X = 607991.521
 DELTA = 46°04'37"
 D = 3°25'48"
 T = 710.37'
 L = 1343.32'
 R = 1670.40'
 PC STA = 176+87.83BE
 PT STA = 190+31.16BE
 SE=5.90%

PI STA = 192+90.18BE
 Y = 143628.732
 X = 607207.799
 DELTA = 4°11'04"
 D = 0°48'29"
 T = 259.02'
 L = 517.81'
 R = 7090.03'
 PC STA = 190+31.16BE
 PT STA = 195+48.97BE
 SE=2.00%

PI STA = 196+92.38BE
 Y = 143841.258
 X = 606866.026

PI STA 200+36.27BE
 Y = 144016.349
 X = 606570.046



Estimate Of Quantities

5660-00-72 5944-01-72

Line	Item	Item Description	Unit	Total	Qty	Qty
0002	204.0100	Removing Pavement	SY	24,374.000	10,234.000	14,140.000
0004	204.0110	Removing Asphaltic Surface	SY	4,031.000	2,426.000	1,605.000
0006	204.0150	Removing Curb & Gutter	LF	8,378.000	4,297.000	4,081.000
0008	204.0155	Removing Concrete Sidewalk	SY	435.000	435.000	
0010	204.0220	Removing Inlets	EACH	13.000	7.000	6.000
0012	204.0245	Removing Storm Sewer (size) 01. 48-Inch	LF	8.000		8.000
0014	204.0245	Removing Storm Sewer (size) 02. 18-Inch	LF	8.000		8.000
0016	205.0100	Excavation Common	CY	28,784.000	11,467.000	17,317.000
0018	213.0100	Finishing Roadway (project) 01. 5660-00-72	EACH	1.000	1.000	
0020	213.0100	Finishing Roadway (project) 02. 5944-01-72	EACH	1.000		1.000
0022	305.0110	Base Aggregate Dense 3/4-Inch	TON	1,809.000	875.000	934.000
0024	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	14,918.000	6,280.000	8,638.000
0026	305.0410	Aggregate Detours	TON	200.000	100.000	100.000
0028	312.0110	Select Crushed Material	TON	27,942.000	11,695.000	16,247.000
0030	416.0160	Concrete Driveway 6-Inch	SY	15.000	15.000	
0032	416.0180	Concrete Driveway 8-Inch	SY	150.000	150.000	
0034	416.0610	Drilled Tie Bars	EACH	56.000	56.000	
0036	455.0605	Tack Coat	GAL	1,735.000	705.000	1,030.000
0038	460.2000	Incentive Density HMA Pavement	DOL	6,290.000	2,270.000	4,020.000
0040	460.5223	HMA Pavement 3 LT 58-28 S	TON	3,772.000		3,772.000
0042	460.5224	HMA Pavement 4 LT 58-28 S	TON	6,060.000	3,545.000	2,515.000
0044	465.0115	Asphaltic Surface Detours	TON	100.000	50.000	50.000
0046	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	21.000	5.000	16.000
0048	465.0400	Asphaltic Shoulder Rumble Strips	LF	6,800.000	2,044.000	4,756.000
0050	522.0118	Culvert Pipe Reinforced Concrete Class III 18-Inch	LF	8.000		8.000
0052	522.1018	Apron Endwalls for Culvert Pipe Reinforced Concrete 18-Inch	EACH	1.000		1.000
0054	522.1048	Apron Endwalls for Culvert Pipe Reinforced Concrete 48-Inch	EACH	1.000		1.000
0056	524.0648	Apron Endwalls for Culvert Pipe Salvaged 48-Inch	EACH	1.000		1.000
0058	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	8,364.000	4,283.000	4,081.000
0060	602.0405	Concrete Sidewalk 4-Inch	SF	3,807.000	3,807.000	
0062	606.0200	Riprap Medium	CY	18.000		18.000
0064	611.0624	Inlet Covers Type H	EACH	13.000	7.000	6.000
0066	611.3230	Inlets 2x3-FT	EACH	13.000	7.000	6.000
0068	611.8110	Adjusting Manhole Covers	EACH	1.000	1.000	
0070	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	920.000	920.000	
0072	618.0100	Maintenance And Repair of Haul Roads (project) 01. 5660-00-72	EACH	1.000	1.000	
0074	618.0100	Maintenance And Repair of Haul Roads (project) 02. 5944-01-72	EACH	1.000		1.000

Estimate Of Quantities

5660-00-72 5944-01-72

Line	Item	Item Description	Unit	Total	Qty	Qty
0076	619.1000	Mobilization	EACH	1.000	0.400	0.600
0078	624.0100	Water	MGAL	269.000	110.000	159.000
0080	625.0500	Salvaged Topsoil	SY	12,573.000	4,423.000	8,150.000
0082	627.0200	Mulching	SY	12,573.000	4,423.000	8,150.000
0084	628.1504	Silt Fence	LF	2,240.000	2,240.000	
0086	628.1520	Silt Fence Maintenance	LF	2,240.000	2,240.000	
0088	628.1905	Mobilizations Erosion Control	EACH	4.000	2.000	2.000
0090	628.1910	Mobilizations Emergency Erosion Control	EACH	4.000	2.000	2.000
0092	628.2002	Erosion Mat Class I Type A	SY	4,548.000	2,660.000	1,888.000
0094	628.7015	Inlet Protection Type C	EACH	16.000	10.000	6.000
0096	628.7504	Temporary Ditch Checks	LF	370.000	300.000	70.000
0098	628.7555	Culvert Pipe Checks	EACH	13.000	11.000	2.000
0100	629.0210	Fertilizer Type B	CWT	8.100	3.000	5.100
0102	630.0130	Seeding Mixture No. 30	LB	226.000	80.000	146.000
0104	630.0200	Seeding Temporary	LB	113.000	40.000	73.000
0106	630.0500	Seed Water	MGAL	285.000	100.000	185.000
0108	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	2.000		2.000
0110	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	1.000		1.000
0112	637.2210	Signs Type II Reflective H	SF	20.000		20.000
0114	642.5201	Field Office Type C	EACH	1.000	1.000	
0116	643.0300	Traffic Control Drums	DAY	21,524.000	6,148.000	15,376.000
0118	643.0420	Traffic Control Barricades Type III	DAY	3,860.000	2,948.000	912.000
0120	643.0705	Traffic Control Warning Lights Type A	DAY	7,720.000	5,896.000	1,824.000
0122	643.0715	Traffic Control Warning Lights Type C	DAY	3,044.000	1,060.000	1,984.000
0124	643.0900	Traffic Control Signs	DAY	18,609.000	7,437.000	11,172.000
0126	643.0910	Traffic Control Covering Signs Type I	EACH	5.000	2.000	3.000
0128	643.0920	Traffic Control Covering Signs Type II	EACH	2.000		2.000
0130	643.1050	Traffic Control Signs PCMS	DAY	42.000	28.000	14.000
0132	643.5000	Traffic Control	EACH	1.000	0.500	0.500
0134	645.0112	Geotextile Type DF Schedule B	SY	511.000	511.000	
0136	645.0120	Geotextile Type HR	SY	62.000		62.000
0138	645.0220	Geogrid Type SR	SY	41,236.000	17,392.000	23,844.000
0140	646.1020	Marking Line Epoxy 4-Inch	LF	24,337.000	10,270.000	14,067.000
0142	646.3020	Marking Line Epoxy 8-Inch	LF	1,108.000	304.000	804.000
0144	646.5020	Marking Arrow Epoxy	EACH	5.000		5.000
0146	646.5120	Marking Word Epoxy	EACH	1.000		1.000
0148	646.5220	Marking Symbol Epoxy	EACH	2.000		2.000
0150	646.7120	Marking Diagonal Epoxy 12-Inch	LF	254.000		254.000
0152	646.8120	Marking Curb Epoxy	LF	461.000	227.000	234.000
0154	646.8220	Marking Island Nose Epoxy	EACH	1.000	1.000	

Estimate Of Quantities

5660-00-72 5944-01-72

Line	Item	Item Description	Unit	Total	Qty	Qty
0156	650.4000	Construction Staking Storm Sewer	EACH	13.000	7.000	6.000
0158	650.4500	Construction Staking Subgrade	LF	11,012.000	5,462.000	5,550.000
0160	650.5000	Construction Staking Base	LF	11,012.000	5,462.000	5,550.000
0162	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	8,364.000	4,283.000	4,081.000
0164	650.6000	Construction Staking Pipe Culverts	EACH	1.000		1.000
0166	650.9910	Construction Staking Supplemental Control (project) 01. 5660-00-72	LS	1.000	1.000	
0168	650.9910	Construction Staking Supplemental Control (project) 02. 5944-01-72	LS	1.000		1.000
0170	650.9920	Construction Staking Slope Stakes	LF	11,012.000	5,462.000	5,550.000
0172	690.0150	Sawing Asphalt	LF	464.000	346.000	118.000
0174	690.0250	Sawing Concrete	LF	168.000	100.000	68.000
0176	740.0440	Incentive IRI Ride	DOL	8,135.000	3,310.000	4,825.000
0178	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	425.000	200.000	225.000
0180	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	350.000	125.000	225.000
0182	SPV.0060	Special 01. Adjusting Valve Boxes	EACH	3.000	3.000	

EARTHWORK SUMMARY

Division	From/To Station	Location	205.0100 Common Excavation (1)		Salvaged/Unusable Pavement Material (4)	Available Material (5)	Reduced EBS in Fill (9)	Expanded EBS Backfill (11)	Unexpanded Fill	Expanded Fill (13)	Mass Ordinate +/- (14)	Waste	208.0100 Borrow
			Cut (2)	EBS Excavation (3)ADD 5%			Factor 1.00	Factor 1.33		Factor 1.33			
Division 1													
	04+50 - 42+50	STH 59	10,363	518		10,363	518	689	592	787	9,576		
Division 1 Subtotal			10,363	518	0	10,363	518	689	592	787	9,576		
Division 2													
	50+33 - 50+37	30 th St.	150	8		150	8	10	12	16	134		
	60+30 - 60+60	6 th St.	231	12		231	12	15	19	25	206		
	70+30 - 70+80	Weiss Ln.	177	9		177	9	12	8	11	166		
Division 2 Subtotal			558	28	0	558	28	37	39	52	506	10,082	
Grand Total			10,921	546	0	10,921	546	726	631	839	10,082	10,082	
Total Common Exc			11,467										

Notes:

- (1) Common Excavation is the sum of the Cut and EBS Excavation columns. Item number 205.0100
 - (2) Salvaged/Unusable Pavement Material is included in Cut.
 - (3) EBS Excavation to be backfilled with Select Borrow material. Note: this is designers choice, can be backfilled with Borrow, or Cut as well.
 - (4) Salvaged/Unusable Pavement Material
 - 5) Available Material = Cut - Salvaged/Unusable Pavement Material
 - (6) Marsh Excavation - to be backfilled with Select Borrow Material. Note: this is designers choice, can be backfilled with Borrow, or Cut as well. Item number 205.0500
 - (7) Rock Excavation item number 205.0200
 - (8) Reduced Marsh in Fill - Excavated Marsh material is usable in Fills outside the 1:1 slope. Marsh in Fill Reduction factor = X 1X
 - (9) Reduced EBS in Fill - Excavated EBS material is usable in Fills outside the 1:1 slope. EBS in Fill Reduction factor = 1
 - (10) Expanded Marsh Backfill - This is to be filled with Select Borrow material. Marsh Backfill Factor = 1. Item number 208.1100
 - (11) Expanded EBS Backfill - This is to be filled with Select Borrow material. EBS Backfill Factor = 1.33. Item number 208.1100
 - (12) Expanded Rock Factor = X5X
 - (13) Expanded Fill Factor = 1.33
- Depending on selections:
- Expanded Fill = (Unexpanded Fill - Expanded Rock - Reduced EBS) * Fill Factor
 - Or
 - Expanded Fill = (Unexpanded Fill - Expanded Rock - Reduced Marsh) * Fill Factor
 - Or
 - Expanded Fill = (Unexpanded Fill - Expanded Rock) * Fill Factor
- (14) The Mass Ordinate + or - Qty calculated for the Division. Plus quantity indicates an excess of material within the Division. Minus indicates a shortage of material within the Division.

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EARTHWORK SUMMARY

Division	From/To Station	Location	205.0100 Common Excavation (1)		Salvaged/Unusable Pavement Material (4)	Available Material (5)	Reduced EBS in Fill (9)	Expanded EBS Backfill (11)	Unexpanded Fill	Expanded Fill (13)	Mass Ordinate +/- (14)	Waste	208.0100 Borrow	Comment:
			Cut (2)	EBS Excavation (3)ADD 5%			Factor 1.00	Factor 1.00		Factor 1.25				
Division 1	175+50 - 207+00		16,492	825		16,492	825	825	1,682	2,103	14,390			
Division 1 Subtotal			16,492	825	0	16,492	825	825	1,682	2,103	14,390			
Grand Total			16,492	825	0	16,492	825	825	1,682	2,103	14,390	14,390		
Total Common Exc			17,317											

Notes:

- (1) Common Excavation is the sum of the Cut and EBS Excavation columns. Item number 205.0100
 - (2) Salvaged/Unusable Pavement Material is included in Cut.
 - (3) EBS Excavation to be backfilled with Select Borrow material. Note: this is designers choice, can be backfilled with Borrow, or Cut as well.
 - (4) Salvaged/Unusable Pavement Material
 - 5) Available Material = Cut - Salvaged/Unusable Pavement Material
 - (6) Marsh Excavation - to be backfilled with Select Borrow Material. Note: this is designers choice, can be backfilled with Borrow, or Cut as well. Item number 205.0500
 - (7) Rock Excavation item number 205.0200
 - (8) Reduced Marsh in Fill - Excavated Marsh material is usable in Fills outside the 1:1 slope. Marsh in Fill Reduction factor = X.1X
 - (9) Reduced EBS in Fill - Excavated EBS material is usable in Fills outside the 1:1 slope. EBS in Fill Reduction factor = 1
 - (10) Expanded Marsh Backfill - This is to be filled with Select Borrow material. Marsh Backfill Factor = X.3X. Item number 208.1100
 - (11) Expanded EBS Backfill - This is to be filled with Select Borrow material. EBS Backfill Factor = 1. Item number 208.1100
 - (12) Expanded Rock Factor = X.5X
 - (13) Expanded Fill Factor = 1.25
- Depending on selections:
- Expanded Fill = (Unexpanded Fill - Expanded Rock - Reduced Marsh - Reduced EBS) * Fill Factor**
 - Or Expanded Fill = (Unexpanded Fill - Expanded Rock - Reduced EBS) * Fill Factor
 - Or Expanded Fill = (Unexpanded Fill - Expanded Rock - Reduced Marsh) * Fill Factor
 - Or Expanded Fill = (Unexpanded Fill - Expanded Rock) * Fill Factor
- (14) The Mass Ordinate + or - Qty calculated for the Division. Plus quantity indicates an excess of material within the Division. Minus indicates a shortage of material within the Division.

REMOVING PAVEMENT

CATEGORY	STATION	TO	STATION	LOCATION	204. 0100 REMOVING PAVEMENT SY	REMARKS
0010	4+65SB	-	15+83SB	STH 59	4297	MAINLINE
	25+97SB	-	41+93SB	STH 59	5937	MAINLINE
TOTAL 0010					10234	

REMOVING ASPHALTIC SURFACE

CATEGORY	STATION	TO	STATION	LOCATION	204. 0110 REMOVING ASPHALTIC SURFACE SY	REMARKS
0010	4+65SB	-	15+83SB	STH 59	1677	SHOULDER & TURN LANES
	25+97SB	-	33+79SB	STH 59	749	SHOULDER & TURN LANES
TOTAL 0010					2426	

REMOVING CURB & GUTTER

204.0150
REMOVING
CURB & GUTTER

CATEGORY	STATION	TO	STATION	LOCATION	LF	REMARKS
0010	4+65SB- LT	-	4+97SB- LT	STH 59	47	EOP
	4+65NB- RT	-	8+81NB- RT	STH 59	440	EOP
	5+38SB- LT	-	8+53SB- LT	STH 59	332	EOP
	6+74SB	-	8+68SB	STH 59	402	MEDI AN
	9+05NB- RT	-	9+29NB- RT	STH 59	51	EOP
	9+15SB- LT	-	11+24SB- LT	STH 59	215	EOP
	9+19SB	-	11+29SB	STH 59	442	MEDI AN
	11+89SB	-	15+83SB	STH 59	803	MEDI AN
	25+97SB	-	33+79SB	STH 59	1565	MEDI AN
	TOTAL 0010					4297

REMOVING CONCRETE SIDEWALK

204.0155
REMOVING
CONCRETE
SIDEWALK

CATEGORY	STATION	TO	STATION	LOCATION	SY	REMARKS
0010	6+74SB	-	8+68SB	STH 59	205	CONCRETE MEDI AN
	9+18SB	-	10+32SB	STH 59	110	CONCRETE MEDI AN
	11+89SB	-	12+96SB	STH 59	120	CONCRETE MEDI AN
TOTAL 0010					435	

BASE COURSE ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	305.0110	305.0120	312.0110	305.0410	REMARKS
					BASE AGGREGATE DENSE 3/4- INCH TON	BASE AGGREGATE DENSE 1 1/4- INCH TON	SELECT CRUSHED MATERIAL TON	AGGREGATE DETOURS TON	
0010	4+65SB	-	15+82.98SB	STH 59	135	2500	5010		MAINLINE
	25+97.30SB	-	41+93.09SB	STH 59	720	3570	6455		MAINLINE
	70+00	-	70+80.51	WEISS LANE	20	115	230		SIDEROAD
	6+80SB		8+65SB	STH 59		45			MEDIAN 4" SIDEWALK
	9+25NB		10+40NB	STH 59		25			MEDIAN 4" SIDEWALK
	12+00NB		13+10NB	STH 59		25			MEDIAN 4" SIDEWALK
	UNDISTRIBUTED			STH 59				100	
TOTAL 0010					875	6280	11695	100	

CONCRETE DRIVEWAY

CATEGORY	STATION	LOCATION	416.0160	416.0180	REMARKS
			CONCRETE DRIVEWAY 6-INCH SY	CONCRETE DRIVEWAY 8-INCH SY	
0010	5+15SB-LT	2809 STH 59		150	CONCRETE DRIVEWAY
	6+30NB-RT	2820 STH 59	8		CONCRETE DRIVEWAY
	6+50SB-LT	2817 STH 59	7		CONCRETE DRIVEWAY
TOTAL 0010			15	150	

DRILLED TIE BARS

CATEGORY	STATION	LOCATION	416.0610	REMARKS
			DRILLED TIE BARS EACH	
0010	5+15SB-LT	2809 STH 59	56	COUNTY DRIVEWAY
TOTAL 0010			56	

ASPHALT ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	460. 5224 HMA PAVEMENT 4 LT 58- 28 S TON	455. 0605 TACK COAT GAL	465. 0115 ASPHALTI C SURFACE DETOURS TON	REMARKS
0010	4+65SB	-	15+82. 98SB	STH 59	1560	310		MAINLINE
0010	25+97. 30SB	-	41+93. 09SB	STH 59	1940	385		MAINLINE
0010	70+00	-	70+80. 51	WEISS LANE	45	10		SIDEROAD
	UNDISTRIBUTED			STH 59			50	
TOTAL 0010					3545	705	50	

**ASPHALTI C SURFACE
DRIVEWAYS AND FIELD
ENTRANCES**

CATEGORY	STATION	LOCATION	465. 0120 ASPHALTI C SURFACE DRIVEWAYS AND FE' S TON	REMARKS
0010	5+30NB- RT	STH 59	2	ASPHALT DRIVEWAY
	6+50SB- LT	STH 59	1	ASPHALT DRIVEWAY
	35+00NB- RT	STH 59	2	GRAVEL FE
TOTAL 0010			5	

RUMBLE STRIPS

CATEGORY	STATION	TO	STATION	LOCATION	465. 0400 ASPHALTI C SHOULDER RUMBLE STRIPS LF	REMARKS
0010	26+10NB	-	41+95NB	STH 59	1268	SHOULDER RT
	28+00SB	-	32+00SB	STH 59	320	SHOULDER LT
	36+25SB	-	41+95SB	STH 59	456	SHOULDER LT
TOTAL 0010					2044	

CONCRETE CURB & GUTTER 30-INCH TYPE D

601.0411
CONCRETE
CURB &
GUTTER
30-INCH
TYPE D

CATEGORY	STATION	TO	STATION	LOCATION	LF	REMARKS	
0010	4+65SB- LT	-	4+97SB- LT	STH 59	47	EOP	
	4+65NB- RT	-	8+81NB- RT	STH 59	440	EOP	
	5+38SB- LT	-	8+53SB- LT	STH 59	332	EOP	
	6+74SB	-	8+68SB	STH 59	390	MEDIAN	
	9+05NB- RT	-	9+29NB- RT	STH 59	51	EOP	
	9+15SB- LT	-	11+24SB- LT	STH 59	215	EOP	
	9+19SB	-	11+29SB	STH 59	442	MEDIAN	
	11+89SB	-	15+83SB	STH 59	801	MEDIAN	
	25+97SB	-	33+79SB	STH 59	1565	MEDIAN	
	TOTAL 0010					4283	

CONCRETE SIDEWALK 4-INCH

602.0405
CONCRETE
SIDEWALK
4-INCH

CATEGORY	STATION	TO	STATION	LOCATION	SF	REMARKS
0010	6+80SB	-	8+65SB	STH 59	1820	MEDIAN
	9+25NB	-	10+40NB	STH 59	992	MEDIAN
	12+00NB	-	13+10NB	STH 59	995	MEDIAN
TOTAL 0010					3807	

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INLETS & COVERS

CATEGORY	STATION	LOCATION	204. 0220	611. 0624	611. 3230	REMARKS
			REMOVING INLETS EACH	INLET COVERS TYPE H EACH	INLETS 2X3- FT EACH	
0010	6+34. 90SB- 18. 2' LT	STH 59	1	1	1	EOP
	8+48. 50SB- 25. 4' LT	STH 59	1	1	1	EOP
	8+48. 70NB- 2. 4' LT	STH 59	1	1	1	MEDIAN
	8+49. 60NB- 23. 9' RT	STH 59	1	1	1	EOP
	9+19. 60SB- 32. 5' LT	STH 59	1	1	1	EOP
	11+03. 50SB- 17. 3' LT	STH 59	1	1	1	EOP
	11+24. 50NB	STH 59	1	1	1	MEDIAN
TOTAL 0010			7	7	7	

PIPE UNDERDRAIN ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	612. 0406	645. 0112	REMARKS
					PIPE UNDEDRAIN WRAPPED 6- INCH LF	GEOTEXTILE TYPE DF SCHEDULE B SY	
0010	4+65NB	-	8+50NB	STH 59	385	214	
	4+65SB	-	8+50SB	STH 59	385	214	
	9+50SB	-	11+00SB	STH 59	150	83	
TOTAL 0010					920	511	

ADJUSTING MANHOLE COVERS

CATEGORY	STATION	LOCATION	611. 8110 ADJUSTING MANHOLE COVERS EACH	REMARKS
0010	8+94NB- 41' RT	30TH AVE	1	SANITARY MANHOLE
TOTAL 0010			1	

WATER

CATEGORY	LOCATION	624. 0100 WATER MGAL	630. 0500 SEED WATER MGAL	REMARKS
0010	STH 59	110	100	
TOTAL 0010		110	100	

LANDSCAPE ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	630.0130					REMARKS
					625.0500 SALVAGED TOPSOIL SY	627.0200 MULCHING SY	629.0210 FERTILIZER TYPE B CWT	SEEDING MIXTURE NO. 30 LB	630.0200 SEEDING TEMPORARY LB	
0010	4+65SB	-	15+83SB	STH 59	1242	1242	0.78	22	11	MAINLINE
	25+97SB	-	41+93SB	STH 59	2837	2837	1.79	51	26	MAINLINE
	70+00	-	70+81	WEISS LANE	144	144	0.09	3	1	SIDEROAD
				UNDISTRIBUTED	200	200	0.15	4	2	
TOTAL 0010					4423	4423	3	80	40	

MOBILIZATIONS EROSION CONTROL

CATEGORY	LOCATION	628.1905 MOBILIZATIONS EROSION CONTROL EACH		628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH		REMARKS
		0010	STH 59	2	2	
TOTAL 0010		2	2			

EROSION MAT CLASS I TYPE A

CATEGORY	STATION	TO	STATION	LOCATION	628.2002 EROSION MAT CLASS I TYPE A		REMARKS
					SY		
0010	4+65NB-RT	-	8+80NB-RT	STH 59	460		SLOPE RT
	5+50SB-LT	-	8+50SB-LT	STH 59	330		SLOPE LT
	9+10NB-RT	-	11+20NB-RT	STH 59	280		SLOPE RT
	9+20 SB-LT	-	11+20SB-LT	STH 59	220		SLOPE LT
	11+50NB-RT	-	16+00NB-RT	STH 59	500		SLOPE RT
	11+70SB-LT	-	15+80SB-LT	STH 59	460		SLOPE LT
	32+50SB-LT	-	33+90SB-LT	STH 59	180		SLOPE LT
	34+20SB-LT	-	36+00SB-LT	STH 59	230		SLOPE LT
TOTAL 0010					2660		

SILT FENCE

628. 1504 628. 152
SILT SILT
FENCE FENCE
MAINTENANCE

CATEGORY	STATION	TO	STATION	LOCATION	LF	LF	REMARKS
0010	9+10SB- LT	-	11+20SB- LT	STH 59	210	210	
	9+80NB- RT	-	11+30NB- RT	STH 59	150	150	
	11+70NB- RT	-	16+00NB- RT	STH 59	430	430	
	11+70SB- LT	-	15+80SB- LT	STH 59	410	410	
	32+50SB- LT	-	33+80SB- LT	STH 59	150	150	
	34+50SB- LT	-	40+50SB- LT	STH 59	370	370	
	35+10SB- RT	-	42+00SB- RT	STH 59	520	520	
TOTAL 0010					2240	2240	

INLET PROTECTION TYPE C

628. 7015
INLET
PROTECTION
TYPE C

CATEGORY	STATION	LOCATION	EACH	REMARKS
0010	4+70NB- LT	STH 59	1	
	6+35SB- LT	STH 59	1	
	8+49SB- LT	STH 59	1	
	8+49NB- LT	STH 59	1	
	8+50NB- RT	STH 59	1	
	9+20SB- LT	STH 59	1	
	11+04SB- LT	STH 59	1	
	11+24NB	STH 59	1	
	16+00SB	STH 59	1	
	16+20NB	STH 59	1	
TOTAL 0010			10	

TEMPORARY DITCH CHECKS

628. 7504
TEMPORARY
DITCH
CHECKS

CATEGORY	STATION	LOCATION	LF	REMARKS
0010	10+50SB- LT	STH 59	20	DITCH LT
	10+50NB- RT	STH 59	20	DITCH RT
	13+00NB- RT	STH 59	20	DITCH RT
	14+40NB- RT	STH 59	20	DITCH RT
	26+00SB- LT	STH 59	20	DITCH LT
	26+00NB- RT	STH 59	20	DITCH RT
	28+00SB- LT	STH 59	20	DITCH LT
	28+00NB- RT	STH 59	20	DITCH RT
	31+00NB- RT	STH 59	20	DITCH RT
	32+00SB- LT	STH 59	20	DITCH LT
	33+00NB- RT	STH 59	20	DITCH RT
	35+00SB- LT	WEISS LN	20	DITCH LT
	36+00SB- LT	STH 59	20	DITCH LT
	38+00SB- LT	STH 59	20	DITCH LT
	42+50SB- LT	STH 59	20	DITCH LT
TOTAL 0010			300	

CULVERT PIPE CHECKS

628. 7555
CULVERT
PIPE CHECKS

CATEGORY	STATION	LOCATION	EACH	REMARKS
0010	11+25NB- RT	STH 59	2	DITCH RT
	33+70SB- LT	STH 59	2	DITCH LT
	34+80NB- RT	STH 59	2	DITCH LT
	36+80SB- LT	STH 59	3	DITCH LT
	43+50SB- LT	STH 59	2	DITCH LT
TOTAL 0010			11	

TRAFFIC CONTROL

CATEGORY	STATION	LOCATION	643. 0300 TRAFFIC CONTROL DRUMS DAY	643. 0420 TRAFFIC CONTROL BARRICADES TYPE III DAY	643. 0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	643. 0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C DAY	643. 0900 TRAFFIC CONTROL SIGNS DAY	643. 0910 TRAFFIC CONTROL COVERING SIGNS TYPE I *EACH	643. 1050 TRAFFIC CONTROL SIGNS PCMS DAY	643. 5000 TRAFFIC CONTROL EACH	REMARKS
0010		STH 59	5724			1060	7437	2	14	0.5	MAINLINE
		STH 59	424						14		WEISS LANE
	4+65SB	STH 59		268	536						MAINLINE
	30TH AVENUE	STH 59		134	268						SIDEROAD
	61/2 STREET	STH 59		134	268						SIDEROAD
	15+82SB	STH 59		402	804						MAINLINE
	STH 11	EB OFF RAMP		268	536						INTERCHANGE RAMP
	STH 11	EB ON RAMP		268	536						INTERCHANGE RAMP
	STH 11	WB ON RAMP		268	536						INTERCHANGE RAMP
	STH 11	WB OFF RAMP		268	536						INTERCHANGE RAMP
	25+97SB	STH 59		402	804						MAINLINE
	41+93SB	STH 59		268	536						MAINLINE
	WEISS LANE	STH 59		268	536						SIDEROAD
TOTAL 0010			6148	2948	5896	1060	7437	2	28	0.5	

*ONE CYLCE FOR TRAFFIC CONTROL SIGNS TYPE I & II DURING ROAD CLOSURE STAGE

GEOGRID TYPE SR

CATEGORY	STATION	TO	STATION	LOCATION	645. 0220 GEOGRID TYPE SR SY	REMARKS
0010	4+65SB	-	15+83SB	STH 59	7454	
	25+97SB	-	41+93SB	STH 59	9578	
	70+00	-	70+81	WEISS LANE	360	
TOTAL 0010					17392	

PAVEMENT MARKING

CATEGORY	STATION	TO	STATION	LOCATION	646. 1020 MARKING LINE EPOXY 4- INCH (WHITE) LF		646. 3020 MARKING LINE EPOXY 8- INCH (WHITE) LF		646. 8120 MARKING CURB EPOXY (YELLOW) LF	646. 8220 MARKING ISLAND NOSE EPOXY (YELLOW) EACH	REMARKS
					(WHITE) LF	(YELLOW) LF	(WHITE) LF	(YELLOW) LF	(YELLOW) EACH		
0010	5+21NB	-	15+95NB	STH 59	924	890			227	1	NB Lane
	26+00NB	-	42+00SB	STH 59	1583	1850					NB Lane
	5+40SB	-	15+90SB	STH 59	960	842	245				SB Lane
	26+00SB	-	42+00SB	STH 59	1366	1855	59				SB Lane
TOTAL 0010					4833	5437	304		227	1	
PROJECT TOTAL					10270						

CONSTRUCTION STAKING STORM SEWER

650. 4000
CONSTRUCTION
STAKING
STORM SEWER

CATEGORY	STATION	LOCATION	EACH	REMARKS
0010	6+34. 90SB- 18. 2' LT	STH 59	1	2x3- FT INLET
	8+48. 50SB- 25. 4' LT	STH 59	1	2x3- FT INLET
	8+48. 70NB- 2. 4' LT	STH 59	1	2x3- FT INLET
	8+49. 60NB- 23. 9' RT	STH 59	1	2x3- FT INLET
	9+19. 60SB- 32. 5' LT	STH 59	1	2x3- FT INLET
	11+03. 50SB- 17. 3' LI	STH 59	1	2x3- FT INLET
	11+24. 50NB	STH 59	1	2x3- FT INLET
TOTAL 0010			7	

CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT)

CATEGORY	LOCATION	650. 9910 LS	REMARKS
0010	STH 59	1	
TOTAL 0010		1	

CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER

650. 5500
CONSTRUCTION
STAKING
CURB AND
GUTTER

CATEGORY	STATION	TO	STATION	LOCATION	LF	REMARKS
0010	4+65SB- LT		4+97SB- LT	STH 59	47	
	4+65NB- RT		8+81NB- RT	STH 59	440	
	5+38SB- LT		8+53SB- LT	STH 59	332	
	6+74SB		8+68SB	STH 59	390	
	9+05NB- RT		9+29NB- RT	STH 59	51	
	9+15SB- LT		11+24SB- LT	STH 59	215	
	9+19SB		11+29SB	STH 59	442	
	11+89SB		15+83SB	STH 59	801	
	25+97SB		33+79SB	STH 59	1565	
TOTAL 0010					4283	

CONSTRUCTION STAKING ROADWAY

CATEGORY	STATION	TO	STATION	LOCATION	650. 4500	650. 5000	650. 9920	REMARKS
					CONSTRUCTION STAKING SUBGRADE LF	CONSTRUCTION STAKING BASE LF	CONSTRUCTION STAKING SLOPE STAKES LF	
0010	4+00	-	15+97	STH 59	1197	1197	1197	MAINLINE
	26+10	-	39+62	STH 59	1352	1352	1352	MAINLINE
	4+65	-	15+83	STH 59	1118	1118	1118	MAINLINE
	25+97	-	41+93	STH 59	1596	1596	1596	MAINLINE
	50+00	-	50+58	30TH AVE	58	58	58	SIDEROAD
	60+00	-	60+60	6TH 1/2 ST	60	60	60	SIDEROAD
	70+00	-	70+81	WEISS LN	81	81	81	SIDEROAD
TOTAL 0010					5462	5462	5462	

SAWING ASPHALT

CATEGORY	STATION	LOCATION	690. 0150 SAWING ASPHALT LF	REMARKS	
0010	5+20SB- LT	STH 59	40	DRI VEWAY	
	6+50SB- LT	STH 59	10	DRI VEWAY	
	8+80SB- LT	STH 59	60	DRI VEWAY	
	11+50SB- LT	STH 59	46	DRI VEWAY	
	15+83SB	STH 59	20	MAI NLI NE	
	5+30NB- RT	STH 59	22	DRI VEWAY	
	9+00NB- RT	30TH AVE	26	SI DEROAD	
	11+50NB- RT	6TH ST	28	SI DEROAD	
	25+97. 30SB	STH 59	42	MAI NLI NE	
	70+80. 51	WEI SS LN	26	SI DEROAD	
	41+93. 09SB	STH 59	26	MAI NLI NE	
	TOTAL 0010			346	

SAWING CONCRETE

CATEGORY	STATION	LOCATION	690. 0250 SAWING CONCRETE LF	REMARKS
0010	4+65SB	STH 59	32	MAI NLI NE
	6+50SB- LT	STH 59	18	DRI VEWAY
	6+30NB- RT	STH 59	18	DRI VEWAY
	15+97NB	STH 59	32	MAI NLI NE
TOTAL 0010			100	

SPECIAL (01. ADJUSTING VALVE BOXES)

CATEGORY	STATION	TO	STATION	LOCATION	SPV. 0060 ADJUSTING VALVE BOXES EACH	REMARKS
0010	4+65	-	15+83	STH 59	3	
TOTAL 0010					3	

REMOVING PAVEMENT

CATEGORY	STATION	TO	STATION	LOCATION	204.0100	201.011	REMARKS
					REMOVING PAVEMENT SY	REMOVING ASPAHLTIC SURFACE SY	
0010	175+99.39BW	-	202+95BW	STH 81	14140	1605	Main line
	202+95BW	-	207+13.23BW	STH 81			Main line
TOTAL 0010					14140	1605	

REMOVING CURB & GUTTER

CATEGORY	STATION	TO	STATION	LOCATION	204.0150	REMARKS
					REMOVING CURB & GUTTER LF	
0010	176+00BW	-	179+6BW	STH 81	751	Median
	180+00BW	-	193+30BW	STH 81	2706	Median
	193+70BW	-	196+70BW	STH 81	624	Median
TOTAL 0010					4081	

REMOVING STORM SEWER

CATEGORY	STATION	LOCATION	204.0245.01	204.0245.02	REMARKS
			REMOVING STORM SEWER 48-INCH LF	REMOVING STORM SEWER 18-INCH	
0010	184+02BW- 77' LT	STH 81	8		REMOVE APRON ENDWALL
	187+04BW- 57' LT	STH 81		8	REMOVE 18' PIPE
TOTAL 0010			8	8	

BASE COURSE ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	305.0110	305.0120	305.041	312.0110	REMARKS
					BASE AGGREGATE DENSE 3/4-INCH	BASE AGGREGATE DENSE 1 1/4-INCH	AGGREGATE DETOURS	SELECT CRUSHED MATERIAL	
0010	175+99.39BW	-	211+62.02BW	STH 81	934	8638	100	16247	MAINLINE
TOTAL 0010					934	8638	100	16247	

ASPHALT PAVEMENT ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	455.0605	460.5223	460.5224	465.0115	REMARKS
					TACK COAT	HMA PAVEMENT 3 LT 58-28 S4	HMA PAVEMENT LT 58-28 S	ASPHALTIC SURFACE DETOURS	
0010	175+99.39BW	-	207+13.25BW	STH 81	1030	3772	2515	50	MAINLINE
TOTAL 0010					1030	3772	2515	50	

ASPHALTIC SURFACE
DRIVEWAYS AND FIELD
ENTRANCES

CATEGORY	STATION	LOCATION	465.0120 TON	REMARKS
0010	179+80BE- RT	STH 59	2.5	GRAVEL FE
	179+80BW- LT	STH 59	10.0	GRAVEL PE
	193+45WB- LT	STH 59	3.5	GRAVEL FE
TOTAL 0010			16	

ASPHALTIC SHOULDER RUMBLE STRIPS

CATEGORY	STATION	TO	STATION	LOCATION	465. 0400 ASPHALTIC SHOULDERS RUMBLE STRIPS LF	REMARKS
0010	176+04BE	-	188+10BE	STH 81	1206	
	195+90BE	-	203+80BE	STH 81	790	
	197+00BE	-	200+00BE	STH 81	300	
	179+10BW	-	206+10BW	STH 81	2160	
	196+70BW	-	199+70BW	STH 81	300	
	TOTAL 0010					4756

CROSS DRAIN FOR CULVERT PIPES

CATEGORY	STATION	LOCATION	522. 0118 CULVERT PIPE REINFORCED CONCRETE CLASS III 18- INCH LF	522. 1018 APRON ENDWALLS FOR CULVERT PIPE 18- INCH EACH	522. 1048 APRON ENDWALLS FOR CULVERT PIPE 48- INCH EACH	524. 0648 APRON ENDWALLS FOR CULVERT PIPE SALVAGED 48- INCH EACH	REMARKS
0010	184+02BW- 77' LT	STH 81			1		REMOVE & REPLACE ENDWALL
	185+12BE- 78' RT	STH 81				1	RESET EW & ADD JOINT TIES
	187+04BW- 57' LT	STH 81	8	1			REMOVE AND REPLACE PIPE & EW
TOTAL 0010			8	1	1	1	

CONCRETE CURB & GUTTER 30-INCH TYPE D

CATEGORY	STATION	TO	STATION	LOCATION	601. 0411 CONCRETE CURB & GUTTER 30- INCH TYPE D LF	REMARKS
0010	176+00BW	-	179+6BW	STH 81	751	Medi an
	180+00BW	-	193+30BW	STH 81	2706	Medi an
	193+70BW	-	196+70BW	STH 81	624	Medi an
TOTAL 0010					4081	

RI PRAP ITEMS

CATEGORY	STATION	LOCATION	606.0200	645.012	REMARKS
			RI PRAP	GEOTEXTILE	
			MEDI UM	TYPE HR	
			CY	SY	
0010	184+02BW- 77' LT	STH 81	9	28	REMOVE & REPLACE 48" ENDW
	185+12BE- 78' RT	STH 81	5	19	REMOVE & JOINT TIE ENDWALI
	187+04BE- 57' LT	STH 81	4	15	REMOVE & REPLACE PIPE
TOTAL 0010			18	62	

STORM INLETS AND COVERS

CATEGORY	STATION	LOCATION	204.0220	611.0624	611.3230	REMARKS
			REMOVING	INLET COVERS	INLETS	
			INLETS	TYPE H	2X3- FT	
			EACH	EACH	EACH	
0010	179+51.00BW	STH 81	1	1	1	Medi an
	179+66.90BE	STH 81	1	1	1	Medi an
	187+03.10BW	STH 81	1	1	1	Medi an
	187+25.50BE	STH 81	1	1	1	Medi an
	193+79.60BW	STH 81	1	1	1	Medi an
	194+10.20BE	STH 81	1	1	1	Medi an
TOTAL 0010			6	6	6	

WATER

CATEGORY	STATION	TO	STATION	LOCATION	624.0100	630.0500	REMARKS
					WATER	SEED WATER	
					MGAL	MGAL	
0010	176+00BW	-	207+13.23BW	STH 81	159	185	MAINLINE & SIDEROADS
TOTAL 0010					159	185	

LANDSCAPE ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	625.0500	627.0200	629.0210	630.0130	630.0200	REMARKS
					SALVAGED TOPSOIL SY	MULCHING SY	FERTILIZER TYPE B CWT	SEEDING MIX. NO. 30 LB	SEEDING TEMPORARY LB	
0010	175+99.39BW		207+13.23BW	STH 81	8150	8150	5.1	146	73	Main line
TOTAL 0010					8150	8150	5.1	146	73	

MOBILIZATIONS EROSION CONTROL

CATEGORY	LOCATION	628.1905	628.1910	REMARKS
		MOBILIZATIONS EROSION CONTROL EACH	MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	
0010	STH 81	2	2	
TOTAL 0010		2	2	

EROSION MAT CLASS I TYPE A

CATEGORY	STATION	TO	STATION	LOCATION	628.2002	REMARKS
					EROSION MAT CLASS 1 TYPE A SY	
0010	188+00BE	-	193+20BE	STH 81	588	SLOPE RT
	194+40BE	-	200+50BE	STH 81	678	SLOPE RT
	203+40BW	-	207+80BW	STH 81	489	SLOPE RT
	206+60BW	-	207+50BW	STH 81	133	SLOPE LT
	TOTAL 0010					1888

INLET PROTECTION TYPE C

CATEGORY	STATION	STATION	LOCATION	628.7015	REMARKS
				INLET PROTECTION TYPE C EACH	
0010	179+51BW		STH 81	1	MEDIAN C&G
0010	179+67BE		STH 81	1	MEDIAN C&G
0010	187+03BW		STH 81	1	MEDIAN C&G
0010	187+26BE		STH 81	1	MEDIAN C&G
0010	194+10BE		STH 81	1	MEDIAN C&G
0010	30+76N		CTH N	1	RADI C&G
TOTAL 0010				6	

TEMPORARY DITCH CHECKS

CATEGORY	STATION	LOCATION	628. 7504 TEMPORARY DITCH CHECKS LF	REMARKS
0010	203+30BW	STH 81	20	DITCH RT
	205+90BW	STH 81	20	DITCH LT
	205+90BW	STH 81	30	DITCH RT
TOTAL 0010			70	

CULVERT PIPE CHECKS

CATEGORY	STATION	TO	LOCATION	628. 7555 CULVERT PIPE CHECKS EACH	REMARKS
0010	194+10BE	-	STH 81	1	DITCH RT
0010	194+70BW	-	STH 81	1	DITCH LT
TOTAL 0010				2	

SIGNS TYPE II

CATEGORY	SIGN NUMBER	STATION	LOCATION	SIGN CODE	SIZE (INCH)	634. 0614 POSTS WOOD 4x6- INCH x 14- ft	634. 0616 POSTS WOOD 4x6- INCH x 16- ft	637. 2210 SIGNS TYPE II REFLECTIVE H SF	REMARKS
0010	1-01	182+70BE	RT	R3- 7R	30" x30"	1		6. 25	RIGHT LANE MUST TURN RIGHT
0010	1-02	188+10BE	RT	R4- 4	36" x30"		1	7. 50	BEGIN RIGHT TURN LANE - YIELD TO BIKES
0010	2-01	189+60BE	RT	R3- 7R	30" x30"	1		6. 25	RIGHT LANE MUST TURN RIGHT
TOTAL 0010						2	1	20	

TRAFFIC CONTROL

CATEGORY	STATION	LOCATION	DAY	643. 0300 TRAFFIC CONTROL DRUMS TYPE III	643. 0420 TRAFFIC CONTROL BARRICADES TYPE III	643. 0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A	643. 0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C	643. 0900 TRAFFIC CONTROL SIGNS	643. 091 TRAFFIC COVERING SIGNS Type 1 *EACH	643. 092 TRAFFIC COVERING SIGNS Type II *EACH	643. 1050 TRAFFIC CONTROL PCMS DAY	643. 5000 TRAFFIC CONTROL EACH	REMARKS
0010	STH 81	MAINLINE	13392	912		1824		11172			14	0. 5	DRUMS 50' INTERVALS
	STH 81	COUNTY PE	1984				1984						DRUMS 25' INTERVALS
	STH 11								3	2			
TOTAL 0010			15376	912		1824	1984	11172	3	2	14	0. 5	

* ONE CYCLE FOR TRAFFIC CONTROL COVERING SIGNS TYPE I & II DURING ROAD CLOSURE STAGE

GEOGRID TYPE SR

CATEGORY	STATION	TO	STATION	LOCATION	645. 0220 GEOGRID TYPE SR SY	REMARKS
0010	175+99. 39BW	-	207+13. 25BW	STH 81	23844	Mainline
TOTAL 0010					23844	

PAVEMENT MARKING

STATION	LOCATION	646. 1020 MARKING LINE EPOXY 4- INCH (WHITE)		646. 3020 MARKING LINE EPOXY 8- INCH (WHITE)		646. 5020 MARKING ARROW EPOXY			646. 5120 MARKING WORD EPOXY		646. 5220 MARKING SYMBOL EXPOXY		646. 7120 MARKING DIAGONAL EPOXY 12- INCH (WHITE)		646. 8120 MARKING CURB EXPOXY (YELLOW)		REMARKS
		LF	(YELLOW)	LF	(WHITE)	EACH	EACH	EACH	LF	(YELLOW)	LF	(YELLOW)					
193+10BE	STH 81	2478	1905			5	1	2						234			NB LANE
207+50BE	STH 81	1328	2798	659					39	215							NB LANE
207+20BW	STH 81	3616	1942	145													SB LANE
TOTAL 0010		7422	6645	804		5	1	2	39	215				234			
PROJECT TOTAL		14067														254	

CONSTRUCTION STAKING STORM SEWER

CATEGORY	STATION	LOCATION	650. 4000 CONSTRUCTION STAKING STORM SEWER EACH	REMARKS
0010	179+51. 00BW	STH 81	1	MAINLINE
	179+66. 90BE	STH 81	1	MAINLINE
	187+03. 10BW	STH 81	1	MAINLINE
	187+25. 50BE	STH 81	1	MAINLINE
	193+79. 60BW	STH 81	1	MAINLINE
	194+10. 20BE	STH 81	1	MAINLINE
TOTAL 0010			6	

CONSTRUCTION STAKING

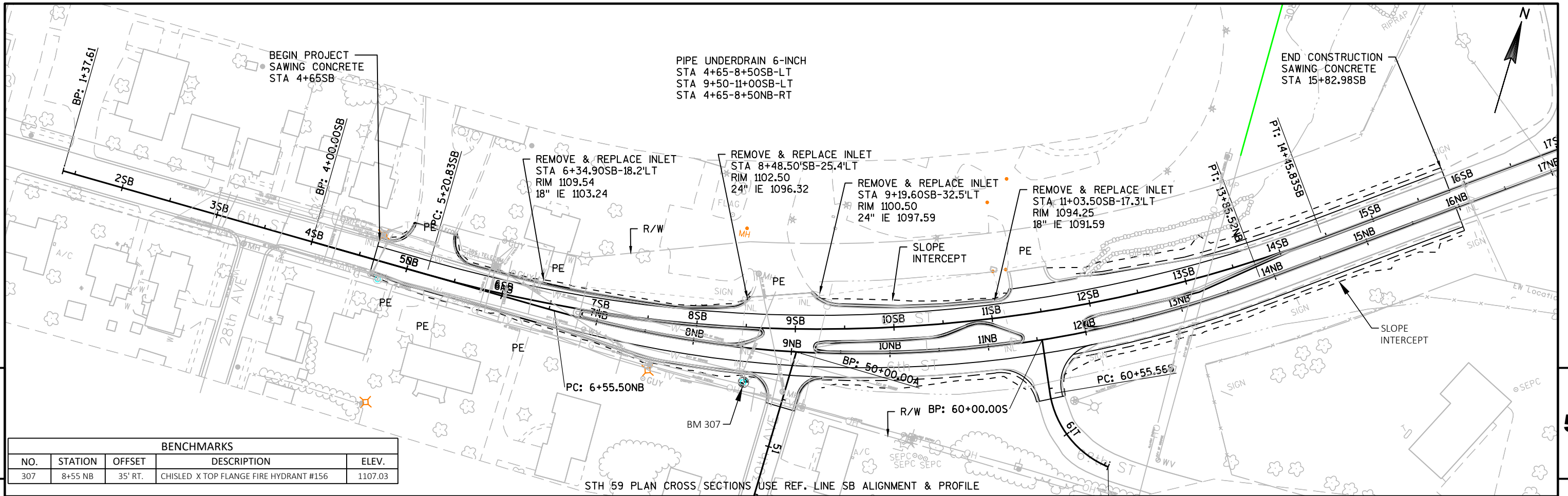
CATEGORY	STATION	TO	STATION	LOCATION	650. 4500	650. 5000	650. 5500	650. 6000	650. 9910	650. 9920	REMARKS
					CONSTRUCTION STAKING SUBGRADE LF	CONSTRUCTION STAKING BASE LF	CONSTRUCTION STAKING CURB & GUTTER LF	CONSTRUCTION STAKING PIPE CULVERTS LF	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL LS	CONSTRUCTION STAKING SLOPE STAKES LF	
0010	176+00BE	-	200+50BE	STH 81	2450	2450				2450	MAI NLI NE
	176+00BW	-	207+00BW	STH 81	3100	3100		1	1	3100	MAI NLI NE
	176+00BW	-	179+6BW	STH 81			751				MAI NLI NE
	180+00BW	-	193+30BW	STH 81			2706				MAI NLI NE
	193+70BW	-	196+70BW	STH 81			624				MAI NLI NE
TOTAL 0010					5550	5550	4081	1	1	5550	

SAWING ASPHALT

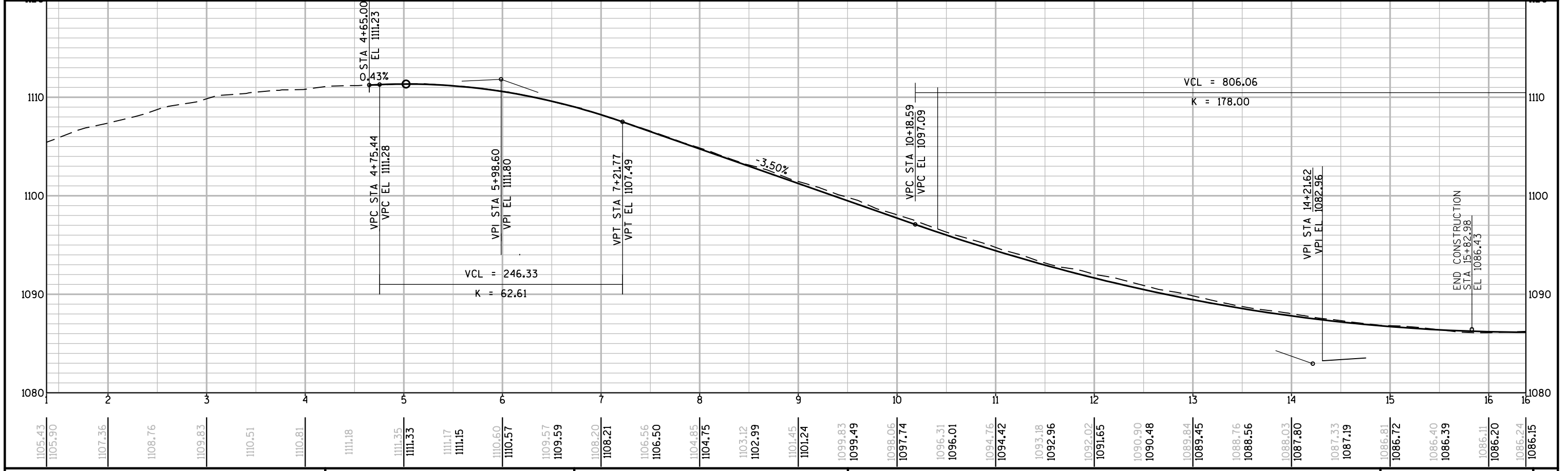
CATEGORY	STATION	LOCATION	690. 0150	REMARKS
			SAWING ASPHALT LF	
0010	193+80BE	STH 81	46	DRI VEWAY
	202+95BW	STH 81	24	ASPHALT/CONCRETE JOINT
	207+13. 25BW	STH 81	48	MAI NLI NE
TOTAL 0010			118	

SAWING CONCRETE

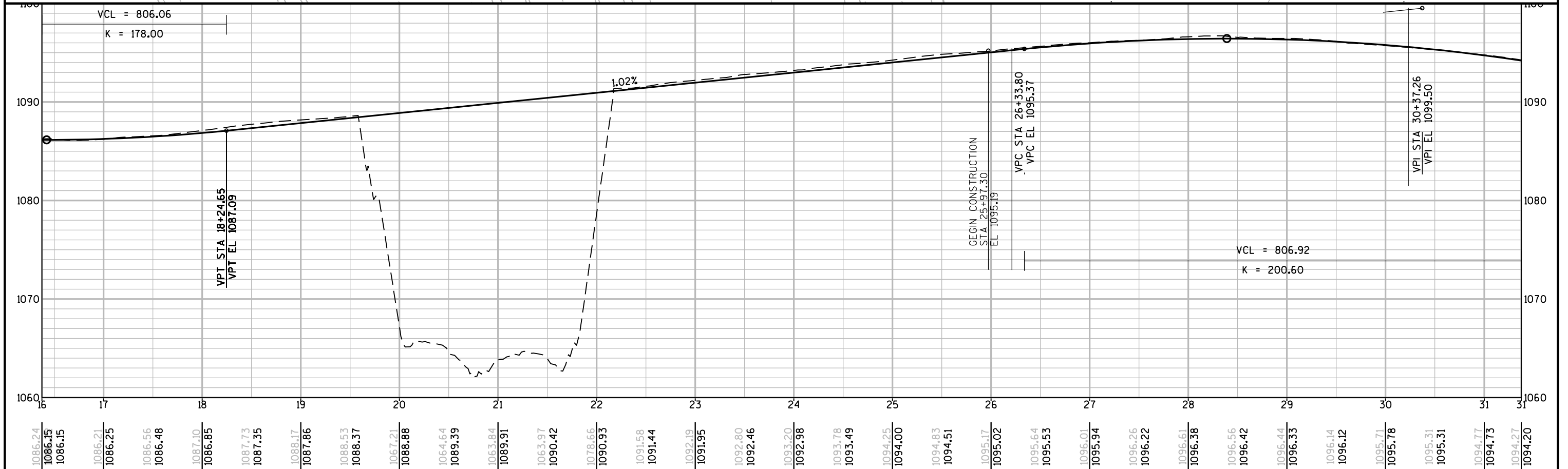
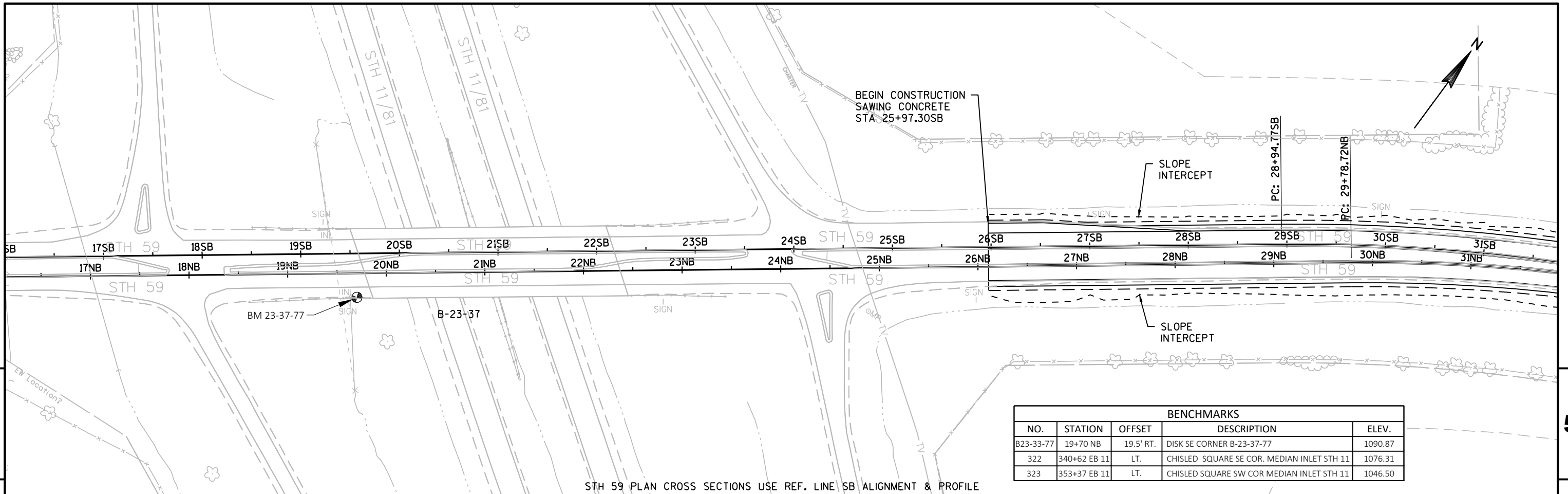
CATEGORY	STATION	LOCATION	690. 0250	REMARKS
			SAWING CONCRETE LF	
0010	175+99. 39BW	STH 81	42	MAI NLI NE
	176+04. 10BE	STH 81	26	MAI NLI NE
TOTAL 0010			68	



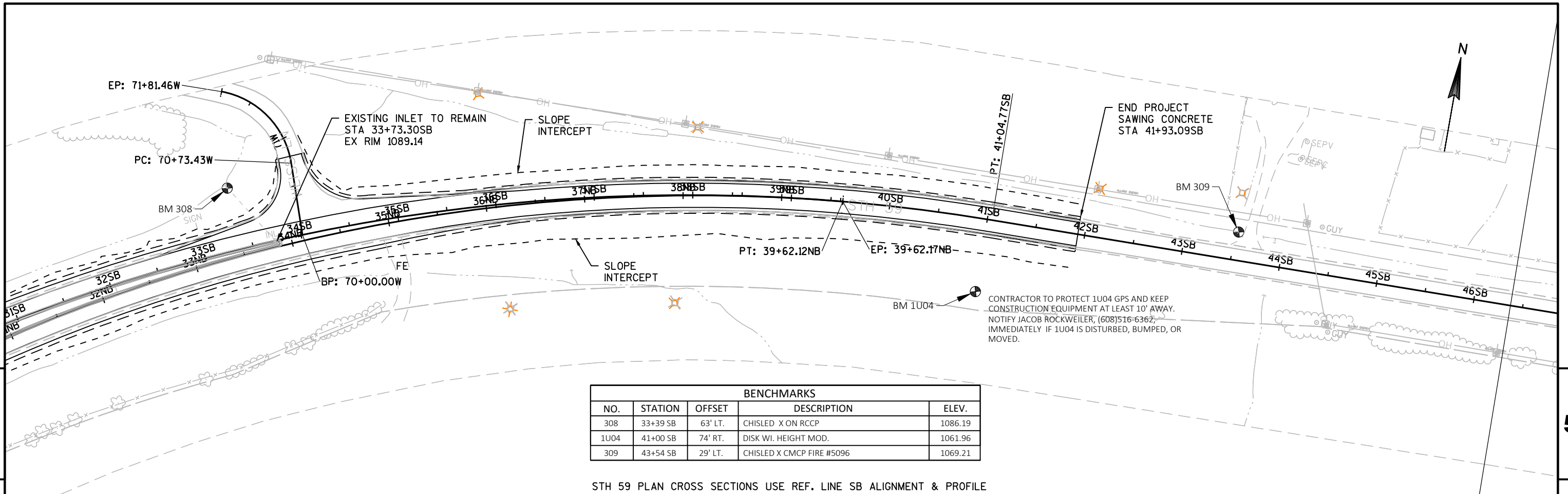
BENCHMARKS				
NO.	STATION	OFFSET	DESCRIPTION	ELEV.
307	8+55 NB	35' RT.	CHISLED X TOP FLANGE FIRE HYDRANT #156	1107.03



PROJECT NO: 5660-00-72 HWY: STH 59 COUNTY: GREEN PLAN AND PROFILE: STH 59SB SHEET **E**

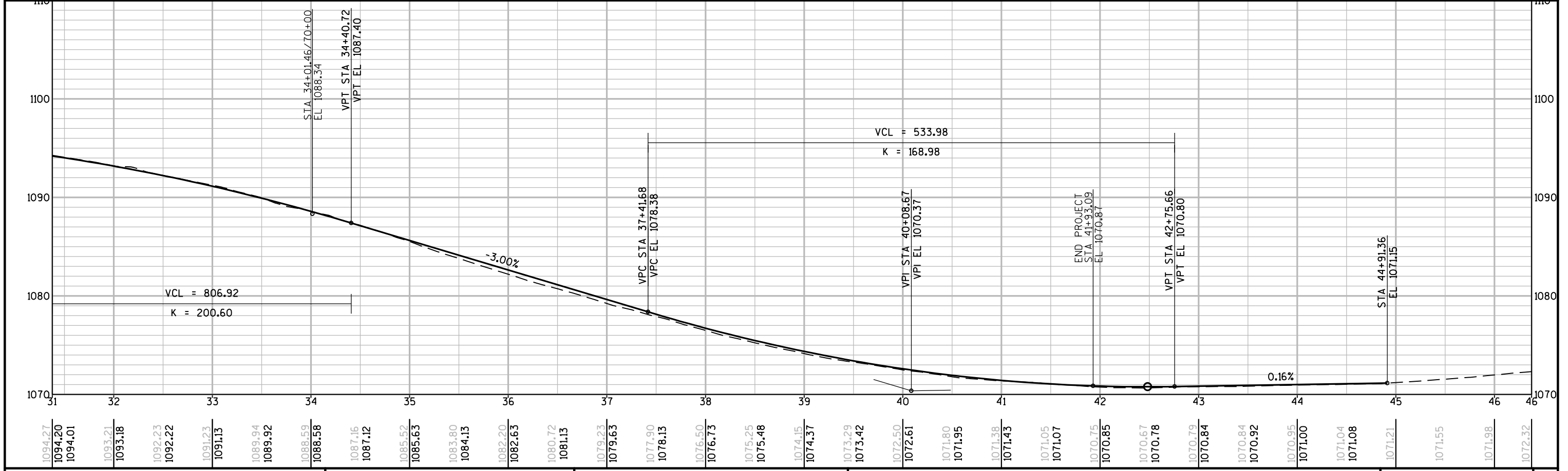


PROJECT NO: 5660-00-72 HWY: STH 59 COUNTY: GREEN PLAN AND PROFILE: STH 59SB SHEET **E**

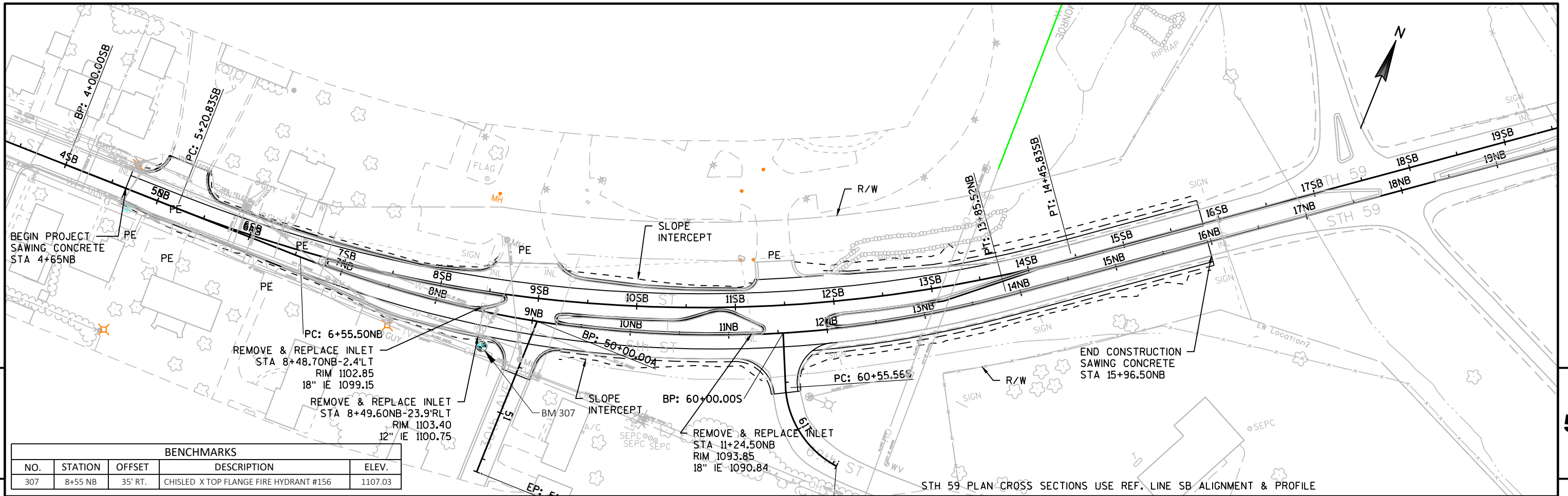


BENCHMARKS				
NO.	STATION	OFFSET	DESCRIPTION	ELEV.
308	33+39 SB	63' LT.	CHISLED X ON RCCP	1086.19
1U04	41+00 SB	74' RT.	DISK W/ HEIGHT MOD.	1061.96
309	43+54 SB	29' LT.	CHISLED X CMCP FIRE #5096	1069.21

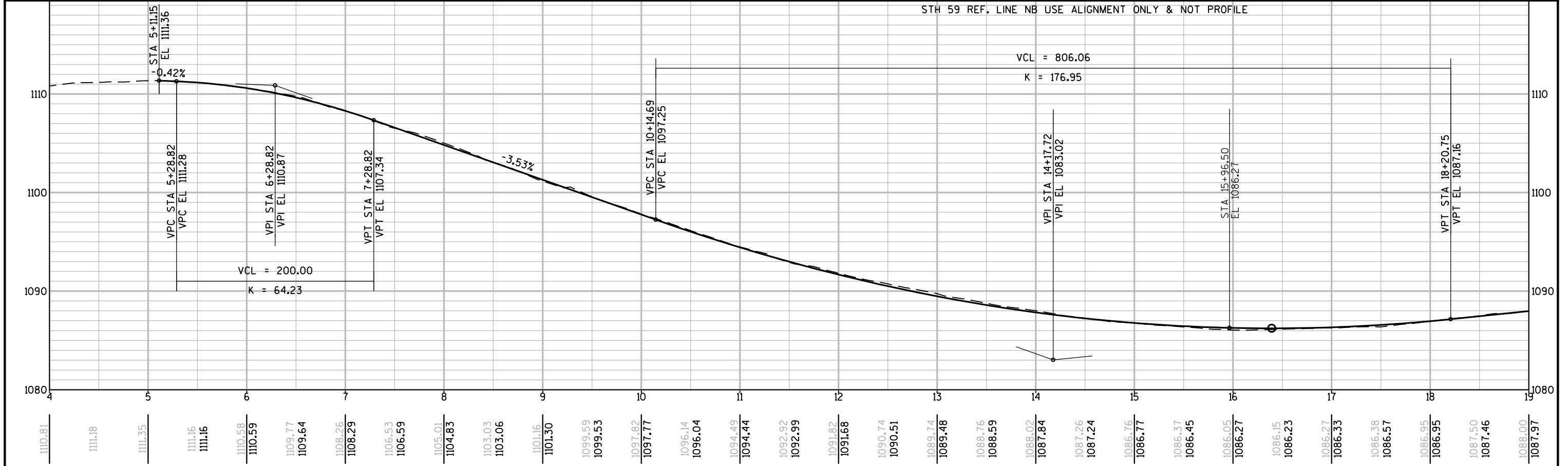
STH 59 PLAN CROSS SECTIONS USE REF. LINE SB ALIGNMENT & PROFILE



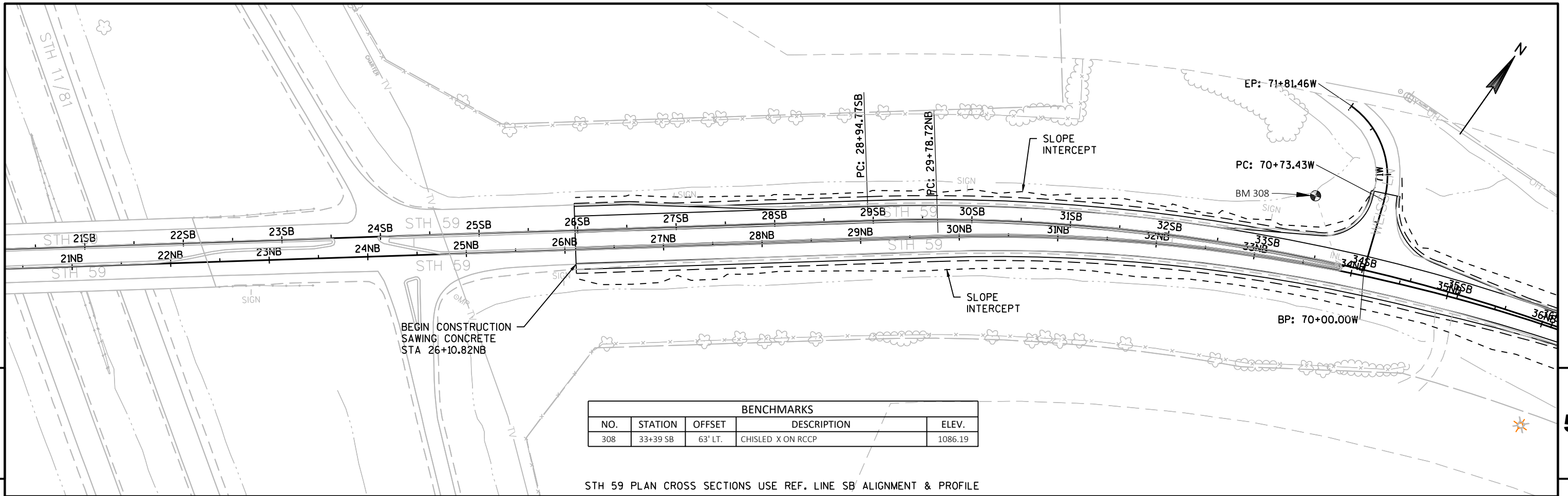
PROJECT NO: 5660-00-02 HWY: STH 59 COUNTY: GREEN PLAN AND PROFILE: STH 59SB SHEET E



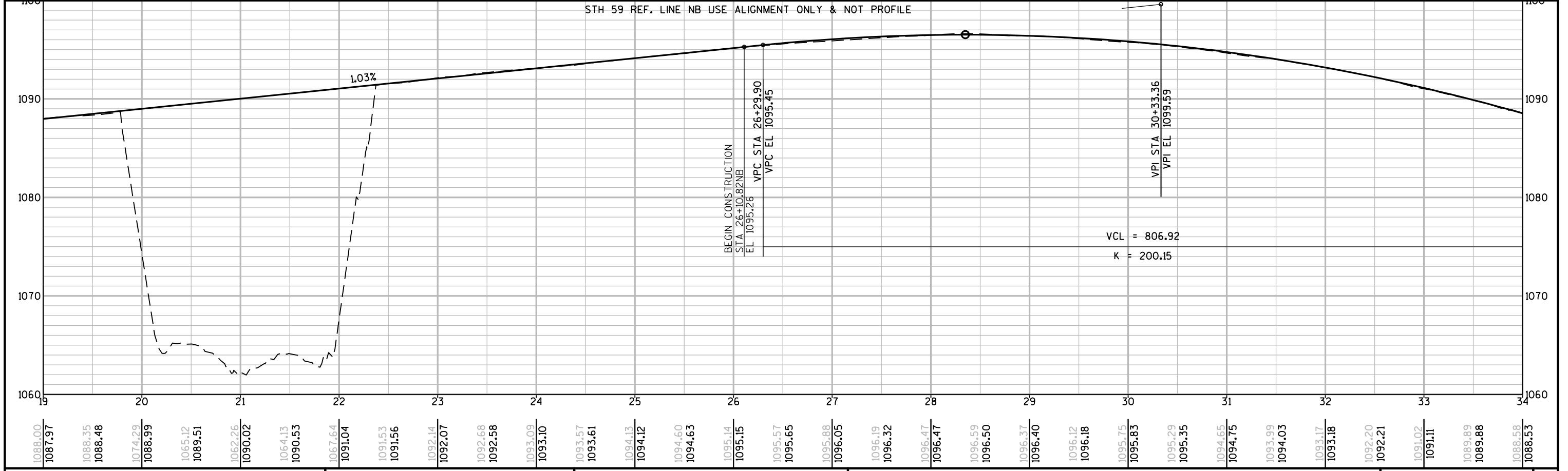
BENCHMARKS				
NO.	STATION	OFFSET	DESCRIPTION	ELEV.
307	8+55 NB	35' RT.	CHISLED X TOP FLANGE FIRE HYDRANT #156	1107.03



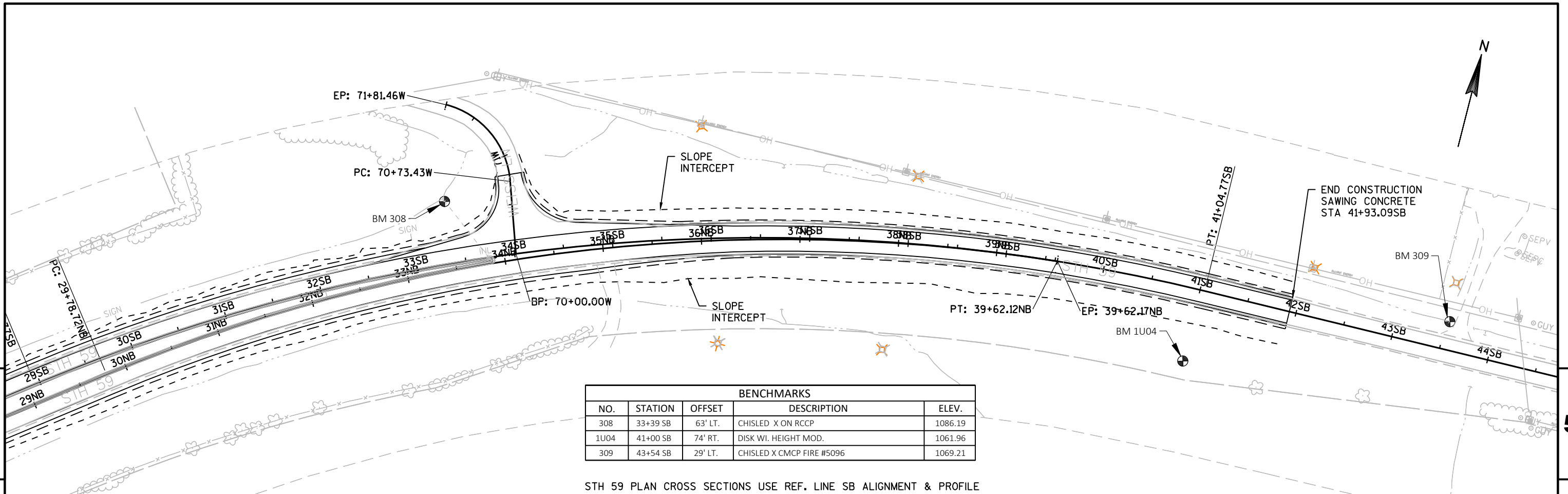
PROJECT NO: 5660-00-72 HWY: STH 59 COUNTY: GREEN PLAN AND PROFILE: STH 59NB SHEET **E**



BENCHMARKS				
NO.	STATION	OFFSET	DESCRIPTION	ELEV.
308	33+39 SB	63' LT.	CHISLED X ON RCCP	1086.19

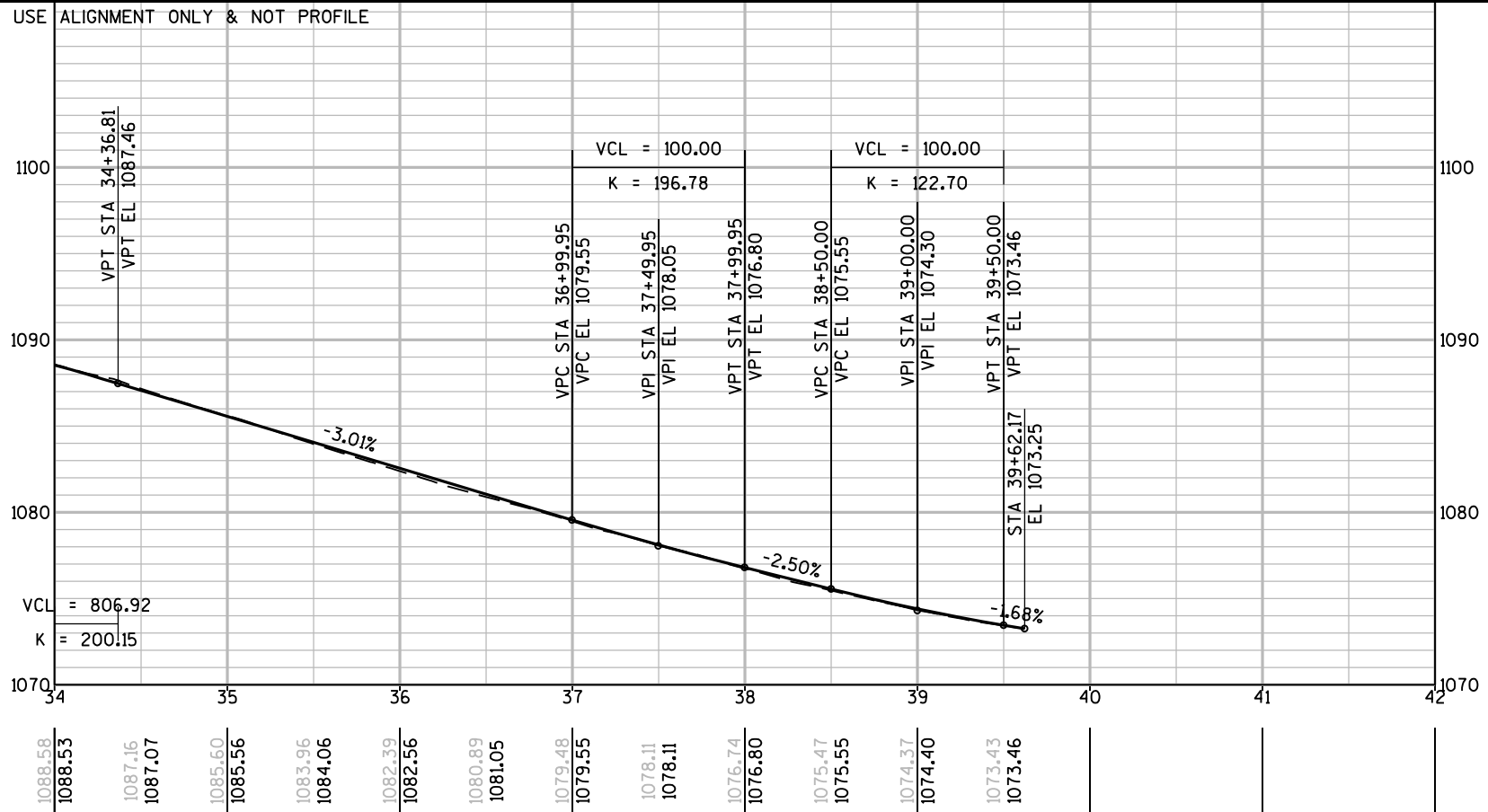


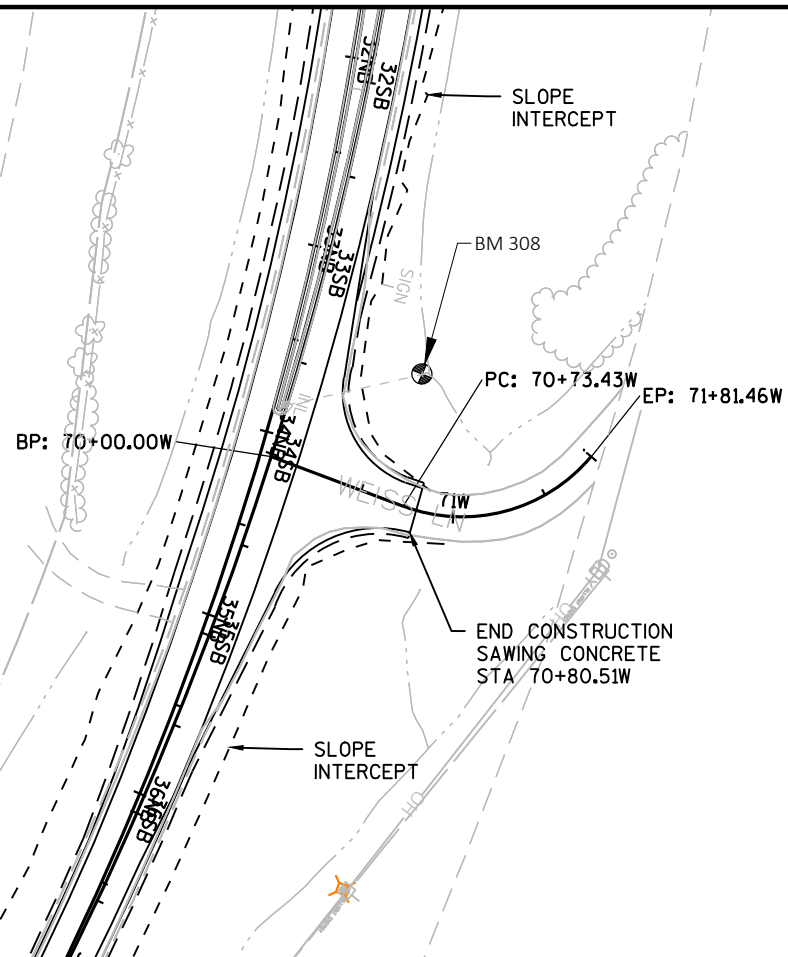
PROJECT NO: 5660-00-72 HWY: STH 59 COUNTY: GREEN PLAN AND PROFILE: STH 59NB SHEET **E**



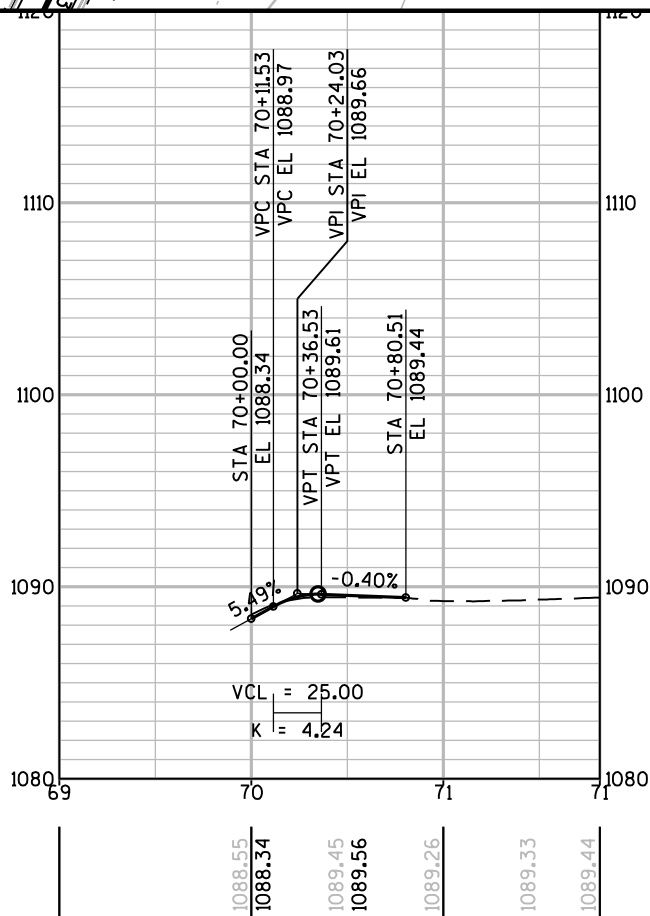
BENCHMARKS				
NO.	STATION	OFFSET	DESCRIPTION	ELEV.
308	33+39 SB	63' LT.	CHISLED X ON RCCP	1086.19
1U04	41+00 SB	74' RT.	DISK W/ HEIGHT MOD.	1061.96
309	43+54 SB	29' LT.	CHISLED X CMCP FIRE #5096	1069.21

STH 59 PLAN CROSS SECTIONS USE REF. LINE SB ALIGNMENT & PROFILE
 STH 59 REF. LINE NB USE ALIGNMENT ONLY & NOT PROFILE

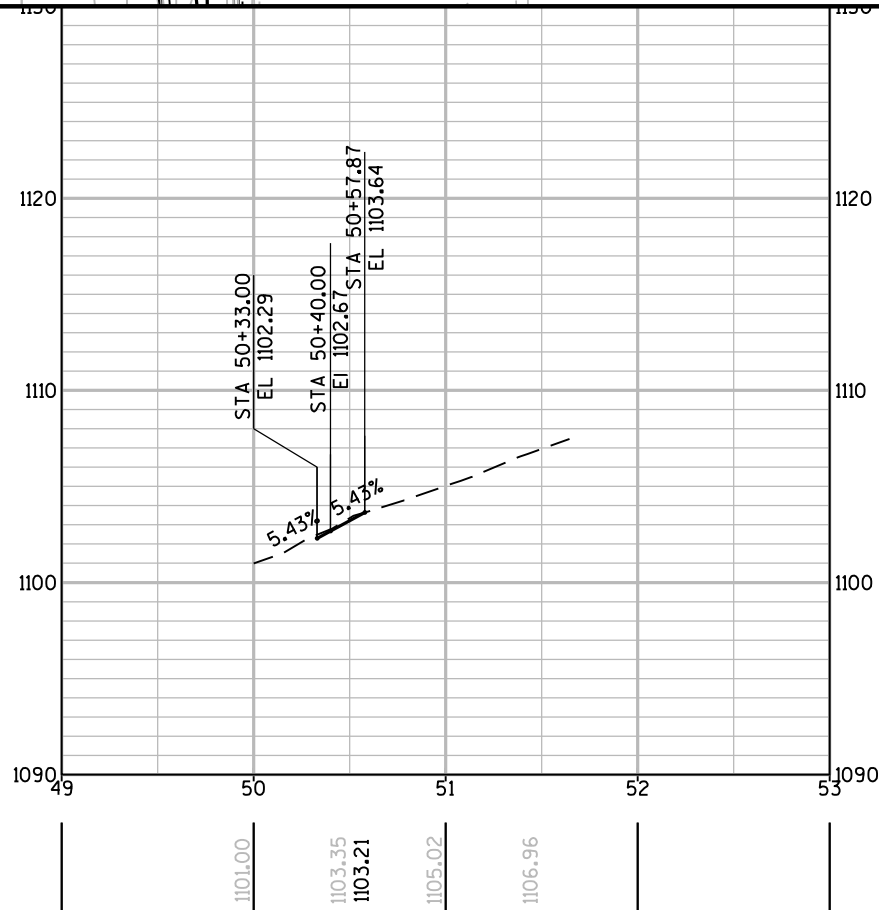
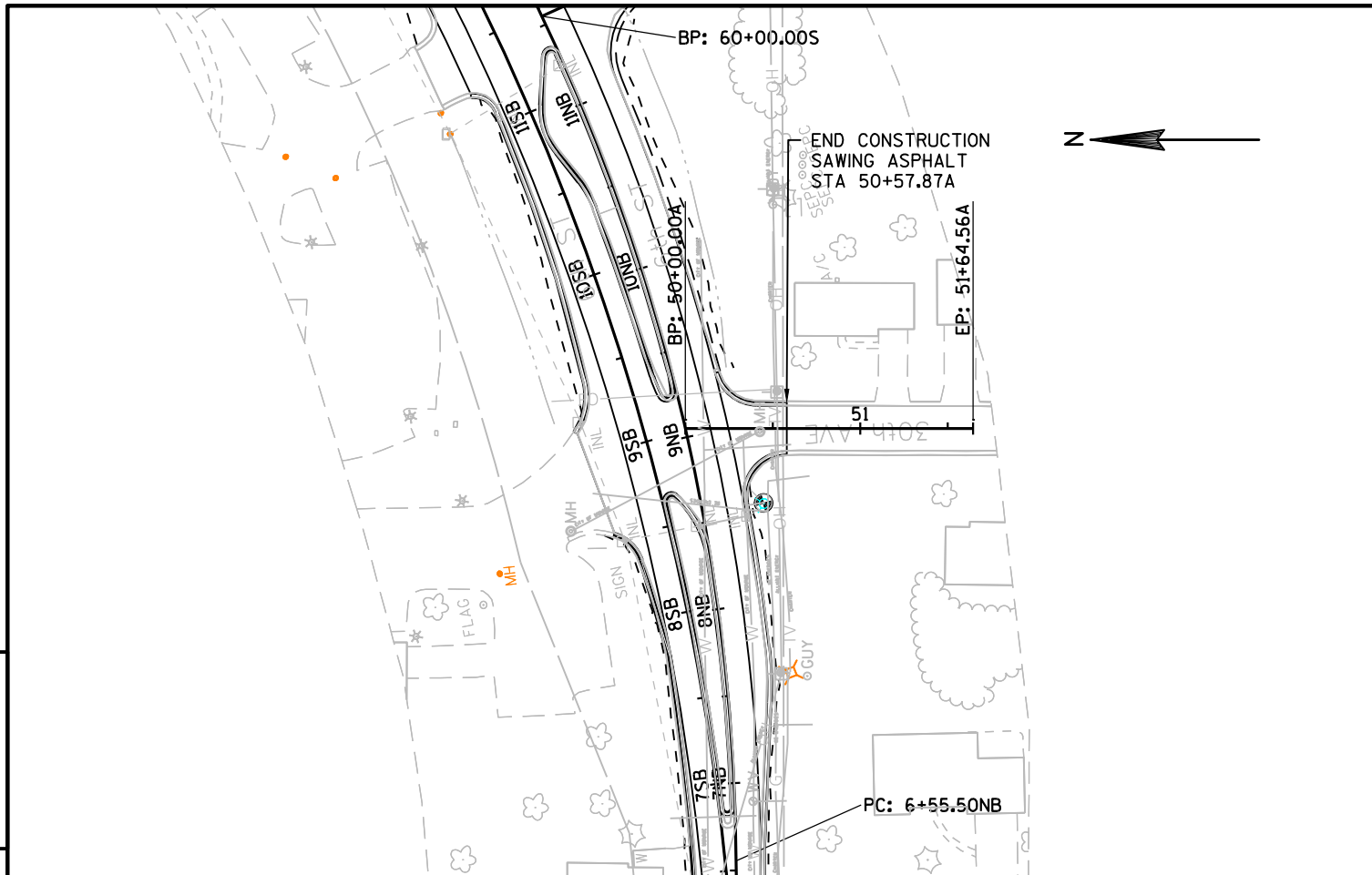




