

GENERAL NOTES

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

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

EROSION CONTROL FEATURES AS SHOWN IN THE PLANS ARE AT SUGGESTED LOCATIONS. THE EXACT LOCATION OF THE EROSION CONTROL DEVICES SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.

SILT FENCE TO BE PLACED AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER. SILT FENCE TO BE PLACED PRIOR TO CONSTRUCTION AND IN PLACE PRIOR TO ANY REMOVALS.

THE EXACT LOCATION OF ALL DRIVEWAY MATCH LIMITS SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER. BLEND SHOULDER GRAVEL TO MATCH EXISTING GRAVEL DRIVEWAYS TO LIMITS SHOWN IN PLANS.

HMA DRIVEWAY MATCHES SHALL BE A MINIMUM 2 1/2-INCHES FOR RESIDENTIAL DRIVEWAYS, AND 3 1/2-INCHES FOR COMMERCIAL DRIVEWAYS.

WHEN THE QUANTITY OF ITEM BASE LAYER OR SURFACE LAYER IS MEASURED FOR PAYMENT BY THE TON, THE THICKNESS OF THE MATERIAL THAT IS SHOWN ON THE PLANS IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF MATERIAL AS DIRECTED BY THE ENGINEER.

DISTURBED AREAS WITHIN THE RIGHT OF WAY ARE TO BE TOPSOILED, FERTILIZED, AND COVERED WITH EROSION MAT.

SECTION 2 ORDER OF SHEETS

- GENERAL NOTES
- PROJECT OVERVIEW
- TYPICAL SECTIONS
- CONSTRUCTION DETAILS
- INTERSECTION DETAILS
- EROSION CONTROL
- PAVEMENT MARKING AND SIGNING
- TRAFFIC CONTROL
- ALIGNMENT DETAIL
- CONTROL POINT DATA
- PLAN AND PROFILE
- EARTHWORK QUANTITIES
- CROSS SECTIONS

RUNOFF COEFFICIENT TABLE

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

TOTAL PROJECT AREA = 84.85 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.35 ACRES

UTILITY CONTACTS

SEWER AND WATER CONTACTS

MONTELLO WASTEWATER TREATMENT FACILITY - SEWER
20 UNDERWOOD AVE
MONTELLO, WI 53949
ATTN: MICHAEL KOHNKE
PH: (608) 297-2416
EMAIL: pwwir.kohnke@cityofmontello.com

CITY OF MONTELLO - WATER
20 UNDERWOOD AVE
MONTELLO, WI 53949
ATTN: MICHAEL KOHNKE
PH: (608) 297-2416
EMAIL: pwwir.kohnke@cityofmontello.com



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

COMMUNICATION CONTACTS

FRONTIER COMMUNICATIONS OF WI LLC -
COMMUNICATION LINE
330 BLACKBURN ST
RIPON, WI 54971
ATTN: TYLER COFFMAN
PH: 217-491-7186
EMAIL: tyler.coffman@jsitel.com

SPECTRUM - COMMUNICATION LINE
165 KNIGHTS WAY
FOND DU LAC, WI 54937
ATTN: DEREK SMET
PH: 920-204-1859
EMAIL: derek.smet@charter.com

MARQUETTE ADAMS TELEPHONE COOP INC -
COMMUNICATION LINE
113 NORTH OXFORD STREET
OXFORD, WI 53952
ATTN: TIM SPATH
PH: 608-450-0088
EMAIL: tspath@maadtelco.com

ELECTRIC & GAS CONTACTS

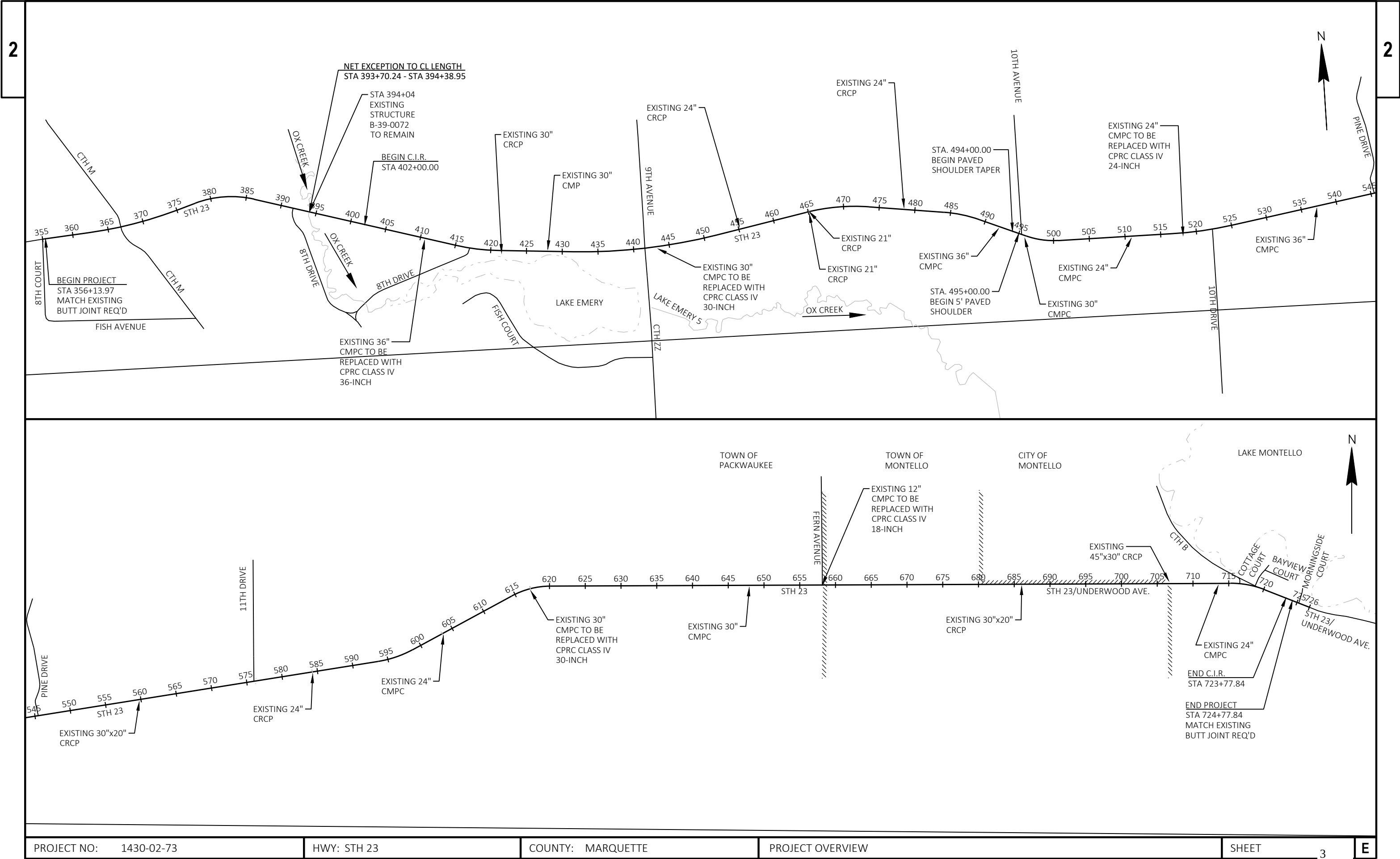
ALLIANT ENERGY - ELECTRICITY
506 FENTON ST
RIPON, WI 54971
ATTN: CODY JACKSON
PH: 920-748-4013
EMAIL: codyjackson@alliantenergy.com

ADAMS-COLUMBIA ELECTRIC COOPERATIVE -
ELECTRICITY
401 E. LAKE ST. / P.O. BOX 70
FRIENDSHIP, WI 53934-0070
ATTN: SHAWN PIETRZAK
PH: 800-831-8629 EXT. 323
EMAIL: spietrzak@acecwi.com

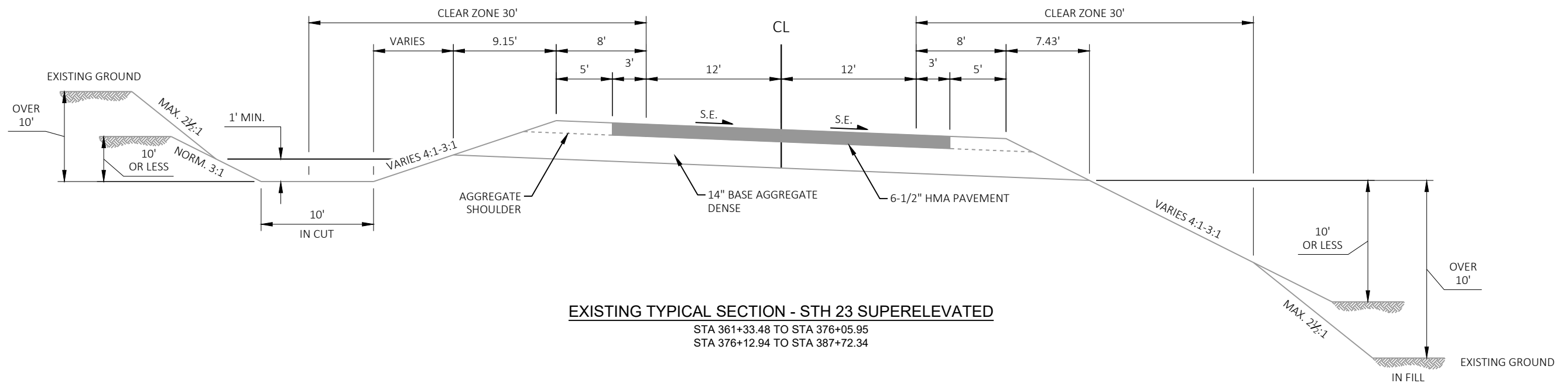
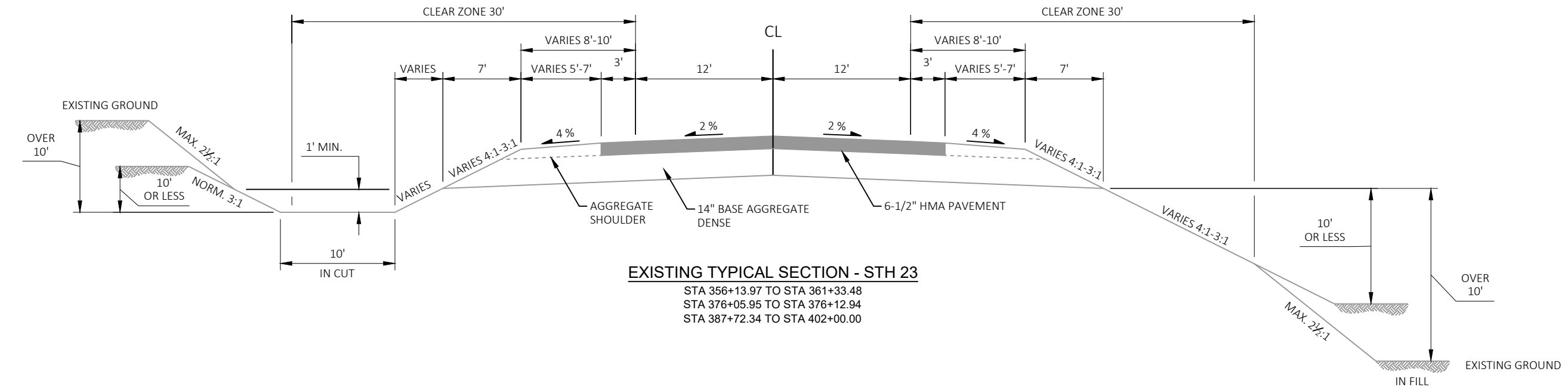
WE ENERGIES - GAS/PETROLEUM
1921 8TH STREET SOUTH
WISCONSIN RAPIDS, WI 54494
ATTN: LARRY KOCH
PH: 715-421-9293
EMAIL: Larry.Koch@we-energies.com

DNR CONTACT

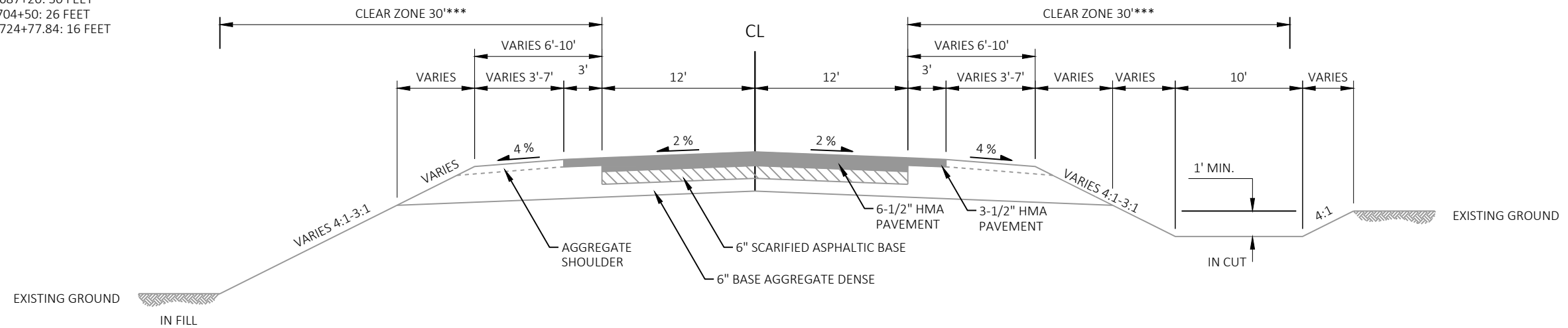
WISCONSIN DEPARTMENT OF NATURAL RESOURCES
625 E. CTY RD Y, SUITE 700
OSHKOSH, WI 54901
ATTN: CASEY JONES
PH: (715) 213-6571
EMAIL: Casey.Jones@wisconsin.gov



PROJECT NO: 1430-02-73	HWY: STH 23	COUNTY: MARQUETTE	PROJECT OVERVIEW	SHEET 3	E
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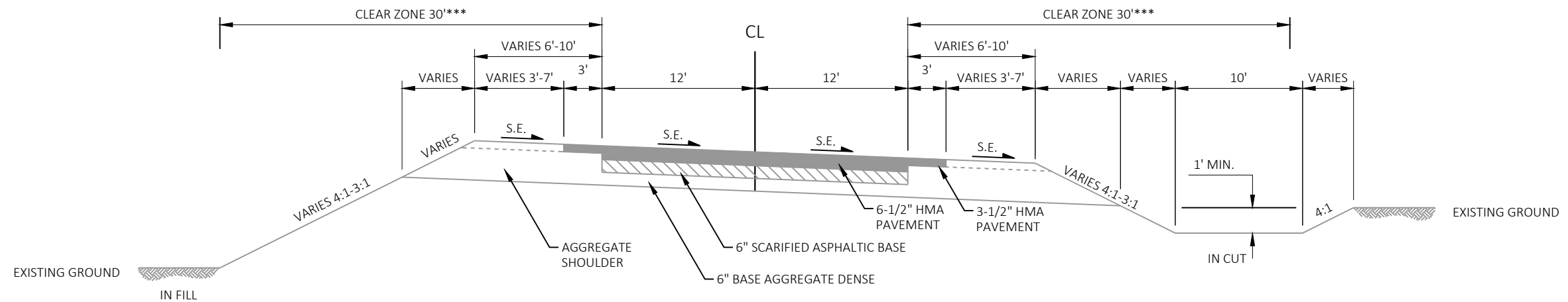


*** CLEAR ZONE WIDTH VARIES:
STATION 495+00 TO STATION 687+20: 30 FEET
STATION 687+20 TO STATION 704+50: 26 FEET
STATION 704+50 TO STATION 724+77.84: 16 FEET



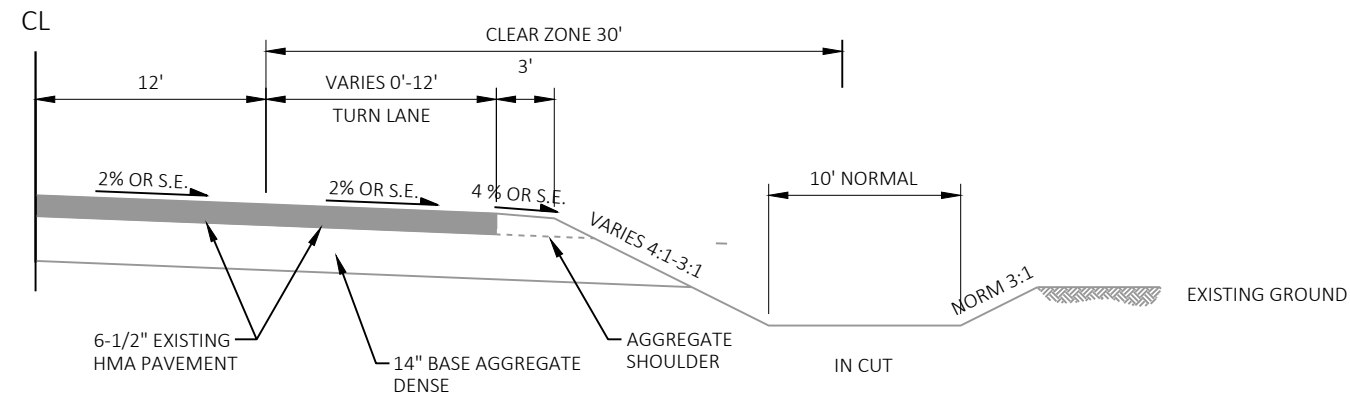
EXISTING TYPICAL SECTION - STH 23

STA 402+00.00 TO STA 724+77.84



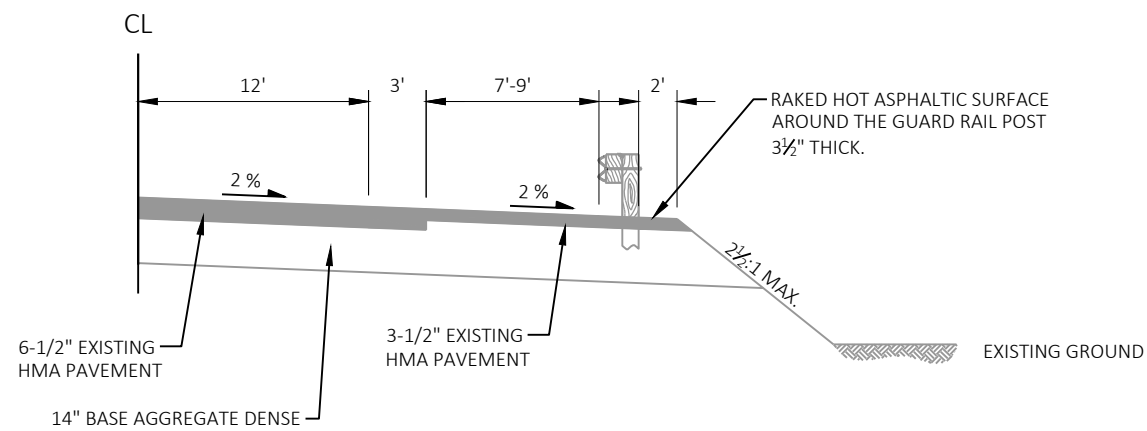
EXISTING TYPICAL SECTION - STH 23 SUPERELEVATED

STA 402+00.00 TO STA 724+77.84



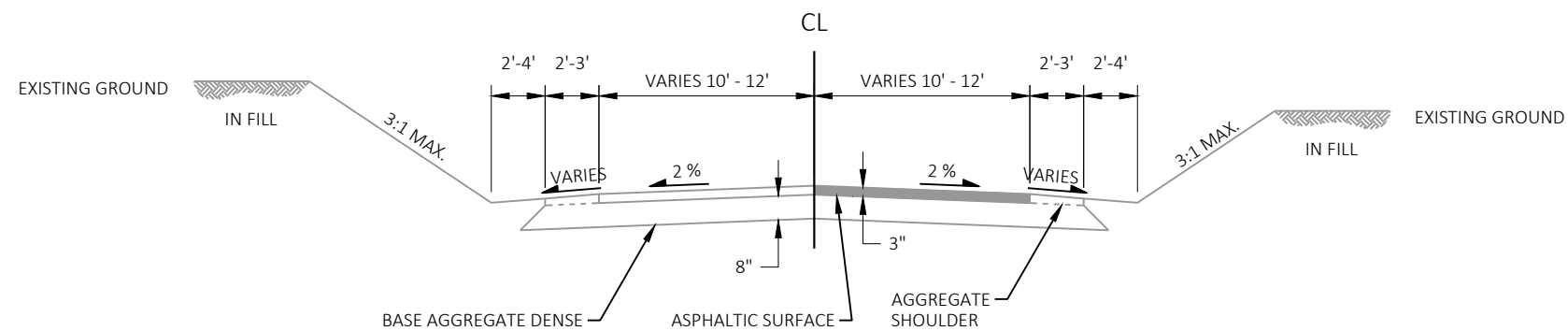
EXISTING TYPICAL HALF SECTION - STH 23 TURN LANES

STA 361+74.53 TO STA 368+34.33 RT
STA 365+02.08 TO STA 372+73.39 LT



EXISTING TYPICAL HALF SECTION - STH 23 BEAM GUARD

STA 392+27.23 TO STA 396+32.07 LT
STA 392+40.12 TO STA 397+32.03 RT

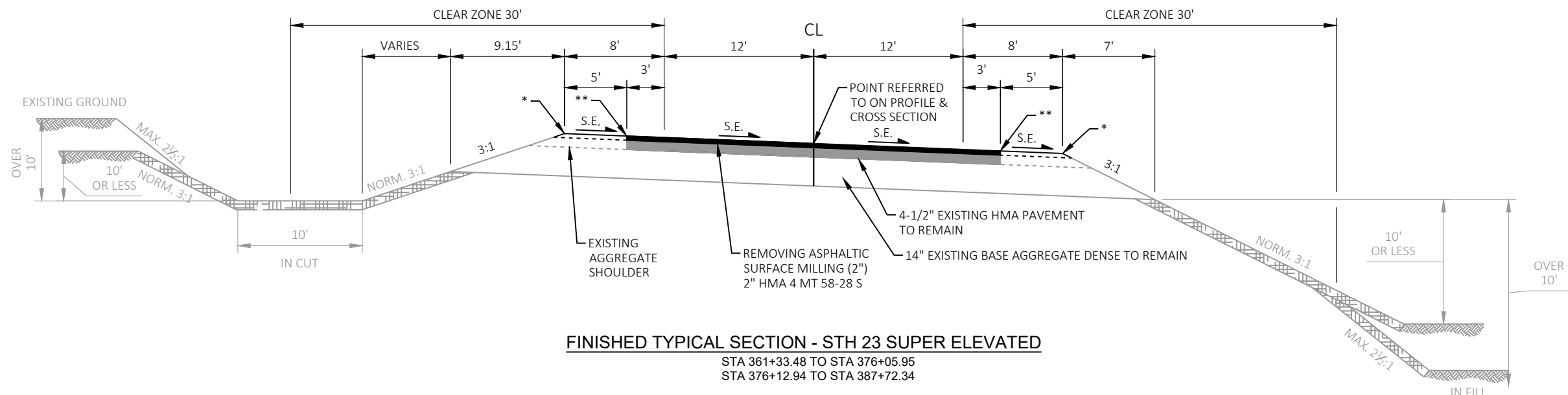
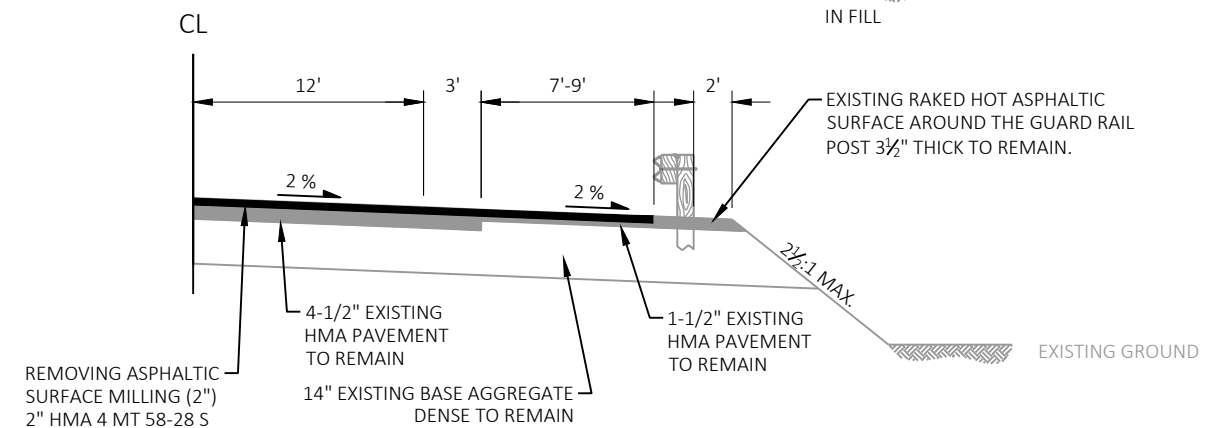
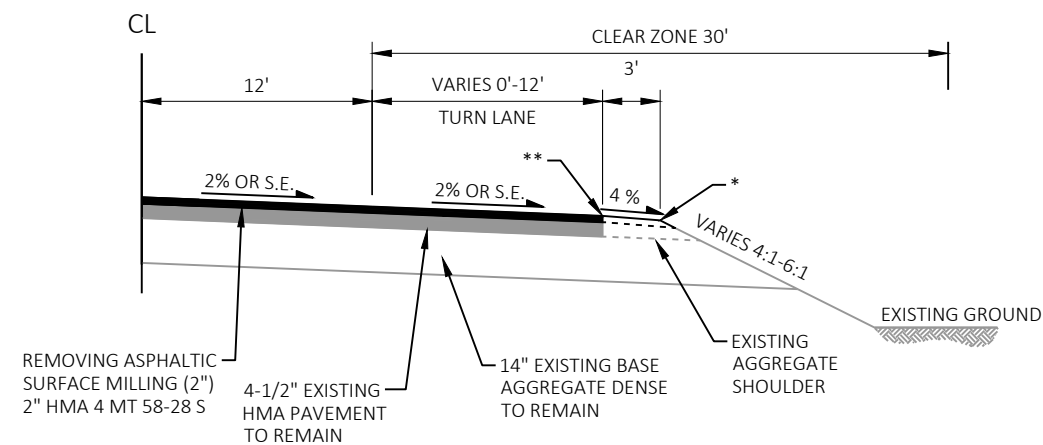
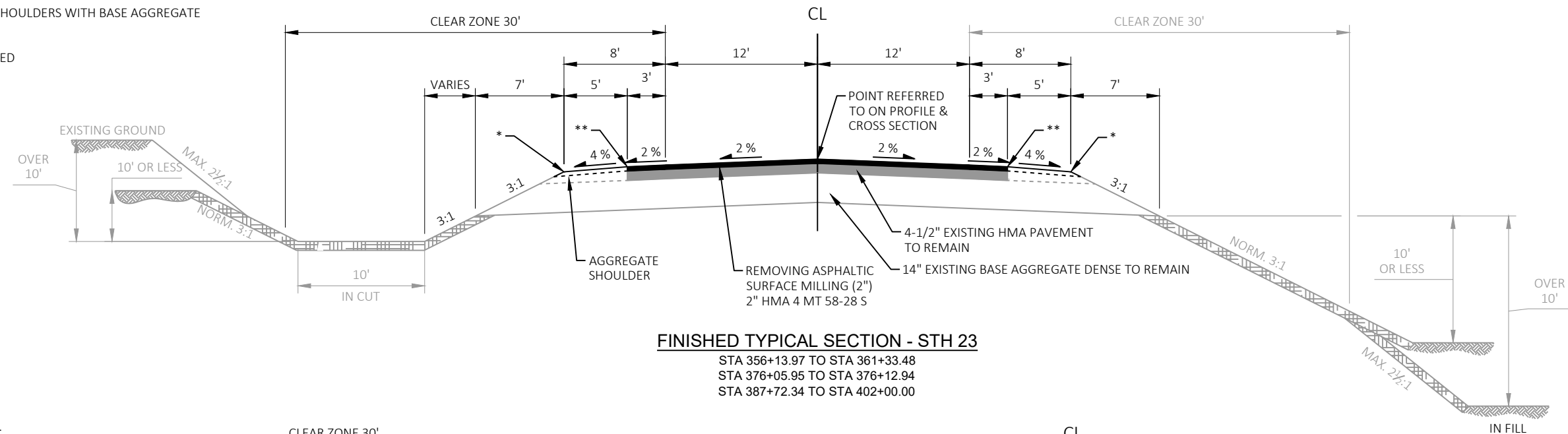


EXISTING TYPICAL SECTION - FERN AVENUE

STA 60+17.00 TO STA 61+17.05

* TOP DRESS EXISTING SHOULDERS WITH BASE AGGREGATE DENSE 3/4-INCH.

**SAFETY EDGE REQUIRED

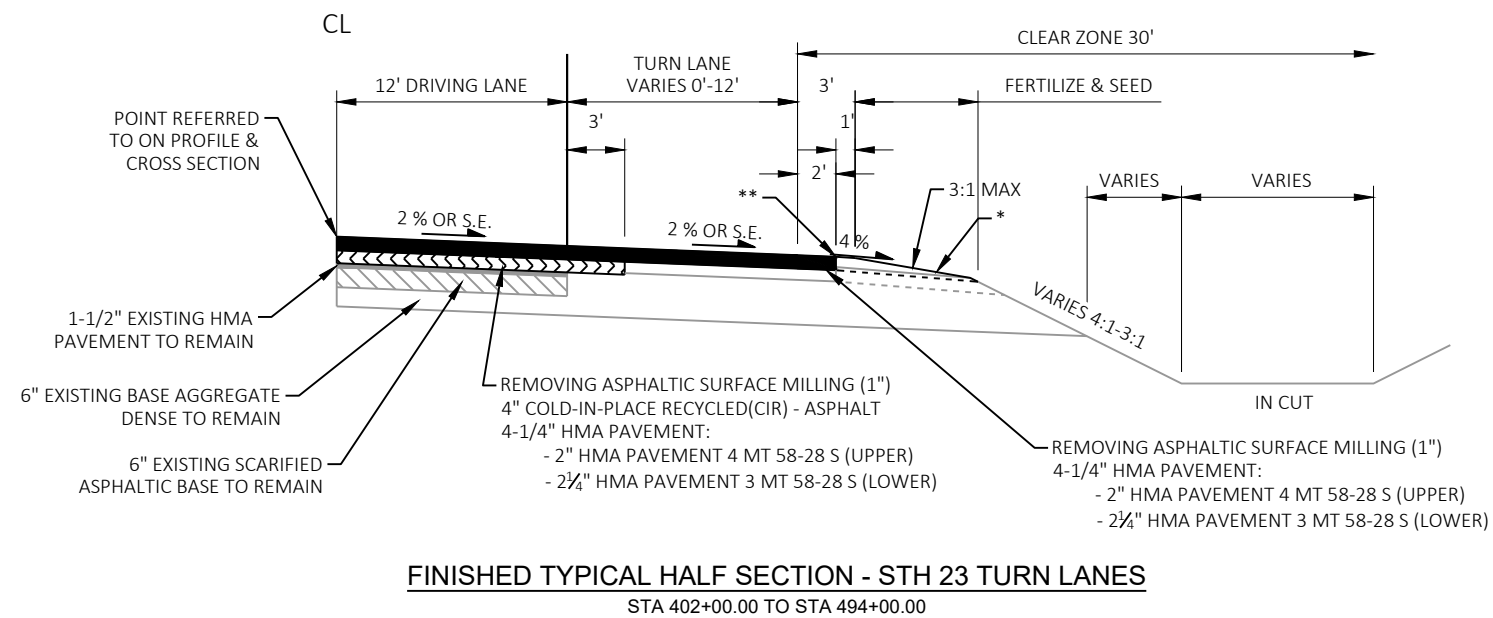
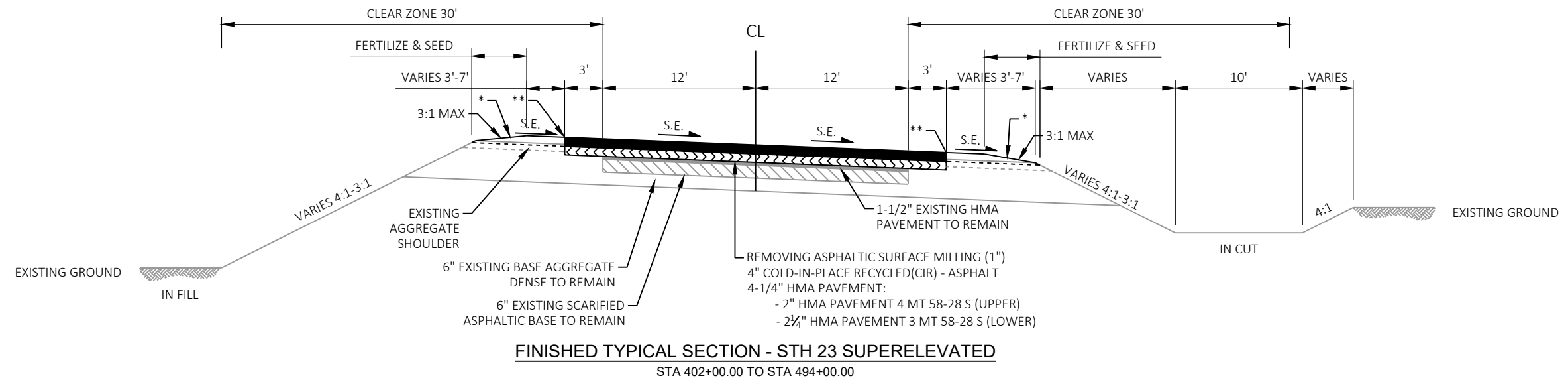
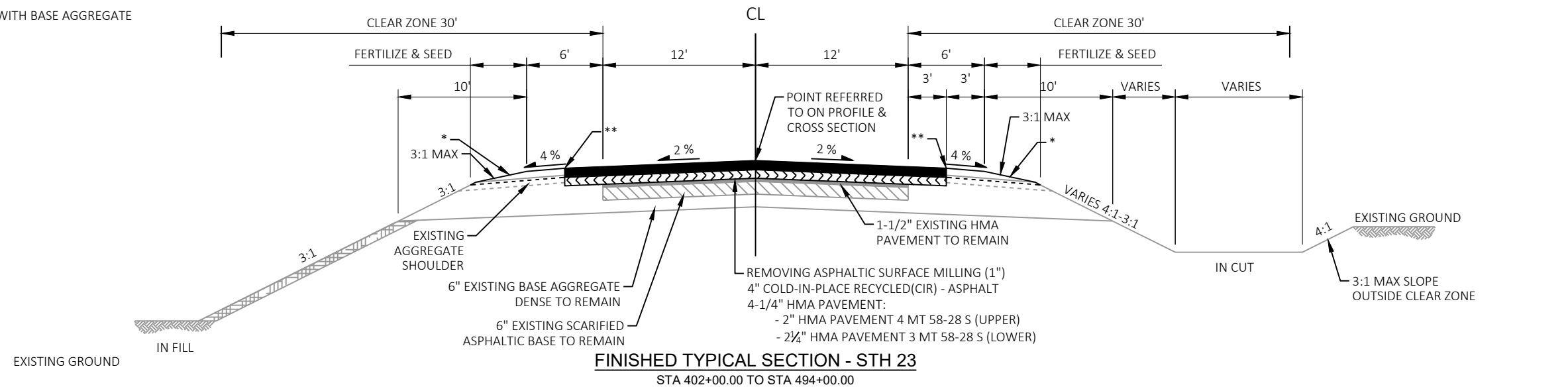


2

* TOP DRESS EXISTING SHOULDERS WITH BASE AGGREGATE DENSE 3/4-INCH.

**** SAFETY EDGE REQUIRED**

2 |



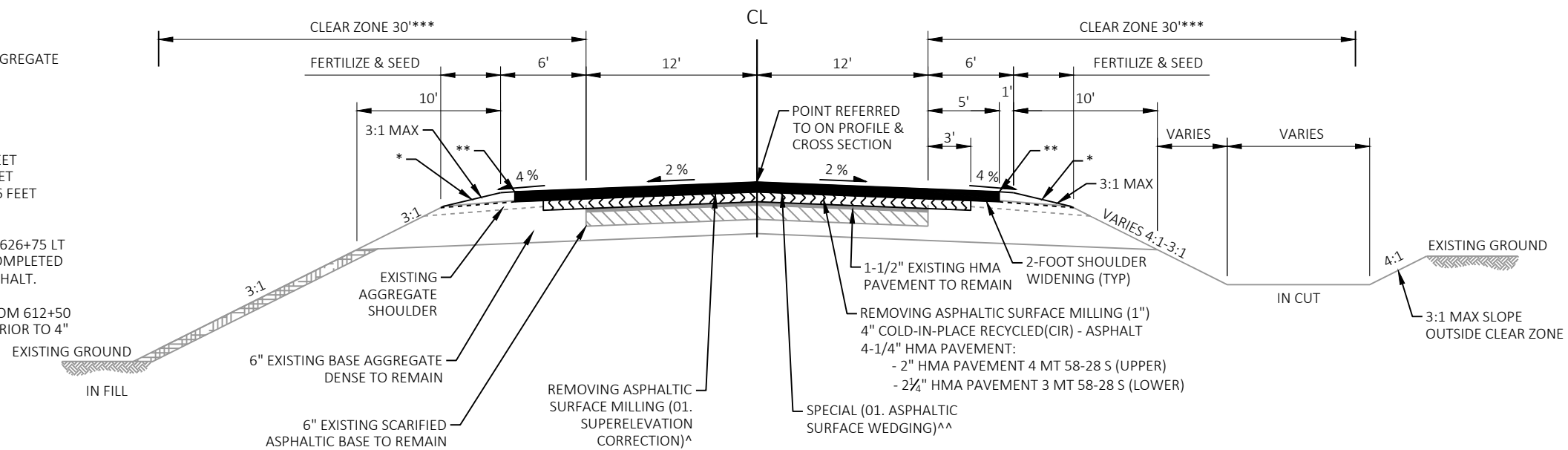
* TOP DRESS EXISTING SHOULDERS WITH BASE AGGREGATE DENSE 3/4-INCH.

** SAFETY EDGE REQUIRED

*** CLEAR ZONE WIDTH VARIES:
STATION 495+00 TO STATION 687+20: 30 FEET
STATION 687+20 TO STATION 704+50: 26 FEET
STATION 704+50 TO STATION 724+77.84: 16 FEET

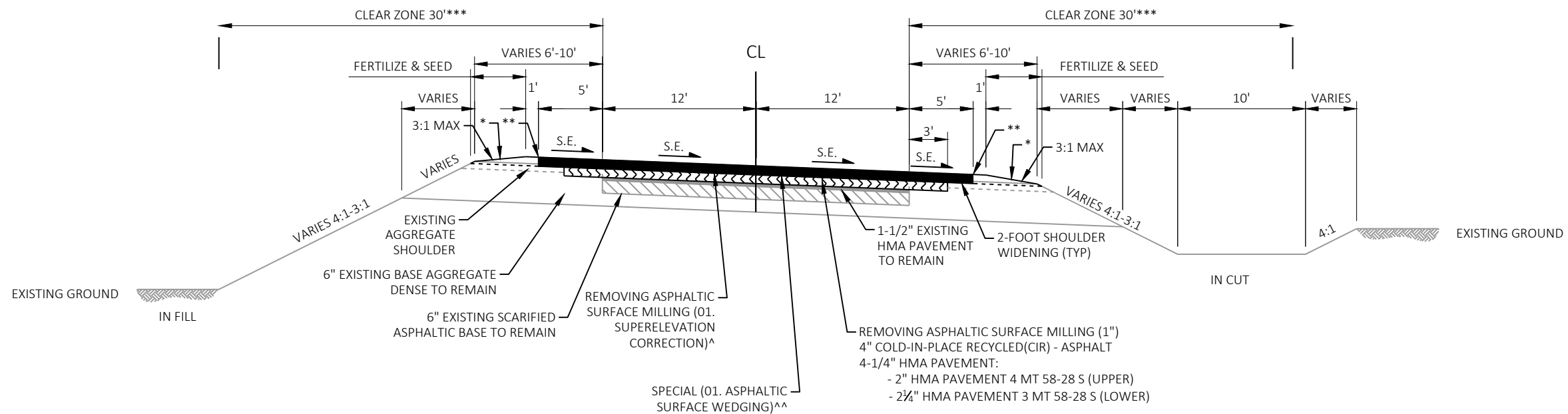
^ REMOVING ASPHALTIC SURFACE MILLING (01. SUPERELEVATION CORRECTION FROM 609+00 TO 626+75 LT AND 623+00 TO 626+75 RT. MILLING SHALL BE COMPLETED PRIOR TO 4" COLD-IN-PLACE RECYCLED (CIR) - ASPHALT.

^^ SPECIAL (01. ASPHALTIC SURFACE WEDGING FROM 612+50 TO 623+00 RT. WEDGING SHALL BE COMPLETED PRIOR TO 4" COLD-IN-PLACE RECYCLED (CIR) - ASPHALT.



FINISHED TYPICAL SECTION - STH 23

STA 495+00.00 TO STA 724+77.84



FINISHED TYPICAL SECTION - STH 23 SUPERELEVATED

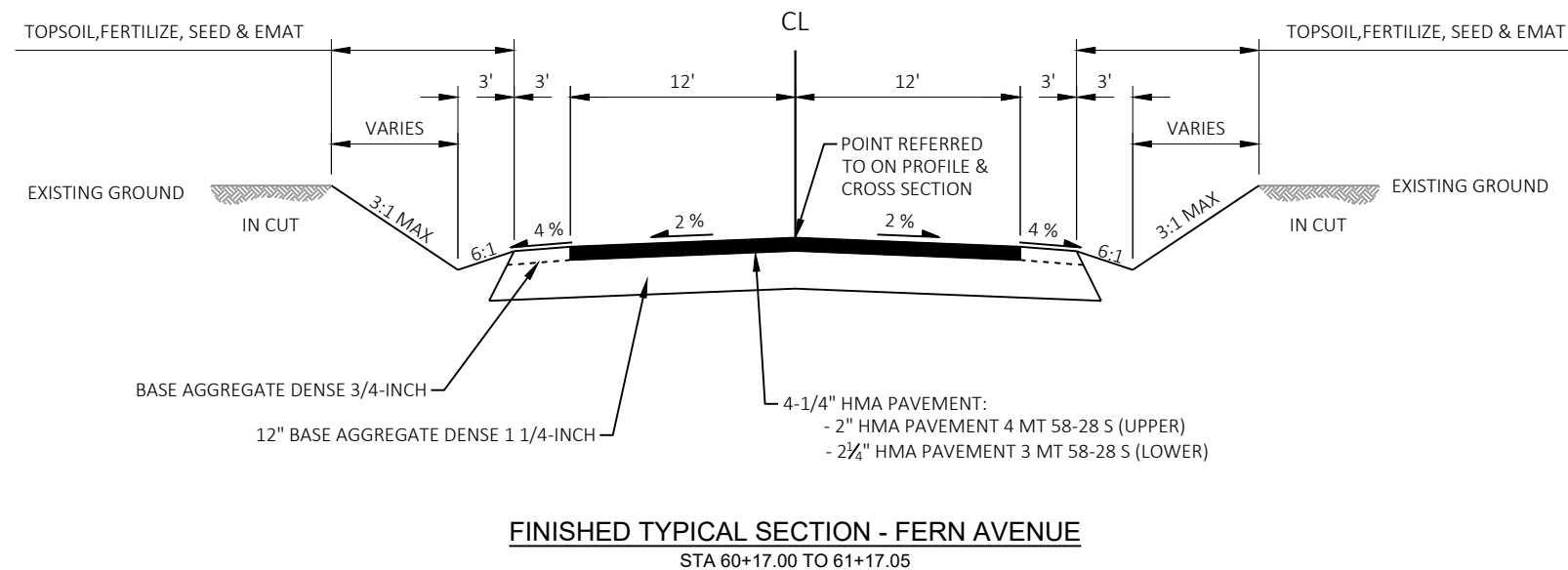
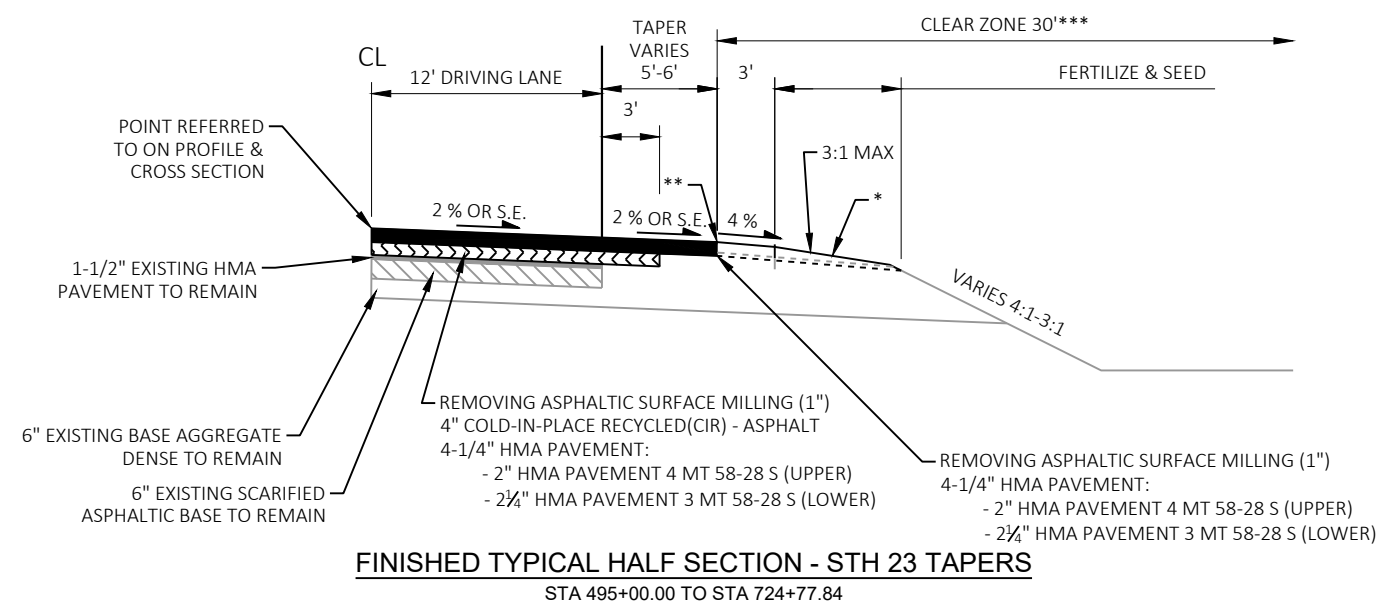
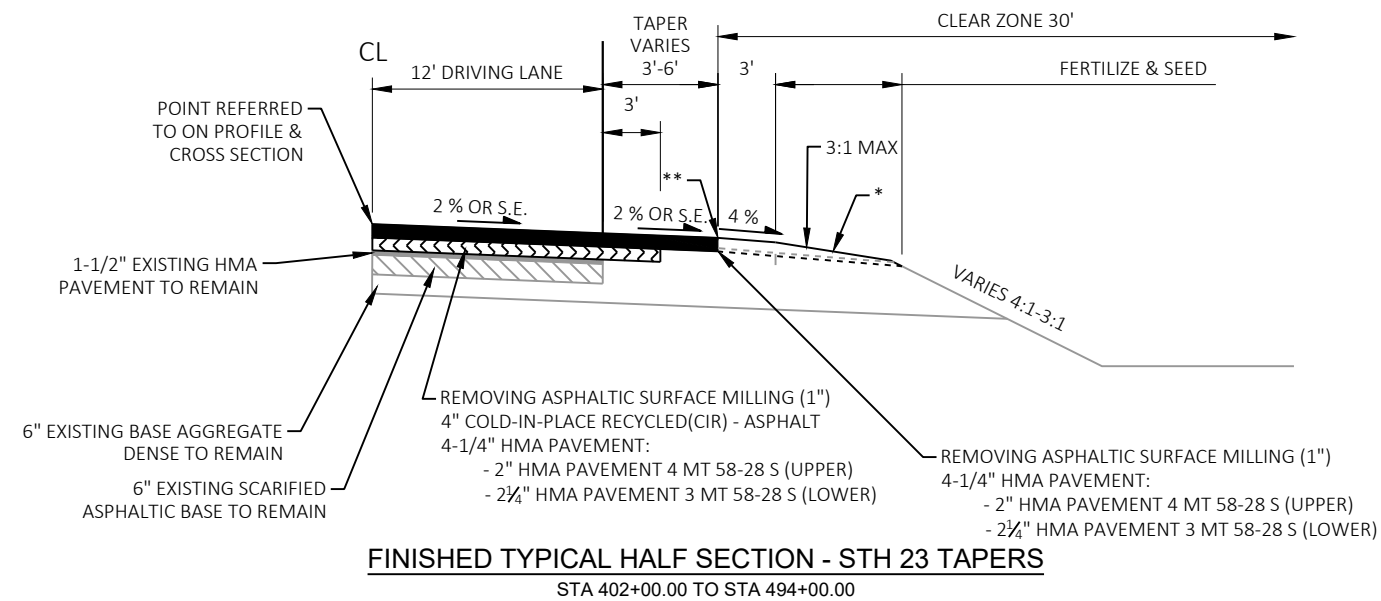
STA 495+00.00 TO STA 724+77.84

2

* TOP DRESS EXISTING SHOULDERS WITH BASE AGGREGATE DENSE 3/4-INCH.

** SAFETY EDGE REQUIRED

*** CLEAR ZONE WIDTH VARIES:
STATION 495+00 TO STATION 687+20: 30 FEET
STATION 687+20 TO STATION 704+50: 26 FEET
STATION 704+50 TO STATION 724+77.84: 16 FEET



2 |

2

Diagram showing a side road with curb and gutter. The road is labeled STH 23. The diagram shows a 10' butt joint between the existing asphalt pavement and the new HMA pavement. The diagram also shows the removal of asphaltic surface milling and the removal of asphaltic surface butt joints. A note states: "NOTE: WHEN MATCHING TO AN UNPAVED SURFACE, BUTT JOINT IS NOT REQUIRED."

LEGEND:

- REMOVING ASPHALTIC SURFACE MILLING
- REMOVING ASPHALTIC SURFACE BUTT JOINTS SEE BUTT JOINT DETAIL

NOTE: WHEN MATCHING TO AN UNPAVED SURFACE, BUTT JOINT IS NOT REQUIRED.

SIDE ROADS WITH CURB AND GUTTER

CTH M
CTH ZZ
9TH AVENUE
CTH B

2

Diagram showing a side road without curb and gutter. The diagram shows a 10' butt joint between the existing asphalt pavement and the new HMA pavement. The diagram also shows the removal of asphaltic surface milling and the removal of asphaltic surface butt joints. A note states: "NOTE: WHEN MATCHING TO AN UNPAVED SURFACE, BUTT JOINT IS NOT REQUIRED."

LEGEND:

- REMOVING ASPHALTIC SURFACE MILLING
- REMOVING ASPHALTIC SURFACE BUTT JOINTS SEE BUTT JOINT DETAIL

NOTE: WHEN MATCHING TO AN UNPAVED SURFACE, BUTT JOINT IS NOT REQUIRED.

SIDE ROADS WITHOUT CURB AND GUTTER

8TH DRIVE
8TH DRIVE
10TH AVENUE
10TH DRIVE
11TH DRIVE
CTH B
COTTAGE COURT

Diagram showing a mainline and sideroad butt joint. The diagram shows a 10' butt joint between the existing asphalt pavement and the new HMA pavement. The diagram also shows the removal of asphaltic surface milling and the removal of asphaltic surface butt joints. A note states: "NOTE: WHEN MATCHING TO AN UNPAVED SURFACE, BUTT JOINT IS NOT REQUIRED."

LEGEND:

- HMA PAVEMENT
- REMOVING ASPHALTIC SURFACE MILLING
- REMOVING ASPHALTIC SURFACE BUTT JOINTS

MAINLINE AND SIDEROAD BUTT JOINTS

STH 23
CTH M
8TH DRIVE
STH 23

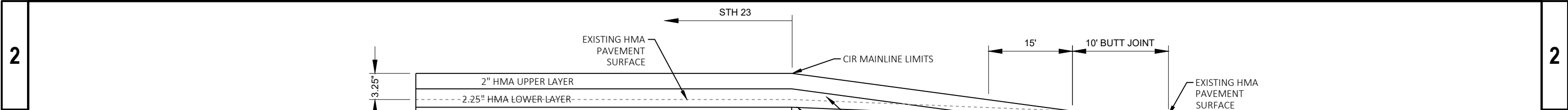
Diagram showing a mainline and sideroad butt joint. The diagram shows a 10' butt joint between the existing asphalt pavement and the new HMA pavement. The diagram also shows the removal of asphaltic surface milling and the removal of asphaltic surface butt joints. A note states: "NOTE: WHEN MATCHING TO AN UNPAVED SURFACE, BUTT JOINT IS NOT REQUIRED."

LEGEND:

- HMA PAVEMENT
- REMOVING ASPHALTIC SURFACE MILLING
- REMOVING ASPHALTIC SURFACE BUTT JOINTS

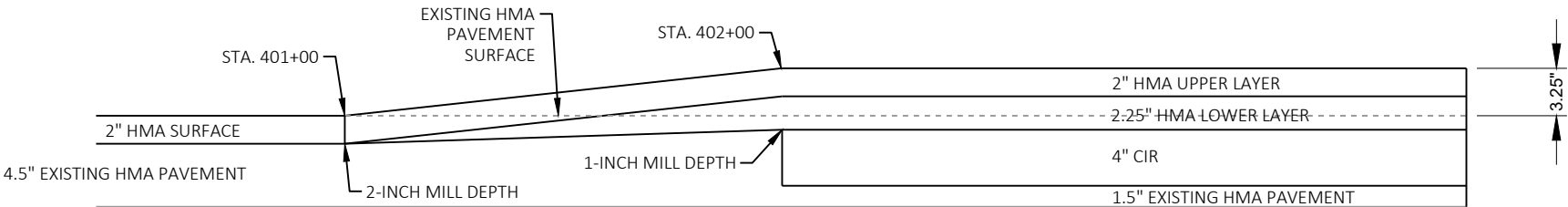
MAINLINE AND SIDEROAD BUTT JOINTS

8TH DRIVE
CTH ZZ
9TH AVENUE
10TH AVENUE
10TH DRIVE
11TH DRIVE
CTH B
CTH B
COTTAGE COURT



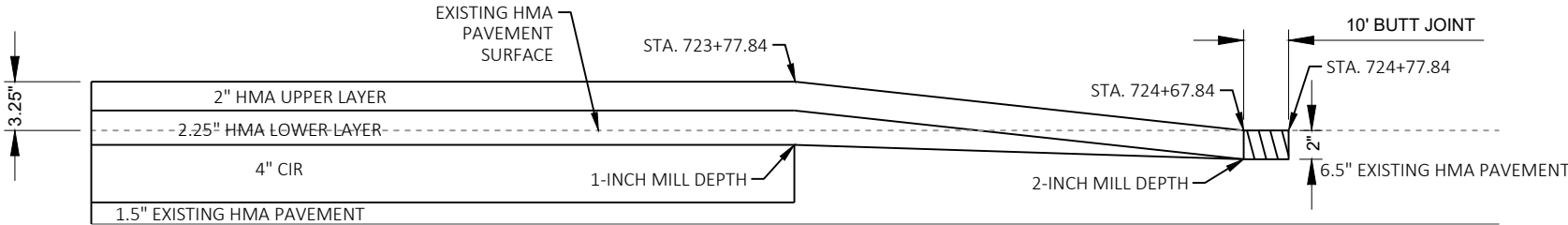
PAVING TRANSITION DETAIL - SIDE ROADS

- | | |
|-------------|---------------|
| 8TH DRIVE | 11TH DRIVE |
| CTH ZZ | CTH B |
| 9TH AVENUE | CTH B |
| 10TH AVENUE | COTTAGE COURT |
| 10TH DRIVE | |



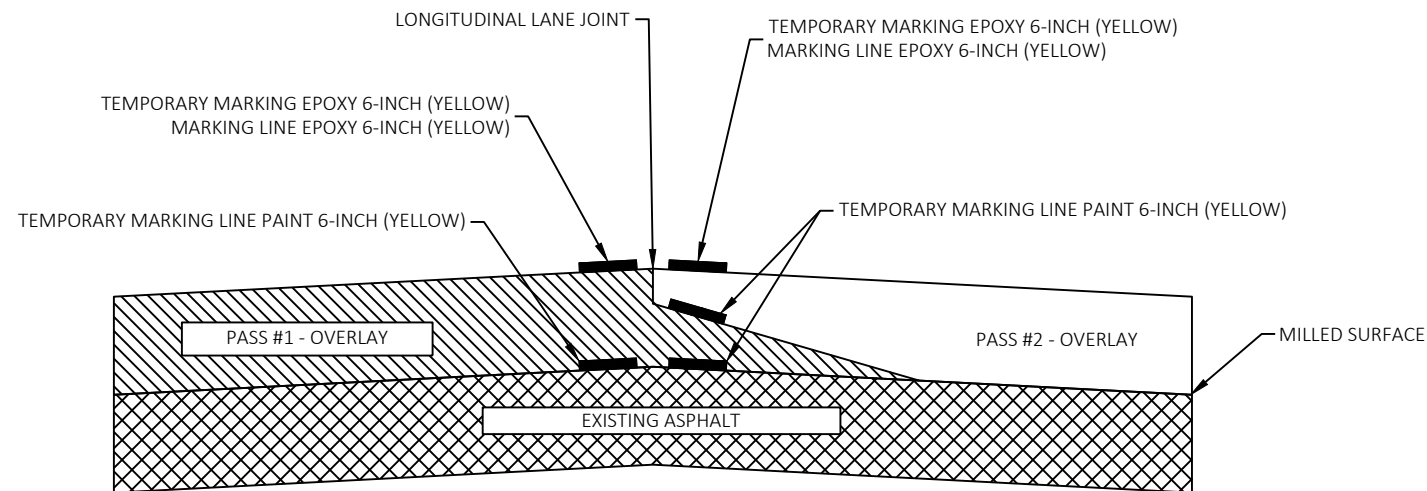
PAVING TRANSITION DETAIL

STA 401+00.00 - STA. 402+00.00
MAINLINE



PAVING TRANSITION DETAIL

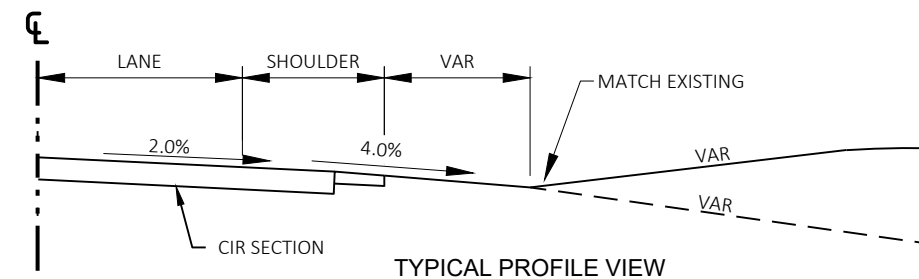
STA 723+77.84 - STA 724+77.84
MAINLINE



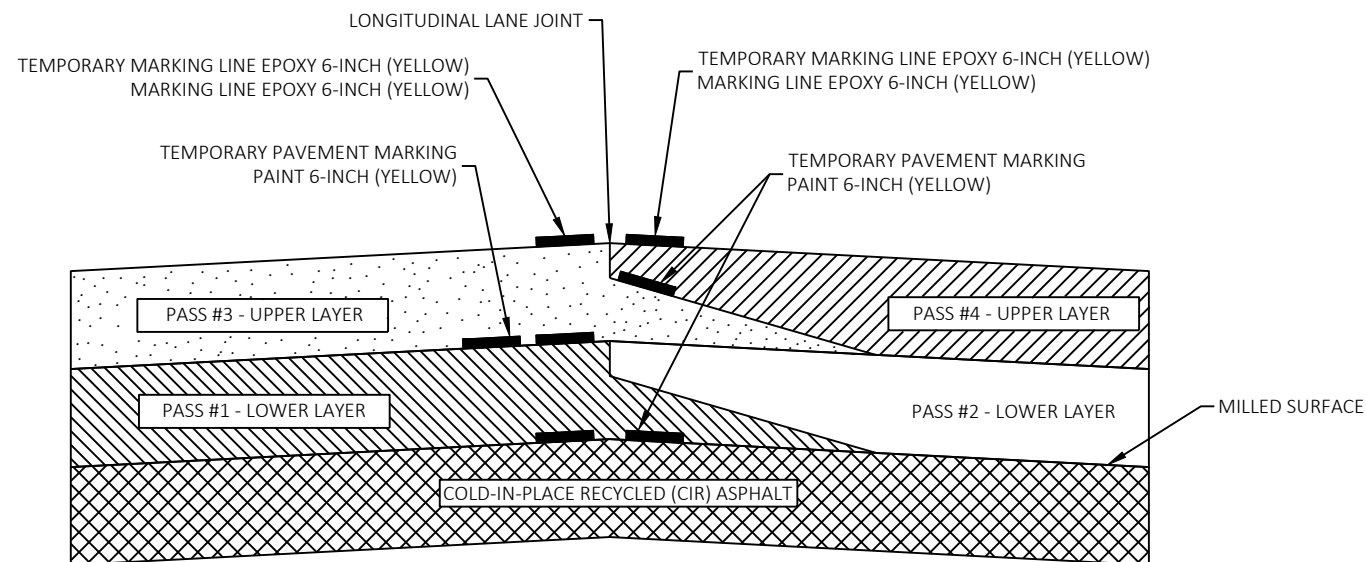
PAVEMENT MARKING DETAIL FOR TAPERED OVERLAPPING JOINTS IN HMA PAVEMENTS

SEE SDD 15C08-a FOR DIMENSIONS
STA. 356+13.97 TO STA. 401+00.00

NOTES:
MATCH PERMANENT CENTERLINE PAVEMENT MARKINGS FOR TEMPORARY MARKINGS.
PLACE SKIP-ONLY PORTIONS OF CENTERLINE MARKINGS ON PASS #1.



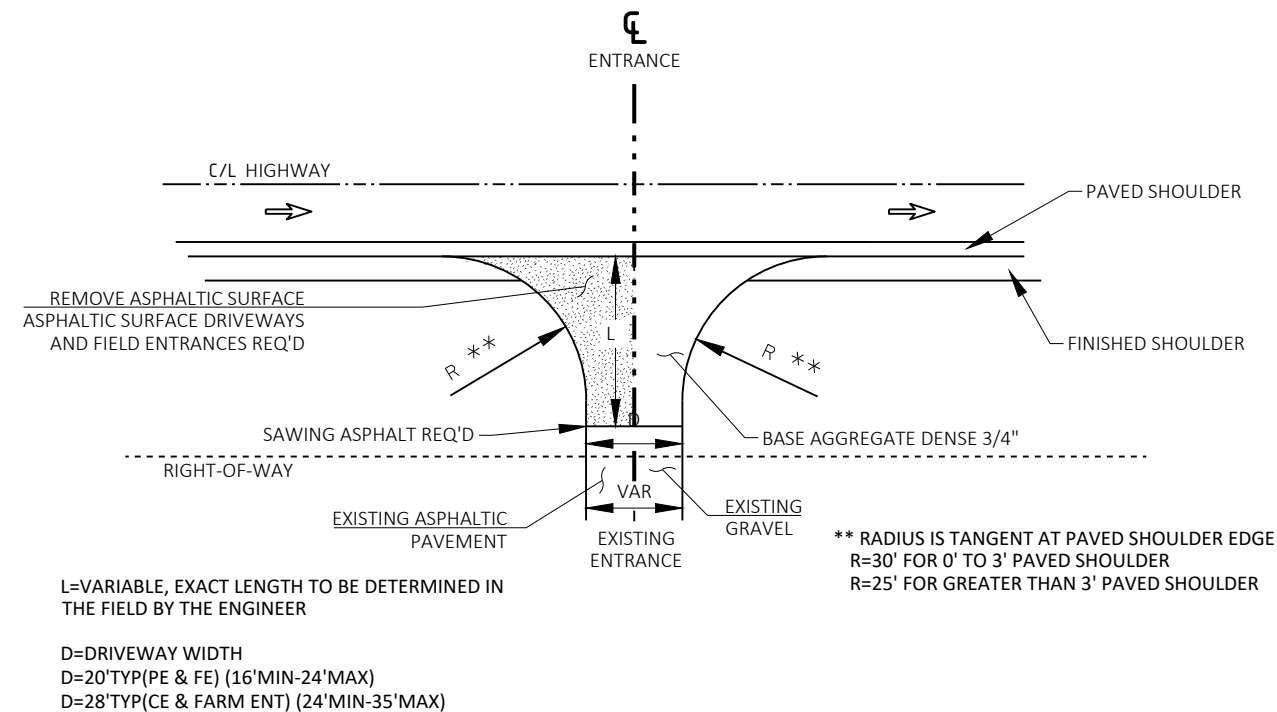
TYPICAL PROFILE VIEW



PAVEMENT MARKING DETAIL FOR TAPERED OVERLAPPING JOINTS IN HMA PAVEMENTS

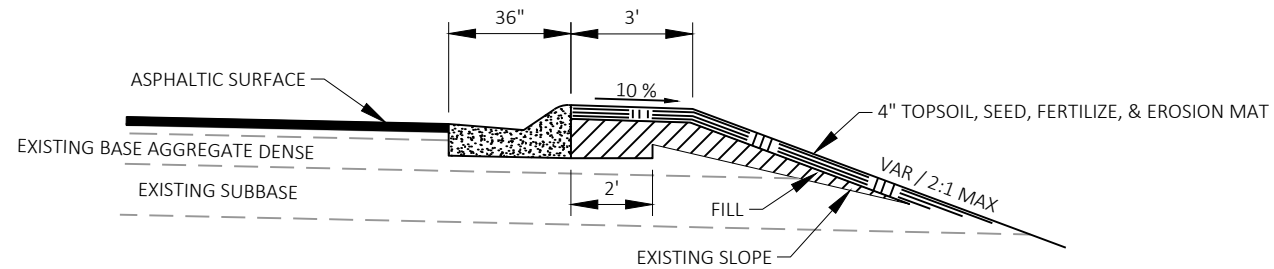
SEE SDD 15C08-a FOR DIMENSIONS
STA. 401+00.00 TO STA. 724+77.84

NOTES:
MATCH PERMANENT CENTERLINE PAVEMENT MARKINGS FOR TEMPORARY MARKINGS.
PLACE SKIP-ONLY PORTIONS OF CENTERLINE MARKINGS ON PASS #3.

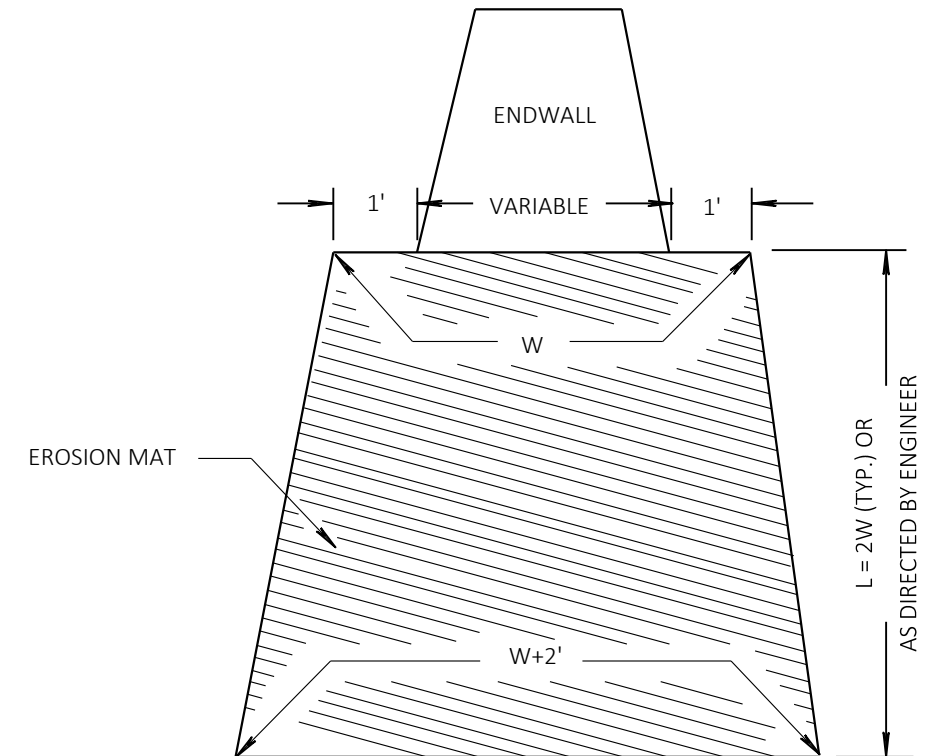


PLAN VIEW

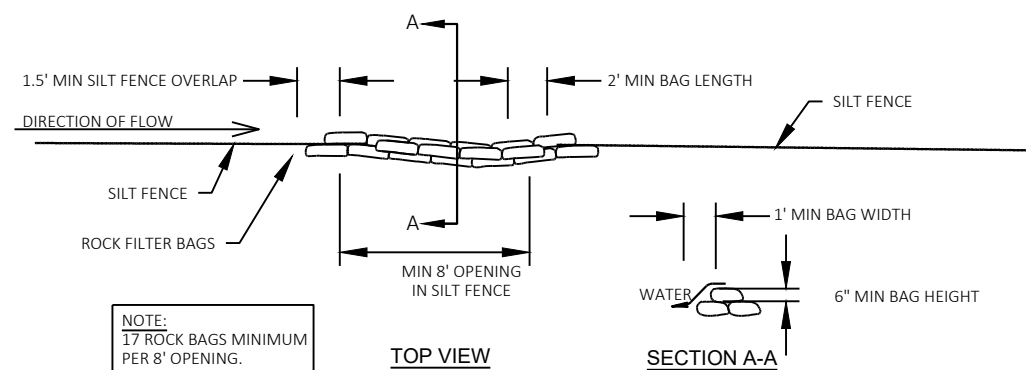
RURAL DRIVEWAY INTERSECTION (PE, FE & CE)
(FOR RESURFACING PROJECTS)



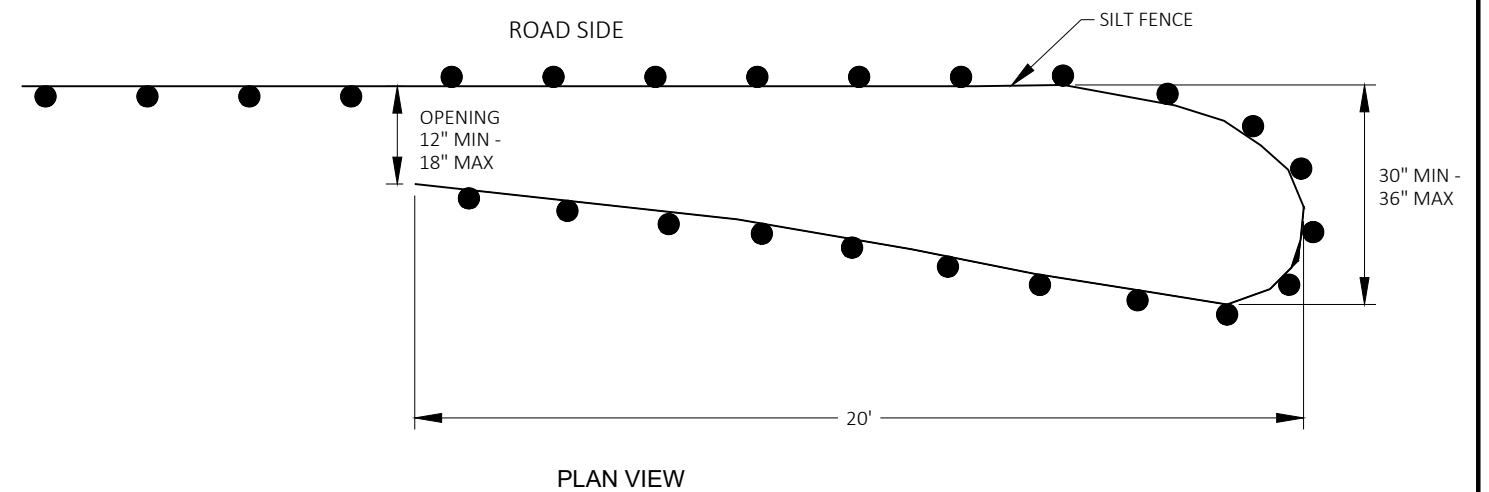
DETAIL OF CURB & GUTTER INSTALLATION AT INTERSECTIONS



EROSION MAT TREATMENT AT CULVERTS

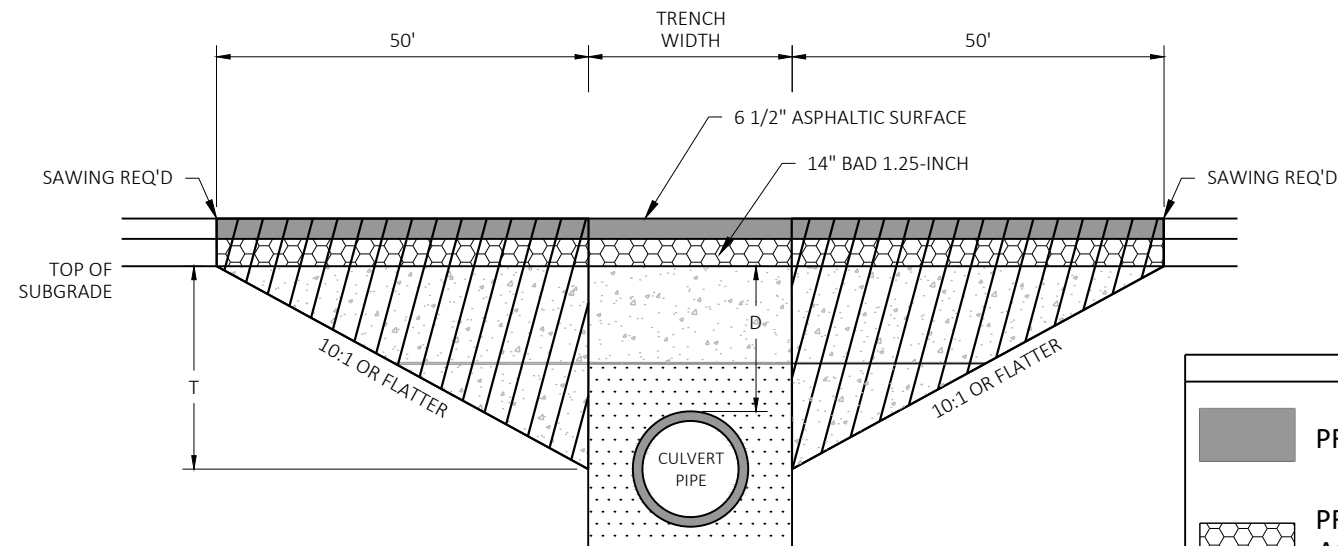


ROCK BAGS USED FOR SILT FENCE RELIEF



TEMPORARY SMALL ANIMAL TURN-AROUND

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



TRANSITION CUT DEPTH (T) = THE LESSER OF DEPTH TO CENTER OF PIPE OR 5 FT.
DO NOT EXTEND TRANSITION CUT BELOW HORIZONTAL CENTER OF PIPE.

DEPTH D < 6 FT

KEY

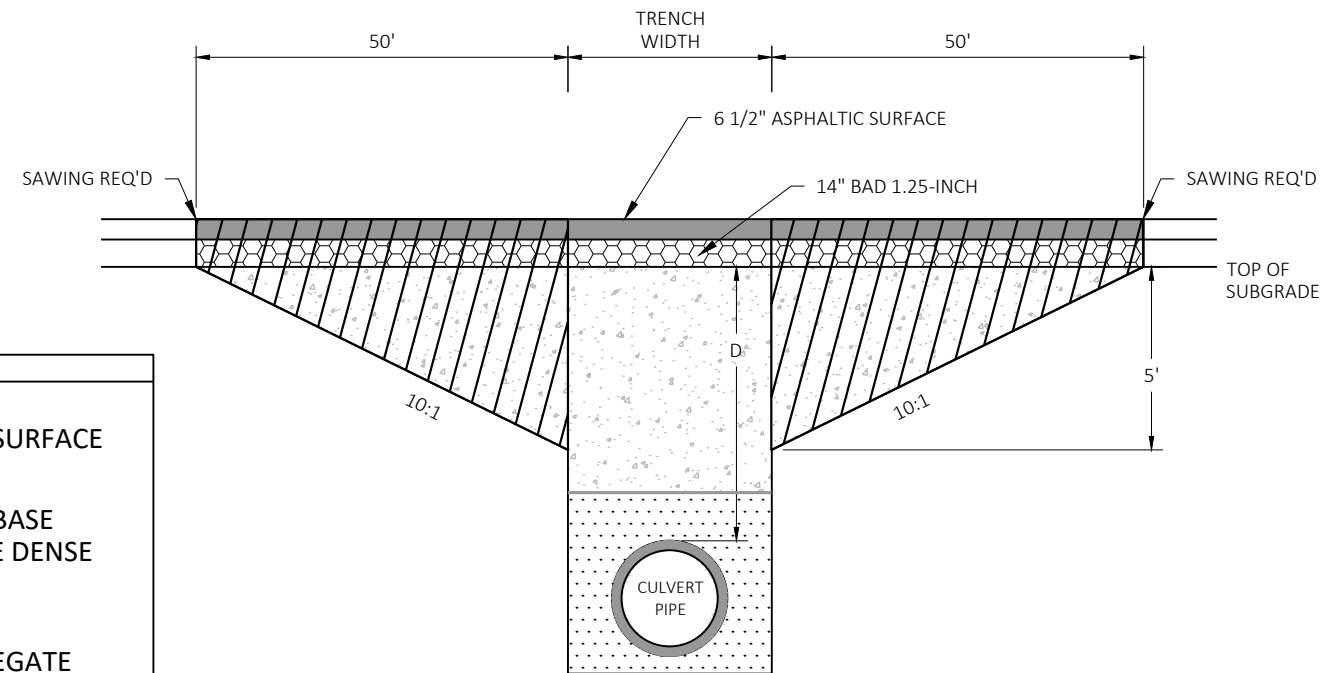
PROPOSED SURFACE

PROPOSED BASE
AGGREGATE DENSE
1 1/4-INCH

BASE AGGREGATE
DENSE 3/4-INCH

TRANSITION CUT
EXCAVATION/BACKFILL

FOUNDATION
BACKFILL



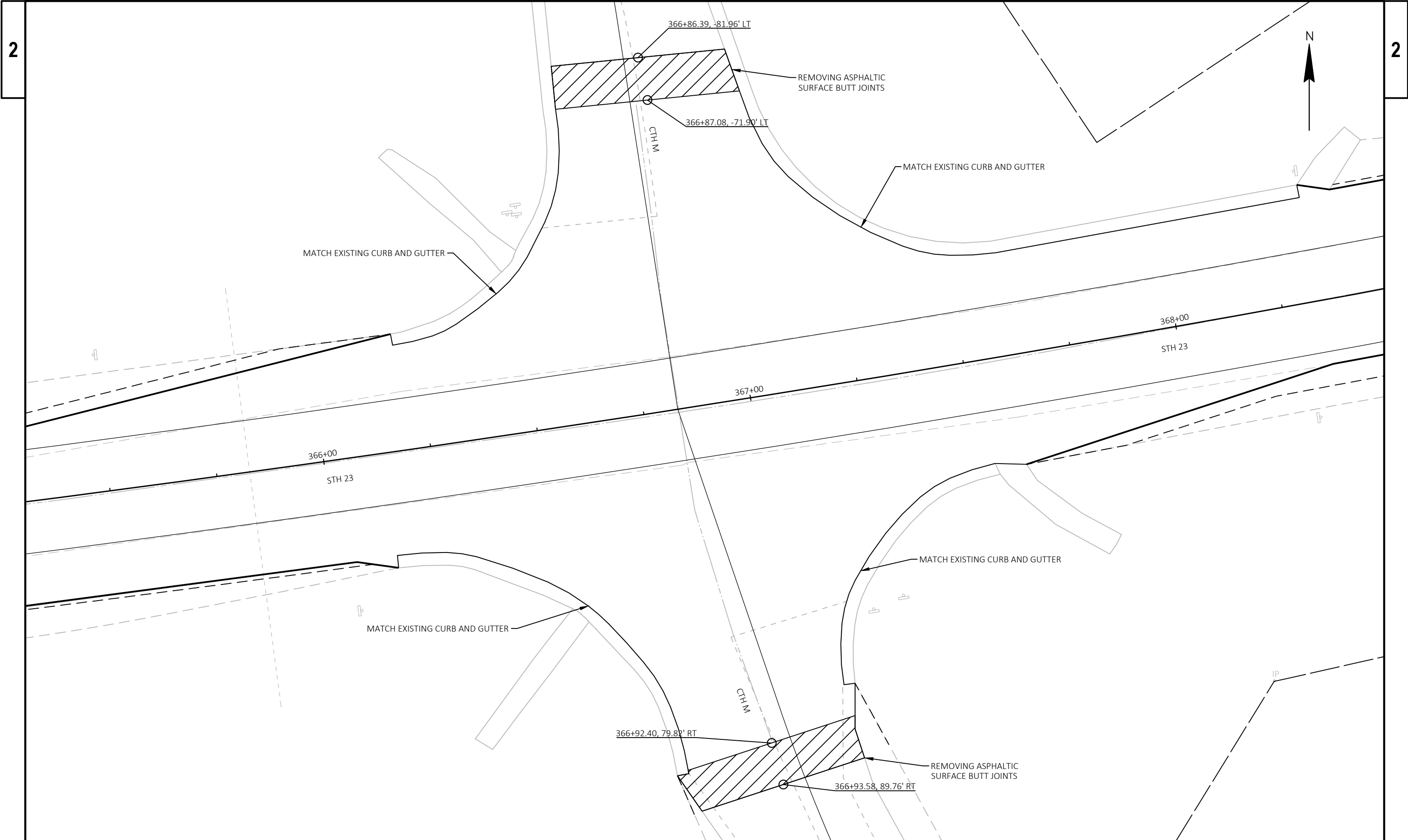
DEPTH D ≥ 6 FT

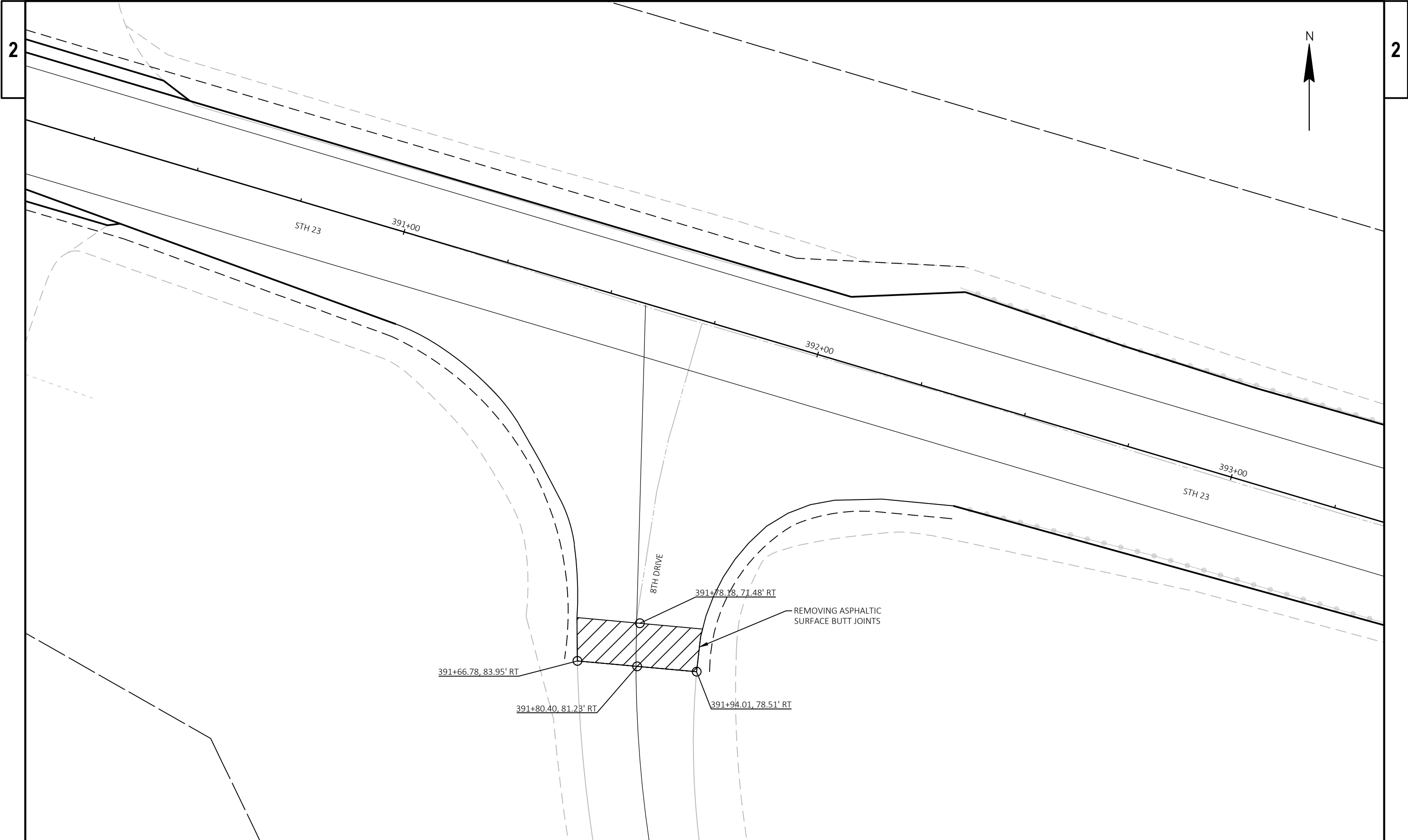
NOTES

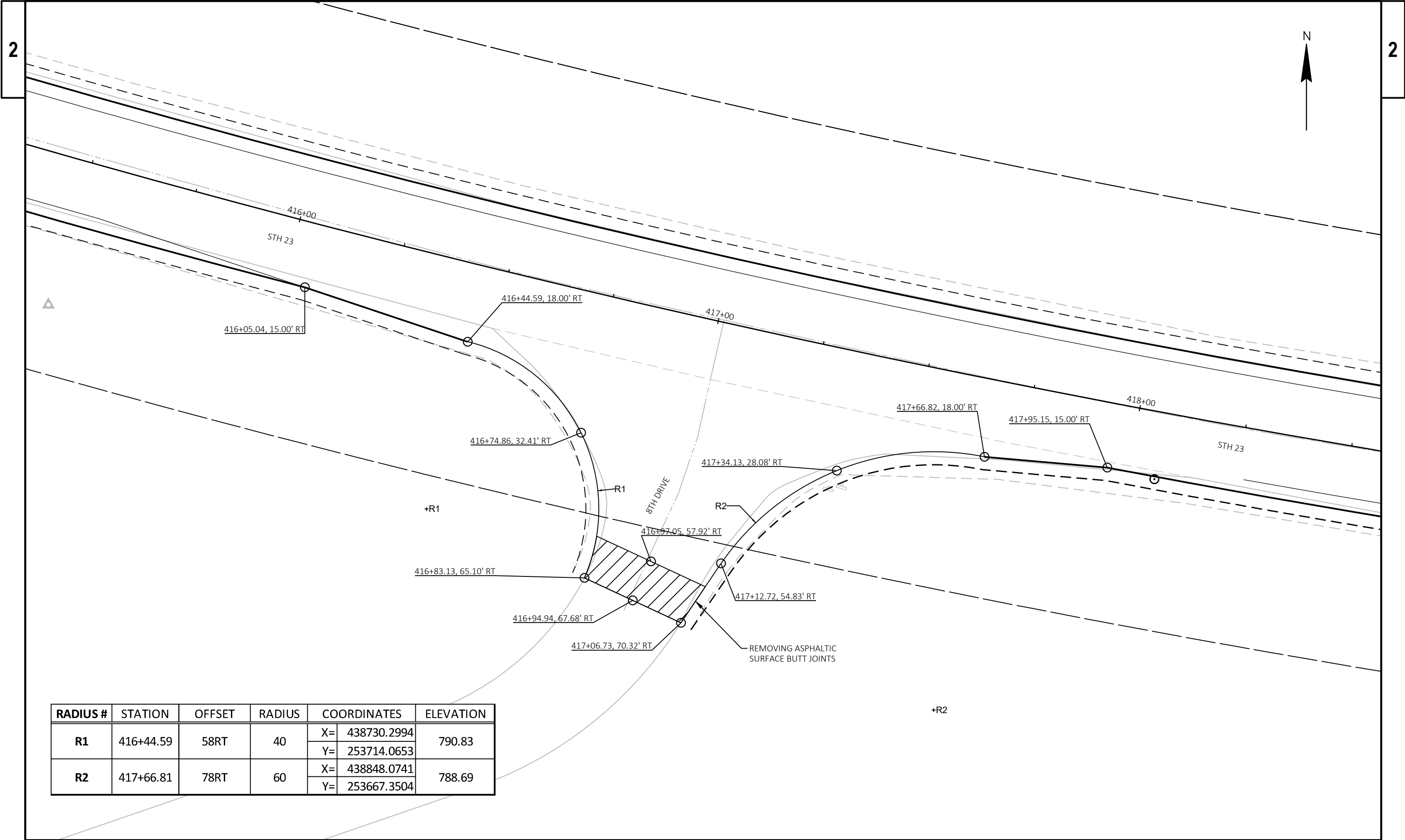
- TRANSITION CUT IS PAID AS EXCAVATION COMMON.
- TRANSITION CUT WIDTH IS FROM SUBGRADE SHOULDER POINT TO SUBGRADE SHOULDER POINT.
- PERFORM CULVERT PIPE INSTALLATION BEFORE REMOVING ASPHALTIC SURFACE MILLING 1-INCH.
- PLACE ASPHALTIC SURFACE AFTER CULVERT PIPE INSTALLATION AND BEFORE REMOVING ASPHALTIC SURFACE MILLING 1-INCH.

