LAX APRIL 2024

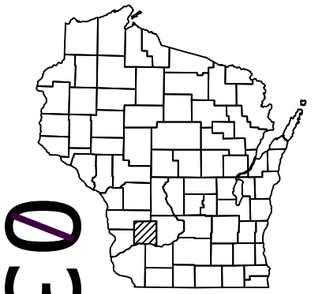
PROJECT ID: 5419-06-70
WITH: 5419-06-73

COUNTY: RICHLAND

ORDER OF SHEETS


Section No. 1 Title
Section No. 2 Typical Sections and Details
Section No. 3 Estimate of Quantities
Section No. 3 Miscellaneous Quantities
Section No. 4 Right of Way Plat
Section No. 5 Plan and Profile (Includes Erosion Control Plans)
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 = 168



03

N

DESIGN DESIGNATION 5419-06-01

| | | | |
|---|---|---|---|
| A.A.D.T. | 2025 | = | 860 |
| A.A.D.T. | 2045 | = | 900 |
| D.H.V. | | = | 112 |
| D.D. | | = | 50% |
| T. | | = | 6.1% ADT |
| DESIGN SPEED | | = | 55 MPH |
| ESALS | | = | 116,800 |

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 (300'EB')
- 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) (ROCK)
- SPECIAL DITCH
- GRADE ELEVATION (LABEL 95.36)
- CULVERT (Profile View)

UTILITIES
- ELECTRIC (E)
- OVERHEAD UTILITY (OH)
- FIBER OPTIC (FO)
- GAS (G)
- SANITARY SEWER (SAN)
- STORM SEWER (SS)
- TELEPHONE (T)
- WATER (W)
- UTILITY PEDESTAL
- POWER POLE
- TELEPHONE POLE

# STATE OF WISCONSIN
# DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

# STH 80 - RICHLAND CENTER

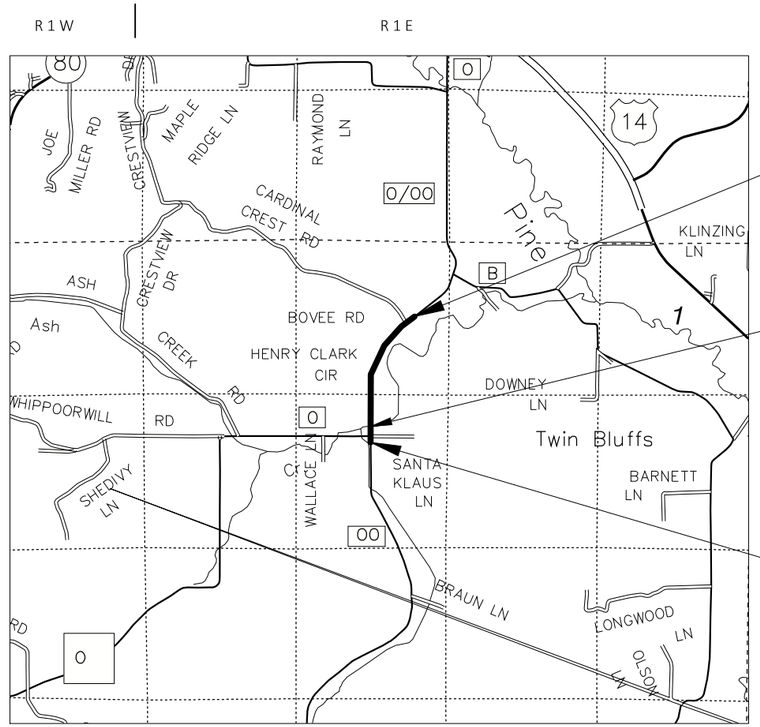
**CTH OO TO CARDINAL CREST ROAD**

## CTH O

RICHLAND COUNTY

| STATE PROJECT | FEDERAL PROJECT | |
|---|---|---|
| | PROJECT | CONTRACT |
| 5419-06-70 | WISC 2024312 | 1 |
| | | |
| | | |
| | | |

STATE PROJECT NUMBER
5419-06-70




END PROJECT 5419-06-70
STA 552+00.00

EXCEPTION TO NET CENTERLINE LENGTH
STA 509+70.39'O' TO STA 510+24.01'O'
STR B-52-15

BEGIN PROJECT 5419-06-70
STA 505+41.95'O'
Y = 422842.145
X = 682670.944

LAYOUT
SCALE 0 1 MILE

TOTAL NET LENGTH OF CENTERLINE = 0.872 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), RICHLAND COUNTY NAD83 ( 1991 ), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES. GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES.

ELEVATIONS ARE REFERENCED TO NAVD 88.

ACCEPTED FOR
COUNTY of RICHLAND
11/30/2023 (Date)
Joshua Elder (Signature)
Highway Commissioner (Signature & Title of Official)

ORIGINAL PLANS PREPARED BY
SEH
WISCONSIN JARROD S. STARREN 38465 EAU CLAIRE, WI PROFESSIONAL ENGINEER
11/28/2023 (Date)
(Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY
Surveyor SEH
Designer SEH
Project Manager VALERIE GUIDER, PE
Regional Examiner REGIONAL EXAMINER
Regional Supervisor KYLE HEMP, PE

APPROVED FOR THE DEPARTMENT
DATE: 11/30/2023 (Signature)

E

WHEN THE QUANTITY OF BASE AGGREGATE OR ASPHALTIC SURFACE IS MEASURED FOR PAYMENT BY THE TON OR CUBIC YARD, 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.

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.

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

THE EXACT LOCATION OF THE EROSION CONTROL DEVICES SHALL BE DETERMINED IN THE FIELD, AS DIRECTED BY THE ENGINEER.

