

WIS

MARCH 2019

PROJECT ID:
WITH: N/A

6999-18-75

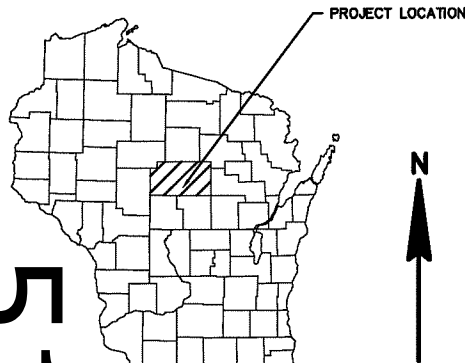
COUNTY:

MARATHON

ORDER OF SHEETS

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

TOTAL SHEETS = 170



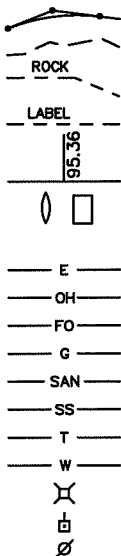
DESIGN DESIGNATION 6999-18-75

| | | | |
|--------------|------|---|-----------------|
| A.A.D.T. | 2019 | = | 2900 |
| A.A.D.T. | 2039 | = | 3200 |
| D.H.V. | | = | 5.9 |
| D.D. | | = | 59/41 |
| T. | | = | 5.1 |
| DESIGN SPEED | | = | 40 MPH / 45 MPH |
| ESALS | | = | 350,000 |

CONVENTIONAL SYMBOLS

| | |
|--------------------------------|---------|
| PLAN | |
| CORPORATE LIMITS | //// |
| PROPERTY LINE | --- |
| LOT LINE | - - - - |
| LIMITED HIGHWAY EASEMENT | --- |
| EXISTING RIGHT OF WAY | --- |
| PROPOSED OR NEW R/W LINE | --- |
| SLOPE INTERCEPT | --- |
| REFERENCE LINE | --- |
| EXISTING CULVERT | --- |
| PROPOSED CULVERT (Box or Pipe) | --- |
| COMBUSTIBLE FLUIDS | CAUTION |
| MARSH AREA | --- |
| WOODED OR SHRUB AREA | --- |

| | |
|---|-----|
| PROFILE | |
| GRADE LINE | --- |
| ORIGINAL GROUND | --- |
| MARSH OR ROCK PROFILE (To be noted as such) | --- |
| SPECIAL DITCH | --- |
| GRADE ELEVATION | --- |
| CULVERT (Profile View) | --- |
| UTILITIES | |
| ELECTRIC | --- |
| OVERHEAD UTILITY | --- |
| FIBER OPTIC | --- |
| GAS | --- |
| SANITARY SEWER | --- |
| STORM SEWER | --- |
| TELEPHONE | --- |
| WATER | --- |
| UTILITY PEDESTAL | --- |
| POWER POLE | --- |
| TELEPHONE POLE | --- |



STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

C WAUSAU, CTH N

SKYLINE LANE TO COUNTY ROAD X

CTH N

MARATHON COUNTY

STATE PROJECT NUMBER

6999-18-75

END CONSTRUCTION

CTH X
STA 322+56
N=197729.326
E=296003.350

BEGIN PROJECT

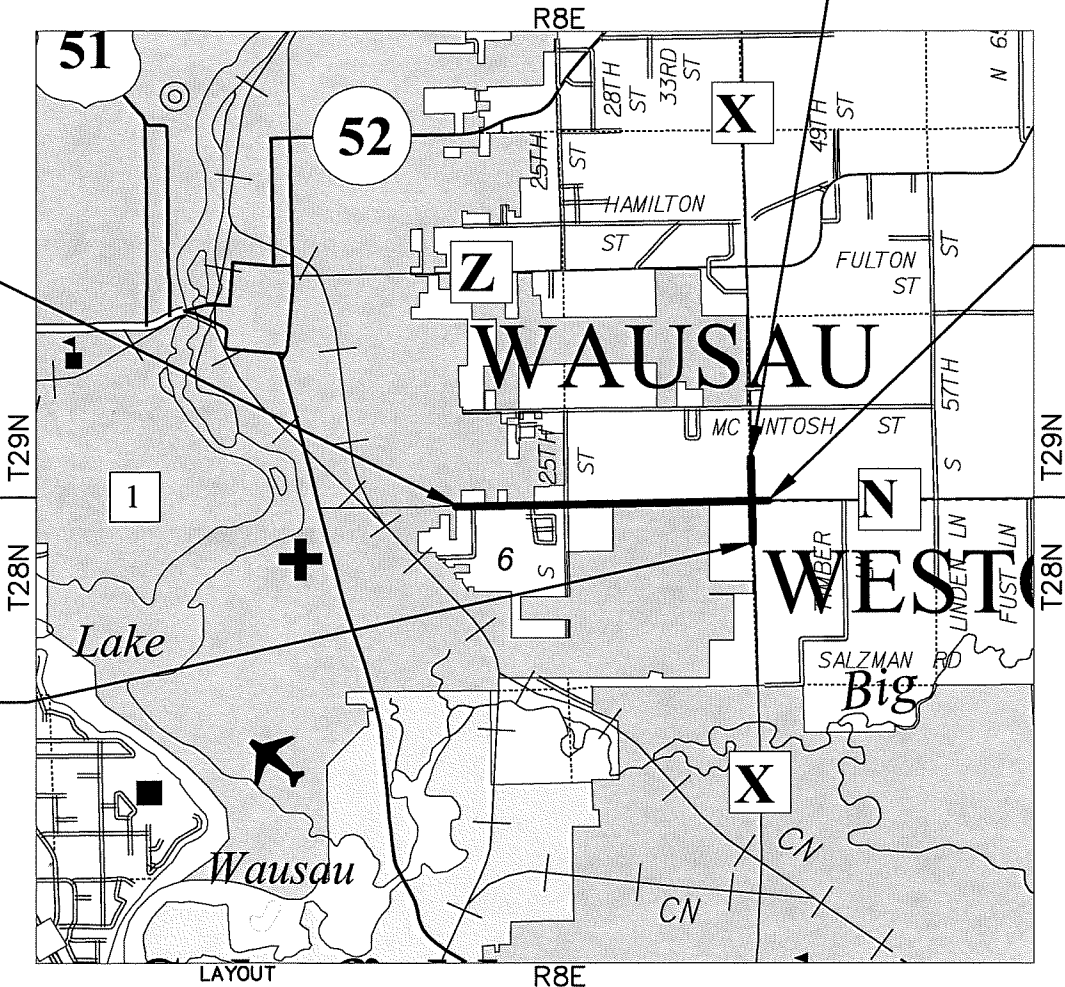
STA 50+56.64
N=196790.541
E=287758.035

END PROJECT

STA 146+15.00
N=196894.213
E=297315.304

BEGIN CONSTRUCTION

CTH X
STA 304+26
N=195999.918
E=296048.529



SCALE 0 1 MILE

TOTAL NET LENGTH OF CENTERLINE = 1.810 MILES

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

STATE PROJECT

6999-18-75

FEDERAL PROJECT

PROJECT

WISC 2019178

CONTRACT

1

ACCEPTED FOR

COUNTY of MARATHON

10/18/18

(Date) (Signature & Title of Official)

ORIGINAL PLANS PREPARED BY

QUEST

Civil Engineers, LLC

320 West Grand Ave, Suite 302
Wisconsin Rapids, WI 54495

WISCONSIN
ADAM J. OSYPOWSKI
E-38889
STEVENS POINT
WIS.
PROFESSIONAL ENGINEER

10/18/18

(Date) (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor QUEST CIVIL ENGINEERS

Designer QUEST CIVIL ENGINEERS

Management Consultant

CEDAR CORPORATION

APPROVED FOR THE DEPARTMENT

DATE: 10-29-2018

(Management Consultant Signature)

GENERAL NOTES

WHEN THE QUANTITY OF THE ITEMS OF BASE AGGREGATE DENSE AND ASPHALTIC SURFACE ARE MEASURED FOR PAYMENT BY THE TON, THE DEPTH OR THICKNESS OF THE LAYER SHOWN ON THE PLANS IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

PURSUANT TO CHAPTER 59 OF THE WISCONSIN STATUTES, THE CONTRACTOR SHALL CAREFULLY MAKE A SEARCH FOR EVIDENCE OF ALL LANDMARKS, BENCHMARKS, AND OTHER CONTROL POINTS IN ALL AREAS WHERE SUCH LANDMARKS, BENCHMARKS, OR OTHER CONTROL POINTS MAY EXIST.

THE CONTRACTOR SHALL PROTECT ALL SURVEY MARKERS. SURVEY MARKERS SHALL NOT BE REMOVED WITHOUT THE APPROVAL OF THE ENGINEER.

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

ALL WASTE MATERIAL RESULTING FROM THE VARIOUS CONSTRUCTION OPERATIONS SHALL BE ENTIRELY REMOVED AND PROPERLY DISPOSED OF IMMEDIATELY OR AS DIRECTED BY THE ENGINEER.

EXACT LOCATION AND LIMITS OF DRIVEWAY ENTRANCES ARE TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESHAPING AND RESTORATION OF, INCLUDING BUT NOT LIMITED TO : SEED, FERTILIZER, EROSION MAT OF ANY DISTURBED AREAS OUTSIDE OF THE NORMAL CONSTRUCTION LIMITS AS DETERMINED BY THE ENGINEER.

THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. UTILITES HAVE NOT BEEN LOCATED ALONG THE DETOUR ROUTE. IDENTIFY THESE LOCATIONS PRIOR TO INSTALLING SIGNING ALONG THE DETOUR.

EROSION CONTROL ITEMS ARE TO BE PLACED AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER.

NO DRIVEWAY CULVERTS ARE PROPOSED TO BE REPLACED AS PART OF THIS PROJECT

ROADWAY CULVERTS SHOWN IN THE PLAN INSTALLED BY OTHERS INCLUDE +/- 20 LF OF GRADING AROUND AEW CONFORMING TO THE CROSS SECTIONS SHOWN IN THE PLAN. EARTHWORK QUANTITIES SHOWN IN PLAN INCLUDE THIS WORK BY OTHERS. CONTRACTOR SHALL TIE INTO THESE AREAS AND RESTORE DISTURBED AREAS.

THE ALIGNMENT IN THE PULVERIZE AND RELAY SECTION IS BASED ON THE ORIGINAL AS BUILT PLAN. PROFILE ELEVATION OF THE ROADWAY CENTERLINE MAY DEVIATE FROM THE PLAN BASED ON THE MATERIAL IN THE PULVERIZE AND RELAY SECTION. NEW HMA PAVEMENT SHALL FOLLOW PROFILE OF PULVERIZE AND RELAID MATERIAL. ANY ADJUSTMENTS SHALL BE INCIDENTAL TO OTHER ITEMS IN THE CONTRACT.

THE ALIGNMENT IN THE MILL AND OVERLAY SECTION IS BASED ON FIELD SURVEY SHOTS TAKEN ON THE CENTERLINE AND/OR EDGELINE. ACTUAL ROADWAY CENTERLINE MAY DEVIATE FROM THE PLAN. NEW HMA PAVEMENT SHALL FOLLOW EXISTING ROADWAY CENTERLINE. ANY ADJUSTMENTS SHALL BE INCIDENTAL TO OTHER ITEMS IN THE CONTRACT.

PLACE ASPHALTIC SURFACE PATCHING ON MILLED SURFACE AREAS BEFORE AREAS ARE OPENED UP TO TRAFFIC OR WHEN FLAGGERS ARE PRESENT TO DIRECT TRAFFIC THROUGH THE WORK AREAS.

PLACE THE LOWER LAYER OF ASPHALTIC PAVEMENT ON THE MAINLINE WITHIN SEVEN (7) CALENDAR DAYS AFTER THE PULVERIZE AND RELAY IS COMPLETED ON THE MAINLINE OF CTH N.

PLACE THE LOWER LAYER OF ASPHALTIC PAVEMENTS ON SIDEROADS AND 4" DRIVEWAYS BEFORE THE UPPER SURFACE LAYER OF ASPHALTIC PAVEMENTS ARE PLACED ON THE MAINLINE ADJACENT TO THE SIDEROAD.

PLACE THE UPPER SURFACE LAYER OF ASPHALTIC PAVEMENT ON THE MAINLINE WITHIN SEVEN (7) CALENDAR DAYS AFTER THE LOWER SURFACE LAYER OF ASPHALTIC PAVEMENT IS PLACED OR MILLED ON THE MAINLINE OF BOTH THE CTH N AND CTH X ROADWAYS.

PLACE THE UPPER SURFACE LAYER OF ASPHALTIC PAVEMENT ON THE SIDEROADS WITHIN SEVEN (7) CALENDAR DAYS AFTER THE UPPER SURFACE LAYER OF ASPHALTIC PAVEMENT IS PLACED ON THE MAINLINE.

DESIGN CONTACT

QUEST CIVIL ENGINEERS
ADAM OSYPOWSKI
320 WEST GRAND AVENUE, SUITE 302
WISCONSIN RAPIDS, WI 54495
TELEPHONE: 715.423.3525
adam.osypowski@questllc.biz

DNR CONTACT

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
JON SIMONSEN
107 SUTLIFF AVENUE
RHINELANDER, WI 54501
TELEPHONE 715-367-1936
jonathan.simonsen@wisconsin.gov

COUNTY CONTACT

MARATHON COUNTY HIGHWAY DEPARTMENT
JIM GRIESBACH- COMMISSIONER
1430 WEST STREET
WAUSAU, WI 54401
TELEPHONE 715-261-1800
James.Griesbach@co.marathon.wi.us

UTILITY CONTACTS

CHARTER COMMUNICATIONS (COMMUNICATIONS)
853 MCINTOSH STREET
P.O. BOX 1818
WAUSAU, WI 54402-1818
ATTN: SCOTT OLSON
715-301-4079 OFFICE
715-216-6204 CELL
SCOTT.OLSON@CHARTERCOM.COM

FRONTIER COMMUNICATIONS (COMMUNICATIONS)
521 FOURTH STREET
WAUSAU, WI 54403
ATTN: TOM LOCKE
715-847-1550
TOM.LOCKE@FTR.COM

WAUSAU WATER WORKS (WATER)
407 GRANT STREET
WAUSAU, WI 54403
ATTN: SHANNON LANE
715-261-7265 OR 715-571-9774
SHANNON.LANE@CI.WAUSAU.WI.US

WAUSAU WATER WORKS (SEWER)
407 GRANT STREET
WAUSAU, WI 54403
ATTN: KEN RYE
715-261-6530 OR 715-574-3149
KEN.RYE@CI.WAUSAU.WI.US

WISCONSIN PUBLIC SERVICE CORP (GAS)
1700 SHERMAN STREET
WAUSAU, WI 54476
ATTN: FRITZ MARTIN
715-848-7387 OFFICE
715-573-2025 CELL
FRANCIS.MARTIN@WISCONSINPUBLICSERVICE.COM

WISCONSIN PUBLIC SERVICE CORP (ELECTRIC)
PO BOX 1166
WAUSAU, WI 54402
ATTN: CLAYTON VIRCKS
715-848-7317 OFFICE
715-573-7806 CELL
CLAYTON.VIRCKS@WISCONSINPUBLICSERVICE.COM

ANR PIPELINE
2629 SUNSET DRIVE
STEVENS POINT, WI 54482
ATTN: DUANE PRONDZINSKI
715-460-4322 CELL
DUANE_PRONDZINSKI@TRANSCANADA.COM



PAVEMENT CORING LOG

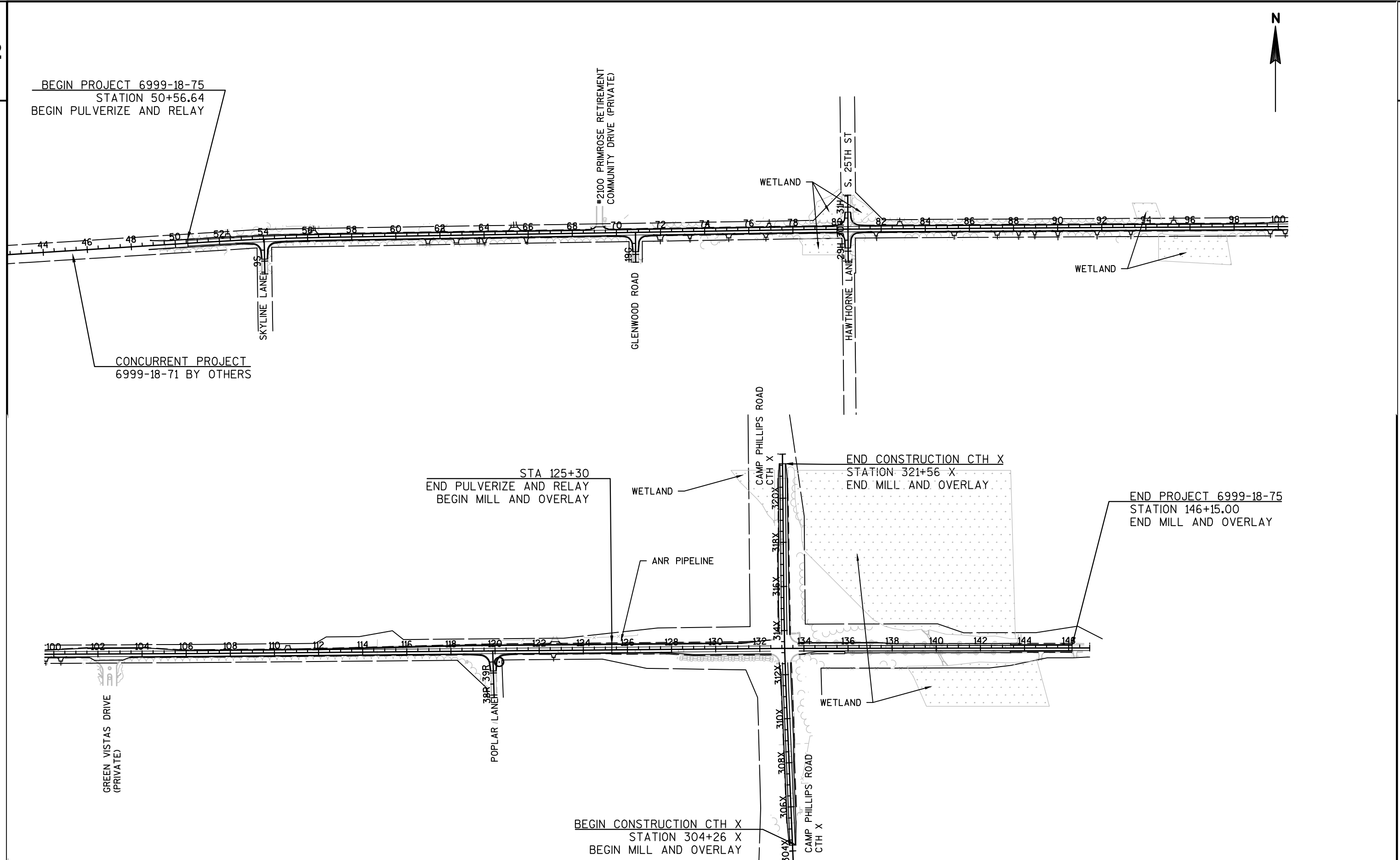
| CORE NO. | STA | OFFSET FROM CTH N REF LINE | PAVEMENT THICKNESS | RECYCLED ASPHALT THICKNESS | BASE COURSE DEPTH |
|----------|--------|----------------------------------|-----------------------|----------------------------------|----------------------|
| | | | (INCHES) | (INCHES) | (INCHES) |
| N-10 | 70+56 | 6.2' RT | 4.5 | 5 | 6.5 |
| N-11 | 118+82 | 15.5' LT | 5.5 | 5 | 8.5 |

HMA PAVEMENT LAYER THICKNESS

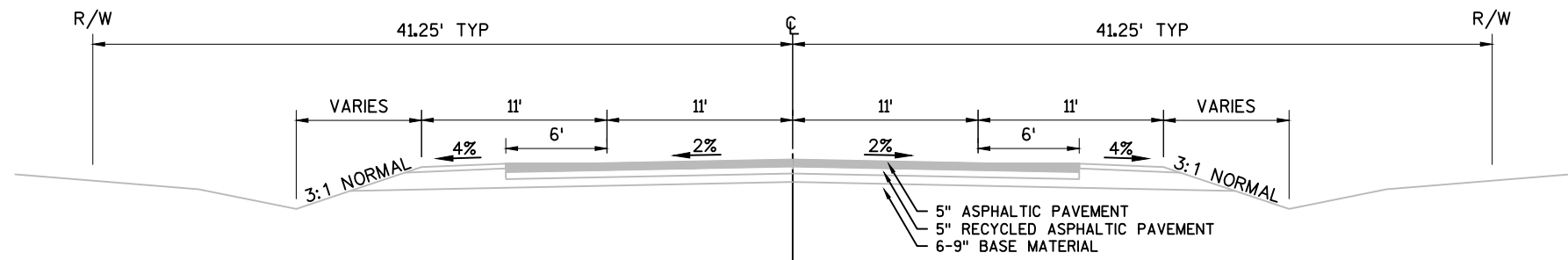
| TOTAL LAYER THICKNESS | LAYERS |
|---|--|
| CTH N PULVERIZE AND RELAY SECTION – 4" MAINLINE AND SHOULDERS | 1 ¾" UPPER LAYER 5 LT 58-28 S 2 ¼" LOWER LAYER 3 LT 58-28 S |
| CTH N AND CTH X MILL AND OVERLAY SECTION – 1 ¾" MAINLINE AND SHOULDERS | 1 ¾" UPPER LAYER 5 LT 58-28 S |

2

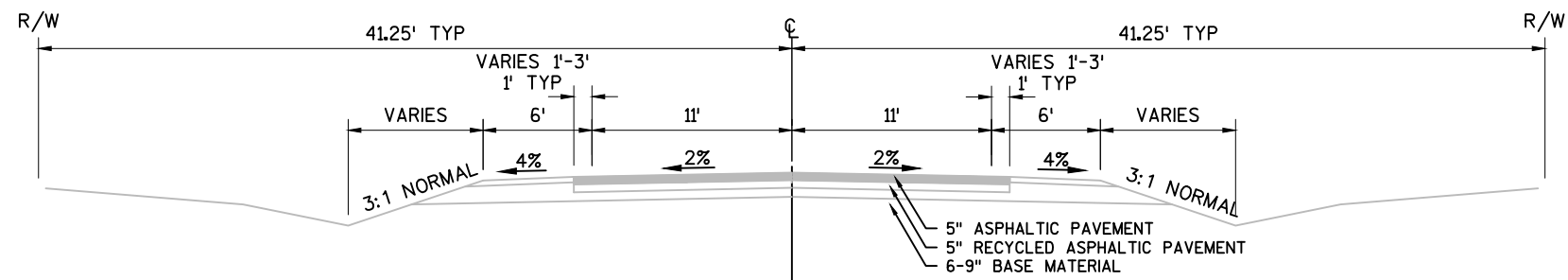
2



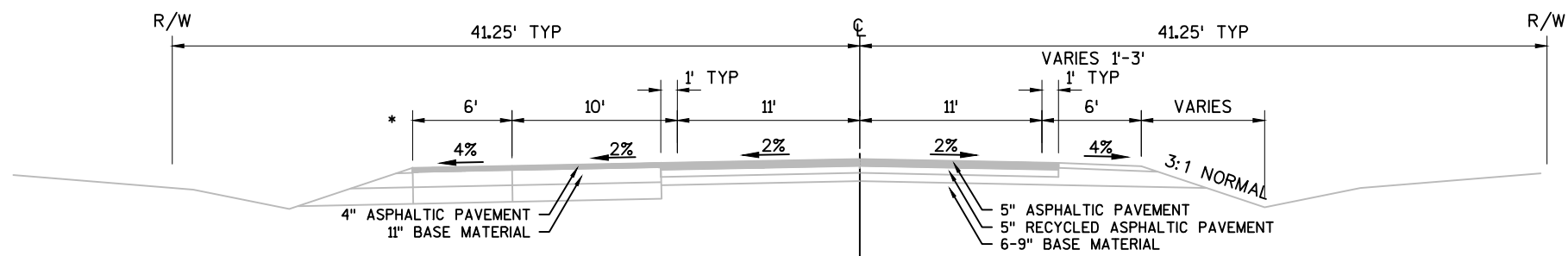
| | | | | | |
|-----------------------|-----------|-----------------|------------------|-------|----------|
| PROJECT NO:6999-18-75 | HWY:CTH N | COUNTY:MARATHON | PROJECT OVERVIEW | SHEET | E |
|-----------------------|-----------|-----------------|------------------|-------|----------|



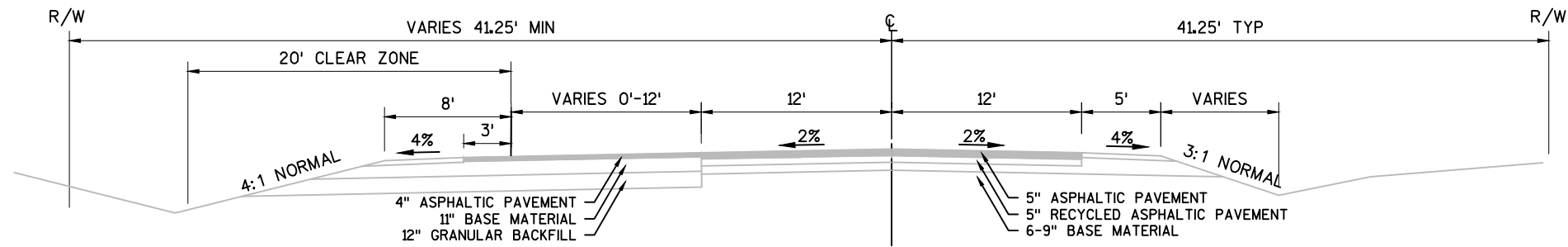
EXISTING TYPICAL SECTION
STATION 50+50.64 TO STATION 54+56



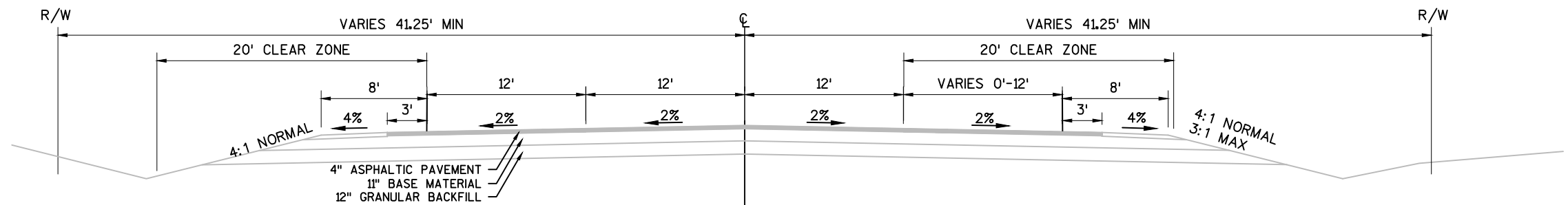
EXISTING TYPICAL SECTION
STATION 54+56 TO STATION 98+29
STATION 106+21 TO STATION 111+73



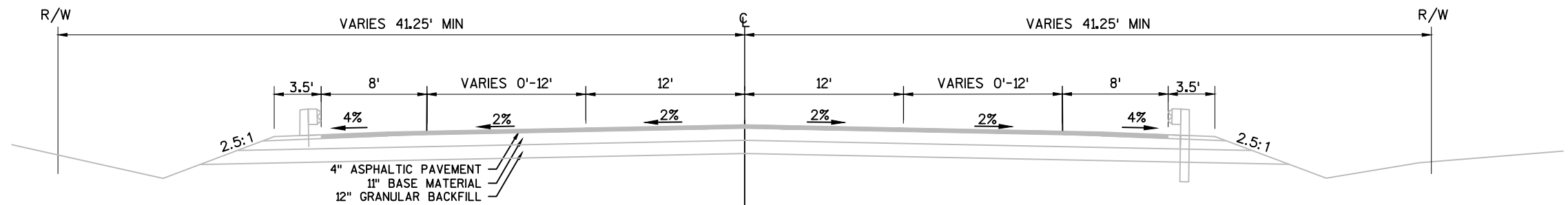
EXISTING TYPICAL SECTION
STATION 98+29 TO STATION 106+21
* 30 IN CURB AND GUTTER STA 101+54-STA 104+04



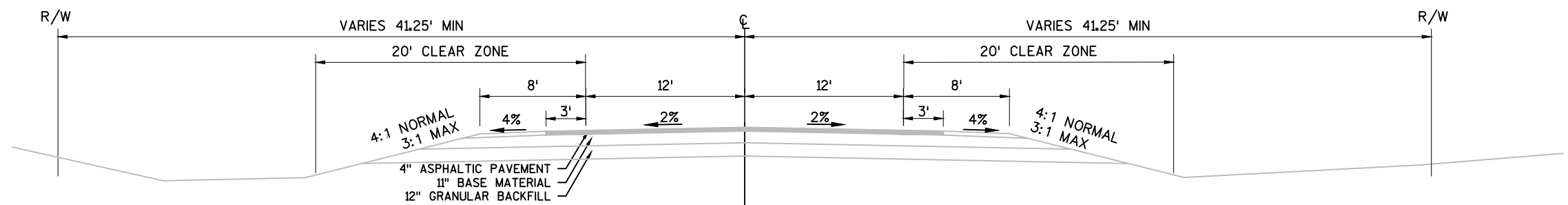
EXISTING TYPICAL SECTION
STATION 111+73 TO STATION 125+30



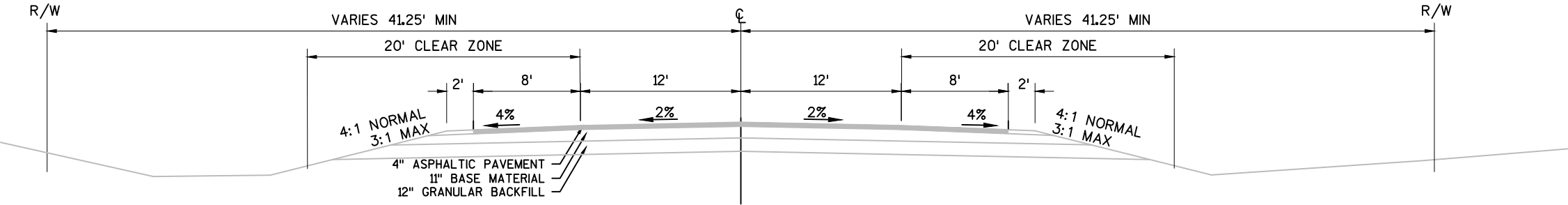
EXISTING TYPICAL SECTION
STATION 125+30 TO STATION 134+35



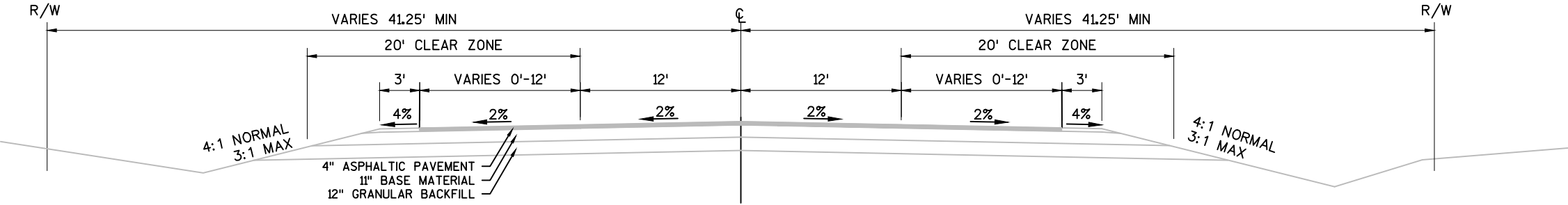
EXISTING TYPICAL SECTION
STATION 134+35 TO STATION 143+35



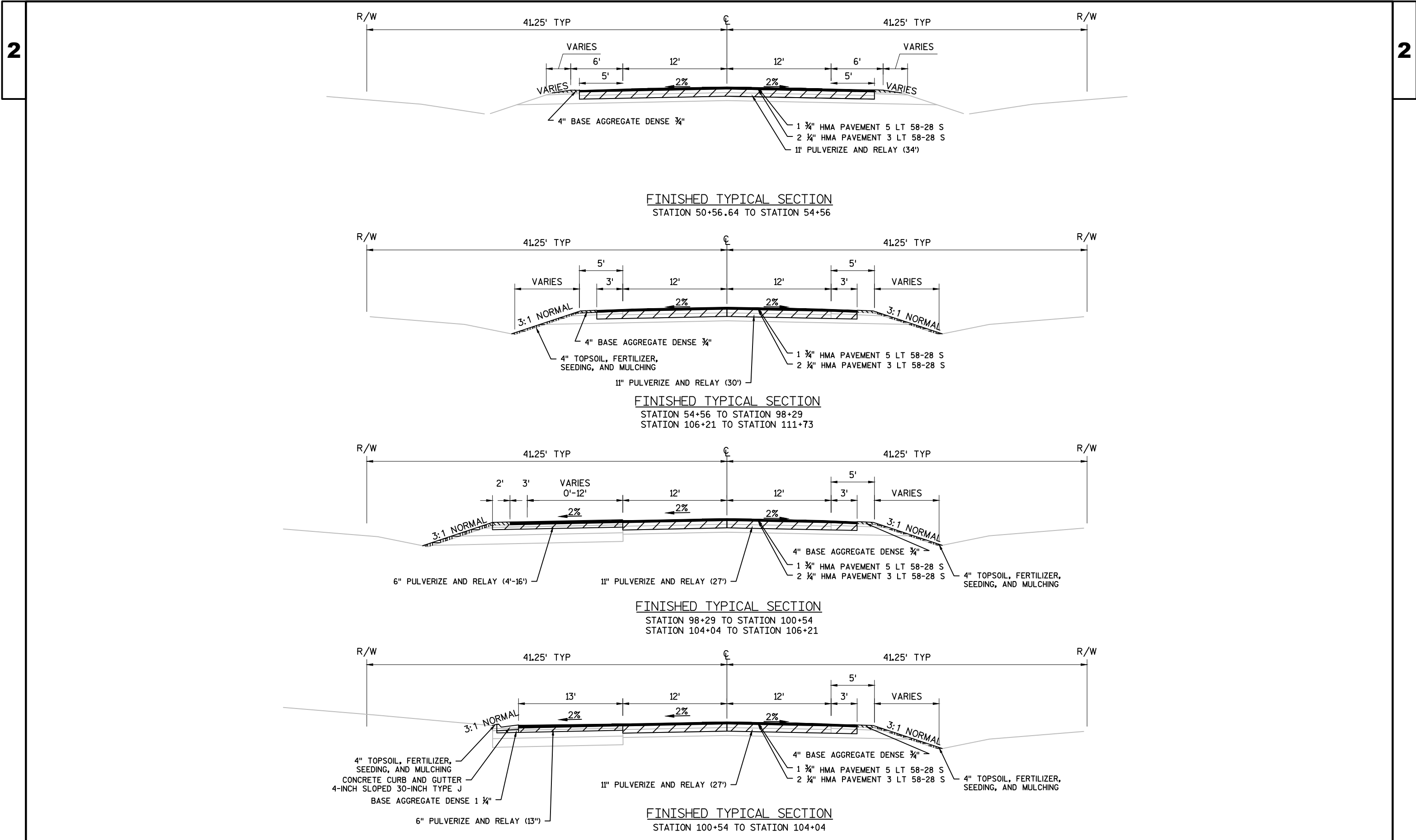
EXISTING TYPICAL SECTION
STATION 143+35 TO STATION 146+15

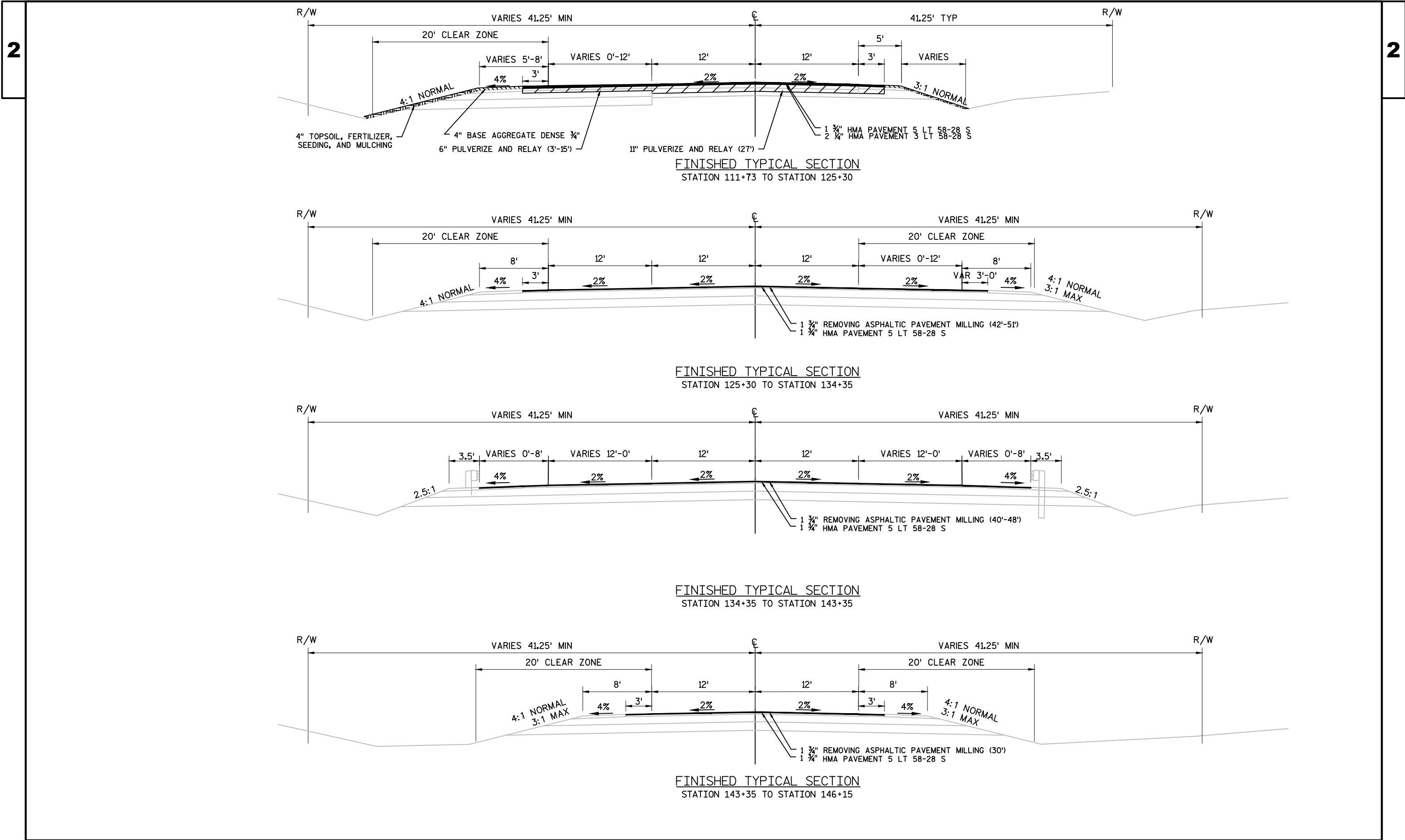


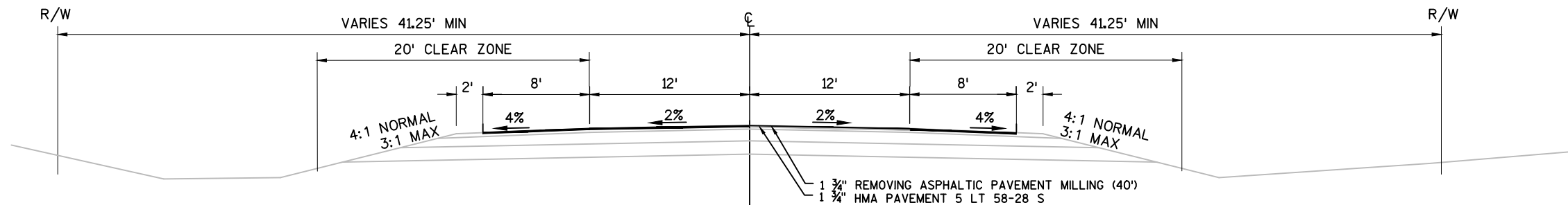
EXISTING TYPICAL SECTION
STATION 304+26 TO STATION 307+53
STATION 320+22-STATION 322+56



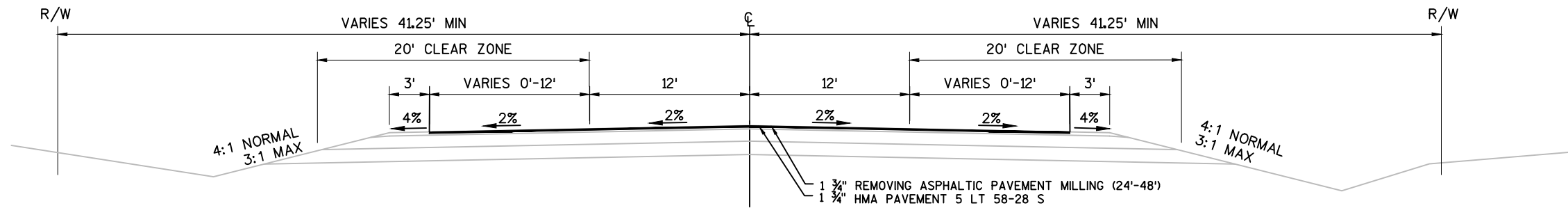
EXISTING TYPICAL SECTION
STATION 307+53-STATION 320+22



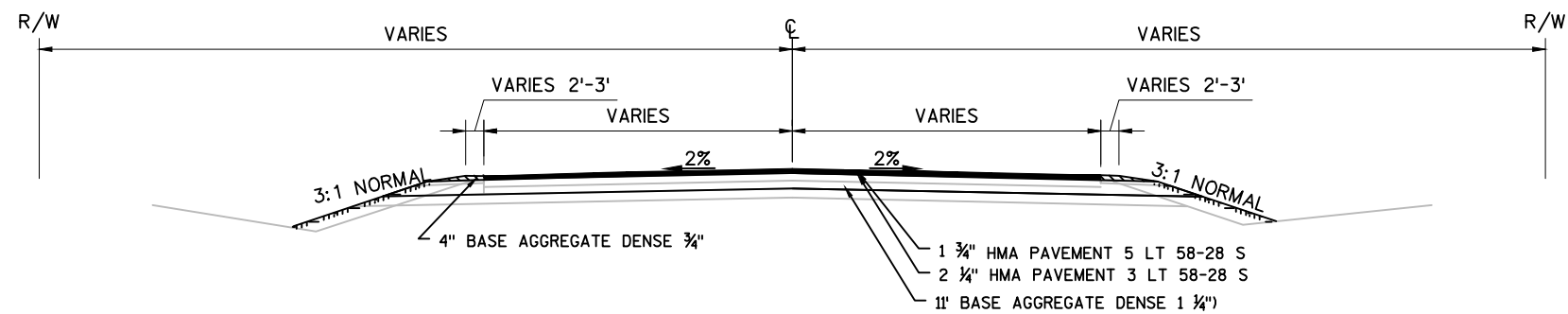




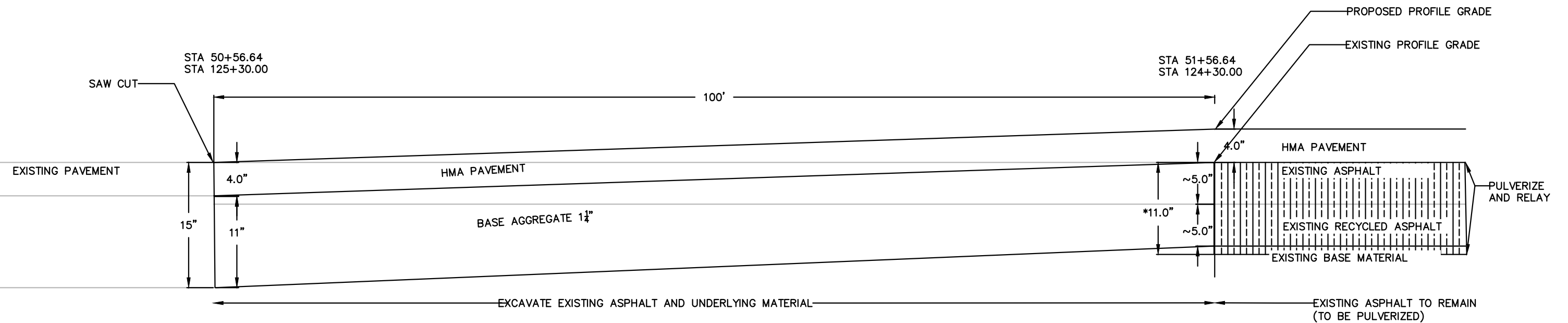
FINISHED TYPICAL SECTION
STATION 304+26X TO STATION 307+53X
STATION 320+22X-STATION 322+56X



FINISHED TYPICAL SECTION
STATION 307+53X-STATION 320+22X

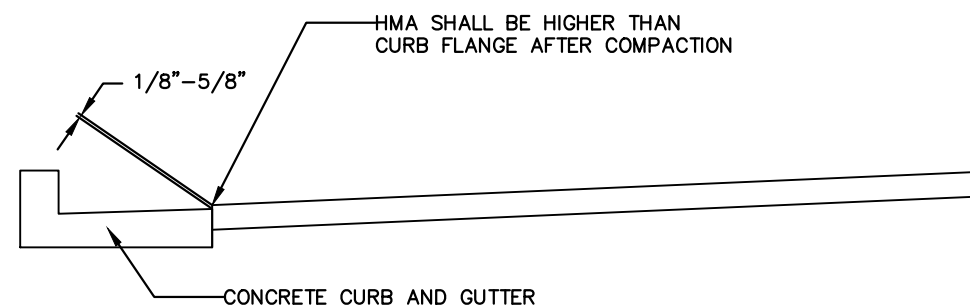


FINISHED TYPICAL SECTION
SKYLINE LANE
GLENWOOD ROAD
HAWTHORNE LANE/25TH AVENUE
POPLAR LANE

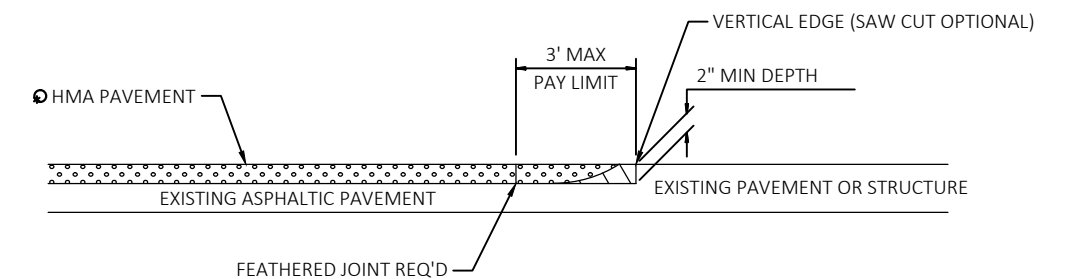


PAVEMENT AND BASE TRANSITION DETAIL

STA 50+56.64 - STA 51+06.64
STA 124+80.00 - STA 125+30.00 (REVERSED) (*6" PULVERIZE DEPTH IN CLIMBING LANE AND TAPER)
NOTE: BOTH TRANSITIONS ARE LOCATED IN VERTICAL CURVE AREAS.



HMA PAVING AT CURB AND GUTTER

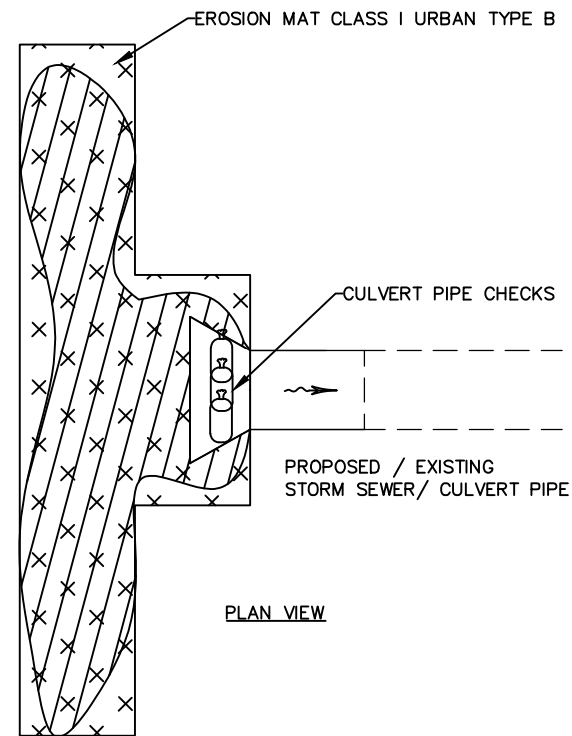


SEE TYPICAL CROSS SECTION FOR PAVEMENT TYPE AND THICKNESS OF INDIVIDUAL LAYERS

REMOVING ASPHALTIC SURFACE, MILLING

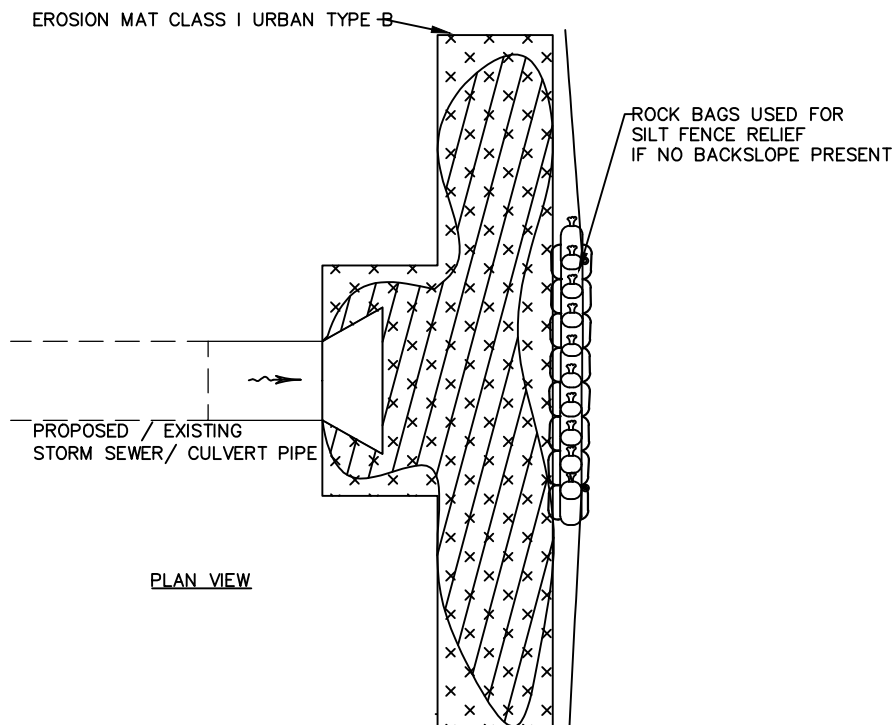
REMOVE ASPHALTIC SURFACE WEDGE AT BUTT JOINT TO CREATE VERTICAL EDGE

BUTT JOINT DETAIL FOR ASPHALTIC PAVEMENTS (NO PROFILE CHANGE)



PLAN VIEW

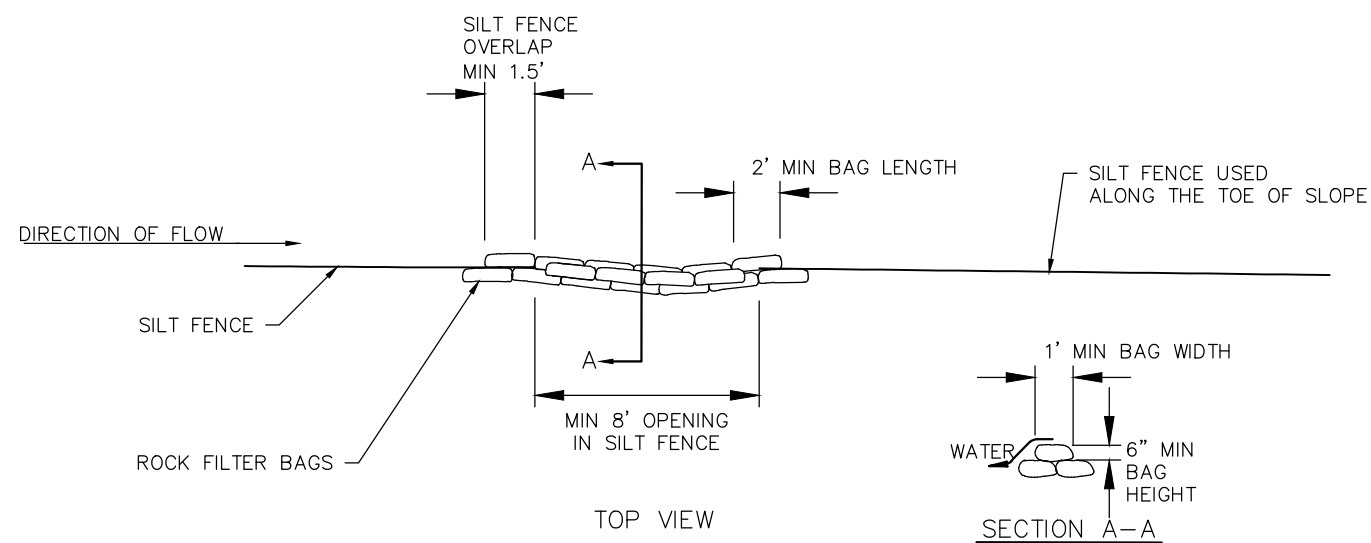
EROSION CONTROL AT INLET



PLAN VIEW

EROSION CONTROL AT OUTFALL

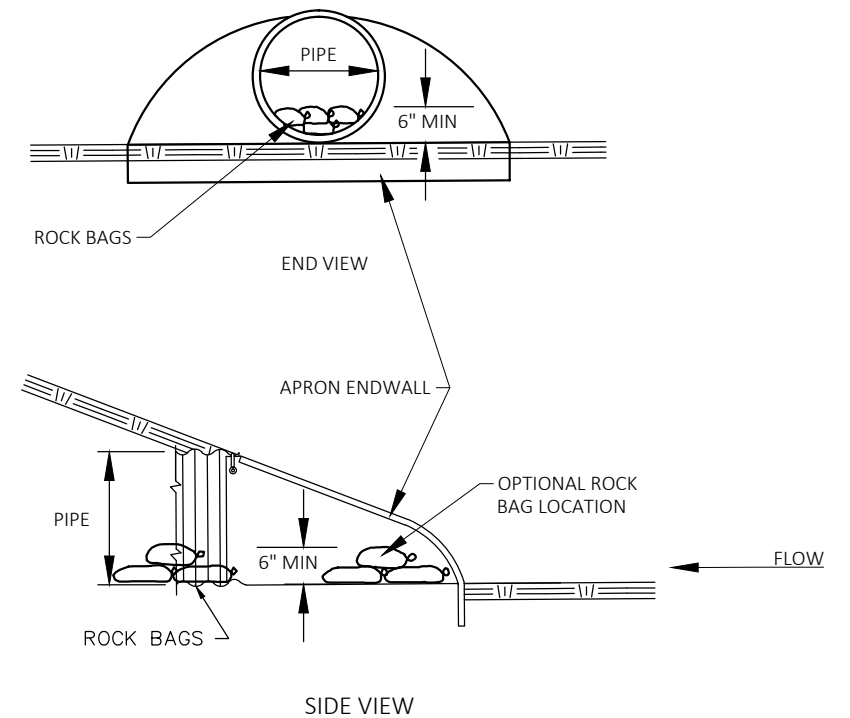
EROSION CONTROL AT APRON ENDWALLS
FOR USE IN CROSS CULVERT LOCATIONS



TOP VIEW

SECTION A-A

ROCK BAGS USED FOR SILT FENCE RELIEF

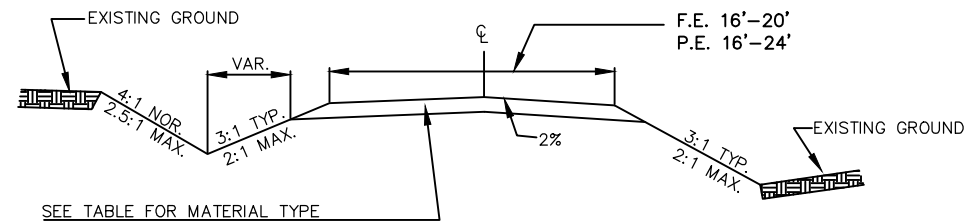


END VIEW

SIDE VIEW

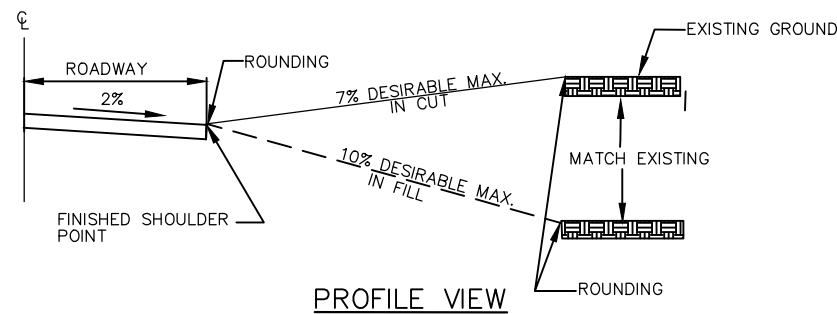
CULVERT PIPE CHECK

(INSTALL ON INLET END ONLY)

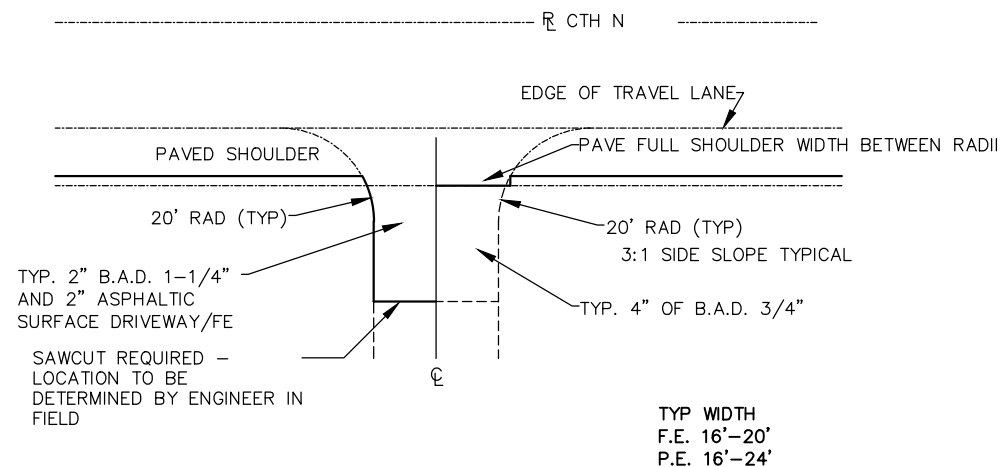


NOTE: EXISTING DRIVE
CULVERTS TO REMAIN

TYPICAL CROSS SECTION



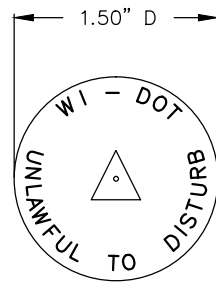
PROFILE VIEW



PLAN VIEW

RURAL DRIVEWAY DETAIL

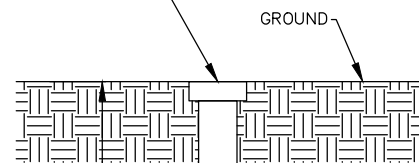
| DRIVEWAY OPENING LOCATION | FIRE NO | TYPE | MATERIAL | MATCH TO EXISTING | WIDTH @ MATCH | RADIUS DOWN STA | RADIUS UP STA | SLOPE % |
|---------------------------------|--------------|------------|---------------------------------|-------------------|---------------|--------------------|---------------|---------|
| 52+39 LT | - | FE | BASE AGG. DENSE 3/4" | 32' LT | 16.8' | 20' | 20' | -2.7 |
| 56+28 LT | 1804 | RES | ASPHALTIC SURFACE DRIVEWAY | 32' LT | 18.5' | 35' | 30' | 1.0 |
| 61+45 RT | 1821 | RES | ASPHALTIC SURFACE DRIVEWAY | 35' RT | 16.0' | 20' | 20' | -14.4 |
| 62+13 LT | 1908 | RES | ASPHALTIC SURFACE DRIVEWAY | 32' LT | 11.3' | 20' | 20' | 7.0 |
| 62+75 RT | 1919 | RES | ASPHALTIC SURFACE DRIVEWAY | 35' RT | 19.7' | 20' | 20' | -12.9 |
| 64+02 RT | 1825 1925 | RES | ASPHALTIC SURFACE DRIVEWAY | 35' RT | 13.2' | 20' | 20' | -11.8 |
| 65+39 LT | - | COMM FE | BASE AGG. DENSE 3/4" | 32' LT | 32.3' | 30' | 45' | 5.4 |
| 65+92 RT | 2011 | RES | ASPHALTIC SURFACE DRIVEWAY | 38' RT | 11.2' | 20' | 20' | -14.0 |
| 69+24 LT | 2100 | COMM | ASPHALTIC SURFACE DRIVEWAY-4" | 28' LT | 33.6' | 25' CURB | 25' CURB | 1.0 |
| 71+98 RT | 2203 | RES | ASPHALTIC SURFACE DRIVEWAY | 35' RT | 21.5' | 20' | 20' | -10.9 |
| 73+33 RT | 2211 | RES | ASPHALTIC SURFACE DRIVEWAY | 32' RT | 10.5' | 20' | 20' | -1.2 |
| 74+13 LT | 2302 | RES | ASPHALTIC SURFACE DRIVEWAY | 32' LT | 12.0' | 20' | 20' | 7.8 |
| 75+09 RT | 2315 | RES | ASPHALTIC SURFACE DRIVEWAY | 32' RT | 18.0' | 20' | 20' | -8.4 |
| 76+78 RT | 2403 | RES | ASPHALTIC SURFACE DRIVEWAY | 32' RT | 12.8' | 20' | 20' | -6.5 |
| 76+92 LT | 2308 | RES | BASE AGG. DENSE 3/4" | 32' LT | 11.3' | 20' | 20' | -1.3 |
| 81+77 RT | 2505 | RES | ASPHALTIC SURFACE DRIVEWAY | 32' RT | 10.0' | 20' | 20' | -9.1 |
| 82+84 LT | - | FE | BASE AGG. DENSE 3/4" | 32' LT | 16.4' | 20' | 20' | -7.4 |
| 85+33 RT | 2615 | RES | ASPHALTIC SURFACE DRIVEWAY | 32' RT | 17.9' | 20' | 20' | 0.8 |
| 87+26 RT | 2623 | RES | ASPHALTIC SURFACE DRIVEWAY | 32' RT | 18.0' | 20' | 20' | -3.7 |
| 88+24 RT | 2715 | RES | ASPHALTIC SURFACE DRIVEWAY | 35' RT | 11.2 | 20' | 20' | -9.0 |
| 88+96 RT | 2727 | RES ACCESS | ASPHALTIC SURFACE DRIVEWAY | 32' RT | 9.7' | 20' | 20' | -10.8 |
| 90+00 RT | 2727 | RES | ASPHALTIC SURFACE DRIVEWAY | 35' RT | 13.5' | 20' | 20' | -15.6 |
| 91+80 RT | 2811 | RES | RED GRANITE | 32' RT | 11.3' | 20' | 20' | -12.0 |
| 93+32 RT | 2821 | RES | ASPHALTIC SURFACE DRIVEWAY | 35' RT | 10.4' | 20' | 20' | -11.7 |
| 95+26 LT | 2902 2904 | RES | BASE AGG. DENSE 3/4" | 32' LT | 15.6' | 20' | 20' | -6.2 |
| 99+64 RT | 3015 | RES | ASPHALTIC SURFACE DRIVEWAY | 32' RT | 14.8' | 20' | 20' | -8.8 |
| 100+32 RT | 3015 | AGRIC | ASPHALTIC SURFACE DRIVEWAY | 32' RT | 14.7' | 20' | 20' | -7.4 |
| 102+53 | - | PRIVATE RD | ASPHALTIC SURFACE DRIVEWAY - 4" | 28' RT | 124' | - | - | -1.3 |
| 110+61 LT | - | FE | BASE AGG. DENSE 3/4" | 32' LT | 15.6' | 20' | 20' | -5.0 |
| 122+65 RT | - | FE | BASE AGG. DENSE 3/4" | 32' RT | 12.7' | 20' | 20' | -5.0 |
| 122+73 LT | 3708 | AGRIC | ASPHALTIC SURFACE DRIVEWAY | 40' LT | 37.3' | 40' | 40' | -13.2 |



WIS DOT MONUMENT CAP MARKER LOGO (SSDR130)

CONTRACTOR TO ORDER LANDMARK REFERENCE MONUMENTS WITH THE ABOVE STAMPING

MONUMENT MARKER TO BE FLUSH WITH GROUND SURFACE OR DEPRESSED IN PAVED SURFACE.

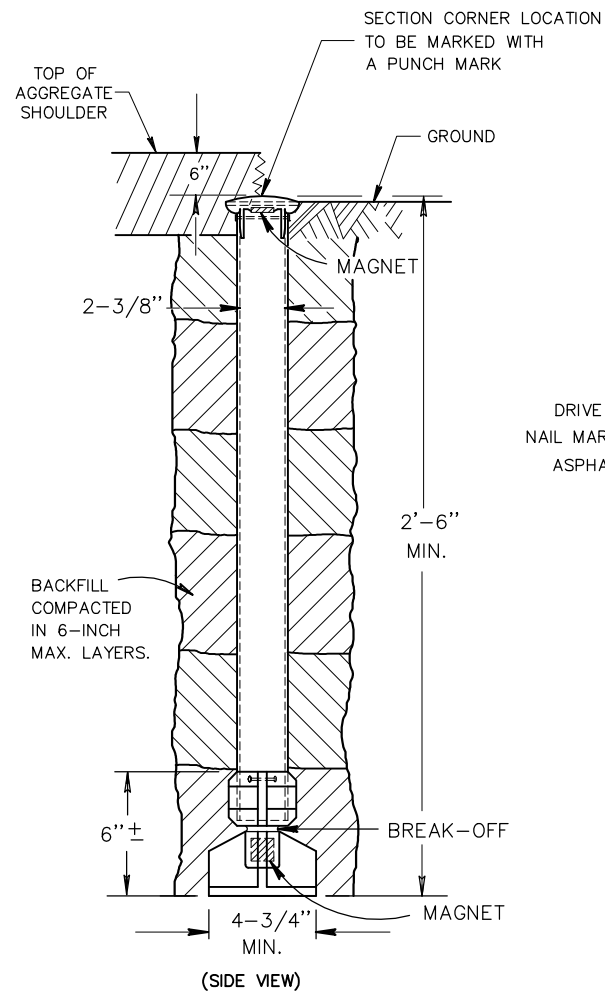


30"

(FRONT VIEW)

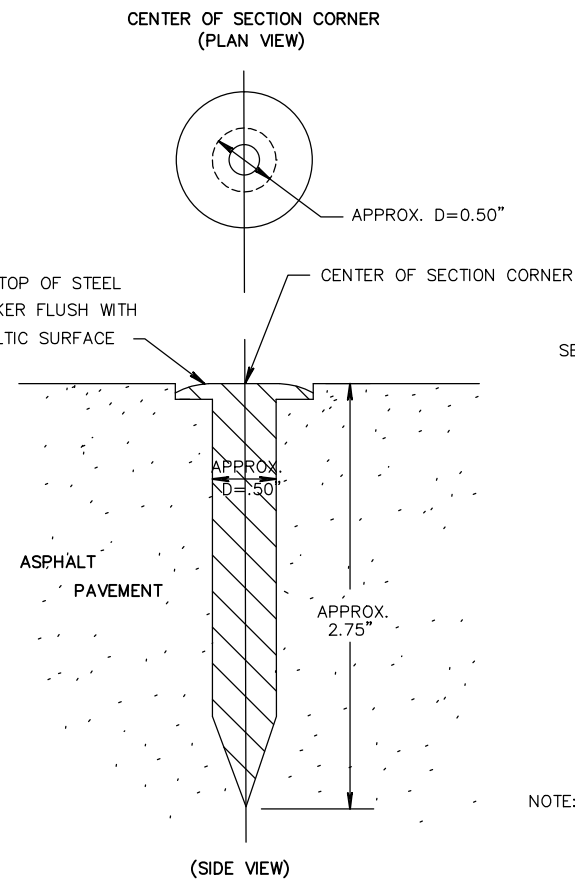
BERNSTEN DRIVABLE MONUMENT SSDR130

LANDMARK REFERENCE MONUMENT (TIES ONLY)



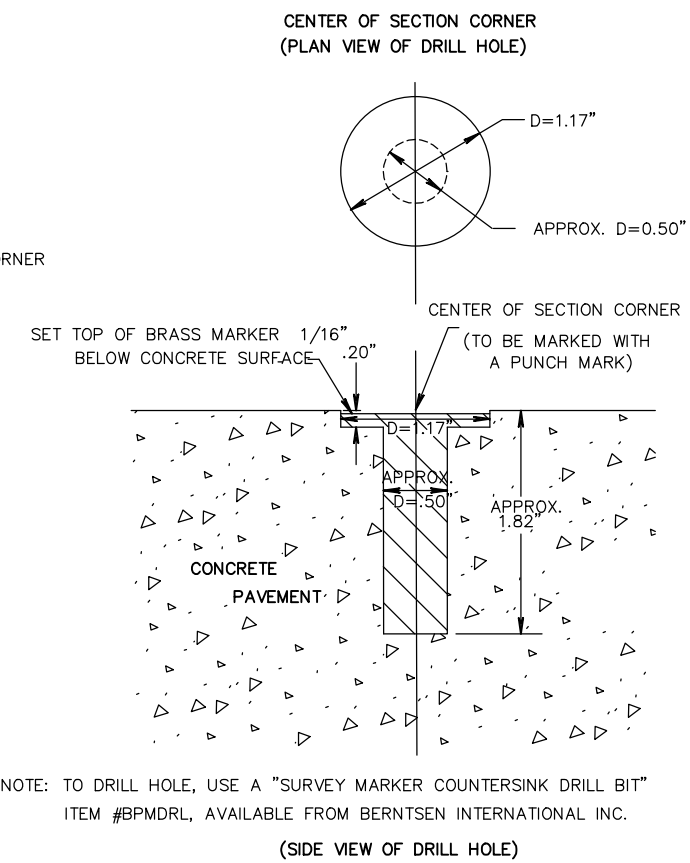
OUTSIDE OF PAVEMENT

BERNTSEN A1BR30 ALUMINUM BREAK-OFF MONUMENT



IN ASPHALTIC PAVEMENT

BERNTSEN SNM1 STEEL NAIL MARKER



IN CONCRETE PAVEMENT

BERNTSEN BP - 1 BRASS MARKER WITH ANCHOR PLUG

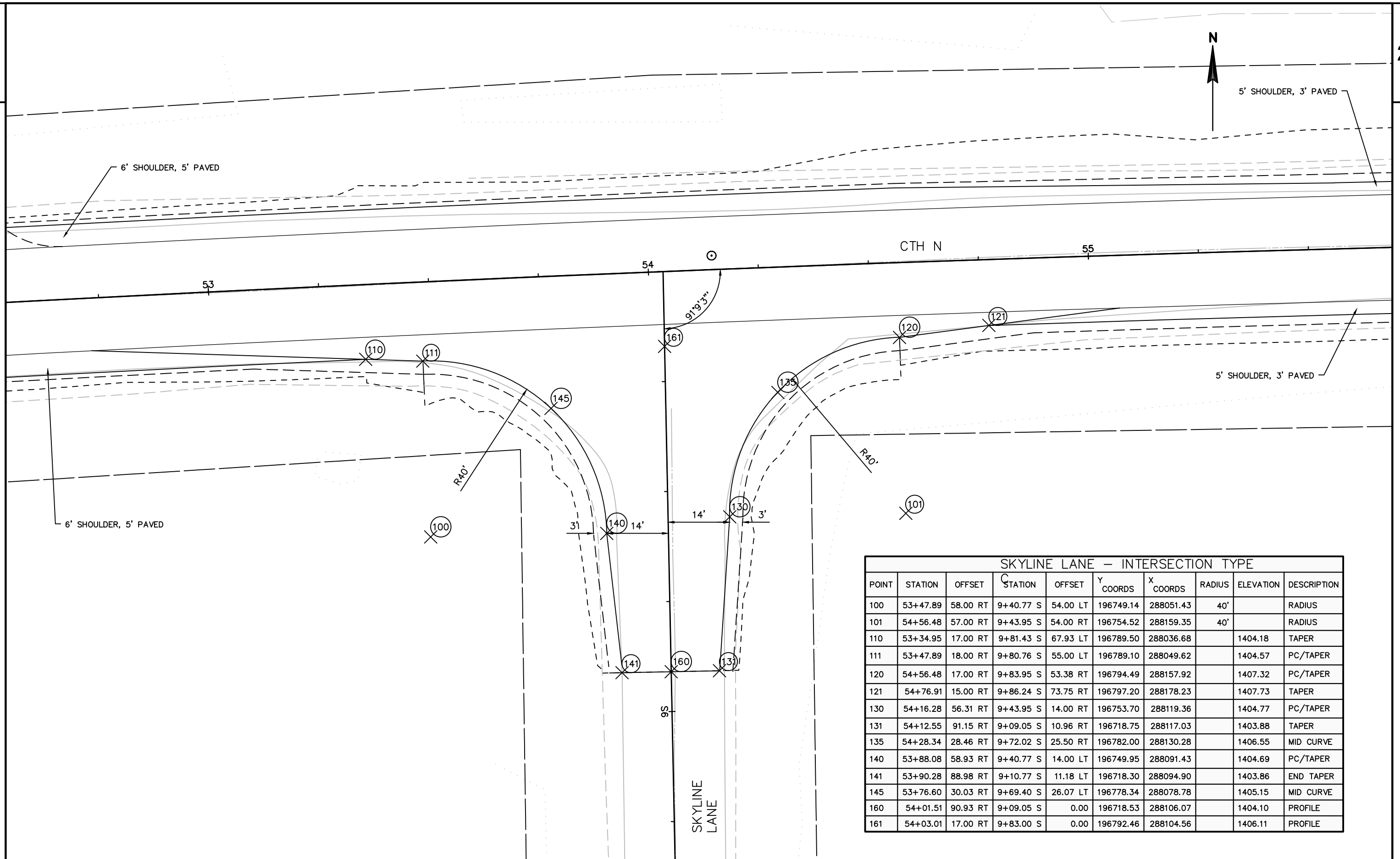
SECTION CORNER MONUMENTS

GENERAL NOTES

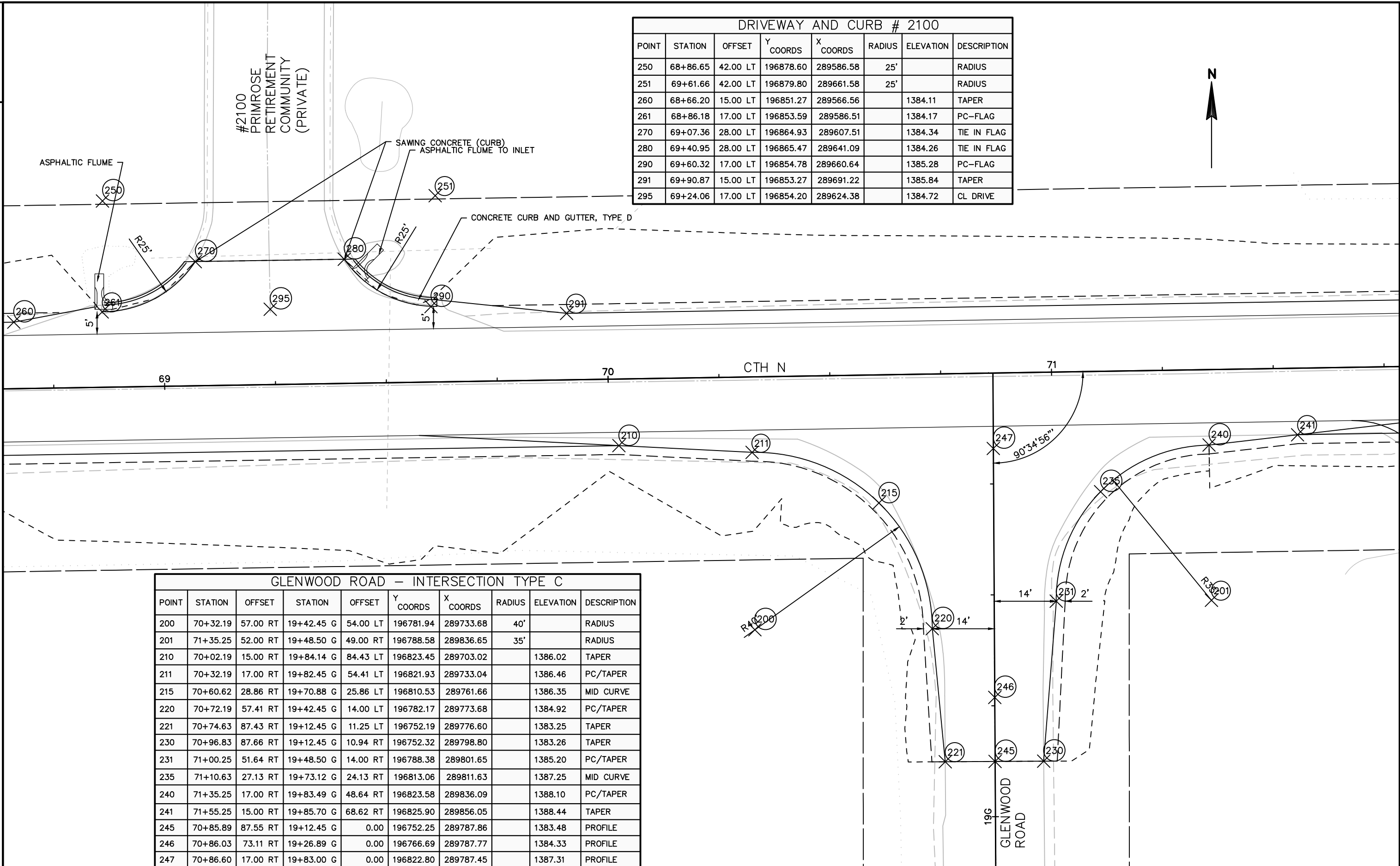
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

LOCATE LANDMARK REFERENCE MONUMENTS OUTSIDE THE CONSTRUCTION LIMITS AND WITHIN WISDOT RIGHT OF WAY. LOCATION TO BE APPROVED BY THE ENGINEER.

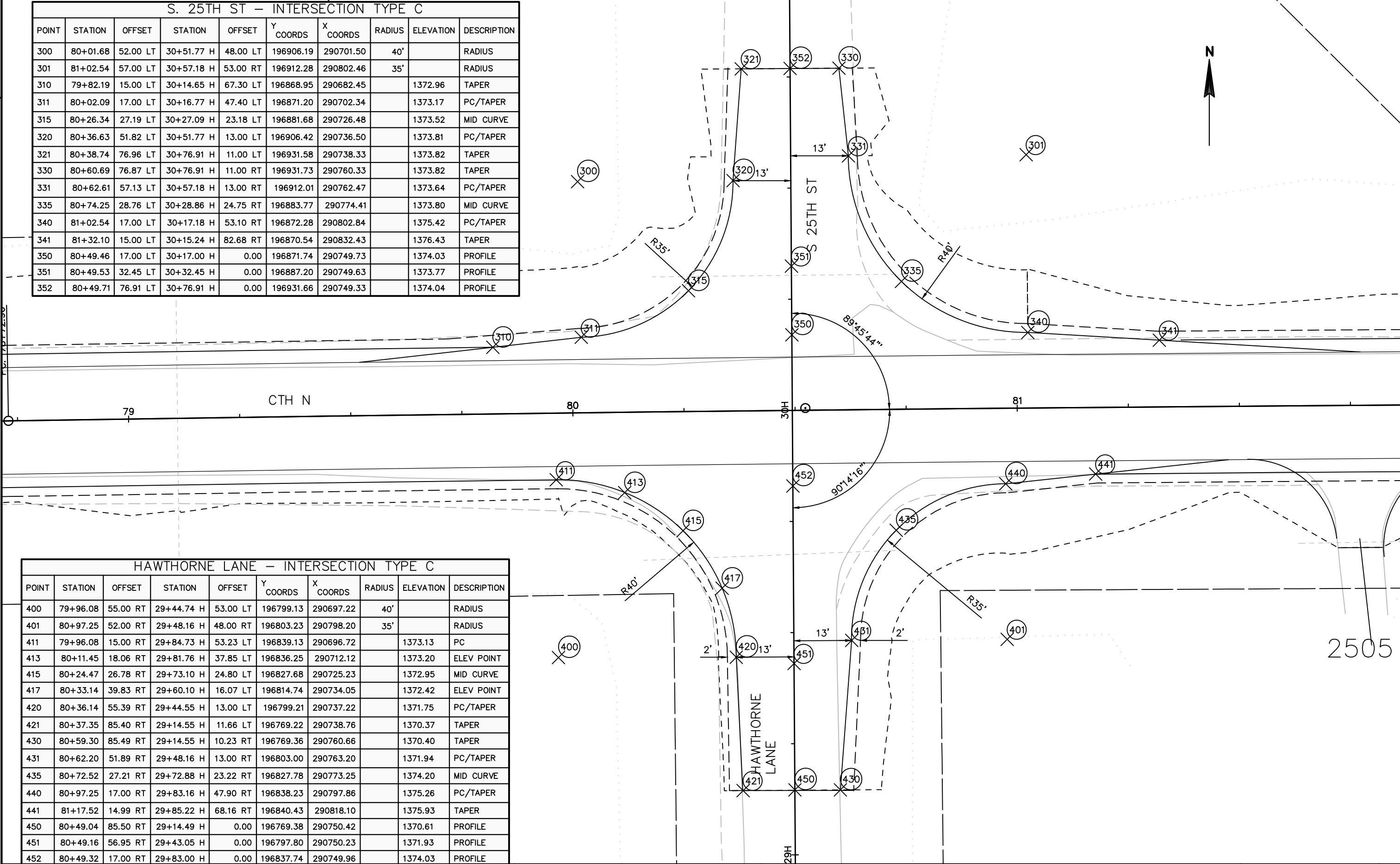
CONTRACTOR WILL SUPPLY ALL REQUIRED SURVEY MONUMENTS.



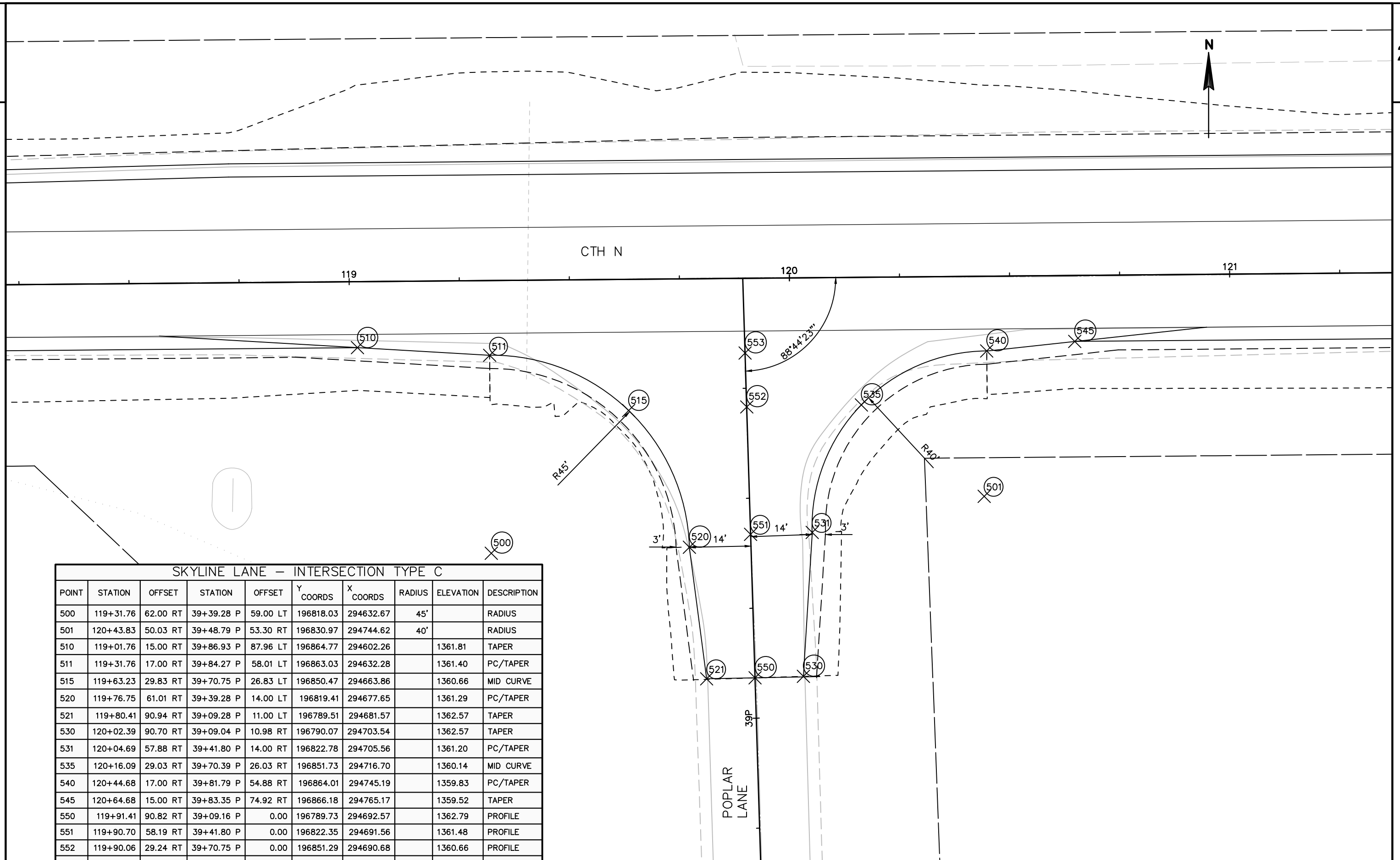
| SKYLINE LANE – INTERSECTION TYPE | | | | | | | | | | |
|----------------------------------|----------|----------|---|-----------|----------|-------------|-------------|--------|-----------|-------------|
| POINT | STATION | OFFSET | C | STATION | OFFSET | Y COORDS | X COORDS | RADIUS | ELEVATION | DESCRIPTION |
| 100 | 53+47.89 | 58.00 RT | | 9+40.77 S | 54.00 LT | 196749.14 | 288051.43 | 40' | | RADIUS |
| 101 | 54+56.48 | 57.00 RT | | 9+43.95 S | 54.00 RT | 196754.52 | 288159.35 | 40' | | RADIUS |
| 110 | 53+34.95 | 17.00 RT | | 9+81.43 S | 67.93 LT | 196789.50 | 288036.68 | | 1404.18 | TAPER |
| 111 | 53+47.89 | 18.00 RT | | 9+80.76 S | 55.00 LT | 196789.10 | 288049.62 | | 1404.57 | PC/TAPER |
| 120 | 54+56.48 | 17.00 RT | | 9+83.95 S | 53.38 RT | 196794.49 | 288157.92 | | 1407.32 | PC/TAPER |
| 121 | 54+76.91 | 15.00 RT | | 9+86.24 S | 73.75 RT | 196797.20 | 288178.23 | | 1407.73 | TAPER |
| 130 | 54+16.28 | 56.31 RT | | 9+43.95 S | 14.00 RT | 196753.70 | 288119.36 | | 1404.77 | PC/TAPER |
| 131 | 54+12.55 | 91.15 RT | | 9+09.05 S | 10.96 RT | 196718.75 | 288117.03 | | 1403.88 | TAPER |
| 135 | 54+28.34 | 28.46 RT | | 9+72.02 S | 25.50 RT | 196782.00 | 288130.28 | | 1406.55 | MID CURVE |
| 140 | 53+88.08 | 58.93 RT | | 9+40.77 S | 14.00 LT | 196749.95 | 288091.43 | | 1404.69 | PC/TAPER |
| 141 | 53+90.28 | 88.98 RT | | 9+10.77 S | 11.18 LT | 196718.30 | 288094.90 | | 1403.86 | END TAPER |
| 145 | 53+76.60 | 30.03 RT | | 9+69.40 S | 26.07 LT | 196778.34 | 288078.78 | | 1405.15 | MID CURVE |
| 160 | 54+01.51 | 90.93 RT | | 9+09.05 S | 0.00 | 196718.53 | 288106.07 | | 1404.10 | PROFILE |
| 161 | 54+03.01 | 17.00 RT | | 9+83.00 S | 0.00 | 196792.46 | 288104.56 | | 1406.11 | PROFILE |

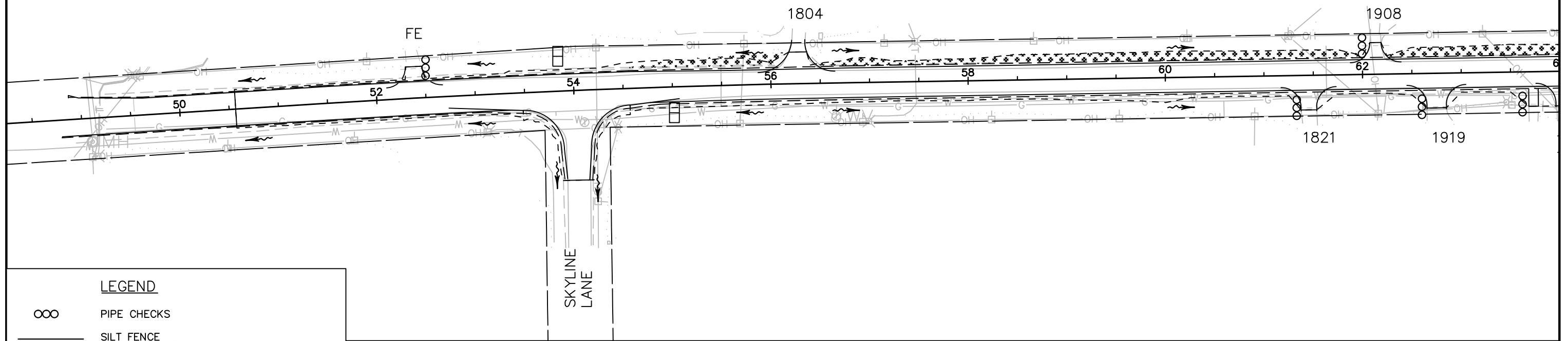


| S. 25TH ST – INTERSECTION TYPE C | | | | | | | | | |
|----------------------------------|----------|----------|------------|----------|-----------|-----------|--------|-----------|-------------|
| POINT | STATION | OFFSET | STATION | OFFSET | Y COORDS | X COORDS | RADIUS | ELEVATION | DESCRIPTION |
| 300 | 80+01.68 | 52.00 LT | 30+51.77 H | 48.00 LT | 196906.19 | 290701.50 | 40' | | RADIUS |
| 301 | 81+02.54 | 57.00 LT | 30+57.18 H | 53.00 RT | 196912.28 | 290802.46 | 35' | | RADIUS |
| 310 | 79+82.19 | 15.00 LT | 30+14.65 H | 67.30 LT | 196868.95 | 290682.45 | | 1372.96 | TAPER |
| 311 | 80+02.09 | 17.00 LT | 30+16.77 H | 47.40 LT | 196871.20 | 290702.34 | | 1373.17 | PC/TAPER |
| 315 | 80+26.34 | 27.19 LT | 30+27.09 H | 23.18 LT | 196881.68 | 290726.48 | | 1373.52 | MID CURVE |
| 320 | 80+36.63 | 51.82 LT | 30+51.77 H | 13.00 LT | 196906.42 | 290736.50 | | 1373.81 | PC/TAPER |
| 321 | 80+38.74 | 76.96 LT | 30+76.91 H | 11.00 LT | 196931.58 | 290738.33 | | 1373.82 | TAPER |
| 330 | 80+60.69 | 76.87 LT | 30+76.91 H | 11.00 RT | 196931.73 | 290760.33 | | 1373.82 | TAPER |
| 331 | 80+62.61 | 57.13 LT | 30+57.18 H | 13.00 RT | 196912.01 | 290762.47 | | 1373.64 | PC/TAPER |
| 335 | 80+74.25 | 28.76 LT | 30+28.86 H | 24.75 RT | 196883.77 | 290774.41 | | 1373.80 | MID CURVE |
| 340 | 81+02.54 | 17.00 LT | 30+17.18 H | 53.10 RT | 196872.28 | 290802.84 | | 1375.42 | PC/TAPER |
| 341 | 81+32.10 | 15.00 LT | 30+15.24 H | 82.68 RT | 196870.54 | 290832.43 | | 1376.43 | TAPER |
| 350 | 80+49.46 | 17.00 LT | 30+17.00 H | 0.00 | 196871.74 | 290749.73 | | 1374.03 | PROFILE |
| 351 | 80+49.53 | 32.45 LT | 30+32.45 H | 0.00 | 196887.20 | 290749.63 | | 1373.77 | PROFILE |
| 352 | 80+49.71 | 76.91 LT | 30+76.91 H | 0.00 | 196931.66 | 290749.33 | | 1374.04 | PROFILE |



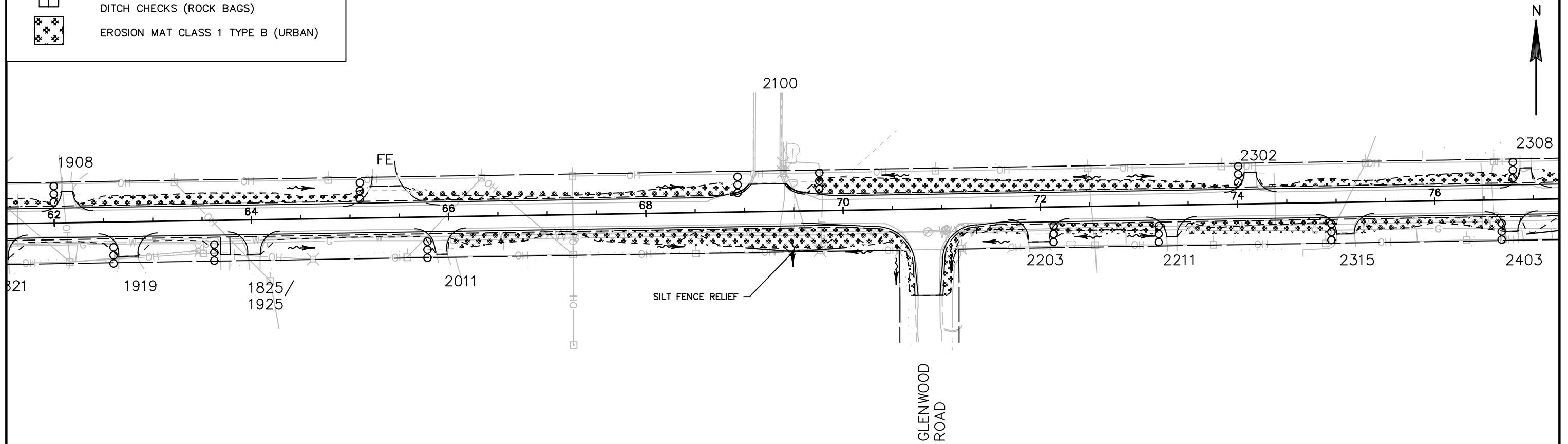
| HAWTHORNE LANE – INTERSECTION TYPE C | | | | | | | | | |
|--------------------------------------|----------|----------|------------|----------|-----------|-----------|--------|-----------|-------------|
| POINT | STATION | OFFSET | STATION | OFFSET | Y COORDS | X COORDS | RADIUS | ELEVATION | DESCRIPTION |
| 400 | 79+96.08 | 55.00 RT | 29+44.74 H | 53.00 LT | 196799.13 | 290697.22 | 40' | | RADIUS |
| 401 | 80+97.25 | 52.00 RT | 29+48.16 H | 48.00 RT | 196803.23 | 290798.20 | 35' | | RADIUS |
| 411 | 79+96.08 | 15.00 RT | 29+84.73 H | 53.23 LT | 196839.13 | 290696.72 | | 1373.13 | PC |
| 413 | 80+11.45 | 18.06 RT | 29+81.76 H | 37.85 LT | 196836.25 | 290712.12 | | 1373.20 | ELEV POINT |
| 415 | 80+24.47 | 26.78 RT | 29+73.10 H | 24.80 LT | 196827.68 | 290725.23 | | 1372.95 | MID CURVE |
| 417 | 80+33.14 | 39.83 RT | 29+60.10 H | 16.07 LT | 196814.74 | 290734.05 | | 1372.42 | ELEV POINT |
| 420 | 80+36.14 | 55.39 RT | 29+44.55 H | 13.00 LT | 196799.21 | 290737.22 | | 1371.75 | PC/TAPER |
| 421 | 80+37.35 | 85.40 RT | 29+14.55 H | 11.66 LT | 196769.22 | 290738.76 | | 1370.37 | TAPER |
| 430 | 80+59.30 | 85.49 RT | 29+14.55 H | 10.23 RT | 196769.36 | 290760.66 | | 1370.40 | TAPER |
| 431 | 80+62.20 | 51.89 RT | 29+48.16 H | 13.00 RT | 196803.00 | 290763.20 | | 1371.94 | PC/TAPER |
| 435 | 80+72.52 | 27.21 RT | 29+72.88 H | 23.22 RT | 196827.78 | 290773.25 | | 1374.20 | MID CURVE |
| 440 | 80+97.25 | 17.00 RT | 29+83.16 H | 47.90 RT | 196838.23 | 290797.86 | | 1375.26 | PC/TAPER |
| 441 | 81+17.52 | 14.99 RT | 29+85.22 H | 68.16 RT | 196840.43 | 290818.10 | | 1375.93 | TAPER |
| 450 | 80+49.04 | 85.50 RT | 29+14.49 H | 0.00 | 196769.38 | 290750.42 | | 1370.61 | PROFILE |
| 451 | 80+49.16 | 56.95 RT | 29+43.05 H | 0.00 | 196797.80 | 290750.23 | | 1371.93 | PROFILE |
| 452 | 80+49.32 | 17.00 RT | 29+83.00 H | 0.00 | 196837.74 | 290749.96 | | 1374.03 | PROFILE |