CULVERT PIPE TRANSITION

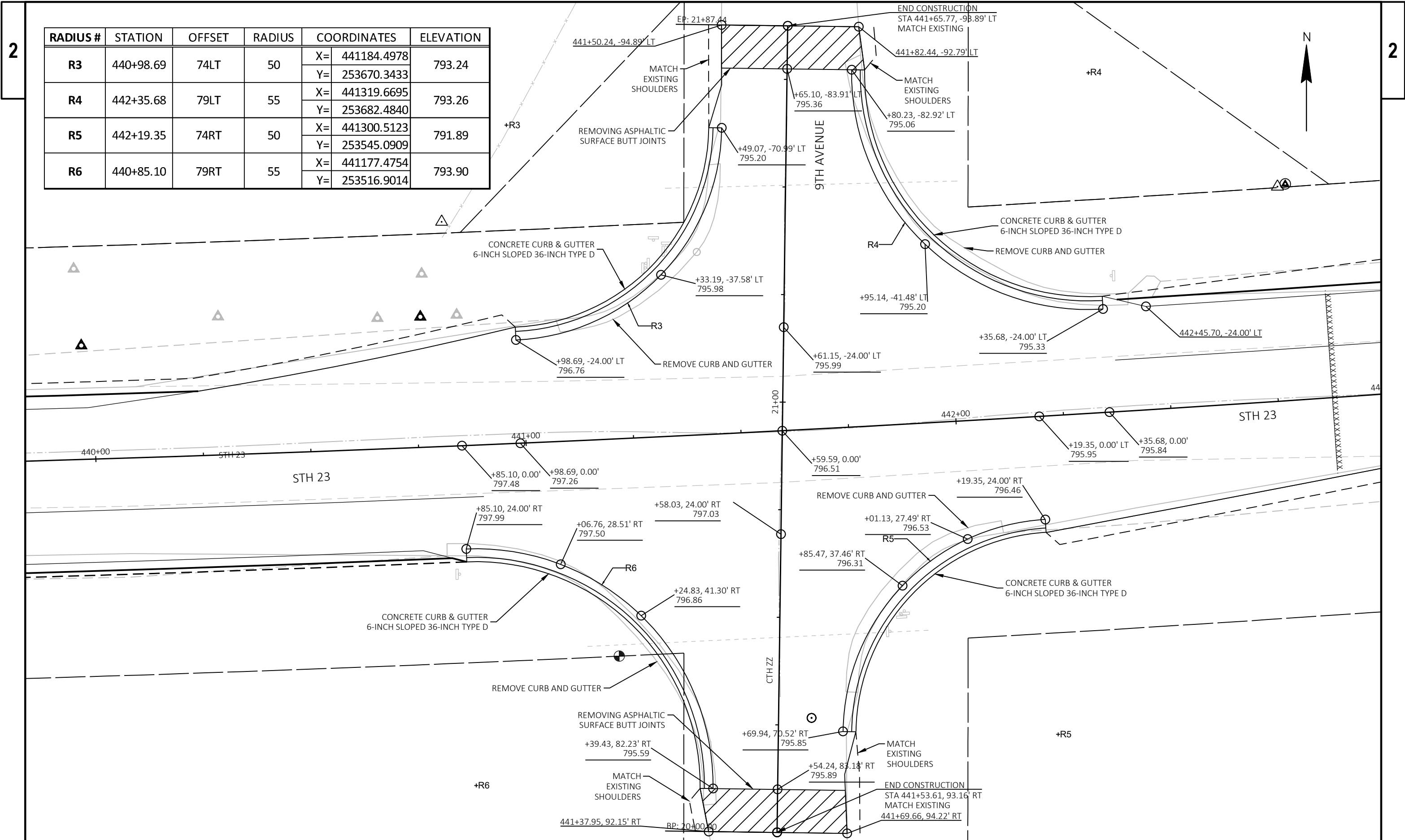
ROUTE	STA (CL)	DEPTH D (FT)	PIPE DIA (IN)	REMARKS
STH 23	410+64.29	1.4	36	
STH 23	443+40.36	0.2	30	
STH 23	518+12.98	0.7	24	
STH 23	617+28.45	1.5	30	
FERN AVE	60+29.48	0.2	18	

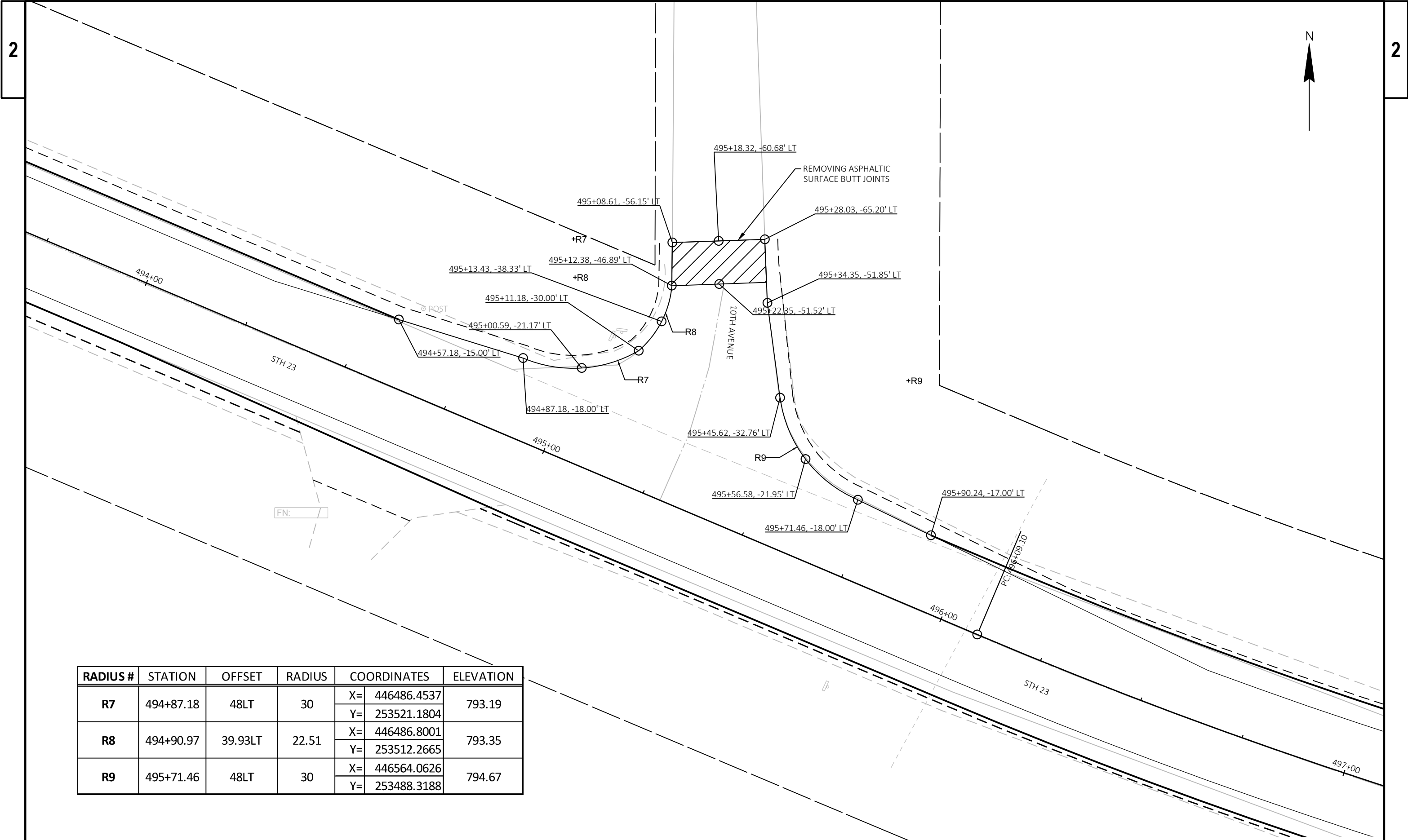




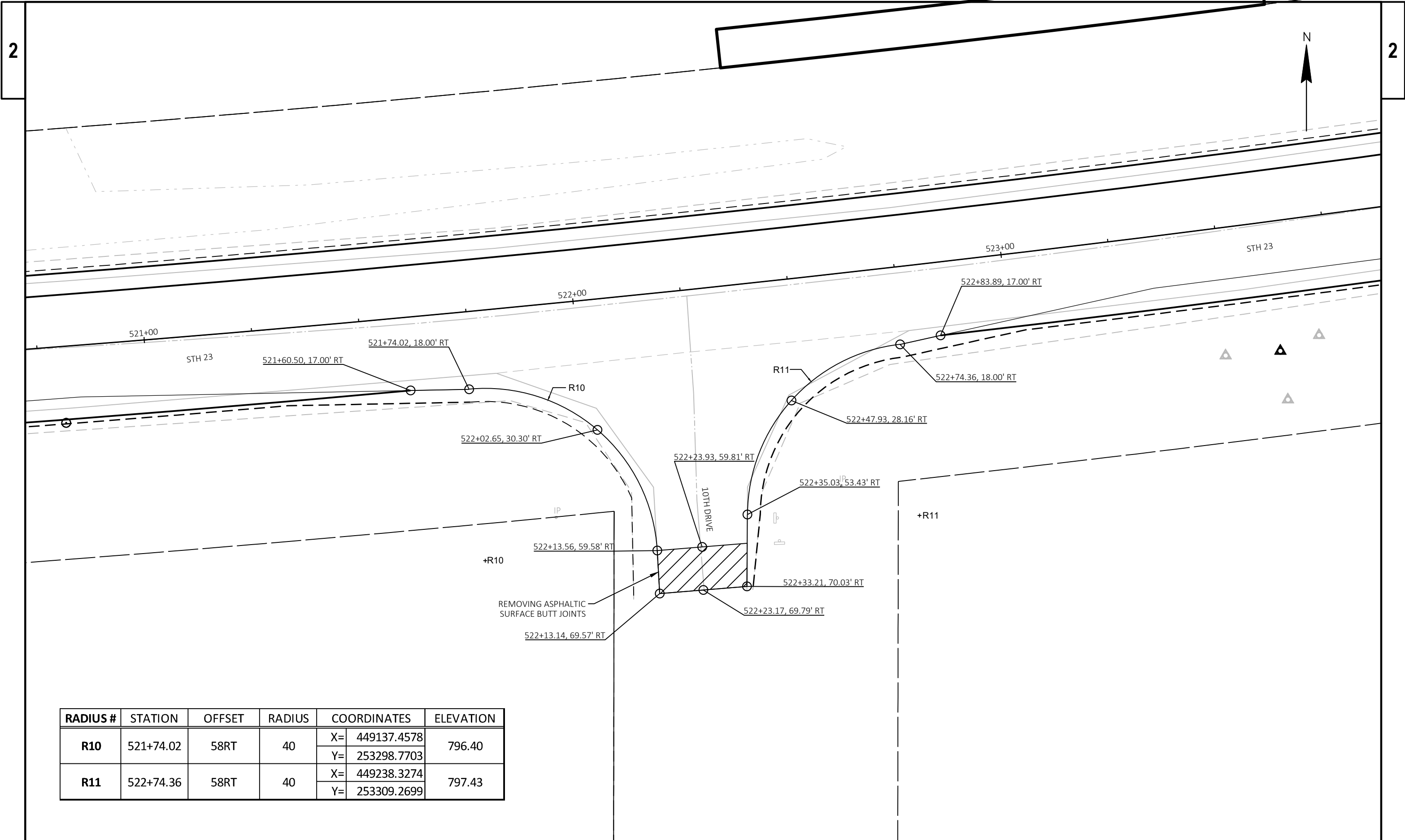


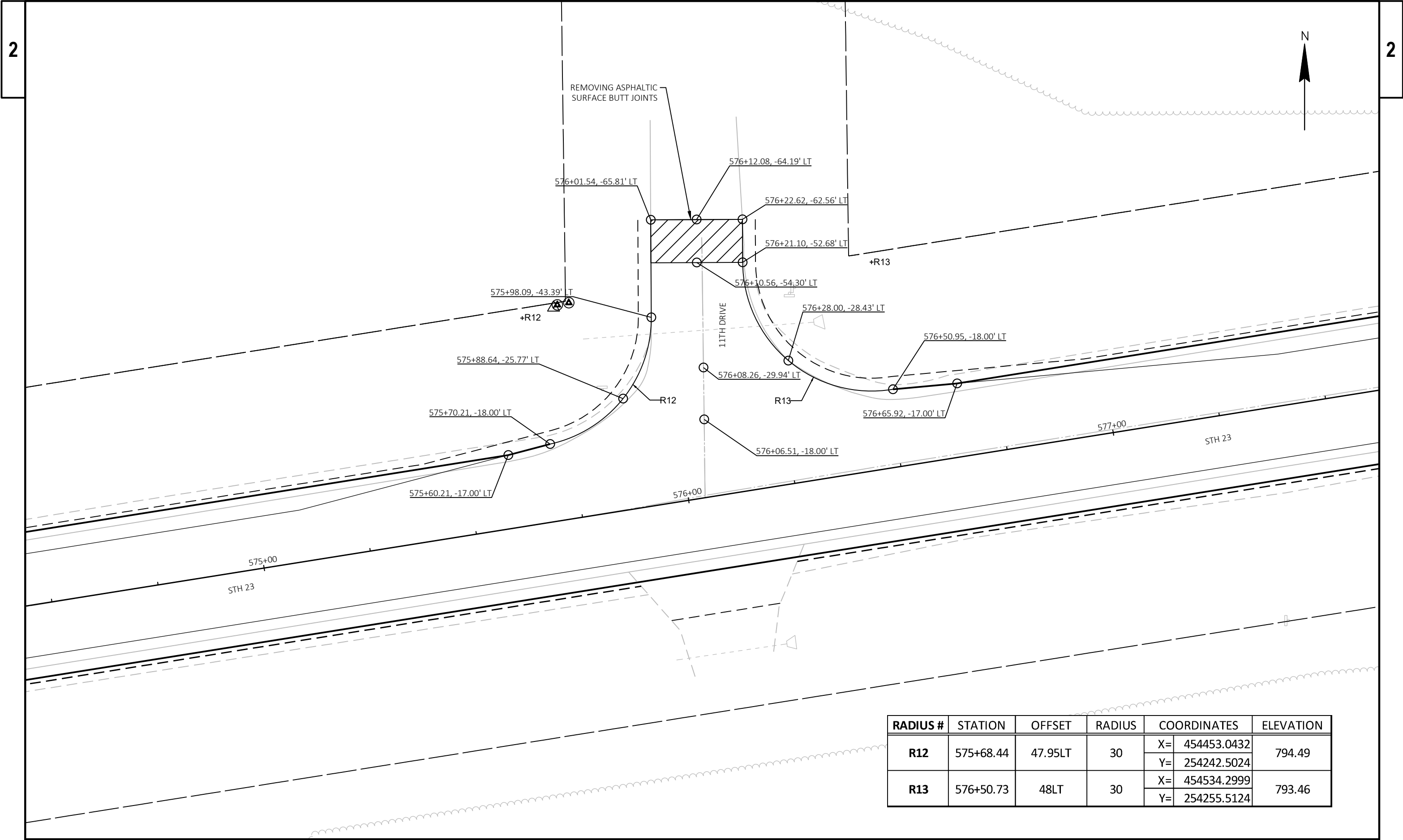
RADIUS #	STATION	OFFSET	RADIUS	COORDINATES		ELEVATION
R1	416+44.59	58RT	40	X=	438730.2994	790.83
				Y=	253714.0653	
R2	417+66.81	78RT	60	X=	438848.0741	788.69
				Y=	253667.3504	





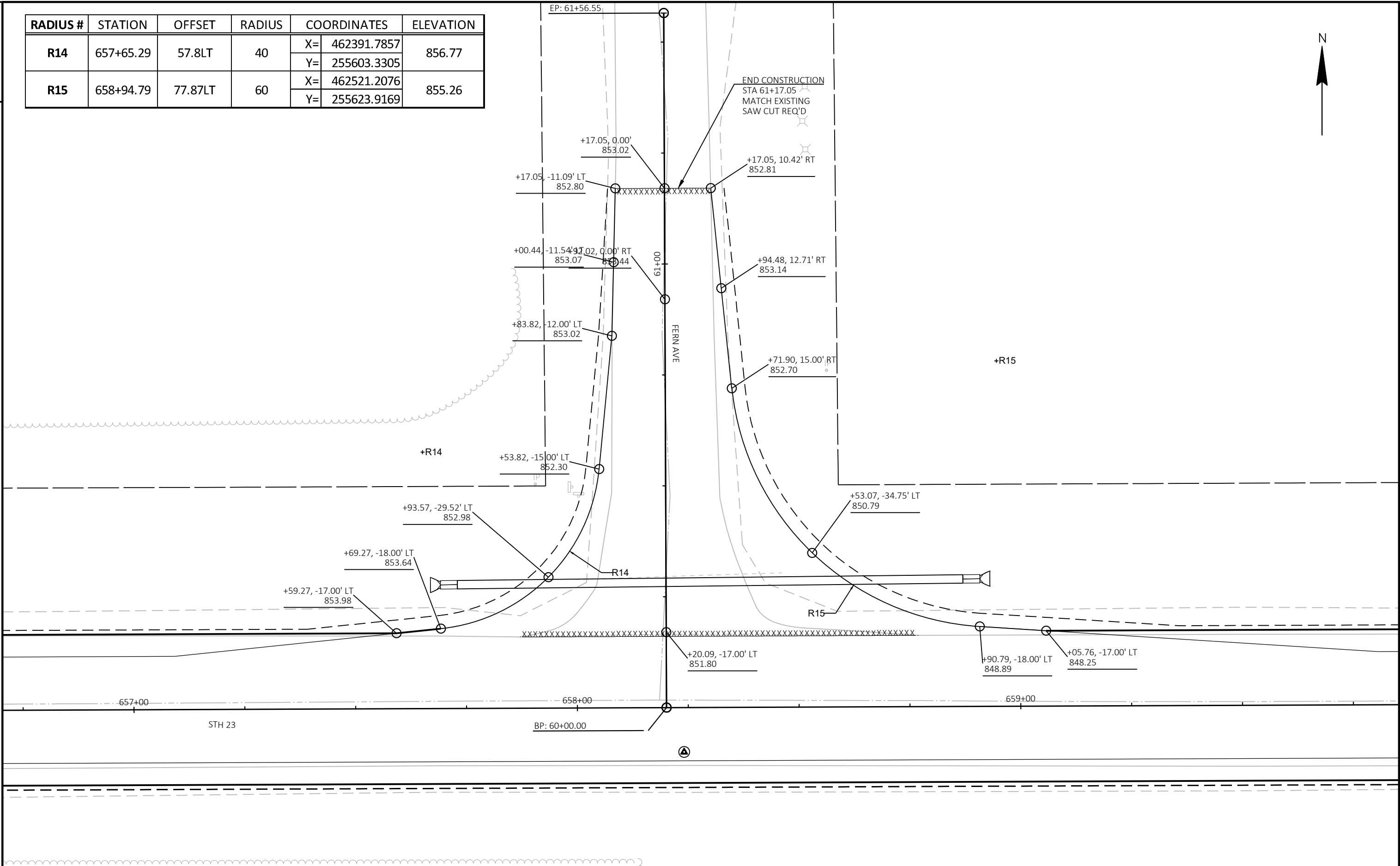
RADIUS #	STATION	OFFSET	RADIUS	COORDINATES		ELEVATION
R7	494+87.18	48LT	30	X=	446486.4537	793.19
				Y=	253521.1804	
R8	494+90.97	39.93LT	22.51	X=	446486.8001	793.35
				Y=	253512.2665	
R9	495+71.46	48LT	30	X=	446564.0626	794.67
				Y=	253488.3188	



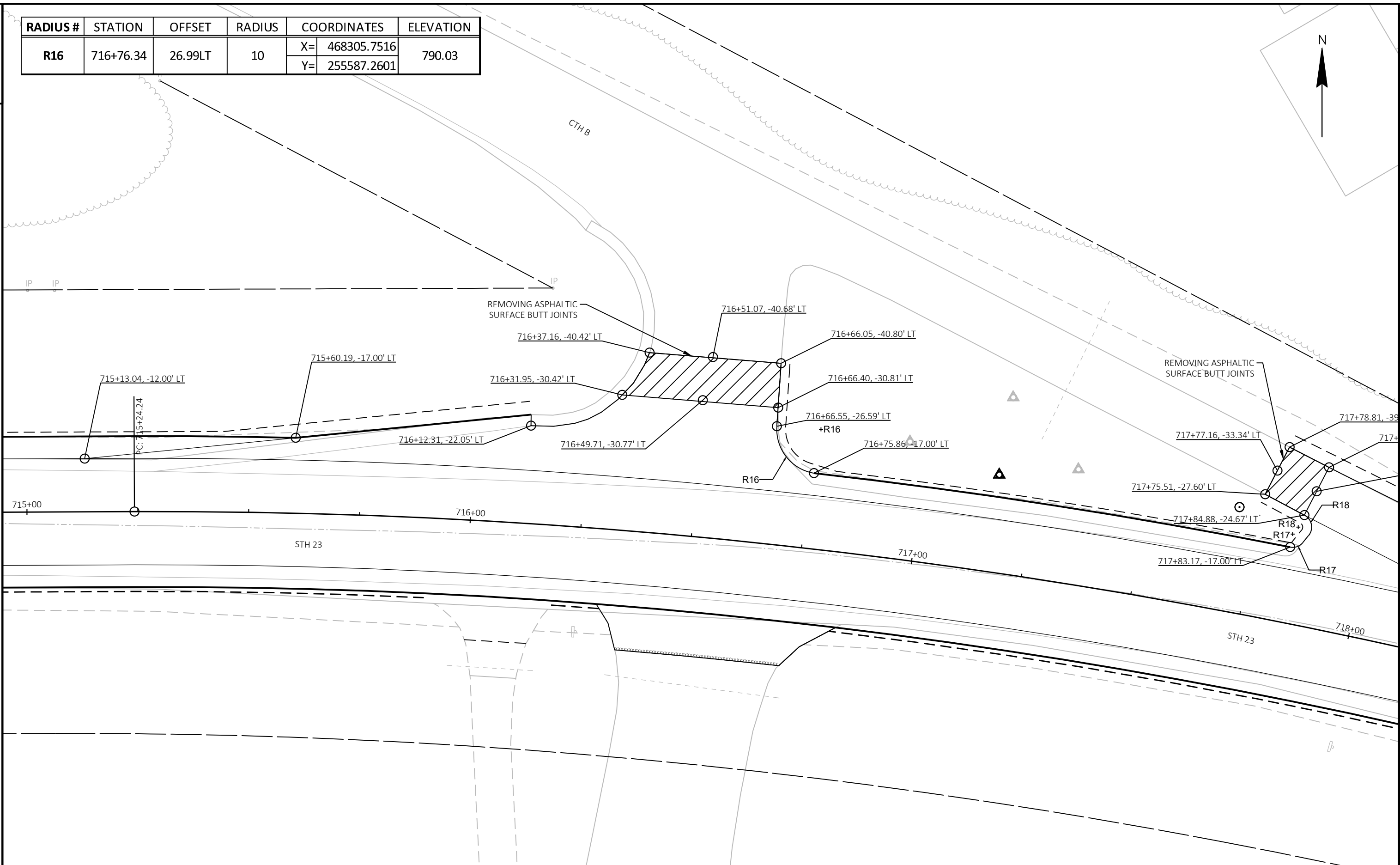


RADIUS #	STATION	OFFSET	RADIUS	COORDINATES		ELEVATION
R12	575+68.44	47.95LT	30	X=	454453.0432	794.49
				Y=	254242.5024	
R13	576+50.73	48LT	30	X=	454534.2999	793.46
				Y=	254255.5124	

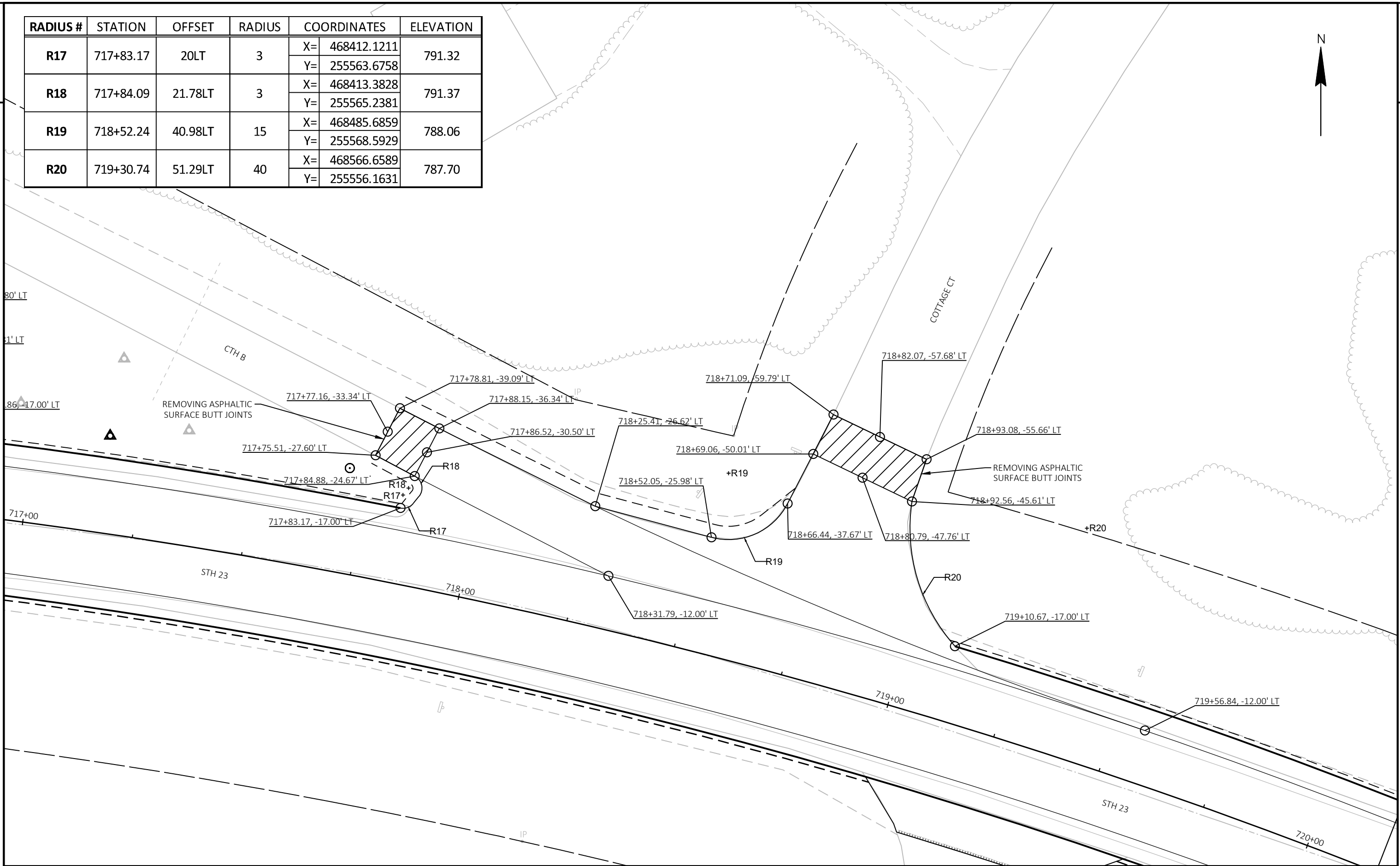
RADIUS #	STATION	OFFSET	RADIUS	COORDINATES		ELEVATION
R14	657+65.29	57.8LT	40	X=	462391.7857	856.77
				Y=	255603.3305	
R15	658+94.79	77.87LT	60	X=	462521.2076	855.26
				Y=	255623.9169	

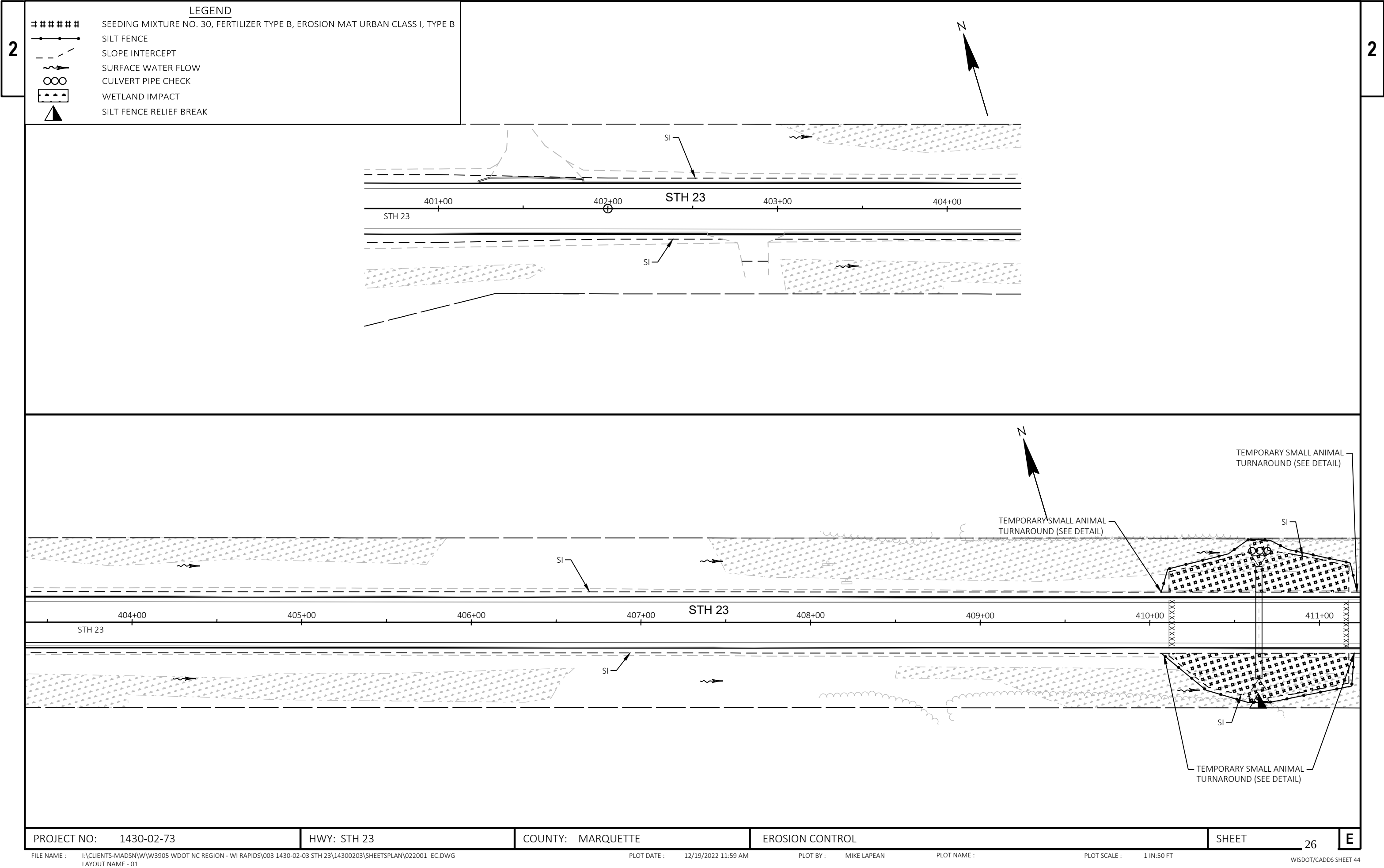


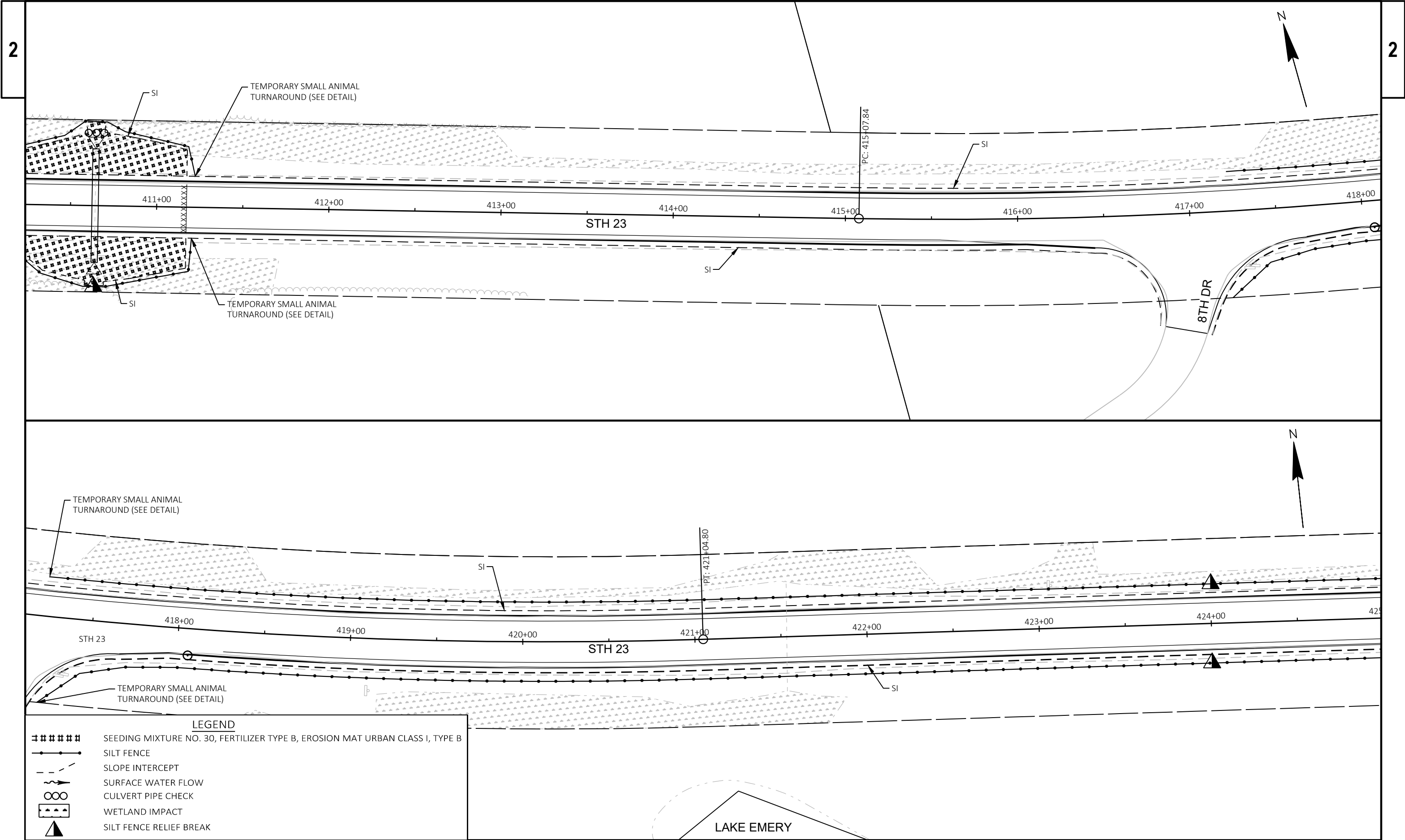
RADIUS #	STATION	OFFSET	RADIUS	COORDINATES		ELEVATION
R16	716+76.34	26.99LT	10	X=	468305.7516	790.03
				Y=	255587.2601	

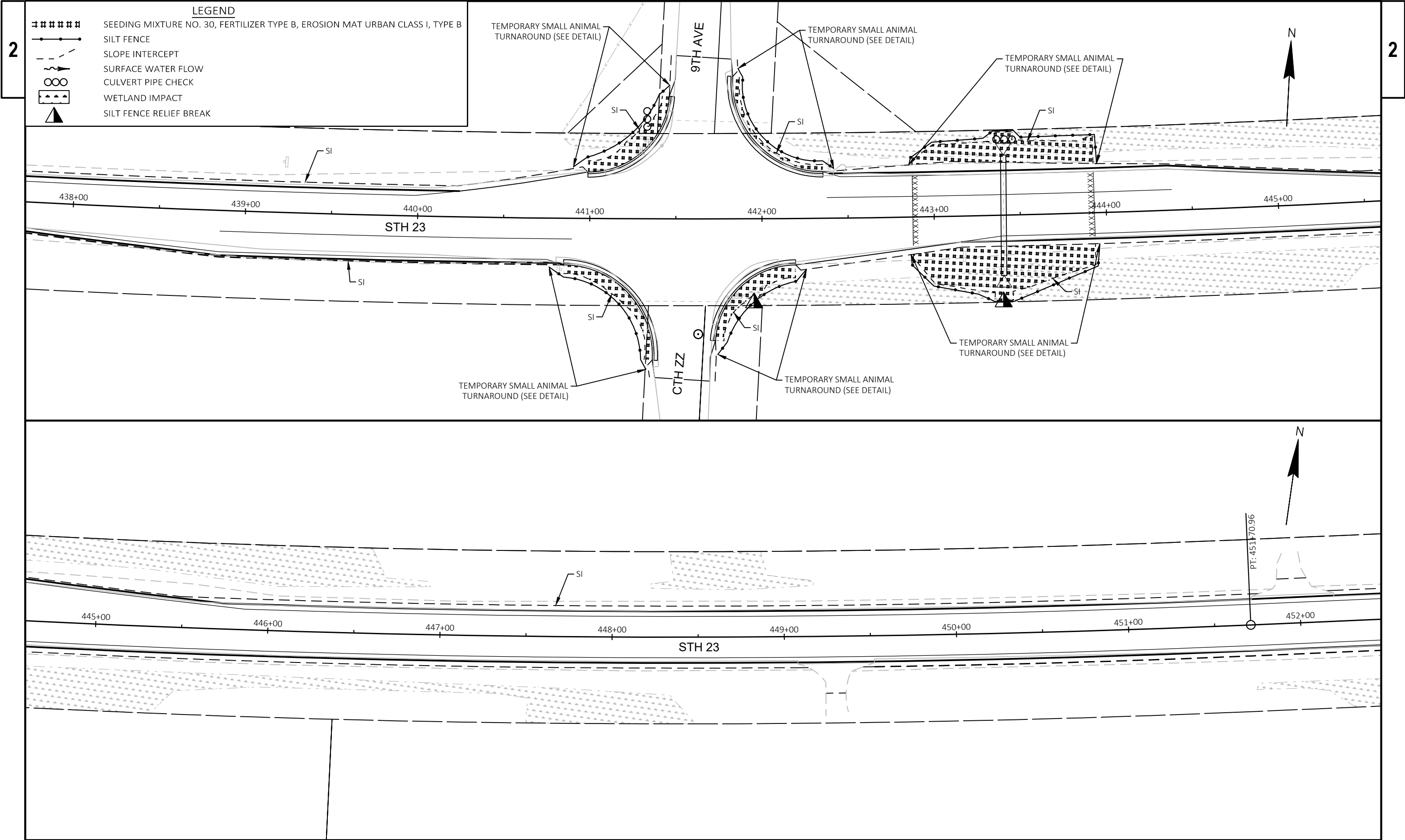


RADIUS #	STATION	OFFSET	RADIUS	COORDINATES		ELEVATION
R17	717+83.17	20LT	3	X=	468412.1211	791.32
				Y=	255563.6758	
R18	717+84.09	21.78LT	3	X=	468413.3828	791.37
				Y=	255565.2381	
R19	718+52.24	40.98LT	15	X=	468485.6859	788.06
				Y=	255568.5929	
R20	719+30.74	51.29LT	40	X=	468566.6589	787.70
				Y=	255556.1631	



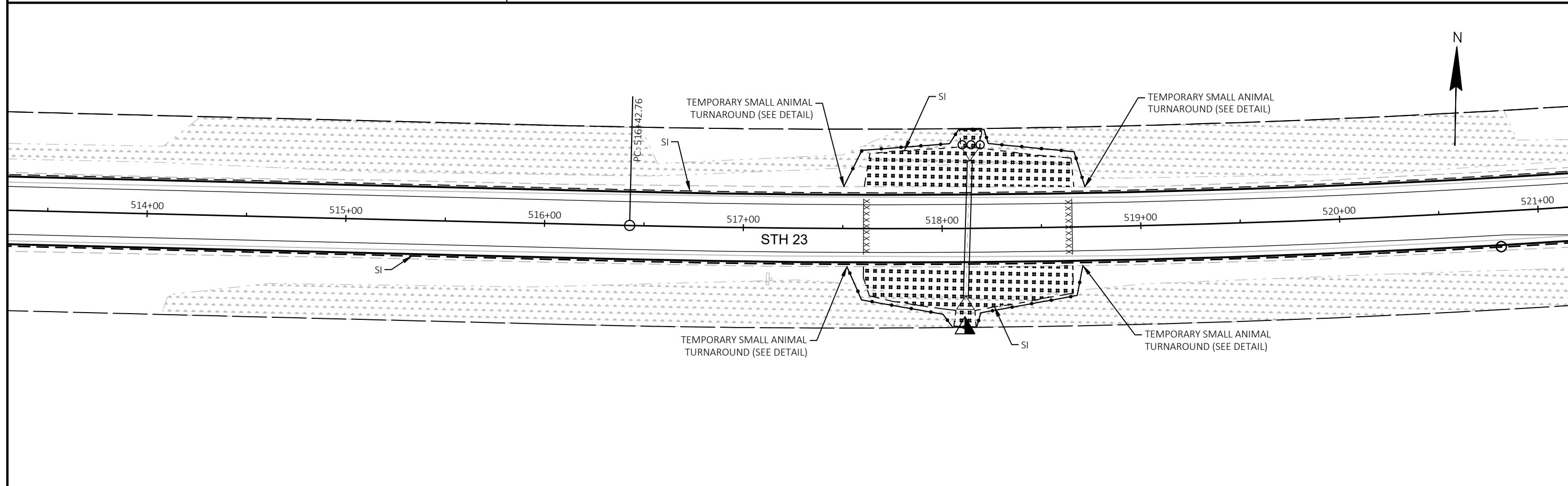
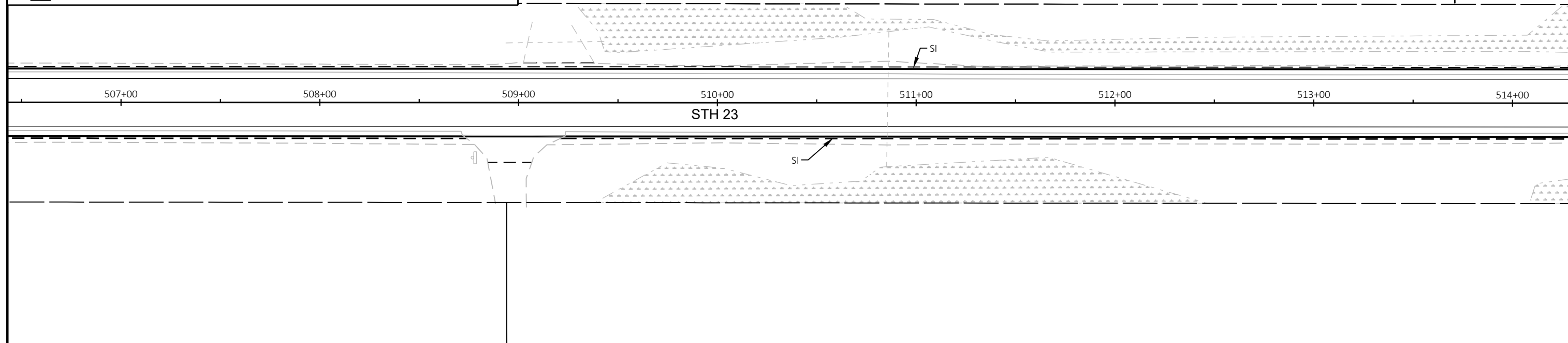






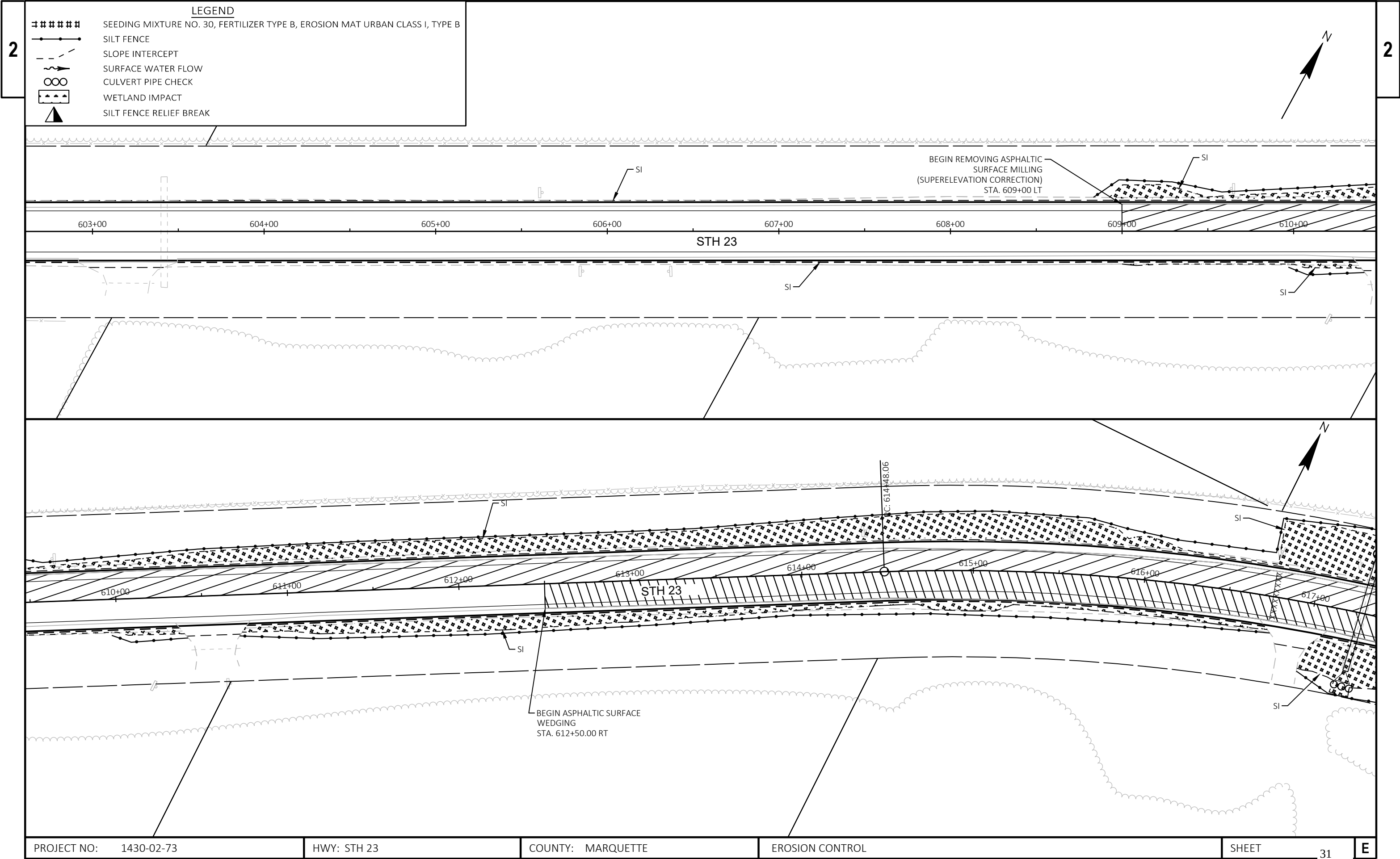
LEGEND	
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	SILT FENCE
	SLOPE INTERCEPT
	SURFACE WATER FLOW
	CULVERT PIPE CHECK
	WETLAND IMPACT
	SILT FENCE RELIEF BREAK

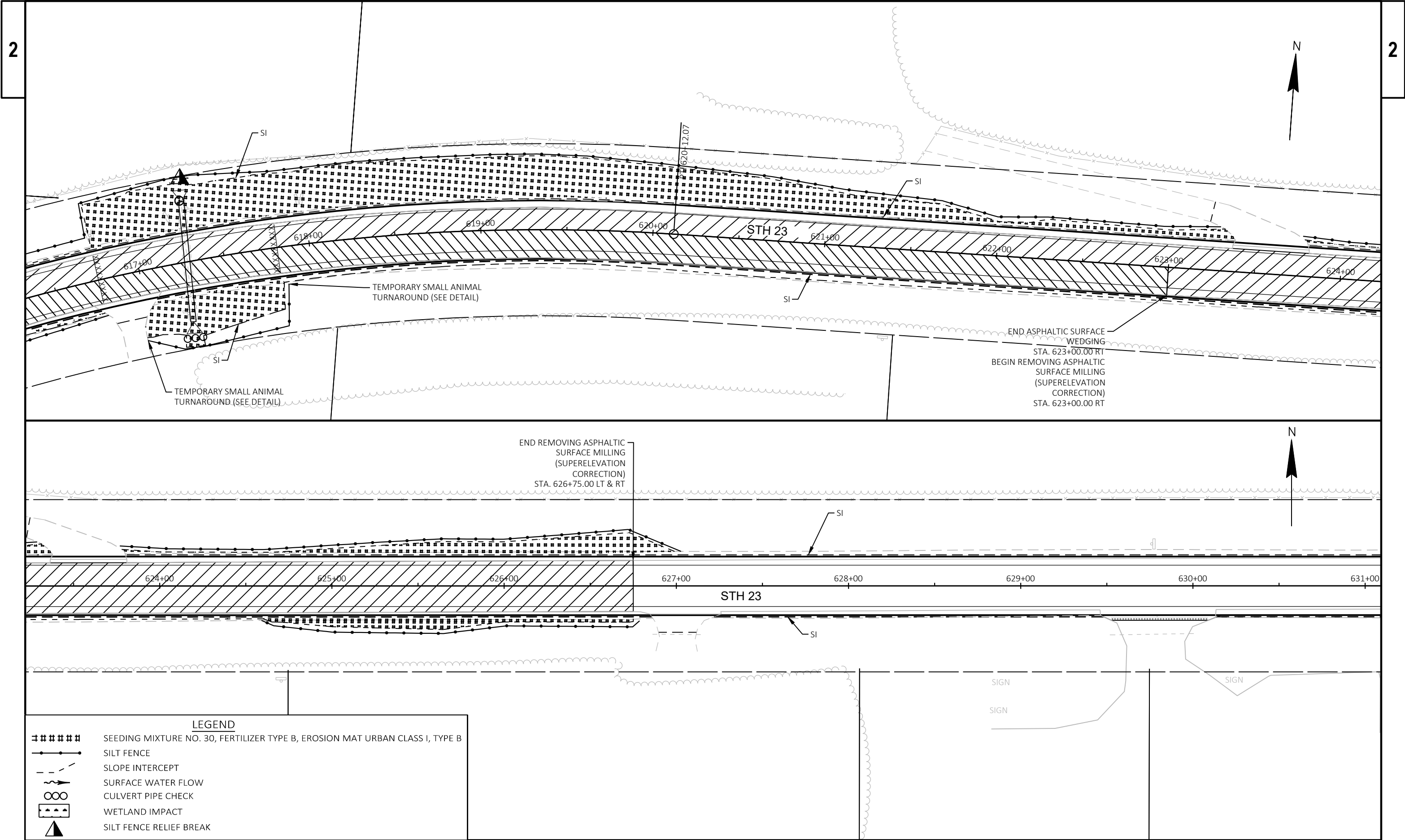
SEEDING MIXTURE NO. 30, FERTILIZER TYPE B, EROSION MAT URBAN CLASS I, TYPE B
SILT FENCE
SLOPE INTERCEPT
SURFACE WATER FLOW
CULVERT PIPE CHECK
WETLAND IMPACT
SILT FENCE RELIEF BREAK



30

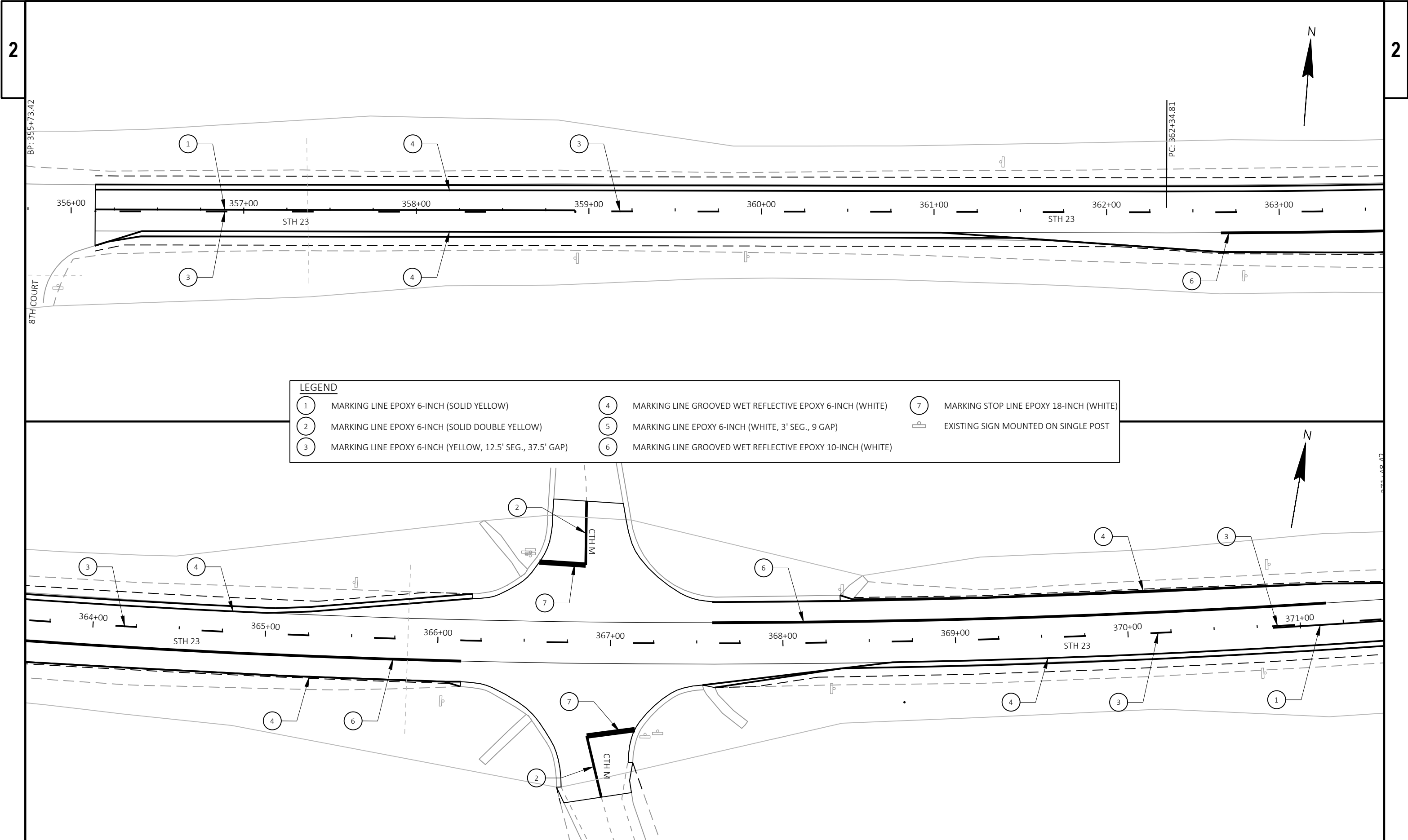
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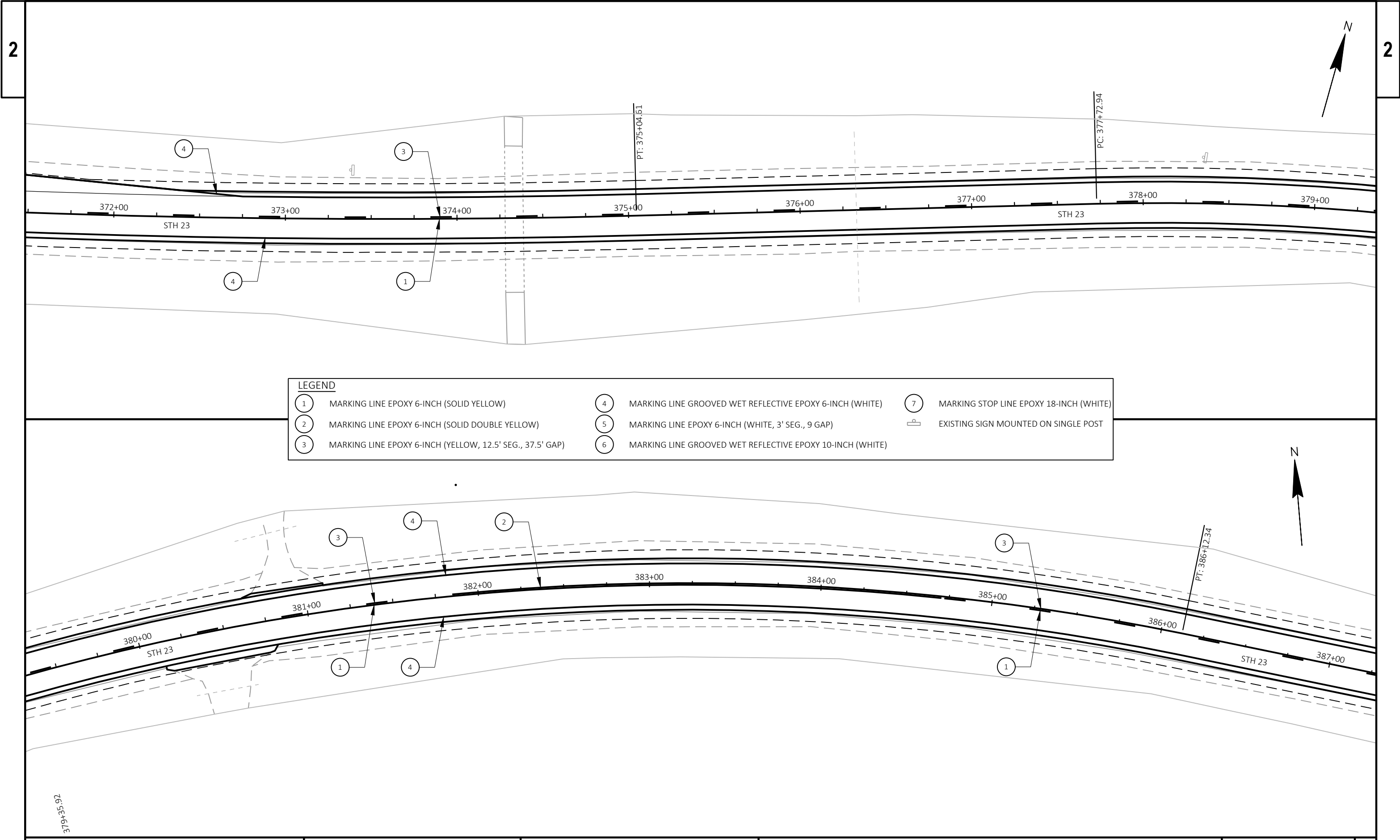


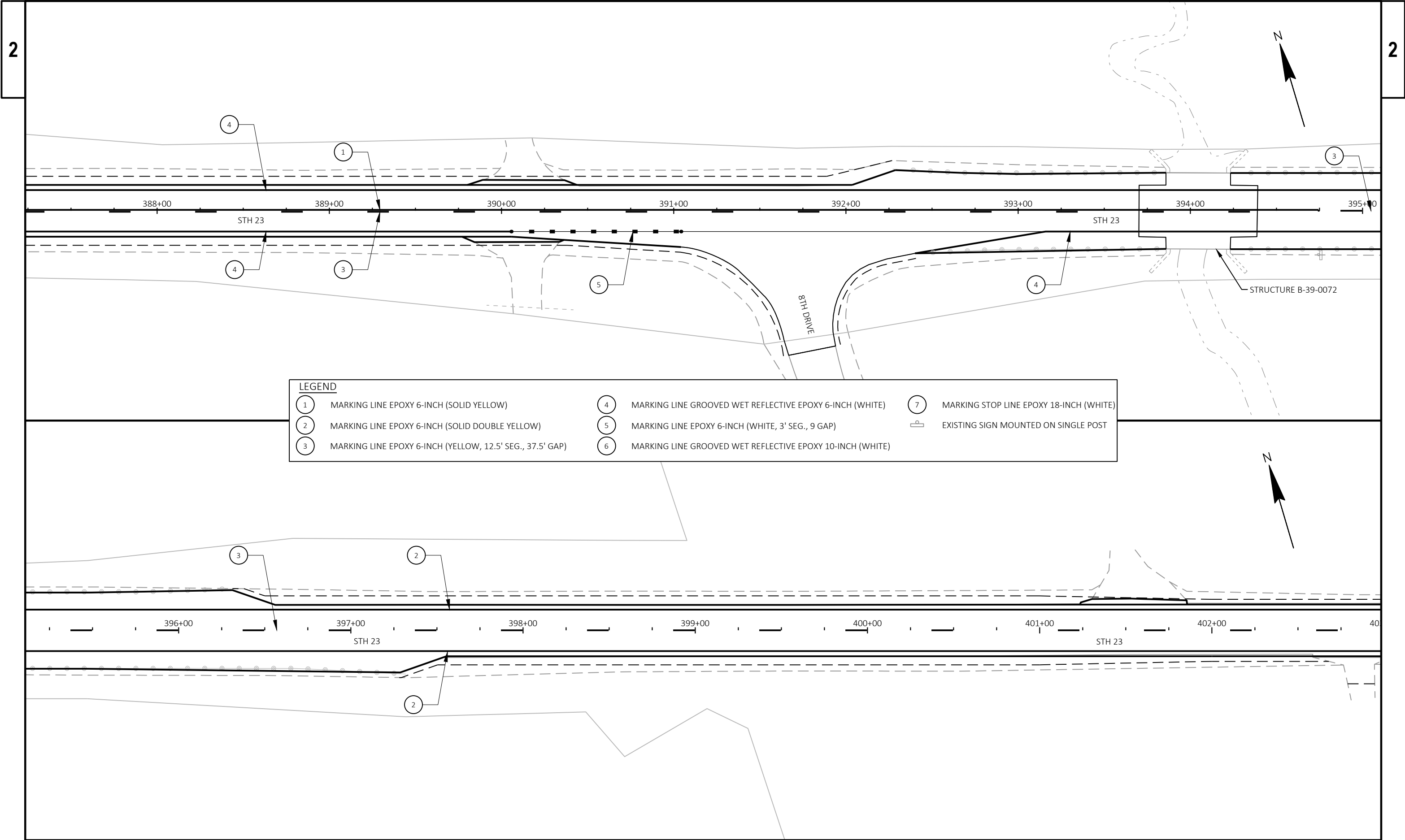


LEGEND	
	SEEDING MIXTURE NO. 30, FERTILIZER TYPE B, EROSION MAT URBAN CLASS I, TYPE B
	SILT FENCE
	SLOPE INTERCEPT
	SURFACE WATER FLOW
	CULVERT PIPE CHECK
	WETLAND IMPACT
	SILT FENCE RELIEF BREAK

PROJECT NO: 1430-02-73	HWY: STH 23	COUNTY: MARQUETTE	EROSION CONTROL	SHEET 32	E
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LEGEND

1

MARKING LINE EPOXY 6-INCH (SOLID YELLOW)

2

MARKING LINE EPOXY 6-INCH (SOLID DOUBLE YELLOW)

3

MARKING LINE EPOXY 6-INCH (YELLOW, 12.5' SEG., 37.5' GAP)

4

MARKING LINE GROOVED WET REFLECTIVE EPOXY 6-INCH (WHITE)

5

MARKING LINE EPOXY 6-INCH (WHITE, 3' SEG., 9 GAP)

6

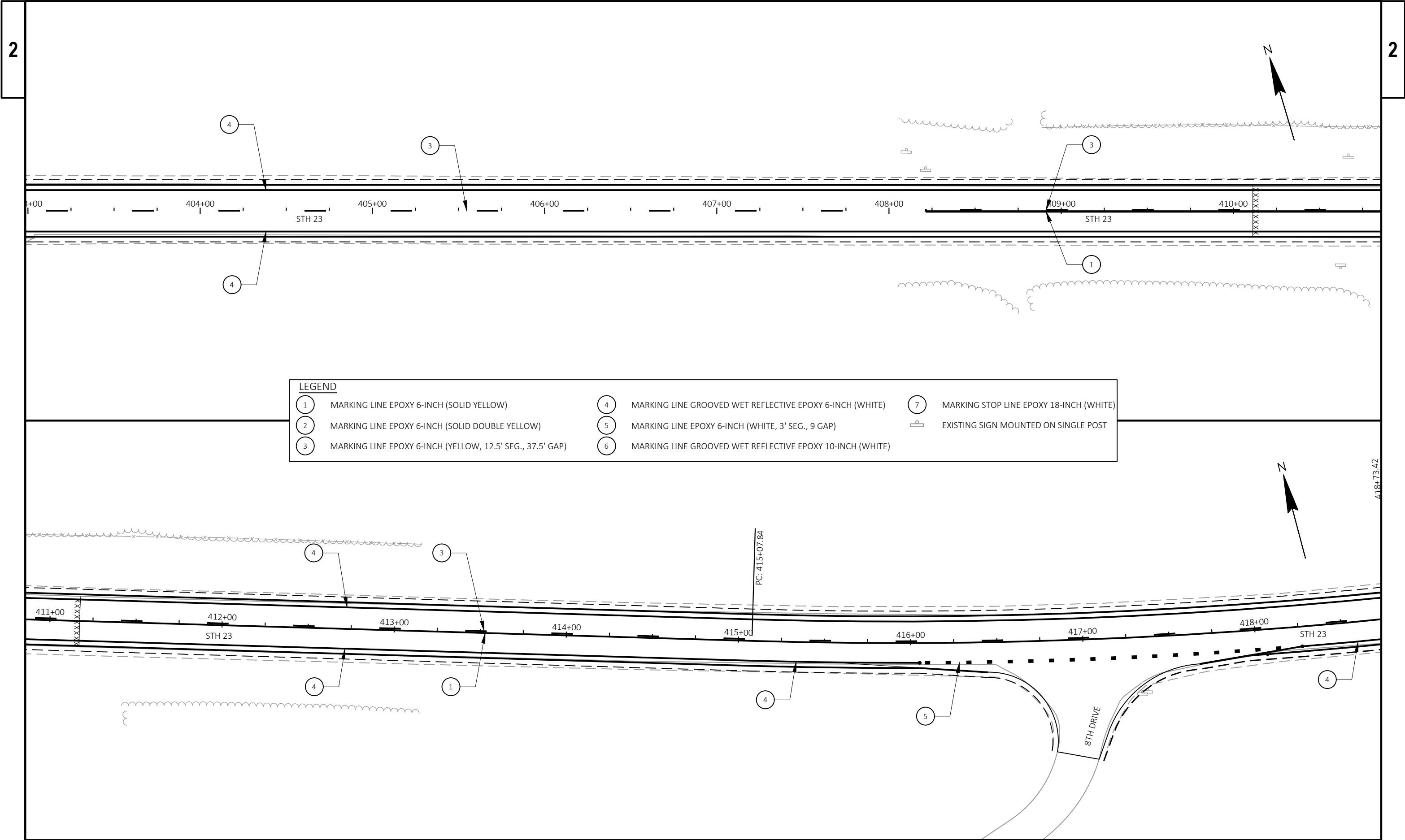
MARKING LINE GROOVED WET REFLECTIVE EPOXY 10-INCH (WHITE)

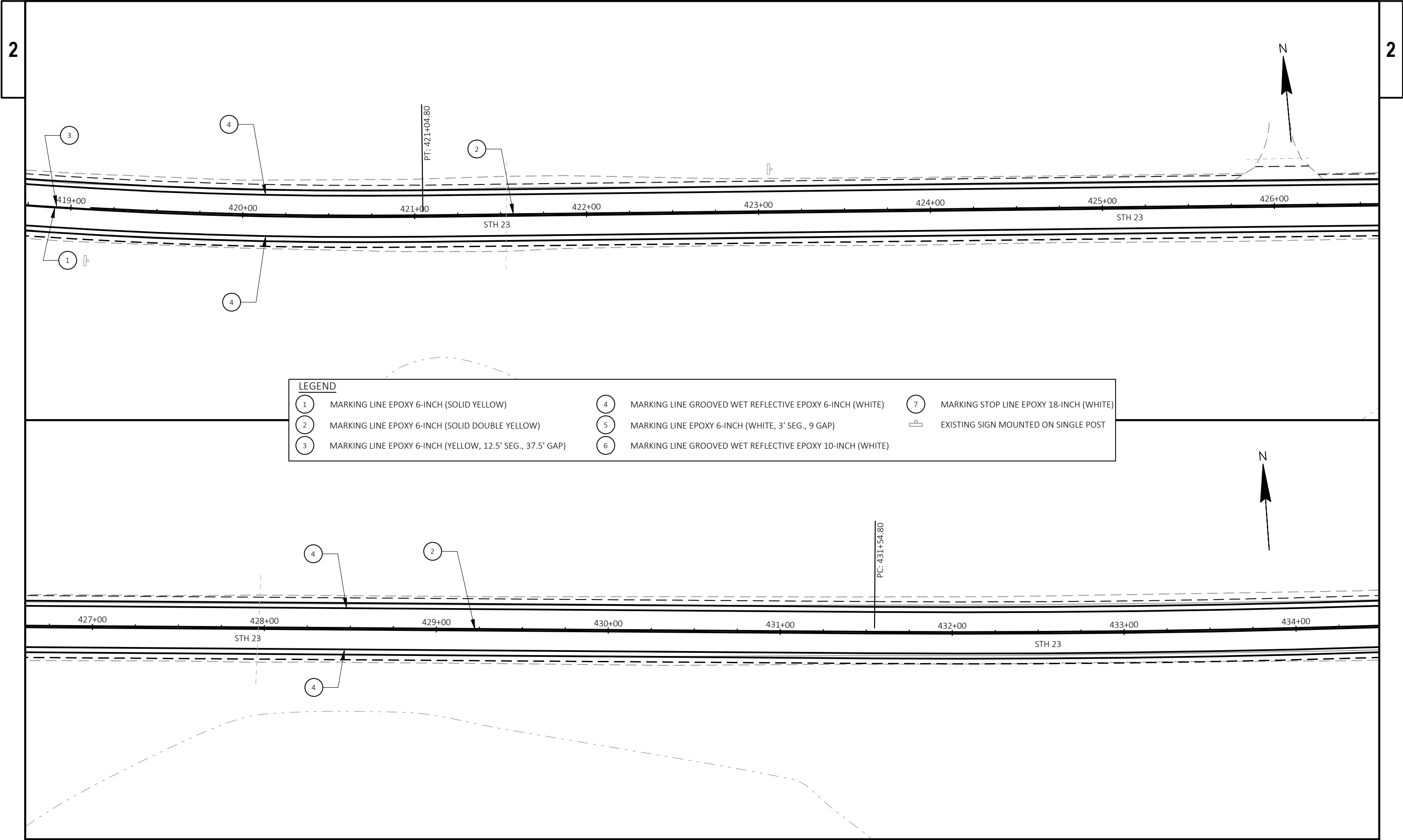
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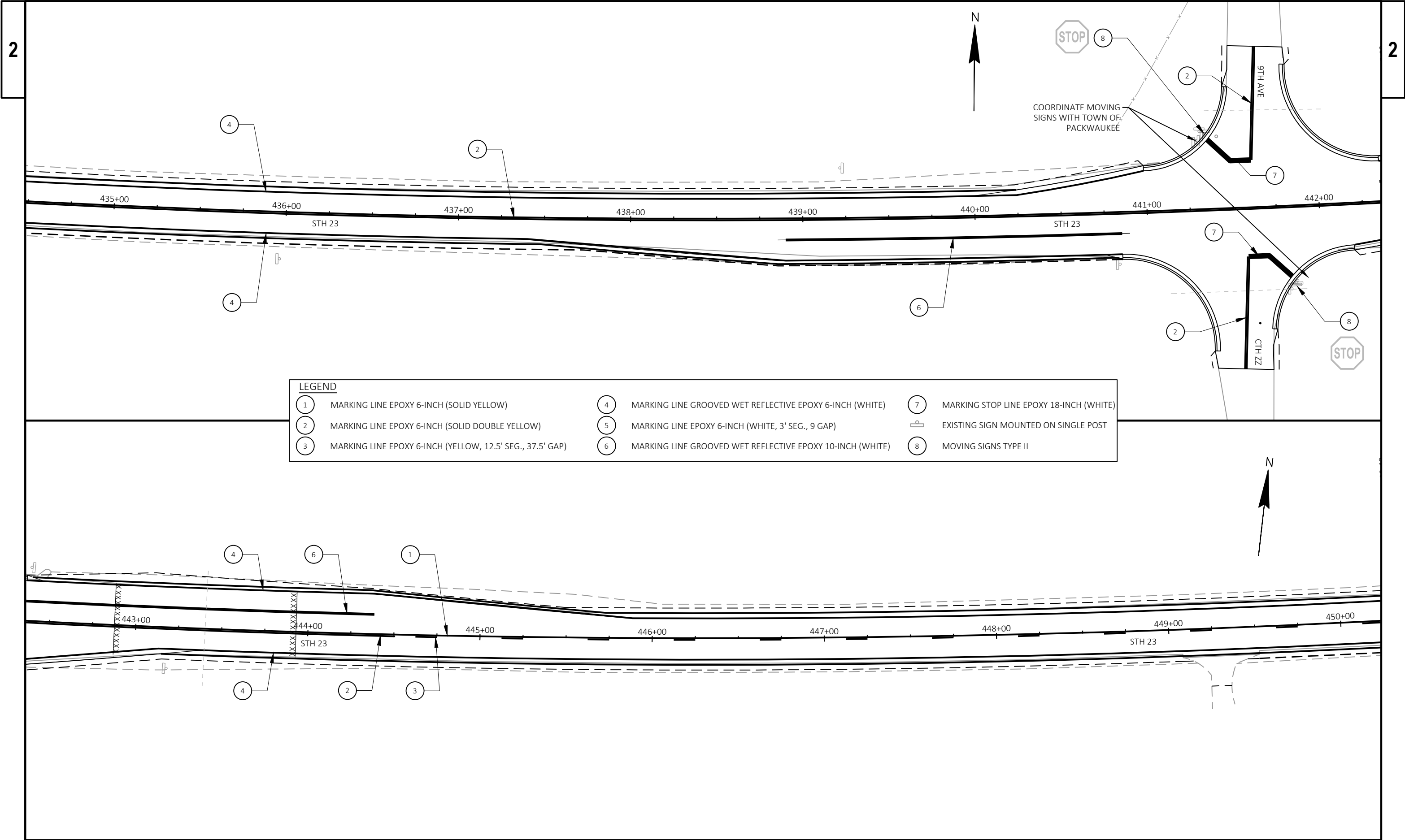
MARKING STOP LINE EPOXY 18-INCH (WHITE)

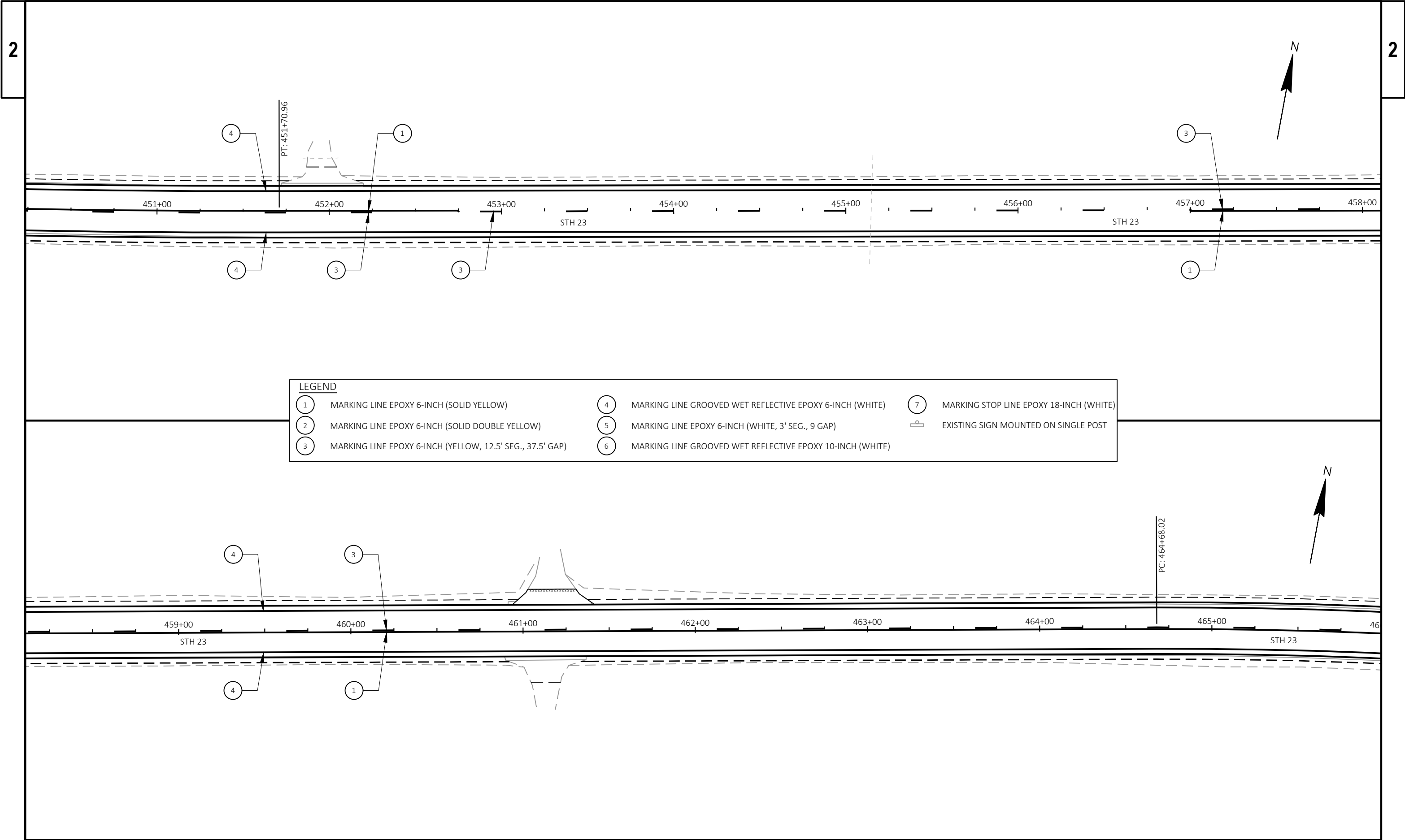


EXISTING SIGN MOUNTED ON SINGLE POST

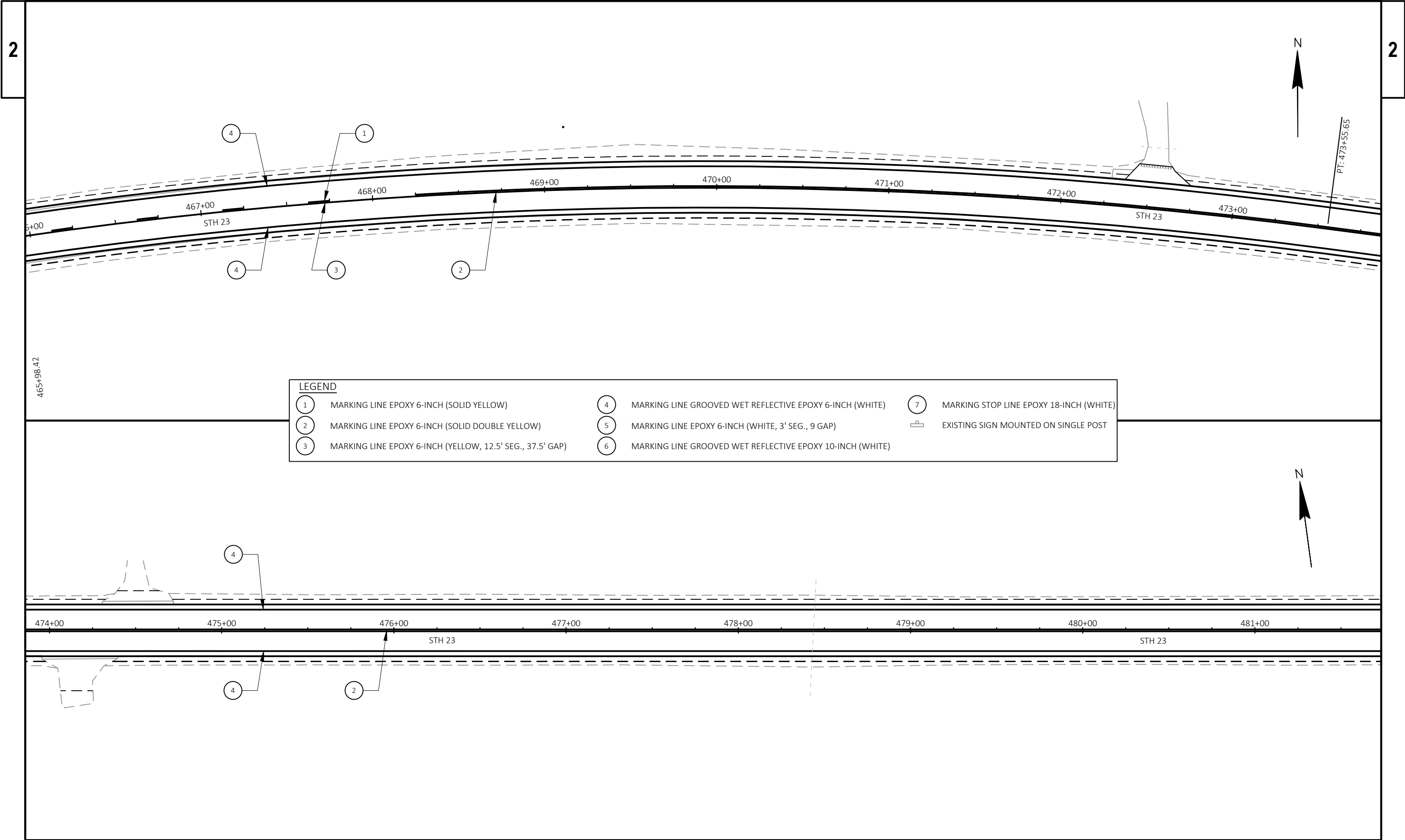


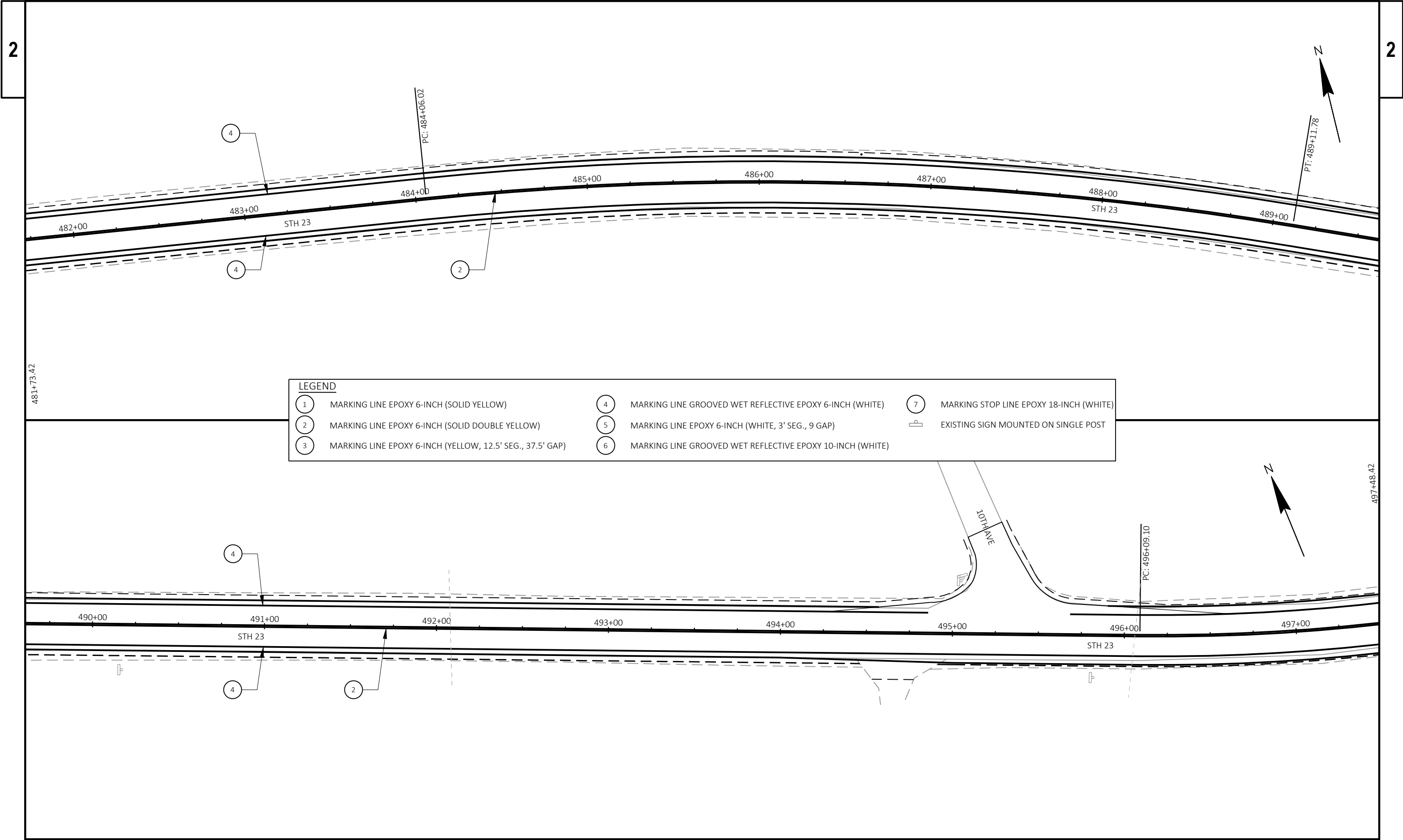


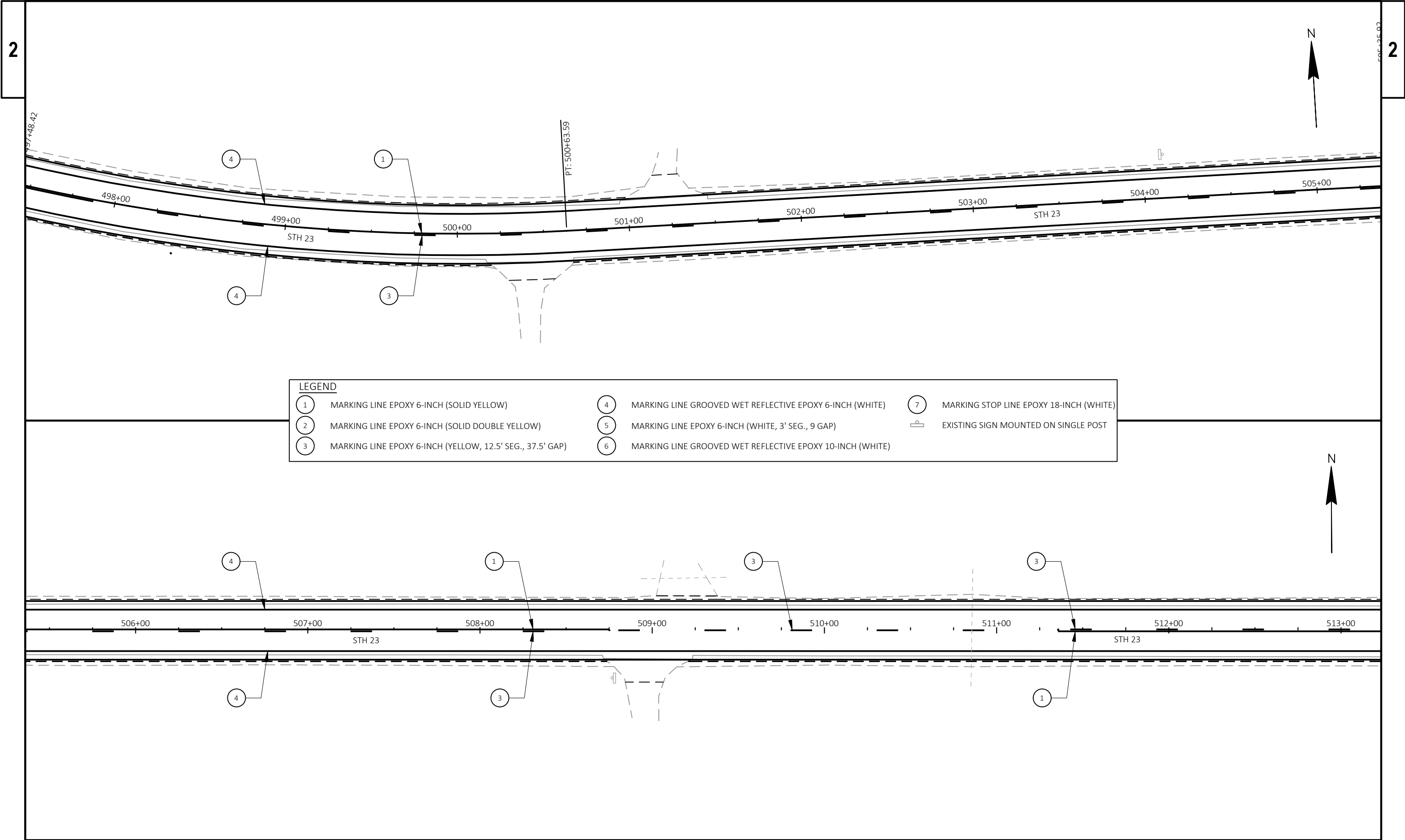




LEGEND					
	MARKING LINE EPOXY 6-INCH (SOLID YELLOW)		MARKING LINE GROOVED WET REFLECTIVE EPOXY 6-INCH (WHITE)		MARKING STOP LINE EPOXY 18-INCH (WHITE)
	MARKING LINE EPOXY 6-INCH (SOLID DOUBLE YELLOW)		MARKING LINE EPOXY 6-INCH (WHITE, 3' SEG., 9 GAP)		EXISTING SIGN MOUNTED ON SINGLE POST
	MARKING LINE EPOXY 6-INCH (YELLOW, 12.5' SEG., 37.5' GAP)		MARKING LINE GROOVED WET REFLECTIVE EPOXY 10-INCH (WHITE)		



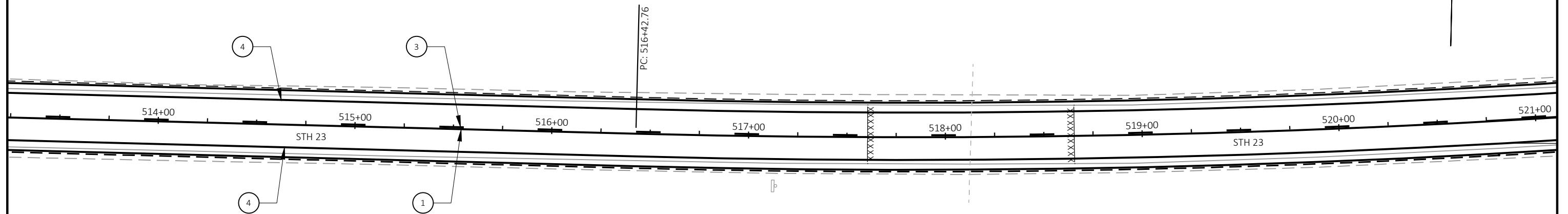




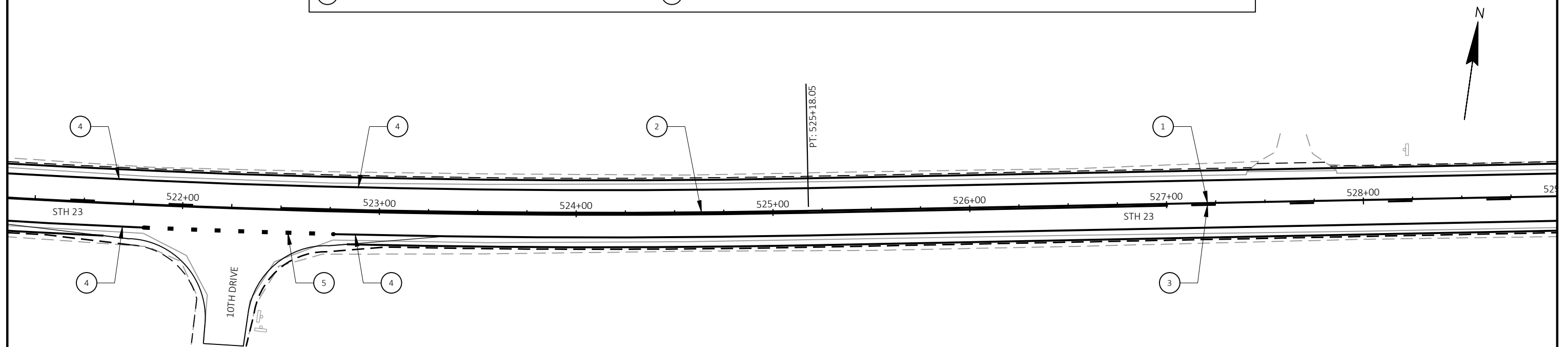
LEGEND					
	MARKING LINE EPOXY 6-INCH (SOLID YELLOW)		MARKING LINE GROOVED WET REFLECTIVE EPOXY 6-INCH (WHITE)		MARKING STOP LINE EPOXY 18-INCH (WHITE)
	MARKING LINE EPOXY 6-INCH (SOLID DOUBLE YELLOW)		MARKING LINE EPOXY 6-INCH (WHITE, 3' SEG., 9 GAP)		EXISTING SIGN MOUNTED ON SINGLE POST
	MARKING LINE EPOXY 6-INCH (YELLOW, 12.5' SEG., 37.5' GAP)		MARKING LINE GROOVED WET REFLECTIVE EPOXY 10-INCH (WHITE)		