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, ARE TO BE 4-INCH SALVAGED TOPSOILED, FERTILIZED, AND SEEDED AND MULCHED. FINISHED SEEDED SURFACE SHALL BE 1-INCH BELOW THE TOP OF ADJACENT CONCRETE, AS DIRECTED BY THE ENGINEER.

BEARINGS SHOWN ON THE PLANS ARE GROUND BEARINGS TO THE NEAREST SECOND.

THE LOCATION OF ALL DRIVEWAYS WILL BE DETERMINED BY THE ENGINEER.

ALL CURB AND GUTTER RADII, PAVEMENT DIMENSIONS AND STATIONS ARE SHOWN TO THE EDGE OF PAVEMENT UNLESS NOTED OTHERWISE.

ALL SIDE ROAD EARTHWORK QUANTITIES ARE INCLUDED IN MAINLINE EARTHWORK QUANTITIES.

A VERTICAL SAWCUT SHALL BE MADE THROUGH EXISTING DRIVEWAYS AND PAVEMENTS AT REMOVAL LIMITS.

ALL STORM SEWER INVERTS, ELEVATIONS, PIPE LENGTHS, AND GRADES ARE COMPUTED CENTER-TO-CENTER OF STRUCTURES.

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

ASPHALTIC SURFACE/HMA PAVEMENT SHALL BE CONSTRUCTED WITH THE FOLLOWING LAYER THICKNESSES:

| PAVEMENT THICKNESS (INCH) | LOWER (INCH) | NOM AGG SIZE (MM) | MIDDLE (INCH) | NOM AGG SIZE (MM) | UPPER (INCH) | NOM AGG SIZE (MM) |
|---|---|---|---|---|---|---|
| 4 | 2.25 | --- | --- | --- | 1.75 | --- |

EXISTING PIPE CULVERT AND/OR CONCRETE BOX CULVERT SIZES SHOWN ARE APPROXIMATE AND THE CONTRACTOR SHALL BASE ITS BID ON ACTUAL FIELD CONDITIONS.

WETLANDS ARE PRESENT AT:
STA 509+50 TO STA 510+50 LT AND RT
STA 533+50 TO STA 534+00 LT AND RT

DO NOT OPERATE MACHINERY OUTSIDE OF THE SLOPE INTERCEPTS IN THESE AREAS.

## UTILITY CONTACTS

FRONTIER COMMUNICATIONS - COMLN
451 BROADWAY DRIVE
SUN PRAIRIE, WI 53590
TELEPHONE: 608.622.3807
ATTENTION: CHRIS BLUMER
EMAIL: CHRISTOPHER.BLUMER@FTR.COM

RICHLAND ELECTRIC COOPERATIVE - ELECTRIC
PO BOX 439
RICHLAND CENTER, WI 53581
TELEPHONE: 608.426.1715
CELL#: 608.475.2444
ATTENTION: CURT BROCKWAY
EMAIL: CBROCKWAY@REC.COOP

## DESIGN CONTACT

SEH INC
10 NORTH BRIDGE STREET
CHIPPEWA FALLS, WI 54729
TELEPHONE: 715.720.6261
ATTENTION: JARROD STARREN
EMAIL: JSTARREN@SEHINC.COM

RICHLAND COUNTY
RICHLAND COUNTY HWY DEPARTMENT
120 BOWEN CIRCLE
RICHLAND CENTER, WI 53581
OFFICE: 608.647.4707
SHOP#: 608.604.7624
ATTENTION: JOSH ELDER
EMAIL: JOSH.ELDER@CO.RICHLAND.WI.US

## DNR CONTACT

DNR SOUTH CENTRAL REGION
3911 FISH HATCHERY ROAD
FITCHBURG, WI 53711
TELEPHONE: 608.275.3008
ATTENTION: ANDREW BARTA
EMAIL: ANDREW.BARTA@WISCONSIN.GOV

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

## ORDER OF SECTION NO 2 SHEETS

TYPICAL SECTIONS
CONSTRUCTION DETAILS
INTERSECTION DETAILS
EROSION CONTROL
PERMANENT SIGNING & PAVEMENT MARKING
TRAFFIC CONTROL AND CONSTRUCTION STAGING
ALIGNMENT DETAIL

2

N

ASH CREEK UNITED METHODIST CHURCH

HENRY CLARK LANE

CARDINAL CREST RD

BOVEE LANE

CTH O SOUTH

CTH O/CTH OO

CTH OO

ASH CREEK

SANTA KLAUS LANE

CTH TB

500'0'
505'0'
510'0'
515'0'
520'0'
525'0'
530'0'
535'0'
540'0'
545'0'
550'0'
555'0'
560'0'
565'0'
570'0'
575'0'
580'0'

10'OS'
15'OS'
16'OS'
20'SK'
24'SK'
31'AC'
30'AC'
38'BAQ-B'
50'CC'
54'CC'
70'TB'
75'TB'
76'TB'

END PROJECT 5419-06-70
BEGIN PROJECT 5419-06-73
STA 552+00.00

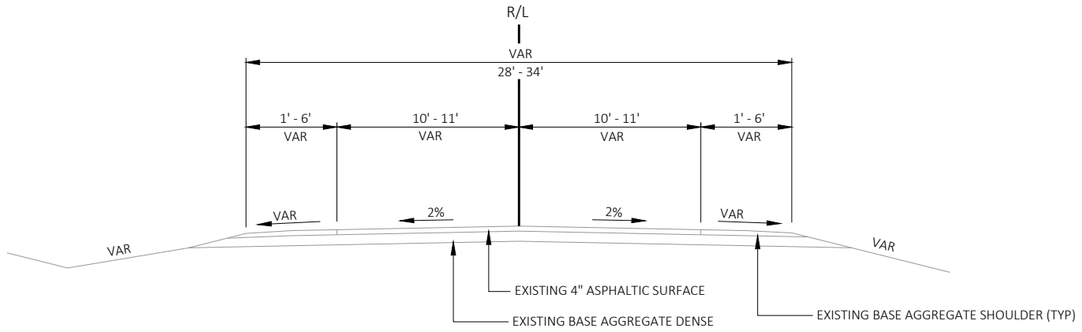
EXCEPTION TO NET CENTERLINE LENGTH
STA 509+70.39 TO STA 510+24.01
STR B-52-15

