

UTILITIES CONTACTS

ALLIANT ENERGY
GAS/ELECTRIC
NICKOLAS BELTZ
3730 KENNEDY ROAD
JANESVILLE WI 53545
PHONE: 608-757-7517
EMAIL: NICKOLASBELTZ@ALLIANTENERGY.COM

BRIGHTSPEED
COMMUNICATION
JAMES WINTER
224 INDUSTRIAL DRIVE
NORTH PRAIRIE, WI 53153
PHONE: 262-392-5210
EMAIL: JAMES.WINTER@BRIGHTSPEED.COM

EVERSTREAM
COMMUNICATION
SHAD GARCIA
324 EAST WISCONSIN AVENUE
MILWAUKEE WI 53202
PHONE: 414-409-1708
EMAIL: SGARCIA@EVERSTREAM.COM

SPECTRUM
COMMUNICATION
TOM PHILLIPS
2016 CRANSTON ROAD
BELOIT, WI 53511
PHONE: 608-209-4821
EMAIL: THOMAS.PHILLIPS@CHARTER.COM

CTH N HMA 6.25-INCHES		
LAYER	THICKNESS	TYPE
UPPER	2.5-INCHES	4 MT 58-28 S
LOWER	3.75-INCHES	3 MT 58-28 S

DESIGN PROJECT LEADER

RYAN RUDZINSKI, P.E.
RH BATTERMAN
1040 NORTH WISCONSIN STREET
ELKHORN WI 53121
PHONE: 608-921-7619
EMAIL: RRUDZINSKI@RHBATTERMAN.COM

ROCK COUNTY PUBLIC WORKS DEPARTMENT

DUANE M. JORGENSEN, JR., P.E.
DIRECTOR OF PUBLIC WORKS
3715 NEWVILLE ROAD
JANESVILLE WI 53545
PHONE: 608-757-5450
EMAIL: DUANE.JORGENSEN@CO.ROCK.WI.CO

ROCK COUNTY SURVEYOR

BRAD HEUER
SURVEYOR
51 S. MAIN STREET
JANESVILLE, WI 53545
PHONE: 608-751-2778
EMAIL: BRAD.HEUER@CO.ROCK.WI.US

WISCONSIN DNR LIAISON

SHELLEY NELSON
SW REGION
3911 FISH HATCHERY ROAD
FITCHBURG WI 53711
PHONE: 608-444-2835
EMAIL: SHELLEY.NELSON@WISCONSIN.GOV

WISDOT

ZACHARY PEARSON, P.E.
DTSD SW REGION
2101 WRIGHT STREET
MADISON, WI 53704
PHONE: 608-516-6503
EMAIL: ZACHARY.PEARSON@DOT.WI.GOV

GENERAL NOTES

THE LOCATIONS OF EXISTING AND PROPOSED UTILITIES INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAYBE UTILITY FACILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL COORDINATE THEIR CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGERS HOTLINE, AND/OR A DIRECT CALL TO THE UTILITIES THAT HAVE FACILITIES IN THE AREA. NOT ALL UTILITIES ARE MEMBERS OF DIGGERS HOTLINE.

CONTRACTOR WILL BE RESPONSIBLE FOR RESHAPING AND SEEDING ANY PREVIOUSLY GRASSED AREAS WHICH ARE DISTURBED BY OPERATIONS, OUTSIDE OF THE NORMAL CONSTRUCTION LIMITS.

HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON 112LBS/SY/IN.

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

RIGHT OF WAY INFORMATION SHOWN ON THE PLANS IS APPROXIMATE.

THE CONTRACTOR IS TO WORK WITH UTMOST CARE AND PROTECT ALL SURVEY MARKERS. REMOVAL OF ANY SURVEY MARKER IS TO BE WITH THE APPROVAL OF THE ENGINEER. ROCK COUNTY SURVEYOR TO REPLACE SURVEY MARKER AT STATION 120+26, 4' LT. CONTRACTOR SHALL COORDINATE REPLACEMENT PRIOR TO PAVING ASPHALT.

TOPSOIL SHALL BE PLACED 1-INCH BELOW THE TOP OF ADJACENT CONCRETE CURBS OR SIDEWALKS.

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

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

PRIOR TO PLACEMENT OF BEAM GUARD THE SHOULDERS SHALL BE IN PLACE, SHAPED AND COMPACTED.

CONTRACTOR SHALL MAINTAIN ACCESS TO ALL DRIVEWAYS AT ALL TIMES EXCEPT WHEN PAVING OR PIPE LAYING OPERATIONS REQUIRE THE DRIVEWAY TO BE CLOSED. ACCESS TO DRIVEWAYS SHALL BE RE-ESTABLISHED IMMEDIATELY AFTER OPERATIONS ARE COMPLETED. ACCESS SHALL BE PROVIDED DURING ALL NON-WORKING HOURS.

EROSION CONTROL GENERAL NOTES

RE-TOPSOIL DISTURBED AREAS, AS DESIGNATED BY THE ENGINEER, SEED AND EROSION MAT TOP-SOILED AREAS, AS DESIGNATED BY THE ENGINEER, WITHIN FIVE (5) DAYS AFTER PLACEMENT OF TOPSOIL. IF GRADED AREAS ARE LEFT EXPOSED FOR MORE THAN FOURTEEN (14) CALENDAR DAYS, SEED THOSE AREAS WITH TEMPORARY SEED.

STOCKPILE EXCESS MATERIAL OR SPOILS ON UPLAND AREAS AWAY FROM WETLANDS, FLOODPLAINS, AND WATERWAYS. STOCKPILED SOIL SHALL BE PROTECTED AGAINST EROSION. IF STOCKPILED MATERIAL IS LEFT FOR MORE THAN FOURTEEN (14) CALENDAR DAYS, SEED THE STOCKPILE WITH TEMPORARY SEED.

QUANTITIES FOR EROSION CONTROL ITEMS HAVE BEEN INCLUDED IN THE PROJECT, BUT ARE NOT REPRESENTED ON THE PLAN. THE LOCATIONS AND TYPE OF EROSION CONTROL ITEMS WILL BE DETERMINED BY THE CONTRACTOR'S ECIP AND BY THE ENGINEER. EROSION CONTROL ITEMS SHALL BE MAINTAINED UNTIL PERMANENT VEGETATION IS ESTABLISHED OR UNTIL THE ENGINEER DETERMINES THAT THE ITEM IS NO LONGER REQUIRED.

ORDER OF SECTION DETAIL SHEETS

- GENERAL NOTES
- PROJECT OVERVIEW
- TYPICAL SECTIONS
- CONSTRUCTION DETAILS
- EROSION CONTROL
- PERMANENT SIGNING
- PAVEMENT MARKING
- TRAFFIC CONTROL
- DETOUR PLAN
- ALIGNMENT PLAN
- BORINGS & CONTROL POINTS
- SUPERELEVATION TABLE

RUNOFF COEFFICIENT TABLE

LAND USE:	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
	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 STRIPTURF:	.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 SLOPETURF:			.25			.27			.28			.30
			.32			.34			.36			.38
PAVEMENT:												
ASPHALT:	.70 - .95											
CONCRETE:	.80 - .95											
BRICK:	.70 - .80											
DRIVES, WALKS:	.75 - .85											
ROOFS:	.75 - .95											
GRAVEL ROADS, SHOULDERS:	.40 - .60											

TOTAL PROJECT AREA = 38.35 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 6.20 ACRES



STANDARD ABBREVIATIONS

ABUT	ABUTMENT	LT	LEFT
AC	ACRE	LHF	LEFT HAND FORWARD
AGG	AGGREGATE	L	LENGTH OF CURVE
AH	AHEAD	LF	LINEAR FOOT
∠	ANGLE	LC	LONG CHORD OF CURVE
AADT	ANNUAL AVERAGE DAILY TRAFFIC	LS	LUMP SUM
AEW	APRON ENDWALL	MGAL	ONE THOUSAND GALLONS
ASPH	ASPHALTIC	MH	MANHOLE
BK	BACK	ML OR M/L	MATCH LINE
BC	BACK OF CURB	NOM	NOMINAL
BAD	BASE AGGREGATE DENSE	NC	NORMAL CROWN
BL OR B/L	BASE LINE	NB	NORTHBOUND
BM	BENCH MARK	NO	NUMBER
CB	CATCH BASIN	OD	OUTSIDE DIAMETER
CL OR C/L	CENTER LINE	PAVT	PAVEMENT
Δ	CENTRAL ANGLE OR DELTA	PLE	PERMANENT LIMITED EASEMENT
CE	COMMERCIAL ENTRANCE	PC	POINT OF CURVATURE
CONC	CONCRETE	PI	POINT OF INTERSECTION
CSW	CONCRETE SIDEWALK	PT	POINT OF TANGENCY
CONST	CONSTRUCTION	PCC	PORTLAND CEMENT CONCRETE
CP	CONTROL POINT	LB	POUND
CO	COUNTY	PSI	POUNDS PER SQUARE INCH
CTH	COUNTY TRUCK HIGHWAY	PE	PRIVATE ENTRANCE
CY	CUBIC YARD	PROJ	PROJECT
CP	CULVERT PIPE	PL	PROPERTY LINE
CPCA	CULVERT PIPE CORRUGATED ALUMINUM	PRW	PROPOSED RIGHT OF WAY
CPCPE	CULVERT PIPE CORRUGATED POLYETHYLENE	R	RADIUS
CPCPP	CULVERT PIPE CORRUGATED POLYPROPYLENE	RL OR R/L	REFERENCE LINE
CPCS	CULVERT PIPE CORRUGATED STEEL	REQD	REQUIRED
CPCSAC	CULVERT PIPE CORRUGATED STEEL ALUMINUM COATED	RT	RIGHT
CPCSPC	CULVERT PIPE CORRUGATED STEEL POLYMER COATED	RHF	RIGHT HAND FORWARD
CPRC	CULVERT PIPE REINFORCED CONCRETE	R/W	RIGHT OF WAY
CPRCHE	CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL	RD	ROAD
CPS	CULVERT PIPE SALVAGED	RDWY	ROADWAY
CPT	CULVERT PIPE TEMPORARY	SHLDR	SHOULDER
C & G	CURB AND GUTTER	SW	SIDEWALK
D	DEGREE OF CURVE	SB	SOUTHBOUND
DHV	DESIGN HOUR VOLUME	SPECS	SPECIFICATIONS
DIA	DIAMETER	SF	SQUARE FEET
DD	DIRECTIONAL DISTRIBUTION	SY	SQUARE YARD
DE	DRAINAGE EASEMENT	SDD	STANDARD DETAIL DRAWINGS
DWY	DRIVEWAY	STH	STATE TRUNK HIGHWAY
EA	EACH	STA	STATION
EB	EASTBOUND	SSPC	STORM SEWER PIPE COMPOSITE
EL OR ELEV	ELEVATION	SSCPE	STORM SEWER PIPE CORRUGATED POLYETHYLENE
EMB	EMBANKMENT	SSCPP	STORM SEWER PIPE CORRUGATED POLYPROPYLENE
EW	ENDWALL	SSPNRC	STORM SEWER PIPE NON-REINFORCED CONCRETE
EAT	ENERGY ABSORBING TERMINAL	SSPRC	STORM SEWER PIPE REINFORCED CONCRETE
ESALS	EQUIVALENT SINGLE AXLE LOADS	SSPRC	STORM SEWER PIPE REINFORCED CONCRETE
EXC	EXCAVATION	SSPRCHE	STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL
EBS	EXCAVATION BELOW SUBGRADE	SE	SUPERELEVATION
EXIST	EXISTING	SL OR S/L	SURVEY LINE
FERT	FERTILIZER	TEMP	TEMPORARY
FE	FIELD ENTRANCE	TI	TEMPORARY INTEREST
FL OR F/L	FLOW LINE	TLE	TEMPORARY LIMITED EASEMENT
FT	FOOT	TC	TOP OF CURB
FTMS	FREE TRAFFIC MANAGEMENT SYSTEM	TL OR T/L	TRANSIT LINE
HES	HIGH EARLY STRENGTH	T	TRUCKS (PERCENT OF)
HE	HIGHWAY EASEMENT	TYP	TYPICAL
CWT	HUNDRED WEIGHT	USH	UNITED STATES HIGHWAY
IN DIA	INCH DIAMETER	VAR	VARIABLE
INL	INLET	VC	VERTICAL CURVE
ID	INSIDE DIAMETER	VPC	VERTICAL POINT OF CURVATURE
INTERS	INTERSECTION	VPI	VERTICAL POINT OF INTERSECTION
IH	INTERSTATE HIGHWAY	VPT	VERTICAL POINT OF TANGENCY
INV	INVERT	W	WEST
JT	JOINT	WB	WESTBOUND

PROJECT NO: 3658-00-70

HWY: CTH N

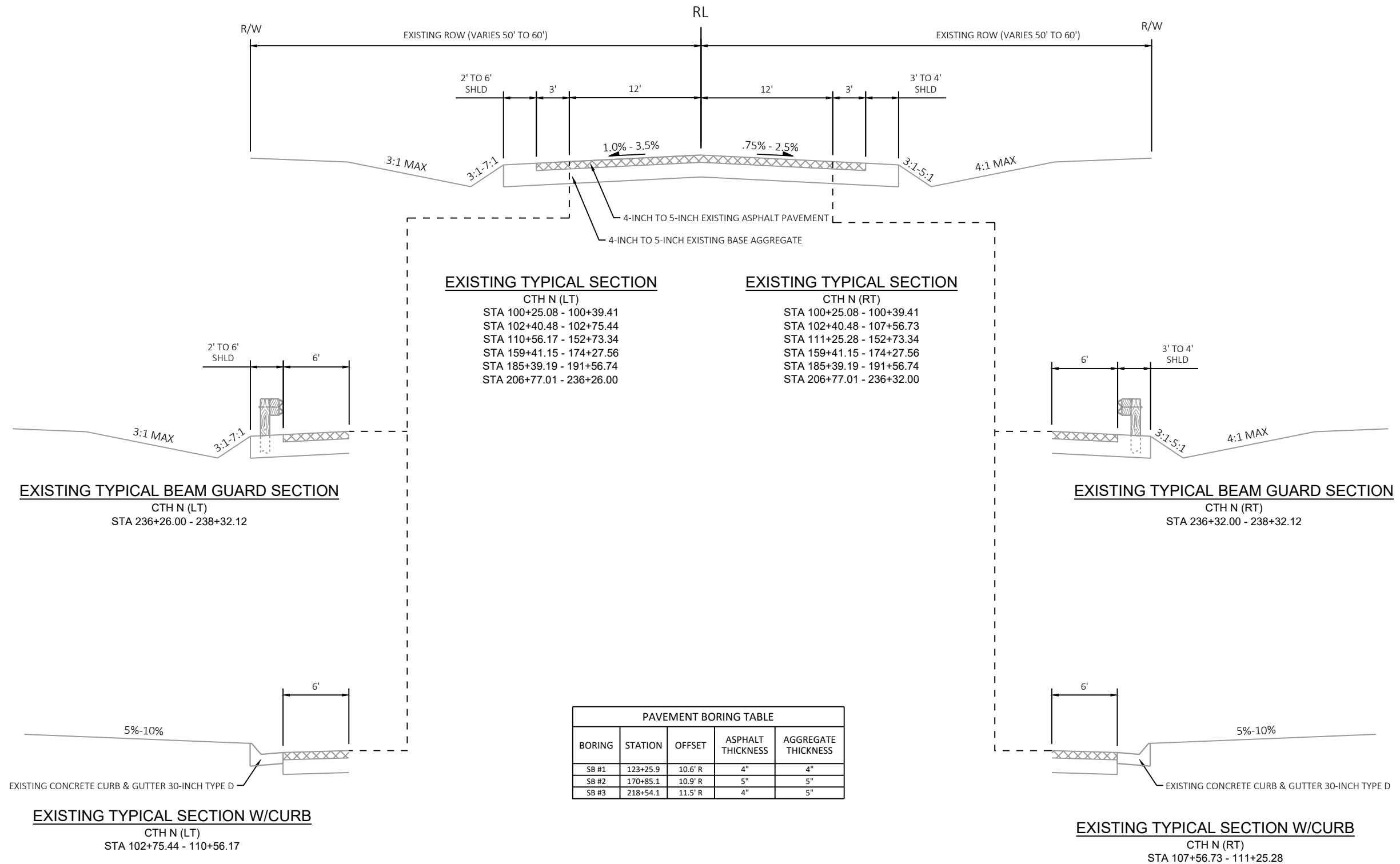
COUNTY: ROCK

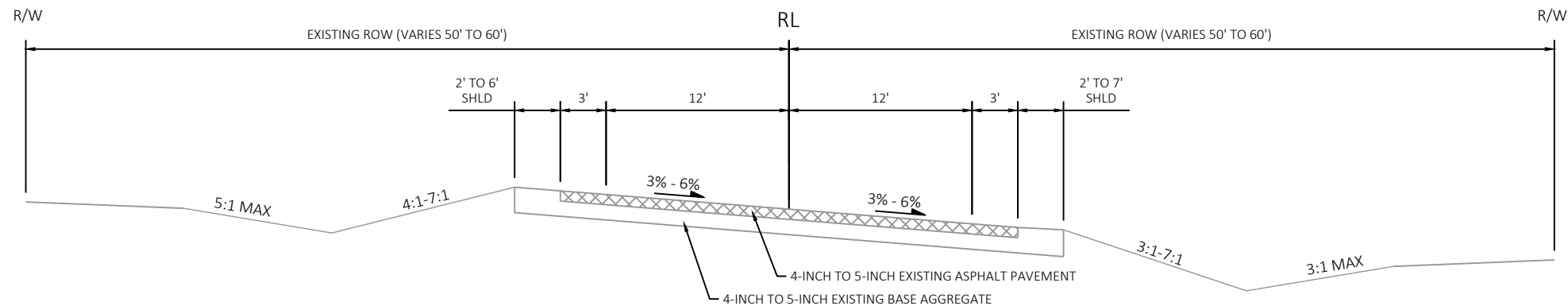
GENERAL NOTES

SHEET



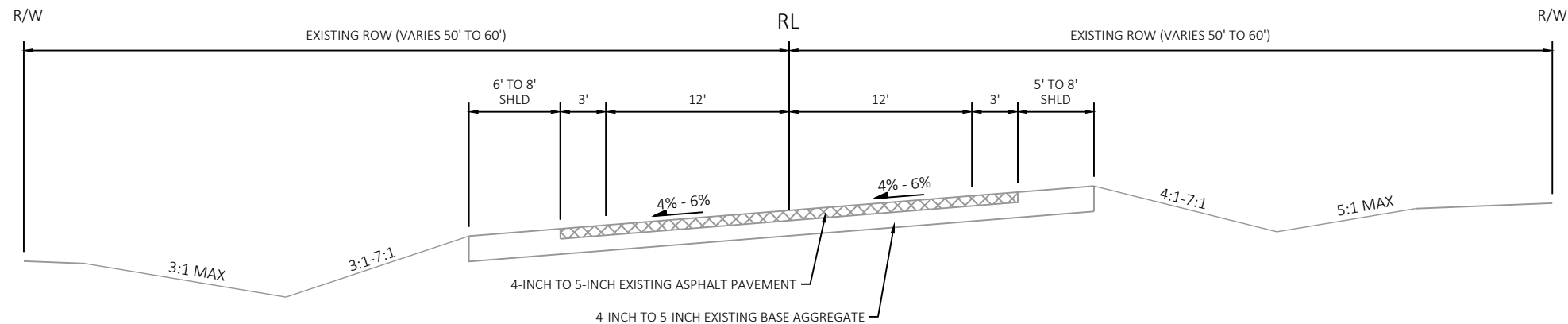
PROJECT NO: 3658-00-70	HWY: CTH N	COUNTY: ROCK	PROJECT OVERVIEW	SHEET 4	E
------------------------	------------	--------------	------------------	---------	---





EXISTING TYPICAL SECTION

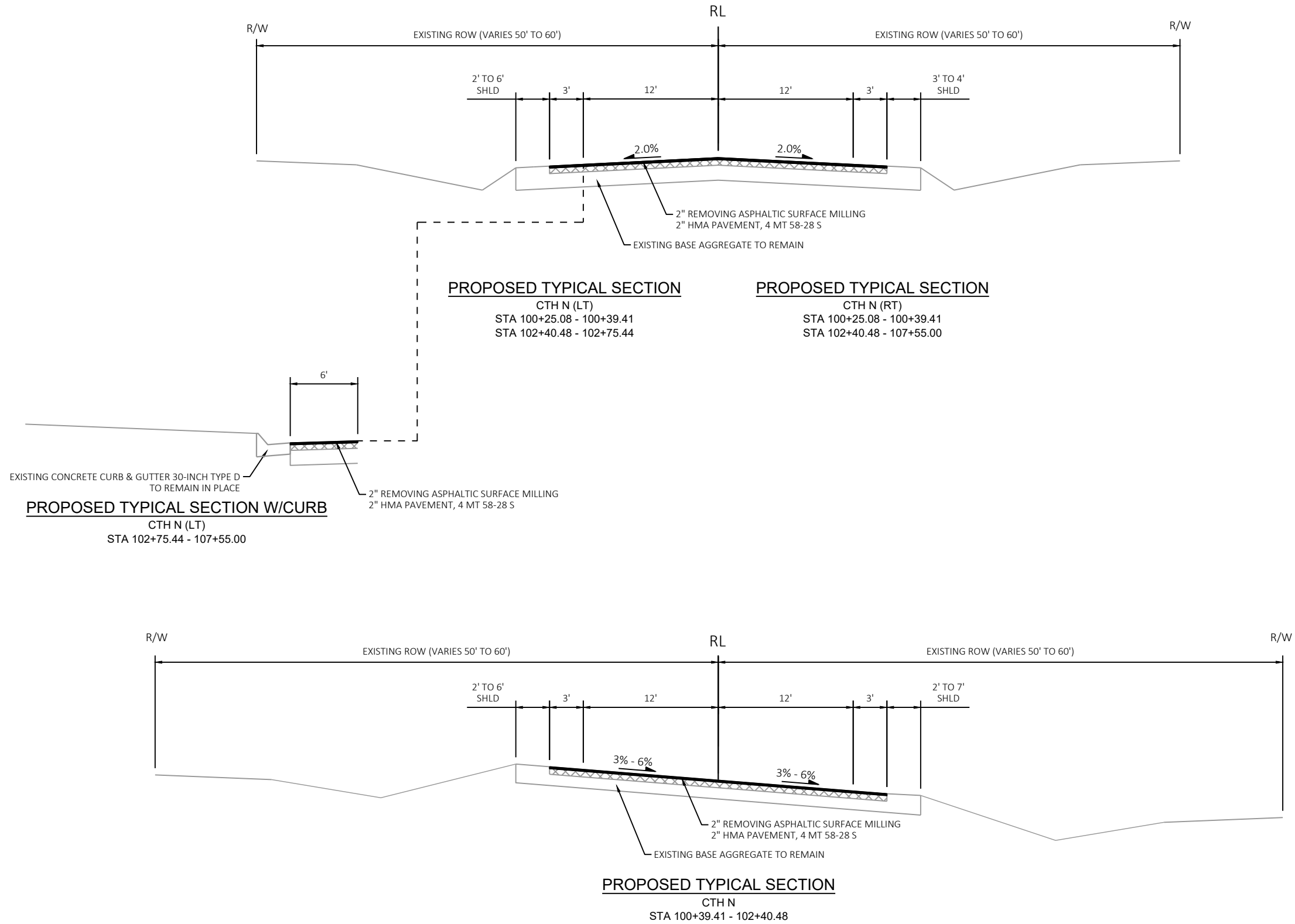
CTH N
STA 100+39.41 - 102+40.48
STA 152+73.34 - 159+41.15
STA 191+56.74 - 206+77.01
STA 226+73.82 - 236+44.05

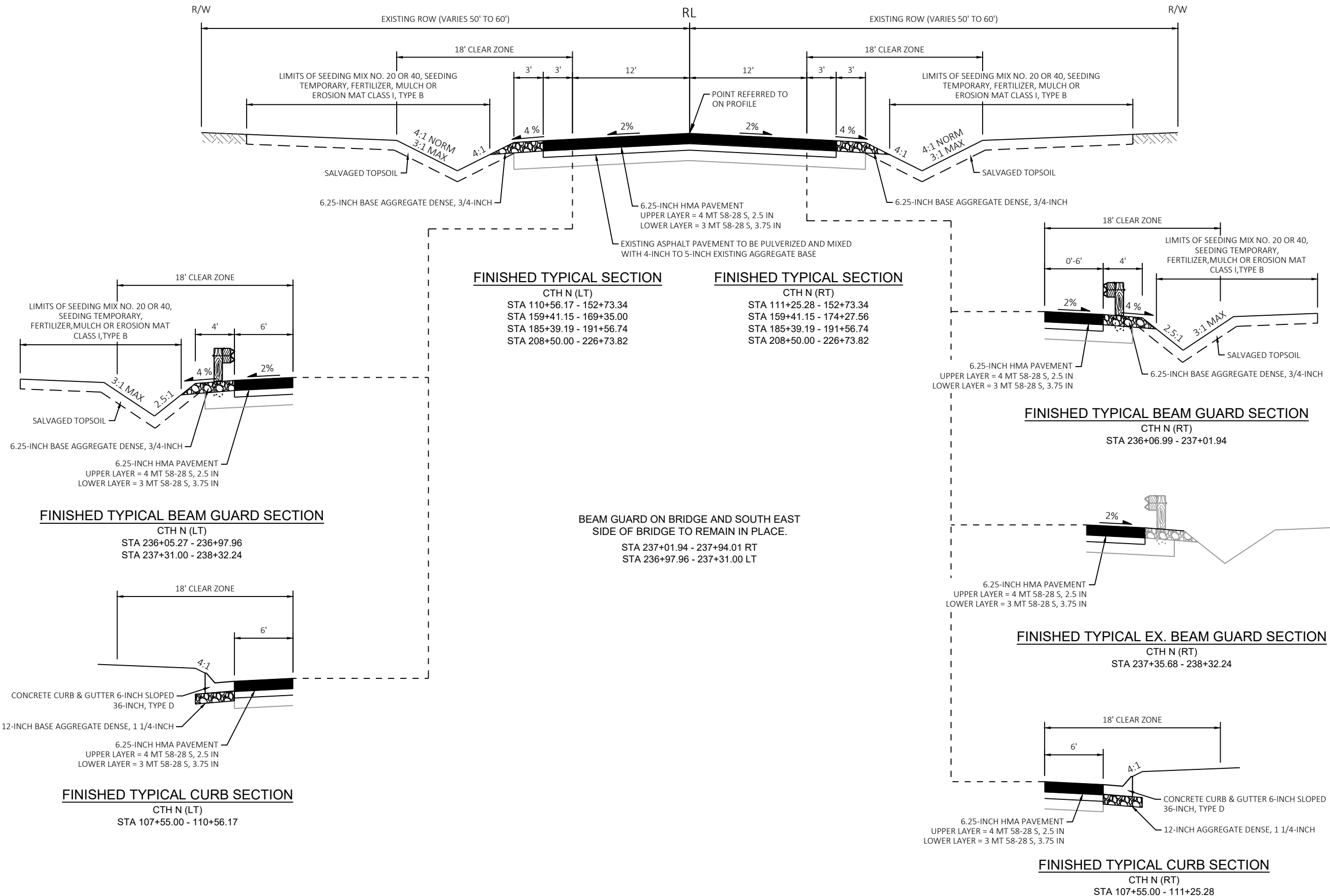


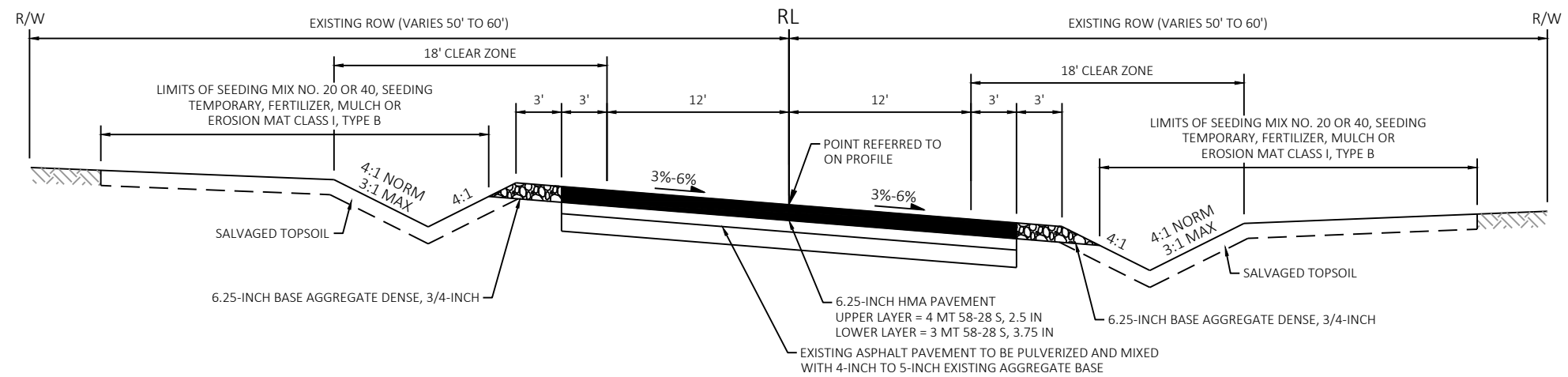
EXISTING TYPICAL SECTION

CTH N
STA 174+27.56 - 185+39.19

PAVEMENT BORING TABLE				
BORING	STATION	OFFSET	ASPHALT THICKNESS	AGGREGATE THICKNESS
SB #1	123+25.9	10.6' R	4"	4"
SB #2	170+85.1	10.9' R	5"	5"
SB #3	218+54.1	11.5' R	4"	5"

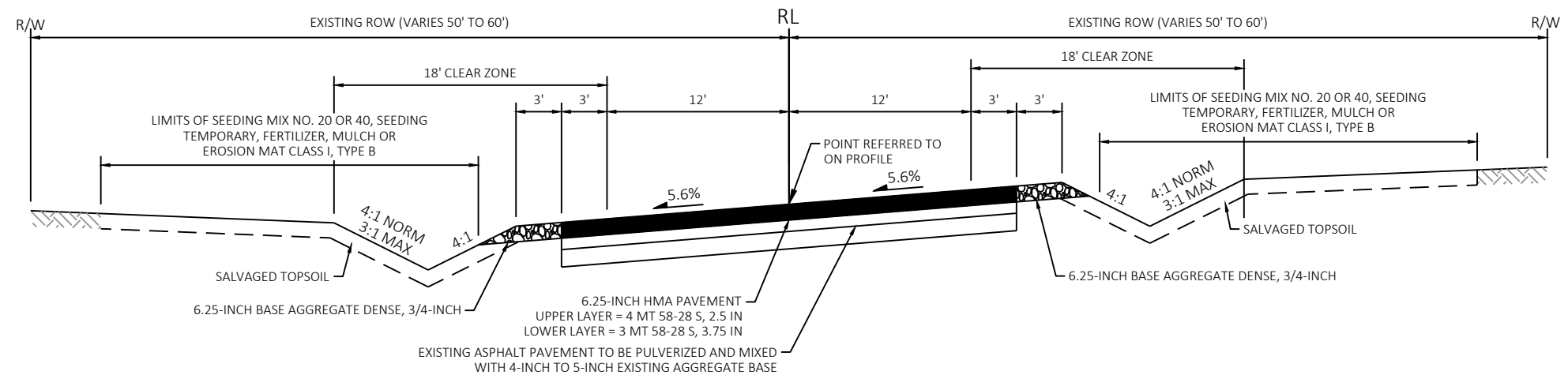






FINISHED TYPICAL SECTION

CTH N
STA 152+73.34 - 159+41.15
STA 191+56.74 - 197+72.00
STA 226+73.82 - 236+44.05

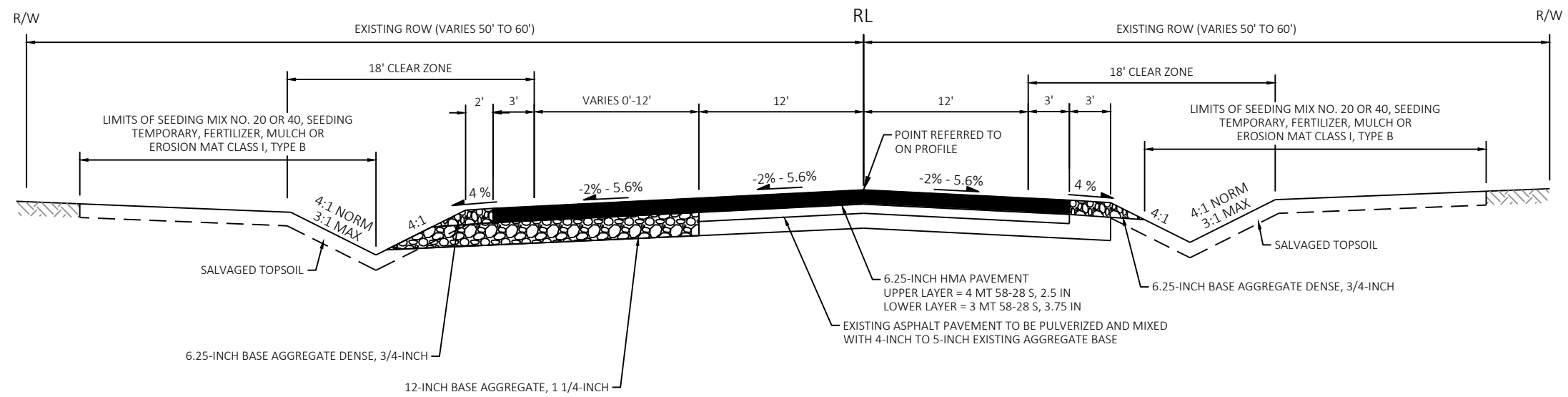


FINISHED TYPICAL SECTION

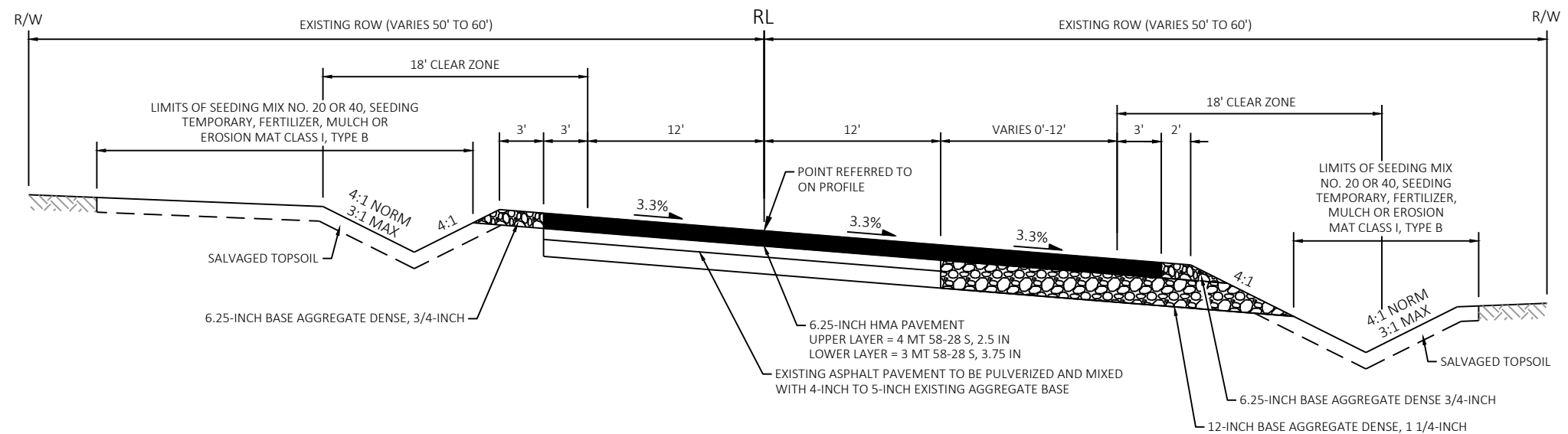
CTH N
STA 177+29.56 - 185+39.19

2

2 |



FINISHED TYPICAL SECTION
CTH N
STA 169+35.00 - 177+29.56



FINISHED TYPICAL SECTION
CTH N
STA 197+72.00 - 203+50.00

PROJECT NO:	3658-00-70
-------------	------------

HWY: CTH N

COUNTY: ROCK

TYPICAL SECTIONS

SHEET

10

I

FILE NAME : J:\34200-34299\34249 - CTH N ROCK COUNTY\DESIGN\3658-00-02\SHEETSPLAN\36580002_020301-TS.DWG
LAYOUT NAME - 06-10ft

PLOT DATE : 7/31/2024 8:32 AM

PLOT BY : CARYN MELLOM

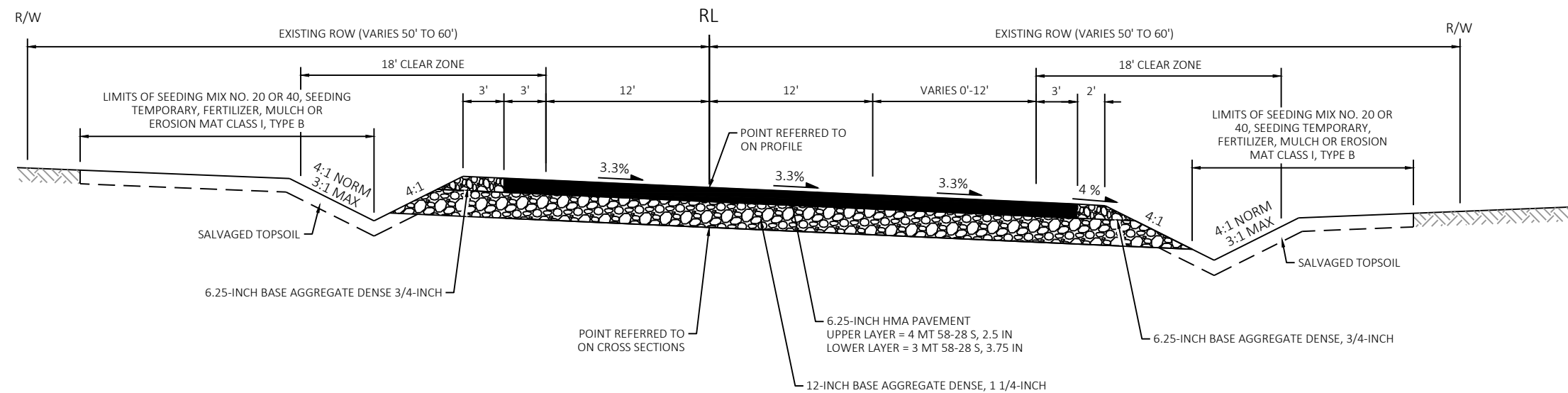
PLOT NAME :

PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 42

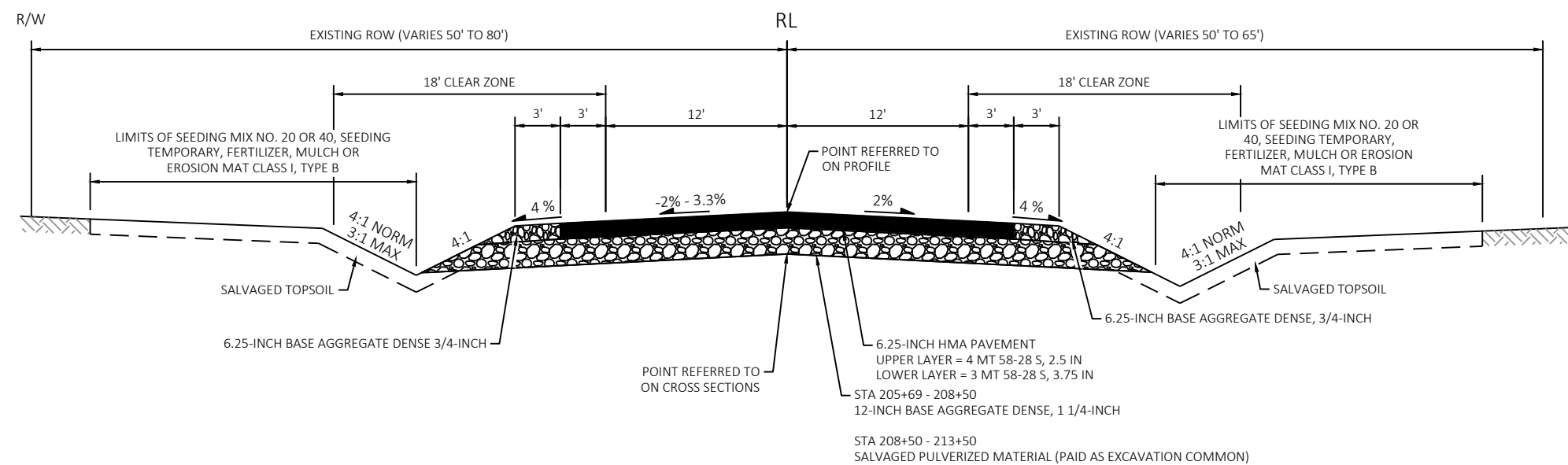
2

2 |



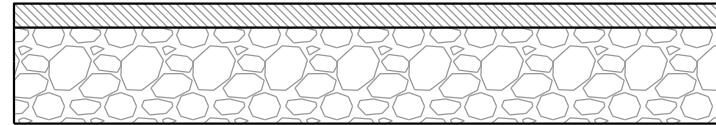
FINISHED TYPICAL SECTION

CTH N
STA 203+50.00 - 205+69.00



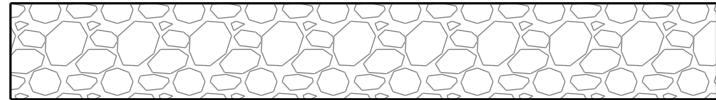
FINISHED TYPICAL SECTION

CTH N
STA 205+69.00 - 213+50.00



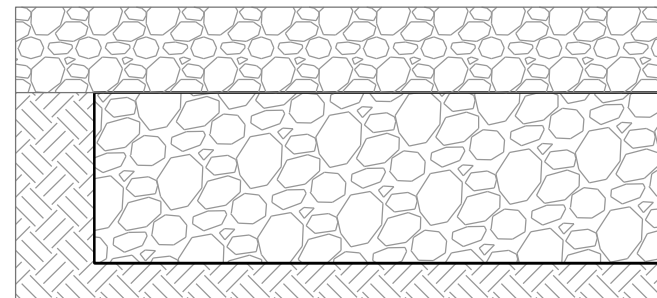
3" ASPHALTIC SURFACE DRIVEWAYS AND
FIELD ENTRANCES
EXISTING BASE AGGREGATE TO REMAIN

BITUMINOUS DRIVEWAY SECTION



12" BASE AGGREGATE DENSE 1-1/4 INCH

AGGREGATE DRIVEWAY SECTION



PAVEMENT SECTION SUBGRADE

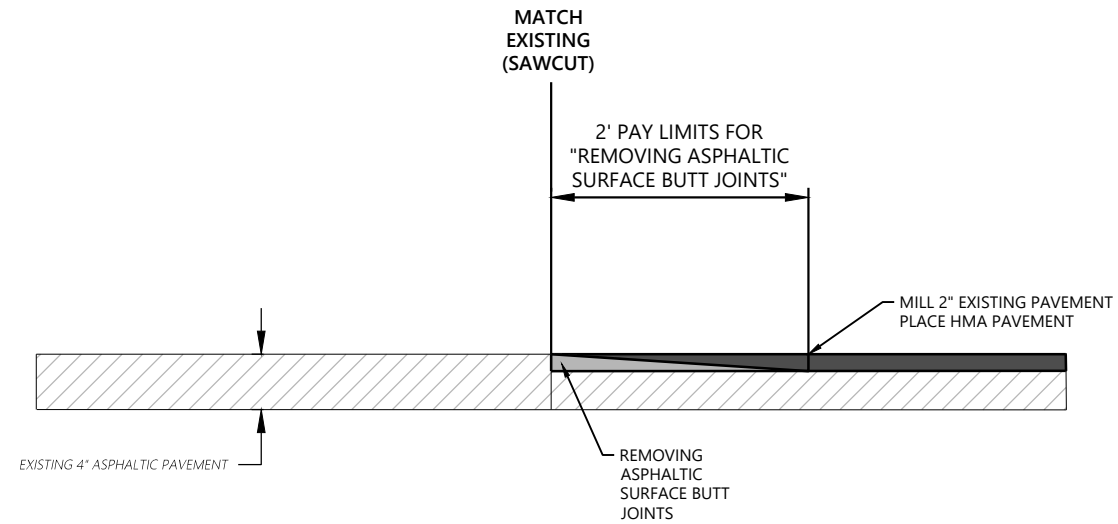
* SELECT CRUSHED MATERIAL, 12-INCHES

** GEOGRID TYPE SR

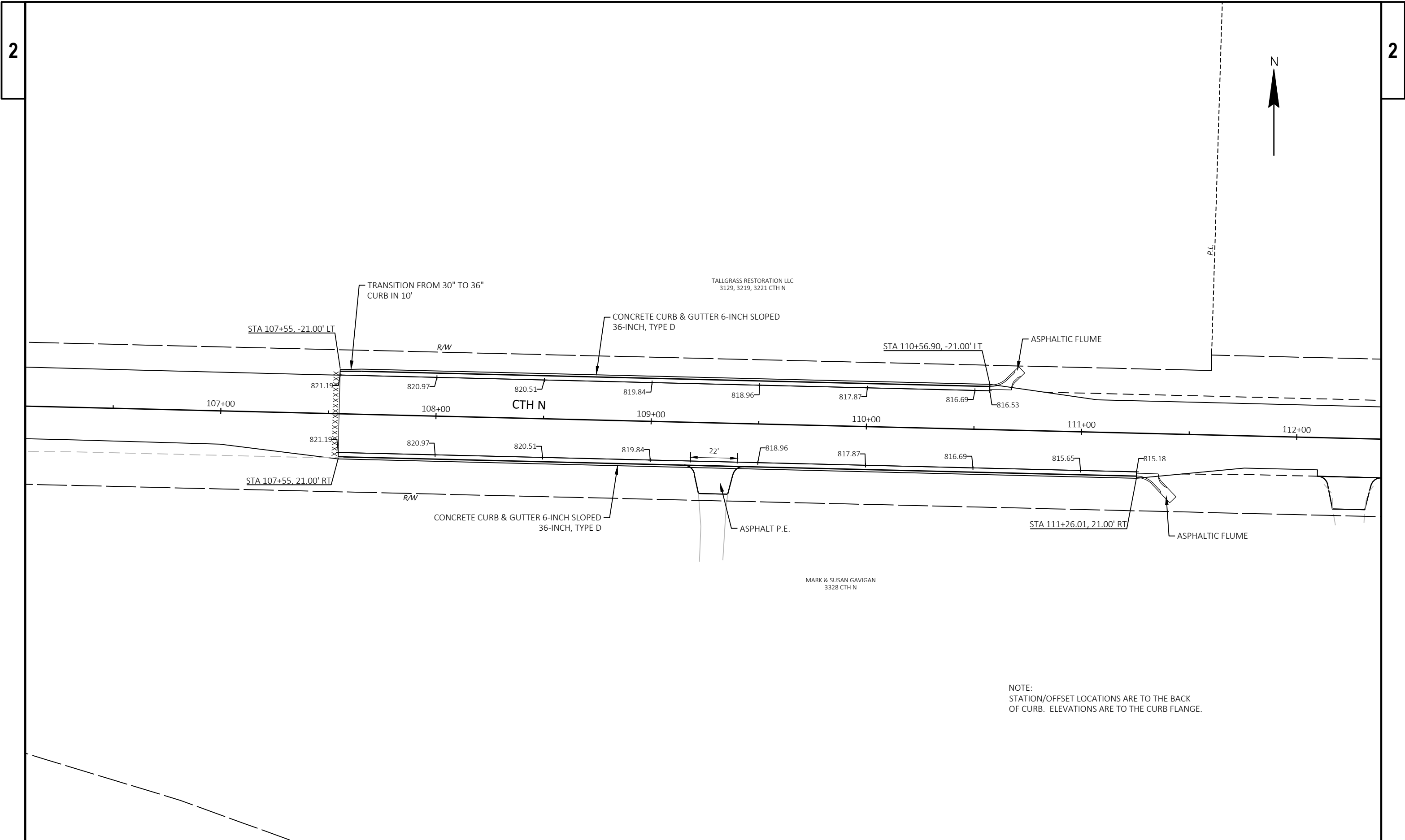
EXISTING SUBGRADE

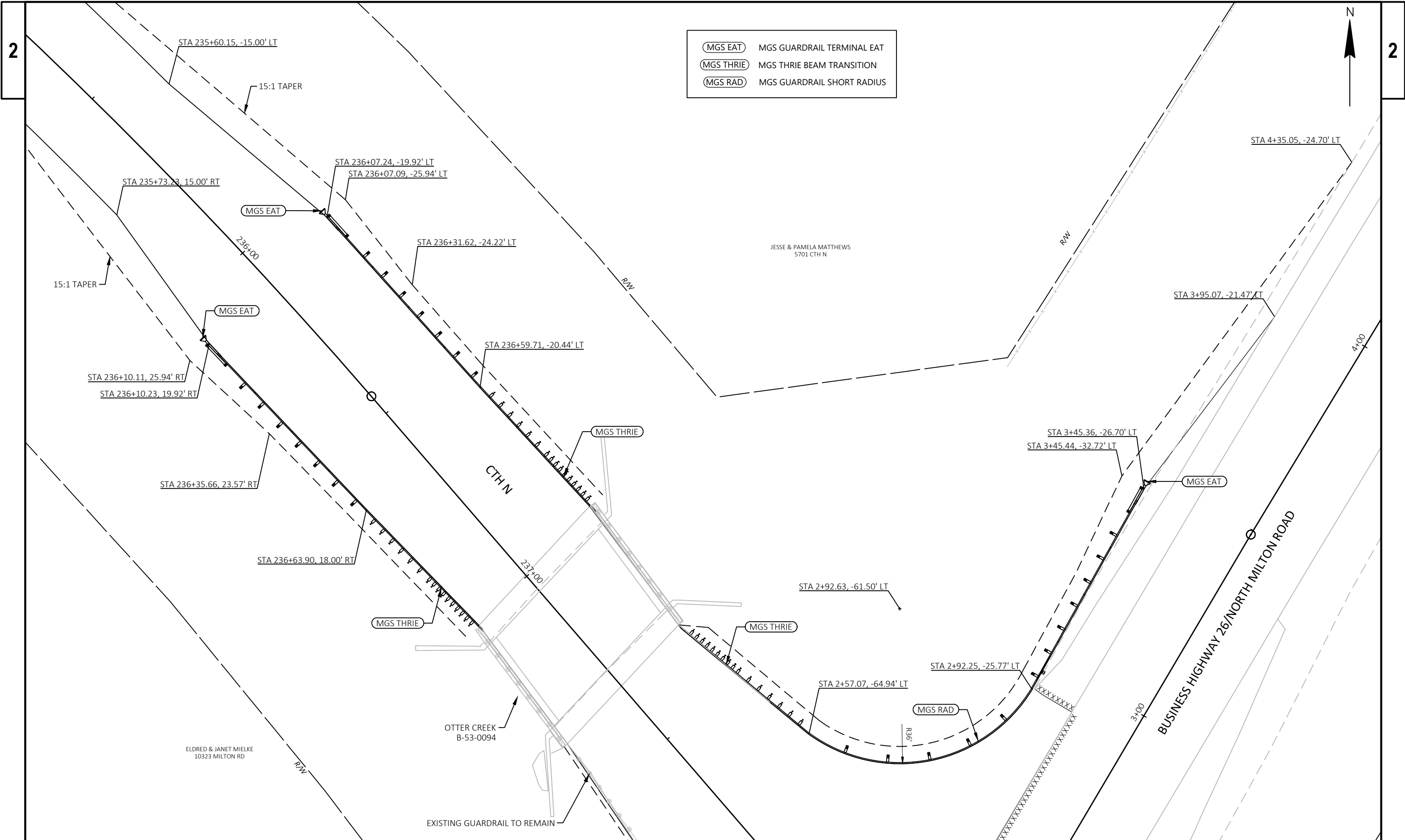
*DEPTH OF UNDERCUT SHALL BE 1 FOOT MINIMUM OR AS DIRECTED BY ENGINEER
** USE OF GEOGRID SHALL BE APPROVED BY ENGINEER

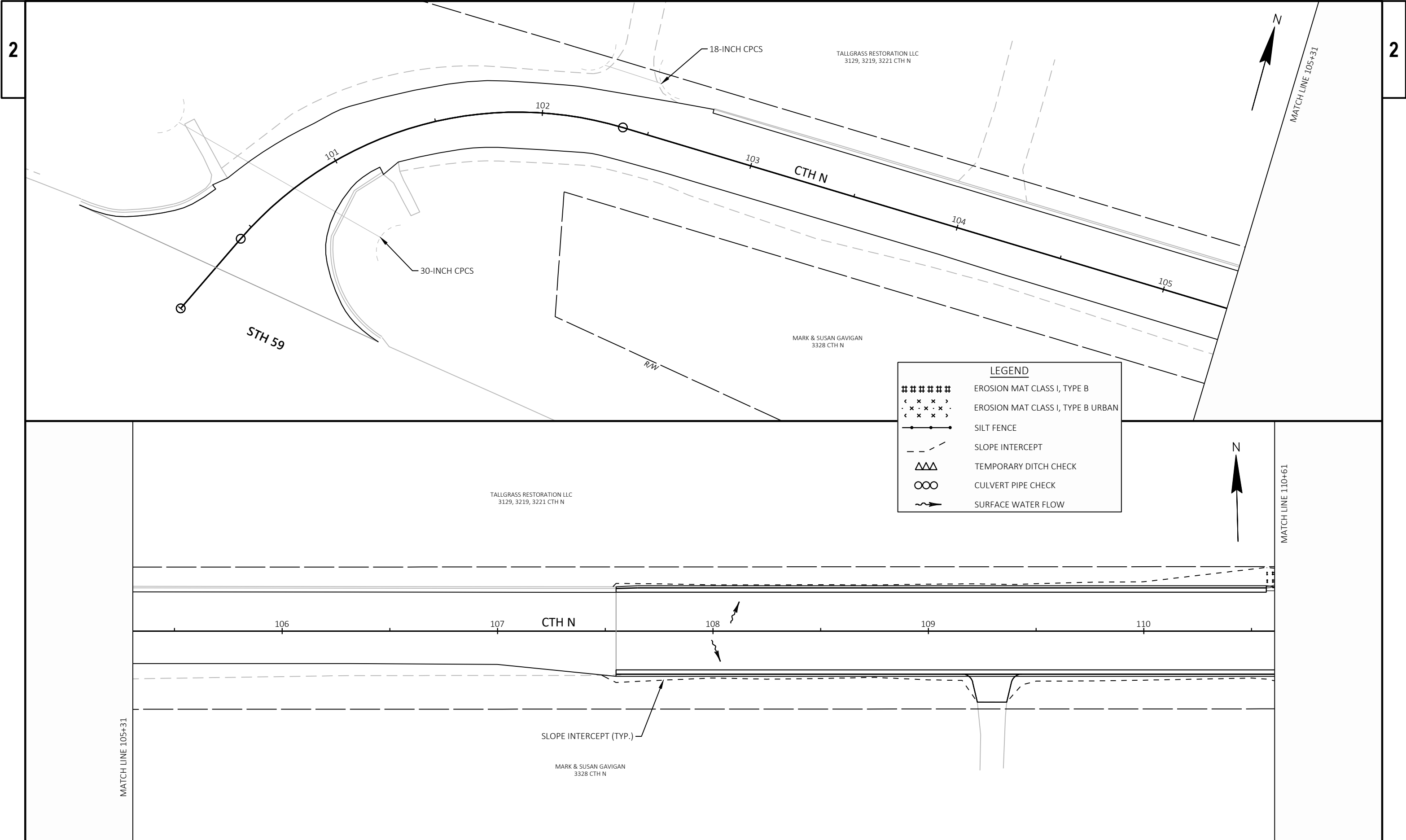
UNDERCUT SECTION

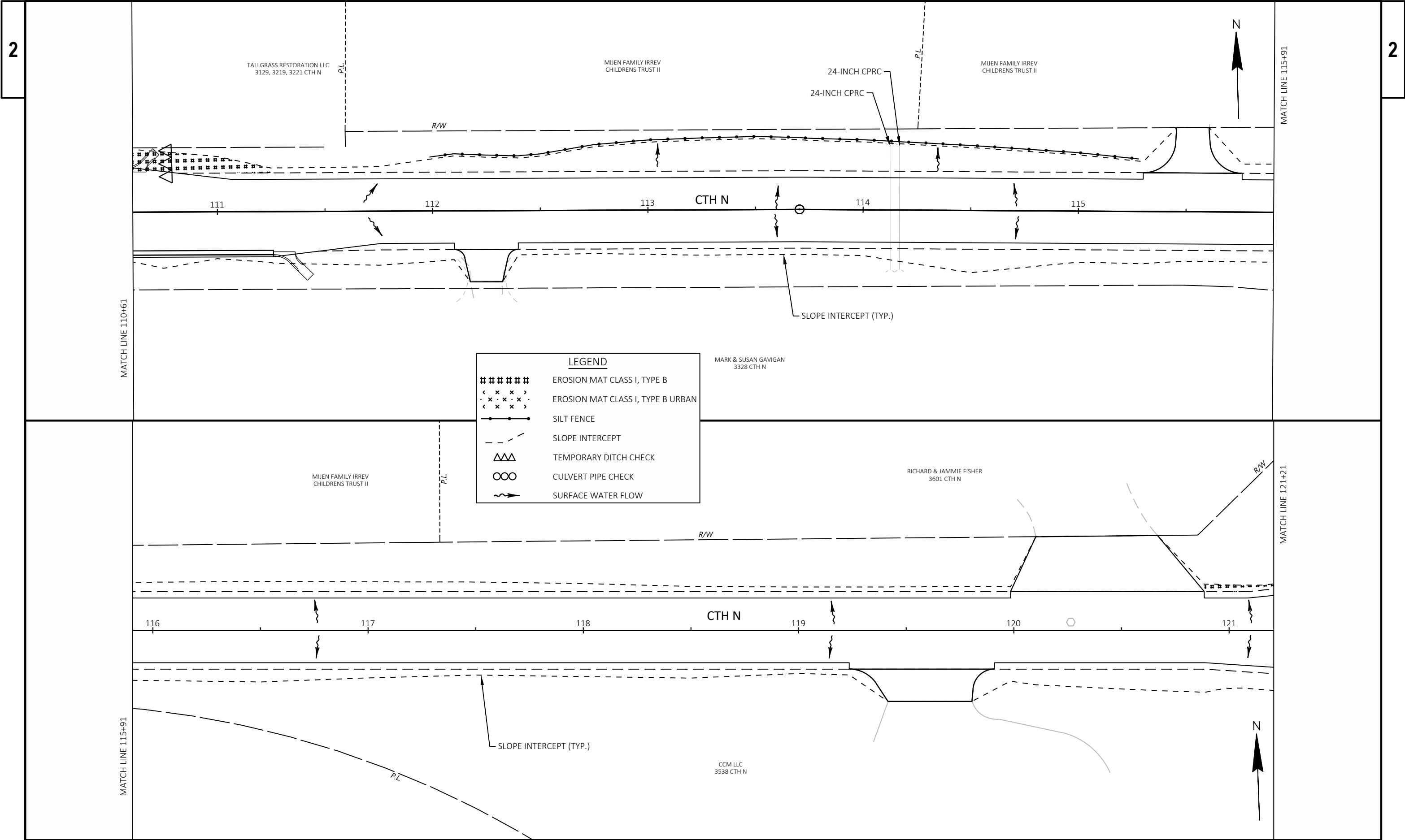


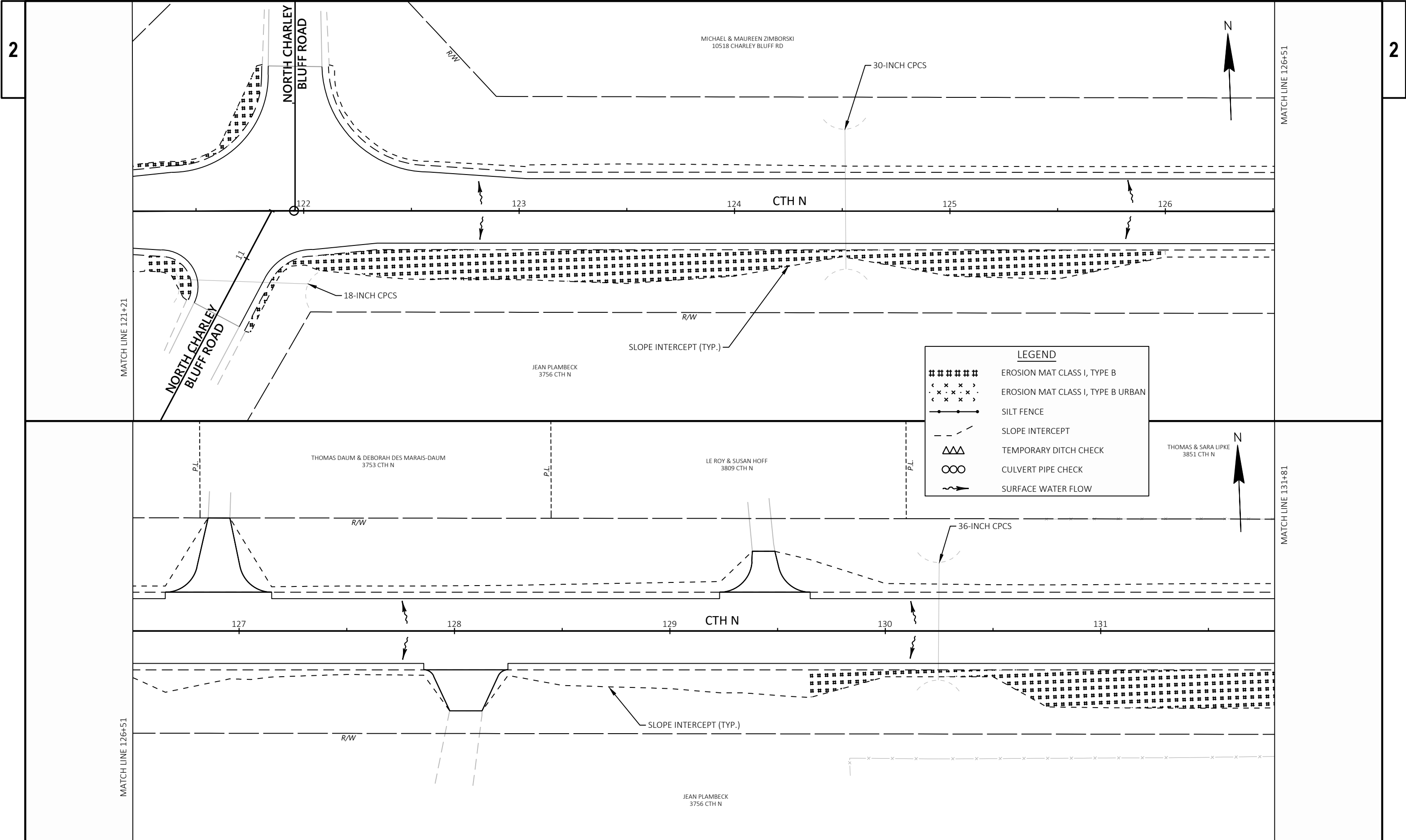
BUTT JOINT TO MATCH EXISTING

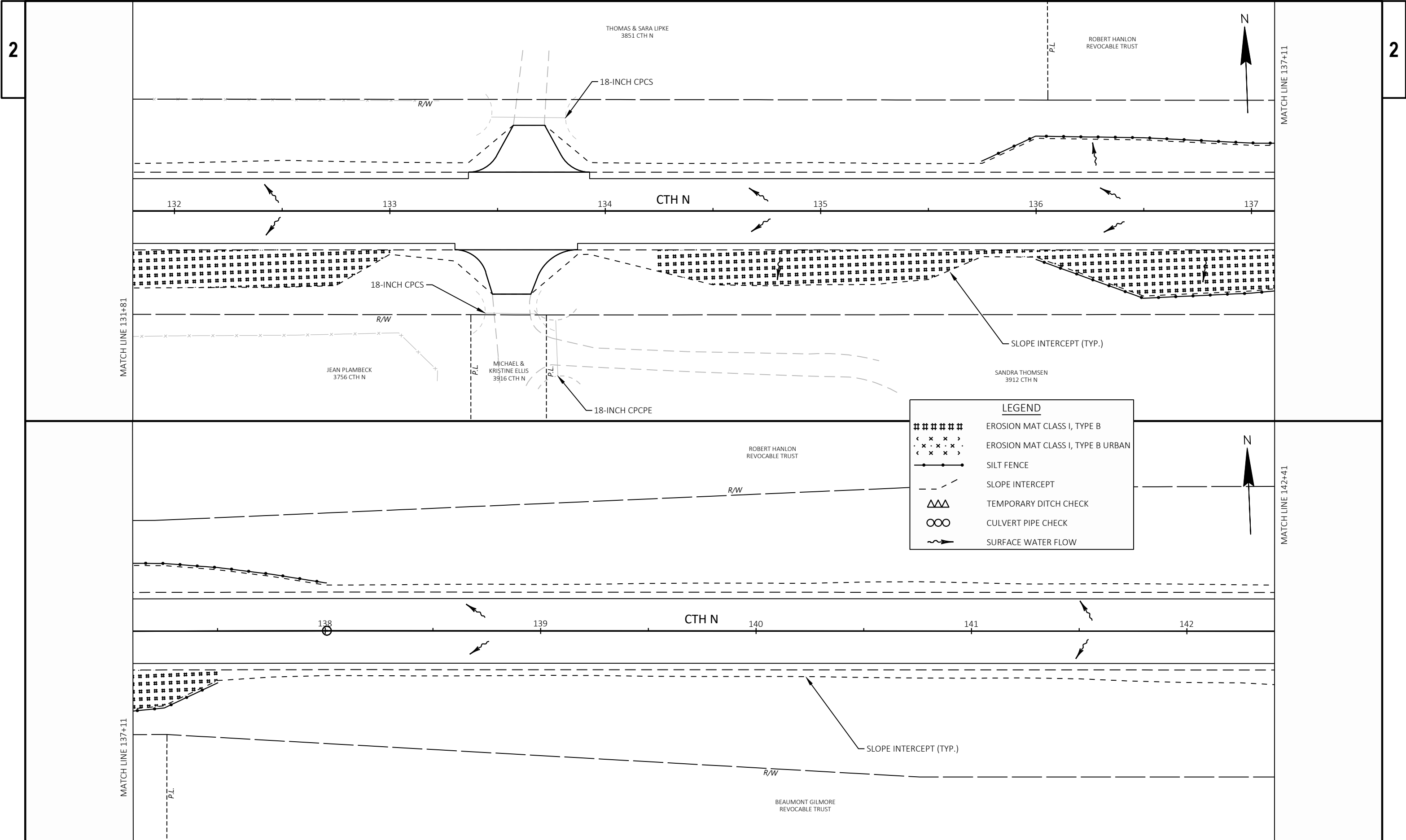


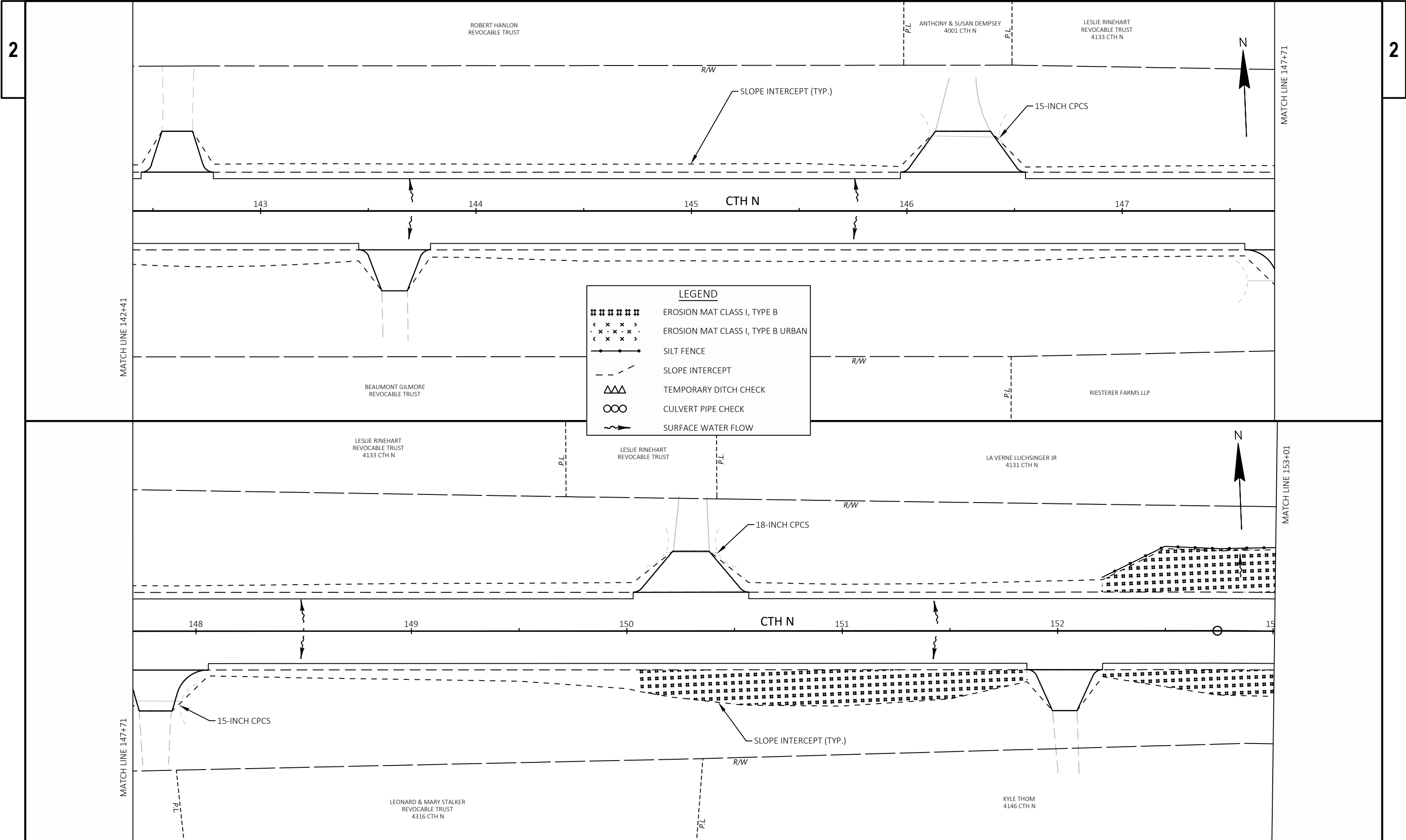


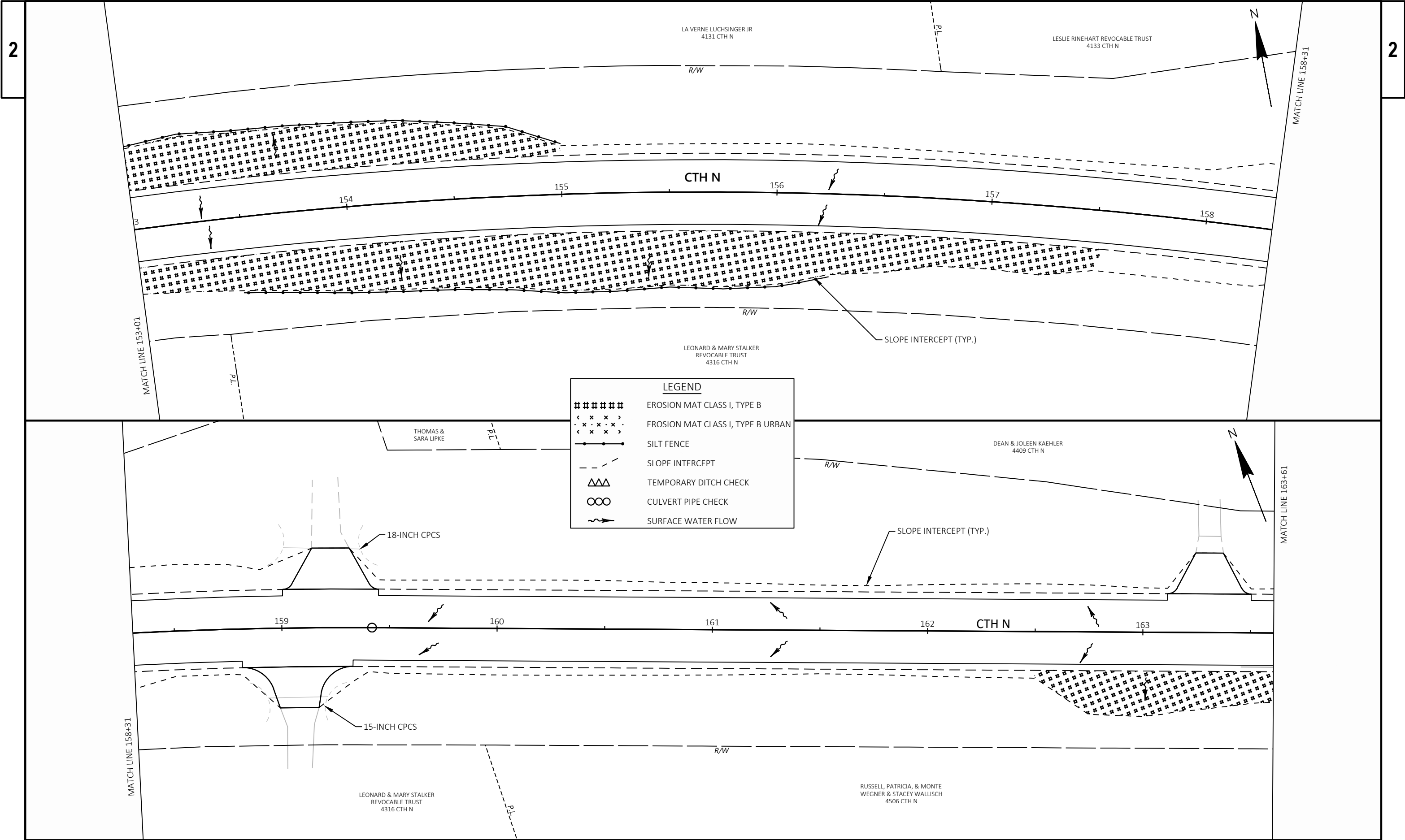


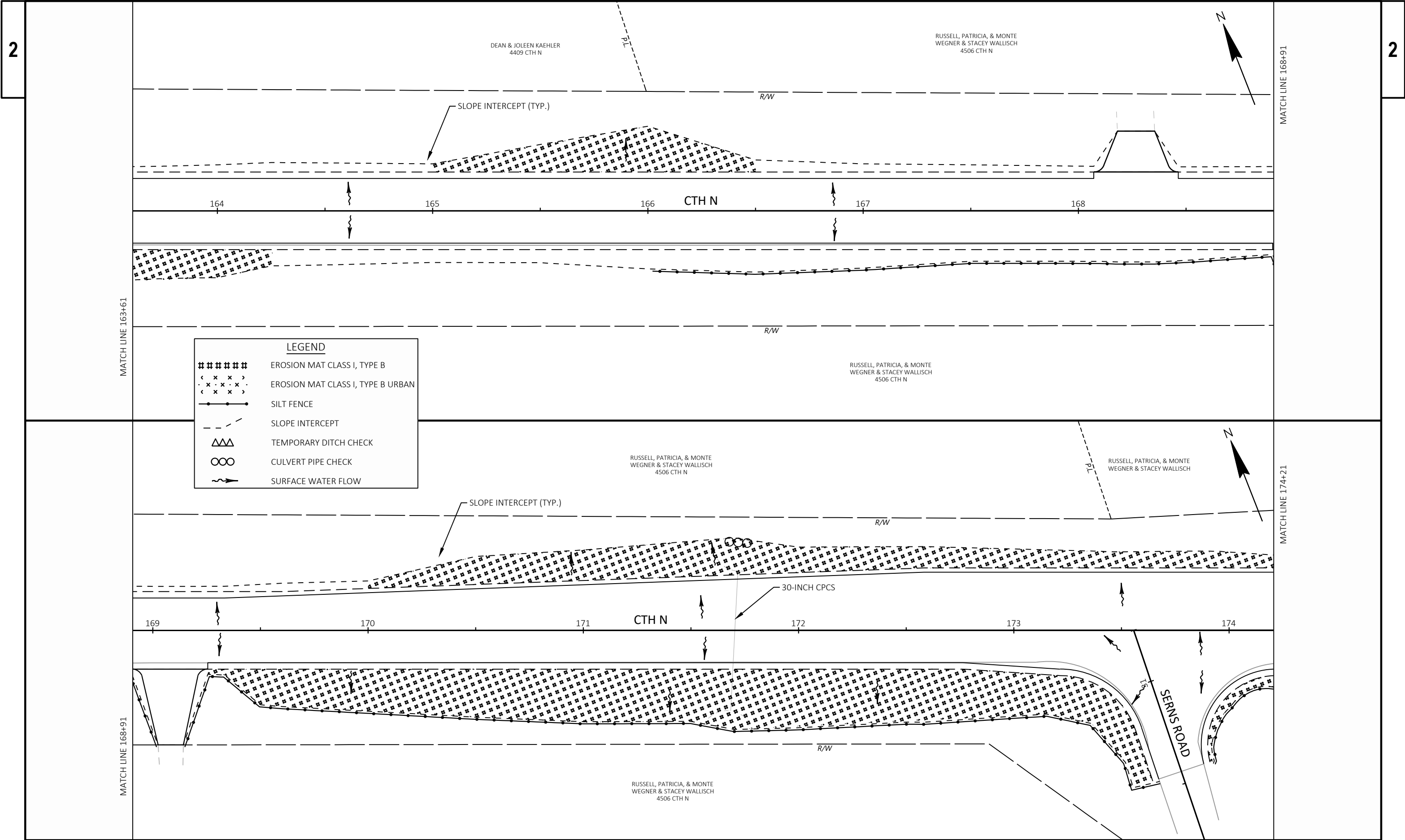


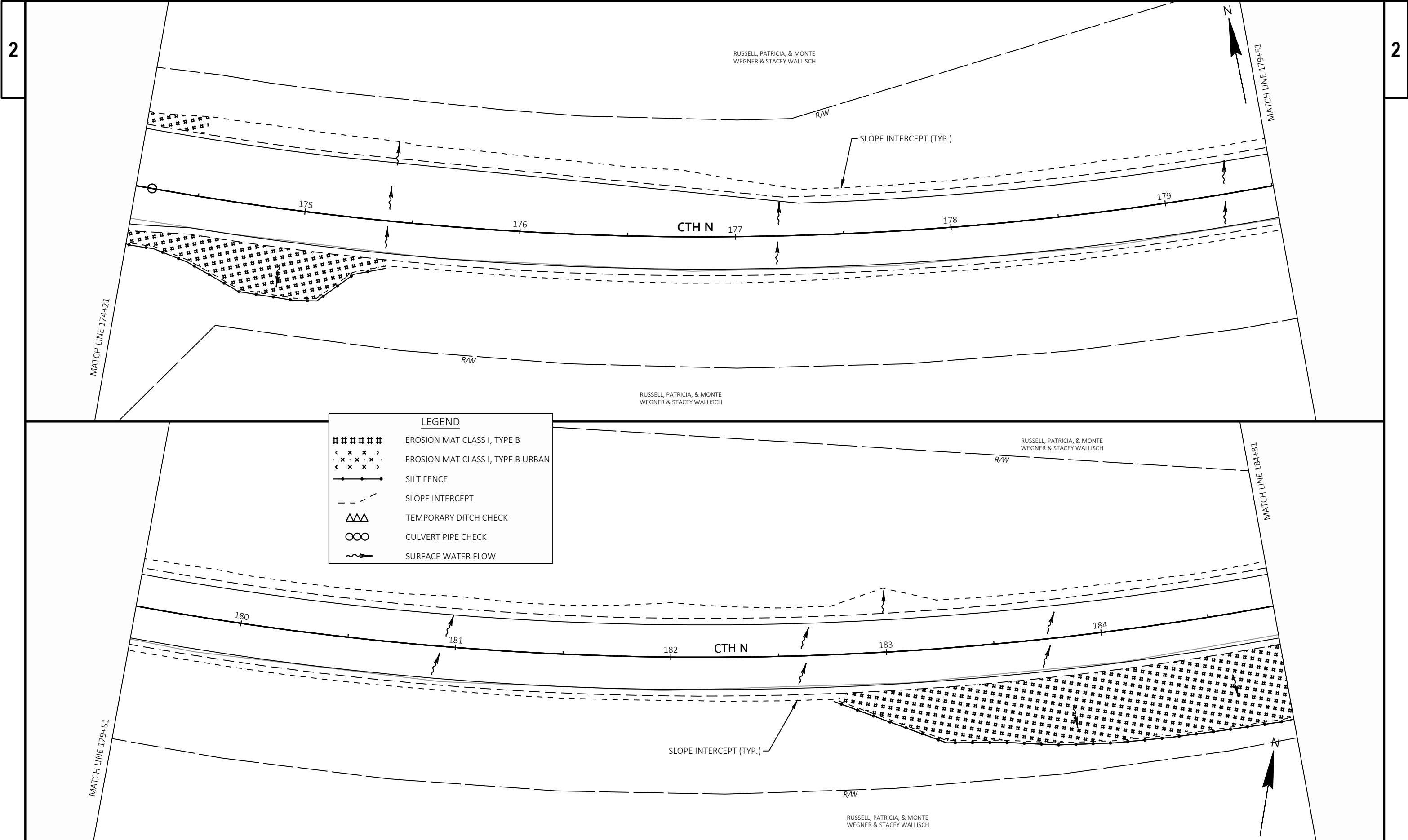


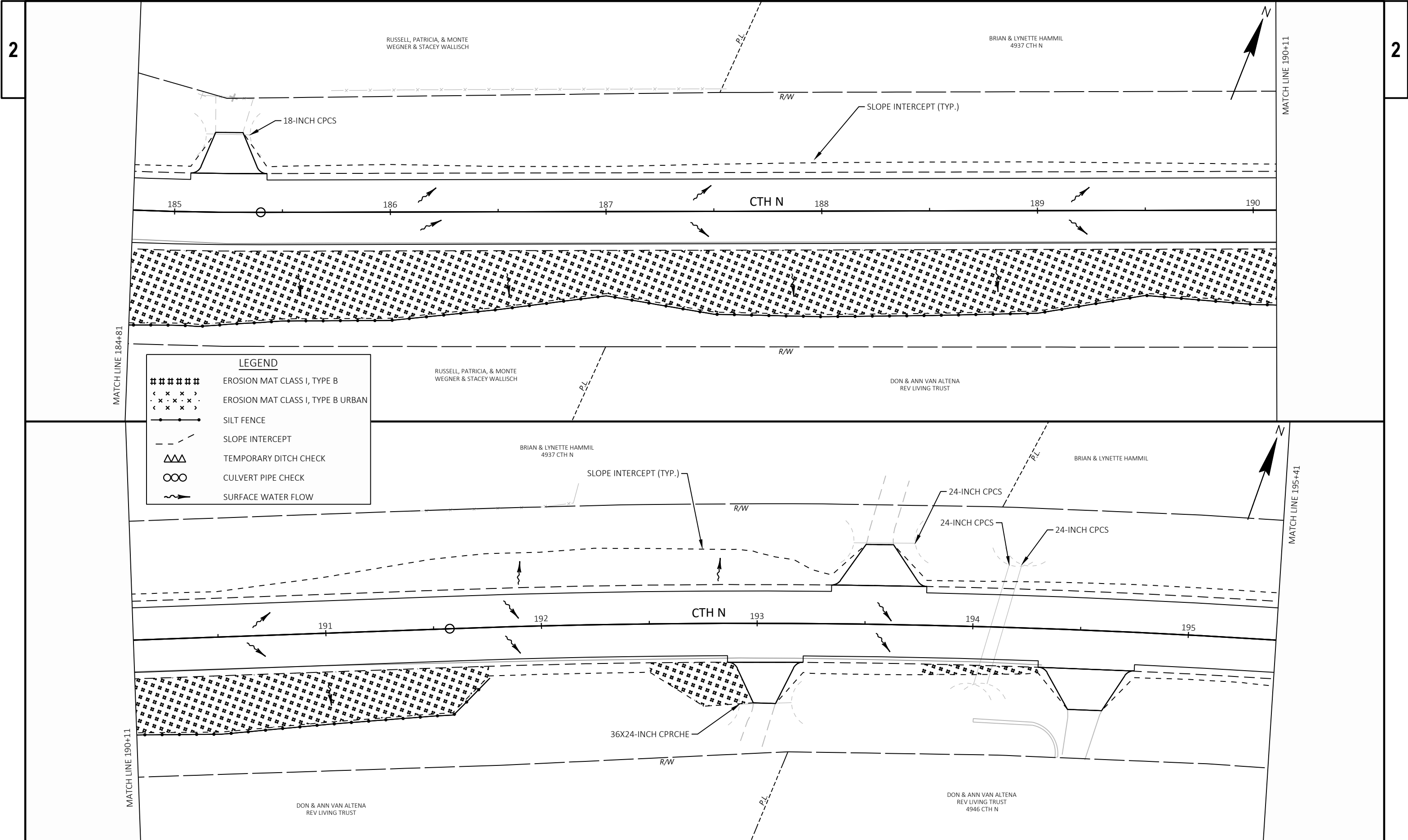


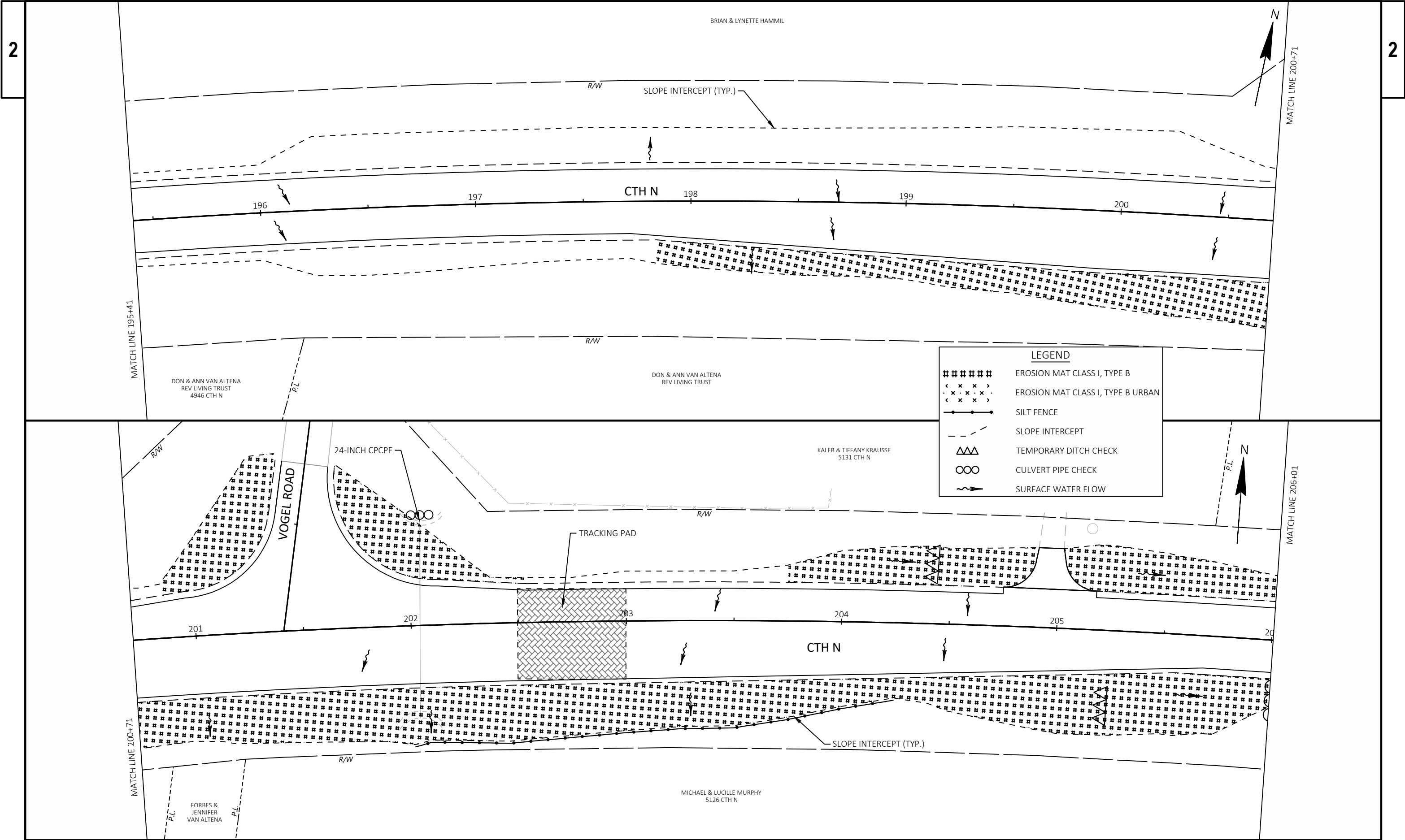


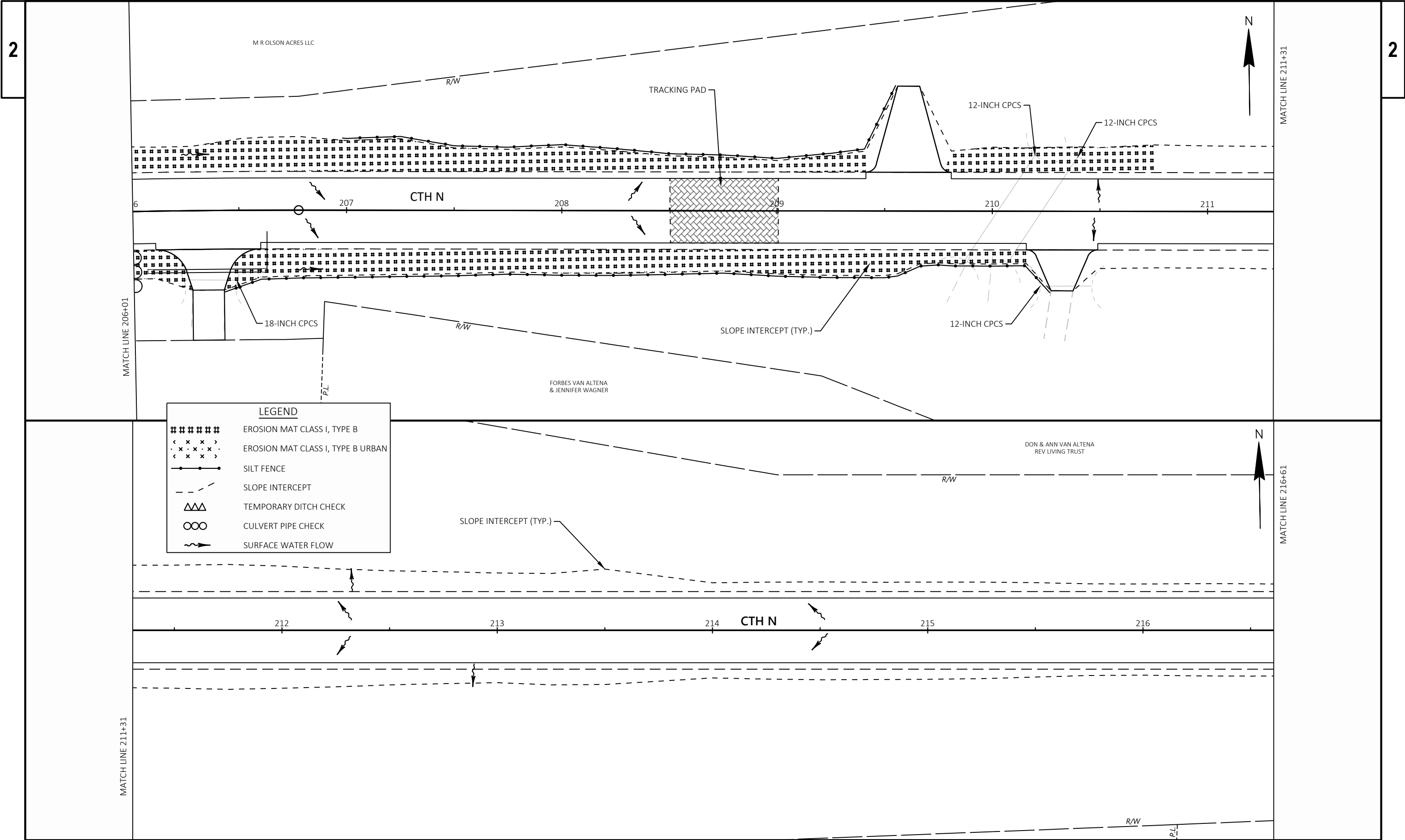


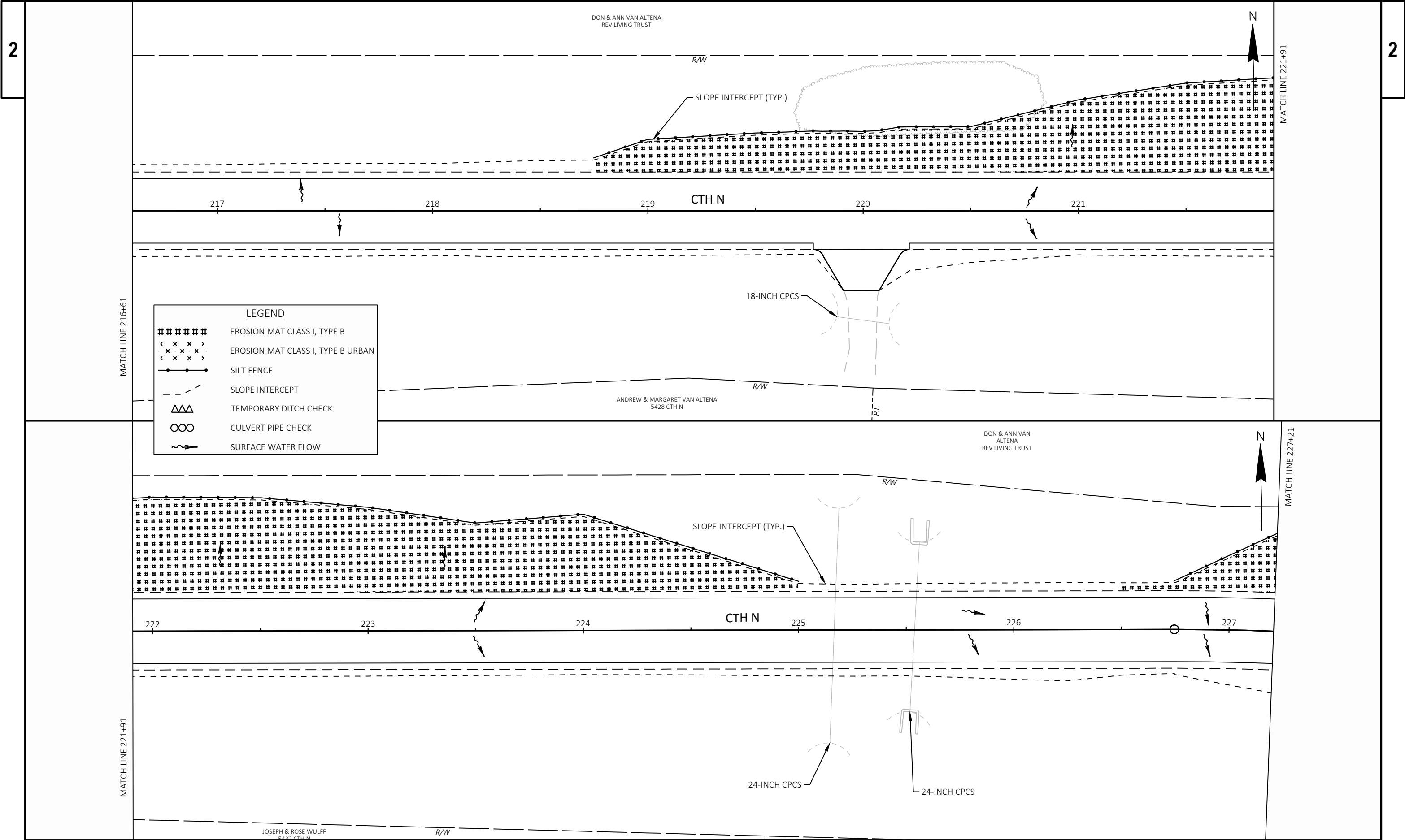


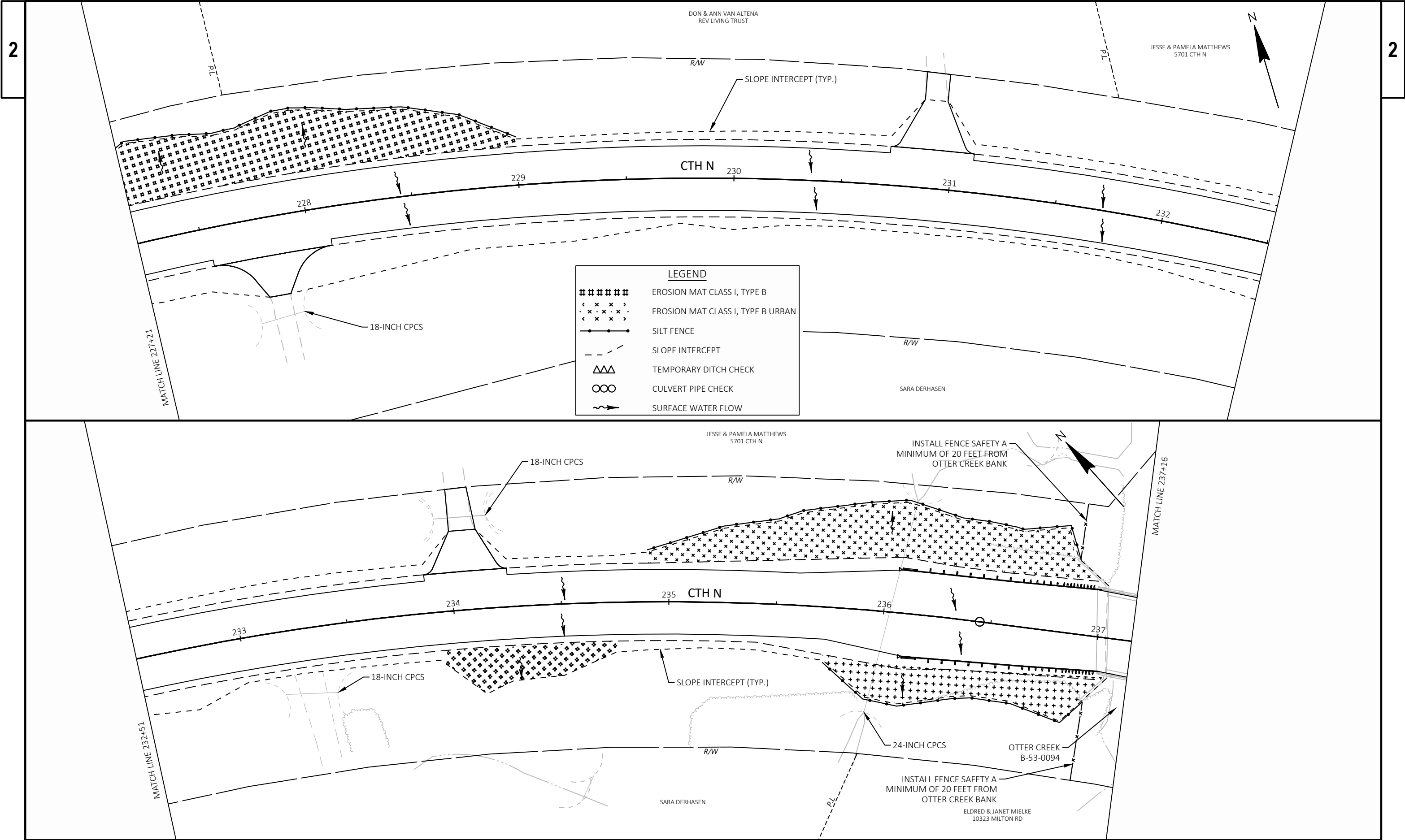


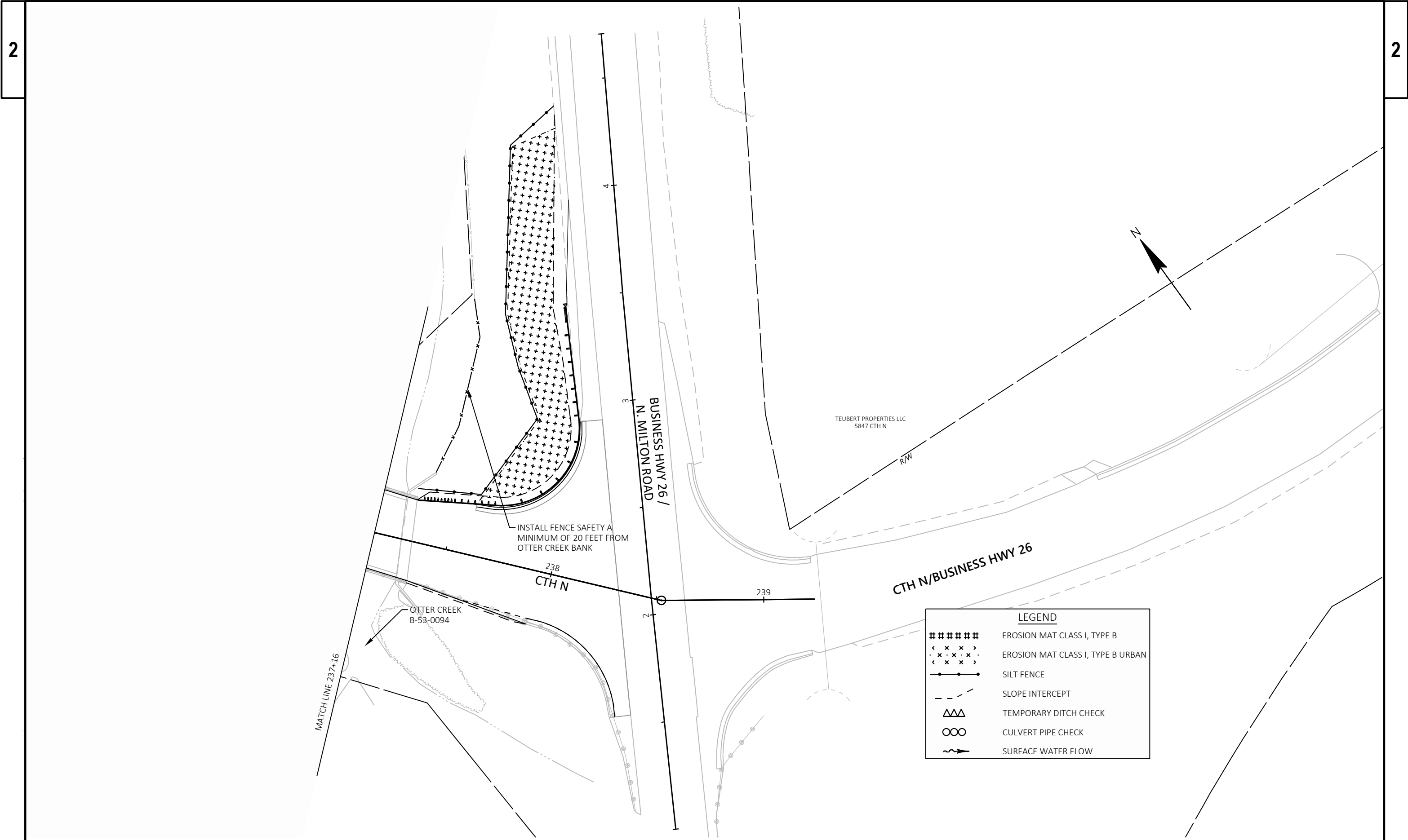


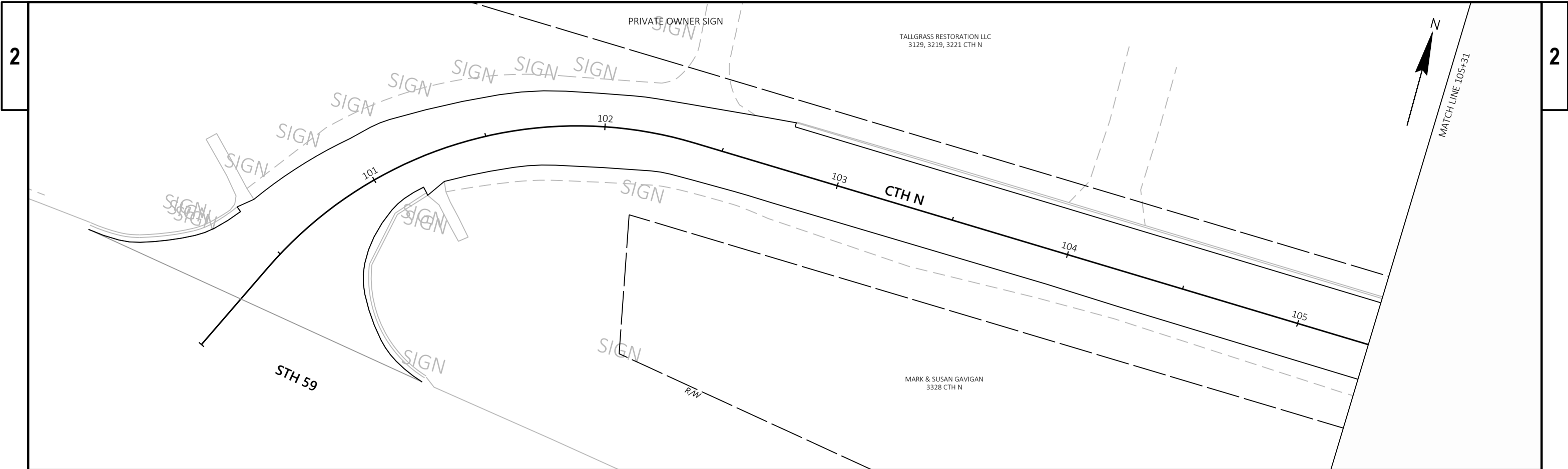










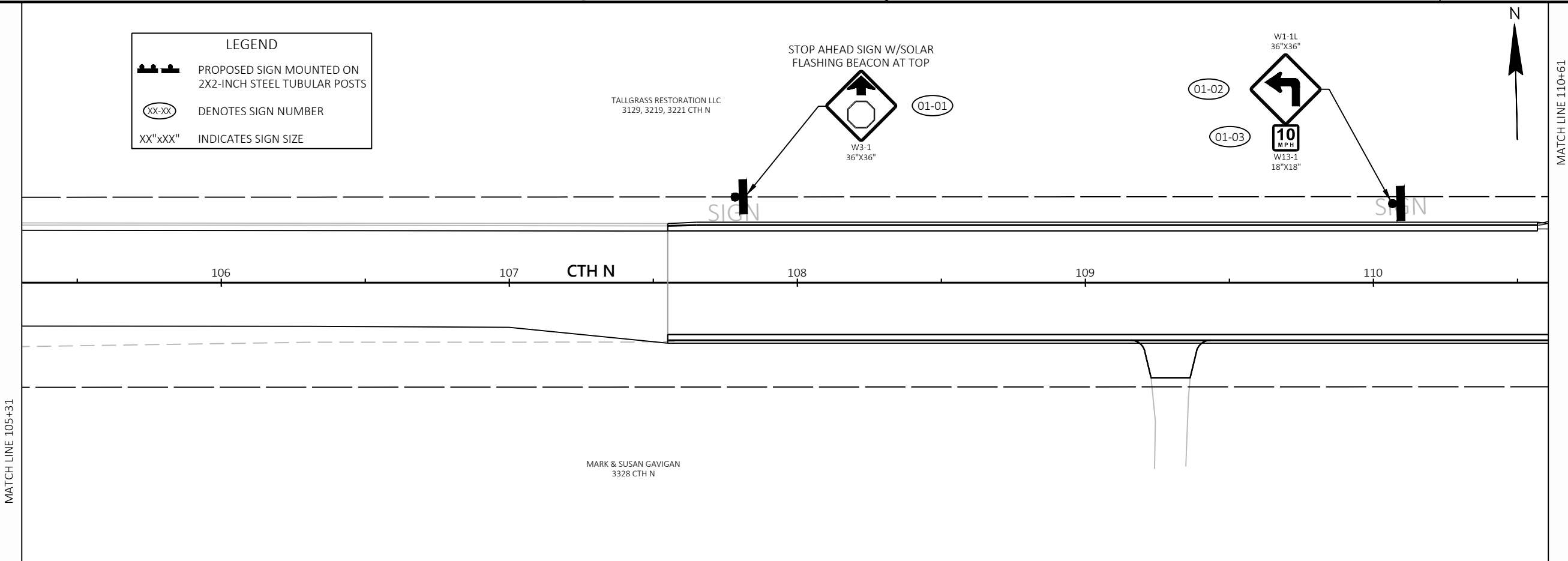


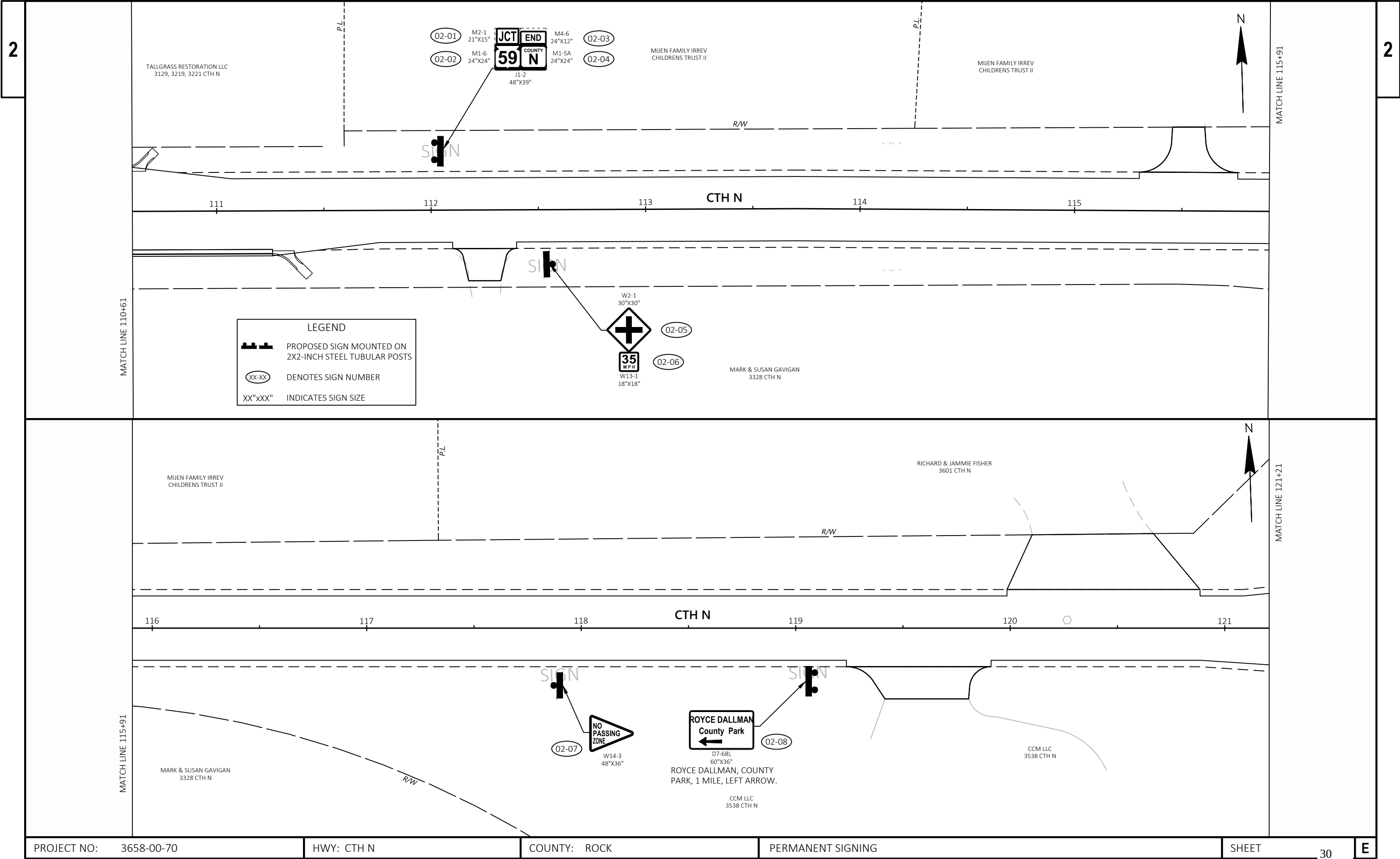
LEGEND

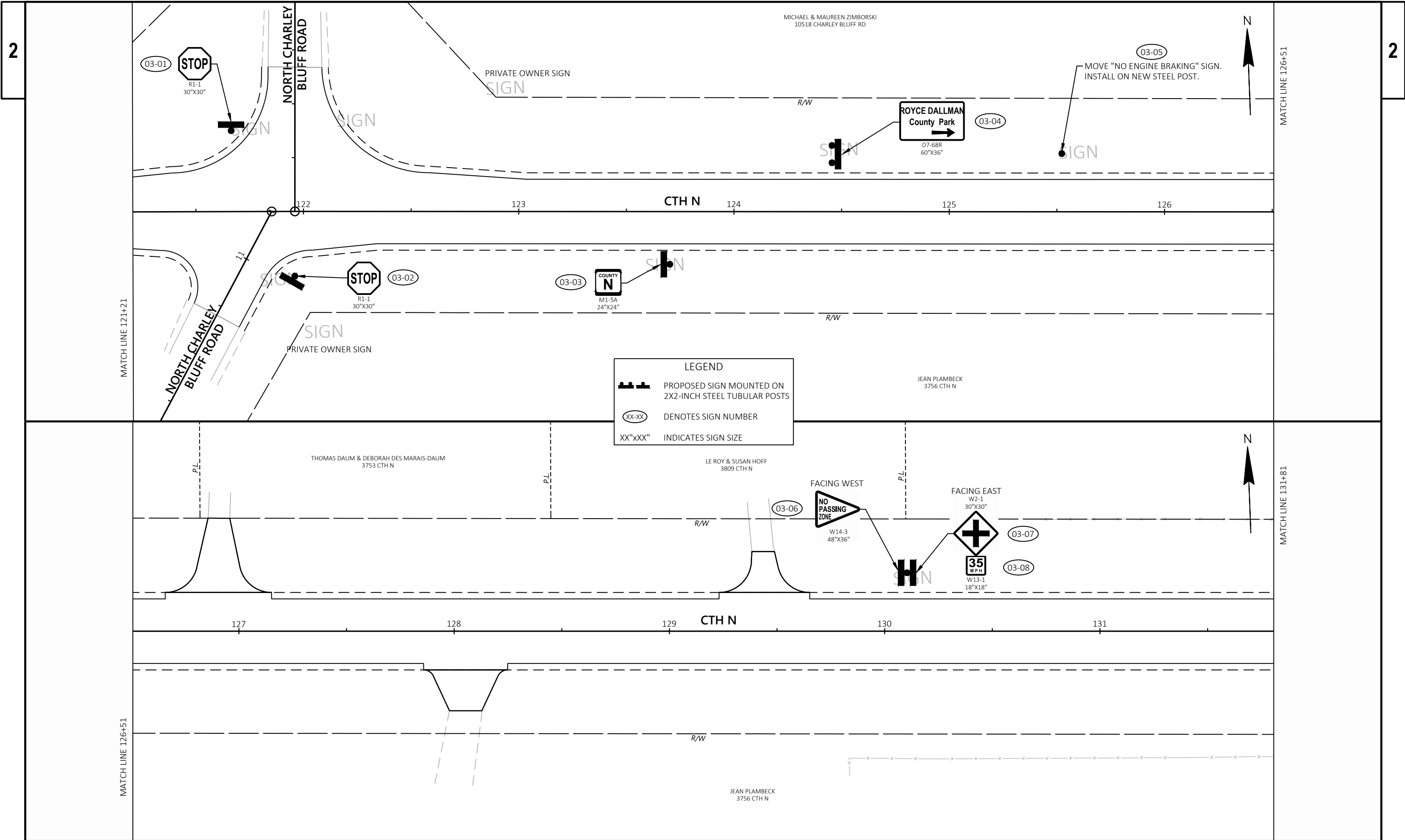
PROPOSED SIGN MOUNTED ON 2X2-INCH STEEL TUBULAR POSTS