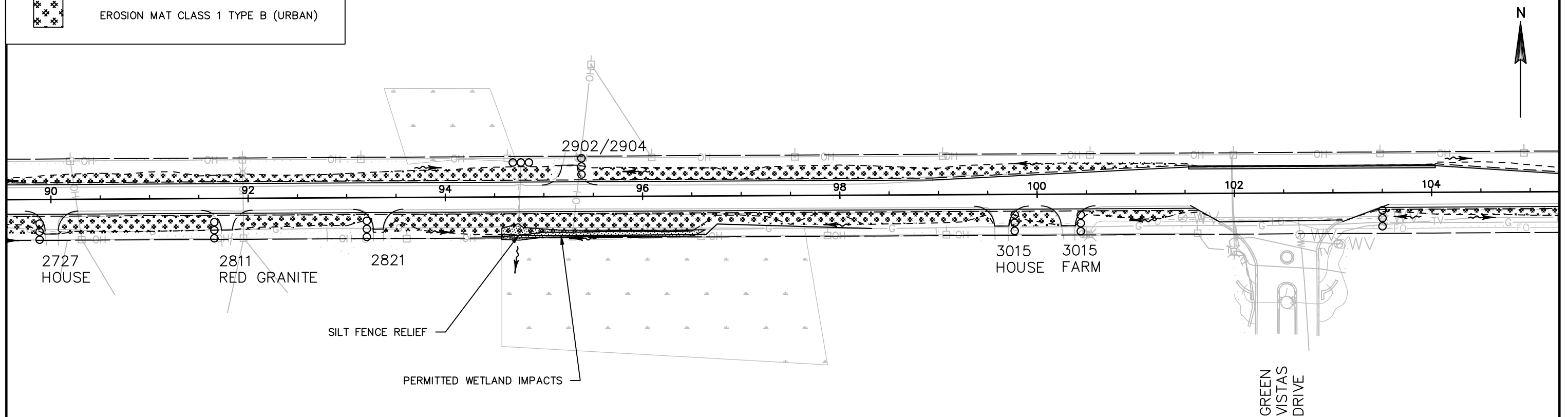
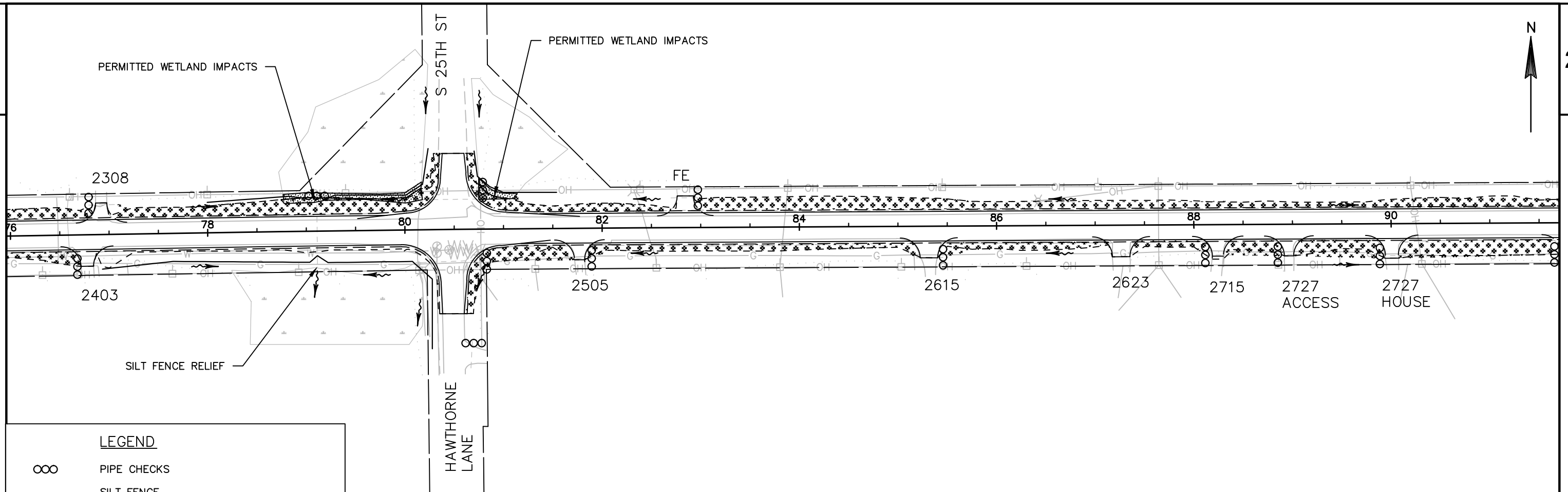


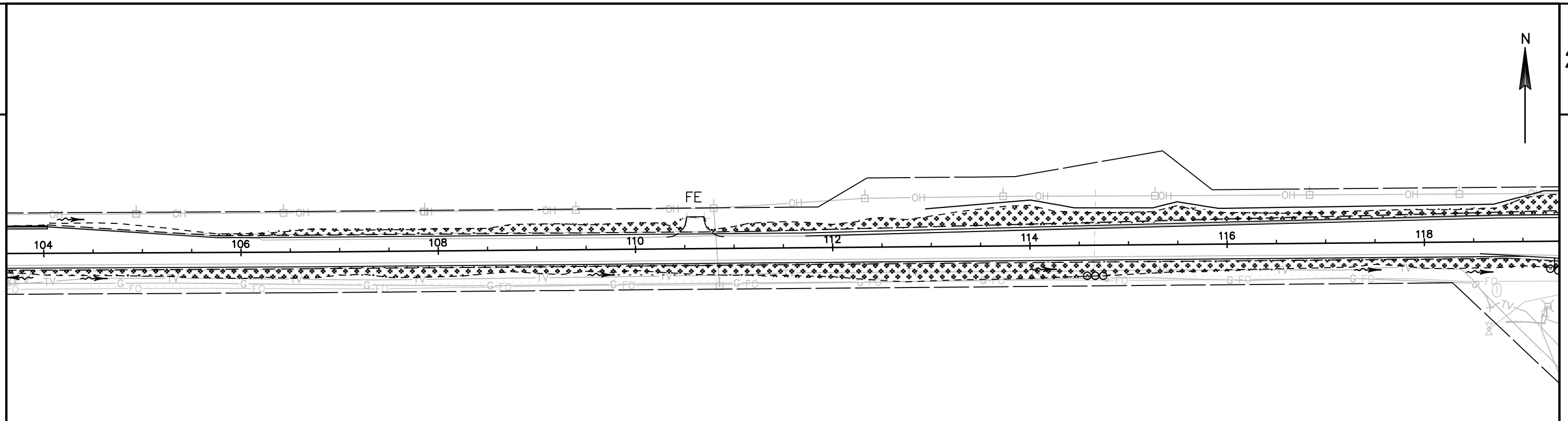


LEGEND

- ooo PIPE CHECKS
- SILT FENCE
- DITCH CHECKS (ROCK BAGS)
- *** EROSION MAT CLASS 1 TYPE B (URBAN)







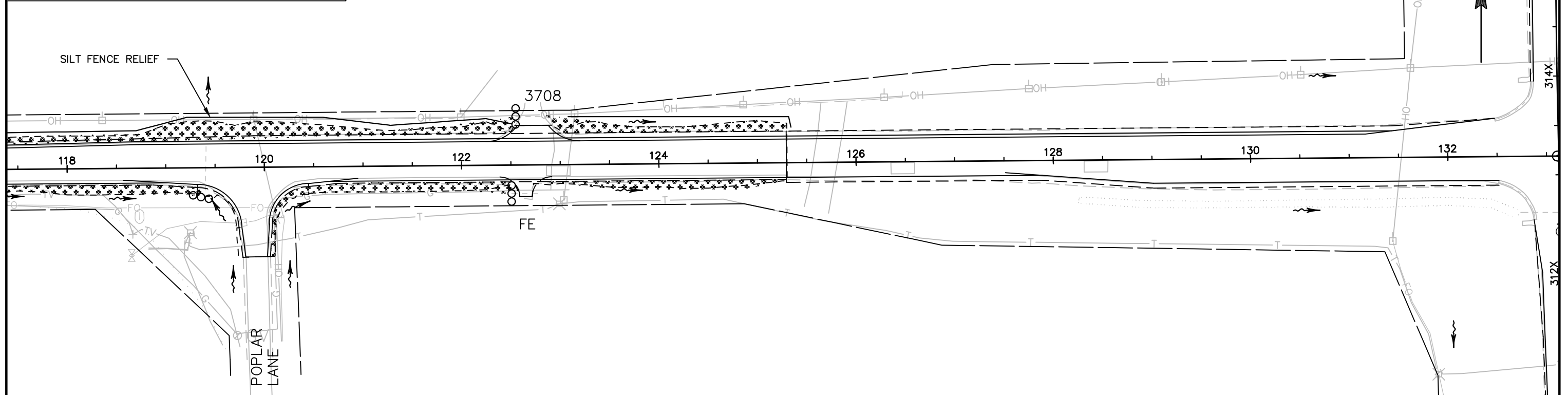
LEGEND

ooo PIPE CHECKS

— SILT FENCE

□ DITCH CHECKS (ROCK BAGS)

*** EROSION MAT CLASS 1 TYPE B (URBAN)



| | | | | | |
|-----------------------|-----------|-----------------|-----------------|-------|---|
| PROJECT NO:6999-18-75 | HWY:CTH N | COUNTY:MARATHON | EROSION CONTROL | SHEET | E |
|-----------------------|-----------|-----------------|-----------------|-------|---|

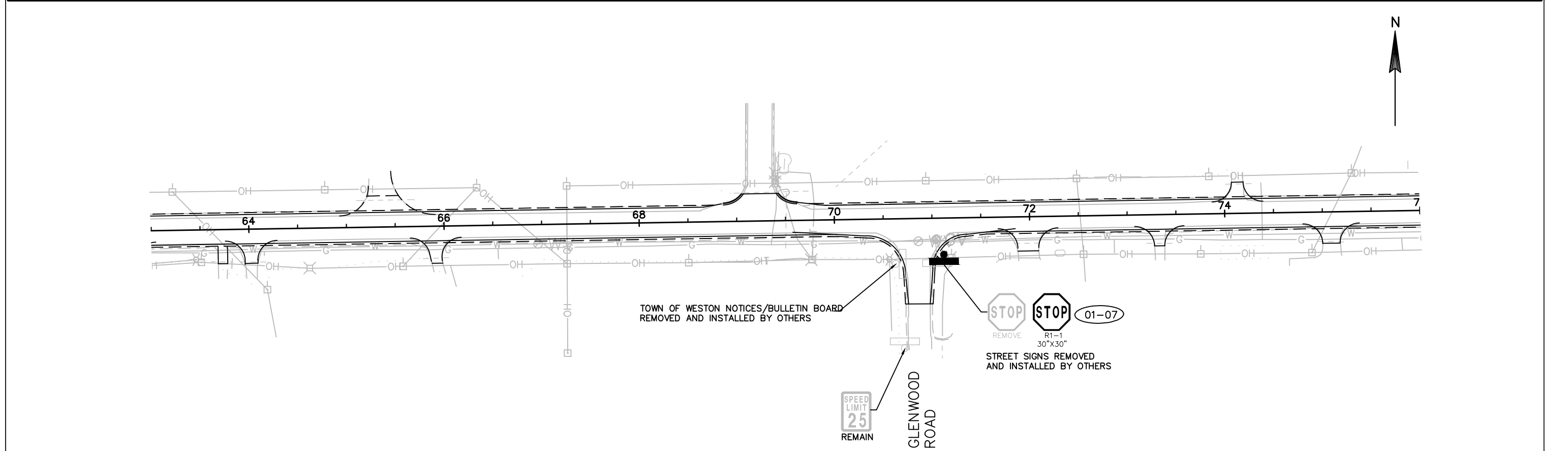
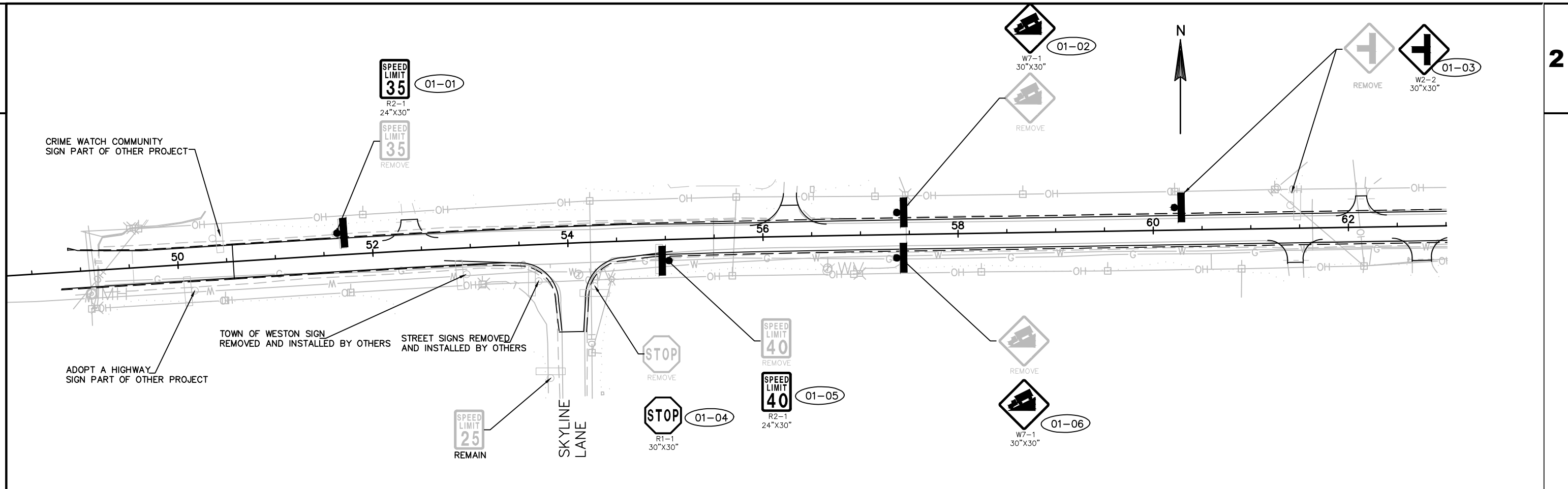
2

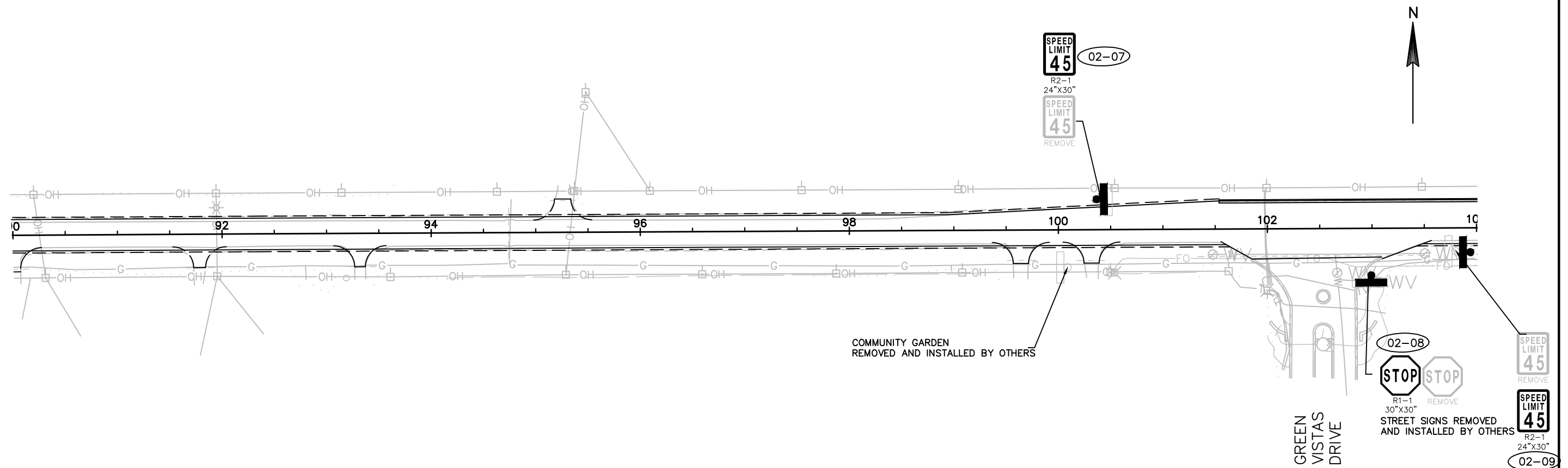
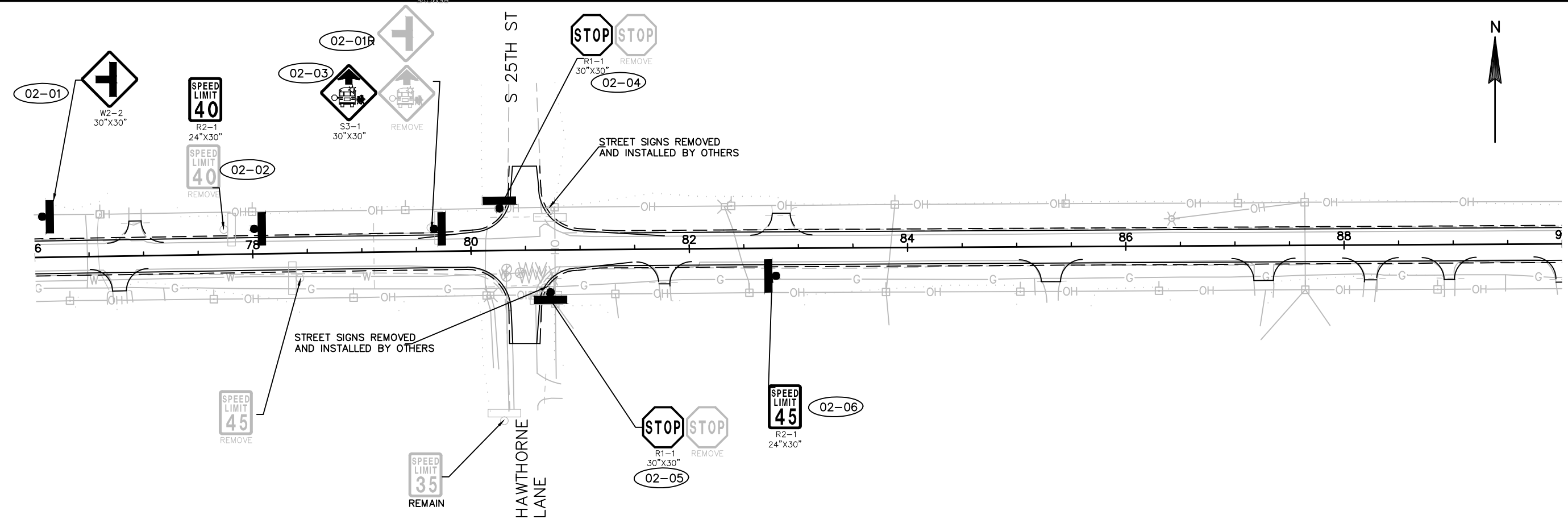
2

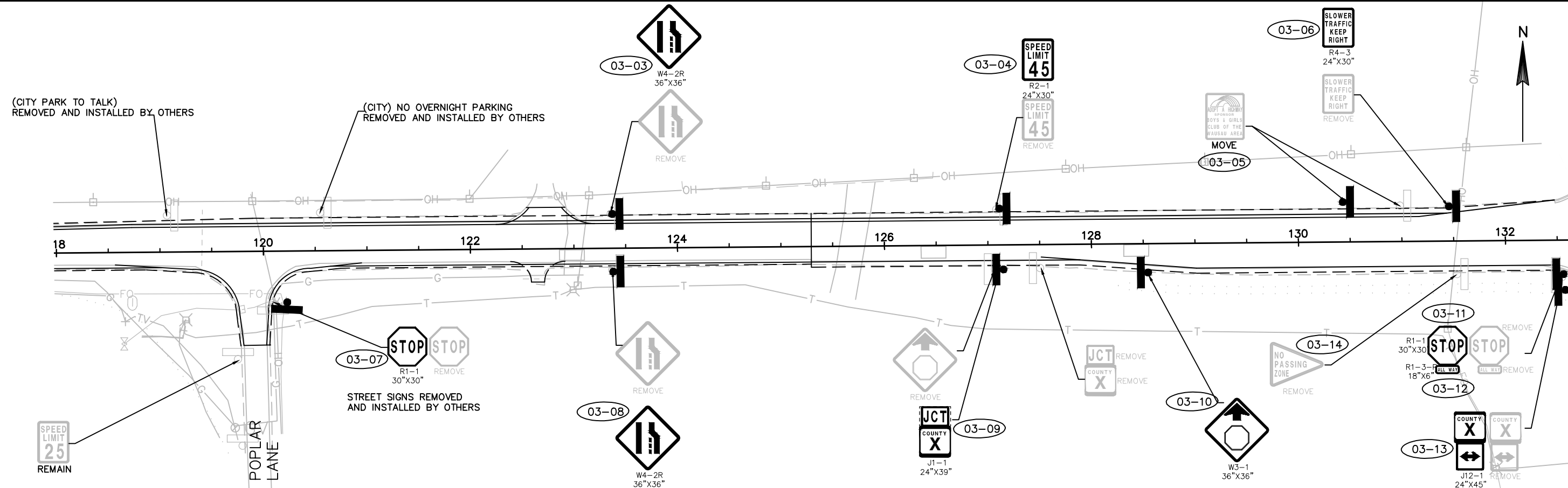
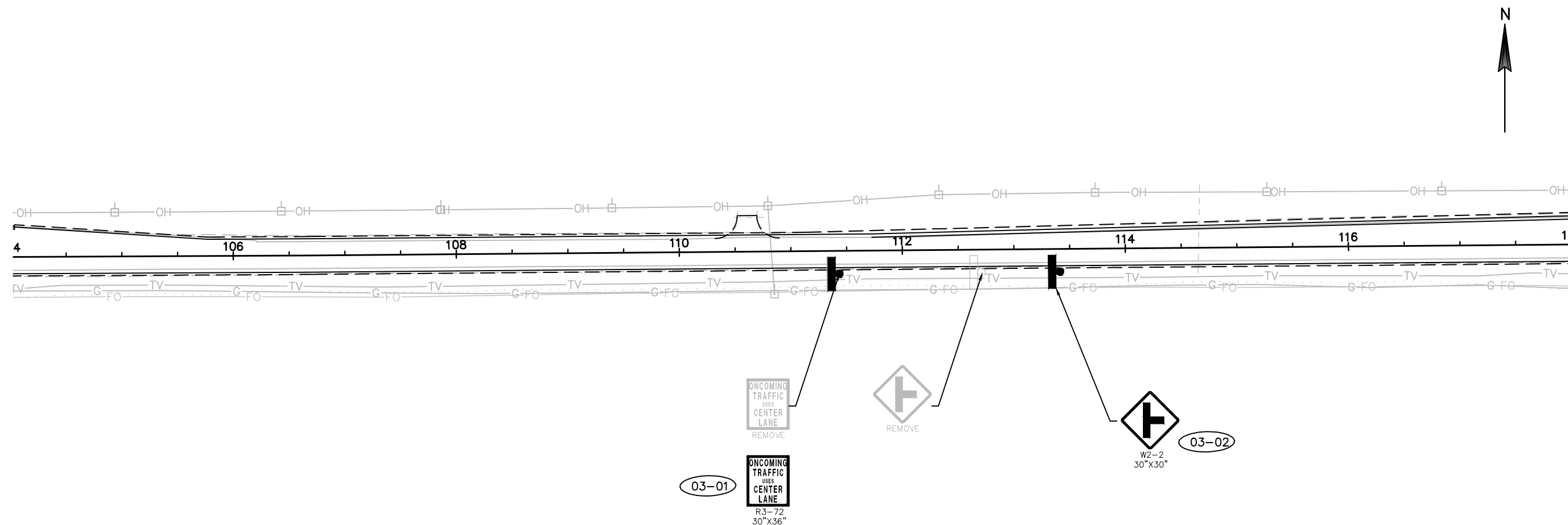


E

WISDOT/CADDS SHEET 44







PROJECT NO:6999-18-75

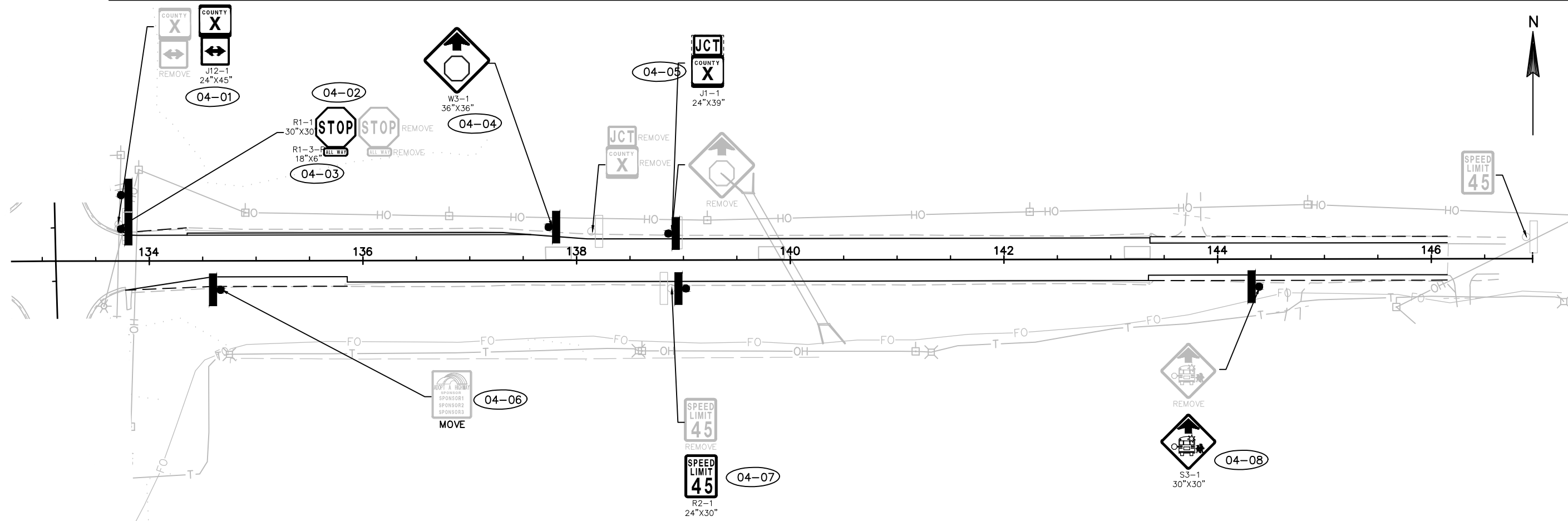
HWY:CTH N

COUNTY:MARATHON

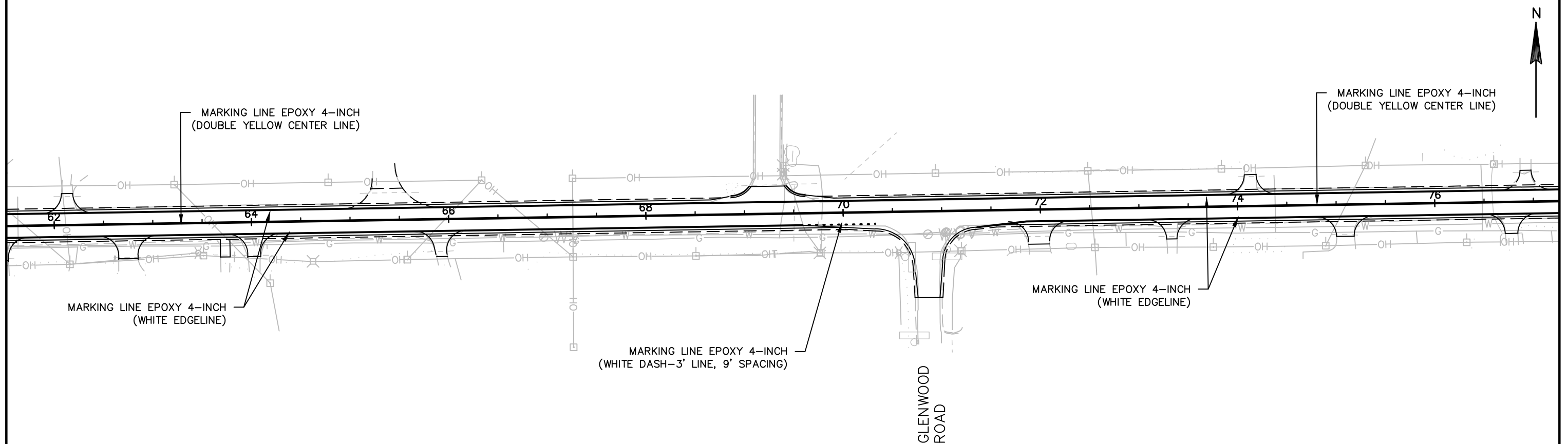
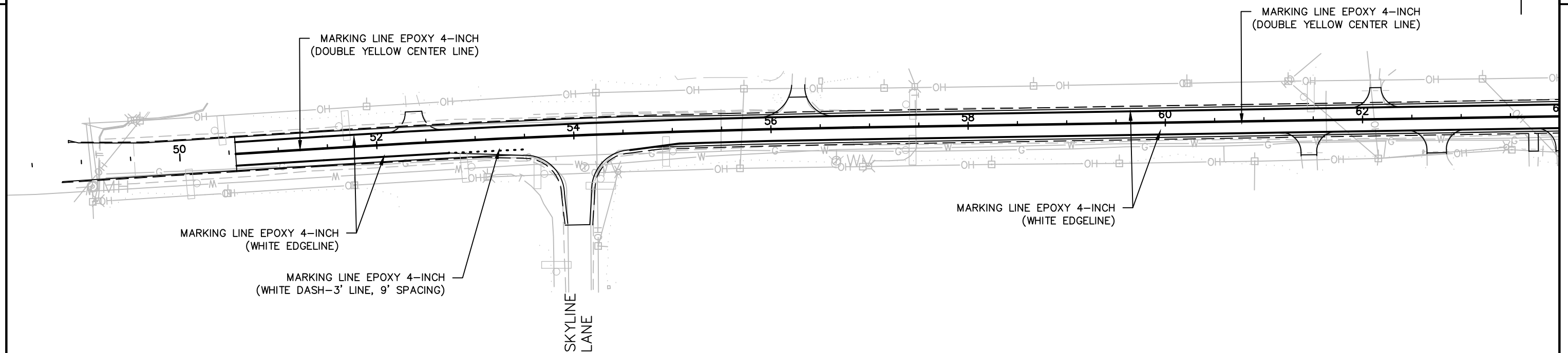
PERMANENT SIGNING

SHEET

E







PROJECT NO:6999-18-75

HWY:CTH N

COUNTY:MARATHON

PAVEMENT MARKING

SHEET

E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\LOCAL PROJECTS\DSN 2016-003 - CTH N (MARATHON COUNTY)\C3D\SHEETSP\PLAN\024501_PM.DWG
LAYOUT NAME - SHEET - (8)

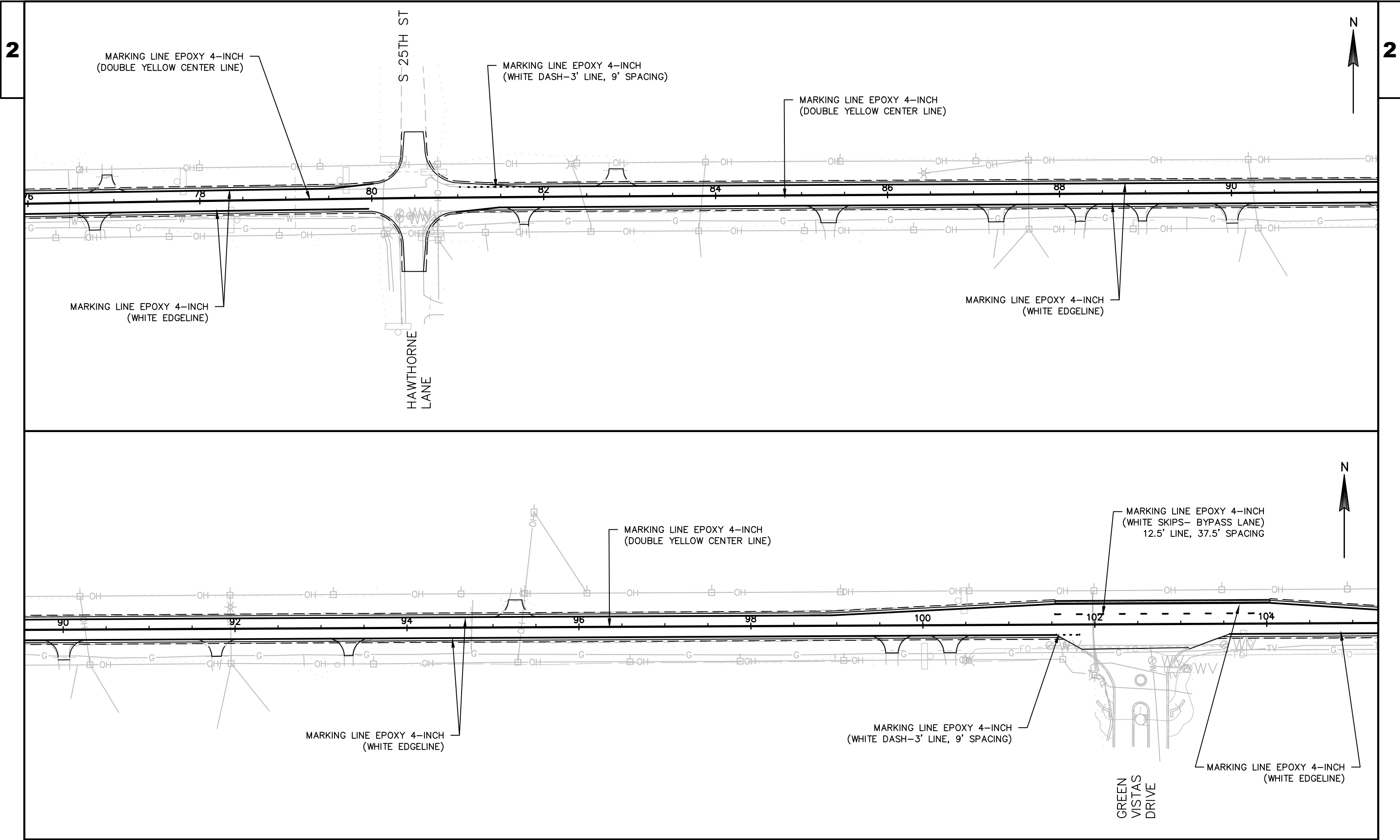
PLOT DATE : 10/22/2018 10:50 AM

PLOT BY : ADAM OSYPOWSKI

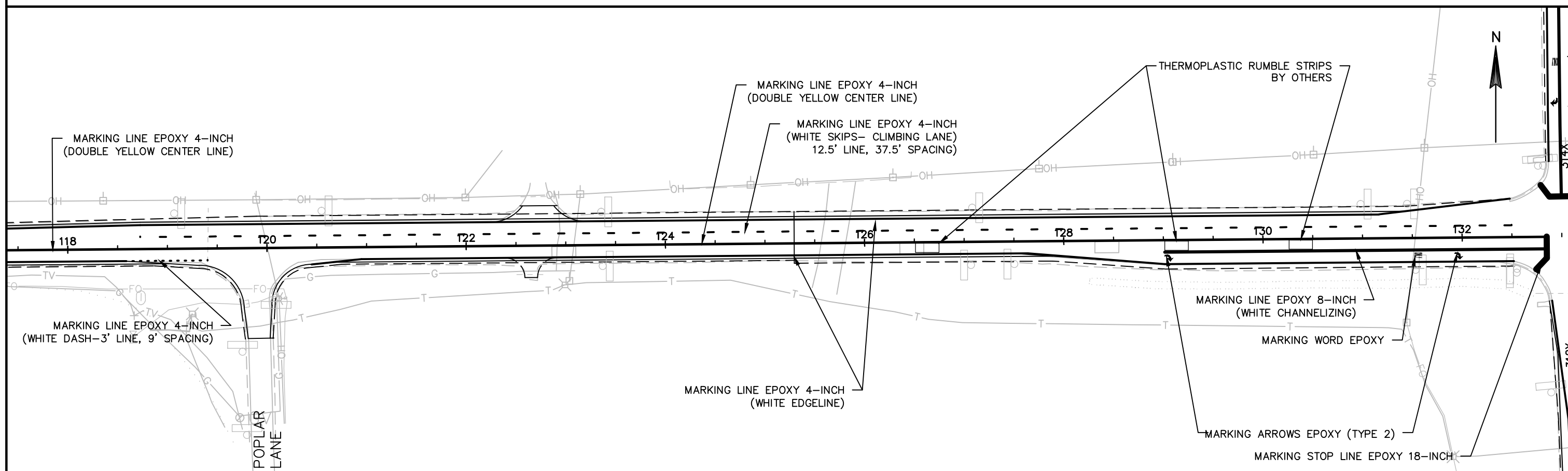
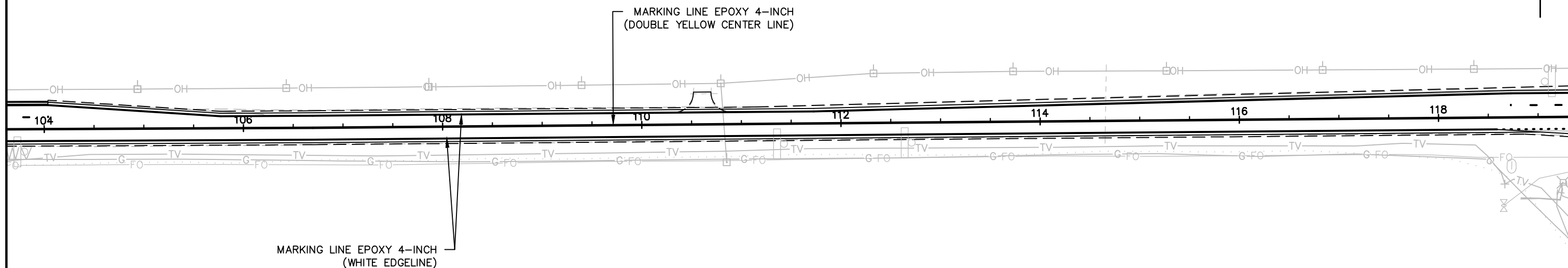
PLOT NAME :

PLOT SCALE : 1 IN:100 FT

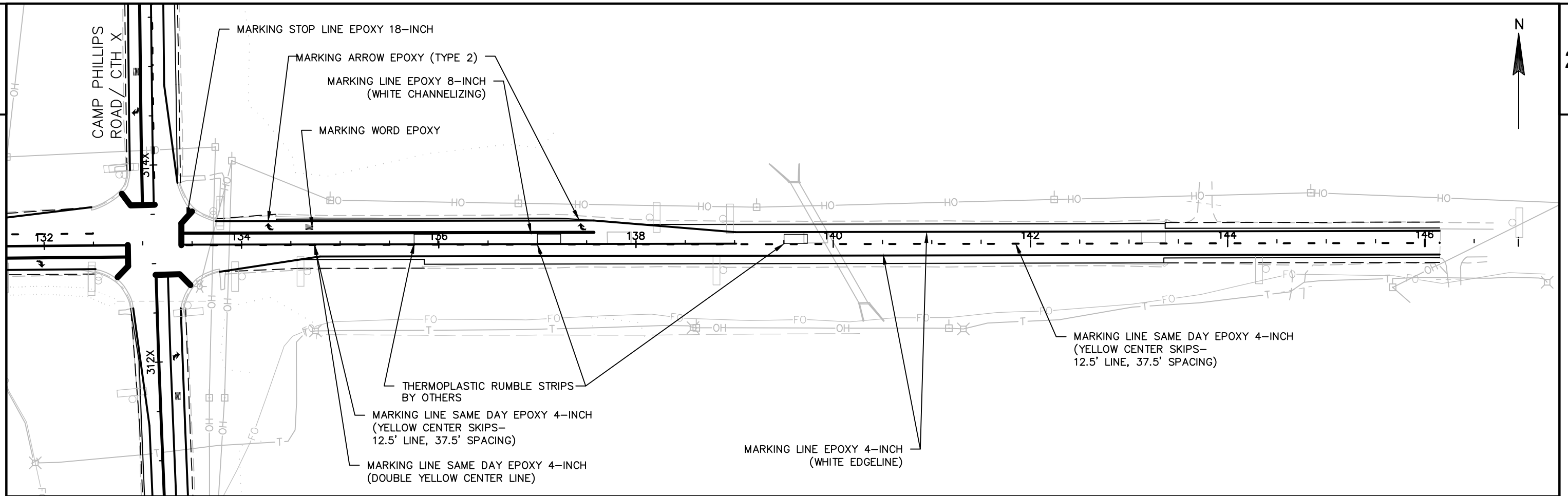
WISDOT/CADDs SHEET 44



| | | | | | |
|-----------------------|-----------|-----------------|------------------|-------|---|
| PROJECT NO:6999-18-75 | HWY:CTH N | COUNTY:MARATHON | PAVEMENT MARKING | SHEET | E |
|-----------------------|-----------|-----------------|------------------|-------|---|



2



2

| | | | | | |
|-----------------------|-----------|-----------------|------------------|-------|---|
| PROJECT NO:6999-18-75 | HWY:CTH N | COUNTY:MARATHON | PAVEMENT MARKING | SHEET | E |
|-----------------------|-----------|-----------------|------------------|-------|---|

CAMP PHILLIPS
ROAD/ CTH X

304X

306X

308X

310X

312X

314X

316X

MARKING LINE EPOXY 4-INCH
(WHITE EDGELINE)

MARKING LINE SAME DAY EPOXY 4-INCH
(DOUBLE YELLOW CENTER LINE)

THERMOPLASTIC RUMBLE STRIPS
BY OTHERS

MARKING LINE EPOXY 8-INCH
(WHITE CHANNELIZING)

PAVEMENT MARKING WORDS EPOXY

MARKING ARROW EPOXY (TYPE 2)

MARKING STOP LINE EPOXY 18-INCH

Z

MARKING STOP LINE EPOXY 18-INCH

MARKING ARROW EPOXY (TYPE 2)

MARKING LINE EPOXY 8-INCH
(WHITE CHANNELIZING)

MARKING WORD EPOXY

MARKING LINE EPOXY SAME DAY 4-INCH
(YELLOW CENTER SKIPS-
12.5' LINE, 37.5' SPACING)

CAMP PHILLIPS
ROAD/ CTH X

312X

314X

316X

318X

320X

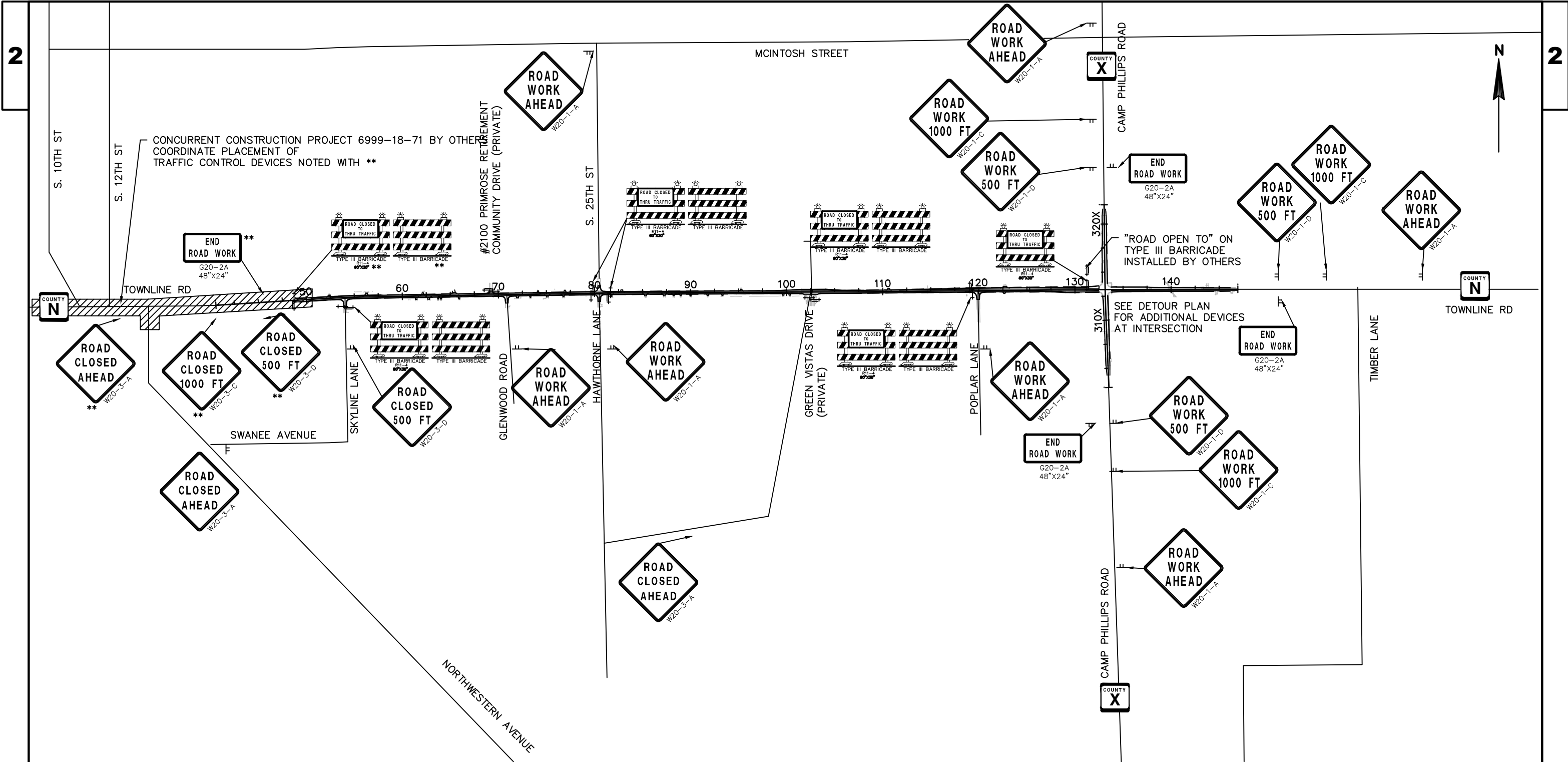
THERMOPLASTIC RUMBLE STRIPS
BY OTHERS

MARKING LINE SAME DAY EPOXY 4-INCH
(YELLOW CENTER SKIPS-
12.5' LINE, 37.5' SPACING)

MARKING LINE SAME DAY EPOXY 4-INCH
(YELLOW CENTER SKIPS)

MARKING LINE EPOXY 4-INCH
(WHITE EDGELINE)

Z



TRAFFIC CONTROL NOTES

- THE EXACT NUMBER, LOCATION, AND SPACING OF ALL TRAFFIC CONTROL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS OR AS DETERMINED BY THE ENGINEER.
- ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.
- SIGNS DESIGNATED AS "WO" ARE THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.
- ALL SIGNS AND DEVICES SHALL BE IN CONFORMANCE WITH THE "WISCONSIN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (WMUTCD), A SUPPLEMENT TO THE FEDERAL HIGHWAY ADMINISTRATION'S "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD).
- ANY SIGNS OR PAVEMENT MARKING, TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND APPROVED BY THE ENGINEER.

- THE FOLLOWING SIGNS SHALL BE USED AS NEEDED THROUGHOUT THE WORK ZONE. THESE SIGNS SHALL BE CONSIDERED INCIDENTAL TO THE ITEM 643.5000 "TRAFFIC CONTROL"
- W8-1 36"x36" "BUMP"
- W8-7 36"x36" "LOOSE GRAVEL"
- W8-9 36"x36" "LOW SHOULDER"
- W8-11 36"x36" "UNEVEN LANES"
- ALL SIDE STREETS SHALL BE OPEN TO TRAFFIC AT ALL TIMES DURING CONSTRUCTION.
- ACCESS SHALL BE MAINTAINED TO ALL DRIVEWAYS AT ALL TIMES DURING CONSTRUCTION.
- REFER TO STANDARD DETAIL DRAWING "TRAFFIC CONTROL ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC", AND "TRAFFIC CONTROL FOR LANE CLOSURE (WITH FLAGGING OPERATIONS)"
- SEE SPECIAL PROVISIONS FOR ADDITIONAL TRAFFIC/STAGING REQUIREMENTS.

PROJECT NO:6999-18-75

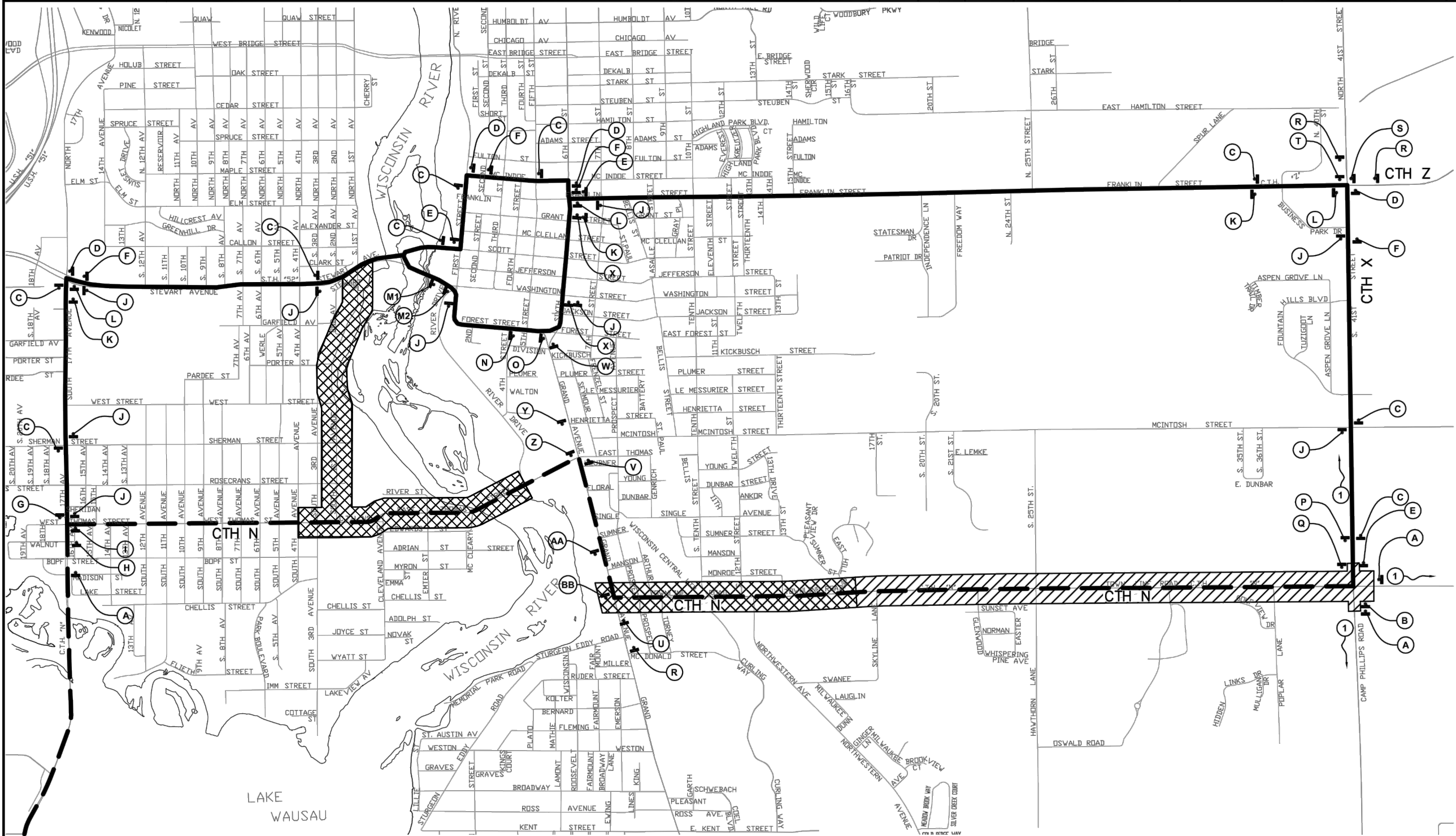
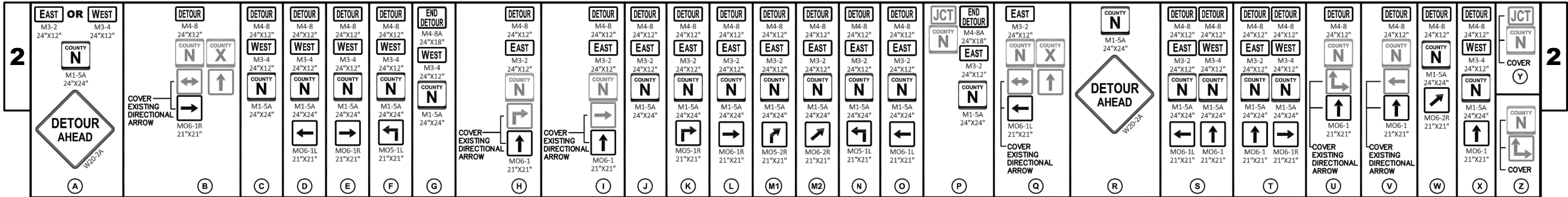
HWY:CTH N

COUNTY:MARATHON

TRAFFIC CONTROL OVERVIEW

SHEET

E

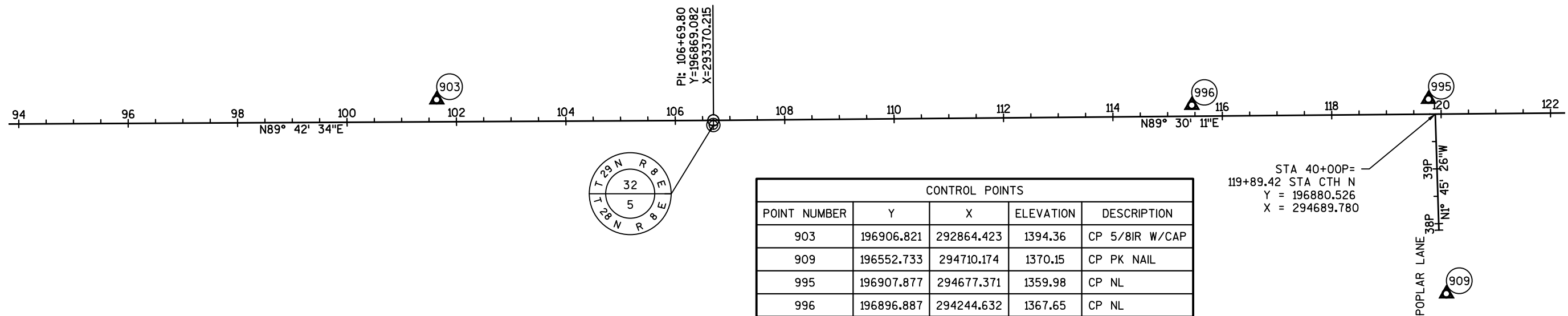
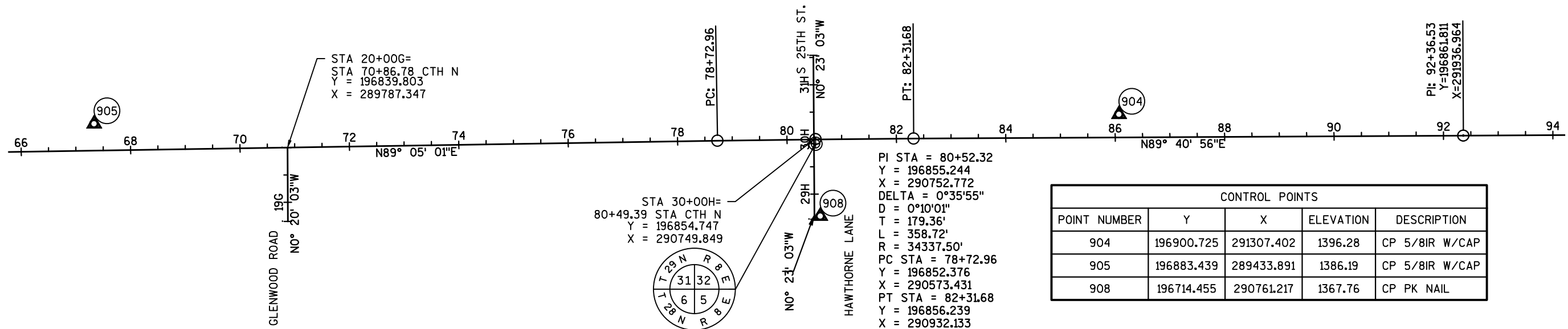
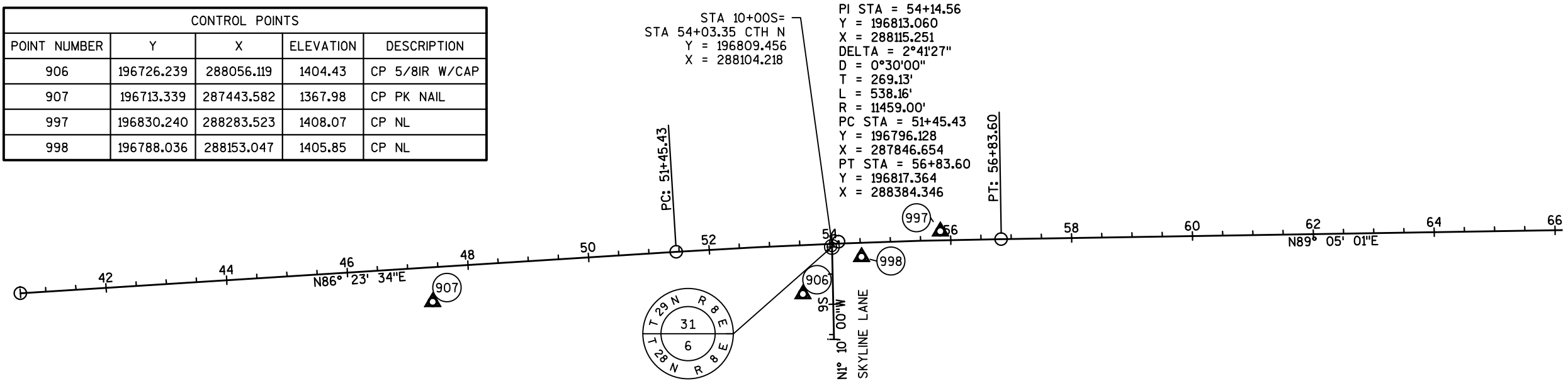


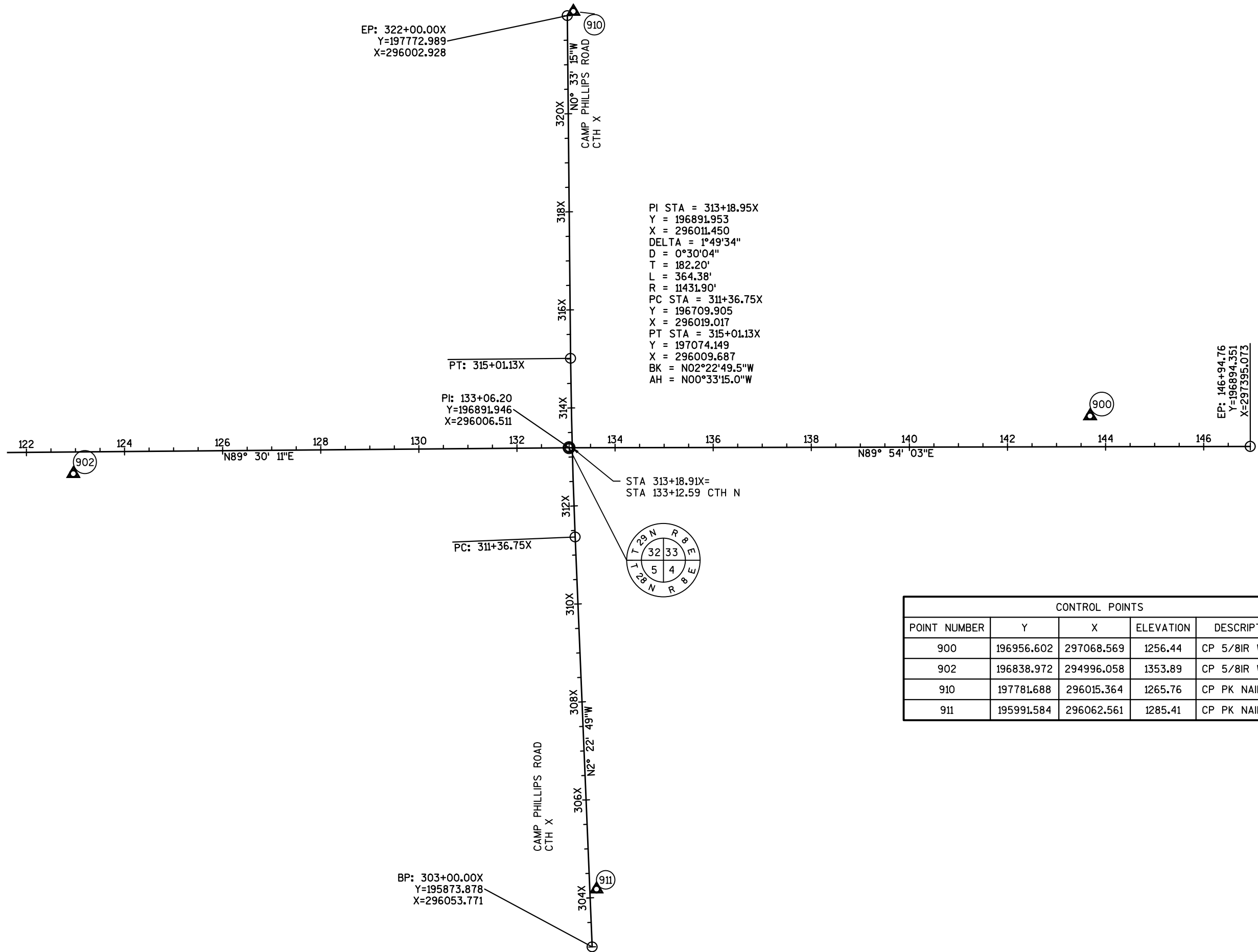
LEGEND

- EXISTING CTH N
- CTH N DETOUR ROUTE
- PROJECT WORK ZONE
- WORK ZONES (BY OTHERS)
- ADVANCED SIGNING OF WORK ZONE

DETOUR SIGNING TO BE INSTALLED BY PROJECT 6999-18-71 AND IS SHOWN FOR INFORMATION ONLY

| CONTROL POINTS | | | | |
|----------------|------------|------------|-----------|----------------|
| POINT NUMBER | Y | X | ELEVATION | DESCRIPTION |
| 906 | 196726.239 | 288056.119 | 1404.43 | CP 5/8IR W/CAP |
| 907 | 196713.339 | 287443.582 | 1367.98 | CP PK NAIL |
| 997 | 196830.240 | 288283.523 | 1408.07 | CP NL |
| 998 | 196788.036 | 288153.047 | 1405.85 | CP NL |





| CONTROL POINTS | | | | |
|----------------|------------|------------|-----------|----------------|
| POINT NUMBER | Y | X | ELEVATION | DESCRIPTION |
| 900 | 196956.602 | 297068.569 | 1256.44 | CP 5/8IR W/CAP |
| 902 | 196838.972 | 294996.058 | 1353.89 | CP 5/8IR W/CAP |
| 910 | 197781.688 | 296015.364 | 1265.76 | CP PK NAIL |
| 911 | 195991.584 | 296062.561 | 1285.41 | CP PK NAIL |

Estimate Of Quantities

| 6999-18-75 | | | | | |
|------------|------------|--|------|------------|------------|
| Line | Item | Item Description | Unit | Total | Qty |
| 0002 | 204.0110 | Removing Asphaltic Surface | SY | 1,192.000 | 1,192.000 |
| 0004 | 204.0115 | Removing Asphaltic Surface Butt Joints | SY | 36.000 | 36.000 |
| 0006 | 204.0120 | Removing Asphaltic Surface Milling | SY | 18,357.000 | 18,357.000 |
| 0008 | 204.0150 | Removing Curb & Gutter | LF | 300.000 | 300.000 |
| 0010 | 205.0100 | Excavation Common | CY | 500.000 | 500.000 |
| 0012 | 205.9010.S | Grading and Shaping Intersection (location) 01. Skyline Lane | LS | 1.000 | 1.000 |
| 0014 | 205.9010.S | Grading and Shaping Intersection (location) 02. Glenwood Road | LS | 1.000 | 1.000 |
| 0016 | 205.9010.S | Grading and Shaping Intersection (location) 03. Hawthorne Lane | LS | 1.000 | 1.000 |
| 0018 | 205.9010.S | Grading and Shaping Intersection (location) 04. 25th Avenue | LS | 1.000 | 1.000 |
| 0020 | 205.9010.S | Grading and Shaping Intersection (location) 05. Poplar Lane | LS | 1.000 | 1.000 |
| 0022 | 208.0100 | Borrow | CY | 2,519.000 | 2,519.000 |
| 0024 | 211.0100 | Prepare Foundation for Asphaltic Paving (project) 01. 6999-18-75 | LS | 1.000 | 1.000 |
| 0026 | 213.0100 | Finishing Roadway (project) 01. 6999-18-75 | EACH | 1.000 | 1.000 |
| 0028 | 305.0110 | Base Aggregate Dense 3/4-Inch | TON | 2,291.000 | 2,291.000 |
| 0030 | 305.0120 | Base Aggregate Dense 1 1/4-Inch | TON | 2,395.000 | 2,395.000 |
| 0032 | 305.0500 | Shaping Shoulders | STA | 74.000 | 74.000 |
| 0034 | 325.0100 | Pulverize and Relay | SY | 26,350.000 | 26,350.000 |
| 0036 | 374.1020.S | QMP Pulverize and Relay Compaction | SY | 26,350.000 | 26,350.000 |
| 0038 | 455.0605 | Tack Coat | GAL | 2,818.000 | 2,818.000 |
| 0040 | 460.2000 | Incentive Density HMA Pavement | DOL | 3,149.000 | 3,149.000 |
| 0042 | 460.4110.S | Reheating HMA Pavement Longitudinal Joints | LF | 3,900.000 | 3,900.000 |
| 0044 | 460.5223 | HMA Pavement 3 LT 58-28 S | TON | 3,699.000 | 3,699.000 |
| 0046 | 460.5225 | HMA Pavement 5 LT 58-28 S | TON | 4,721.000 | 4,721.000 |
| 0048 | 465.0110 | Asphaltic Surface Patching | TON | 20.000 | 20.000 |
| 0050 | 465.0120 | Asphaltic Surface Driveways and Field Entrances | TON | 184.000 | 184.000 |
| 0052 | 465.0315 | Asphaltic Flumes | SY | 10.000 | 10.000 |
| 0054 | 601.0110 | Concrete Curb Type D | LF | 50.000 | 50.000 |
| 0056 | 601.0576 | Concrete Curb & Gutter 4-Inch Sloped 30-Inch Type J | LF | 250.000 | 250.000 |
| 0058 | 614.0400 | Adjusting Steel Plate Beam Guard | LF | 1,659.000 | 1,659.000 |
| 0060 | 614.0950 | Replacing Guardrail Posts and Blocks | EACH | 130.000 | 130.000 |
| 0062 | 618.0100 | Maintenance And Repair of Haul Roads (project) 01. 6999-18-75 | EACH | 1.000 | 1.000 |
| 0064 | 619.1000 | Mobilization | EACH | 1.000 | 1.000 |
| 0066 | 621.0100 | Landmark Reference Monuments | EACH | 16.000 | 16.000 |
| 0068 | 624.0100 | Water | MGAL | 75.000 | 75.000 |

Estimate Of Quantities

6999-18-75

| Line | Item | Item Description | Unit | Total | Qty |
|------|----------|---|------|------------|------------|
| 0070 | 625.0100 | Topsoil | SY | 14,975.000 | 14,975.000 |
| 0072 | 627.0200 | Mulching | SY | 1,285.000 | 1,285.000 |
| 0074 | 628.1504 | Silt Fence | LF | 3,065.000 | 3,065.000 |
| 0076 | 628.1520 | Silt Fence Maintenance | LF | 3,065.000 | 3,065.000 |
| 0078 | 628.1905 | Mobilizations Erosion Control | EACH | 3.000 | 3.000 |
| 0080 | 628.1910 | Mobilizations Emergency Erosion Control | EACH | 2.000 | 2.000 |
| 0082 | 628.2008 | Erosion Mat Urban Class I Type B | SY | 11,350.000 | 11,350.000 |
| 0084 | 628.7555 | Culvert Pipe Checks | EACH | 95.000 | 95.000 |
| 0086 | 628.7570 | Rock Bags | EACH | 119.000 | 119.000 |
| 0088 | 629.0210 | Fertilizer Type B | CWT | 8.000 | 8.000 |
| 0090 | 630.0120 | Seeding Mixture No. 20 | LB | 407.000 | 407.000 |
| 0092 | 631.0300 | Sod Water | MGAL | 335.000 | 335.000 |
| 0094 | 634.0616 | Posts Wood 4x6-Inch X 16-FT | EACH | 27.000 | 27.000 |
| 0096 | 634.0618 | Posts Wood 4x6-Inch X 18-FT | EACH | 19.000 | 19.000 |
| 0098 | 637.2210 | Signs Type II Reflective H | SF | 173.280 | 173.280 |
| 0100 | 637.2230 | Signs Type II Reflective F | SF | 103.250 | 103.250 |
| 0102 | 638.2102 | Moving Signs Type II | EACH | 3.000 | 3.000 |
| 0104 | 638.2602 | Removing Signs Type II | EACH | 51.000 | 51.000 |
| 0106 | 638.3000 | Removing Small Sign Supports | EACH | 46.000 | 46.000 |
| 0108 | 642.5201 | Field Office Type C | EACH | 1.000 | 1.000 |
| 0110 | 643.0300 | Traffic Control Drums | DAY | 7,800.000 | 7,800.000 |
| 0112 | 643.0420 | Traffic Control Barricades Type III | DAY | 1,014.000 | 1,014.000 |
| 0114 | 643.0705 | Traffic Control Warning Lights Type A | DAY | 2,028.000 | 2,028.000 |
| 0116 | 643.0900 | Traffic Control Signs | DAY | 2,262.000 | 2,262.000 |
| 0118 | 643.5000 | Traffic Control | EACH | 1.000 | 1.000 |
| 0120 | 646.1020 | Marking Line Epoxy 4-Inch | LF | 37,432.000 | 37,432.000 |
| 0122 | 646.3020 | Marking Line Epoxy 8-Inch | LF | 1,820.000 | 1,820.000 |
| 0124 | 646.4520 | Marking Line Same Day Epoxy 4-Inch | LF | 3,326.000 | 3,326.000 |
| 0126 | 646.5020 | Marking Arrow Epoxy | EACH | 8.000 | 8.000 |
| 0128 | 646.5120 | Marking Word Epoxy | EACH | 4.000 | 4.000 |
| 0130 | 646.6120 | Marking Stop Line Epoxy 18-Inch | LF | 144.000 | 144.000 |
| 0132 | 649.0105 | Temporary Marking Line Paint 4-Inch | LF | 3,326.000 | 3,326.000 |
| 0134 | 650.5000 | Construction Staking Base | LF | 7,474.000 | 7,474.000 |
| 0136 | 650.5500 | Construction Staking Curb Gutter and Curb & Gutter | LF | 300.000 | 300.000 |
| 0138 | 650.8000 | Construction Staking Resurfacing Reference | LF | 11,294.000 | 11,294.000 |
| 0140 | 650.9910 | Construction Staking Supplemental Control (project) 01. 6999-18-75 | LS | 1.000 | 1.000 |
| 0142 | 650.9920 | Construction Staking Slope Stakes | LF | 7,474.000 | 7,474.000 |
| 0144 | 690.0150 | Sawing Asphalt | LF | 820.000 | 820.000 |
| 0146 | 690.0250 | Sawing Concrete | LF | 6.000 | 6.000 |

Estimate Of Quantities

6999-18-75

| Line | Item | Item Description | Unit | Total | Qty |
|------|----------|--|------|-----------|-----------|
| 0148 | 740.0440 | Incentive IRI Ride | DOL | 8,628.000 | 8,628.000 |
| 0150 | ASP.1T0A | On-the-Job Training Apprentice at \$5.00/HR | HRS | 300.000 | 300.000 |
| 0152 | ASP.1T0G | On-the-Job Training Graduate at \$5.00/HR | HRS | 600.000 | 600.000 |
| 0154 | SPV.0060 | Special 01. Reestablish Section Corner Monuments | EACH | 4.000 | 4.000 |
| 0156 | SPV.0195 | Special 01. Base Aggregate Disintegrated Granite | TON | 31.000 | 31.000 |

REMOVING ASPHALTIC SURFACE

| 204. 0110 REMOVING ASPHALTIC SURFACE | | | | |
|---|-------|---------------|---------------------|--------|
| STA | SI DE | LOCATI ON | THI CKNESS I NCH | SY |
| 56+28 | LT | DRI VEWAY | 2 | 58 |
| 61+45 | RT | DRI VEWAY | 2 | 54 |
| 62+13 | RT | DRI VEWAY | 2 | 36 |
| 62+75 | RT | DRI VEWAY | 2 | 60 |
| 64+02 | RT | DRI VEWAY | 2 | 47 |
| 65+92 | RT | DRI VEWAY | 2 | 43 |
| 69+24 | LT | DRI VEWAY | 2 | 66 |
| 71+98 | RT | DRI VEWAY | 2 | 67 |
| 73+33 | RT | DRI VEWAY | 2 | 36 |
| 74+13 | RT | DRI VEWAY | 2 | 38 |
| 75+09 | RT | DRI VEWAY | 2 | 50 |
| 76+78 | RT | DRI VEWAY | 2 | 40 |
| 81+77 | RT | DRI VEWAY | 2 | 36 |
| 85+33 | RT | DRI VEWAY | 2 | 50 |
| 87+26 | RT | DRI VEWAY | 2 | 50 |
| 88+24 | RT | DRI VEWAY | 2 | 45 |
| 88+96 | RT | DRI VEWAY | 2 | 34 |
| 90+00 | RT | DRI VEWAY | 2 | 47 |
| 93+32 | LT | DRI VEWAY | 2 | 43 |
| 99+64 | RT | DRI VEWAY | 2 | 44 |
| 100+32 | RT | DRI VEWAY | 2 | 44 |
| 102+53 | RT | GREEN VI STAS | 4 | 54 |
| 122+73 | LT | DRI VEWAY | 2 | 150 |
| TOTAL | | | | 1, 192 |

REMOVING CURB AND GUTTER

| 204. 0150 REMOVING CURB | | | | |
|----------------------------|---|-----------|-----|-----|
| STA | - | STA | LOC | LF |
| 101+54 | - | 104+04 | LT | 250 |
| #2100 | - | DRI VE LT | LT | 25 |
| #2100 | - | DRI VE RT | LT | 25 |
| TOTAL | | | | 300 |

REMOVING ASPHALTIC SURFACE MILLING

| 204. 0120 REMOVING ASPHALTIC SURFACE MILLING | | | | |
|---|---|--------------------------|--------------------------|---------|
| STA | - | STA | LOCATI ON | SY |
| 125+30 | - | 127+89 | CTH N | 1, 266 |
| 127+89 | - | 129+01 | TURN TAPER CTH N | 610 |
| 129+01 | - | 131+17 | CTH N | 1, 296 |
| 131+17 | - | 132+48 | INTERSECTION TAPER CTH N | 888 |
| | | INTERSECTION CTH N/CTH X | | 1, 428 |
| 133+75 | - | 134+60 | INTERSECTION TAPER CTH N | 434 |
| 134+60 | - | 135+85 | GR LEFT CTH N | 569 |
| 135+85 | - | 137+32 | GR BOTH CTH N | 751 |
| 137+32 | - | 138+10 | TURN TAPER/GR CTH N | 373 |
| 138+10 | - | 143+37 | GR BOTH CTH N | 2, 342 |
| 143+37 | - | 146+15 | CTH N | 927 |
| 304+26 | - | 305+26 | CTH X | 389 |
| 305+26 | - | 308+05 | CTH X | 1, 240 |
| 308+05 | - | 309+05 | TURN LANE TAPER CTH X | 467 |
| 309+05 | - | 312+00 | CTH X | 1, 442 |
| 312+00 | - | 312+55 | INTERSECTION TAPER CTH X | 290 |
| 313+95 | - | 317+45 | CTH X | 1, 711 |
| 317+45 | - | 318+01 | TURN LANE TAPER CTH X | 261 |
| 318+01 | - | 320+90 | CTH X | 1, 284 |
| 320+90 | - | 321+90 | TURN LANE TAPER SB CTH X | 389 |
| TOTALS | | | | 18, 357 |

REMOVING ASPHALTIC SURFACE BUTT JOINTS

| 204. 0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS | | |
|---|-----------|----|
| STA-STA | LOCATI ON | SY |
| 146+15 | CTH N | 10 |
| 304+26 | CTH X | 13 |
| 322+56 | CTH X | 13 |
| TOTAL | | 36 |

ALL ITEMS CATEGORY 0010 UNLESS NOTED

EARTHWORK

| | | 205. 0100 | | 208. 0100 | |
|------------|------------|-------------------------|-----|-----------|--|
| | | EXCAVATI ON | | BORROW | |
| | | COMMON | | | |
| STA | - STA | LOCATION | CY | CY | |
| 50+56. 00 | 51+56. 00 | WEST TRANS-BASE REMOVAL | 119 | --- | |
| 50+56. 00 | 81+00. 00 | CTH N INSLOPES | --- | 773 | |
| 81+00. 00 | 125+30. 00 | CTH N INSLOPES | --- | 1731 | |
| 124+30. 00 | 125+30. 00 | EAST TRANS-BASE REMOVAL | 164 | 15 | |
| | | UNDI STRI BUTED | 217 | --- | |
| TOTALS | | | 500 | 2519 | |

| Division | From/To Station | Location | Common Excavation | Unusable Material See Comment | Available Material (1) | Unexpanded Fill | Expanded Fill (2) | Mass Ordinate +/- (3) | Waste | Comment: |
|--------------------------|-----------------|----------|-------------------|-------------------------------|------------------------|-----------------|-------------------|-----------------------|-------|---------------------|
| | | | Cut (2) | | | | Factor 1.30 | | | |
| | 50+56 | 51+56 | 119 | 119 | 0 | 0 | 0 | 0 | | Waste Existing base |
| | 51+56 | 81+00 | 0 | 0 | 0 | 595 | 773 | -773 | | |
| | 81+00 | 124+30 | 0 | 0 | 0 | 1332 | 1731 | -1731 | | |
| | 124+30 | 125+30 | 164 | 164 | 0 | 12 | 15 | -15 | | Waste Existing base |
| Division Subtotal | | | 284 | 284 | 0 | 1938 | 2519 | -2519 | 284 | |
| PROJECT 6999-18-75 TOTAL | | | 284 | 284 | 0 | 1938 | 2519 | -2519 | 284 | |

- 1) Available Material = Cut -Unusuable Material
- 2) Expanded Fill. Factor = 1.3
- 3) 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.

PREP AND FINISH

| | | 211. 0100 | 213. 0100 |
|-----------|--|-------------|-------------|
| | | PREPARE | FINI SHI NG |
| | | FOUNDATI ON | ROADWAY |
| | | FOR ASPHALT | EACH |
| | | PAVEMENT | |
| LOCATI ON | | LS | |
| PROJECT | | 1 | 1 |
| TOTALS | | 1 | 1 |

BASE AGGREGATE

| | | 305. 0110 | 305. 0120 | SPV. 0195. 01 | 624. 0100 |
|----------------------------------|--------------|-----------|-------------|-----------------|-----------|
| | | BASE AGG | BASE AGG | BASE AGG | |
| | | DENSE | DENSE | DI SI NTEGRATED | WATER |
| | | 3/4-I NCH | 1 1/4-I NCH | GRANI TE | MGAL |
| STA | - STA | LOCATI ON | TON | TON | TON |
| 50+56. 00 | - 51+56. 00 | CTH N LT | 8 | 272 | --- |
| 51+56. 00 | - 54+56. 00 | CTH N LT | 25 | --- | --- |
| 54+56. 00 | - 68+86. 00 | CTH N LT | 199 | --- | --- |
| 69+60. 00 | - 79+82. 00 | CTH N LT | 142 | --- | --- |
| 81+32. 00 | - 101+54. 00 | CTH N LT | 281 | --- | --- |
| 101+54. 00 | - 104+04. 00 | CTH N LT | --- | 46 | --- |
| 104+04. 00 | - 111+73. 00 | CTH N LT | 107 | --- | --- |
| 111+73. 00 | - 118+73. 00 | CTH N LT | 136 | --- | --- |
| 118+73. 00 | - 124+30. 00 | CTH N LT | 170 | --- | --- |
| 124+30. 00 | - 125+30. 00 | CTH N LT | 31 | 421 | --- |
| 50+56. 00 | - 51+56. 00 | CTH N RT | 8 | 272 | --- |
| 51+56. 00 | - 53+35. 00 | CTH N RT | 15 | --- | --- |
| 54+76. 00 | - 70+02. 00 | CTH N RT | 212 | --- | --- |
| 71+55. 00 | - 79+96. 00 | CTH N RT | 117 | --- | --- |
| 81+17. 00 | - 101+63. 00 | CTH N RT | 284 | --- | --- |
| 103+57. 00 | - 119+01. 00 | CTH N RT | 214 | --- | --- |
| 120+65. 00 | - 124+30. 00 | CTH N RT | 51 | --- | --- |
| 124+30. 00 | - 125+30. 00 | CTH N RT | 14 | 231 | --- |
| INTERSECTI ON | | SKYLI NE | 18 | 194 | --- |
| INTERSECTI ON | | GLENWOOD | 16 | 187 | --- |
| INTERSECTI ON | | HAWTHORNE | 14 | 169 | --- |
| INTERSECTI ON | | 25TH | 14 | 163 | --- |
| INTERSECTI ON | | POPLAR | 25 | 208 | --- |
| DRI VEWAYS AND FI EL D ENTRANCES | | | 81 | 118 | 11 |
| UNDI STRI BUTED | | | 109 | 114 | 20 |
| TOTALS | | | 2291 | 2395 | 31 |
| | | | | | 75 |

GRADING AND SHAPING

| | | 205. 9010. S | | | | |
|----------------|--|-------------------------------------|-------|----------|----------|-----------|
| | | GRADI NG AND SHAPI NG INTERSECTI ON | | | | |
| | | APPROX EARTHWORK | | . 01 | . 02 | . 03 |
| | | CUT | FI LL | SKYLI NE | GLENWOOD | HAWTHORNE |
| LOCATI ON | | CY | CY | LS | LS | LS |
| SKYLI NE LANE | | 94 | 10 | 1 | --- | --- |
| GLENWOOD ROAD | | 91 | 17 | --- | 1 | --- |
| HAWTHORNE LANE | | 86 | 34 | --- | --- | 1 |
| 25TH AVE S | | 80 | 55 | --- | --- | 1 |
| POPLAR LANE | | 96 | 26 | --- | --- | --- |
| TOTALS | | | | 1 | 1 | 1 |

ALL ITEMS CATEGORY 0010 UNLESS NOTED

SHAPING SHOULDERS

| | | | | | |
|----------------------------|---|--------|----------|---|--|
| | | | | 305. 0500 SHAPING SHOULDER S | |
| STA | - | STA | LOCATION | STA | |
| 125+30 | - | 132+50 | CTH N | 16 | |
| 133+75 | - | 146+15 | CTH N | 24 | |
| 304+26 | - | 312+50 | CTH X | 16 | |
| 313+75 | - | 322+56 | CTH X | 18 | |
| TOTALS | | | | 74 | |
| | | | | | |
| <u>PULVERIZE AND RELAY</u> | | | | | |
| | | | | 325. 0100 PULVERIZE AND RELAY SY | 374. 1010. S OMP PULVERIZE AND RELAY SY |
| STA | - | STA | LOCATION | SY | SY |
| 51+56 | - | 53+43 | | 707 | 707 |
| 53+43 | - | 54+43 | | 356 | 356 |
| 54+43 | - | 98+94 | | 14837 | 14837 |
| 98+94 | - | 101+54 | | 1040 | 1040 |
| 101+54 | - | 104+04 | | 1112 | 1112 |
| 104+04 | - | 105+75 | | 684 | 684 |
| 105+75 | - | 111+73 | | 1994 | 1994 |
| 111+73 | | 118+50 | | 2784 | 2784 |
| 118+50 | | 124+30 | | 2836 | 2836 |
| TOTAL | | | | 26, 350 | 26, 350 |

HMA PAVEMENT

| | | | | 455. 0605 TACK COAT GAL | 460. 5223 HMA PAVEMENT 3 LT 58-28 S TON | 460. 5225 HMA PAVEMENT 5 LT 58-28 S TON |
|--------|---|--------|---------------------------|-------------------------------|--|--|
| STA | - | STA | LOCATI ON | | | |
| 50+56 | - | 54+56 | | CTH N | 91 | 152 |
| 54+56 | - | 99+10 | | CTH N | 891 | 1, 494 |
| 99+10 | - | 101+54 | WI DENI NG-BYPASS | CTH N | 59 | 98 |
| 101+54 | - | 104+04 | BYPASS | CTH N | 67 | 112 |
| 104+04 | - | 105+67 | WI DENI NG-BYPASS | CTH N | 39 | 66 |
| 105+67 | - | 113+48 | | CTH N | 156 | 262 |
| 113+48 | - | 118+73 | WI DENI NG-CLI MBI NG | CTH N | 130 | 217 |
| 118+73 | - | 125+30 | | CTH N | 193 | 323 |
| 125+30 | - | 127+89 | | CTH N | 76 | 127 |
| 127+89 | - | 129+01 | TURN TAPER | CTH N | 37 | 61 |
| 129+01 | - | 131+17 | | CTH N | 78 | 130 |
| 131+17 | - | 132+48 | INTERSECTI ON TAPER | CTH N | 53 | 89 |
| | | | INTERSECTI ON CTH N/CTH X | | 86 | 144 |
| 133+75 | - | 134+60 | INTERSECTI ON TAPER | CTH N | 26 | 44 |
| 134+60 | - | 135+85 | GR LEFT | CTH N | 34 | 57 |
| 135+85 | - | 137+32 | GR BOTH | CTH N | 45 | 76 |
| 137+32 | - | 138+10 | TURN TAPER/GR | CTH N | 22 | 37 |
| 138+10 | - | 143+37 | GR BOTH | CTH N | 141 | 236 |
| 143+37 | - | 146+15 | | CTH N | 56 | 93 |
| | | | INTERSECTI ON SKYLI NE | CTH N | 19 | 32 |
| | | | INTERSECTI ON GLENWOOD | CTH N | 18 | 31 |
| | | | INTERSECTI ON HAWTHORNE | CTH N | 17 | 28 |
| | | | INTERSECTI ON 25TH | CTH N | 16 | 27 |
| | | | INTERSECTI ON POPLAR | CTH N | 20 | 34 |
| 304+26 | - | 305+26 | | CTH X | 23 | 39 |
| 305+26 | - | 308+05 | | CTH X | 74 | 125 |
| 308+05 | - | 309+05 | TURN LANE TAPER | CTH X | 28 | 47 |
| 309+05 | - | 312+00 | | CTH X | 87 | 145 |
| 312+00 | - | 312+55 | INTERSECTI ON TAPER | CTH X | 17 | 29 |
| 313+95 | - | 317+45 | | CTH X | 103 | 172 |
| 317+45 | - | 318+01 | TURN LANE TAPER | CTH X | 16 | 26 |
| 318+01 | - | 320+90 | | CTH X | 77 | 129 |
| 320+90 | - | 321+90 | TURN LANE TAPER SB | CTH X | 23 | 39 |
| TOTALS | | | | | 2, 818 | 4, 721 |

ALL ITEMS CATEGORY 0010 UNLESS NOTED

ASPHALTIC JOINT

460. 4110. S
REHEATING
HMA PAVEMENT
LONGITUDINAL
JOINTS

| STATION | - | STATION | STATION | LF |
|---------|---|---------|---------|--------|
| 125+30 | - | 146+15 | CTH N | 2, 100 |
| 304+26 | - | 322+56 | CTH X | 1, 800 |
| TOTAL | | | | 3, 900 |

ASPHALTIC SURFACE

465. 0120
ASP SURF
DRI VEWAYS &
FIELD ENTRANCES

| STA | LOCATION | THICKNESS INCH | TON |
|--------|-----------------|-------------------|-------|
| 56+28 | LT DRI VEWAY | 2 | 6. 2 |
| 61+45 | RT DRI VEWAY | 2 | 6. 1 |
| 62+13 | RT DRI VEWAY | 2 | 3. 9 |
| 62+75 | RT DRI VEWAY | 2 | 6. 9 |
| 64+02 | RT DRI VEWAY | 2 | 5. 4 |
| 65+92 | RT DRI VEWAY | 4 | 15. 1 |
| 71+98 | RT DRI VEWAY | 2 | 7. 7 |
| 73+33 | RT DRI VEWAY | 2 | 3. 9 |
| 74+13 | RT DRI VEWAY | 2 | 5. 1 |
| 75+09 | RT DRI VEWAY | 2 | 6. 6 |
| 76+78 | RT DRI VEWAY | 2 | 4. 3 |
| 81+77 | RT DRI VEWAY | 2 | 3. 9 |
| 85+33 | RT DRI VEWAY | 2 | 5. 3 |
| 87+26 | RT DRI VEWAY | 2 | 5. 3 |
| 88+24 | RT DRI VEWAY | 2 | 4. 1 |
| 88+96 | RT DRI VEWAY | 2 | 3. 7 |
| 90+00 | RT DRI VEWAY | 2 | 5. 4 |
| 93+32 | LT DRI VEWAY | 2 | 4. 9 |
| 99+64 | RT DRI VEWAY | 2 | 4. 7 |
| 100+32 | RT DRI VEWAY | 2 | 4. 7 |
| 102+53 | RT GREEN VISTAS | 4 | 53. 7 |
| 122+73 | LT DRI VEWAY | 2 | 17. 3 |
| TOTAL | | | 184 |

ASPHALTIC SURFACE PATCHING

465. 0110
ASPHALTIC SURFACE
PATCHING
TON

| LOCATION | | TON |
|---|------------------------------|-----|
| MILL AND OVERLAY SUBSURFACE REPAIR AREAS (UNDISTRIBUTED) | CTH N/ CTH X INTERSECTION | 20 |
| TOTALS | | 20 |

ASPHALTIC FLUMES

465. 0315
ASPHALTIC
FLUMES
SY

| STA | - | STA | LOCATION | SY |
|-------|----|-----|-----------|----|
| #2100 | LT | LT | DRI VEWAY | 4 |
| #2100 | RT | LT | DRI VEWAY | 6 |
| TOTAL | | | | 10 |

CONCRETE CURB AND GUTTER

601. 0576
CONCRETE
CURB AND GUTTER
4-INCH
SLOPED
30-INCH TYPE J

| STA | - | STA | LOC | LF | LF |
|--------|---|-----------|-----|-----|-----|
| 101+54 | - | 104+04 | LT | --- | 250 |
| #2100 | - | DRI VE LT | LT | 25 | --- |
| #2100 | - | DRI VE RT | LT | 25 | --- |
| TOTAL | | | | 50 | 250 |

ADJUSTING GUARDRAIL

614. 0400
ADJUSTING
STEEL PLATE
BEAM
GUARD

614. 0950
REPLACING
GUARDRAIL
POSTS AND
BLOCKS

| STA | - | STA | LOCATION | LF | EACH |
|--------|---|--------|----------|--------|------|
| 134+34 | - | 143+38 | CTH N LT | 904 | 70 |
| 135+82 | - | 143+37 | CTH N RT | 755 | 60 |
| TOTALS | | | | 1, 659 | 130 |

MONUMENTS

621. 0100
LANDMARK
REFERENCE
MONUMENTS

SPV. 0060. 01
REESTABLISH
SECTION CORNER
MONUMENTS

| LOCATION | EACH | EACH |
|--------------------------|------|------|
| QUARTER CORNER 31-6 | 4 | 1 |
| SECTION CORNER 31-32-6-5 | 4 | 1 |
| QUARTER CORNER 32-5 | 4 | 1 |
| SECTION CORNER 32-33-5-4 | 4 | 1 |
| TOTALS | | 16 |
| | | 4 |

ALL ITEMS CATEGORY 0010 UNLESS NOTED

SALVAGED TOPSOIL, EROSION MAT, FERTILIZER, AND SEEDING

| | | | | | | | | | | 628. 2008 |
|-----------------|---|--------|----------|---------|------|-----|--------|------|--|-----------|
| | | | | | | | | | | E MAT |
| | | | | | | | | | | URBAN |
| | | | | | | | | | | CLASS I |
| | | | | | | | | | | TYPE B |
| | | | | | | | | | | SY |
| STA | - | STA | LOC | SY | CWT | LB | SY | MGAL | | |
| 50+56 | - | 54+00 | CTH N RT | 155 | 0. 0 | 4 | 155 | 3 | | --- |
| 54+00 | - | 66+00 | CTH N RT | 620 | 0. 1 | 17 | 620 | 14 | | --- |
| 66+00 | - | 71+00 | CTH N RT | 745 | 0. 4 | 20 | --- | 17 | | 745 |
| 71+00 | - | 76+75 | CTH N RT | 405 | 0. 5 | 11 | --- | 9 | | 405 |
| 76+75 | - | 80+50 | CTH N RT | 220 | 0. 3 | 6 | 220 | 5 | | --- |
| 80+50 | - | 102+00 | CTH N RT | 2, 470 | 0. 1 | 67 | --- | 55 | | 2470 |
| 103+50 | - | 120+00 | CTH N RT | 1, 835 | 1. 6 | 50 | --- | 41 | | 1835 |
| 120+00 | - | 125+30 | CTH N RT | 430 | 1. 2 | 12 | --- | 10 | | 430 |
| | | | | | | | | | | |
| 50+56 | - | 55+00 | CTH N LT | 180 | 0. 0 | 5 | 180 | 4 | | --- |
| 55+00 | - | 69+00 | CTH N LT | 1, 150 | 0. 1 | 31 | --- | 26 | | 1150 |
| 69+00 | - | 80+50 | CTH N LT | 1, 235 | 0. 7 | 33 | --- | 28 | | 1235 |
| 80+50 | - | 102+00 | CTH N LT | 2, 050 | 0. 8 | 55 | --- | 46 | | 2050 |
| 102+00 | - | 104+00 | CTH N LT | 110 | 1. 3 | 3 | 110 | 2 | | --- |
| 104+00 | - | 125+30 | CTH N LT | 1, 970 | 0. 1 | 53 | --- | 44 | | --- |
| UNDI STRI BUTED | | | | 1, 400 | 1 | 40 | --- | 31 | | 1, 030 |
| TOTAL | | | | 14, 975 | 8 | 407 | 1, 285 | 335 | | 11, 350 |

SILT FENCE

| | | | | | | | 628. 1520 |
|----------------|---|--------|-----|------|------|--|-----------|
| | | | | | | | SILT |
| | | | | | | | FENCE |
| | | | | | | | MAI NT |
| | | | | | | | ROCK |
| | | | | | | | BAGS |
| STA | - | STA | LOC | FT | FT | | EACH |
| 68+50 | - | 69+50 | RT | 100 | 100 | | 15 |
| 77+00 | - | 80+00 | RT | 400 | 400 | | 15 |
| 78+00 | - | 80+00 | LT | 250 | 250 | | --- |
| 80+75 | - | 81+50 | LT | 125 | 125 | | --- |
| 94+40 | - | 98+40 | LT | 400 | 400 | | 15 |
| 112+50 | - | 125+40 | RT | 1290 | 1290 | | 30 |
| DIT CH CHECKS | | | | 0 | 0 | | 24 |
| UNDI STRUBUTED | | | | 500 | 500 | | 20 |
| TOTAL | | | | 3065 | 3065 | | 119 |

MOBILIZATION EROSION CONTROL

| | | | 628. 1910 |
|-----------|---|--|-----------------|
| | | | MOBI LI ZATI ON |
| | | | EMERGENCY |
| | | | EROSI ON |
| | | | CONTROL |
| | | | EACH |
| LOCATI ON | | | |
| PROJECT | 3 | | 2 |
| TOTALS | 3 | | 2 |

CULVERT PIPE CHECKS

| | | | 628. 7555 |
|-----------------|----|--|-----------|
| | | | CULVERT |
| | | | PI PE |
| | | | CHECKS |
| | | | EACH |
| STA | | | |
| 69+00 | LT | | 2 |
| 69+68 | LT | | 2 |
| 79+11 | LT | | 2 |
| 80+85 | LT | | 2 |
| 80+81 | RT | | 2 |
| 94+74 | LT | | 3 |
| 114+66 | RT | | 2 |
| 119+40 | RT | | 4 |
| DRI VES | | | 60 |
| UNDI STRI BUTED | | | 16 |
| TOTAL | | | 95 |