ENVIRONMENTALLY SENSITIVE AREA

BEGIN PROJECT 5419-06-70
STA 505+41.95
Y = 422842.145
X = 682670.944

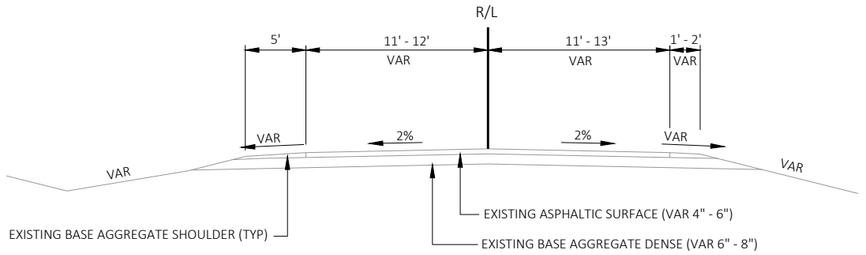
| PROJECT NO: 5419–06–70 | HWY: CTH O | COUNTY: RICHLAND | PROJECT OVERVIEW | SHEET 3 E |
|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D\54190671\SHEETSPLAN\020201_PO.DWG PLOT DATE : 11/13/2023 6:41 AM PLOT BY : ANNIE JEROME PLOT NAME : _____ PLOT SCALE : ########## WISDOT/CADDS SHEET 42



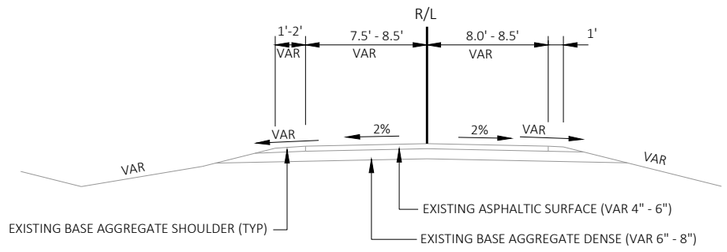

TYPICAL EXISTING SECTION

CTH O
STA 505+41 'O' TO STA 552+00 'O'




TYPICAL EXISTING SECTION

CTH O SOUTH
STA 14+50.29 'OS' TO STA 16+84.49 'OS'

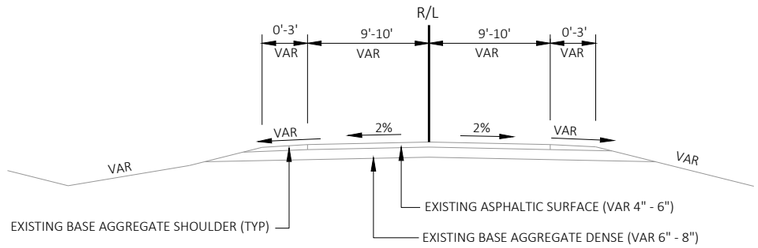



TYPICAL EXISTING SECTION

SANTA KLAUS LANE
STA 20+00.00 'SK' TO STA 20+90.51 'SK'

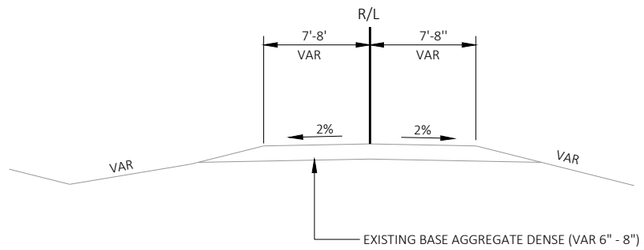
| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | TYPICAL SECTIONS | SHEET 4 | E |
|---|---|---|---|---|---|

2




TYPICAL EXISTING SECTION

HENRY CLARK LANE
STA 30+00.00 'AC' TO STA 31+90.00 'AC'
CARDINAL CREST ROAD
STA 50+00.00 'CC' TO STA 53+00.00 'CC'



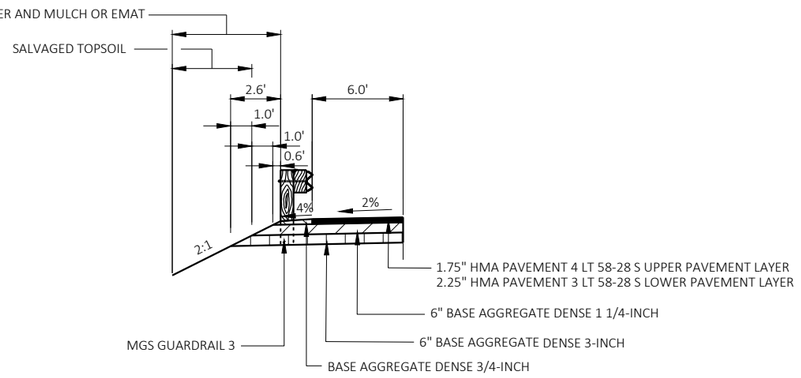

TYPICAL EXISTING SECTION

BOVEE LANE
STA 38+79.24 'B' TO STA 40+00.00 'B'