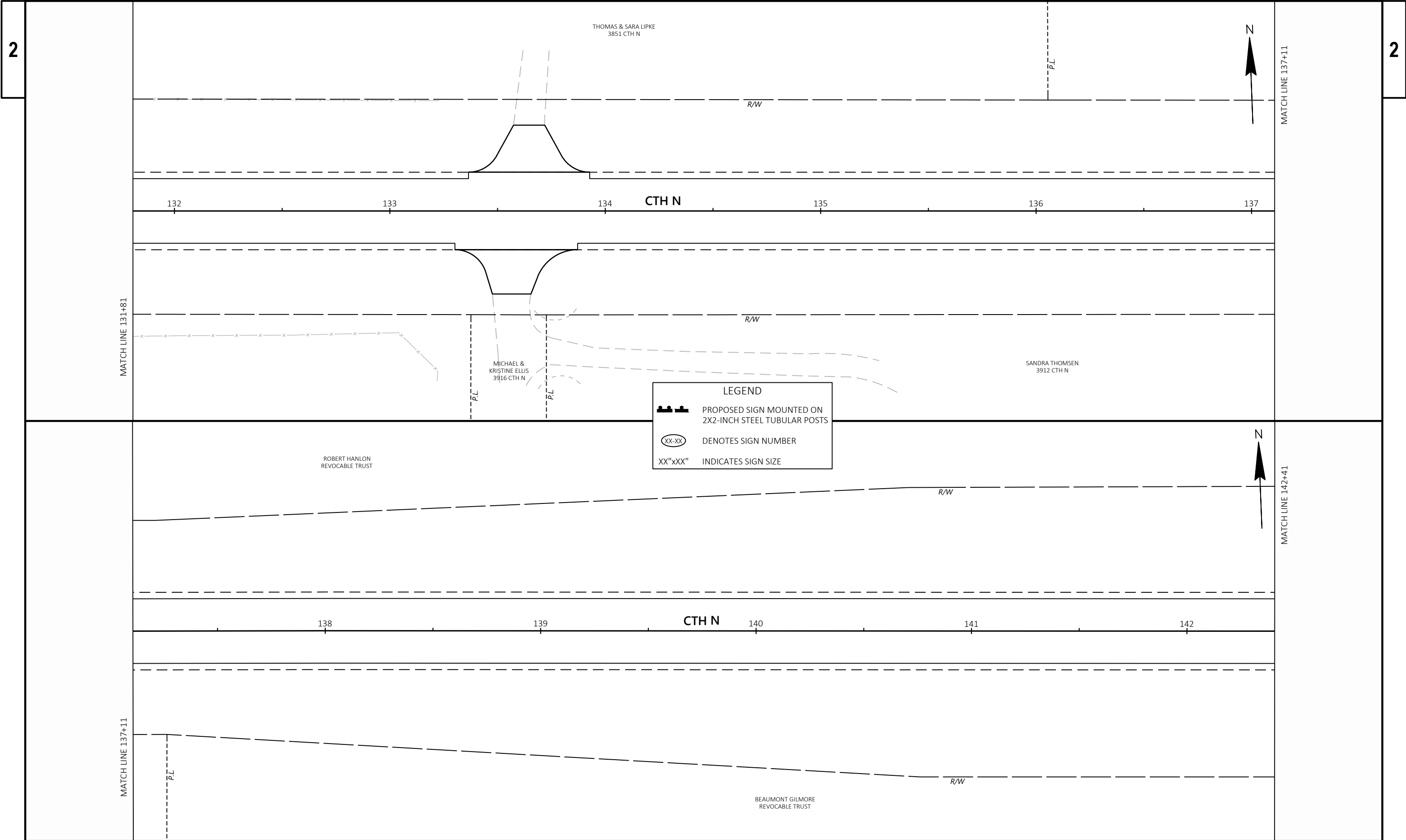
DENOTES SIGN NUMBER

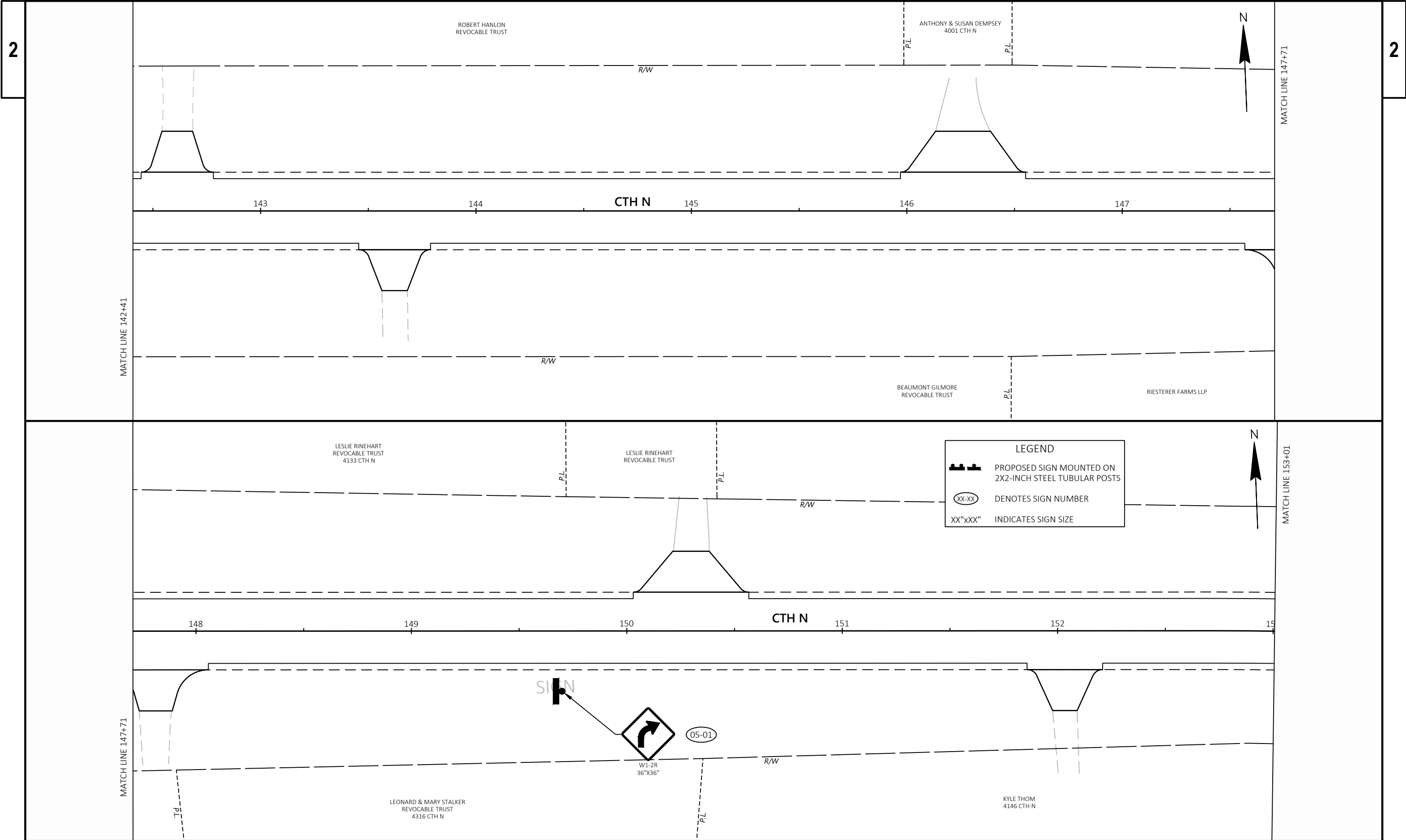
XX"XXX" INDICATES SIGN SIZE

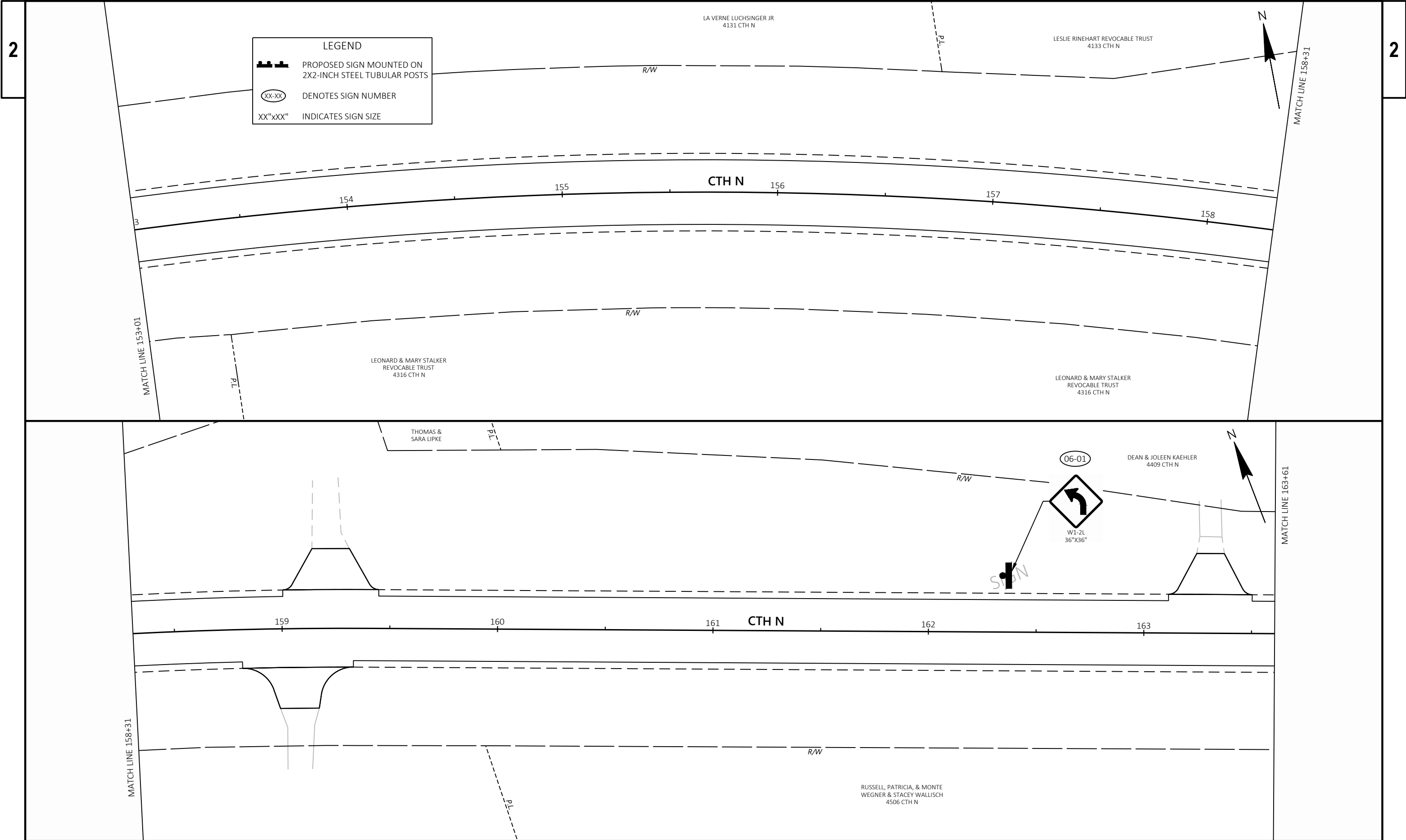


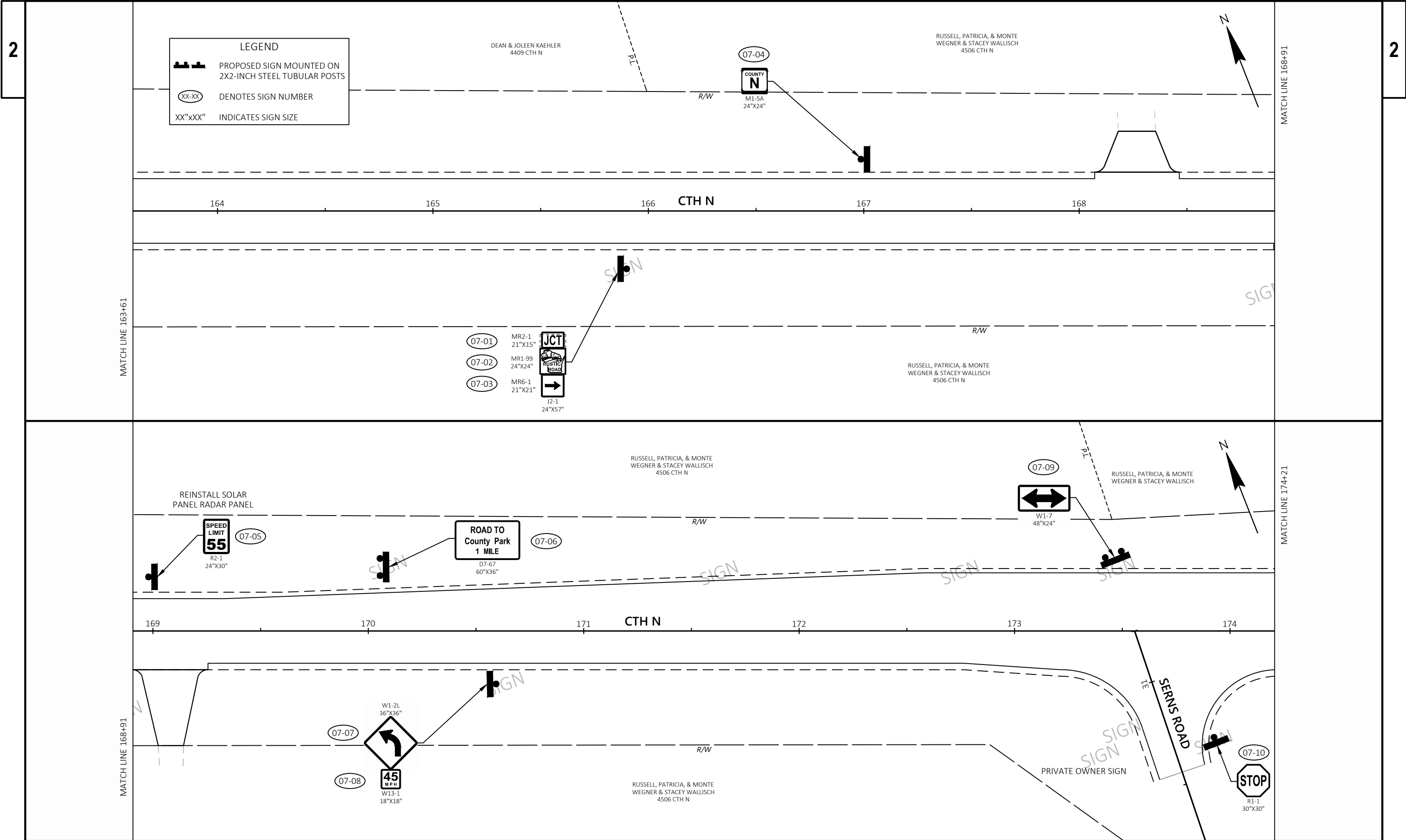


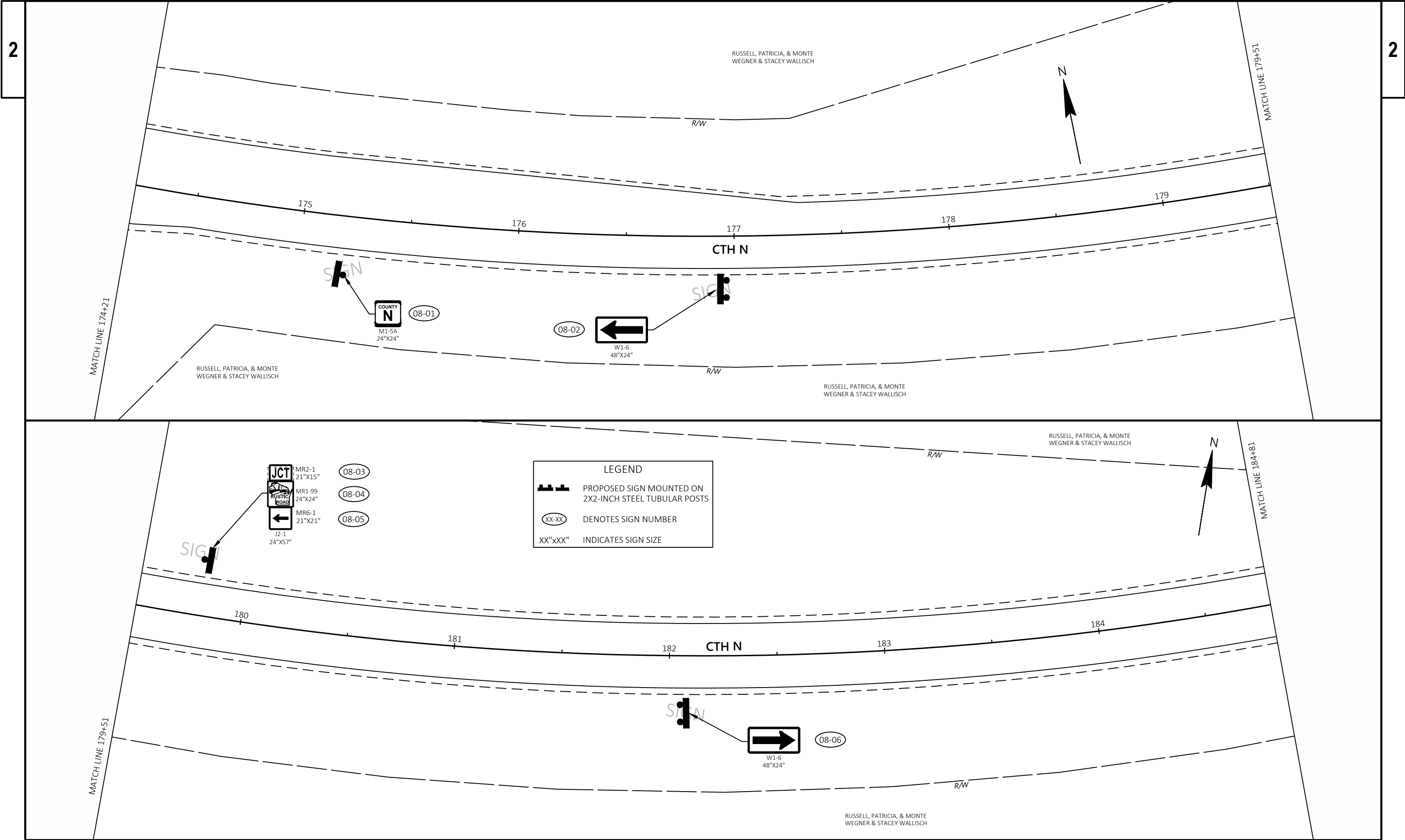


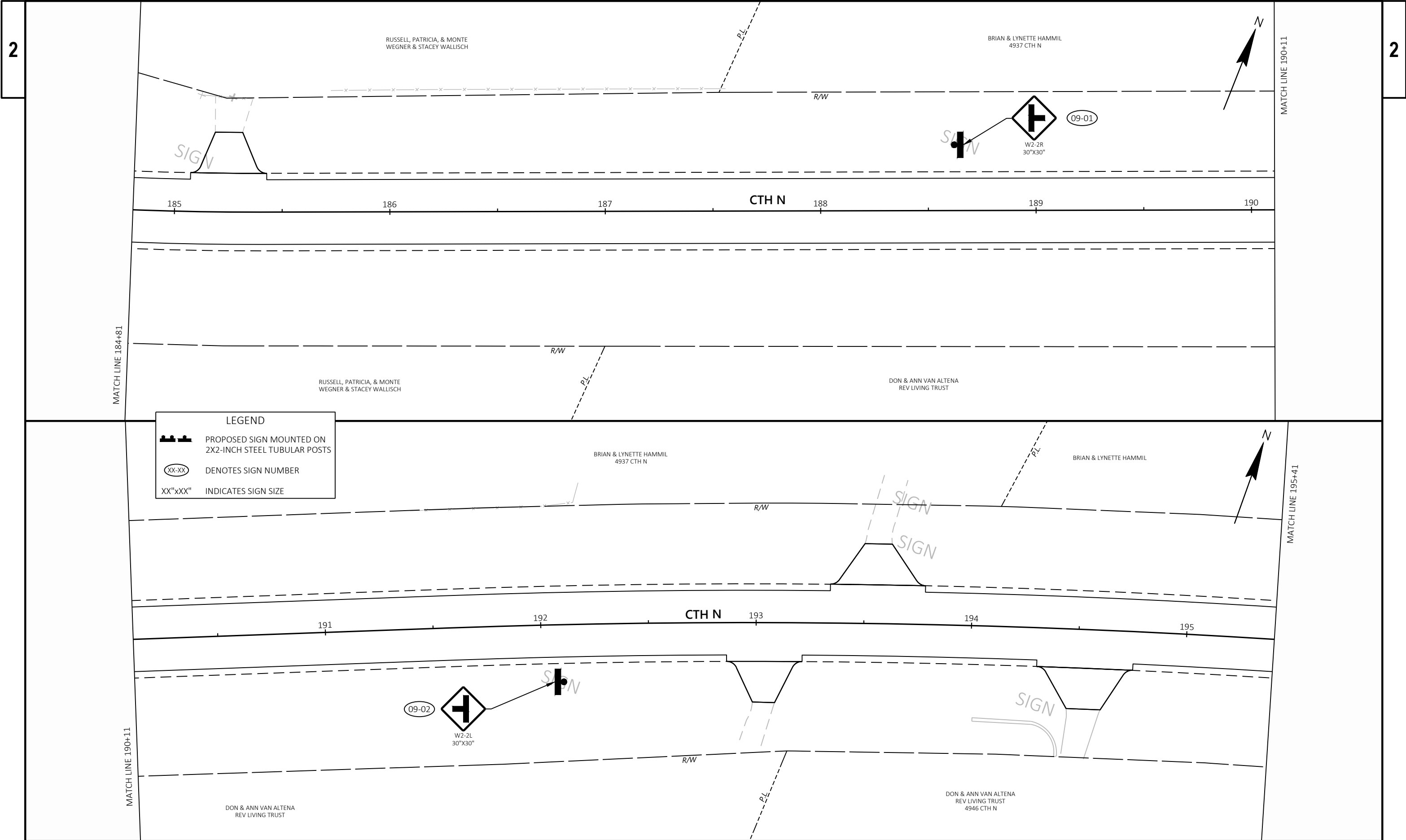


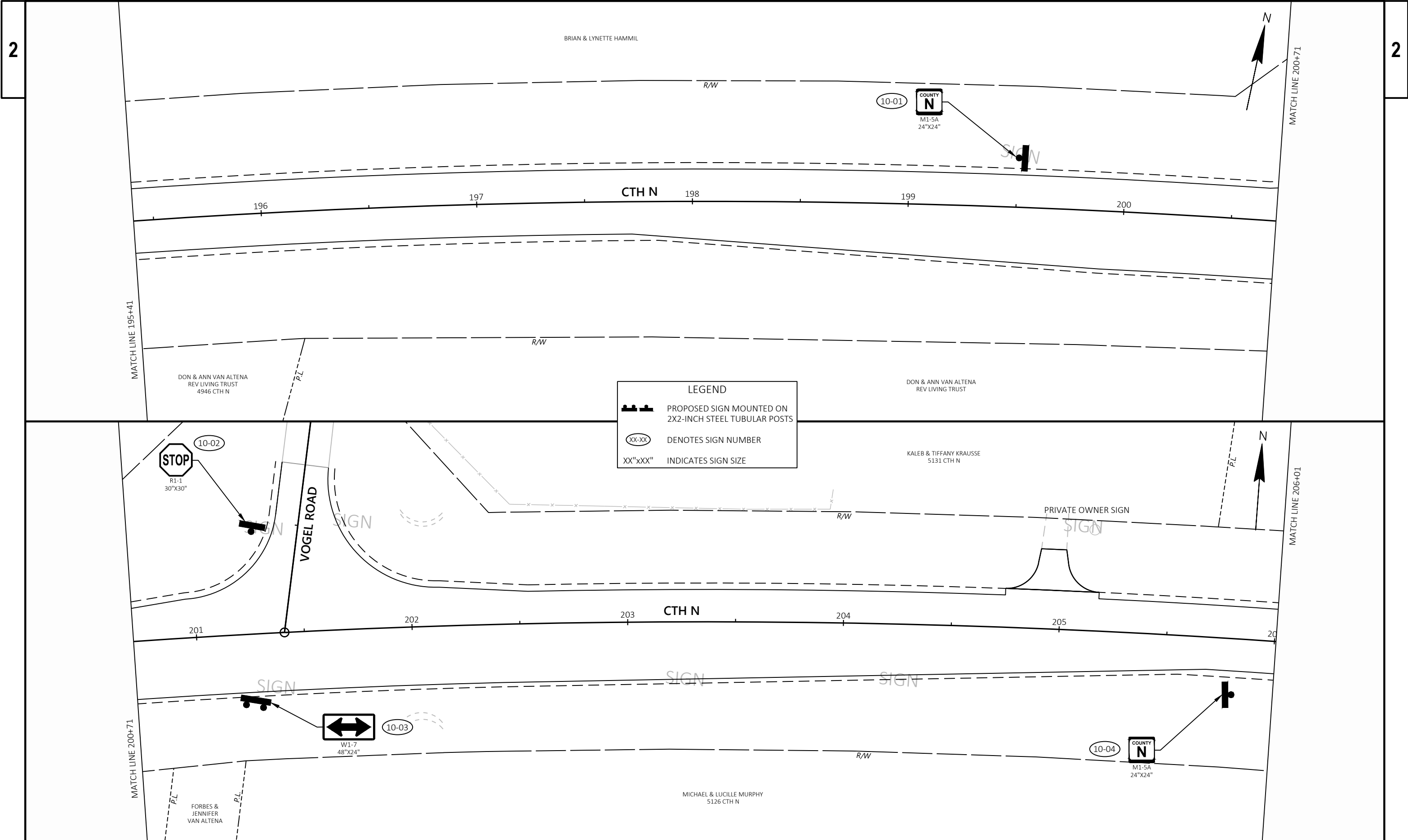


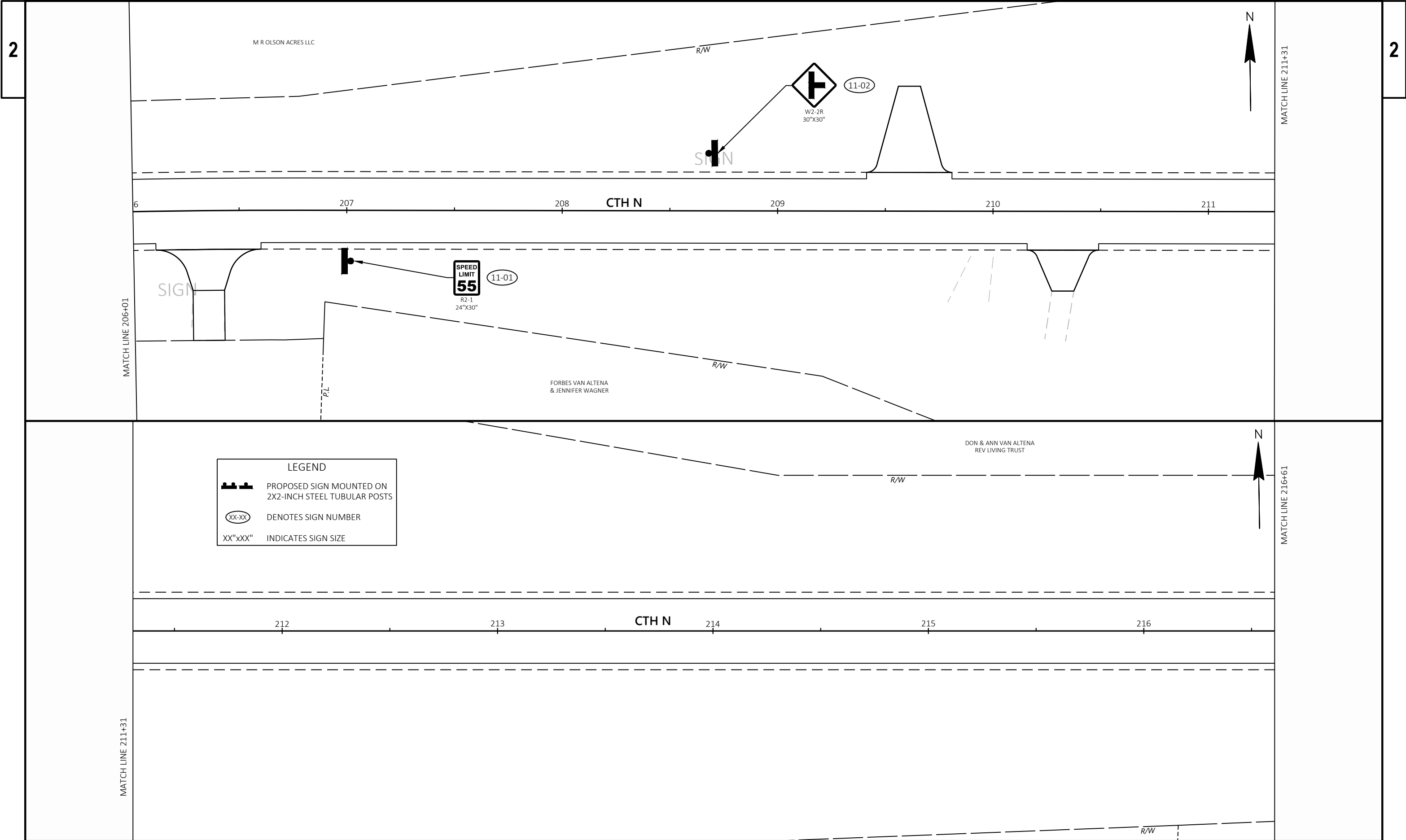


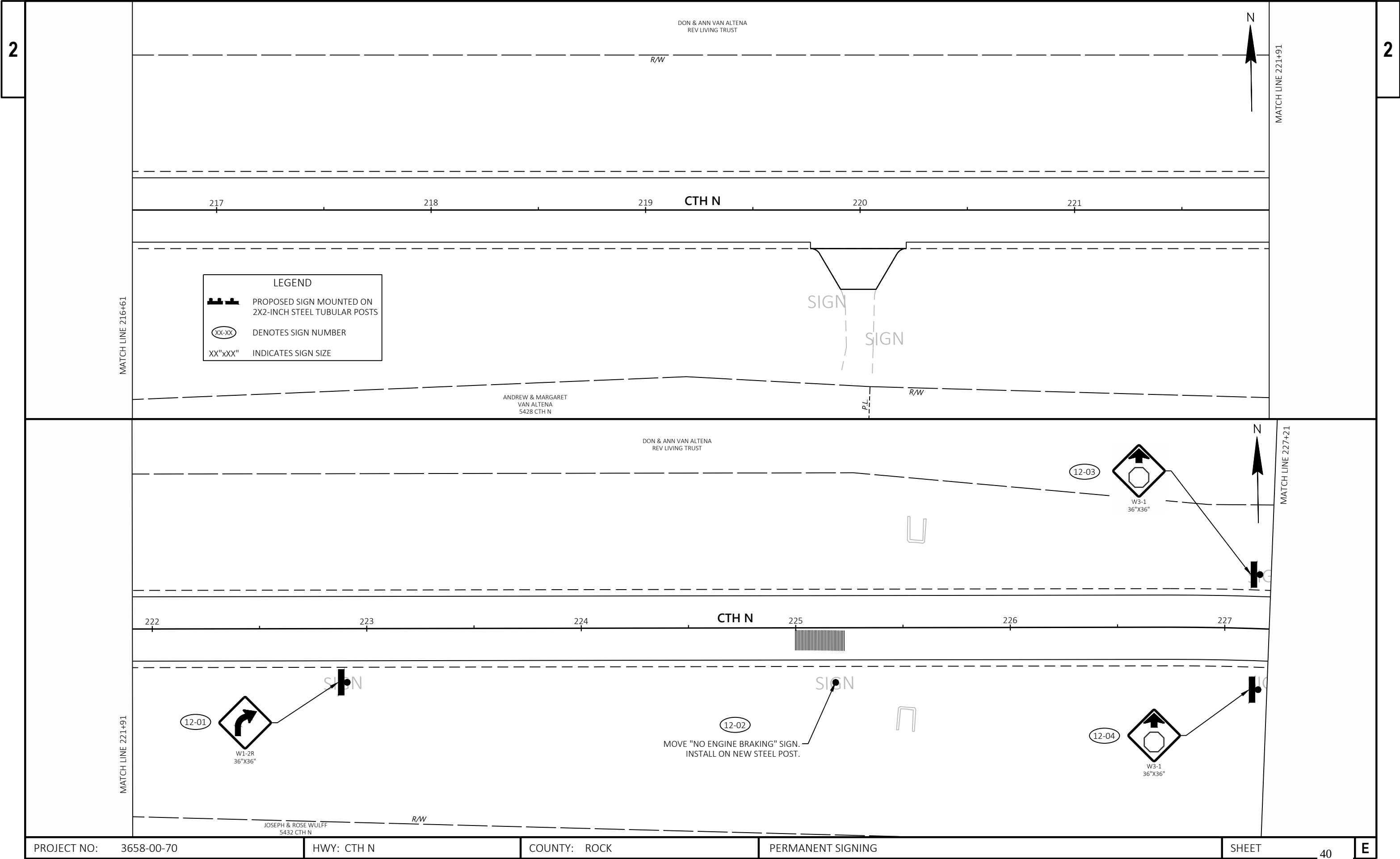


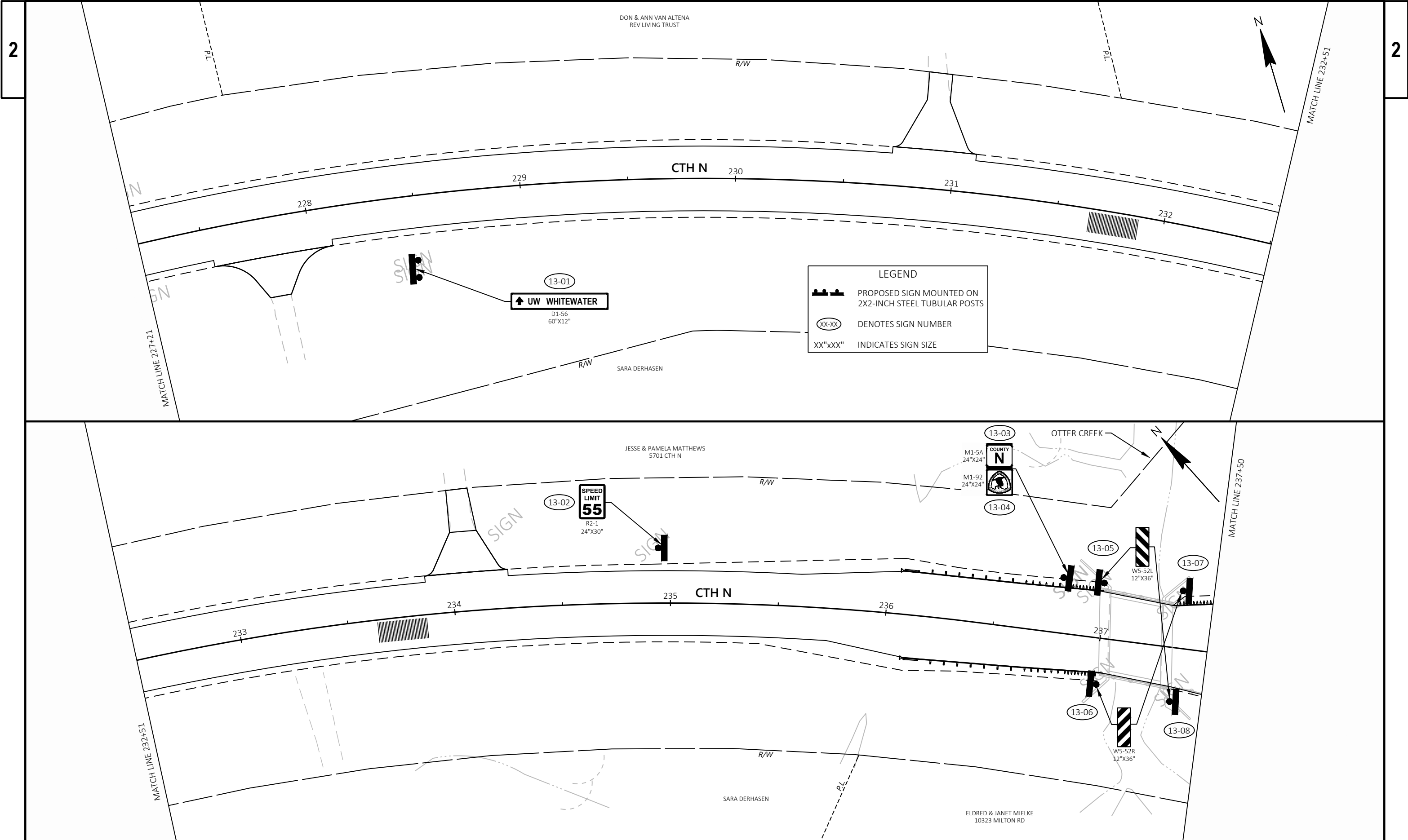


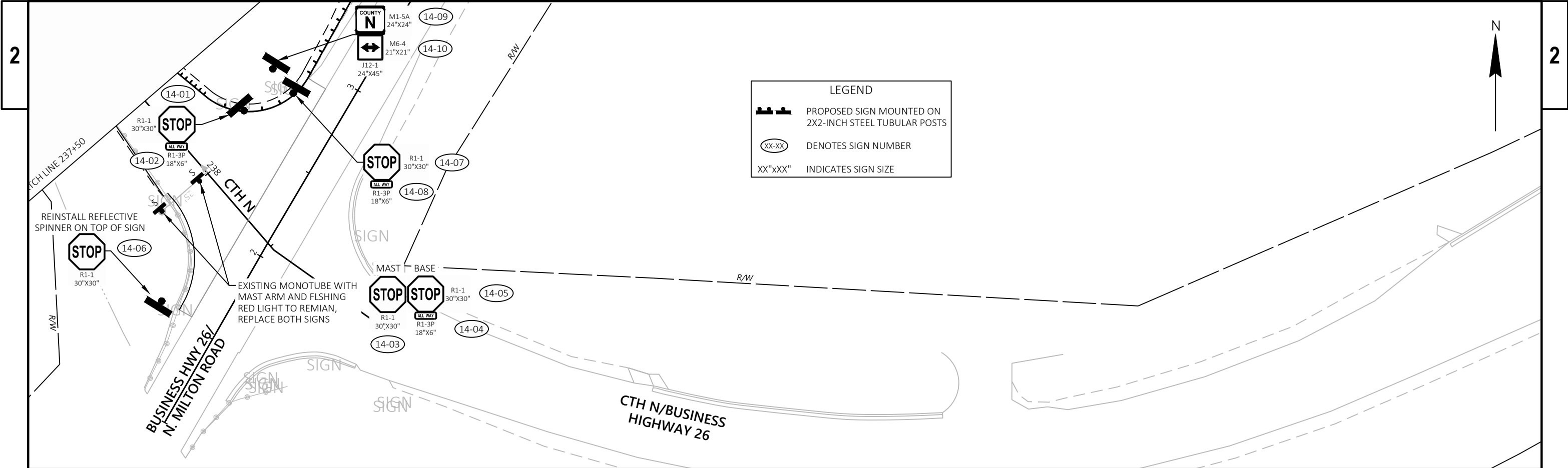


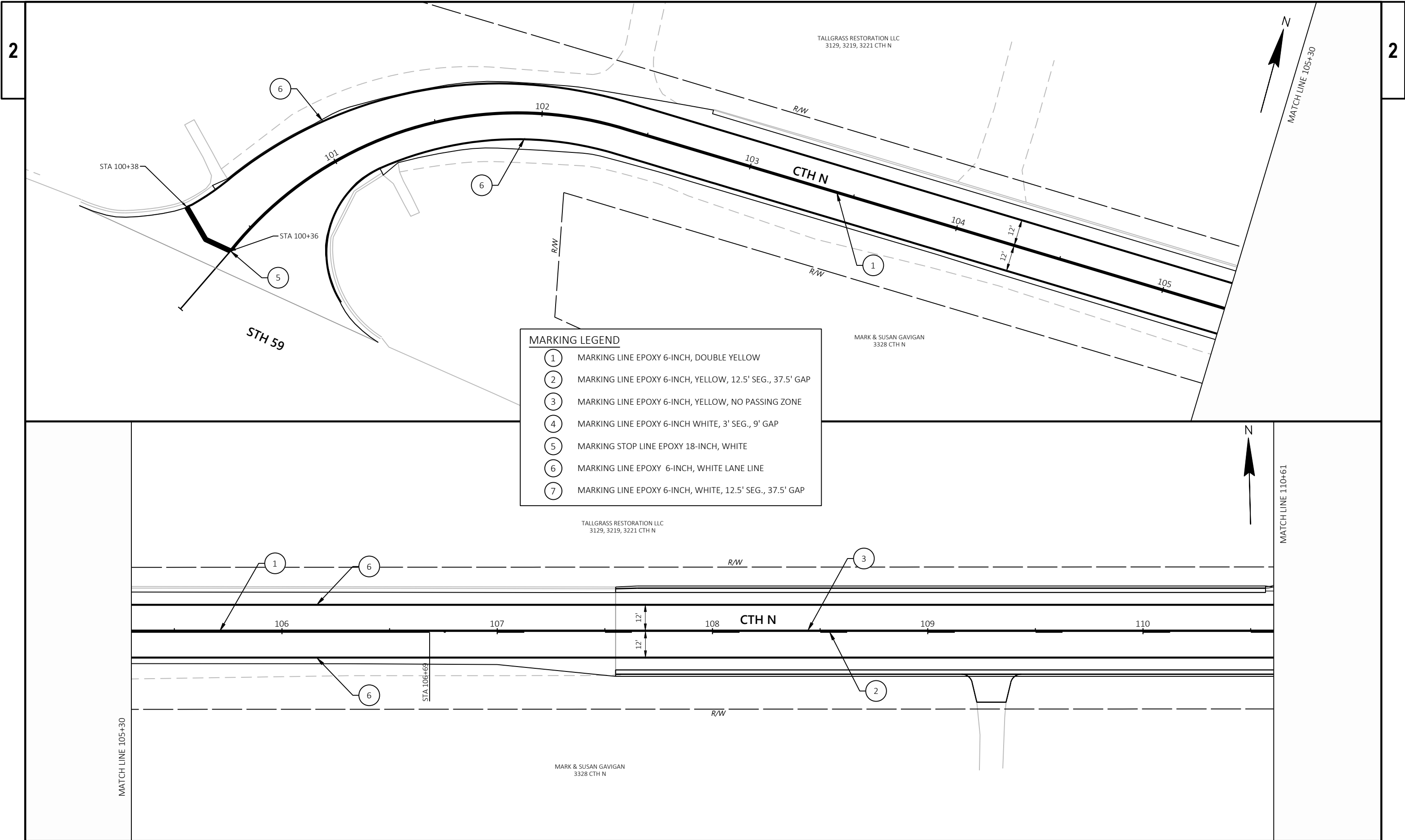


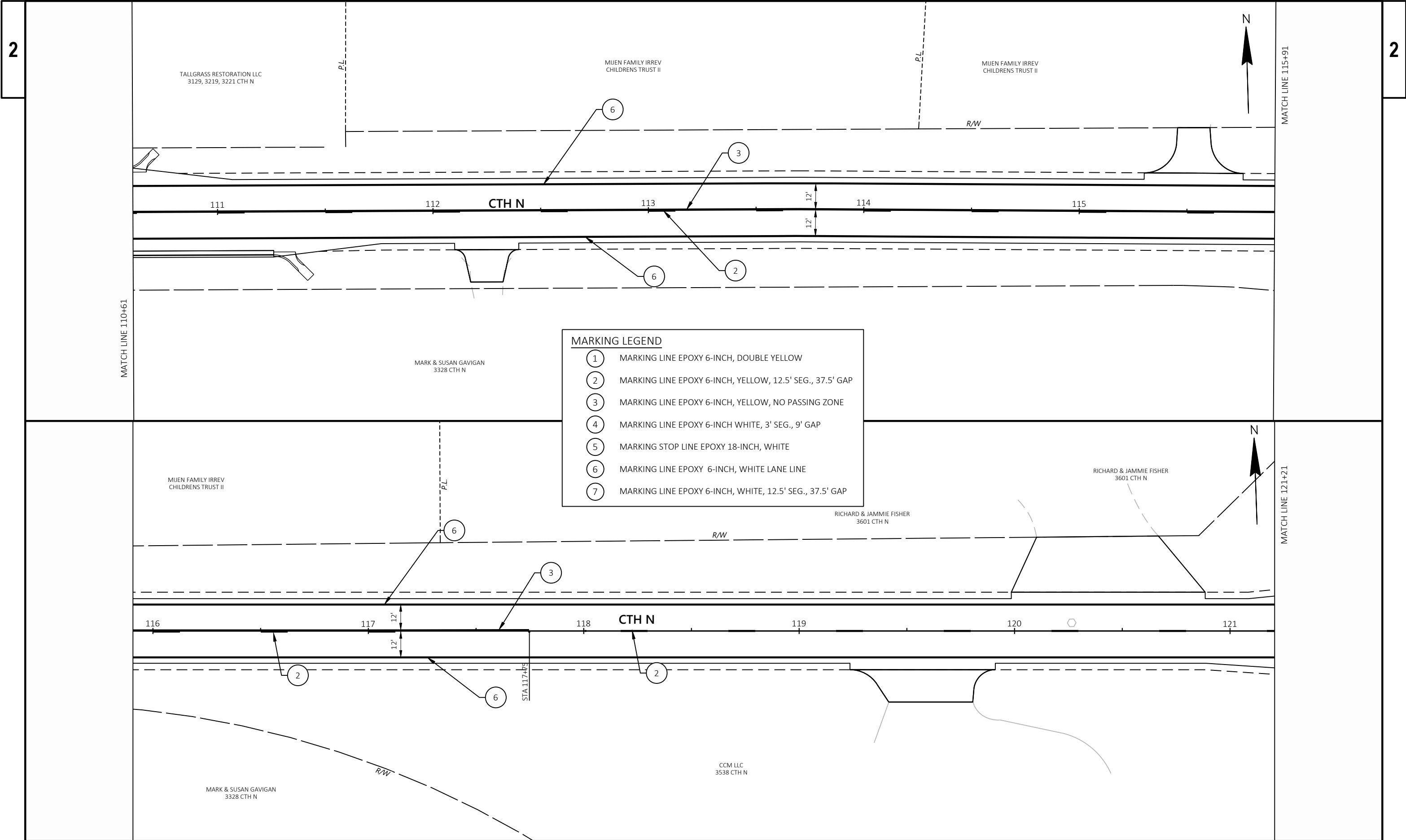


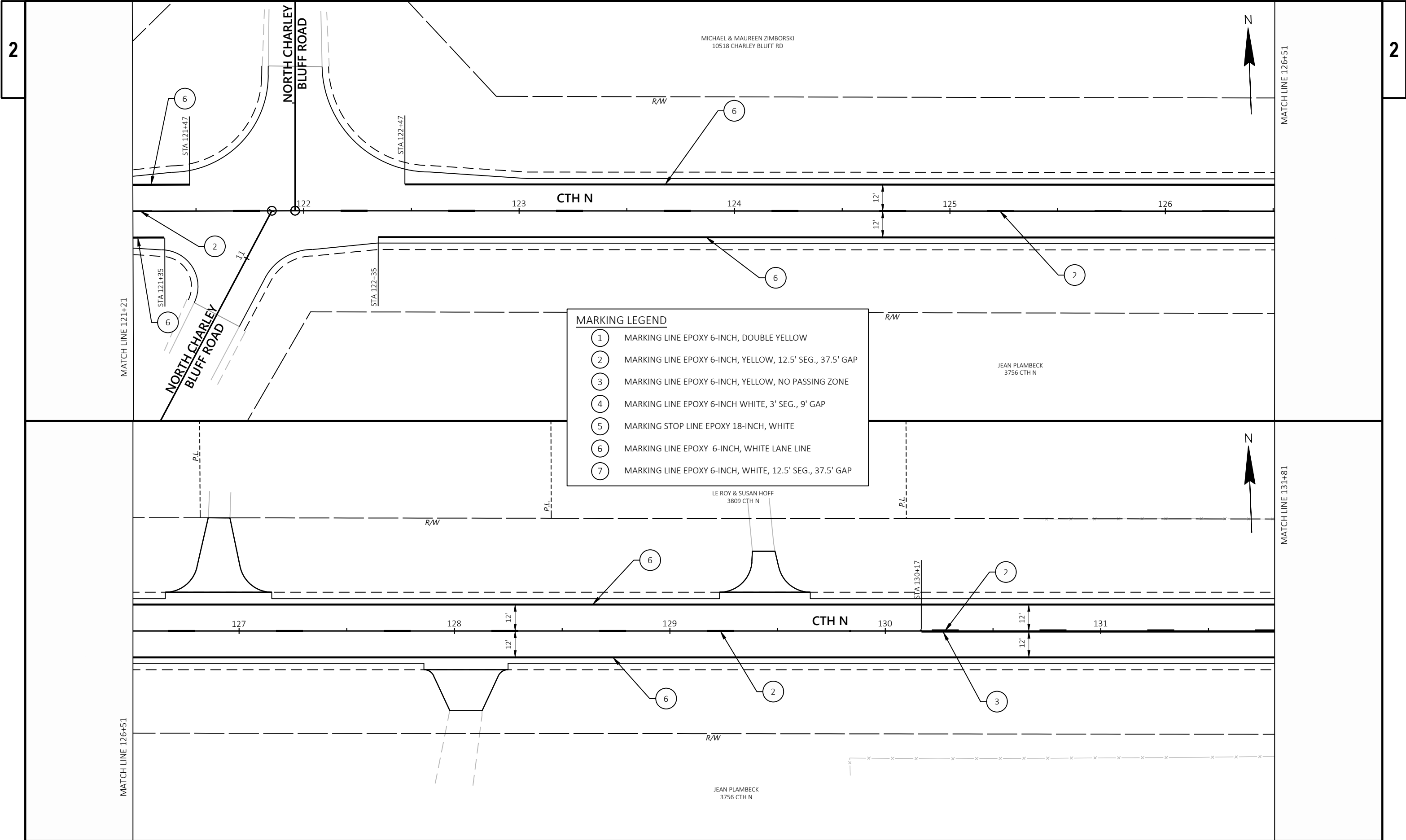


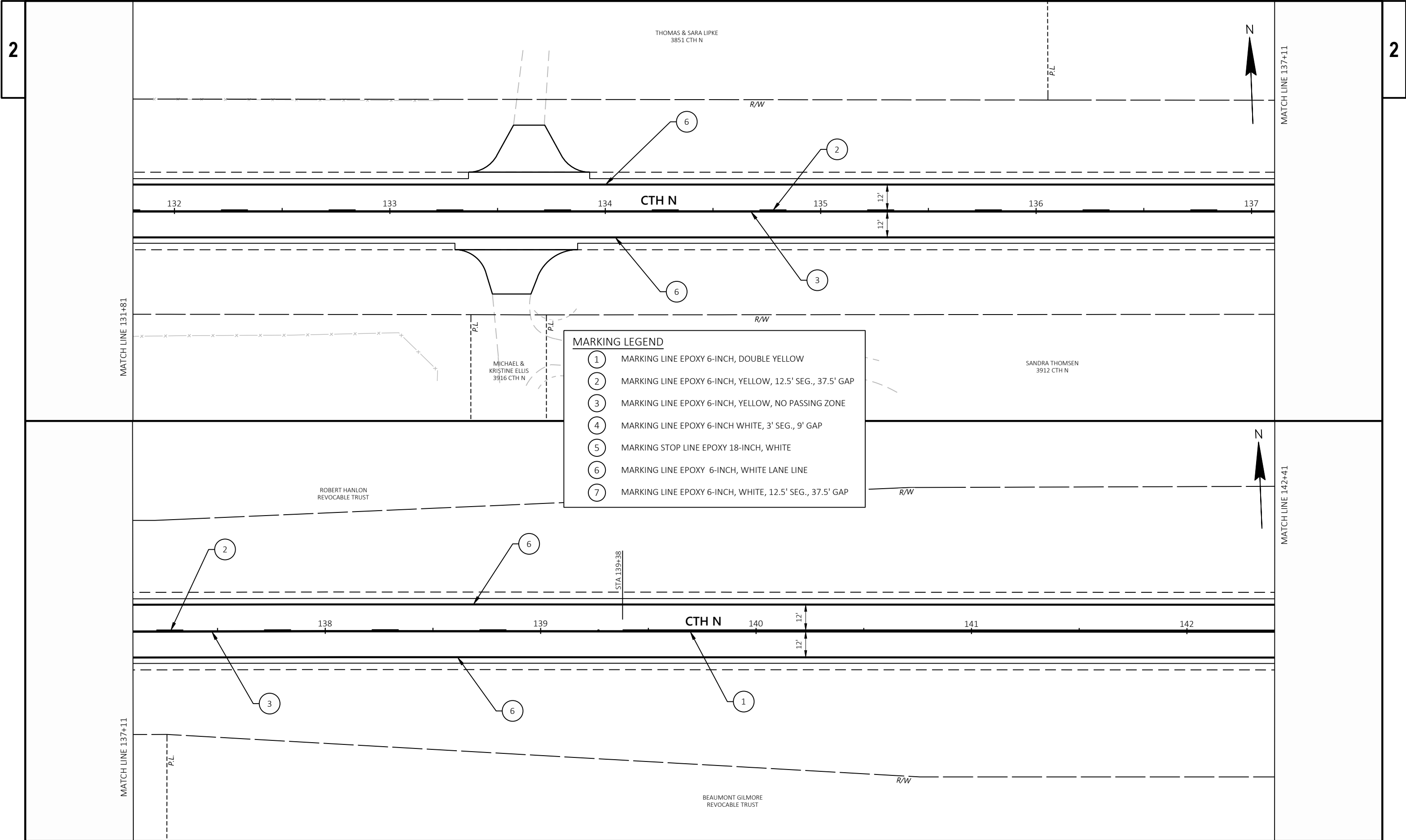


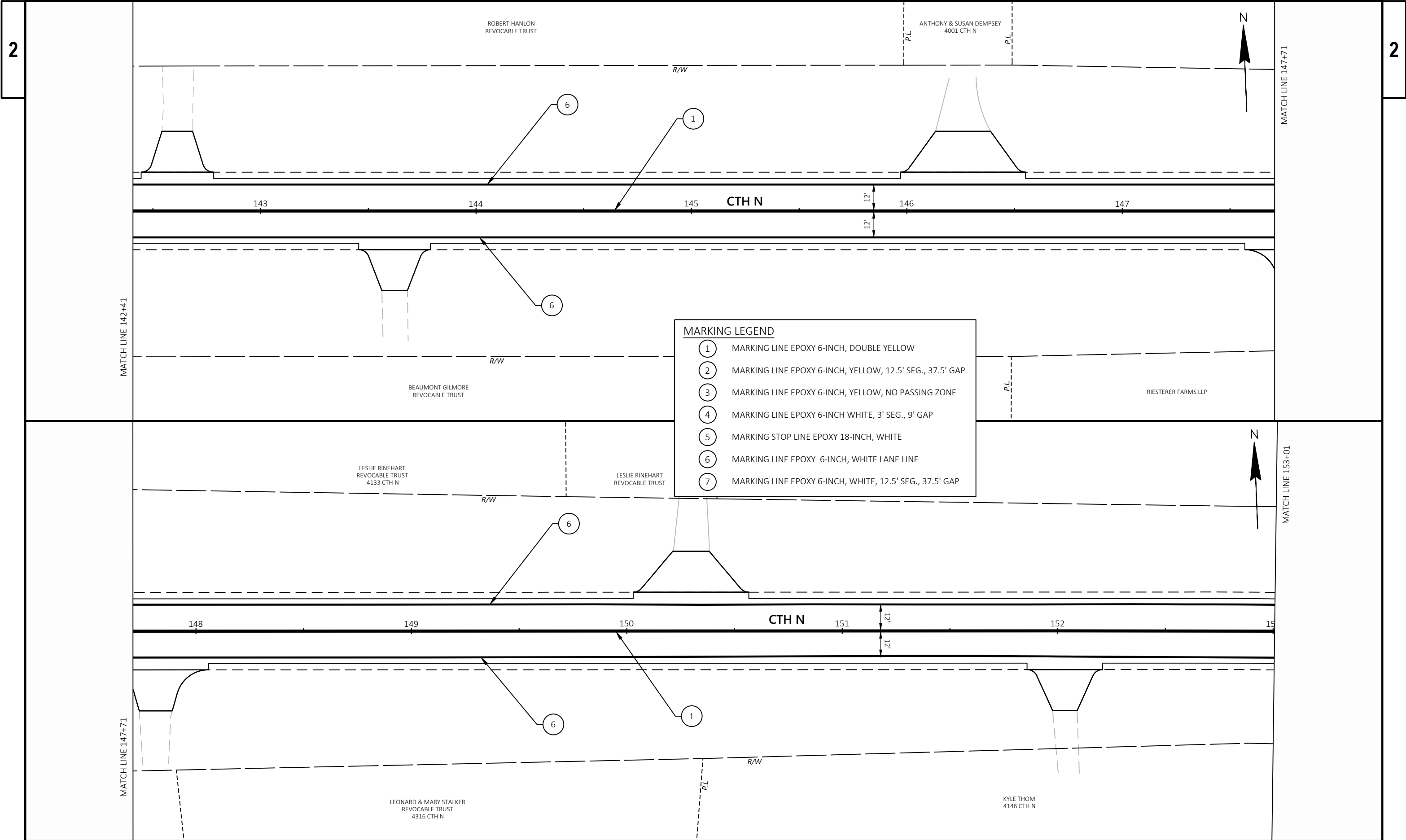


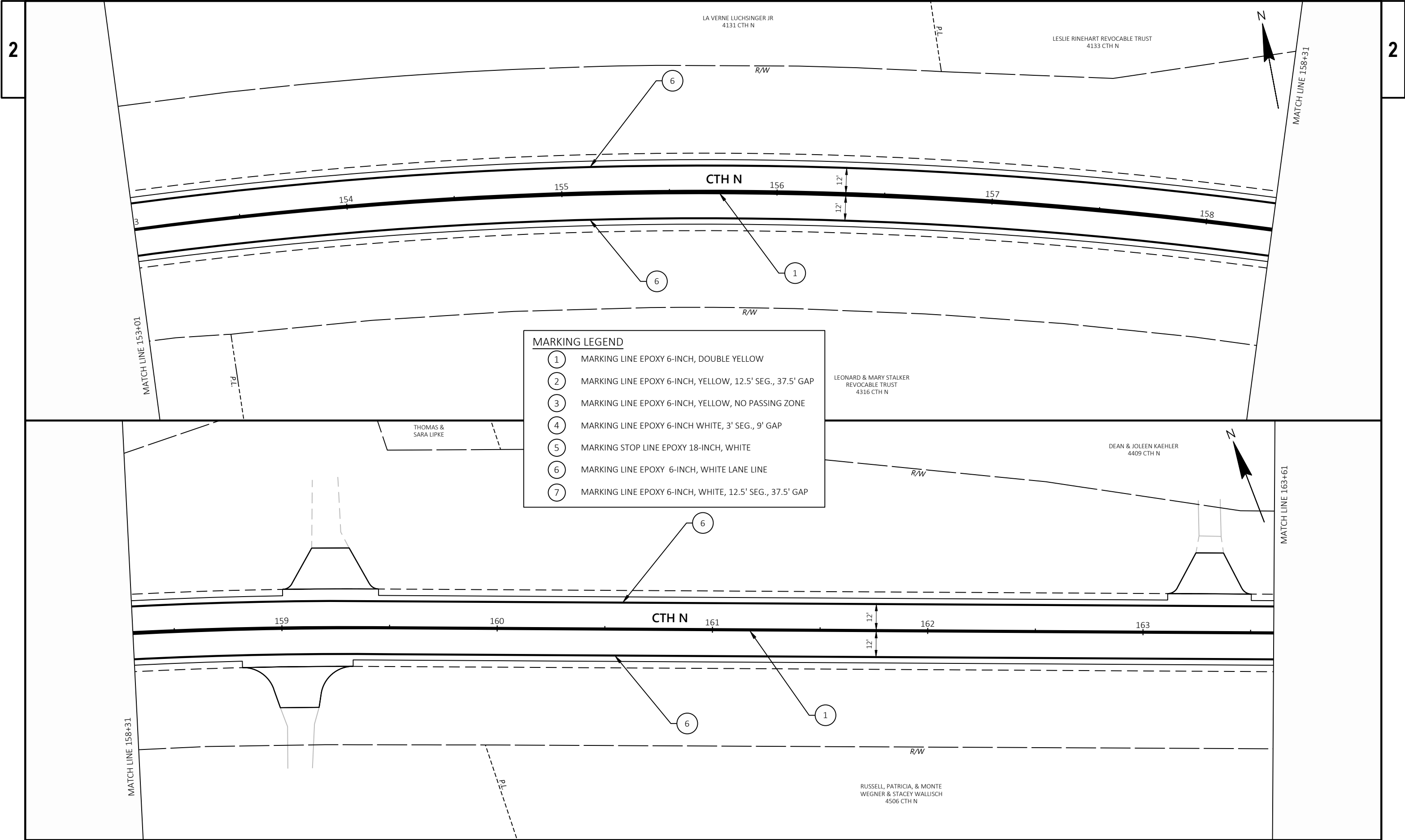


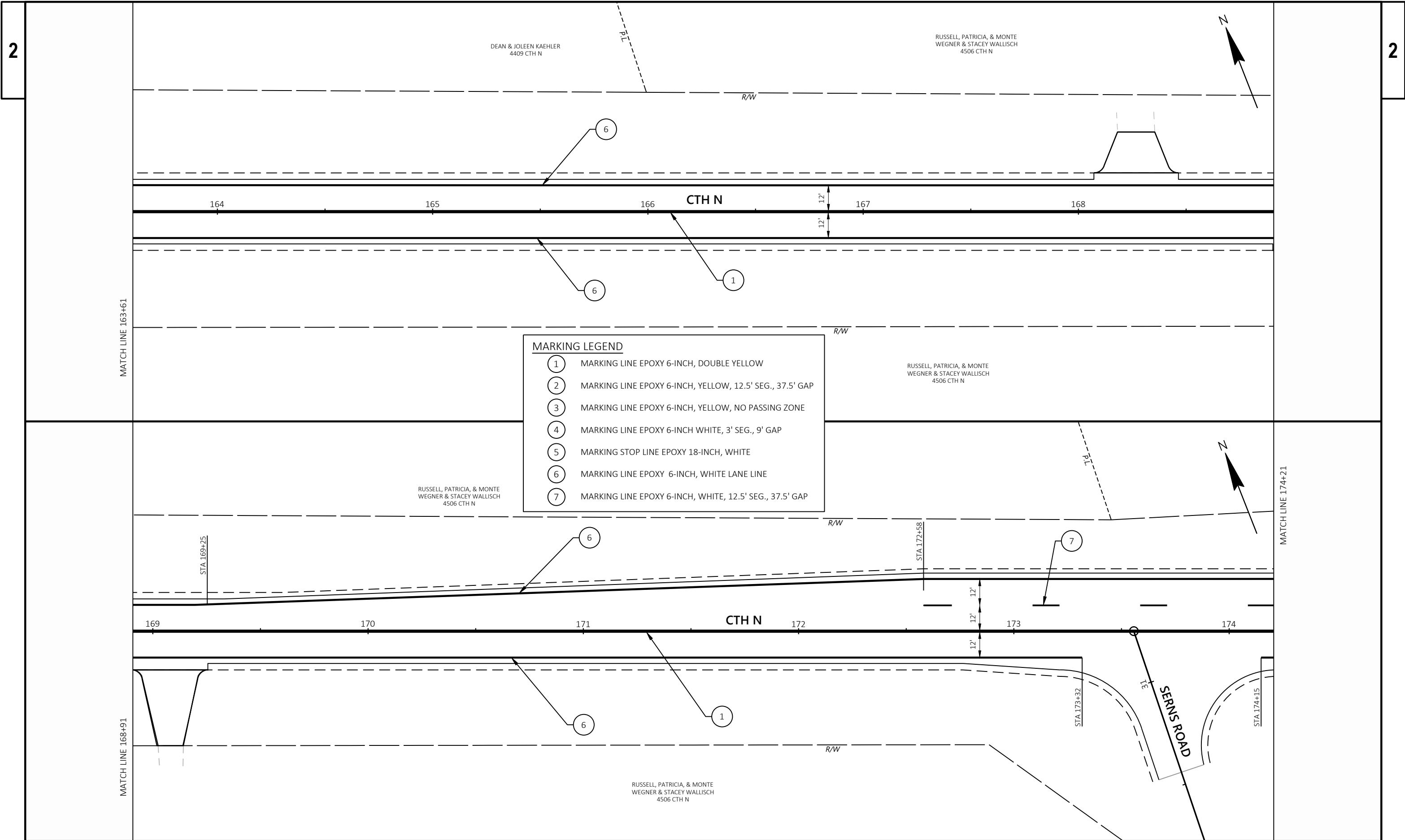




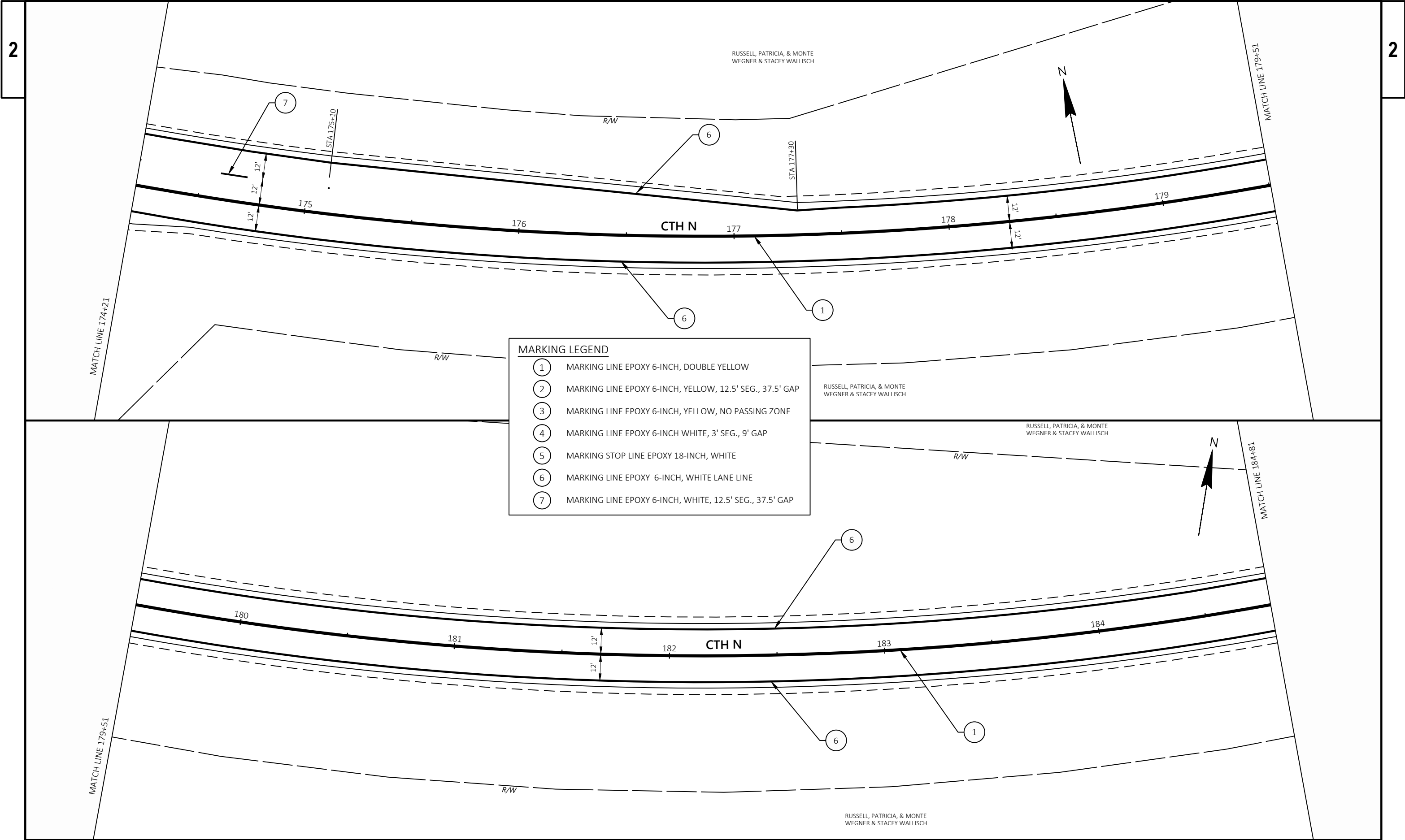


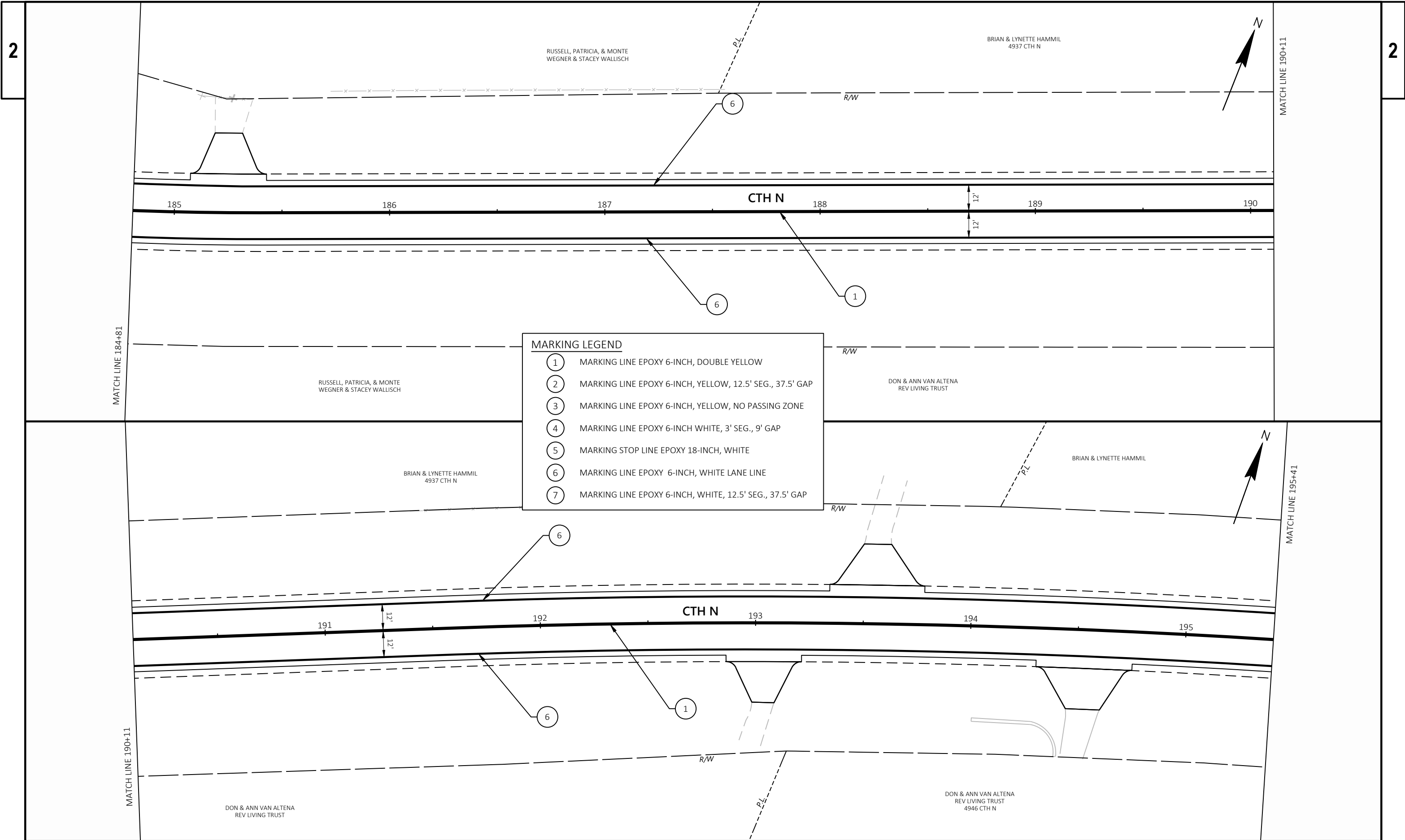


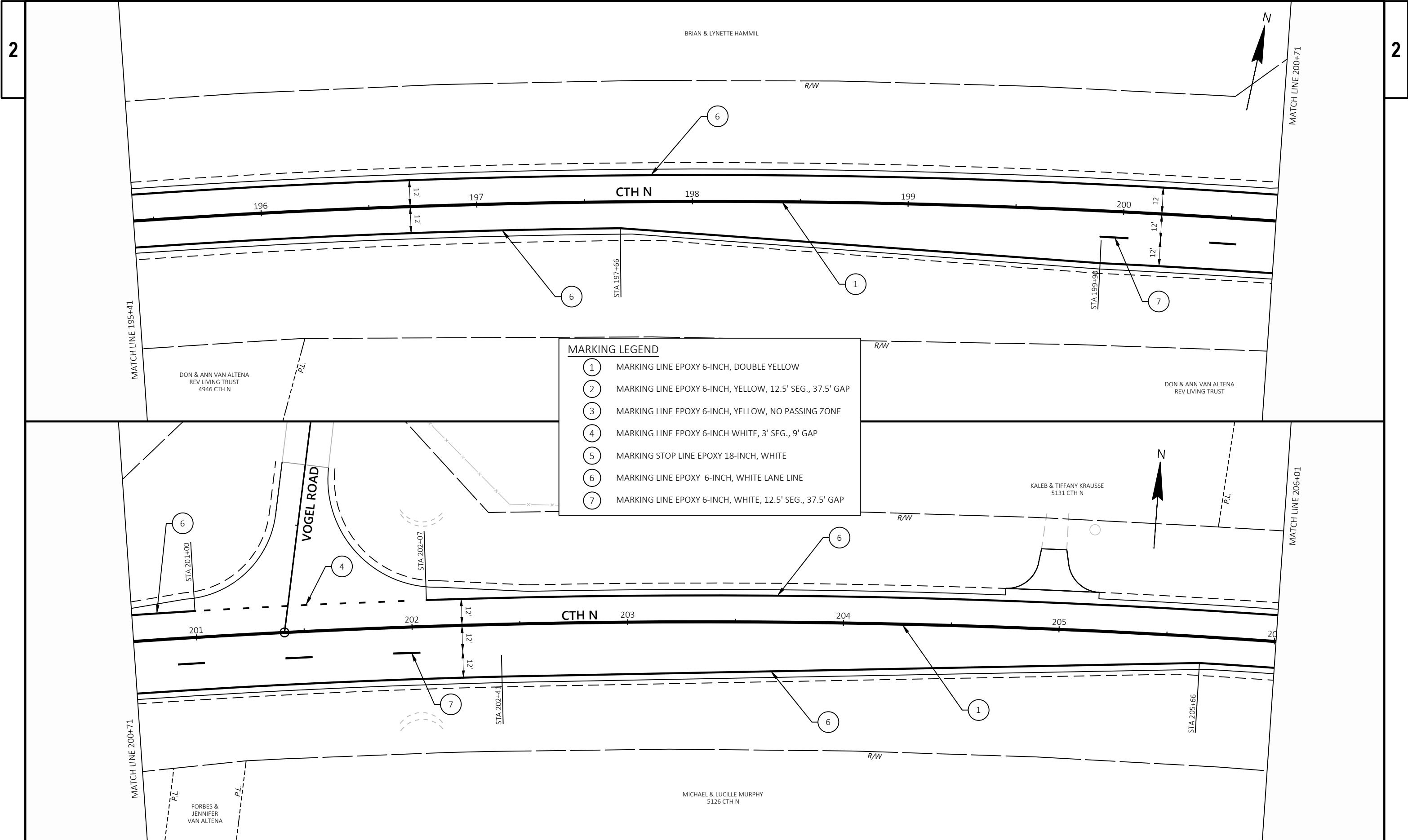


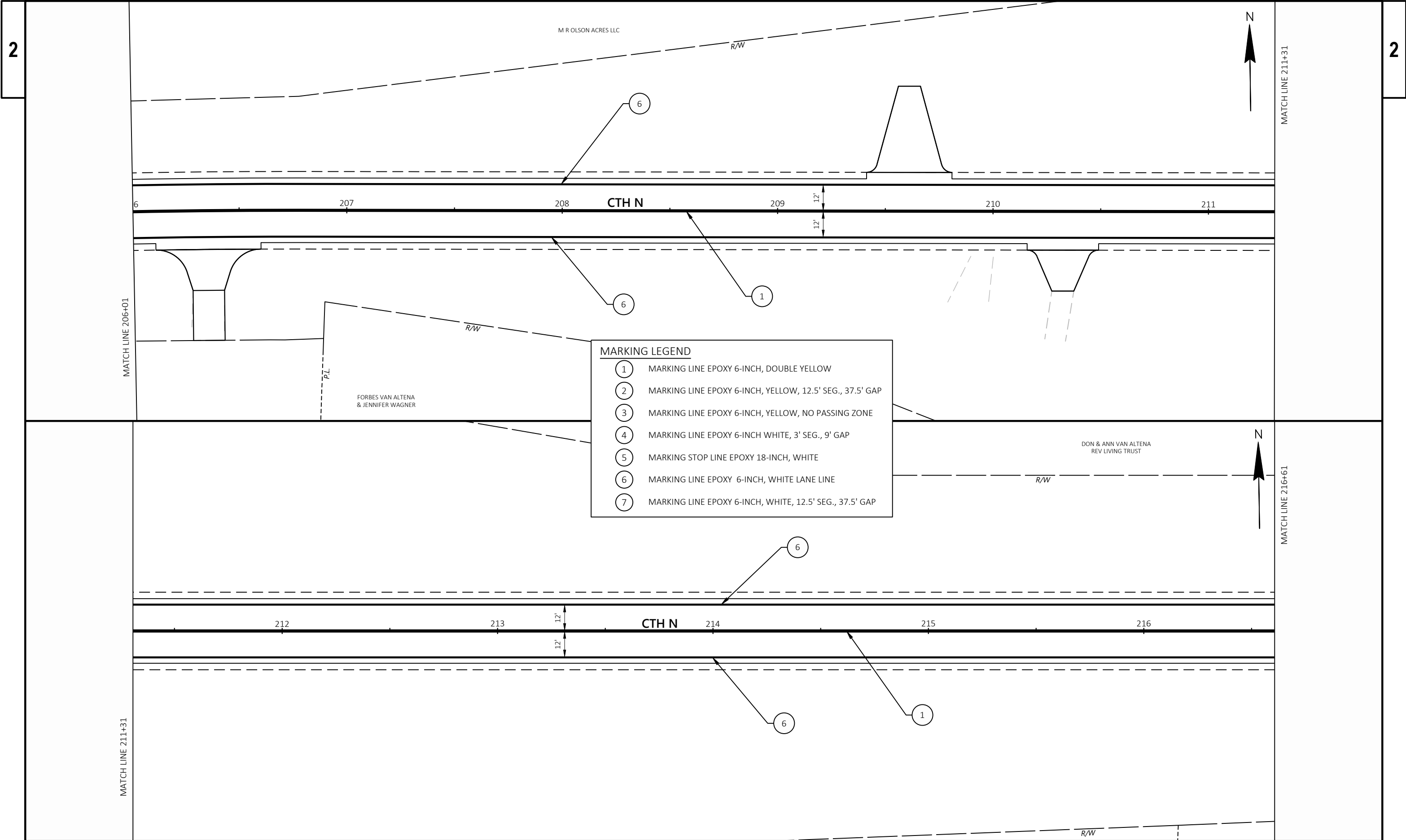


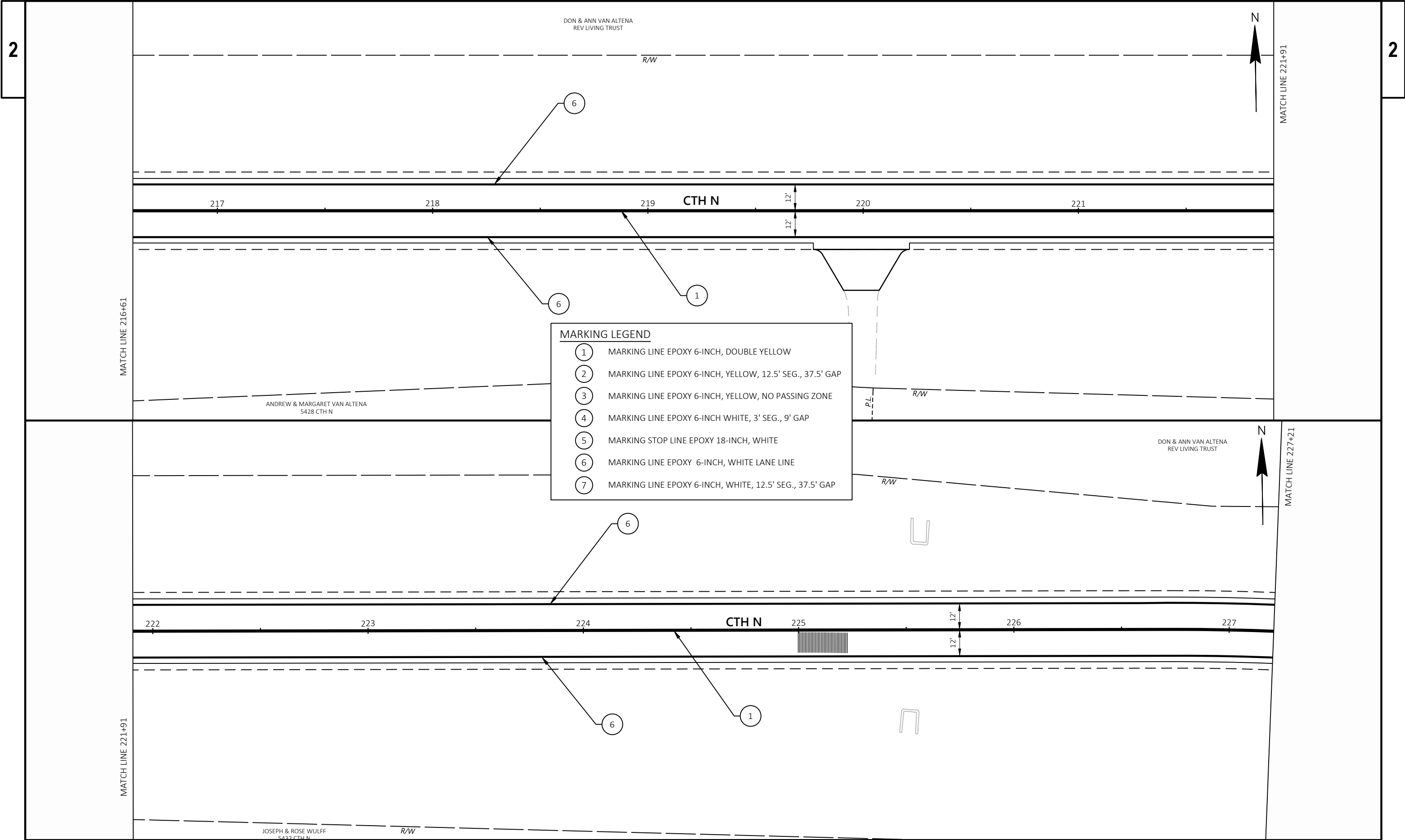
MARKING LEGEND	
①	MARKING LINE EPOXY 6-INCH, DOUBLE YELLOW
②	MARKING LINE EPOXY 6-INCH, YELLOW, 12.5' SEG., 37.5' GAP
③	MARKING LINE EPOXY 6-INCH, YELLOW, NO PASSING ZONE
④	MARKING LINE EPOXY 6-INCH WHITE, 3' SEG., 9' GAP
⑤	MARKING STOP LINE EPOXY 18-INCH, WHITE
⑥	MARKING LINE EPOXY 6-INCH, WHITE LANE LINE
⑦	MARKING LINE EPOXY 6-INCH, WHITE, 12.5' SEG., 37.5' GAP

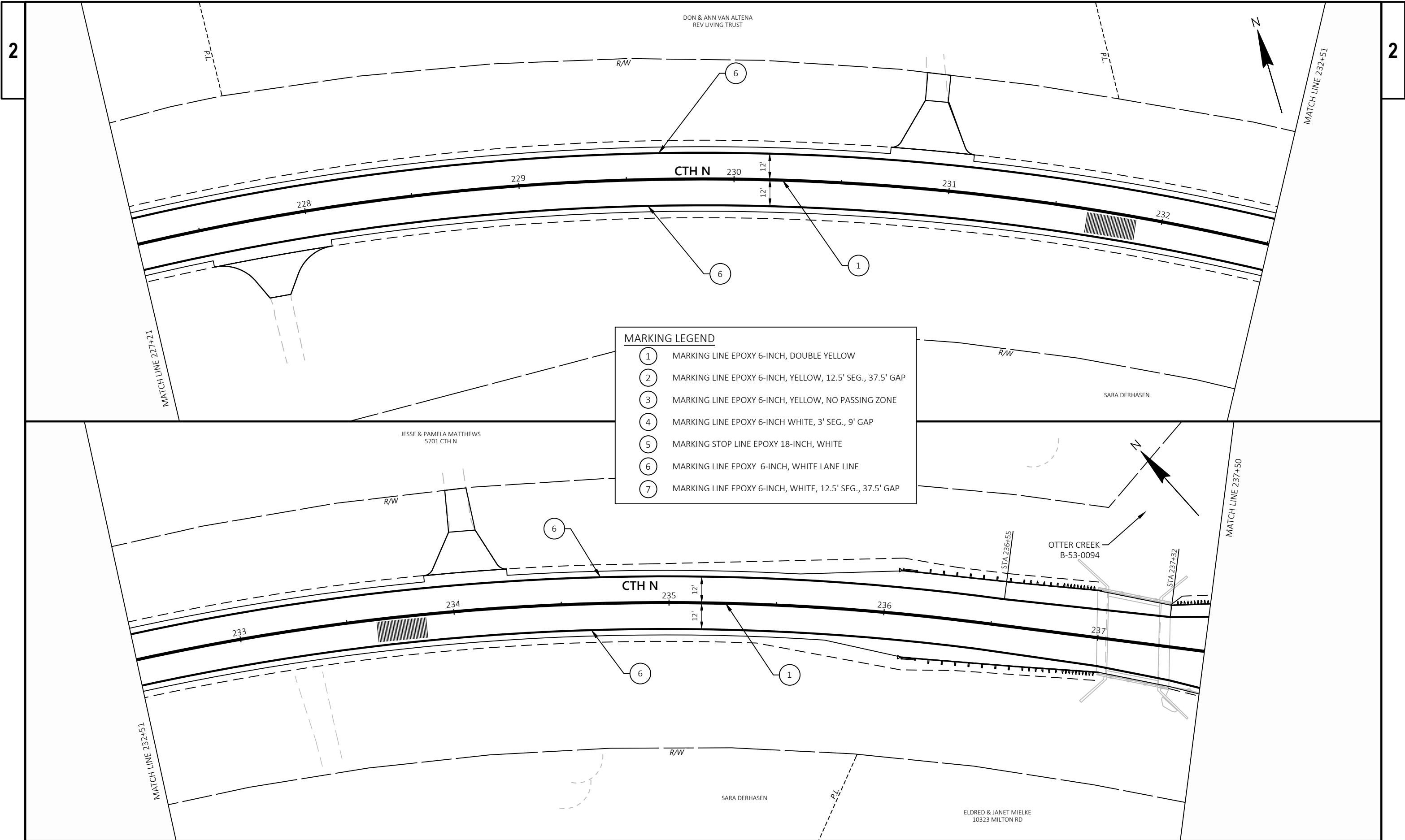


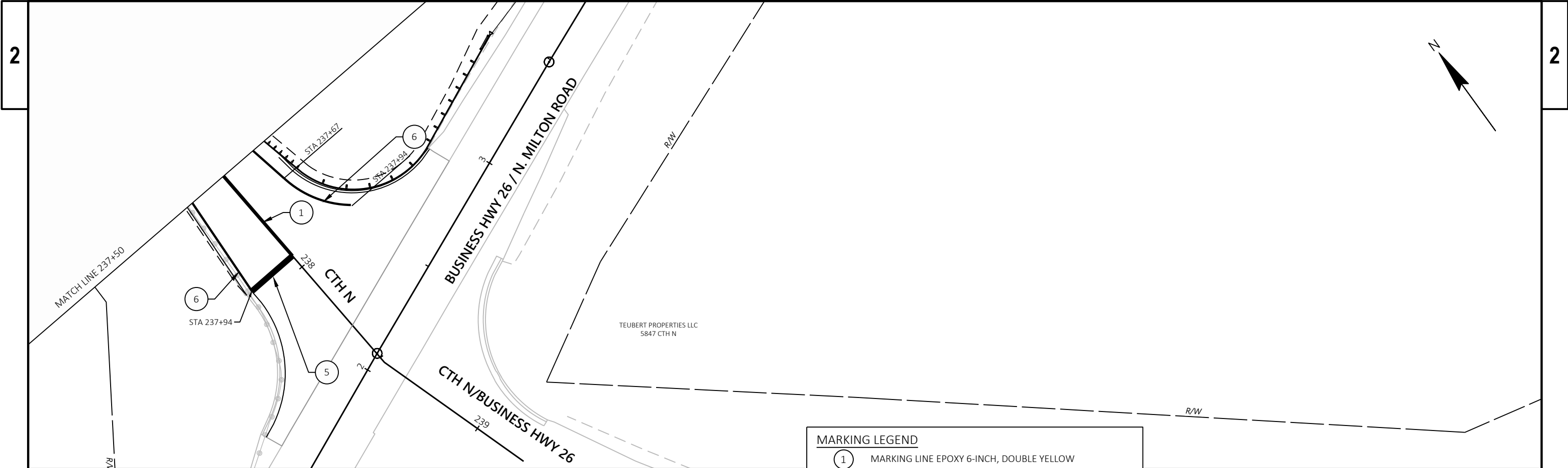




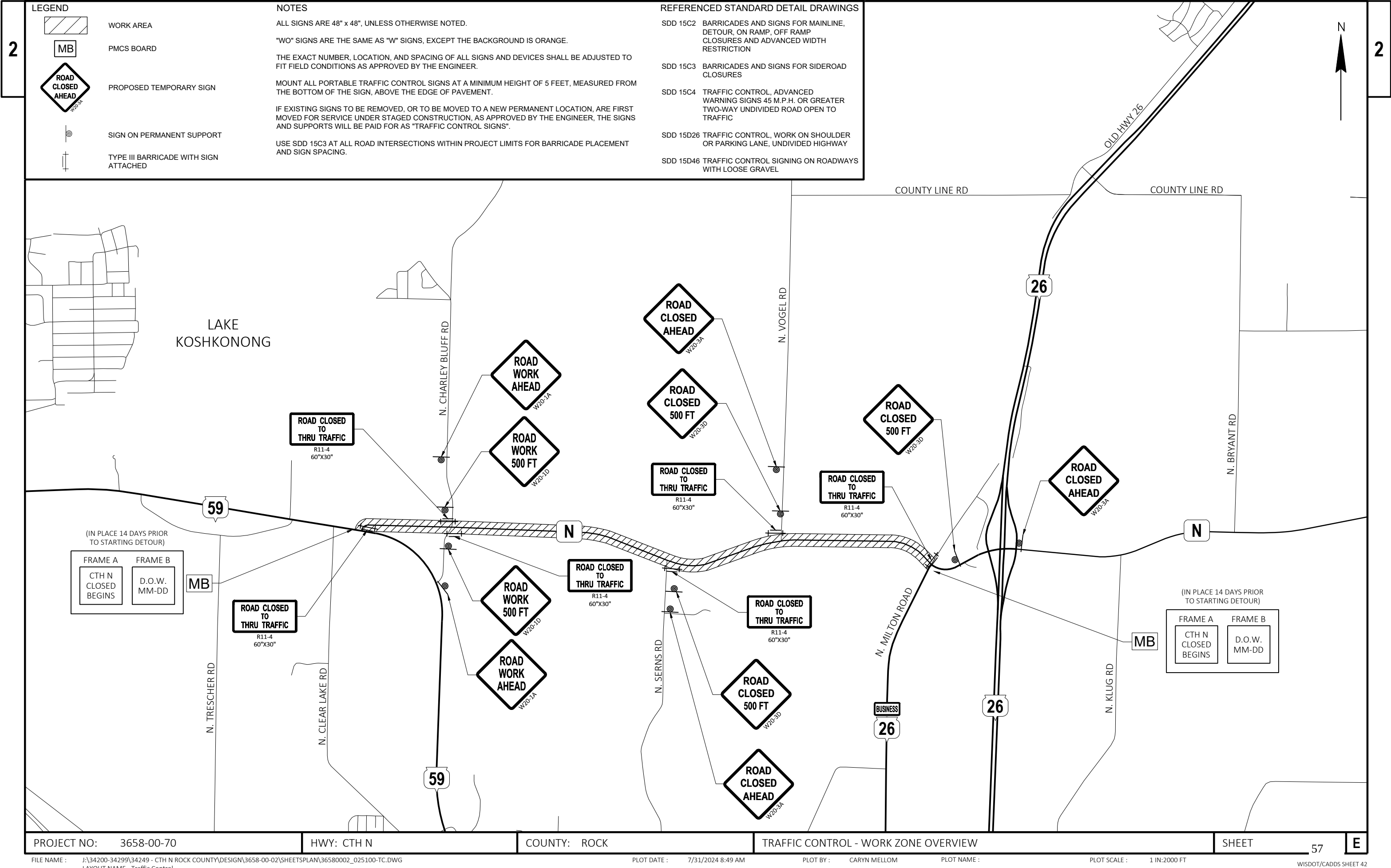


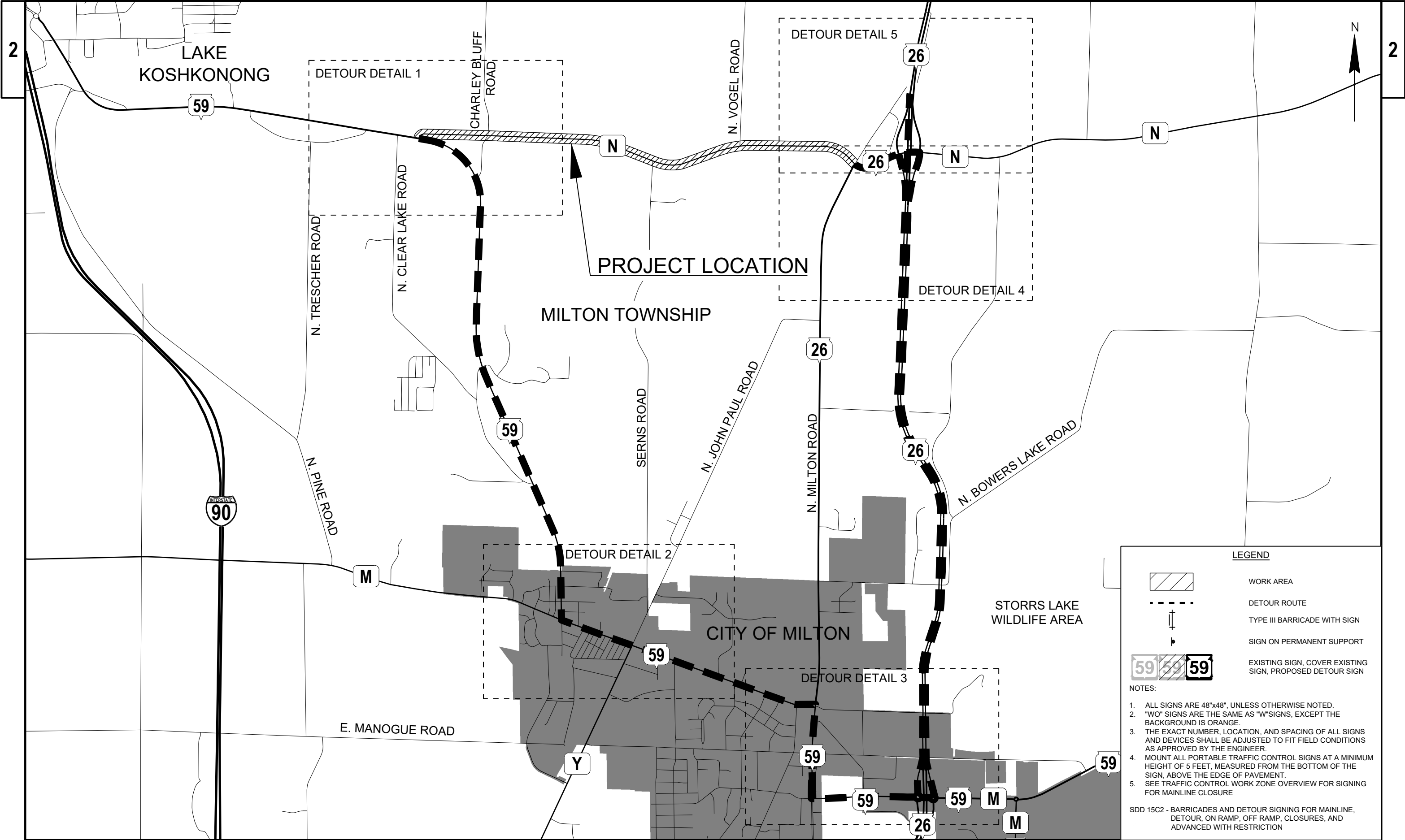


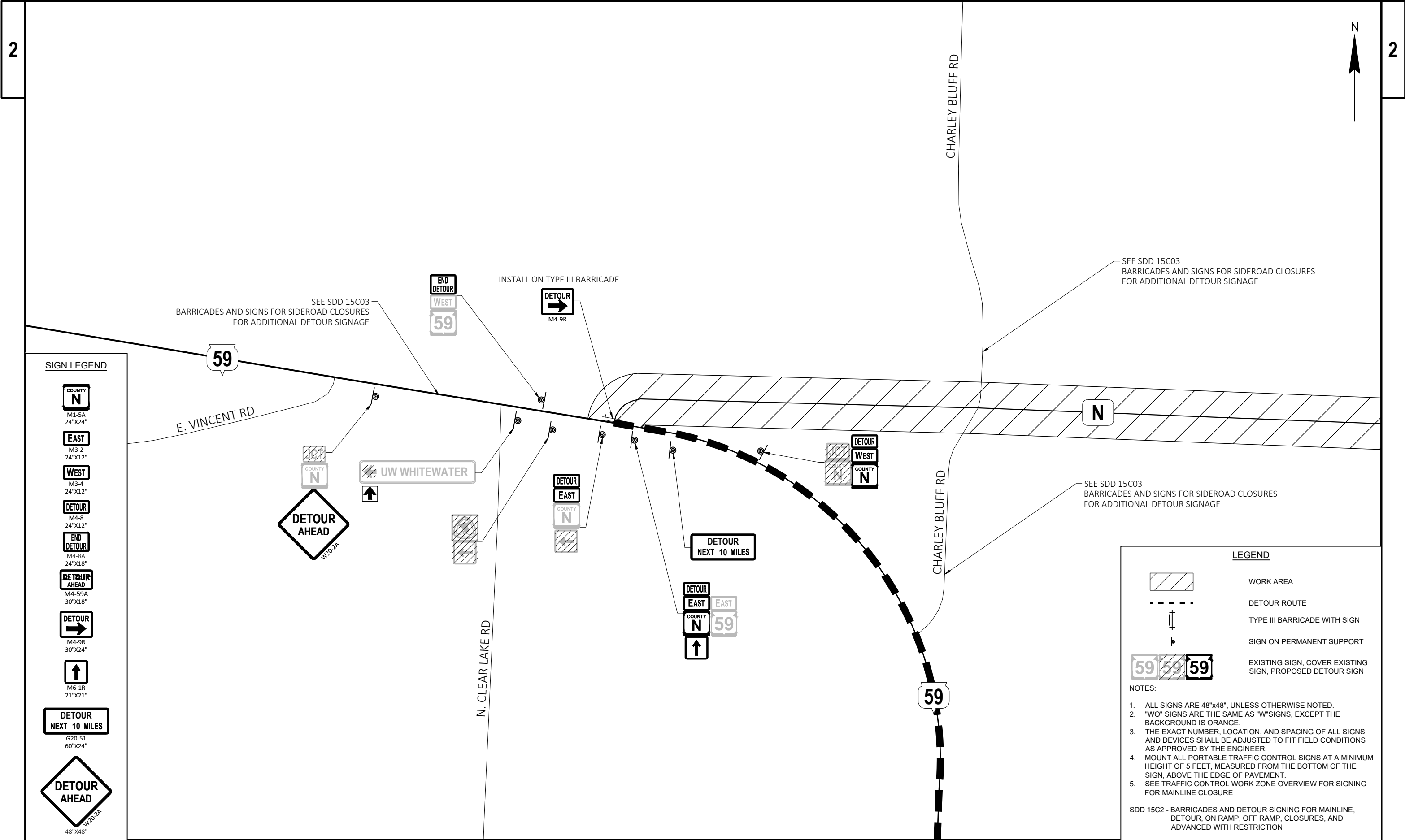




MARKING LEGEND	
①	MARKING LINE EPOXY 6-INCH, DOUBLE YELLOW
②	MARKING LINE EPOXY 6-INCH, YELLOW, 12.5' SEG., 37.5' GAP
③	MARKING LINE EPOXY 6-INCH, YELLOW, NO PASSING ZONE
④	MARKING LINE EPOXY 6-INCH WHITE, 3' SEG., 9' GAP
⑤	MARKING STOP LINE EPOXY 18-INCH, WHITE
⑥	MARKING LINE EPOXY 6-INCH, WHITE LANE LINE
⑦	MARKING LINE EPOXY 6-INCH, WHITE, 12.5' SEG., 37.5' GAP







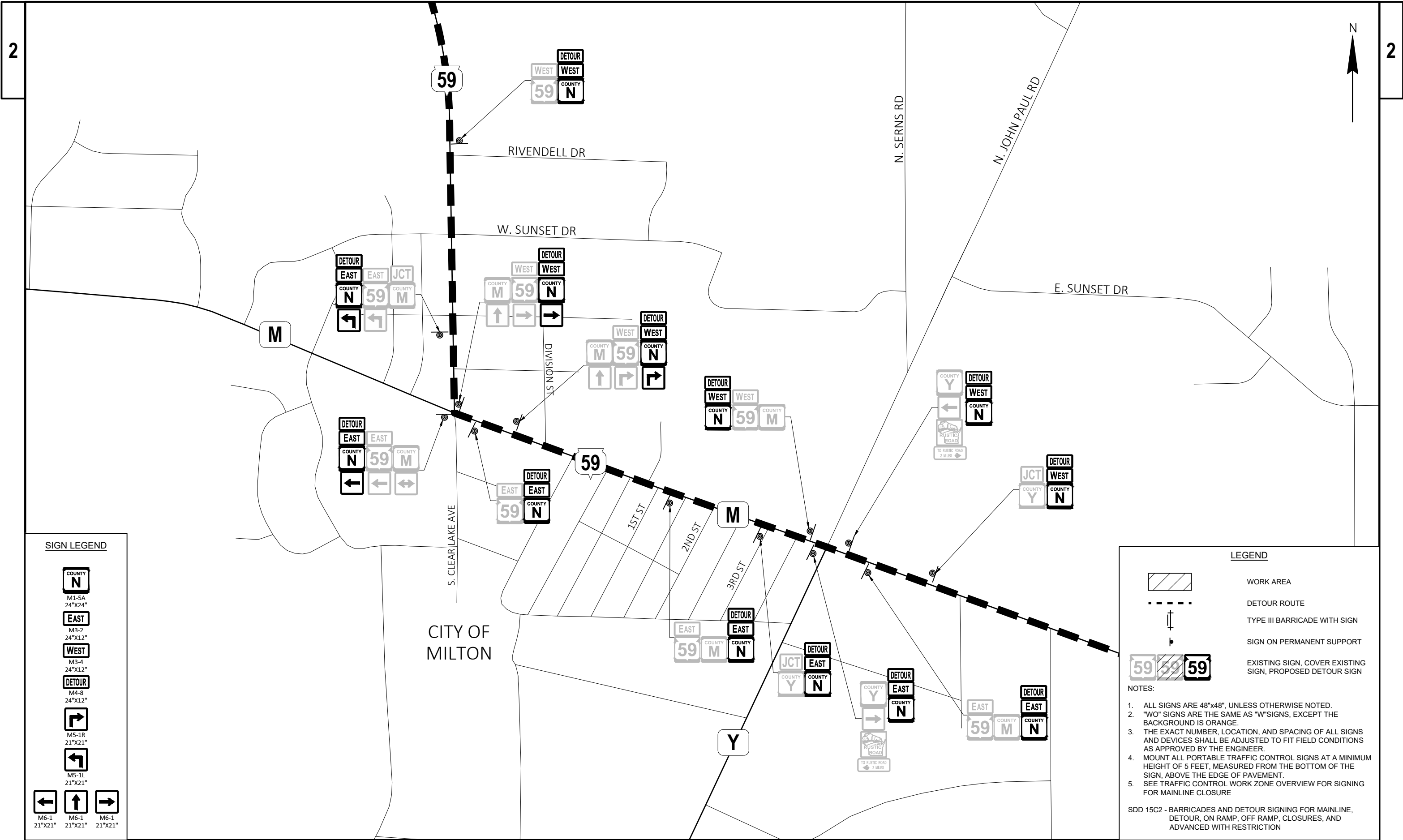
SIGN LEGEND

- COUNTY N
M1-5A
24"x24"
- EAST
M3-2
24"x12"
- WEST
M3-4
24"x12"
- DETOUR
M4-8
24"x12"
- END DETOUR
M4-8A
24"x18"
- DETOUR AHEAD
M4-59A
30"x18"
- DETOUR
M4-9R
30"x24"
- M6-1R
21"x21"
- DETOUR NEXT 10 MILES
G20-51
60"x24"
- DETOUR AHEAD
W20-2A
48"x48"

LEGEND

- WORK AREA
- DETOUR ROUTE
- TYPE III BARRICADE WITH SIGN
- SIGN ON PERMANENT SUPPORT
- EXISTING SIGN, COVER EXISTING SIGN, PROPOSED DETOUR SIGN

- NOTES:
- ALL SIGNS ARE 48"x48", 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 AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
 - MOUNT ALL PORTABLE TRAFFIC CONTROL SIGNS AT A MINIMUM HEIGHT OF 5 FEET, MEASURED FROM THE BOTTOM OF THE SIGN, ABOVE THE EDGE OF PAVEMENT.
 - SEE TRAFFIC CONTROL WORK ZONE OVERVIEW FOR SIGNING FOR MAINLINE CLOSURE
- SDD 15C2 - BARRICADES AND DETOUR SIGNING FOR MAINLINE, DETOUR, ON RAMP, OFF RAMP, CLOSURES, AND ADVANCED WITH RESTRICTION



SIGN LEGEND

COUNTY N
M1-5A
24"x24"

EAST
M3-2
24"x12"

WEST
M3-4
24"x12"

DETOUR
M4-8
24"x12"

M5-1R
21"x21"

M5-1L
21"x21"

M6-1
21"x21"

M6-1
21"x21"

M6-1
21"x21"

LEGEND

WORK AREA

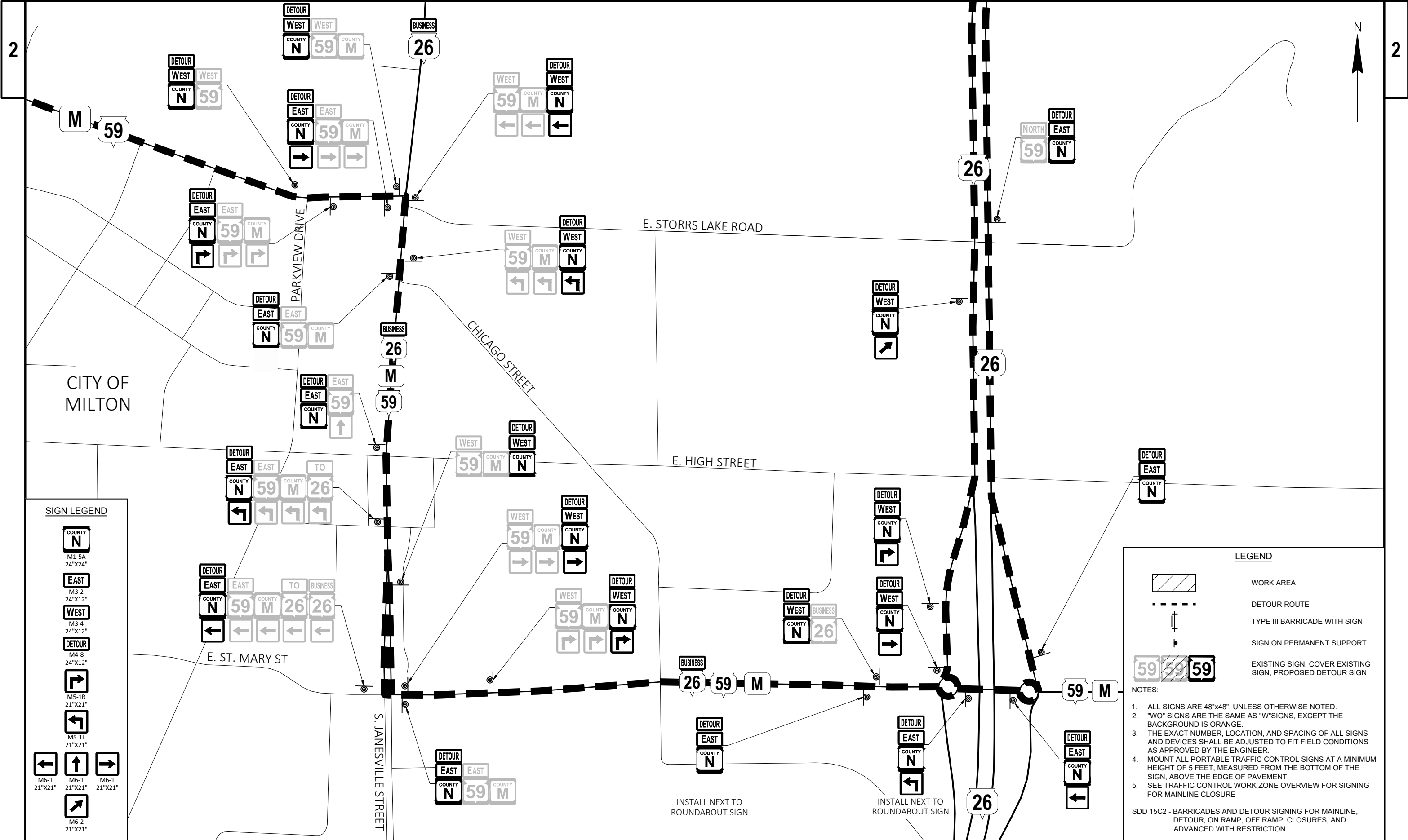
DETOUR ROUTE

TYPE III BARRICADE WITH SIGN

SIGN ON PERMANENT SUPPORT

EXISTING SIGN, COVER EXISTING SIGN, PROPOSED DETOUR SIGN

- NOTES:
- ALL SIGNS ARE 48"x48", 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 AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
 - MOUNT ALL PORTABLE TRAFFIC CONTROL SIGNS AT A MINIMUM HEIGHT OF 5 FEET, MEASURED FROM THE BOTTOM OF THE SIGN, ABOVE THE EDGE OF PAVEMENT.
 - SEE TRAFFIC CONTROL WORK ZONE OVERVIEW FOR SIGNING FOR MAINLINE CLOSURE
- SDD 15C2 - BARRICADES AND DETOUR SIGNING FOR MAINLINE, DETOUR, ON RAMP, OFF RAMP, CLOSURES, AND ADVANCED WITH RESTRICTION



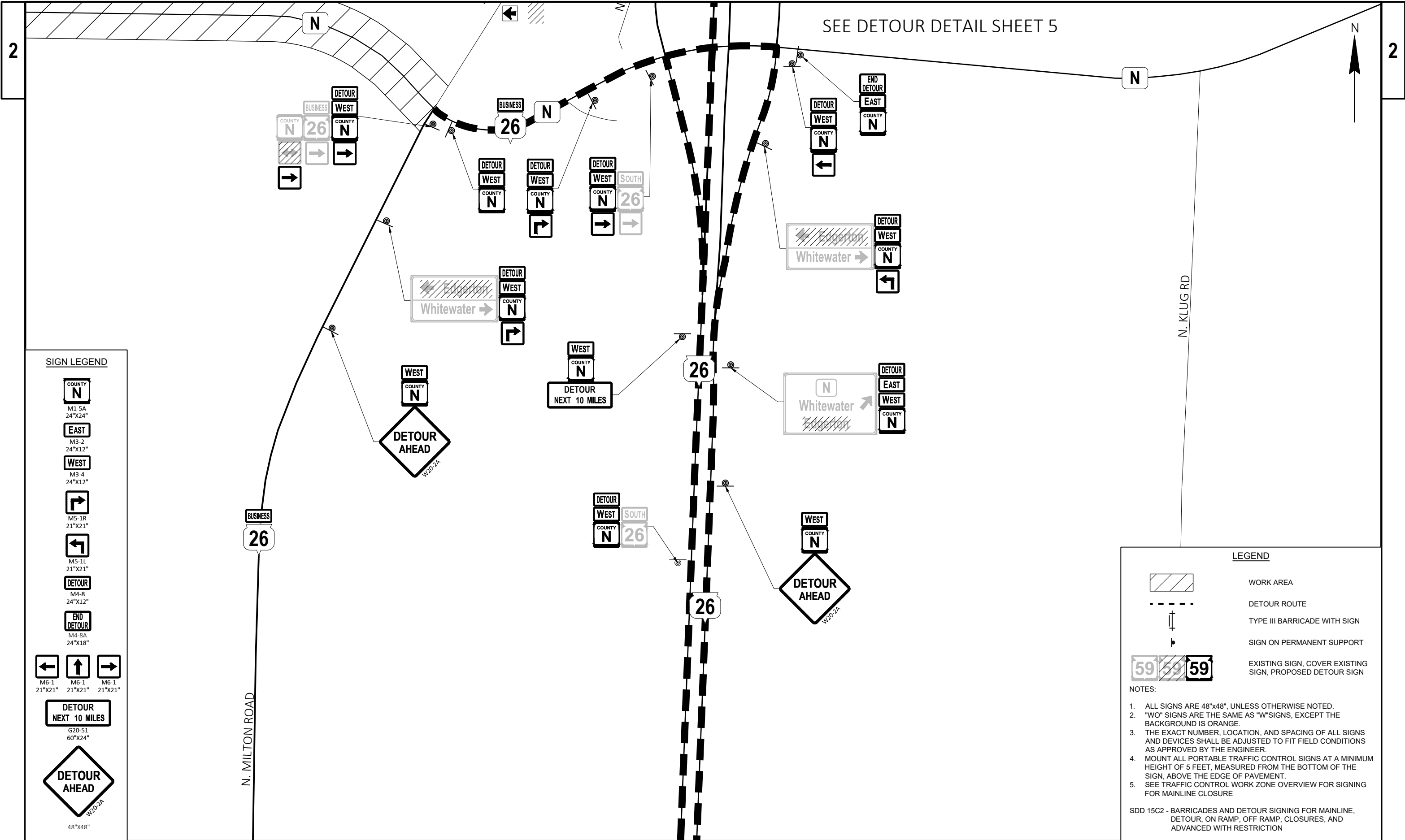
SIGN LEGEND

- COUNTY N
M1-5A
24"x24"
- EAST
M3-2
24"x12"
- WEST
M3-4
24"x12"
- DETOUR
M4-8
24"x12"
- M5-1R
21"x21"
- M5-1L
21"x21"
- M6-1
21"x21"
- M6-1
21"x21"
- M6-1
21"x21"
- M6-2
21"x21"

LEGEND

- WORK AREA
- DETOUR ROUTE
- TYPE III BARRICADE WITH SIGN
- SIGN ON PERMANENT SUPPORT
- EXISTING SIGN, COVER EXISTING SIGN, PROPOSED DETOUR SIGN

- NOTES:
- ALL SIGNS ARE 48"x48", 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 AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
 - MOUNT ALL PORTABLE TRAFFIC CONTROL SIGNS AT A MINIMUM HEIGHT OF 5 FEET, MEASURED FROM THE BOTTOM OF THE SIGN, ABOVE THE EDGE OF PAVEMENT.
 - SEE TRAFFIC CONTROL WORK ZONE OVERVIEW FOR SIGNING FOR MAINLINE CLOSURE
- SDD 15C2 - BARRICADES AND DETOUR SIGNING FOR MAINLINE, DETOUR, ON RAMP, OFF RAMP, CLOSURES, AND ADVANCED WITH RESTRICTION



SIGN LEGEND

COUNTY N

M1-5A

24"x24"

EAST

M3-2

24"x12"

WEST

M3-4

24"x12"

M5-1R

21"x21"

M5-1L

21"x21"

DETOUR

M4-8

24"x12"

END DETOUR

M4-8A

24"x18"

M6-1

21"x21"

M6-1

21"x21"

M6-1

21"x21"

DETOUR

G20-51

60"x24"

DETOUR AHEAD

W20-2A

48"x48"

LEGEND

WORK AREA

DETOUR ROUTE

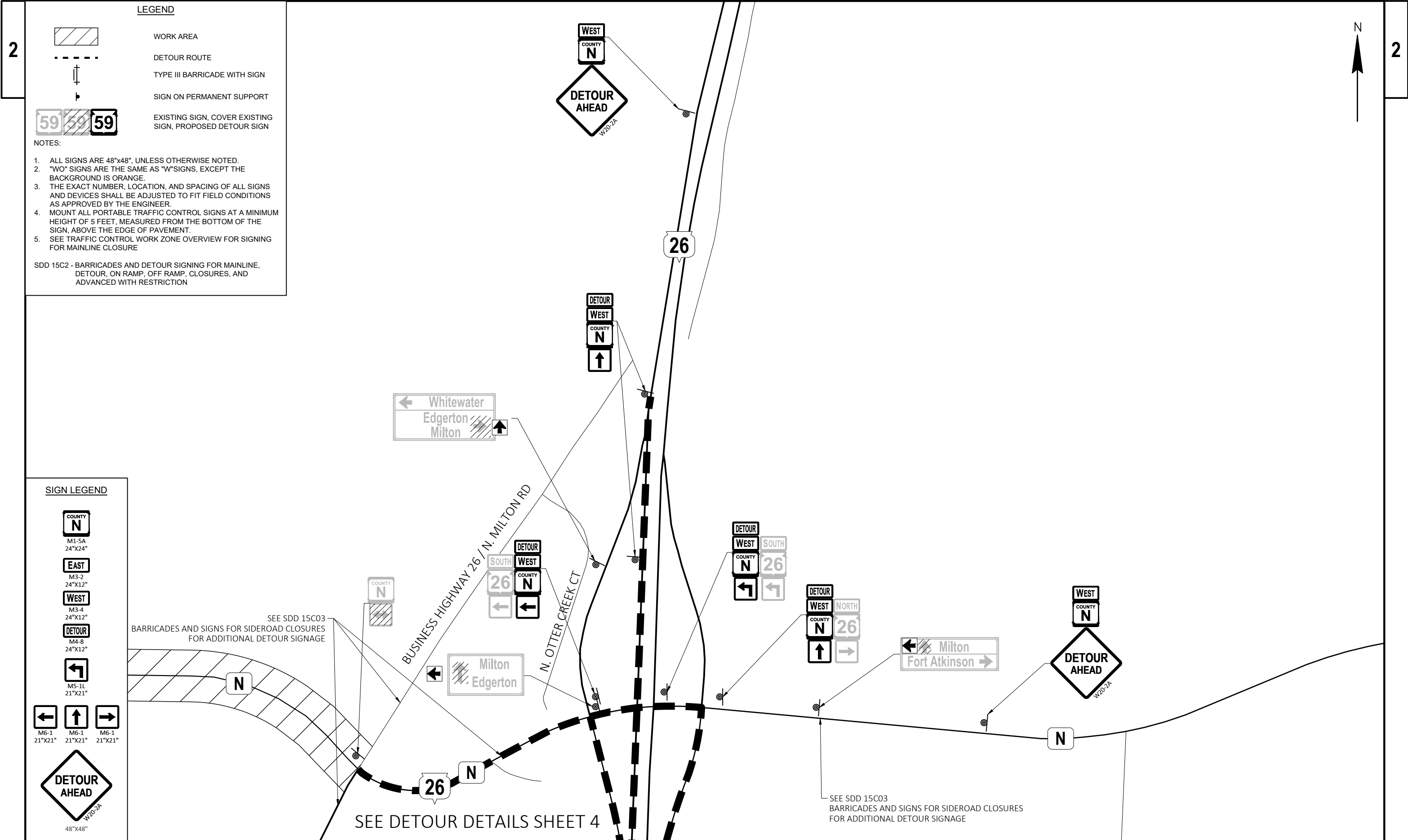
TYPE III BARRICADE WITH SIGN

SIGN ON PERMANENT SUPPORT

59 59 59

EXISTING SIGN, COVER EXISTING SIGN, PROPOSED DETOUR SIGN

- NOTES:
- ALL SIGNS ARE 48"x48", 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 AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
 - MOUNT ALL PORTABLE TRAFFIC CONTROL SIGNS AT A MINIMUM HEIGHT OF 5 FEET, MEASURED FROM THE BOTTOM OF THE SIGN, ABOVE THE EDGE OF PAVEMENT.
 - SEE TRAFFIC CONTROL WORK ZONE OVERVIEW FOR SIGNING FOR MAINLINE CLOSURE
- SDD 15C2 - BARRICADES AND DETOUR SIGNING FOR MAINLINE, DETOUR, ON RAMP, OFF RAMP, CLOSURES, AND ADVANCED WITH RESTRICTION



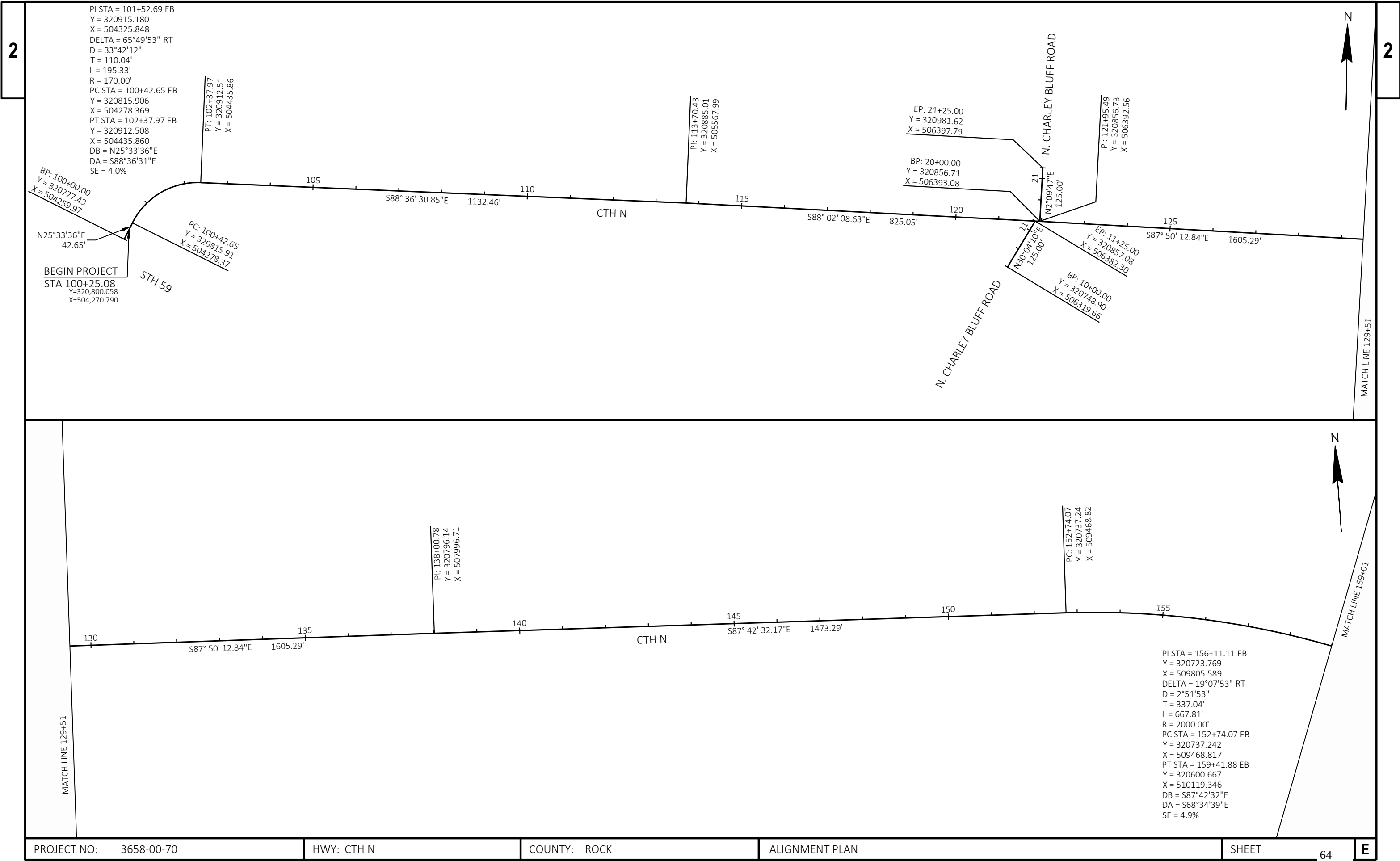
SIGN LEGEND

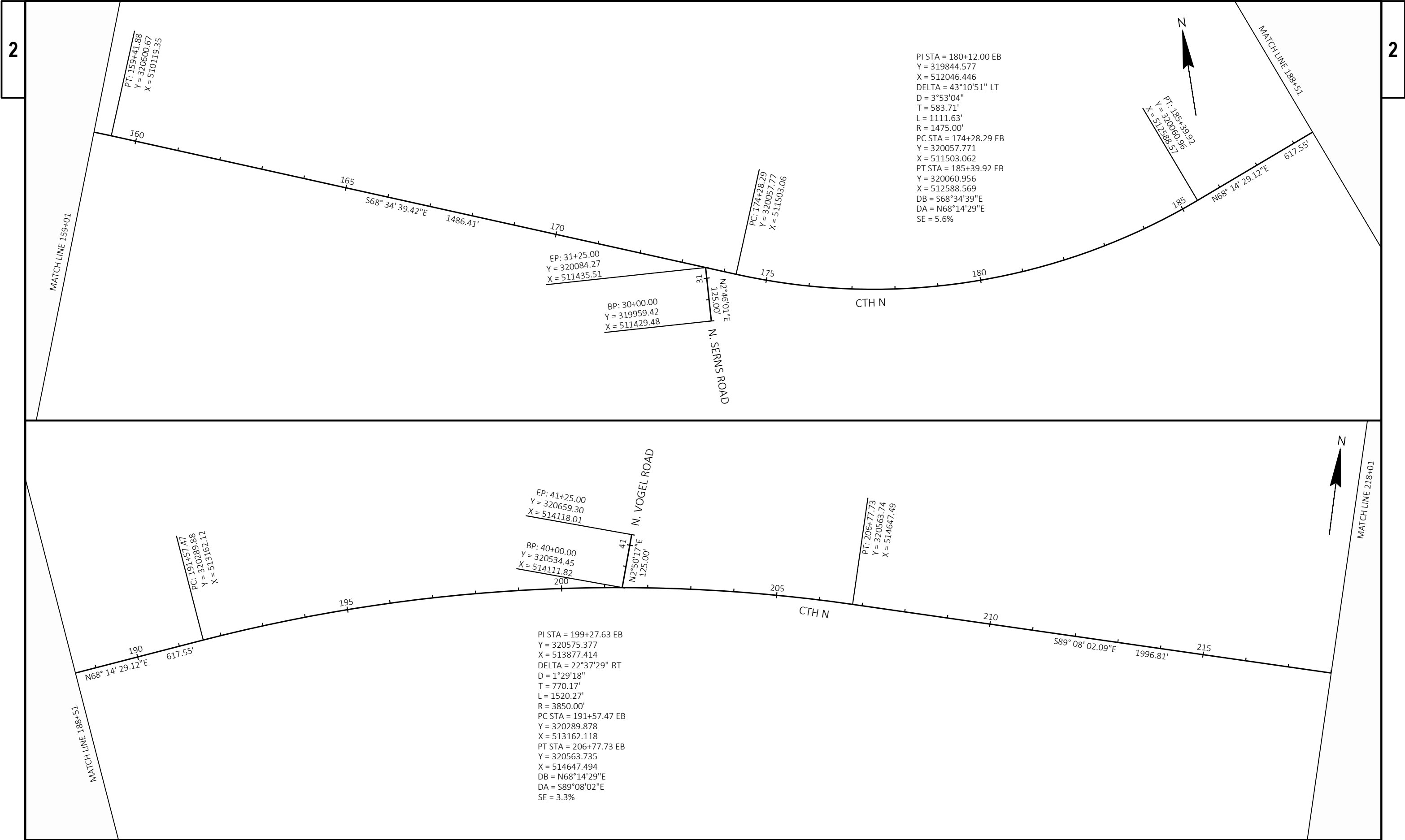
- COUNTY N
M1-5A
24"x24"
- EAST
M3-2
24"x12"
- WEST
M3-4
24"x12"
- DETOUR
M4-8
24"x12"
- M5-1L
21"x21"
- M6-1
21"x21"
- M6-1
21"x21"
- M6-1
21"x21"
- DETOUR AHEAD
W20-2A
48"x48"

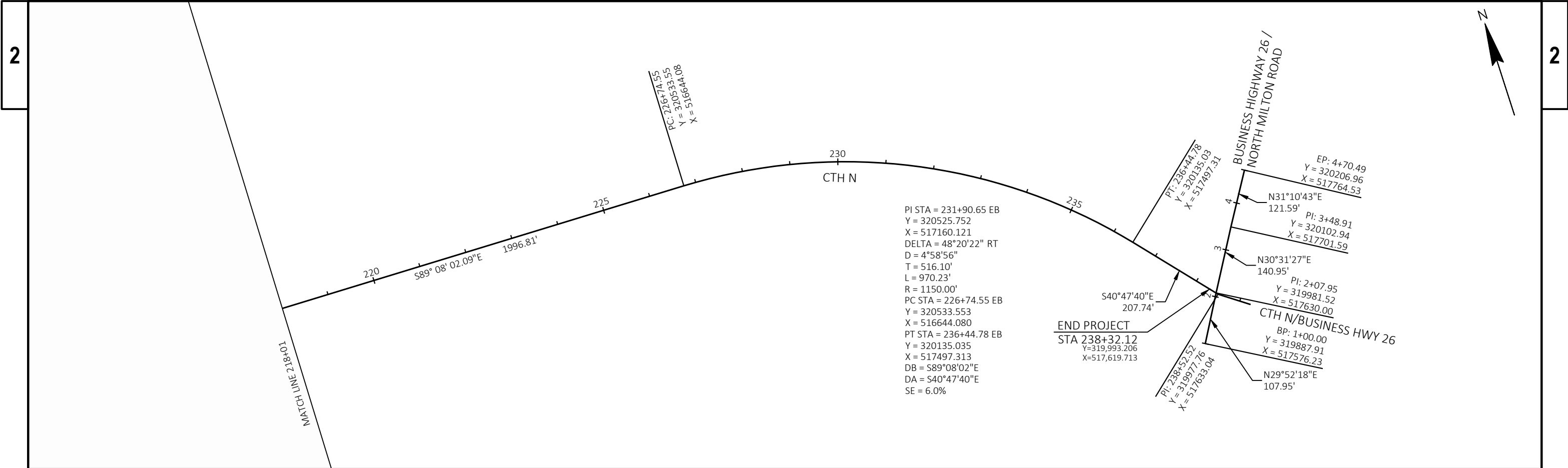
SEE SDD 15C03
BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
FOR ADDITIONAL DETOUR SIGNAGE

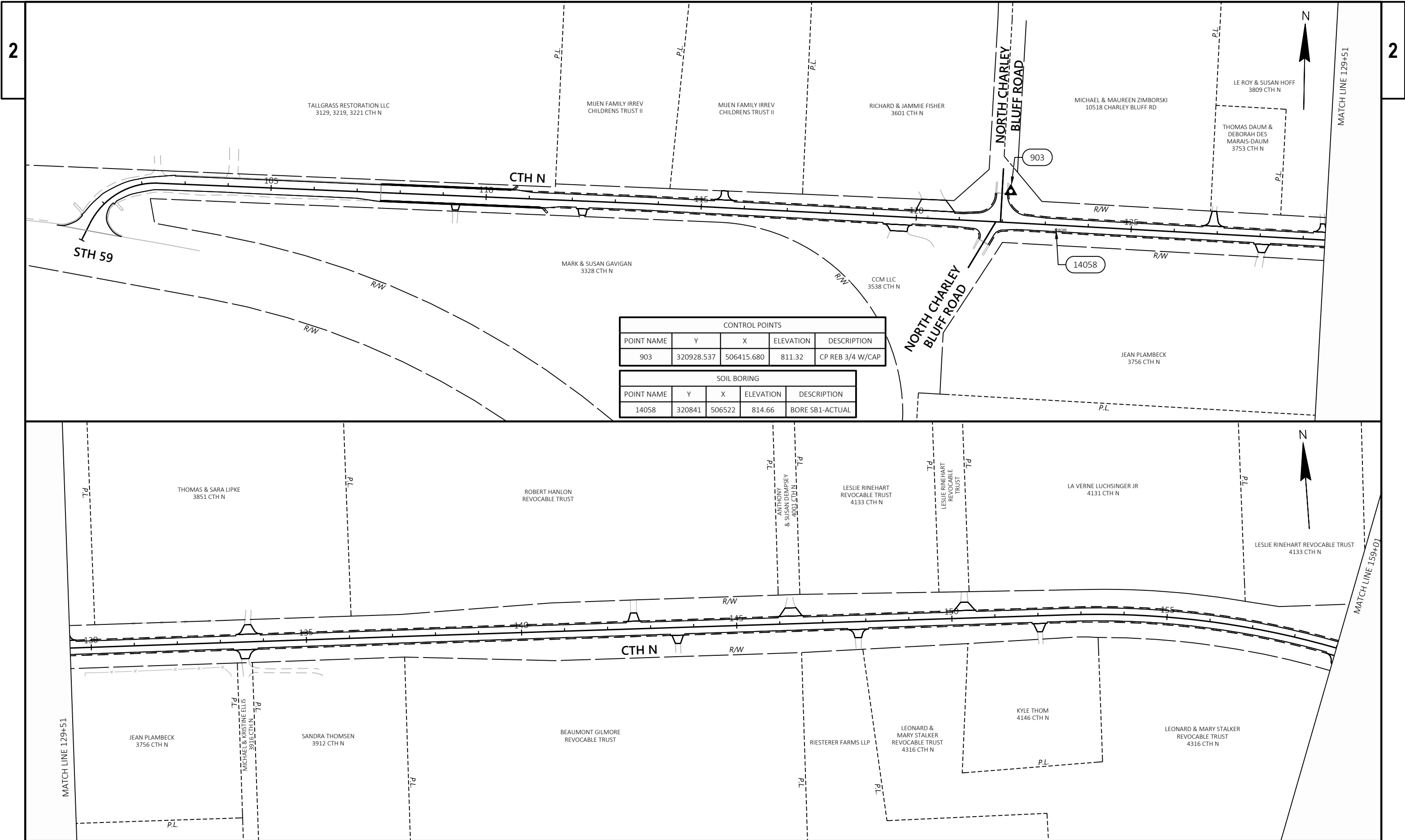
SEE DETOUR DETAILS SHEET 4

SEE SDD 15C03
BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
FOR ADDITIONAL DETOUR SIGNAGE



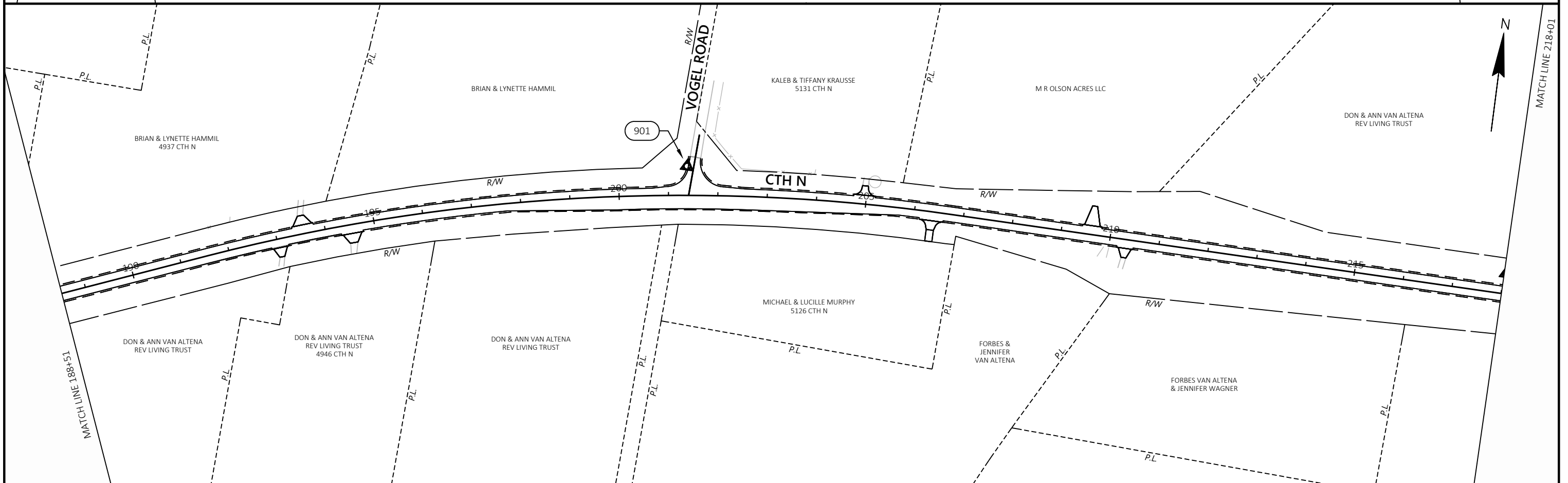
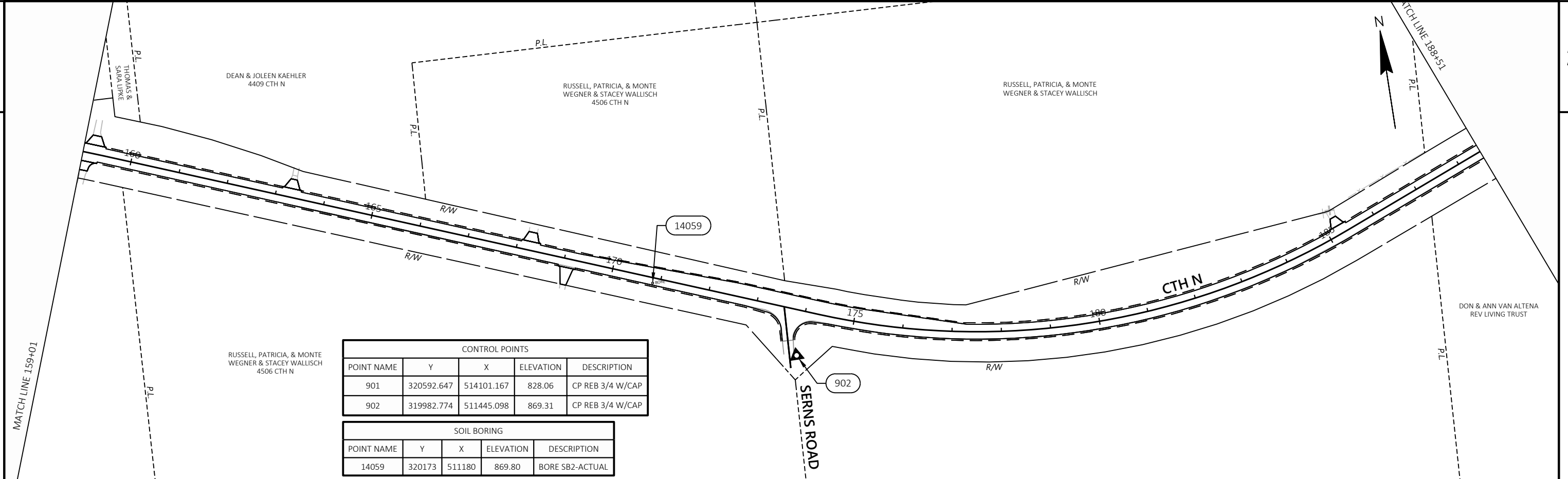






2

2



PROJECT NO:	3658-00-70
-------------	------------

HWY: CTH N

COUNTY: ROCK

BORINGS & CONTROL POINTS

SHEET 68

E

FILE NAME : J:\34200-34299\34249 - CTH N ROCK COUNTY\DESIGN\3658-00-02\SHEETS\PLAN\36580002_027301-CP.DWG
LAYOUT NAME - 02

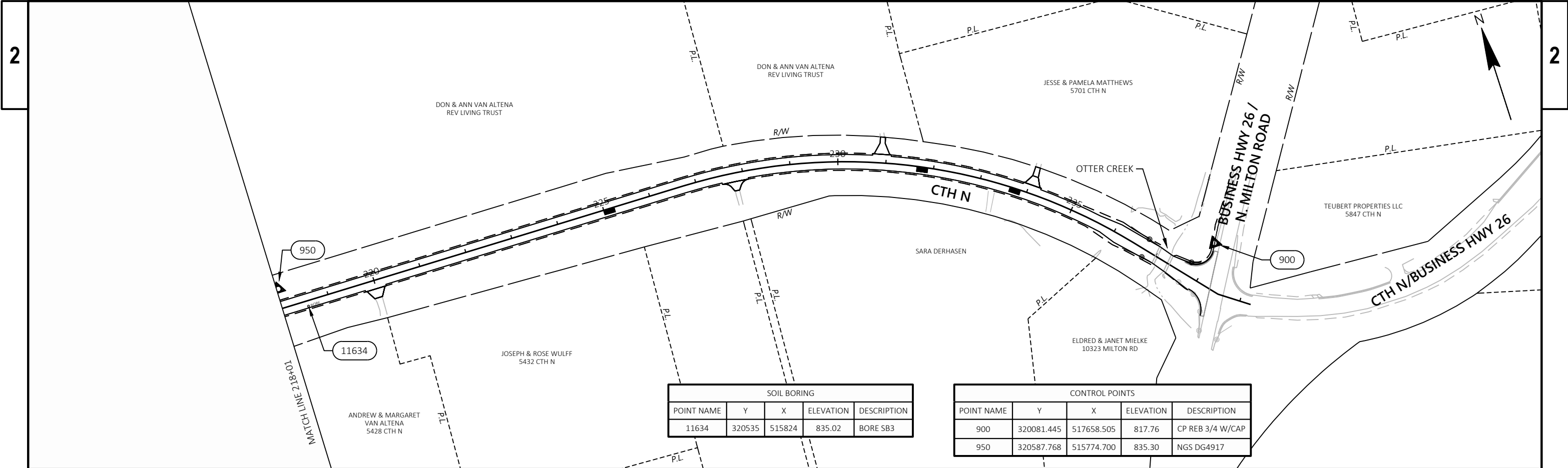
PLOT DATE : 7/31/2024 8:53 AM

PLOT BY : CARYN MELLOM

PLOT NAME : PLOT SCALE :

PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 44



CTH N SUPERELEVATION TABLE					
Station	SHLDR LT	SLOPE LT	SLOPE RT	SHLDR RT	Description
151+39.71'	-4.00%	-2.00%	-2.00%	-4.00%	End Normal Shoulder
151+39.71'	-2.00%	-2.00%	-2.00%	-4.00%	End Normal Crown
151+90.73'	0.00%	0.00%	-2.00%	-4.00%	Level Crown
152+41.75'	2.00%	2.00%	-2.00%	-4.00%	Reverse Crown
152+92.77'	4.00%	4.00%	-4.00%	-4.00%	Low Shoulder Match
153+15.73'	4.90%	4.90%	-4.90%	-4.90%	Begin Full Super
159+00.22'	4.90%	4.90%	-4.90%	-4.90%	End Full Super
159+23.18'	4.00%	4.00%	-4.00%	-4.00%	Low Shoulder Match
159+74.20'	2.00%	2.00%	-2.00%	-4.00%	Reverse Crown
160+25.22'	0.00%	0.00%	-2.00%	-4.00%	Level Crown
160+76.24'	-2.00%	-2.00%	-2.00%	-4.00%	Begin Normal Crown
160+76.24'	-4.00%	-2.00%	-2.00%	-4.00%	Begin Normal Shoulder

CTH N SUPERELEVATION TABLE					
Station	SHLDR LT	SLOPE LT	SLOPE RT	SHLDR RT	Description
172+81.88'	-4.00%	-2.00%	-2.00%	-4.00%	End Normal Shoulder
172+81.88'	-4.00%	-2.00%	-2.00%	-2.00%	End Normal Crown
173+32.95'	-4.00%	-2.00%	0.00%	0.00%	Level Crown
173+84.02'	-4.00%	-2.00%	2.00%	2.00%	Reverse Crown
174+35.09'	-4.00%	-4.00%	4.00%	4.00%	Low Shoulder Match
174+75.95'	-5.60%	-5.60%	5.60%	5.60%	Begin Full Super
184+92.26'	-5.60%	-5.60%	5.60%	5.60%	End Full Super
185+33.11'	-4.00%	-4.00%	4.00%	4.00%	Low Shoulder Match
185+84.19'	-4.00%	-2.00%	2.00%	2.00%	Reverse Crown
186+35.26'	-4.00%	-2.00%	0.00%	0.00%	Level Crown
186+86.33'	-4.00%	-2.00%	-2.00%	-2.00%	Begin Normal Crown
186+86.33'	-4.00%	-2.00%	-2.00%	-4.00%	Begin Normal Shoulder

CTH N SUPERELEVATION TABLE					
Station	SHLDR LT	SLOPE LT	SLOPE RT	SHLDR RT	Description
190+50.55'	-4.00%	-2.00%	-2.00%	-4.00%	End Normal Shoulder
190+50.55'	-2.00%	-2.00%	-2.00%	-4.00%	End Normal Crown
191+01.46'	0.00%	0.00%	-2.00%	-4.00%	Level Crown
191+52.37'	2.00%	2.00%	-2.00%	-4.00%	Reverse Crown
191+85.46'	3.30%	3.30%	-3.30%	-4.00%	Begin Full Super
206+49.74'	3.30%	3.30%	-3.30%	-4.00%	End Full Super
206+82.83'	2.00%	2.00%	-2.00%	-4.00%	Reverse Crown
207+33.74'	0.00%	0.00%	-2.00%	-4.00%	Level Crown
207+84.65'	-2.00%	-2.00%	-2.00%	-4.00%	Begin Normal Crown
207+84.65'	-4.00%	-2.00%	-2.00%	-4.00%	Begin Normal Shoulder

CTH N SUPERELEVATION TABLE					
Station	SHLDR LT	SLOPE LT	SLOPE RT	SHLDR RT	Description
225+21.54'	-4.00%	-2.00%	-2.00%	-4.00%	End Normal Shoulder
225+21.54'	-2.00%	-2.00%	-2.00%	-4.00%	End Normal Crown
225+72.54'	0.00%	0.00%	-2.00%	-4.00%	Level Crown
226+23.54'	2.00%	2.00%	-2.00%	-4.00%	Reverse Crown
226+74.54'	4.00%	4.00%	-4.00%	-4.00%	Low Shoulder Match
227+25.54'	6.00%	6.00%	-6.00%	-6.00%	Begin Full Super
235+93.79'	6.00%	6.00%	-6.00%	-6.00%	End Full Super
236+44.79'	4.00%	4.00%	-4.00%	-4.00%	Low Shoulder Match
236+95.79'	2.00%	2.00%	-2.00%	-4.00%	Reverse Crown
237+46.79'	0.00%	0.00%	-2.00%	-4.00%	Level Crown
237+97.79'	-2.00%	-2.00%	-2.00%	-4.00%	Begin Normal Crown
237+97.79'	-4.00%	-2.00%	-2.00%	-4.00%	Begin Normal Shoulder

Estimate Of Quantities

3658-00-70

Line	Item	Item Description	Unit	Total	Qty
0002	201.0205	Grubbing	STA	14.000	14.000
0004	203.0100	Removing Small Pipe Culverts	EACH	1.000	1.000
0006	204.0110	Removing Asphaltic Surface	SY	600.000	600.000
0008	204.0115	Removing Asphaltic Surface Butt Joints	SY	30.000	30.000
0010	204.0120	Removing Asphaltic Surface Milling	SY	2,800.000	2,800.000
0012	204.0150	Removing Curb & Gutter	LF	750.000	750.000
0014	204.0165	Removing Guardrail	LF	205.000	205.000
0016	205.0100	Excavation Common	CY	6,406.000	6,406.000
0018	208.0100	Borrow	CY	690.000	690.000
0020	213.0100	Finishing Roadway (project) 01. 3658-00-70	EACH	1.000	1.000
0022	305.0110	Base Aggregate Dense 3/4-Inch	TON	5,100.000	5,100.000
0024	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	6,600.000	6,600.000
0026	312.0110	Select Crushed Material	TON	3,100.000	3,100.000
0028	325.0100	Pulverize and Relay	SY	46,000.000	46,000.000
0030	455.0605	Tack Coat	GAL	4,000.000	4,000.000
0032	460.2000	Incentive Density HMA Pavement	DOL	5,230.000	5,230.000
0034	460.6223	HMA Pavement 3 MT 58-28 S	TON	10,500.000	10,500.000
0036	460.6224	HMA Pavement 4 MT 58-28 S	TON	7,500.000	7,500.000
0038	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	100.000	100.000
0040	465.0315	Asphaltic Flumes	SY	70.000	70.000
0042	465.0580	Asphaltic Rumble Strips, Transverse	SY	80.000	80.000
0044	521.1018	Apron Endwalls for Culvert Pipe Steel 18-Inch	EACH	2.000	2.000
0046	521.3118	Culvert Pipe Corrugated Steel 18-Inch	LF	50.000	50.000
0048	601.0557	Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type D	LF	674.000	674.000
0050	614.2350	MGS Guardrail Short Radius	LF	60.000	60.000
0052	614.2500	MGS Thrie Beam Transition	LF	120.000	120.000
0054	614.2610	MGS Guardrail Terminal EAT	EACH	3.000	3.000
0056	616.0700.S	Fence Safety	LF	160.000	160.000
0058	618.0100	Maintenance and Repair of Haul Roads (project) 01. 3658-00-70	EACH	1.000	1.000
0060	619.1000	Mobilization	EACH	1.000	1.000
0062	624.0100	Water	MGAL	400.000	400.000
0064	625.0500	Salvaged Topsoil	SY	30,000.000	30,000.000
0066	627.0200	Mulching	SY	12,500.000	12,500.000
0068	628.1504	Silt Fence	LF	6,000.000	6,000.000
0070	628.1520	Silt Fence Maintenance	LF	6,000.000	6,000.000
0072	628.1905	Mobilizations Erosion Control	EACH	3.000	3.000
0074	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0076	628.2004	Erosion Mat Class I Type B	SY	16,700.000	16,700.000
0078	628.2008	Erosion Mat Urban Class I Type B	SY	1,200.000	1,200.000
0080	628.7504	Temporary Ditch Checks	LF	50.000	50.000
0082	628.7555	Culvert Pipe Checks	EACH	33.000	33.000
0084	628.7560	Tracking Pads	EACH	2.000	2.000
0086	629.0210	Fertilizer Type B	CWT	20.000	20.000
0088	630.0120	Seeding Mixture No. 20	LB	440.000	440.000
0090	630.0140	Seeding Mixture No. 40	LB	115.000	115.000
0092	630.0200	Seeding Temporary	LB	820.000	820.000
0094	630.0500	Seed Water	MGAL	700.000	700.000
0096	634.0810	Posts Tubular Steel 2x2-Inch X 10-FT	EACH	8.000	8.000
0098	634.0812	Posts Tubular Steel 2x2-Inch X 12-FT	EACH	48.000	48.000

Estimate Of Quantities

3658-00-70

Line	Item	Item Description	Unit	Total	Qty
0100	634.0814	Posts Tubular Steel 2x2-Inch X 14-FT	EACH	1.000	1.000
0102	637.2210	Signs Type II Reflective H	SF	179.620	179.620
0104	637.2230	Signs Type II Reflective F	SF	167.370	167.370
0106	638.2102	Moving Signs Type II	EACH	2.000	2.000
0108	638.2602	Removing Signs Type II	EACH	65.000	65.000
0110	638.3000	Removing Small Sign Supports	EACH	47.000	47.000
0112	642.5201	Field Office Type C	EACH	1.000	1.000
0114	643.0300	Traffic Control Drums	DAY	13,000.000	13,000.000
0116	643.0420	Traffic Control Barricades Type III	DAY	2,600.000	2,600.000
0118	643.0705	Traffic Control Warning Lights Type A	DAY	2,600.000	2,600.000
0120	643.0715	Traffic Control Warning Lights Type C	DAY	12,000.000	12,000.000
0122	643.0900	Traffic Control Signs	DAY	28,000.000	28,000.000
0124	643.0910	Traffic Control Covering Signs Type I	EACH	3.000	3.000
0126	643.0920	Traffic Control Covering Signs Type II	EACH	15.000	15.000
0128	643.1050	Traffic Control Signs PCMS	DAY	50.000	50.000
0130	643.5000	Traffic Control	EACH	1.000	1.000
0132	645.0220	Geogrid Type SR	SY	5,000.000	5,000.000
0134	646.2020	Marking Line Epoxy 6-Inch	LF	51,400.000	51,400.000
0136	646.6120	Marking Stop Line Epoxy 18-Inch	LF	60.000	60.000
0138	648.0100	Locating No-Passing Zones	MI	2.600	2.600
0140	650.4500	Construction Staking Subgrade	LF	2,360.000	2,360.000
0142	650.5000	Construction Staking Base	LF	13,080.000	13,080.000
0144	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	674.000	674.000
0146	650.6000	Construction Staking Pipe Culverts	EACH	1.000	1.000
0148	650.8000	Construction Staking Resurfacing Reference	LF	14,180.000	14,180.000
0150	650.9911	Construction Staking Supplemental Control (project) 01. 3658-00-70	EACH	1.000	1.000
0152	650.9920	Construction Staking Slope Stakes	LF	13,450.000	13,450.000
0154	690.0150	Sawing Asphalt	LF	440.000	440.000
0156	690.0250	Sawing Concrete	LF	162.000	162.000
0158	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	2,000.000	2,000.000
0160	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	1,320.000	1,320.000

201 -Grubbing

201.0205 GRUBBING						
CATEGORY	STATION	TO	STATION	OFFSET	LOCATION	STA
0010	155+00	-	156+00	RT	CTH N	1
0010	162+00	-	164+00	RT	CTH N	2
0010	187+00	-	190+00	RT	CTH N	3
0010	200+00	-	202+00	RT	CTH N	2
0010	205+00	-	206+00	RT	CTH N	1
0010	220+00	-	221+00	LT	CTH N	1
0010	228+00	-	229+00	LT	CTH N	1
0010	235+00	-	237+00	LT/RT	CTH N	2
0010	3+00	-	4+00	LT	STH 26	1
TOTAL 0010						14

204-325 - ROADWAY REMOVALS

							204.0115	204.0120	325.0100
							REMOVING ASPHALTIC SURFACE BUTT JOINTS	REMOVING ASPHALTIC SURFACE MILLING	PULVERIZE AND RELAY
CATEGORY	STATION	TO	STATION	LOCATION			SY	SY	SY
0010	100+25	-	238+32	CTH N			30	2,800	46,000
TOTAL 0010							30	2,800	46,000

DIVISION	FROM/TO STATION	205.0100 COMMON EXCAVATION (1)		SALVAGED/UNUSABLE PAVEMENT MATERIAL (4)	AVAILABLE MATERIAL (5)	UNEXPANDED FILL	EXPANDED FILL (13)	MASS ORDINATE +/- (14)	208.0100 BORROW	COMMENT
		CUT (2)	EBS EXCAVATION (3)				FACTOR			
							1.00			
DIVISION 1										
CTH_N	107+55.04/235+00.00	4,005	2,400	0	4,005	4,354	4,354	-349	349	
CTH_N_235_00	235+00.10/236+97.19	1	0	0	1	255	255	-254	254	
DIVISION 1 SUBTOTAL		4,006	2,400	0	4,006	4,609	4,609	-603	603	
DIVISION 2										
LCL_MILTON_RD	2+95.29/4+21.73	0	0	0	0	87	87	-87	87	
DIVISION 2 SUBTOTAL		0	0	0	0	87	87	-87	87	
GRAND TOTAL		4,006	2,400	0	4,006	4,696	4,696	-690	690	
TOTAL COMMON EXC		6,406								
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.										
(3) EBS EXCAVATION TO BE BACKFILLED WITH SELECT CRUSHED MATERIAL.										
(4) SALVAGED/UNUSABLE PAVEMENT MATERIAL										
(5) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSUABLE PAVEMENT MATERIAL										
(14) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.										