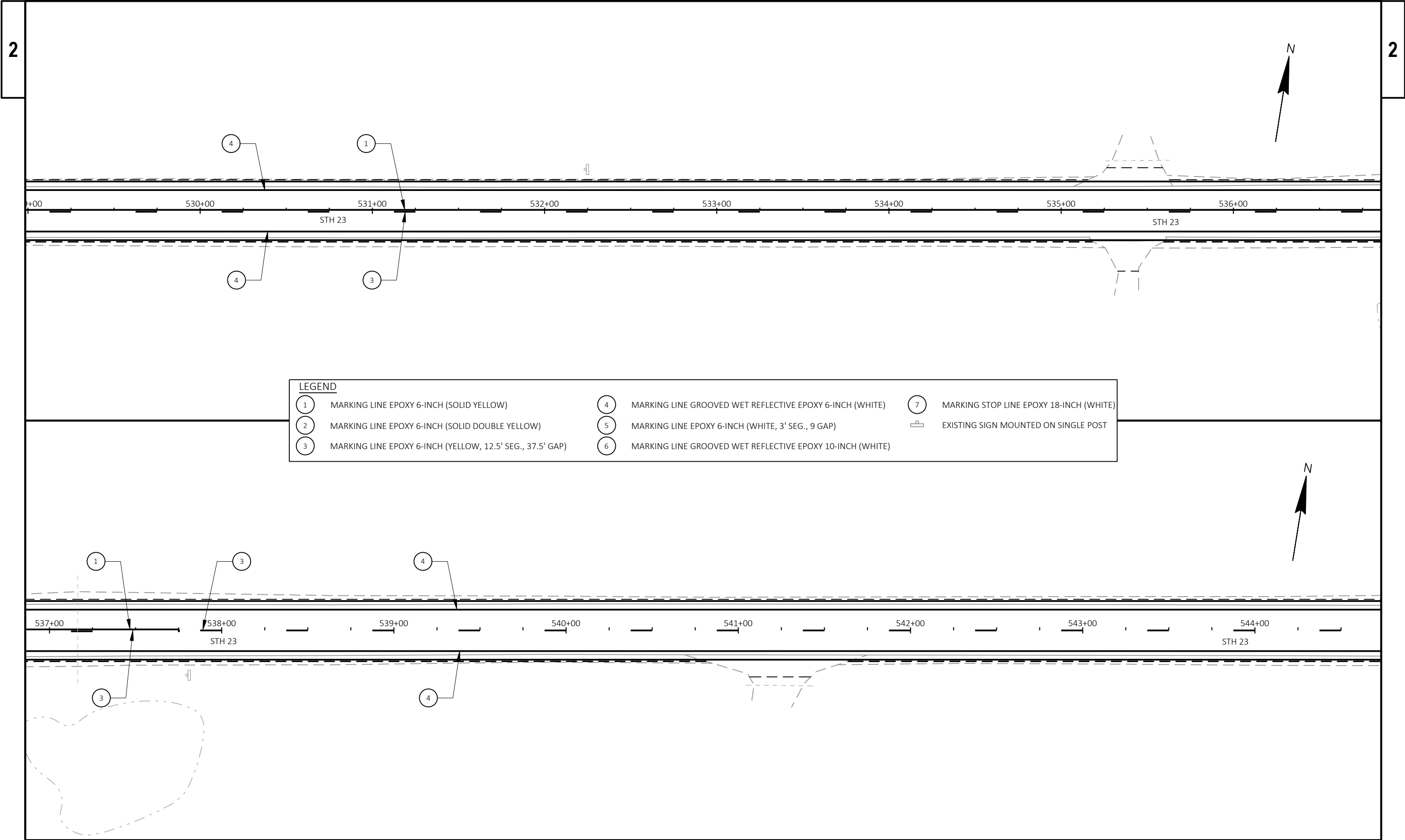
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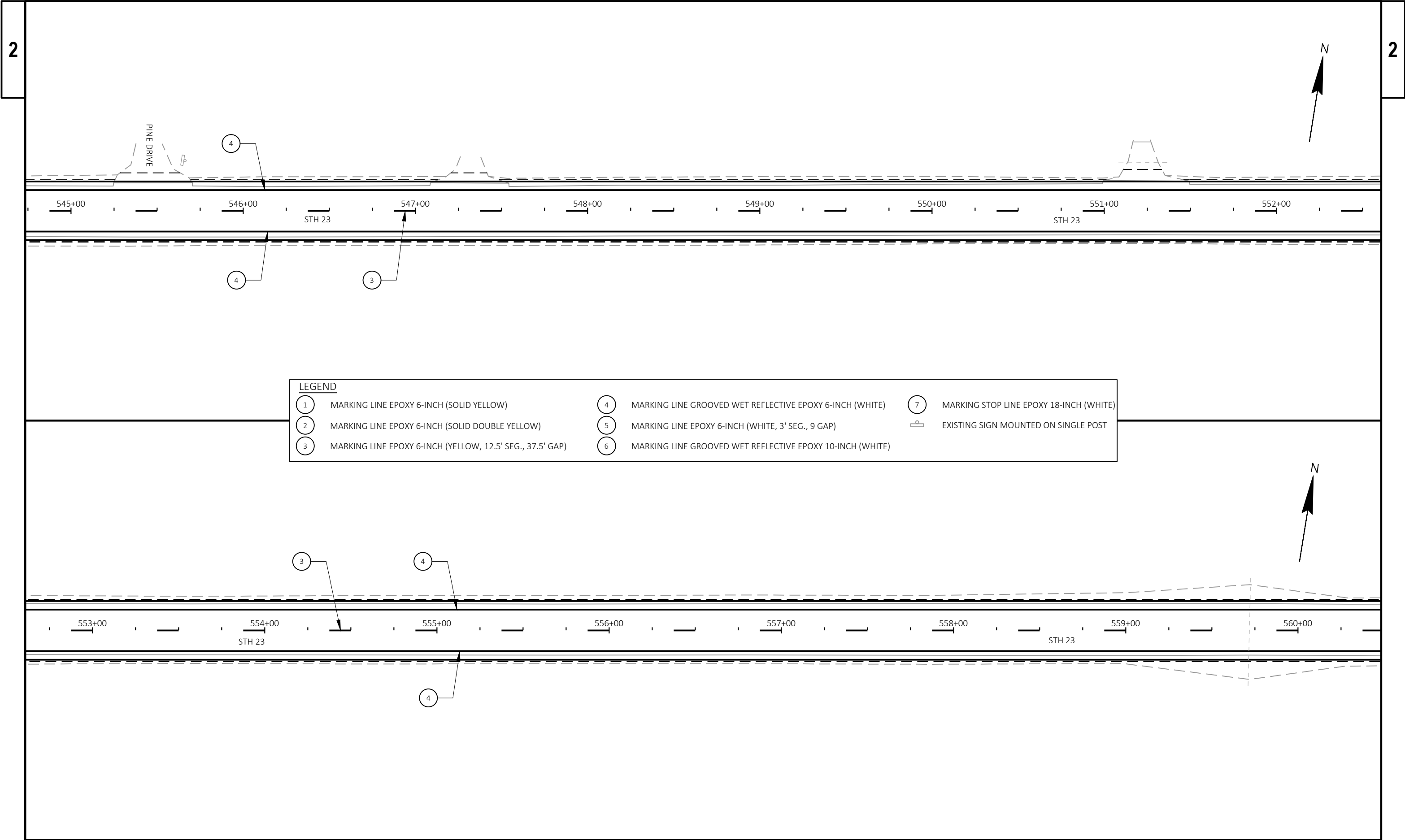
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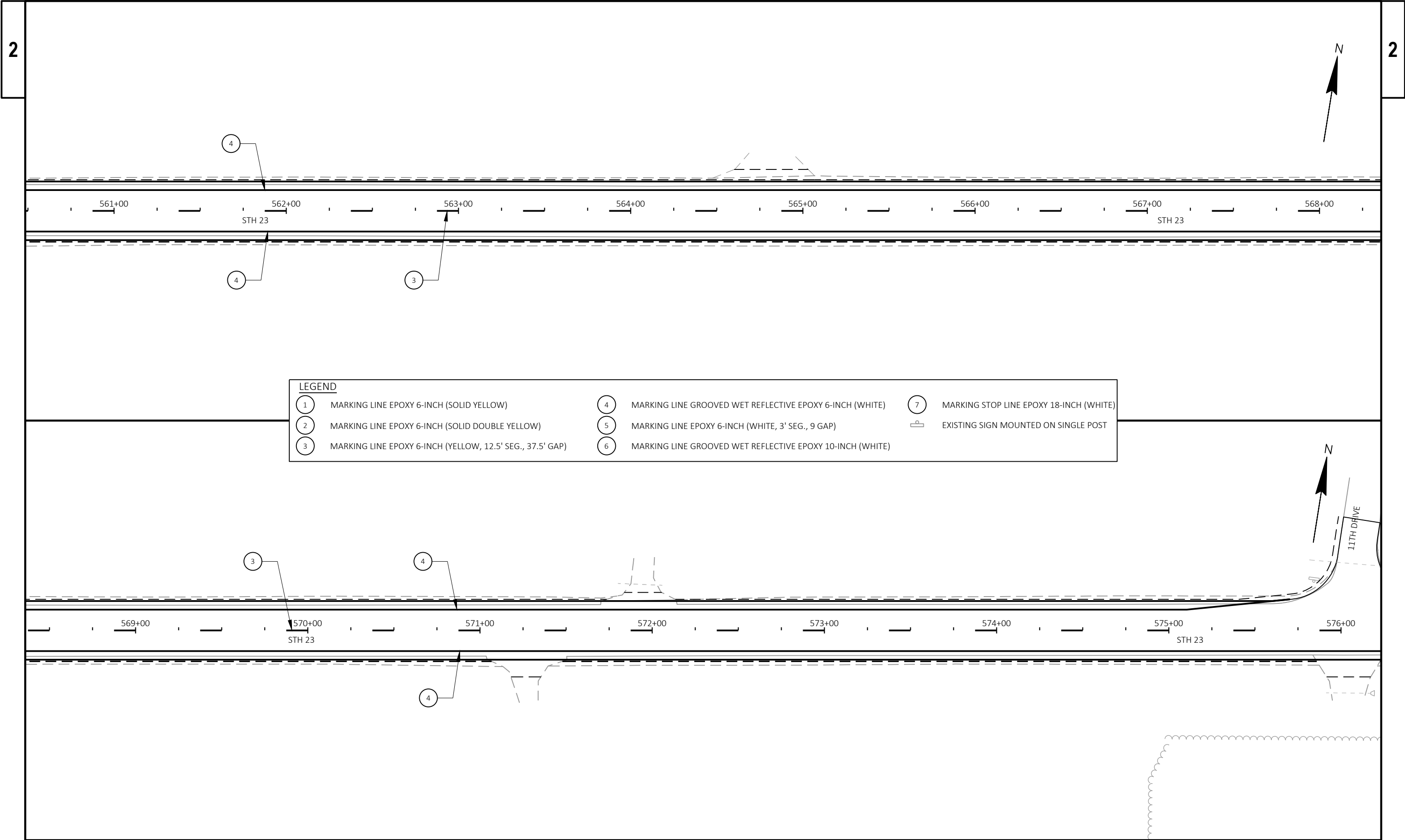
LEGEND			
	MARKING LINE EPOXY 6-INCH (SOLID YELLOW)		MARKING LINE GROOVED WET REFLECTIVE EPOXY 6-INCH (WHITE)
	MARKING LINE EPOXY 6-INCH (SOLID DOUBLE YELLOW)		MARKING LINE EPOXY 6-INCH (WHITE, 3' SEG., 9' GAP)
	MARKING LINE EPOXY 6-INCH (YELLOW, 12.5' SEG., 37.5' GAP)		MARKING LINE GROOVED WET REFLECTIVE EPOXY 10-INCH (WHITE)
			MARKING STOP LINE EPOXY 18-INCH (WHITE)
			EXISTING SIGN MOUNTED ON SINGLE POST



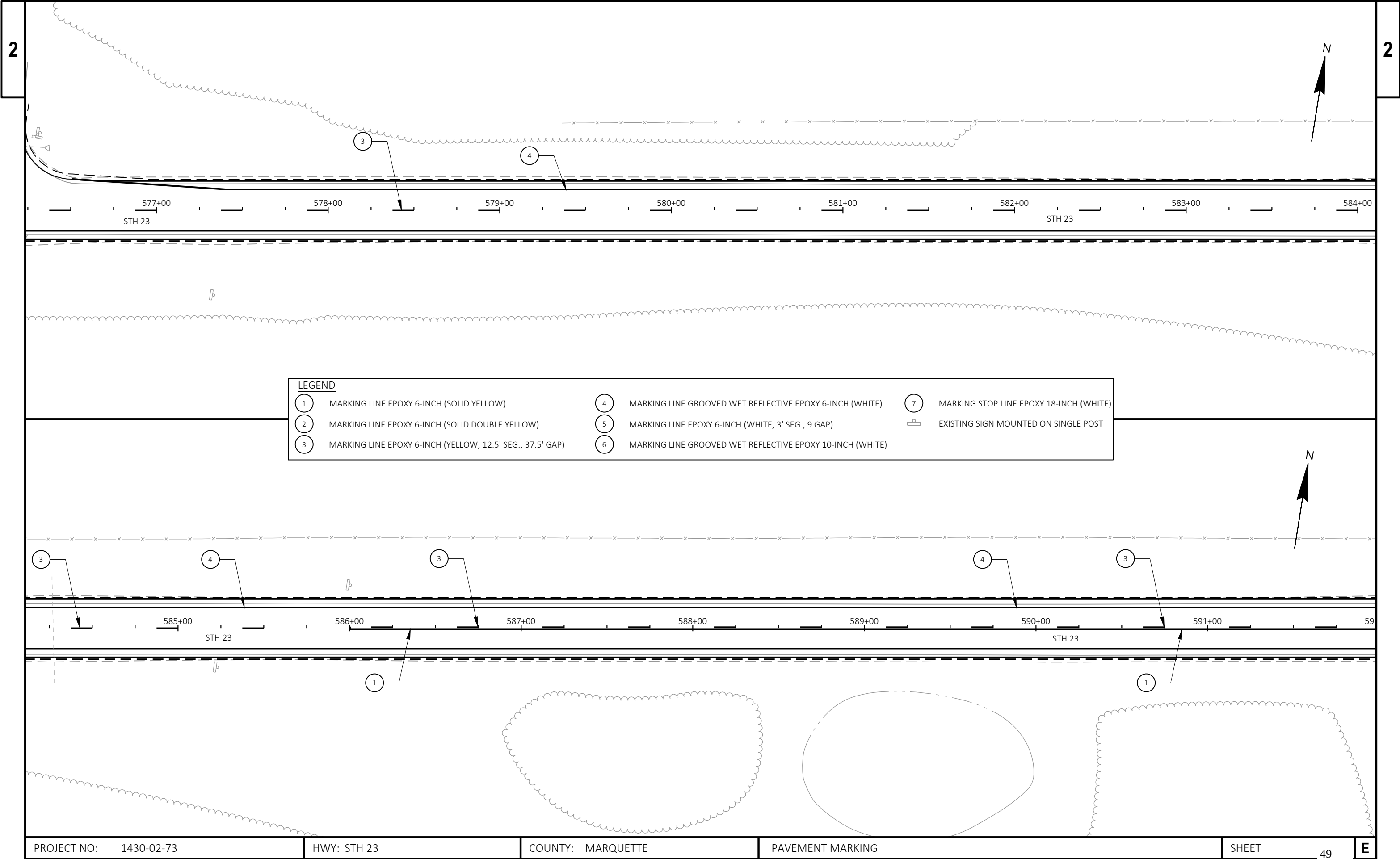




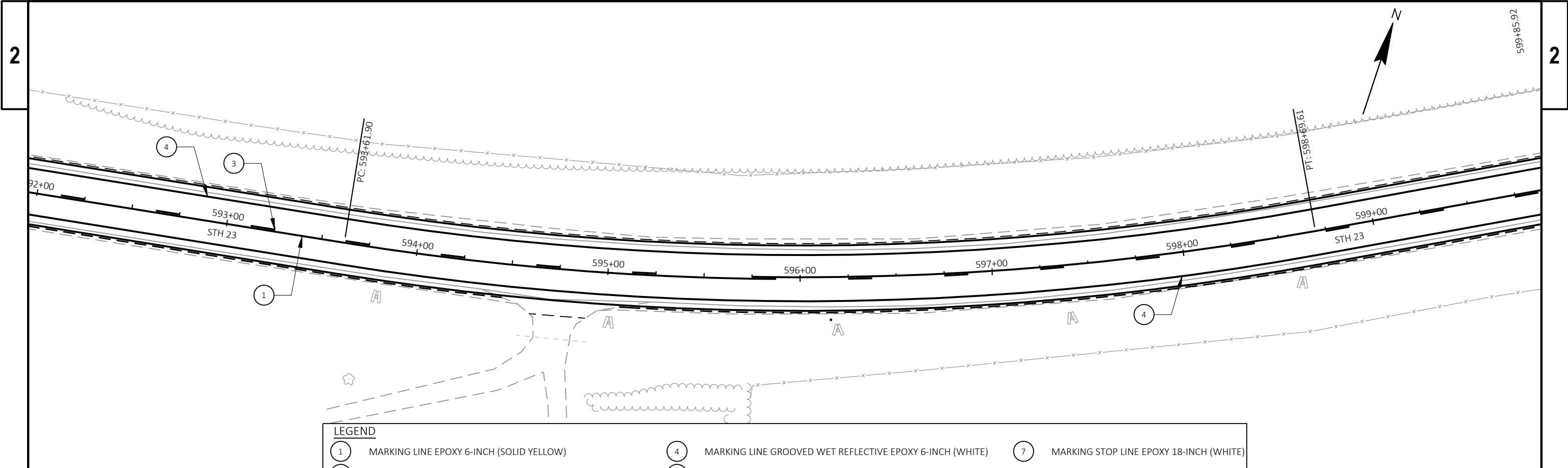
LEGEND					
	MARKING LINE EPOXY 6-INCH (SOLID YELLOW)		MARKING LINE GROOVED WET REFLECTIVE EPOXY 6-INCH (WHITE)		MARKING STOP LINE EPOXY 18-INCH (WHITE)
	MARKING LINE EPOXY 6-INCH (SOLID DOUBLE YELLOW)		MARKING LINE EPOXY 6-INCH (WHITE, 3' SEG., 9 GAP)		EXISTING SIGN MOUNTED ON SINGLE POST
	MARKING LINE EPOXY 6-INCH (YELLOW, 12.5' SEG., 37.5' GAP)		MARKING LINE GROOVED WET REFLECTIVE EPOXY 10-INCH (WHITE)		



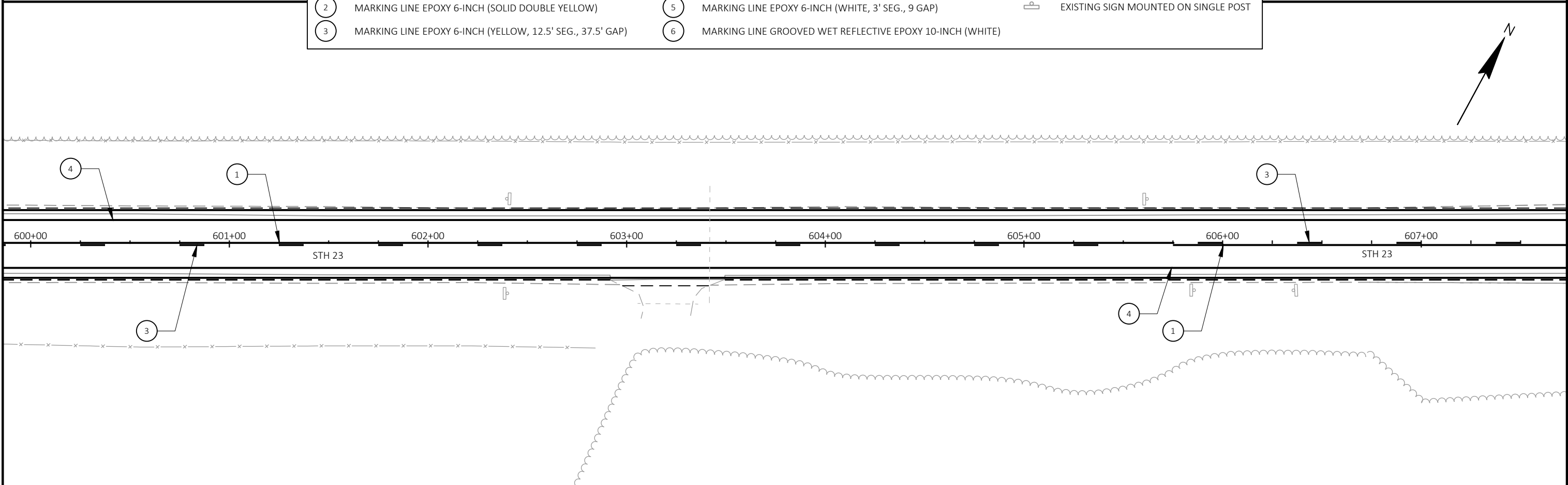
LEGEND					
	MARKING LINE EPOXY 6-INCH (SOLID YELLOW)		MARKING LINE GROOVED WET REFLECTIVE EPOXY 6-INCH (WHITE)		MARKING STOP LINE EPOXY 18-INCH (WHITE)
	MARKING LINE EPOXY 6-INCH (SOLID DOUBLE YELLOW)		MARKING LINE EPOXY 6-INCH (WHITE, 3' SEG., 9 GAP)		EXISTING SIGN MOUNTED ON SINGLE POST
	MARKING LINE EPOXY 6-INCH (YELLOW, 12.5' SEG., 37.5' GAP)		MARKING LINE GROOVED WET REFLECTIVE EPOXY 10-INCH (WHITE)		

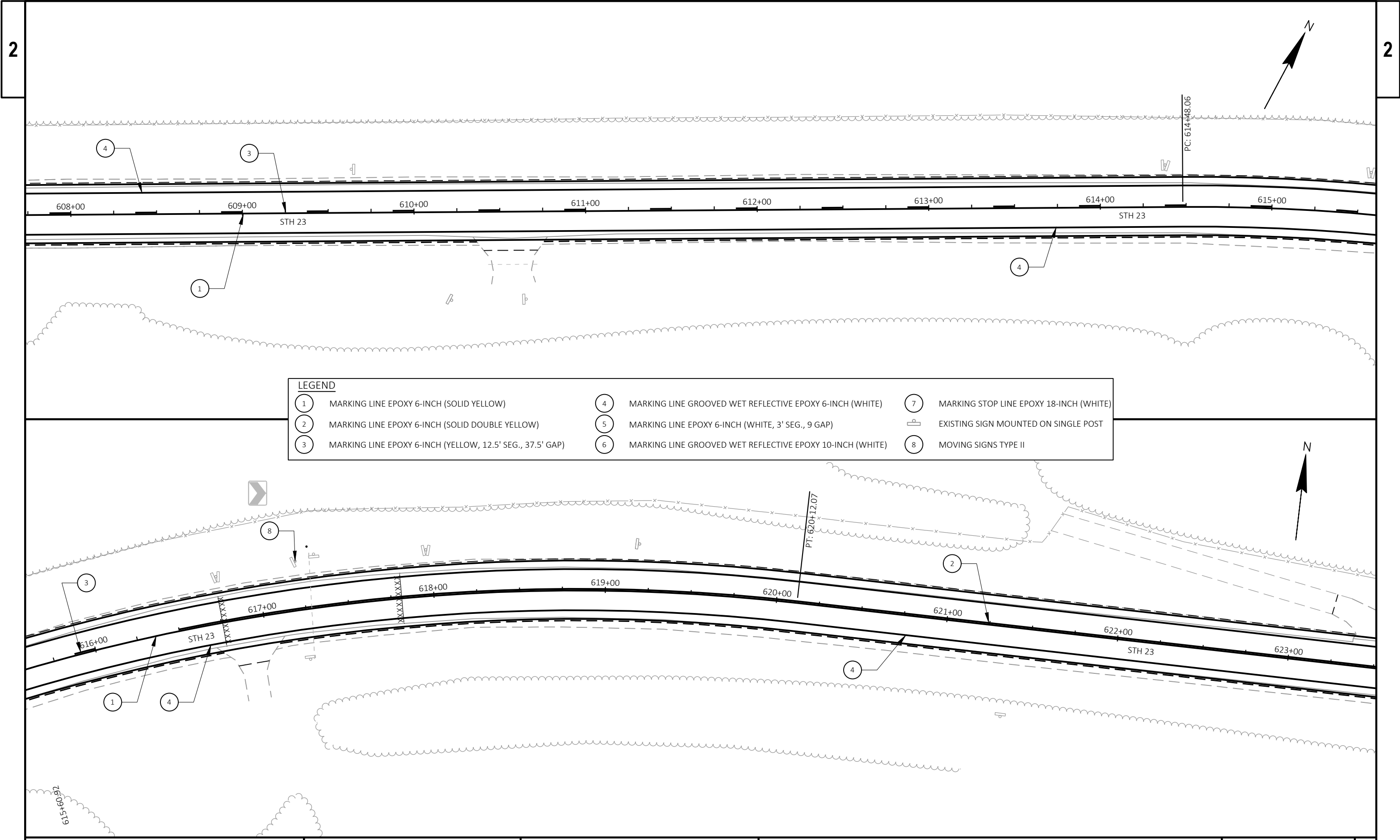


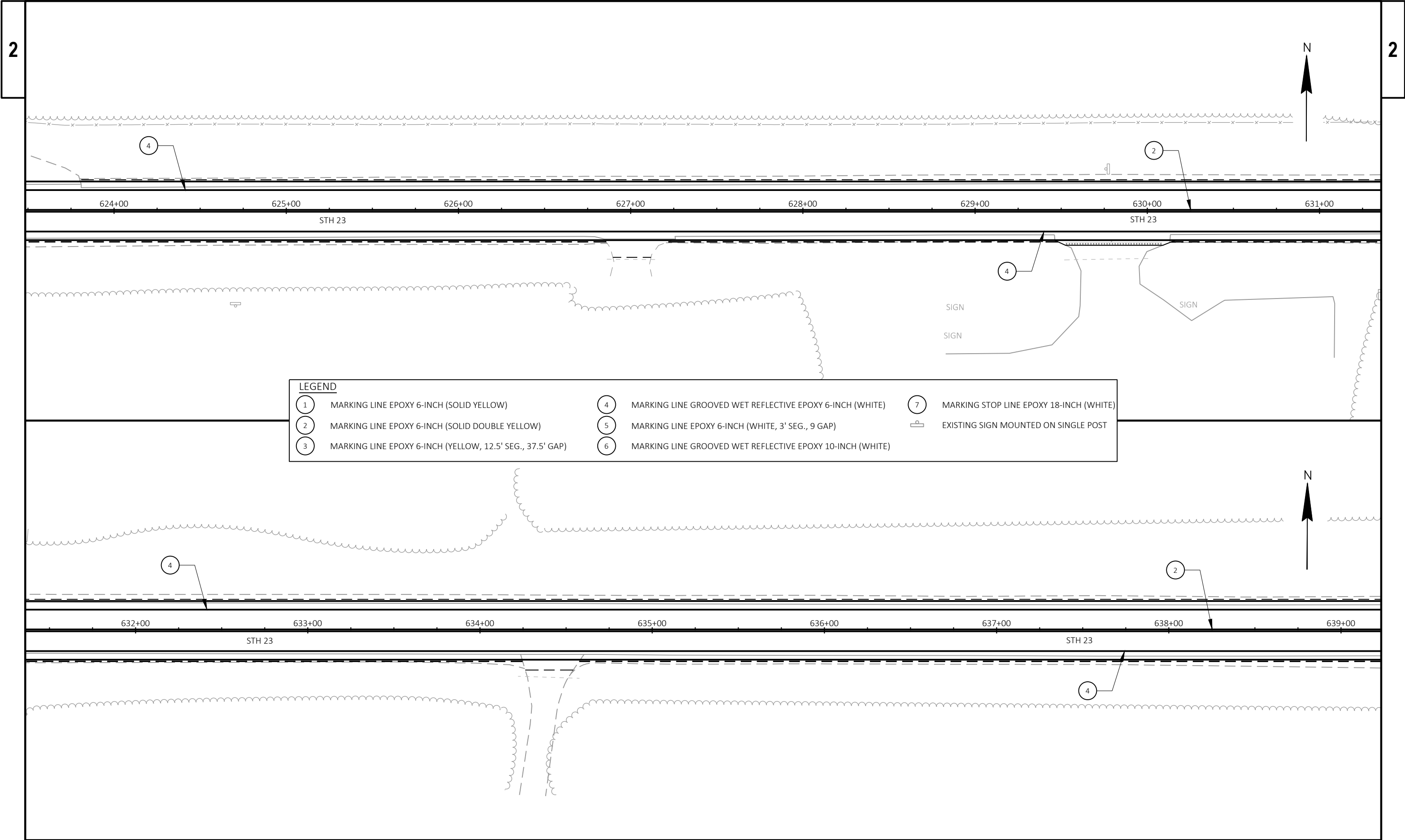
LEGEND					
	MARKING LINE EPOXY 6-INCH (SOLID YELLOW)		MARKING LINE GROOVED WET REFLECTIVE EPOXY 6-INCH (WHITE)		MARKING STOP LINE EPOXY 18-INCH (WHITE)
	MARKING LINE EPOXY 6-INCH (SOLID DOUBLE YELLOW)		MARKING LINE EPOXY 6-INCH (WHITE, 3' SEG., 9 GAP)		EXISTING SIGN MOUNTED ON SINGLE POST
	MARKING LINE EPOXY 6-INCH (YELLOW, 12.5' SEG., 37.5' GAP)		MARKING LINE GROOVED WET REFLECTIVE EPOXY 10-INCH (WHITE)		



LEGEND					
1	MARKING LINE EPOXY 6-INCH (SOLID YELLOW)	4	MARKING LINE GROOVED WET REFLECTIVE EPOXY 6-INCH (WHITE)	7	MARKING STOP LINE EPOXY 18-INCH (WHITE)
2	MARKING LINE EPOXY 6-INCH (SOLID DOUBLE YELLOW)	5	MARKING LINE EPOXY 6-INCH (WHITE, 3' SEG., 9 GAP)		EXISTING SIGN MOUNTED ON SINGLE POST
3	MARKING LINE EPOXY 6-INCH (YELLOW, 12.5' SEG., 37.5' GAP)	6	MARKING LINE GROOVED WET REFLECTIVE EPOXY 10-INCH (WHITE)		







LEGEND

1

MARKING LINE EPOXY 6-INCH (SOLID YELLOW)

2

MARKING LINE EPOXY 6-INCH (SOLID DOUBLE YELLOW)

3

MARKING LINE EPOXY 6-INCH (YELLOW, 12.5' SEG., 37.5' GAP)

4

MARKING LINE GROOVED WET REFLECTIVE EPOXY 6-INCH (WHITE)

5

MARKING LINE EPOXY 6-INCH (WHITE, 3' SEG., 9 GAP)

6

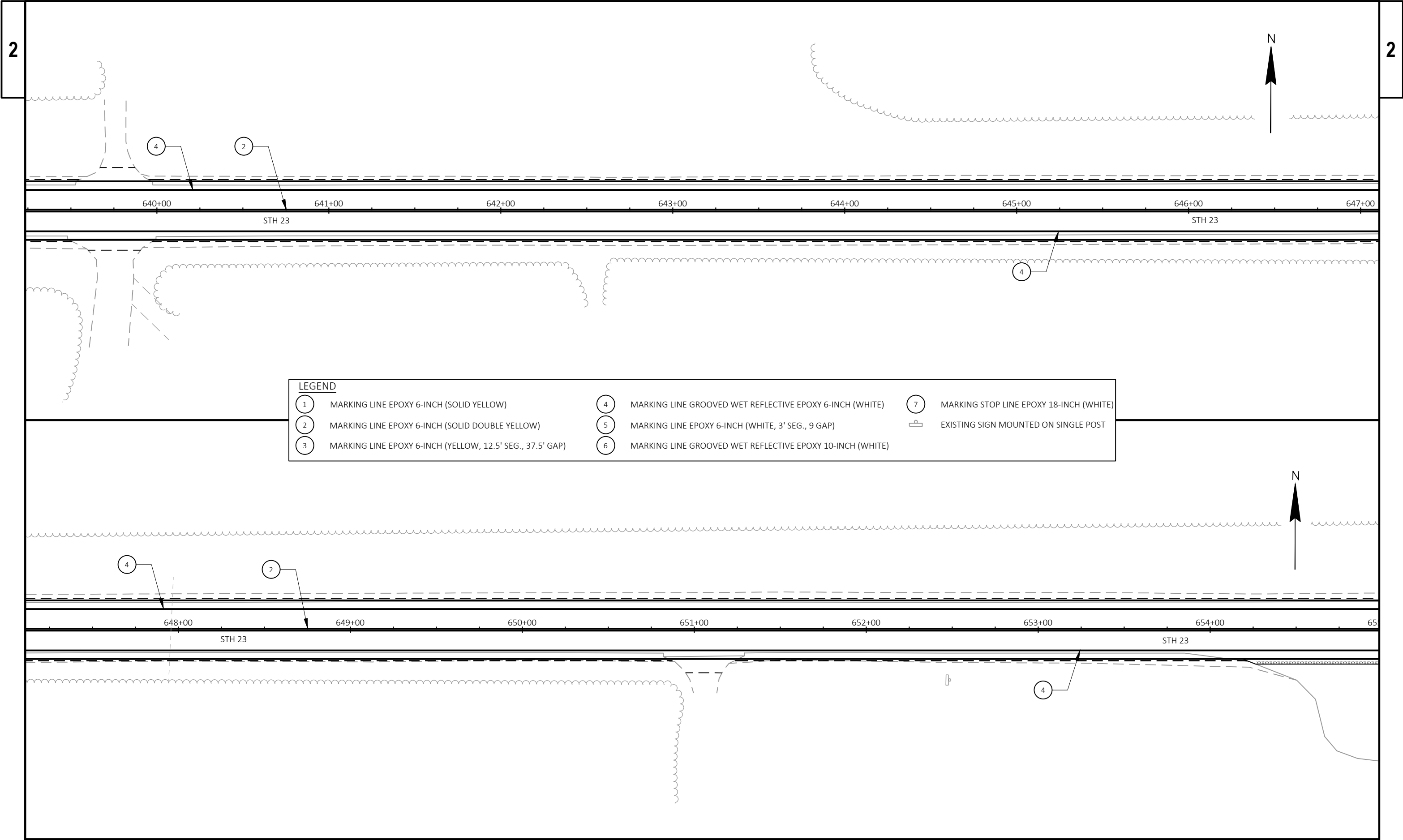
MARKING LINE GROOVED WET REFLECTIVE EPOXY 10-INCH (WHITE)

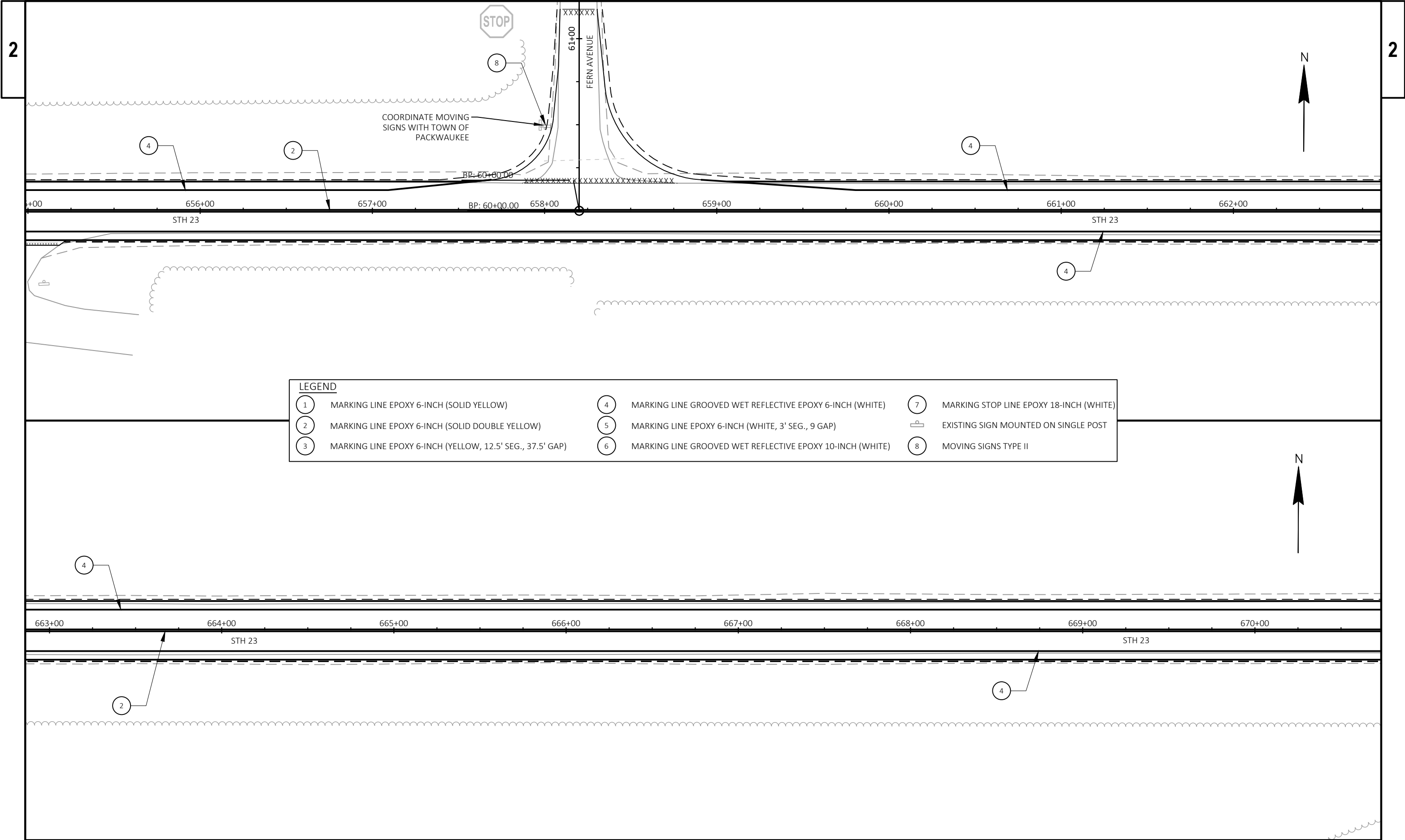
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MARKING STOP LINE EPOXY 18-INCH (WHITE)

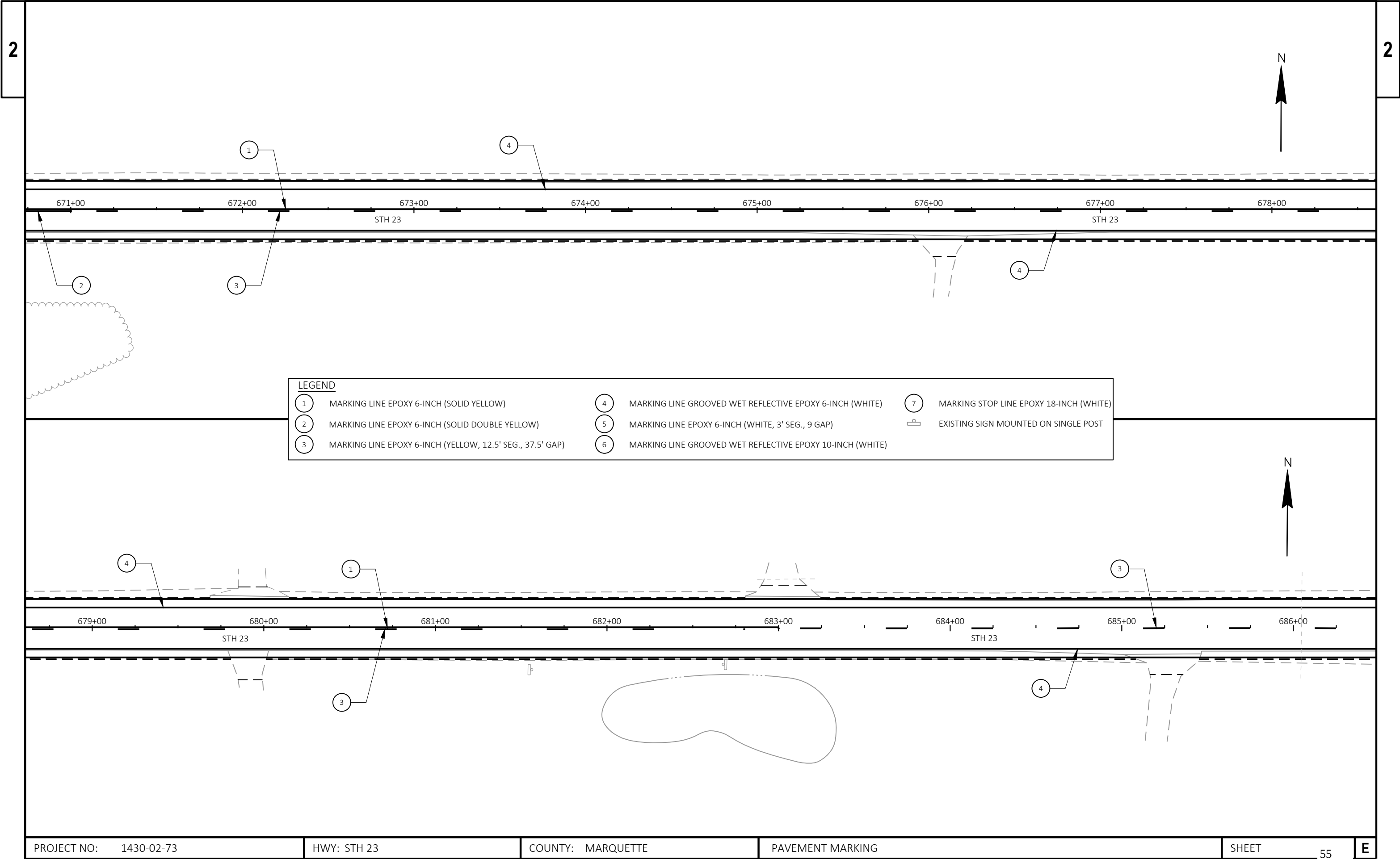


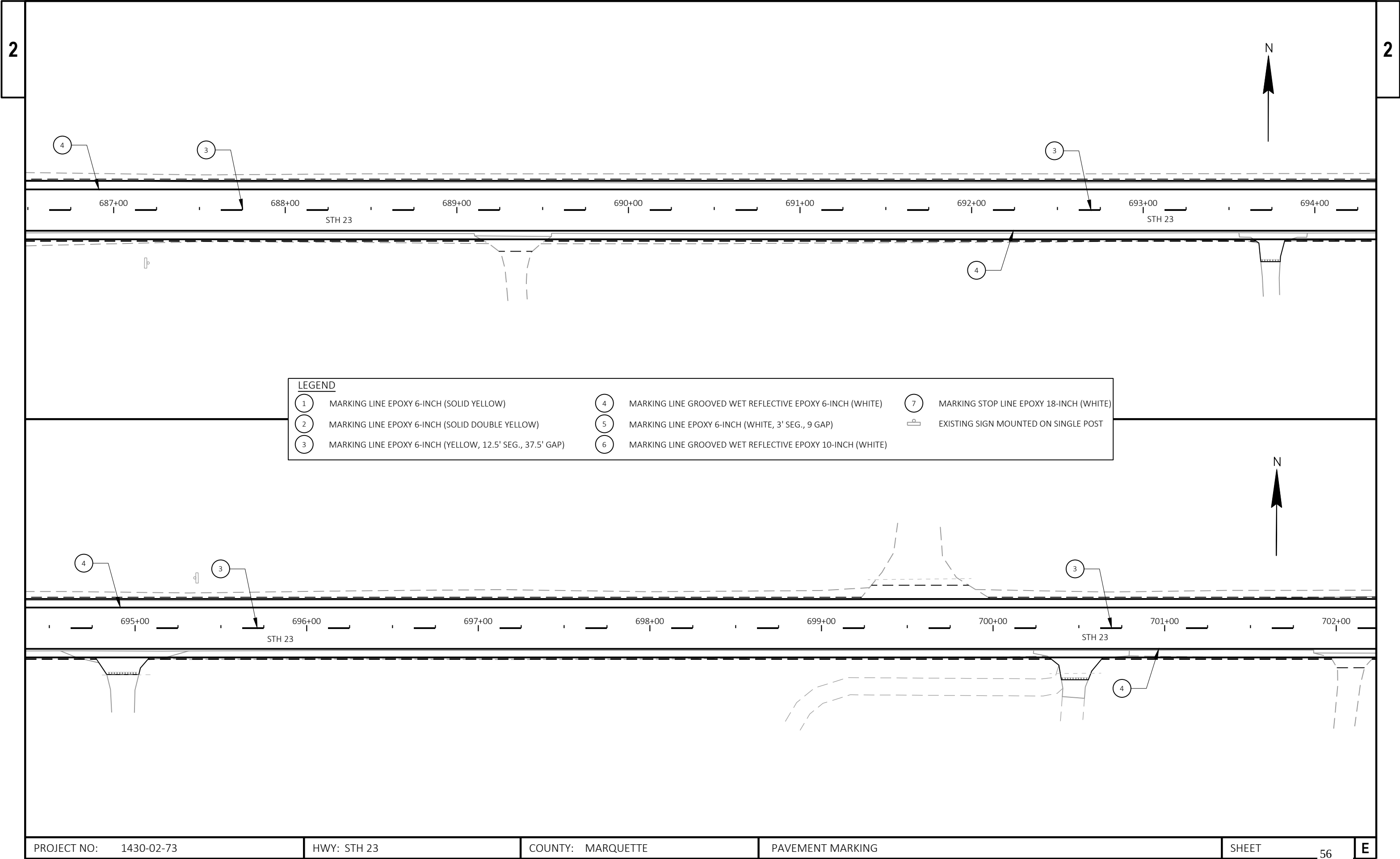
EXISTING SIGN MOUNTED ON SINGLE POST

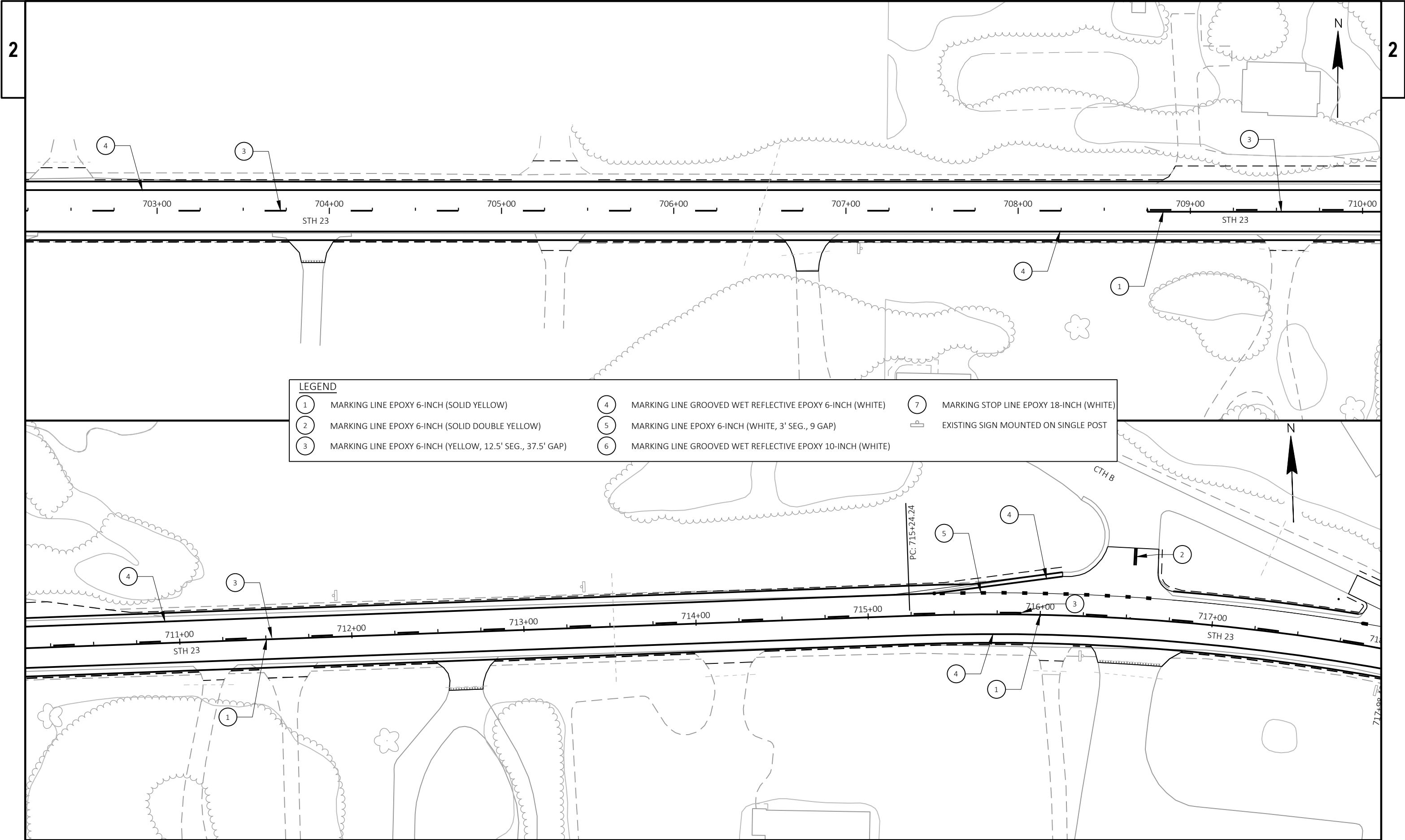




LEGEND					
	MARKING LINE EPOXY 6-INCH (SOLID YELLOW)		MARKING LINE GROOVED WET REFLECTIVE EPOXY 6-INCH (WHITE)		MARKING STOP LINE EPOXY 18-INCH (WHITE)
	MARKING LINE EPOXY 6-INCH (SOLID DOUBLE YELLOW)		MARKING LINE EPOXY 6-INCH (WHITE, 3' SEG., 9 GAP)		EXISTING SIGN MOUNTED ON SINGLE POST
	MARKING LINE EPOXY 6-INCH (YELLOW, 12.5' SEG., 37.5' GAP)		MARKING LINE GROOVED WET REFLECTIVE EPOXY 10-INCH (WHITE)		MOVING SIGNS TYPE II

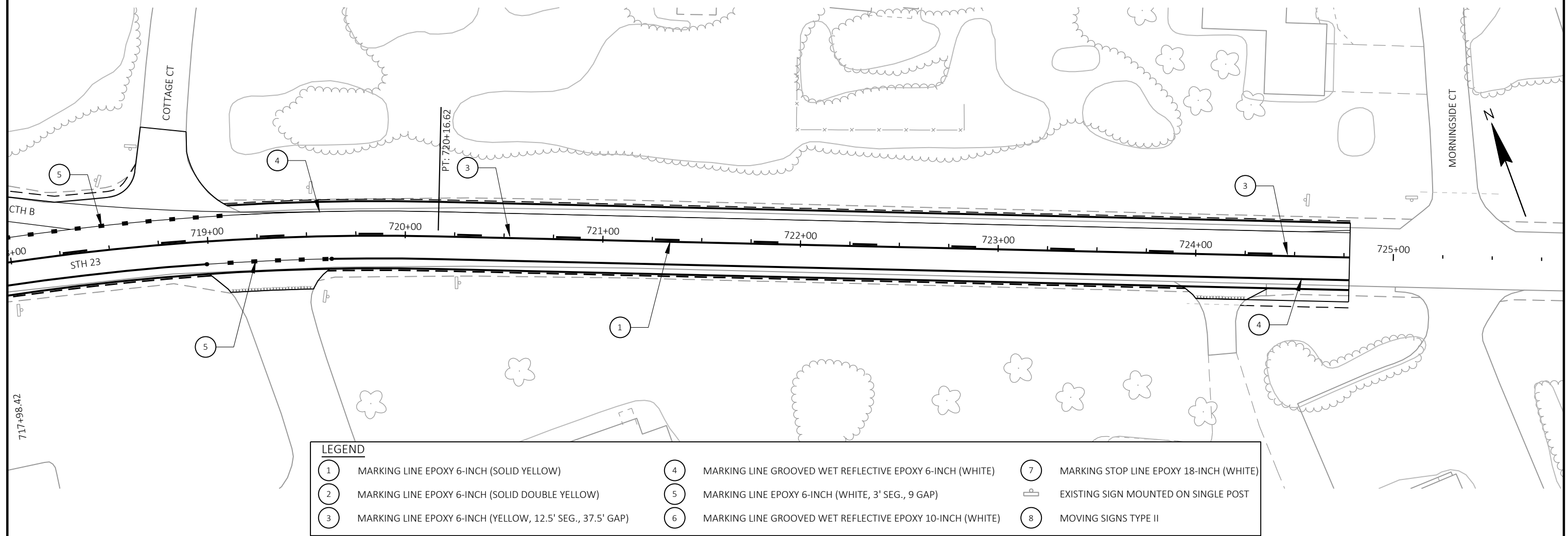






LEGEND

1	MARKING LINE EPOXY 6-INCH (SOLID YELLOW)	4	MARKING LINE GROOVED WET REFLECTIVE EPOXY 6-INCH (WHITE)	7	MARKING STOP LINE EPOXY 18-INCH (WHITE)
2	MARKING LINE EPOXY 6-INCH (SOLID DOUBLE YELLOW)	5	MARKING LINE EPOXY 6-INCH (WHITE, 3' SEG., 9 GAP)		EXISTING SIGN MOUNTED ON SINGLE POST
3	MARKING LINE EPOXY 6-INCH (YELLOW, 12.5' SEG., 37.5' GAP)	6	MARKING LINE GROOVED WET REFLECTIVE EPOXY 10-INCH (WHITE)		



GENERAL NOTES

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

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS.

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

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

SEE SDD "TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 MPH OR GREATER UNDIVIDED ROAD OPEN TO TRAFFIC" FROM WEST PROJECT LIMITS TO STA 704+69.

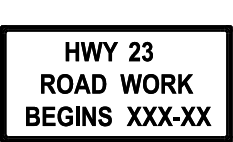
SEE SDD "TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 MPH OR LESS TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC" FROM STA 704+69 TO EAST PROJECT LIMITS.

SEE SDD "TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION" FOR FLAGGING OPERATIONS AT CULVERT REPLACEMENT LOCATIONS.

SEE SDD "TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACE."

SEE SDD "TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH LOOSE GRAVEL."

INSTALL G20-57 SIGNS AT PROJECT TERMINI 7 DAYS PRIOR TO BEGINNING CONSTRUCTION AND REMOVE WHEN CONSTRUCTION BEGINS.



G20-57
72"X36"

1



W20-1A

2



W20-1C

3



W20-1D

4

END
ROAD WORK

G20-2A
48"X24"

5

ROAD WORK
NEXT 7 MILES

G20-1
60"X24"

6

GROOVED
PAVEMENT

WO8-15

7



WO8-1



WO16-7L
48"X24"

8



WO8-1

9



WO8-7

10

SEE SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES."

SEE SDD "BARRICADES AND SIGNS FOR SIDEROAD CLOSURES."

SEE SDD "TRAFFIC CONTROL, DROP-OFF SIGNING."

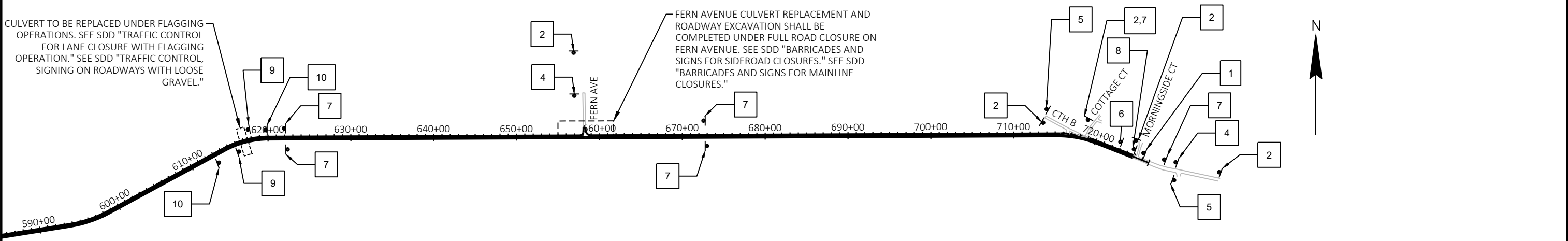
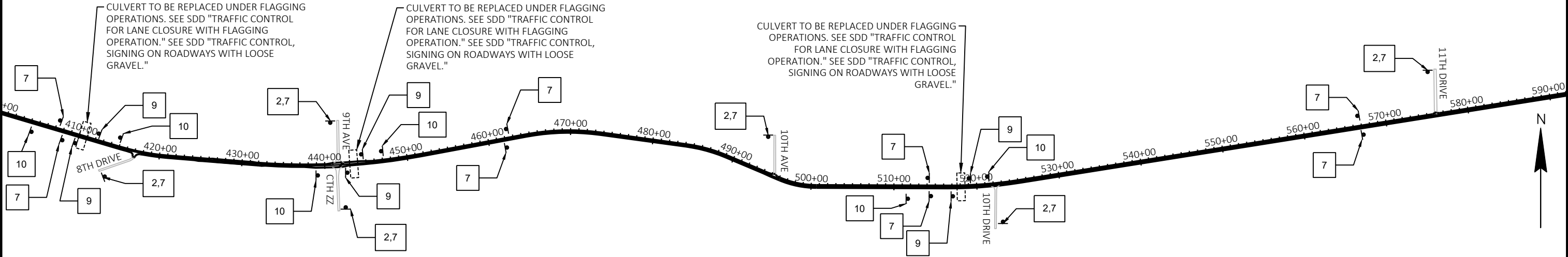
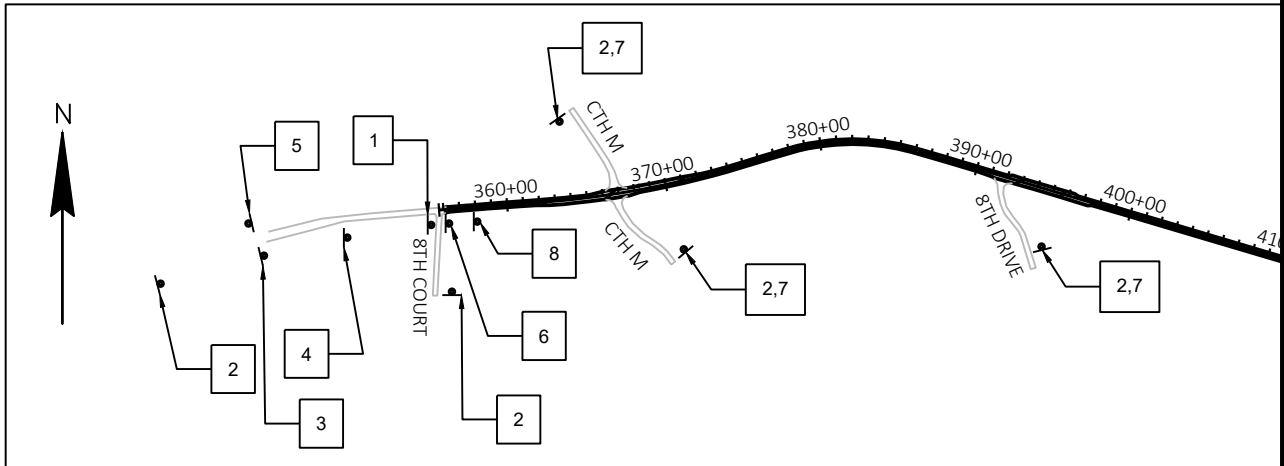
SIGNS 7, 8, 9, AND 10 SHALL ONLY BE INSTALLED WHILE CONDITION IS PRESENT.
SIGNS SHALL BE REMOVED WHEN NOT IN USE.

LEGEND

SIGN ON PERMANENT SUPPORT



WORK AREA



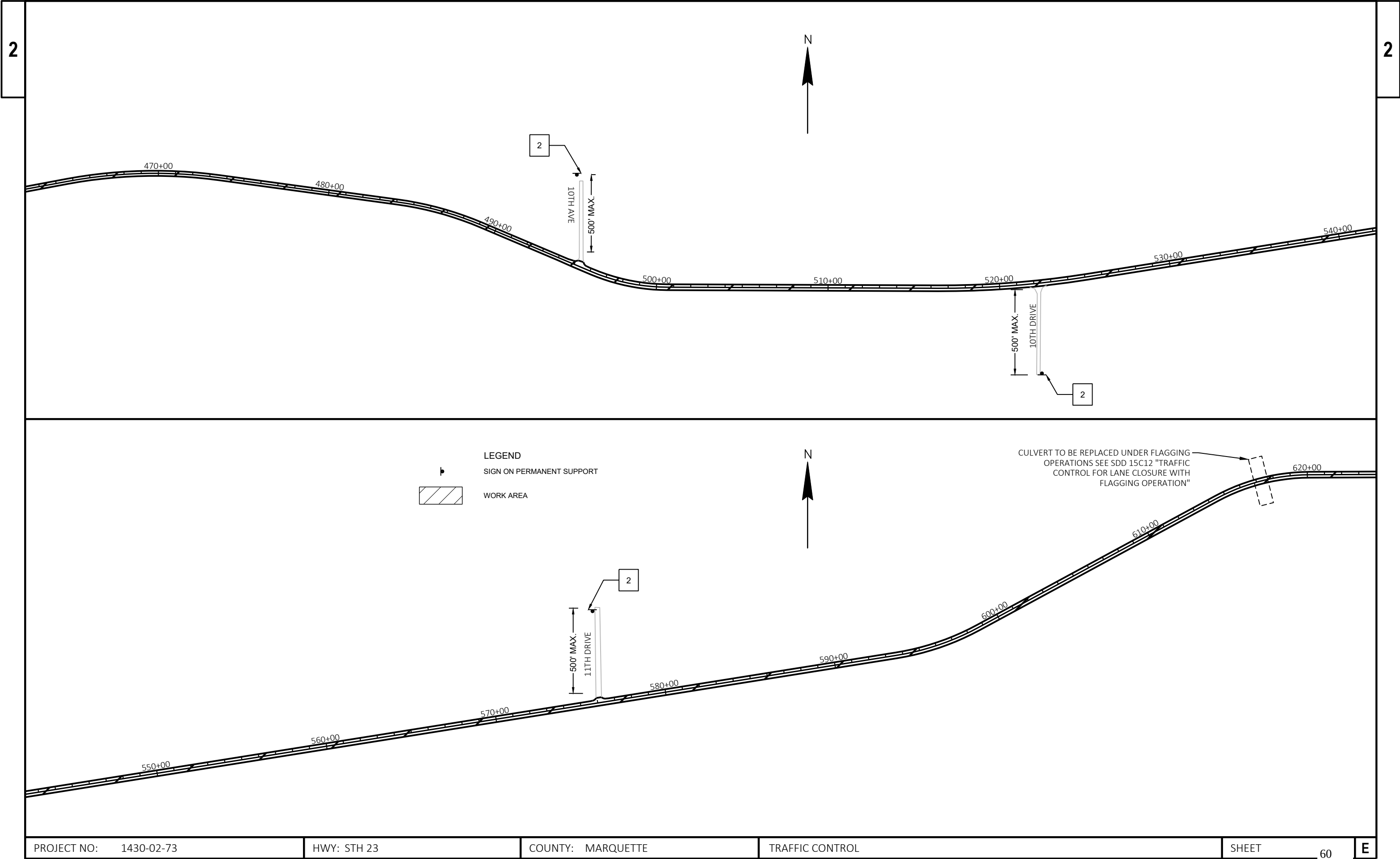
PROJECT NO: 1430-02-73

HWY: STH 23

COUNTY: MARQUETTE

TRAFFIC CONTROL

SHEET



2

2



PROJECT NO:	1430-02-73
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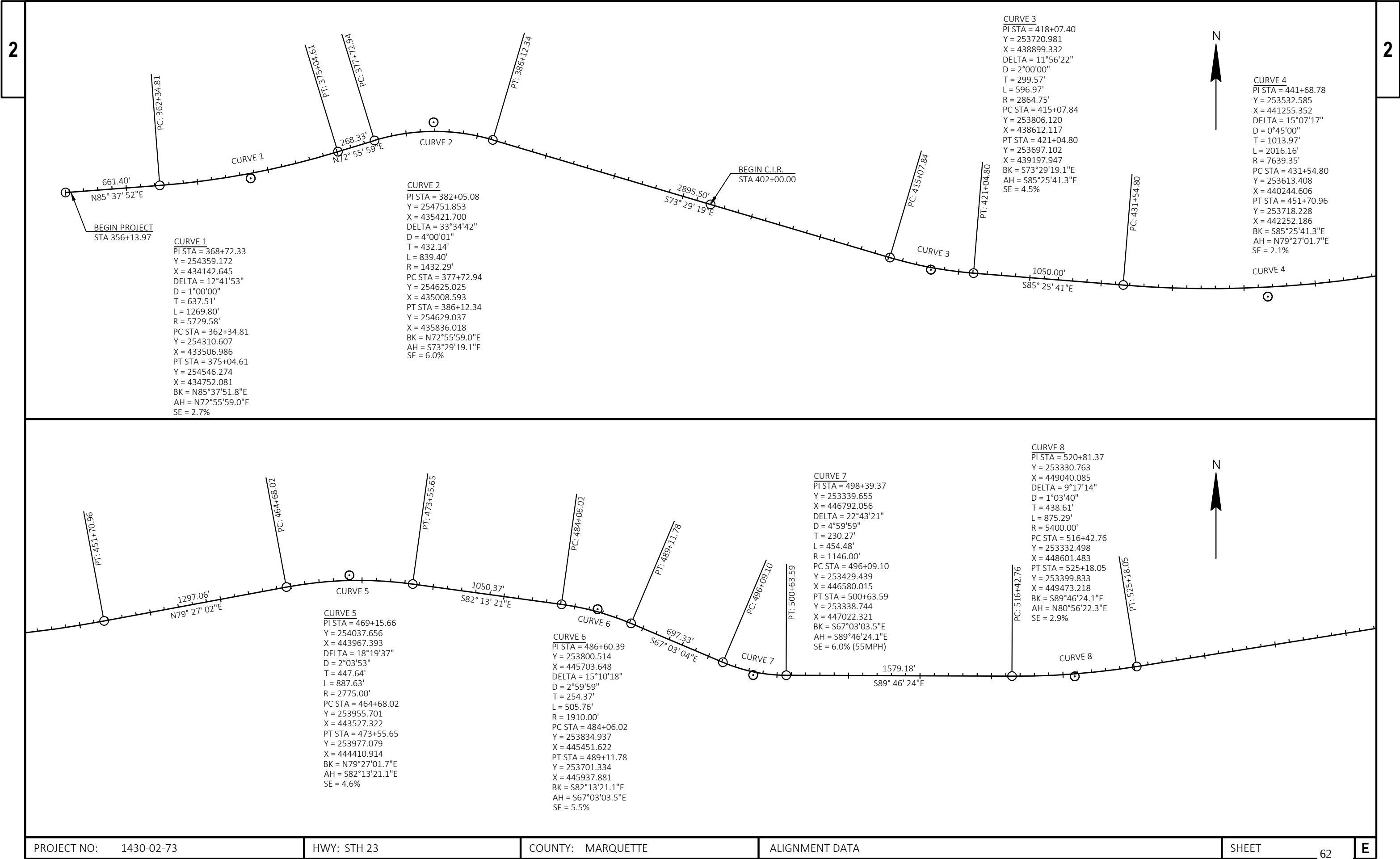
HWY: STH 23

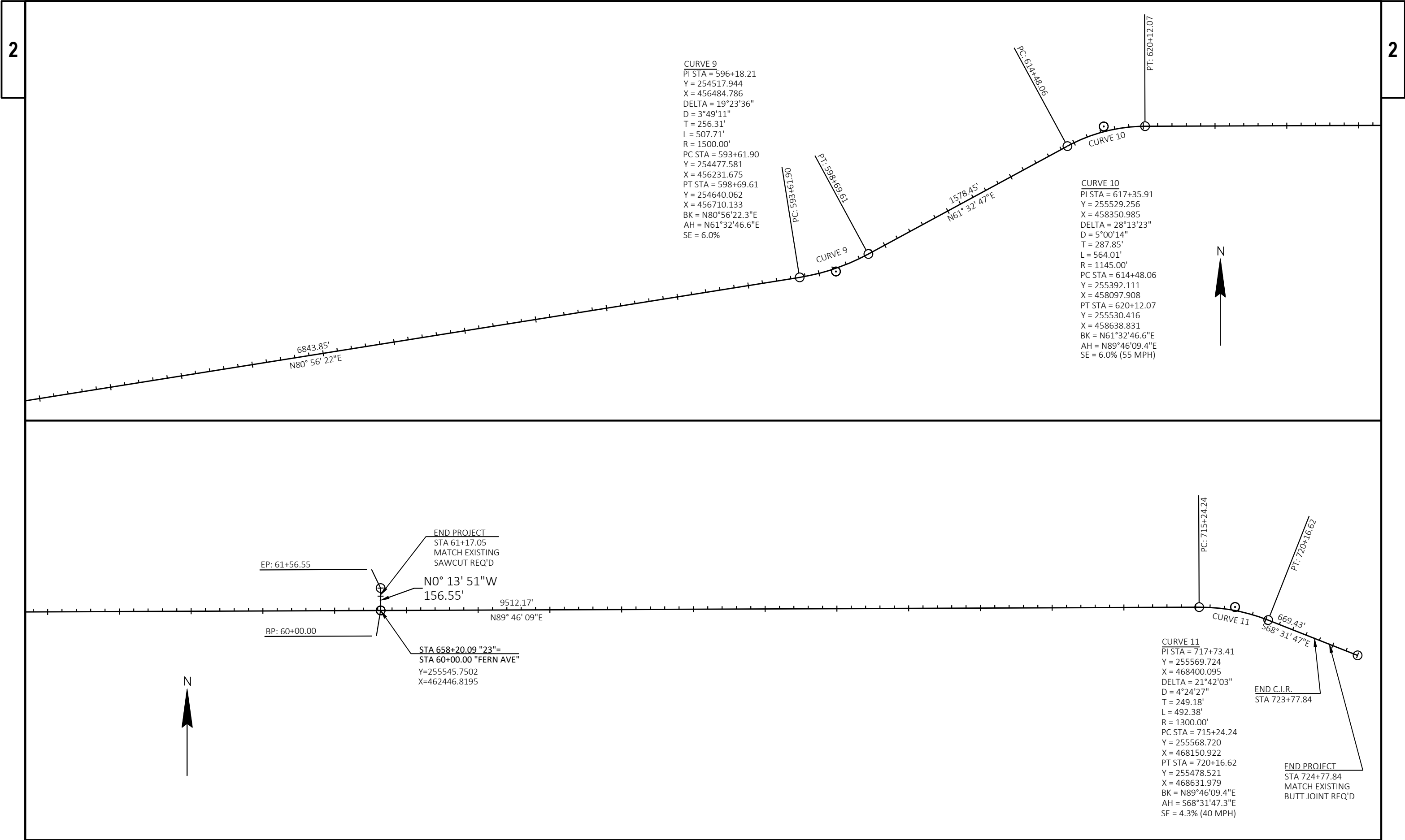
COUNTY: MARQUETTE

TRAFFIC CONTROL

SHEET	61	E
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WISDOT/CADDS SHEET 44





Superelevation Region	Station	Description	Left Outside Shoulder	Left Outside Lane	Left Inside Lane	Left Inside Shoulder	Right Outside Shoulder	Right Outside Lane
	355+73.42'	Begin Alignment	-4.00%	-2.00%	0.00%	0.00%	-4.00%	-2.00%
1	361+33.48'	End Normal Shoulder	-4.00%	-2.00%	0.00%	0.00%	-4.00%	-2.00%
1	361+33.48'	End Normal Crown	-4.00%	-2.00%	0.00%	0.00%	-4.00%	-2.00%
1	361+86.81'	Level Crown	-4.00%	-2.00%	0.00%	0.00%	0.00%	0.00%
1	362+40.15'	Reverse Crown	-4.00%	-2.00%	0.00%	0.00%	2.00%	2.00%
1	362+58.81'	Begin Full Super	-4.00%	-2.70%	0.00%	0.00%	2.70%	2.70%
1	374+80.62'	End Full Super	-4.00%	-2.70%	0.00%	0.00%	2.70%	2.70%
1	374+99.28'	Reverse Crown	-4.00%	-2.00%	0.00%	0.00%	2.00%	2.00%
1	375+52.62'	Level Crown	-4.00%	-2.00%	0.00%	0.00%	0.00%	0.00%
1	376+05.95'	Begin Normal Crown	-4.00%	-2.00%	0.00%	0.00%	-4.00%	-2.00%
1	376+05.95'	Begin Normal Shoulder	-4.00%	-2.00%	0.00%	0.00%	-4.00%	-2.00%

Superelevation Region	Station	Description	Left Outside Shoulder	Left Outside Lane	Left Inside Lane	Left Inside Shoulder	Right Outside Shoulder	Right Outside Lane
2	376+12.94'	End Normal Shoulder	-4.00%	-2.00%	0.00%	0.00%	-4.00%	-2.00%
2	376+12.94'	End Normal Crown	-4.00%	-2.00%	0.00%	0.00%	-4.00%	-2.00%
2	376+66.27'	Level Crown	0.00%	0.00%	0.00%	0.00%	-4.00%	-2.00%
2	377+19.60'	Reverse Crown	2.00%	2.00%	0.00%	0.00%	-4.00%	-2.00%
2	377+72.94'	Low Shoulder Match	4.00%	4.00%	0.00%	0.00%	-4.00%	-4.00%
2	378+26.27'	Begin Full Super	6.00%	6.00%	0.00%	0.00%	-6.00%	-6.00%
2	385+59.01'	End Full Super	6.00%	6.00%	0.00%	0.00%	-6.00%	-6.00%
2	386+12.34'	Low Shoulder Match	4.00%	4.00%	0.00%	0.00%	-4.00%	-4.00%
2	386+65.68'	Reverse Crown	2.00%	2.00%	0.00%	0.00%	-4.00%	-2.00%
2	387+19.01'	Level Crown	0.00%	0.00%	0.00%	0.00%	-4.00%	-2.00%
2	387+72.34'	Begin Normal Crown	-4.00%	-2.00%	0.00%	0.00%	-4.00%	-2.00%
2	387+72.34'	Begin Normal Shoulder	-4.00%	-2.00%	0.00%	0.00%	-4.00%	-2.00%

Superelevation Region	Station	Description	Left Outside Shoulder	Left Outside Lane	Left Inside Lane	Left Inside Shoulder	Right Outside Shoulder	Right Outside Lane
3	413+74.50'	End Normal Shoulder	-4.00%	-2.00%	0.00%	0.00%	-4.00%	-2.00%
3	413+74.50'	End Normal Crown	-4.00%	-2.00%	0.00%	0.00%	-4.00%	-2.00%
3	414+27.83'	Level Crown	-4.00%	-2.00%	0.00%	0.00%	0.00%	0.00%
3	414+81.17'	Reverse Crown	-4.00%	-2.00%	0.00%	0.00%	2.00%	2.00%
3	415+34.50'	Low Shoulder Match	-4.00%	-4.00%	0.00%	0.00%	4.00%	4.00%
3	415+47.83'	Begin Full Super	-4.50%	-4.50%	0.00%	0.00%	4.50%	4.50%
3	420+64.81'	End Full Super	-4.50%	-4.50%	0.00%	0.00%	4.50%	4.50%
3	420+78.14'	Low Shoulder Match	-4.00%	-4.00%	0.00%	0.00%	4.00%	4.00%
3	421+31.47'	Reverse Crown	-4.00%	-2.00%	0.00%	0.00%	2.00%	2.00%
3	421+84.81'	Level Crown	-4.00%	-2.00%	0.00%	0.00%	0.00%	0.00%
3	422+38.14'	Begin Normal Crown	-4.00%	-2.00%	0.00%	0.00%	-4.00%	-2.00%
3	422+38.14'	Begin Normal Shoulder	-4.00%	-2.00%	0.00%	0.00%	-4.00%	-2.00%

Superelevation Region	Station	Description	Left Outside Shoulder	Left Outside Lane	Left Inside Lane	Left Inside Shoulder	Right Outside Shoulder	Right Outside Lane
4	430+64.13'	End Normal Shoulder	-4.00%	-2.00%	0.00%	0.00%	-4.00%	-2.00%
4	430+64.13'	End Normal Crown	-4.00%	-2.00%	0.00%	0.00%	-4.00%	-2.00%
4	431+17.47'	Level Crown	-4.00%	-2.00%	0.00%	0.00%	0.00%	0.00%
4	431+70.80'	Reverse Crown	-4.00%	-2.00%	0.00%	0.00%	2.00%	2.00%
4	431+73.47'	Begin Full Super	-4.00%	-2.10%	0.00%	0.00%	2.10%	2.10%
4	451+52.30'	End Full Super	-4.00%	-2.10%	0.00%	0.00%	2.10%	2.10%
4	451+54.97'	Reverse Crown	-4.00%	-2.00%	0.00%	0.00%	2.00%	2.00%
4	452+08.30'	Level Crown	-4.00%	-2.00%	0.00%	0.00%	0.00%	0.00%
4	452+61.63'	Begin Normal Crown	-4.00%	-2.00%	0.00%	0.00%	-4.00%	-2.00%
4	452+61.63'	Begin Normal Shoulder	-4.00%	-2.00%	0.00%	0.00%	-4.00%	-2.00%

Superelevation Region	Station	Description	Left Outside Shoulder	Left Outside Lane	Left Inside Lane	Left Inside Shoulder	Right Outside Shoulder	Right Outside Lane
5	463+32.54'	End Normal Shoulder	-4.00%	-2.00%	0.00%	0.00%	-4.00%	-2.00%
5	463+32.54'	End Normal Crown	-4.00%	-2.00%	0.00%	0.00%	-4.00%	-2.00%
5	463+86.02'	Level Crown	0.00%	0.00%	0.00%	0.00%	-4.00%	-2.00%
5	464+39.50'	Reverse Crown	2.00%	2.00%	0.00%	0.00%	-4.00%	-2.00%
5	464+92.98'	Low Shoulder Match	4.00%	4.00%	0.00%	0.00%	-4.00%	-4.00%
5	465+09.02'	Begin Full Super	4.60%	4.60%	0.00%	0.00%	-4.60%	-4.60%
5	473+14.66'	End Full Super	4.60%	4.60%	0.00%	0.00%	-4.60%	-4.60%
5	473+30.70'	Low Shoulder Match	4.00%	4.00%	0.00%	0.00%	-4.00%	-4.00%
5	473+84.18'	Reverse Crown	2.00%	2.00%	0.00%	0.00%	-4.00%	-2.00%
5	474+37.66'	Level Crown	0.00%	0.00%	0.00%	0.00%	-4.00%	-2.00%
5	474+91.14'	Begin Normal Crown	-4.00%	-2.00%	0.00%	0.00%	-4.00%	-2.00%
5	474+91.14'	Begin Normal Shoulder	-4.00%	-2.00%	0.00%	0.00%	-4.00%	-2.00%

Superelevation Region	Station	Description	Left Outside Shoulder	Left Outside Lane	Left Inside Lane	Left Inside Shoulder	Right Outside Shoulder	Right Outside Lane
6	482+54.56'	End Normal Shoulder	-4.00%	-2.00%	0.00%	0.00%	-4.00%	-2.00%
6	482+54.56'	End Normal Crown	-4.00%	-2.00%	0.00%	0.00%	-4.00%	-2.00%
6	483+08.02'	Level Crown	0.00%	0.00%	0.00%	0.00%	-4.00%	-2.00%
6	483+61.47'	Reverse Crown	2.00%	2.00%	0.00%	0.00%	-4.00%	-2.00%
6	484+14.93'	Low Shoulder Match	4.00%	4.00%	0.00%	0.00%	-4.00%	-4.00%
6	484+55.02'	Begin Full Super	5.50%	5.50%	0.00%	0.00%	-5.50%	-5.50%
6	488+62.78'	End Full Super	5.50%	5.50%	0.00%	0.00%	-5.50%	-5.50%
6	489+02.88'	Low Shoulder Match	4.00%	4.00%	0.00%	0.00%	-4.00%	-4.00%
6	489+56.33'	Reverse Crown	2.00%	2.00%	0.00%	0.00%	-4.00%	-2.00%
6	490+09.78'	Level Crown	0.00%	0.00%	0.00%	0.00%	-4.00%	-2.00%
6	490+63.24'	Begin Normal Crown	-4.00%	-2.00%	0.00%	0.00%	-4.00%	-2.00%
6	490+63.24'	Begin Normal Shoulder	-4.00%	-2.00%	0.00%	0.00%	-4.00%	-2.00%

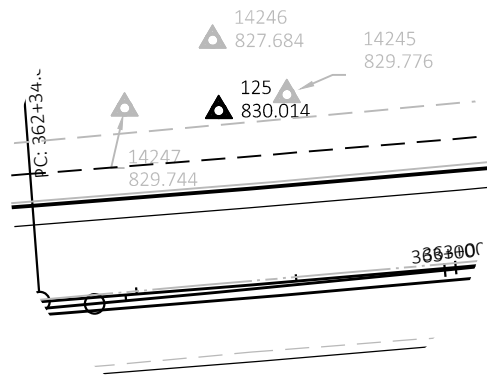
Superelevation Region	Station	Description	Left Outside Shoulder	Left Outside Lane	Left Inside Lane	Left Inside Shoulder	Right Outside Shoulder	Right Outside Lane
7	494+56.10'	End Normal Shoulder	-4.00%	-2.00%	0.00%	0.00%	-4.00%	-2.00%
7	494+56.10'	End Normal Crown	-4.00%	-2.00%	0.00%	0.00%	-4.00%	-2.00%
7	495+07.10'	Level Crown	-4.00%	-2.00%	0.00%	0.00%	0.00%	0.00%
7	495+58.10'	Reverse Crown	-4.00%	-2.00%	0.00%	0.00%	2.00%	2.00%
7	496+09.10'	Low Shoulder Match	-4.00%	-4.00%	0.00%	0.00%	4.00%	4.00%
7	496+60.10'	Begin Full Super	-6.00%	-6.00%	0.00%	0.00%	6.00%	6.00%
7	500+12.59'	End Full Super	-6.00%	-6.00%	0.00%	0.00%	6.00%	6.00%
7	500+63.59'	Low Shoulder Match	-4.00%	-4.00%	0.00%	0.00%	4.00%	4.00%
7	501+14.59'	Reverse Crown	-4.00%	-2.00%	0.00%	0.00%	2.00%	2.00%
7	501+65.59'	Level Crown	-4.00%	-2.00%	0.00%	0.00%	0.00%	0.00%
7	502+16.59'	Begin Normal Crown	-4.00%	-2.00%	0.00%	0.00%	-4.00%	-2.00%
7	502+16.59'	Begin Normal Shoulder	-4.00%	-2.00%	0.00%	0.00%	-4.00%	-2.00%

Superelevation Region	Station	Description	Left Outside Shoulder	Left Outside Lane	Left Inside Lane	Left Inside Shoulder	Right Outside Shoulder	Right Outside Lane
8	515+38.32'	End Normal Shoulder	-4.00%	-2.00%	0.00%	0.00%	-4.00%	-2.00%
8	515+38.32'	End Normal Crown	-4.00%	-2.00%	0.00%	0.00%	-4.00%	-2.00%
8	515+91.43'	Level Crown	-4.00%	-2.00%	0.00%	0.00%	0.00%	0.00%
8	516+44.53'	Reverse Crown	-4.00%	-2.00%	0.00%	0.00%	2.00%	2.00%
8	516+68.43'	Begin Full Super	-4.00%	-2.90%	0.00%	0.00%	2.90%	2.90%
8	524+92.39'	End Full Super	-4.00%	-2.90%	0.00%	0.00%	2.90%	2.90%
8	525+16.28'	Reverse Crown	-4.00%	-2.00%	0.00%	0.00%	2.00%	2.00%
8	525+69.39'	Level Crown	-4.00%	-2.00%	0.00%	0.00%	0.00%	0.00%
8	526+22.49'	Begin Normal Crown	-4.00%	-2.00%	0.00%	0.00%	-4.00%	-2.00%
8	526+22.49'	Begin Normal Shoulder	-4.00%	-2.00%	0.00%	0.00%	-4.00%	-2.00%

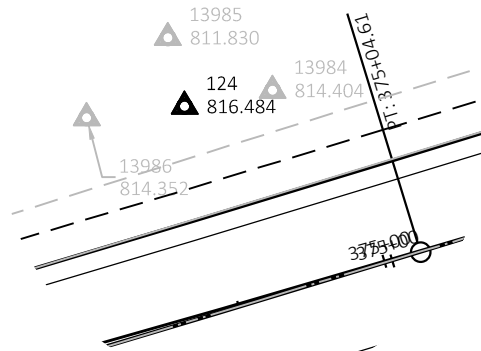
Superelevation Region	Station	Description	Left Outside Shoulder	Left Outside Lane	Left Inside Lane	Left Inside Shoulder	Right Outside Shoulder	Right Outside Lane
9	592+01.90'	End Normal Shoulder	-4.00%	-2.00%	0.00%	0.00%	-4.00%	-2.00%
9	592+01.90'	End Normal Crown	-4.00%	-2.00%	0.00%	0.00%	-4.00%	-2.00%
9	592+55.23'	Level Crown	-4.00%	-2.00%	0.00%	0.00%	0.00%	0.00%
9	593+08.56'	Reverse Crown	-4.00%	-2.00%	0.00%	0.00%	2.00%	2.00%
9	593+61.90'	Low Shoulder Match	-4.00%	-4.00%	0.00%	0.00%	4.00%	4.00%
9	594+15.23'	Begin Full Super	-6.00%	-6.00%	0.00%	0.00%	6.00%	6.00%
9	598+16.29'	End Full Super	-6.00%	-6.00%	0.00%	0.00%	6.00%	6.00%
9	598+69.62'	Low Shoulder Match	-4.00%	-4.00%	0.00%	0.00%	4.00%	4.00%
9	599+22.95'	Reverse Crown	-4.00%	-2.00%	0.00%	0.00%	2.00%	2.00%
9	599+76.29'	Level Crown	-4.00%	-2.00%	0.00%	0.00%	0.00%	0.00%
9	600+29.62'	Begin Normal Crown	-4.00%	-2.00%	0.00%	0.00%	-2.00%	-2.00%
9	600+29.62'	Begin Normal Shoulder	-4.00%	-2.00%	0.00%	0.00%	-4.00%	-2.00%

Superelevation Region	Station	Description	Left Outside Shoulder	Left Outside Lane	Left Inside Lane	Left Inside Shoulder	Right Outside Shoulder	Right Outside Lane
10	612+94.06'	End Normal Shoulder	-4.00%	-2.00%	0.00%	0.00%	-4.00%	-2.00%
10	612+94.06'	End Normal Crown	-2.00%	-2.00%	0.00%	0.00%	-4.00%	-2.00%
10	613+45.40'	Level Crown	0.00%	0.00%	0.00%	0.00%	-4.00%	-2.00%
10	613+96.73'	Reverse Crown	2.00%	2.00%	0.00%	0.00%	-4.00%	-2.00%
10	614+48.06'	Low Shoulder Match	4.00%	4.00%	0.00%	0.00%	-4.00%	-4.00%
10	614+99.40'	Begin Full Super	6.00%	6.00%	0.00%	0.00%	-6.00%	-6.00%
10	619+60.74'	End Full Super	6.00%	6.00%	0.00%	0.00%	-6.00%	-6.00%
10	620+12.07'	Low Shoulder Match	4.00%	4.00%	0.00%	0.00%	-4.00%	-4.00%
10	620+63.40'	Reverse Crown	2.00%	2.00%	0.00%	0.00%	-4.00%	-2.00%
10	621+14.74'	Level Crown	0.00%	0.00%	0.00%	0.00%	-4.00%	-2.00%
10	621+66.07'	Begin Normal Crown	-2.00%	-2.00%	0.00%	0.00%	-4.00%	-2.00%
10	621+66.07'	Begin Normal Shoulder	-4.00%	-2.00%	0.00%	0.00%	-4.00%	-2.00%
*Curve 10 utilizes the WisDOT Pre-2009 (eMax 6%, 2 lane undivided roadway) Superelevation Rate Table.								