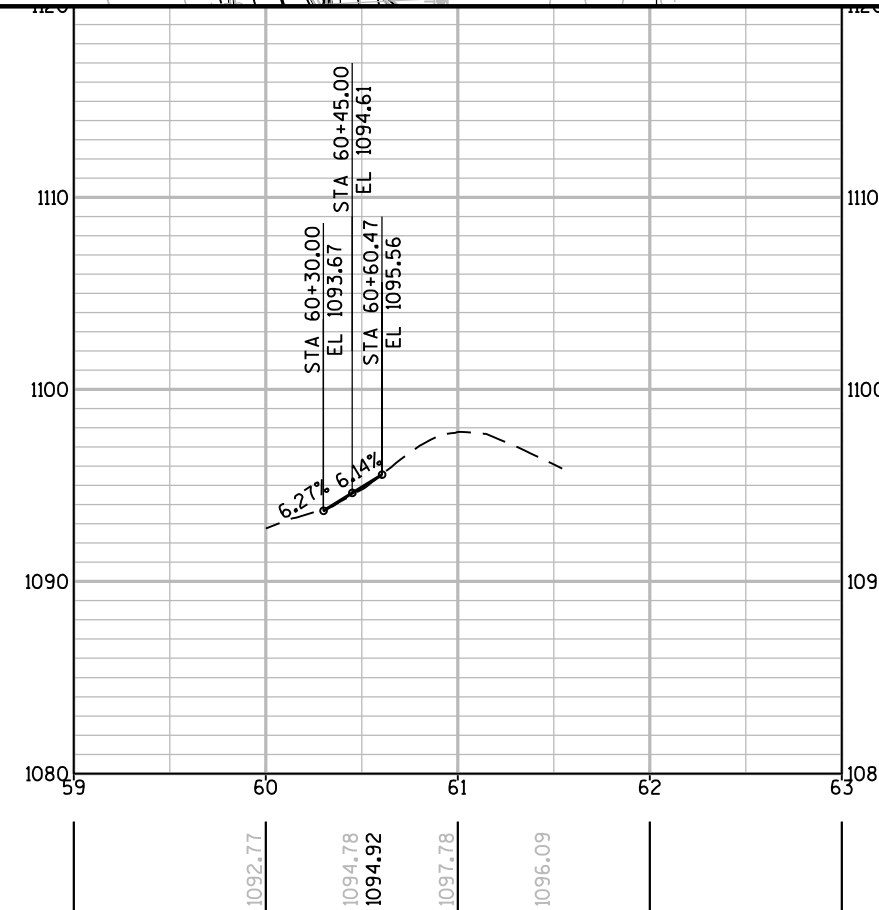
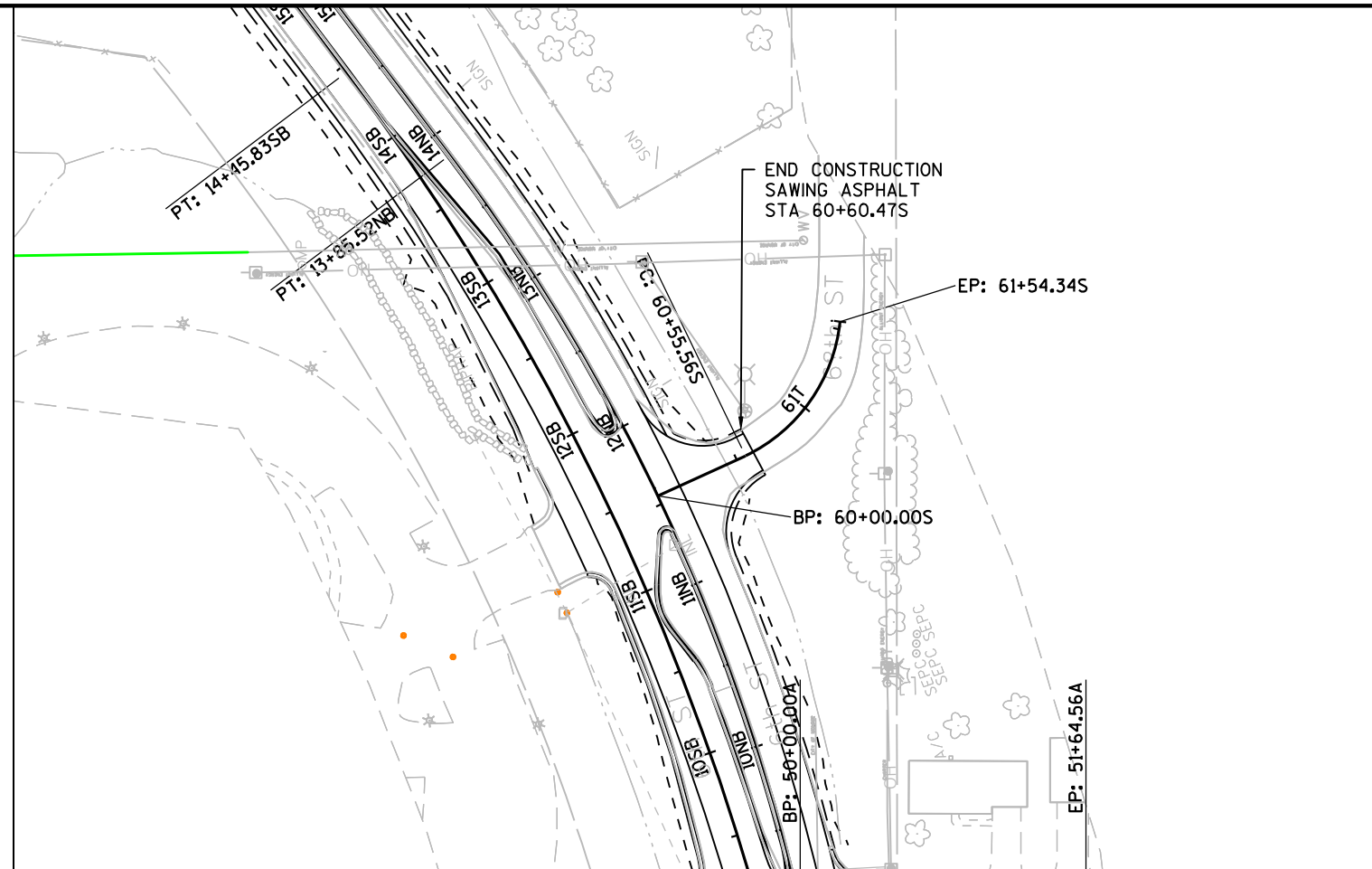
BENCHMARKS				
NO.	STATION	OFFSET	DESCRIPTION	ELEV.
308	33+39 SB	63' LT.	CHISLED X ON RCCP	1086.19



5



5



PROJECT NO: 5660-00-72

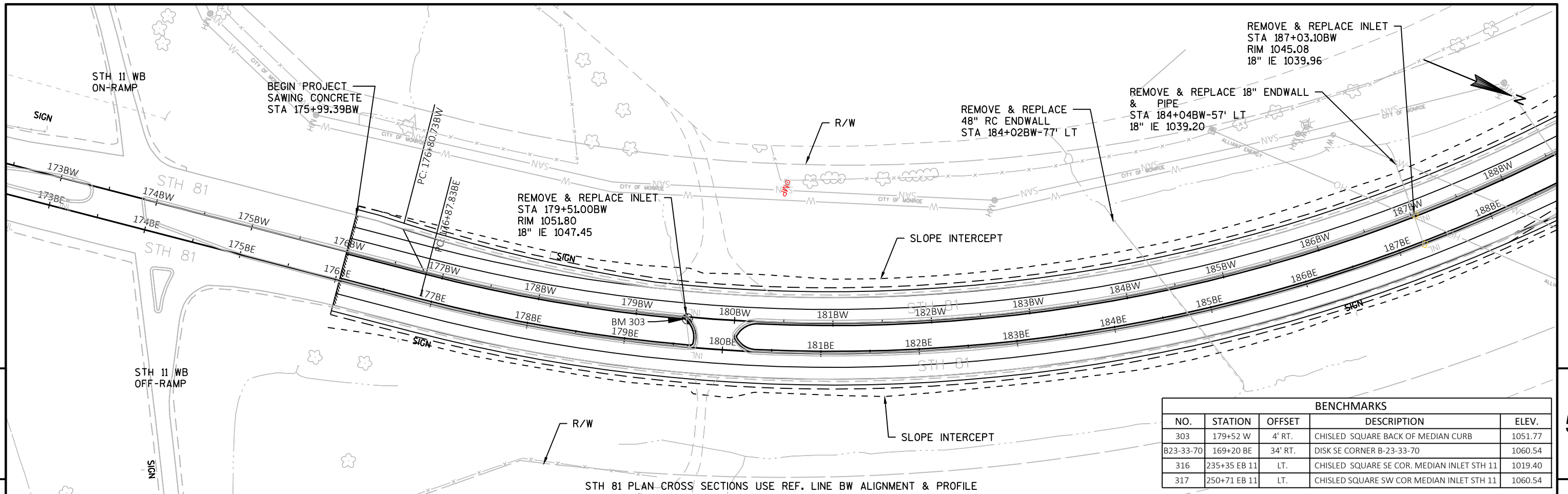
HWY: STH 59

COUNTY: GREEN

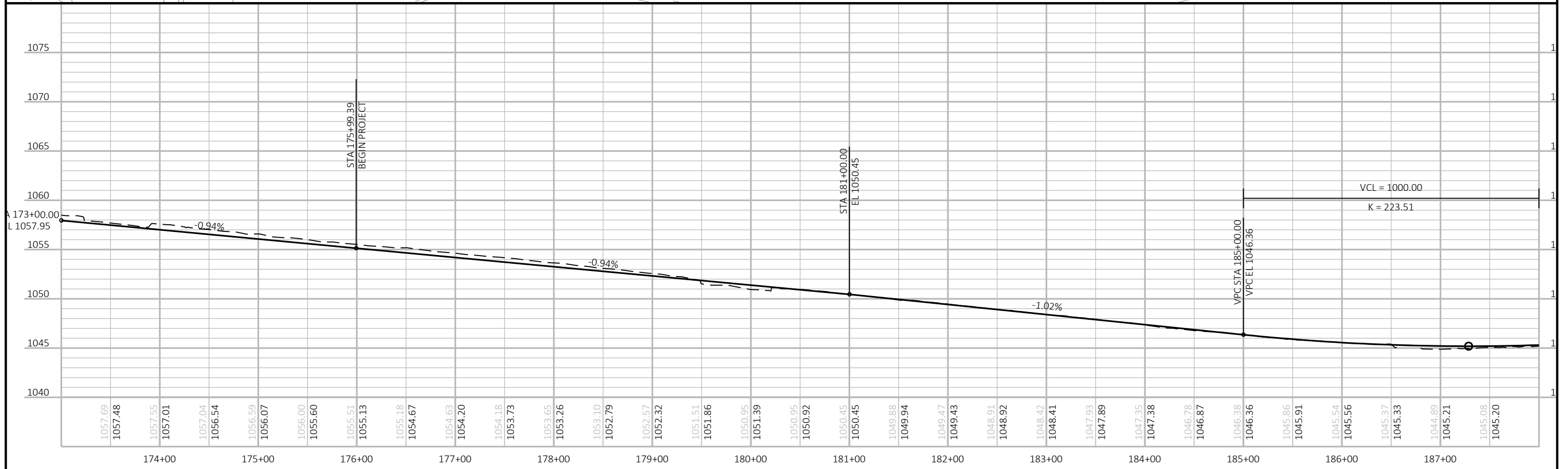
PLAN AND PROFILE: 30TH AVE - 6 1/2 ST

SHEET

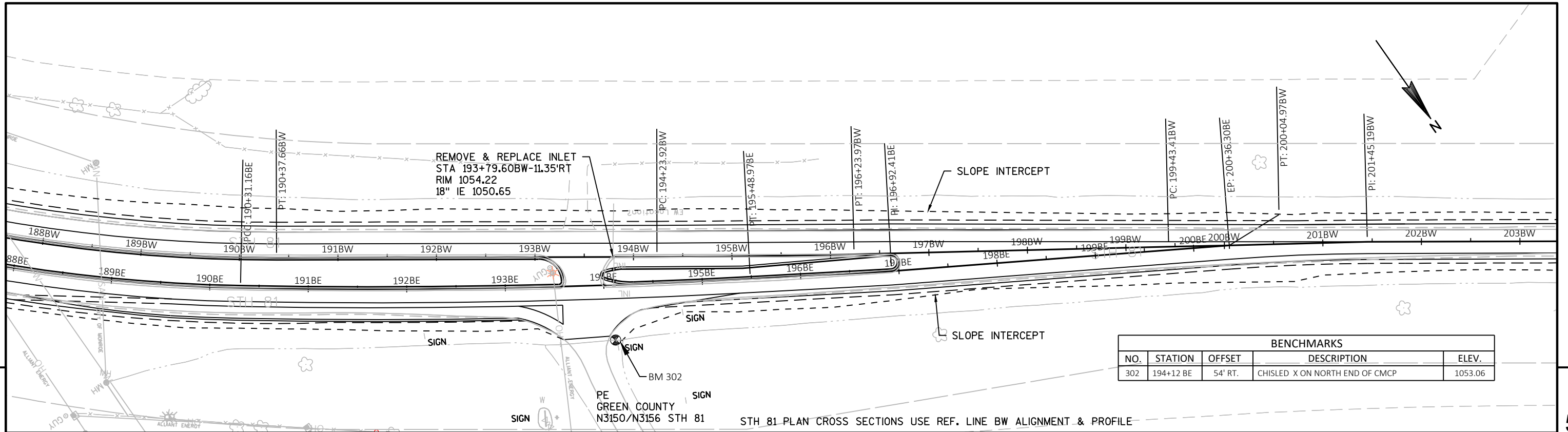
E



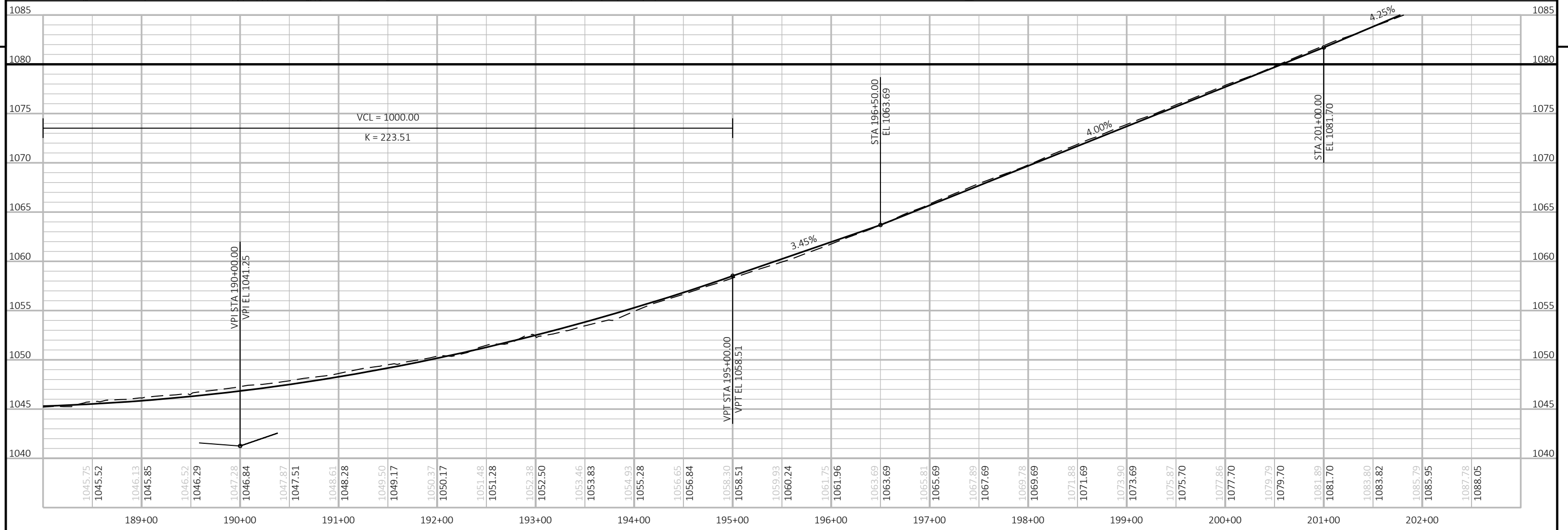
BENCHMARKS				
NO.	STATION	OFFSET	DESCRIPTION	ELEV.
303	179+52 W	4' RT.	CHISLED SQUARE BACK OF MEDIAN CURB	1051.77
B23-33-70	169+20 BE	34' RT.	DISK SE CORNER B-23-33-70	1060.54
316	235+35 EB 11	LT.	CHISLED SQUARE SE COR. MEDIAN INLET STH 11	1019.40
317	250+71 EB 11	LT.	CHISLED SQUARE SW COR MEDIAN INLET STH 11	1060.54



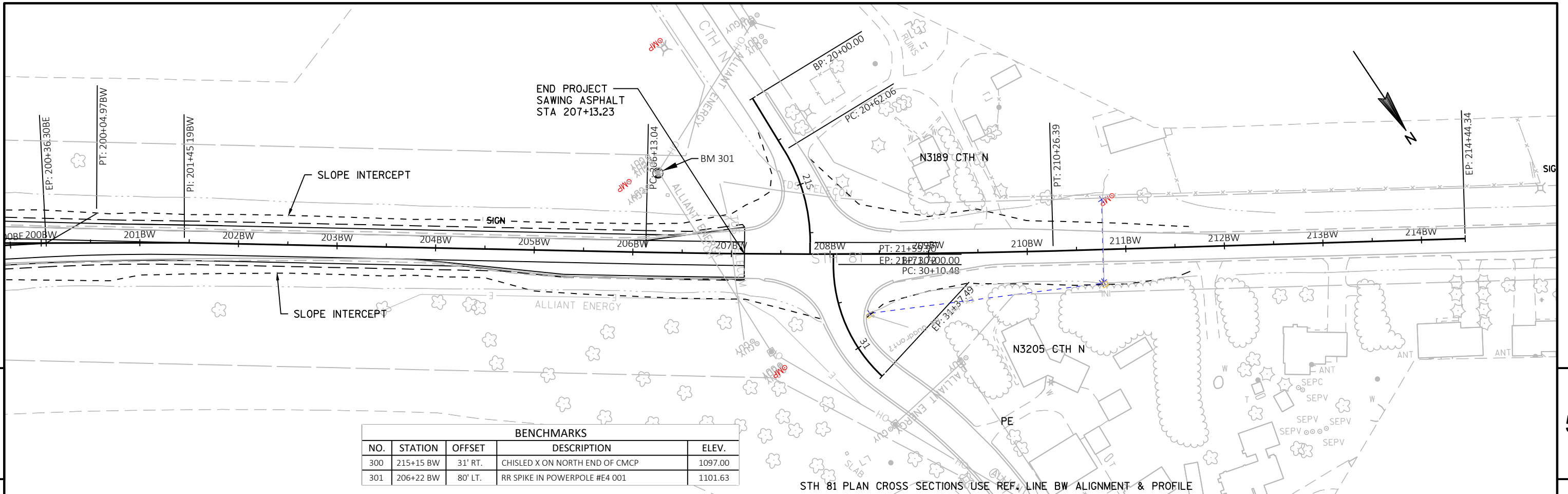
PROJECT NO: 5944-01-72 HWY: STH 81 COUNTY: GREEN PLAN AND PROFILE: STH 81 BW SHEET E



BENCHMARKS				
NO.	STATION	OFFSET	DESCRIPTION	ELEV.
302	194+12 BE	54' RT.	CHISLED X ON NORTH END OF CMCP	1053.06

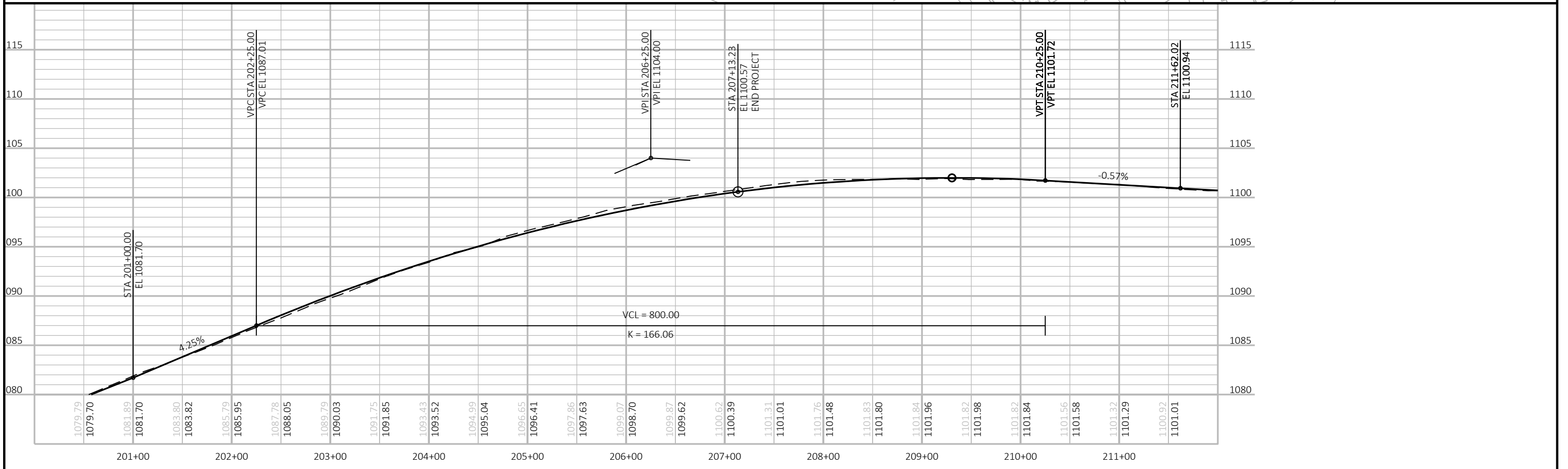


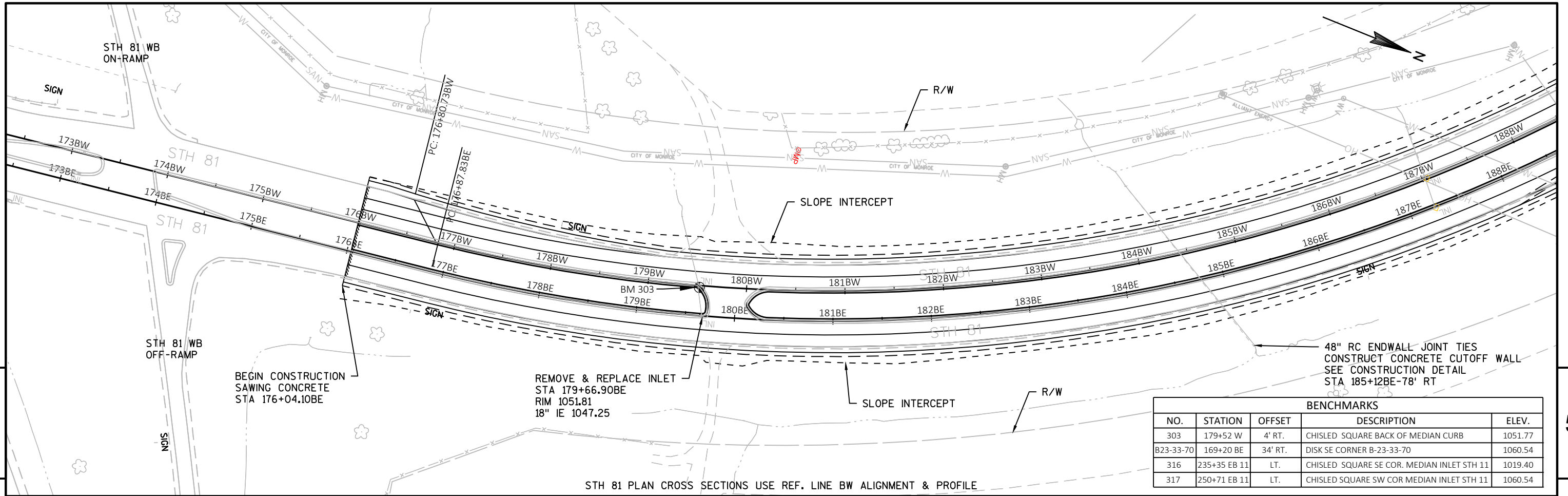
PROJECT NO: 5944-01-72 HWY: STH 81 COUNTY: GREEN PLAN AND PROFILE: STH 81 BW SHEET E



BENCHMARKS				
NO.	STATION	OFFSET	DESCRIPTION	ELEV.
300	215+15 BW	31' RT.	CHISLED X ON NORTH END OF CMCP	1097.00
301	206+22 BW	80' LT.	RR SPIKE IN POWERPOLE #E4 001	1101.63

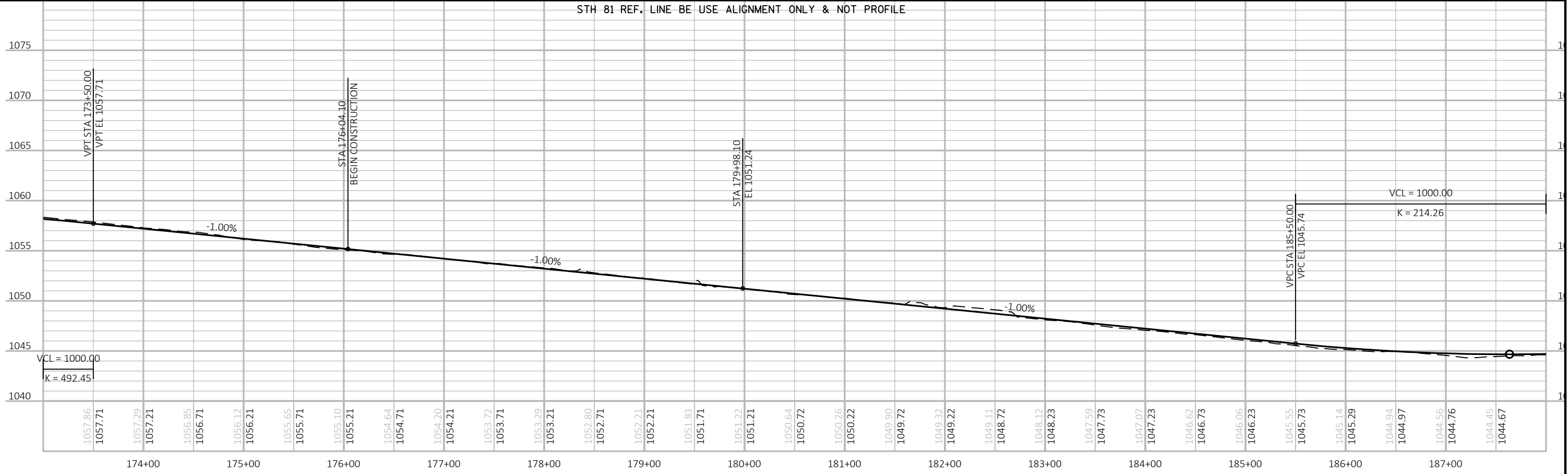
STH 81 PLAN CROSS SECTIONS USE REF. LINE BW ALIGNMENT & PROFILE

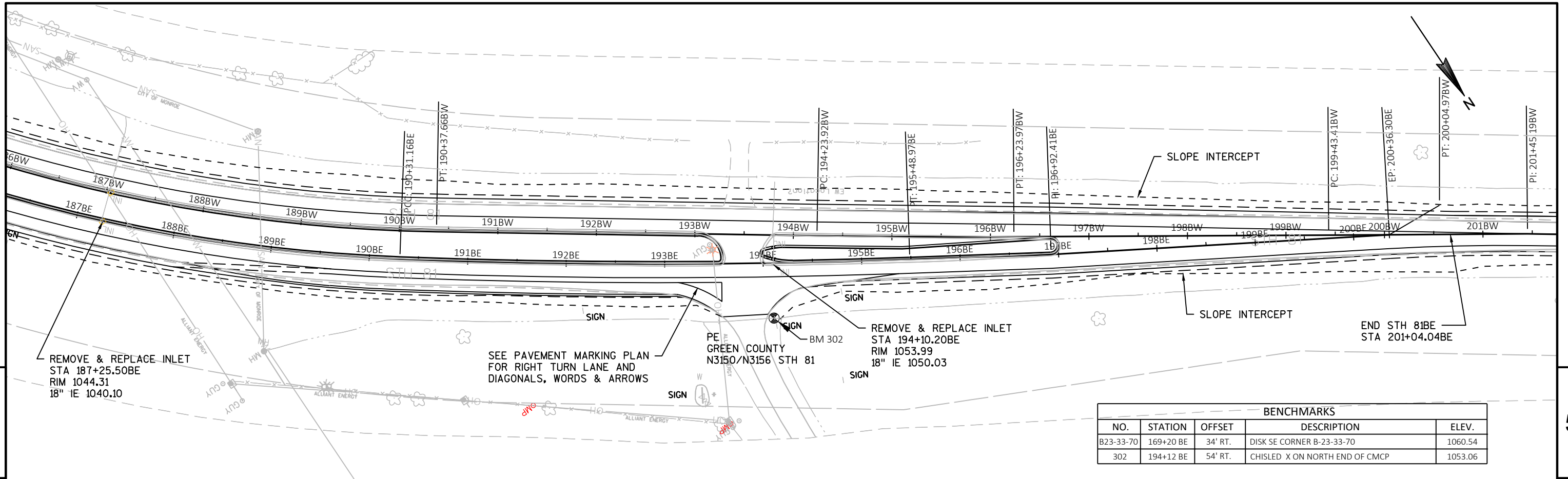




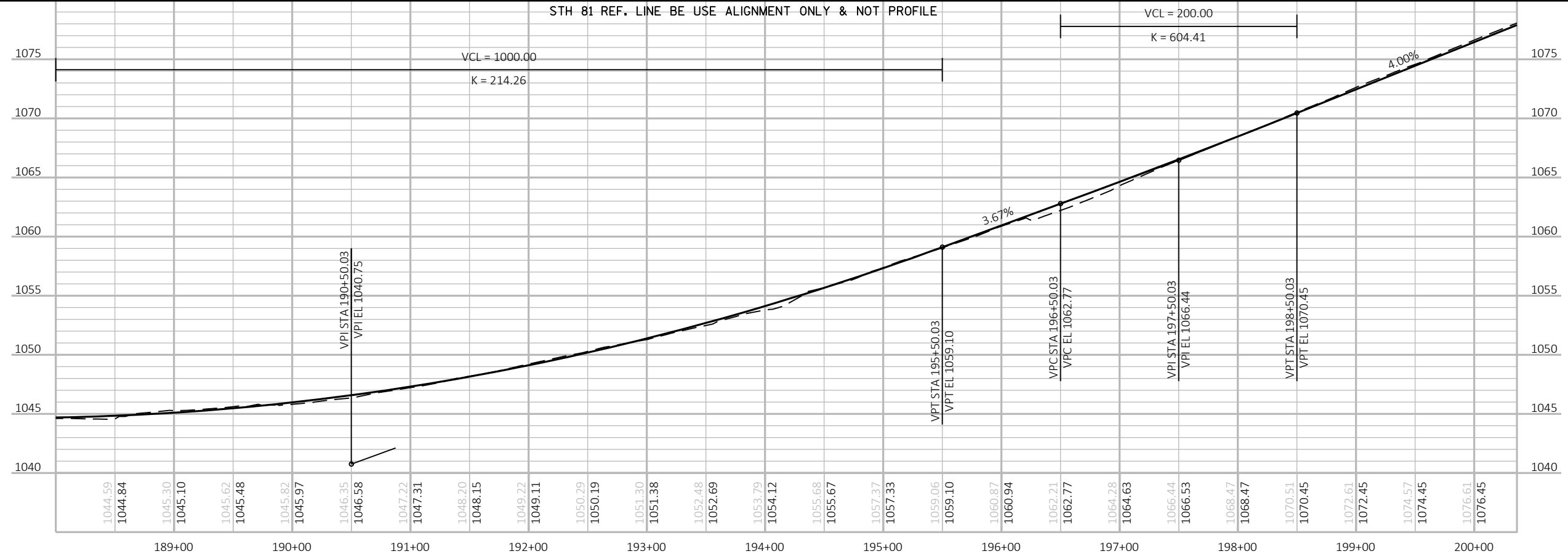
BENCHMARKS				
NO.	STATION	OFFSET	DESCRIPTION	ELEV.
303	179+52 W	4' RT.	CHISLED SQUARE BACK OF MEDIAN CURB	1051.77
B23-33-70	169+20 BE	34' RT.	DISK SE CORNER B-23-33-70	1060.54
316	235+35 EB 11	LT.	CHISLED SQUARE SE COR. MEDIAN INLET STH 11	1019.40
317	250+71 EB 11	LT.	CHISLED SQUARE SW COR MEDIAN INLET STH 11	1060.54

STH 81 PLAN CROSS SECTIONS USE REF. LINE BW ALIGNMENT & PROFILE
 STH 81 REF. LINE BE USE ALIGNMENT ONLY & NOT PROFILE



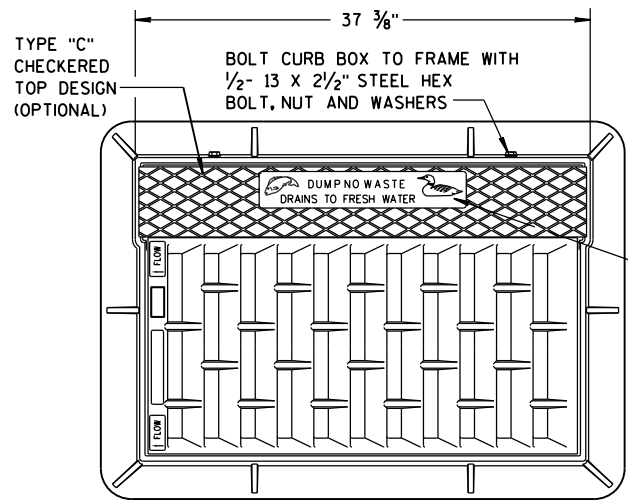


STH 81 PLAN CROSS SECTIONS USE REF. LINE BW ALIGNMENT & PROFILE
 STH 81 REF. LINE BE USE ALIGNMENT ONLY & NOT PROFILE

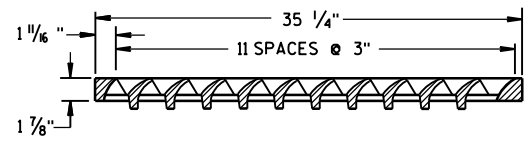
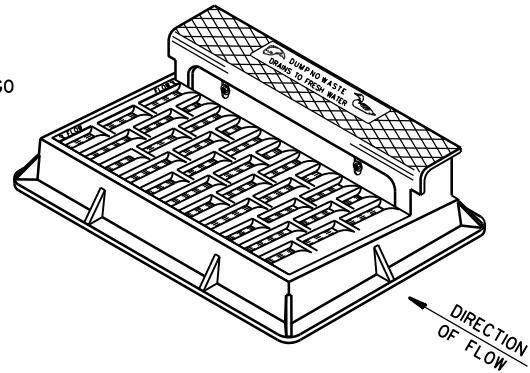


Standard Detail Drawing List

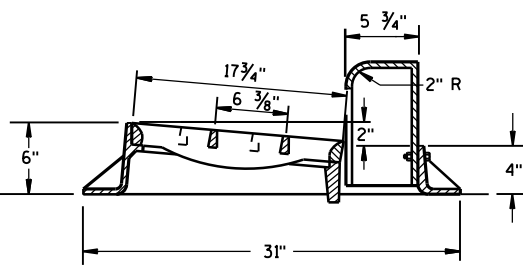
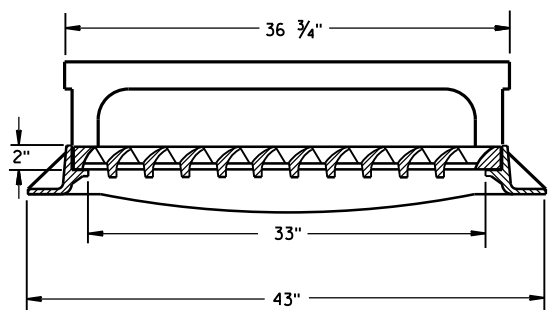
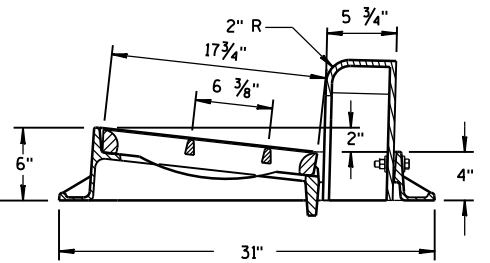
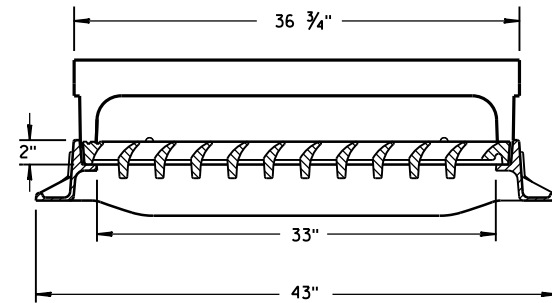
08A05-19A	INLET COVERS TYPE A, H, A-S, H-S & Z
08C07-02	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08D01-20A	CONCRETE CURB & GUTTER
08D01-20B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D15-05A	EDGEDRAIN OUTLET AND OUTFALL MARKERS
08D15-05B	EDGEDRAIN AND BASE AGGREGATE OPEN GRADED
08D15-05C	EDGEDRAIN AND BASE AGGREGATE OPEN GRADED
08D19-02	DRIVEWAY AND SIDEWALK RAMPS TYPE Z
08D20-01	DRIVEWAYS WITH CURB & GUTTER RETURNS
08D21-01	DRIVEWAYS WITHOUT CURB & GUTTER
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E15-01	CULVERT PIPE CHECK
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
08F08-02	STEEL APRON ENDWALLS FOR CULVERT PIPE AND PIPE ARCH SLOPED CROSS DRAINS
09A01-13A	AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND D AND TEE INTERSECTION BYPASS LANE
13A05-05A	SHOULDER RUMBLE STRIP, MILLING
13A10-02A	2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING
13A10-02C	2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING
13A10-02D	2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING
13C18-07A	CONCRETE PAVEMENT JOINTING
15C02-07A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-07B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C02-07C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C07-14A	PAVEMENT MARKING SYMBOLS
15C07-14B	PAVEMENT MARKING WORDS
15C07-14C	PAVEMENT MARKING ARROWS
15C08-19A	LONGITUDINAL MARKING (MAINLINE)
15C08-19B	PAVEMENT MARKING (TURN LANES)
15C11-07B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-07	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C27-03B	PAVEMENT MARKING (ISLANDS)
15C29-06A	BICYCLE LANE MARKING
15C35-03A	PAVEMENT MARKING (INTERSECTIONS)
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS
15D39-02	TRAFFIC CONTROL, DROP-OFF SIGNING



**NOTE:
GRATE IS REVERSIBLE.**

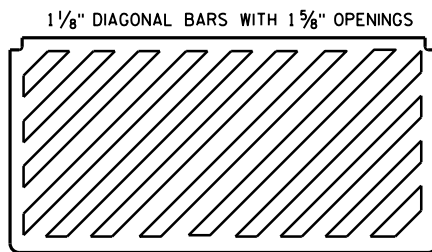


NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

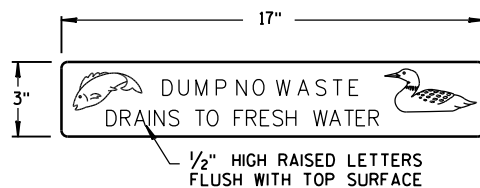


TYPE "H"

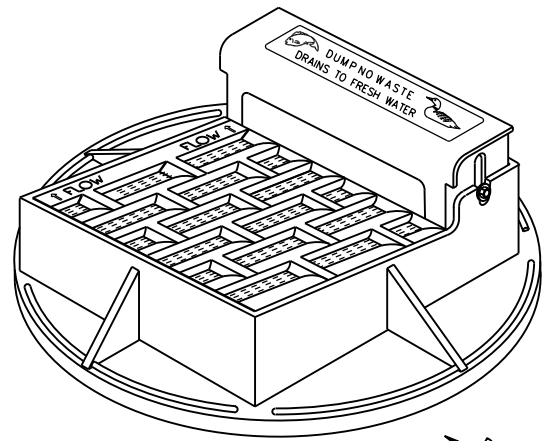
NOTE: EITHER CASTING IS ACCEPTABLE



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

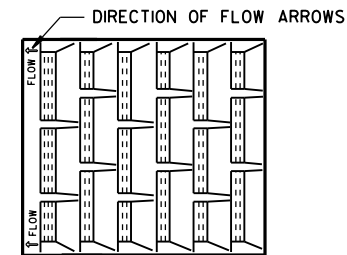


LOGO DETAIL

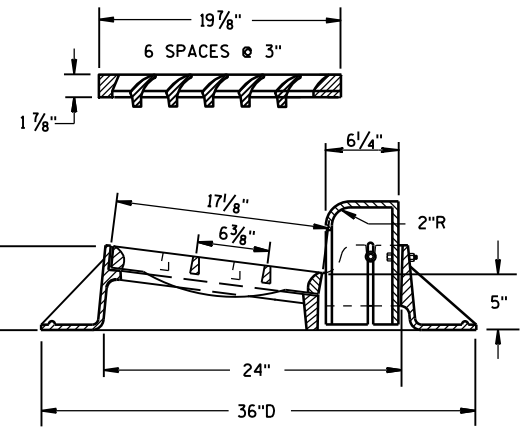
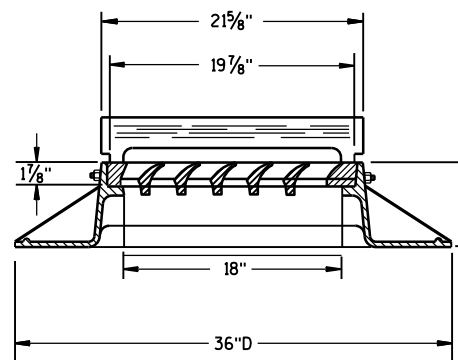


NOTE: CURB BOX ADJUSTABLE 4" TO 9"

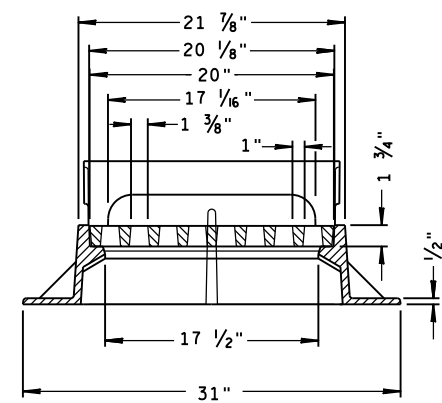
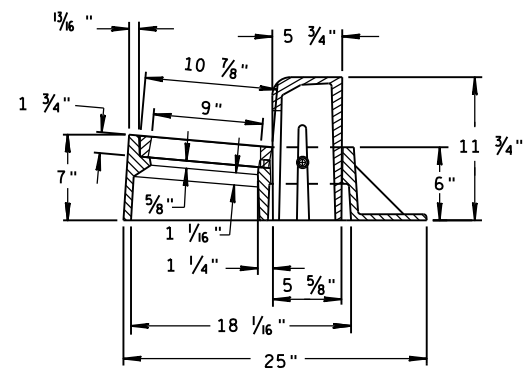
**NOTE:
GRATE IS REVERSIBLE.**



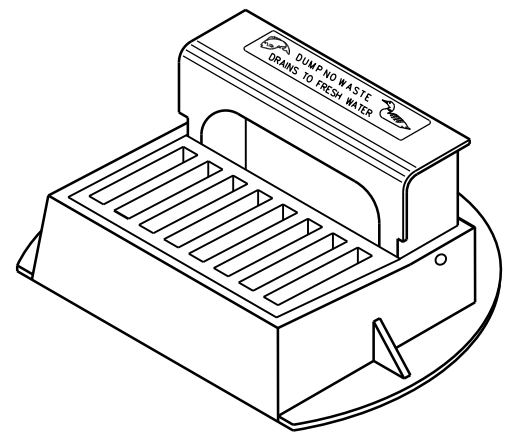
**SPECIAL GRATE FOR
TYPE "A" COVER**
(MEASURES 19 3/4" X 17" X 1 1/8")
(NOTED AS TYPE A-S ON DRAINAGE TABLE)



TYPE "A"



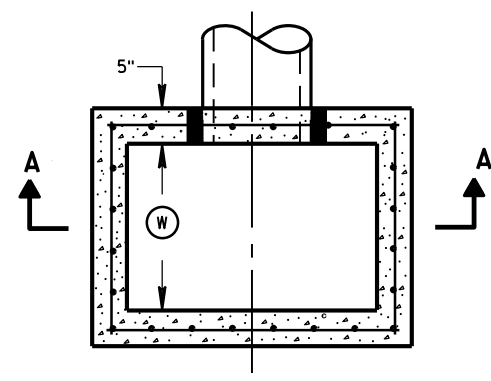
TYPE "Z"



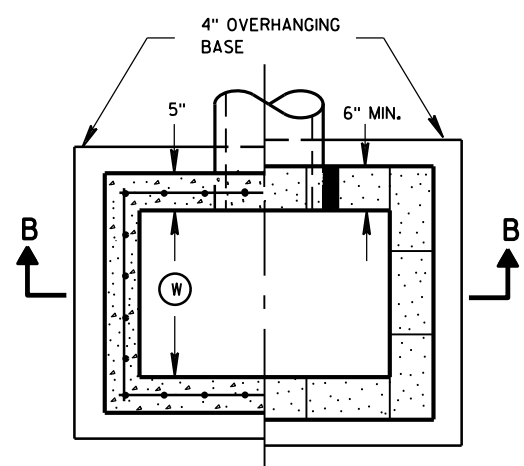
**INLET COVERS
TYPE A, H, A-S, H-S & Z**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

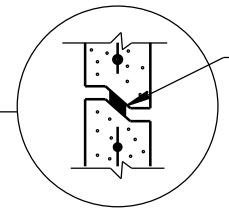
APPROVED
11-27-13
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA



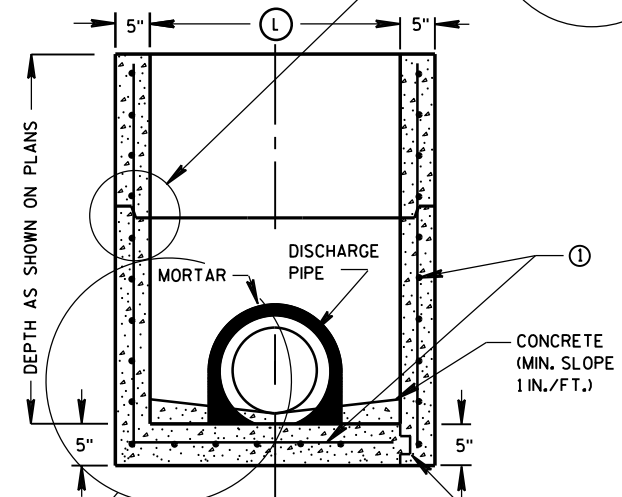
PLAN VIEW



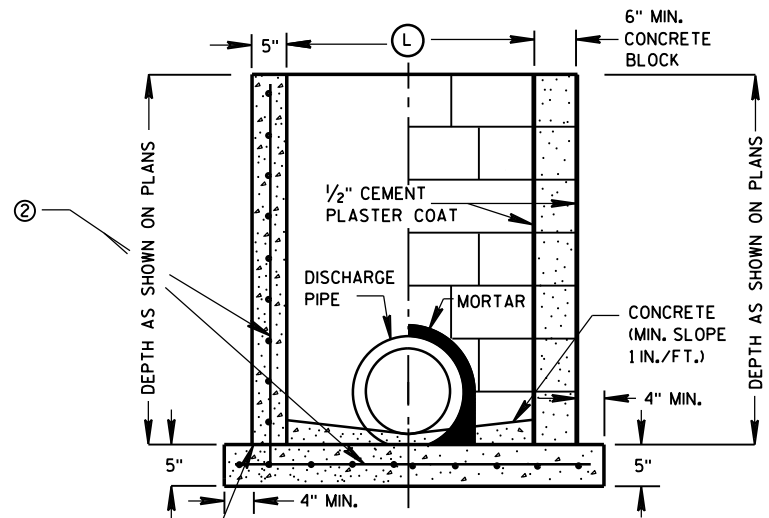
PLAN VIEW



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



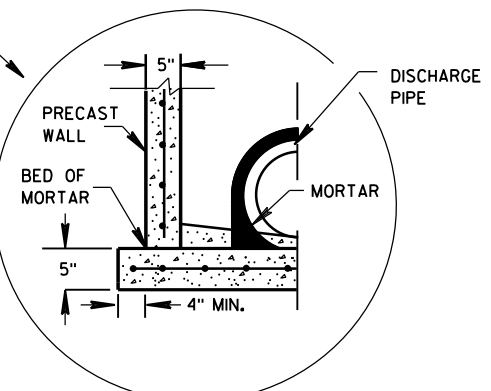
SECTION A-A



SECTION B-B

PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE
 PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE
 KEYWAY

CONSTRUCTION JOINT
 CAST-IN-PLACE REINFORCED CONCRETE
 CONCRETE BLOCK WITH CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ①



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

① FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.

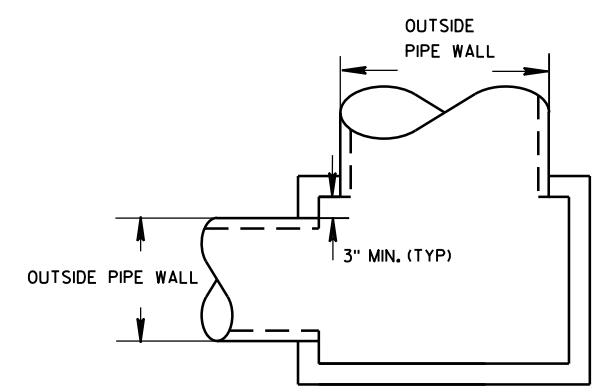
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

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

PIPE MATRIX

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



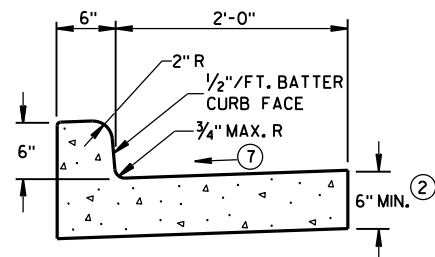
DETAIL "A"

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

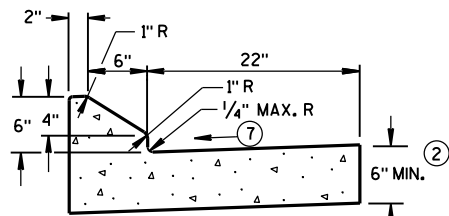
INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

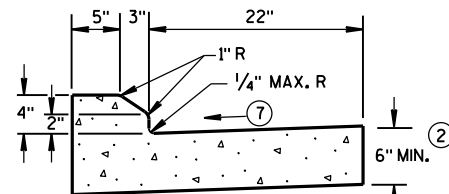
APPROVED
 Sept., 2016 /S/ Rodney Taylor
 DATE ROADWAY STANDARDS DEVELOPMENT
 FHWA UNIT SUPERVISOR



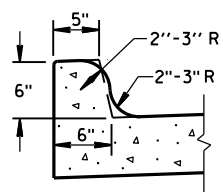
TYPES A^① & D



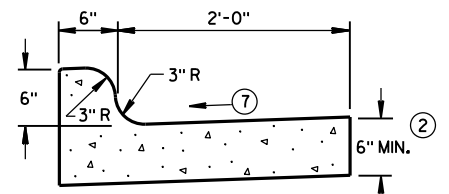
6" SLOPED CURB TYPES G^① & J



4" SLOPED CURB TYPES G^① & J

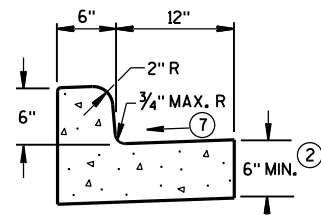


TYPES K^① & L
(OPTIONAL CURB SHAPE)



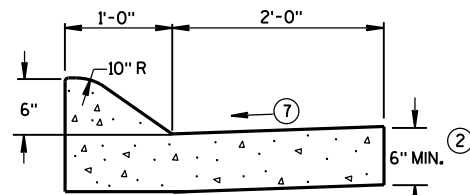
TYPES K^① & L

CONCRETE CURB & GUTTER 30"

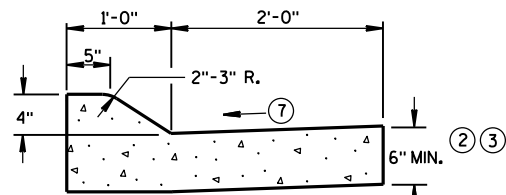


TYPES A^① & D

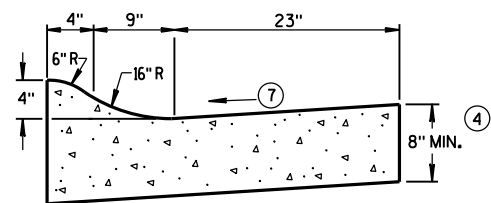
CONCRETE CURB & GUTTER 18"



6" SLOPED CURB TYPES A^① & D

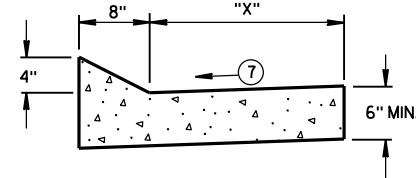


4" SLOPED CURB TYPES A^① & D



4" SLOPED CURB TYPES R^① & T^⑤

CONCRETE CURB & GUTTER 36"



TYPES TBT & TBTT^①

CONCRETE CURB & GUTTER

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

GENERAL NOTES

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

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

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

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

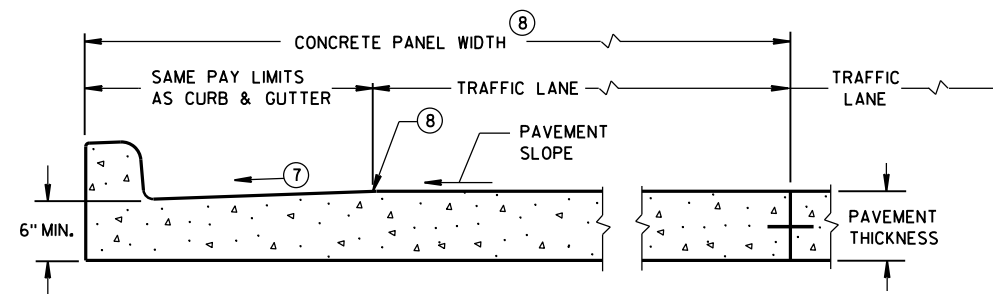
UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2'-0" BEHIND THE BACK OF CURBS.

- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.
- ④ THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑤ THE FACE OF CURB IS 6" FROM THE BACK OF CURB.
- ⑥ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.
- ⑦ USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.
- ⑧ INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.

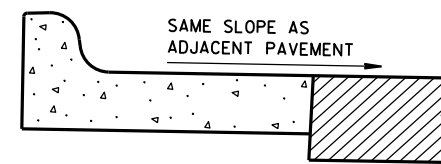
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

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

* BIKE LANE IS NOT SHOWN.



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER

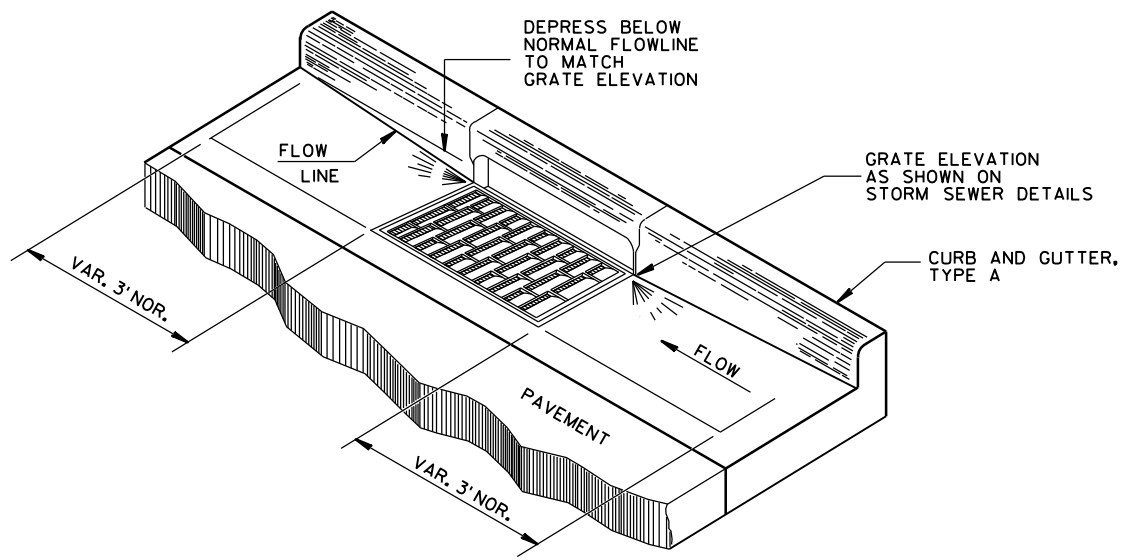


REVERSE SLOPE GUTTER^⑥

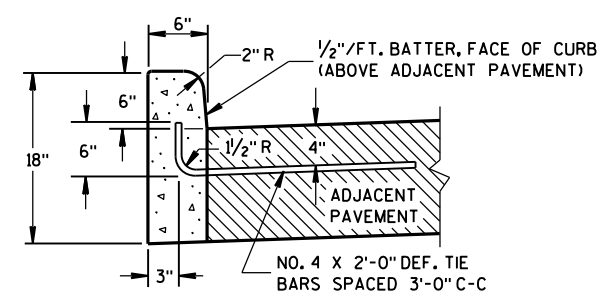
(TYPICAL FOR ALL CURB & GUTTER TYPES)

CONCRETE CURB & GUTTER

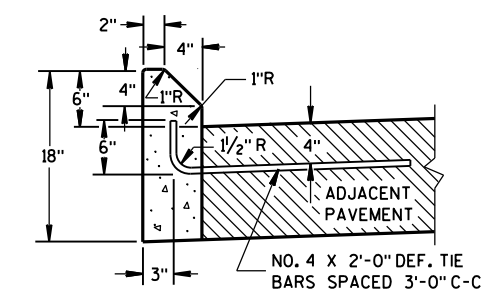
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



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



TYPES A^① & D

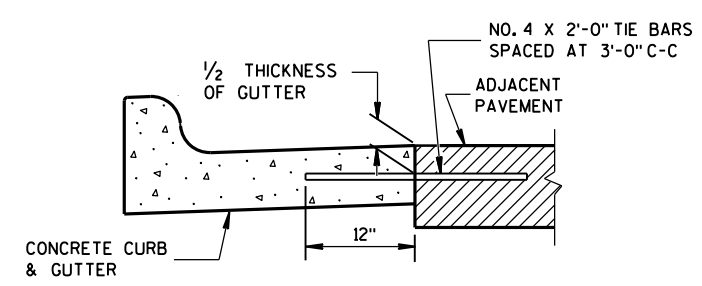


TYPES G^① & J

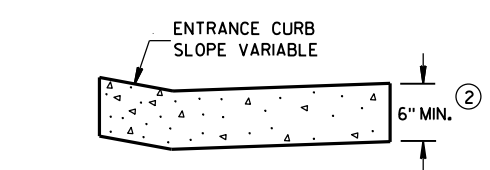
GENERAL NOTES

- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.
- PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.
- UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2'-0" BEHIND THE BACK OF CURBS.
- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBTT.
 - ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
 - ③ REFER TO SDD 8D18 AND SDD 8D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.

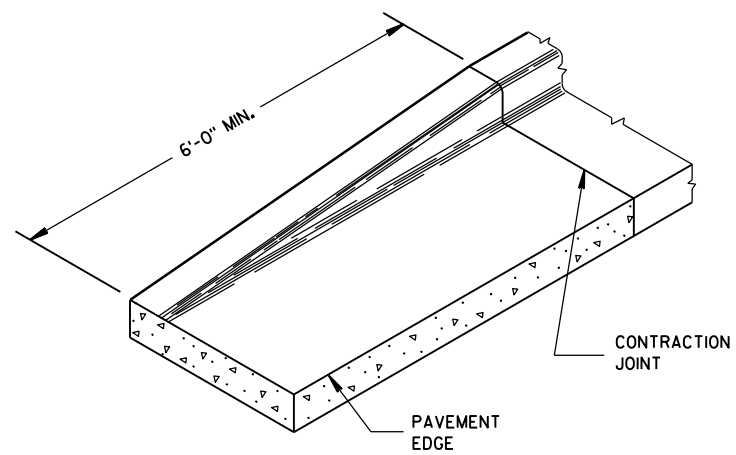
CONCRETE CURB



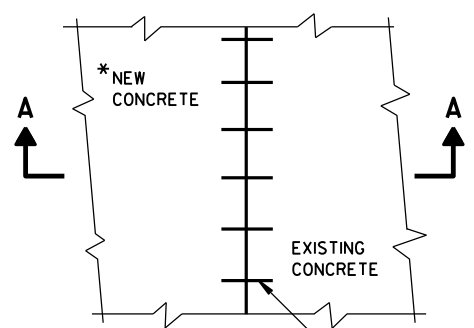
TYPICAL TIE BAR LOCATION^①



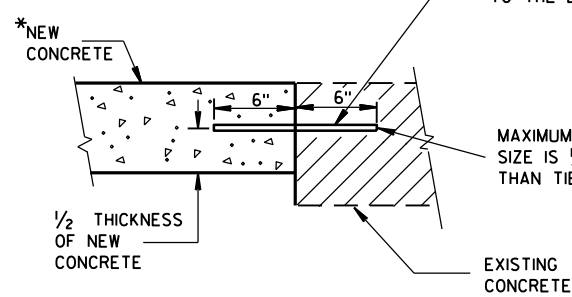
DRIVEWAY ENTRANCE CURB^⑨
(WHEN DIRECTED BY THE ENGINEER)



END SECTION CURB & GUTTER



PLAN VIEW



SECTION A-A
TIE BARS DRILLED INTO EXISTING PAVEMENT

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

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

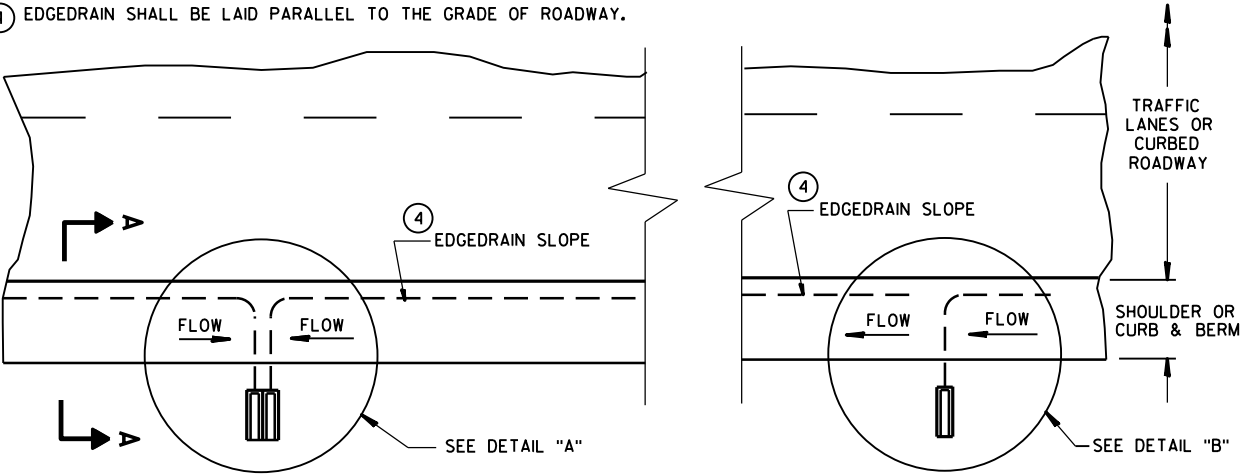
MAXIMUM DRILL HOLE SIZE IS 1/8" GREATER THAN TIE BAR DIAMETER

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June, 2017 DATE	/s/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA	

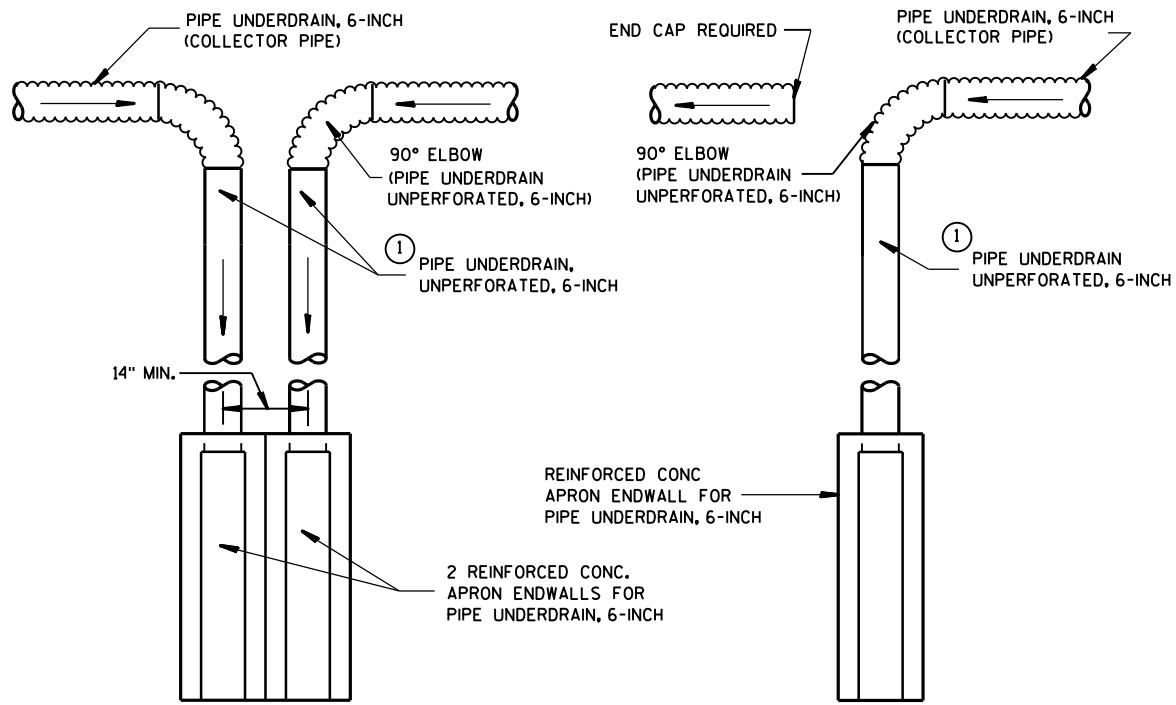
GENERAL NOTES

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

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

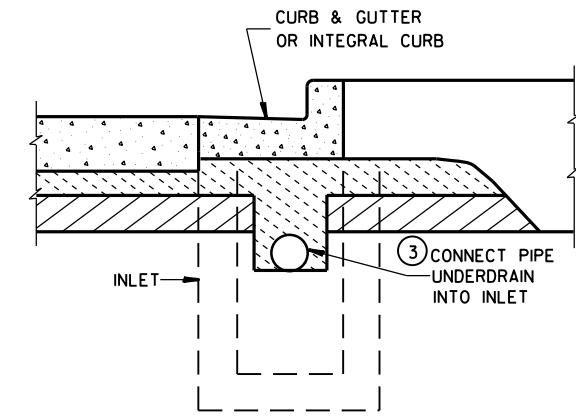


**PLAN VIEW
ROADWAY WITH SHOULDERS OR CURBS
(EDGEDRAIN OUTLETS TO ROADSIDE) ②**

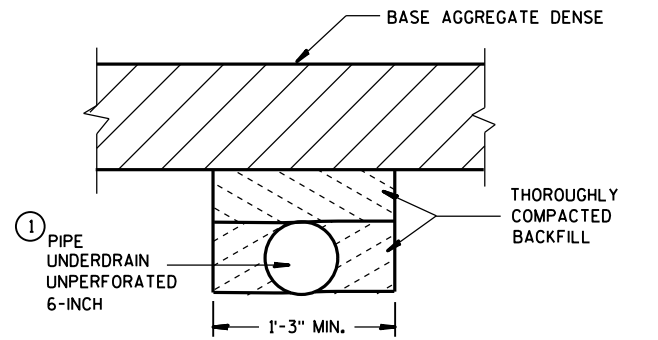


DETAIL "A" TO BE USED AT LOW POINT LOCATIONS
DETAIL "B" TO BE USED AT INTERMEDIATE LOCATIONS

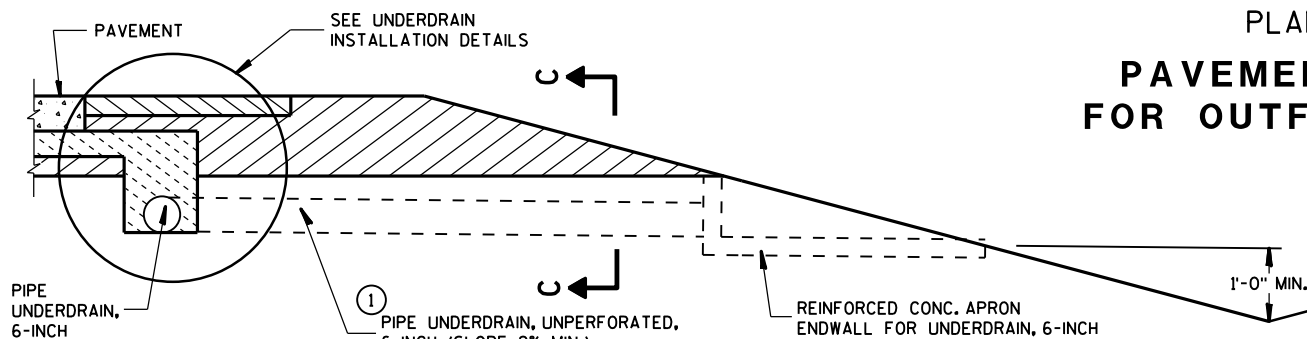
TYPICAL DRAIN OUT DETAILS



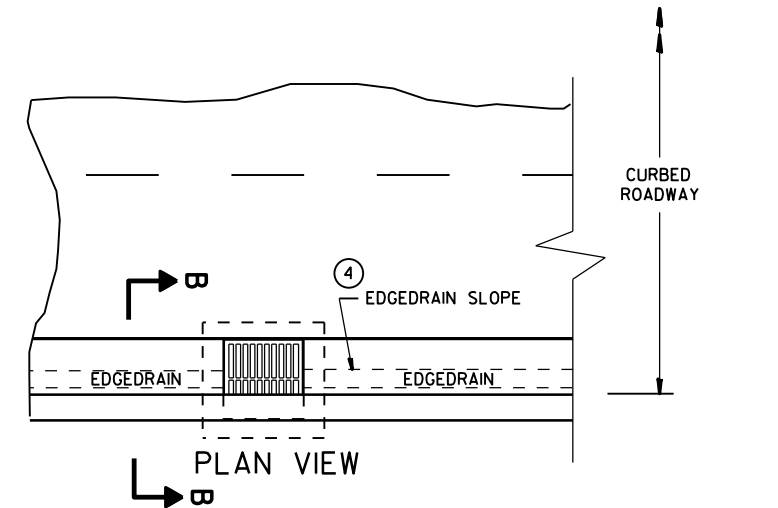
**SECTION B-B
URBAN CROSS SECTION**



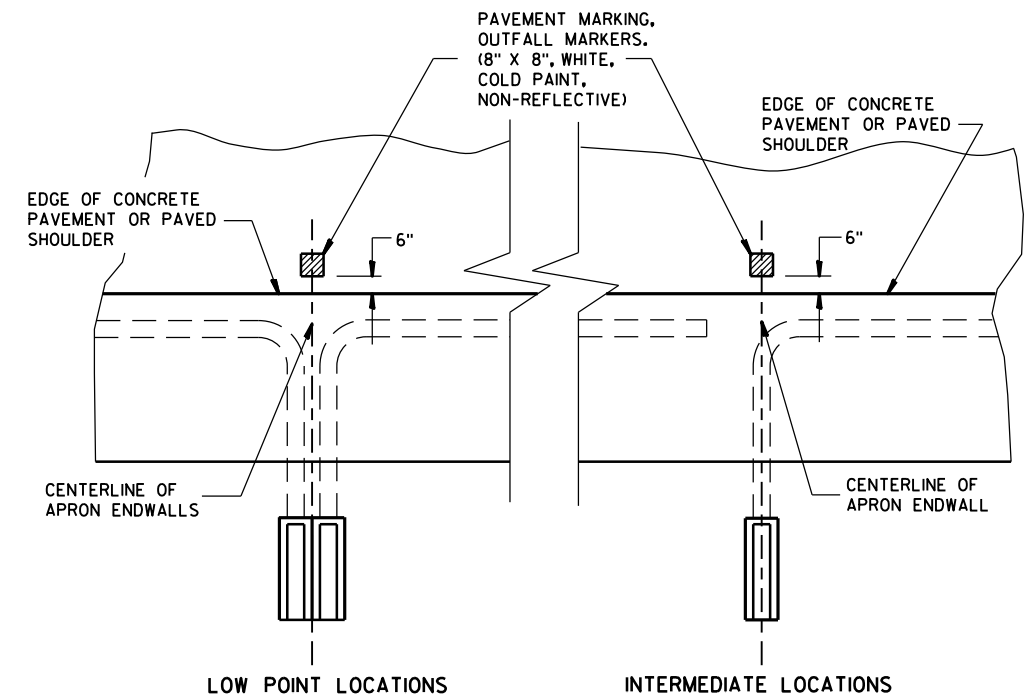
**SECTION C-C
(TRENCH FOR OUTFALL PIPE)**



**SECTION A-A
RURAL CROSS SECTION**



**ROADWAY WITH CURBS
(EDGEDRAIN CONNECTS INTO INLET STRUCTURE)**



**PLAN VIEW
PAVEMENT MARKING
FOR OUTFALL MARKERS**

**EDGEDRAIN OUTLET
AND OUTFALL MARKERS**

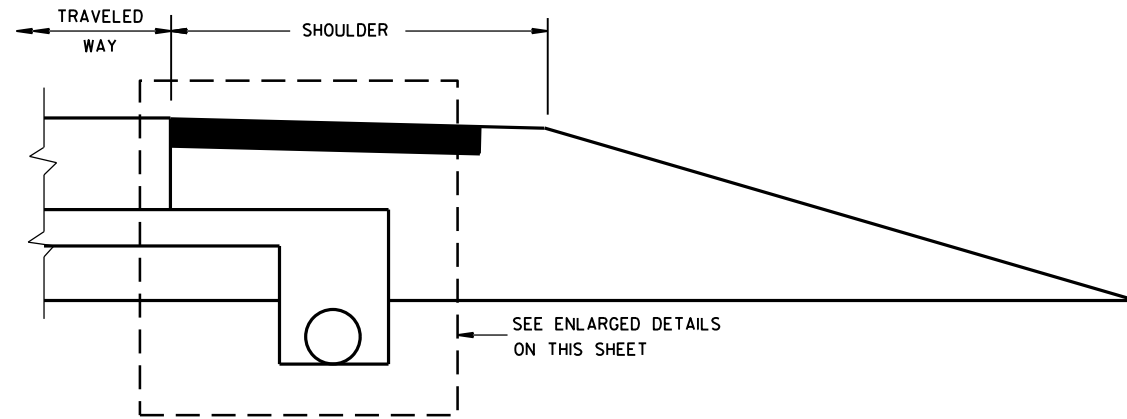
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

6

S.D.D. 8 D 15-5a

S.D.D. 8 D 15-5a



RURAL CROSS SECTION

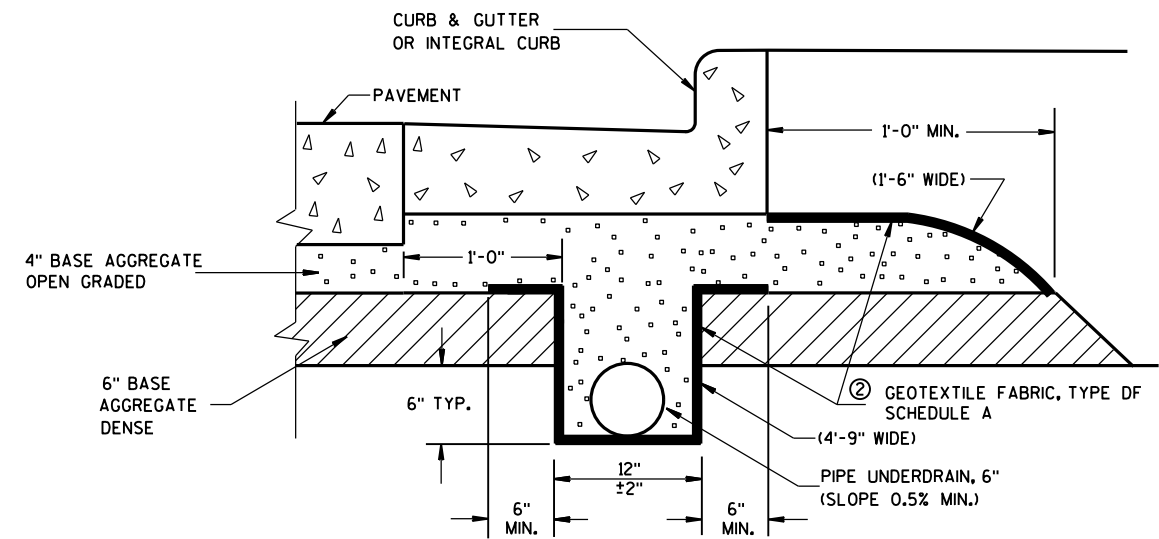
GENERAL NOTES

THE DIMENSIONS SHOWN ON THE TYPICAL CROSS SECTIONS WILL GOVERN IN THE EVENT THERE IS A CONFLICT WITH THE DETAILS SHOWN ON THIS DRAWING.

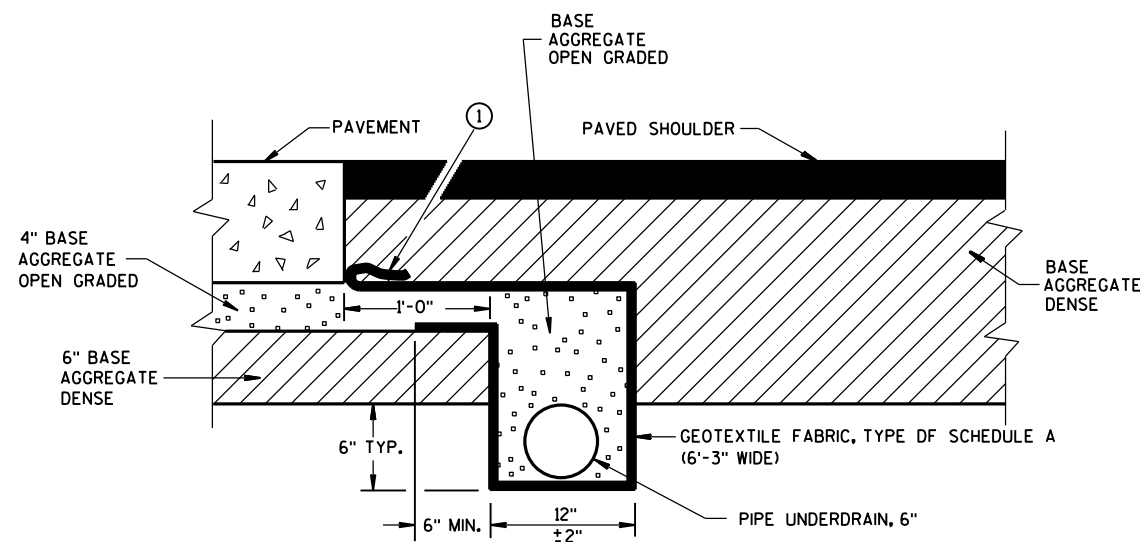
PIPE UNDERDRAIN SHALL BE LAID PARALLEL TO THE GRADE OF THE ROADWAY.

① FOLD OVER EXCESS GEOTEXTILE FABRIC AT THIS LOCATION.

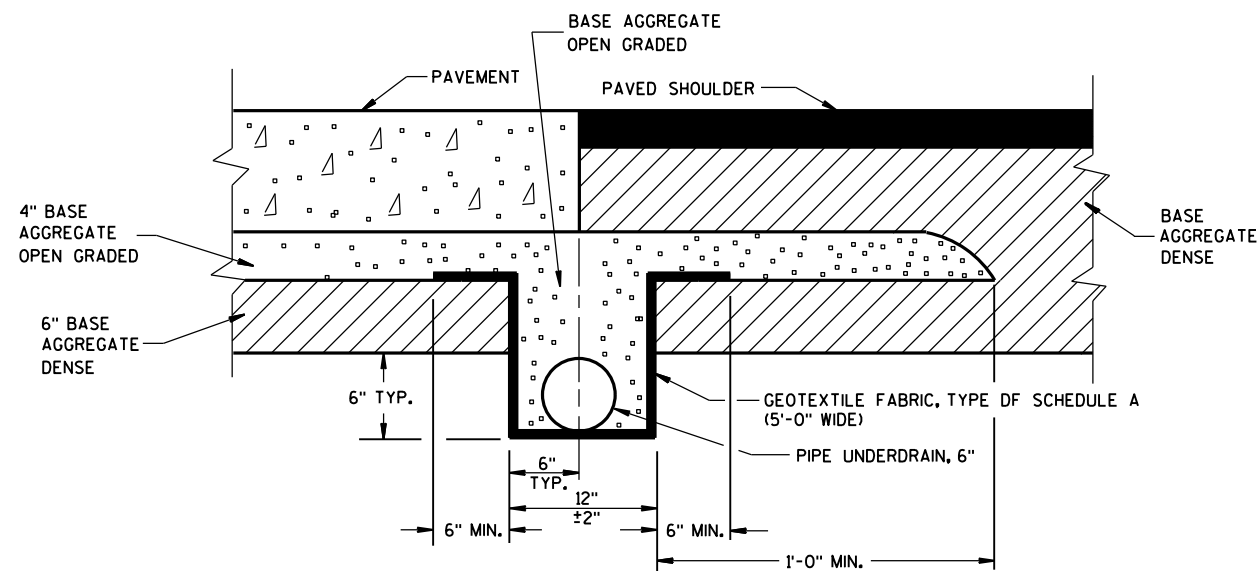
② TOTAL FABRIC WIDTH IS 6'-3" FOR PAYMENT.



EDGEDRAIN IN URBAN ROADWAY



POST PAVING INSTALLATION
(QUANTITIES ARE BASED ON THIS DETAIL)



PRE-PAVING INSTALLATION ALTERNATE

EDGEDRAIN IN RURAL ROADWAY

EDGEDRAIN AND BASE AGGREGATE OPEN GRADED

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

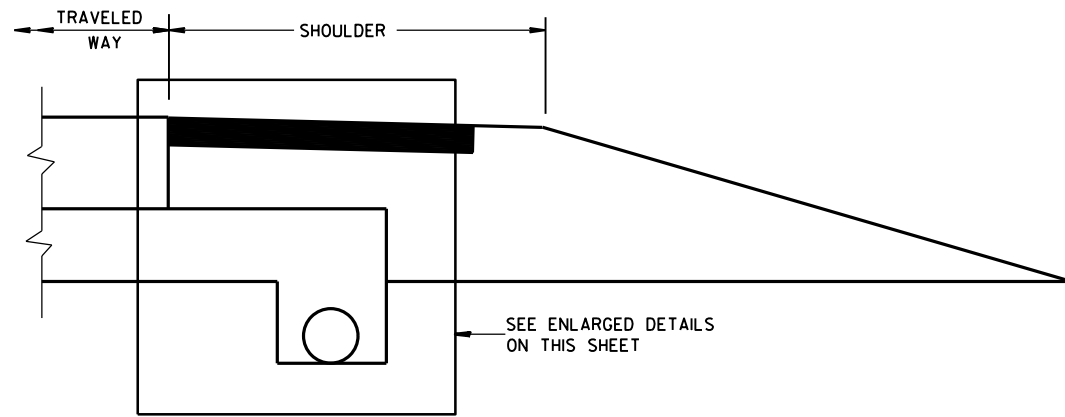
APPROVED
DATE: Sept. 2015 /S/ Peter Kemp, P.E.
PAVEMENT SUPERVISOR
FHWA

6

6

S.D.D. 8 D 15-5b

S.D.D. 8 D 15-5b

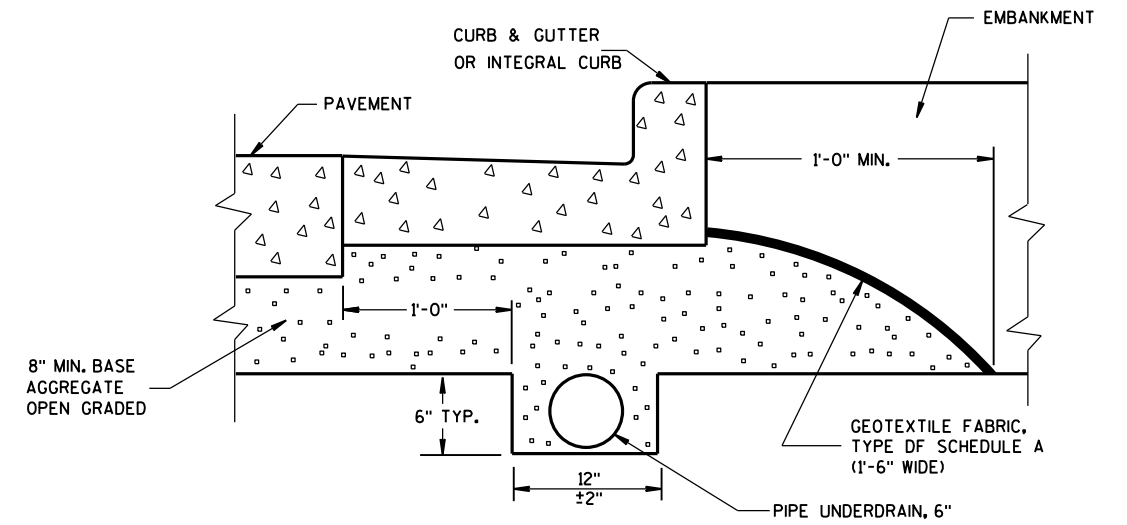


RURAL CROSS SECTION

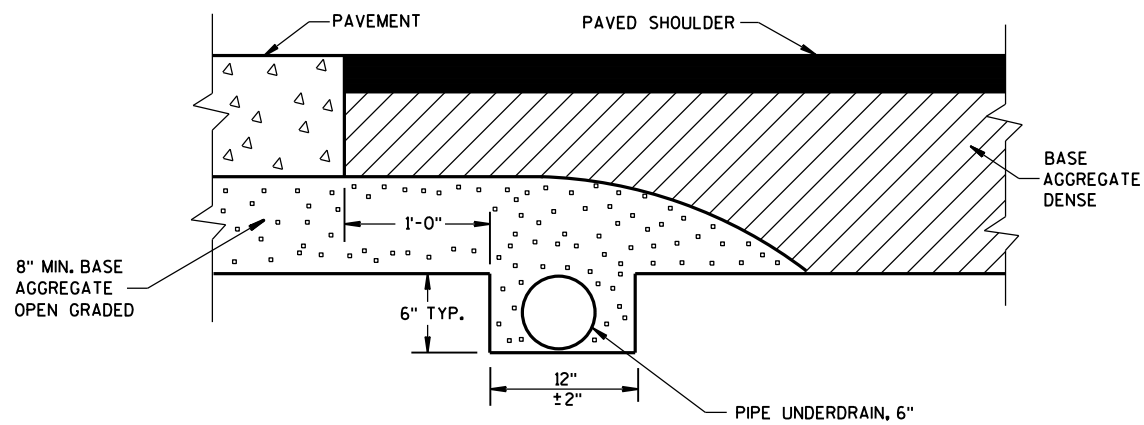
GENERAL NOTES

THE DIMENSIONS SHOWN ON THE TYPICAL CROSS SECTIONS WILL GOVERN IN THE EVENT THERE IS A CONFLICT WITH THE DETAILS SHOWN ON THIS DRAWING.

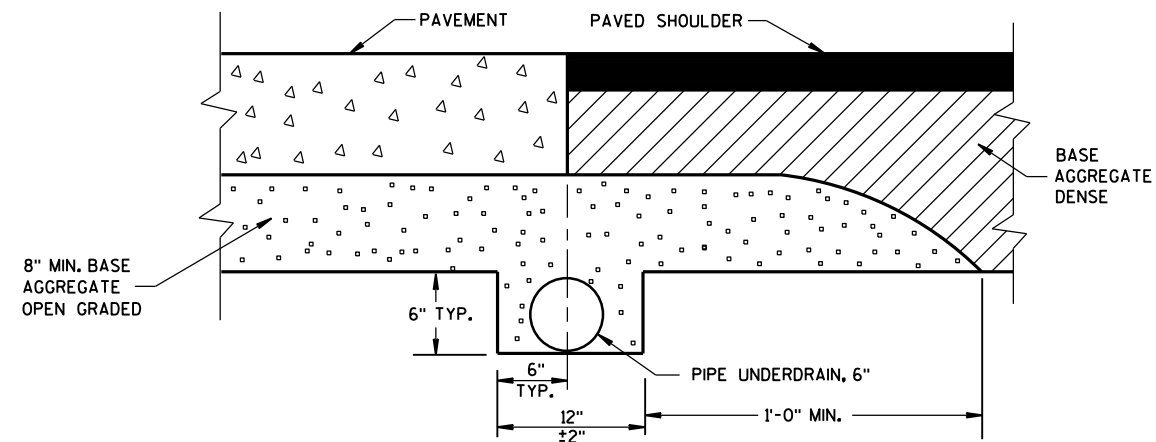
PIPE UNDERDRAIN SHALL BE LAID PARALLEL TO THE GRADE OF THE ROADWAY.