305-312 - BASE COURSE AGGREGATE

* - BID ITEM IN MULTIPLE TABLES

* - BID ITEM IN MULTIPLE TABLES					*	*			
					305.0110	305.0120	312.0110	624.0100	645.0220
					BASE AGGREGATE DENSE 3/4-INCH TON	BASE AGGREGATE DENSE 1 1/4- INCH TON	SELECT CRUSHED MATERIAL TON	WATER MGAL	GEOGRID TYPE SR SY
0010	100+25	-	238+32	CTH N	4,300	4,600	-	300	-
0010	UNDISTRIBUTED			CTH N	200	1,800	3,100	100	5,000
TOTAL 0010					4,500	6,400	3,100	400	5,000

305-460 - DRIVEWAYS								
* - BID ITEM IN MULTIPLE TABLES					*	*		*
				204.0110	305.0110	305.0120	465.0120	690.0150
				REMOVING	BASE	BASE	ASPHALTIC	
				ASPHALTIC	AGGREGATE	AGGREGATE	SURFACE	
			DRIVEWAY	SURFACE	DENSE 3/4-INCH	DENSE 1 1/4-INCH	DRIVEWAYS AND	SAWING
CATEGORY	STATION	OFFSET	MATERIAL	SY	TON	TON	TON	ASPHALT
0010	109+30	RT	ASPHALT	23	-	9	5	14
0010	112+25	RT	AGGREGATE	-	12	-	-	-
0010	115+54	LT	AGGREGATE	-	17	-	-	-
0010	119+59	RT	ASPHALT	108	-	26	13	39
0010	120+40	LT	AGGREGATE	-	74	-	-	-
0010	126+91	LT	ASPHALT	73	-	25	13	10
0010	128+05	RT	AGGREGATE	-	18	-	-	-
0010	129+45	LT	ASPHALT	43	-	12	7	11
0010	133+57	RT	AGGREGATE	-	22	-	-	-
0010	133+60	LT	AGGREGATE	-	24	-	-	-
0010	142+60	LT	AGGREGATE	-	15	-	-	-
0010	143+55	RT	AGGREGATE	-	14	-	-	-
0010	146+27	LT	ASPHALT	92	-	28	15	26
0010	147+80	RT	AGGREGATE	-	17	-	-	-
0010	150+30	LT	ASPHALT	88	-	23	12	17
0010	152+05	RT	AGGREGATE	-	15	-	-	-
0010	159+06	RT	ASPHALT	75	-	18	10	18
0010	159+29	LT	AGGREGATE	-	21	-	-	-
0010	163+30	LT	AGGREGATE	-	17	-	-	-
0010	168+27	LT	AGGREGATE	-	20	-	-	-
0010	169+07	RT	AGGREGATE	-	27	-	-	-
0010	185+25	LT	AGGREGATE	-	15	-	-	-
0010	193+05	RT	AGGREGATE	-	15	-	-	-
0010	193+52	LT	AGGREGATE	-	19	-	-	-
0010	194+50	RT	ASPHALT	64	-	19	10	16
0010	204+95	LT	AGGREGATE	-	14	-	-	-
0010	206+32	RT	AGGREGATE	-	17	-	-	-
0010	209+60	LT	AGGREGATE	-	33	-	-	-
0010	210+32	RT	AGGREGATE	-	14	-	-	-
0010	220+00	RT	AGGREGATE	-	21	-	-	-
0010	227+80	RT	AGGREGATE	-	17	-	-	-
0010	230+90	LT	AGGREGATE	-	20	-	-	-
0010	234+50	LT	AGGREGATE	-	17	-	-	-
0010	UNDISTRIBUTED			35	85	40	15	9
TOTAL 0010				600	600	200	100	160

455-465 - HMA PAVEMENT									
					455.0605	460.6223	460.6224	465.0315	465.0580
					TACK COAT	HMA PAVEMENT	HMA PAVEMENT	ASPHALTIC	ASPHALTIC
CATEGORY	STATION	TO	STATION	LOCATION	GAL	3 MT 58-28 S	4 MT 58-28 S	FLUMES	RUMBLE STRIPS,
						TON	TON	SY	TRANSVERSE
0010	100+25	-	238+32	CTH N	3,550	10,300	7,300	64	80
0010	UNDISTRIBUTED			CTH N	450	200	200	6	-
TOTAL 0010					4,000	10,500	7,500	70	80

521 - CULVERTS										
				203.0100	521.1018	521.3118	628.7555			
				REMOVING SMALL PIPE CULVERTS EACH	ENDWALLS FOR CULVERT PIPE STEEL 18-INCH EACH	CULVERT PIPE CORRUGATED STEEL 18-INCH LF	CULVERT PIPE CHECKS EACH	STEEL THICKNESS (IN)	INVERT ELEVATIONS INLET OUTLET	
CATEGORY	FROM STRUCTURE	TO STRUCTURE	LOCATION							
0010	EW 1.1	EW 1.0	DRIVEWAY	1	2	50	1	0.064	828.70	828.28
0010	UNDISTRIBUTED			-	-	-	32	-	-	-
TOTAL 0010				1	2	50	33			

601 - CONCRETE ITEMS									
* - BID ITEM IS IN MULTIPLE TABLES									
				204.0150	601.0557	690.0250			
				REMOVING CURB & GUTTER LF	CONCRETE CURB & GUTTER 6- INCH SLOPED 36- INCH TYPED LF	SAWING CONCRETE LF			
0010	107+55	-	111+25	CTH N	750	674	12		
TOTAL 0010					750	674	12		

614 - BEAM GUARD									
					204.0165	614.2350	614.2500	614.2610	
					REMOVING GUARDRAIL LF	MGS GUARDRAIL SHORT RADIUS LF	MGS THRIE BEAM TRANSITION LF	MGS GUARDRAIL TERMINAL EAT EACH	
0010	100+25	-	238+32	CTH N	205	60	120	3	
TOTAL 0010					205	60	120	3	

625-630 - RESTORATION														
					625.0500	627.0200	628.2004	628.2008	629.0210	630.0120	630.0140	630.0200	630.0500	
					SALVAGED		EROSION MAT	EROSION MAT	FERTILIZER TYPE	SEEDING	SEEDING	SEEDING		
					TOPSOIL	MULCHING	CLASS I TYPE B	URBAN CLASS I	B	MIXTURE NO. 20	MIXTURE NO. 40	TEMPORARY	SEED WATER	
CATEGORY	STATION	TO	STATION	LOCATION	SY	SY	SY	SY	CWT	LB	LB	LB	MGAL	
0010	100+25	-	238+32	CTH N	26,650	11,050	14,800	900	17	385	100	720	600	
0010	UNDISTRIBUTED				3,350	1,450	1,900	300	3.0	55	15	100	100	
TOTAL 0010					30,000	12,500	16,700	1,200	20.0	440	115	820	700	
628 - EROSION CONTROL														
					616.0700.S	628.1504	628.1520	628.1905	628.1910	628.7504	628.7560			
								MOBILIZATIONS	MOBILIZATIONS					
								EROSION	EROSION	TEMPORARY				
					FENCE SAFETY	SILT FENCE	MAINTENANCE	CONTROL	CONTROL	DITCH CHECKS	TRACKING PADS			
CATEGORY	STATION	TO	STATION	LOCATION	LF	LF	LF	EACH	EACH	LF	EACH			
0010	100+25	-	238+32	CTH N	160	5,700	5,700	3	3	30	2			
0010	UNDISTRIBUTED				-	300	300	-	-	20	-			
TOTAL 0010					160	6,000	6,000	3	3	50	2			
634-638 - SIGNS														
					634.0810	634.0812	634.0814	637.2210	637.2230	638.2102	638.2602	638.3000		
					POSTS TUBULAR	POSTS TUBULAR	POSTS TUBULAR	SIGNS TYPE II	SIGNS TYPE II	MOVING SIGNS	REMOVING	REMOVING		
					STEEL 2X2-INCH	STEEL 2X2-INCH	STEEL 2X2-INCH	REFLECTIVE H	REFLECTIVE F	TYPE II	SIGNS TYPE II	SMALL SIGN		
					X 10-FT	X 12-FT	X 14-FT	SF	SF	EACH	EACH	SUPPORTS		
DENOTES	SIGN	STATION	OFFSET	WISDOT	SIZE	LOCATION	EACH	EACH	EACH	SF	SF	EACH	EACH	REMARKS
				SERIES	(INXIN)									
0010	01-01	107+79	LT	W3-1	36X36	CTH N	-	1	-	9.00	-	1	1	REINSTALL SOLAR BEACON LIGHT
0010	01-02	110+07	LT	W1-1L	36X36	CTH N	-	-	1	9.00	-	1	1	-
0010	01-03	110+07	LT	W13-1	18X18	CTH N	-	-	-	2.25	-	1	-	INSTALLED ON SAME POST AS 01-03
0010	02-01	112+02	LT	M2-1	21X15	CTH N	-	2	-	2.19	-	1	1	INSTALLED ON SAME POSTS AS 02-01 - 02-04
0010	02-02	112+02	LT	M1-6	24X24	CTH N	-	-	-	4.00	-	1	-	INSTALLED ON SAME POSTS AS 02-01 - 02-04
0010	02-03	112+02	LT	M4-6	24X12	CTH N	-	-	-	2.00	-	1	-	INSTALLED ON SAME POSTS AS 02-01 - 02-04
0010	02-04	112+02	LT	M1-5A	24X24	CTH N	-	-	-	4.00	-	1	-	INSTALLED ON SAME POSTS AS 02-01 - 02-04
0010	02-05	112+52	RT	W2-1	30X30	CTH N	-	1	-	6.25	-	1	1	-
0010	02-06	112+52	RT	W13-1	18X18	CTH N	-	-	-	2.25	-	1	-	INSTALLED ON SAME POST AS 02-05
0010	02-07	117+90	RT	W14-3	48X36	CTH N	-	1	-	5.56	-	1	1	-
0010	02-08	119+05	RT	D7-68L	60X36	CTH N	1	1	-	15.00	-	1	1	ROYCE DALLMAN, COUNTY PARK, 1 MILE, LEFT ARROW
0010	03-01	121+58	LT	R1-1	30X30	CHARLEY BLUFF	-	1	-	5.18	-	1	1	-
0010	03-02	121+97	RT	R1-1	30X30	CHARLEY BLUFF	-	1	-	5.18	-	1	1	-
0010	03-03	123+68	RT	M1-5A	24X24	CTH N	-	1	-	4.00	-	1	1	-
0010	03-04	124+50	LT	D7-68R	60X36	CTH N	1	1	-	15.00	-	1	1	ROYCE DALLMAN, COUNTY PARK, 1 MILE, RIGHT ARROW
0010	03-05	125+60	LT	-	-	CTH N	-	1	-	-	-	1	1	ENGINE BRAKING SIGN
0010	03-06	130+14	LT	W14-3	48X36	CTH N	-	-	-	5.56	-	1	-	SIGN INSTALLED FACING WEST
0010	03-07	130+14	LT	W2-1	30X30	CTH N	-	1	-	6.25	-	1	1	INSTALLED ON SAME POST AS 03-06
0010	03-08	130+14	LT	W13-1	18X18	CTH N	-	-	-	2.25	-	1	-	INSTALLED ON SAME POST AS 03-06
0010	05-01	149+69	RT	W1-2R	36X36	CTH N	-	1	-	9.00	-	1	1	-

CONTINUED ON NEXT PAGE

3

3

CONTINUED FROM PREVIOUS PAGE																
634-638 - SIGNS																
CATEGORY	DENOTES SIGN NUMBER	STATION	OFFSET	WisDOT SERIES CODE	SIZE (INXIN)	LOCATION	634.0810	634.0812	634.0814	637.2210	637.2230	638.2102	638.2602	638.3000	REMARKS	
							POSTS TUBULAR STEEL 2X2-INCH X 10-FT EACH	POSTS TUBULAR STEEL 2X2-INCH X 12-FT EACH	POSTS TUBULAR STEEL 2X2-INCH X 14-FT EACH	SIGNS TYPE II REFLECTIVE H SF	SIGNS TYPE II REFLECTIVE F SF	MOVING SIGNS TYPE II EACH	REMOVING SIGNS TYPE II EACH	REMOVING SMALL SIGN SUPPORTS EACH		
0010	06-01	162+33	LT	W1-2L	36X36	CTH N	-	1	-	-	9.00	-	1	1	-	
0010	07-01	165+90	RT	MR2-1	21X15	CTH N	-	1	-	2.19	-	-	1	1	-	
0010	07-02	165+90	RT	MR1-99	24X24	CTH N	-	-	-	4.00	-	-	1	-	INSTALLED ON SAME POST AS 07-01	
0010	07-03	165+90	RT	MR6-1	21X21	CTH N	-	-	-	3.06	-	-	1	-	INSTALLED ON SAME POST AS 07-01	
0010	07-04	167+00	LT	M1-5A	24X24	CTH N	-	1	-	4.00	-	-	1	1	-	
0010	07-05	169+00	LT	R2-1	24X30	CTH N	-	1	-	5.00	-	-	1	1	REINSTALL SOLAR POWERED SPEED RADAR	
0010	07-06	170+07	LT	D7-67	60X30	CTH N	1	1	-	15.00	-	-	1	1	-	
0010	07-07	170+58	RT	W1-2L	36X36	CTH N	-	1	-	-	9.00	-	1	1	-	
0010	07-08	170+58	RT	W13-1	18X18	CTH N	-	-	-	-	2.25	-	1	-	INSTALLED ON SAME POST AS 07-07	
0010	07-09	173+46	LT	W1-7	W1-7	CTH N	-	2	-	-	8.00	-	1	1	-	
0010	07-10	174+11	RT	R1-1	R1-1	SERNS	-	1	-	5.18	-	-	1	1	-	
0010	08-01	175+20	RT	M1-5A	24X24	CTH N	-	1	-	4.00	-	-	1	1	-	
0010	08-02	176+92	RT	W1-6	48X24	CTH N	-	2	-	-	8.00	-	1	1	-	
0010	08-03	179+80	LT	MR2-1	21X15	CTH N	-	1	-	2.19	-	-	1	1	-	
0010	08-04	179+80	LT	MR1-99	24X24	CTH N	-	-	-	4.00	-	-	1	-	INSTALLED ON SAME POST AS 08-03	
0010	08-05	179+80	LT	MR26-1	21X21	CTH N	-	-	-	3.06	-	-	1	-	INSTALLED ON SAME POST AS 08-03	
0010	08-06	182+05	RT	W1-6	48X24	CTH N	-	2	-	-	8.00	-	1	1	-	
0010	09-01	188+63	LT	W2-2R	30X30	CTH N	-	1	-	-	6.25	-	1	1	-	
0010	09-02	192+07	RT	W2-2L	30X30	CTH N	-	1	-	-	6.25	-	1	1	-	
0010	10-01	199+51	LT	M1-5A	24X24	CTH N	-	1	-	4.00	-	-	1	1	-	
0010	10-02	201+30	LT	R1-1	30X30	VOGEL	-	1	-	5.18	-	-	1	1	-	
0010	10-03	201+37	RT	W1-7	48X24	CTH N	-	2	-	-	8.00	-	1	1	-	
0010	10-04	205+79	RT	M1-5A	24X24	CTH N	-	1	-	4.00	-	-	1	1	-	
0010	11-01	207+00	RT	R2-1	24X30	CTH N	-	1	-	5.00	-	-	1	1	-	
0010	11-02	208+69	LT	W2-2R	30X30	CTH N	-	1	-	-	6.25	-	1	1	-	
0010	12-01	222+90	RT	W1-2R	36X36	CTH N	-	1	-	-	9.00	-	1	1	-	
0010	12-02	225+17	RT	-	-	CTH N	-	1	-	-	-	1	-	1	ENGINE BRAKING SIGN	
0010	12-03	227+15	LT	W3-1	36X36	CTH N	-	1	-	-	9.00	-	1	1	-	
0010	12-04	227+15	RT	W3-1	36X36	CTH N	-	1	-	-	9.00	-	1	1	-	
0010	13-01	228+48	RT	D1-56	12X60	CTH N	1	1	-	5.00	-	-	1	2	"UW WHITEWATER" WITH UP ARROW	
0010	13-02	234+95	LT	R2-1	24X30	CTH N	-	1	-	5.00	-	-	1	1	-	
0010	13-03	236+80	LT	M1-5A	24X24	CTH N	-	1	-	4.00	-	-	1	1	-	
0010	13-04	236+80	LT	M1-92	24X24	CTH N	-	-	-	4.00	-	-	1	-	INSTALLED ON SAME POST AS 13-03	
0010	13-05	236+97	LT	W5-52L	12X36	CTH N	1	-	-	-	3.00	-	1	1	-	
0010	13-06	236+97	RT	W5-52R	12X36	CTH N	1	-	-	-	3.00	-	1	1	-	
0010	13-07	237+36	LT	W5-52L	12X36	CTH N	1	-	-	-	3.00	-	1	1	-	
0010	13-08	237+36	RT	W5-52R	12X36	CTH N	1	-	-	-	3.00	-	1	1	-	
0010	14-01	237+88	LT	R1-1	30X30	CTH N	-	1	-	5.18	-	-	1	1	-	
0010	14-02	237+88	LT	R1-3P	18X6	CTH N	-	-	-	0.75	-	-	1	-	INSTALLED ON SAME POST AS 14-01	
0010	14-03	237+98	RT	R1-1	30X30	CTH N	-	-	-	5.18	-	-	1	-	INSTALLED ON EXISTING MONOTUBE WITH MASTARM	
0010	14-04	237+98	RT	R1-1	30X30	CTH N	-	-	-	5.18	-	-	1	-	INSTALLED ON EXISTING MONOTUBE WITH MASTARM	
0010	14-05	237+98	RT	R1-3P	18X6	CTH N	-	-	-	0.75	-	-	1	-	INSTALLED ON EXISTING MONOTUBE WITH MASTARM	
0010	14-06	1+50	LT	R1-1	30X30	MILTON	-	1	-	5.18	-	-	1	1	-	
0010	14-07	2+85	LT	R1-1	30X30	MILTON	-	1	-	5.18	-	-	1	-	-	
0010	14-08	2+85	LT	R1-3P	18X6	MILTON	-	-	-	0.75	-	-	1	-	INSTALLED ON SAME POST AS 14-07	
0010	14-09	2+87	LT	M1-5A	24X24	MILTON	-	1	-	4.00	-	-	1	-	-	
0010	14-10	2+87	LT	M6-4	21X21	MILTON	-	-	-	3.06	-	-	1	-	INSTALLED ON SAME POST AS 14-09	
TOTAL 0010							8.00	48.00	1.00	179.62	167.37	2	65	47		

PROJECT NO: 3658-00-70

HWY: CTH N

COUNTY: ROCK

MISCELLANEOUS QUANTITIES

SHEET

76

E

643 - TRAFFIC CONTROL

				643.0300	643.0420	643.0705	643.0715	643.0900	643.0910	643.0920	643.1050	643.5000
				TRAFFIC CONTROL DRUMS	TRAFFIC CONTROL BARRICADES TYPE III	TRAFFIC CONTROL WARNING LIGHTS TYPE A	TRAFFIC CONTROL WARNING LIGHTS TYPE C	TRAFFIC CONTROL SIGNS	TRAFFIC CONTROL COVERING SIGNS TYPE I	TRAFFIC CONTROL COVERING SIGNS TYPE II	TRAFFIC CONTROL SIGNS PCMS	TRAFFIC CONTROL EACH
CATEGORY	PHASE	DAYS	LOCATION	DAY	DAY	DAY	DAY	DAY	EACH	EACH	DAY	EACH
0010	PCMS NOTICE	14	PROJECT	140	-	-	-	-	-	-	28	-
0010	ROAD CLOSED	120	PROJECT	12,000	1,920	1,920	12,000	25,320	1	10	-	-
0010	DETOUR	120	PROJECT	-	360	360	-	1,800	-	-	-	-
0010	UNDISTRIBUTED	-	PROJECT	860	320	320	-	880	2	5	22	1
TOTAL 0010				13,000	2,600	2,600	12,000	28,000	3	15	50	1

646 - PAVEMENT MARKING

				646.2020	646.6120	648.0100
				MARKING LINE EPOXY 6-INCH	MARKING STOP LINE EPOXY 18-INCH	LOCATING NO-PASSING ZONES
CATEGORY	STATION	TO	STATION	LOCATION	LF	MI
0010	100+25	-	238+32	CTH N	51,400	2.6
TOTAL 0010					51,400	2.6

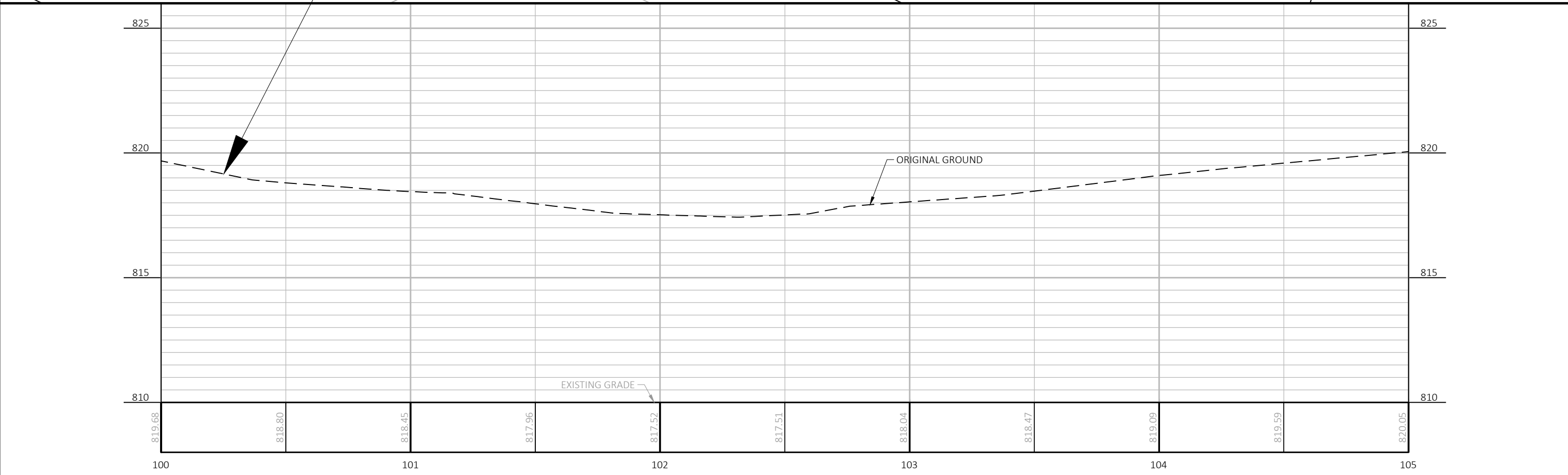
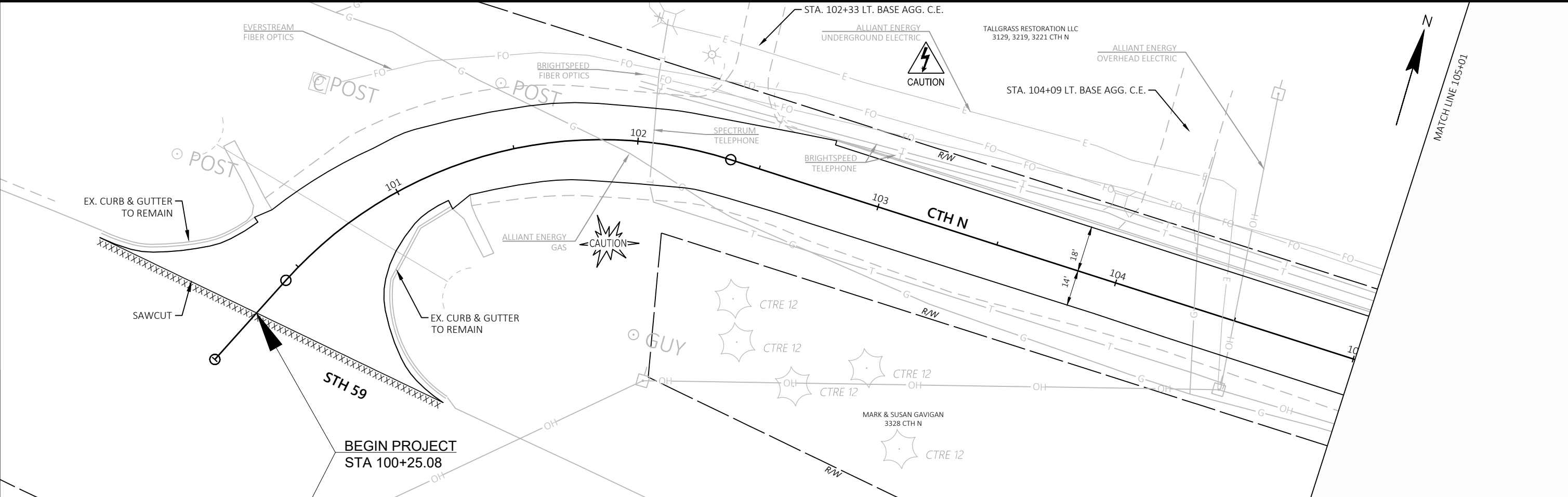
650 - CONSTRUCTION STAKING

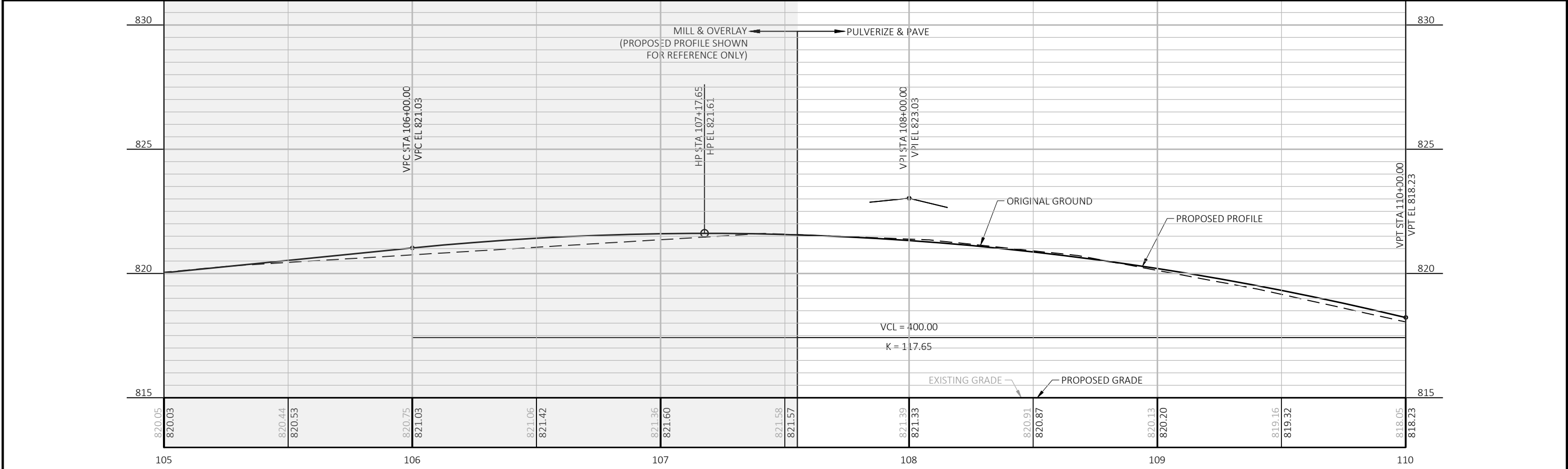
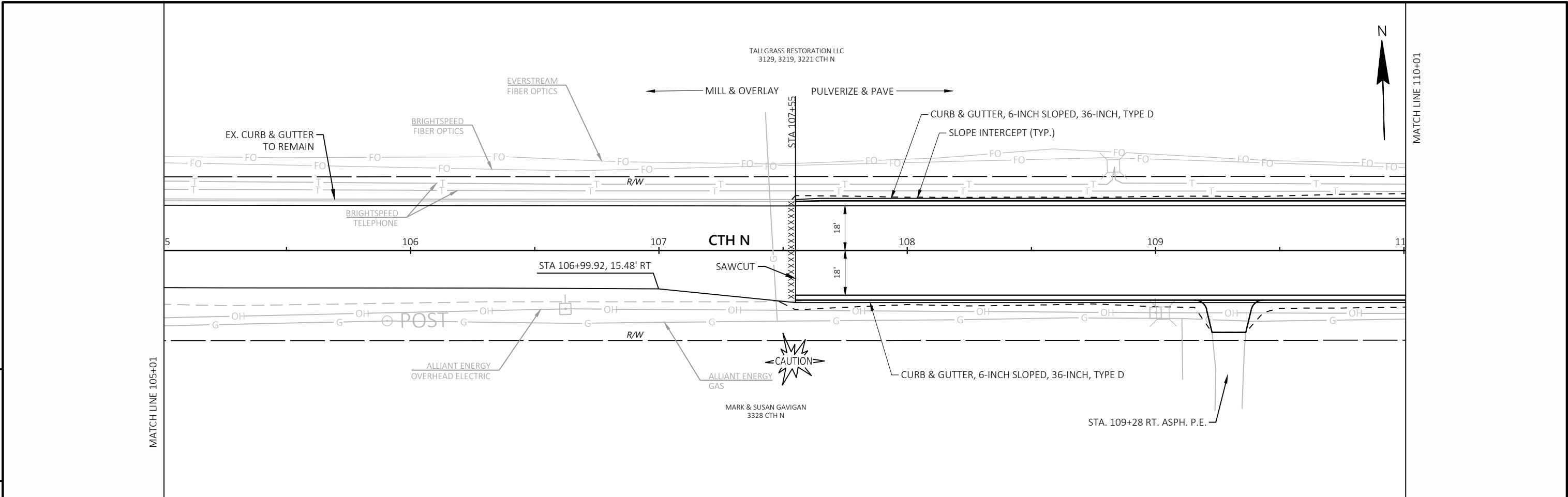
				650.4500	650.5000	650.5500	650.6000	650.8000	650.9911.01	650.9920
				CONSTRUCTION STAKING SUBGRADE	CONSTRUCTION STAKING BASE	CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER	CONSTRUCTION STAKING PIPE CULVERTS	CONSTRUCTION STAKING RESURFACING REFERENCE	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) (01. 3658-00-70)	CONSTRUCTION STAKING SLOPE STAKES
CATEGORY	LOCATION	LF	LF	LF	LF	LF	EACH	LF	EACH	LF
0010	CTH N	2,360	13,080	674	1	13,810	1	13,810	1	13,080
0010	MILTON ROAD	-	-	-	-	370	-	370	-	370
TOTAL 0010		2,360	13,080	674	1	14,180	1	14,180	1	13,450

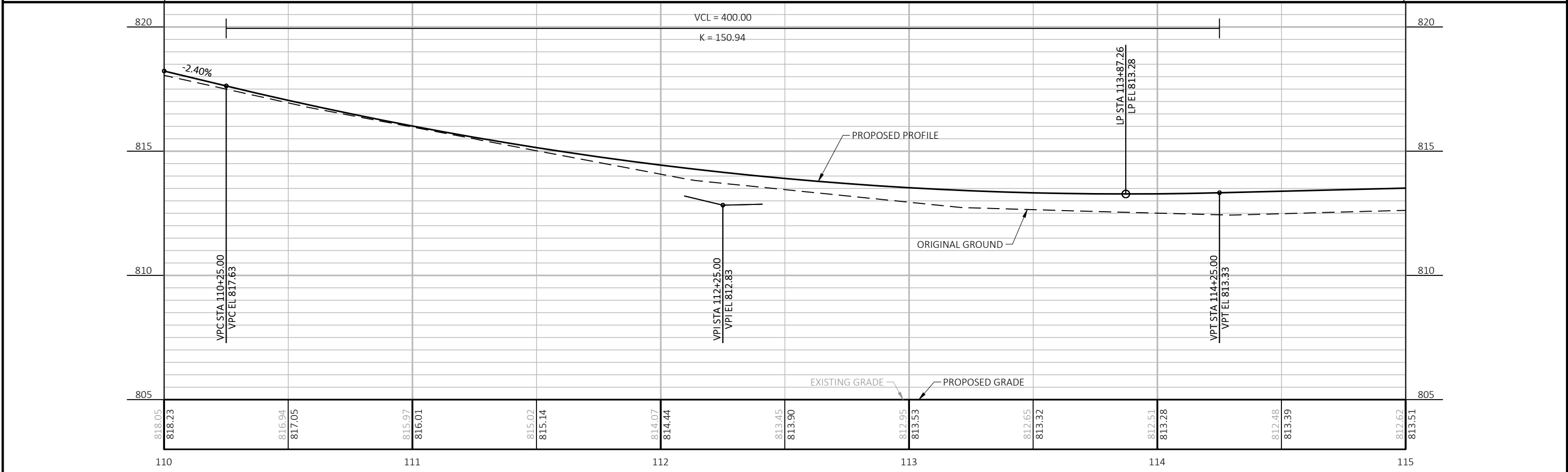
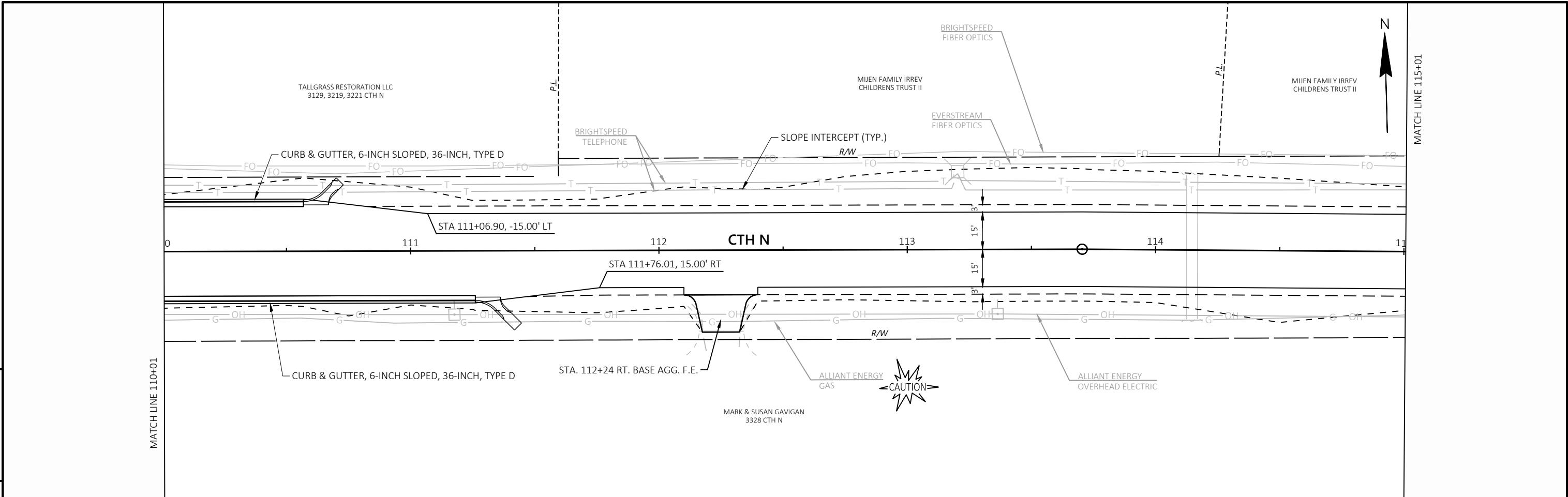
690 - SAWCUTS

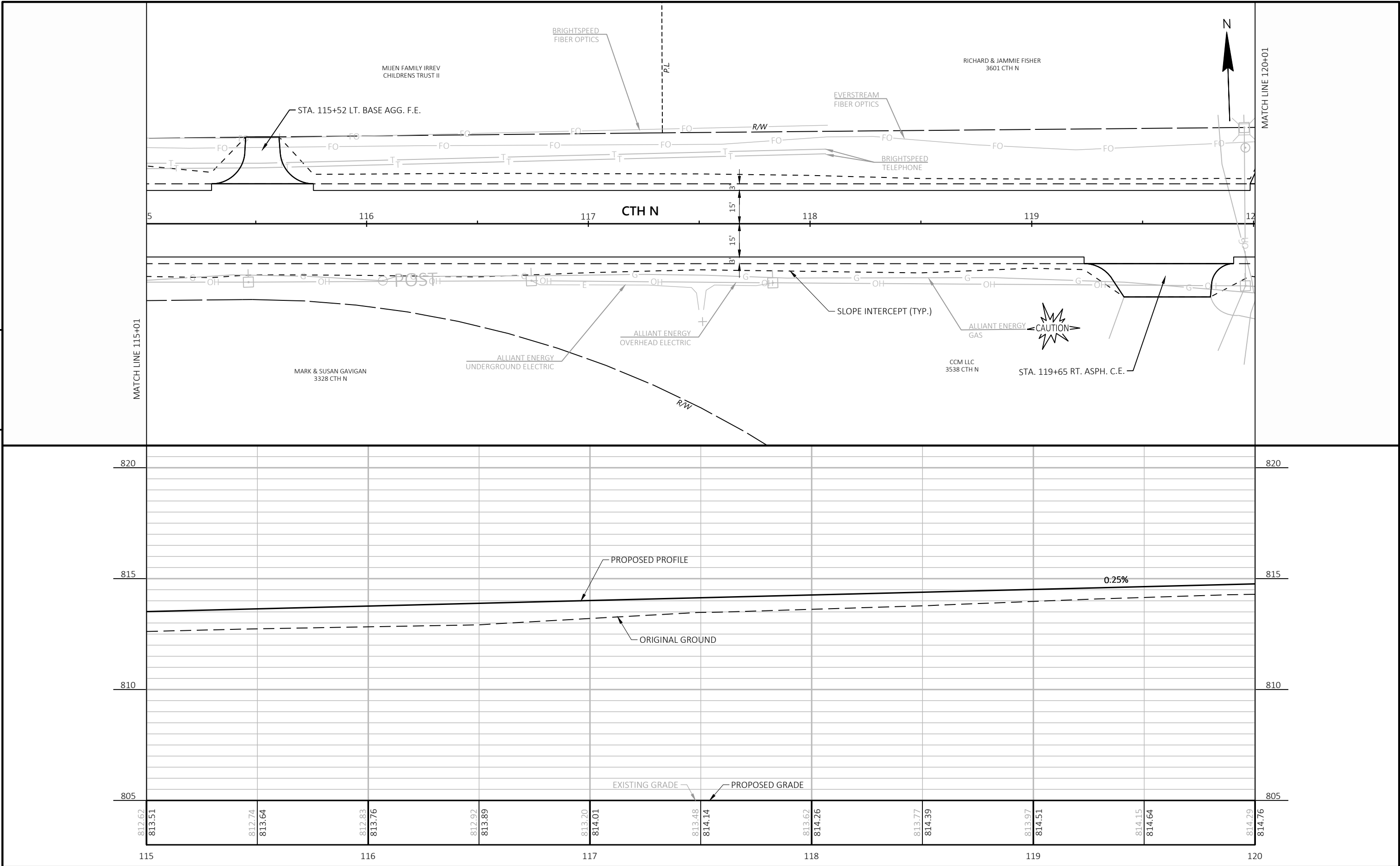
* - BID ITEM IN MULTIPLE TABLES

				690.0150	690.0250
				SAWING ASPHALT	SAWING CONCRETE
CATEGORY	STATION	OFFSET	LOCATION	LF	LF
0010	100+25	CROSS	STH 59	153	-
0010	121+60	RT	CHARLEY BLUFF ROAD	24	-
0010	121+96	LT	CHARLEY BLUFF ROAD	25	-
0010	174+10	RT	SERNS ROAD	22	-
0010	201+37	LT	VOGEL ROAD	22	-
0010	238+35	CROSS	STH 26	16	138
0010	UNDISTRIBUTED		PROJECT	18	12
TOTAL 0010				280	150

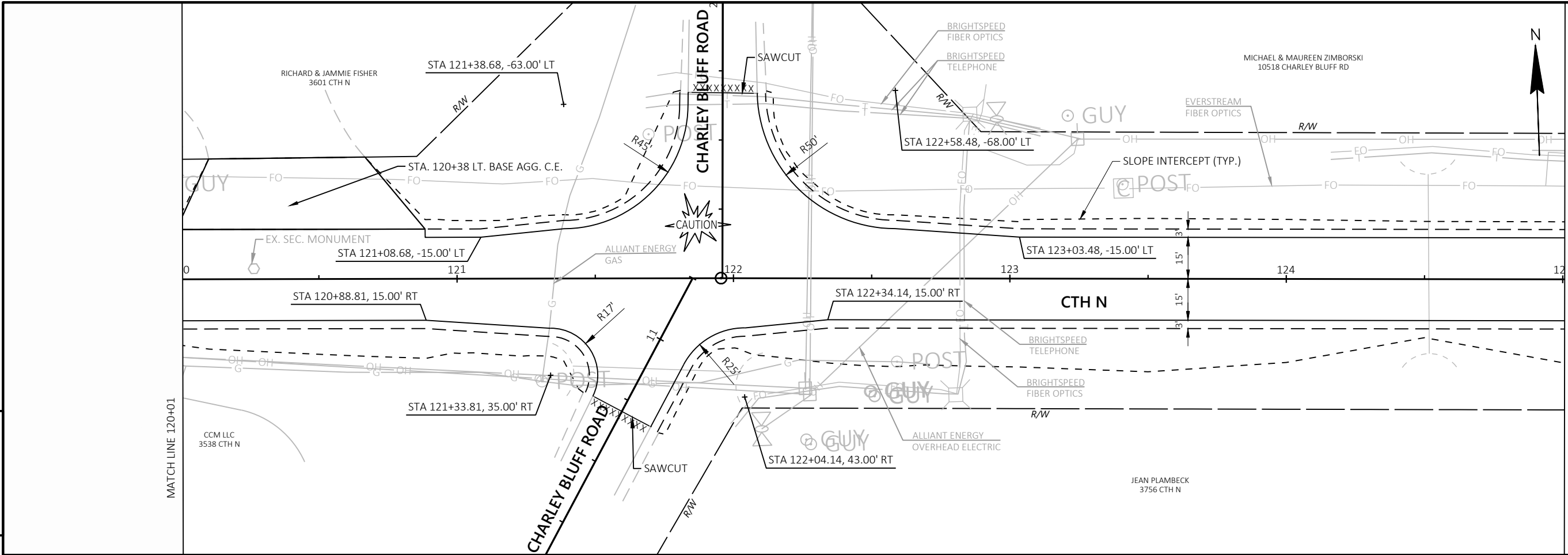




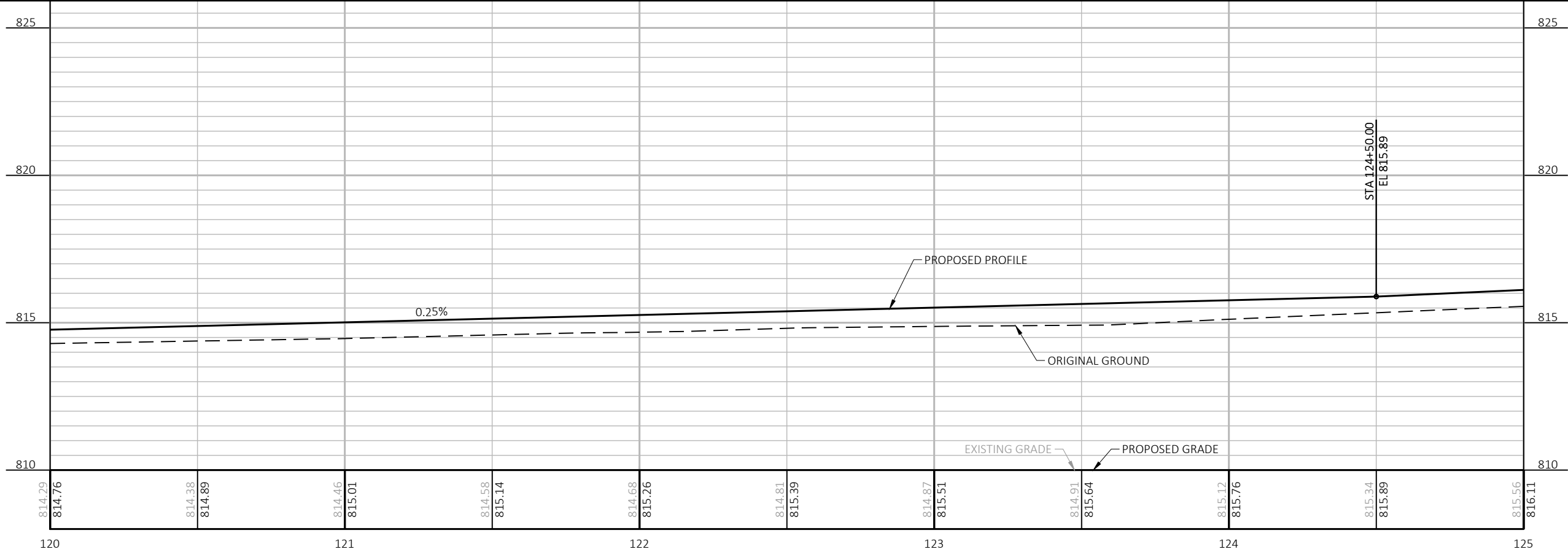




5

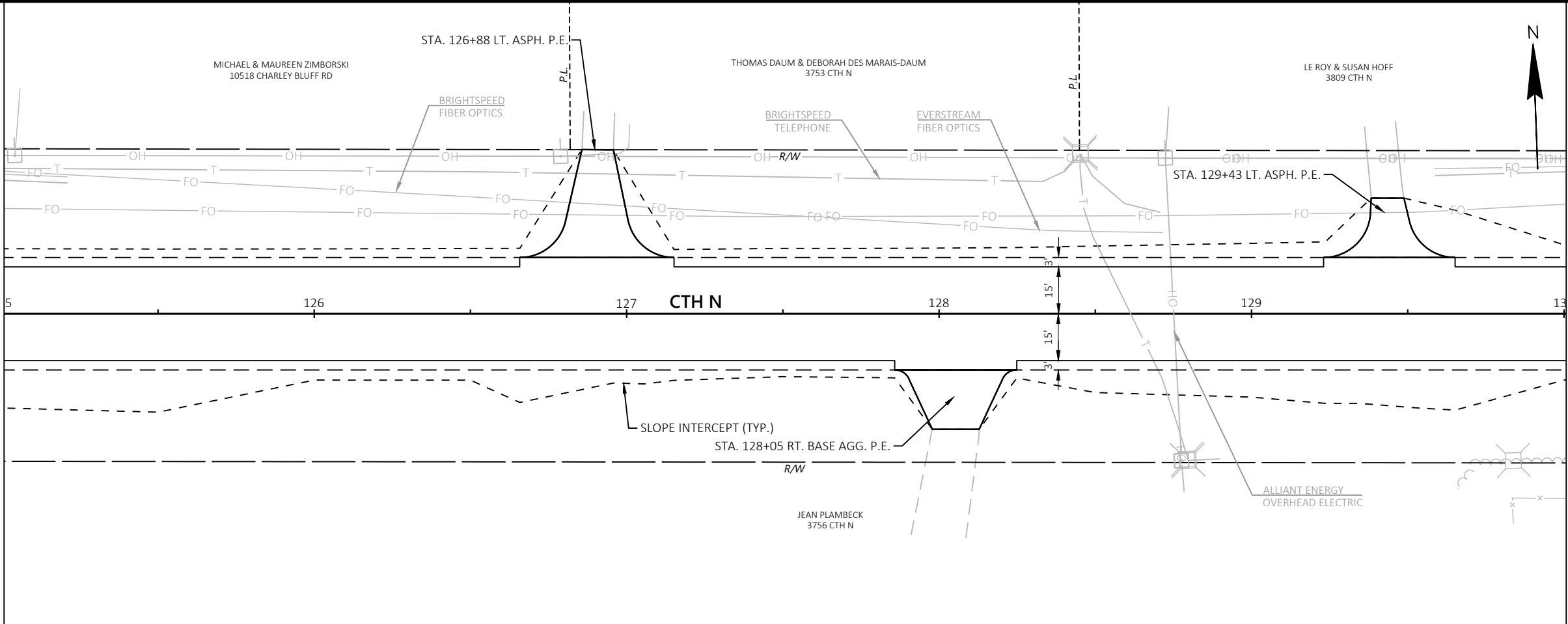


5

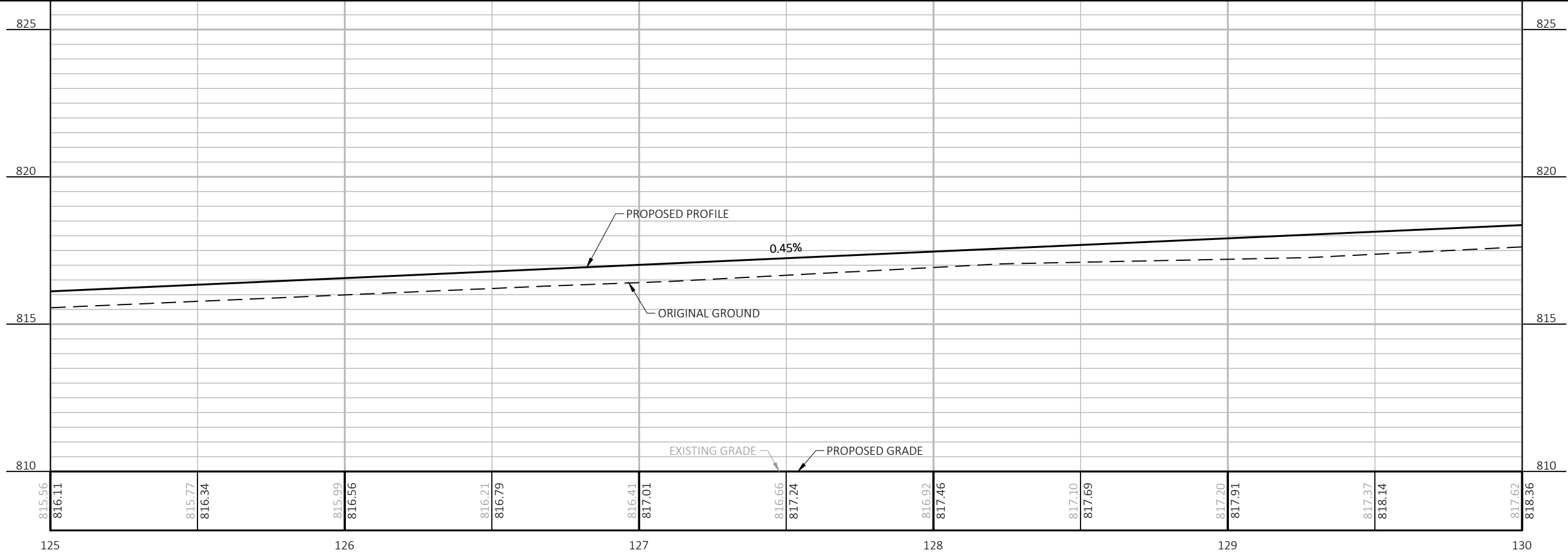


5

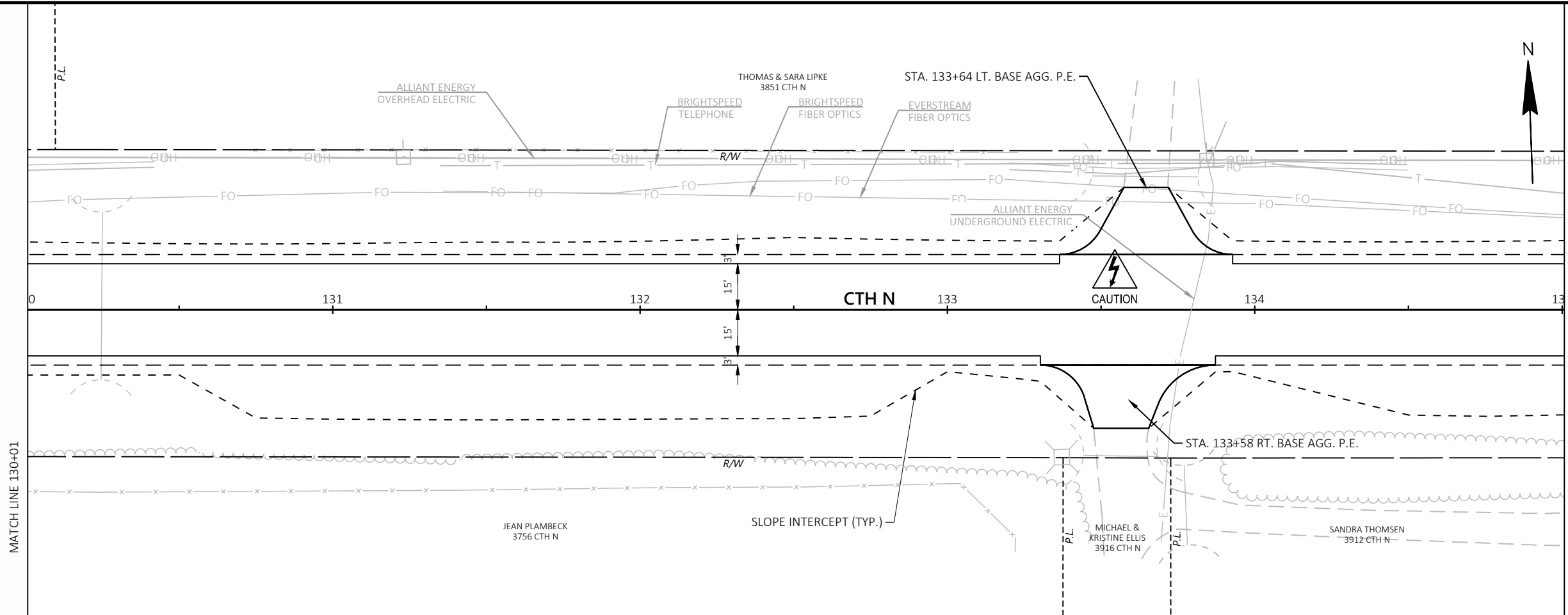
MATCH LINE 125+01



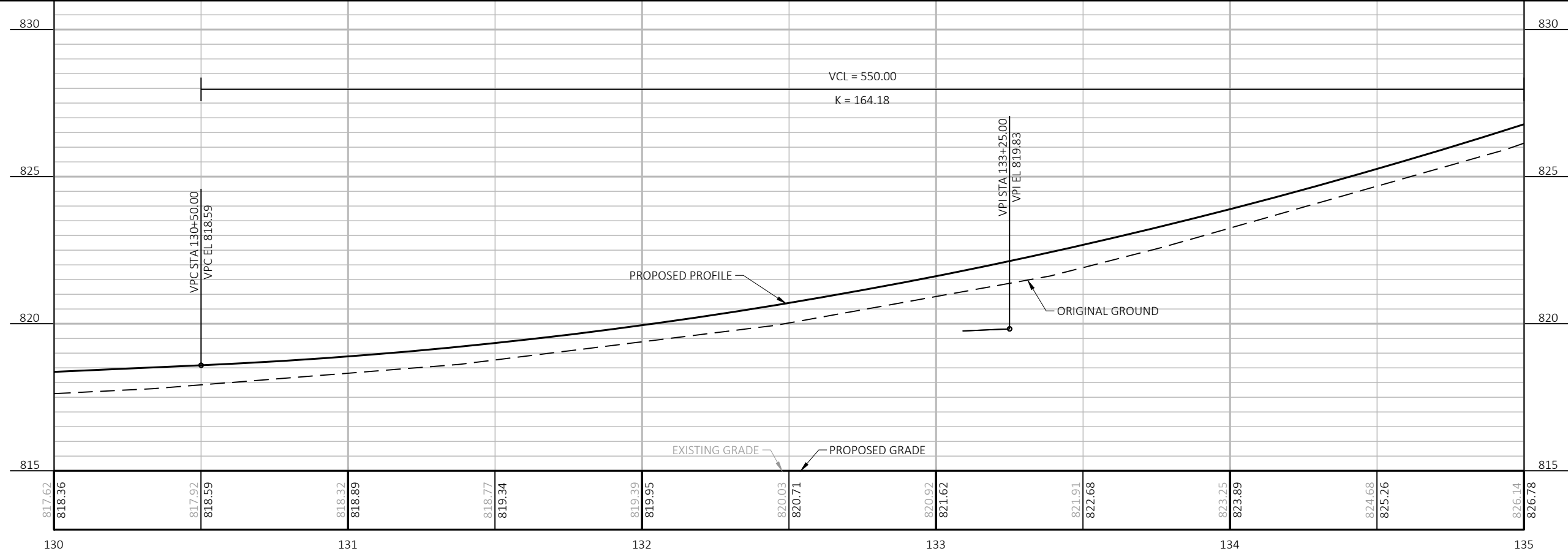
5



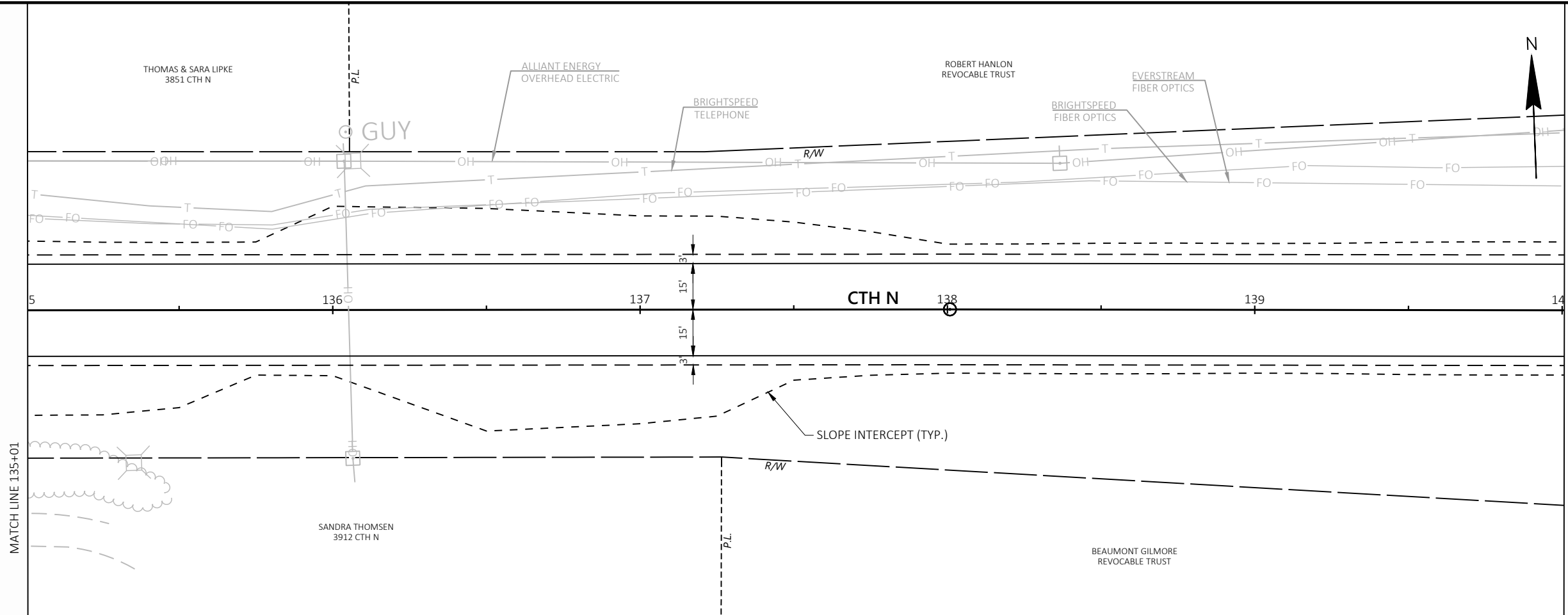
5



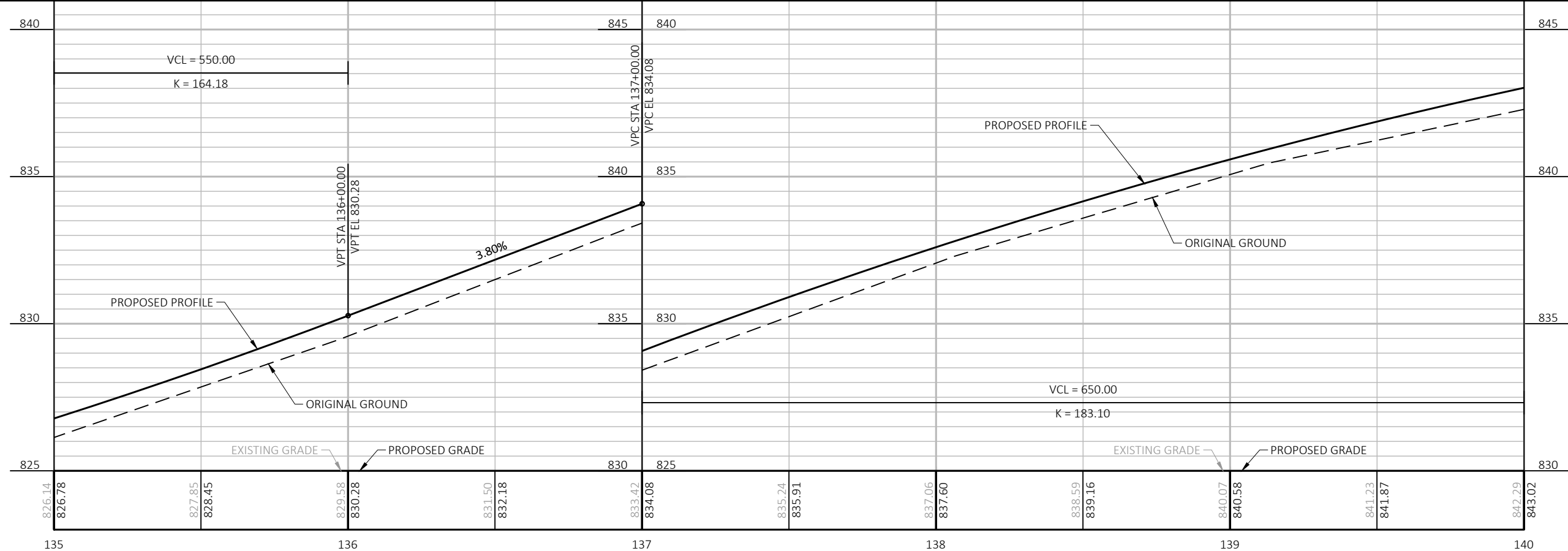
5



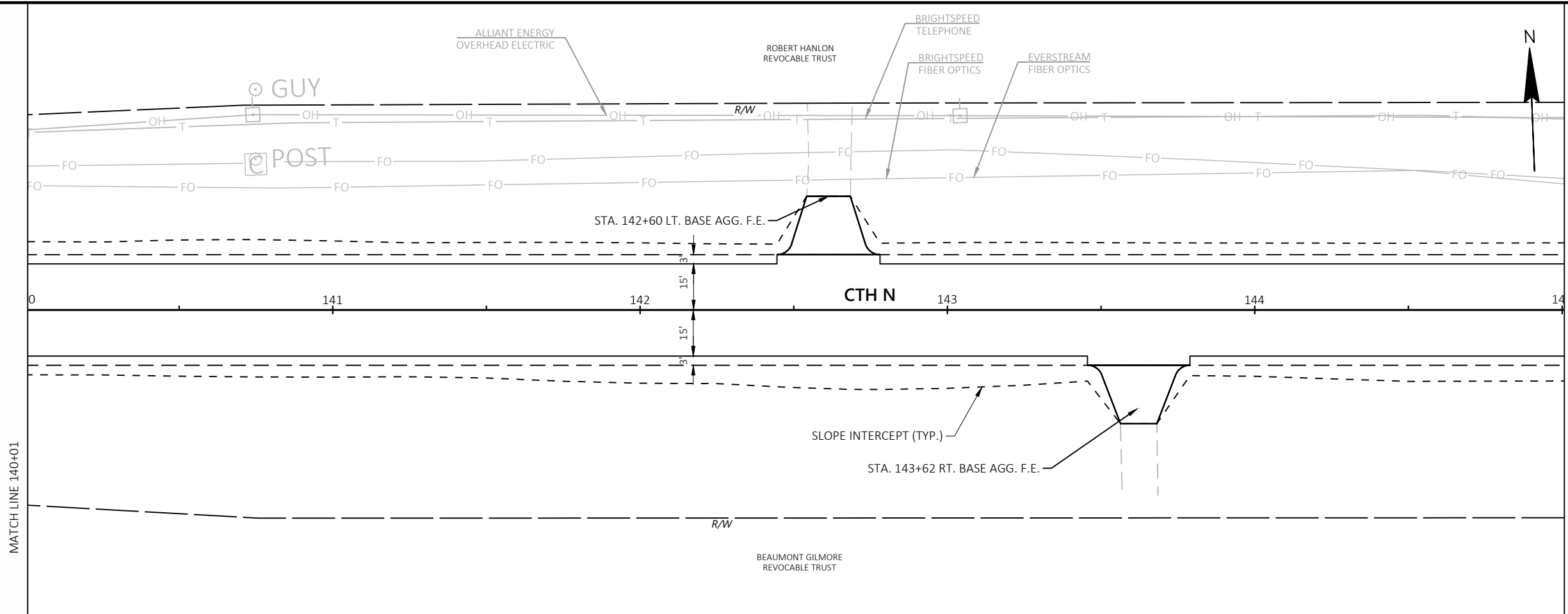
5



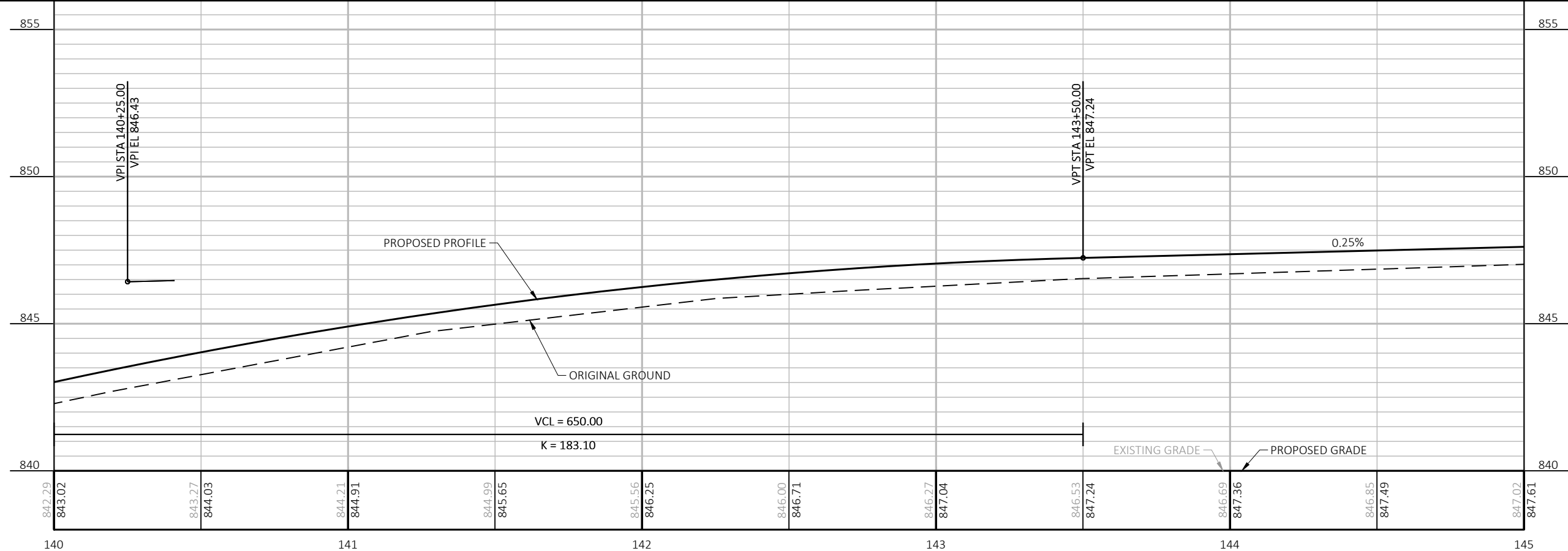
5

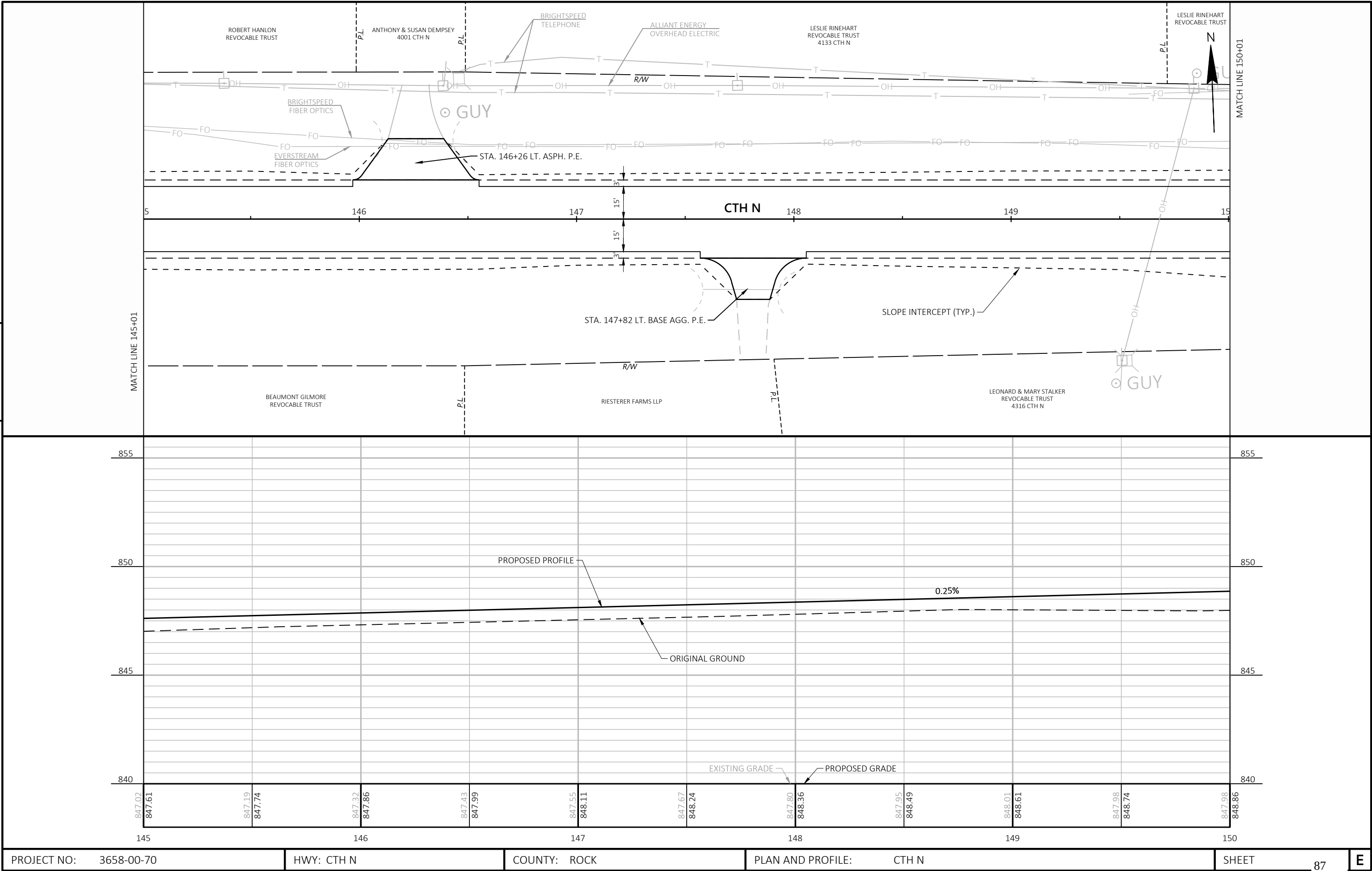


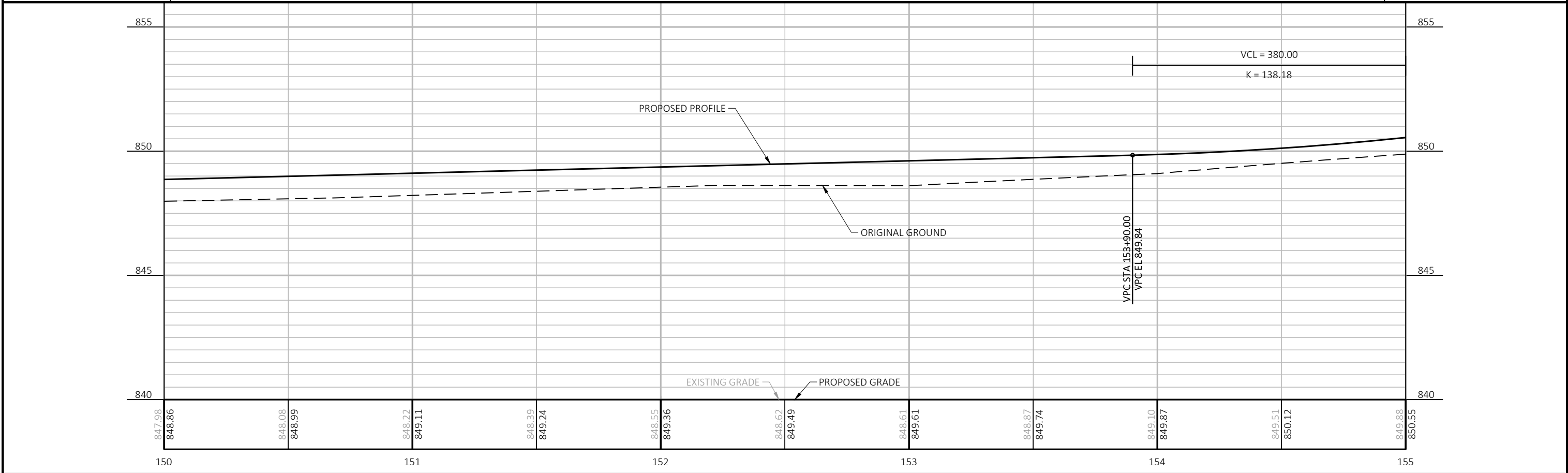
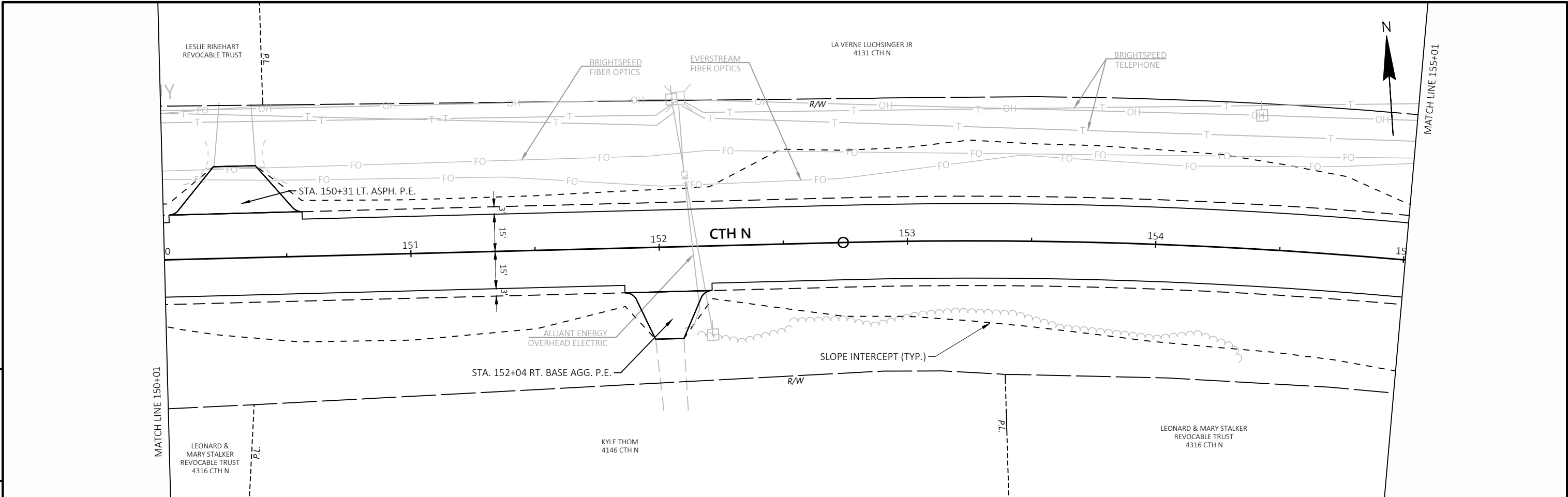
5



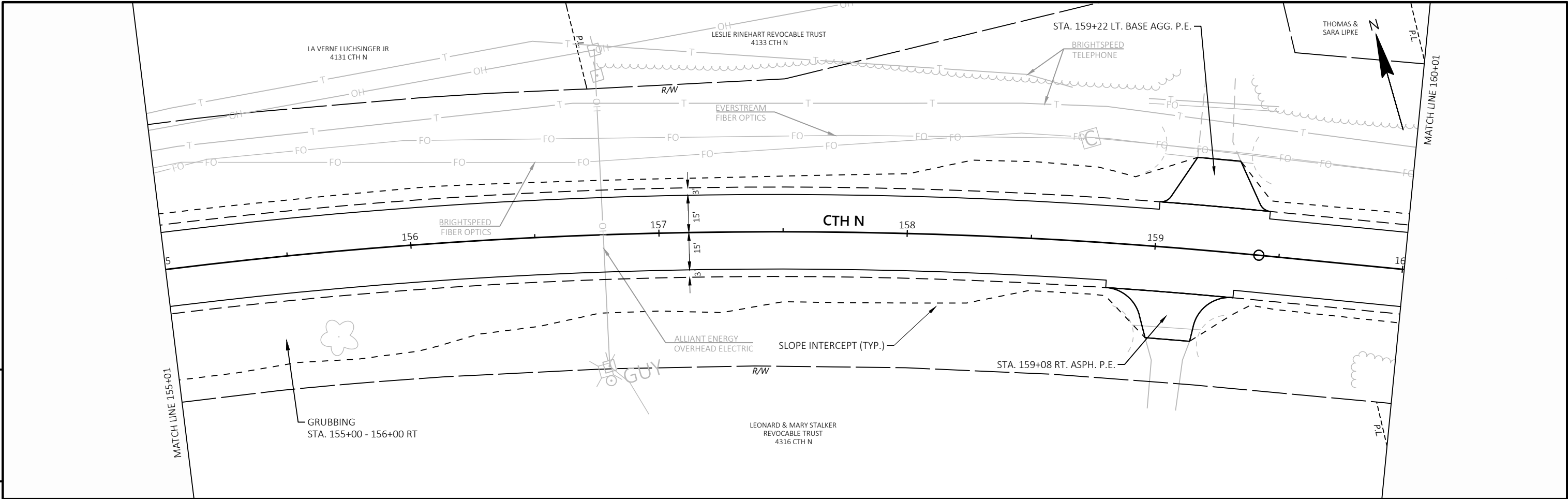
5



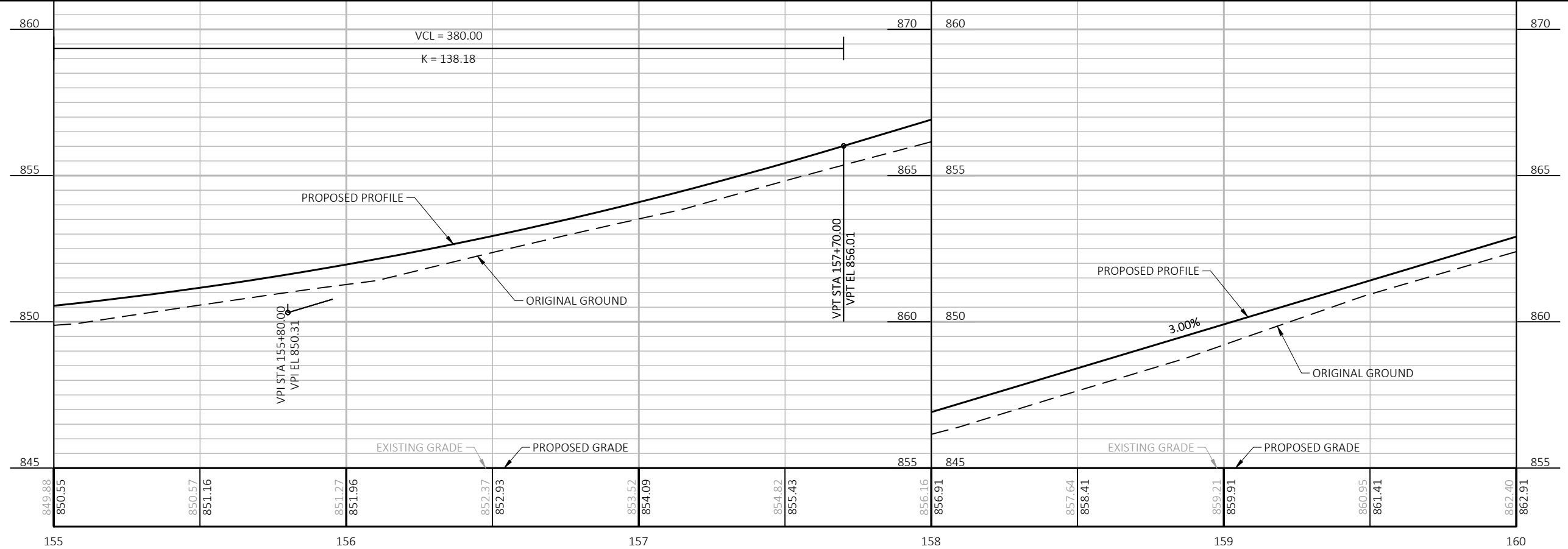




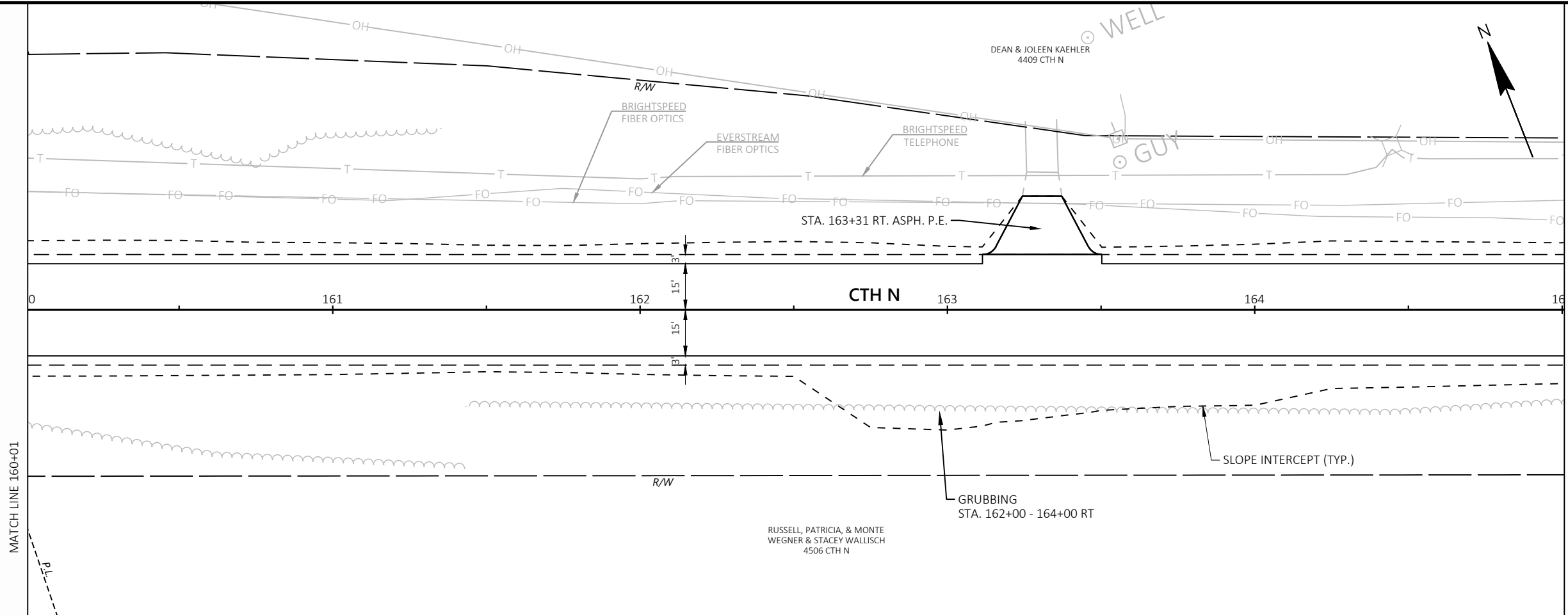
5



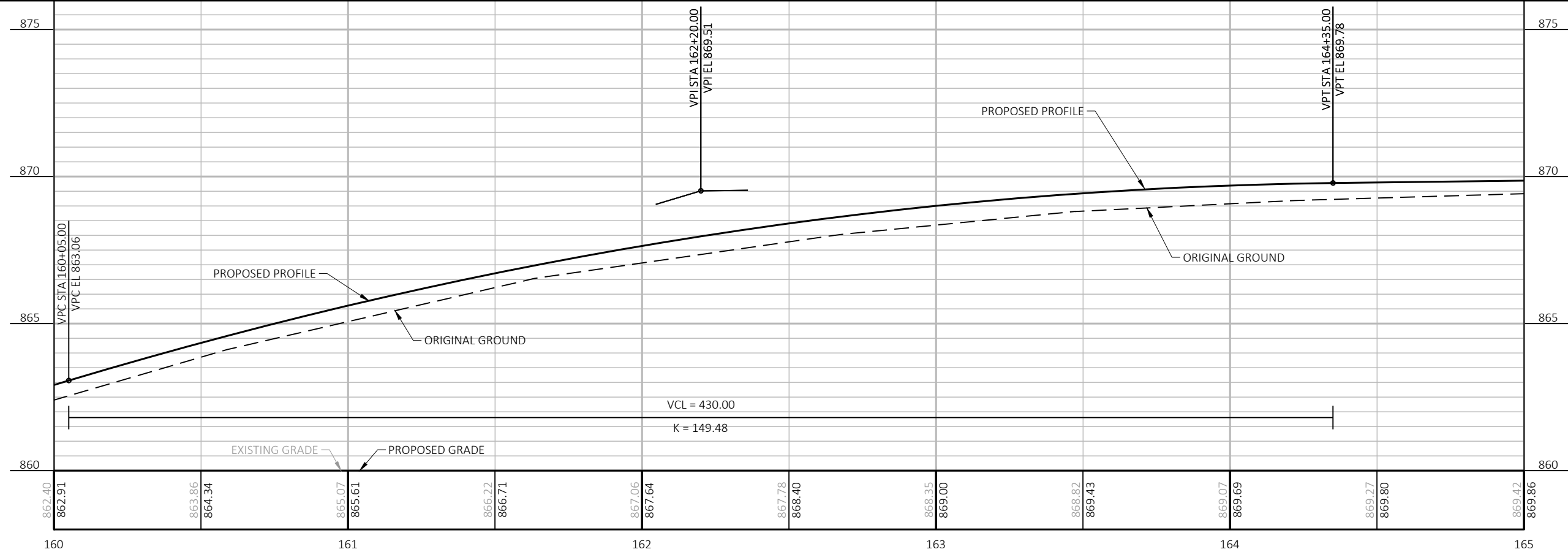
5



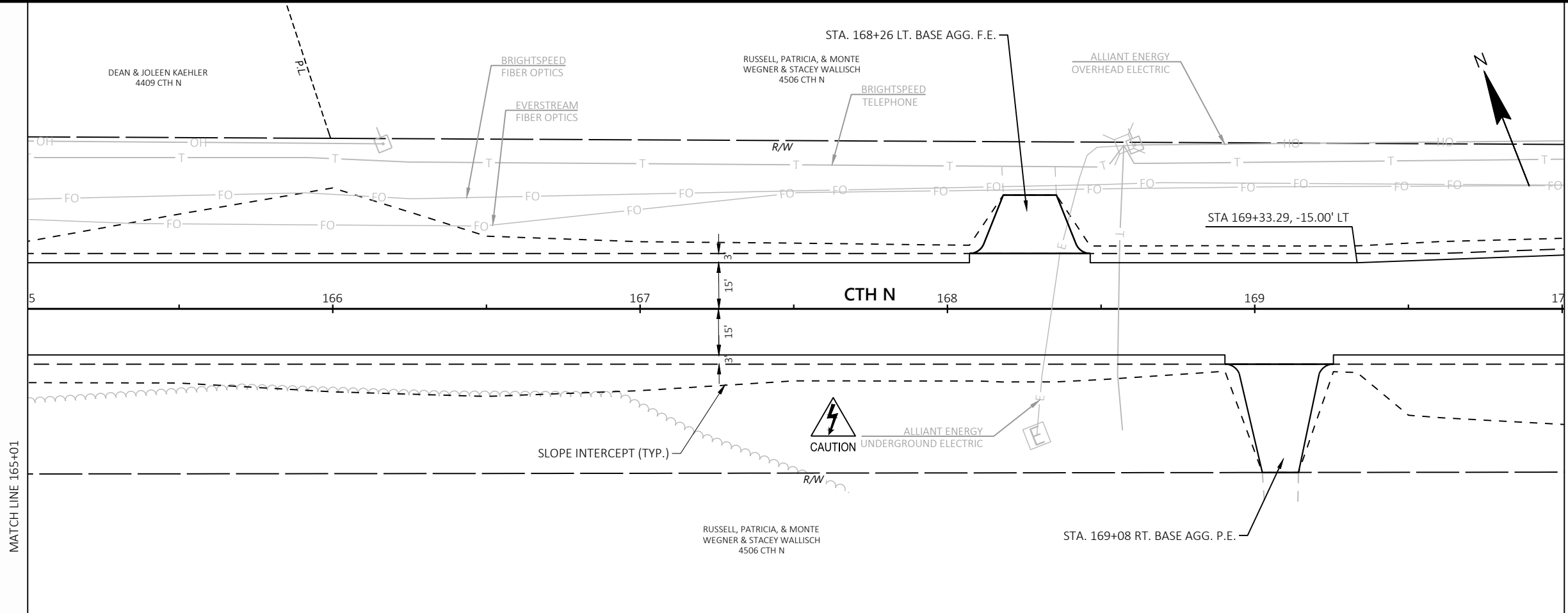
5



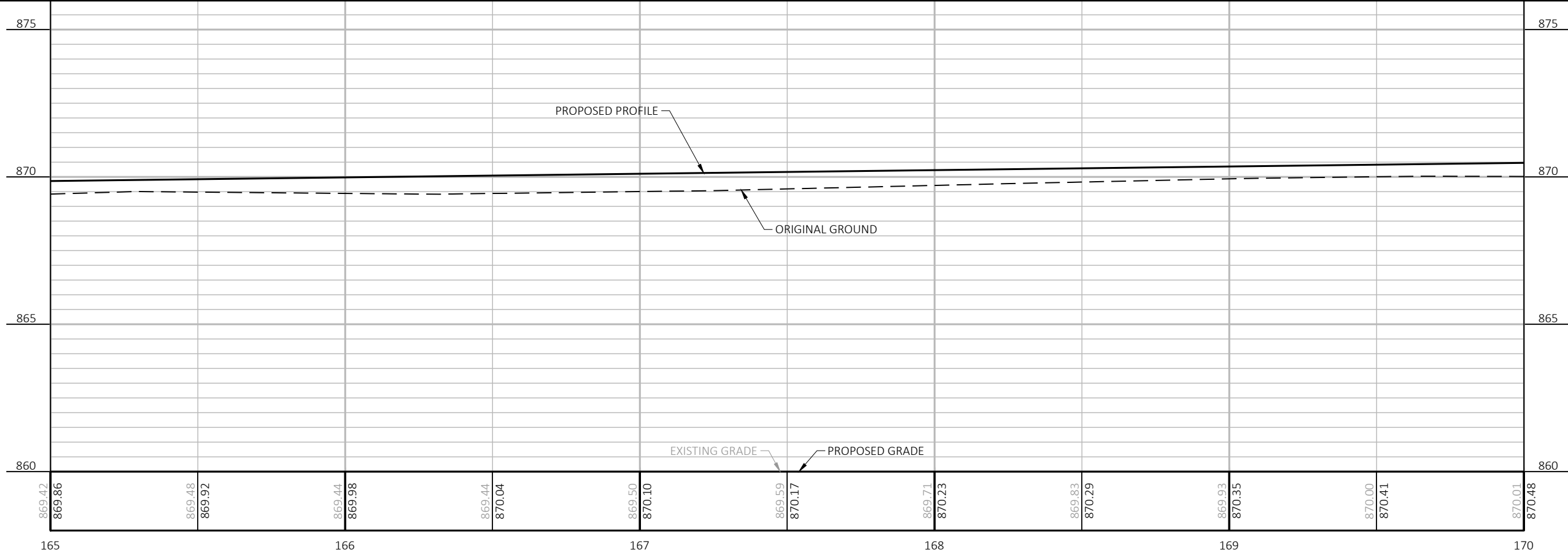
5



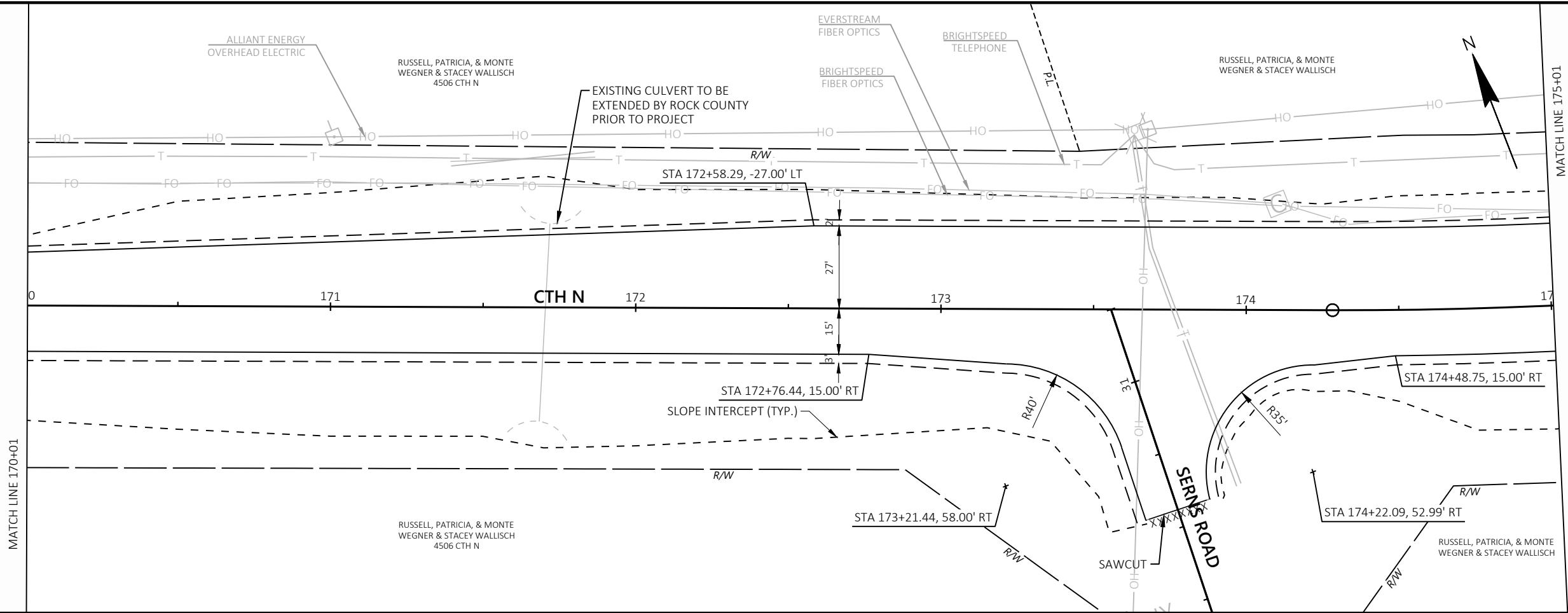
5



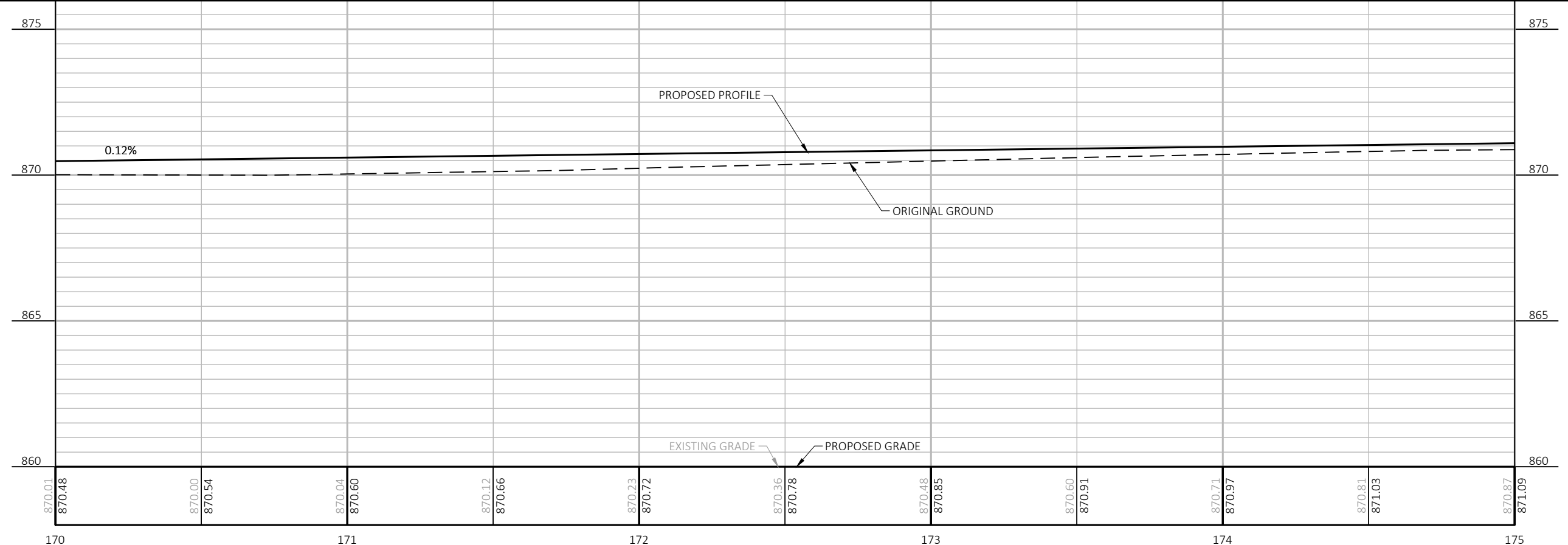
5

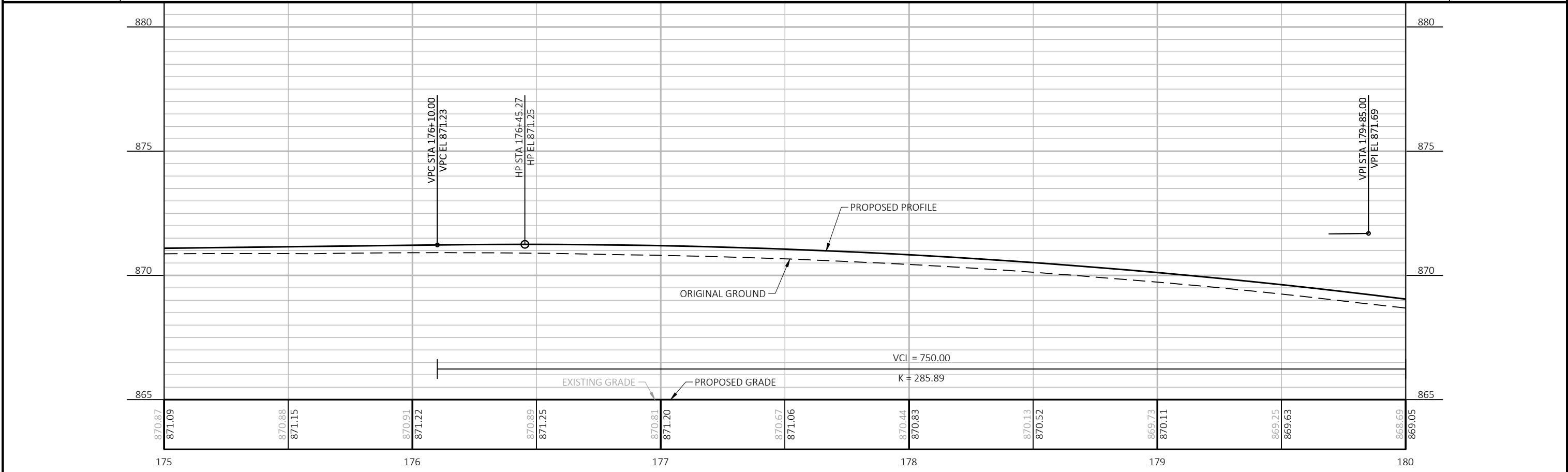
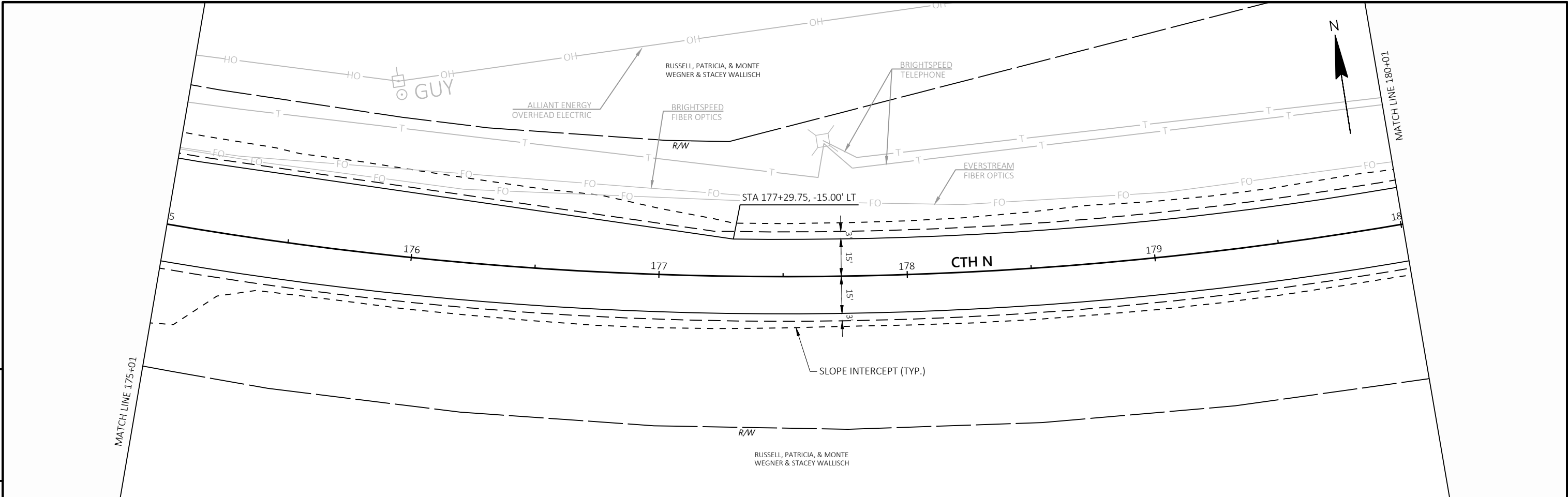


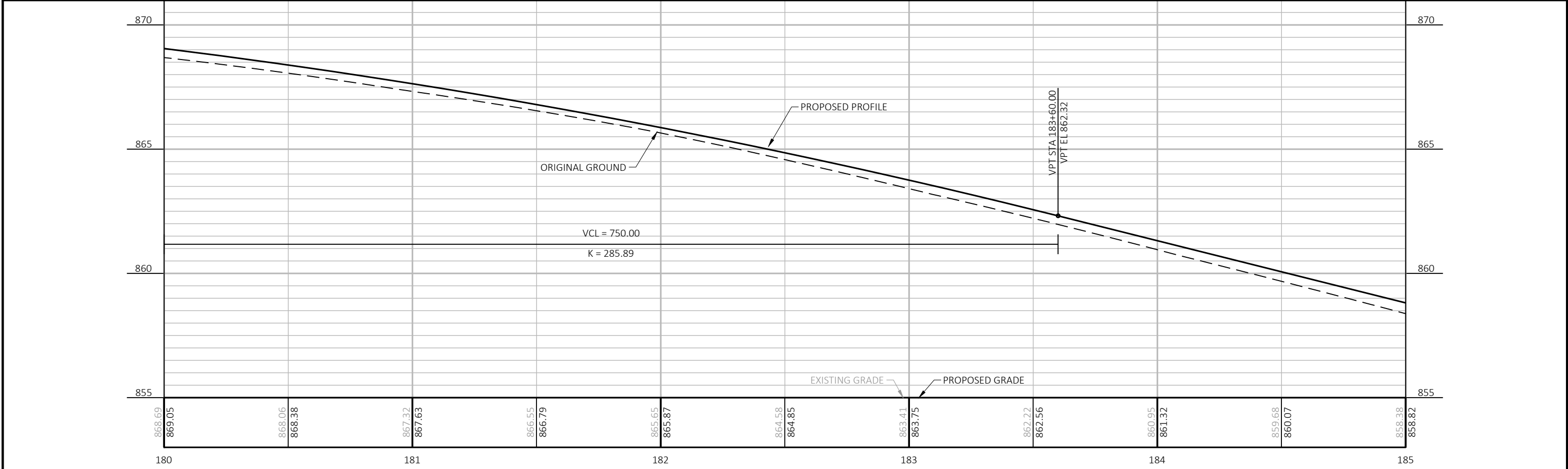
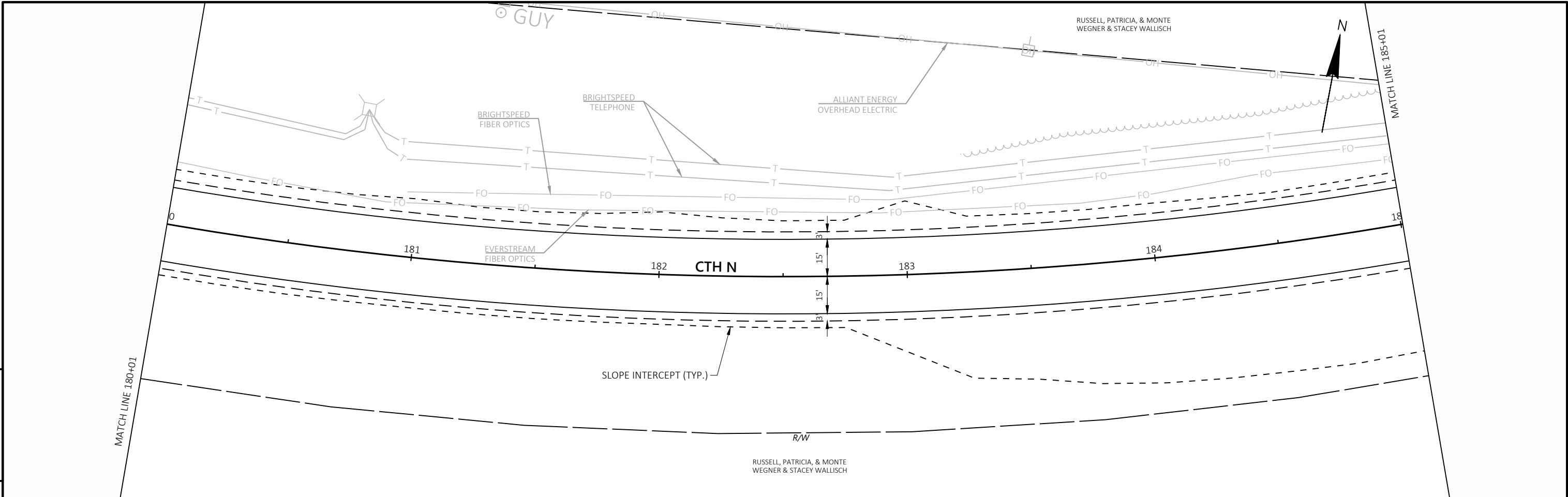
5



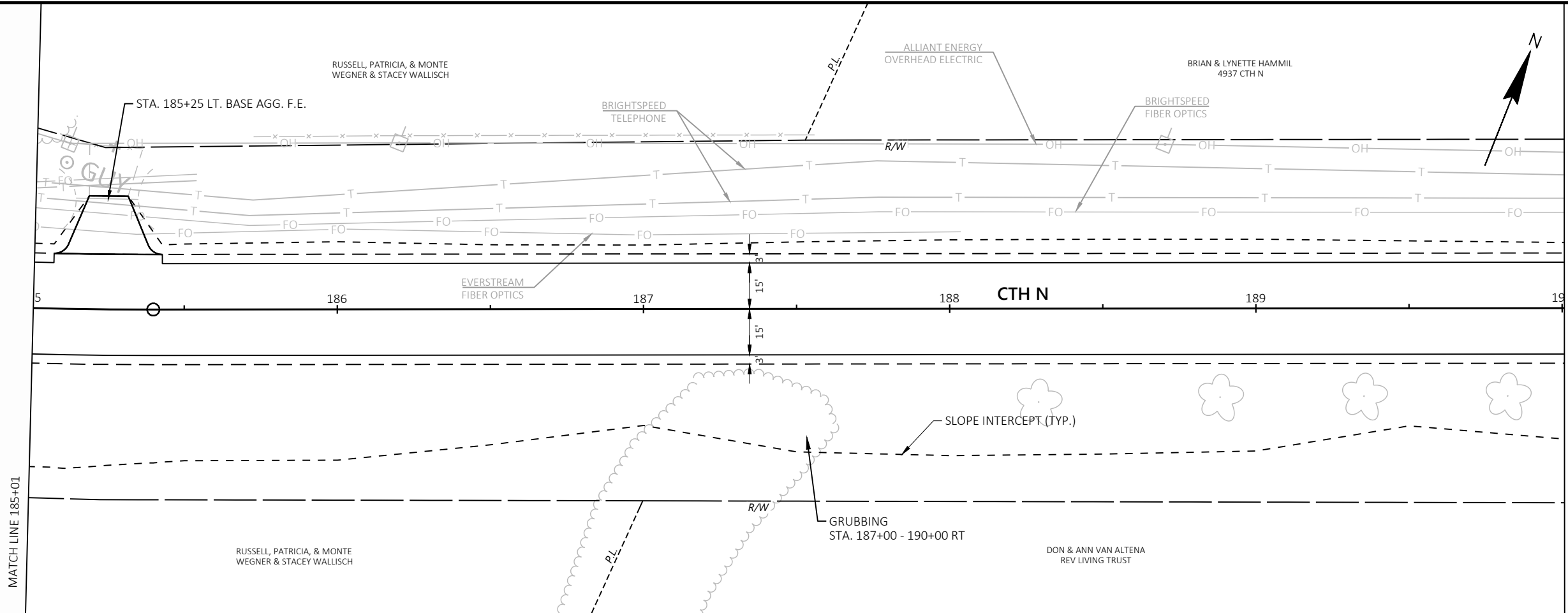
5





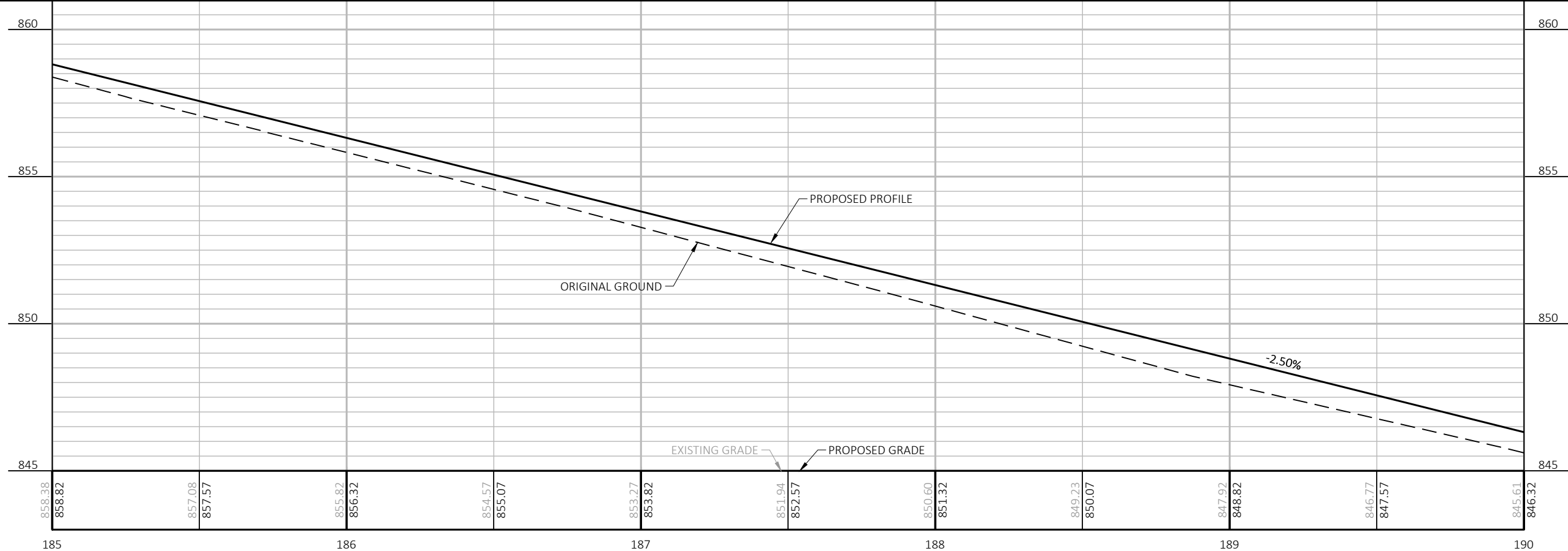


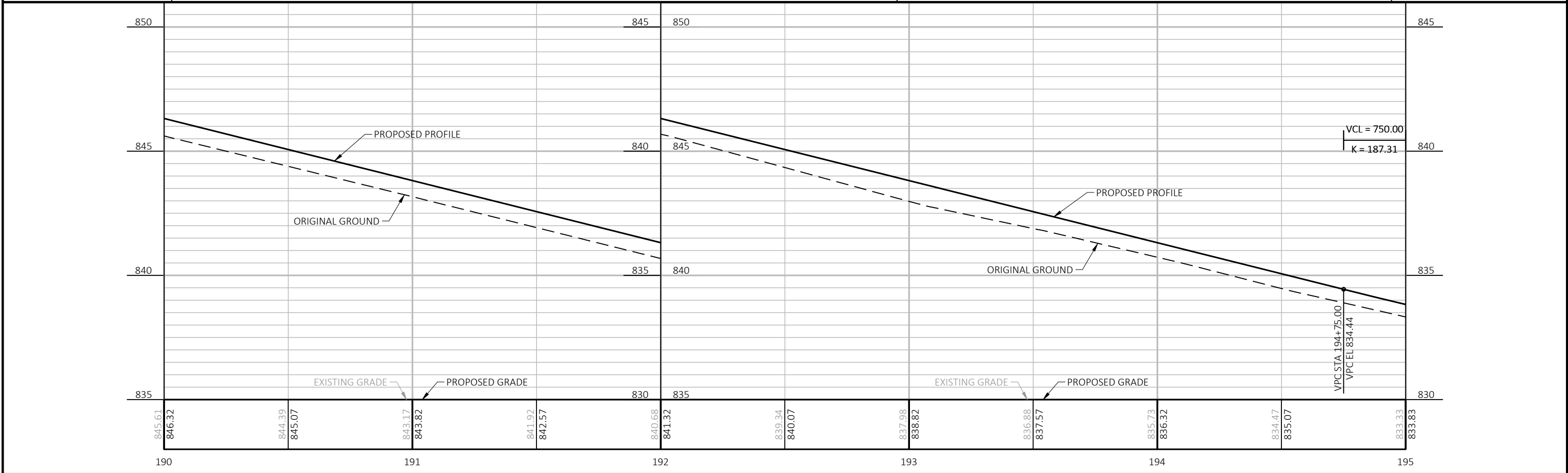
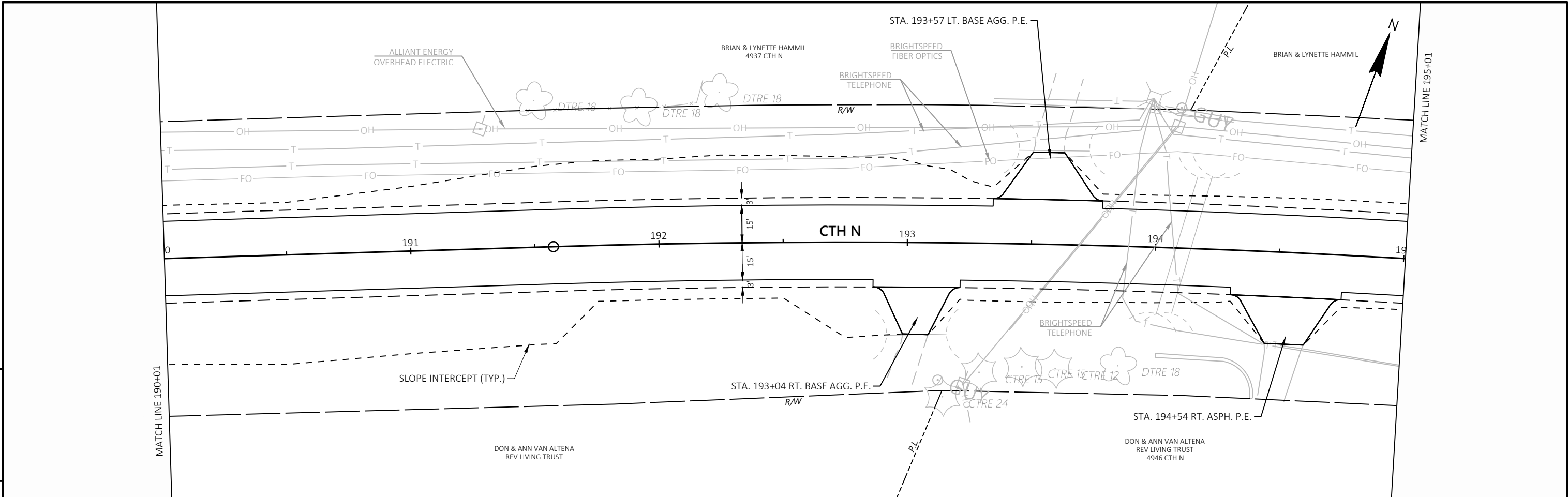
5

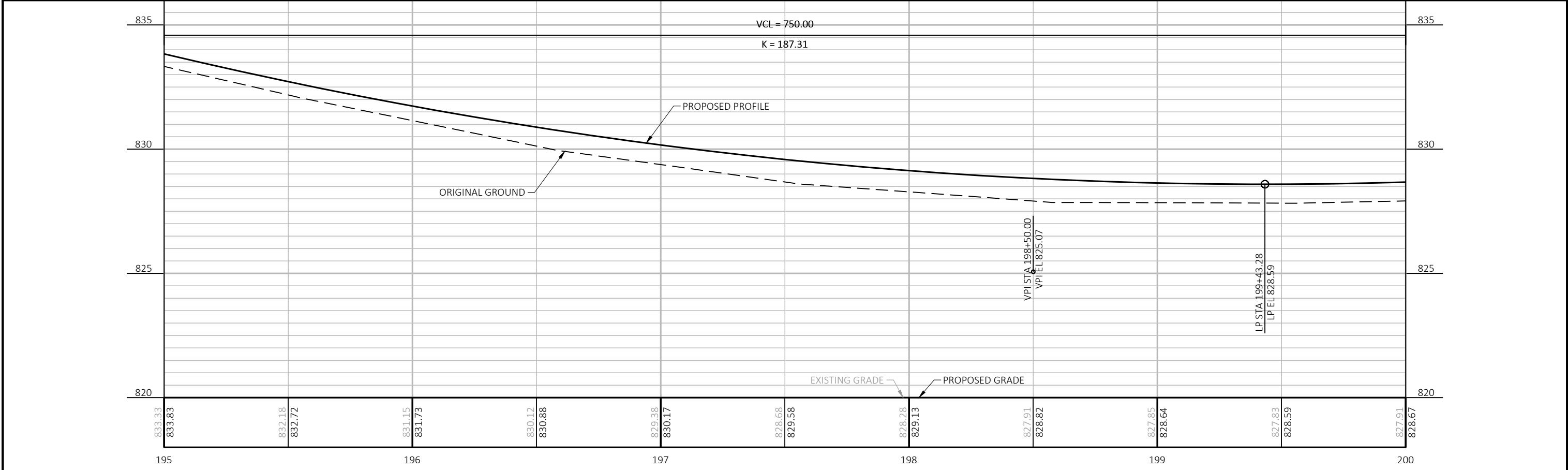
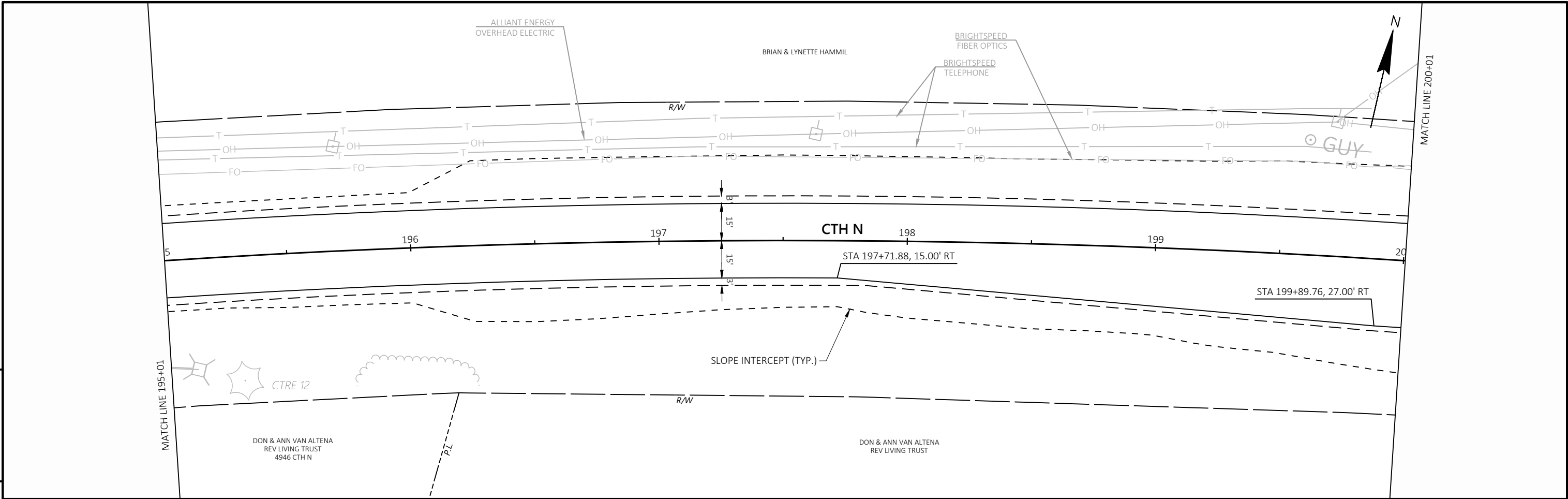


MATCH LINE 190+01

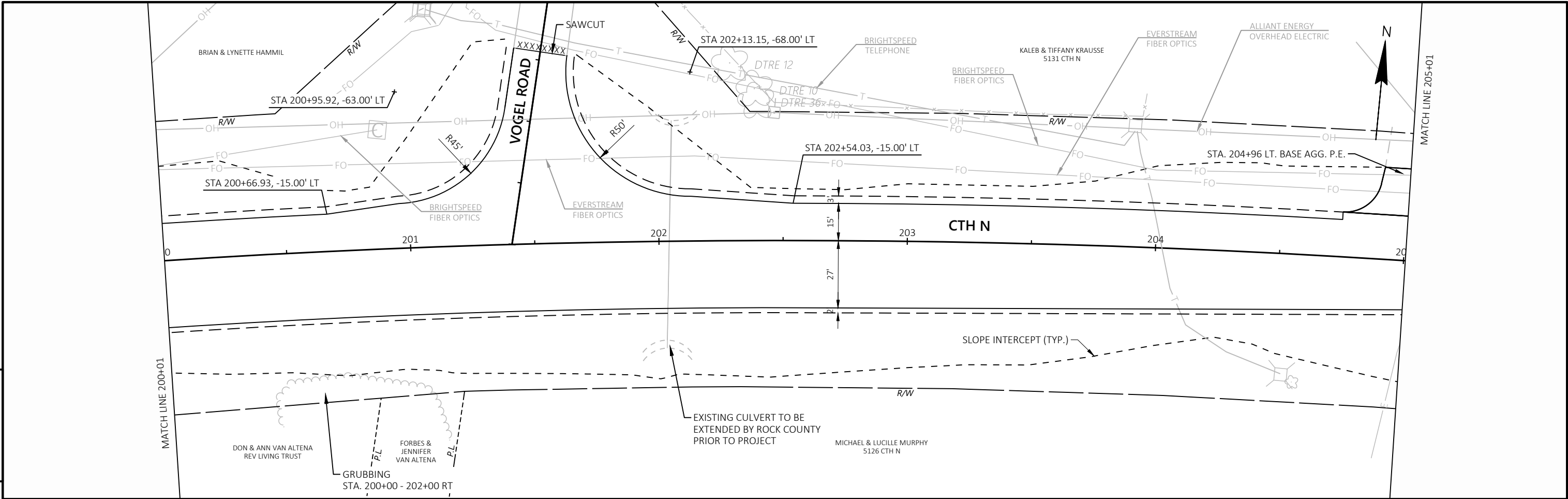
5



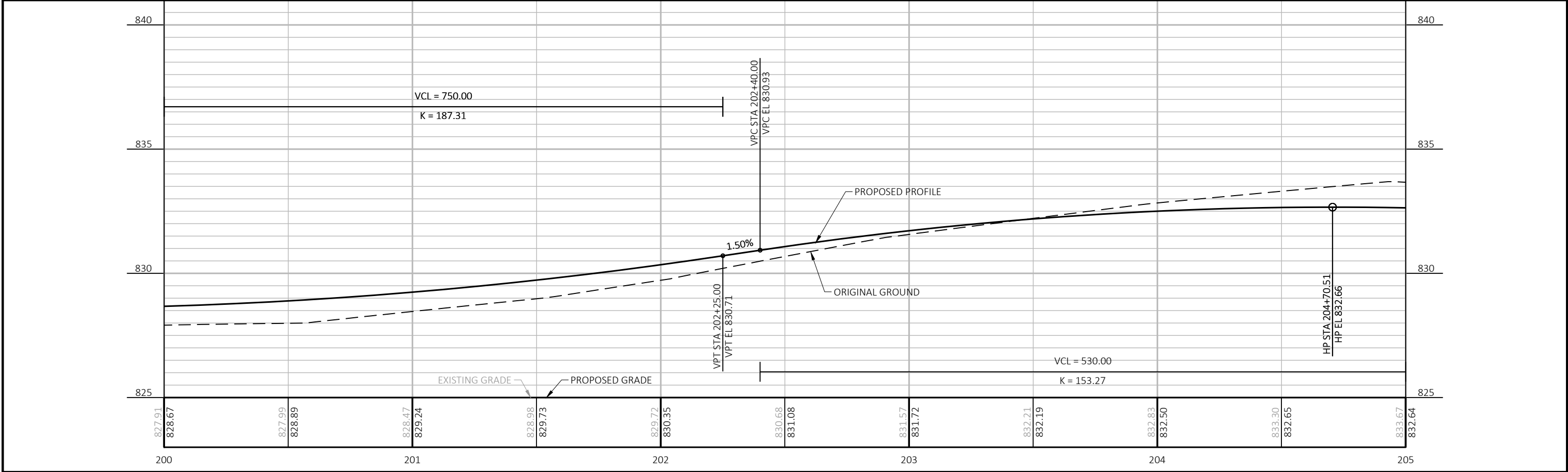


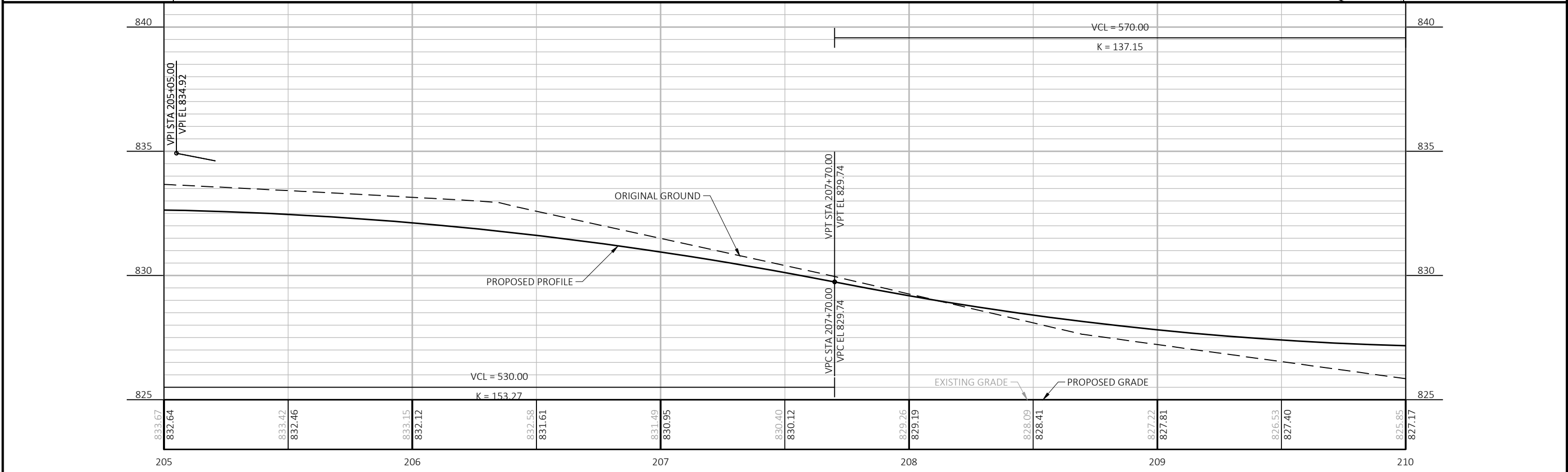
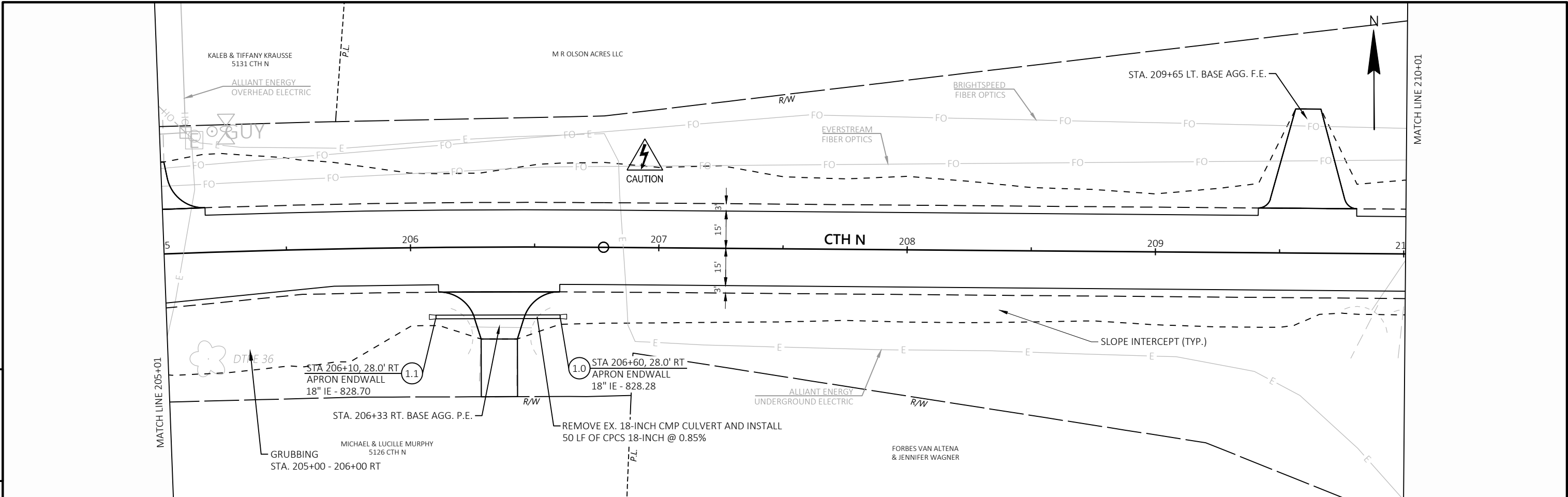


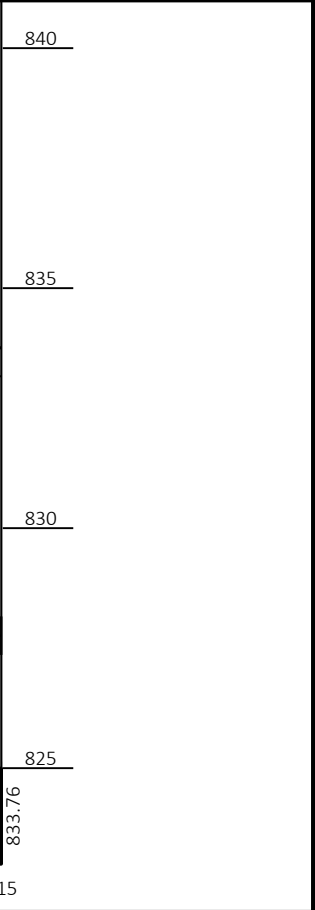
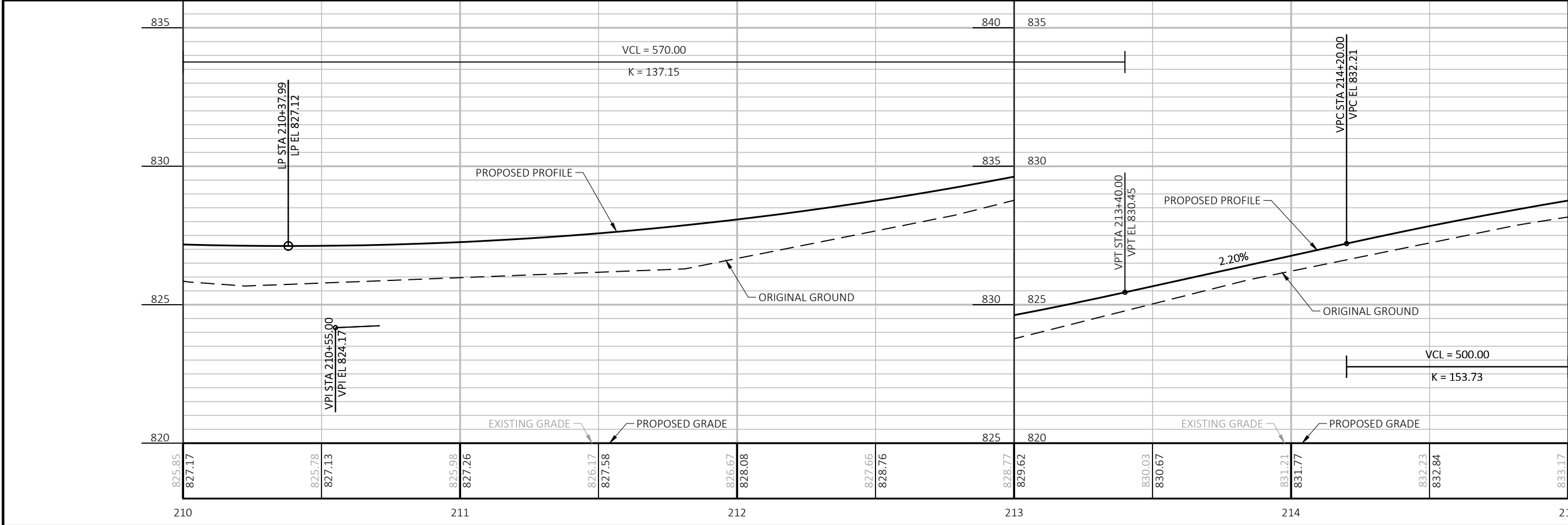
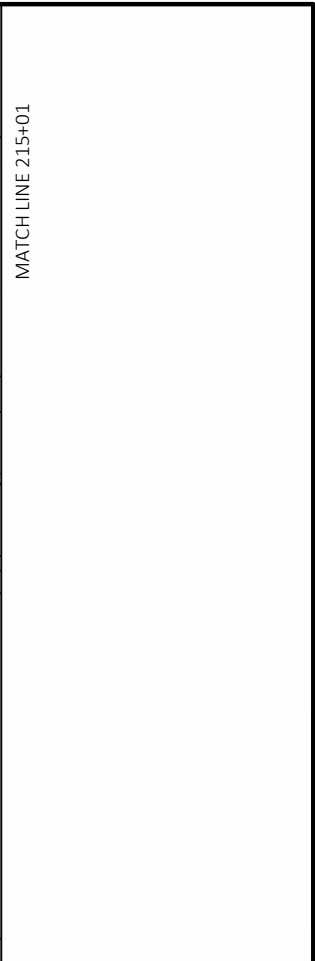
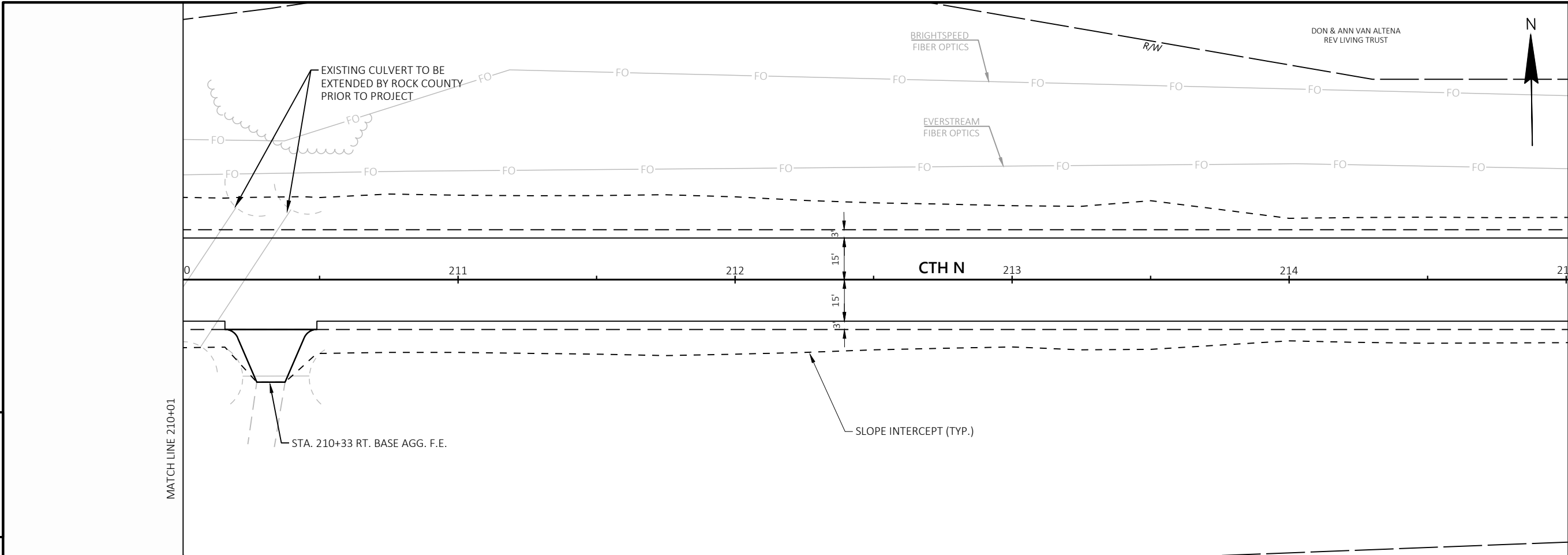
5



5

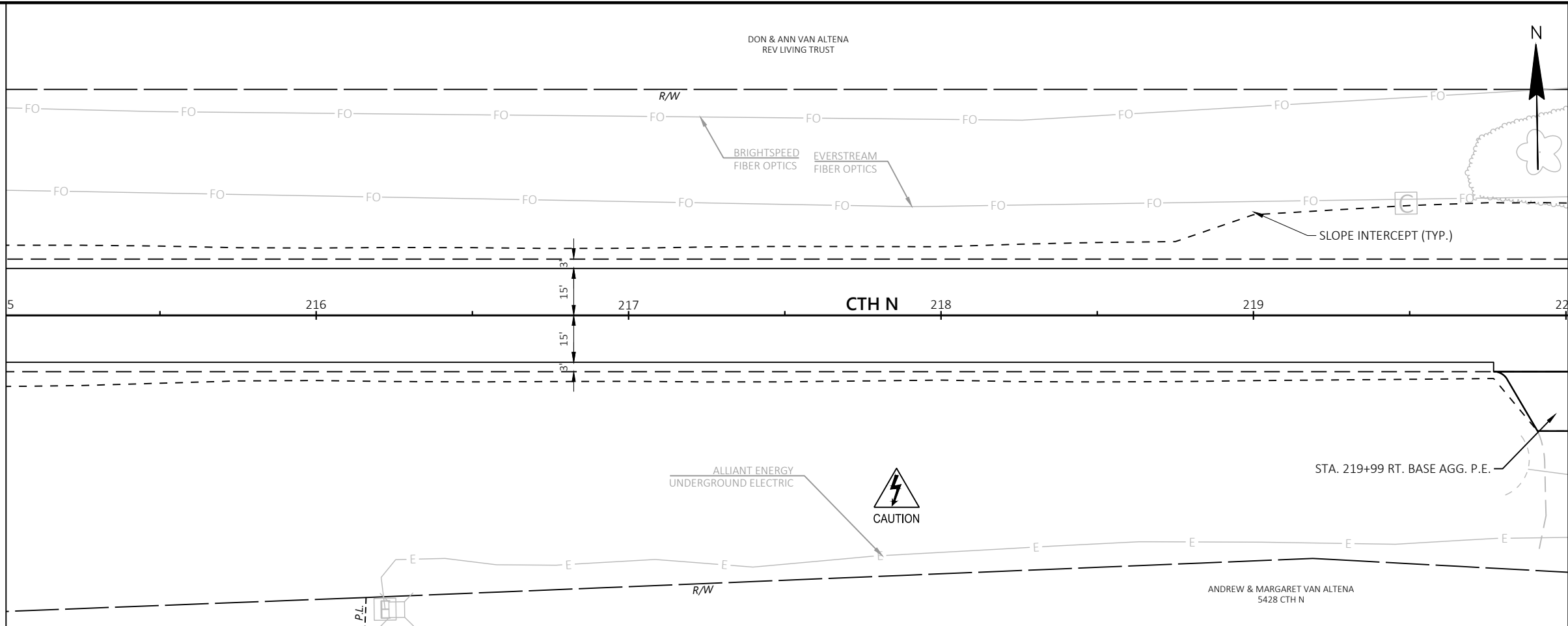




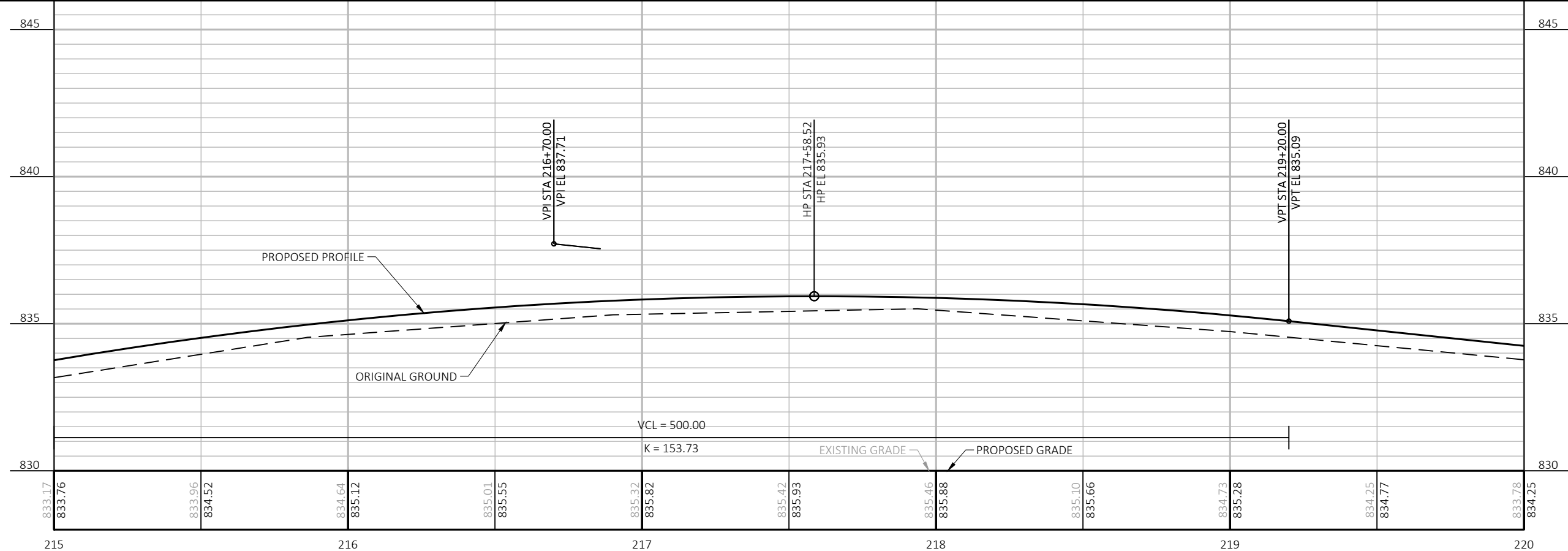


5

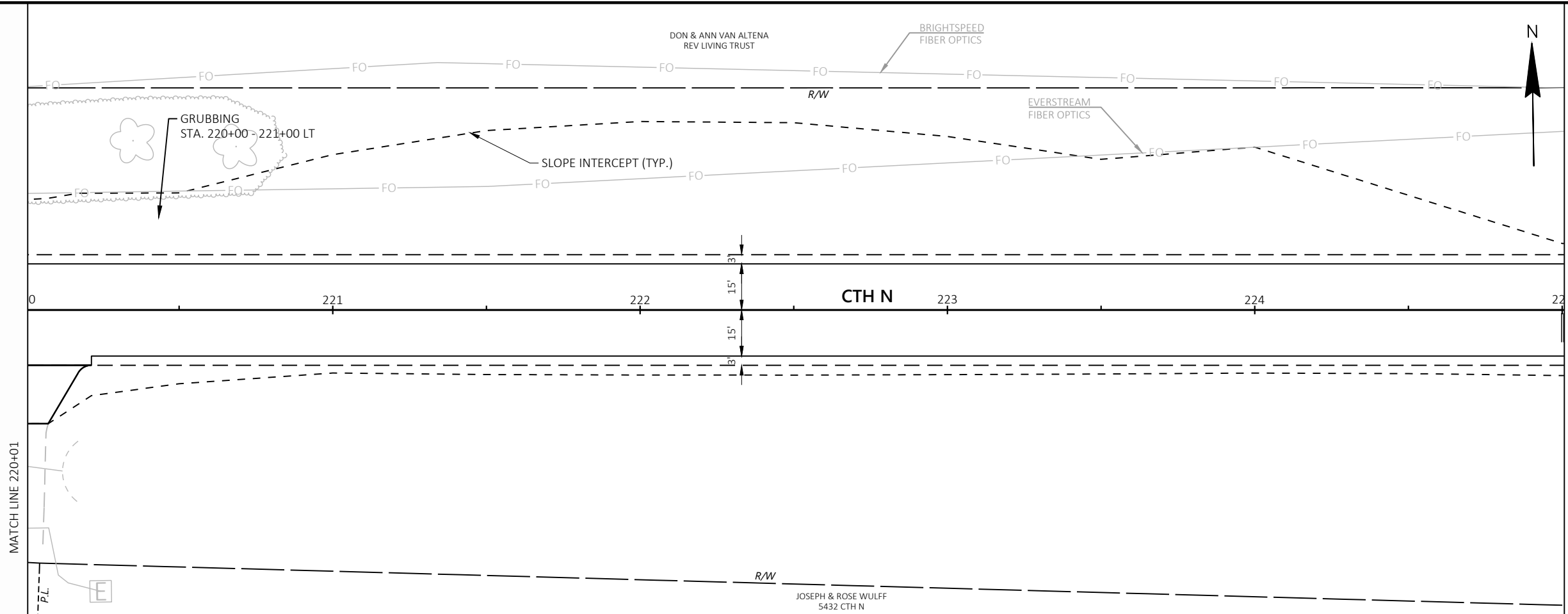
MATCH LINE 215+01



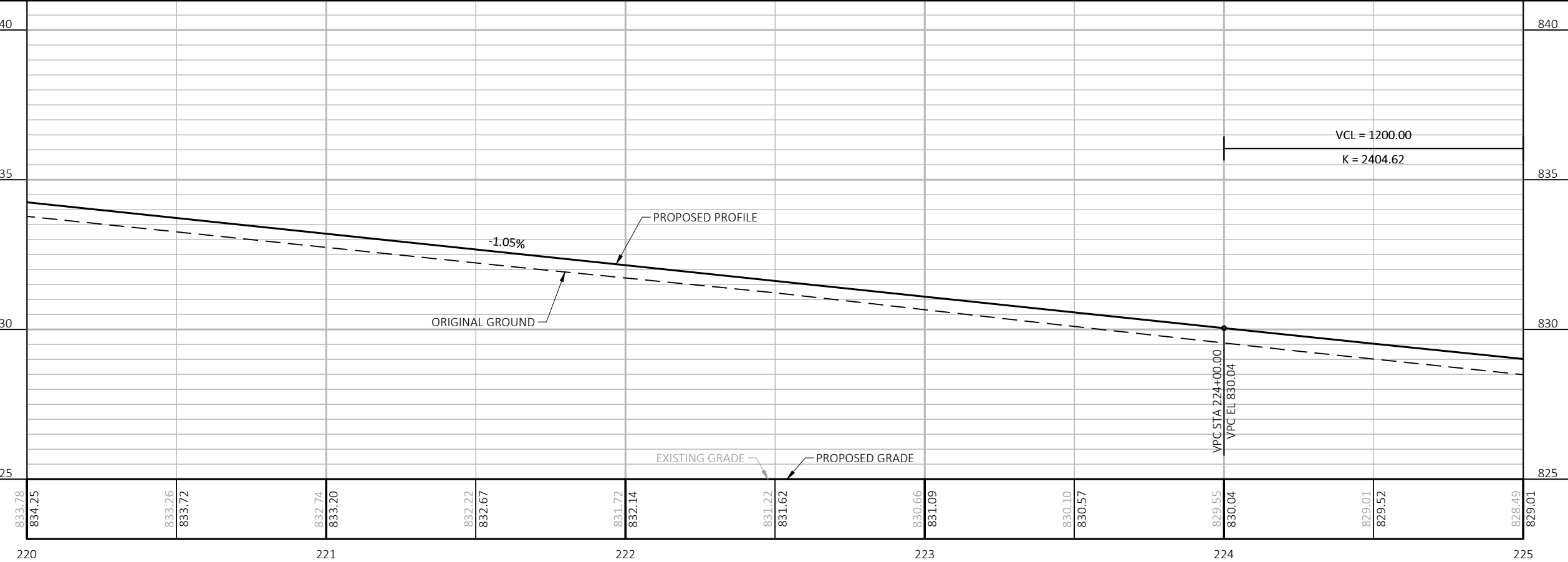
5



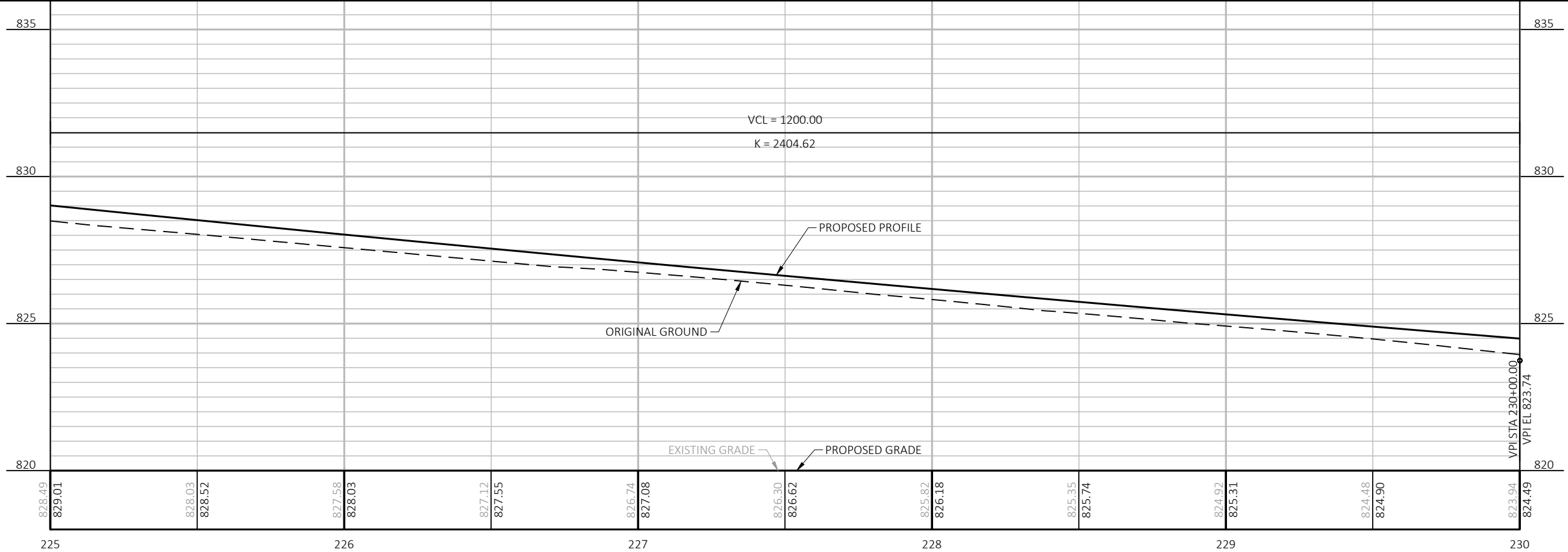
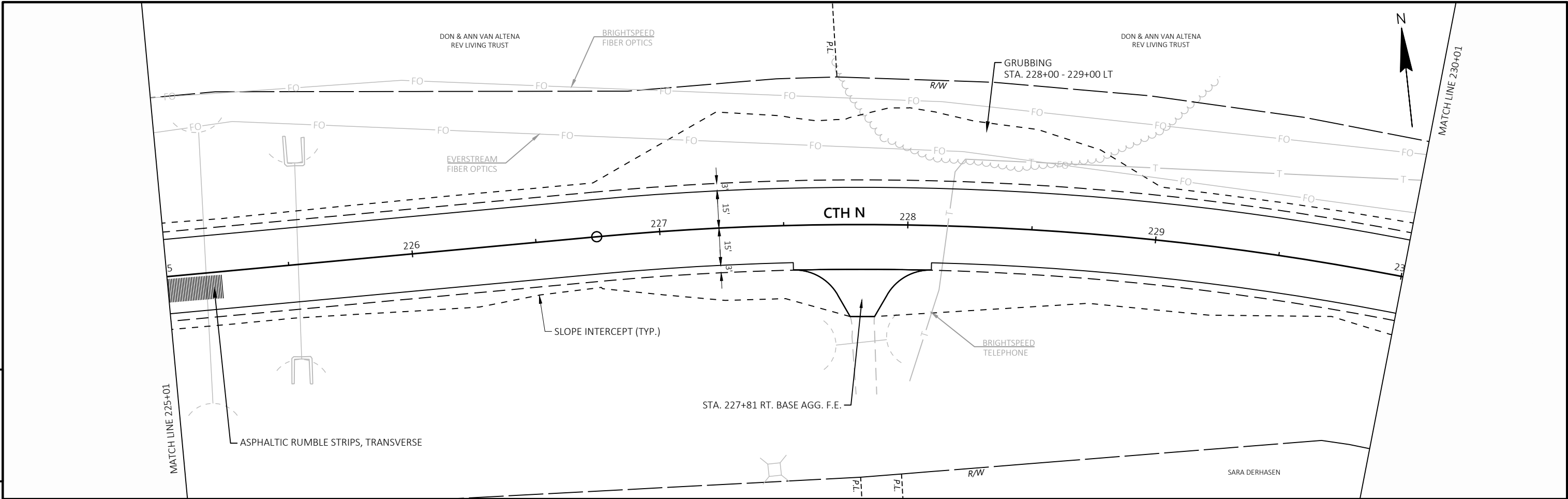
5

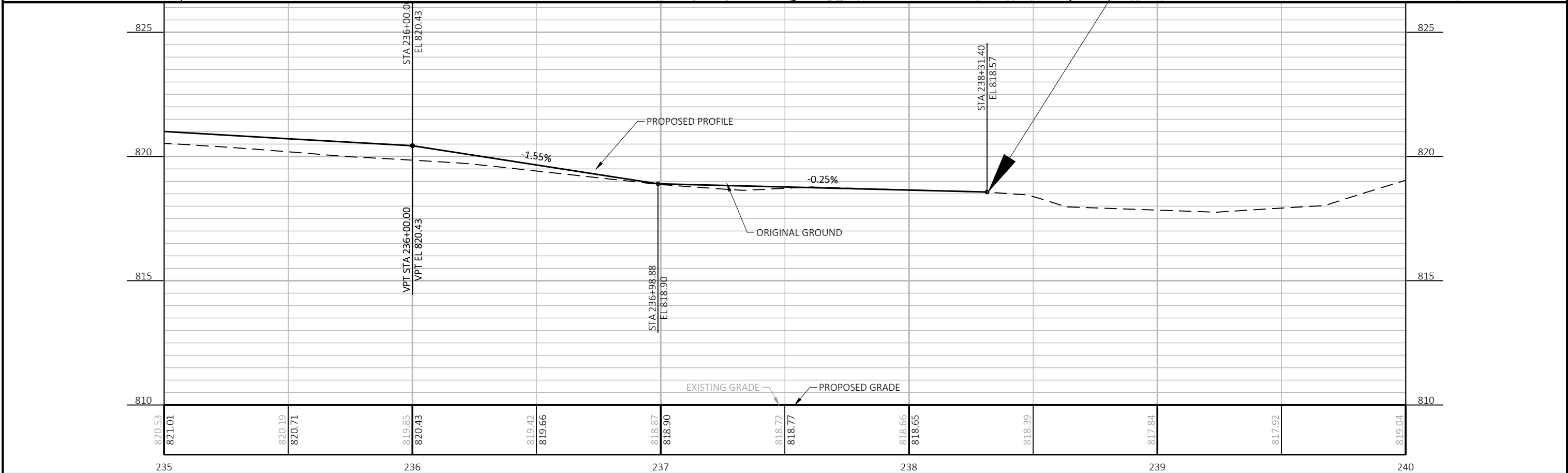
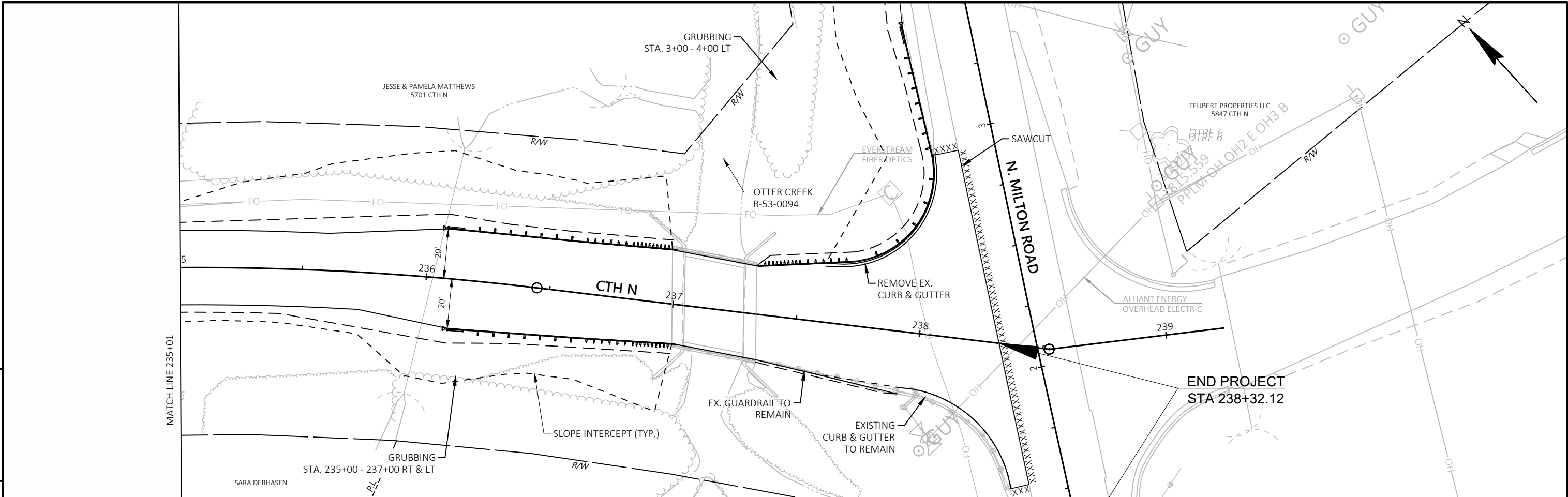


MATCH LINE 225+01



840
835
830
825
833.78
834.25
833.26
833.72
832.74
833.20
832.22
832.67
831.72
832.14
831.22
831.62
830.66
831.09
830.10
830.57
829.55
830.04
829.01
829.52
828.49
829.01

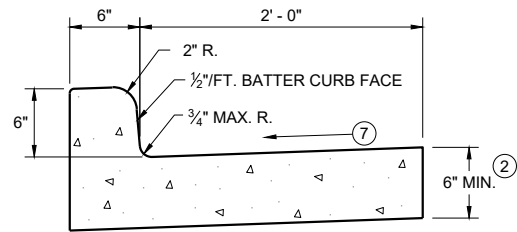




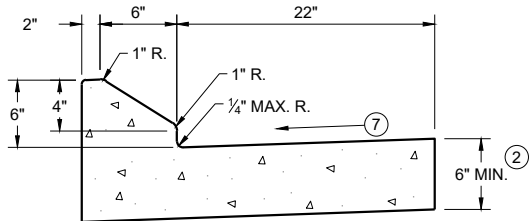
PROJECT NO: 3658-00-70	HWY: CTH N	COUNTY: ROCK	PLAN AND PROFILE: CTH N	SHEET 105	E
------------------------	------------	--------------	-------------------------	-----------	---

Standard Detail Drawing List

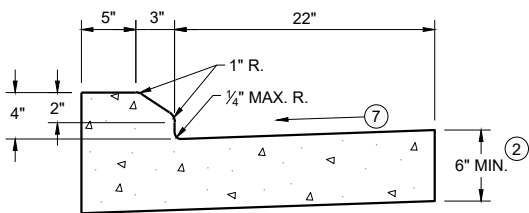
08D01-23A	CONCRETE CURB & GUTTER
08D01-23B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D04-07	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E14-01	TRACKING PAD
08E15-01	CULVERT PIPE CHECK
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
09A01-14A	AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND D AND TEE INTERSECTION BYPASS LANE
09A01-14B	AT-GRADE SIDE ROAD INTERSECTION, TYPE "A1" & "A2"
13A08-02	TRANSVERSE RUMBLE STRIPS, ASPHALTIC
14B42-07A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-05A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05E	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05F	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05G	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05H	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05I	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05J	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05K	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05L	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B53-02A	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-02B	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-02C	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-02D	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-02E	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-02F	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-02G	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-02H	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-02I	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
15C02-09A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-09B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C02-09C	DETOUR SIGNING 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
15C08-23A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C33-05	STOP LINE AND CROSSWALK PAVEMENT MARKING
15C35-06A	PAVEMENT MARKING (INTERSECTIONS)
15C35-06B	PAVEMENT MARKING AND SIGNING (CLIMBING LANE & PASSING LANE)
15D28-04	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D45-03	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH LOOSE GRAVEL



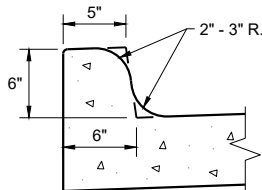
TYPES A^① & D



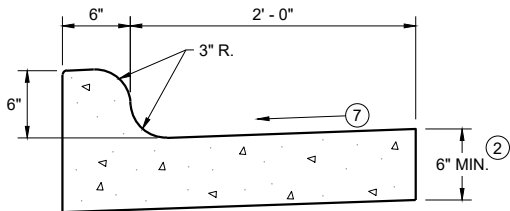
6" SLOPED CURB TYPES G^① & J



4" SLOPED CURB TYPES G^① & J

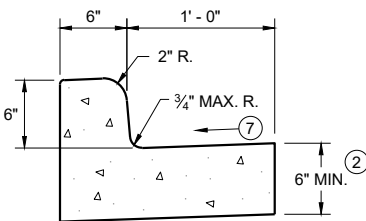


TYPES K^① & L
(OPTIONAL CURB SHAPE)



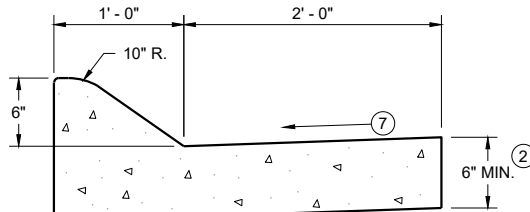
TYPES K^① & L

CONCRETE CURB AND GUTTER 30"

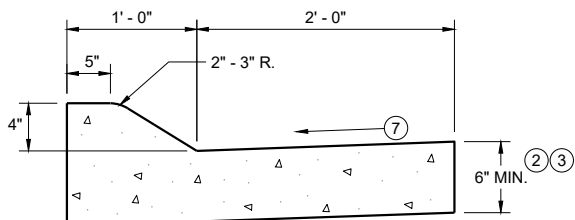


TYPES A^① & D

CONCRETE CURB AND GUTTER 18"

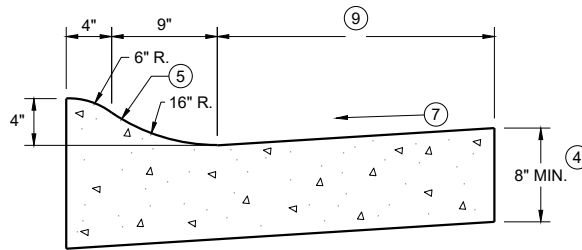


6" SLOPED CURB TYPES A^① & D



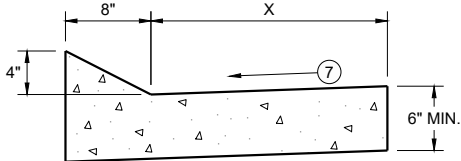
4" SLOPED CURB TYPES A^① & D

CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R^① & T

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

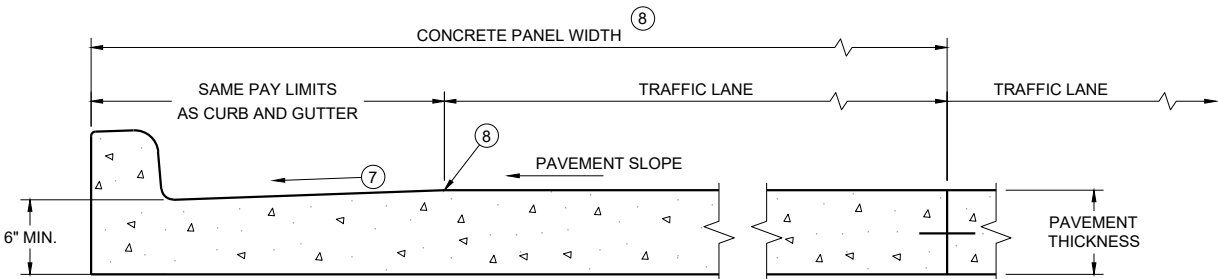


TYPES TBT & TBTT^①

CONCRETE CURB AND GUTTER

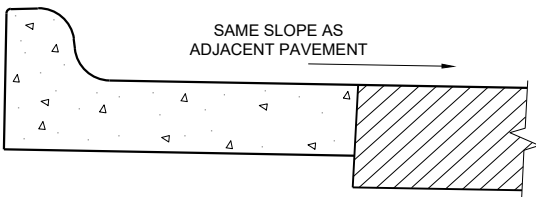
PAVEMENT THICKNESS
AND MAXIMUM CONCRETE
PANEL WIDTH TABLE

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.