ALL ITEMS CATEGORY 0010 UNLESS NOTED

| | | | | | | |
|--------------|--------------|-----------|-----------|-----------|-----------|----------|
| 637. 2230 | | | | 638. 3000 | | |
| 637. 2210 | SIGNS | POSTS | WOOD | 638. 2102 | 638. 2602 | REMOVING |
| SIGNS | FLORECENT | 634. 0616 | 634. 0618 | MOVING | REMOVING | SMALL |
| TYPE II | TYPE II | 4X6 INCH | 4X6 INCH | SIGNS | SIGNS | SIGN |
| REFLECTIVE H | REFLECTIVE F | 16 FT | 18 FT | TYPE II | TYPE II | SUPPORTS |
| SF | SF | EACH | EACH | EACH | EACH | EACH |

| SIGN # | | SIGN CODE | SHAPE T, O, R, D | SIGN SIZE IN X IN | | MESSAGE | REFLECTIVE H SF | REFLECTIVE F SF | 16 FT EACH | 18 FT EACH | TYPE II EACH | TYPE III EACH | SUPPORTS EACH | |
|--------------------|---------|-----------|------------------------|----------------------|-----------------------|-----------------------------------|--------------------|--------------------|---------------|---------------|-----------------|------------------|------------------|----|
| 01 - 01 | R2-1 | R | 24 | X | 30 | SPEED LIMIT 35 | 5.00 | --- | 1 | --- | --- | 1 | 1 | |
| 01 - 02 | W7-1 | R | 30 | X | 30 | HILL | --- | 6.25 | 1 | --- | --- | 1 | 1 | |
| 01 - 03 | W2-2 | R | 30 | X | 30 | INTERSECTION | --- | 6.25 | 1 | --- | --- | 1 | 1 | |
| 01 - 04 | R1-1 | O | 30 | X | 30 | STOP | 5.18 | --- | 1 | --- | --- | 1 | 1 | |
| 01 - 05 | R2-1 | R | 24 | X | 30 | SPEED LIMIT 40 | 5.00 | --- | 1 | --- | --- | 1 | 1 | |
| 01 - 06 | W7-1 | R | 30 | X | 30 | HILL | --- | 6.25 | 1 | --- | --- | 1 | 1 | |
| 01 - 07 | R1-1 | O | 30 | X | 30 | STOP | 5.18 | --- | 1 | --- | --- | 1 | 1 | |
| 02 - 01 | W2-2 | R | 30 | X | 30 | INTERSECTION | --- | 6.25 | 1 | --- | --- | 1 | 1 | |
| 02 - 03 | S3-1 | D | 36 | X | 36 | SCHOOL BUS STOP AHEAD | --- | 9.00 | --- | 1 | --- | 1 | --- | |
| 02 - 02 | R2-1 | R | 24 | X | 30 | SPEED LIMIT 40 | 5.00 | --- | 1 | --- | --- | 1 | 1 | |
| 02 - 04 | R1-1 | O | 30 | X | 30 | STOP | 5.18 | --- | 1 | --- | --- | 1 | 1 | |
| 02 - 06 | R2-1 | R | 24 | X | 30 | SPEED LIMIT 45 | 5.00 | --- | 1 | --- | --- | 1 | 1 | |
| 02 - 05 | R1-1 | O | 30 | X | 30 | STOP | 5.18 | --- | 1 | --- | --- | 1 | 1 | |
| 02 - 07 | R2-1 | R | 24 | X | 30 | SPEED LIMIT 45 | 5.00 | --- | 1 | --- | --- | 1 | 1 | |
| 02 - 08 | R1-1 | O | 30 | X | 30 | STOP | 5.18 | --- | 1 | --- | --- | 1 | 1 | |
| 02 - 09 | R2-1 | R | 24 | X | 30 | SPEED LIMIT 45 | 5.00 | --- | 1 | --- | --- | 1 | 1 | |
| 03 - 01 | R3-72 | R | 30 | X | 36 | ONCOMING TRAFFIC USES CENTER LANE | 7.50 | --- | 1 | --- | --- | 1 | 1 | |
| 03 - 03 | W4-2R | R | 36 | X | 36 | RIGHT LANE ENDS | --- | 9.00 | --- | 1 | --- | 1 | 1 | |
| 03 - 02 | W2-2 | R | 30 | X | 30 | INTERSECTION | --- | 6.25 | 1 | --- | --- | 1 | 1 | |
| 03 - 04 | R2-1 | R | 24 | X | 30 | SPEED LIMIT 45 | 5.00 | --- | 1 | --- | --- | 1 | 1 | |
| 03 - 05 | I 55-56 | R | EXIST | | ADOPT A HIGHWAY- MOVE | --- | --- | --- | 1 | 1 | 0 | 1 | | |
| 03 - 06 | R4-3 | R | 24 | X | 30 | SLOWER TRAFFIC KEEP RIGHT | 5.00 | --- | 1 | --- | --- | 1 | 1 | |
| 03 - 07 | R1-1 | O | 30 | X | 30 | STOP | 5.18 | --- | 1 | --- | --- | 1 | 1 | |
| 03 - 08 | W4-2R | R | 36 | X | 36 | RIGHT LANE ENDS | --- | 9.00 | --- | 1 | --- | 1 | 1 | |
| 03 - 09 | J1-1 | R | 24 | X | 39 | JCT COUNTY X | 6.50 | --- | --- | 1 | --- | 1 | 1 | |
| 03 - 10 | W3-1 | R | 36 | X | 36 | STOP AHEAD | --- | 9.00 | --- | 1 | --- | 1 | 1 | |
| 03 - 11 | R1-1 | O | 30 | X | 30 | STOP | 5.18 | --- | 1 | --- | --- | 1 | 1 | |
| 03 - 12 | R1-3P | R | 18 | X | 6 | ALL WAY | 0.75 | --- | --- | --- | --- | 1 | --- | |
| 03 - 13 | J12-1 | R | 24 | X | 45 | COUNTY X LT/RT | 7.50 | --- | --- | 1 | --- | 1 | 1 | |
| 03 - 14 | | | NO PASSING ZONE-REMOVE | | | | --- | --- | --- | --- | --- | 1 | 1 | |
| 04 01 | J12-1 | R | 24 | X | 45 | COUNTY X LT/RT | 7.50 | --- | --- | 1 | --- | 1 | 1 | |
| 04 02 | R1-1 | O | 30 | X | 30 | STOP | 5.18 | --- | 1 | --- | --- | 1 | 1 | |
| 04 03 | R1-3P | R | 18 | X | 6 | ALL WAY | 0.75 | --- | --- | --- | --- | 1 | --- | |
| 04 04 | W3-1 | R | 36 | X | 36 | STOP AHEAD | --- | 9.00 | --- | 1 | --- | 1 | 1 | |
| 04 05 | J1-1 | R | 24 | X | 39 | JCT COUNTY X | 6.50 | --- | --- | 1 | --- | 1 | 1 | |
| 04 06 | I 55-56 | R | EXIST | | ADOPT A HIGHWAY- MOVE | --- | --- | --- | 1 | 1 | 0 | 1 | | |
| 04 07 | R2-1 | R | 24 | X | 30 | SPEED LIMIT 45 | 5.00 | --- | 1 | --- | --- | 1 | 1 | |
| 04 08 | S3-1 | D | 36 | X | 36 | SCHOOL BUS STOP AHEAD | --- | 9.00 | --- | 1 | --- | 1 | 1 | |
| 05 01 | R2-1 | R | 24 | X | 30 | SPEED LIMIT 45 | 5.00 | --- | 1 | --- | --- | 1 | 1 | |
| 05 02 | I 55-56 | R | EXIST | | ADOPT A HIGHWAY- MOVE | --- | --- | --- | 1 | 1 | 0 | 1 | | |
| 05 03 | J1-1 | R | 24 | X | 39 | JCT COUNTY N | 6.50 | --- | --- | 1 | --- | 1 | 1 | |
| 05 04 | W3-1 | R | 36 | X | 36 | STOP AHEAD | --- | 9.00 | --- | 1 | --- | 1 | 1 | |
| 05 05 | R1-1 | O | 30 | X | 30 | STOP | 5.18 | --- | 1 | --- | --- | 1 | 1 | |
| 05 06 | R1-3P | R | 18 | X | 6 | ALL WAY | 0.75 | --- | --- | --- | --- | 1 | --- | |
| 05 07 | J12-2 | R | 24 | X | 45 | COUNTY N LT/RT ; COUNTY X AHEAD | 7.50 | --- | --- | 1 | --- | 1 | 1 | |
| 05 08 | J12-2 | R | 24 | X | 45 | COUNTY N LT/RT ; COUNTY X AHEAD | 7.50 | --- | --- | 1 | --- | 1 | 1 | |
| CONTINUE NEXT PAGE | | | | | | | SUBTOTAL | 155.85 | 94.25 | 25 | 17 | 3 | 43 | 42 |

ALL ITEMS CATEGORY 0010 UNLESS NOTED

TYPE II SIGNING CONTINUED

| | | | | | | | 637. 2210 | 637. 2230 | | | 638. 2102 | 638. 2602 | 638. 3000 | |
|---------|-------|------------|-----------|---|----|----------------|------------|------------|----------|----------|-----------|-----------|-----------|----|
| | | | | | | | SIGNS | SIGNS | POSTS | WOOD | MOVING | REMOVING | REMOVING | |
| | | | | | | | REFLECTIVE | REFLECTIVE | 4X6 INCH | 4X6 INCH | SIGNS | SIGNS | SMALL | |
| | | | | | | | TYPE II | TYPE II | 16 FT | 18 FT | TYPE II | TYPE II | SIGN | |
| SIGN # | SIGN | SHAPE | SIGN SIZE | | | MESSAGE | SF | SF | EACH | EACH | EACH | EACH | SUPPORTS | |
| | CODE | T, O, R, D | IN | X | IN | | | | | | | | | |
| 05 - 09 | R1-1 | O | 30 | X | 30 | STOP | 5.18 | --- | 1 | --- | --- | 1 | 1 | |
| 05 - 10 | R1-3P | R | 18 | X | 6 | ALL WAY | 0.75 | --- | --- | --- | --- | 1 | --- | |
| 05 - 11 | W3-1 | R | 36 | X | 36 | STOP AHEAD | --- | 9.00 | --- | 1 | --- | 1 | 1 | |
| 05 - 12 | J1-1 | R | 24 | X | 39 | JCT COUNTY N | 6.50 | --- | --- | 1 | --- | 1 | 1 | |
| 05 - 13 | R2-1 | R | 24 | X | 30 | SPEED LIMIT 45 | 5.00 | --- | 1 | --- | --- | 1 | 1 | |
| - | | | | | | | | | | | | | | |
| | | | | | | | SUBTOTAL | 17.43 | 9.00 | 2 | 2 | 0 | 5 | 4 |
| | | | | | | | TOTALS | 173.28 | 103.25 | 27 | 19 | 322 | 48 | 46 |

TRAFFIC CONTROL DEVICES

| LOCATION | | SERVICE DAYS | 643. 5000 | | 643. 0420 | | 643. 0705 | | 643. 0900 | | |
|------------------------|--|-----------------|-----------|--------|------------|--------|-----------|--------|-----------|--------|--------|
| | | | TRAFFIC | | BARRICADES | | WARNING | | TC SIGNS | | |
| | | | CONTROL | | TYPE III | | LIGHTS | | TC SIGNS | | |
| | | | IN | | IN | | IN | | IN | | |
| | | | SERVICE | DAYS | SERVICE | DAYS | SERVICE | DAYS | SERVICE | DAYS | |
| PROJECT | | --- | 1 | --- | --- | --- | --- | --- | --- | --- | |
| ROAD CLOSED TO TRAFFIC | | 78 | --- | 100 | 7800 | 13 | 1014 | 26 | 2028 | 29 | 2, 262 |
| DETOUR | | 78 | | | | | | | | | |
| UNDISTRIBUTED | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| TOTAL | | | 1 | 7, 800 | | 1, 014 | | 2, 028 | | 2, 262 | |

PAVEMENT MARKING

| | | 646. 1020 | | | | 646. 4520 | | 646. 3020 | 646. 5020 | 646. 5120 | 646. 6120 | 649. 0105 | |
|--------|---|---------------------------|---------|----------|---------|-----------------------|--------|------------|-----------|-----------|-----------|-----------|--------|
| | | MARKING LINE EPOXY 4-INCH | | | | MARKING LINE SAME DAY | | LINE EPOXY | MARKING | MARKING | STOP LINE | MARKING | |
| | | (YELLOW) | | (WHI TE) | | EPOXY 4-INCH(YELLOW) | | 8-INCH | ARROW | WORD | EPOXY | MARKING | |
| STA | - | STA | SKI P | CENTER | EDGE | DASH | SKI P | CENTER | WHI TE | EPOXY | EPOXY | 18-INCH | 4-INCH |
| | | | LF | LF | LF | LF | LF | LF | LF | EA | EA | LF | LF |
| 50+64 | - | 52+50 | --- | 372 | 372 | --- | --- | --- | --- | --- | --- | --- | --- |
| 52+50 | - | 53+50 | --- | 200 | 100 | 25 | --- | --- | --- | --- | --- | --- | --- |
| 53+50 | - | 54+50 | --- | 200 | 100 | --- | --- | --- | --- | --- | --- | --- | --- |
| 54+50 | - | 69+50 | --- | 3, 000 | 3, 000 | --- | --- | --- | --- | --- | --- | --- | --- |
| 69+50 | - | 70+50 | --- | 200 | 100 | 25 | --- | --- | --- | --- | --- | --- | --- |
| 70+50 | - | 71+40 | --- | 180 | 90 | --- | --- | --- | --- | --- | --- | --- | --- |
| 71+40 | - | 79+00 | --- | 1, 520 | 1, 520 | --- | --- | --- | --- | --- | --- | --- | --- |
| 79+00 | - | 80+00 | --- | 200 | 100 | 25 | --- | --- | --- | --- | --- | --- | --- |
| 80+00 | - | 81+00 | --- | 200 | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 81+00 | - | 82+00 | --- | 200 | 100 | 25 | --- | --- | --- | --- | --- | --- | --- |
| 82+00 | - | 101+00 | --- | 3, 800 | 3, 800 | --- | --- | --- | --- | --- | --- | --- | --- |
| 101+00 | - | 101+50 | --- | 100 | 100 | --- | --- | --- | --- | --- | --- | --- | --- |
| 101+50 | - | 104+00 | --- | 500 | 250 | 63 | --- | --- | --- | --- | --- | --- | --- |
| 101+50 | - | 104+00 | --- | --- | --- | 63 | --- | --- | --- | --- | --- | --- | --- |
| 104+00 | - | 118+40 | --- | 2, 880 | 2, 880 | --- | --- | --- | --- | --- | --- | --- | --- |
| 118+40 | - | 119+40 | --- | 200 | 100 | 25 | --- | --- | --- | --- | --- | --- | --- |
| 119+40 | - | 120+50 | --- | 220 | 110 | --- | --- | --- | --- | --- | --- | --- | --- |
| 120+50 | - | 129+00 | --- | 1, 700 | 1, 700 | --- | --- | --- | --- | --- | --- | --- | --- |
| 120+50 | - | 132+40 | --- | --- | --- | 298 | --- | --- | --- | --- | --- | --- | --- |
| 129+00 | - | 132+40 | --- | 680 | 680 | --- | --- | --- | 340 | 2 | 1 | 36 | --- |
| 133+40 | - | 139+00 | --- | --- | 560 | 140 | 140 | 560 | 560 | 2 | 1 | 36 | 700 |
| 139+00 | - | 146+15 | --- | --- | 1, 430 | --- | 179 | --- | --- | --- | --- | --- | 179 |
| 304+26 | - | 309+00 | --- | --- | 948 | --- | --- | 948 | --- | --- | --- | --- | 948 |
| 309+00 | - | 312+80 | --- | --- | 760 | --- | --- | 760 | 380 | 2 | 1 | 36 | 760 |
| 313+60 | - | 319+00 | --- | --- | 1, 080 | --- | 135 | 540 | 540 | 2 | 1 | 36 | 675 |
| 319+00 | - | 321+56 | --- | --- | 512 | --- | 64 | --- | --- | --- | --- | --- | 64 |
| TOTAL | | | 16, 352 | | 21, 080 | | 3, 326 | | 1, 820 | 8 | 4 | 144 | 3, 326 |
| | | | 37, 432 | | | | | | | | | | |

SAWING ASPHALT

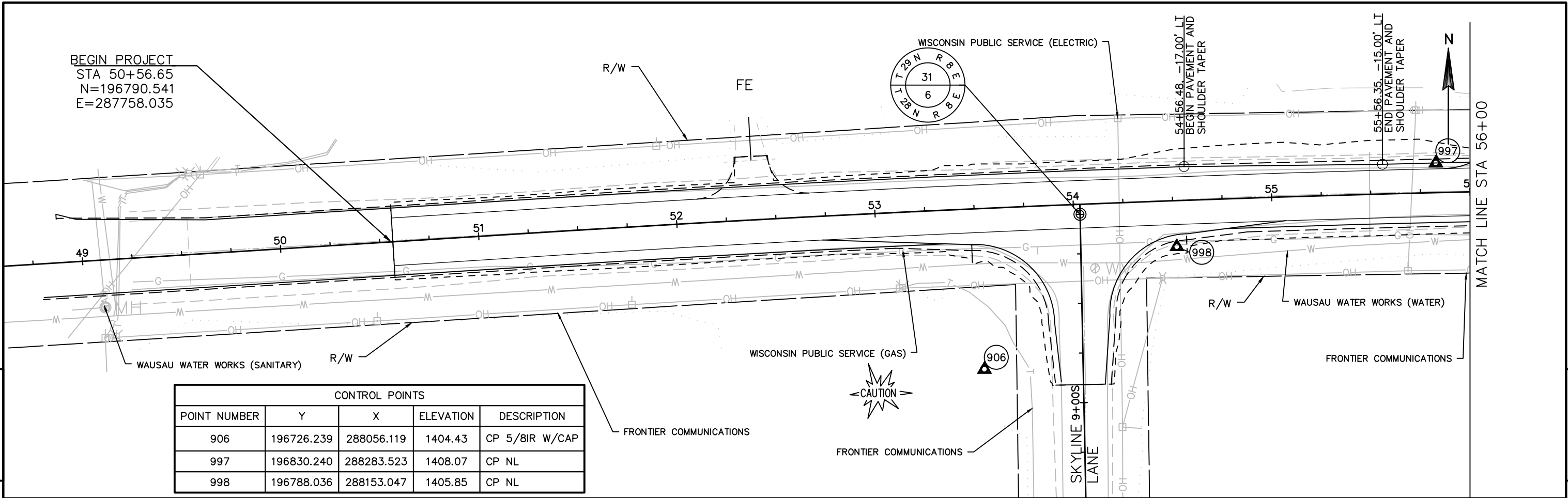
| | | 690. 0150 | 690. 0250 |
|---------|--------------------------|-----------|-----------|
| | | SAWI NG | SAWI NG |
| | | ASPHALT | CONCRETE |
| STA | LOCATI ON | LF | LF |
| 50+56 | BEGIN PROJECT | 34 | --- |
| 125+30 | PULVERI ZE/MILL LI MI TS | 44 | --- |
| 146+15 | END PROJECT | 30 | --- |
| 304+26X | BEGIN CONST CTH X | 30 | --- |
| 321+56X | END CONST CTH X | 30 | --- |
| | SKYLI NE | 22 | --- |
| | DRIVE #2100 | 39 | 6 |
| | GLENWOOD | 22 | --- |
| | HAWTHORNE | 22 | --- |
| | GREEN VI STAS | 125 | --- |
| | POPLAR | 22 | --- |
| | RES DRI VEWAYS | 325 | --- |
| | UNDI STRI BUTED | 75 | --- |
| TOTAL | | 820 | 6 |

CONSTRUCTION STAKING

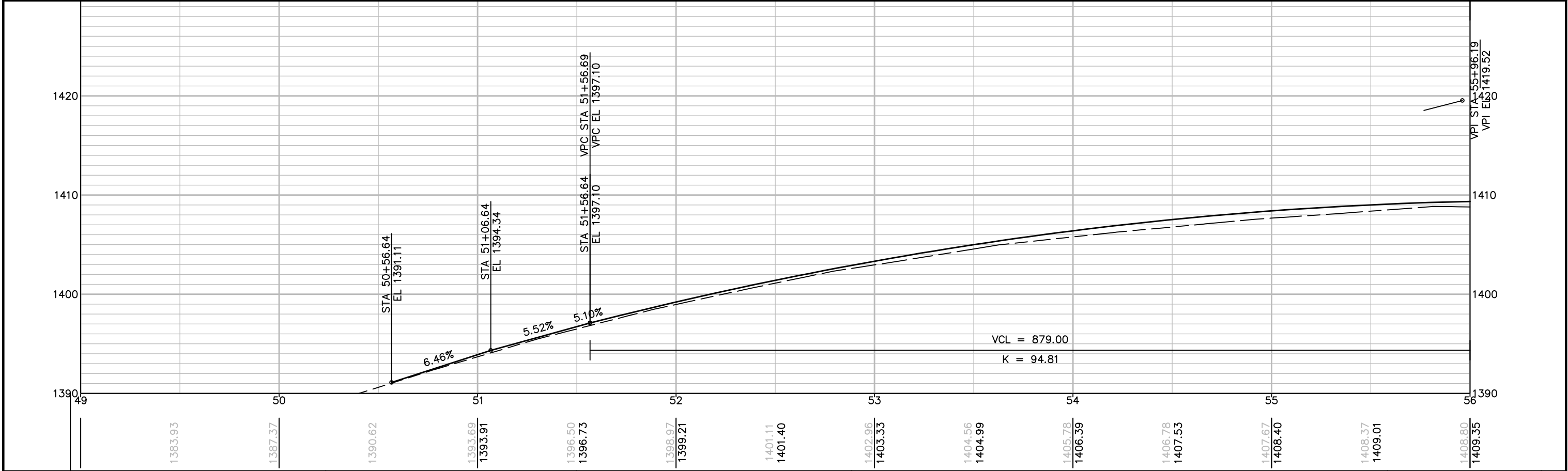
| | | 650. 5000 | 650. 5500 | 650. 8000 | 650. 9910 | 650. 9920 |
|---------|----------|---------------|-----------------|---------------|---------------|---------------|
| | | CONSTRUCTI ON | CONSTRUCTI ON | CONSTRUCTI ON | CONSTRUCTI ON | CONSTRUCTI ON |
| | | STAKI NG | STAKI NG | STAKI NG | STAKI NG | STAKI NG |
| | | BASE | CURB AND GUTTER | RESURFACI NG | SUPPLI MENTAL | SLOPE |
| STA | - STA | LF | LF | LF | LS | LF |
| PROJECT | | --- | --- | --- | 1 | --- |
| 50+56 | - 125+30 | 7, 474 | 300 | 7, 474 | --- | 7474 |
| 125+30 | 146+15 | --- | --- | 2, 085 | --- | --- |
| 304+25 | 321+60 | --- | --- | 1, 735 | --- | --- |
| TOTALS | | 7, 474 | 300 | 11, 294 | 1 | 7, 474 |

ALL ITEMS CATEGORY 0010 UNLESS NOTED

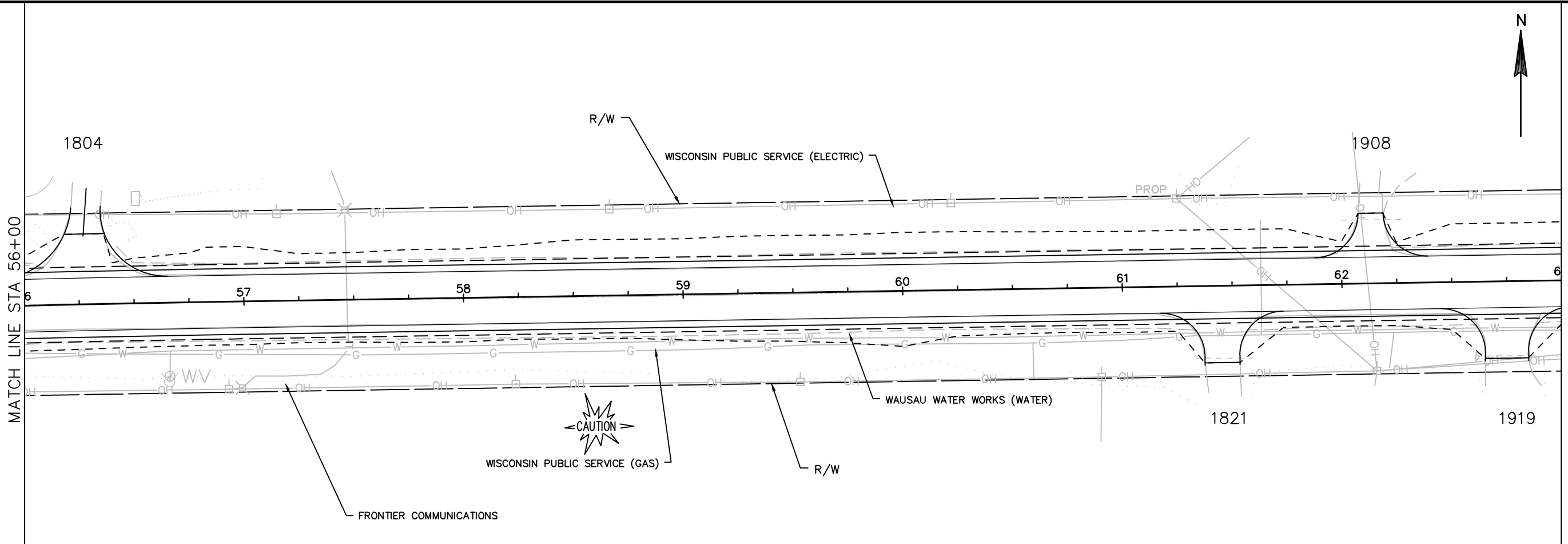
5



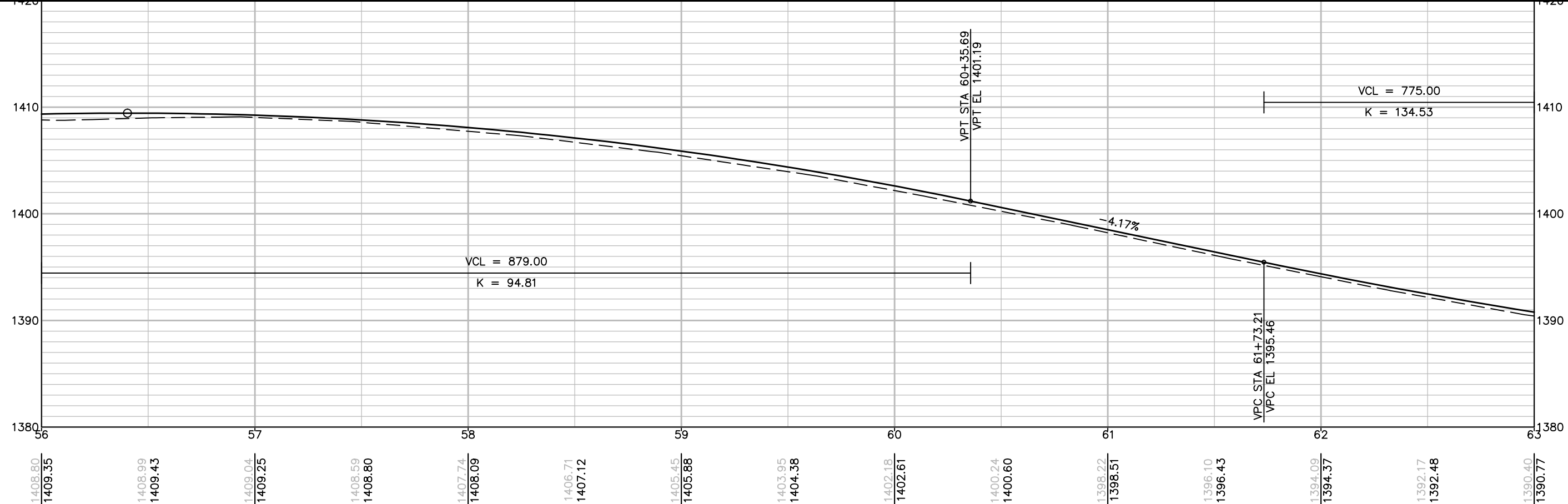
5



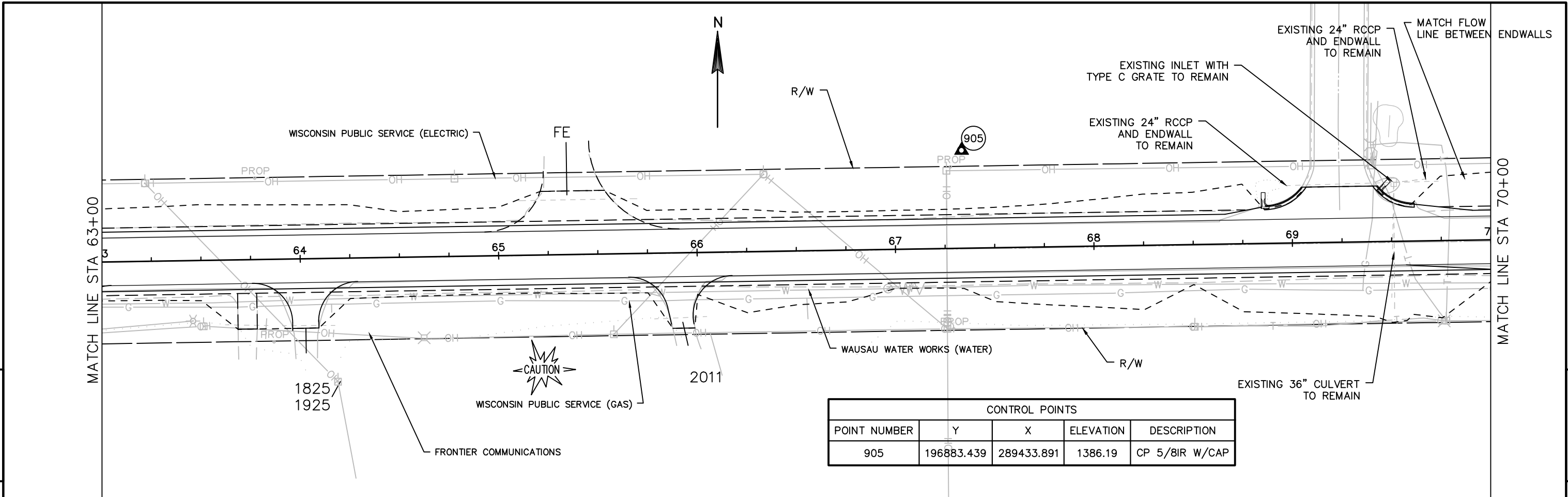
5



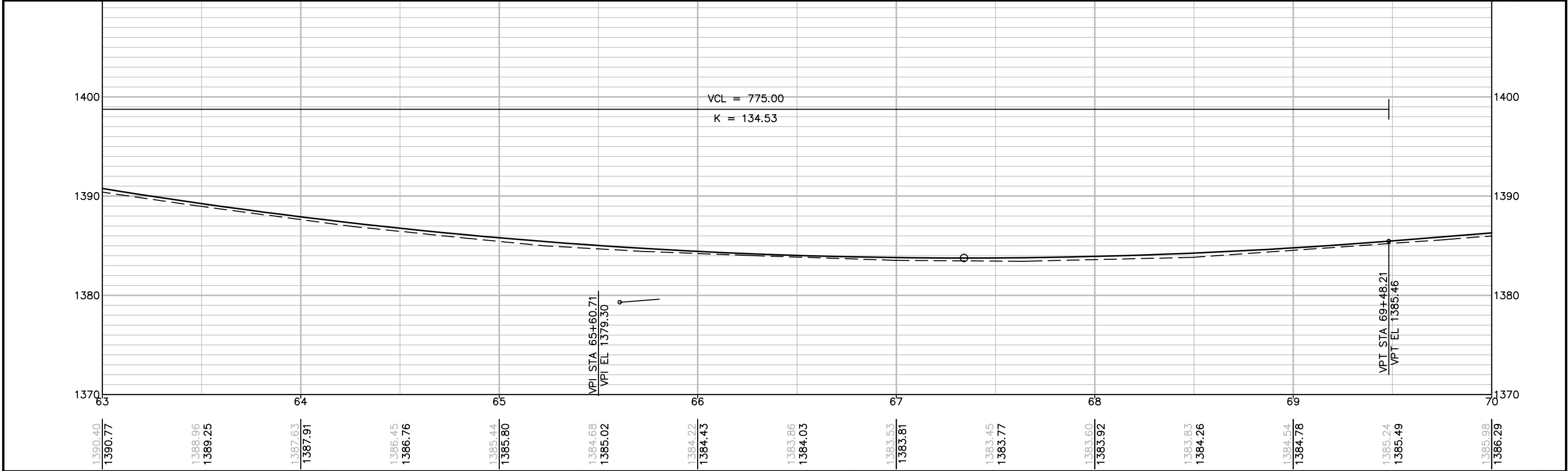
5



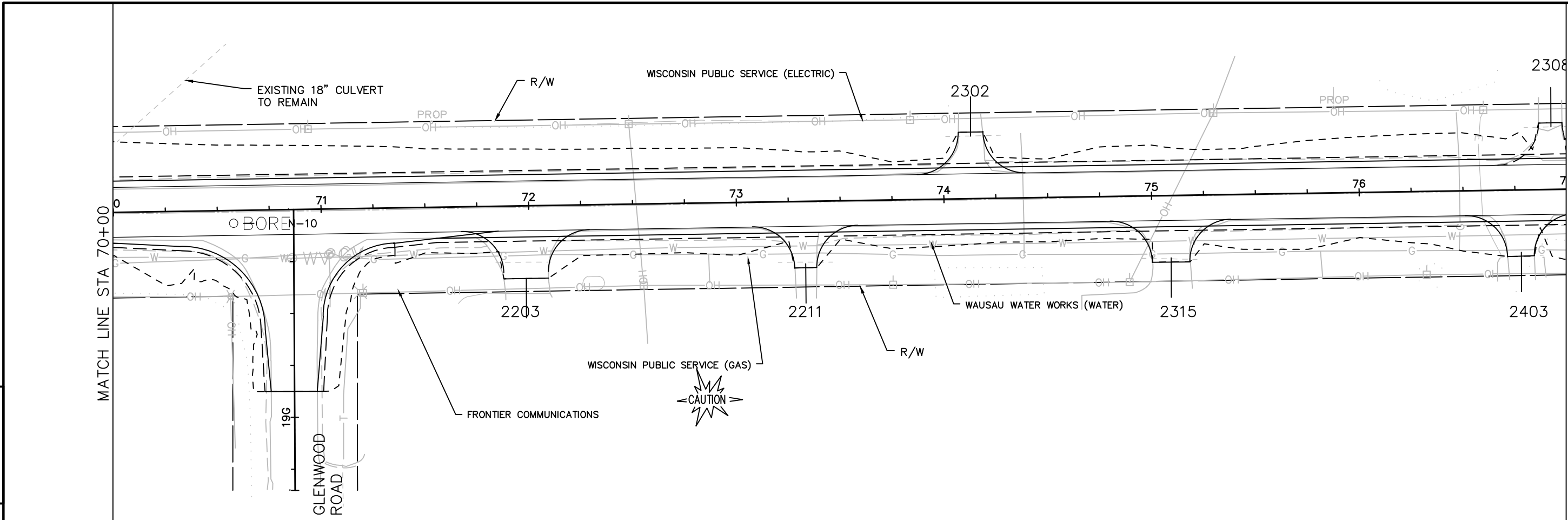
5



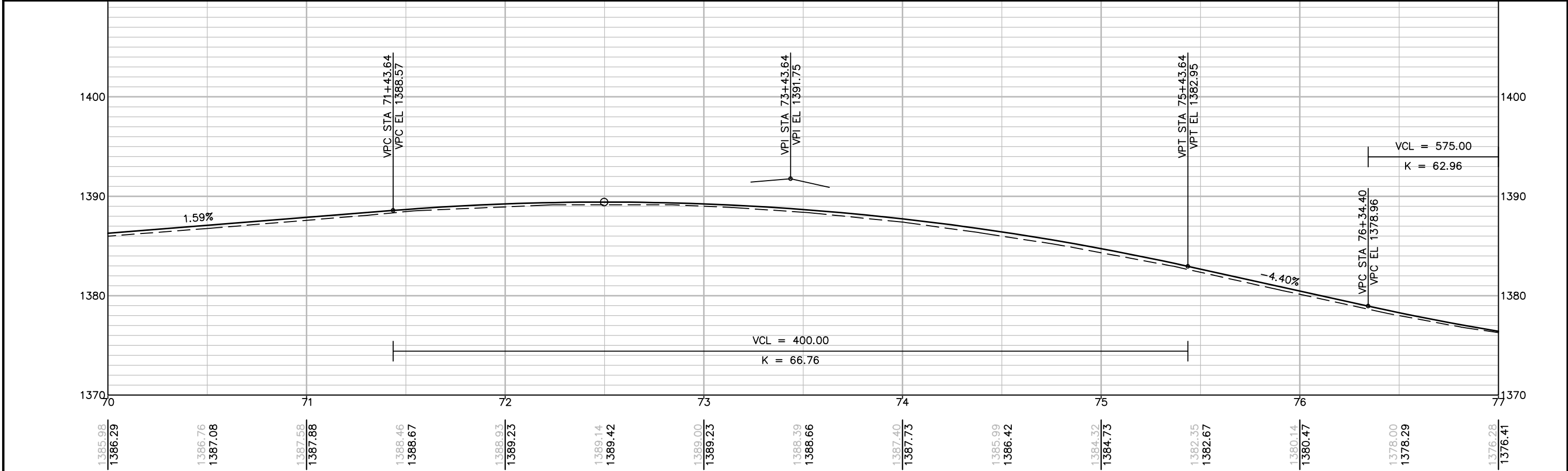
5

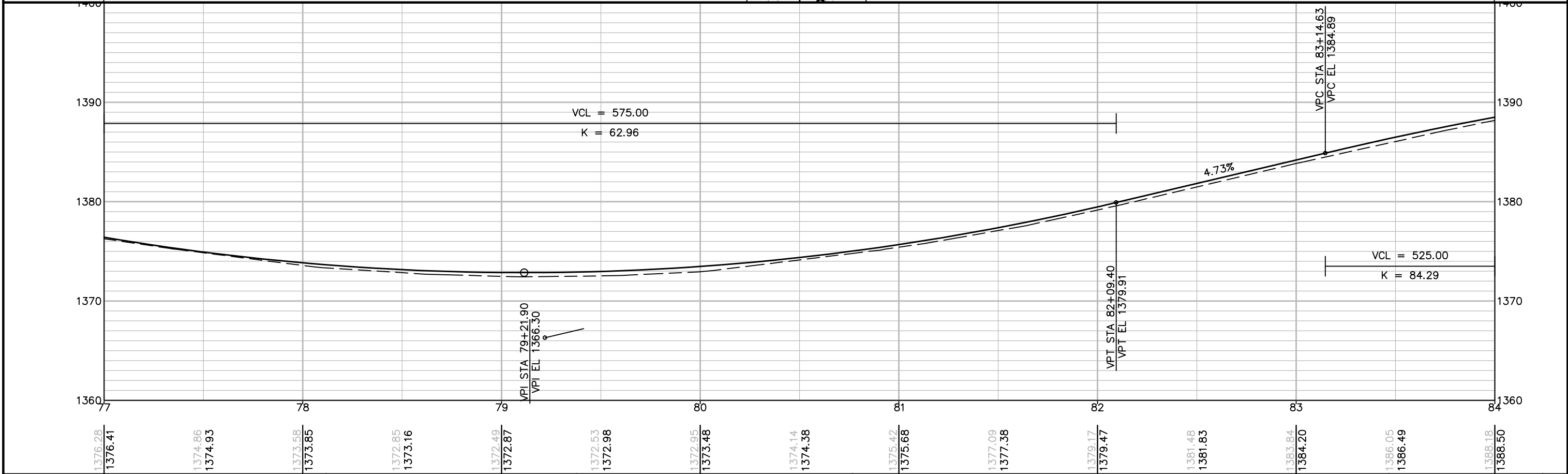
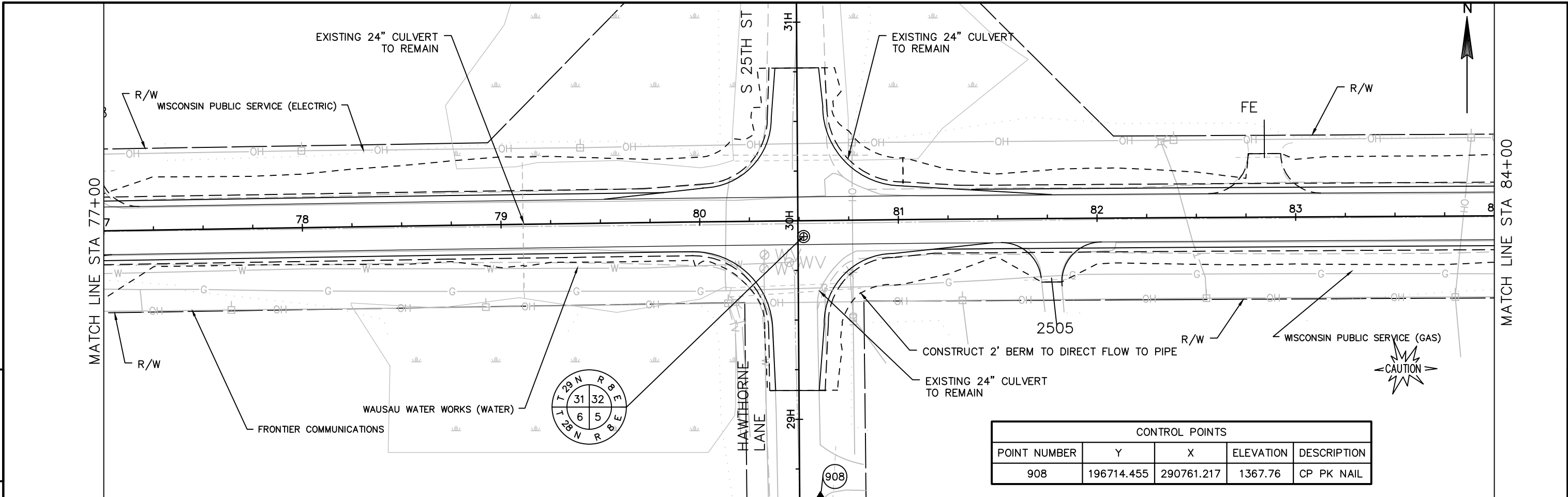


5

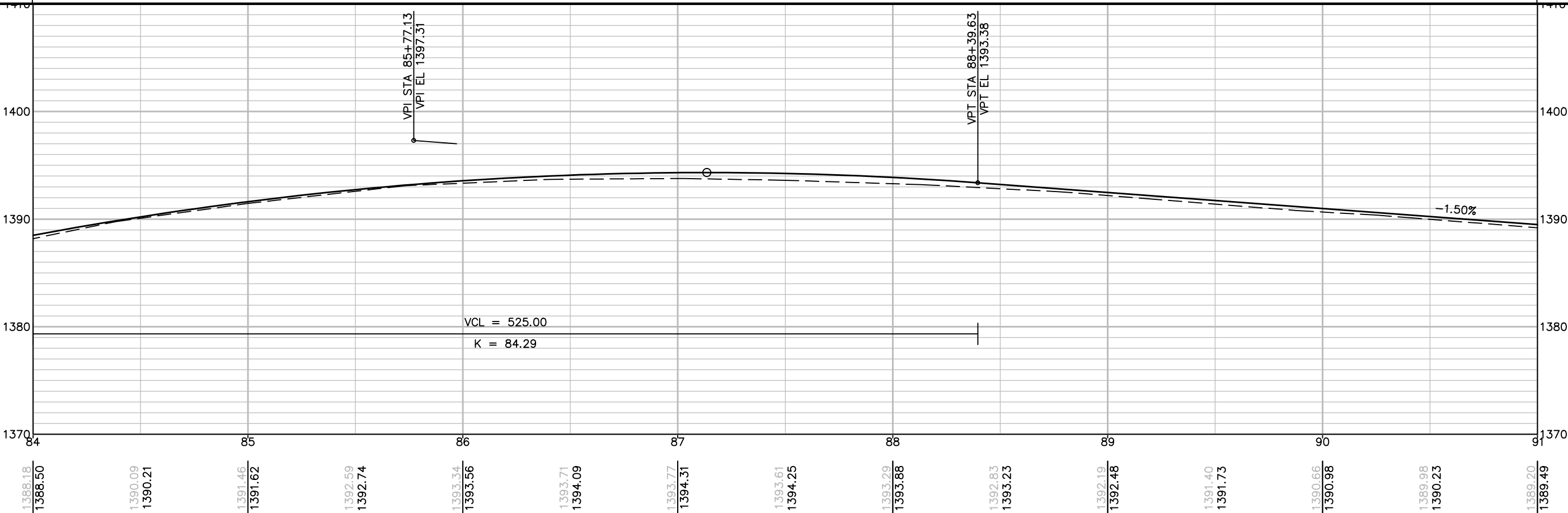
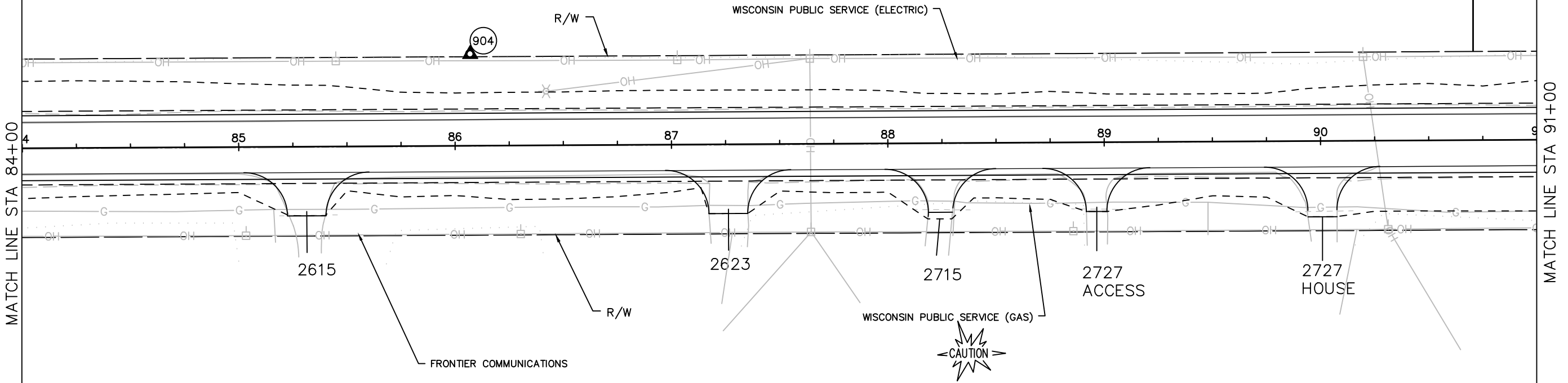


5





| CONTROL POINTS | | | | |
|----------------|------------|------------|-----------|----------------|
| POINT NUMBER | Y | X | ELEVATION | DESCRIPTION |
| 904 | 196900.725 | 291307.402 | 1396.28 | CP 5/8IR W/CAP |



PROJECT NO:6999-18-75

HWY:CTH N

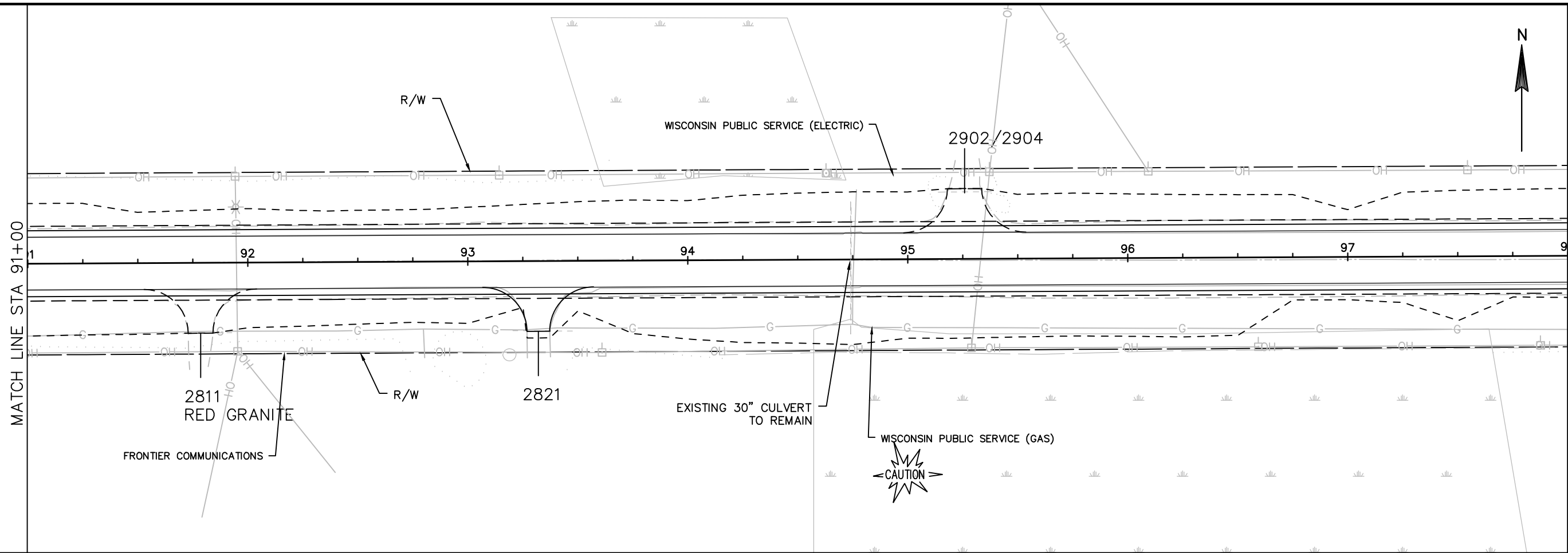
COUNTY:MARATHON

PLAN AND PROFILE: CTH N

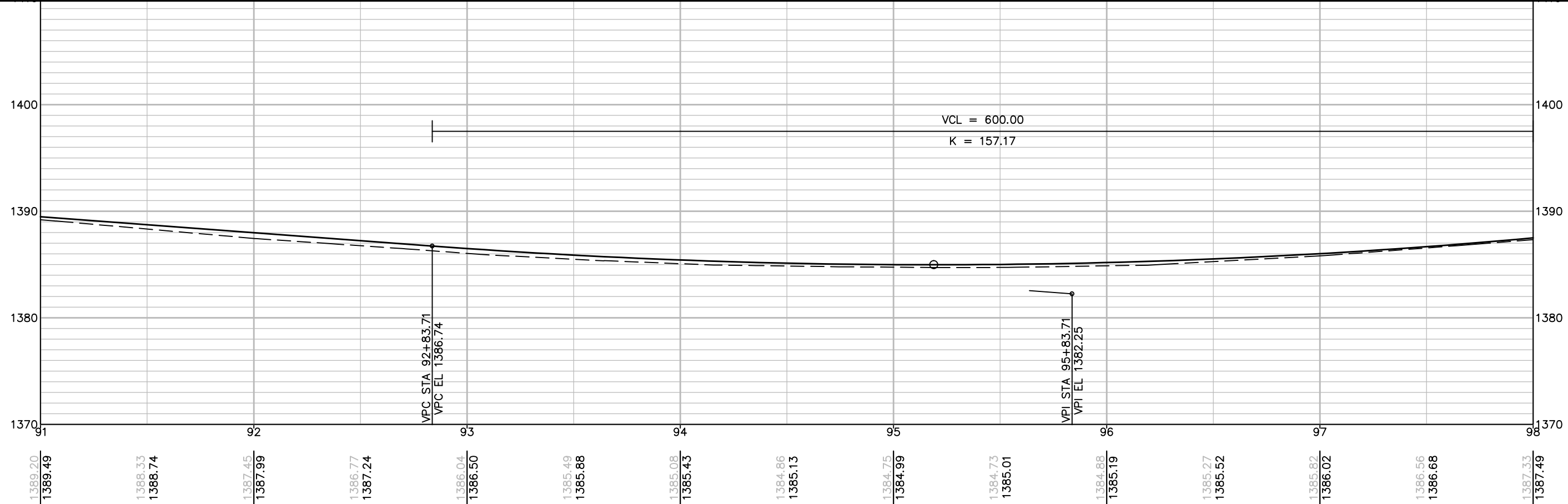
SHEET

E

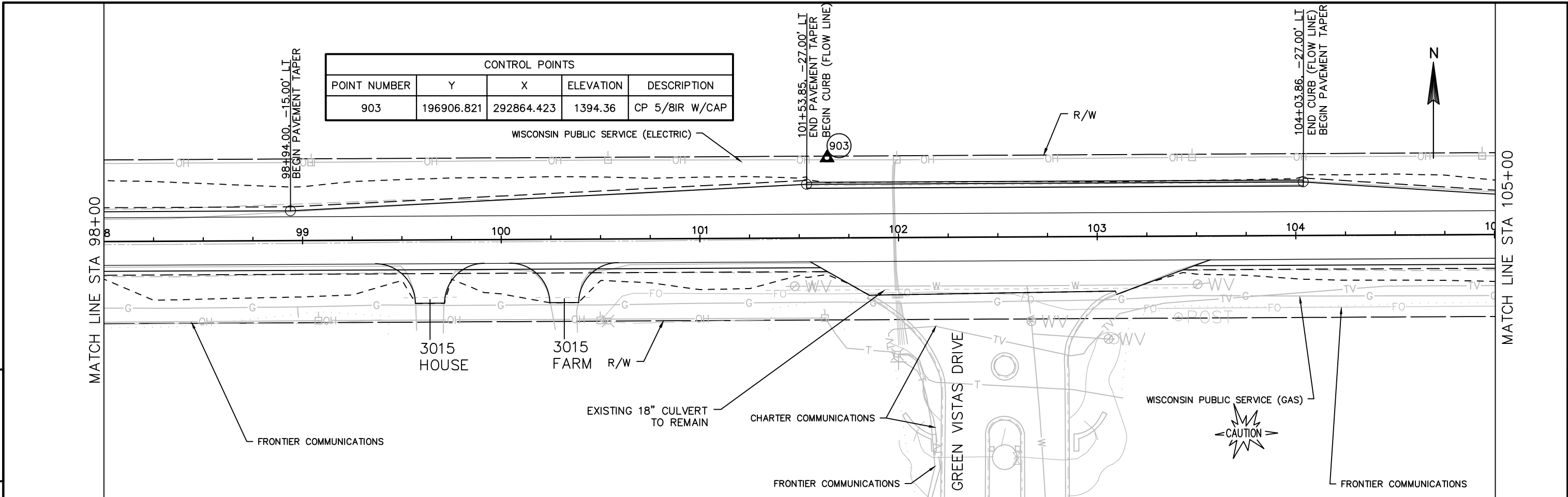
5



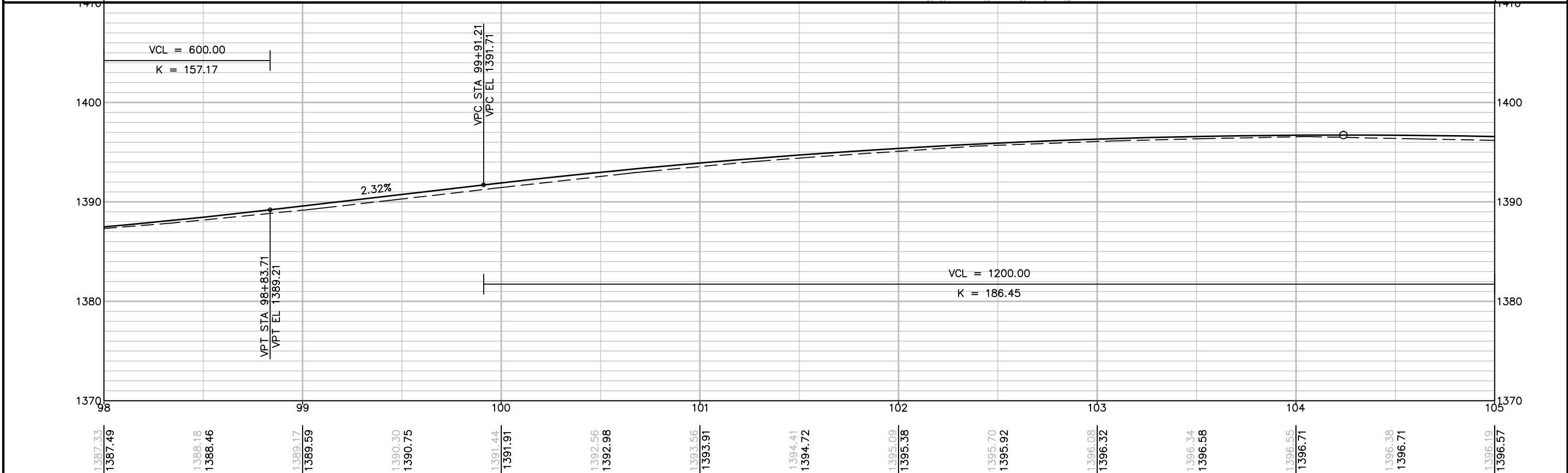
5



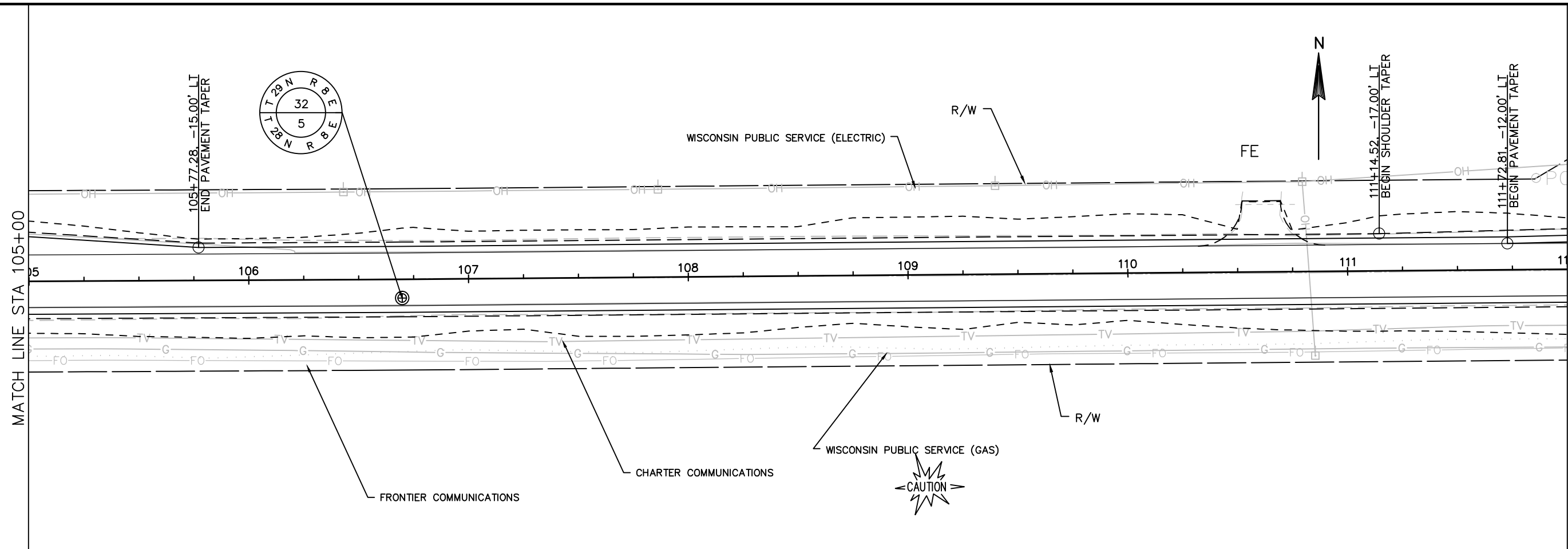
5



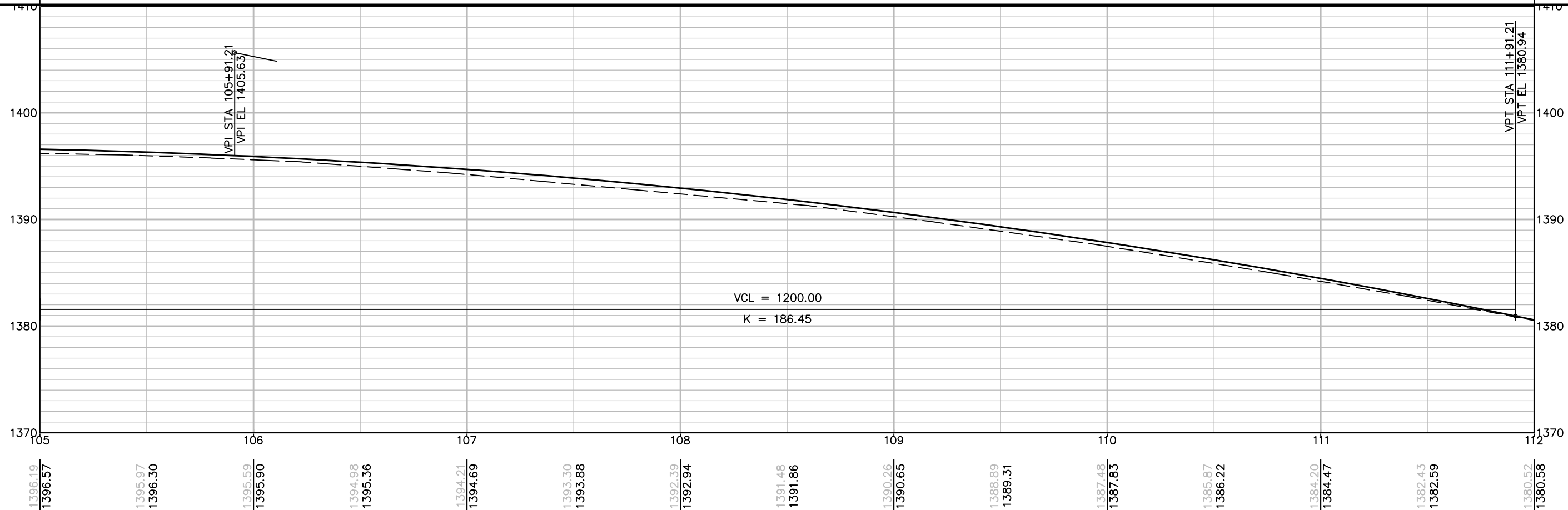
5



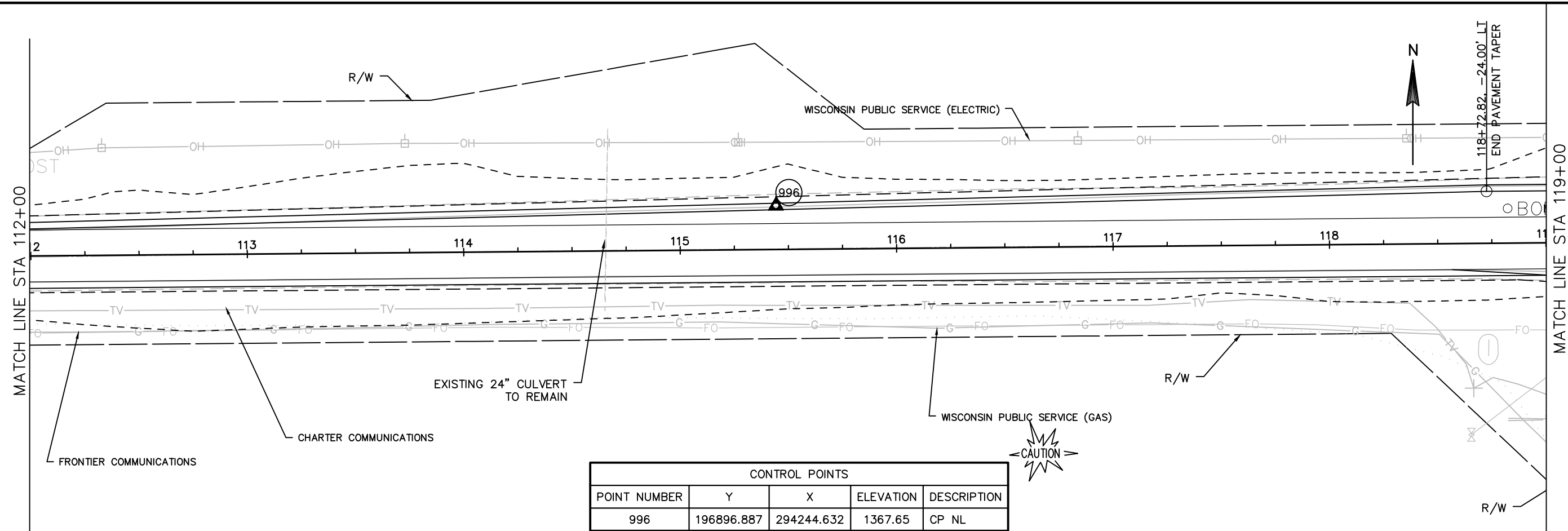
5



5

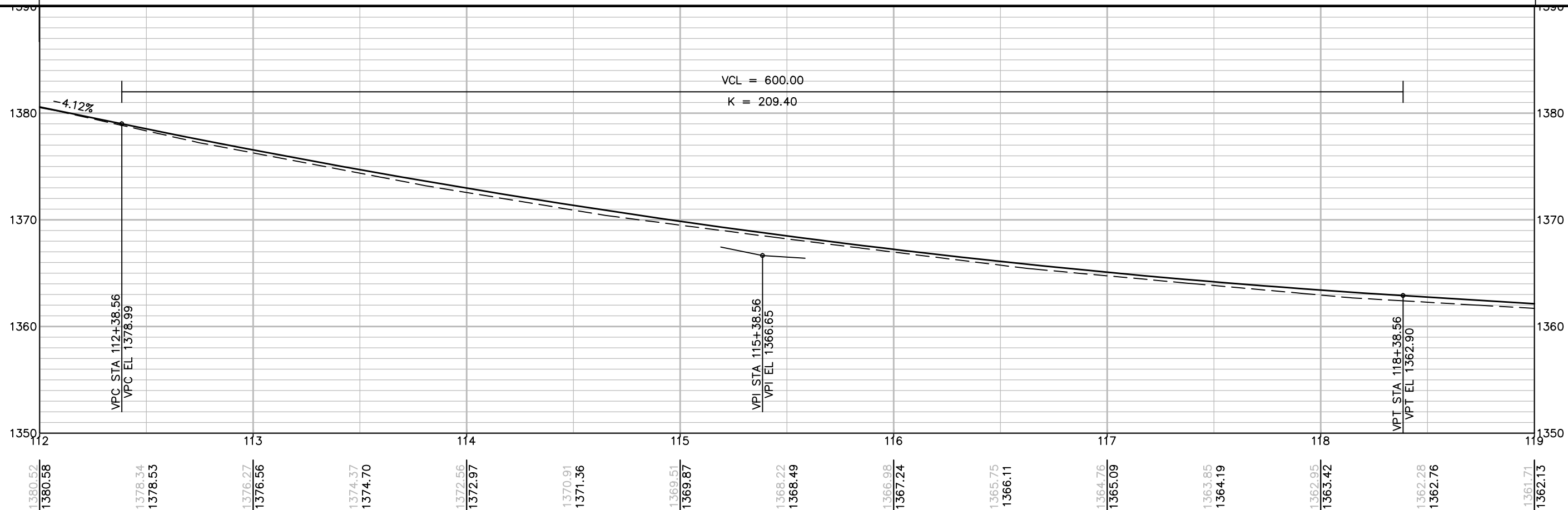


5

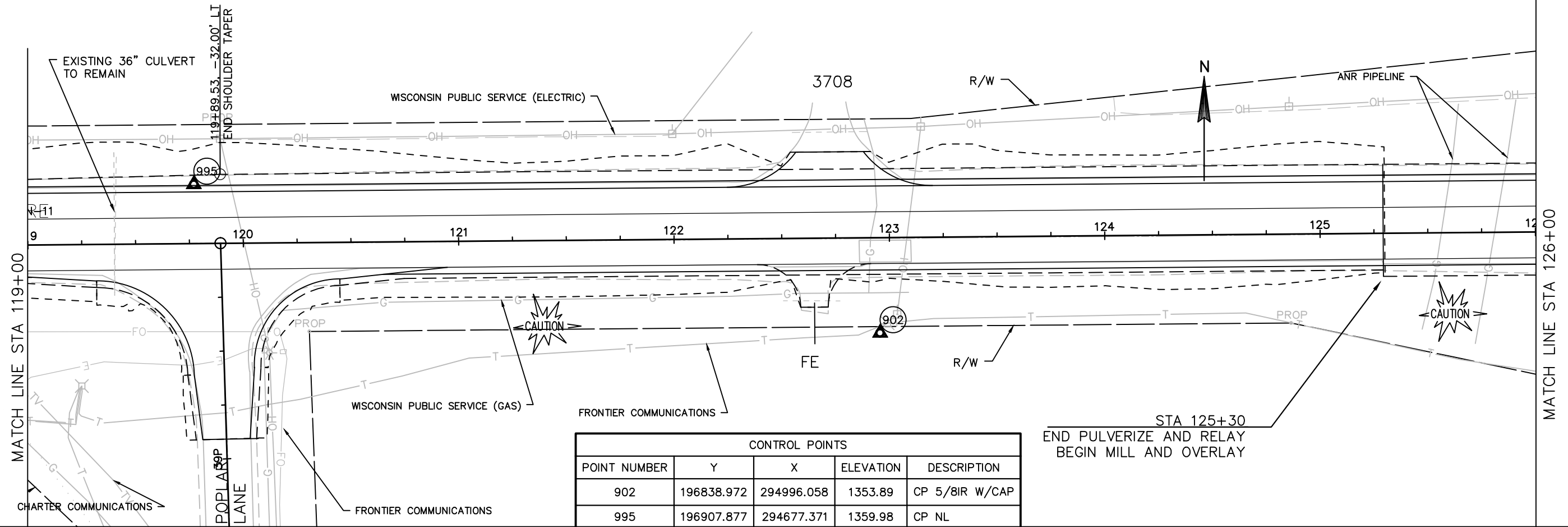


| CONTROL POINTS | | | | |
|----------------|------------|------------|-----------|-------------|
| POINT NUMBER | Y | X | ELEVATION | DESCRIPTION |
| 996 | 196896.887 | 294244.632 | 1367.65 | CP NL |

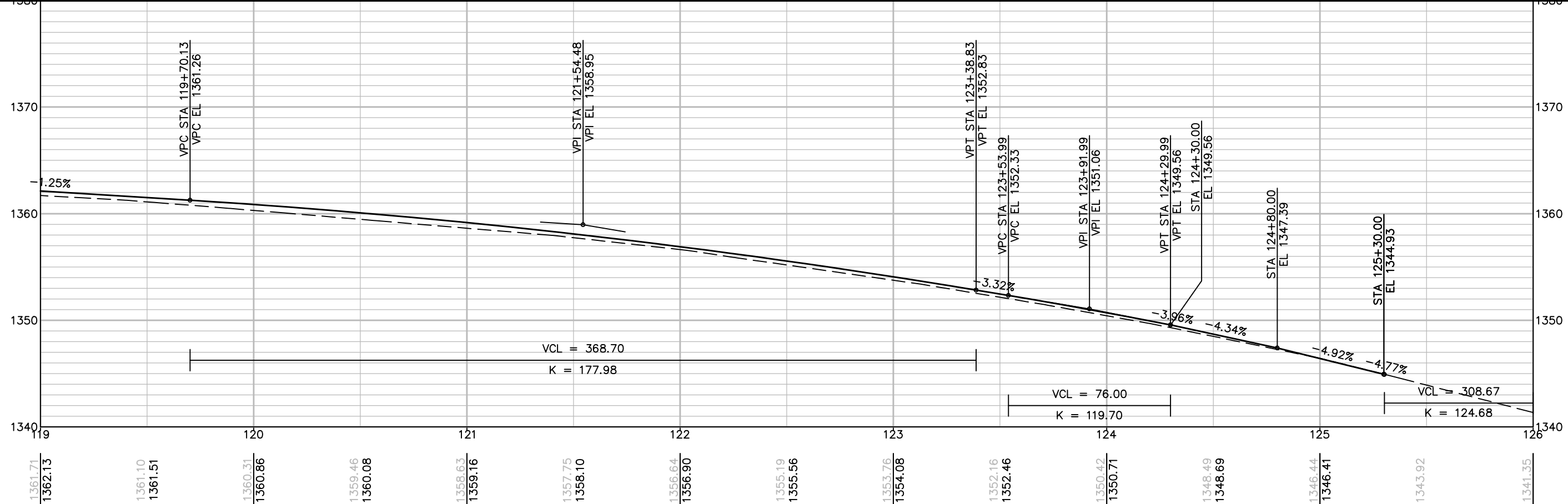
5

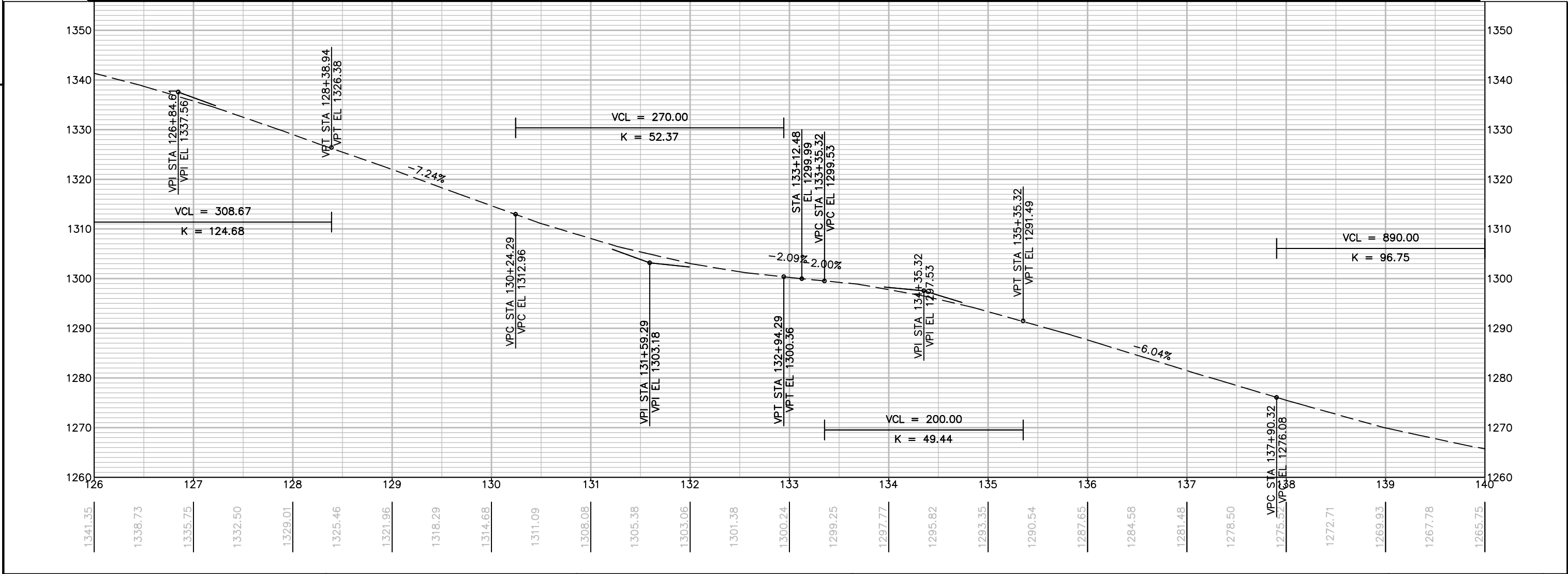
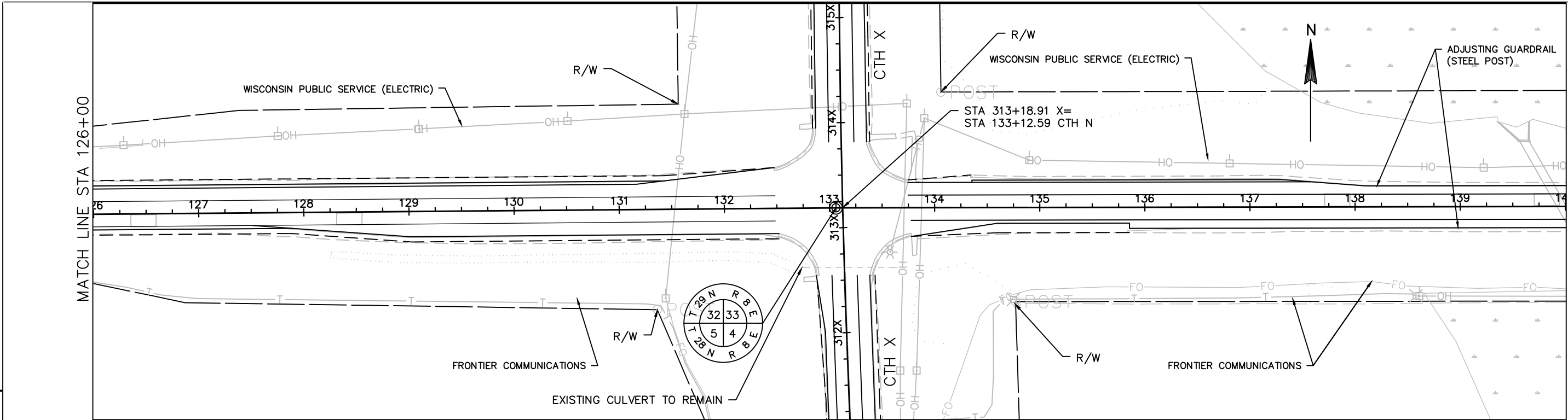


5

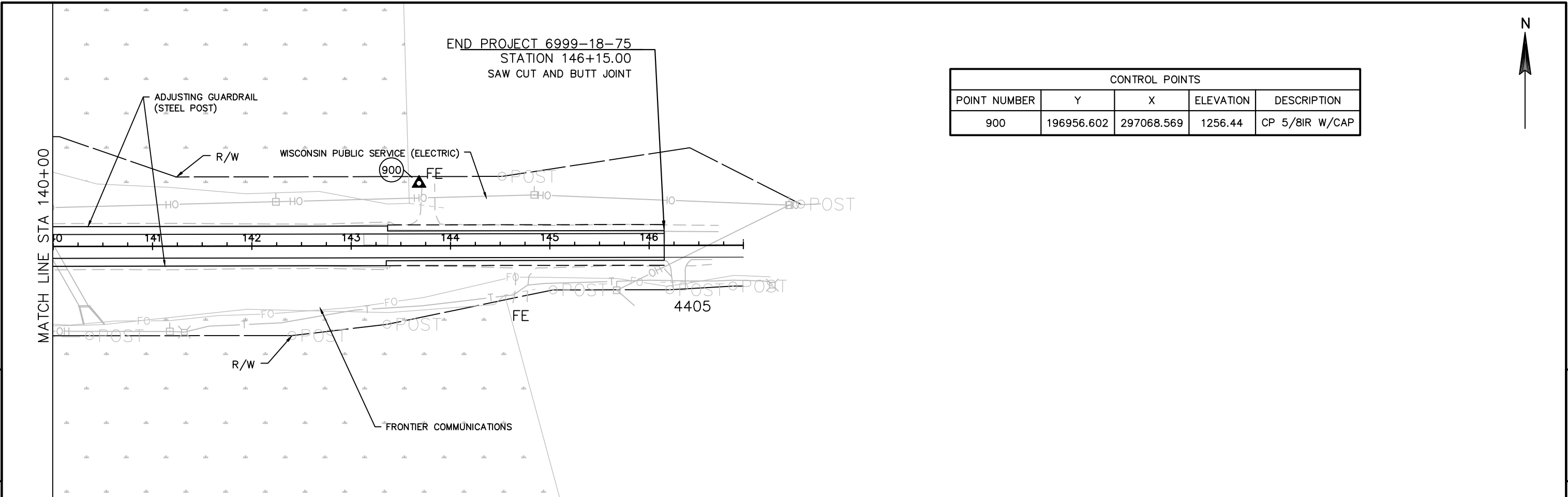


5





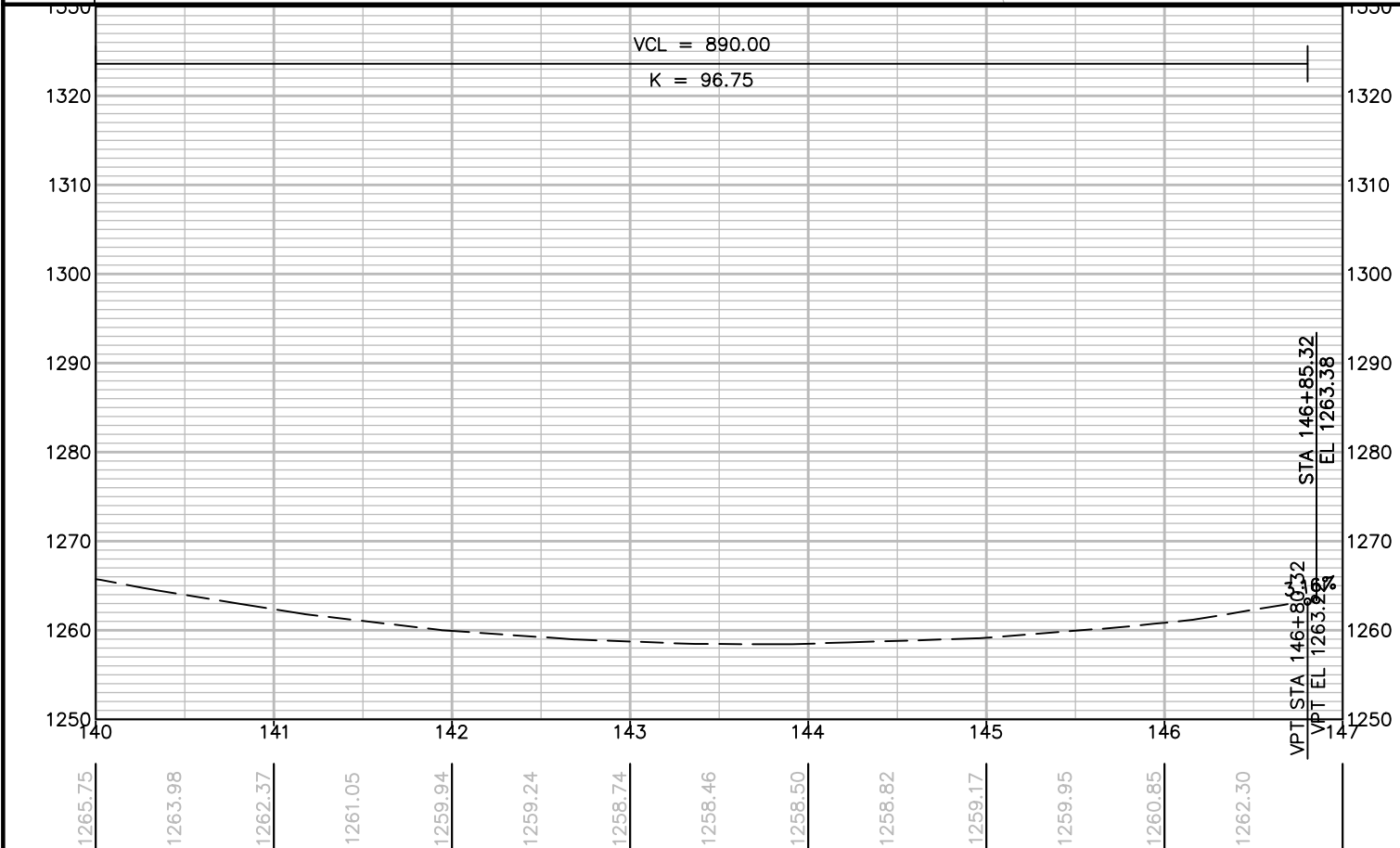
5



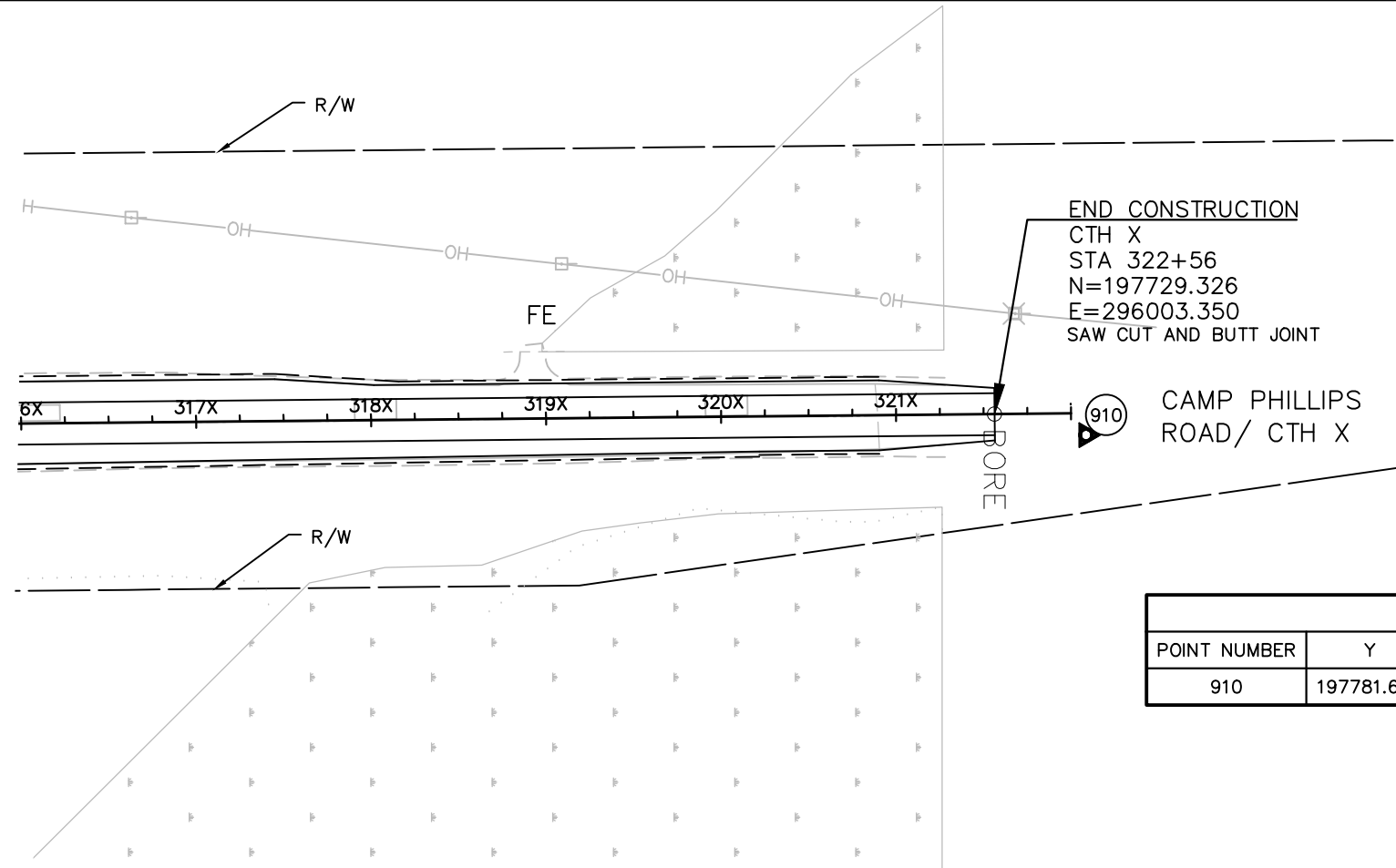
| CONTROL POINTS | | | | |
|----------------|------------|------------|-----------|----------------|
| POINT NUMBER | Y | X | ELEVATION | DESCRIPTION |
| 900 | 196956.602 | 297068.569 | 1256.44 | CP 5/8IR W/CAP |



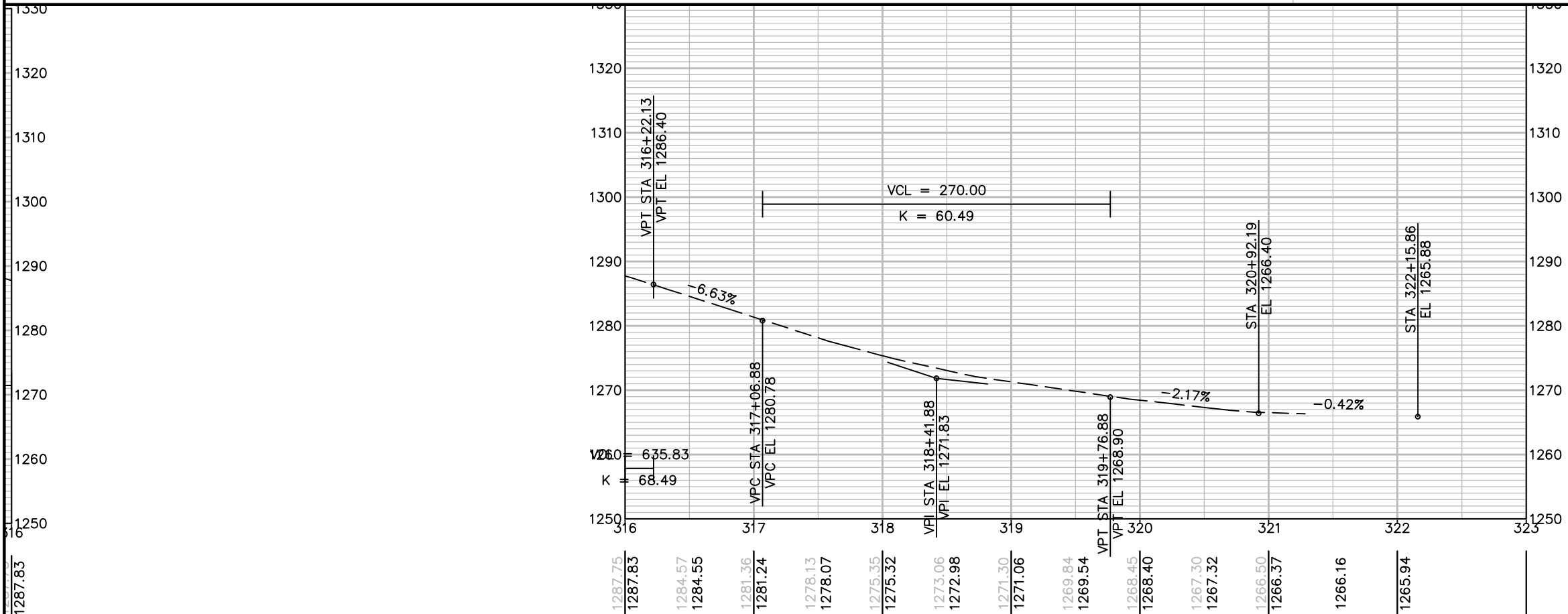
5



| | | | | | |
|-----------------------|-----------|-----------------|-------------------------|-------|---|
| PROJECT NO:6999-18-75 | HWY:CTH N | COUNTY:MARATHON | PLAN AND PROFILE: CTH N | SHEET | E |
|-----------------------|-----------|-----------------|-------------------------|-------|---|

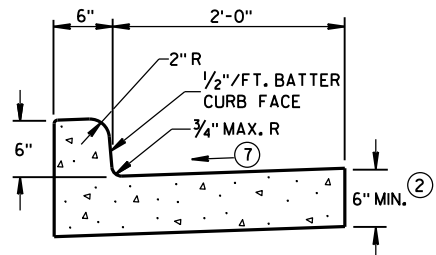


| CONTROL POINTS | | | | |
|----------------|------------|------------|-----------|-------------|
| POINT NUMBER | Y | X | ELEVATION | DESCRIPTION |
| 910 | 197781.688 | 296015.364 | 1265.76 | CP PK NAIL |

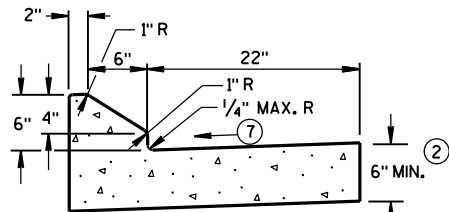


Standard Detail Drawing List

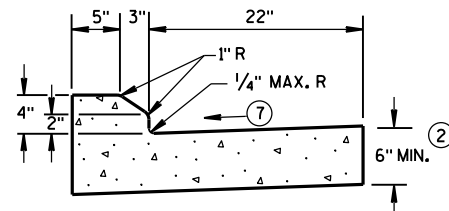
| | |
|-----------|--|
| 08D01-20A | CONCRETE CURB & GUTTER |
| 08D01-20B | CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS |
| 08D04-05 | CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES |
| 08D21-01 | DRIVEWAYS WITHOUT CURB & GUTTER |
| 08D22-01 | DRIVEWAYS WITHOUT CURB & GUTTER RESURFACING PROJECTS RURAL |
| 08E08-03 | TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS |
| 08E09-06 | SILT FENCE |
| 08E14-01 | TRACKING PAD |
| 09A01-13A | AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND D AND TEE INTERSECTION BYPASS LANE |
| 14B15-11A | STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS |
| 14B15-11B | STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS |
| 14B15-11C | STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS |
| 14B24-09A | STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL |
| 14B24-09B | STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL |
| 14B24-09C | STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL |
| 14B29-01 | SAFETY EDGE |
| 15C02-06A | BARRICADES AND SIGNS FOR MAINLINE CLOSURES |
| 15C02-06B | BARRICADES AND SIGNS FOR MAINLINE CLOSURES |
| 15C02-06C | 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 |
| 15C05-05 | TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS |
| 15C07-14B | PAVEMENT MARKING WORDS |
| 15C07-14C | PAVEMENT MARKING ARROWS |
| 15C08-19A | LONGITUDINAL MARKING (MAINLINE) |
| 15C08-19C | PAVEMENT MARKING (TURN LANES) |
| 15C12-06 | TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION |
| 15C19-05A | MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY |
| 15C33-03 | STOP LINE AND CROSSWALK PAVEMENT MARKING |
| 15C35-03A | PAVEMENT MARKING (INTERSECTIONS) |
| 15D38-02A | TEMPORARY TRAFFIC CONTROL SIGN MOUNTING |
| 15D38-02B | ATTACHMENT OF SIGNS TO POSTS |



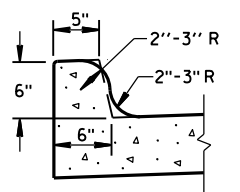
TYPES A^① & D



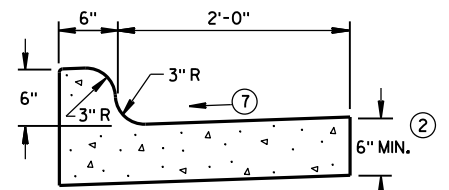
6" SLOPED CURB TYPES G^① & J



4" SLOPED CURB TYPES G^① & J

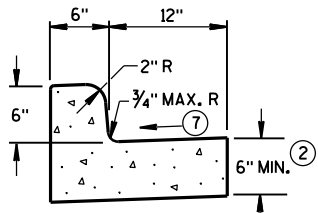


TYPES K^① & L
(OPTIONAL CURB SHAPE)



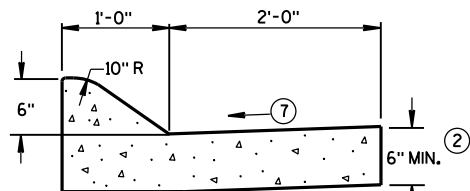
TYPES K^① & L

CONCRETE CURB & GUTTER 30"

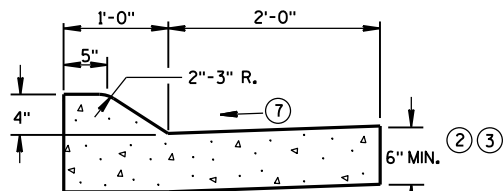


TYPES A^① & D

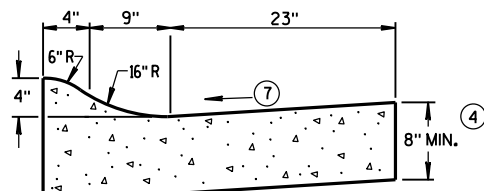
CONCRETE CURB & GUTTER 18"



6" SLOPED CURB TYPES A^① & D

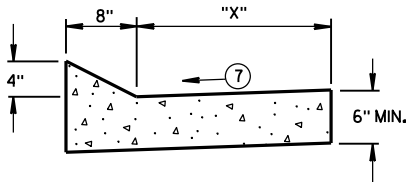


4" SLOPED CURB TYPES A^① & D



4" SLOPED CURB TYPES R^① & T^⑤

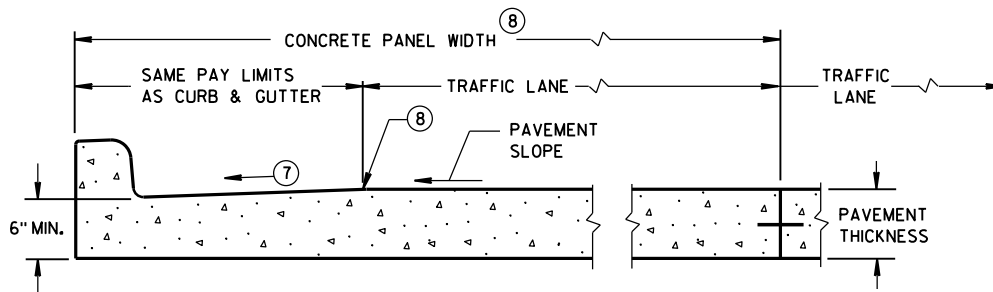
CONCRETE CURB & GUTTER 36"



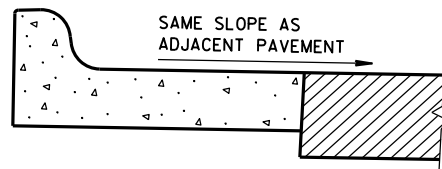
TYPES TBT & TBTT^①

CONCRETE CURB & GUTTER

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



PARTIAL SECTION OF PAVEMENT
WITH INTEGRAL CURB & GUTTER



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

GENERAL NOTES

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

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

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

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

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

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

PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

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

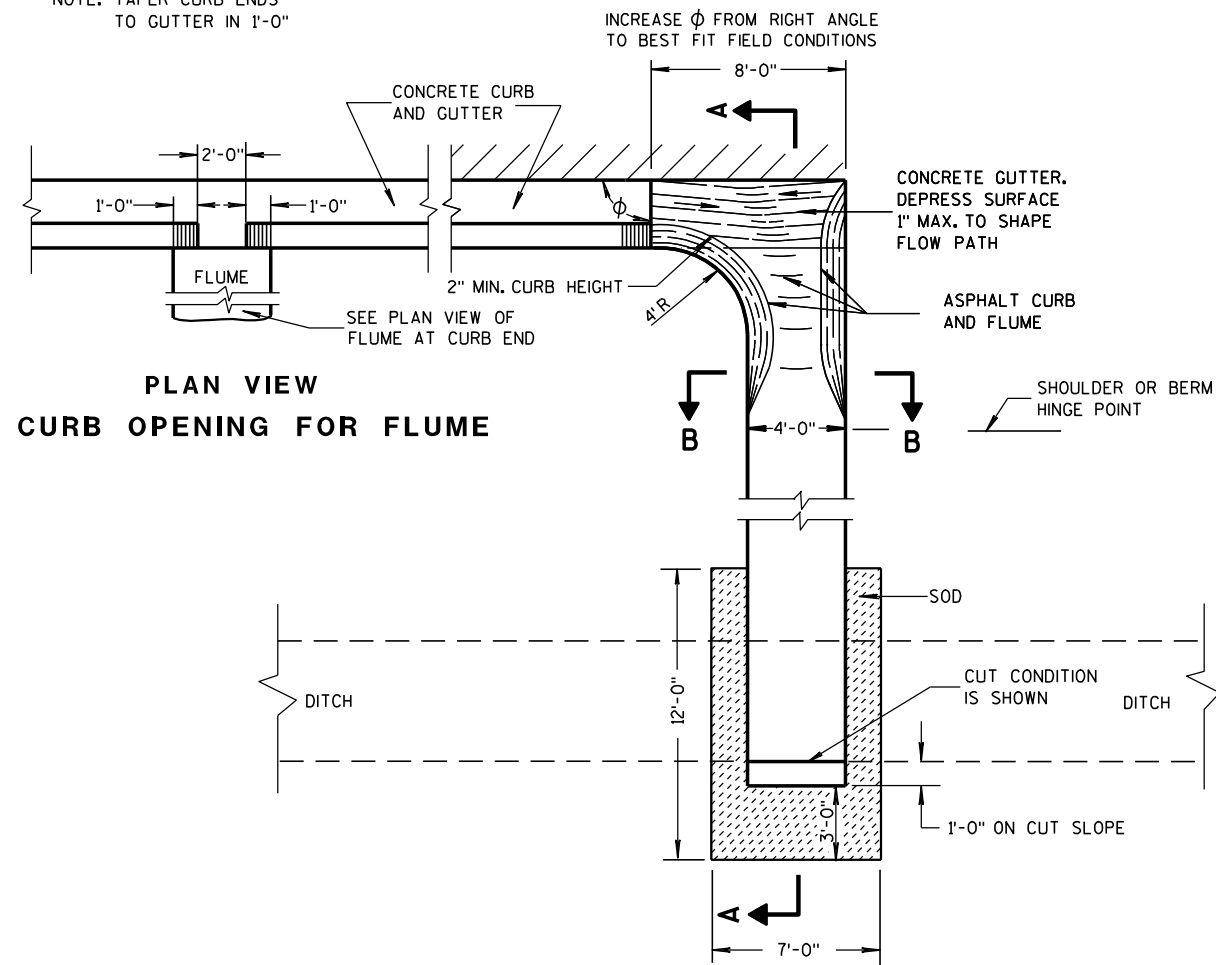
* BIKE LANE IS NOT SHOWN.