EDGEDRAIN IN URBAN ROADWAY



POST PAVING INSTALLATION
(QUANTITIES ARE BASED ON THIS DETAIL)



PRE-PAVING INSTALLATION ALTERNATIVE

EDGEDRAIN IN RURAL ROADWAY

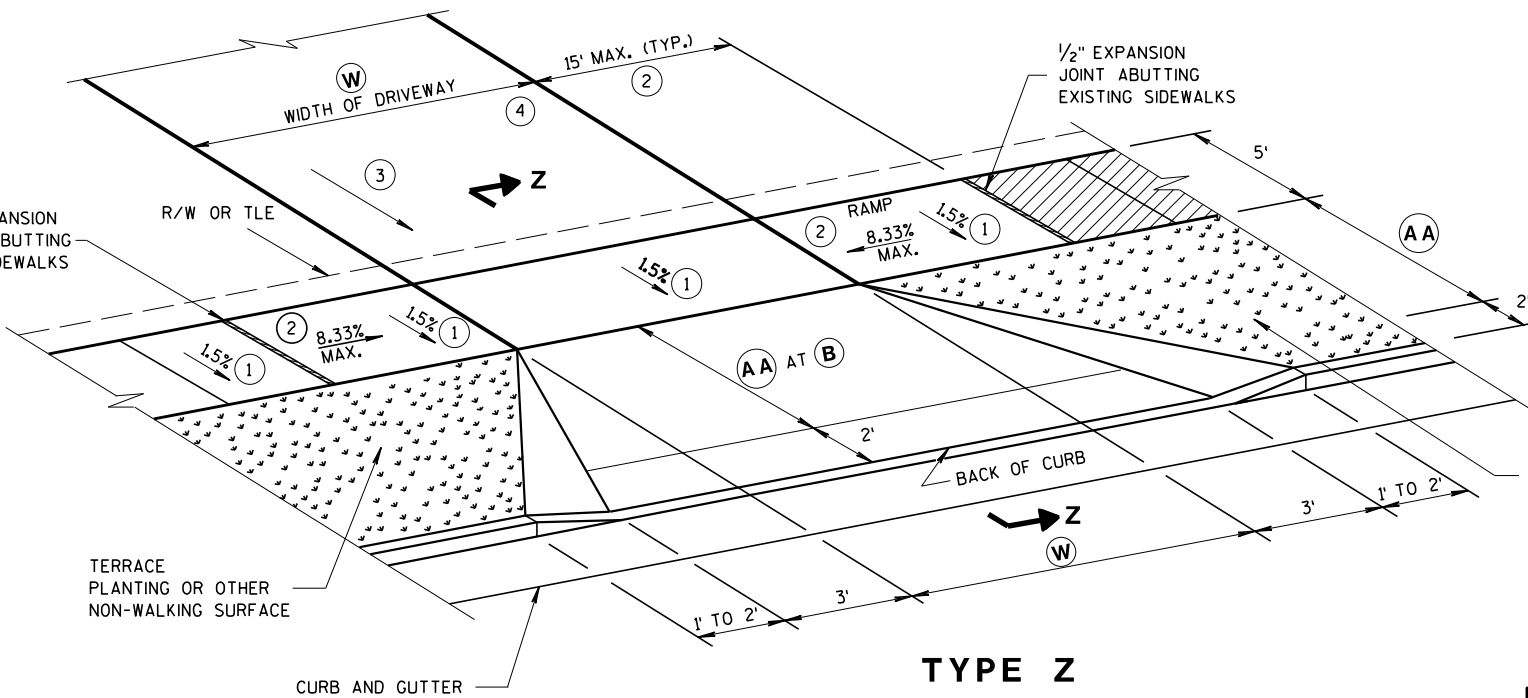
EDGEDRAIN AND BASE AGGREGATE OPEN GRADED	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE FHWA	/s/ Peter Kemp, P.E. PAVEMENT SUPERVISOR

6

6

S.D.D. 8 D 15-5c

S.D.D. 8 D 15-5c



**TYPE Z
SIDEWALK WITH WIDER TERRACE
TERRACE VARIES 7 TO 12 FEET**

TABLE Z

(A) FEET	(B) %	(B) %
4.5'	6.25% GUTTER	4% GUTTER
5.5'	11.5%	9% TO 11.5%
6.5'	9% TO 11.5%	8% TO 11.5%
7.5'	8% TO 11.5%	6% TO 11.5%
8.5'	7% TO 11.5%	6% TO 11.5%
9.5'	6% TO 11.5%	5% TO 11.5%
	5% TO 11.5%	4% TO 11.5%

GENERAL NOTES

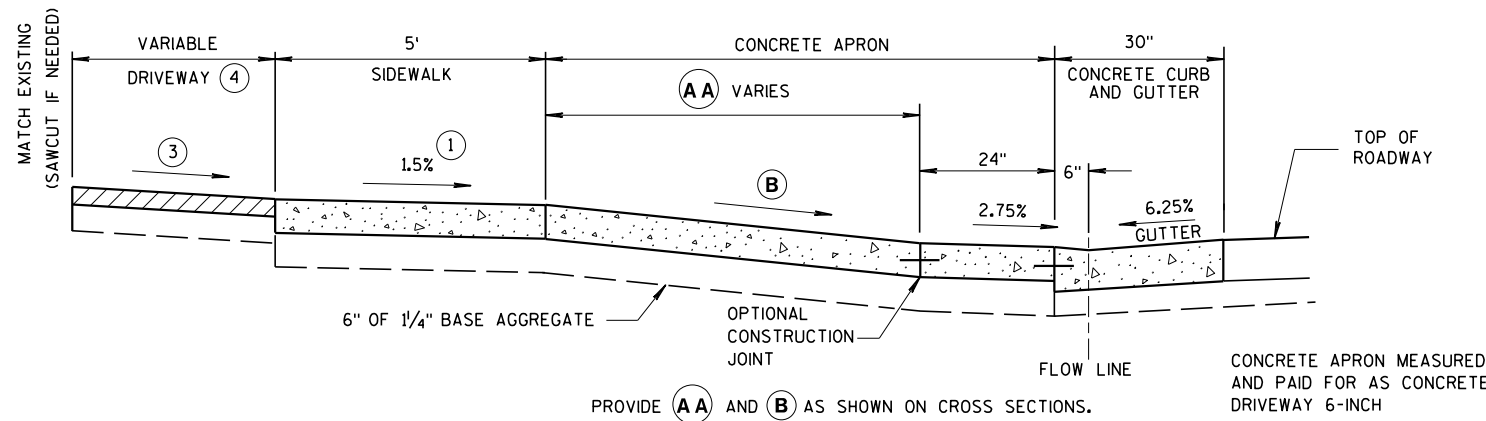
PROVIDE CONSTRUCTION JOINTS ALONG THE CENTER OF THE CONCRETE FOR DRIVEWAYS UNDER 20 FEET IN WIDTH AND AT THE THIRD POINTS OVER 20 FEET IN WIDTH.

(W) IS SHOWN ON PLAN AND PROFILE SHEETS.

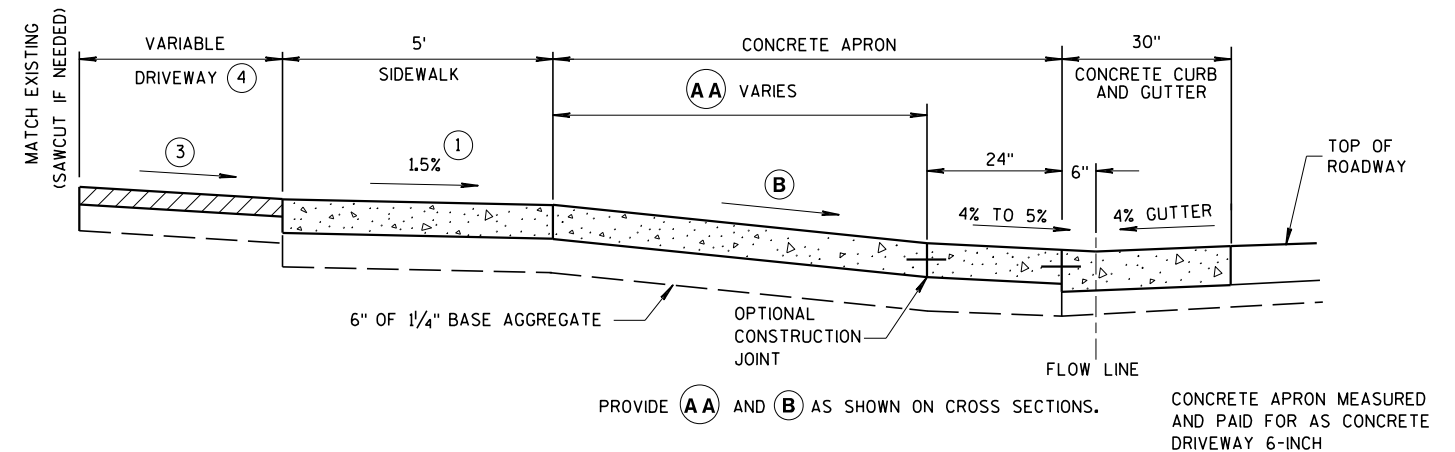
OFFSETS, ELEVATIONS, AND PERCENT GRADE ARE SHOWN ON THE CROSS SECTIONS.

- ① CONSTRUCTION TOLERANCE OF 0.5% ± FOR SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.
- ② THE SIDEWALK RAMP MAXIMUM RUNNING SLOPE SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15 FEET TO AVOID CHASING THE SLOPE INDEFINITELY WHEN CONNECTING TO STEEP GRADES. WHEN APPLYING THE 15 FOOT MAXIMUM LENGTH, THE RUNNING SLOPE OF THE SIDEWALK SHALL BE AS FLAT AS FEASIBLE AND NOT EXCEED THE LONGITUDINAL GRADE OF THE ROADWAY.
- ③ DRIVEWAY SLOPES: DESIRABLE MAXIMUM
10.5% UP AWAY FROM SIDEWALK (SAG)
8.5% DOWN AWAY FROM SIDEWALK (CREST)
ABSOLUTE MAXIMUM 15% FOR BOTH CREST AND SAG
- ④ DRIVEWAY TYPES
 - 6-INCH CONCRETE DRIVEWAY PAVEMENT OVER 6-INCH BASE AGGREGATE
 - 2-INCH TO 3-INCH ASPHALTIC SURFACE OVER 6-INCH BASE AGGREGATE
 - 6-INCH BASE AGGREGATE (MAY BE INCREASED FOR CLAY SUBGRADES)

(W): 12' MIN. - 24' MAX. RESIDENTIAL AND NON-COMMERCIAL (PE & FE)
16' MIN. - 35' MAX. COMMERCIAL (CE)



6.25% GUTTER SLOPE



4% GUTTER SLOPE

NOTE: SIDEWALK MAY BE DEPRESSED IN DRIVEWAY AREAS FOR B VALUES NOT SHOWN IN TABLE Z.
SIDEWALK WITHIN THE LIMITS OF THE DRIVEWAY PAID FOR AS CONCRETE DRIVEWAY 6-INCH.
SEPARATE PAYMENT FOR BASE AGGREGATE WILL BE MADE.

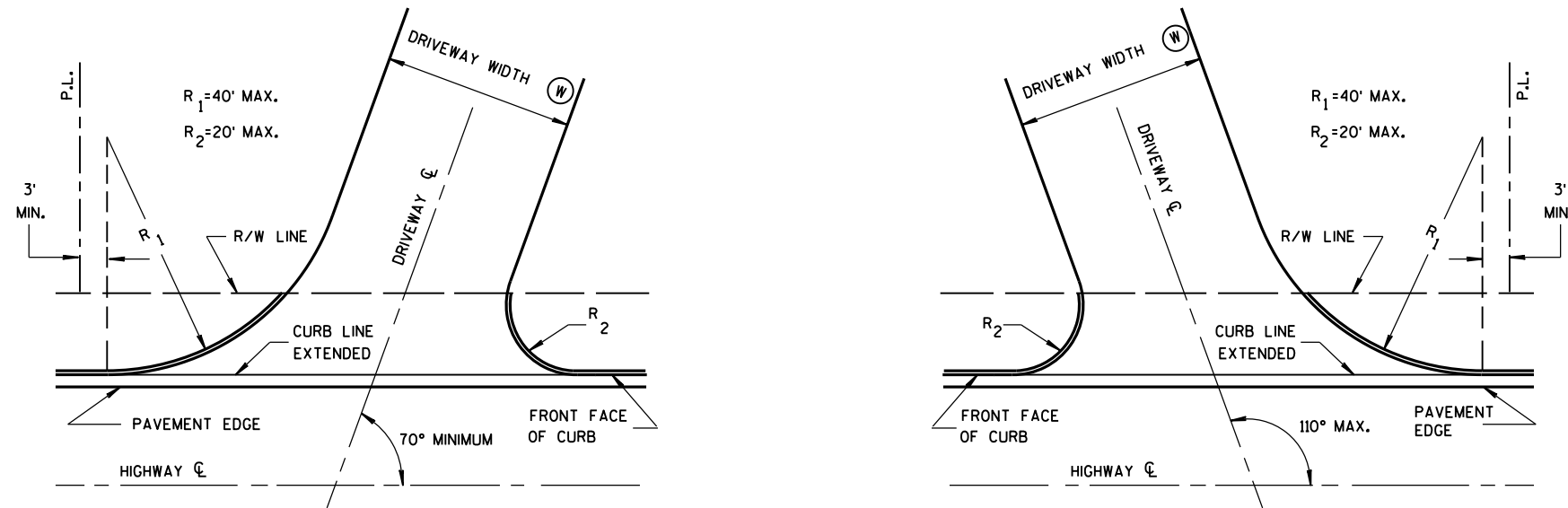
**SECTION Z-Z
DRIVEWAY DETAIL WITH CONCRETE CURB & GUTTER
(URBAN AND SUBURBAN)**

NOT TO SCALE

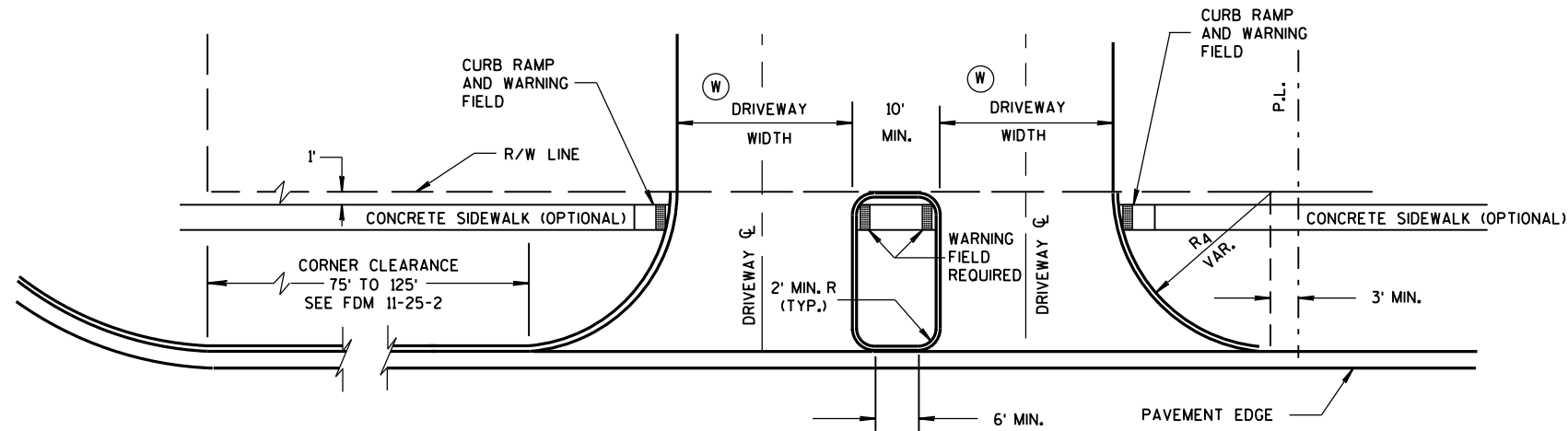
DRIVEWAY AND SIDEWALK RAMP TYPE Z

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA



**SKewed DRIVEWAY DETAILS
(COMMERCIAL AND NON-COMMERCIAL)
SIDEWALK NOT SHOWN**



**DRIVEWAY LOCATION AND SPACING DETAILS
SIDEWALK SHOWN**

NOTES

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

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

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

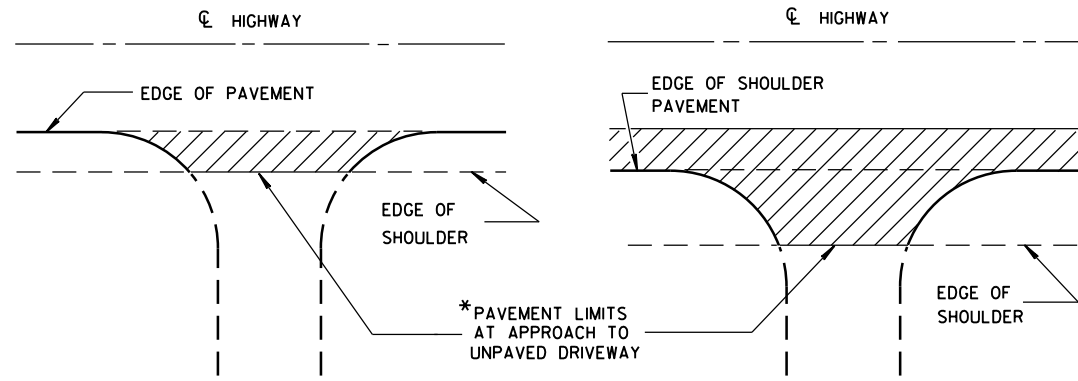
NO DRIVEWAY SHALL BE BUILT WITHIN 3 FEET OF THE PROPERTY LINE EXCEPT FOR EXISTING JOINT DRIVEWAY SHARED BY TWO OWNERS.

- Ⓜ DRIVEWAY WIDTHS:
 COMMERCIAL - 35' MAX., 16' MIN.
 RESIDENTIAL AND NON-COMMERCIAL - 24' MAX., 12' MIN.

**DRIVEWAYS WITH
CURB & GUTTER RETURNS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
 December, 2016 /s/ Rodney Taylor
 DATE ROADWAY STANDARDS DEVELOPMENT
 FHWA UNIT SUPERVISOR

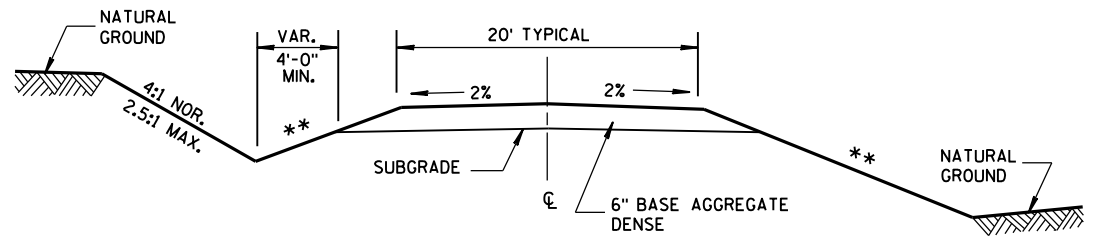


*WHERE DRIVEWAY IS PAVED, APPROACH PAVEMENT SHOULD BE EXTENDED TO MATCH DRIVEWAY PAVEMENT.

PLAN VIEW
(UNPAVED SHOULDER ON HIGHWAY)

PLAN VIEW
(PAVED SHOULDER ON HIGHWAY)

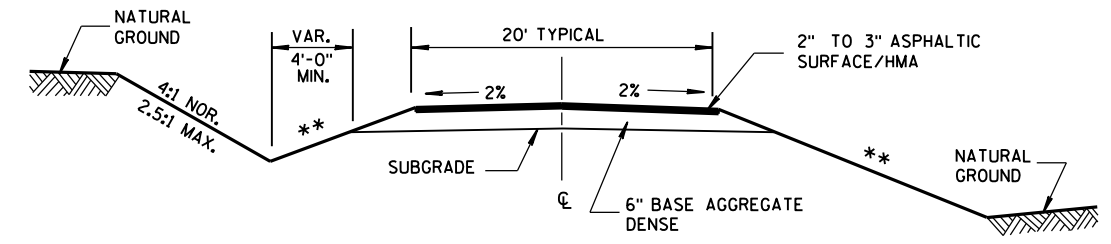
RURAL DRIVEWAY INTERSECTION DETAIL
(NO CURB & GUTTER OR SIDEWALK)



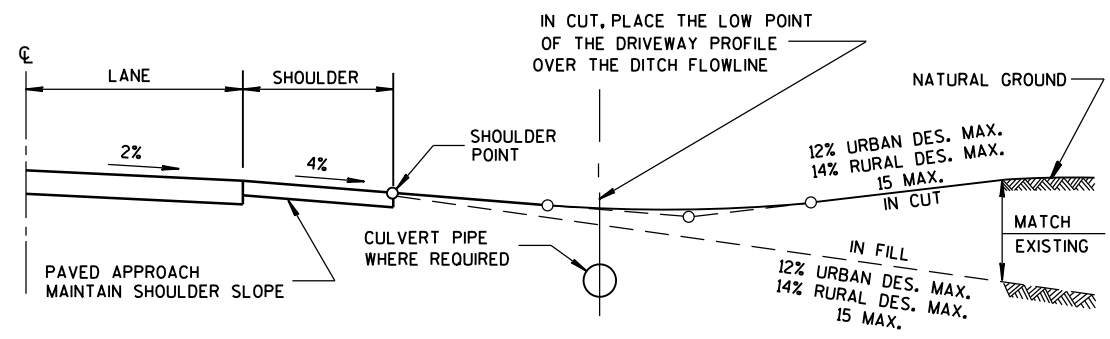
TYPICAL CROSS SECTION FOR PRIVATE DRIVE OR FIELD ENTRANCE
AGGREGATE SURFACE

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

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

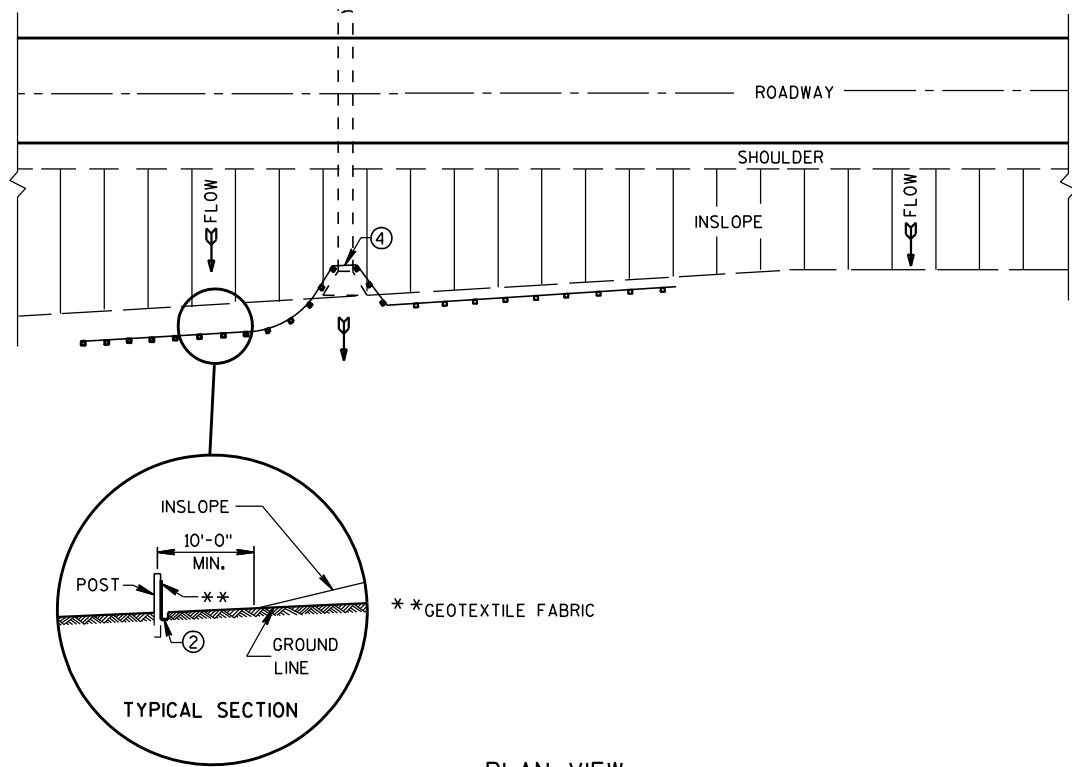


TYPICAL CROSS SECTION FOR PRIVATE DRIVE OR FIELD ENTRANCE
ASPHALTIC SURFACE

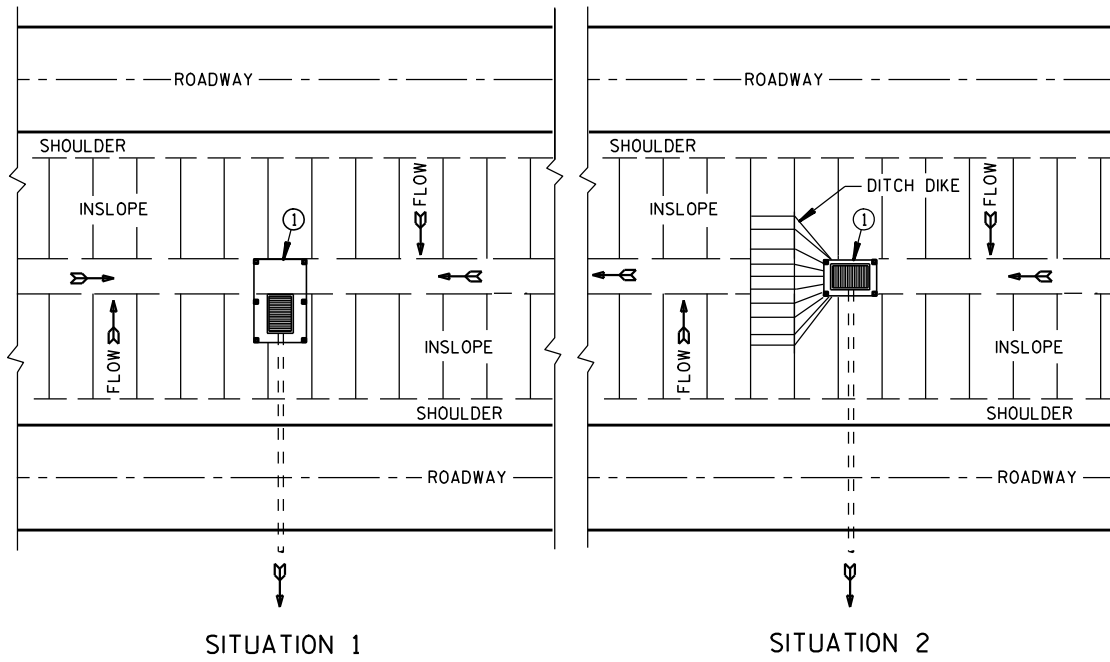


TYPICAL DRIVEWAY PROFILES

DRIVEWAYS WITHOUT CURB & GUTTER	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED December, 2016	/S/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
DATE	FHWA



PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE

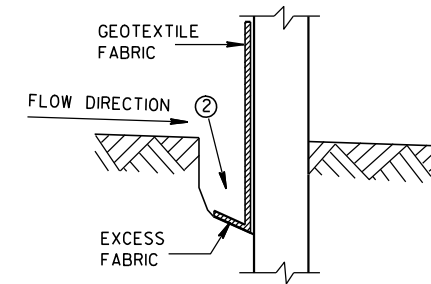


SITUATION 1 SITUATION 2
PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

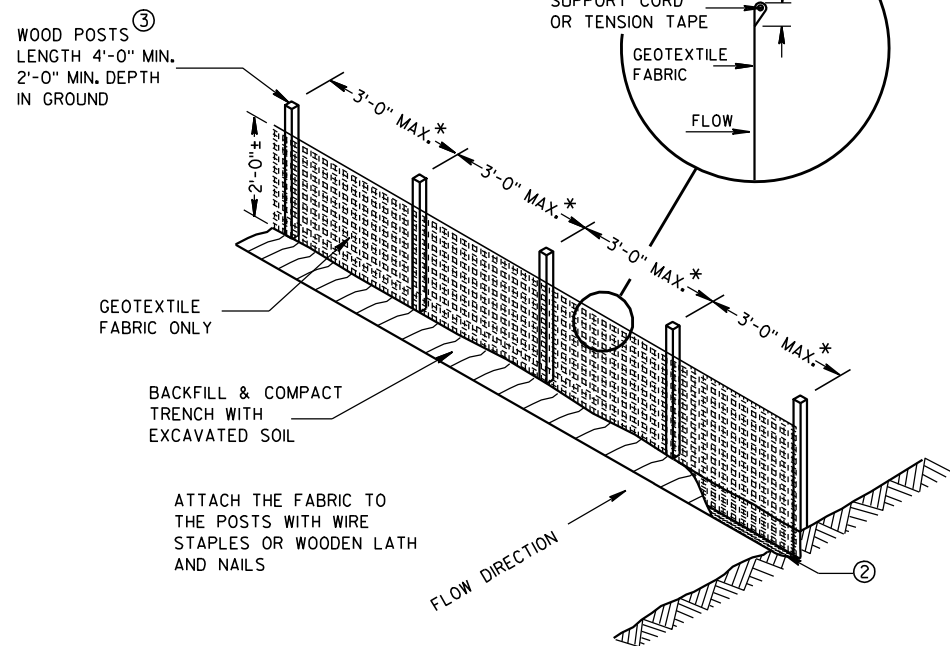
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

- 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.



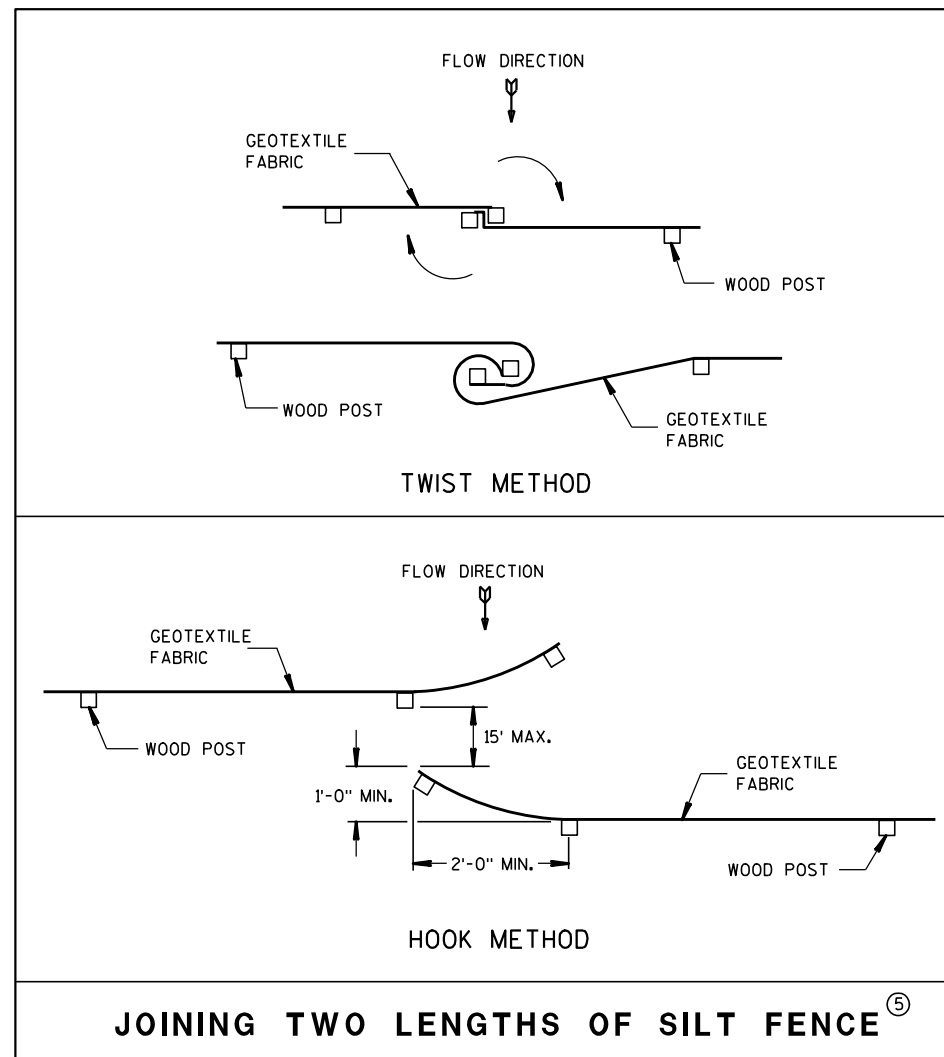
TRENCH DETAIL

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

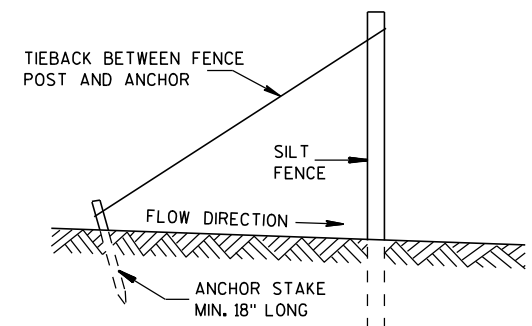


SILT FENCE

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



JOINING TWO LENGTHS OF SILT FENCE ⑤

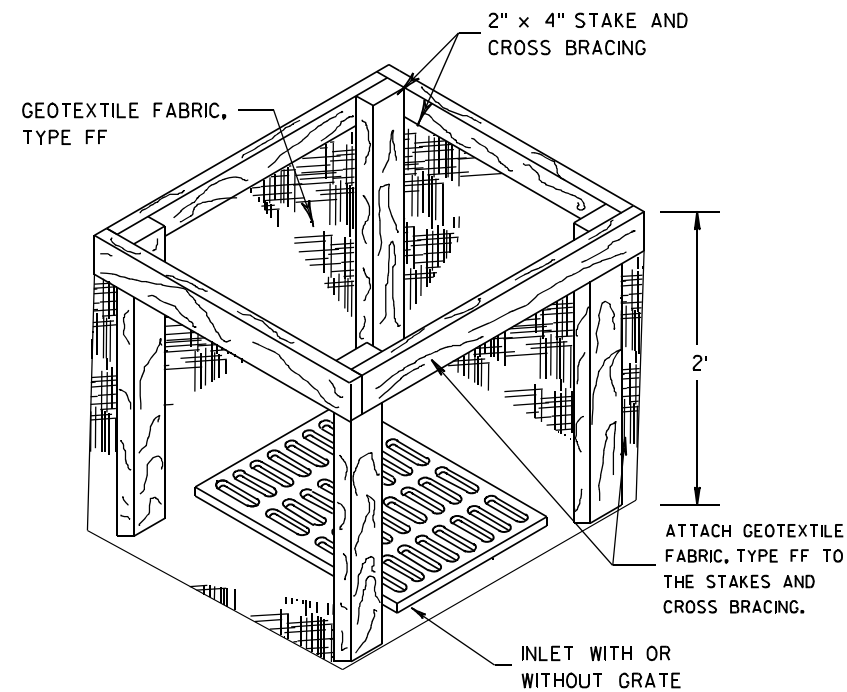
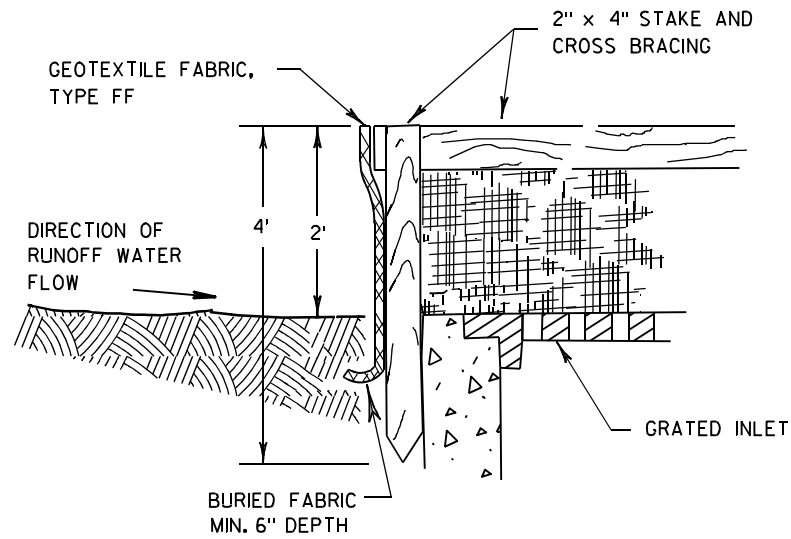


SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



INLET PROTECTION, TYPE A

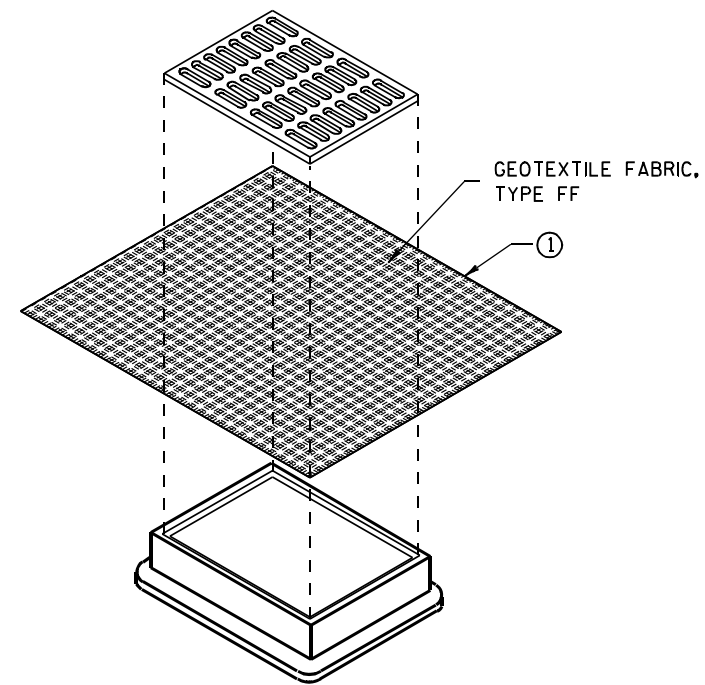
GENERAL NOTES

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

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

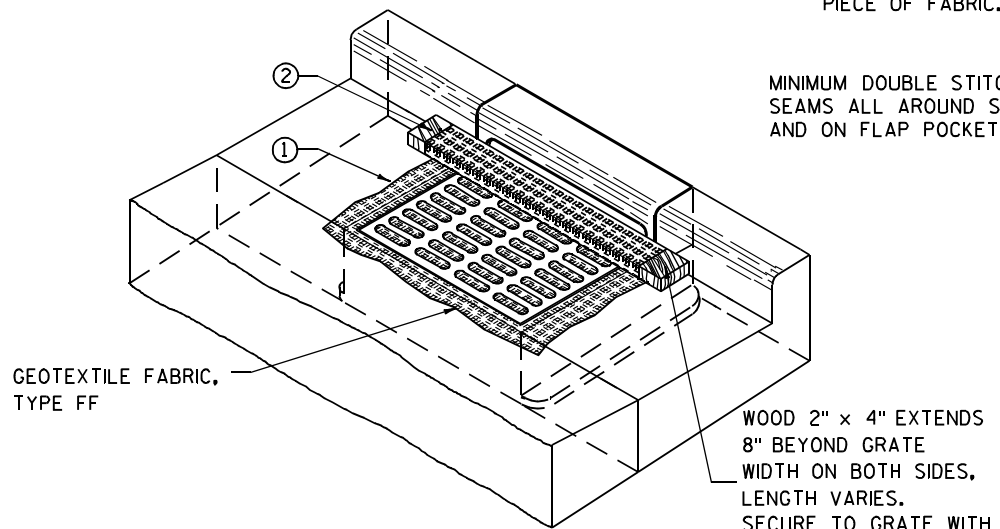
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- ① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.
- ② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.
- ③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.



**INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)**

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



INLET PROTECTION, TYPE C (WITH CURB BOX)

INSTALLATION NOTES

TYPE B & C

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

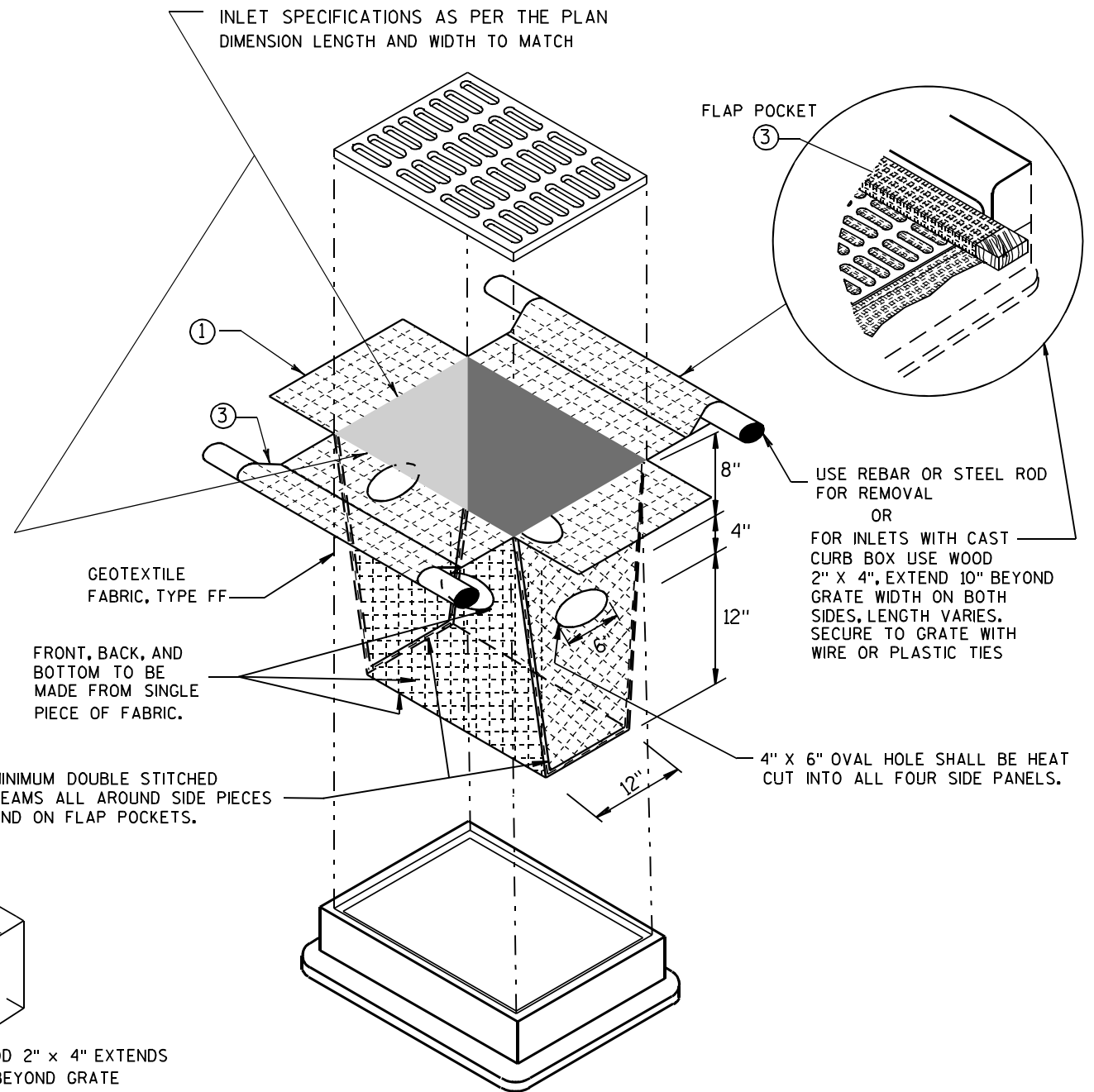
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

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

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

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



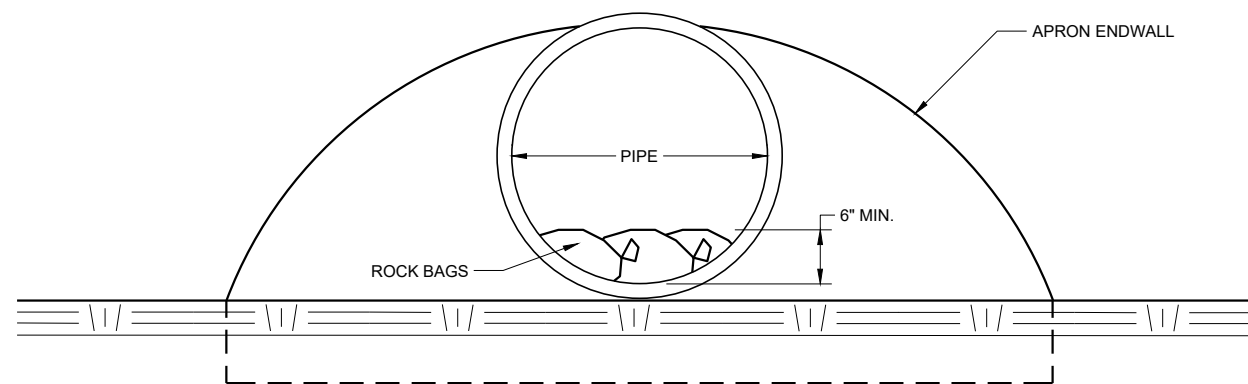
INLET PROTECTION, TYPE D

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

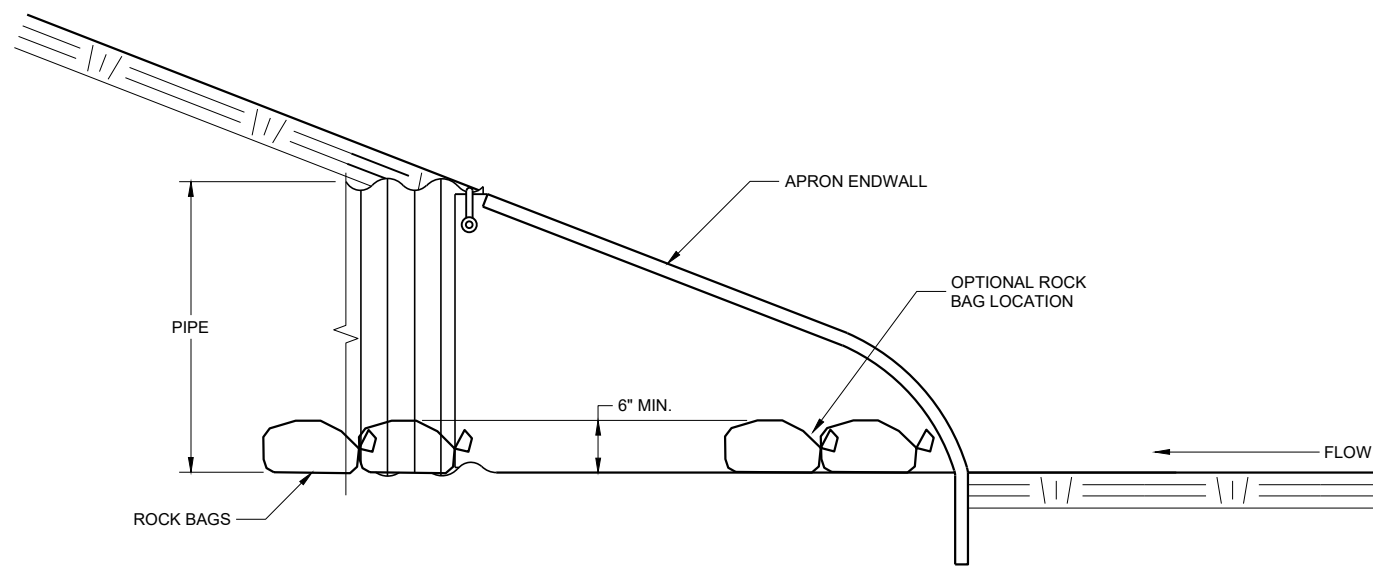
**INLET PROTECTION
TYPE A, B, C, AND D**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



END VIEW



SIDE VIEW

CULVERT PIPE CHECK
 (INSTALL ON INLET END ONLY)

CULVERT PIPE CHECK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
 May 2019 /S/ Daniel Schave
 DATE EROSION CONTROL ENGINEER

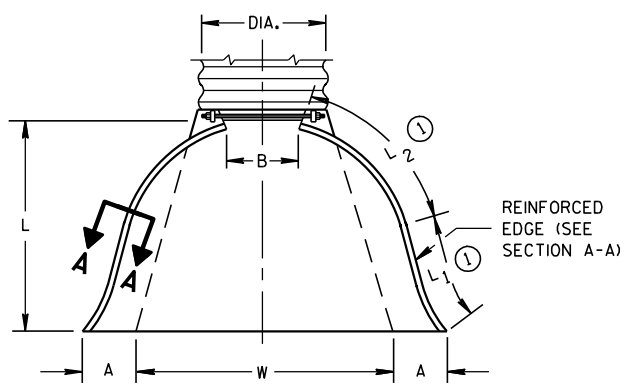
FHWA

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

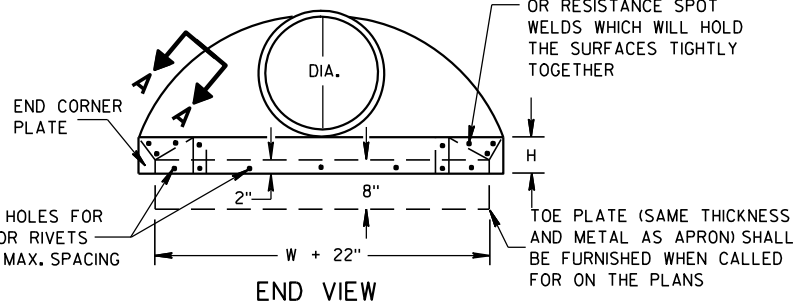
REINFORCED CONCRETE APRON ENDWALLS									
PIPE DIA. (IN.)	DIMENSIONS (Inches)							APPROX. SLOPE	
	T	A	B	C	D	E	G		
12	2	4	24	48 1/8	72 1/8	24	2	3 to 1	
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1	
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1	
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1	
24	3	9 1/2	43 1/2	30	73 1/2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

* MINIMUM
** MAXIMUM

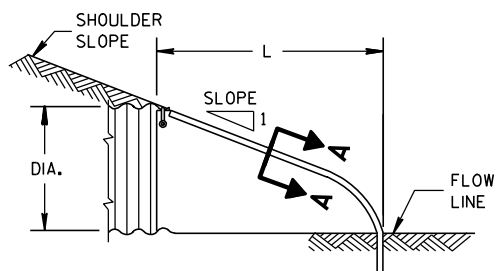


PLAN VIEW

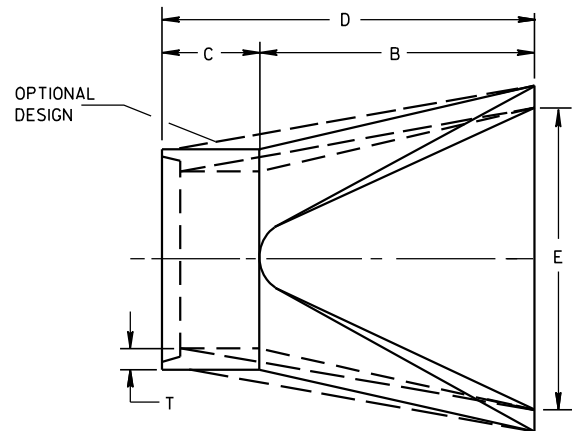
END CORNER PLATES MAY BE FASTENED TO APRON PROPER BY BOLTS, RIVETS, OR RESISTANCE SPOT WELDS WHICH WILL HOLD THE SURFACES TIGHTLY TOGETHER



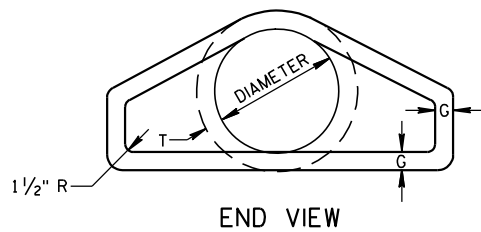
END VIEW



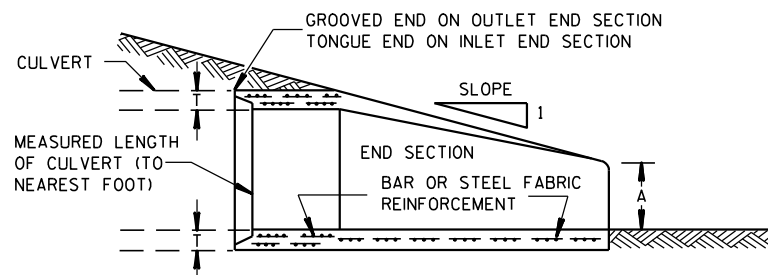
SIDE ELEVATION
METAL ENDWALLS



PLAN

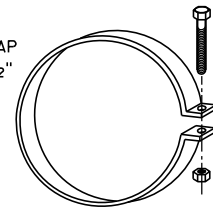


END VIEW



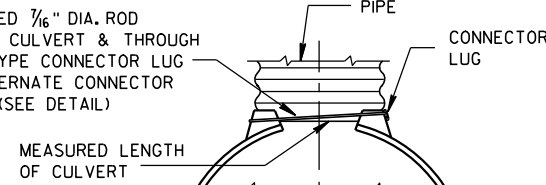
LONGITUDINAL SECTION
CONCRETE ENDWALLS

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



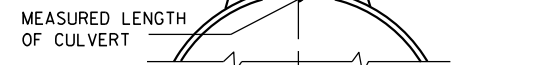
ALTERNATE FOR TYPE 1 CONNECTION
END SECTION CONNECTOR STRAP

THREADED 3/16" DIA. ROD AROUND CULVERT & THROUGH TANK TYPE CONNECTOR LUG OR ALTERNATE CONNECTOR STRAP (SEE DETAIL)



TYPE 1
FOR 12" THRU 24" CORR. PIPE

THREADED 3/16" DIA. ROD OVER TOP OF APRON, SIDE LUGS TO BE RIVETED TO APRON



TYPE 2
FOR 30" THRU 96" CORR. PIPE

MEASURED LENGTH OF CULVERT

TYPE 3
FOR 42" THRU 96" CORR. PIPE

MEASURED LENGTH OF CULVERT

TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

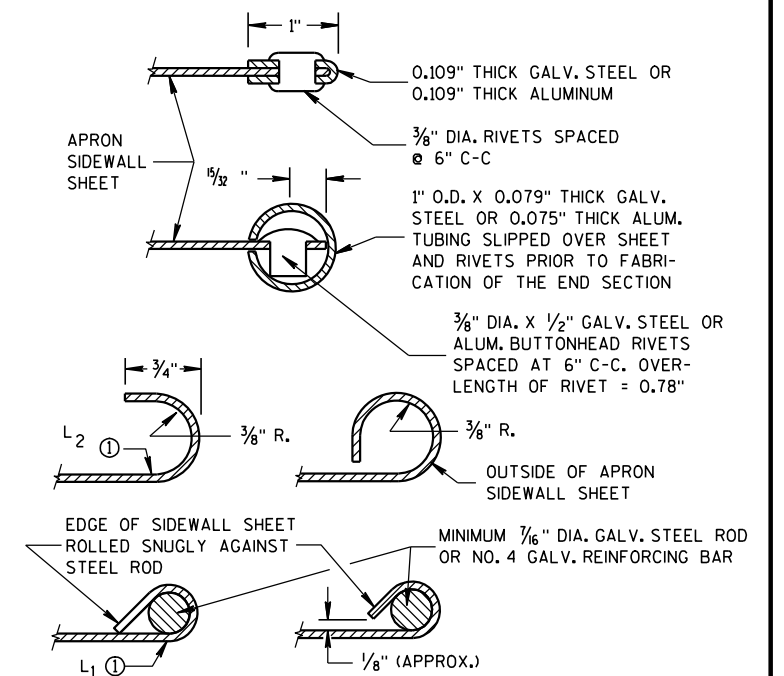
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

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

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

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

CONCRETE CULVERT ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VICE 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.

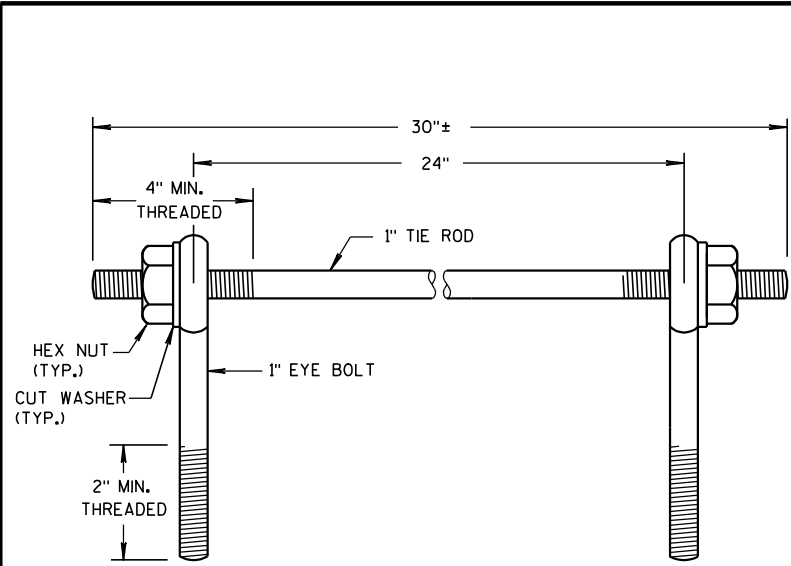
WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

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

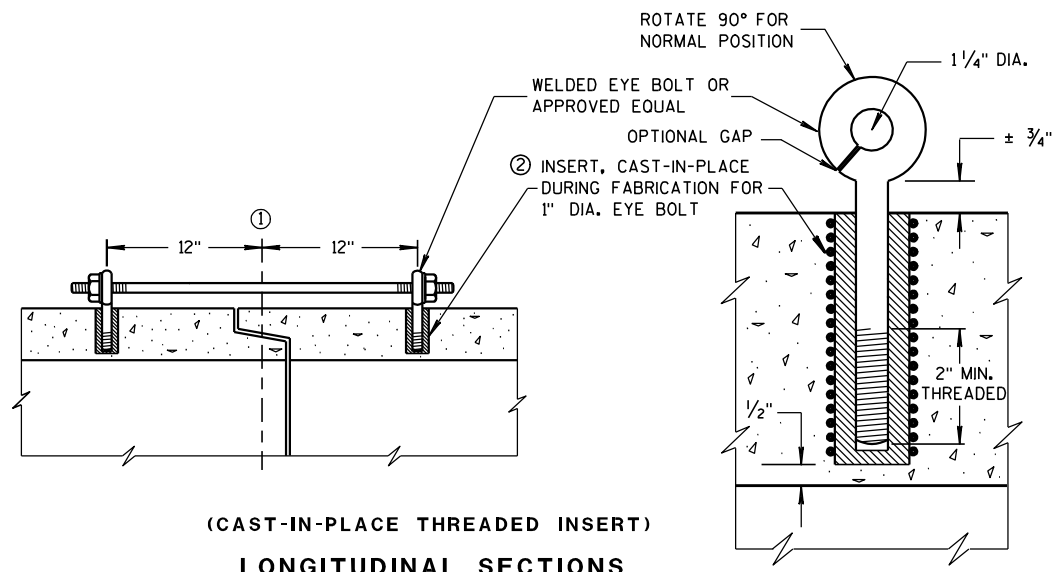
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



EYE BOLTS AND TIE ROD

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 1)



(CAST-IN-PLACE THREADED INSERT)
LONGITUDINAL SECTIONS

GENERAL NOTES

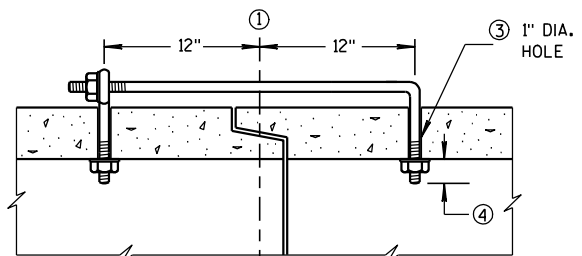
DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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

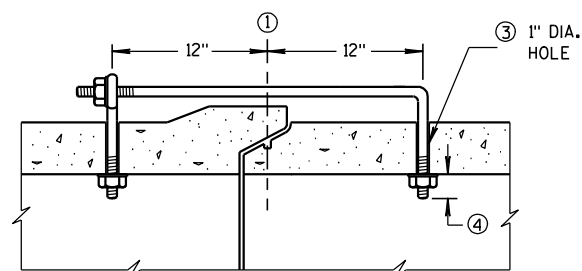
DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR JOINT TIES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

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

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



(TONGUE & GROOVE PIPE)



(MODIFIED BELL PIPE)
LONGITUDINAL SECTION

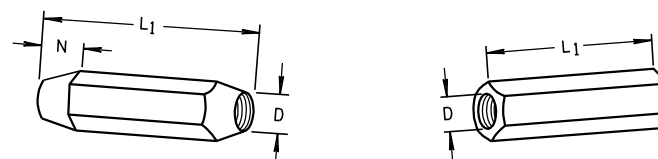
EYE BOLT DIMENSION TABLE

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

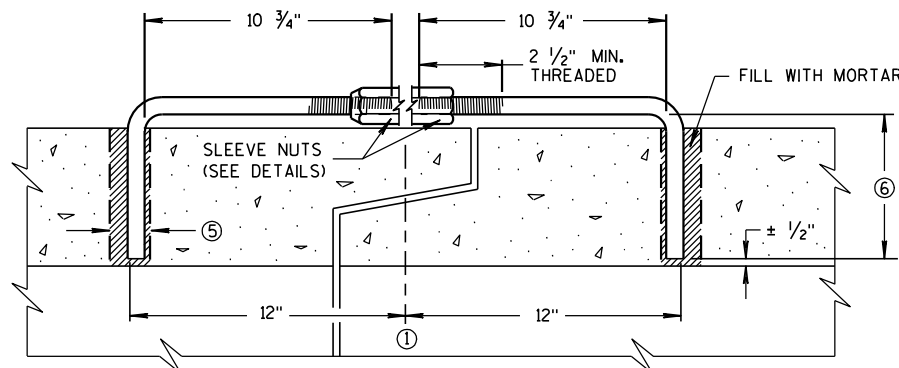
ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L1	N
12-60	5/8	5/8	5	1/2
66-84	3/4	3/4	5	1/2
90-108	1	1	7	1 1/6

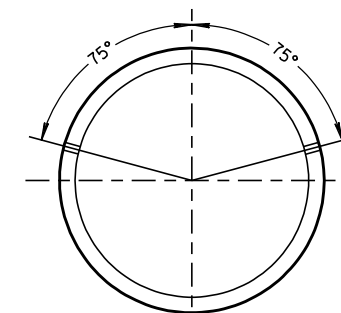
DIMENSIONS SHOWN ARE IN INCHES



TAPERED PLAIN
RIGHT AND LEFT THREADS
SLEEVE NUTS

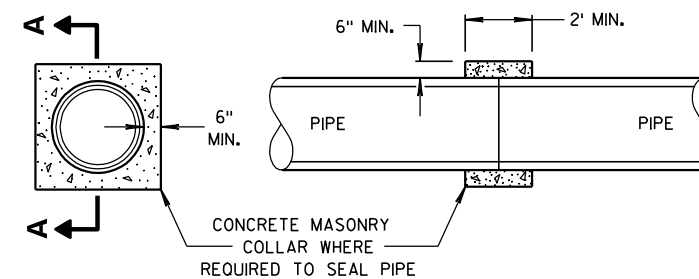


LONGITUDINAL SECTION
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)
ADJUSTABLE TIE ROD (ALTERNATE NO. 3)

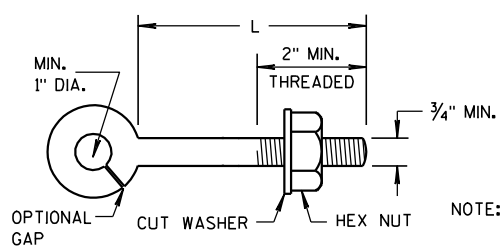


PLACEMENT OF (2) CAST-IN-PLACE
INSERTS OR HOLES DURING FABRICATION
FOR PIPE SECTIONS REQUIRING TIE RODS

TRANSVERSE SECTION

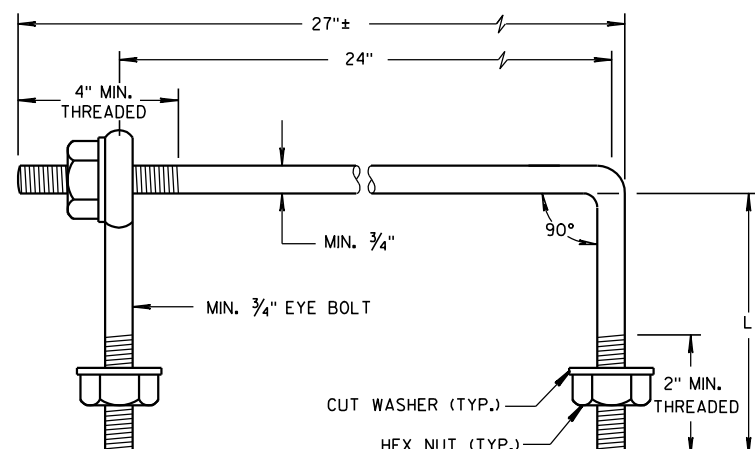


SECTION A-A
CONCRETE COLLAR DETAIL



EYE BOLT

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



EYE BOLT AND TIE ROD

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

6

6

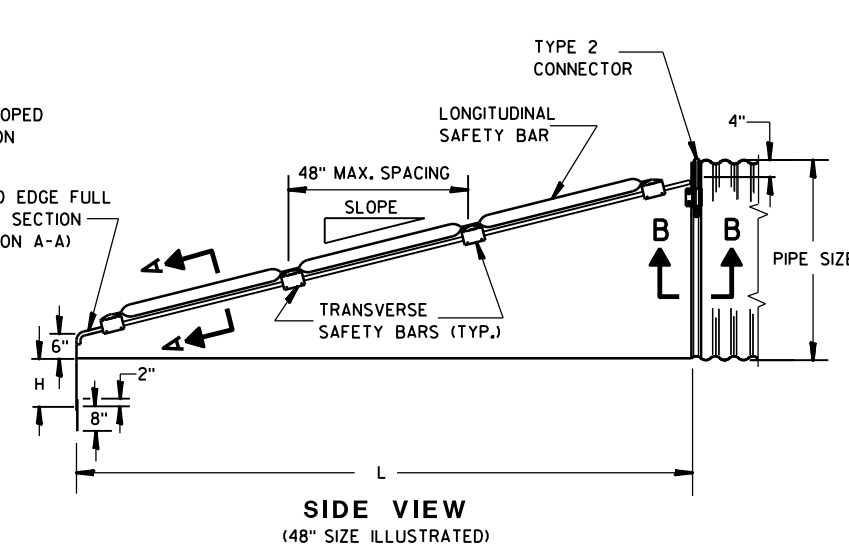
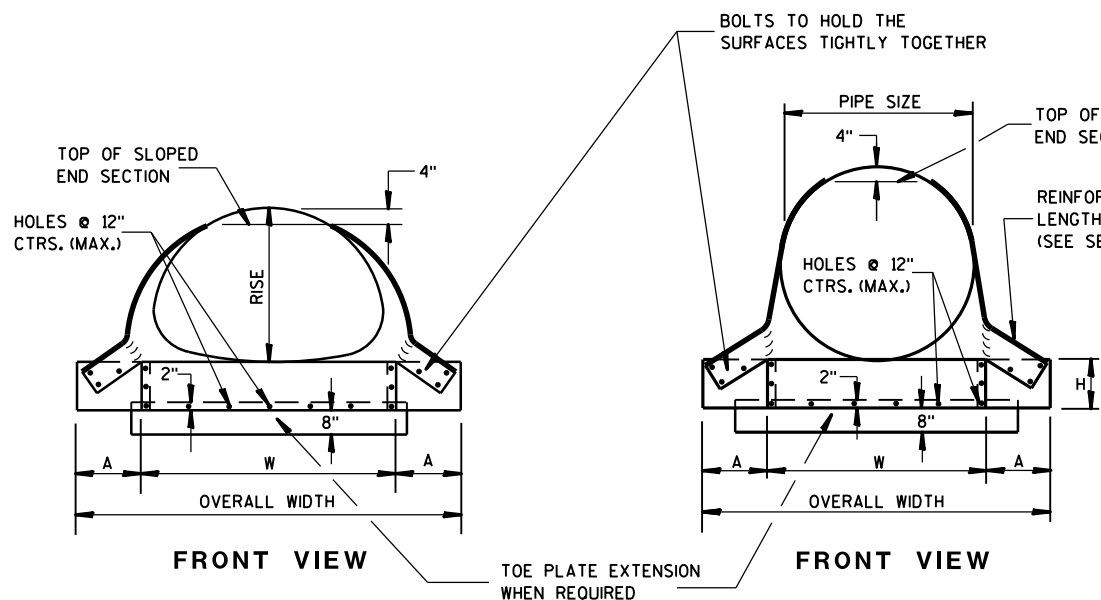
S.D.D. 8 F 4-7

S.D.D. 8 F 4-7

JOINT TIES FOR CONCRETE
PIPE AND CONCRETE
COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



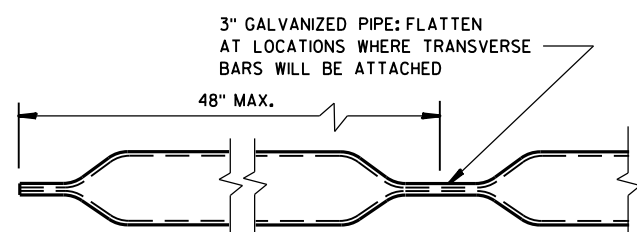
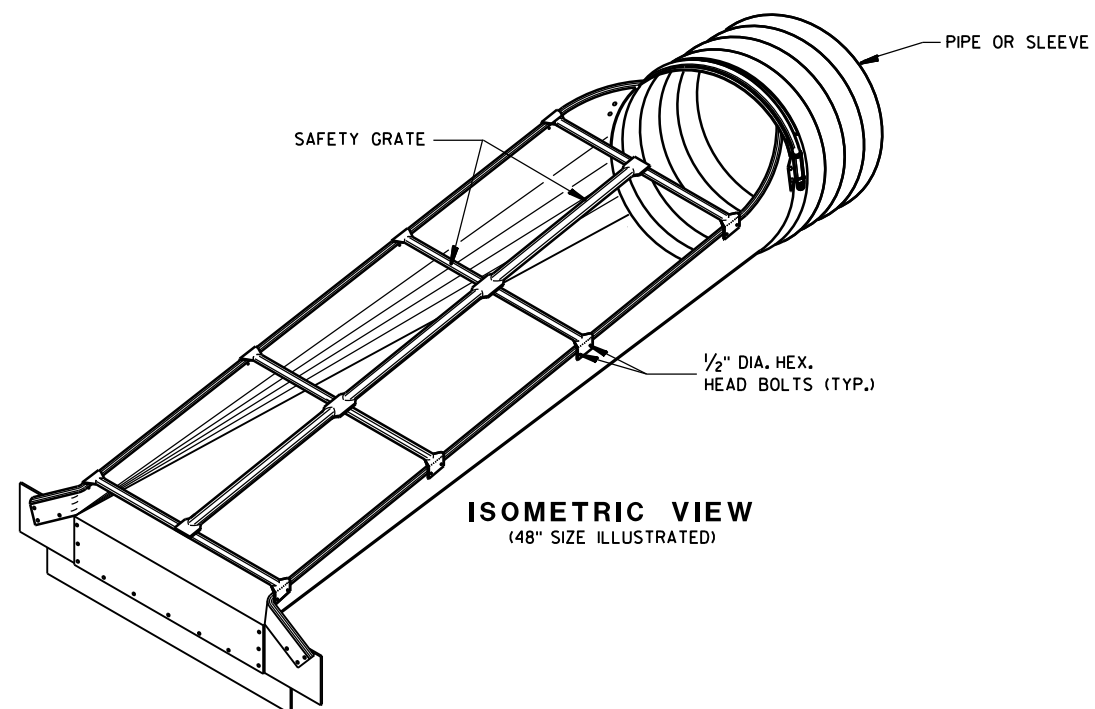
GENERAL NOTES

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

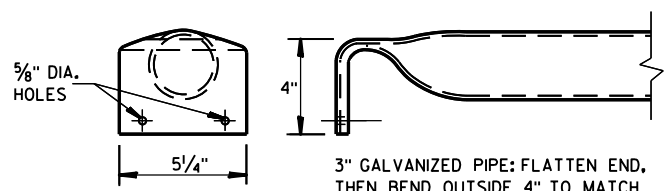
SAFETY GRATES SHALL BE FABRICATED FROM 3-INCH DIAMETER GALVANIZED PIPE MEETING THE REQUIREMENTS OF ASTM A-53, GRADE B, SCHEDULE 40 OR APPROVED EQUAL. THE LONGITUDINAL BAR SHALL BE WELDED TO THE TRANSVERSE BARS WHERE THE BARS CROSS. THE NUMBER OF TRANSVERSE BARS REQUIRED WILL VARY DEPENDING ON THE LENGTH OF THE END SECTION.

SLOPED STEEL ENDWALLS LOCATED AT THE ENDS OF CONCRETE CULVERT PIPE SHALL BE FURNISHED WITH STEEL ADAPTER SLEEVES.

STEEL APRON ENDWALLS FOR CULVERT PIPE CROSS DRAINS										
PIPE DIA. (IN.)	MIN. THICK. IN.	GAGE	DIMENSIONS (inches)				L DIMENSIONS			
			A	H	W	OVERALL WIDTH	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES
36	.109	12	12	9	42	66	4:1	104	6:1	156
42	.109	12	16	12	48	80	4:1	128	6:1	192
48	.109	12	16	12	54	86	4:1	152	6:1	228
54	.109	12	16	12	60	92	4:1	176	6:1	264
60	.109	12	16	12	66	98	4:1	200	6:1	300

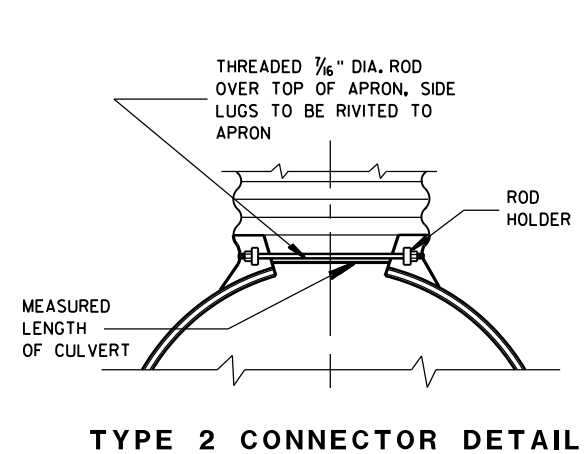


LONGITUDINAL SAFETY BAR

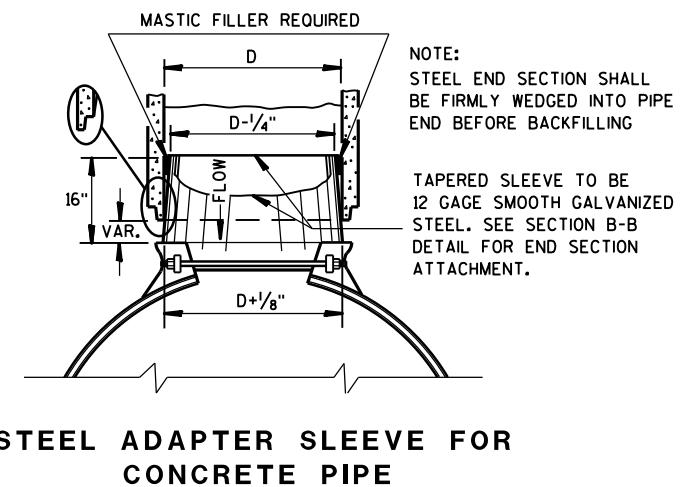


TRANSVERSE SAFETY BAR

STEEL APRON ENDWALLS FOR PIPE ARCH SLOPED CROSS DRAINS												
EQUIV. DIA. (IN.)	INCHES		MIN. THICK. IN.	GAGE	DIMENSIONS (inches)				L DIMENSIONS			
	SPAN	RISE			A	H	W	OVERALL WIDTH	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES
30	35	24	.079	14	12	9	41	65	4:1	56	6:1	84
36	42	29	.109	12	12	9	48	72	4:1	76	6:1	114
42	49	33	.109	12	16	12	55	87	4:1	92	6:1	138
48	57	38	.109	12	16	12	63	95	4:1	112	6:1	168
54	64	43	.109	12	16	12	70	102	4:1	132	6:1	198
60	71	47	.109	12	16	12	77	109	4:1	148	6:1	222



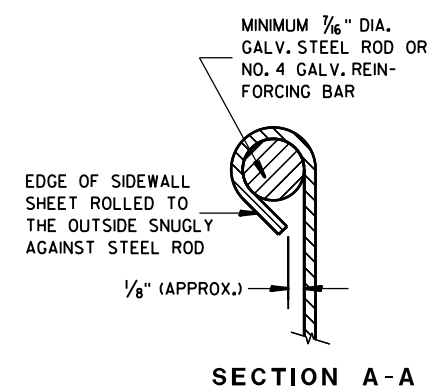
TYPE 2 CONNECTOR DETAIL



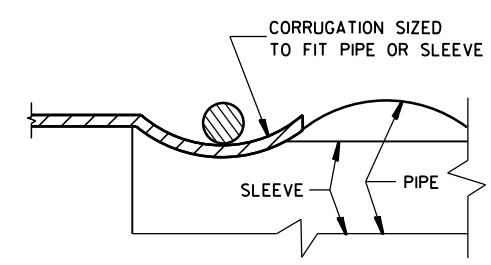
STEEL ADAPTER SLEEVE FOR CONCRETE PIPE

NOTE: STEEL END SECTION SHALL BE FIRMLY WEDGED INTO PIPE END BEFORE BACKFILLING

TAPERED SLEEVE TO BE 12 GAGE SMOOTH GALVANIZED STEEL. SEE SECTION B-B DETAIL FOR END SECTION ATTACHMENT.



SECTION A-A

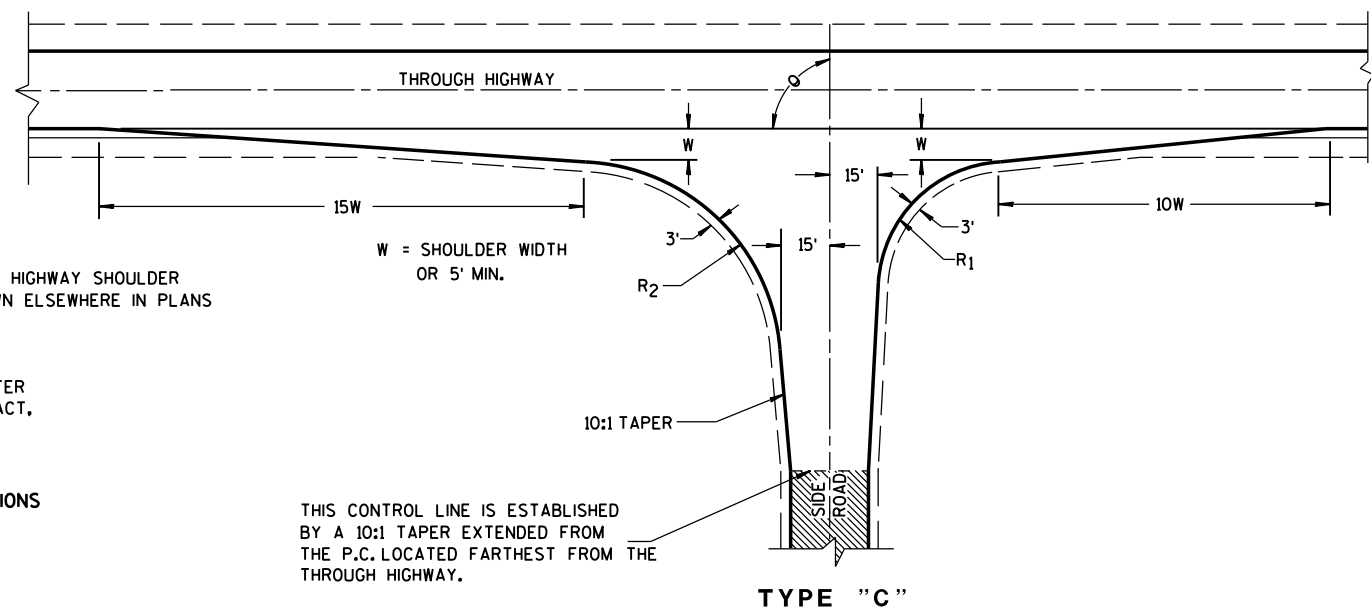
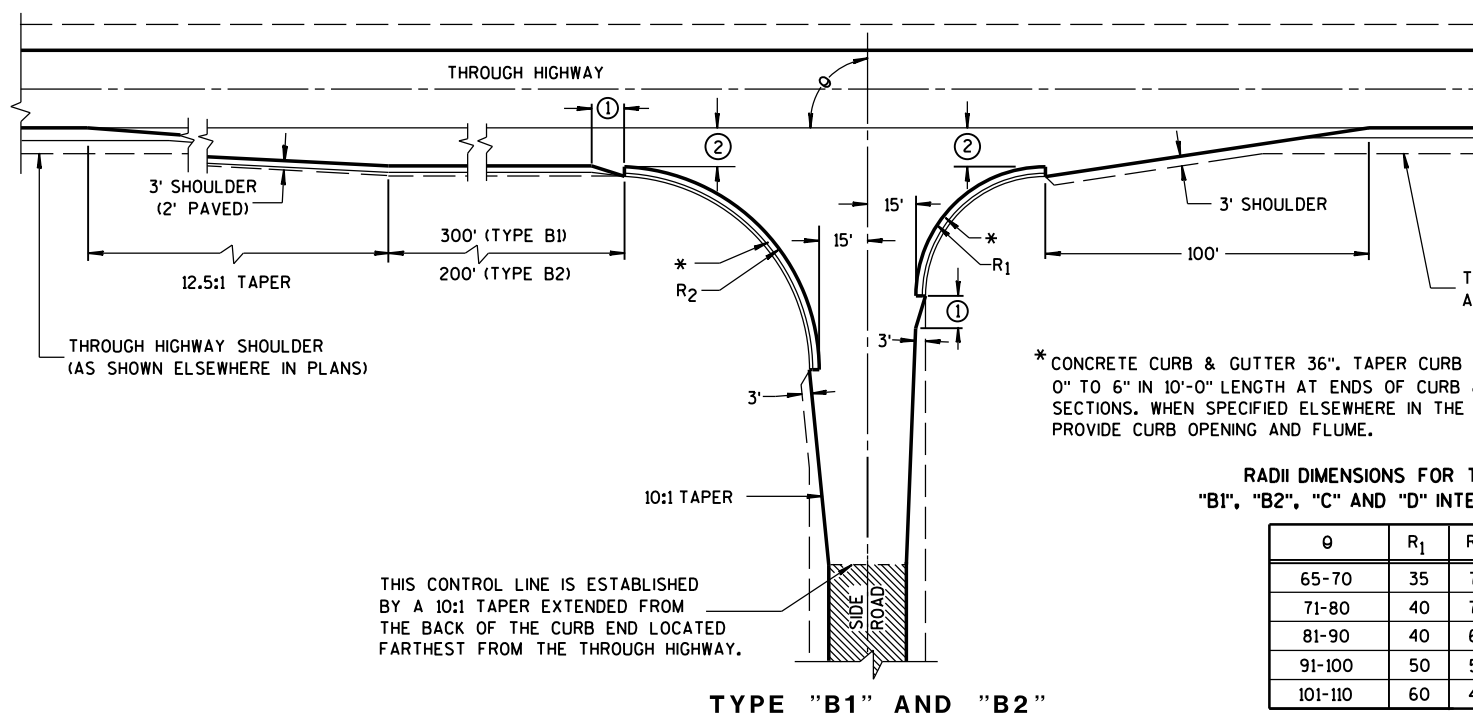


SECTION B-B

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



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

θ	R ₁	R ₂
65-70	35	70
71-80	40	70
81-90	40	60
91-100	50	55
101-110	60	45

GENERAL NOTES

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

SIDE ROAD SURFACING NOTE

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

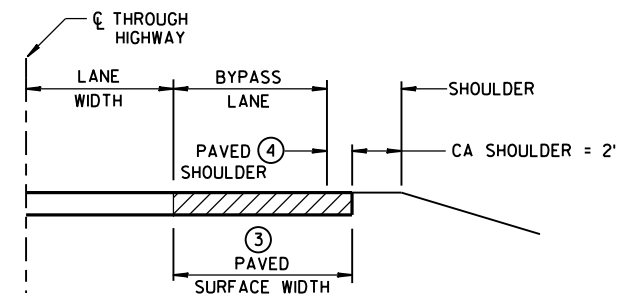
WHEN THE SIDE ROAD IS PRESENTLY PAVED, NEW PAVEMENT SHALL BE PLACED TO THE LIMITS OF DESIGN AS SHOWN AND BEYOND, IF NECESSARY, TO MEET EXISTING PAVEMENT.

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

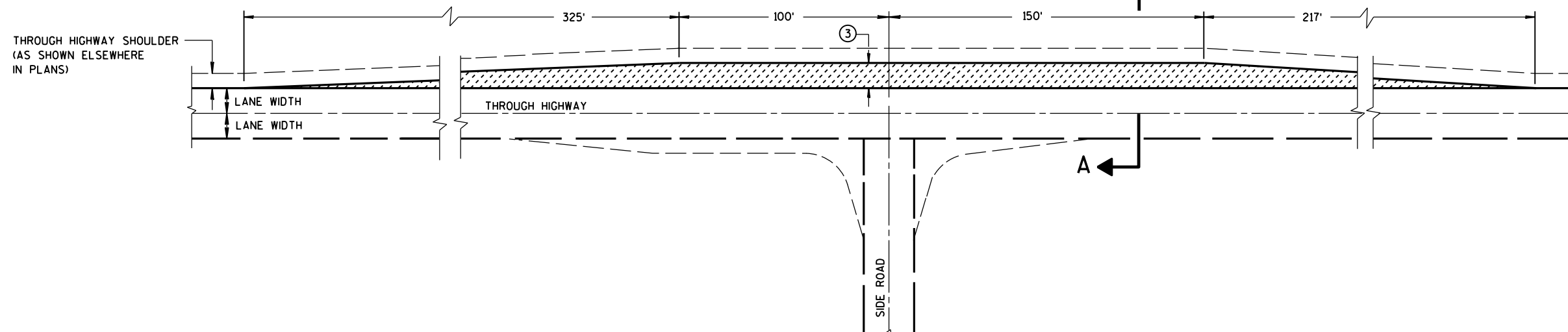
EXISTING PAVED SURFACE

BYPASS LANE

- ① 10-FT TYPICAL.
- ② 12-FT** PLUS ADDITIONAL WIDTH FOR BIKE LANE IF SHOWN ELSEWHERE IN THE PLAN.
- **10-FT MAY BE USED ON TYPE B2 ON RESURFACING PROJECTS IF SPECIFIED IN THE CONTRACT.
- ③ BYPASS LANE PAVED SURFACE WIDTH OUTSIDE OF TRAVEL LANE
-ASPHALT = 12-FT PLUS PAVED SHOULDER WIDTH.
-PC CONCRETE = 13-FT PLUS PAVED SHOULDER WIDTH.
- ④ BYPASS LANE PAVED SHOULDER WIDTH = THE GREATER OF 1-FT OR THE PAVED SHOULDER WIDTH OF THE THROUGH HIGHWAY.



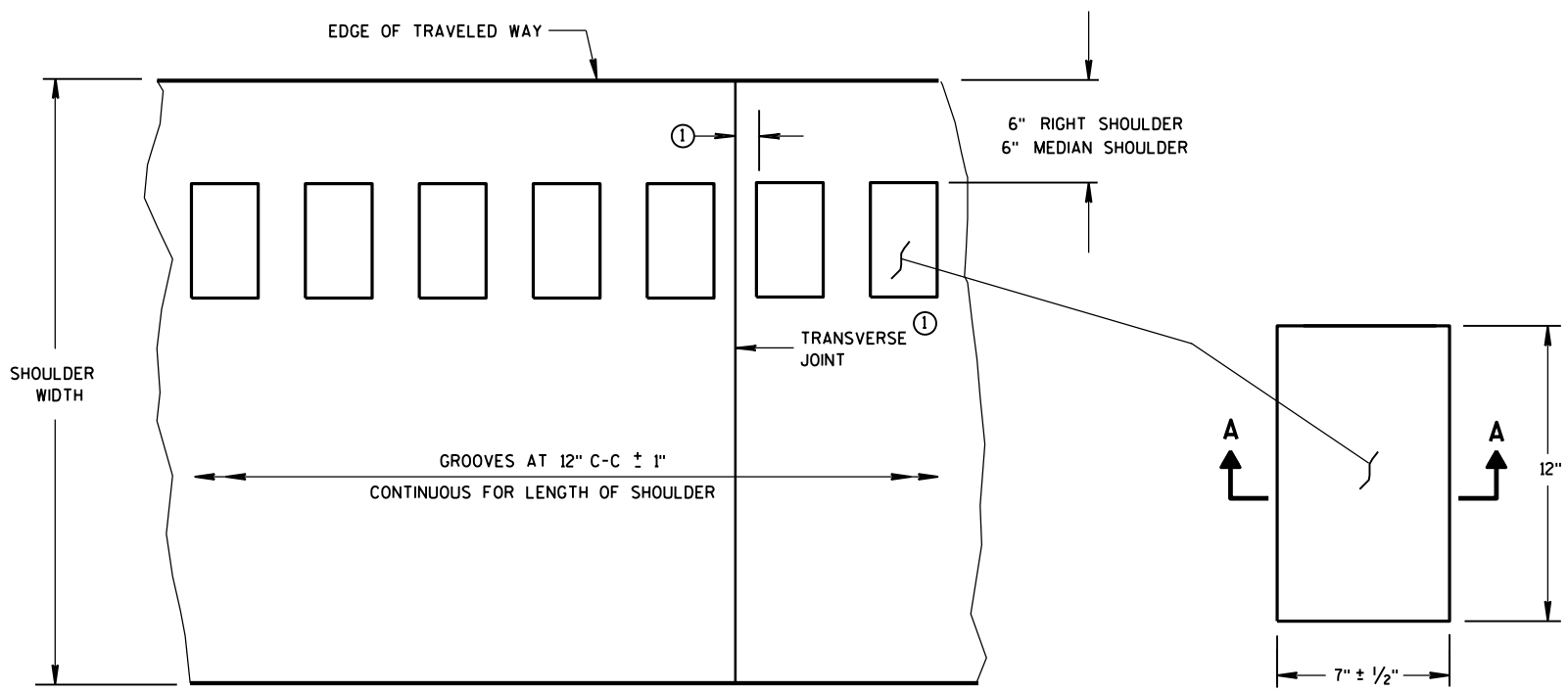
SECTION A-A
(SHOWING BYPASS LANE AND SHOULDER)



TEE INTERSECTION BYPASS LANE DETAIL

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

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PLAN VIEW
SHOULDER WITH GROOVES

PLAN VIEW
(SINGLE GROOVE)

PLACEMENT DETAIL FOR MILLED RUMBLE STRIP

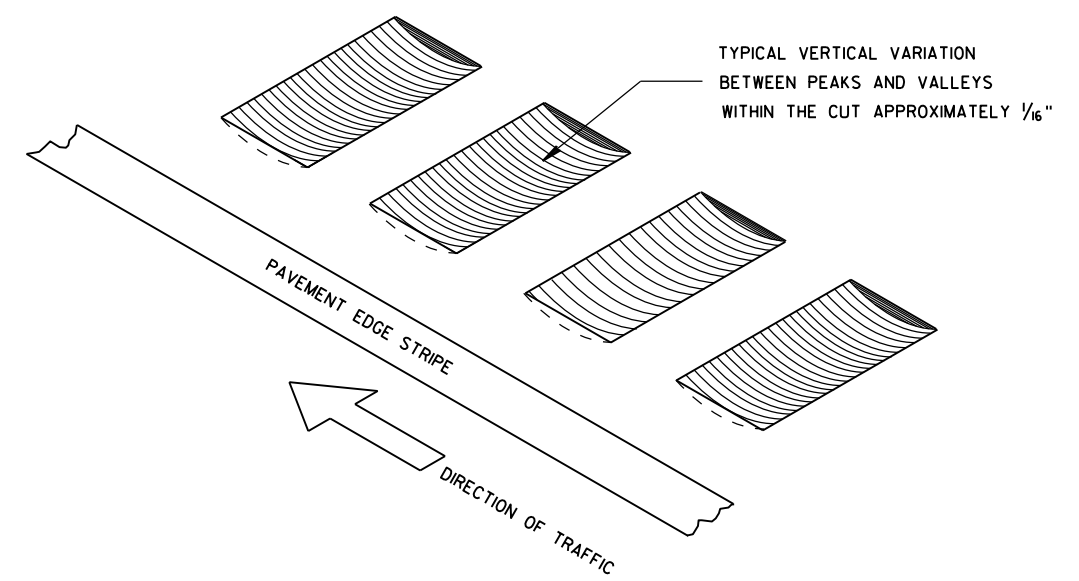
GENERAL NOTES

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

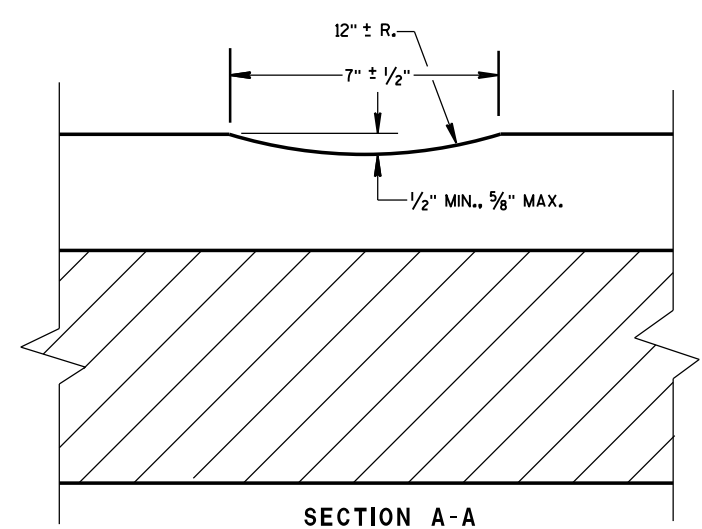
RUMBLE STRIPS ON EXPRESSWAYS

DO NOT INSTALL RUMBLE STRIPS ACROSS SIDE ROAD INTERSECTIONS, COMMERCIAL DRIVEWAYS, PRIVATE DRIVEWAYS OR ADJACENT TO RIGHT TURN LANES, LEFT TURN LANES, TURN LANE TAPERS, BRIDGE DECKS, BRIDGE APPROACHES, OR 100 FEET IN ADVANCE OF RAILROAD CROSSING. THE ATTACHED STANDARD DETAIL DRAWING SHOWS THE LOCATION OF THE RUMBLE STRIPS AT INTERCHANGE AREAS.