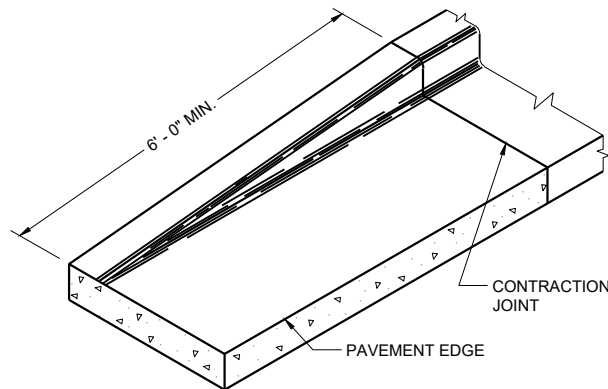
INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

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

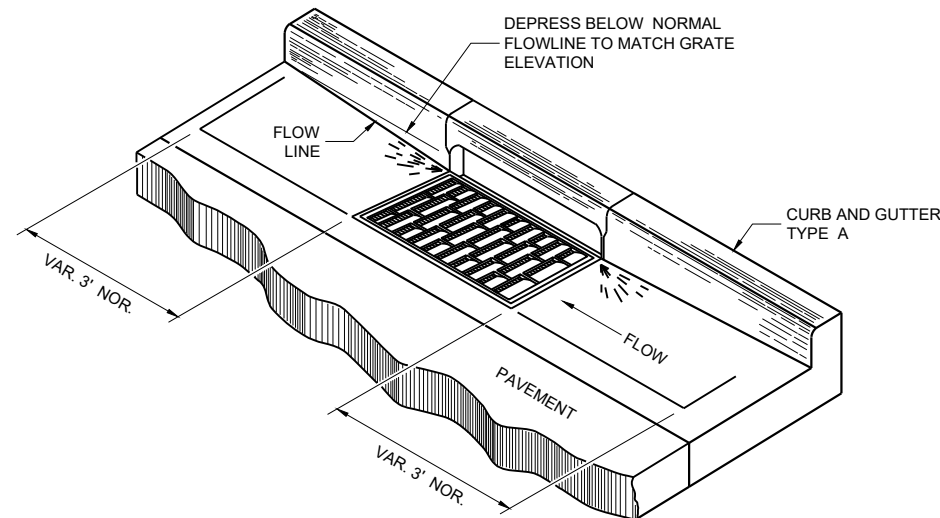
- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH 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

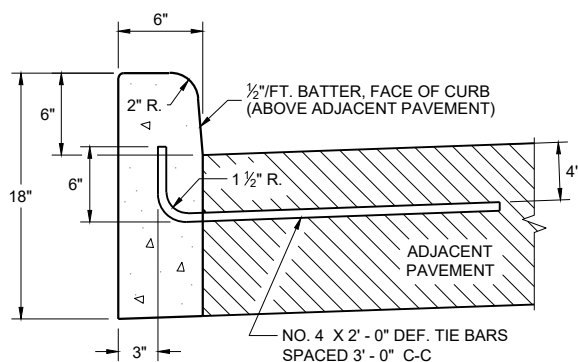


END SECTION CURB AND GUTTER

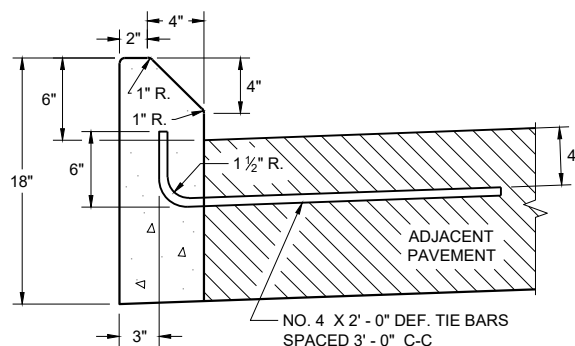


DETAIL OF CURB AND GUTTER AT INLETS

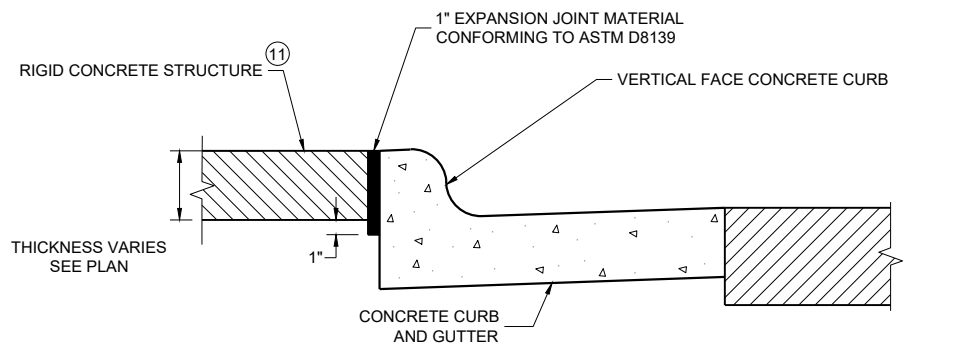
(TYPICAL H INLET COVER SHOWN)



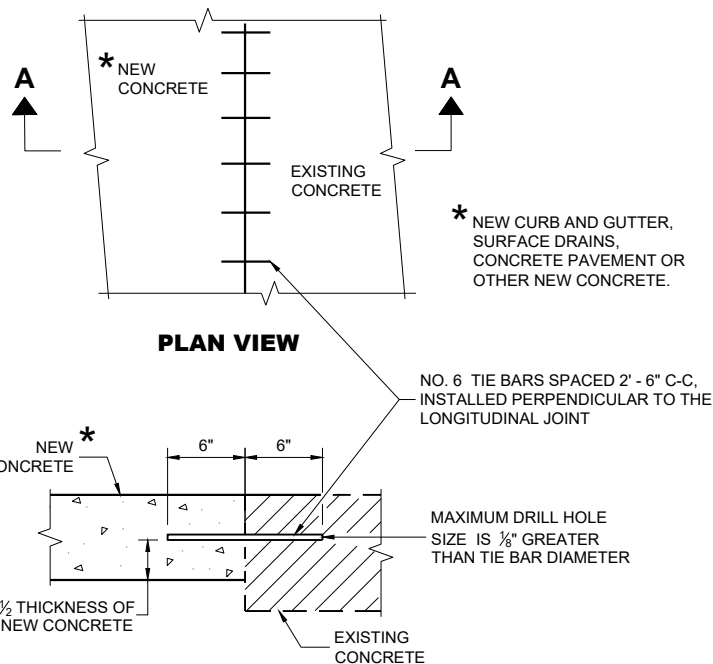
TYPES A^① & D



**TYPES G^① & J
CONCRETE CURB**



EXPANSION JOINT DETAIL FOR VERTICAL CURB ABUTTING A RIGID STRUCTURE^⑪



**SECTION A - A
TIE BARS DRILLED INTO EXISTING PAVEMENT**

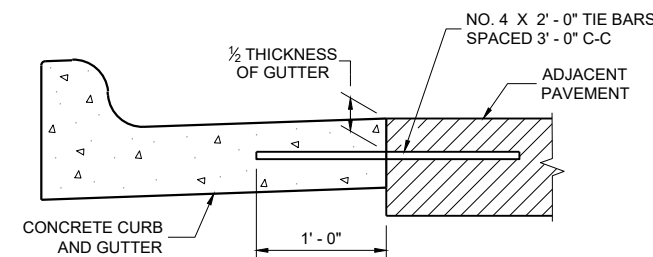
GENERAL NOTES

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

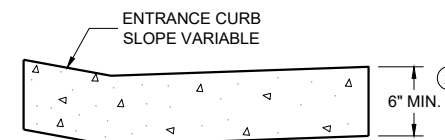
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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.
- ⑩ REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.
- ⑪ PLACE 1" THICK EXPANSION JOINT MATERIAL BETWEEN VERTICAL FACE CURB TYPES EXTENDING FROM THE TOP OF CURB TO 1 INCH BELOW THE ADJOINING CONCRETE SURFACE. RIGID CONCRETE STRUCTURES INCLUDE RAISED CONCRETE MEDIANS, CONCRETE SAFETY ISLANDS, SPLITTER ISLANDS, OR LOCATIONS IDENTIFIED ON THE PLANS.



TYPICAL TIE BAR LOCATION^①



**DRIVEWAY ENTRANCE CURB^⑩
(WHEN DIRECTED BY THE ENGINEER)**

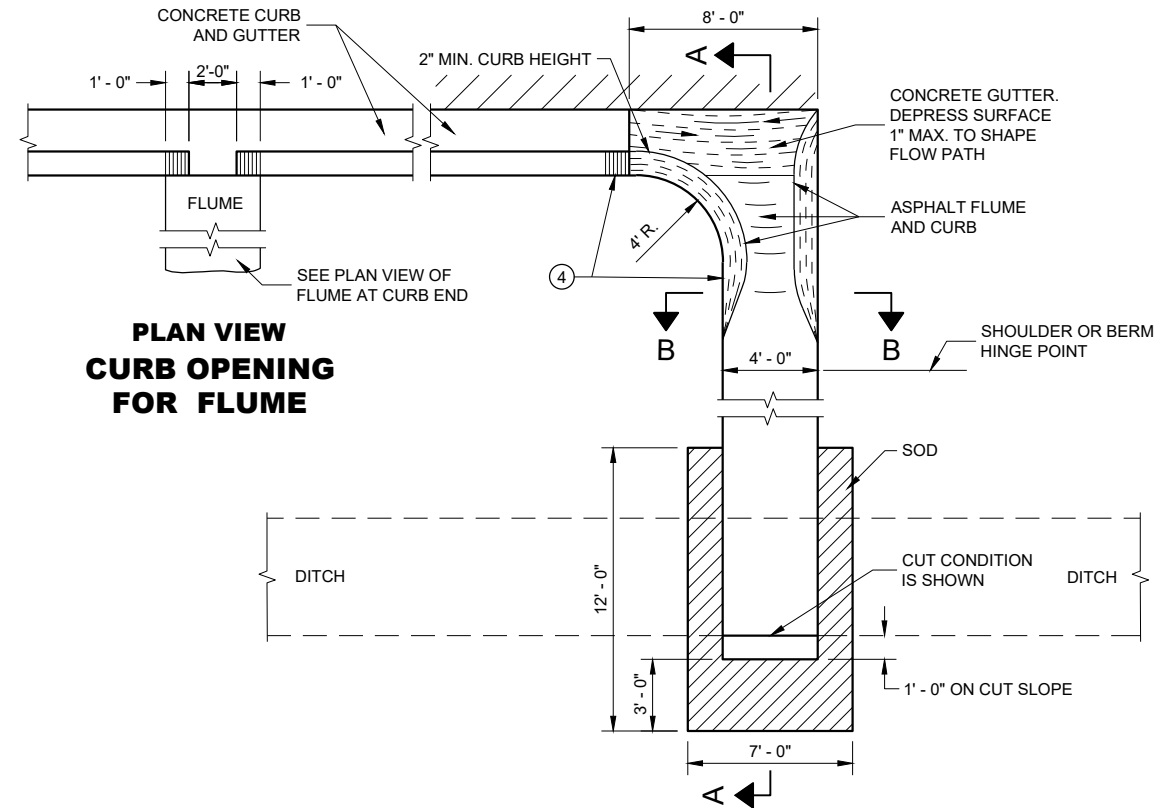
**CONCRETE CURB, TIES
AND CURB AND GUTTER
APPLICATIONS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA UNIT SUPERVISOR

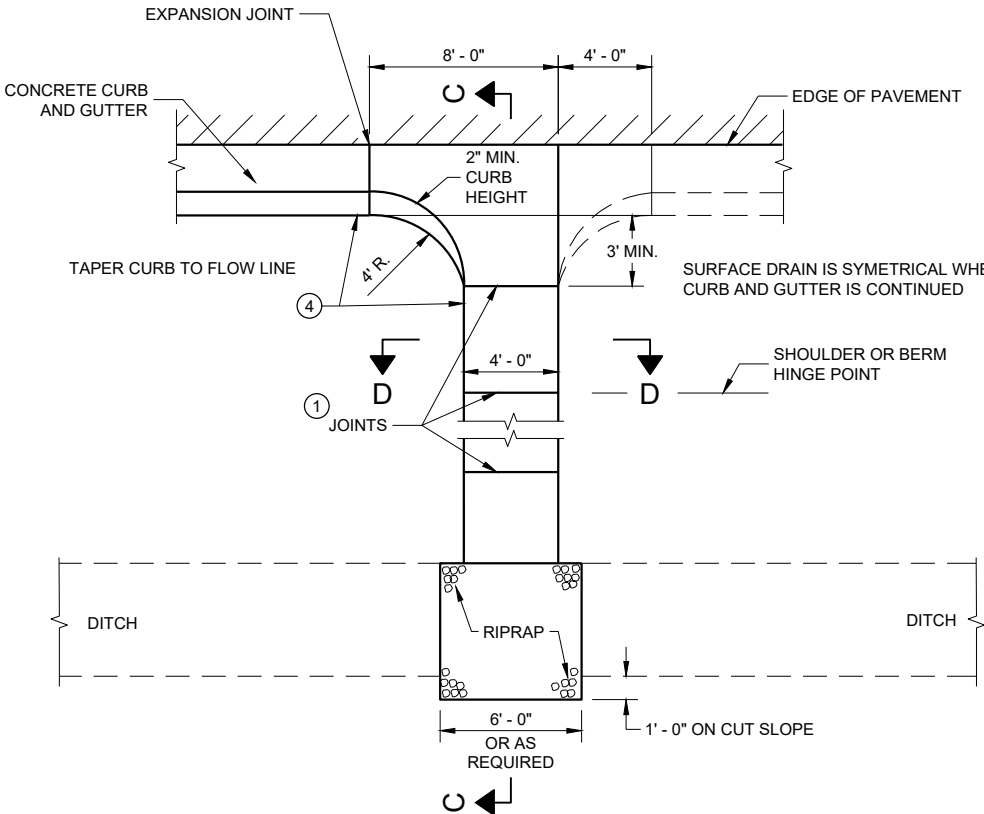
NOTE: TAPER CURB ENDS TO GUTTER IN 1' - 0"

ASPHALTIC FLUME



PLAN VIEW
CURB OPENING
FOR FLUME

PLAN VIEW
FLUME AT CURB END



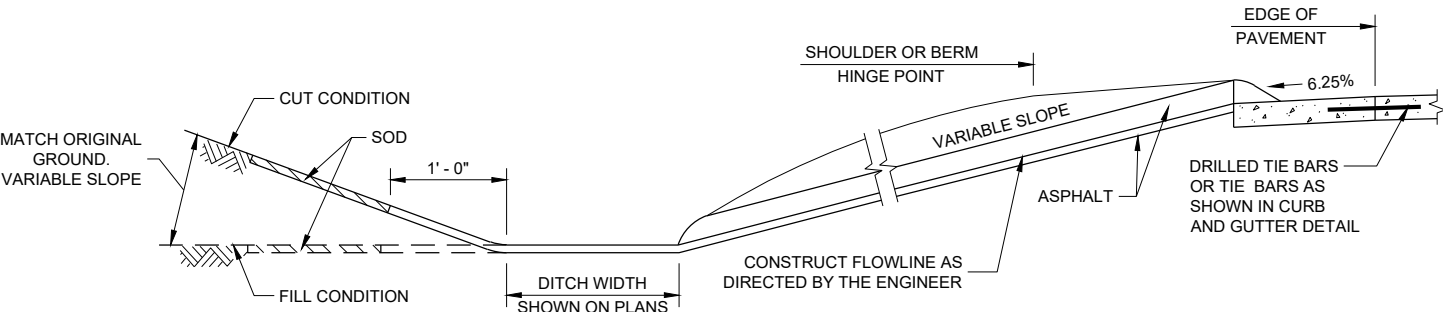
PLAN VIEW
CONCRETE SURFACE DRAIN

GENERAL NOTES

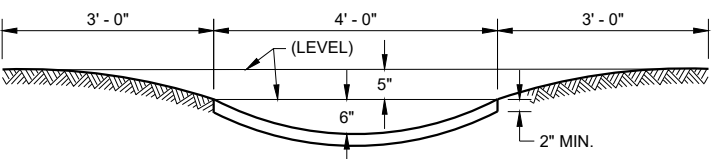
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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

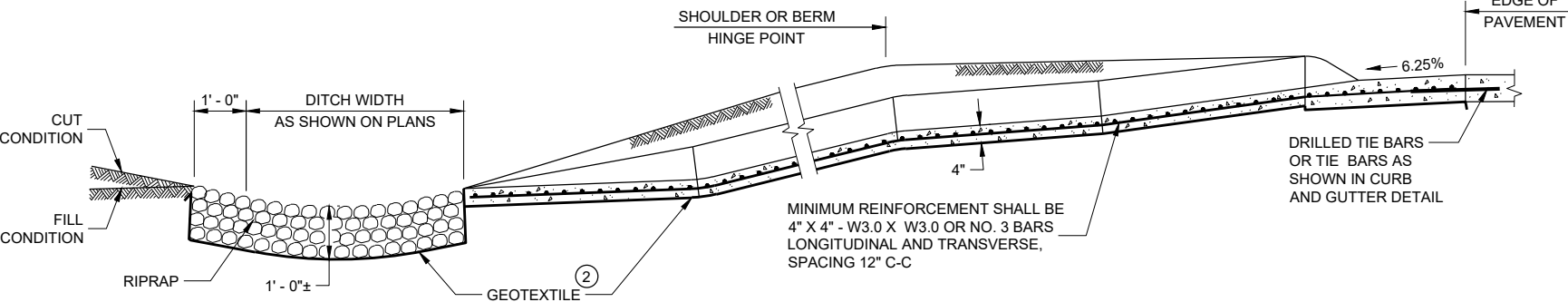
- ① JOINTS SHALL BE 1/8" TO 1/4" WIDE BY 1 1/2" DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.
- ② GEOTEXTILE TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.
- ③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED.
- ④ ANGLE OF FLUME IN RELATION TO BACK OF CURB TO BE CONSTRUCTED PER THE PLAN DETAILS OR AS DIRECTED BY THE ENGINEER. ANGLE OF FLUME MAY BE OTHER THAN 90 DEGREES AS SHOWN.



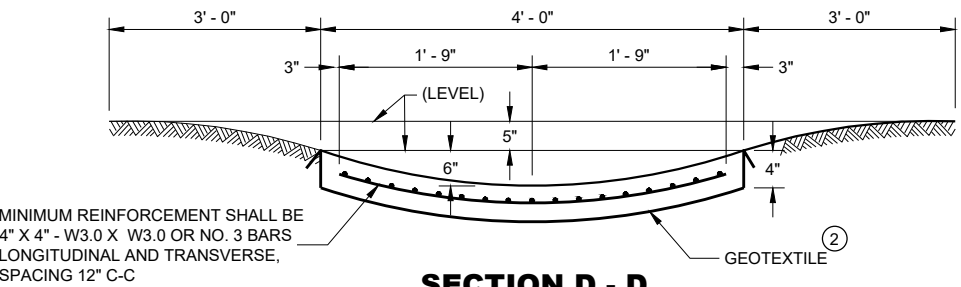
SECTION A - A



SECTION B - B



SECTION C - C



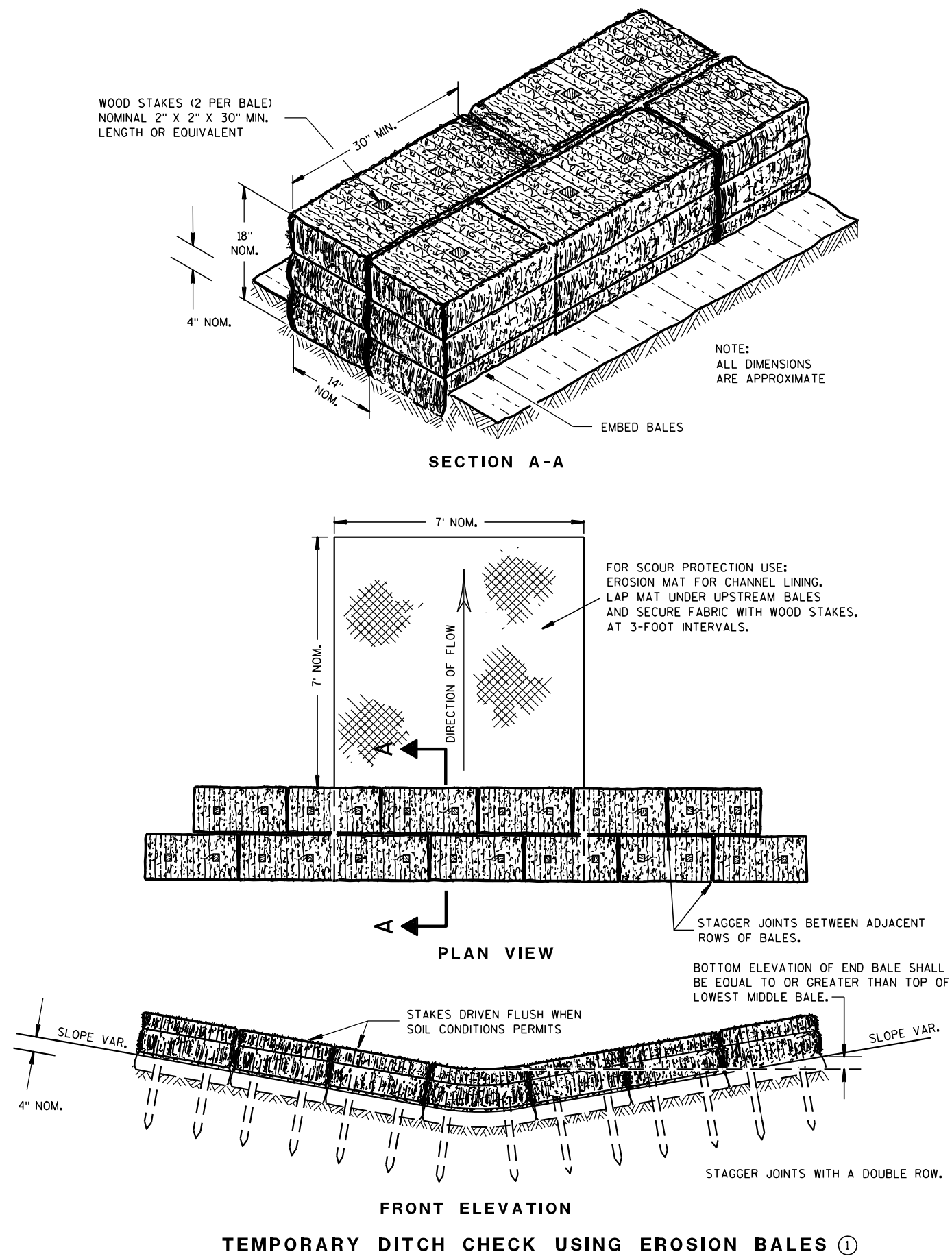
SECTION D - D

CONCRETE SURFACE
DRAINS AND
ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT ENGINEER
109

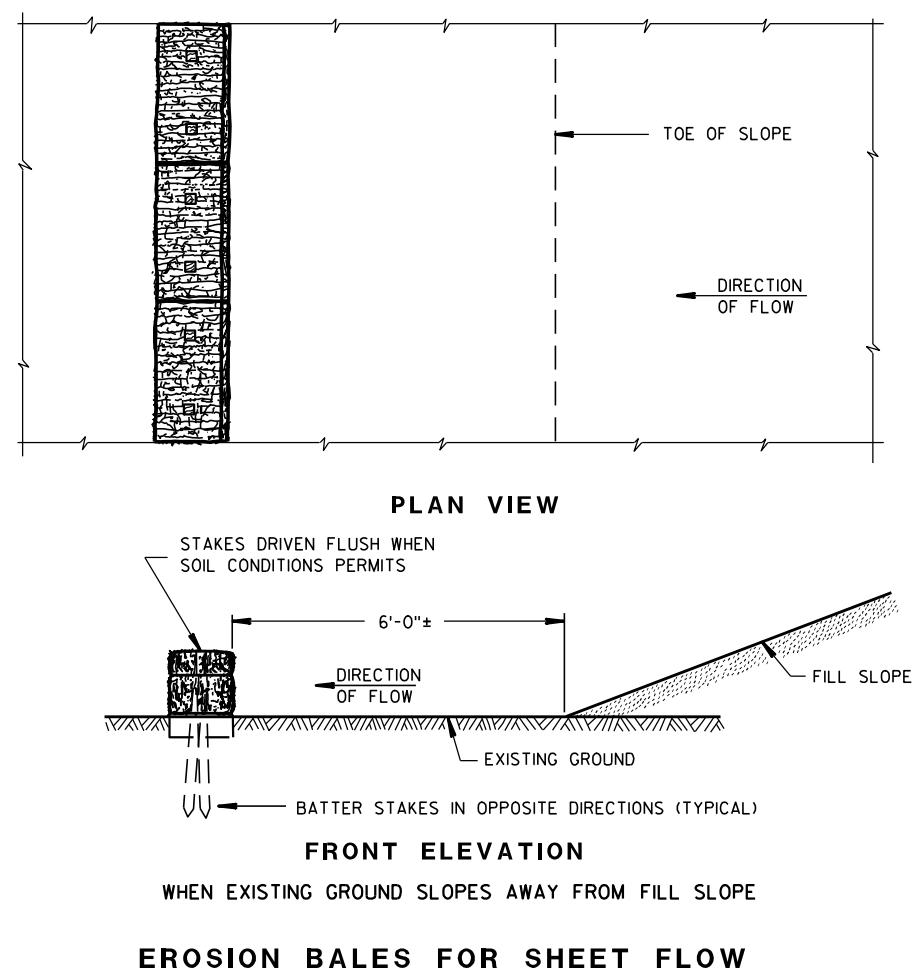
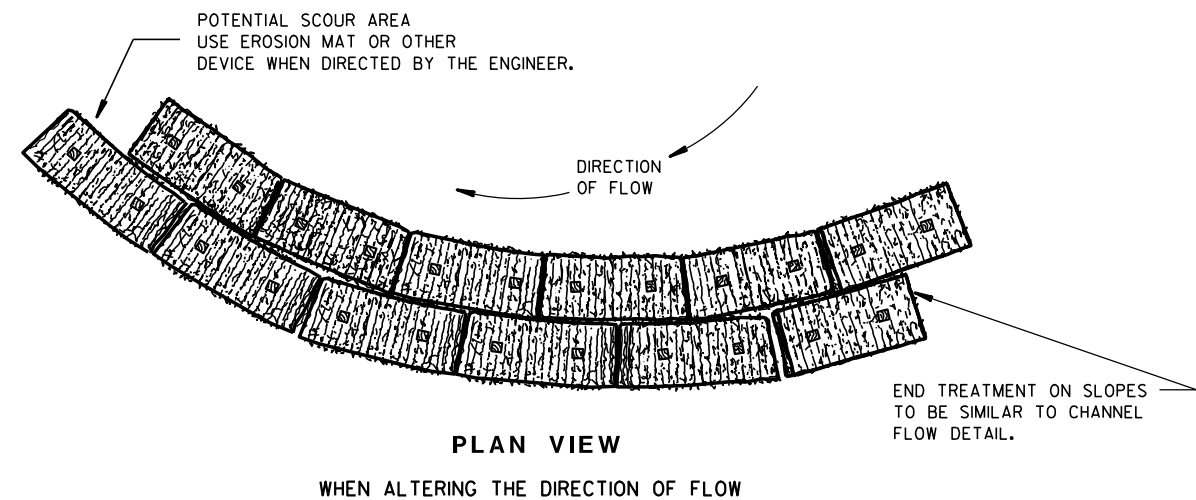
FHWA



GENERAL NOTES

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

- ① 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.

TYPICAL INSTALLATIONS OF
EROSION BALES / TEMPORARY
DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

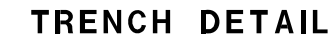
APPROVED

6/04/02
DATE/S/ Beth Conn
CHIEF ROADWAY DEVELOPER 110 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.

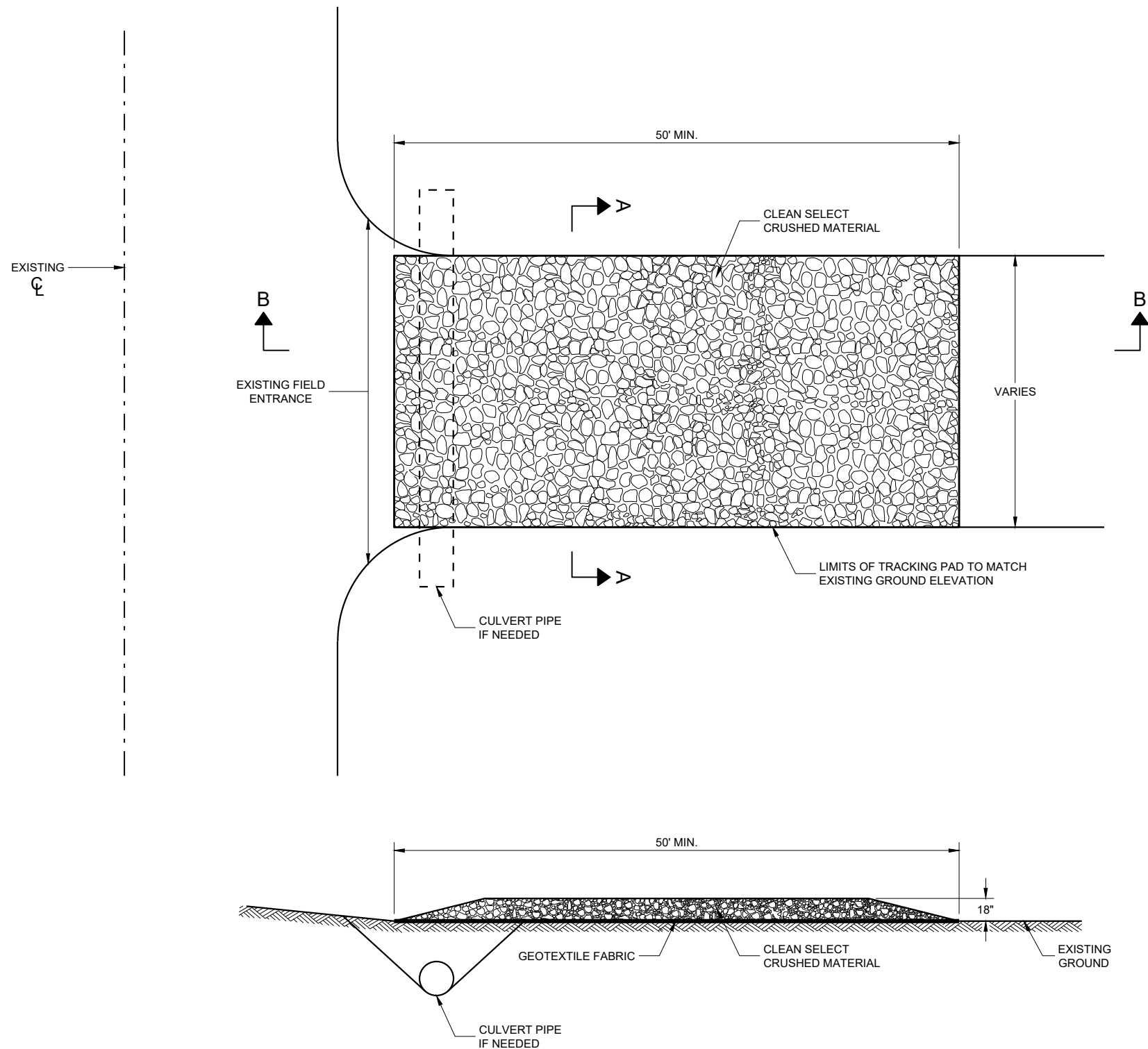


SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA



SECTION B - B

GENERAL NOTES

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

TRACKING PAD SHALL BE INSPECTED DAILY. DEFICIENT AREAS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

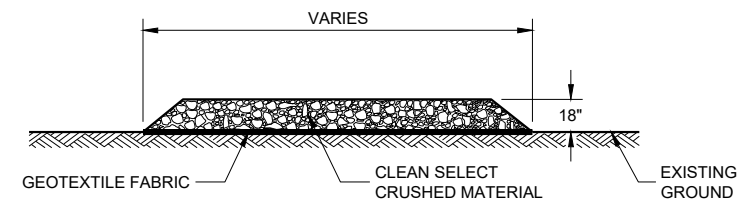
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

TRACKING PAD SHALL BE THE FULL WIDTH OF THE EGRESS POINT.

SURFACE WATER MUST BE PREVENTED FROM PASSING THROUGH THE TRACKING PAD. FLOWS SHALL BE DIVERTED AWAY, AROUND OR CONVEYED UNDER THE TRACKING PAD.

CULVERT PIPE OR OTHER BMP USED TO DIVERT WATER AWAY, AROUND OR UNDER THE TRACKING PAD SHALL BE DESIGNED TO CONVEY THE 2 YEAR - 24 HOUR EVENT.

THE COST OF ADDITIONAL BMP TO DIVERT WATER ARE INCIDENTAL TO THE TRACKING PAD BID ITEM.

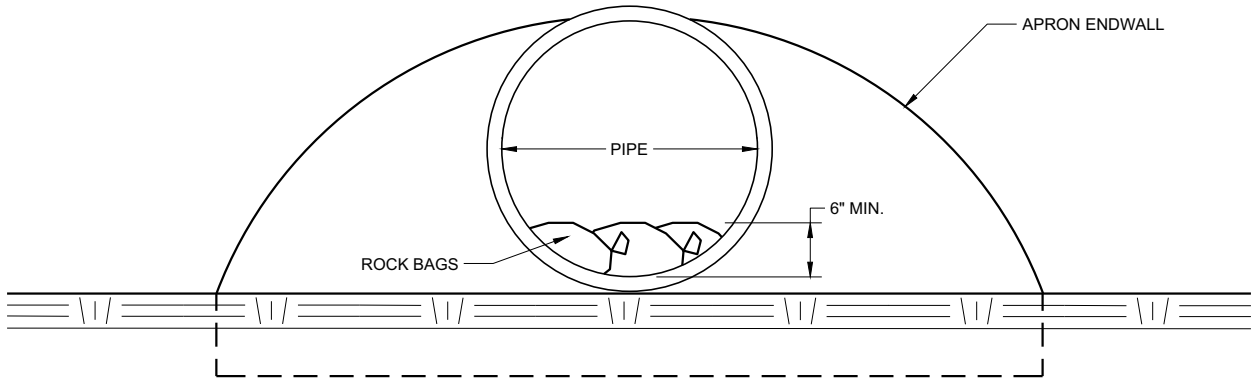


SECTION A - A

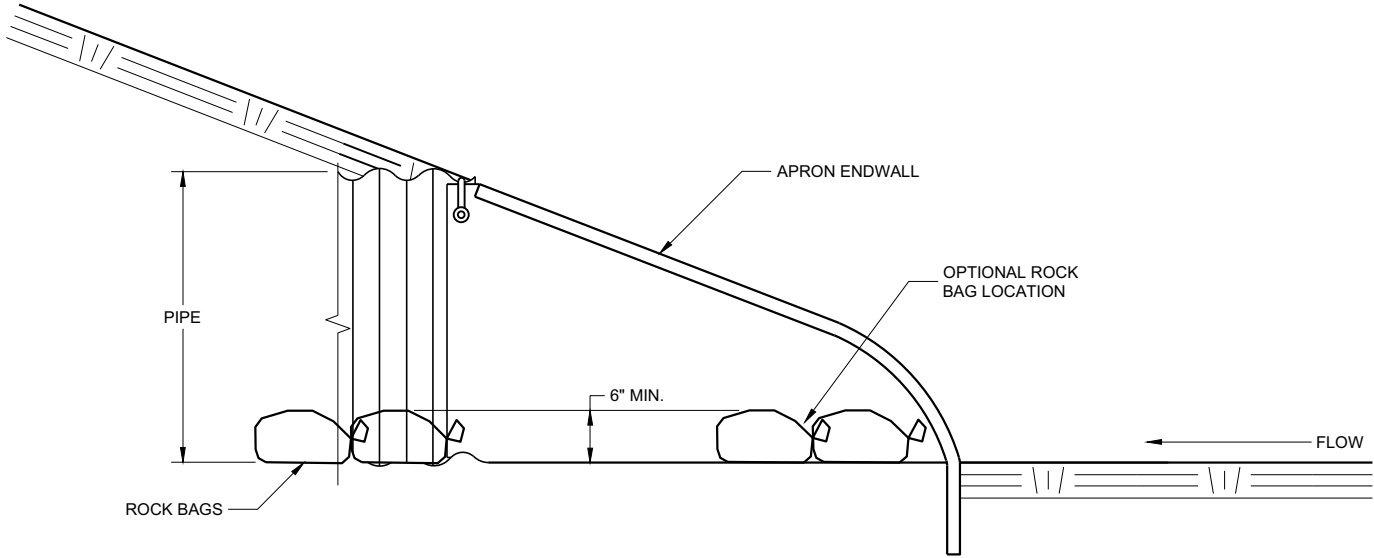
TRACKING PAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
3/24/2011
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER



END VIEW



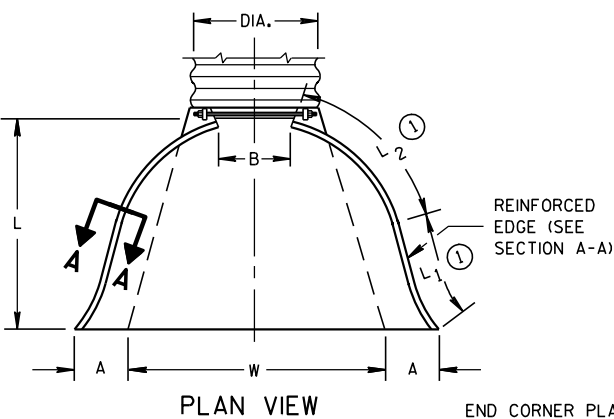
SIDE VIEW

CULVERT PIPE CHECK
(INSTALL ON INLET END ONLY)

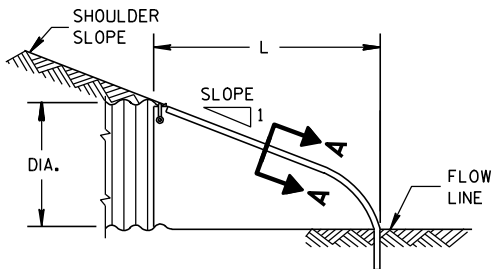
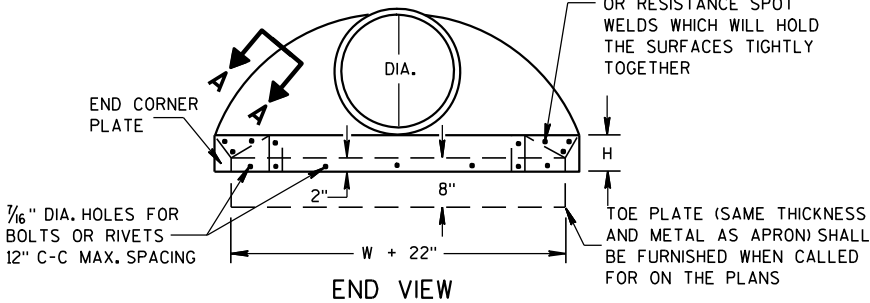
CULVERT PIPE CHECK	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2019 DATE	/S/ Daniel Schave EROSION CONTROL ENGI 113
FHWA	

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



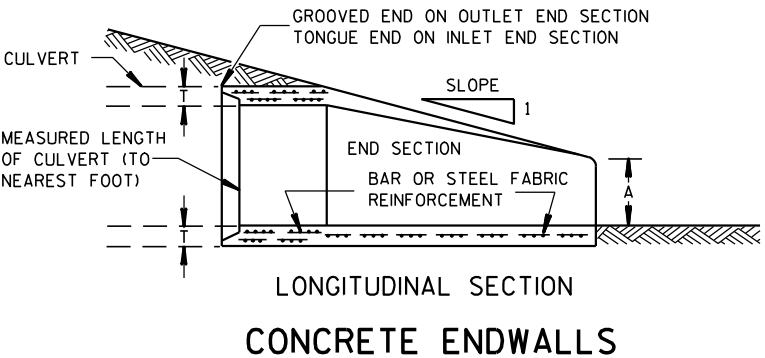
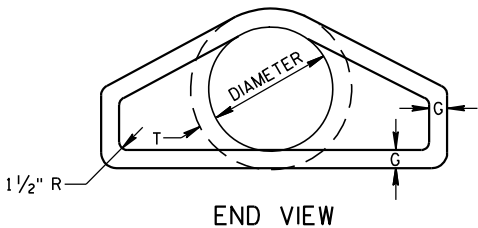
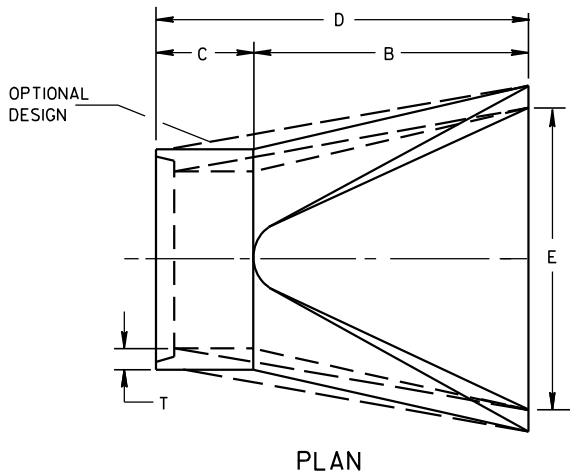
END CORNER PLATES MAY
BE FASTENED TO APRON
PROPER BY BOLTS, RIVETS,
OR RESISTANCE SPOT
WELDS WHICH WILL HOLD
THE SURFACES TIGHTLY
TOGETHER



SIDE ELEVATION
METAL ENDWALLS

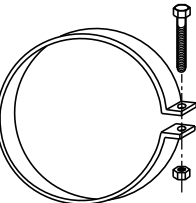
REINFORCED CONCRETE APRON ENDWALLS									
PIPE DIA. (IN.)	DIMENSIONS (Inches)							APPROX. SLOPE	
	T	A	B	C	D	E	G		
12	2	4	24	48 ⁷ / ₈	72 ¹ / ₈	24	2	3 to 1	
15	2 ¹ / ₄	6	27	46	73	30	2 ¹ / ₄	3 to 1	
18	2 ¹ / ₂	9	27	46	73	36	2 ¹ / ₂	3 to 1	
21	2 ³ / ₄	9	36	37 ¹ / ₂	73 ¹ / ₂	42	2 ³ / ₄	3 to 1	
24	3	9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

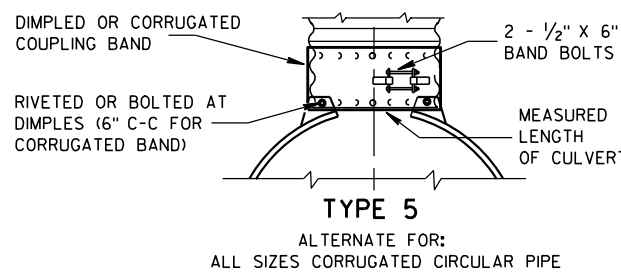
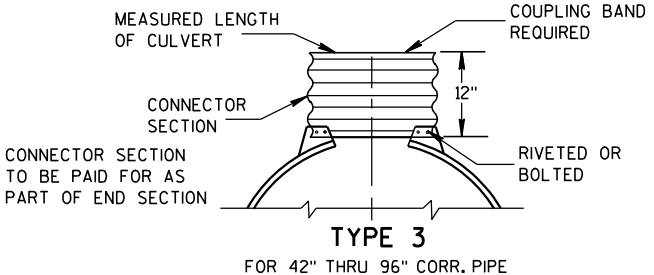
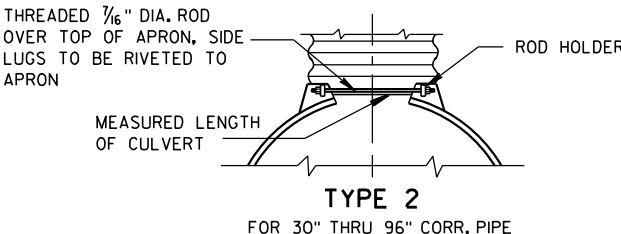
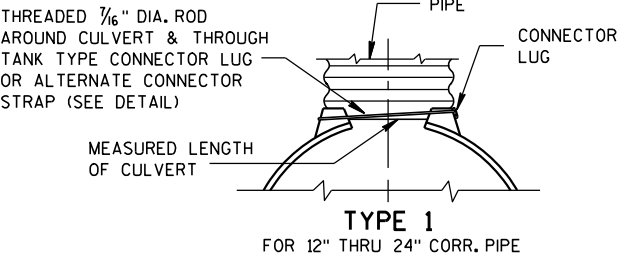


LONGITUDINAL SECTION
CONCRETE ENDWALLS

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



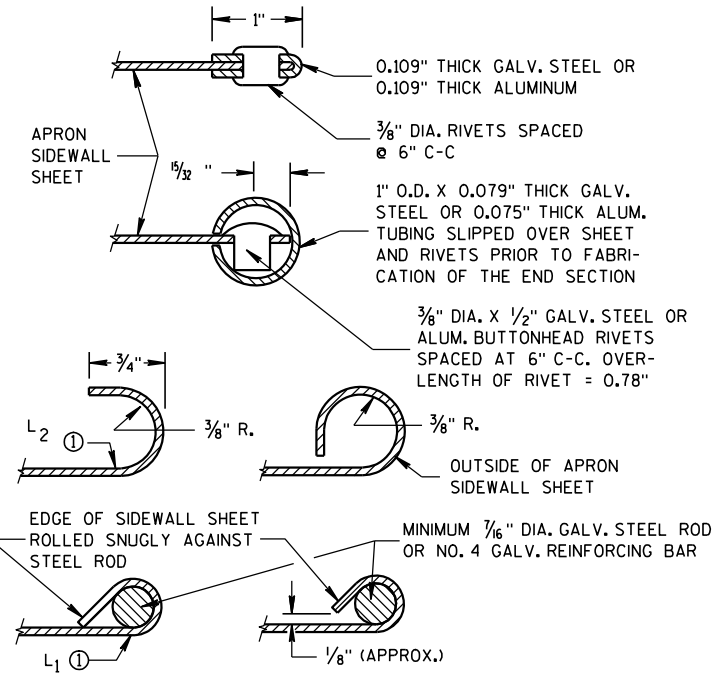
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL,
AND CORRUGATED BAND FITS INSIDE ENDWALL.
DIMPLED BAND MAY BE USED WITH HELICALLY
CORRUGATED PIPE.

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.

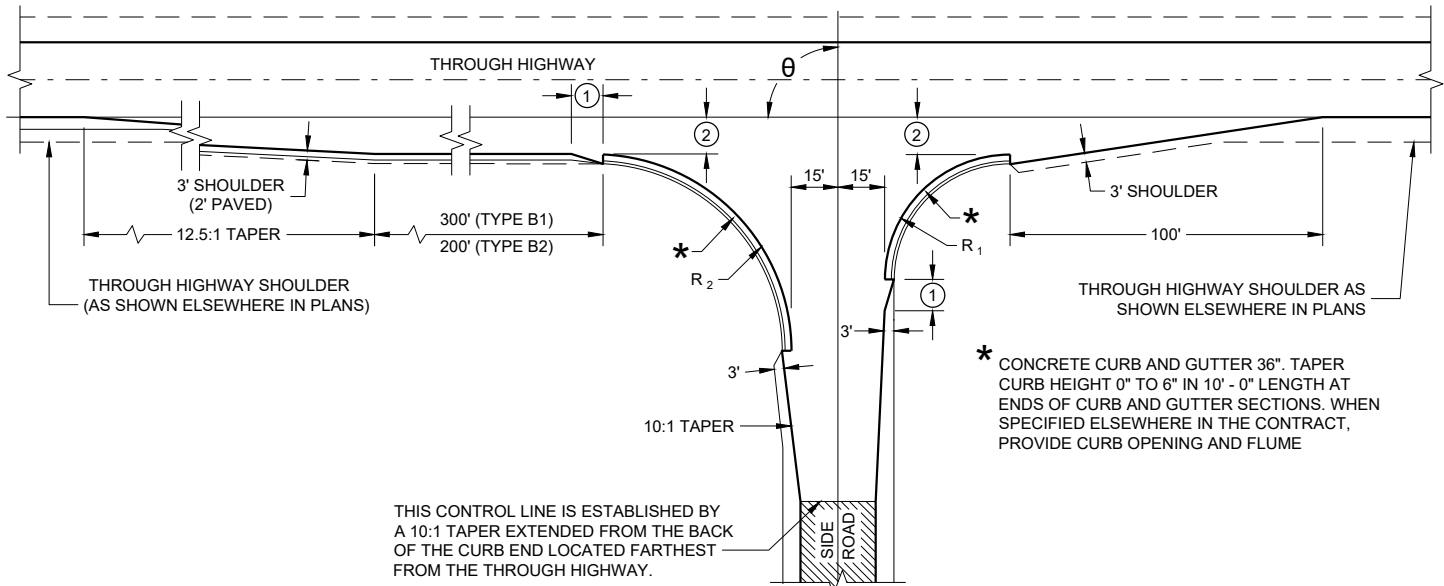
ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND
LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL
THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND
LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH
OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT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

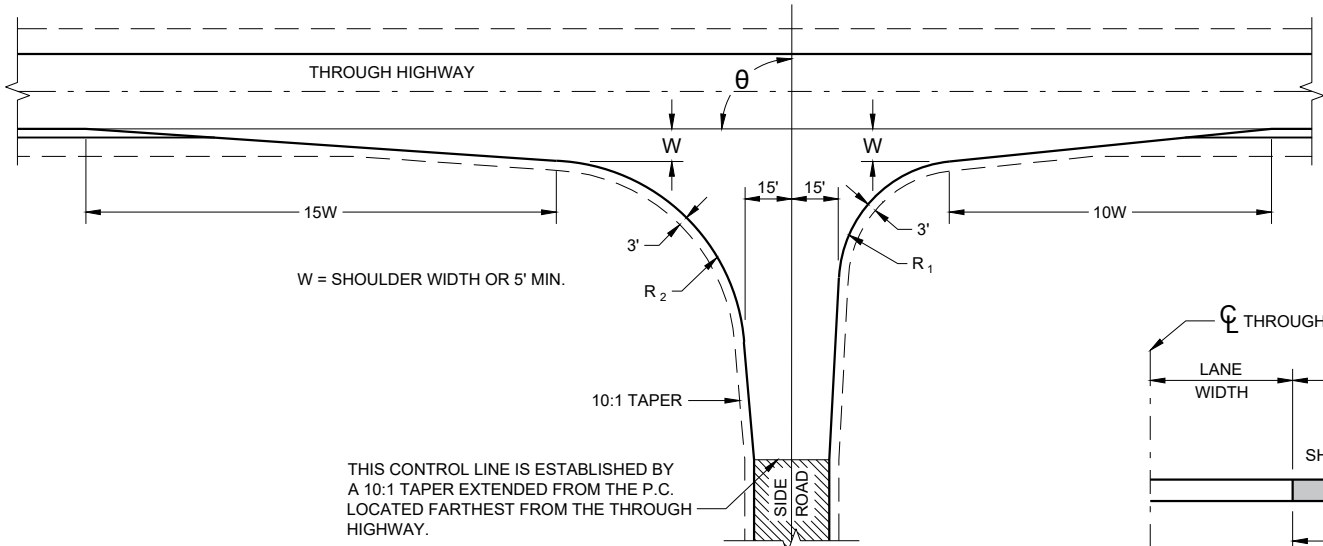
WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT
TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT
TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

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

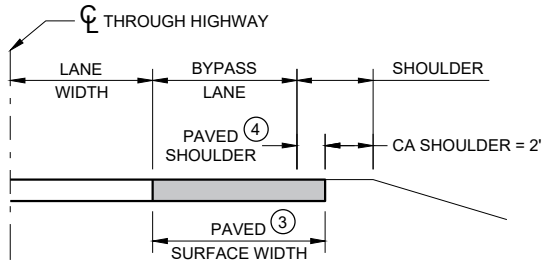
APRON ENDWALLS FOR CULVERT PIPE			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
APPROVED	11/30/94	/S/ Rory L. Rhinehart	NEER
DATE		CHIEF ROADWAY DEVELOP	114
FHWA			



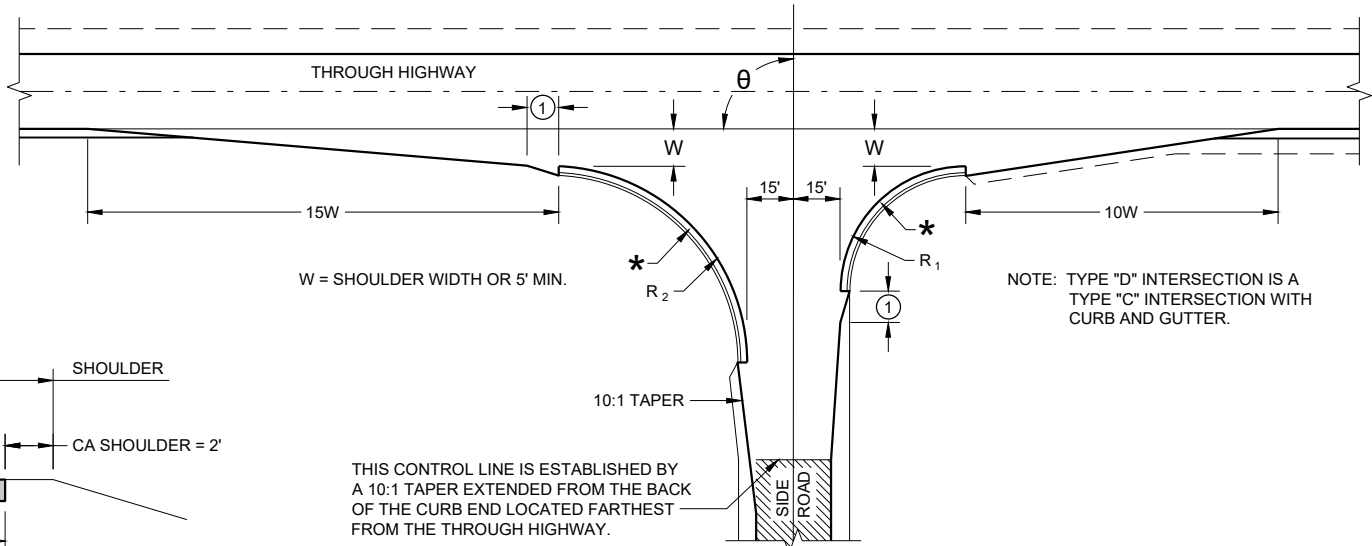
TYPE "B1" AND "B2"



TYPE "C"



SECTION A - A
(SHOWING BYPASS LANE AND SHOULDER)



TYPE "D"

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.

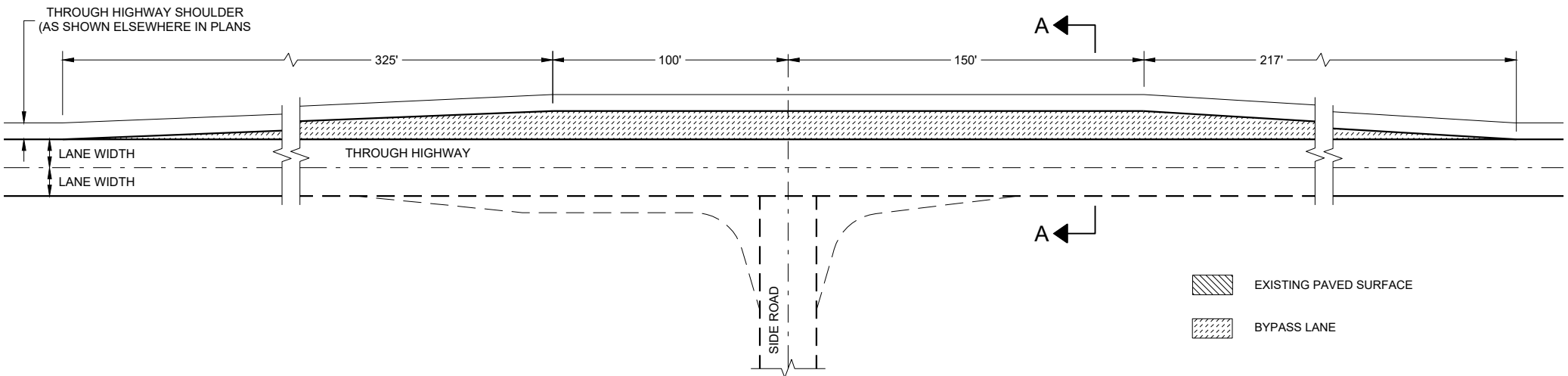
SIDE ROAD SURFACING NOTE

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.



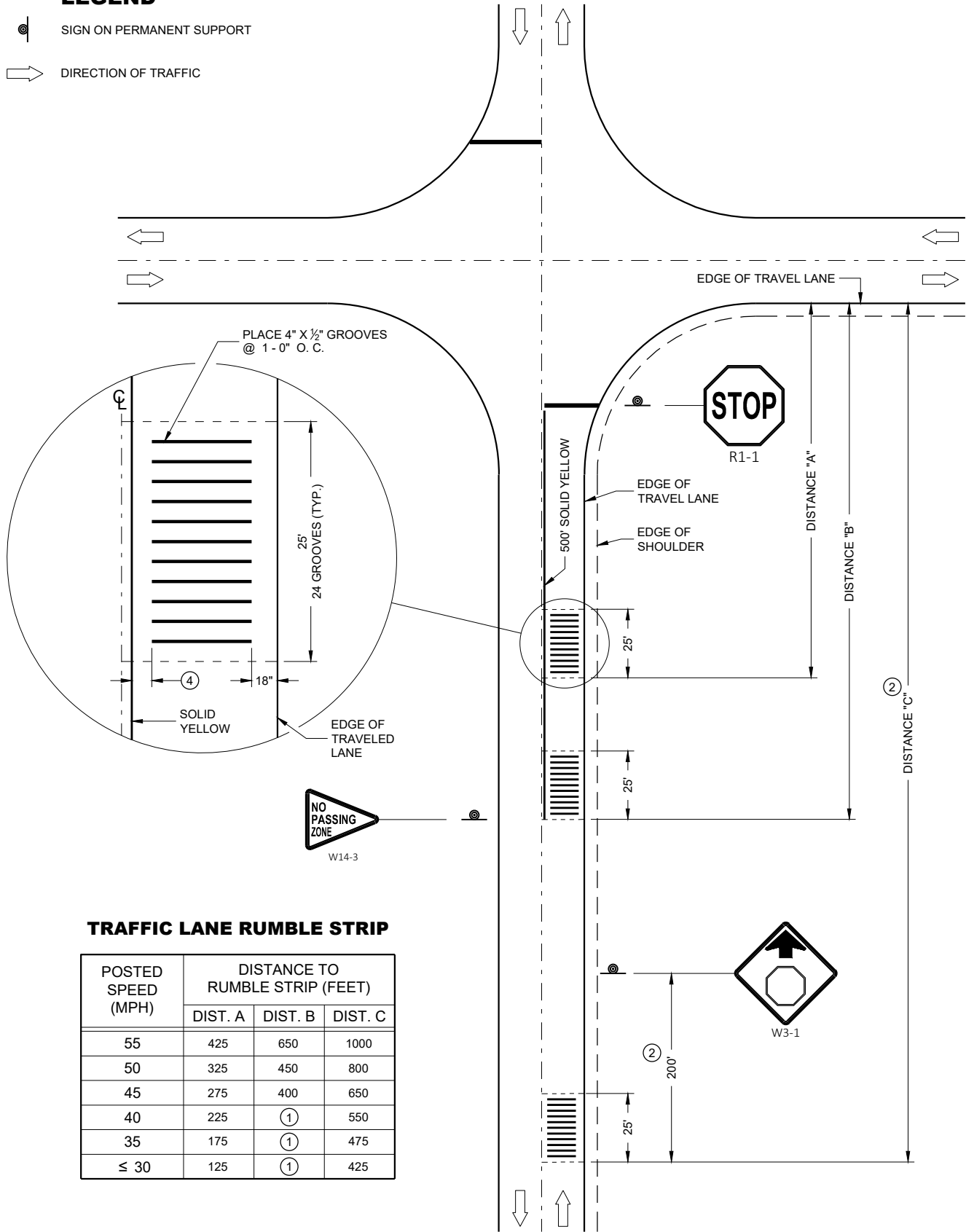
TEE INTERSECTION BYPASS LANE DETAIL

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 115

LEGEND

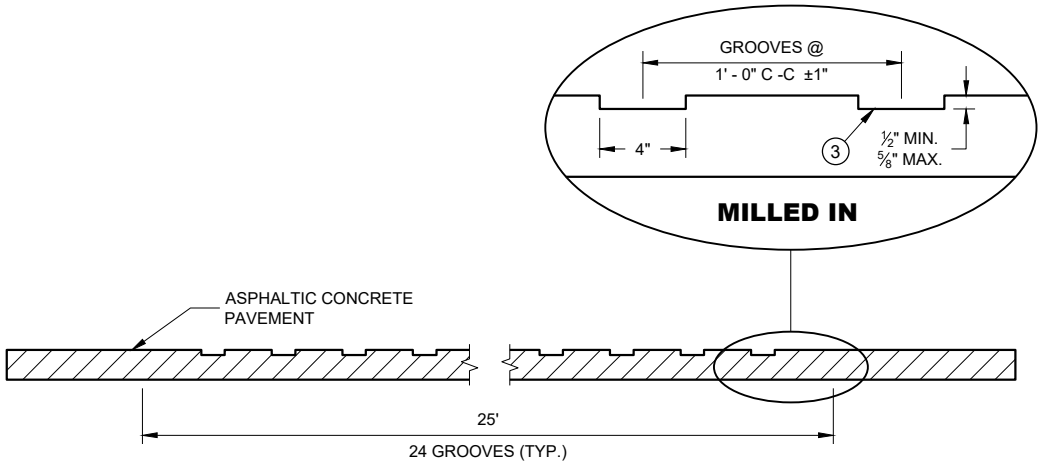
-  SIGN ON PERMANENT SUPPORT
-  DIRECTION OF TRAFFIC



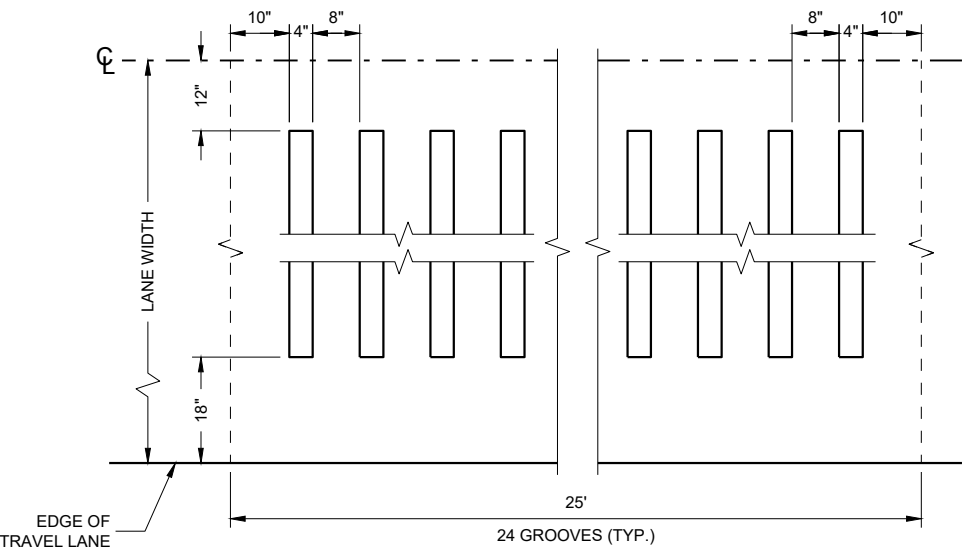
RUMBLE STRIP LOCATION

GENERAL NOTES

- CONTRACTOR SHALL CONFIRM RUMBLE STRIP LOCATION WITH THE ENGINEER PRIOR TO INSTALLATION. THE ENGINEER MAY MODIFY THE RUMBLE STRIP LOCATION AS FIELD CONDITIONS DICTATE.
- WHEN ASPHALTIC PAVEMENT IS NEW IN THE RUMBLE AREA, THE CONTRACTOR SHALL ALLOW THE PAVEMENT TO CURE A MINIMUM OF 7 DAYS PRIOR TO RUMBLE INSTALLATION.
- PAVEMENT MARKING AND SIGNING DETAILS AND SPECIFICATIONS ARE PROVIDE ELSEWHERE IN THE CONTRACT.
- ① ELIMINATE THE MIDDLE SET OF RUMBLE STRIPS.
 - ② LOCATE RUMBLE STRIP 200 FEET IN ADVANCE OF W3-1 SIGN AS SHOWN. IF W3-1 IS NOT IN PLACE, USE DISTANCE "C".
 - ③ TYPICAL VERTICAL VARIATION BETWEEN PEAKS AND VALLEYS WITHIN THE CUT APPROXIMATELY $\frac{1}{16}$ ".
 - ④ 12 INCH CLEAR BETWEEN THE SOLID YELLOW LINE AND THE EDGE OF THE RUMBLE.



ELEVATION VIEW



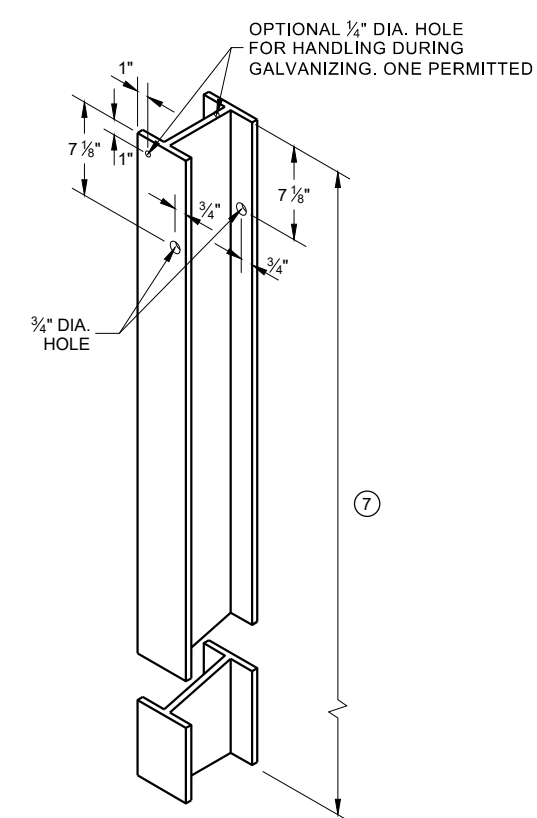
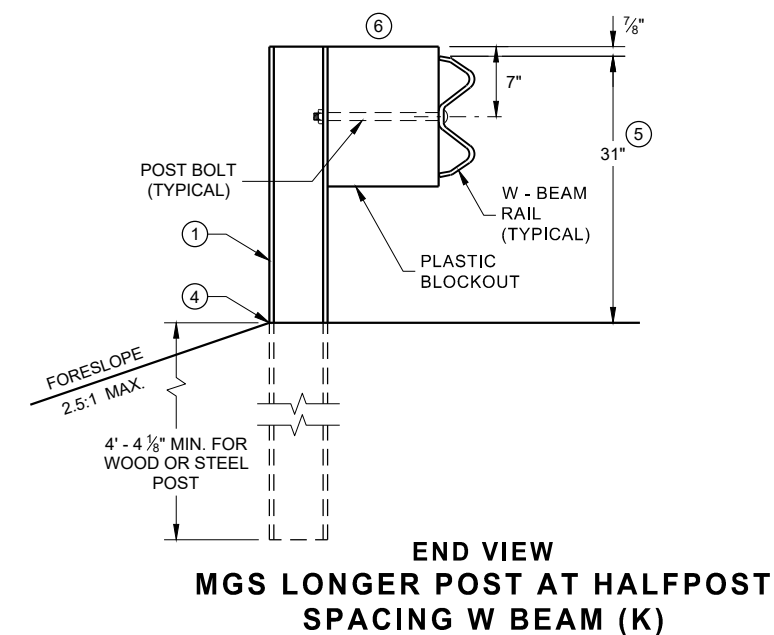
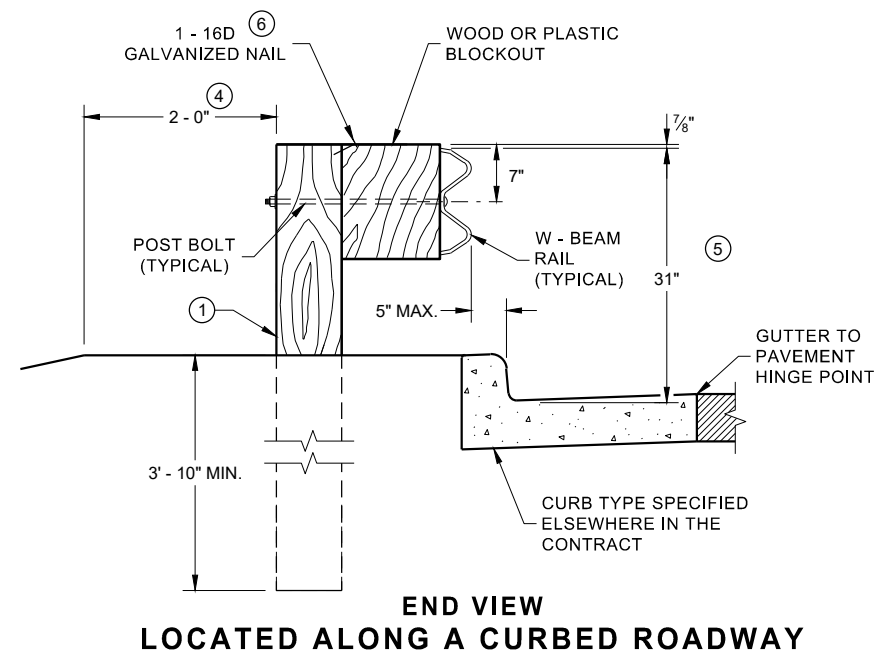
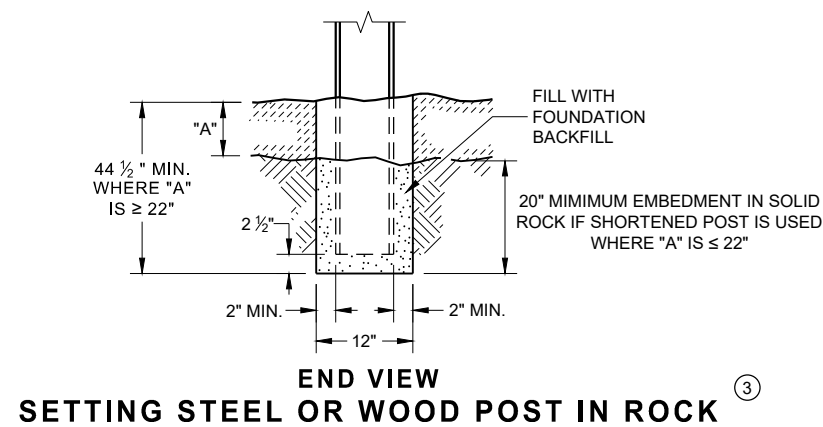
PLAN VIEW
ASPHALTIC PAVEMENT MILLED IN

TRANSVERSE RUMBLE STRIPS, ASPHALTIC

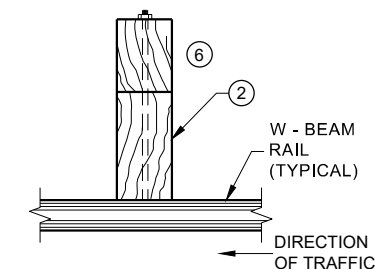
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE
/S/ Rodney Taylor
ROADWAY DESIGN STAFF
UNIT SUPERVISOR
117
FHWA

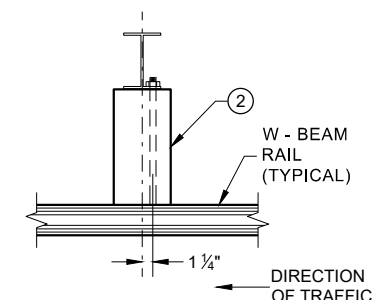
- ① WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.
- ② USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.
- ③ IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.
- ④ WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).
- ⑤ FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS $\pm 1"$. FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 3/4" TO 32".
- ⑥ WHEN USING STEEL POST AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.
- ⑦ TOTAL POST LENGTH FOR TYPE K IS 7' - 0". TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



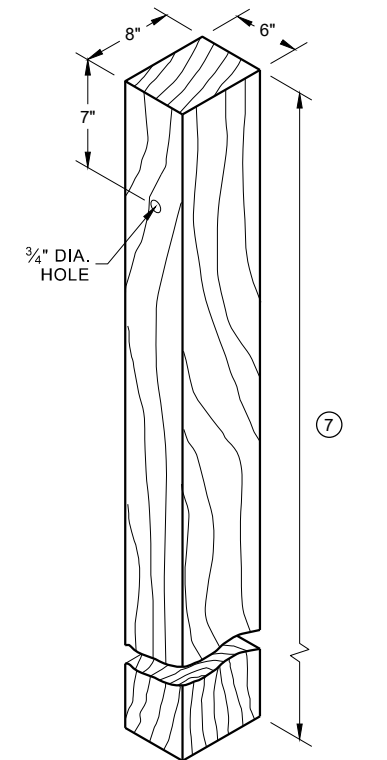
STEEL POST & HOLE
PUNCHING DETAIL
(W 6 X 9) ①



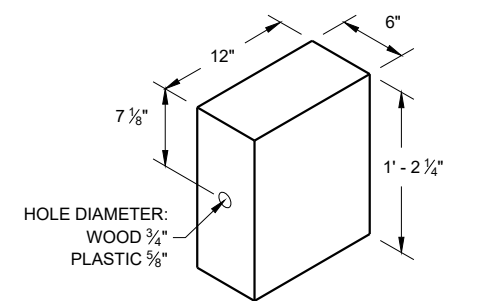
PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



PLAN VIEW
STEEL POST,
PLASTIC BLOCKOUT & BEAM



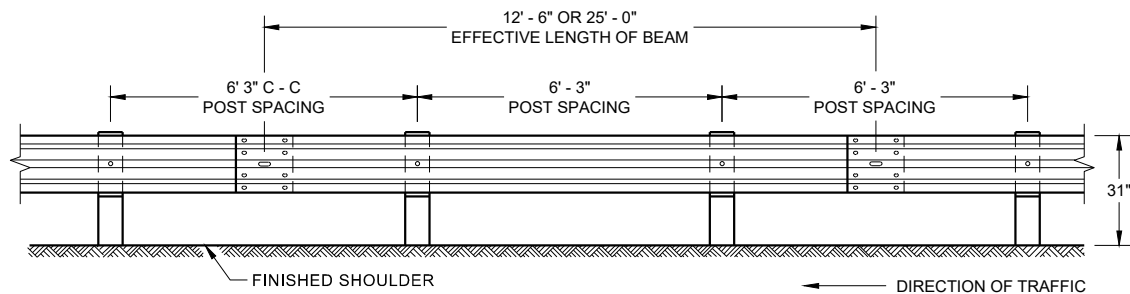
WOOD POST
(6" X 8") NOMINAL ①



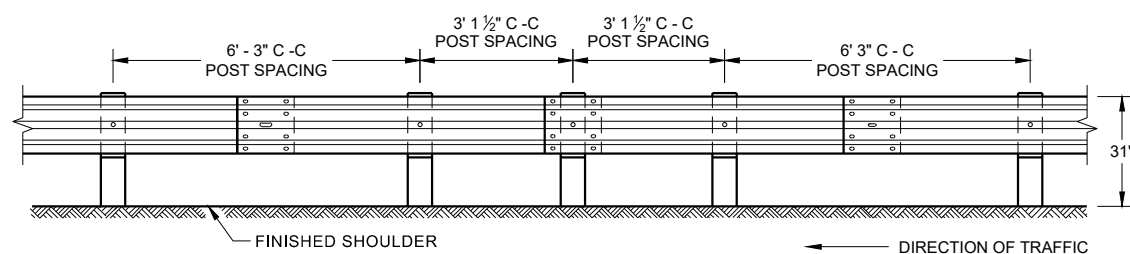
WOOD OR PLASTIC
BLOCKOUT ②

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

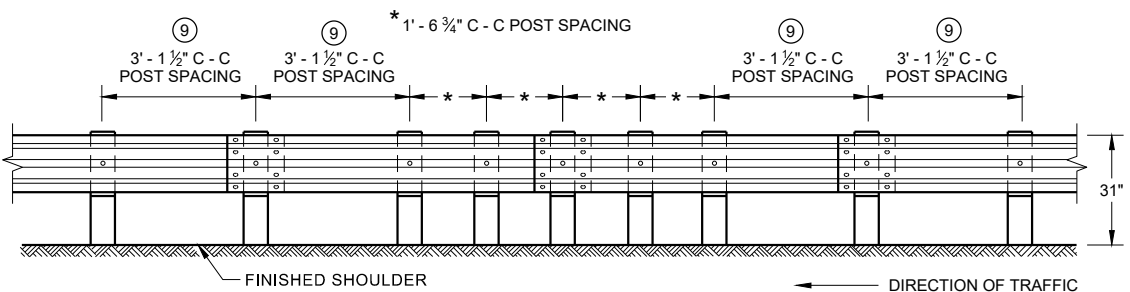
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 118



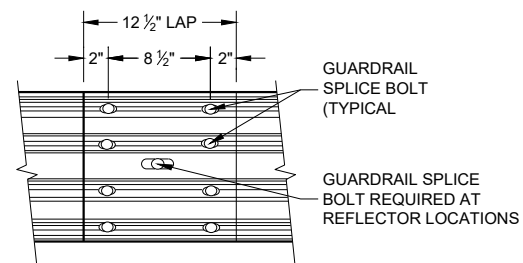
**FRONT VIEW
POST SPACING STANDARD INSTALLATION**



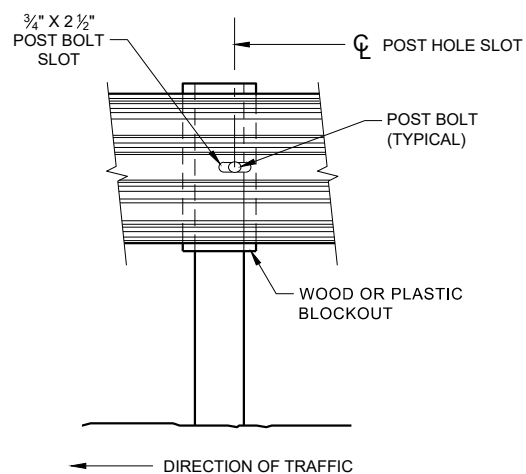
**FRONT VIEW
HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)**



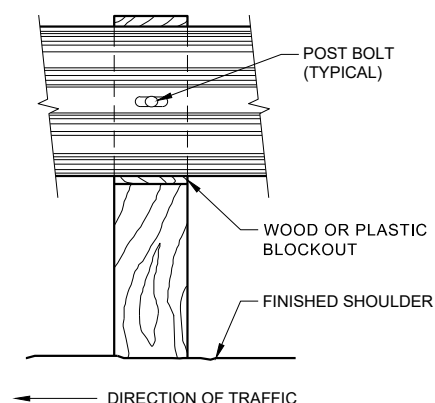
**FRONT VIEW
QUARTER POST SPACING (QS)**



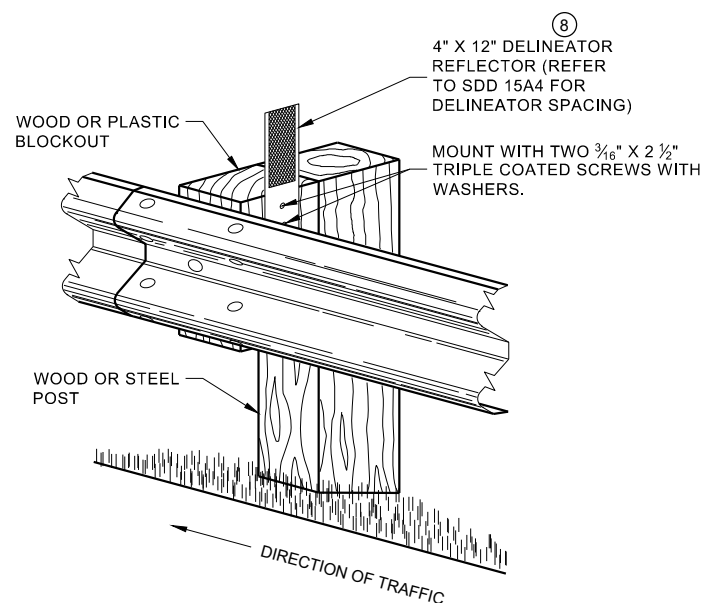
**FRONT VIEW
MID-SPAN BEAM SPLICE**



FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



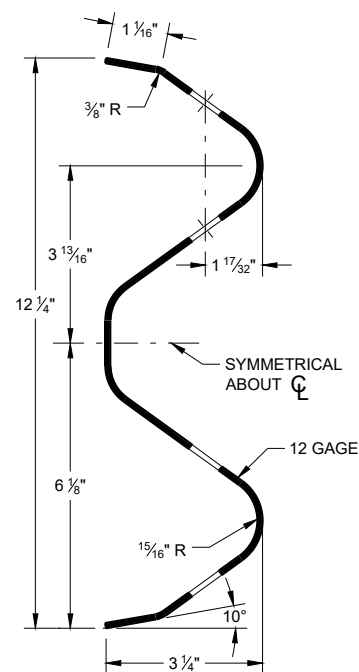
**ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION**

GENERAL NOTES

- 8 DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.
- 9 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

POST BOLTS ARE A 3/4" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 3/4" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND 3/4" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

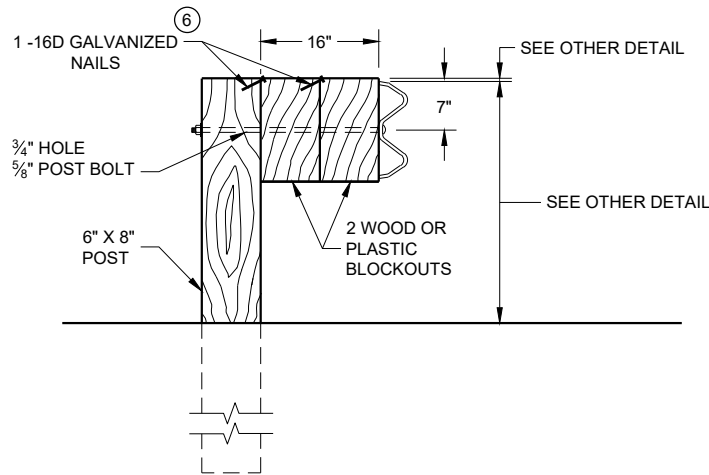
GUARD RAIL SPLICE BOLTS ARE A 3/4" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES 3/4" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



SECTION THRU W-BEAM RAIL

**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

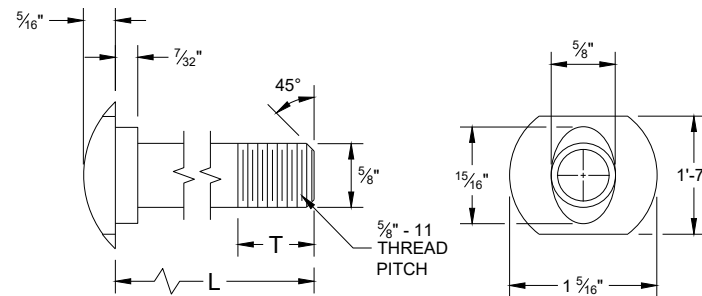
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



DETAIL FOR 16" BLOCKOUT DEPTH

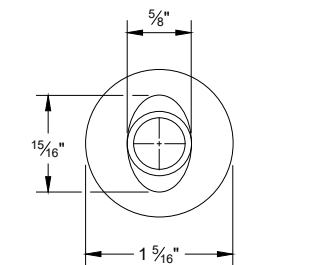
IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.

- NOTE:
1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF $\frac{3}{16}$ ".
 2. IF THE BOLT EXTENDS MORE THAN $\frac{1}{4}$ " FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

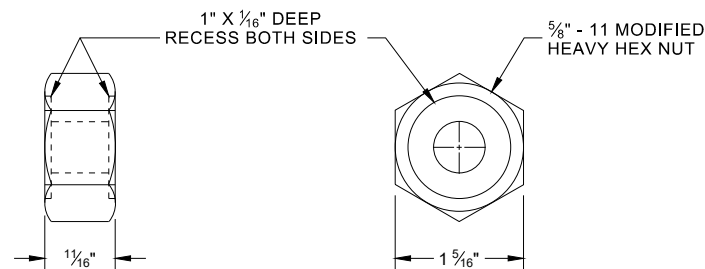


POST BOLT TABLE

L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"

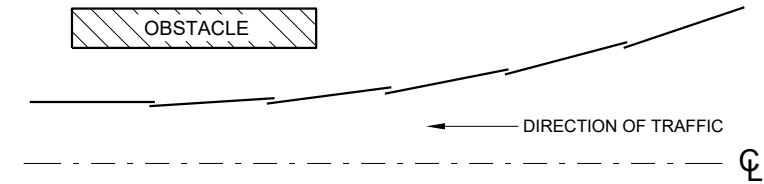


ALTERNATE BOLT HEAD

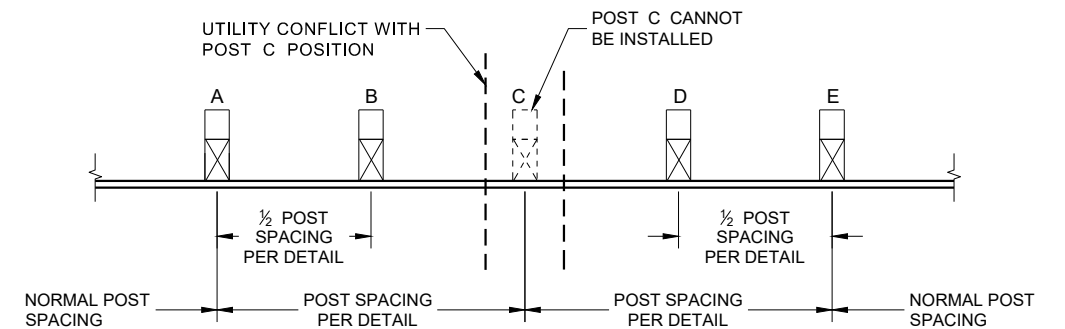


POST BOLT, SPLICE BOLT
AND RECESS NUT

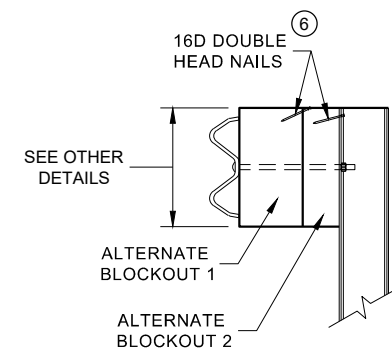
- 6 WHEN USING STEEL POST AD WOOD BLOCKOUTS, INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.



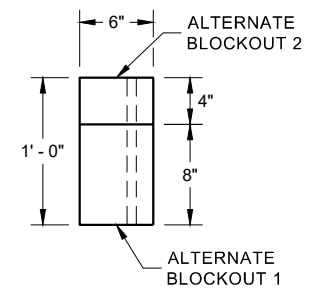
PLAN VIEW
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS
UNDERGROUND OBSTRUCTION



SIDE VIEW



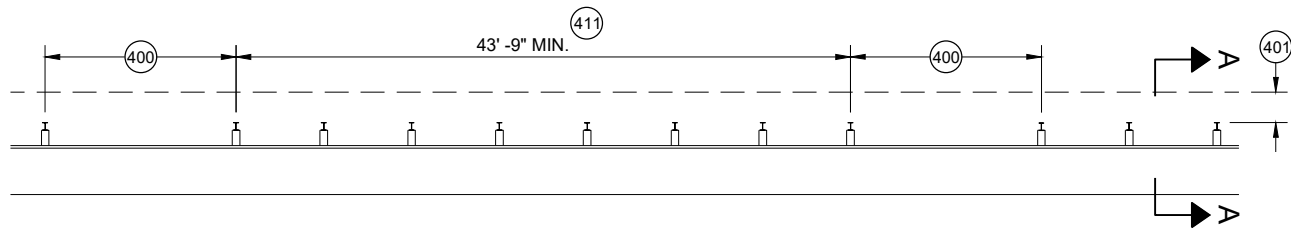
PLAN VIEW

ALTERNATE WOOD
BLOCKOUT DETAIL

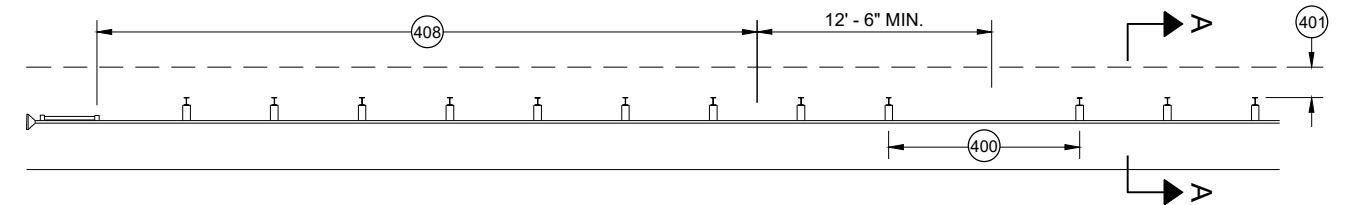
- NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.
- DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

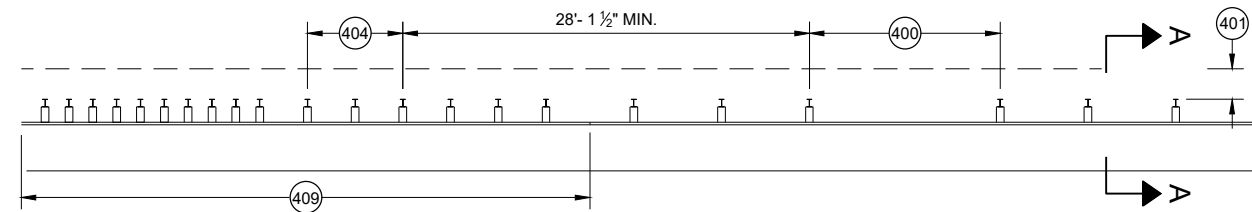
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



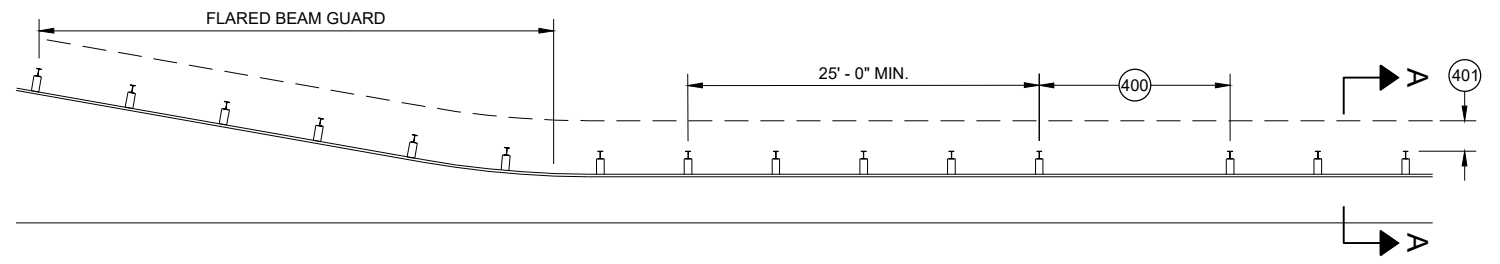
MISSING POST IN MGS GUARDRAIL



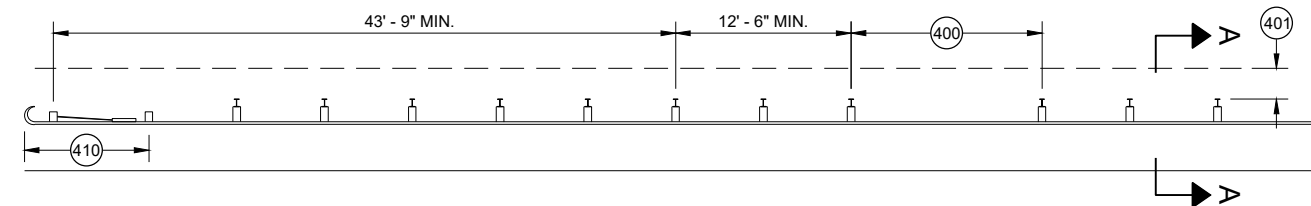
MISSING POST IN MGS GUARDRAIL NEAR EAT



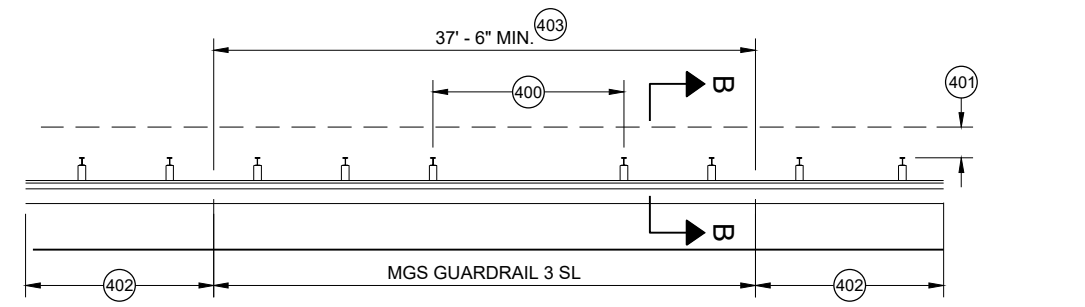
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

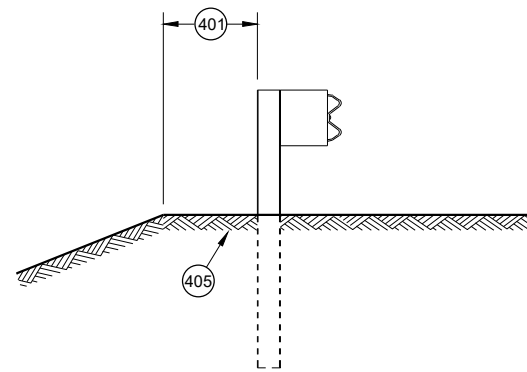


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

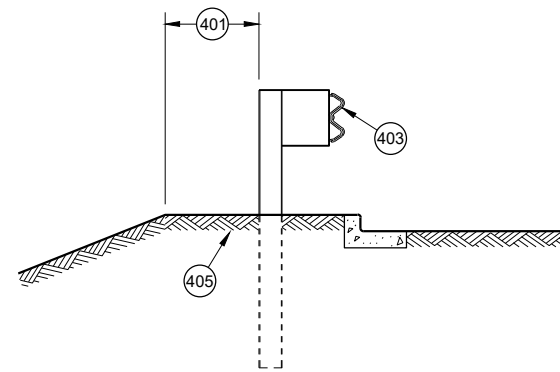


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL)

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



SECTION A - A



SECTION B - B

**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2021
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR 121

FHWA

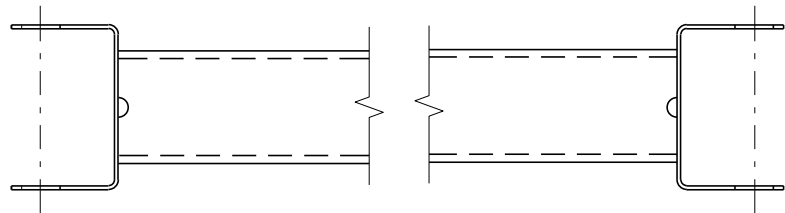
- A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE (HPL) AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.
- B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED
- C) DIFFERENT MANUFACTURERS REQUIRE DIFFERENT PERFORATED W - BEAM RAIL END PANELS. SEE MANUFACTURER'S INFORMATION.
- D) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF - TAPPING SCREWS. ONE SCREW PER CORNER.
- E) HARDWARE MAY VARY BETWEEN MANUFACTURER. SEE MANUFACTURER'S DRAWING FOR INFORMATION.

DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

THE CENTER OF THE UPPER 3 1/2" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.

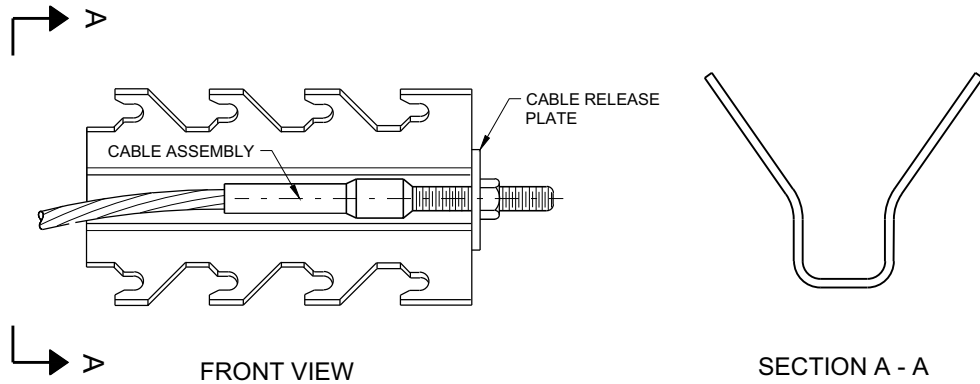


STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 122

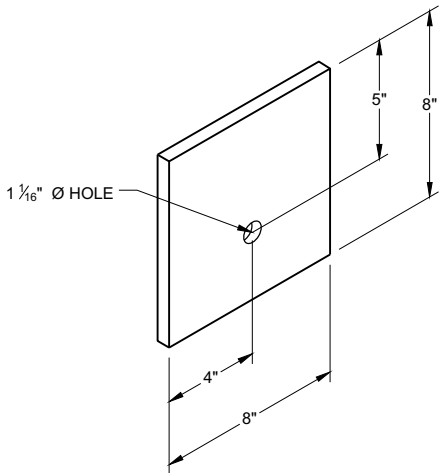


GENERIC GROUND STRUT⁹ ^E

BILL OF MATERIALS	
PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
①	UPPER POST NO. 1 6" X 6" TUBE
②	LOWER POST NO. 1
③	WOOD CRT
④	WOOD BLOCKOUT
⑤	PIPE SLEEVE
⑥	BEARING PLATE
⑦	BCT CABLE ASSEMBLY
⑧	ANCHOR CABLE BOX
⑨	GROUND STRUT
⑩	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
⑪	STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
⑫	IMPACT HEAD
⑬	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)
⑭	SOIL PLATE
⑮	UPPER POST NO. 2
⑯	LOWER POST NO. 2



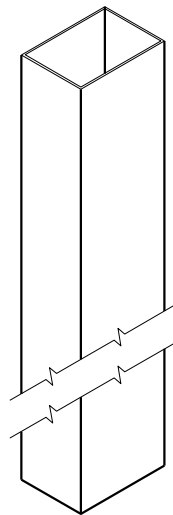
GENERIC ANCHOR CABLE BOX⁹ ^E



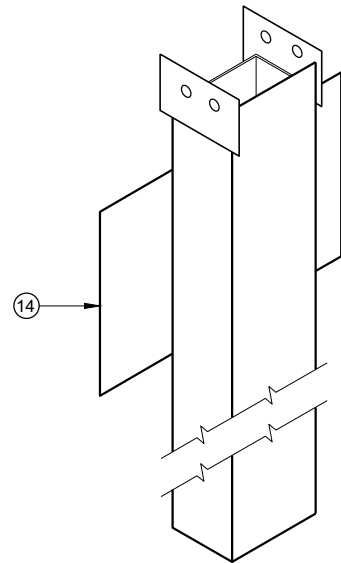
BEARING PLATE⁶ ^E

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

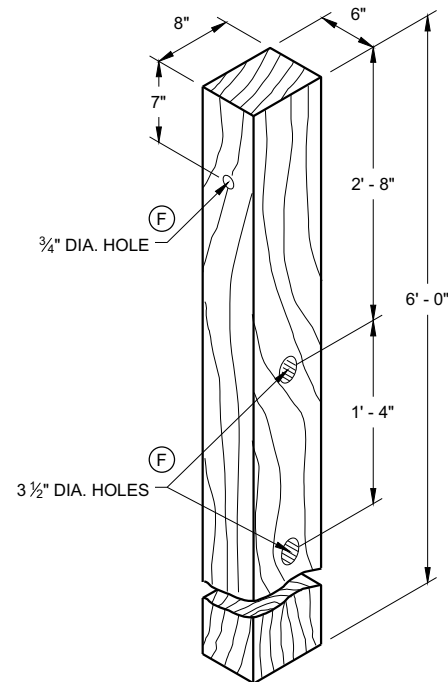
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 123



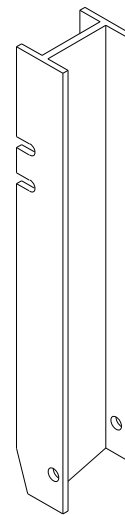
UPPER POST NO. 1 ⁽¹⁾ (E)



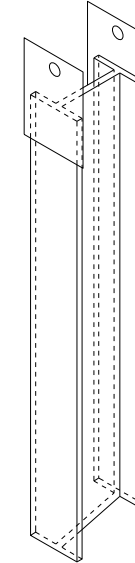
LOWER POST NO. 1 ⁽²⁾ (E)



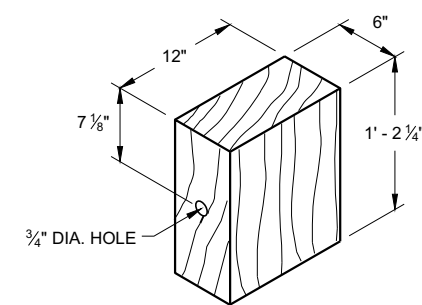
WOOD CRT POST ⁽³⁾ (E)
POSTS NUMBER 3-9



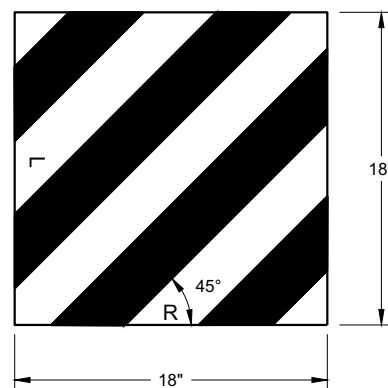
UPPER POST NO. 2 ⁽¹⁵⁾ (E)



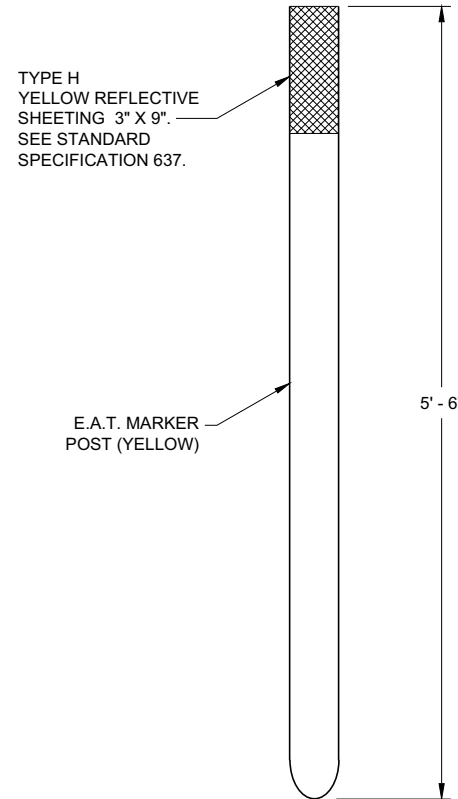
LOWER POST NO. 2 ⁽¹⁶⁾ (E)



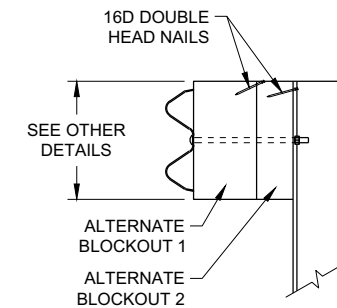
WOOD BLOCKOUT ⁽⁴⁾
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



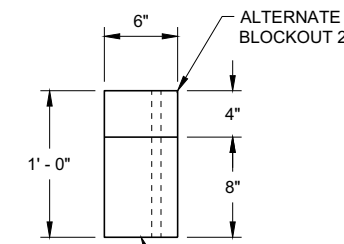
REFLECTIVE SHEETING DETAIL ^(E)



E.A.T. MARKER POST ⁽¹³⁾



SIDE VIEW



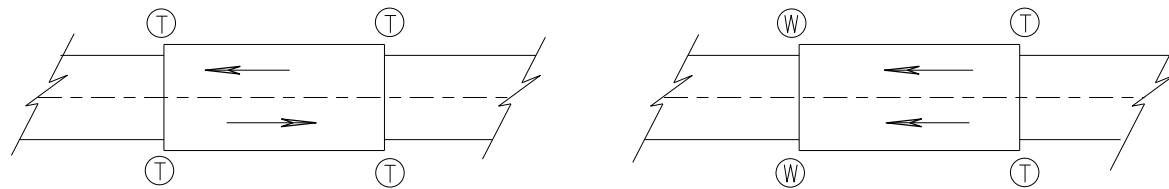
TOP VIEW

ALTERNATE WOOD
BLOCKOUT DETAIL

**MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018 DATE /S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR 124
FHWA



TWO WAY TRAFFIC

ONE WAY TRAFFIC

(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

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

GENERAL NOTES

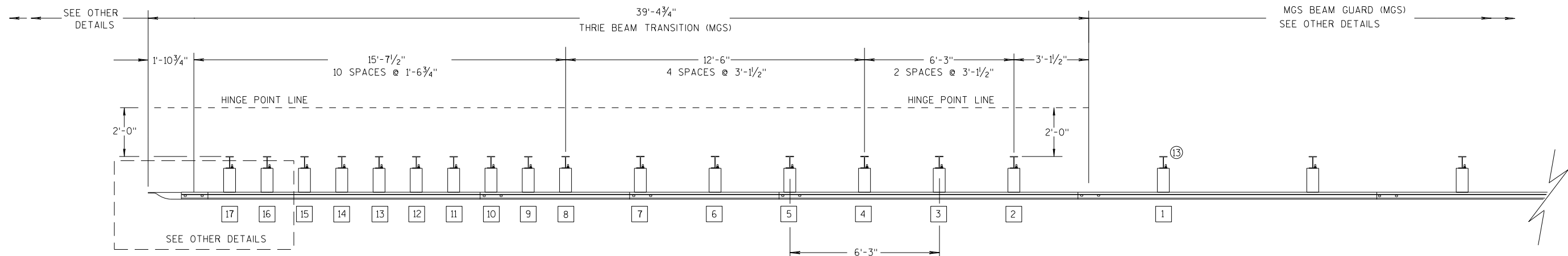
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2 1/2", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

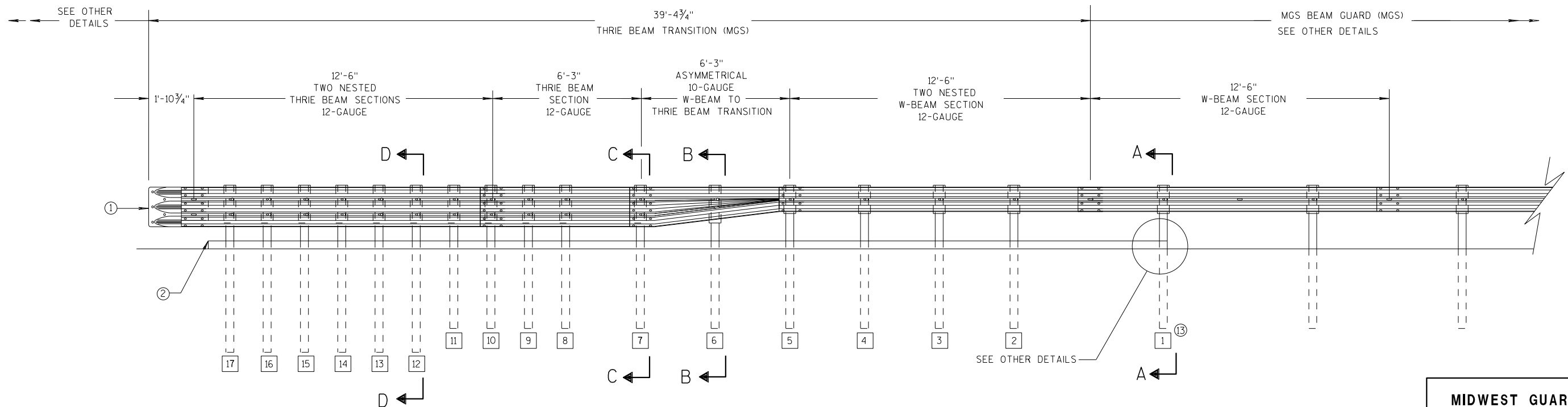
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

- ① BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.
- ② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- ⑬ STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD14B42



PLAN VIEW



ELEVATION VIEW

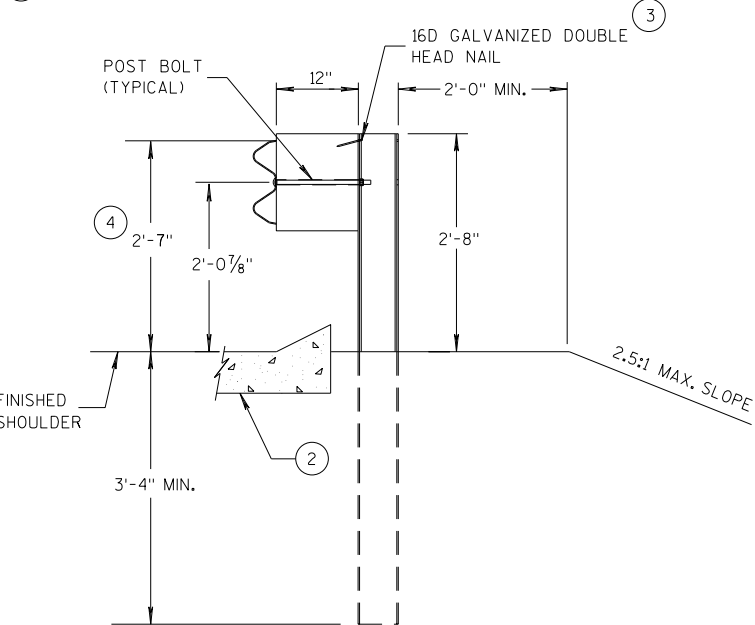
MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

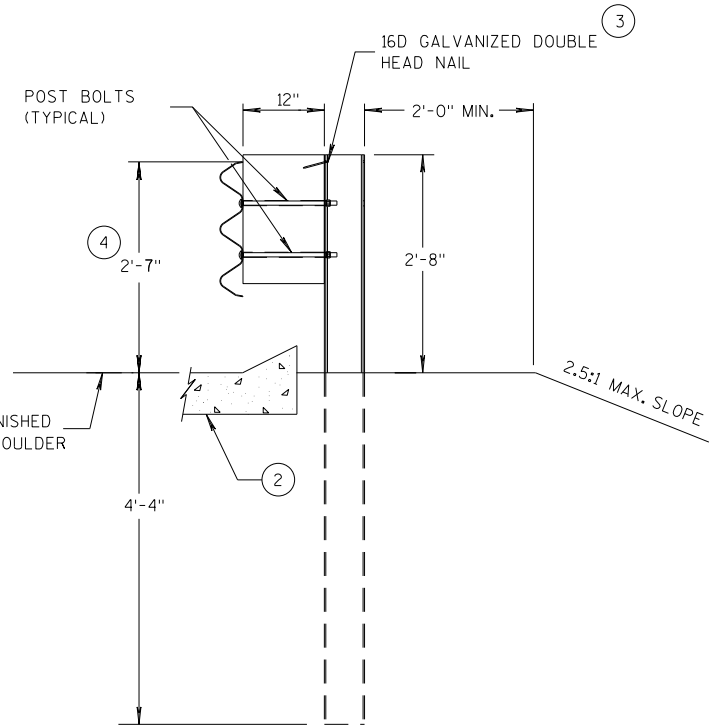
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 125

GENERAL NOTES

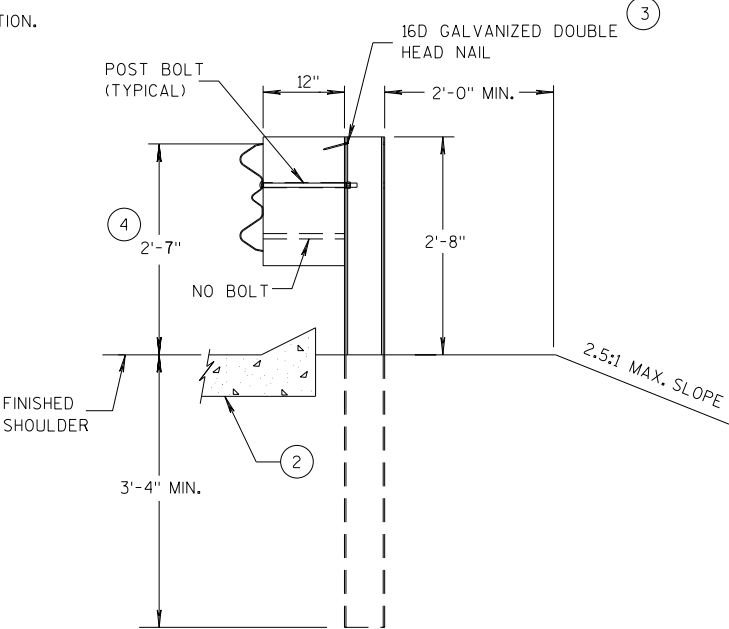
- 2 OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- 3 WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.
- 4 TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".
- 13 STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42



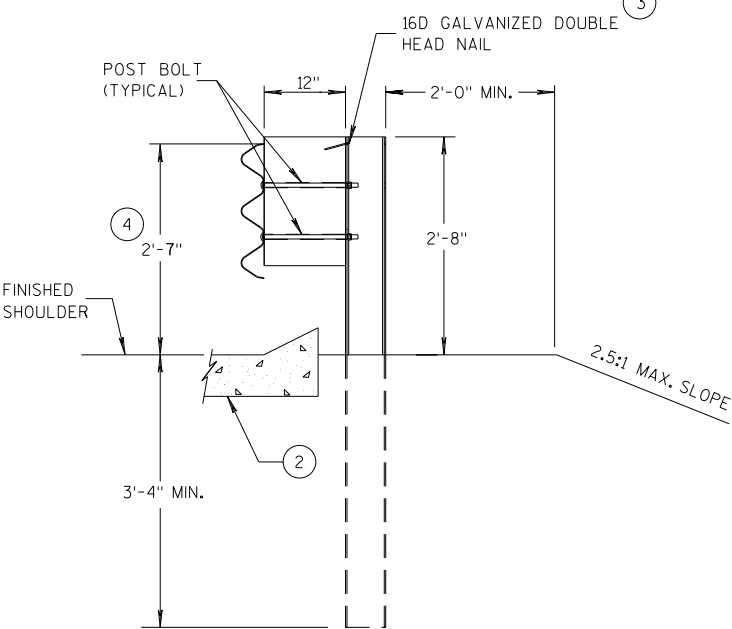
SECTION A-A
POSTS 1-5



SECTION D-D
POSTS 12-17



SECTION B-B
POST 6



SECTION C-C
POSTS 7-11

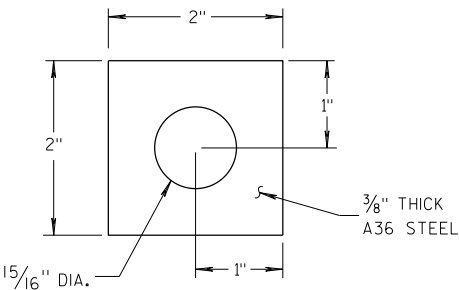
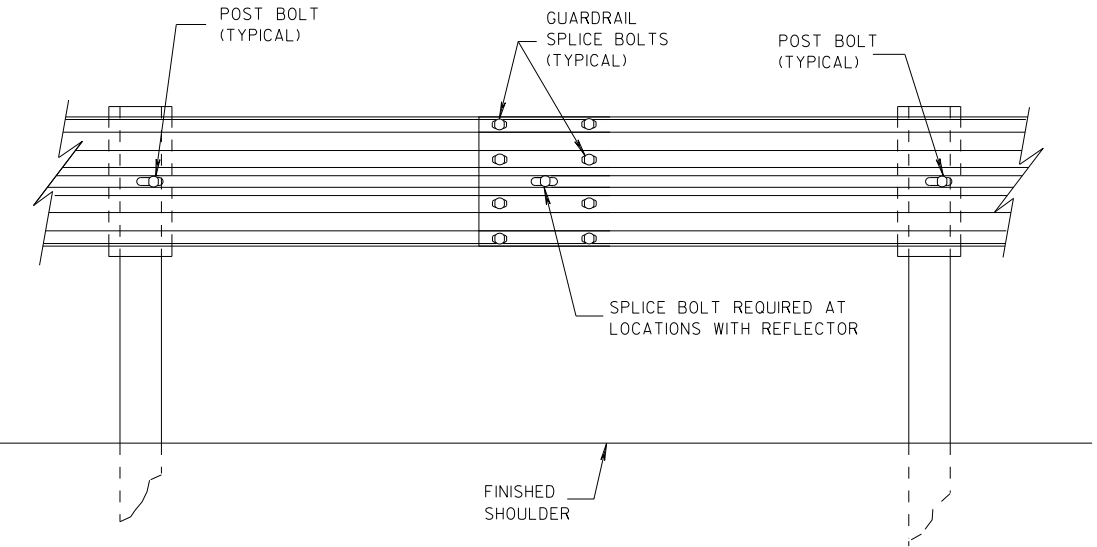
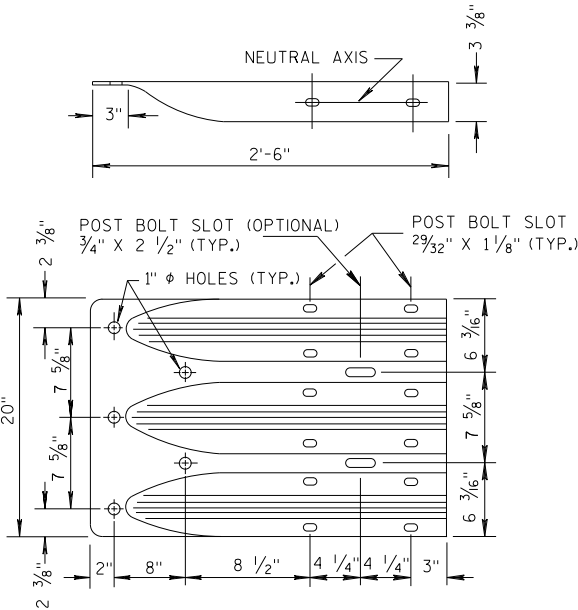


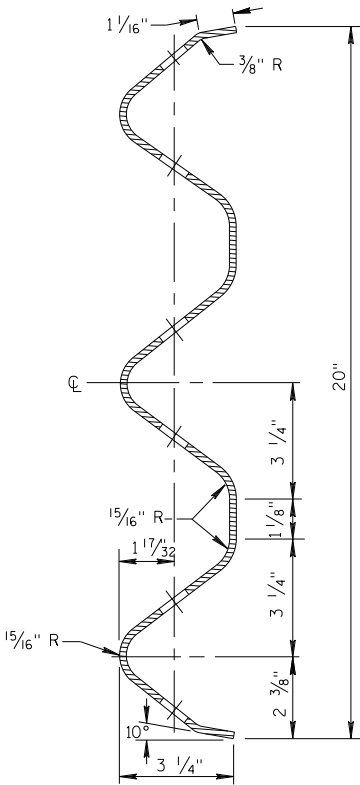
PLATE WASHER DETAIL



SPlice DETAIL



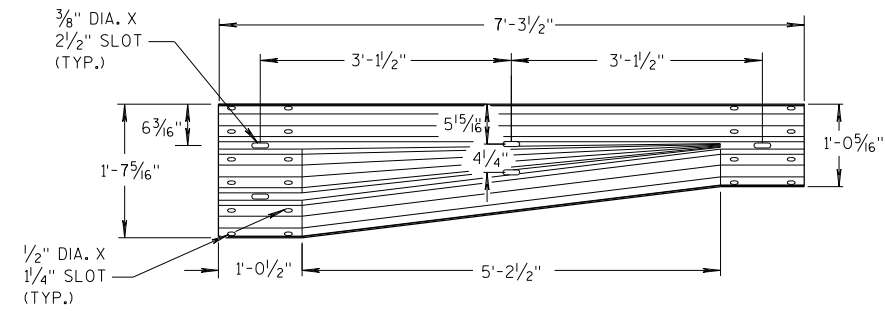
THRIE BEAM
TERMINAL CONNECTOR



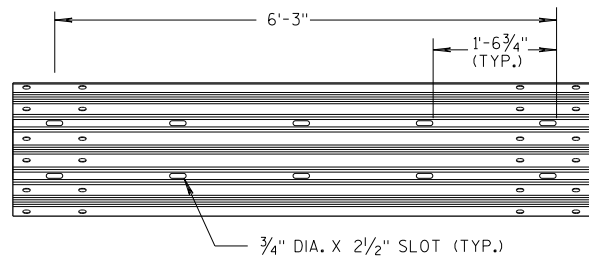
SECTION THRU THRIE
BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

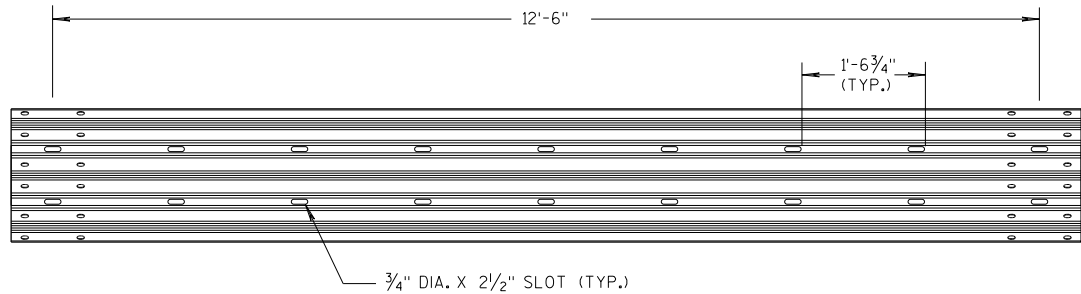
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



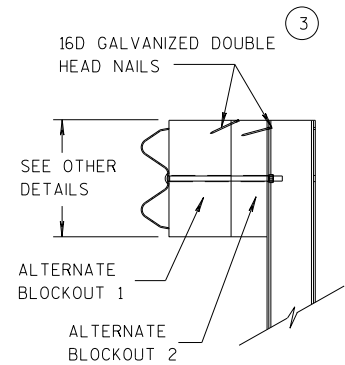
W-BEAM TO THRIE BEAM TRANSITION SECTION



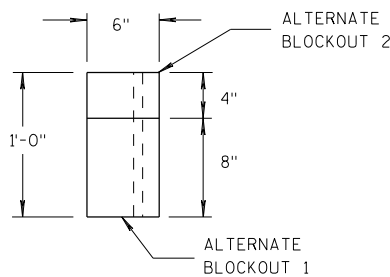
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

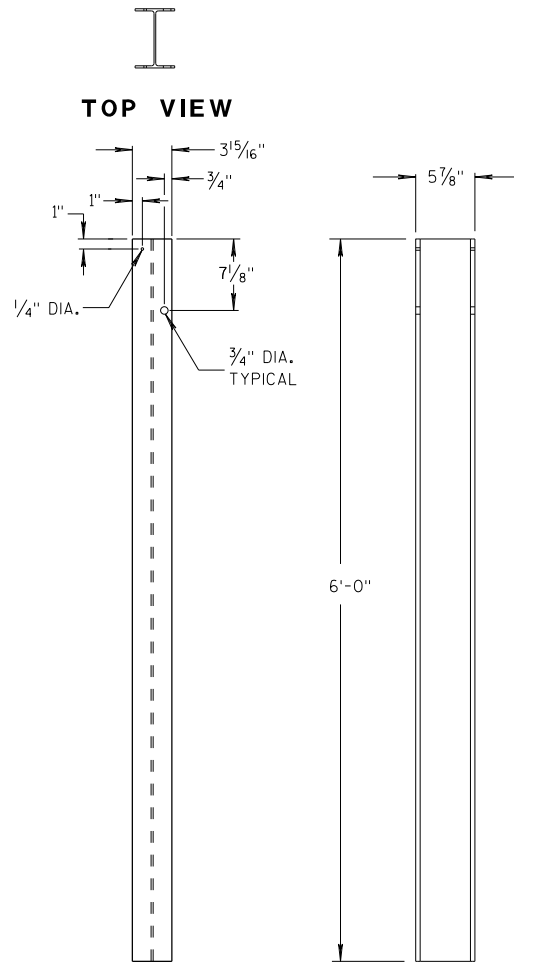


SIDE VIEW



TOP VIEW

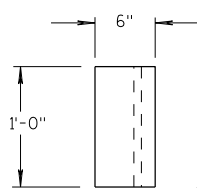
ALTERNATE WOOD BLOCKOUT DETAIL



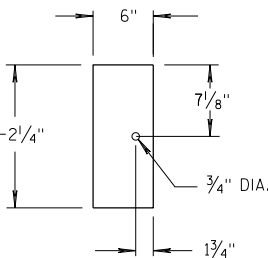
FRONT VIEW

SIDE VIEW

STEEL POSTS 1-5

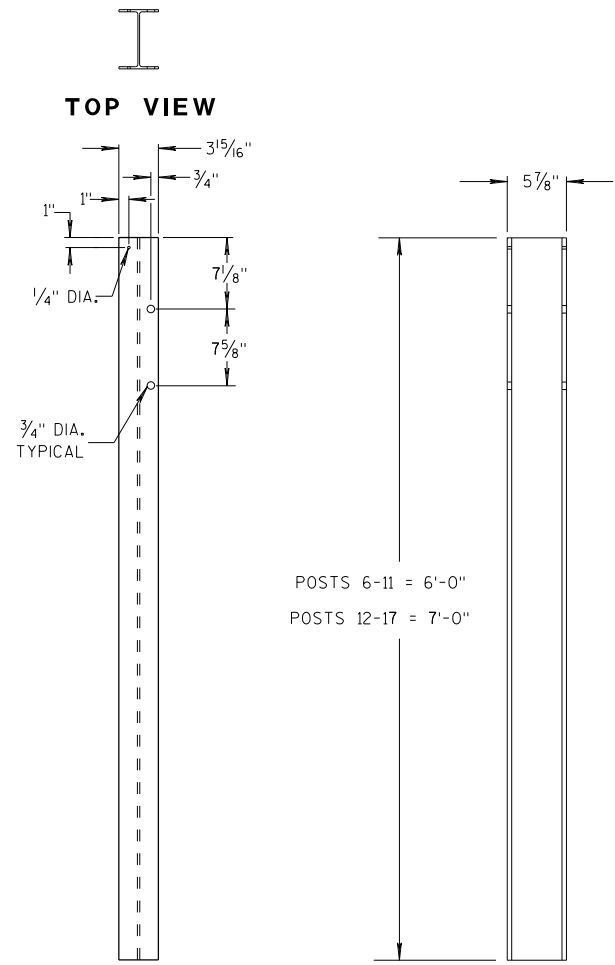


TOP VIEW



FRONT VIEW

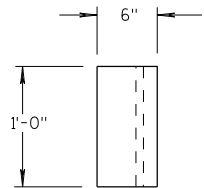
BLOCKOUT POSTS 1-5



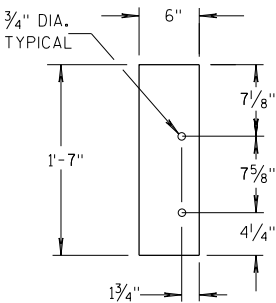
FRONT VIEW

SIDE VIEW

STEEL POSTS 6-17



TOP VIEW



FRONT VIEW

BLOCKOUT POSTS 6-17

GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

BOLT HOLES FOR POST ARE ON FRONT AND OF SIDE OF POST.

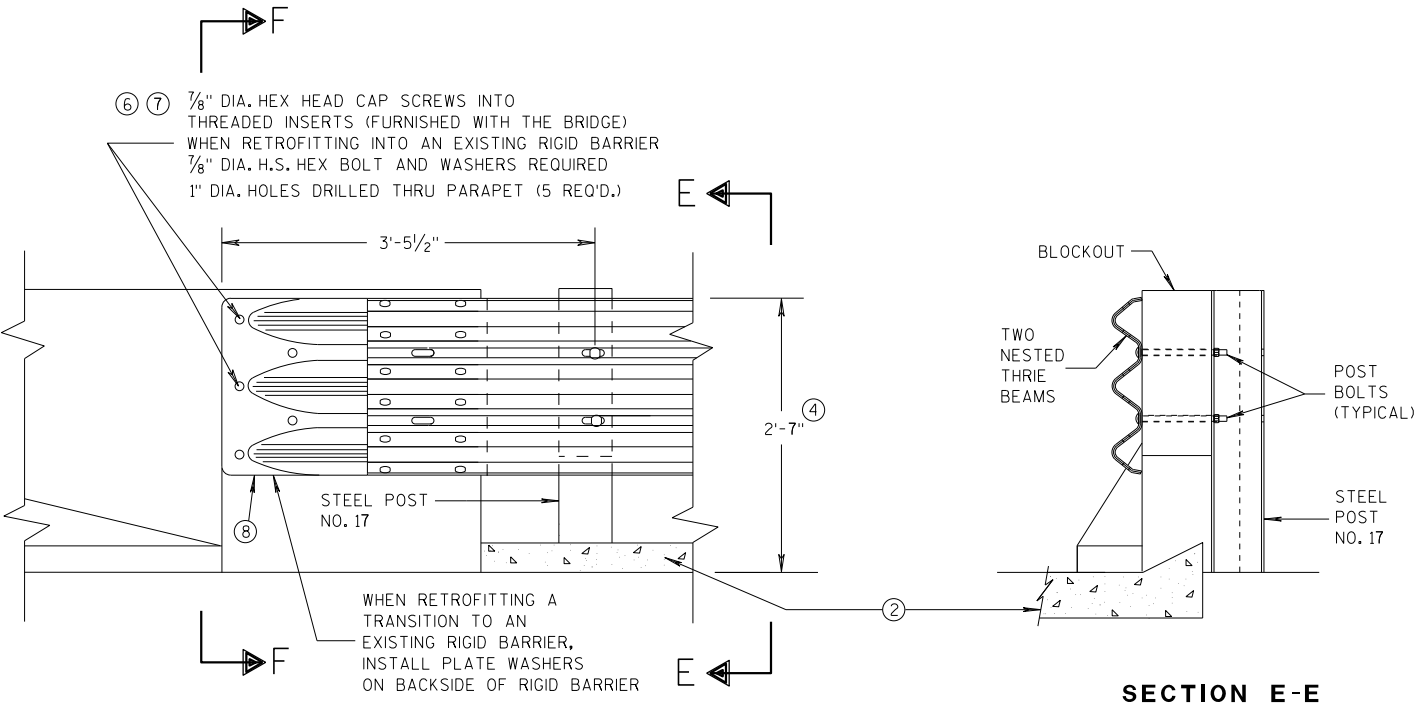
3 WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

5 WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.

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

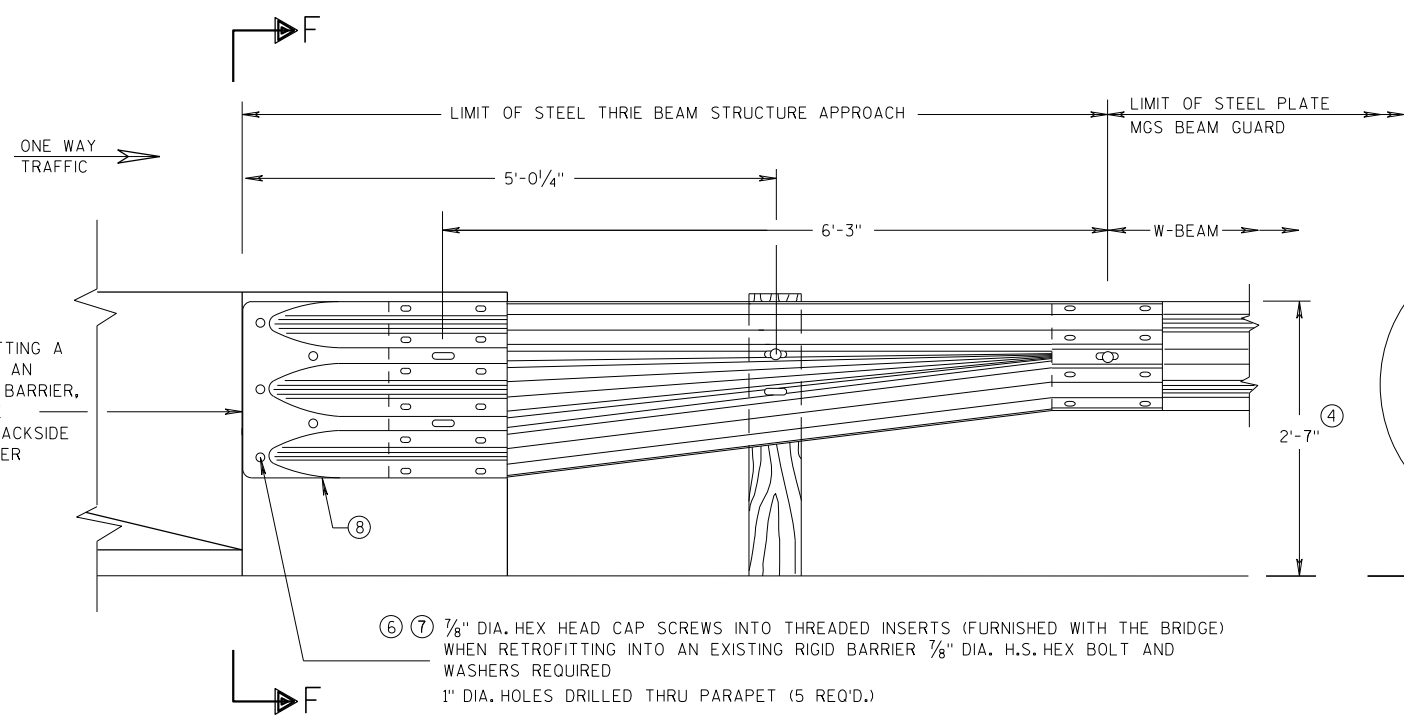
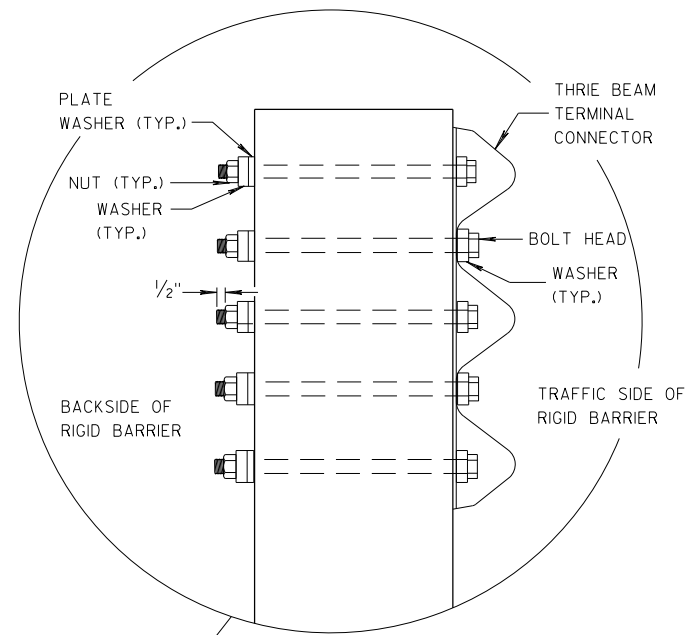
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

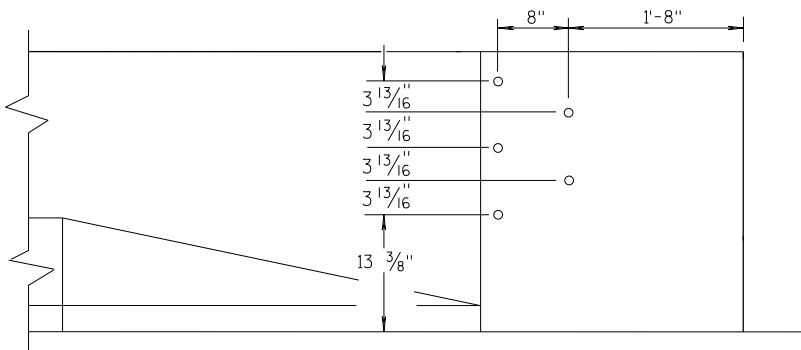


GENERAL NOTES

- THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.
- ② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- ④ TOLERANCE FOR TOP OF BEAM IS $\pm 1"$.
- ⑥ DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
- ⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.
- ⑧ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".



SECTION F-F



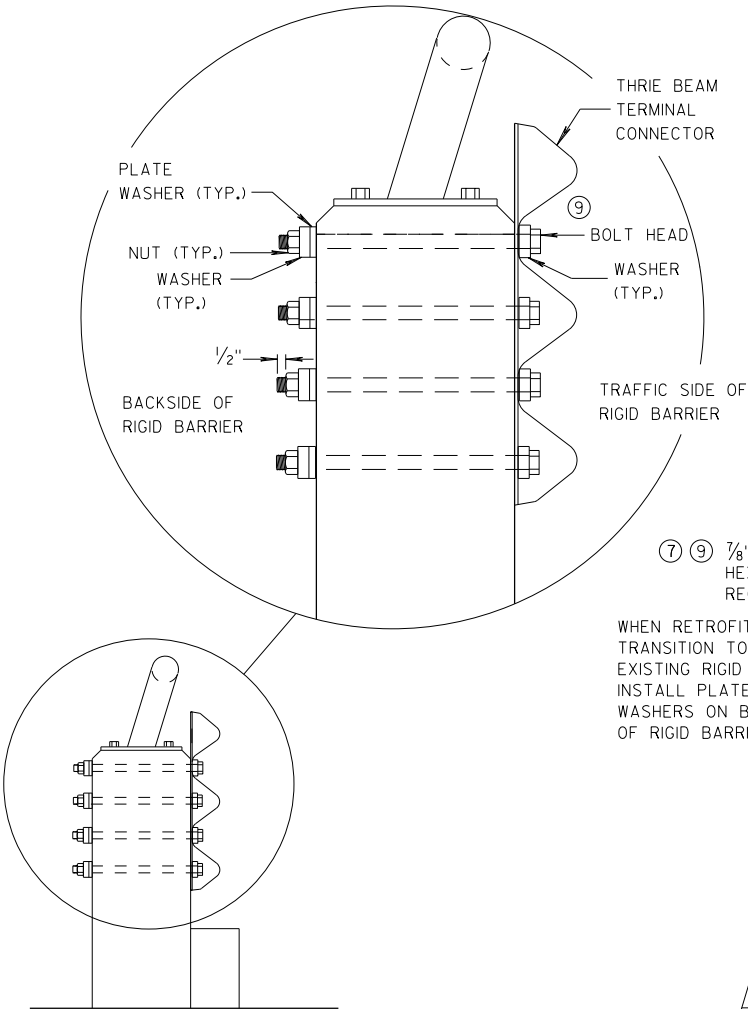
DRILL HOLE LOCATION

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
APPROVED 07/2018 DATE	/S/ Rodney Taylor ROADWAY STANDARDS UNIT SUPERVISOR		
FHWA	128	NT	

GENERAL NOTES

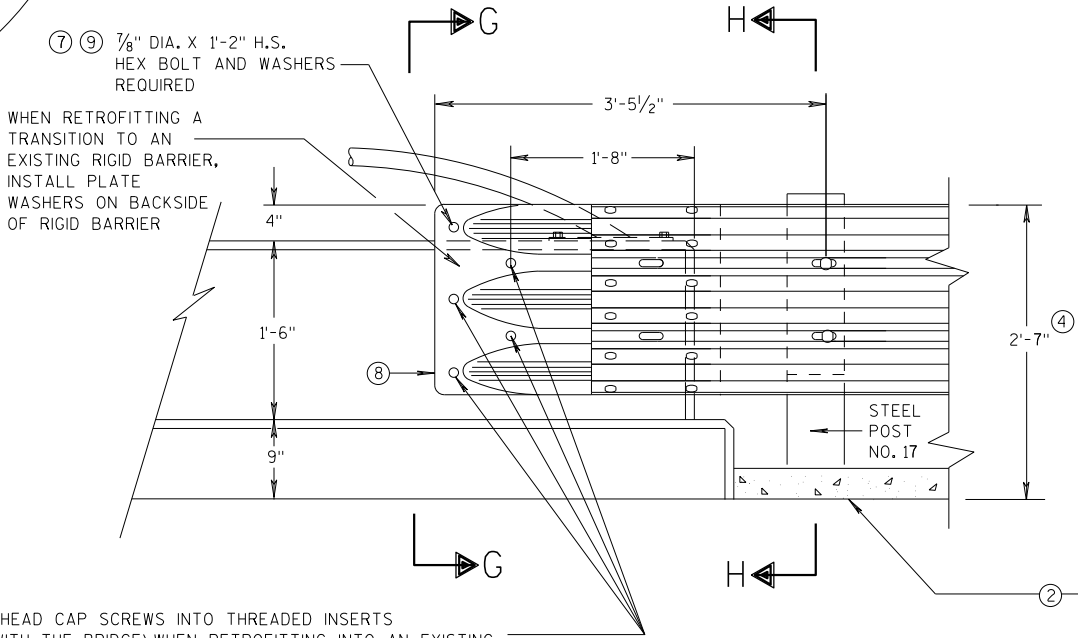
THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

- ②
- OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- ④
- TOLERANCE FOR TOP OF BEAM IS ± 1".
- ⑥
- DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
- ⑦
- BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.
- ⑧
- THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".
- ⑨
- BOLT, NUT AND WASHERS NOT REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PAPAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE EDGE OF PARAPET.



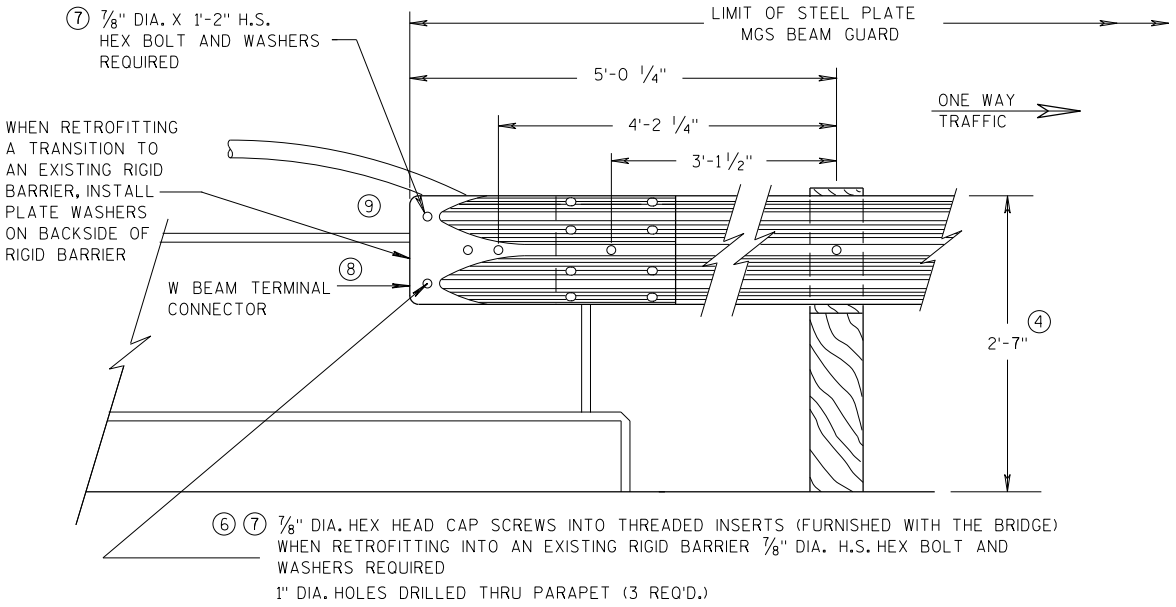
SECTION G-G

- ⑥ ⑦
- 7/8" DIA. HEX HEAD CAP SCREWS INTO THREADED INSERTS (FURNISHED WITH THE BRIDGE) WHEN RETROFITTING INTO AN EXISTING RIGID BARRIER 7/8" DIA. H.S. HEX BOLT AND WASHERS REQUIRED 1" DIA. HOLES DRILLED THRU PARAPET (4 REQ'D.)