CONCRETE CURB & GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

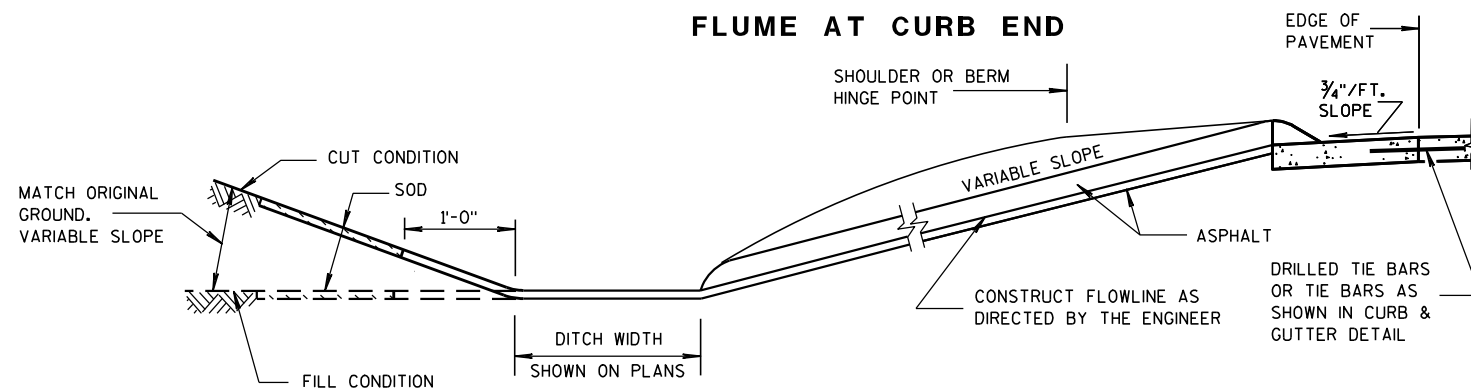
ASPHALTIC FLUME

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

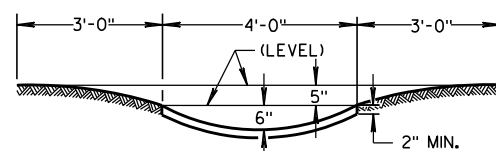


PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



SECTION A-A



SECTION B-B

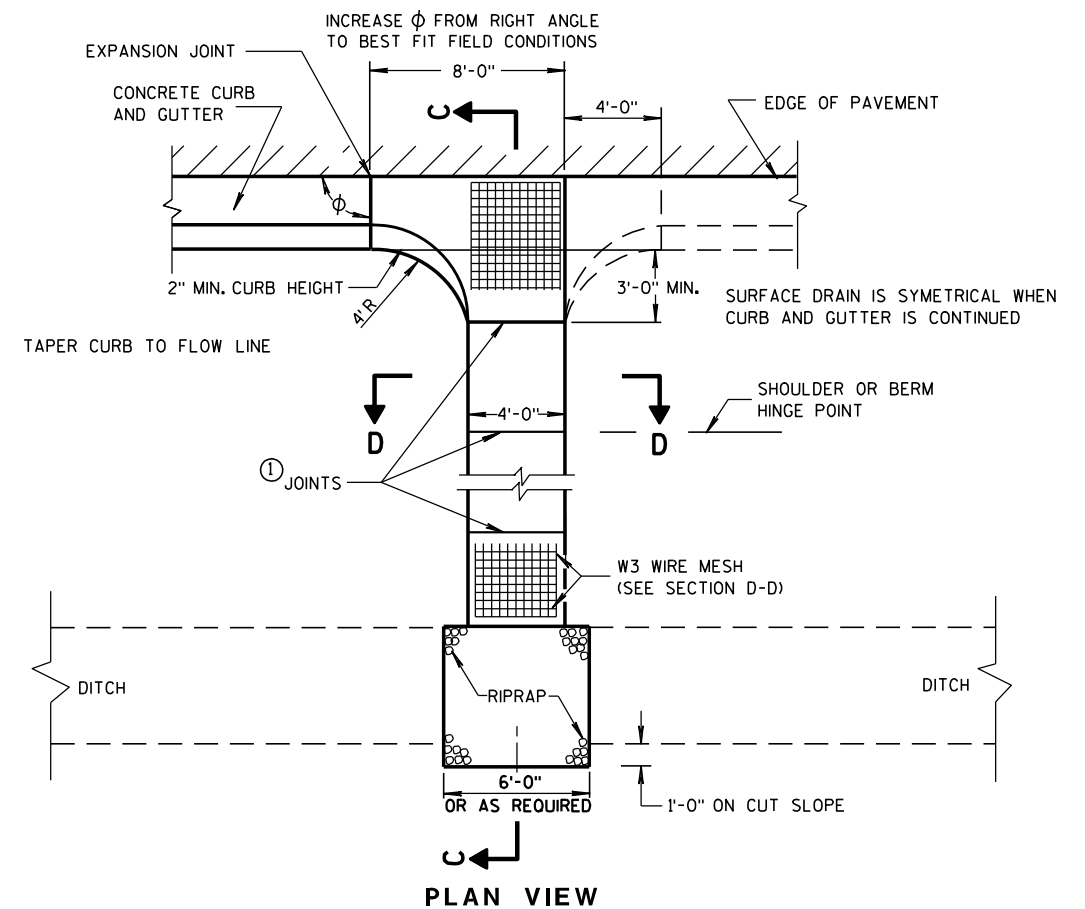
GENERAL NOTES

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

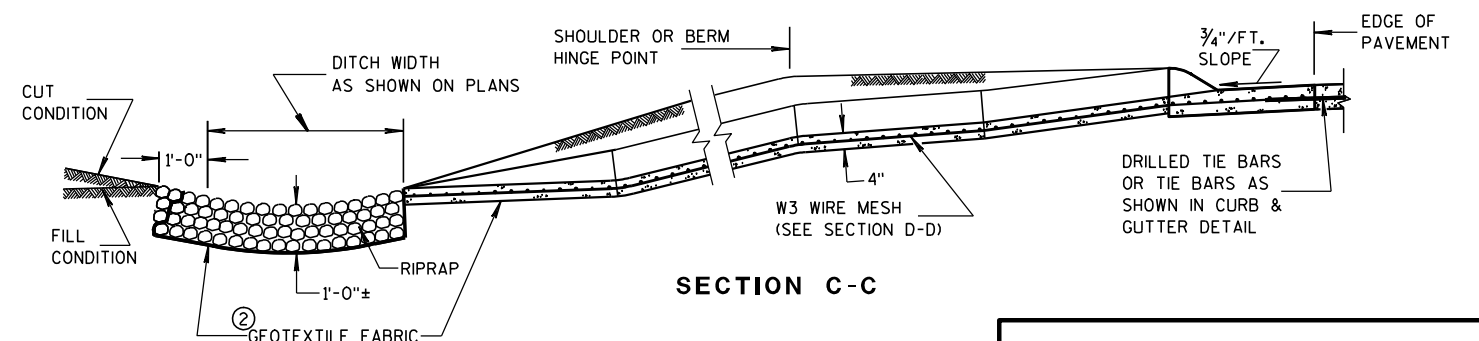
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

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

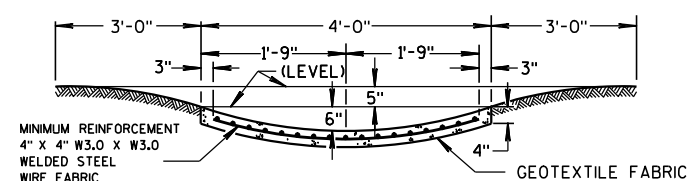
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

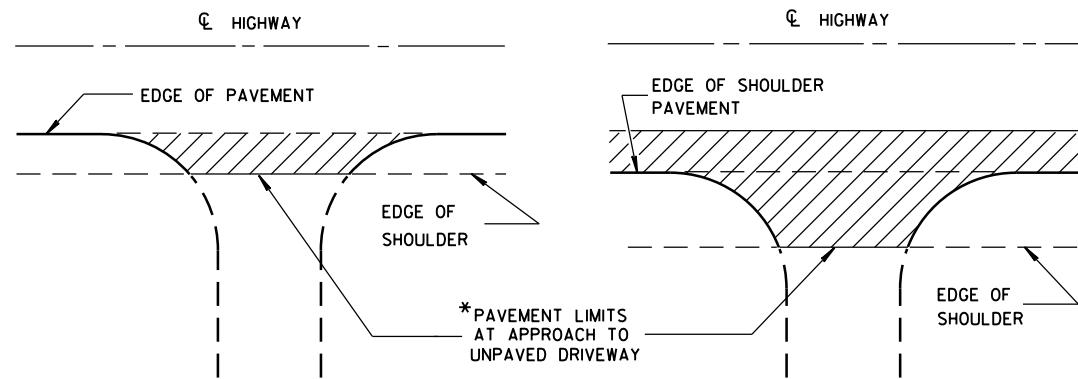
APPROVED

9-4-08

DATE

FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

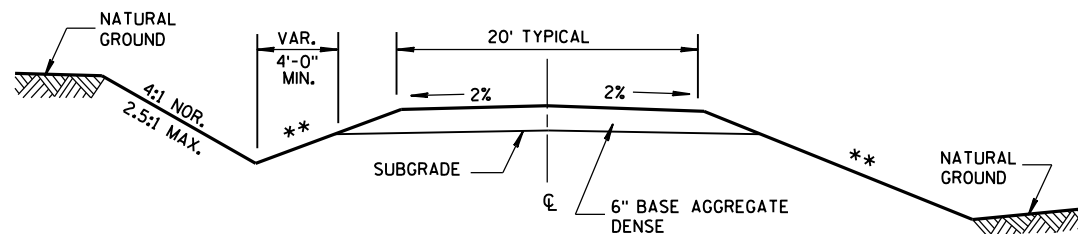


*WHERE DRIVEWAY IS PAVED, APPROACH PAVEMENT SHOULD BE EXTENDED TO MATCH DRIVEWAY PAVEMENT.

PLAN VIEW
(UNPAVED SHOULDER ON HIGHWAY)

PLAN VIEW
(PAVED SHOULDER ON HIGHWAY)

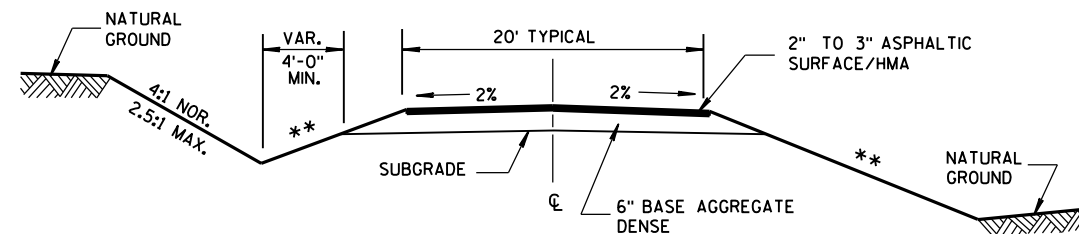
RURAL DRIVEWAY INTERSECTION DETAIL
(NO CURB & GUTTER OR SIDEWALK)



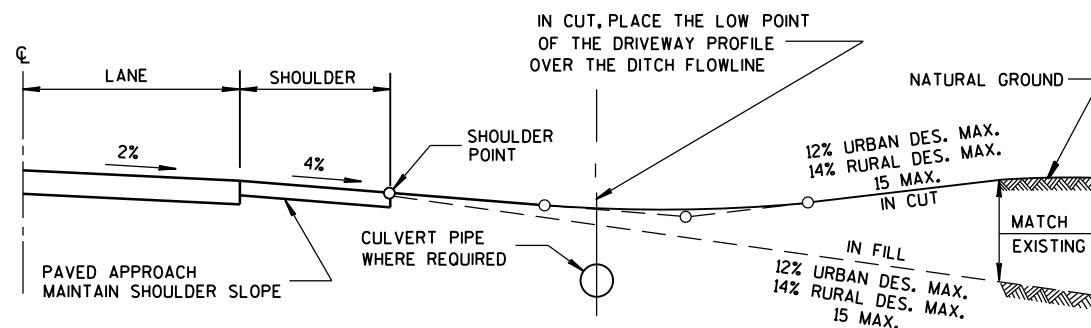
**TYPICAL CROSS SECTION FOR
PRIVATE DRIVE OR FIELD ENTRANCE
AGGREGATE SURFACE**

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

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



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

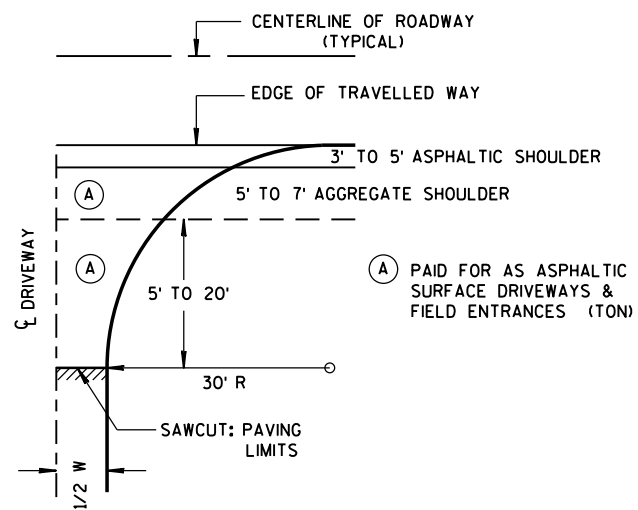


TYPICAL DRIVEWAY PROFILES

**DRIVEWAYS
WITHOUT CURB & GUTTER**

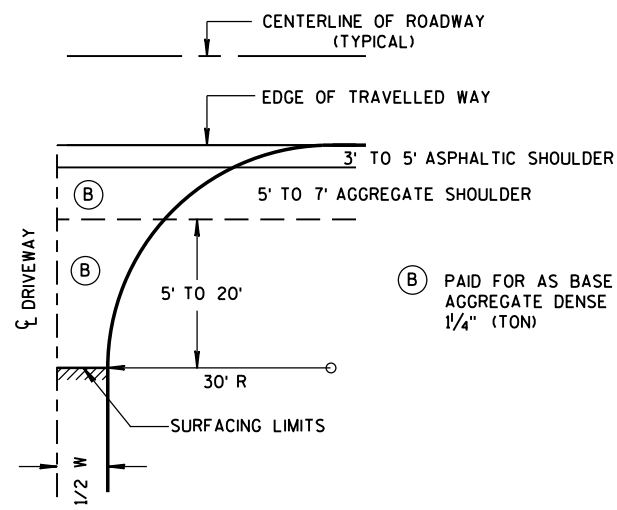
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



PLAN VIEW
HALF SECTION

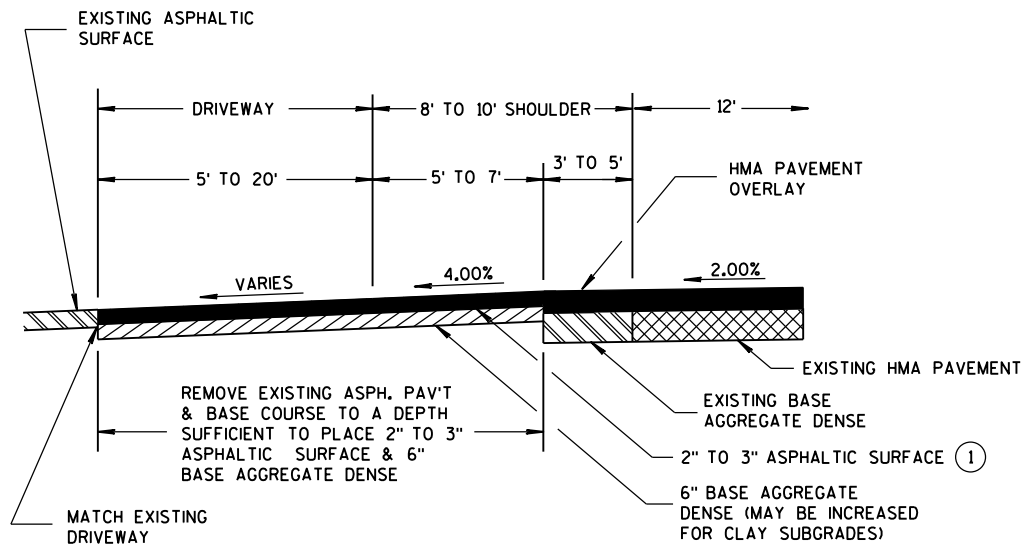
W MIN. = 16'
W MAX. = 24'



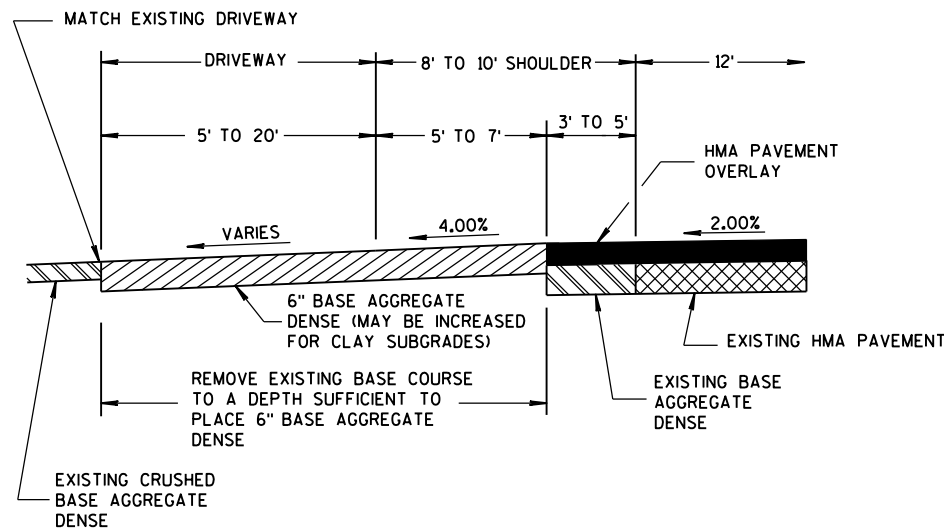
PLAN VIEW
HALF SECTION

GENERAL NOTES

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



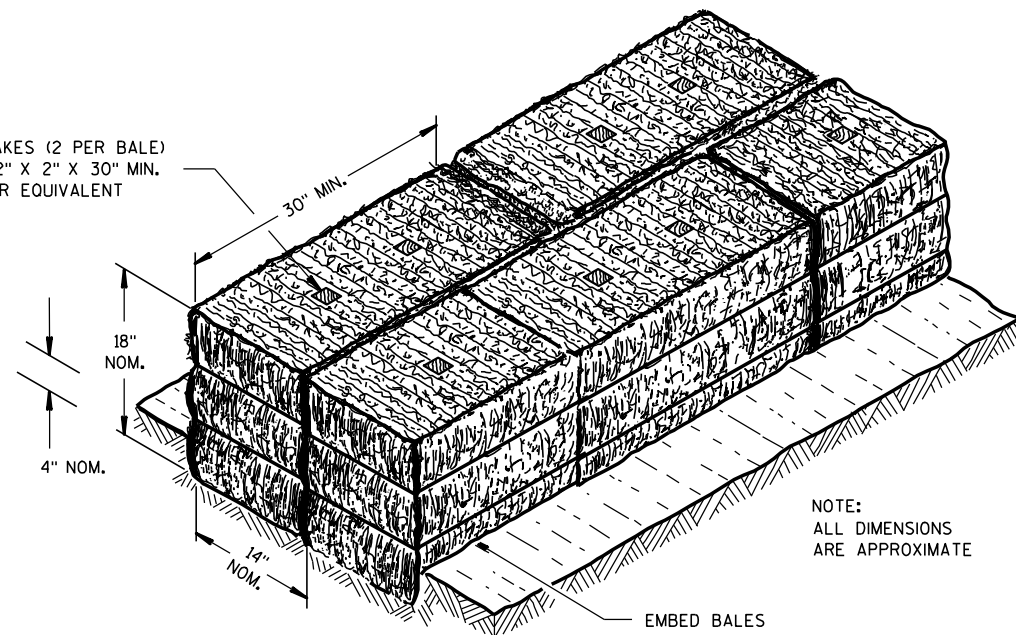
PROFILE VIEW
RURAL ENTRANCE
WITH ASPHALTIC SURFACE
RESURFACING PROJECTS



PROFILE VIEW
RURAL ENTRANCE
WITH AGGREGATE SURFACE
6" BASE AGGREGATE DENSE
RESURFACING PROJECTS

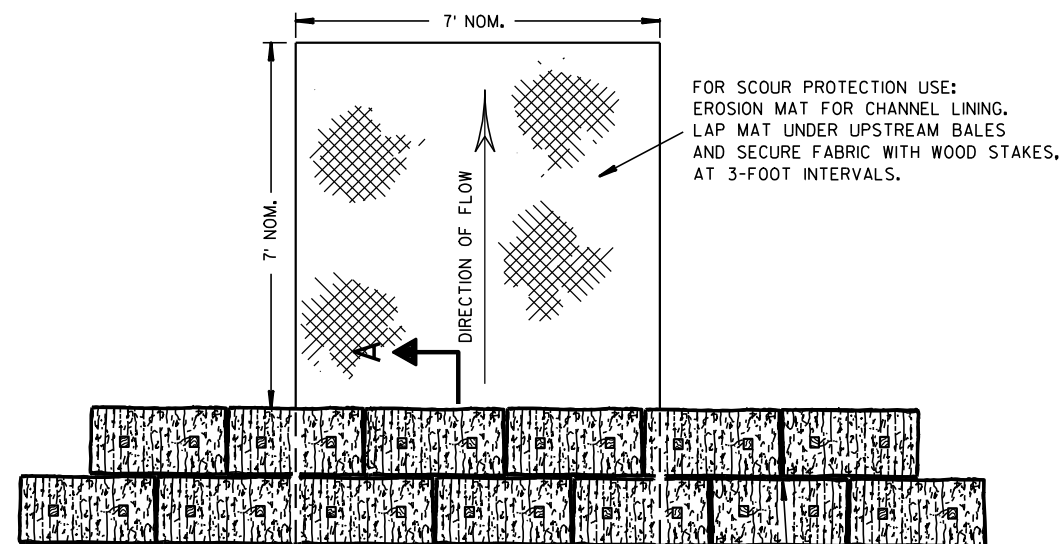
| DRIVEWAYS WITHOUT CURB & GUTTER RESURFACING PROJECTS RURAL | |
|--|---|
| STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION | |
| APPROVED December, 2016 DATE | /S/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR FHWA |

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



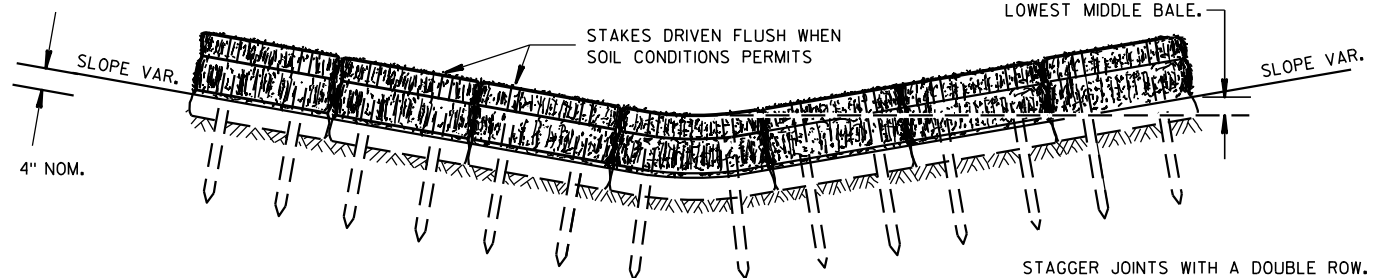
NOTE:
ALL DIMENSIONS
ARE APPROXIMATE

SECTION A-A



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

PLAN VIEW



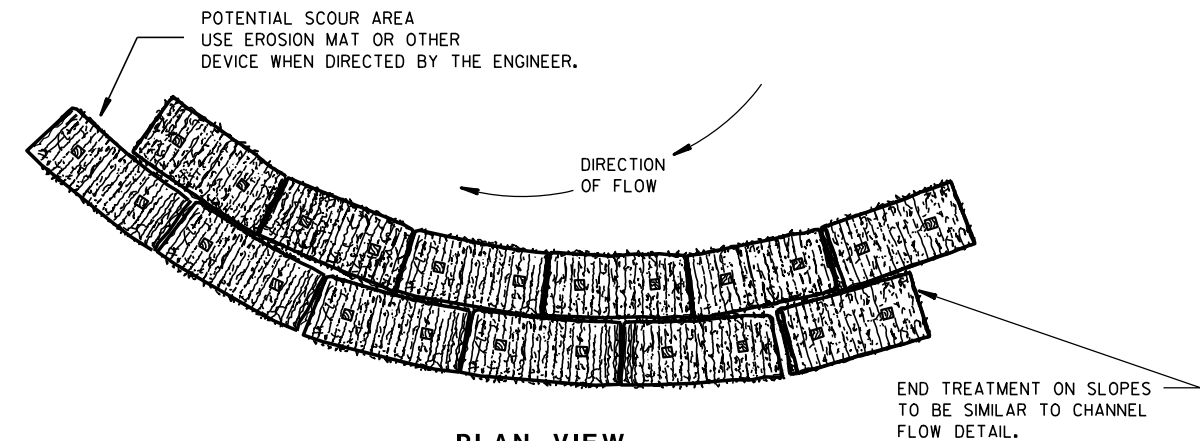
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

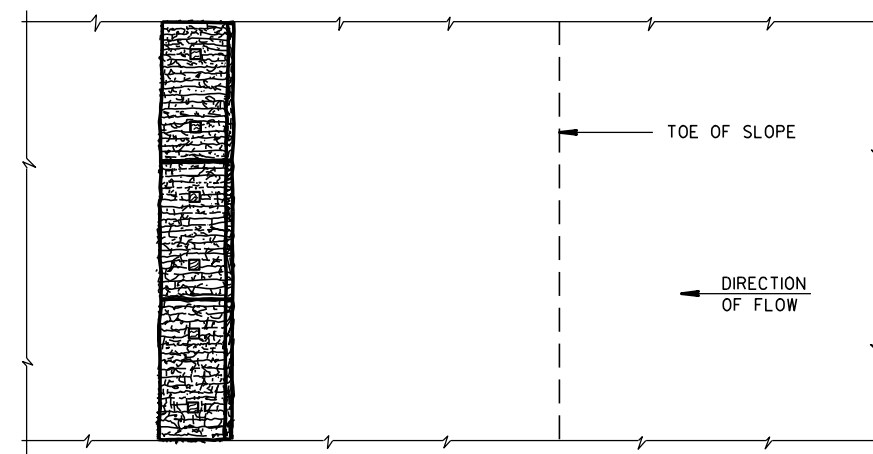
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

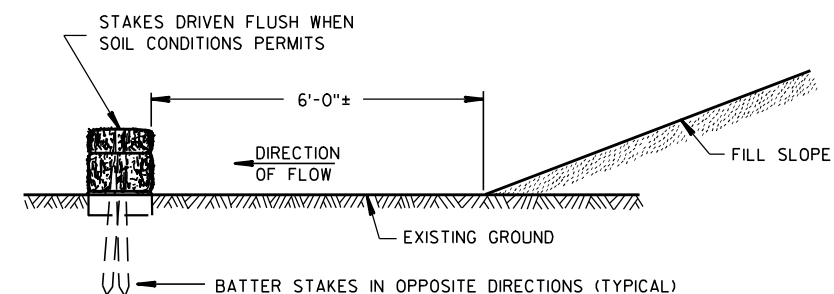


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/04/02
DATE

/S/ Beth Canestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

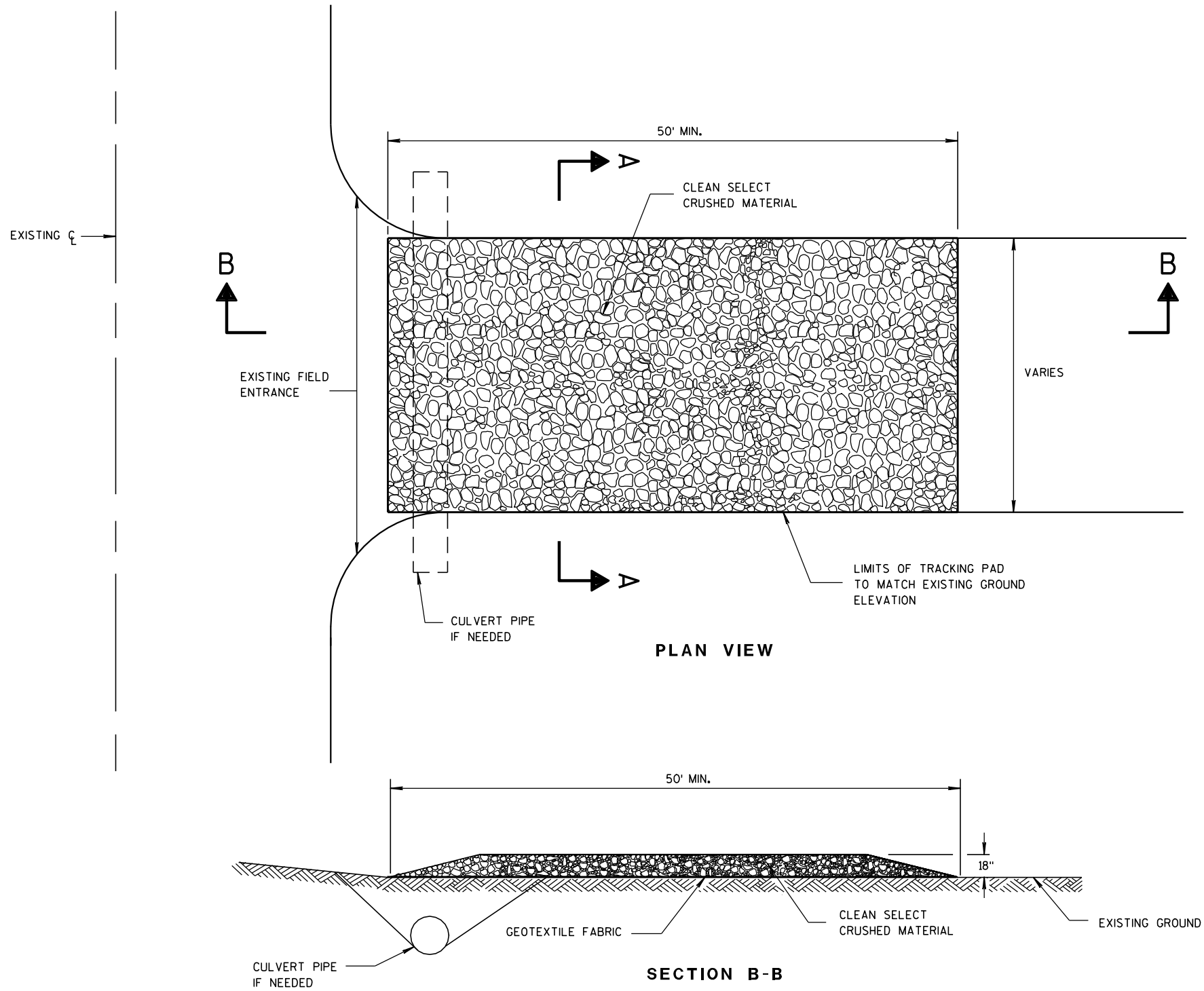
FHWA



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



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



TRACKING PAD

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.

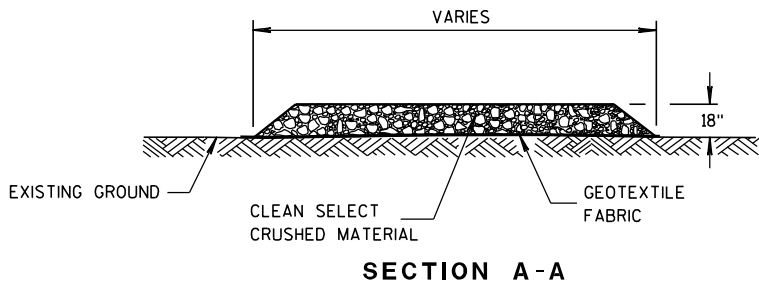
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

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.

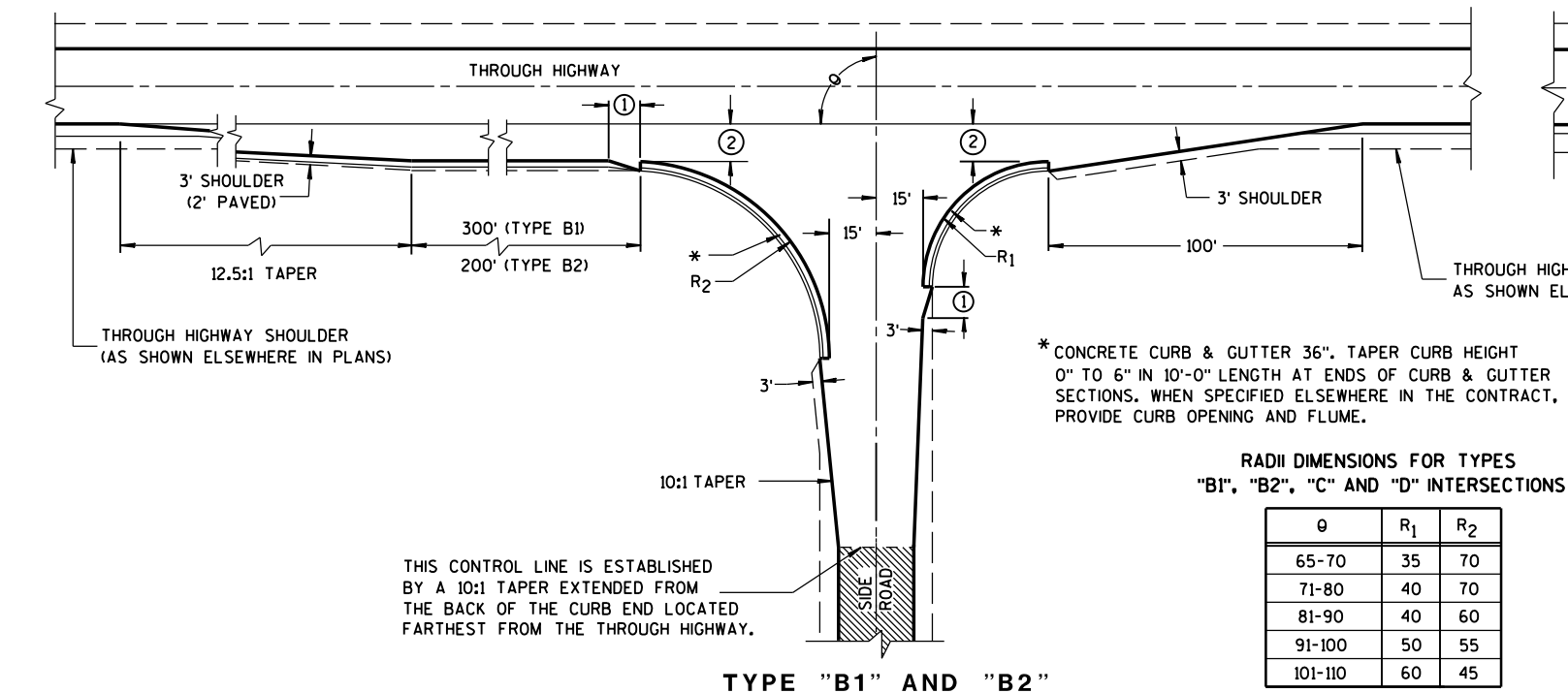
THE COST OF ADDITIONAL BMP TO DIVERT WATER ARE INCIDENTAL TO THE TRACKING PAD BID ITEM.



TRACKING PAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



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

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

GENERAL NOTES

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

SIDE ROAD SURFACING NOTE

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

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

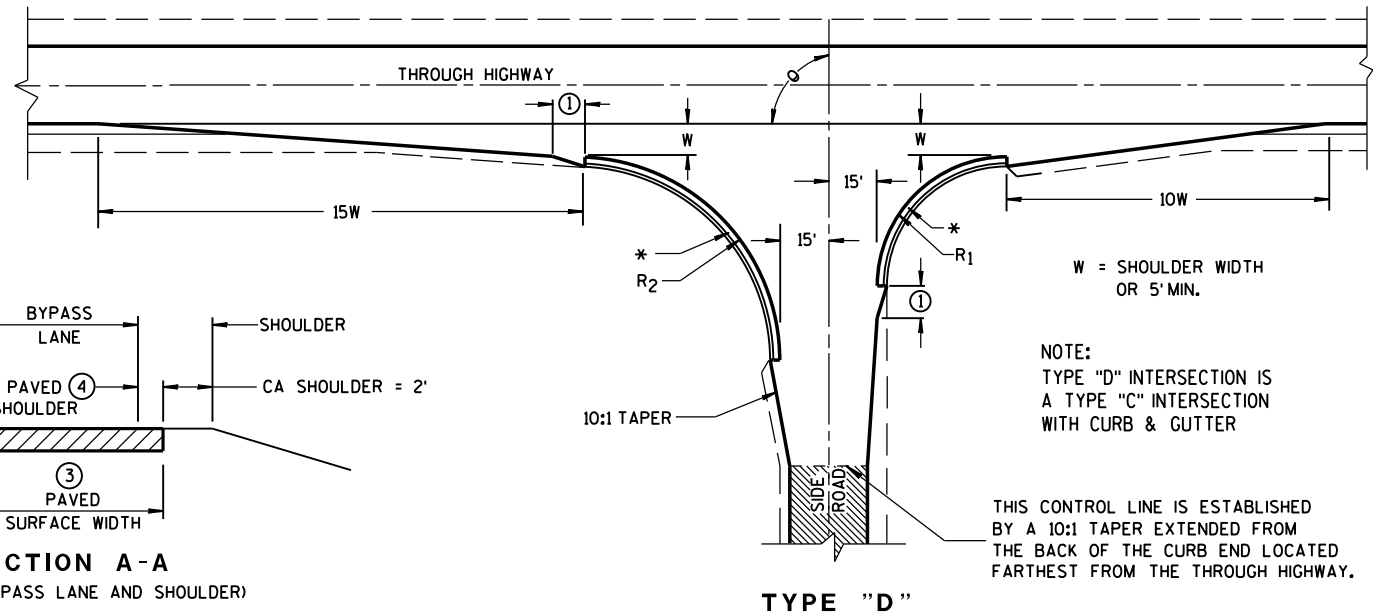
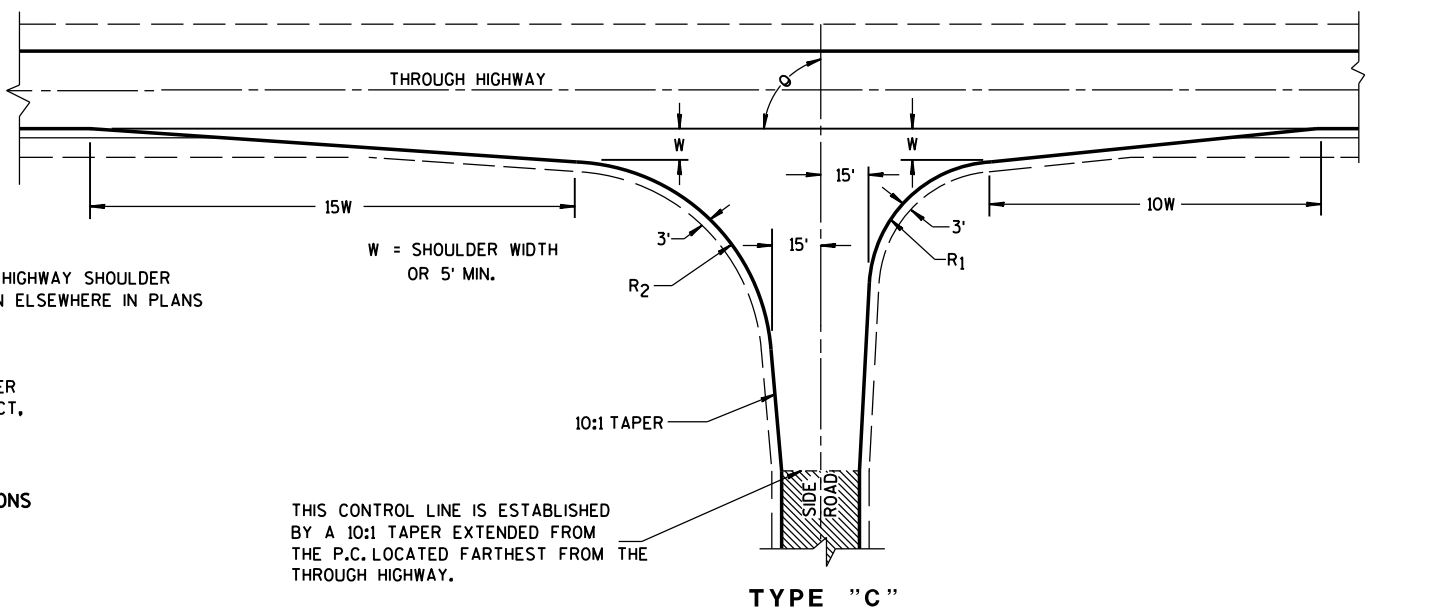
WHEN THE SIDE ROAD IS THE CONSTRUCTION PROJECT, THE INTERSECTION SURFACING SHALL BE THE SAME AS FOR THE PROJECT.

EXISTING PAVED SURFACE

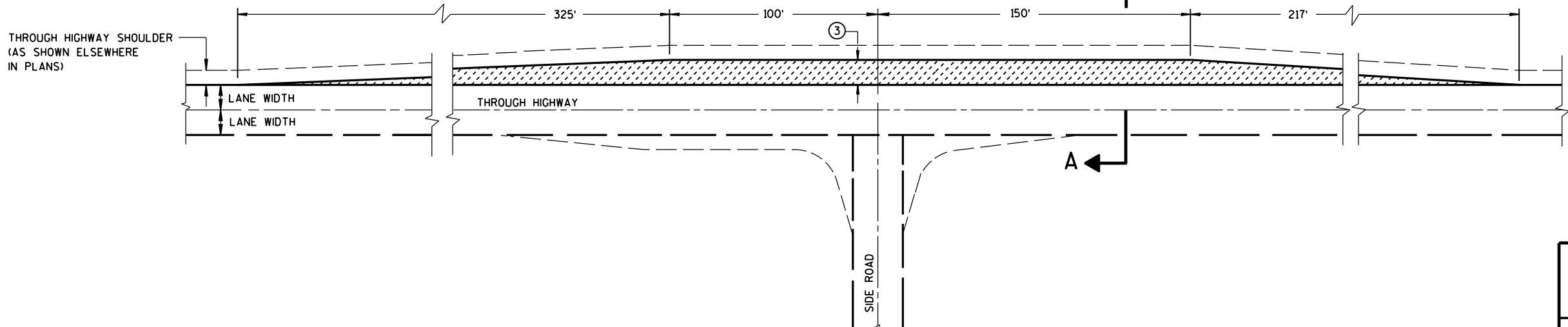
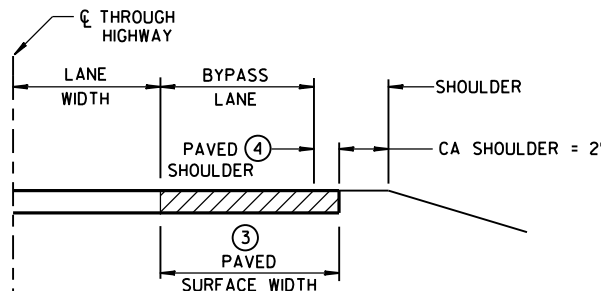
BYPASS LANE

- 10-FT TYPICAL.
- 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.
- BYPASS LANE PAVED SURFACE WIDTH OUTSIDE OF TRAVEL LANE
-ASPHALT = 12-FT PLUS PAVED SHOULDER WIDTH.
-PC CPNCRETE = 13-FT PLUS PAVED SHOULDER WIDTH.
- BYPASS LANE PAVED SHOULDER WIDTH = THE GREATER OF 1-FT OR THE PAVED SHOULDER WIDTH OF THE THROUGH HIGHWAY.



NOTE:
TYPE "D" INTERSECTION IS A TYPE "C" INTERSECTION WITH CURB & GUTTER



TEE INTERSECTION BYPASS LANE DETAIL

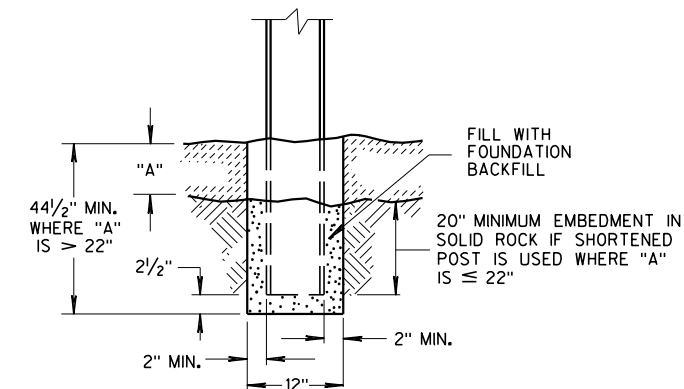
AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND "D" AND TEE INTERSECTION BYPASS LANE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

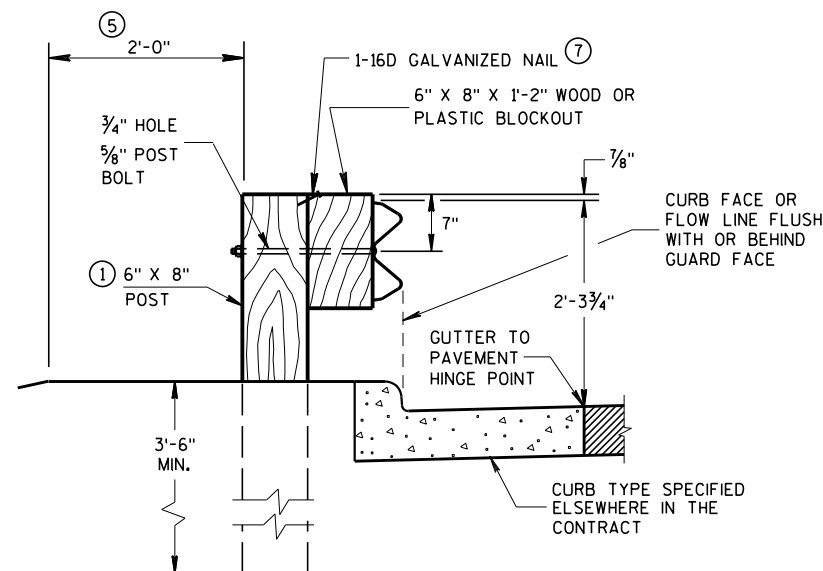
GENERAL NOTES

- W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POSTS WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS. APPROVED PLASTIC BLOCKOUT DESIGNS MAY VARY FROM THIS TYPICAL DETAIL WHEN USED IN CONJUNCTION WITH STEEL POSTS. DO NOT MIX STEEL POSTS AND WOOD POSTS IN A SINGLE INSTALLATION.
- USE STRUCTURAL STEEL POSTS CONFORMING TO ASTM A 36. GALVANIZED POSTS ACCORDING TO AASHTO M 111. EITHER SET THE POSTS IN DRILLED HOLES OR DRIVE TO GRADE. REMOVE MUSHROOMING CAUSED BY DRIVING AND REPAIR DAMAGED SPELTER COATING ON GALVANIZED POSTS.
- INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.
- USE EITHER WOOD OR APPROVED PLASTIC BLOCKOUTS ON WOOD POSTS.
- IF THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING, W BEAM (LHW).
- IF ROCK IS ENCOUNTERED DURING EXCAVATION, THE ENGINEER MAY APPROVE USING A 12 INCH DIAMETER POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE APPROXIMATELY 2 1/2 INCHES DEEP. CUT THE POSTS TO LENGTH AND PLACE IN THE HOLE. BACKFILL WITH MATERIAL EXCAVATED FROM THE HOLE AND COMPACT ADEQUATELY.
- 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.

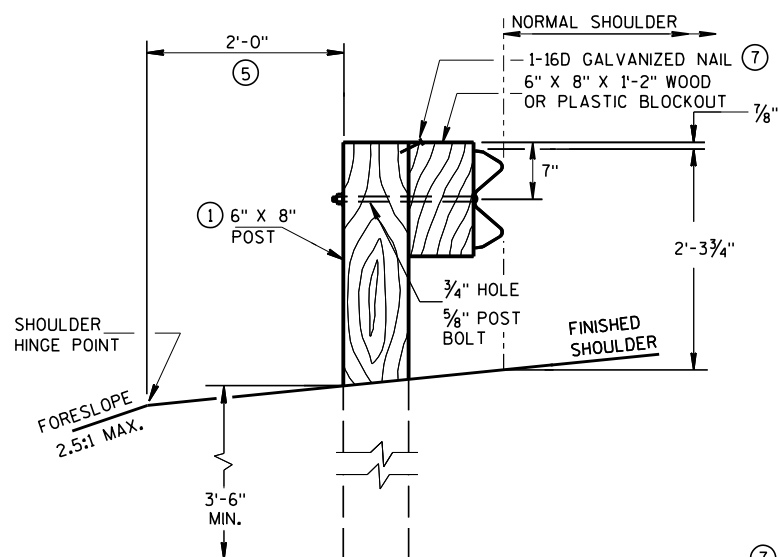
INSTALL BEAM GUARD SECTIONS AND ALL NECESSARY HARDWARE ACCORDING TO THE APPLICABLE PLAN AND CURRENT STANDARD AND SUPPLEMENTAL SPECIFICATIONS. ALL DIMENSIONS ARE SUBJECT TO MANUFACTURER'S TOLERANCES EXCEPT WHERE ALLOWABLE TOLERANCES ARE SHOWN.



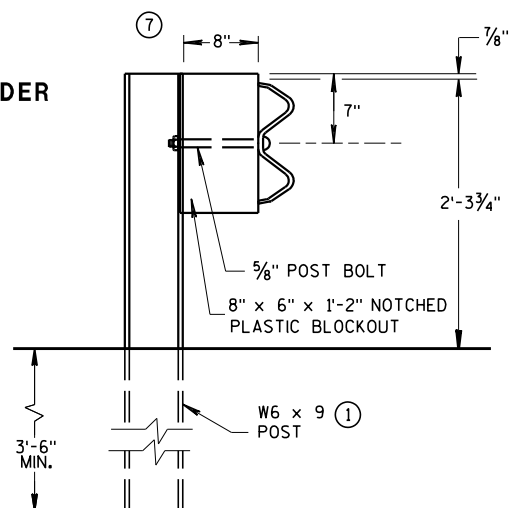
END VIEW
SETTING STEEL OR WOOD POST IN ROCK ⑥



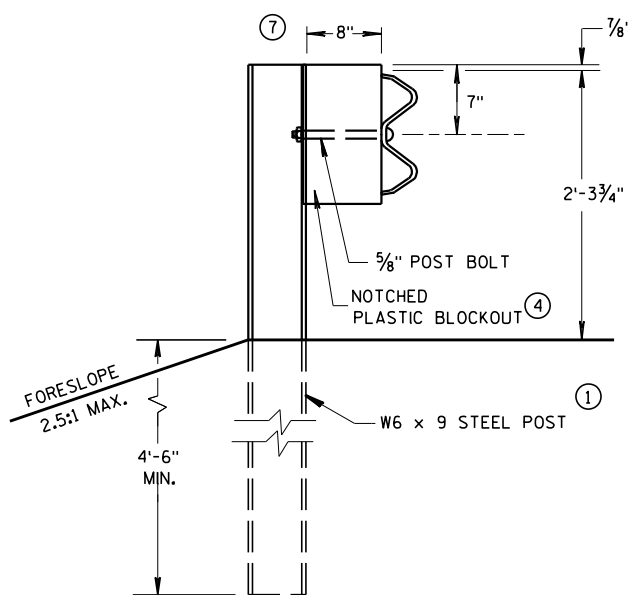
END VIEW
LOCATED ALONG A CURBED ROADWAY



END VIEW
LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION

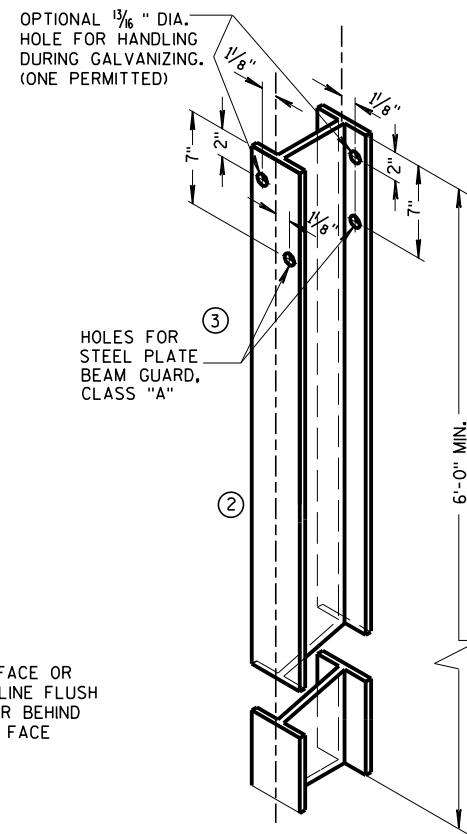


END VIEW
STEEL POST & NOTCHED
PLASTIC BLOCKOUT ALTERNATIVE
STANDARD INSTALLATION



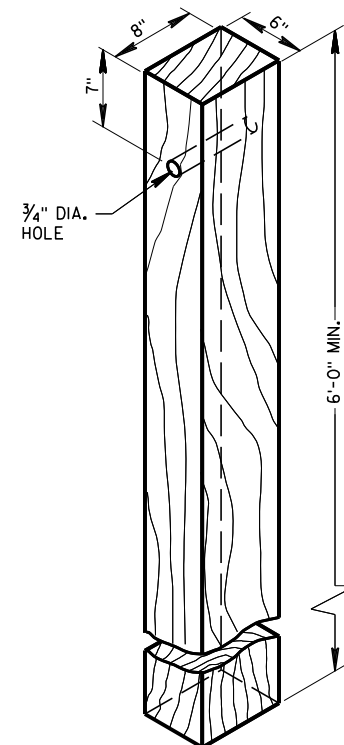
END VIEW
LONGER POST AT HALF
POST SPACING W BEAM
(LHW)

TYPICAL INSTALLATION OF STEEL PLATE BEAM GUARD

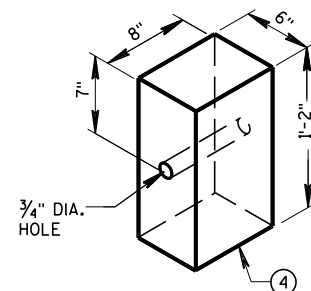


STEEL POST &
HOLE PUNCHING DETAIL
(W6 X 9) ①

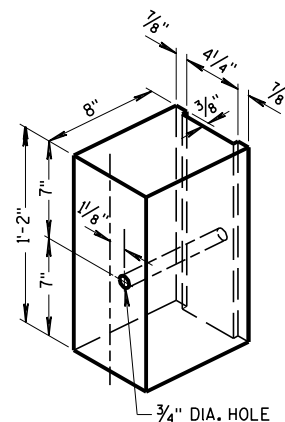
ALL HOLES 1/8" DIAMETER EXCEPT AS NOTED



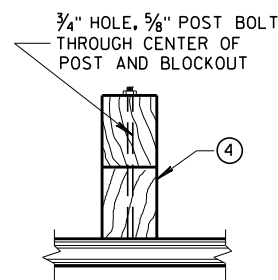
WOOD POST
(6" X 8") NOMINAL



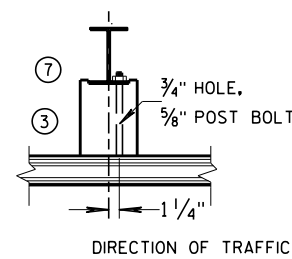
WOOD OR PLASTIC
BLOCKOUT FOR
WOOD POSTS



TYPICAL NOTCHED
PLASTIC BLOCKOUT
FOR STEEL POSTS ①



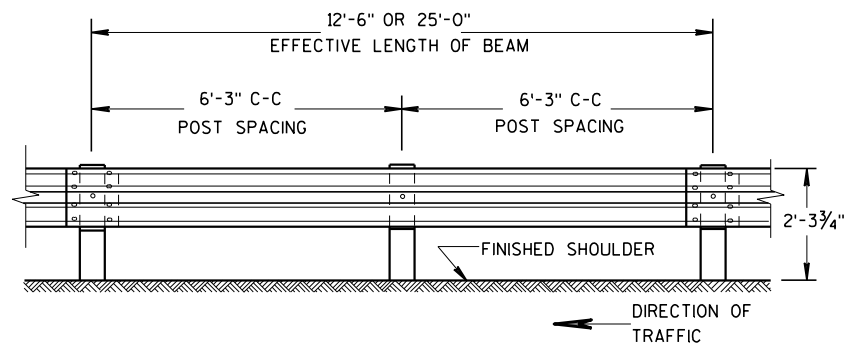
PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, NOTCHED
PLASTIC BLOCKOUT & BEAM

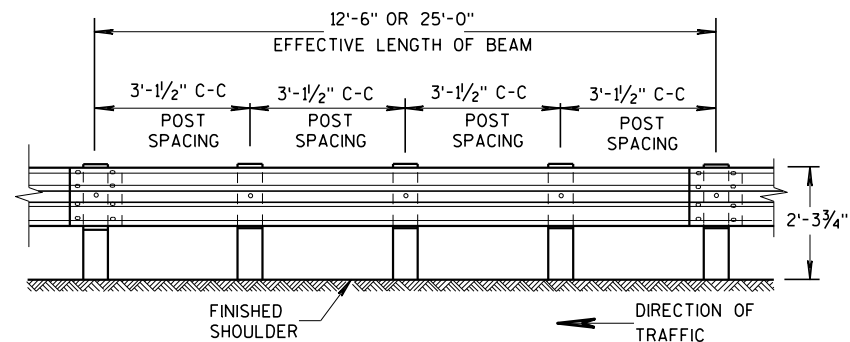
STEEL PLATE BEAM GUARD,
CLASS "A"
INSTALLATION & ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



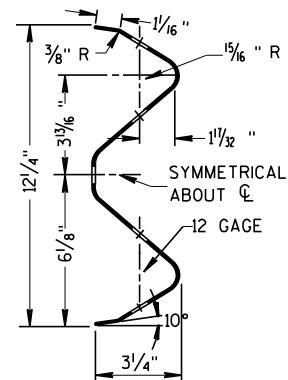
FRONT VIEW

POST SPACING STANDARD INSTALLATION

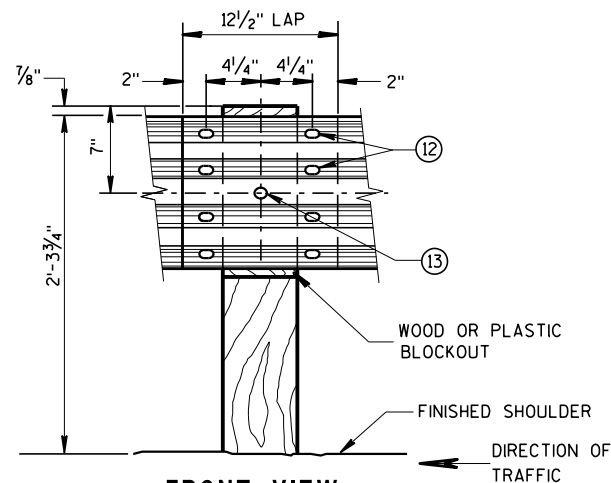


FRONT VIEW

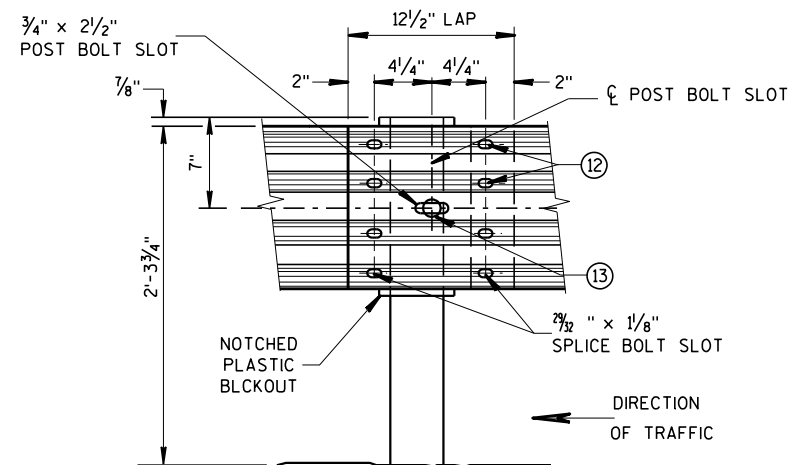
POST SPACING FOR LONGER POST
AT HALF POST SPACING W BEAM (LHW)



SECTION THRU W BEAM



FRONT VIEW
BEAM SPLICE AT WOOD POST
AND POST MOUNTING DETAIL

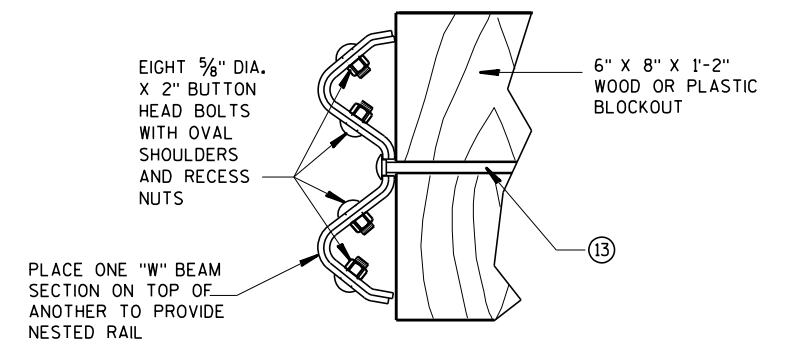


FRONT VIEW
BEAM SPLICE AT STEEL POST
TYPICAL SPlicing DETAILS
OF STEEL PLATE BEAM GUARD

GENERAL NOTES

FURNISH GUARDRAIL DEFLECTORS FROM APPROVED PRODUCTS LIST.

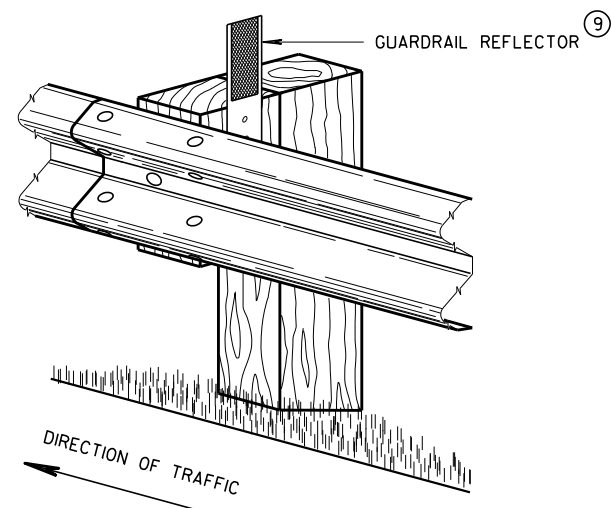
- ⑨ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINA. START REFLECTORS AT POST #9 AND SPACE EVENLY EVERY 100 FEET (MAX.) TO THE END OF GUARDRAIL RUN, USING A MINIMUM OF 3 REFLECTORS.
- ⑫ 8 - 5/8" ϕ X 2" BUTTON HEAD BOLTS WITH OVAL SHOULDERS & RECESS NUTS.
- ⑬ 5/8" DIA. BUTTON HEAD BOLT AND RECESS NUT WITH 5/8" DIA. F844 FLAT WASHER UNDER NUT.



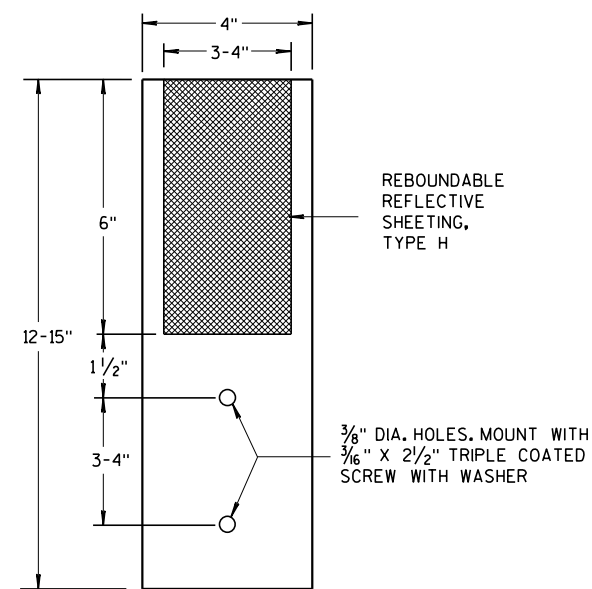
NESTED W BEAM (NW)

USE ALL OTHER STANDARD BEAM GUARD DETAILS FOR
CONSTRUCTING NESTED W BEAM (NW)

* USE DOUBLE SIDED WHITE GUARDRAIL REFLECTORS ON ROADWAYS WITH BI-DIRECTIONAL TRAFFIC (NO MEDIAN). USE SINGLE SIDED WHITE (RIGHT SIDE) AND SINGLE SIDED YELLOW (LEFT SIDE) ON ROADWAYS WITH MEDIAN SEPARATION.



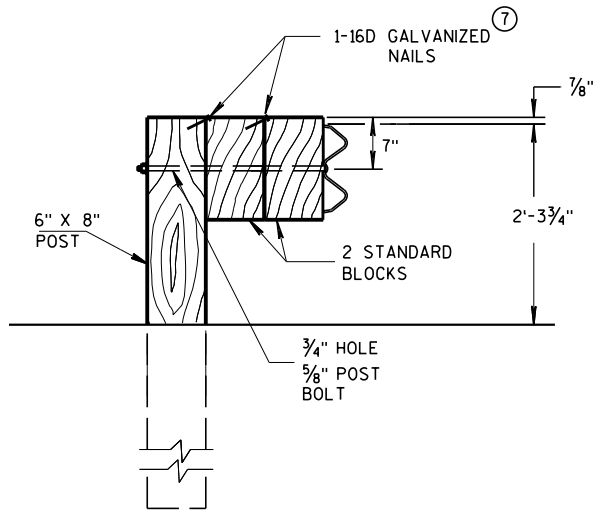
4" X 12" GUARDRAIL REFLECTOR DETAIL
AND TYPICAL INSTALLATION *



4"x 12" GUARDRAIL REFLECTOR

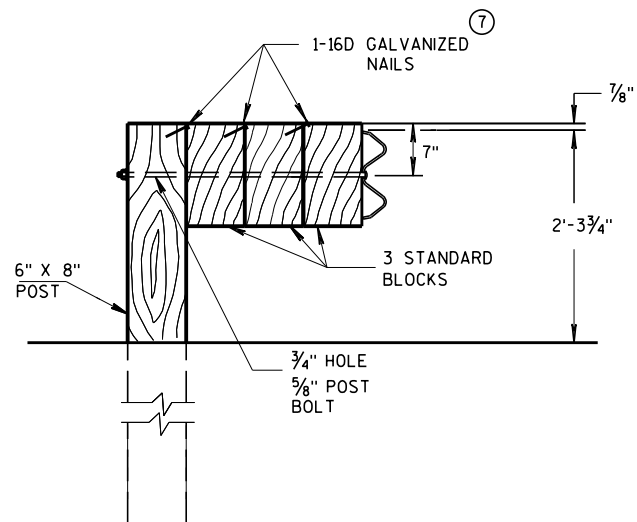
STEEL PLATE BEAM GUARD,
CLASS "A",
INSTALLATION & ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



DETAIL FOR DOUBLE BLOCKS

THE NUMBER OF DOUBLE BLOCK POSTS
WITHIN A BARRIER RUN IS UNLIMITED

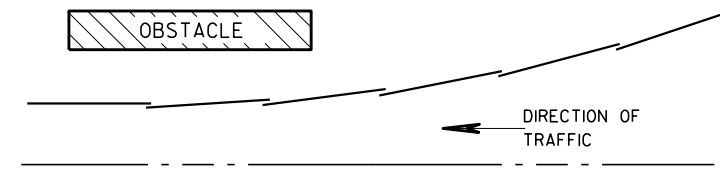


DETAIL FOR TRIPLE BLOCKS

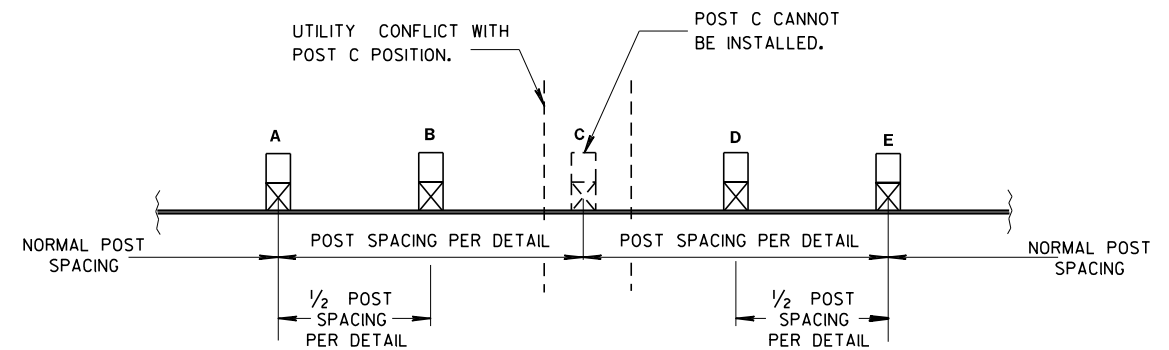
TRIPLE BLOCK DETAIL IS LIMITED TO ONE
LOCATION WITHIN A BEAM GUARD RUN.

NOTES: USE DOUBLE OR TRIPLE BLOCKS WHEN UNDERGROUND OBSTACLES
PREVENT THE POST FROM BEING INSTALLED.

DO NOT USE EXTRA 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.



PLAN VIEW BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION

STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2017

DATE

FHWA

/S/ Rodney Taylor

ROADWAY STANDARDS DEVELOPMENT

UNIT SUPERVISOR

BILL OF MATERIALS

| NOTE NO. | DESCRIPTION |
|----------|--|
| ① | WOOD BREAKAWAY TERMINAL POST: 5 1/2" X 7 1/2" X 3'-9" |
| ② | STEEL TUBE TS 8" X 6" X 0.188", 6'-0" |
| ④ | WOOD BREAKAWAY CRT POST: 6" X 8" X 6'-0" |
| ⑤ | WOOD OFFSET BLOCKS: 6' X 8" X 1'-2" |
| ⑥ | PIPE SLEEVE: 2" X 5 1/2" STANDARD PIPE |
| ⑦ | BEARING PLATE |
| ⑧ | BCT CABLE ASSEMBLY |
| ⑨ | CABLE ANCHOR BOX |
| ⑩ | STRUT & YOKE |
| ⑪ | STEEL PLATE BEAM, END PANEL 12 GA. |
| ⑫ | STEEL PLATE BEAM: 12 GA. 13'-6 1/2" |
| ⑬ | IMPACT HEAD |
| ⑭ | 0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE F PER SECTION 637 OF THE STANDARD SPECIFICATIONS |

GENERAL NOTES

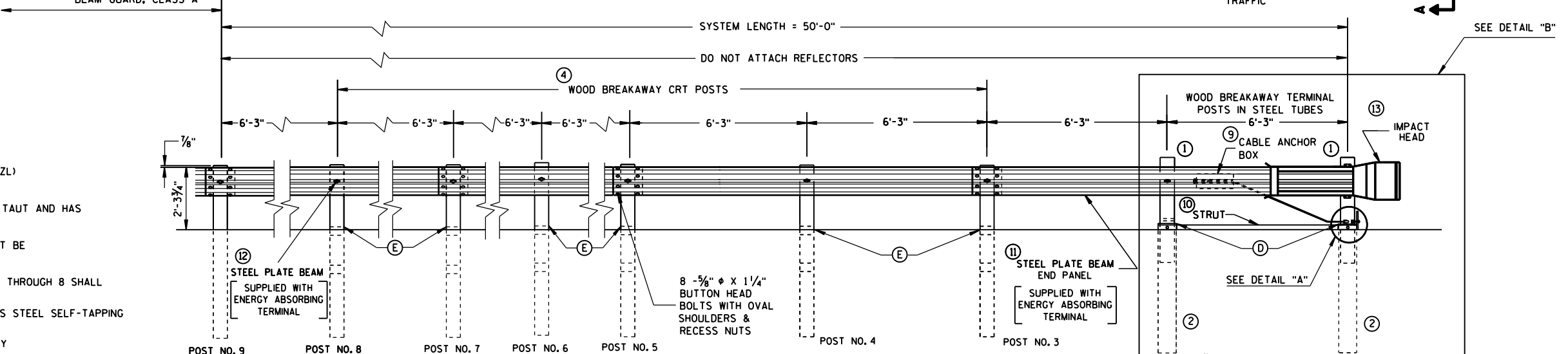
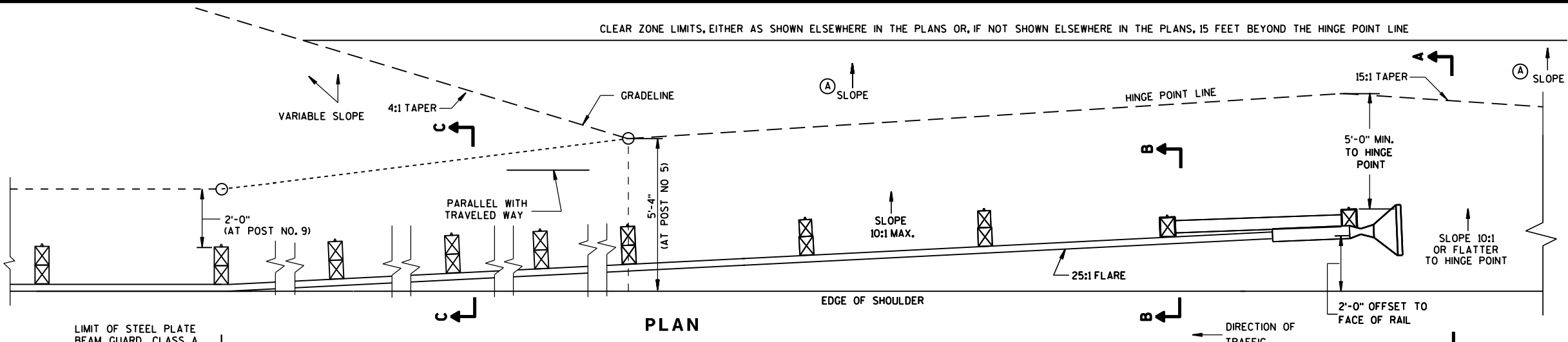
FOLLOW MANUFACTURE'S BOLTING RECOMMENDATIONS.

- (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.
- (D) THE TOP OF THE STEEL TUBE ON POSTS 1 AND 2 SHALL NOT BE MORE THAN 3" ABOVE THE FINISH GROUND ELEVATION.
- (E) THE CENTER OF THE UPPER 3 1/2" DIAMETER HOLE ON POST 3 THROUGH 8 SHALL BE 3/4" ABOVE THE FINISHED GROUND LINE.
- (F) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS, ONE SCREW PER CORNER.

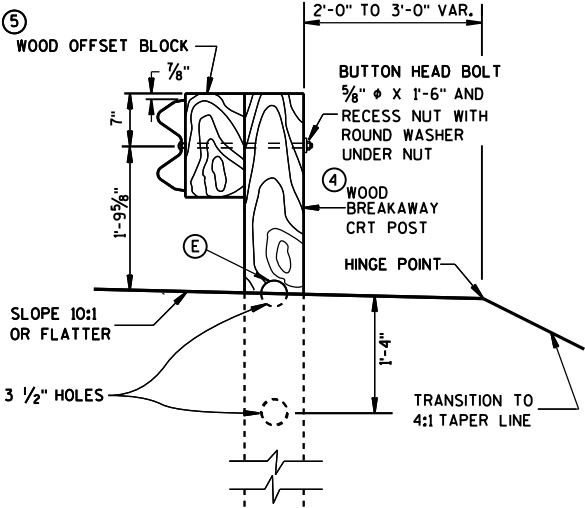
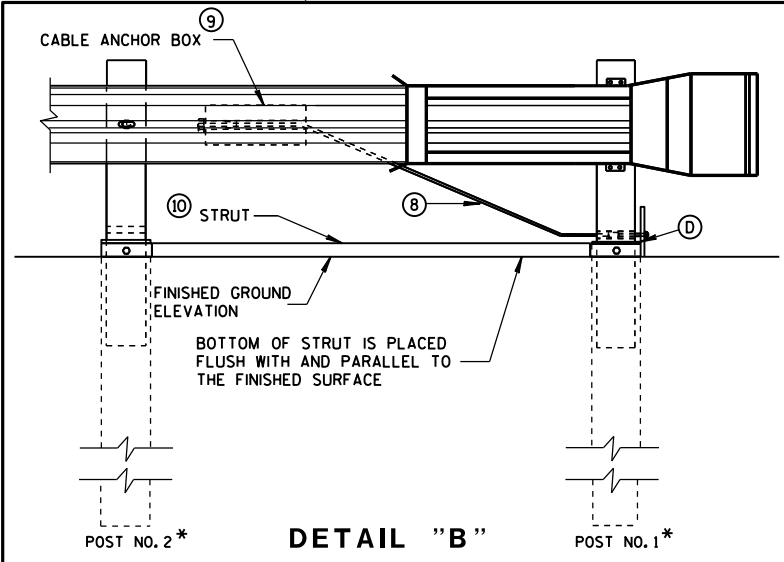
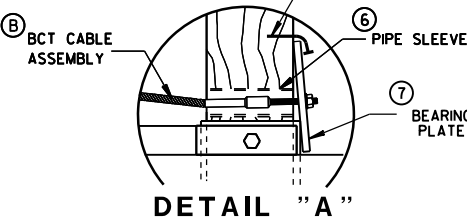
STEEL POSTS SHALL NOT BE ALLOWED FOR USE WITH ENERGY ABSORBING TERMINALS.

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

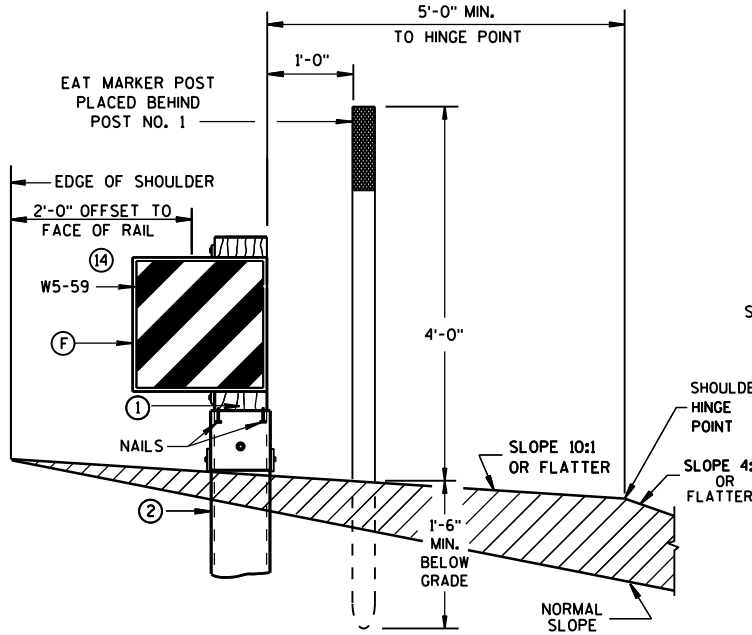
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.



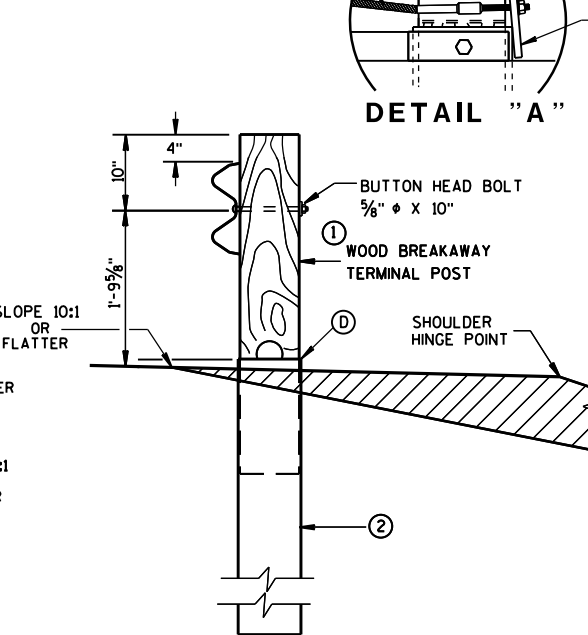
ELEVATION



SECTION C-C
TYPICAL AT POST NOS. 6, 8



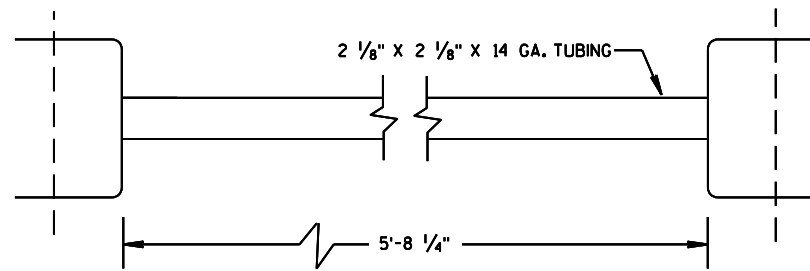
SECTION A-A
TYPICAL AT POST NO. 1*



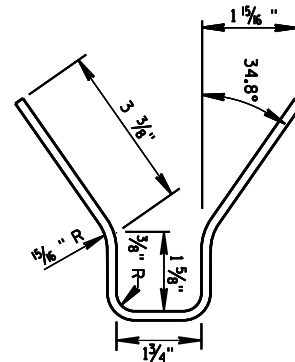
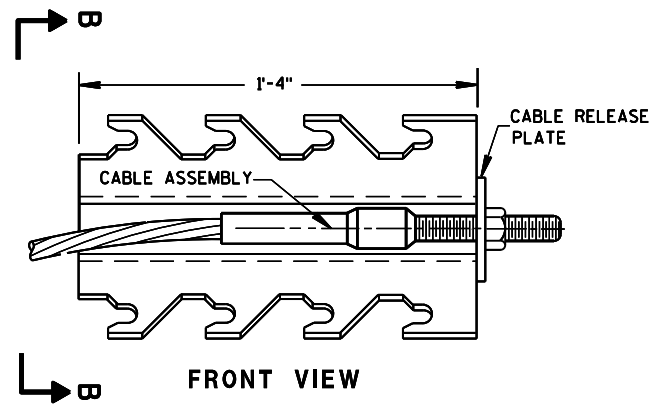
SECTION B-B
TYPICAL AT POST NO. 2*

STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

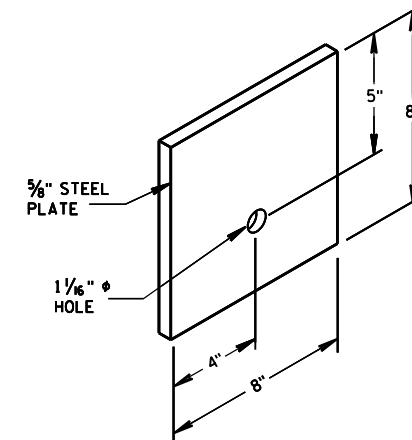
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



⑩ STRUT DETAIL



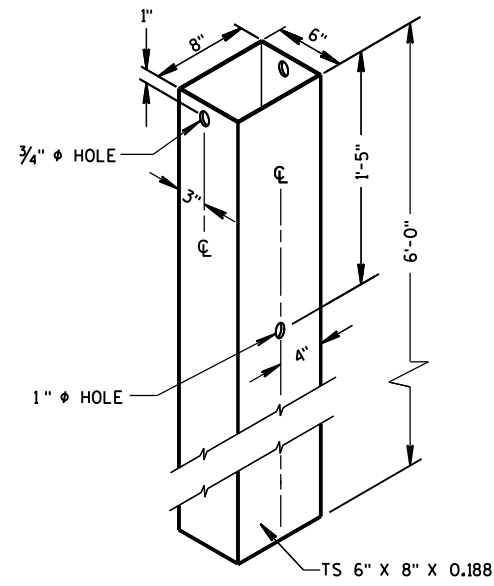
⑨ CABLE ANCHOR BOX



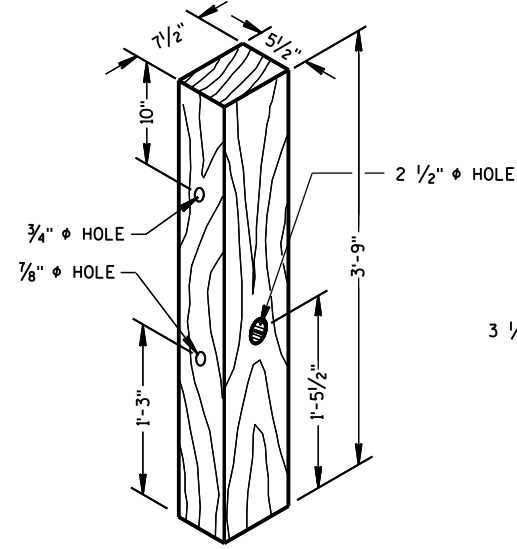
⑦ STEEL BEARING PLATE

STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

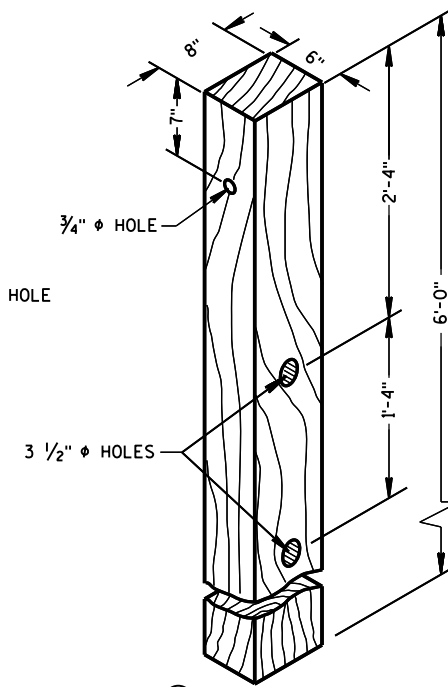
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



② **72" STEEL TUBE**
(POSTS NO. 1-4)



① **TERMINAL POST**

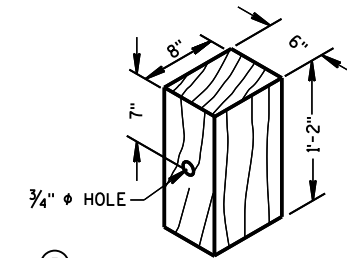


④ **CRT POST**
(POSTS NO'S 5-8)

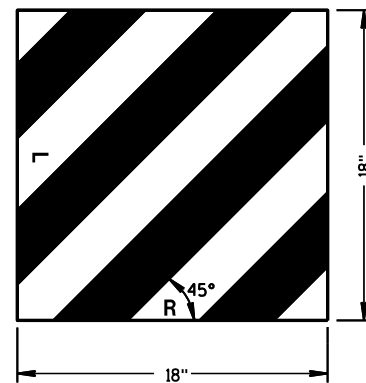
WOOD BREAKAWAY POSTS

GENERAL NOTES

WHEN ROCK IS ENCOUNTERED DURING EXCAVATION, A 12 INCH DIA. POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK MAY BE USED IF APPROVED BY THE ENGINEER. GRANULAR MATERIAL SHALL BE PLACED IN THE BOTTOM OF THE HOLE APPROXIMATELY 2 1/2" INCHES DEEP TO PROVIDE DRAINAGE. THE SOIL TUBES SHALL BE FIELD CUT TO LENGTH, PLACED IN THE HOLE AND BACKFILLED WITH ADEQUATELY COMPACTED MATERIAL EXCAVATED FROM THE HOLE.



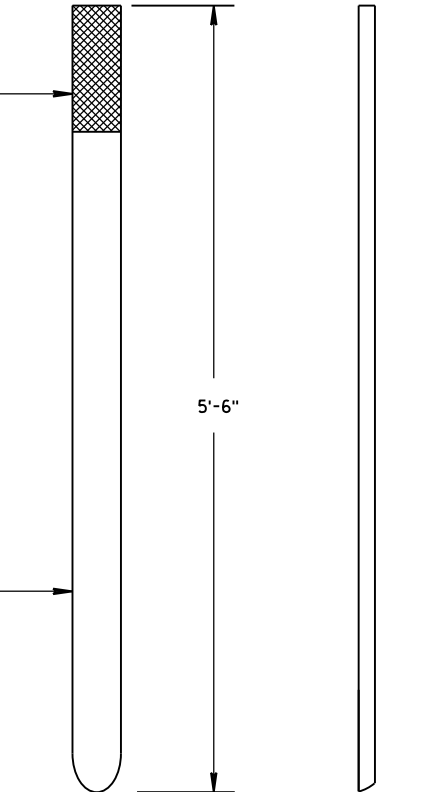
⑤ **WOOD OFFSET BLOCK**
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



⑭ **REFLECTIVE SHEETING DETAILS**

TYPE H
YELLOW REFLECTIVE
SHEETING 3" X 9".
SEE STANDARD
SPECIFICATION 637.