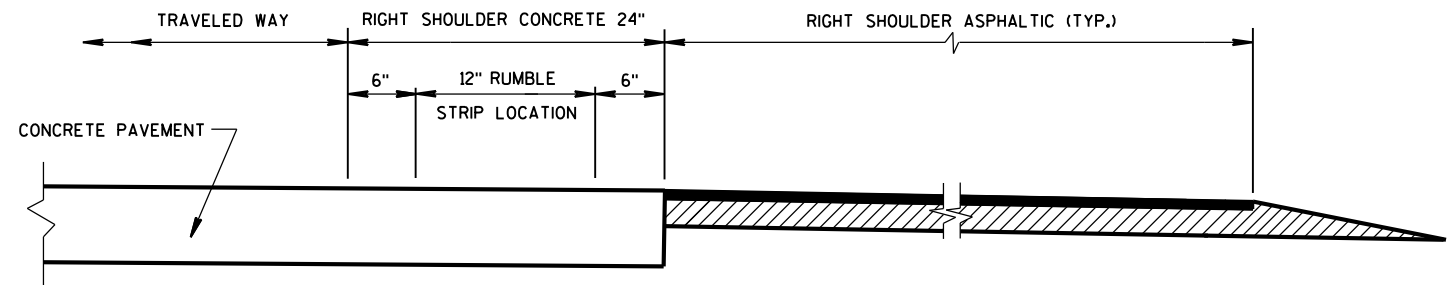
① CONCRETE PAVEMENT - RUMBLE STRIPS SHALL BE A MINIMUM OF 6" AWAY FROM TRANSVERSE JOINTS.



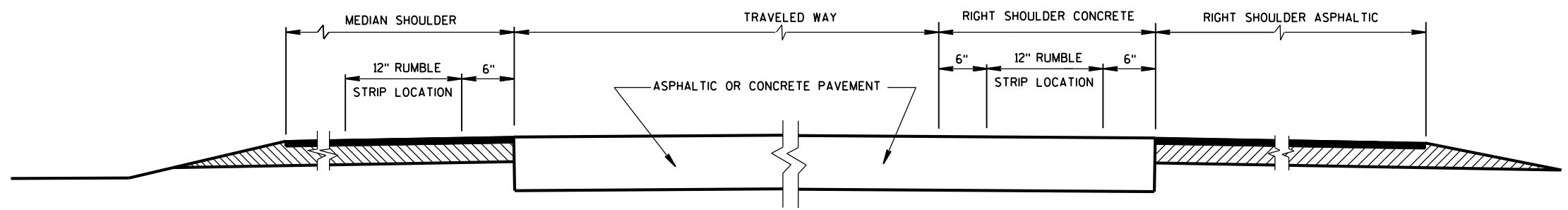
ISOMETRIC



SECTION A-A



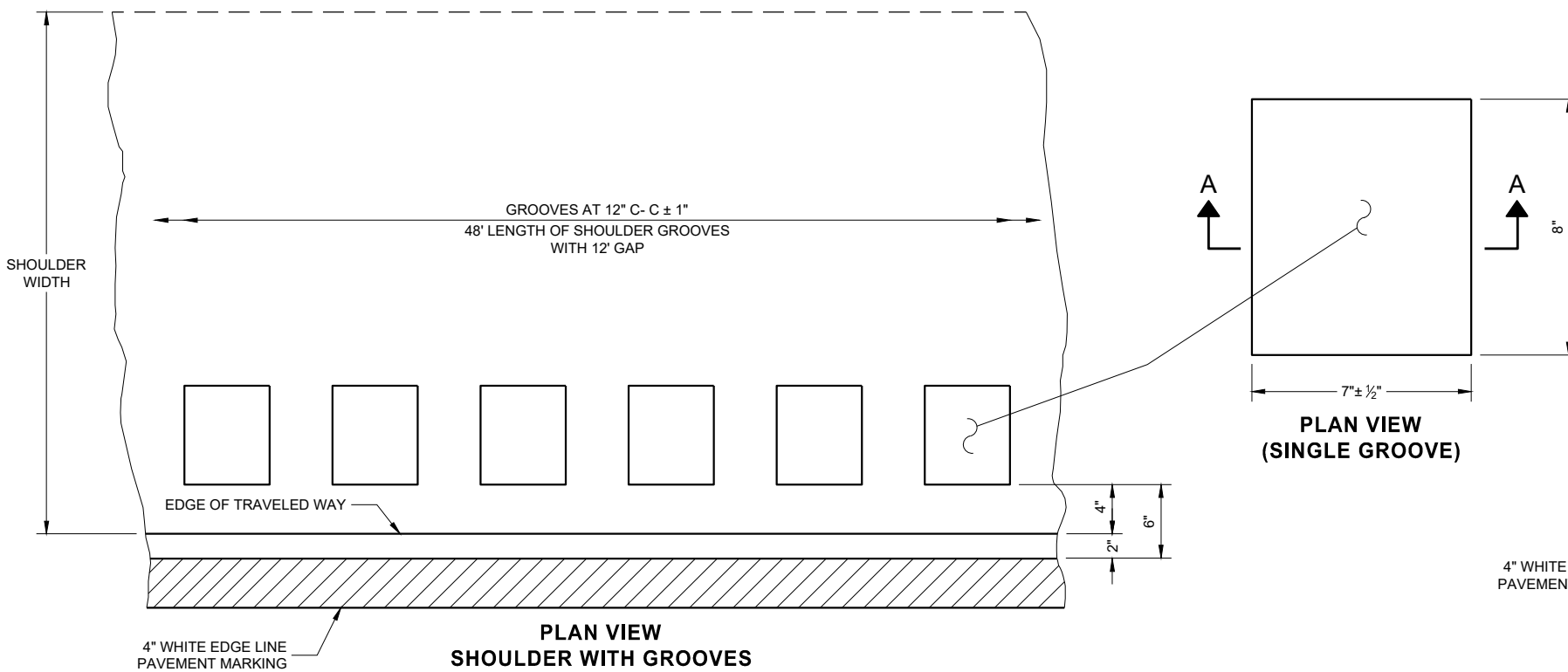
SECTION VIEW
(CONCRETE PAVEMENT EXTENDS INTO RIGHT SHOULDER)



SECTION VIEW
TYPICAL LOCATIONS OF SHOULDER RUMBLE STRIPS
IN RURAL DIVIDED HIGHWAYS
(ONE ROADWAY IS SHOWN)

SHOULDER RUMBLE STRIP,
MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



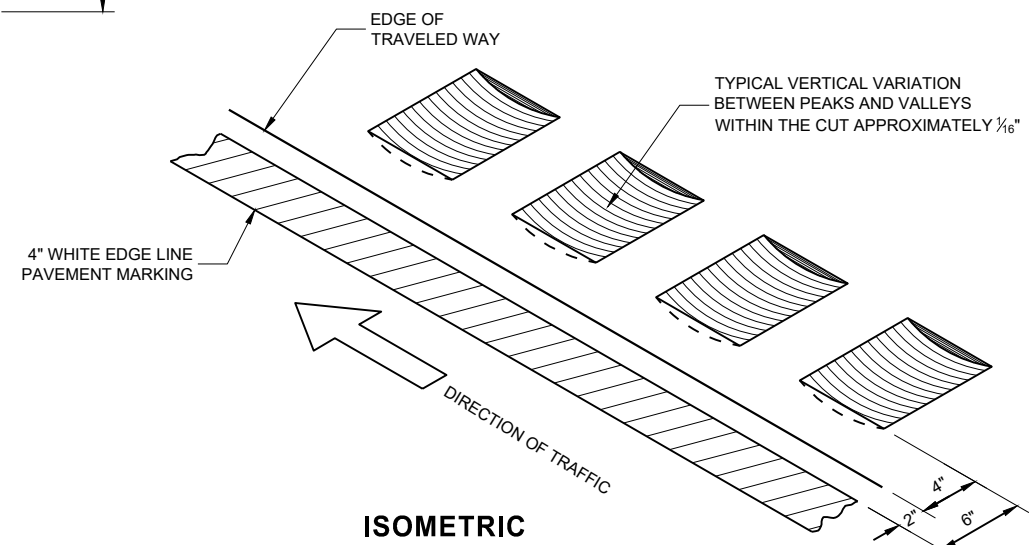
PLACEMENT DETAIL FOR TYPE 1 MILLED RUMBLE STRIP

GENERAL NOTES

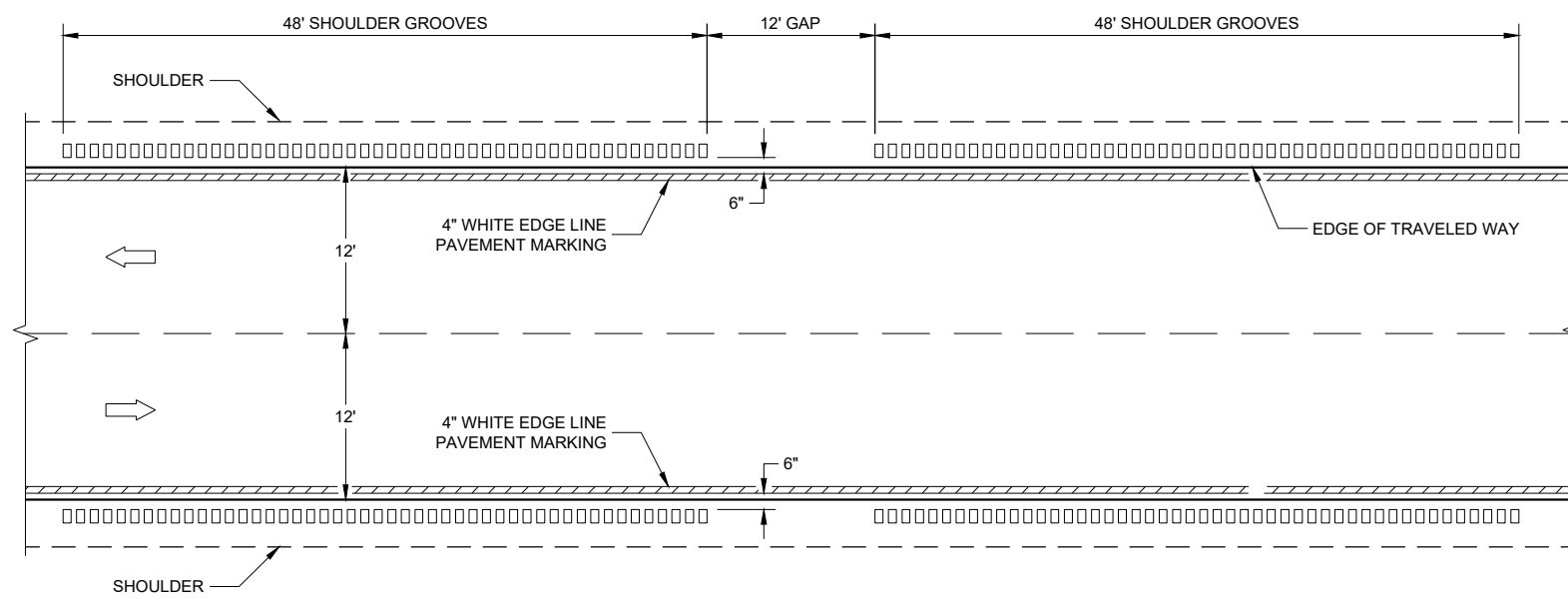
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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

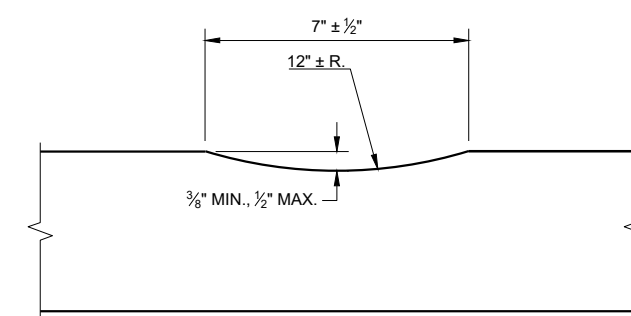
- ① SHOULDER GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS. WHEN DIRECTED BY THE ENGINEER.



ISOMETRIC



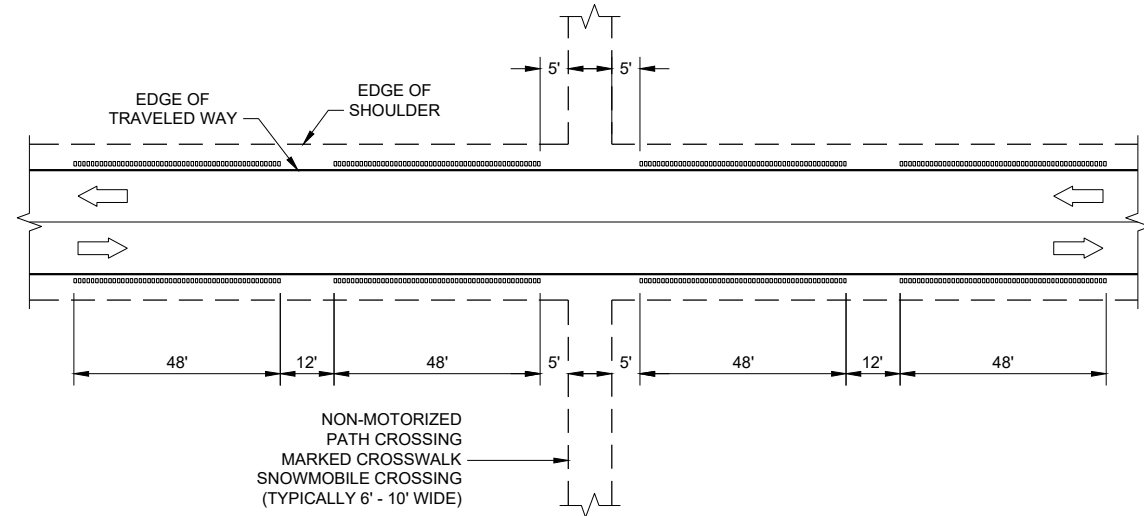
TYPE 1
2 - LANE SHOULDER RUMBLE STRIP



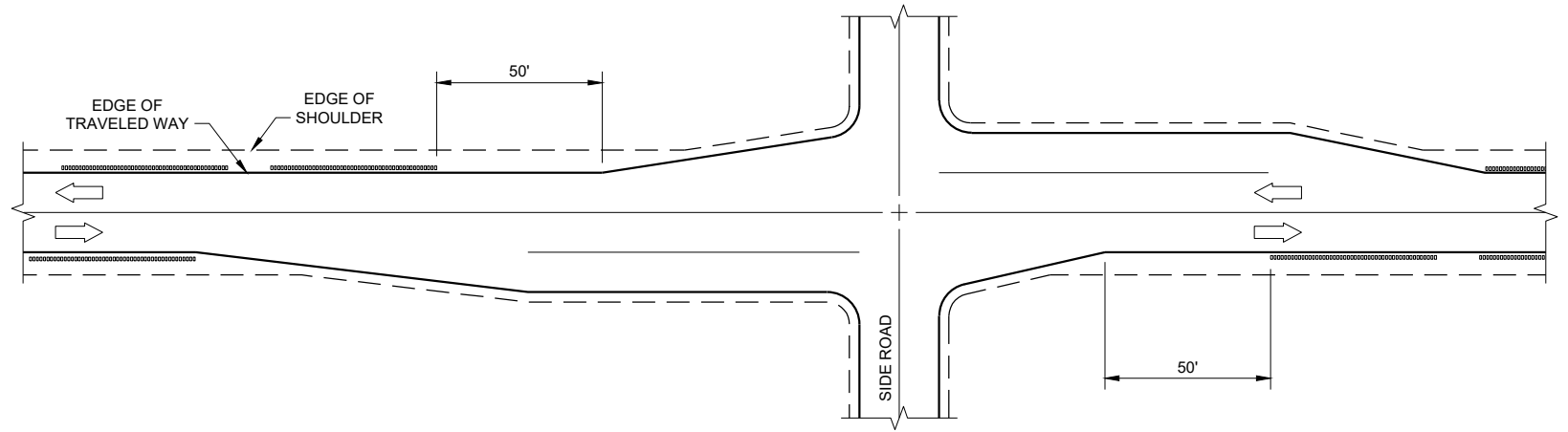
SECTION A - A

**2-LANE RURAL SHOULDER
RUMBLE STRIP, MILLING**

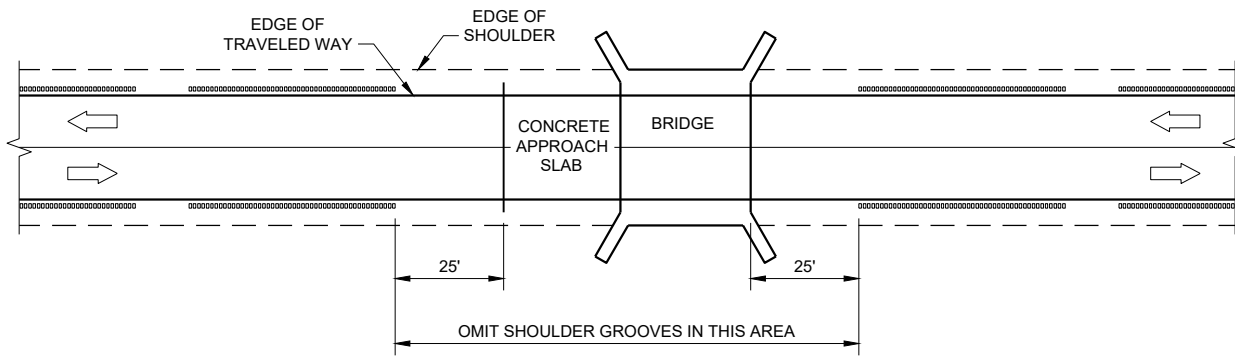
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



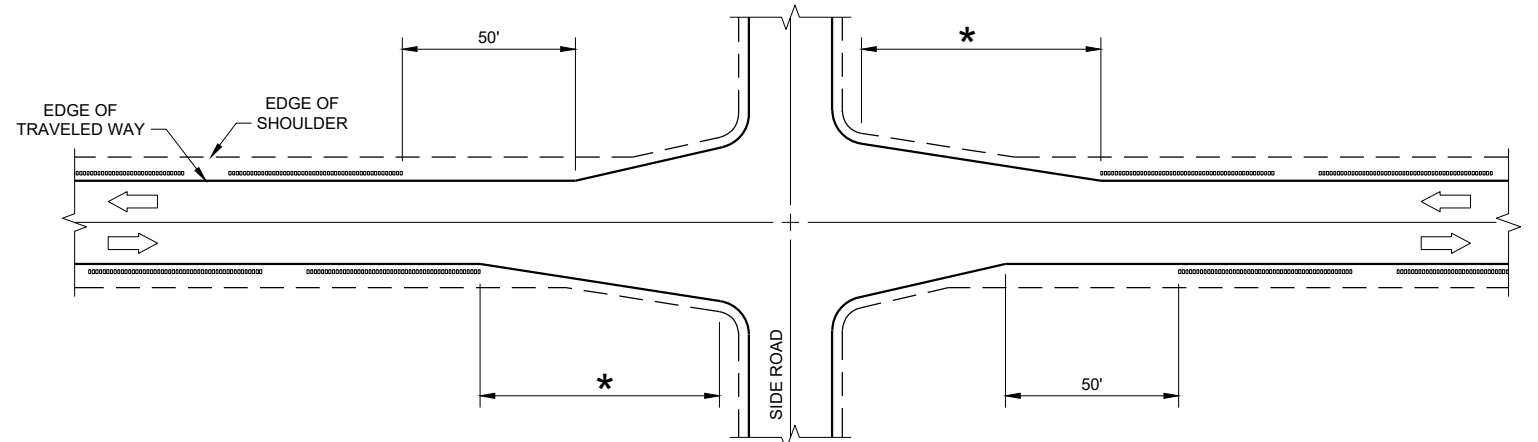
SHOULDER GROOVES AT MISCELLANEOUS CROSSINGS



SHOULDER GROOVES AT RIGHT TURN LANE

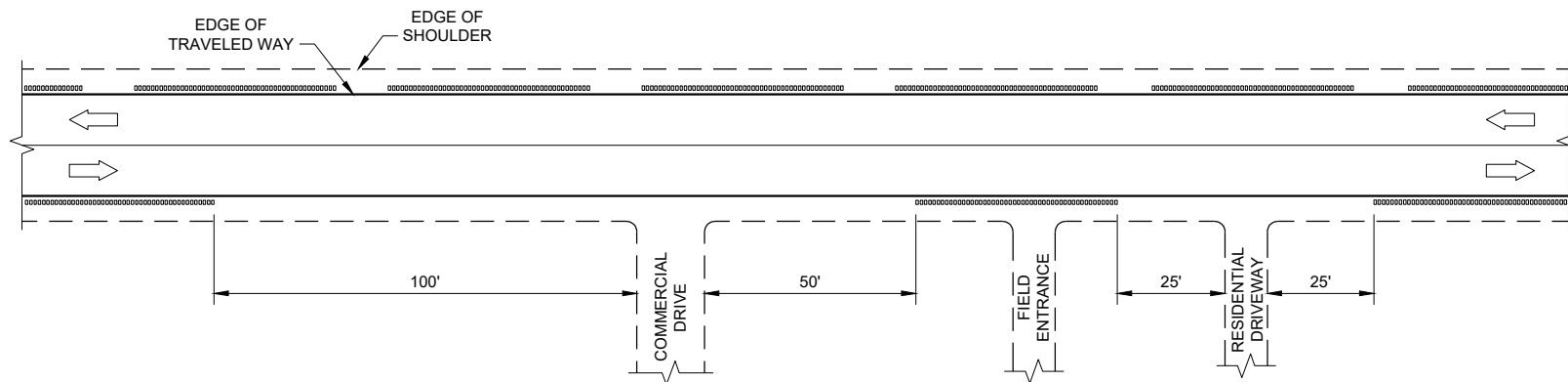


SHOULDER GROOVES AT BRIDGES



* GREATER OF 100' OR APPROACH TAPER LENGTH

SHOULDER GROOVES AT INTERSECTIONS WITH APPROACH TAPER



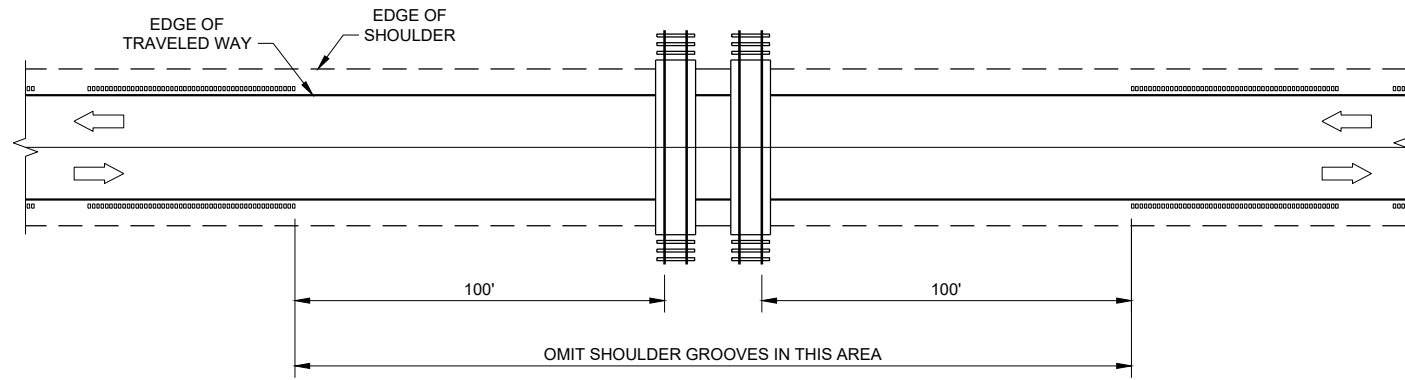
SHOULDER GROOVES AT DRIVEWAYS^①

GENERAL NOTES

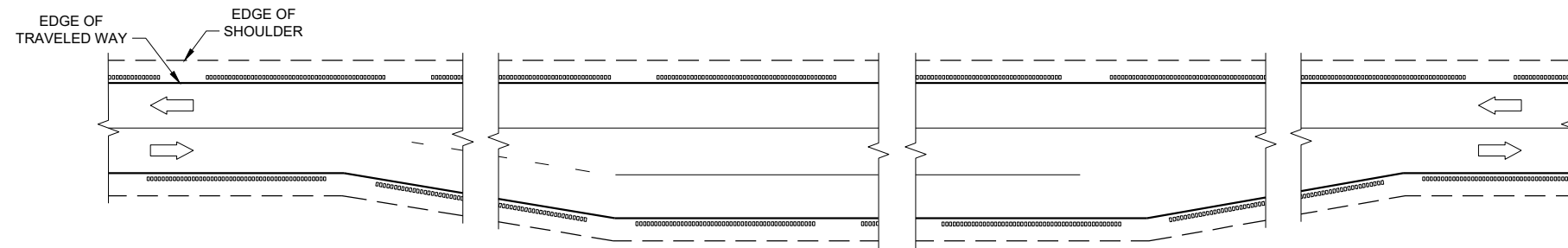
- ① SHOULDER GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS. WHEN DIRECTED BY THE ENGINEER.

**2-LANE RURAL SHOULDER
RUMBLE STRIP, MILLING**

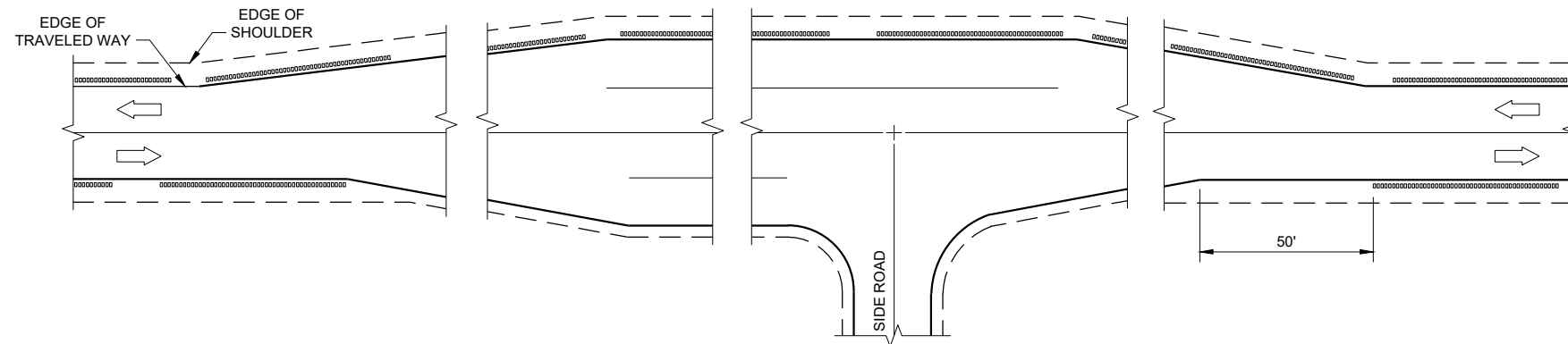
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SHOULDER GROOVES AT RAILROADS



SHOULDER GROOVES AT PASSING AND CLIMBING LANES



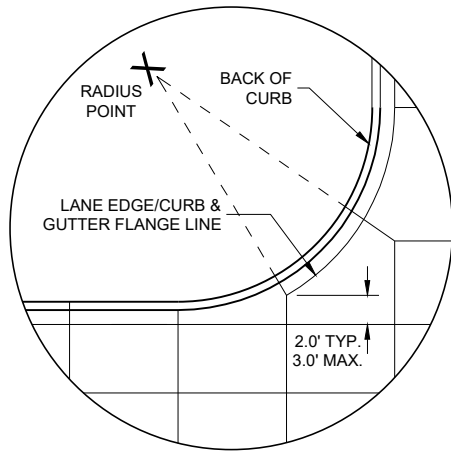
SHOULDER GROOVES AT BYPASS LANES

2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING

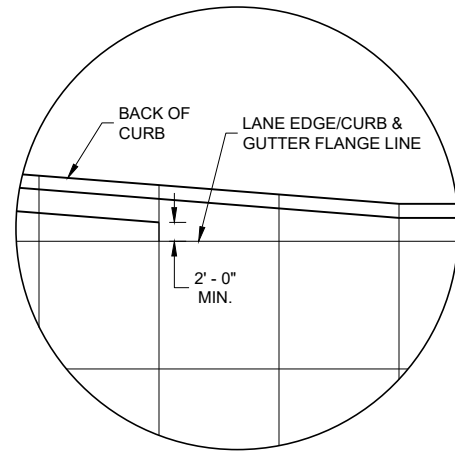
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018 DATE /S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT ENGINEER

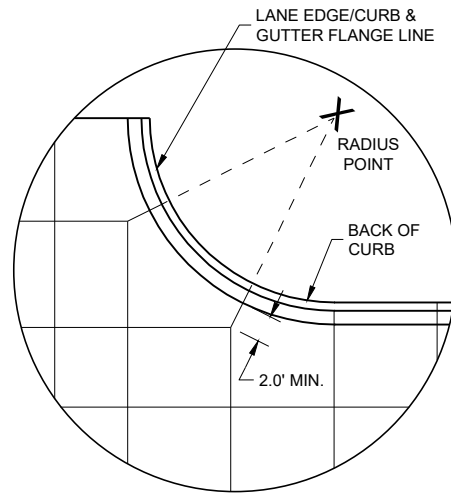
FHWA



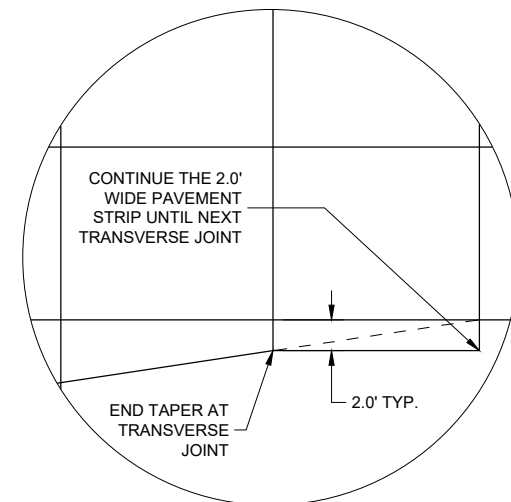
DETAIL "A"



DETAIL "B"



DETAIL "C"

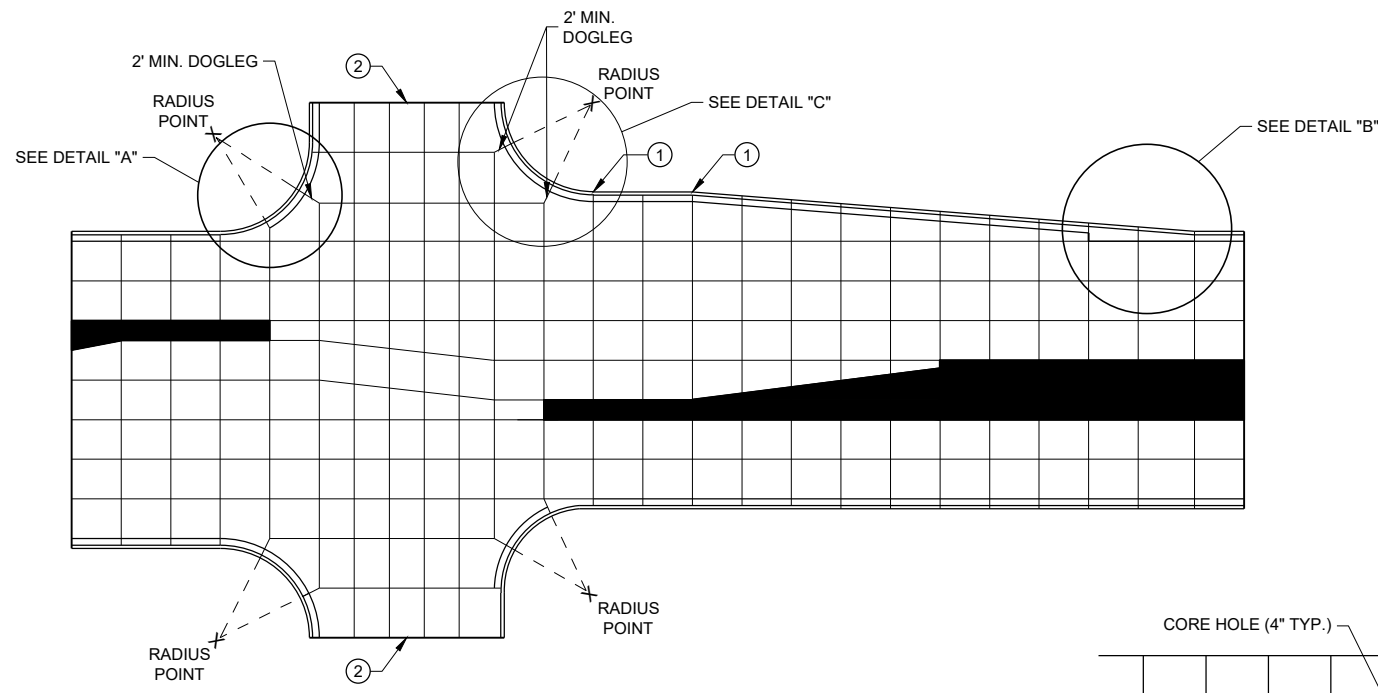


DETAIL "D"

GENERAL NOTES

- THE PRIMARY ROADWAY CONTROLS THE TRANSVERSE JOINT PATTERN.
- ALIGN NEW JOINTS WITH EXISTING JOINTS OR CRACKS.
- CONSTRUCT TRANSVERSE JOINTS PERPENDICULAR TO THE ROADWAY.
- ADJUST TRANSVERSE JOINTS TO ALIGN WITH UTILITY FIXTURES (E.G MANHOLES AND INLETS) IN THE PAVEMENT STRUCTURE WHEN POSSIBLE. WATER VALVES DO NOT REQUIRE JOINT ADJUSTMENT.
- AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.
- SEE TABLE FOR TRANSVERSE JOINT SPACING. JOINT SPACING SPECIFIED IS MAXIMUM AND ACTUAL SPACING CAN BE ADJUSTED TO ACCOMMODATE INTERSECTIONS.
- AVOID ANGLES LESS THAN 60° BY DOGLEGGING JOINTS THROUGH CURVE RADIUS POINTS. USE 90° ANGLES WHEN POSSIBLE.
- CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

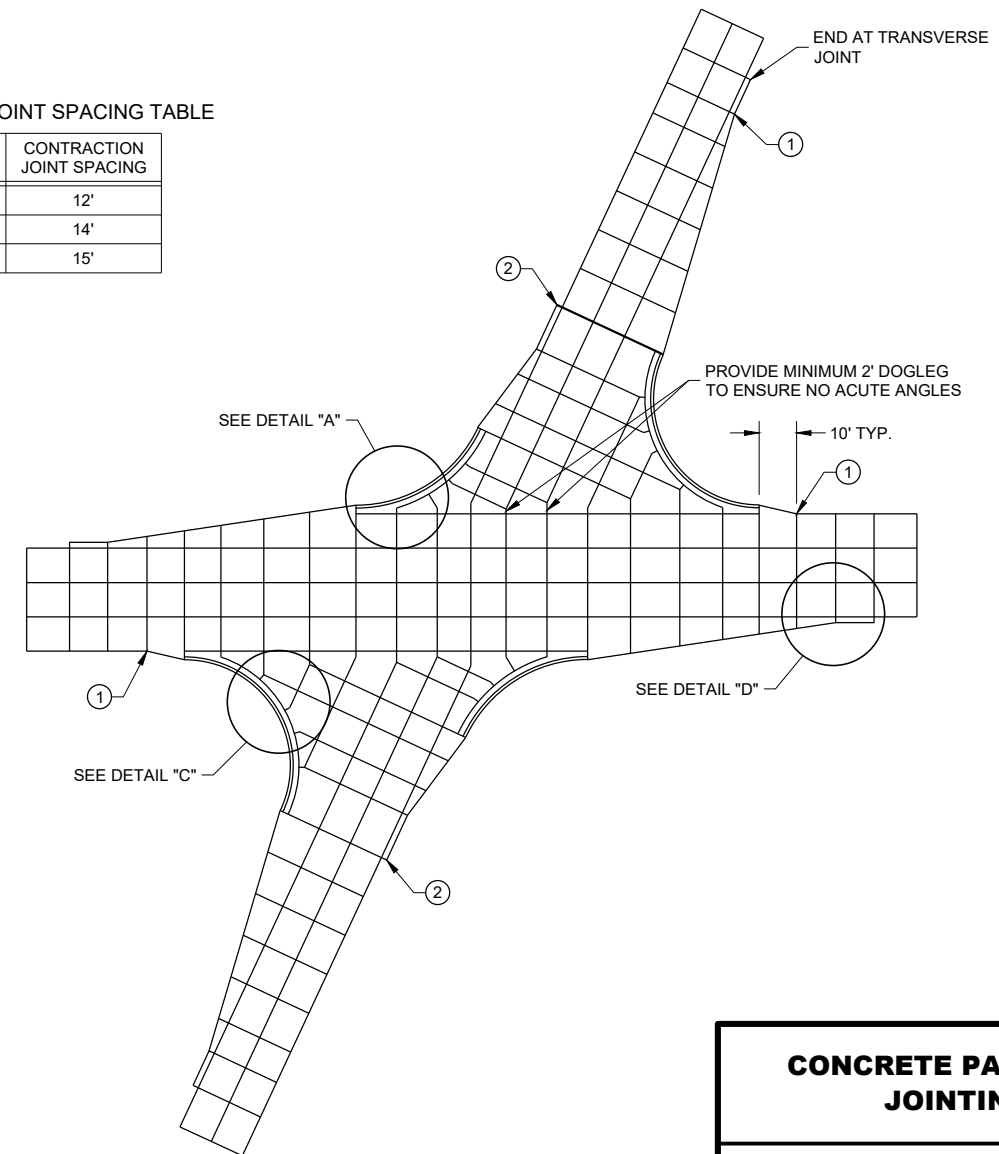
- ① PROVIDE TRANSVERSE JOINTS AT ALL PAVEMENT WIDTH CHANGES.
- ② CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH EDGE OF RADIUS.
- ③ THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM THESE JOINTING DETAILS.



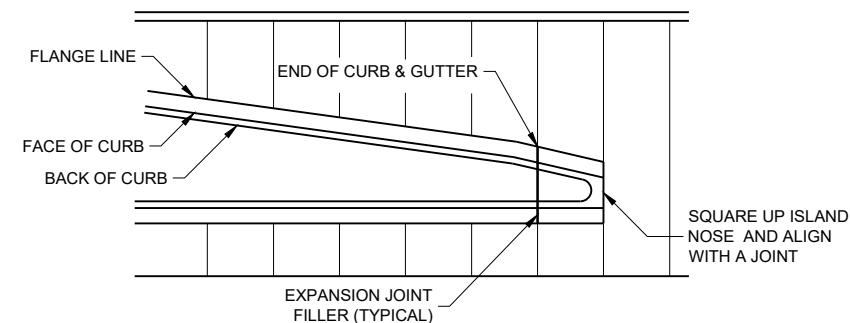
STANDARD INTERSECTION

PAVEMENT DEPTH AND JOINT SPACING TABLE

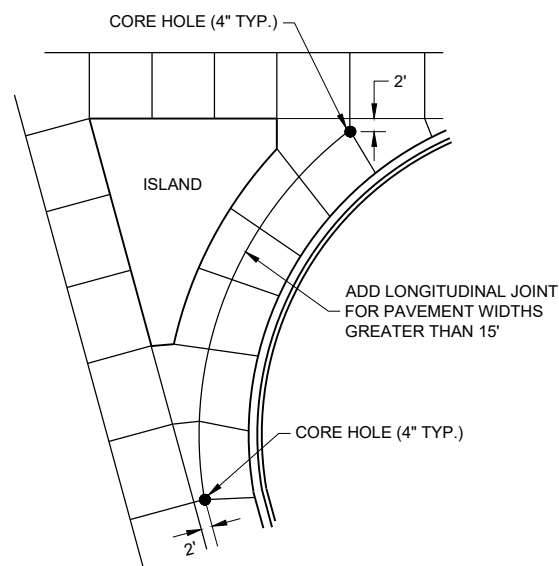
PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6 1/2"	12'
7", 7 1/2"	14'
8" & ABOVE	15'



SKEWED INTERSECTION



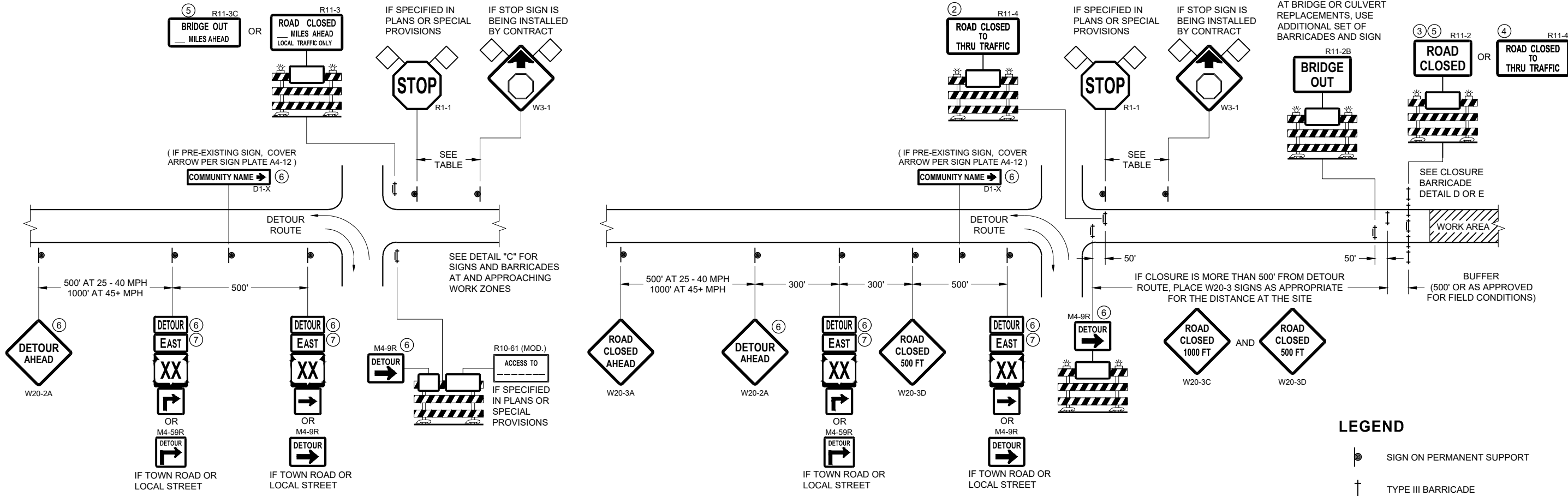
APPROACH TO MEDIAN



LARGE RIGHT TURN

CONCRETE PAVEMENT JOINTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR
 WORK ZONE GREATER THAN OR EQUAL TO 1/2 MILE FROM
 DETOUR ROUTE (1000 FEET IF URBAN)

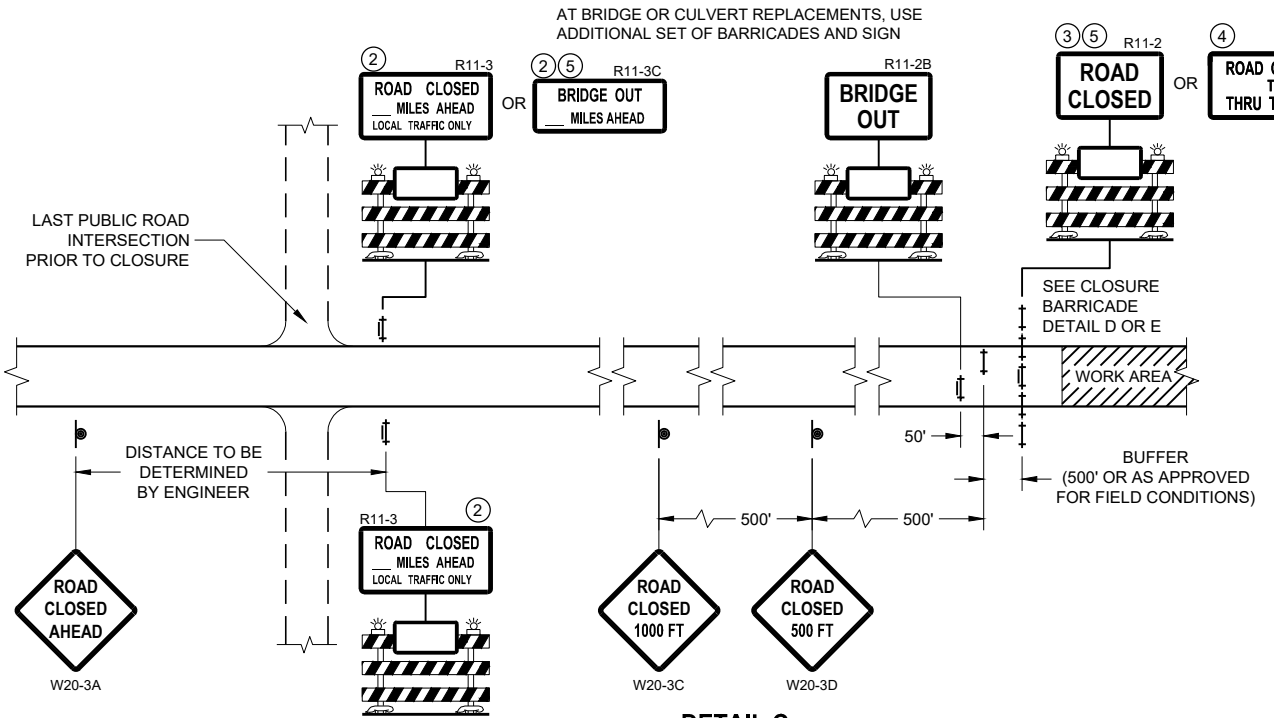
DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR
 WORK ZONE LESS THAN 1/2 MILE FROM
 DETOUR ROUTE (1000 FEET IF URBAN)

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- FLAGS, 16" X 16" MIN. (ORANGE)

M4 - 8
 M3 - X
 M1 - 4 OR M1 - 6 OR M1 - 5A
 M05 - 1 OR M06 - 1

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



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

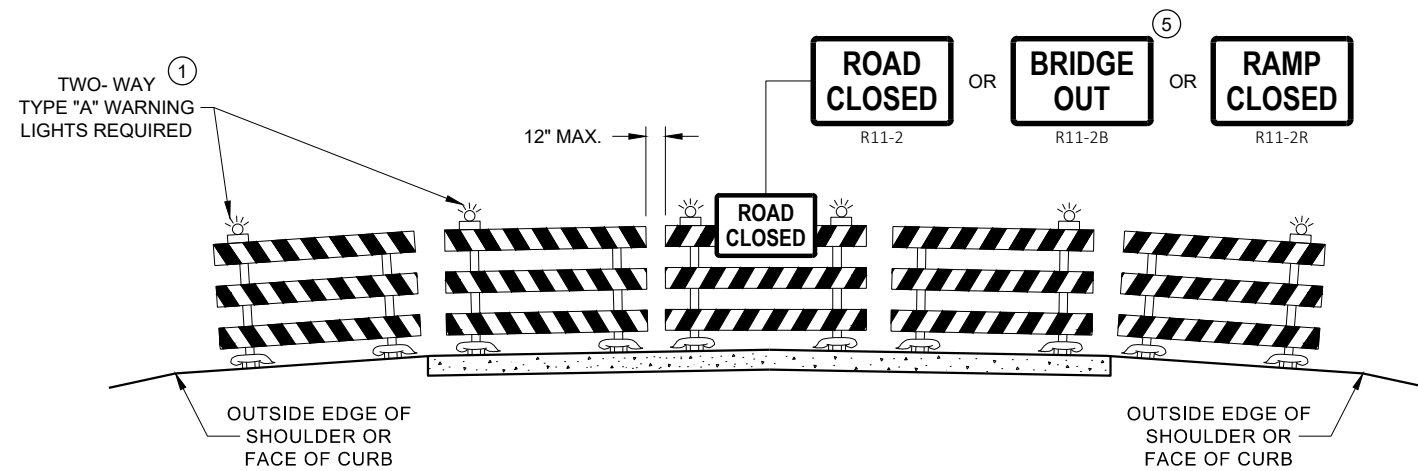
SEE SDD 15C2-SHEET "b"
 FOR GENERAL NOTES
 AND FOOTNOTES ① THROUGH ⑦

**BARRICADES AND SIGNS
 FOR MAINLINE CLOSURES**

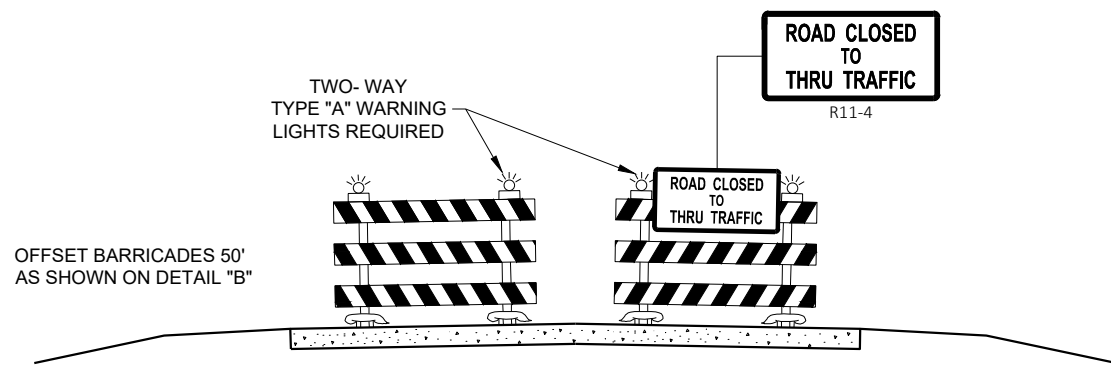
STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

APPROVED
 November 2018 /S/ Andrew Heidtke
 DATE DATE WORK ZONE ENGINEER

FHWA



**DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW**



**DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW**

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

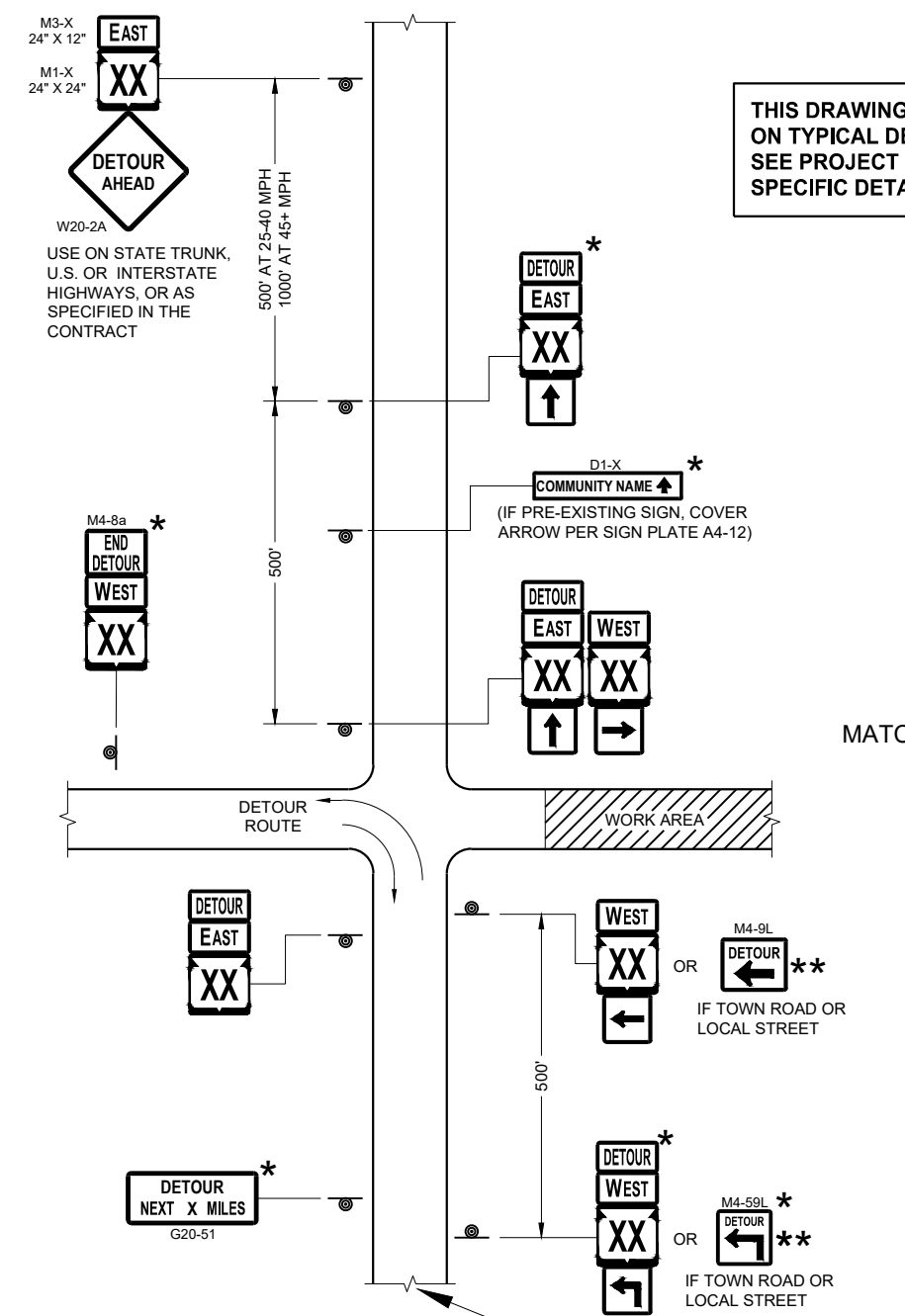
- ① TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING).
- ② THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT AN INTERSECTION.
- ③ FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "D".
- ④ FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "E".
- ⑤ FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11 - 2 AND R11 - 3 SIGNS.
- ⑥ INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.
- ⑦ "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

**BARRICADES AND SIGNS
FOR
VARIOUS CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

FHWA



THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL DETOUR SIGN LAYOUT AND SPACING. SEE PROJECT DETOUR SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.

LEGEND

- SIGN ON PERMANENT SUPPORT
- WORK AREA
- M4 - 8
- M3 - X
- M1 - 4
- M1 - 6
- M1 - 5A
- M05 - 1
- M06 - 1
- M06 - 1

GENERAL NOTES

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

IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

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

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

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

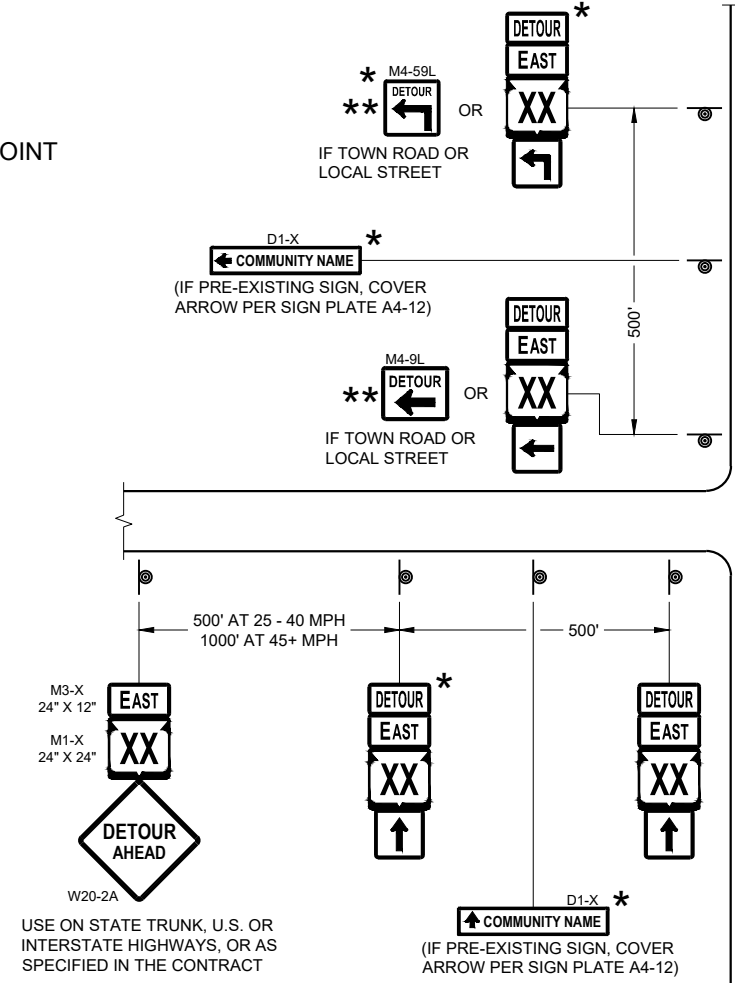
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

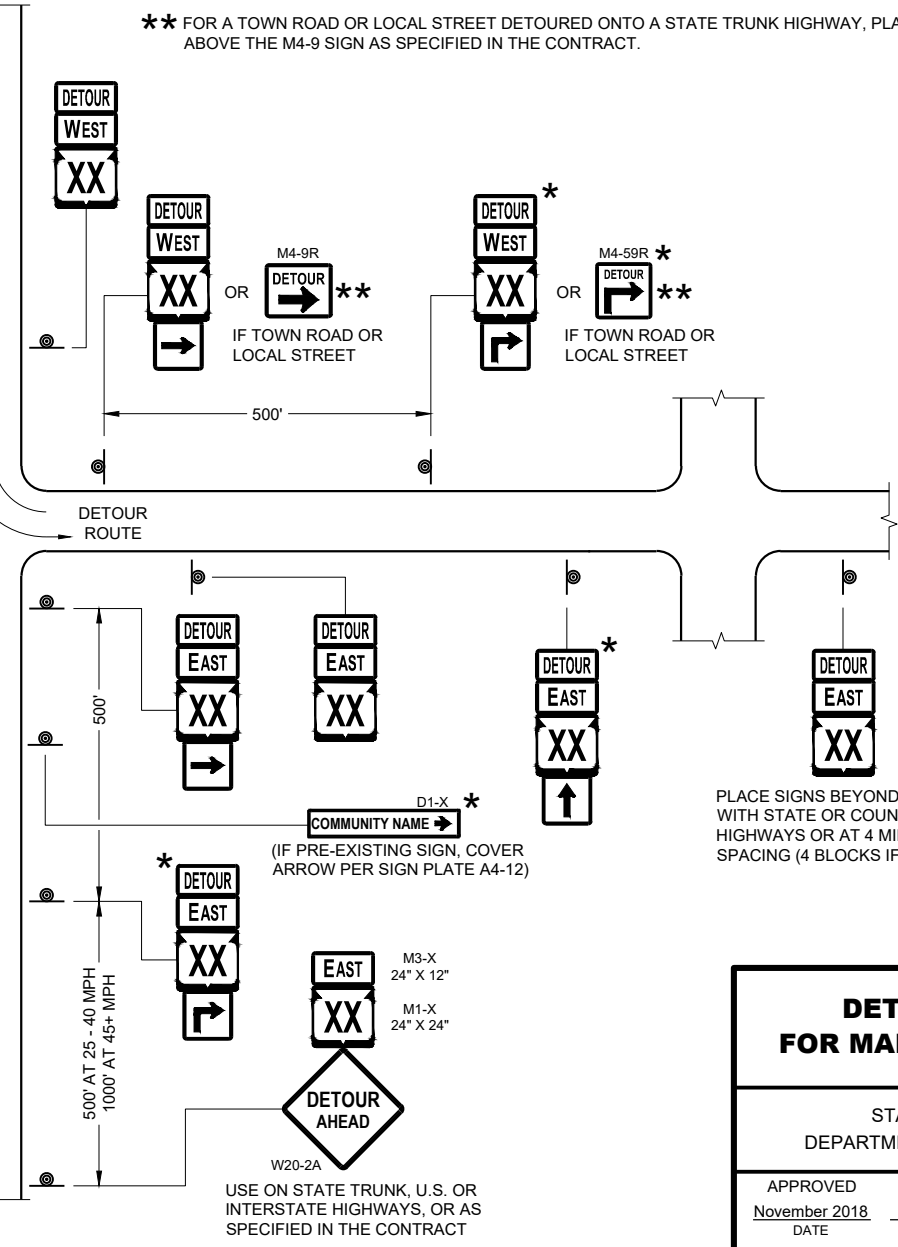
- M3-X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1-4, M1-5A AND M1-6 SHALL BE 24" X 24" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- M05-1 AND M06-1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-9 AND M4-59 SHALL BE 30" X 24"
- M4-8a SHALL BE 24" X 18"
- G20-51 SHALL BE 60" X 24"
- W20-2A SHALL BE 48" X 48"
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

- * OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.
- ** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.

MATCH POINT



DETAIL F
DETOUR SIGNING



**DETOUR SIGNING
FOR MAINLINE CLOSURES**

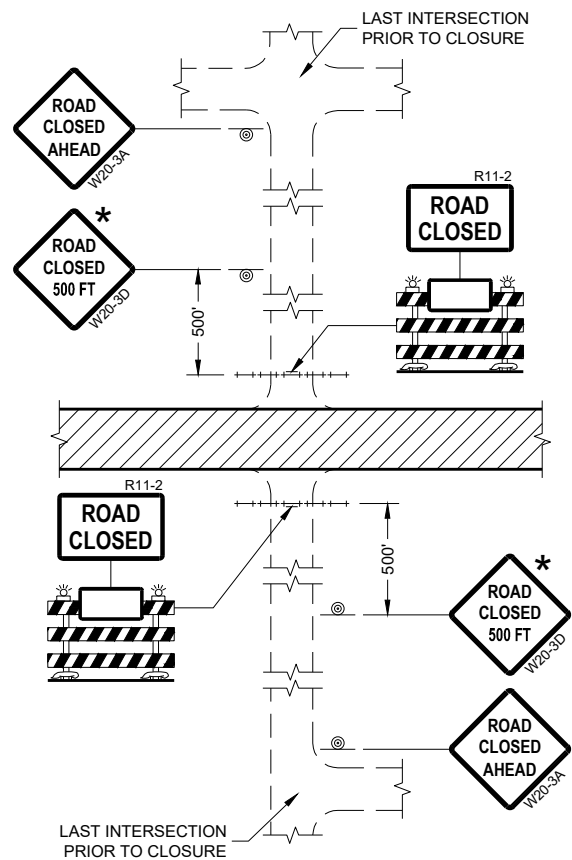
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

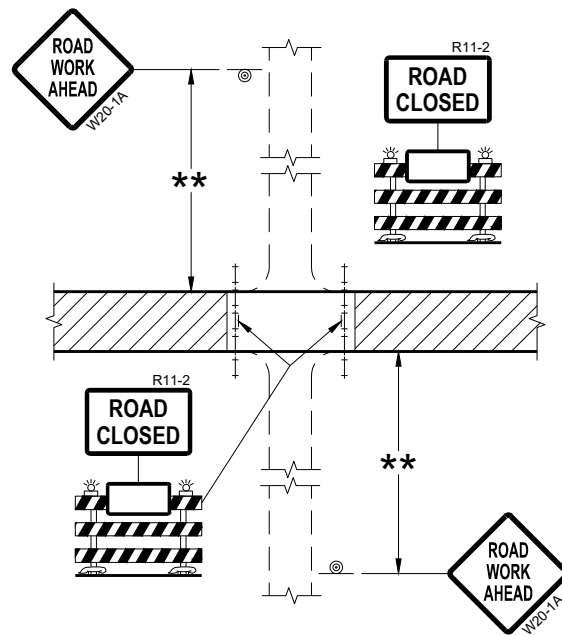
FHWA

SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS AND DETAIL A OR B ON SDD SHEET 15C02 - SHEET "a"

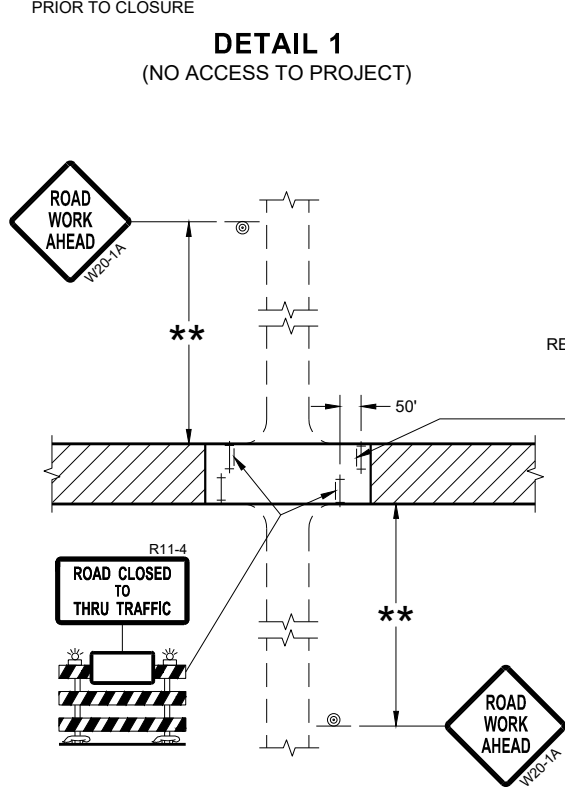
PLACE SIGNS BEYOND INTERSECTIONS WITH STATE OR COUNTY TRUNK HIGHWAYS OR AT 4 MILE MAXIMUM SPACING (4 BLOCKS IF URBAN AREA)



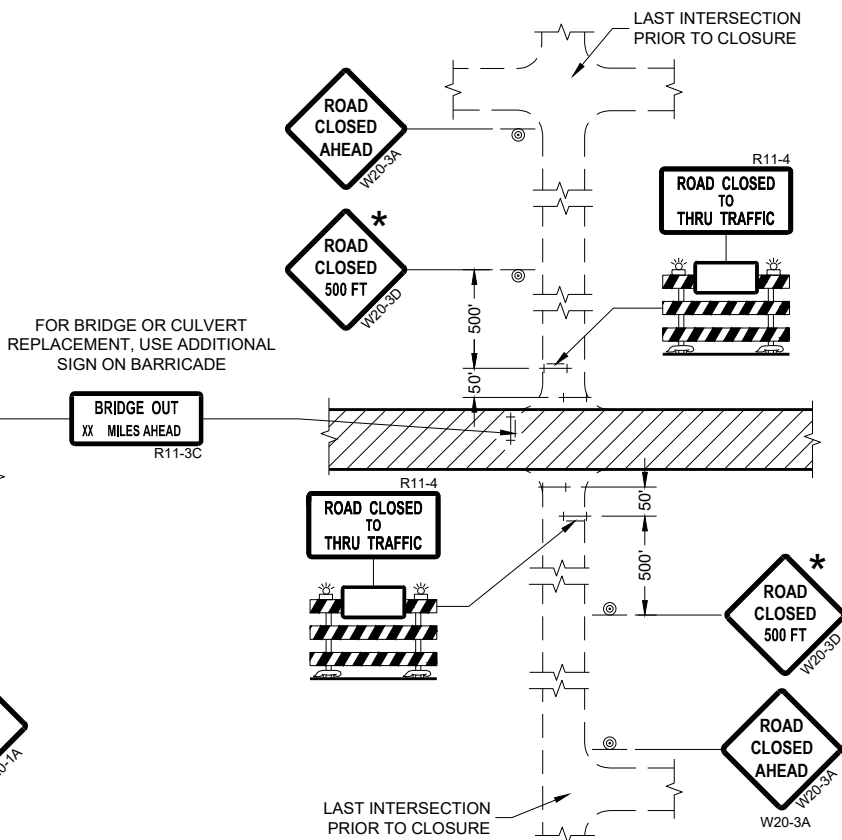
DETAIL 1
(NO ACCESS TO PROJECT)



DETAIL 2
(PUBLIC CROSS-TRAFFIC MAINTAINED.
NO ACCESS TO PROJECT)



DETAIL 3
(PUBLIC CROSS-TRAFFIC MAINTAINED.
CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)



DETAIL 4
(CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)

GENERAL NOTES

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

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

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

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

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

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

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

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

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
R11-2 SHALL BE 48" X 30".
R11-4 AND R11-3 SHALL BE 60" X 30".

- * OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FEET OR LESS FROM THE WORK ZONE.
- ** 500' MAX. OR AT LAST INTERSECTION, WHICHEVER IS CLOSEST.

LEGEND

- ⊙ SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- ⚡ TYPE "A" WARNING LIGHT (FLASHING)
- ▨ WORK AREA

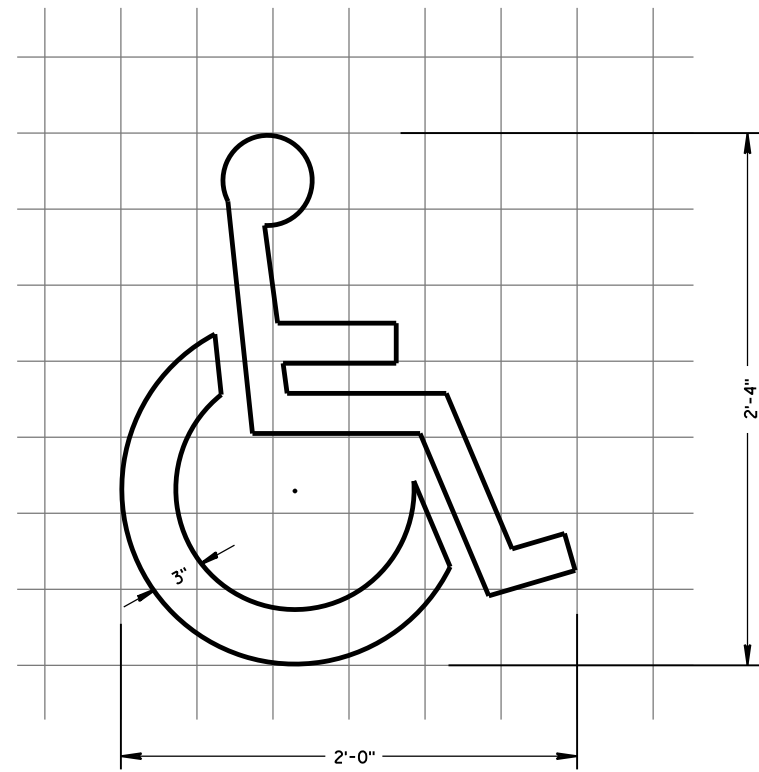
**BARRICADES AND SIGNS
FOR
SIDEROAD CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

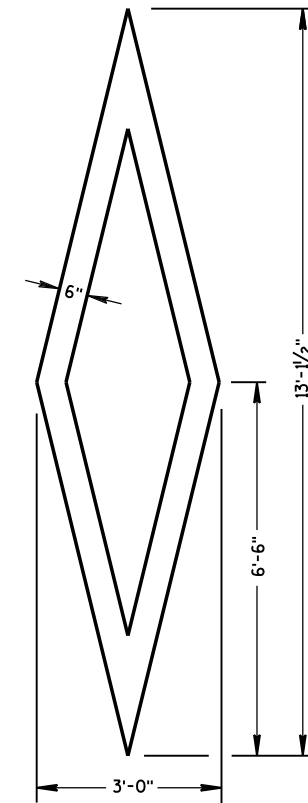
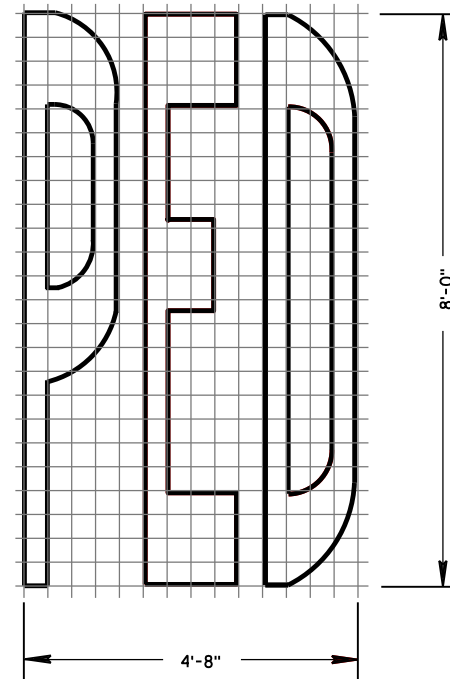
APPROVED
July 2018 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

GENERAL NOTES

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



HANDICAP SYMBOL

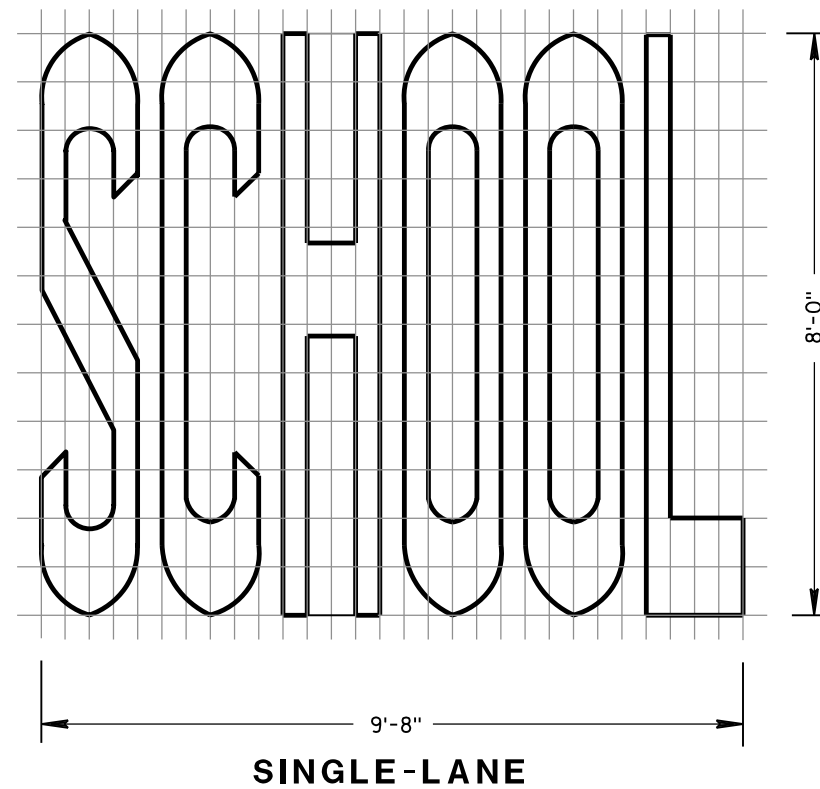
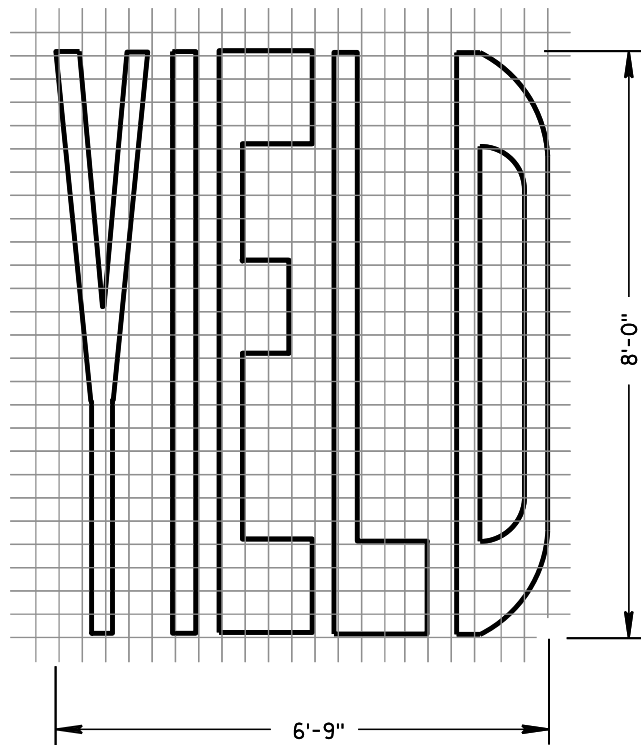
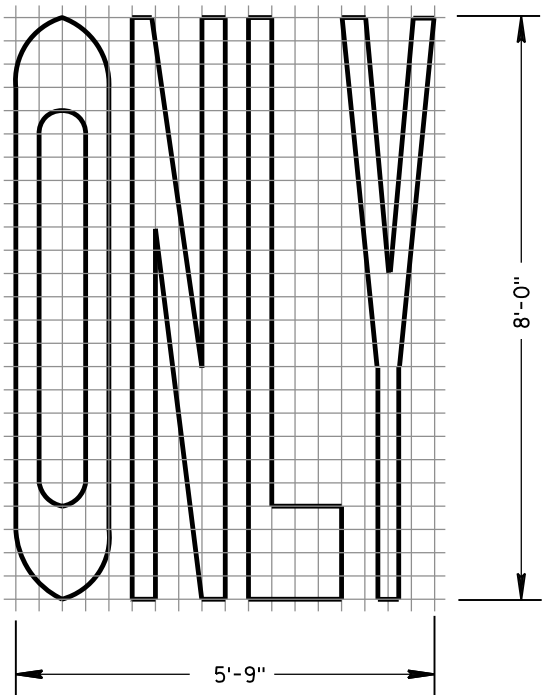
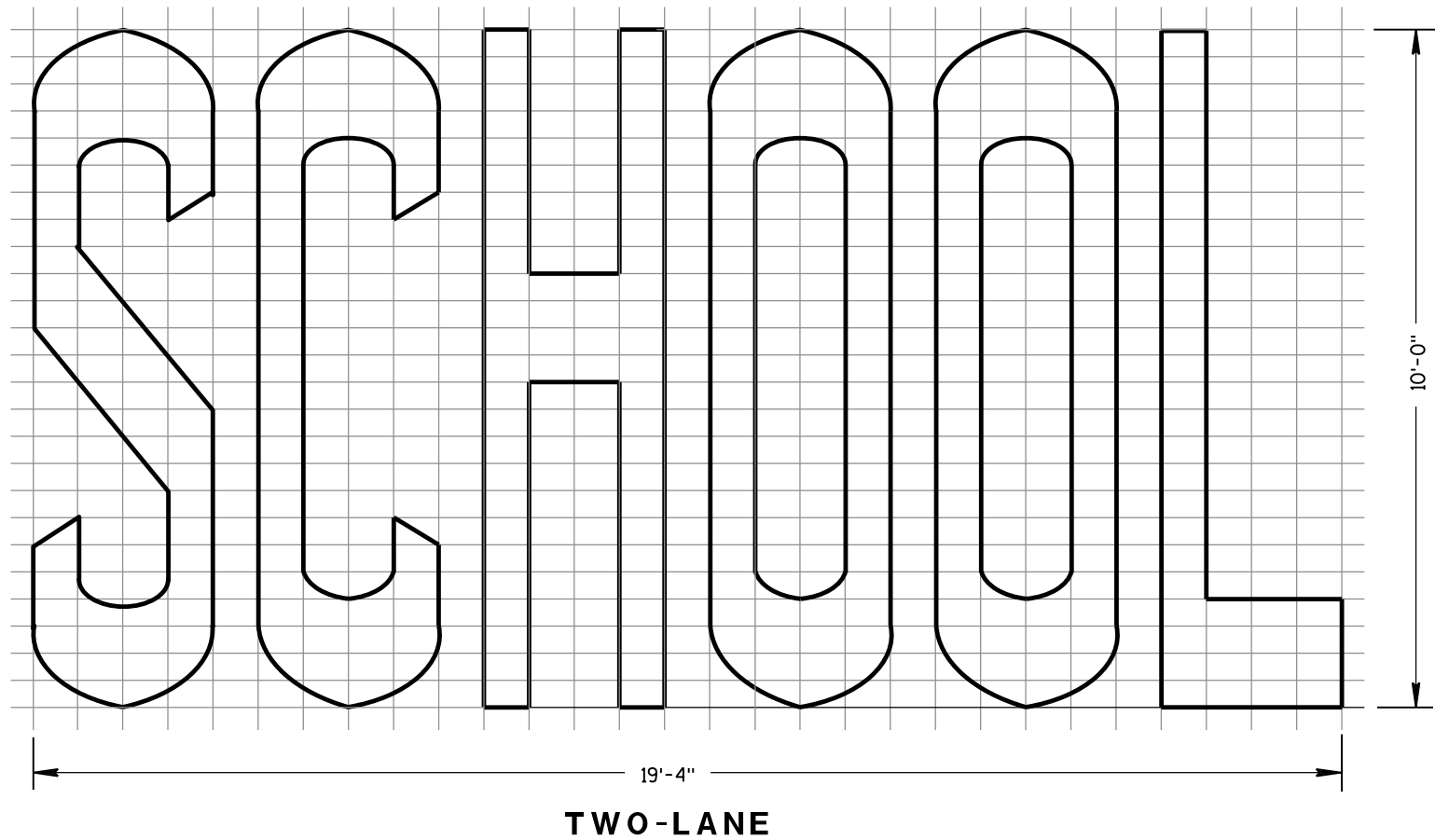
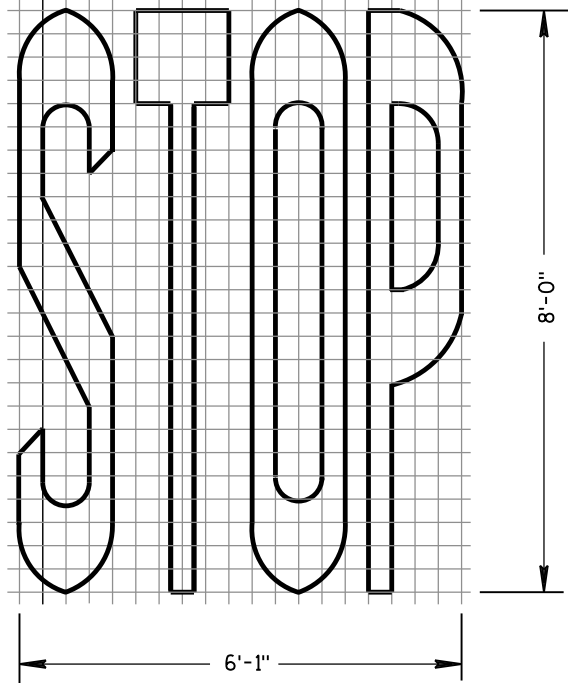


PREFERENTIAL LANE SYMBOL

PAVEMENT MARKING SYMBOLS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2017 DATE	/S/ Matthew R. Rauch STATE SIGNING AND MARKING ENGINEER
FHWA	

GENERAL NOTES

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



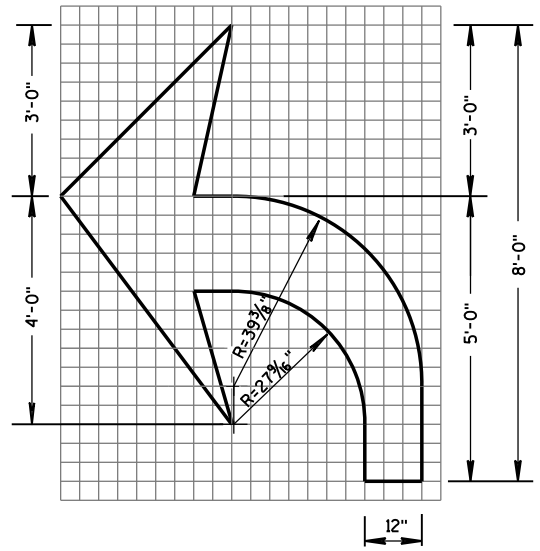
PAVEMENT MARKING WORDS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