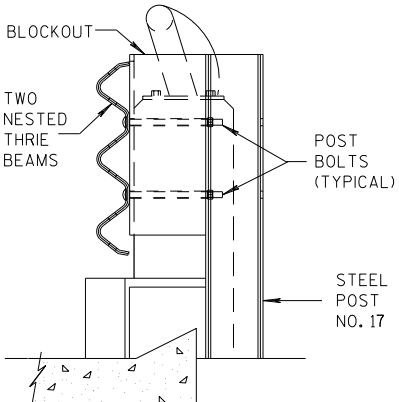
FRONT VIEW

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS



FRONT VIEW

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

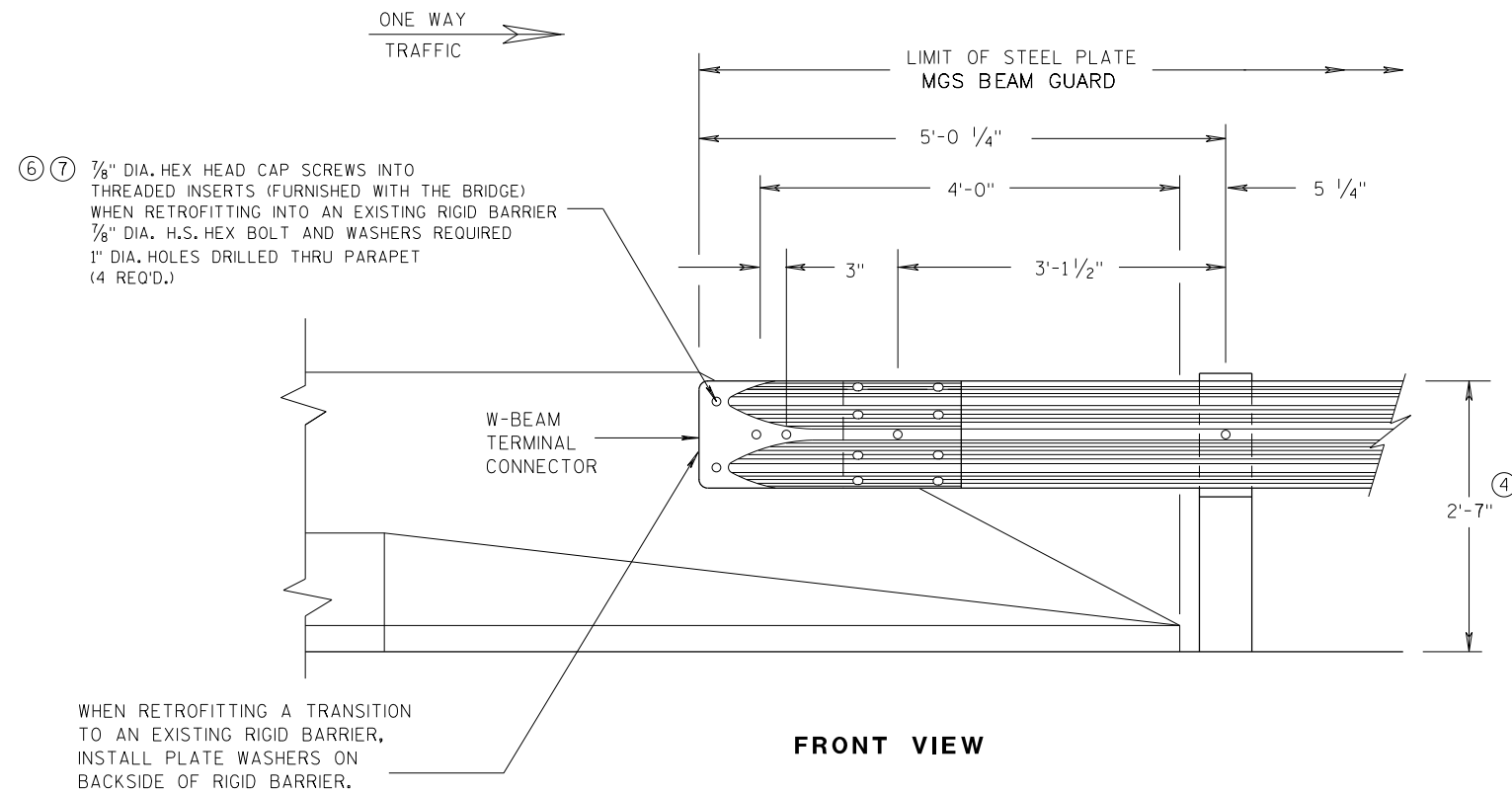


SECTION H-H

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

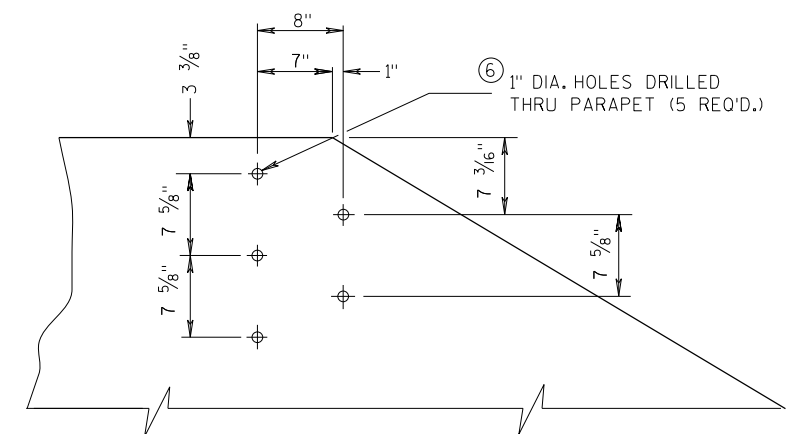
APPROVED
07/2018 /S/ Rodney Taylor
DATE ROADWAY STANDARDS UNIT SUPERVISOR
FHWA 129



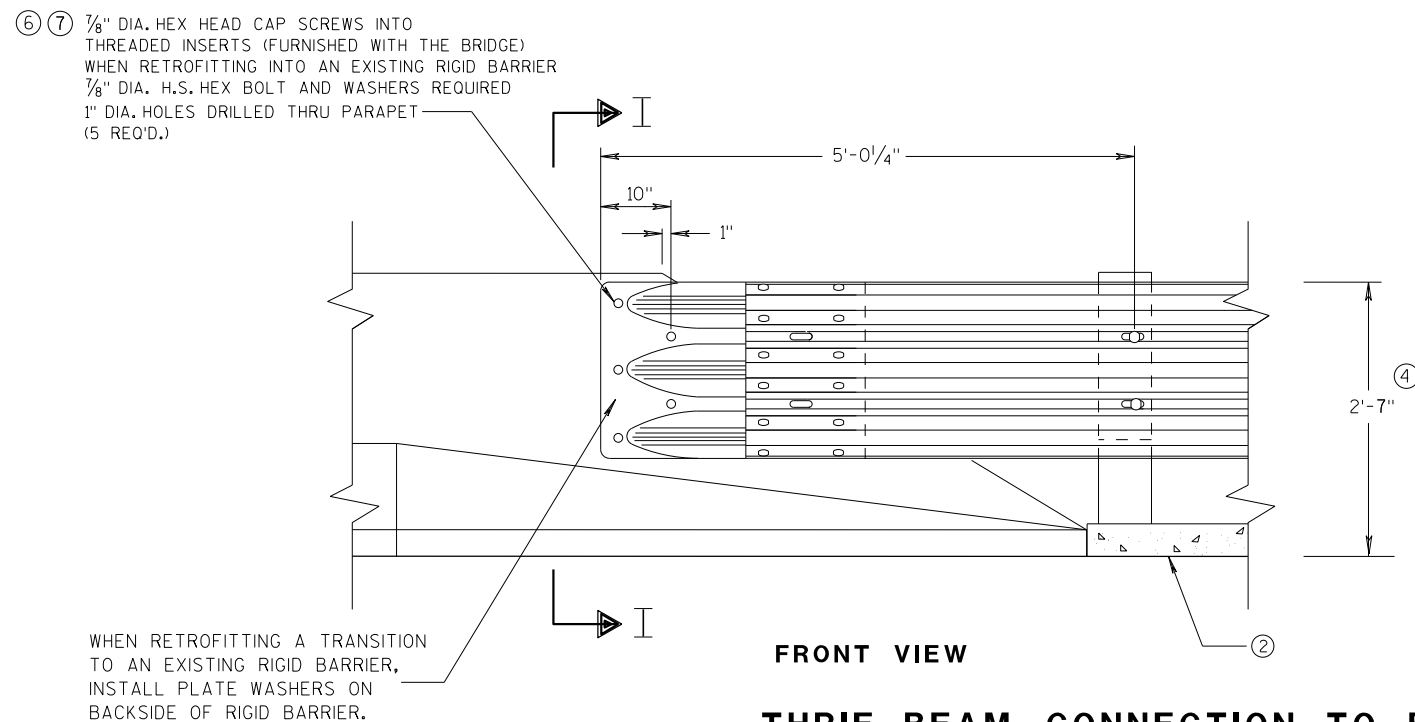
**W BEAM CONNECTION TO
PARAPETS WITH SLOPED ENDS**
(USE ONLY AT TRAFFIC EXIT END OF ONE WAY BRIDGE)

GENERAL NOTES

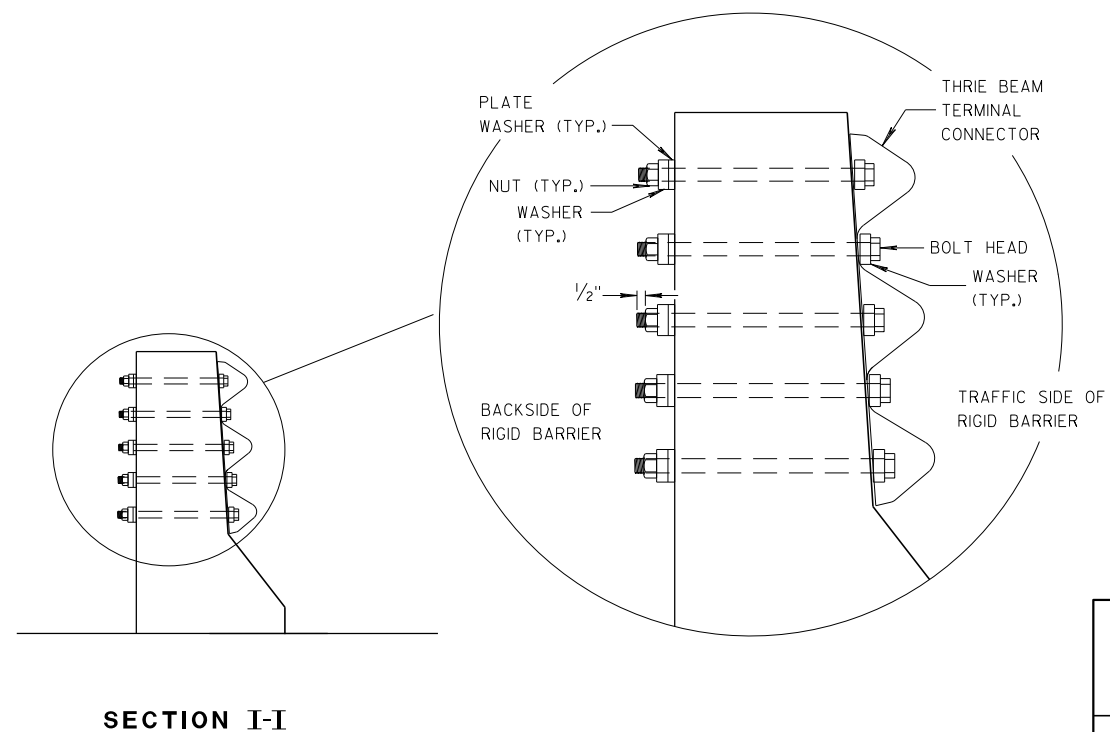
- ② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- ④ TOLERANCE FOR TOP OF BEAM IS $\pm 1"$.
- ⑥ DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
- ⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



**DRILL HOLE LOCATION AND PATTERN
FOR THRIE BEAM CONNECTION**



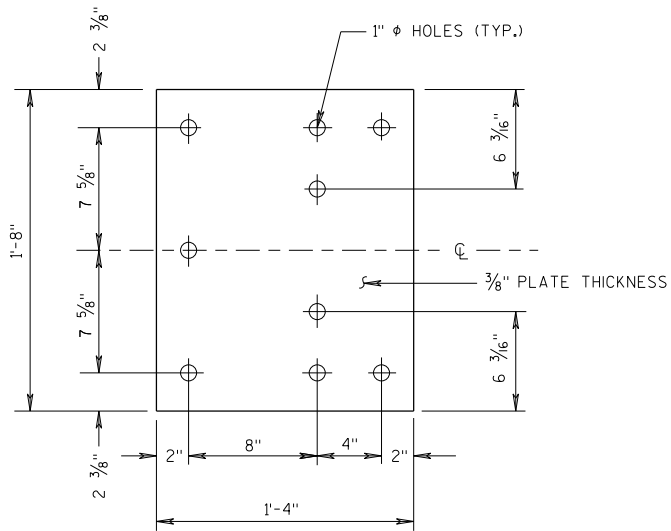
**THRIE BEAM CONNECTION TO BRIDGE
PARAPETS WITH SLOPED ENDS**



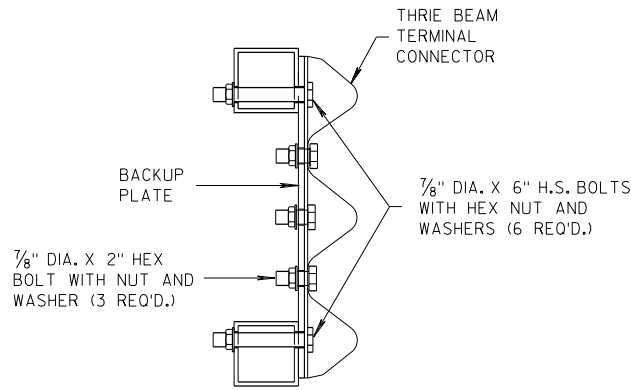
**MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

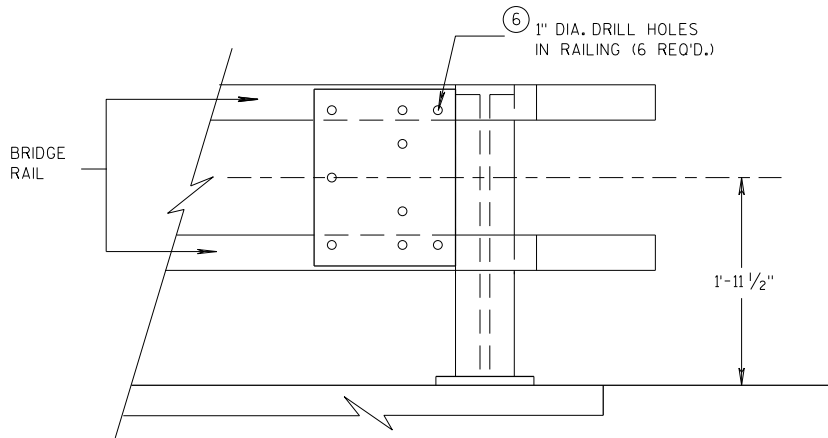
APPROVED
DATE 07/2018 /S/ Rodney Taylor
ROADWAY STANDARDS UNIT SUPERVISOR 130
FHWA



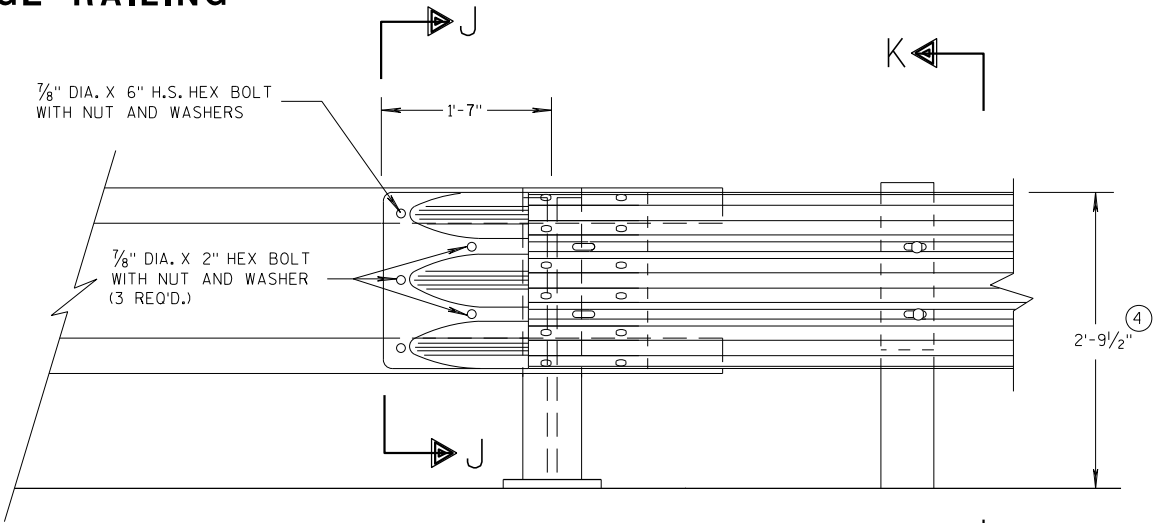
BACK-UP PLATE DETAIL



SECTION J-J

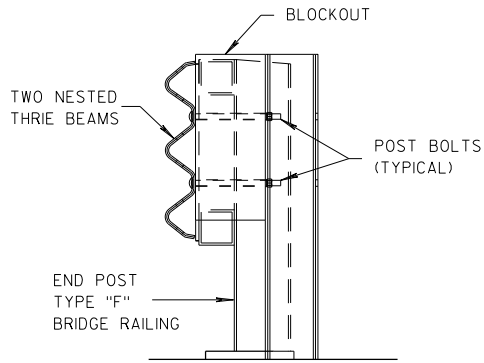


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING



FRONT VIEW

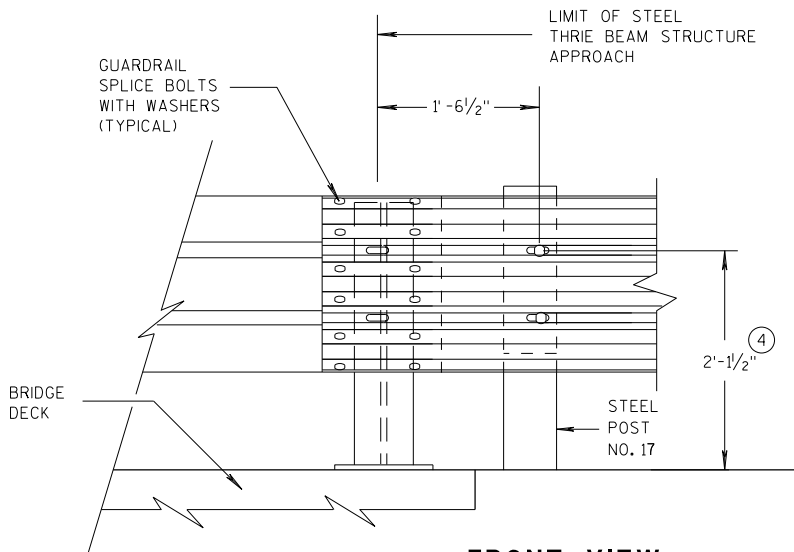
THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"



SECTION K-K

GENERAL NOTES

- ④ TOLERANCE FOR TOP OF BEAM IS $\pm 1"$.
- ⑥ DRILLING HOLES THROUGH THE PAPER, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.



FRONT VIEW

THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"

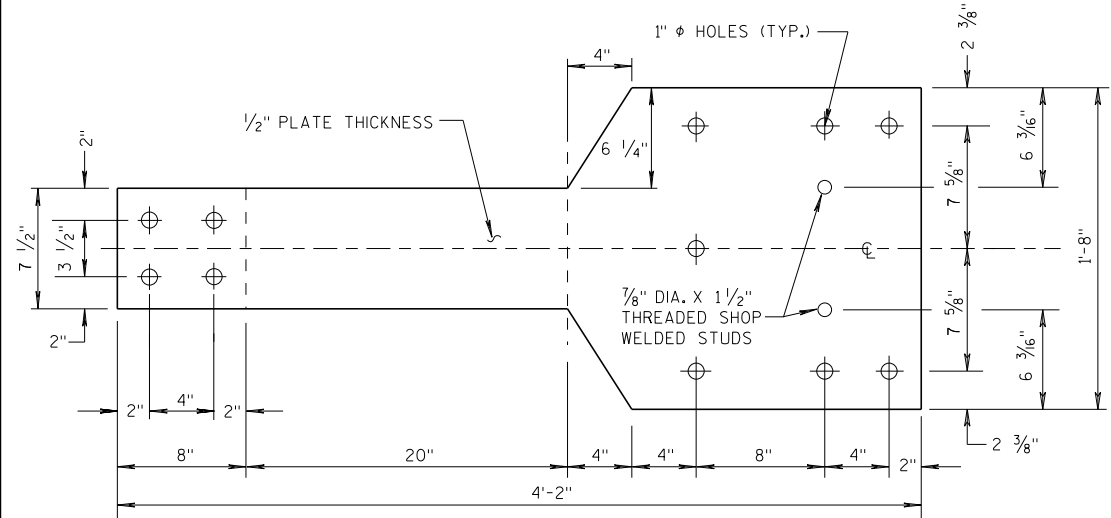
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

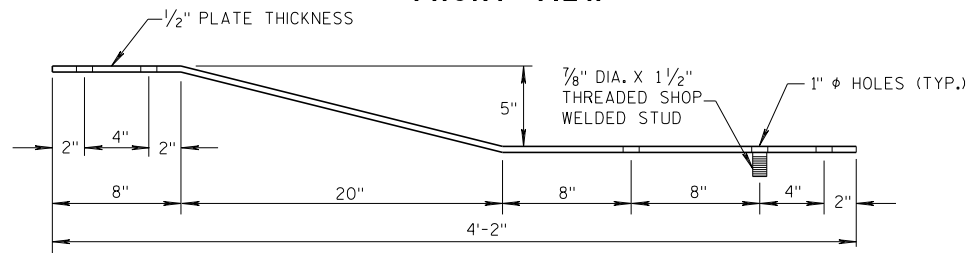
APPROVED
07/2018
DATE
/S/ Rodney Taylor 131
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR
FHWA

GENERAL NOTES

④ TOLERANCE FOR TOP OF W-BEAM RAIL IS $\pm 1"$.

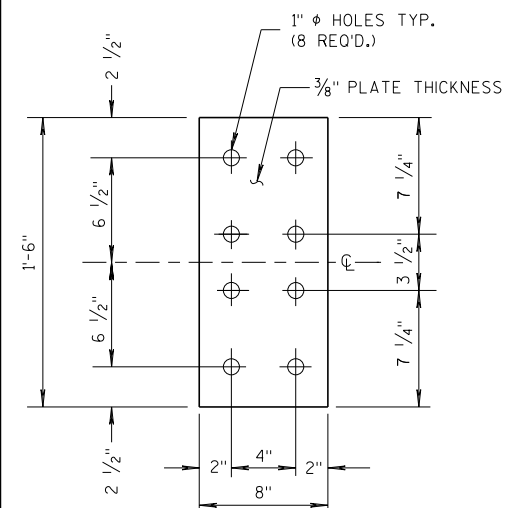


FRONT VIEW



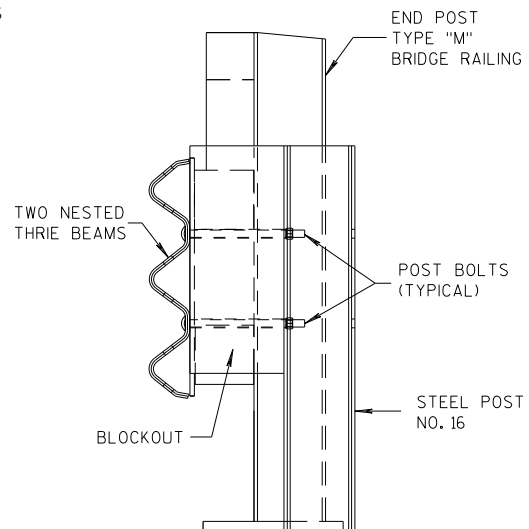
PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

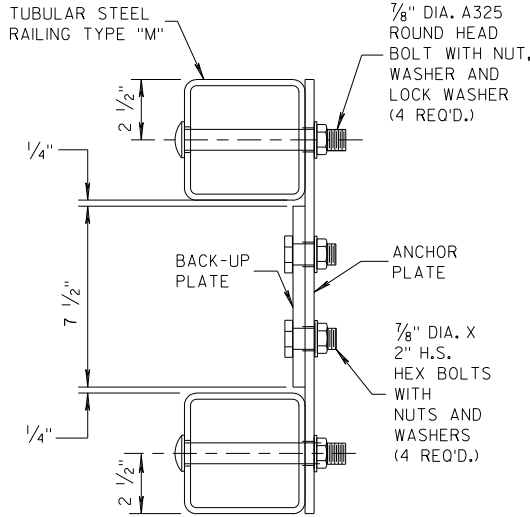


FRONT VIEW

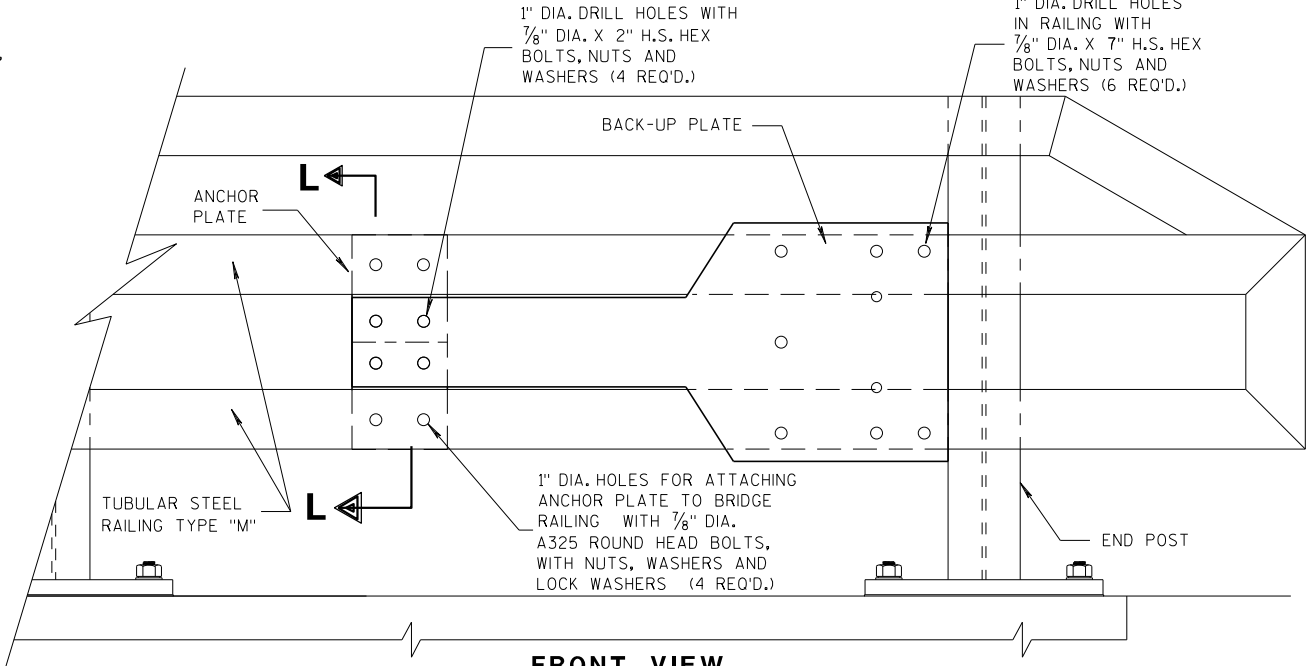
**ANCHOR
PLATE DETAIL,
TYPE "M"**



SECTION M-M

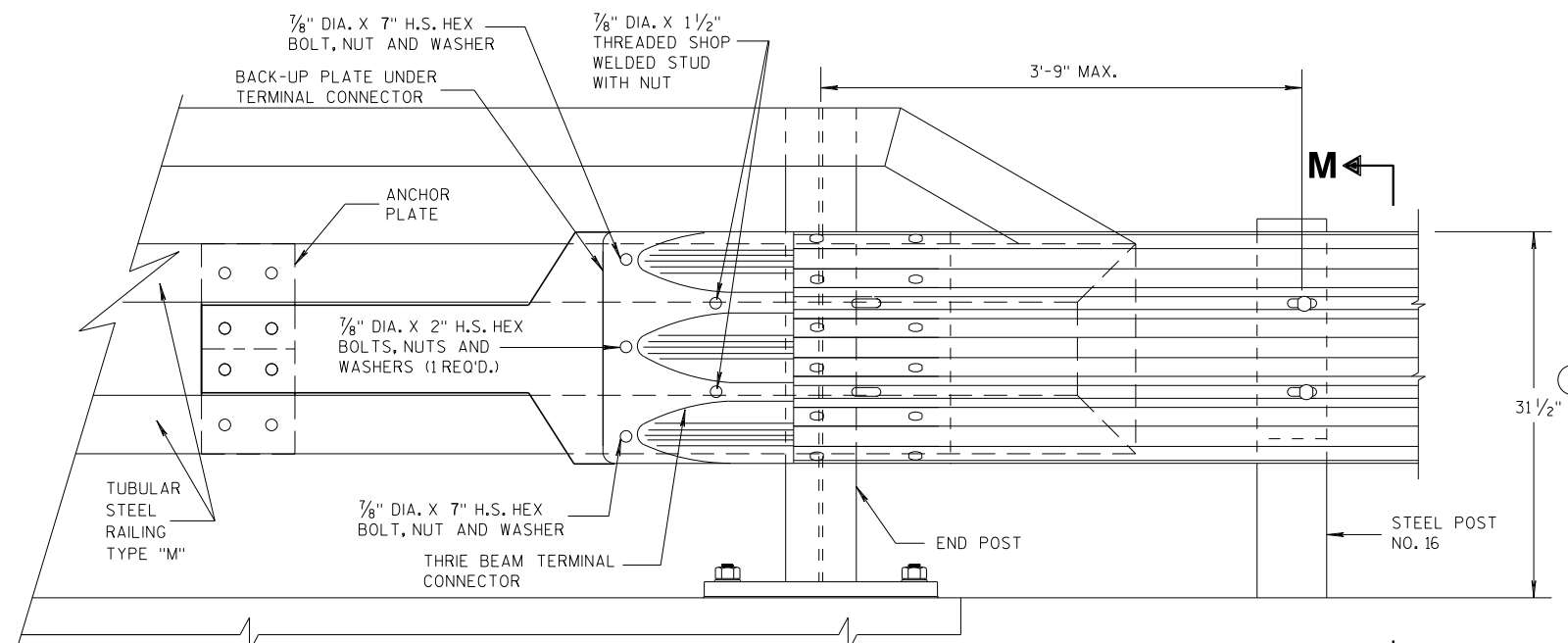


SECTION L-L

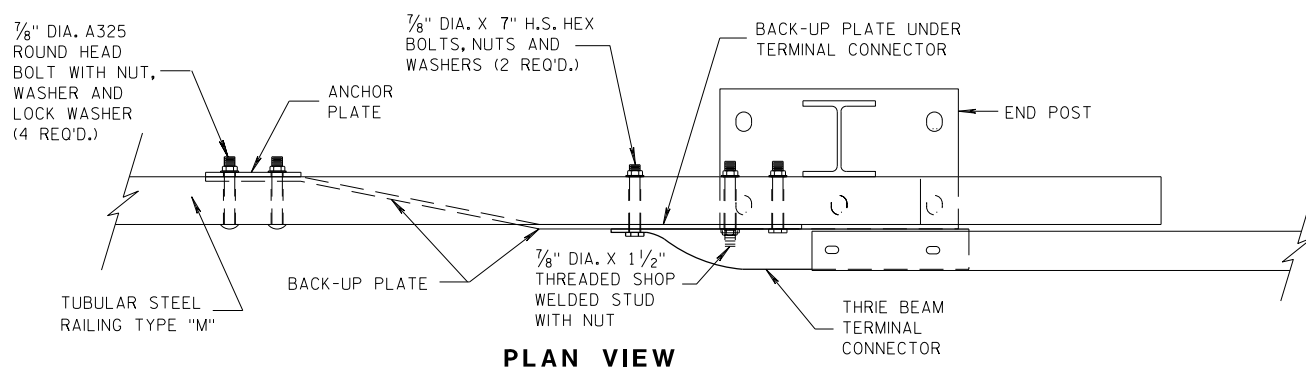


FRONT VIEW

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



FRONT VIEW



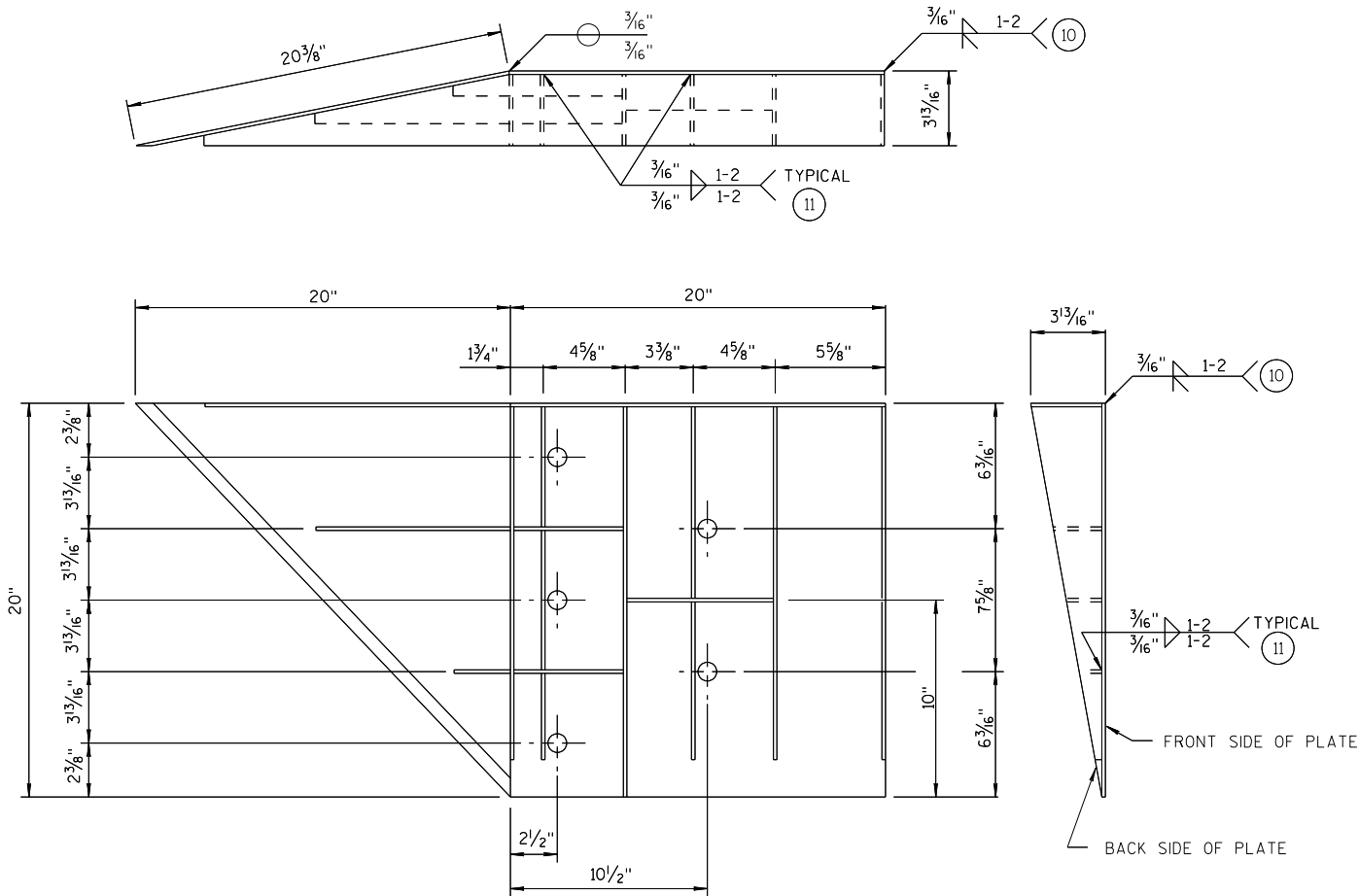
PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
07/2018 /S/ Rodney Taylor
DATE ROADWAY STANDARDS UNIT SUPERVISOR
FHWA 132 ENT

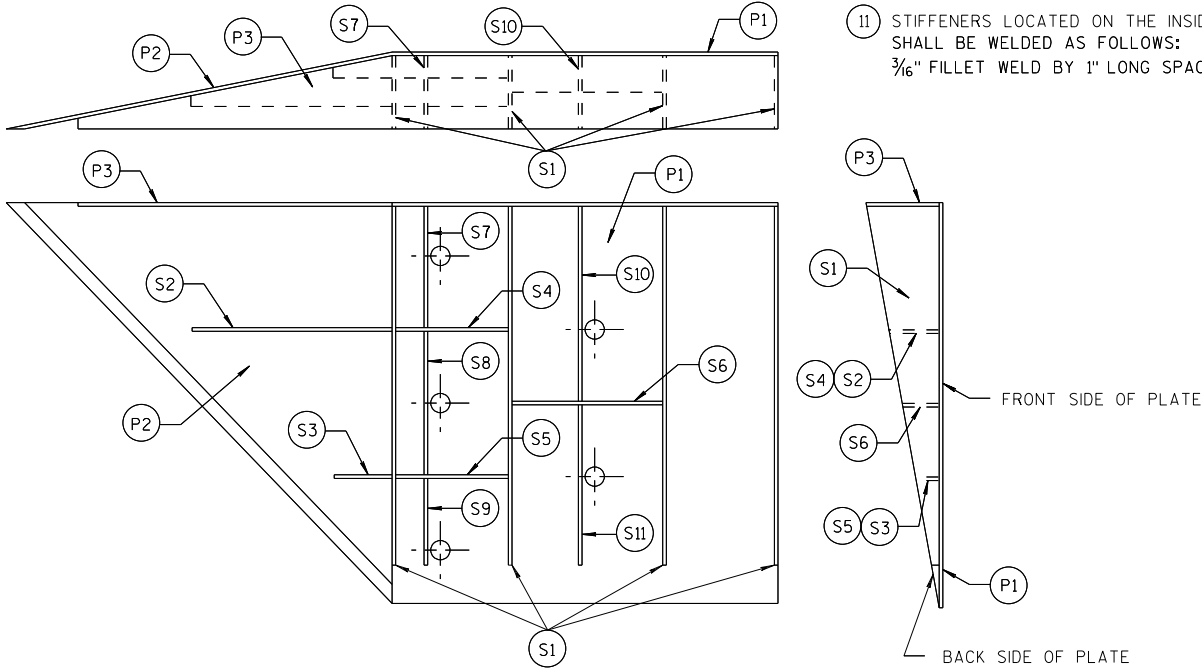


WELDING INSTRUCTION
(VIEWED FROM BACK SIDE OF PLATE)

SINGLE SLOPE CONNECTION PLATE

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

PLATE AND STIFFENER IDENTIFICATION
(VIEWED FROM BACK SIDE OF PLATE)



GENERAL NOTES

- COVER PLATE PANELS ARE 3/16" THICK.
- ALL STIFFENERS ARE 1/4" THICK.
- CONNECTOR PLATE SHALL BE FABRICATED FROM ASTM GRADE A36 STEEL AND GALVANIZED.
- FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.
- ALL HOLE DIAMETERS SHALL BE 1".
- FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

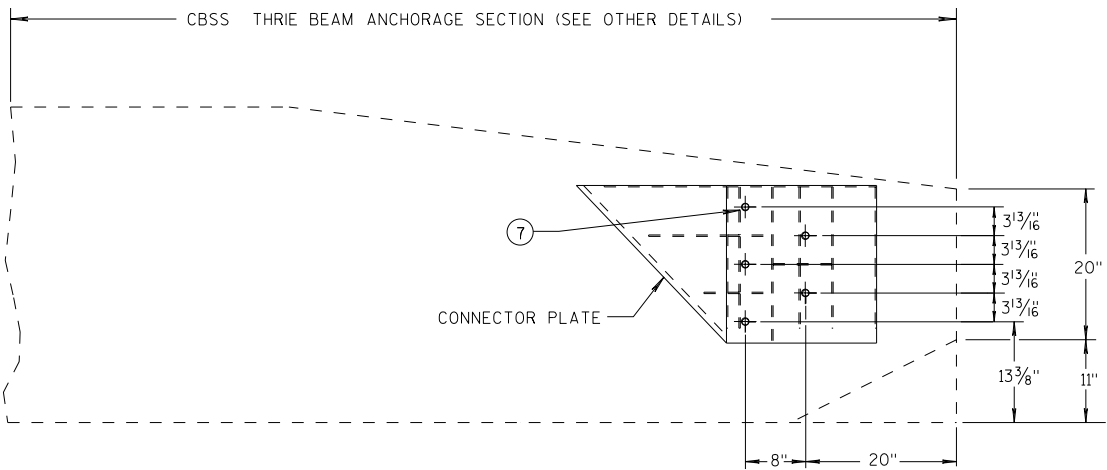
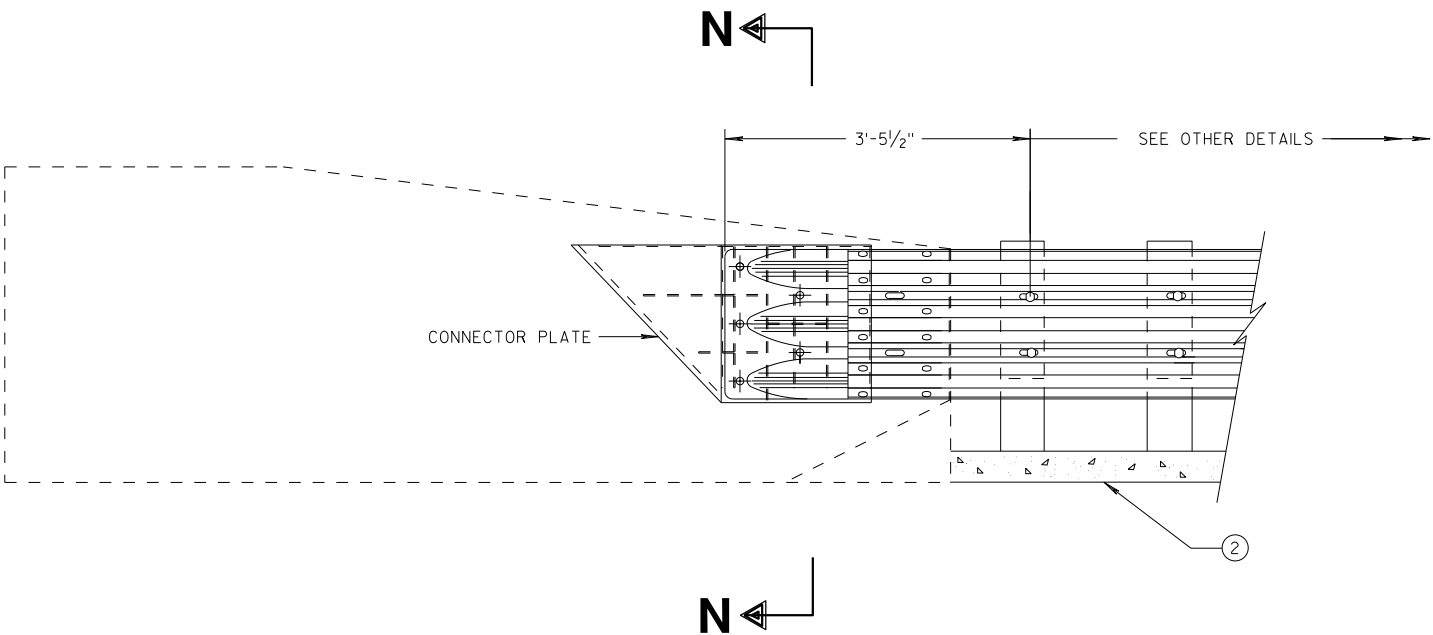
- 10 STIFFENERS LOCATED AT THE OUTSIDE EDGES OF THE COVER PLATES SHALL BE WELDED AS FOLLOWS:
SINGLE BEVEL GROOVE WELD ON EXTERNAL SIDES AND 3/16" FILLET WELD BY 1" LONG SPACED AT 2" ON INTERNAL SIDES.
- 11 STIFFENERS LOCATED ON THE INSIDE OF THE COVER PLATE SHALL BE WELDED AS FOLLOWS:
3/16" FILLET WELD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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS UNIT SUPERVISOR
133
ENT

THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER



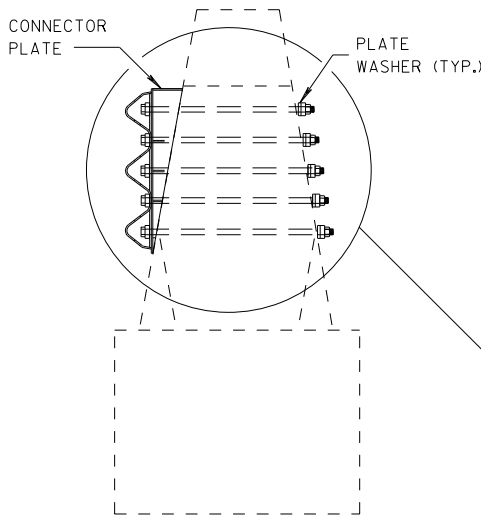
SINGLE SLOPE CONNECTION PLATE PLACEMENT

GENERAL NOTES

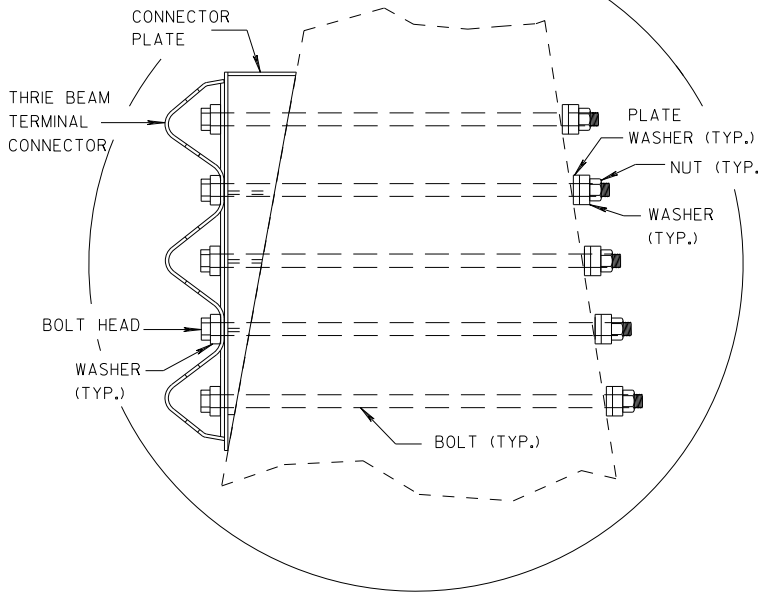
CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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

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



SECTION N-N



MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

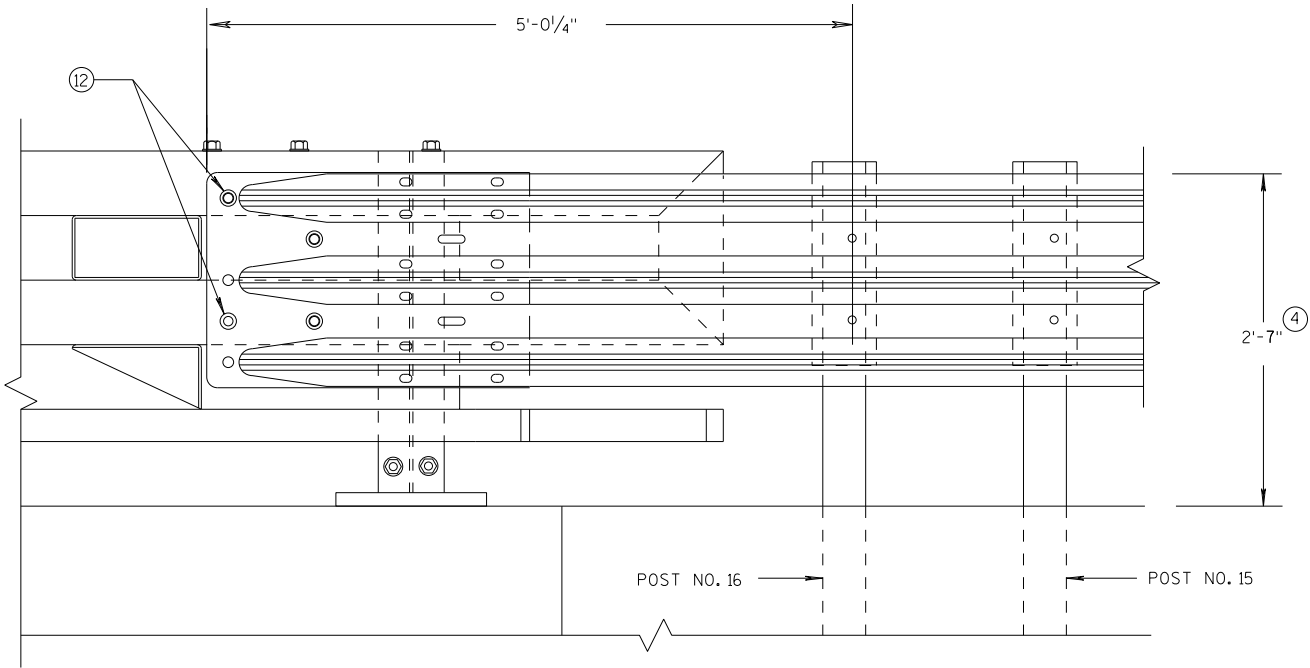
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE 7/2018
FHWA

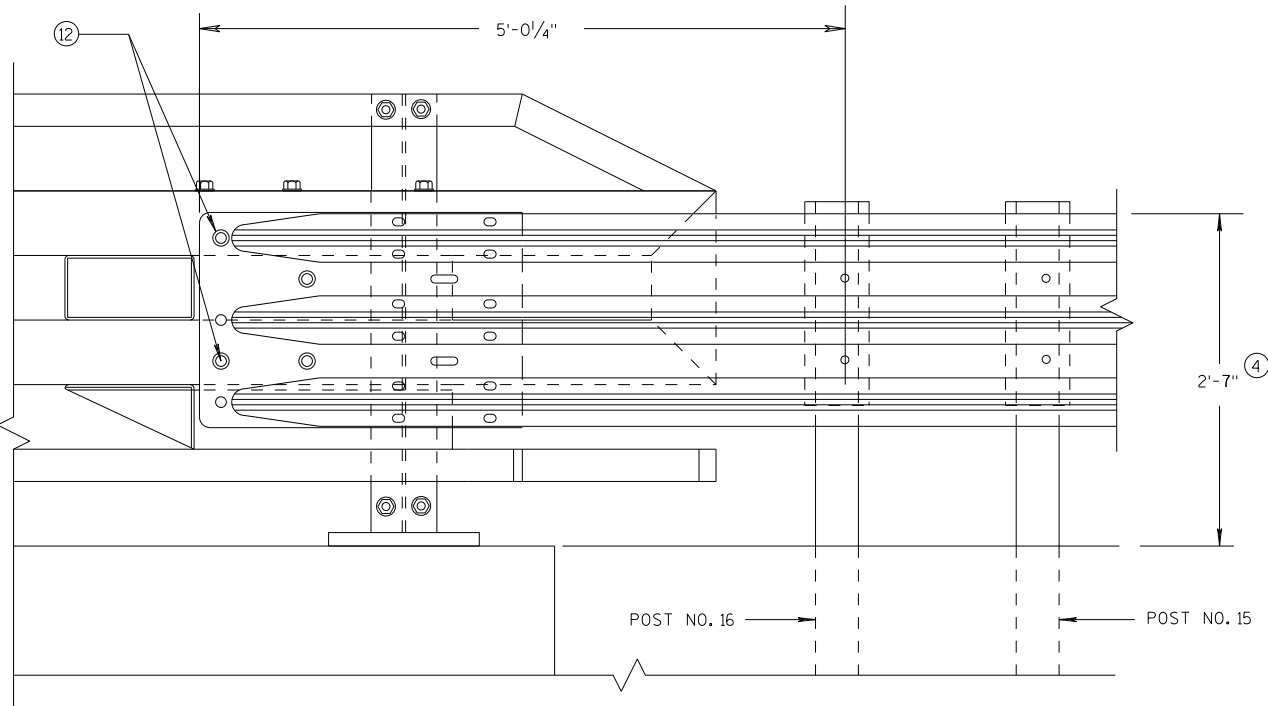
/S/ Rodney Taylor
ROADWAY STANDARDS DESIGN
UNIT SUPERVISOR 134

GENERAL NOTES

- ④ TOLERANCE FOR TOP OF BEAM IS $\pm 1"$.
- ⑫ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND $\frac{1}{2}$ -INCH BEYOND NUT.



ELEVATION OF DETAIL AT NY3 END POST
THRIE BEAM RAIL ATTACHMENT

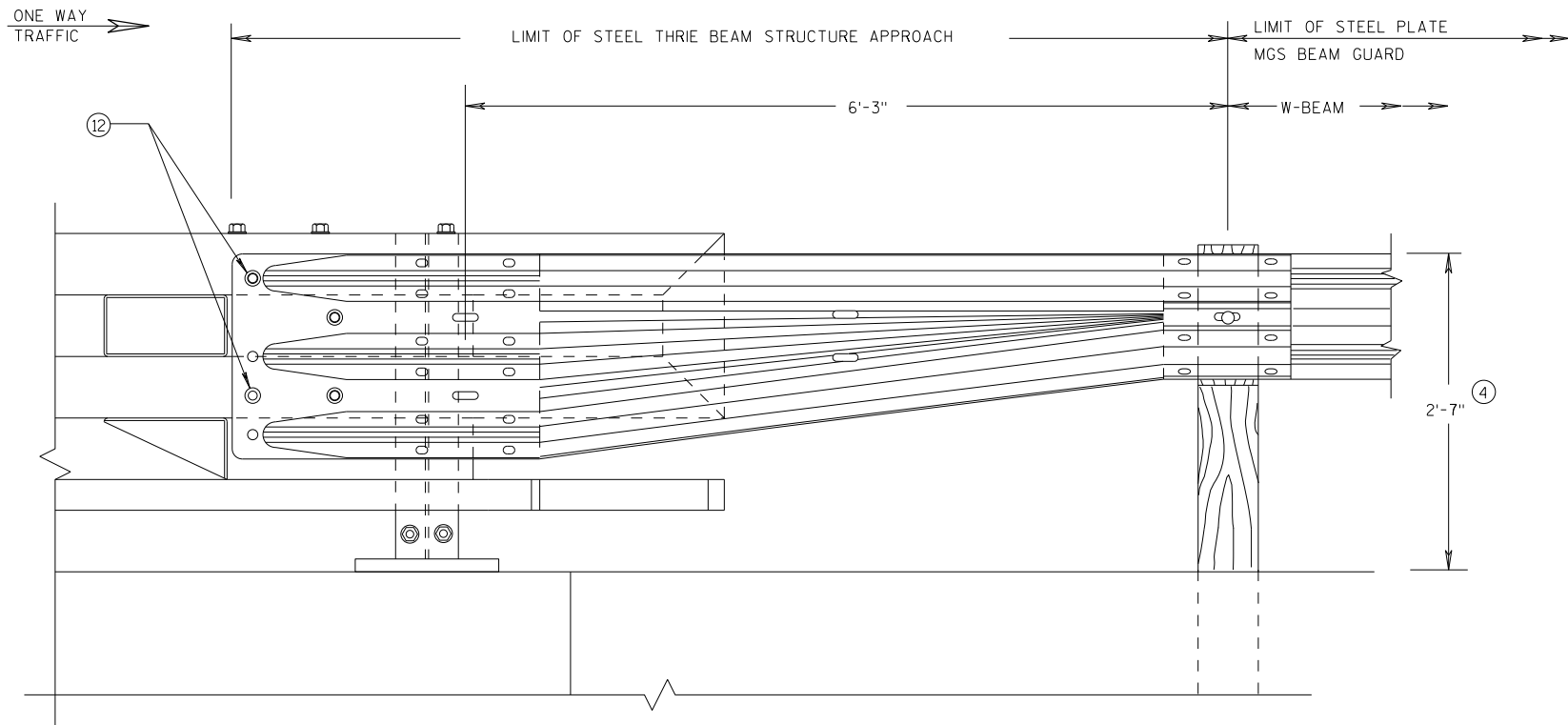


ELEVATION OF DETAIL AT NY4 END POST
THRIE BEAM RAIL ATTACHMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE 7/2018 /S/ Rodney Taylor
ROADWAY STANDARDS UNIT SUPERVISOR 135 NT
FHWA



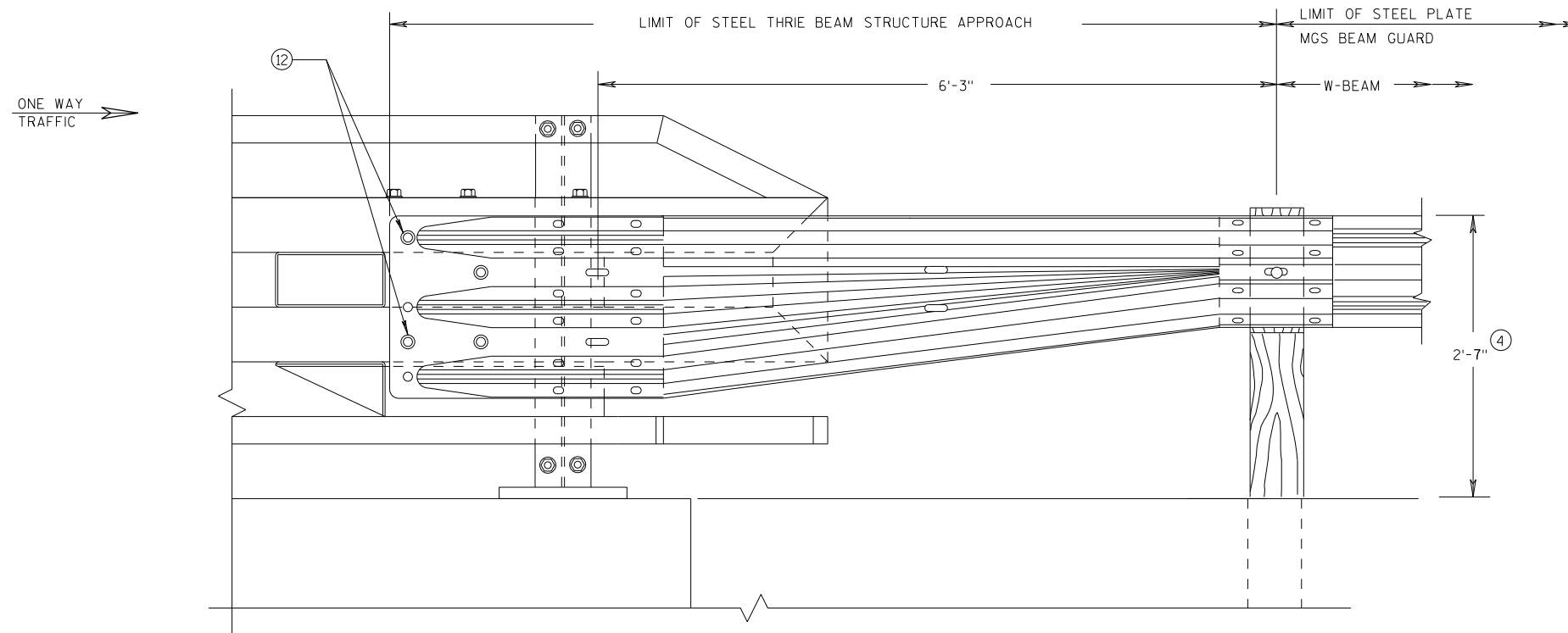
GENERAL NOTES

(4) TOLERANCE FOR TOP OF BEAM IS $\pm 1"$.

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

FRONT VIEW

W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY3" (USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)



FRONT VIEW

W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY4" (USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

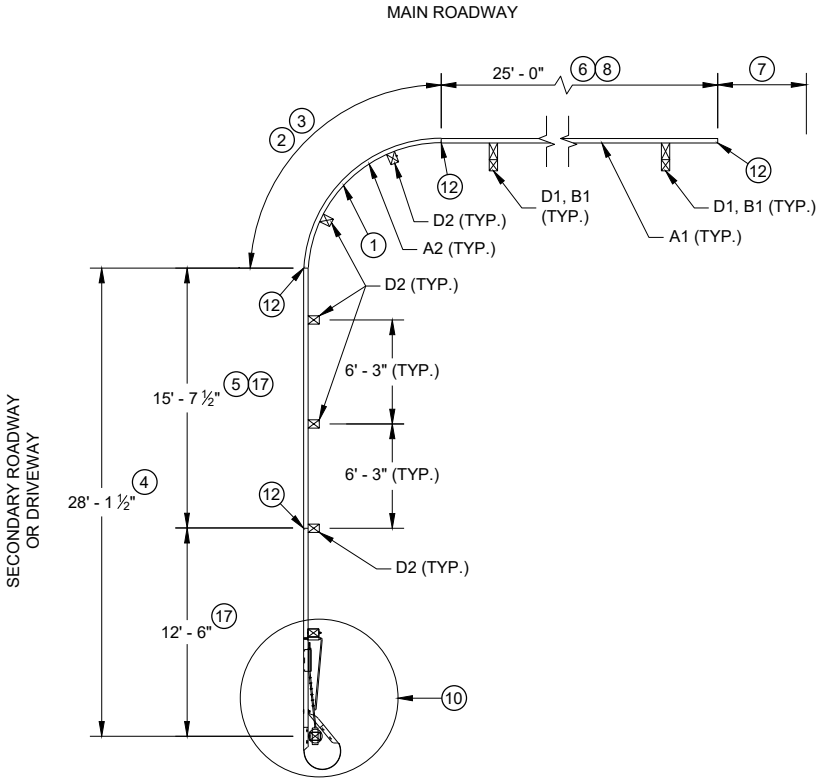
7/2018
DATE

FHWA

/S/ Rodney Taylor

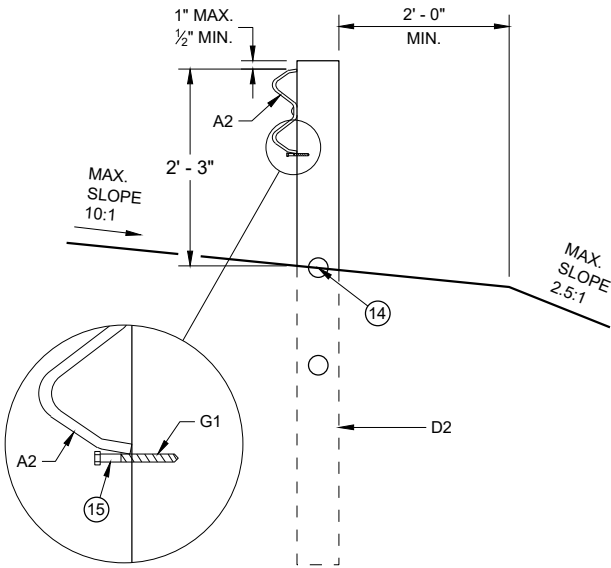
ROADWAY STANDARDS C 136
UNIT SUPERVISOR

NT

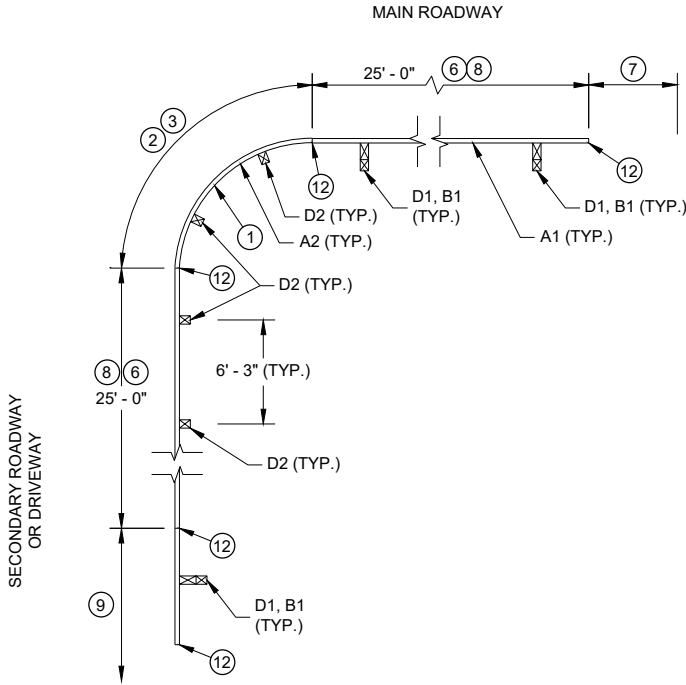


PLAN VIEW

**SHORT RADIUS BEAM GUARD WITH
SHORT RADIUS TERMINAL ON
SECONDARY ROAD OR DRIVEWAY**

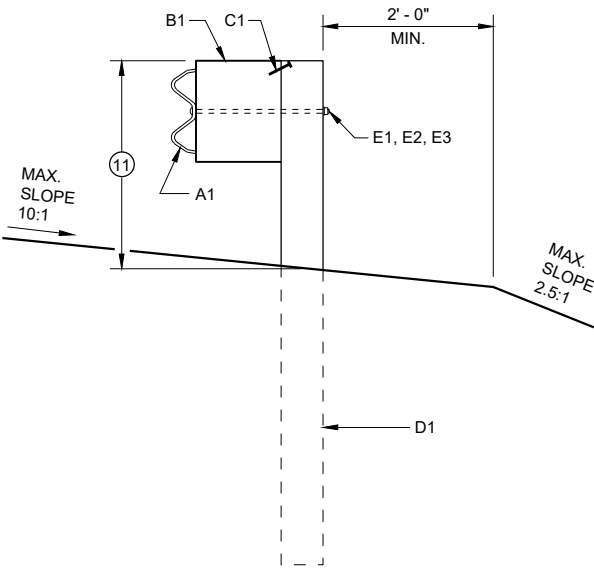


**CONTROLLED RELEASE
TERMINAL POST (CRT) IN RADIUS**



PLAN VIEW

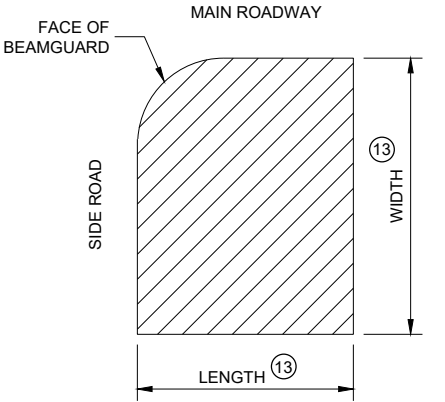
**SHORT RADIUS BEAM GUARD WITH
EAT, ADDITIONAL BEAM GUARD
OR
TRANSITION TO RIGID BARRIER ON
SECONDARY ROAD OR DRIVEWAY**



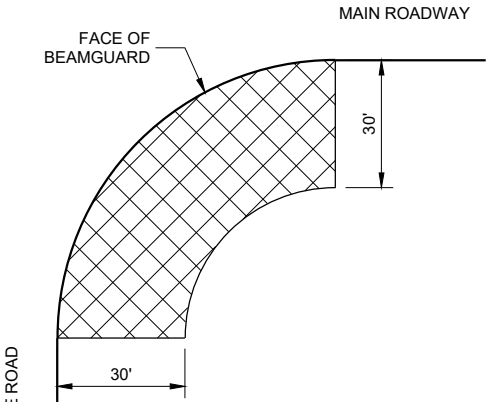
**BEAM GUARD POSTS
IN HEIGHT TRANSITION**

TABLE FOR RADIUS OF 32' AND LESS

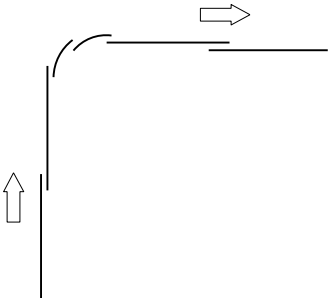
RADIUS (FT)	LENGTH (FT)	WIDTH (FT)
8	25	15
16	30	15
24	40	20
32	50	30



**AREA FREE OF FIXED
OBJECTS FOR RADIUS
32' AND LESS**



**AREA FREE OF FIXED
OBJECTS FOR RADIUS
GREATER THAN 32'**



LAP SPLICE DETAIL

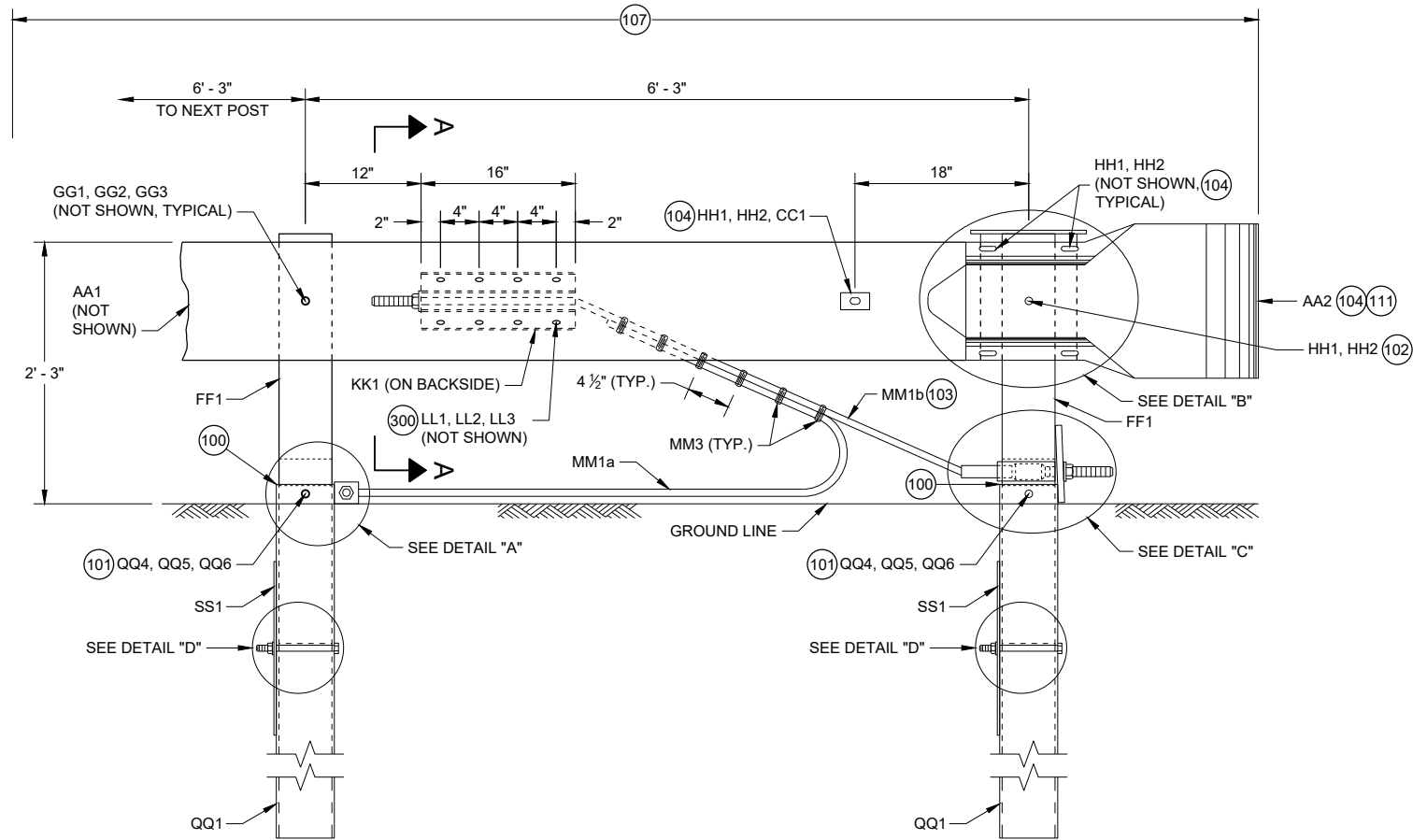
GENERAL NOTES

- SEE PLANS FOR OTHER BARRIER SYSTEM AND LOCATION SPECIFICS.
- SEE SDD 14B42 FOR MORE INFORMATION ON BEAM GUARD INSTALLATION, PARTS, MATERIALS, AND INSTALLATION INFORMATION.
- GALVANIZE PARTS AFTER FABRICATION.
- WELDING TO FOLLOW CURRENT REQUIREMENTS OF THE AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE ANSI / AWS D1.1.
- UNLESS NOTED OTHERWISE, ALL PLATES ARE FLAT AND FREE OF WARP.
- UNLESS NOTED OTHERWISE, ALL EDGES ARE SMOOTH, STRAIGHT AND VERTICAL.
- ALL CUTS AND HOLES, EXCEPT IN BEAM GUARD RAIL ARE TO BE MACHINED OR MACHINE FLAME CUT.
- UNLESS NOTED OTHERWISE, CUT OR PROVIDE BOLTS THAT ARE 1/4" TO 1/2" BEYOND THE NUT.
- DRAWINGS ARE NOT TO SCALE.

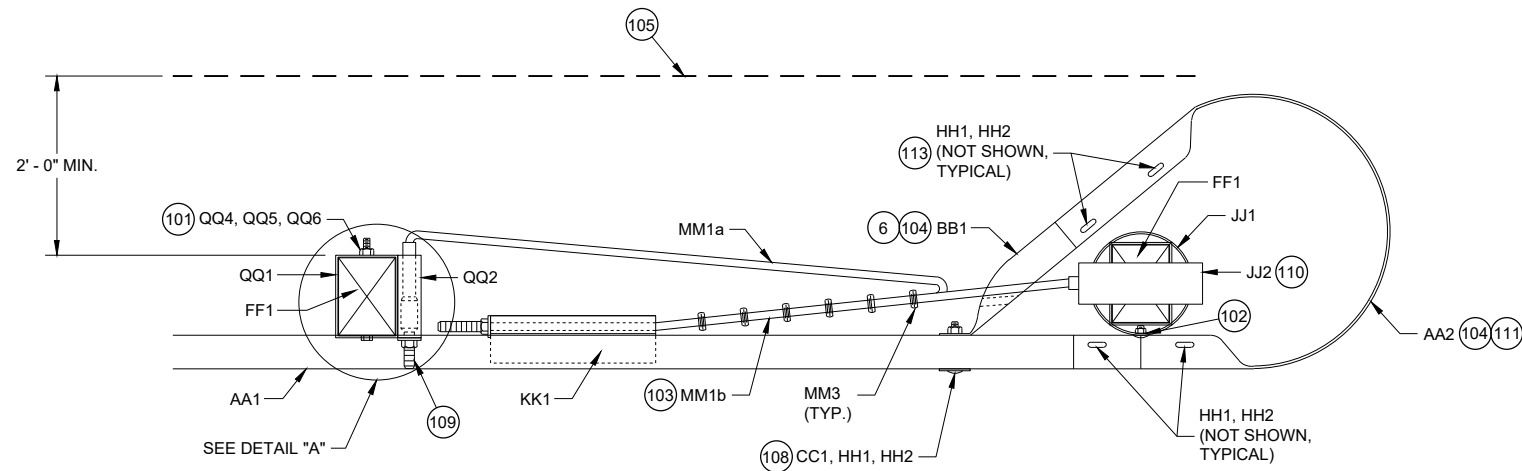
- (1) RADIUS MEASURE FROM INSIDE OF RAIL. LENGTH OF BEAM GUARD SHORT RADIUS GUARD MEASURED ALONG TRAFFIC SIDE OF RAIL. RADIUS BETWEEN 8 FEET TO 150 FEET. SEE PLAN FOR REQUIRED RADIUS. BEAM GUARD RAIL IN RADIUS IS SHOP BENT. ODD RAIL LENGTH OR FIELD CUTS MAY BE REQUIRED.
- (2) CONTROLLED RELEASE TERMINAL (CRT) POSTS ARE USED IN THE RADIUS. CONTROLLED RELEASE TERMINAL (CRT) POSTS ARE SPACED 6' - 3". SEE PLAN FOR NUMBER OF CONTROLLED RELEASE (CRT) POSTS.
- (3) WITHIN RADIUS BEAM GUARD RAILS ARE NOT BOLTED TO POSTS. BEAM GUARD RAIL IS RESTED ON TOP OF LAG SCREW.
- (4) MINIMUM LENGTH OF BEAM GUARD ALONG SIDE ROAD OR DRIVEWAY TO INSTALL SHORT RADIUS TERMINAL. BEAM GUARD IS PAID WITH BEAM GUARD ITEM.
- (5) ODD LENGTH OF BEAM GUARD REQUIRED TO INSTALL SHORT RADIUS TERMINAL.
- (6) MINIMUM AMOUNT OF BEAM GUARD TO BE INSTALLED PRIOR TO TRANSITION TO RIGID BARRIER. ADDITIONAL BEAM GUARD, OR EAT. BEAM GUARD PAID FOR WITH BEAM GUARD ITEM. SEE PLANS FOR MORE DETAIL.
- (7) BEAM GUARD, EAT, OR TRANSITION TO RIGID BARRIER. SEE PLAN.
- (8) TOP OF BEAM GUARD BY THE RADIUS IS 27". HEIGHT OF BEAM GUARD IS 31" BY TRANSITION TO RIGID BARRIER, ADDITIONAL BEAM GUARD OR EAT.
- (9) ADDITIONAL BEAM GUARD, EAT OR TRANSITION TO RIGID BARRIER. BEAM GUARD SHOWN. SEE PLAN FOR DETAILS.
- (10) SHORT RADIUS TERMINAL (SEE OTHER DETAILS).
- (11) HEIGHT VARIES. SEE NOTE (8) AND (8).
- (12) BEAM GUARD RAIL SPLICE LOCATION. SPLICE LOCATION REQUIRES PART F1 AND F2. SEE SDD 14B42 FOR DETAILS.
- (13) SEE TABLE FOR VALUES.
- (14) MAXIMUM HEIGHT FOR CENTER OF HOLE IS 3/4" ABOVE FINISHED GROUND ±1".
- (15) DRILL POST 1 5/64" DIA. PILOT HOLE. DO NOT HAMMER LAG SCREW INTO POST.
- (16) SMALL SIGNS ON BREAKAWAY HARDWARE ARE ACCEPTABLE.
- (17) TOP OF RAIL HEIGHT IS 27" WHEN USING A SHORT RADIUS TERMINAL (CRT).

**SHORT RADIUS BEAM
GUARD (MGS) SHORT
RADIUS TERMINAL (MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



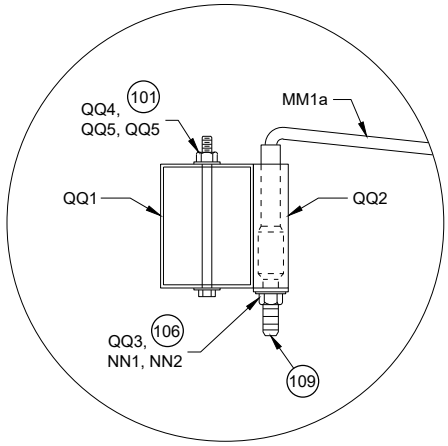
PROFILE VIEW
SHORT RADIUS TERMINAL



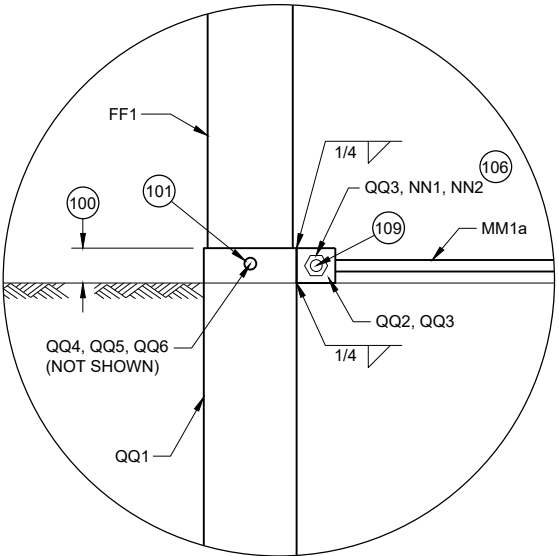
TOP VIEW
SHORT RADIUS TERMINAL

GENERAL NOTES

- (100) TOP OF FOUNDATION TUBE 2 INCHES MAXIMUM ABOVE FINISHED GROUND.
- (101) WASHERS REQUIRED BETWEEN BOLT HEAD AND FOUNDATION TUBE AND BETWEEN NUT AND FOUNDATION TUBE.
- (102) SPLICE BOLT AND NUT CONNECTS BEAM GUARD RAIL, W-BEAM SECTION BUFFER, AND STEEL PIPE ASSEMBLY. NO WASHER REQUIRED. SEE DETAIL "B".
- (103) CABLE IS TAUT.
- (104) ADJUST AA2 AND BB1 TO FIT.
- (105) BREAK POINT OF SHOULDER.
- (106) TACK WELD CABLE CONNECTOR TUBE PLATE TO CABLE CONNECTION TUBE. SEE DETAIL "A" PROFILE VIEW.
- (107) PAY LIMIT FOR BEAM GUARD.
- (108) SQUARE WASHER BETWEEN HEAD OF BOLT AND TRAFFIC FACE OF BEAM GUARD. ROUND WASHER REQUIRED BETWEEN NUT AND BB1.
- (109) CUT OR PROVIDE THREADED STUD THAT IS FLUSH WITH FACE OF BEAM GUARD RAIL KK1 (PLUS OR MINUS 1/2" TOLERANCE). DEBURR AFTER CUTTING.
- (110) SEE STEEL PIPE ASSEMBLY DETAILS.
- (111) ATTACH UU2 WITH UU3. SHOP APPLY UU1 TO UU2.
- (112) FOUR (4) HH1 AND HH2 REQUIRED TO ATTACH AA1 TO AA2.
- (113) FOUR (4) HH1 AND HH2 REQUIRED TO ATTACH AA2 TO BB1.



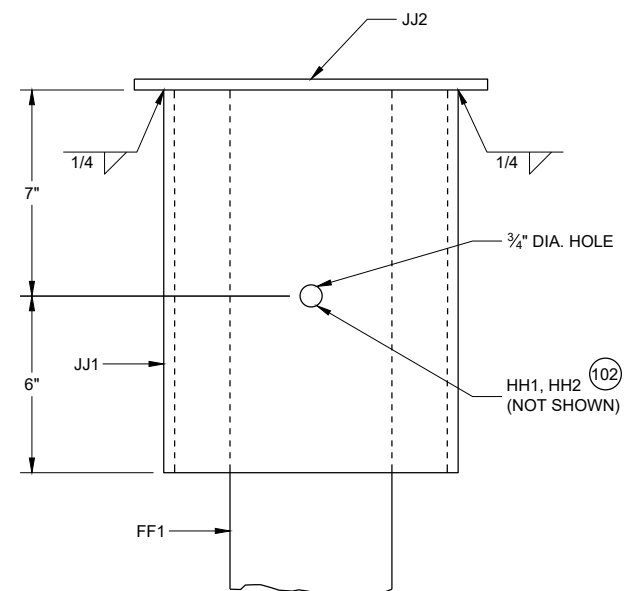
TOP VIEW
DETAIL "A"
(WOOD BREAKAWAY AND BEAM
GUARD RAIL POSTS NOT SHOWN)



PROFILE VIEW
DETAIL "A"

SHORT RADIUS BEAM
GUARD (MGS) SHORT
RADIUS TERMINAL (MGS)

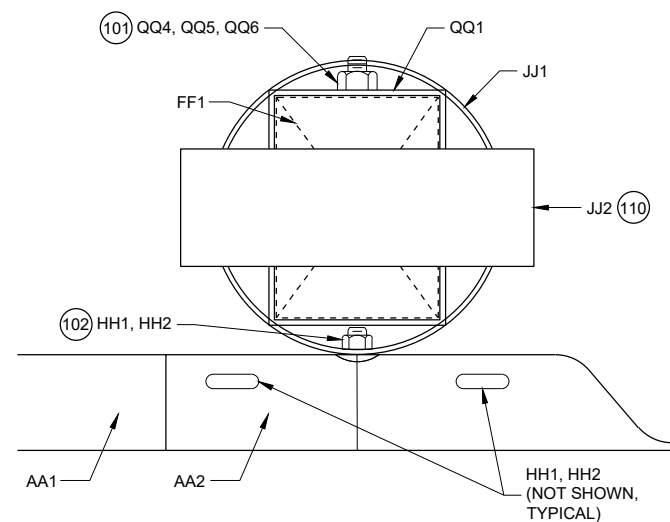
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 138



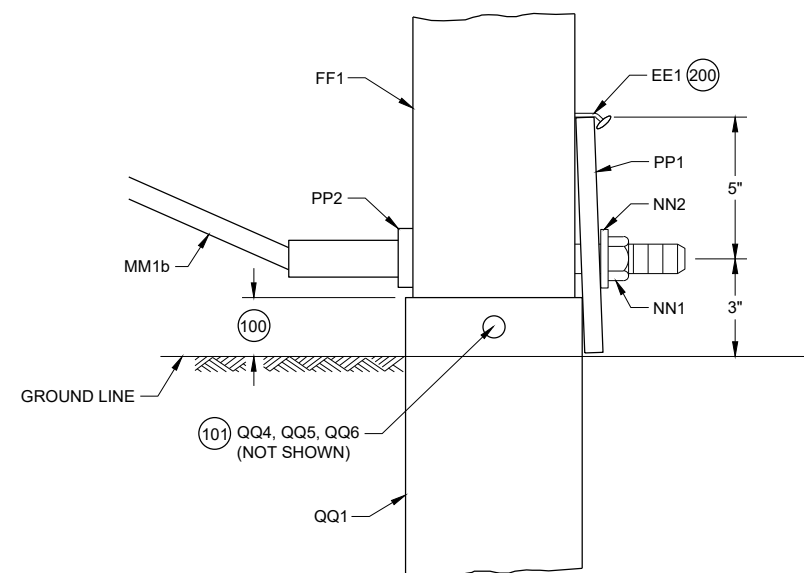
PROFILE VIEW

DETAIL "B"

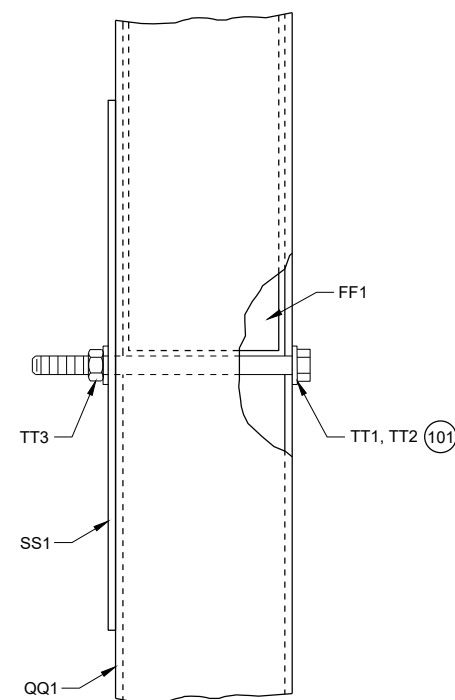
STEEL PIPE ASSEMBLY
(BEAM GUARD AND W BEAM
END SECTION NOT SHOWN)



PLAN VIEW
DETAIL "B"
STEEL PIPE ASSEMBLY



**PROFILE VIEW
DETAIL "C"**



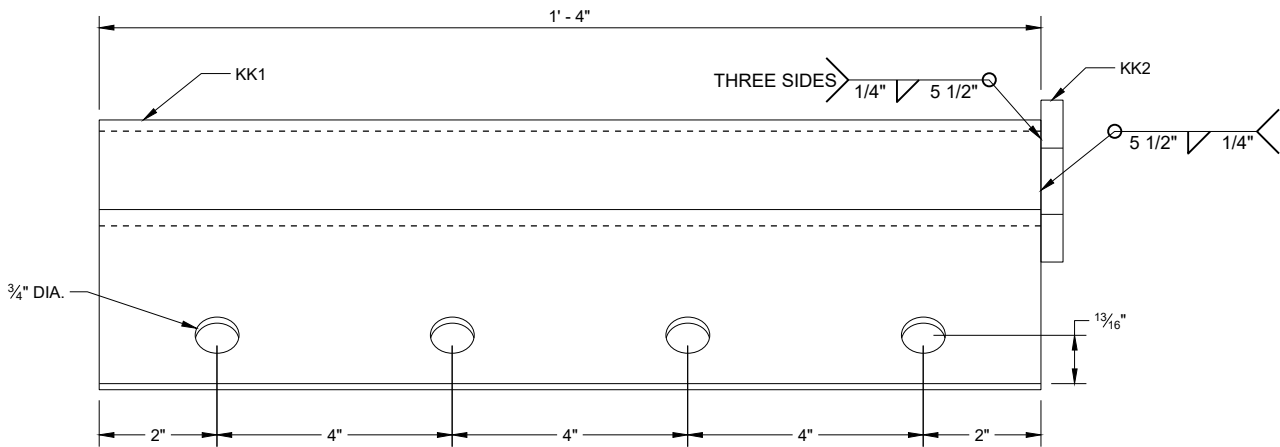
PROFILE VIEW
DETAIL "D"

GENERAL NOTES

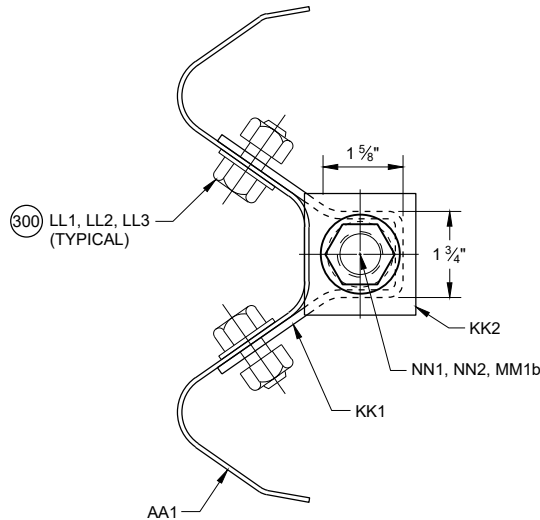
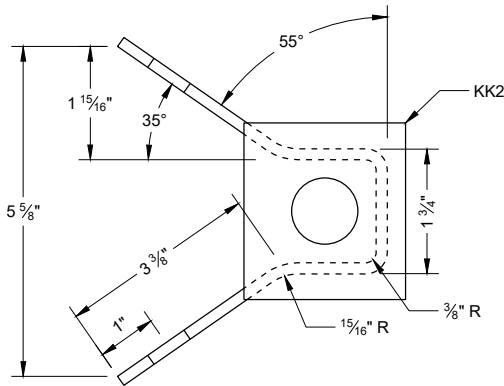
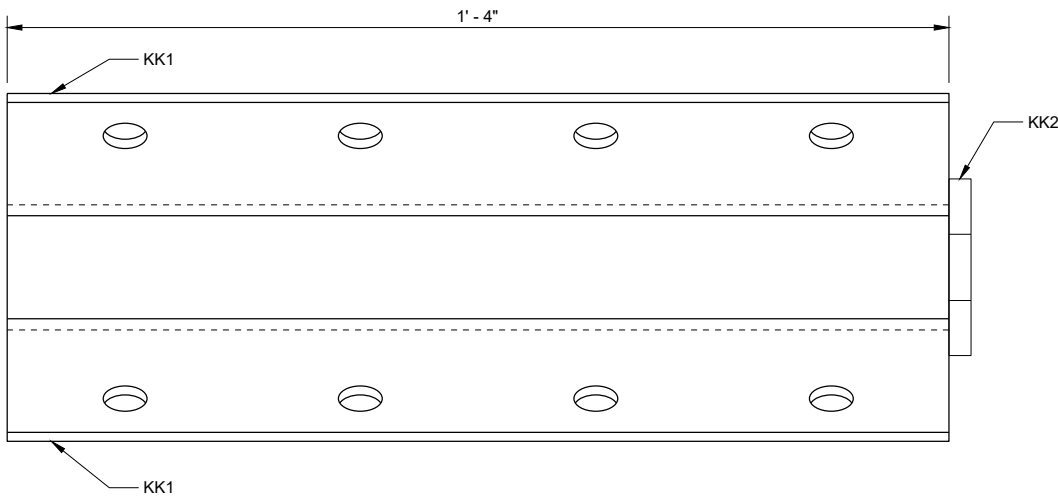
(200) TWO (2) NAILS SPACED 4 INCHES CENTER TO CENTER.

**SHORT RADIUS BEAM
GUARD (MGS) SHORT
RADIUS TERMINAL (MGS)**

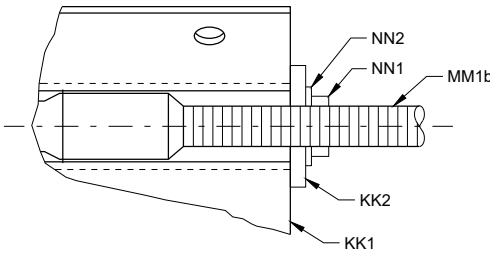
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 139



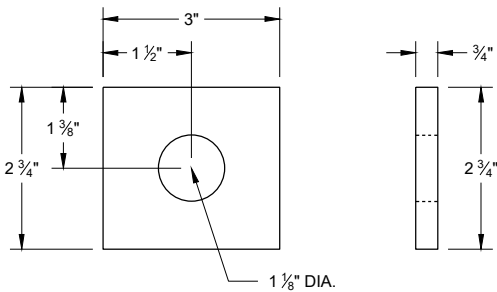
ANCHOR BRACKET (KK1, KK2)



SECTION A - A

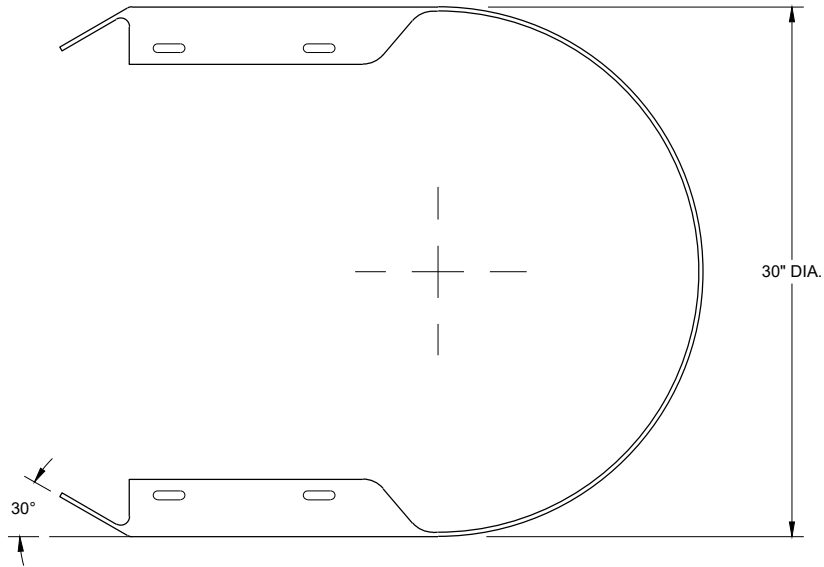


ANCHOR BRACKET BEARING PLATE (KK2)

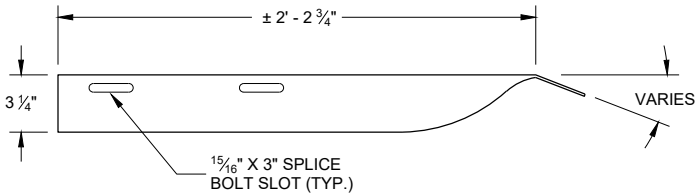


SHORT RADIUS BEAM
GUARD (MGS) SHORT
RADIUS TERMINAL (MGS)

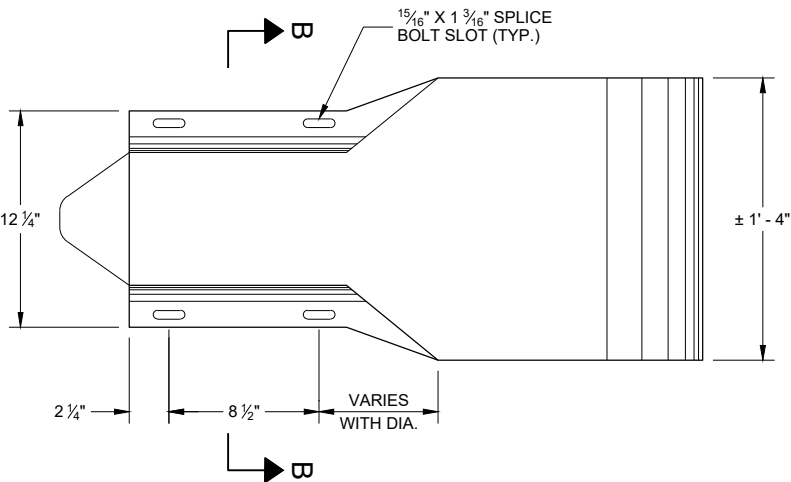
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 140



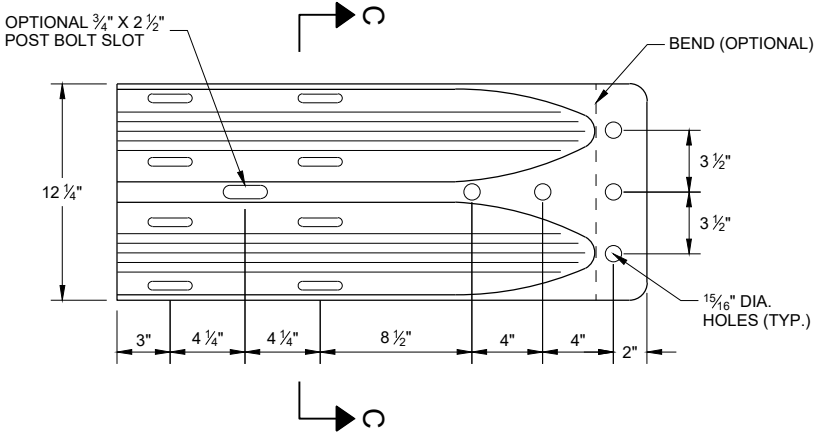
TOP VIEW



TOP VIEW



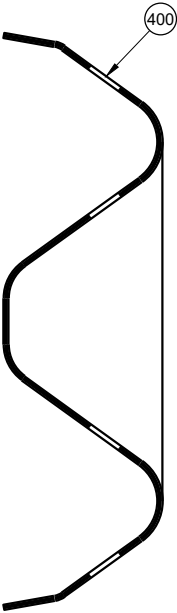
PROFILE VIEW
W BEAM
END SECTION BUFFER (AA2)



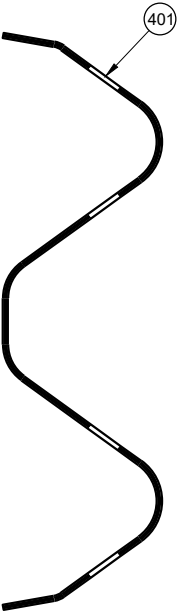
PROFILE VIEW
W BEAM
TERMINAL CONNECTOR (BB1)

GENERAL NOTES

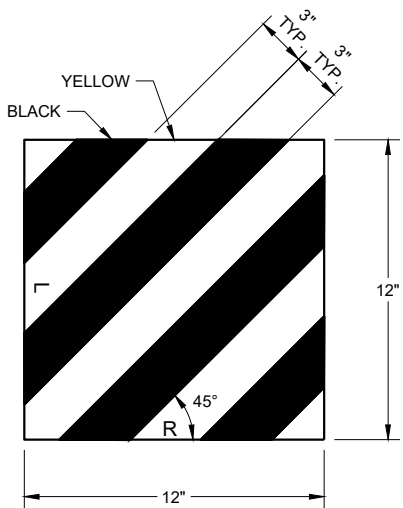
- (400) CROSS SECTION OF PART IS TO FIT OVER AA1 .
- (401) CROSS SECTION OF PART IS TO FIT OVER OR UNDER AA1 .



SECTION B -B



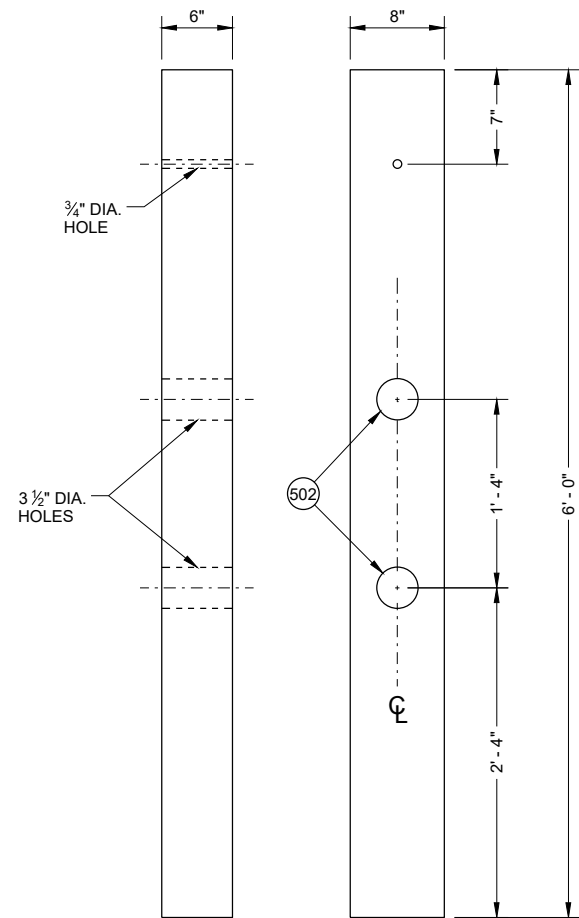
SECTION C -C



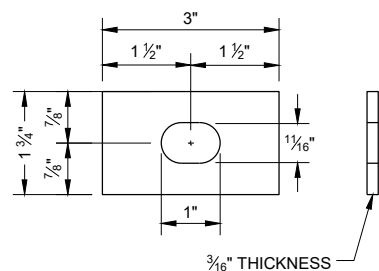
REFLECTIVE SHEETING (UU1, UU2)

SHORT RADIUS BEAM
GUARD (MGS) SHORT
RADIUS TERMINAL (MGS)

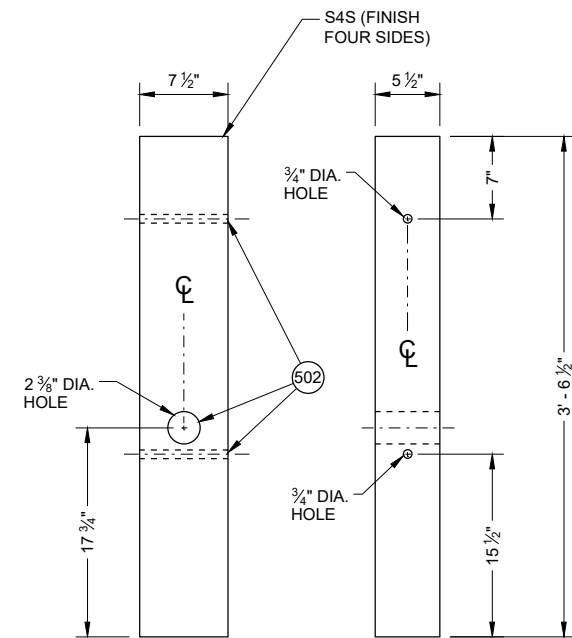
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 141



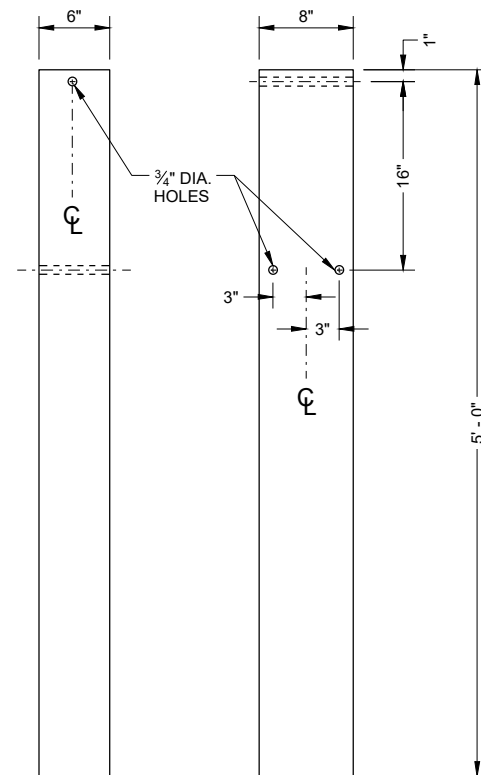
FRONT VIEW SIDE VIEW
CONTROLLED RELEASE POST (CRT) (DD2)



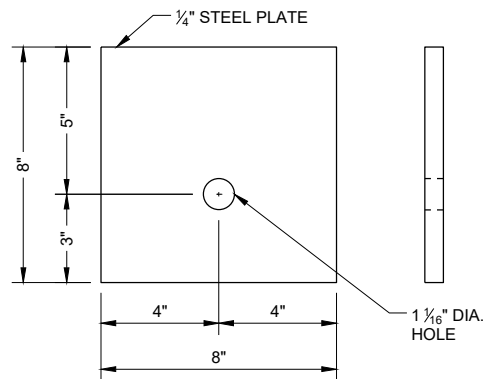
RECTANGULAR PLATE WASHER (CC1)



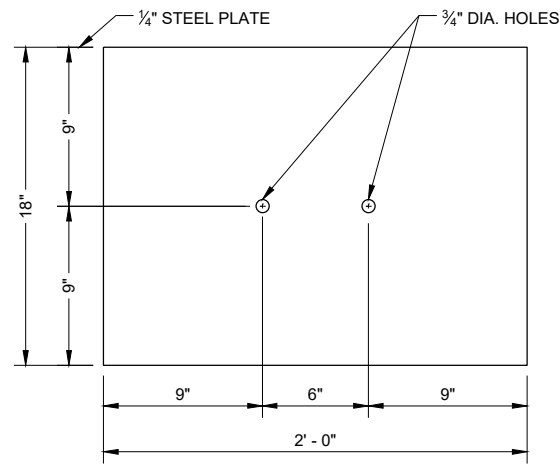
FRONT VIEW SIDE VIEW
WOOD BREAKAWAY POST (FF1)



FRONT VIEW SIDE VIEW
FOUNDATION TUBE (QQ1) (500)



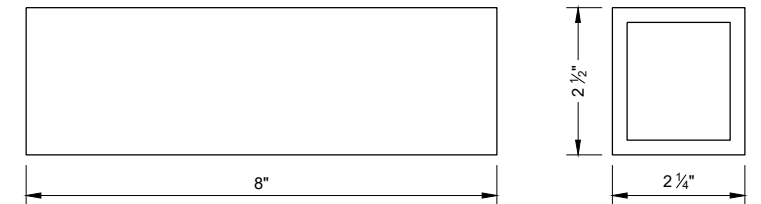
BEARING PLATE (PP1)



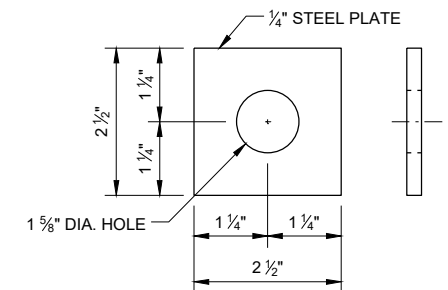
SOIL PLATE (SS1)

GENERAL NOTES

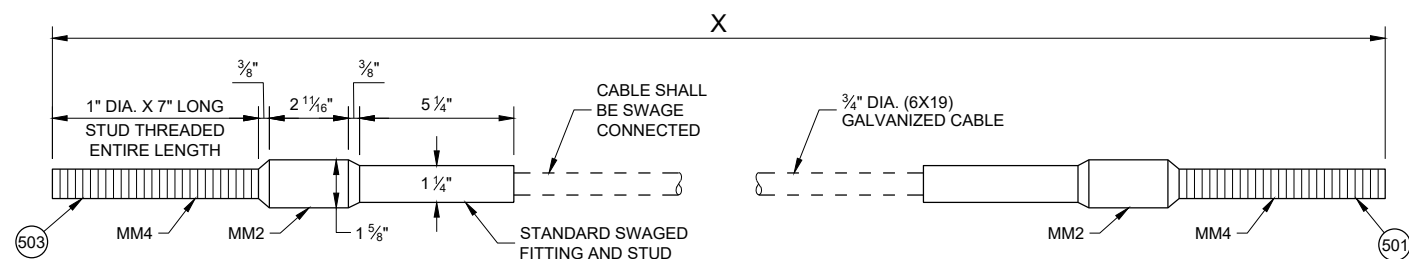
- (500) SEE DETAIL "D" FOR LOCATION AND ATTACHMENT OF SS1.
- (501) FOR MM1a THREADED STUD ONLY REQUIRED ON ONE END. SWAGED FITTING REQUIRED.
- (502) LOCATE HOLES ON THE CENTERLINE OF THE SIDE OF THE POST.
- (503) MM1a MAY HAVE ONE THREADED STUD 4 INCHES LONG. SEE NOTE (109).



FOUNDATION TUBE - ANCHOR CABLE TUBE (QQ2)



ANCHOR CABLE TUBE END PLATE (QQ3)



CABLE ASSEMBLY (MM1a, MM1b)

"X" LENGTH

MM1b	9' - 0"
MM1b	6' - 8"

SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 142

BILL OF MATERIALS - SHORT RADIUS BEAM GUARD (MGS)

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
A1	BEAM GUARD RAIL	AASHTO M180, CLASS A, TYPE 2	
		APPROVED PRODUCER	
A2	BEAM GUARD RAIL - SHOP BENT	INDICATE ON BACK OF RAIL THE RADIUS THAT RAIL WAS BENT TO. SHOP BEND RADIUS IS TO THE NEAREST FOOT. FOLLOW AASHTO M180 ON HOW TO MARK RADIUS INFORMATION.	
		AASHTO M180, CLASS A, TYPE 2	
		APPROVED PRODUCER	
B1	BLOCK - WOOD	WISDOT SPEC. 614	SEE SDD 14B42
C1	NAIL	ASTM A153 HOT DIP CLASS D	
		ASTM F1667 TYPE 1 STYLE 12 (16 DOUBLE HEAD)	
D1	POST-STRONG POST-WOOD	WISDOT SPEC. 614	SEE SDD 14B42
D2	POST-CRT-WOOD	WISDOT SPEC. 614	
E1	POST BOLT	ASTM A307 GRADE A OR SAE J429 GRADE 2	5/8" DIA. SEE SDD 14B42 FOR BOLT GEOMETRY
		AASHTO M180	
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		UNC	
E2	POST BOLT - WASHER	ASTM F436 TYPE 1 (HARDEN TYPICALLY USED WITH STEEL) OR ASTM F844 (UNHARDENED TYPICALLY WITH WOOD)	5/8" DIA.
		GALV. AASHTO M111 / ASTM A 123 OR GALV. HOT DIP. TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329	
E3	POST BOLT - NUT	AASHTO M180 DOUBLE RECESSED HEAVY HEX HEAD	5/8" DIA. SEE SDD 14B42 FOR BOLT GEOMETRY
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		UNC	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		ASTM A563 GRADE A HEAVY HEX HEAD	
F1	SPLICE BOLT	GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	5/8" DIA. SEE SDD 14B42 FOR BOLT GEOMETRY
		ASTM A307 GRADE A OR SAE J429 GRADE 2	
		UNC	
		AASHTO M180	

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
F2	SPLICE BOLT - NUT	ASTM A563 GRADE A	5/8" DIA. SEE SDD 14B42 FOR BOLT GEOMETRY
		AASHTO M180 DOUBLE RECESSED HEAVY HEX HEAD	
		GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C/ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1/ASTM B695 CLASS 50, TYPE 1	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		UNC	
G1	LAG SCREW	ASTM A308 GRADE A ASTM A153 CLASS D	1/2" DIA. 6" LONG
H1	DELINEATOR - BEAM GUARD		SEE SDD 14B42 FOR MORE INFORMATION
H2	DELINEATION - SHEETING	YELLOW OR WHITE	
		WISDOT SPEC 637 TYPE SH	
		APPROVED PRODUCT LIST	
J1	FOUNDATION BACKFILL	STANDARD SPEC. 614	
AA1	BEAM GUARD RAIL - PUNCHED	AASHTO M180, CLASS A, TYPE 2	
		APPROVED PRODUCER	
AA2	BEAM GUARD RAIL - END SECTION BUFFER	AASHTO M180, CLASS A, TYPE 2	
		APPROVED PRODUCER	
BB1	BEAM GUARD RAIL - TERMINAL CONNECTOR MODIFIED	AASHTO M180, CLASS A, TYPE 2	
		APPROVED PRODUCER	
CC1	SHORT RADIUS - SQUARE WASHER	AASHTO M180	
		GALV. AASHTO M111 / ASTM A123	
EE1	NAIL	ASTM A153 HOT DIP CLASS D	
		ASTM F1667 TYPE 1 STYLE 12 (16 DOUBLE HEADED)	
FF1	POST - BCT - WOOD	S4S FINISH ON 4 SIDES	
		WISDOT SPEC. 614	
GG1	POST BOLT	ASTM A307 GRADE A OR SAE J429 GRADE 2	3/8" DIA. SEE SDD 14B42 FOR BOLT GEOMETRY
		AASHTO M180	
		GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C/ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1/ASTM B695 CLASS 50, TYPE 1	
		UNC	
GG2	POST BOLT - WASHER	ASTM F436 TYPE 1 (HARDEN TYPICALLY USED WITH STEEL) OR ASTM F844 (UNHARDENED TYPICALLY WITH WOOD)	3/8" DIA.
		GALV. AASHTO M111 / ASTM A 123 OR GALV. HOT DIP. TO AASHTO M232 CLASS C/ASTM A153 CLASS C / ASTM F2329	

SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

BILL OF MATERIALS - SHORT RADIUS BEAM GUARD (MGS)

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
GG3	POST BOLT - NUT	ASTM A563 GRADE A	3⁄8" DIA. SEE 14B42 FOR GEOMETRY
		AASHTO M180 DOUBLE RECESSED HEAVY HEX HEAD	
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		UNC	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		ASTM A563 GRADE A HEAVY HEX HEAD	
HH1	SPLICE BOLT	GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	3⁄8" DIA. SEE SDD 14B42 FOR BOLT GEOMETRY
		ASTM A307 GRADE A OR SAE J429 GRADE 2	
		UNC	
		AASHTO M180 HEAD GEOMETRY	
HH2	SPLICE BOLT - NUT	ASTM A563 GRADE A	3⁄8" DIA. SEE SDD 14B42 FOR BOLT GEOMETRY
		AASHTO M180 DOUBLE RECESSED HEAVY HEX HEAD	
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		UNC	
JJ1	PIPE - STEEL	ASTM A53 GALVANIZED GRADE B SCHEDULE 40	10" O.D.
JJ2	TOP PLATE	ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI OR ASTM A709 MAX STRENGTH 50 KSI OR ASTM A992 MAX STRENGTH 50 KSI	DIMENSIONS 3⁄8" X 4" X 1' - 0"
		GALV. AASHTO M111 / ASTM A123	
KK1	ANCHOR BRACKET	ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI OR ASTM A709 MAX STRENGTH 50 KSI OR ASTM A992 MAX STRENGTH 50 KSI	
		GALV. AASHTO M111 / ASTM A123	
KK2	ANCHOR BRACKET - BEARING PLATE	ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI OR ASTM A709 MAX STRENGTH 50 KSI OR ASTM A992 MAX STRENGTH 50 KSI	
		GALV. AASHTO M111 / ASTM A123	
LL1	ANCHOR BRACKET - BOLT	ASTM A307 GRADE B HEAVY HEX HEAD OR SAE J429 GRADE 2 HEAVY HEX HEAD	3⁄8" DIA.
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		UNC	

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
LL2	ANCHOR BRACKET - WASHER	ASTM F436 TYPE 1 (HARDEN WASHER ONLY)	3⁄8" DIA.
		GALV. AASHTO M111 / ASTM A123 OR GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329	
LL3	ANCHOR BRACKET - NUT	ASTM A563 GRADE A	3⁄8" DIA.
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		UNC	
MM1a	ANCHOR CABLE	AASHTO M30 / ASTM A741 INDEPENDENT WIRE CORE (IWRC) OR WIRE STRAND CORE (WCS), IMPROVED PLOW STEEL (IPS), 6X19, TYPE II OR IIc CLASS C ZINC COATED	
MM1b	ANCHOR CABLE	AASHTO M30 / ASTM A741 INDEPENDENT WIRE CORE (IWRC) OR WIRE STRAND CORE (WCS), IMPROVED PLOW STEEL (IPS), 6X19, TYPE II OR IIc CLASS C ZINC COATED	
MM2	ANCHOR CABLE - SWAGE FITTING	ASTM A576 GRADE 1035	
		SWAGE FITTINGS ARE TO BE FACTORY SWEDGED. WITH A BREAKING STRENGTH 40,000 LBS.	
		GALV. AASHTO M111 / ASTM A123	
		ASME B30.26 FORGED, CAST, OR DIE STAMPED WITH THE FOLLOWING INTO CONNECTION: NAME OF MANUFACTURER OR TRADEMARK OF CONNECTION'S MANUFACTURER, SIZE OR RATED LOAD, GRADE.	
MM3	WIRE ROPE CABLE CLAMPS	FF-C-450D TYPE 1 CLASS 1	3⁄4"
		ASTM A153 HOT DIP CLASS D	
MM4	ANCHOR CABLE - SWAGE FITTING - STUD	ASTM F3125 GRADE A325 TYPE 1 OR SAE GRADE 5 OR ASTM A449 TYPE 1 HEAVY HEX HEAD	
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		UNC	
NN1	ANCHOR CABLE - NUT	ASTM A563 GRADE A	1" DIA.
		AASHTO M180 DOUBLE RECESSED HEAVY HEX HEAD	
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A 563	
NN2	ANCHOR CABLE - NUT - WASHER	UNC	1" DIA.
		ASTM F436 TYPE 1 (HARDEN WASHER ONLY)	
		GALV. AASHTO M111 / ASTM A123 OR GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329	

SHORT RADIUS BEAM
GUARD (MGS) SHORT
RADIUS TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 144

BILL OF MATERIALS - SHORT RADIUS BEAM GUARD (MGS)

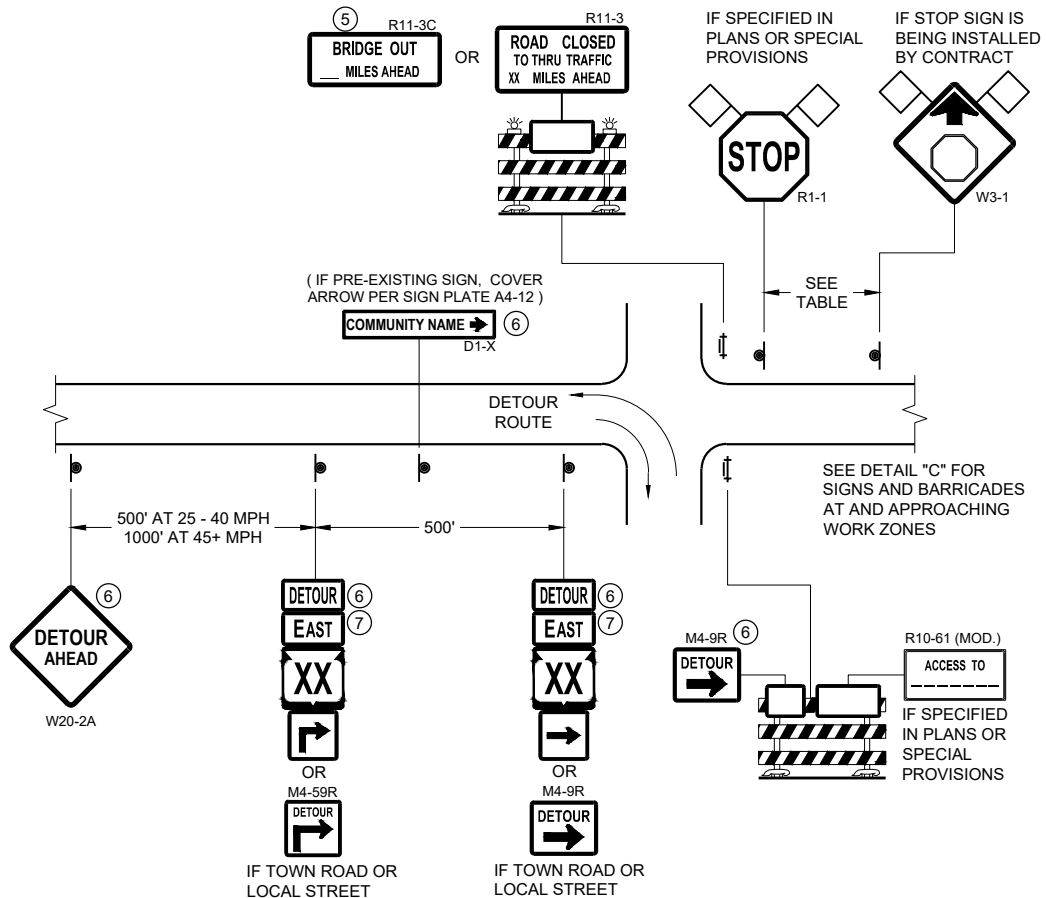
PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
PP1	BEARING PLATE AT POST	ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI OR ASTM A709 MAX STRENGTH 50 KSI OR ASTM A992 MAX STRENGTH 50 KSI	
		GALV. AASHTO M111 / ASTM A123	
PP2	PIPE - STEEL	ASTM A53 GALVANIZED GRADE B SCHEDULE 40	2" DIA. x 6" LONG
QQ1	FOUNDATION TUBE	ASTM A500 GRADE B	8" X 6" X $\frac{3}{16}$ "
		GALV. AASHTO M111 / ASTM A123	
QQ2	SHORT RADIUS - FOUNDATION TUBE - ANCHOR CABLE - TUBE	ASTM A500 GRADE B	DIMENSIONS 2 $\frac{1}{2}$ " X 2 $\frac{1}{4}$ " X $\frac{1}{4}$ " X 8"
		GALV. AASHTO M111 / ASTM A123	
QQ3	SHORT RADIUS - SOIL TUBE - ANCHOR CABLE - TUBE - END PLATE	ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI OR ASTM A709 MAX STRENGTH 50 KSI OR ASTM A992 MAX STRENGTH 50 KSI	DIMENSIONS 2 $\frac{1}{2}$ " X 2 $\frac{1}{2}$ " X $\frac{1}{4}$ "
		GALV. AASHTO M111 / ASTM A123	
QQ4	GROUND STRUT AND YOKE - BOLT	GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	$\frac{5}{8}$ DIA.
		ASTM A307 GRADE B HEAVY HEX HEAD OR SAE J429 GRADE 2 HEAVY HEX HEAD	
		UNC	
QQ5	GROUND PLATE AND YOKE - WASHER	ASTM F436 TYPE 1 (HARDEN WASHER ONLY)	$\frac{5}{8}$ DIA.
		GALV. AASHTO M111 / ASTM A123 OR GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329	
QQ6	GROUND STRUT AND YOKE - NUT	HEAVY HEX	$\frac{5}{8}$ DIA.
		UNC	
		ASTM A563 GRADE A	
		OVER TAPPED NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
SS1	SOIL PLATE	ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI OR ASTM A709 MAX STRENGTH 50 KSI OR ASTM A992 MAX STRENGTH 50 KSI	
		GALV. AASHTO M111 / A123	
TT1	SOIL PLATE - BOLT	ASTM A307 GRADE B HEAVY HEX HEAD OR SAE J429 GRADE 2 HEAVY HEX HEAD	$\frac{5}{8}$ DIA.
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		UNC	
TT2	SOIL PLATE - WASHER	ASTM F436 TYPE 1 (HARDEN WASHER ONLY)	$\frac{5}{8}$ DIA.
		GALV. AASHTO M111 / ASTM A123 OR GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329	
TT3	SOIL PLATE - NUT	GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	$\frac{5}{8}$ DIA.
UU1	OBJECT MARKER - SHEETING	MUTCD / WISDOT OBJECT MARKER TYPE 3	PATTERN AND COLOR FOR SHEETING. SHEETING TYPE FOR MARKER.
		WISDOT SPEC 637 TYPE F	
		APPROVED PRODUCT LIST	
UU2	OBJECT MARKER - ALUMINUM PLATE	WISDOT SPEC 637 ALUMINUM PLATE	MATERIAL AND THICKNESS OF MATERIALS
UU3	OBJECT MARKER - SCREWS	STAINLESS SELF-TAPPING SCREWS	
VV1	FOUNDATION BACKFILL	WISDOT SPEC 614	

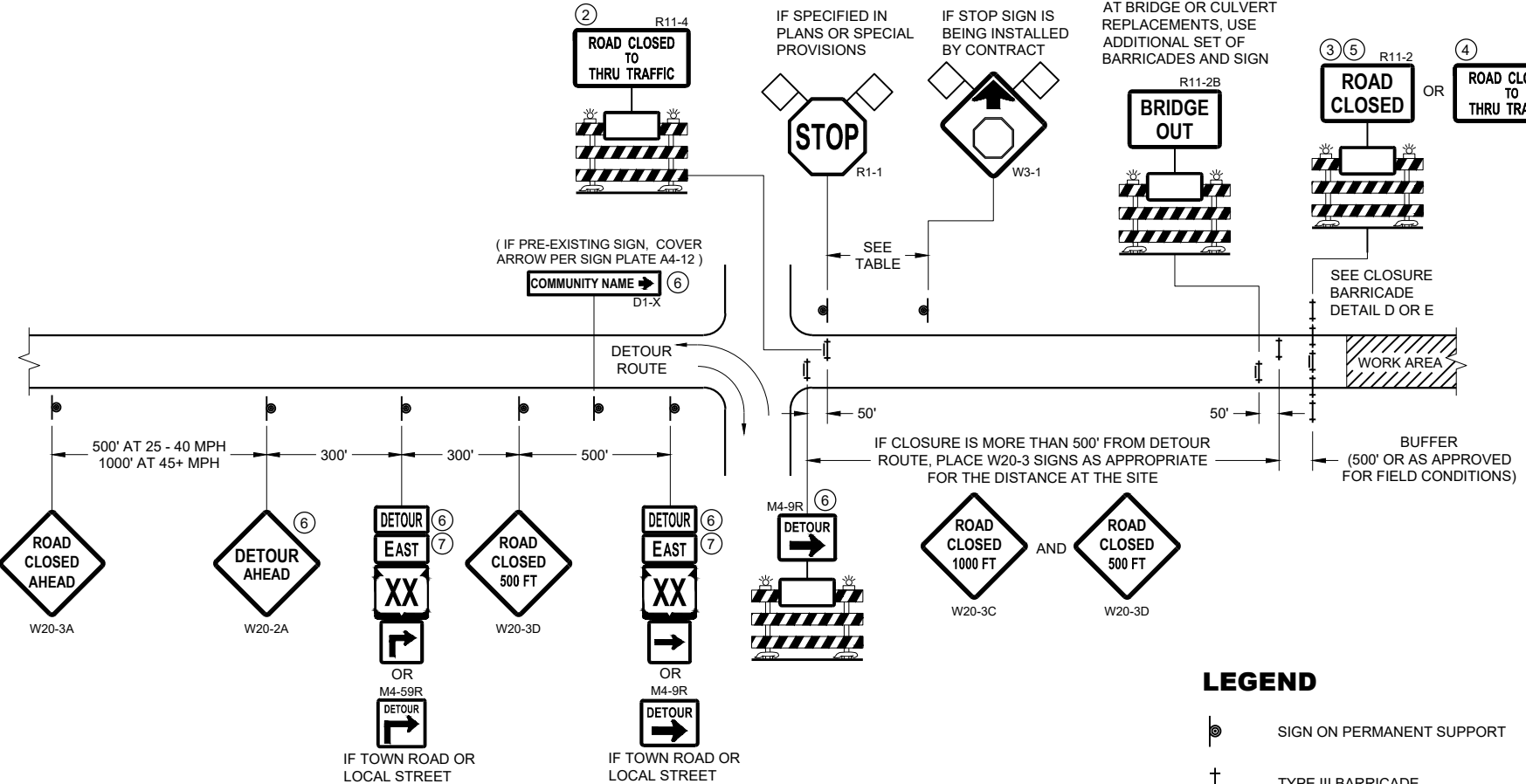
SHORT RADIUS BEAM
GUARD (MGS) SHORT
RADIUS TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

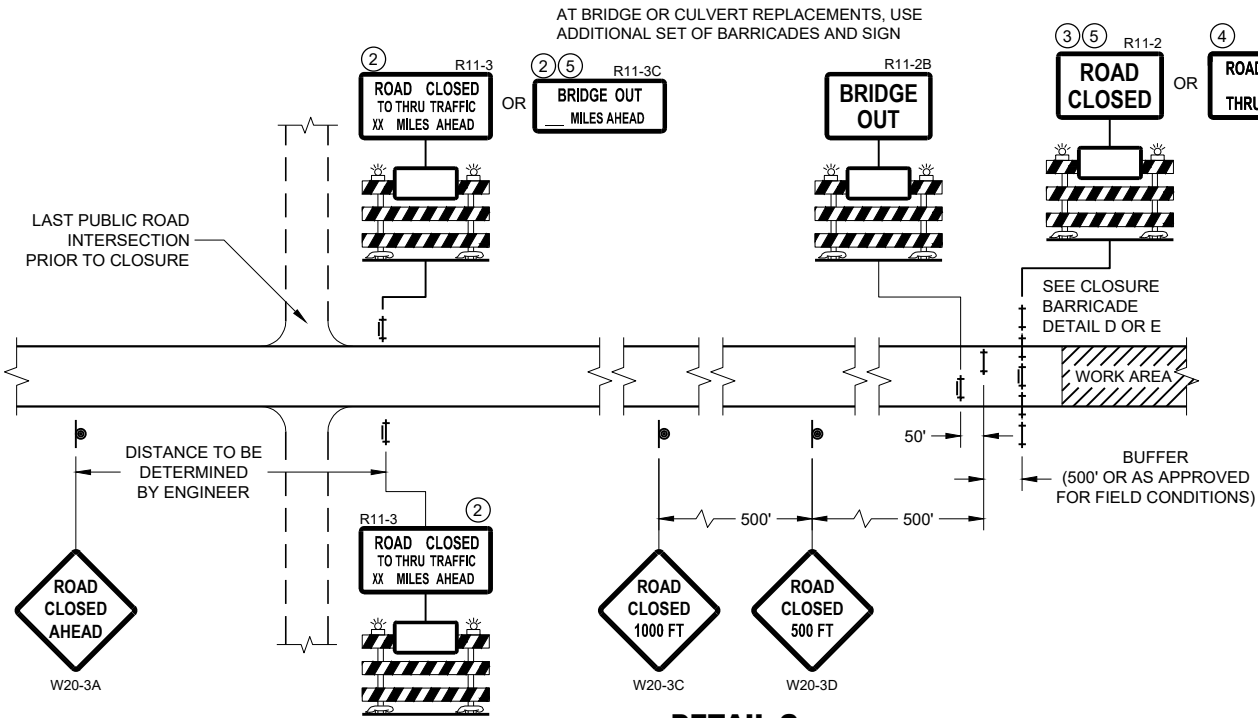
APPROVED
May 2022 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVE ENGINEER 145
FHWA



DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR
WORK ZONE GREATER THAN OR EQUAL TO ½ MILE FROM
DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR
WORK ZONE LESS THAN ½ MILE FROM
DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

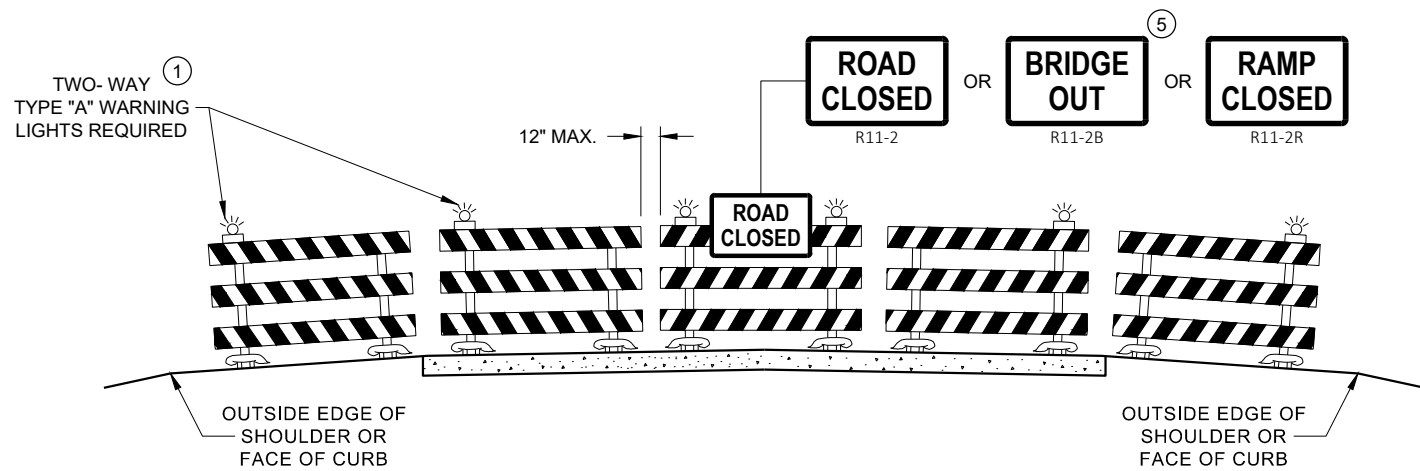
LEGEND

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

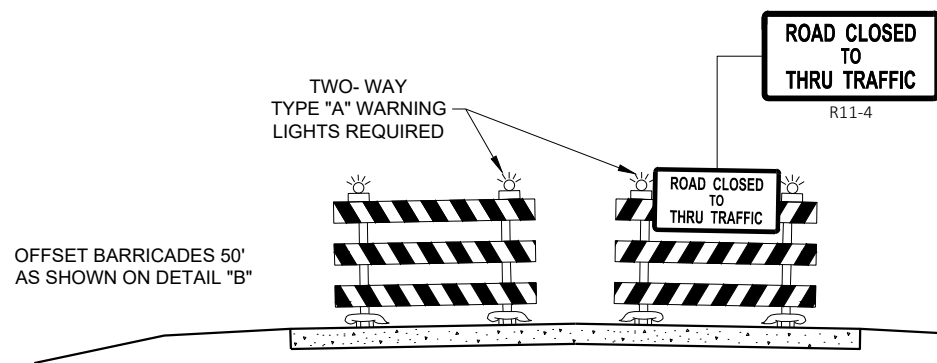
**BARRICADES AND SIGNS
FOR MAINLINE CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER 146
FHWA



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



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

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

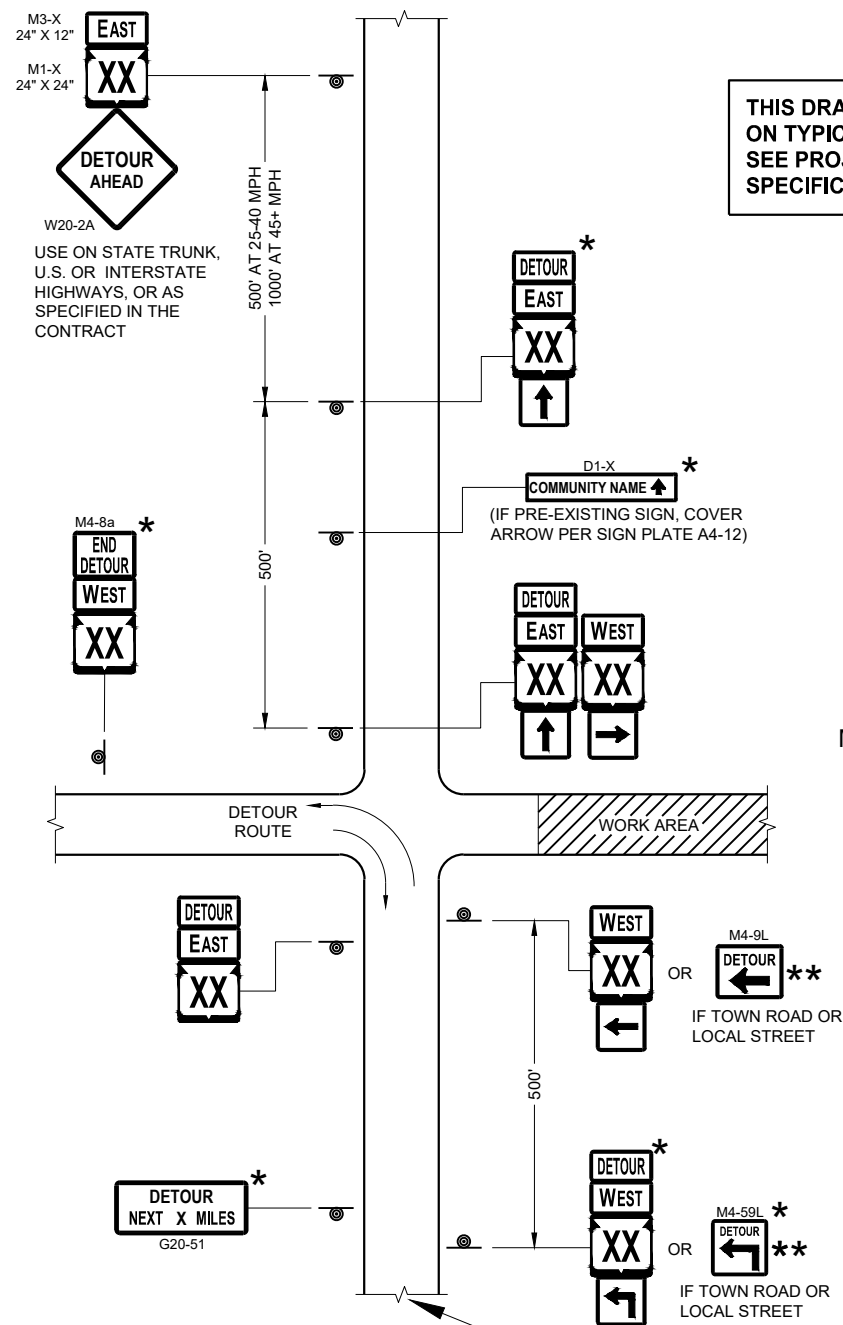
- 1 TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING).
- 2 THESE SIGNS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

BARRICADES AND SIGNS FOR VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER 147

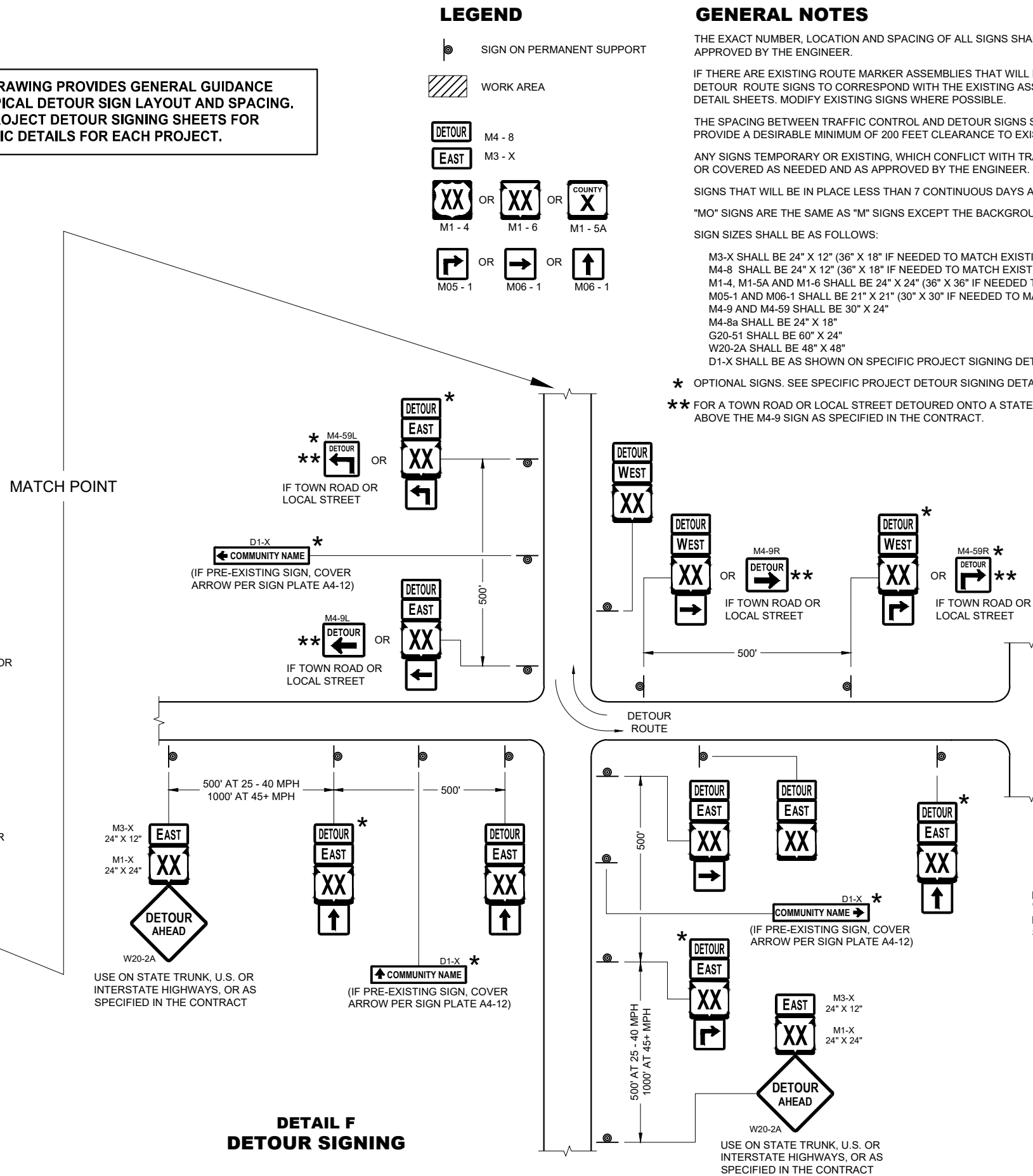
FHWA



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

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

SDD 15C02 - 09c



DETAIL F DETOUR SIGNING

GENERAL NOTES

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

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

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

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

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

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

SIGN SIZES SHALL BE AS FOLLOWS:

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

* OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.

**** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.**

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

DETOUR SIGNING FOR MAINLINE CLOSURES

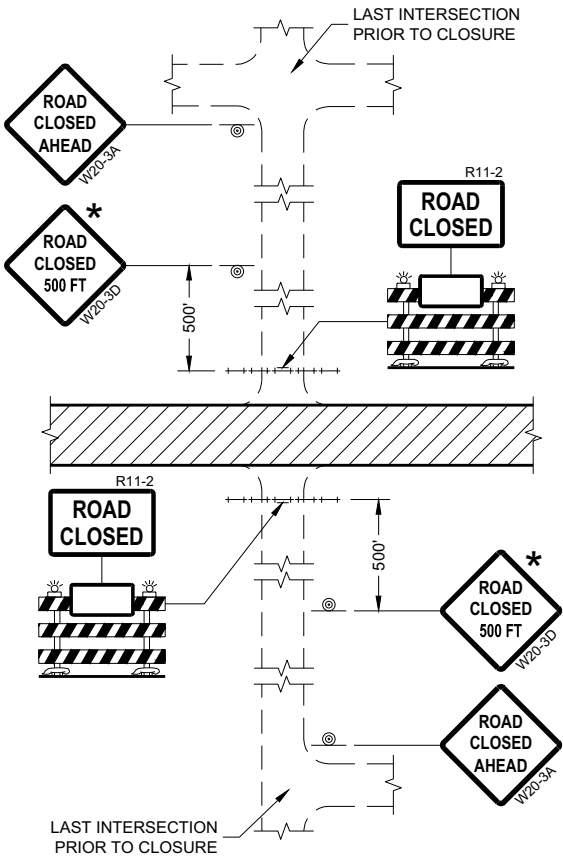
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

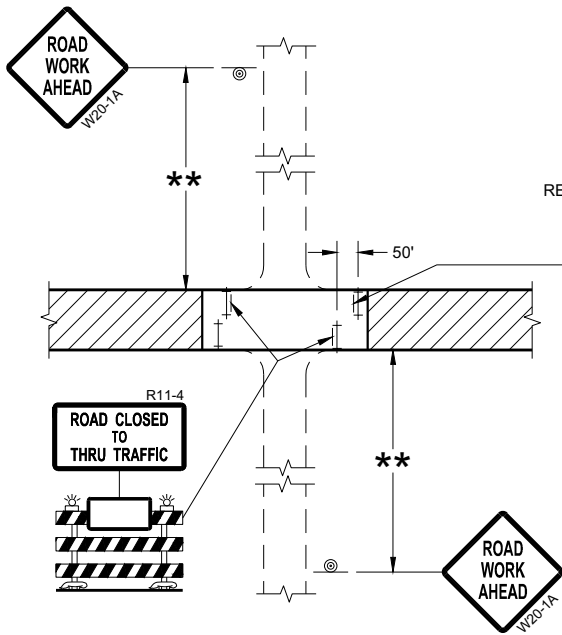
/S/ Andrew Heidtke
WORK ZONE ENGINEER 148

FHWA

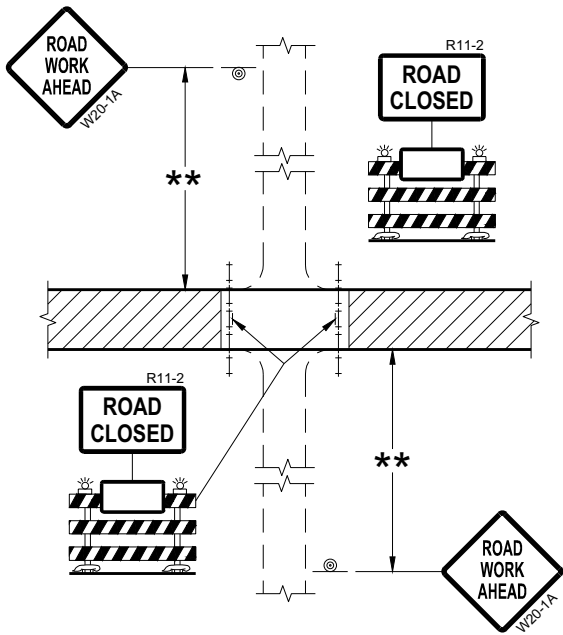
SDD15C02 - 09c



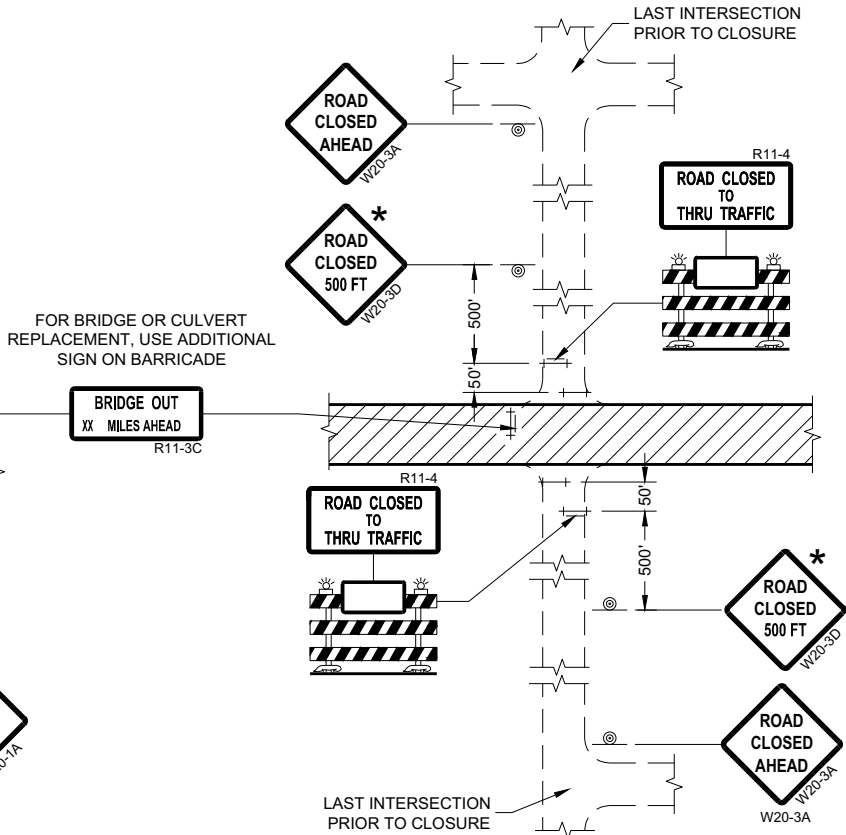
DETAIL 1
(NO ACCESS TO PROJECT)



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 149
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.