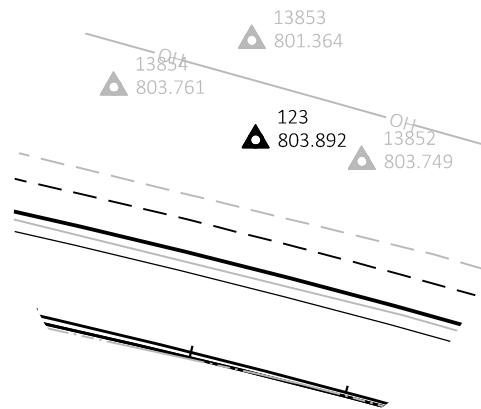
Superelevation Region	Station	Description	Left Outside Shoulder	Left Outside Lane	Left Inside Lane	Left Inside Shoulder	Right Outside Shoulder	Right Outside Lane
11	714+23.51'	End Normal Shoulder	-4.00%	-2.00%	0.00%	0.00%	-4.00%	-2.00%
11	714+23.51'	End Normal Crown	-4.00%	-2.00%	0.00%	0.00%	-4.00%	-2.00%
11	714+64.90'	Level Crown	0.00%	0.00%	0.00%	0.00%	-4.00%	-2.00%
11	715+06.30'	Reverse Crown	2.00%	2.00%	0.00%	0.00%	-4.00%	-2.00%
11	715+47.69'	Low Shoulder Match	4.00%	4.00%	0.00%	0.00%	-4.00%	-4.00%
11	715+53.90'	Begin Full Super	4.30%	4.30%	0.00%	0.00%	-4.30%	-4.30%
11	719+86.95'	End Full Super	4.30%	4.30%	0.00%	0.00%	-4.30%	-4.30%
11	719+93.16'	Low Shoulder Match	4.00%	4.00%	0.00%	0.00%	-4.00%	-4.00%
11	720+34.56'	Reverse Crown	2.00%	2.00%	0.00%	0.00%	-4.00%	-2.00%
11	720+75.95'	Level Crown	0.00%	0.00%	0.00%	0.00%	-4.00%	-2.00%
11	721+17.35'	Begin Normal Crown	-4.00%	-2.00%	0.00%	0.00%	-4.00%	-2.00%
11	721+17.35'	Begin Normal Shoulder	-4.00%	-2.00%	0.00%	0.00%	-4.00%	-2.00%
	726+86.05'	End Alignment	-4.00%	-2.00%	0.00%	0.00%	-4.00%	-2.00%



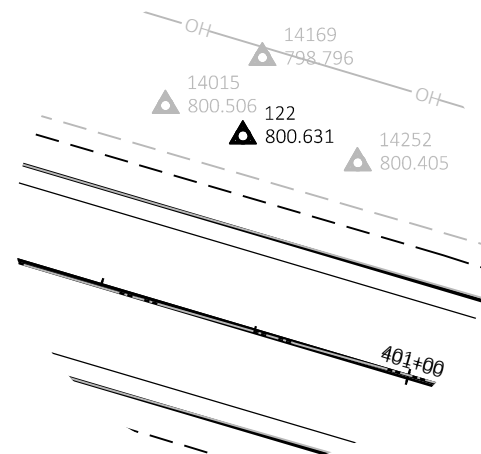
CP 125
STA 362+66.20
OFF 29.55 LT



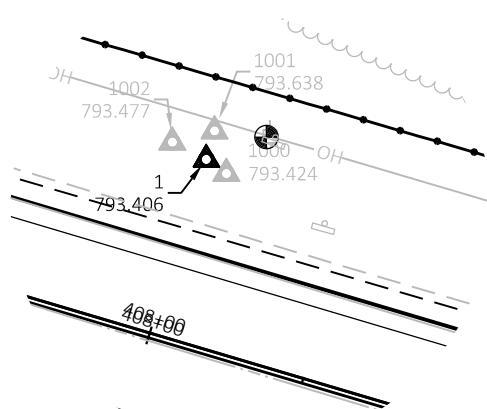
CP 124
STA 374+77.09
OFF 32.28 LT



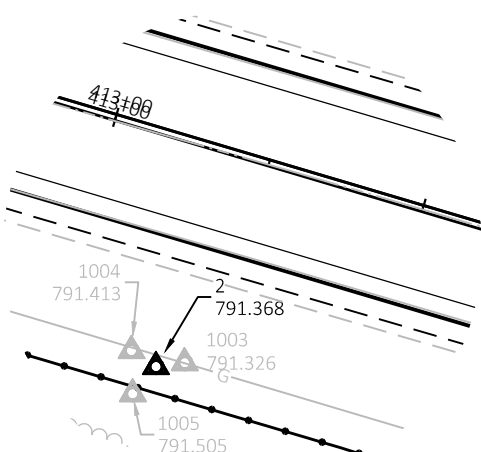
CP 123
STA 385+52.06
OFF 35.42 LT



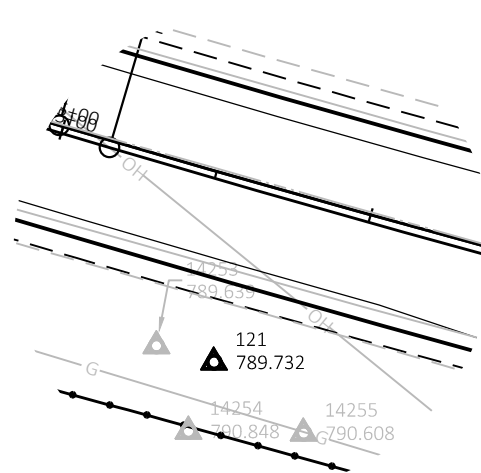
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STA 400+64.64
OFF 28.48 LT



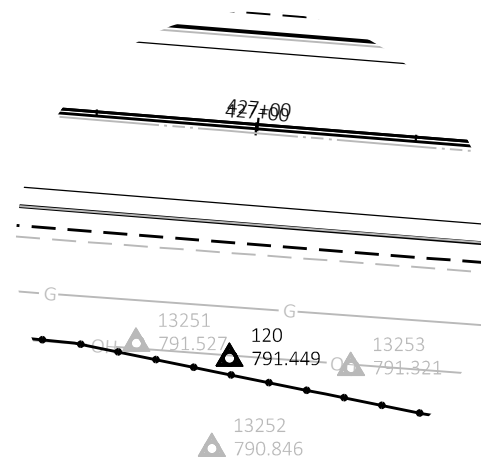
CP 1
STA 408+00.78
OFF 28.47 LT



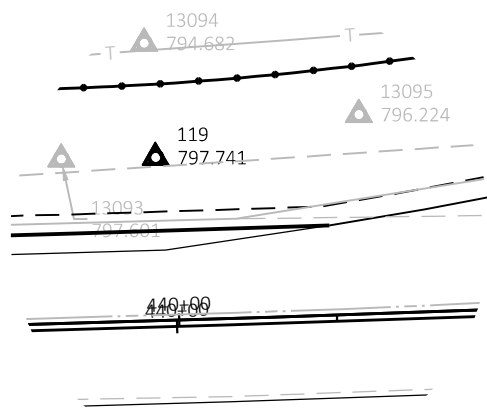
CP 2
STA 413+17.07
OFF 36.04 RT



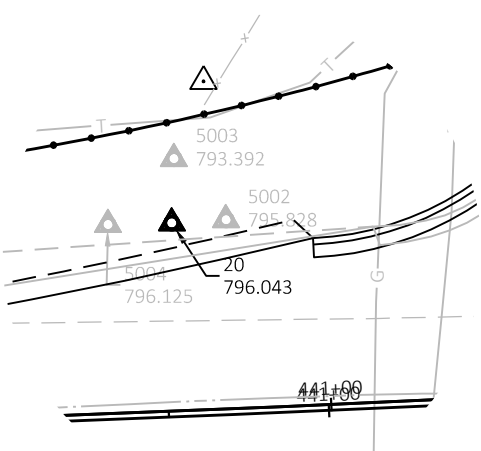
CP 121
STA 415+32.70
OFF 28.81 RT



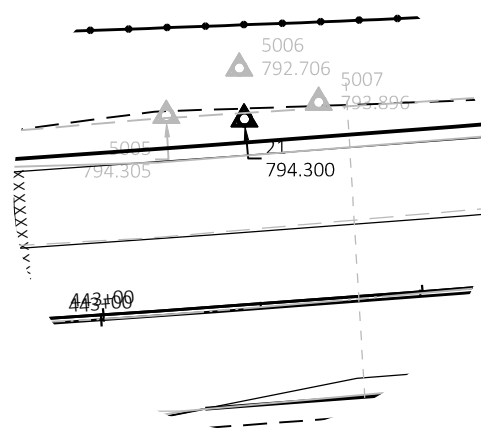
CP 120
STA 426+98.45
OFF 36.75 RT



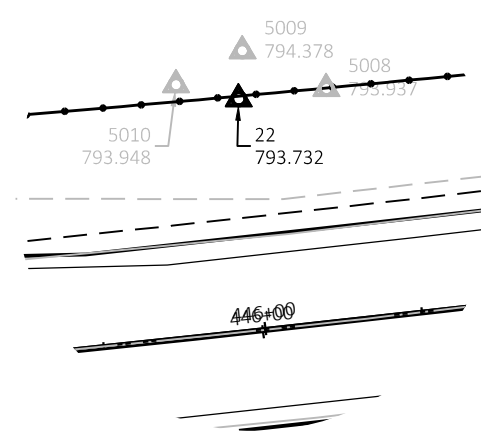
CP 119
STA 439+97.05
OFF 25.47 LT



CP 20
STA 440+76.27
OFF 29.36 LT



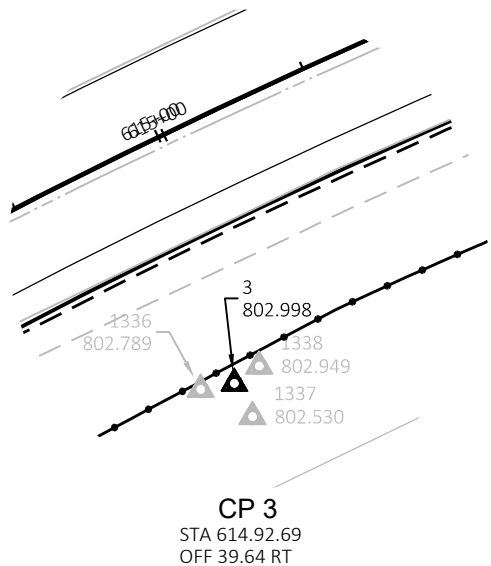
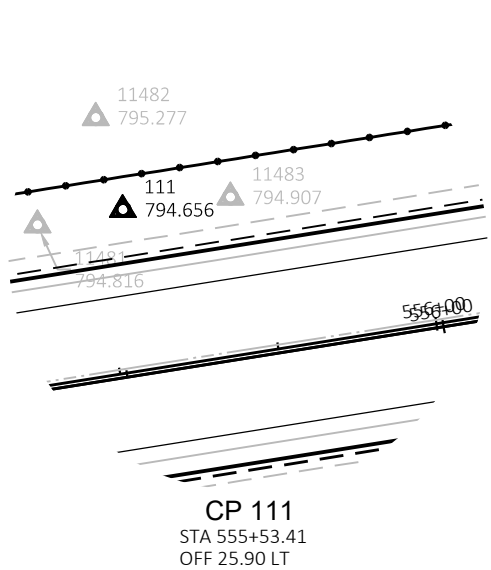
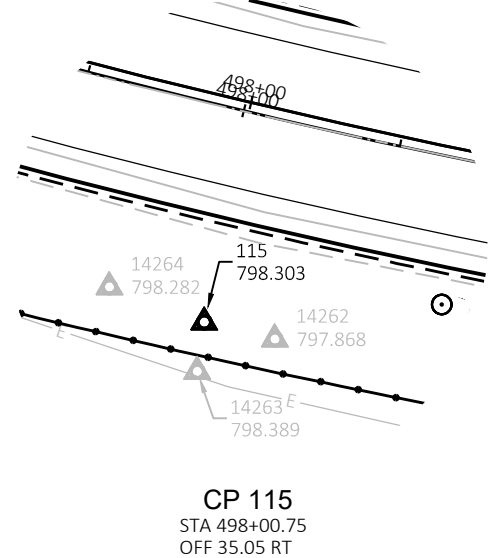
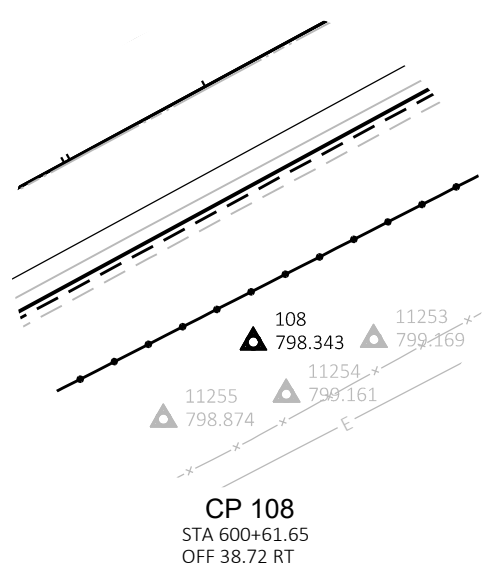
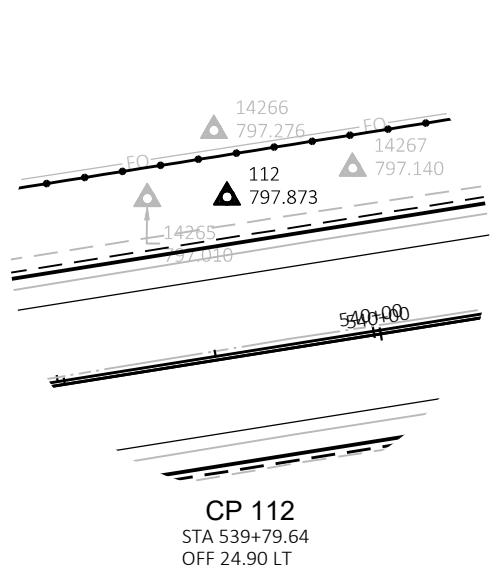
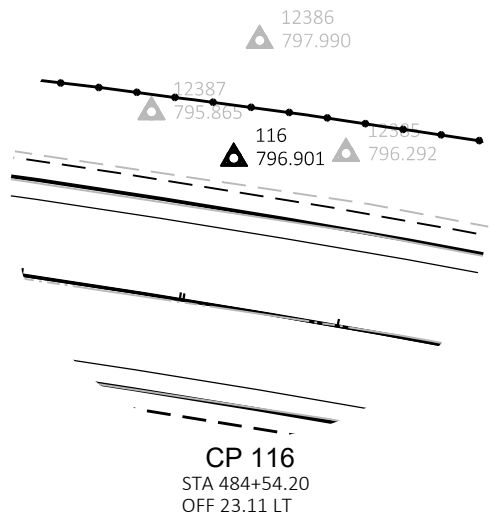
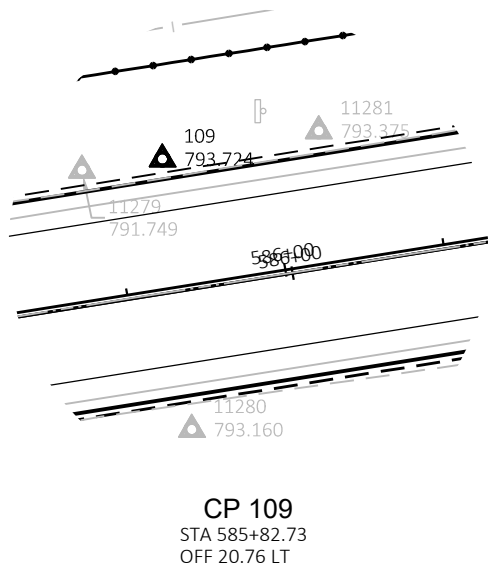
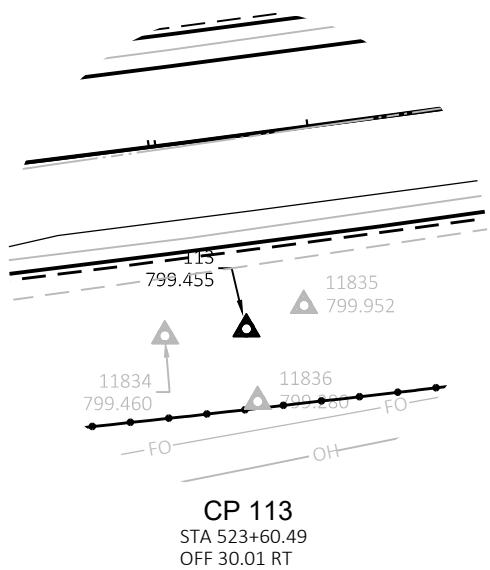
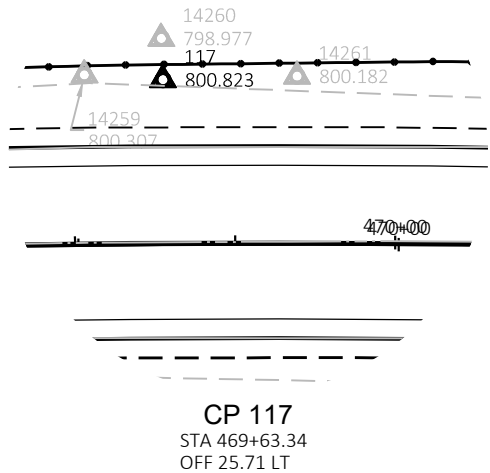
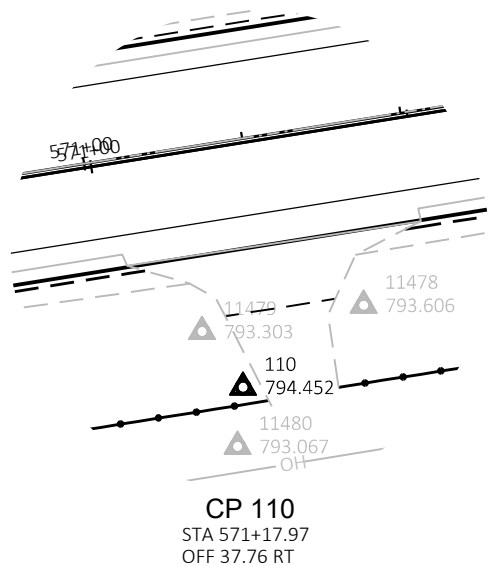
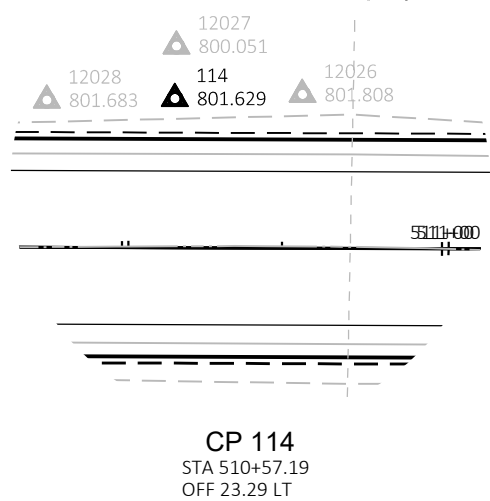
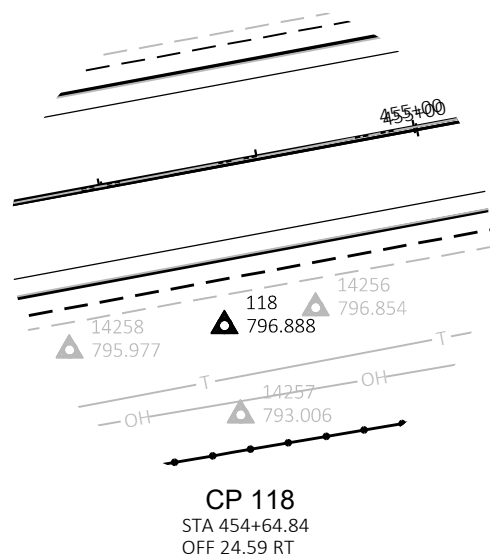
CP 21
STA 443+24.16
OFF 28.93 LT



CP 22
STA 445+99.70
OFF 36.09 LT

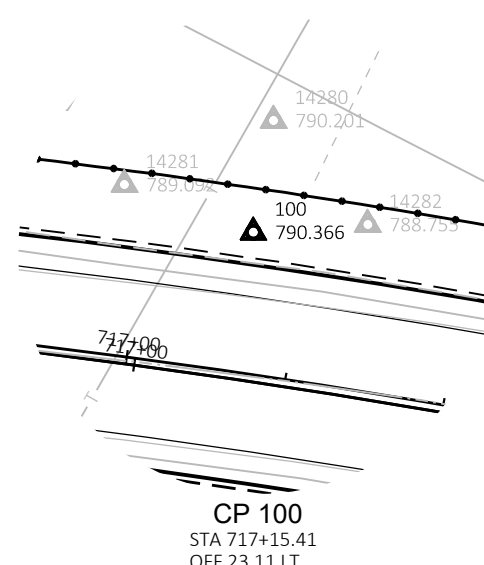
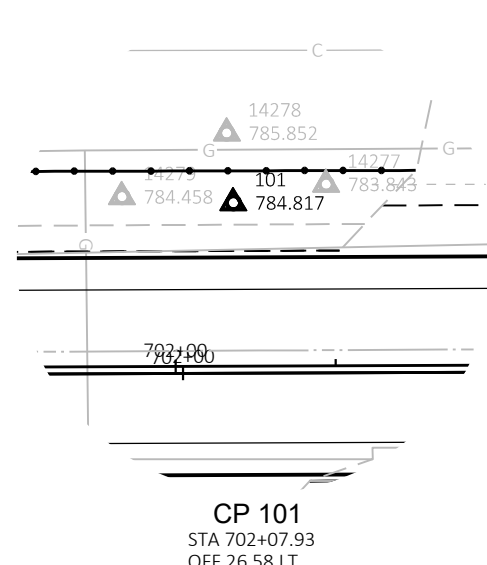
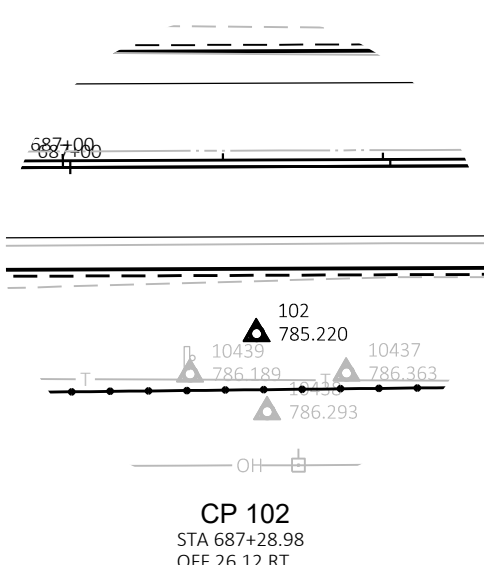
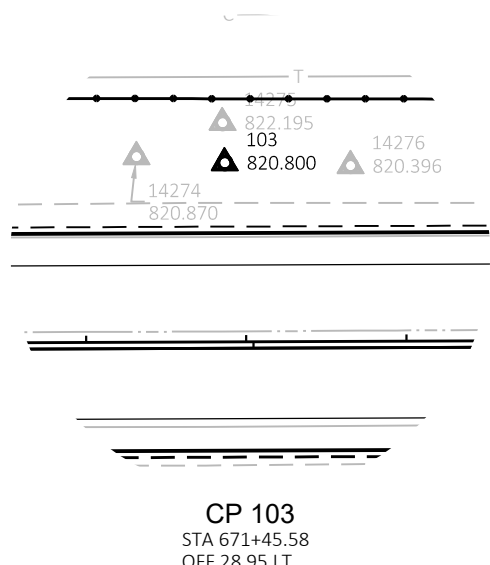
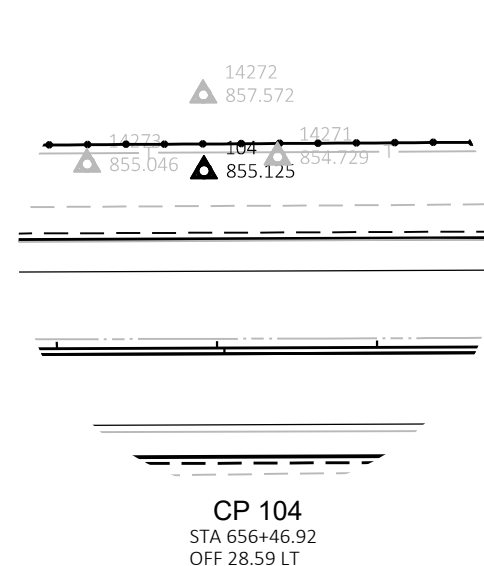
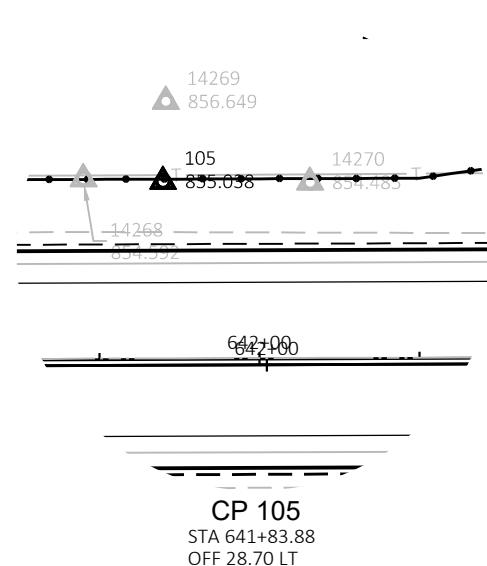
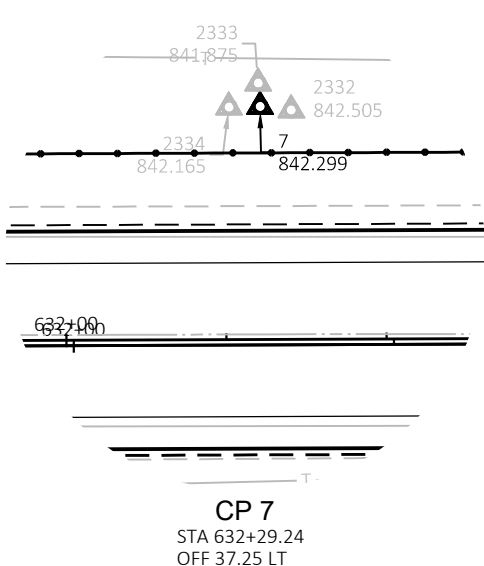
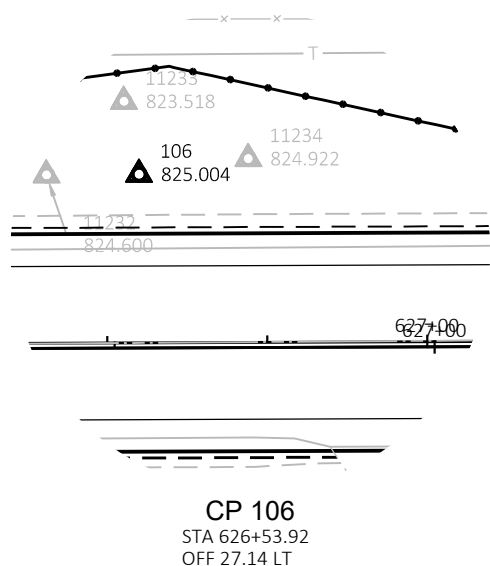
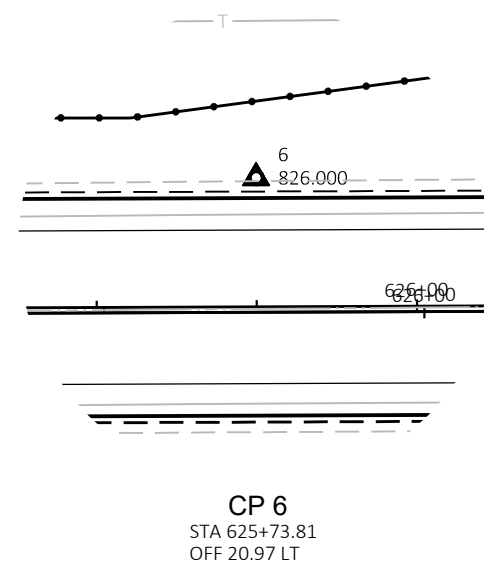
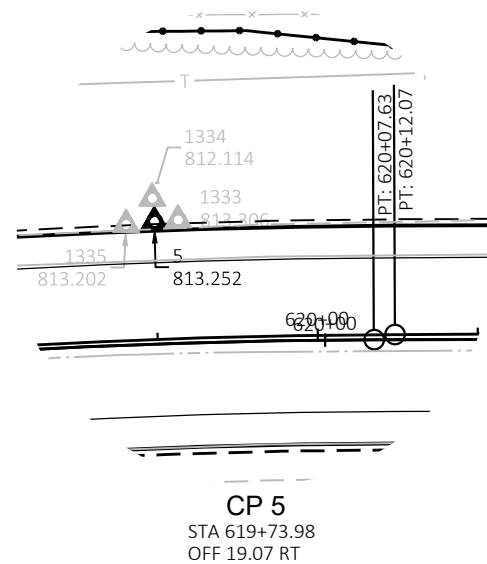
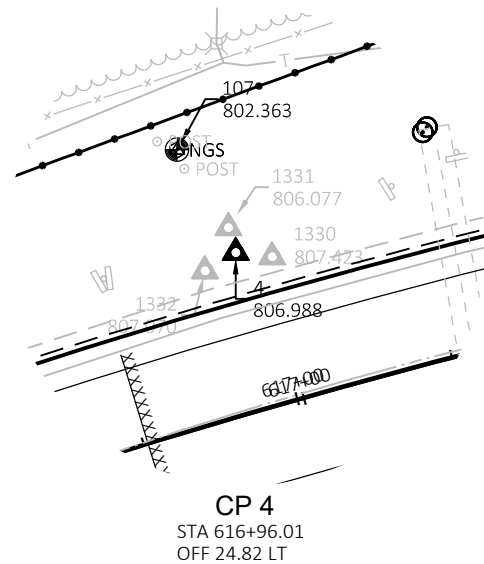
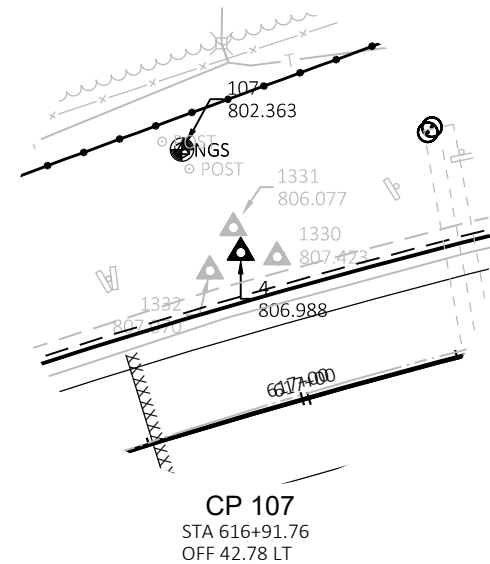
CONTROL POINT COORDINATES

CP#	NORTHING	EASTING	PT. ELEV.	DESCRIPTION
125	254340.431	433534.936	830.014'	CP
14245	254342.898	433545.565	829.776'	REFERENCE TIE
14246	254351.408	433533.967	827.684'	REFERENCE TIE
14247	254340.817	433520.234	829.744'	REFERENCE TIE
124	254569.042	434715.214	816.484'	CP
13984	254571.534	434728.948	814.404'	REFERENCE TIE
13985	254579.778	434712.607	811.830'	REFERENCE TIE
13986	254567.247	434699.919	814.352'	REFERENCE TIE
123	254678.570	435785.971	803.892'	CP
13852	254675.253	435802.556	803.749'	REFERENCE TIE
13853	254694.112	435785.383	801.364'	REFERENCE TIE
13854	254686.848	435763.802	803.761'	REFERENCE TIE
122	254244.023	437236.616	800.631'	CP
14015	254248.790	437224.546	800.506'	REFERENCE TIE
14169	254256.262	437239.660	798.796'	REFERENCE TIE
14252	254239.867	437254.544	800.405'	REFERENCE TIE
1	254035.098	437942.510	793.406'	CP 3/8IN IR BHA CAP
1000	254032.914	437945.637	793.424'	REFERENCE TIE
1001	254039.543	437943.803	793.638'	REFERENCE TIE
1002	254037.807	437937.192	793.477'	REFERENCE TIE
2	253826.726	438419.275	791.368'	CP 3/8IN IR BHA CAP
1003	253827.318	438423.744	791.326'	REFERENCE TIE
1004	253829.233	438415.441	791.413'	REFERENCE TIE
1005	253822.481	438415.635	791.505'	REFERENCE TIE
121	253772.556	438628.447	789.732'	CP
14253	253775.114	438619.467	789.639'	REFERENCE TIE
14254	253761.769	438624.462	790.848'	REFERENCE TIE
14255	253761.493	438642.443	790.608'	REFERENCE TIE
120	253613.809	439787.091	791.449'	CP
13251	253616.143	439772.531	791.527'	REFERENCE TIE
13252	253599.736	439784.341	790.846'	REFERENCE TIE
13253	253612.379	439806.046	791.321'	REFERENCE TIE
119	253619.107	441085.733	797.741'	CP
13093	253618.876	441071.005	797.601'	REFERENCE TIE
13094	253636.942	441083.964	794.682'	REFERENCE TIE
13095	253625.828	441117.487	796.224'	REFERENCE TIE
20	253625.761	441164.482	796.043'	CP 3/8IN IR BHA CAP
5002	253626.252	441172.929	795.828'	REFERENCE TIE
5003	253635.778	441164.799	793.392'	REFERENCE TIE
5004	253625.474	441154.507	796.125'	REFERENCE TIE
21	253639.230	441411.054	794.300'	CP 3/8IN IR BHA CAP
5005	253639.764	441398.871	794.305'	REFERENCE TIE
5006	253647.158	441410.280	792.706'	REFERENCE TIE
5007	253641.821	441422.665	793.896'	REFERENCE TIE
22	253671.096	441683.653	793.732'	CP 3/8IN IR BHA CAP
5008	253672.719	441697.345	793.937'	REFERENCE TIE
5009	253678.600	441684.239	794.378'	REFERENCE TIE
5010	253673.289	441673.881	793.948'	REFERENCE TIE



CONTROL POINT COORDINATES

CP#	NORTHING	EASTING	PT. ELEV.	DESCRIPTION
118	253747.377	442546.091	796.888'	CP
14256	253750.147	442560.338	796.854'	REFERENCE TIE
14257	253733.421	442548.627	793.006'	REFERENCE TIE
14258	253743.582	442521.894	795.977'	REFERENCE TIE
117	254027.916	444020.119	800.823'	CP
14259	254028.669	444007.862	800.307'	REFERENCE TIE
14260	254034.384	444019.859	798.977'	REFERENCE TIE
14261	254028.480	444041.077	800.182'	REFERENCE TIE
116	253850.449	445503.542	796.901'	CP
12385	253851.215	445521.079	796.292'	REFERENCE TIE
12386	253868.876	445507.569	797.990'	REFERENCE TIE
12387	253857.695	445490.681	795.865'	REFERENCE TIE
115	253336.945	446754.989	798.303'	CP
14262	253334.275	446766.018	797.868'	REFERENCE TIE
14263	253329.234	446753.897	798.389'	REFERENCE TIE
14264	253342.417	446740.183	798.282'	REFERENCE TIE
114	253358.127	448017.004	801.629'	CP
12026	253358.738	448036.915	801.808'	REFERENCE TIE
12027	253366.302	448017.244	800.051'	REFERENCE TIE
12028	253357.874	447997.015	801.683'	REFERENCE TIE
113	253347.474	449322.146	799.455'	CP
11834	253346.417	449309.418	799.460'	REFERENCE TIE
11835	253351.148	449331.119	799.952'	REFERENCE TIE
11836	253336.171	449323.894	799.280'	REFERENCE TIE
112	253654.183	450913.760	797.873'	CP
14265	253653.927	450901.319	797.010'	REFERENCE TIE
14266	253664.547	450911.723	797.276'	REFERENCE TIE
14267	253658.659	450933.386	797.140'	REFERENCE TIE
111	253902.974	452467.738	794.656'	CP
11481	253900.577	452454.403	794.816'	REFERENCE TIE
11482	253917.358	452463.503	795.277'	REFERENCE TIE
11483	253904.923	452484.551	794.907'	REFERENCE TIE
110	254086.455	454022.807	794.452'	CP
11478	254099.280	454041.636	793.606'	REFERENCE TIE
11479	254095.168	454016.417	793.303'	REFERENCE TIE
11480	254077.240	454021.956	793.067'	REFERENCE TIE
109	254374.888	455460.077	793.724'	CP
11279	254373.147	455447.508	791.749'	REFERENCE TIE
11280	254332.658	455464.677	793.160'	REFERENCE TIE
11281	254379.302	455484.506	793.375'	REFERENCE TIE
108	254698.006	456898.235	798.343'	CP
11253	254698.425	456917.059	799.169'	REFERENCE TIE
11254	254689.875	456903.389	799.161'	REFERENCE TIE
11255	254685.995	456884.188	798.874'	REFERENCE TIE
3	255377.218	458156.070	802.998'	CP 3/8IN IR BHA CAP
1336	255376.236	458150.815	802.789'	REFERENCE TIE
1337	255372.009	458158.911	802.530'	REFERENCE TIE
1338	255379.911	458159.939	802.949'	REFERENCE TIE



CONTROL POINT COORDINATES

CP#	NORTHING	EASTING	PT. ELEV.	DESCRIPTION
107	255525.750	458312.032	802.363'	NGS
4	255509.709	458321.175	806.988'	CP 3/8IN IR BHA CAP
1330	255509.013	458326.857	807.423'	REFERENCE TIE
1331	255513.568	458320.031	806.077'	REFERENCE TIE
1332	255506.829	458316.358	807.070'	REFERENCE TIE
5	255548.017	458601.260	813.252'	CP 3/8IN IR BHA CAP
1333	255548.291	458604.944	813.306'	REFERENCE TIE
1334	255551.667	458600.907	812.114'	REFERENCE TIE
1335	255547.607	458596.817	813.202'	REFERENCE TIE
6	255552.819	459201.636	826.000'	CP NAIL
106	255559.313	459281.715	825.004'	CP
11232	255559.188	459267.258	824.600'	REFERENCE TIE
11233	255570.700	459279.347	823.518'	REFERENCE TIE
11234	255561.757	459298.780	824.922'	REFERENCE TIE
7	255571.718	459856.995	842.299'	CP 3/8IN IR BHA CAP
2332	255571.145	459861.852	842.505'	REFERENCE TIE
2333	255575.347	459856.680	841.875'	REFERENCE TIE
2334	255571.592	459852.116	842.165'	REFERENCE TIE
105	255566.981	460811.656	855.038'	CP
14268	255567.350	460799.218	854.592'	REFERENCE TIE
14269	255579.454	460812.088	856.649'	REFERENCE TIE
14270	255566.838	460834.629	854.485'	REFERENCE TIE
104	255572.719	462274.686	855.125'	CP
14271	255574.864	462286.189	854.729'	REFERENCE TIE
14272	255584.549	462274.573	857.572'	REFERENCE TIE
14273	255573.748	462256.440	855.046'	REFERENCE TIE
103	255579.061	463773.339	820.800'	CP
14274	255579.982	463759.561	820.870'	REFERENCE TIE
14275	255585.311	463772.983	822.195'	REFERENCE TIE
14276	255578.571	463792.981	820.396'	REFERENCE TIE
102	255530.327	465356.940	785.220'	CP
10437	255524.176	465370.985	786.363'	REFERENCE TIE
10438	255518.138	465358.598	786.293'	REFERENCE TIE
10439	255524.024	465346.567	786.189'	REFERENCE TIE
14277	255591.816	466850.165	783.843'	REFERENCE TIE
14278	255599.806	466834.651	785.852'	REFERENCE TIE
14279	255589.863	466818.255	784.458'	REFERENCE TIE
101	255588.923	466835.666	784.817'	CP
100	255577.018	468345.949	790.366'	CP
14280	255594.469	468349.102	790.201'	REFERENCE TIE
14281	255584.452	468325.817	789.092'	REFERENCE TIE
14282	255578.225	468363.801	788.755'	REFERENCE TIE

Estimate Of Quantities

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Line	Item	Item Description	Unit	Total	Qty
0002	203.0100	Removing Small Pipe Culverts	EACH	5.000	5.000
0004	204.0110	Removing Asphaltic Surface	SY	522.000	522.000
0006	204.0115	Removing Asphaltic Surface Butt Joints	SY	559.000	559.000
0008	204.0120	Removing Asphaltic Surface Milling	SY	127,112.000	127,112.000
0010	204.0150	Removing Curb & Gutter	LF	302.000	302.000
0012	204.9180.S	Removing (item description) 01. Asphaltic Surface Milling Superelevation Correction	SY	3,422.000	3,422.000
0014	205.0100	Excavation Common	CY	4,071.000	4,071.000
0016	208.1500.S	Temporary Lane Shift During Culvert Work	EACH	8.000	8.000
0018	211.0101	Prepare Foundation for Asphaltic Paving (project) 01. 1430-02-73	EACH	1.000	1.000
0020	211.0400	Prepare Foundation for Asphaltic Shoulders	STA	462.000	462.000
0022	211.0700.S	Prepare Foundation for CIR Base Layer (project) 01. 1430-02-73	EACH	1.000	1.000
0024	211.0800.S	Base Repair for CIR Layer	CY	7,151.000	7,151.000
0026	213.0100	Finishing Roadway (project) 01. 1430-02-73	EACH	1.000	1.000
0028	305.0110	Base Aggregate Dense 3/4-Inch	TON	4,156.000	4,156.000
0030	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	1,941.000	1,941.000
0032	305.0504.S	Hauling Excess Shoulder Material	CY	370.000	370.000
0034	327.1000.S	CIR Asphaltic Base Layer	SY	107,260.000	107,260.000
0036	455.0605	Tack Coat	GAL	5,675.000	5,675.000
0038	455.0770.S	Asphalt Stabilizing Agent	TON	505.000	505.000
0040	460.0105.S	HMA Percent Within Limits (PWL) Test Strip Volumetrics	EACH	2.000	2.000
0042	460.0110.S	HMA Percent Within Limits (PWL) Test Strip Density	EACH	2.000	2.000
0044	460.2005	Incentive Density PWL HMA Pavement	DOL	14,020.000	14,020.000
0046	460.2007	Incentive Density HMA Pavement Longitudinal Joints	DOL	18,440.000	18,440.000
0048	460.2010	Incentive Air Voids HMA Pavement	DOL	31,000.000	31,000.000
0050	460.6223	HMA Pavement 3 MT 58-28 S	TON	15,338.000	15,338.000
0052	460.6224	HMA Pavement 4 MT 58-28 S	TON	15,650.000	15,650.000
0054	465.0105	Asphaltic Surface	TON	545.000	545.000
0056	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	49.000	49.000
0058	465.0425	Asphaltic Shoulder Rumble Strips 2-Lane Rural	LF	34,169.000	34,169.000
0060	465.0475	Asphalt Centerline Rumble Strips 2-Lane Rural	LF	29,255.000	29,255.000
0062	522.0418	Culvert Pipe Reinforced Concrete Class IV 18-Inch	LF	114.000	114.000
0064	522.0424	Culvert Pipe Reinforced Concrete Class IV 24-Inch	LF	68.000	68.000
0066	522.0430	Culvert Pipe Reinforced Concrete Class IV 30-Inch	LF	140.000	140.000
0068	522.0436	Culvert Pipe Reinforced Concrete Class IV 36-Inch	LF	66.000	66.000
0070	522.1018	Apron Endwalls for Culvert Pipe Reinforced Concrete 18-Inch	EACH	2.000	2.000
0072	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	2.000	2.000
0074	522.1030	Apron Endwalls for Culvert Pipe Reinforced Concrete 30-Inch	EACH	4.000	4.000
0076	522.1036	Apron Endwalls for Culvert Pipe Reinforced Concrete 36-Inch	EACH	2.000	2.000
0078	601.0557	Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type D	LF	318.000	318.000
0080	618.0100	Maintenance And Repair of Haul Roads (project) 01. 1430-02-73	EACH	1.000	1.000
0082	619.1000	Mobilization	EACH	1.000	1.000
0084	624.0100	Water	MGAL	90.000	90.000
0086	625.0100	Topsoil	SY	4,119.000	4,119.000
0088	628.1504	Silt Fence	LF	5,506.000	5,506.000
0090	628.1905	Mobilizations Erosion Control	EACH	3.000	3.000
0092	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0094	628.2008	Erosion Mat Urban Class I Type B	SY	4,119.000	4,119.000
0096	628.7555	Culvert Pipe Checks	EACH	40.000	40.000
0098	628.7570	Rock Bags	EACH	136.000	136.000

Estimate Of Quantities

1430-02-73					
Line	Item	Item Description	Unit	Total	Qty
0100	629.0210	Fertilizer Type B	CWT	2.590	2.590
0102	630.0130	Seeding Mixture No. 30	LB	75.000	75.000
0104	630.0500	Seed Water	MGAL	47.000	47.000
0106	633.5200	Markers Culvert End	EACH	10.000	10.000
0108	638.2102	Moving Signs Type II	EACH	18.000	18.000
0110	642.5001	Field Office Type B	EACH	1.000	1.000
0112	643.0300	Traffic Control Drums	DAY	734.000	734.000
0114	643.0420	Traffic Control Barricades Type III	DAY	36.000	36.000
0116	643.0705	Traffic Control Warning Lights Type A	DAY	48.000	48.000
0118	643.0900	Traffic Control Signs	DAY	3,424.000	3,424.000
0120	643.1000	Traffic Control Signs Fixed Message	SF	36.000	36.000
0122	643.4100	Traffic Control Interim Lane Closure	EACH	4.000	4.000
0124	643.5000	Traffic Control	EACH	1.000	1.000
0126	646.6120	Marking Stop Line Epoxy 18-Inch	LF	115.000	115.000
0128	648.0100	Locating No-Passing Zones	MI	6.980	6.980
0130	650.4500	Construction Staking Subgrade	LF	523.000	523.000
0132	650.5000	Construction Staking Base	LF	523.000	523.000
0134	650.6000	Construction Staking Pipe Culverts	EACH	5.000	5.000
0136	650.8000	Construction Staking Resurfacing Reference	LF	36,864.000	36,864.000
0138	650.9911	Construction Staking Supplemental Control (project) 01. 1430-02-73	EACH	1.000	1.000
0140	650.9920	Construction Staking Slope Stakes	LF	2,237.000	2,237.000
0142	690.0150	Sawing Asphalt	LF	750.000	750.000
0144	740.0440	Incentive IRI Ride	DOL	27,930.000	27,930.000
0146	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	2,400.000	2,400.000
0148	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	1,980.000	1,980.000
0150	SPV.0060	Special 01. Mowing	EACH	21.000	21.000
0152	SPV.0060	Special 02. Reestablish Section Corner Monuments	EACH	2.000	2.000
0154	SPV.0090	Special 01. Temporary Marking Line Paint 6-Inch	LF	148,479.000	148,479.000
0156	SPV.0090	Special 02. Temporary Marking Line Epoxy 6-Inch	LF	44,831.000	44,831.000
0158	SPV.0090	Special 03. Marking Line Epoxy 6-Inch	LF	45,259.000	45,259.000
0160	SPV.0090	Special 04. Marking Line Grooved Wet Ref Epoxy 6-Inch	LF	72,389.000	72,389.000
0162	SPV.0090	Special 05. Marking Line Grooved Wet Ref Epoxy 10-Inch	LF	1,101.000	1,101.000
0164	SPV.0180	Special 01. Resin Binder High Friction Surface Treatment	SY	4,532.000	4,532.000
0166	SPV.0195	Special 01. Asphaltic Surface Wedging	TON	74.000	74.000

DIVISION	FROM/TO STATION	LOCATION	205.0100 COMMON EXCAVATION	SALVAGED/UNUSABLE PAVEMENT MATERIAL (4)	AVAILABLE MATERIAL (5)	UNEXPANDED FILL	EXPANDED FILL (6)	MASS ORDINATE +/- (7)	WASTE	COMMENT
			CUT (2)				FACTOR X1.25			
DIVISION 1										
STH 23	410+11-411+17	STH 23	1,020	60	960	9	11	949	949	
STH 23	442+88-443+93	STH 23	871	60	811	5	6	805	805	
STH 23	517+60-518+65	STH 23	733	58	675	13	16	659	659	
STH 23	609+00-626+75	STH 23	1,187	72	1,115	315	394	721	721	
FERN AVENUE	60+17-61+17	FERN AVENUE	260	59	201	13	16	185	185	
DIVISION 1 SUBTOTAL			4,071	309	3,762	355	444	3,318		
GRAND TOTAL			4,071	309	3,762	355	444	3,318	3,318	
TOTAL COMMON EXC			4,071							

NOTES:

(1) COMMON EXCAVATION IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100

(2) SALVAGED/UNSUABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.

(4) SALVAGED/UNUSABLE PAVEMENT MATERIAL

(5) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSUABLE PAVEMENT MATERIAL

(6) 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

(7) 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.

(8) FACTORS USED TO COMPUTE ANTICIPATED WASTE AND THE COMPUTED WASTE VOLUME IDENTIFIED ARE FOR GENERAL INFORMATION ONLY.

REMOVING DRAINAGE

203.0100 REMOVING SMALL PIPE CULVERTS				
CATEGORY	STATION	LOCATION	EACH	REMARKS
0010	410+64.29	STH 23	1	36-INCH X 66LF CPCS
0010	443+40.37	STH 23	1	30-INCH X 67LF CPCS
0010	518+12.97	STH 23	1	24-INCH X 66LF CPCS
0010	617+28.45	STH 23	1	30-INCH X 62LF CPCS
0010	60+29.56	FERN AVENUE	1	18-INCH X 47LF CPCS
TOTAL 0010			5	

REMOVING CURB & GUTTER

204.0150 REMOVING CURB & GUTTER											
CATEGORY	STATION	LT/RT	TO	STATION	LT/RT	LOCATION	LF	REMARKS			
0010	440+81	RT	-	441+40	RT	CTH ZZ & STH 23	94				
0010	441+08	LT	-	441+48	LT	9TH AVE & STH 23	57				
0010	441+71	RT	-	442+09	RT	CTH ZZ & STH 23	56				
0010	441+79	LT	-	442+42	LT	9TH AVE & STH 23	95				
TOTAL 0010							302				

HMA REMOVAL & PREPARATION														
CATEGORY	STATION	TO	STATION	LOCATION	204.0110 REMOVING ASPHALTIC SURFACE SY	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS SY	204.0120 REMOVING ASPHALTIC SURFACE MILLING SY	211.0400 PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS STA	211.0700.S.01. PREPARE FOUNDATION FOR CIR BASE LAYER (PROJECT) (01. 1430-02-73) EACH	211.0800.S BASE REPAIR FOR CIR LAYER CY	305.0504.S HAULING EXCESS SHOULDER MATERIAL CY	327.1000.S CIR ASPHALTIC BASE LAYER SY	211.0101.01 PREPARE FOUNDATION FOR ASPHALTIC PAVING (PROJECT) (01. 1430-02-73) EACH	REMARKS
0010	-	-	-	PROJECT	-	-	-	-	1	-	-	-	1	
0010	356+13.97	-	402+00.00	STH 23	-	-	17,305	-	-	-	370	-	-	
0010	356+13.97	-	356+23.97	STH 23	-	38	-	-	-	-	-	-	-	
0010	366+86.39	-	366+87.08	CTH M	-	46	-	-	-	-	-	-	-	
0010	366+92.40	-	366+93.58	CTH M	-	46	-	-	-	-	-	-	-	
0010	391+78.18	-	391+80.40	8TH DRIVE	-	32	-	-	-	-	-	-	-	
0010	393+60.33	-	393+85.91	CTH M	-	74	-	-	-	-	-	-	-	B-39-0072
0010	394+23.36	-	394+48.90	CTH M	-	74	-	-	-	-	-	-	-	B-39-0072
0010	402+00.00	-	724+77.84	STH 23	522	-	-	-	-	-	-	-	-	DRIVEWAY BUMP OUTS AND MATCHES
0010	402+00.00	-	723+77.84	STH 23	-	-	-	-	-	7,151	-	107,260	-	
0010	402+00.00	-	724+77.84	STH 23	-	-	109,807	-	-	-	-	-	-	
0010	416+94.94	-	416+97.05	8TH DRIVE	-	29	-	-	-	-	-	-	-	
0010	441+53.61	-	441+54.24	CTH ZZ	-	37	-	-	-	-	-	-	-	
0010	441+65.10	-	441+65.77	9TH AVENUE	-	36	-	-	-	-	-	-	-	
0010	495+18.32	-	495+22.35	10TH AVE	-	24	-	-	-	-	-	-	-	
0010	522+23.17	-	522+23.93	10TH DRIVE	-	23	-	-	-	-	-	-	-	
0010	576+10.56	-	576+12.08	11TH DRIVE	-	24	-	-	-	-	-	-	-	
0010	716+49.71	-	716+51.07	CTH B	-	36	-	-	-	-	-	-	-	
0010	717+77.16	-	717+86.52	CTH B	-	13	-	-	-	-	-	-	-	
0010	718+80.79	-	718+82.07	COTTAGE COURT	-	27	-	-	-	-	-	-	-	
TOTAL 0010					522	559	127,112	0	1	7,151	370	107,260	1	
0020	494+00.00	-	724+77.84	STH 23	-	-	-	462	-	-	-	-	-	
TOTAL 0020					-	-	-	462	-	-	-	-	-	
PROJECT TOTAL					522	559	127,112	462	1	7,151	370	107,260	1	

SUPERELEVATION CORRECTION

						204.9180.S.01	SPV.0195.01																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
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BASE AGGREGATES											
305.0110 305.0120 624.0100											
BASE AGGREGATE DENSE 3/4-INCH BASE AGGREGATE DENSE 1 1/4-INCH WATER											
CATEGORY	STATION	TO	STATION	LOCATION	TON	TON	MGAL	REMARKS			
0010	356+13.97	-	402+00.00	STH 23	283	-	4	MILL&OVERLAY-UNPAVED SHOULDERS			
0010	402+00.00	-	724+77.84	STH 23	2273	-	34	CIR - UNPAVED SHOULDERS			
0010	402+00.00	-	724+77.84	STH 23	166	-	2	GRAVEL DRIVEWAY MATCHES			
0010	410+11.30	-	411+17.31	STH 23	51	359	6	BASE COURSE/SHOULDERING			
0010	410+11.30	-	411+17.31	STH 23	469	-	7	TRANSITION CUT BACKFILL			
0010	442+87.62	-	443+93.12	STH 23	51	490	8	BASE COURSE/SHOULDERING			
0010	442+87.62	-	443+93.12	STH 23	347	-	5	TRANSITION CUT BACKFILL			
0010	517+60.47	-	518+65.47	STH 23	51	362	6	BASE COURSE/SHOULDERING			
0010	517+60.47	-	518+65.47	STH 23	288	-	4	TRANSITION CUT BACKFILL			
0010	616+75.69	-	617+81.20	STH 23	51	370	6	BASE COURSE/SHOULDERING			
0010	616+75.69	-	617+81.20	STH 23	389	-	6	TRANSITION CUT BACKFILL			
0010	60+17.00	-	61+17.05	FERN AVENUE	20	360	6				
TOTAL 0010					4,156	1,941	90				
HMA											
455.0605 455.0770.S 460.6223 460.6224 465.0105 SPV.0180.01 SPECIAL (01. RESIN BINDER HIGH FRICTION SURFACE TREATMENT)											
TACK COAT ASPHALT STABILIZING AGENT HMA PAVEMENT 3 MT 58-28 S HMA PAVEMENT 4 MT 58-28 S ASPHALTIC SURFACE											
CATEGORY	STATION	TO	STATION	LOCATION	GAL	TON	TON	TON	TON	SY	REMARKS
0010	356+13.97	-	401+00	STH 23	825	-	-	1,319	-	-	12FT DRIVING LANES
0010	356+13.97	-	401+00	STH 23	435	-	-	696	-	-	3FT SHOULDERS AND INTERSECTIONS
0010	401+00	-	494+00	STH 23	3,472	-	3,125	2,778	-	-	12FT DRIVING LANES
0010	401+00	-	494+00	STH 23	-	-	1,055	938	-	-	3FT SHOULDERS AND INTERSECTIONS
0010	402+00	-	723+77.84	STH 23	-	505	-	-	-	-	CIR
0010	494+00	-	724+77.84	STH 23	-	-	7,754	6,893	-	-	12FT DRIVING LANES
0010	494+00	-	724+77.84	STH 23	-	-	2,115	1,880	-	-	3FT SHOULDERS AND INTERSECTIONS
0010	410+11.30	-	411+17.31	STH 23	24	-	-	-	126	-	TEMPORARY HMA AT CULVERT REPLACEMENT (3MT)
0010	442+87.62	-	443+93.12	STH 23	32	-	-	-	167	-	TEMPORARY HMA AT CULVERT REPLACEMENT (3MT)
0010	517+60.47	-	518+65.47	STH 23	24	-	-	-	126	-	TEMPORARY HMA AT CULVERT REPLACEMENT (3MT)
0010	616+75.69	-	617+81.20	STH 23	24	-	-	-	126	-	TEMPORARY HMA AT CULVERT REPLACEMENT (3MT)
TOTAL 0010					4,836	505	14,049	14,504	545	0	
0020	494+00	-	724+77.84	STH 23	716	-	1,289	1,146	-	-	2FT WIDENING OF SHOULDERS
0020	592+01.90	-	600+29.62	STH 23	-	-	-	-	-	2,207	CURVE 9, 12FT DRIVING LANES
0020	612+50.00	-	623+00.00	E/B STH 23	123	-	-	-	-	-	TACK FOR SUPERELEVATION WEDGE LAYER
0020	612+94.06	-	621+66.07	STH 23	-	-	-	-	-	2,325	CURVE 10, 12FT DRIVING LANES
TOTAL 0020					839	0	1,289	1,146	0	4,532	
PROJECT TOTAL					5,675	505	15,338	15,650	545	4,532	

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3

HMA QMP ACCEPTANCE

LOCATION	STATION			UNDERLYING SURFACE	BID ITEM	TONS	THICKNESS	QUALITY MANAGEMENT PROGRAM TO BE USED FOR:	
	FROM	-	TO					MIXTURE ACCEPTANCE	DENSITY ACCEPTANCE
2 X 12 FOOT DRIVING LANES	356+13.97	-	401+00.00	MILLED EXISTING ASPHALTIC SURFACE	4 MT 58-28 S	1319	2"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
3 FOOT SHOULDERS & INTERSECTIONS	356+13.97	-	401+00.00	MILLED EXISTING ASPHALTIC SURFACE	4 MT 58-28 S	696	2"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE
2 X 12 FOOT DRIVING LANES	401+00.00	-	494+00.00	CIR	3 MT 58-28 S	3125	2.25"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
3 FOOT SHOULDERS & INTERSECTIONS	401+00.00	-	494+00.00	CIR	3 MT 58-28 S	1055	2.25"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE
2 X 12 FOOT DRIVING LANES	494+00.00	-	724+77.84	CIR	3 MT 58-28 S	7754	2.25"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
5 FOOT SHOULDERS & INTERSECTIONS	494+00.00	-	724+77.84	CIR	3 MT 58-28 S	3404	2.25"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE
2 X 12 FOOT DRIVING LANES	401+00.00	-	494+00.00	HMA PAVEMENT 3 MT 58-28 S	4 MT 58-28 S	2778	2"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
3 FOOT SHOULDERS & INTERSECTIONS	401+00.00	-	494+00.00	HMA PAVEMENT 3 MT 58-28 S	4 MT 58-28 S	938	2"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE
2 X 12 FOOT DRIVING LANES	494+00.00	-	724+77.84	HMA PAVEMENT 3 MT 58-28 S	4 MT 58-28 S	6893	2"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
5 FOOT SHOULDERS & INTERSECTIONS	494+00.00	-	724+77.84	HMA PAVEMENT 3 MT 58-28 S	4 MT 58-28 S	3026	2"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE

HMA DRIVEWAYS

						REMARKS
CATEGORY	STATION	LT/RT	LOCATION	TON	LF	
0010	461+17	LT	STH 23	4	28	
0010	472+53	LT	STH 23	4	19	
0010	629+78	RT	STH 23	2	57	
0010	654+81	RT	STH 23	4	92	
0010	693+74	RT	STH 23	2	11	
0010	694+93	RT	STH 23	3	19	
0010	700+49	RT	STH 23	3	16	
0010	703+91	RT	STH 23	3	14	
0010	706+78	RT	STH 23	4	-	
0010	712+66	RT	STH 23	5	20	
0010	716+53	RT	STH 23	6	37	
0010	719+32	RT	STH 23	6	42	
0010	724+13	RT	STH 23	3	26	

TOTAL 0010 49 381

*ADDITIONAL QUANTITIES FOUND ELSEWHERE IN PLANS

RUMBLE STRIPS

						465.0425	465.0475	REMARKS
						ASPHALTIC	ASPHALT	
						SHOULDER	CENTERLINE	
						RUMBLE STRIPS	RUMBLE STRIPS	
						2-LANE RURAL	2-LANE RURAL	
CATEGORY	STATION	TO	STATION	LOCATION	LF	LF	LF	
0010	357+73	-	687+20	STH 23	-	29,255		
				TOTAL 0010	0	29,255		
0020	495+22	-	687+20	STH 23	17,184	-		RT SHOULDER
0020	496+62	-	687+20	STH 23	16,985	-		LT SHOULDER
				TOTAL 0020	34,169	0		
				PROJECT TOTAL	34,169	29,255		

PROJECT NO: 1430-02-73

HWY: STH 23

COUNTY: MARQUETTE

MISCELLANEOUS QUANTITIES

SHEET

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DRAINAGE																	
							522.0418	522.0424	522.0430	522.0436	522.1018	522.1024	522.1030	522.1036	633.5200	650.6000	
							CULVERT PIPE REINFORCED CONCRETE CLASS IV 18-INCH	CULVERT PIPE REINFORCED CONCRETE CLASS IV 24-INCH	CULVERT PIPE REINFORCED CONCRETE CLASS IV 30-INCH	CULVERT PIPE REINFORCED CONCRETE CLASS IV 36-INCH	ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18- INCH	ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24- INCH	ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 30- INCH	ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 36- INCH	MARKERS CULVERT END	CONSTRUCTION STAKING PIPE CULVERTS	
CATEGORY	STATION*	OFFSET*	TO	STATION*	OFFSET*	LOCATION	LF	LF	LF	LF	EACH	EACH	EACH	EACH	EACH	EACH	REMARKS
0010	410+64.30	33.00	LT	-	410+64.28	33.00	RT	STH 23	-	-	-	66	-	-	-	2	1
0010	443+40.91	35.00	'LT	-	443+39.83	35.00	'RT	STH 23	-	-	70	-	-	2	-	2	1
0010	518+11.74	34.00	'RT	-	518+14.22	34.00	'LT	STH 23	-	68	-	-	-	2	-	2	1
0010	617+31.09	34.90	'LT	-	617+25.64	34.89	'RT	STH 23	-	-	70	-	-	2	-	2	1
0010	60+27.91	47.06	'LT	-	60+28.74	66.94	'RT	FERN AVENUE	114	-	-	-	2	-	-	2	1
TOTAL 0010							114	68	140	66	2	2	4	2	10	5	

* STATIONS AND OFFSETS ARE TO ENDS OF CULVERT PIPE SECTION, NOT AEW SECTION.

CONCRETE ITEMS								
							601.0557 CONCRETE CURB & GUTTER 6- INCH SLOPED 36- INCH TYPE D	
CATEGORY	STATION	LT/RT	TO	STATION	LT/RT	LOCATION	LF	REMARKS
0010	440+85.10	RT	-	441+42.39	RT	CTH ZZ & STH 23	86	
0010	440+98.69	LT	-	441+49.07	LT	9TH AVE & STH 23	73	
0010	441+72.91	RT	-	442+19.35	RT	CTH ZZ & STH 23	72	
0010	441+80.23	LT	-	442+35.68	LT	9TH AVE & STH 23	87	
TOTAL 0010							318	

SECTION CORNER MONUMENTS					
					SPV.0060.02 SPECIAL (02. REESTABLISH SECTION CORNER MONUMENTS)
CATEGORY	STATION	OFFSET	LOCATION	EACH	REMARKS
0010	658+24	10' RT	STH 23	1	
0010	706+42	2' LT	STH 23	1	
TOTAL 0010				2	

EROSION CONTROL								
					628.1504	628.7555	628.7570	
					CULVERT PIPE			
CATEGORY	STATION	STATION	LT/RT	LOCATION	SILT FENCE	CHECKS	ROCK BAGS	REMARKS
					LF	EACH	EACH	
0010	410+07	- 411+22	LT	STH 23	191	-	-	
0010	410+07	- 411+20	RT	STH 23	188	-	-	
0010		410+64	LT	STH 23	-	5	-	
0010		410+64	RT	STH 23	-	-	17	SILT FENCE RELIEF
0010	440+77	- 441+33	RT	STH 23	135	-	-	
0010	440+90	- 441+36	LT	STH 23	122	-	-	
0010	441+74	- 442+26	RT	STH 23	120	-	-	
0010	441+86	- 442+42	LT	STH 23	136	-	-	
0010		441+33	LT	STH 23	-	5	-	
0010		441+95	RT	STH 23	-	-	17	SILT FENCE RELIEF
0010	442+85	- 443+95	LT	STH 23	180	-	-	
0010	442+86	- 443+96	RT	STH 23	183	-	-	
0010		443+40	RT	STH 23	-	-	17	SILT FENCE RELIEF
0010		443+41	LT	STH 23	-	5	-	
0010	517+50	- 518+72	LT	STH 23	201	-	-	
0010	517+52	- 518+71	RT	STH 23	191	-	-	
0010		518+12	RT	STH 23	-	-	17	SILT FENCE RELIEF
0010		518+14	LT	STH 23	-	5	-	
0010	608+83	- 623+29	LT	STH 23	1,491	-	-	
0010	609+97	- 610+41	RT	STH 23	45	-	-	
0010	610+71	- 616+77	RT	STH 23	601	-	-	
0010	616+97	- 617+85	RT	STH 23	109	-	-	
0010		617+26	RT	STH 23	-	5	-	
0010		617+31	LT	STH 23	-	-	17	SILT FENCE RELIEF
0010	624+59	- 626+79	RT	STH 23	222	-	-	
0010	60+20	- 61+21	LT	FERN AVE	147	-	-	
0010	60+20	- 61+22	RT	FERN AVE	143	-	-	
0010		60+28	LT	FERN AVE	-	5	-	
0010		60+29	RT	FERN AVE	-	-	17	SILT FENCE RELIEF
0010				UNDISTRIBUTED	1,101	10	34	
TOTAL 0010					5,506	40	136	

EROSION CONTROL MOBILIZATIONS				
		628.1905	628.1910	
		MOBILIZATIONS	MOBILIZATIONS	
		EROSION	EMERGENCY	
		CONTROL	EROSION	
CATEGORY	LOCATION	EACH	EACH	REMARKS
0010	PROJECT	3	3	
	TOTAL 0010	3	3	

SIGNS					
					638.2102
					MOVING SIGNS
					TYPE II
CATEGORY	EXISTING STATION	EXISTING OFFSET	LOCATION	EACH	REMARKS
0010	441+35	44' LT	STH 23	1	STOP SIGN (R1-1)
0010	441+85	44' RT	STH 23	1	STOP SIGN (R1-1)
0010	617+23	28' LT	STH 23	1	CHEVRON (W1-8)
0010	60+48	20' LT	FERN AVENUE	1	STOP SIGN (R1-1)
0010	UNDISTRIBUTED		STH 23	14	NO PASSING ZONE (W14-3)
TOTAL 0010				18	

RESTORATION

					625.0100	628.2008	629.0210	630.0130	630.0500	
						EROSION MAT				
						URBAN CLASS I	FERTILIZER TYPE	SEEDING		
					TOPSOIL	TYPE B	B	MIXTURE NO. 30	SEED WATER	
CATEGORY	STATION	TO	STATION	LOCATION	SY	SY	CWT	LB	MGAL	REMARKS
0010	410+11.30	-	411+17.31	STH 23	363	363	0.23	7	4	
0010	440+76.64	-	442+41.96	STH 23	174	174	0.11	3	2	
0010	442+87.62	-	443+93.12	STH 23	303	303	0.19	5	3	
0010	517+60.47	-	518+65.47	STH 23	417	417	0.26	8	5	
0010	608+83.00	-	627+03.00	STH 23	2,598	2,598	1.64	47	29	
0010	60+17.00	-	61+17.05	FERN AVENUE	264	264	0.17	5	3	
TOTAL 0010					4,119	4,119	2.59	75	47	

TRAFFIC CONTROL

							208.1500.S	643.0300	643.0420	643.0705	643.0900	643.1000	643.4100	
							TEMPORARY		TRAFFIC	TRAFFIC		TRAFFIC	TRAFFIC	
							LANE SHIFT	TRAFFIC	CONTROL	CONTROL		CONTROL SIGNS	CONTROL	
							DURING	CONTROL	BARRICADES	WARNING	TRAFFIC	CONTROL SIGNS	INTERIM LANE	
							CULVERT WORK	DRUMS	TYPE III	LIGHTS TYPE A	CONTROL SIGNS	FIXED MESSAGE	CLOSURE	
CATEGORY	LOCATION	NO. OF SIGNS	NO. OF DRUMS	NO. OF BARRICADES	NO. OF LIGHTS TYPE A	DAYS	EACH	DAY	DAY	DAY	DAY	SF	EACH	REMARKS
0010	STH 23 & 8TH COURT	1	-	-	-	7	-	-	-	-	-	18		7-DAY ADVANCED WARNING (G20-57)
0010	STH 23 & 8TH COURT	4	-	-	-	100	-	-	-	-	400	-		
0010	8TH COURT	1	-	-	-	100	-	-	-	-	100	-		
0010	CTH M	4	-	-	-	100	-	-	-	-	400	-		
0010	8TH DRIVE	2	-	-	-	100	-	-	-	-	200	-		
0010	8TH DRIVE	2	-	-	-	100	-	-	-	-	200	-		PROTECTION OF C&G WORK WITH DRUMS
0010	9TH AVE/CTHZZ	4	20	-	-	100	-	280	-	-	400	-		
0010	10TH AVE	2	-	-	-	100	-	-	-	-	200	-		
0010	10TH DRIVE	2	-	-	-	100	-	-	-	-	200	-		
0010	11TH DRIVE	2	-	-	-	100	-	-	-	-	200	-		
0010	FERN AVENUE	2	-	-	-	100	-	-	-	-	200	-		FERN AVENUE CLOSURE FERN AVENUE CLOSURE
0010	FERN AVENUE	6	-	12	16	3	-	-	36	48	18	-		
0010	STH 23	2	-	-	-	3	-	-	-	-	6	-		
0010	CTH B	2	-	-	-	100	-	-	-	-	200	-		
0010	COTTAGE CT	2	-	-	-	100	-	-	-	-	200	-		
0010	MORNINGSIDE COURT	1	-	-	-	100	-	-	-	-	100	-		7-DAY ADVANCED WARNING (G20-57)
0010	STH 23 & MORNINGSIDE CT	1	-	-	-	7	-	-	-	-	-	18		
0010	CULVERT REPLACEMENT (410+64)	10	34	-	-	2	2	68	-	-	-	-		
0010	CULVERT REPLACEMENT (443+40)	10	34	-	-	2	2	68	-	-	-	-		
0010	CULVERT REPLACEMENT (518+12)	10	34	-	-	2	2	68	-	-	-	-		
0010	CULVERT REPLACEMENT (617+28)	10	34	-	-	2	2	68	-	-	-	-		UNEVEN LANE SIGNING GROOVED PAVEMENT SIGNING BUMP/LOOSE GRAVEL SIGNING
0010	STH 23 & MORNINGSIDE CT	4	-	-	-	100	-	-	-	-	400	-		
0010	STH 23	14	-	-	-	25	-	-	-	-	350	-		
0010	STH 23	18	-	-	-	30	-	-	-	-	540	-		
0010	STH 23	16	-	-	-	30	-	-	-	-	480	-		
0010	E/B LANE, CURVE 9	10	44	-	-	1	-	44	-	-	-	-	1	RESIN BINDER HIGH FRICTION SURFACE TREATMENT
0010	E/B LANE, CURVE 10	10	47	-	-	1	-	47	-	-	-	-	1	RESIN BINDER HIGH FRICTION SURFACE TREATMENT
0010	W/B LANE, CURVE 10	10	47	-	-	1	-	47	-	-	-	-	1	RESIN BINDER HIGH FRICTION SURFACE TREATMENT
0010	W/B LANE, CURVE 9	10	44	-	-	1	-	44	-	-	-	-	1	RESIN BINDER HIGH FRICTION SURFACE TREATMENT
TOTAL 0010							8	734	36	48	3,424	36	4	

PAVEMENT MARKING (SHEET 1 OF 2)

						646.6120	648.0100	SPV.0090.01	SPV.0090.02	SPV.0090.03	SPV.0090.04	SPV.0090.05
						MARKING STOP LINE	LOCATING NO-	SPECIAL (01.	SPECIAL (02.	SPECIAL (03.	SPECIAL (04.	SPECIAL (05.
						EPOXY 18-INCH	PASSING ZONES	TEMPORARY	TEMPORARY	MARKING LINE	MARKING LINE	MARKING LINE
						WHITE		MARKING LINE	MARKING LINE	MARKING LINE	GROOVED WET	GROOVED WET
						LF	MI	PAINT 6-INCH)	EPOXY 6-INCH)	EPOXY 6-INCH)	REF EPOXY 6-	REF EPOXY 10-
						LF	MI	LF	LF	LF	INCH)	INCH)
CATEGORY	STATION	TO	STATION	MARKING TYPE	LOCATION	LF	MI	LF	LF	LF	LF	LF
0010	356+13.90	-	724+77.84	-	STH 23	-	6.98	-	-	-	-	-
0010	356+13.97	-	401+00	CL MARKINGS	STH 23	-	-	4,005	-	-	-	-
0010	356+13.97	-	401+00	CL MARKINGS	STH 23	-	-	1,707	2,298	-	-	-
0010	356+13.97	-	401+00.00	CL MARKINGS	STH 23	-	-	-	1,707	-	-	-
0010	401+00.00	-	724+77.84	CL MARKINGS	STH 23	-	-	40,826	-	-	-	-
0010	401+00.00	-	724+77.84	CL MARKINGS	STH 23	-	-	40,826	-	-	-	-
0010	401+00.00	-	724+77.84	CL MARKINGS	STH 23	-	-	-	-	-	-	-
0010	401+00.00	-	724+77.84	CL MARKINGS	STH 23	-	-	20,290	20,536	-	-	-
0010	401+00.00	-	724+77.84	CL MARKINGS	STH 23	-	-	-	20,290	-	-	-
0010	356+13.90	-	366+13.82	RT EDGELINE	STH 23	-	-	-	-	-	1,003	-
0010	356+13.97	-	366+19.69	LT EDGELINE	STH 23	-	-	-	-	-	1,005	-
0010	356+13.97	-	358+92.04	CL SOLID-SKIP	STH 23	-	-	-	-	348	-	-
0010	358+92.04	-	370+83.98	CL SKIP	STH 23	-	-	-	-	298	-	-
0010	362+66.27	-	366+13.82	CHANNELIZING LANE LINE	STH 23	-	-	-	-	-	-	348
0010	366+58.31	-	366+85.14	STOP BAR	CTH M	27	-	-	-	-	-	-
0010	366+85.14	-	366+85.21	CL SOLID-SOLID	CTH M	-	-	-	-	74	-	-
0010	366+86.96	-	366+95.66	CL SOLID-SOLID	CTH M	-	-	-	-	72	-	-
0010	366+86.96	-	367+14.52	STOP BAR	CTH M	28	-	-	-	-	-	-
0010	367+53.36	-	390+05.71	RT EDGELINE	STH 23	-	-	-	-	-	2,248	-
0010	367+59.05	-	371+15.68	CHANNELIZING LANE LINE	STH 23	-	-	-	-	-	-	356
0010	367+59.05	-	401+00.00	LT EDGELINE	STH 23	-	-	-	-	-	3,346	-
0010	370+83.98	-	381+84.90	CL SKIP-SOLID	STH 23	-	-	-	-	1,376	-	-
0010	381+84.90	-	384+69.92	CL SOLID-SOLID	STH 23	-	-	-	-	570	-	-
0010	384+69.92	-	394+74.44	CL SOLID-SKIP	STH 23	-	-	-	-	1,256	-	-
0010	390+05.71	-	391+04.31	RT EDGELINE SKIP	STH 23	-	-	-	-	-	25	-
0010	392+40.12	-	401+00.00	RT EDGELINE	STH 23	-	-	-	-	-	861	-
0010	394+74.44	-	401+00.00	CL SKIP	STH 23	-	-	-	-	157	-	-
0010	401+00.00	-	440+98.69	LT EDGELINE	STH 23	-	-	-	-	-	3,996	-
0010	401+00.00	-	408+21.31	CL SKIP	STH 23	-	-	-	-	180	-	-
0010	401+00.00	-	416+05.04	RT EDGELINE	STH 23	-	-	-	-	-	1,505	-
0010	408+21.31	-	419+11.32	CL SKIP-SOLID	STH 23	-	-	-	-	1,363	-	-
0010	416+05.04	-	418+26.64	RT EDGELINE SKIP	STH 23	-	-	-	-	-	56	-
0010	417+66.82	-	440+85.10	RT EDGELINE	STH 23	-	-	-	-	-	2,323	-
0010	419+11.32	-	452+75.00	CL SOLID-SOLID	STH 23	-	-	-	-	6,728	-	-
0010	438+90.00	-	440+85.10	CHANNELIZING LANE LINE	STH 23	-	-	-	-	-	-	195
0010	441+36.38	-	441+61.41	STOP BAR	9TH AVE	30	-	-	-	-	-	-
0010	441+53.61	-	441+57.77	CL SOLID-SOLID	CTH ZZ	-	-	-	-	130	-	-
0010	441+57.77	-	441+82.49	STOP BAR	CTH ZZ	30	-	-	-	-	-	-
0010	441+61.41	-	441+65.77	CL SOLID-SOLID	9TH AVE	-	-	-	-	132	-	-
0010	442+19.35	-	521+80.68	RT EDGLELINE	STH 23	-	-	-	-	-	7,963	-
0010	442+35.68	-	444+38.41	CHANNELIZING LANE LINE	STH 23	-	-	-	-	-	-	202
0010	442+35.68	-	494+85.83	LT EDGELINE	STH 23	-	-	-	-	-	5,256	-
0010	452+75.00	-	457+00.00	CL SKIP	STH 23	-	-	-	-	106	-	-
0010	457+00.00	-	468+25.00	CL SKIP-SOLID	STH 23	-	-	-	-	1,406	-	-
SUBTOTAL SHEET 1						115	6.98	148,479	44,831	14,196	29,587	1,101

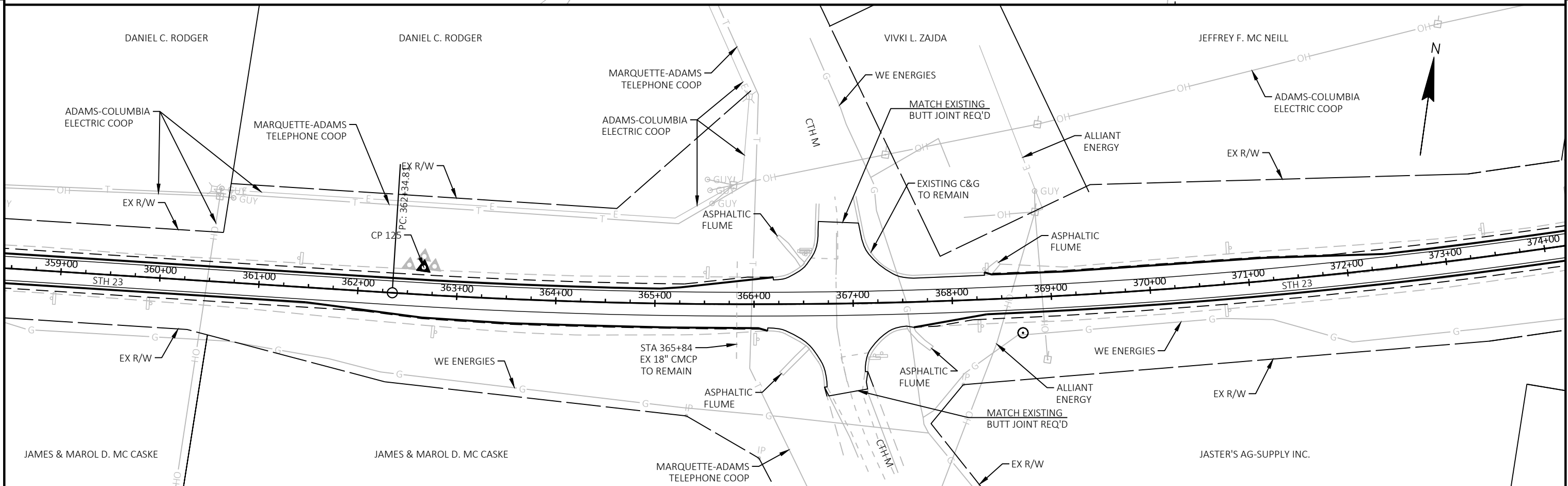
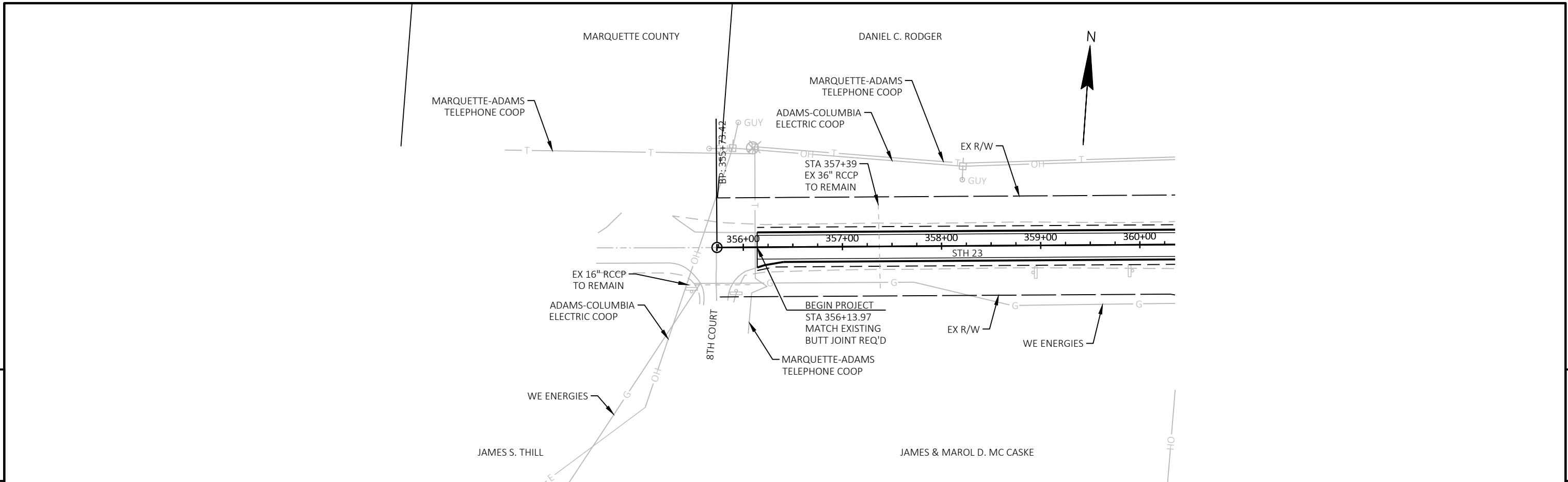
PAVEMENT MARKING (SHEET 2 OF 2)

CATEGORY	STATION	TO	STATION	MARKING TYPE	LOCATION	MARKING STOP LINE	LOCATING NO-	SPECIAL (01.	SPECIAL (02.	SPECIAL (03.	SPECIAL (04.	SPECIAL (05.
						EPOXY 18-INCH	PASSING ZONES	TEMPORARY	TEMPORARY	MARKING LINE	MARKING LINE	MARKING LINE
						WHITE		MARKING LINE	MARKING LINE	MARKING LINE	GROOVED WET	GROOVED WET
						LF	MI	PAINT 6-INCH)	EPOXY 6-INCH)	EPOXY 6-INCH)	REF EPOXY 6-	REF EPOXY 10-
0010	468+25.00	-	497+74.87	CL SOLID-SOLID	STH 23	-	-	-	-	5,900	-	-
0010	495+68.35	-	575+70.46	LT EDGELINE	STH 23	-	-	-	-	-	7,996	-
0010	497+74.87	-	508+75.00	CL SOLID-SKIP	STH 23	-	-	-	-	1,375	-	-
0010	508+75.00	-	511+35.69	CL SKIP	STH 23	-	-	-	-	65	-	-
0010	511+35.69	-	522+50.00	CL SKIP-SOLID	STH 23	-	-	-	-	1,393	-	-
0010	521+80.68	-	522+76.79	RT EDGELINE SKIP	STH 23	-	-	-	-	-	24	-
0010	522+50.00	-	527+00.00	CL SOLID-SOLID	STH 23	-	-	-	-	900	-	-
0010	522+76.79	-	718+98.70	RT EDGELINE	STH 23	-	-	-	-	-	19,617	-
0010	527+00.00	-	537+75.00	CL SOLID-SKIP	STH 23	-	-	-	-	1,344	-	-
0010	537+75.00	-	586+00.00	CL SKIP	STH 23	-	-	-	-	1,206	-	-
0010	576+50.95	-	657+69.27	LT EDGELINE	STH 23	-	-	-	-	-	8,121	-
0010	586+00.00	-	595+75.00	CL SKIP-SOLID	STH 23	-	-	-	-	1,219	-	-
0010	595+75.00	-	605+75.00	CL SOLID-SKIP	STH 23	-	-	-	-	1,250	-	-
0010	605+75.00	-	616+50.00	CL SKIP-SOLID	STH 23	-	-	-	-	1,344	-	-
0010	616+50.00	-	671+00.00	CL SOLID-SOLID	STH 23	-	-	-	-	10,900	-	-
0010	658+90.79	-	716+12.31	LT EDGELINE	STH 23	-	-	-	-	-	5,723	-
0010	671+00.00	-	683+00.00	CL SOLID-SKIP	STH 23	-	-	-	-	1,500	-	-
0010	683+00.00	-	708+75.00	CL SKIP	STH 23	-	-	-	-	644	-	-
0010	708+75.00	-	724+77.84	CL SKIP-SOLID	STH 23	-	-	-	-	2,004	-	-
0010	715+38.65	-	716+75.74	LT EDGELINE SKIP	STH 23	-	-	-	-	-	35	-
0010	716+53.01	-	716+53.21	CL SOLID-SOLID	CTH B	-	-	-	-	20	-	-
0010	716+75.74	-	717+86.24	LT EDGELINE	STH 23	-	-	-	-	-	112	-
0010	717+86.24	-	719+17.19	LT EDDGELINE SKIP	STH 23	-	-	-	-	-	33	-
0010	717+78.81	-	718+25.28	RT EDGELINE	STH 23	-	-	-	-	-	49	-
0010	718+98.70	-	719+62.50	RT EDGELINE SKIP	STH 23	-	-	-	-	-	16	-
0010	719+17.19	-	724+77.84	LT EDGELINE	STH 23	-	-	-	-	-	562	-
0010	719+62.50	-	724+77.84	RT EDGELINE	STH 23	-	-	-	-	-	515	-
SUBTOTAL SHEET 2						0	0	0	0	31,063	42,802	0
TOTAL 0010						115	6.98	148,479	44,831	45,259	72,389	1,101

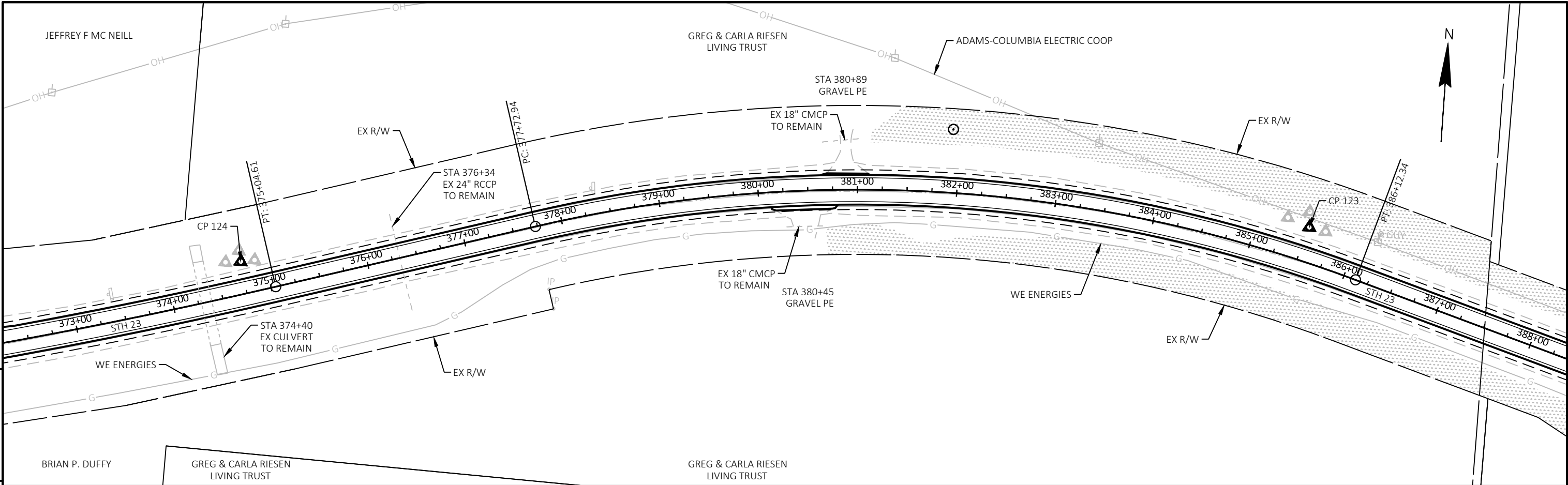
CONSTRUCTION STAKING									
					650.4500	650.5000	650.8000	650.9920	
					CONSTRUCTION		CONSTRUCTION		
					STAKING	CONSTRUCTION	STAKING	CONSTRUCTION	
					SUBGRADE	STAKING BASE	RESURFACING	STAKING SLOPE	
CATEGORY	STATION	TO	STATION	LOCATION	LF	LF	LF	LF	REMARKS
0010	356+13.97	-	401+00.00	STH 23	-	-	4,486	-	
0010	401+00.00	-	724+77.84	STH 23	-	-	32,378	-	
0010	410+11.30	-	411+17.31	STH 23	106	106	-	106	
0010	442+87.62	-	443+93.12	STH 23	106	106	-	106	
0010	517+60.47	-	518+65.47	STH 23	105	105	-	105	
0010	608+83.00	-	627+03.00	STH 23	-	-	-	1,820	
0010	616+75.69	-	617+81.20	STH 23	106	106	-	-	
0010	60+17.00	-	61+17.06	FERN AVENUE	100	100	-	100	
TOTAL 0010					523	523	36,864	2,237	

SAWING					
*690.0150SAWING ASPHALT					
CATEGORY	STATION	LOCATION	LF	REMARKS	
0010	410+11.30	STH 23	29		
0010	411+17.31	STH 23	29		
0010	442+87.62	STH 23	43		
0010	443+93.12	STH 23	38		
0010	517+60.47	STH 23	30		
0010	518+65.47	STH 23	30		
0010	616+75.69	STH 23	29		
0010	617+81.20	STH 23	29		
0010	60+16.00	FERN AVENUE	90		
0010	61+17.05	FERN AVENUE	22		
TOTAL 0010			369		

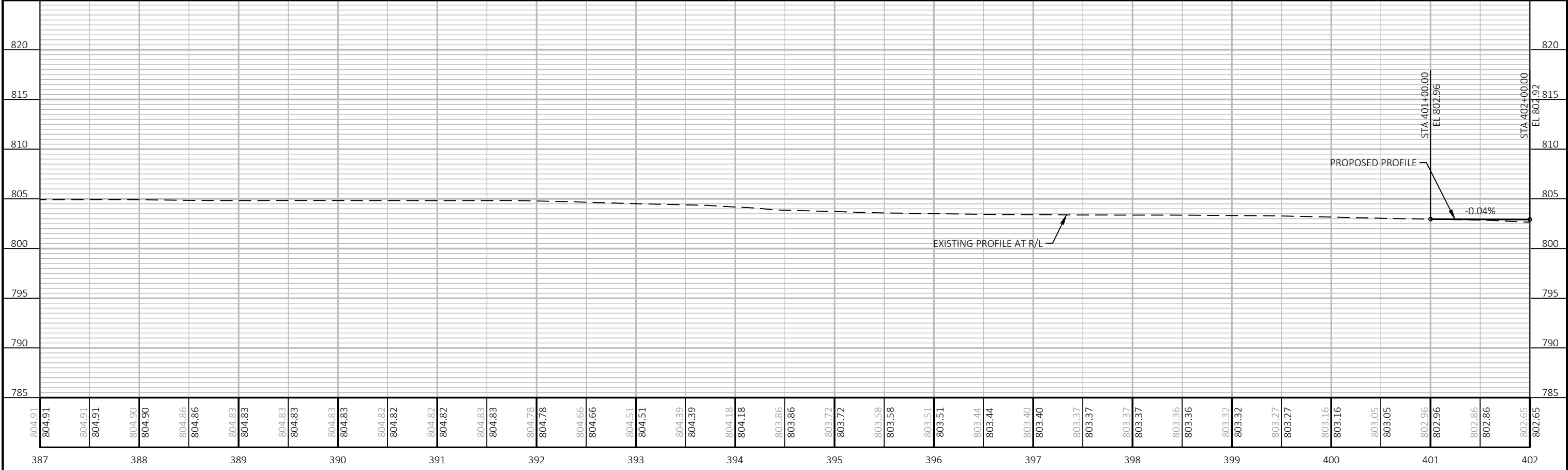
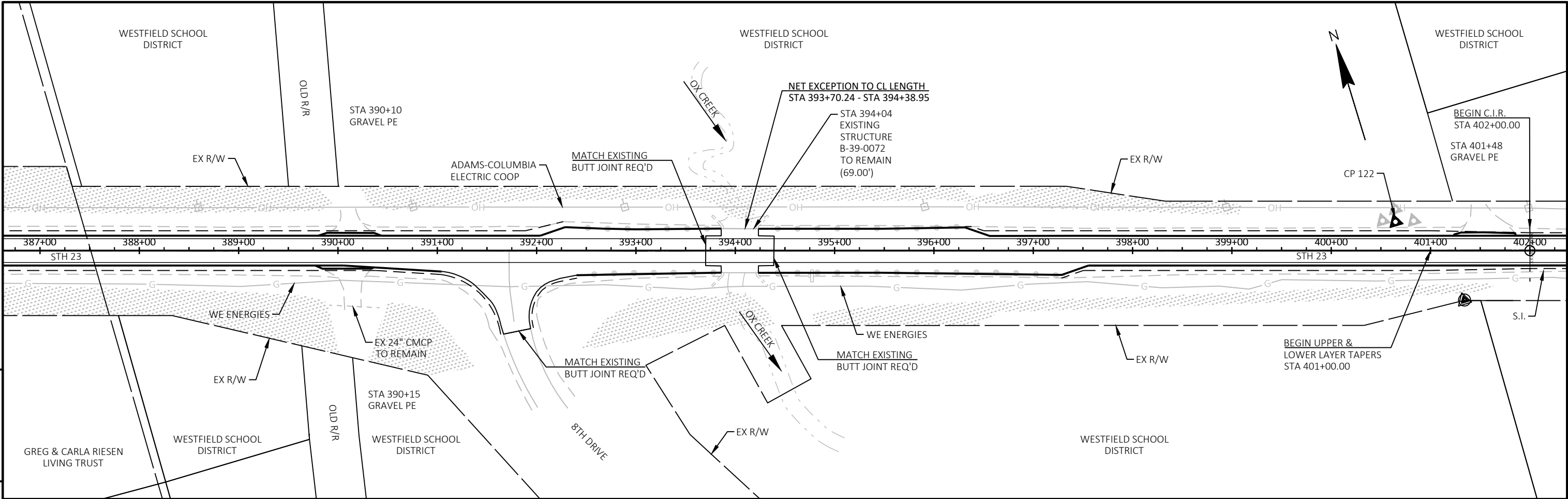
*ADDITIONAL QUANTITIES FOUND ELSEWHERE IN PLANS