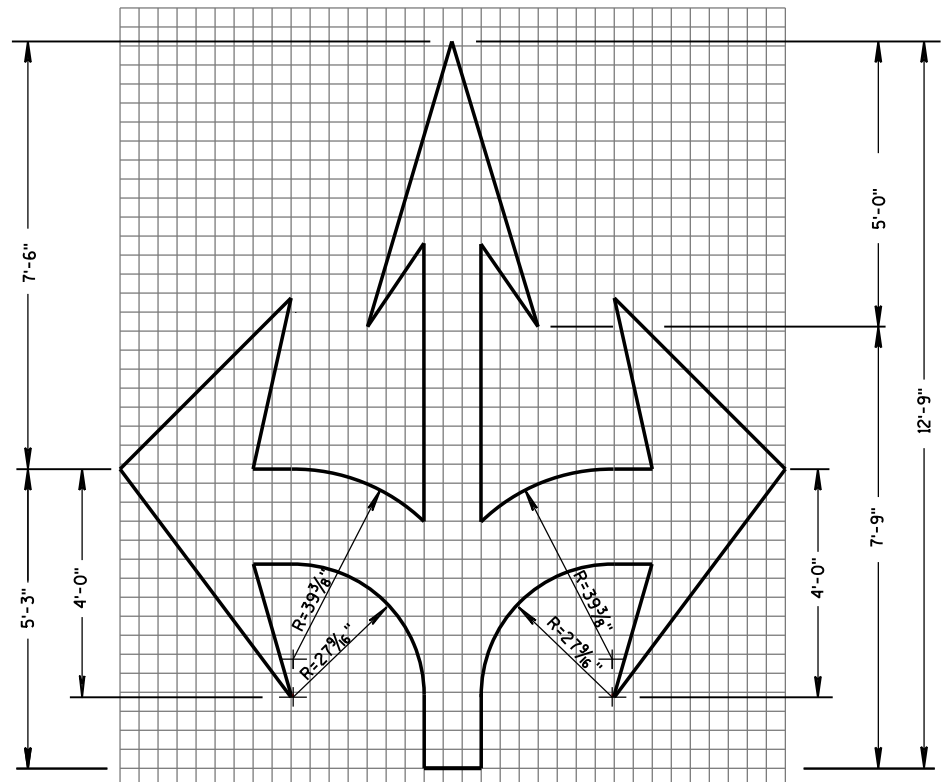
APPROVED

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

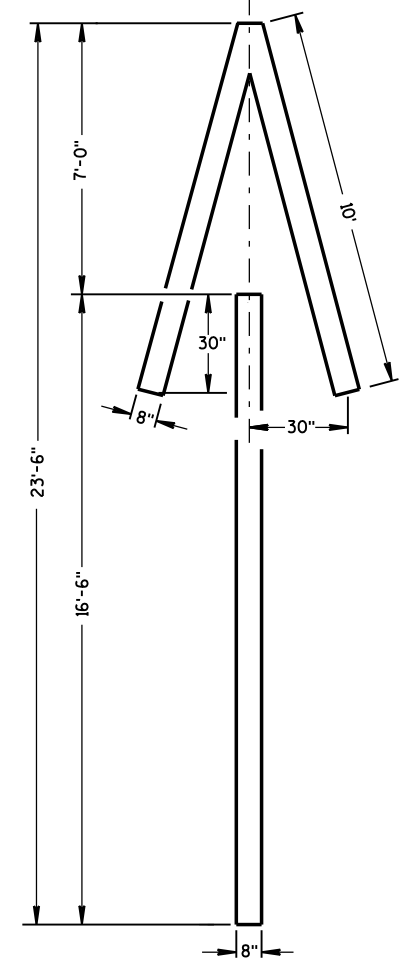
FHWA



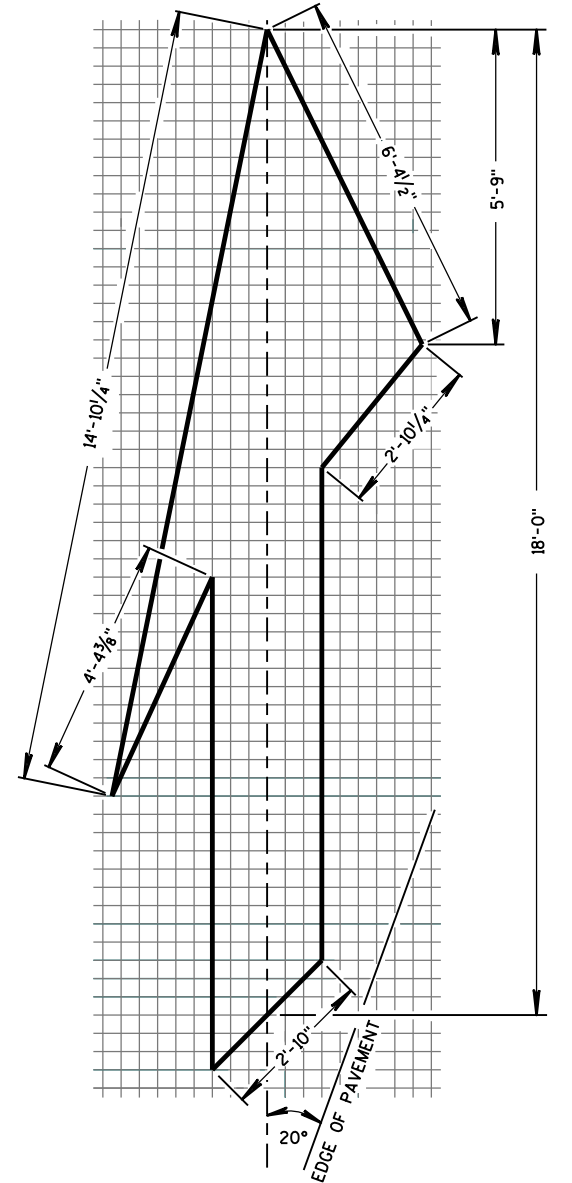
TYPE 2



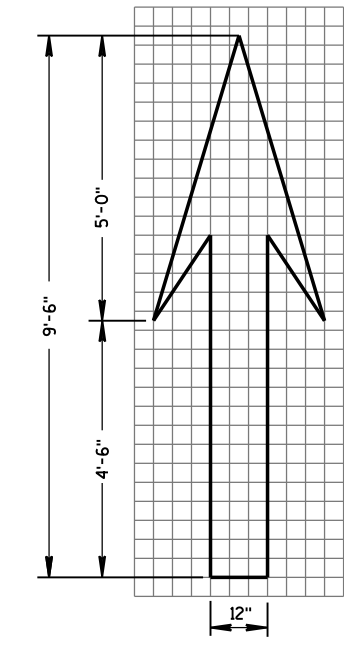
TYPE 6



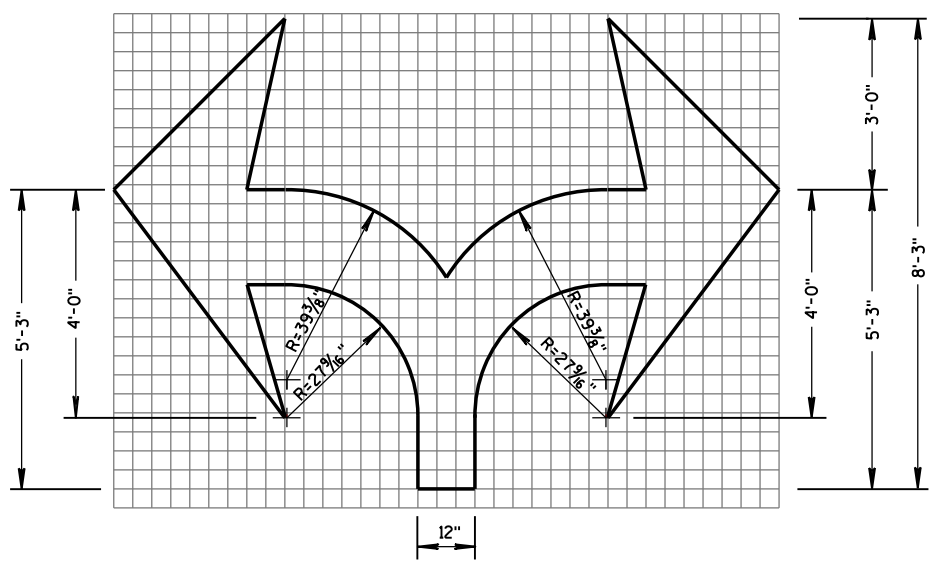
TYPE 4



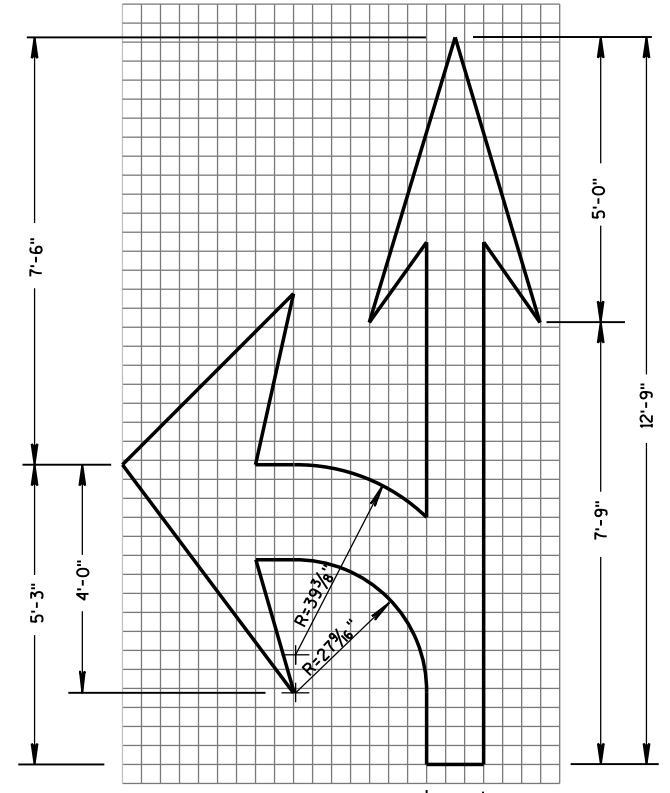
TYPE 5 LANE DROP ARROW



TYPE 1



TYPE 7

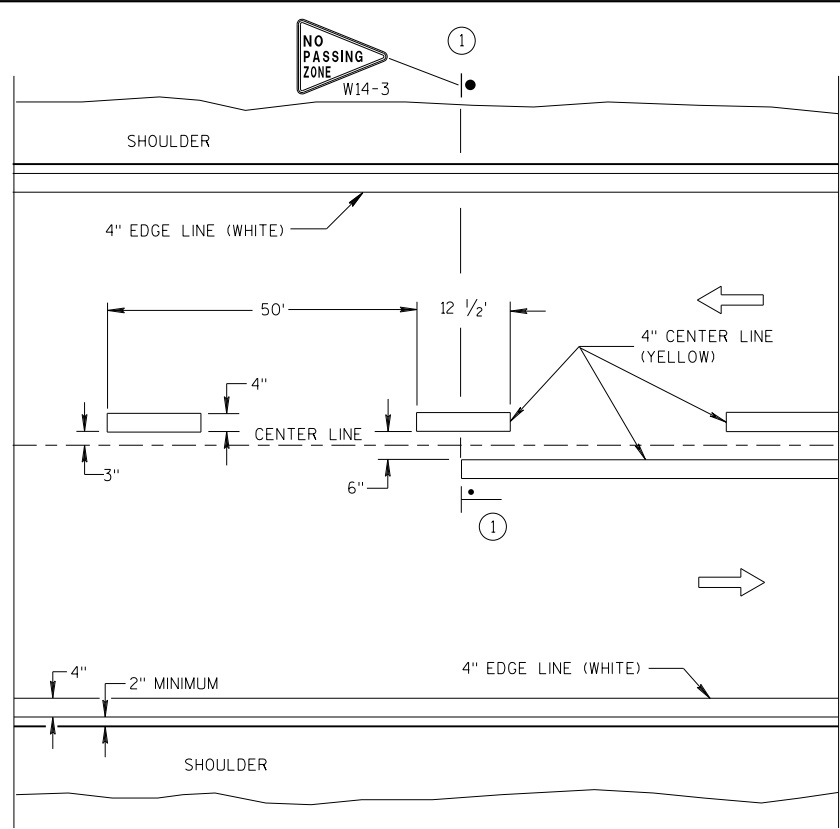


TYPE 3

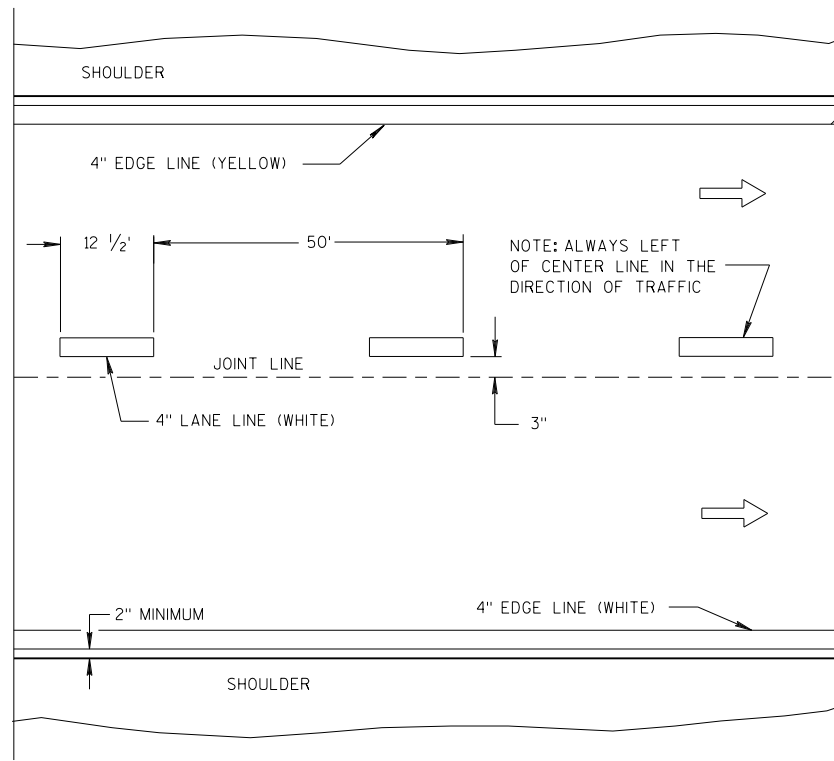
GENERAL NOTES

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

PAVEMENT MARKING ARROWS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2017 DATE	/s/ Matthew R. Rauch STATE SIGNING AND MARKING ENGINEER
FHWA	

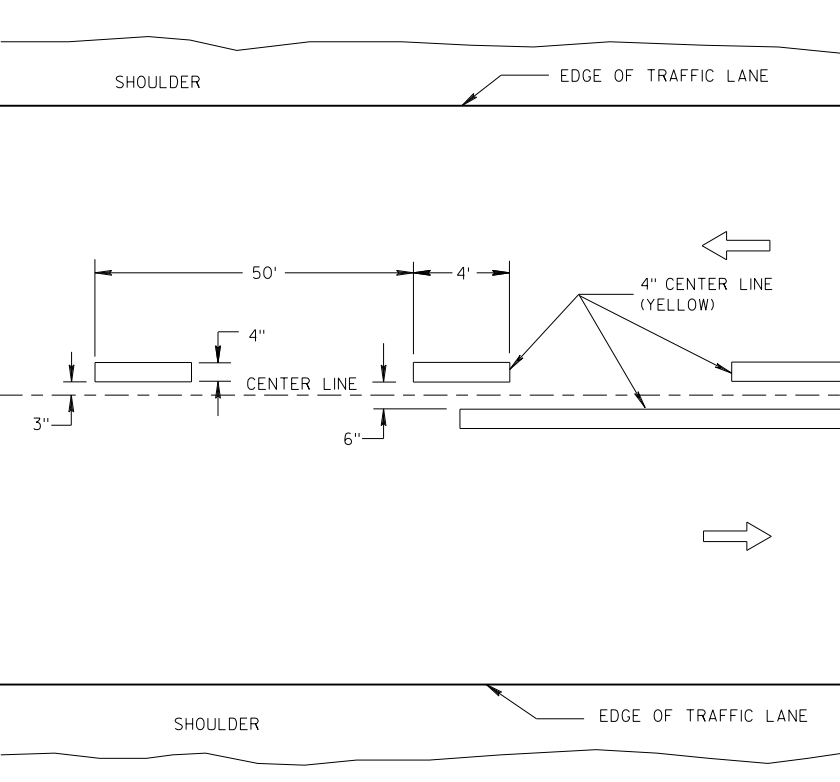


TWO WAY TRAFFIC

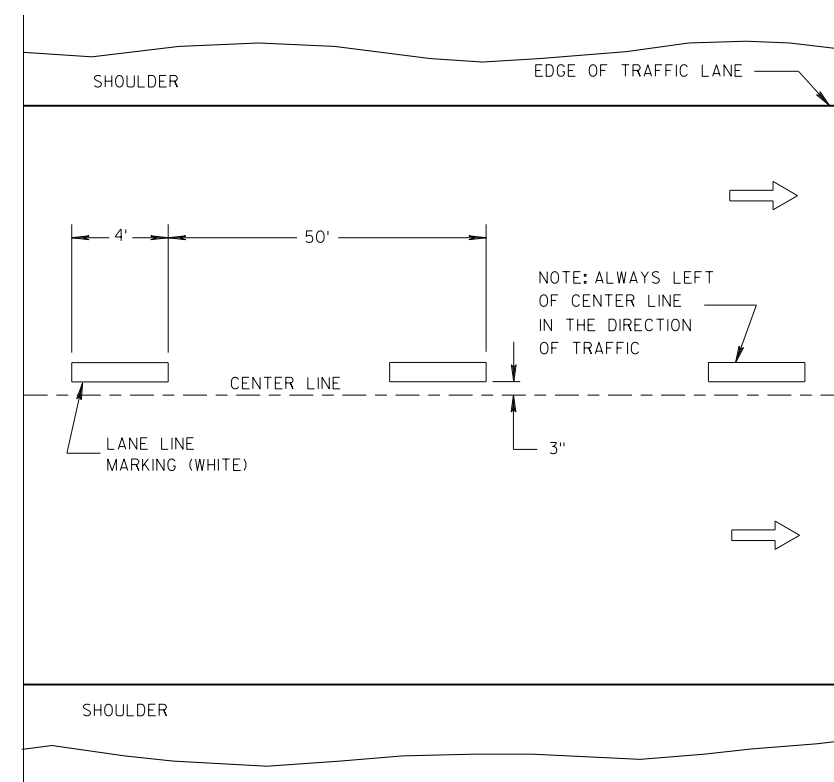


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

GENERAL NOTES

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

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

NOTE

ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL

LEGEND

- "T" MARKING
- POST MOUNTED SIGN

LONGITUDINAL MARKING (MAINLINE)

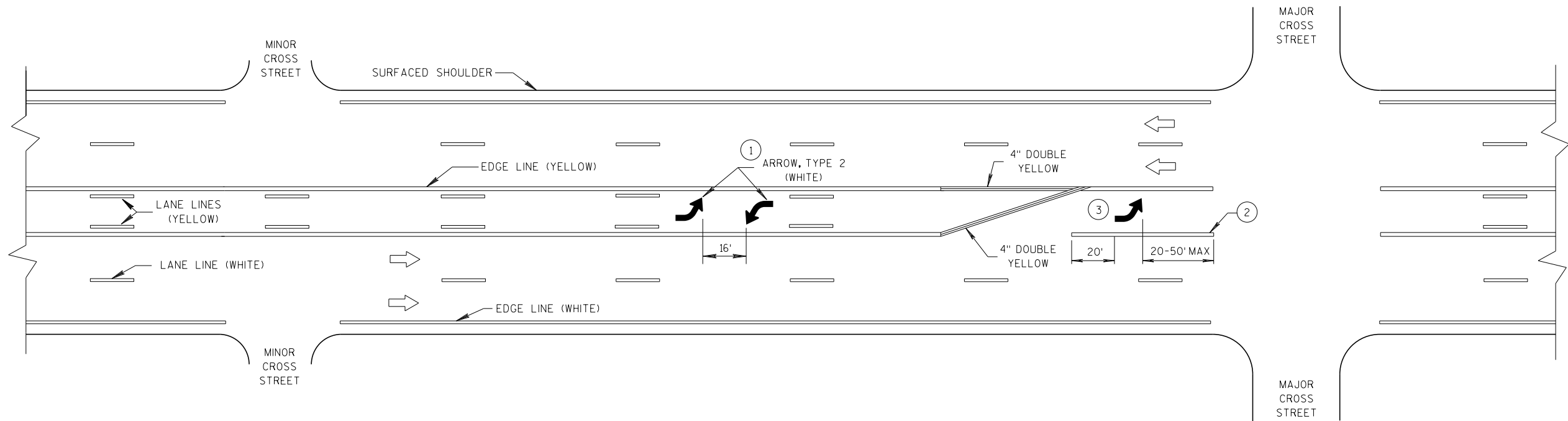
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE 7/2018 /S/ Matthew R. Rauch
STATE SIGNING AND MARKING ENGINEER
FHWA

GENERAL NOTES

- ① A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
- ② 8" WHITE
- ③ TURN BAY LENGTH OF LESS THAN 48' DOES NOT REQUIRE PAVEMENT ARROWS OR TEXT

➔ DIRECTION OF TRAFFIC

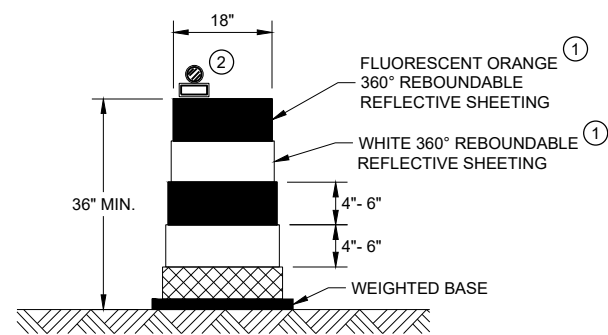


TWO WAY LEFT TURN LANE

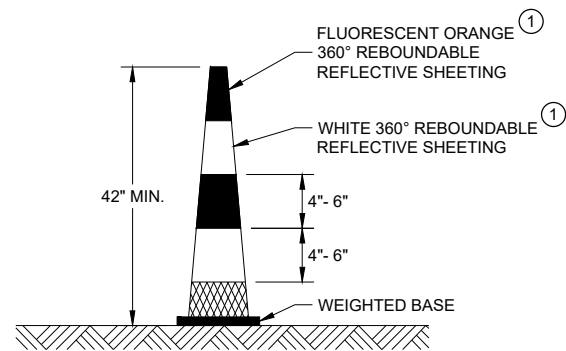
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6

<p>PAVEMENT MARKING (TURN LANES)</p>
<p>STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION</p>

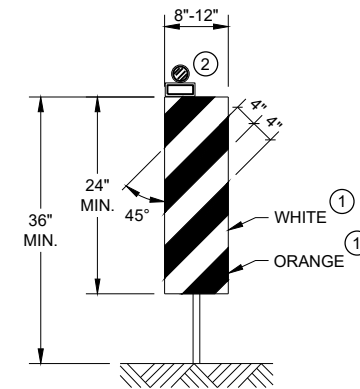


DRUM



42" CONE

DO NOT USE IN TAPERS
 1/2 SPACING OF DRUMS

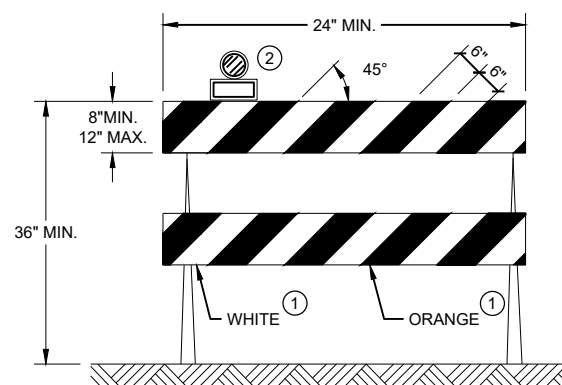


VERTICAL PANEL

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

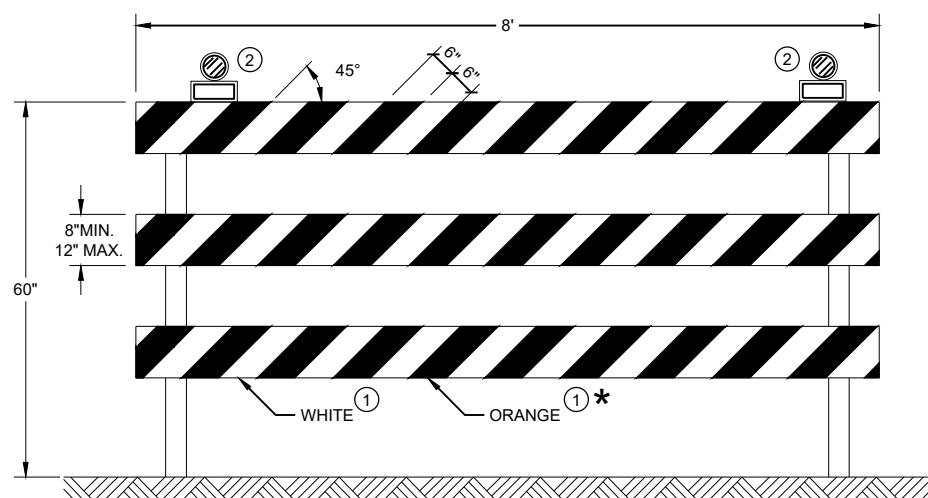
GENERAL NOTES

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



TYPE II BARRICADE

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








TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2017 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
<small>FHWA</small>	

LEGEND

-  SIGN ON PORTABLE OR PERMANENT SUPPORT
-  TEMPORARY PORTABLE RUMBLE STRIP ARRAY
-  DIRECTION OF TRAFFIC
-  WORK AREA
-  FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

GENERAL NOTES

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

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

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

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

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

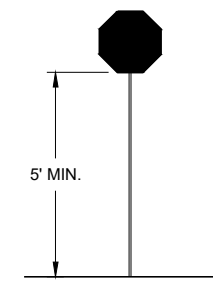
WHEN A SIDE ROAD OR RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

FLAGGING

- FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT REMOVE TEMPORARY PORTABLE RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.
- ① FOR MOVING WORK OPERATIONS, POST ADDITIONAL W20-7A FLAGGER SIGNS AT APPROXIMATELY 3,500' INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.
 - ② SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.
- WHEN THE DISTANCE BETWEEN FLAGGERS EXCEEDS 2 MILES, A PILOT CAR IS REQUIRED. WHEN CURVES REDUCE SIGHT DISTANCE BELOW 400', A PILOT CAR IS REQUIRED.

TEMPORARY PORTABLE RUMBLE STRIPS

- UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.
- ③ EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS SPACED ACCORDING TO MANUFACTURER'S RECOMMENDATION, PLACED TRANSVERSE ACROSS THE LANE AT LOCATIONS SHOWN.
- ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FOR THE APPROVED PRODUCTS LIST.
- INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.
- PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.
- DO NOT INSTALL TEMPORARY PORTABLE RUMBLE STRIPS ON GRAVEL, MILLED SURFACES, OR ASPHALT THAT HAS BEEN PAVED LESS THAN 12 HOURS.



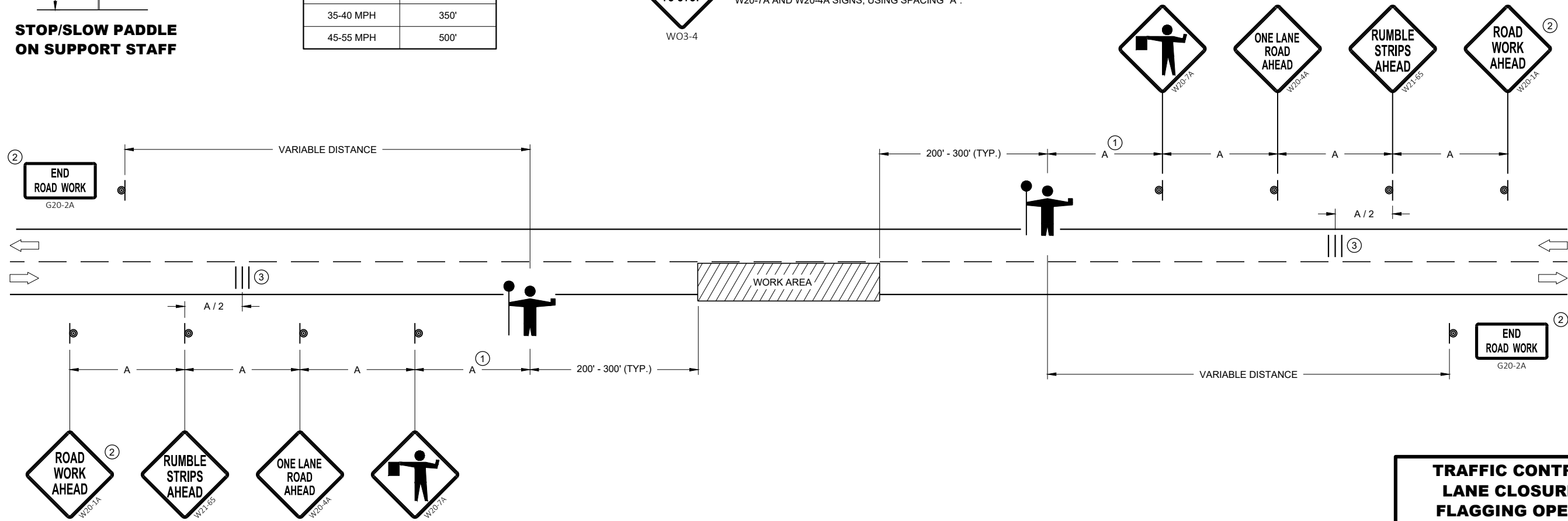
STOP/SLOW PADDLE ON SUPPORT STAFF

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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



USE OF W03-4 SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7A AND W20-4A SIGNS, USING SPACING "A".



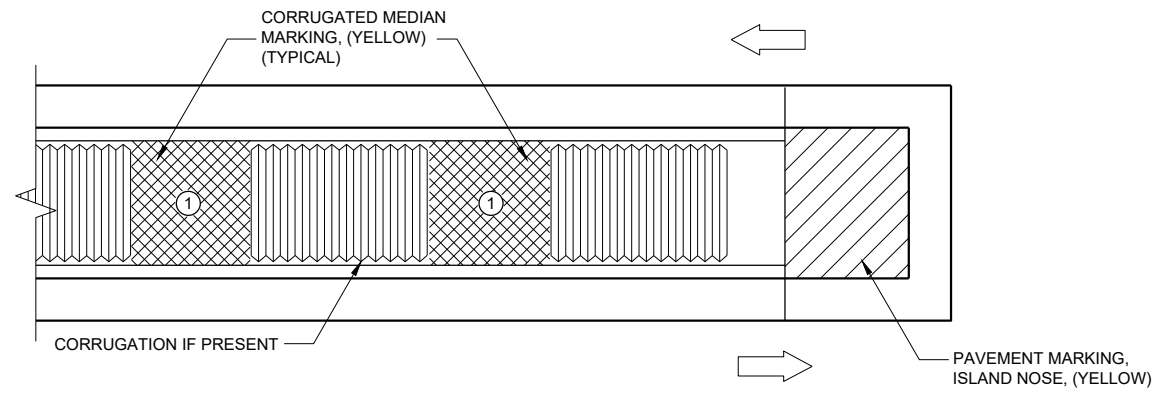
TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

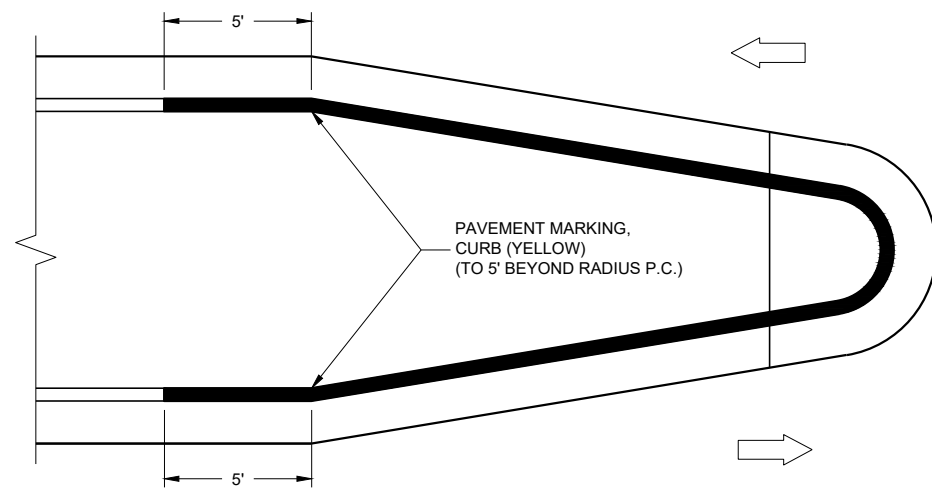
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE: May 2019 /S/ Andrew Heidtke
WORK ZONE ENGINEER

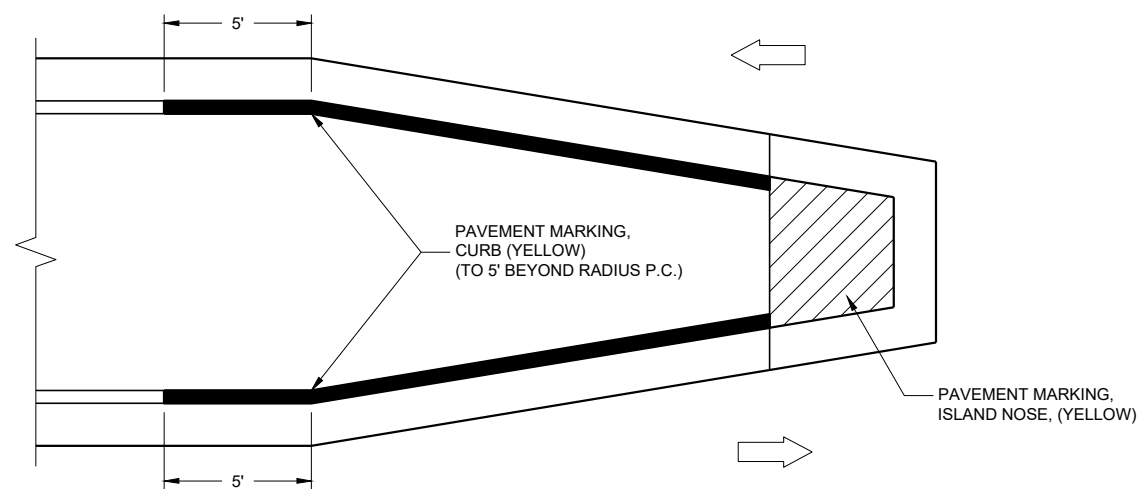
FHWA



MEDIAN ISLAND WITH SQUARE BLUNT NOSE



MEDIAN ISLAND WITH ROUND BLUNT NOSE







MEDIAN ISLAND WITH SLOPED NOSE

TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS

GENERAL NOTES

WHEN CONCRETE CORRUGATED MEDIAN IS CONSTRUCTED TO SEPARATE TRAFFIC OPERATING IN THE OPPOSING DIRECTION, YELLOW PAVEMENT MARKING SHALL BE APPLIED TO THE FLAT PORTION OF THE CONCRETE CORRUGATED MEDIAN. THE ITEM OF PAVEMENT MARKING, CONCRETE CORRUGATED MEDIAN, WILL BE MEASURED IN PLACE AND ACCEPTED IN ACCORDANCE WITH THE CONTRACT AND PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT.

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

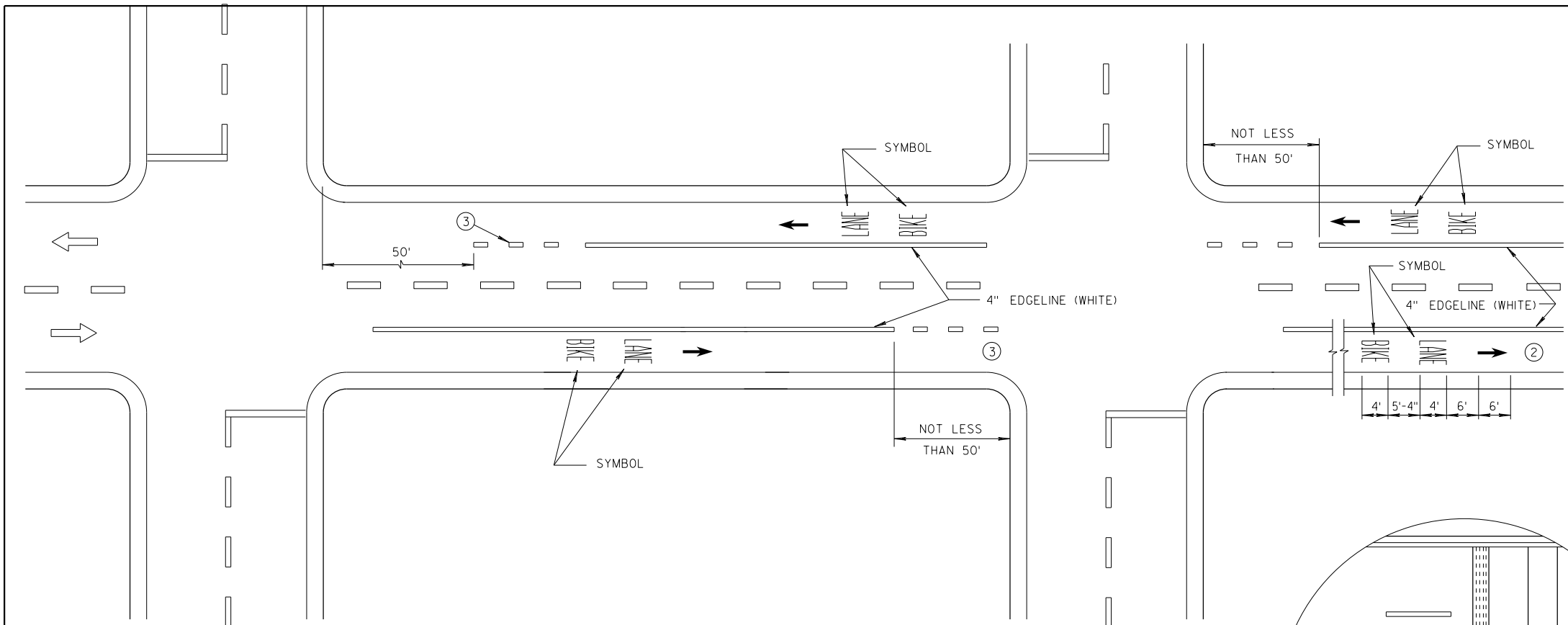
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SDD 15C27 - 03b

SDD 15C27 - 03b

PAVEMENT MARKINGS (ISLANDS)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 7/2018 DATE	/S/ Matthew R. Rauch STATE SIGNING AND MARKING ENGINEER
<small>FHWA</small>	

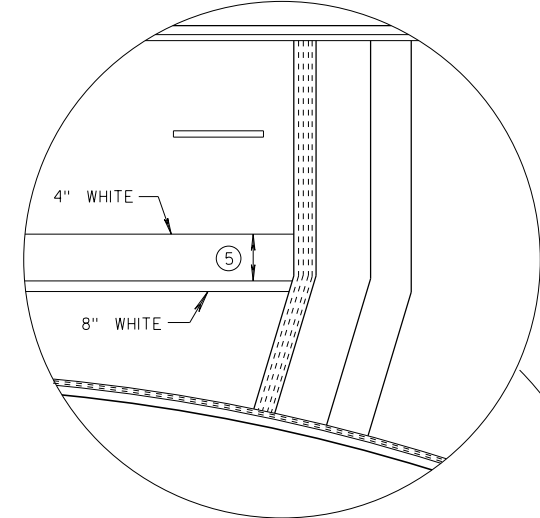


GENERAL NOTES

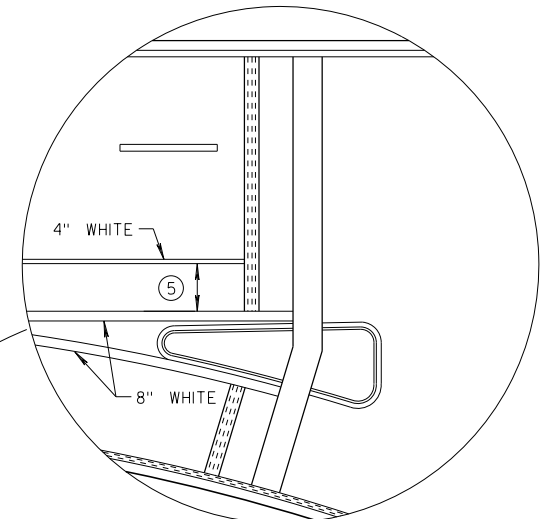
- ① DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.
- ② MINIMUM OF ONE PER BLOCK. MAXIMUM OF 250 FEET.
- ③ DOTTED LINES (3' LINE, 9' GAP) SHOULD BE USED 50 FEET TO 200 FEET IN ADVANCE OF AN INTERSECTION WHERE THERE IS NO RIGHT TURN ONLY LANE AND THERE IS HEAVY RIGHT TURN TRAFFIC OR THERE IS A NEAR-SIDE BUS STOP. AT OTHER INTERSECTIONS WHERE RIGHT TURN TRAFFIC IS LIGHT TO MODERATE, A SOLID LINE CAN BE USED UP TO THE INTERSECTION.
- ④ IF SIGNED AND/OR MARKED AS A BICYCLE FACILITY INCLUDE SECOND LINE OF LINE-SPACE MARKING, OTHERWISE DO NOT.
- ⑤ BIKE ACCOMODATION IS TYPICALLY 5 FEET WIDE AND A MINIMUM OF 4 FEET FROM A LONGITUDINAL JOINT. USE 5 FEET AT 45 MPH.
- ⑥ OMIT THESE MARKINGS FOR WIDER TURN LANE APPLICATIONS (MINIMUM OF 15 FEET WIDE TURN LANE).
- ⑦ REFER TO CONTRACT PLANS FOR LANE WIDTH.

➔ DIRECTION OF TRAVEL

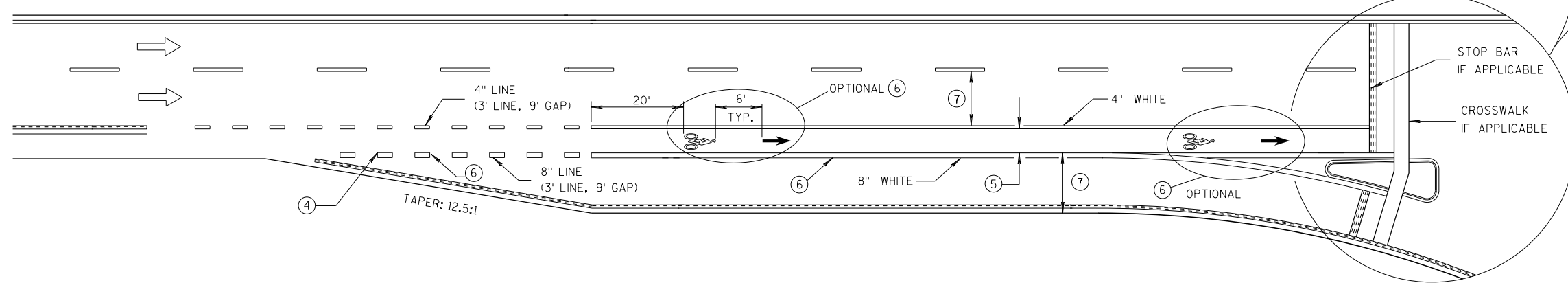
**DESIGNATED BICYCLE LANE
NO PARKING**



4 LANE DIVIDED WITHOUT ISLAND



4 LANE DIVIDED WITH ISLAND



**BIKE LANE - FOR 2-LANE ROADWAYS AND 4-LANE DIVIDED ROADWAYS
(4-LANE DIVIDED WITH RIGHT TURN LANE SHOWN)**

BICYCLE LANE MARKING	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 7/2018 DATE	/S/ Matthew R. Rauch STATE SIGNING AND MARKING ENGINEER
FHWA	

6

6


S.D.D. 15 C 29-6a

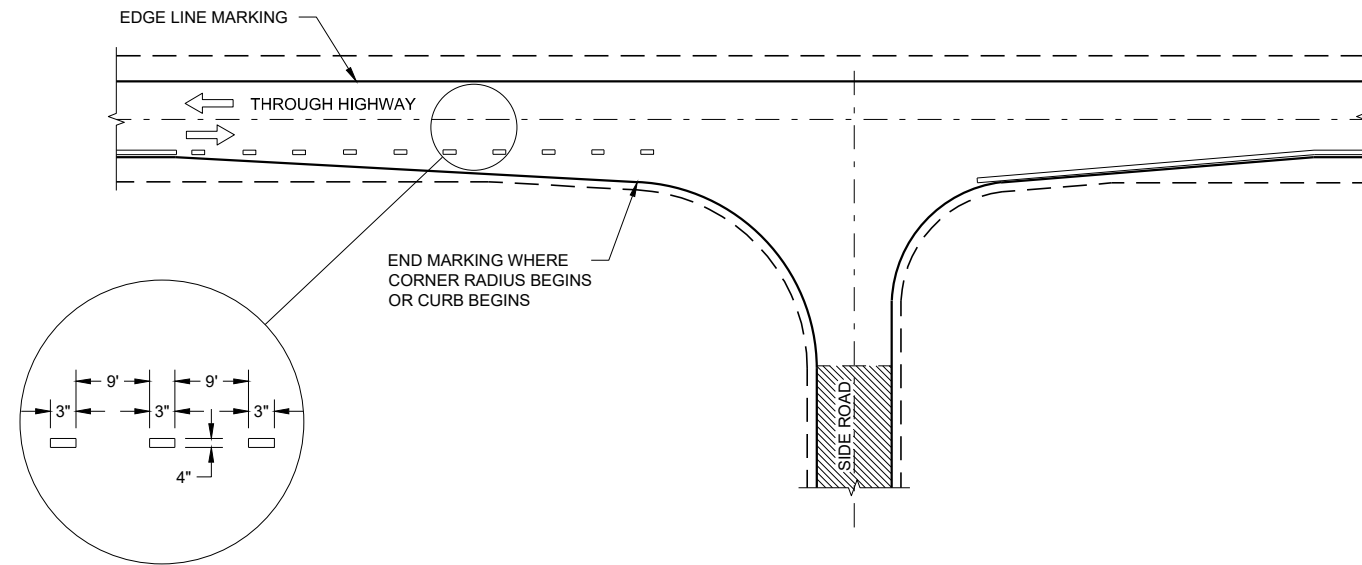
S.D.D. 15 C 29-6a

GENERAL NOTES

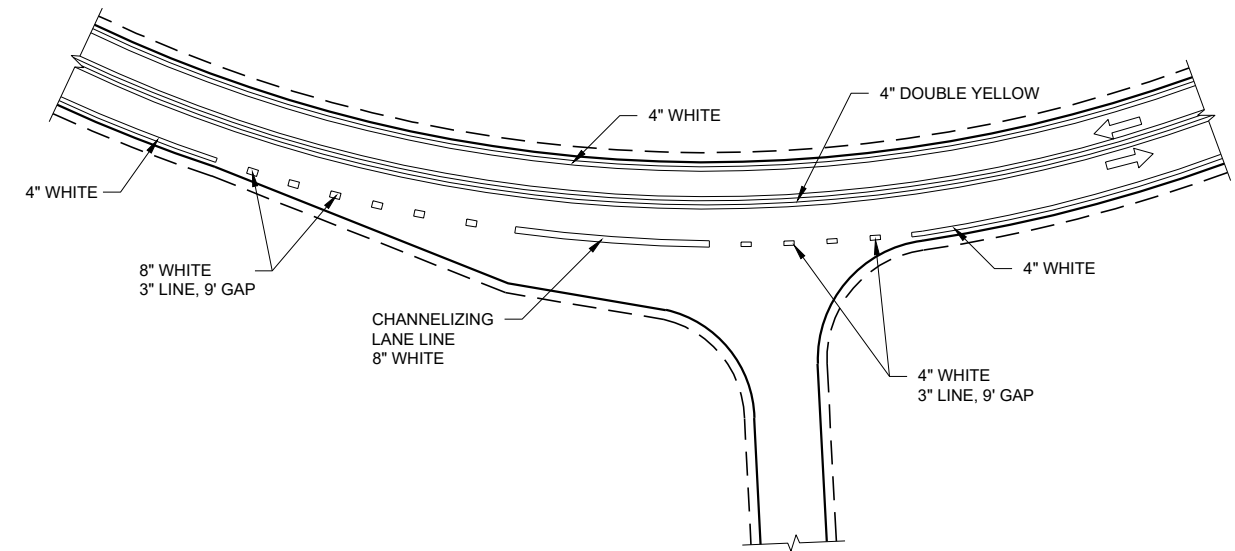
OMIT EDGE LINES THROUGH INTERSECTIONS. CONTINUE EDGE LINES THROUGH DRIVEWAYS.

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

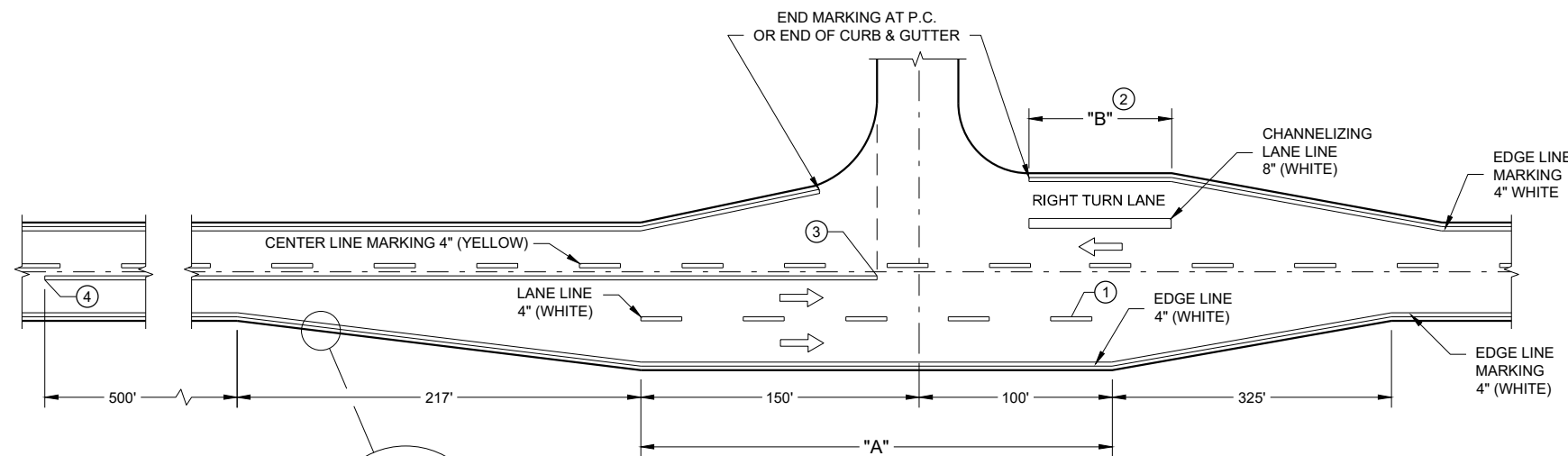
ARROW SYMBOL () SHOWS DIRECTION OF TRAVEL



MINOR INTERSECTION

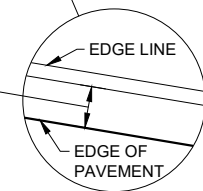


INTERSECTION ON OUTSIDE OF CURVE



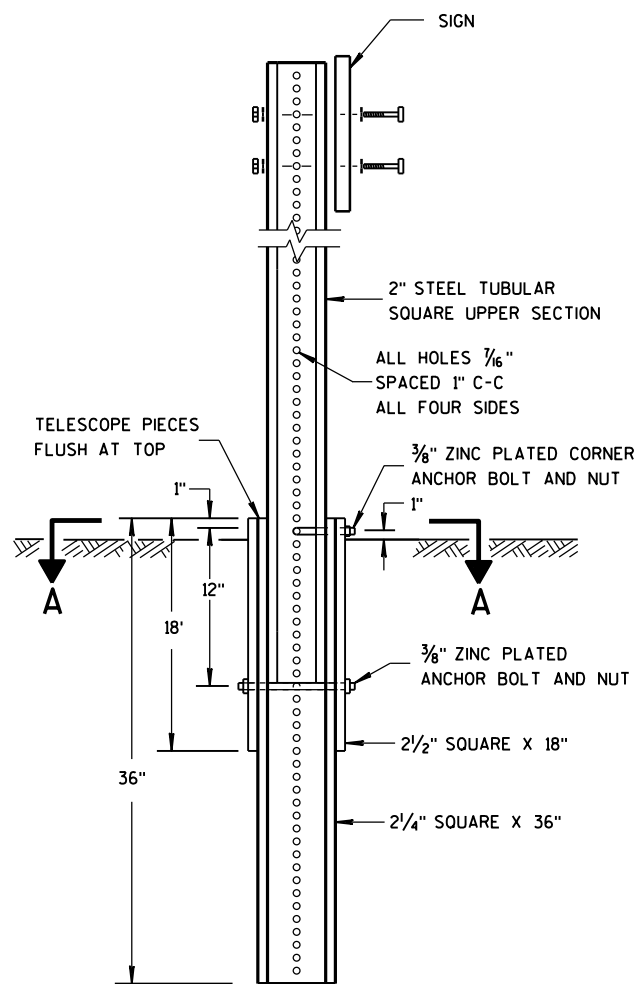
MAJOR INTERSECTIONS (INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)

BYPASS LANE PAVED SHOULDER WIDTH (AS SHOWN ELSEWHERE IN PLANS) - PLUS 2 INCHES



PAVEMENT MARKING (INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



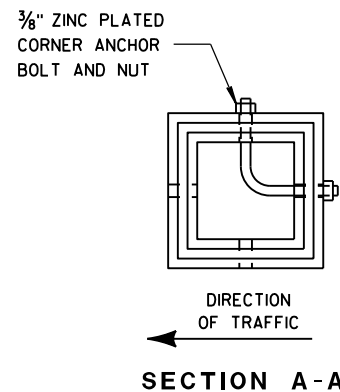
DETAIL OF TUBULAR STEEL SIGN POST

TUBULAR STEEL POSTS

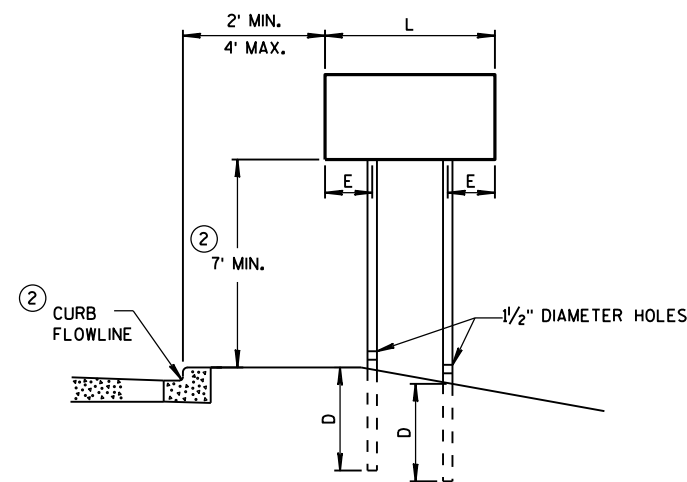
AREA OF SIGN INSTALLATION (SQ. FT.)	NUMBER OF REQUIRED TUBULAR STEEL POSTS
9 OR LESS	1
GREATER THAN 9 LESS THAN OR EQUAL TO 18	2
GREATER THAN 18 LESS THAN OR EQUAL TO 27	3

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

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



SECTION A-A

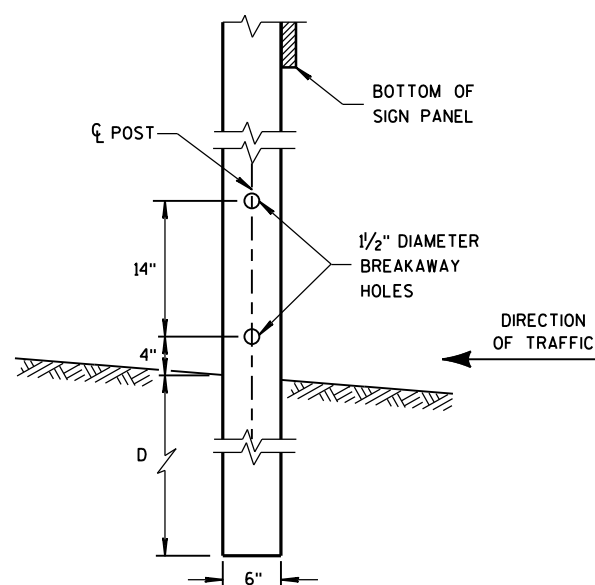


URBAN AREA

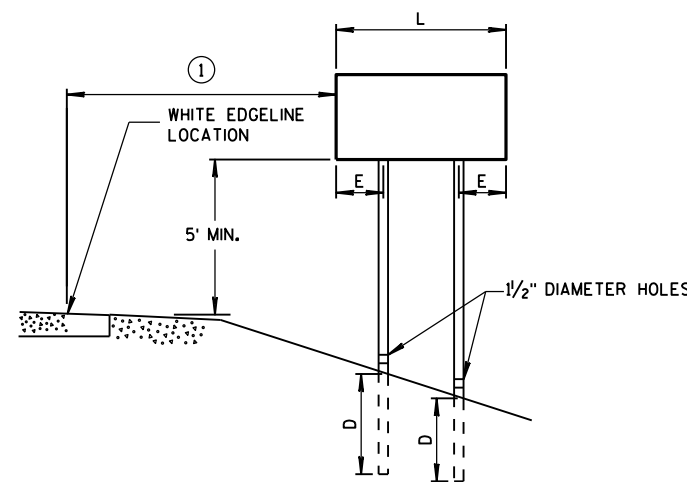
POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

WOOD POST EMBEDMENT DEPTH

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



4" X 6" WOOD POST MODIFICATION



RURAL AREA

4" X 6" WOOD POST

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

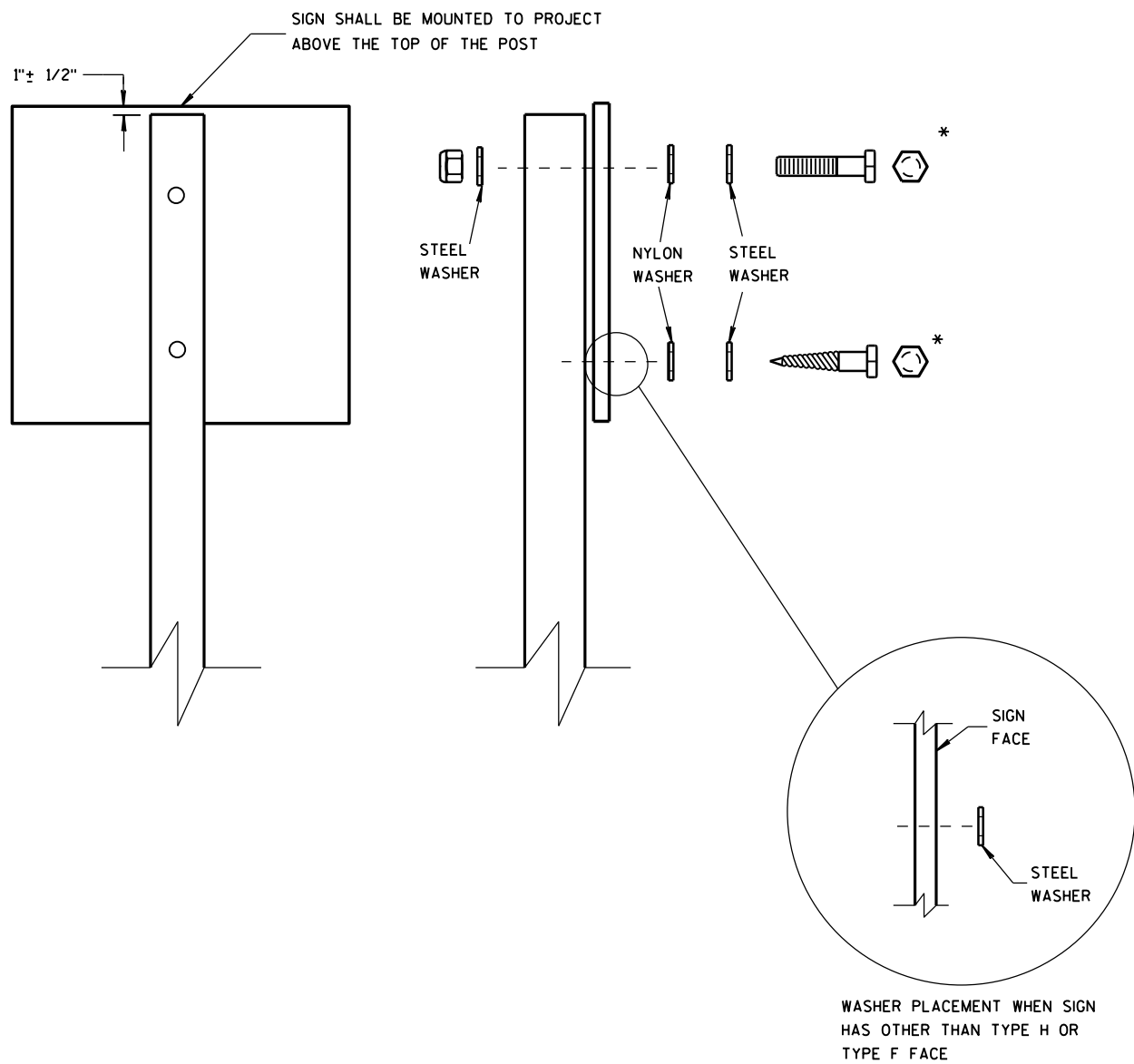
SEE NOTE ③

GENERAL NOTES

- ① 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.
- ② THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.
- ③ FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



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 - 3/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

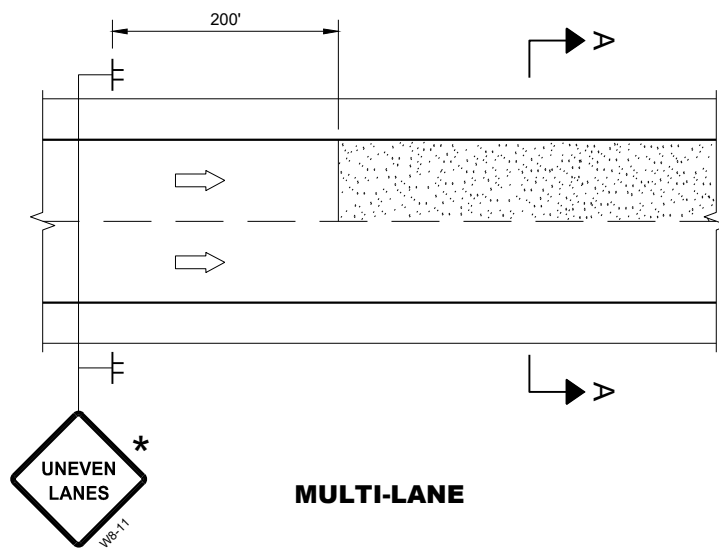
WASHERS (ALL POSTS) -

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

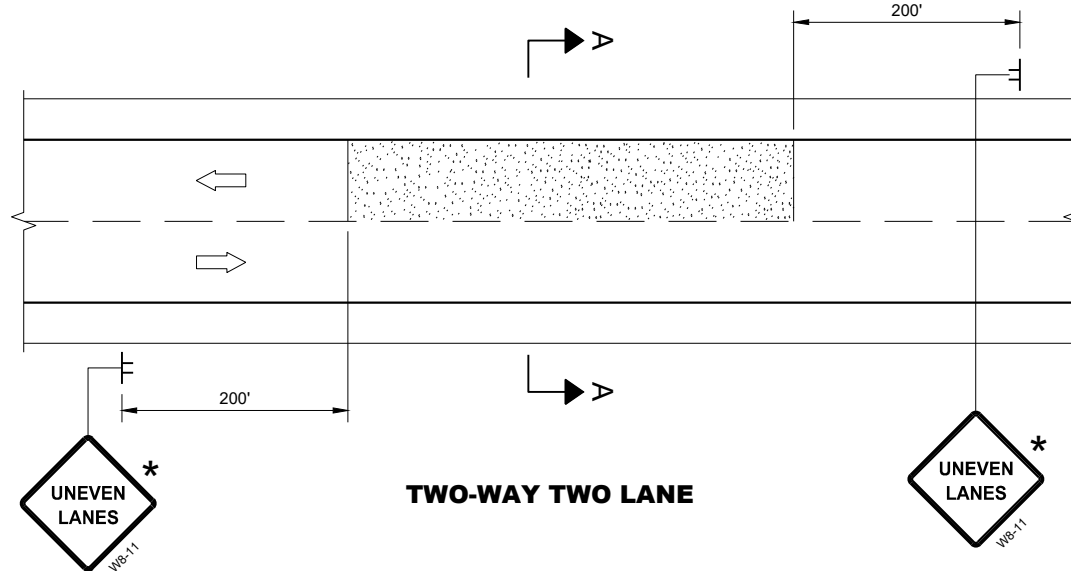
1-1/4" O.D. X 3/8" I.D. X .080 NYLON FOR ALL TYPE H SIGNS

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

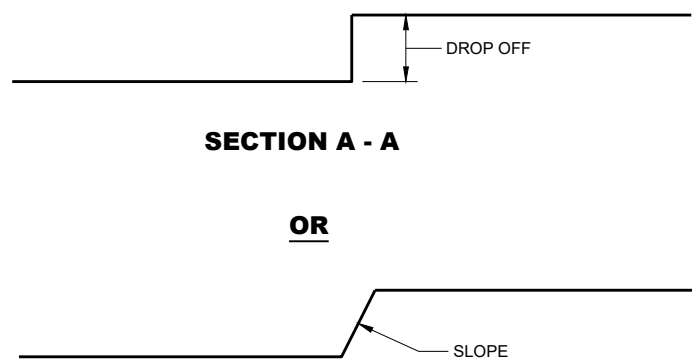
ATTACHMENT OF SIGNS TO POSTS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2017 DATE	/s/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	



MULTI-LANE



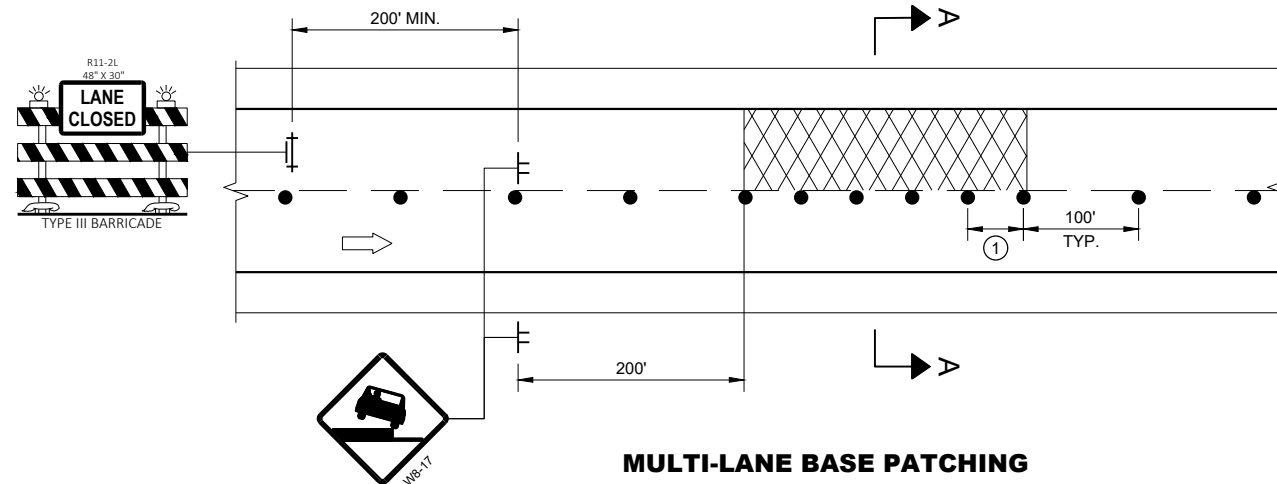
TWO-WAY TWO LANE



SECTION A - A

OR

SECTION A - A



MULTI-LANE BASE PATCHING

ADJACENT LANE DROP-OFFS

GENERAL NOTES

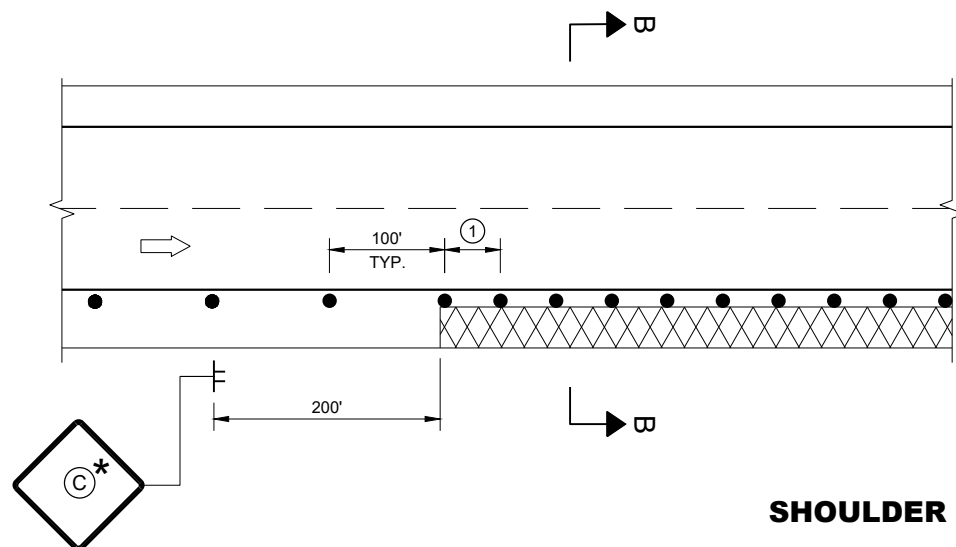
- FOR SPOT LOCATIONS USE ENGINEERING JUDGEMENT WHEN PLACING ADDITIONAL SIGNS.
- ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.
- "WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.
- WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.
- * IF THE DROP-OFF IS CONTINUOUS ALONG THE PROJECT, PLACE ADDITIONAL SIGNS EVERY 1 MILE AND AFTER EVERY ENTRANCE RAMP.
- ① USE CLOSER SPACING WHEN DELINEATING DROP-OFF.

LEGEND

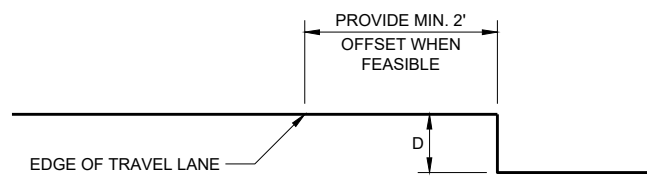
- ⊥ SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- ⊥ TYPE III BARRICADE WITH ATTACHED SIGN
- ⊥ TYPE "A" WARNING LIGHT (FLASHING)
- ➡ DIRECTION OF TRAFFIC
- ▨ WORK AREA WITH DROP-OFF
- ▨ MILLED SURFACE

6

6



SHOULDER DROP-OFFS



SECTION B - B

D	SIGN (C)
< 2" WITH A SLOPE STEEPER THAN 3:1	LOW SHOULDER W08-9
2" < 6" WITH A SLOPE STEEPER THAN 3:1	SHOULDER DROP-OFF W8-9A PROVIDE A 3:1 OR FLATTER SLOPE OF MATERIAL ADJACENT TO THE PAVEMENT

SDD 15D39 - 02

SDD 15D39 - 02

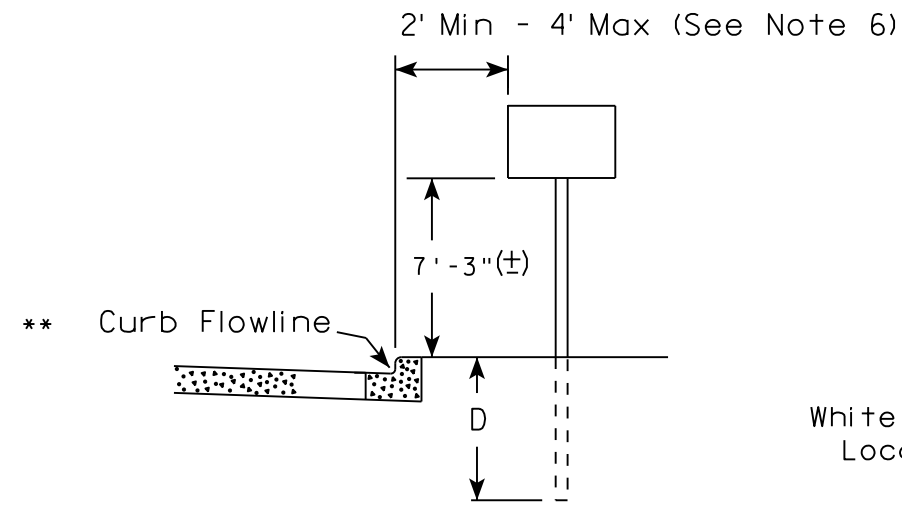
**TRAFFIC CONTROL,
DROP-OFF SIGNING**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

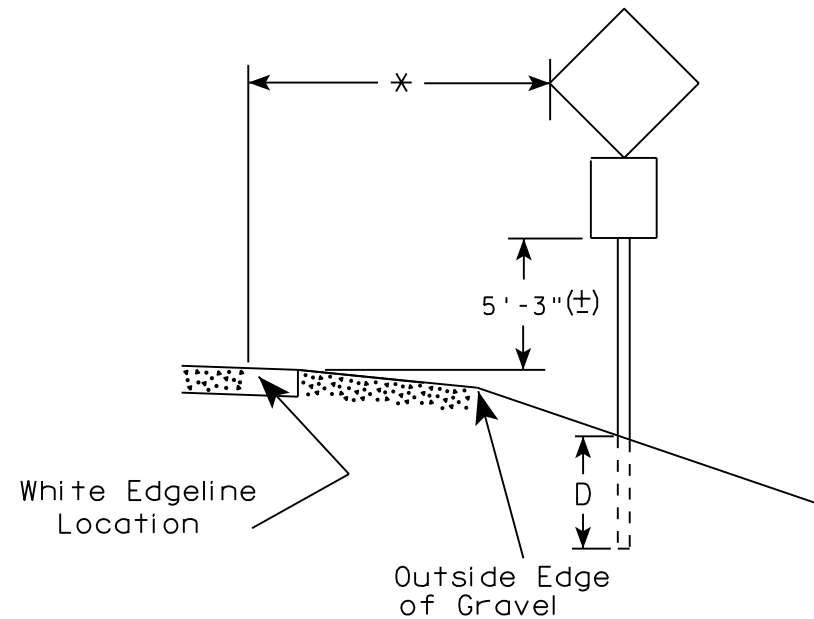
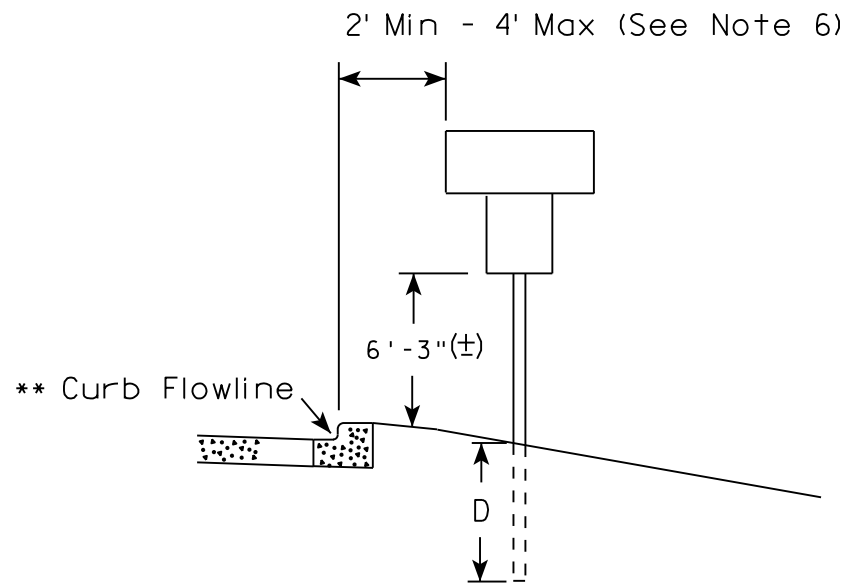
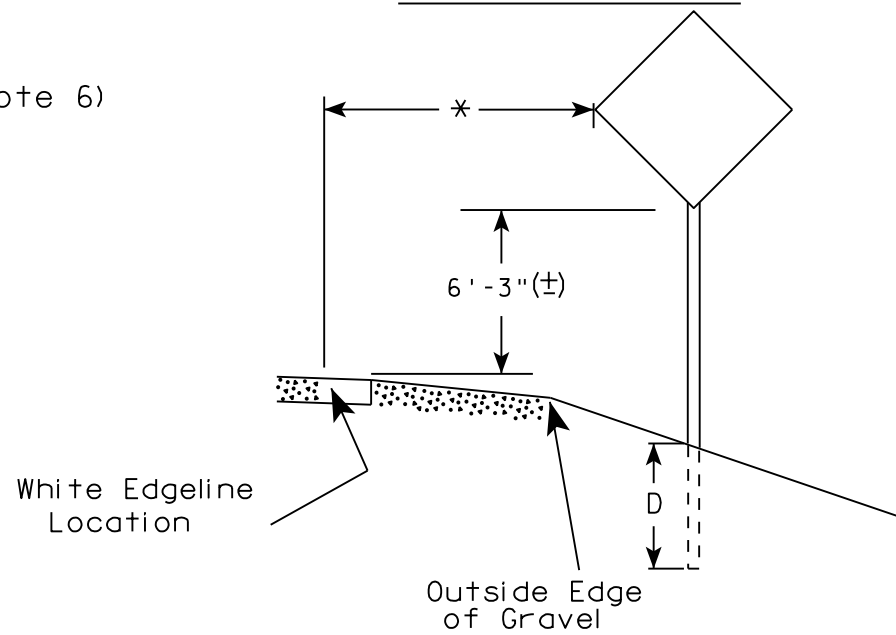
APPROVED
March 2018 /S/ Andrew Heidtke
DATE DATE WORK ZONE ENGINEER

FHWA

URBAN AREA



RURAL AREA (See Note 2)



POST EMBEDMENT DEPTH

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

GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on 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. J-Assemblies are considered to be one sign for mounting height.
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 signs 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), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).

** 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.

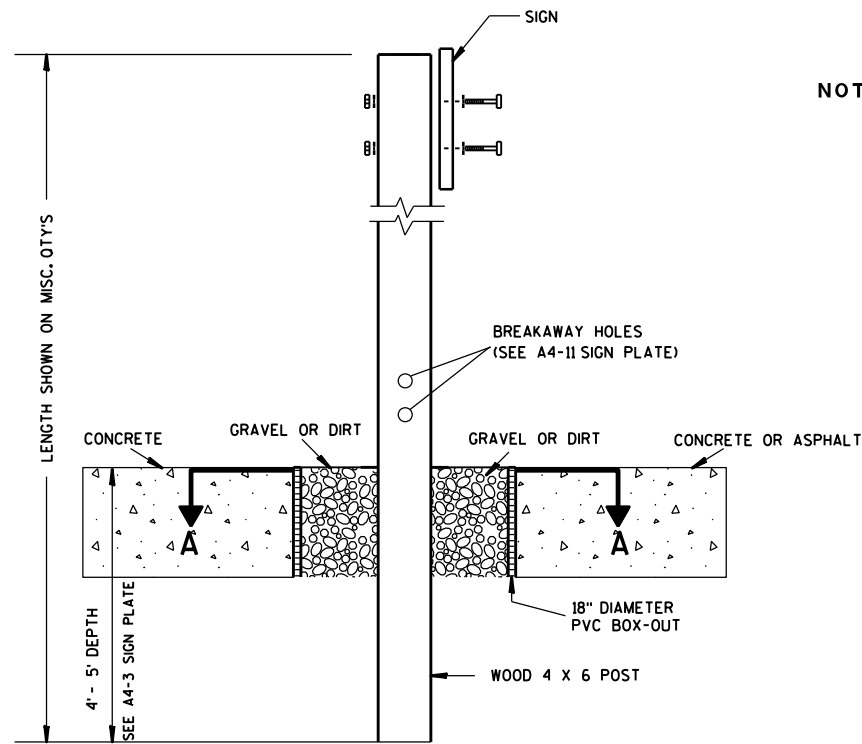
* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

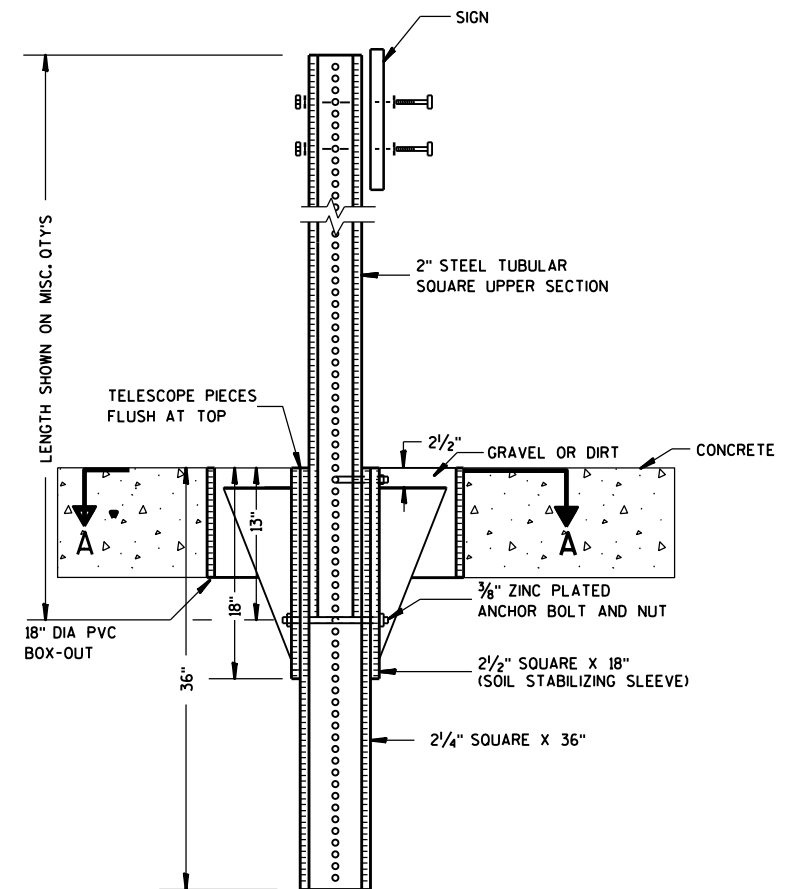
DATE 8/21/17 PLATE NO. A4-3.21



ELEVATION VIEW

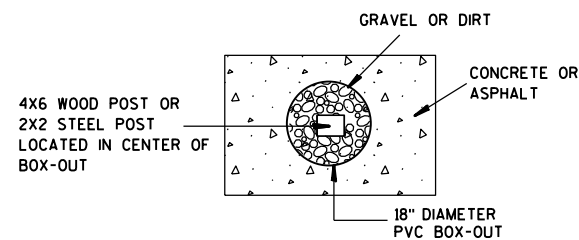
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ ASPHALT INSTALLATIONS

**SIGN POST
BOX-OUTS
A4-3B**

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

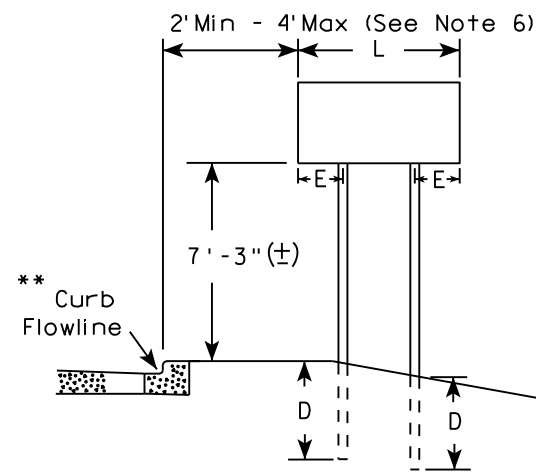
7

7

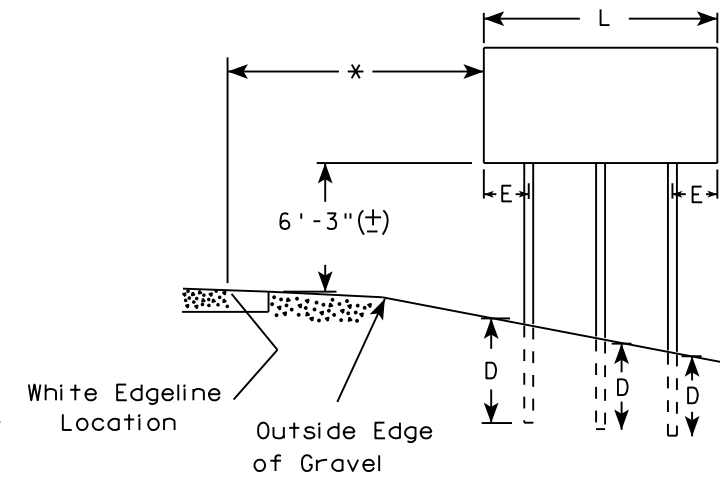
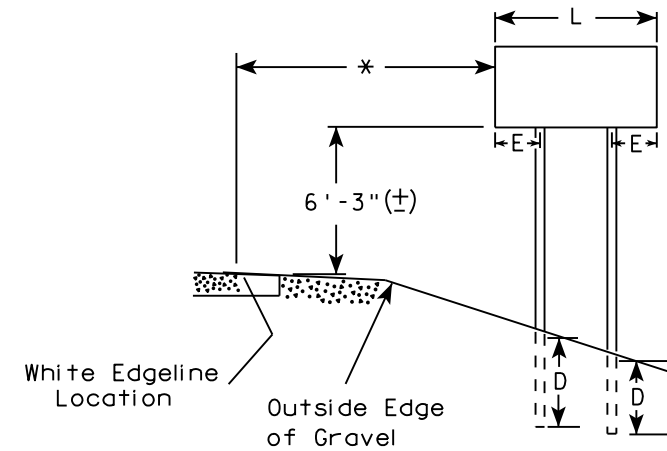
GENERAL NOTES

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

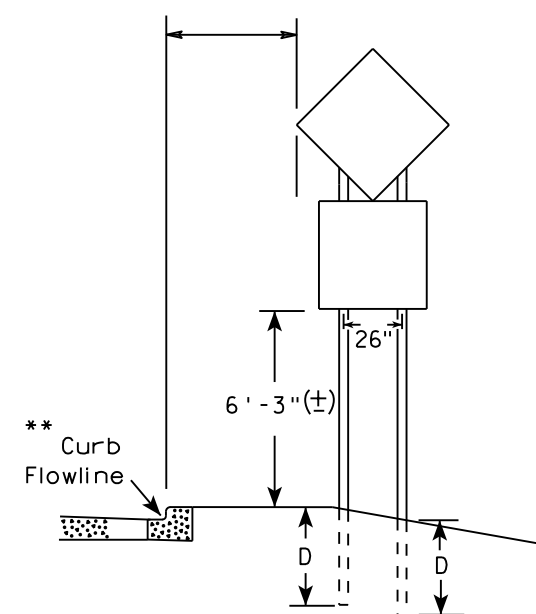
URBAN AREA



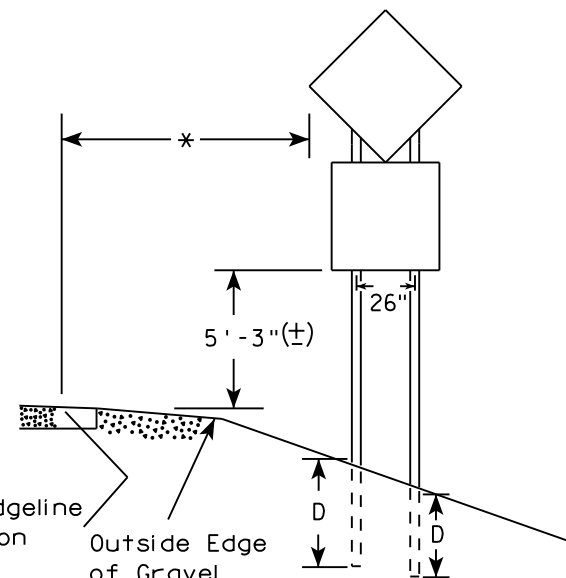
RURAL AREA (See Note 3)



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



48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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

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

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

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

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

POST EMBEDMENT DEPTH

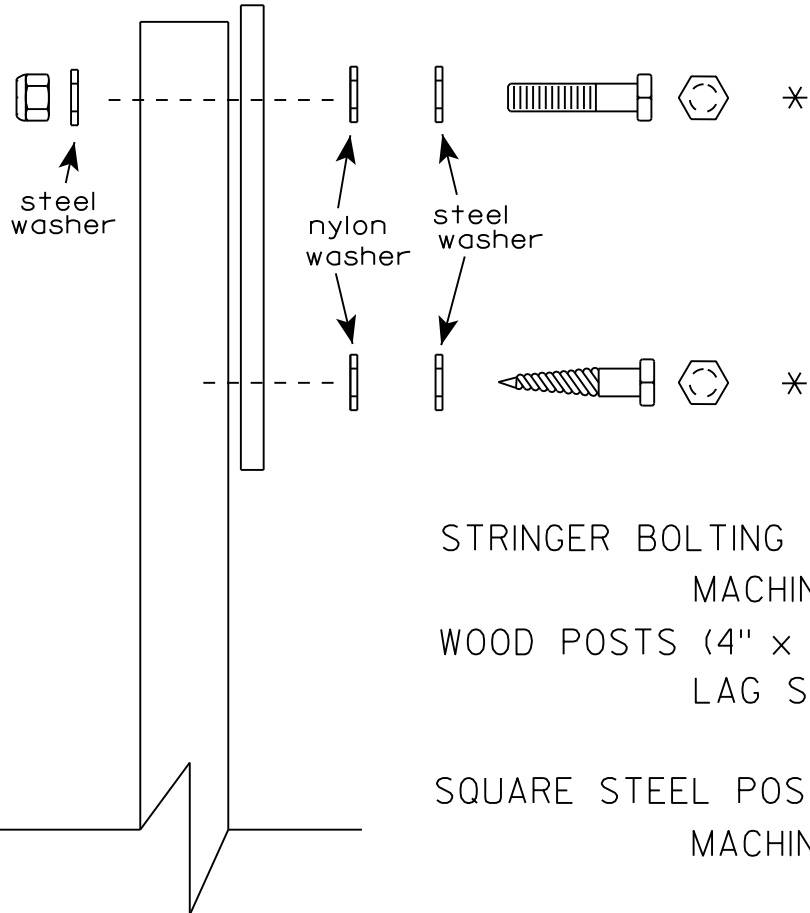
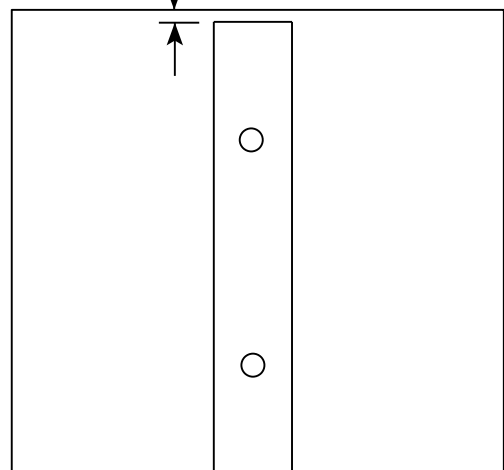
Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION
OF TYPE II SIGNS
ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION
APPROVED *Matthew R. Rauch*
For State Traffic Engineer
DATE 8/21/17 PLATE NO. A4-4.15

1"± 1/2"

SIGN SHALL BE MOUNTED TO PROJECT ABOVE THE TOP OF THE POST



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

- a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3
- b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

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

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

WOOD POSTS (4" x 4" or 4" x 6")

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

SQUARE STEEL POSTS (2" x 2")

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

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

WASHERS (ALL POSTS) -

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

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

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

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

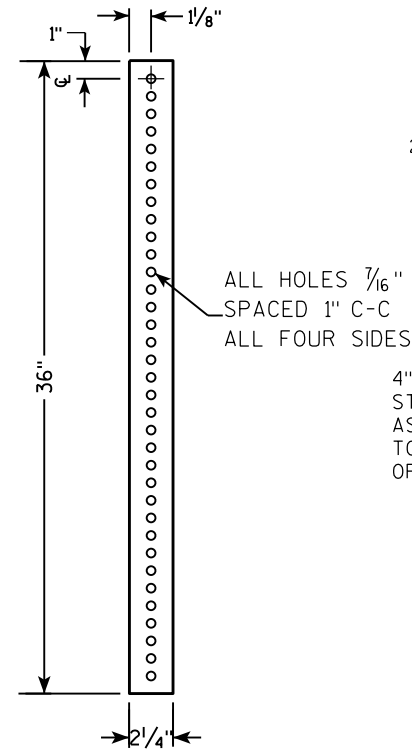
APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 8/11/16 PLATE NO. A4-8.8

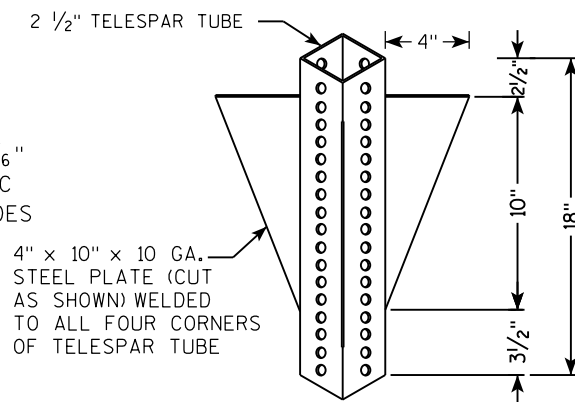
7

**TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM**

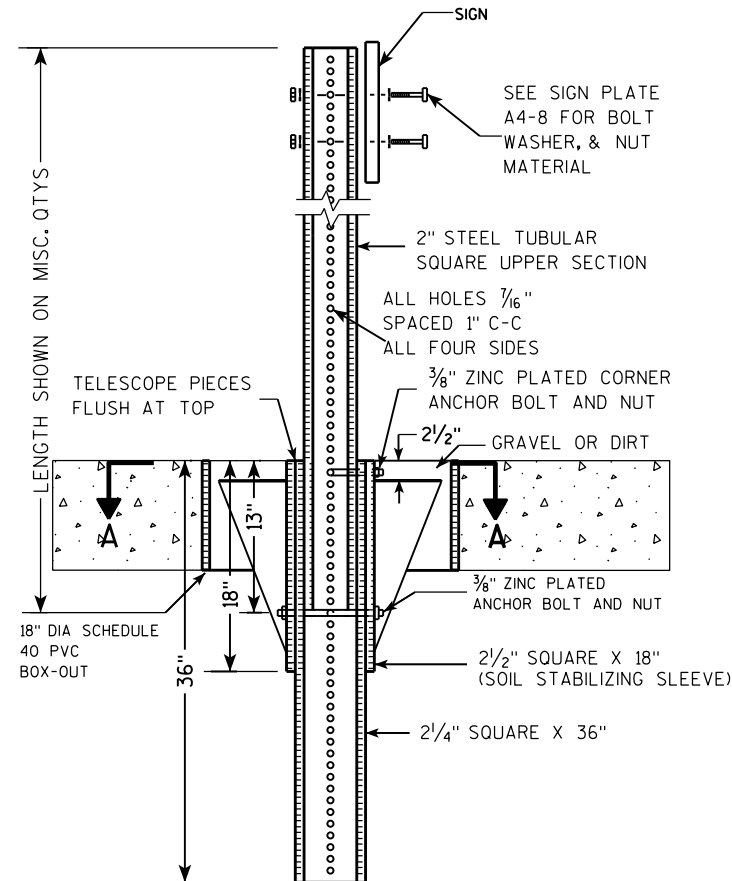
2 1/4" SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