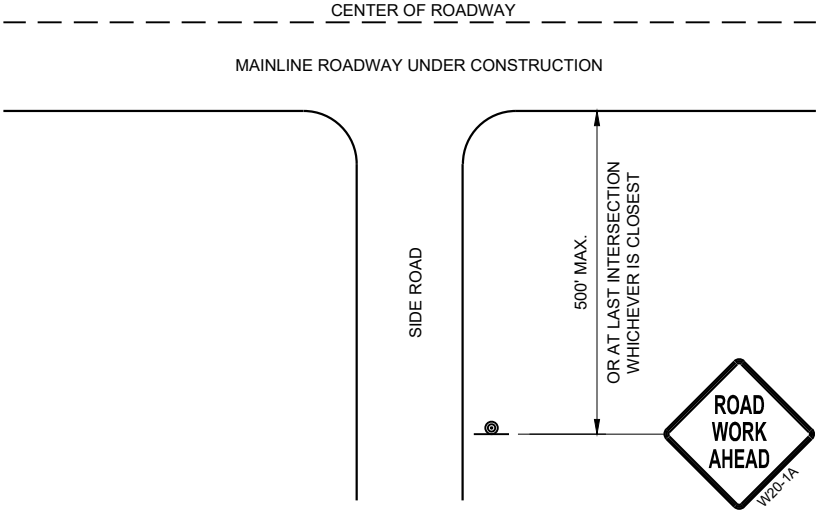
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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.

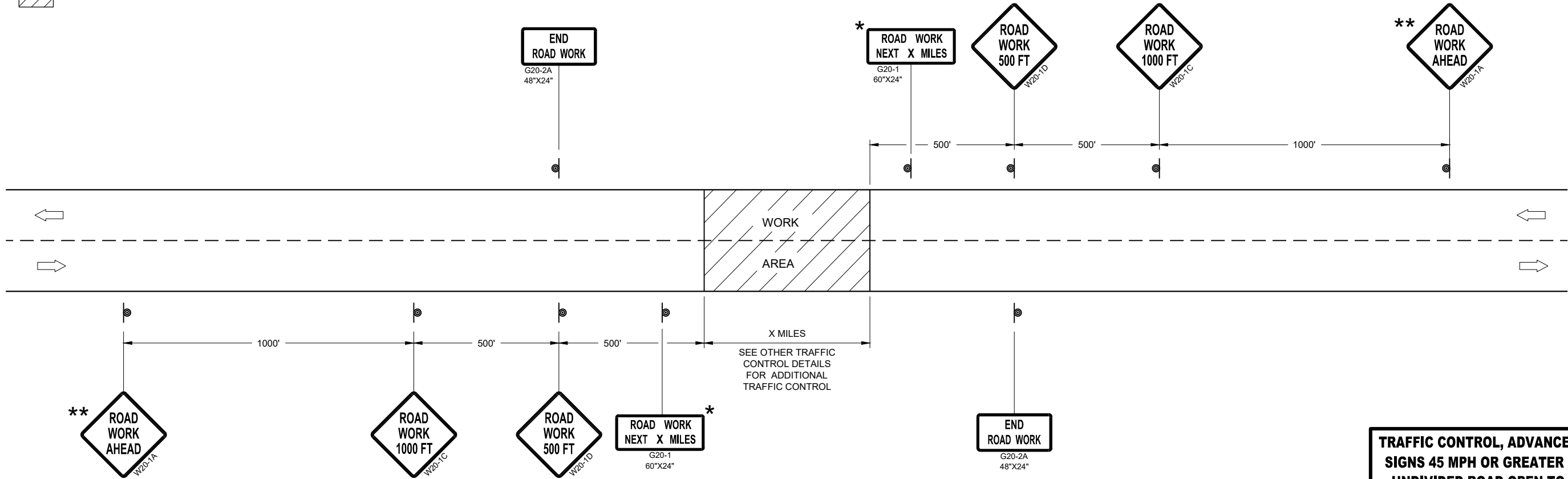
- * OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS
- ** PLACE AN ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.

LEGEND

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



TYPICAL SIDE ROAD APPROACH
WARNING SIGN DETAIL



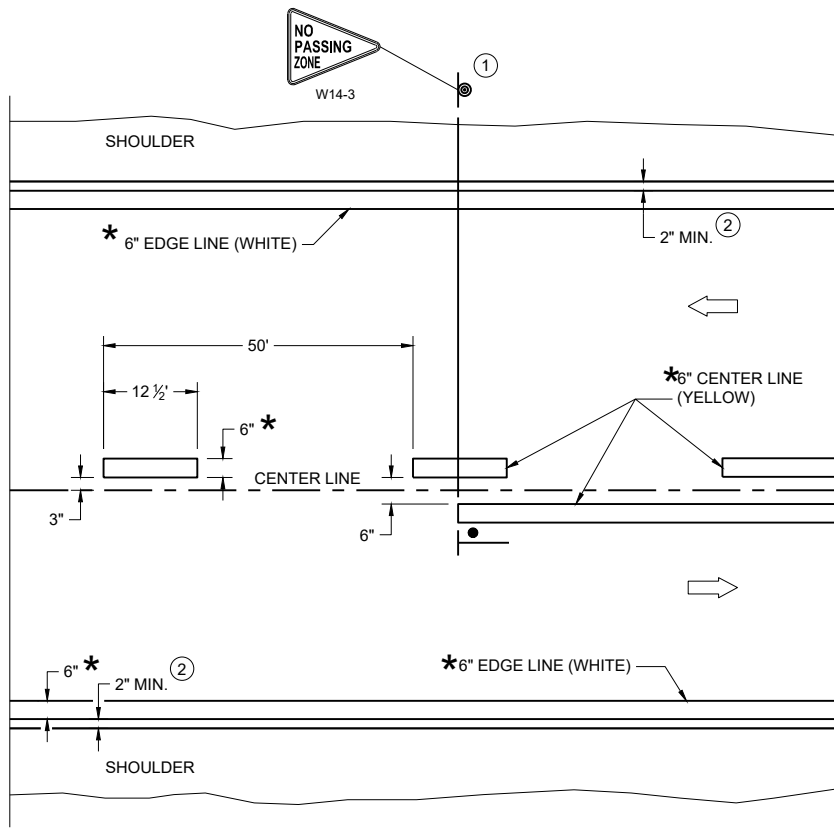
TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER

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

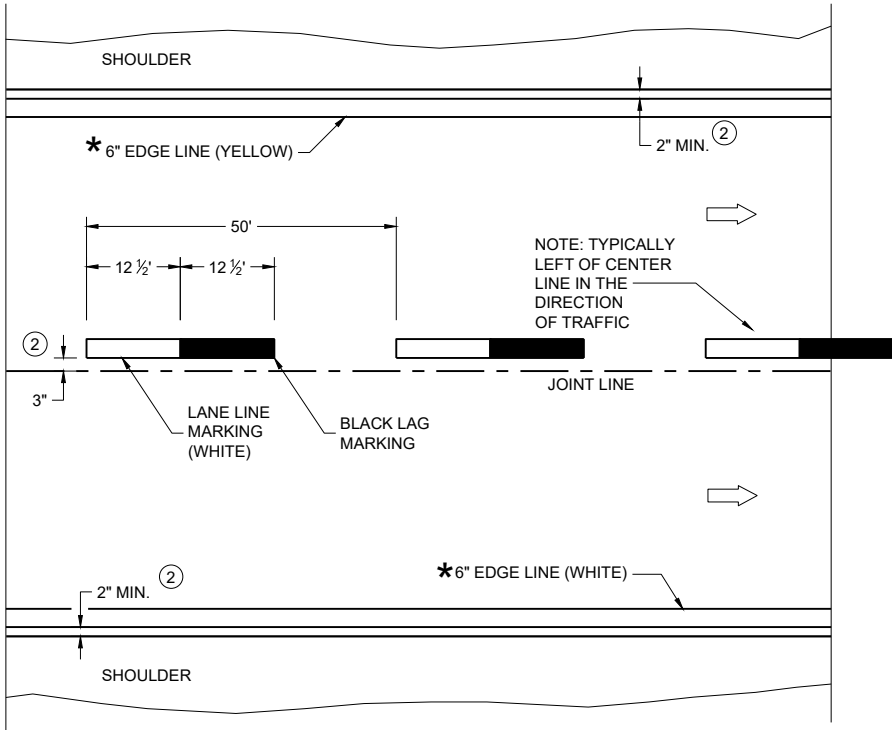
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER 150

FHWA



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

GENERAL NOTES

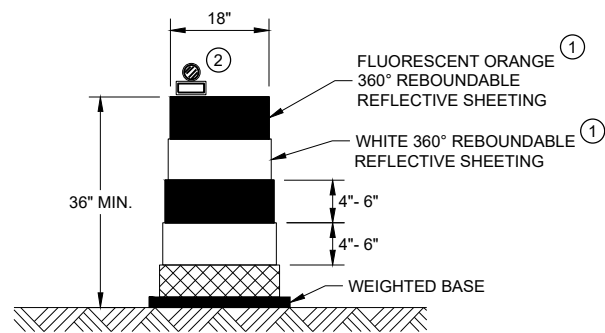
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

- 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

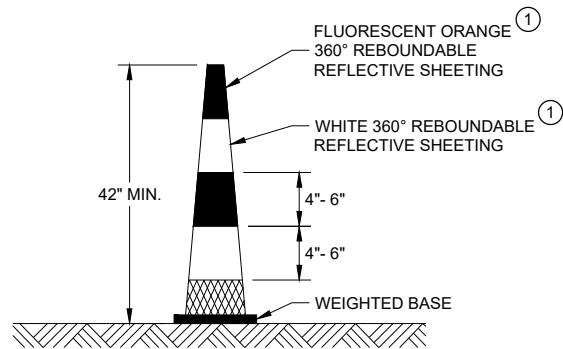
- "T" MARKING
- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC

PERMANENT LONGITUDINAL PAVEMENT MARKINGS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2023 DATE	/S/ Jeannie Silver Statewide Pavement Marking Engineer



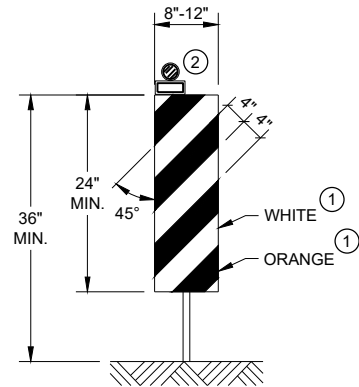
DRUM

BALLAST WIDTHS
RANGE FROM 24"-36"



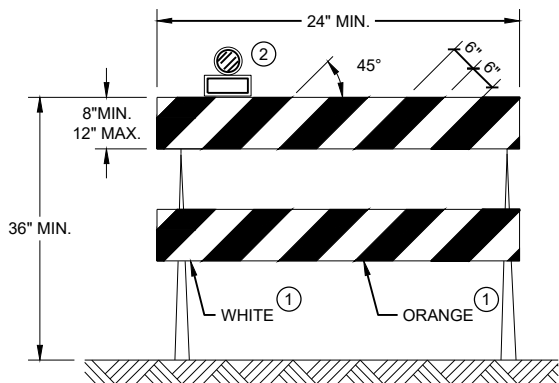
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS
BALLAST WIDTHS
RANGE FROM 14"-20"



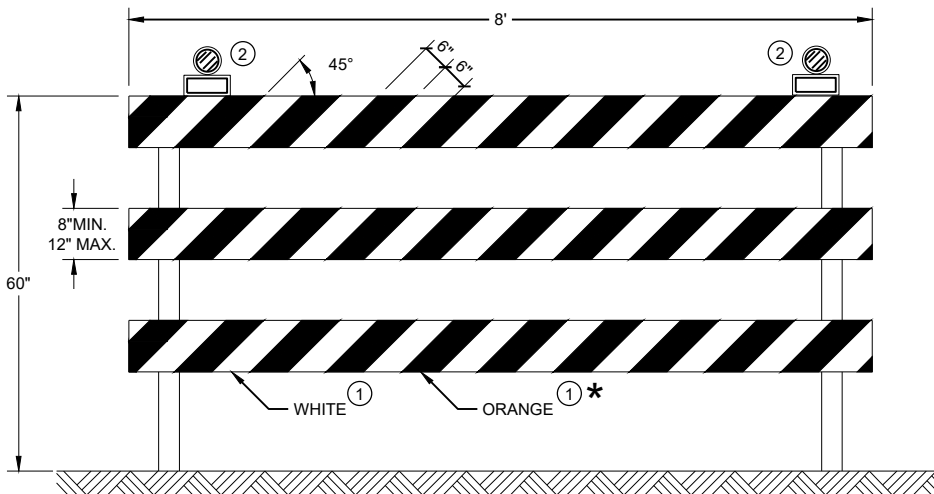
VERTICAL PANEL

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



TYPE II BARRICADE

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



TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

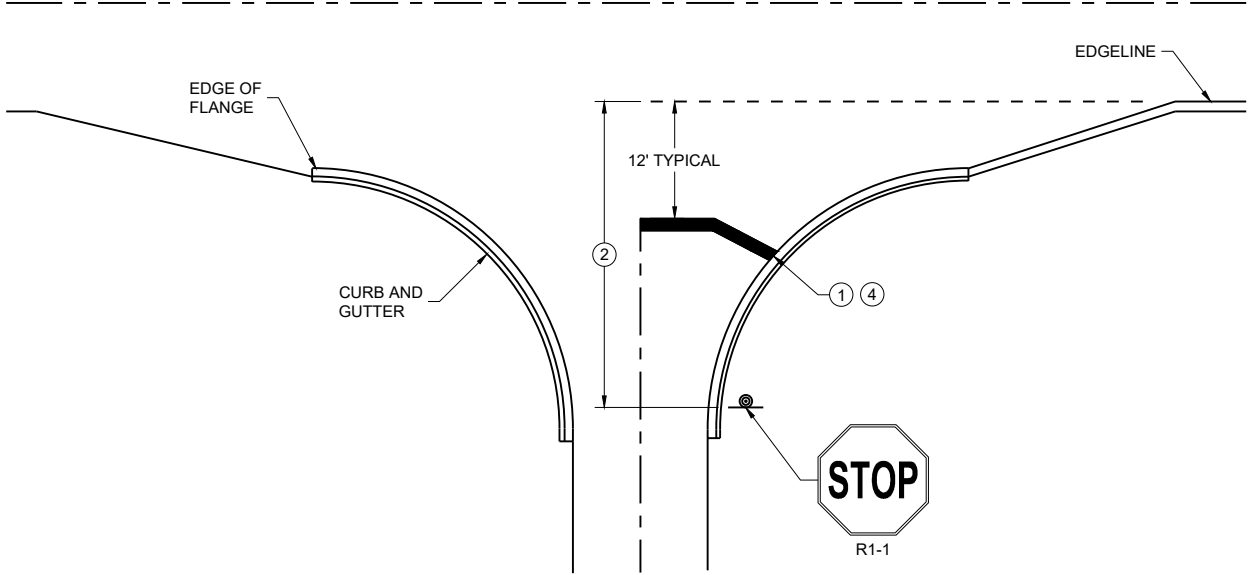
GENERAL NOTES

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

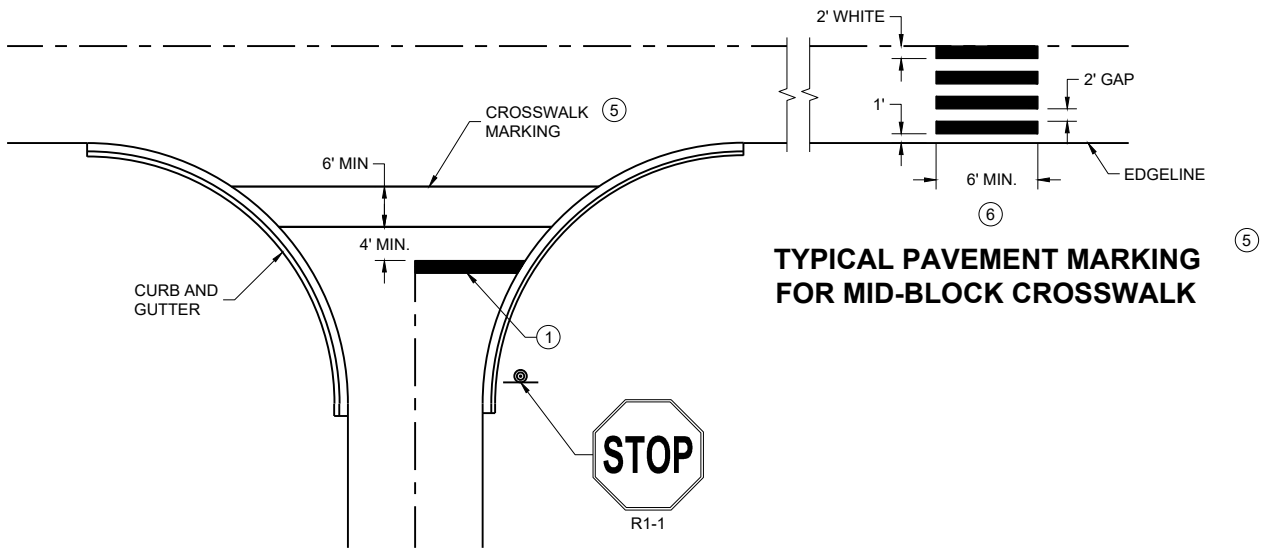
**CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

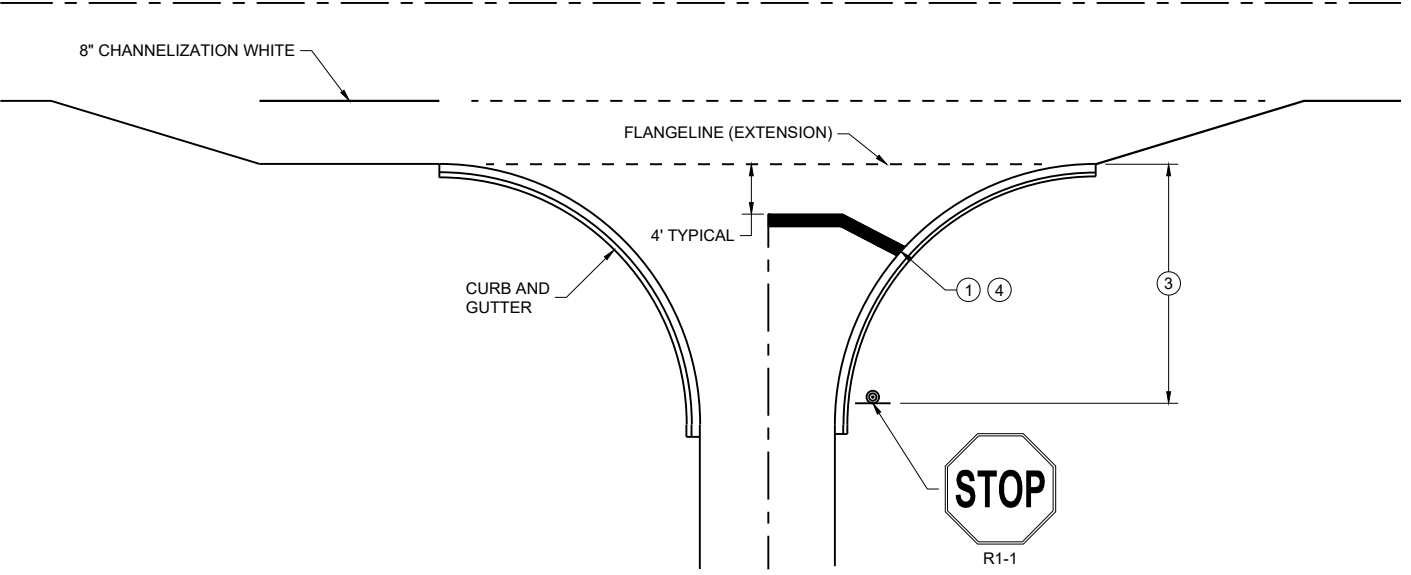
APPROVED
November 2022 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER 152
FHWA



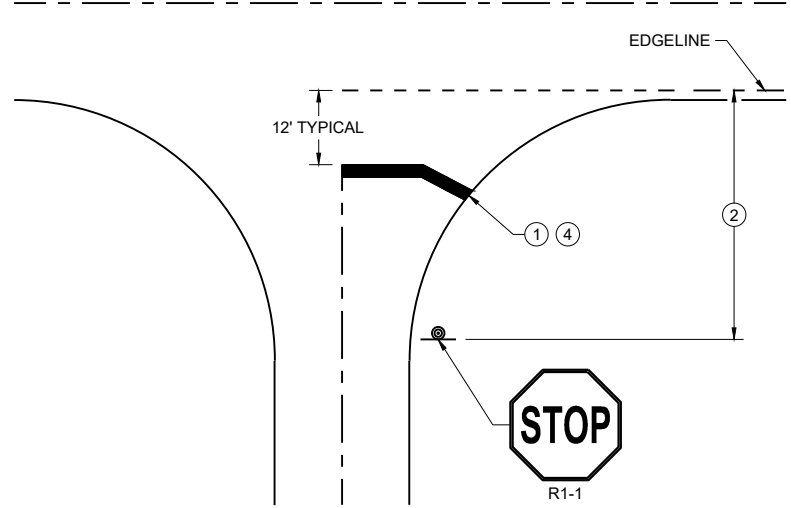
TYPICAL STOP LINE PAVEMENT MARKING
WITH CURB AND GUTTER



TYPICAL STOP LINE PAVEMENT MARKING
FOR SIDE ROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING
FOR SIDE ROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING
WITHOUT CURB AND GUTTER

GENERAL NOTES

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

- 1 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
- 2 NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGE LINE.
- 3 NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGE LINE EXTENSION.
- 4 MOVE CLOSER TO THE EDGE OF TRAVEL LINE AS NEEDED FOR VISIBILITY AND SIGHT LINES (NO CLOSER THAN 4 FEET).
- 5 LADDER BAR CROSSWALKS SHOULD ONLY BE USED FOR MID BLOCK CROSSINGS. USE 2 - 6" TRANSVERSE LINES.
- 6 POSTED SPEED LIMITS OF 40 MPH OR GREATER USE A MINIMUM WIDTH OF 8' FOR MIDBLOCK CROSSWALKS

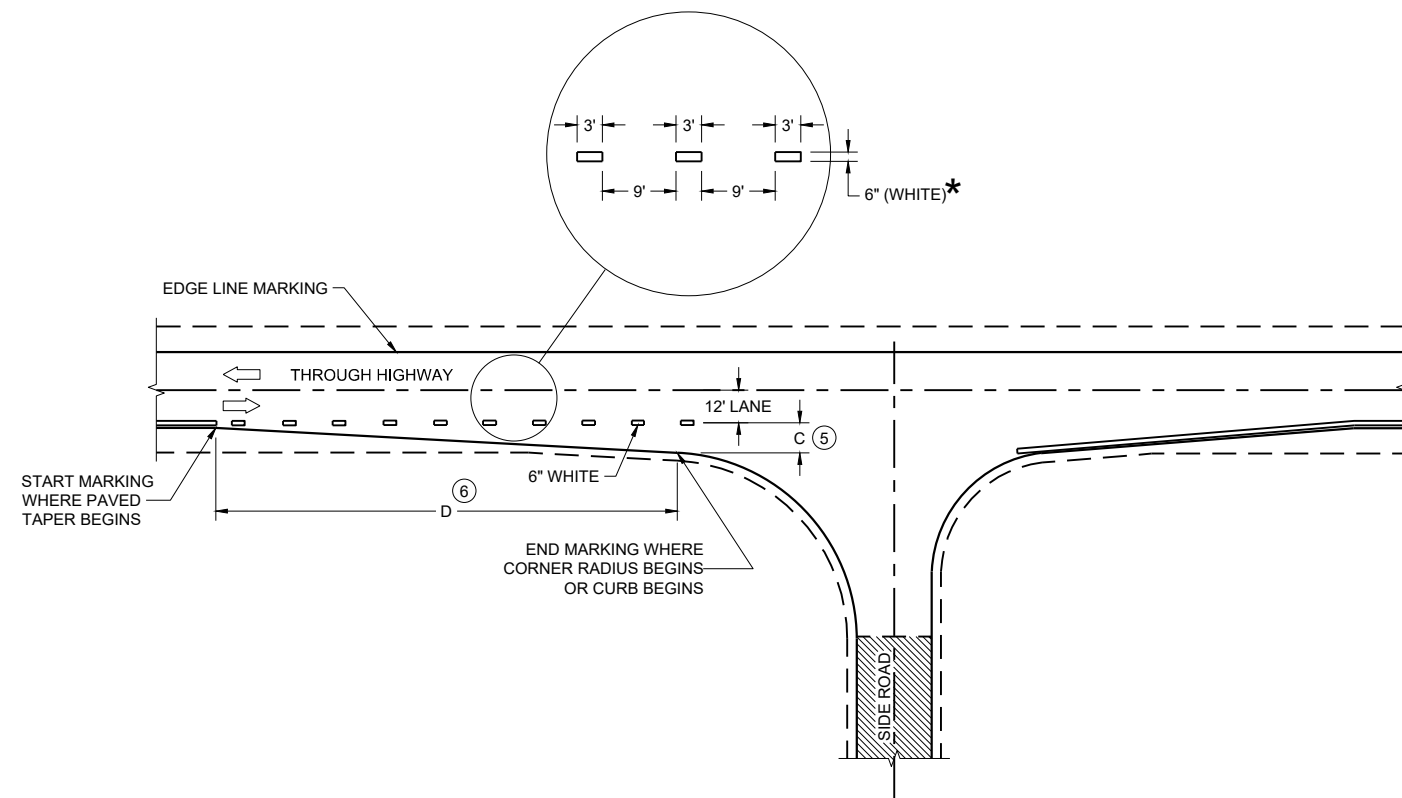
STOP LINE AND CROSSWALK
PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

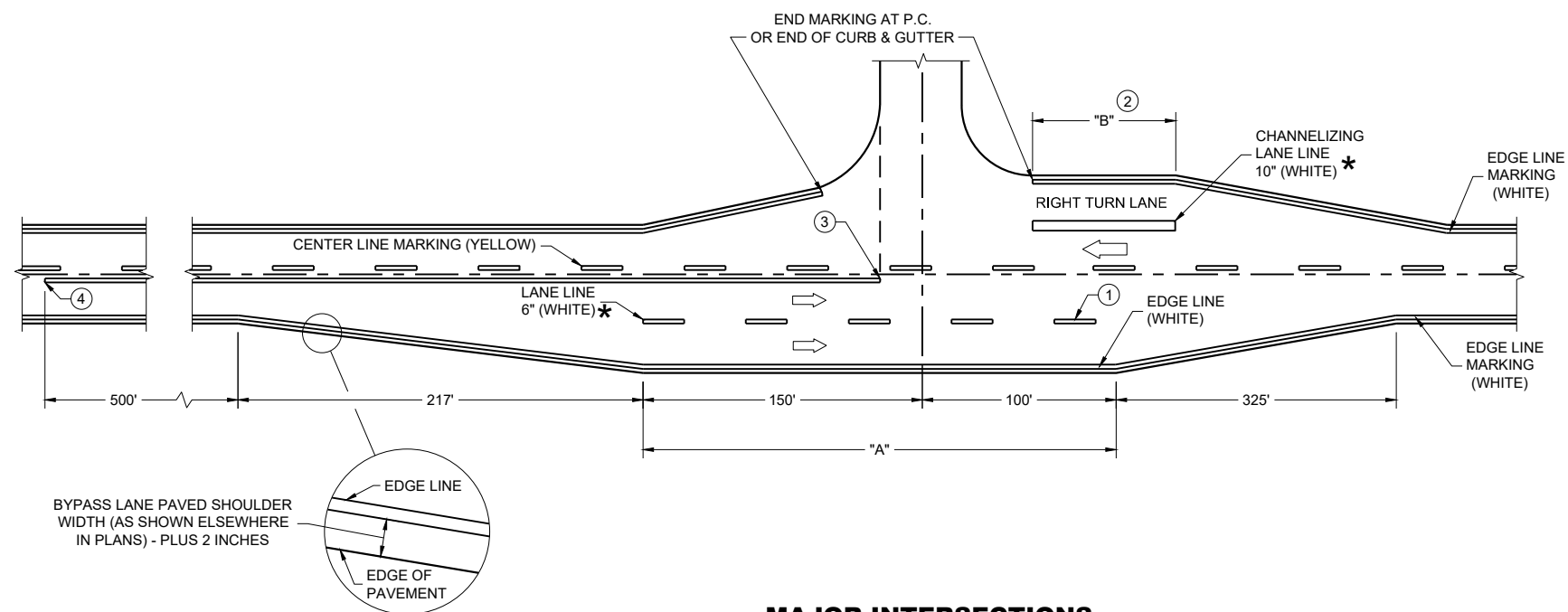
APPROVED
March 2024
DATE

/S/ Matthew Rauch
STATE SIGNING AND MARKING
ENGINEER

FHWA



MINOR INTERSECTION

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

*CONFIRM MARKING LINE WIDTH WITH
THE MISCELLANEOUS QUANTITIES

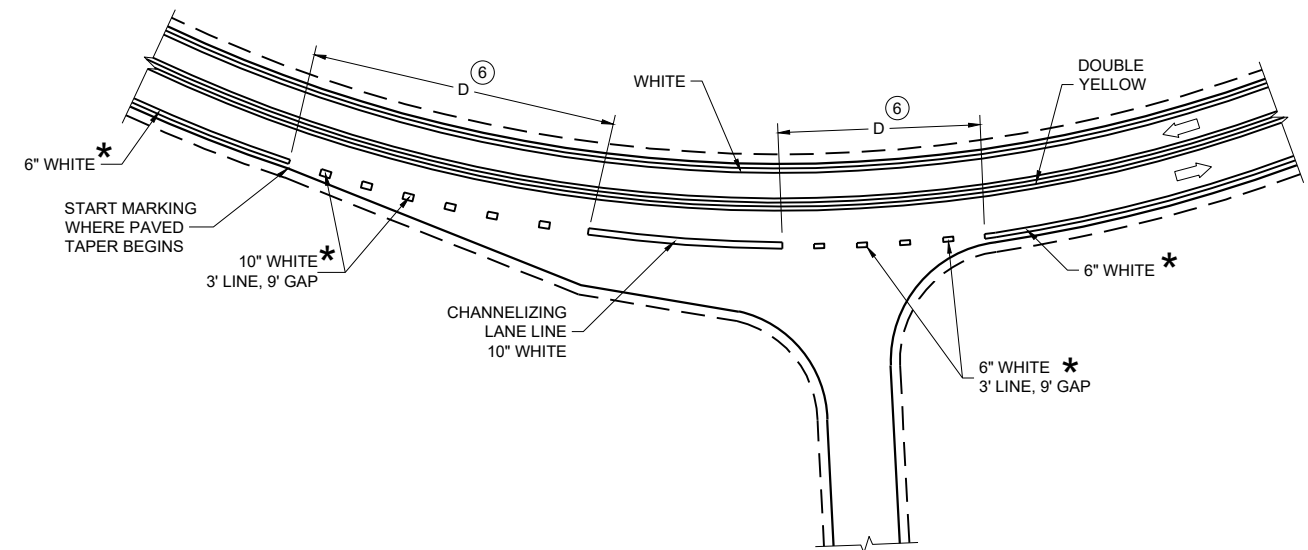
GENERAL NOTES

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

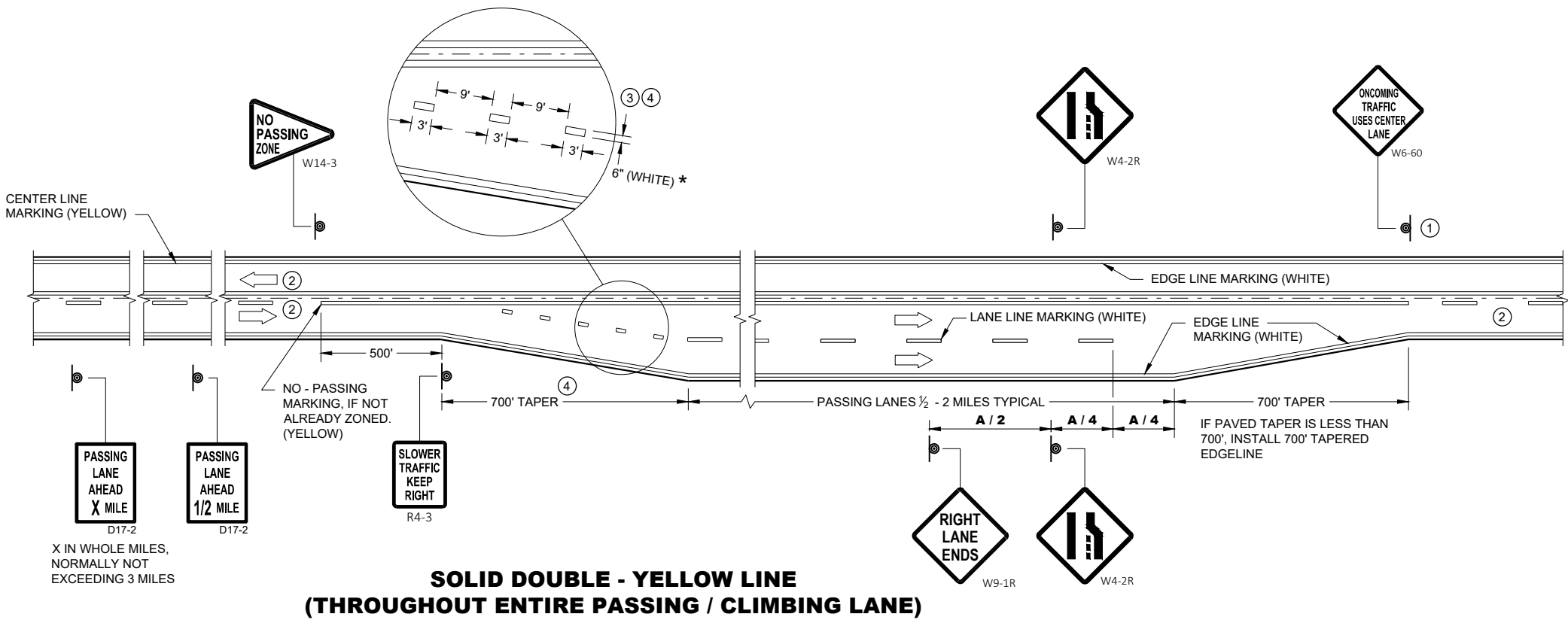
➡ DIRECTION OF TRAVEL



INTERSECTION ON OUTSIDE OF CURVE

PAVEMENT MARKING
(INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



GENERAL NOTES

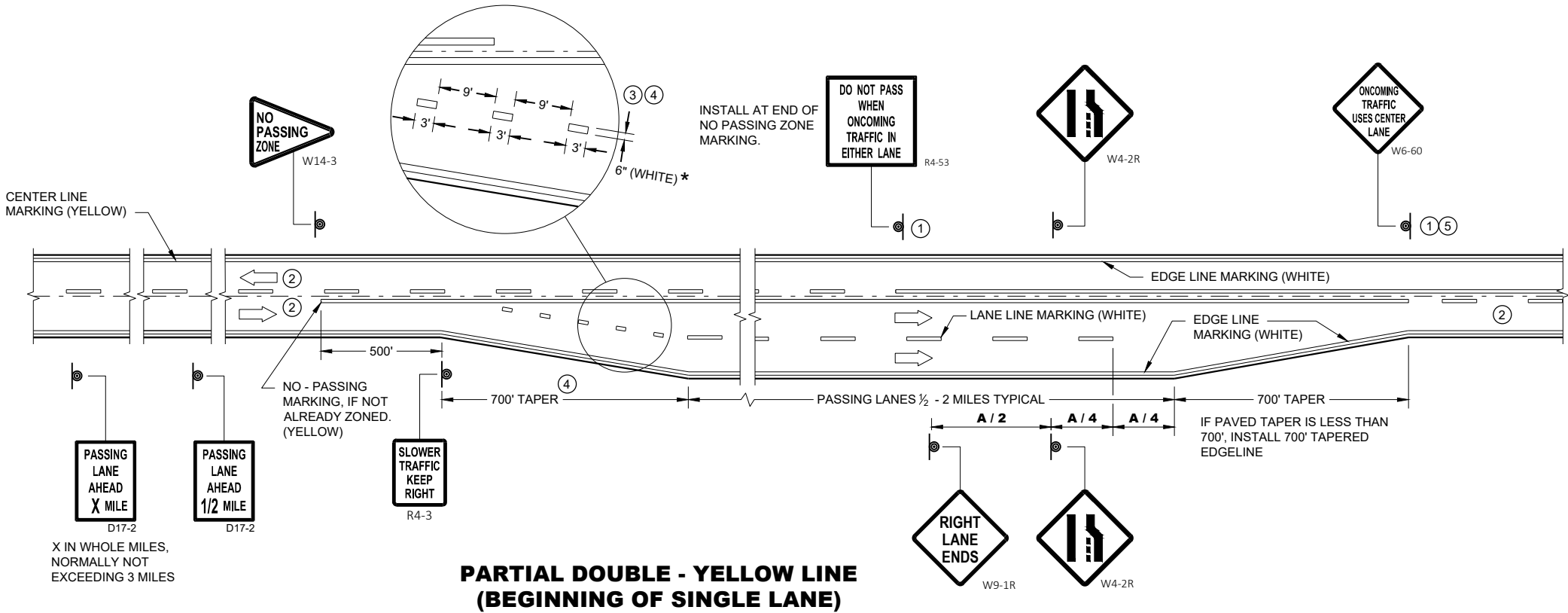
- ① SIGN SHALL BE REPEATED AT 1 MILE INCREMENTS OR AT THE DISCRETION OF THE REGIONAL TRAFFIC ENGINEER.
- ② THERE MAY BE SOLID YELLOW ON THE CENTERLINE DUE TO SIGHT CONDITIONS.
- ③ THE TAPER LENGTH OF THE DOTTED LINE PAVEMENT MARKING SHALL BE 700 FEET, 3' LINE, 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.
- ④ WHEN THE ENTRANCE TAPER IS LESS THAN 700 FEET OR THE SHOULDER WIDTH IN THE PASSING / CLIMBING LANE IS LESS THAN THE ADJACENT HIGHWAY, DO NOT INSTALL DOTTED LINE PAVEMENT MARKING.
- ⑤ REPEAT EVERY 1 MILE UP UNTIL R4-53.

ARROW SYMBOL (➡) SHOWS DIRECTION OF TRAVEL

DISTANCE TABLE

POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
45	775
50	885
55	990

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



PAVEMENT MARKING & SIGNING
(CLIMBING LANE & PASSING LANE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

LEGEND

-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL DRUM
-  DIRECTION OF TRAFFIC
-  WORK ZONE

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY THE REGIONAL TRAFFIC UNIT.

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

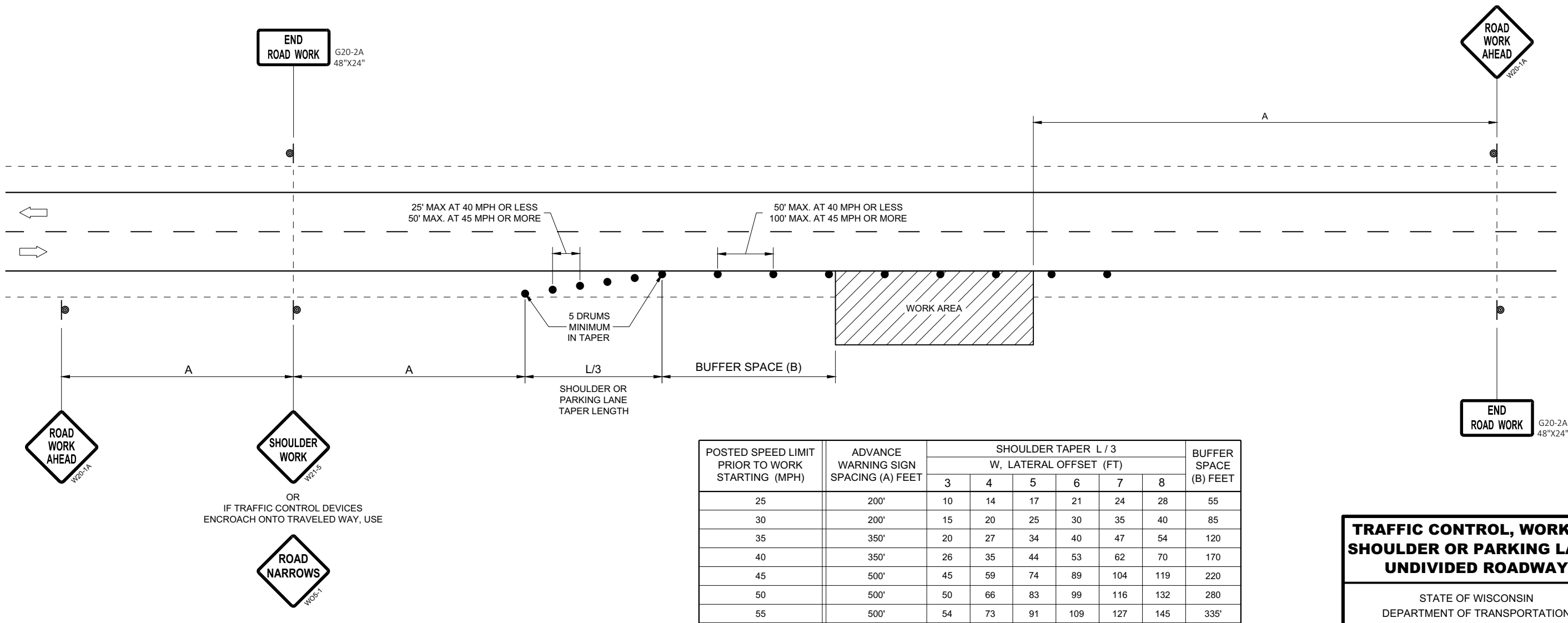
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

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

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

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

W20-1A AND G20-2A SIGNS ARE NOT REQUIRED IF THE WORK AREA IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT. G20-2A SIGNS MAY ALSO BE OMITTED IF DURATION OF WORK IS LESS THAN 7 CONTINUOUS DAYS AND NIGHTS.



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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2020
DATE
/S/ Andrew Heidtke
STATEWIDE WORK ZONE T
SAFETY ENGINEER 156

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.

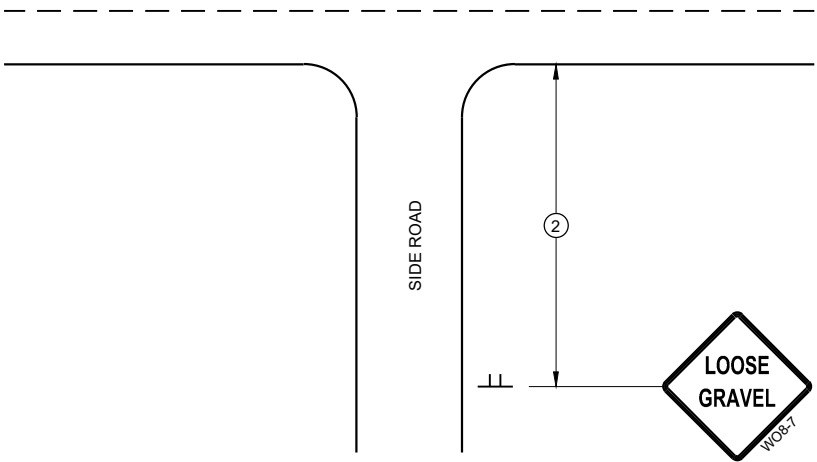
ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE, INCLUDING PRE-EXISTING SIGNS IN THE VICINITY, SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER.

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.

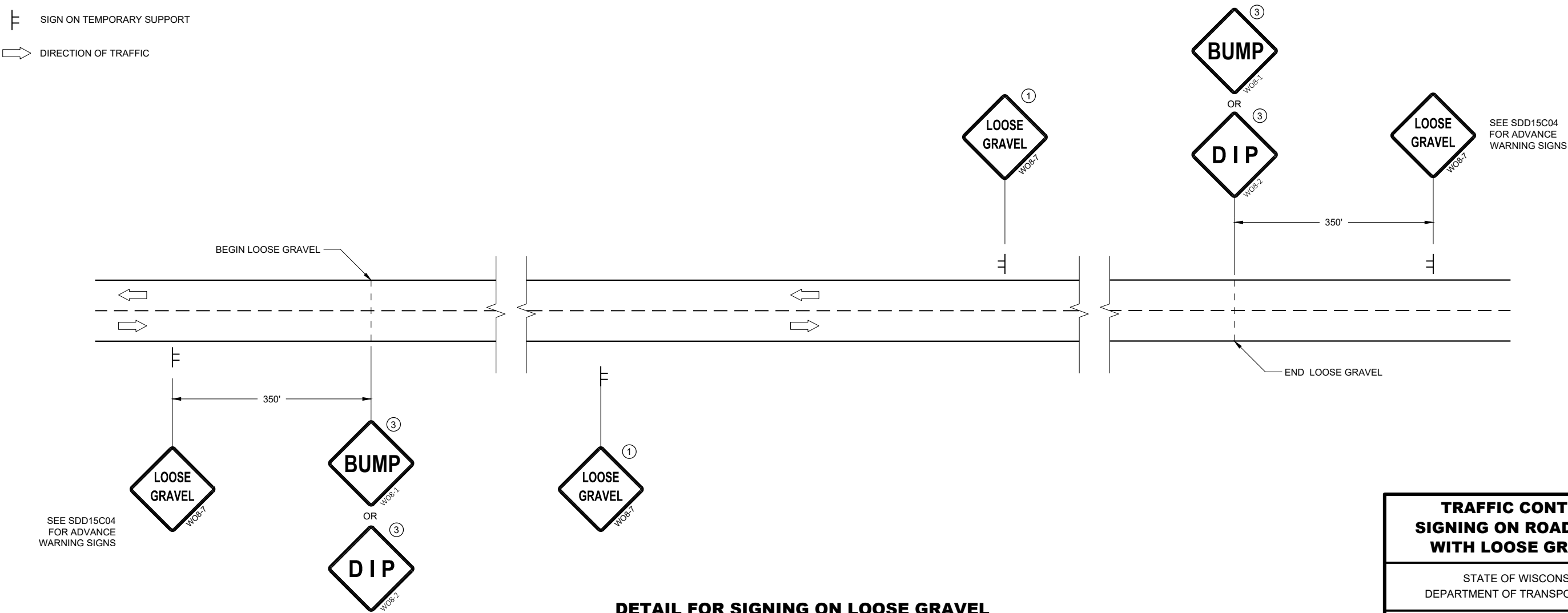
- ① PLACE SIGNS 350' IN ADVANCE OF CHIP SEALED OR LOOSE GRAVEL SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.
- ② PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.
- ③ ADD WO8-1 OR WO8-2 SIGN WHEN THE CONDITION IS PRESENT.

LEGEND

-  SIGN ON TEMPORARY SUPPORT
-  DIRECTION OF TRAFFIC



TYPICAL SIDE ROAD APPROACH
SIGN DETAIL



DETAIL FOR SIGNING ON LOOSE GRAVEL
OR CHIP SEALED SURFACES

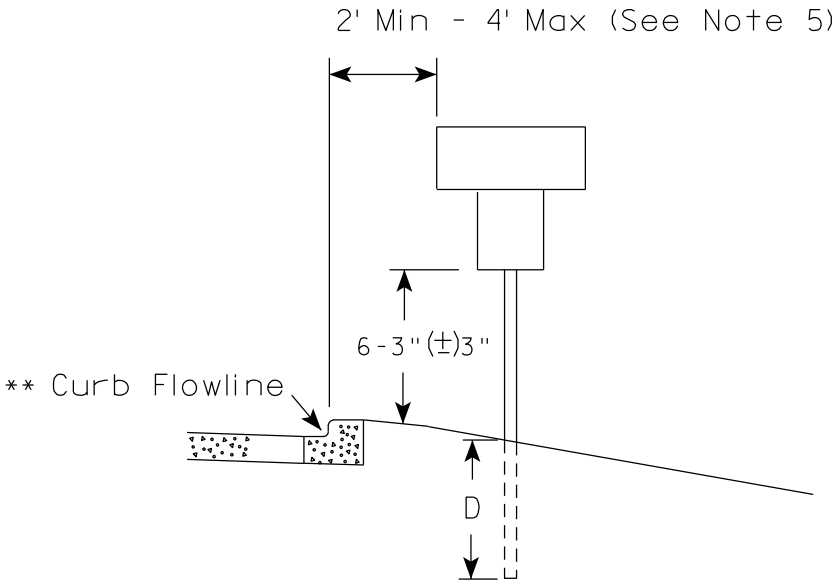
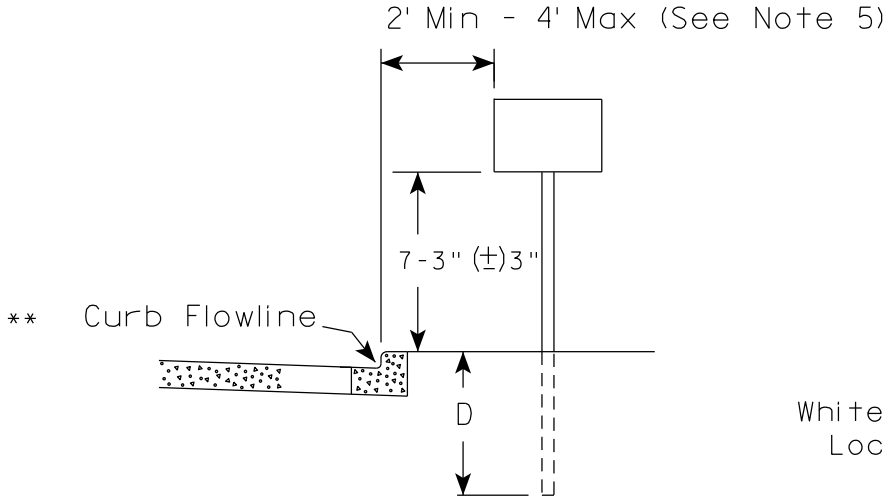
TRAFFIC CONTROL
SIGNING ON ROADWAYS
WITH LOOSE GRAVEL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

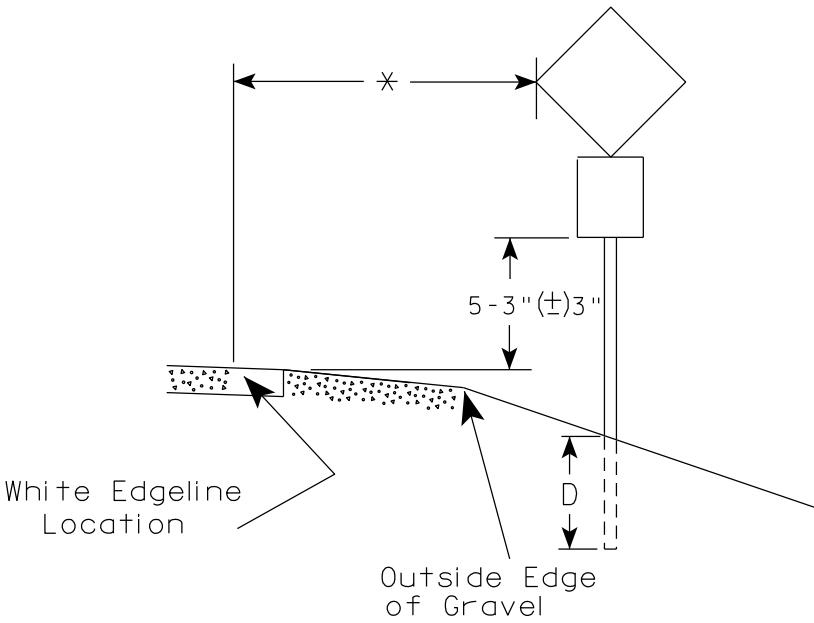
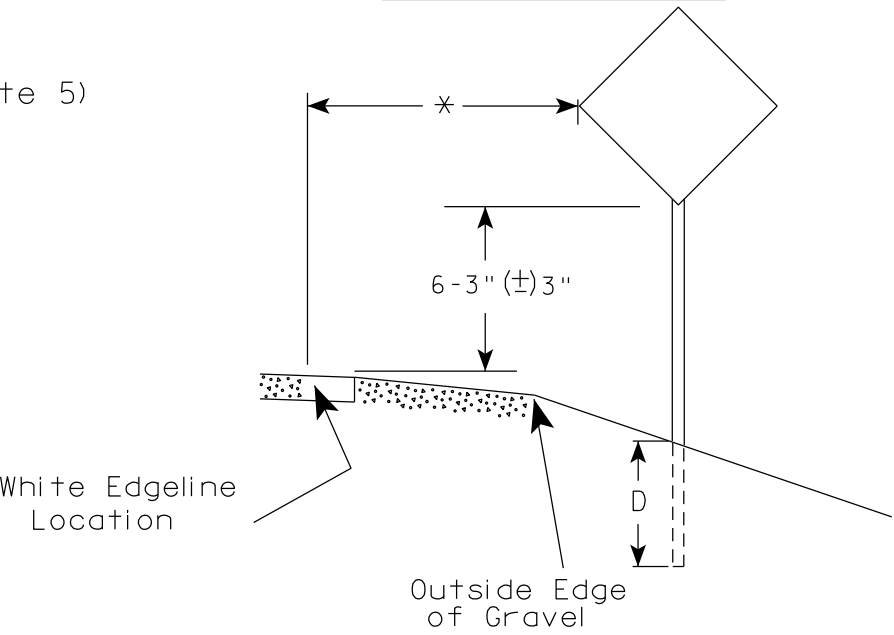
APPROVED
February 2021 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER 157

FHWA

URBAN AREA



RURAL AREA (See Note 2)



POST EMBEDMENT DEPTH

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

GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on or behind barrier wall, see A4-10 sign plate.
The Double Arrow sign (W12-1D) shall be mounted at a height of 2'-3" (±) 3". The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±) 3".
3. For expressways and freeways, mounting height is 7'- 3" (±) 3" or 6'-3" (±) 3" depending upon existence of a sub-sign.
4. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±) 3".
5. Offset distance shall be consistent with existing signs or consistent throughout length of project.
6. Folding signs shall be mounted at a height of 5'-3" (±) 3" or as directed by the Engineer.

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

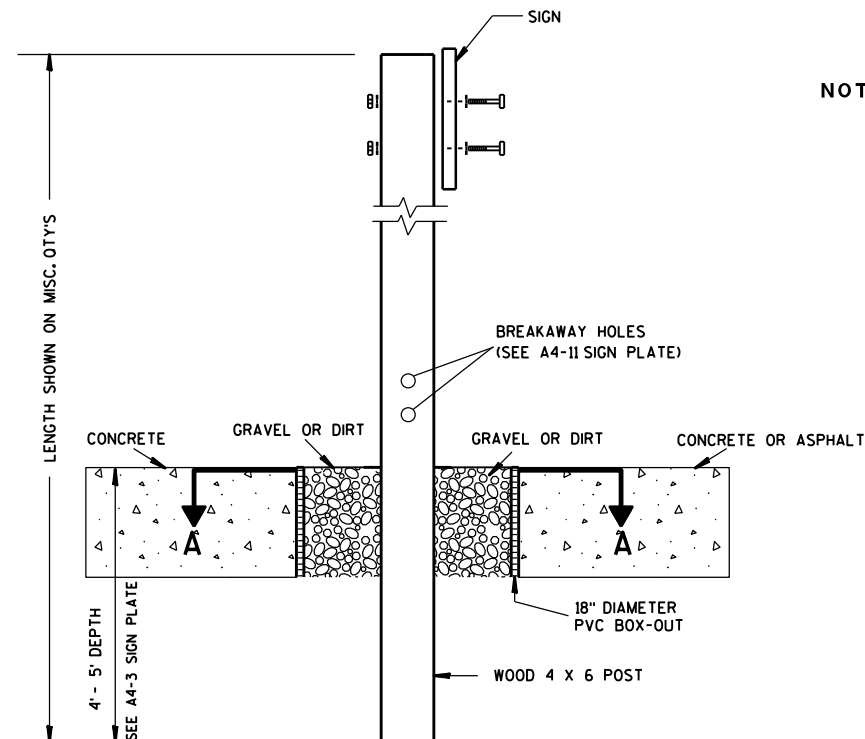
* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

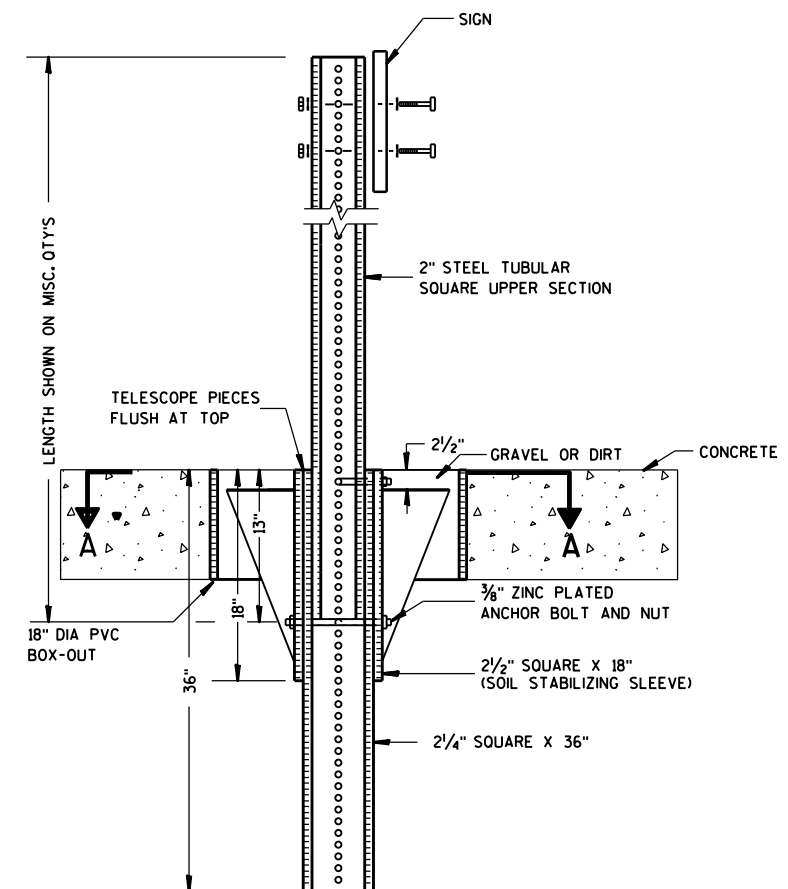
DATE 12/6/23 PLATE NO. A4-3.23



ELEVATION VIEW

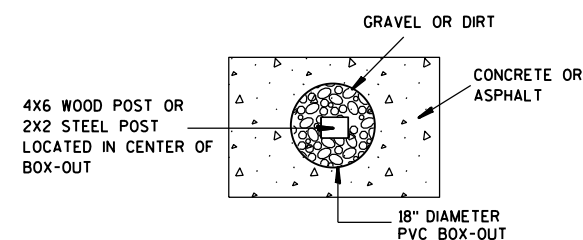
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST
BOX-OUTS
A4-3B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 1/27/14 PLAT 159 A4-3B.1

PROJECT NO:

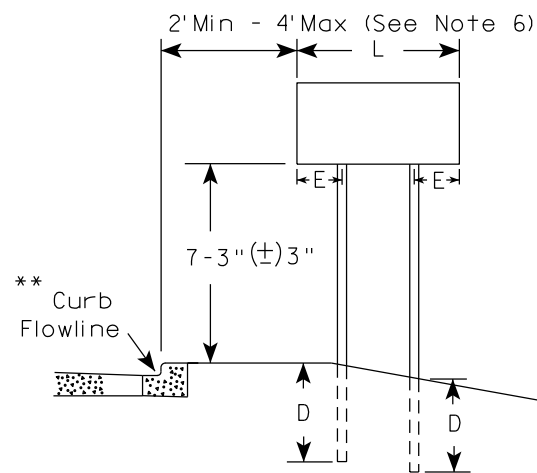
HWY:

COUNTY:

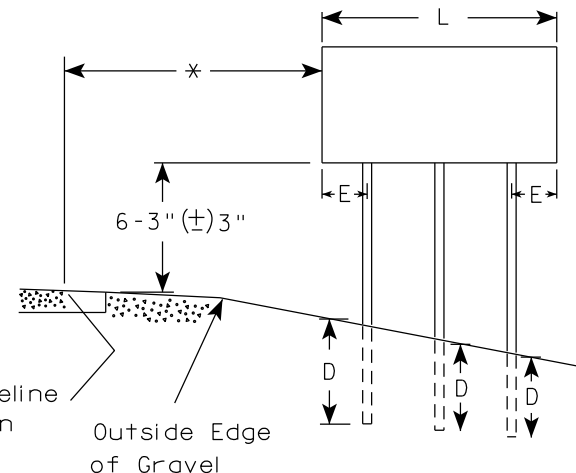
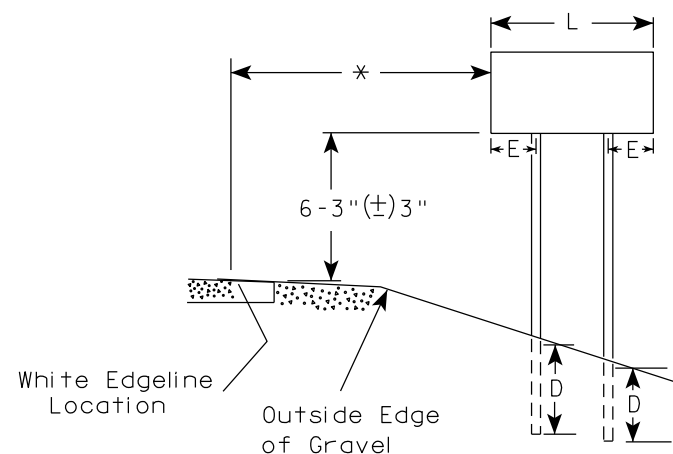
SHEET NO:

E

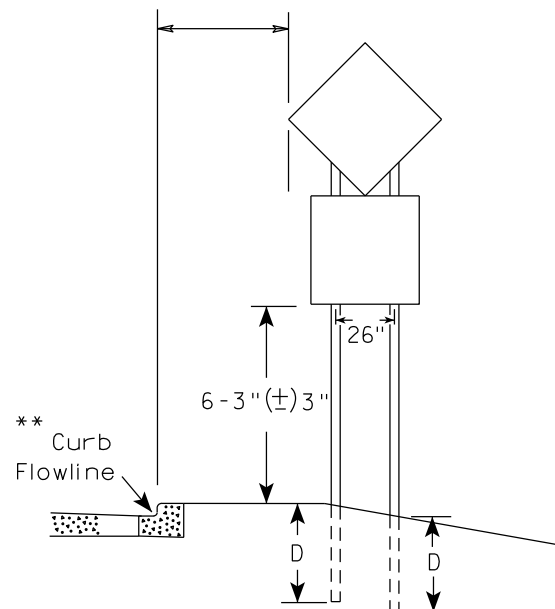
URBAN AREA



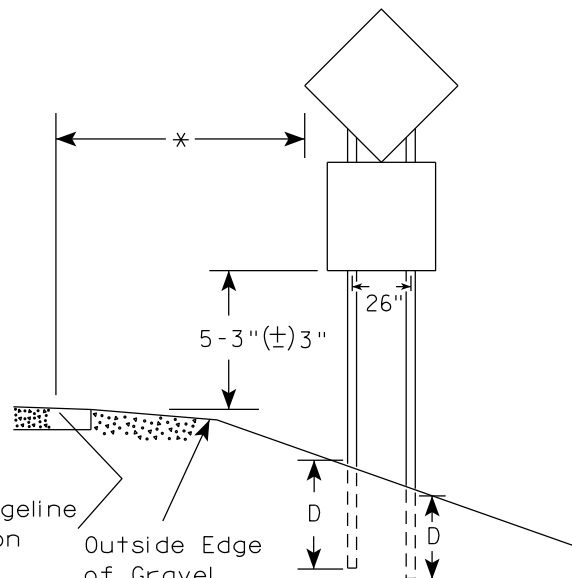
RURAL AREA (See Note 3)



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



48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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

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

POST EMBEDMENT DEPTH

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

TYPICAL INSTALLATION
OF TYPE II SIGNS
ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 12/6/23 PLATE NO. A4-4.16

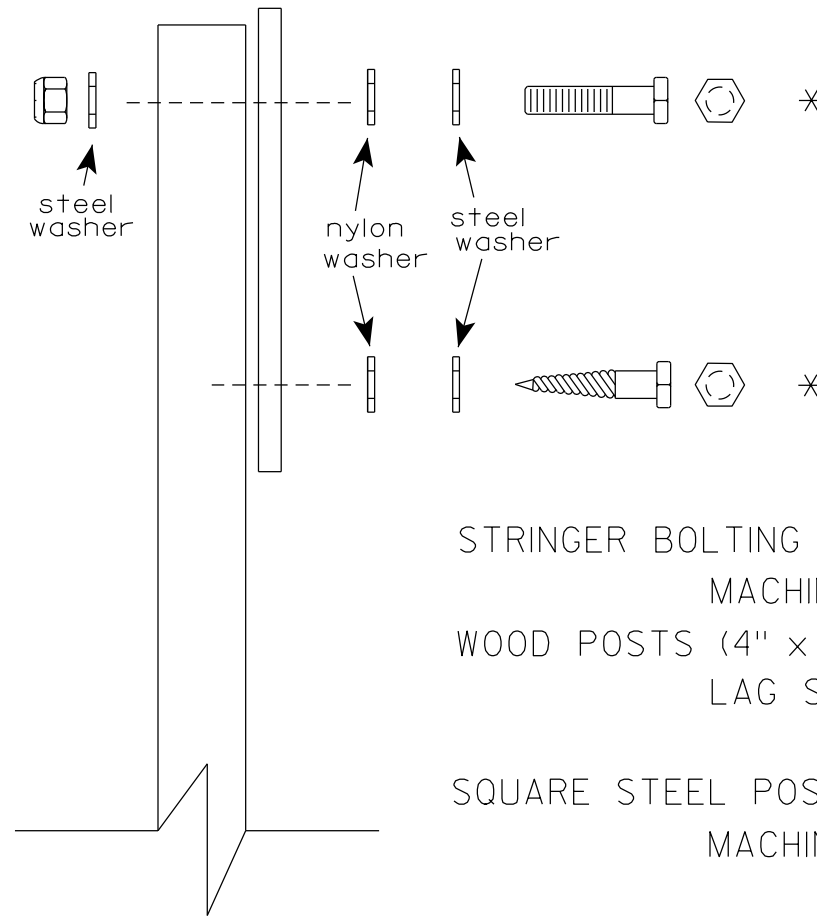
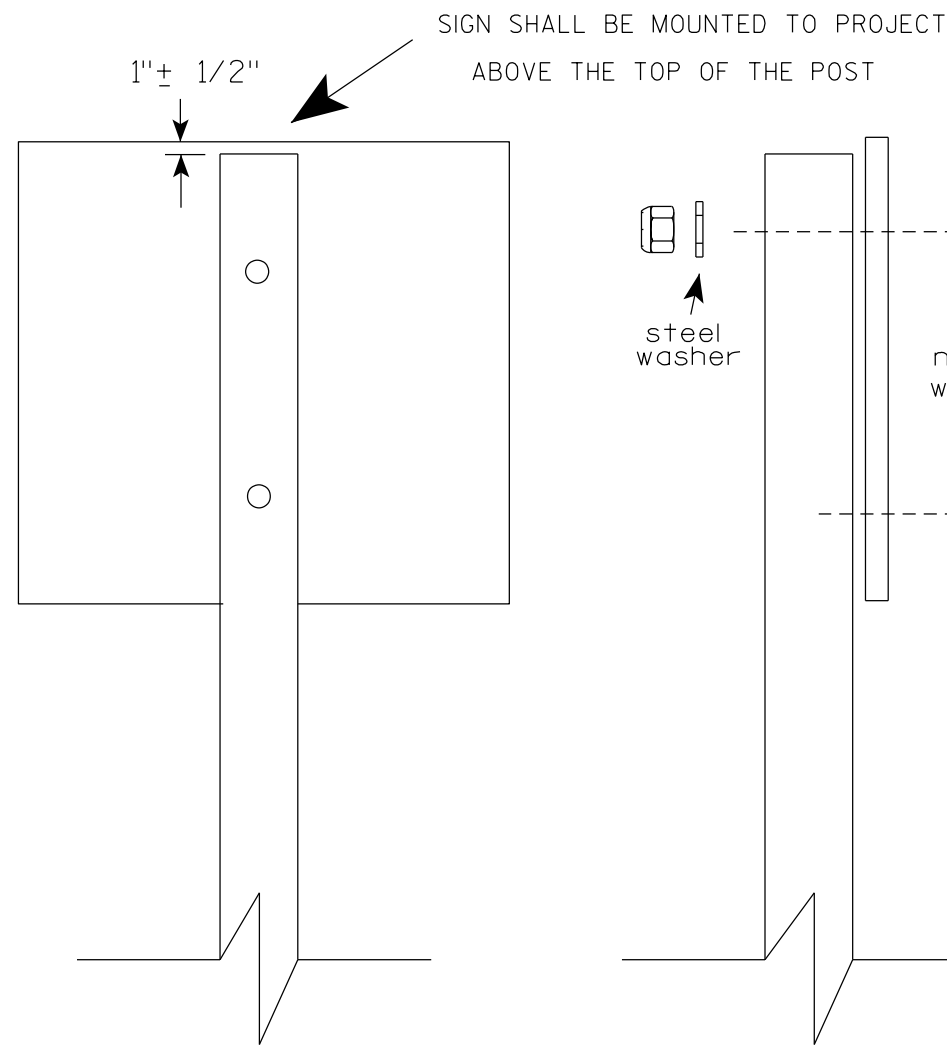
GENERAL NOTES

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

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

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

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



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

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

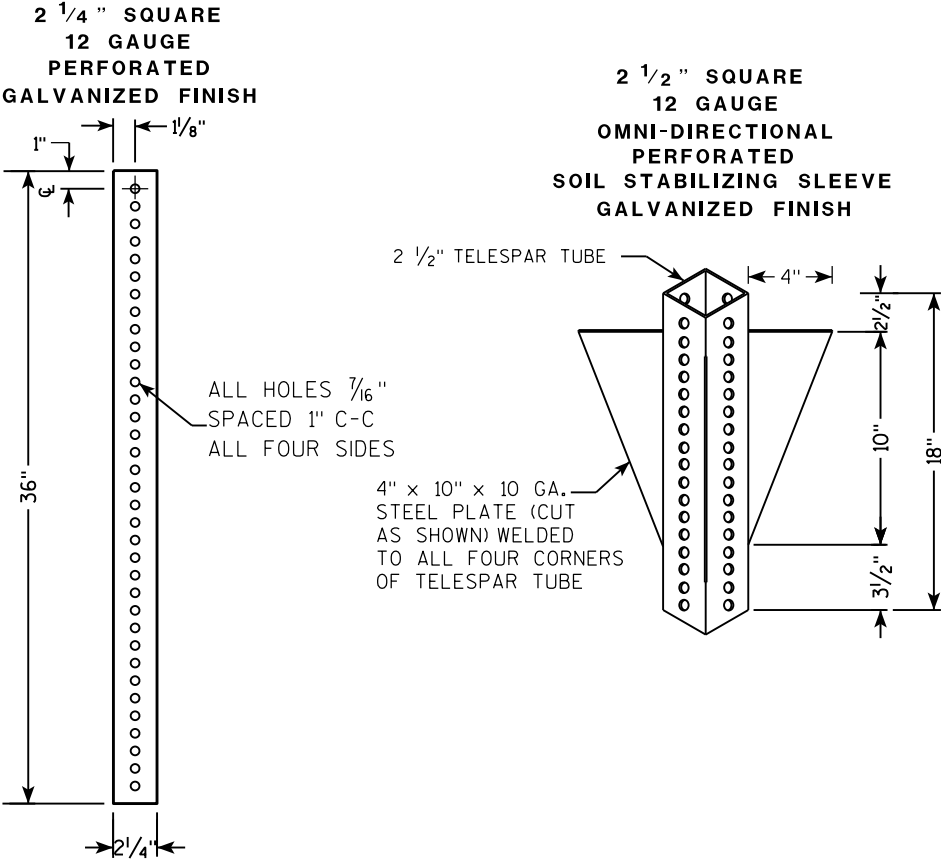
Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

- STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)
- MACHINE BOLTS - $\frac{5}{16}$ " X 1-3/4" Length w/ lock nuts
- WOOD POSTS (4" x 6")
- LAG SCREWS - $\frac{3}{8}$ " X 3" (NO STRINGERS ON BACK OF SIGN)
 $\frac{3}{8}$ " X 4" (STRINGERS ON BACK OF SIGN)
- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS - $\frac{3}{8}$ " X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
 $\frac{3}{8}$ " X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)
- RIVETS - $\frac{9}{32}$ " (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH
- WASHERS (ALL POSTS) -
- 1-1/4" O.D. X $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ " STEEL
 - 1-1/4" O.D. X $\frac{3}{8}$ " I.D. X .080 NYLON

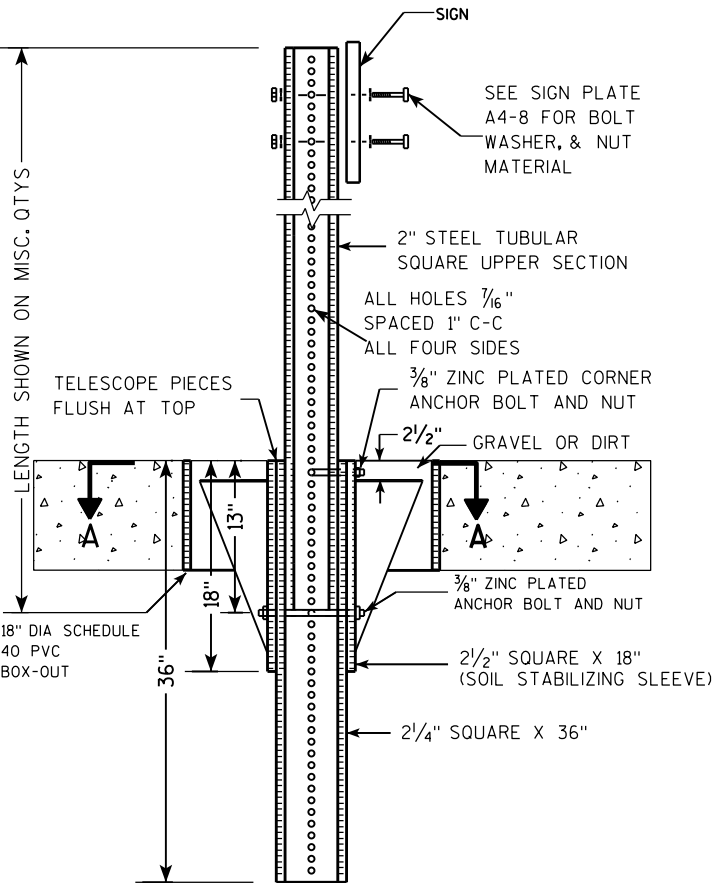
* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require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

ATTACHMENT OF SIGNS TO POSTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 4/1/2020	PLATE NO. A4-8.9

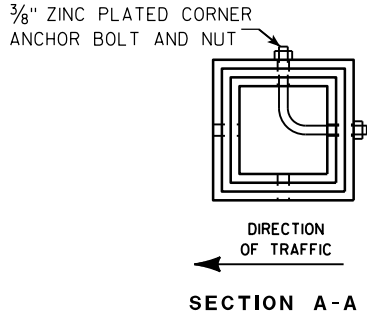
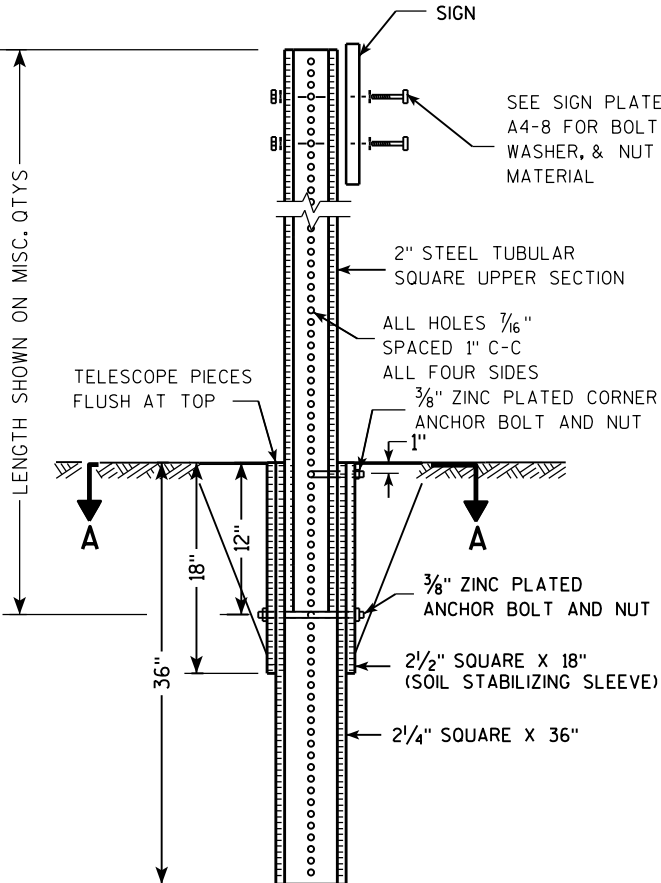
TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM



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



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



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

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

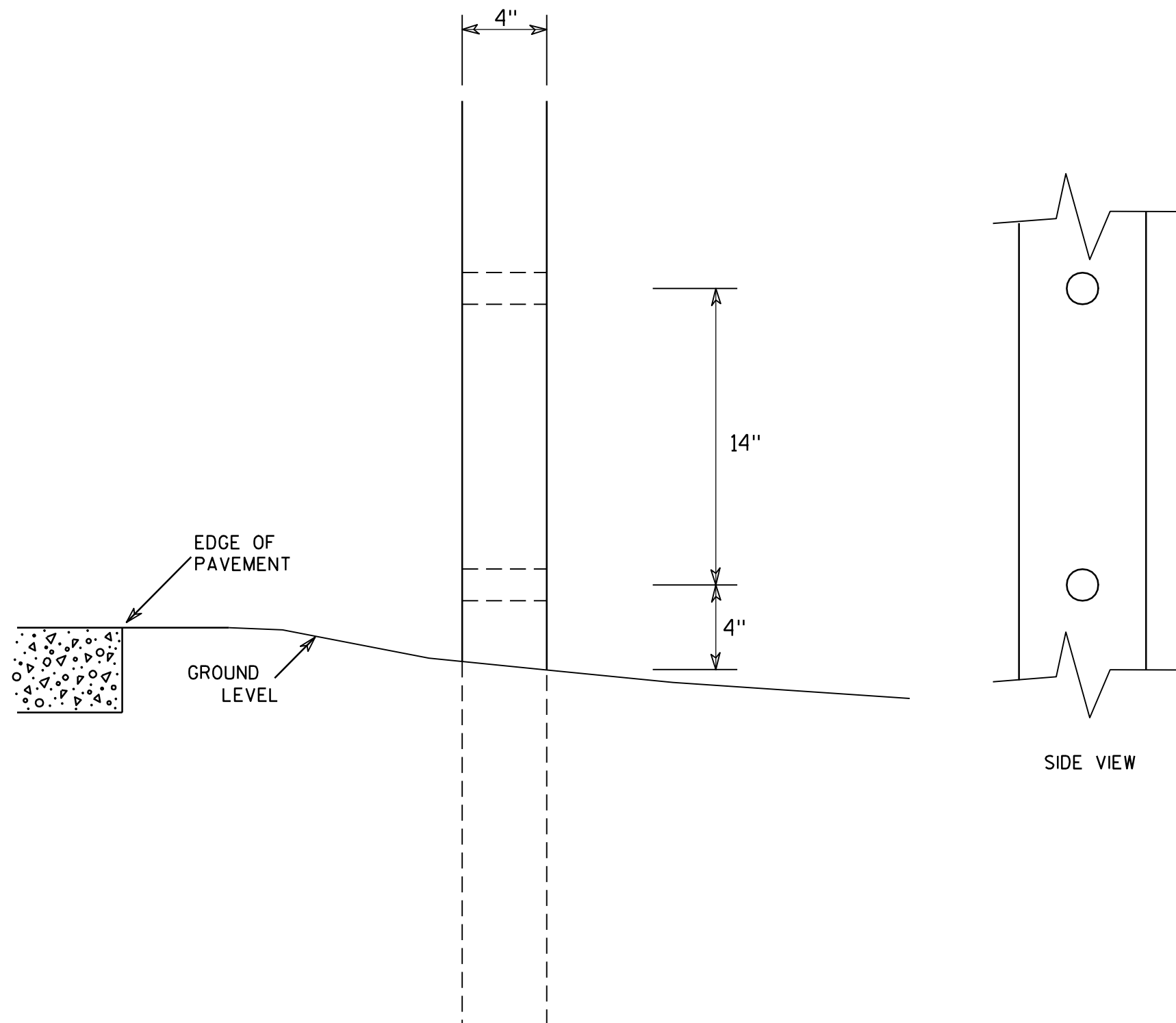
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 2/05/15 PLAT 162 14-9.9

7



GENERAL NOTES

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

7

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Chester J. Spang
for State Traffic Engineer

DATE 3/27/97

PLATE NO. A4-11.2

PROJECT NO:

HWY:

COUNTY:

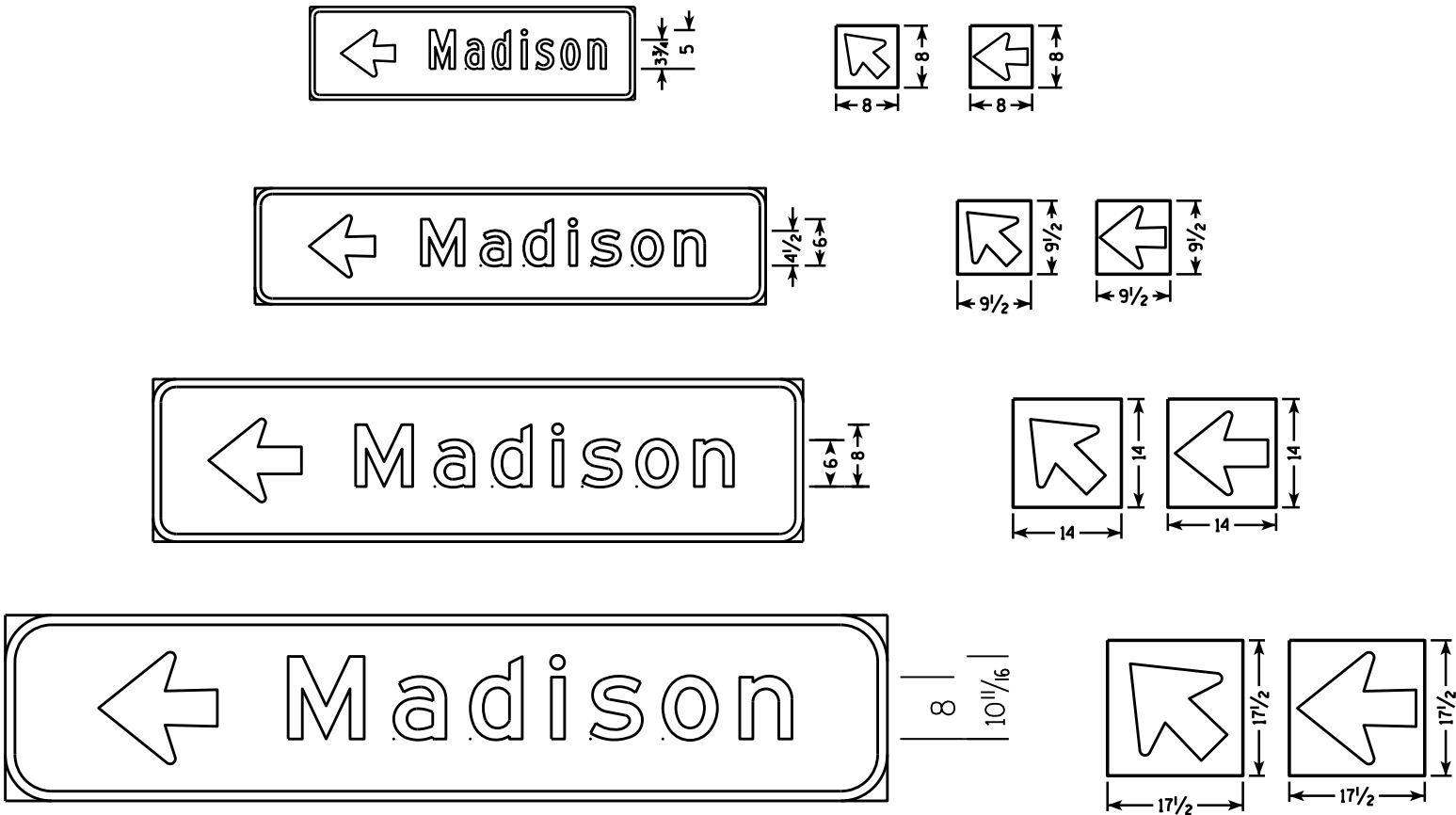
SHEET NO: 163

E

SIGN LAYOUT WITH VARIOUS SIZED MESSAGES

GENERAL NOTES

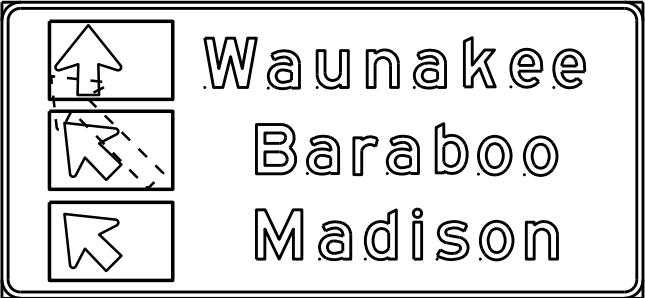
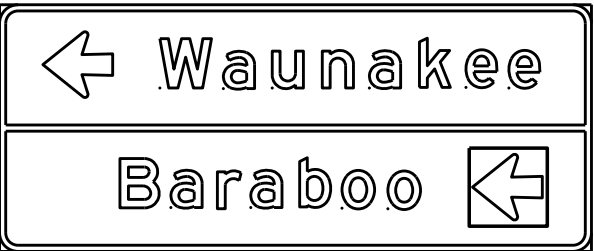
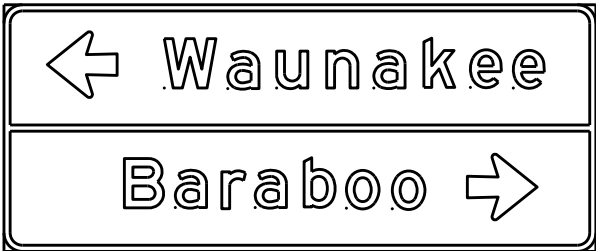
- 1. Materials shall conform to Standard Specification Section 637.
Base - Sheet Aluminum 0.040" Thickness
Sheeting - Orange Type F Reflective
Arrow - Black Non-Reflective
- 2. Arrow signs shall be fastened to permanent sign by either aluminum rivets or aluminum self-tapping sheet metal screws.
There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



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

BEFORE

AFTER



DESTINATION DIRECTIONAL ARROW FOR DETOUR SIGNS

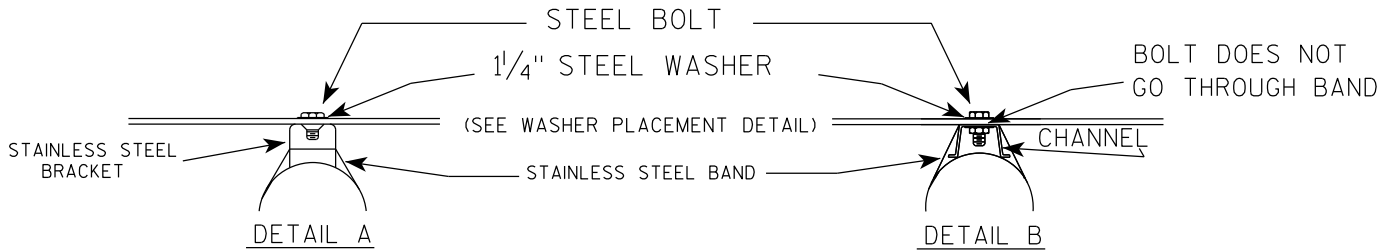
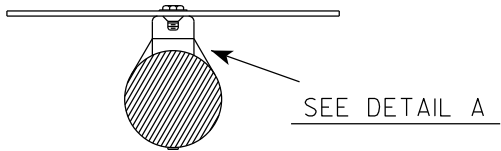
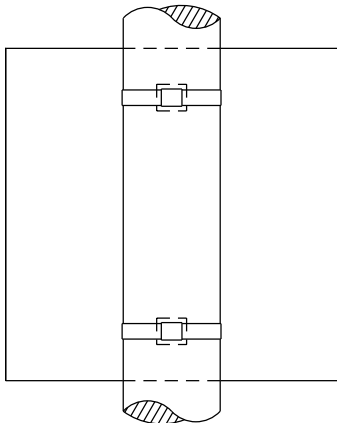
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

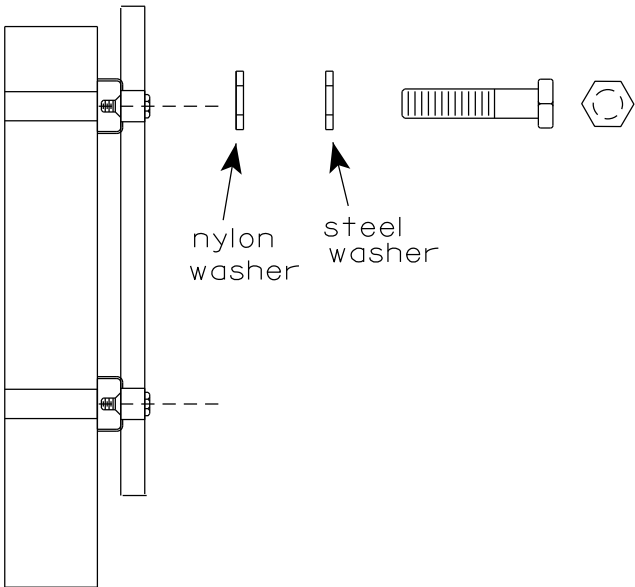
DATE 10/08/14 164 . A4-12.2

BANDING

SINGLE SIGN



WASHER PLACEMENT

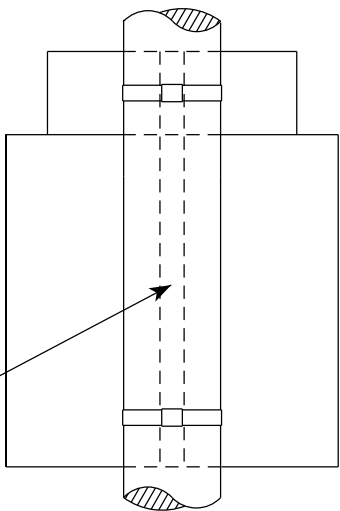


WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

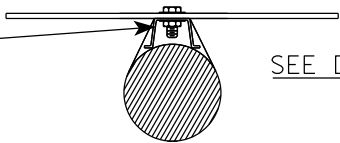
GENERAL NOTES

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

"J" ASSEMBLY



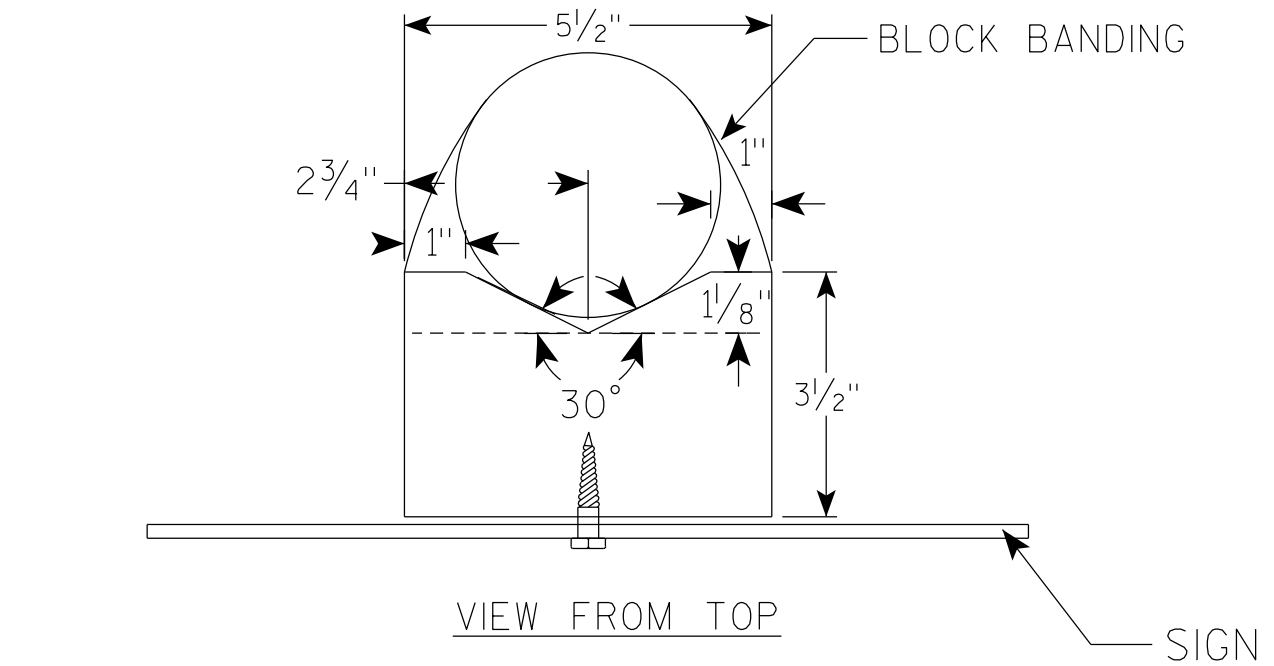
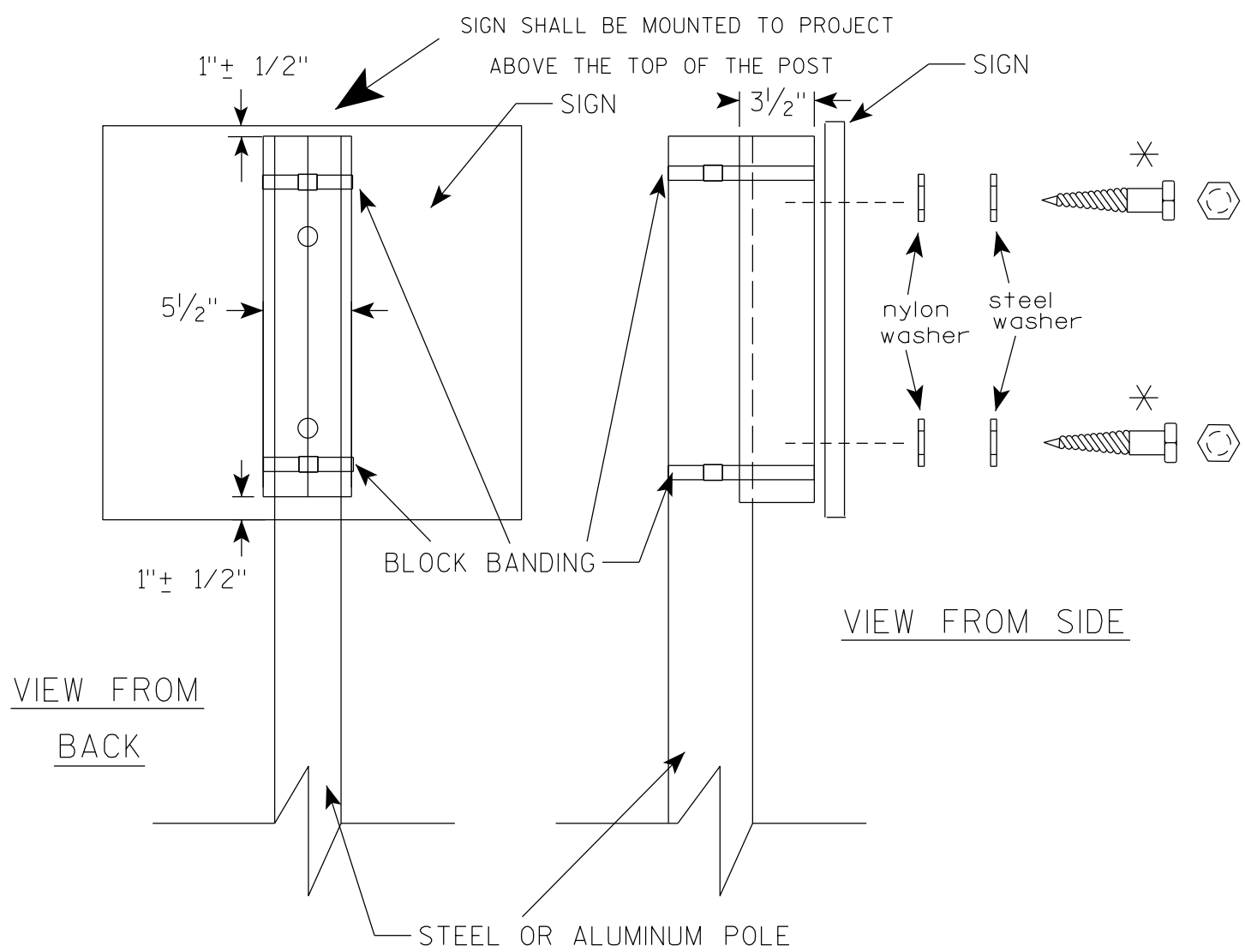
CHANNEL
SEE TYPICAL PANEL
INSTALLATION SHEET



STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 6/10/19 PLATE NO. A5-9.4

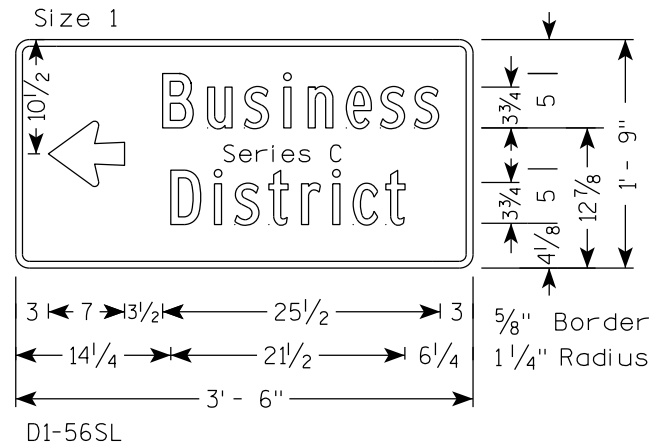
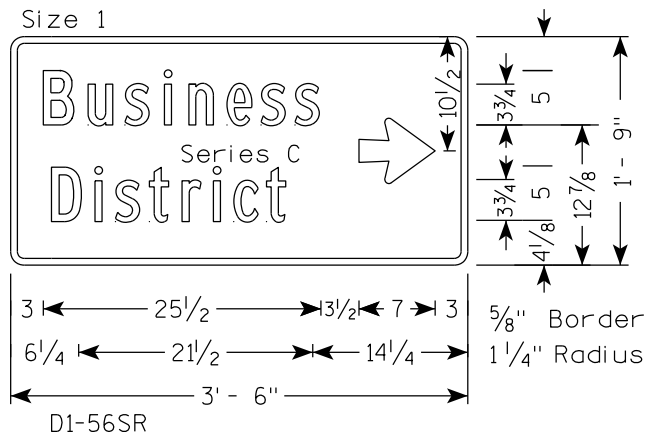


GENERAL NOTES

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

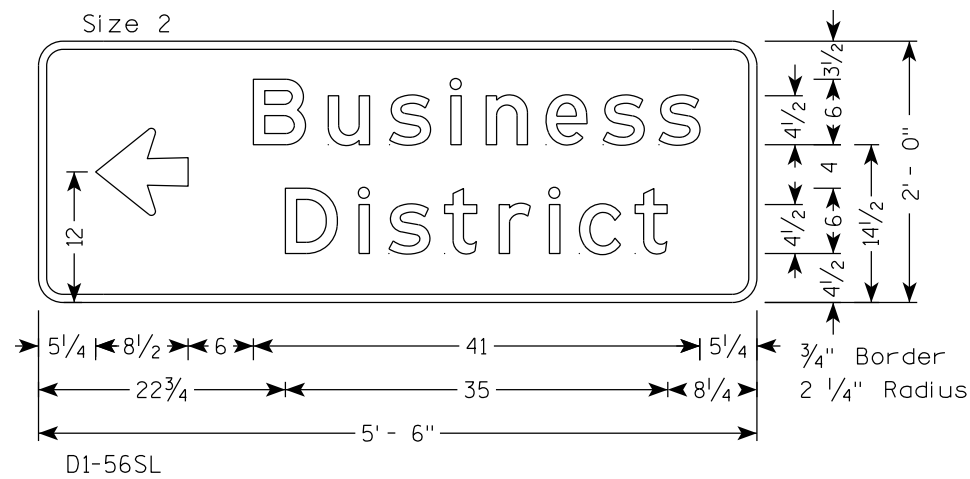
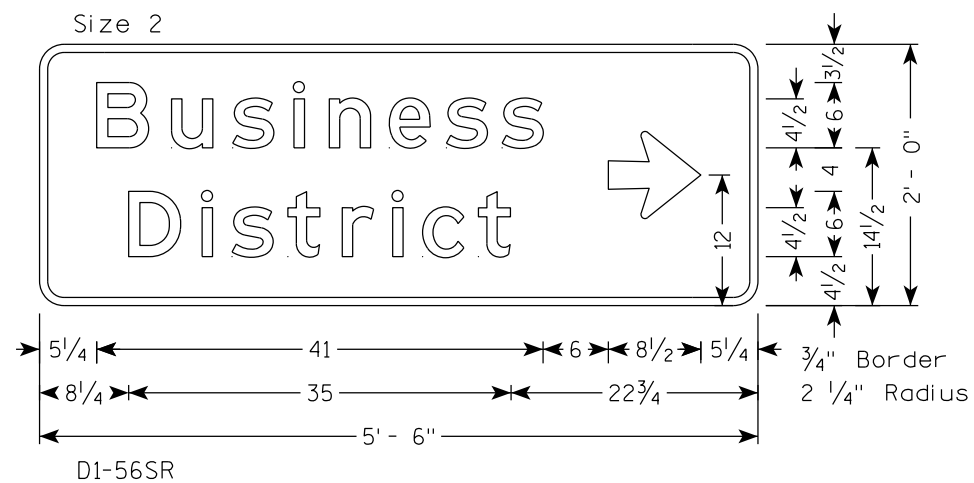
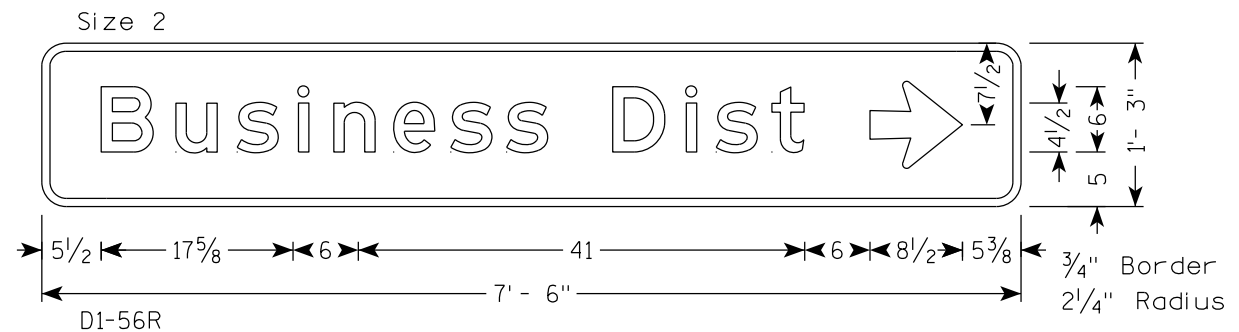
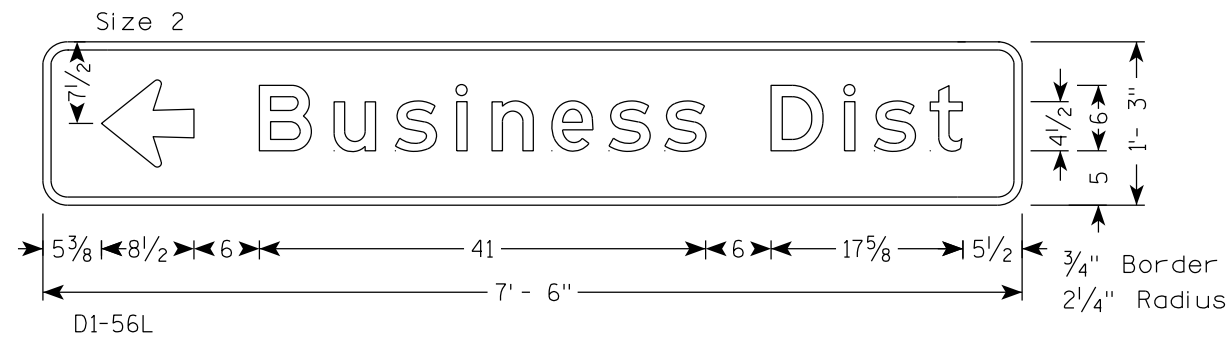
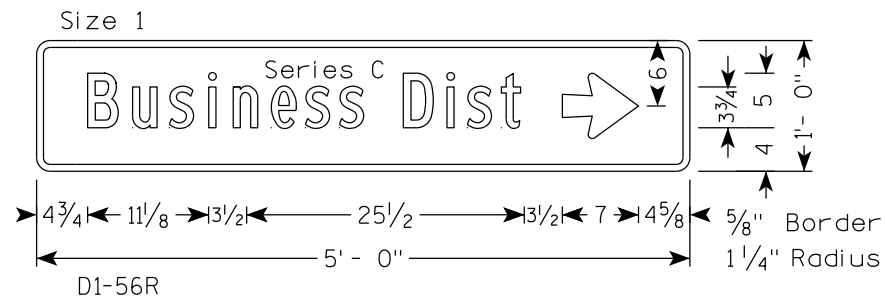
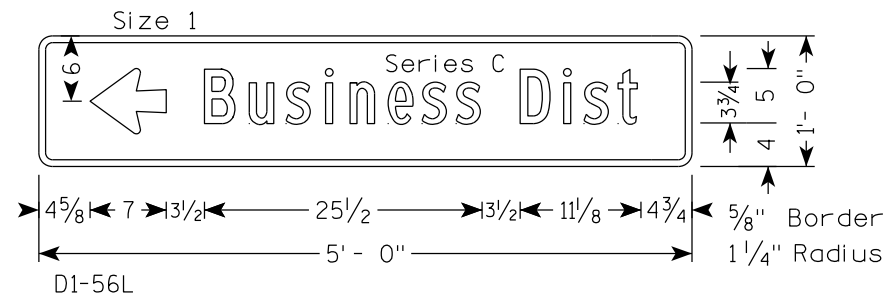
✱ LAG BOLTS SHALL BE $\frac{3}{8}$ " X $2\frac{1}{2}$ "

BLOCK BANDING DETAIL (V-BLOCK OPTION)	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 4/19/2022	PLATE NO. A5-10.3



NOTES

1. Sign is Type II - Type H Reflective
2. Color:
Background - Green
Message - White
3. Message Series - E except as noted



TYPICAL STANDARD
D1-56L & R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 1/14/21 PLATE NO. D1-56.2

PROJECT NO:

HWY:

COUNTY:

SHEET NO: 167

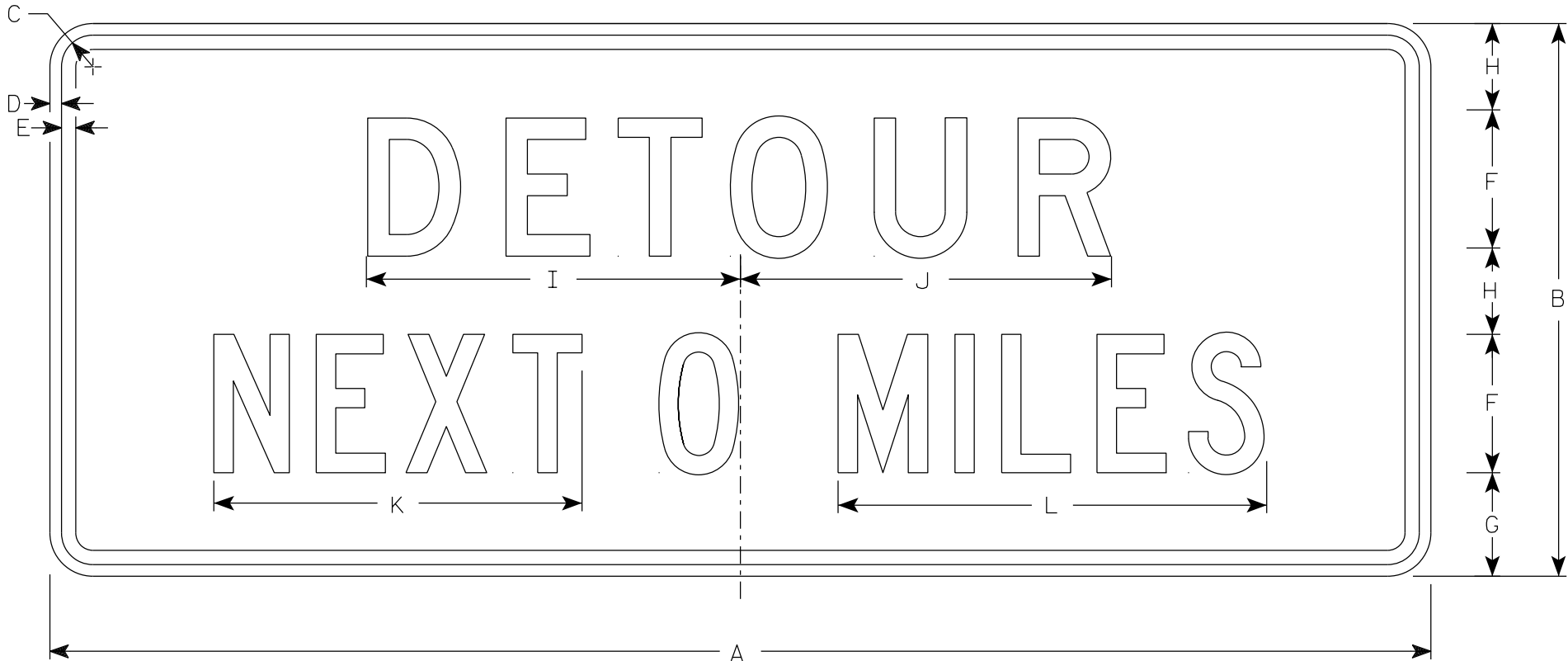
E

7

7

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
Background - Orange
Message - Black
- 3. Message Series - Line 1 is D and Line 2 is C
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 5. Round distance to nearest whole Mile and substitute appropriate numerals and optically adjust spacing to achieve proper balance



G20-51

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	60	24	1 7⁄8	1⁄2	5⁄8	6	4 1⁄2	3 3⁄4	16 1⁄4	16 1⁄8	16	18 5⁄8															10.0
2M	60	24	1 7⁄8	1⁄2	5⁄8	6	4 1⁄2	3 3⁄4	16 1⁄4	16 1⁄8	16	18 5⁄8															10.0
3	60	24	1 7⁄8	1⁄2	5⁄8	6	4 1⁄2	3 3⁄4	16 1⁄4	16 1⁄8	16	18 5⁄8															10.0
4	60	24	1 7⁄8	1⁄2	5⁄8	6	4 1⁄2	3 3⁄4	16 1⁄4	16 1⁄8	16	18 5⁄8															10.0
5	60	24	1 7⁄8	1⁄2	5⁄8	6	4 1⁄2	3 3⁄4	16 1⁄4	16 1⁄8	16	18 5⁄8															10.0

STANDARD SIGN

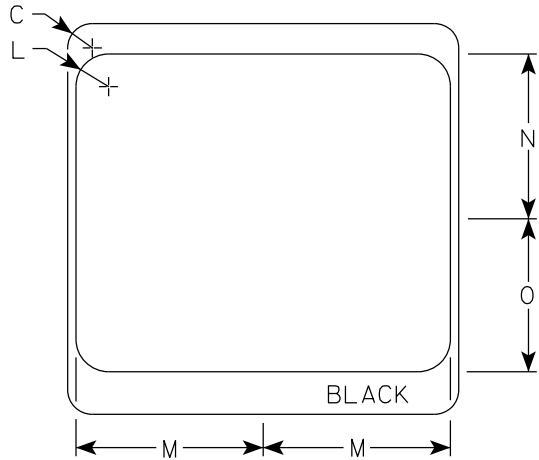
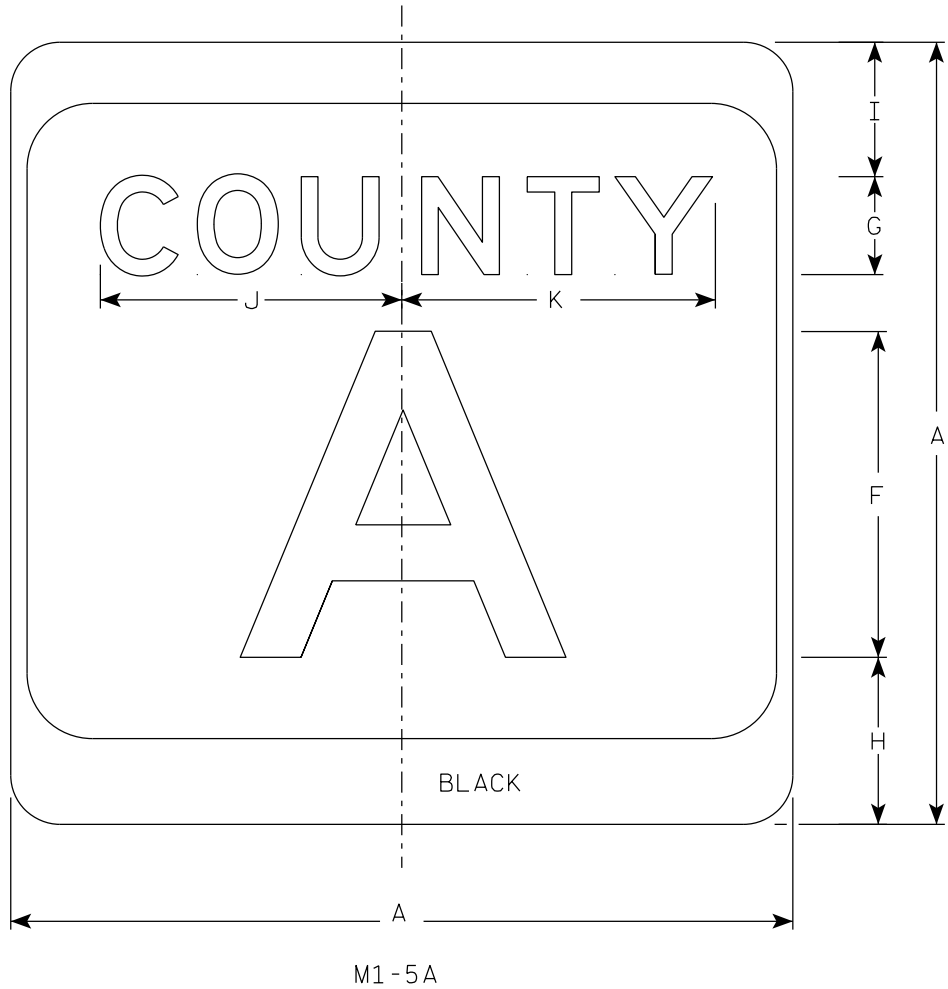
G20-51

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
State Traffic Engineer

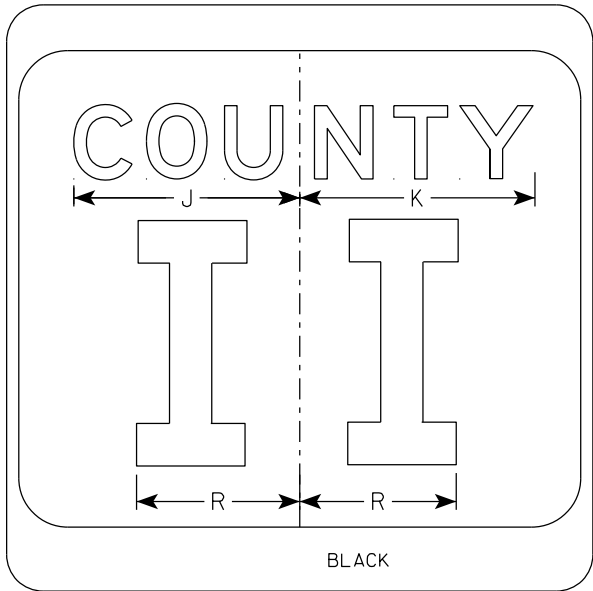
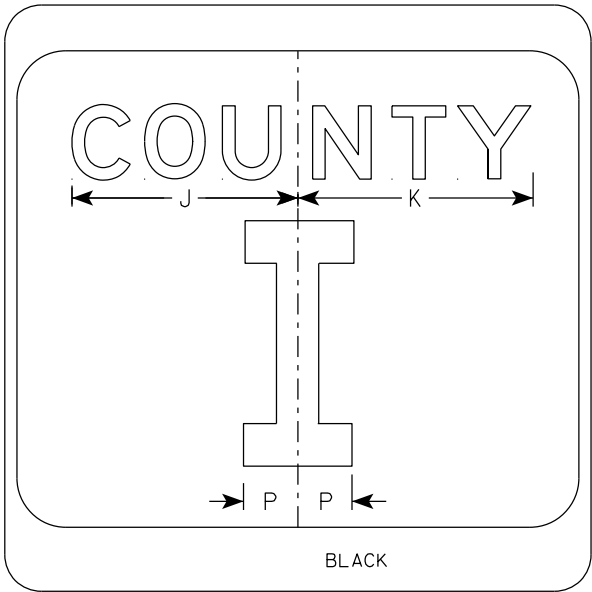
DATE 1/26/2023 PLATE NO. G20-51.3

7



NOTES

1. Sign is Type II - Type H Reflective
2. Color:
Background - White & Black
Message - Black
3. Message Series - see Note 4
4. Message Series E for 1 letter.
Message Series D for 2 letters unless
message is too big then Series C.
Message Series C for 3 letters unless
message is too big then Series B.
5. Substitute appropriate letters & optically
center to achieve proper balance.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 5/8									4.0
2M	24		1 1/2			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 5/8									4.0
3	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
4	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
5	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0

CTH MARKER

M1-5A FOR ASSEMBLIES

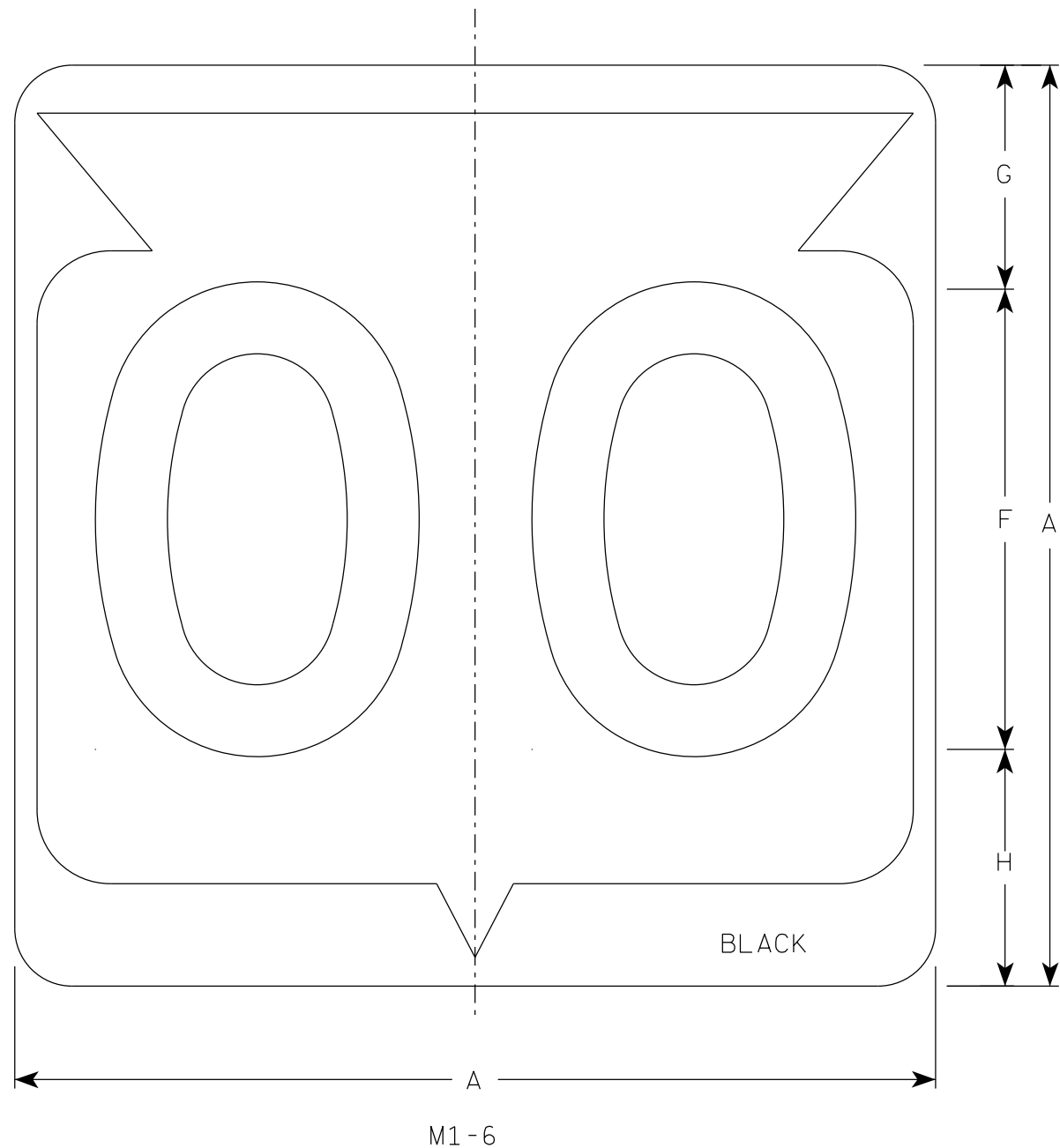
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/8/2022 PLATE NO. M1-5A.9

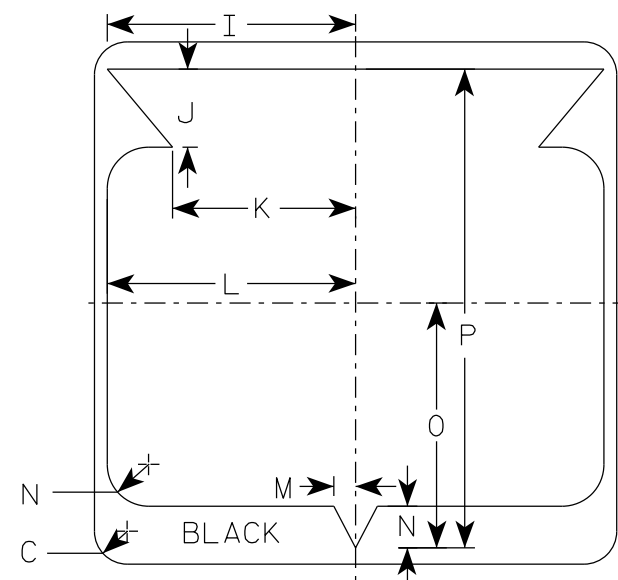
7

7



NOTES

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



7

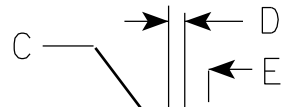
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	v	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0
2M	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0
3	36		2 1/4			18	8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

STATE ROUTE MARKER
M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/8/2022 PLATE NO. M1-6.11



- NOTES
- 1. Sign is Type II - Type H Reflective
 - 2. Color:
 - Background - White except as noted
 - Message - Blue
 - 3. Message Series - Rock River Trail - 1½" UC Helvetica Black
Scenic and Historic Trail - 1⅓" UC Helvetica Inserat Roman Medium
 - 4. Contact WisDOT with any questions.

7

7

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

STANDARD SIGN

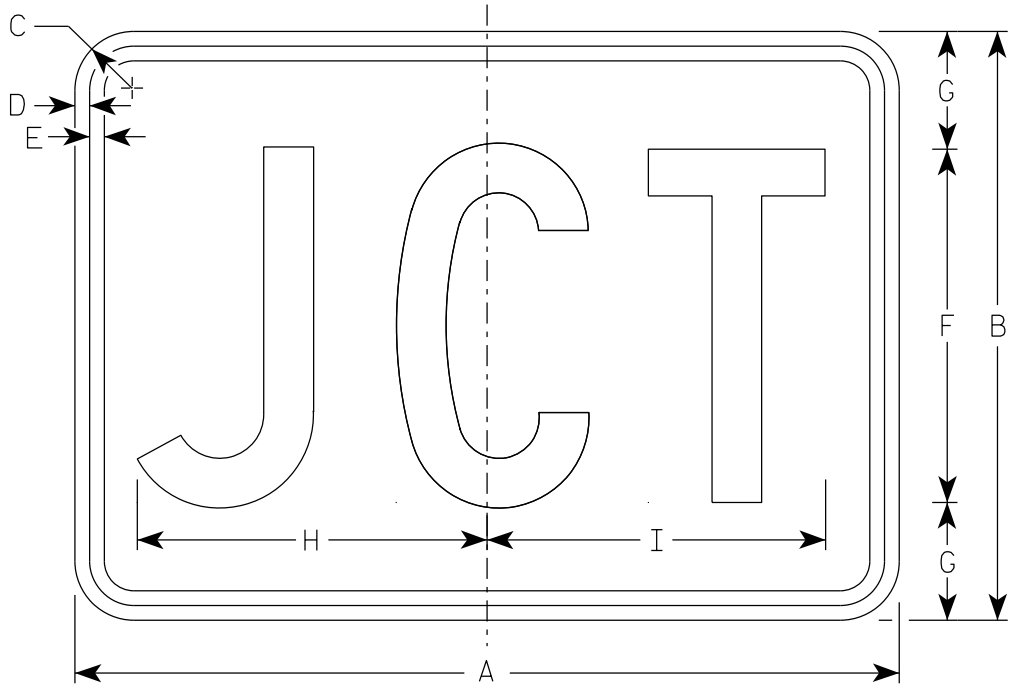
M1-92

WISCONSIN DEPT OF TRANSPORTATION

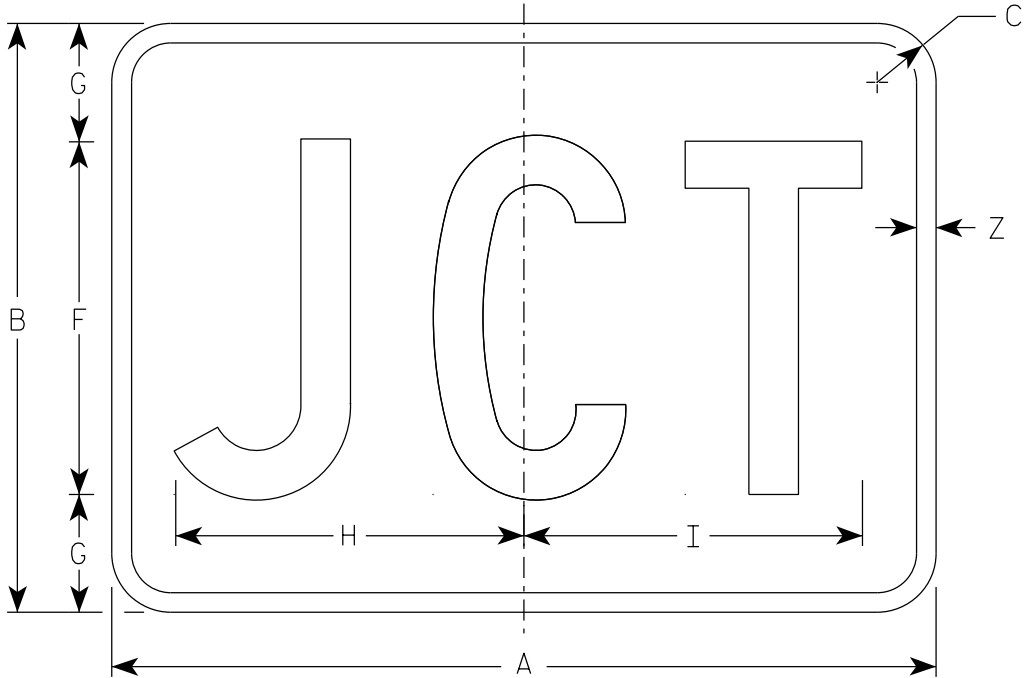
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 2/8/2023 PLATE NO. M1-92.4

7



M2-1
MM2-1
MP2-1



MB2-1
MK2-1
MN2-1
MR2-1

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
 - Background - See note 5
 - Message - See note 5
- 3. Message Series - C
- 4. M2-1 Background - White
Message - Black
- MB2-1 Background - Blue
Message - White
- MK2-1 Background - Green
Message - White
- MM2-1 Background - White
Message - Green
- MN2-1 Background - Brown
Message - White
- MP2-1 Background - White
Message - Blue
- MR2-1 Background - Brown
Message - Yellow

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	21	15	1 1/2	3/8	3/8	9	3	8 7/8	8 5/8																	1/2	2.20
2M	21	15	1 1/2	3/8	3/8	9	3	8 7/8	8 5/8																	1/2	2.20
3	30	21	1 1/2	3/8	3/8	13	4	12 7/8	12 3/8																	1/2	4.40
4	30	21	1 1/2	3/8	3/8	13	4	12 7/8	12 3/8																	1/2	4.40
5	30	21	1 1/2	3/8	3/8	13	4	12 7/8	12 3/8																	1/2	4.40

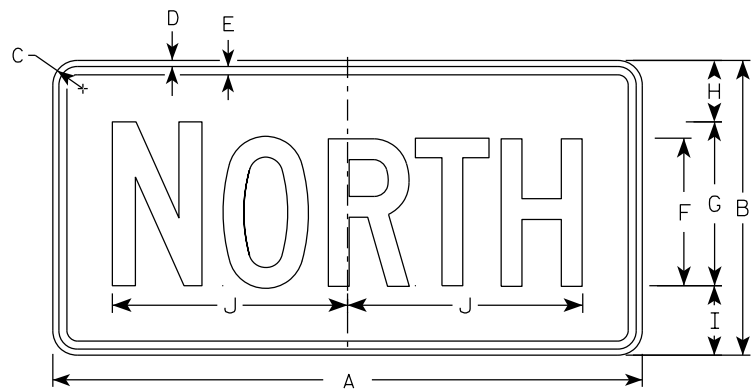
PROJECT NO:

HWY:

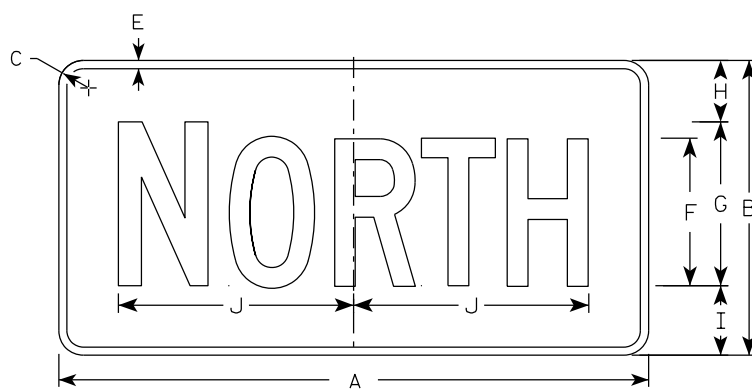
COUNTY:

SHEET NO: 172

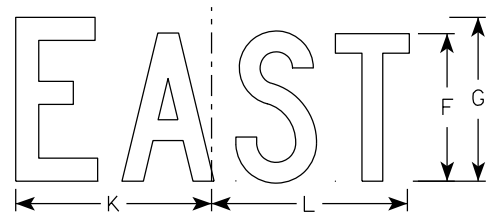
E



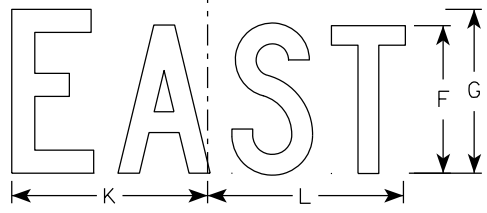
M3-1
MM3-1
MP3-1



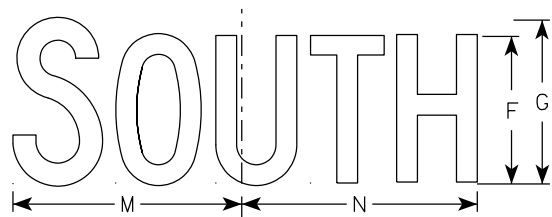
MB3-1
MK3-1
MN3-1



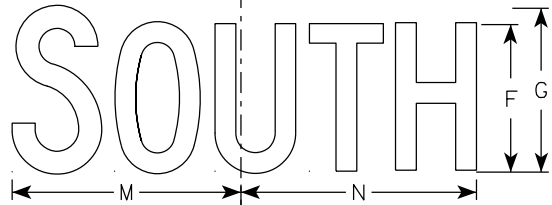
M3-2
MM3-2
MP3-2



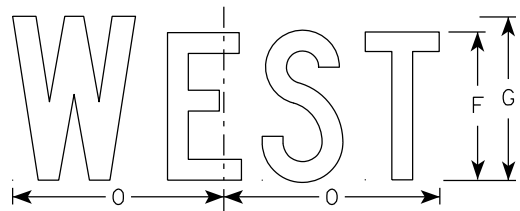
MB3-2
MK3-2
MN3-2



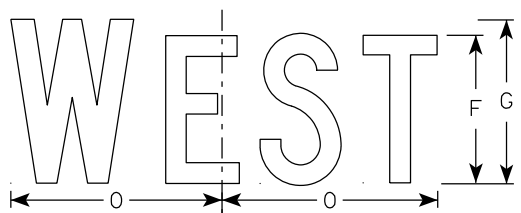
M3-3
MM3-3
MP3-3



MB3-3
MK3-3
MN3-3



M3-4
MM3-4
MP3-4



MB3-4
MK3-4
MN3-4

NOTES

- All Signs Type II - Type H Reflective
- Color:
 - Background - See note 5
 - Message - See note 5
- Message Series - C
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- M3-1 thru M3-4 Background - White
Message - Black
MB3-1 thru MB3-4 Background - Blue
Message - White
MK3-1 thru MK3-4 Background - Green
Message - White
MM3-1 thru MM3-4 Background - White
Message - Green
MN3-1 thru MN3-4 Background - Brown
Message - White
MP3-1 thru MP3-4 Background - White
Message - Blue
- Note the first letter of each direction is larger than the remainder of the message.