E.A.T. MARKER
POST (YELLOW)
SEE APPROVED
PRODUCTS LIST

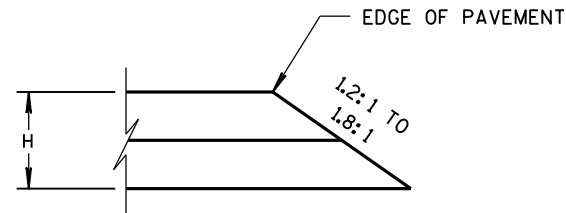


E.A.T. MARKER POST

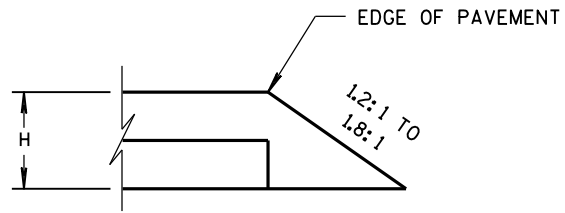
**STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

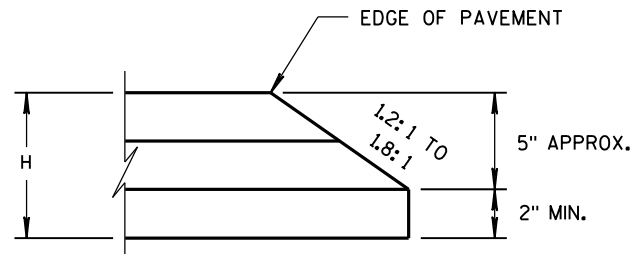
APPROVED
June 2017 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA UNIT SUPERVISOR



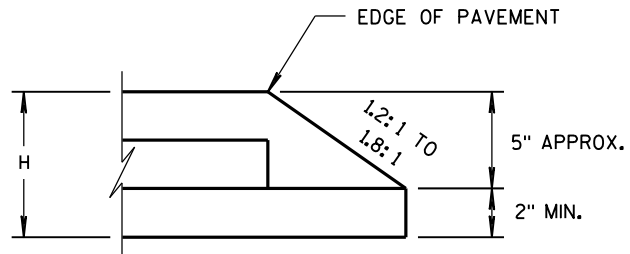
CONSTRUCTED WITH FINAL TWO LAYERS
FOR H 5" OR LESS



CONSTRUCTED WITH FINAL LAYER
FOR H 5" OR LESS

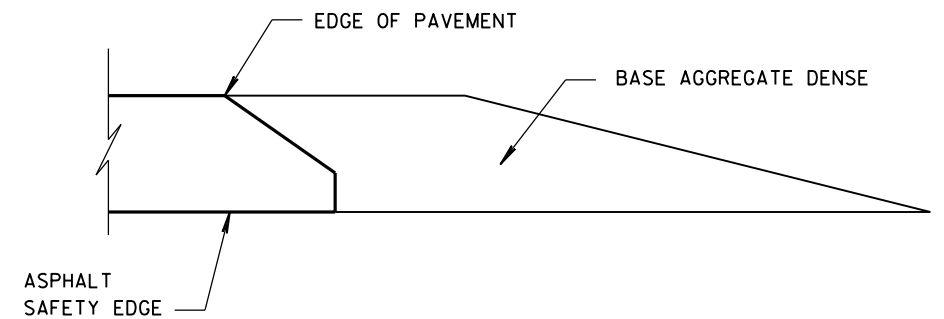


CONSTRUCTED WITH FINAL TWO LAYERS
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER
FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

SAFETY EDGE_{SM}

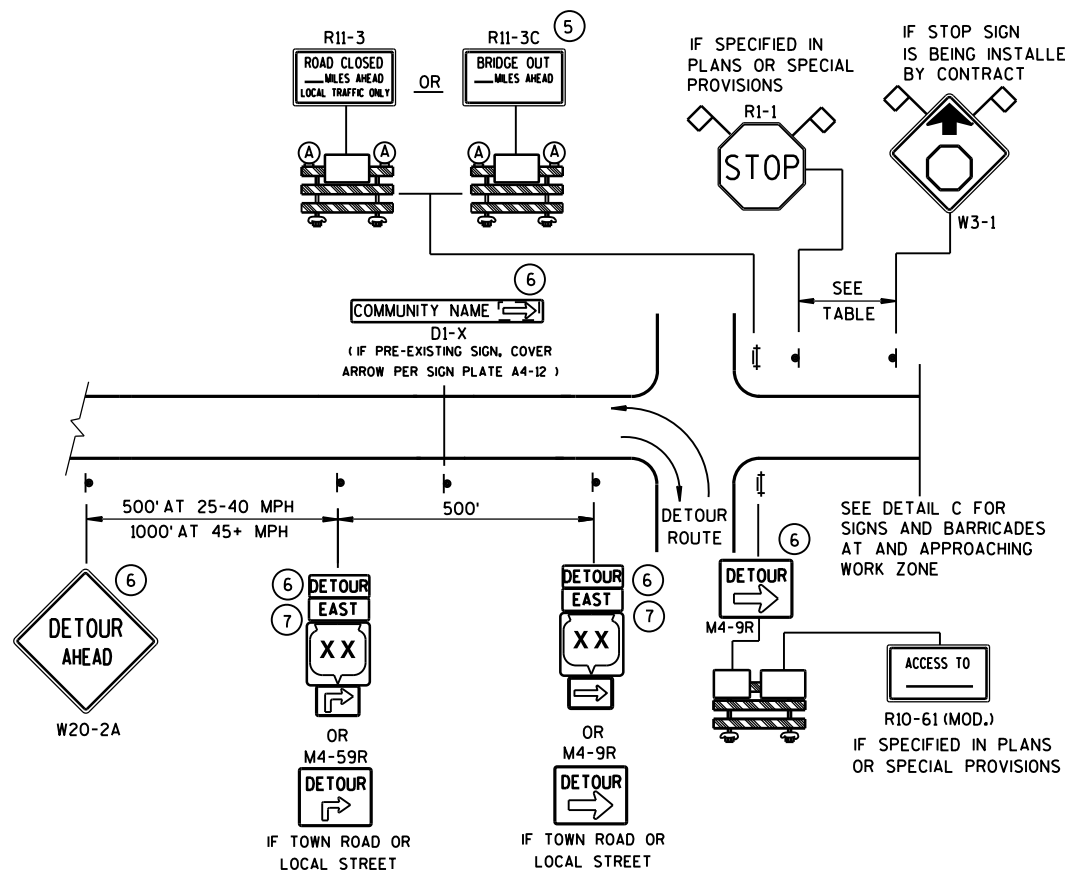
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

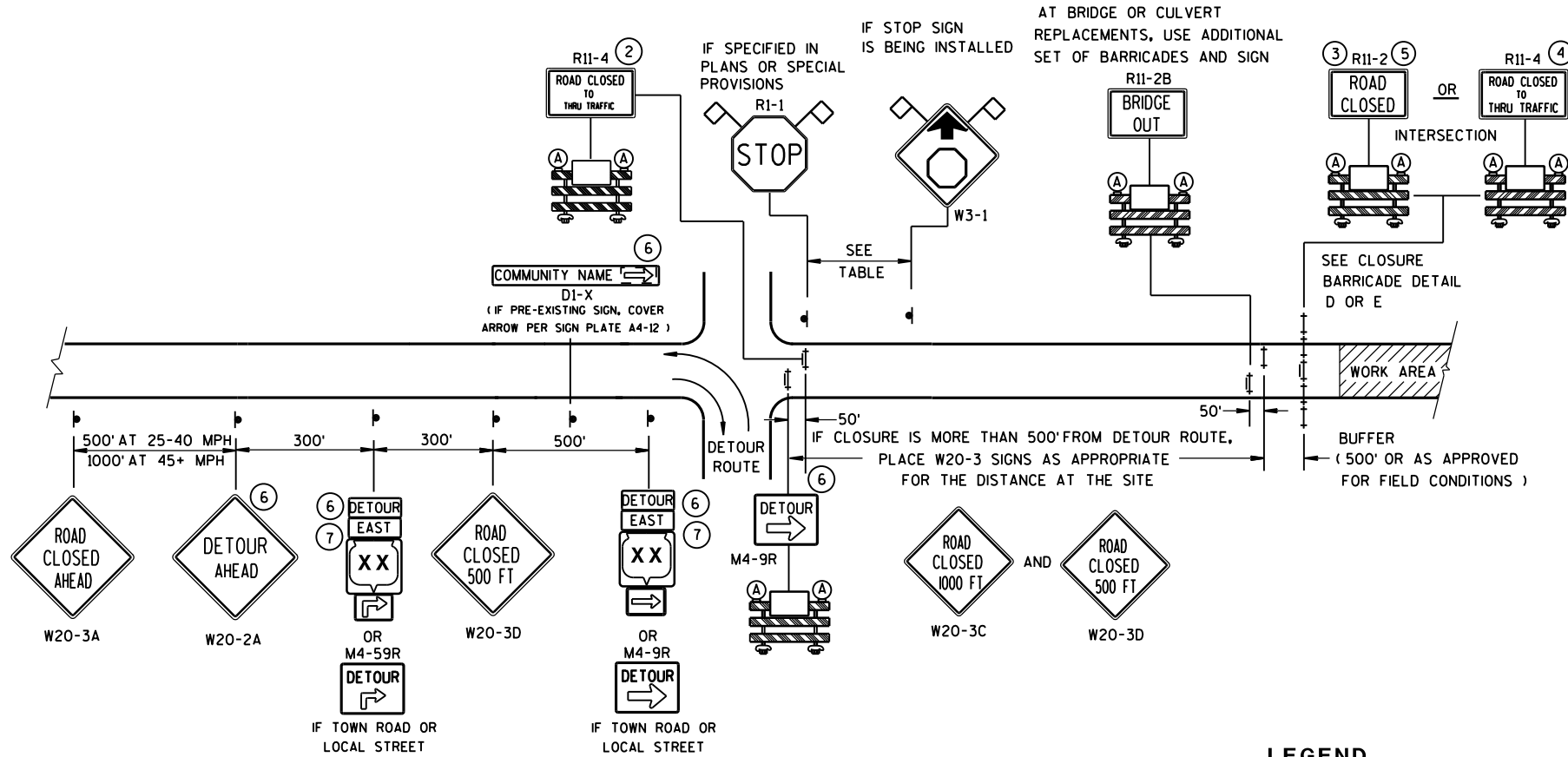
11/30/2012
DATE

FHWA

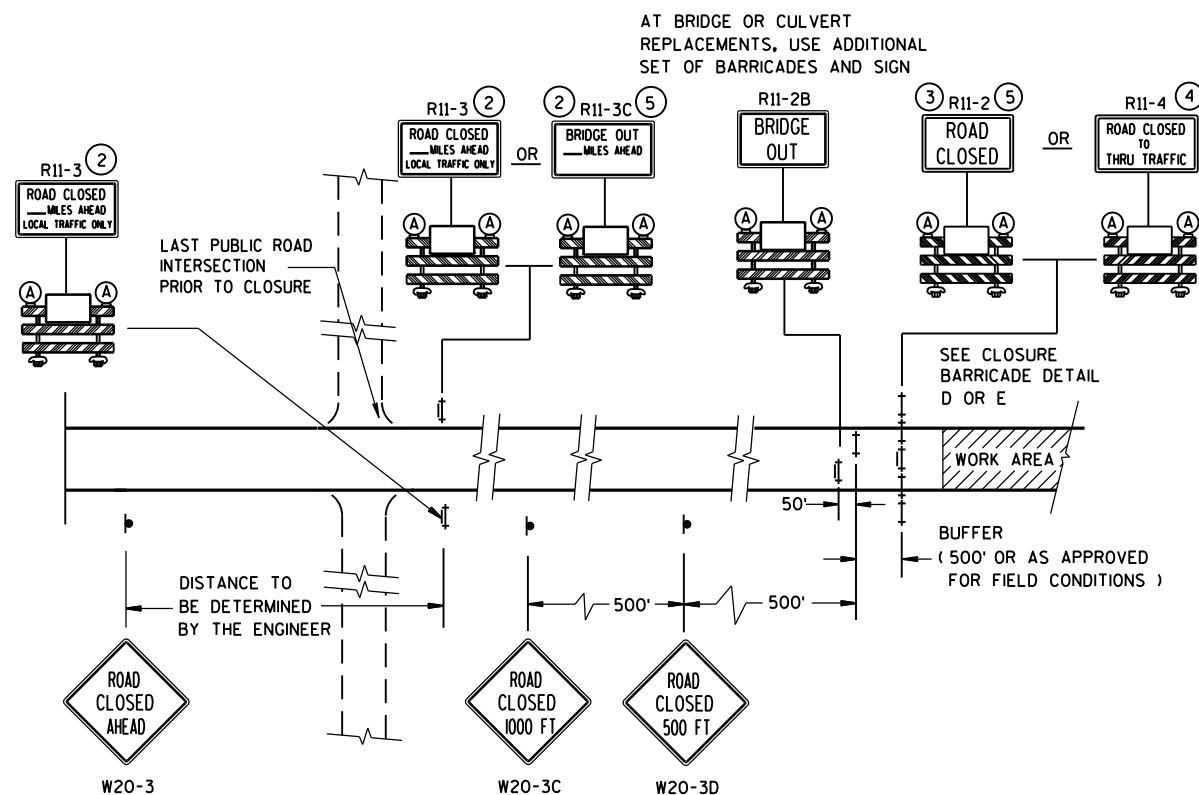
/s/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



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



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



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

LEGEND

- SIGN ON PERMANENT SUPPORT
- ⊥ TYPE III BARRICADE
- ⊥ TYPE III BARRICADE WITH ATTACHED SIGN
- Ⓐ TYPE "A" WARNING LIGHT (FLASHING)

WORK AREA

DETOUR EAST M4-8 M3-X
XX OR COUNTY XX OR XX
M1-4 M1-5A M1-6

M05-1 OR M06-1

FLAGS, 16" X 16" MIN., (ORANGE)

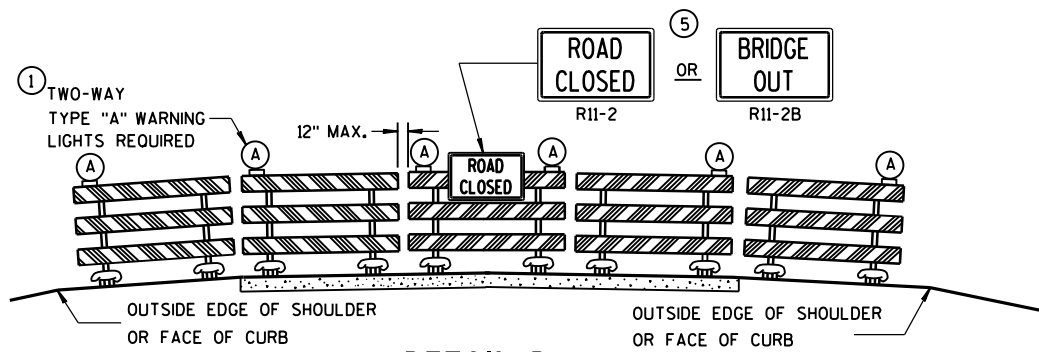
| SPEED LIMIT (MPH) | "STOP AHEAD" ADVANCE WARNING DISTANCE (FT) |
|-------------------|--|
| 25 | 200 |
| 30 | 200 |
| 35 | 350 |
| 40 | 350 |
| 45 | 500 |
| 50 | 550 |
| 55 | 750 |

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

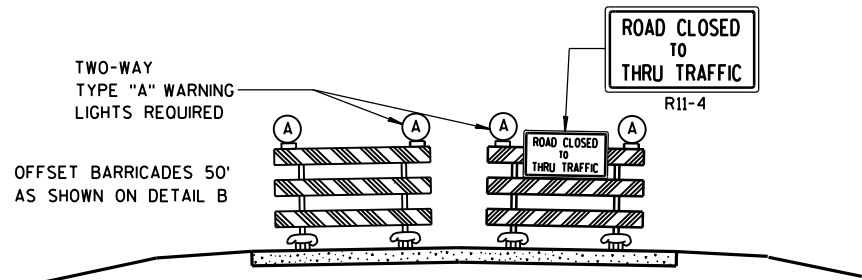
BARRICADES AND SIGNS
FOR
MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Sept. 2015 /S/ Peter Amokobe Atepe
DATE STATEWIDE WORK ZONE TRAFFIC
FHWA SAFETY ENGINEER



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 BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

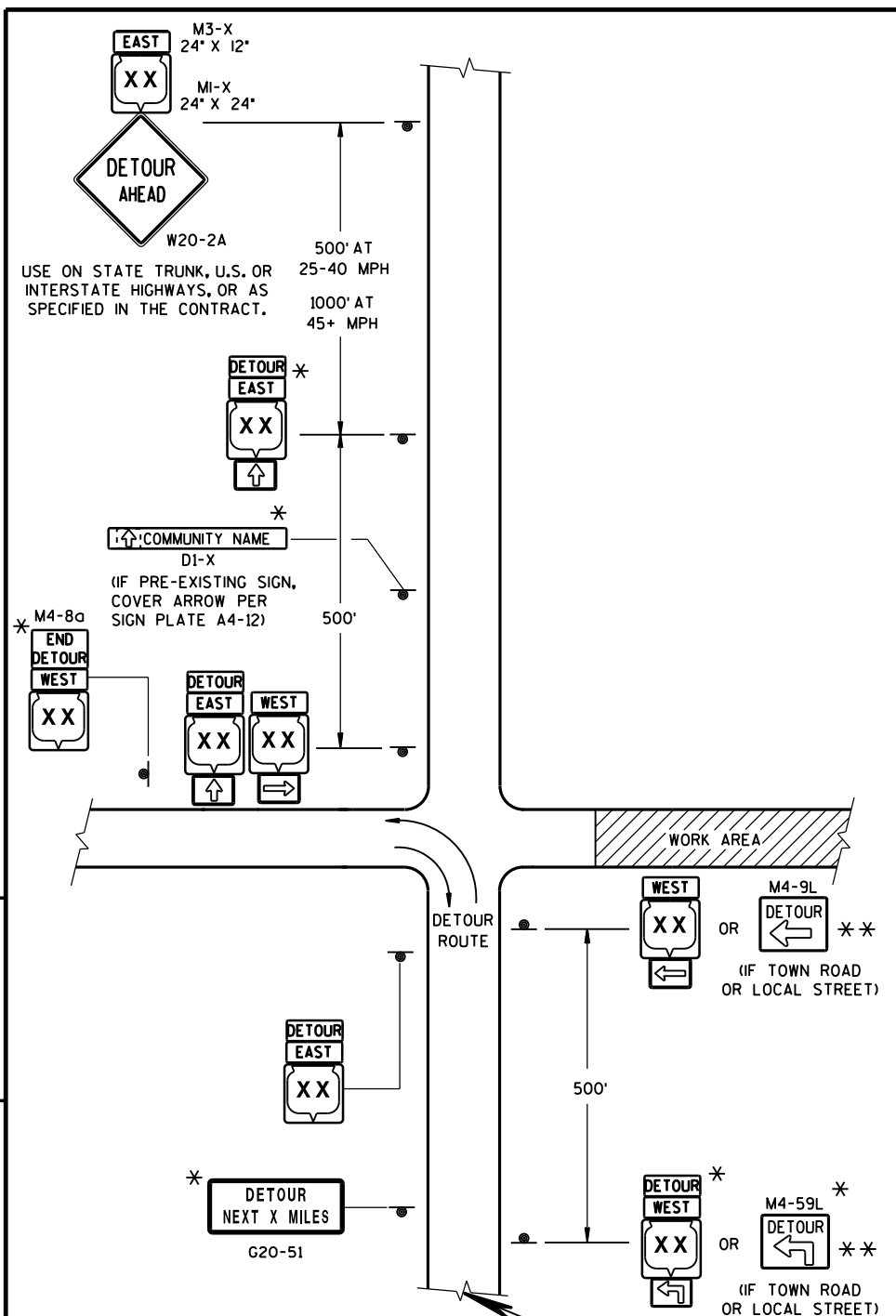
"WO AND "MO" SIGNS ARE THE SAME AS "W" AND "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

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

- R11-2 SHALL BE 48" X 30".
- R11-3, 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". (30" X 15" 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.)
- 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 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 LANE 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 MAINLINE CLOSURES | |
|--|---|
| STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION | |
| Sept. 2015 DATE | /S/ Peter Amokobe Atepe STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER |
| FHWA | |



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

MATCH POINT

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.

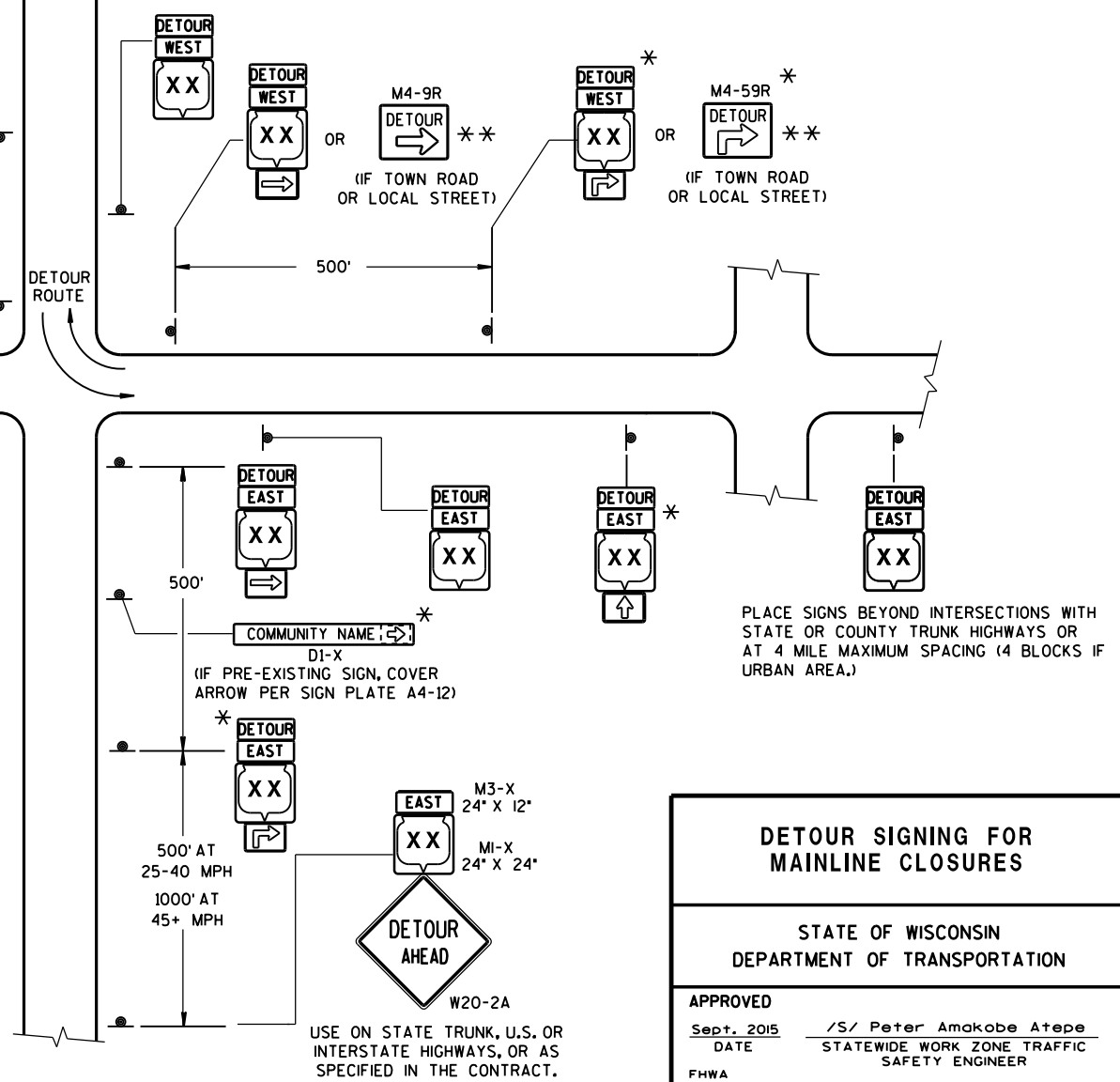
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

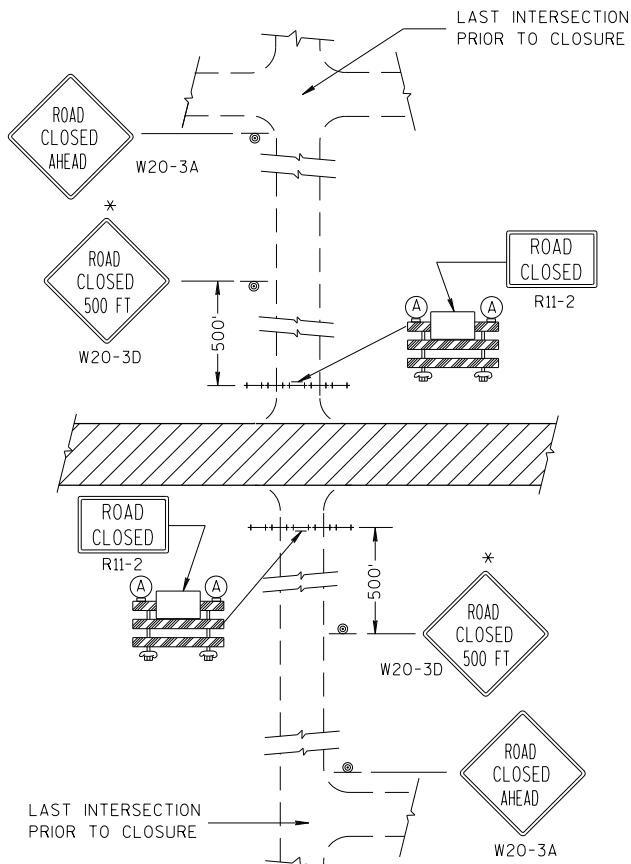
- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-9 SHALL BE 30" X 24".
- M4-8a SHALL BE 24" X 18".
- G20-51 SHALL BE 60" X 24".
- W20-2 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.

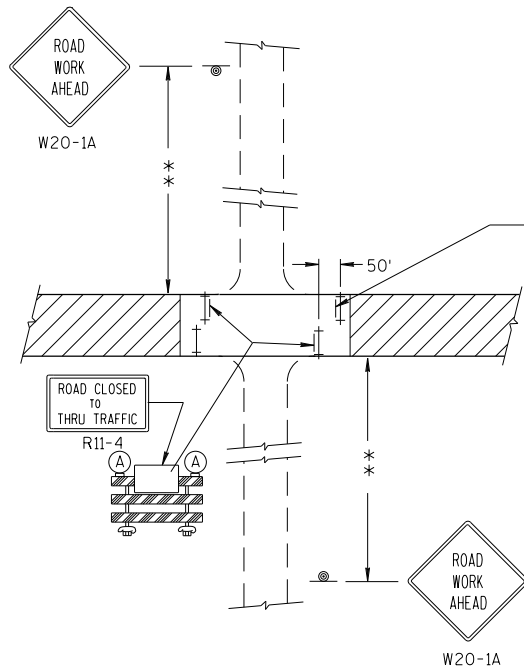
** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.



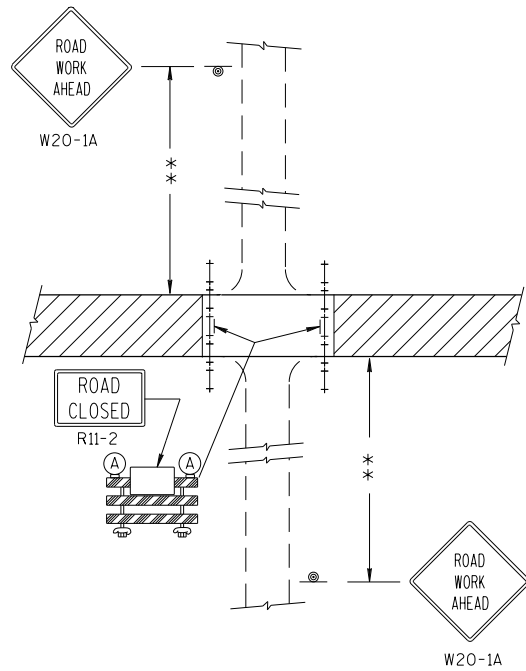
| DETOUR SIGNING FOR MAINLINE CLOSURES | |
|--|---|
| STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION | |
| APPROVED | DATE |
| Sept. 2015 | /S/ Peter Amakobe Atepe |
| DATE | STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER |
| FHWA | |



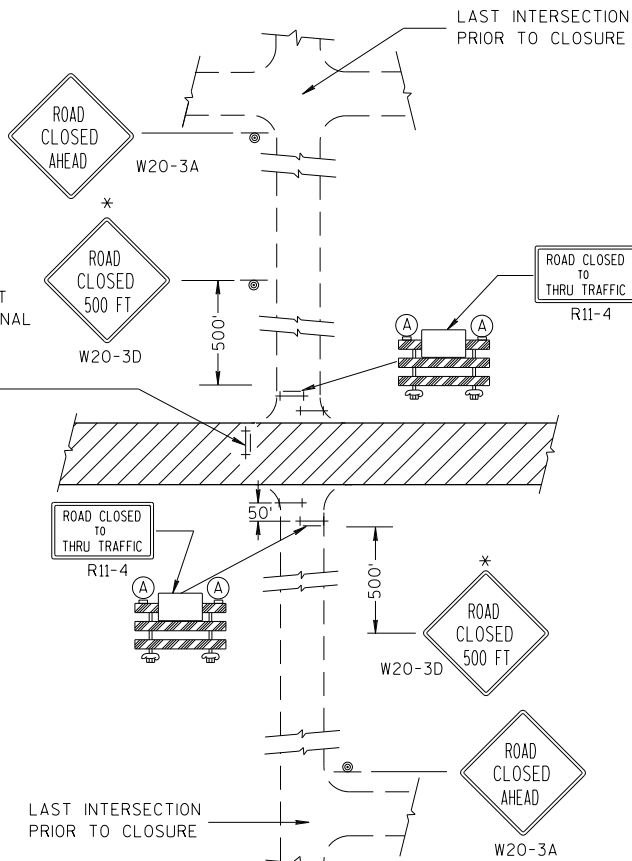
DETAIL 1
(NO ACCESS TO PROJECT)



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



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 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 RE-ESTABLISHED.

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 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 FT. OR LESS FROM THE WORK ZONE.

**500' MAX. OR AT LAST INTERSECTION WHICHEVER IS CLOSER.

LEGEND

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

**BARRICADES AND SIGNS
FOR
SIDEROAD CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/2018

DATE

FHWA

/S/ Andrew Heidtke

WORK ZONE ENGINEER

TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL

GENERAL NOTES

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

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

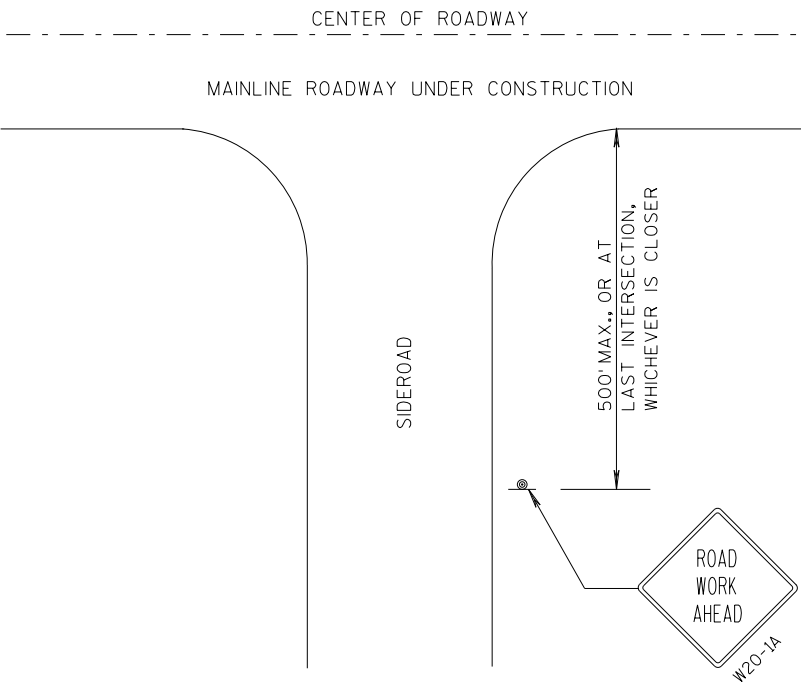
ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

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

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



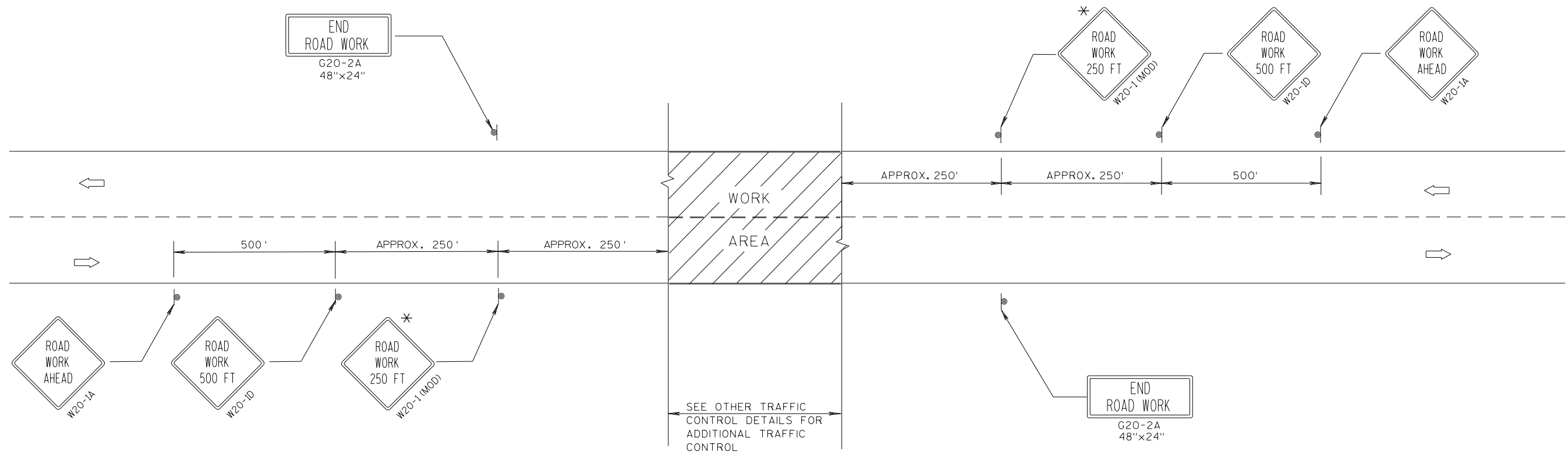
LEGEND

- ⊙ SIGN ON PERMANENT SUPPORT
- ➡ DIRECTION OF TRAFFIC
- ▨ WORK AREA

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER
FHWA



TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL

GENERAL NOTES

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

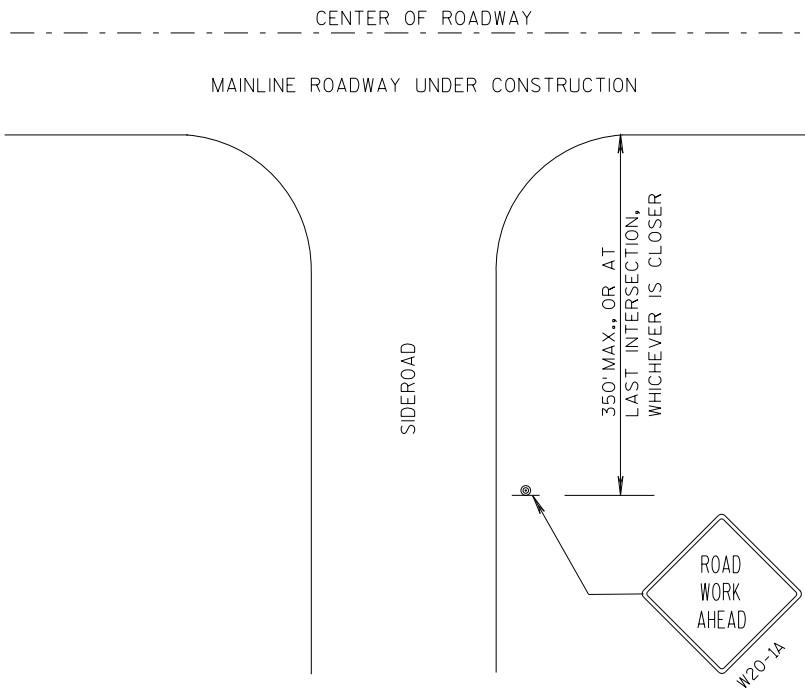
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"x36" SIGNS MAY BE USED INSTEAD OF 48"x48" SIGNS.

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

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

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



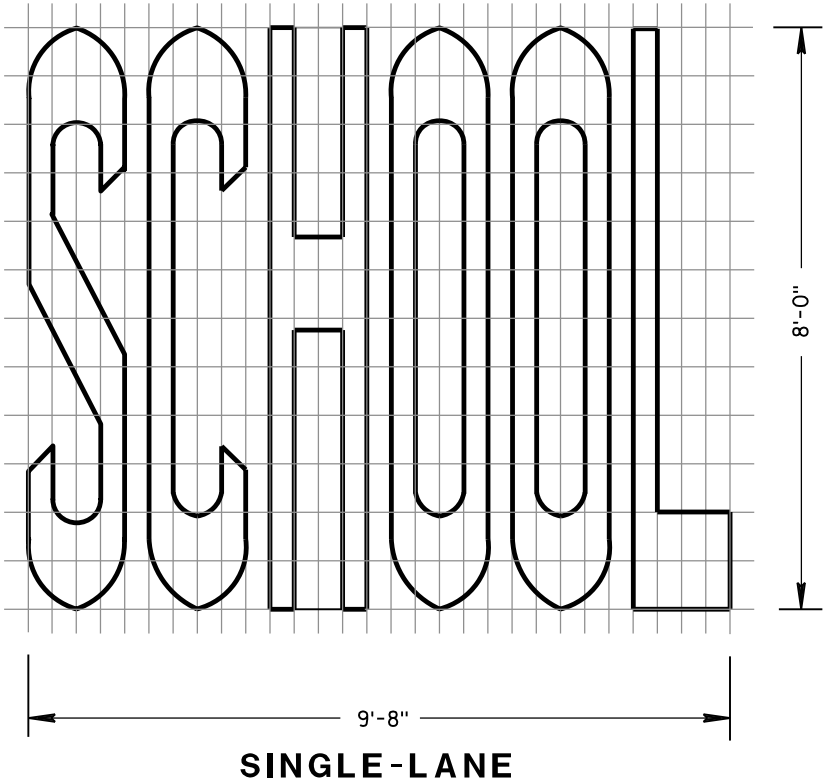
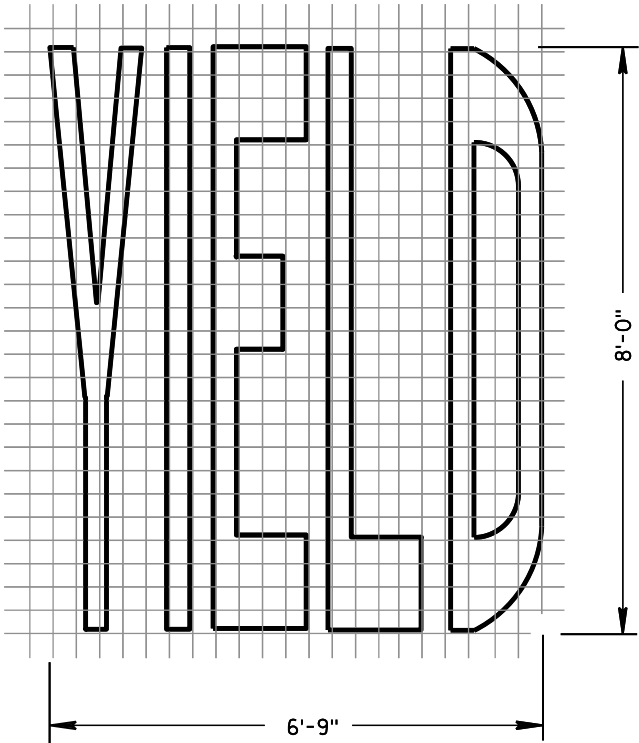
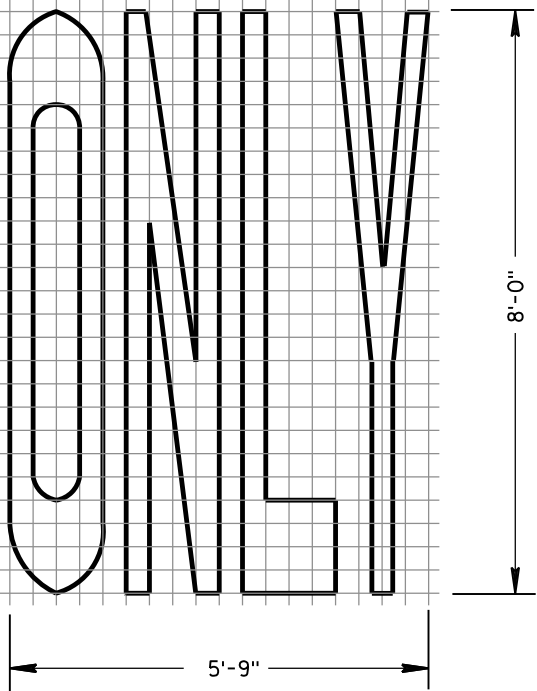
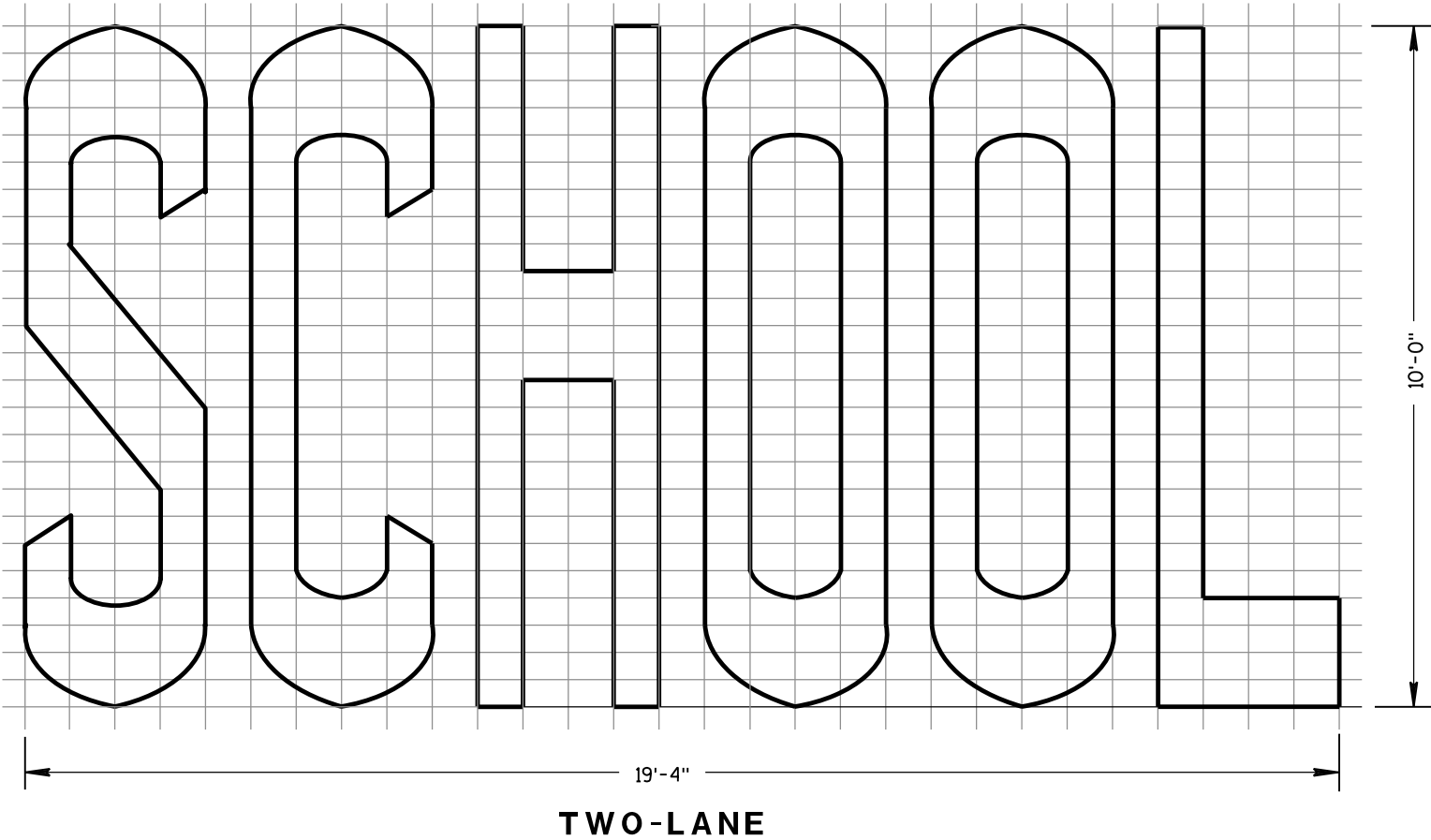
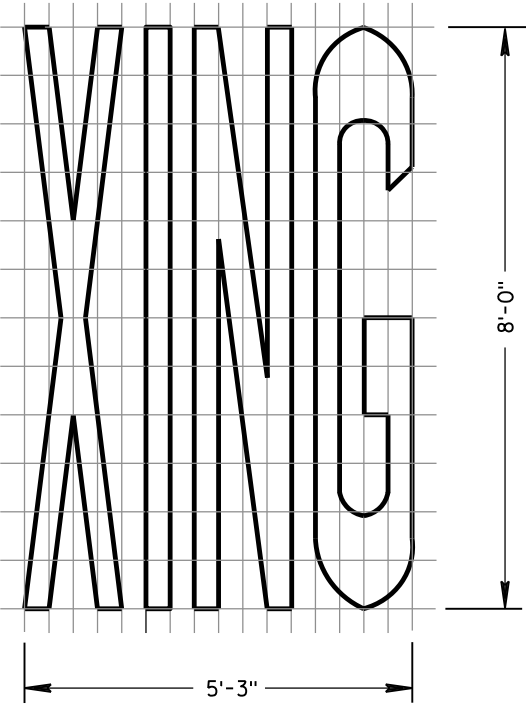
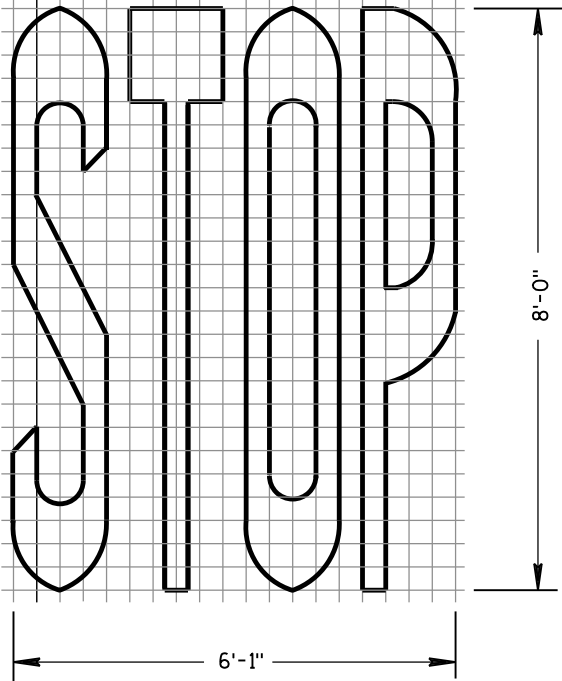
LEGEND

- ⊙ SIGN ON PERMANENT SUPPORT
- ➡ DIRECTION OF TRAFFIC
- ▨ WORK AREA

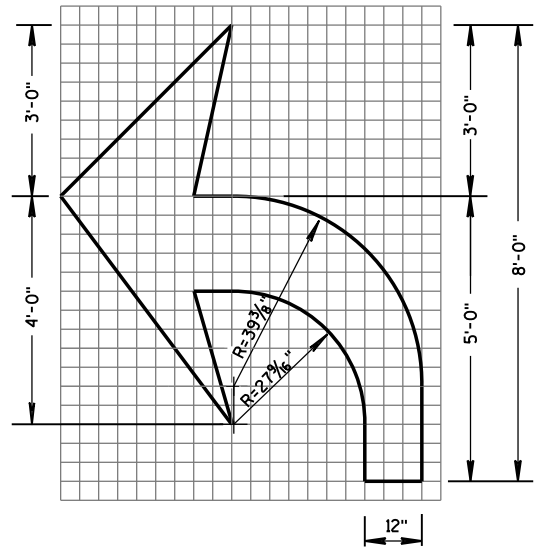
| | |
|--|--|
| TRAFFIC CONTROL. ADVANCE WARNING SIGNS 40 M.P.H. OR LESS TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC | |
| STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION | |
| APPROVED 7/2018 DATE | /S/ Andrew Heidtke WORK ZONE ENGINEER |
| FHWA | |

GENERAL NOTES

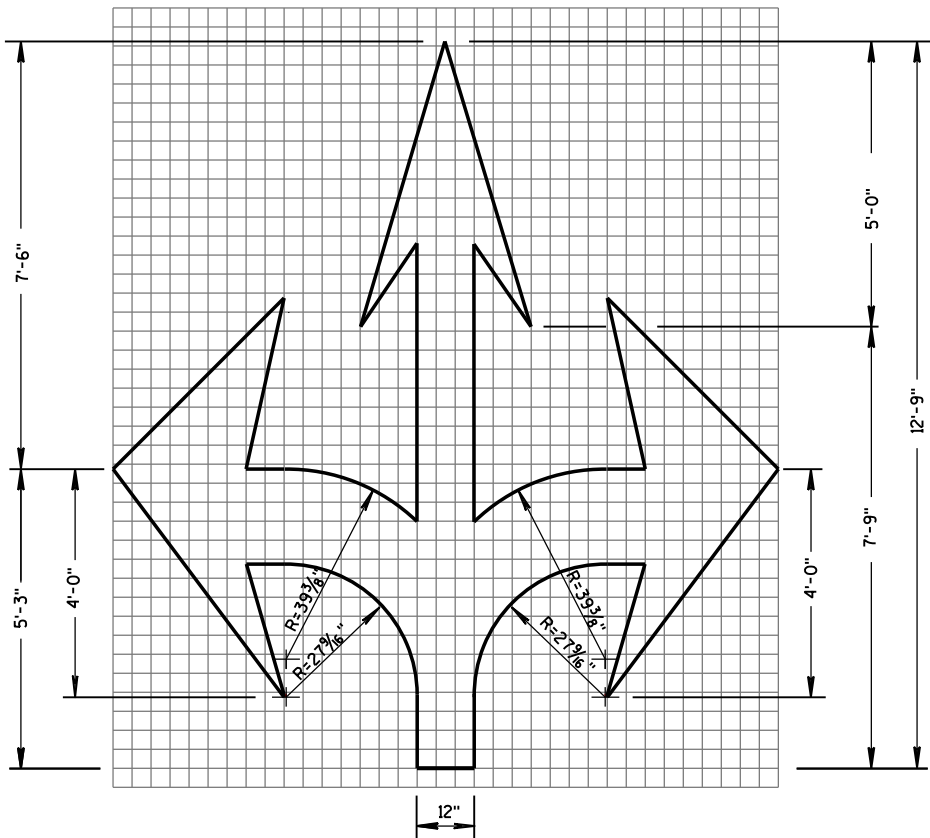
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.



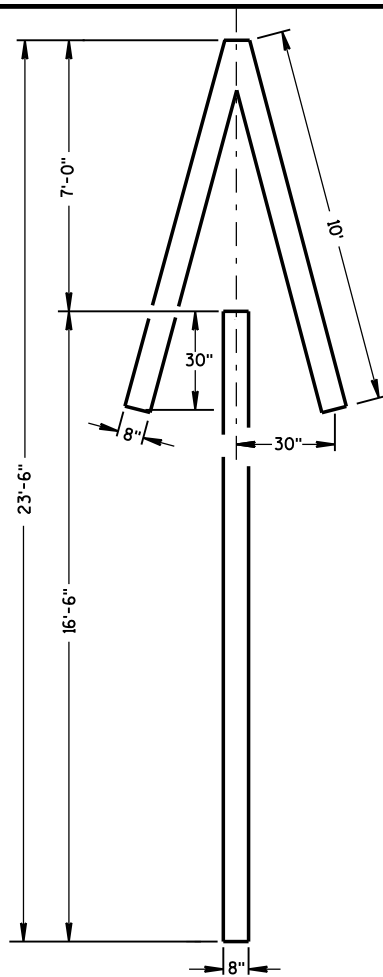
| PAVEMENT MARKING WORDS | |
|--|--|
| STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION | |
| APPROVED June 2017 DATE | /S/ Matthew R. Rauch STATE SIGNING AND MARKING ENGINEER |
| FHWA | |



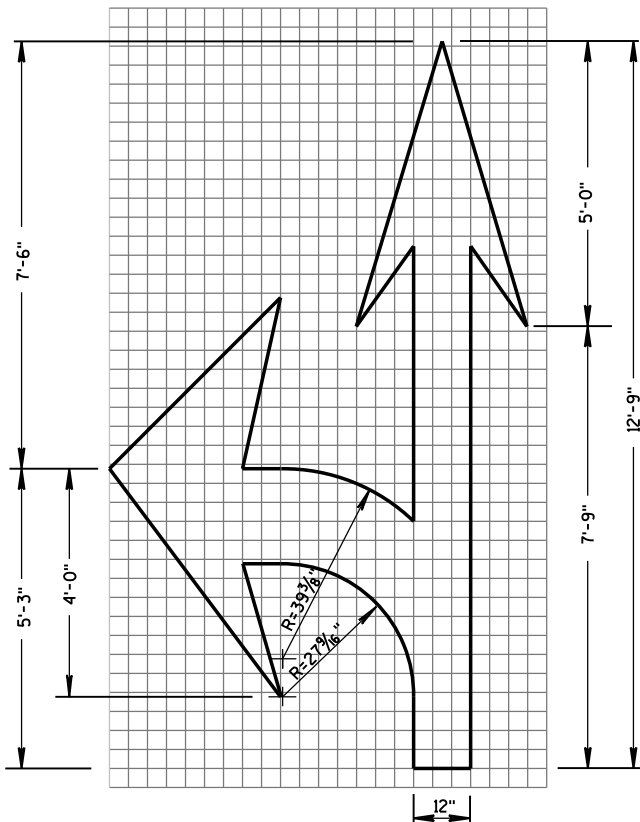
TYPE 2



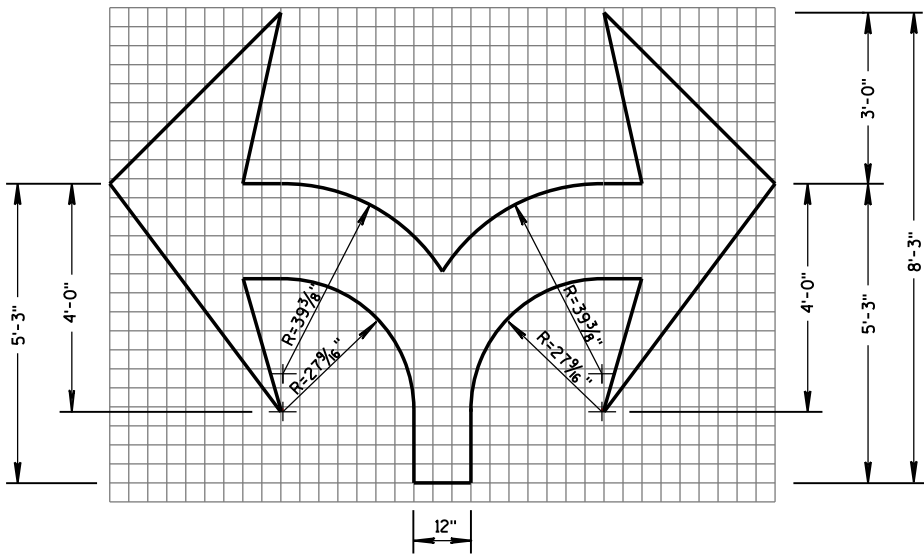
TYPE 6



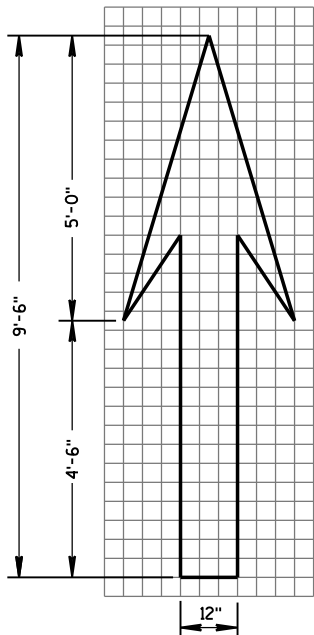
TYPE 4



TYPE 3



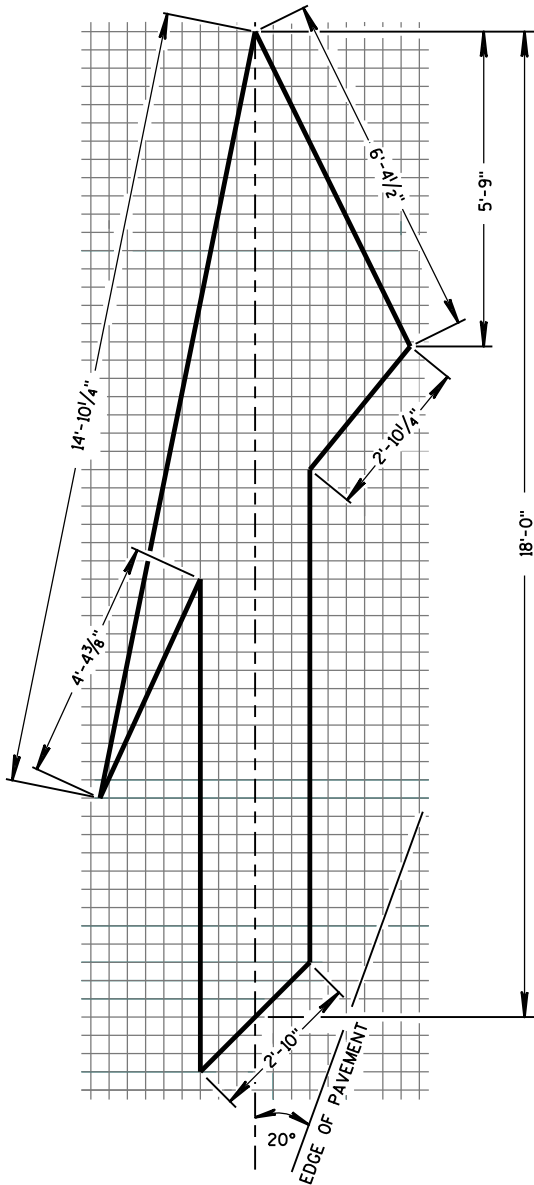
TYPE 7



TYPE 1

GENERAL NOTES

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

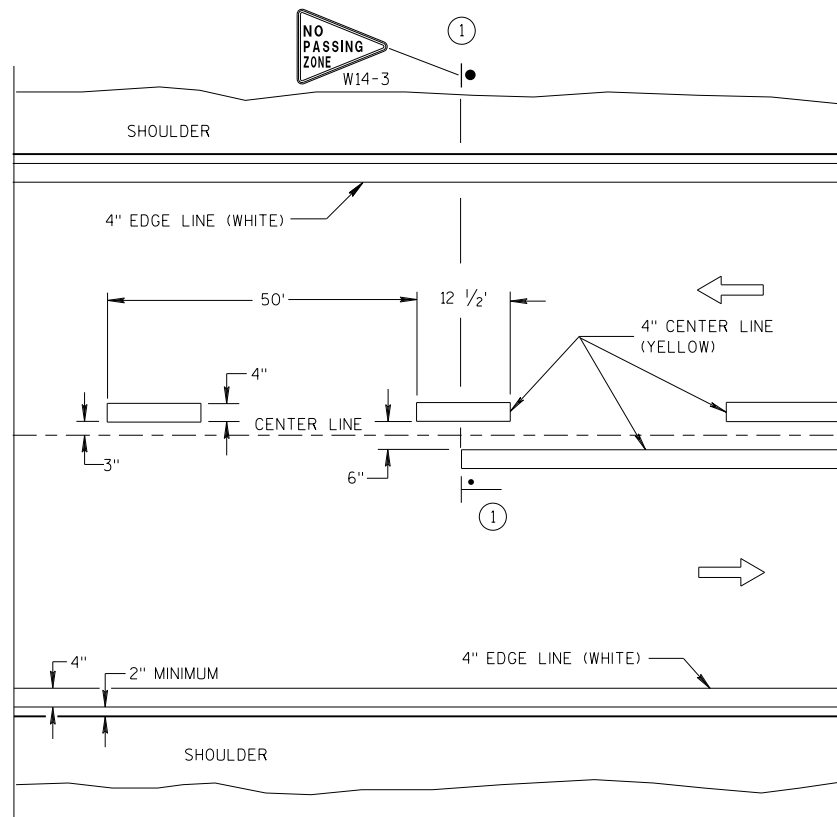


TYPE 5 LANE DROP ARROW

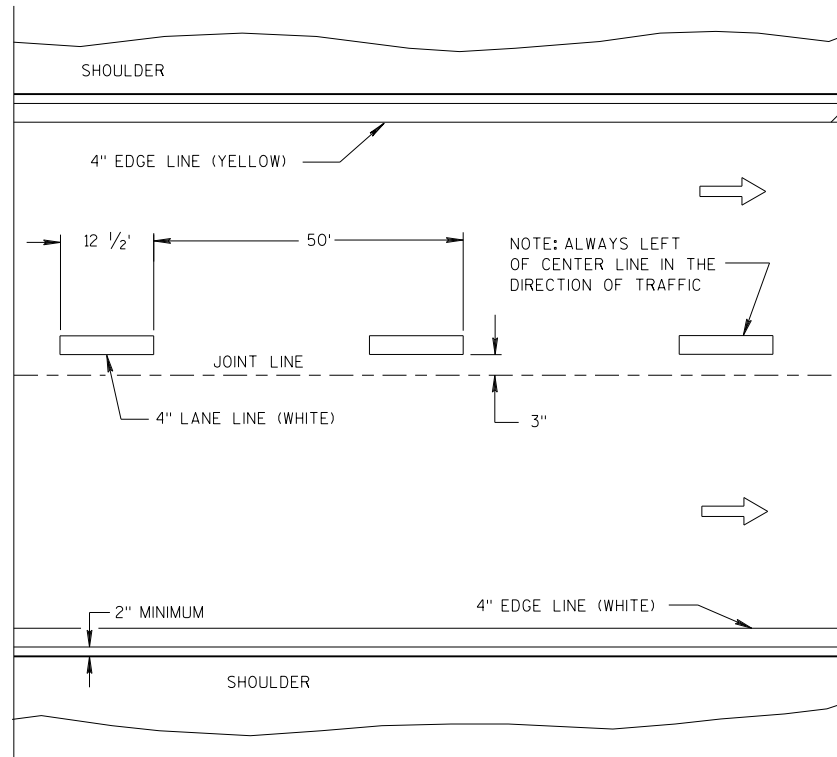
PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

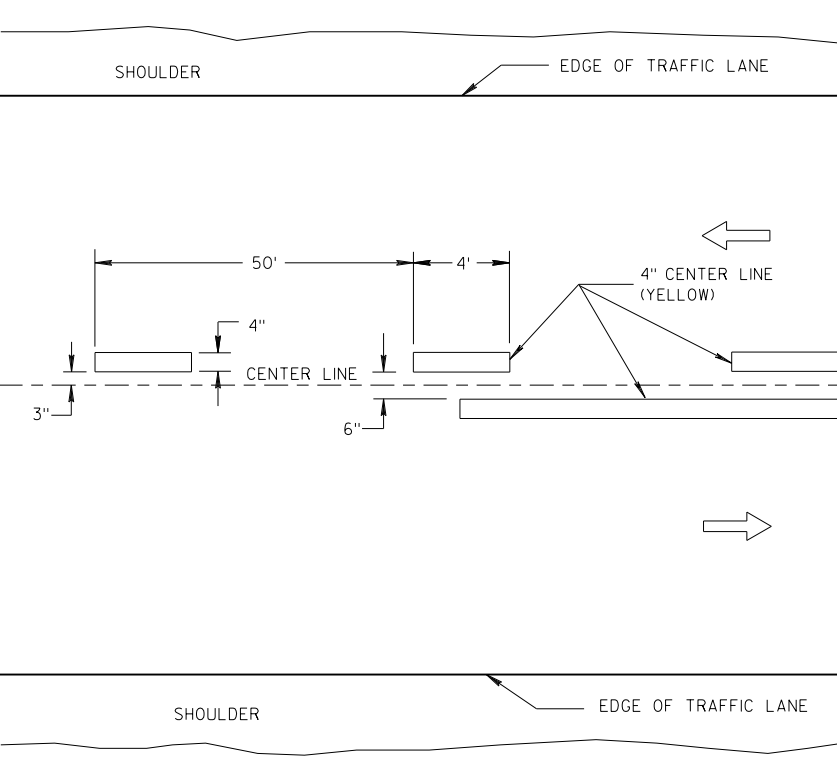


TWO WAY TRAFFIC

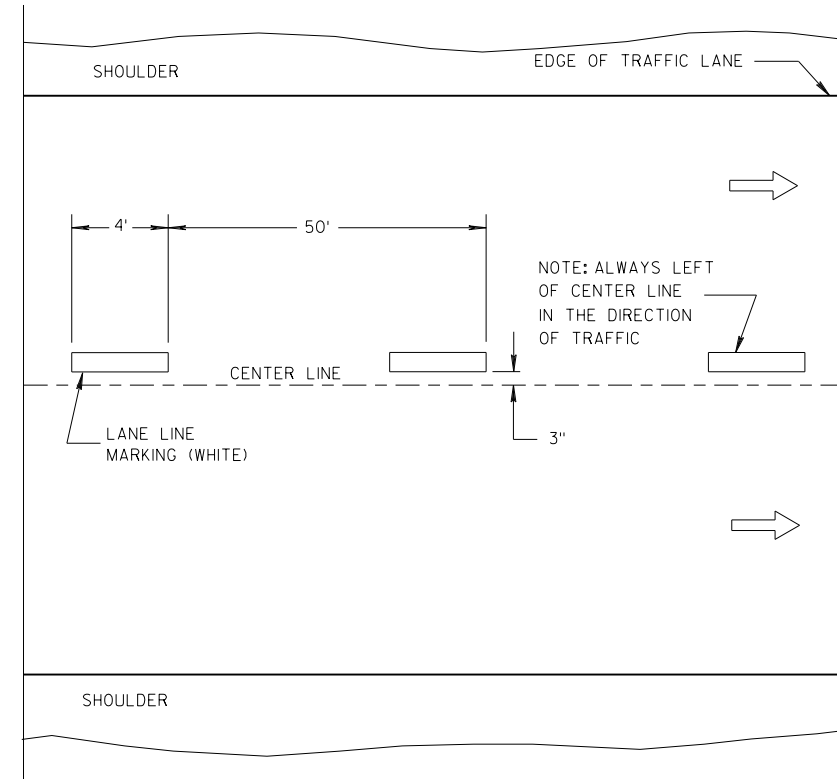


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

GENERAL NOTES

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

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

NOTE

ARROW SYMBOL (➡) SHOWS DIRECTION OF TRAVEL

LEGEND

- "T" MARKING
- POST MOUNTED SIGN

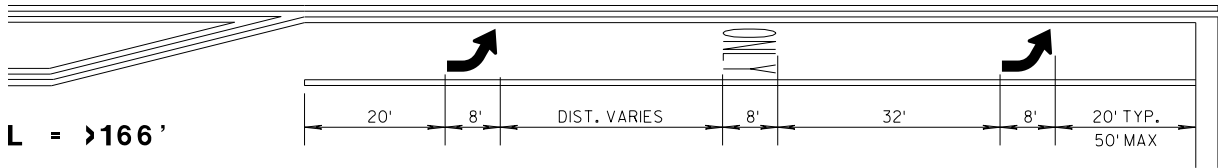
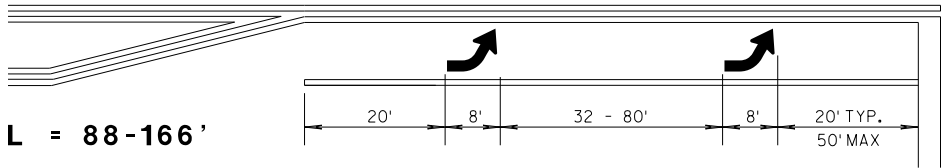
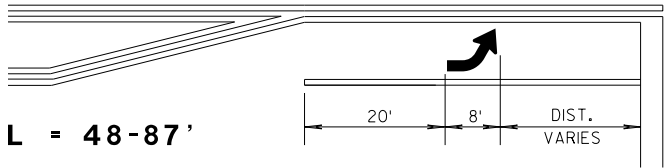
LONGITUDINAL MARKING
(MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

TURN LANE OPTIONS

LENGTH OF TURN BAY (L) OF 0-47' DOES NOT REQUIRE PAVEMENT MARKING ARROWS OR WORDS



*(SEE TURN LANE OPTIONS FOR PLACEMENT OF PAVEMENT MARKING ARROWS AND WORDS)

GENERAL NOTES

- ① 8" WHITE
- ② QUANTITY AND LOCATION OF TYPE 3 ARROW ARE THE SAME AS THE TYPE II ARROWS IN THE ADJACENT TURN LANE. FOR TURN LANES WITH A PHYSICAL SEPARATION, THE ARROWS AND ONLY MARKING ARE ELIMINATED.

→ DIRECTION OF TRAFFIC
L = LENGTH OF TURN BAY

PAVEMENT MARKING
(TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

LEGEND

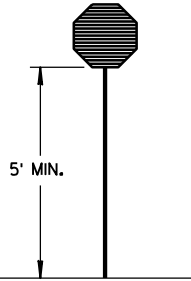
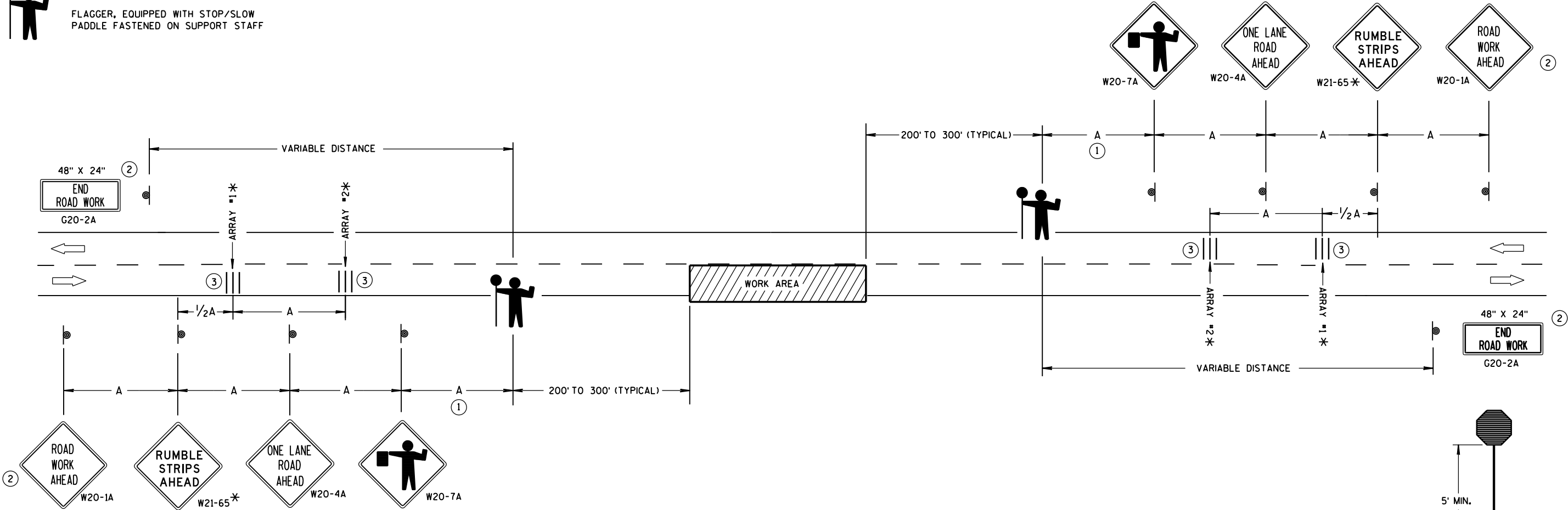
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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



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



STOP/SLOW PADDLE ON SUPPORT STAFF

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

GENERAL NOTES

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

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

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

"W0" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

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

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS. PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

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

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

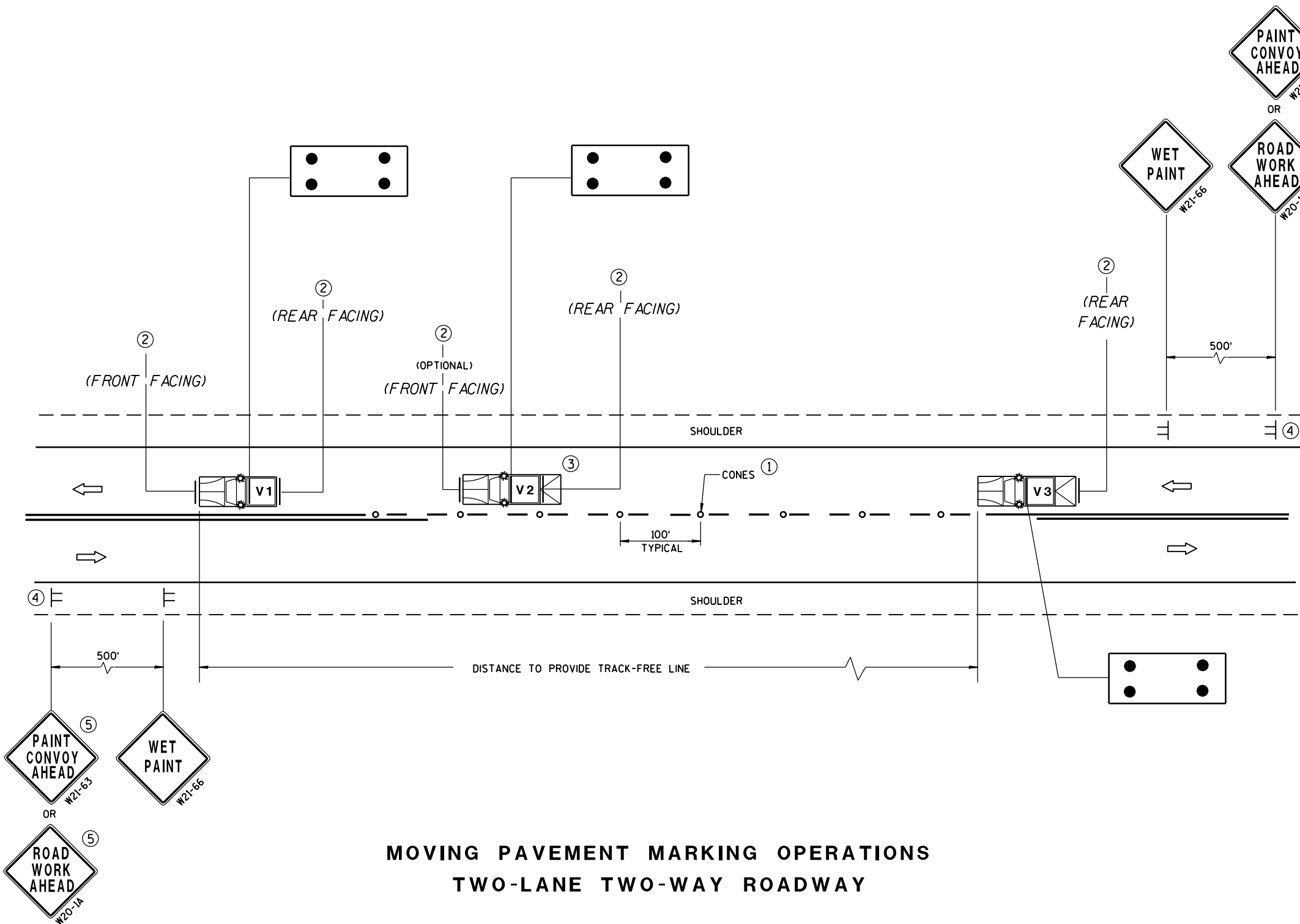
* UTILIZE TEMPORARY RUMBLE STRIPS WHEN FLAGGING OPERATION IS ANTICIPATED TO BE STATIONARY IN EXCESS OF TWO HOURS.

- FOR A MOVING WORK OPERATION, SIGNING AND TEMPORARY RUMBLE STRIPS (IF USED) SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3,500 FOOT INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.
- SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.
- EACH TEMPORARY RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS SPACED ACCORDING TO MANUFACTURER'S RECOMMENDATION, PLACED TRANSVERSE ACROSS THE LANE AT LOCATIONS SHOWN.

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

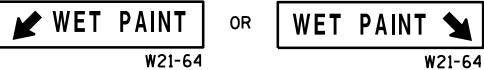
APPROVED
June 2017 /S/ Andrew Heldtke
DATE WORK ZONE ENGINEER
FHWA



MOVING PAVEMENT MARKING OPERATIONS
TWO-LANE TWO-WAY ROADWAY

GENERAL NOTES

- ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.
- VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL OPERATING IN CAUTION MODE. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.
- ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE SPECIFIED.
- IF SPEED LIMIT IS 40 MPH OR LESS STATIONARY SIGNS MAY BE OMITTED IF CONES ARE USED.
- ALTERNATE SIGN MESSAGES, SUCH AS "PAINT CREW AHEAD" OR "ROAD PAINTING AHEAD" MAY BE USED.
- DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.
- THE WORK AND SHADOW VEHICLES SHOULD PULL OVER PERIODICALLY TO ALLOW TRAFFIC TO PASS.
- THIS DRAWING SHALL BE USED FOR CENTERLINE OR EDGELINE MARKING.
- WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR TURN THE STATIONARY WARNING SIGNS AWAY FROM TRAFFIC.
- ① CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.
- ② USE STANDARD SIGN W21-64 WITH APPROPRIATE ARROW.
- ③ OPTIONAL TRUCK-MOUNTED ATTENUATOR.
- ④ SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.
- ⑤ IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1 OR W21-63 ARE NOT REQUIRED.



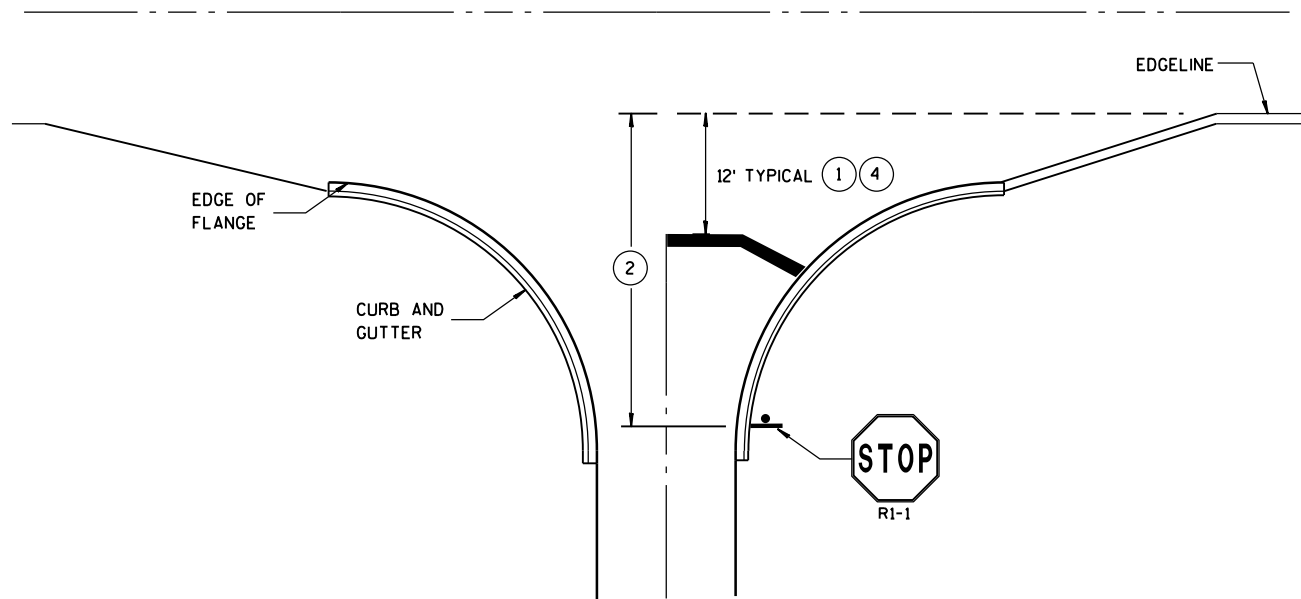
LEGEND

- V1** LEAD VEHICLE
- V2** SHADOW VEHICLE
- V3** TRAIL VEHICLE WITH TMA
- TMA** TRUCK-MOUNTED ATTENUATOR
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- CONES
- FLASHING ARROW PANEL (CAUTION)

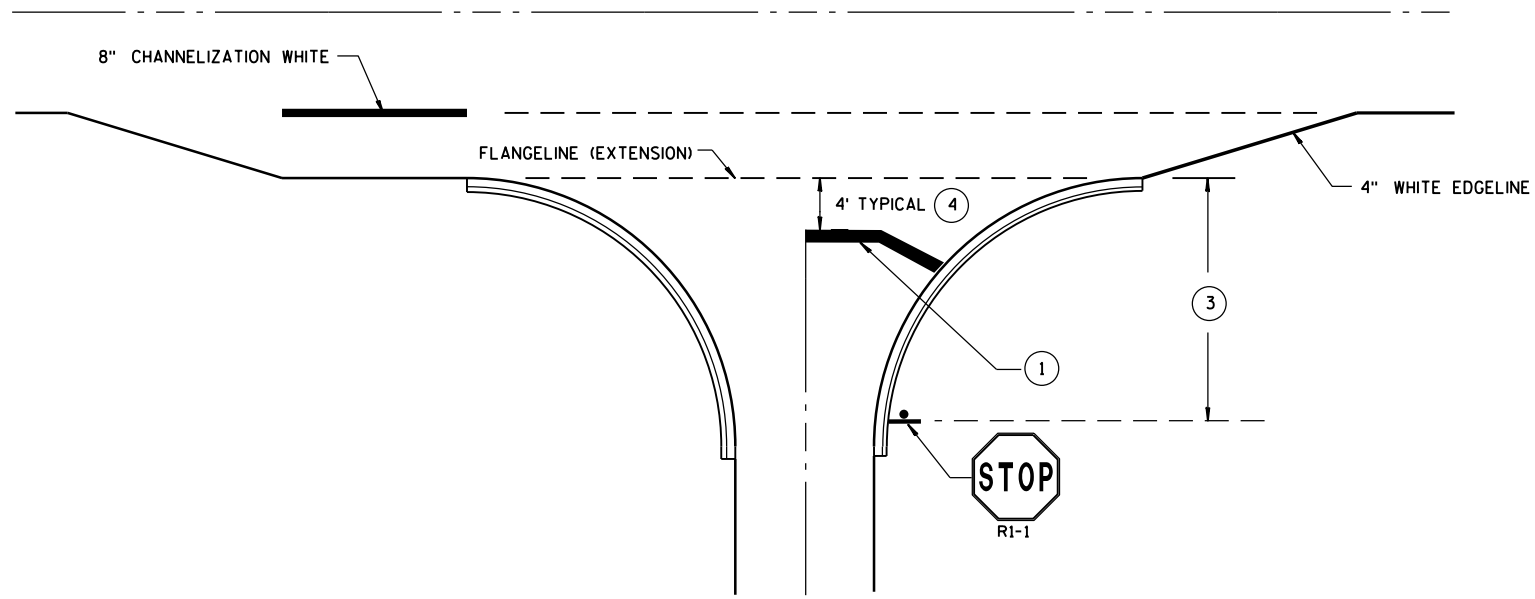
MOVING PAVEMENT MARKING
OPERATION
TWO-LANE TWO-WAY ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE: Sept., 2017 /S/ Andrew Heidtke
WORK ZONE ENGINEER
FHWA



TYPICAL STOP LINE PAVEMENT MARKING
WITH CURB AND GUTTER

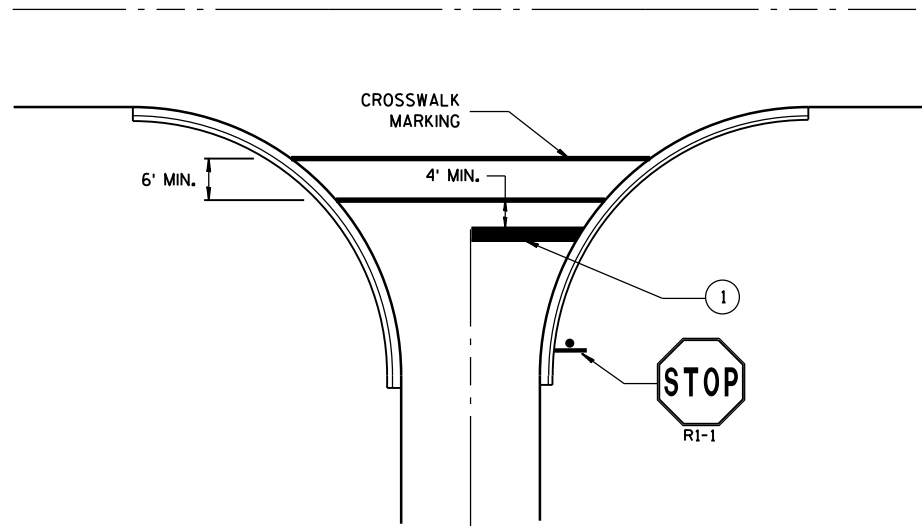


TYPICAL STOP LINE PAVEMENT MARKING
FOR SIDEROADS WITH RIGHT TURN LANE

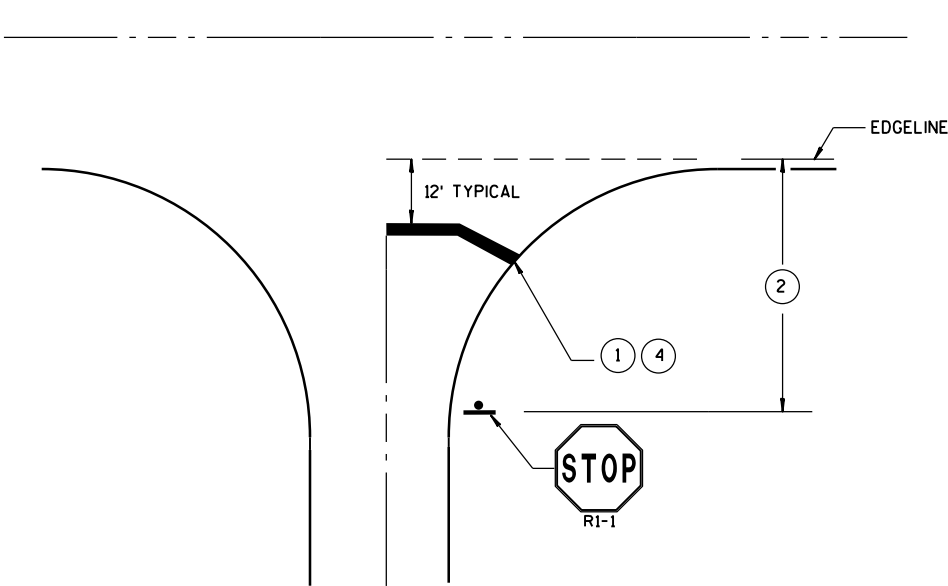
GENERAL NOTES

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 PROJECT ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
- 2 IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGE LINE THAN NO STOP LINE IS REQUIRED.
- 3 IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION THAN NO STOP LINE IS REQUIRED.
- 4 MOVE CLOSER TO EDGE OF TRAVEL LANE AS NEEDED FOR VISIBILITY AND SIGHT LINES. (NO CLOSER THAN 4 FEET).

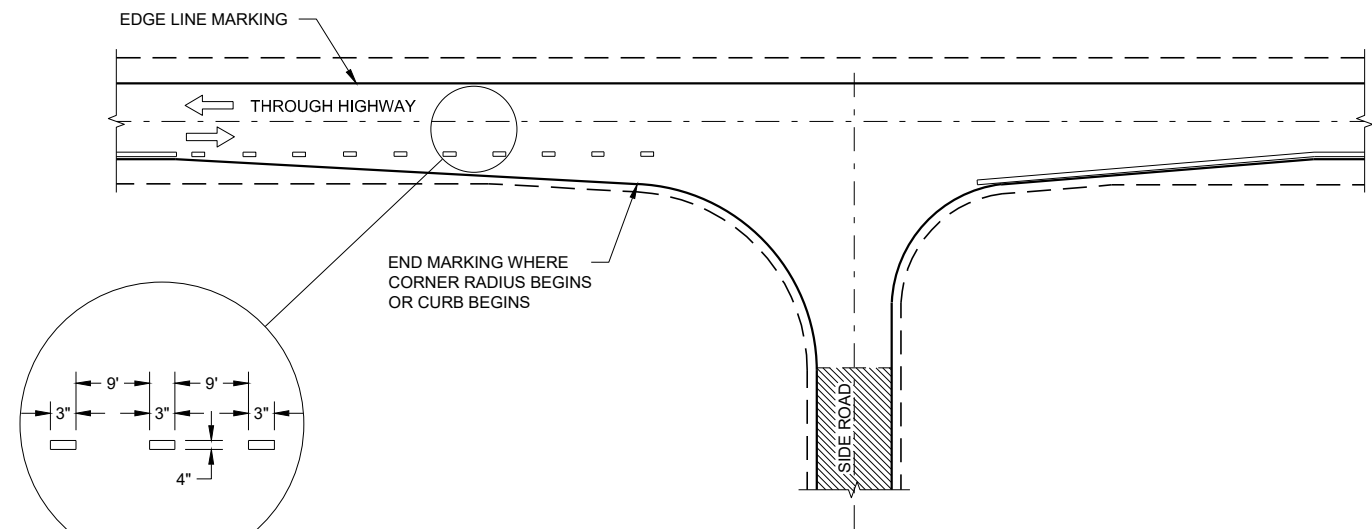


TYPICAL STOP LINE PAVEMENT MARKING
FOR SIDEROADS WITH CROSSWALK MARKING

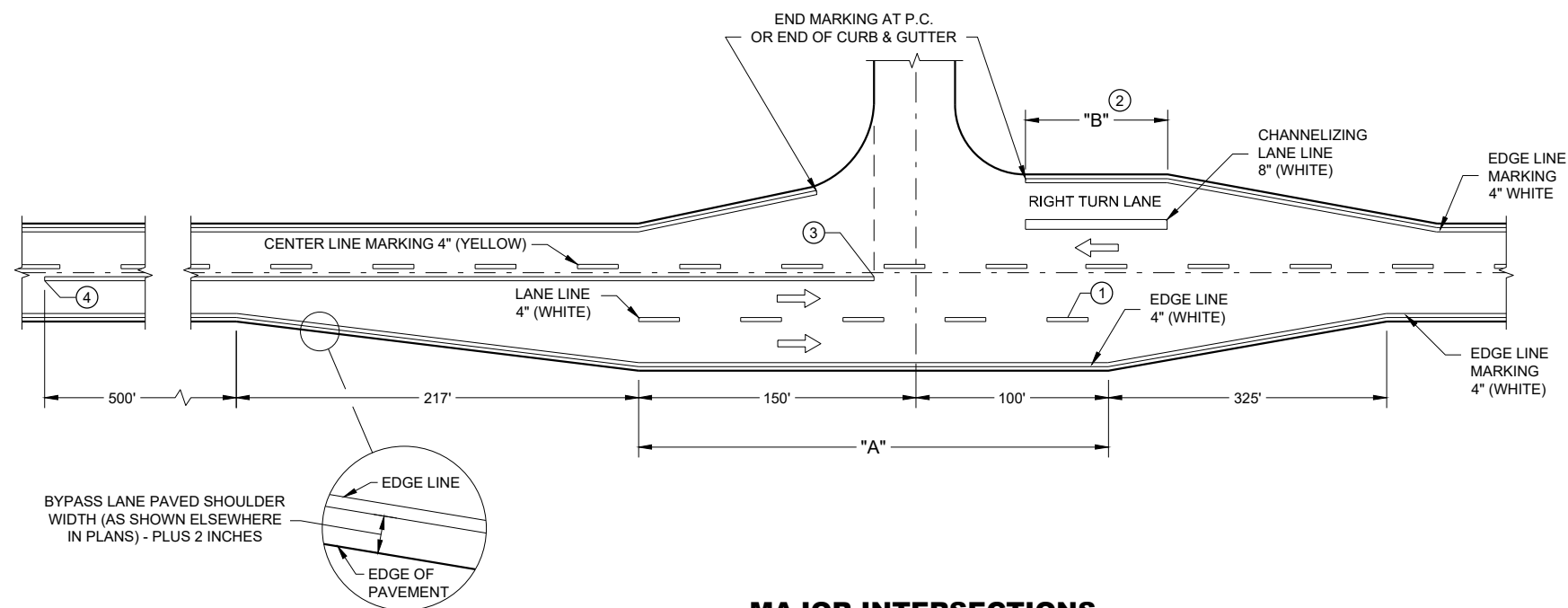


TYPICAL STOP LINE PAVEMENT MARKING
WITHOUT CURB AND GUTTER

| STOP LINE AND CROSSWALK PAVEMENT MARKING | |
|--|--|
| STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION | |
| APPROVED DATE | /S/ Matthew R. Rauch STATE SIGNING AND MARKING ENGINEER |
| FHWA | |



MINOR INTERSECTION



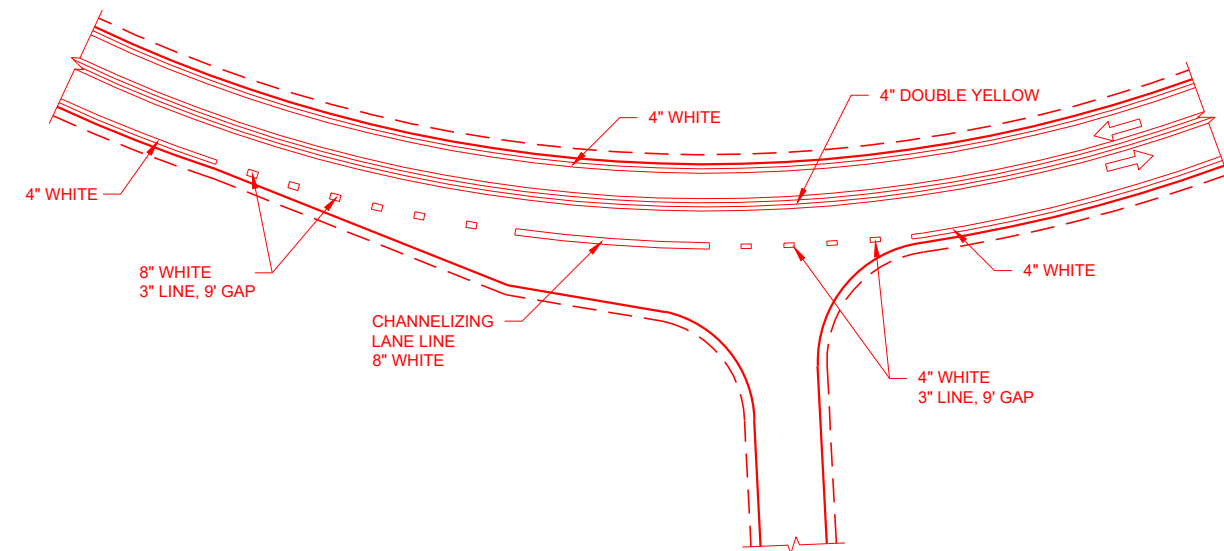
MAJOR INTERSECTIONS
(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)

GENERAL NOTES

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

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

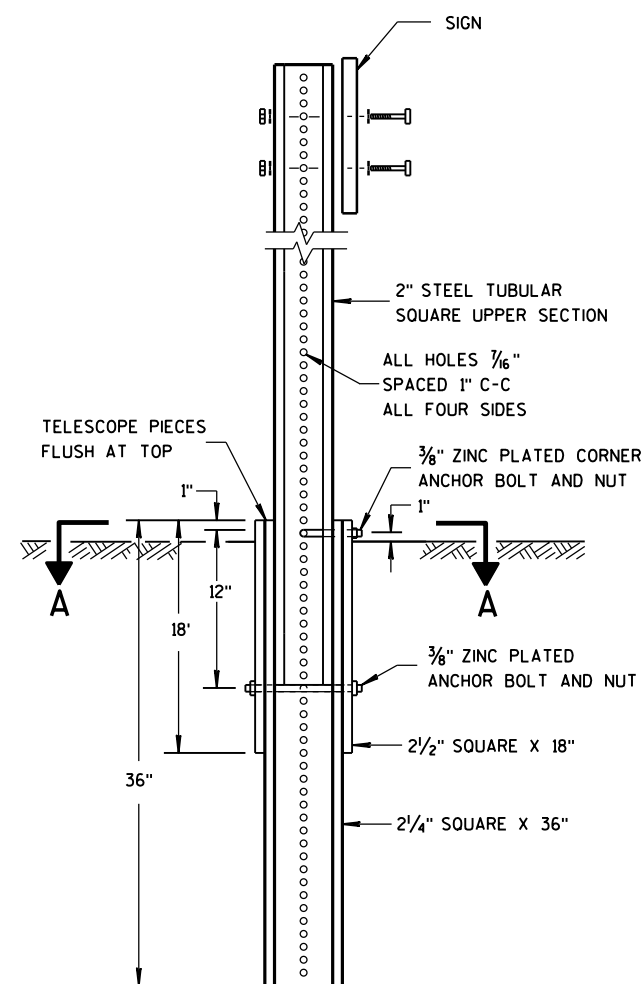
ARROW SYMBOL (➡) SHOWS DIRECTION OF TRAVEL



INTERSECTION ON OUTSIDE OF CURVE

PAVEMENT MARKING
(INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



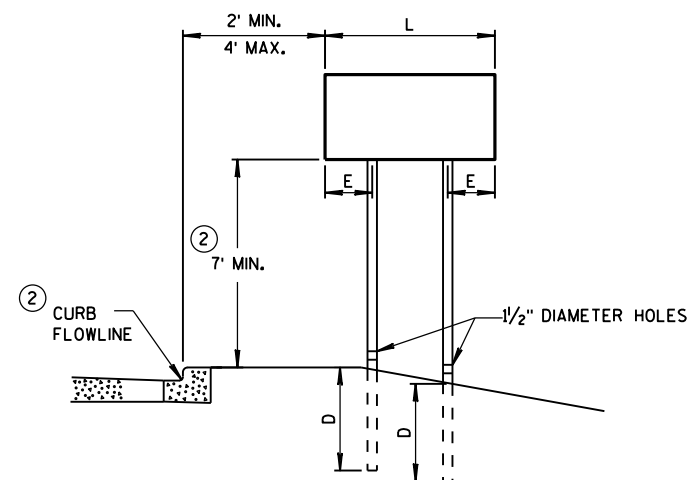
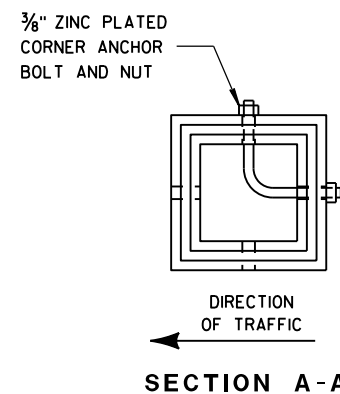
DETAIL OF TUBULAR STEEL SIGN POST

TUBULAR STEEL POSTS

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

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

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

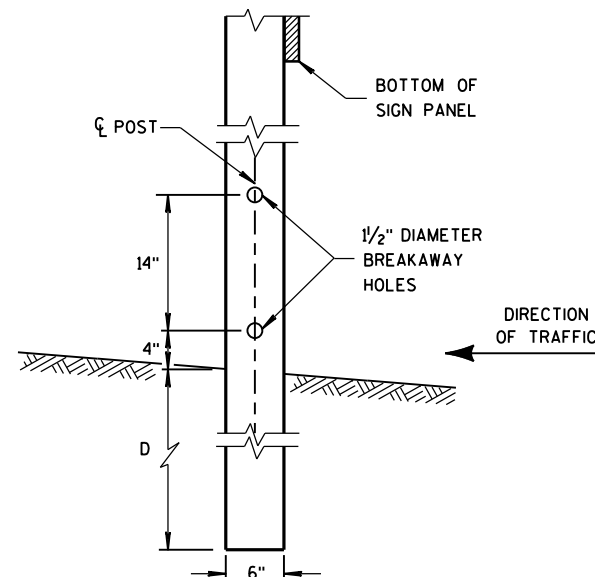


URBAN AREA

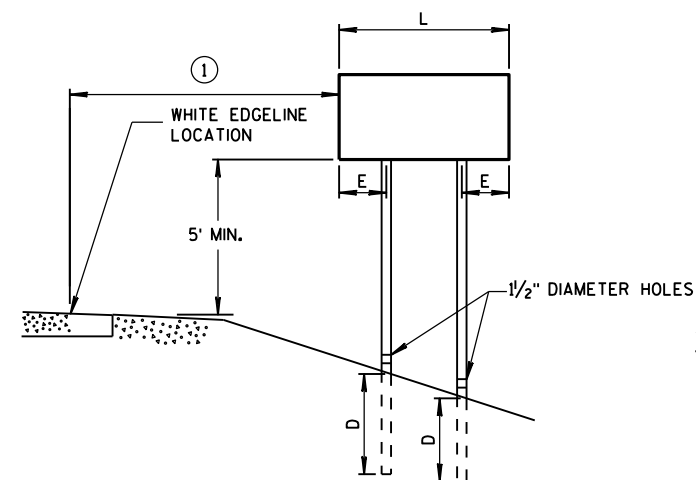
POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

WOOD POST
EMBEDMENT DEPTH

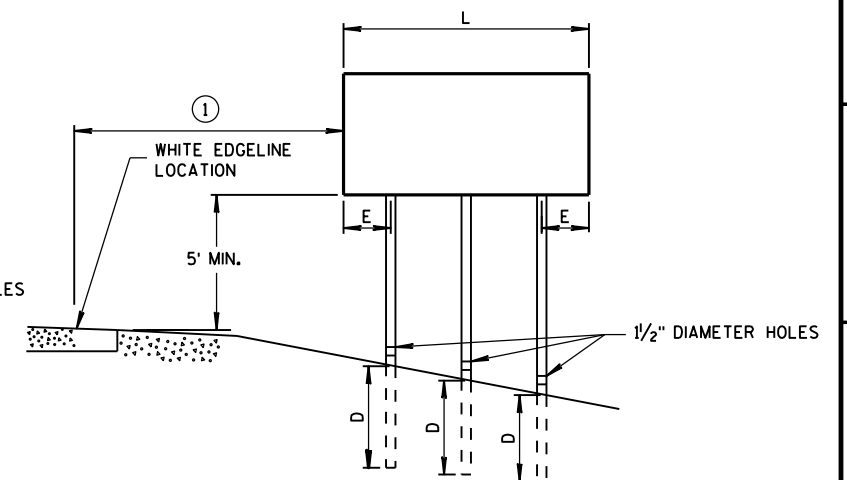
| | |
|---|------------|
| AREA OF SIGN INSTALLATION (SQ. FT.) | D (MIN) |
| 20 OR LESS | 4' |
| GREATER THAN 20 | 5' |



4"x6" WOOD POST MODIFICATION



RURAL AREA



4" X 6" WOOD POST

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

SEE NOTE (3)

GENERAL NOTES

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



NUTS, BOLTS AND LAGS USED FOR MOUNTING SIGNS SHALL HAVE HEXAGONAL HEADS AND SHALL BE EITHER:

- A. HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: A 153, CLASS D, OR SC 3
- B. ELECTRO-GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: B 633, TYPE III, SC 3

THREADS ON BOLTS AND NUTS SHALL BE MANUFACTURED WITH SUFFICIENT ALLOWANCE FOR THE CADMIUM PLATE OR GALVANIZED COATING TO PERMIT THE NUTS TO RUN FREELY ON THE BOLTS.