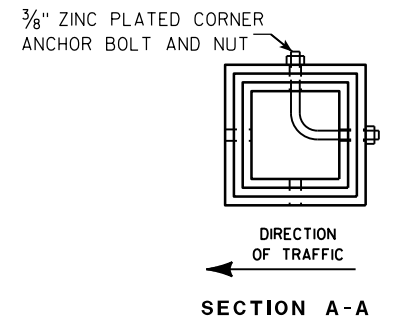
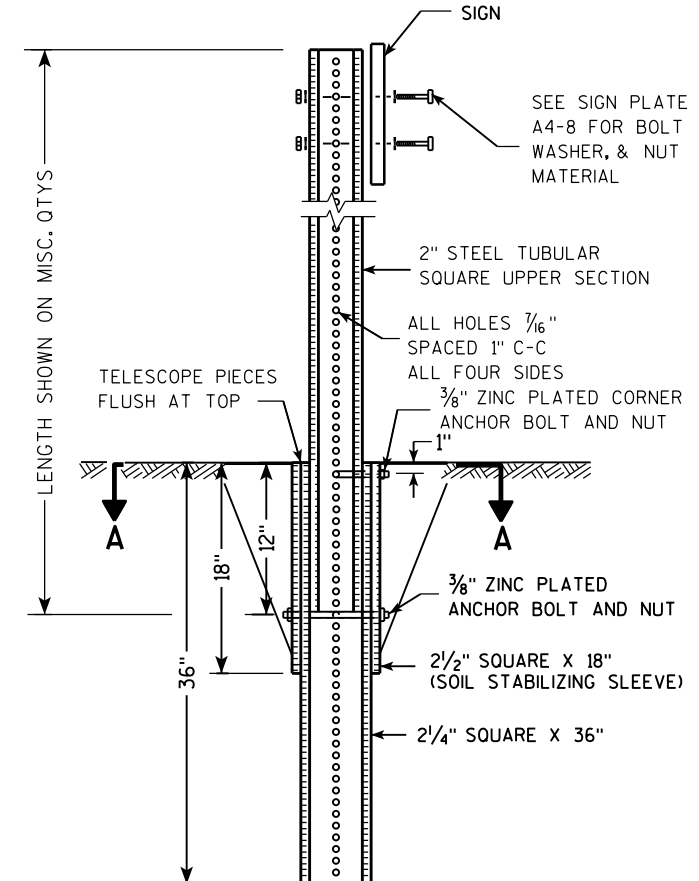
2 1/2" SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH



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



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



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

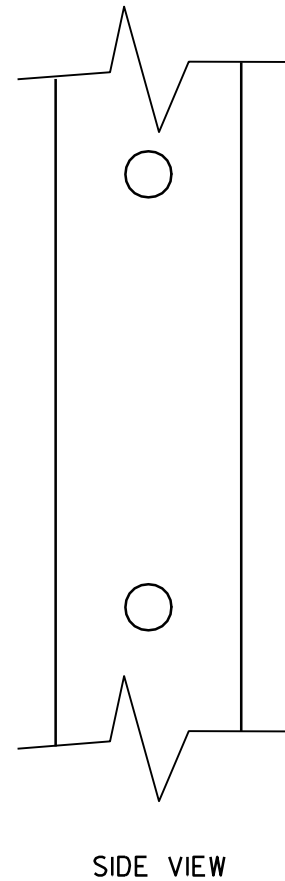
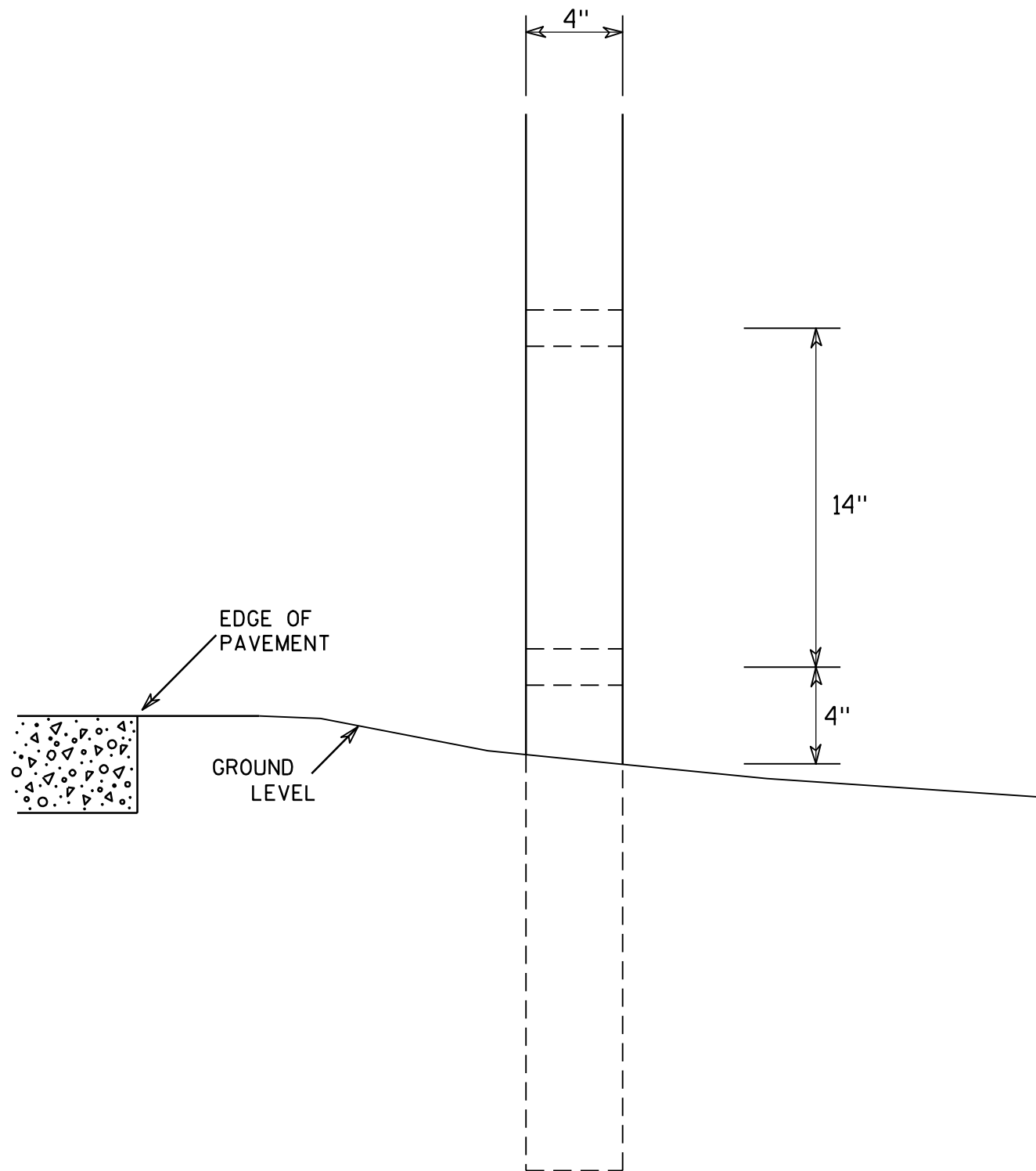
Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

**TUBULAR STEEL
SIGN POST
A4-9**

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 2/05/15 PLATE NO. A4-9.9



GENERAL NOTES

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

7

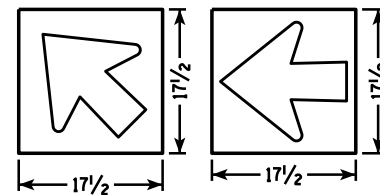
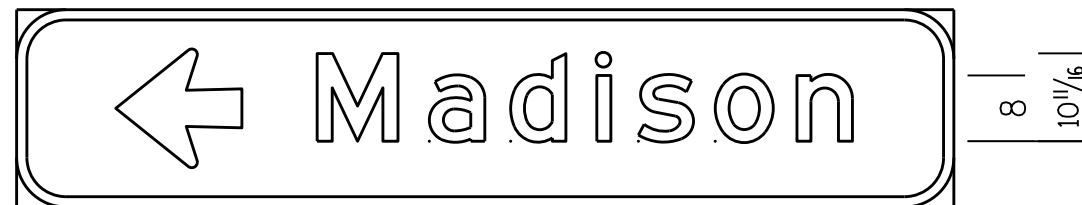
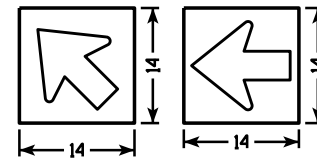
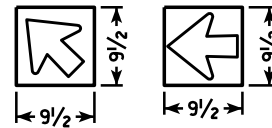
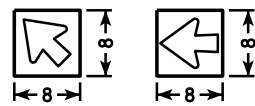
7

4 X 6 WOOD POST MODIFICATIONS	
<i>WISCONSIN DEPT OF TRANSPORTATION</i>	
APPROVED	<i>Chester J Spang</i> for State Traffic Engineer
DATE <u>3/27/97</u>	PLATE NO. <u>A4-11.2</u>

SIGN LAYOUT WITH VARIOUS SIZED MESSAGES

GENERAL NOTES

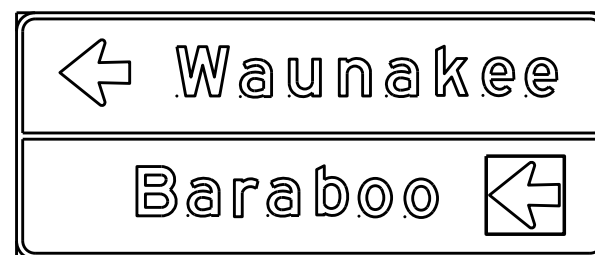
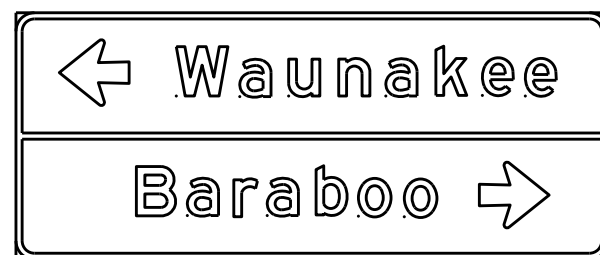
- Materials shall conform to Standard Specification Section 637.
Base - Sheet Aluminum 0.040" Thickness
Sheeting - Orange Type F Reflective
Arrow - Black Non-Reflective
- Arrow signs shall be fastened to permanent sign by either aluminum rivets or aluminum self-tapping sheet metal screws. There shall be a minimum of 2 fasteners used per arrow sign.
- There shall be a spacer consisting of a 0.08" nylon washer between the back of the arrow sign and the face of the permanent sign.
- Arrows are per standard plate A1-2
- Use separate arrow sign for each destination
- Tilt arrow is always at 45 degrees
- Arrow is centered on arrow sign



Lower Case Copy Size	Standard Width (Single Arrow)	2 Line Tilt Arrow Cover Width	3 Line Tilt Arrow Cover Width	Height
3 3/4" Series C	8	9 1/2	14 1/2	8
4 1/2" Series D & E	9 1/2	10	15	9 1/2
6" Series D & E	14	16	20 1/2	14
8" Series E	17 1/2	20 1/2	25	17 1/2

BEFORE

AFTER



DESTINATION DIRECTIONAL ARROW FOR DETOUR SIGNS

WISCONSIN DEPT OF TRANSPORTATION

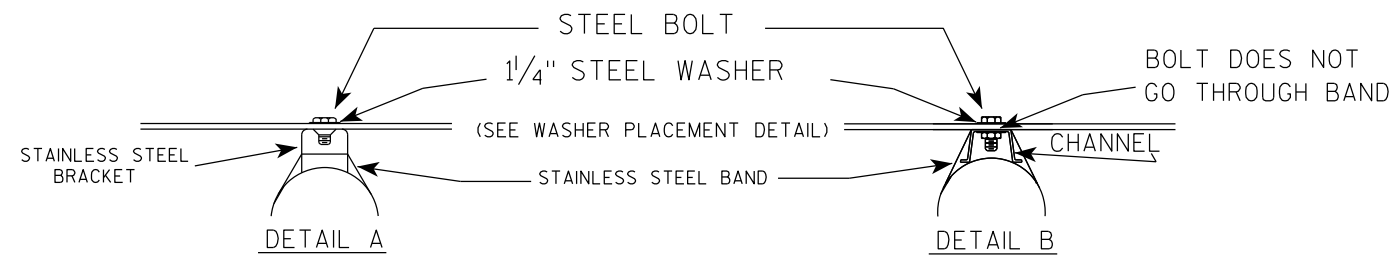
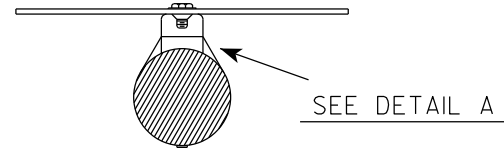
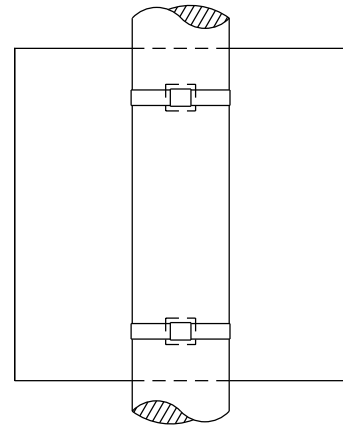
APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 10/08/14

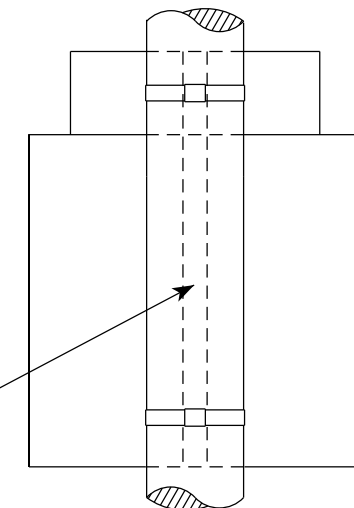
PLATE NO. A4-12.2

BANDING

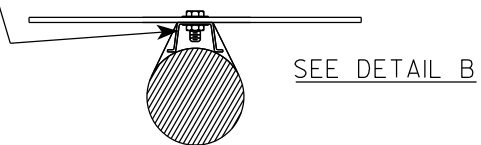
SINGLE SIGN



"J" ASSEMBLY

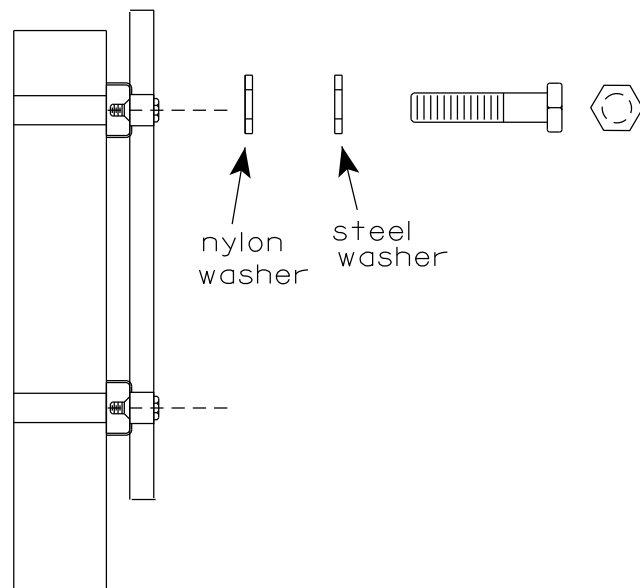


CHANNEL
SEE TYPICAL PANEL
INSTALLATION SHEET



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

WASHER PLACEMENT



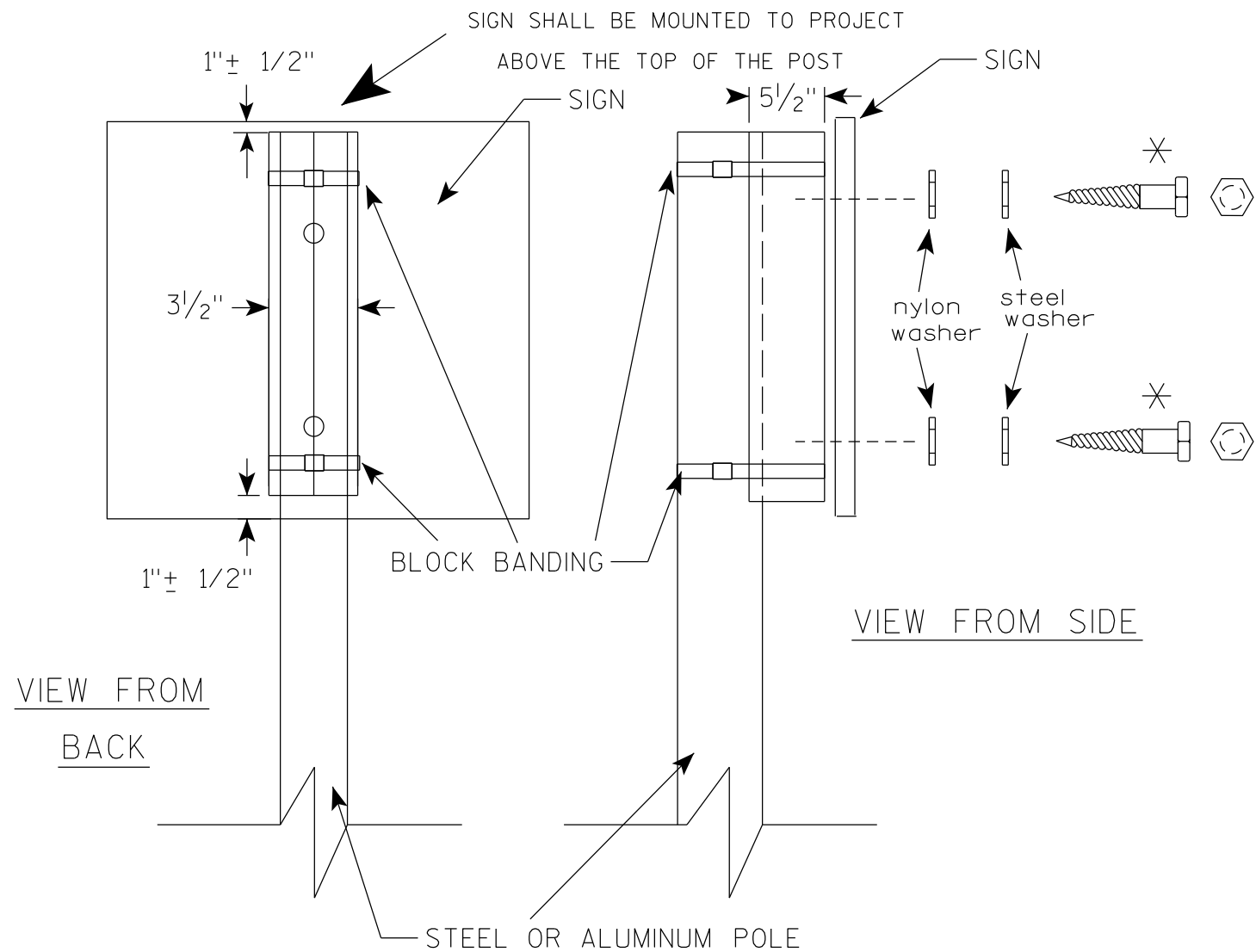
WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

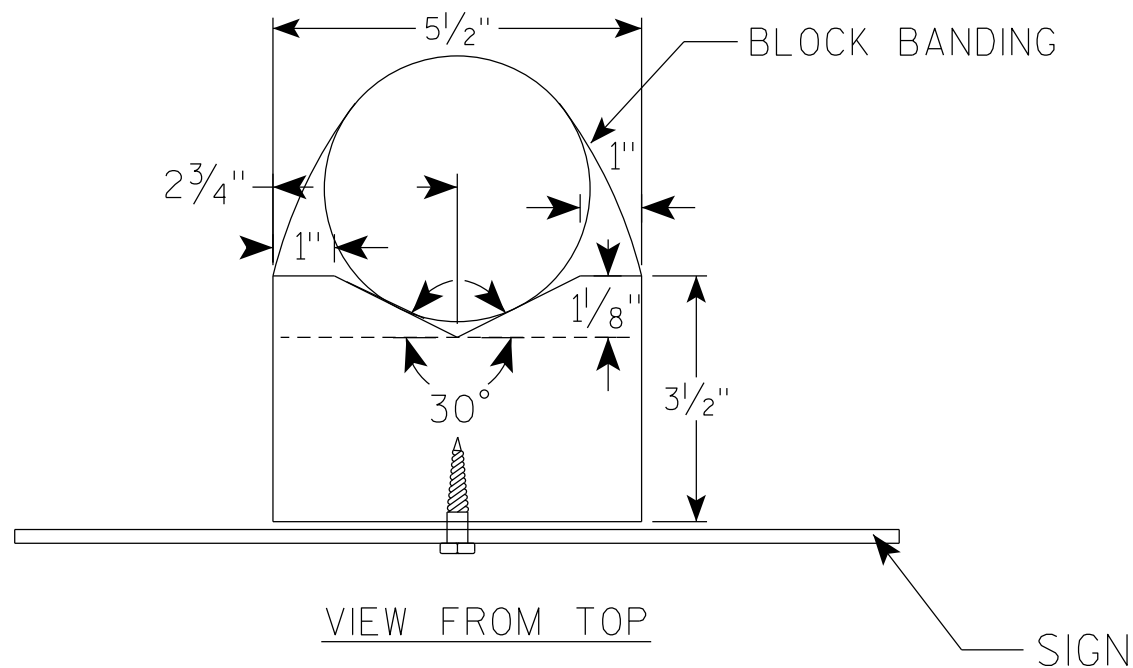
DATE 6/10/19 PLATE NO. A5-9.4



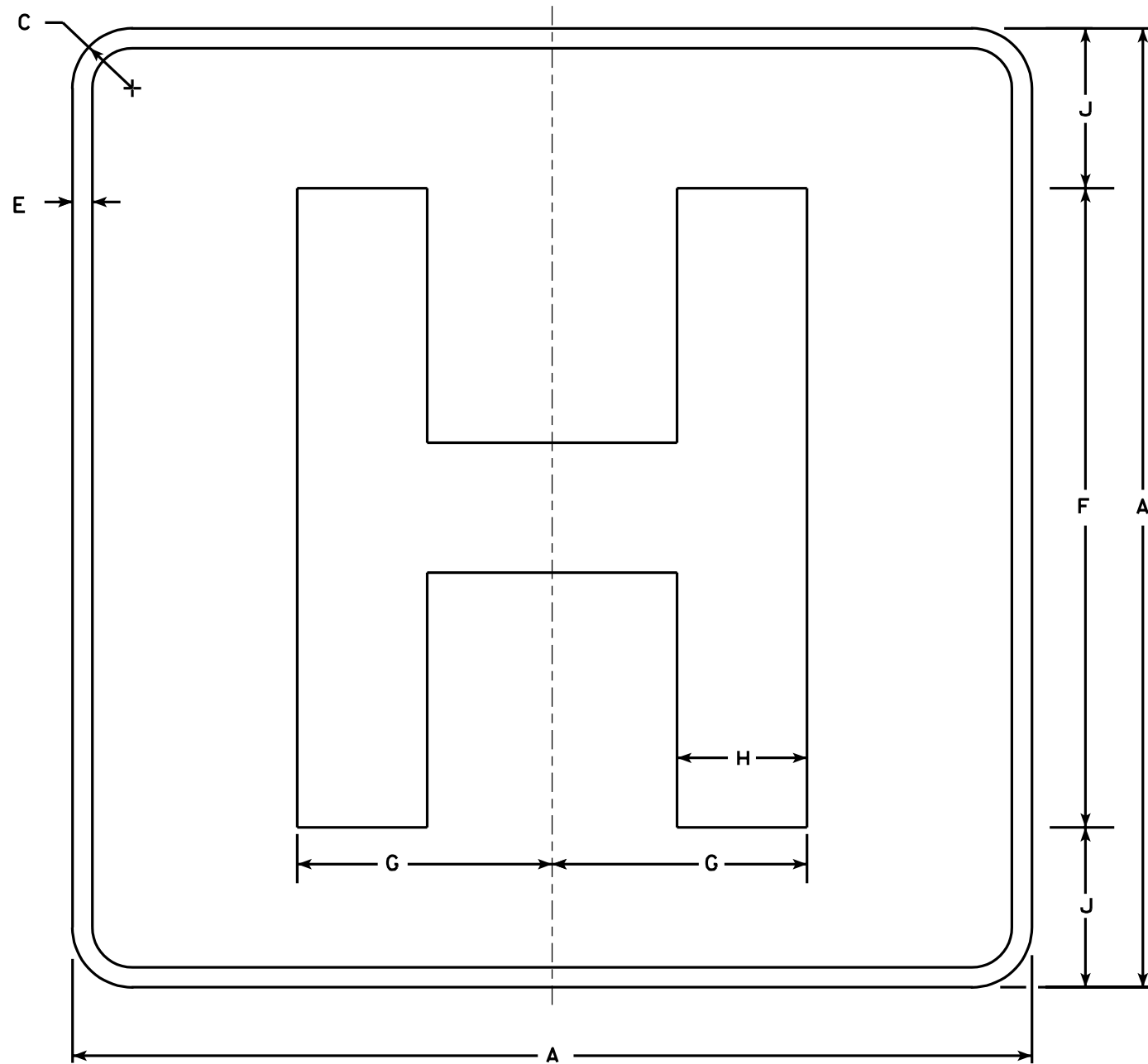
GENERAL NOTES

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

* LAG BOLTS SHALL BE 3/8" X 2 1/2"



BLOCK BANDING DETAIL (V-BLOCK OPTION)	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R Rauch</i> for State Traffic Engineer
DATE 6/10/19	PLATE NO. A5-10.2



NOTES

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

7

Metric equivalent for this sign is:

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

D9-2

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18		1 1/8		1/2	12	4 3/4	2 3/8		3																	4.0
2	24		1 1/2		1/2	16	6 3/8	3 1/4		4																	4.0
3	36		2 1/4		3/4	24	9 1/2	4 7/8		6																	9.0
4																											
5																											

STANDARD SIGN
D9-2

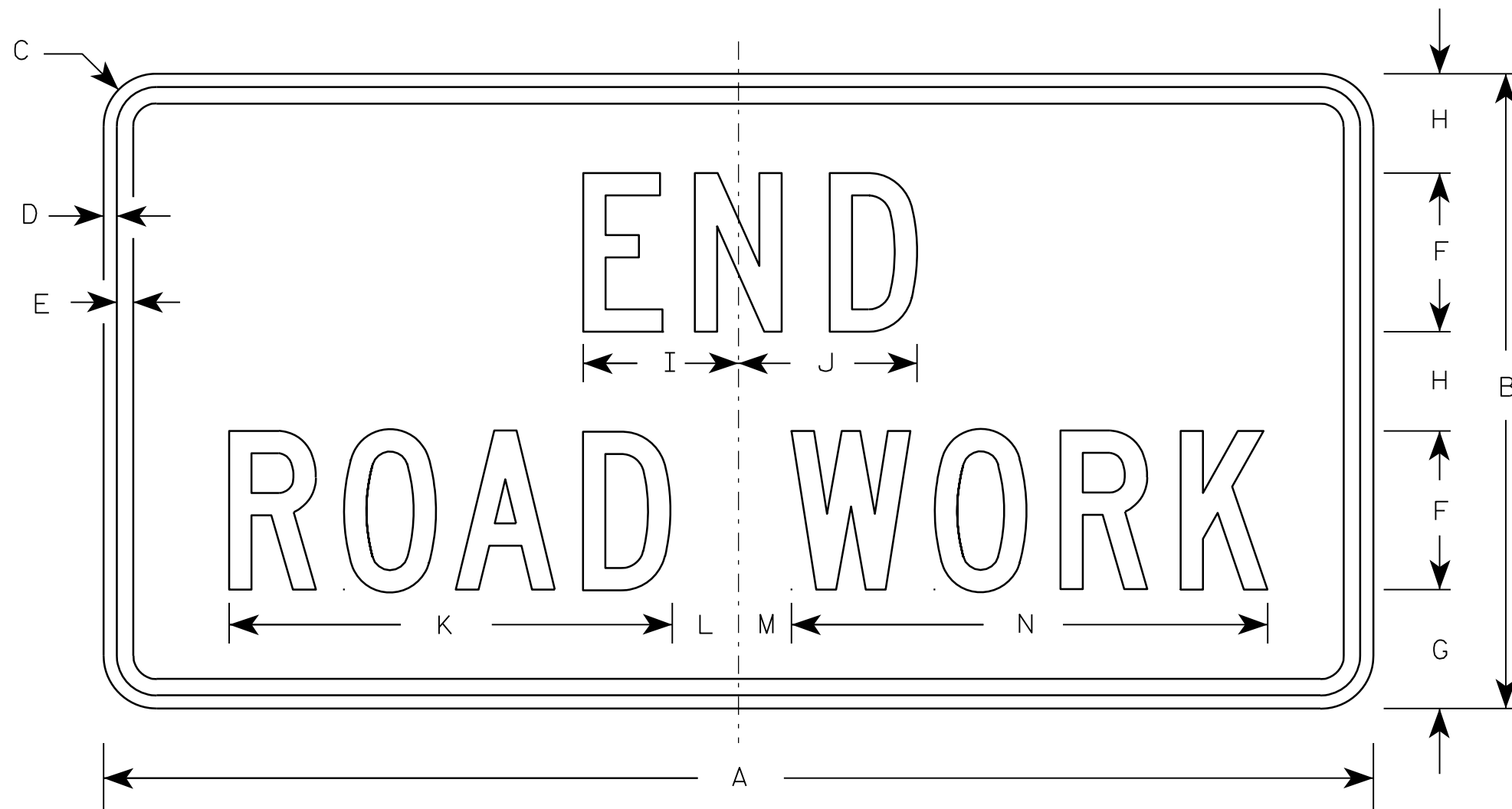
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Chester J Spang*
for State Traffic Engineer

DATE 1/15/02 PLATE NO. D9-2.4

NOTES

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



G20-2A

7

7

Metric equivalent for this sign is:

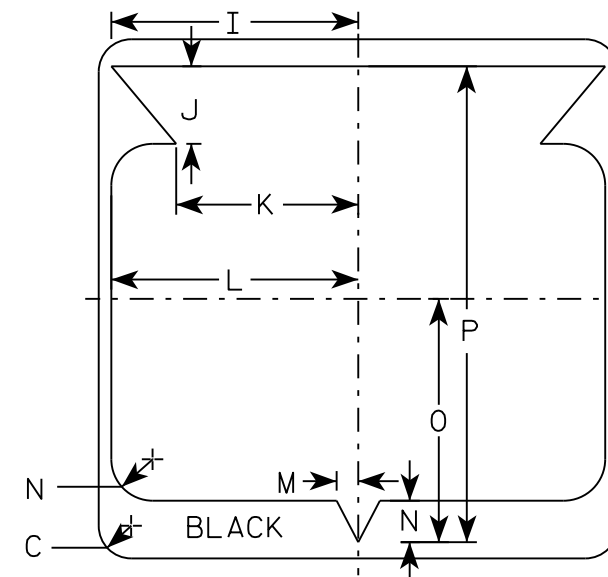
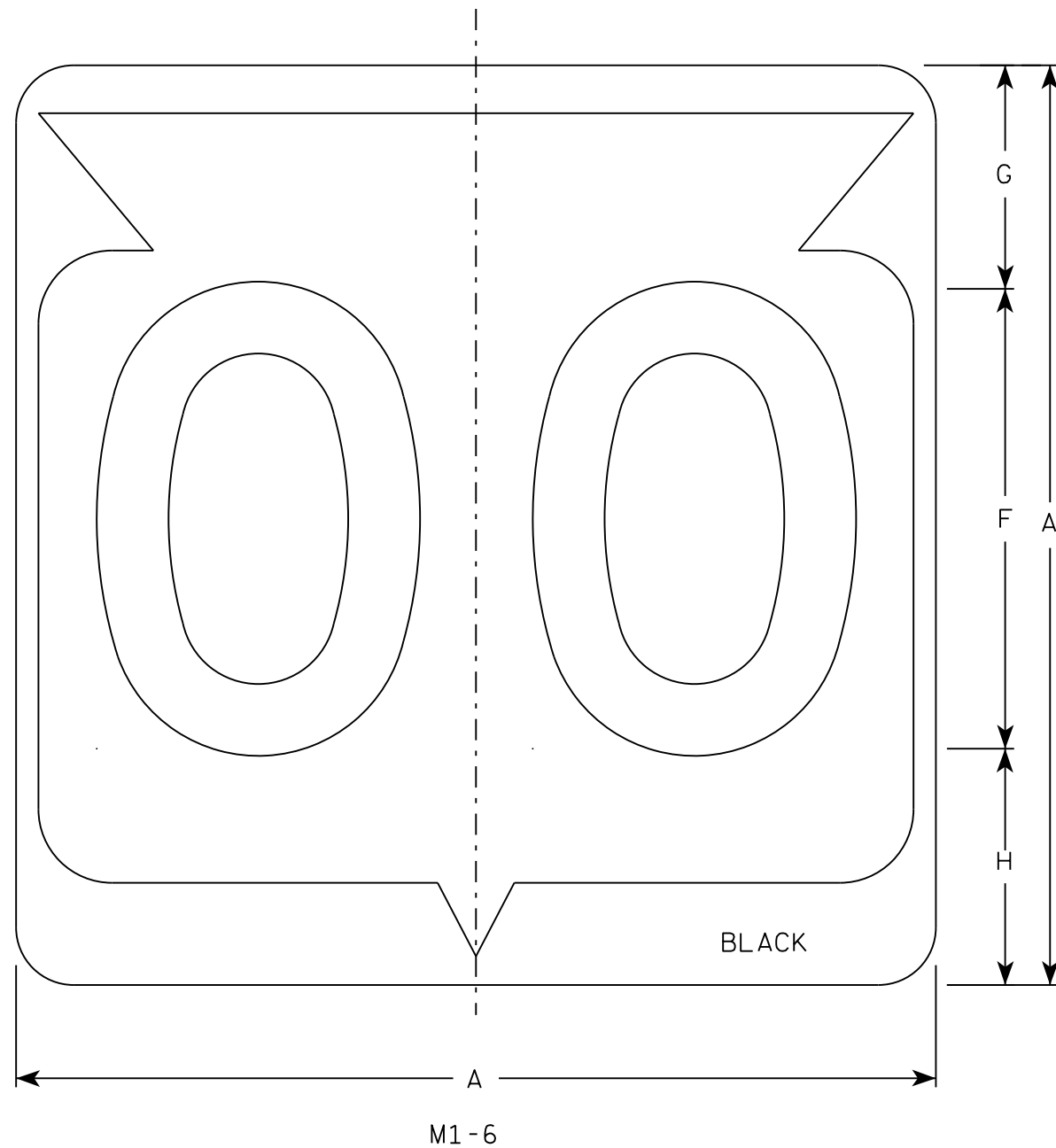
SIZE	
1	900 mm X 450 mm
2	1200 mm X 600 mm
3	1200 mm X 600 mm
4	1200 mm X 600 mm
5	1200 mm X 600 mm

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

STANDARD SIGN G20-2A	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 9/30/09	PLATE NO. G20-2A.8

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
Background - White
Message - Black
3. Message Series - D except 3 number signs 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.



7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0
3	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0
4	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0
5	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0

STATE ROUTE MARKER
M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

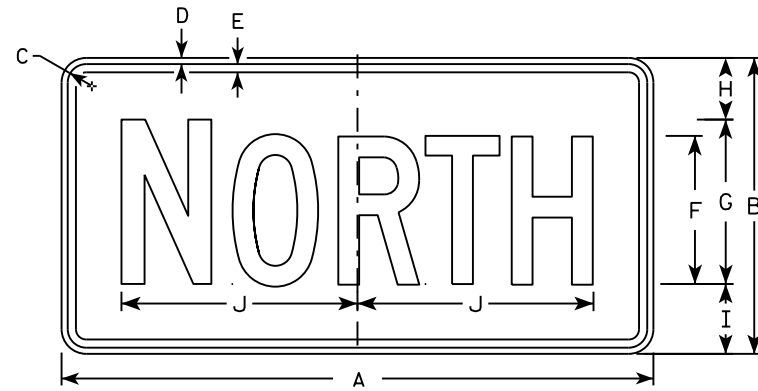
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/16/18 PLATE NO. M1-6.10

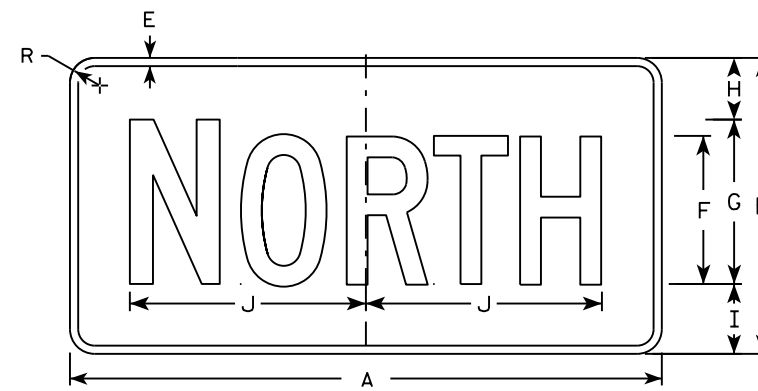
PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: _____ E

NOTES

- All Signs Type II - Type H
- Color:
 - Background - See note 5
 - Message - See note 5
- Message Series - C
- 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.
- M3-1 thru M3-4 Background - White
 Message - Black
 MB3-1 thru MB3-4 Background - Blue
 Message - White
 MK3-1 thru MK3-4 Background - Green
 Message - White
 MM3-1 thru MM3-4 Background - White
 Message - Green
 MN3-1 thru MN3-4 Background - Brown
 Message - White
 MP3-1 thru MP3-4 Background - White
 Message - Blue
- Note the first letter of each direction is larger than the remainder of the message.



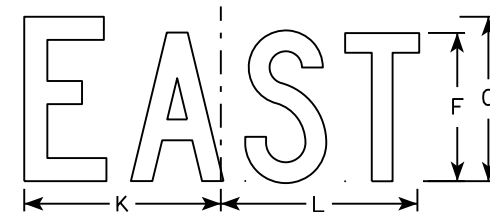
M3-1
MM3-1
MP3-1



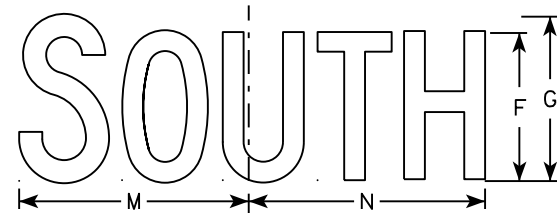
MB3-1
MK3-1
MN3-1



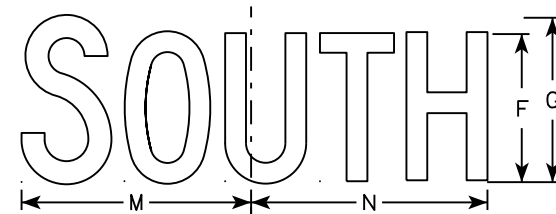
M3-2
MM3-2
MP3-2



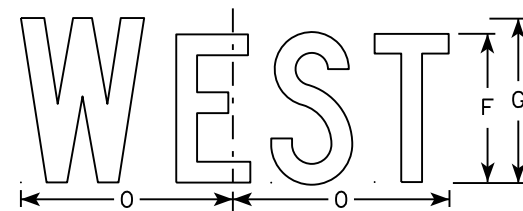
MB3-2
MK3-2
MN3-2



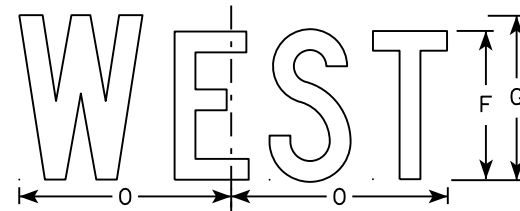
M3-3
MM3-3
MP3-3



MB3-3
MK3-3
MN3-3



M3-4
MM3-4
MP3-4



MB3-4
MK3-4
MN3-4

7

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

STANDARD SIGNS
M3-1 thru M3-4
SERIES

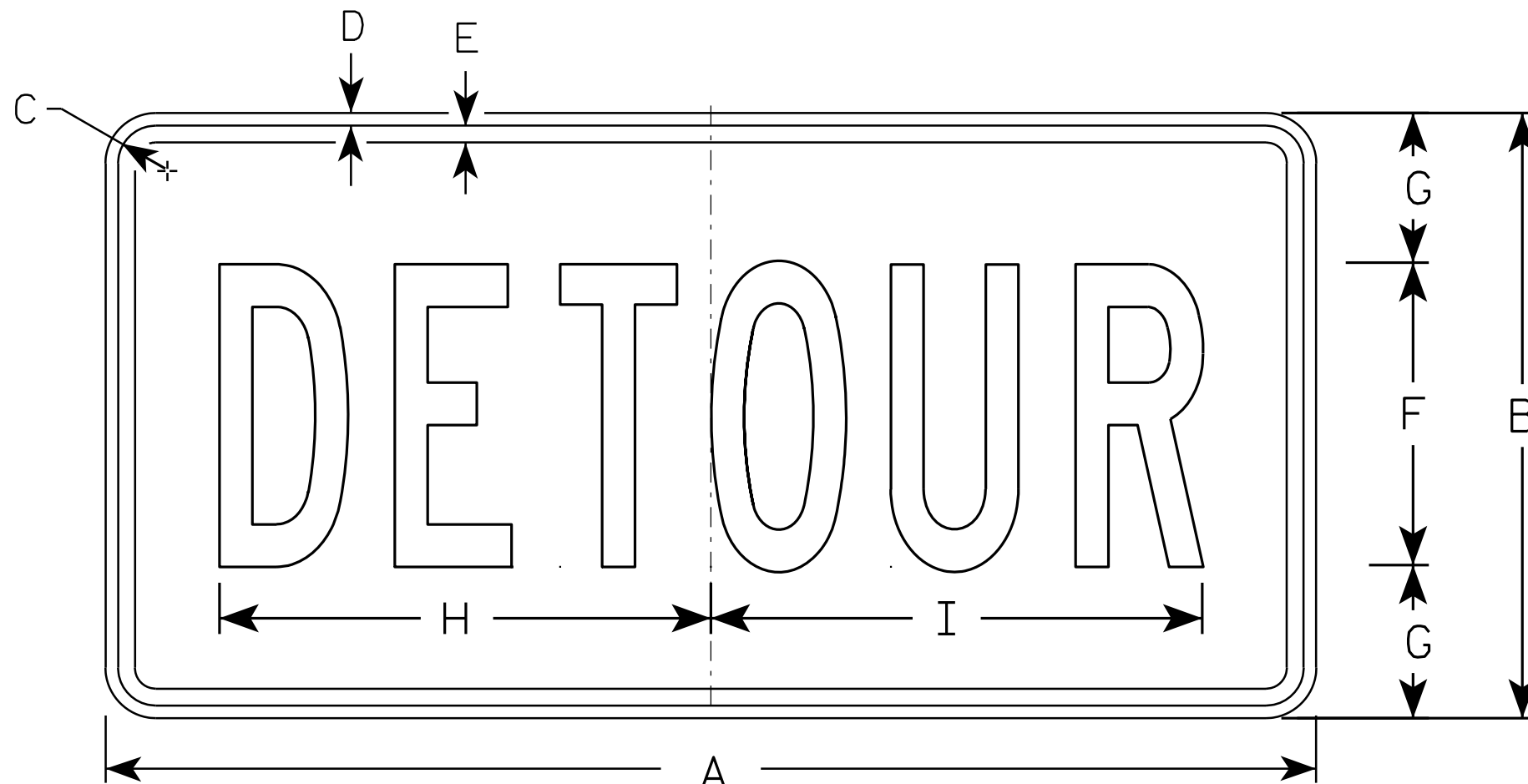
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M3-1.14

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Orange
Message - Black
3. Message Series - B
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.



M4-8

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	3	10	10 1/4																		2.0
3	36	18	1 1/8	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
4																											
5																											

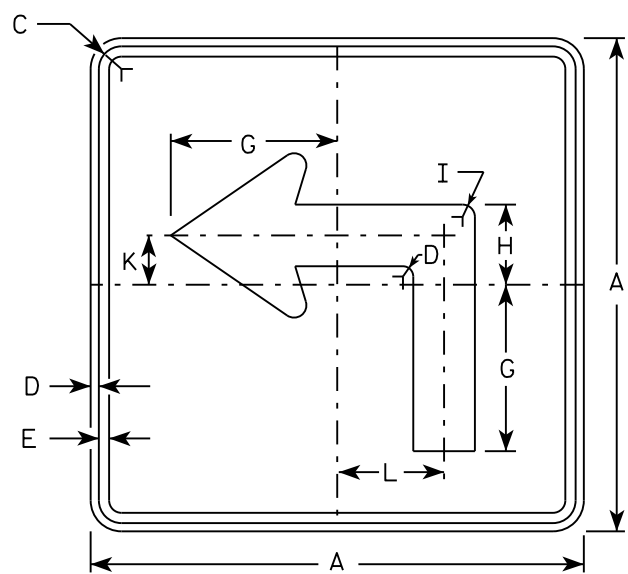
STANDARD SIGN
M4-8

WISCONSIN DEPT OF TRANSPORTATION

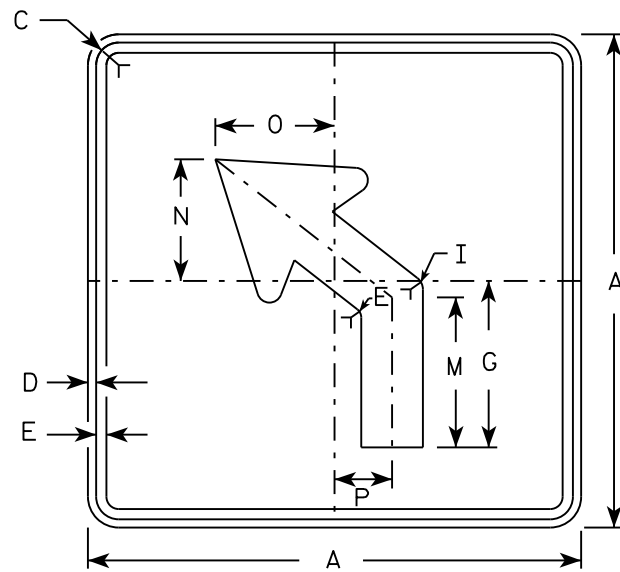
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/10/10 PLATE NO. M4-8.2

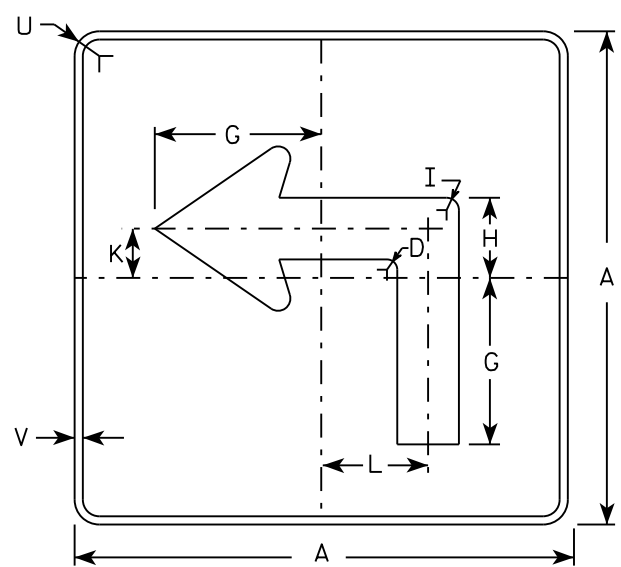
PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**



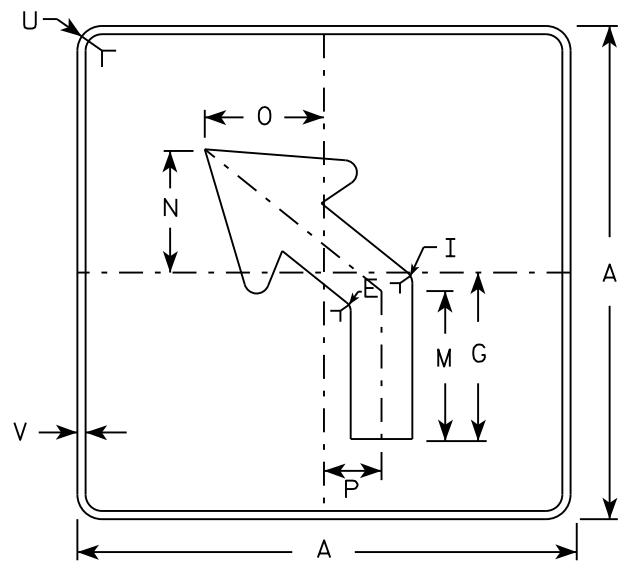
M5-1L
MM5-1L
M05-1L
MP5-1L



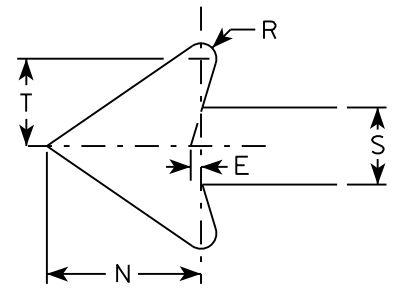
M5-2L
MM5-2L
M05-2L
MP5-2L



MB5-1L
MK5-1L
MN5-1L
MR5-1L



MB5-2L
MK5-2L
MN5-2L
MR5-2L



NOTES

- Signs are Type II - Type H reflective except as shown
- Color:
Background - See note 4
Message - See note 4
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- | | |
|-----------------|---|
| M5-1 and M5-2 | Background - White |
| | Message - Black |
| MB5-1 and MB5-2 | Background - Blue |
| | Message - White |
| MK5-1 and MK5-2 | Background - Green |
| | Message - White |
| MM5-1 and MM5-2 | Background - White |
| | Message - Green |
| MN5-1 and MN5-2 | Background - Brown |
| | Message - White |
| M05-1 and M05-2 | Background - Orange - Type F Reflective |
| | Message - Black |
| MP5-1 and MP5-2 | Background - White - Type H Reflective |
| | Message - Blue |
| MR5-1 and MR5-2 | Background - Brown |
| | Message - Yellow |
- M5-1R same as M5-1L except arrow points right.
- M5-2R same as M5-2L except arrow tilts right.

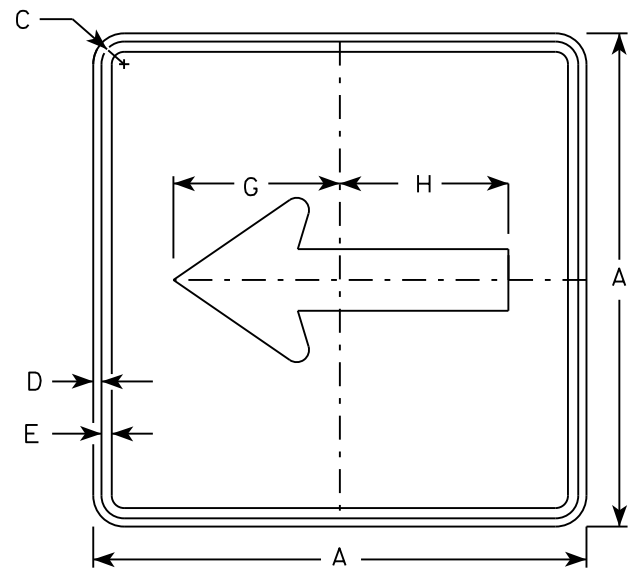
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3	1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25

STANDARD SIGN
M5-1 & M5-2

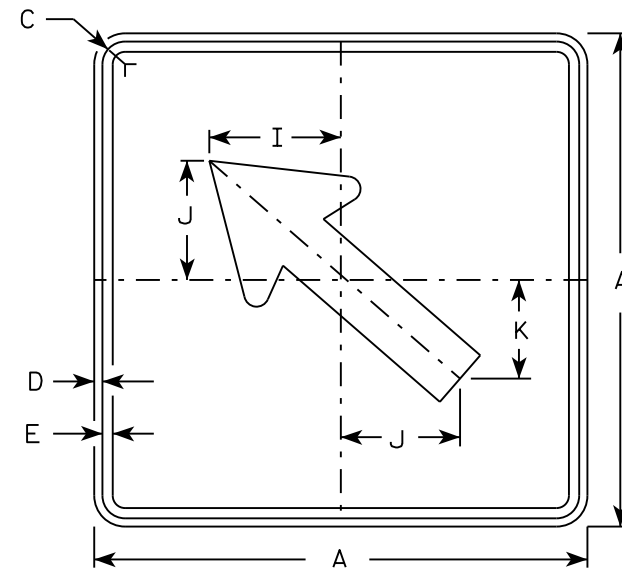
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

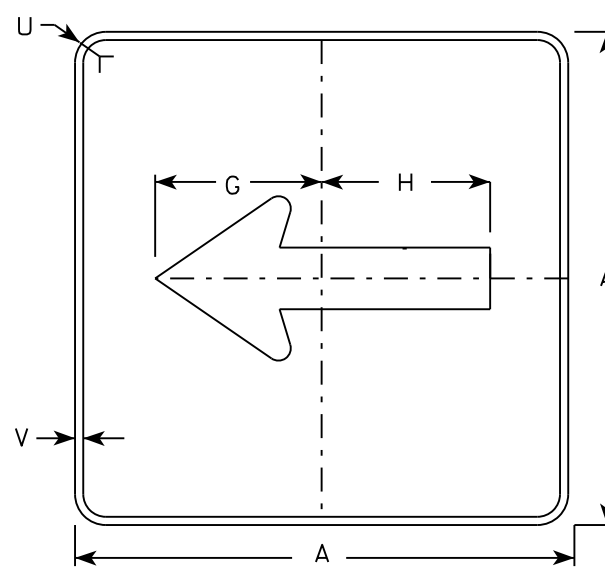
DATE 10/15/15 PLATE NO. M5-1.13



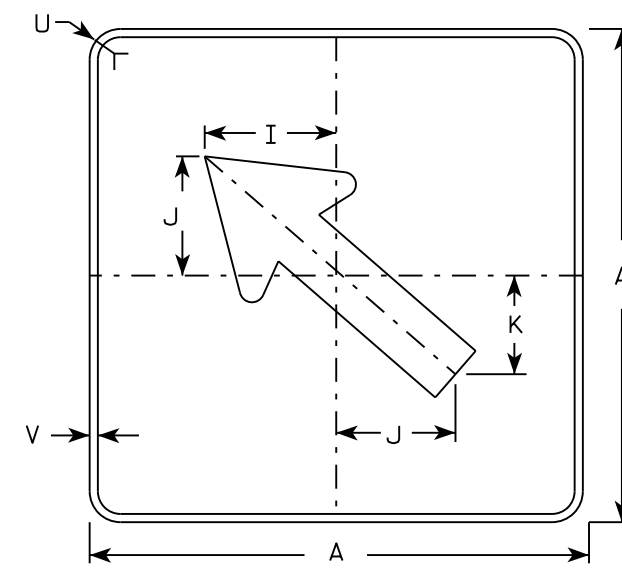
M6-1
MM6-1
M06-1
MP6-1



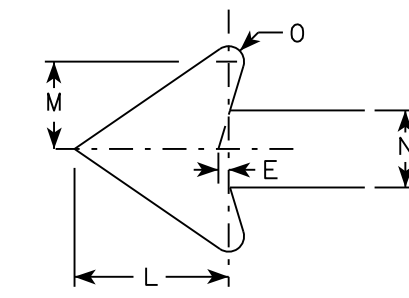
M6-2
MM6-2
M06-2
MP6-2



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



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



NOTES

- Signs are Type II - Type H except as Shown
- 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
Message - Black
MB6-1 and MB6-2 Background - Blue
Message - White
MK6-1 and MK6-2 Background - Green
Message - White
MM6-1 and MM6-2 Background - White
Message - Green
MN6-1 and MN6-2 Background - Brown
Message - White
M06-1 and M06-2 Background - Orange - Type F Reflective
Message - Black
MP6-1 and MP6-2 Background - White
Message - Blue
MR6-1 and MR6-2 Background - Brown
Message - Yellow

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2						1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25

STANDARD SIGN
M6-1 & M6-2
SERIES

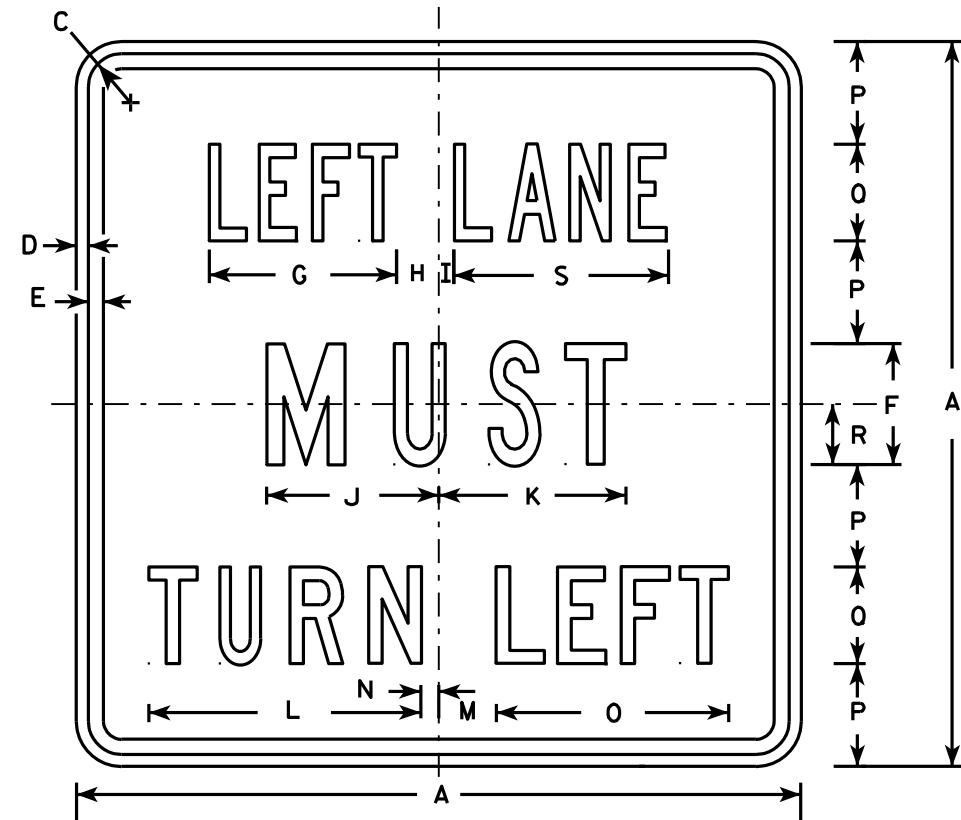
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

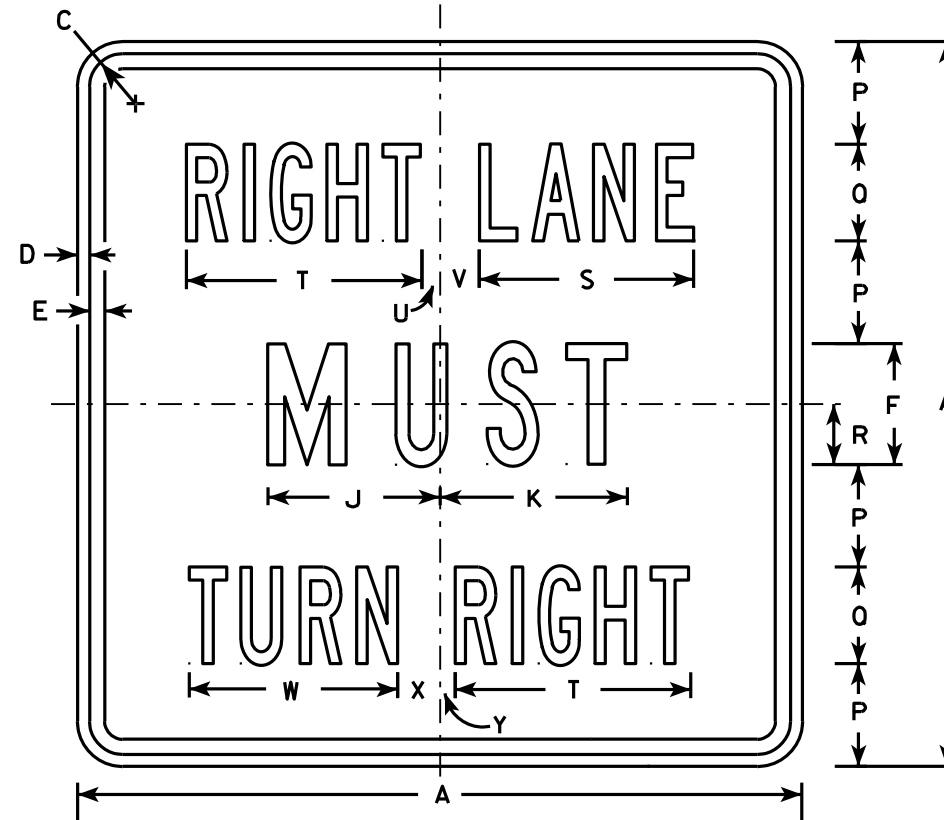
DATE 10/15/15 PLATE NO. M6-1.15

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - Line 1 is Series B.
Line 2 is Series C.
Line 3 on plate R3-7R is Series B and Series C on plate R3-7L.
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



R3-7L



R3-7R

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
2S	30		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
2M	30		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
3	36		1 5/8	5/8	3/4	6	9 5/8	2	1 1/8	8 3/4	9	13 1/2	3 7/8	1 1/2	12 1/2	5	5	3	10 5/8	12	7/8	2 1/4	10 5/8	2 1/8	1		9.00
4	48		2 1/4	3/4	1	8	13 1/2	2 3/8	1 1/2	11 1/2	11 7/8	17 3/4	3 5/8	2 1/2	16 3/8	6 1/2	7	4	14 3/8	16 7/8	5/8	3 1/4	15 1/8	2 3/4	1 1/8		16.00
5																											

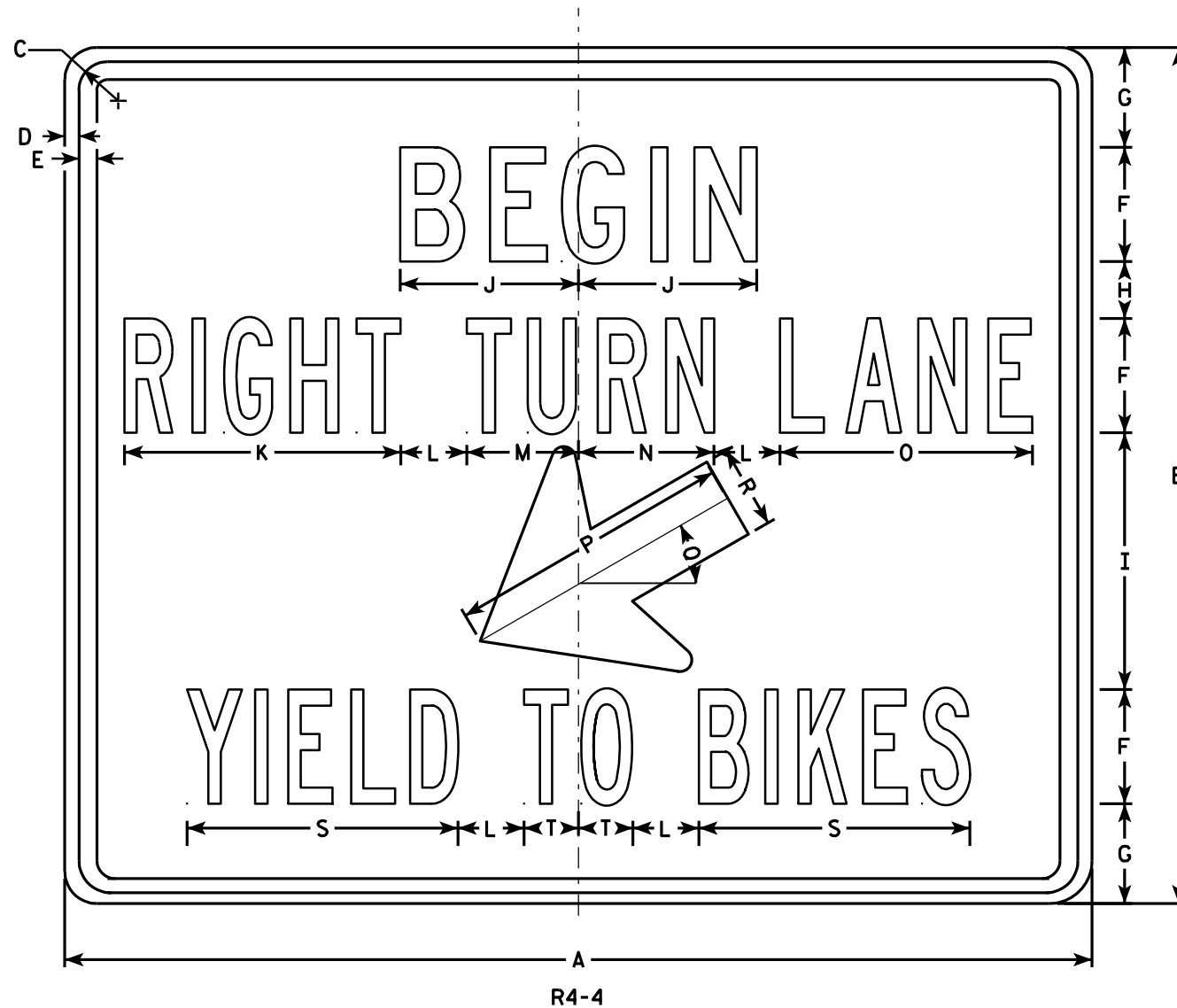
STANDARD SIGN
R3-7L & R3-7R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 3/18/2011 PLATE NO. R3-7.3

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



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - See Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Line 1 is Series C
Lines 2 & 3 are Series B

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	36	30	1 3/8	1/2	5/8	4	3 1/2	2	9	6 1/4	9 3/4	2 3/8	3 7/8	4 3/4	8 7/8	10	30°	2 7/8	9 1/2	1 7/8							7.5
2M	36	30	1 3/8	1/2	5/8	4	3 1/2	2	9	6 1/4	9 3/4	2 3/8	3 7/8	4 3/4	8 7/8	10	30°	2 7/8	9 1/2	1 7/8							7.5
3																											
4																											
5																											

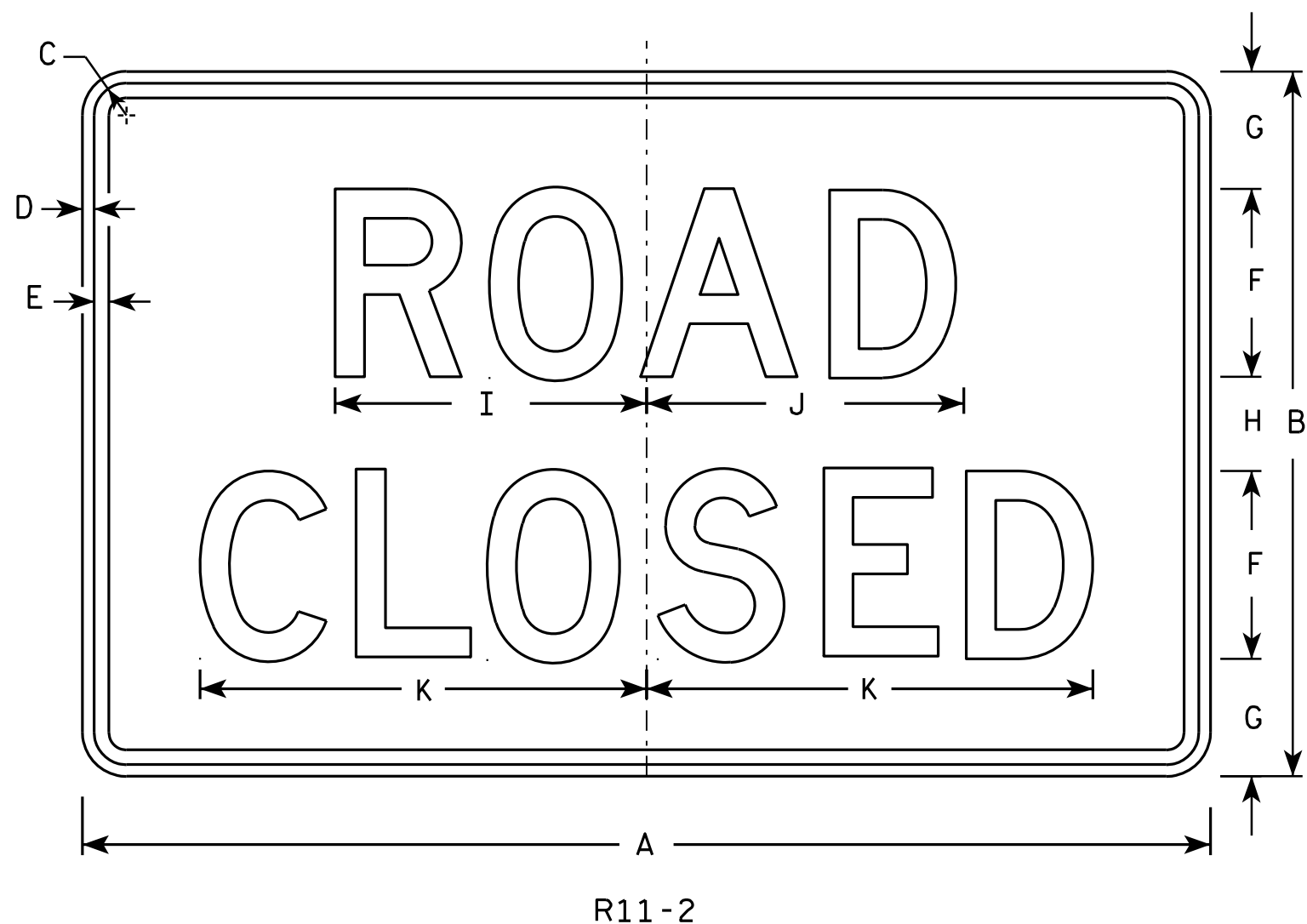
STANDARD SIGN
R4-4

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

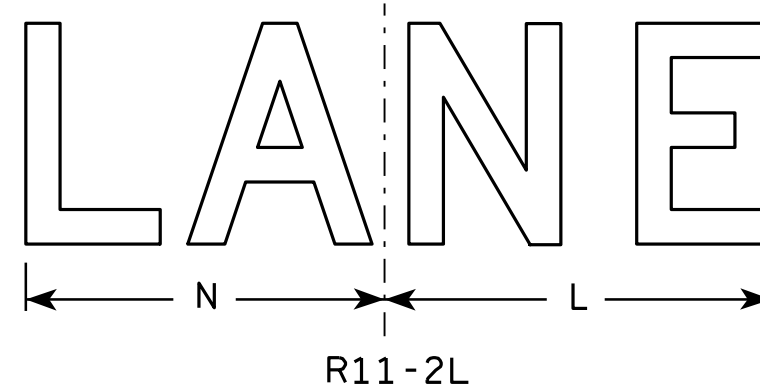
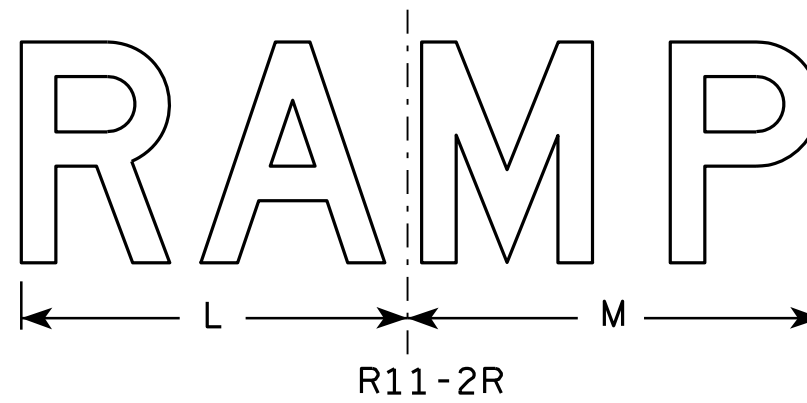
DATE 3/25/2011 PLATE NO. R4-4.2

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



NOTES

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



7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13												10.0	
2M	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13												10.0	
3	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13												10.0	
4	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13												10.0	
5	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13												10.0	

STANDARD SIGN
R11-2

WISCONSIN DEPT OF TRANSPORTATION

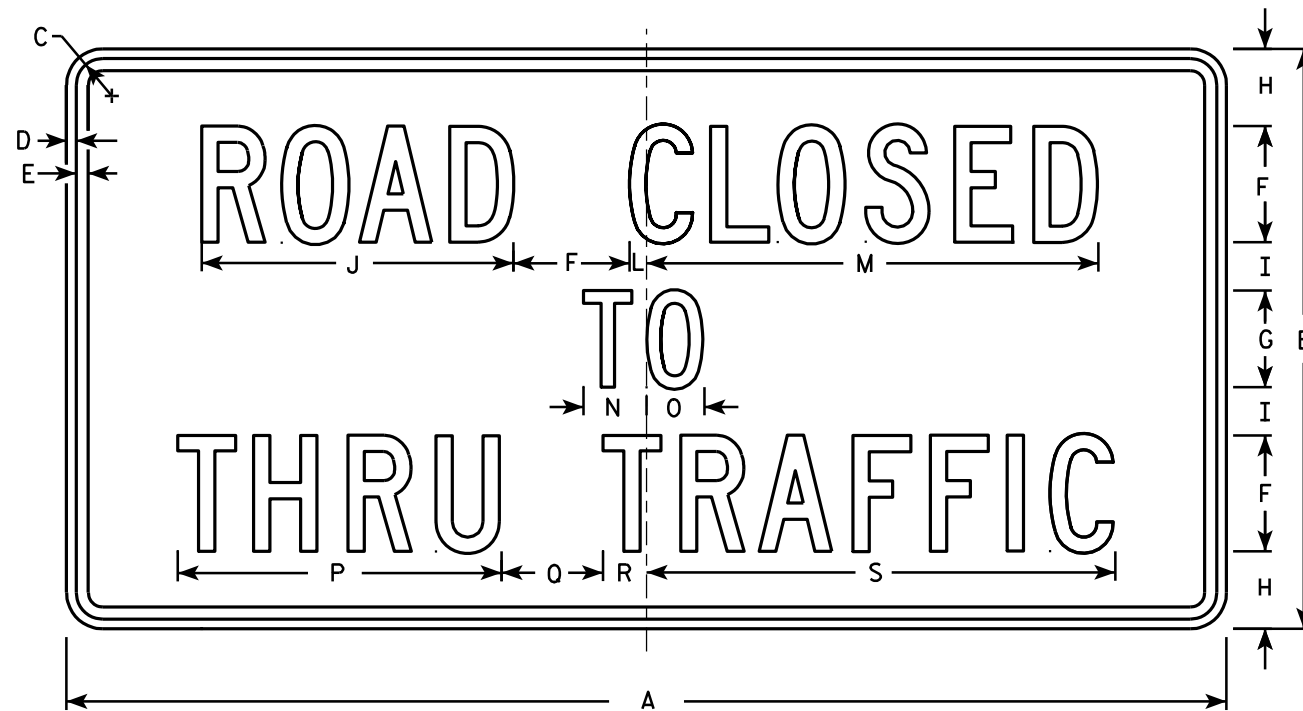
APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-2.10

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

NOTES

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



R11-4

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	60	30	1 3/8	1/2	5/8	6	5	4	2 1/2	16 1/8		7/8	23 3/8	3 1/4	3	16 3/4	5 1/4	2 1/4	24 1/4								12.5
2M	60	30	1 3/8	1/2	5/8	6	5	4	2 1/2	16 1/8		7/8	23 3/8	3 1/4	3	16 3/4	5 1/4	2 1/4	24 1/4								12.5
3																											
4																											
5																											

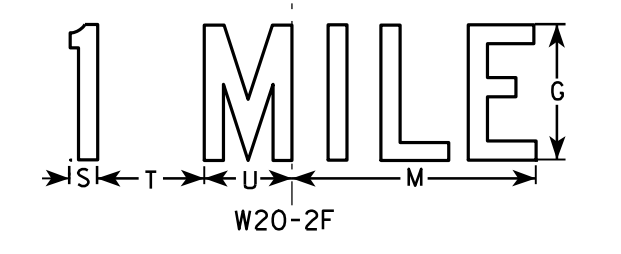
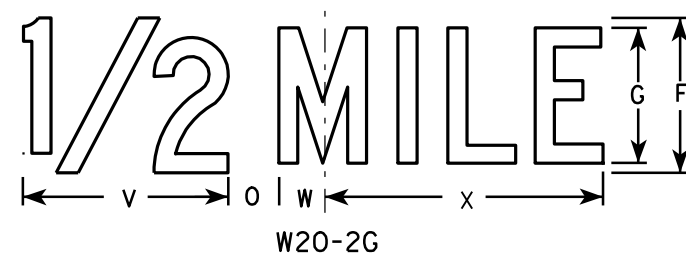
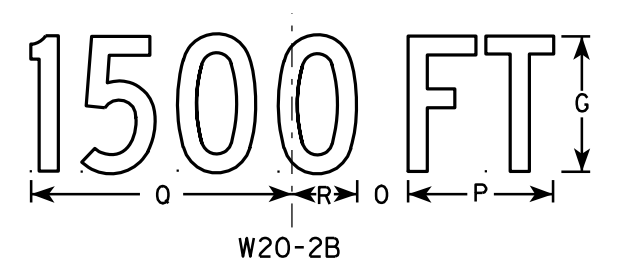
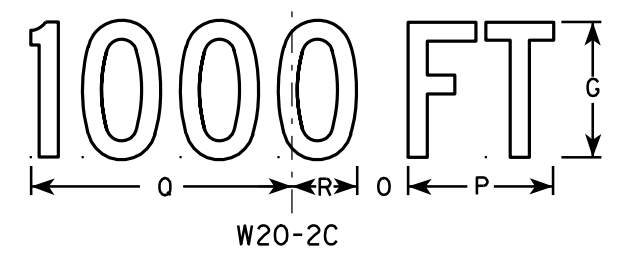
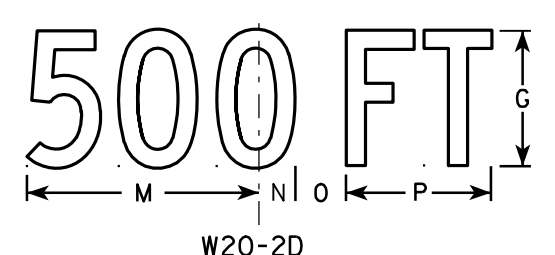
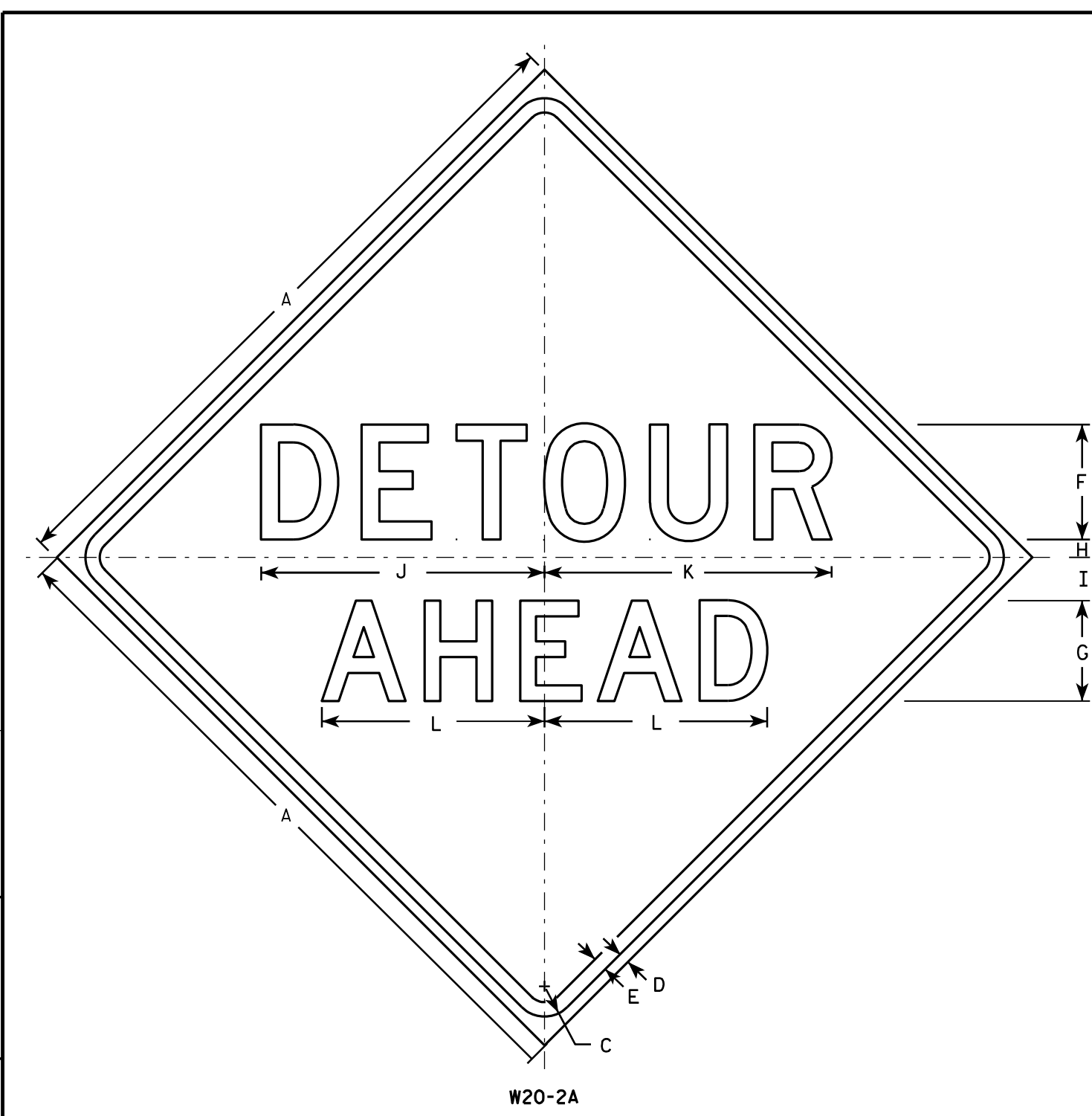
STANDARD SIGN
R11 - 4

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Raush*
for State Traffic Engineer

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

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 - Orange
Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Line 1 is Series D.
Line 2 is Series D for AHEAD and Series C for all other distances.

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	6	5	1	2 1/4	14 3/4	15	11 5/8	9	1 3/8	1 7/8	5 5/8	10 1/8	2 1/2	1 1/8	4 1/2	3 1/2	8	1 3/4	10 3/4			9.0
2S	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
2M	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
3	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
4	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
5	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0

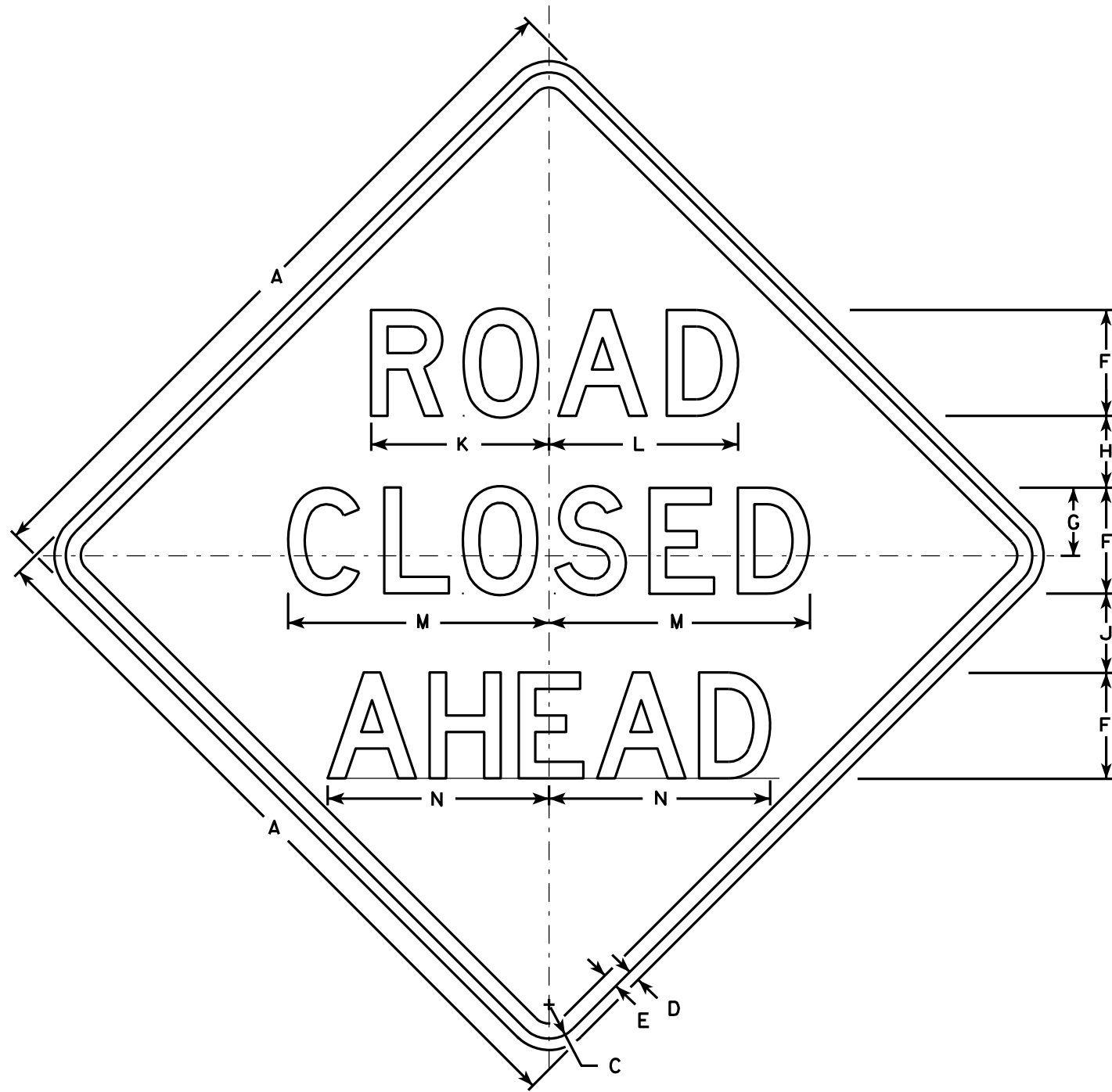
STANDARD SIGN
W20-2A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

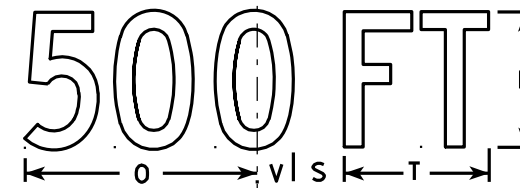
APPROVED *Matthew R. Raub*
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-2.6

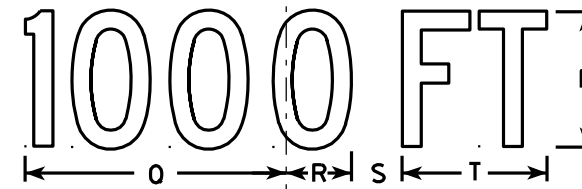
PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: _____ E



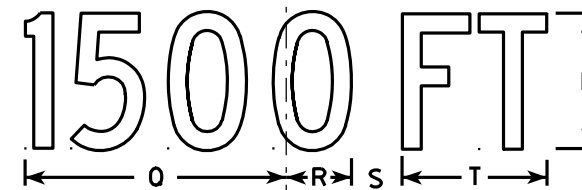
W20-3A



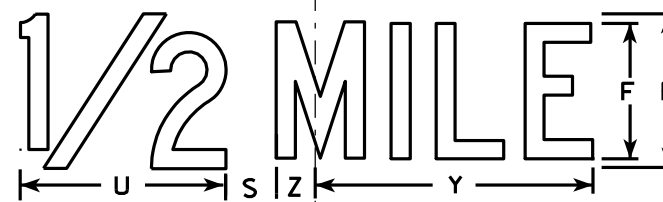
W20-3D



W20-3C



W20-3B



W20-3G



W20-3F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Orange
Message - Black
3. Message Series - see note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1 and 2 are Series D.
Line 3 is Series D for AHEAD and Series C for all other distances.