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

STANDARD SIGNS M3-1 THRU M3-4 SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

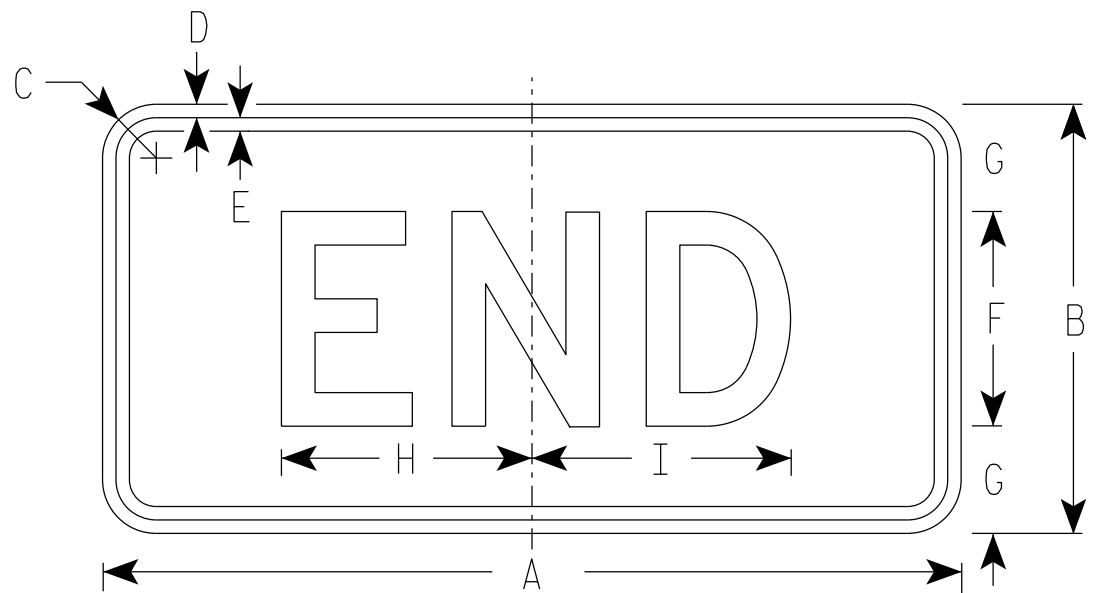
DATE 2/8/2023 PLATE NO. M3-1.15

PROJECT NO: HWY: COUNTY: SHEET NO: 173 E

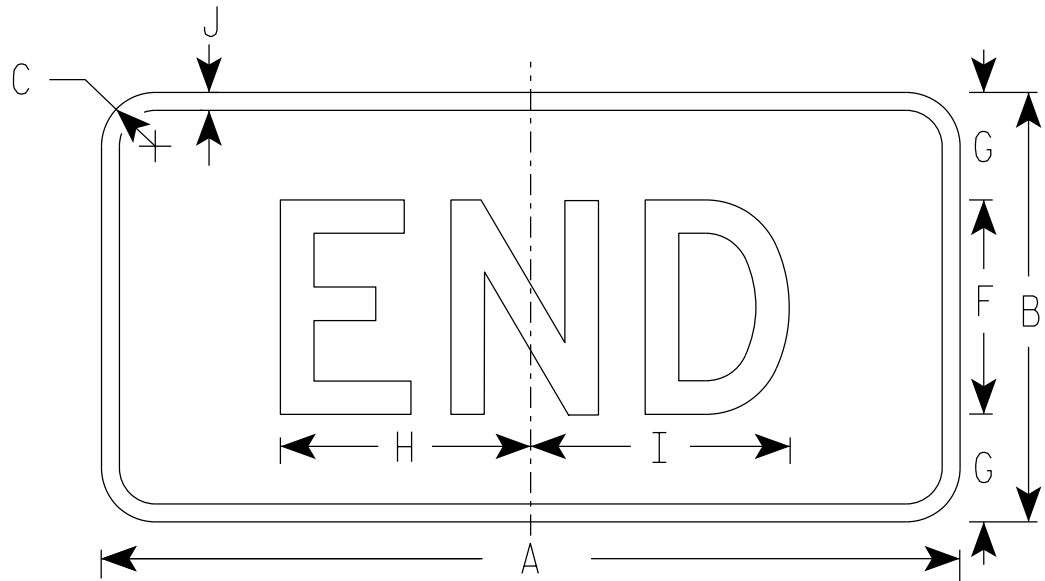
FILE NAME : C:\CAEfiles\Projects\tr_stdplate-M31.dgn PLOT DATE : 8-FEB 2023 11:00 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : \$\$.....plotscale.....\$\$WISDOT/CADDS SHEET 42

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
 - Background - See note 5
 - Message - See note 5
- 3. Message Series - D
- 4. M4-6 Background - White
 Message - Black
- MB4-6 Background - Blue
 Message - White
- MK4-6 Background - Green
 Message - White
- MM4-6 Background - White
 Message - Green
- MN4-6 Background - Brown
 Message - White
- MP4-6 Background - White
 Message - Blue
- MR4-6 Background - Brown
 Message - Yellow



M4-6
MM4-6
MP4-6



MB4-6
MK4-6
MN4-6
MR4-6

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

STANDARD SIGN

M4-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 2/8/2023 PLATE NO. M4-7.11

PROJECT NO:

HWY:

COUNTY:

SHEET NO: 174

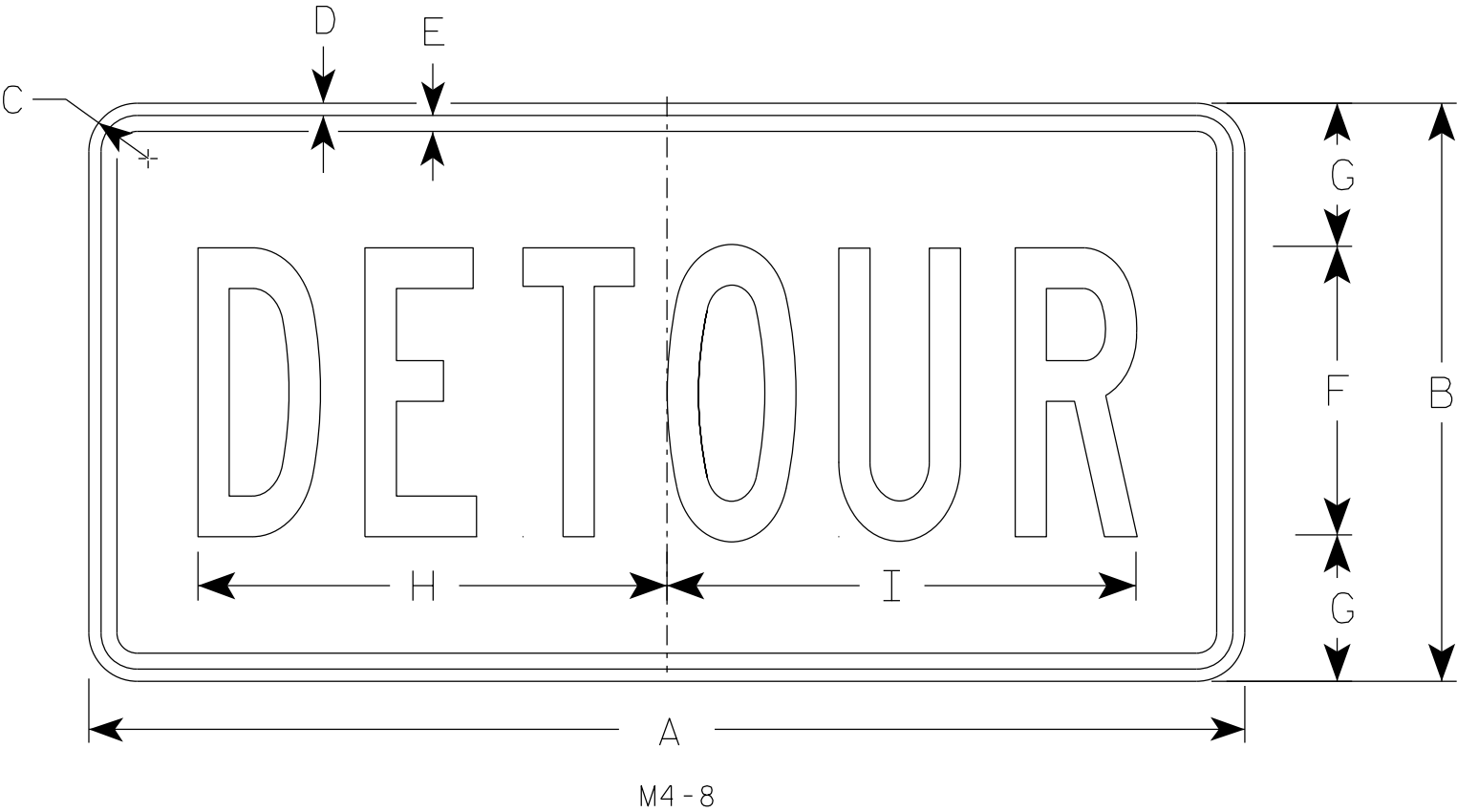
E

7

7

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
Background - Orange
Message - Black
- 3. Message Series - B
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



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

STANDARD SIGN

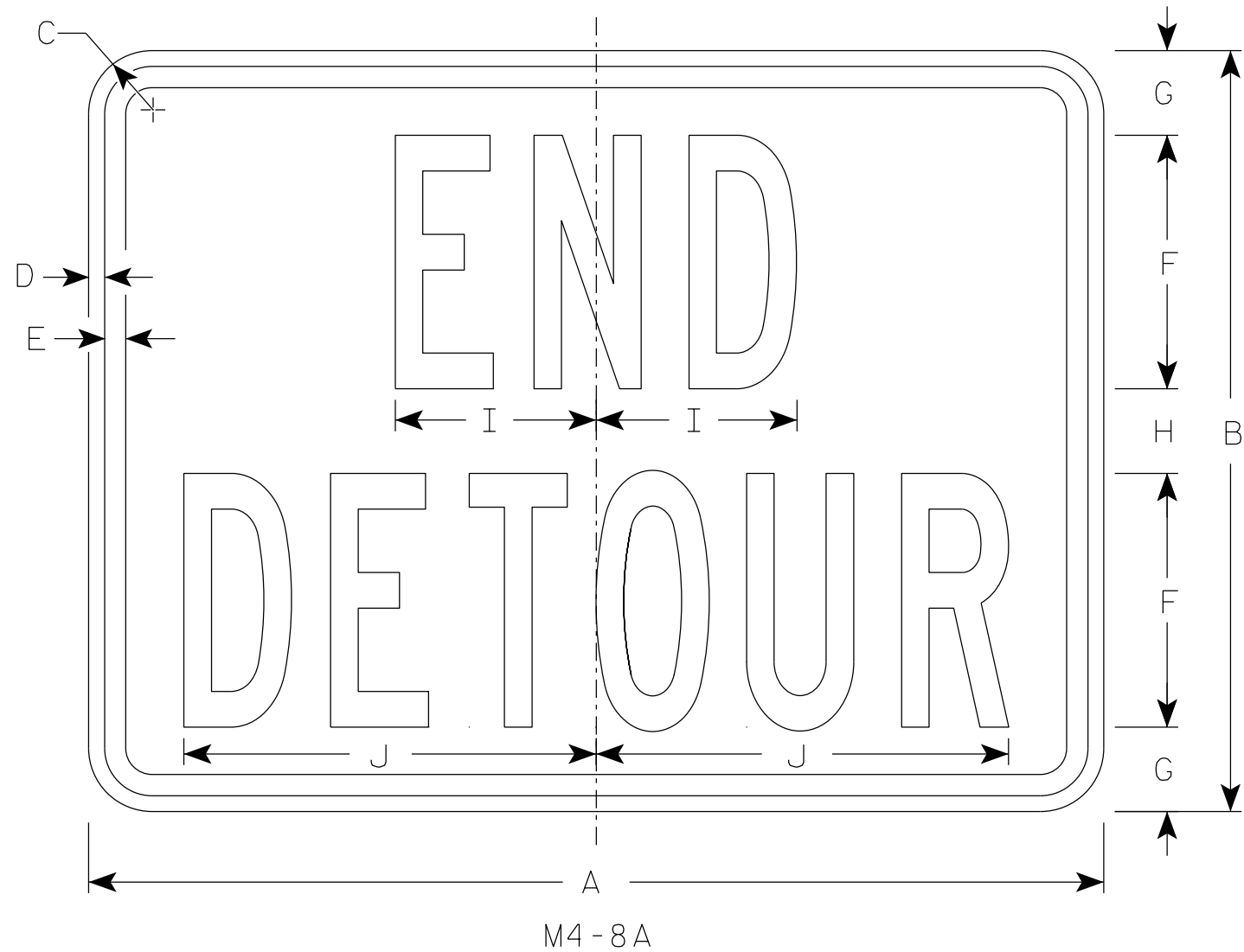
M4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 2/9/2023 PLATE NO. M4-8.4

7



NOTES

1. Sign is Type II - Type F Reflective
2. Color:
Background - Orange
Message - Black
3. Message Series - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	v	W	X	Y	Z	Area sq. ft.
1																											
2	24	18	1 1/2	3/8	1/2	6	2	2	4 3/4	9 3/4																	3.0
2M	24	18	1 1/2	3/8	1/2	6	2	2	4 3/4	9 3/4																	3.0
3	30	24	1 1/2	3/8	1/2	8	2 1/2	3	6 3/4	13																	5.0
4	30	24	1 1/2	3/8	1/2	8	2 1/2	3	6 3/4	13																	5.0
5	30	24	1 1/2	3/8	1/2	8	2 1/2	3	6 3/4	13																	5.0

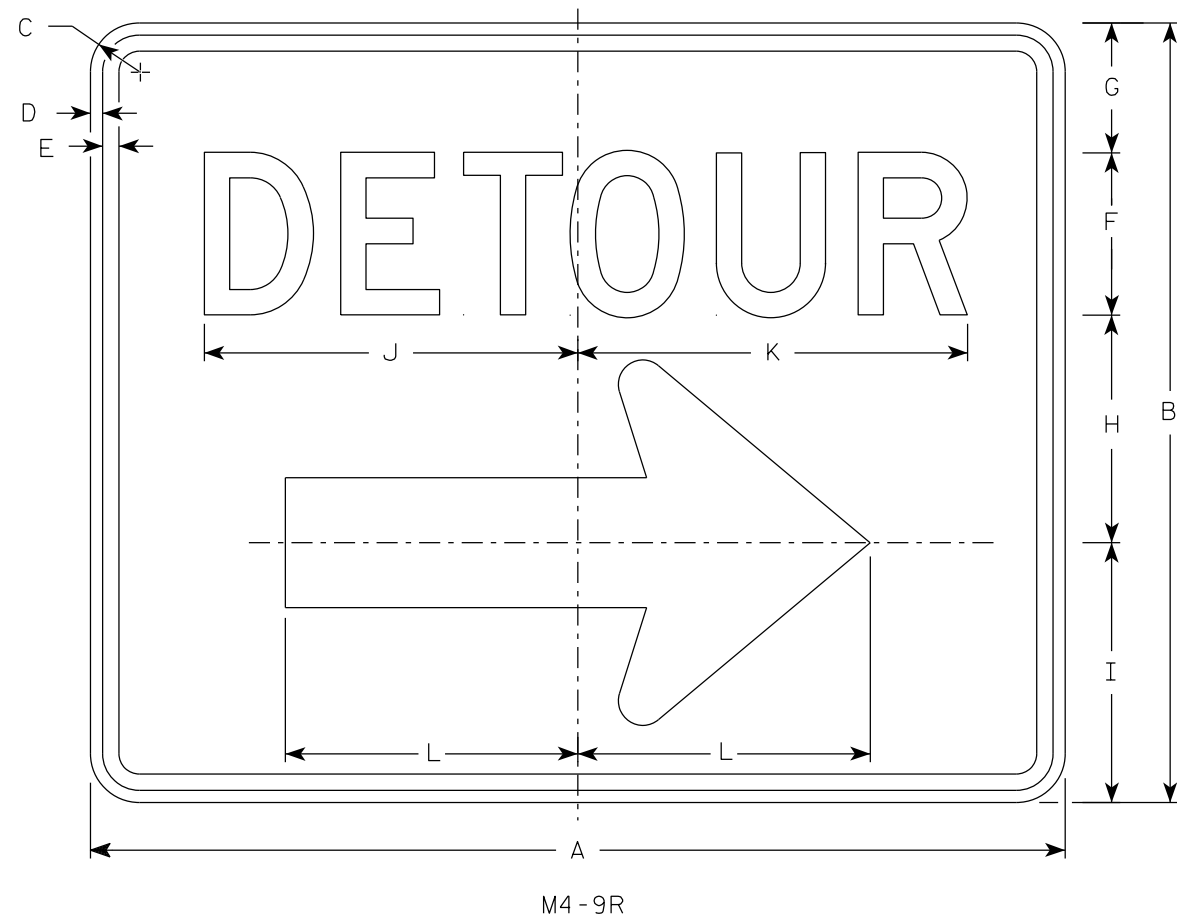
STANDARD SIGN

M4-8A

WISCONSIN DEPT OF TRANSPORTATION

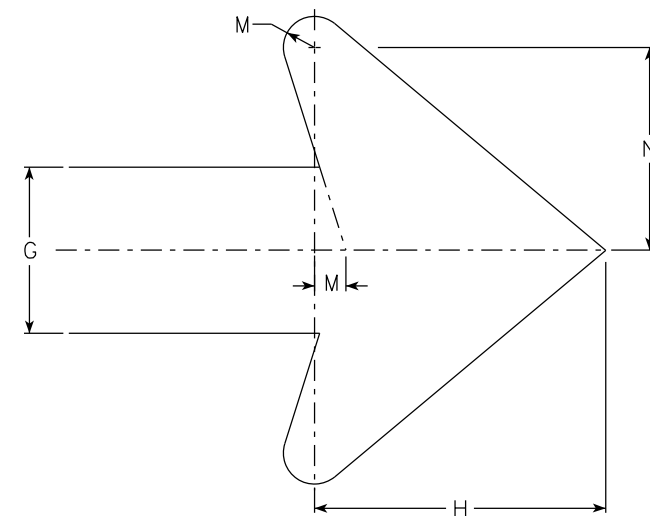
APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 2/9/2023 PLATE NO. M4-8A.4



NOTES

1. Sign is Type II - Type F Reflective
2. Color:
Background - Orange
Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M4-9L is the same as M4-9R except the arrow is reversed.



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	30	24	1 1/2	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
2M	30	24	1 1/2	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
3	30	24	1 1/2	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
4	48	36	1 7/8	1/2	5/8	8	6	10 1/2	11 5/8	20 5/8	20 1/2	13 1/4	1 1/8	6 7/8													12.0
5	48	36	1 7/8	1/2	5/8	8	6	10 1/2	11 5/8	20 5/8	20 1/2	13 1/4	1 1/8	6 7/8													12.0

STANDARD SIGN
M4-9 R & L

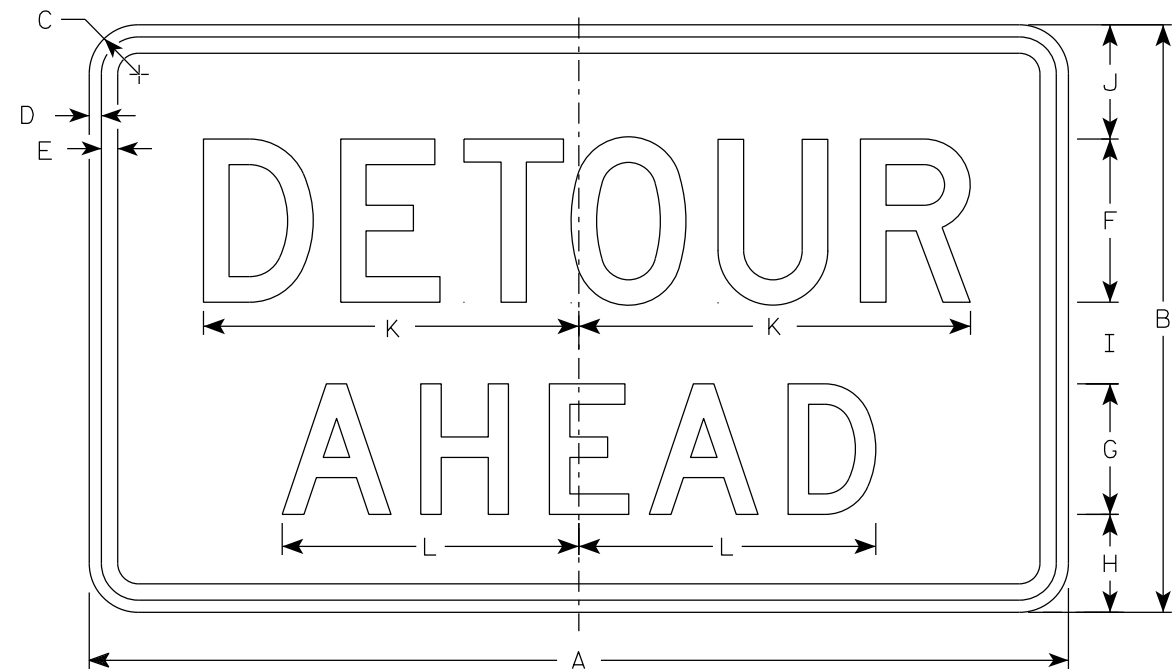
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 2/9/2023 PLATE NO. M4-9R.6

PROJECT NO: HWY: COUNTY: SHEET NO: 177 **E**

7



M4-59A

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
Background - Orange
Message - Black
- 3. Message Series - D
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 1/2	3/8	1/2	5	4	3	2 1/2	3 1/2	11 3/4	9 1/8														3.75	
2M	30	18	1 1/2	3/8	1/2	5	4	3	2 1/2	3 1/2	11 3/4	9 1/8														3.75	
3																											
4																											
5																											

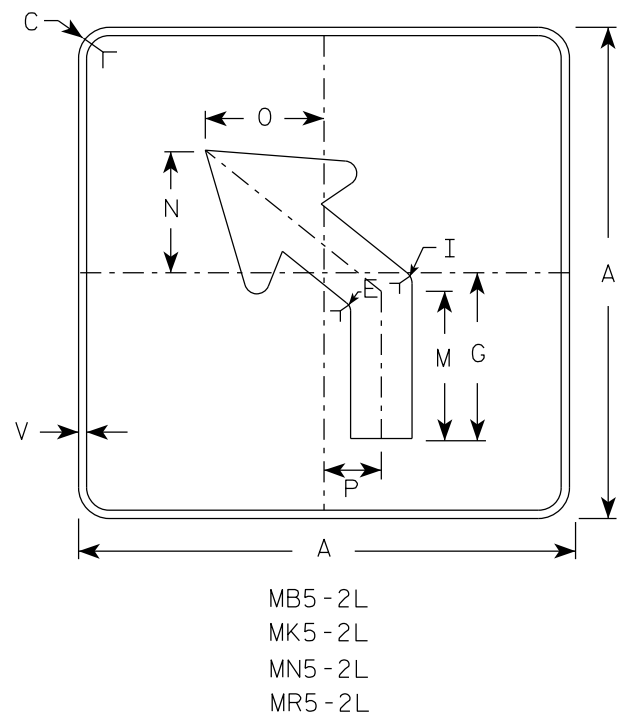
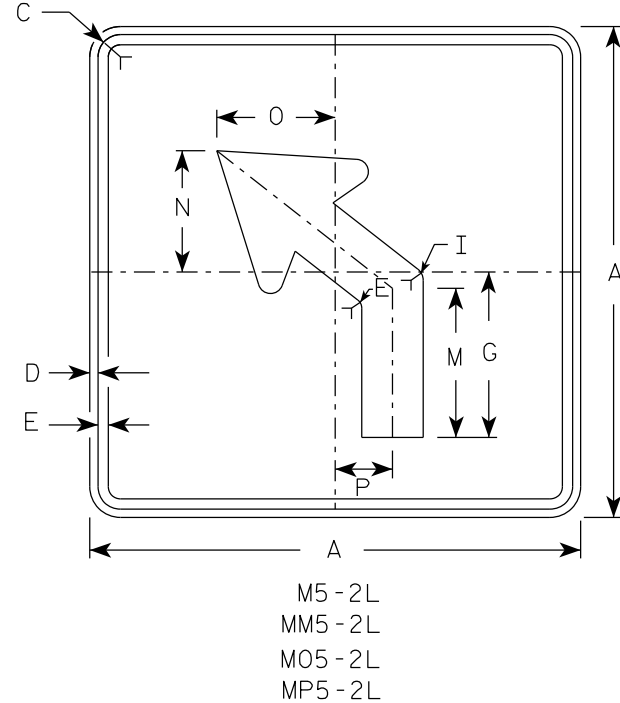
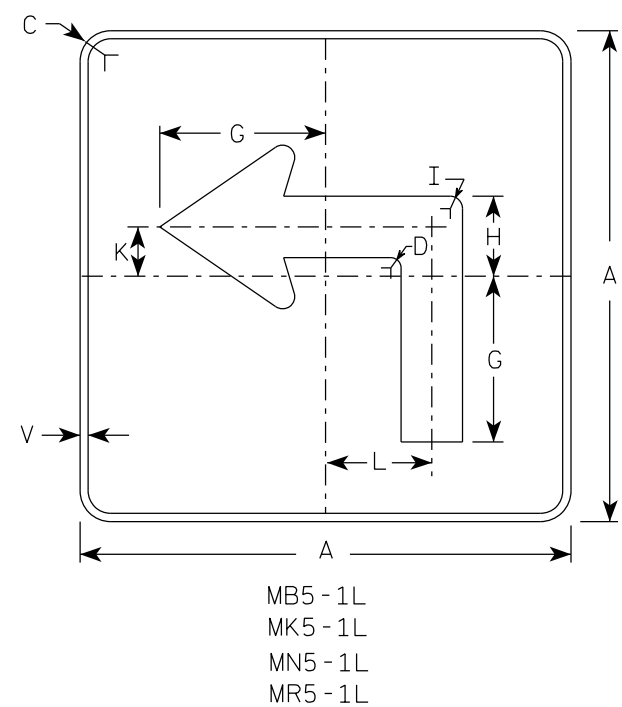
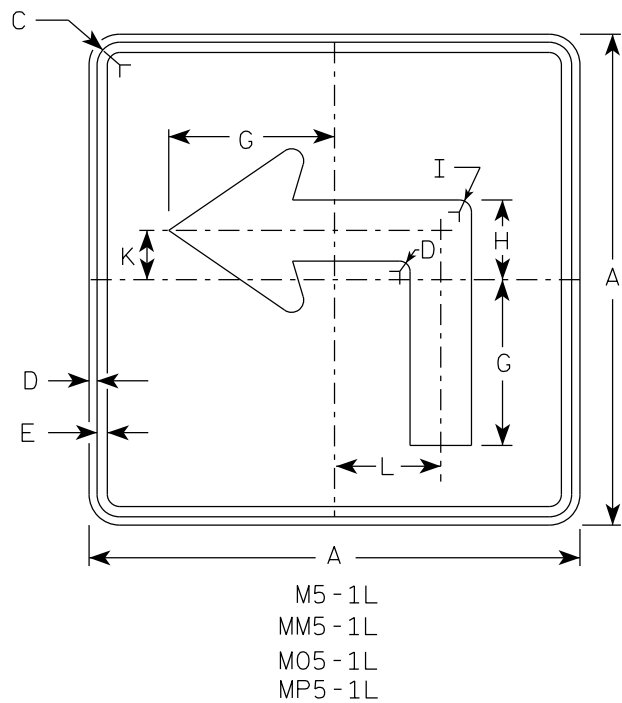
PROJECT NO:

HWY:

COUNTY:

SHEET NO: 178

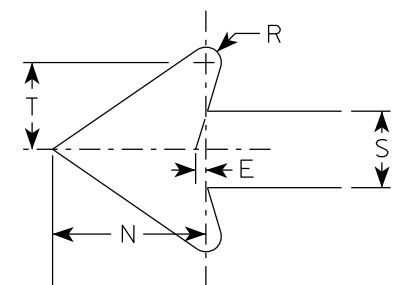
E



NOTES

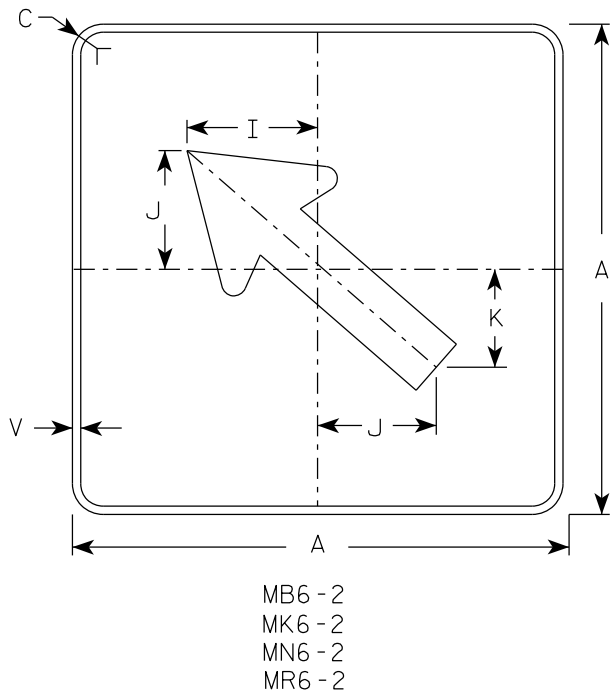
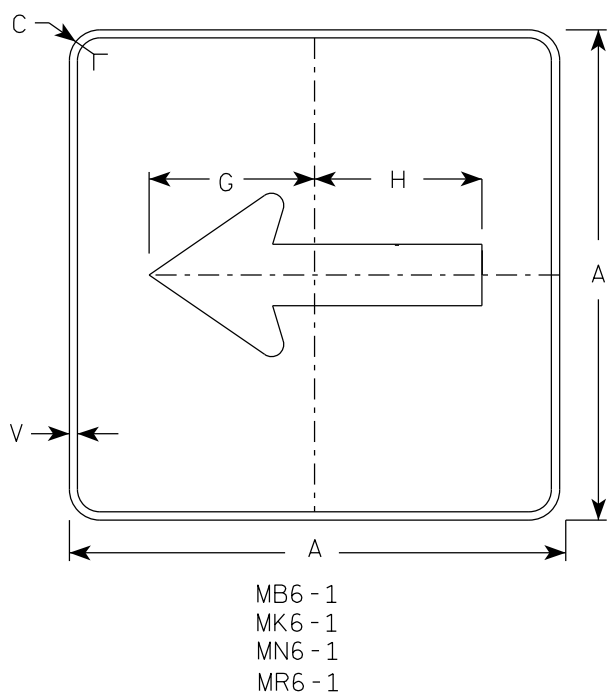
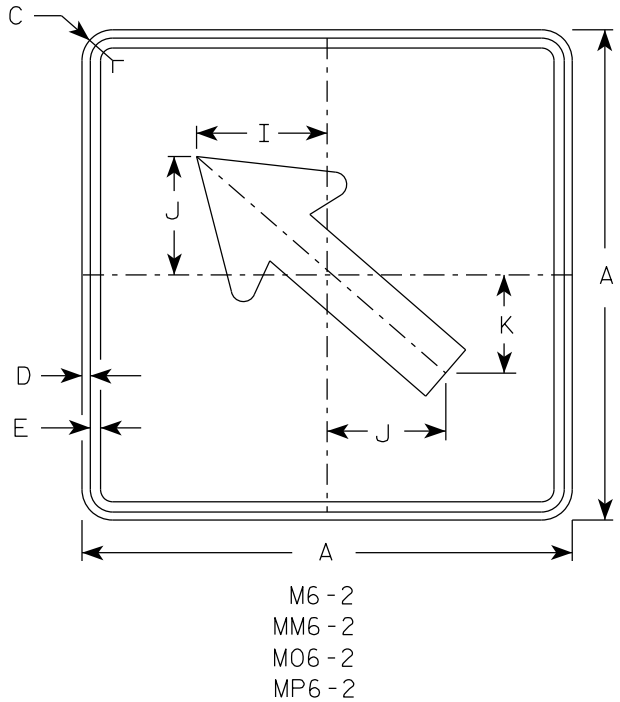
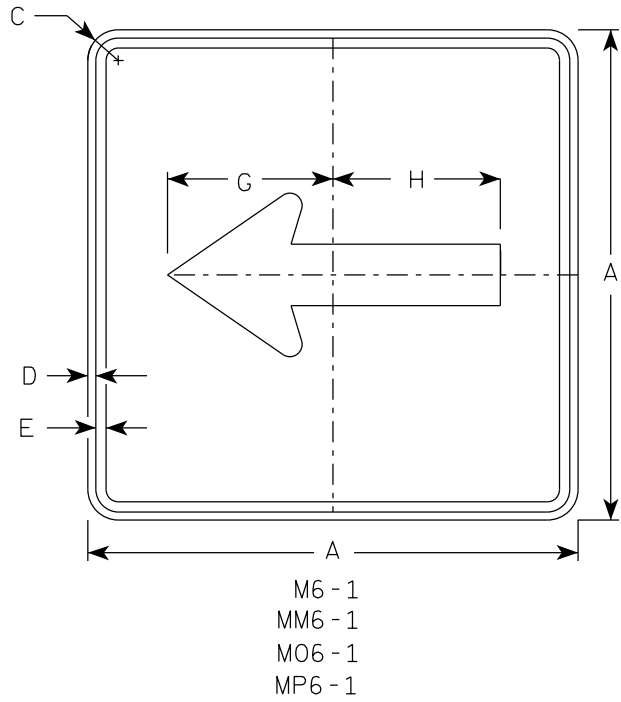
- Signs are Type II - Type H reflective except as shown
- Color:
Background - See note 4
Message - See note 4
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- | | | |
|-----------|-------|---|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

ARROW DETAIL

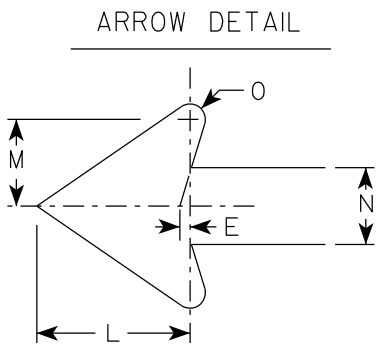


SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	21		1 1/2	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3		1/2					3.06
2M	21		1 1/2	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3		1/2					3.06
3	30		1 7/8	1/2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

PROJECT NO:	HWY:	COUNTY:	SHEET NO: 179	E
-------------	------	---------	---------------	---



- NOTES**
- Signs are Type II - Type H Reflective except as Shown
 - Color:
Background - See note 4
Message - See note 4
 - Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
 - M6-1 and M6-2 Background - White
Message - Black
MB6-1 and MB6-2 Background - Blue
Message - White
MK6-1 and MK6-2 Background - Green
Message - White
MM6-1 and MM6-2 Background - White
Message - Green
MN6-1 and MN6-2 Background - Brown
Message - White
M06-1 and M06-2 Background - Orange - Type F Reflective
Message - Black
MP6-1 and MP6-2 Background - White
Message - Blue
MR6-1 and MR6-2 Background - Brown
Message - Yellow



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

NOTES

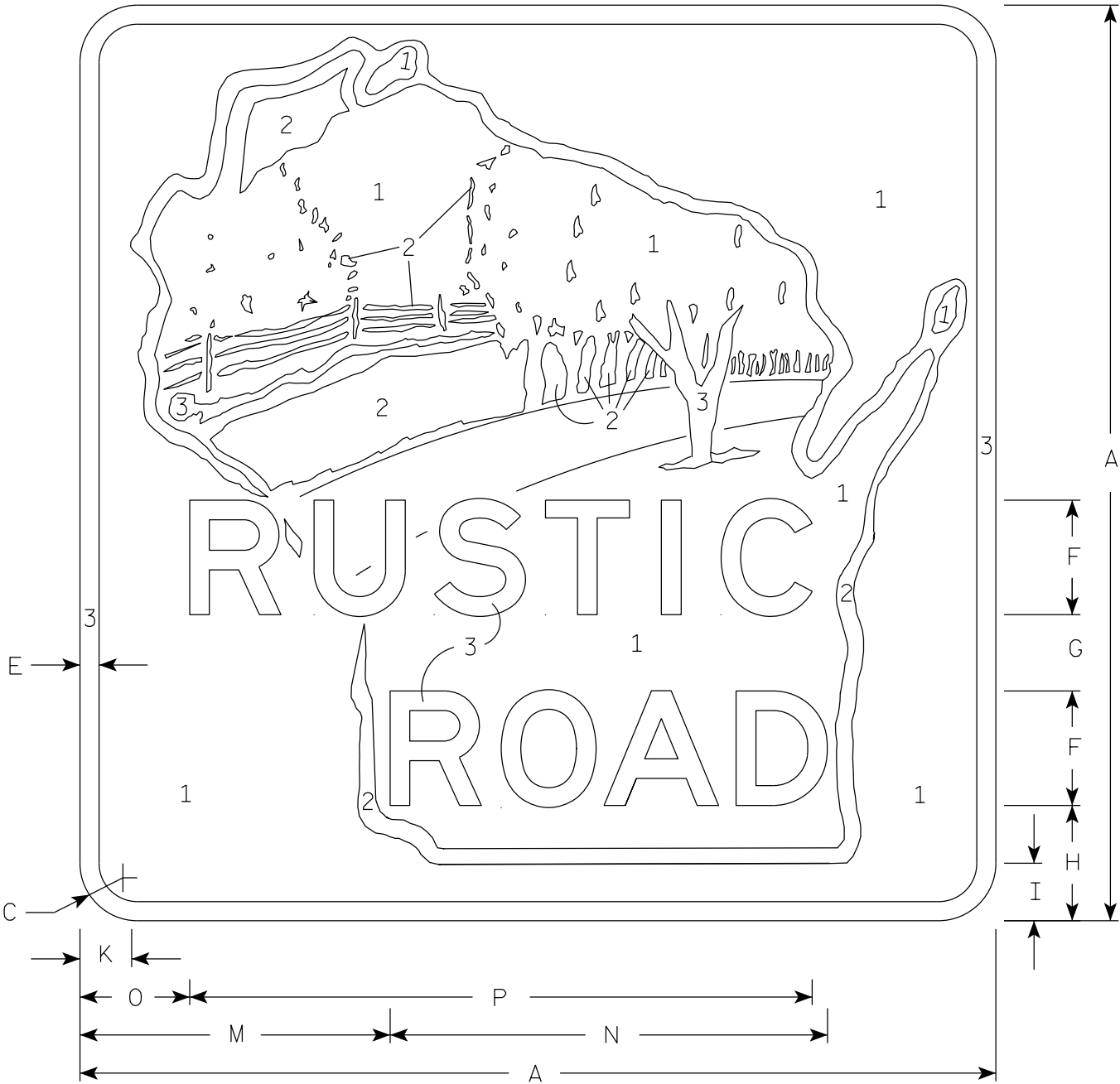
1. Sign is Type II - Type H Reflective
2. Color:

Background - See note 4

Message - See note 4
3. Message Series - E Modified
4. The sign will be color coded by numerical designation Numeral *1 Brown

2 White

3 Yellow
- Exact color descriptions will be furnished upon request.



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

STANDARD SIGN
MR1-99

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 2/13/2023 PLATE NO. MR1-99.7

PROJECT NO:

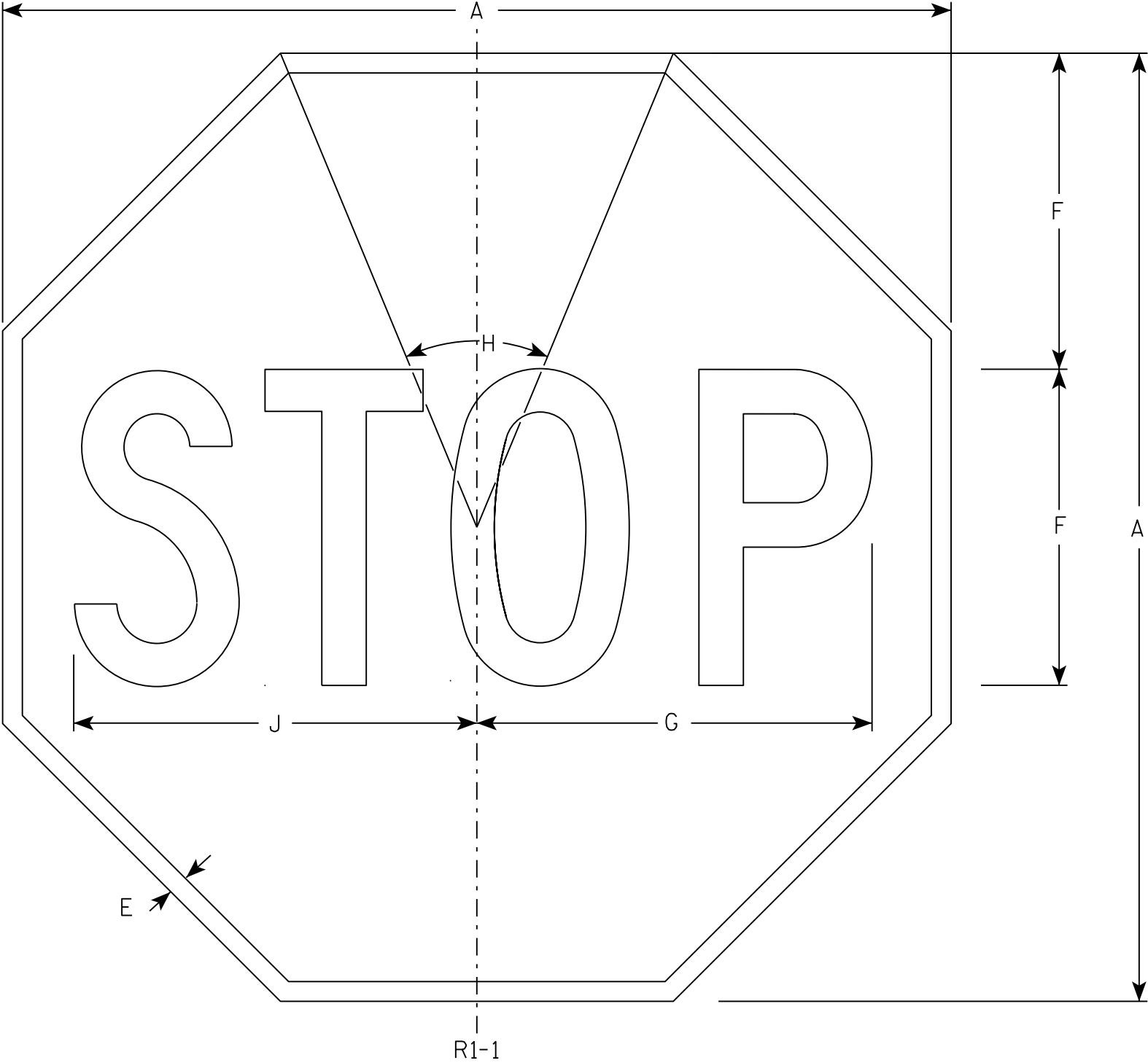
HWY:

COUNTY:

SHEET NO: 181

E

7



NOTES

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

7

R1-1

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2S	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2M	36				3/4	12	15	45°		15 3/8																	7.46
3	36				3/4	12	15	45°		15 3/8																	7.46
4	48				1	16	20	45°		20 1/2																	13.25
5	48				1	16	20	45°		20 1/2																	13.25
6	18				3/8	6	7 3/4	45°		7 3/4																	1.86
7	12				1/4	4	5	45°		5 1/8																	0.78

STANDARD SIGN
R1 - 1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

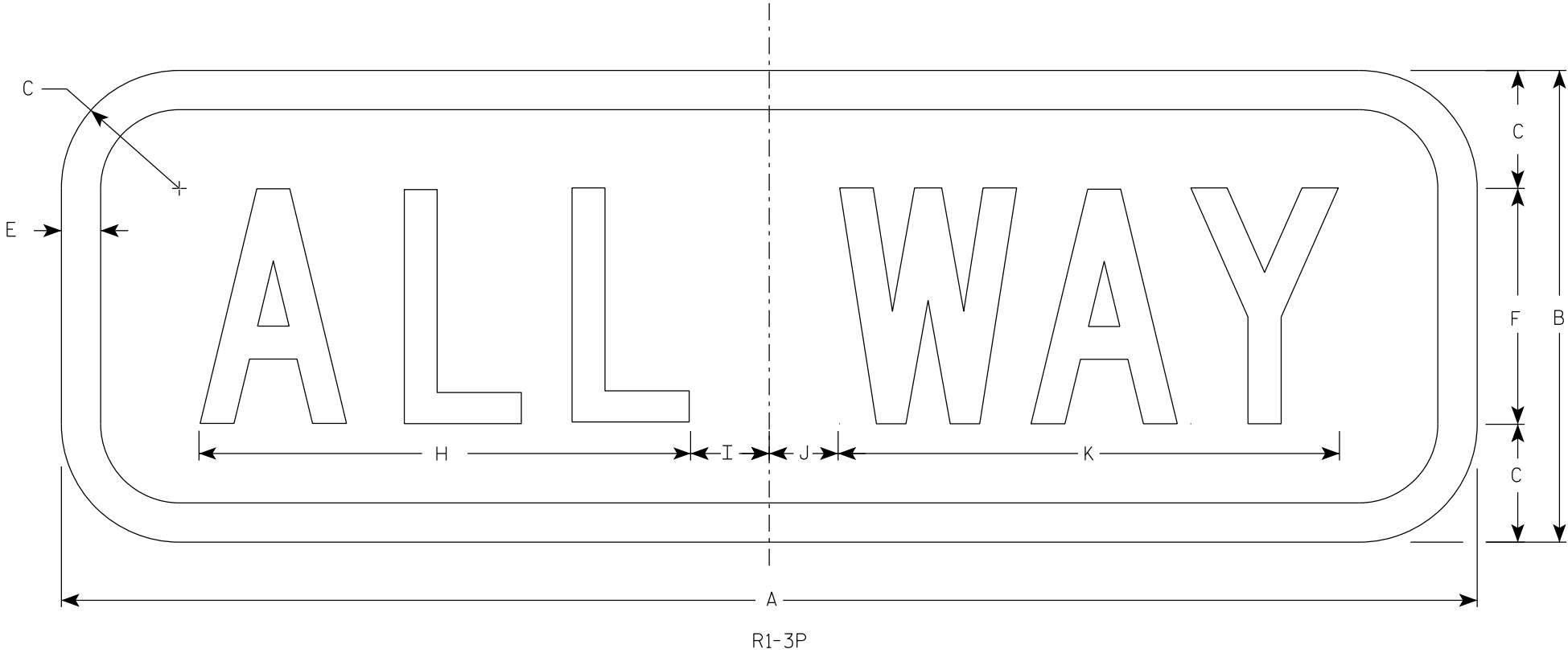
DATE 11/12/15 PLATE NO. R1-1.13

7

7

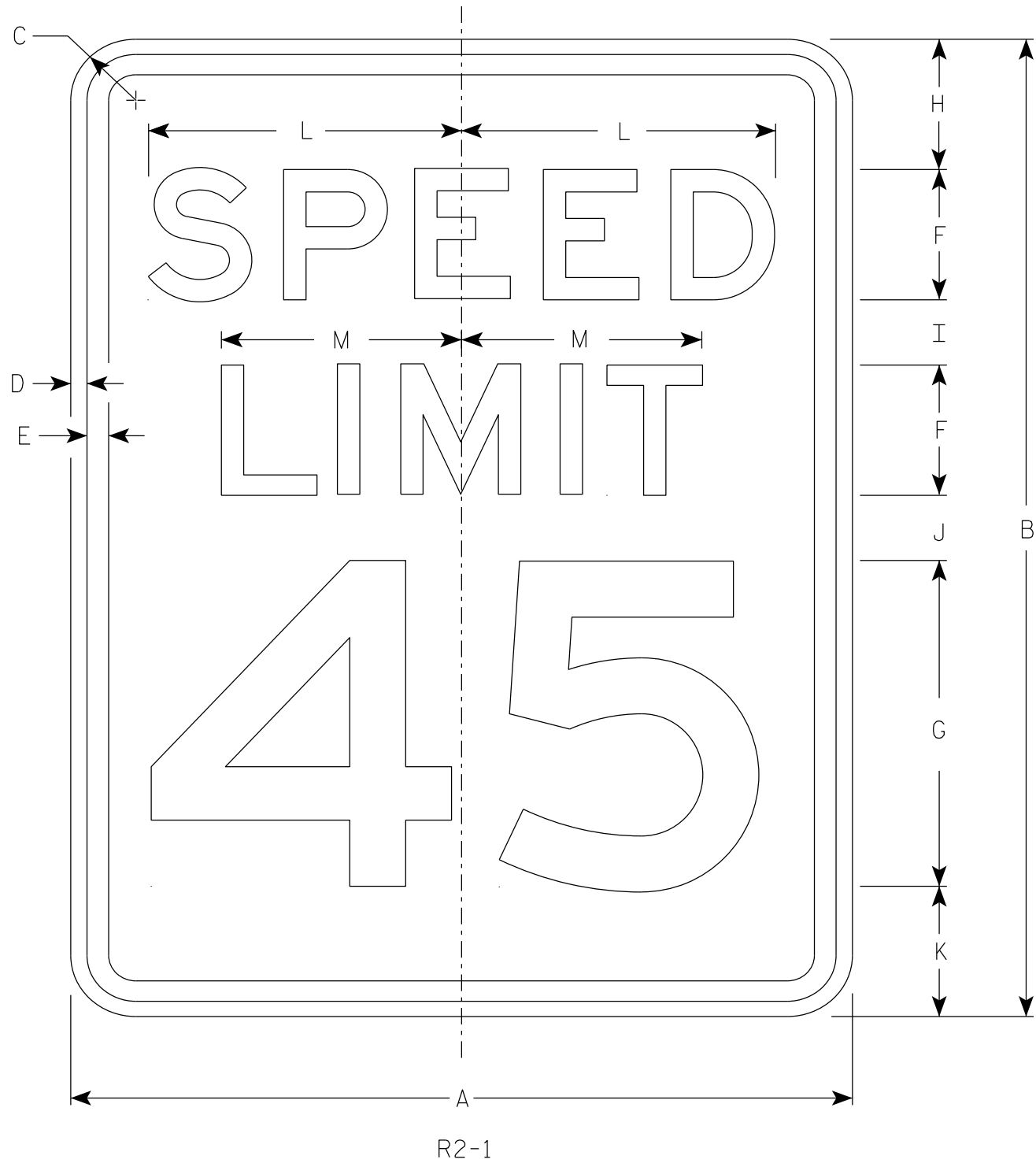
NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
 - Background - Red
 - Message - White
- 3. Message Series - C
- 4. For 30"x30" R1-1 use 18"x6" R1-3P sign
- For 36"x36" R1-1 use 24"x9" R1-3P sign
- For 48"x48" R1-1 use 30"x12" R1-3P sign



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	6	1 1/2		1/2	3		6 1/4	1 1/4	7/8	6 3/8																0.75
2S	18	6	1 1/2		1/2	3		6 1/4	1 1/4	7/8	6 3/8																0.75
2M	24	9	1 1/2		1/2	5		9 1/4	1 1/4	3/4	9 3/4																1.5
3	24	9	1 1/2		1/2	5		9 1/4	1 1/4	3/4	9 3/4																1.5
4	30	12	1 1/2		5/8	6		11	2 1/4	1 1/2	11 3/4																2.5
5	30	12	1 1/2		5/8	6		11	2 1/4	1 1/2	11 3/4																2.5

7



NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
 - Background - White
 - Message - Black
- 3. Message Series - E
- 4. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

7

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

STANDARD SIGN

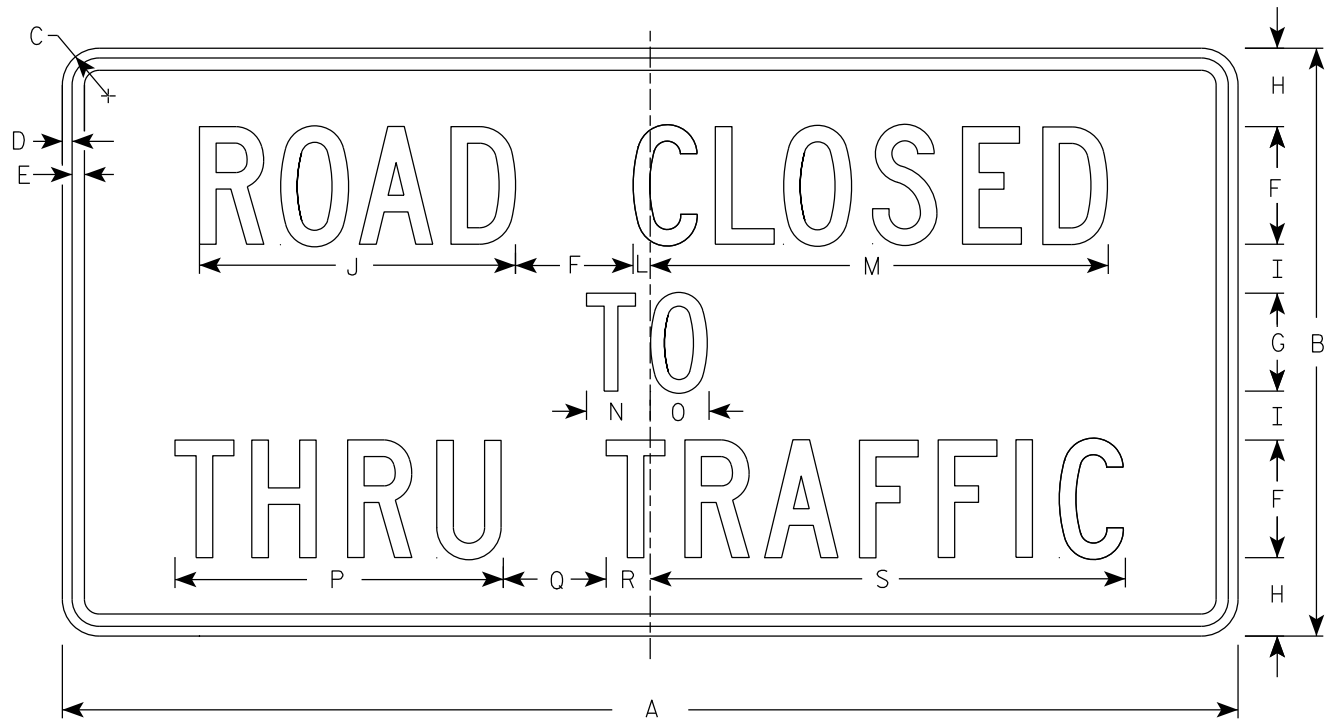
R2 - 1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 2/1/23 PLATE NO. R2-1.14

7



R11-4

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
Background - White
Message - Black
- 3. Message Series - C
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

7

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

PROJECT NO:

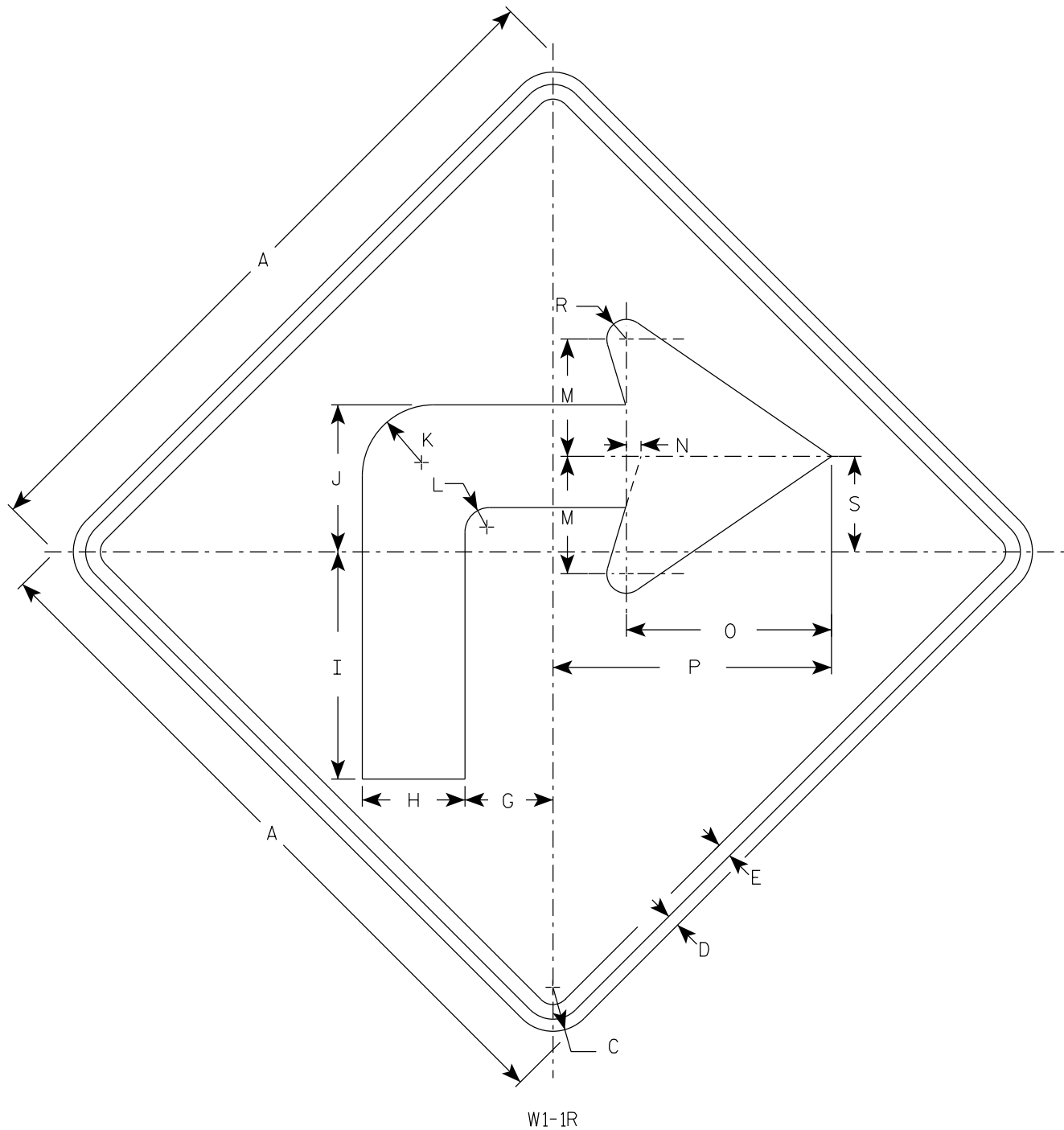
HWY:

COUNTY:

SHEET NO: 185

E

7



NOTES

1. Sign is Type II - Type F Reflective
2. Color:
Background - Yellow
Message - Black
3. W1-1L is the same as W1-1R except the arrow is reversed along the vertical centerline.

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/2	3/8	1/2		3	3 1/2	7 3/4	5	2 1/2	7/8	4	1/2	7	9 1/2		5/8	3 1/4								4.0
2S	36		2 1/4	5/8	3/4		4 1/2	5 1/4	11 5/8	7 1/2	3 5/8	1 1/4	6	3/4	10 1/2	14 1/4		1	4 7/8								9.0
2M	36		2 1/4	5/8	3/4		4 1/2	5 1/4	11 5/8	7 1/2	3 5/8	1 1/4	6	3/4	10 1/2	14 1/4		1	4 7/8								9.0
3	36		2 1/4	5/8	3/4		4 1/2	5 1/4	11 5/8	7 1/2	3 5/8	1 1/4	6	3/4	10 1/2	14 1/4		1	4 7/8								9.0
4	48		3	3/4	1		6	7	15 1/2	10	4 7/8	1 5/8	8	1	14	19		1 1/4	6 1/2								16.0
5	48		3	3/4	1		6	7	15 1/2	10	4 7/8	1 5/8	8	1	14	19		1 1/4	6 1/2								16.0

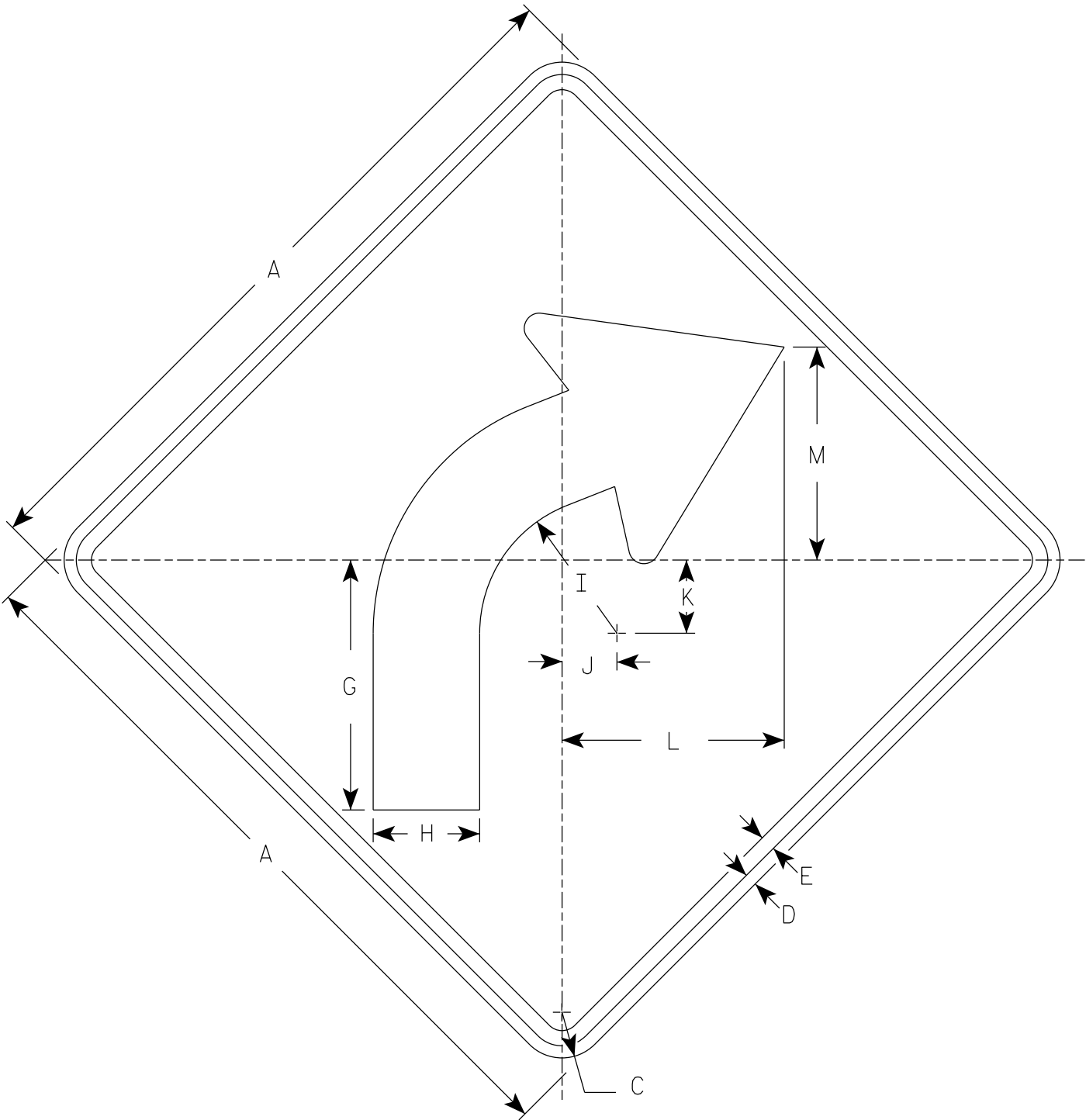
STANDARD SIGN
W1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/22/2023 PLATE NO. W1-1.12

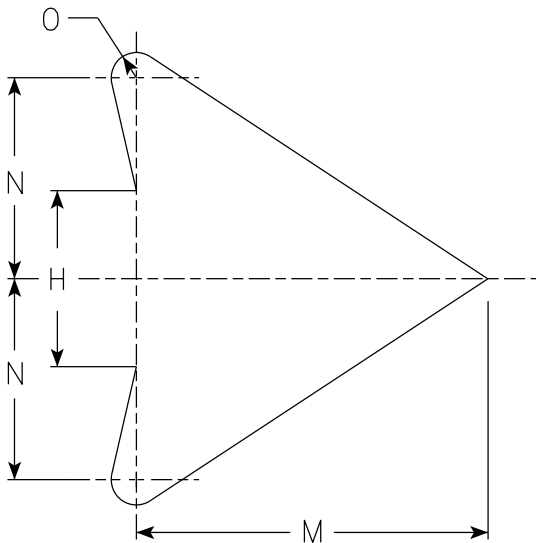
PROJECT NO: HWY: COUNTY: SHEET NO: 186 E



W1-2R

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
Background - Yellow
Message - Black
- 3. W1-2L is the same as W1-2R except the arrow is reversed along the vertical centerline.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/2	3/8	1/2		8 1/4	3 1/2	4 1/2	1 3/4	2 3/8	7 1/4	7	4	1/2												4.0
2S	30		1 7/8	1/2	5/8		10 1/4	4 3/8	5 5/8	2 1/4	3	9 1/8	8 3/4	5	5/8												6.25
2M	36		2 1/4	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
3	36		2 1/4	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
4	36		2 1/4	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
5	48		3	3/4	1		16 1/2	7	9	3 1/2	4 5/8	14 1/2	14	8	1												16.0

STANDARD SIGN
W1-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

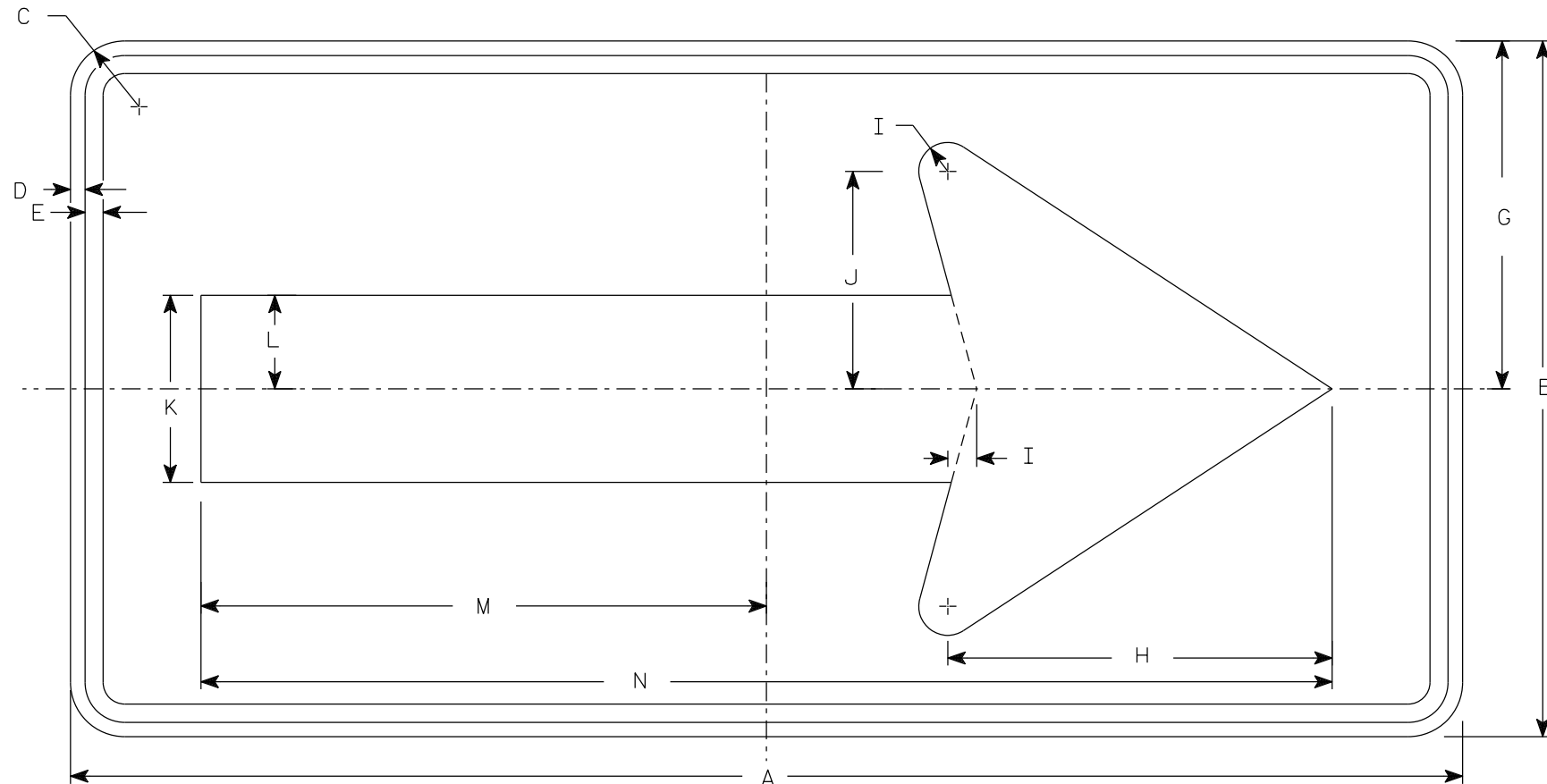
DATE 3/23/2023 PLATE NO. W1-2.11

7

7

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
 - Background - Yellow
 - Message - Black



W1-6

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 1/2	3/8	3/8		9	10	3/4	5 5/8	4 3/4	2 3/8	14 5/8	29 1/4													4.5
2S	48	24	1 7/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 7/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 7/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 7/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
5	96	48	3	3/4	1		24	26 1/2	2	15	13	6 1/2	39	78													32.0

STANDARD SIGN

W1-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 4/13/2023 PLATE NO. W1-6.9

PROJECT NO:

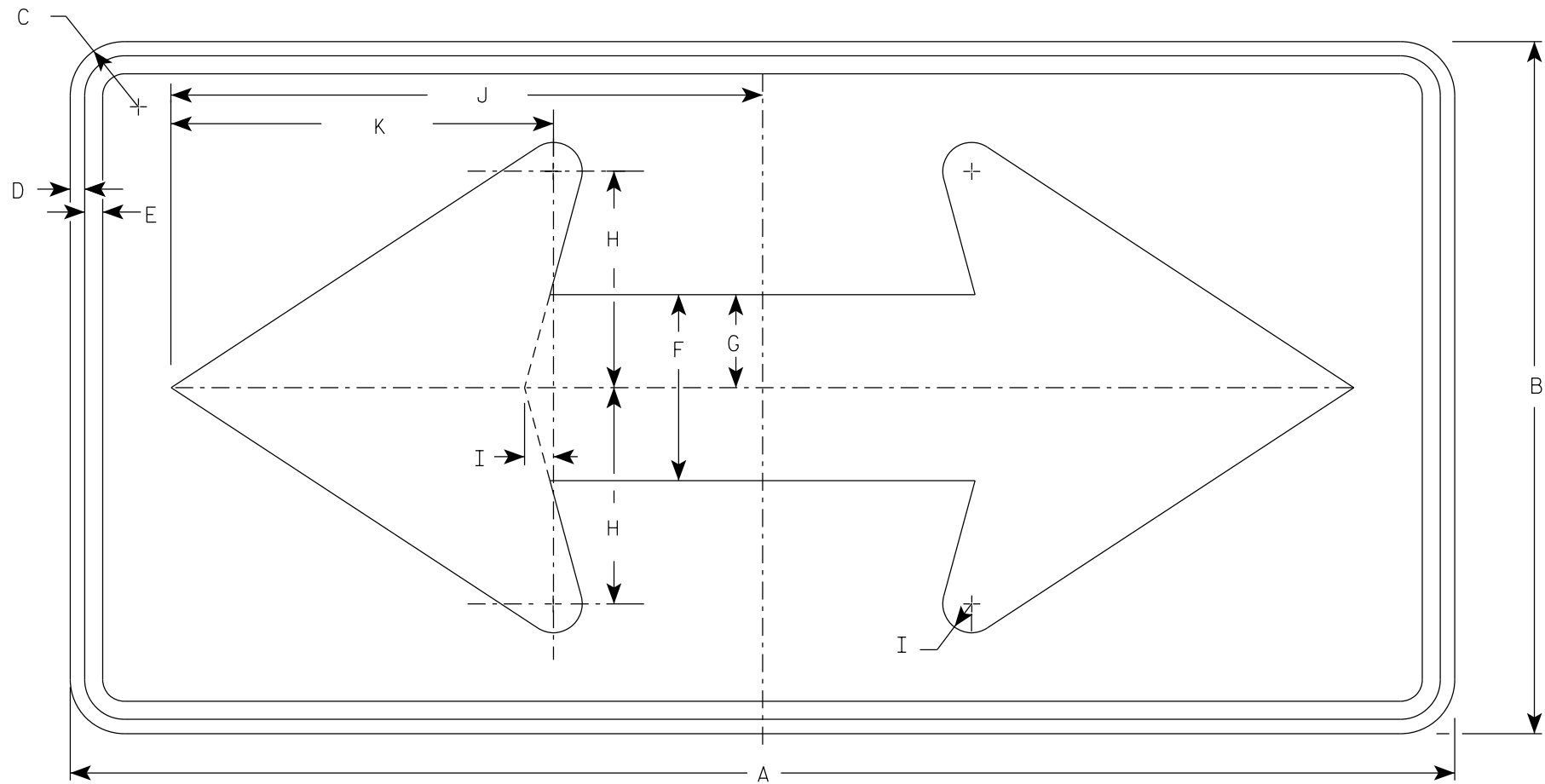
HWY:

COUNTY:

SHEET NO: 188

E

7



W1-7

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
Background - Yellow
Message - Black

7

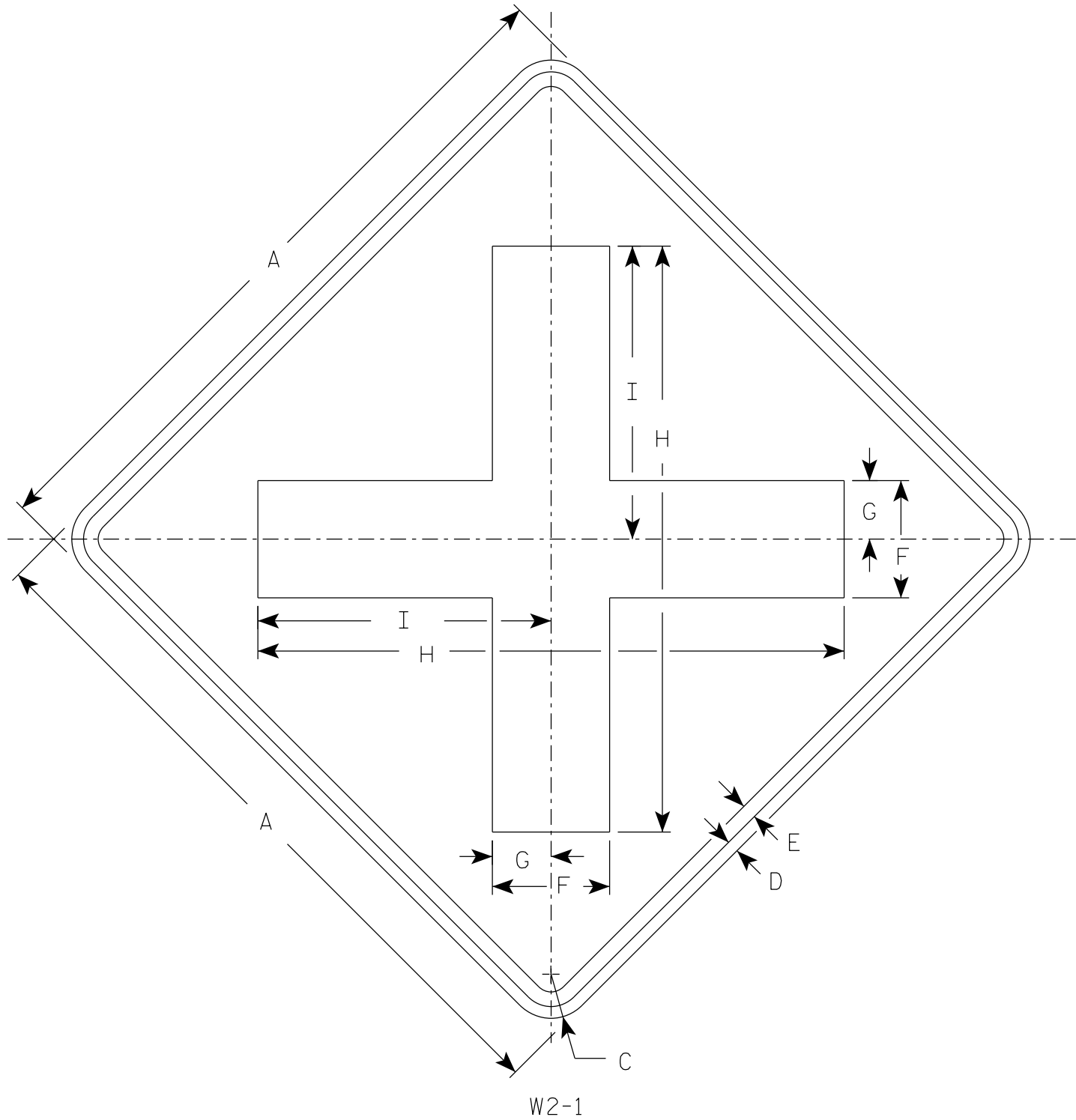
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 1/2	3/8	1/2	5	2 1/2	5 3/4	3/4	15 5/8	10 1/8																4.5
2S	48	24	1 7/8	1/2	5/8	6 1/2	3 1/4	7 1/2	1	20 1/2	13 1/4																8.0
2M	48	24	1 7/8	1/2	5/8	6 1/2	3 1/4	7 1/2	1	20 1/2	13 1/4																8.0
3	60	30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

STANDARD SIGN
W1-7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/10/2023 PLATE NO. W1-7.8



NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
 - Background - Yellow
 - Message - Black

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/2	3/8	1/2	4	2	20	10																		4.0
2S	30		1 7/8	1/2	5/8	5	2 1/2	25	12 1/2																		6.25
2M	30		1 7/8	1/2	5/8	5	2 1/2	25	12 1/2																		6.25
3	36		2 1/4	5/8	3/4	6	3	30	15																		9.0
4	48		3	3/4	1	8	4	40	20																		16.0
5																											

PROJECT NO:

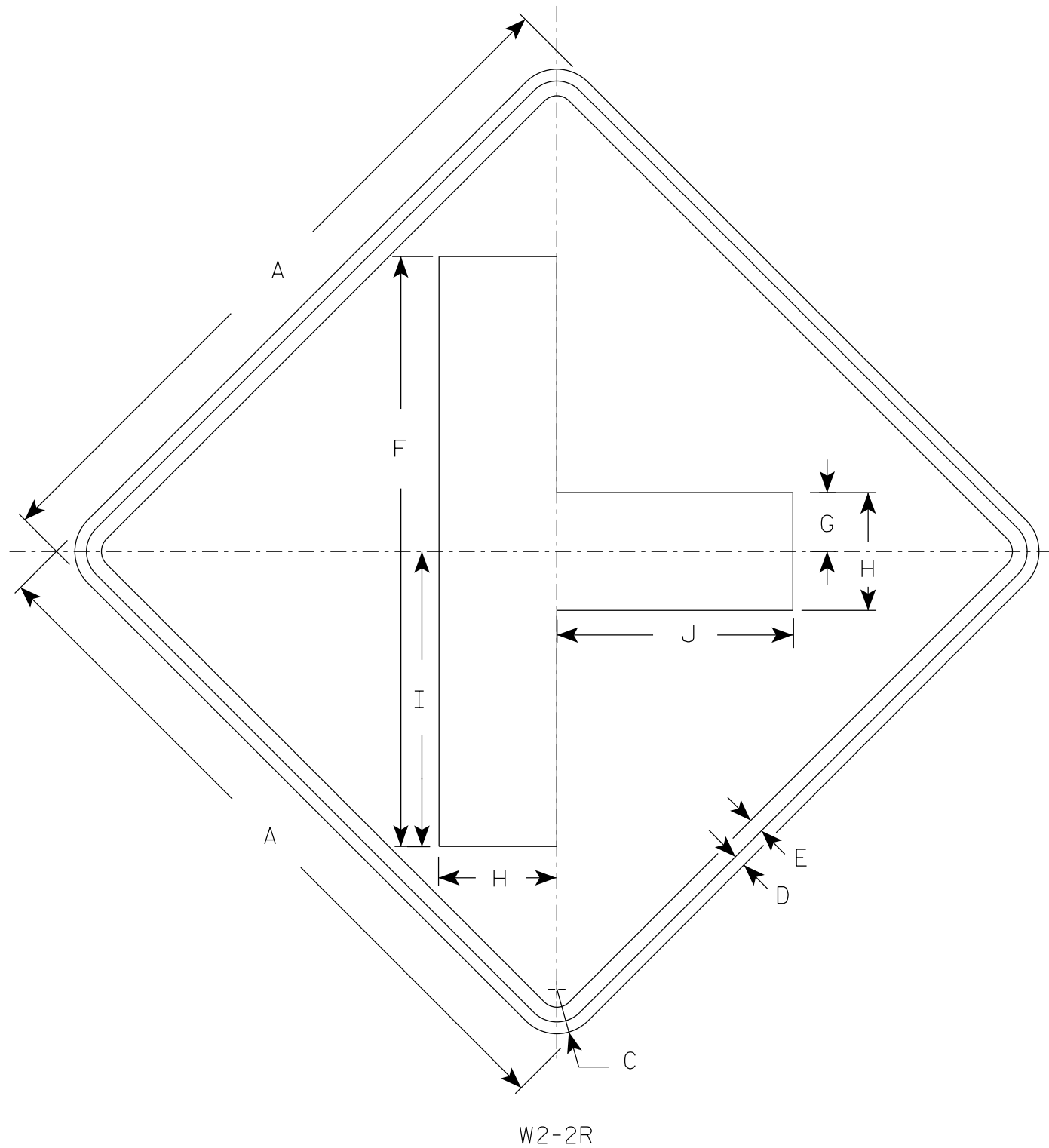
HWY:

COUNTY:

SHEET NO: 190

E

7



NOTES

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

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/2	3/8	1/2	20	2	4	10	8																	4.0
2S	30		1 7/8	1/2	5/8	25	2 1/2	5	12 1/2	10																	6.25
2M	30		1 7/8	1/2	5/8	25	2 1/2	5	12 1/2	10																	6.25
3	36		2 1/4	5/8	3/4	30	3	6	15	12																	9.0
4	48		3	3/4	1	40	4	8	20	16																	16.0
5																											

PROJECT NO:

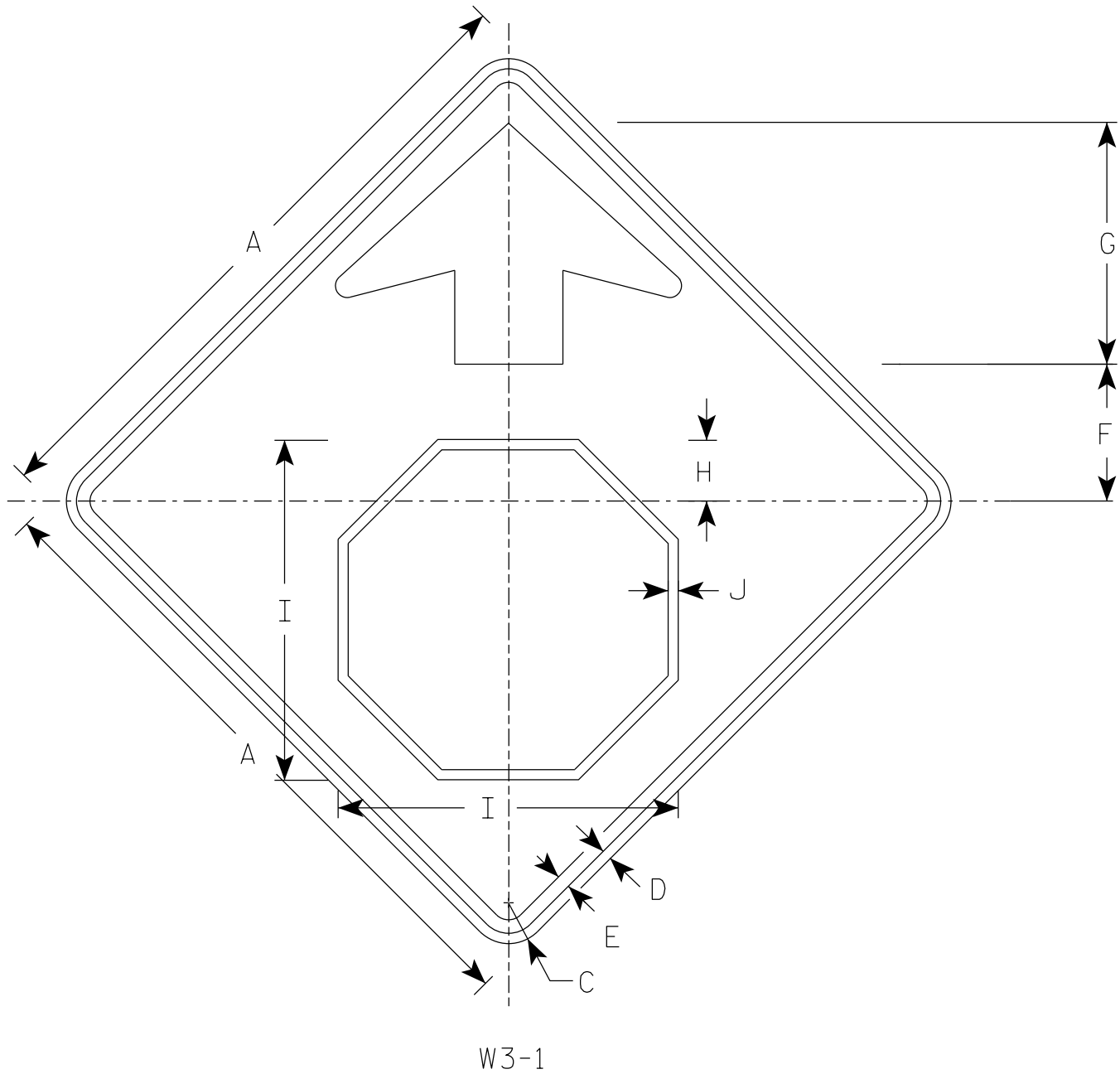
HWY:

COUNTY:

SHEET NO: 191

E

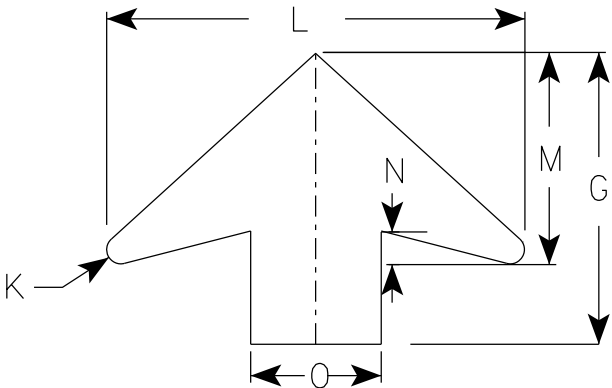
7



W3-1

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
 - Background - Yellow
 - Arrow & Border - Black
 - Stop Symbol - White Border on Red Background



ARROW DETAIL

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 7/8	1/2	5/8	6 1/4	11 1/4	2 3/8	15 3/4	1/2	1/2	16	8	1 1/4	5												6.25
2S	36		2 1/4	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
2M	36		2 1/4	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
3	36		2 1/4	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
4	48		3	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0
5	48		3	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0

STANDARD SIGN

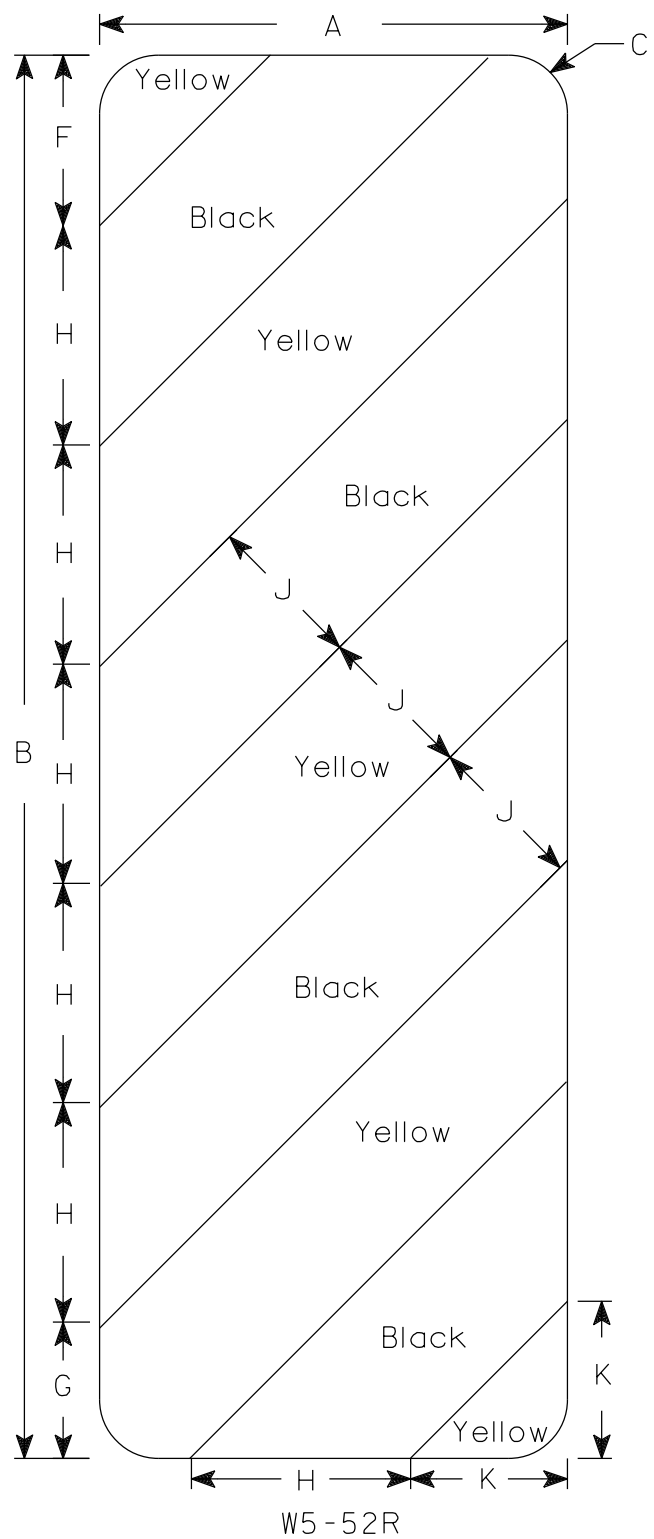
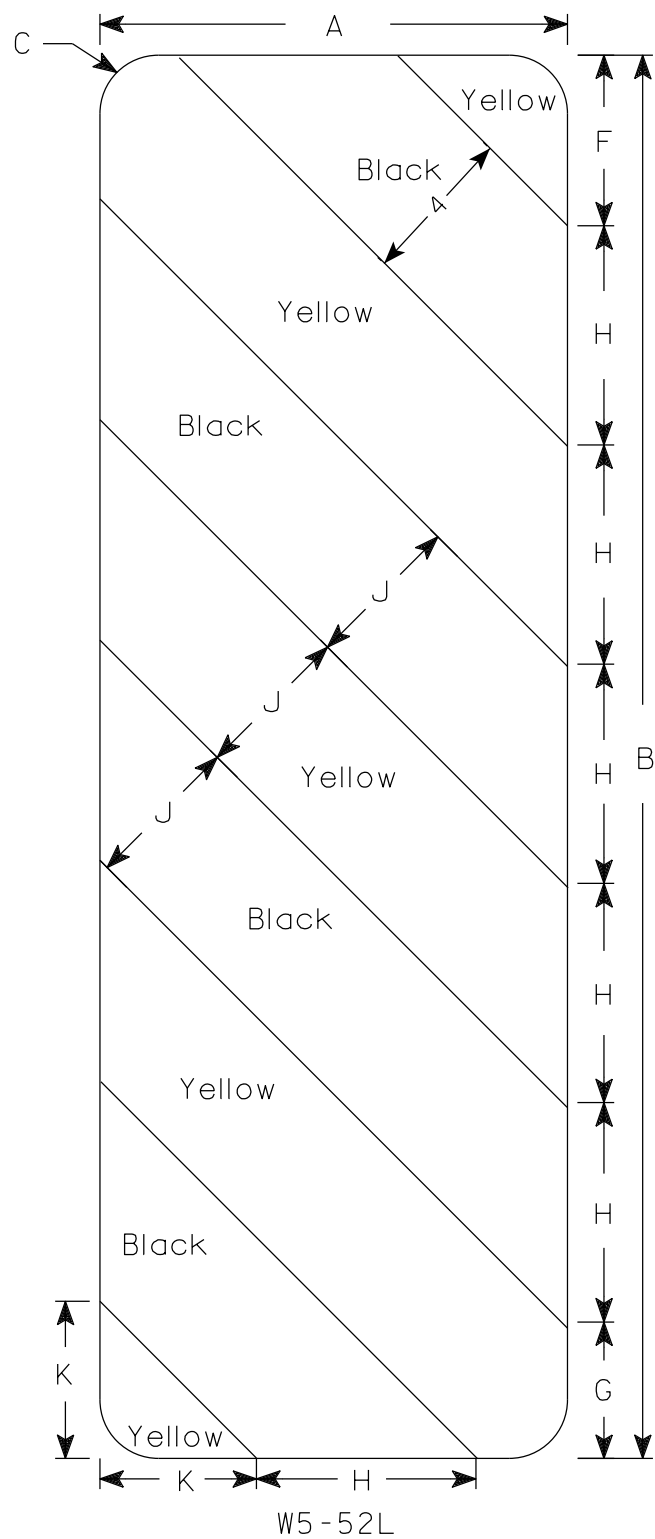
W3-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 8/17/2023

PLATE NO. W3-1.13

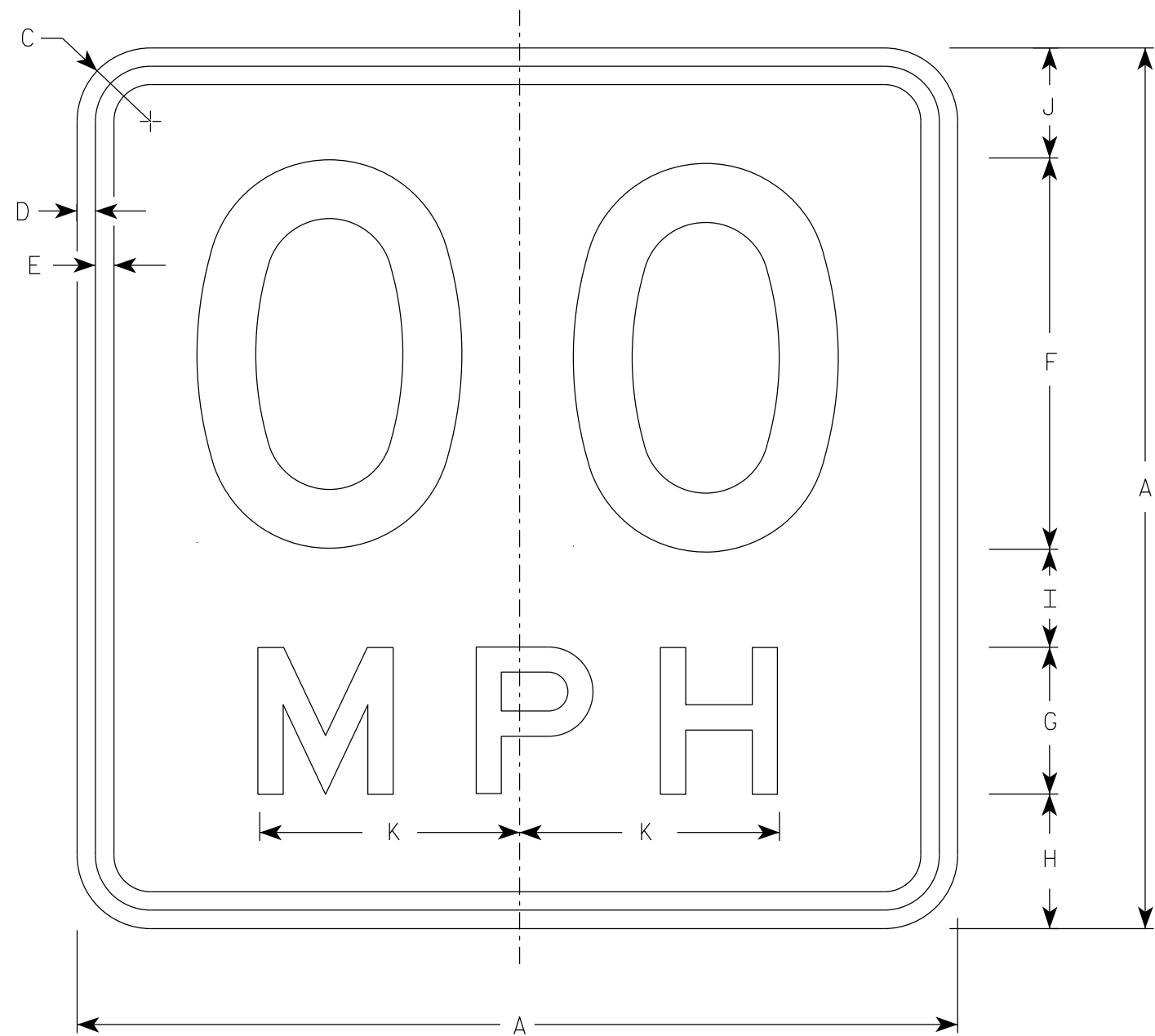


NOTES

1. Sign is Type II - Type F Reflective
2. Color:
Background - Yellow
Message - Black
3. Alternate colors of stripes as shown.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	12	36	1 1/2			4 3/8	3 1/2	5 5/8	45°	4	4																3.0
2M	12	36	1 1/2			4 3/8	3 1/2	5 5/8	45°	4	4																3.0
3	18	54	1 1/2			6	5 1/2	8 1/2	45°	6	6 9/16																6.75
4																											
5																											

PROJECT NO:		HWY:		COUNTY:		SHEET NO: 193		E
-------------	--	------	--	---------	--	---------------	--	---



NOTES

1. Sign is Type II - Type F Reflective
2. Color:
Background - Yellow
Message - Black
3. Message Series - See Note 5
4. Substitute appropriate numerals and optically space about centerline to achieve proper balance.
5. Line 1 is Series D
Line 2 is Series E

W13-1

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

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

STANDARD SIGN
W13-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R. Rauch
For State Traffic Engineer

DATE 1/8/2024 PLATE NO. W13-1.17

PROJECT NO:

HWY:

COUNTY:

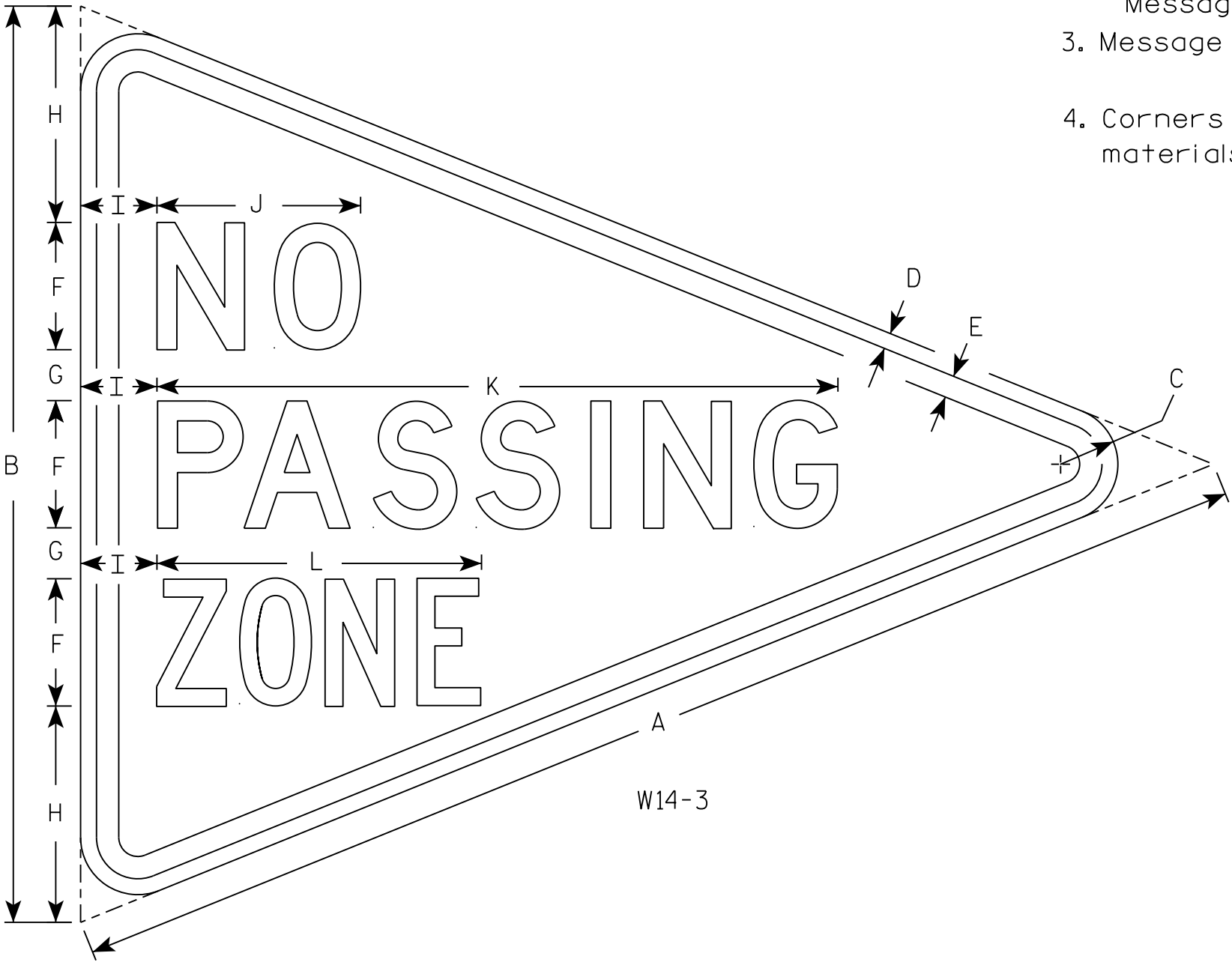
SHEET NO:

194

E

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
Background - Yellow
Message - Black
- 3. Message Series - Lines 1 and 2 are Series D.
Line 3 is series C.
- 4. Corners and borders shall be rounded on all base materials for this sign.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	36	2 1/4	5/8	7/8	5	2	8 1/2	3	8	26 3/4	12 3/4															5.56
2M																											
3																											
4																											
5																											

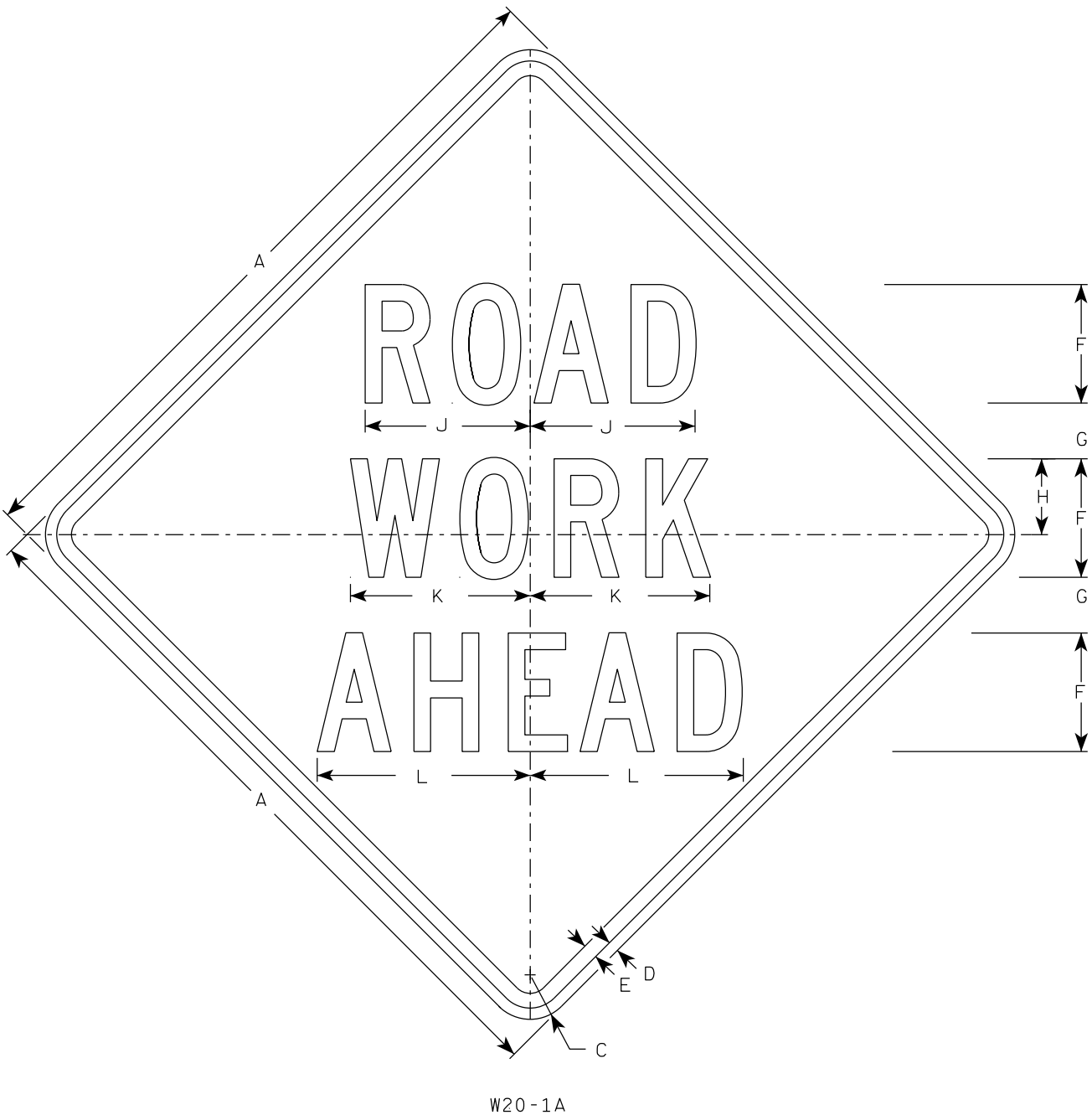
STANDARD SIGN
W14-3

WISCONSIN DEPT OF TRANSPORTATION

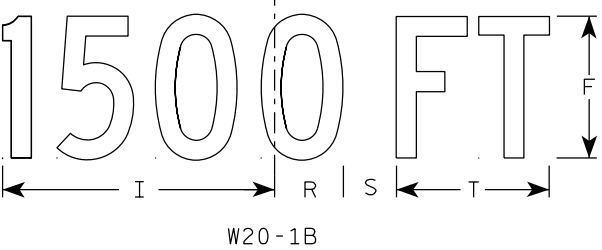
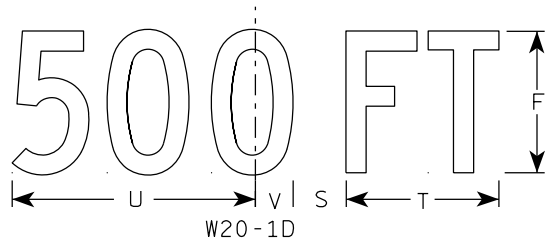
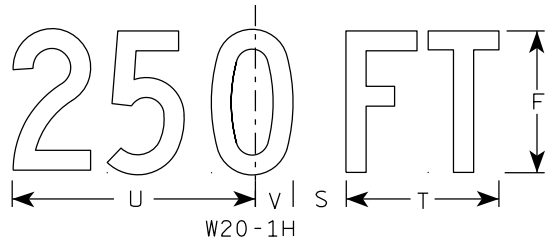
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/21/17 PLATE NO. W14-3.10

7

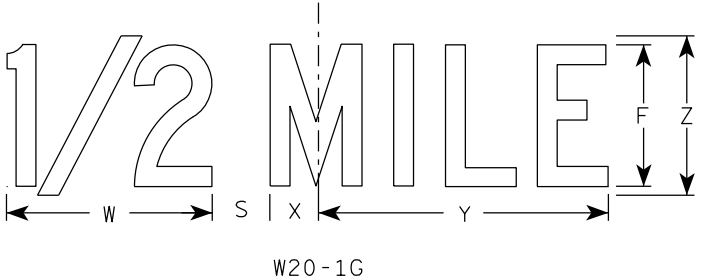


W20-1A

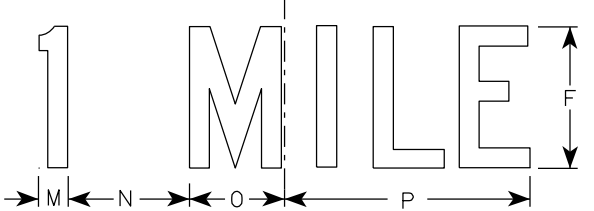


W20-1B

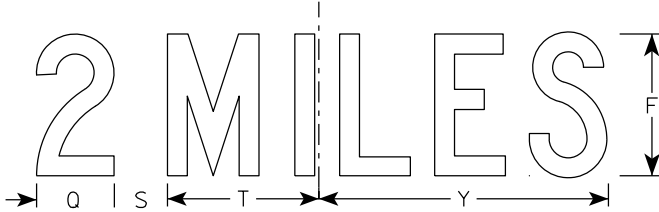
- NOTES
1. Sign is Type II - Type F Reflective
 2. Color:
Background - Orange
Message - Black
 3. Message Series - C
 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



W20-1G



W20-1F



W20-1E

7

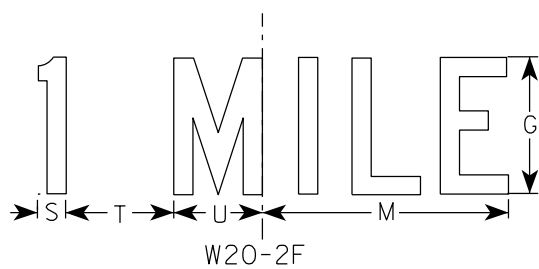
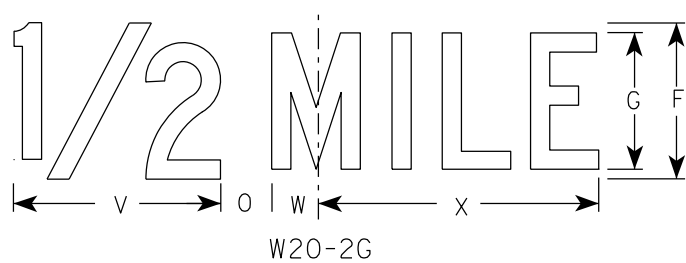
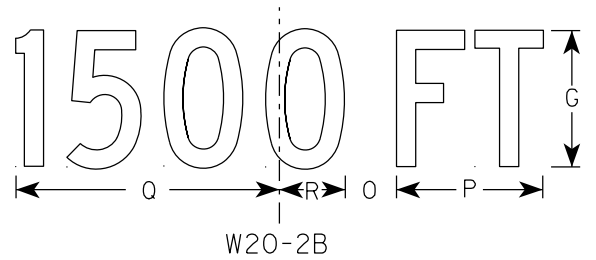
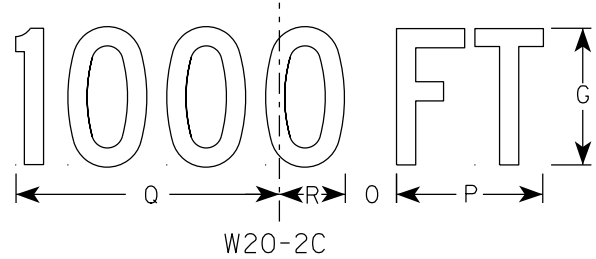
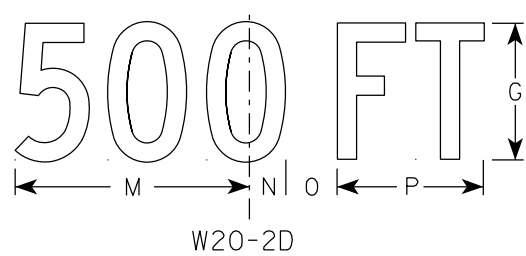
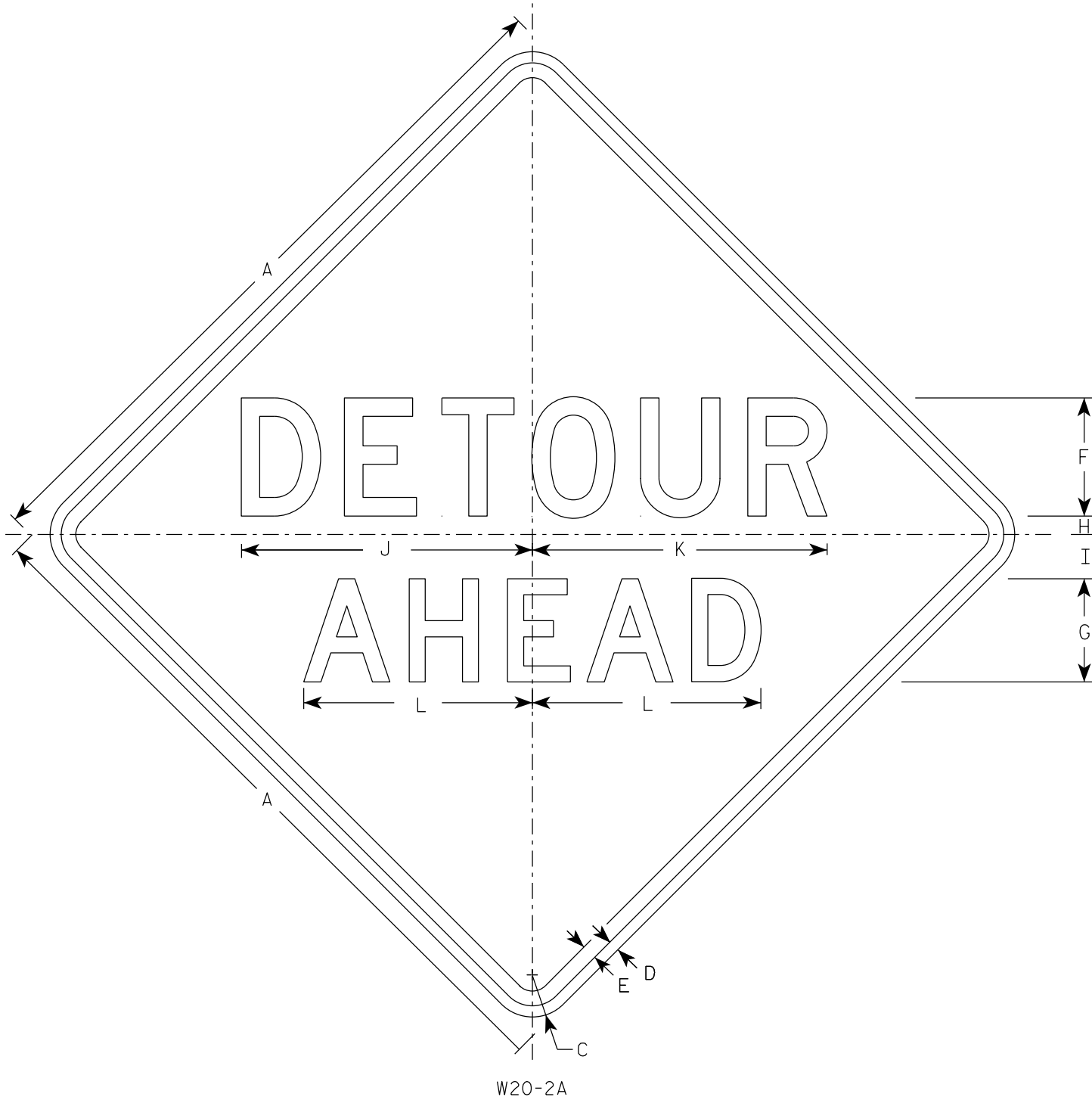
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	v	W	X	Y	Z	Area sq. ft.
1	36		2 1/4	5/8	3/4	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9	3 1/4	2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
2M	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
3	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
4	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
5	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0

STANDARD SIGN
W20-1A, B, C, D, E, F, G & H

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 1/10/2024 PLATE NO. W20-1.12



NOTES

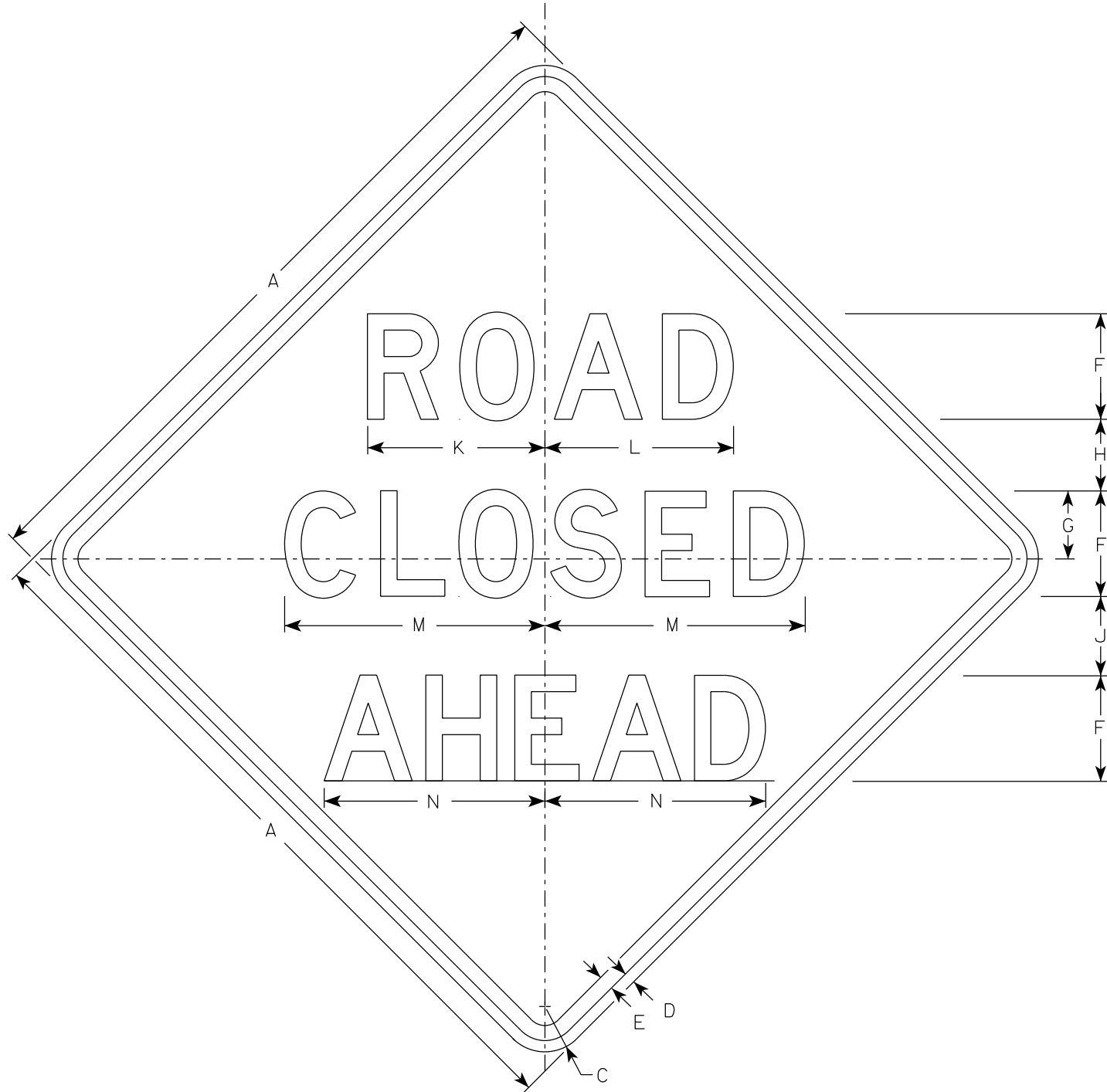
1. Sign is Type II - Type F Reflective
2. Color:
Background - Orange
Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Line 1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

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

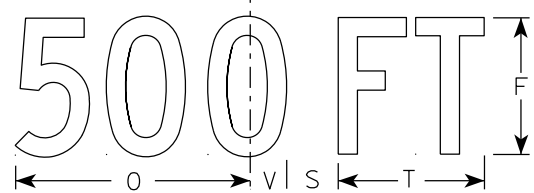
STANDARD SIGN W20-2A,B,C,D,F & G	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 1/10/2024	PLATE NO. W20-2.7

PROJECT NO:	HWY:	COUNTY:	SHEET NO: 197	E
-------------	------	---------	---------------	---

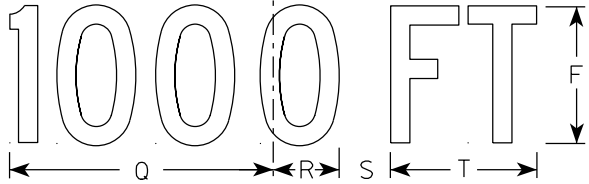
7



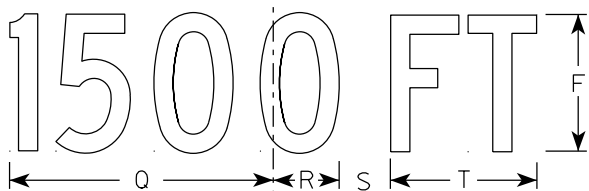
W20-3A



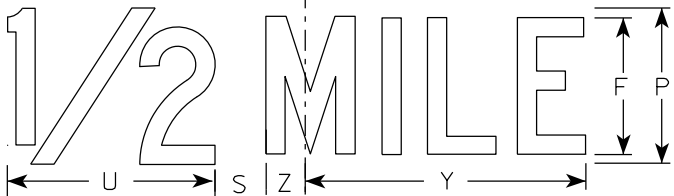
W20-3D



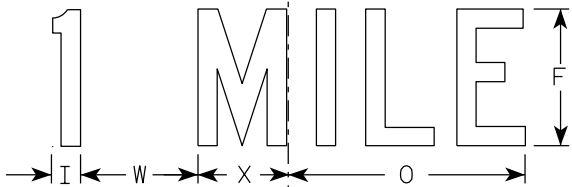
W20-3C



W20-3B



W20-3G



W20-3F

NOTES

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

7

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

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

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 1/10/2024 PLATE NO. W20-3.8

DIVISION 1 - CTY-N

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 1.00	MASS ORDINATE
						NOTE 1		NOTE 3	NOTE 1		NOTE 8
107+55.04	10755.04	0.00	12.12	0.00	0.32	0	0	0	0	0	0
109+29.22	10929.22	174.18	20.23	0.00	0.00	104	0	1	104	1	103
110+00.00	11000.00	70.78	10.92	0.00	0.13	41	0	0	145	1	144
111+00.00	11100.00	100.00	11.17	0.00	0.00	41	0	0	186	1	185
112+25.22	11225.22	125.22	11.16	0.00	1.03	52	0	2	238	3	235
113+00.00	11300.00	74.78	0.06	0.00	4.43	16	0	8	254	11	243
114+00.00	11400.00	100.00	0.00	0.00	8.32	0	0	24	254	35	219
115+00.00	11500.00	100.00	0.00	0.00	7.33	0	0	29	254	64	190
115+55.15	11555.15	55.15	12.90	0.00	5.12	13	0	13	267	77	190
116+00.00	11600.00	44.85	0.00	0.00	6.79	11	0	10	278	87	191
117+00.00	11700.00	100.00	0.00	0.00	4.05	0	0	20	278	107	171
118+00.00	11800.00	100.00	0.00	0.00	1.55	0	0	10	278	117	161
119+00.00	11900.00	100.00	1.19	0.00	0.00	2	0	3	280	120	160
120+00.00	12000.00	100.00	2.97	0.00	1.22	8	0	2	288	122	166
121+00.00	12100.00	100.00	0.11	0.00	4.19	6	0	10	294	132	162
122+00.00	12200.00	100.00	7.96	0.00	1.28	15	0	10	309	142	167
123+00.00	12300.00	100.00	0.00	0.00	6.52	15	0	14	324	156	168
124+00.00	12400.00	100.00	0.00	0.00	4.64	0	0	21	324	177	147
125+00.00	12500.00	100.00	0.11	0.00	2.15	0	0	13	324	190	134
126+00.00	12600.00	100.00	0.10	0.00	0.83	0	0	6	324	196	128
126+89.50	12689.50	89.50	24.36	0.00	0.96	41	0	3	365	199	166
128+00.00	12800.00	110.50	14.68	0.00	0.30	80	0	3	445	202	243
129+00.00	12900.00	100.00	0.00	0.00	4.97	27	0	10	472	212	260
129+43.97	12943.97	43.97	11.25	0.00	6.22	9	0	9	481	221	260
130+00.00	13000.00	56.03	0.00	0.00	3.79	12	0	10	493	231	262
131+00.00	13100.00	100.00	0.00	0.00	10.00	0	0	26	493	257	236
132+00.00	13200.00	100.00	0.00	0.00	9.04	0	0	35	493	292	201
133+00.00	13300.00	100.00	0.18	0.00	3.05	0	0	22	493	314	179
133+62.13	13362.13	62.13	24.37	0.00	2.33	28	0	6	521	320	201
134+00.00	13400.00	37.87	0.70	0.00	2.28	18	0	3	539	323	216
135+00.00	13500.00	100.00	0.00	0.00	7.52	1	0	18	540	341	199
136+00.00	13600.00	100.00	0.00	0.00	6.39	0	0	26	540	367	173
137+00.00	13700.00	100.00	0.00	0.00	13.15	0	0	36	540	403	137
138+00.00	13800.00	100.00	0.16	0.00	0.82	0	0	26	540	429	111
139+00.00	13900.00	100.00	0.03	0.00	0.92	0	0	3	540	432	108
140+00.00	14000.00	100.00	0.00	0.00	2.70	0	0	7	540	439	101
141+00.00	14100.00	100.00	0.00	0.00	3.38	0	0	11	540	450	90
142+00.00	14200.00	100.00	0.00	0.00	3.57	0	0	13	540	463	77
142+60.65	14260.65	60.65	7.30	0.00	3.67	8	0	8	548	471	77
143+00.00	14300.00	39.35	0.00	0.00	4.50	5	0	6	553	477	76
143+60.06	14360.06	60.06	9.99	0.00	2.64	11	0	8	564	485	79
144+00.00	14400.00	39.94	0.00	0.00	2.77	7	0	4	571	489	82
145+00.00	14500.00	100.00	0.00	0.00	2.73	0	0	10	571	499	72
146+24.07	14624.07	124.07	13.20	0.00	1.03	30	0	9	601	508	93
147+00.00	14700.00	75.93	0.05	0.00	1.27	19	0	3	620	511	109

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
8 - MASS ORDINATE	IF MARSH AND EBS TO BE BACKFILLED WITH GRANULAR: [CUT - SALVAGED PAVT - ((FILL - REDUCED MARSH IN FILL - REDUCED EBS IN FILL - EXPANDED ROCK) * FILL FACTOR)]

DIVISION 1 - CTY-N

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 1.00	MASS ORDINATE
						NOTE 1		NOTE 3	NOTE 1		NOTE 8
147+81.51	14781.51	81.51	9.22	0.00	0.76	14	0	3	634	514	120
149+00.00	14900.00	118.49	0.00	0.00	2.48	20	0	7	654	521	133
150+31.67	15031.67	131.67	7.46	0.00	9.09	18	0	28	672	549	123
151+00.00	15100.00	68.33	0.00	0.00	10.43	9	0	25	681	574	107
152+00.00	15200.00	100.00	8.87	0.00	5.75	16	0	30	697	604	93
153+00.00	15300.00	100.00	0.00	0.00	24.48	16	0	56	713	660	53
154+00.00	15400.00	100.00	0.00	0.00	31.72	0	0	104	713	764	-51
155+00.00	15500.00	100.00	0.00	0.00	27.53	0	0	110	713	874	-161
156+00.00	15600.00	100.00	0.00	0.00	18.70	0	0	86	713	960	-247
157+00.00	15700.00	100.00	0.00	0.00	5.83	0	0	45	713	1,005	-292
158+00.00	15800.00	100.00	0.00	0.00	10.12	0	0	30	713	1,035	-322
159+00.00	15900.00	100.00	13.86	0.00	6.14	26	0	30	739	1,065	-326
160+00.00	16000.00	100.00	0.00	0.00	3.40	26	0	18	765	1,083	-318
161+00.00	16100.00	100.00	0.00	0.00	1.46	0	0	9	765	1,092	-327
162+00.00	16200.00	100.00	0.01	0.00	1.33	0	0	5	765	1,097	-332
163+31.62	16331.62	131.62	9.48	0.00	9.38	23	0	26	788	1,123	-335
164+00.00	16400.00	68.38	0.00	0.00	4.94	12	0	18	800	1,141	-341
165+00.00	16500.00	100.00	0.25	0.00	1.27	0	0	11	800	1,152	-352
166+00.00	16600.00	100.00	0.10	0.00	11.00	1	0	23	801	1,175	-374
167+00.00	16700.00	100.00	0.00	0.00	3.27	0	0	26	801	1,201	-400
168+27.20	16827.20	127.20	12.77	0.00	1.30	30	0	11	831	1,212	-381
169+08.35	16908.35	81.15	24.13	0.00	0.03	55	0	2	886	1,214	-328
170+00.00	17000.00	91.65	0.68	0.00	12.87	42	0	22	928	1,236	-308
171+00.00	17100.00	100.00	0.32	0.00	25.83	2	0	72	930	1,308	-378
172+00.00	17200.00	100.00	5.60	0.00	26.03	11	0	96	941	1,404	-463
173+00.00	17300.00	100.00	3.67	0.00	13.52	17	0	73	958	1,477	-519
174+00.00	17400.00	100.00	4.83	0.00	8.22	16	0	40	974	1,517	-543
175+00.00	17500.00	100.00	13.05	0.00	7.25	33	0	29	1,007	1,546	-539
176+00.00	17600.00	100.00	6.28	0.00	0.51	36	0	14	1,043	1,560	-517
177+00.00	17700.00	100.00	1.11	0.00	2.40	14	0	5	1,057	1,565	-508
178+00.00	17800.00	100.00	0.73	0.00	0.47	3	0	5	1,060	1,570	-510
179+00.00	17900.00	100.00	0.58	0.00	1.14	2	0	3	1,062	1,573	-511
180+00.00	18000.00	100.00	0.85	0.00	1.11	3	0	4	1,065	1,577	-512
181+00.00	18100.00	100.00	0.87	0.00	1.13	3	0	4	1,068	1,581	-513
182+00.00	18200.00	100.00	2.20	0.00	1.08	6	0	4	1,074	1,585	-511
183+00.00	18300.00	100.00	0.99	0.00	1.56	6	0	5	1,080	1,590	-510
184+00.00	18400.00	100.00	0.49	0.00	21.34	3	0	42	1,083	1,632	-549
185+00.00	18500.00	100.00	1.15	0.00	46.15	3	0	125	1,086	1,757	-671
185+26.24	18526.24	26.24	13.84	0.00	36.54	7	0	40	1,093	1,797	-704
186+00.00	18600.00	73.76	0.00	0.00	27.64	19	0	88	1,112	1,885	-773
187+00.00	18700.00	100.00	0.42	0.00	14.78	1	0	79	1,113	1,964	-851
188+00.00	18800.00	100.00	0.00	0.00	32.05	1	0	87	1,114	2,051	-937
189+00.00	18900.00	100.00	0.00	0.00	29.37	0	0	114	1,114	2,165	-1,051
190+00.00	19000.00	100.00	0.02	0.00	18.65	0	0	89	1,114	2,254	-1,140
191+00.00	19100.00	100.00	0.00	0.00	19.01	0	0	70	1,114	2,324	-1,210

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
8 - MASS ORDINATE	IF MARSH AND EBS TO BE BACKFILLED WITH GRANULAR: [CUT - SALVAGED PAVT - ((FILL - REDUCED MARSH IN FILL - REDUCED EBS IN FILL - EXPANDED ROCK) * FILL FACTOR)]

DIVISION 1 - CTY-N

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 1.00	MASS ORDINATE
						NOTE 1		NOTE 3	NOTE 1		NOTE 8
192+00.00	19200.00	100.00	0.01	0.00	10.68	0	0	55	1,114	2,379	-1,265
193+00.00	19300.00	100.00	6.87	0.00	10.87	13	0	40	1,127	2,419	-1,292
193+58.29	19358.29	58.29	9.02	0.00	2.97	17	0	15	1,144	2,434	-1,290
194+00.00	19400.00	41.71	0.12	0.00	1.87	7	0	4	1,151	2,438	-1,287
194+52.49	19452.49	52.49	12.89	0.00	2.07	13	0	4	1,164	2,442	-1,278
195+00.00	19500.00	47.51	1.01	0.00	1.58	12	0	3	1,176	2,445	-1,269
196+00.00	19600.00	100.00	0.03	0.00	2.95	2	0	8	1,178	2,453	-1,275
197+00.00	19700.00	100.00	0.00	0.00	12.69	0	0	29	1,178	2,482	-1,304
198+00.00	19800.00	100.00	0.00	0.00	18.32	0	0	57	1,178	2,539	-1,361
199+00.00	19900.00	100.00	0.17	0.00	33.81	0	0	97	1,178	2,636	-1,458
200+00.00	20000.00	100.00	0.18	0.00	62.14	1	0	178	1,179	2,814	-1,635
201+00.00	20100.00	100.00	0.29	0.00	65.45	1	0	236	1,180	3,050	-1,870
202+00.00	20200.00	100.00	0.33	0.00	73.38	1	0	257	1,181	3,307	-2,126
203+00.00	20300.00	100.00	53.72	0.00	43.40	100	0	216	1,281	3,523	-2,242
204+00.00	20400.00	100.00	85.90	0.00	11.96	259	0	103	1,540	3,626	-2,086
205+00.00	20500.00	100.00	167.72	0.00	0.00	470	0	22	2,010	3,648	-1,638
206+00.00	20600.00	100.00	132.41	0.00	0.00	556	0	0	2,566	3,648	-1,082
206+35.18	20635.18	35.18	139.84	0.00	0.00	177	0	0	2,743	3,648	-905
207+00.00	20700.00	64.82	99.31	0.00	0.00	287	0	0	3,030	3,648	-618
208+00.00	20800.00	100.00	72.36	0.00	0.00	318	0	0	3,348	3,648	-300
209+00.00	20900.00	100.00	38.63	0.00	0.00	206	0	0	3,554	3,648	-94
209+60.87	20960.87	60.87	25.47	0.00	10.63	72	0	12	3,626	3,660	-34
210+00.00	21000.00	39.13	6.93	0.00	2.06	23	0	9	3,649	3,669	-20
210+32.35	21032.35	32.35	6.65	0.00	10.83	8	0	8	3,657	3,677	-20
211+00.00	21100.00	67.65	5.49	0.00	7.55	15	0	23	3,672	3,700	-28
212+00.00	21200.00	100.00	2.86	0.00	6.62	15	0	26	3,687	3,726	-39
213+00.00	21300.00	100.00	24.97	0.00	0.74	52	0	14	3,739	3,740	-1
214+00.00	21400.00	100.00	0.27	0.00	1.80	47	0	5	3,786	3,745	41
215+00.00	21500.00	100.00	0.00	0.00	3.21	1	0	9	3,787	3,754	33
216+00.00	21600.00	100.00	0.51	0.00	0.68	1	0	7	3,788	3,761	27
217+00.00	21700.00	100.00	0.23	0.00	1.05	1	0	3	3,789	3,764	25
218+00.00	21800.00	100.00	0.94	0.00	0.80	2	0	3	3,791	3,767	24
219+00.00	21900.00	100.00	0.05	0.00	4.54	2	0	10	3,793	3,777	16
220+00.00	22000.00	100.00	14.98	0.00	6.12	28	0	20	3,821	3,797	24
221+00.00	22100.00	100.00	0.97	0.00	14.80	30	0	39	3,851	3,836	15
222+00.00	22200.00	100.00	0.76	0.00	32.23	3	0	87	3,854	3,923	-69
223+00.00	22300.00	100.00	0.71	0.00	20.18	3	0	97	3,857	4,020	-163
224+00.00	22400.00	100.00	0.58	0.00	19.33	2	0	73	3,859	4,093	-234
225+00.00	22500.00	100.00	0.48	0.00	1.09	2	0	38	3,861	4,131	-270
226+00.00	22600.00	100.00	0.11	0.00	1.84	1	0	5	3,862	4,136	-274
227+00.00	22700.00	100.00	3.35	0.00	17.31	6	0	35	3,868	4,171	-303
227+81.81	22781.81	81.81	19.76	0.00	19.53	35	0	56	3,903	4,227	-324
229+00.00	22900.00	118.19	0.97	0.00	1.29	45	0	46	3,948	4,273	-325
230+00.00	23000.00	100.00	0.71	0.00	3.02	3	0	8	3,951	4,281	-330
230+90.65	23090.65	90.65	6.95	0.00	3.00	13	0	10	3,964	4,291	-327

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
8 - MASS ORDINATE	IF MARSH AND EBS TO BE BACKFILLED WITH GRANULAR: [CUT - SALVAGED PAVT - ((FILL - REDUCED MARSH IN FILL - REDUCED EBS IN FILL - EXPANDED ROCK) * FILL FACTOR)]

9

9

PROJECT NO: 3658-00-70

HWY: CTH N

COUNTY: ROCK

EARTHWORK DATA

SHEET

201

E

DIVISION 1 - CTY-N

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 1.00	MASS ORDINATE
			NOTE 1			NOTE 3			NOTE 1		NOTE 8
232+00.00	23200.00	109.35	0.11	0.00	3.57	14	0	13	3,978	4,304	-326
233+00.00	23300.00	100.00	0.04	0.00	5.02	0	0	16	3,978	4,320	-342
234+06.01	23406.01	106.01	6.88	0.00	6.26	14	0	22	3,992	4,342	-350
235+00.00	23500.00	93.99	0.66	0.00	0.78	13	0	12	4,005	4,354	-349

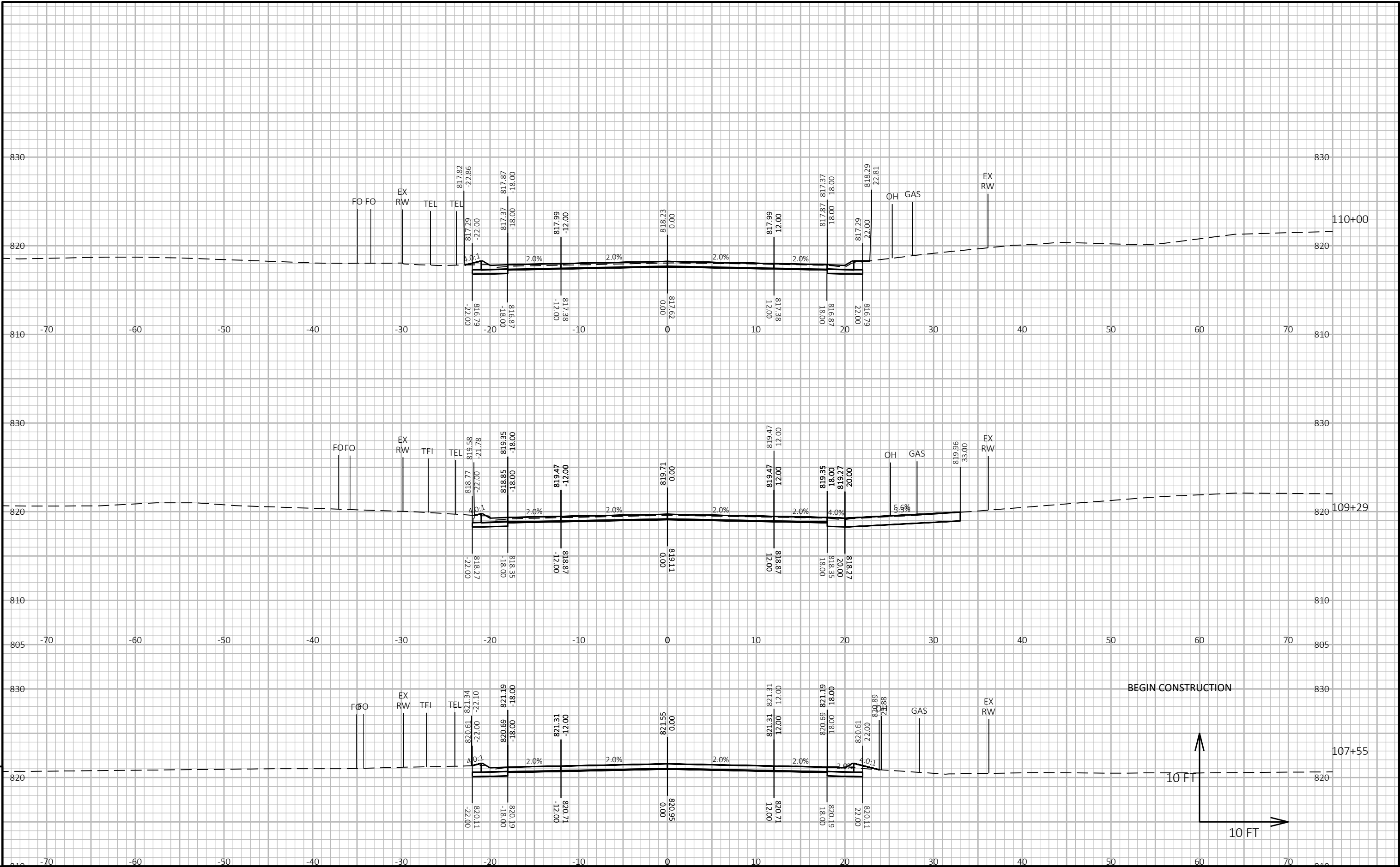
DIVISION 1 - CTY-N

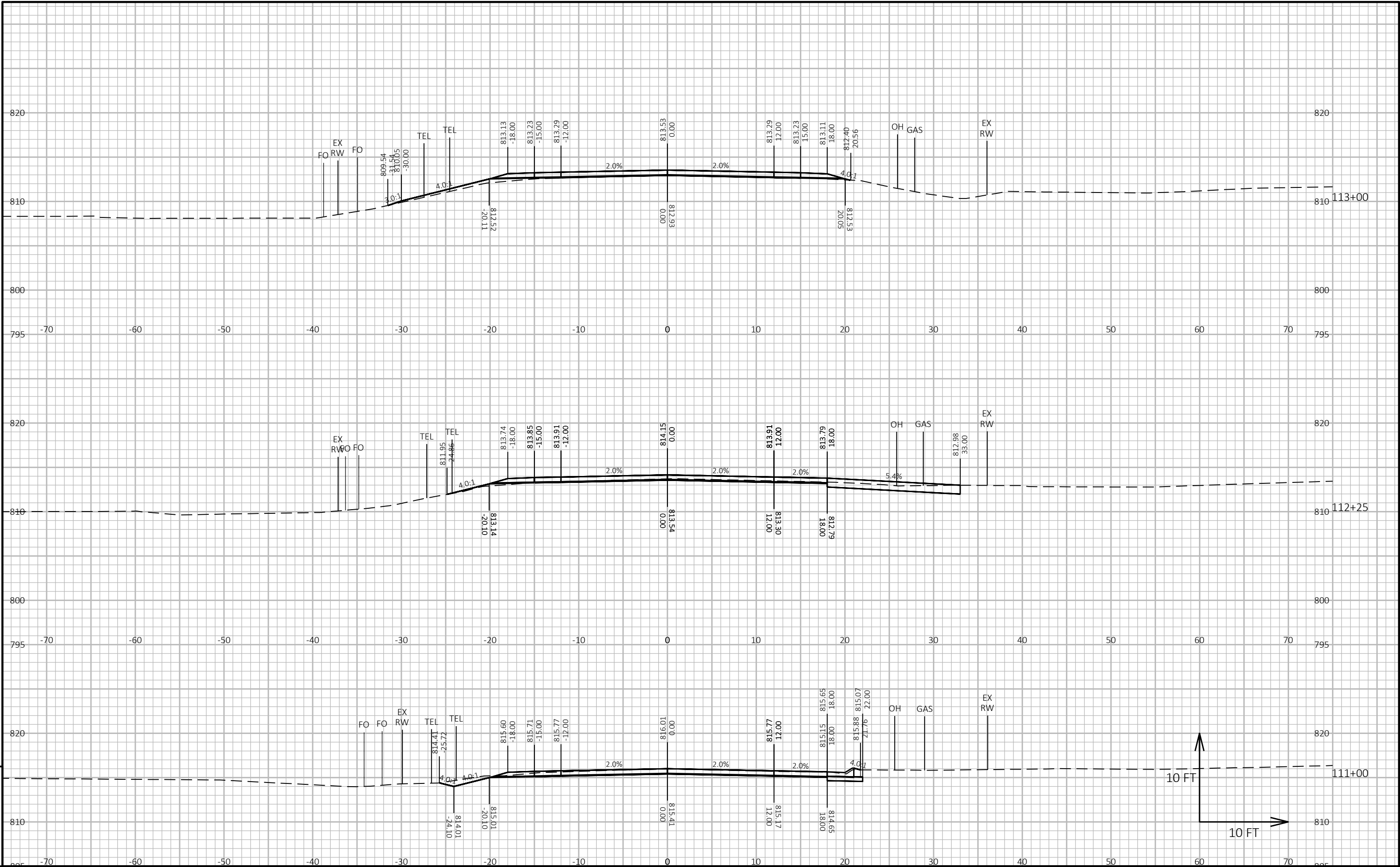
STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL 1.00	MASS ORDINATE
			NOTE 1			NOTE 3			NOTE 1		NOTE 8
235+00.10	23500.10	0.00	0.67	0.00	0.78	0	0	0	0	0	0
235+60.15	23560.15	60.05	0.04	0.00	16.54	1	0	19	1	19	-18
235+73.23	23573.23	13.08	0.02	0.00	21.75	0	0	9	1	28	-27
236+07.25	23607.25	34.02	0.00	0.00	44.90	0	0	42	1	70	-69
236+10.25	23610.25	3.00	0.01	0.00	42.42	0	0	5	1	75	-74
236+31.80	23631.80	21.55	0.00	0.00	32.34	0	0	30	1	105	-104
236+35.73	23635.73	3.93	0.00	0.00	31.40	0	0	5	1	110	-109
236+56.54	23656.54	20.81	0.00	0.00	32.17	0	0	24	1	134	-133
236+60.87	23660.87	4.33	0.02	0.00	31.76	0	0	5	1	139	-138
236+97.19	23697.19	36.32	0.24	0.00	140.37	0	0	116	1	255	-254

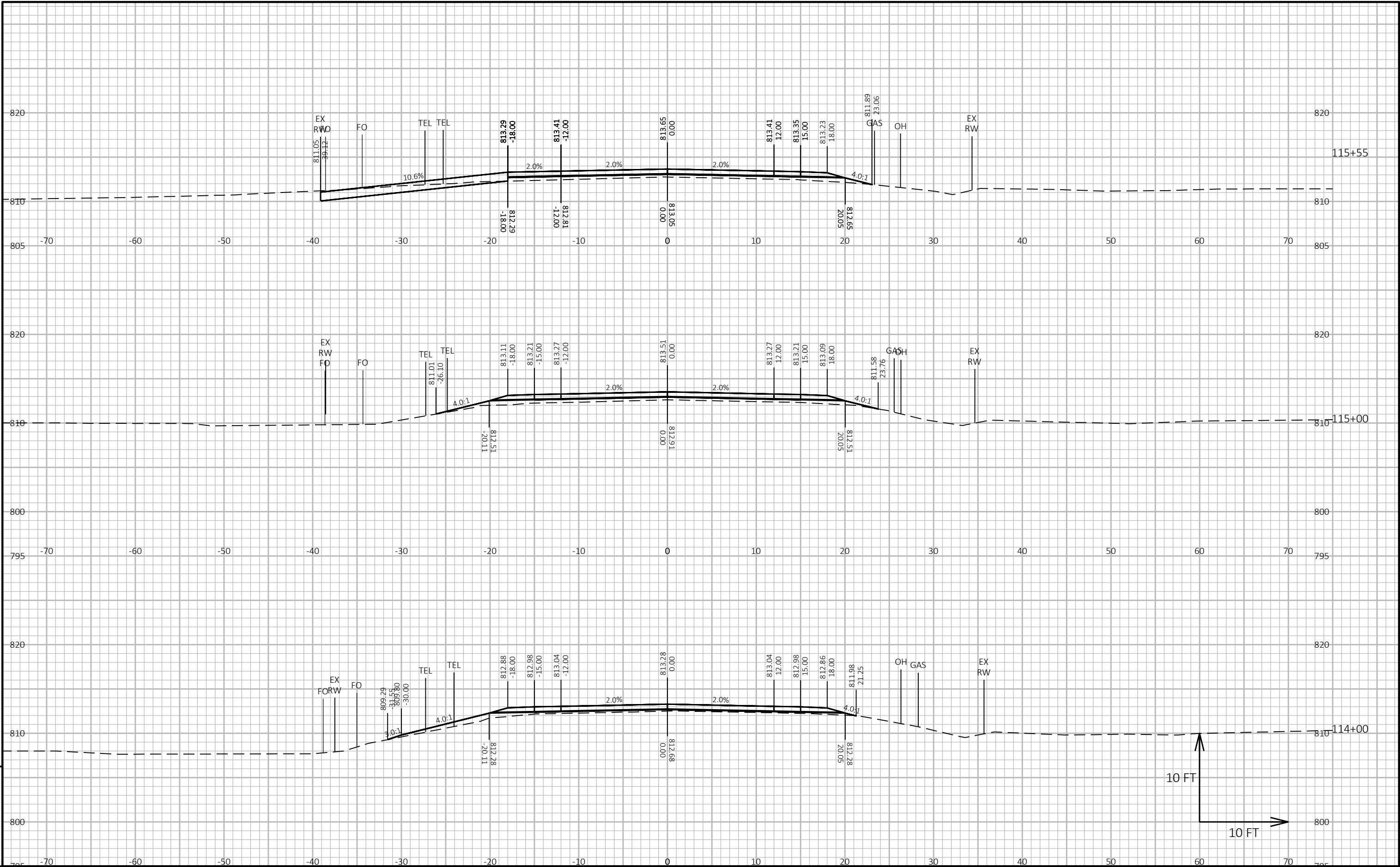
DIVISION 2 - LCL-MILTONRD

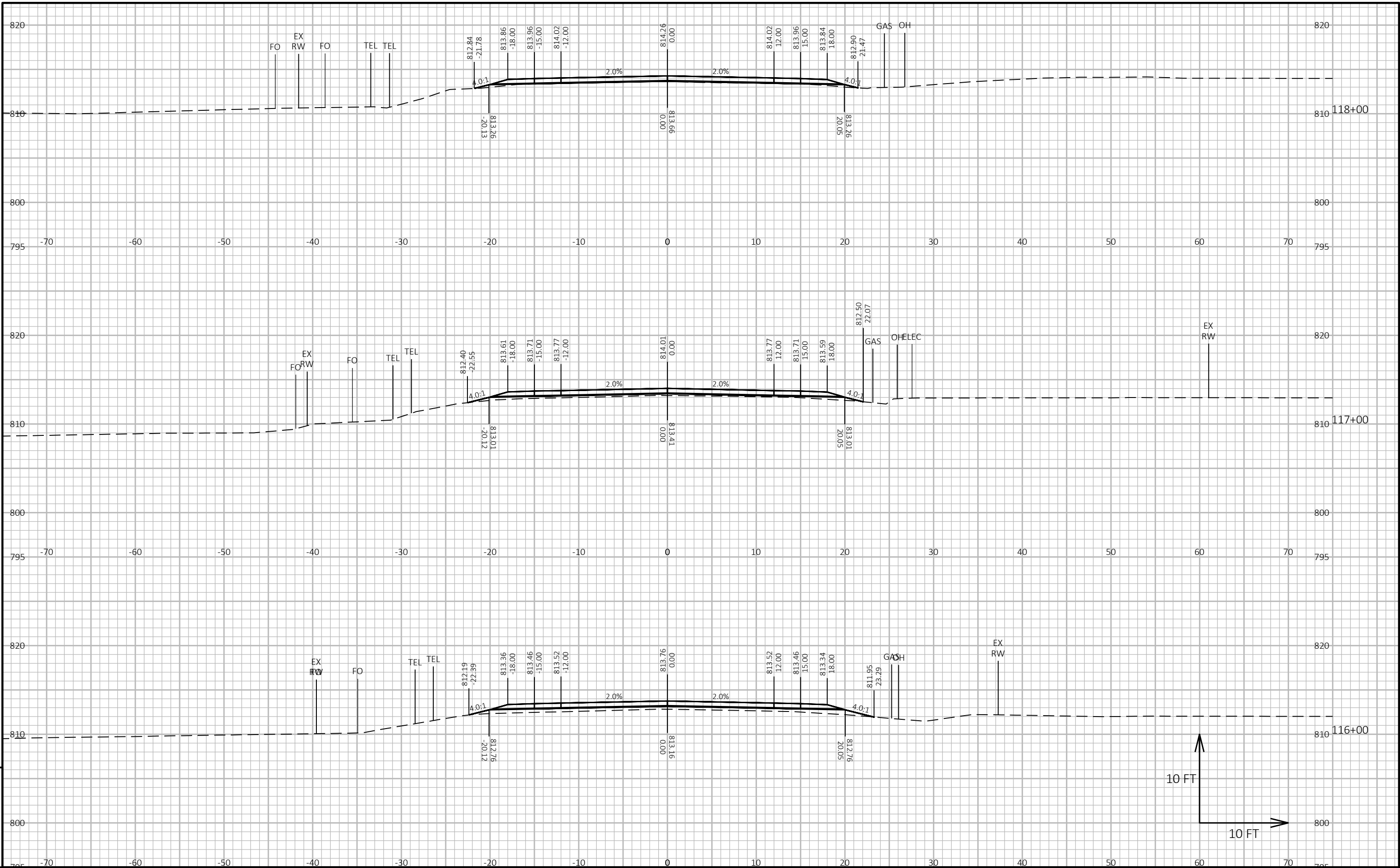
STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EXPANDED FILL 1.00	MASS ORDINATE
			NOTE 1			NOTE 2		NOTE 3	NOTE 1		NOTE 8
2+95.29	295.29	0.00	0.00	0.00	9.48	0	0	0	0	0	0
3+20.26	320.26	24.97	0.00	0.00	18.94	0	0	13	0	13	-13
3+45.28	345.28	25.02	0.00	0.00	29.74	0	0	23	0	36	-36
4+21.73	421.73	76.45	0.00	0.00	6.54	0	0	51	0	87	-87