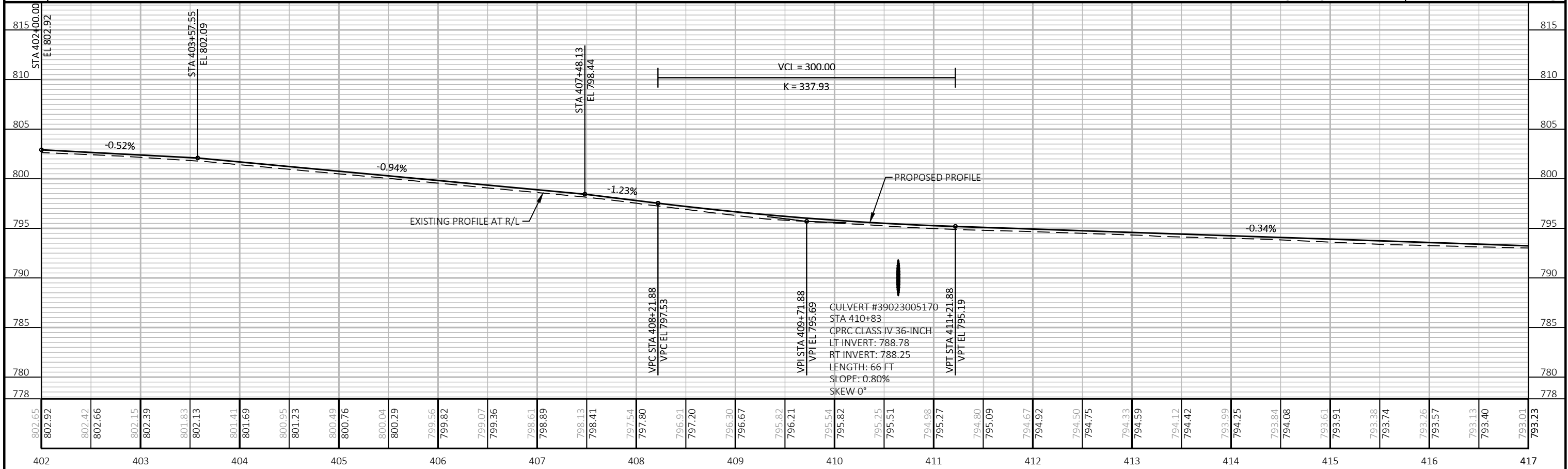
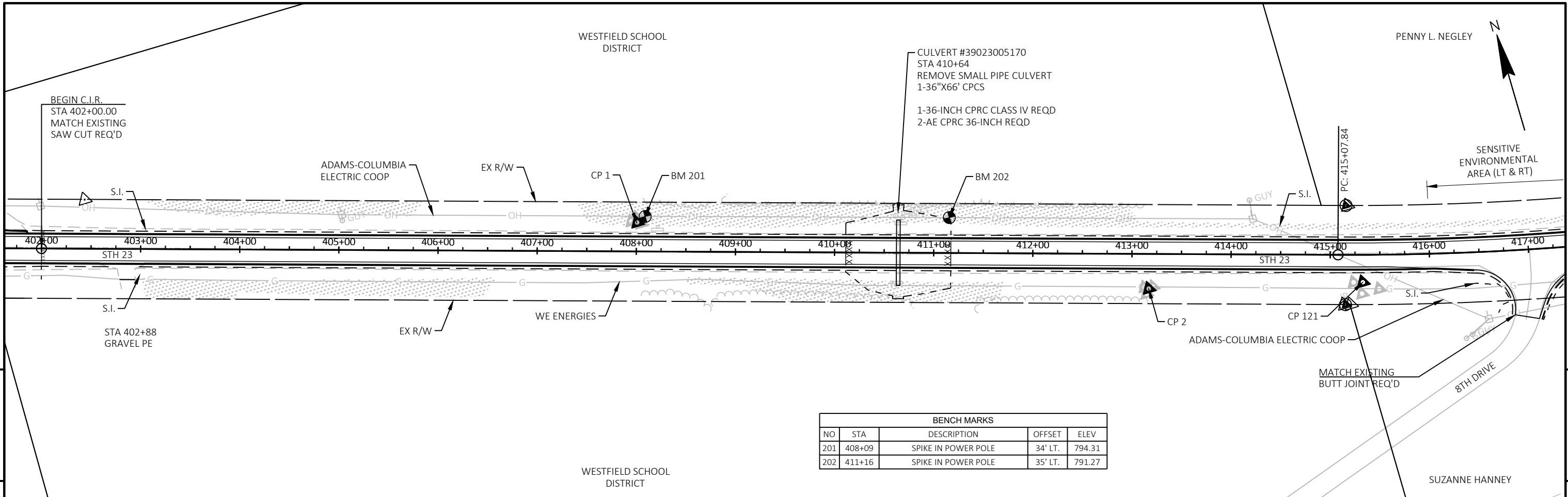
PROJECT NO: 1430-02-73	HWY: STH 23	COUNTY: MARQUETTE	PLAN	SHEET 83	E
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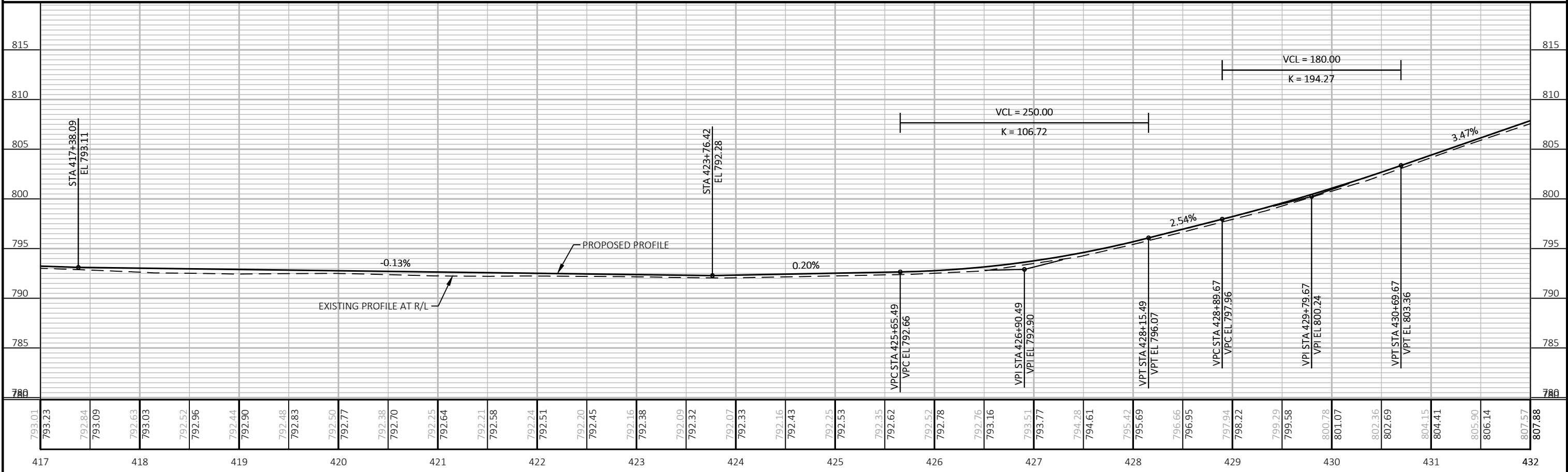
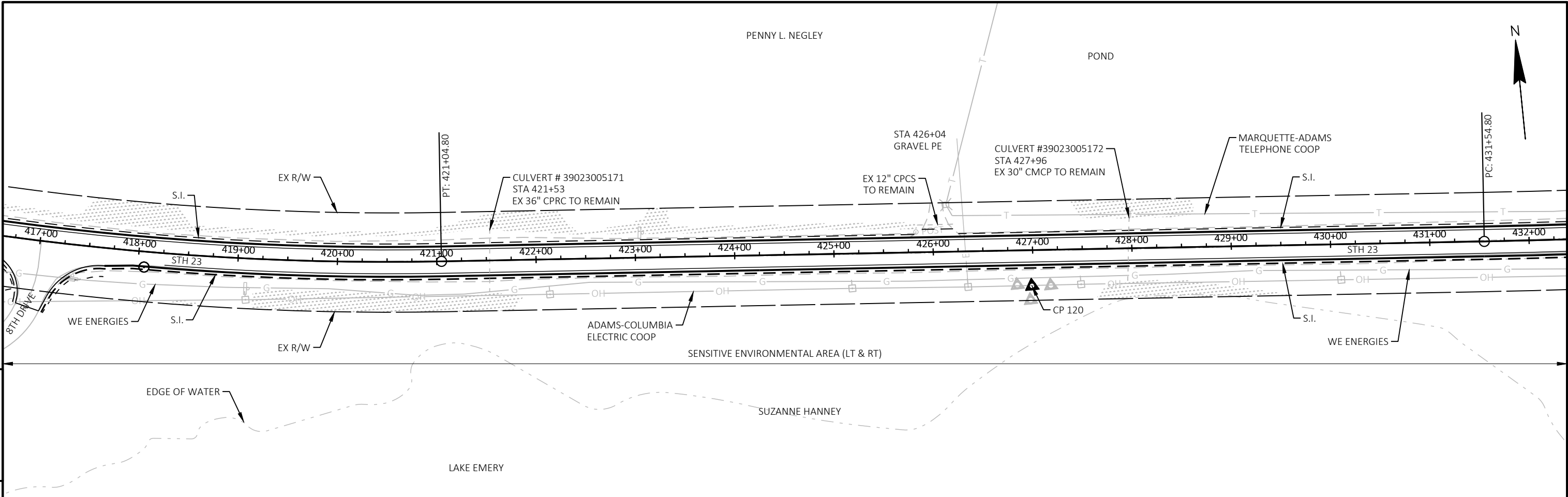


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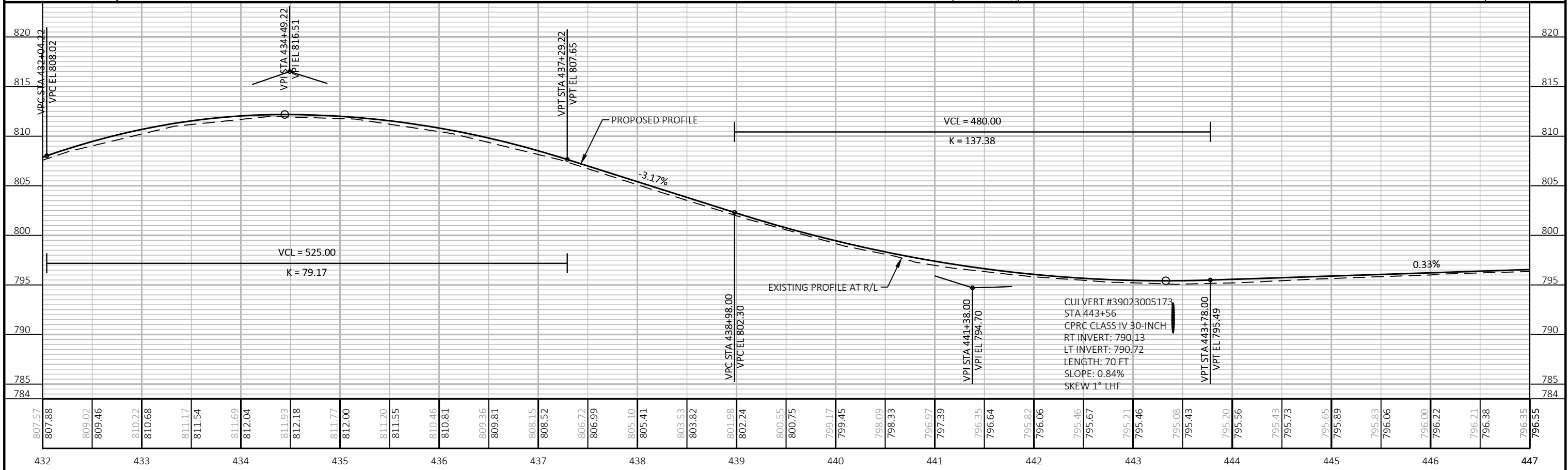
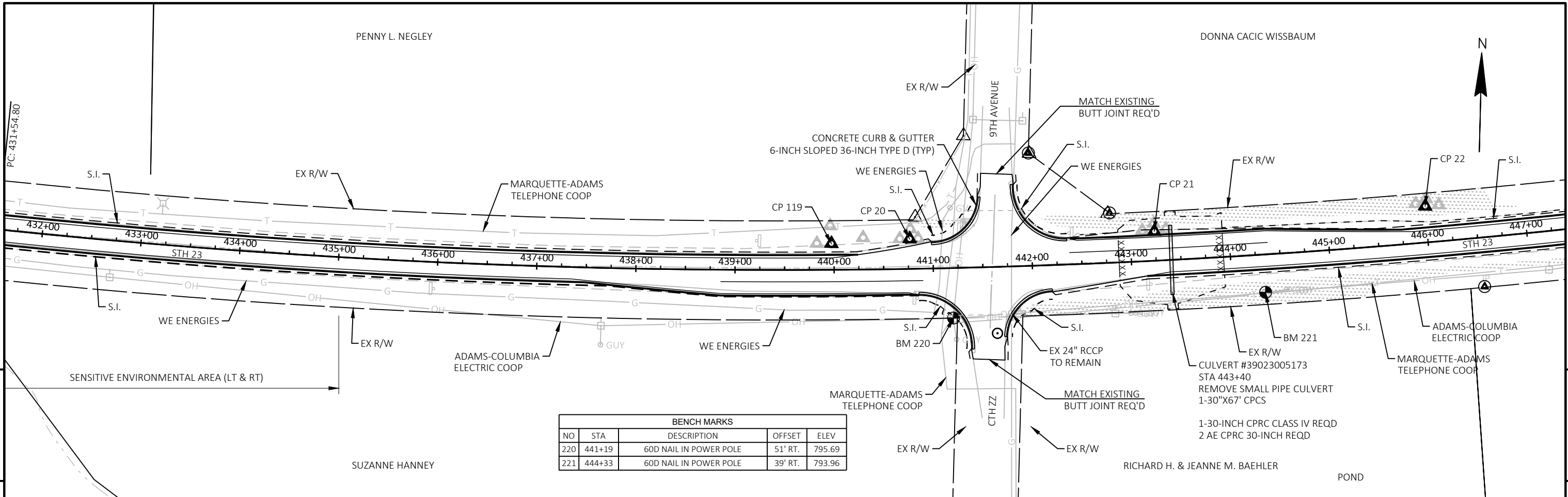


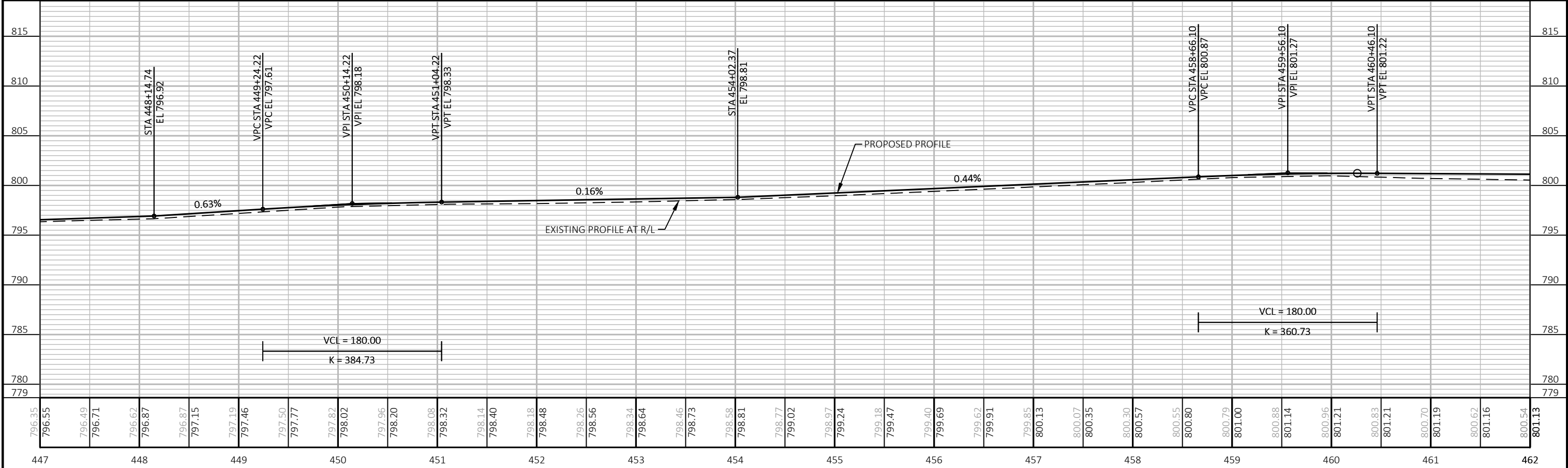
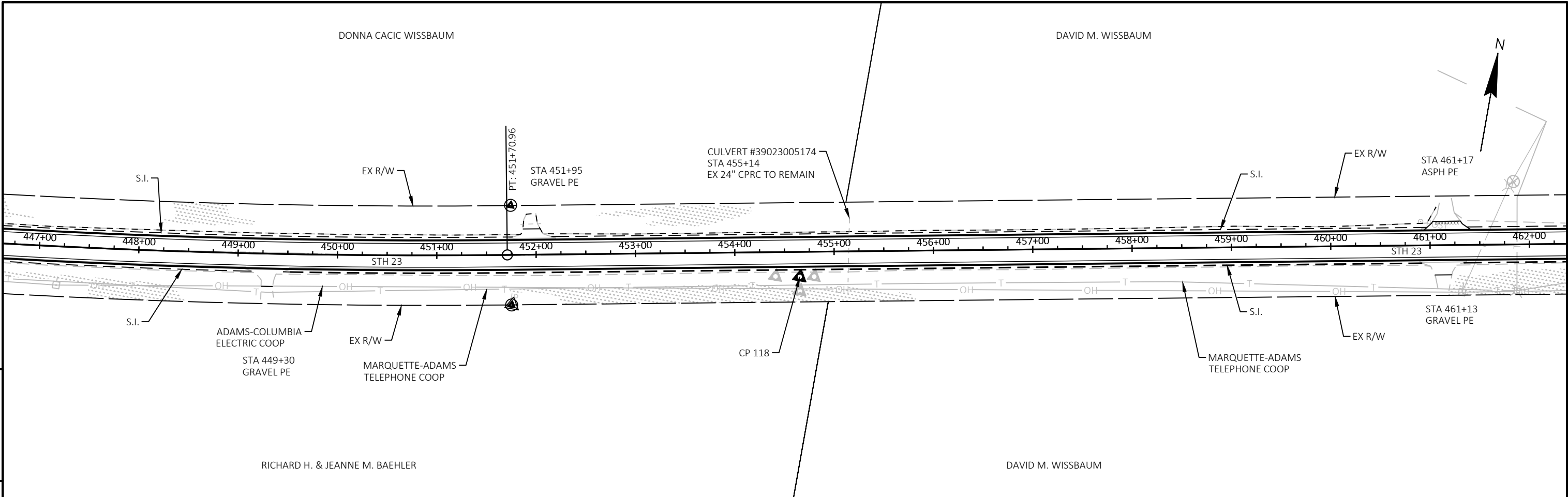
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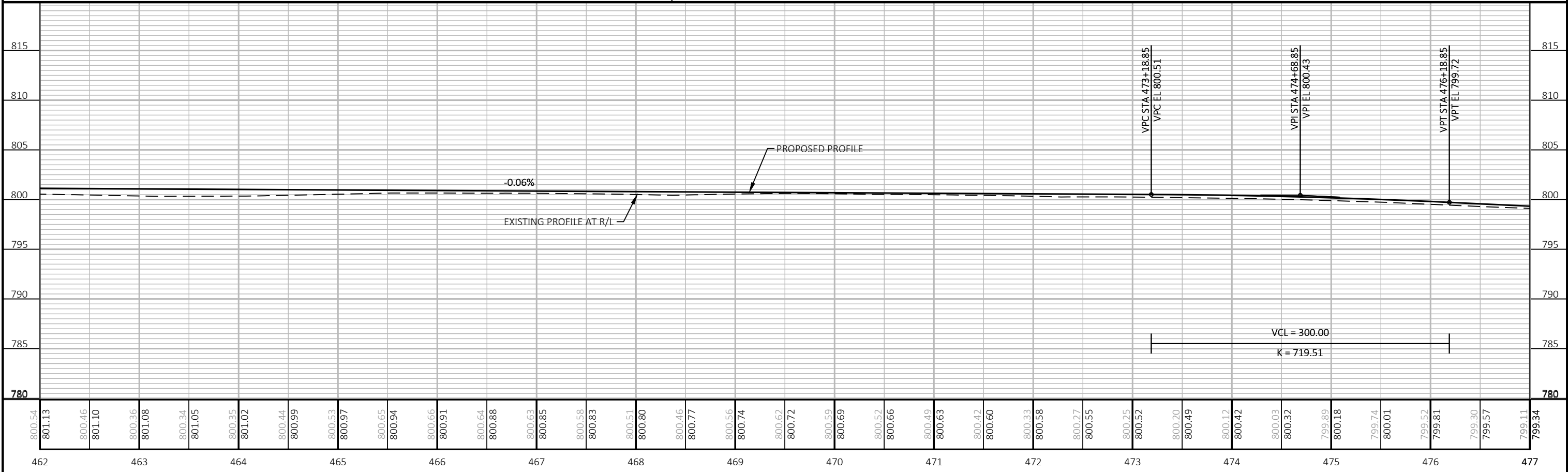
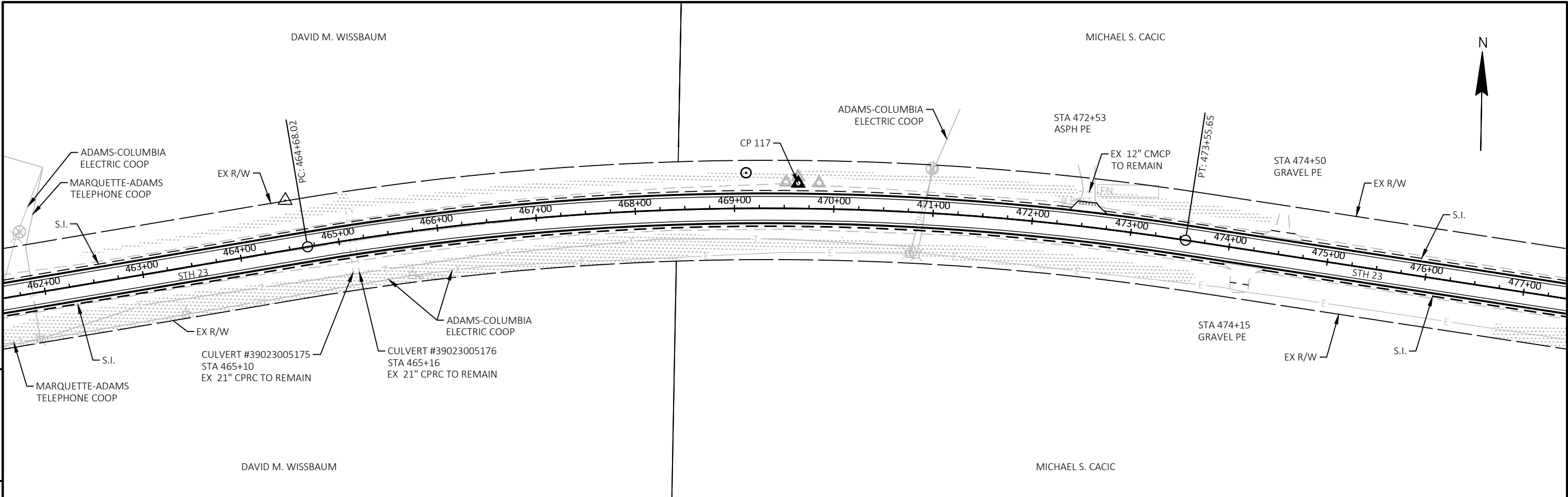


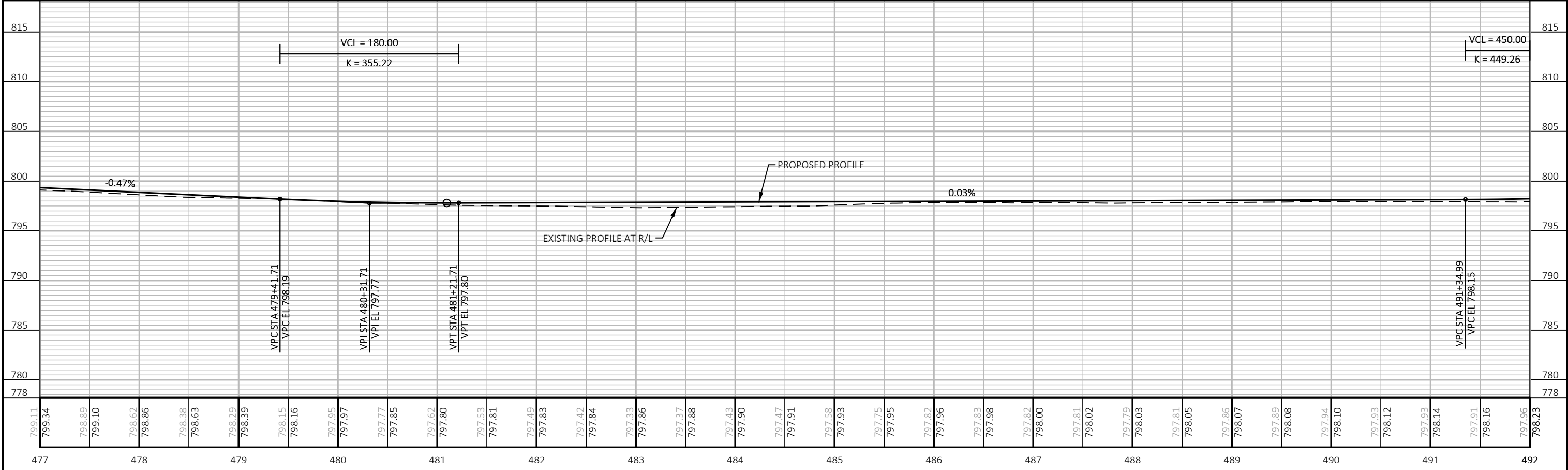
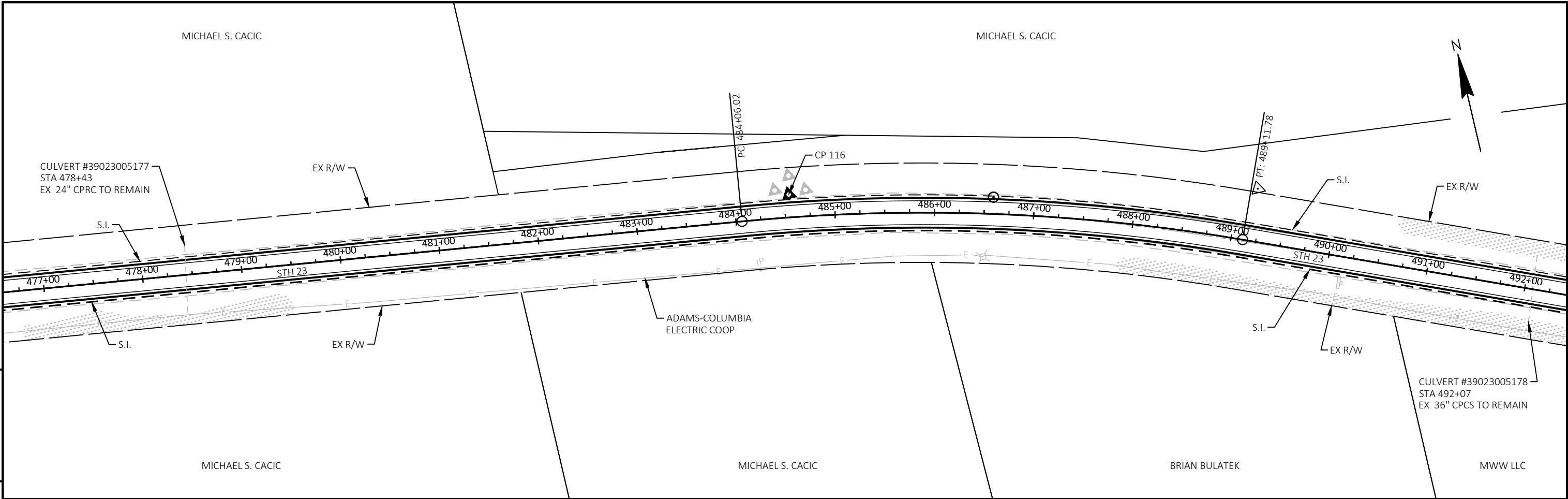


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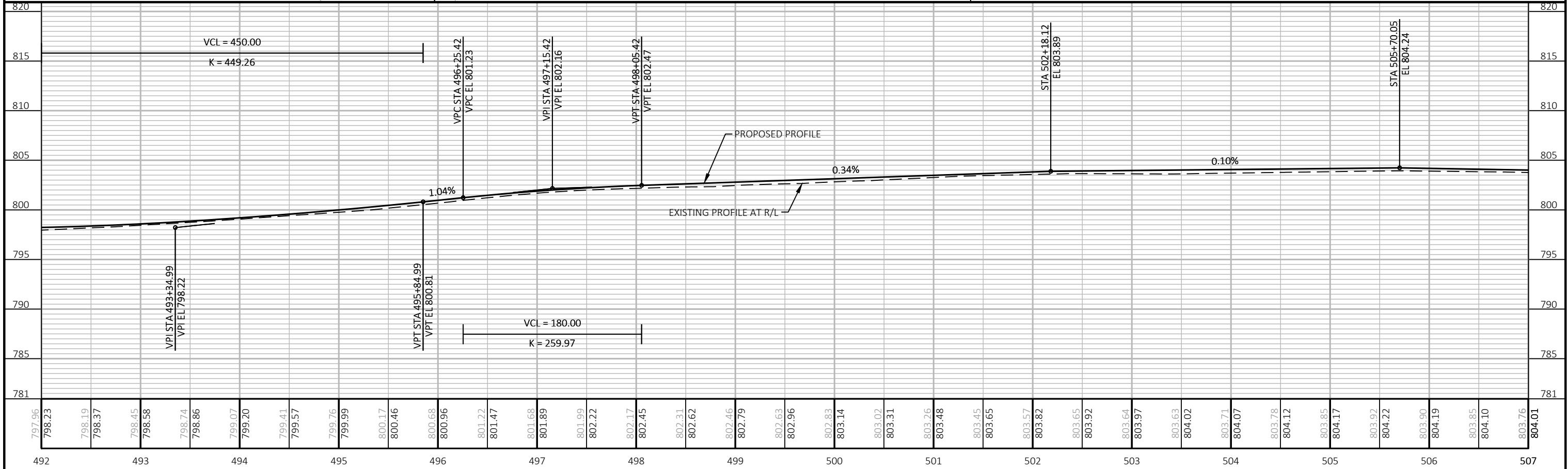
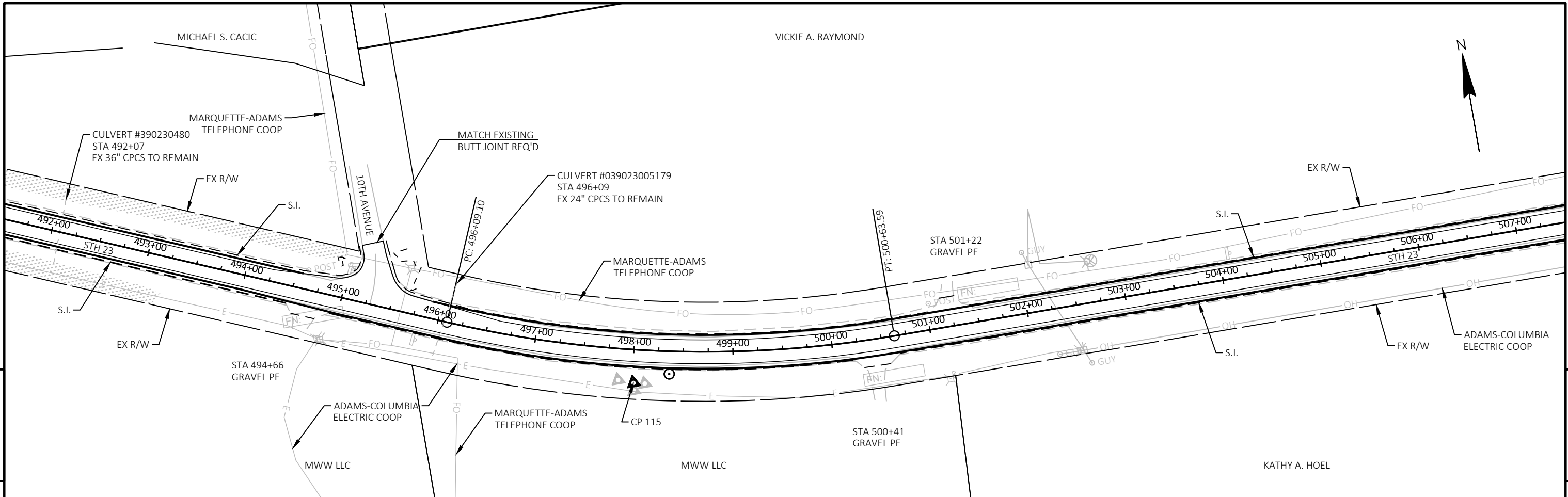




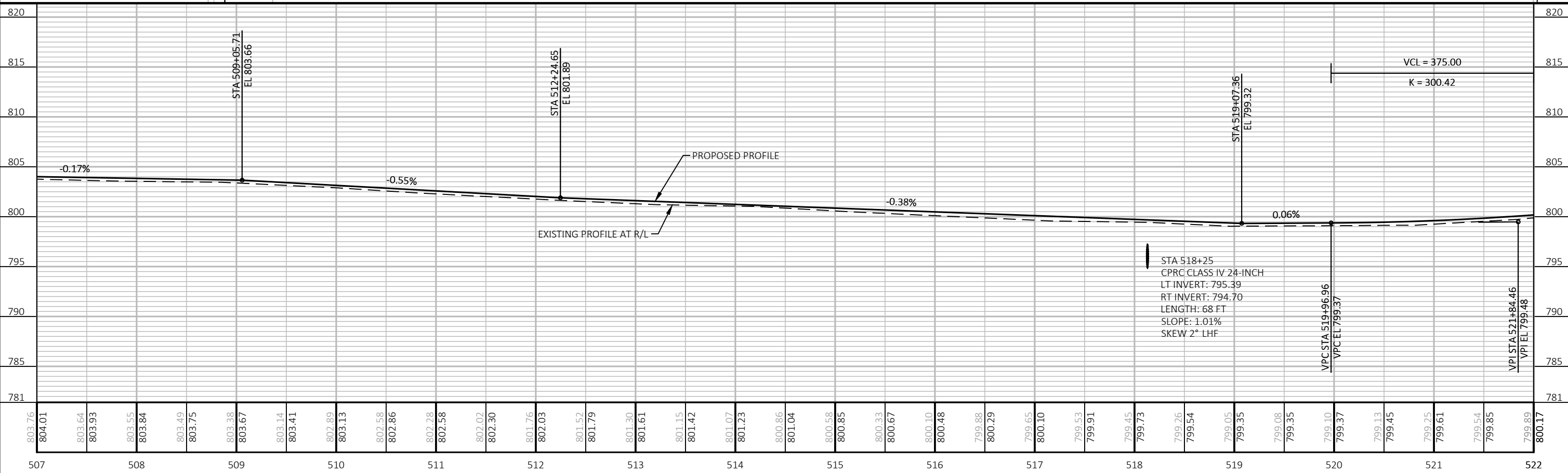
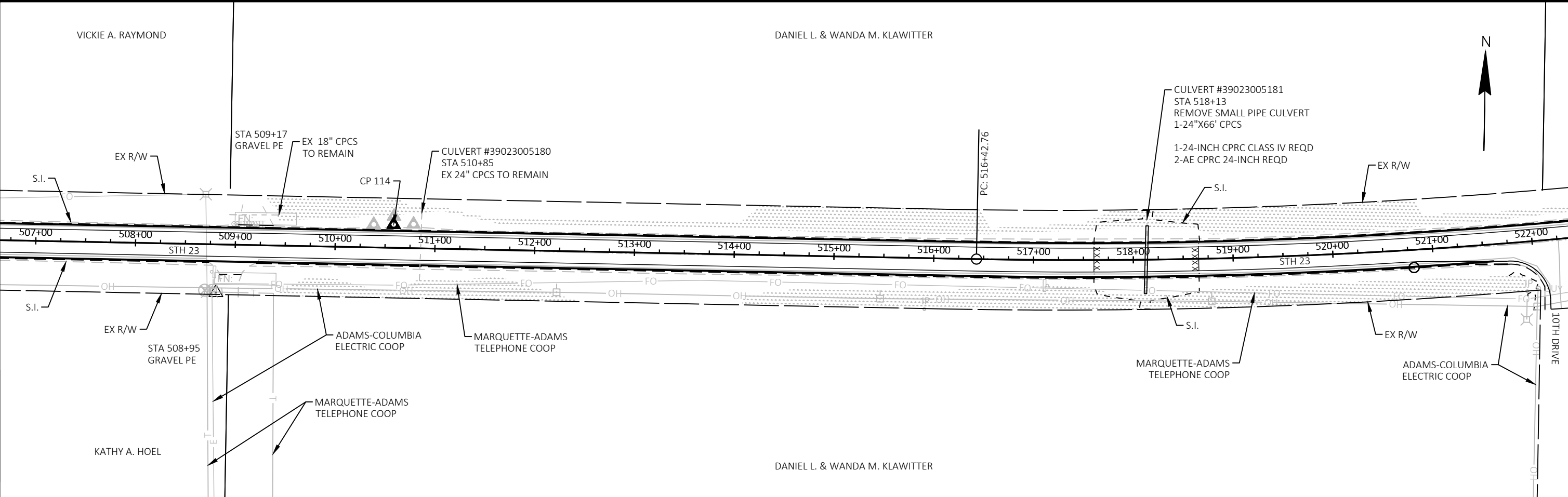




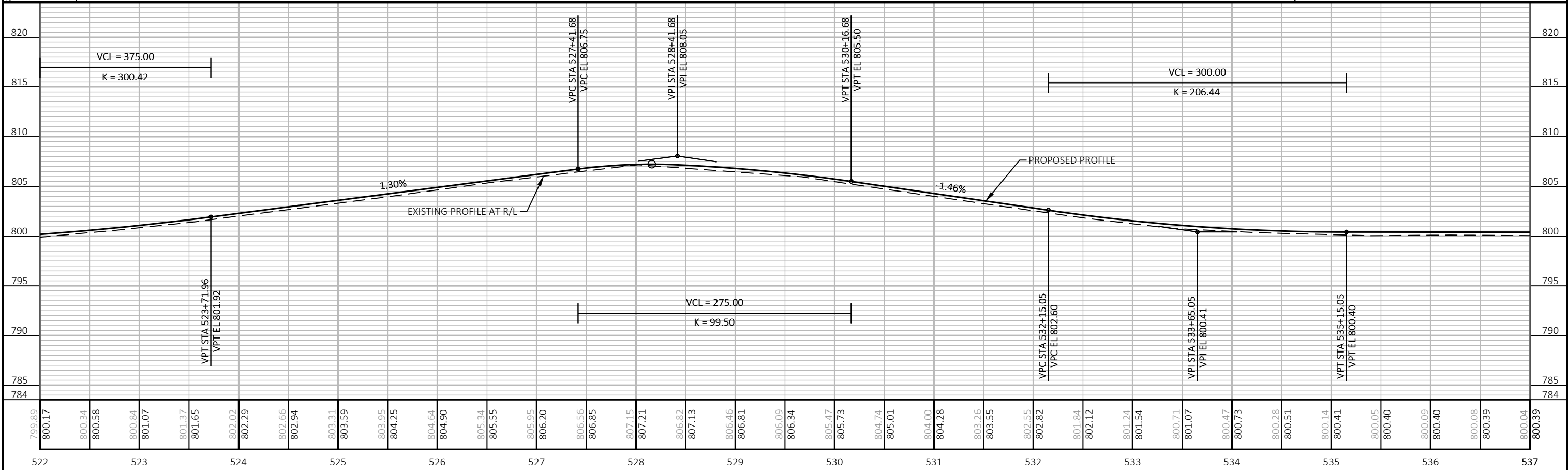
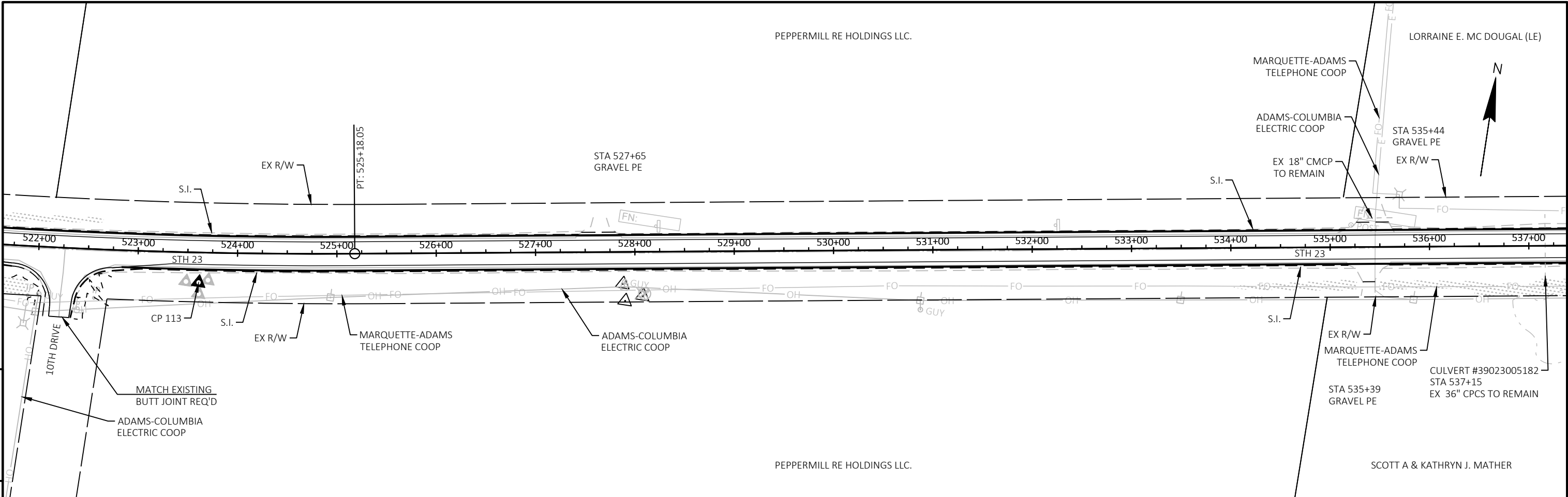
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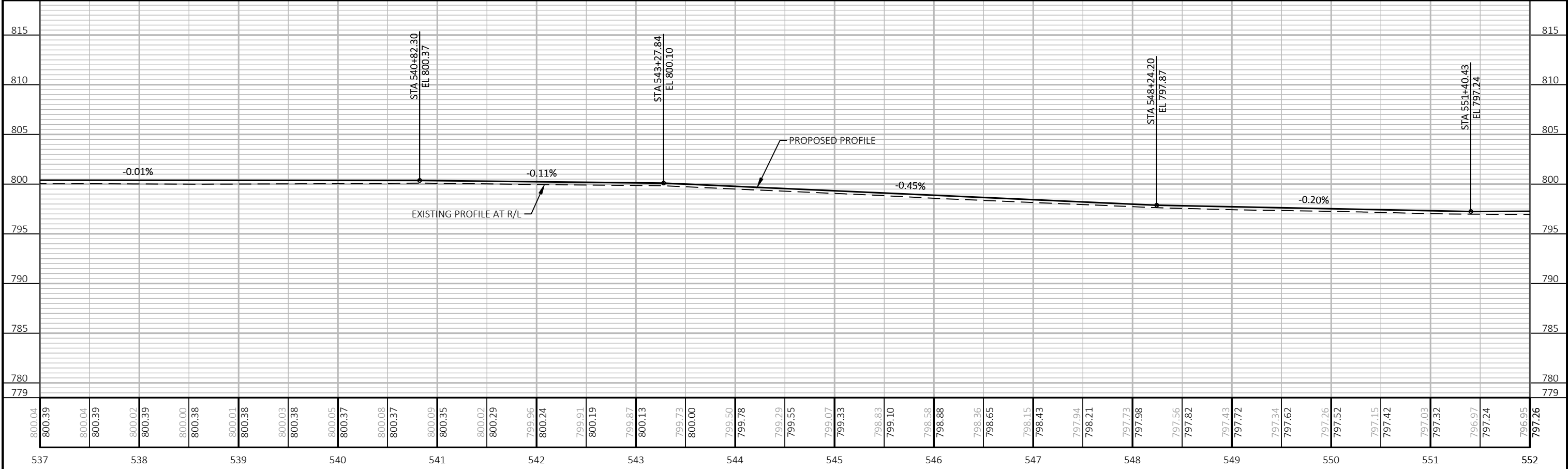
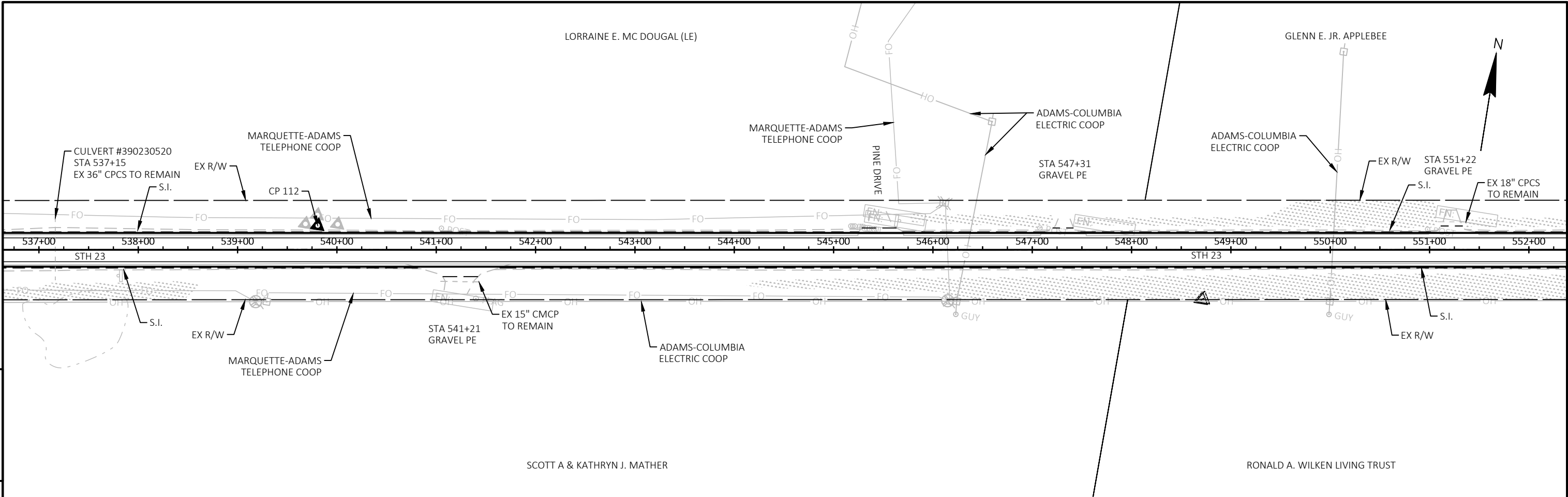


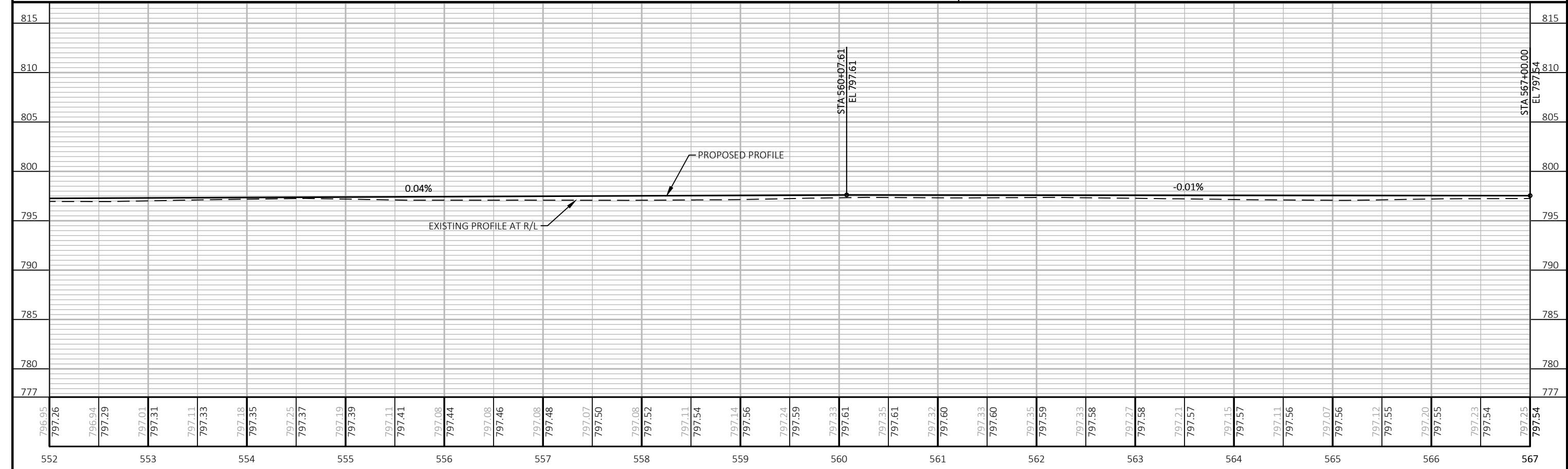
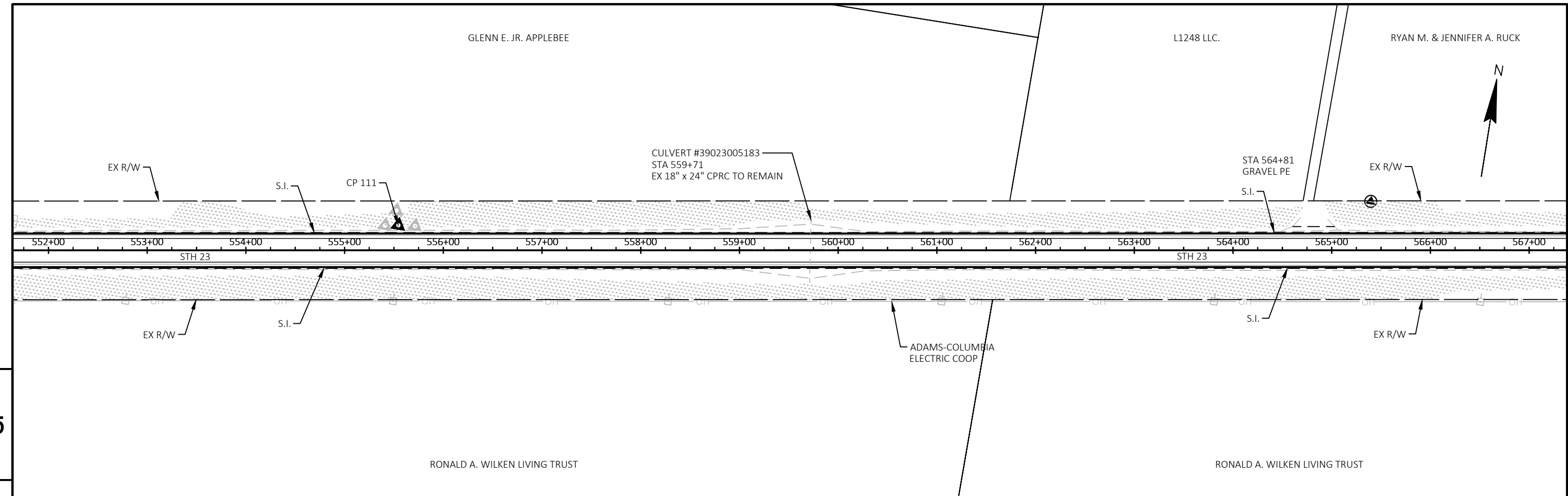
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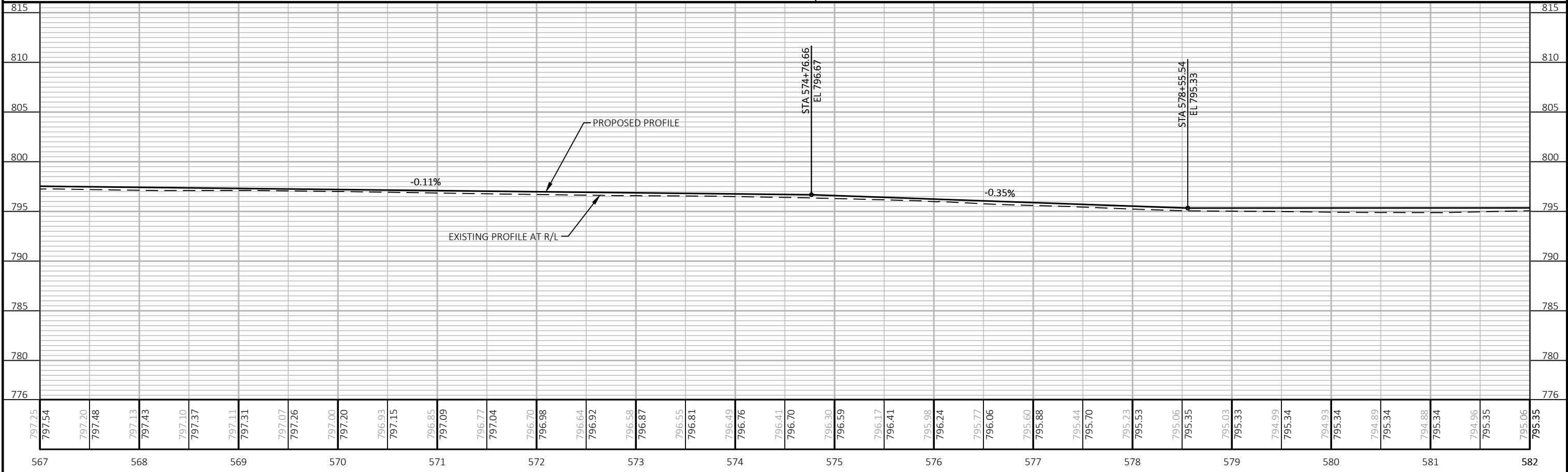
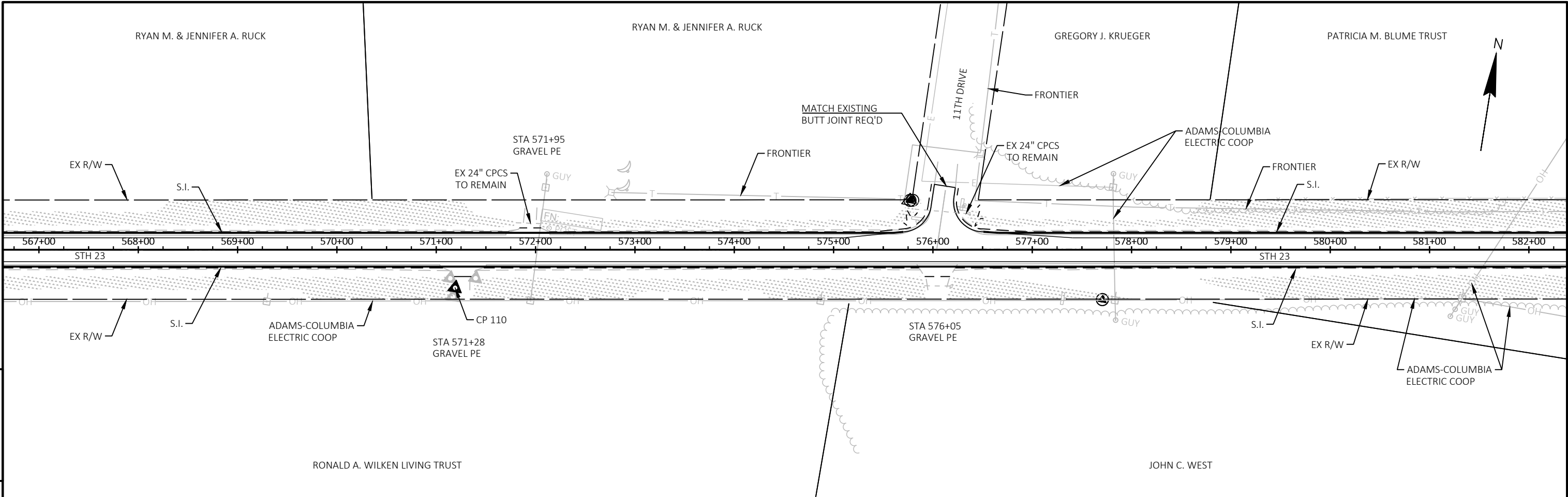
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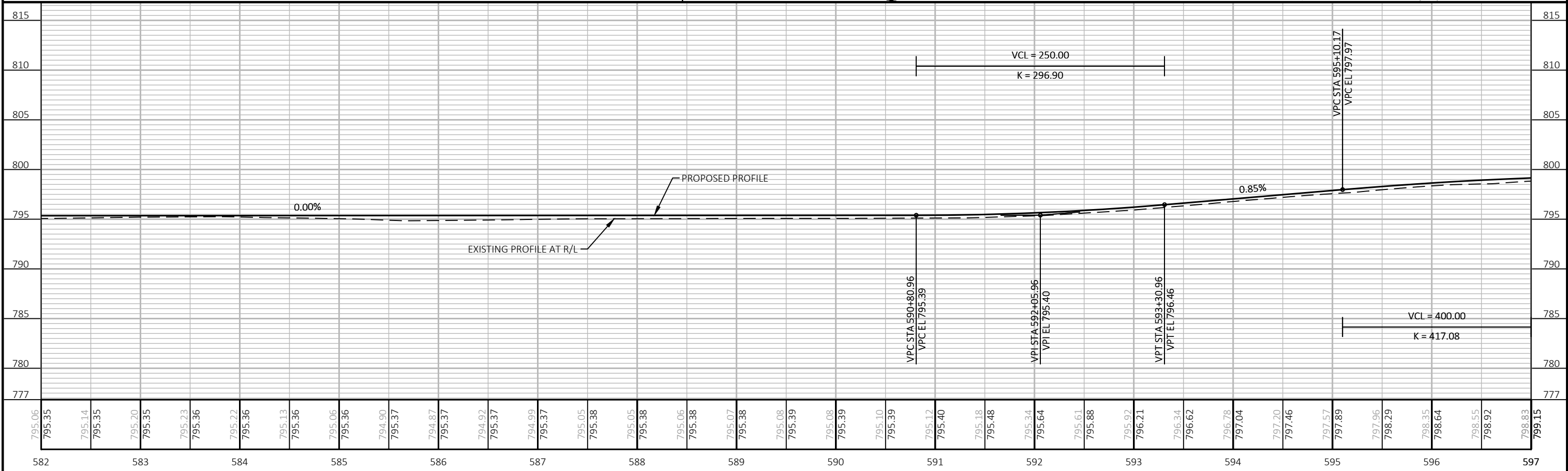
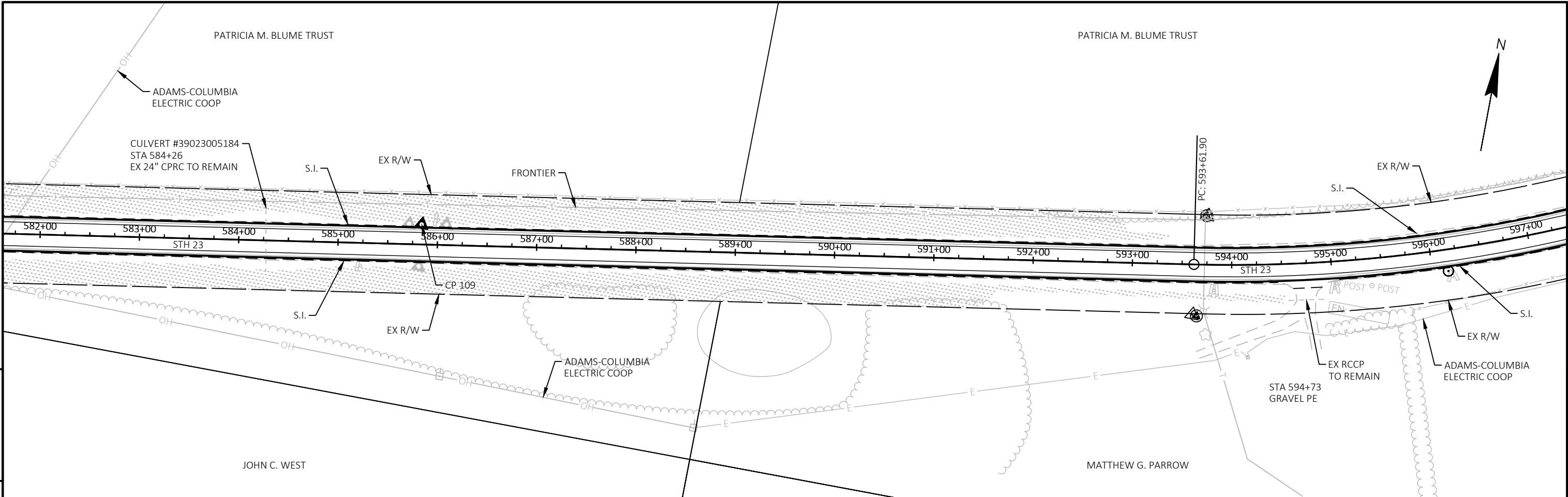




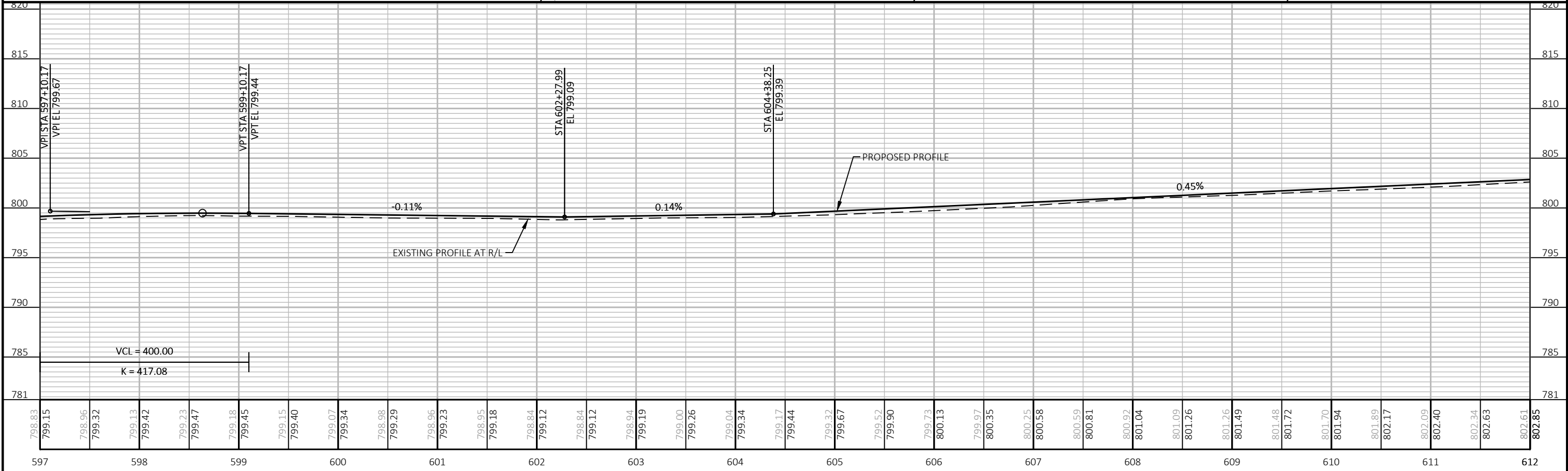
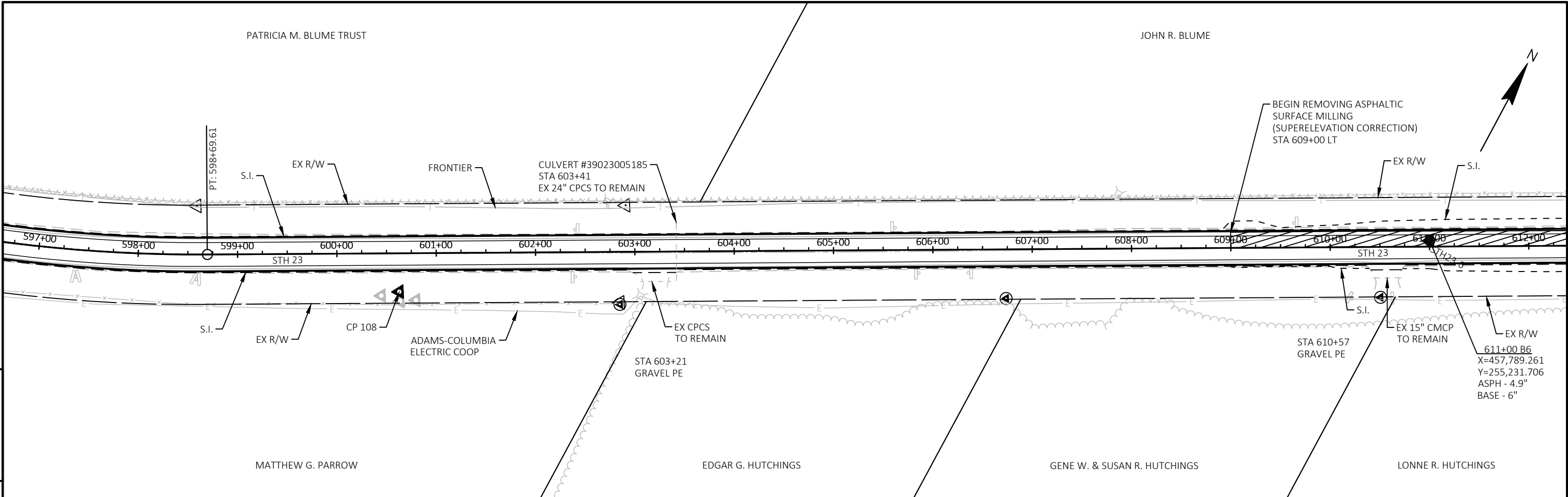
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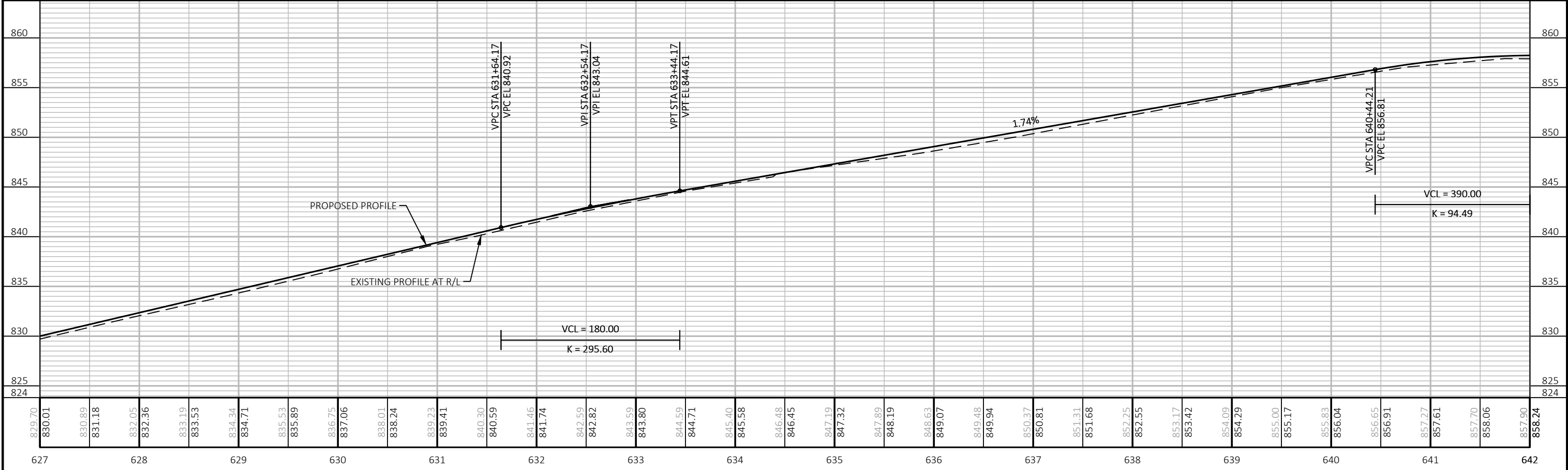
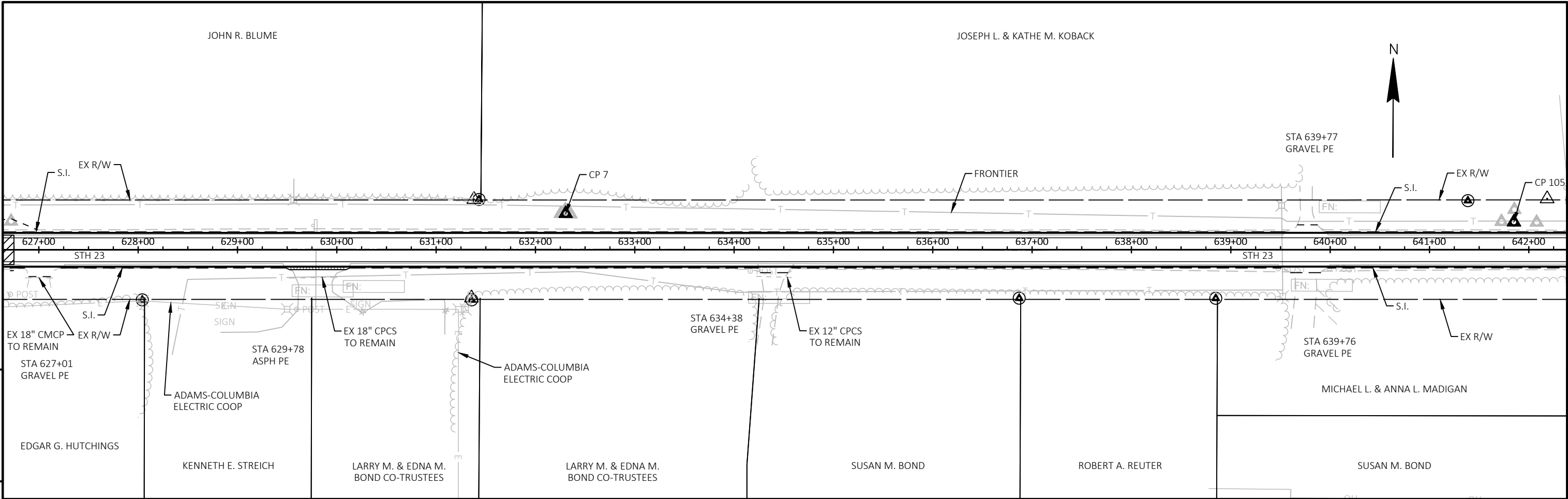


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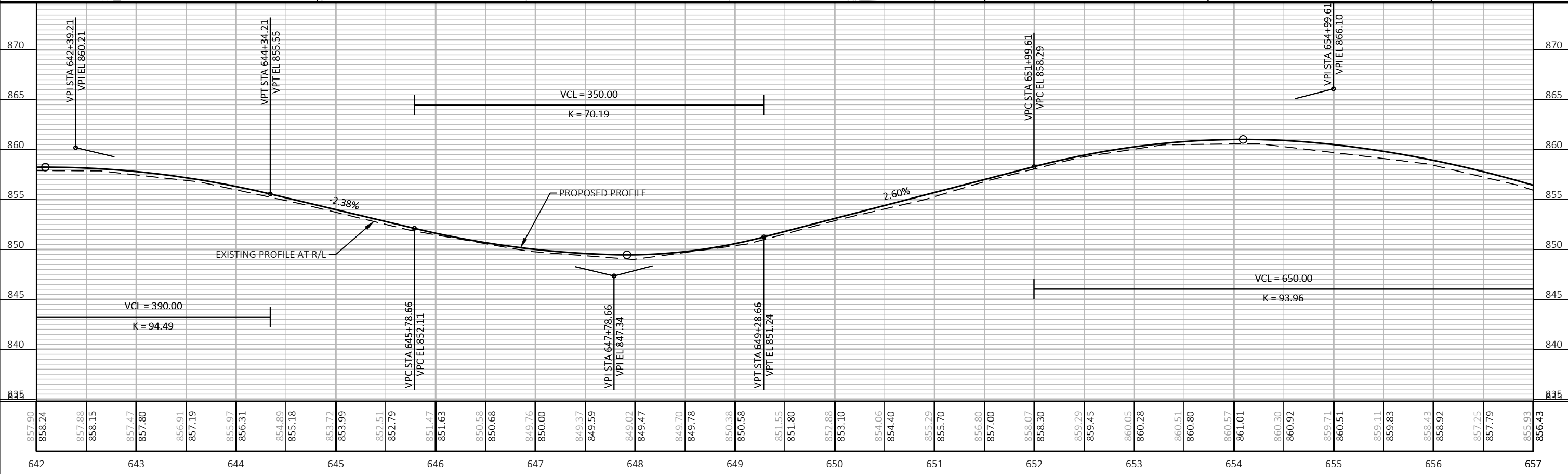
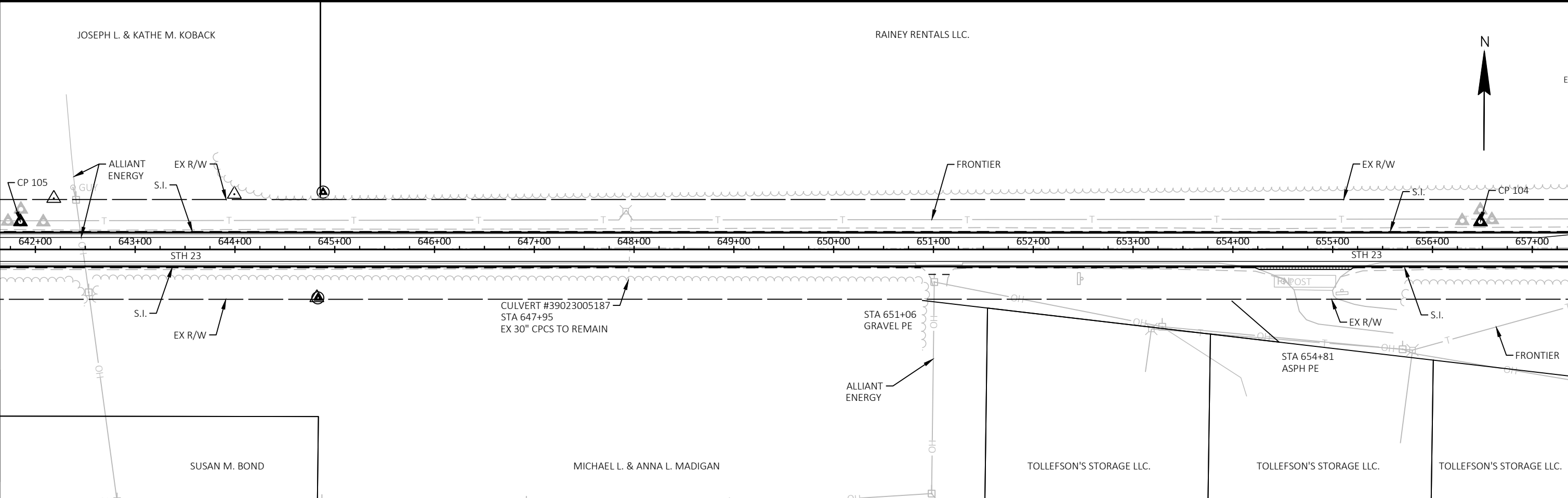


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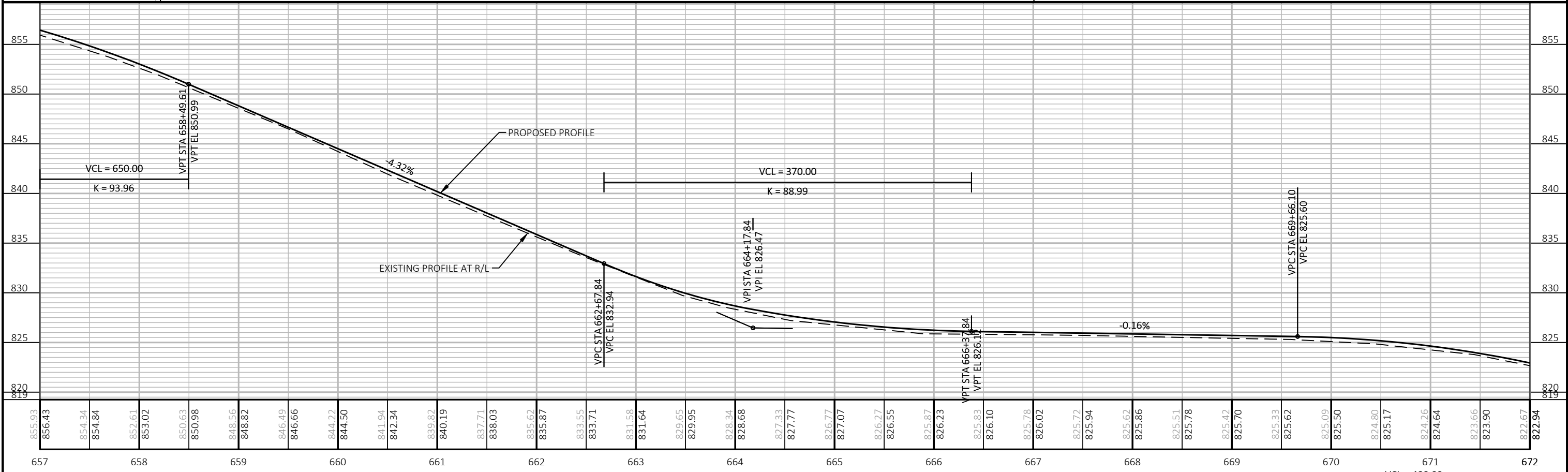
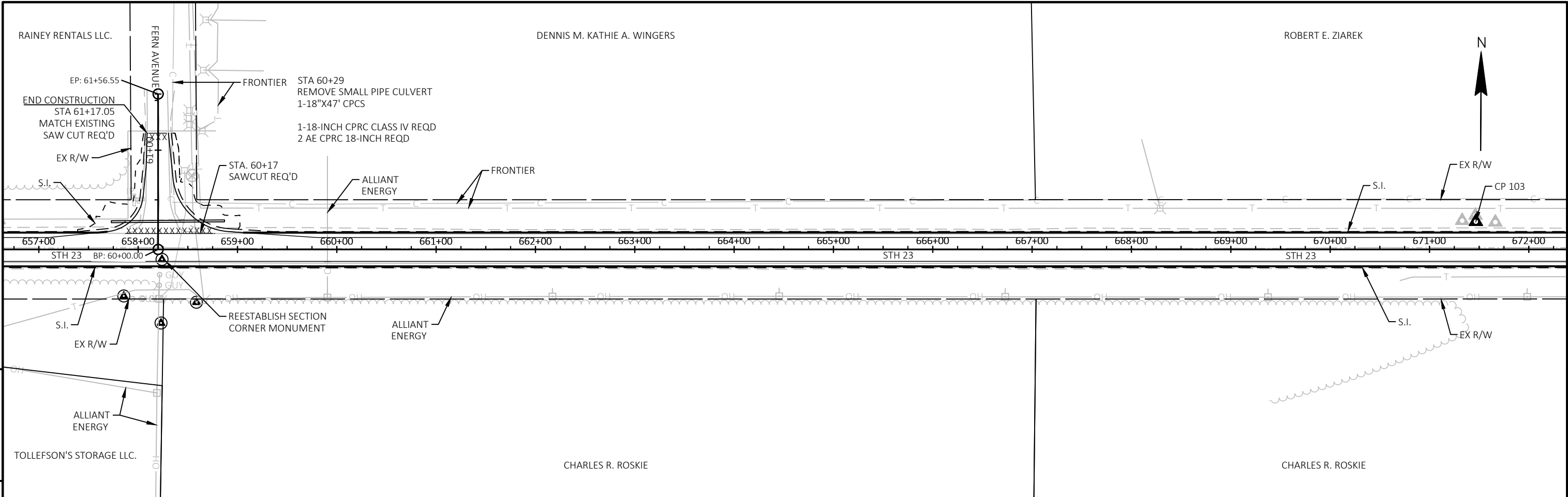