7

7

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

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

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-3.7

EARTHWORK TABLE 1

Division – STH59 SB

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				
			Cut	Salvaged/ Pavement Material	Fill	EBS	Cut	Salvaged/ Pavement Material	Fill	EBS	Cut 1.00	Expanded Fill 1.33	Expanded EBS Backfill 1.00	Reduced EBS in Fill 1.00	Mass Ordinate
04+50	450.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	0	0	0	0
04+66	466.00	16.00	74.73	0.00	0.15	0.00	22	0	0	0	22	0	0	0	22
04+96	496.00	30.00	106.70	0.00	2.63	0.00	101	0	2	0	123	2	0	0	121
05+50	550.00	54.00	88.53	0.00	0.17	0.00	195	0	3	0	318	6	0	0	312
06+00	600.00	50.00	84.51	0.00	0.00	0.00	160	0	0	0	478	6	0	0	472
06+50	650.00	50.00	75.41	0.00	0.80	0.00	148	0	1	0	626	7	0	0	619
07+00	700.00	50.00	70.07	0.00	0.51	0.00	135	0	1	0	761	9	0	0	753
07+50	750.00	50.00	83.43	0.00	0.43	0.00	142	0	1	0	903	10	0	0	893
08+00	800.00	50.00	92.47	0.00	0.51	0.00	163	0	1	0	1,066	11	0	0	1,055
08+50	850.00	50.00	112.63	0.00	0.69	0.00	190	0	1	0	1,256	12	0	0	1,244
09+00	900.00	50.00	159.51	0.00	0.35	0.00	252	0	1	0	1,508	14	0	0	1,494
09+50	950.00	50.00	127.81	0.00	2.77	0.00	266	0	3	0	1,774	18	0	0	1,757
10+00	1000.00	50.00	121.57	0.00	3.54	0.00	231	0	6	0	2,005	25	0	0	1,980
10+50	1050.00	50.00	117.62	0.00	2.82	0.00	221	0	6	0	2,226	33	0	0	2,193
11+00	1100.00	50.00	119.63	0.00	1.19	0.00	220	0	4	0	2,446	38	0	0	2,408
11+50	1150.00	50.00	181.84	0.00	0.00	0.00	279	0	1	0	2,725	40	0	0	2,686
12+00	1200.00	50.00	128.26	0.00	4.04	0.00	287	0	4	0	3,012	45	0	0	2,968
12+50	1250.00	50.00	126.57	0.00	1.76	0.00	236	0	5	0	3,248	52	0	0	3,197
13+00	1300.00	50.00	119.70	0.00	2.11	0.00	228	0	4	0	3,476	56	0	0	3,420
13+50	1350.00	50.00	103.76	0.00	3.14	0.00	207	0	5	0	3,683	63	0	0	3,620
14+00	1400.00	50.00	94.41	0.00	3.45	0.00	183	0	6	0	3,867	71	0	0	3,796
14+50	1450.00	50.00	95.05	0.00	8.29	0.00	175	0	11	0	4,042	85	0	0	3,957
15+00	1500.00	50.00	91.58	0.00	28.81	0.00	173	0	34	0	4,215	131	0	0	4,084
15+50	1550.00	50.00	91.68	0.00	24.23	0.00	170	0	49	0	4,385	197	0	0	4,188
15+82	1582.00	32.00	88.06	0.00	7.94	0.00	107	0	19	0	4,491	222	0	0	4,269
16+00	1600.00	18.00	19.10	0.00	1.43	0.00	36	0	3	0	4,527	226	0	0	4,301

EARTHWORK TABLE 2

Division – STH59 SB

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)						
			Cut	Salvaged/Unusable Pavement Material		Fill	EBS	Cut	Salvaged/Unusable Pavement Material		Fill	EBS	Cut 1.00	Expanded Fill 1.33	Expanded EBS Backfill 1.00	Reduced EBS in Fill 1.00	Mass Ordinate
				Note 1	Note 2				Note 3	Note 1							
25+50	2550.00	950.00	2.38	0.00	0.00	0.00	378	0	25	0	4,905	259	0	0	4,645		
25+98	2598.00	48.00	106.64	0.00	4.20	0.00	97	0	4	0	5,002	264	0	0	4,737		
26+00	2600.00	2.00	111.54	0.00	3.55	0.00	8	0	0	0	5,010	265	0	0	4,745		
26+50	2650.00	50.00	108.31	0.00	2.33	0.00	204	0	5	0	5,213	272	0	0	4,941		
27+00	2700.00	50.00	104.53	0.00	0.89	0.00	197	0	3	0	5,410	276	0	0	5,134		
27+50	2750.00	50.00	101.45	0.00	0.45	0.00	191	0	1	0	5,601	278	0	0	5,323		
28+00	2800.00	50.00	95.49	0.00	2.01	0.00	182	0	2	0	5,783	281	0	0	5,503		
28+50	2850.00	50.00	98.28	0.00	0.08	0.00	179	0	2	0	5,963	283	0	0	5,680		
29+00	2900.00	50.00	91.15	0.00	0.02	0.00	175	0	0	0	6,138	283	0	0	5,855		
29+50	2950.00	50.00	82.59	0.00	1.68	0.00	161	0	2	0	6,299	285	0	0	6,014		
30+00	3000.00	50.00	81.21	0.00	1.62	0.00	152	0	3	0	6,451	290	0	0	6,161		
30+50	3050.00	50.00	82.37	0.00	3.16	0.00	151	0	4	0	6,602	295	0	0	6,307		
31+00	3100.00	50.00	87.48	0.00	0.68	0.00	157	0	4	0	6,759	300	0	0	6,459		
31+50	3150.00	50.00	89.07	0.00	1.73	0.00	163	0	2	0	6,923	303	0	0	6,620		
32+00	3200.00	50.00	89.64	0.00	1.51	0.00	165	0	3	0	7,088	307	0	0	6,781		
32+50	3250.00	50.00	90.62	0.00	0.94	0.00	167	0	2	0	7,255	310	0	0	6,945		
33+00	3300.00	50.00	97.71	0.00	2.98	0.00	174	0	4	0	7,430	315	0	0	7,115		
33+50	3350.00	50.00	106.47	0.00	4.39	0.00	189	0	7	0	7,619	324	0	0	7,295		
34+00	3400.00	50.00	142.79	0.00	5.95	0.00	231	0	10	0	7,850	337	0	0	7,513		
34+50	3450.00	50.00	126.83	0.00	16.64	0.00	250	0	21	0	8,099	365	0	0	7,735		
35+00	3500.00	50.00	108.39	0.00	0.26	0.00	218	0	16	0	8,317	385	0	0	7,932		
35+50	3550.00	50.00	83.38	0.00	47.21	0.00	178	0	44	0	8,495	444	0	0	8,051		
36+00	3600.00	50.00	75.70	0.00	32.04	0.00	147	0	73	0	8,642	541	0	0	8,100		
36+50	3650.00	50.00	74.87	0.00	13.43	0.00	139	0	42	0	8,781	597	0	0	8,184		
37+00	3700.00	50.00	72.89	0.00	7.64	0.00	137	0	20	0	8,918	623	0	0	8,295		
37+50	3750.00	50.00	78.06	0.00	7.93	0.00	140	0	14	0	9,058	643	0	0	8,415		
38+00	3800.00	50.00	77.06	0.00	5.38	0.00	144	0	12	0	9,201	659	0	0	8,543		
38+50	3850.00	50.00	75.10	0.00	7.10	0.00	141	0	12	0	9,342	674	0	0	8,668		
39+00	3900.00	50.00	76.66	0.00	4.40	0.00	141	0	11	0	9,483	688	0	0	8,794		
39+50	3950.00	50.00	80.62	0.00	3.00	0.00	146	0	7	0	9,629	698	0	0	8,931		
40+00	4000.00	50.00	76.43	0.00	3.02	0.00	145	0	6	0	9,774	705	0	0	9,069		
40+50	4050.00	50.00	78.55	0.00	2.23	0.00	143	0	5	0	9,917	711	0	0	9,206		
41+00	4100.00	50.00	83.72	0.00	1.78	0.00	150	0	4	0	10,068	716	0	0	9,351		
41+50	4150.00	50.00	84.41	0.00	4.51	0.00	156	0	6	0	10,223	724	0	0	9,499		
41+93	4193.00	43.00	78.09	0.00	4.44	0.00	129	0	7	0	10,353	734	0	0	9,619		
42+00	4200.00	7.00	0.00	0.00	0.00	0.00	10	0	1	0	10,363	734	0	0	9,628		
42+50	4250.00	50.00	0.00	0.00	0.00	0.00	0	0	0	0	10,363	734	0	0	9,628		
							10,363	0	552	0							

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EARTHWORK TABLE 3

Division – 30th Ave

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				
			Cut	Salvaged/ Pavement Material	Fill	EBS	Cut	Salvaged/ Pavement Material	Fill	EBS	Cut 1.00	Expanded Fill 1.33	Expanded EBS Backfill 1.00	Reduced EBS in Fill 1.00	Mass Ordinate
50+33	5033.00	0.00	680.00	0.00	0.88	0.00	0	0	0	0	0	0	0	0	0
50+40	5040.00	7.00	60.00	0.00	0.19	0.00	96	0	0	0	96	0	0	0	96
50+57	5057.00	17.00	112.00	0.00	0.01	0.00	54	0	0	0	150	0	0	0	150
							150	0	0	0					

Division – 6th St

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				
			Cut	Salvaged/ Pavement Material	Fill	EBS	Cut	Salvaged/ Pavement Material	Fill	EBS	Cut 1.00	Expanded Fill 1.33	Expanded EBS Backfill 1.00	Reduced EBS in Fill 1.00	Mass Ordinate
60+30	6030.00	0.00	606.13	0.00	0.00	0.00	0	0	0	0	0	0	0	0	0
60+45	6045.00	15.00	58.44	0.00	34.33	0.00	185	0	10	0	185	13	0	0	172
60+60	6060.00	15.00	109.99	0.00	0.00	0.00	47	0	10	0	231	25	0	0	206
							231	0	19	0					

Division – WeissLn

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				
			Cut	Salvaged/ Pavement Material	Fill	EBS	Cut	Salvaged/ Pavement Material	Fill	EBS	Cut 1.00	Expanded Fill 1.33	Expanded EBS Backfill 1.00	Reduced EBS in Fill 1.00	Mass Ordinate
70+30	7030.00	0.00	172.49	0.00	0.98	0.00	0	0	0	0	0	0	0	0	0
70+50	7050.00	20.00	87.62	0.00	4.90	0.00	96	0	2	0	96	3	0	0	93
70+80	7080.00	30.00	58.38	0.00	4.86	0.00	81	0	5	0	177	10	0	0	167
							177	0	8	0					

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Division -- WIS 81 BW New

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)						
			Cut	Salvaged/Pavement	Unusable Material	Fill	EBS	Cut	Salvaged/Pavement	Unusable Material	Fill	EBS	Cut	Expanded Fill	Expanded EBS Backfill	Reduced EBS in Fill	Mass Ordinate
174+00	17400.00	50.00	0.00	0.00	0.00	0.00	0	0	0	0	0	0	0	0	0	0	
174+50	17450.00	50.00	0.00	0.00	0.00	0.00	0	0	0	0	0	0	0	0	0	0	
175+00	17500.00	50.00	0.00	0.00	0.00	0.00	0	0	0	0	0	0	0	0	0	0	
175+50	17550.00	50.00	0.00	0.00	0.00	0.00	0	0	0	0	0	0	0	0	0	0	
176+00	17600.00	50.00	159.31	0.00	4.53	0.00	148	0	4	0	148	5	0	0	0	142	
176+50	17650.00	50.00	176.77	0.00	1.71	0.00	311	0	6	0	459	12	0	0	0	446	
177+00	17700.00	50.00	178.11	0.00	0.29	0.00	329	0	2	0	787	15	0	0	0	773	
177+50	17750.00	50.00	173.98	0.00	0.62	0.00	326	0	1	0	1,113	16	0	0	0	1,097	
178+00	17800.00	50.00	168.49	0.00	2.21	0.00	317	0	3	0	1,430	19	0	0	0	1,411	
178+50	17850.00	50.00	160.03	0.00	5.07	0.00	304	0	7	0	1,735	28	0	0	0	1,707	
179+00	17900.00	50.00	153.52	0.00	6.88	0.00	290	0	11	0	2,025	41	0	0	0	1,983	
179+50	17950.00	50.00	145.45	0.00	9.56	0.00	277	0	15	0	2,302	60	0	0	0	2,241	
180+00	18000.00	50.00	176.03	0.00	6.60	0.00	298	0	15	0	2,599	79	0	0	0	2,520	
180+50	18050.00	50.00	146.31	0.00	12.08	0.00	298	0	17	0	2,898	101	0	0	0	2,797	
181+00	18100.00	50.00	146.18	0.00	11.96	0.00	271	0	22	0	3,169	129	0	0	0	3,040	
181+50	18150.00	50.00	143.70	0.00	11.75	0.00	268	0	22	0	3,437	156	0	0	0	3,281	
182+00	18200.00	50.00	146.55	0.00	9.91	0.00	269	0	20	0	3,706	181	0	0	0	3,525	
182+50	18250.00	50.00	148.50	0.00	10.53	0.00	273	0	19	0	3,979	205	0	0	0	3,774	
183+00	18300.00	50.00	150.92	0.00	12.09	0.00	277	0	21	0	4,256	231	0	0	0	4,025	
183+50	18350.00	50.00	151.29	0.00	12.59	0.00	280	0	23	0	4,536	259	0	0	0	4,277	
184+00	18400.00	50.00	147.26	0.00	13.90	0.00	276	0	25	0	4,813	290	0	0	0	4,522	
184+50	18450.00	50.00	143.12	0.00	14.70	0.00	269	0	26	0	5,081	323	0	0	0	4,758	
185+00	18500.00	50.00	144.34	0.00	11.81	0.00	266	0	25	0	5,348	354	0	0	0	4,994	
185+50	18550.00	50.00	147.96	0.00	27.76	0.00	271	0	37	0	5,618	400	0	0	0	5,219	
186+00	18600.00	50.00	151.18	0.00	51.71	0.00	277	0	74	0	5,895	492	0	0	0	5,404	
186+50	18650.00	50.00	156.85	0.00	48.04	0.00	285	0	92	0	6,180	607	0	0	0	5,573	
187+00	18700.00	50.00	151.35	0.00	60.16	0.00	285	0	100	0	6,466	732	0	0	0	5,733	
187+50	18750.00	50.00	163.37	0.00	54.33	0.00	291	0	106	0	6,757	865	0	0	0	5,892	
188+00	18800.00	50.00	165.05	0.00	47.46	0.00	304	0	94	0	7,061	983	0	0	0	6,079	
188+50	18850.00	50.00	157.24	0.00	27.42	0.00	298	0	69	0	7,360	1,069	0	0	0	6,290	
189+00	18900.00	50.00	159.85	0.00	9.96	0.00	294	0	35	0	7,653	1,113	0	0	0	6,541	
189+50	18950.00	50.00	166.03	0.00	9.72	0.00	302	0	18	0	7,955	1,135	0	0	0	6,820	
190+00	19000.00	50.00	165.32	0.00	7.52	0.00	307	0	16	0	8,262	1,155	0	0	0	7,106	
190+50	19050.00	50.00	170.48	0.00	7.86	0.00	311	0	14	0	8,573	1,173	0	0	0	7,400	
191+00	19100.00	50.00	164.80	0.00	34.86	0.00	310	0	40	0	8,883	1,223	0	0	0	7,661	
191+50	19150.00	50.00	173.20	0.00	71.31	0.00	313	0	98	0	9,196	1,345	0	0	0	7,851	
192+00	19200.00	50.00	145.50	0.00	81.36	0.00	295	0	141	0	9,491	1,522	0	0	0	7,969	
192+50	19250.00	50.00	152.07	0.00	77.65	0.00	276	0	147	0	9,767	1,706	0	0	0	8,061	
193+00	19300.00	50.00	183.82	0.00	69.01	0.00	311	0	136	0	10,078	1,876	0	0	0	8,202	
193+50	19350.00	50.00	182.89	0.00	0.35	0.00	340	0	64	0	10,417	1,956	0	0	0	8,461	
194+00	19400.00	50.00	184.21	0.00	2.99	0.00	340	0	3	0	10,757	1,960	0	0	0	8,797	
194+50	19450.00	50.00	161.33	0.00	8.00	0.00	320	0	10	0	11,077	1,973	0	0	0	9,104	
195+00	19500.00	50.00	159.02	0.00	1.71	0.00	297	0	9	0	11,374	1,984	0	0	0	9,390	
195+50	19550.00	50.00	155.16	0.00	1.79	0.00	291	0	3	0	11,665	1,988	0	0	0	9,677	
196+00	19600.00	50.00	150.19	0.00	1.89	0.00	283	0	3	0	11,947	1,992	0	0	0	9,955	
196+50	19650.00	50.00	166.39	0.00	0.29	0.00	293	0	2	0	12,241	1,995	0	0	0	10,246	
197+00	19700.00	50.00	144.98	0.00	0.19	0.00	288	0	0	0	12,529	1,995	0	0	0	10,533	
197+50	19750.00	50.00	150.89	0.00	0.00	0.00	274	0	0	0	12,803	1,996	0	0	0	10,807	
198+00	19800.00	50.00	143.39	0.00	0.00	0.00	272	0	0	0	13,075	1,996	0	0	0	11,080	
198+50	19850.00	50.00	141.76	0.00	0.00	0.00	264	0	0	0	13,339	1,996	0	0	0	11,344	
199+00	19900.00	50.00	135.86	0.00	0.00	0.00	257	0	0	0	13,596	1,996	0	0	0	11,601	
199+50	19950.00	50.00	129.71	0.00	0.00	0.00	246	0	0	0	13,842	1,996	0	0	0	11,847	

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PROJECT NO:5944-01-72

HWY: STH 81

COUNTY: GREEN

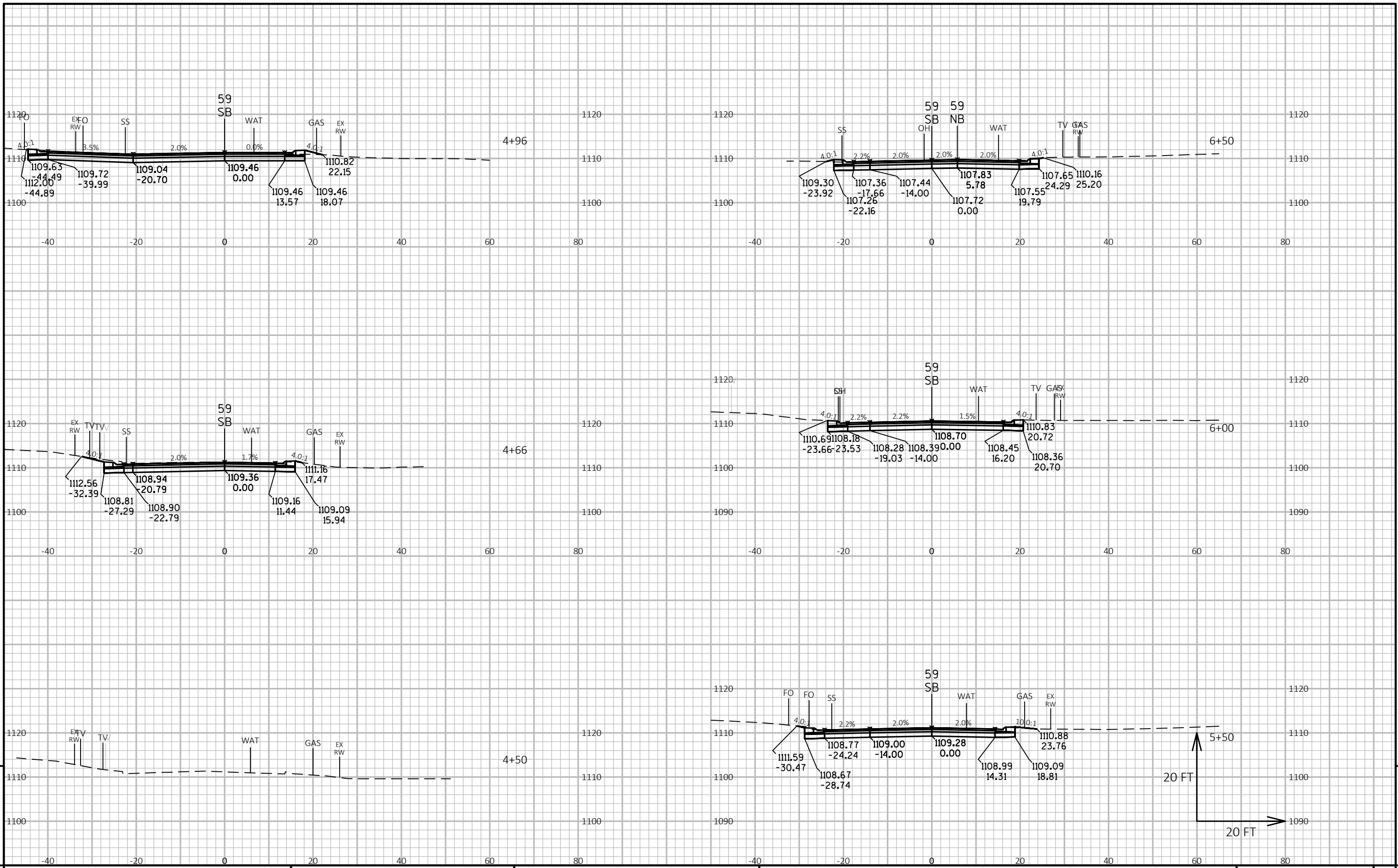
EARTHWORK DATA: STH 81

SHEET

E

Division -- WIS 81 BW New

STATION	Real Station	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				
			Cut	Salvaged/Unusable Pavement Material	Fill	EBS	Cut	Salvaged/Unusable Pavement Material	Fill	EBS	Cut 1.00	Expanded Fill 1.25	Expanded EBS Backfill 1.00	Reduced EBS in Fill 1.00	Mass Ordinate
200+00	20000.00	50.00	122.96	0.00	0.08	0.00	234	0	0	0	14,076	1,996	0	0	12,081
200+50	20050.00	50.00	115.51	0.00	0.24	0.00	221	0	0	0	14,297	1,996	0	0	12,301
201+00	20100.00	50.00	98.58	0.00	0.00	0.00	198	0	0	0	14,495	1,996	0	0	12,499
201+50	20150.00	50.00	87.57	0.00	0.03	0.00	172	0	0	0	14,668	1,996	0	0	12,671
202+00	20200.00	50.00	79.34	0.00	0.00	0.00	155	0	0	0	14,822	1,996	0	0	12,826
202+50	20250.00	50.00	71.69	0.00	0.00	0.00	140	0	0	0	14,962	1,996	0	0	12,966
203+00	20300.00	50.00	74.48	0.00	0.00	0.00	135	0	0	0	15,097	1,996	0	0	13,101
203+50	20350.00	50.00	82.76	0.00	0.00	0.00	146	0	0	0	15,243	1,996	0	0	13,247
204+00	20400.00	50.00	85.15	0.00	0.32	0.00	155	0	0	0	15,398	1,997	0	0	13,402
204+50	20450.00	50.00	92.97	0.00	0.22	0.00	165	0	1	0	15,563	1,997	0	0	13,566
205+00	20500.00	50.00	102.68	0.00	1.82	0.00	181	0	2	0	15,745	2,000	0	0	13,745
205+50	20550.00	50.00	102.68	0.00	7.64	0.00	190	0	9	0	15,935	2,011	0	0	13,924
206+00	20600.00	50.00	102.21	0.00	11.41	0.00	190	0	18	0	16,124	2,033	0	0	14,092
206+50	20650.00	50.00	96.74	0.00	16.47	0.00	184	0	26	0	16,309	2,065	0	0	14,244
207+00	20700.00	50.00	101.63	0.00	16.30	0.00	184	0	30	0	16,492	2,103	0	0	14,389
							16,492	0	1,682	0					



PROJECT NO: 5660-00-72

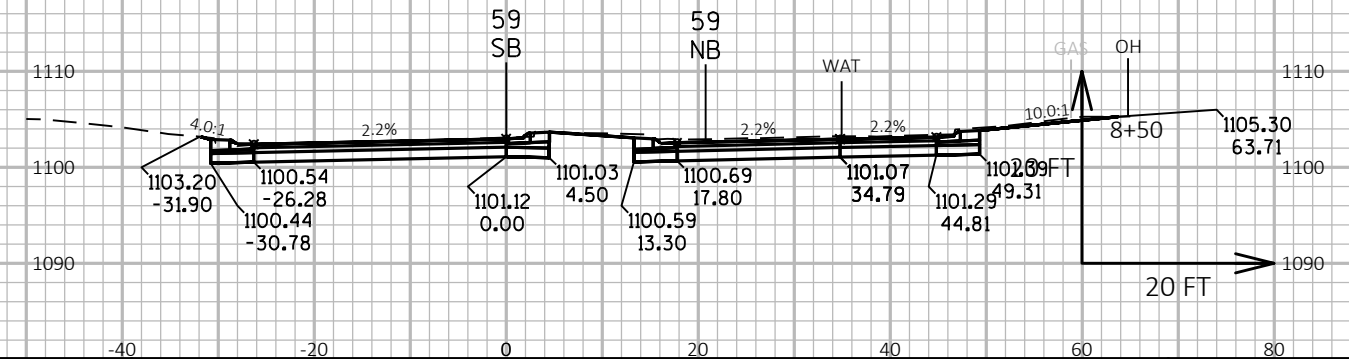
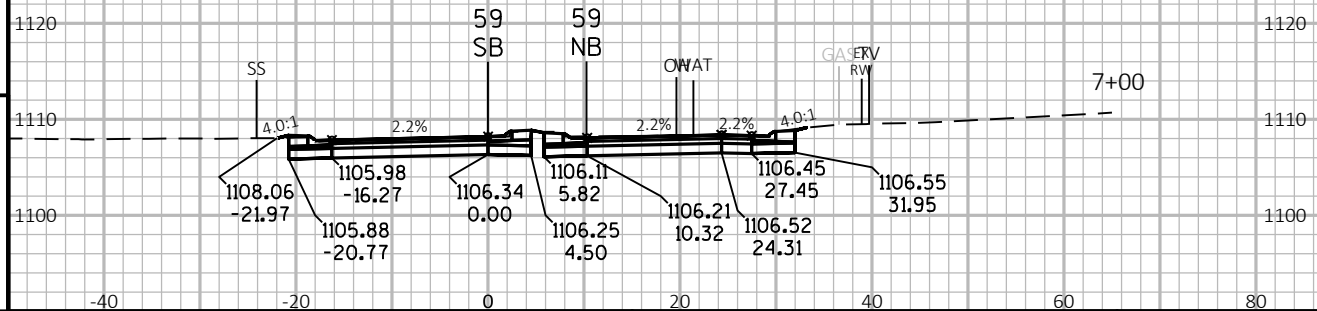
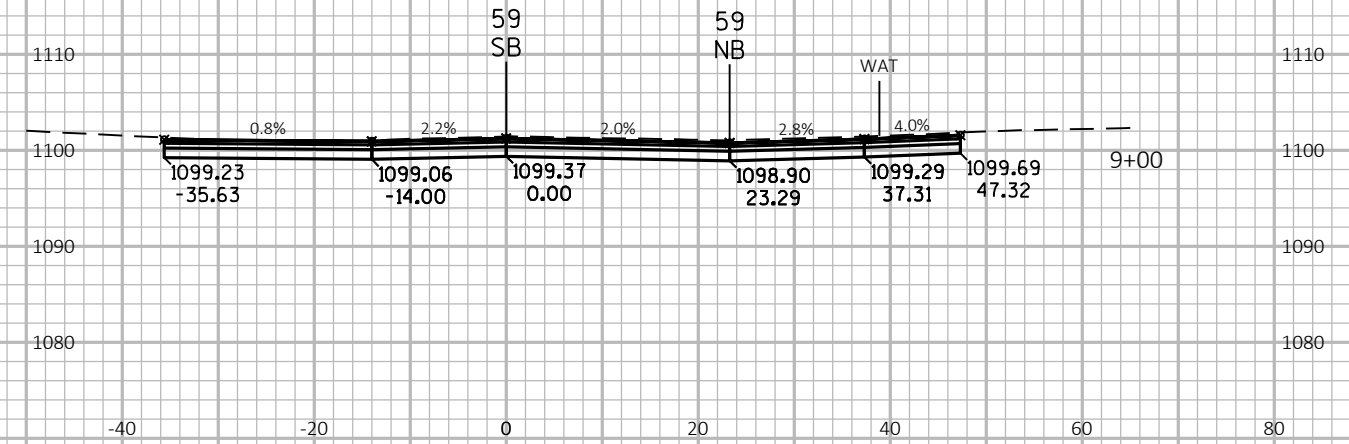
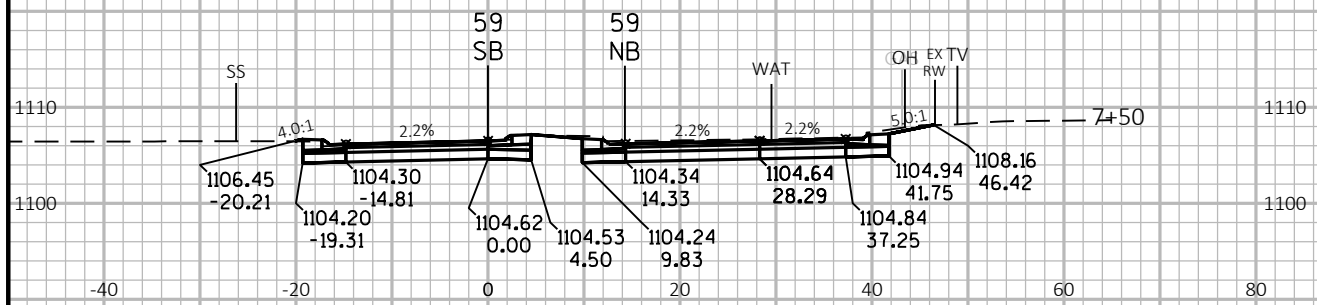
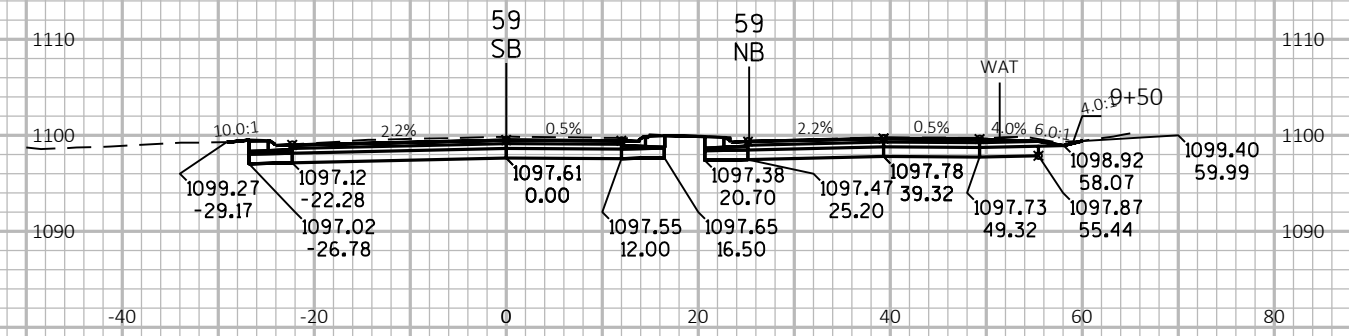
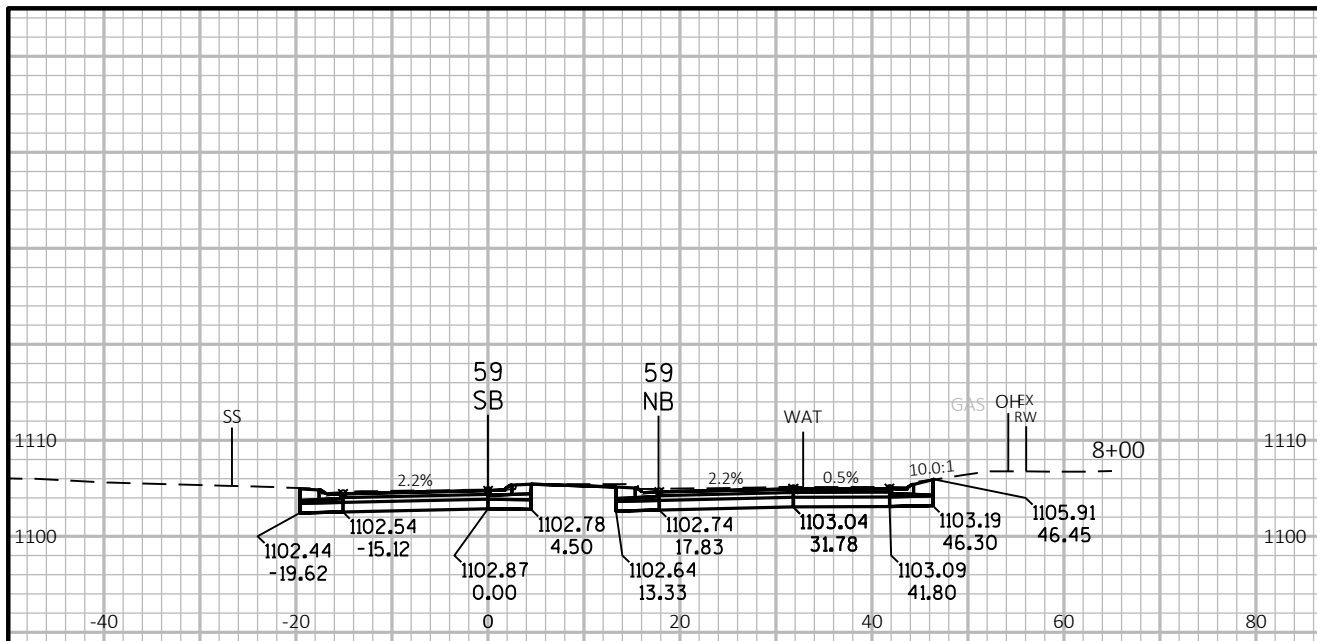
HWY: STH 59

COUNTY: GREEN

CROSS SECTIONS: STH 59

SHEET

E



PROJECT NO: 5660-00-72

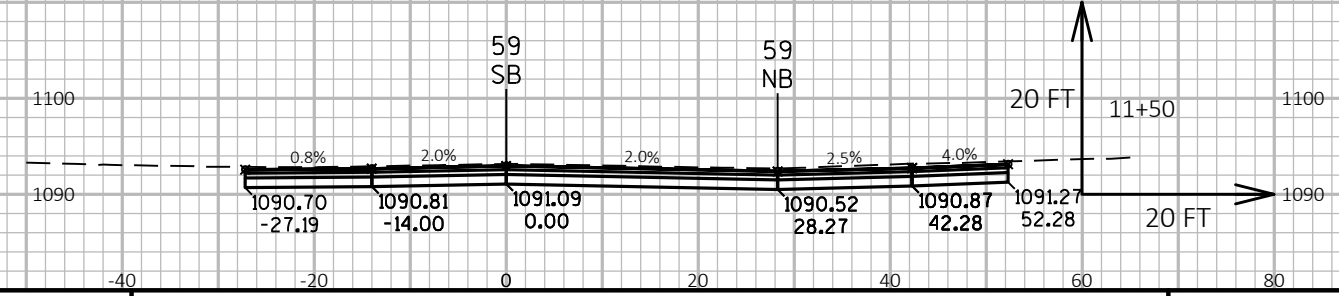
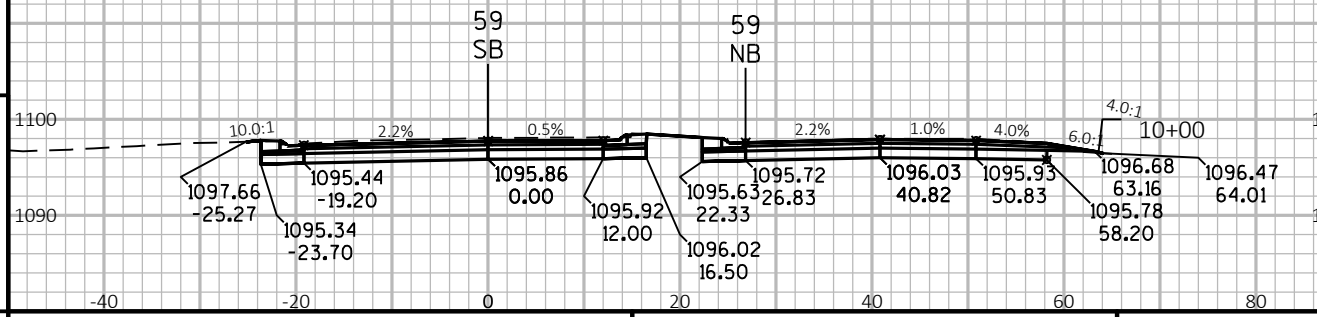
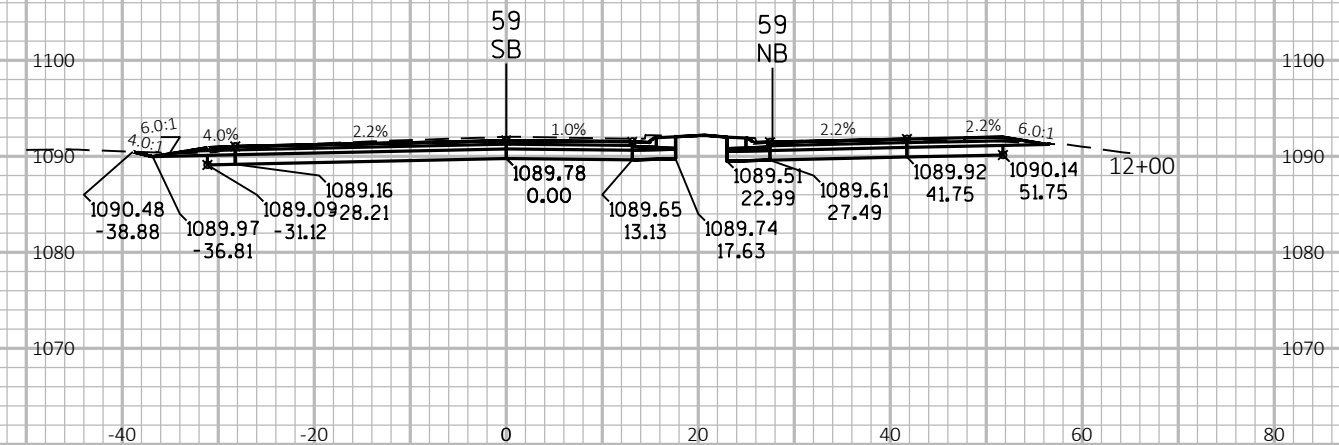
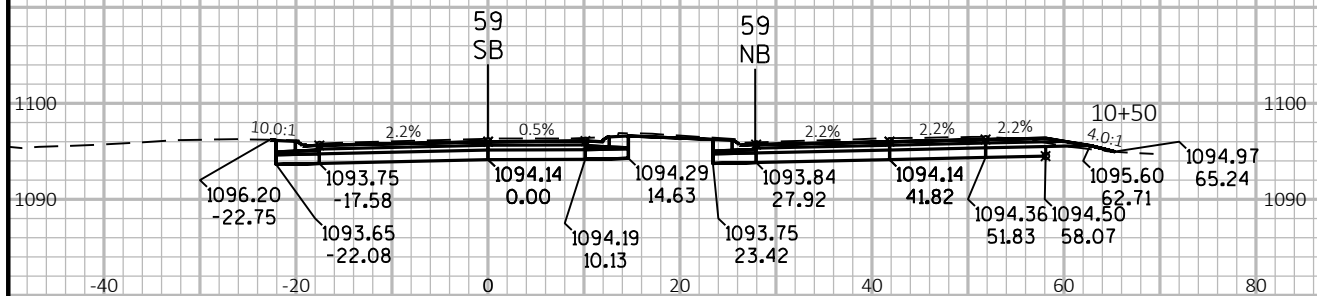
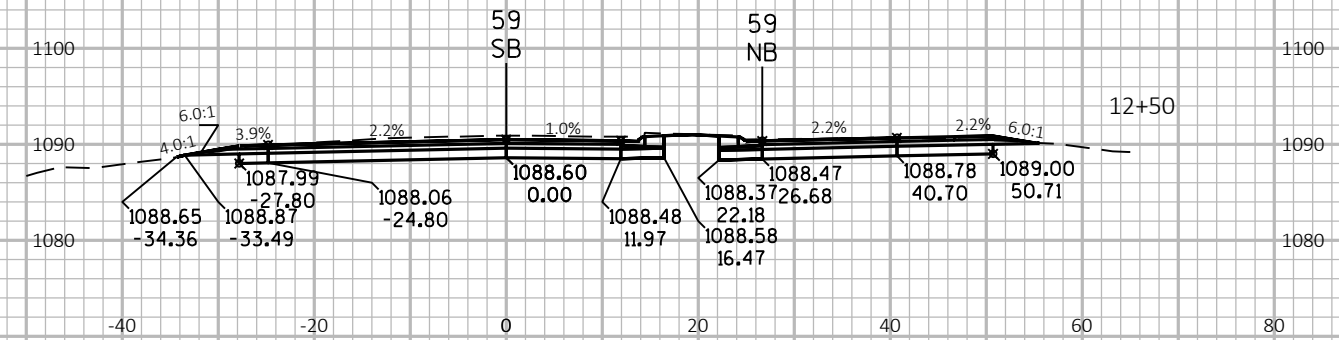
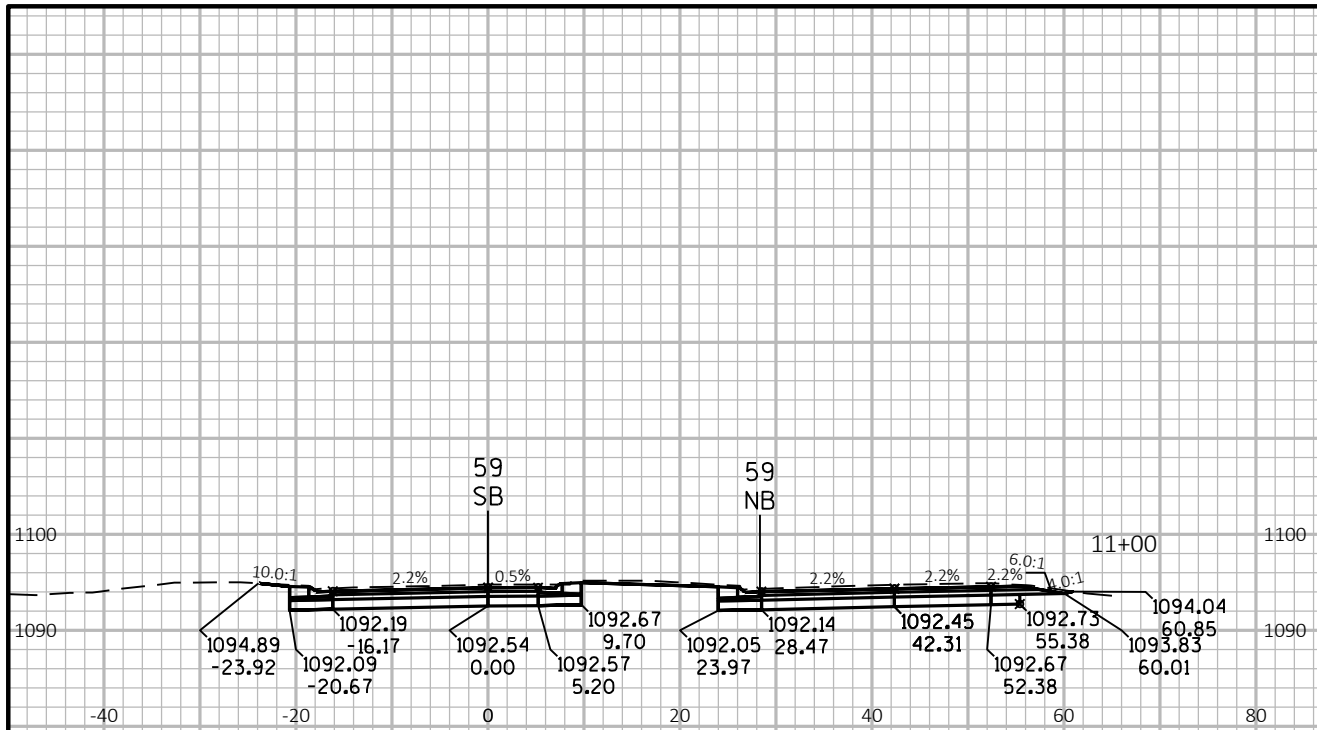
HWY: STH 59

COUNTY: GREEN

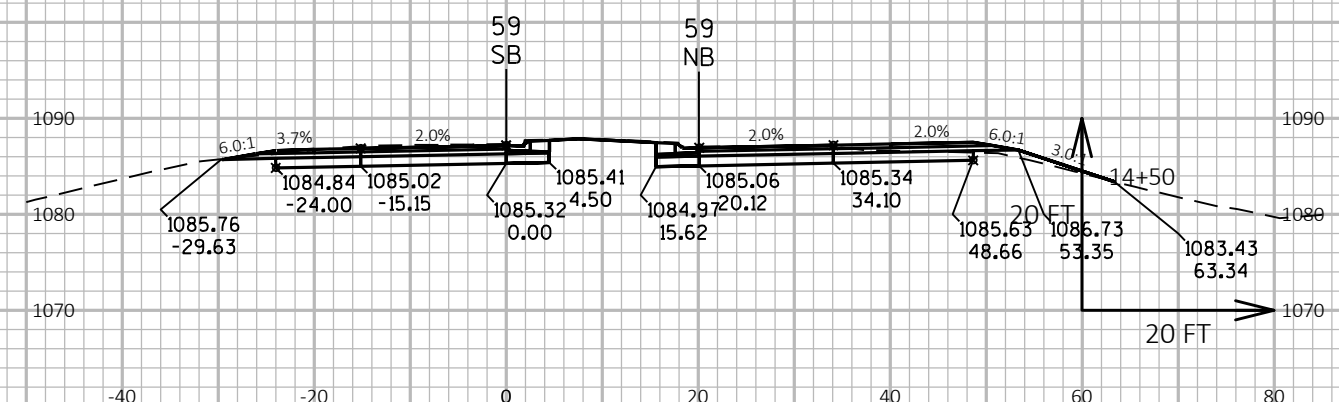
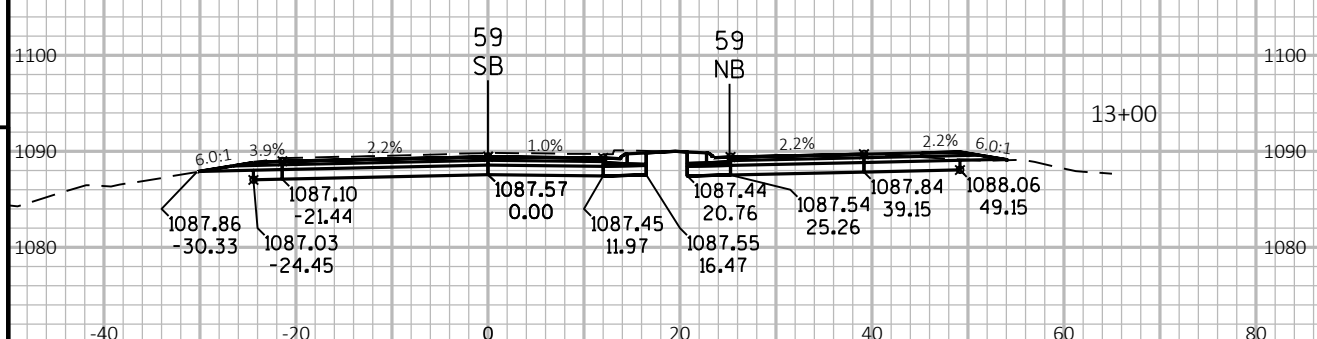
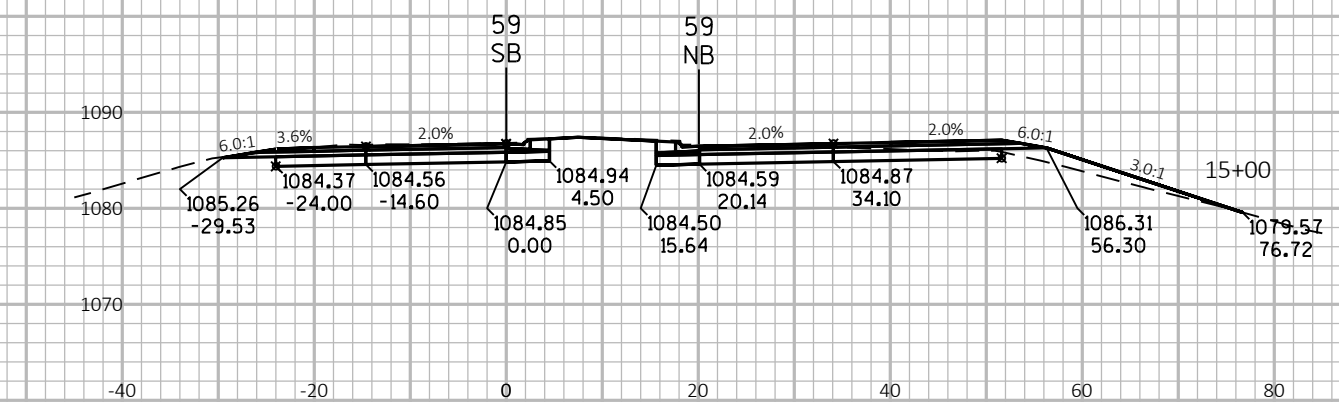
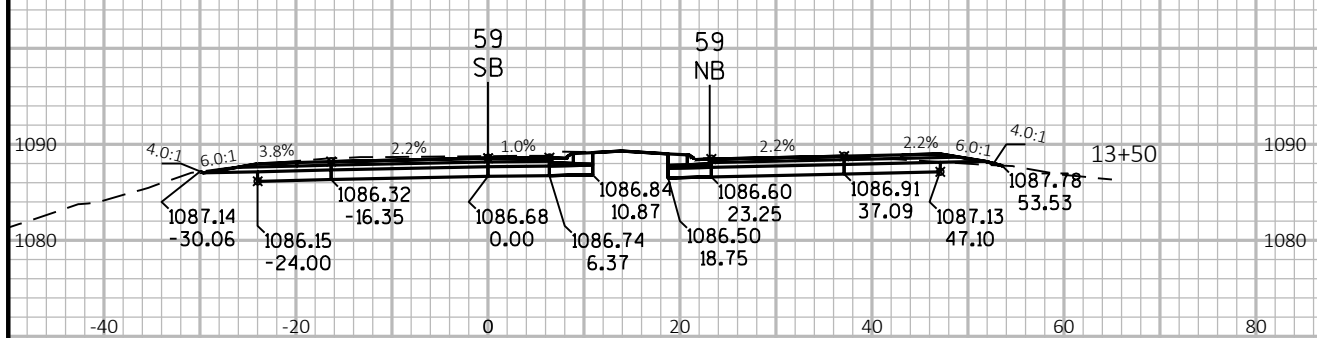
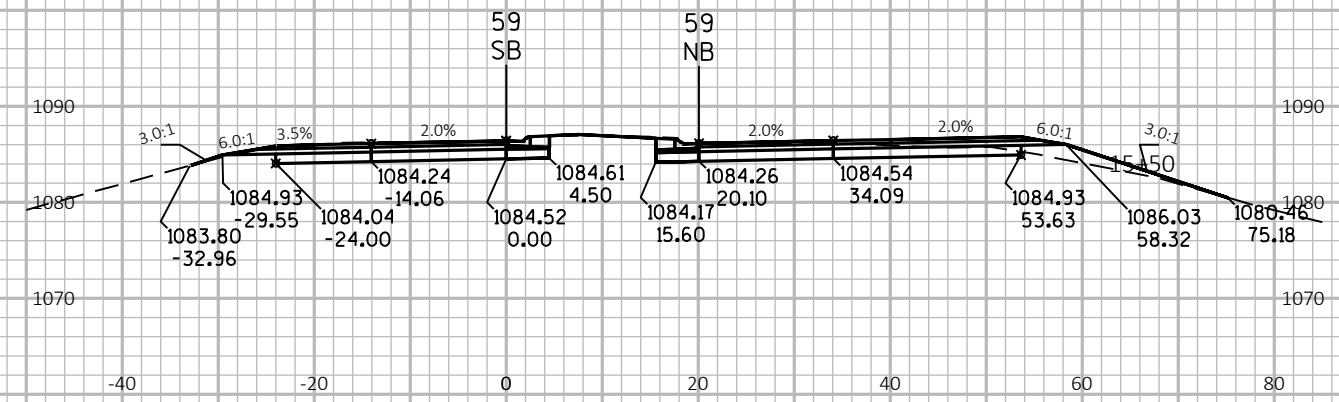
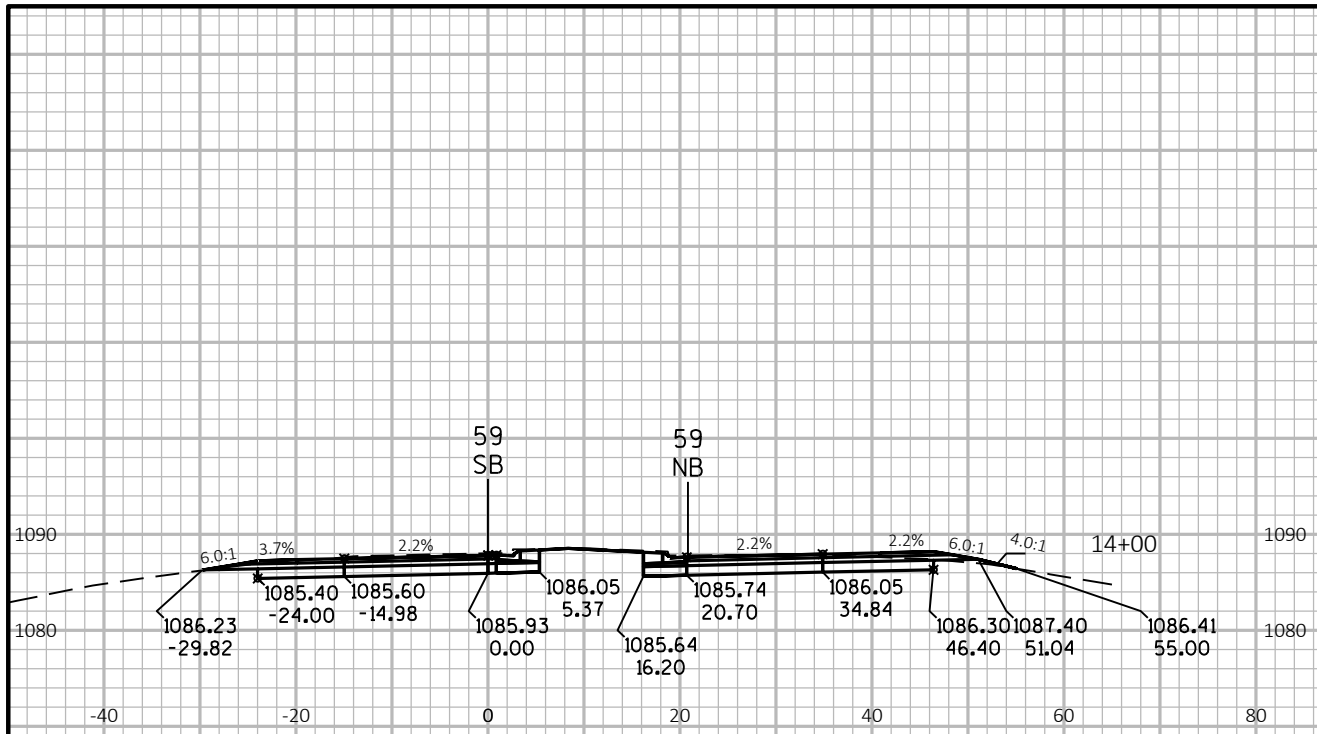
CROSS SECTIONS: STH 59

SHEET

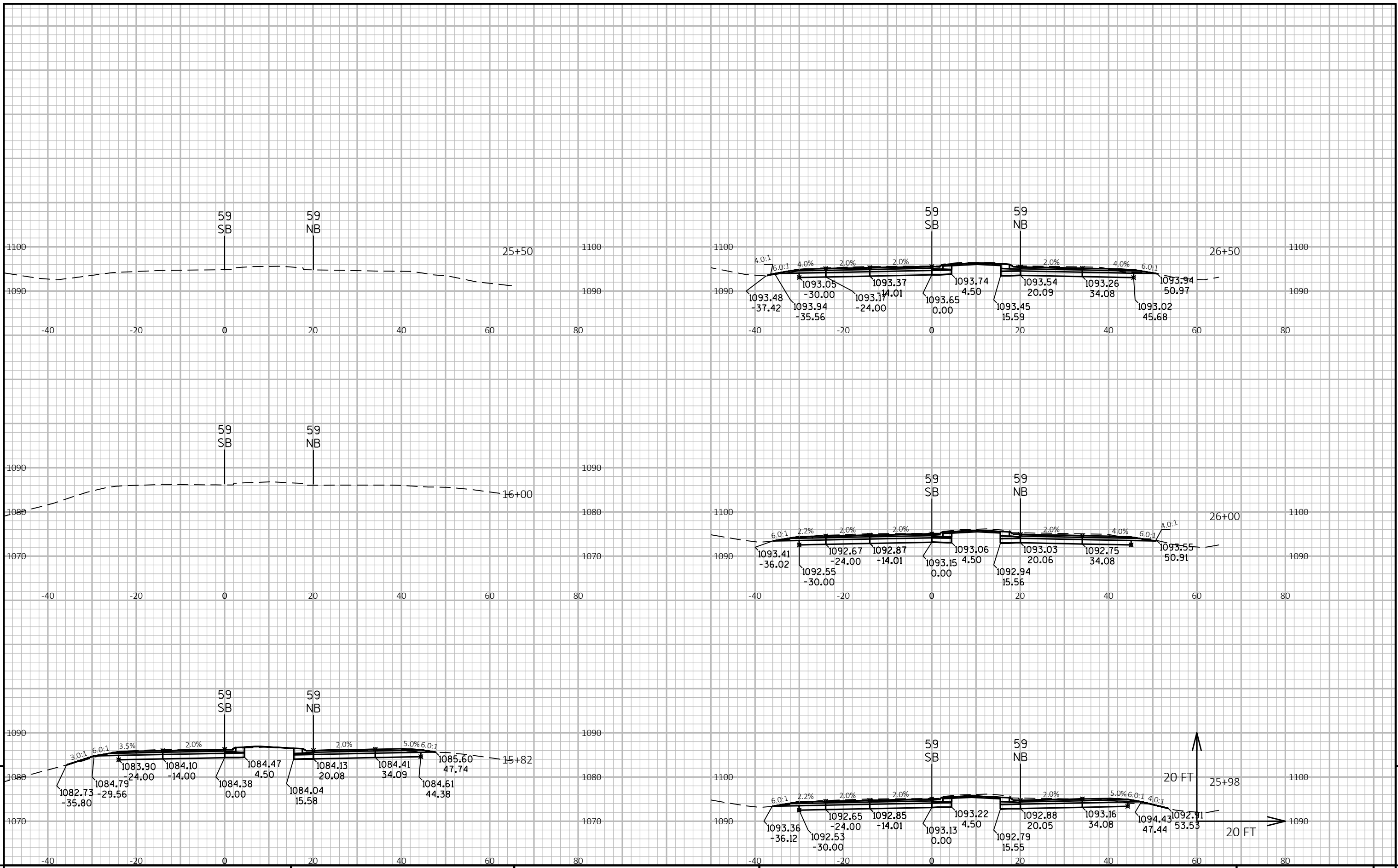
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PROJECT NO: 5660-00-72 HWY: STH 59 COUNTY: GREEN CROSS SECTIONS: STH 59 SHEET 9



PROJECT NO: 5660-00-72 HWY: STH 59 COUNTY: GREEN CROSS SECTIONS: STH 59 SHEET 9



PROJECT NO: 5660-00-72

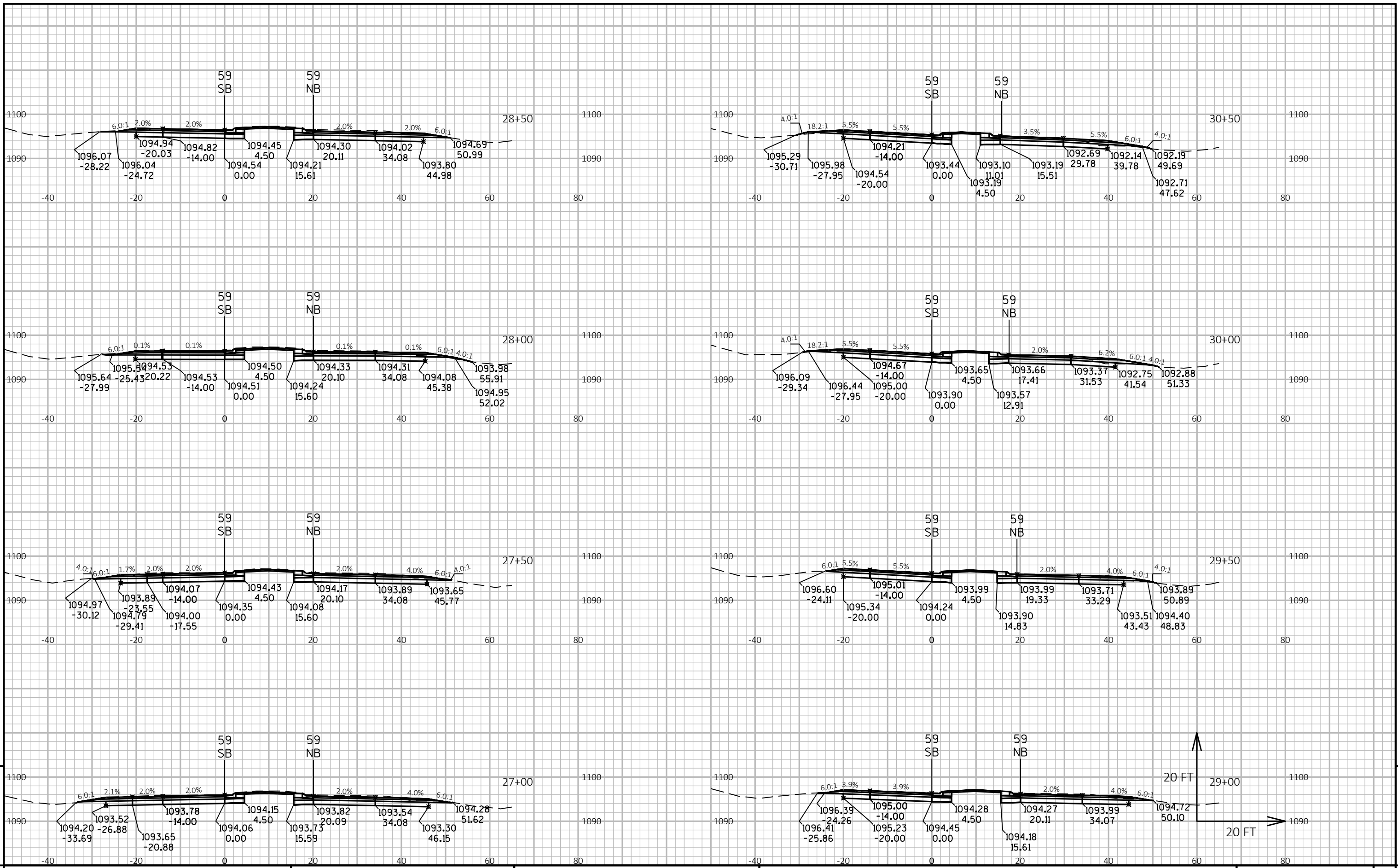
HWY: STH 59

COUNTY: GREEN

CROSS SECTIONS: STH 59

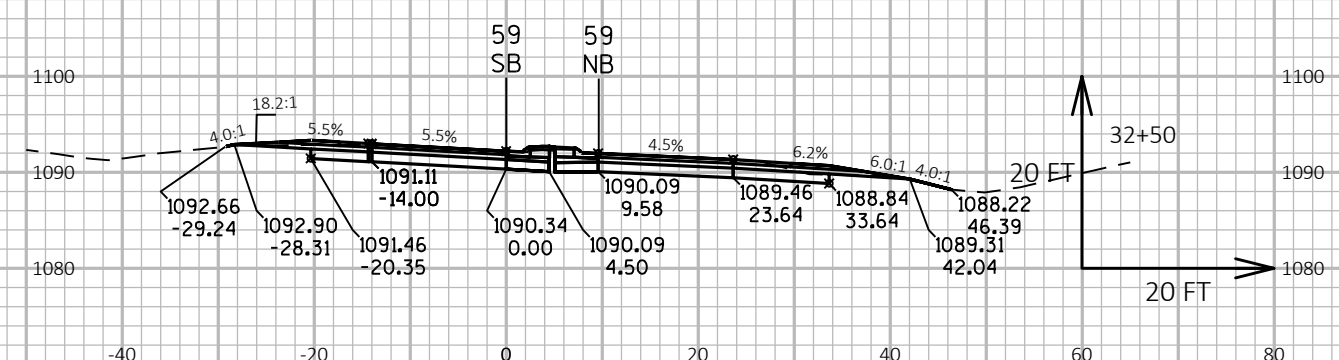
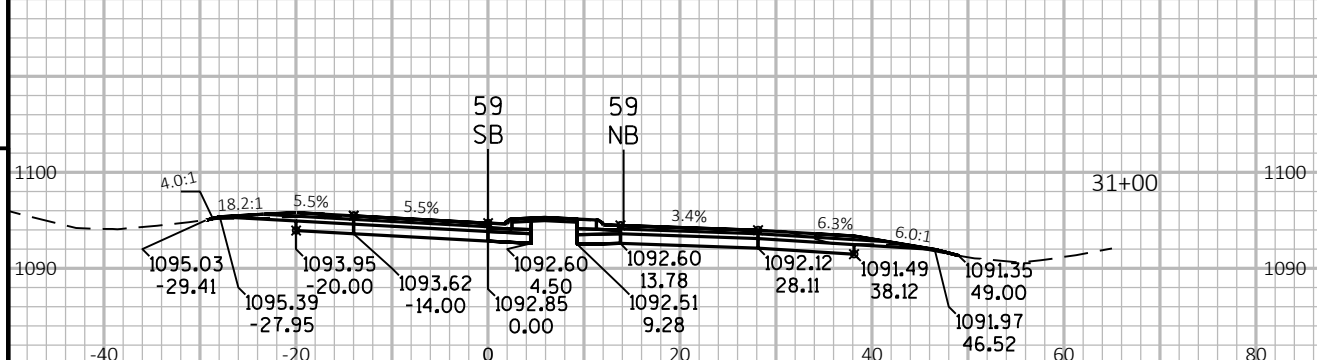
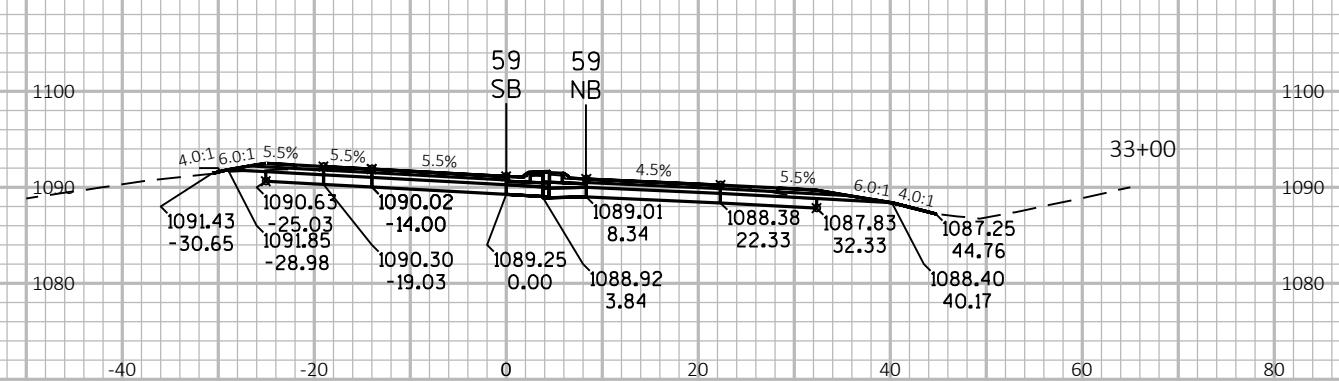
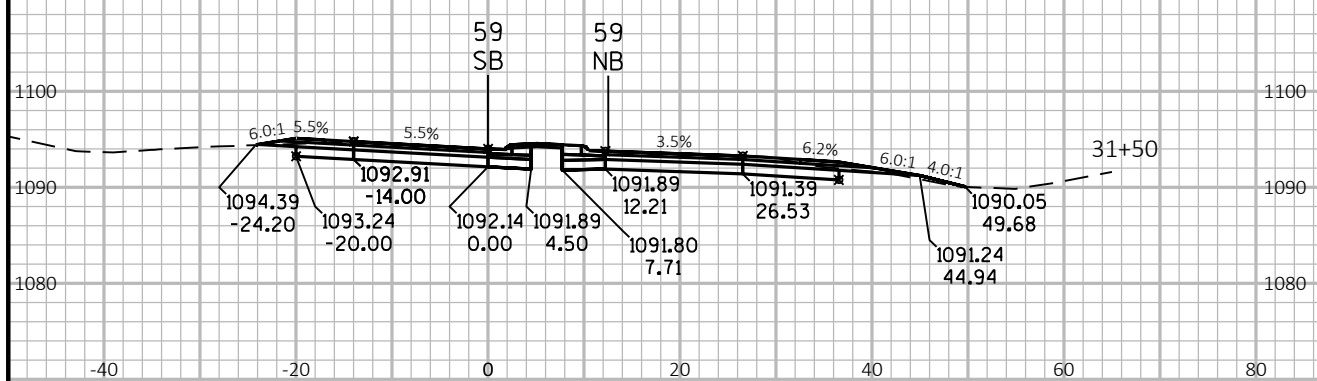
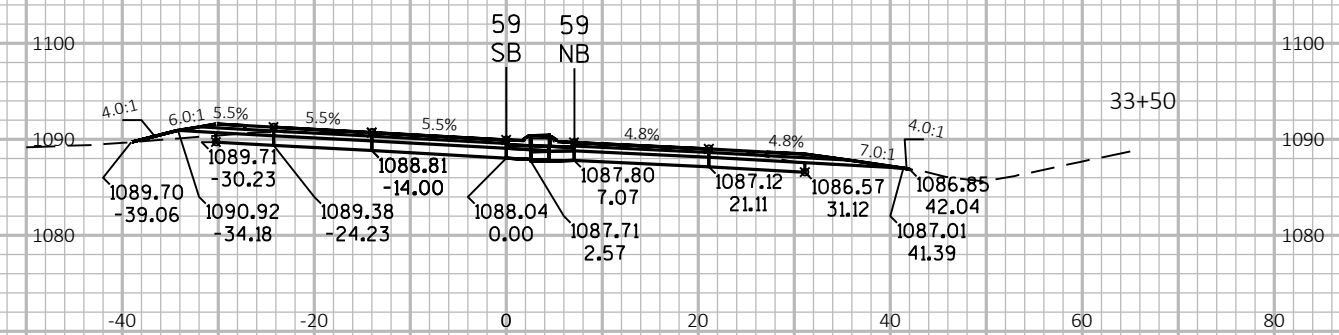
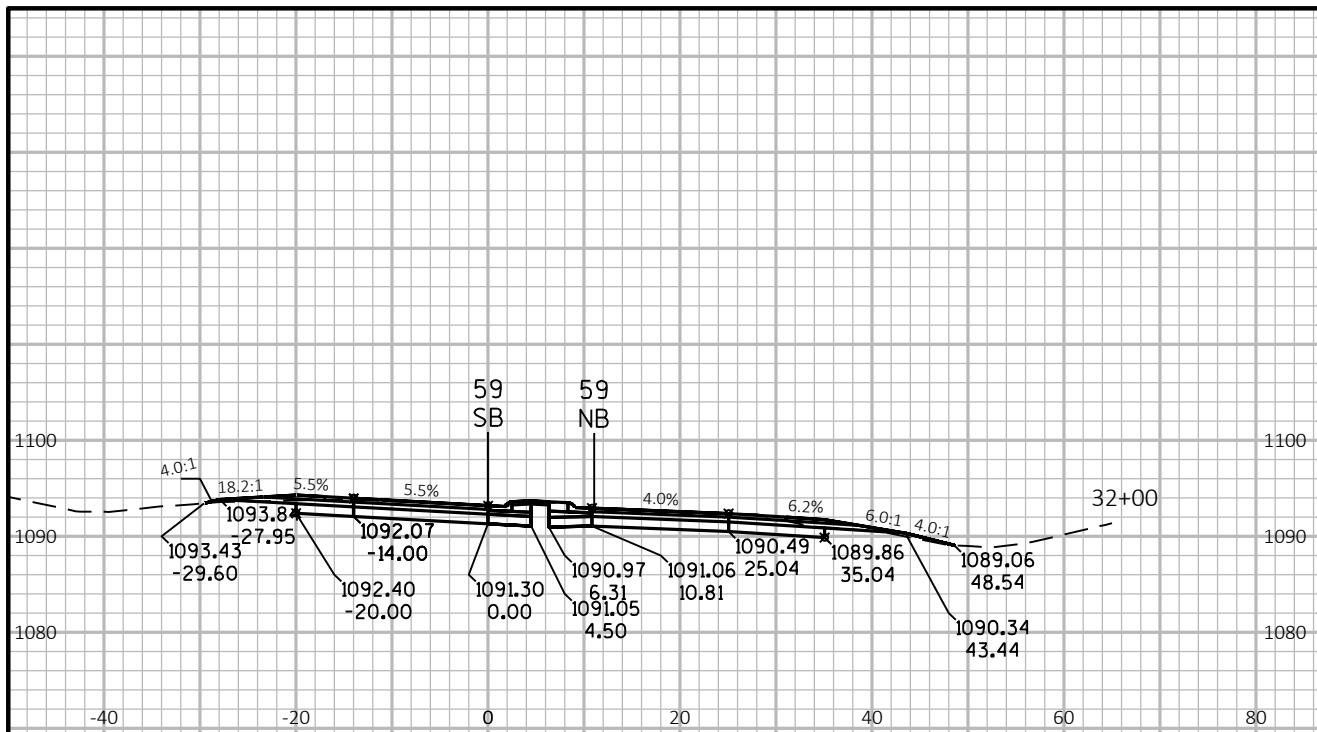
SHEET

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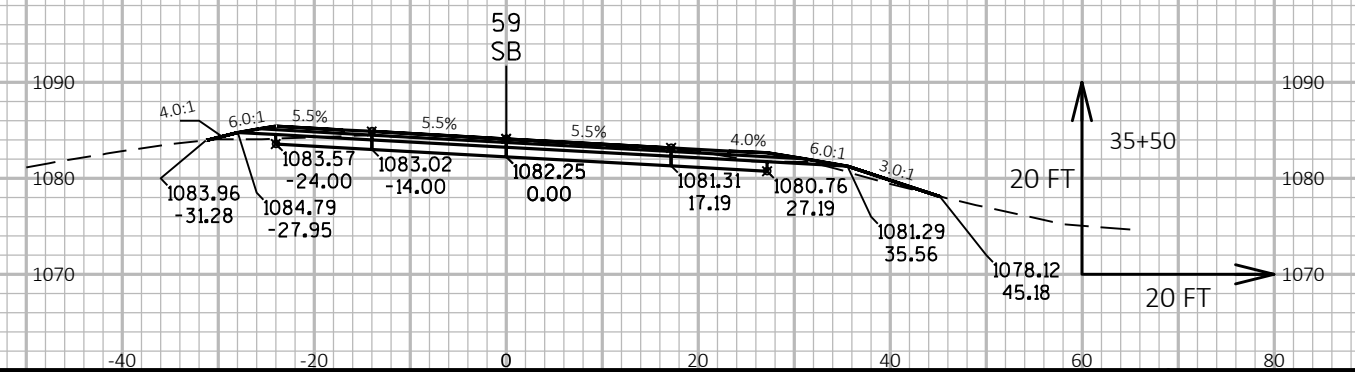
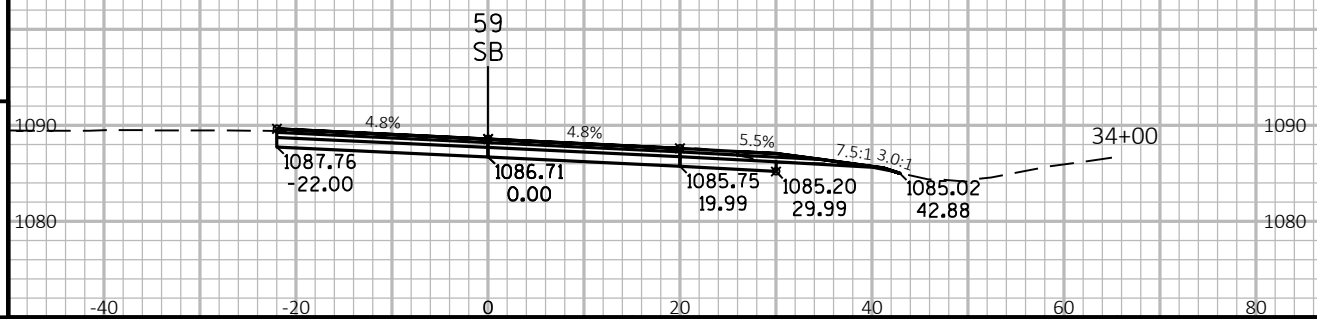
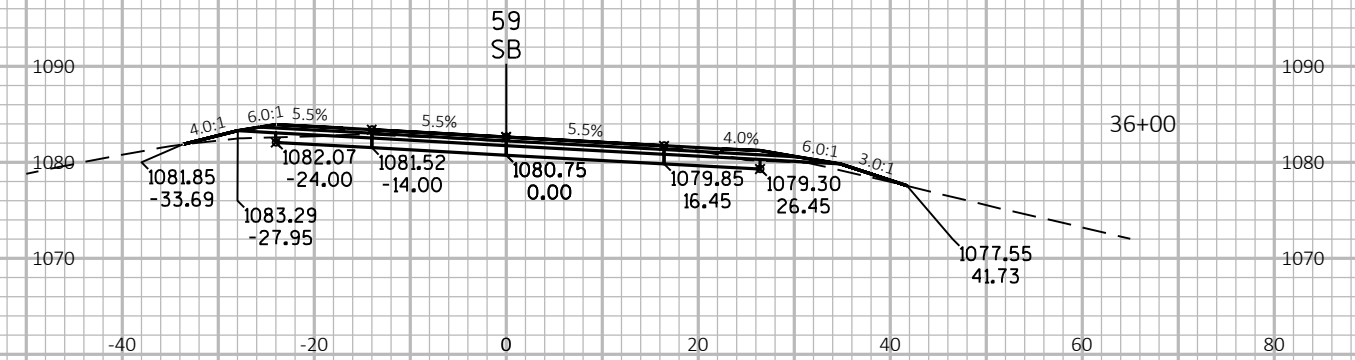
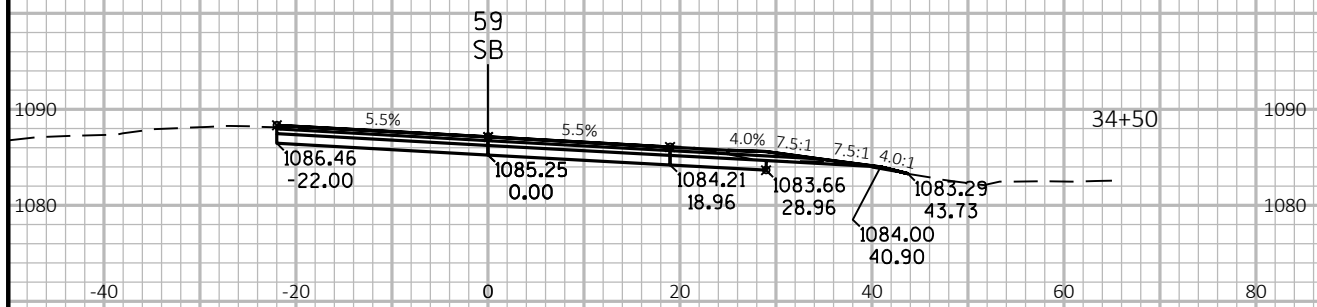
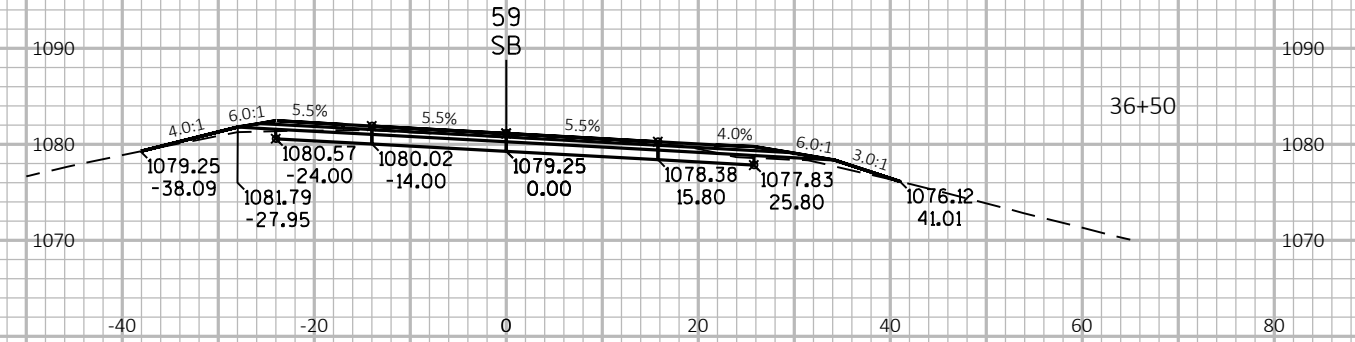
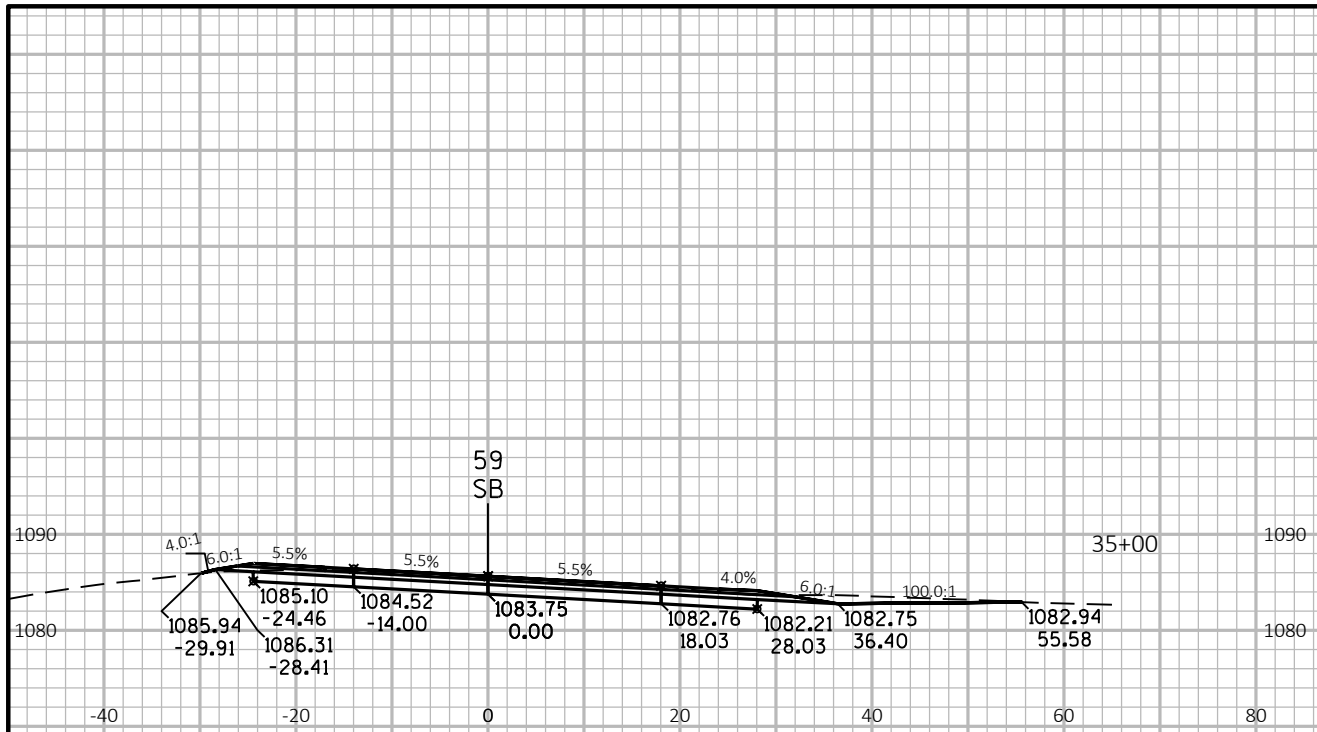


PROJECT NO: 5660-00-72	HWY: STH 59	COUNTY: GREEN	CROSS SECTIONS: STH 59	SHEET 9
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PROJECT NO: 5660-00-72 HWY: STH 59 COUNTY: GREEN CROSS SECTIONS: STH 59 SHEET 9



PROJECT NO: 5660-00-72

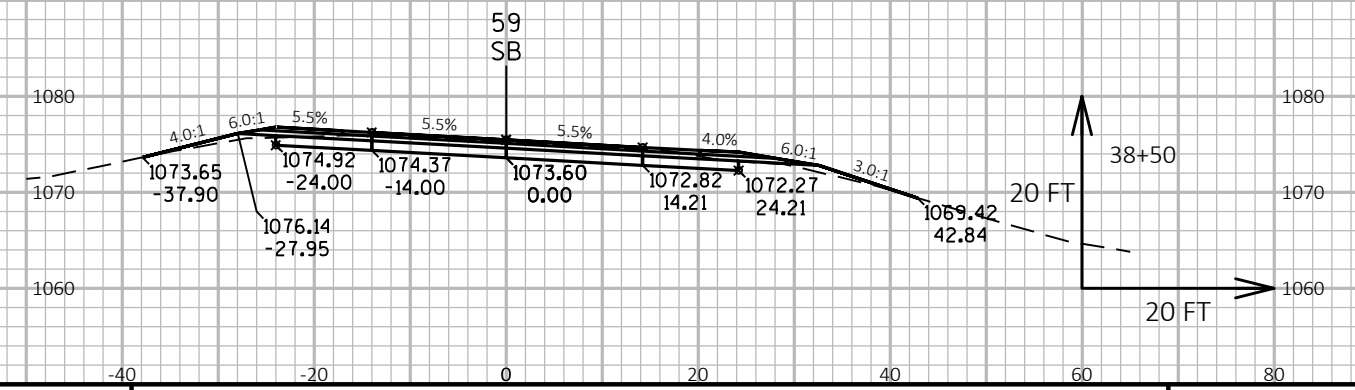
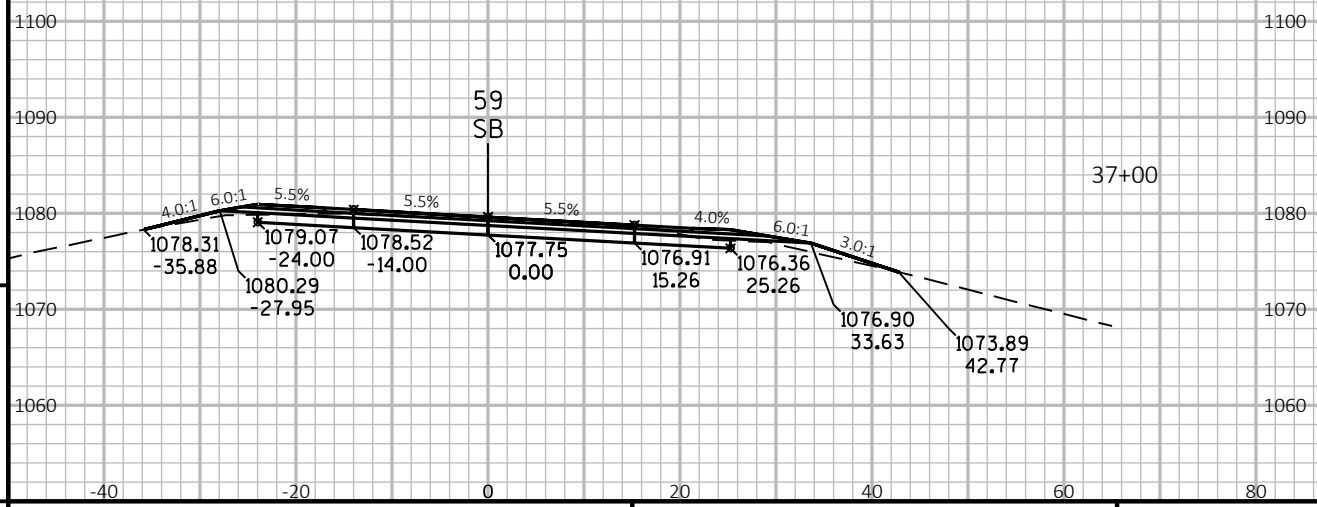
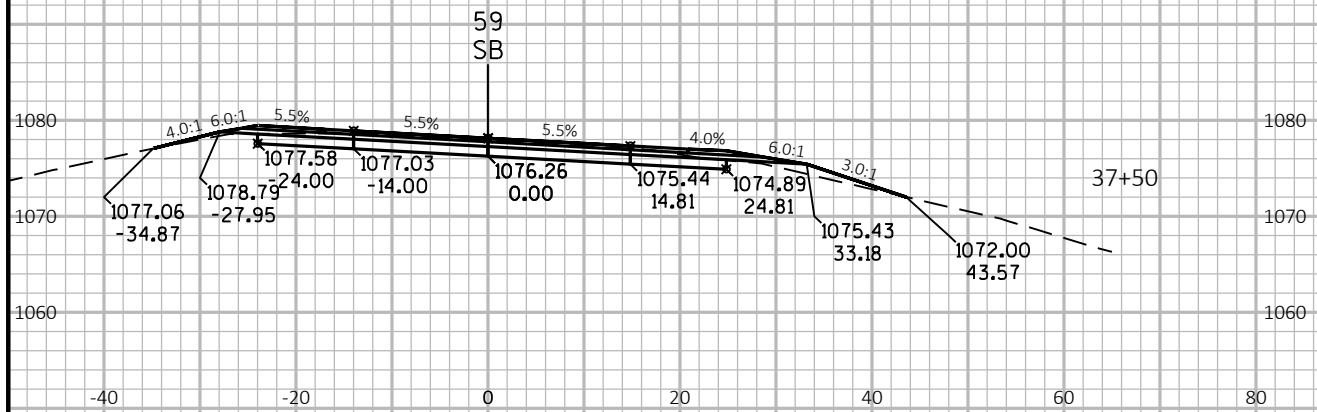
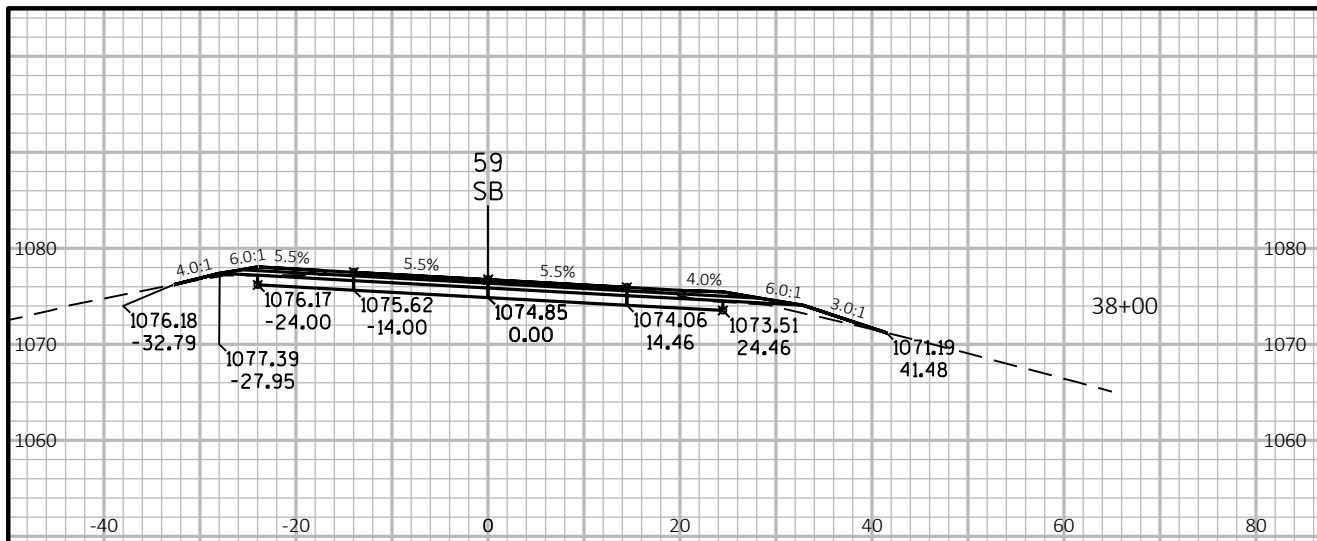
HWY: STH 59