- WOOD POSTS (4" x 4" or 4" x 6")
- LAG SCREWS - 3/8" x 3"
 - MACHINE BOLTS - 5/16" x 6-1/2" OR 7" LENGTH W/ NUTS

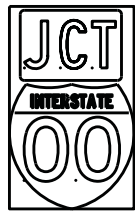
- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS - 3/8" x 3-1/4" LENGTH W/ NUTS
 - RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

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

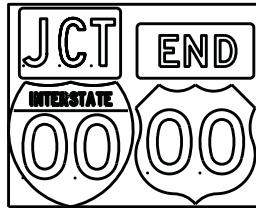
* TWO DIFFERENT FASTENING SYSTEMS ARE SHOWN FOR ILLUSTRATION PURPOSES. ON ANY INDIVIDUAL SIGN, EITHER ONE OR THE OTHER SYSTEM SHALL BE USED. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

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

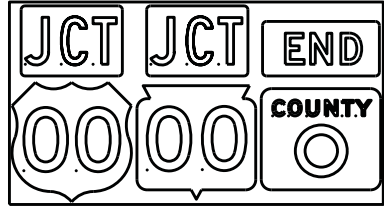
TYPICAL ASSEMBLIES



J1-1



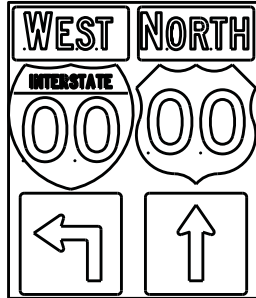
J1-2



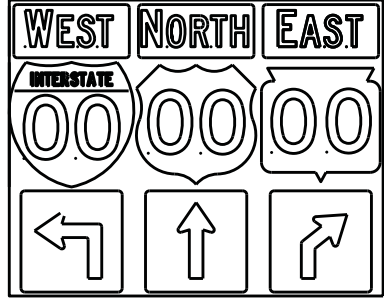
J1-3



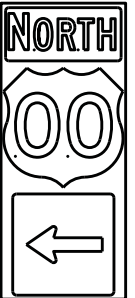
J2-1



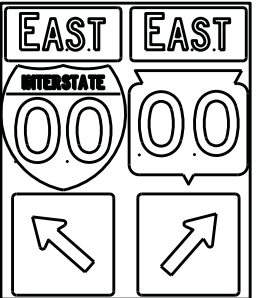
J2-2



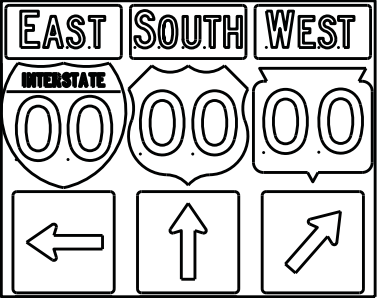
J2-3



J3-1



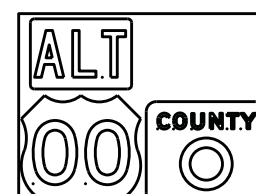
J3-2



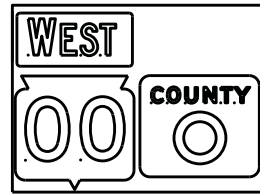
J3-3



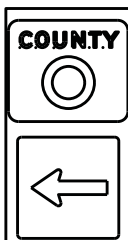
J4-1



J4-2



J4-2



J13-1



J12-1



J32-1



J33-1



J23-1

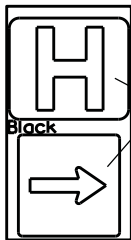


J22-1



JV

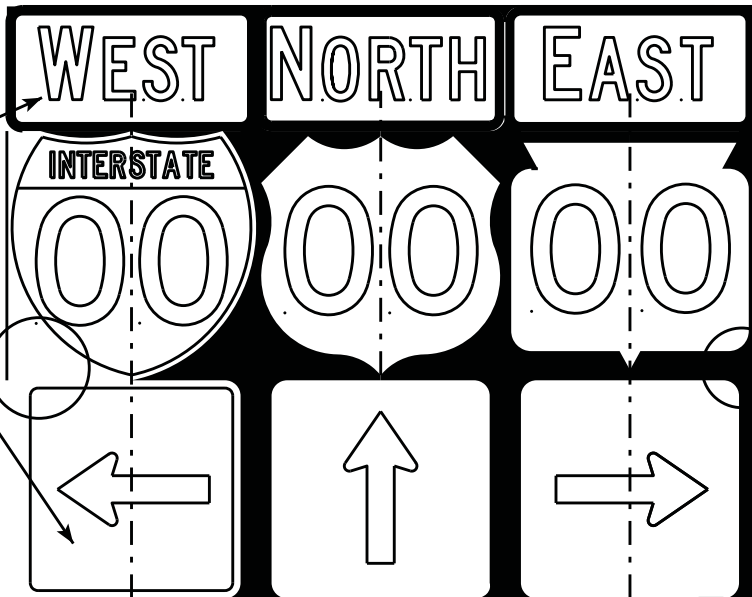
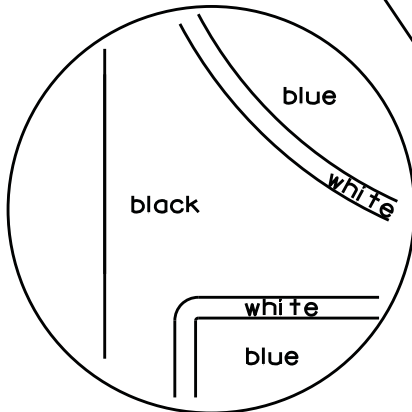
(Typical Vertical J-Assembly
See Note 10 and 11)



JH-1

Blue Background

[blue background
with interstate]



[black background]

ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

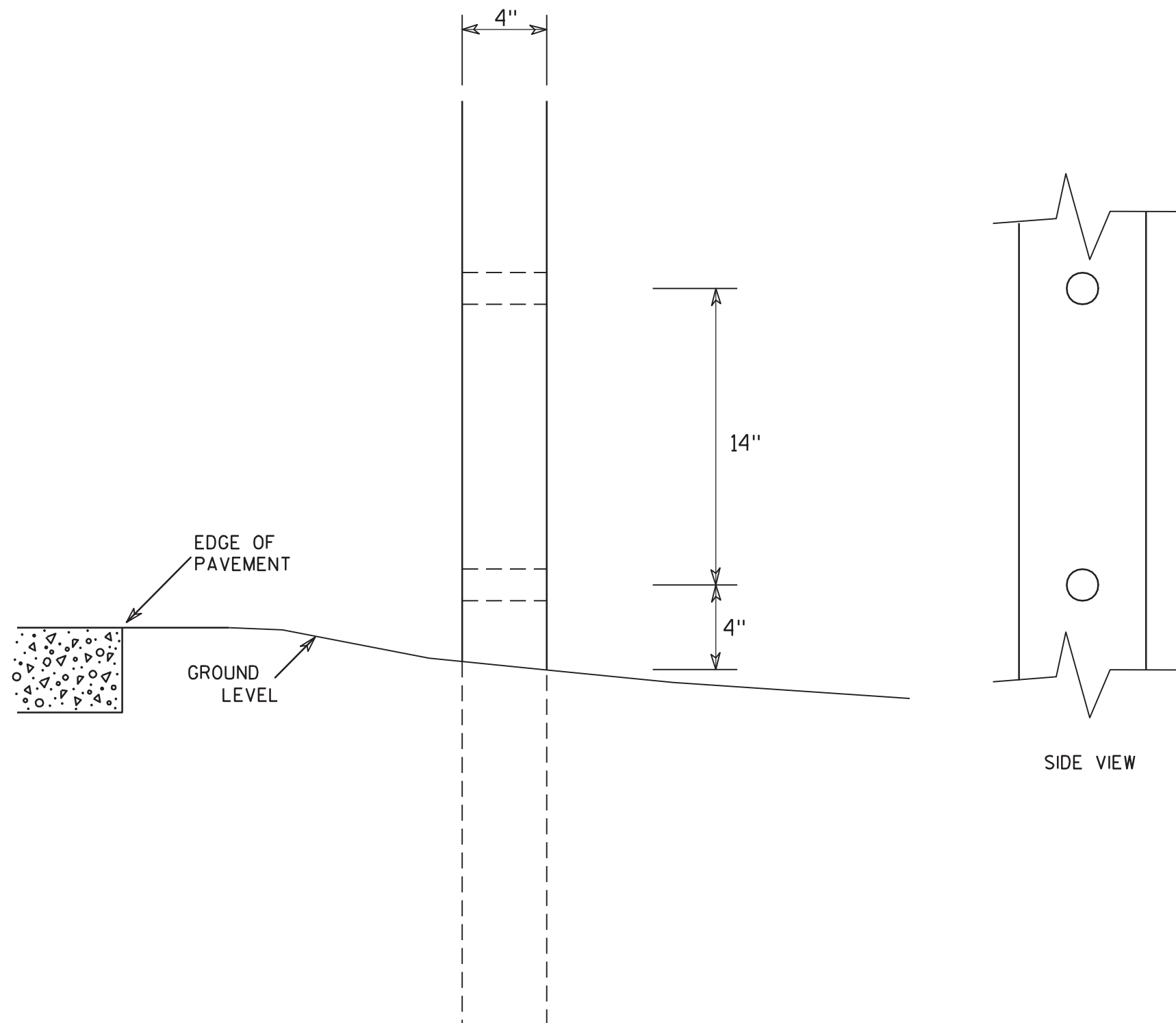
APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 2/06/14 PLATE NO. A2-1S.8

NOTES

1. Signs are Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Black Non-reflective
Message - see Note 5
3. Message Series - See Note 5
4. Corners shall be square or rounded if base material is plywood. If base material is metal the corners shall be rounded.
5. The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
6. Certain marker heads require the component pieces to be the same color. As an example, all the components used with an M1-1 Interstate marker shall be blue.
7. Single panel j-assemblies shall only be used with route marker shields that are same size. If the route marker shields are different size use multiple piece component.
8. Route assemblies that have 24 inch route shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have one horizontal splice between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 inches or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
9. Route assemblies that have 36 inch shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have two horizontal splices. One horizontal splice shall be between the cardinal direction and route shields and the other horizontal splice shall be between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
10. All Vertical J Assemblies are given a Sign Code of JV
11. For JV Assemblies that have a mixture of Interstate and non Interstate shields, arrows and cardinals shall be white on blue.

7



GENERAL NOTES

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

7

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Chester J. Spang
for State Traffic Engineer

DATE 3/27/97

PLATE NO. A4-11.2

PROJECT NO:

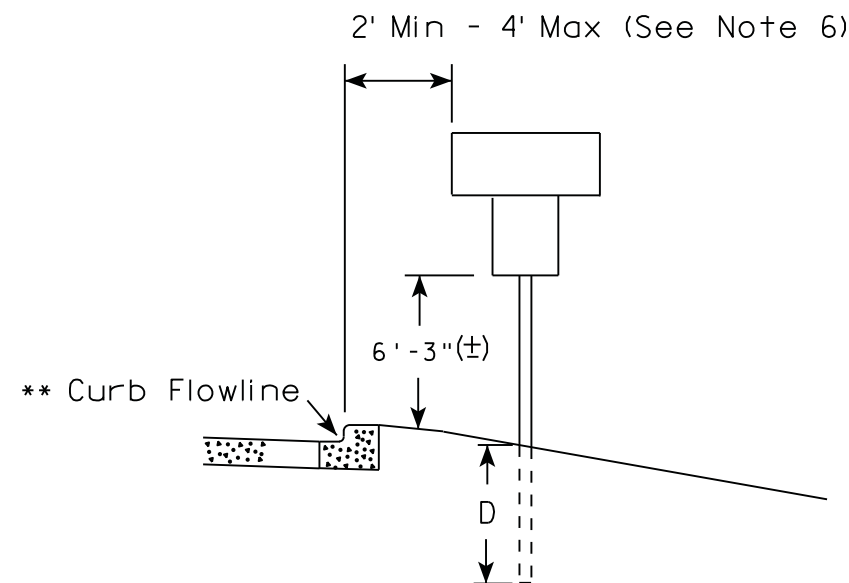
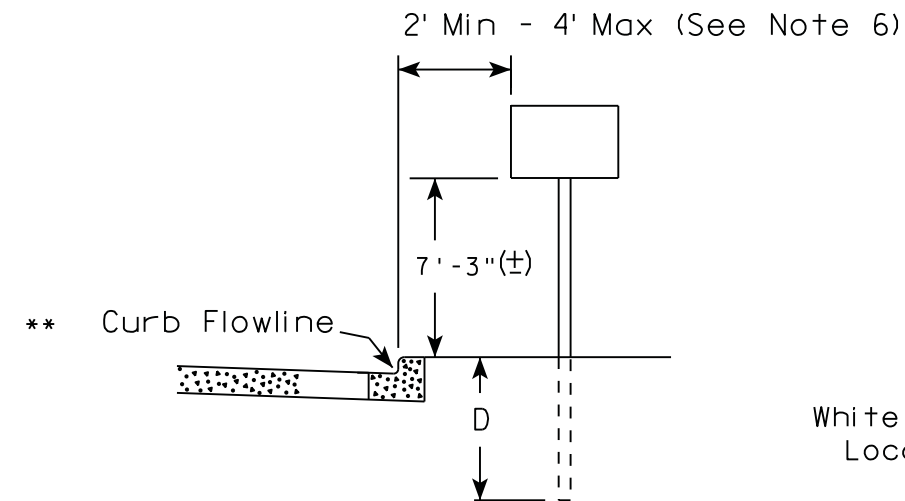
HWY:

COUNTY:

SHEET NO:

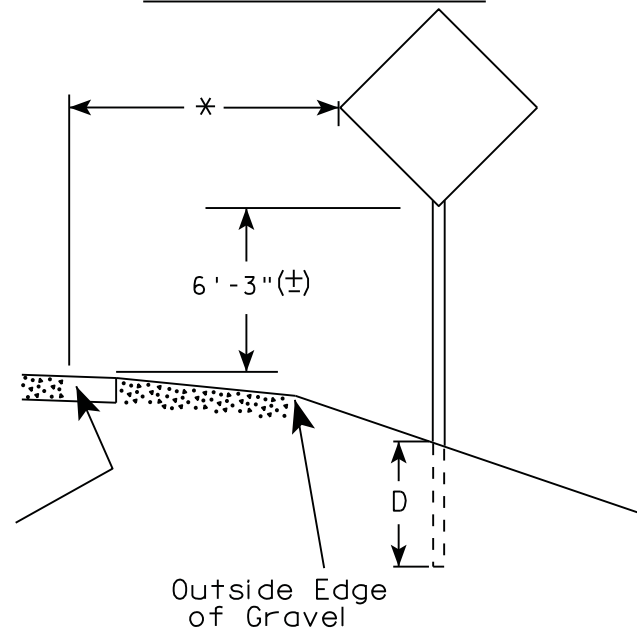
E

URBAN AREA

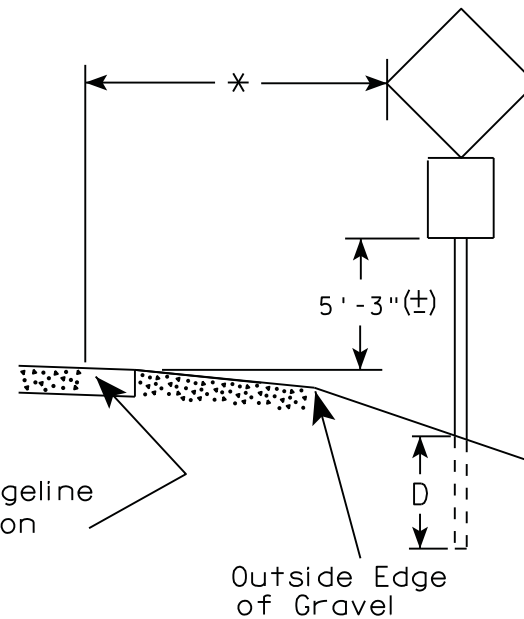


White Edgeline
Location

RURAL AREA (See Note 2)



White Edgeline
Location



Outside Edge
of Gravel

POST EMBEDMENT DEPTH

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

* 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.

GENERAL NOTES

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

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

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R. Rauch
for State Traffic Engineer

DATE 8/21/17

PLATE NO. A4-3.21

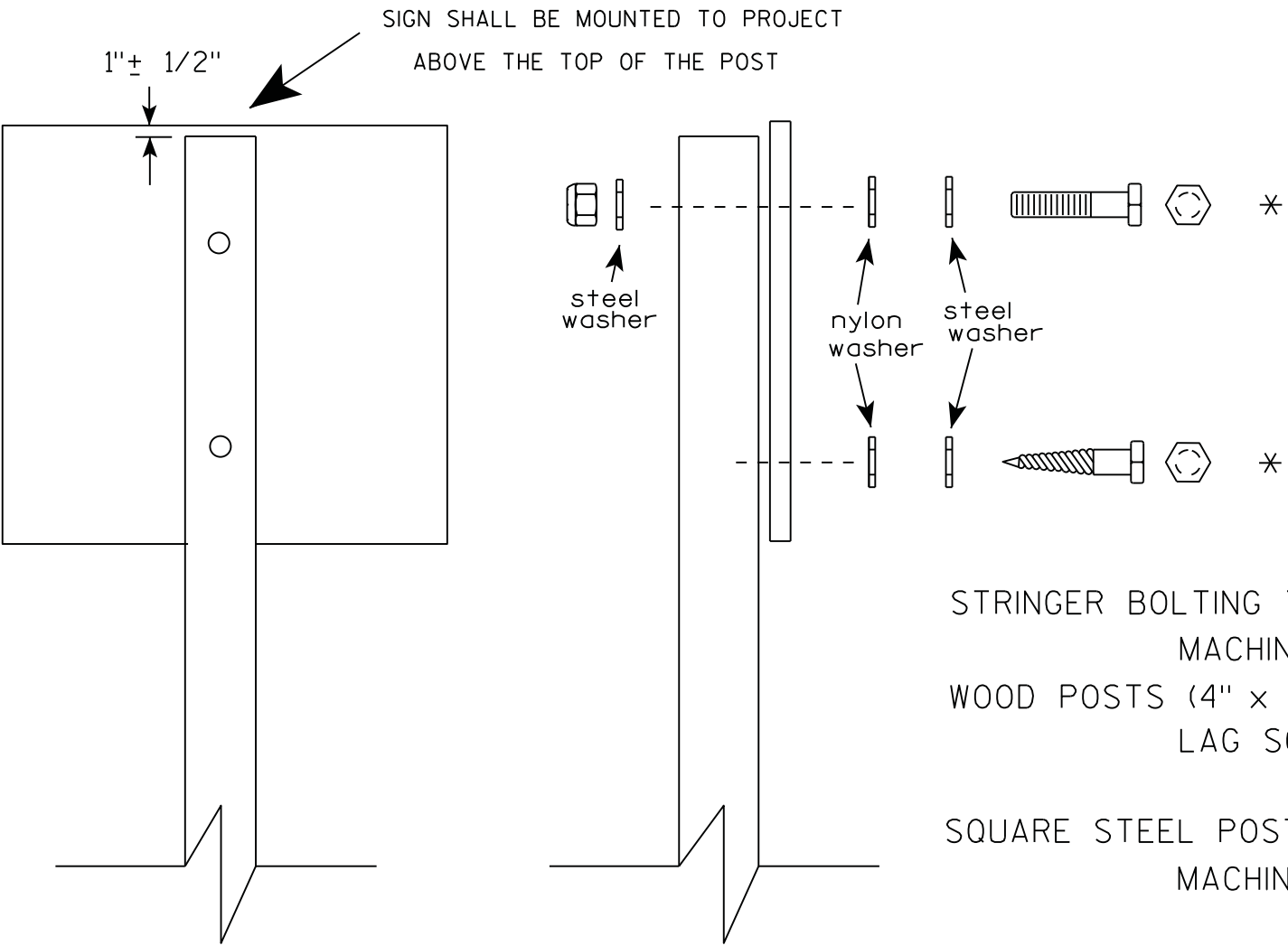
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



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

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

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

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

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

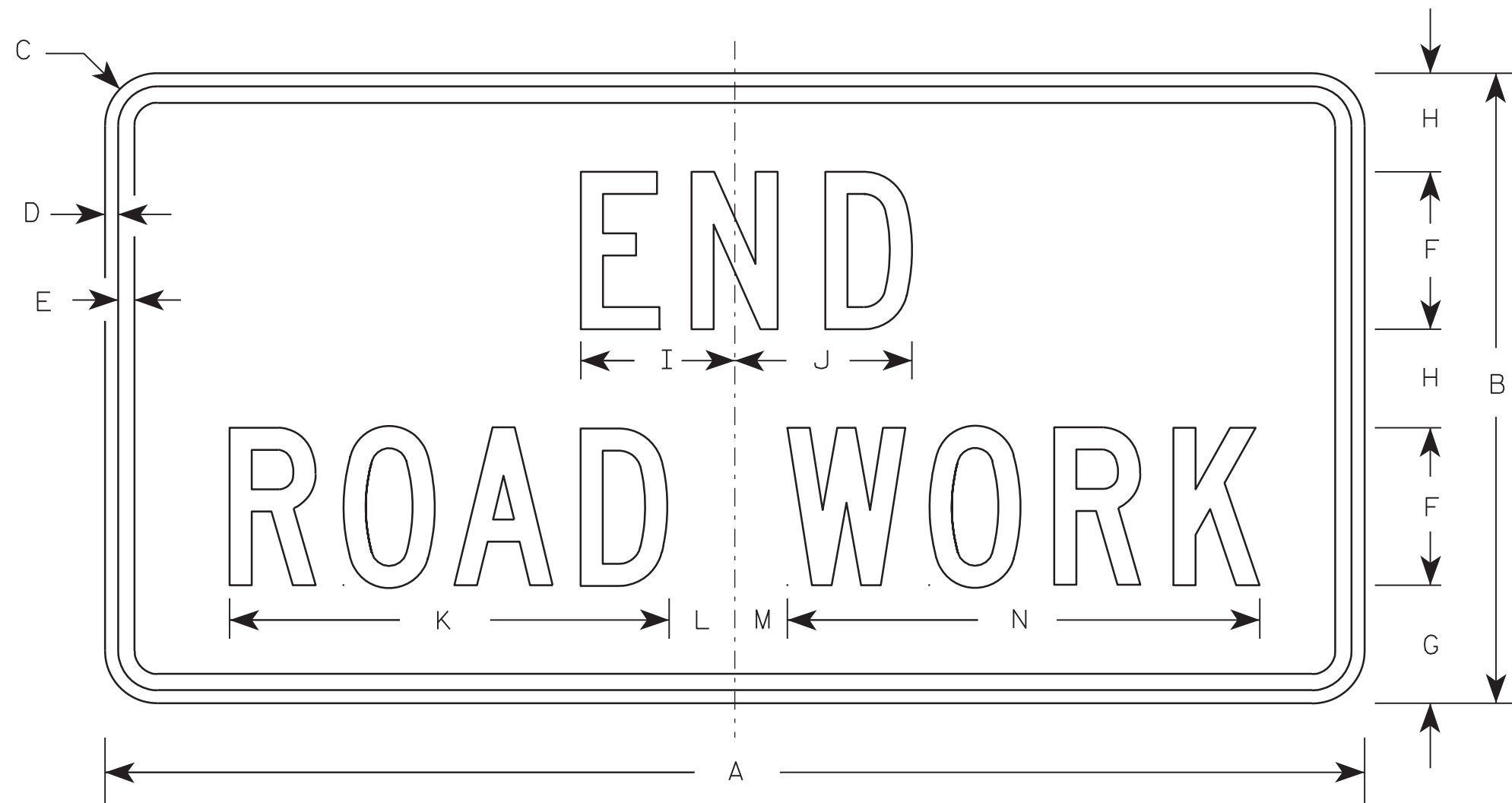
ATTACHMENT OF SIGNS
TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

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

7



G20-2A

NOTES

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

Metric equivalent
for this sign is:

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

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

STANDARD SIGN

G20-2A

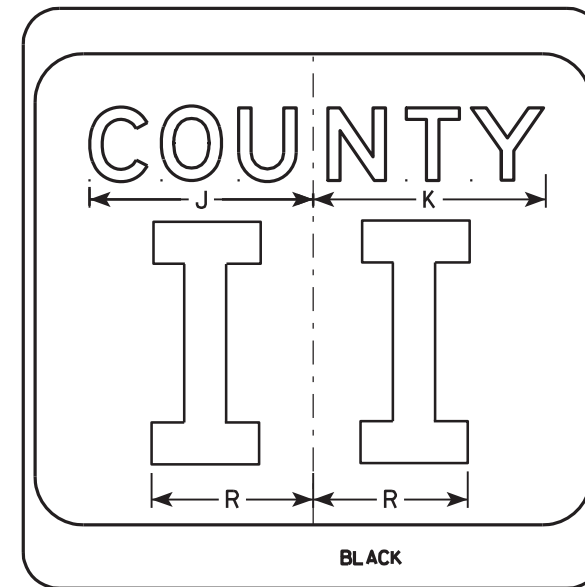
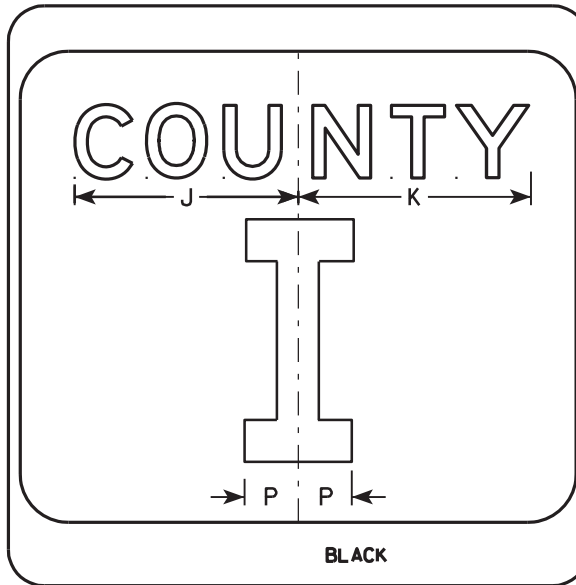
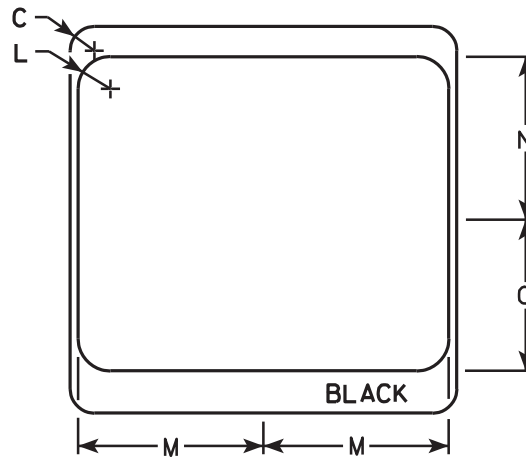
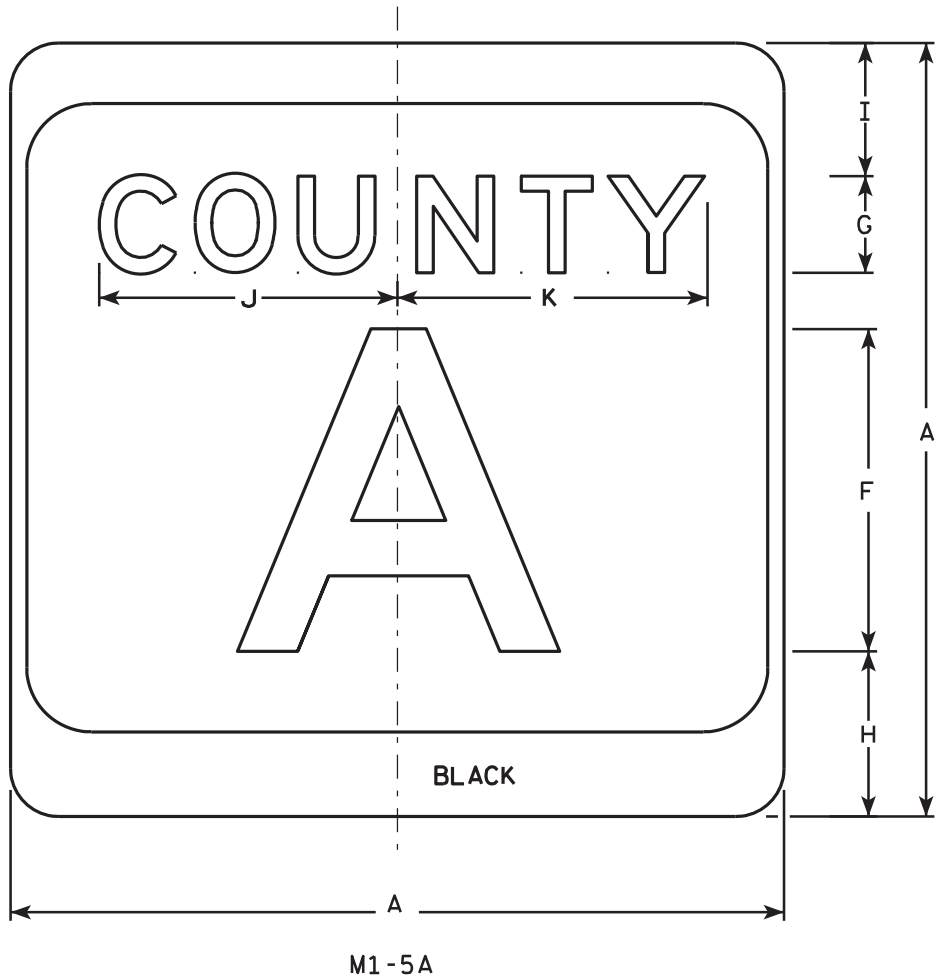
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 9/30/09 PLATE NO. G20-2A.8

7

7



NOTES

- Sign is Type II - see Note 7 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - White & Black - See Note 7
Message - Black
- Message Series - see Note 5
- 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.
- 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.
- Substitute appropriate letters & optically center to achieve proper balance.
- Permanent Signs
Background - Type H Reflective
Detour or temporary Signs
Background - Reflective

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

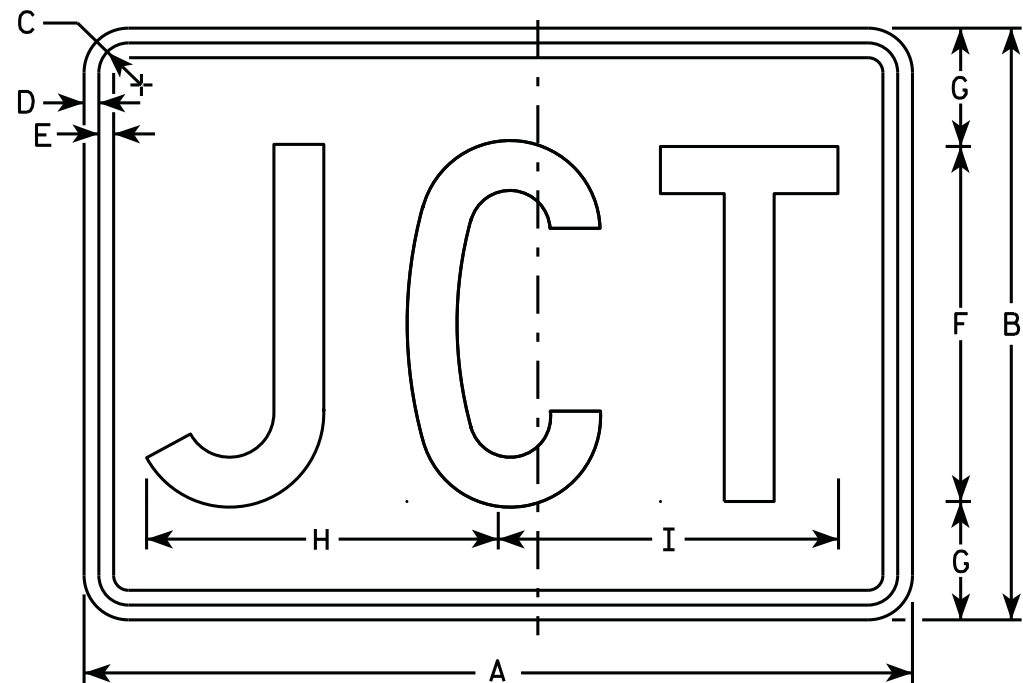
| | | | | |
|-------------|------|---------|-----------|---|
| PROJECT NO: | HWY: | COUNTY: | SHEET NO: | E |
|-------------|------|---------|-----------|---|

CTH MARKER
M1-5A FOR ASSEMBLIES

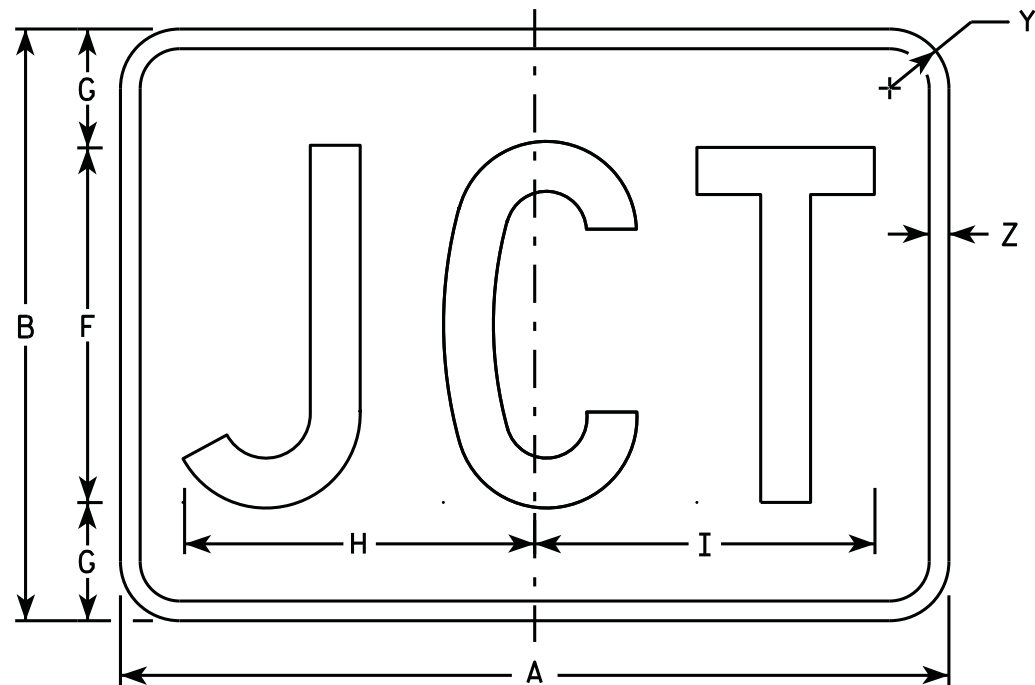
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 9/27/11 PLATE NO. M1-5A.8



M2-1
MM2-1
MP2-1



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

NOTES

1. Sign is Type II - Type H
2. Color:
Background - See note 5
Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M2-1 Background - White
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

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

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

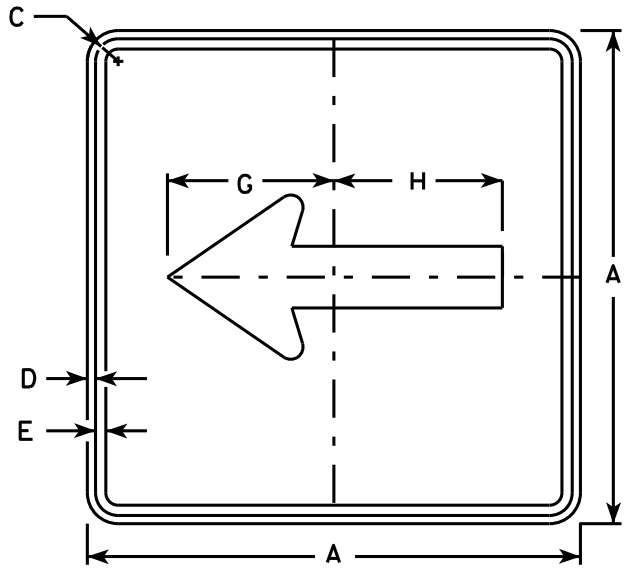
STANDARD SIGN

M2 - 1

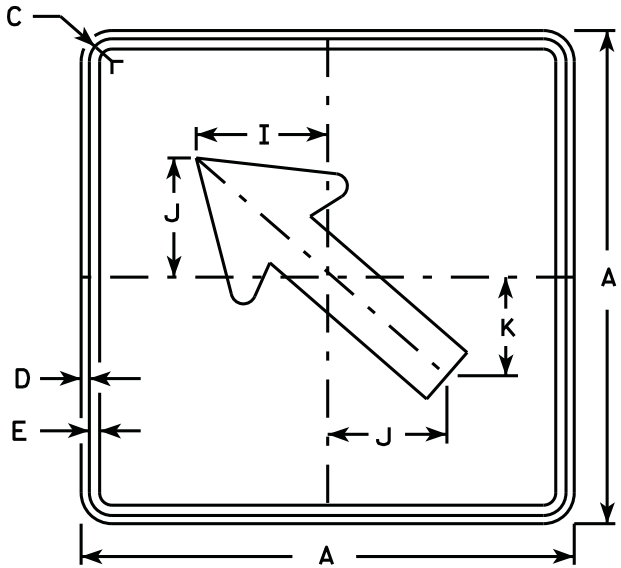
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Raush*
for State Traffic Engineer

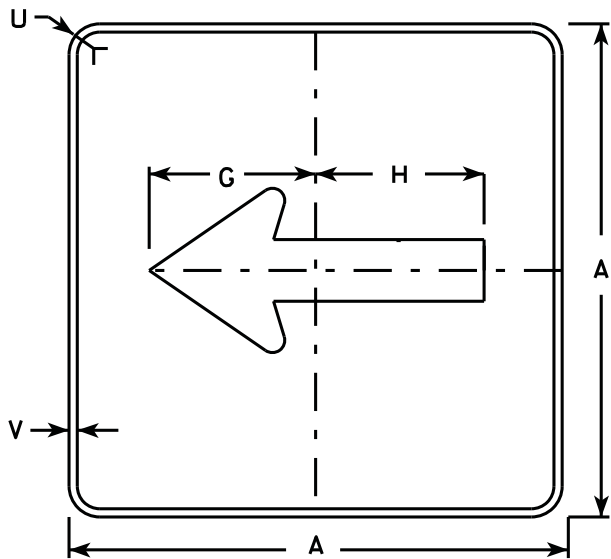
DATE 10/15/15 PLATE NO. M2-1.12



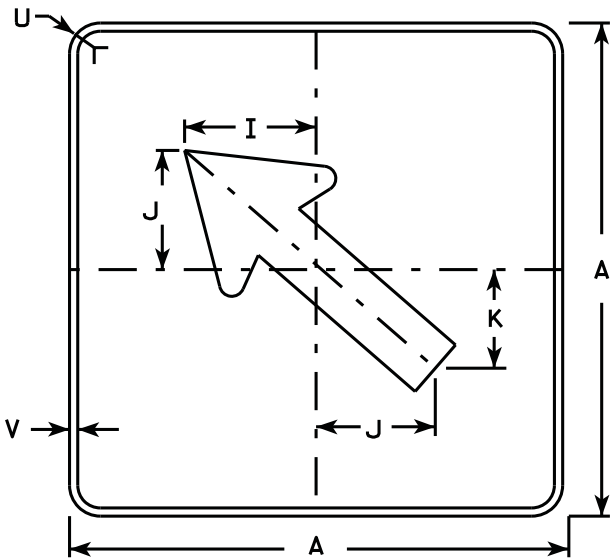
M6 - 1
MM6 - 1
M06 - 1
MP6 - 1



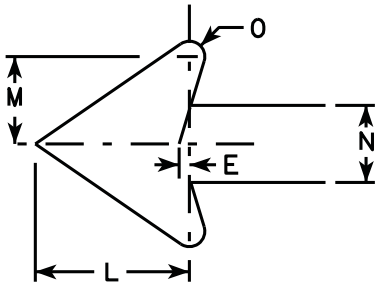
M6 - 2
MM6 - 2
M06 - 2
MP6 - 2



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



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



NOTES

- 1. Signs are Type II - Type H except as Shown
- 2. Color:
 - Background - See note 4
 - Message - See note 4
- 3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 4. 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

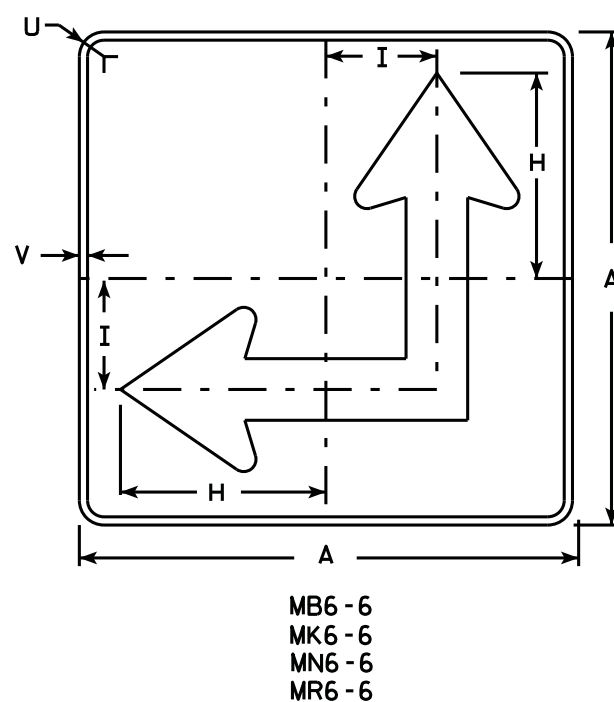
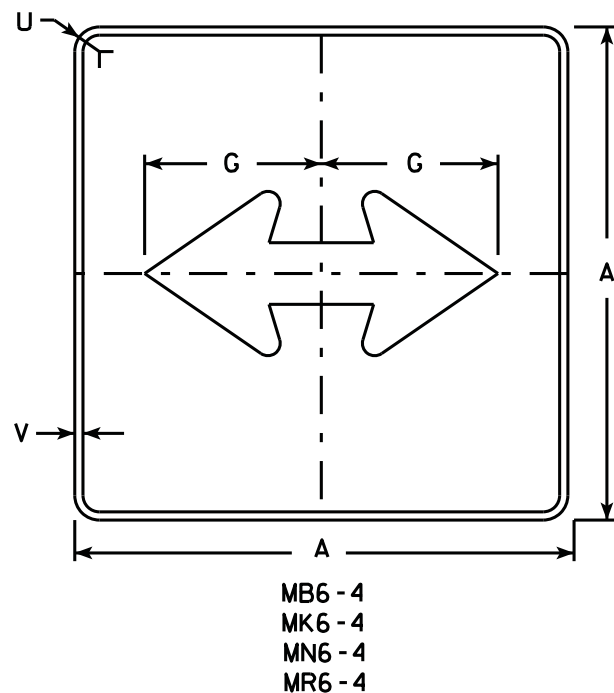
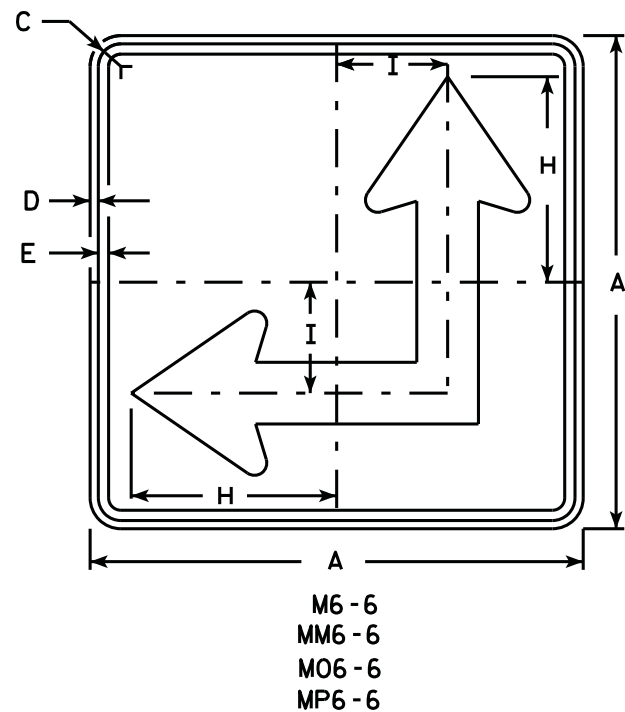
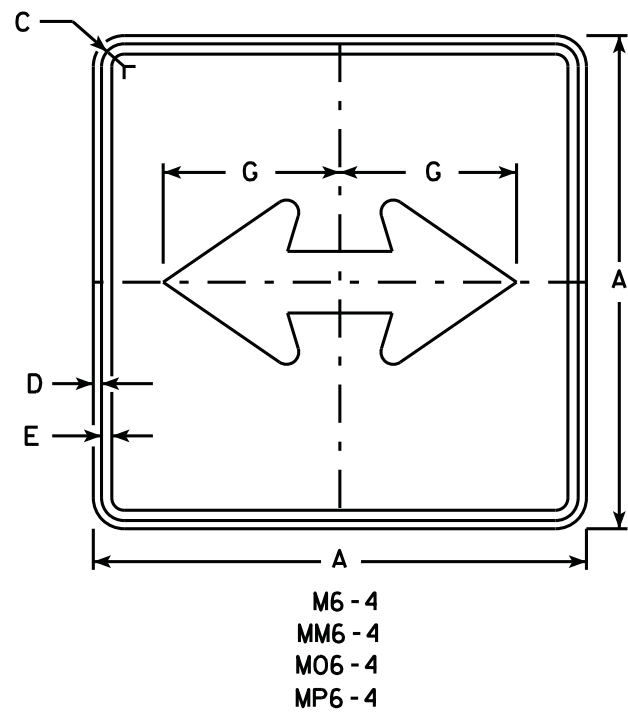
| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | O | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|------|----|---|-------|-----|-----|---|--------|--------|-------|-------|-------|-------|-------|-------|-----|---|---|---|---|---|-------|-----|---|---|---|---|-----------------|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

STANDARD SIGN
M6 - 1 & M6 - 2
SERIES

WISCONSIN DEPT OF TRANSPORTATION

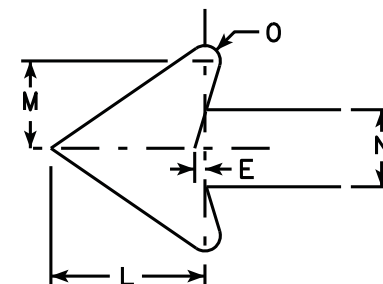
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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



NOTES

1. Signs are Type II - Type H except as Shown
2. Color:
Background - See Note 4
Message - See Note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-4 and M6-6 Background - White
Message - Black
MB6-4 and MB6-6 Background - Blue
Message - White
MK6-4 and MK6-6 Background - Green
Message - White
MM6-4 and MM6-6 Background - White
Message - Green
MN6-4 and MN6-6 Background - Brown
Message - White
M06-4 and M06-6 Background - Orange - Type F Reflective
Message - Black
MP6-4 and MP6-6 Background - White
Message - Blue
MR6-4 and MR6-6 Background - Brown
Message - Yellow
5. M6-6R same as M6-6L except arrow points ahead and right.



| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | O | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|------|----|---|-------|-----|-----|---|--------|--------|-------|---|---|-------|-------|-------|-----|---|---|---|---|---|-------|-----|---|---|---|---|-----------------|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | 21 | | 1 1/8 | 3/8 | 3/8 | | 7 1/2 | 8 3/4 | 4 1/4 | | | 5 1/4 | 3 | 2 5/8 | 1/2 | | | | | | 1 1/2 | 1/2 | | | | | 3.06 |
| 3 | 30 | | 1 3/8 | 1/2 | 5/8 | | 10 3/4 | 12 1/2 | 6 3/4 | | | 7 1/2 | 4 1/4 | 3 3/4 | 3/4 | | | | | | 1 7/8 | 1/2 | | | | | 6.25 |
| 4 | 30 | | 1 3/8 | 1/2 | 5/8 | | 10 3/4 | 12 1/2 | 6 3/4 | | | 7 1/2 | 4 1/4 | 3 3/4 | 3/4 | | | | | | 1 7/8 | 1/2 | | | | | 6.25 |
| 5 | 30 | | 1 3/8 | 1/2 | 5/8 | | 10 3/4 | 12 1/2 | 6 3/4 | | | 7 1/2 | 4 1/4 | 3 3/4 | 3/4 | | | | | | 1 7/8 | 1/2 | | | | | 6.25 |

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

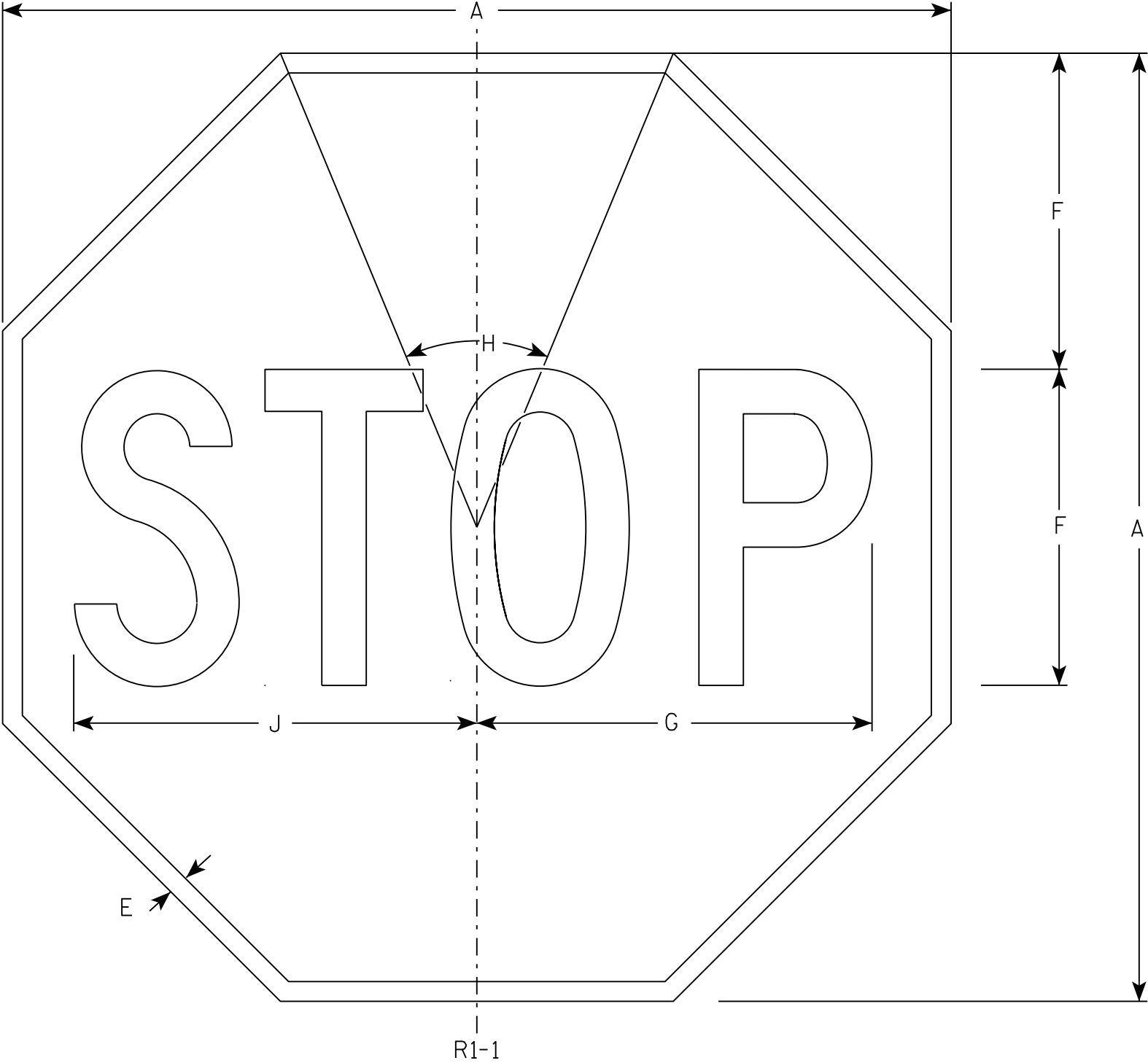
STANDARD SIGN
M6 - 4 & M6 - 6
SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M6-4.10

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 |

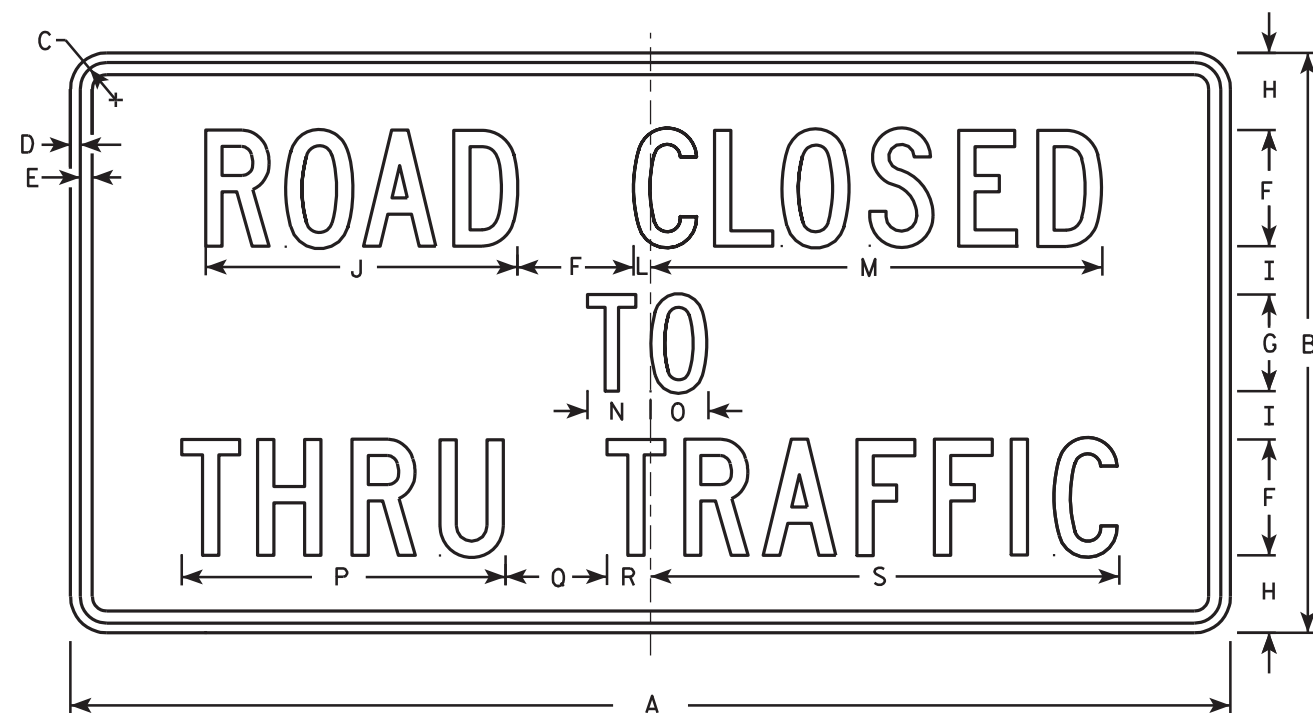
STANDARD SIGN

R1 - 1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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



R11-4

NOTES

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

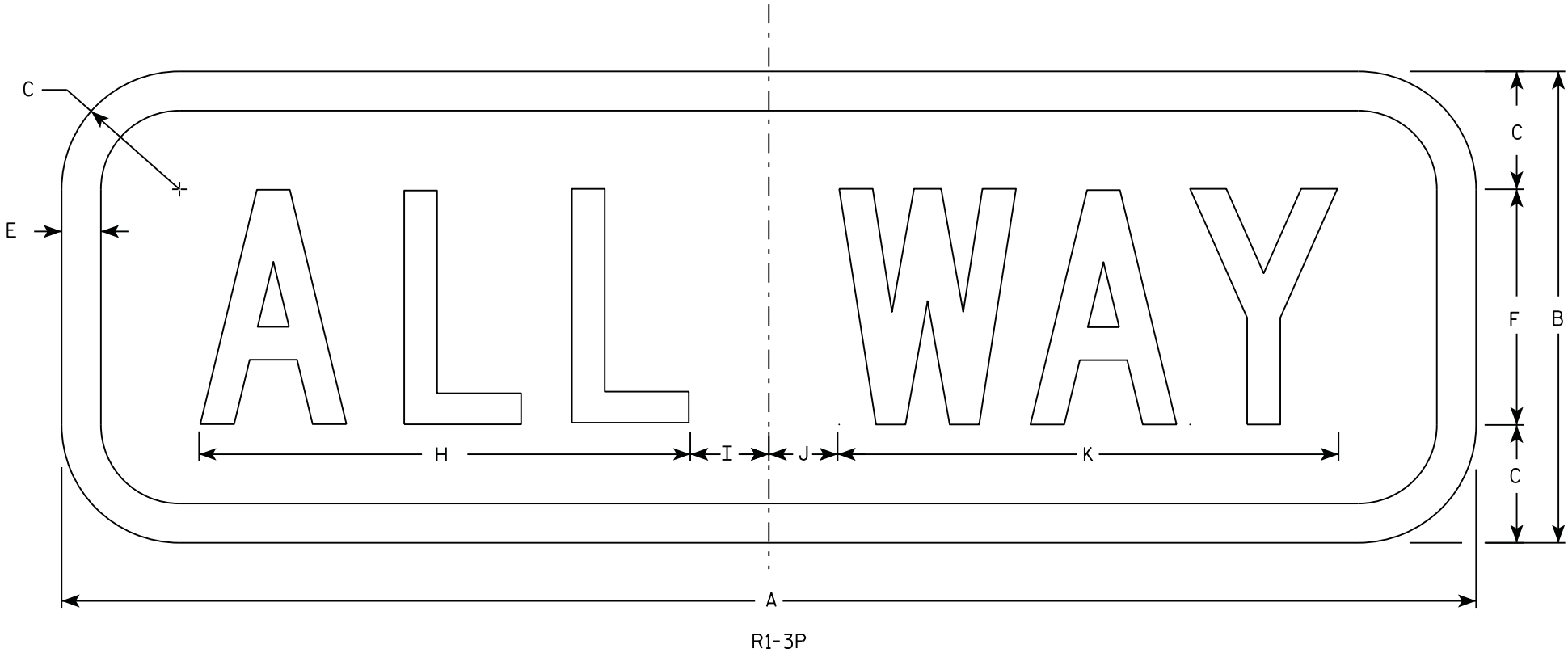
| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|------|----|----|-------|---|-----|---|---|---|-----|------|---|-----|--------|-----|---|------|-----|-----|------|---|---|---|---|---|---|---|-----------------|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2S | 60 | 30 | 1 3⁄8 | ½ | 5⁄8 | 6 | 5 | 4 | 2 ½ | 16 ⅛ | | 7⁄8 | 23 3⁄8 | 3 ¼ | 3 | 16 ¾ | 5 ¼ | 2 ¼ | 24 ¼ | | | | | | | | 12.5 |
| 2M | 60 | 30 | 1 3⁄8 | ½ | 5⁄8 | 6 | 5 | 4 | 2 ½ | 16 ⅛ | | 7⁄8 | 23 3⁄8 | 3 ¼ | 3 | 16 ¾ | 5 ¼ | 2 ¼ | 24 ¼ | | | | | | | | 12.5 |
| 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | |
|----------------------------------|---|
| STANDARD SIGN | |
| R11 - 4 | |
| WISCONSIN DEPT OF TRANSPORTATION | |
| APPROVED | <i>Matthew R. Rauch</i> for State Traffic Engineer |
| DATE 4/1/11 | PLATE NO. R11-4.3 |

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

NOTES

- 1. Sign is Type II - Type 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 | | | | | | | | | | | | | | | | 1.5 |
| 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 | 2 1/4 | | 5/8 | 6 | | 11 | 2 1/4 | 1 1/2 | 11 3/4 | | | | | | | | | | | | | | | | 2.5 |
| 5 | 30 | 12 | 2 1/4 | | 5/8 | 6 | | 11 | 2 1/4 | 1 1/2 | 11 3/4 | | | | | | | | | | | | | | | | 2.5 |

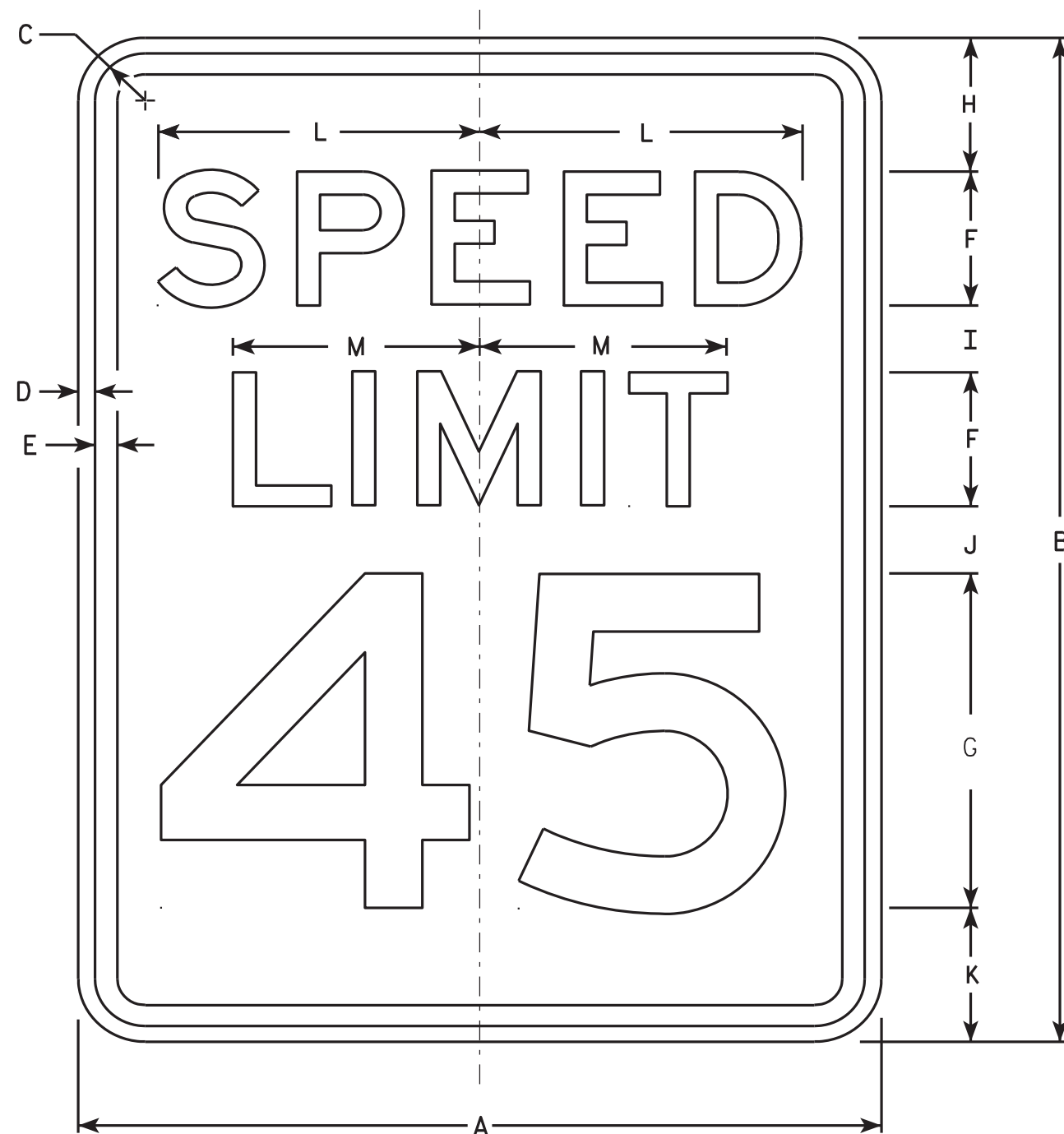
STANDARD SIGN

R1 - 3P

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/29/16 PLATE NO. R1-3P.3



R2-1

NOTES

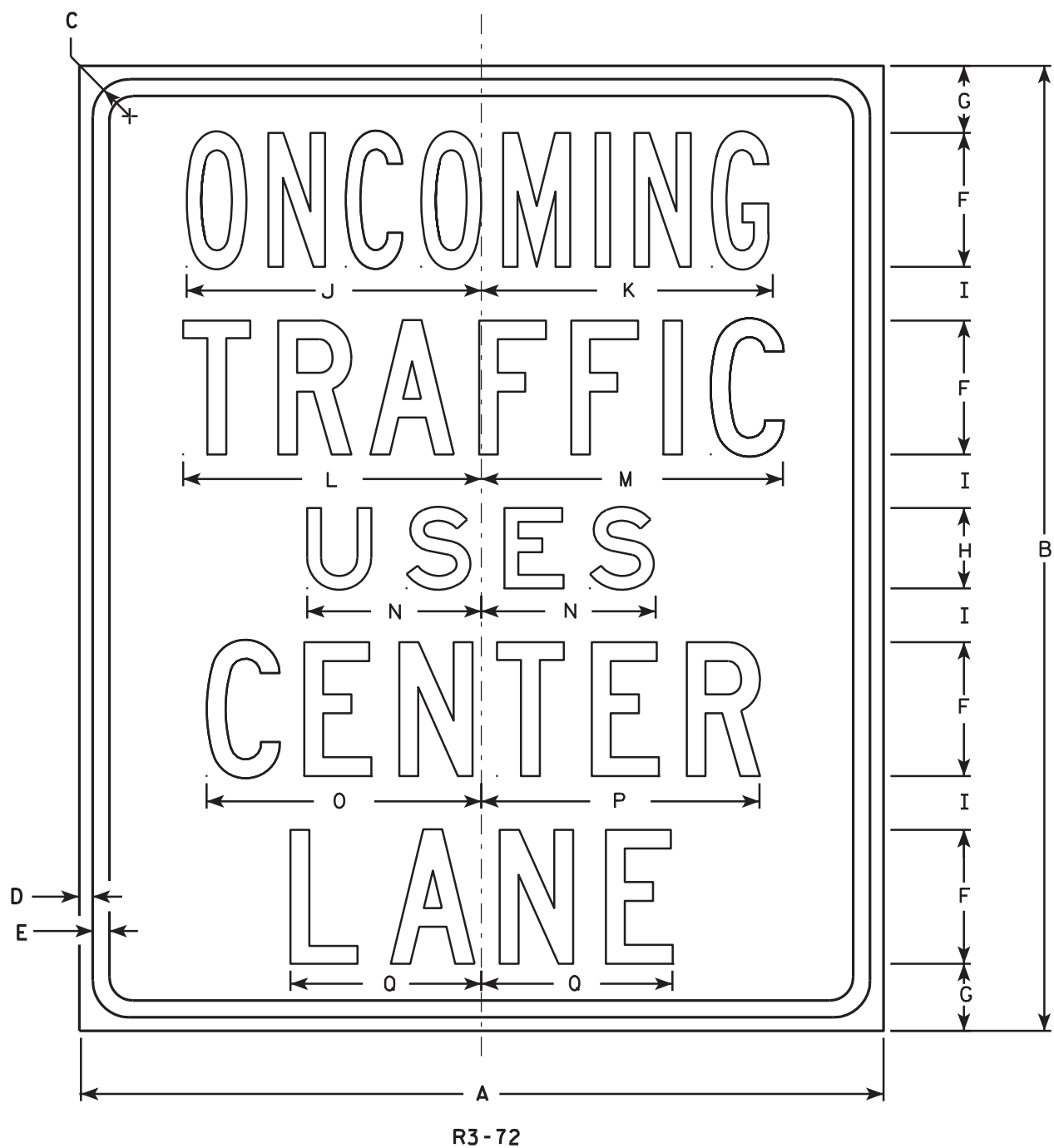
1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as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

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

STANDARD SIGN R2-1

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

PROJECT NO: HWY: COUNTY: SHEET NO: E



NOTES

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

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|------|----|----|-------|-----|-----|---|-------|---|---|----|--------|--------|--------|-------|--------|--------|-------|---|---|---|---|---|---|---|---|---|-----------------|
| 1 | 30 | 36 | 1 3/8 | 1/2 | 5/8 | 5 | 2 1/2 | 3 | 2 | 11 | 10 7/8 | 11 1/8 | 11 1/4 | 6 1/2 | 10 1/4 | 10 3/8 | 7 1/8 | | | | | | | | | | 7.50 |
| 2S | 30 | 36 | 1 3/8 | 1/2 | 5/8 | 5 | 2 1/2 | 3 | 2 | 11 | 10 7/8 | 11 1/8 | 11 1/4 | 6 1/2 | 10 1/4 | 10 3/8 | 7 1/8 | | | | | | | | | | 7.50 |
| 2M | 30 | 36 | 1 3/8 | 1/2 | 5/8 | 5 | 2 1/2 | 3 | 2 | 11 | 10 7/8 | 11 1/8 | 11 1/4 | 6 1/2 | 10 1/4 | 10 3/8 | 7 1/8 | | | | | | | | | | 7.50 |
| 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

STANDARD SIGN R3-72

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

PROJECT NO: HWY: COUNTY: SHEET NO: E



R4-3

NOTES

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

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

STANDARD SIGN R4-3

WISCONSIN DEPT OF TRANSPORTATION

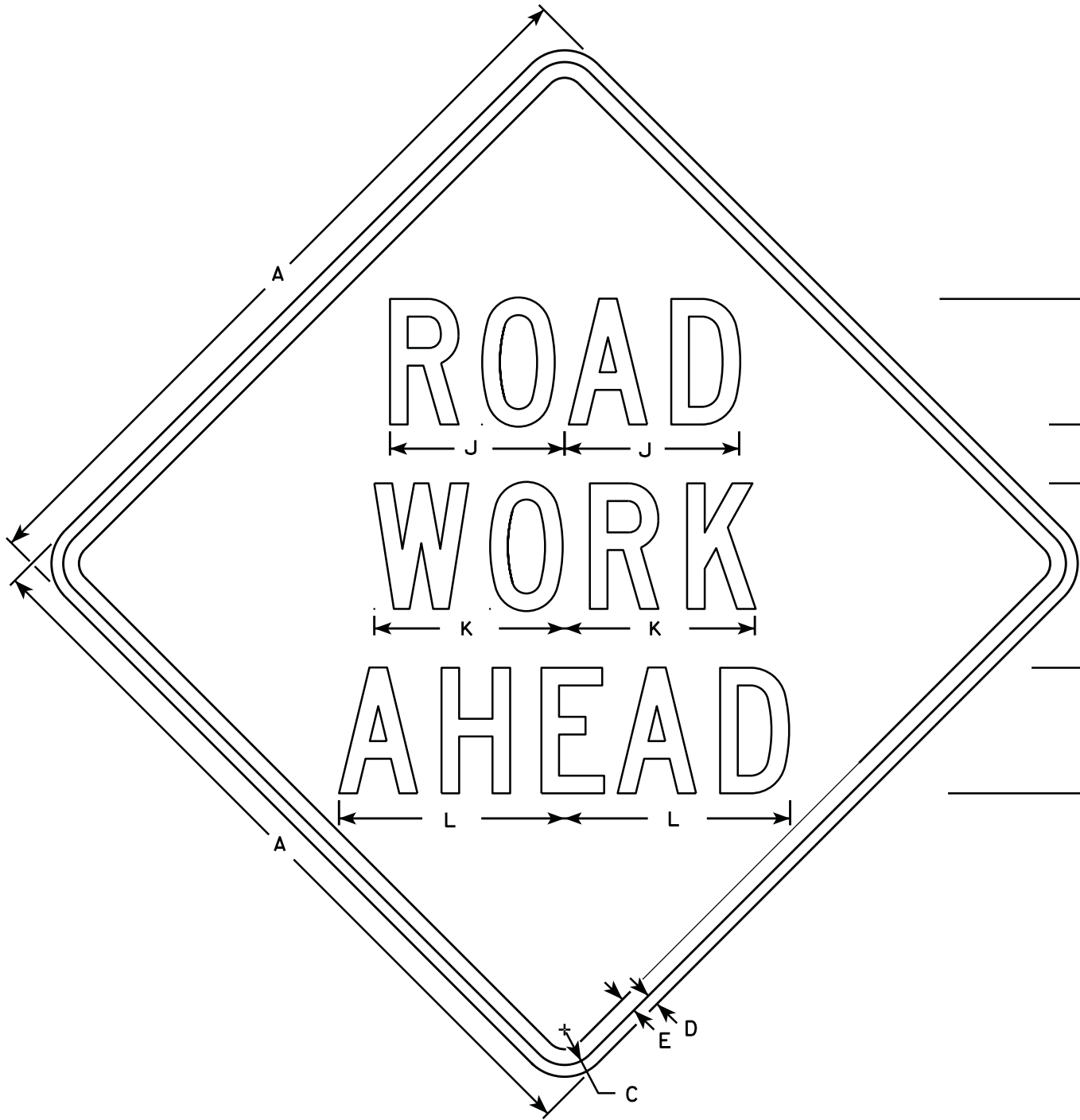
APPROVED *Matthew R. Rauch*
For State Traffic Engineer

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

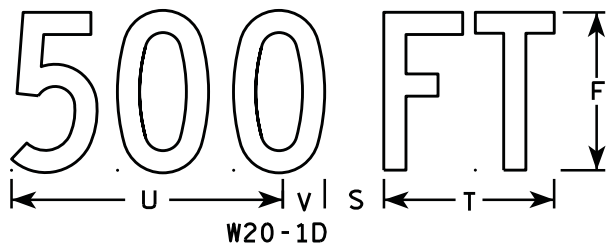
PROJECT NO:

SHEET NO:

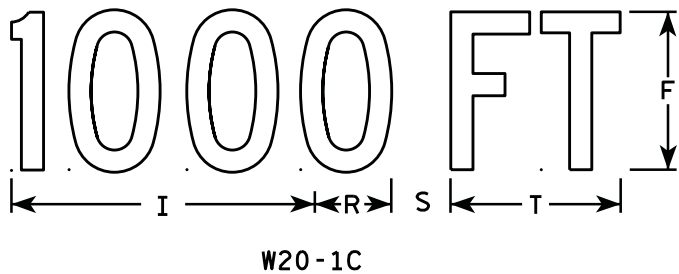
E



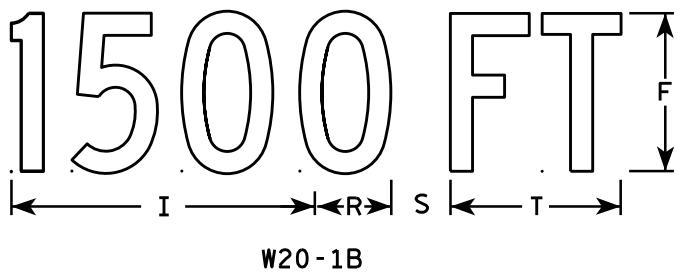
W20-1A



W20-1D



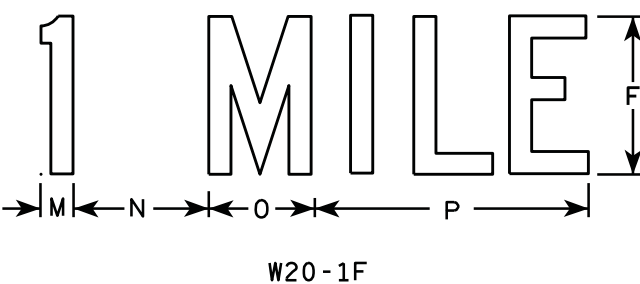
W20-1C



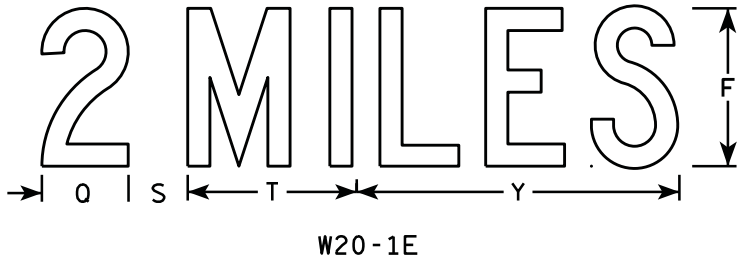
W20-1B



W20-1G



W20-1F



W20-1E

NOTES

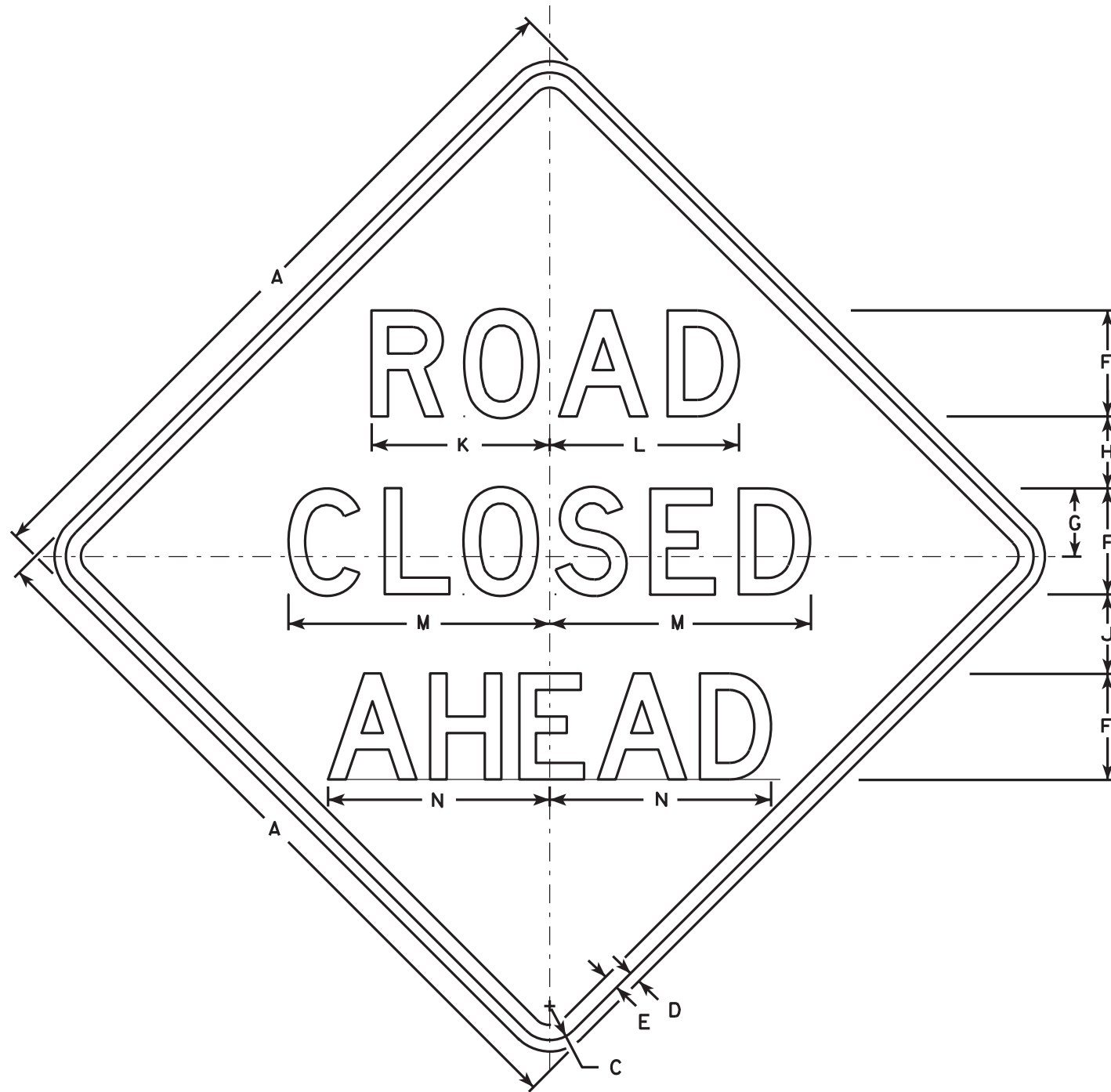
- 1. Sign is Type II - Type F Reflective
- 2. Color:
Background - Orange
Message - Black
- 3. Message Series - C
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

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

WISCONSIN DEPT OF TRANSPORTATION

APPROVED _____
State Traffic Engineer
DATE 5/07/15 PLATE NO. W20-1.10



W20-3A

500 FT

W20-3D

1000 FT

W20-3C

1500 FT

W20-3B

1/2 MILE

W20-3G

1 MILE

W20-3F

NOTES

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

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

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

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

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

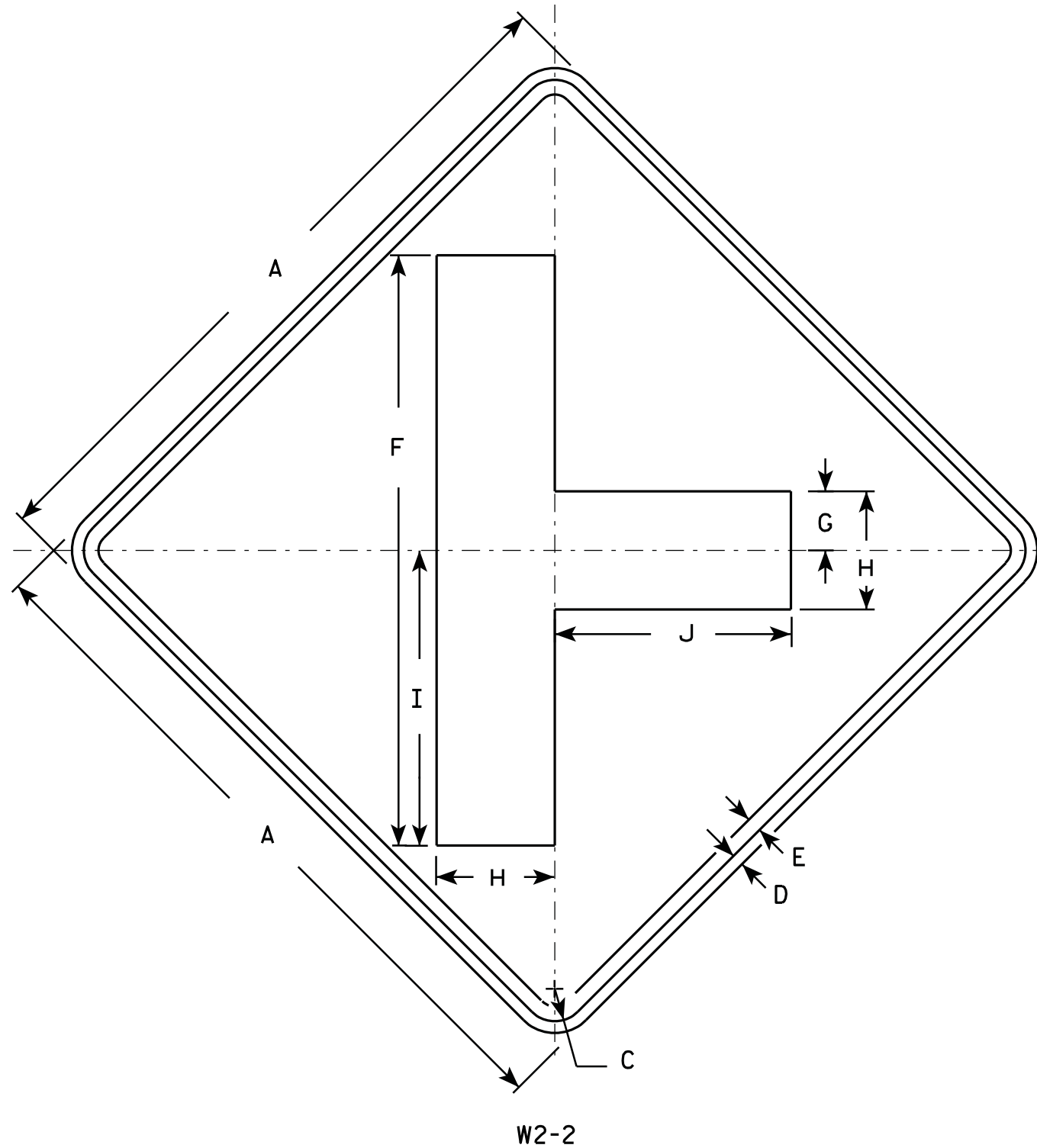
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



NOTES

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

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

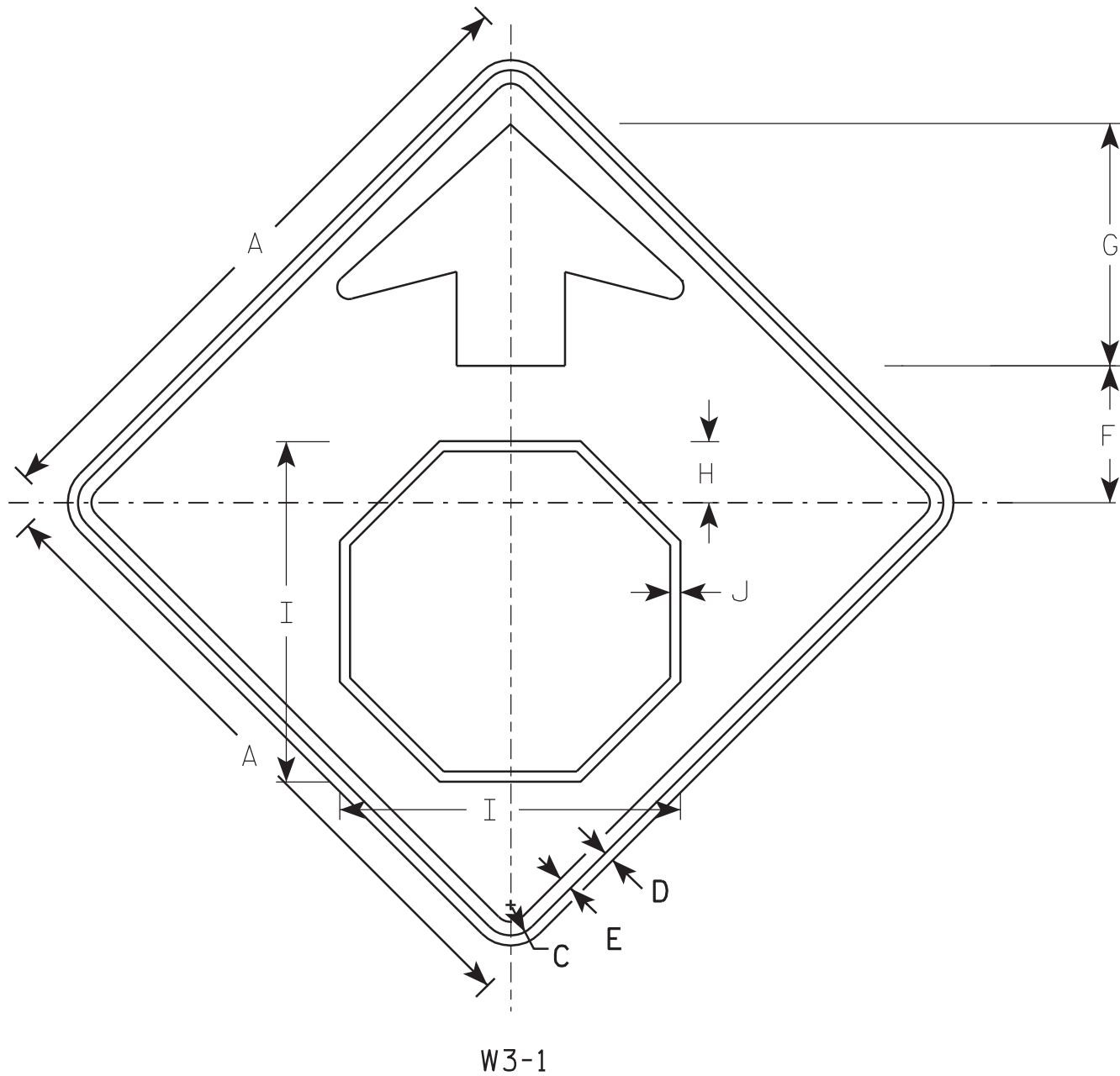
STANDARD SIGN W2-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

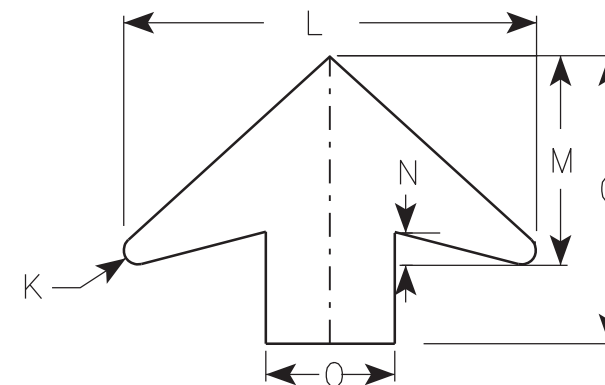
DATE 5/29/12 PLATE NO. W2-2.6

PROJECT NO: HWY: COUNTY: SHEET NO: E



NOTES

1. All Signs Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - YELLOW
Arrow & Border - BLACK
Stop Symbol - WHITE BORDER ON RED BACKGROUND



ARROW DETAIL

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

PROJECT NO:

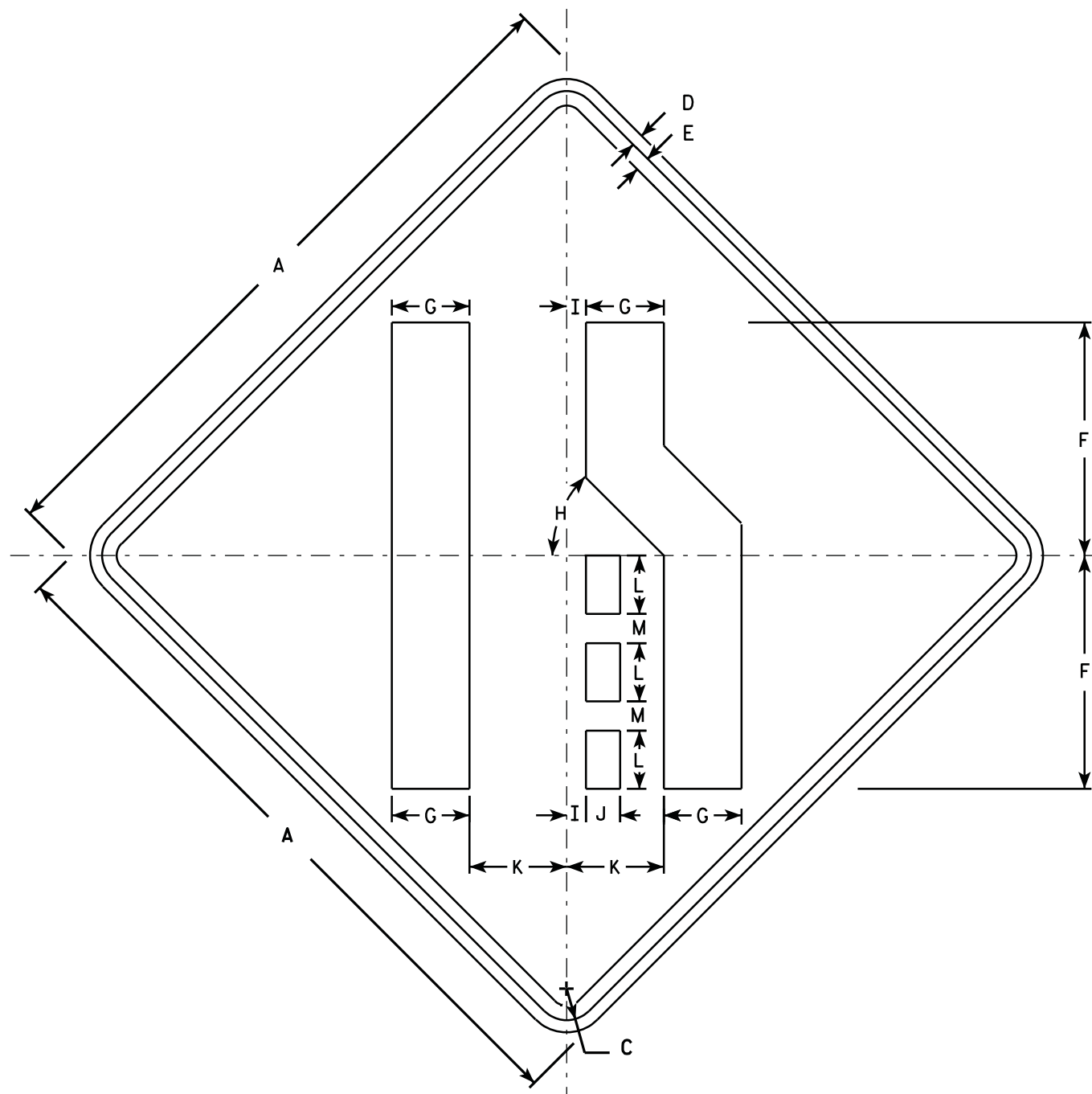
STANDARD SIGN
W3-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 6/7/10 PLATE NO. W3-1.12

SHEET NO:

E



W4-2R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Yellow
Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W4-2L is the same as W4-2R except the symbols is reversed along the vertical centerline.