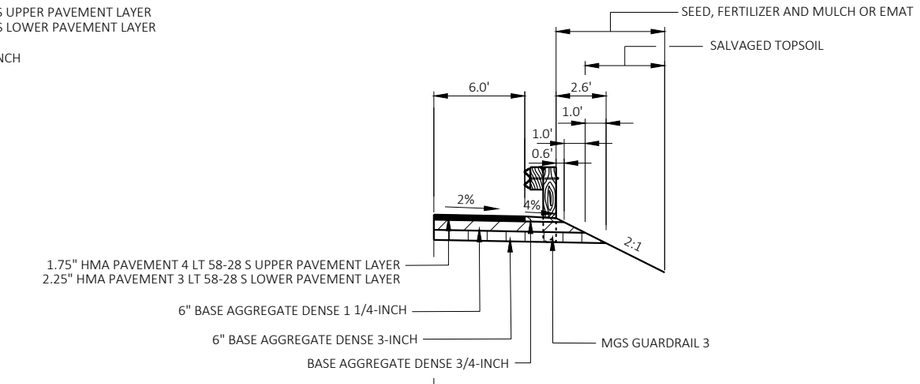
| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | TYPICAL SECTIONS | SHEET 5 | E |
|---|---|---|---|---|---|

| Superelevation Curve | Station | Description | Left Shlder | Left Lane | Right Shlder | Right Lane |
|---|---|---|---|---|---|---|
| | 500+00.00' | Begin Alignment | -4.00% | -2.00% | -4.00% | -2.00% |
| 1 | 522+58.42' | End Normal Shoulder | -4.00% | -2.00% | -4.00% | -2.00% |
| 1 | 522+58.42' | End Normal Crown | -2.00% | -2.00% | -2.00% | -2.00% |
| 1 | 523+11.76' | Level Crown | 0.00% | 0.00% | -2.00% | -2.00% |
| 1 | 523+65.09' | Reverse Crown | 2.00% | 2.00% | -2.00% | -2.00% |
| 1 | 524+71.76' | Begin Full Super | 6.00% | 6.00% | -6.00% | -6.00% |
| 1 | 528+61.26' | End Full Super | 6.00% | 6.00% | -6.00% | -6.00% |
| 1 | 529+67.93' | Reverse Crown | 2.00% | 2.00% | -2.00% | -2.00% |
| 1 | 530+21.26' | Level Crown | 0.00% | 0.00% | -2.00% | -2.00% |
| 1 | 530+74.60' | Begin Normal Crown | -2.00% | -2.00% | -2.00% | -2.00% |
| 1 | 530+74.60' | Begin Normal Shoulder | -4.00% | -2.00% | -4.00% | -2.00% |
| 3 | 534+41.73' | End Normal Shoulder | -4.00% | -2.00% | -4.00% | -2.00% |
| 3 | 534+41.73' | End Normal Crown | -2.00% | -2.00% | -2.00% | -2.00% |
| 3 | 534+95.20' | Level Crown | 0.00% | 0.00% | -2.00% | -2.00% |
| 3 | 535+48.67' | Reverse Crown | 2.00% | 2.00% | -2.00% | -2.00% |
| 3 | 536+26.20' | Begin Full Super | 4.90% | 4.90% | -4.90% | -4.90% |
| 3 | 549+65.21' | End Full Super | 4.90% | 4.90% | -4.90% | -4.90% |
| 3 | 550+42.74' | Reverse Crown | 2.00% | 2.00% | -2.00% | -2.00% |
| 3 | 550+96.21' | Level Crown | 0.00% | 0.00% | -2.00% | -2.00% |
| 3 | 551+49.68' | Begin Normal Crown | -2.00% | -2.00% | -2.00% | -2.00% |
| 3 | 551+49.68' | Begin Normal Shoulder | -4.00% | -2.00% | -4.00% | -2.00% |

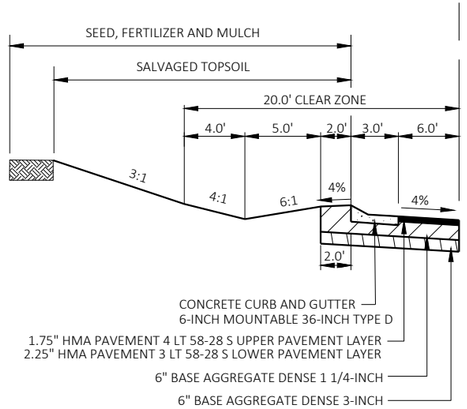
Design Speed = 60 mph
Normal Crown Superelevation Rate = 2 %
Normal Shoulder Crown Superelevation Rate = 4 %