COUNTY: GREEN

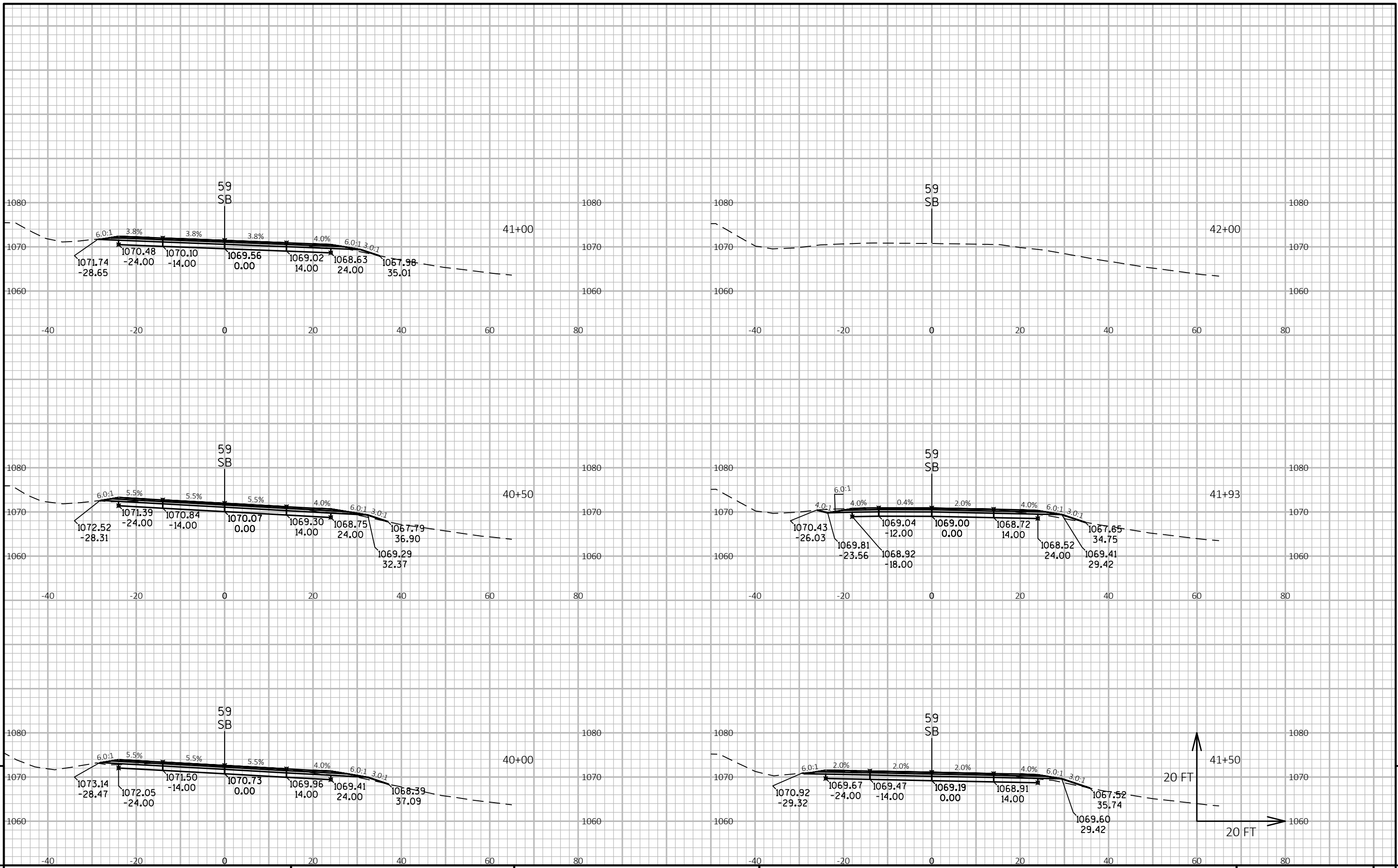
CROSS SECTIONS: STH 59

SHEET

E



PROJECT NO: 5660-00-72 HWY: STH 59 COUNTY: GREEN CROSS SECTIONS: STH 59 SHEET 9



PROJECT NO: 5660-00-72

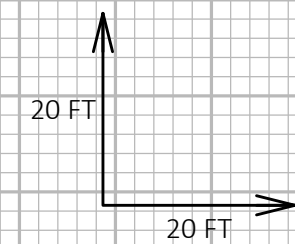
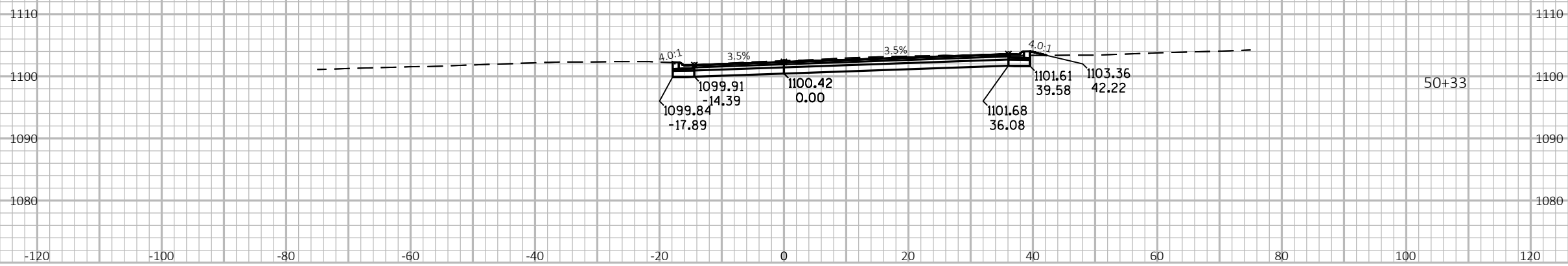
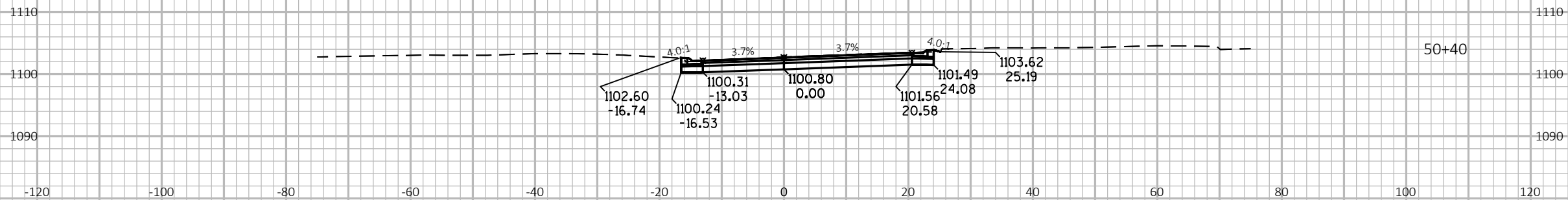
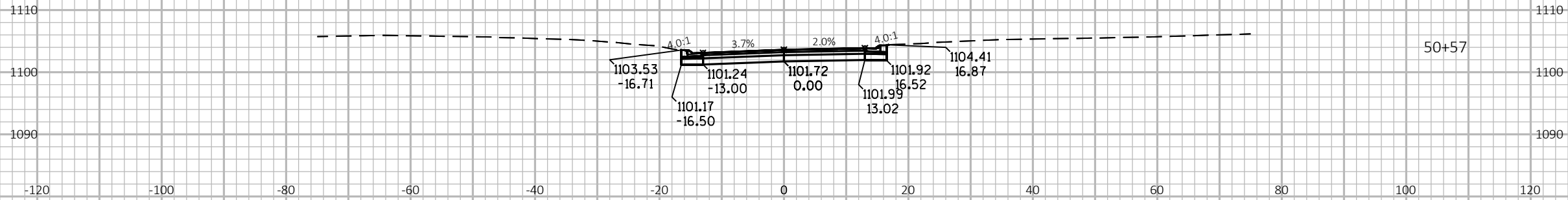
HWY: STH 59

COUNTY: GREEN

CROSS SECTIONS: STH 59

SHEET

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PROJECT NO: 5660-00-72

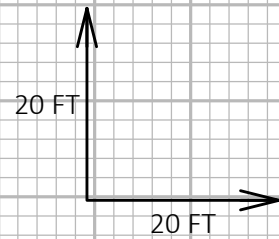
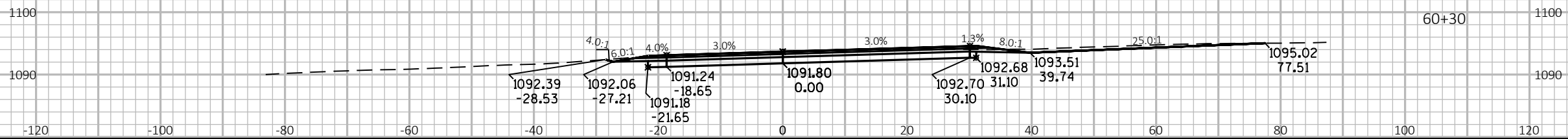
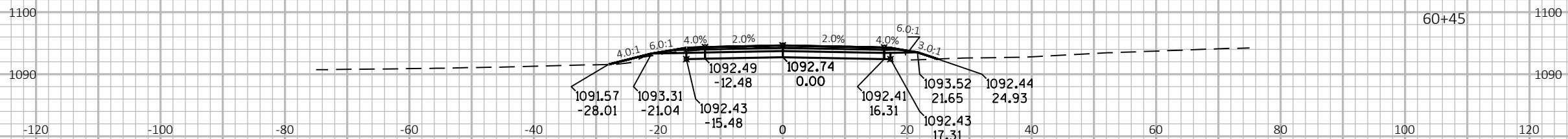
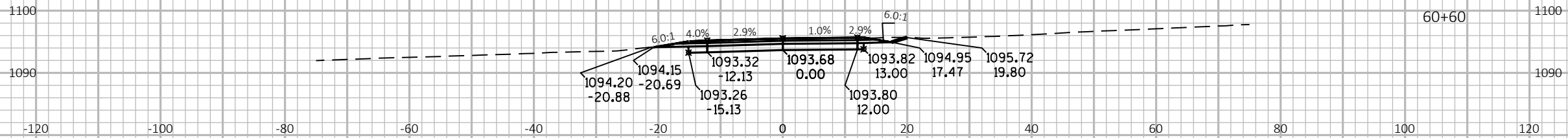
HWY: STH 59

COUNTY: GREEN

CROSS SECTIONS: 30TH AVENUE

SHEET

E



PROJECT NO: 5660-00-72

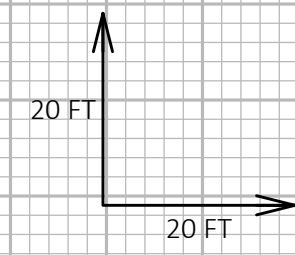
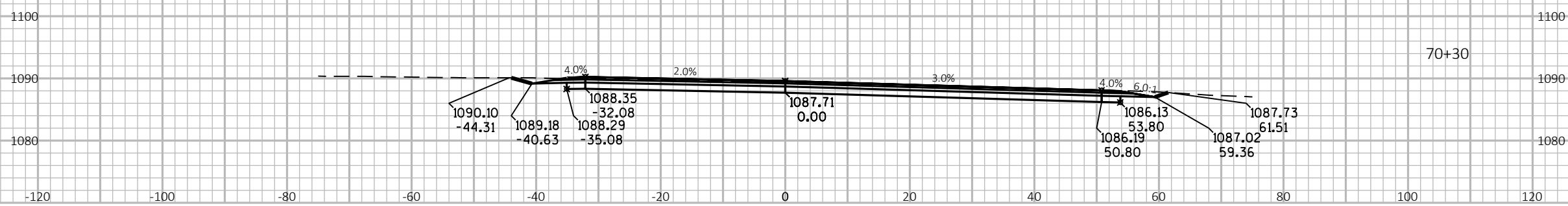
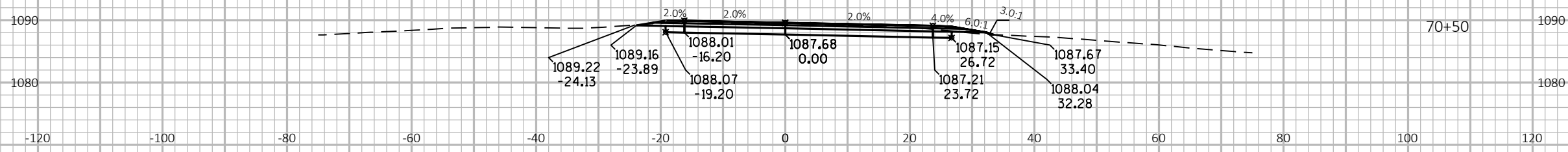
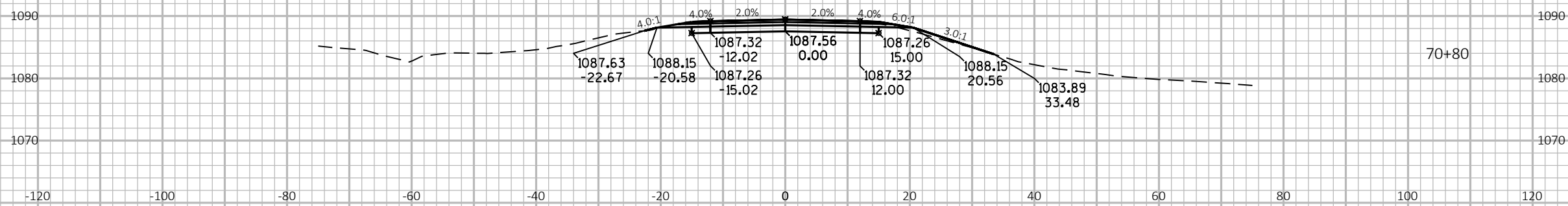
HWY: STH 59

COUNTY: GREEN

CROSS SECTIONS: 6TH ST.

SHEET

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PROJECT NO: 5660-00-72

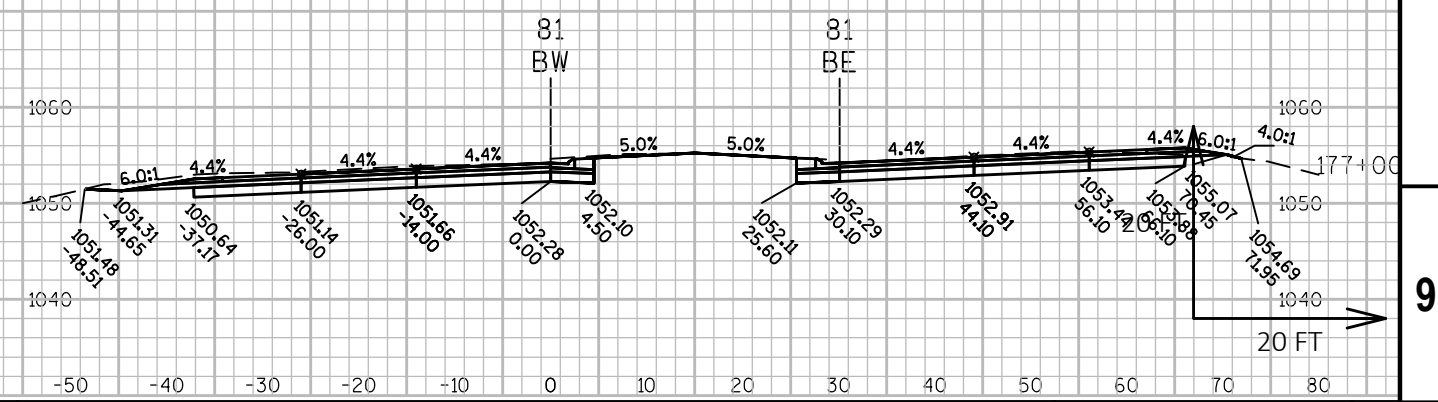
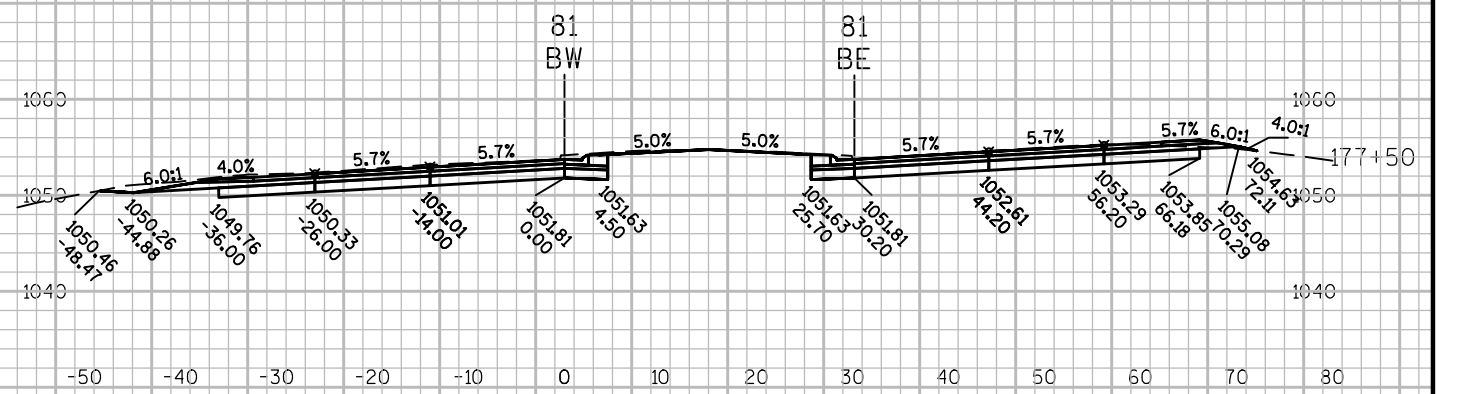
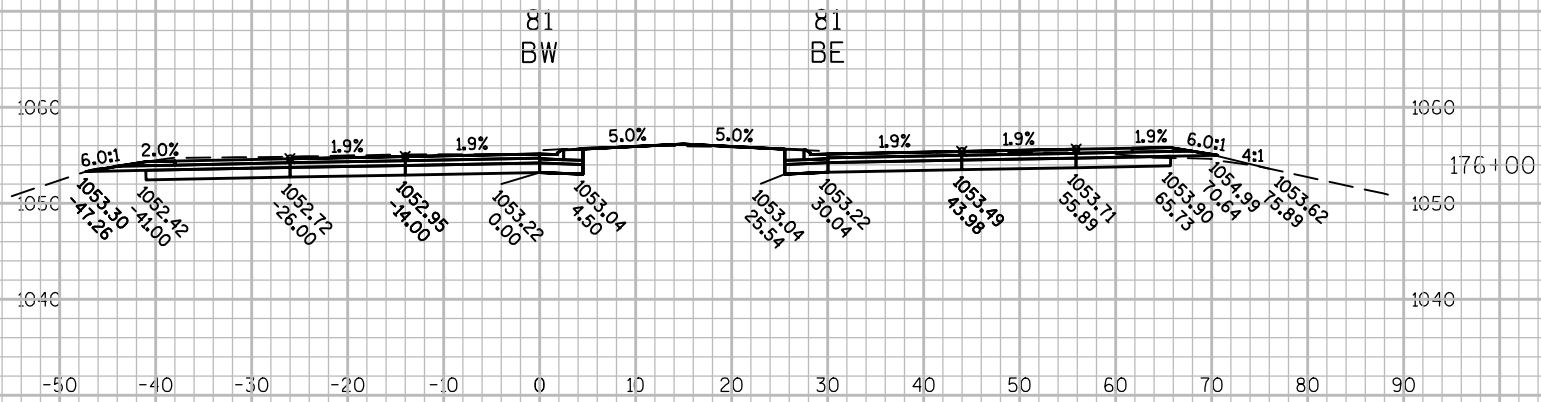
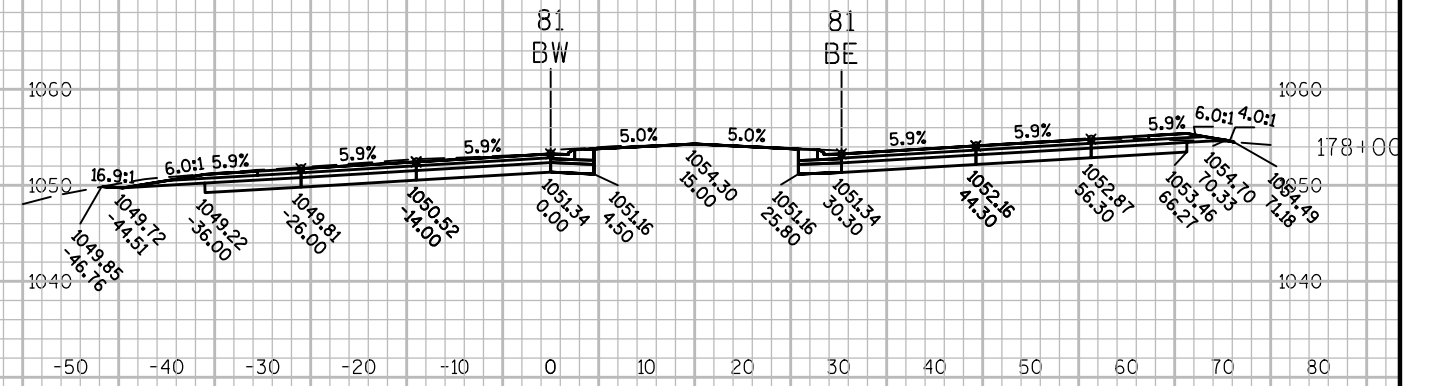
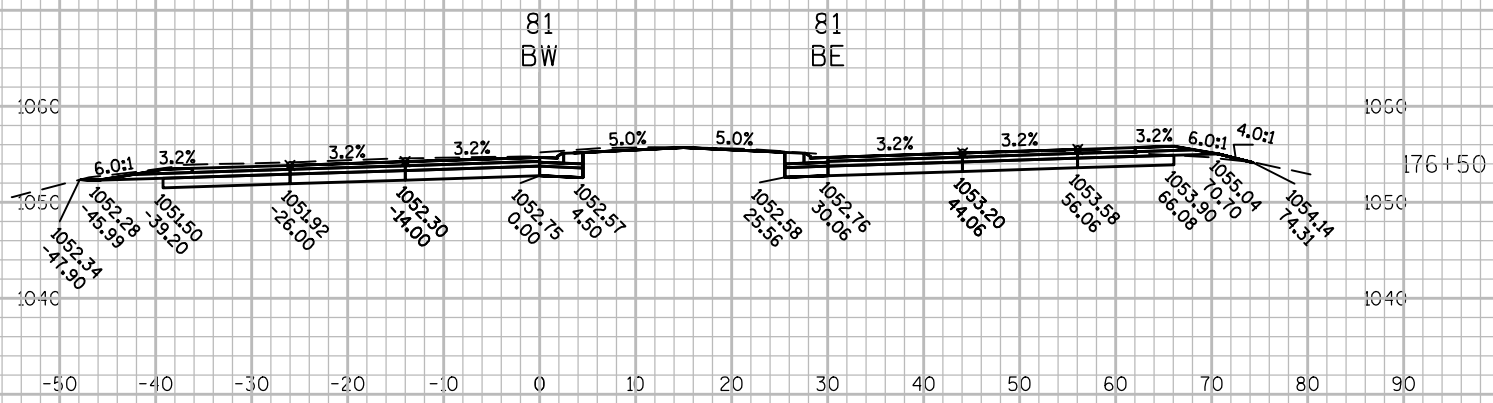
HWY: STH 59

COUNTY: GREEN

CROSS SECTIONS: WEISS LN

SHEET

E



PROJECT NO:5944-01-72

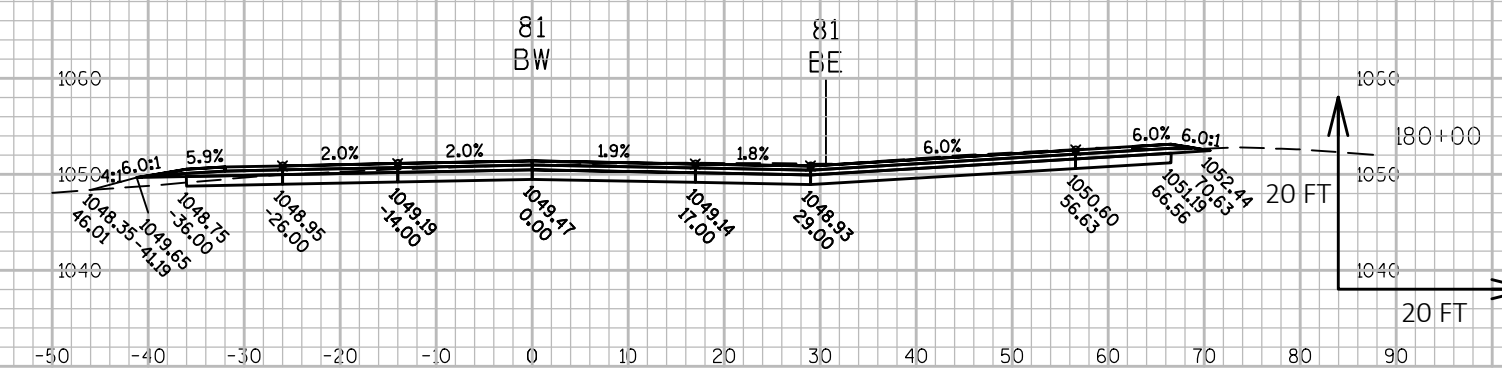
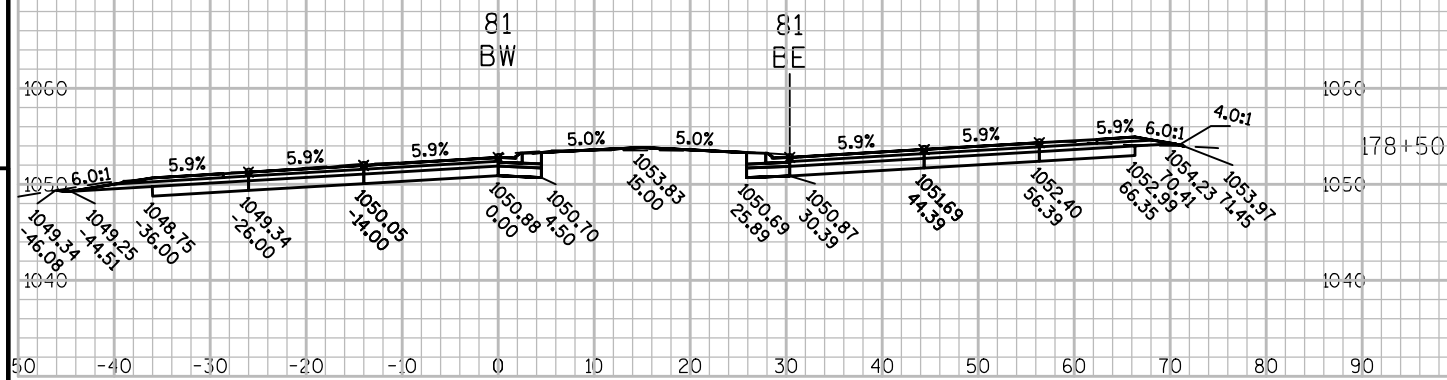
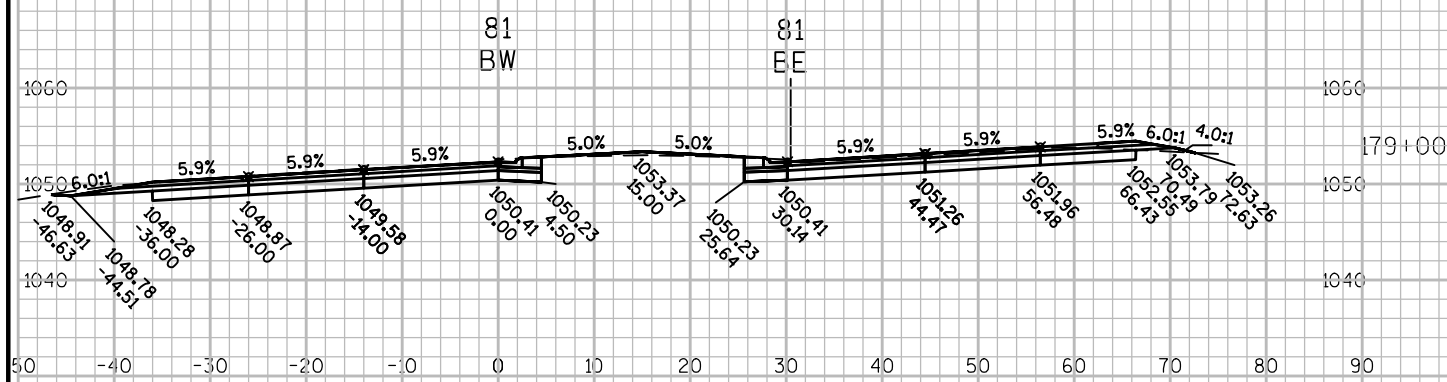
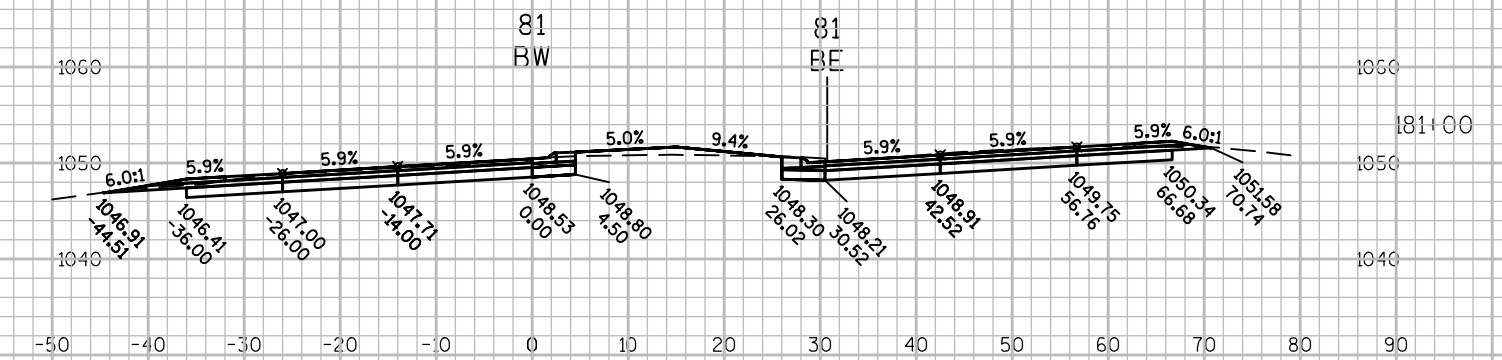
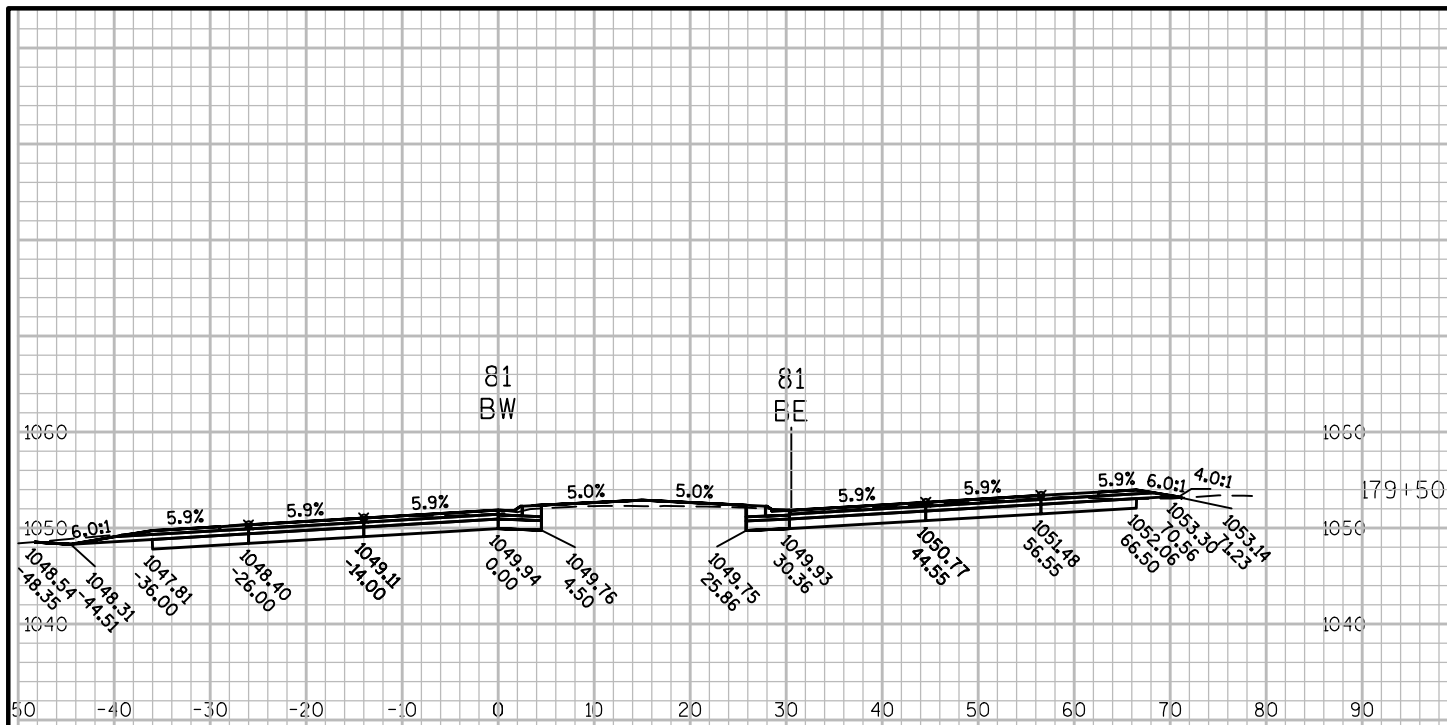
HWY: STH 81

COUNTY: GREEN

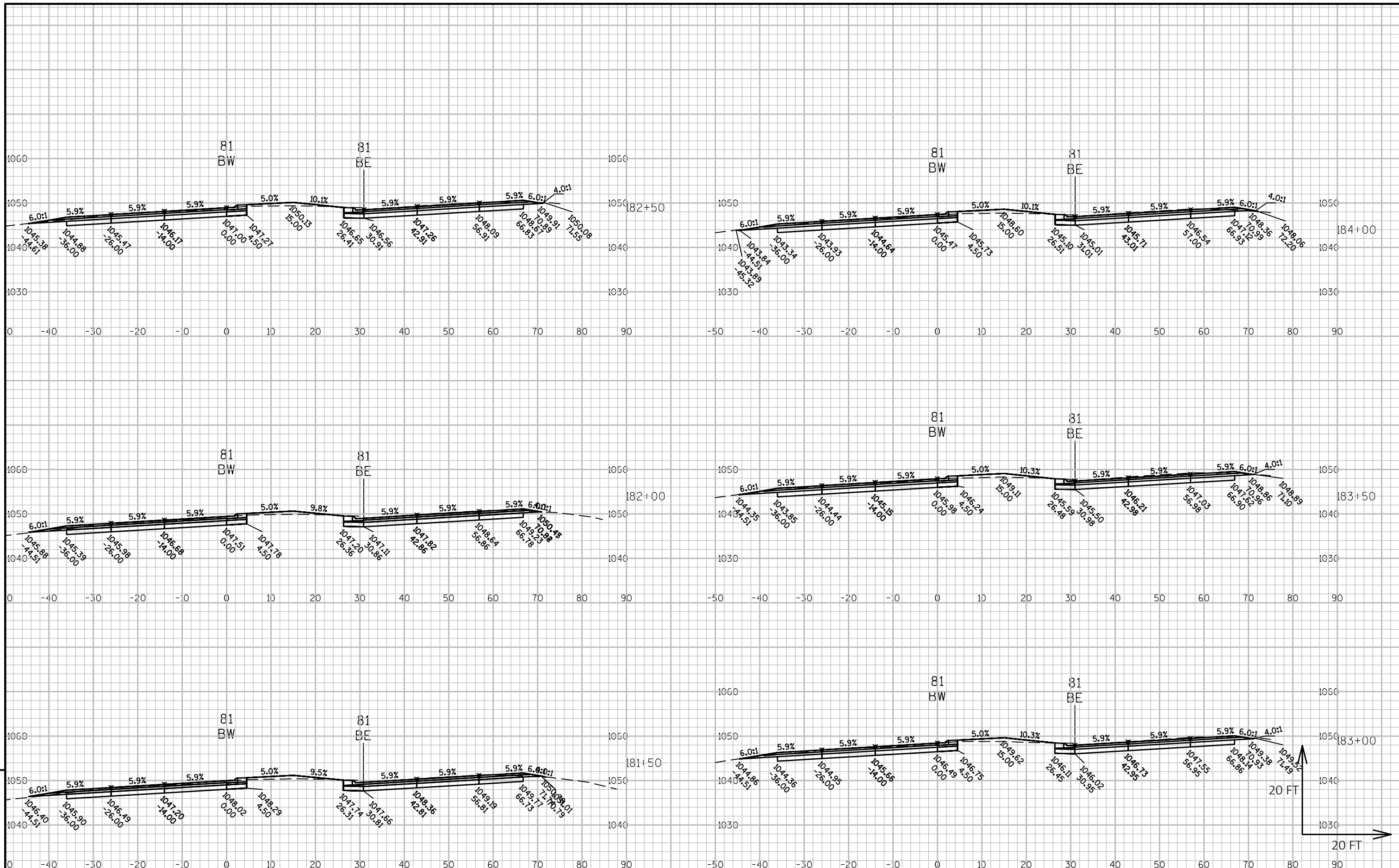
CROSS SECTIONS: STH 81

SHEET

E



PROJECT NO: 5944-01-72 HWY: STH 81 COUNTY: GREEN CROSS SECTIONS: STH 81 SHEET E



PROJECT NO:5944-01-72

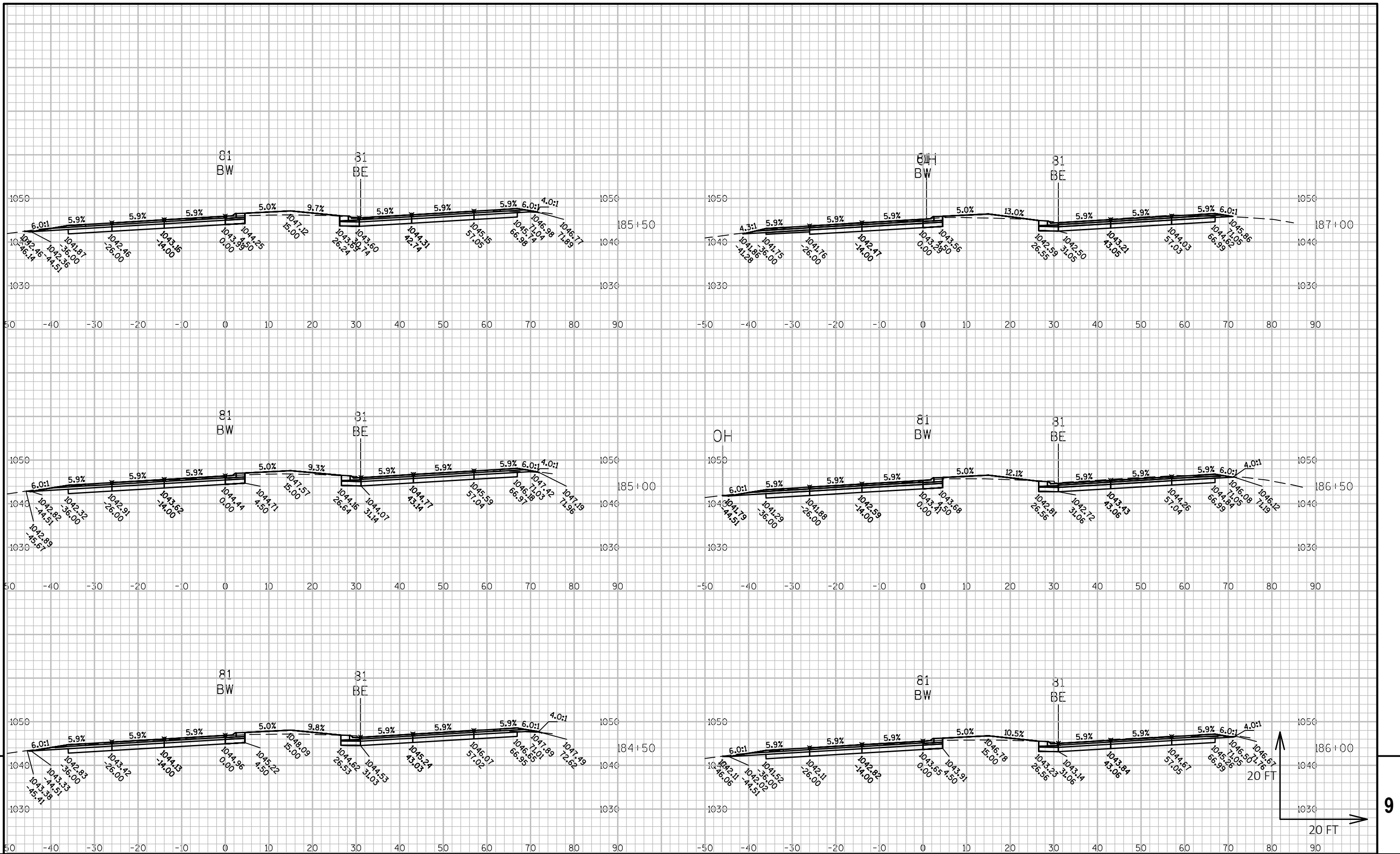
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COUNTY: GREEN

CROSS SECTIONS: STH 81

SHEET

E



PROJECT NO:5944-01-72

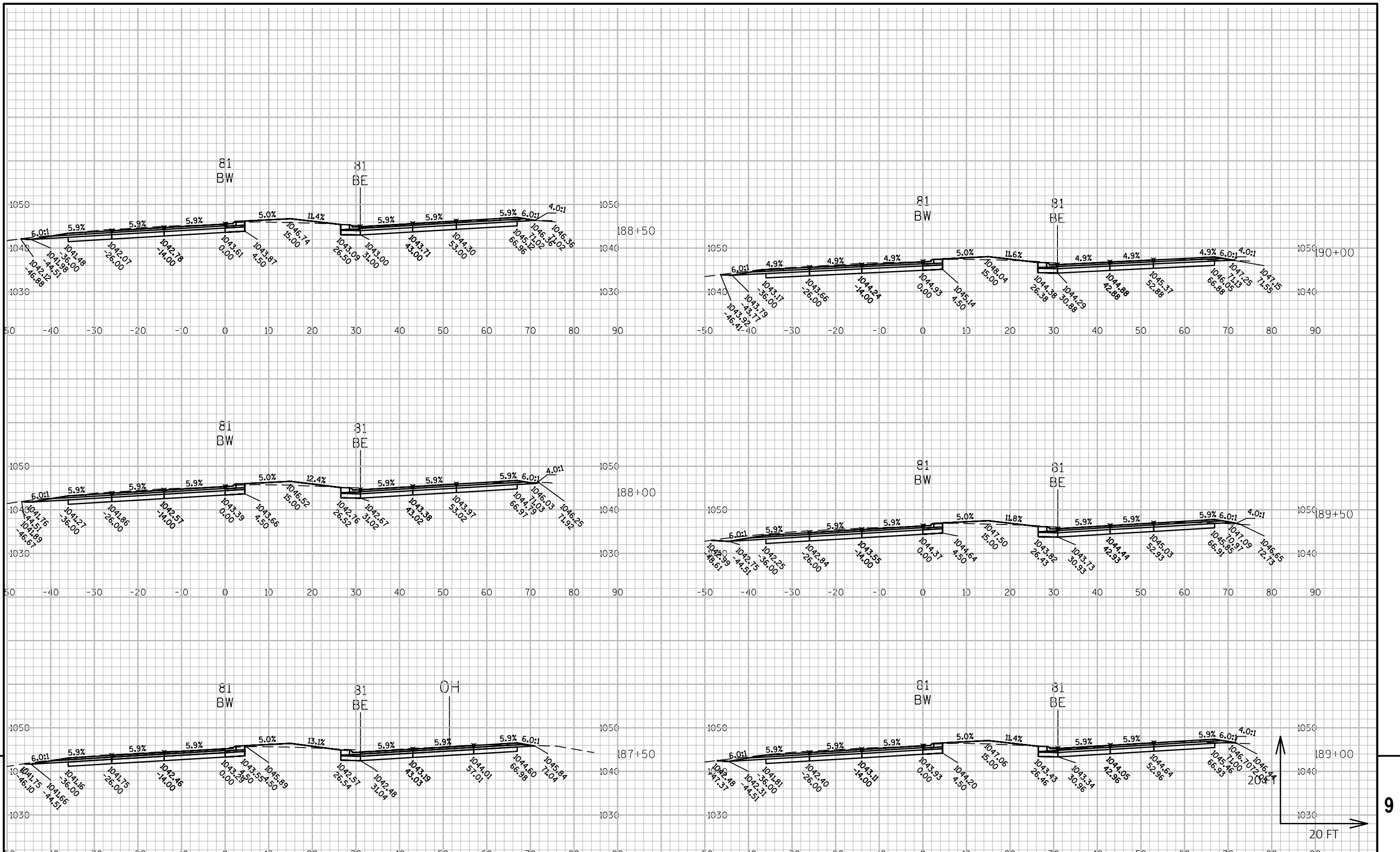
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COUNTY: GREEN

CROSS SECTIONS: STH 81

SHEET

E



PROJECT NO:5944-01-72

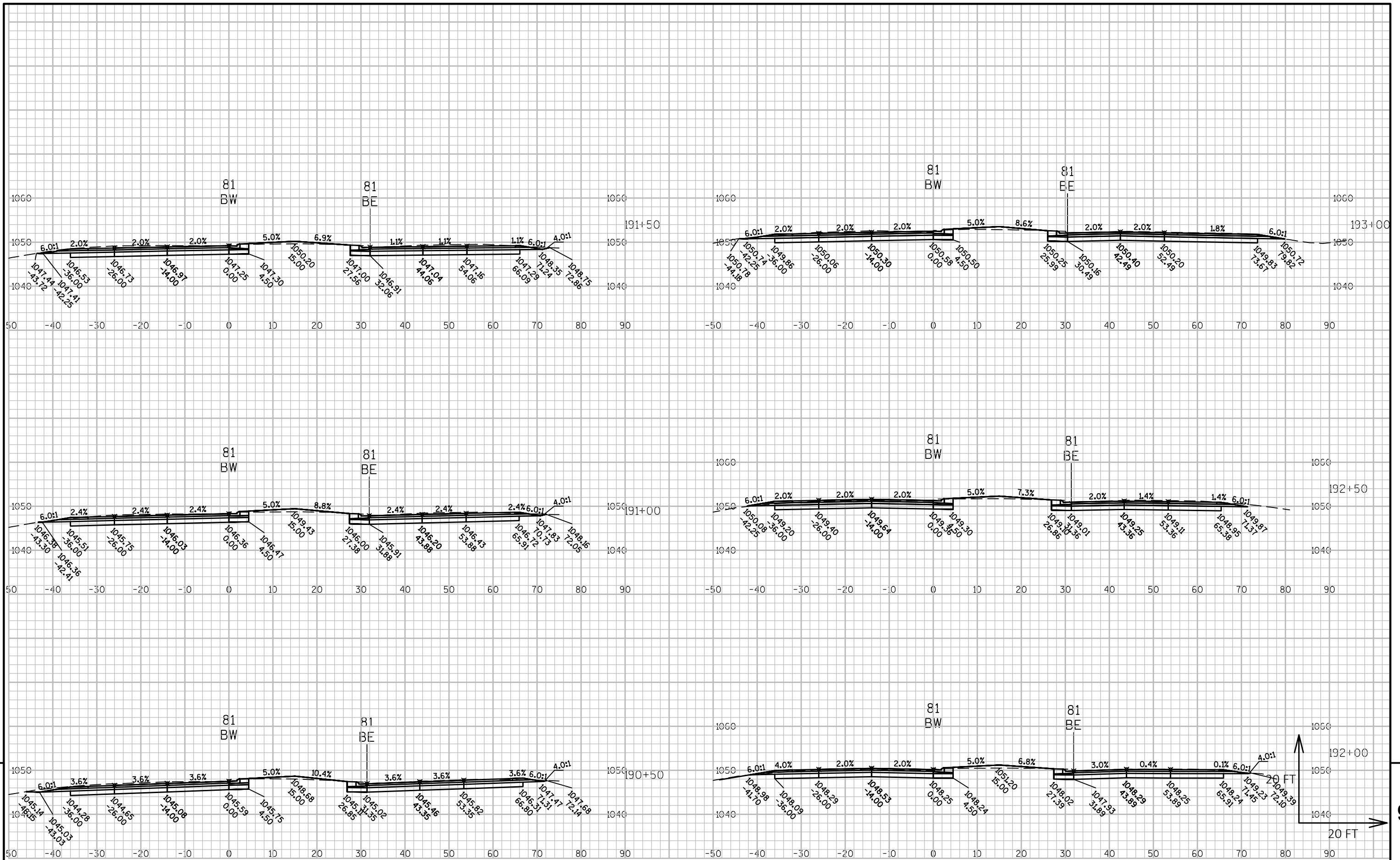
HWY: STH 81

COUNTY: GREEN

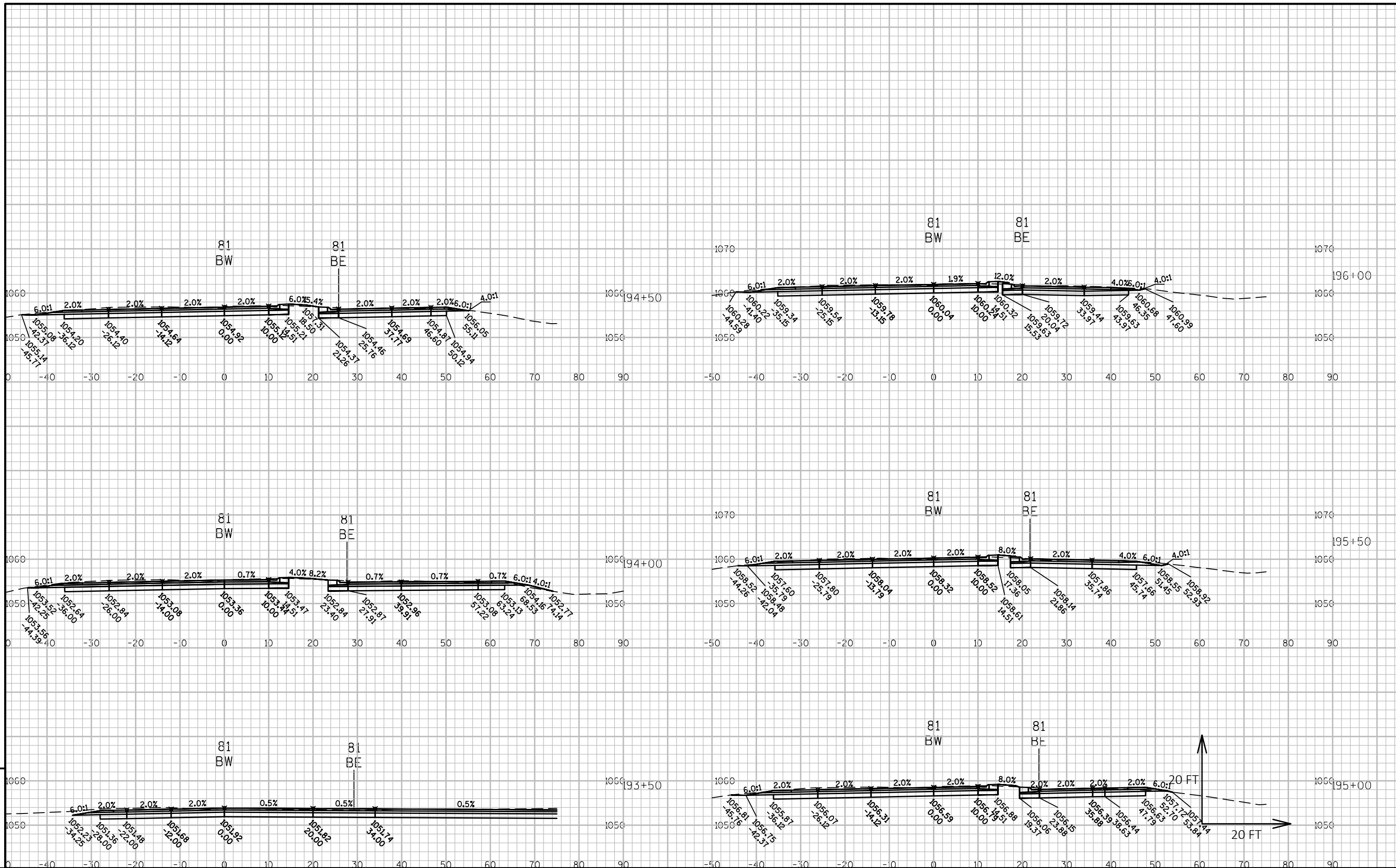
CROSS SECTIONS: STH 81

SHEET

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PROJECT NO:5944-01-72	HWY: STH 81	COUNTY: GREEN	CROSS SECTIONS: STH 81
SHEET			E



PROJECT NO:5944-01-72

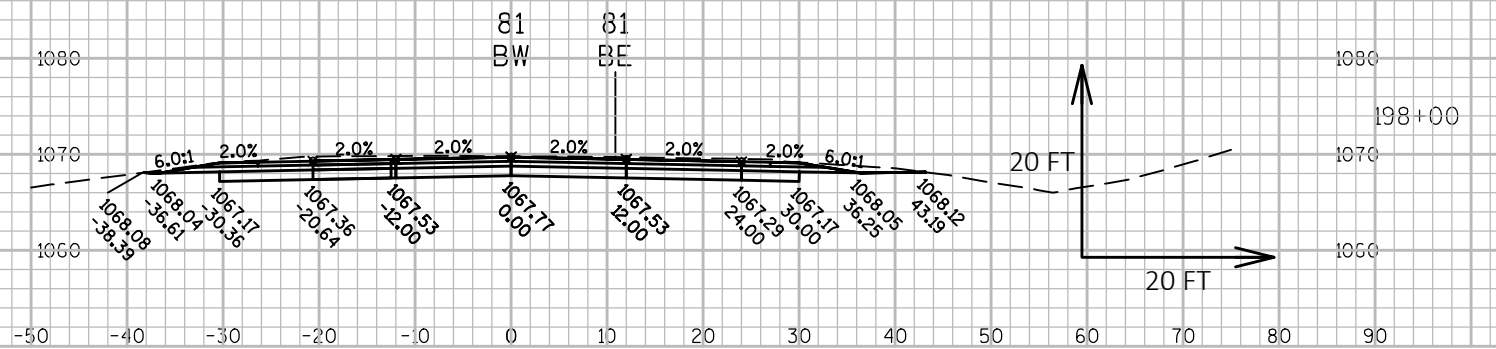
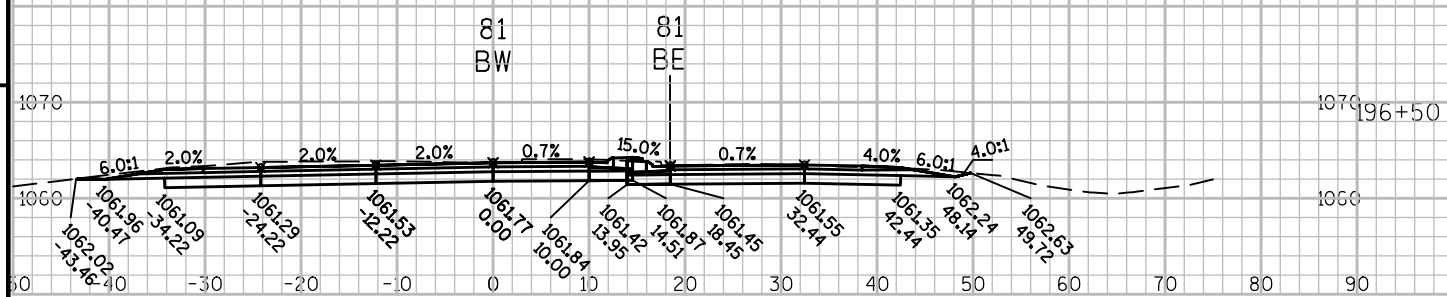
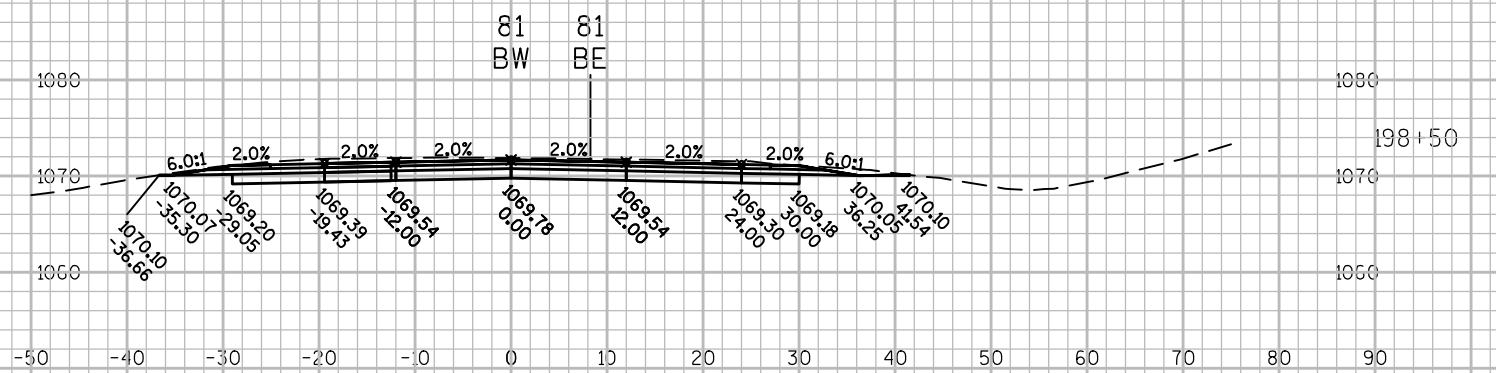
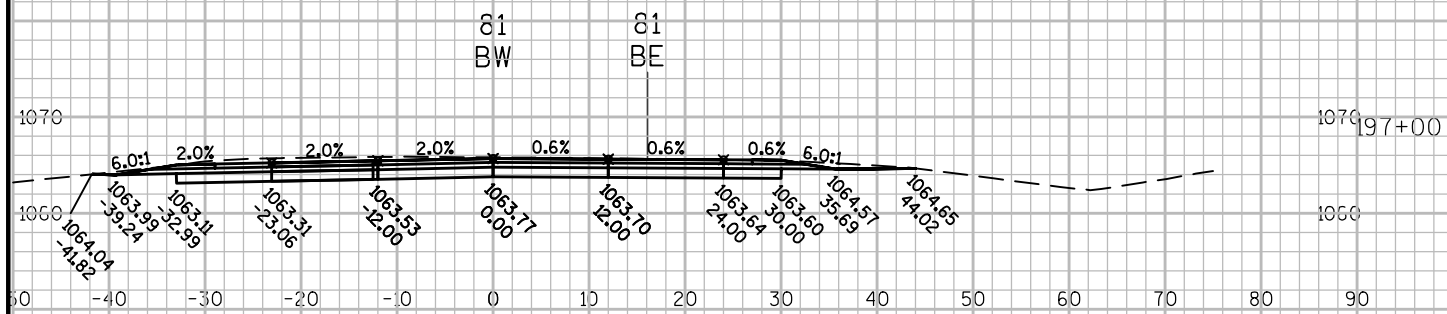
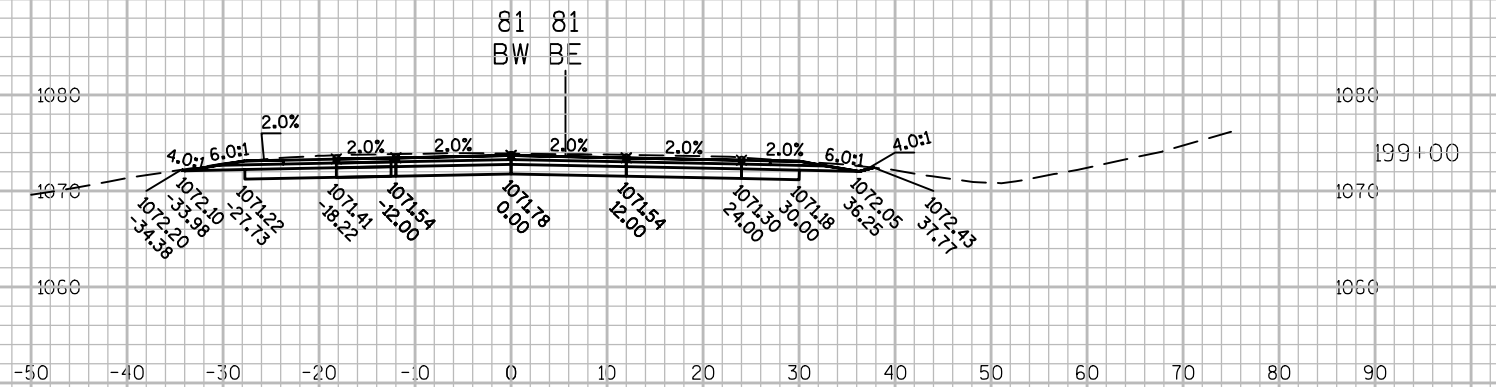
HWY: STH 81

COUNTY: GREEN

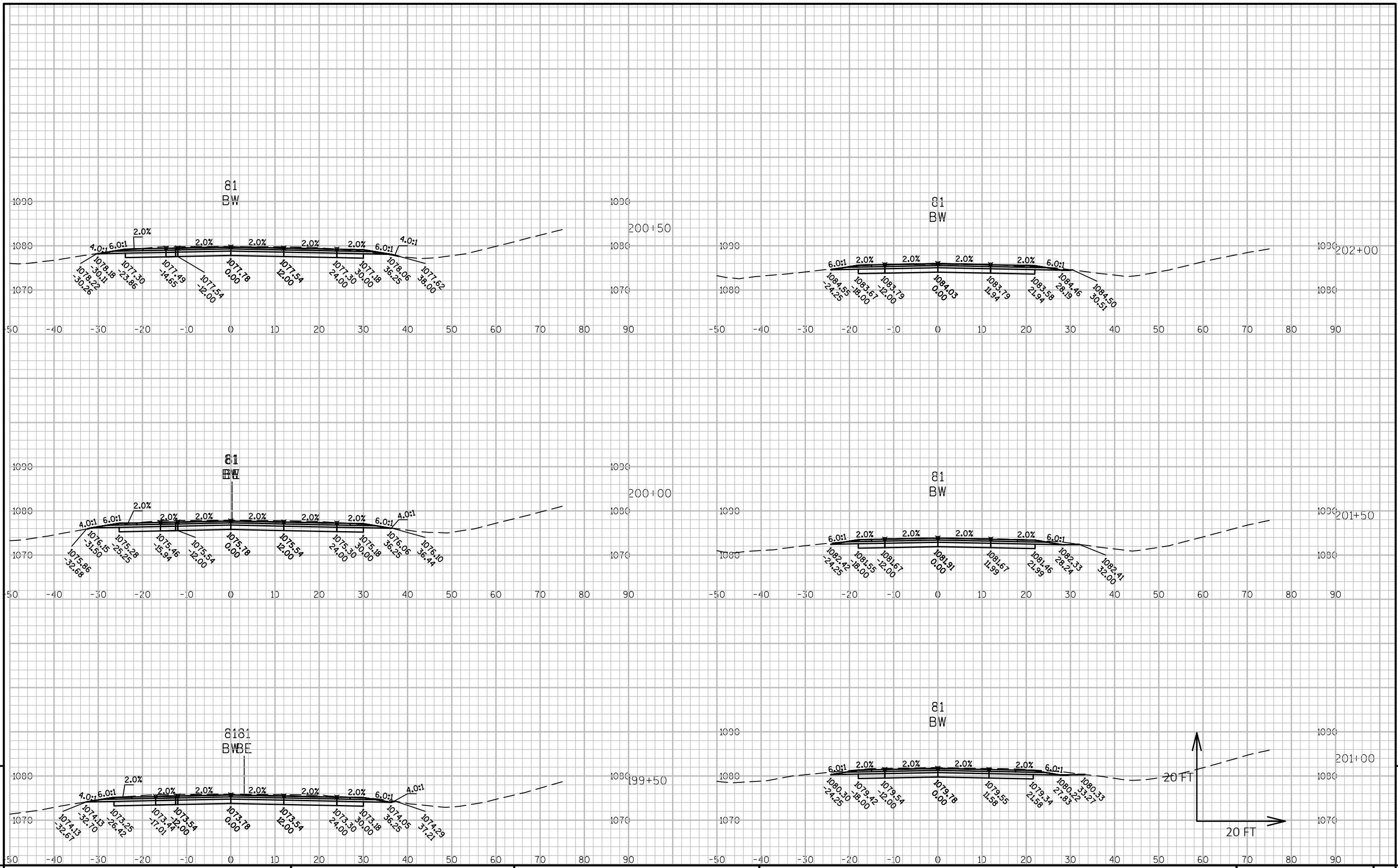
CROSS SECTIONS: STH 81

SHEET

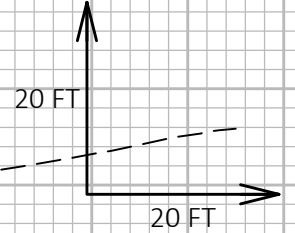
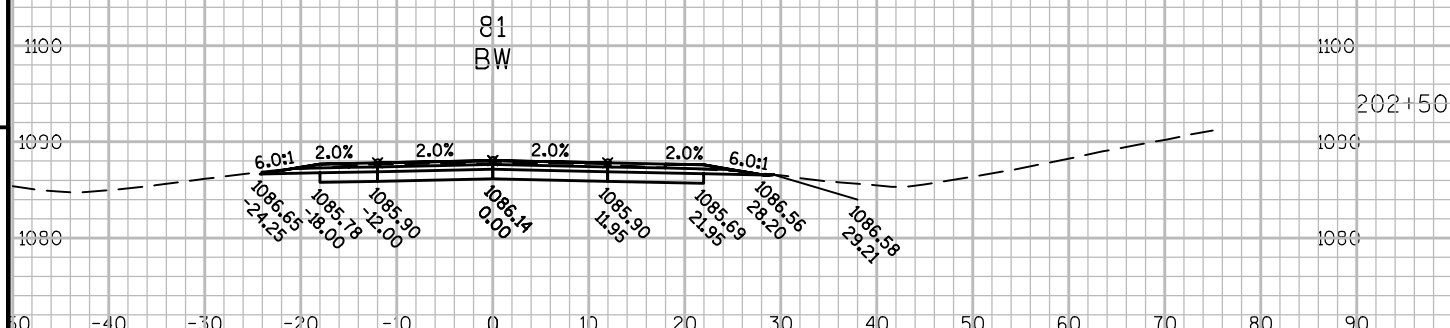
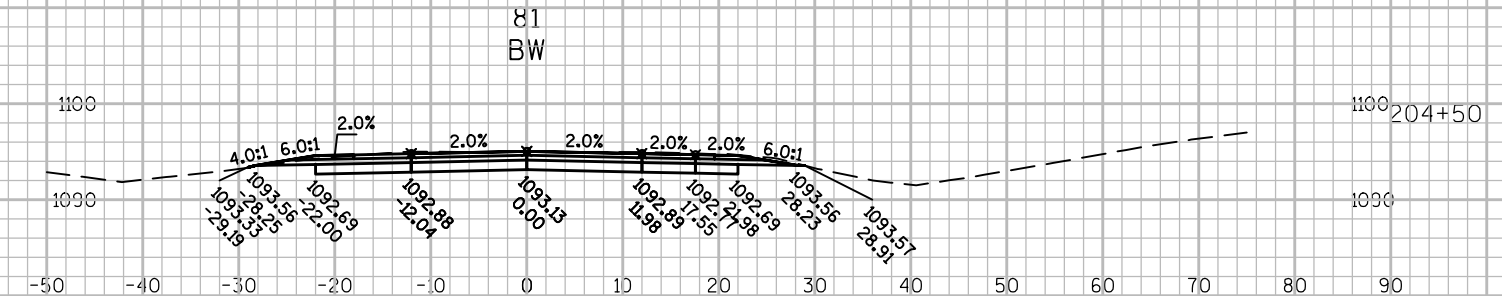
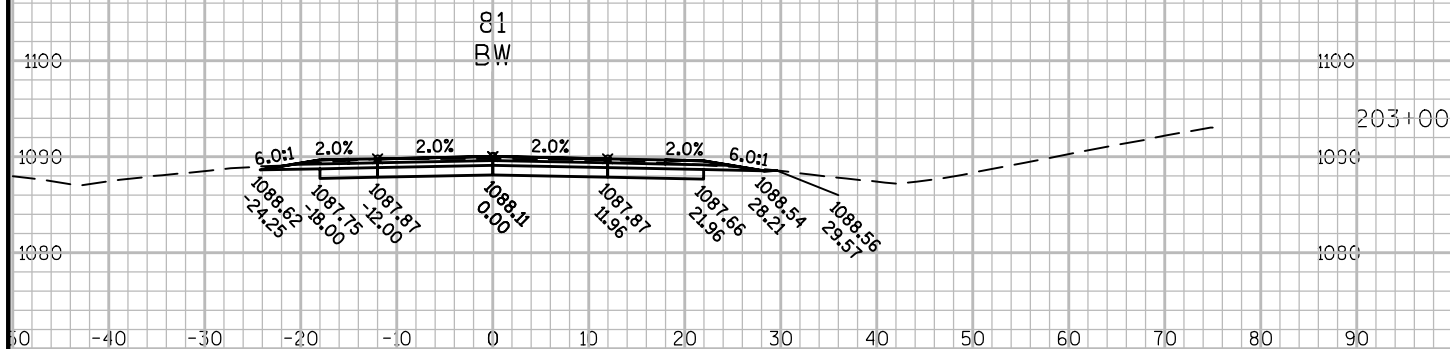
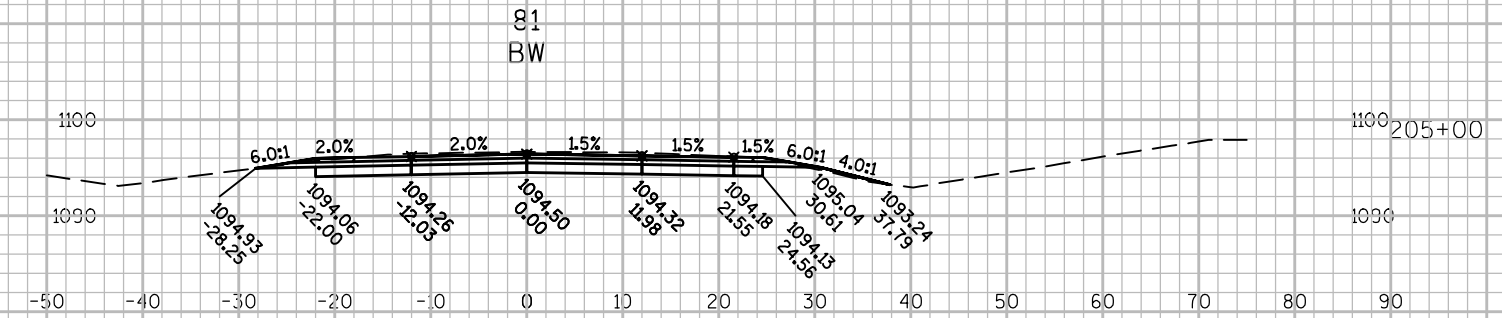
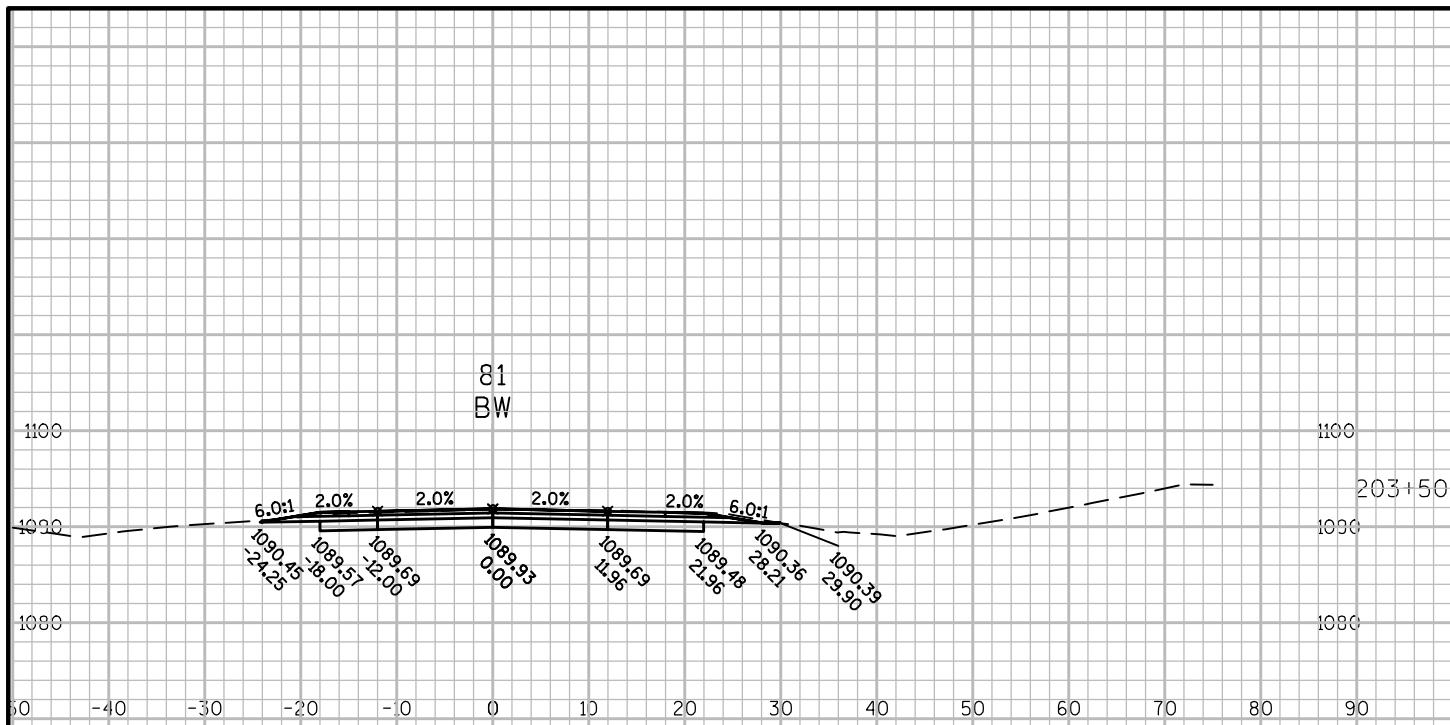
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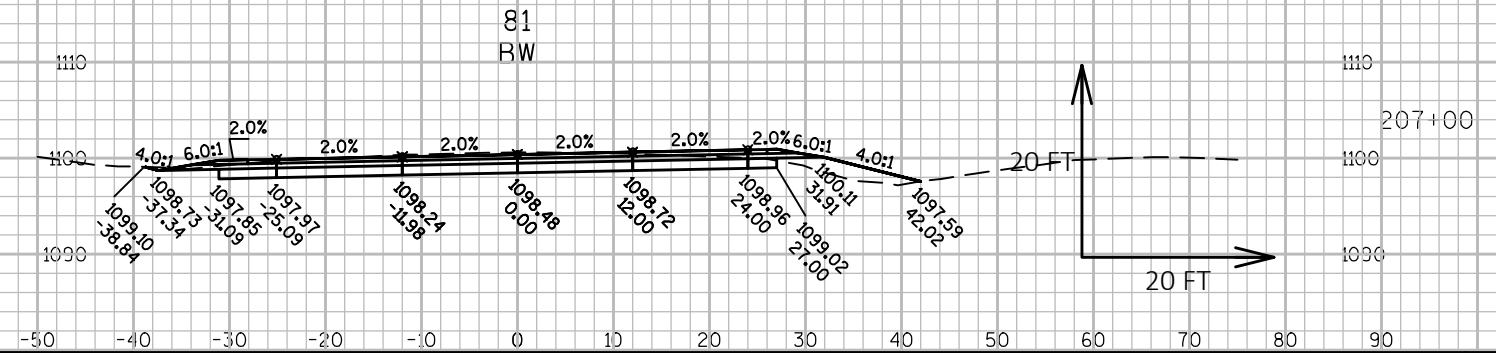
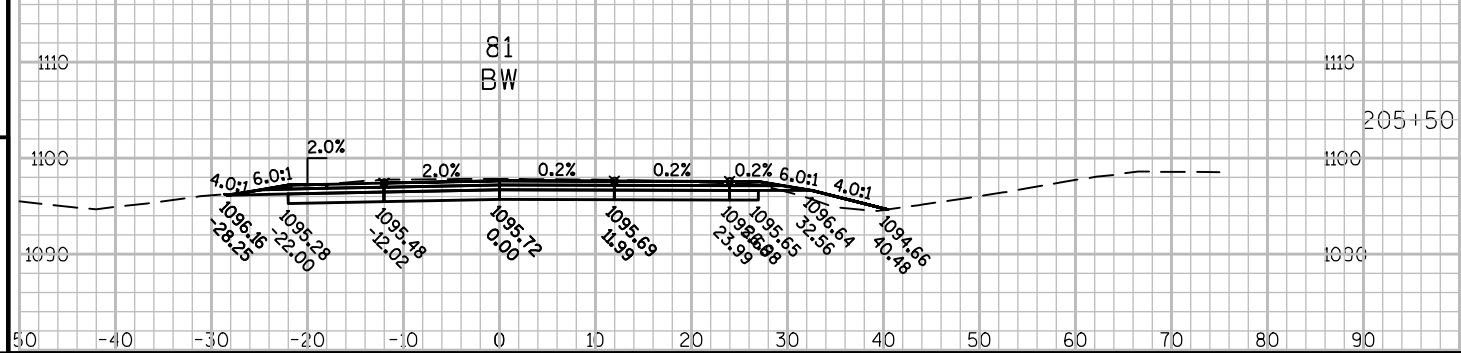
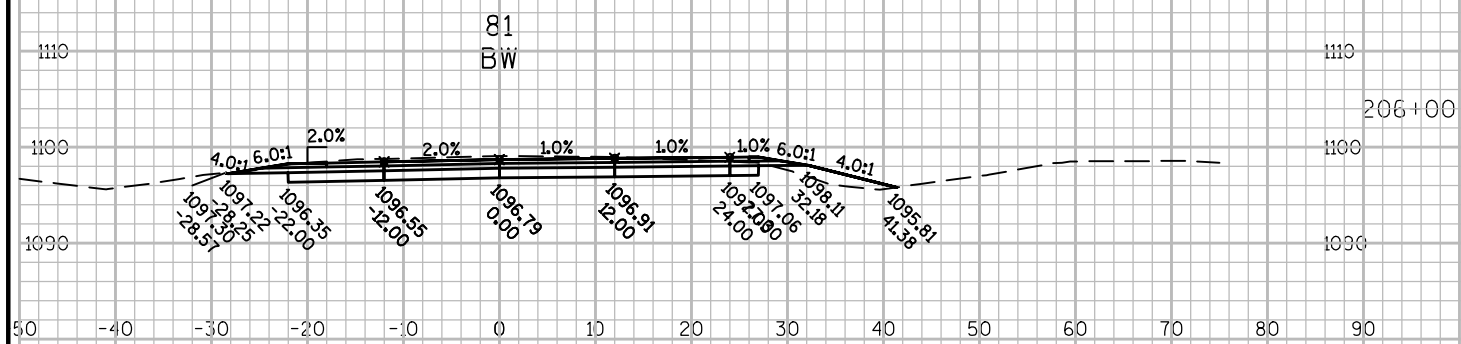
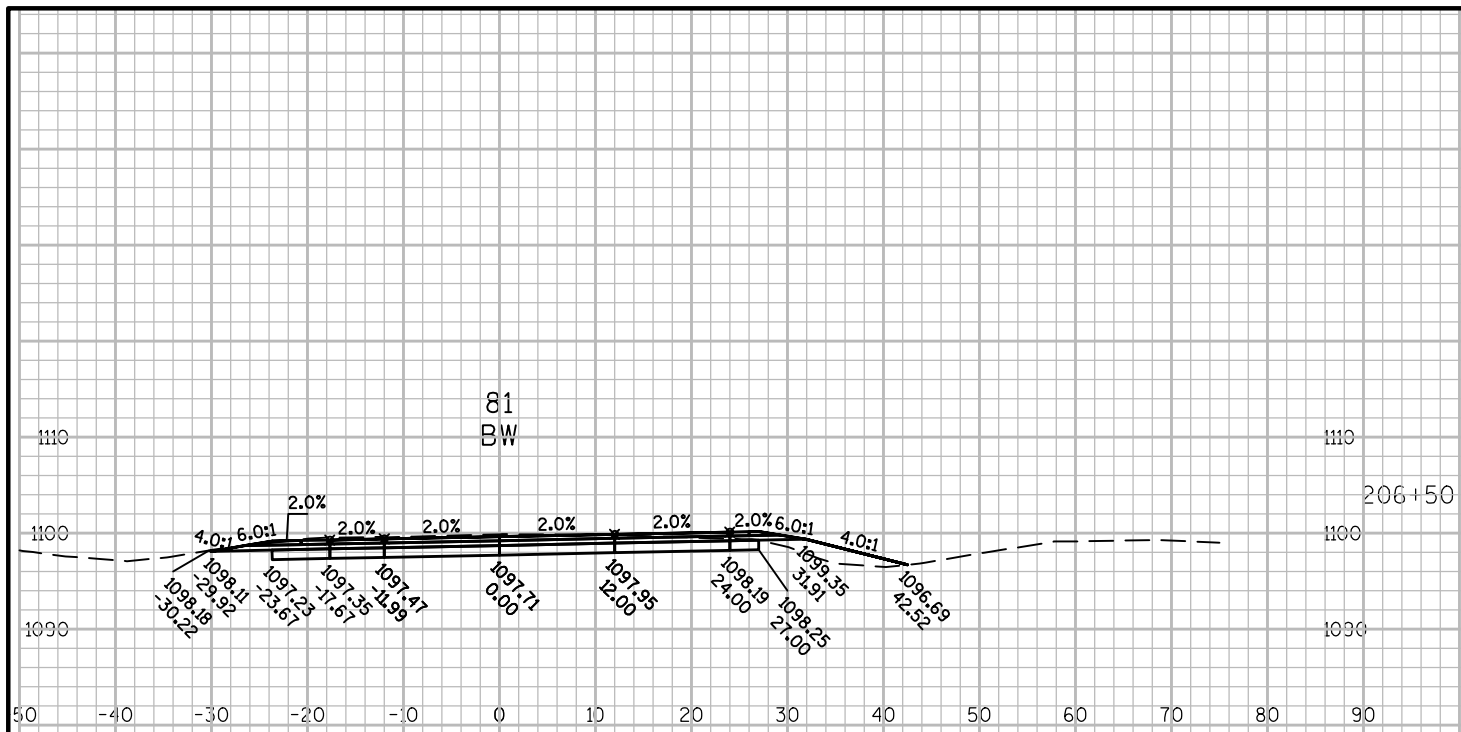
PROJECT NO:5944-01-72 HWY: STH 81 COUNTY: GREEN CROSS SECTIONS: STH 81 SHEET E



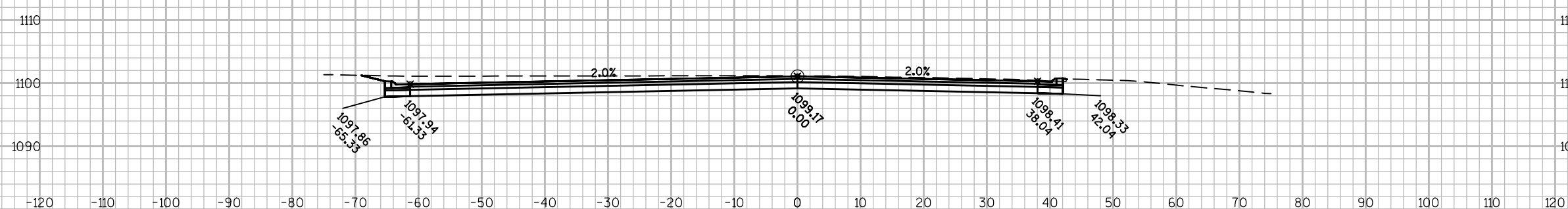
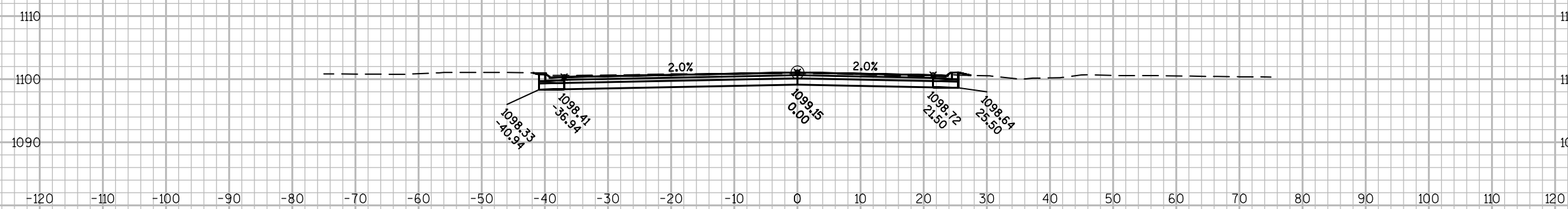
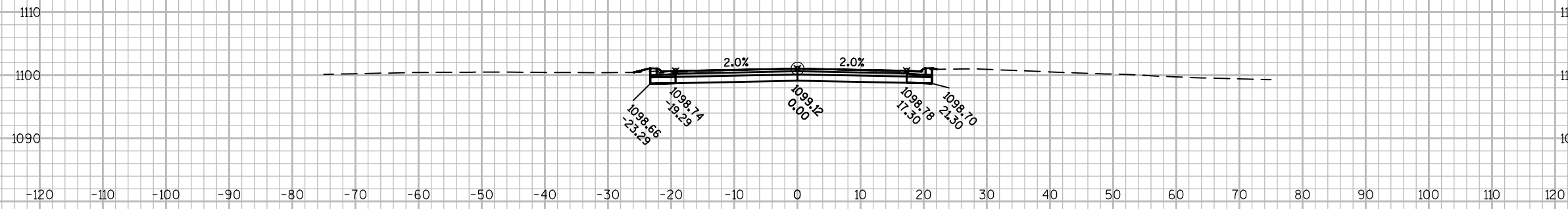
PROJECT NO: 5944-01-72 HWY: STH 81 COUNTY: GREEN CROSS SECTIONS: STH 81 SHEET E



PROJECT NO:5944-01-72 HWY: STH 81 COUNTY: GREEN CROSS SECTIONS: STH 81 SHEET E



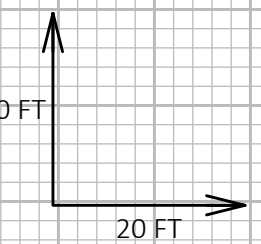
PROJECT NO:5944-01-72 HWY: STH 81 COUNTY: GREEN CROSS SECTIONS: STH 81 SHEET E



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30+75
1100
1090

1110
30+50
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1090

1110
30+30
1100
1090

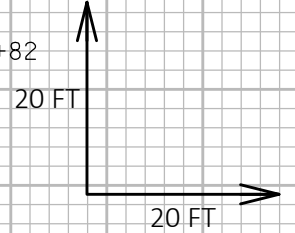
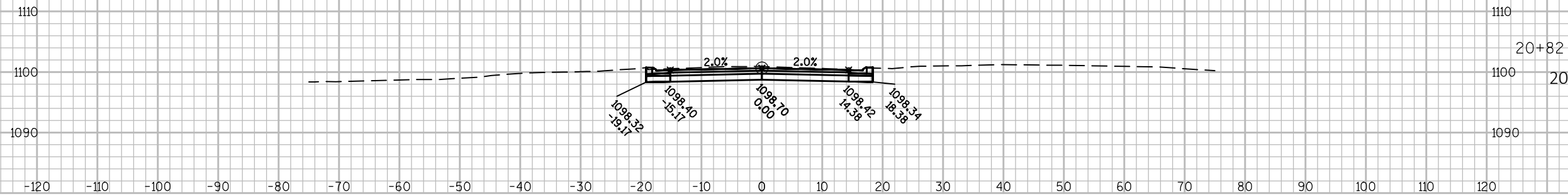
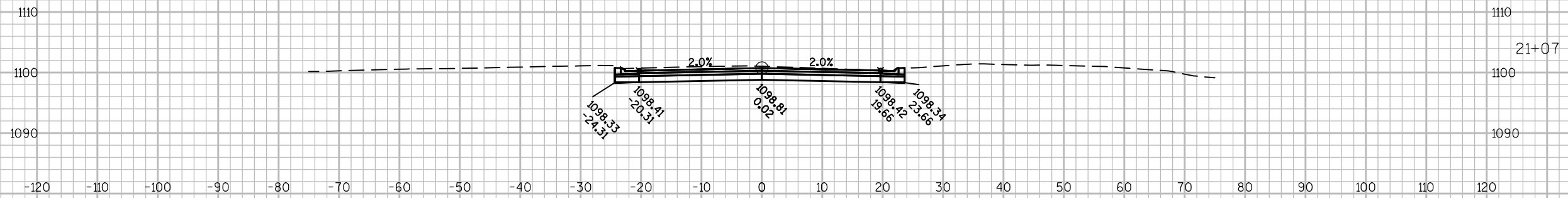
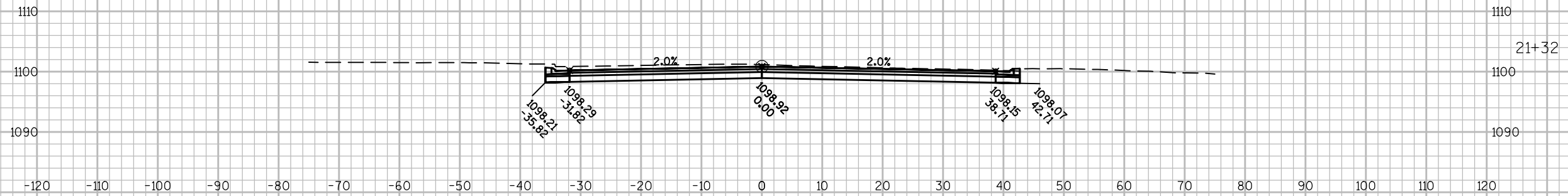


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PROJECT NO:5944-01-72 HWY: STH 81 COUNTY: GREEN CROSS SECTIONS: STH 81 SHEET E

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PROJECT NO:5944-01-72

HWY: STH 81

COUNTY: GREEN

CROSS SECTIONS: STH 81

SHEET

E



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