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

STANDARD SIGN W4-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R. Rauch
for State Traffic Engineer

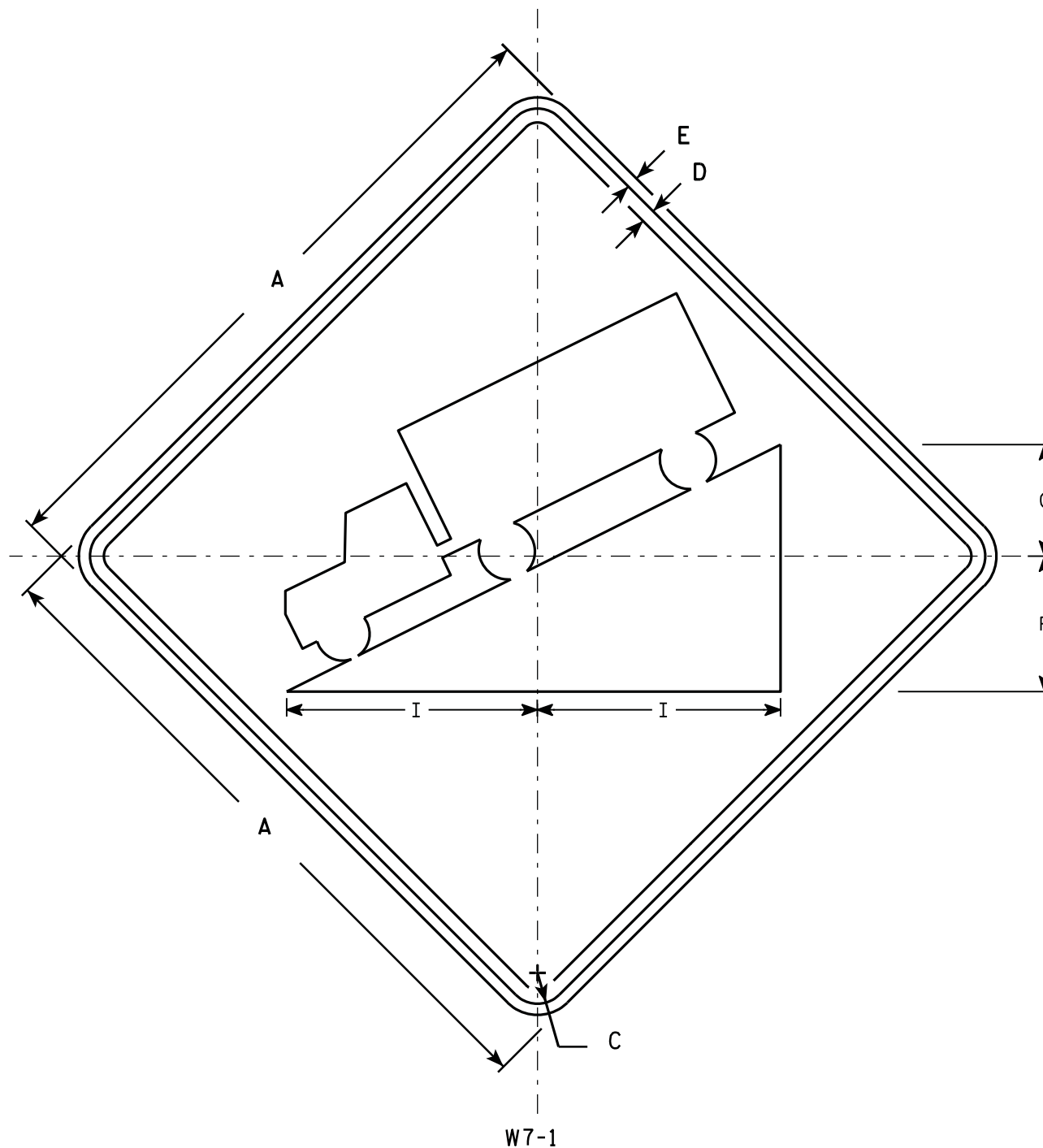
DATE 3/12/13

PLATE NO. W4-2.14

PROJECT NO:

SHEET NO:

E



NOTES

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

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|------|----|---|-------|-----|-----|-------|---|---|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1 | 24 | | 1 1/8 | 3/8 | 3/8 | 5 | 4 | | 8 3/4 | | | | | | | | | | | | | | | | | | 4.0 |
| 2S | 30 | | 1 3/8 | 1/2 | 5/8 | 6 | 5 | | 11 | | | | | | | | | | | | | | | | | | 6.25 |
| 2M | 36 | | 1 5/8 | 5/8 | 3/4 | 7 1/4 | 6 | | 13 1/4 | | | | | | | | | | | | | | | | | | 9.0 |
| 3 | 36 | | 1 5/8 | 5/8 | 3/4 | 7 1/4 | 6 | | 13 1/4 | | | | | | | | | | | | | | | | | | 9.0 |
| 4 | 36 | | 1 5/8 | 5/8 | 3/4 | 7 1/4 | 6 | | 13 1/4 | | | | | | | | | | | | | | | | | | 9.0 |
| 5 | 48 | | 2 1/4 | 3/4 | 1 | 9 3/4 | 8 | | 17 1/2 | | | | | | | | | | | | | | | | | | 16.0 |

STANDARD SIGN W7-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 03/12/13 PLATE NO. W7-1.13

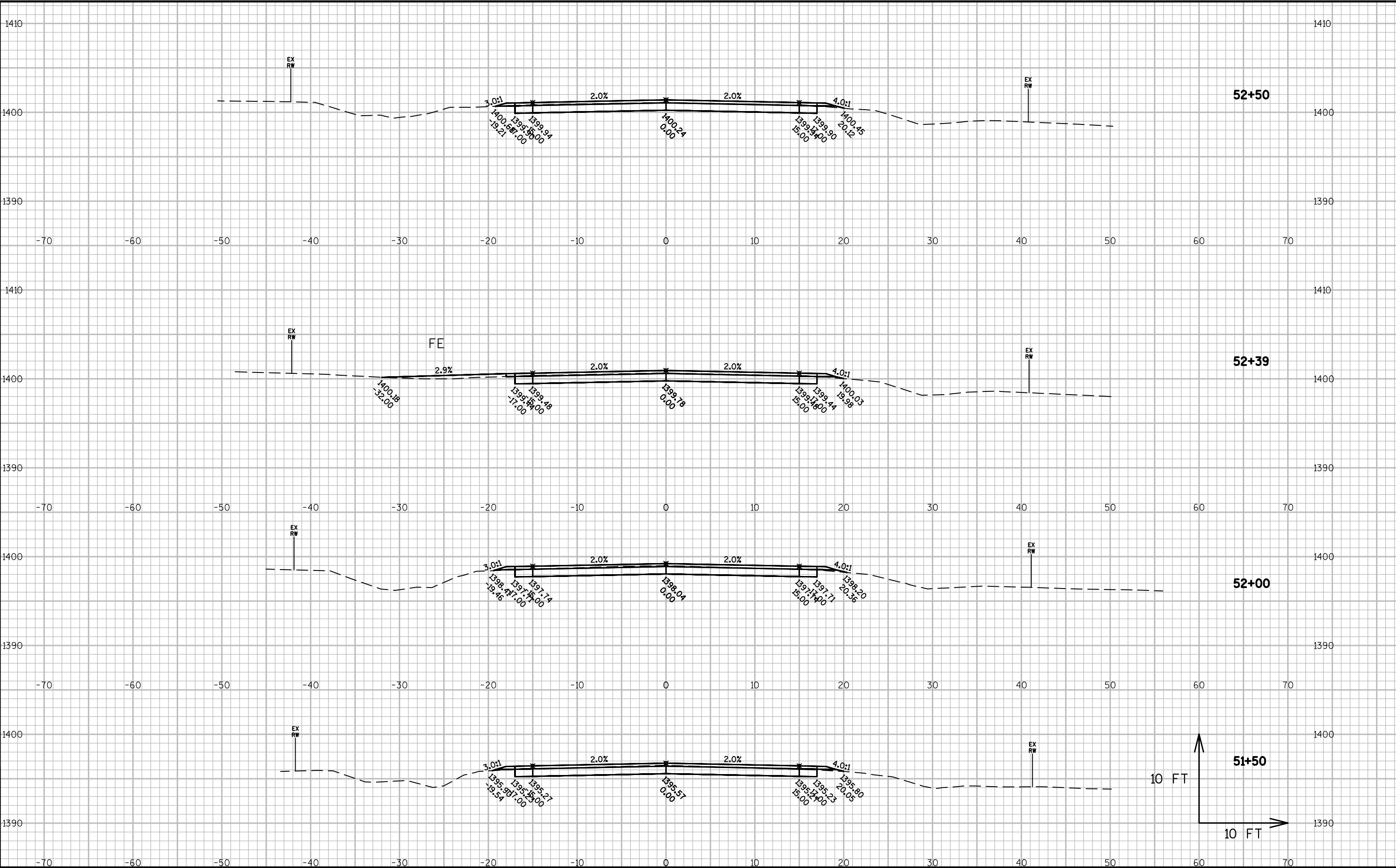
PROJECT NO: HWY: COUNTY: SHEET NO: E

| Station | Cut Area (Sq.ft.) | Cut Volume (Cu.yd.) | Reusable Volume (Cu.yd.) | Fill Area (Sq.ft.) | Fill Volume (Cu.yd.) | Cum. Cut Vol. (Cu.yd.) | Cum. Reusable Vol. (Cu.yd.) | Cum. Fill Vol. (Cu.yd.) |
|---------------------------------------|----------------------|---------------------------|--------------------------------|-----------------------|-------------------------|------------------------------|--------------------------------------|-------------------------------|
| WEST TRANSITION | | | | | | | | |
| 50+57 | 37.74 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 51+00 | 31.92 | 55.92 | 0 | 0.03 | 0.02 | 55.92 | 0.00 | 0.02 |
| 51+50 | 29.08 | 56.48 | 0 | 0.17 | 0.19 | 112.40 | 0.00 | 0.21 |
| 51+57 | 28.18 | 7.04 | 0 | 0.23 | 0.05 | 119.44 | 0.00 | 0.26 |
| PULVERIZE AND RELAY - WEST OF 25TH ST | | | | | | | | |
| 51+57 | 28.18 | 0.00 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52+00 | 29.75 | 0.00 | 0 | 0.2 | 0.16 | 0.00 | 0.00 | 0.16 |
| 52+50 | 30.11 | 0.00 | 0 | 0.11 | 0.29 | 0.00 | 0.00 | 0.45 |
| 53+00 | 27.44 | 0.00 | 0 | 0.35 | 0.43 | 0.00 | 0.00 | 0.87 |
| 53+50 | 22.03 | 0.00 | 0 | 0.61 | 0.89 | 0.00 | 0.00 | 1.76 |
| 54+00 | 17.12 | 0.00 | 0 | 0.96 | 1.45 | 0.00 | 0.00 | 3.22 |
| 54+50 | 12.18 | 0.00 | 0 | 2.76 | 3.44 | 0.00 | 0.00 | 6.66 |
| 55+00 | 13.49 | 0.00 | 0 | 5.8 | 7.93 | 0.00 | 0.00 | 14.59 |
| 55+50 | 15.04 | 0.00 | 0 | 6.07 | 10.99 | 0.00 | 0.00 | 25.58 |
| 56+00 | 19.16 | 0.00 | 0 | 2.59 | 8.02 | 0.00 | 0.00 | 33.60 |
| 56+50 | 24.42 | 0.00 | 0 | 0.93 | 3.26 | 0.00 | 0.00 | 36.86 |
| 57+00 | 29.11 | 0.00 | 0 | 1.06 | 1.84 | 0.00 | 0.00 | 38.70 |
| 57+50 | 28.71 | 0.00 | 0 | 0.94 | 1.85 | 0.00 | 0.00 | 40.55 |
| 58+00 | 24.48 | 0.00 | 0 | 1.9 | 2.63 | 0.00 | 0.00 | 43.18 |
| 58+50 | 23.23 | 0.00 | 0 | 3.62 | 5.11 | 0.00 | 0.00 | 48.29 |
| 59+00 | 23.17 | 0.00 | 0 | 3.09 | 6.21 | 0.00 | 0.00 | 54.50 |
| 59+50 | 21.53 | 0.00 | 0 | 5.15 | 7.63 | 0.00 | 0.00 | 62.13 |
| 60+00 | 21.71 | 0.00 | 0 | 3.89 | 8.37 | 0.00 | 0.00 | 70.50 |
| 60+50 | 23.92 | 0.00 | 0 | 3.21 | 6.57 | 0.00 | 0.00 | 77.08 |
| 61+00 | 24.8 | 0.00 | 0 | 3.38 | 6.10 | 0.00 | 0.00 | 83.18 |
| 61+50 | 20.75 | 0.00 | 0 | 10.02 | 12.41 | 0.00 | 0.00 | 95.59 |
| 62+00 | 25.32 | 0.00 | 0 | 0.46 | 9.70 | 0.00 | 0.00 | 105.29 |
| 62+50 | 23.51 | 0.00 | 0 | 2.36 | 2.61 | 0.00 | 0.00 | 107.90 |
| 63+00 | 23.03 | 0.00 | 0 | 2.05 | 4.08 | 0.00 | 0.00 | 111.98 |
| 63+50 | 24.74 | 0.00 | 0 | 4.61 | 6.17 | 0.00 | 0.00 | 118.15 |
| 64+00 | 22.37 | 0.00 | 0 | 12.59 | 15.93 | 0.00 | 0.00 | 134.08 |
| 64+50 | 22.56 | 0.00 | 0 | 2.4 | 13.88 | 0.00 | 0.00 | 147.96 |
| 65+00 | 22.9 | 0.00 | 0 | 2.45 | 4.49 | 0.00 | 0.00 | 152.45 |
| 65+50 | 24.89 | 0.00 | 0 | 1.76 | 3.90 | 0.00 | 0.00 | 156.35 |
| 66+00 | 24.81 | 0.00 | 0 | 2.45 | 3.90 | 0.00 | 0.00 | 160.24 |
| 66+50 | 29.59 | 0.00 | 0 | 1.87 | 4.00 | 0.00 | 0.00 | 164.24 |
| 67+00 | 28.48 | 0.00 | 0 | 0.38 | 2.08 | 0.00 | 0.00 | 166.33 |
| 67+50 | 26.96 | 0.00 | 0 | 2.06 | 2.26 | 0.00 | 0.00 | 168.59 |
| 68+00 | 26.63 | 0.00 | 0 | 5.39 | 6.90 | 0.00 | 0.00 | 175.48 |
| 68+50 | 23.02 | 0.00 | 0 | 3.81 | 8.52 | 0.00 | 0.00 | 184.00 |
| 69+00 | 29.26 | 0.00 | 0 | 11.41 | 14.09 | 0.00 | 0.00 | 198.10 |
| 69+50 | 28.2 | 0.00 | 0 | 38.06 | 45.81 | 0.00 | 0.00 | 243.90 |
| 70+00 | 26.12 | 0.00 | 0 | 19.05 | 52.88 | 0.00 | 0.00 | 296.78 |

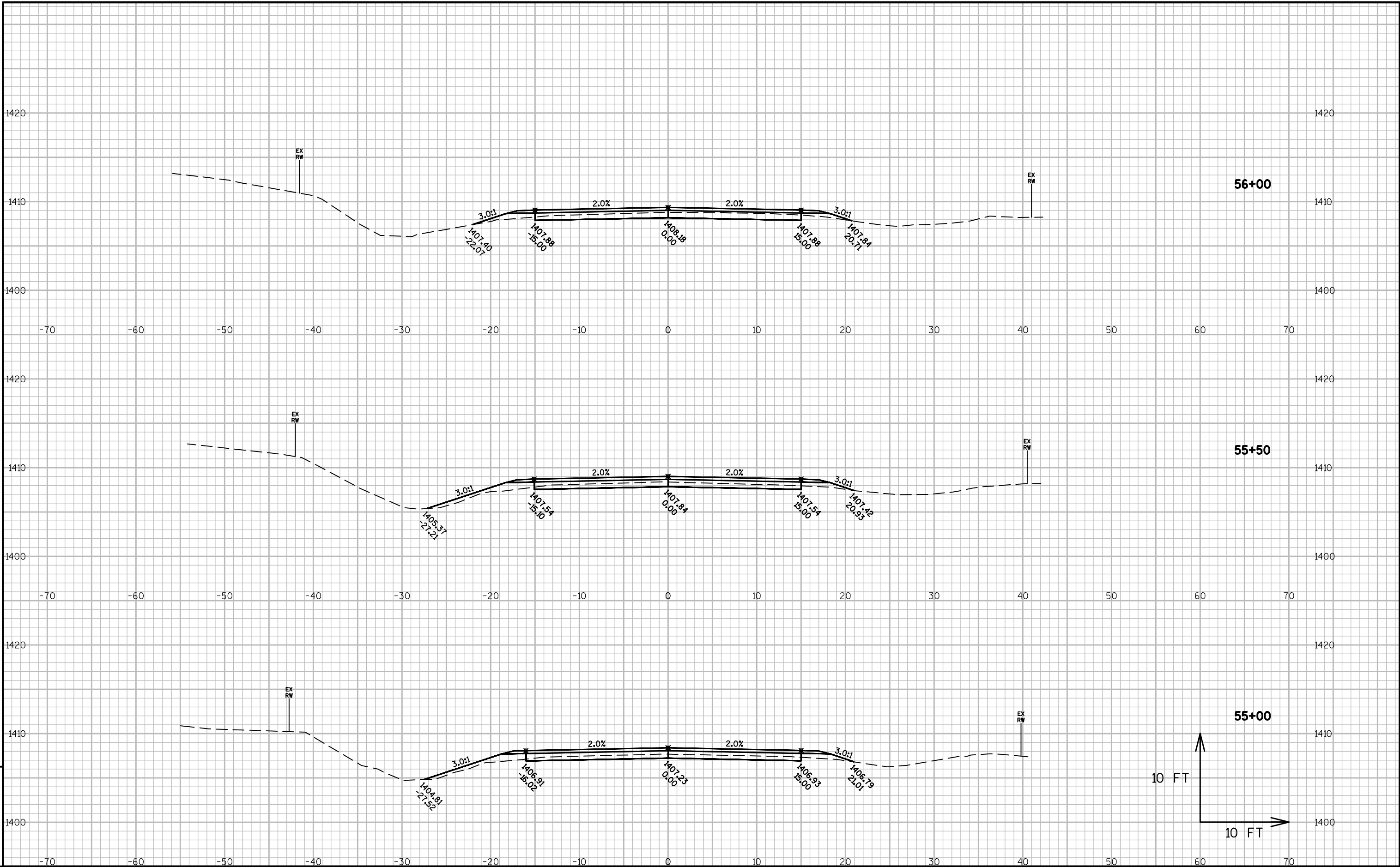
| Station | Cut Area (Sq.ft.) | Cut Volume (Cu.yd.) | Reusable Volume (Cu.yd.) | Fill Area (Sq.ft.) | Fill Volume (Cu.yd.) | Cum. Cut Vol. (Cu.yd.) | Cum. Reusable Vol. (Cu.yd.) | Cum. Fill Vol. (Cu.yd.) |
|---------------------------------------|----------------------|---------------------------|--------------------------------|-----------------------|-------------------------|------------------------------|--------------------------------------|-------------------------------|
| 70+50 | 24.59 | 0.00 | 0 | 12.11 | 28.85 | 0.00 | 0.00 | 325.63 |
| 71+00 | 24.45 | 0.00 | 0 | 8.14 | 18.75 | 0.00 | 0.00 | 344.38 |
| 71+50 | 28.43 | 0.00 | 0 | 5.34 | 12.48 | 0.00 | 0.00 | 356.86 |
| 72+00 | 23.05 | 0.00 | 0 | 12.88 | 16.87 | 0.00 | 0.00 | 373.73 |
| 72+50 | 26.96 | 0.00 | 0 | 6.7 | 18.13 | 0.00 | 0.00 | 391.86 |
| 73+00 | 29.11 | 0.00 | 0 | 3.42 | 9.37 | 0.00 | 0.00 | 401.23 |
| 73+50 | 28.11 | 0.00 | 0 | 1.52 | 4.57 | 0.00 | 0.00 | 405.81 |
| 74+00 | 29.38 | 0.00 | 0 | 0.79 | 2.14 | 0.00 | 0.00 | 407.95 |
| 74+50 | 24.07 | 0.00 | 0 | 0.46 | 1.16 | 0.00 | 0.00 | 409.11 |
| 75+00 | 19.5 | 0.00 | 0 | 2.57 | 2.81 | 0.00 | 0.00 | 411.91 |
| 75+50 | 24.87 | 0.00 | 0 | 2.01 | 4.24 | 0.00 | 0.00 | 416.15 |
| 76+00 | 25.58 | 0.00 | 0 | 4.72 | 6.23 | 0.00 | 0.00 | 422.38 |
| 76+50 | 27.02 | 0.00 | 0 | 7.14 | 10.98 | 0.00 | 0.00 | 433.36 |
| 77+00 | 33.23 | 0.00 | 0 | 4.65 | 10.92 | 0.00 | 0.00 | 444.28 |
| 77+50 | 35.59 | 0.00 | 0 | 3.54 | 7.58 | 0.00 | 0.00 | 451.86 |
| 78+00 | 29.59 | 0.00 | 0 | 5.7 | 8.56 | 0.00 | 0.00 | 460.42 |
| 78+50 | 26.16 | 0.00 | 0 | 10.05 | 14.58 | 0.00 | 0.00 | 475.00 |
| 79+00 | 23.3 | 0.00 | 0 | 26.94 | 34.25 | 0.00 | 0.00 | 509.25 |
| 79+50 | 20.81 | 0.00 | 0 | 13.94 | 37.85 | 0.00 | 0.00 | 547.11 |
| 80+00 | 22.78 | 0.00 | 0 | 18.77 | 30.29 | 0.00 | 0.00 | 577.39 |
| 80+50 | 24.91 | 0.00 | 0 | 0 | 17.38 | 0.00 | 0.00 | 594.77 |
| PULVERIZE AND RELAY - EAST OF 25TH ST | | | | | | | | |
| 80+50 | 28.59 | 0.00 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 81+00 | 28.59 | 0.00 | 0 | 11.14 | 10.31 | 0.00 | 0.00 | 10.31 |
| 81+50 | 27.74 | 0.00 | 0 | 1.96 | 12.13 | 0.00 | 0.00 | 22.44 |
| 82+00 | 26.97 | 0.00 | 0 | 5.92 | 7.30 | 0.00 | 0.00 | 29.74 |
| 82+50 | 25.34 | 0.00 | 0 | 3.98 | 9.17 | 0.00 | 0.00 | 38.91 |
| 83+00 | 23.83 | 0.00 | 0 | 7.86 | 10.96 | 0.00 | 0.00 | 49.87 |
| 83+50 | 21.66 | 0.00 | 0 | 14.01 | 20.25 | 0.00 | 0.00 | 70.12 |
| 84+00 | 25.88 | 0.00 | 0 | 13.66 | 25.62 | 0.00 | 0.00 | 95.74 |
| 84+50 | 32.6 | 0.00 | 0 | 13.39 | 25.05 | 0.00 | 0.00 | 120.79 |
| 85+00 | 32.05 | 0.00 | 0 | 3.92 | 16.03 | 0.00 | 0.00 | 136.81 |
| 85+50 | 30.84 | 0.00 | 0 | 3.97 | 7.31 | 0.00 | 0.00 | 144.12 |
| 86+00 | 28.43 | 0.00 | 0 | 3.33 | 6.76 | 0.00 | 0.00 | 150.88 |
| 86+50 | 23.56 | 0.00 | 0 | 4.82 | 7.55 | 0.00 | 0.00 | 158.43 |
| 87+00 | 20.04 | 0.00 | 0 | 5.06 | 9.15 | 0.00 | 0.00 | 167.57 |
| 87+50 | 16.67 | 0.00 | 0 | 4.73 | 9.06 | 0.00 | 0.00 | 176.64 |
| 88+00 | 16.01 | 0.00 | 0 | 4.47 | 8.52 | 0.00 | 0.00 | 185.16 |
| 88+50 | 23.22 | 0.00 | 0 | 4.9 | 8.68 | 0.00 | 0.00 | 193.83 |
| 89+00 | 24.64 | 0.00 | 0 | 6 | 10.09 | 0.00 | 0.00 | 203.93 |
| 89+50 | 25.17 | 0.00 | 0 | 4.14 | 9.39 | 0.00 | 0.00 | 213.31 |
| 90+00 | 21.73 | 0.00 | 0 | 13.17 | 16.03 | 0.00 | 0.00 | 229.34 |
| 90+50 | 26.93 | 0.00 | 0 | 11.7 | 23.03 | 0.00 | 0.00 | 252.37 |
| 91+00 | 25.95 | 0.00 | 0 | 16.43 | 26.05 | 0.00 | 0.00 | 278.42 |

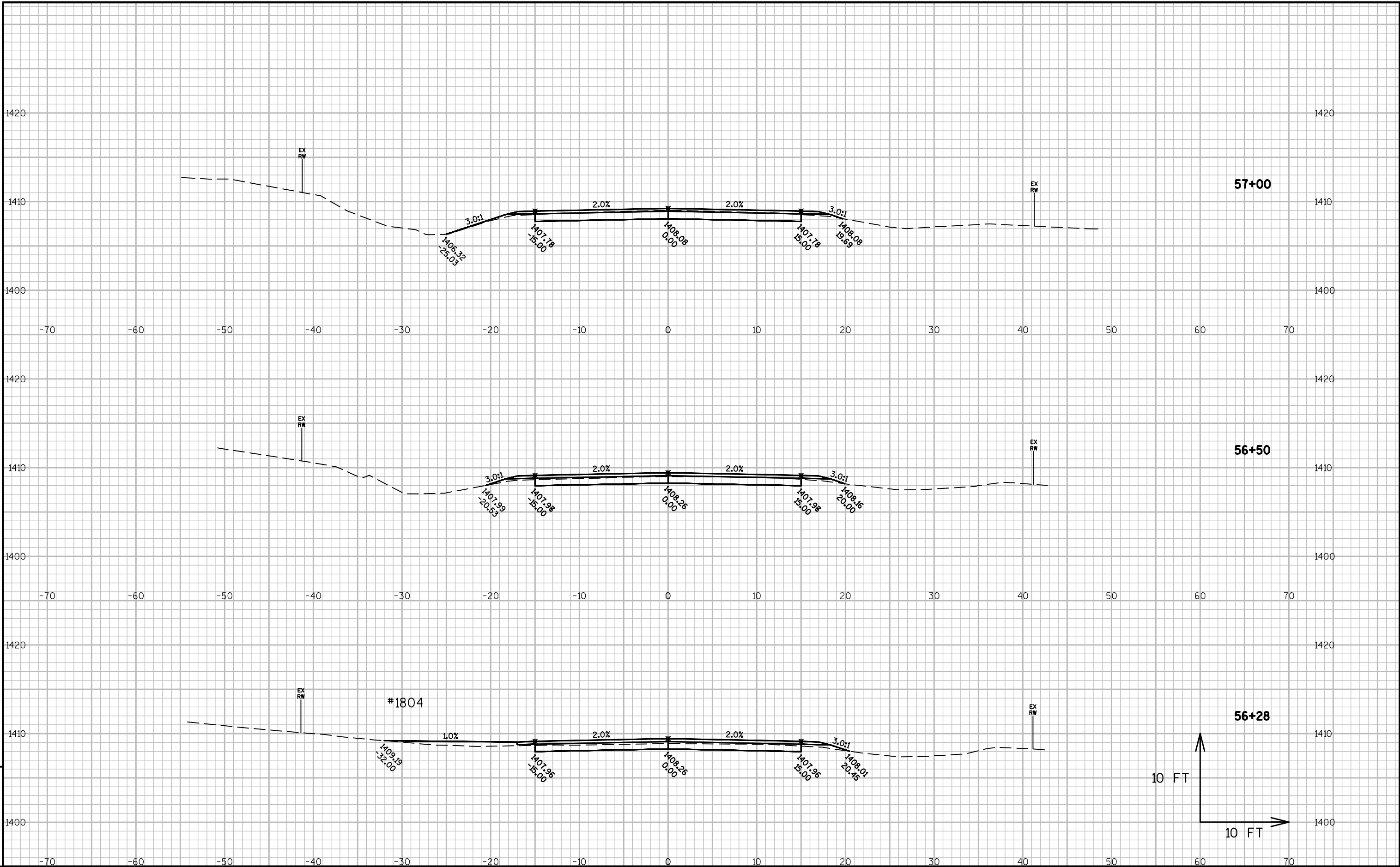
| Station | Cut Area (Sq.ft.) | Cut | Reusable | Fill Area (Sq.ft.) | Fill Volume (Cu.yd.) | Cum. Cut | Cum. | Cum. Fill Vol. (Cu.yd.) |
|---------|----------------------|--------------------|--------------------|-----------------------|-------------------------|------------------|------------------------------|-------------------------------|
| | | Volume (Cu.yd.) | Volume (Cu.yd.) | | | Vol. (Cu.yd.) | Reusable Vol. (Cu.yd.) | |
| 91+50 | 22.85 | 0.00 | 0 | 8.49 | 23.07 | 0.00 | 0.00 | 301.49 |
| 92+00 | 18.69 | 0.00 | 0 | 8.17 | 15.43 | 0.00 | 0.00 | 316.92 |
| 92+50 | 20.3 | 0.00 | 0 | 7.68 | 14.68 | 0.00 | 0.00 | 331.59 |
| 93+00 | 22.19 | 0.00 | 0 | 5.78 | 12.46 | 0.00 | 0.00 | 344.06 |
| 93+50 | 21.45 | 0.00 | 0 | 4.5 | 9.52 | 0.00 | 0.00 | 353.57 |
| 94+00 | 25.52 | 0.00 | 0 | 22.29 | 24.81 | 0.00 | 0.00 | 378.38 |
| 94+50 | 27.01 | 0.00 | 0 | 47.64 | 64.75 | 0.00 | 0.00 | 443.13 |
| 95+00 | 30.09 | 0.00 | 0 | 24.15 | 66.47 | 0.00 | 0.00 | 509.60 |
| 95+50 | 28.41 | 0.00 | 0 | 14.4 | 35.69 | 0.00 | 0.00 | 545.30 |
| 96+00 | 27.38 | 0.00 | 0 | 17.12 | 29.19 | 0.00 | 0.00 | 574.48 |
| 96+50 | 29.03 | 0.00 | 0 | 11.98 | 26.94 | 0.00 | 0.00 | 601.43 |
| 97+00 | 30.83 | 0.00 | 0 | 1.27 | 12.27 | 0.00 | 0.00 | 613.69 |
| 97+50 | 33.15 | 0.00 | 0 | 7.61 | 8.22 | 0.00 | 0.00 | 621.92 |
| 98+00 | 31.95 | 0.00 | 0 | 9.8 | 16.12 | 0.00 | 0.00 | 638.04 |
| 98+50 | 27.92 | 0.00 | 0 | 6.87 | 15.44 | 0.00 | 0.00 | 653.47 |
| 99+00 | 22.85 | 0.00 | 0 | 6.89 | 12.74 | 0.00 | 0.00 | 666.21 |
| 99+50 | 22.45 | 0.00 | 0 | 5.14 | 11.14 | 0.00 | 0.00 | 677.35 |
| 100+00 | 20.94 | 0.00 | 0 | 10.98 | 14.93 | 0.00 | 0.00 | 692.28 |
| 100+50 | 23.05 | 0.00 | 0 | 5.18 | 14.96 | 0.00 | 0.00 | 707.24 |
| 101+00 | 28.5 | 0.00 | 0 | 2.94 | 7.52 | 0.00 | 0.00 | 714.76 |
| 101+50 | 33.33 | 0.00 | 0 | 0.18 | 2.89 | 0.00 | 0.00 | 717.65 |
| 102+00 | 32.72 | 0.00 | 0 | 1.01 | 1.10 | 0.00 | 0.00 | 718.75 |
| 102+50 | 36.56 | 0.00 | 0 | 0.02 | 0.95 | 0.00 | 0.00 | 719.70 |
| 103+00 | 36.69 | 0.00 | 0 | 0.31 | 0.31 | 0.00 | 0.00 | 720.01 |
| 103+50 | 35.61 | 0.00 | 0 | 0.14 | 0.42 | 0.00 | 0.00 | 720.43 |
| 104+00 | 34.35 | 0.00 | 0 | 1.14 | 1.19 | 0.00 | 0.00 | 721.61 |
| 104+50 | 29.22 | 0.00 | 0 | 4.07 | 4.82 | 0.00 | 0.00 | 726.44 |
| 105+00 | 26.94 | 0.00 | 0 | 2.49 | 6.07 | 0.00 | 0.00 | 732.51 |
| 105+50 | 27.43 | 0.00 | 0 | 1.38 | 3.58 | 0.00 | 0.00 | 736.09 |
| 106+00 | 27.21 | 0.00 | 0 | 2.94 | 4.00 | 0.00 | 0.00 | 740.09 |
| 106+50 | 25.67 | 0.00 | 0 | 3.31 | 5.79 | 0.00 | 0.00 | 745.88 |
| 107+00 | 22.92 | 0.00 | 0 | 3.39 | 6.20 | 0.00 | 0.00 | 752.08 |
| 107+50 | 19.73 | 0.00 | 0 | 3.47 | 6.35 | 0.00 | 0.00 | 758.44 |
| 108+00 | 20.96 | 0.00 | 0 | 5.45 | 8.26 | 0.00 | 0.00 | 766.69 |
| 108+50 | 26.08 | 0.00 | 0 | 2.66 | 7.51 | 0.00 | 0.00 | 774.20 |
| 109+00 | 25.31 | 0.00 | 0 | 6.07 | 8.08 | 0.00 | 0.00 | 782.29 |
| 109+50 | 24.25 | 0.00 | 0 | 4.42 | 9.71 | 0.00 | 0.00 | 792.00 |
| 110+00 | 26.04 | 0.00 | 0 | 7.49 | 11.03 | 0.00 | 0.00 | 803.03 |
| 110+50 | 27.94 | 0.00 | 0 | 2.34 | 9.10 | 0.00 | 0.00 | 812.13 |
| 111+00 | 29.61 | 0.00 | 0 | 6.02 | 7.74 | 0.00 | 0.00 | 819.87 |
| 111+50 | 30.99 | 0.00 | 0 | 6.88 | 11.94 | 0.00 | 0.00 | 831.81 |
| 112+00 | 32.52 | 0.00 | 0 | 10.44 | 16.04 | 0.00 | 0.00 | 847.85 |
| 112+50 | 32.51 | 0.00 | 0 | 18.92 | 27.19 | 0.00 | 0.00 | 875.04 |
| 113+00 | 30.26 | 0.00 | 0 | 26.96 | 42.48 | 0.00 | 0.00 | 917.52 |

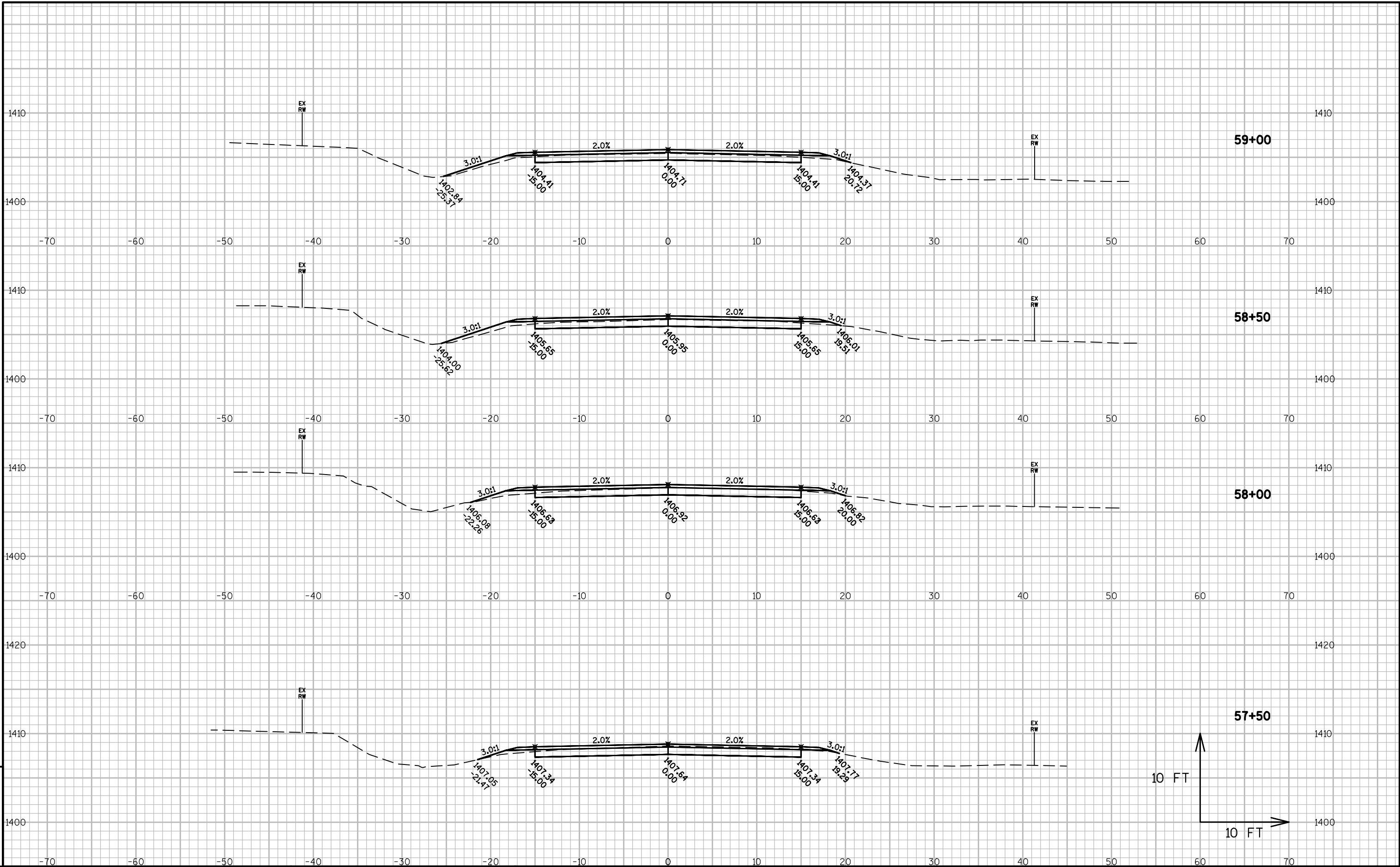
| Station | Cut Area (Sq.ft.) | Cut | Reusable | Fill Area (Sq.ft.) | Fill Volume (Cu.yd.) | Cum. Cut | Cum. | Cum. Fill Vol. (Cu.yd.) |
|-----------------|----------------------|--------------------|--------------------|-----------------------|-------------------------|------------------|------------------------------|-------------------------------|
| | | Volume (Cu.yd.) | Volume (Cu.yd.) | | | Vol. (Cu.yd.) | Reusable Vol. (Cu.yd.) | |
| 113+50 | 24.78 | 0.00 | 0 | 36.37 | 58.64 | 0.00 | 0.00 | 976.16 |
| 114+00 | 21.61 | 0.00 | 0 | 31.63 | 62.96 | 0.00 | 0.00 | 1039.12 |
| 114+50 | 22.99 | 0.00 | 0 | 29.86 | 56.94 | 0.00 | 0.00 | 1096.06 |
| 115+00 | 26.08 | 0.00 | 0 | 18.12 | 44.43 | 0.00 | 0.00 | 1140.48 |
| 115+50 | 29.29 | 0.00 | 0 | 10.63 | 26.62 | 0.00 | 0.00 | 1167.10 |
| 116+00 | 31.02 | 0.00 | 0 | 2.79 | 12.43 | 0.00 | 0.00 | 1179.53 |
| 116+50 | 30.8 | 0.00 | 0 | 3.38 | 5.71 | 0.00 | 0.00 | 1185.24 |
| 117+00 | 30.41 | 0.00 | 0 | 3.06 | 5.96 | 0.00 | 0.00 | 1191.20 |
| 117+50 | 28.73 | 0.00 | 0 | 2.86 | 5.48 | 0.00 | 0.00 | 1196.69 |
| 118+00 | 26.76 | 0.00 | 0 | 5.34 | 7.59 | 0.00 | 0.00 | 1204.28 |
| 118+50 | 25.09 | 0.00 | 0 | 5.61 | 10.14 | 0.00 | 0.00 | 1214.42 |
| 119+00 | 23.49 | 0.00 | 0 | 9.98 | 14.44 | 0.00 | 0.00 | 1228.85 |
| 119+50 | 24.33 | 0.00 | 0 | 8.28 | 16.91 | 0.00 | 0.00 | 1245.76 |
| 120+00 | 20.27 | 0.00 | 0 | 7.33 | 14.45 | 0.00 | 0.00 | 1260.21 |
| 120+50 | 19.03 | 0.00 | 0 | 5.4 | 11.79 | 0.00 | 0.00 | 1272.00 |
| 121+00 | 21.32 | 0.00 | 0 | 7.86 | 12.28 | 0.00 | 0.00 | 1284.28 |
| 121+50 | 27.06 | 0.00 | 0 | 5.16 | 12.06 | 0.00 | 0.00 | 1296.33 |
| 122+00 | 31.62 | 0.00 | 0 | 4.27 | 8.73 | 0.00 | 0.00 | 1305.06 |
| 122+50 | 27.84 | 0.00 | 0 | 0.78 | 4.68 | 0.00 | 0.00 | 1309.74 |
| 123+00 | 30.21 | 0.00 | 0 | 1.14 | 1.78 | 0.00 | 0.00 | 1311.52 |
| 123+50 | 30.72 | 0.00 | 0 | 5.39 | 6.05 | 0.00 | 0.00 | 1317.56 |
| 124+00 | 32.13 | 0.00 | 0 | 4.41 | 9.07 | 0.00 | 0.00 | 1326.64 |
| 124+30 | 32.79 | 0.00 | 0 | 4.65 | 5.03 | 0.00 | 0.00 | 1331.67 |
| EAST TRANSITION | | | | | | | | |
| 124+30 | 32.79 | 0.00 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 124+50 | 34.63 | 24.97 | 0 | 4.5 | 1.67 | 24.97 | 0.00 | 1.67 |
| 125+00 | 51.46 | 79.71 | 0 | 3.11 | 7.05 | 104.68 | 0.00 | 8.71 |
| 125+30 | 56.14 | 59.78 | 0 | 2.15 | 2.92 | 164.46 | 0.00 | 11.64 |