STA 508+79.92 'O' TO STA 512+01.75 'O' LT

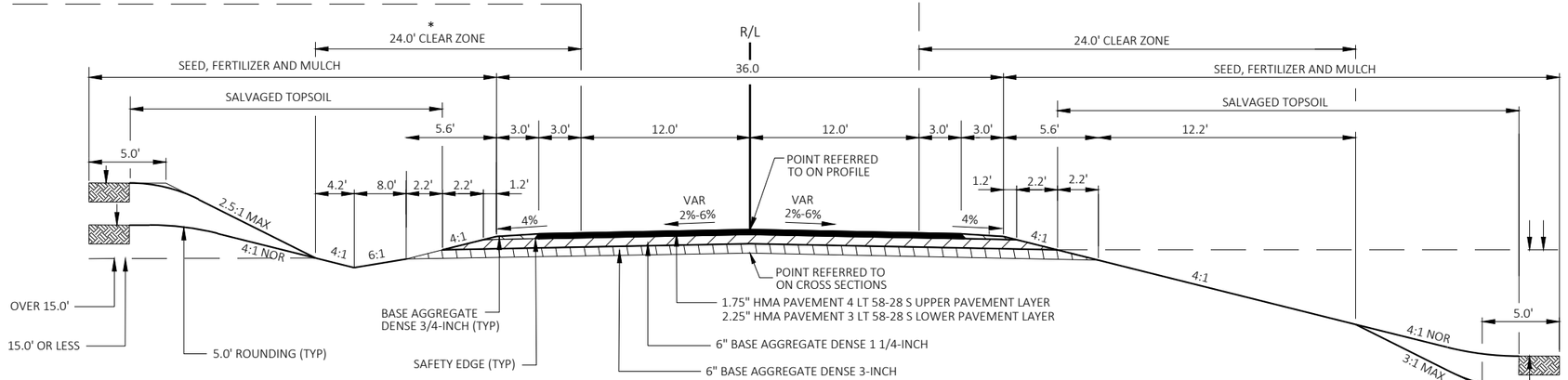



STA 508+45.80 'O' TO STA 512+01.66 'O' RT




TYPICAL FINISHED SECTION - CURB & GUTTER

STA 541+00.00 'O' TO STA 550+03.53 'O' LT



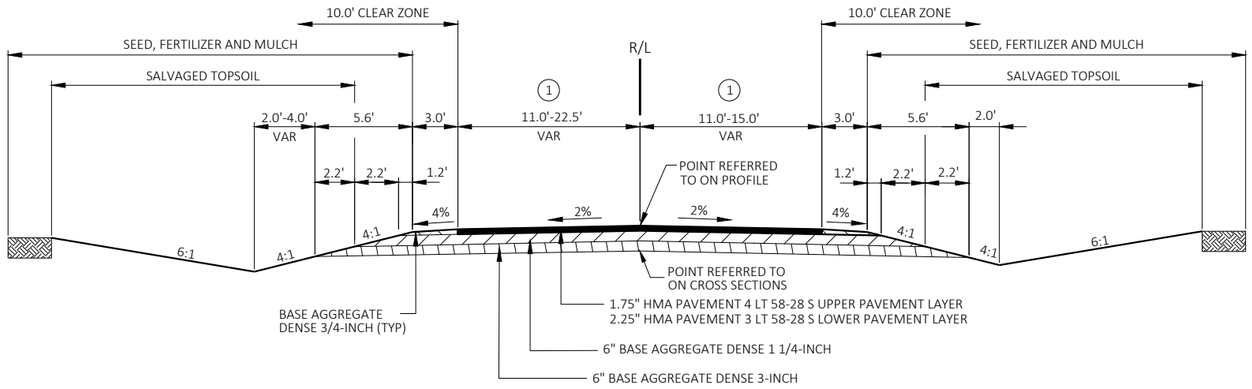

TYPICAL FINISHED SECTION

CTH O
STA 505+41.95 'O' TO STA 509+70.39 'O'
STA 510+24.01 'O' TO STA 552+00.00 'O'

* 20.0' CLEAR ZONE
STA 550+03.53 'O' TO STA 552+00.00 'O' LT

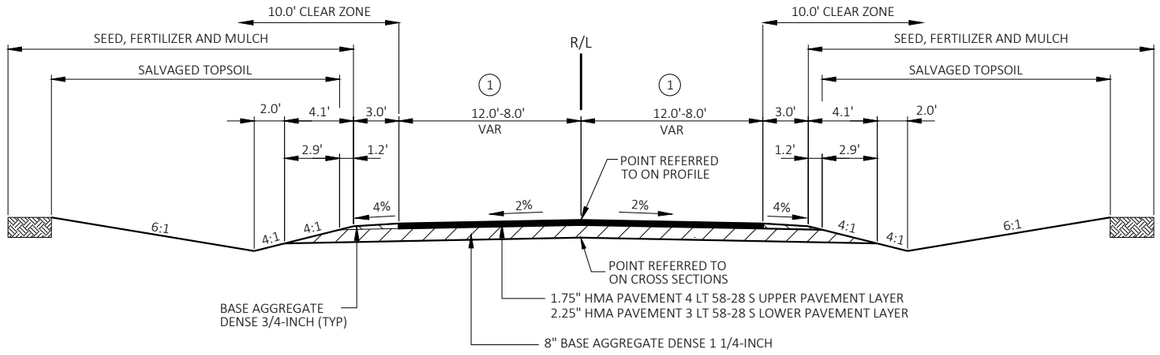
| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | TYPICAL SECTIONS | SHEET 6 | E |
|---|---|---|---|---|---|

2




TYPICAL FINISHED SECTION

CTH O SOUTH
STA 14+50.29 'OS' TO STA 16+84.49 'OS'



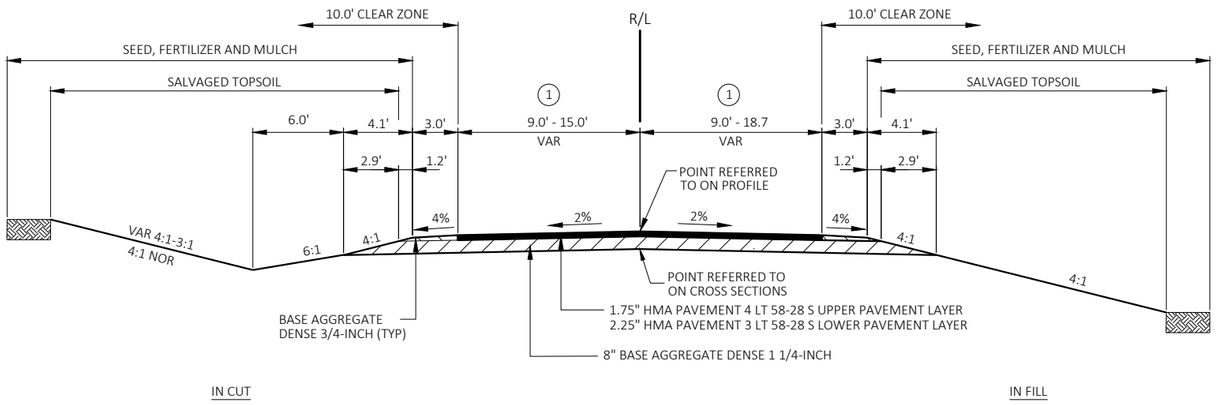

TYPICAL FINISHED SECTION

SANTA KLAUS LANE
STA 20+00.00 'SK' TO STA 20+90.51 'SK'