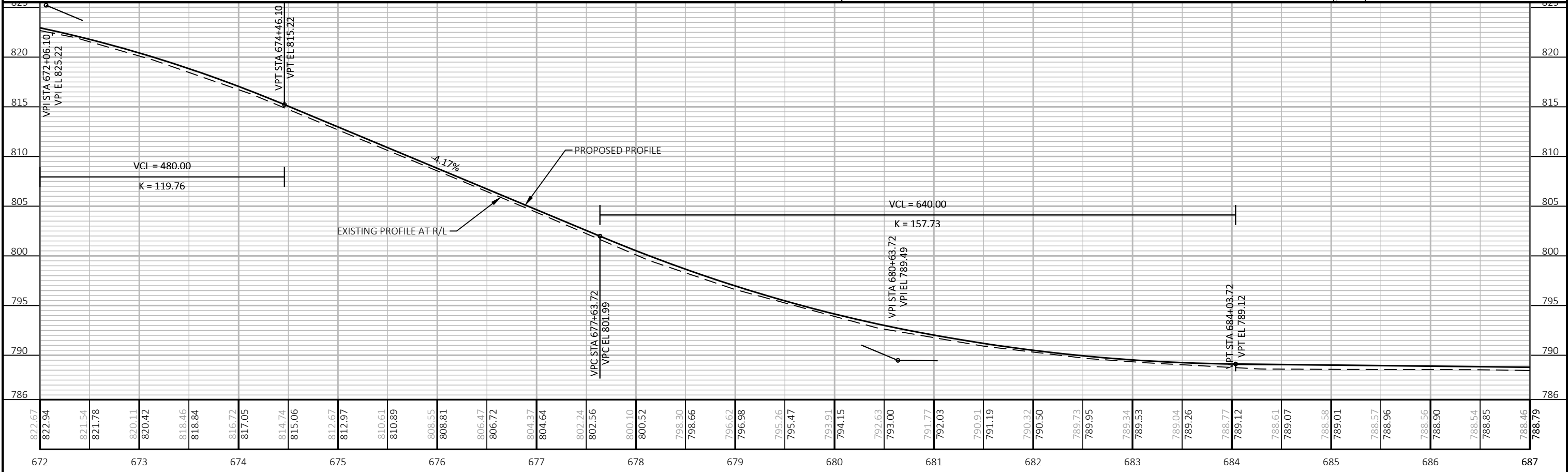
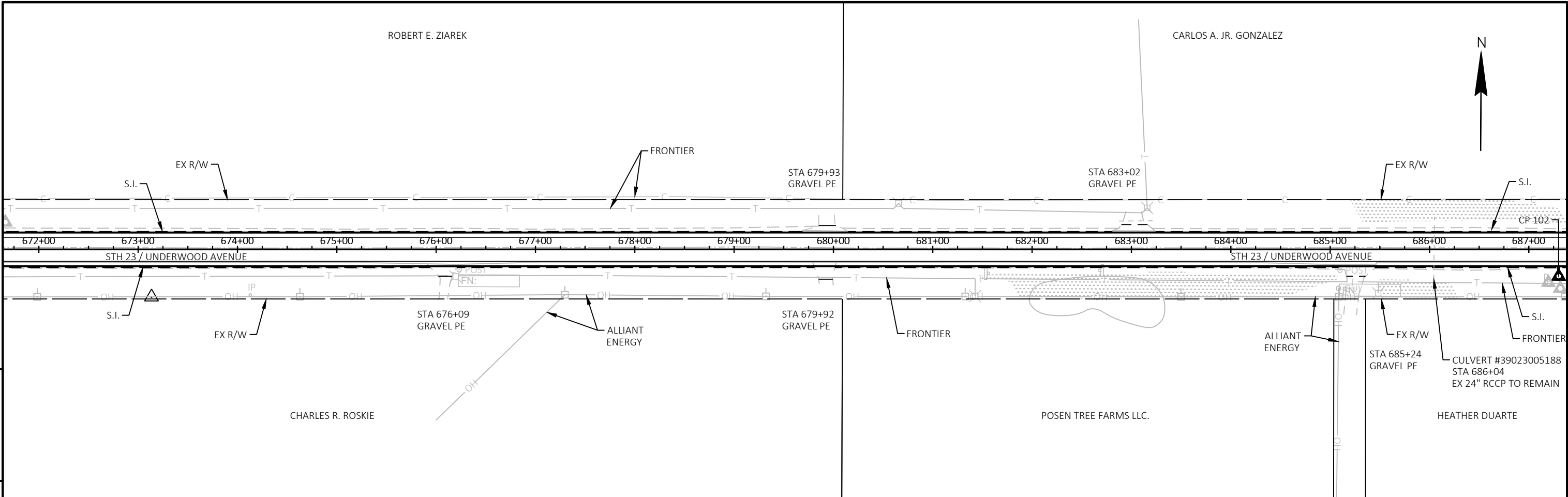
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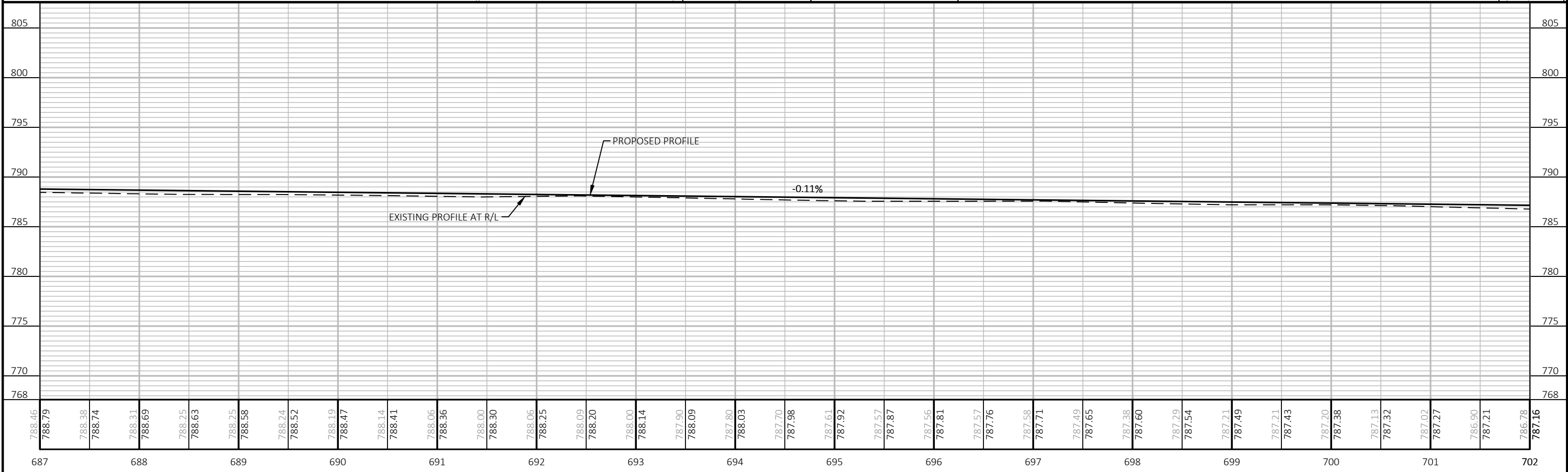
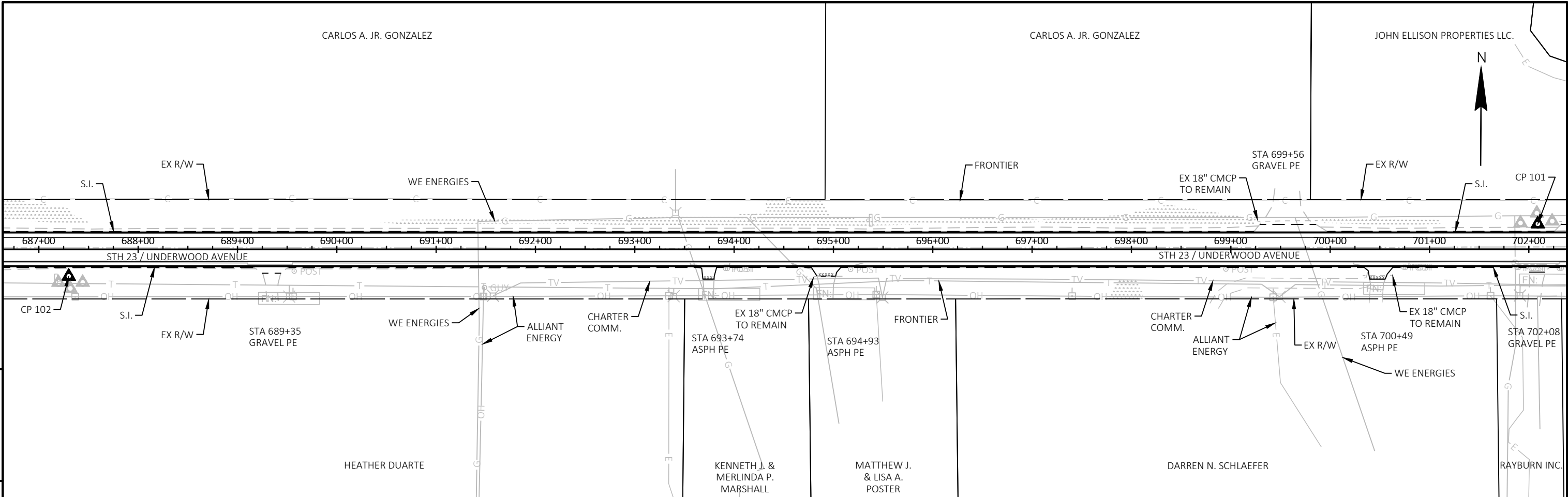
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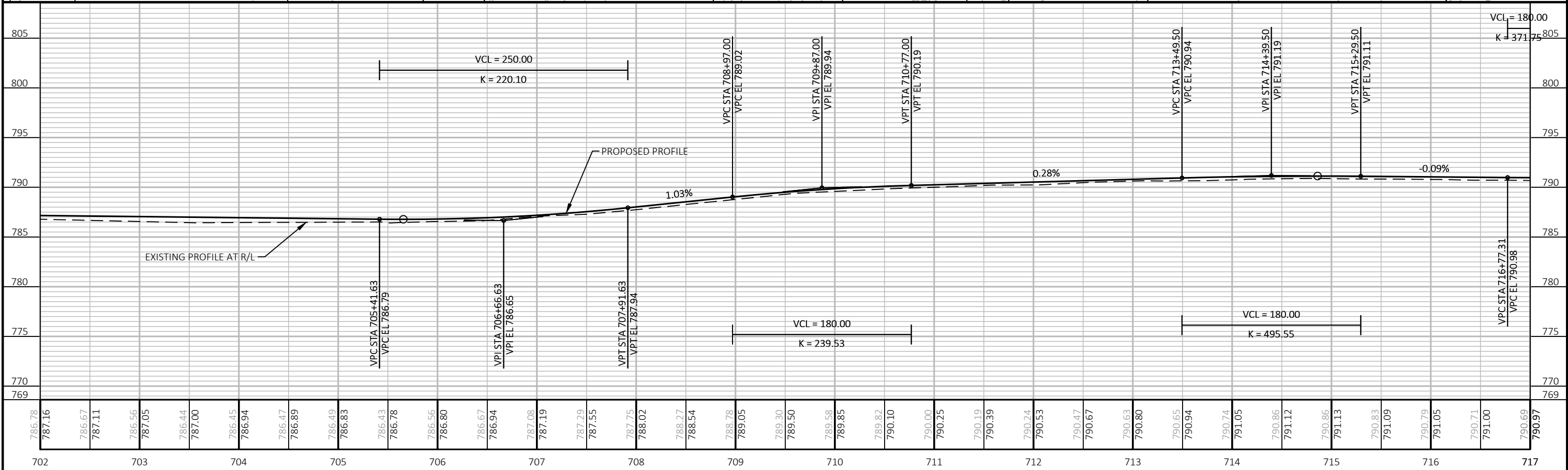
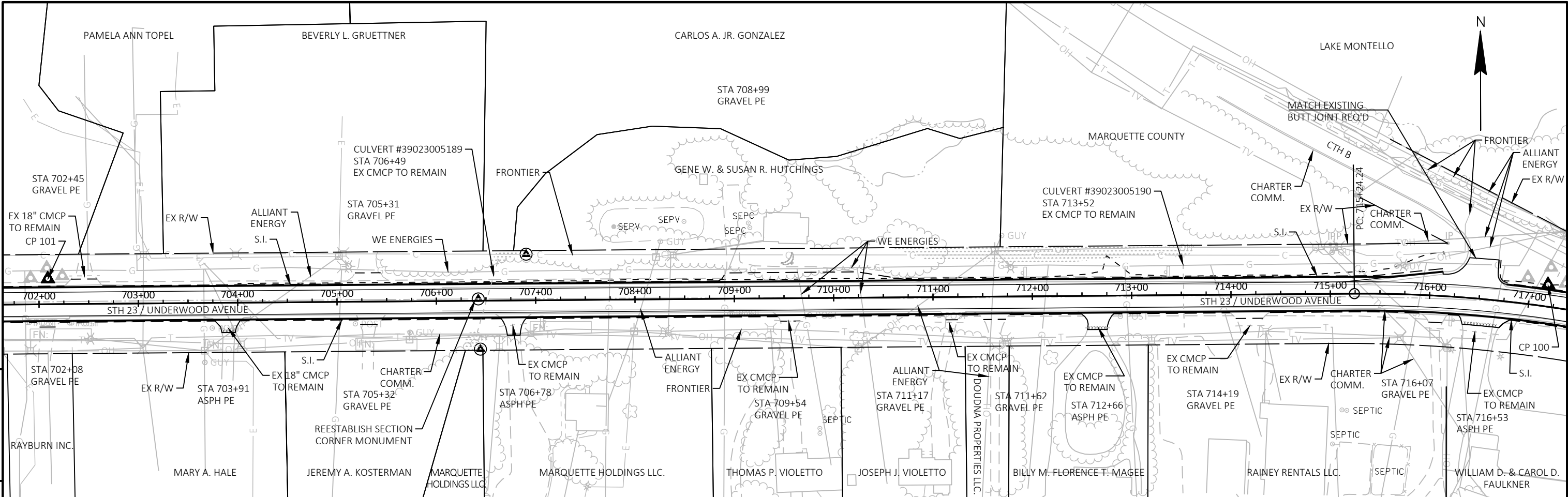
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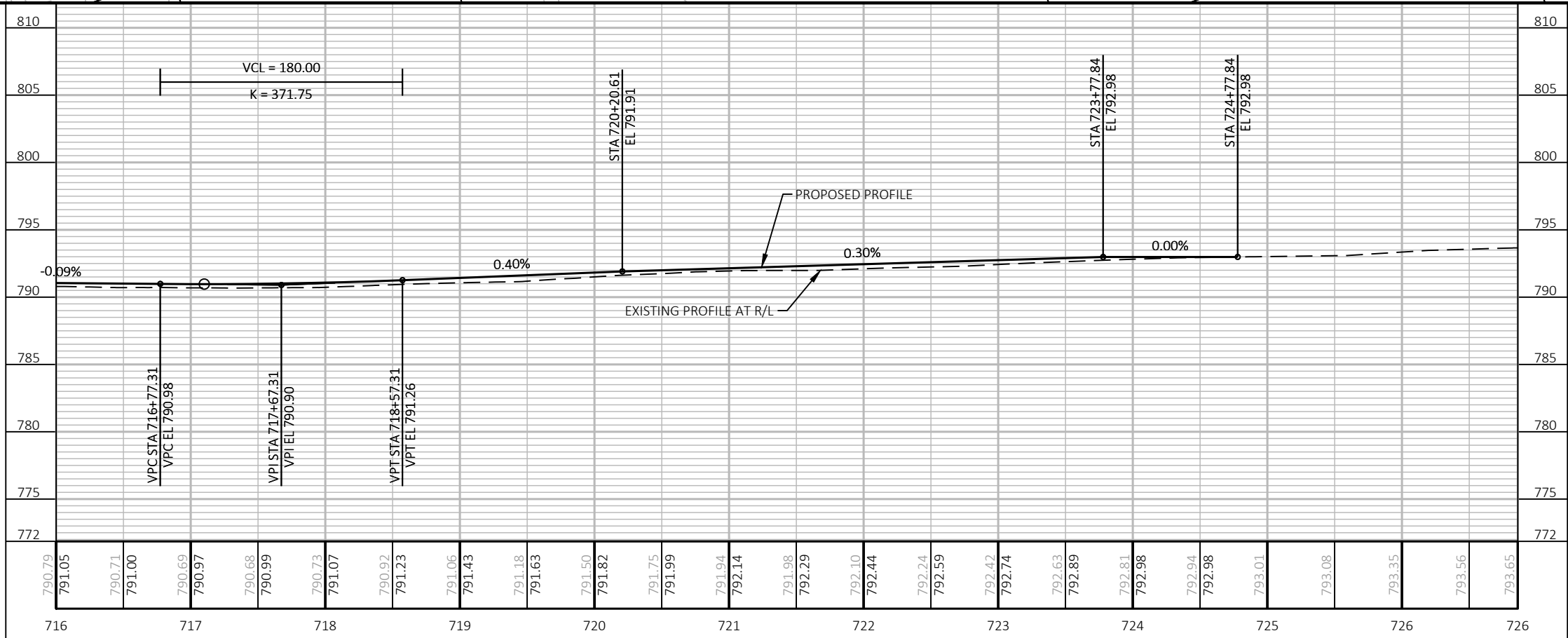
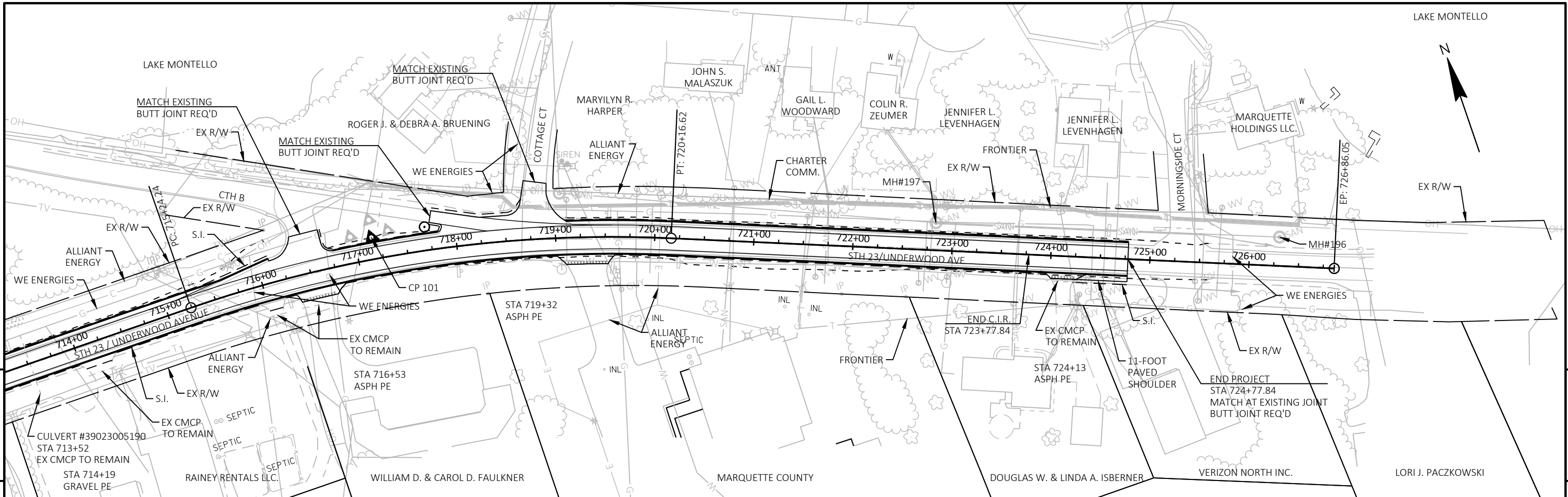
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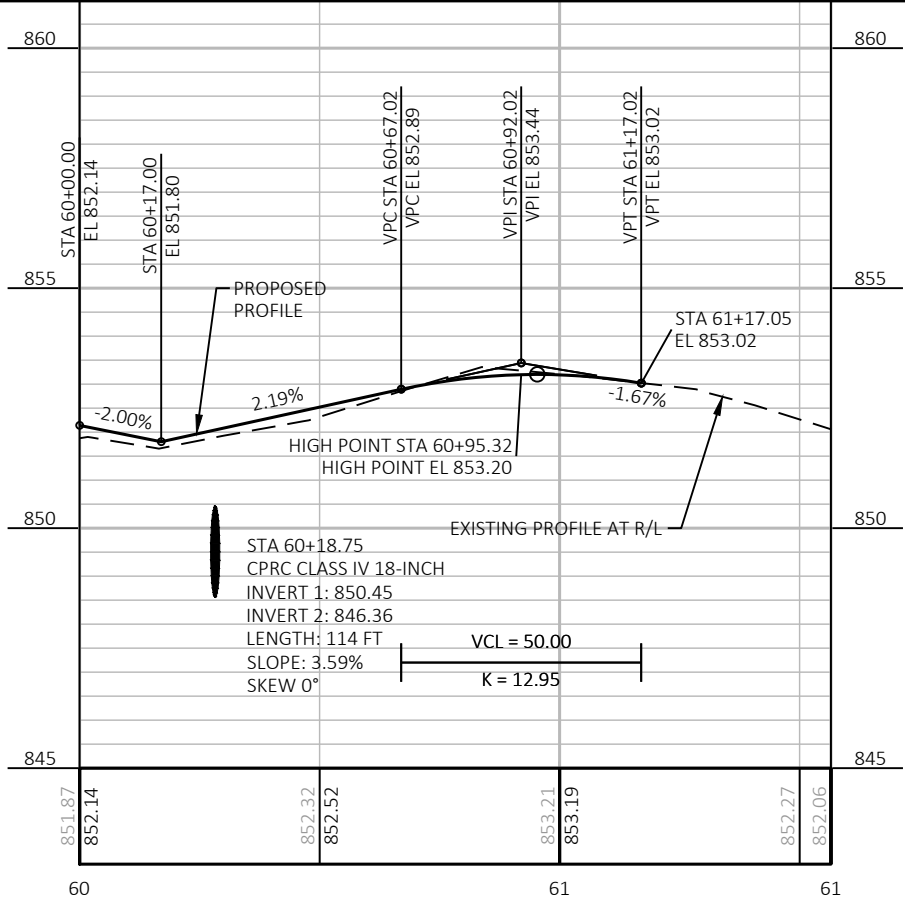
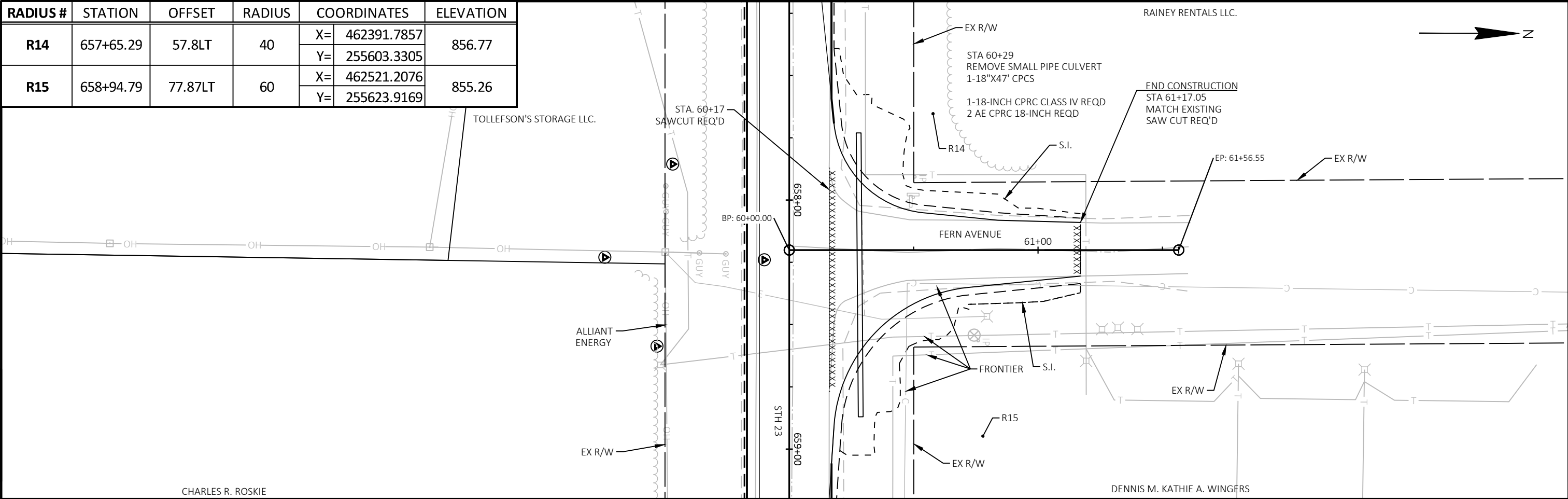
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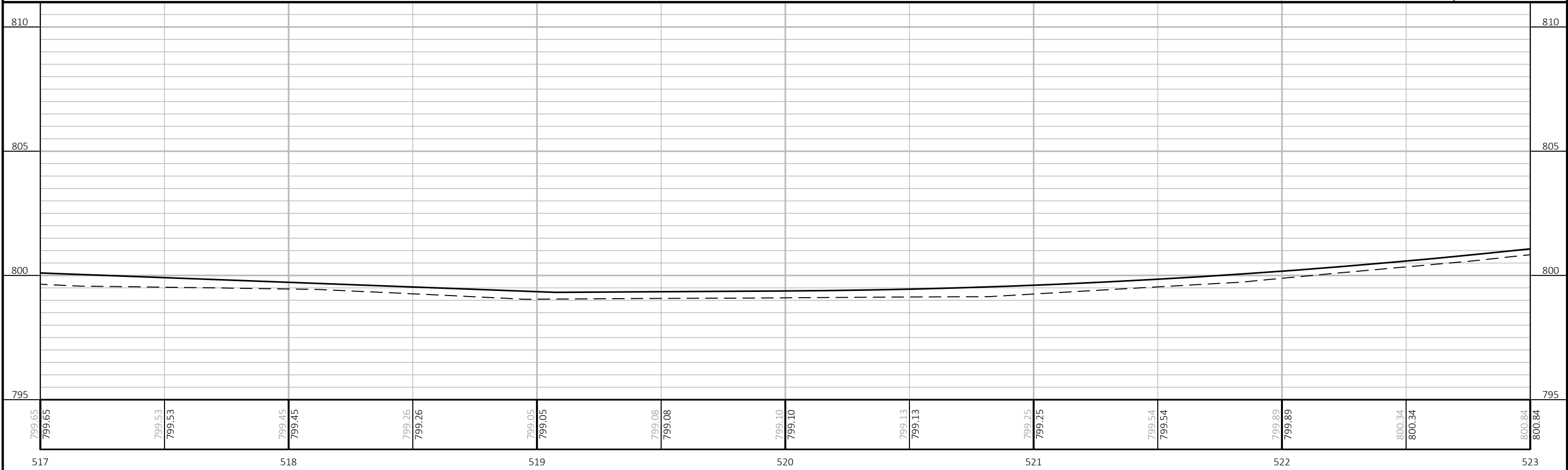
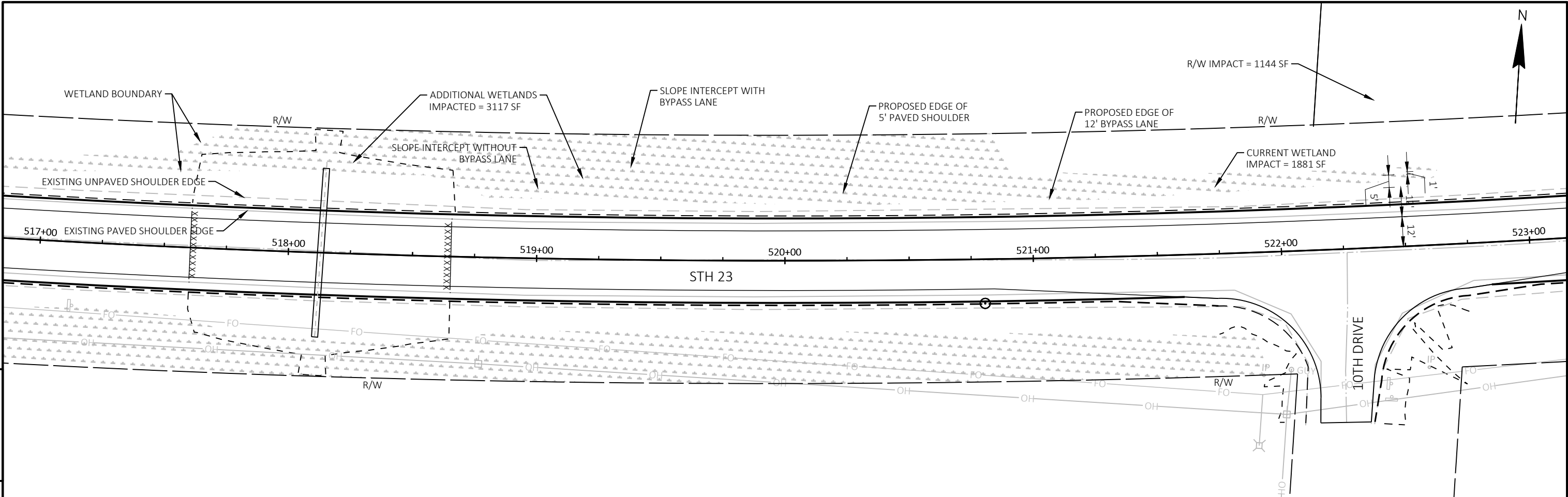


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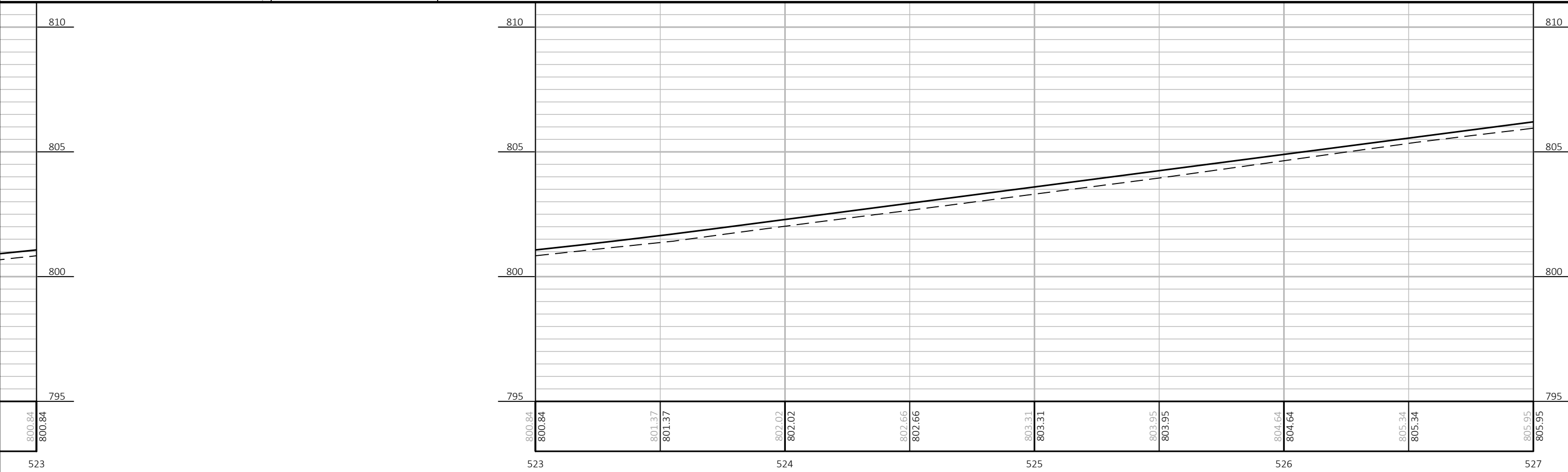
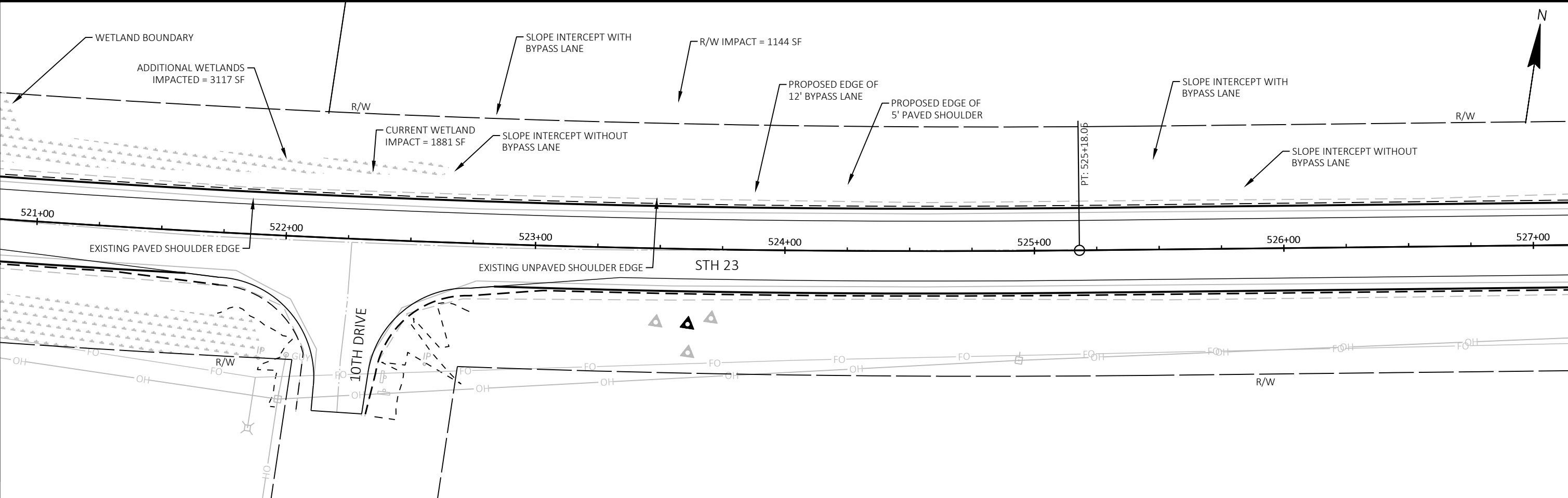


RADIUS #	STATION	OFFSET	RADIUS	COORDINATES		ELEVATION
R14	657+65.29	57.8LT	40	X=	462391.7857	856.77
				Y=	255603.3305	
R15	658+94.79	77.87LT	60	X=	462521.2076	855.26
				Y=	255623.9169	





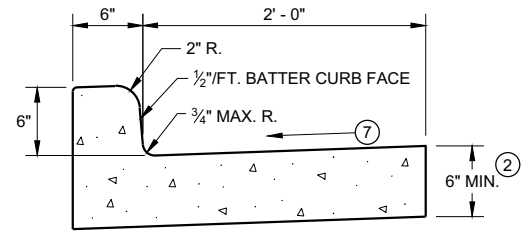
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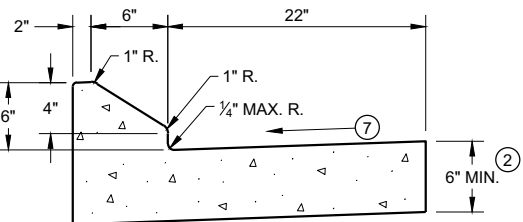
PROJECT NO: 1430-02-73	HWY: STH 23	COUNTY: MARQUETTE	PLAN AND PROFILE: STH 23 - (5)	SHEET 110	E
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Standard Detail Drawing List

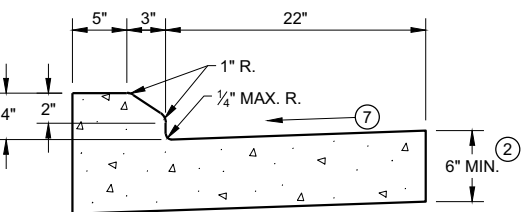
08D01-22A	CONCRETE CURB & GUTTER
08D01-22B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D21-01	DRIVEWAYS WITHOUT CURB & GUTTER
08D22-01	DRIVEWAYS WITHOUT CURB & GUTTER RESURFACING PROJECTS RURAL
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E15-01	CULVERT PIPE CHECK
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-08	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
09A01-14A	AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND D AND TEE INTERSECTION BYPASS LANE
13A10-02A	2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING
13A10-02B	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
13A11-03A	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
13A11-03B	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
13C19-03	HMA LONGITUDINAL JOINTS
14B29-01	SAFETY EDGE
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C02-08A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C05-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C08-22A	LONGITUDINAL MARKING (MAINLINE)
15C08-22B	TEMPORARY LONGITUDINAL PAVEMENT MARKING
15C12-09A	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C35-05A	PAVEMENT MARKING (INTERSECTIONS)
15D39-02	TRAFFIC CONTROL, DROP-OFF SIGNING
15D44-02	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES
15D45-03	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH LOOSE GRAVEL
15D48-01	TRAFFIC CONTROL, LANE SHIFT IN FLAGGING OPERATION
15D51-01	TRAFFIC CONTROL, MOBILE OPERATIONS ON AN UNDIVIDED ROADWAY
16A01-07	LANDMARK REFERENCE MONUMENTS AND COVERS



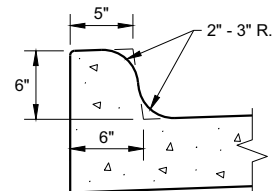
TYPES A^① & D



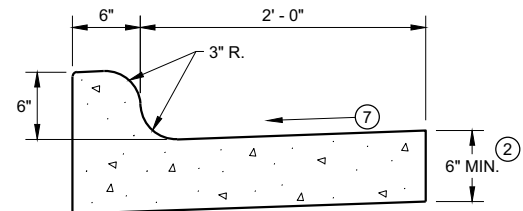
6" SLOPED CURB TYPES G^① & J



4" SLOPED CURB TYPES G^① & J

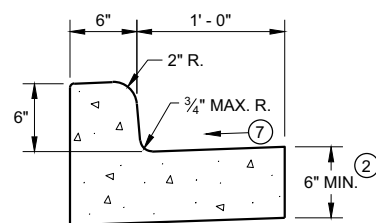


TYPES K^① & L
(OPTIONAL CURB SHAPE)



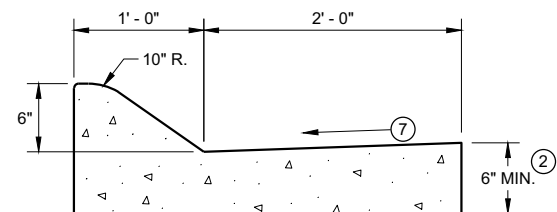
TYPES K^① & L

CONCRETE CURB AND GUTTER 30"

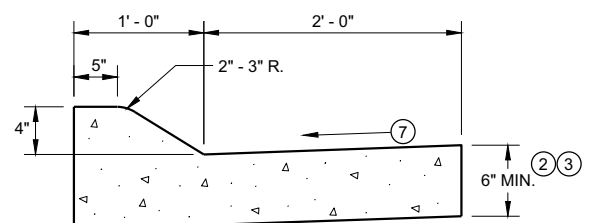


TYPES A^① & D

CONCRETE CURB AND GUTTER 18"

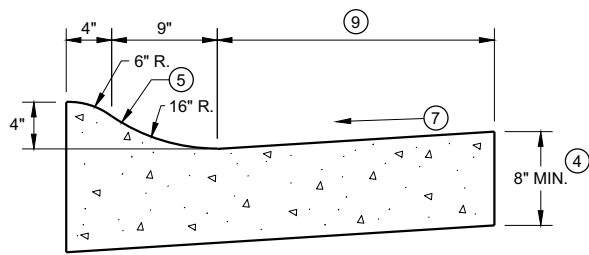


6" SLOPED CURB TYPES A^① & D



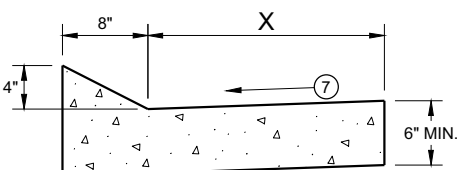
4" SLOPED CURB TYPES A^① & D

CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R^① & T

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

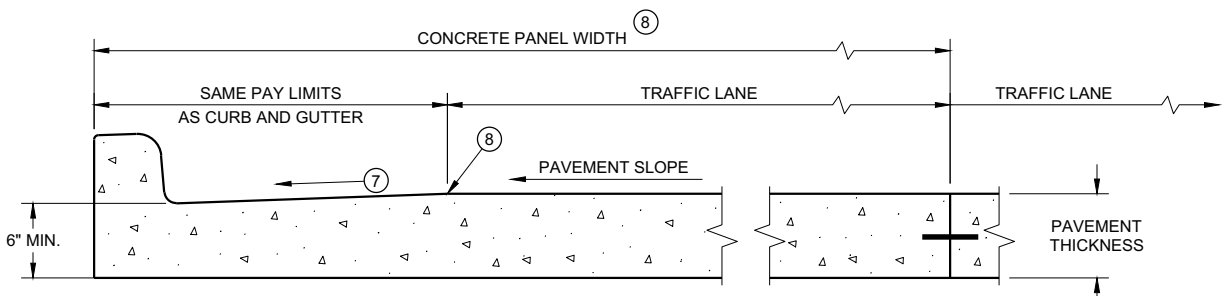


TYPES TBT & TBTT^①

CONCRETE CURB AND GUTTER

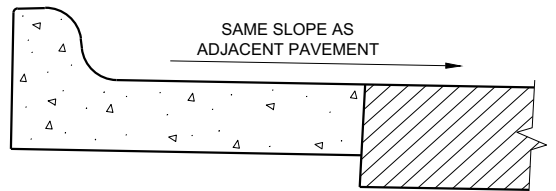
PAVEMENT THICKNESS
AND MAXIMUM CONCRETE
PANEL WIDTH TABLE

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



PARTIAL SECTION OF PAVEMENT *
WITH INTEGRAL CURB AND GUTTER

* BIKE LANE IS NOT SHOWN



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

GENERAL NOTES

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

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

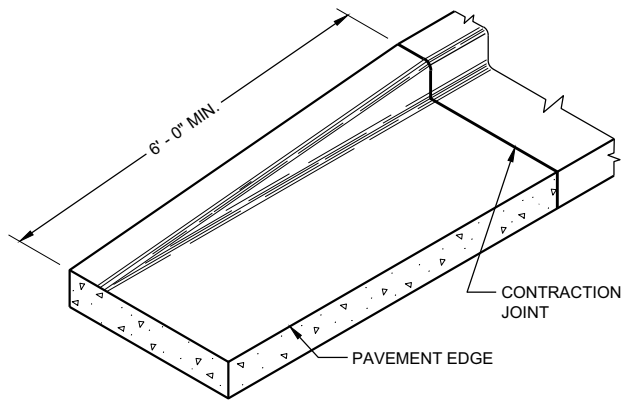
INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

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

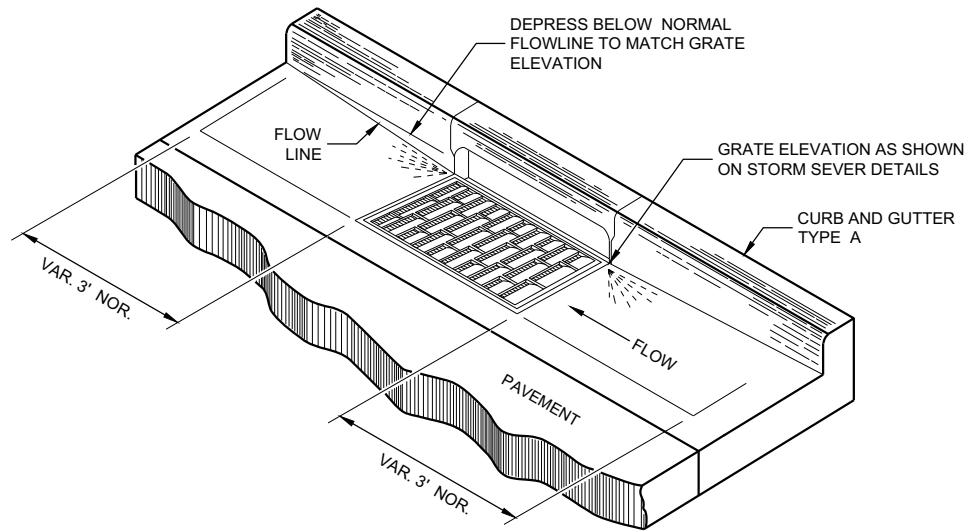
- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.
- ④ THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑤ UNLESS OTHERWISE NOTED, FOR STAKING PURPOSES THE FACE OF CURB IS 6" FROM THE BACK OF CURB.
- ⑥ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.
- ⑦ USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.
- ⑧ INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.
- ⑨ CONCRETE CURB AND GUTTER 4-INCH SLOPED 30-INCH TYPE "R" AND "T" = 17 INCHES
CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE "R" AND "T" = 23 INCHES

CONCRETE CURB AND GUTTER

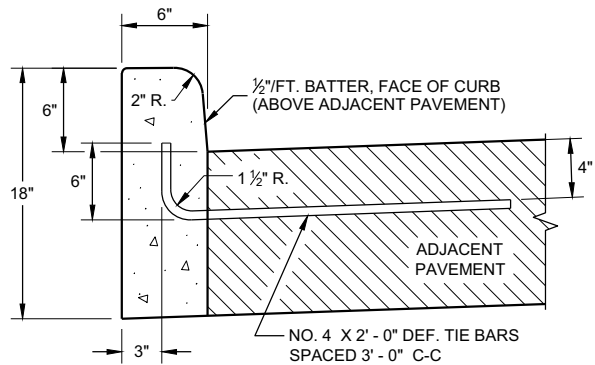
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 112



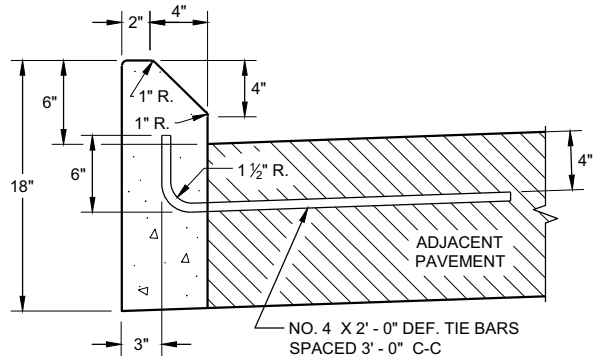
END SECTION CURB AND GUTTER



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

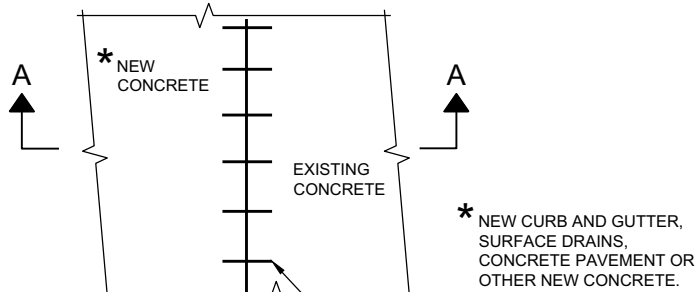


TYPES A^① & D

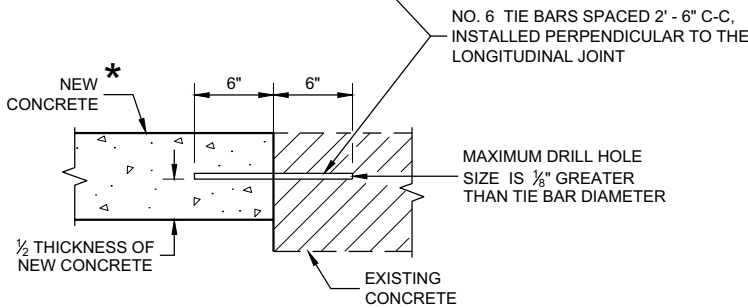


TYPES G^① & J

CONCRETE CURB



PLAN VIEW



SECTION A - A

TIE BARS DRILLED
INTO EXISTING PAVEMENT

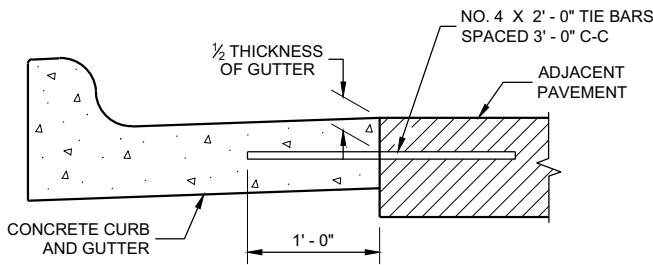
GENERAL NOTES

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

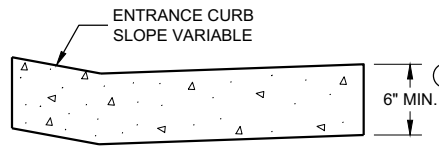
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑨ REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.



TYPICAL TIE BAR LOCATION^①



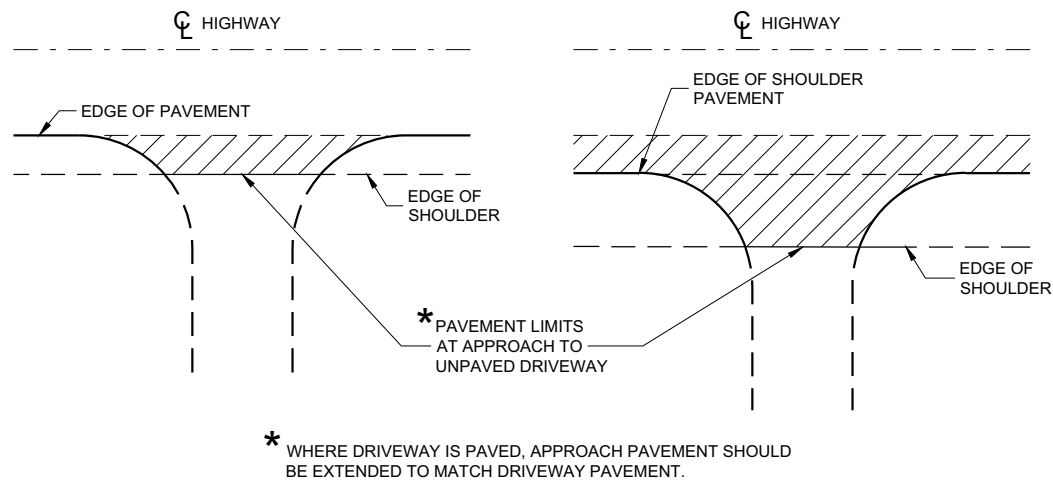
DRIVEWAY ENTRANCE CURB^⑨
(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES
AND CURB AND GUTTER
APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2021
DATE /S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT ENGINEER 113

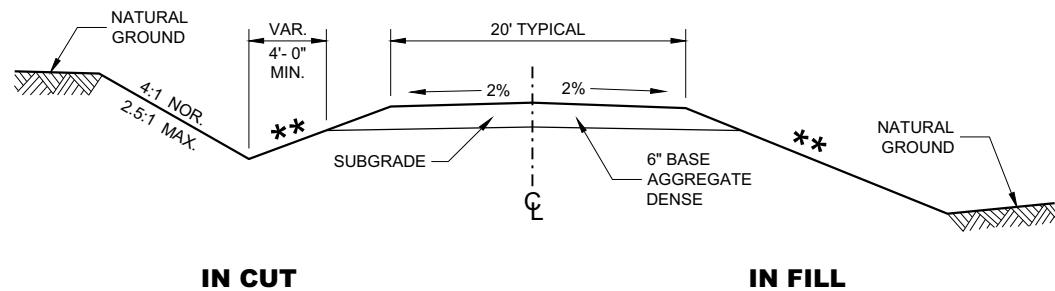
FHWA



PLAN VIEW
(UNPAVED SHOULDER ON HIGHWAY)

PLAN VIEW
(PAVED SHOULDER ON HIGHWAY)

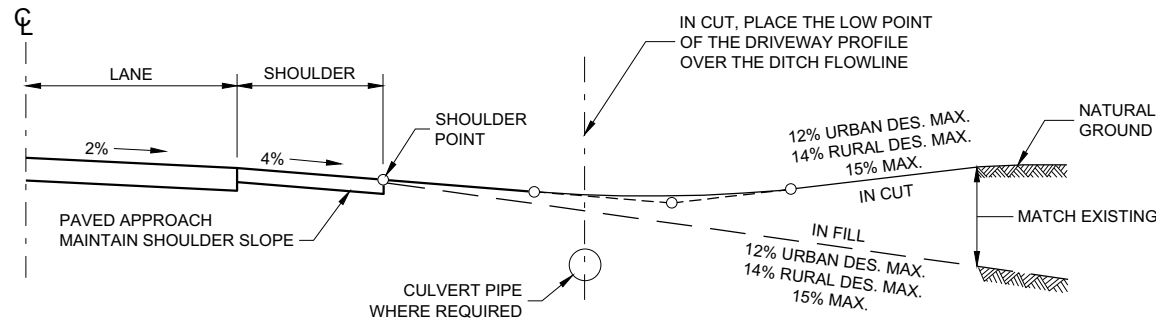
**RURAL DRIVEWAY INTERSECTION DETAIL
(NO CURB AND GUTTER OR SIDEWALK)**



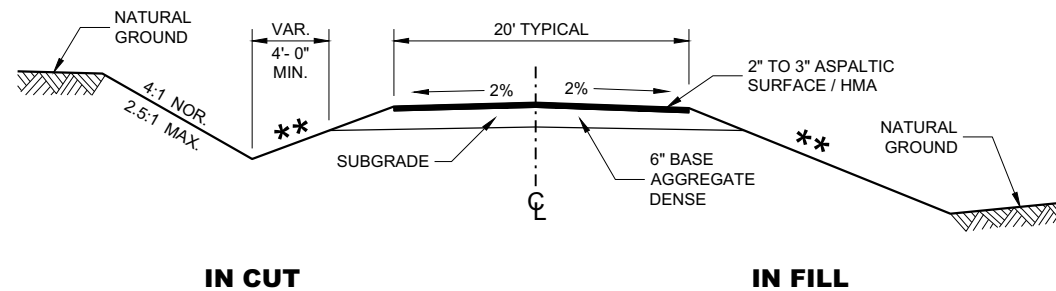
**TYPICAL CROSS SECTION FOR
PRIVATE DRIVE OR FIELD ENTRANCE
AGGREGATE SURFACE**

****** SLOPE CAN VARY WITH SPEED. SEE 11-45-30.6.2

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



TYPICAL DRIVEWAY PROFILES



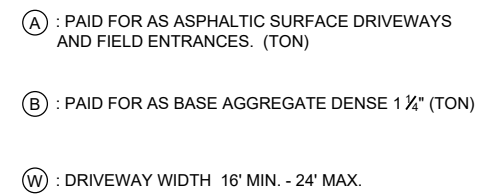
**TYPICAL CROSS SECTION FOR
PRIVATE DRIVE OR FIELD ENTRANCE
ASPHALTIC SURFACE**

**DRIVEWAYS WITHOUT
CURB AND GUTTER**

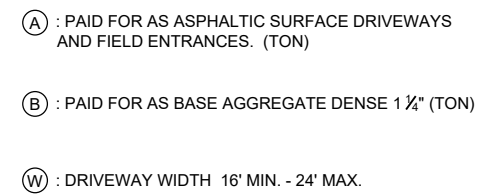
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December 2017 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA

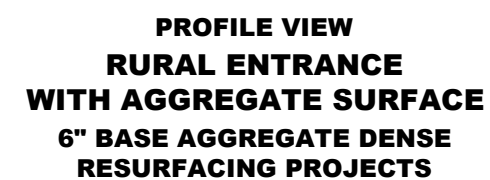
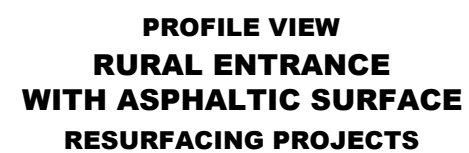
① DESIGN WILL DETERMINE FINAL DRIVEWAY ASPHALTIC THICKNESS BASED ON TYPE OF USAGE AND LOADINGS.



PLAN VIEW
HALF SECTION

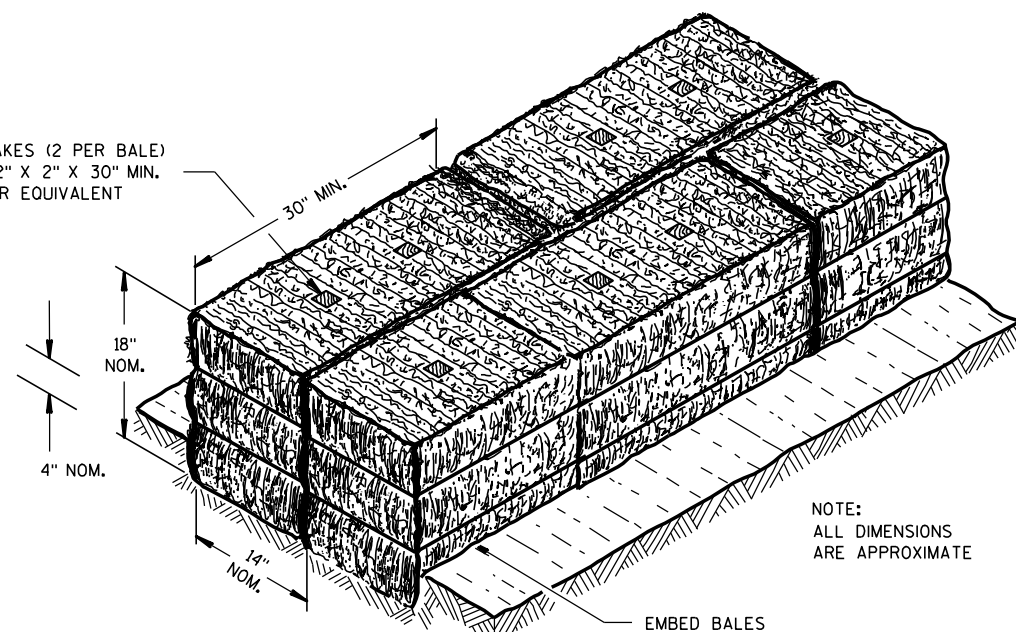


PLAN VIEW
HALF SECTION



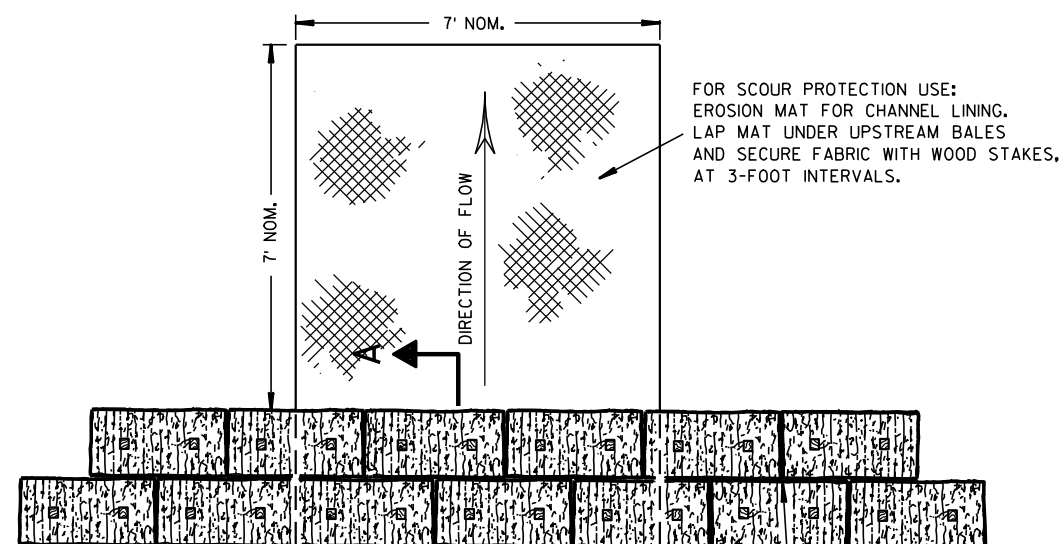
APPROVED
December 2016 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT ENGINEER 115

WOOD STAKES (2 PER BALE)
NOMINAL 2" X 2" X 30" MIN.
LENGTH OR EQUIVALENT



NOTE:
ALL DIMENSIONS
ARE APPROXIMATE

SECTION A-A

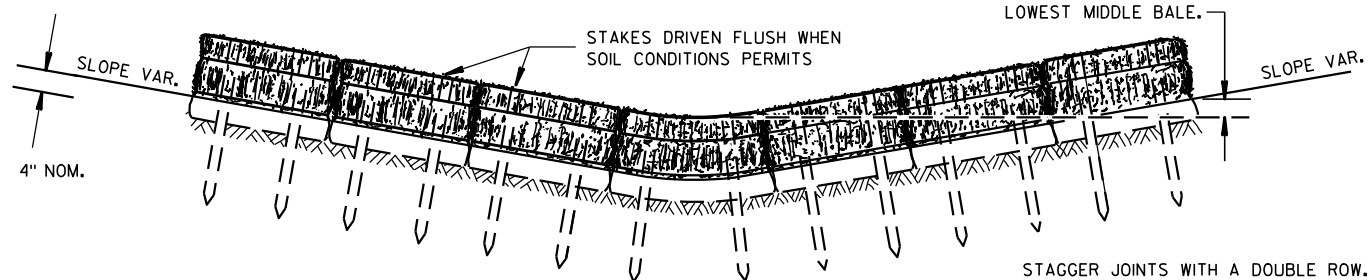


FOR SCOUR PROTECTION USE:
EROSION MAT FOR CHANNEL LINING.
LAP MAT UNDER UPSTREAM BALES
AND SECURE FABRIC WITH WOOD STAKES,
AT 3-FOOT INTERVALS.

PLAN VIEW

STAGGER JOINTS BETWEEN ADJACENT
ROWS OF BALES.

BOTTOM ELEVATION OF END BALE SHALL
BE EQUAL TO OR GREATER THAN TOP OF
LOWEST MIDDLE BALE.



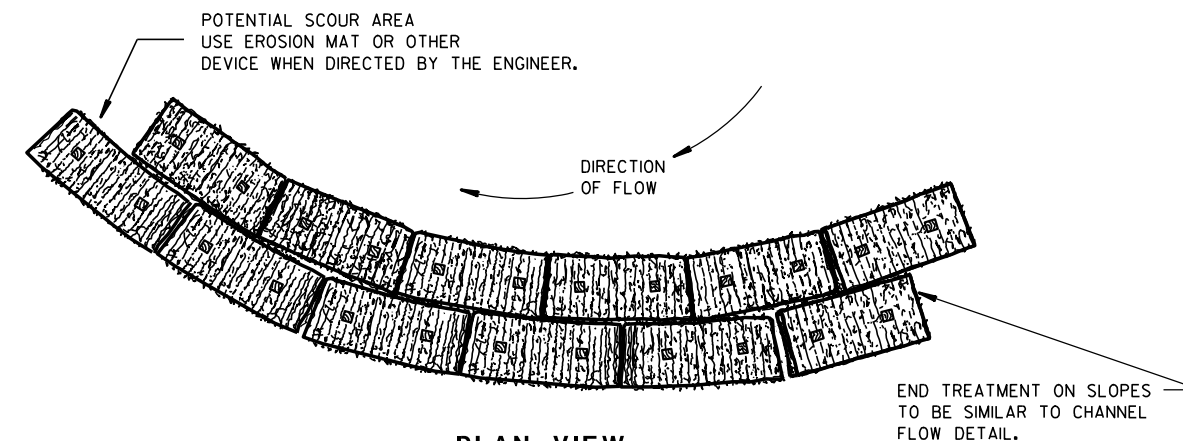
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

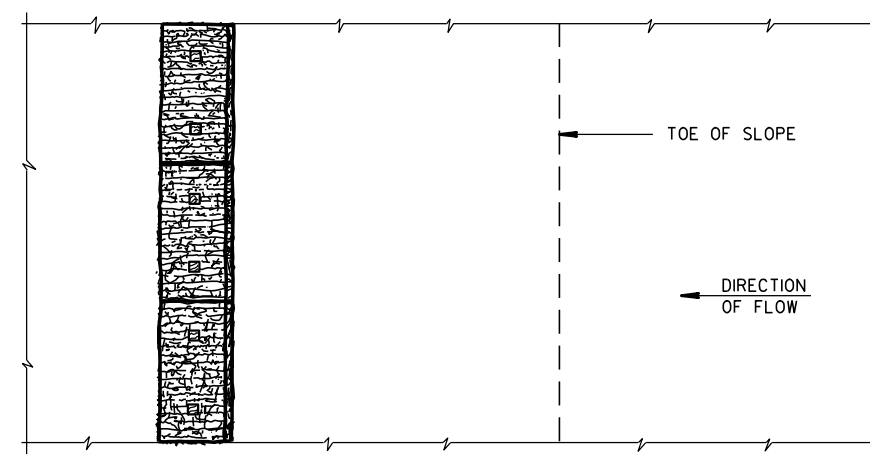
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

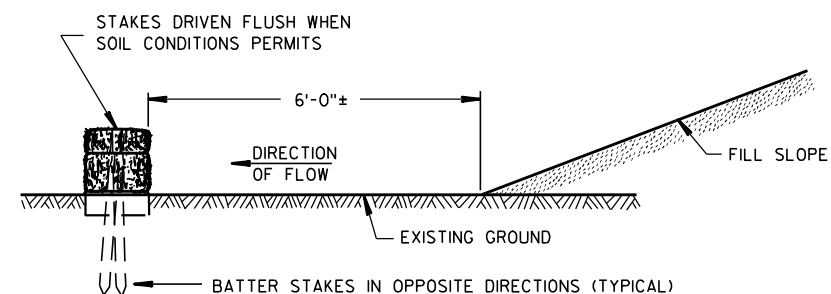


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF
EROSION BALES / TEMPORARY
DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/04/02
DATE

/S/ Beth Connolly
CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA



- ① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- ② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- ③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1½" X 1½" OF OAK OR HICKORY.
- ④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
- ⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.

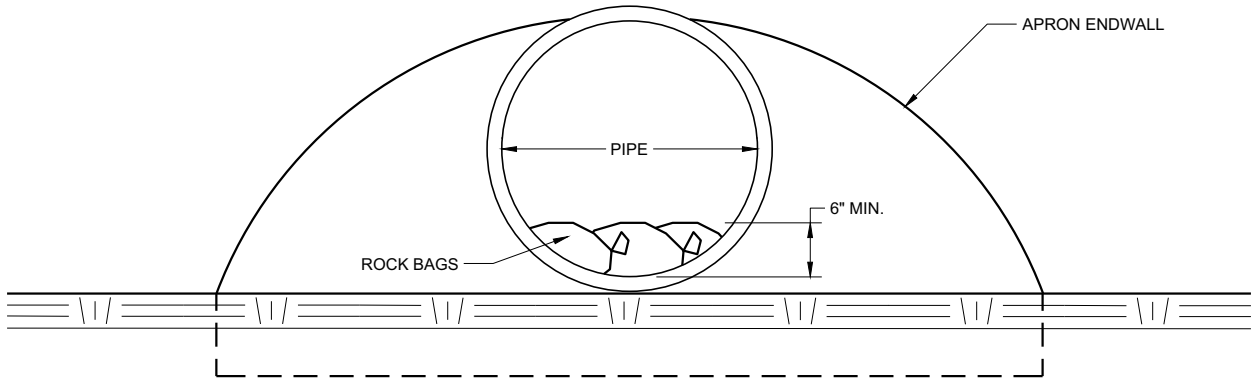


SILT FENCE

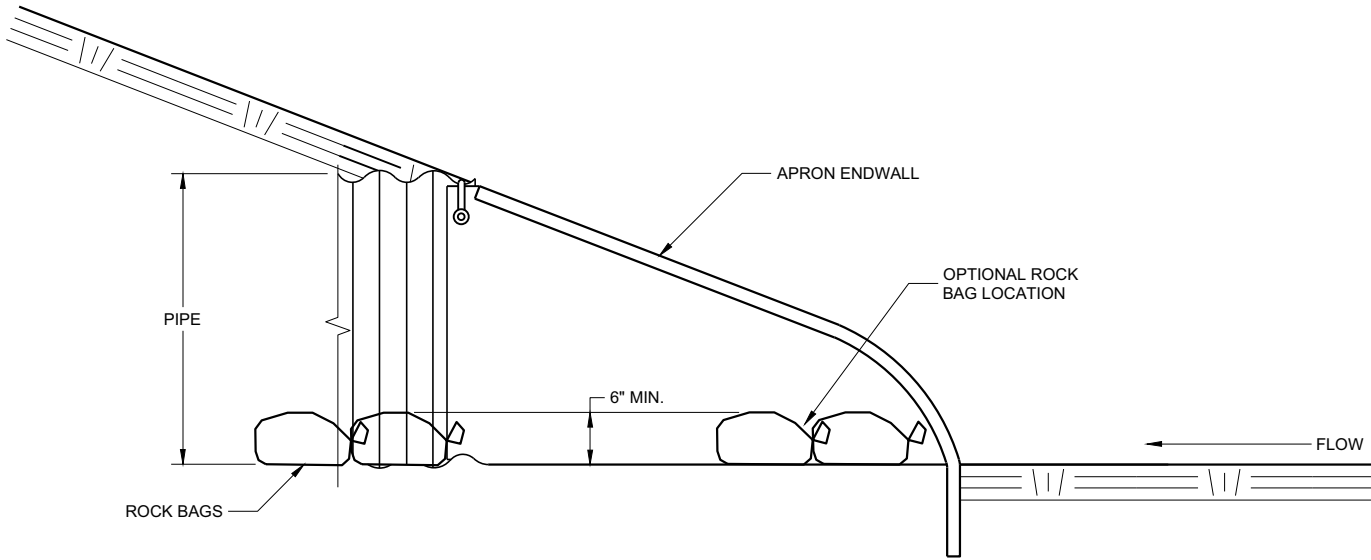
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-29-05 /S/ Beth Connolly
DATE CHIEF ROADWAY DEVELOPMENT 117 JINEER

FHWA



END VIEW



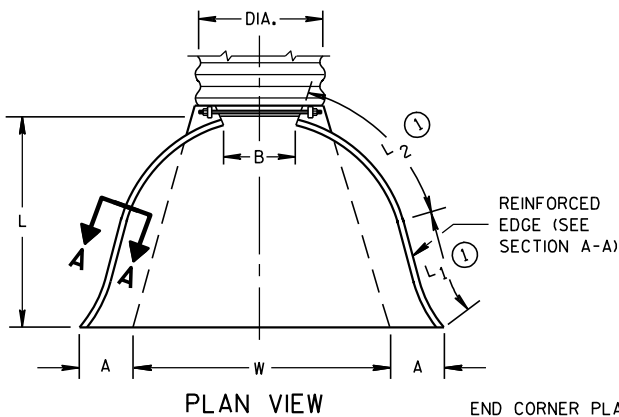
SIDE VIEW

CULVERT PIPE CHECK
(INSTALL ON INLET END ONLY)

CULVERT PIPE CHECK	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2019 DATE	/S/ Daniel Schave EROSION CONTROL ENGI 118
FHWA	

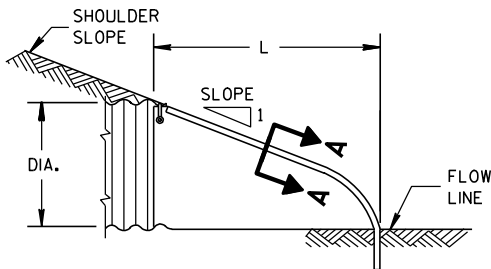
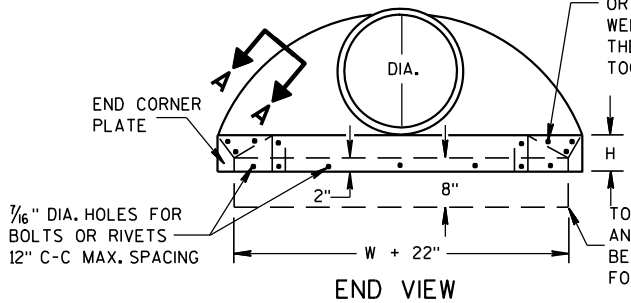
METAL APRON ENDWALLS											
PIPE DIA. (IN.)	MIN. THICK. (Inches)		DIMENSIONS (Inches)						APPROX. SLOPE	BODY	
	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L ₁ ①	L ₂ ①			W (±2")
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	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



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

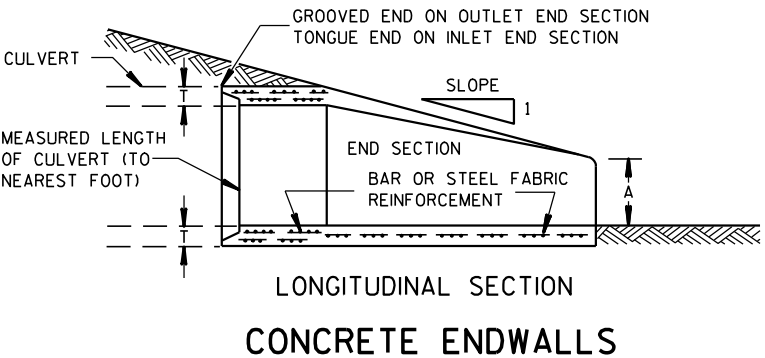
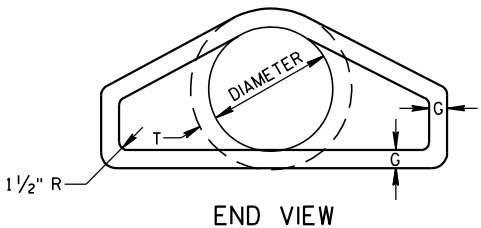
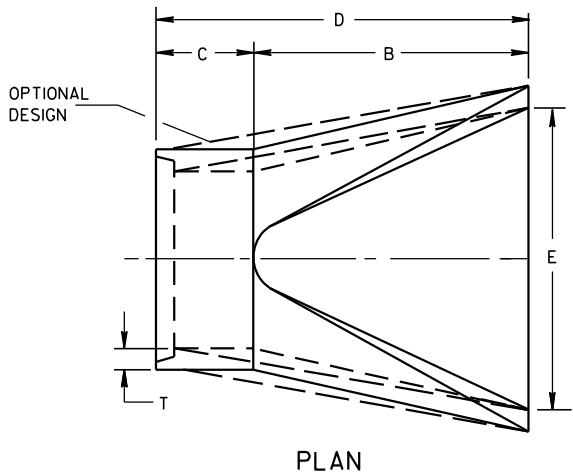
TOE PLATE (SAME THICKNESS AND METAL AS APRON) SHALL BE FURNISHED WHEN CALLED FOR ON THE PLANS



SIDE ELEVATION
METAL ENDWALLS

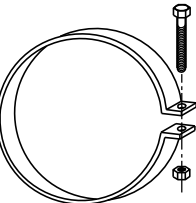
REINFORCED CONCRETE APRON ENDWALLS								
PIPE DIA. (IN.)	DIMENSIONS (Inches)							APPROX. SLOPE
	T	A	B	C	D	E	G	
12	2	4	24	48 ¹ / ₈	72 ¹ / ₈	24	2	3 to 1
15	2 ¹ / ₄	6	27	46	73	30	2 ¹ / ₄	3 to 1
18	2 ¹ / ₂	9	27	46	73	36	2 ¹ / ₂	3 to 1
21	2 ³ / ₄	9	36	37 ¹ / ₂	73 ¹ / ₂	42	2 ³ / ₄	3 to 1
24	3	9 ¹ / ₂	43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

* MINIMUM
** MAXIMUM

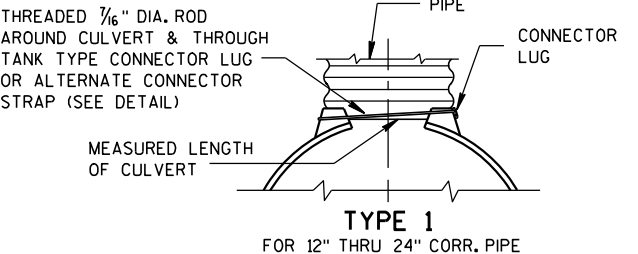


LONGITUDINAL SECTION
CONCRETE ENDWALLS

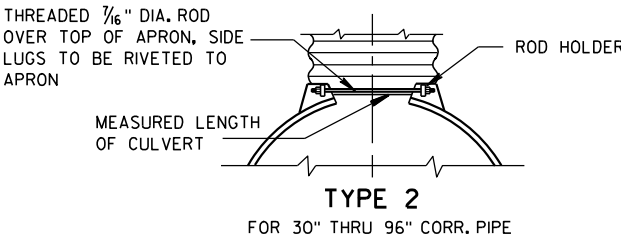
1" WIDE, 12 GA. (0.109" THICK) GALVANIZED STRAP WITH STANDARD 6" X 1/2" BAND BOLT AND NUT



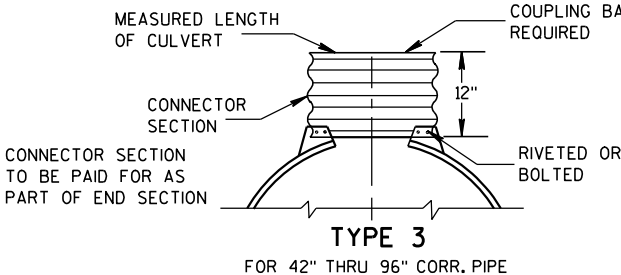
ALTERNATE FOR TYPE 1 CONNECTION
END SECTION CONNECTOR STRAP



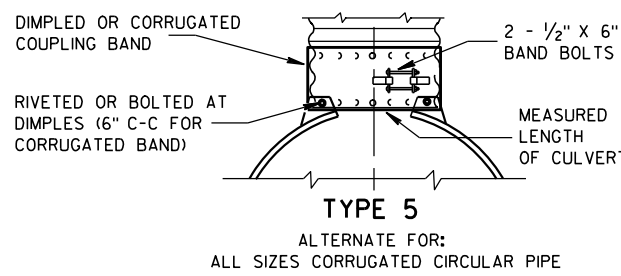
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

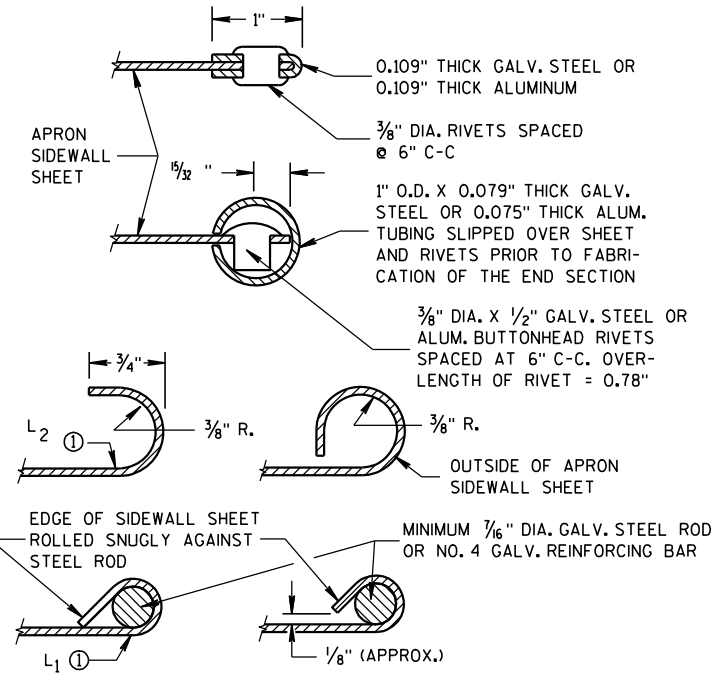
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

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

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

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

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

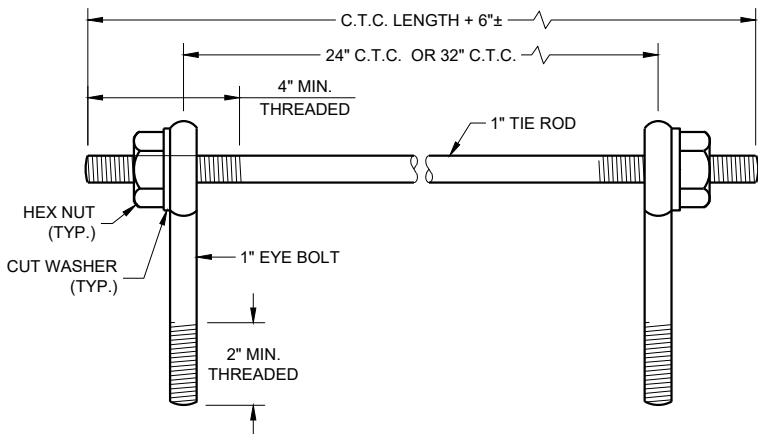
ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT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

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

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

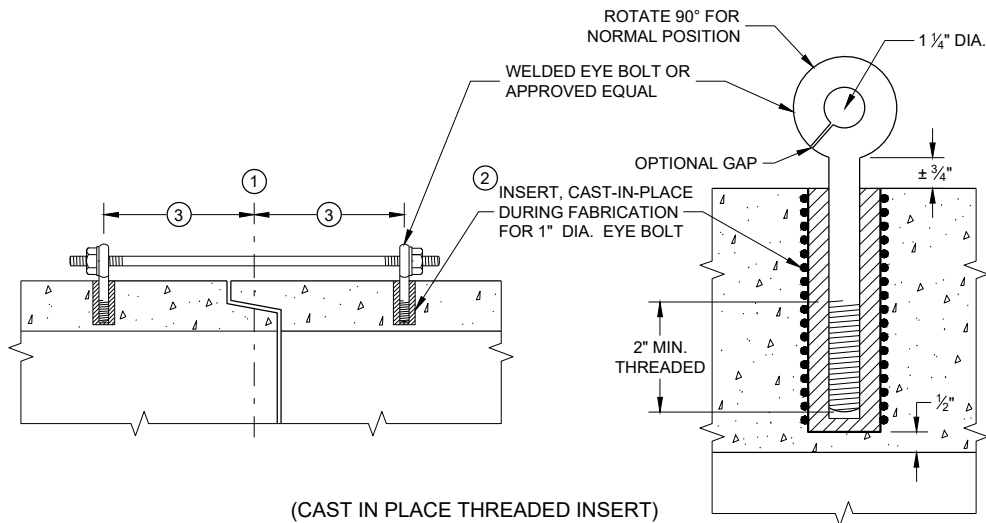
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 11/30/94 DATE	/S/ Rory L. Rhinehart CHIEF ROADWAY DEVELOPMENT NEER
FHWA	



EYE BOLTS AND TIE ROD

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



(CAST IN PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

GENERAL NOTES

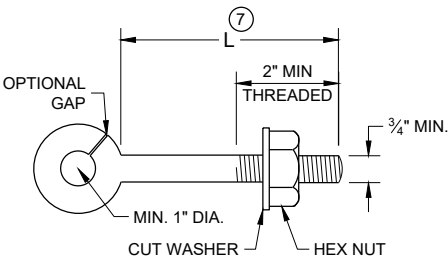
DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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.

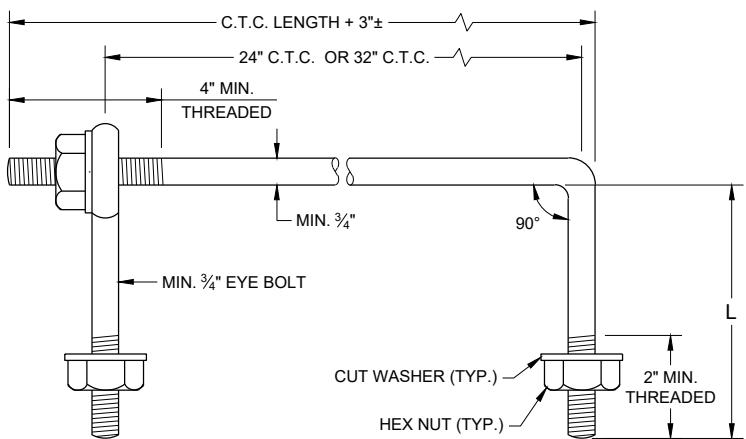
JOINT TIES TO BE HOT-DIP GALVANIZED PER ASTM A 153.

- 1 CENTER LINE 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 PER THE APPLICABLE DETAIL, AND EQUAL DISTANCE FROM THE CENTERLINE OF THE JOINT.
- 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.
- 7 EYE BOLT LENGTH DETERMINED BY WALL THICKNESS, BELL THICKNESS AND BOLT PROJECTION INSIDE PIPE.



EYE BOLT 7

NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" OR 38" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.

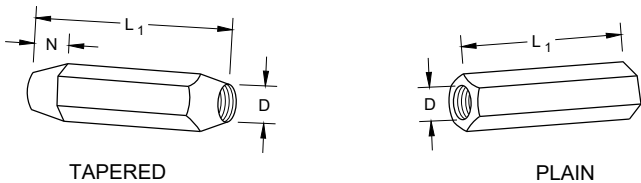


EYE BOLT AND TIE ROD

ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L ₁	N
12 - 60	5/8	5/8	5	1/2
66 - 84	3/4	3/4	5	1/2
90 - 144	1	1	7	1 1/16

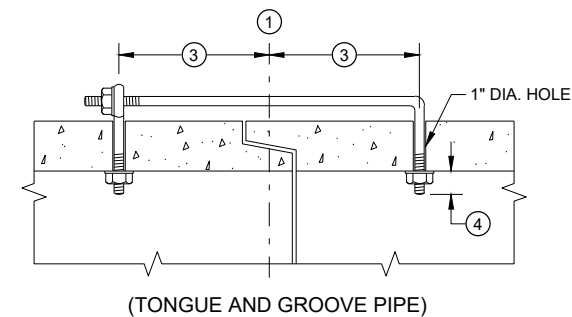
DIMENSIONS SHOWN ARE IN INCHES



TAPERED

PLAIN

RIGHT AND LEFT THREADS
SLEEVE NUTS

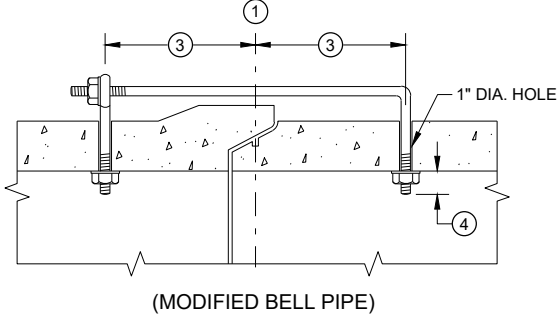


(TONGUE AND GROOVE PIPE)

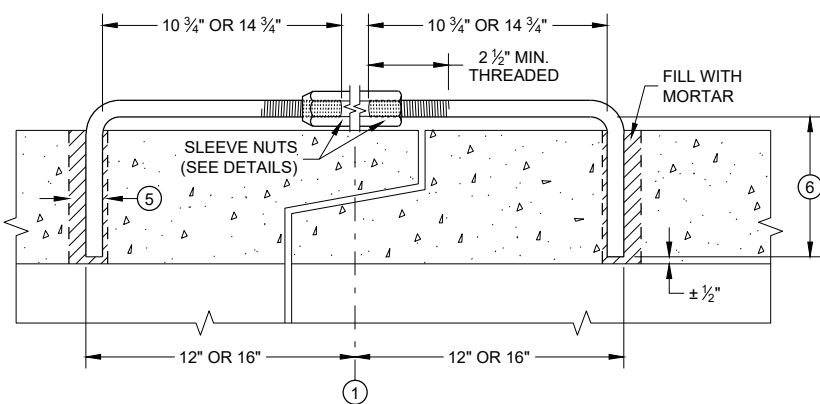
LONGITUDINAL SECTION

(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 2)

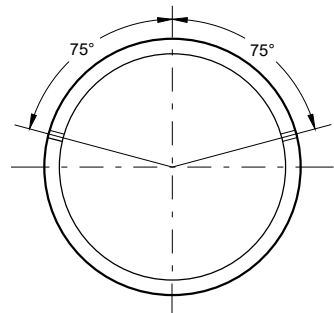


(MODIFIED BELL PIPE)



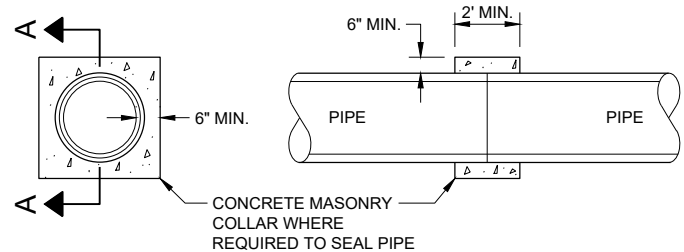
LONGITUDINAL SECTION

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



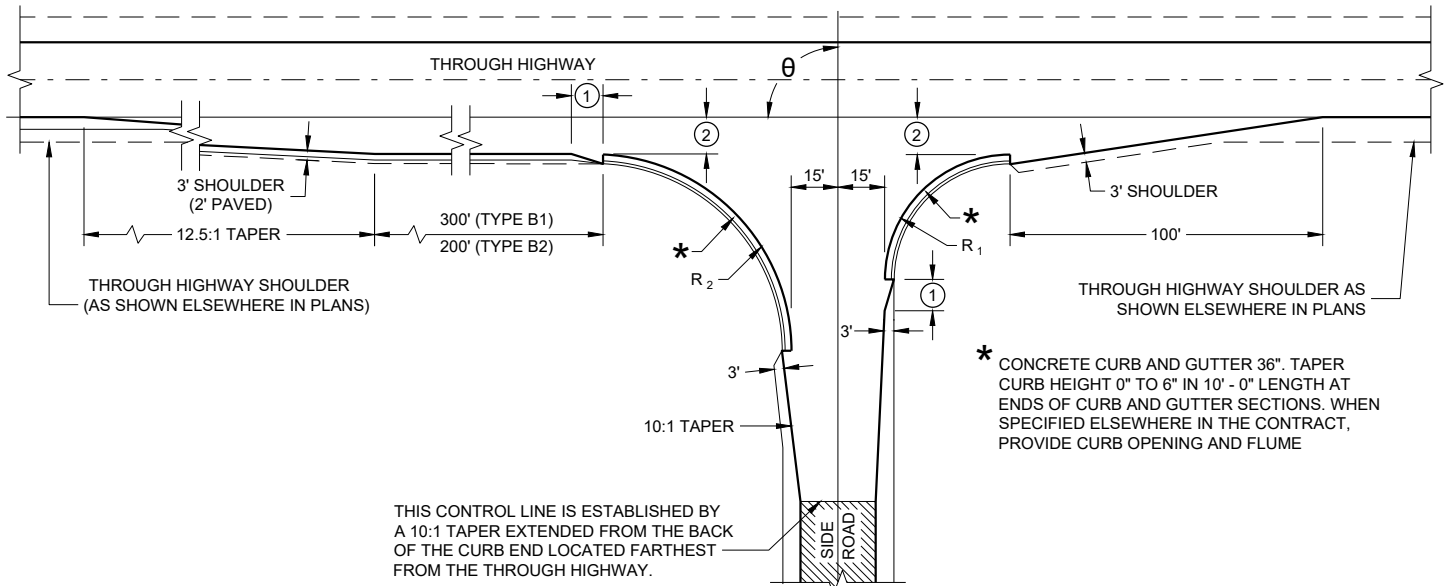
SECTION A - A

CONCRETE COLLAR DETAIL

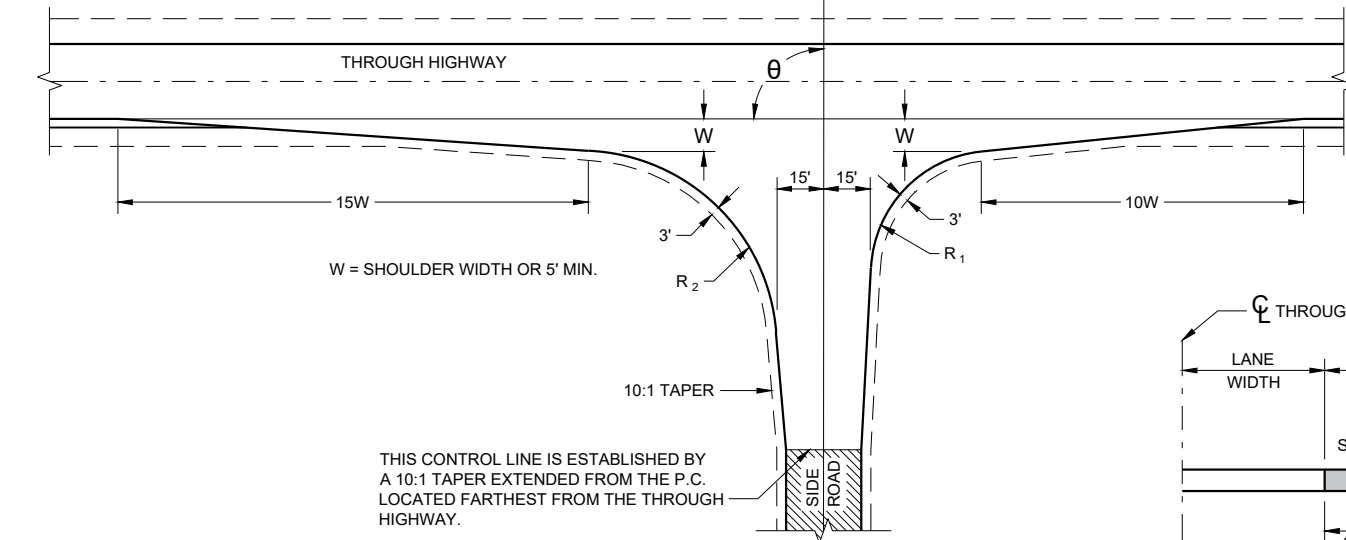
JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

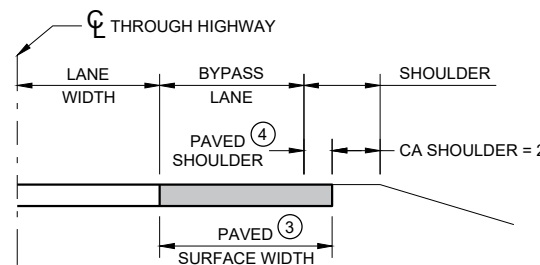
APPROVED
November 2021 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT ENGINEER 120
FHWA



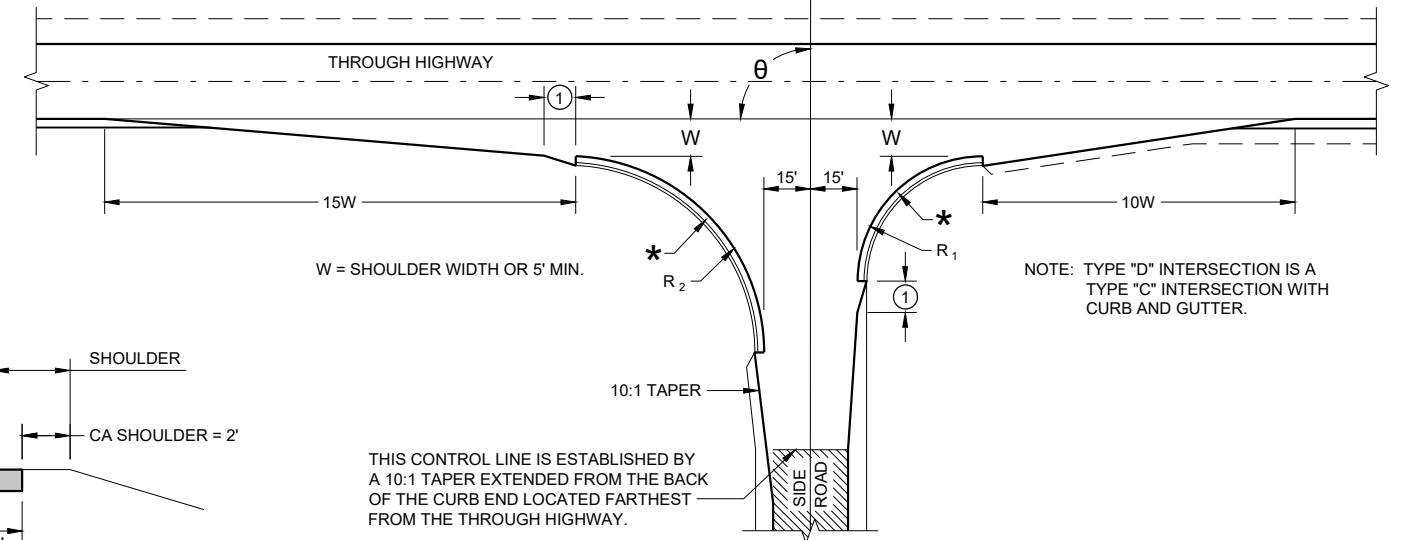
TYPE "B1" AND "B2"



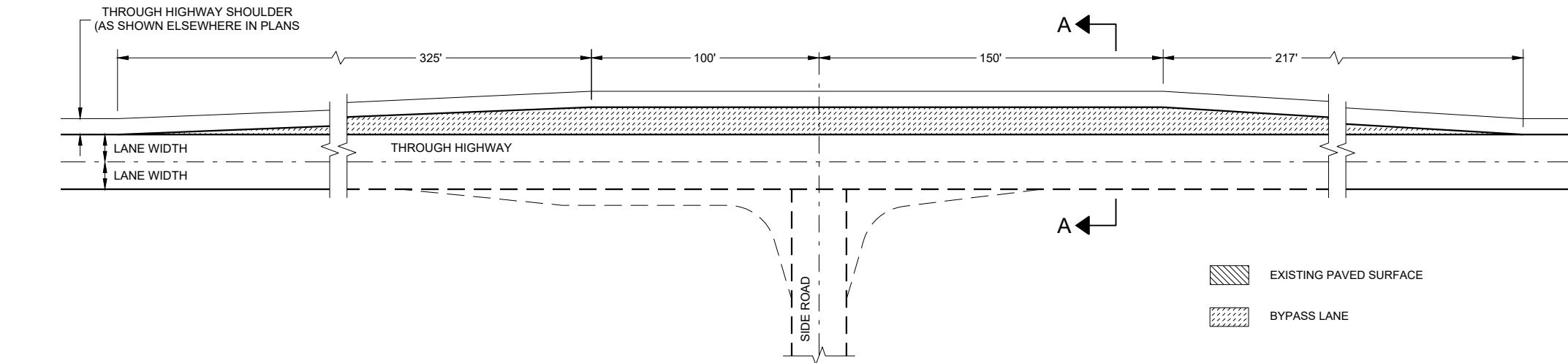
TYPE "C"



SECTION A - A
(SHOWING BYPASS LANE AND SHOULDER)



TYPE "D"



TEE INTERSECTION BYPASS LANE DETAIL

- EXISTING PAVED SURFACE
- BYPASS LANE

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.

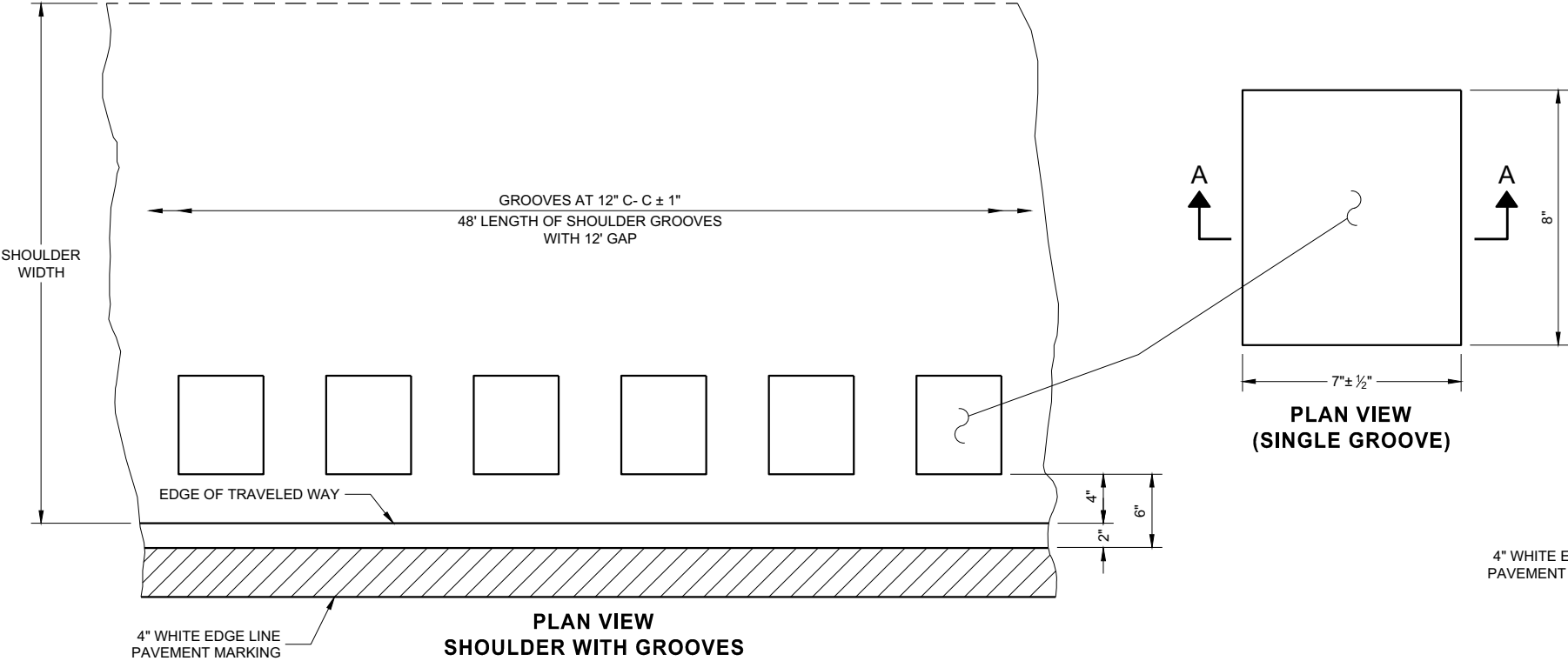
WHEN THE SIDE ROAD IS PRESENTLY PAVED, NEW PAVEMENT SHALL BE PLACED TO THE LIMITS OF DESIGN AS SHOWN AND BEYOND, IF NECESSARY, TO MEET EXISTING PAVEMENT.