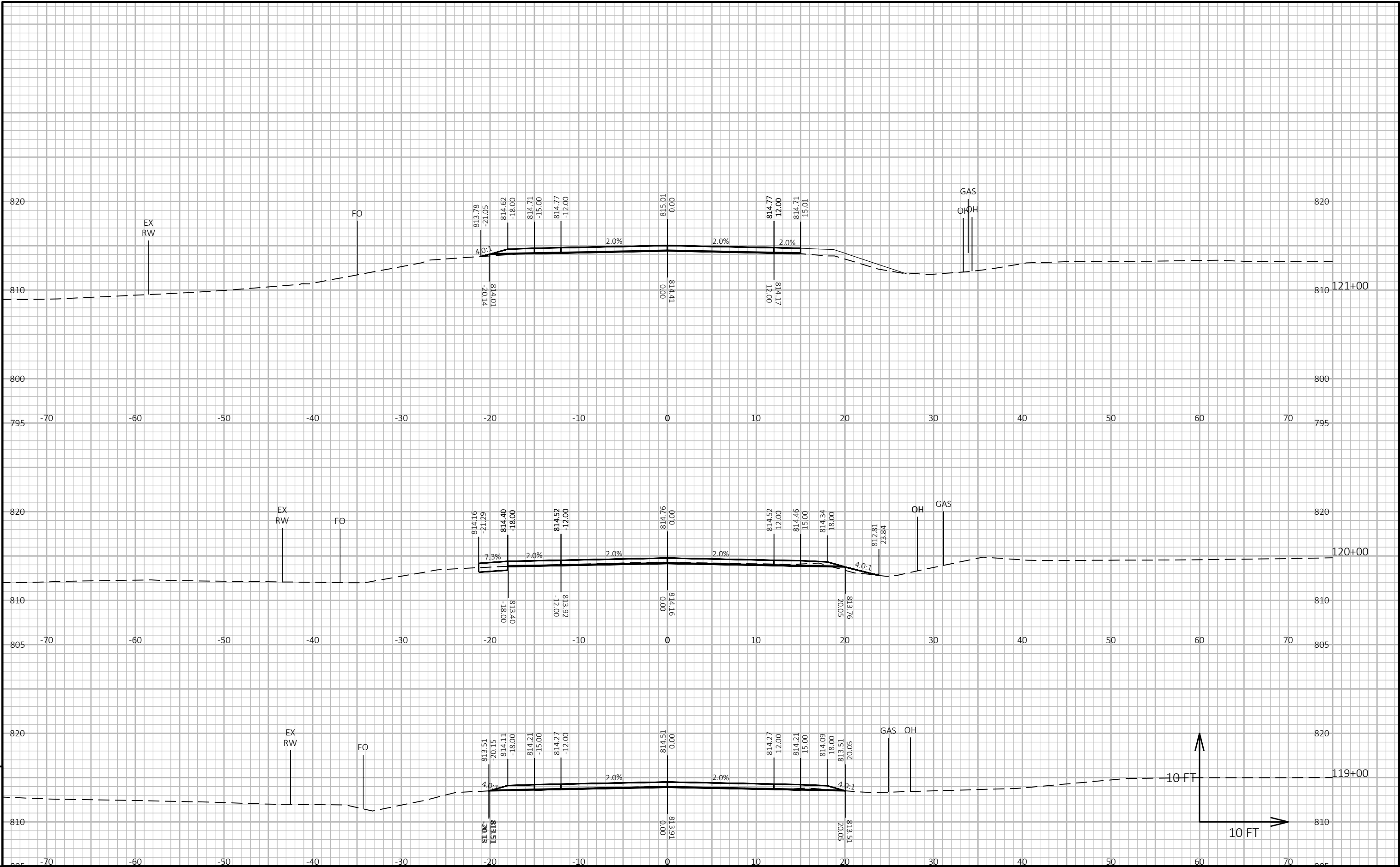
NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
8 - MASS ORDINATE	IF MARSH AND EBS TO BE BACKFILLED WITH GRANULAR: [CUT - SALVAGED PAVT - ((FILL - REDUCED MARSH IN FILL - REDUCED EBS IN FILL - EXPANDED ROCK) * FILL FACTOR)]

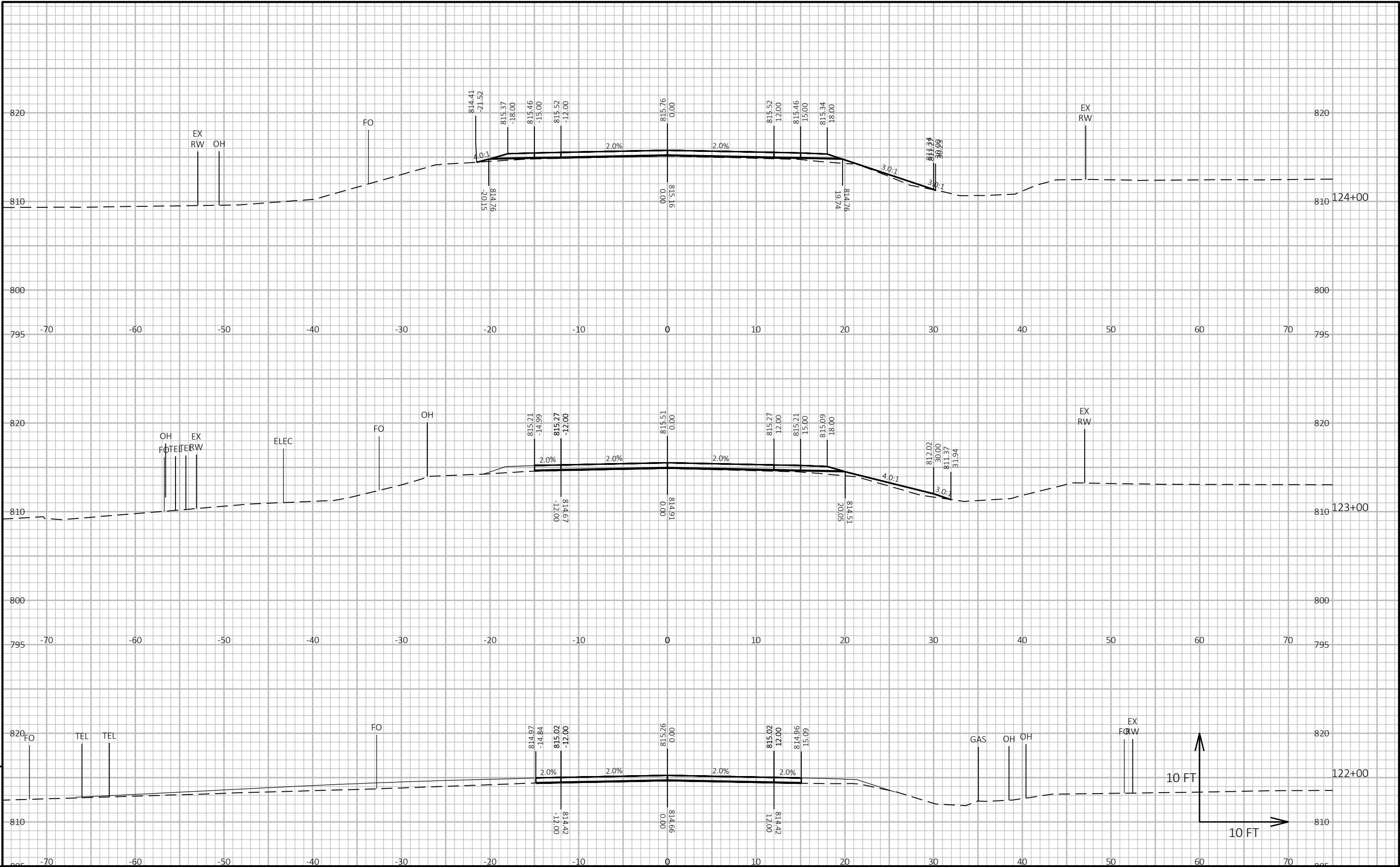


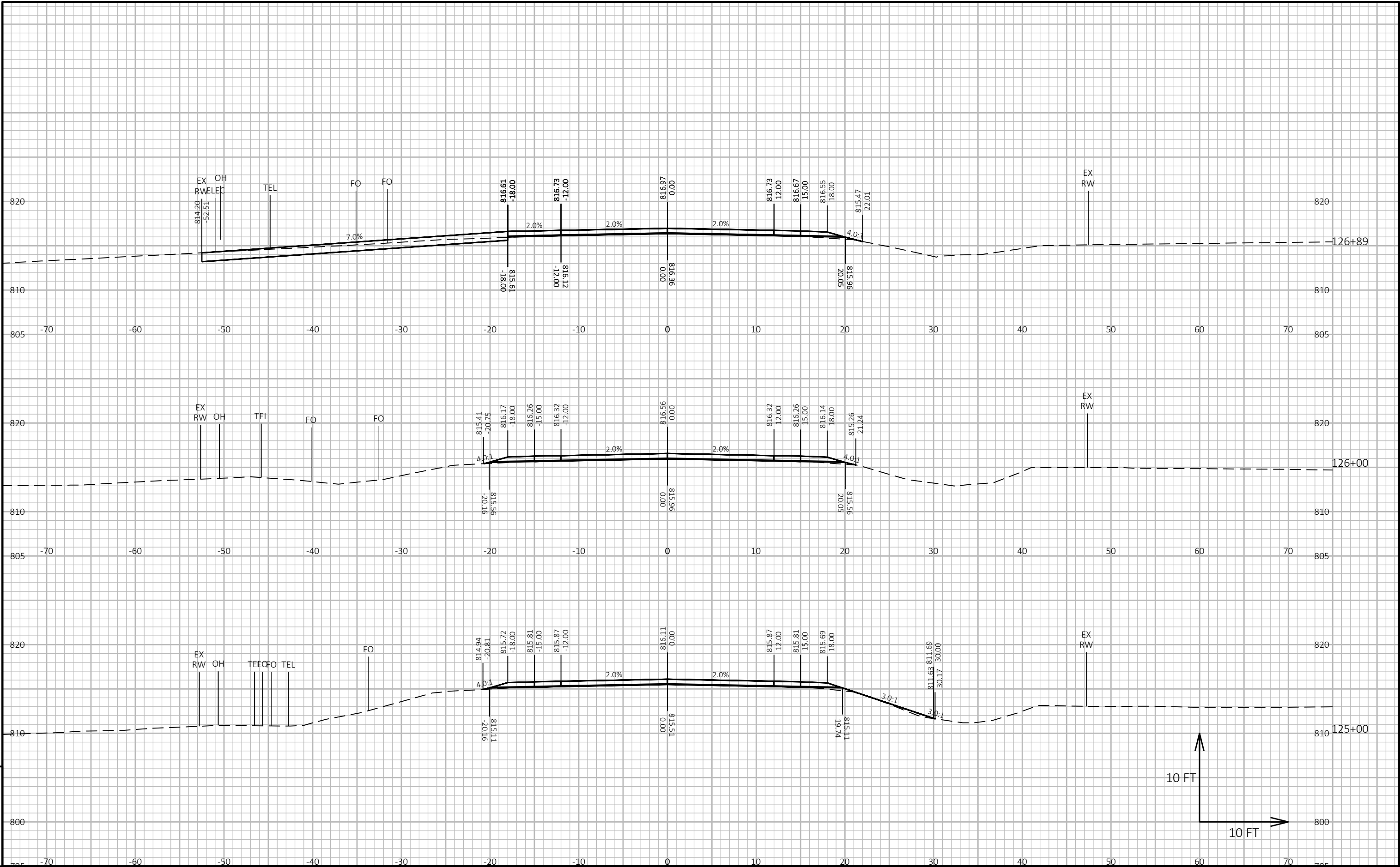


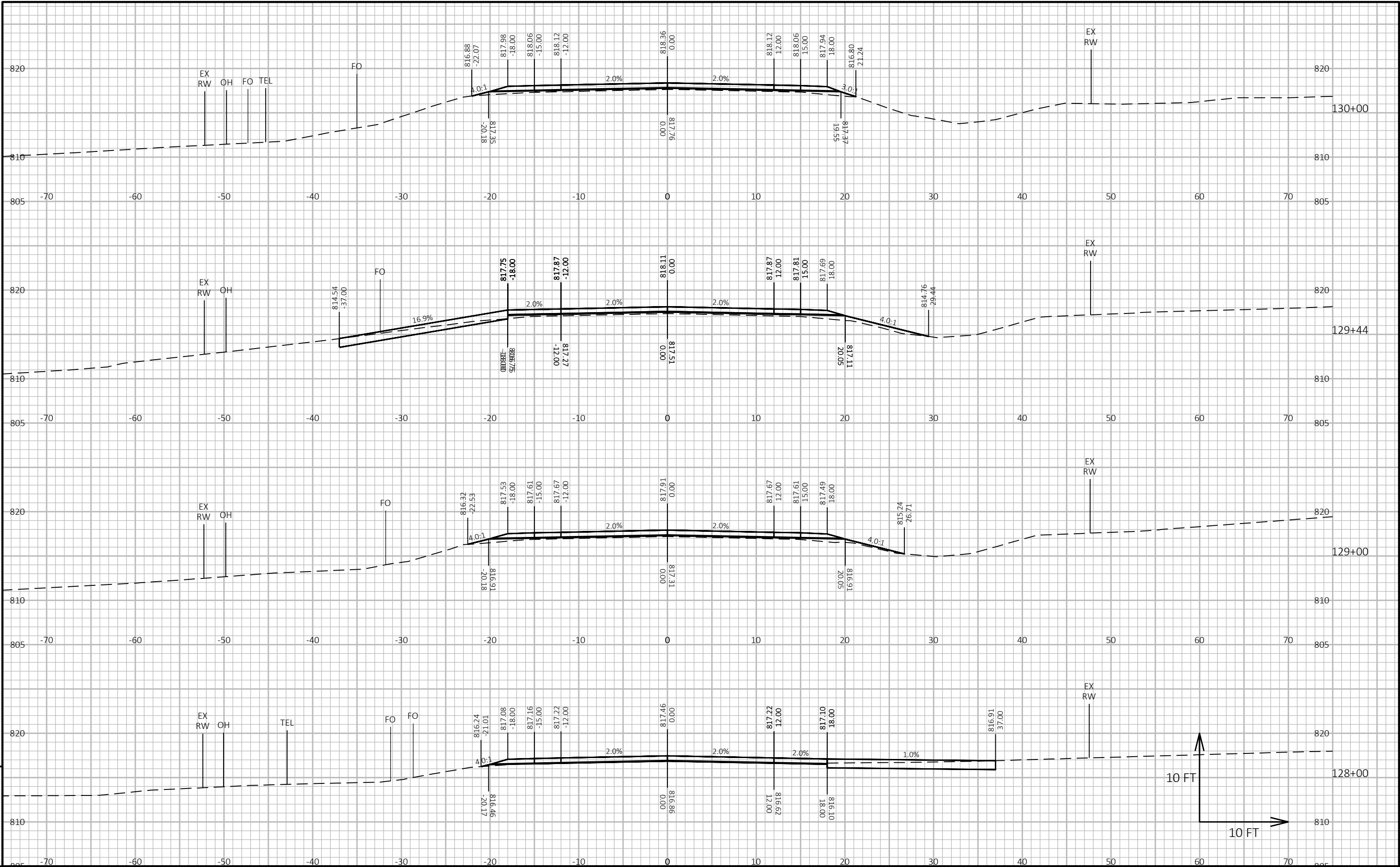


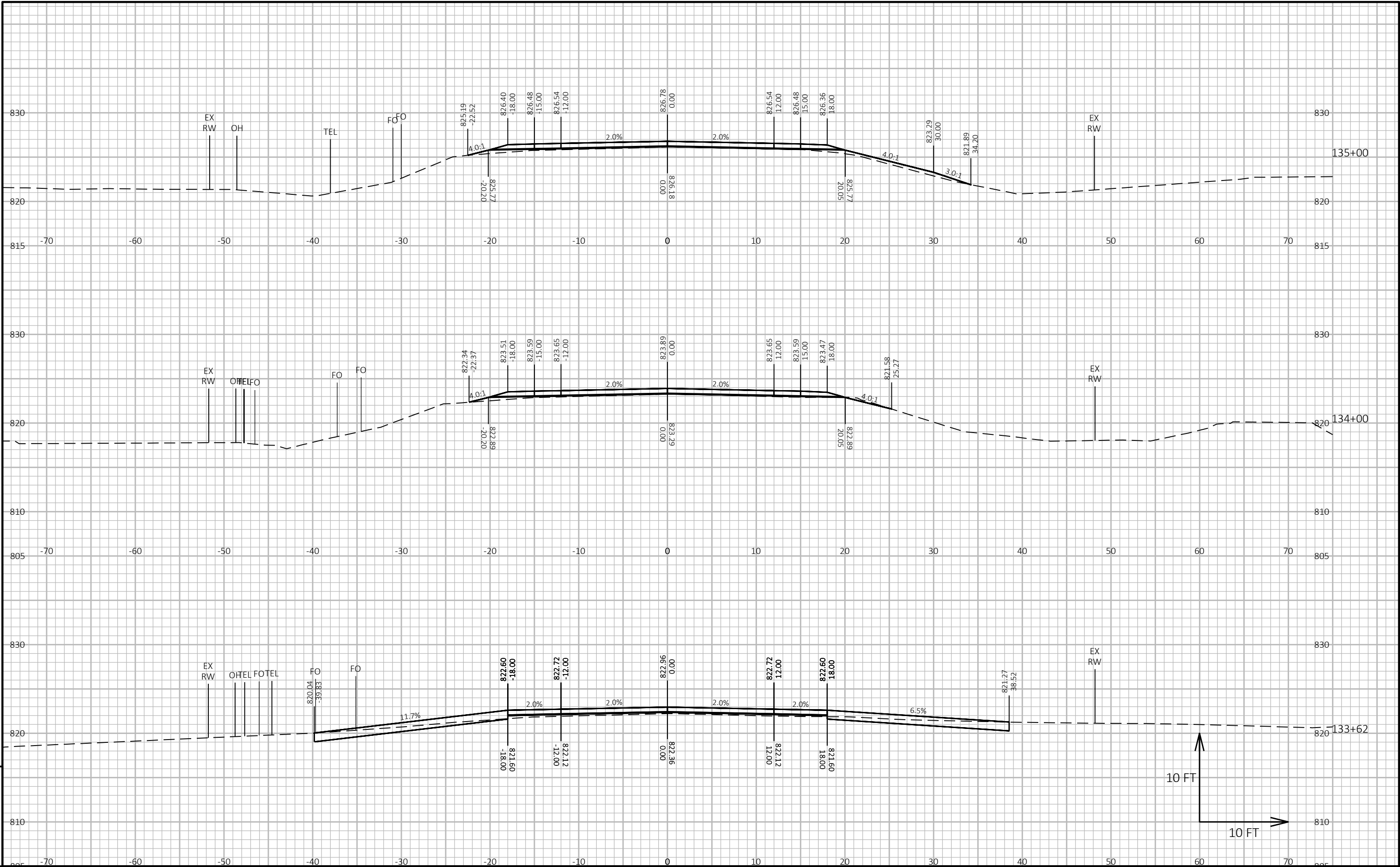


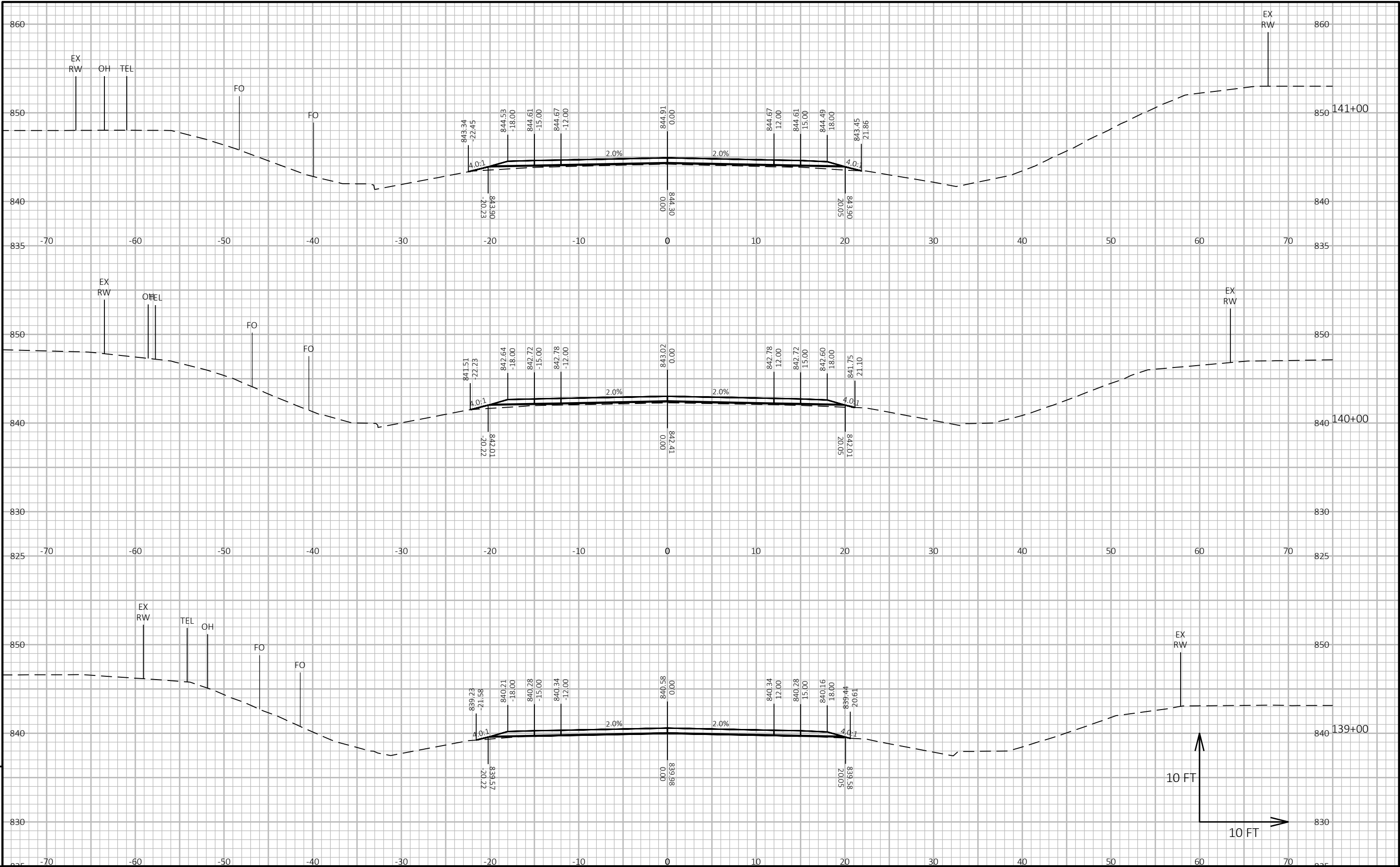


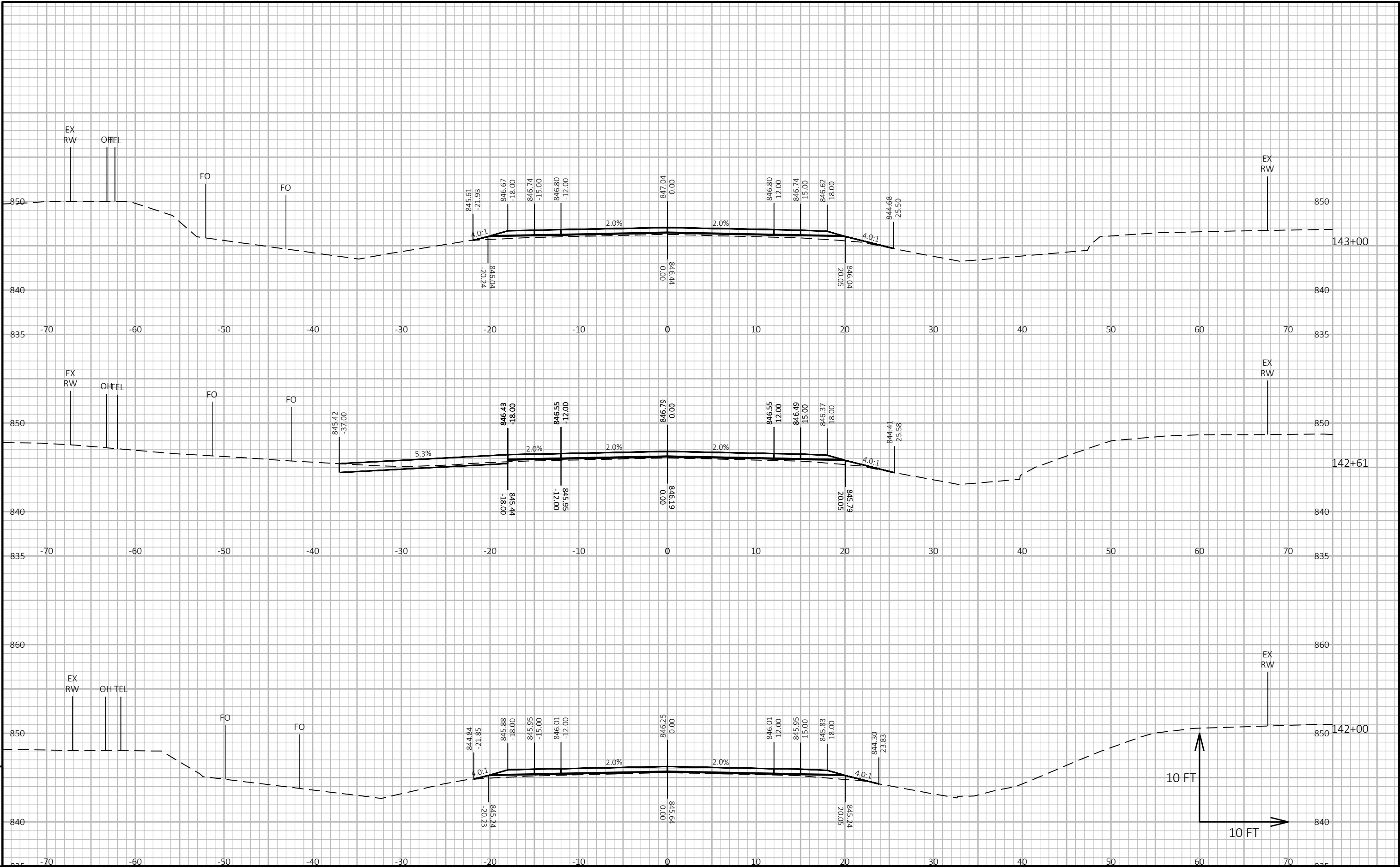


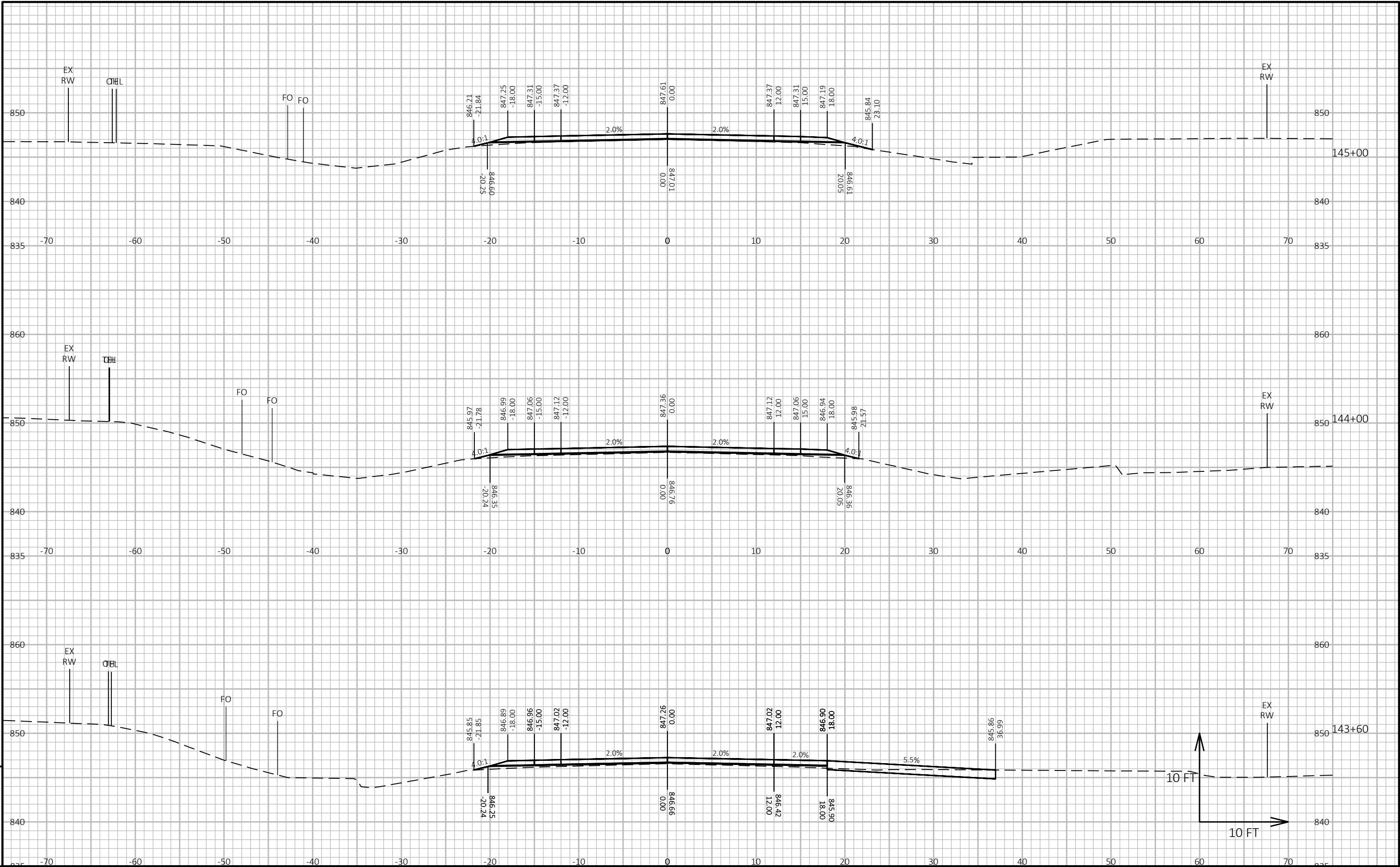


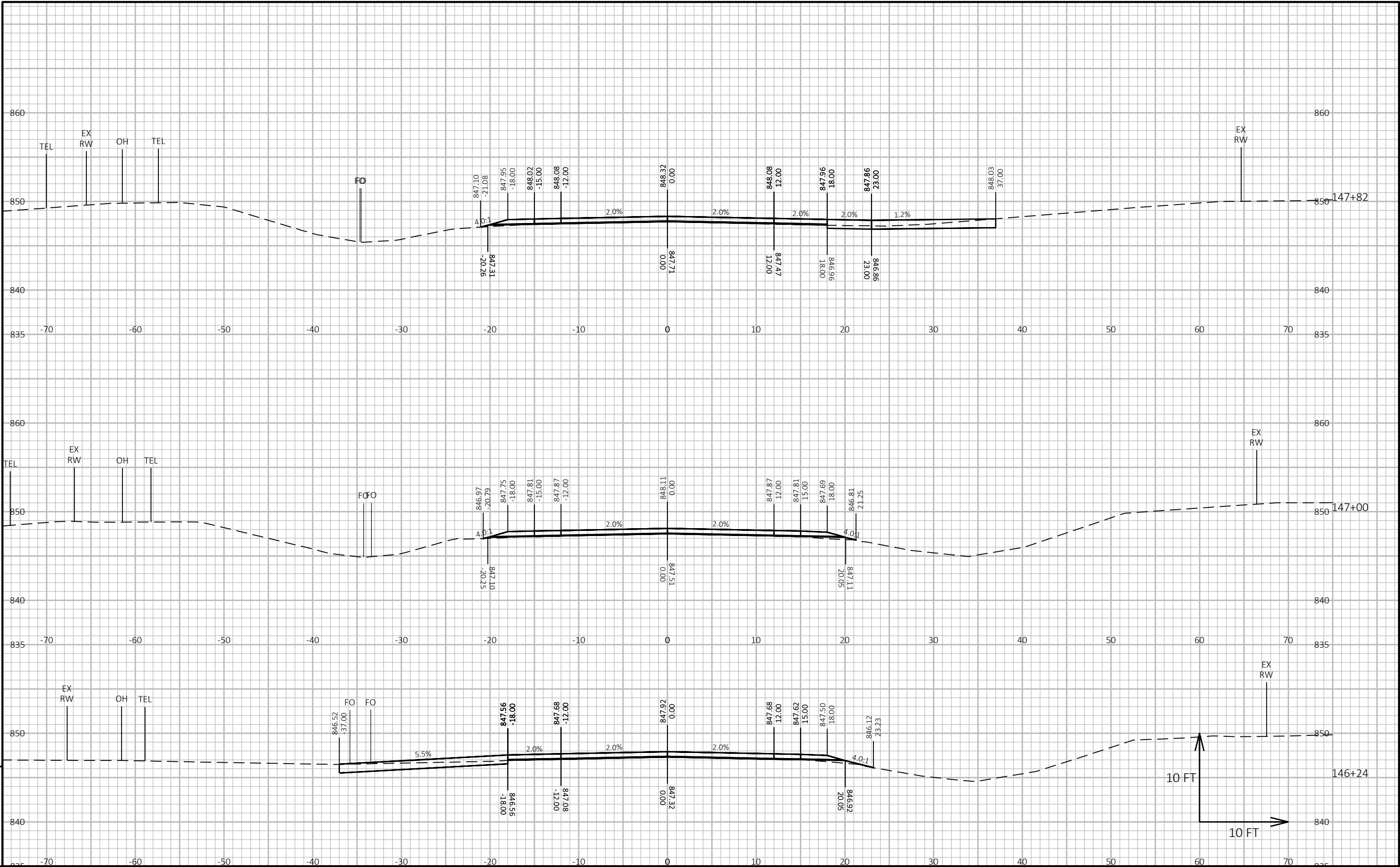


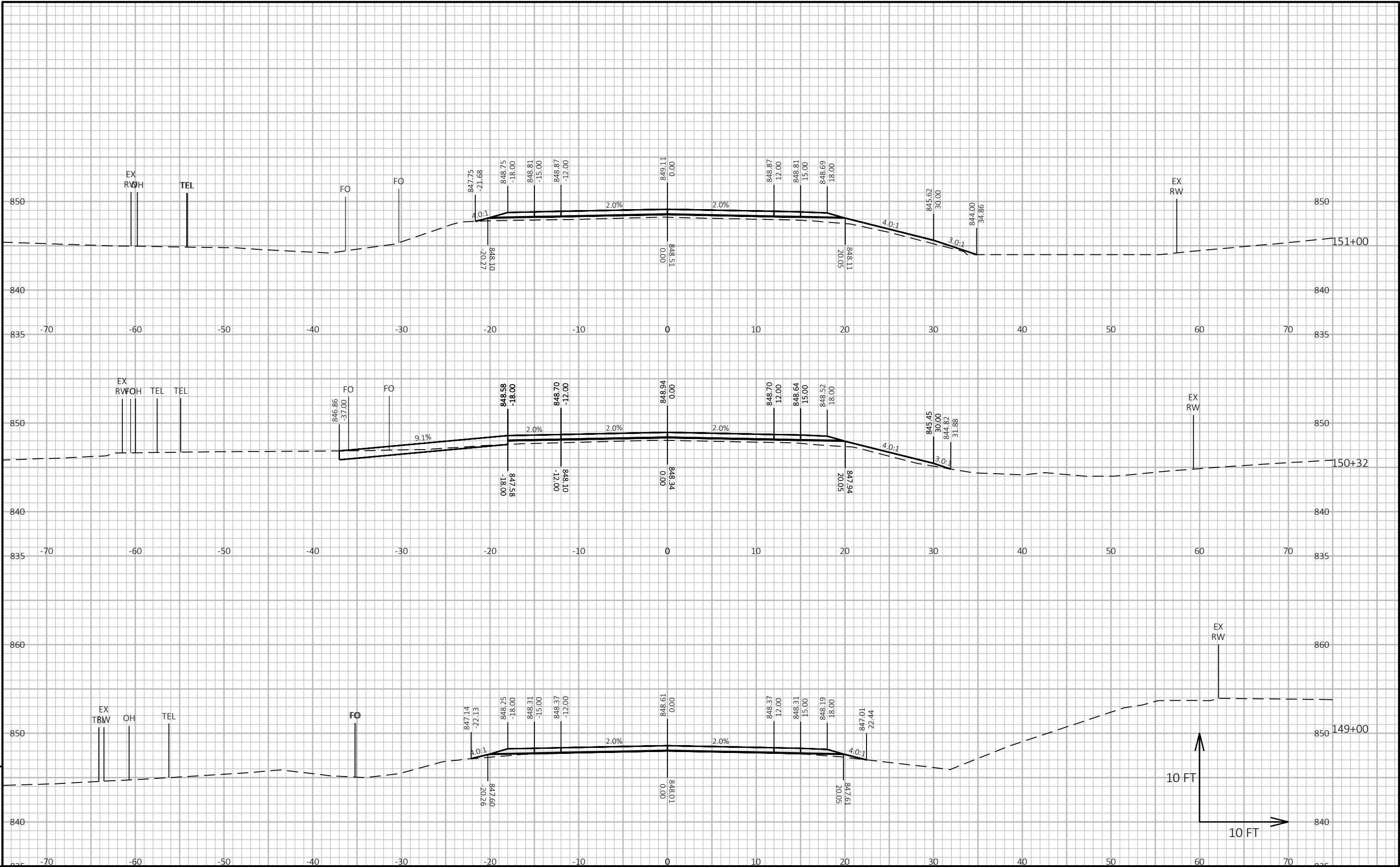


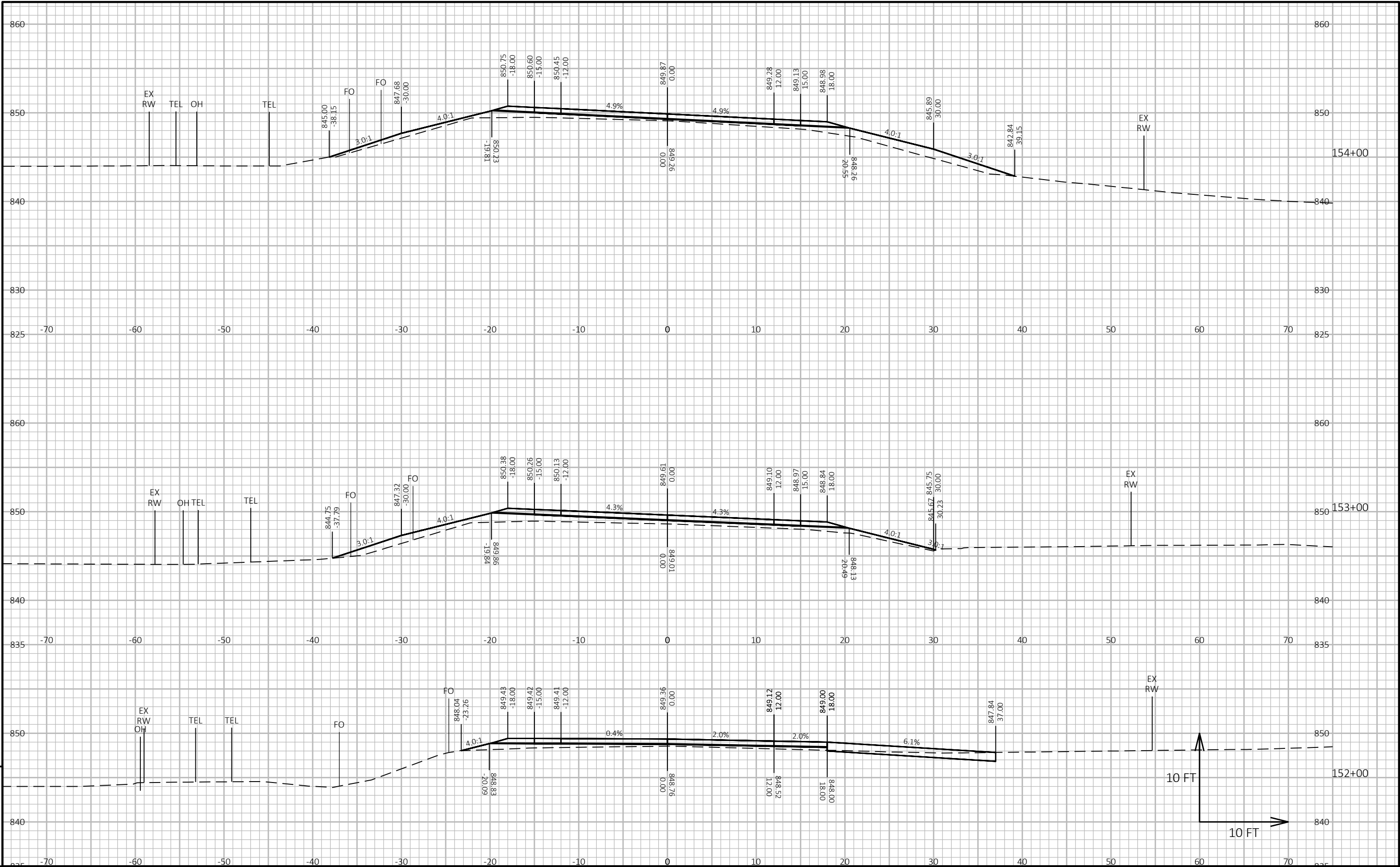


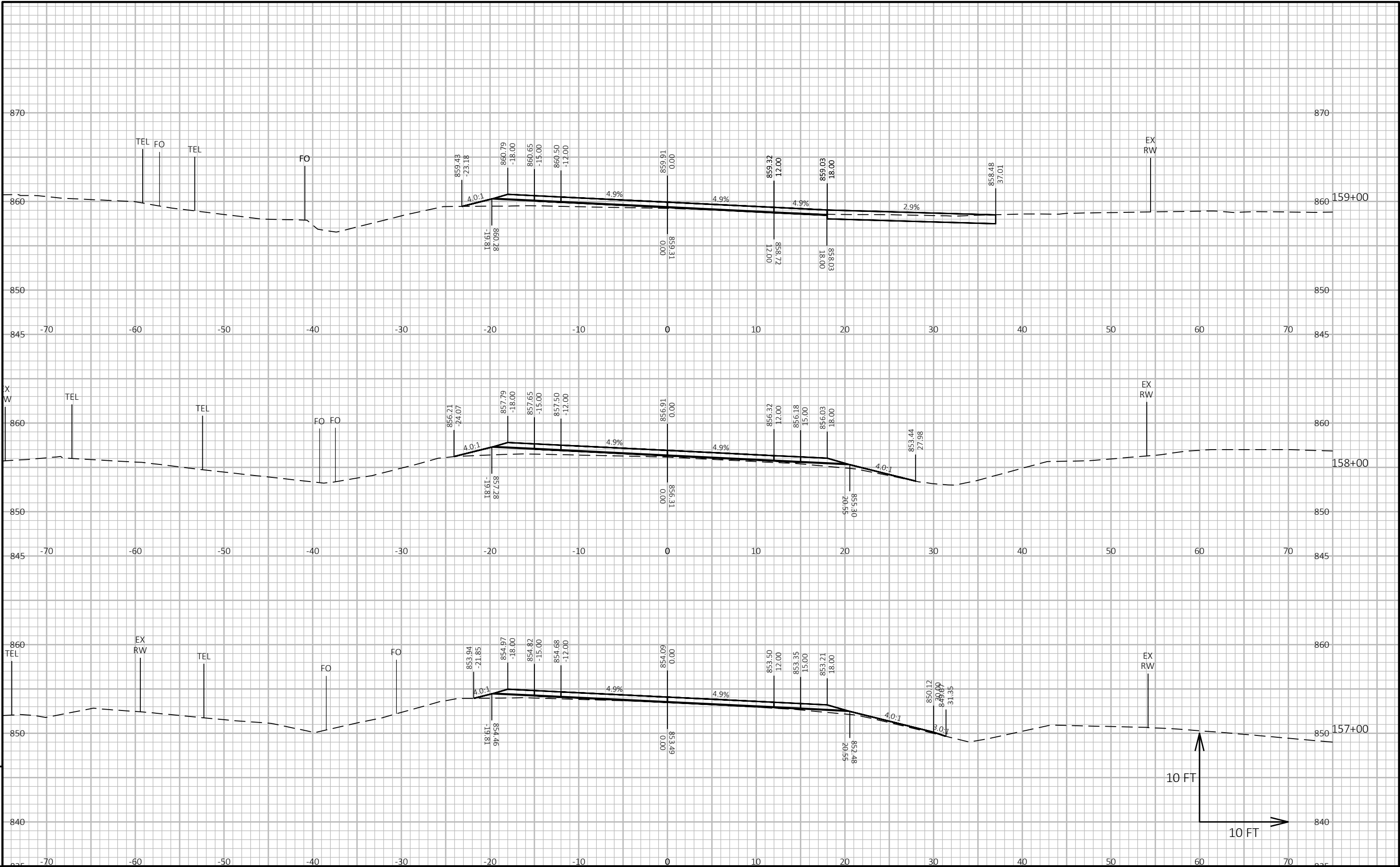


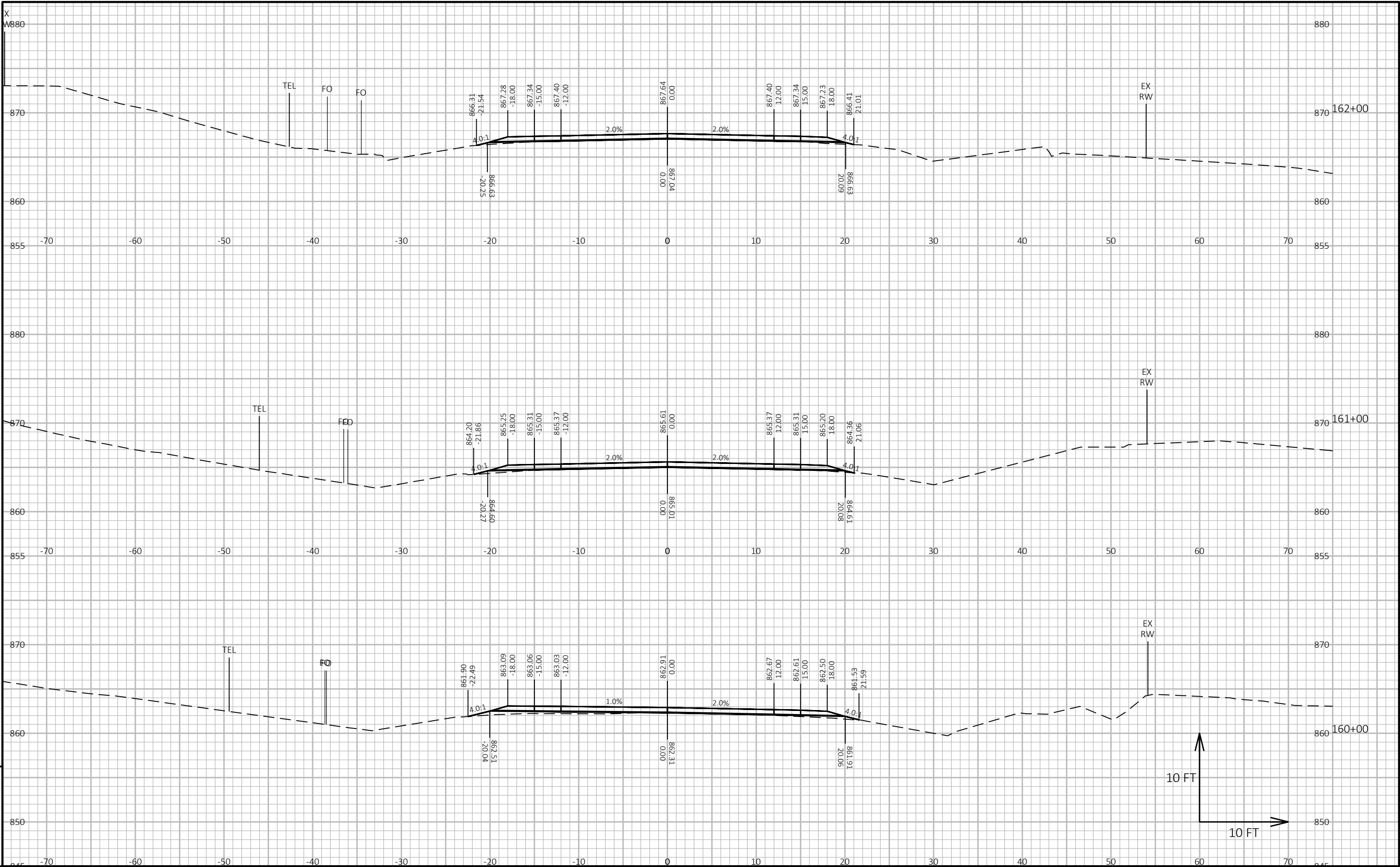


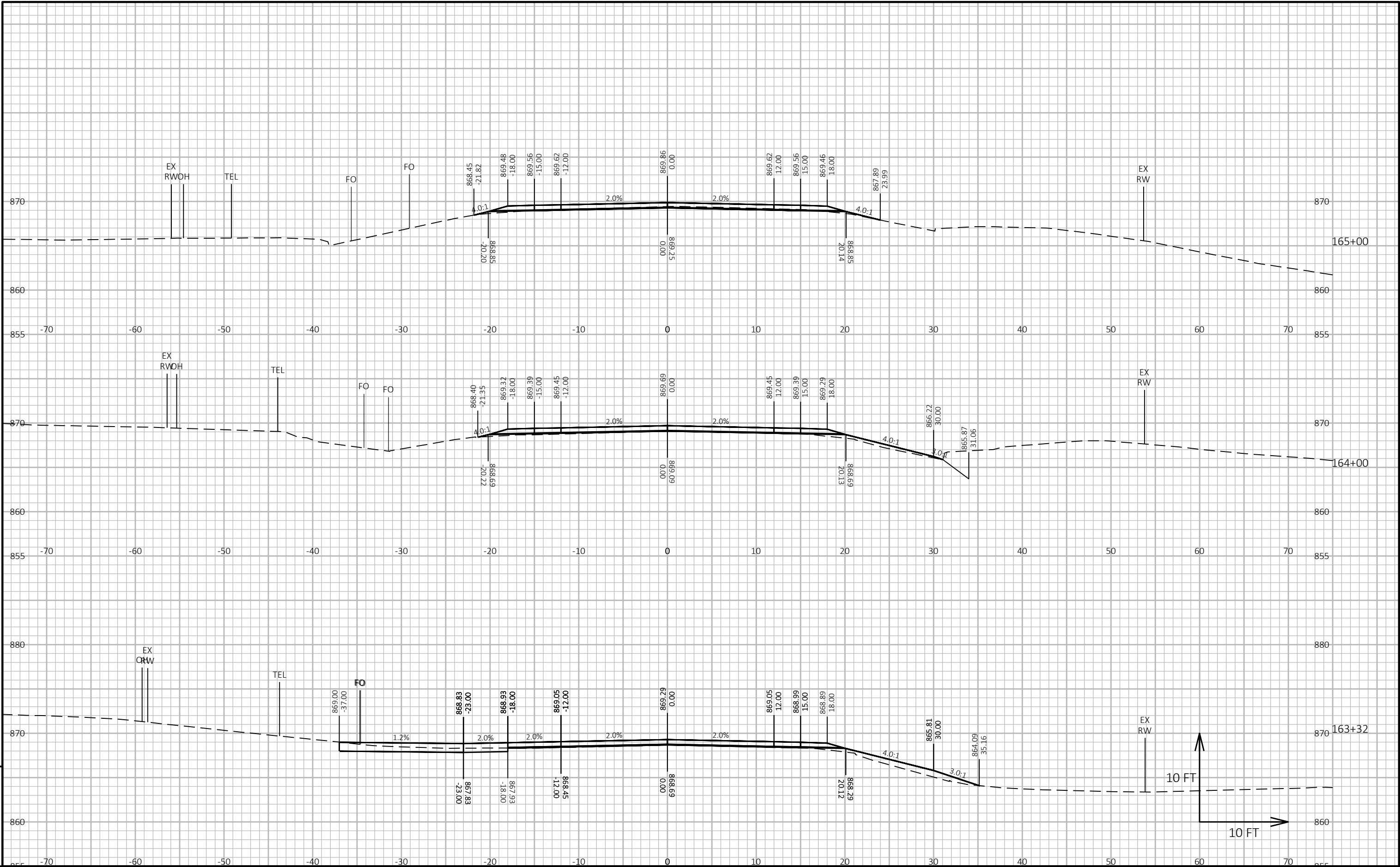


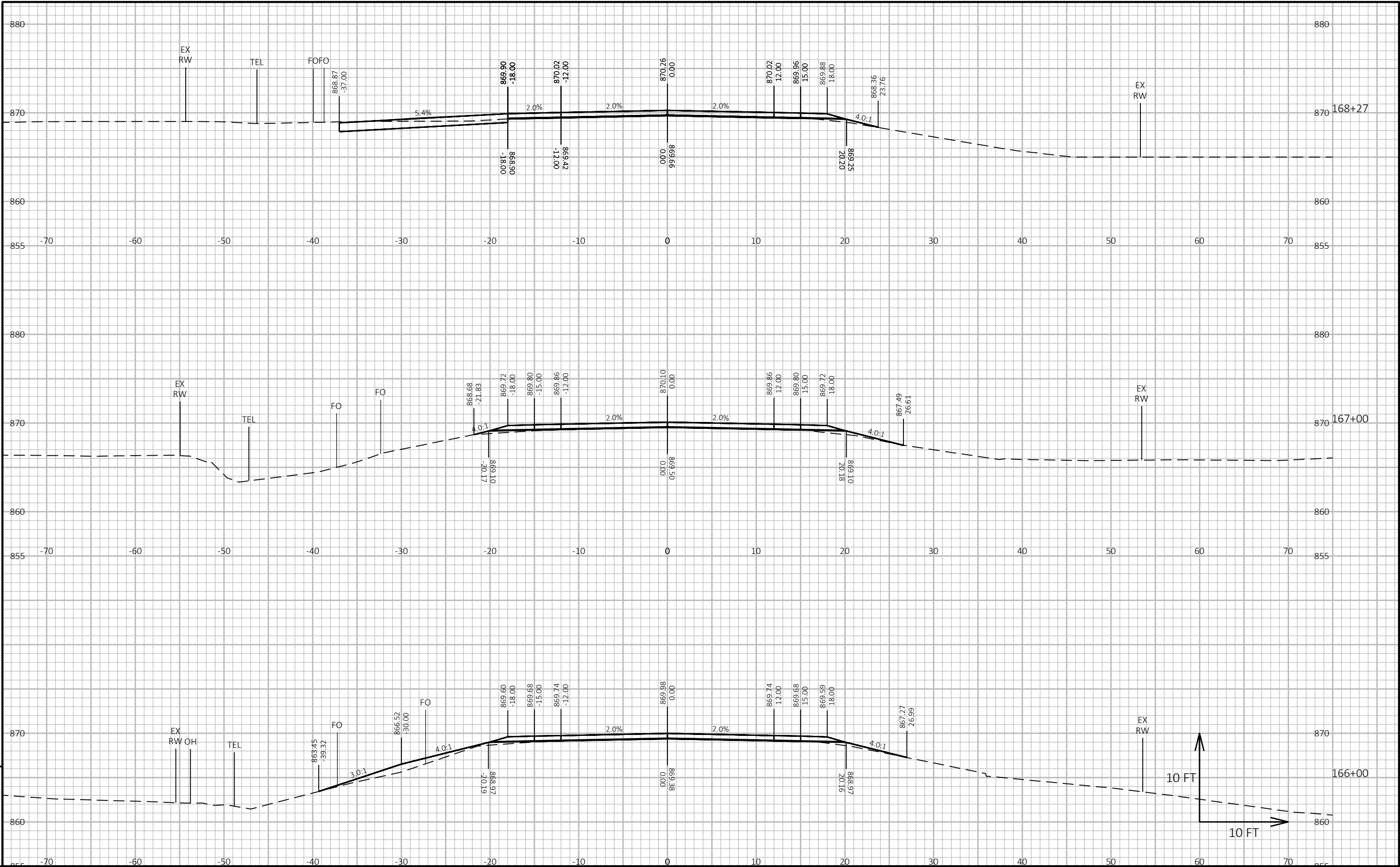


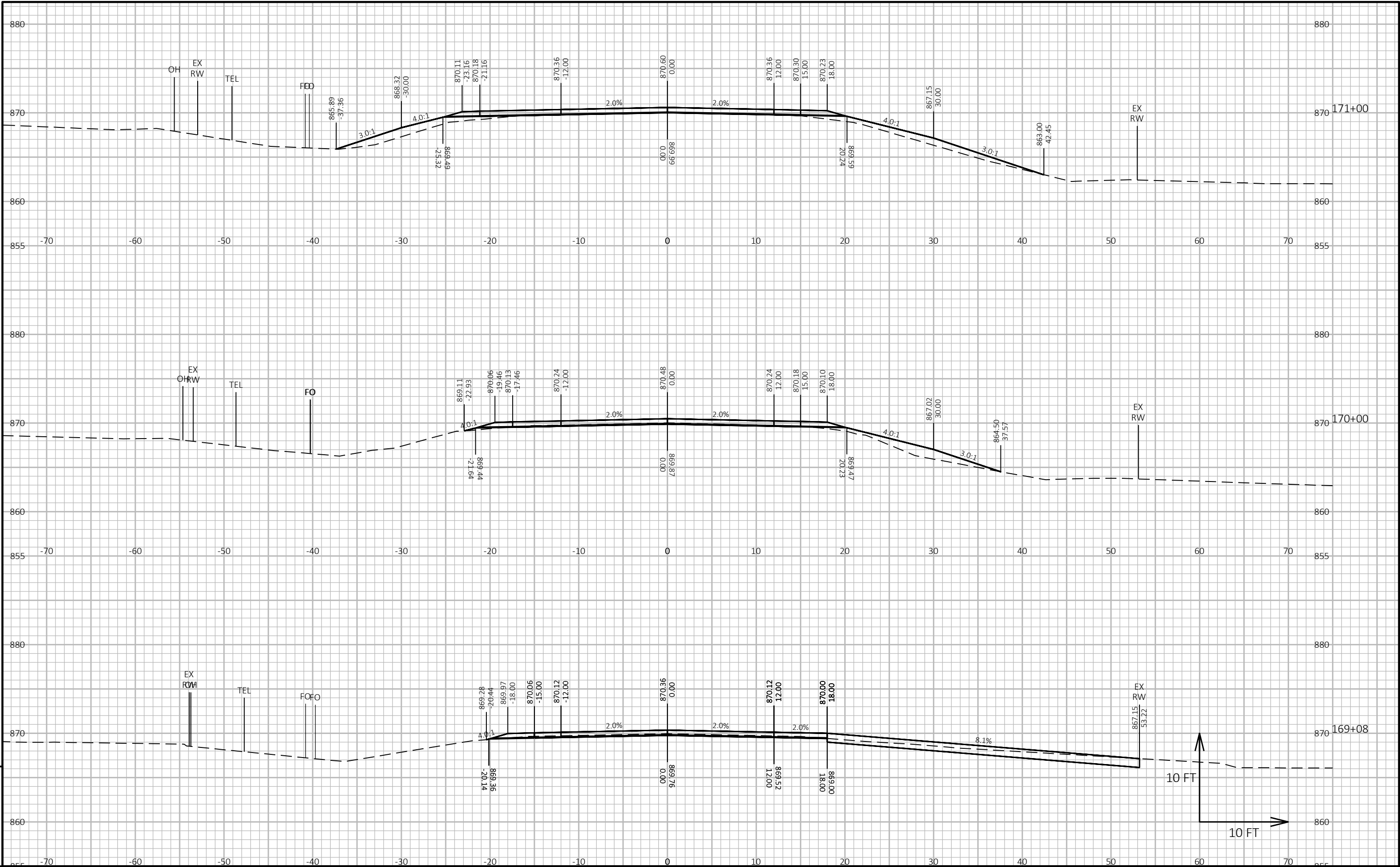


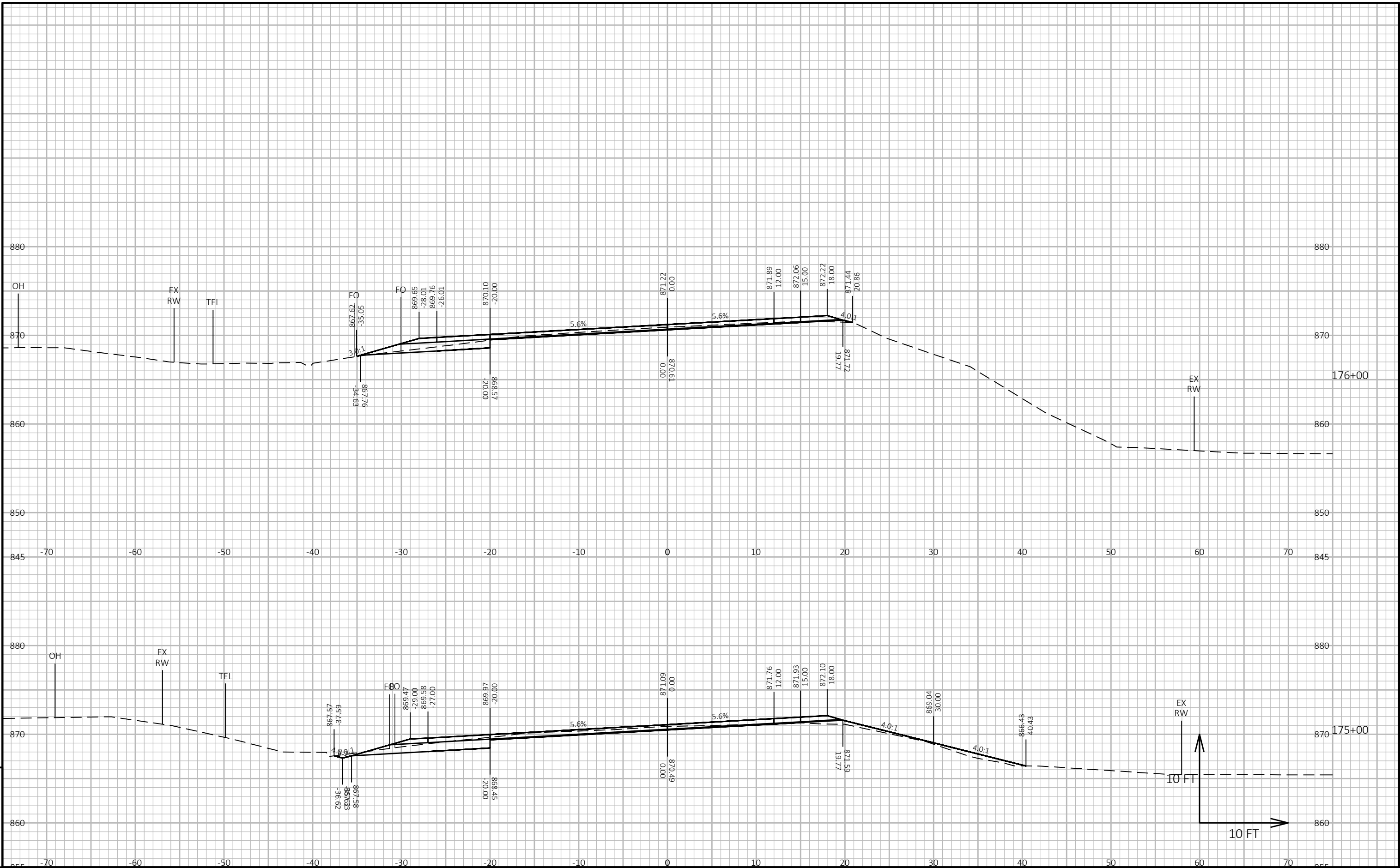


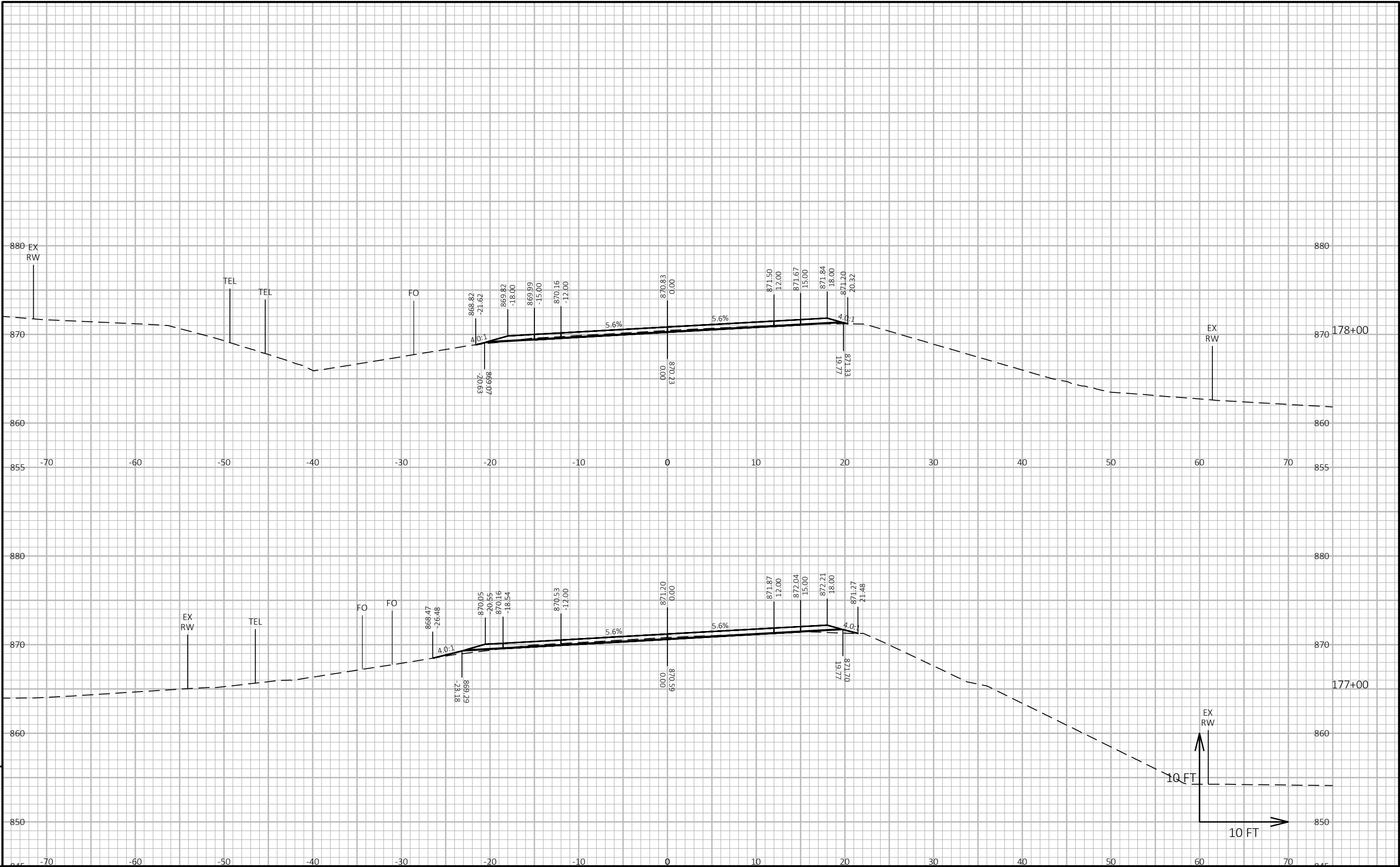


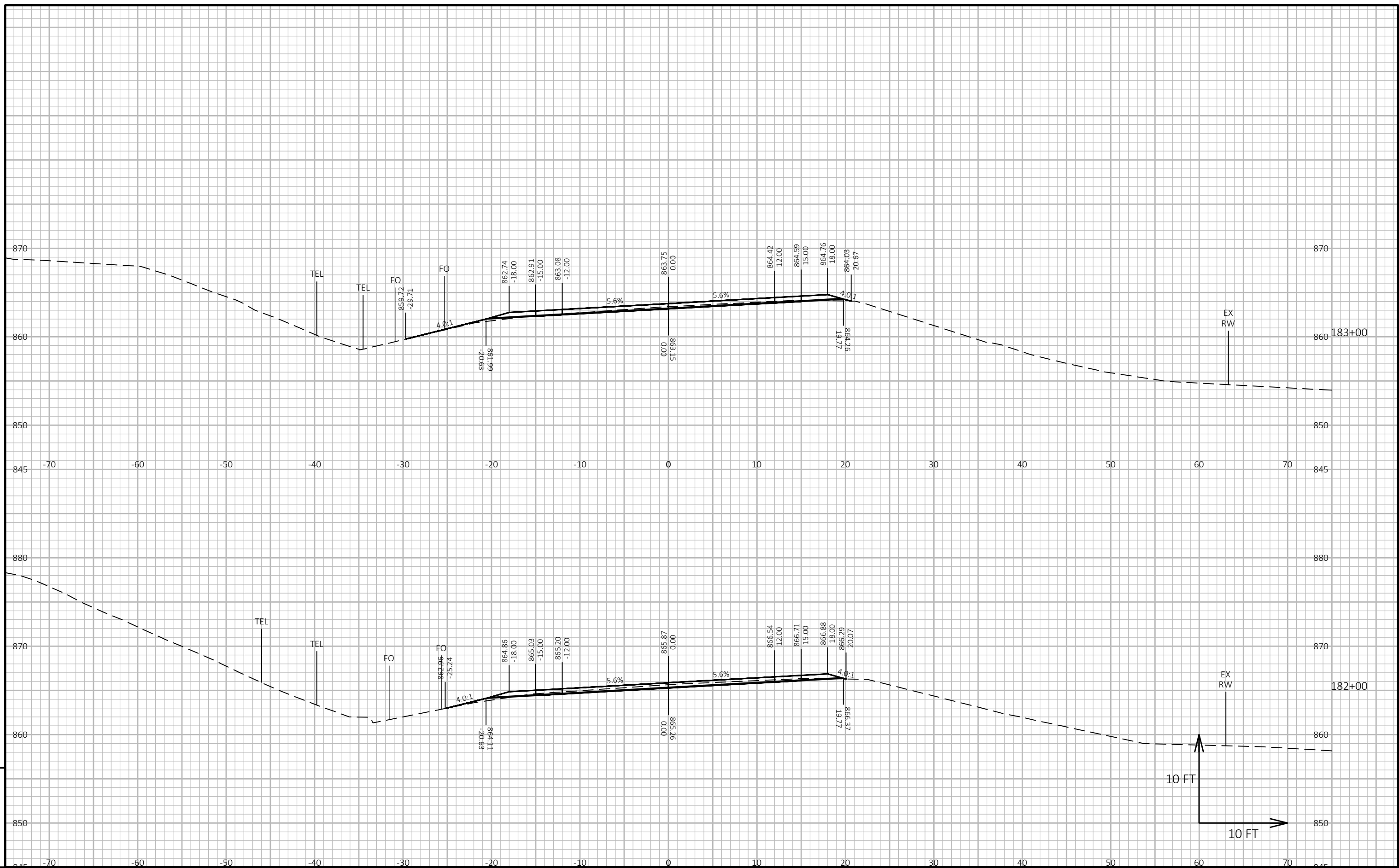












PROJECT NO:	3658-00-70
-------------	------------

HWY: CTH N

COUNTY: ROCK

CROSS SECTIONS:	CTH N
-----------------	-------

SHEET 230

■

FILE NAME : J:\34200-34299\34249 - CTH N ROCK COUNTY\DESIGN\3658-00-02\SHEETS\PLAN\36580002_090201-XS.DWG
LAYOUT NAME - 28

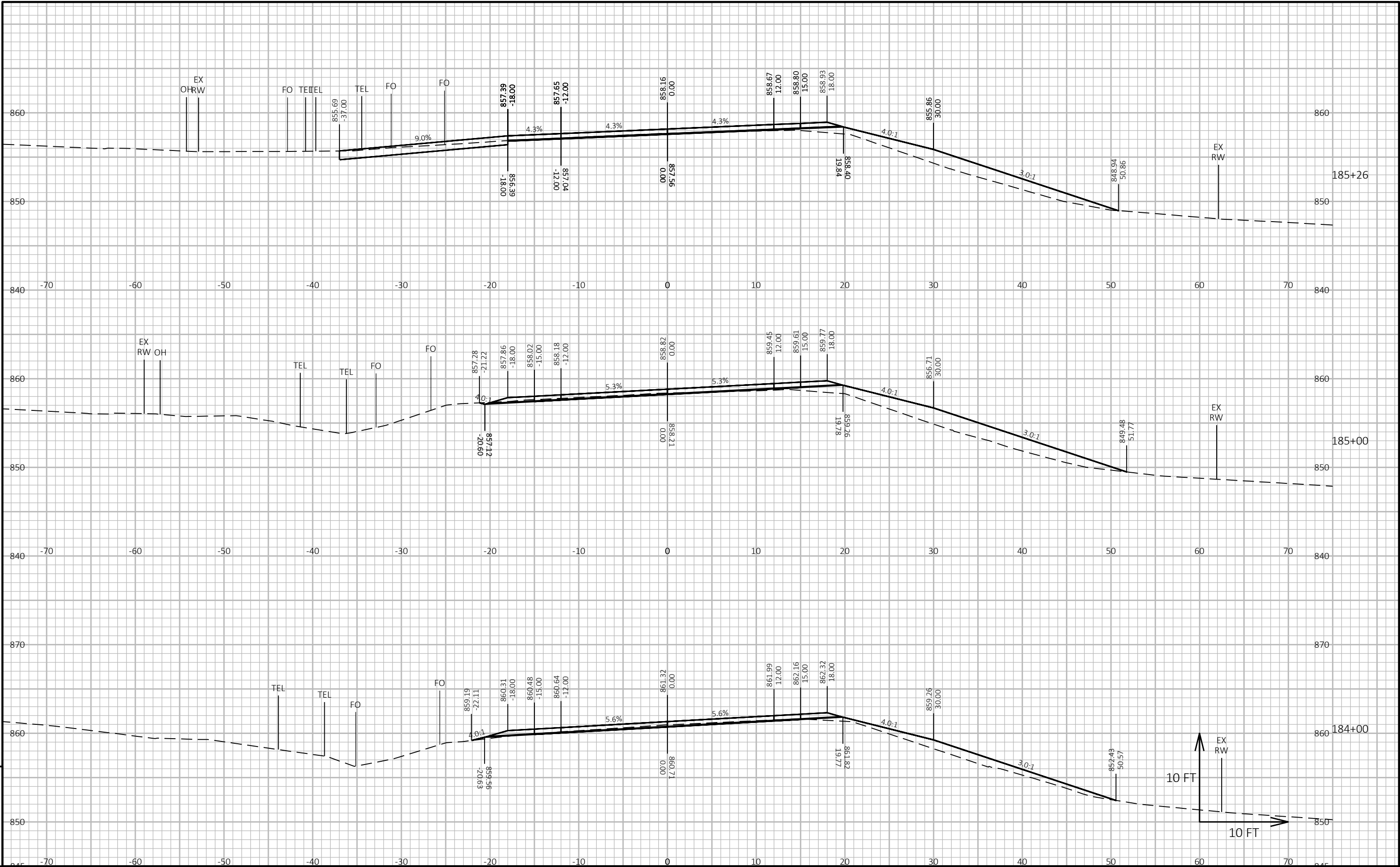
PLOT DATE : 7/31/2024 11:21 AM

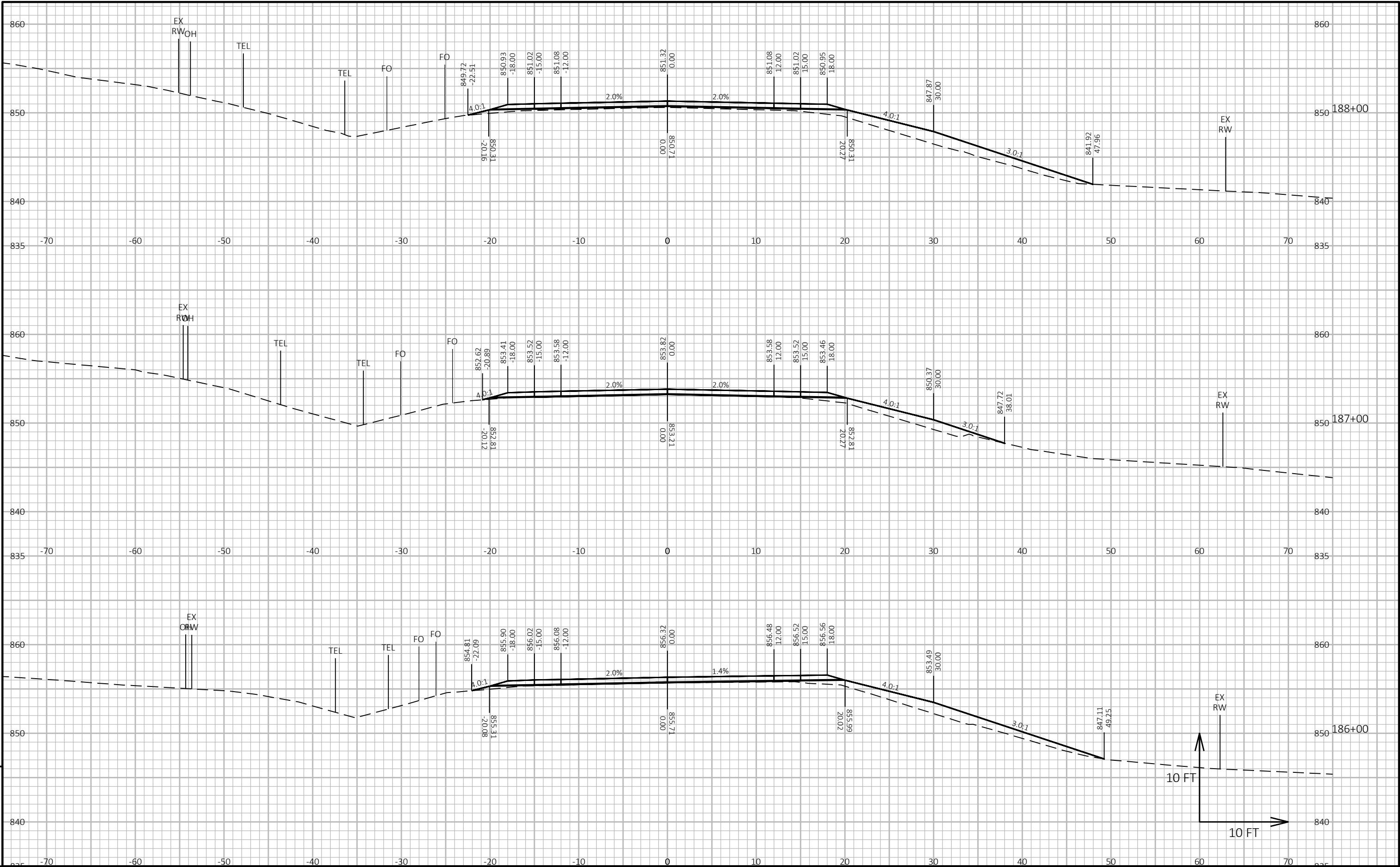
PLOT BY : RYAN RUDZINSKI

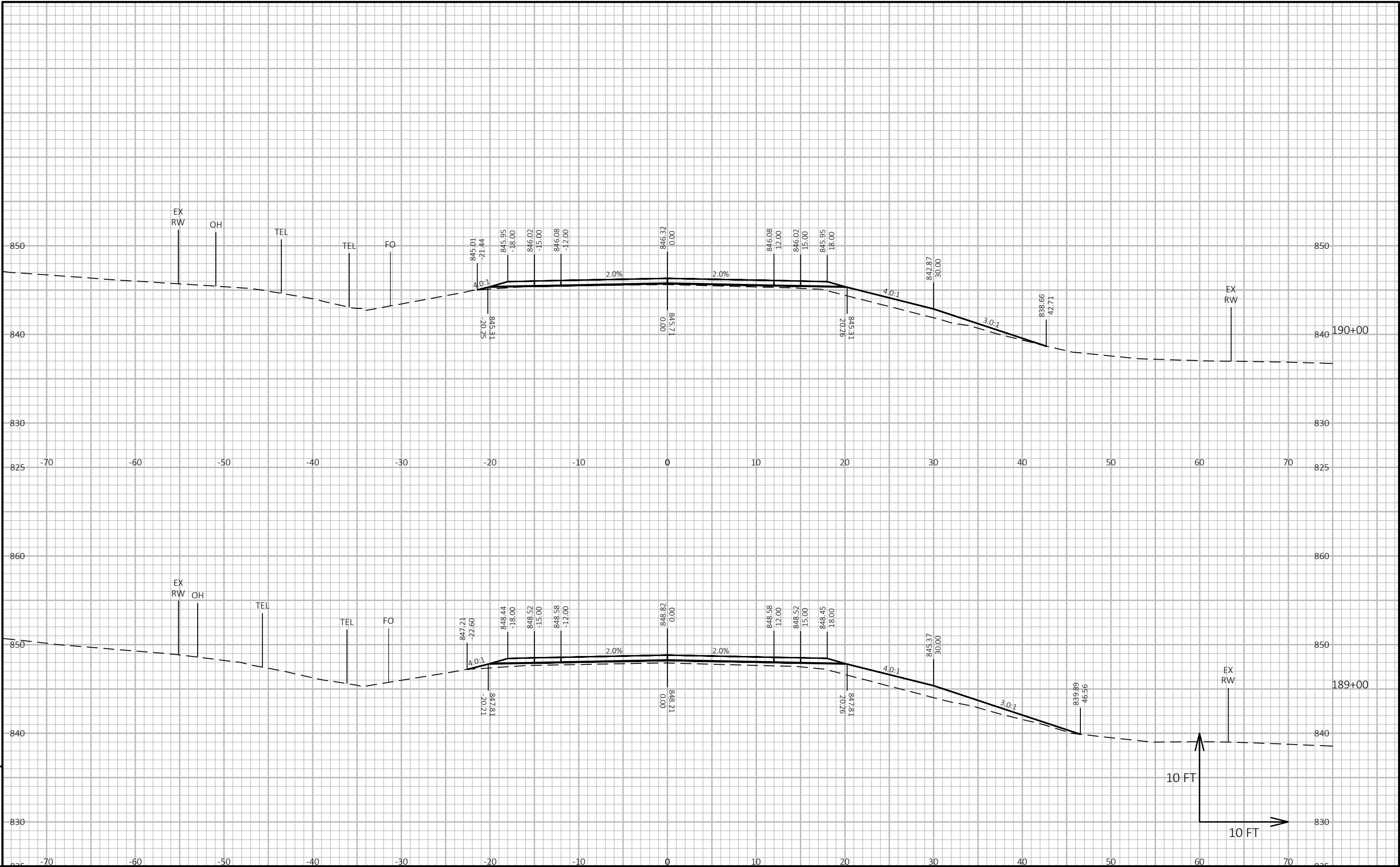
PLOT NAME :

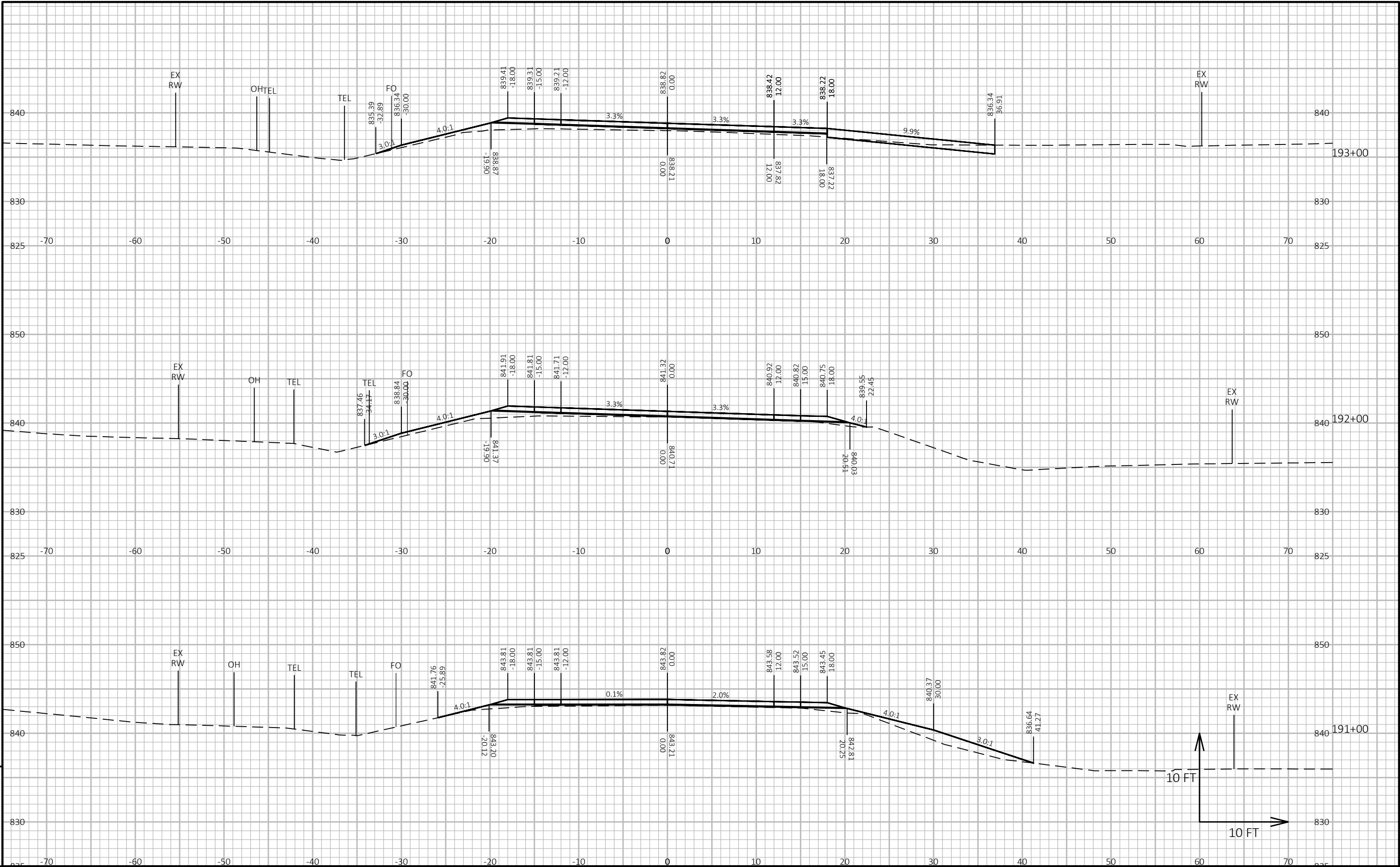
PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

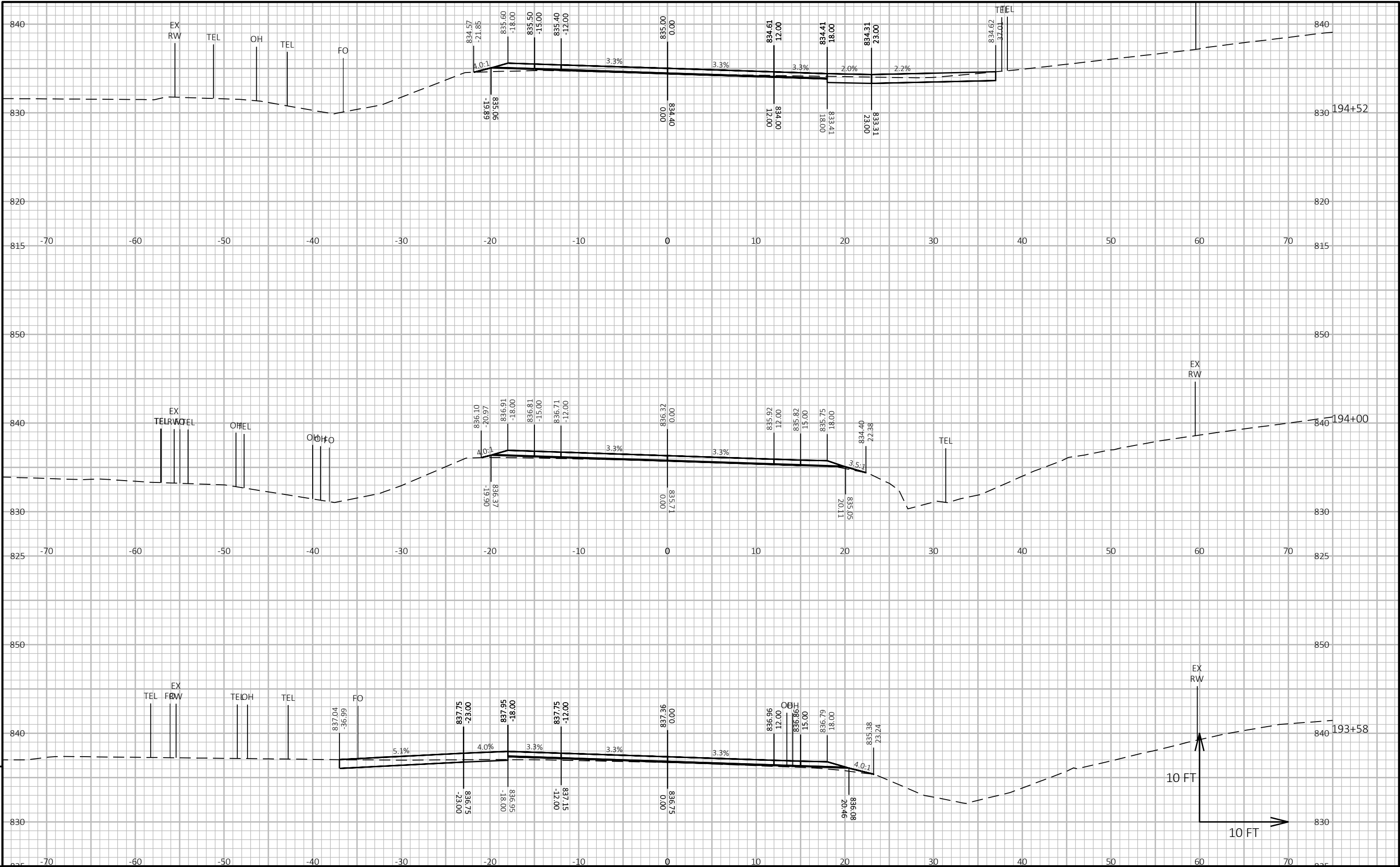
WISDOT/CADDS SHEET 49

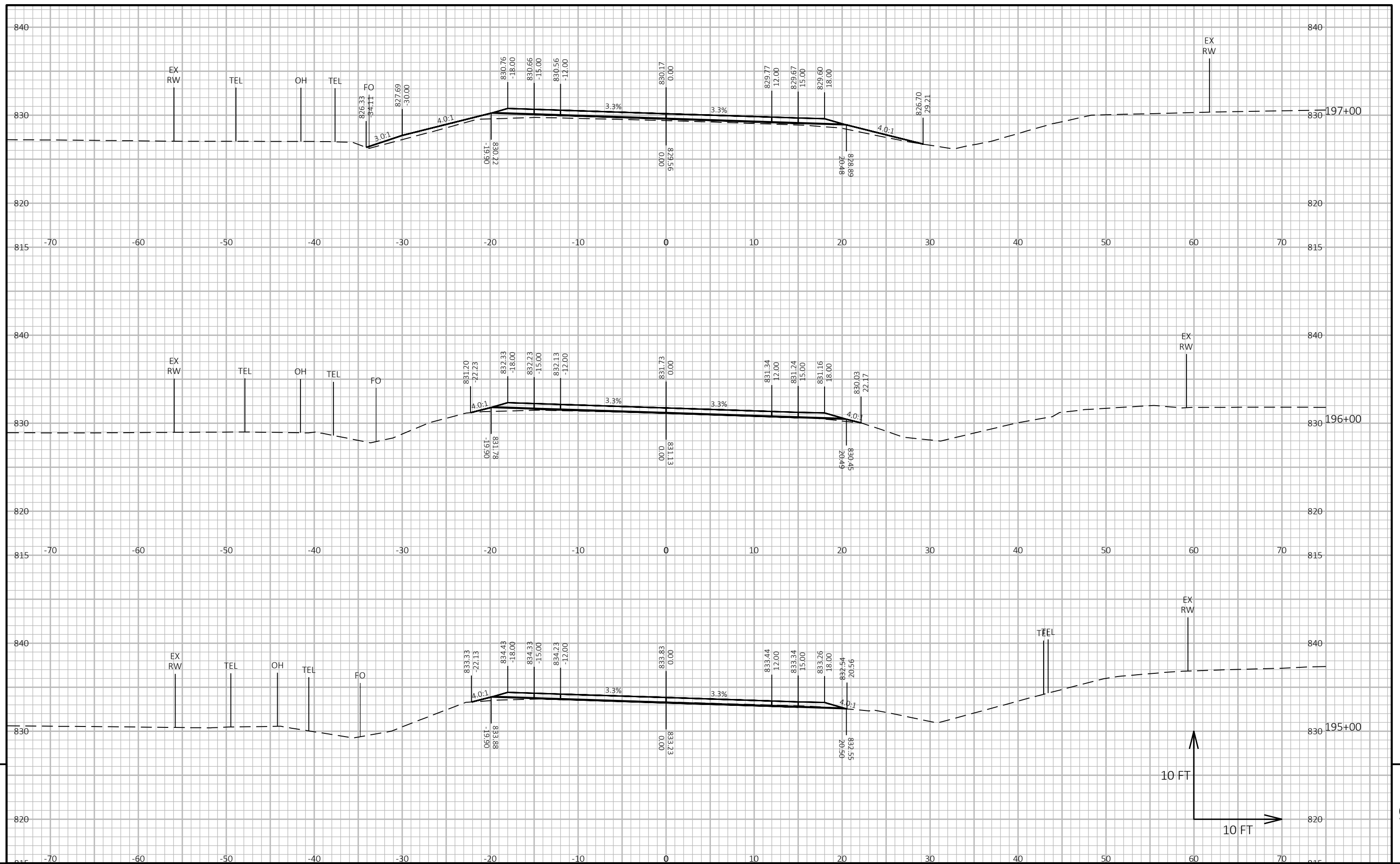


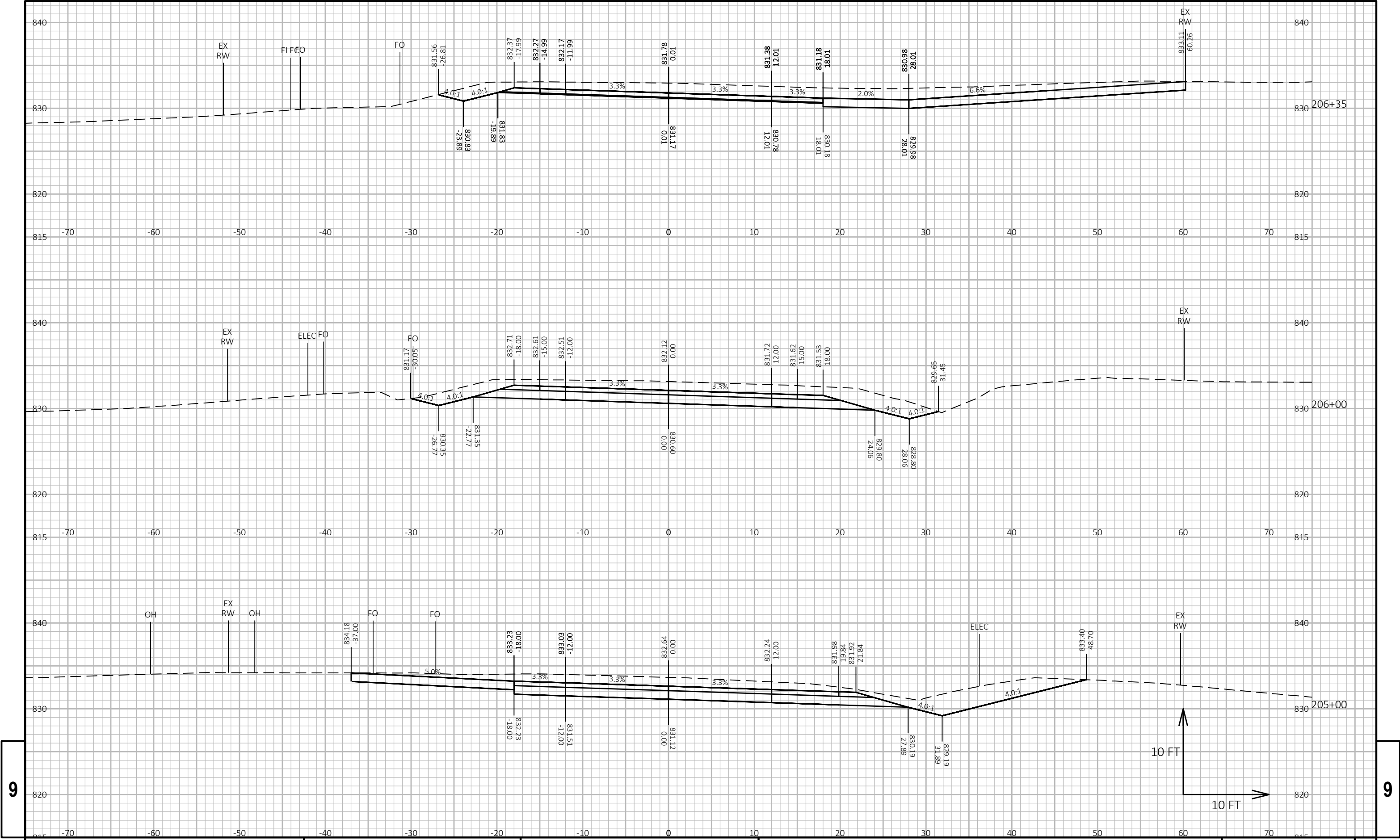






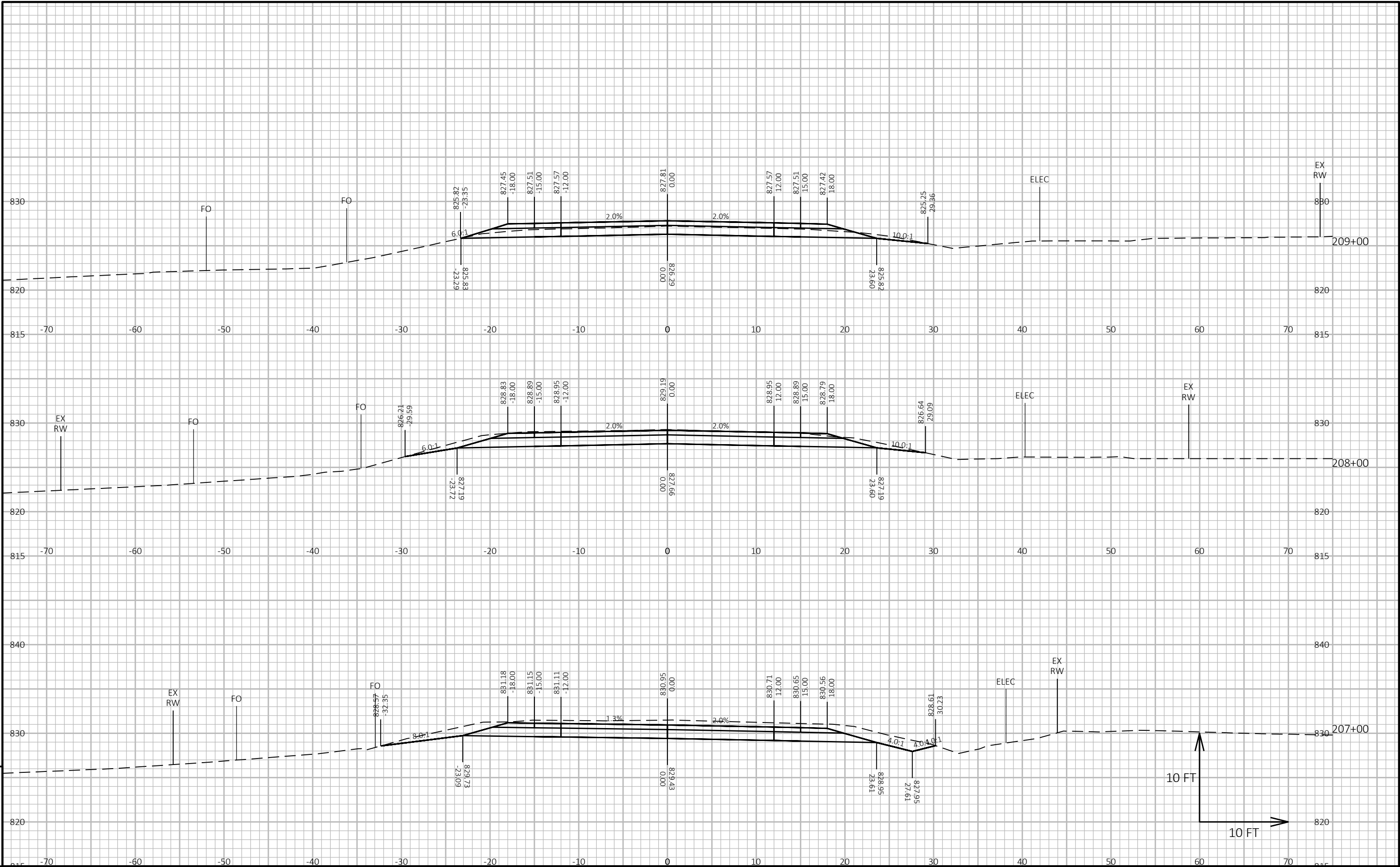


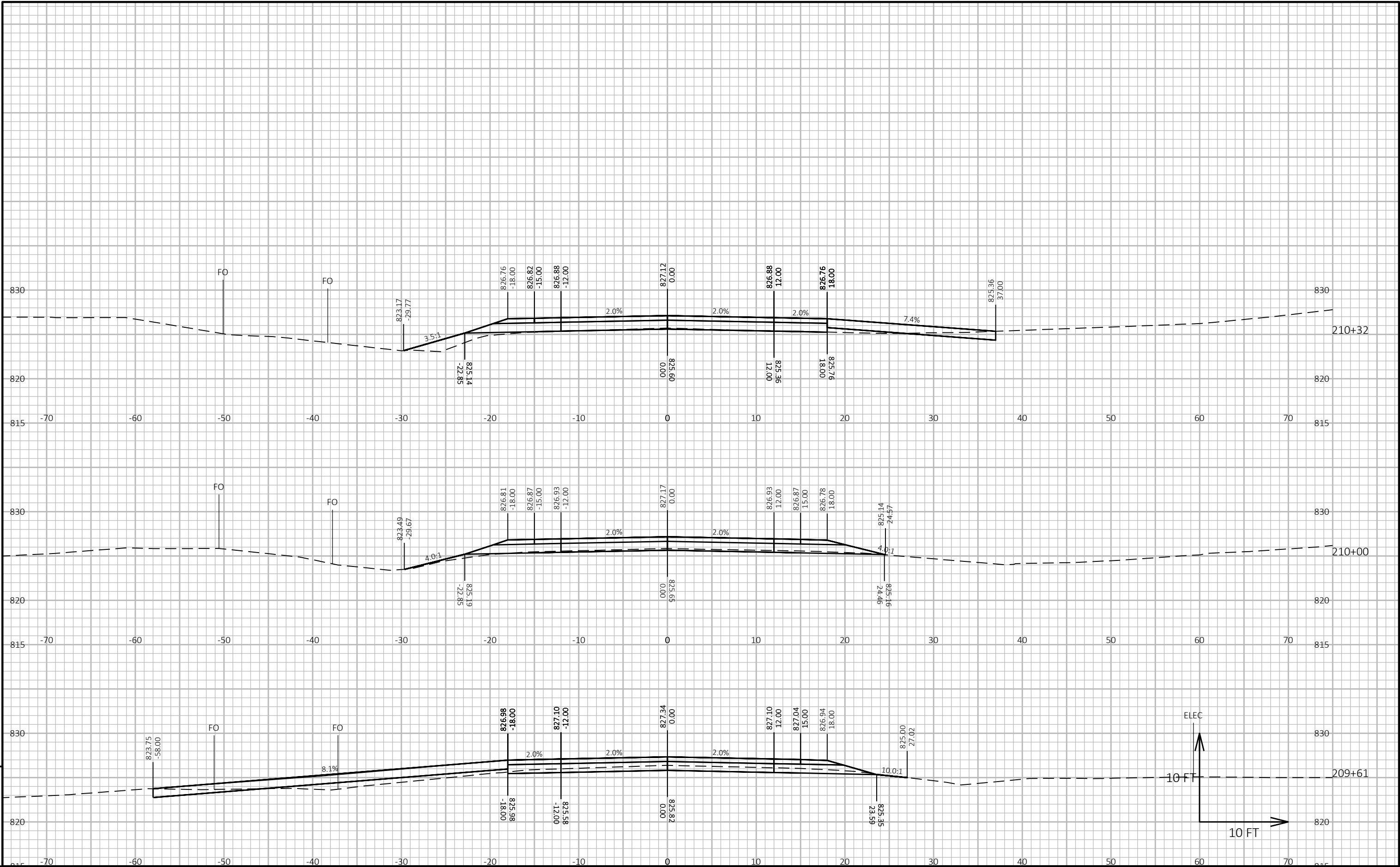


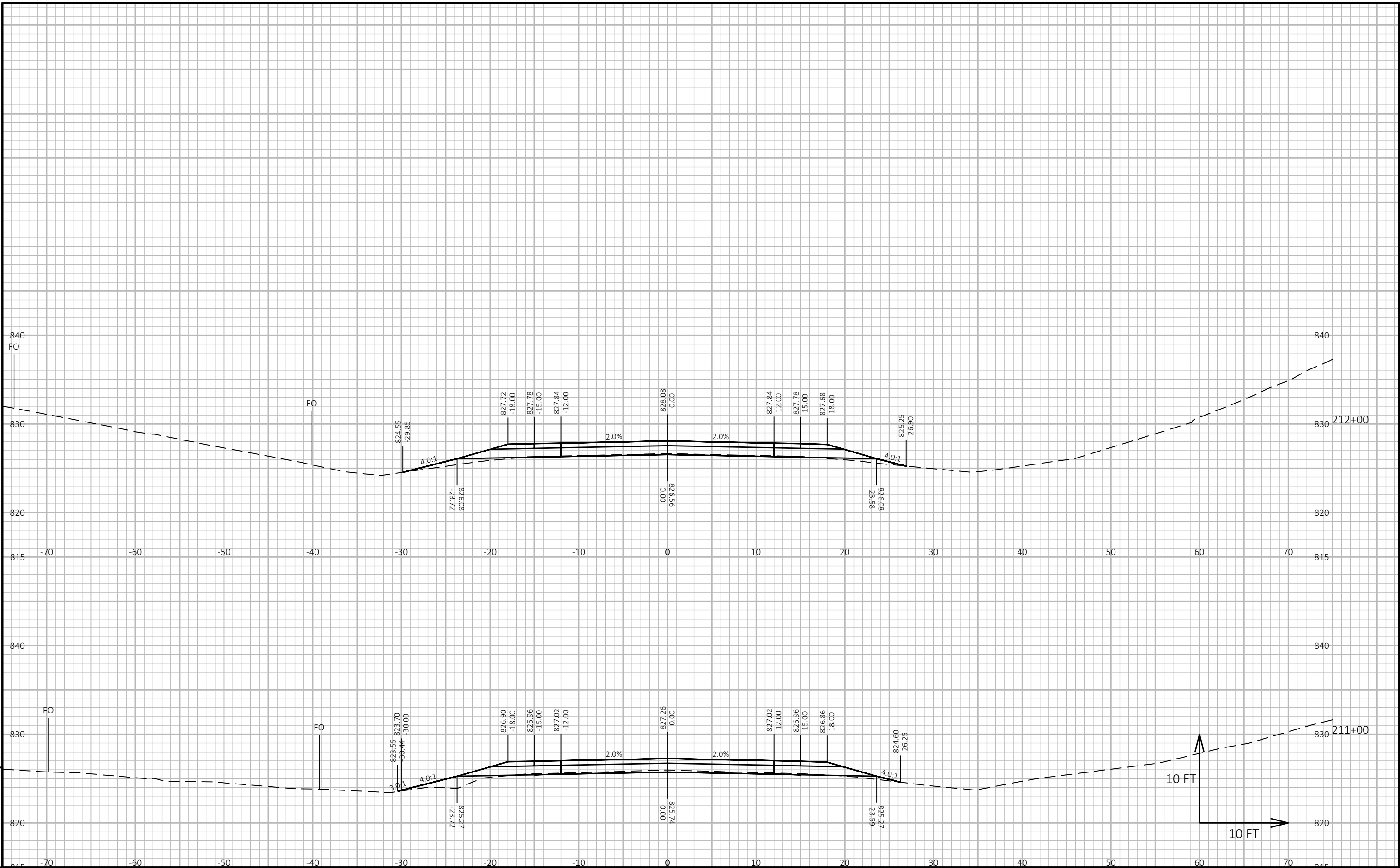


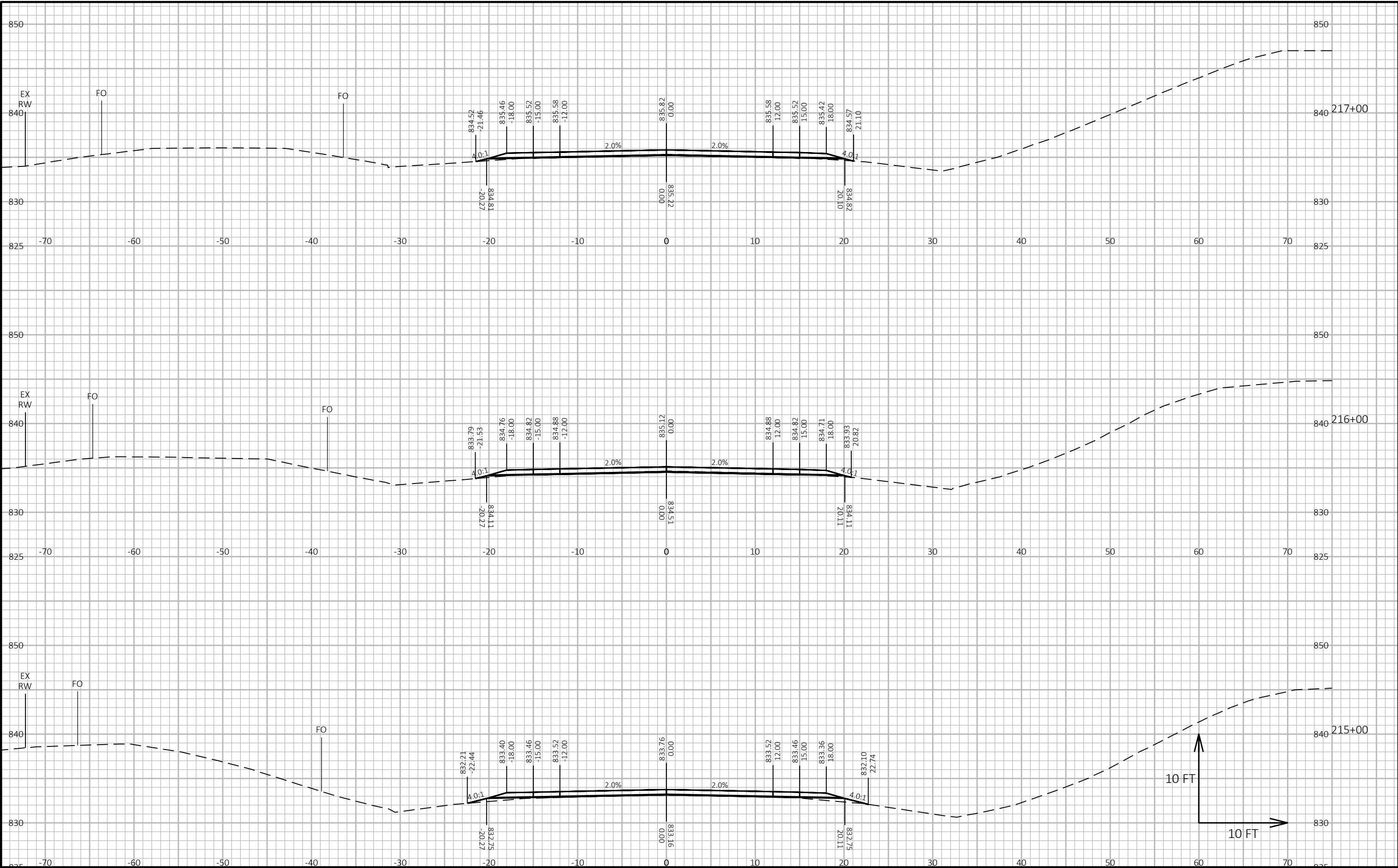
9

9

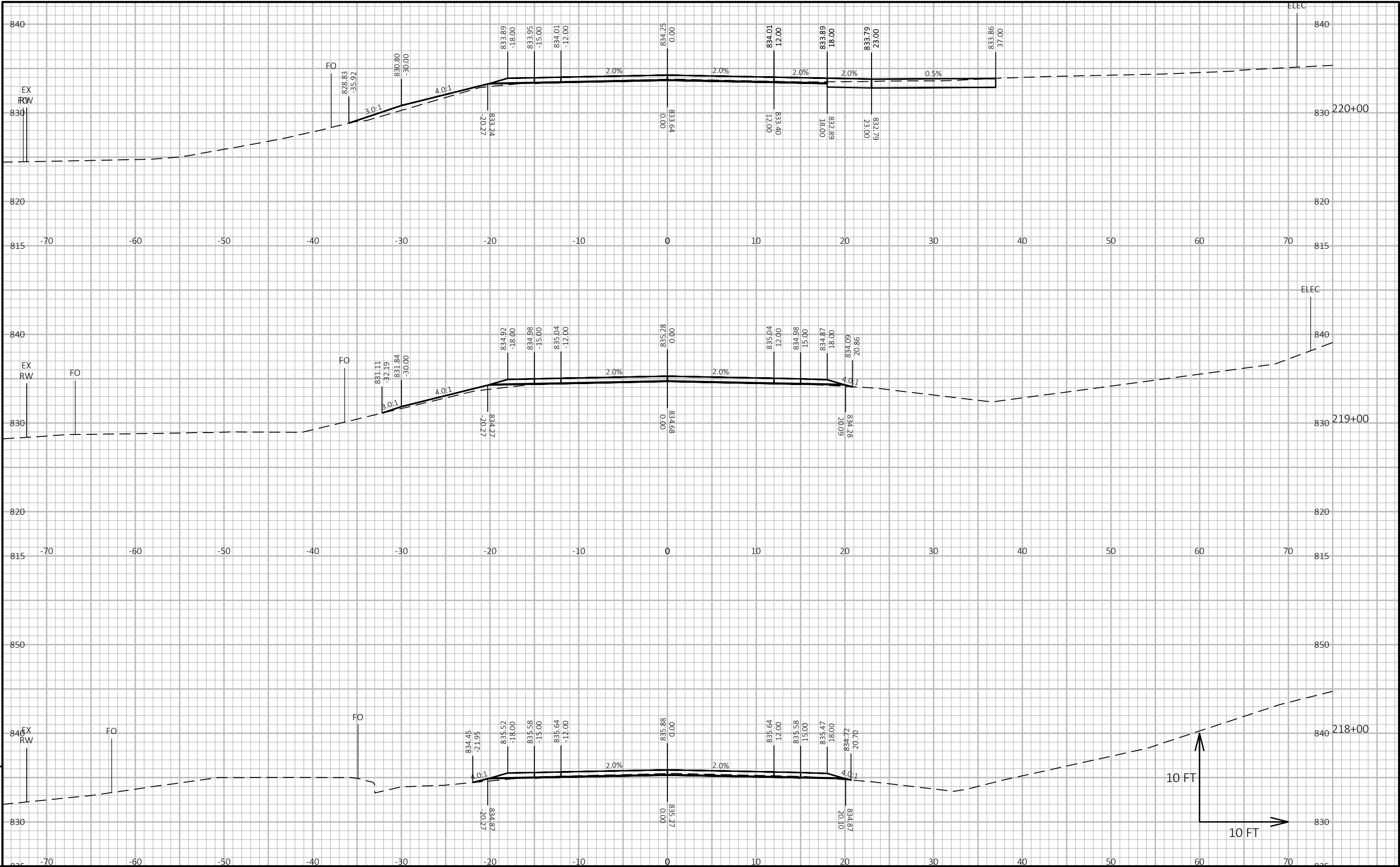


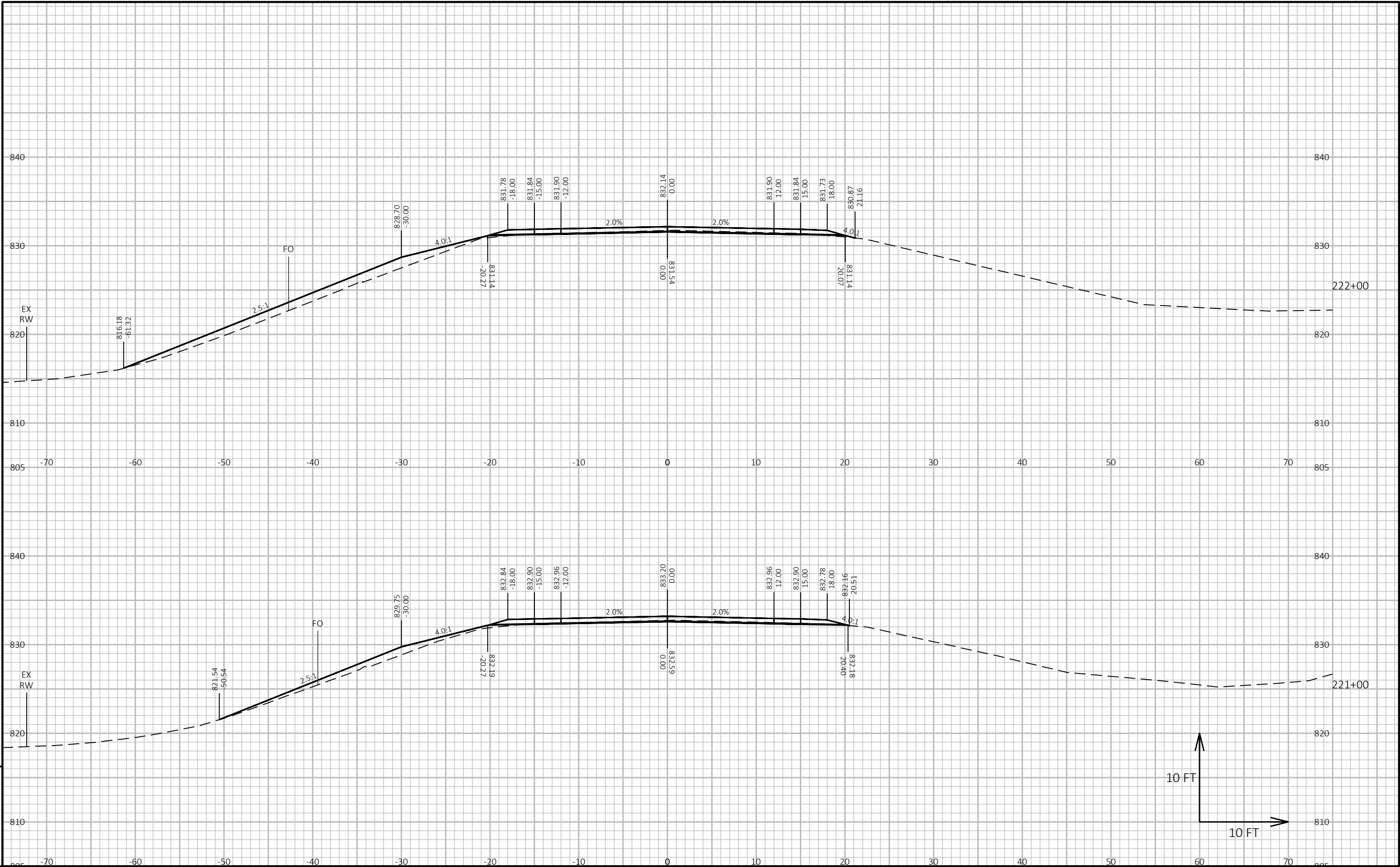


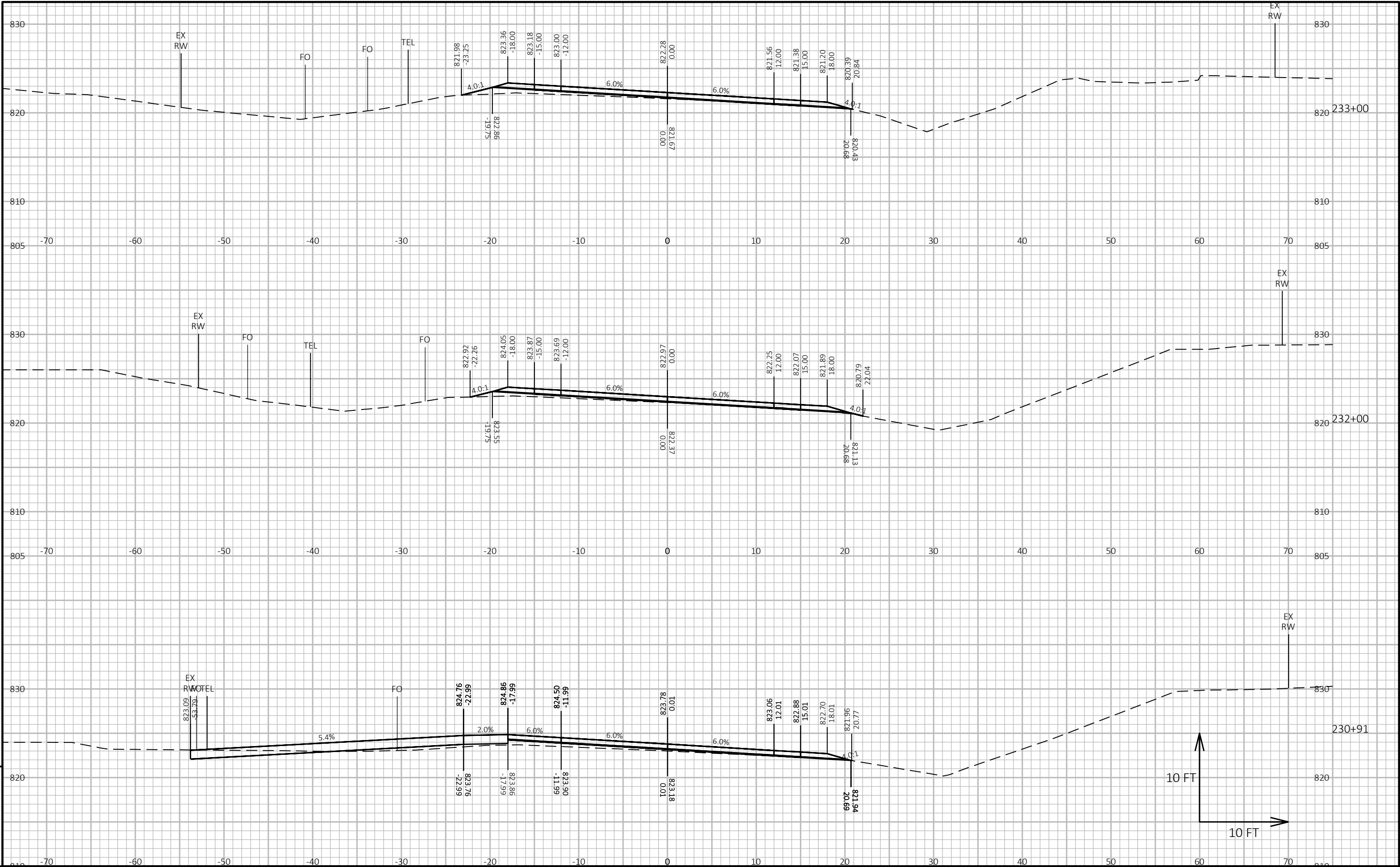


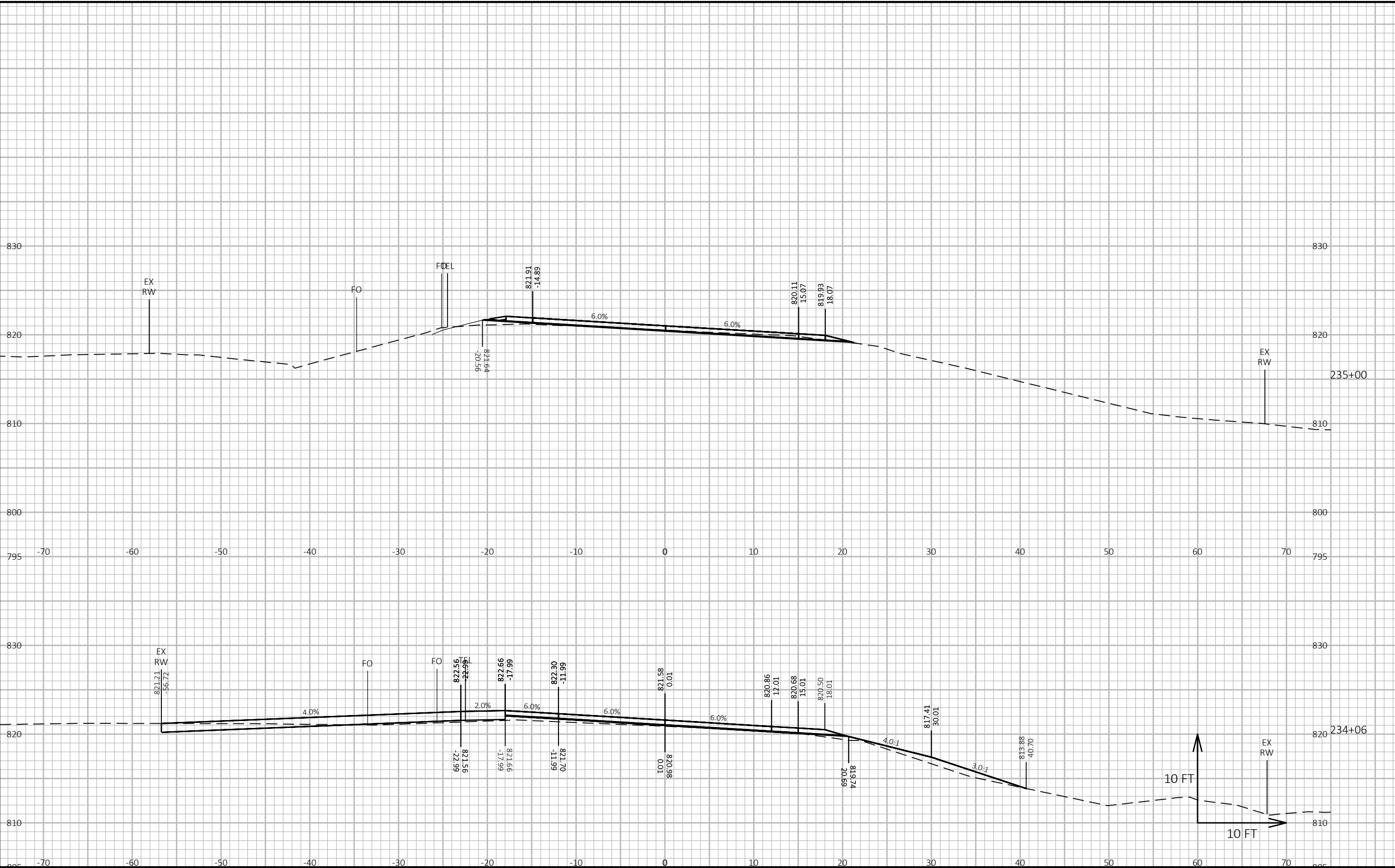


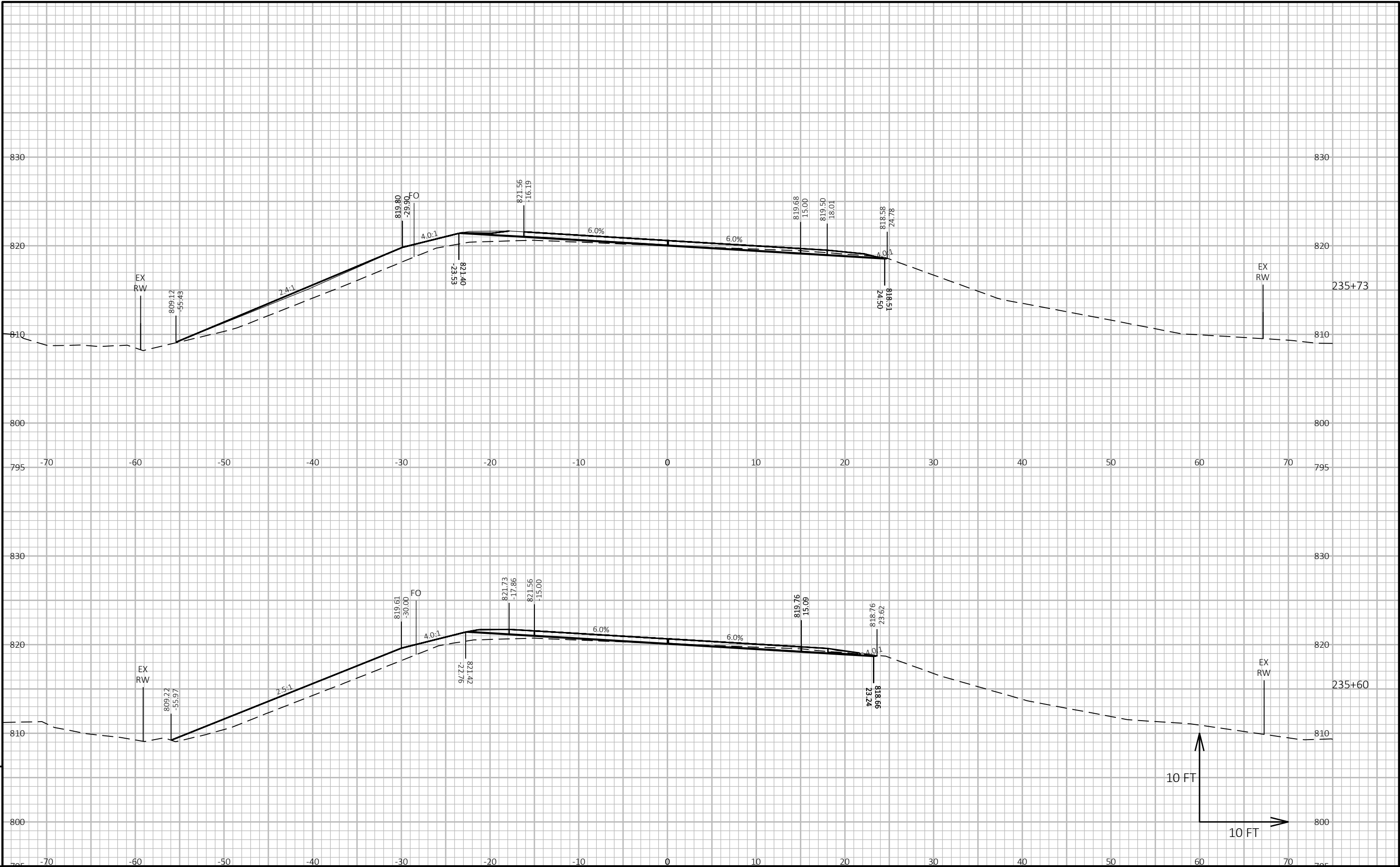
9

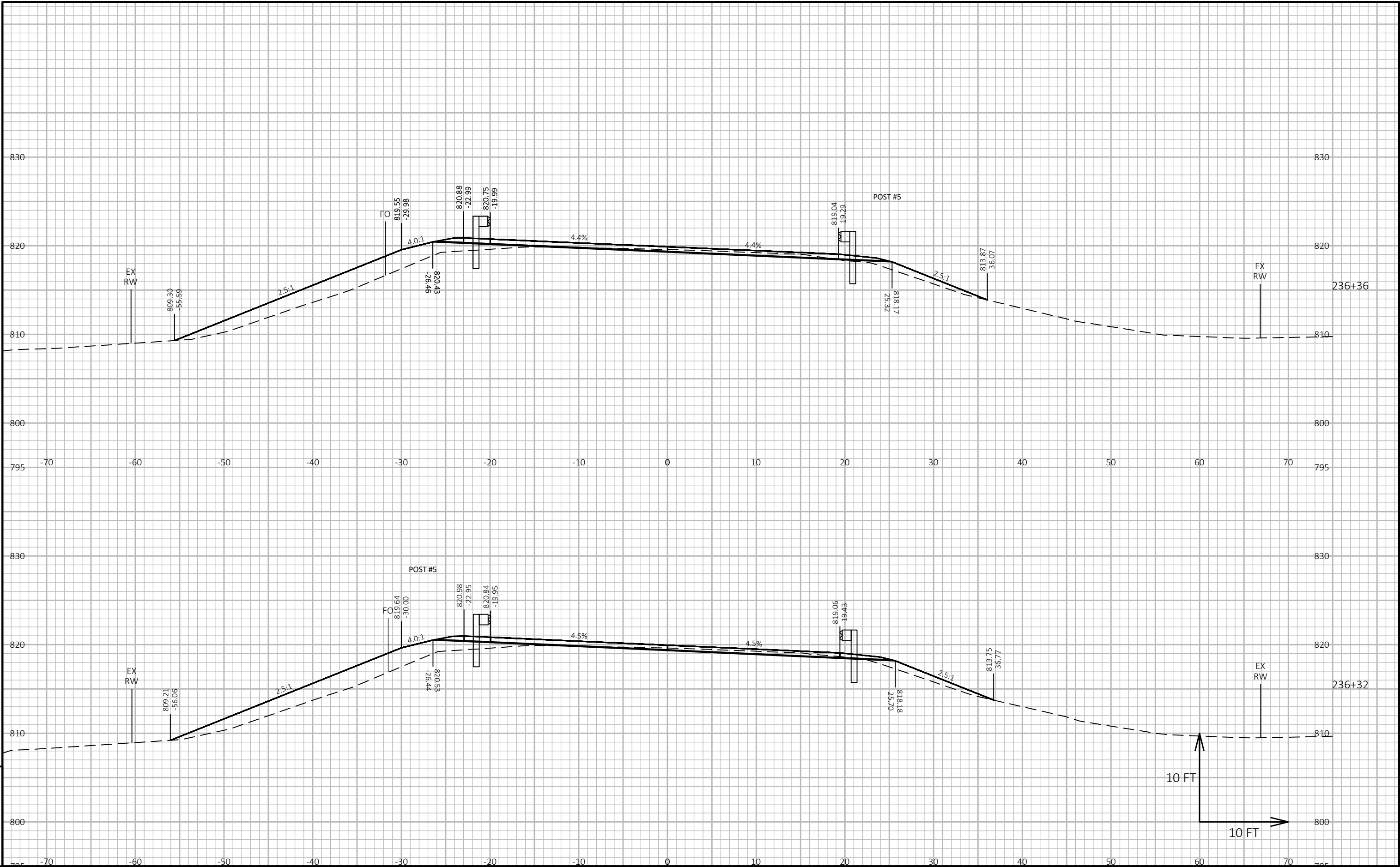


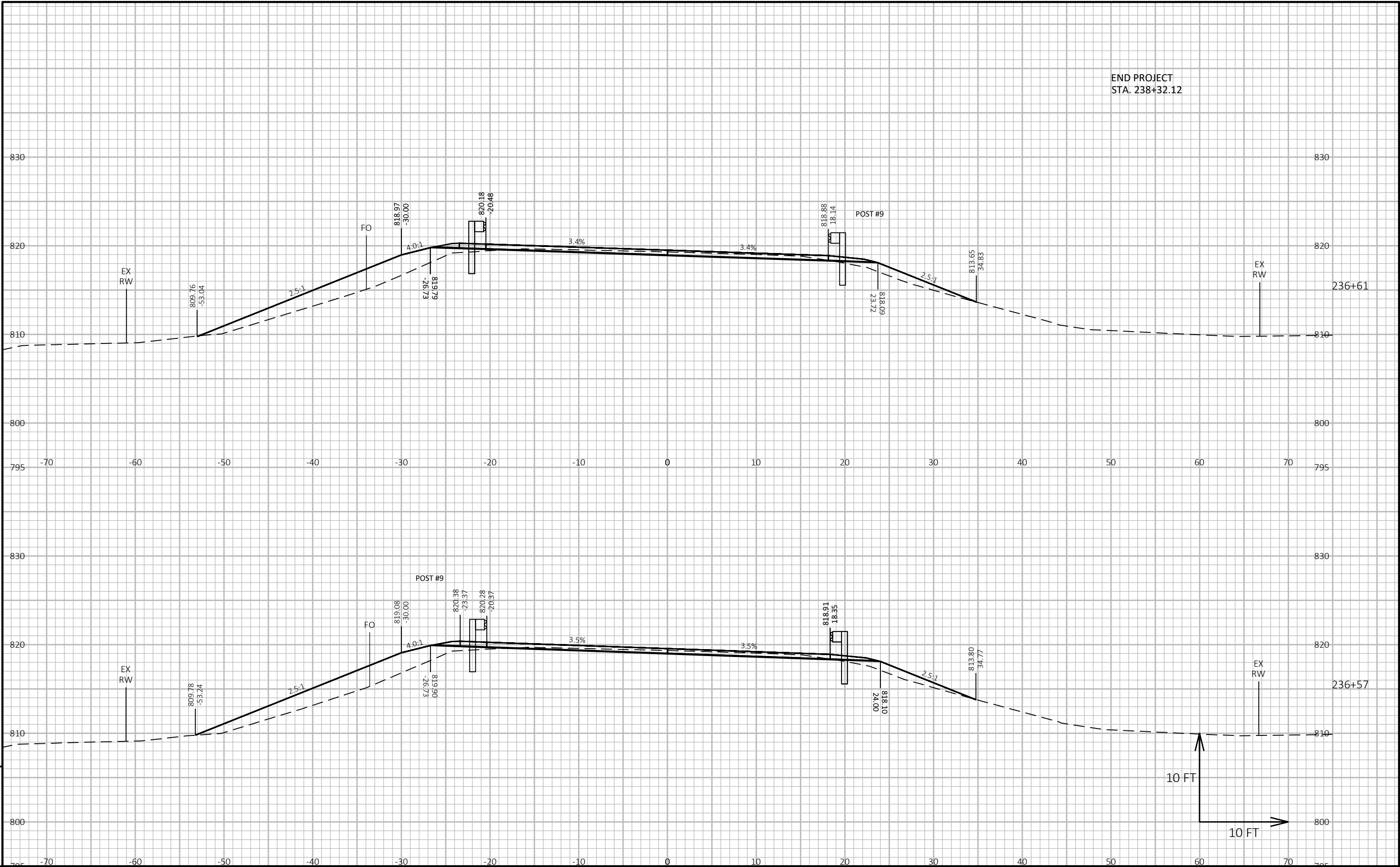


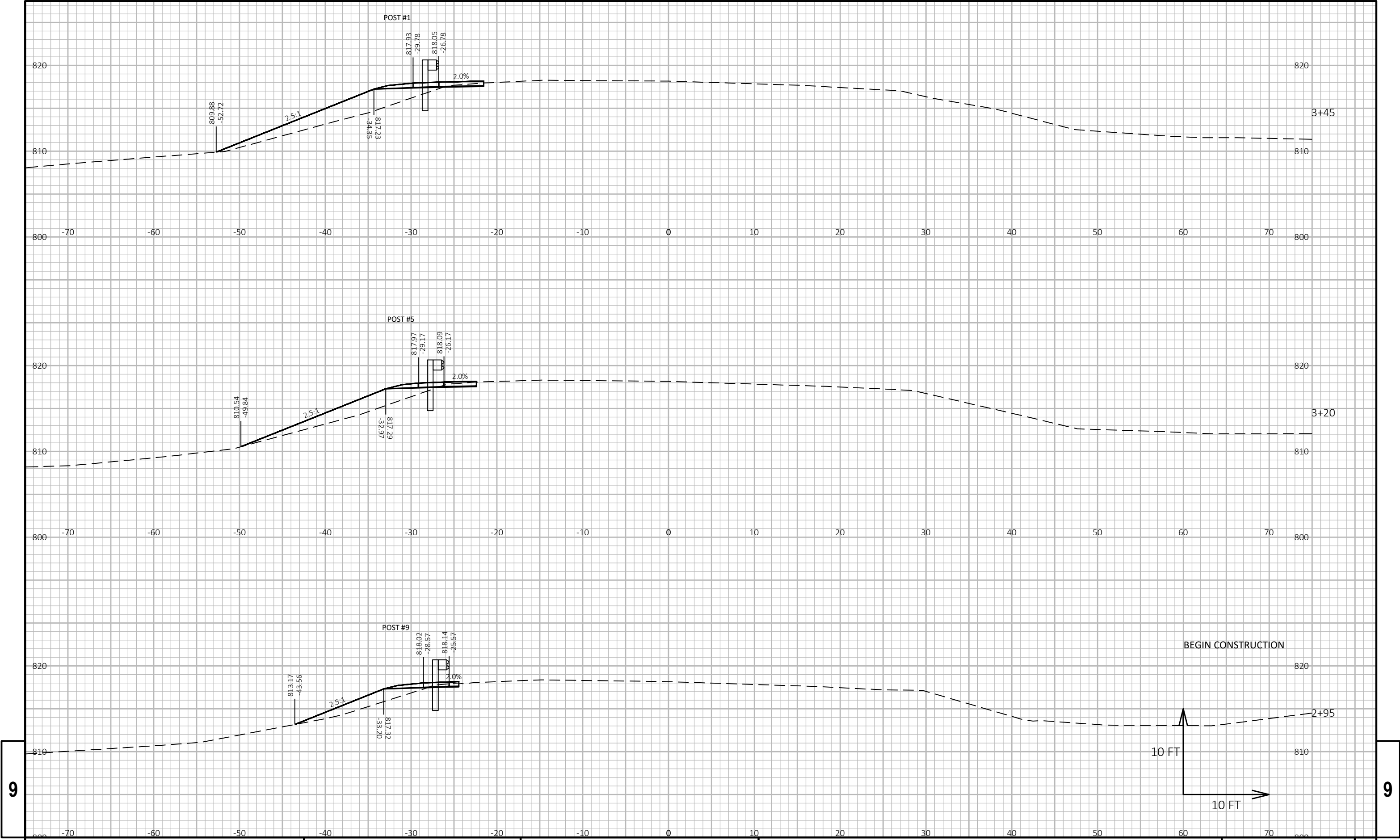


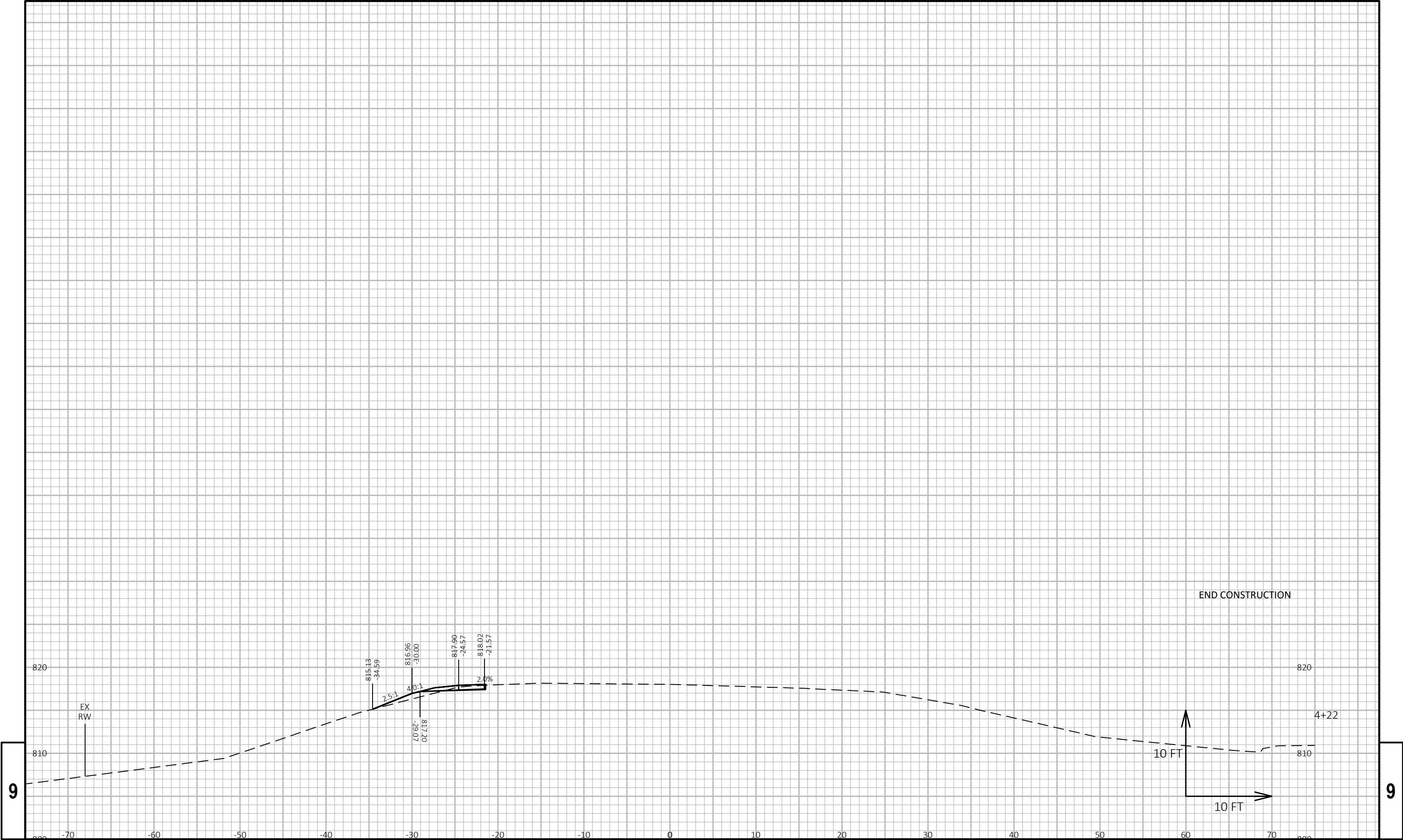








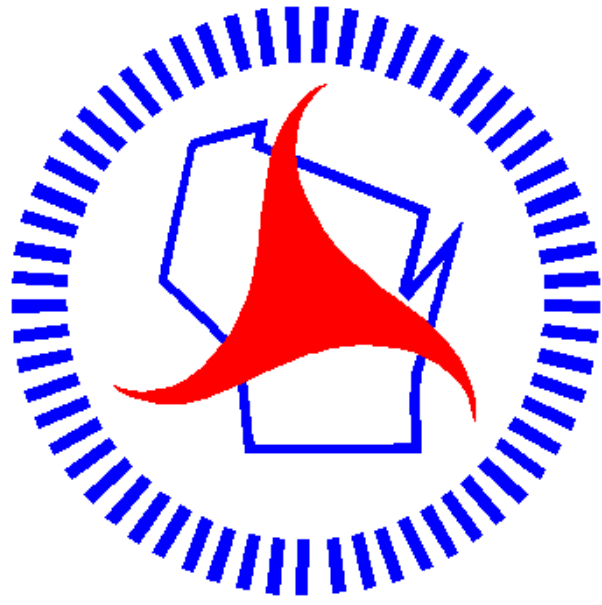




9

9

PROJECT NO:	3658-00-70	HWY:	CTH N	COUNTY:	ROCK	CROSS SECTIONS:	MILTON ROAD	SHEET	257	E
-------------	------------	------	-------	---------	------	-----------------	-------------	-------	-----	---



Wisconsin Department of Transportation

Dedicated people creating transportation solutions through innovation and exceptional service.

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