NOTE:

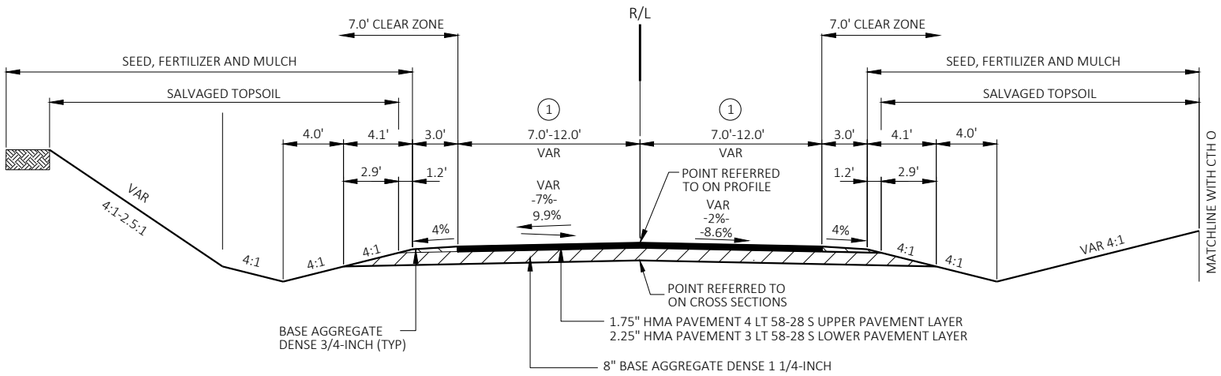
(1) SEE INTERSECTION DETAIL SHEETS FOR ADDITIONAL WIDTHS.

2




TYPICAL FINISHED SECTION

HENRY CLARK LANE
STA 30+00.00 'AC' TO STA 31+90.00 'AC'
CARDINAL CREST ROAD
STA 50+00.00 'CC' TO STA 53+00.00 'CC'



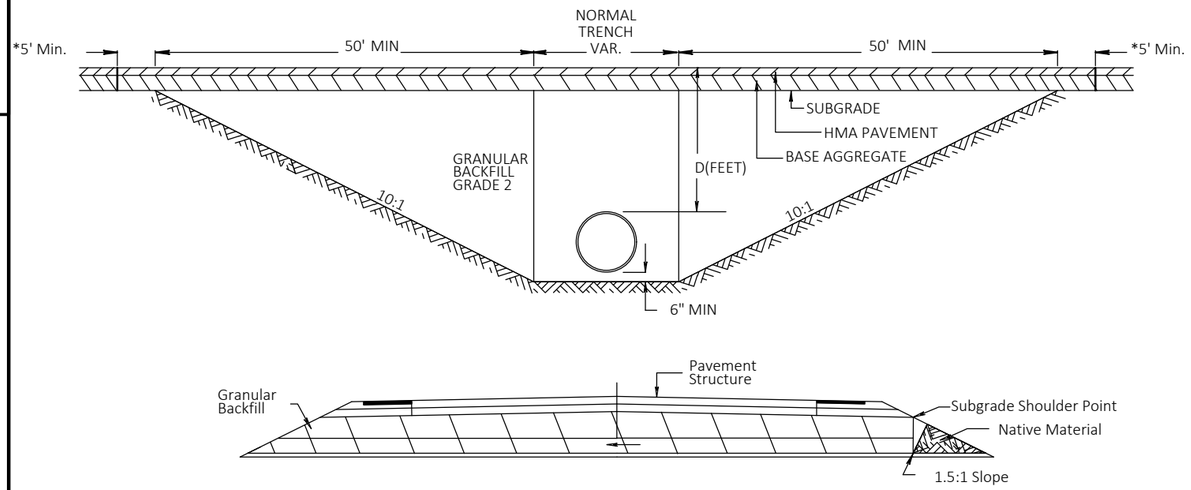

TYPICAL FINISHED SECTION

BOVEE LANE / DRIVEWAY
STA 38+79.24 'B' TO STA 40+00.00 'B'

NOTE:

(1) SEE INTERSECTION DETAIL SHEETS FOR ADDITIONAL WIDTHS.

| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | TYPICAL SECTIONS | SHEET 8 | E |
|---|---|---|---|---|---|