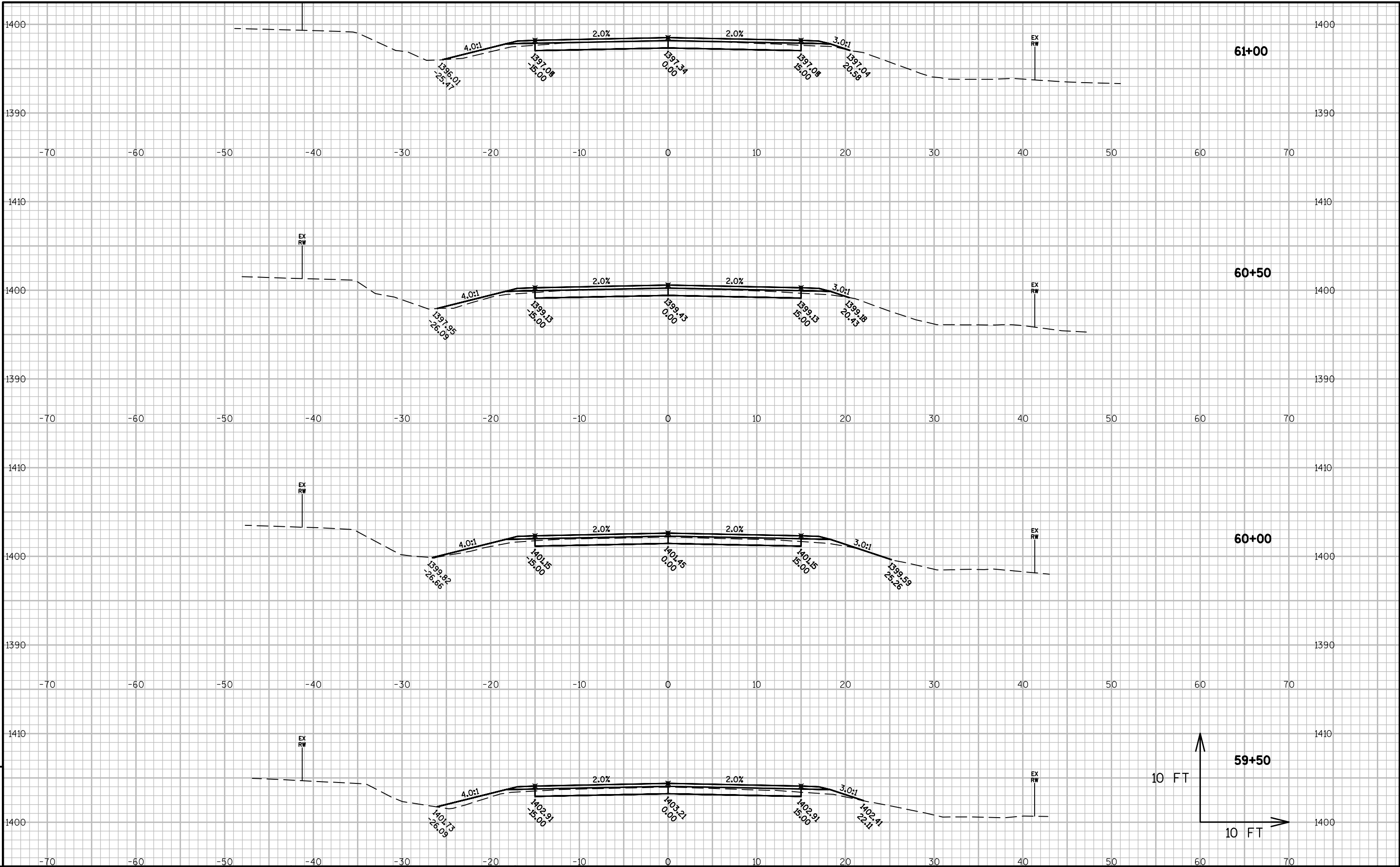


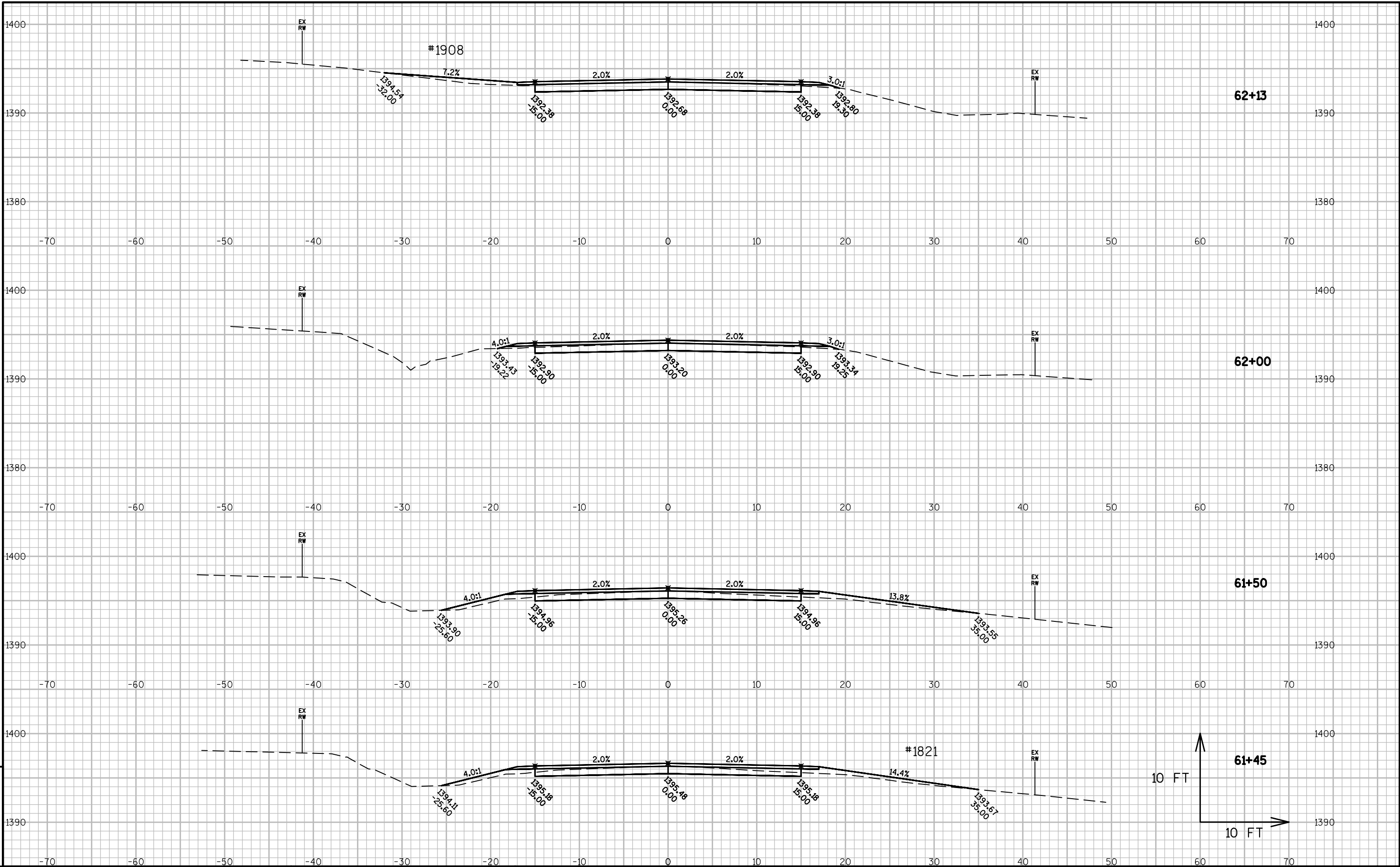


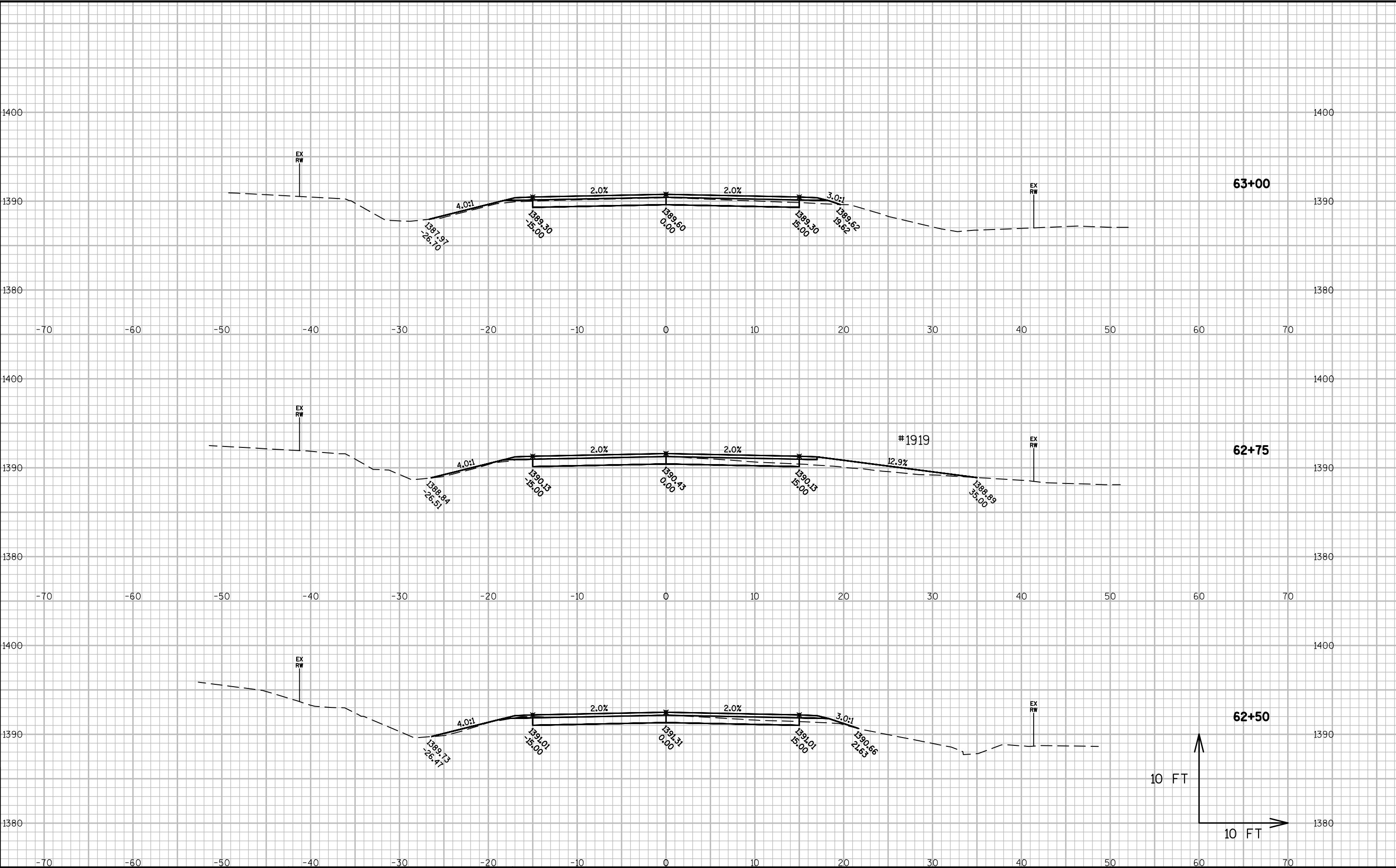


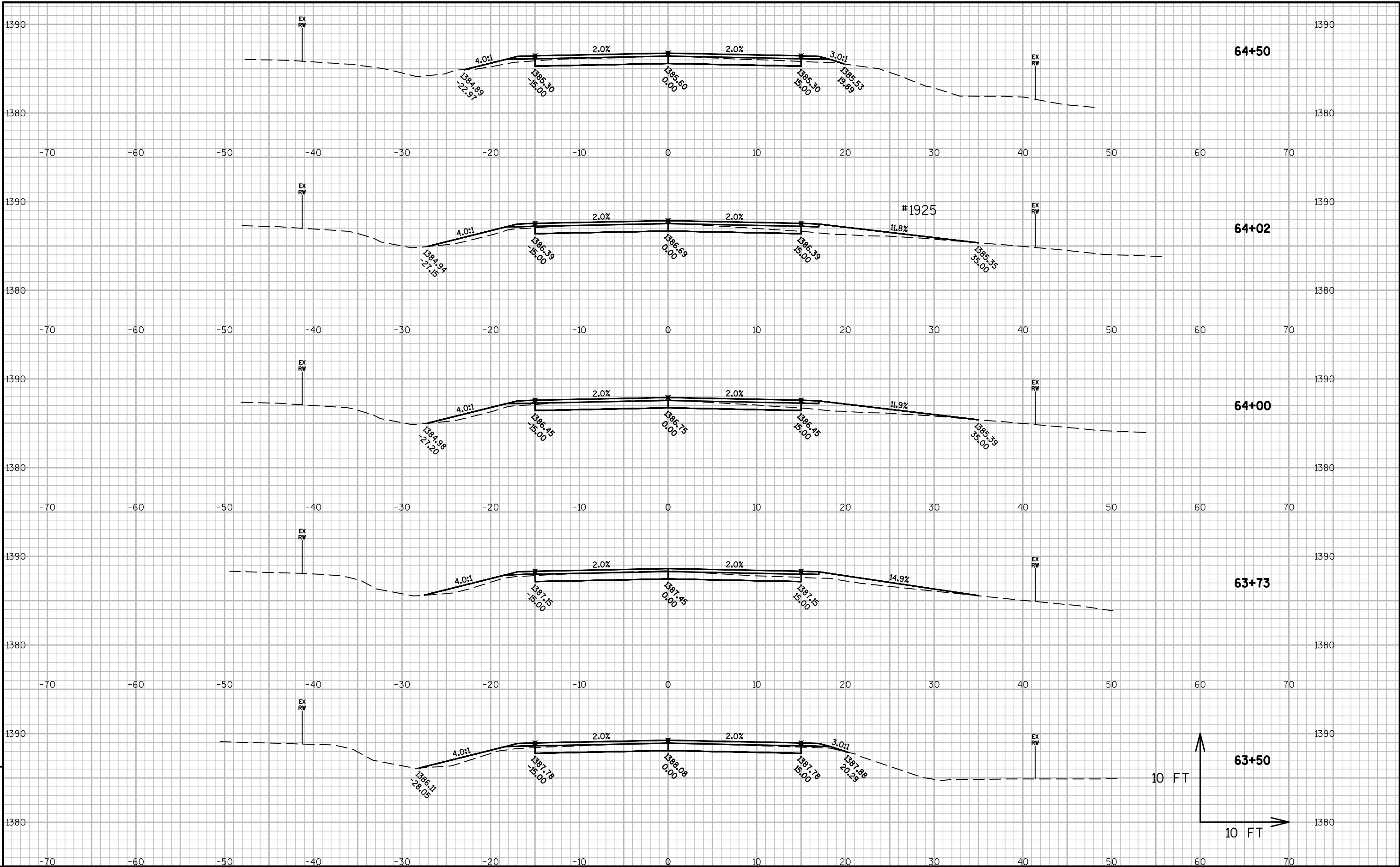


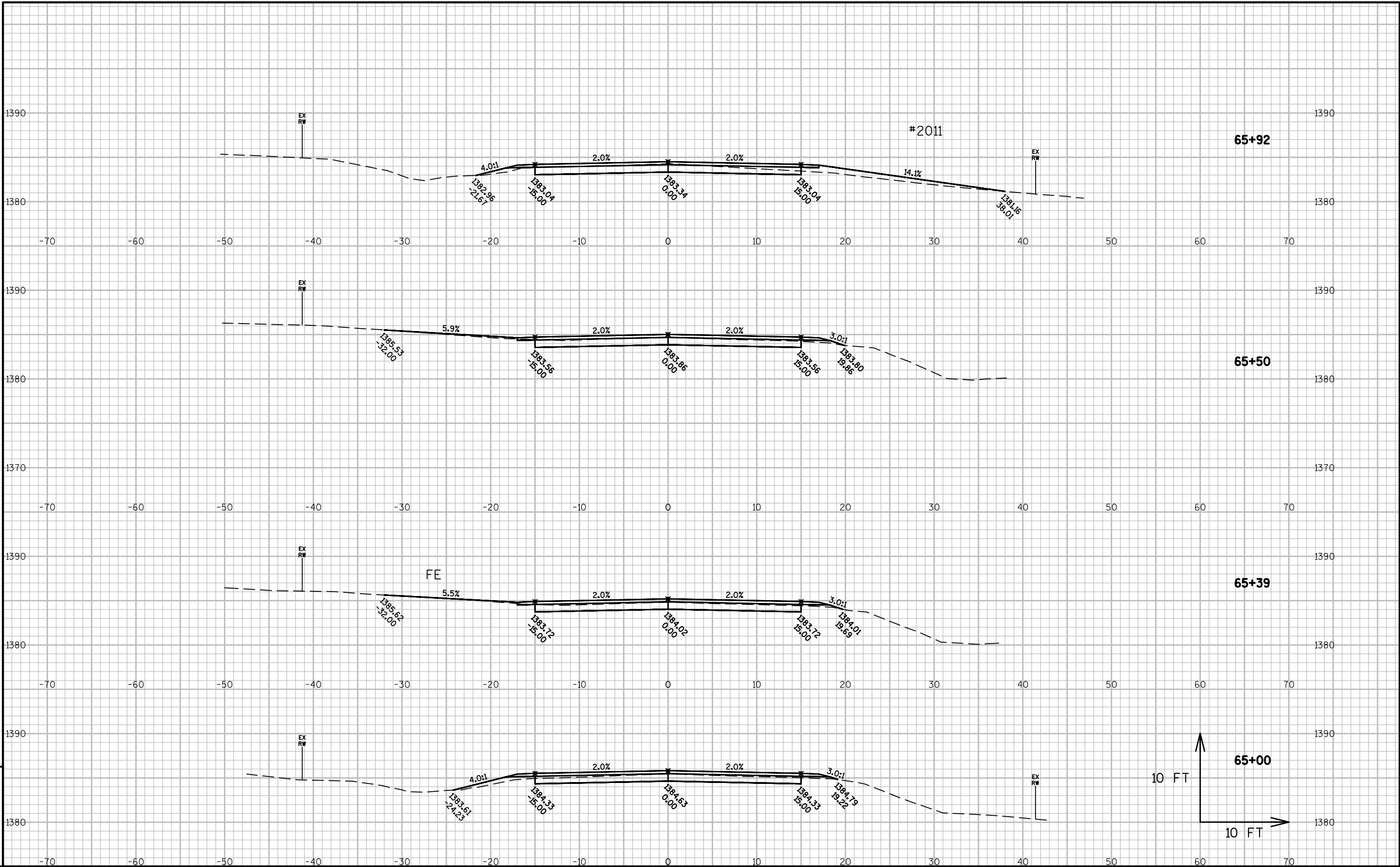


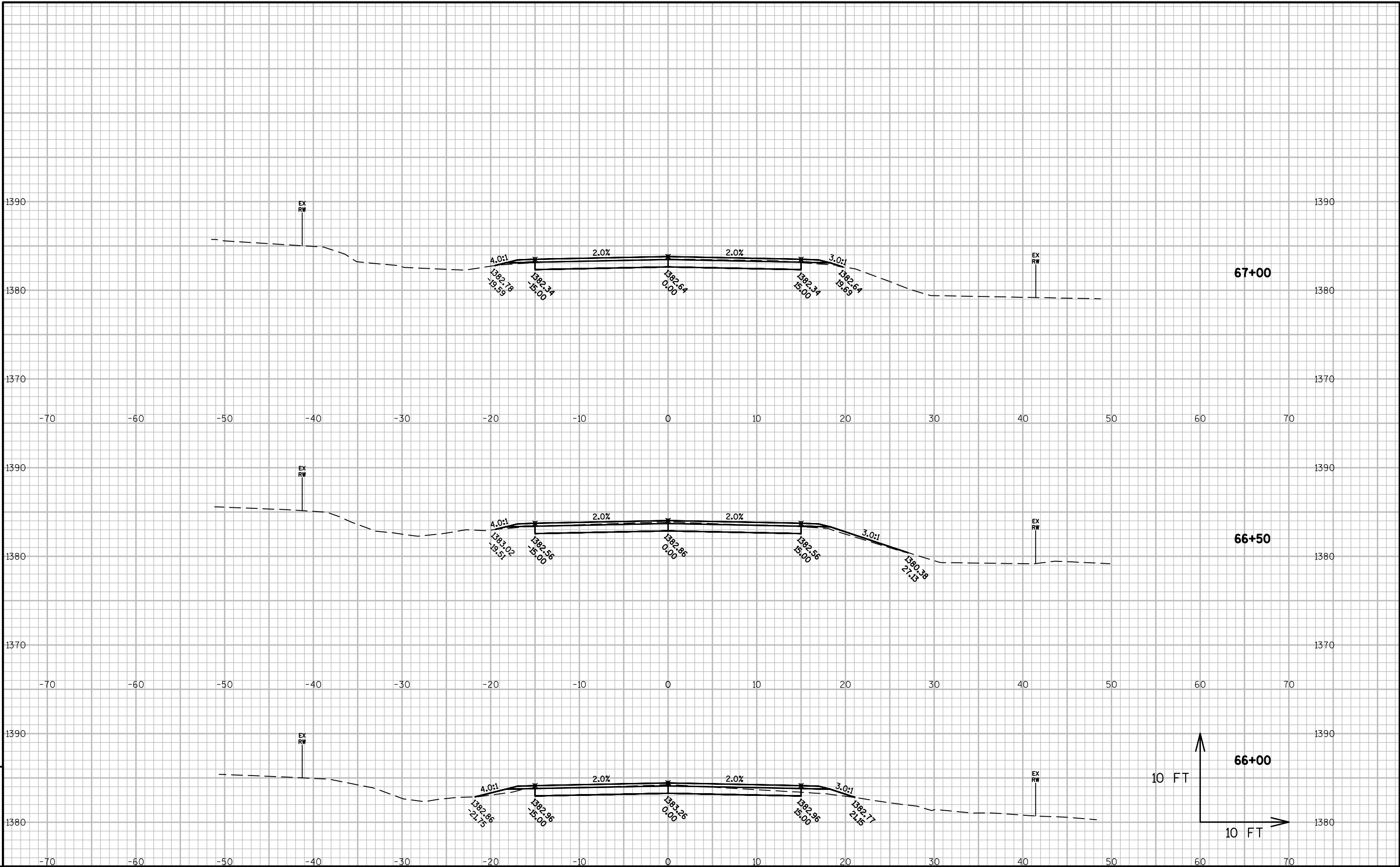


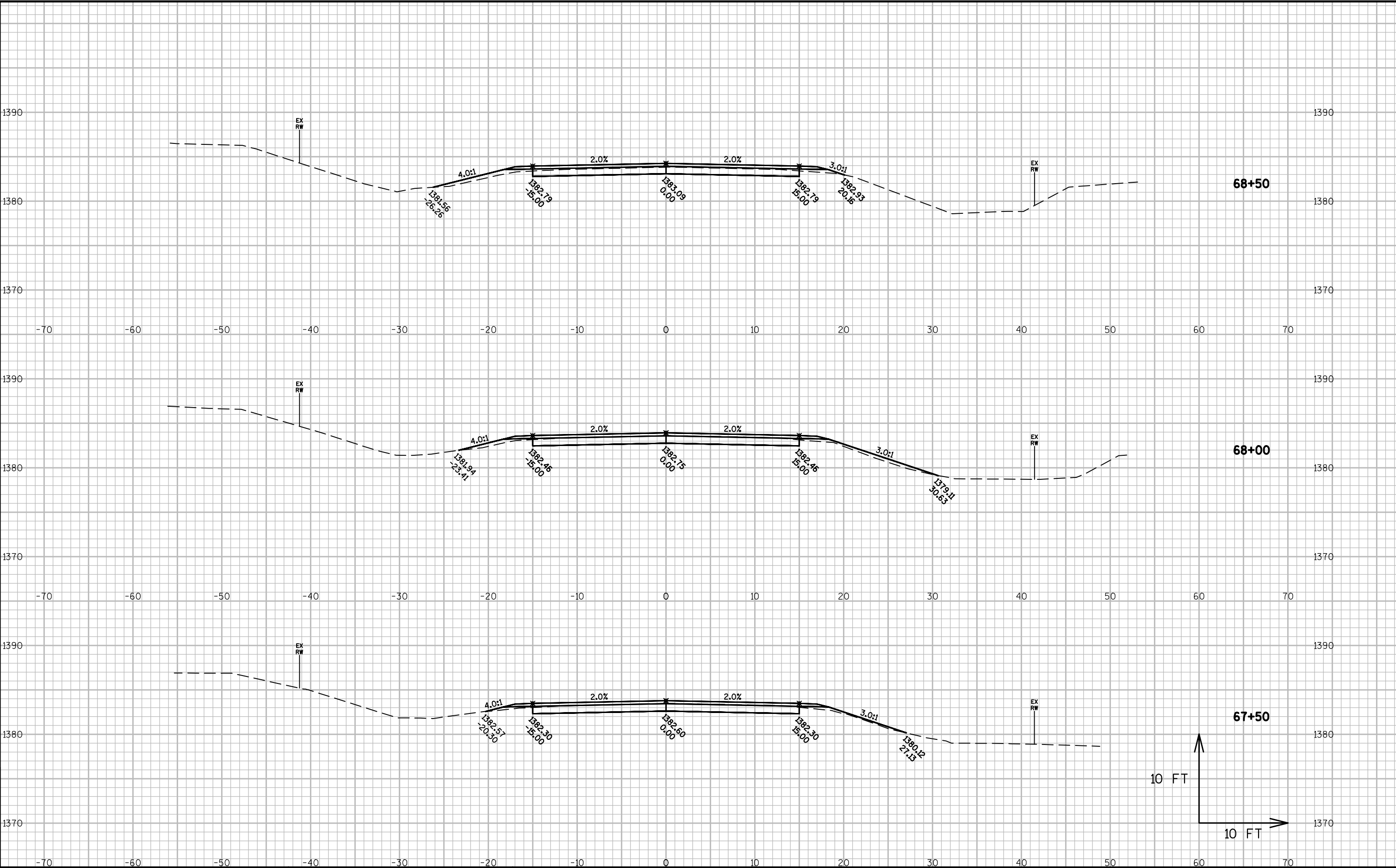


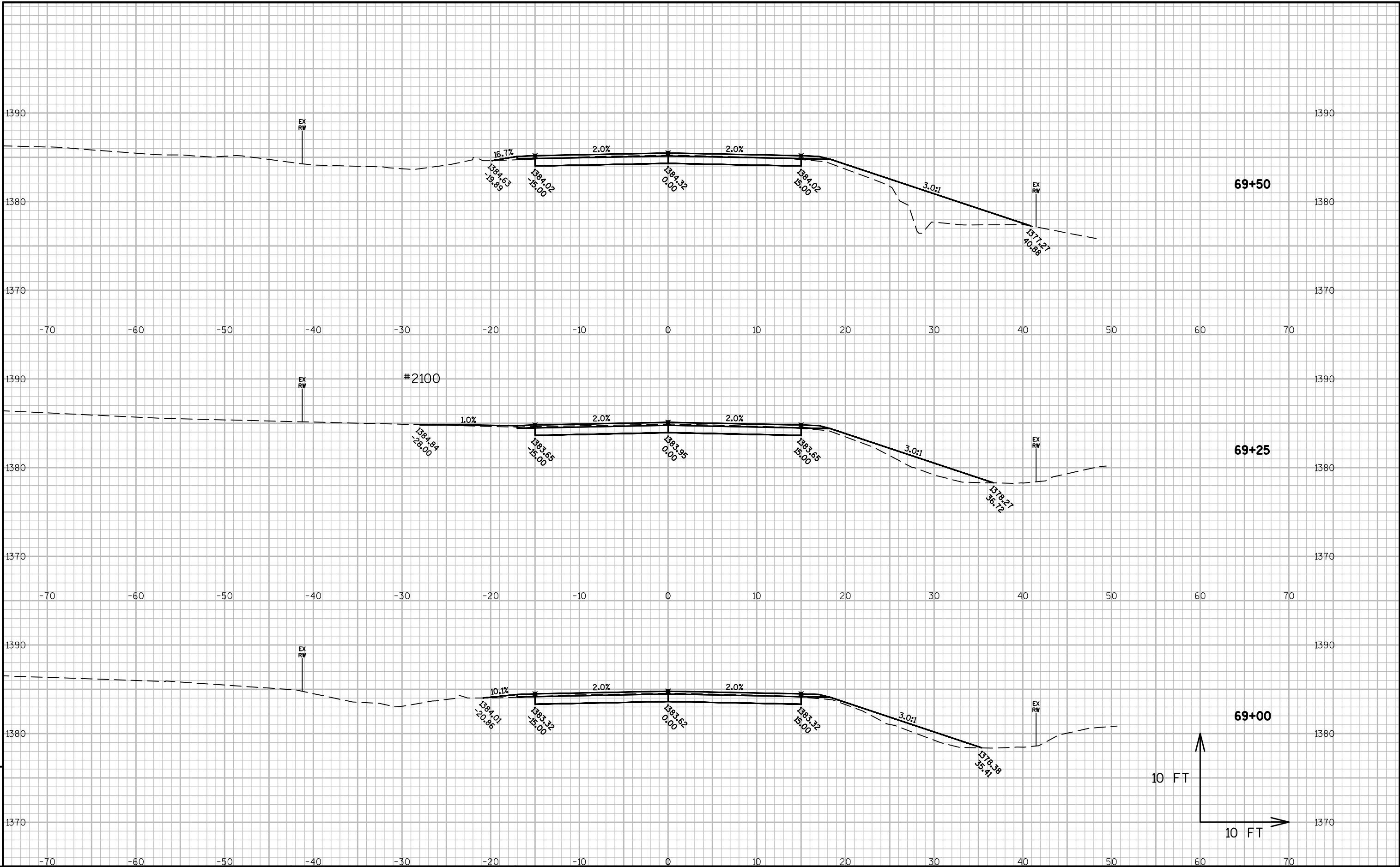


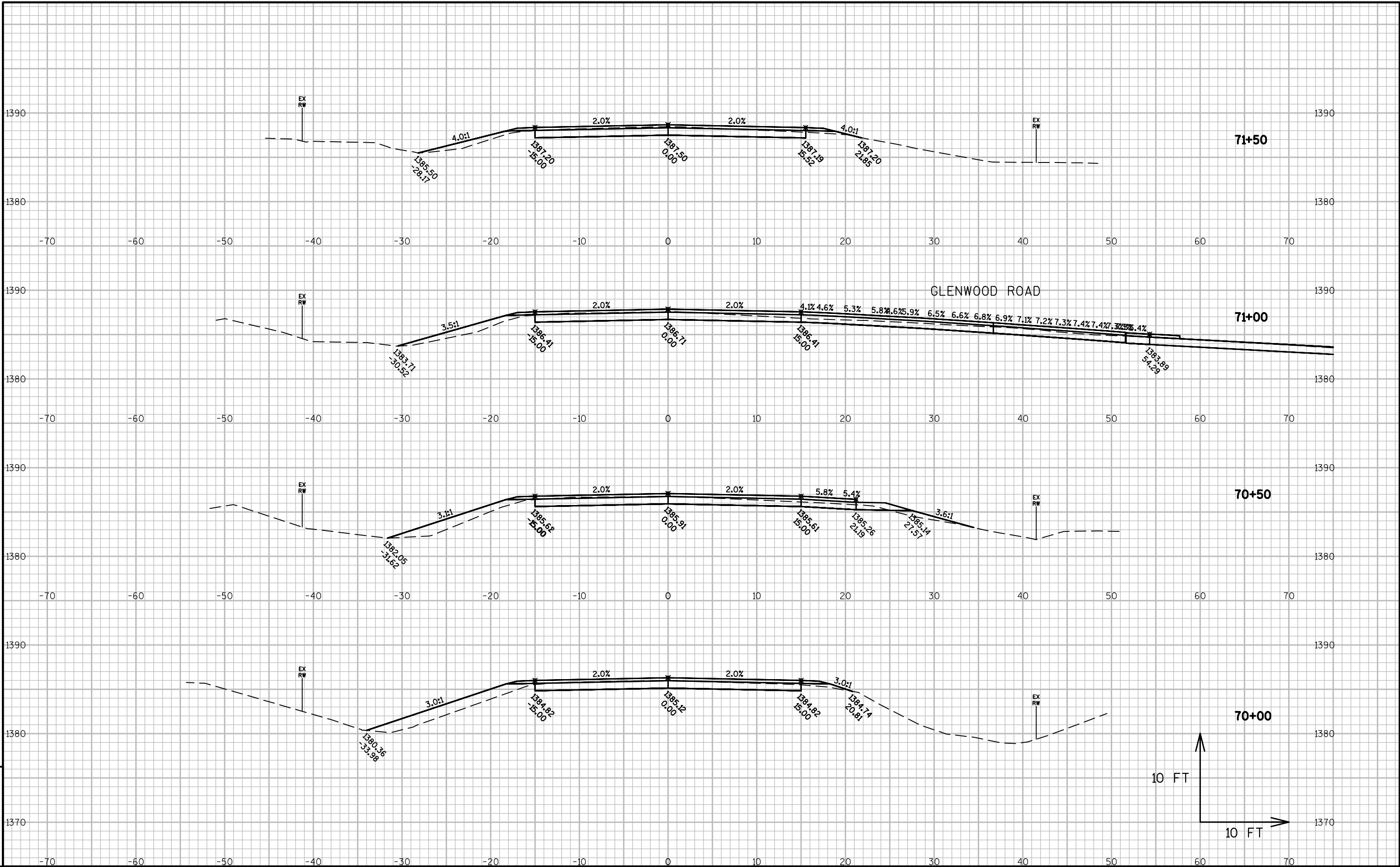


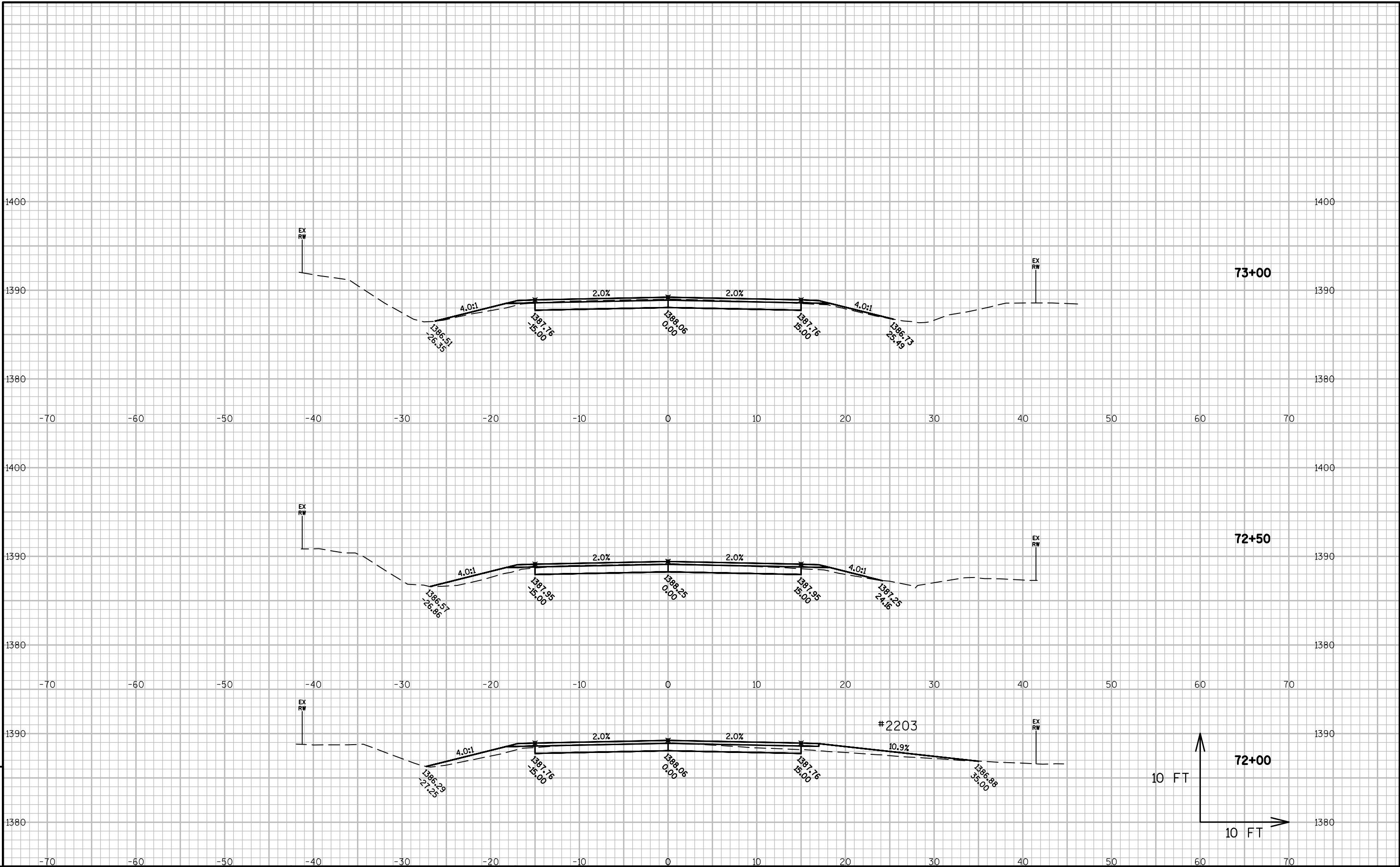


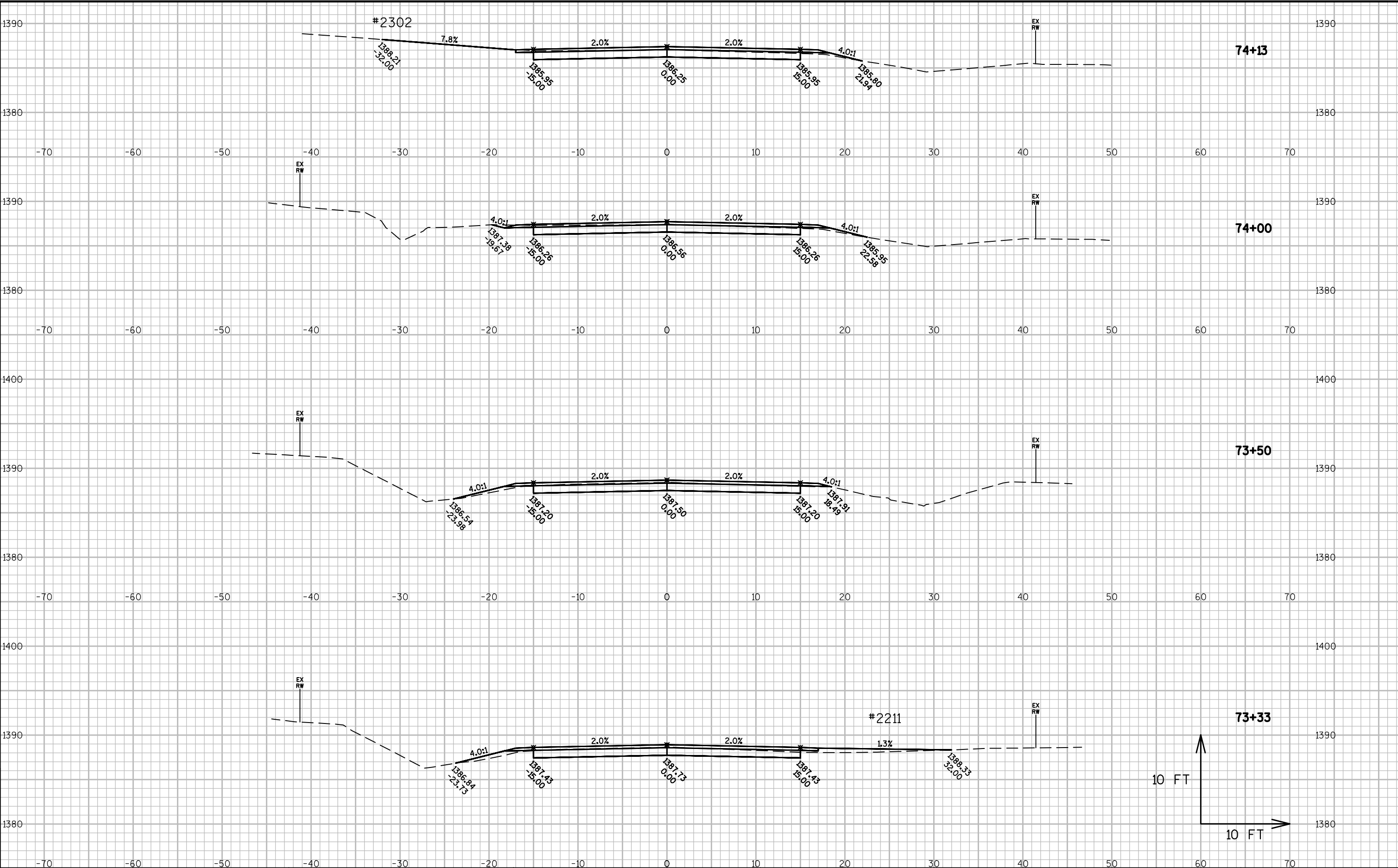


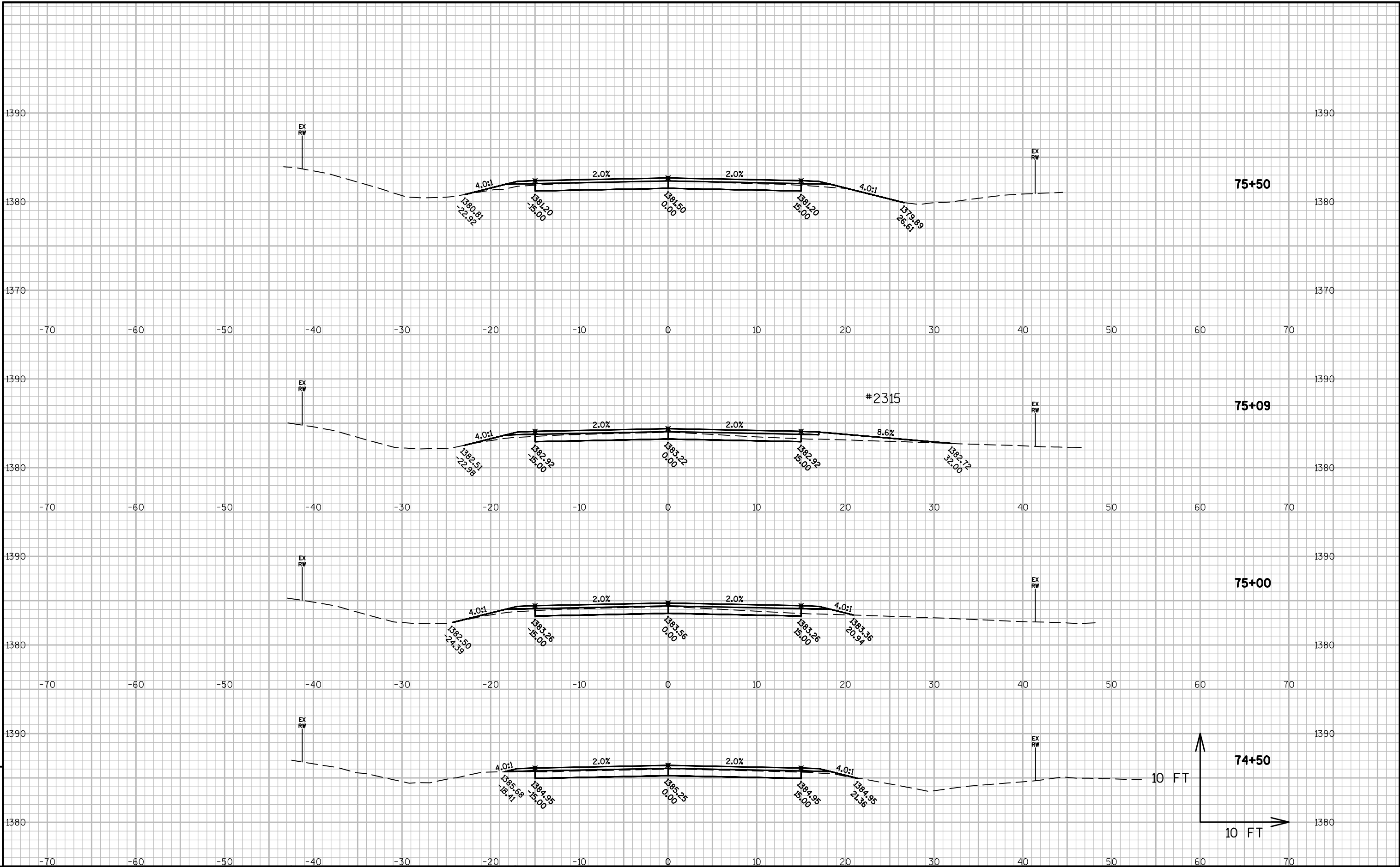


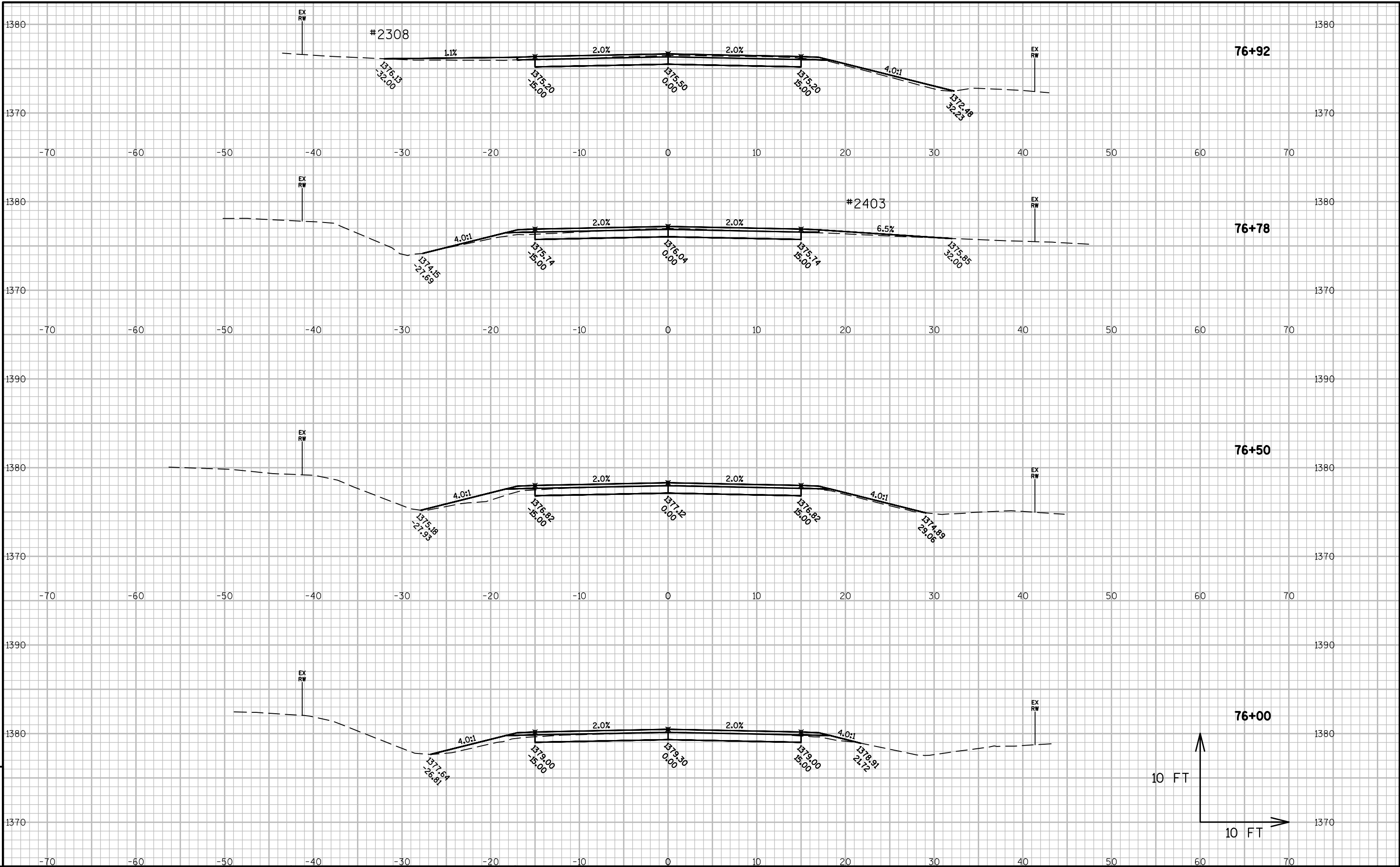


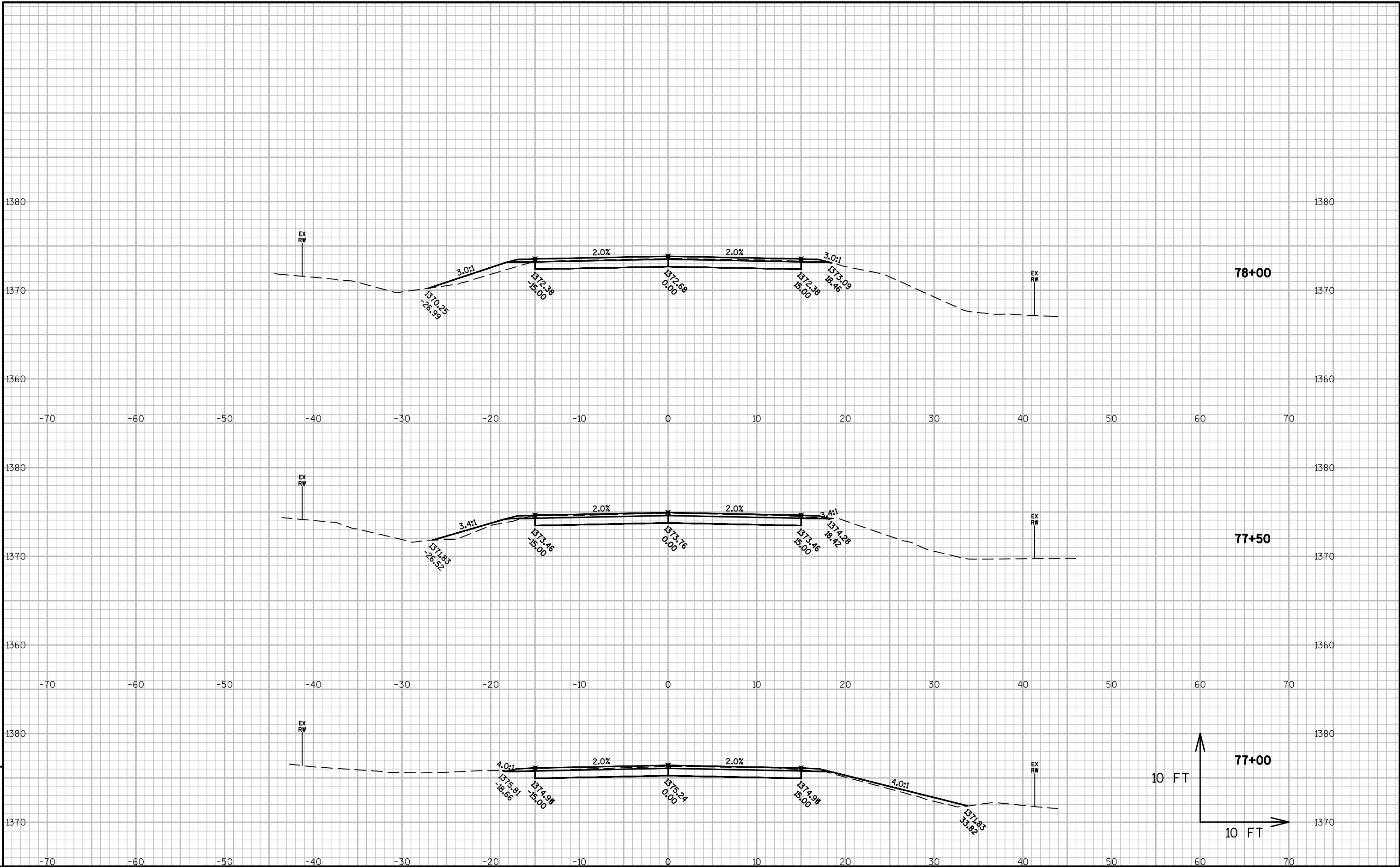


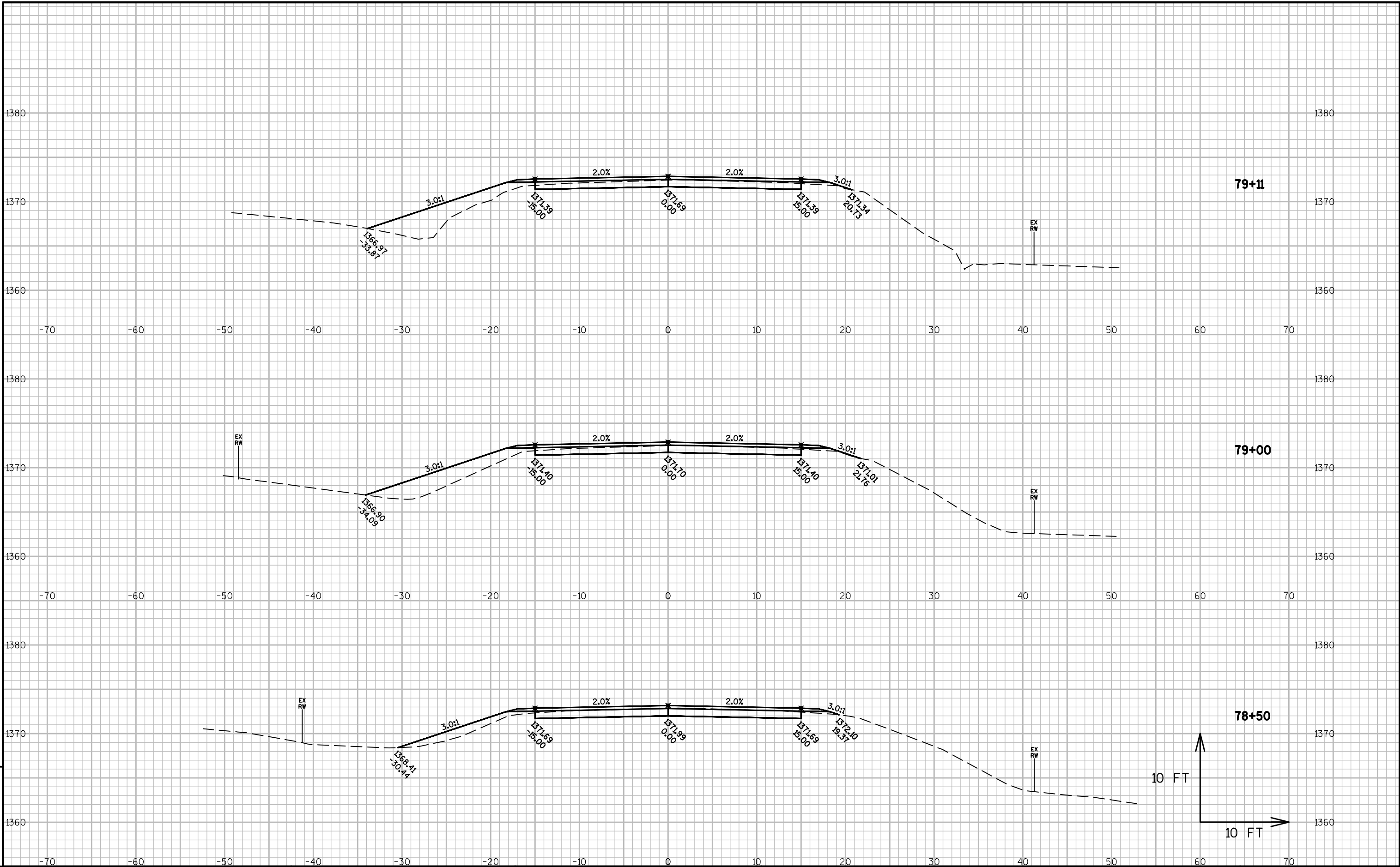


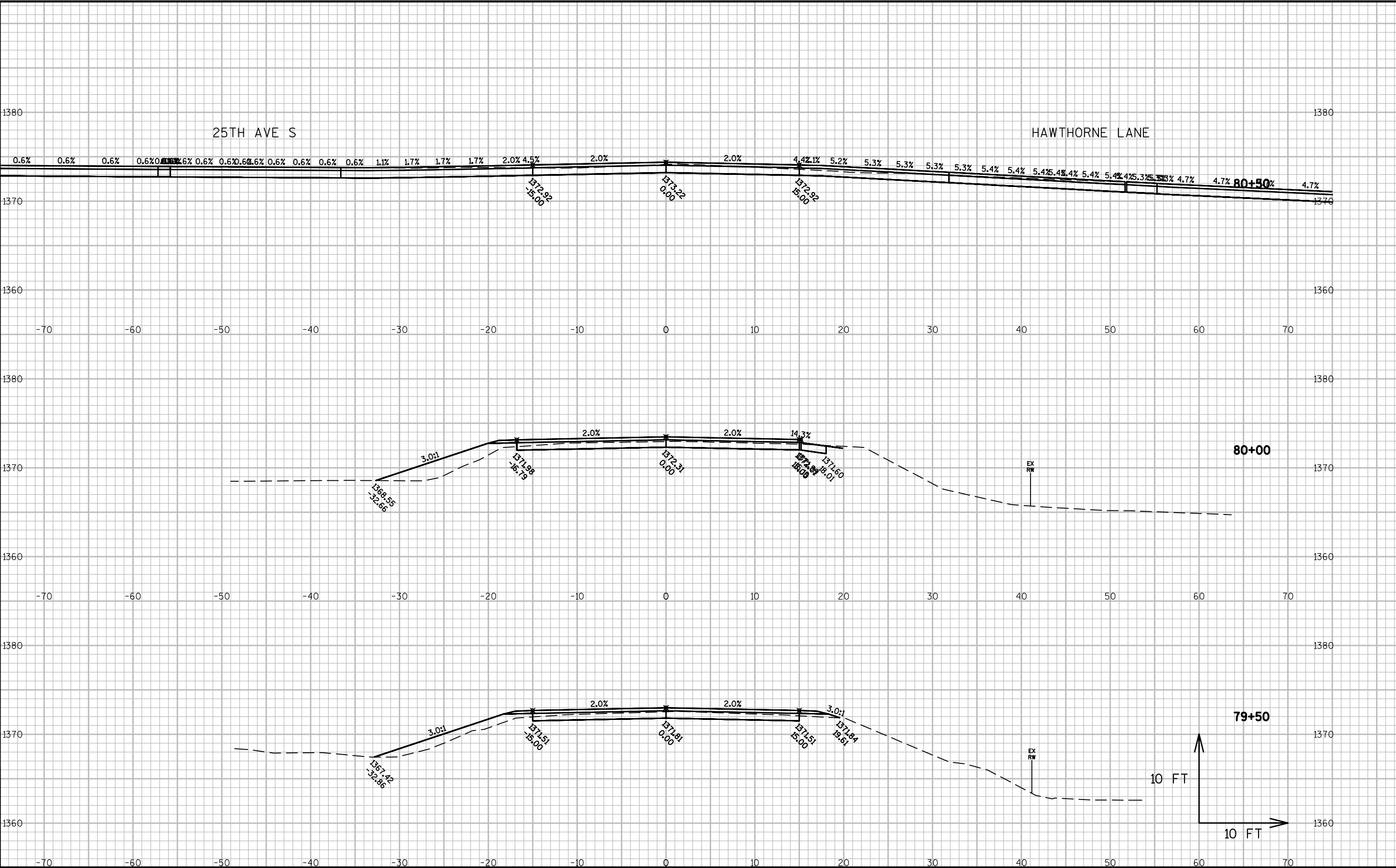


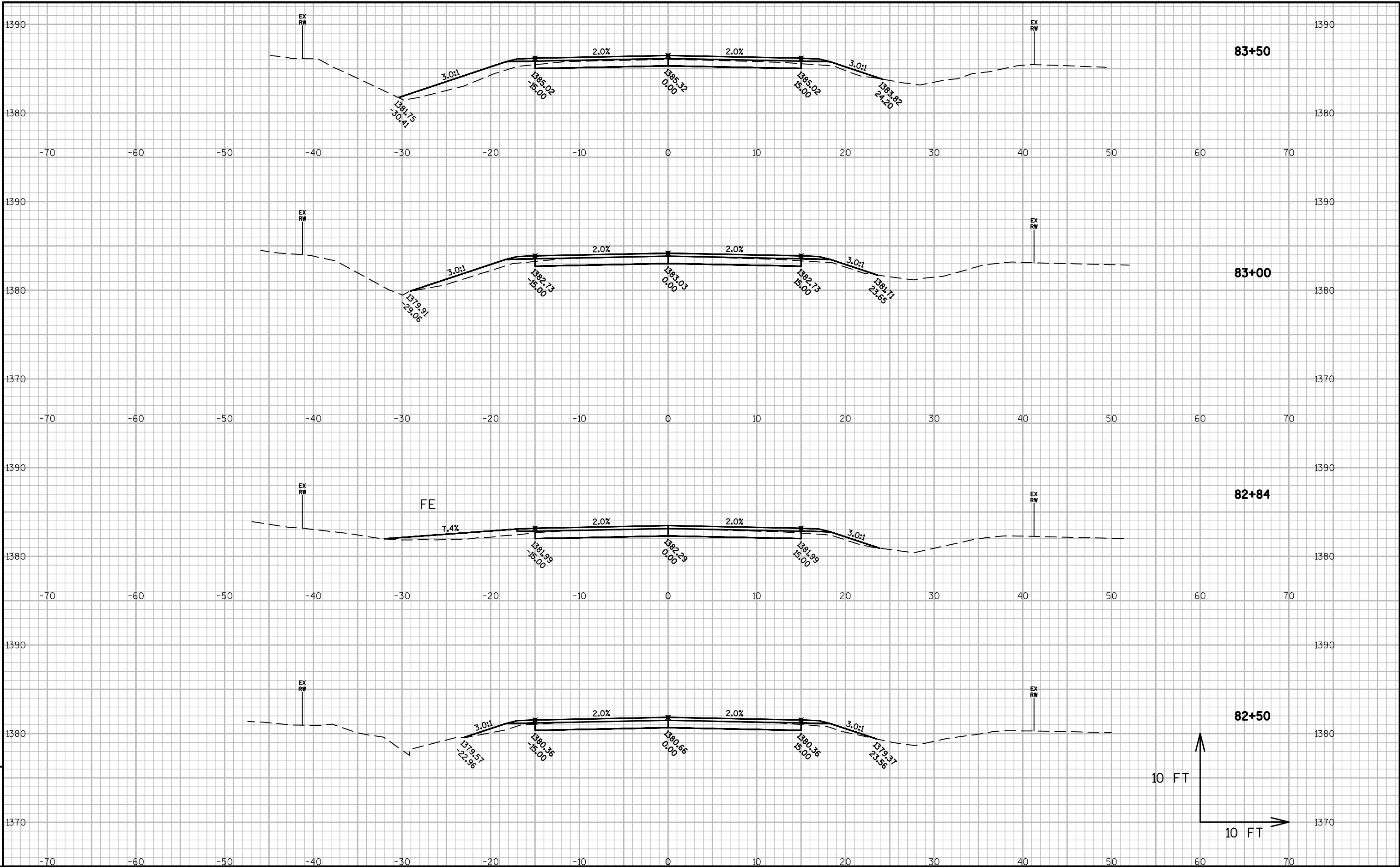


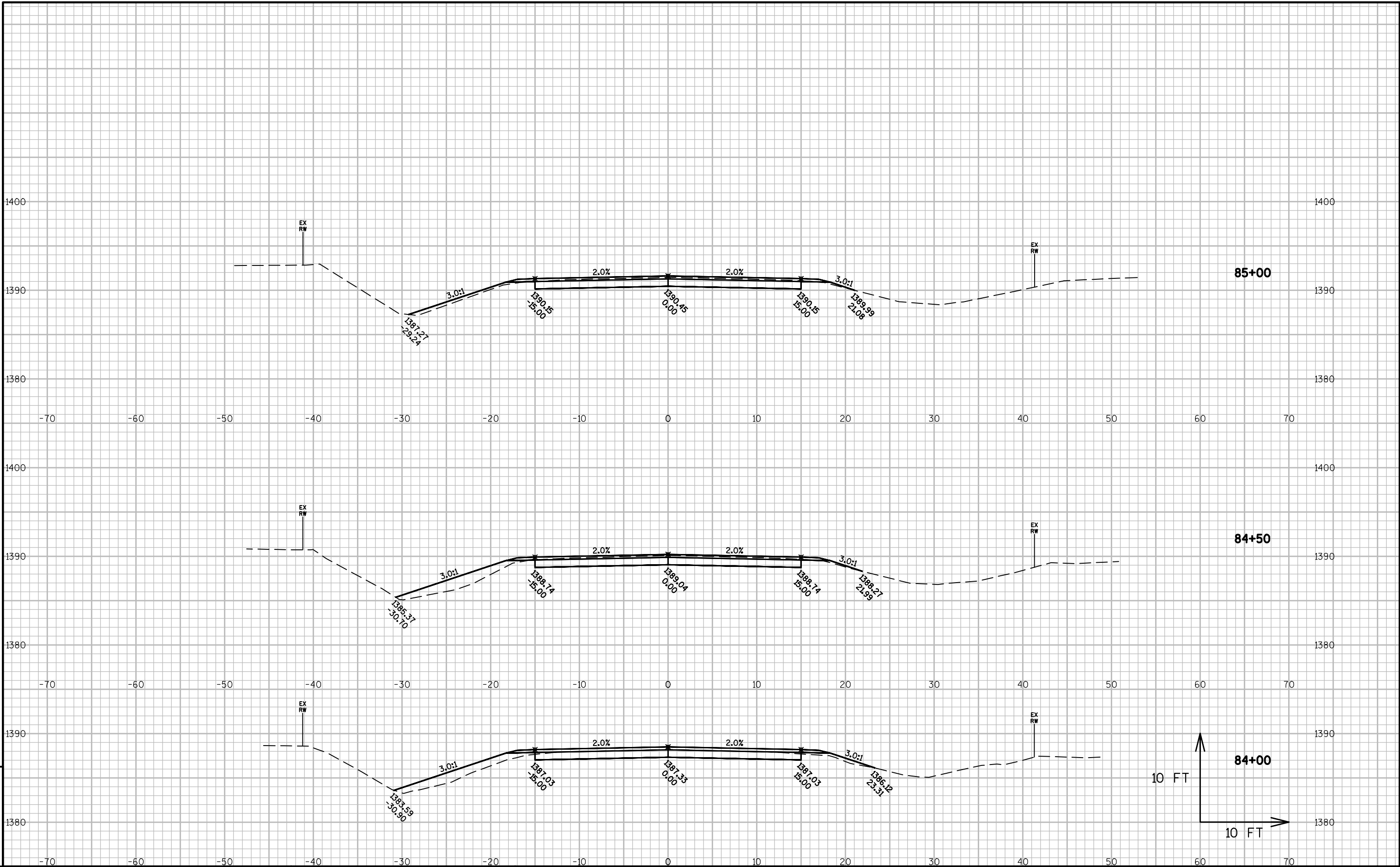


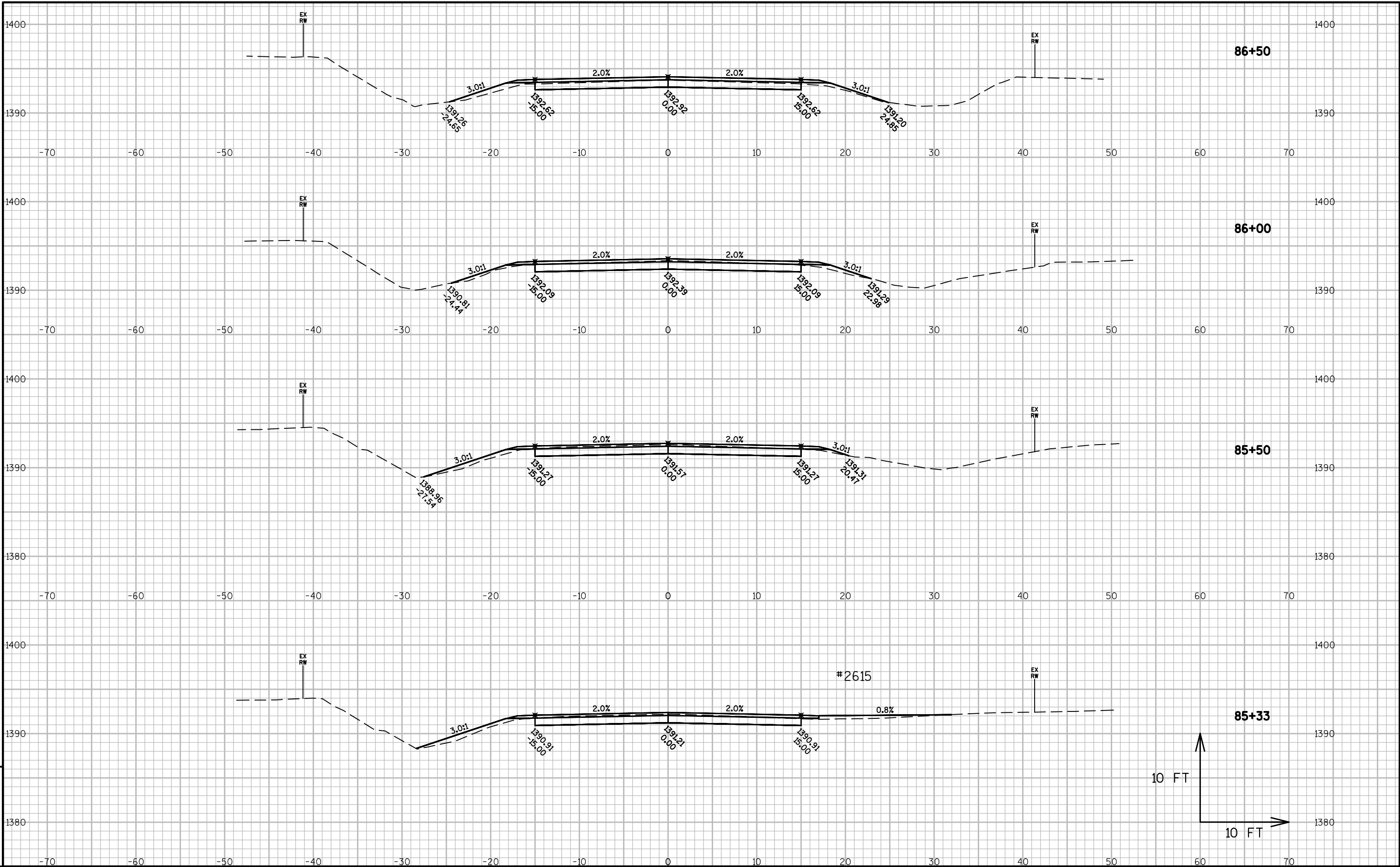


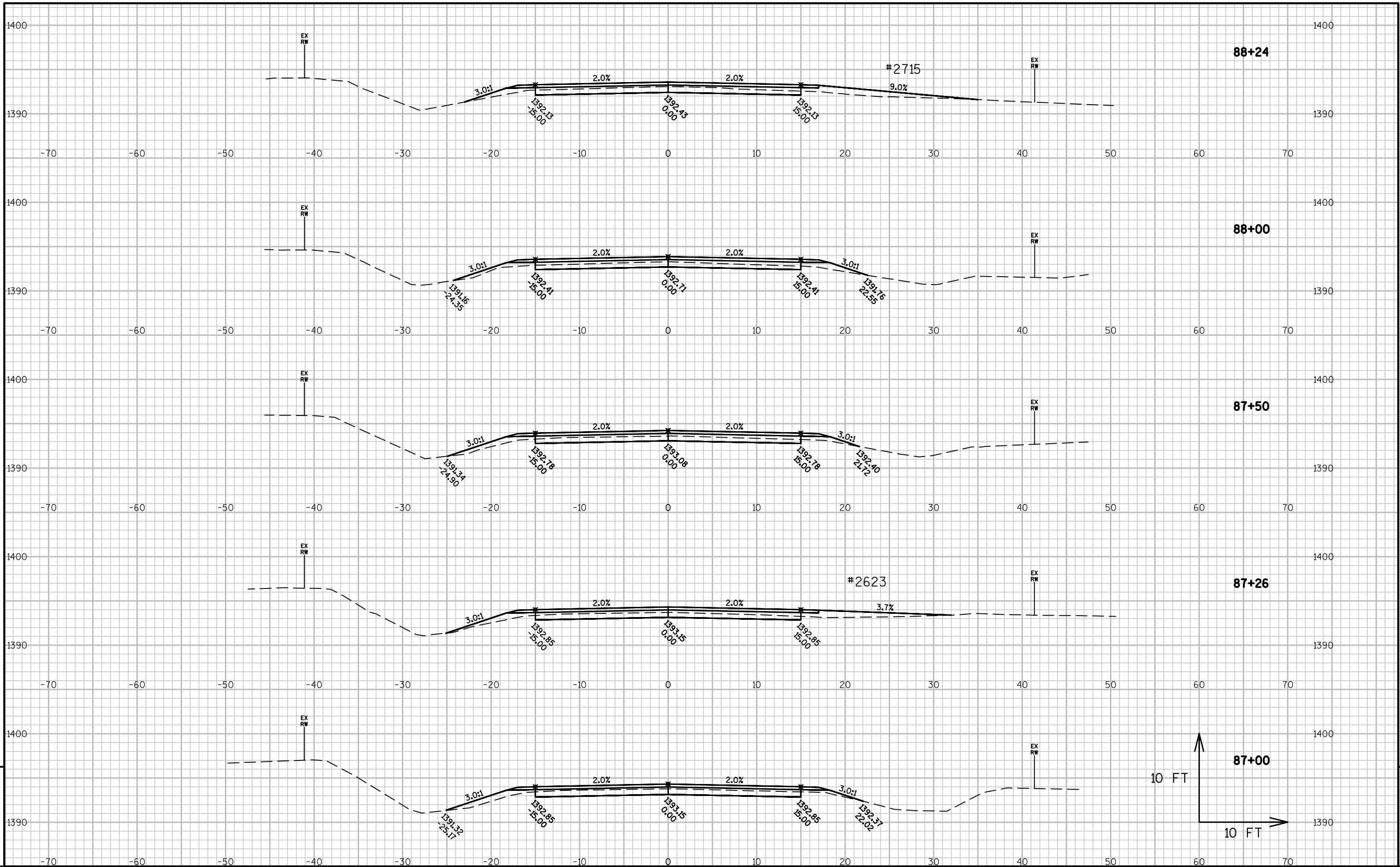


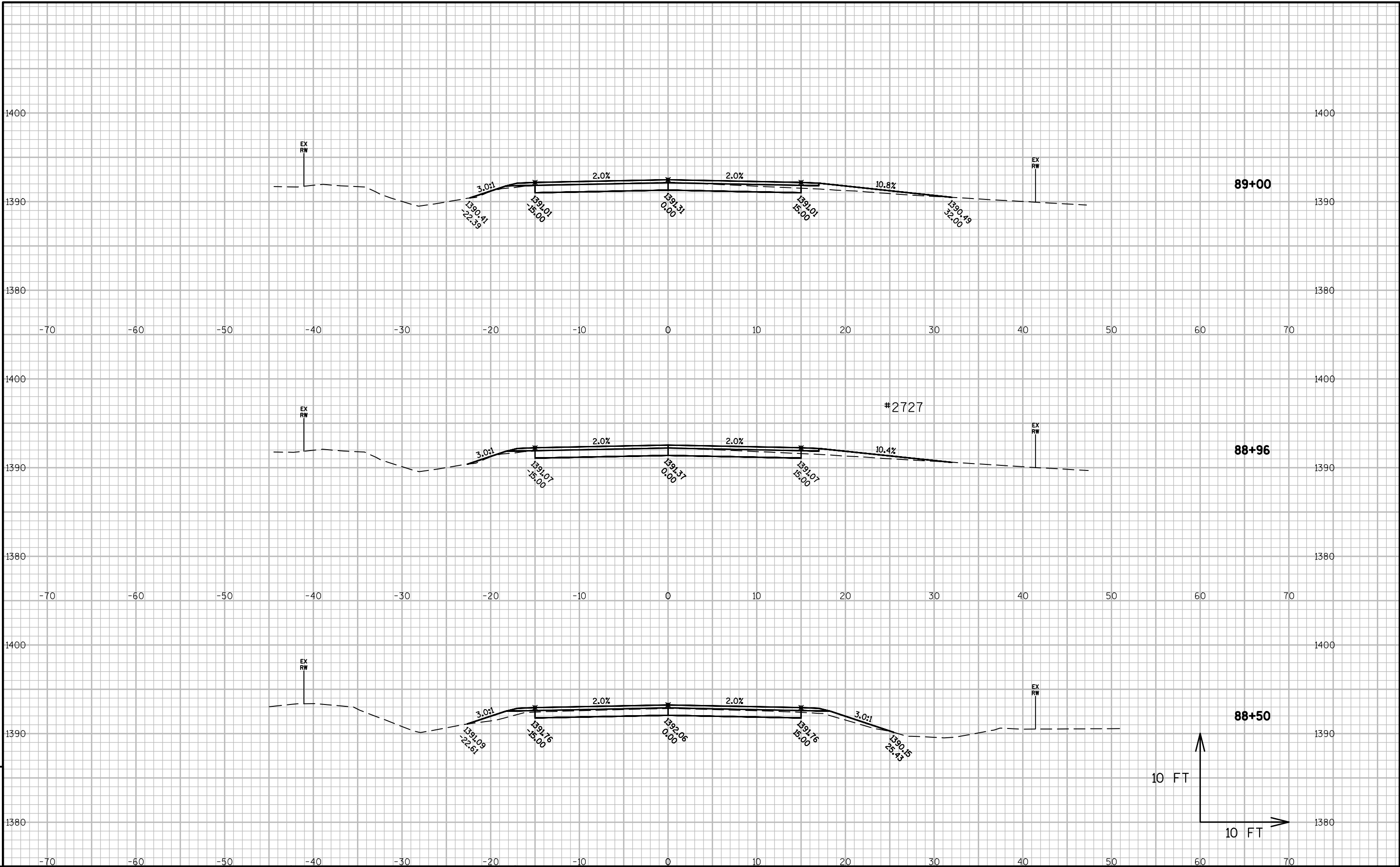


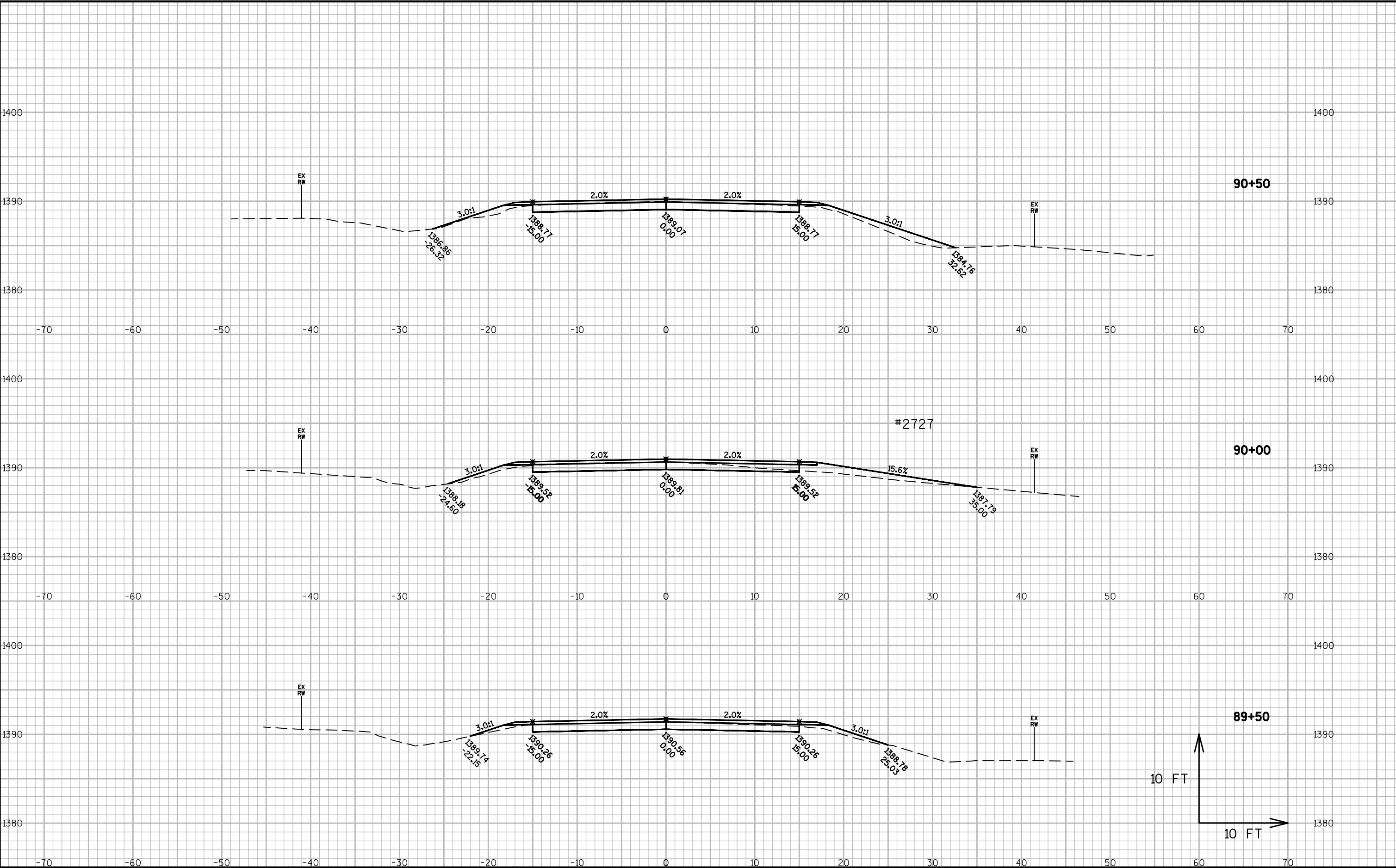


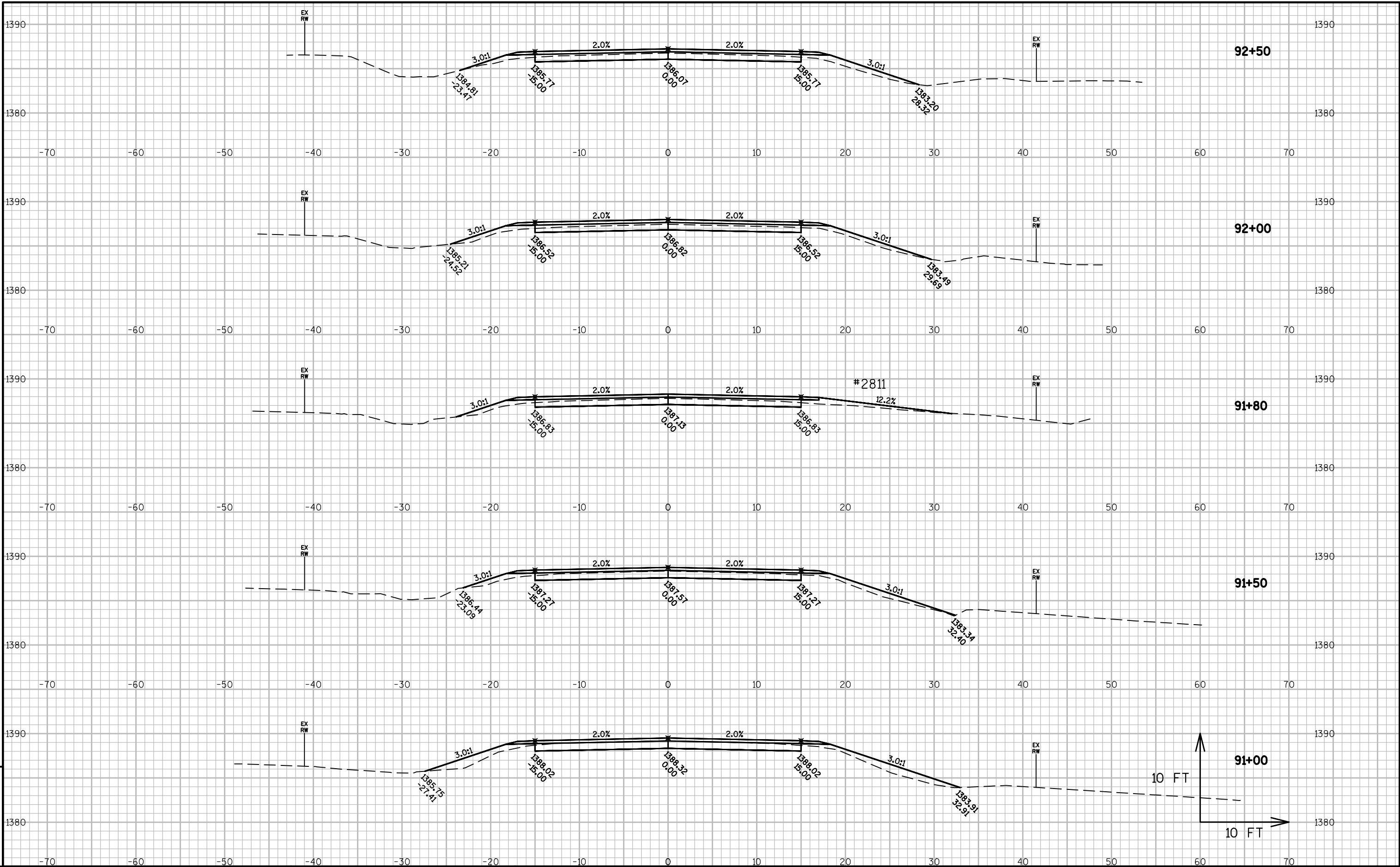


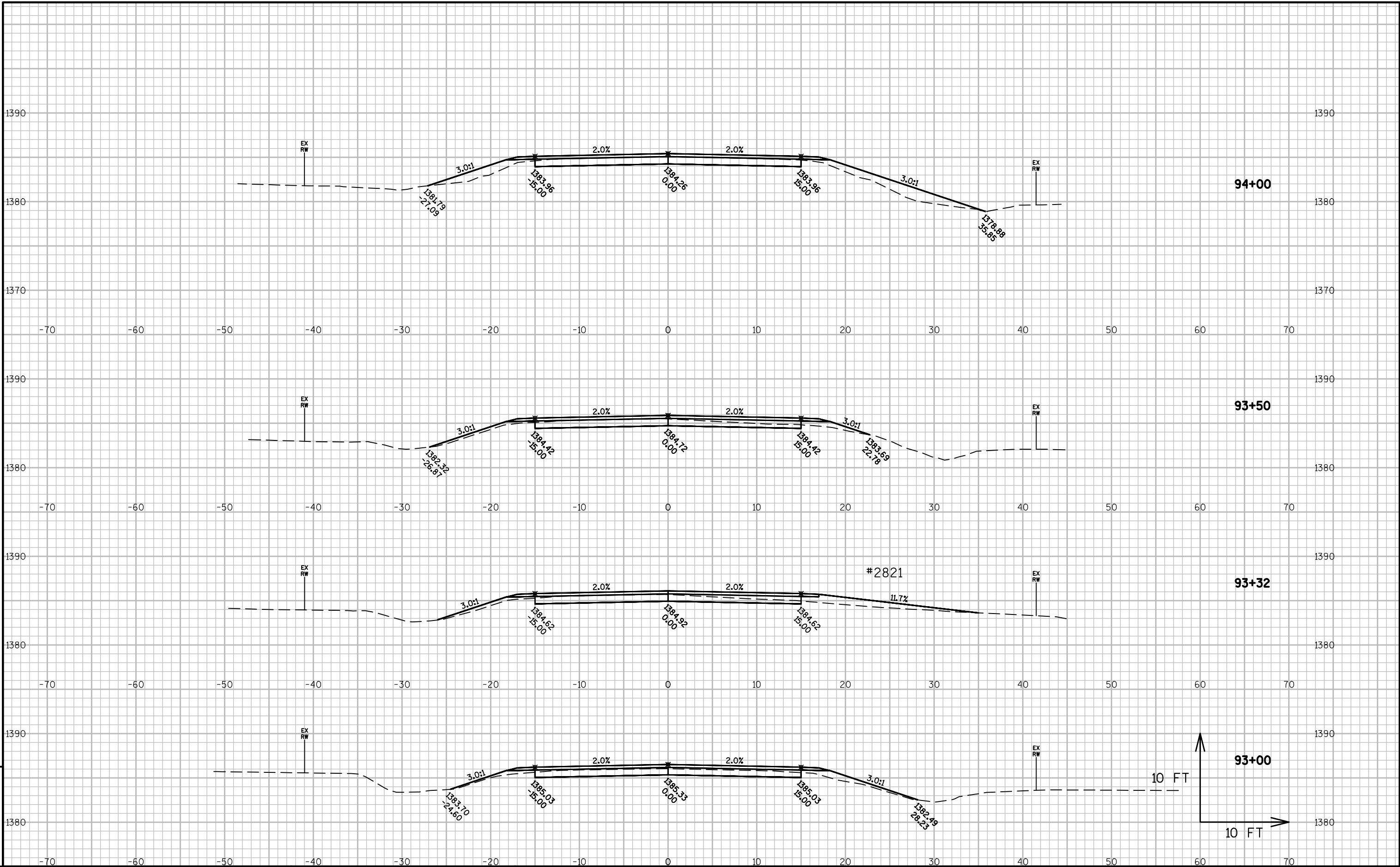


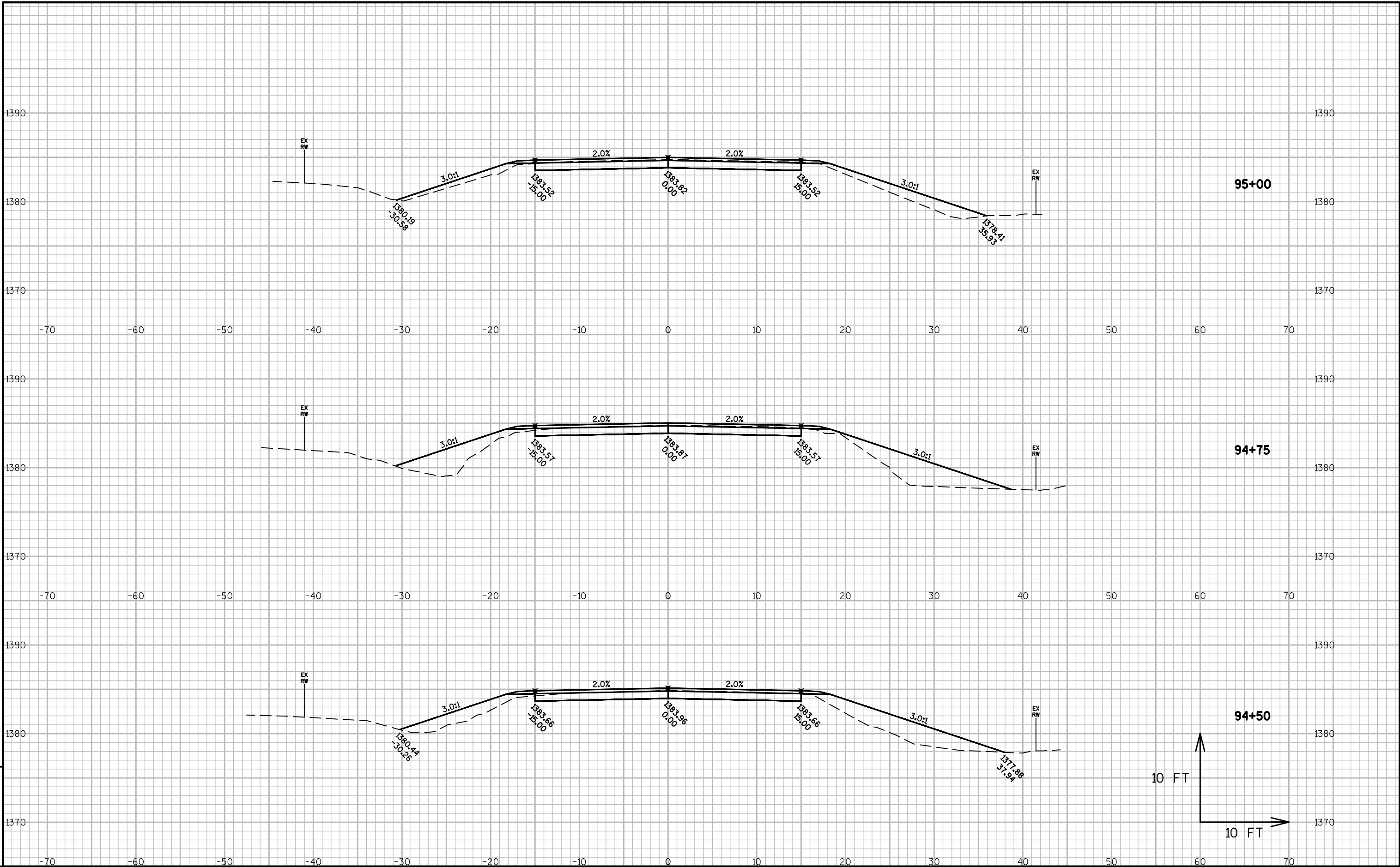


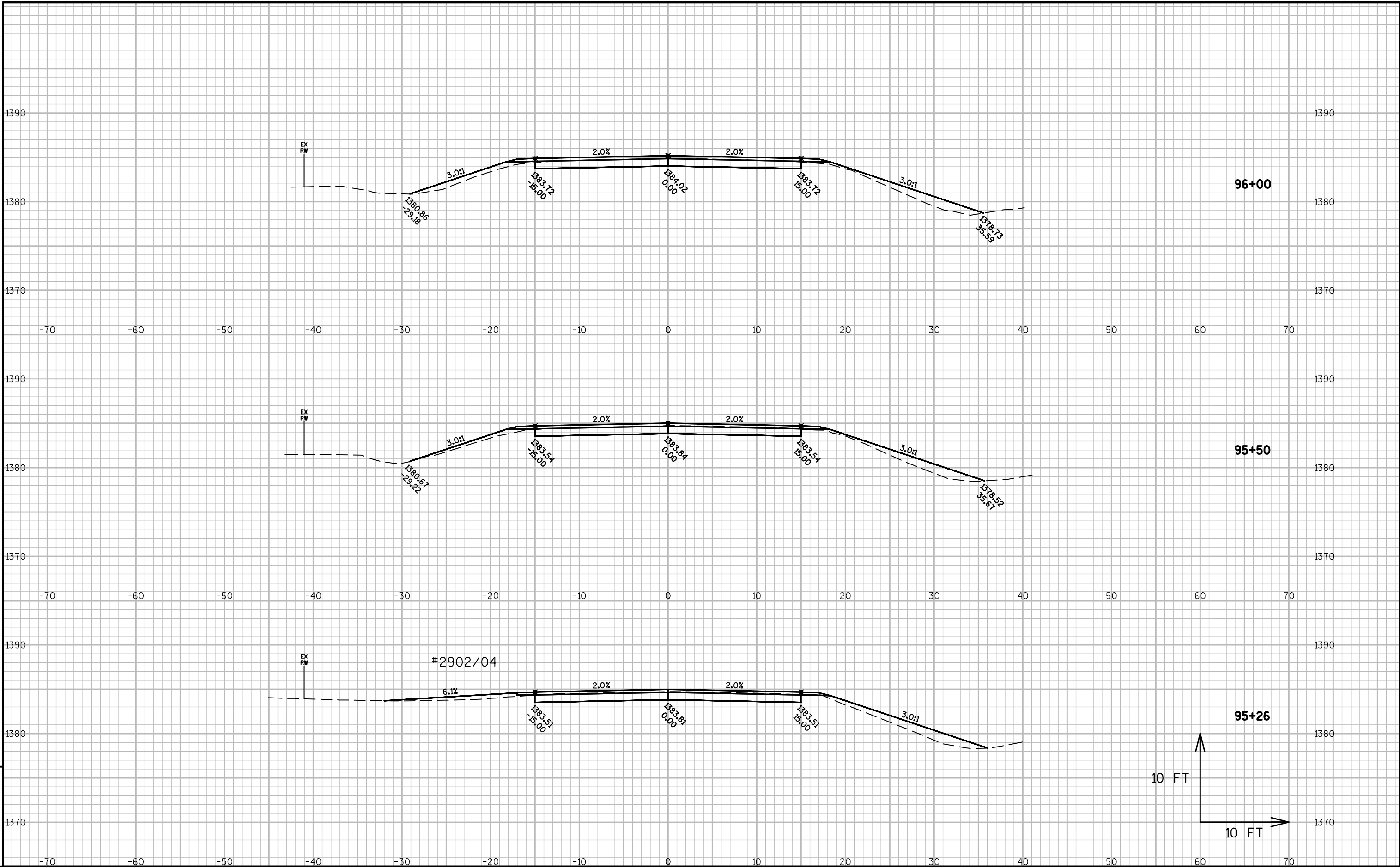


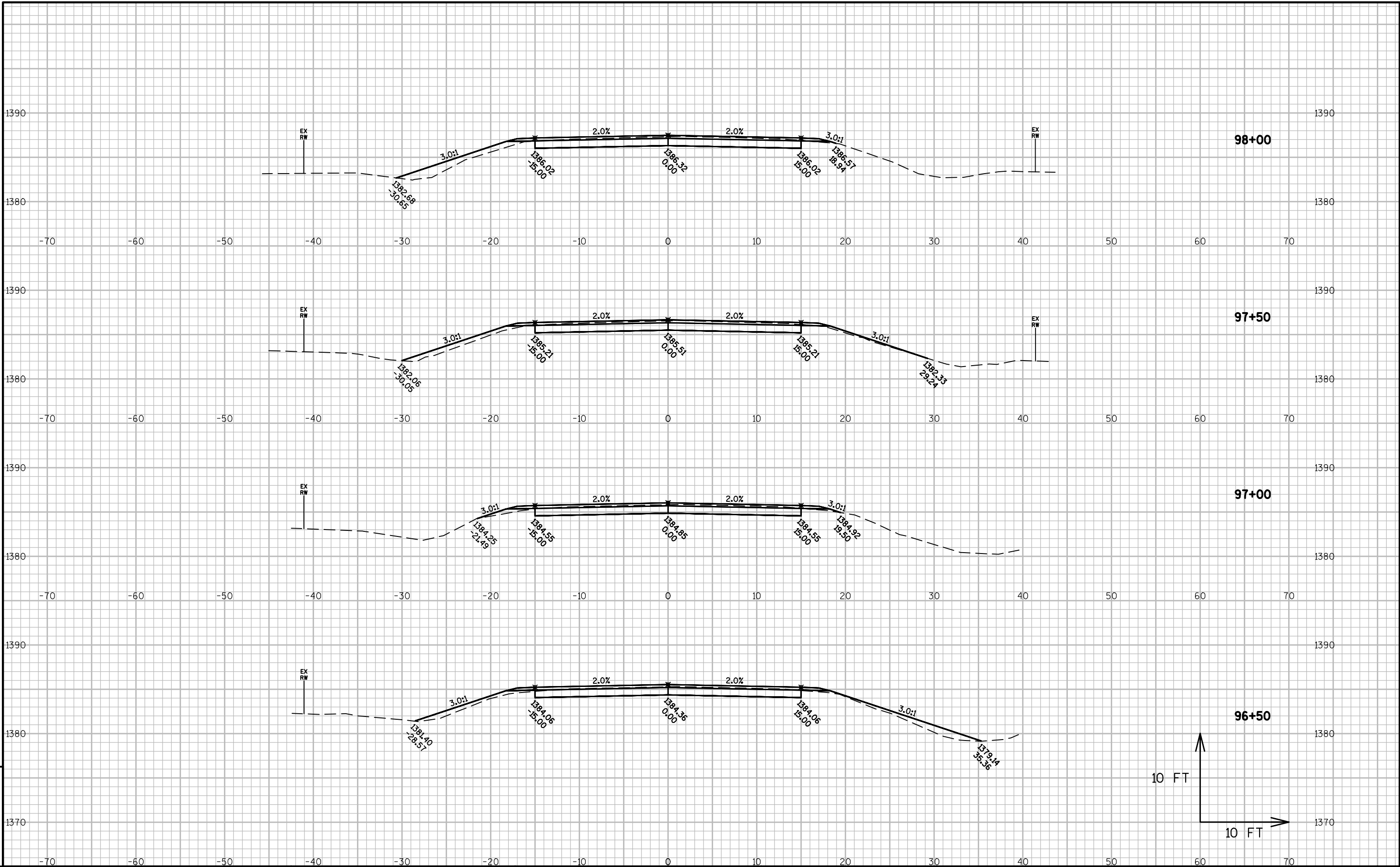


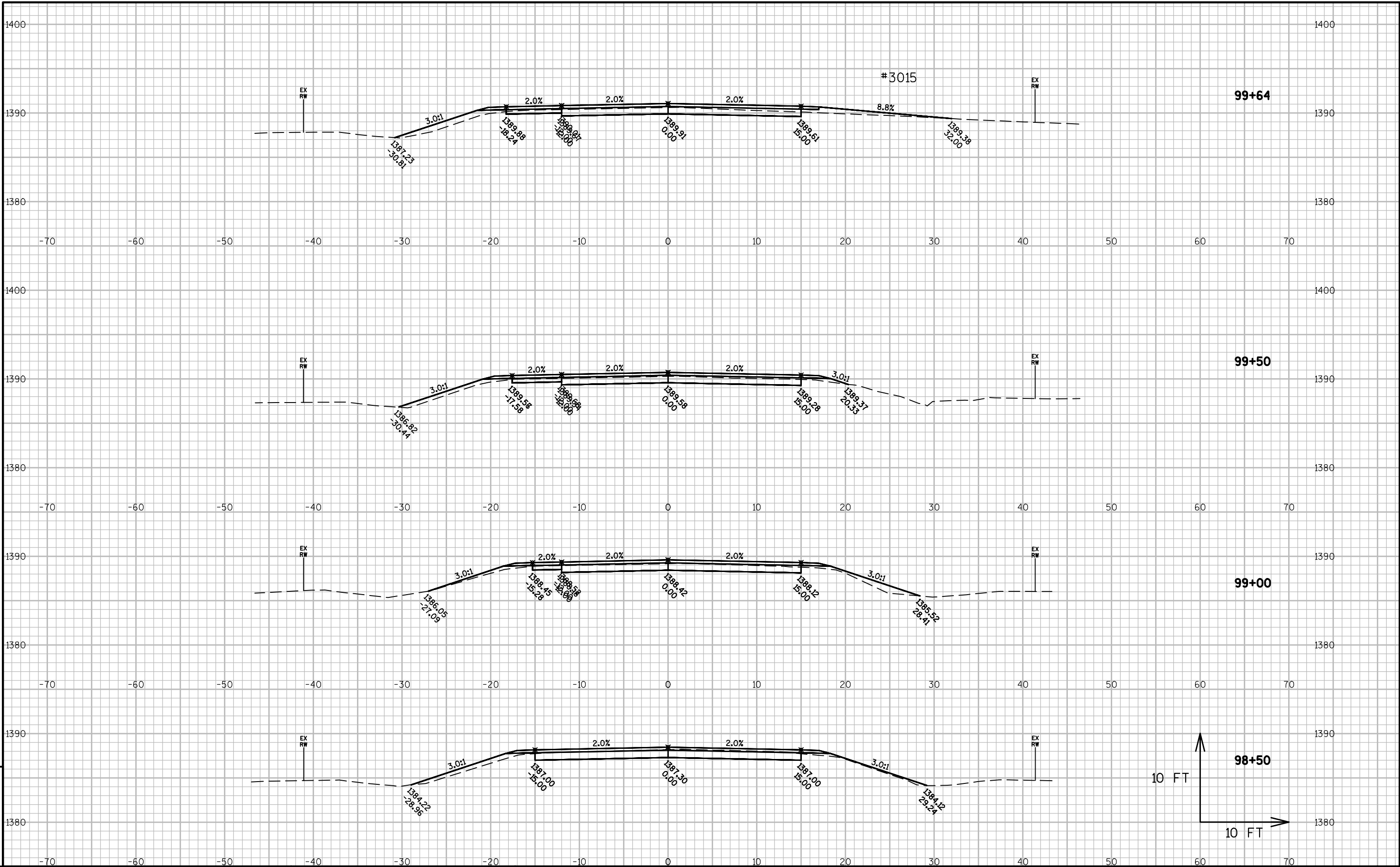


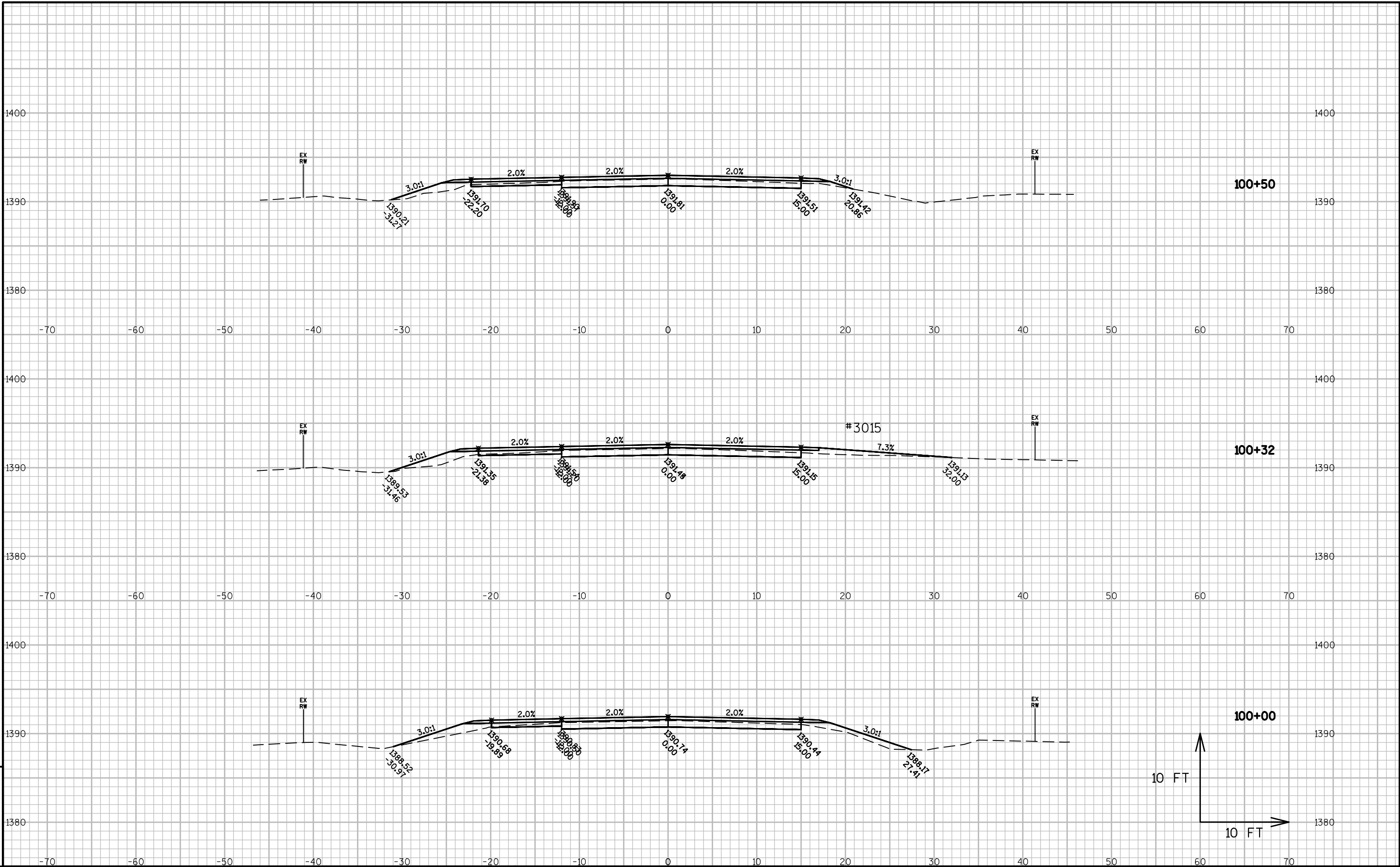


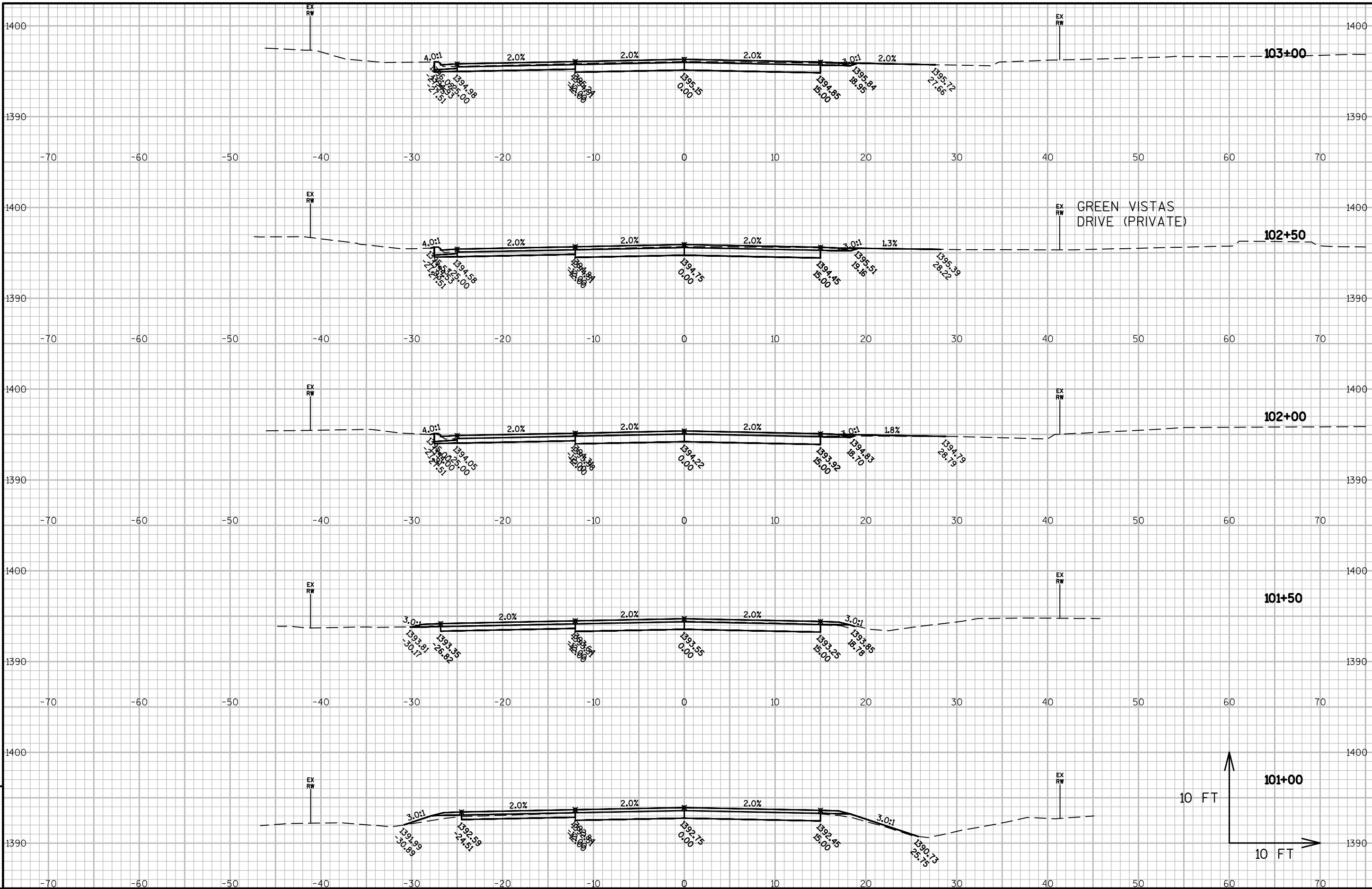


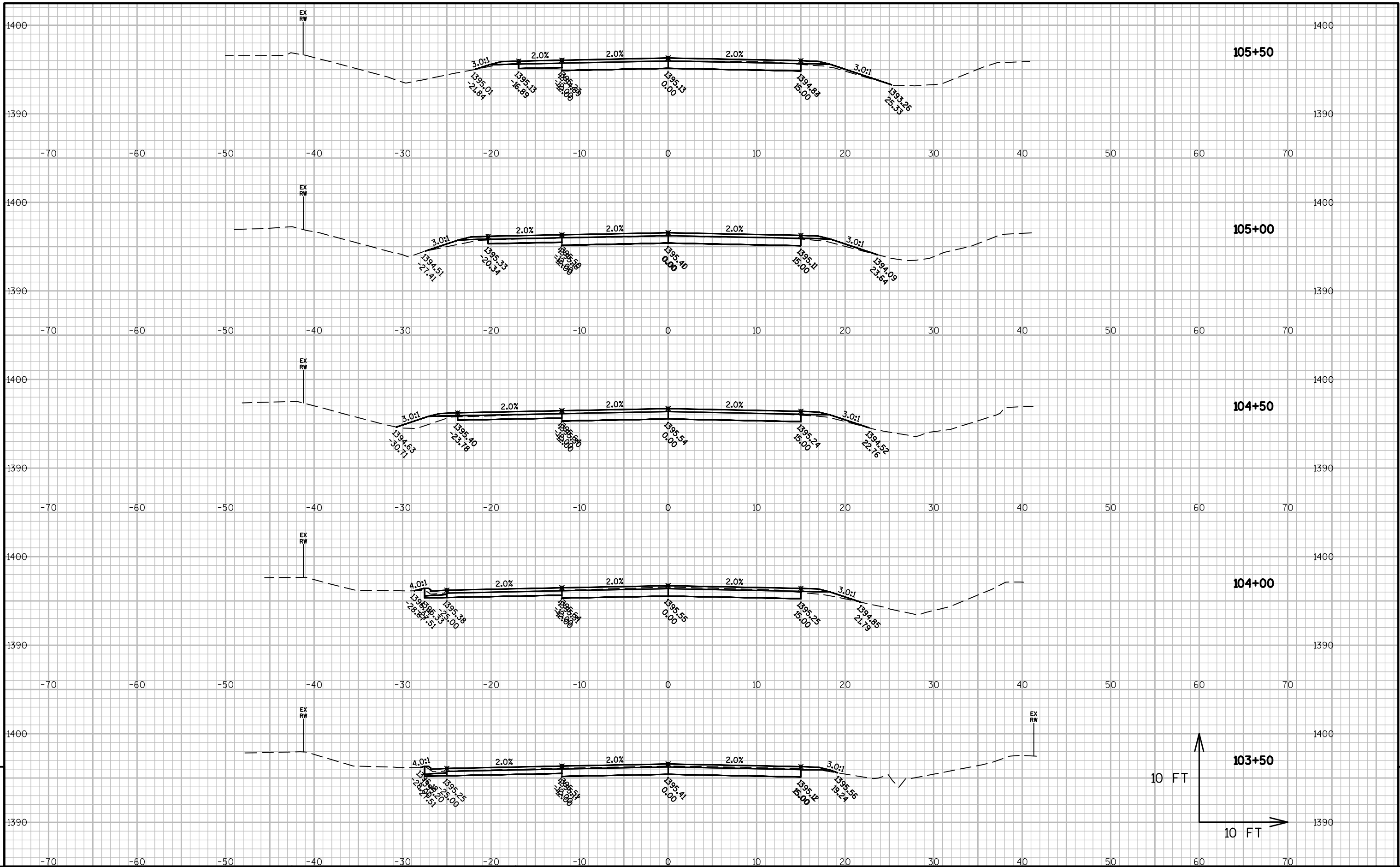


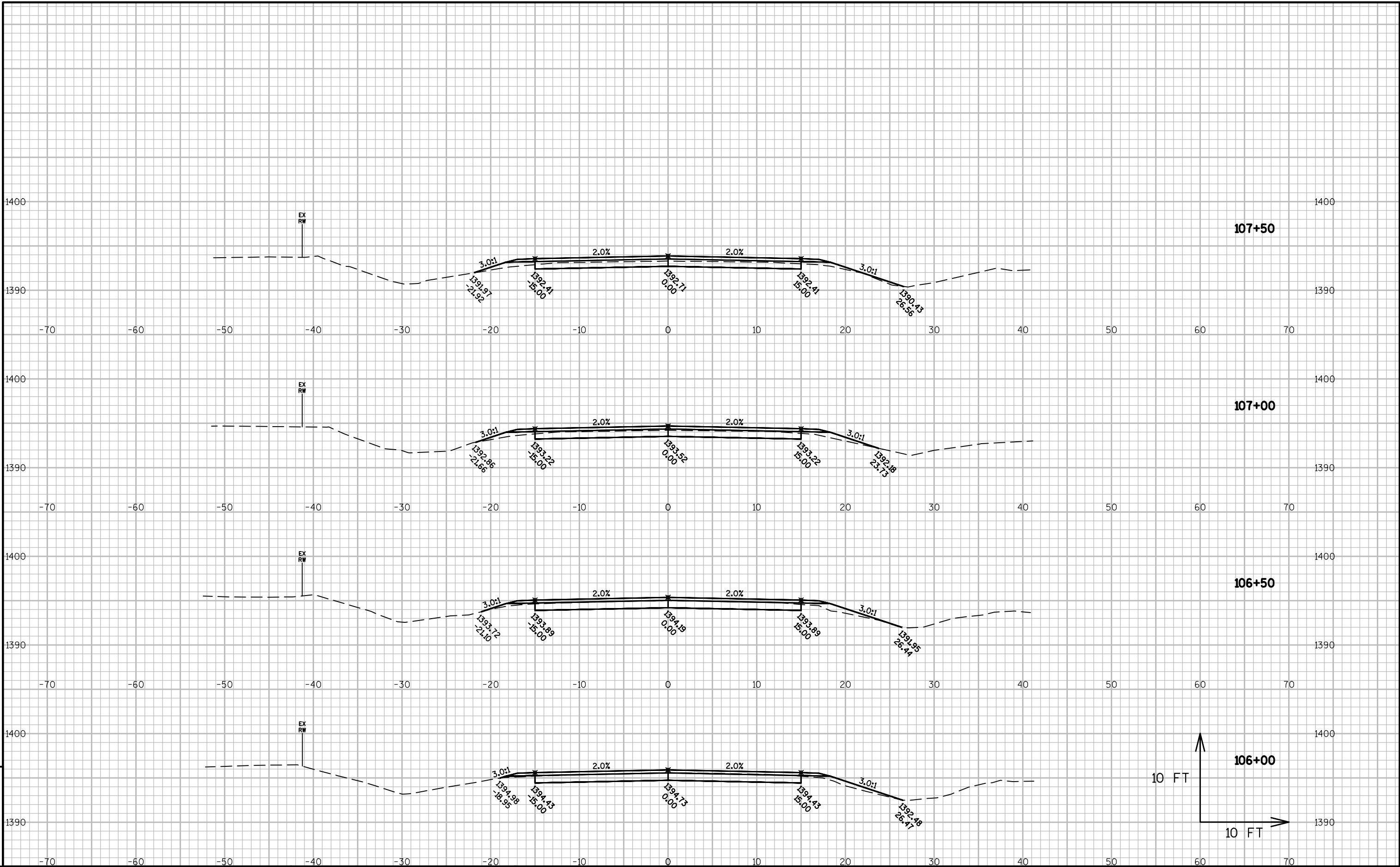


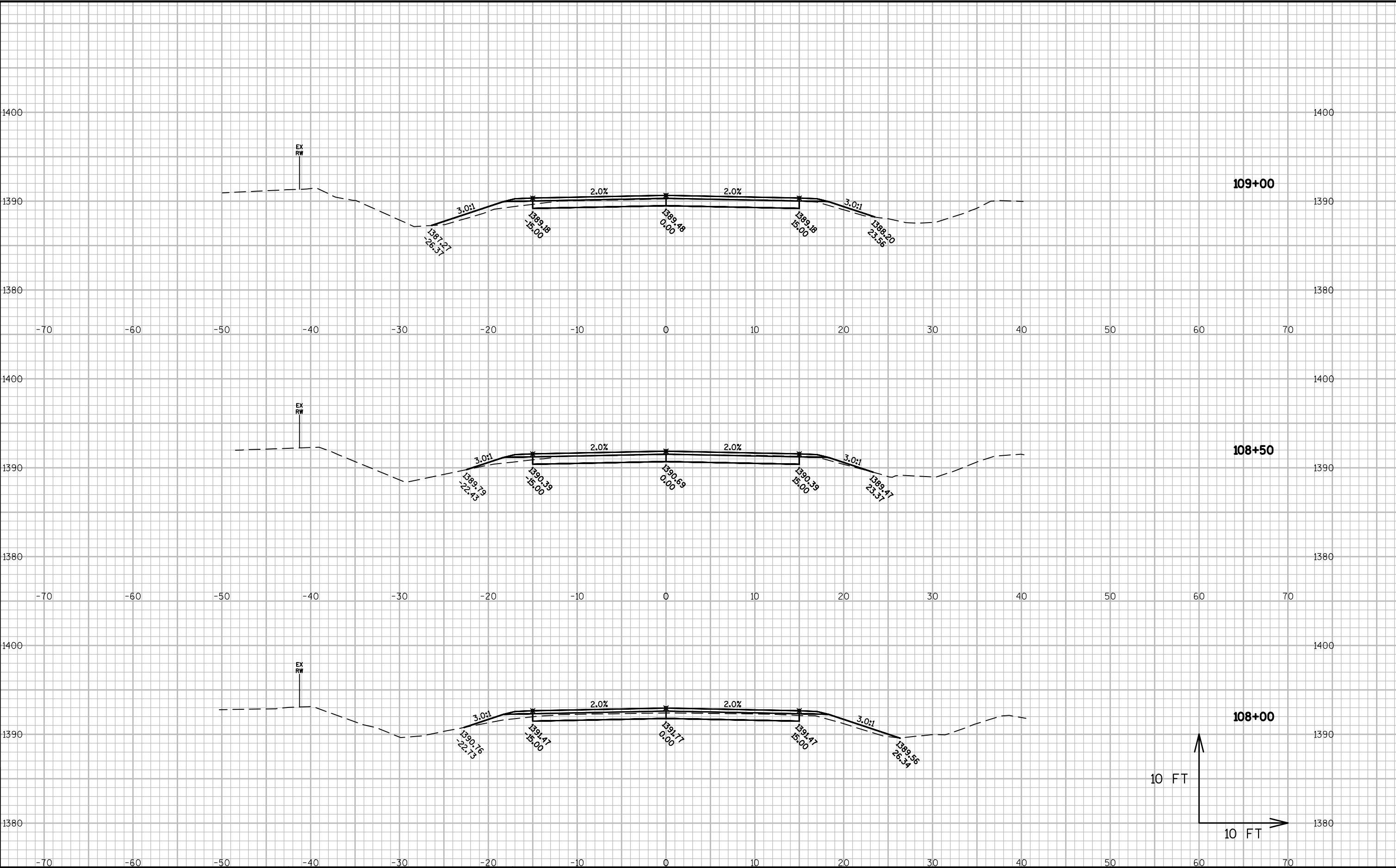


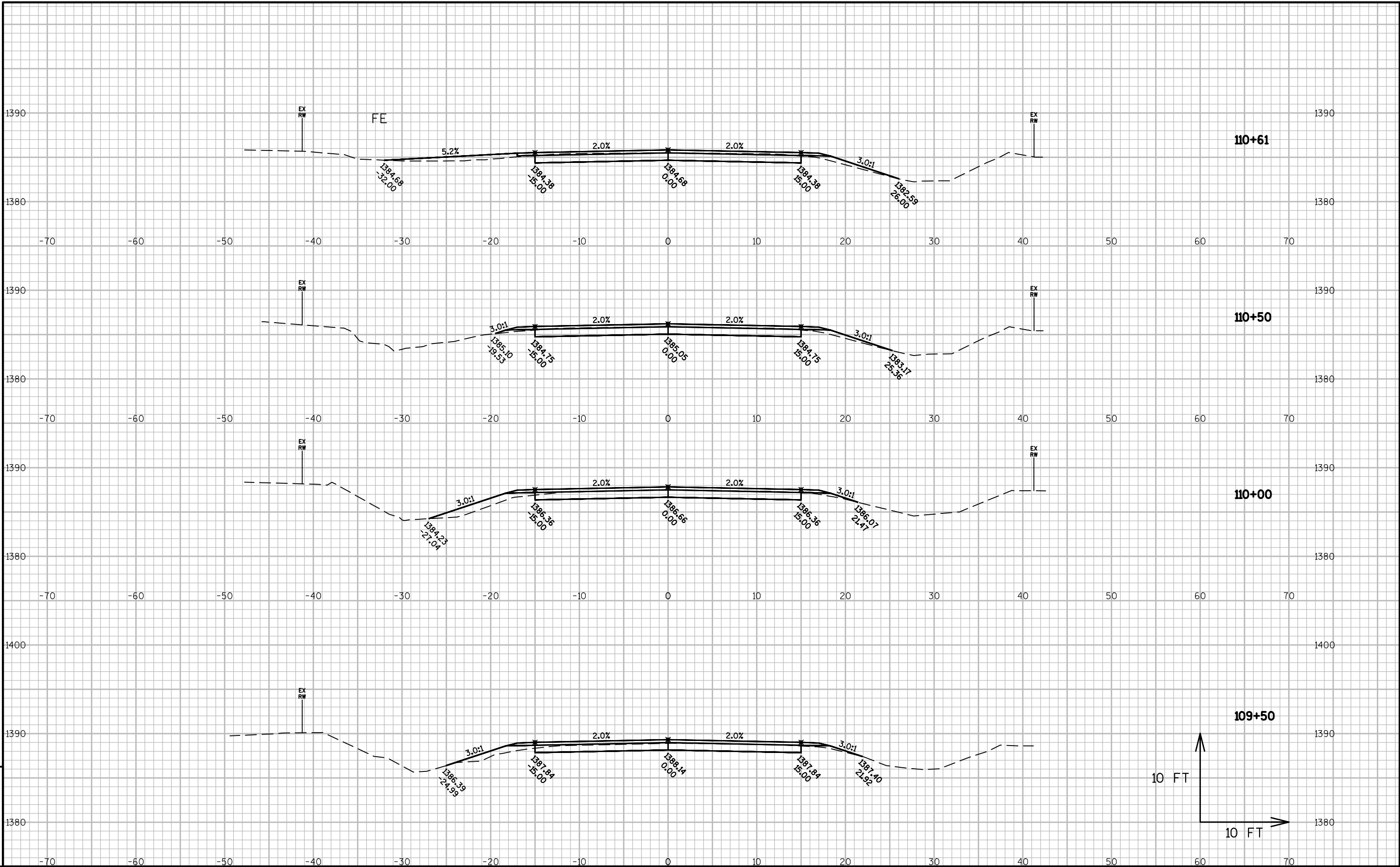


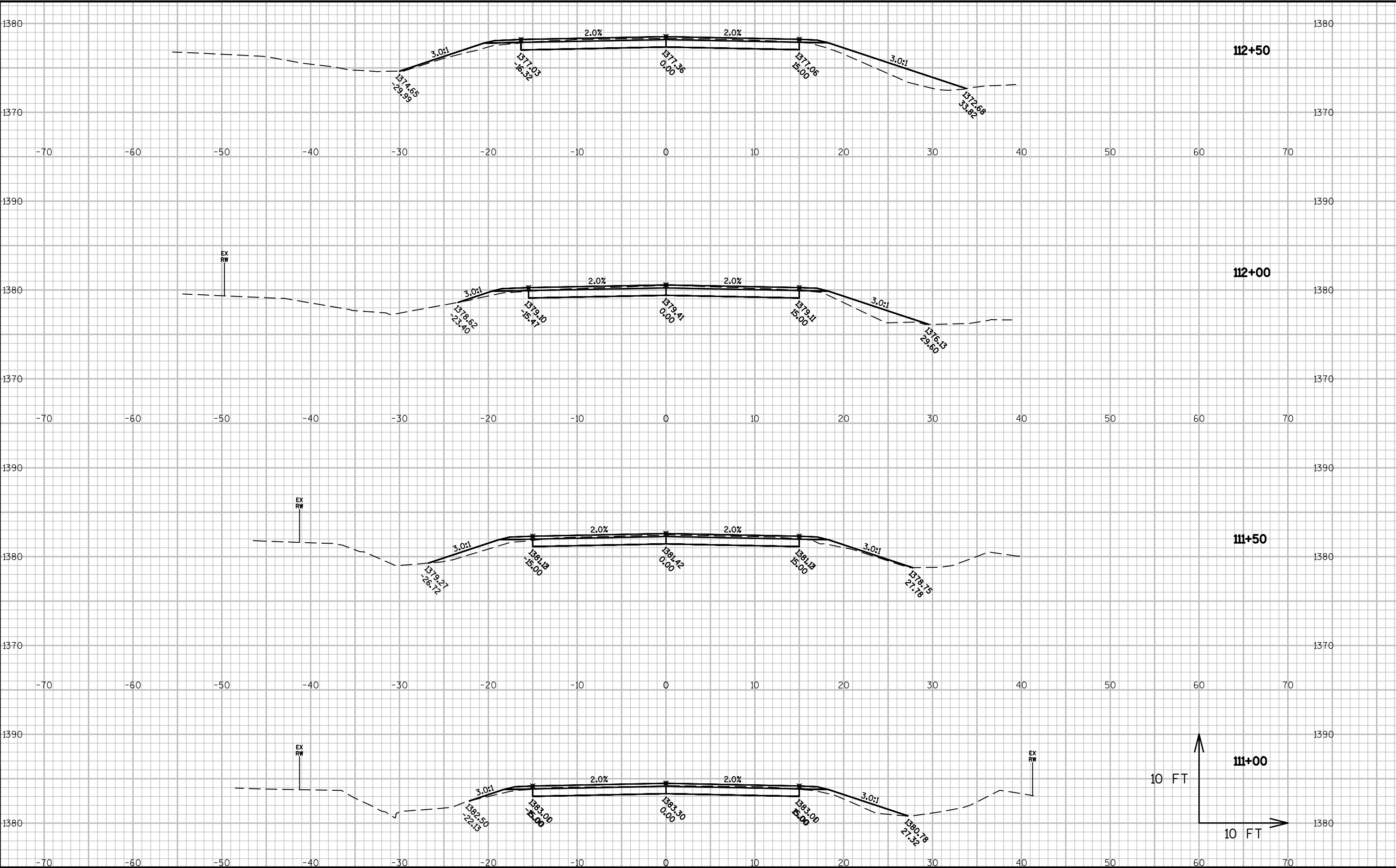


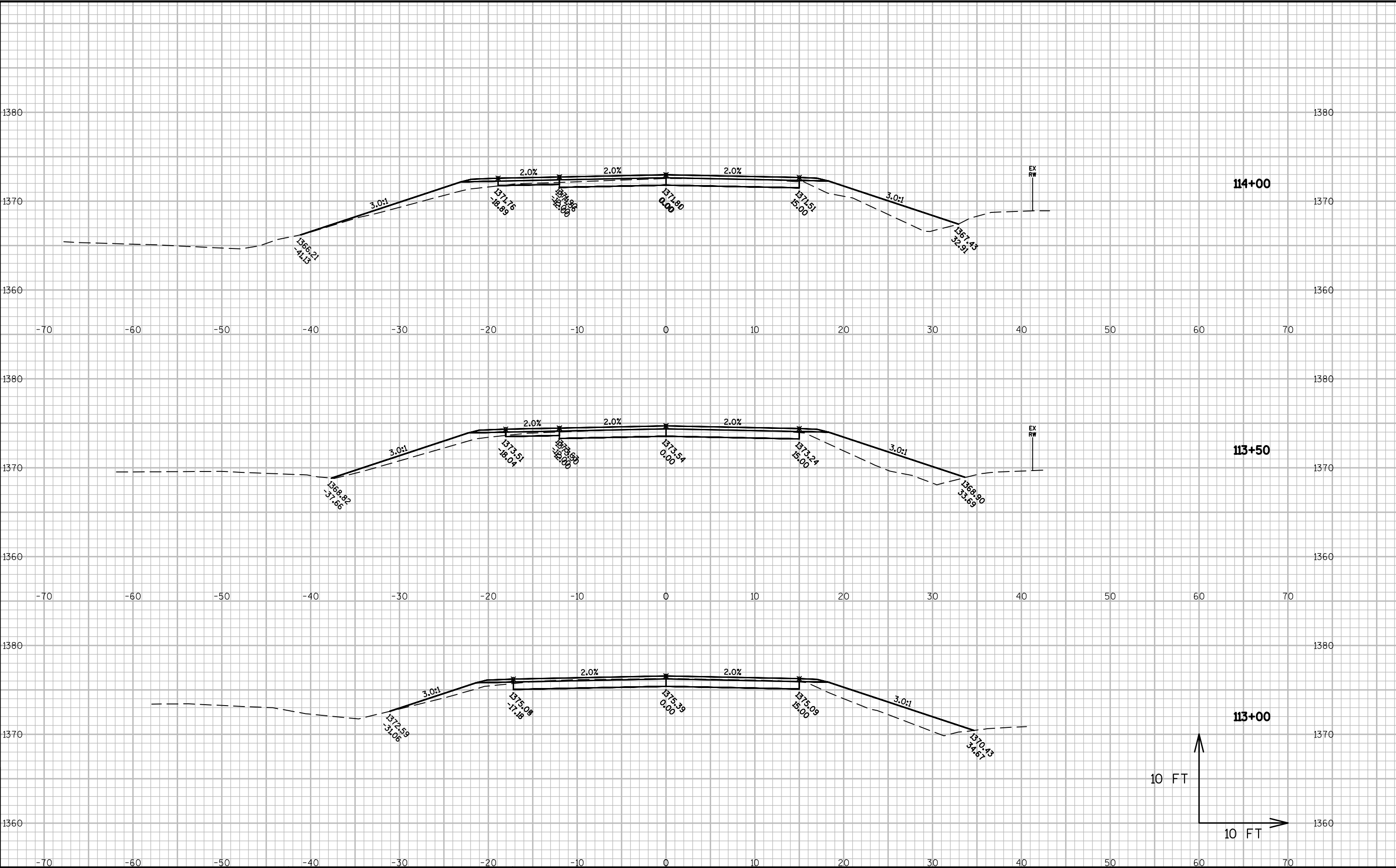


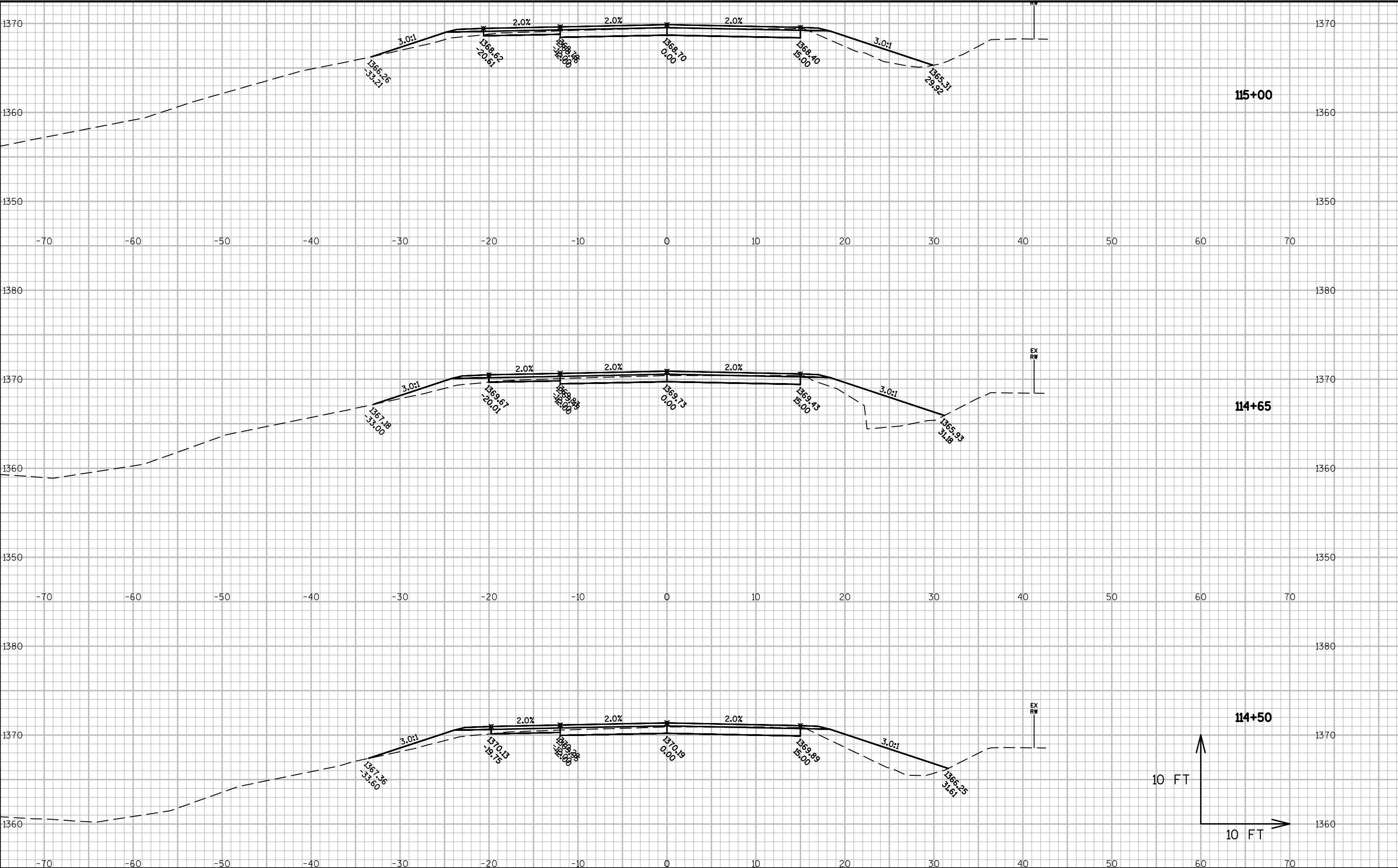


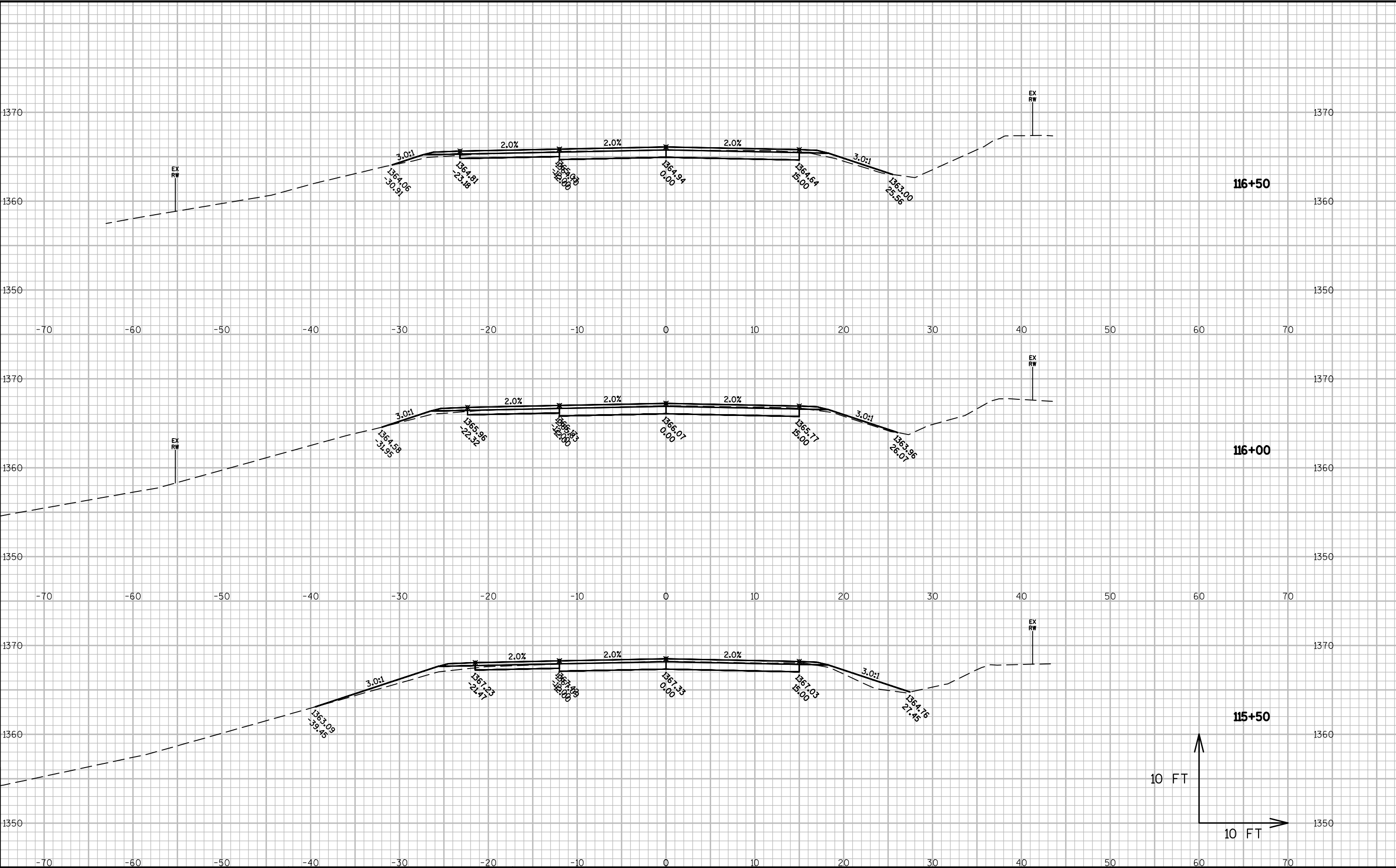


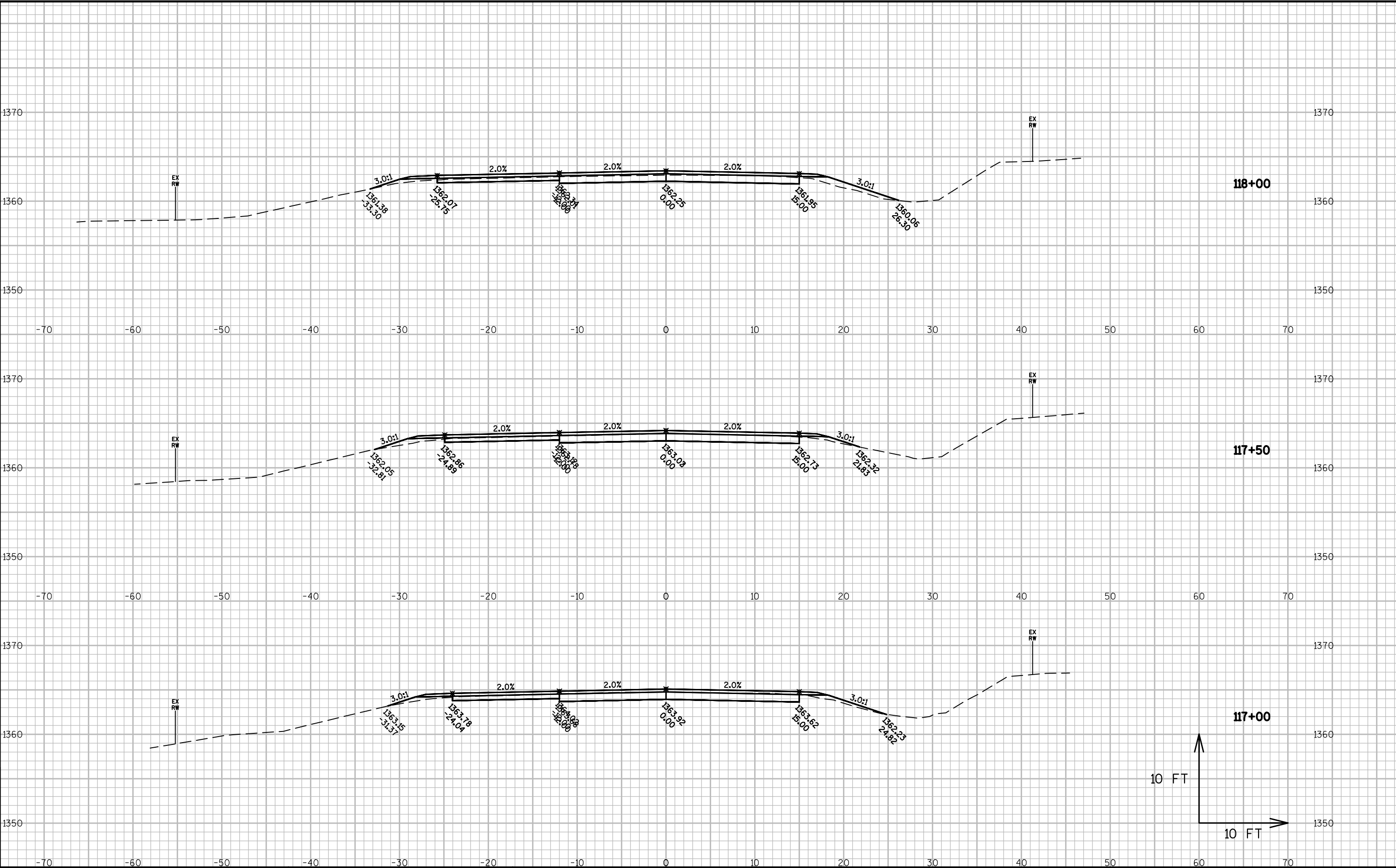


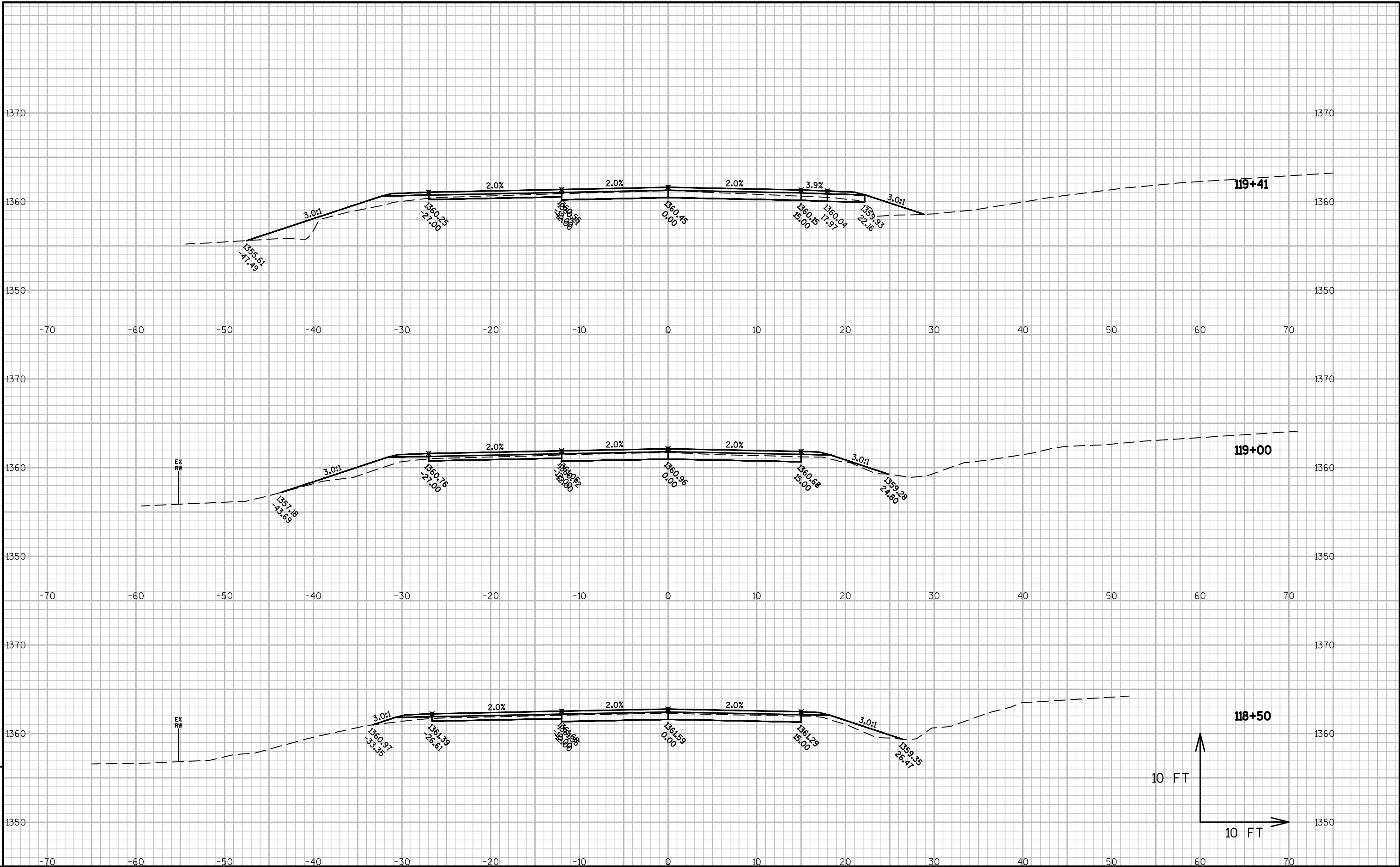


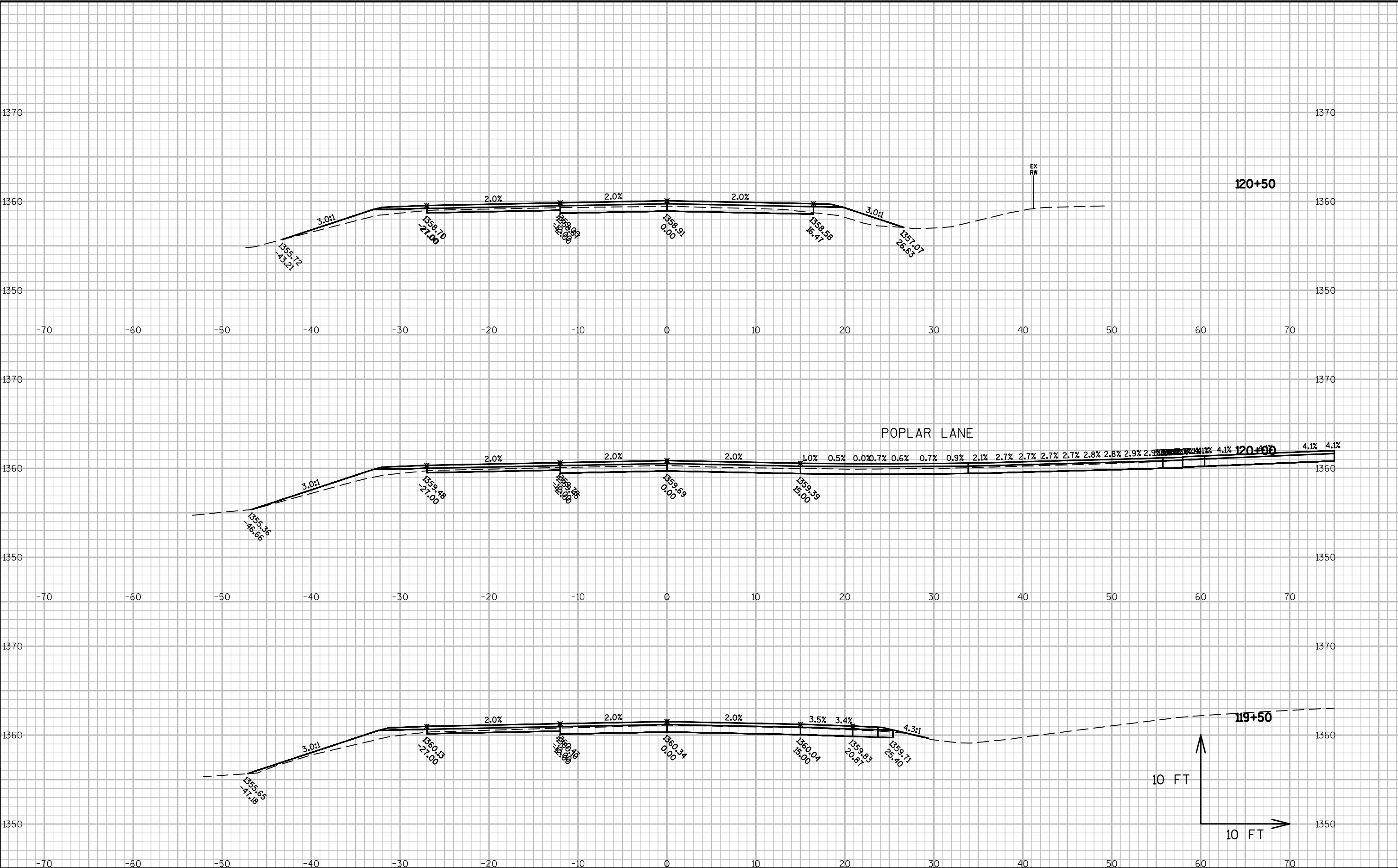


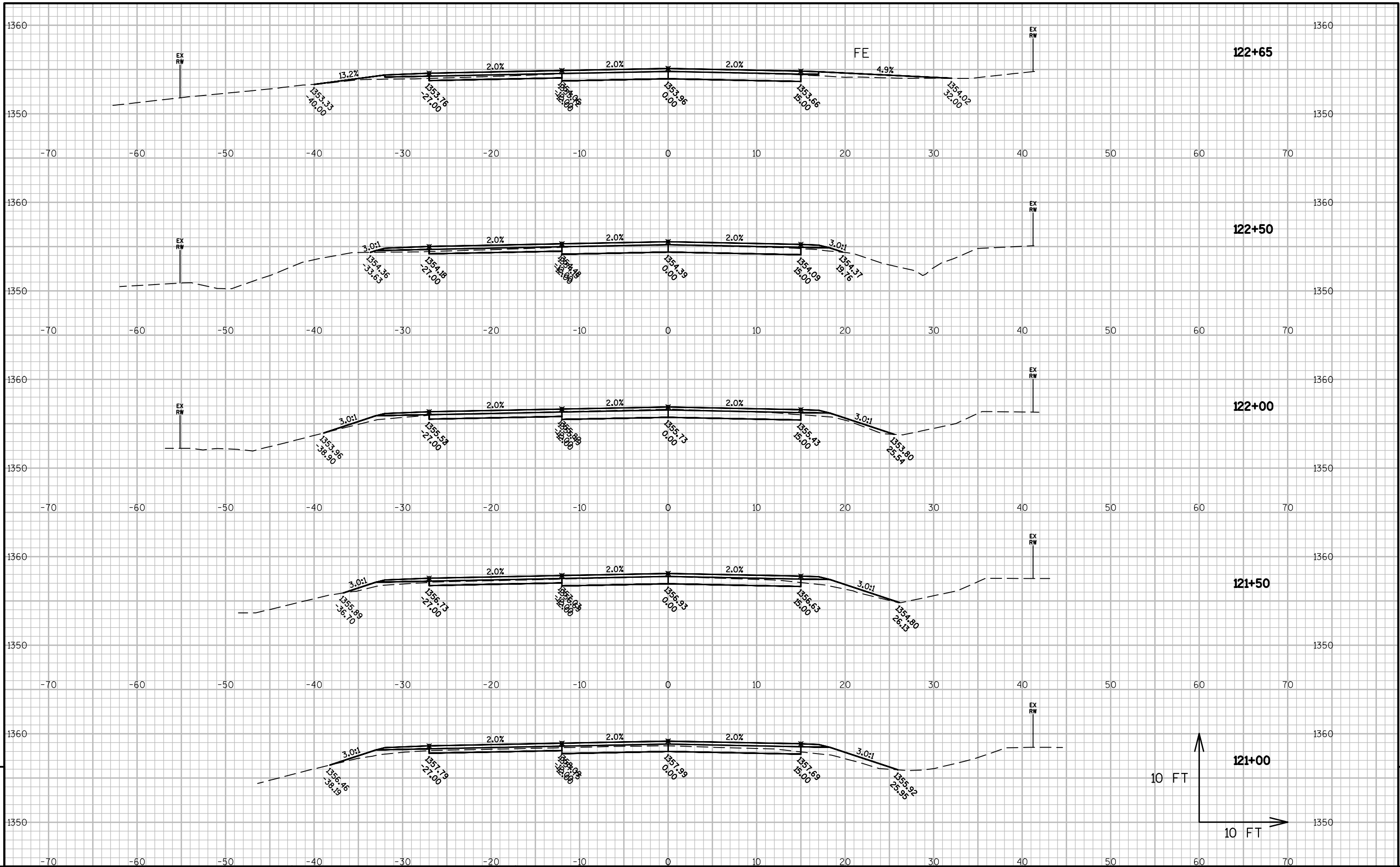


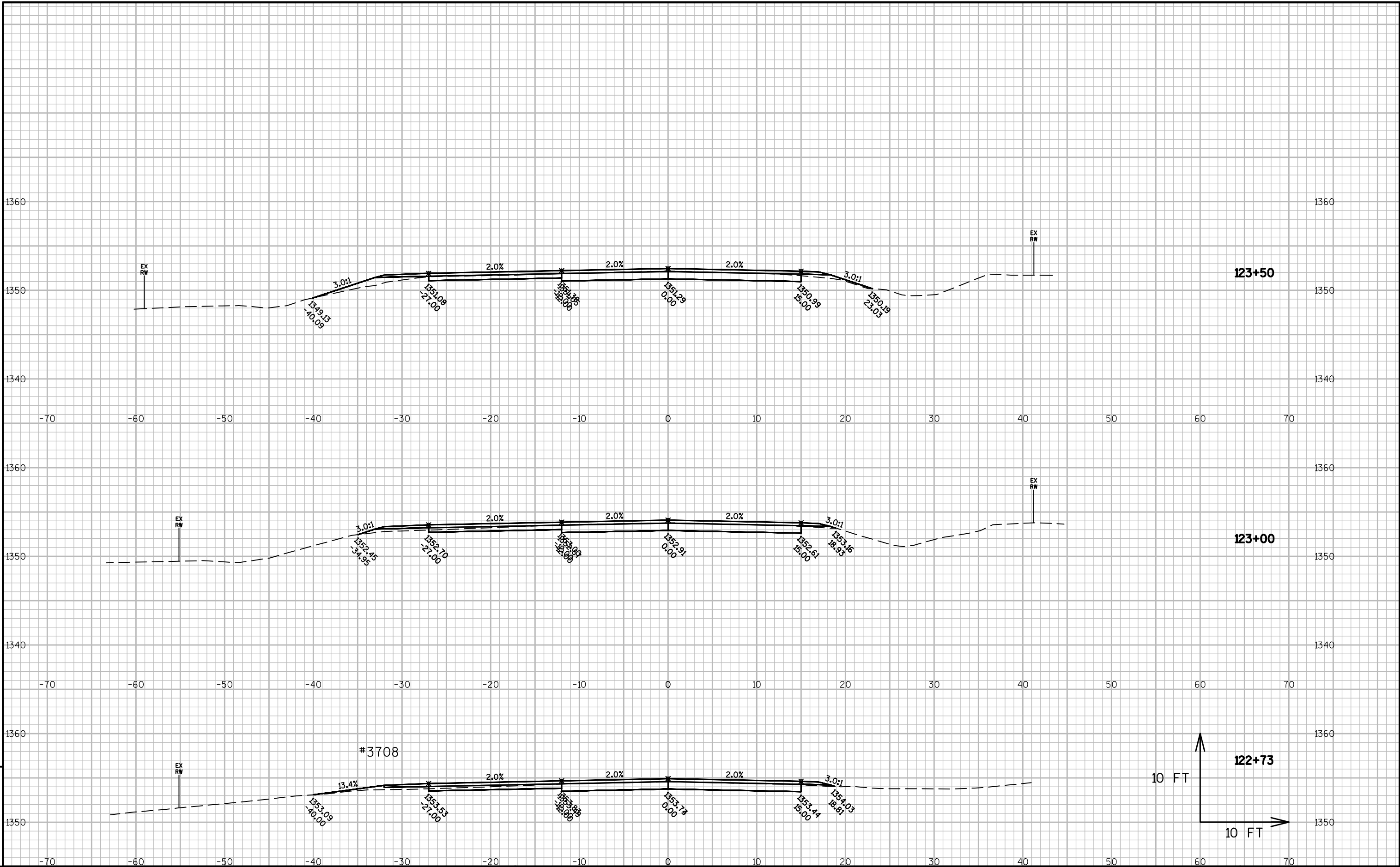


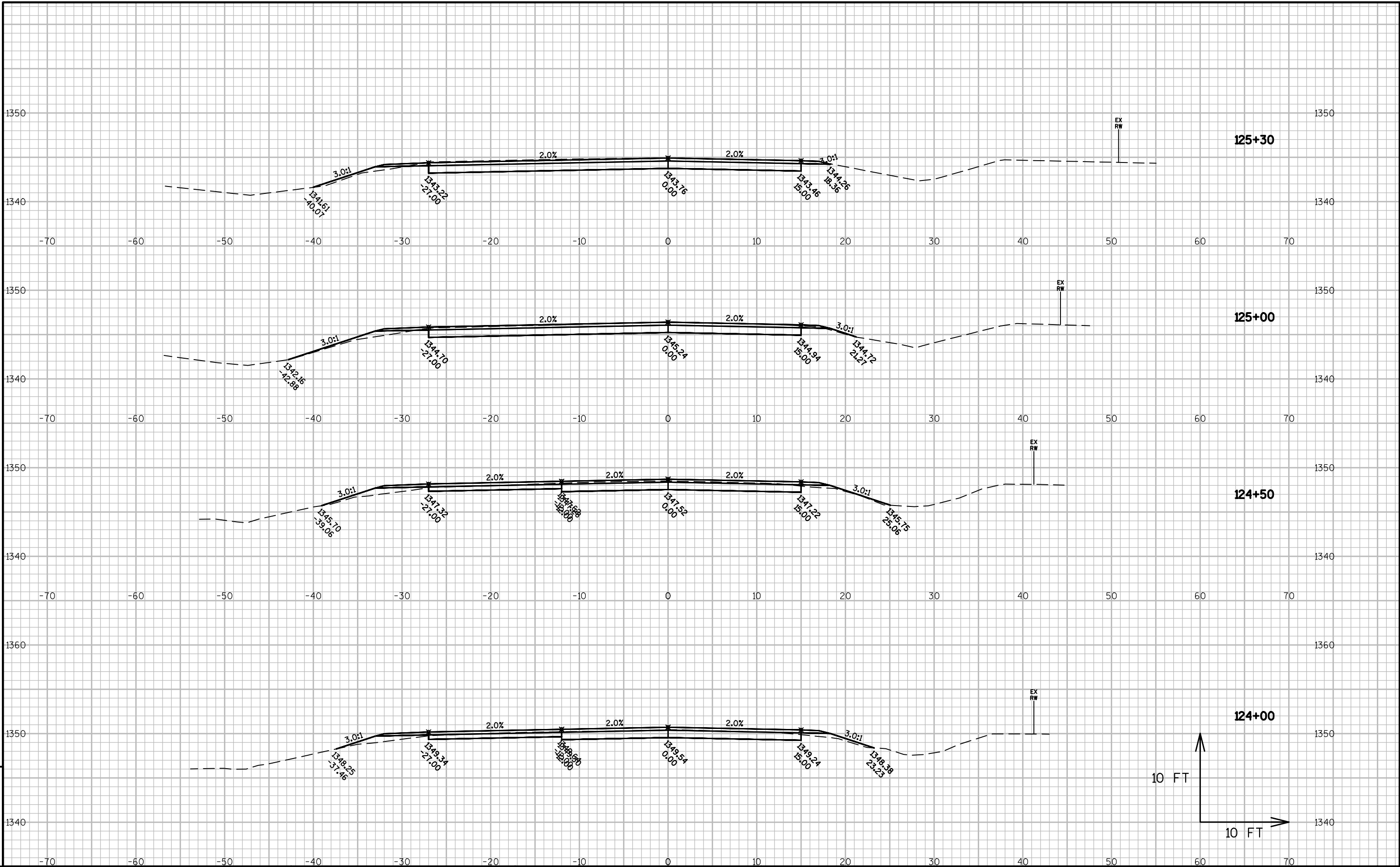












Notes



Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

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