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

- 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.

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 121



6

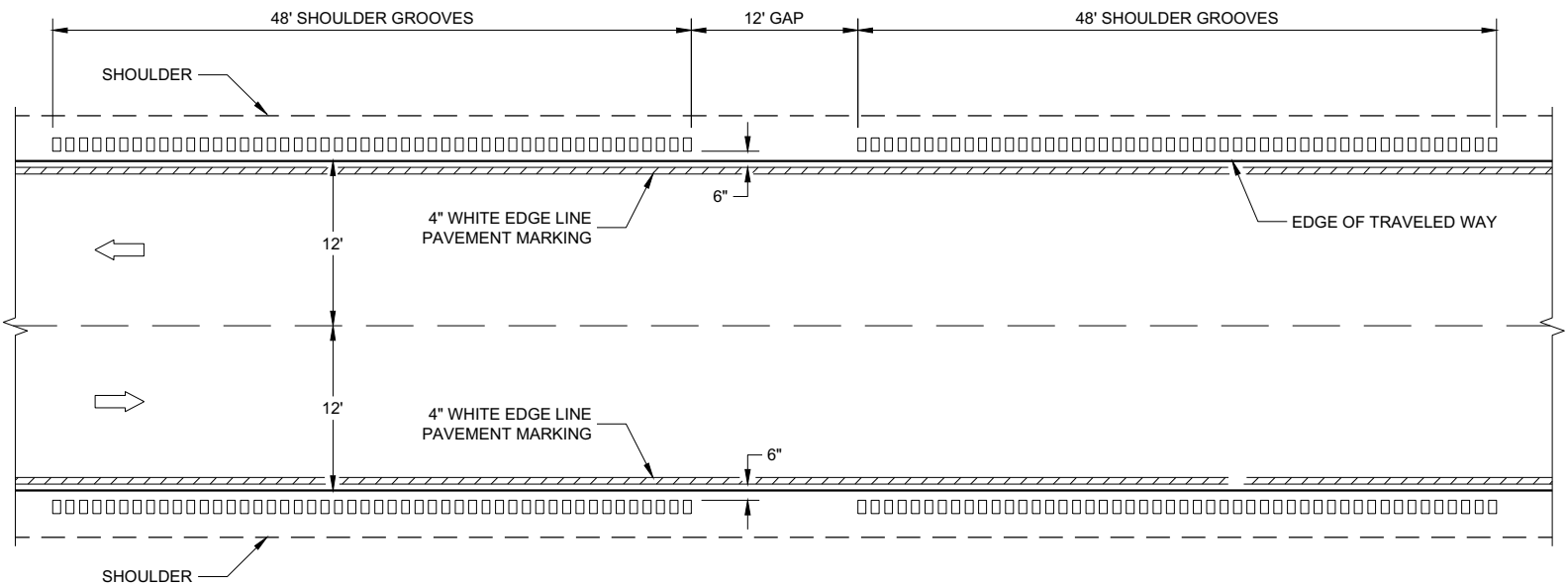
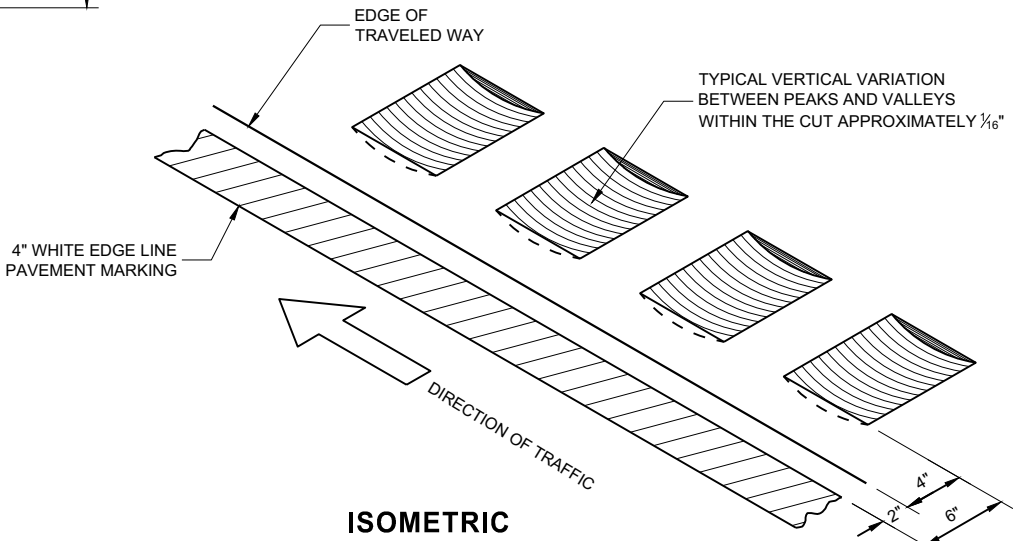
PLACEMENT DETAIL FOR TYPE 1 MILLED RUMBLE STRIP

GENERAL NOTES

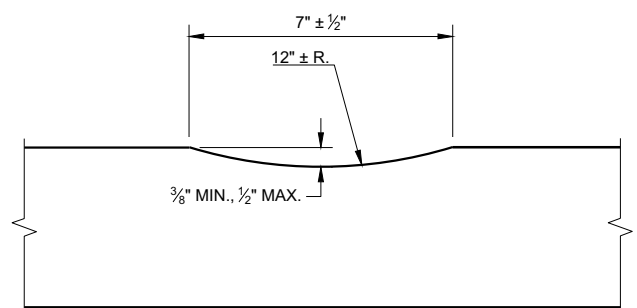
DETAILS OF CONSTRUCTION NO SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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.



TYPE 1
2 - LANE SHOULDER RUMBLE STRIP



2-LANE RURAL SHOULDER
RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



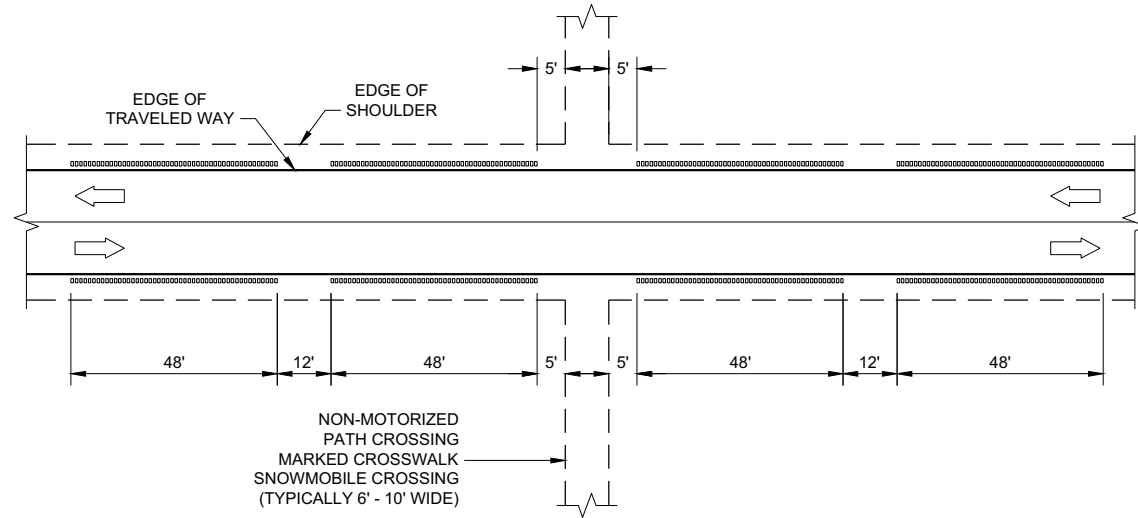
2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 123

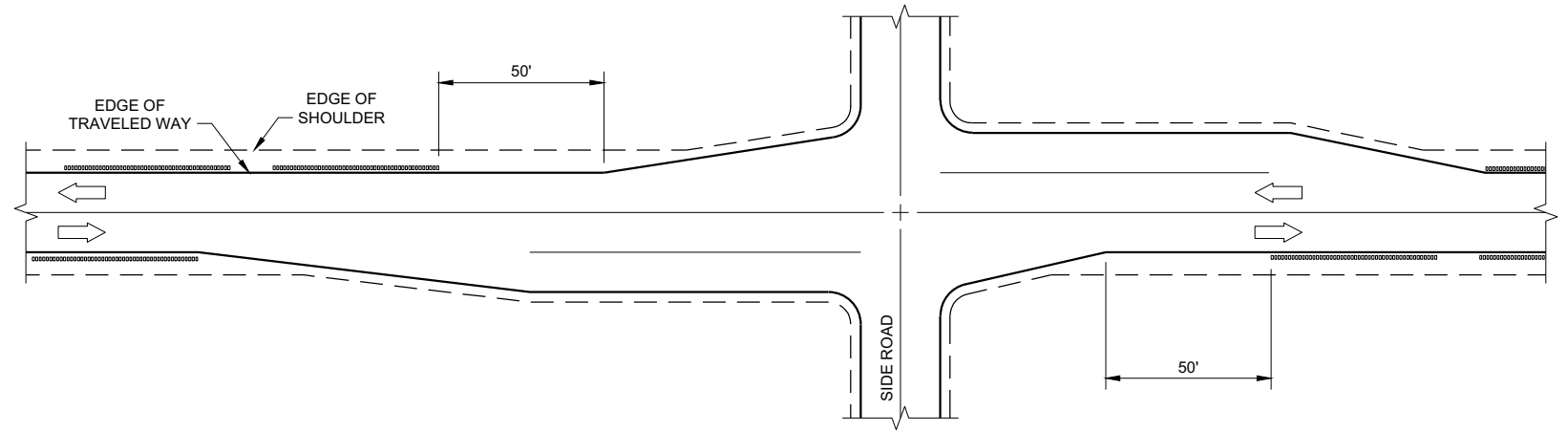
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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

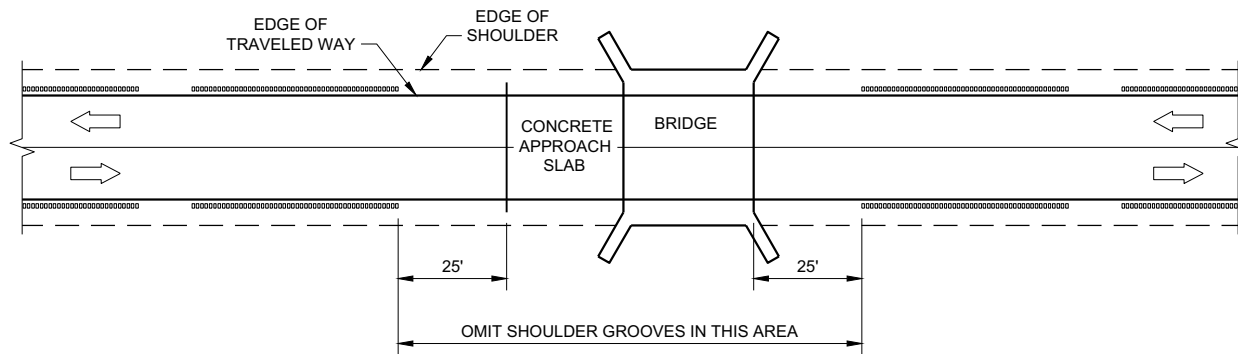
- ① SHOULDER GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS. WHEN DIRECTED BY THE ENGINEER.



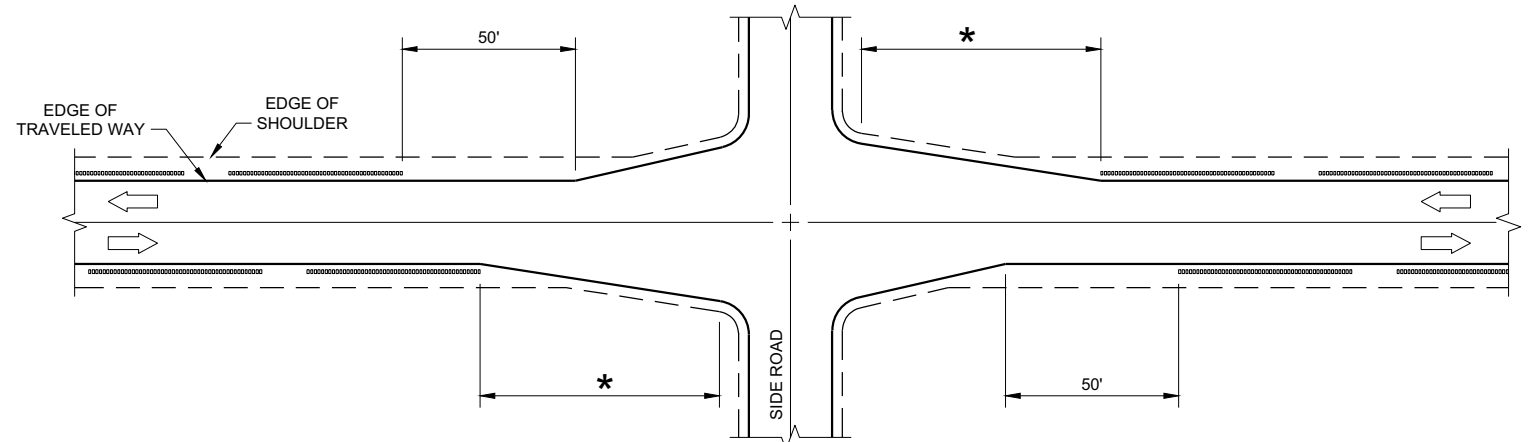
SHOULDER GROOVES AT MISCELLANEOUS CROSSINGS



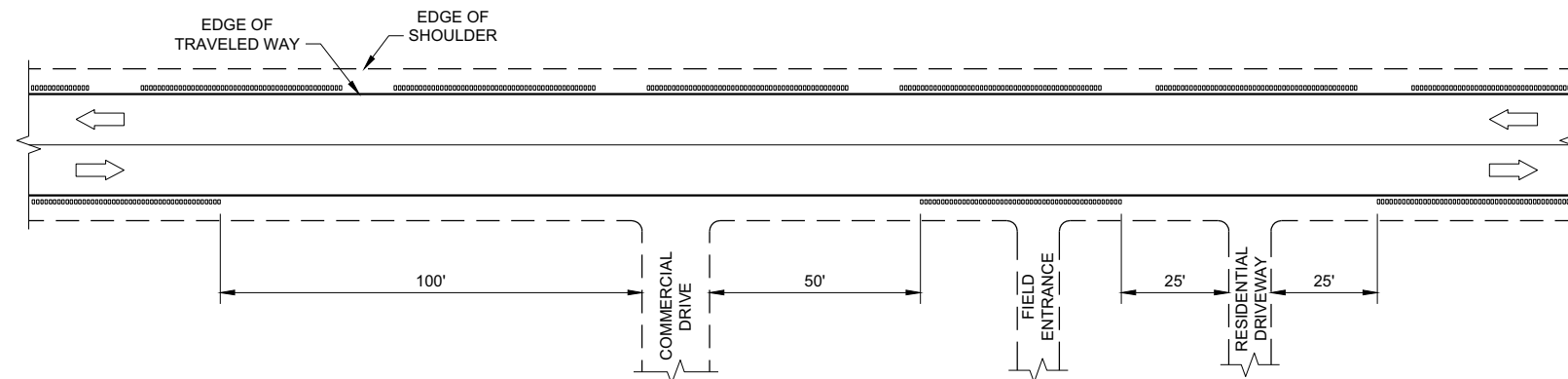
SHOULDER GROOVES AT RIGHT TURN LANE



SHOULDER GROOVES AT BRIDGES



SHOULDER GROOVES AT INTERSECTIONS WITH APPROACH TAPER



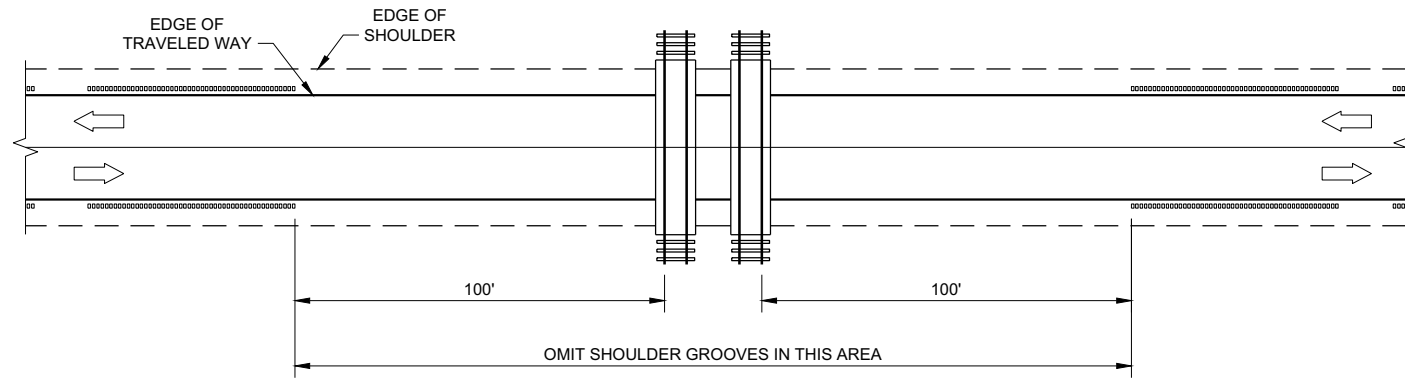
SHOULDER GROOVES AT DRIVEWAYS^①

GENERAL NOTES

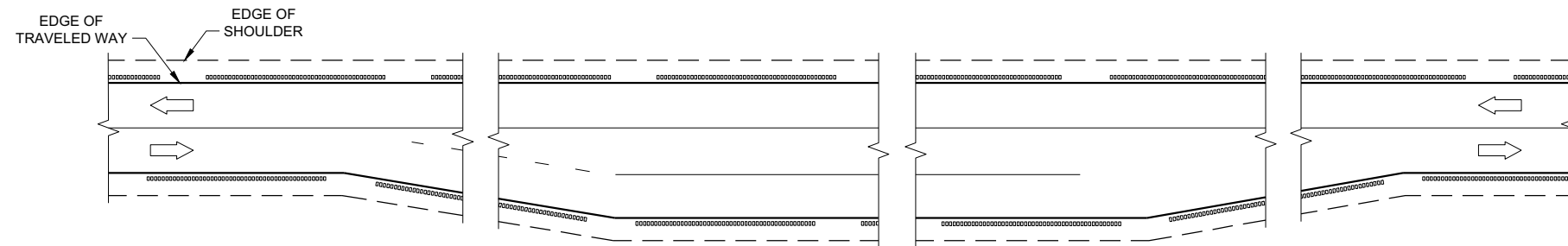
- ① SHOULDER GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS. WHEN DIRECTED BY THE ENGINEER.

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

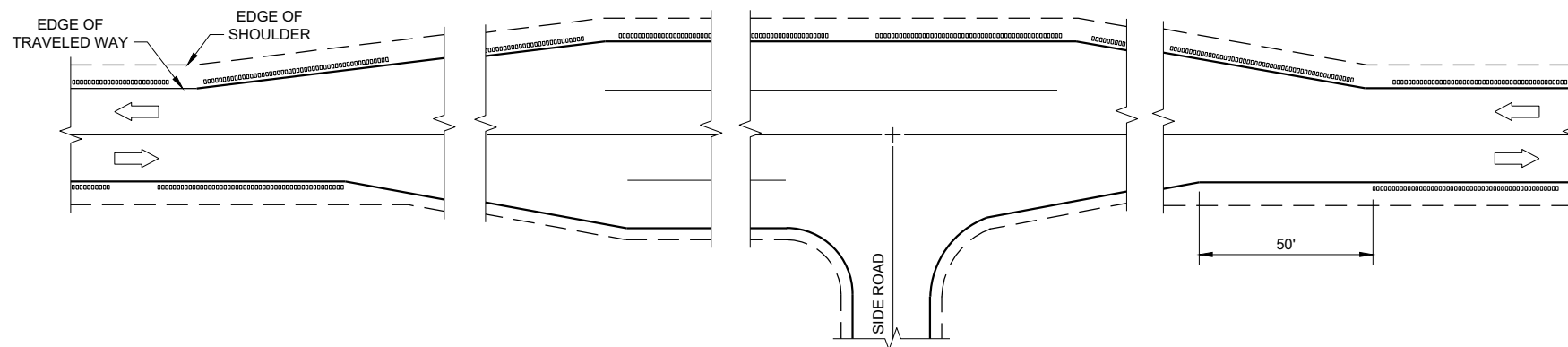
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 124



SHOULDER GROOVES AT RAILROADS



SHOULDER GROOVES AT PASSING AND CLIMBING LANES

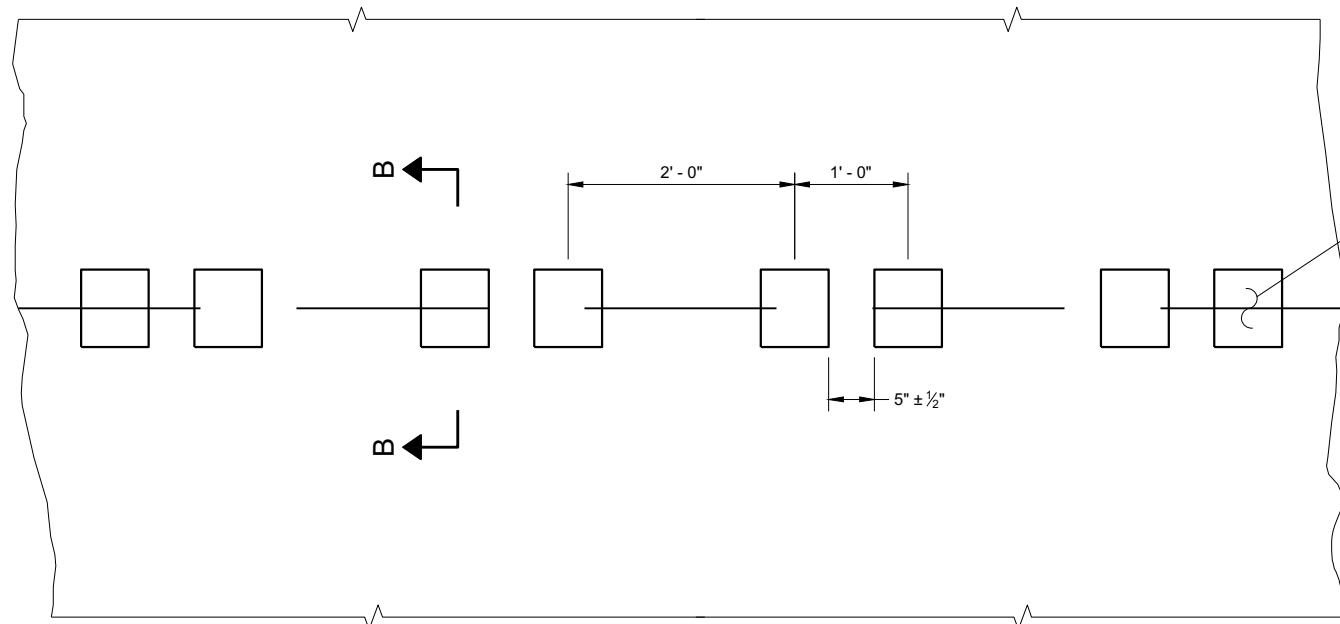


SHOULDER GROOVES AT BYPASS LANES

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

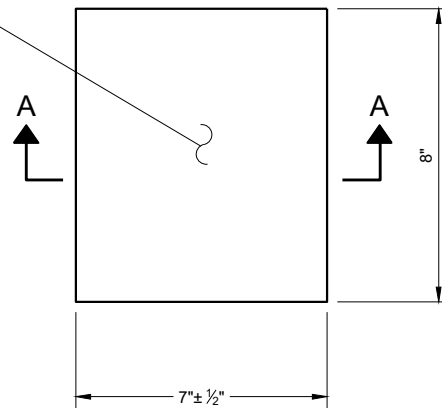
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018 DATE /S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT ENGINEER 125
FHWA



PLAN VIEW
SHOULDER WITH GROOVES

PLACEMENT DETAIL FOR TYPE 1 MILLED RUMBLE STRIP



PLAN VIEW
(SINGLE GROOVE)

GENERAL NOTES

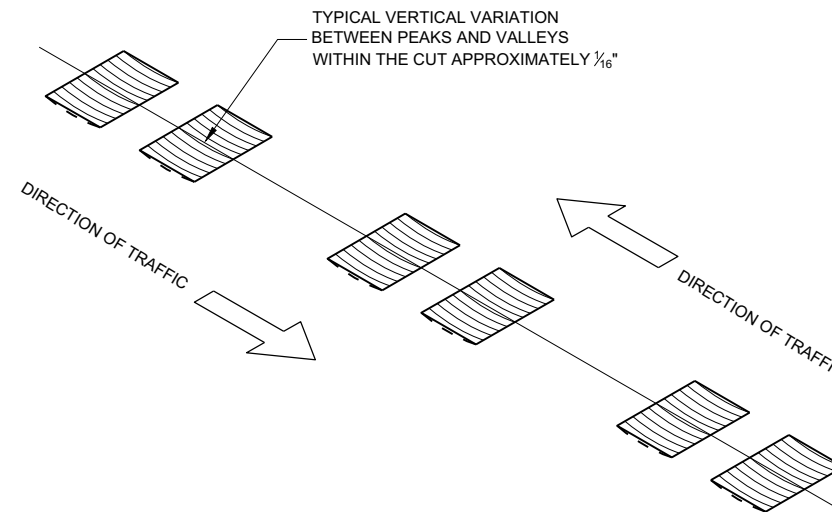
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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

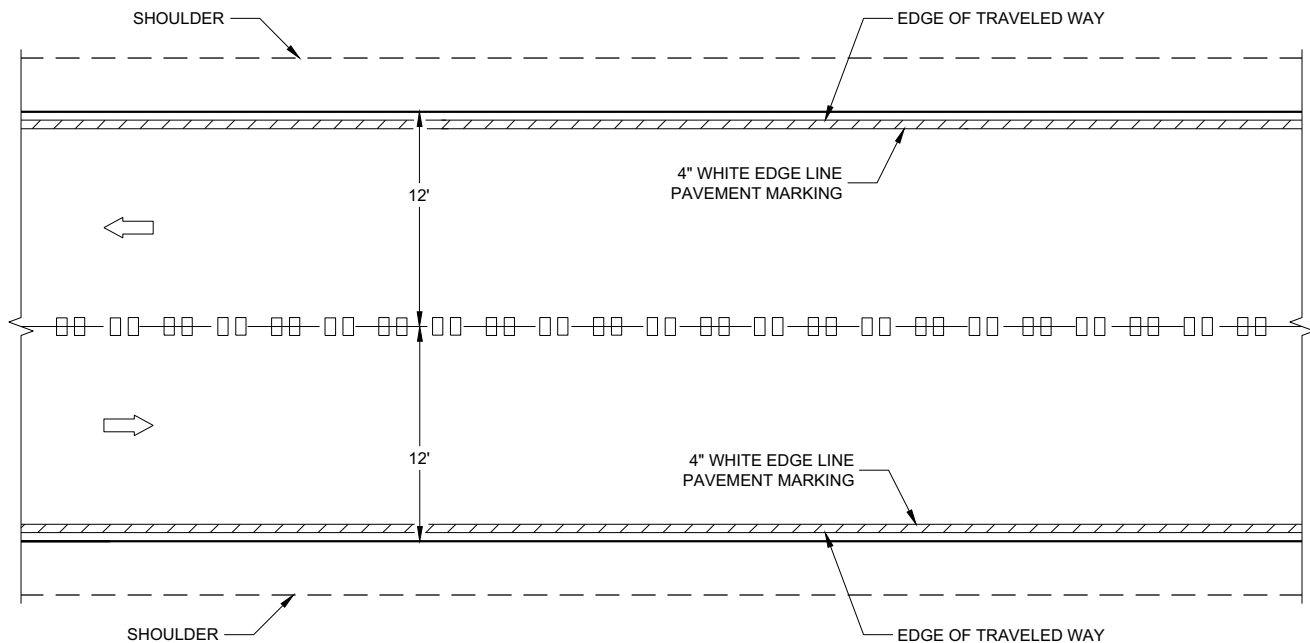
INSTALL PAVEMENT MARKING AFTER THE GROOVES ARE INSTALLED.

SEE SIGNING PLAN FOR SIGN REQUIREMENTS THAT MAY BE NEEDED.

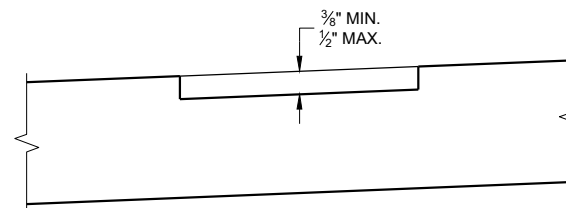
- ① CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS. WHEN DIRECTED BY THE ENGINEER.



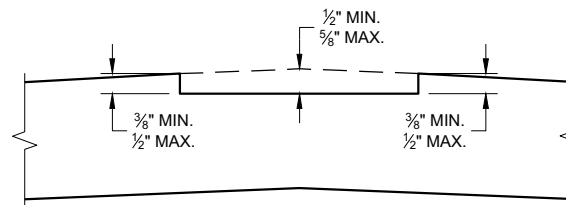
ISOMETRIC



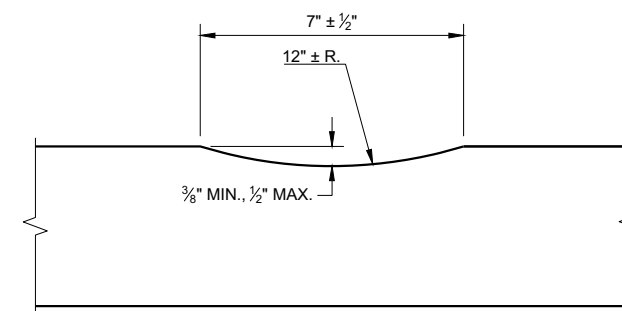
CENTERLINE GROOVES ON TWO-WAY ROADWAYS



SECTION B - B
SUPERELEVATED ROADWAY



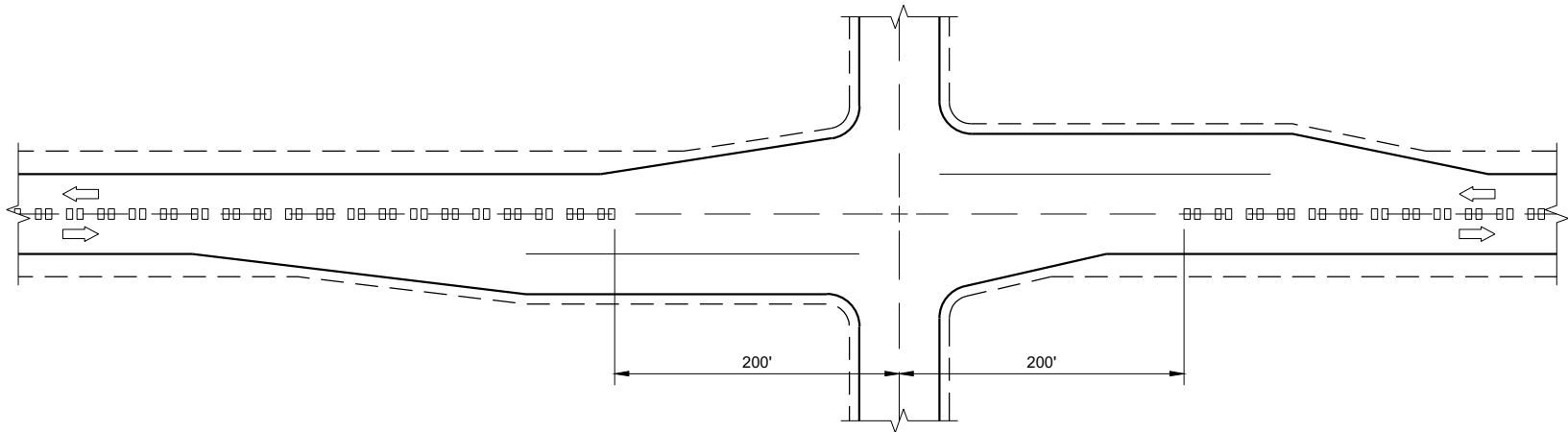
SECTION B - B
CROWNED ROADWAY



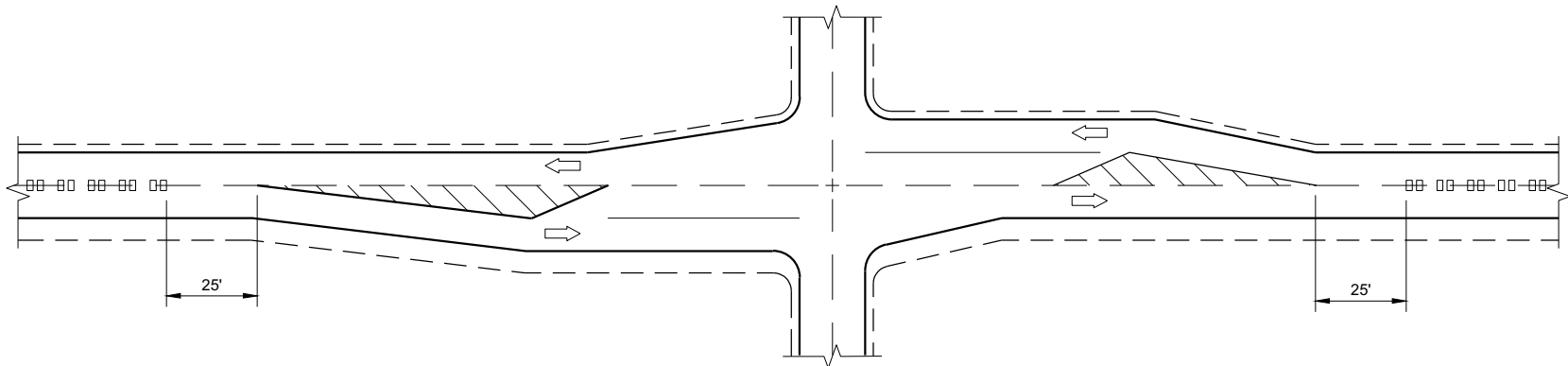
SECTION A - A

**2-LANE RURAL
CENTER LINE RUMBLE STRIP,
MILLING**

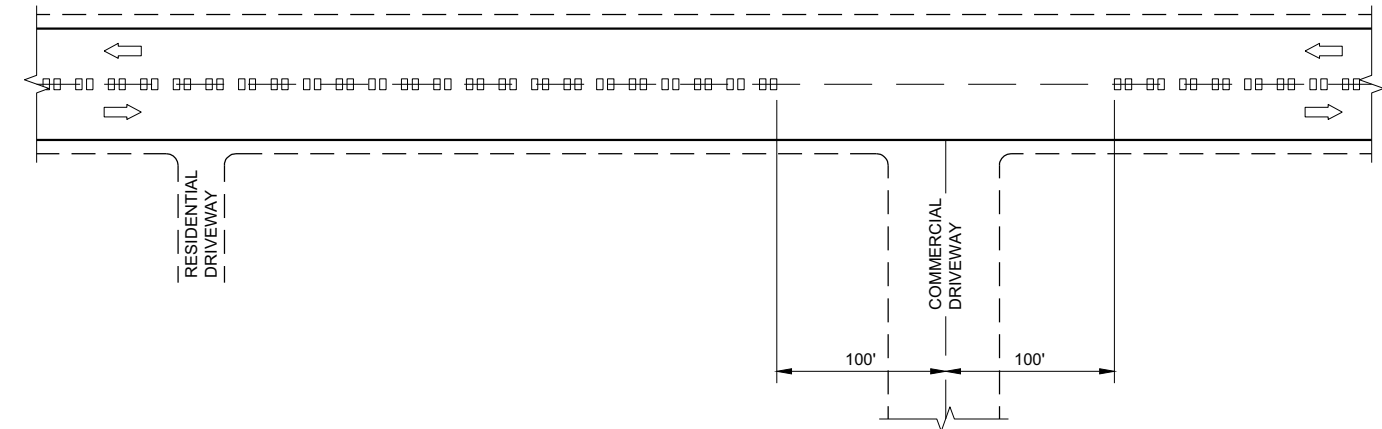
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 126



CENTERLINE GROOVES AT INTERSECTIONS



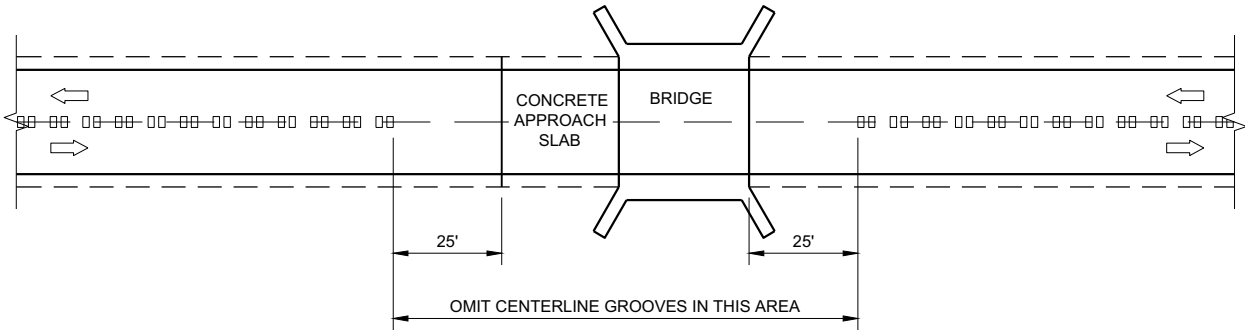
CENTERLINE GROOVES AT INTERSECTIONS
(WITH LEFT TURN LANES)



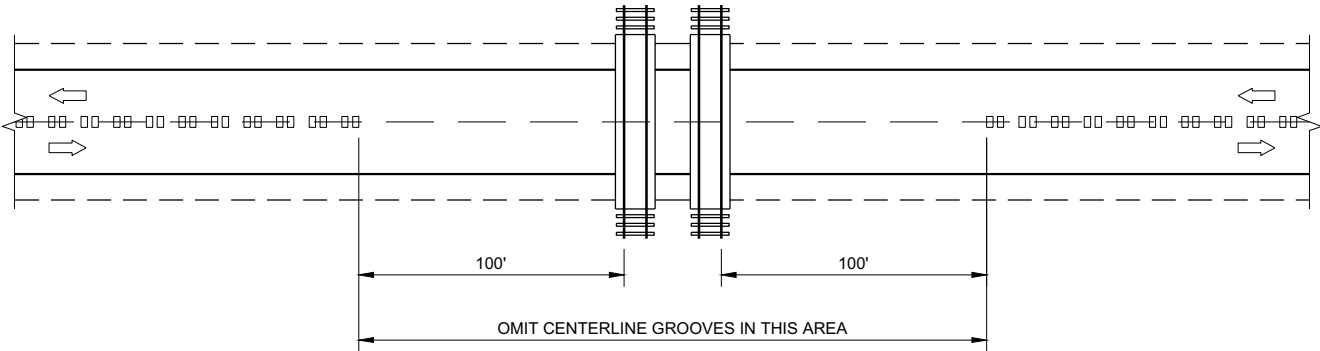
CENTERLINE GROOVES AT DRIVEWAYS^①

GENERAL NOTES

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



CENTERLINE GROOVES AT BRIDGES



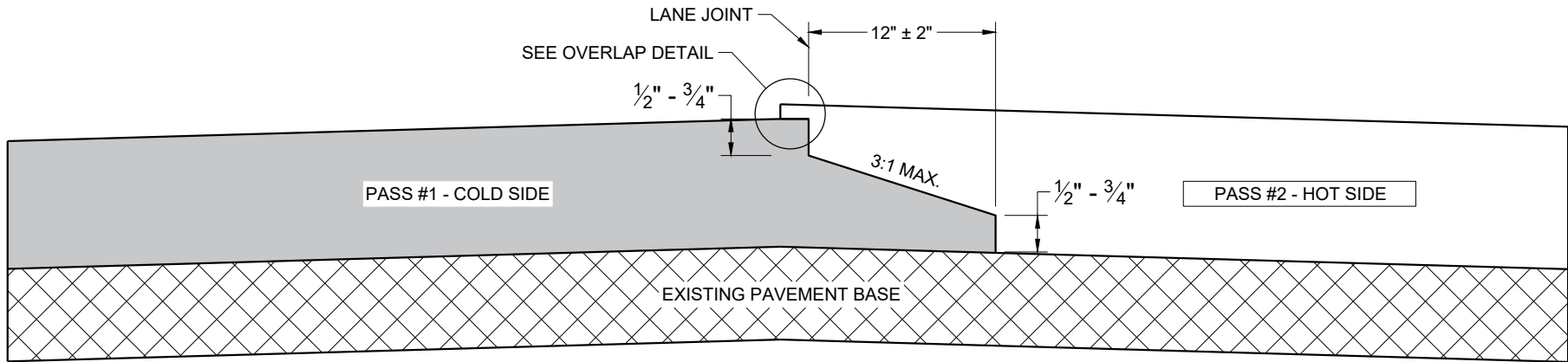
CENTERLINE GROOVES AT RAILROADS

2-LANE RURAL
CENTERLINE RUMBLE STRIP,
MILLING

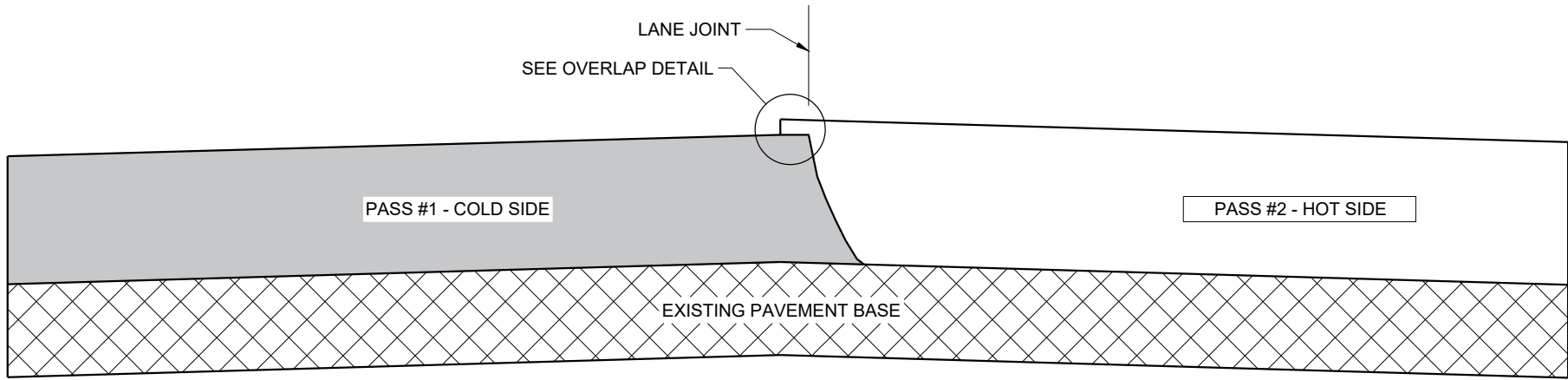
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
ENGINEER
127

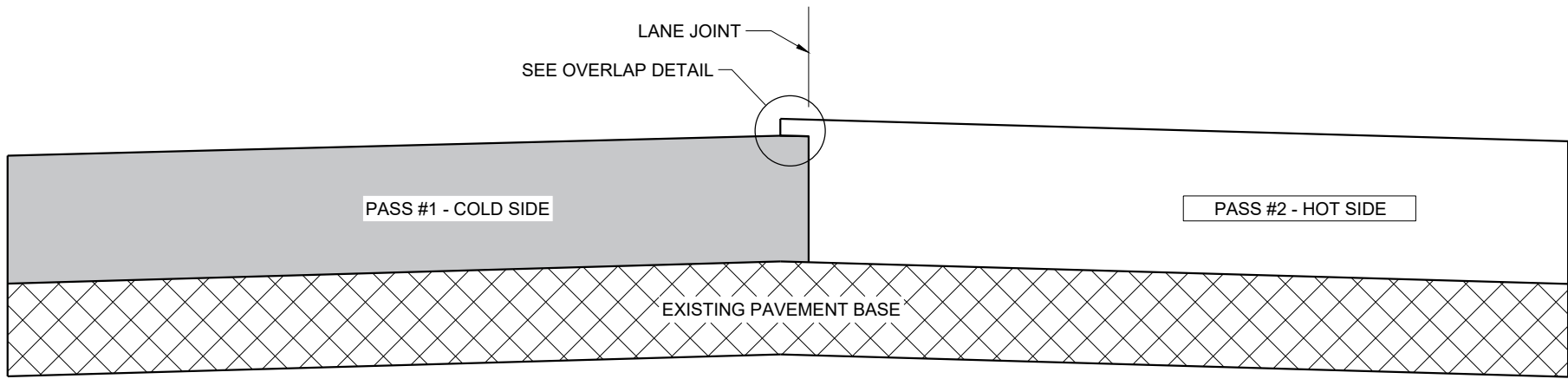
FHWA



TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)

GENERAL NOTES

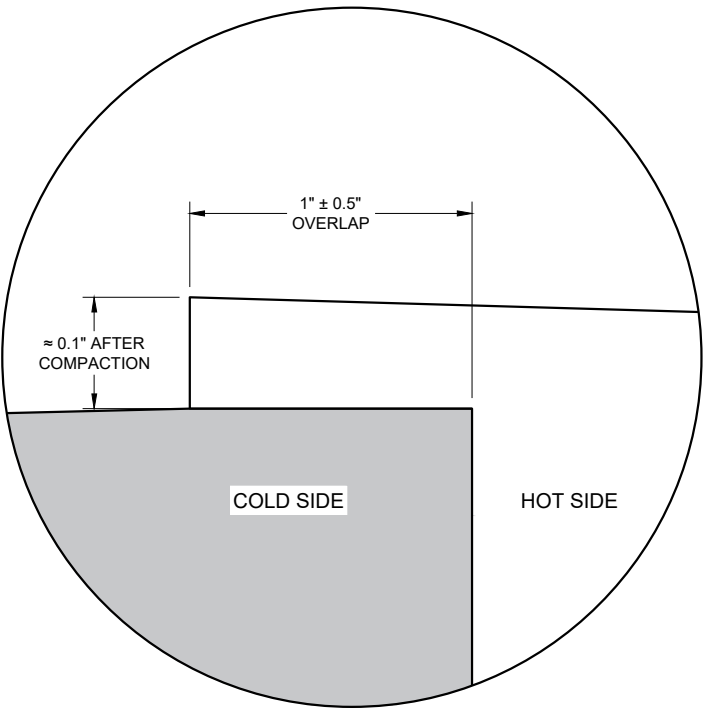
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

FOR ALL LONGITUDINAL JOINTS, ENSURE THE PAVER SCREED OVERLAPS THE PREVIOUSLY PLACED PAVEMENT BY 1" ± 0.5" AND THE HOT SIDE OF THE JOINT REMAINS HIGHER THAN THE COLD SIDE BY APPROXIMATELY 0.1" AFTER FINAL COMPACTION. (IT WILL BE FLUSH WHEN PAVING IN ECHELON.)

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

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

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



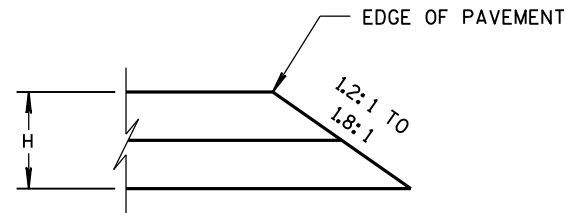
OVERLAP DETAIL (TYPICAL)

HMA LONGITUDINAL JOINTS

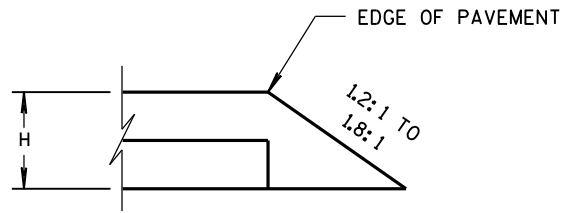
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2020 /S/ Steven Hefel
DATE HMA PAVEMENT ENGIN 128

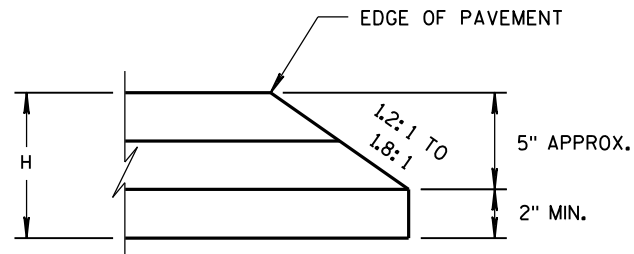
FHWA



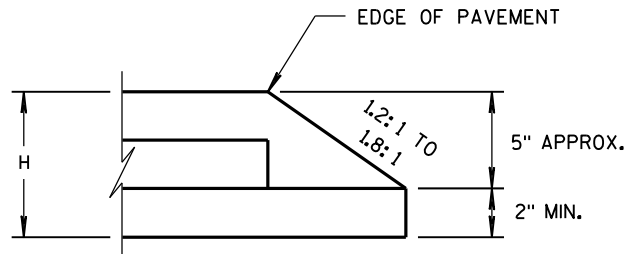
CONSTRUCTED WITH FINAL TWO LAYERS
FOR H 5" OR LESS



CONSTRUCTED WITH FINAL LAYER
FOR H 5" OR LESS

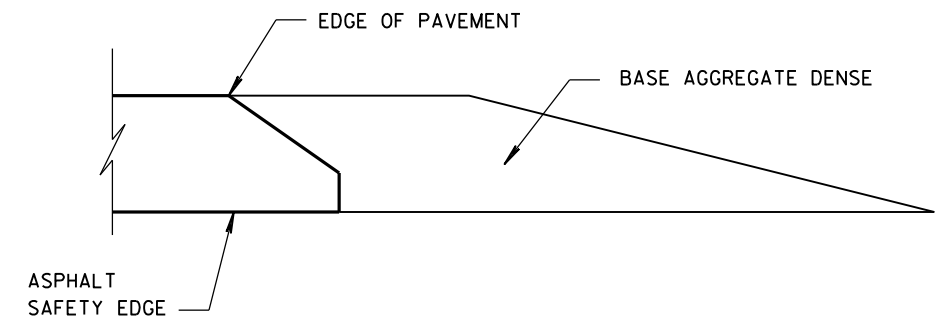


CONSTRUCTED WITH FINAL TWO LAYERS
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER
FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

SAFETY EDGE_{SM}

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

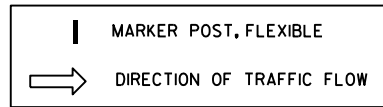
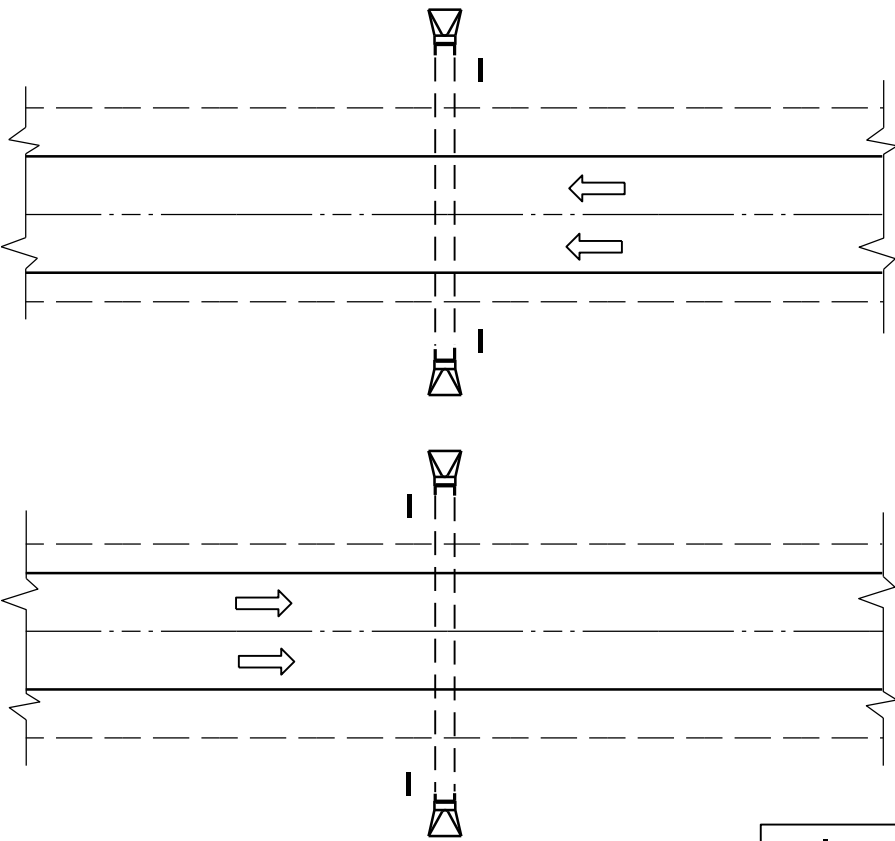
11/30/2012
DATE

FHWA

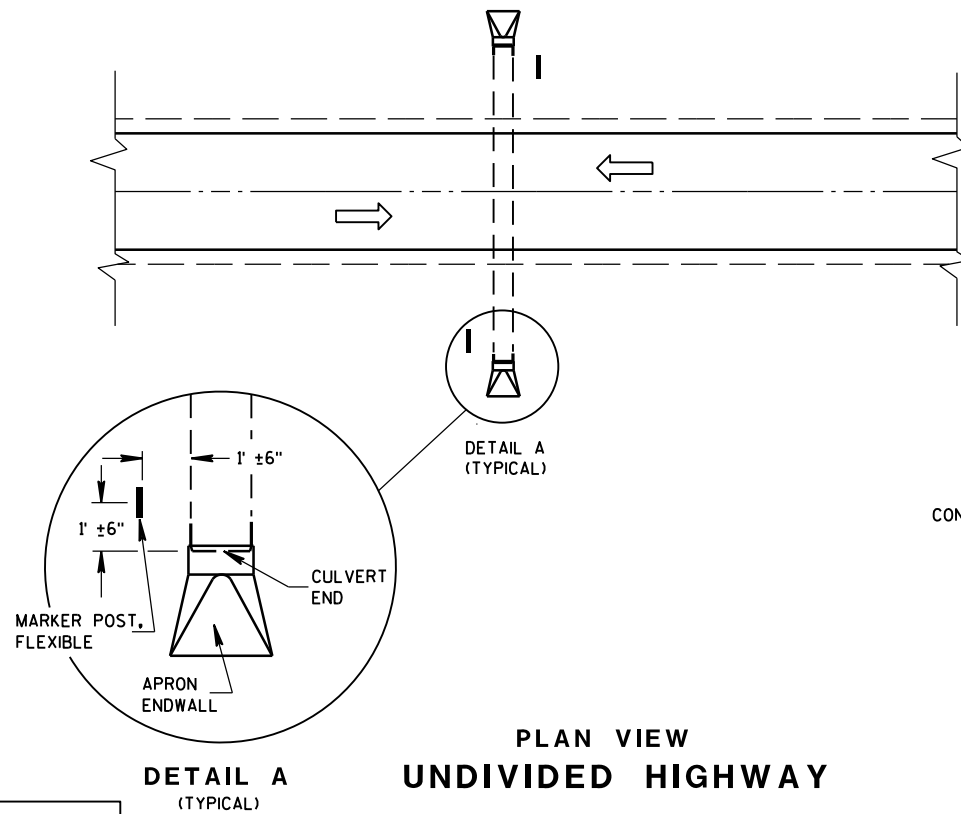
/s/ Jerry H. Zoaga
ROADWAY STANDARDS
ENGINEER

129
ENT

PLAN VIEW
DIVIDED HIGHWAY



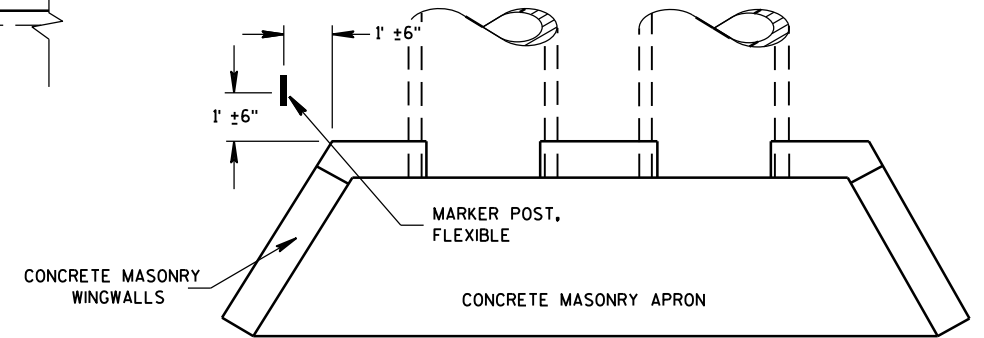
PLAN VIEW
UNDIVIDED HIGHWAY



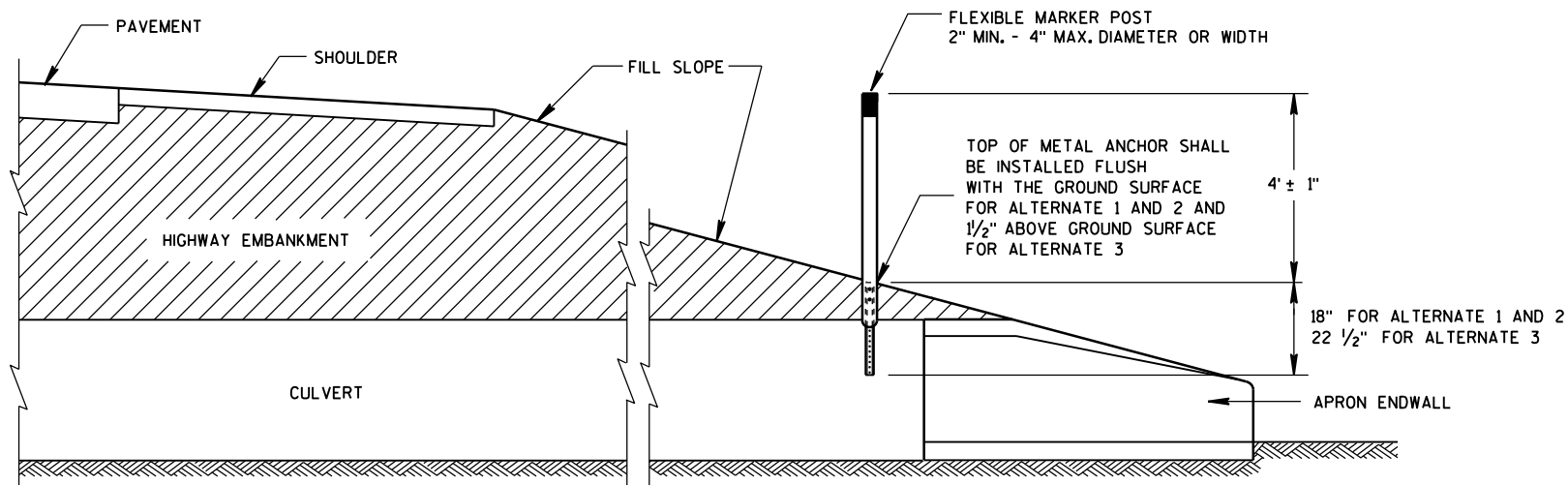
FLEXIBLE MARKER POST LOCATION

GENERAL NOTES

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



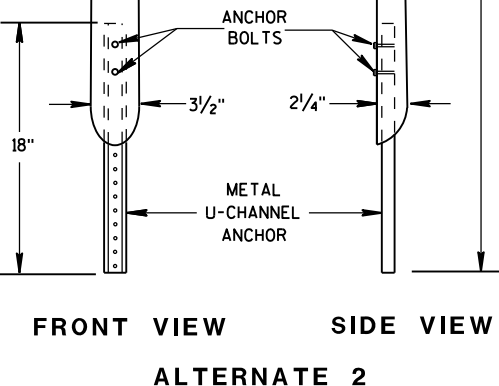
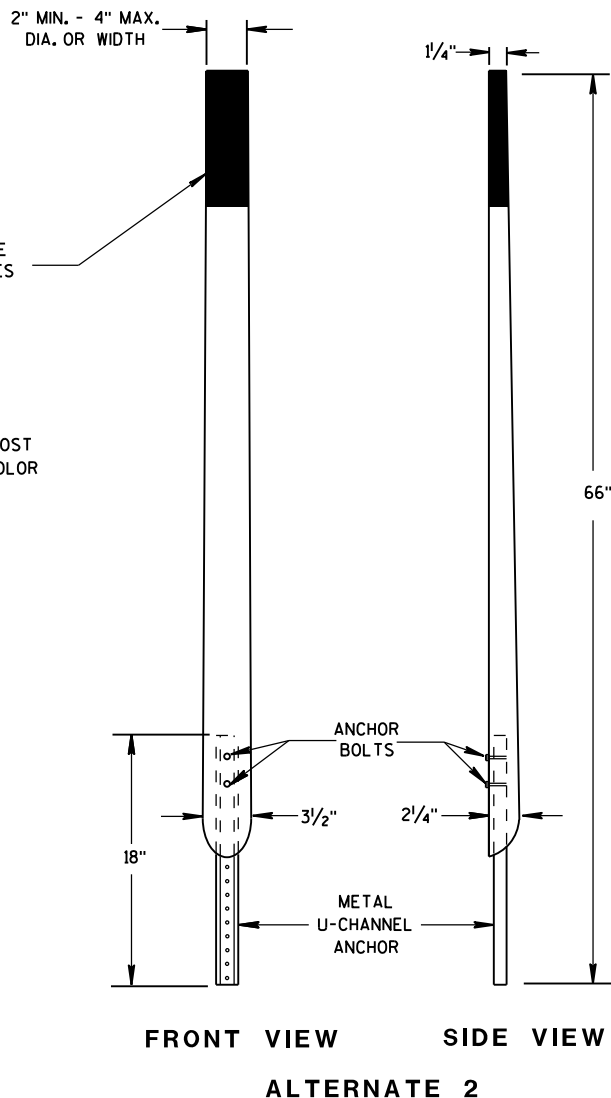
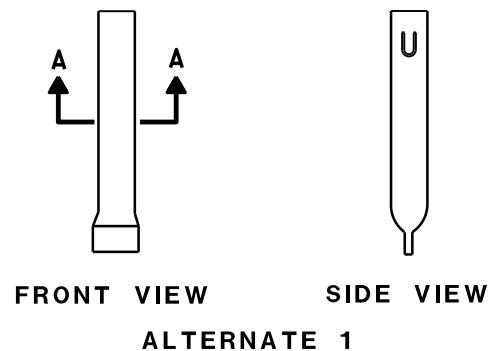
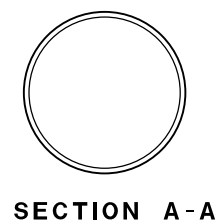
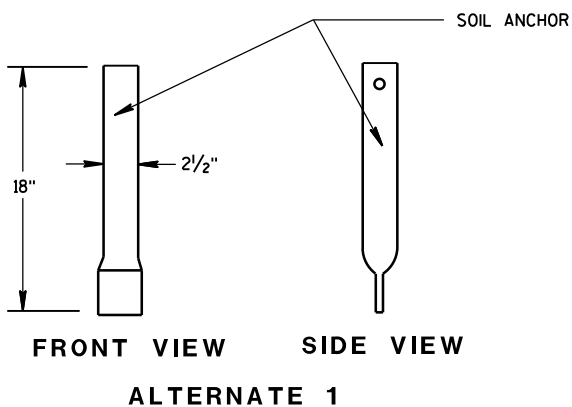
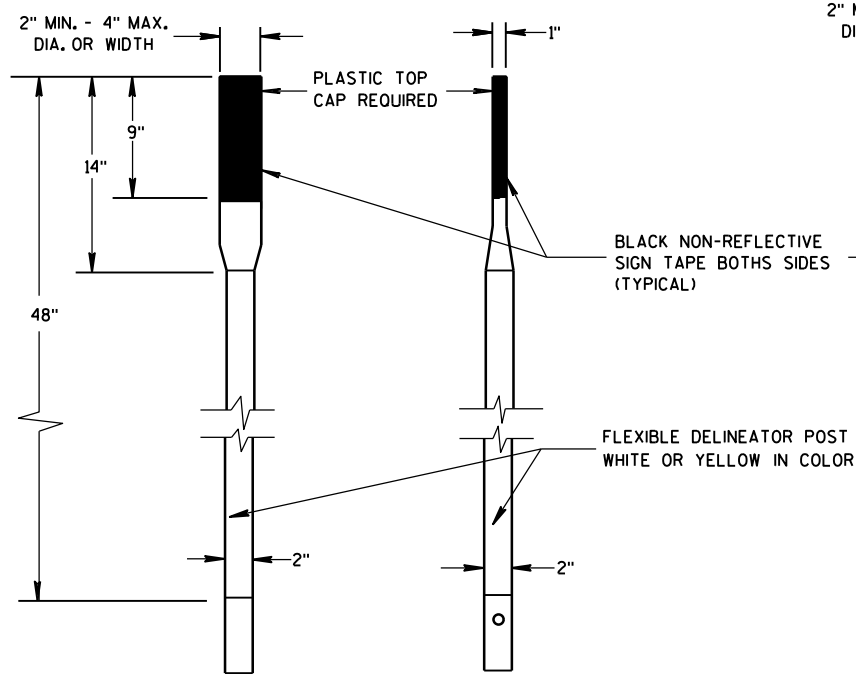
PLAN VIEW
CONCRETE MASONRY ENDWALLS FOR
CULVERT PIPE AND PIPE ARCH



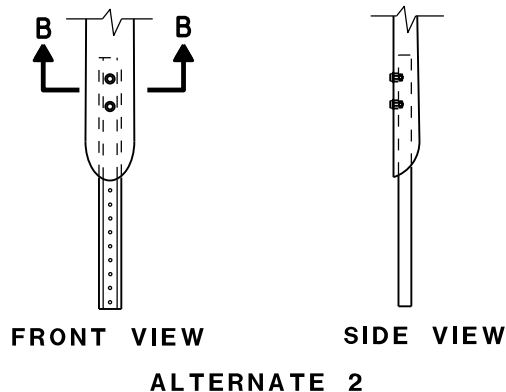
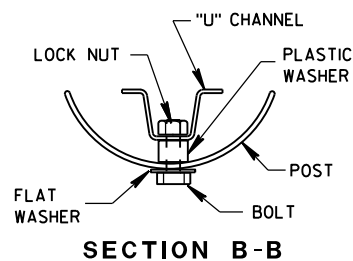
CROSS SECTION
FLEXIBLE MARKER POST

FLEXIBLE MARKER POST
FOR CULVERT END

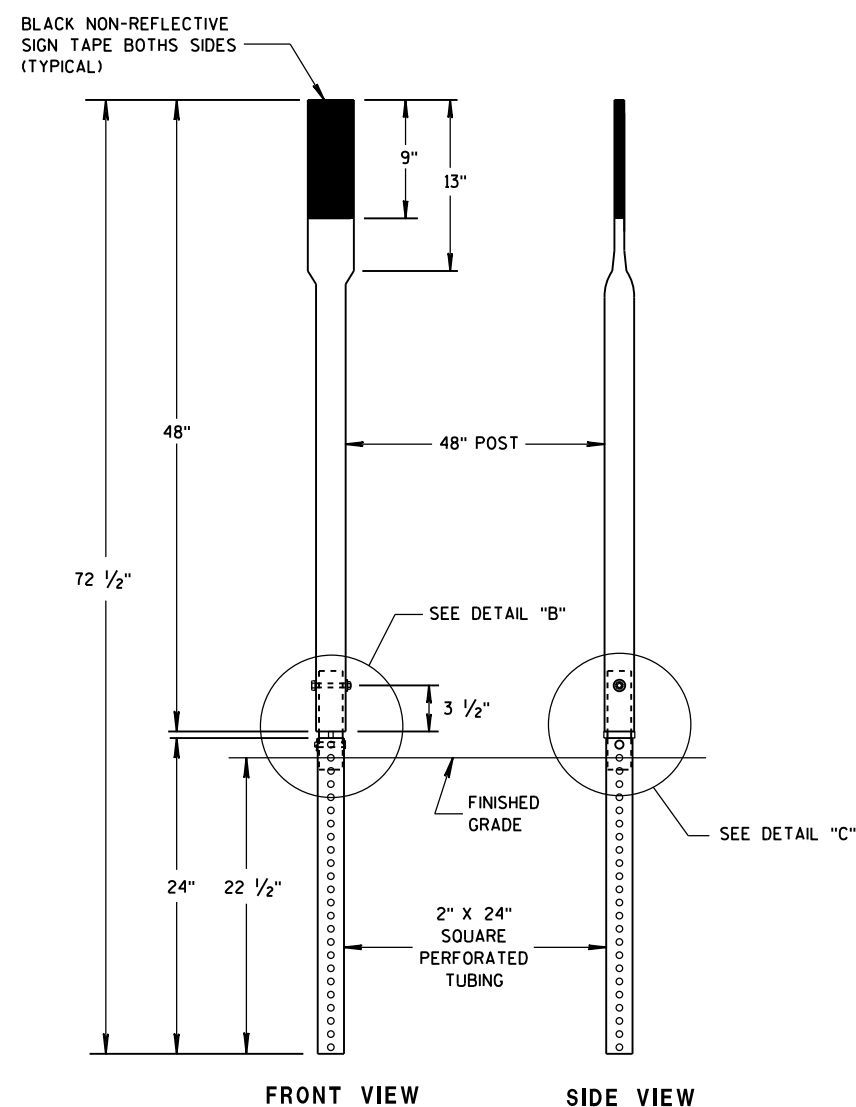
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 130



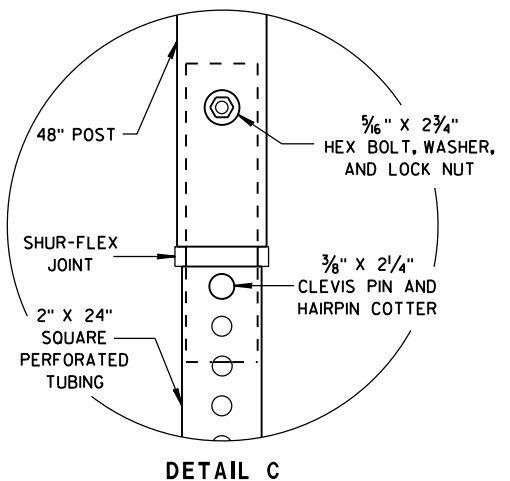
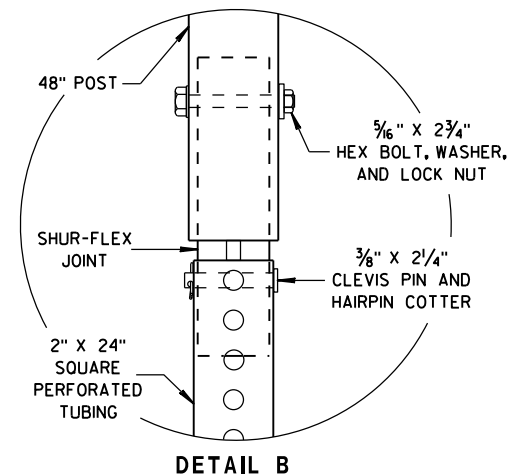
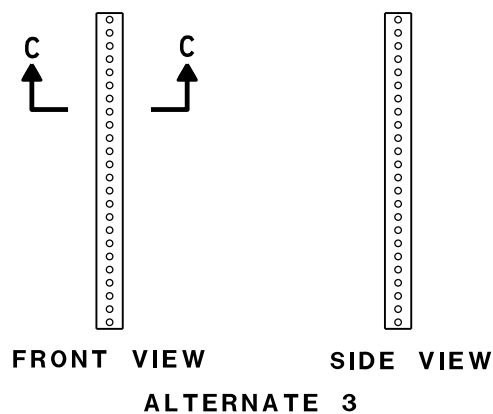
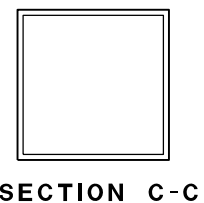
FLEXIBLE MARKER POSTS



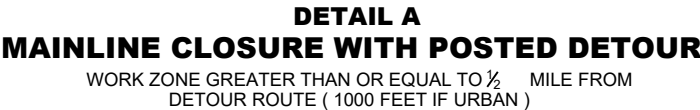
FLEXIBLE MARKER POST ANCHORS



FLEXIBLE MARKER POST ANCHORS



FLEXIBLE MARKER POST FOR CULVERT END	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 10/1/2012 DATE	/S/ Travis Feltes STATE TRAFFIC ENGINEER 131 IGN
FHWA	

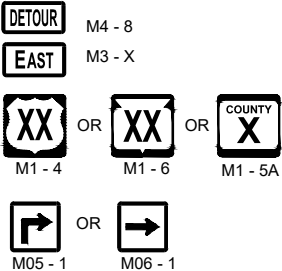


SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

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



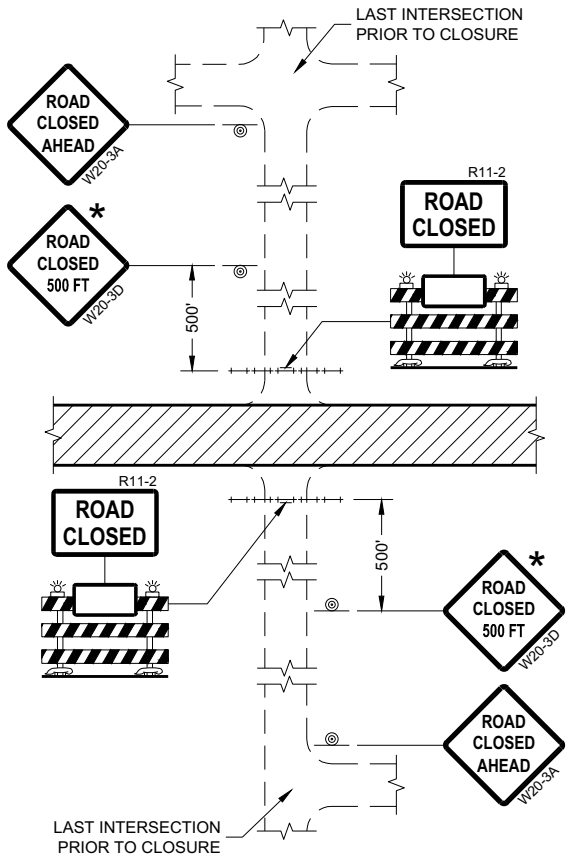
	SIGN ON PERMANENT SUPPORT
	TYPE III BARRICADE
	TYPE III BARRICADE WITH ATTACHED SIGN
	TYPE "A" WARNING LIGHT (FLASHING)
	WORK AREA
	FLAGS, 16" X 16" MIN. (ORANGE)



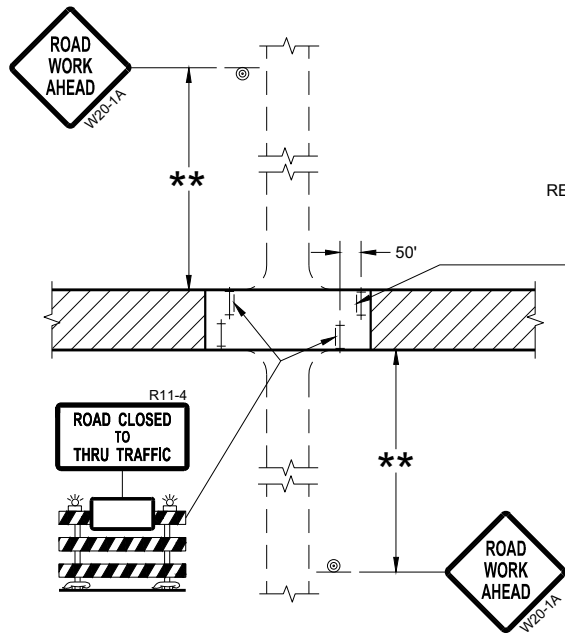
BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

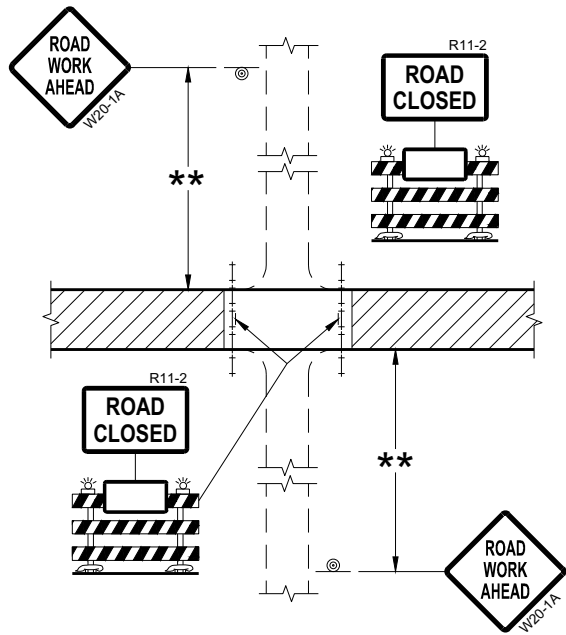
APPROVED
February 2020 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER 132



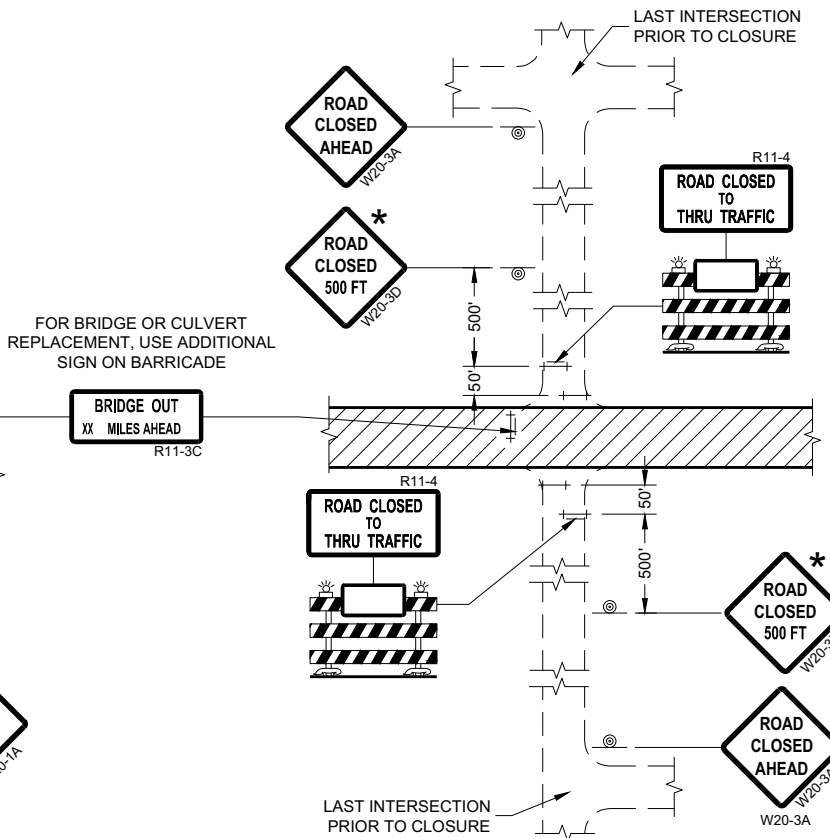
DETAIL 1
(NO ACCESS TO PROJECT)



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



DETAIL 2
(PUBLIC CROSS-TRAFFIC MAINTAINED.
NO 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 133

FHWA

GENERAL NOTES

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

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

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

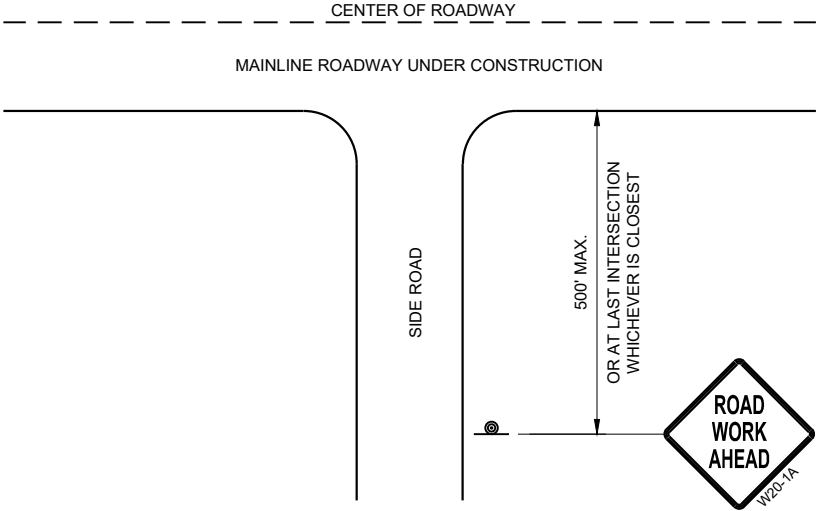
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

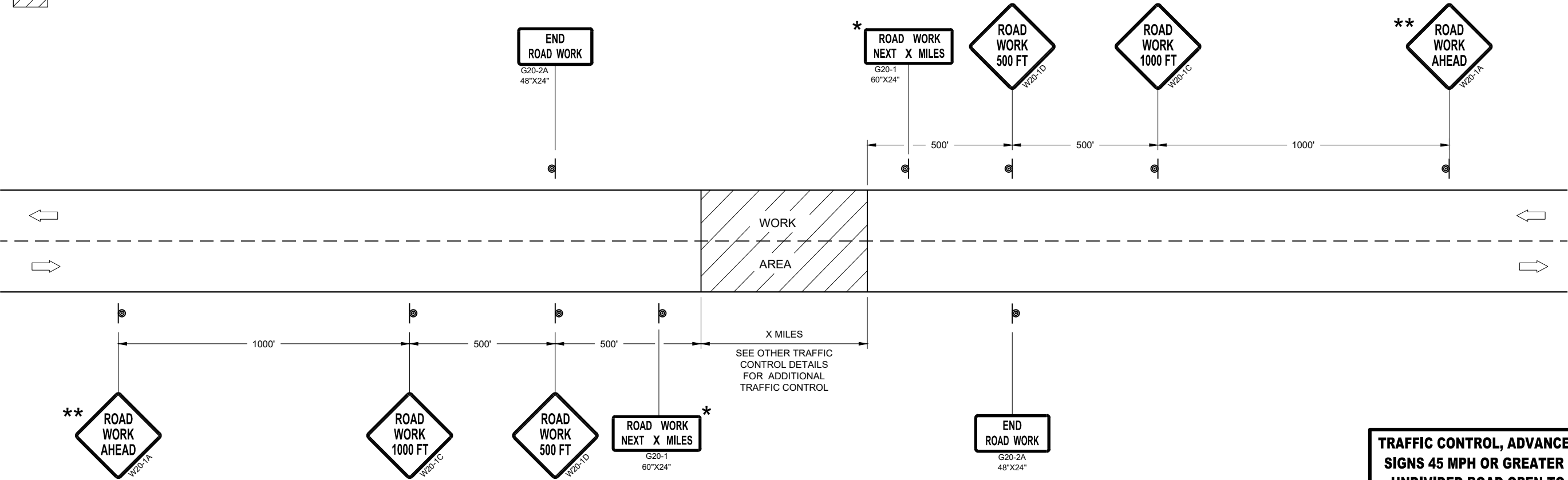
- * OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS
- ** PLACE AN ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.

LEGEND

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



TYPICAL SIDE ROAD APPROACH
WARNING SIGN DETAIL



TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER 134
FHWA

GENERAL NOTES

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

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

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

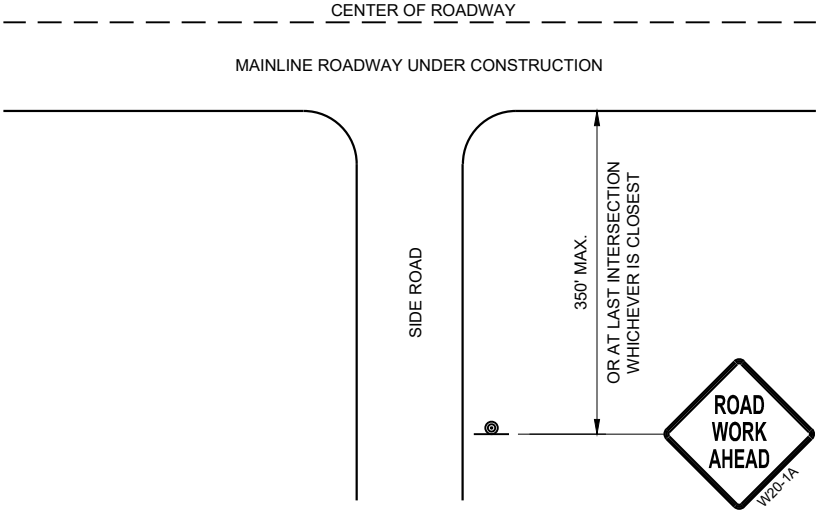
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

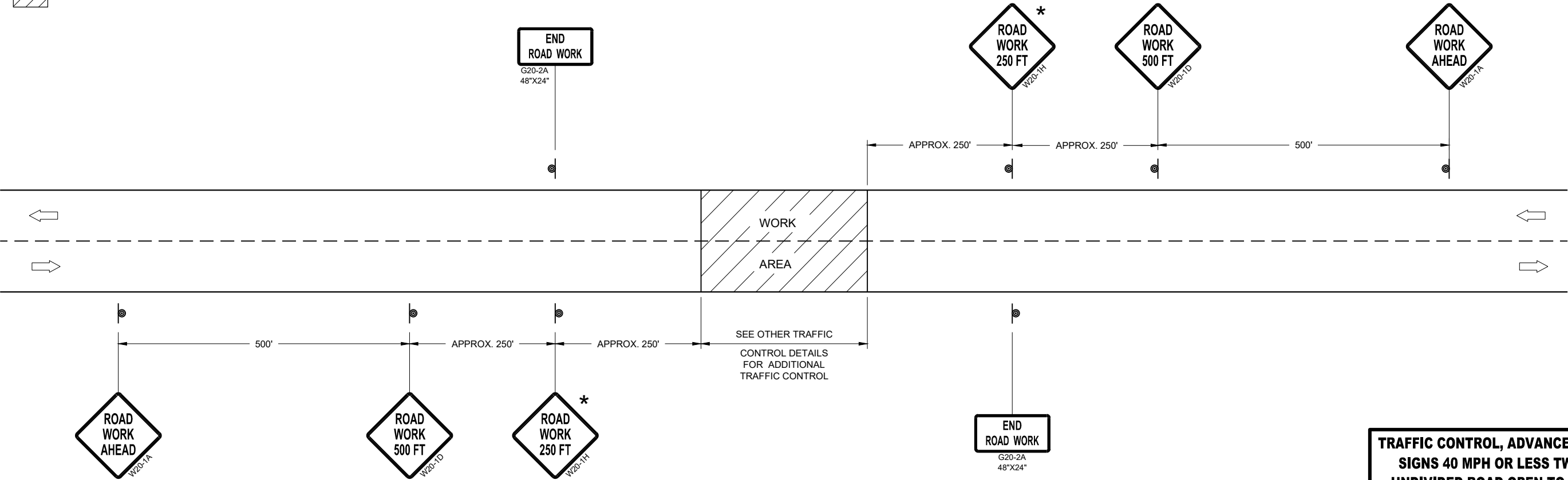
* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FEET" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.