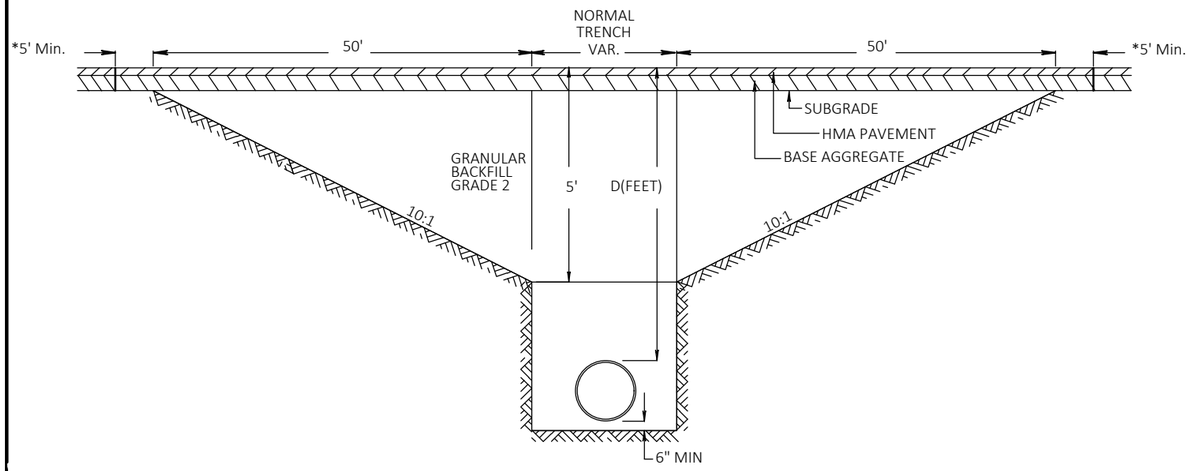


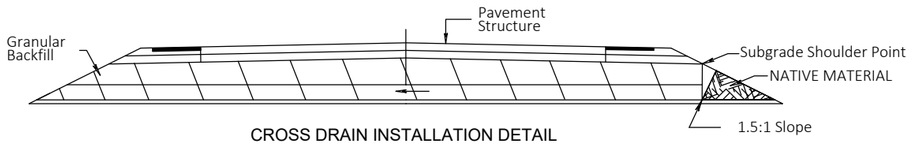


CROSS DRAIN INSTALLATION DETAIL

FOR D ≤ 5'

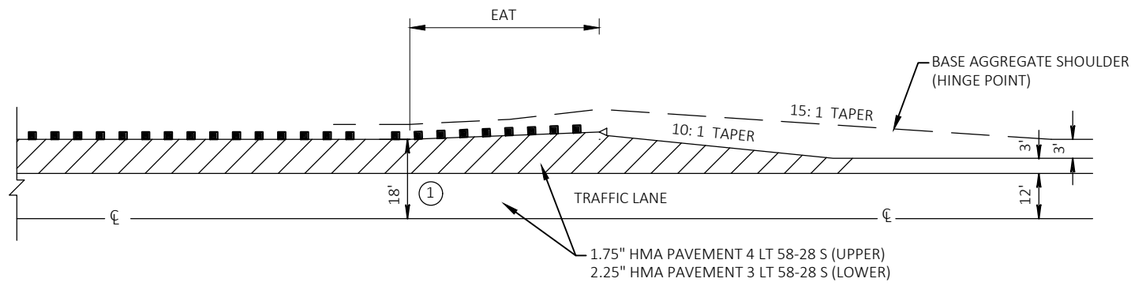
* Pavement Removal Limits (Typical)




CROSS DRAIN INSTALLATION DETAIL

FOR D ≥ 5'




## PAVING ALONG BEAM GUARD

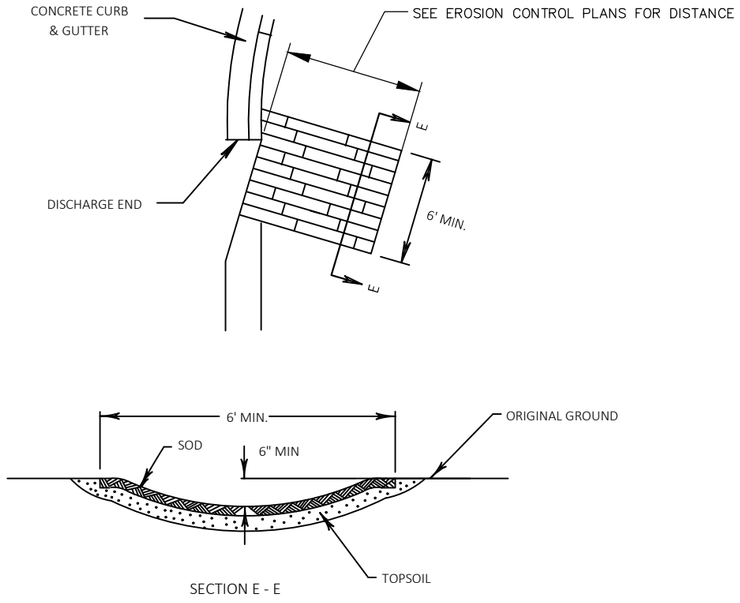
MGS GUARDRAIL TERMINAL EAT REQ'D
STA 508+79.92'O' TO STA 509+33.01'O' LT
STA 511+48.66'O' TO STA 512+01.75'O' LT
STA 507+92.71'O' TO STA 508+45.80'O' RT
STA 511+48.58'O' TO STA 512+01.66'O' RT

MGS GUARDRAIL 3 REQ'D
STA 510+61.27'O' TO STA 511+48.66'O' LT
STA 508+45.80'O' TO STA 509+33.19'O' RT
STA 510+61.18'O' TO STA 511+48.58'O' RT

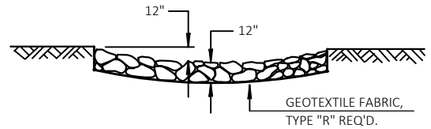
MGS THRIE BEAM TRANSITION
STA 509+33.01'O' TO STA 509+72.40'O' LT
STA 510+21.88'O' TO STA 510+61.27'O' LT
STA 509+33.19'O' TO STA 509+72.59'O' RT
STA 510+21.79'O' TO STA 510+61.18'O' RT

NOTE:

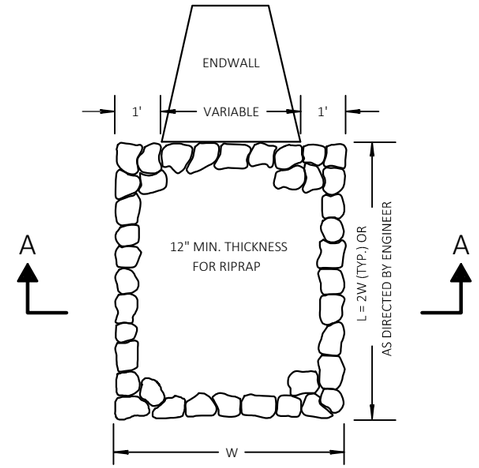
(1) WIDTH VARIES 15' TO 18' SEE PAVING DETAIL FOR WIDTHS.