LEGEND

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



TYPICAL SIDE ROAD APPROACH
WARNING SIGN DETAIL



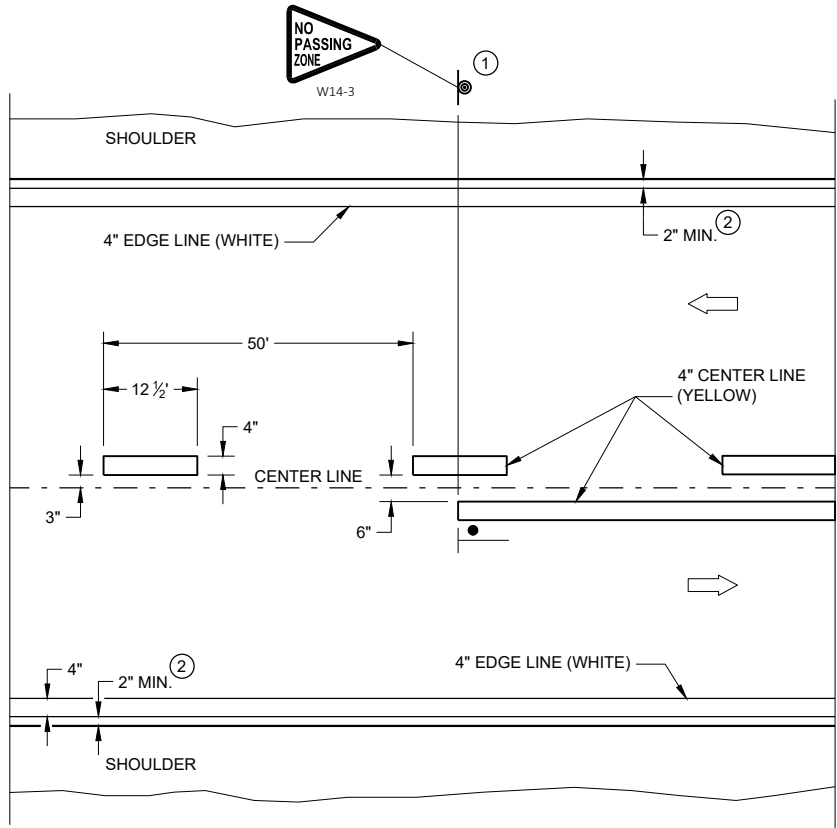
TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40MPH OR LESS

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

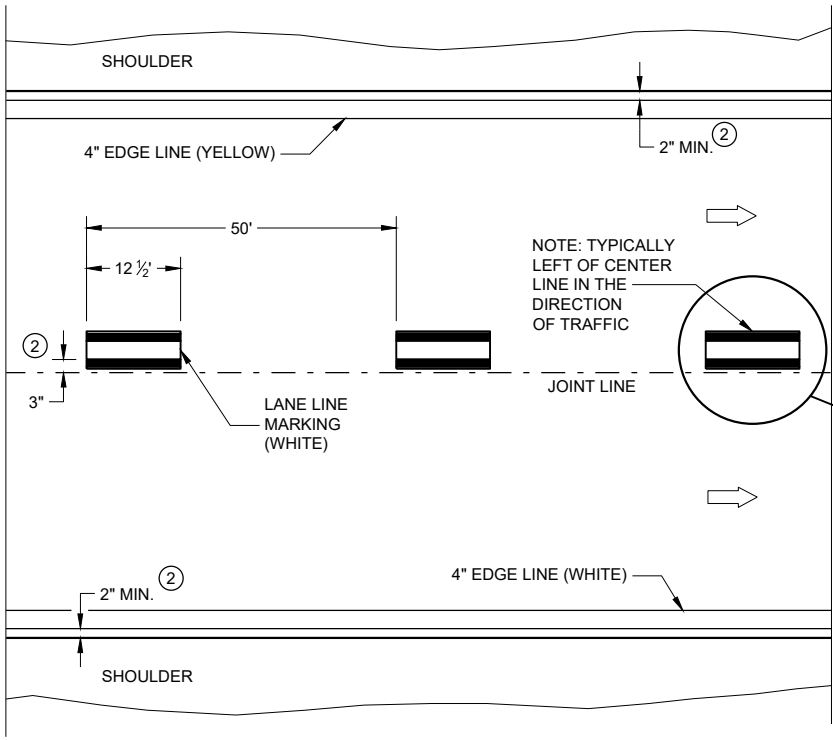
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER 135

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TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

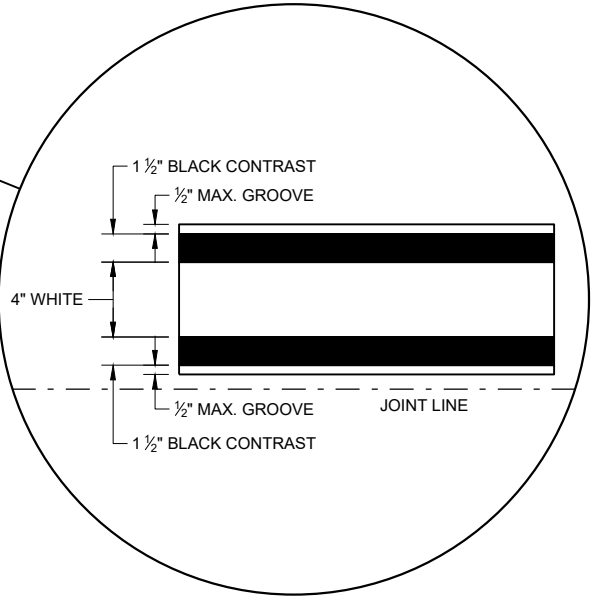
GENERAL NOTES

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

LEGEND

- "T" MARKING
- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC

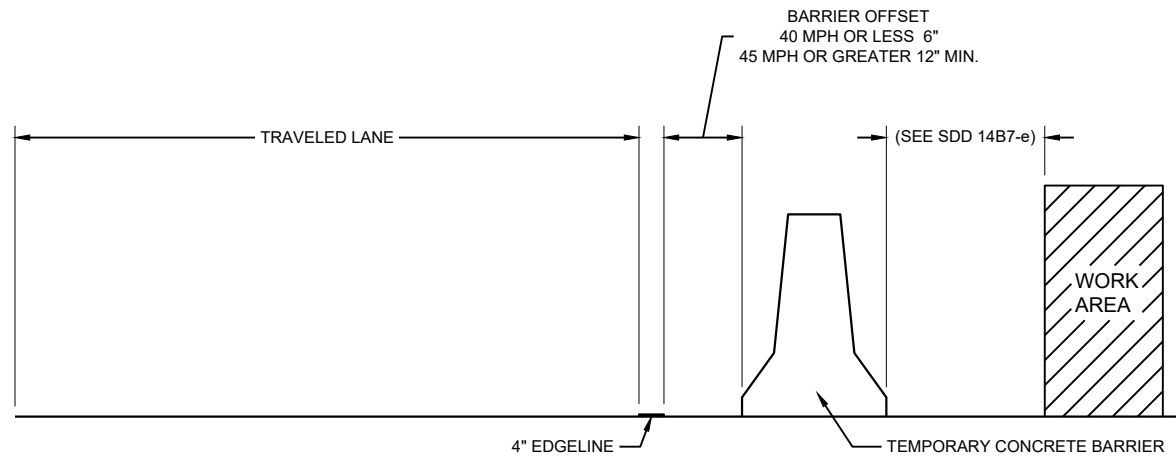


PERMANENT LONGITUDINAL PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022
DATE
/S/ Jeannie Silver
STATEWIDE SIGNING AND N
ENGINEER
136

FHWA



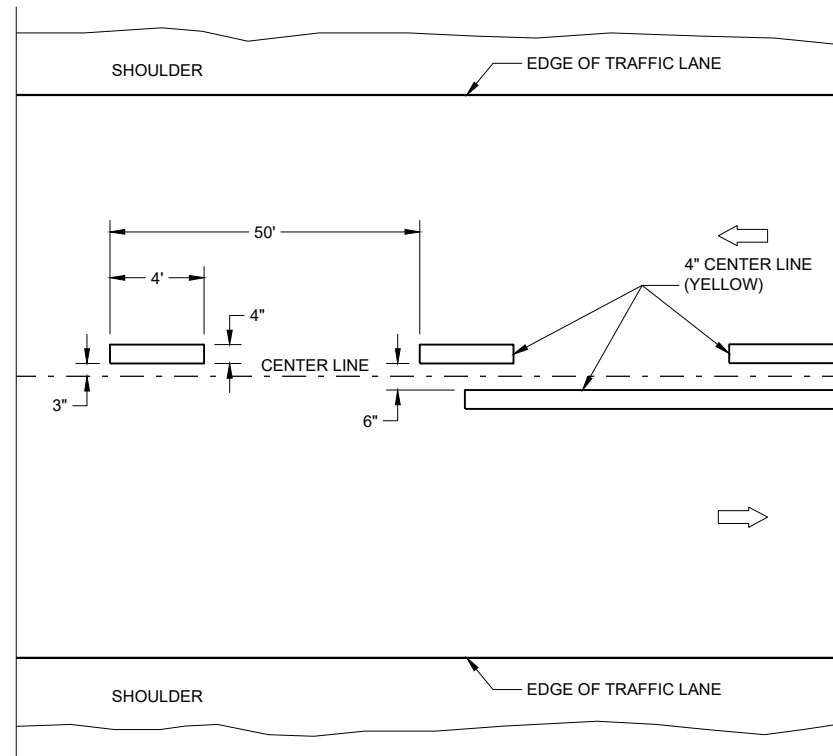
TEMPORARY BARRIER OFFSET FROM EDGELINE

GENERAL NOTES

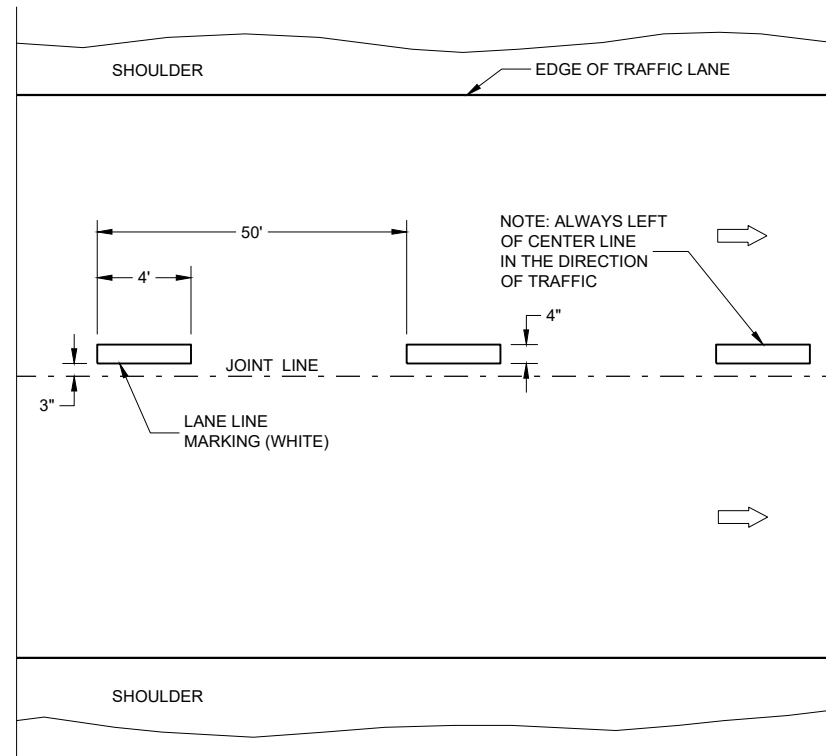
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

LEGEND

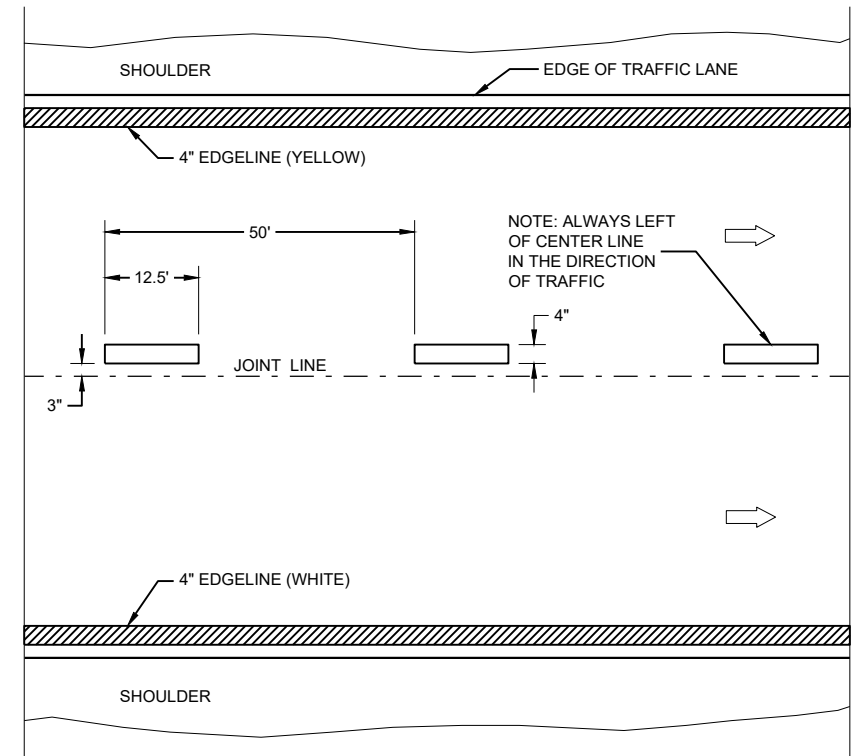
DIRECTION OF TRAFFIC



TWO WAY TRAFFIC



ONE WAY TRAFFIC



FREEWAYS AND EXPRESSWAYS

TEMPORARY PAVEMENT MARKING

TEMPORARY LONGITUDINAL PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022
DATE
/S/ Jeannie Silver
STATEWIDE SIGNING AND MARKING ENGINEER
137

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LEGEND

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

GENERAL NOTES

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

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

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

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

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

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

FLAGGING

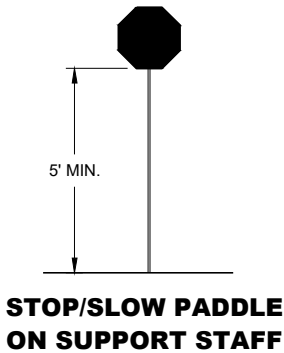
FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT REMOVE TEMPORARY PORTABLE RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.

- ① FOR MOVING WORK OPERATIONS, POST ADDITIONAL W20-7A FLAGGER SIGNS AT APPROXIMATELY 3,500' INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.
- ② SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

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

TEMPORARY PORTABLE RUMBLE STRIPS

- UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.
- ③ EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER
- ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FROM THE APPROVED PRODUCTS LIST.
- INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.
- PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.
- DO NOT INSTALL TEMPORARY PORTABLE RUMBLE STRIPS ON GRAVEL, MILLED SURFACES, OR ASPHALT THAT HAS BEEN PAVED LESS THAN 12 HOURS.

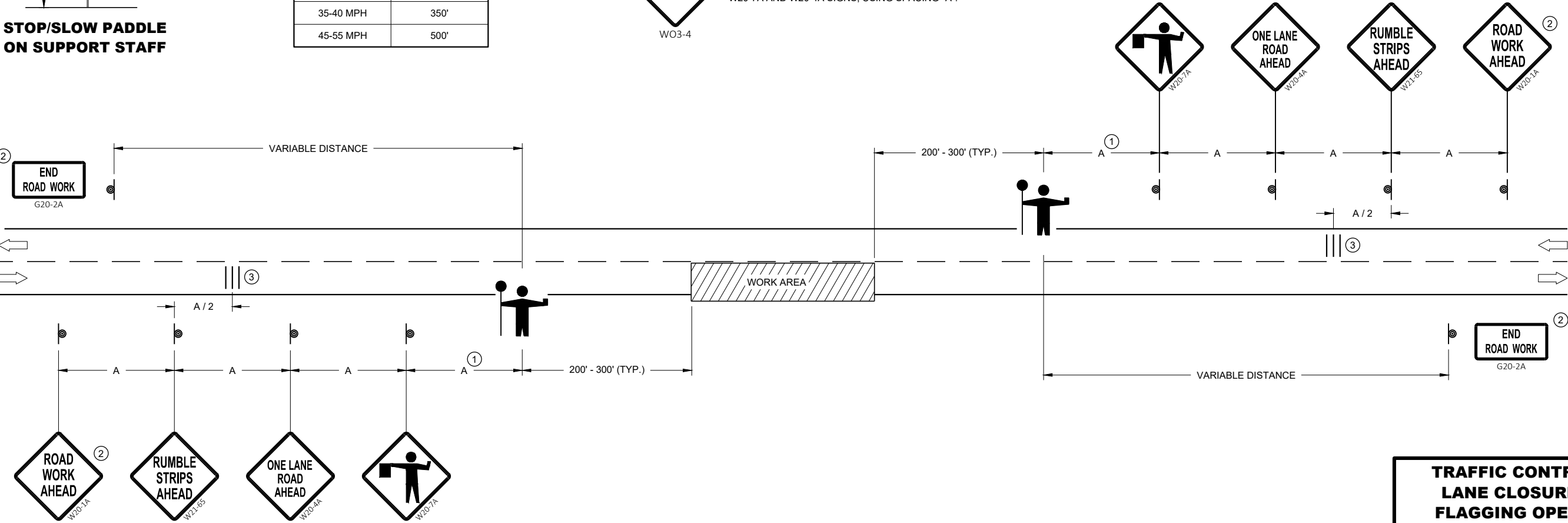


SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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".

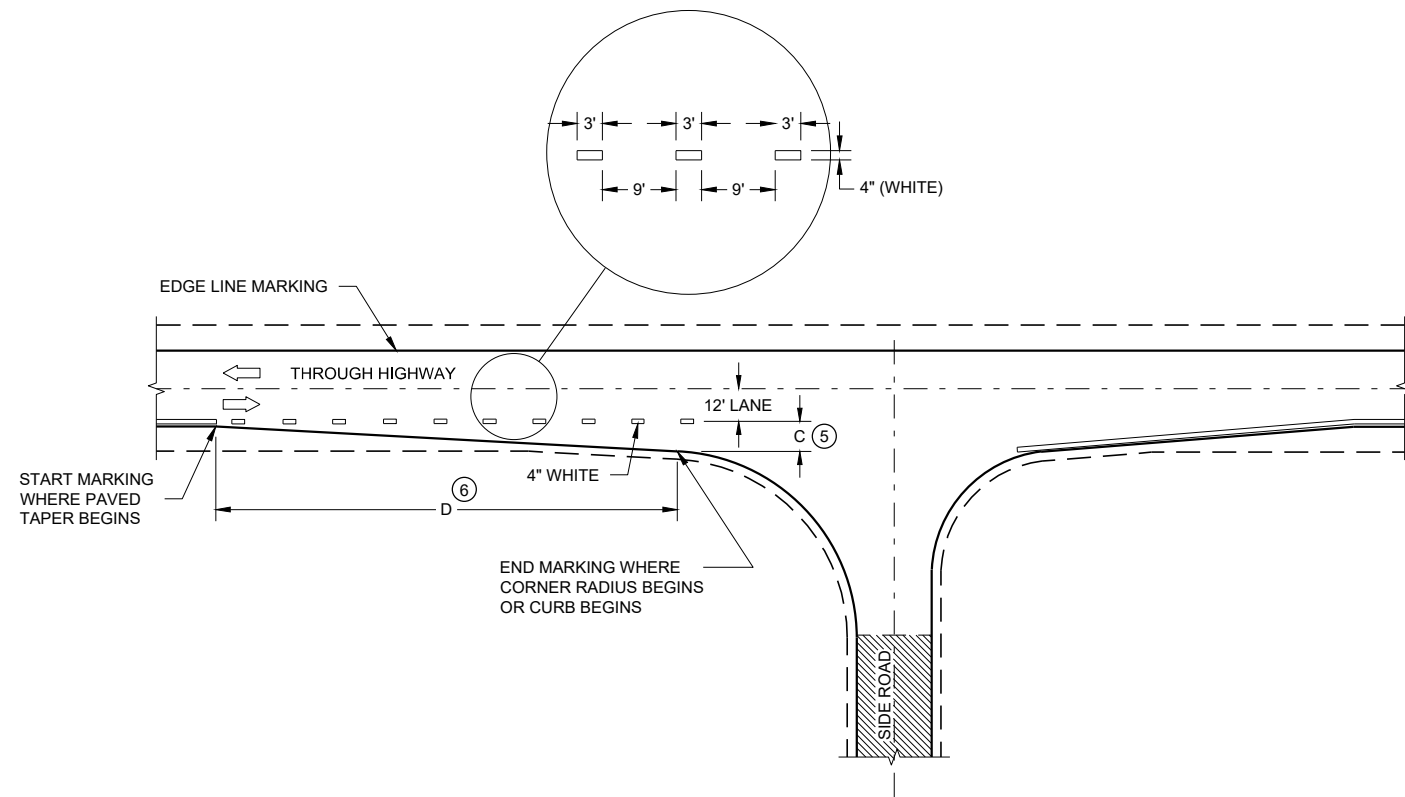


**TRAFFIC CONTROL FOR
LANE CLOSURE WITH
FLAGGING OPERATION**

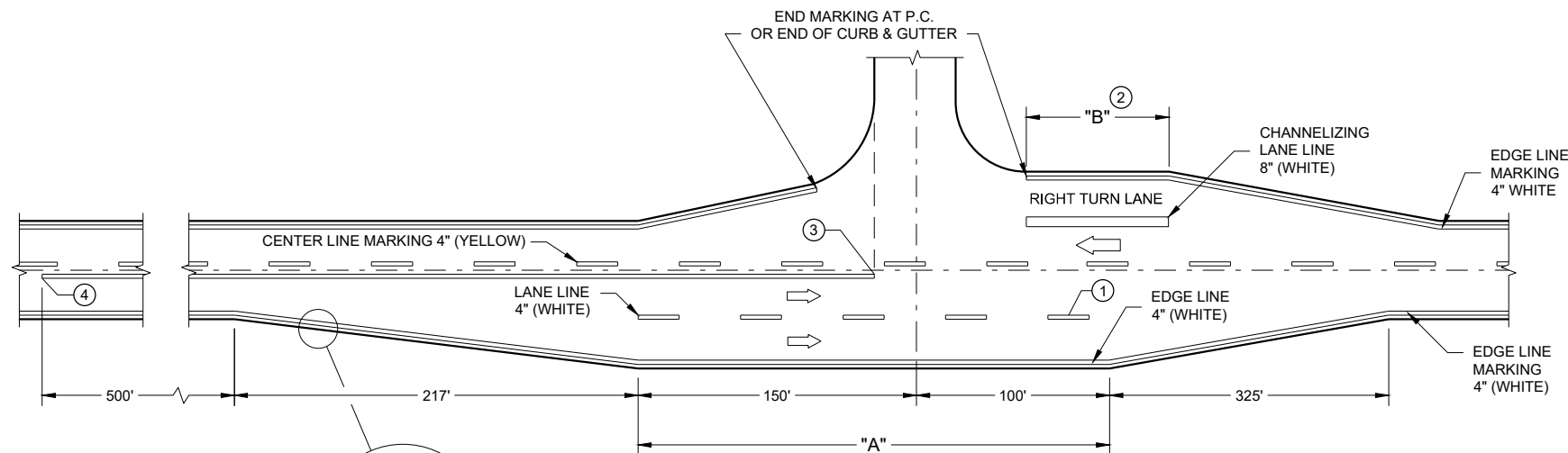
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER 138

FHWA



MINOR INTERSECTION



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

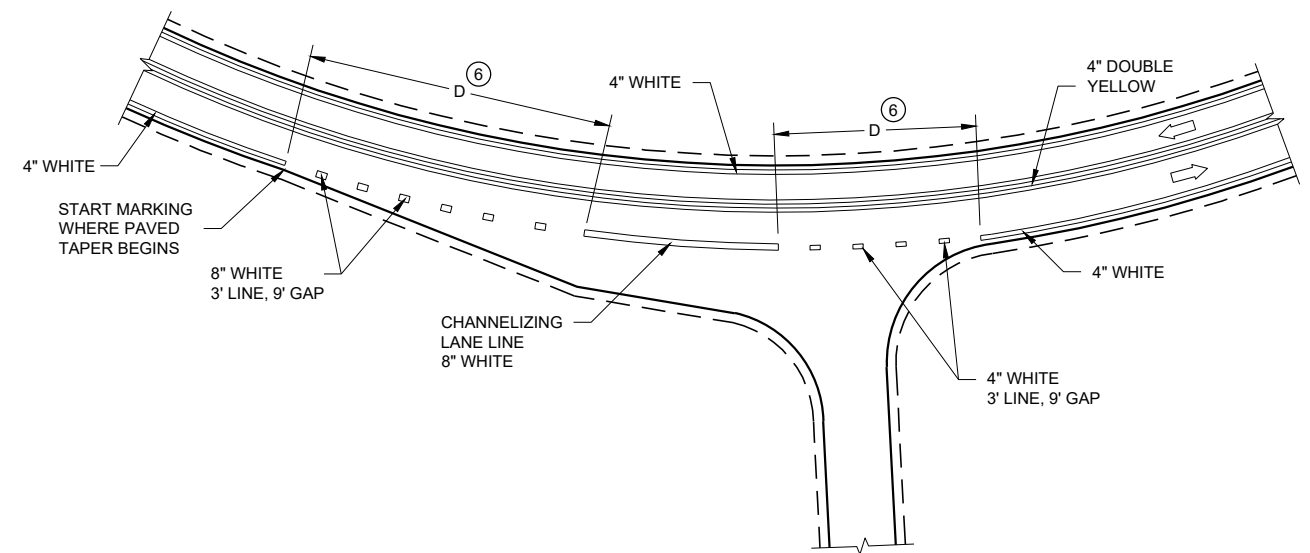
GENERAL NOTES

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

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

LEGEND

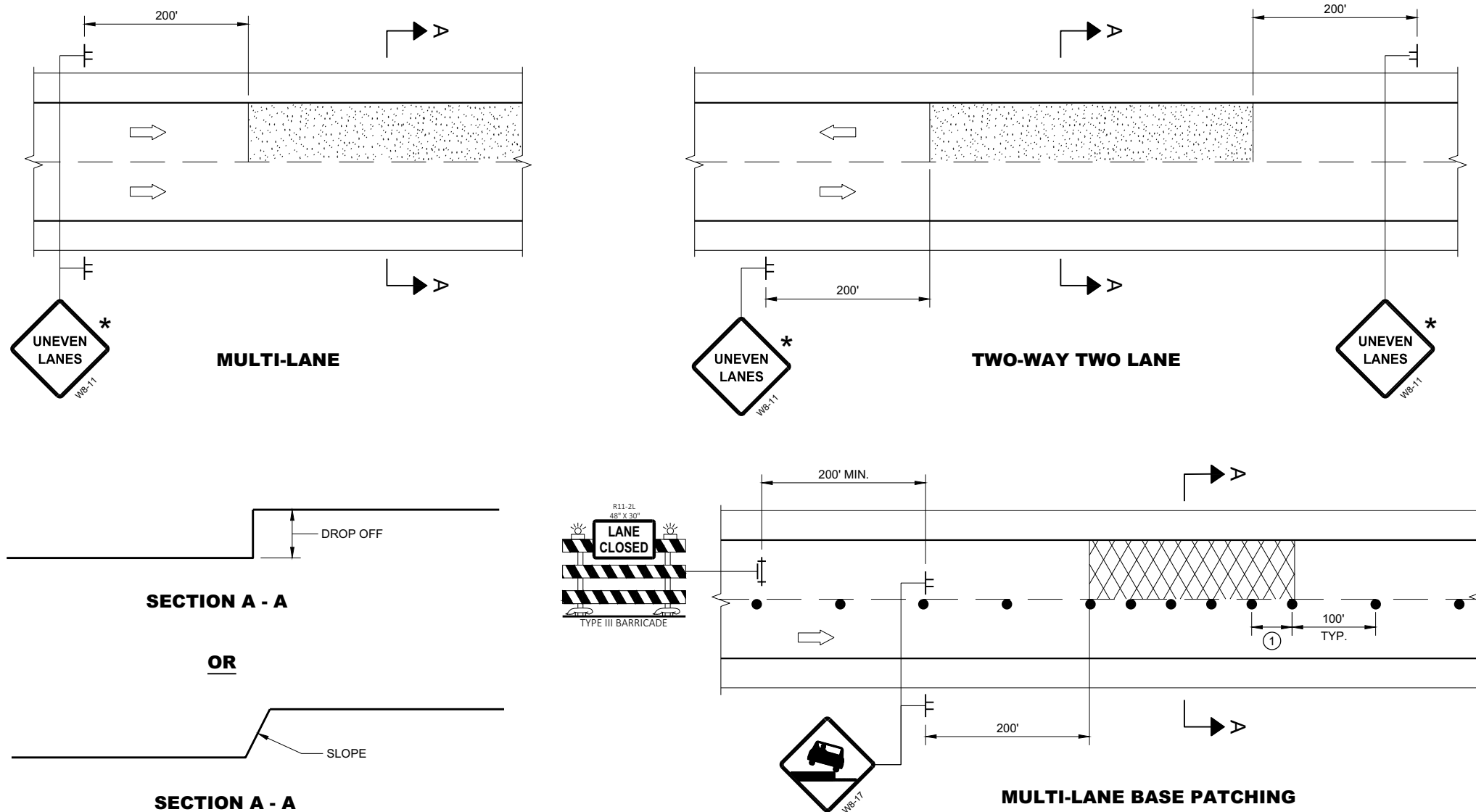
➡ DIRECTION OF TRAVEL



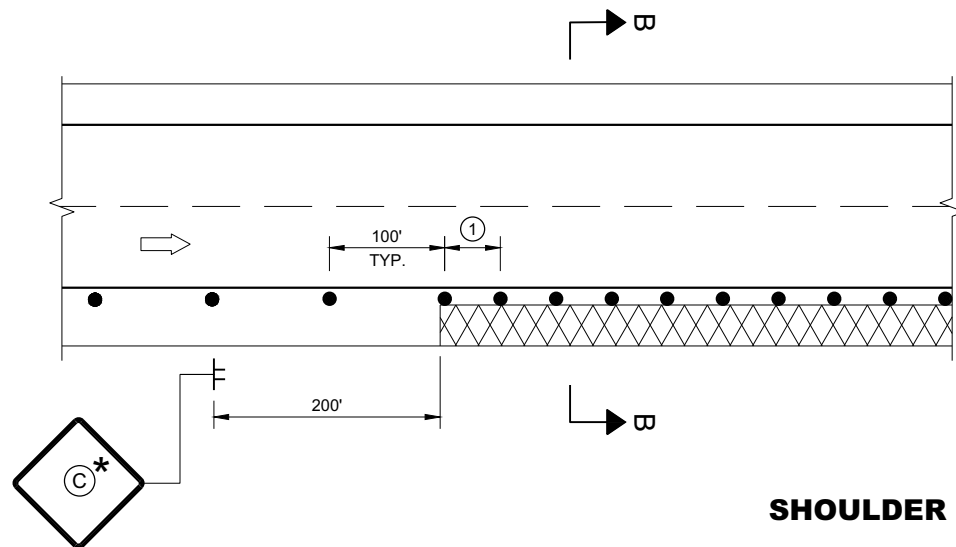
INTERSECTION ON OUTSIDE OF CURVE

PAVEMENT MARKING
(INTERSECTIONS)

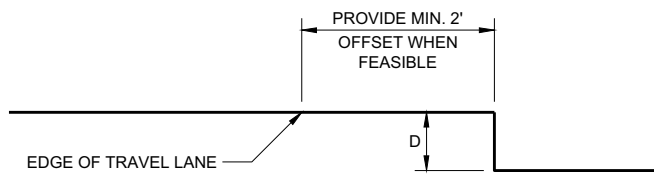
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



ADJACENT LANE DROP-OFFS



SHOULDER DROP-OFFS



SECTION B - B

D	SIGN C
< 2" WITH A SLOPE STEEPER THAN 3:1	 WB-9
2" < 6" WITH A SLOPE STEEPER THAN 3:1	 WB-9A PROVIDE A 3:1 OR FLATTER SLOPE OF MATERIAL ADJACENT TO THE PAVEMENT

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

TRAFFIC CONTROL, DROP-OFF SIGNING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER 140
FHWA

GENERAL NOTES

DRAWING NOT TO SCALE. ALL SIGNS AND POSTS ON THIS SHEET SHALL BE PAID FOR WITH 'TRAFFIC CONTROL SIGNS' BID ITEM. ALL SIDE ROADS WHICH ARE UNDER CONSTRUCTION OF CURB AND GUTTER AND/OR GRADING SHALL BE ADEQUATELY SIGNED.

ALL SIGNS AND DEVICES SHALL BE IN CONFORMANCE WITH THE WISCONSIN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (WMUTCD). SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISDOT STANDARD SIGN PLATES.

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

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

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

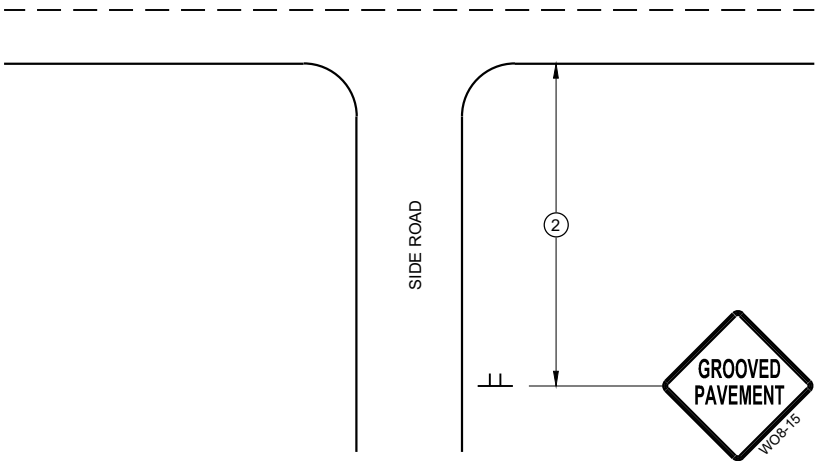
ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE, INCLUDING PRE-EXISTING SIGNS IN THE VICINITY, SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER.

SEE 15C34 FOR ADDITIONAL TRAFFIC CONTROL SIGNING WHEN CENTERLINE PAVEMENT MAKINGS ARE MISSING. 'DO NOT PASS' SIGNS MUST BE INSTALLED ON THE SAME DAY AS MILLING OPERATIONS.

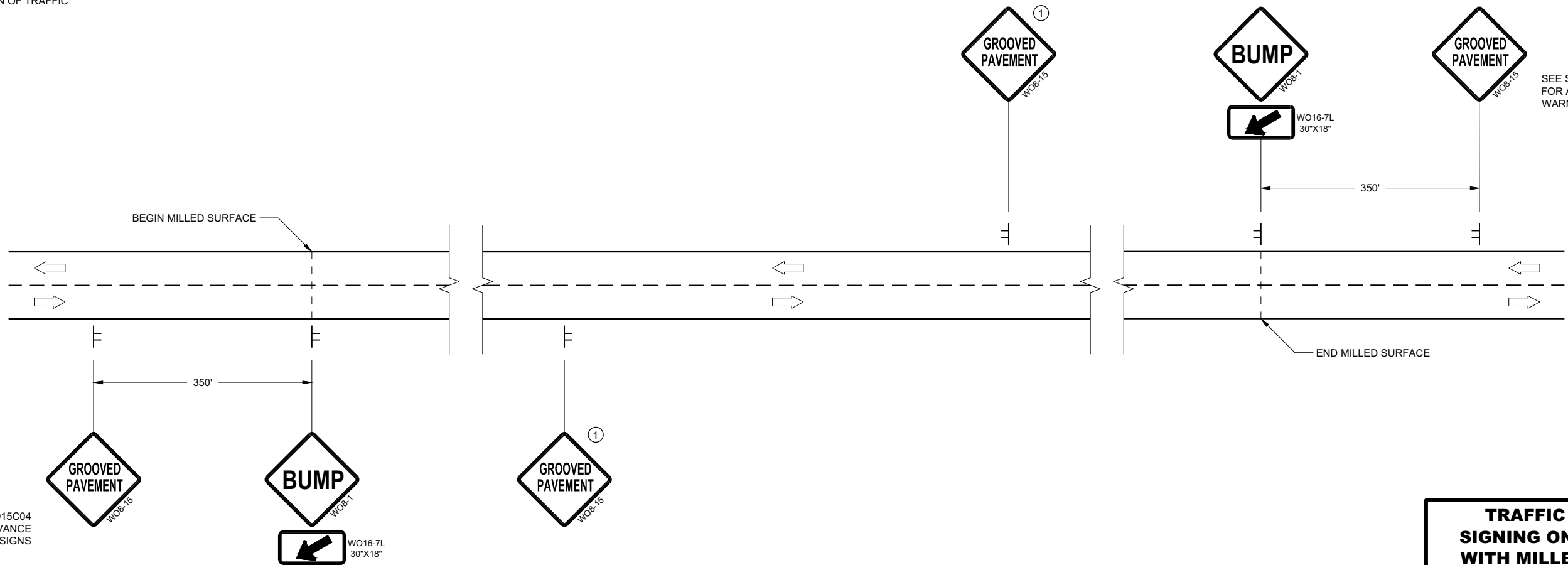
- 1 PLACE SIGNS 350' IN ADVANCE OF MILLED SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.
- 2 PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.

LEGEND

-  SIGN ON TEMPORARY SUPPORT
-  DIRECTION OF TRAFFIC



TYPICAL SIDE ROAD APPROACH
SIGN DETAIL



SEE SDD15C04
FOR ADVANCE
WARNING SIGNS

SEE SDD15C04
FOR ADVANCE
WARNING SIGNS

DETAIL FOR SIGNING ON MILLED SURFACES

TRAFFIC CONTROL,
SIGNING ON ROADWAYS
WITH MILLED SURFACES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER 141

FHWA

GENERAL NOTES

DRAWING NOT TO SCALE. ALL SIGNS AND POSTS ON THIS SHEET SHALL BE PAID FOR WITH 'TRAFFIC CONTROL SIGNS' BID ITEM. ALL SIDE ROADS WHICH ARE UNDER CONSTRUCTION OF CURB AND GUTTER AND/OR GRADING SHALL BE ADEQUATELY SIGNED.

ALL SIGNS AND DEVICES SHALL BE IN CONFORMANCE WITH THE WISCONSIN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (WMUTCD). SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISDOT STANDARD SIGN PLATES.

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

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

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

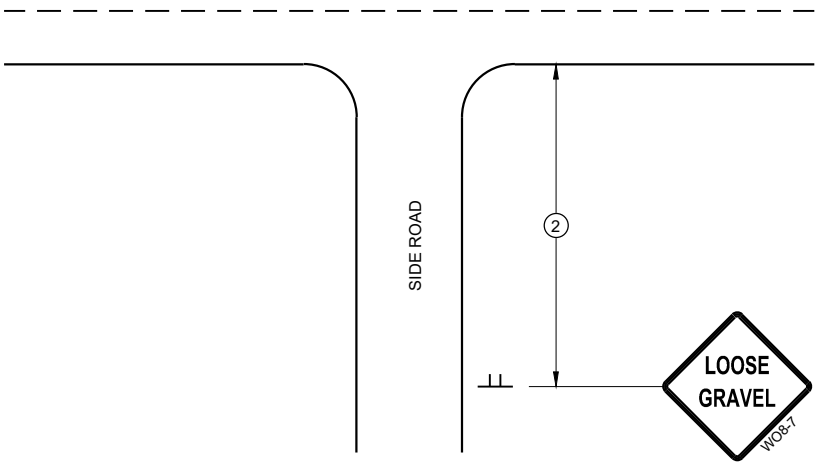
ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE, INCLUDING PRE-EXISTING SIGNS IN THE VICINITY, SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER.

SEE 15C34 FOR ADDITIONAL TRAFFIC CONTROL SIGNING WHEN CENTERLINE PAVEMENT MAKINGS ARE MISSING. 'DO NOT PASS' SIGNS MUST BE INSTALLED ON THE SAME DAY AS MILLING OPERATIONS.

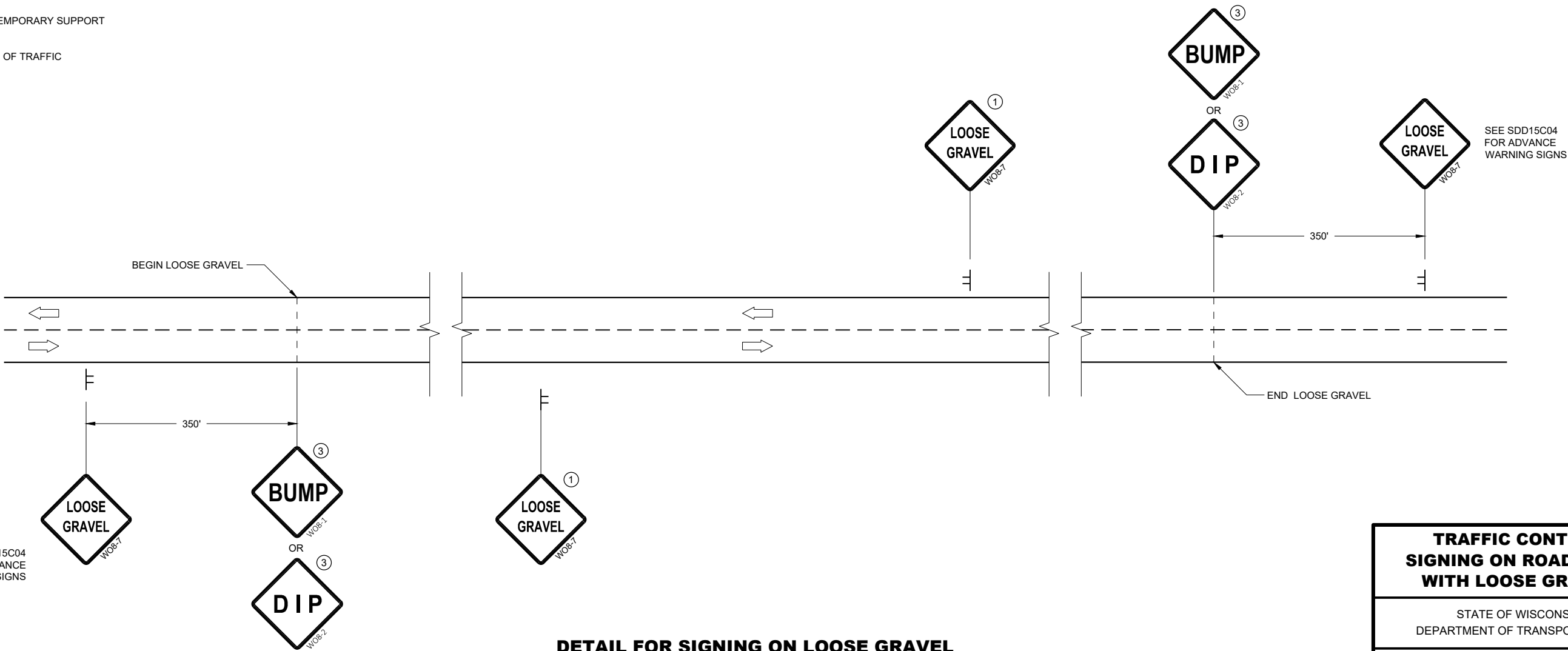
- 1 PLACE SIGNS 350' IN ADVANCE OF CHIP SEALED OR LOOSE GRAVEL SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.
- 2 PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.
- 3 ADD WO8-1 OR WO8-2 SIGN WHEN THE CONDITION IS PRESENT.

LEGEND

-  SIGN ON TEMPORARY SUPPORT
-  DIRECTION OF TRAFFIC



TYPICAL SIDE ROAD APPROACH
SIGN DETAIL

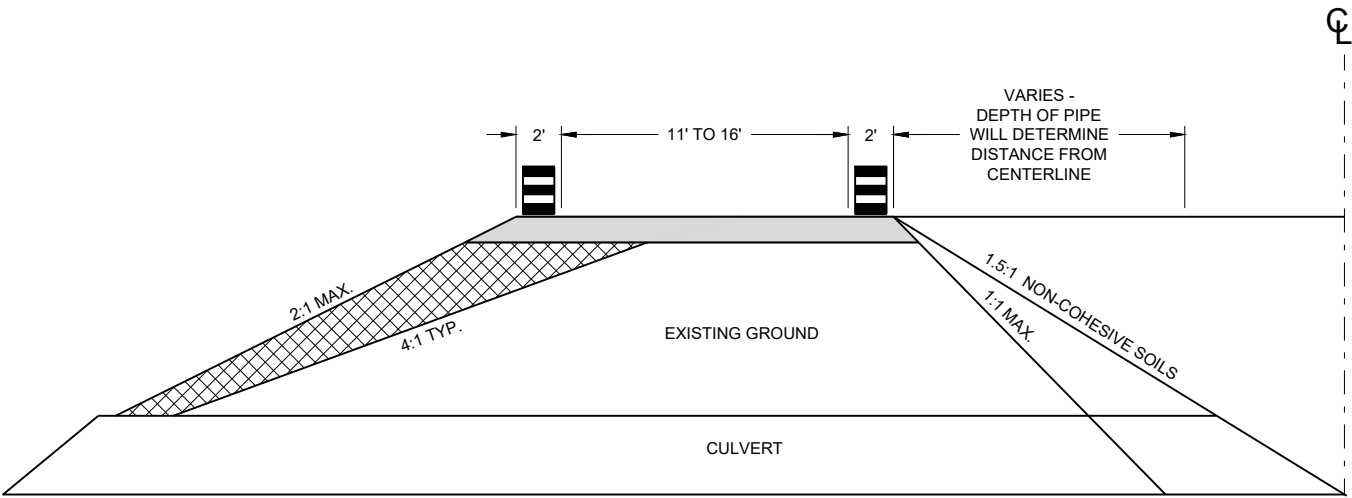


DETAIL FOR SIGNING ON LOOSE GRAVEL
OR CHIP SEALED SURFACES

TRAFFIC CONTROL
SIGNING ON ROADWAYS
WITH LOOSE GRAVEL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2021 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER 142
FHWA



CROSS SECTION

GENERAL NOTES

USE 1:1 FOR COHESIVE CLAYS AND SILTS, LOAMS, SANDY CLAYS AND ANGULAR GRAVEL SOILS.
USE 1.5:1 FOR NON-COHESIVE SOILS.

THE TAPER SHOULD EXTEND ACROSS THE SHOULDER UNLESS DOING SO WOULD GREATLY CONFLICT WITH THE WORK OPERATION.

ALL LANE CLOSURE SIGNS SHALL BE REMOVED OR COVERED AND ALL DEVICES REMOVED BEYOND THE SHOULDER WHEN WORK IS NOT IN PROGRESS AND THE LANE IS RESTORED TO A SAFE OPERATING CONDITION.

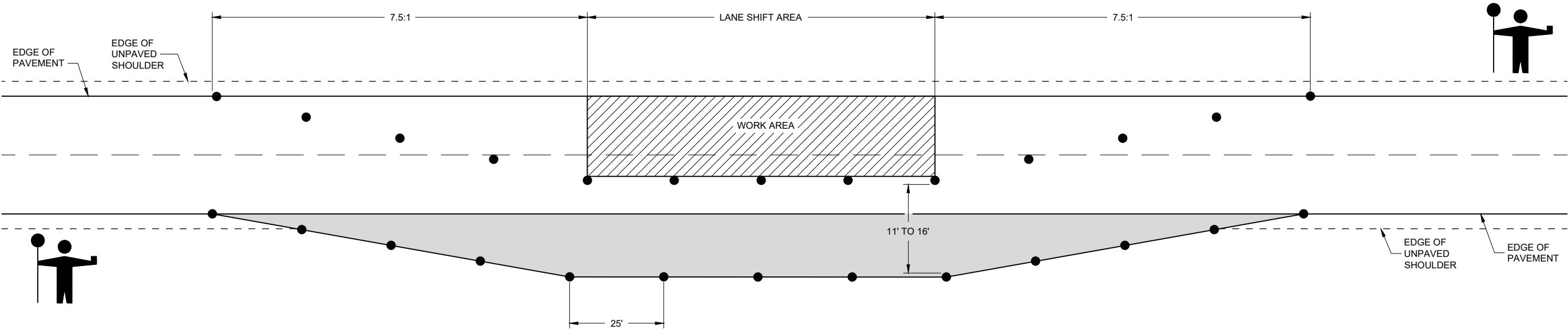
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

USE WITH SDD 15C12 "TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATIONS"

USE WITH SDD 15D45 "SIGNING ON ROADWAYS WITH LOOSE GRAVEL"

LEGEND

- DRUM WITHOUT WARNING LIGHT
- 6" BASE AGGREGATE DENSE 1 1/4" - INCIDENTAL TO LANE SHIFT ITEM
- FILL - INCIDENTAL TO LANE SHIFT ITEM
- WORK AREA
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF



LANE SHIFT IN FLAGGING OPERATION

TRAFFIC CONTROL,
TEMPORARY LANE SHIFT
DURING CULVERT WORK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2021 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER 143

FHWA

LEGEND

- V1

WORK VEHICLE
- V2

SHADOW VEHICLE
- 

TRUCK MOUNTED ATTENUATOR (TMA)
- 

FLASHING ARROW PANEL (CAUTION)
- 

WORK AREA
- 

DIRECTION OF TRAFFIC

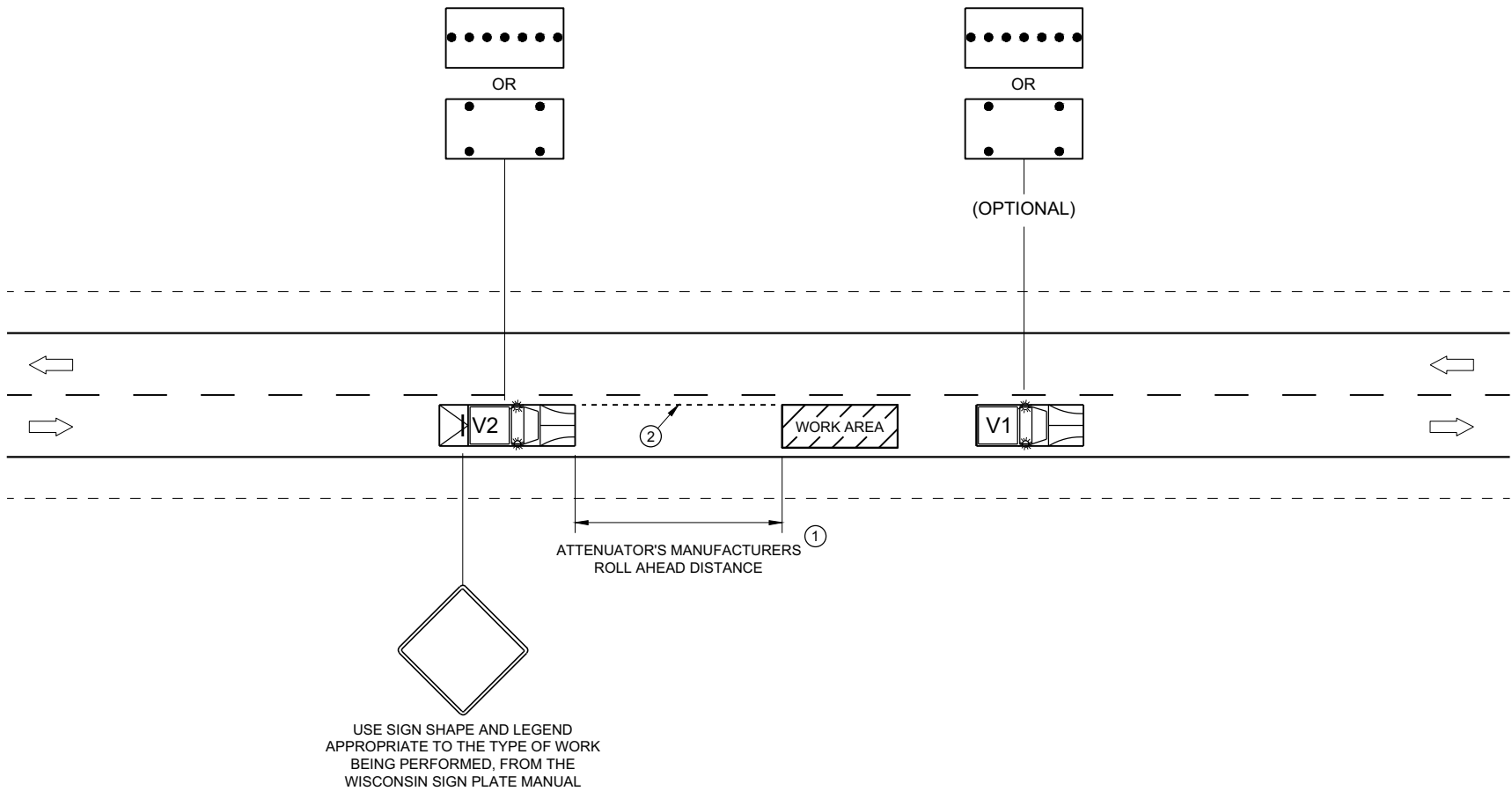
POSTED SPEED PRIOR TO WORK STARTING (MPH)	DECISION SIGHT DISTANCE (D)
0 - 25	550'
30	550'
35	700'
40	700'
45	900'
50	900'
55	1200'

GENERAL NOTES

- ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.
- MOBILE IS WORK THAT MOVES CONTINUOUSLY OR MOVES AT LEAST THE DECISION SIGHT DISTANCE EVERY 15 MINUTES.
- ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.
- ALL ARROW PANELS SHALL BE REAR FACING, TYPE "B" OR "C", AND DISPLAYING THE FLASHING CAUTION MODE. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.
- USE AN ATTENUATOR ON THE REARMOST VEHICLE THAT BLOCKS ALL OR PART OF THE TRAFFIC LANE.
- ①

DISTANCE BETWEEN VEHICLES MAY INCREASE FROM THE ATTENUATOR'S ROLL AHEAD BASED ON TERRAIN, SIGHT DISTANCE, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.
- ②

ALIGN LEFT SIDE OF SHADOW VEHICLE WITH EDGE OF WORK AREA.



TRAFFIC CONTROL,
MOBILE OPERATIONS ON
AN UNDIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2021
DATE

/S/ Andrew Heidtke
STATEWIDE WORK ZONE T
SAFETY ENGINEER

FHWA 144



LANDMARK REFERENCE MONUMENTS AND COVERS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED March 2018 DATE	/S/ Raymond A. Kumapavii ENGINEER 145
FHWA	

DIVISION -1- STH 23

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL X1.25	MASS ORDINATE
						NOTE 1	NOTE 2	NOTE 3	NOTE 1		NOTE 8
410+11.298	41011.30	0.00	41.60	15.00	5.70	0	0	0	0	0	0
410+61.289	41061.29	49.99	455.47	15.00	0.13	460	28	5	460	6	426
410+64.289	41064.29	3.00	441.13	15.00	0.33	50	2	0	510	6	474
410+67.289	41067.29	3.00	452.53	15.00	0.01	50	2	0	560	6	522
411+17.308	41117.31	50.02	43.89	15.00	3.93	460	28	4	1,020	11	949
PROJECT TOTAL						1,020	60	9			

DIVISION -1- STH 23

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL X1.25	MASS ORDINATE
						NOTE 1	NOTE 2	NOTE 3	NOTE 1		NOTE 8
442+87.617	44287.62	0.00	61.19	15.00	1.28	0	0	0	0	0	0
443+37.366	44337.37	49.75	371.13	15.00	0.01	398	28	1	398	1	369
443+40.367	44340.37	3.00	363.59	15.00	0.91	41	2	0	439	1	408
443+43.367	44343.37	3.00	369.03	15.00	0.03	41	2	0	480	1	447
443+93.117	44393.12	49.75	55.86	15.00	4.80	391	28	4	871	6	805
PROJECT TOTAL						871	60	5			

DIVISION -1- STH 23

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL X1.25	MASS ORDINATE
						NOTE 1	NOTE 2	NOTE 3	NOTE 1		NOTE 8
517+60.469	51760.47	0.00	45.85	15.00	7.45	0	0	0	0	0	0
518+10.47	51810.47	50.00	317.17	15.00	0.06	336	28	7	336	9	299
518+12.97	51812.97	2.50	316.69	15.00	0.28	29	1	0	365	9	327
518+15.47	51815.47	2.50	320.35	15.00	0.25	29	1	0	394	9	355
518+65.47	51865.47	50.00	45.47	15.00	6.16	339	28	6	733	16	659
PROJECT TOTAL						733	58	13			

DIVISION -1- STH 23

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL X1.25	MASS ORDNATE
						NOTE 1	NOTE 2	NOTE 3	NOTE 1		NOTE 8
609+00	60900.00	0.00	0.98	0.00	1.84	0	0	0	0	0	0
609+50	60950.00	50.00	1.15	0.00	0.24	2	0	2	2	3	-1
610+00	61000.00	50.00	1.64	0.00	0.05	3	0	0	5	3	3
610+50	61050.00	50.00	2.26	0.00	0.39	4	0	0	9	3	7
611+00	61100.00	50.00	2.75	0.00	1.57	5	0	2	14	5	9
611+50	61150.00	50.00	3.85	0.00	2.25	6	0	4	20	10	10
612+00	61200.00	50.00	6.37	0.00	3.32	9	0	5	29	16	13
612+50	61250.00	50.00	7.07	0.00	3.16	12	0	6	41	24	17
613+00	61300.00	50.00	7.32	0.00	1.70	13	0	4	54	29	25
613+50	61350.00	50.00	4.74	0.00	1.48	11	0	3	65	33	33
614+00	61400.00	50.00	1.82	0.00	5.98	6	0	7	71	41	30
614+50	61450.00	50.00	0.60	0.00	10.33	2	0	15	73	60	13
615+00	61500.00	50.00	2.11	0.00	11.84	3	0	21	76	86	-10
615+50	61550.00	50.00	0.72	0.00	7.16	3	0	18	79	109	-30
616+00	61600.00	50.00	1.08	0.00	1.54	2	0	8	81	119	-38
616+50	61650.00	50.00	1.17	0.00	1.10	2	0	2	83	121	-38
616+75.693	61675.69	25.69	46.97	15.00	1.28	23	7	1	106	123	-24
617+25.438	61725.44	49.75	436.81	15.00	0.88	446	28	2	552	125	392
617+28.447	61728.45	3.01	416.13	15.00	0.10	48	2	0	600	125	438
617+31.456	61731.46	3.01	432.92	15.00	0.04	47	2	0	647	125	483
617+81.202	61781.20	49.75	47.44	15.00	18.60	443	28	17	1,090	146	877
618+00	61800.00	18.80	1.21	0.00	9.62	17	5	10	1,107	159	876
618+50	61850.00	50.00	0.87	0.00	18.32	2	0	26	1,109	191	846
619+00	61900.00	50.00	0.56	0.00	19.99	1	0	35	1,110	235	803
619+50	61950.00	50.00	0.43	0.00	18.83	1	0	36	1,111	280	759
620+00	62000.00	50.00	0.70	0.00	13.69	1	0	30	1,112	318	723
620+50	62050.00	50.00	1.79	0.00	9.88	2	0	22	1,114	345	697
621+00	62100.00	50.00	3.21	0.00	5.42	5	0	14	1,119	363	685
621+50	62150.00	50.00	8.27	0.00	2.92	11	0	8	1,130	373	686
622+00	62200.00	50.00	4.21	0.00	1.16	12	0	4	1,142	378	693
622+50	62250.00	50.00	4.13	0.00	0.36	8	0	1	1,150	379	699
623+00	62300.00	50.00	3.11	0.00	0.22	7	0	1	1,157	380	705
623+50	62350.00	50.00	3.16	0.00	0.13	6	0	0	1,163	380	711
624+00	62400.00	50.00	2.28	0.00	0.08	5	0	0	1,168	380	716
624+50	62450.00	50.00	2.10	0.00	0.02	4	0	0	1,172	380	720
625+00	62500.00	50.00	2.55	0.00	0.14	4	0	0	1,176	380	724
625+50	62550.00	50.00	2.19	0.00	0.49	4	0	1	1,180	381	727
626+00	62600.00	50.00	1.58	0.00	0.69	3	0	1	1,183	383	729
626+50	62650.00	50.00	1.34	0.00	3.79	3	0	4	1,186	388	727
626+75	62675.00	25.00	1.36	0.00	6.05	1	0	5	1,187	394	721

PROJECT TOTAL 1,187 72 315

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PROJECT NO: 1430-02-73

HWY: STH 23

COUNTY: MARQUETTE

EARTHWORK QUANTITIES

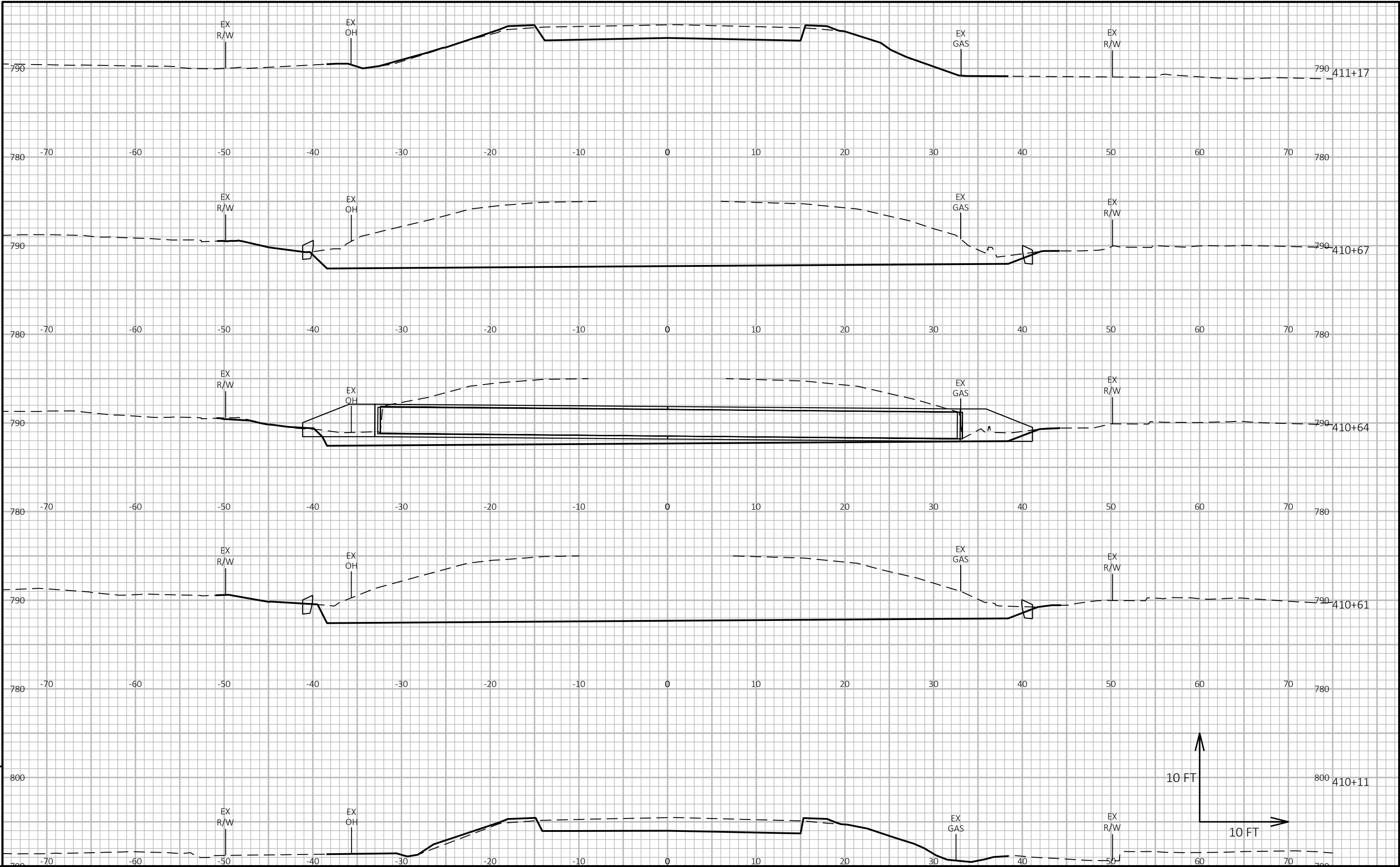
SHEET

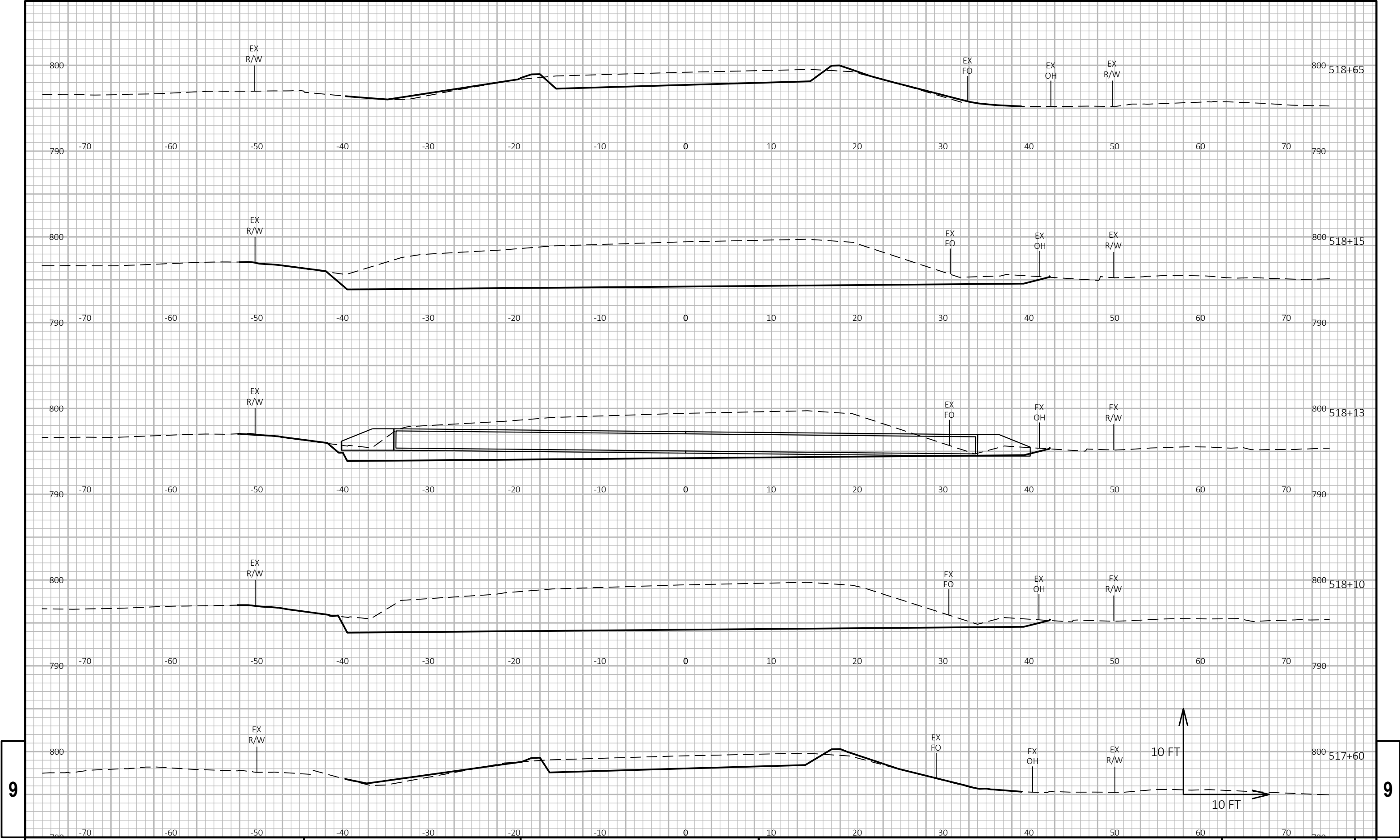
147

E

DIVISION -1- LCL-FERNAVE

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL X1.25	MASS ORDINATE
						NOTE 1	NOTE 2	NOTE 3	NOTE 1		NOTE 8
60+17	6017.00	0.00	22.88	75.00	0.00	0	0	0	0	0	0
60+28.254	6028.25	11.25	285.25	18.00	8.08	64	19	2	64	3	43
60+53.821	6053.82	25.57	11.54	12.50	9.74	141	14	8	205	13	160
60+71.9	6071.90	18.08	30.26	12.00	0.63	14	8	3	219	16	162
60+84.12	6084.12	12.22	31.18	11.50	0.05	14	5	0	233	16	171
60+92.02	6092.02	7.90	19.68	11.50	0.43	7	3	0	240	16	175
61+17	6117.00	24.98	23.09	11.00	0.00	20	10	0	260	16	185
PROJECT TOTAL						260	59	13			

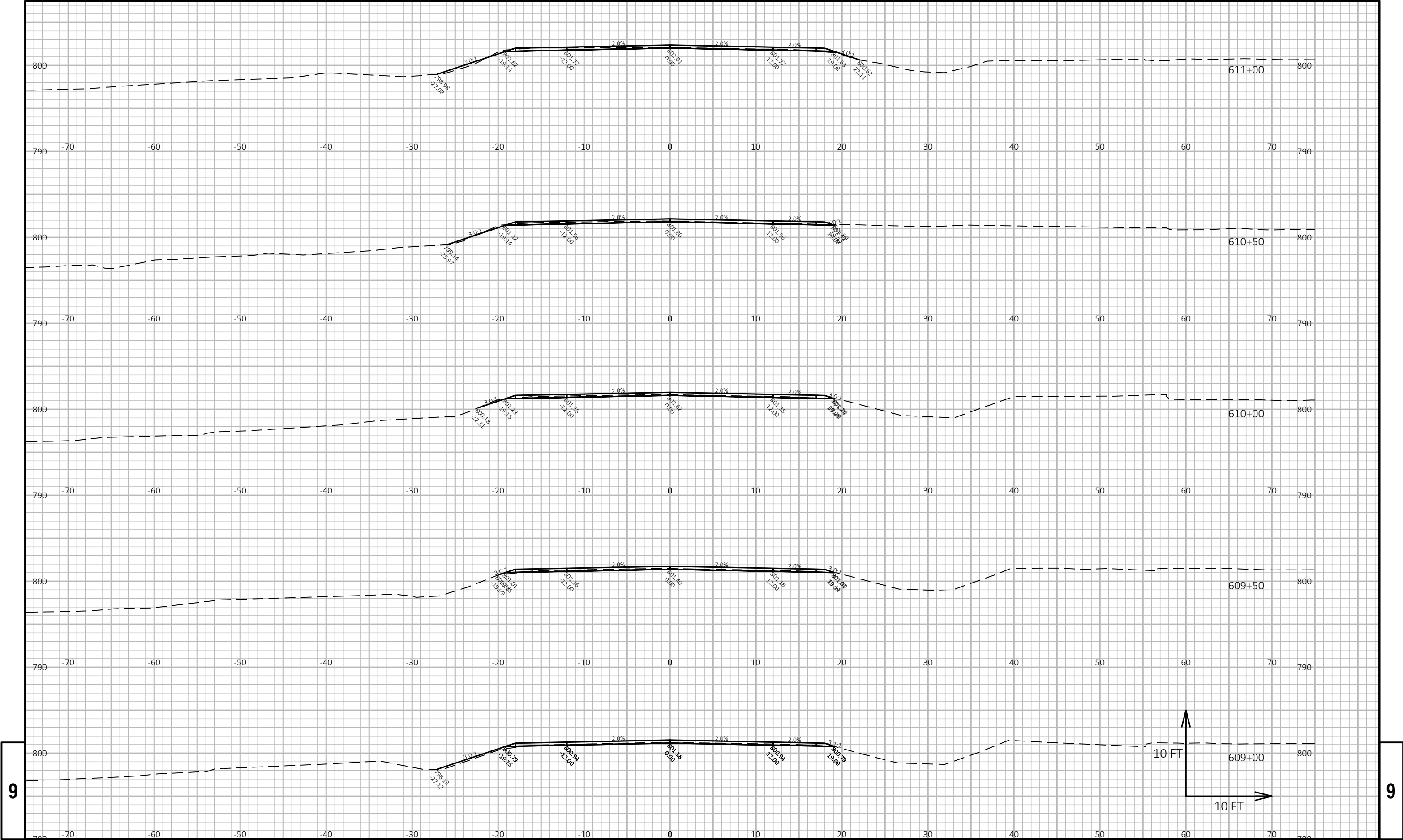




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PROJECT NO: 1430-02-73	HWY: STH 23	COUNTY: MARQUETTE	CROSS SECTIONS: STH 23	SHEET 151	E
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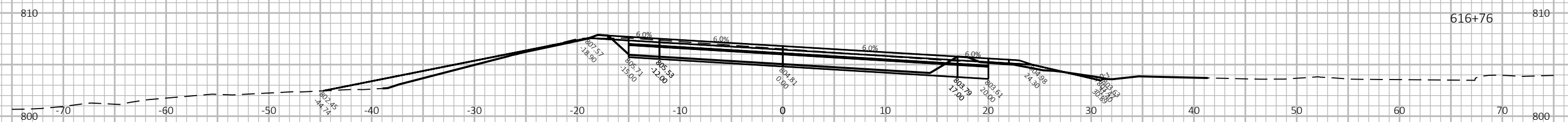
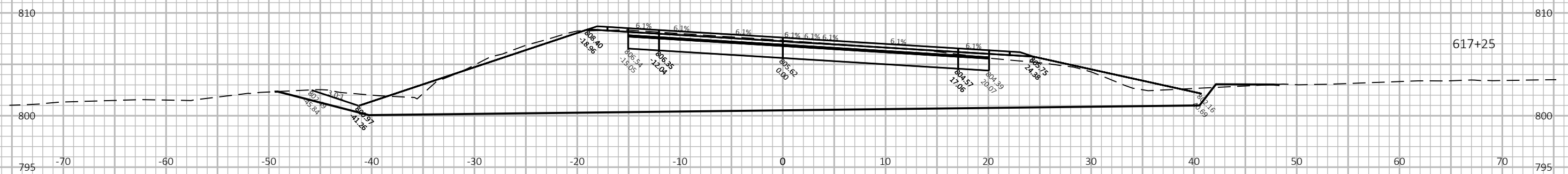
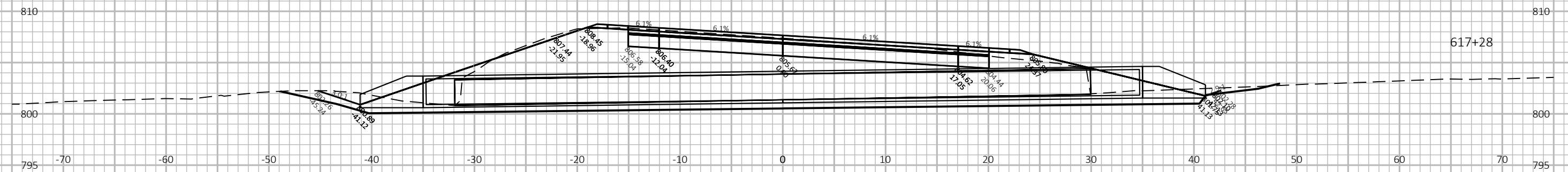






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PROJECT NO:	1430-02-73
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HWY: STH 23

COUNTY: MARQUETTE

CROSS SECTIONS: STH 23

SHEET 155

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LAYOUT NAME - STH 23-4

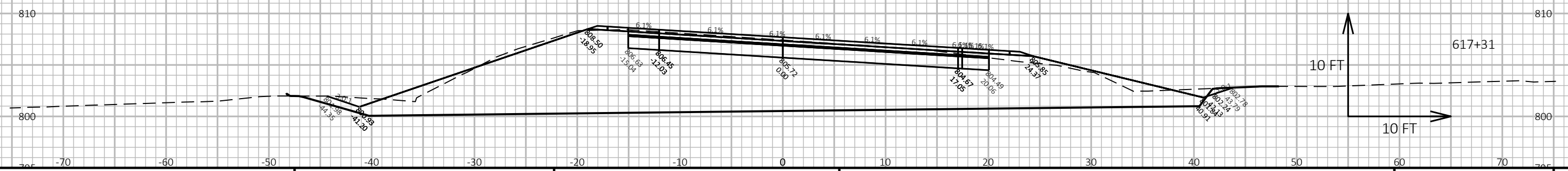
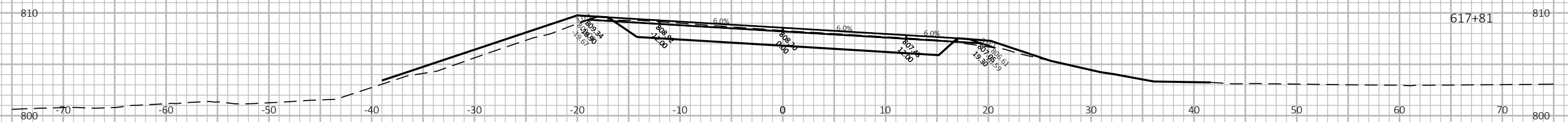
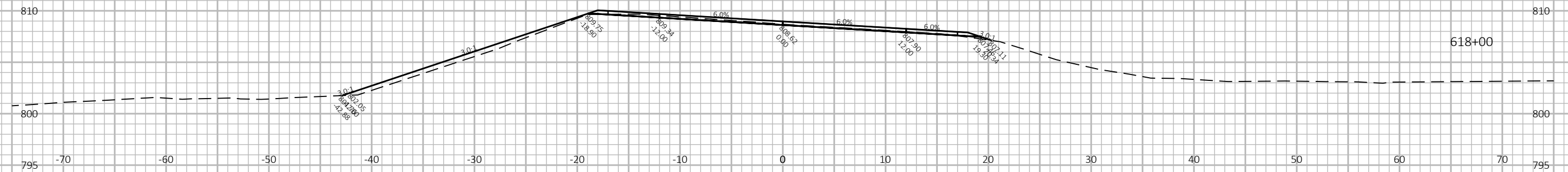
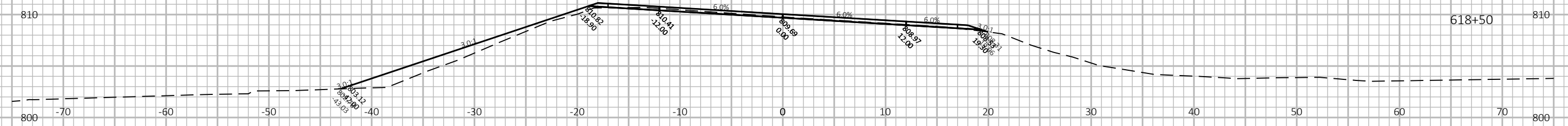
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PLOT BY : JORDAN DISTERHAFT

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO:	1430-02-73
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HWY: STH 23

COUNTY: MARQUETTE

CROSS SECTIONS: STH 23

SHEET 156

FILE NAME : I:\CLIENTS-MADSN\W\W3905 WDOT NC REGION - WI RAPIDS\003 1430-02-03 STH 23\14300203\SHEETS\PLAN\090201-XS-REVISED 6-29-22.DWG
LAYOUT NAME - STH 23-5

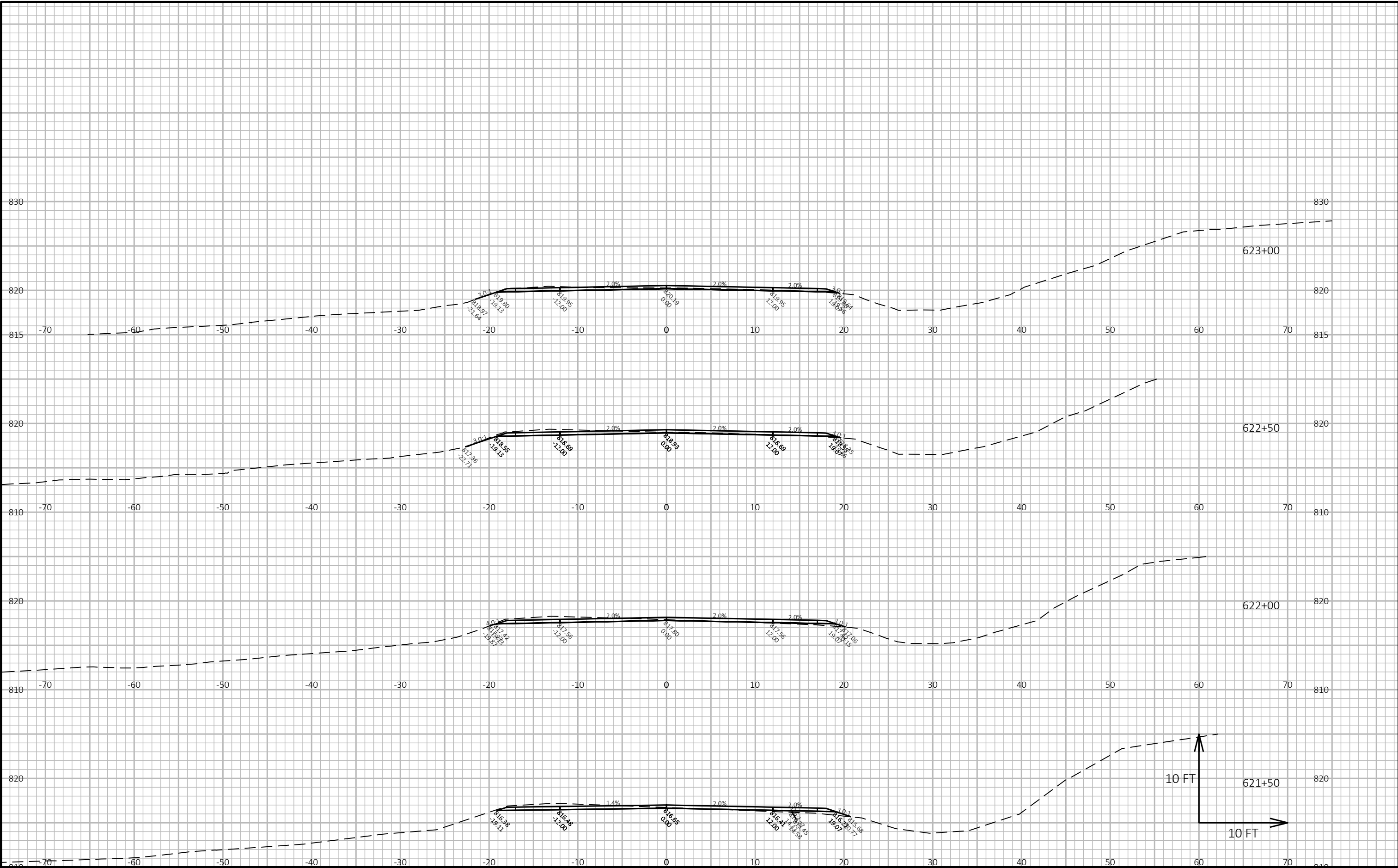
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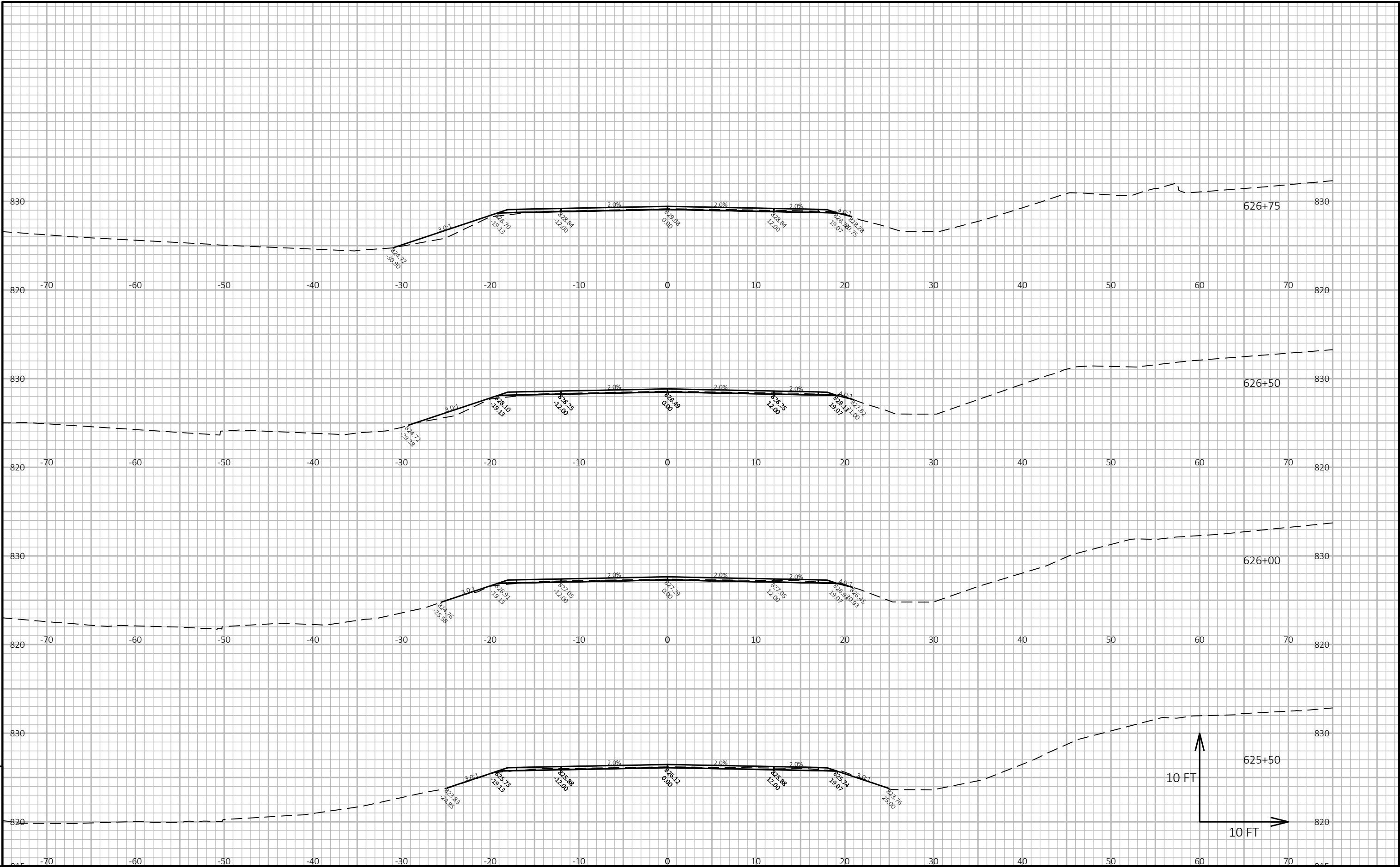
PLOT BY : JORDAN DISTERHAFT

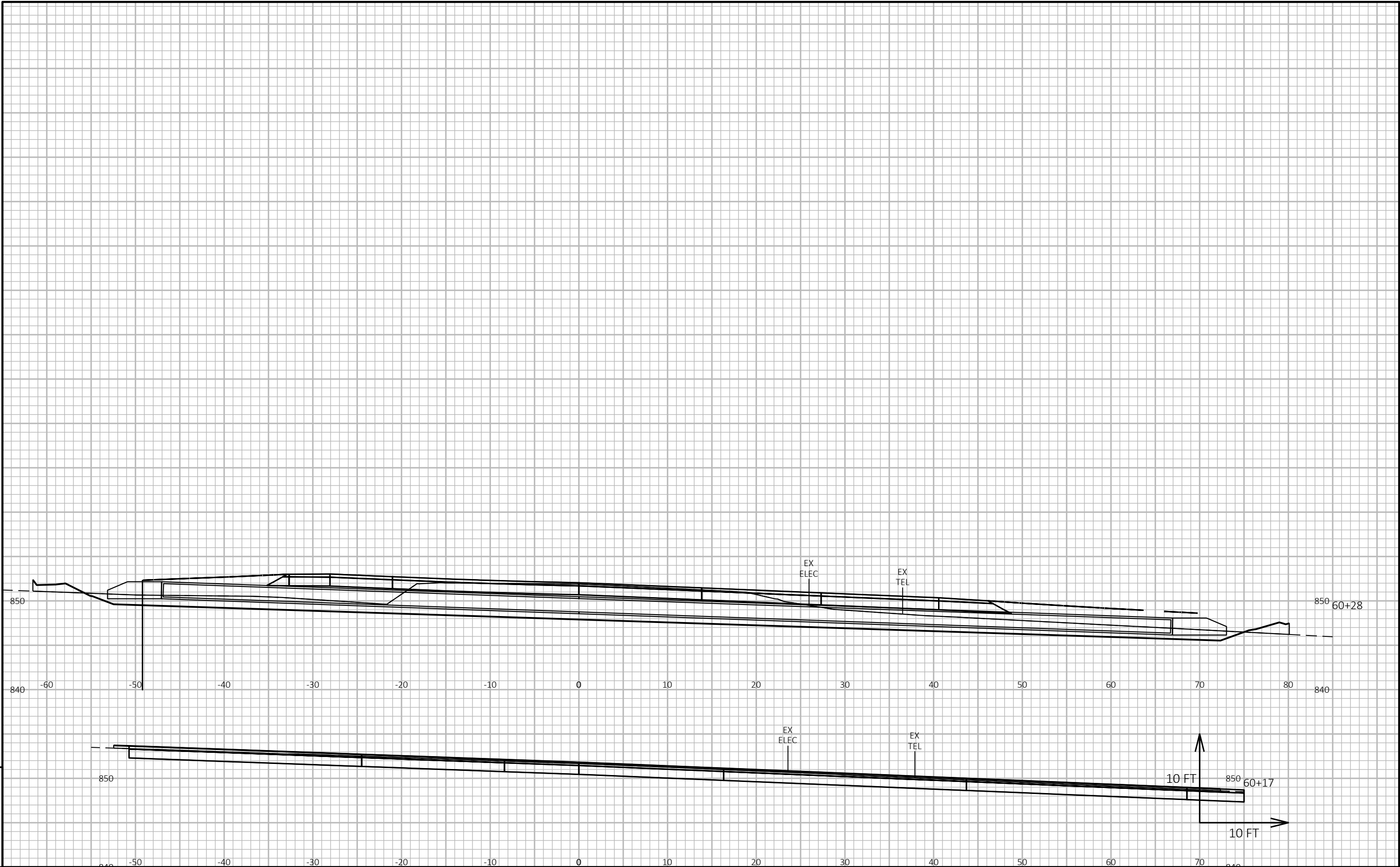
PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

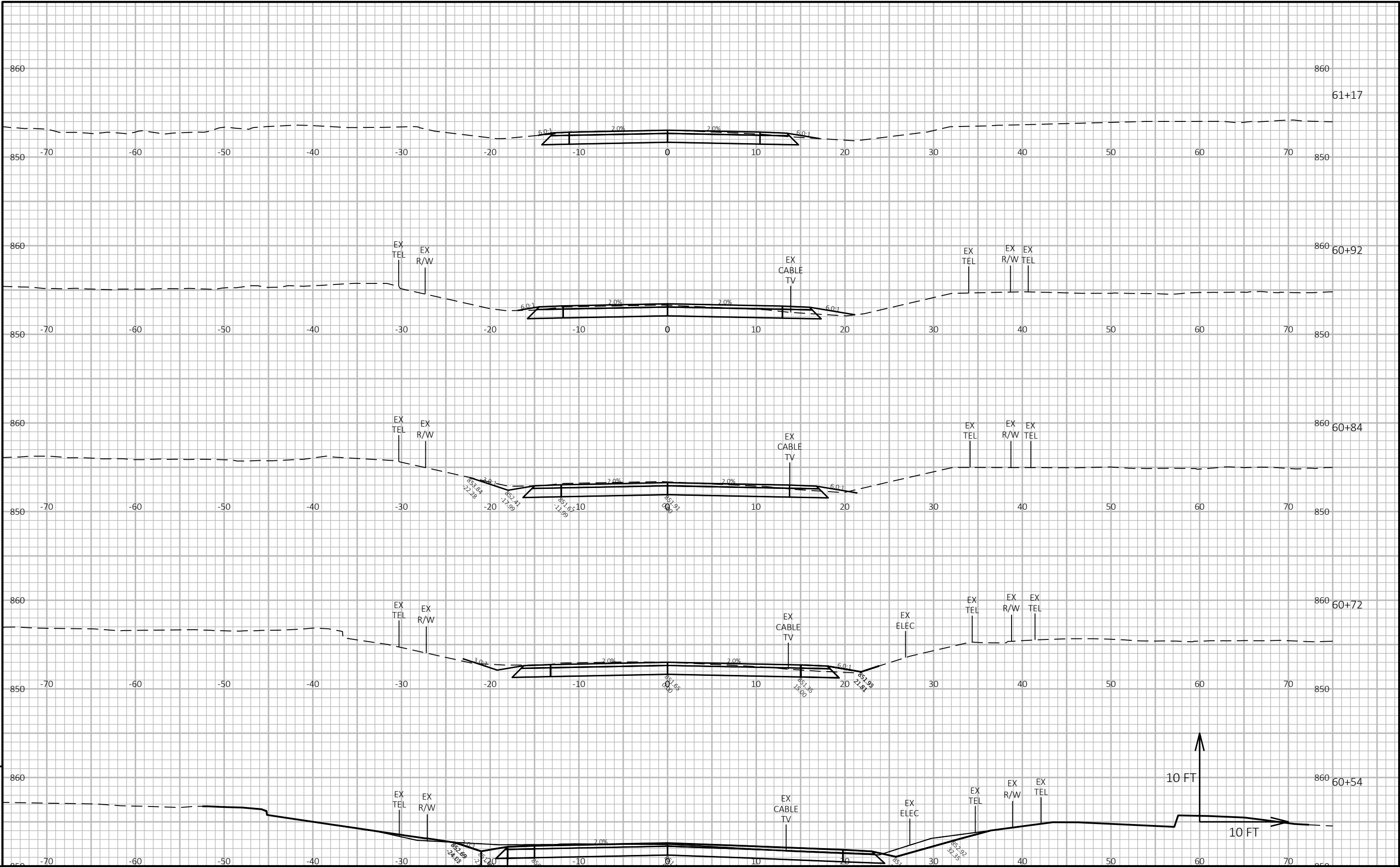




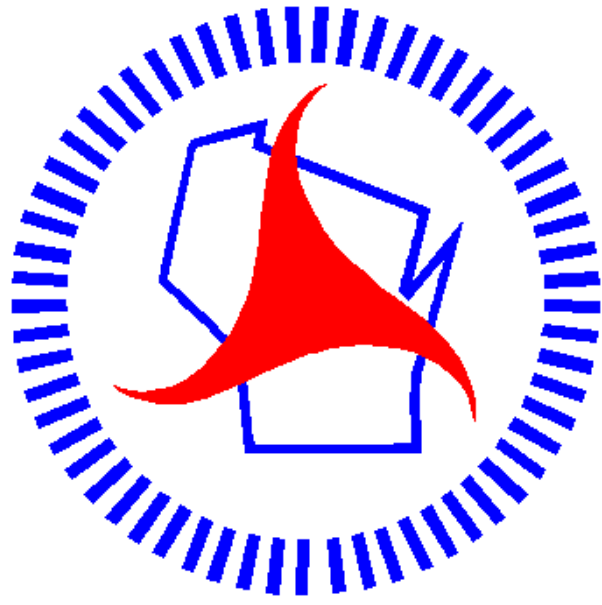


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Notes



Wisconsin Department of Transportation

Dedicated people creating transportation solutions through innovation and exceptional service.

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