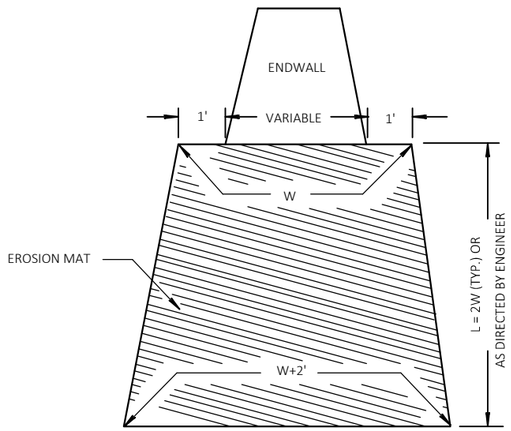

SOD FLUME DETAIL AT CURB ENDS




SECTION A-A




RIPRAP TREATMENT AT CULVERTS



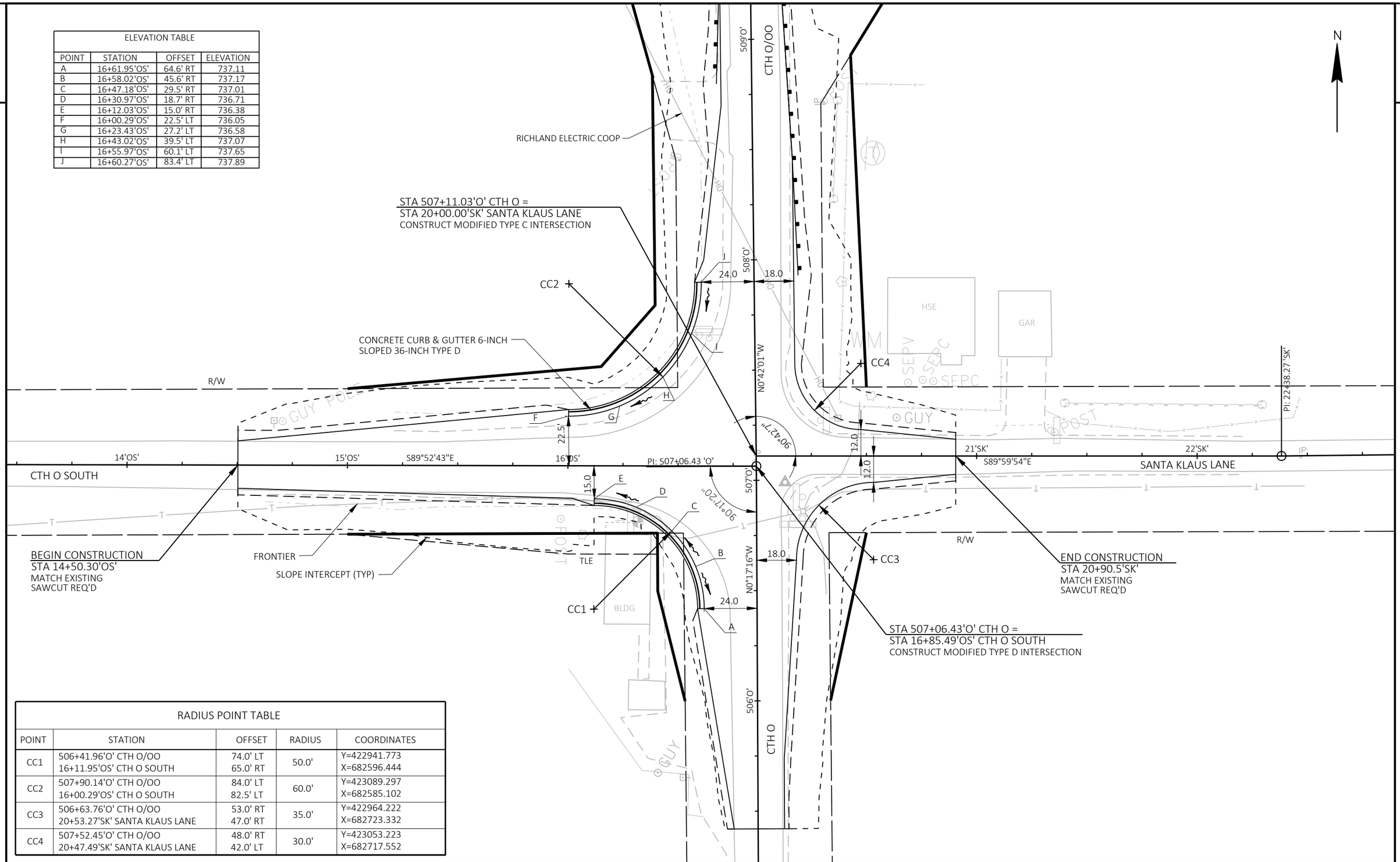

EROSION MAT TREATMENT AT CULVERTS

## RUNOFF COEFFICIENT TABLE

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

TOTAL PROJECT AREA = 10.88 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 12.13 ACRES

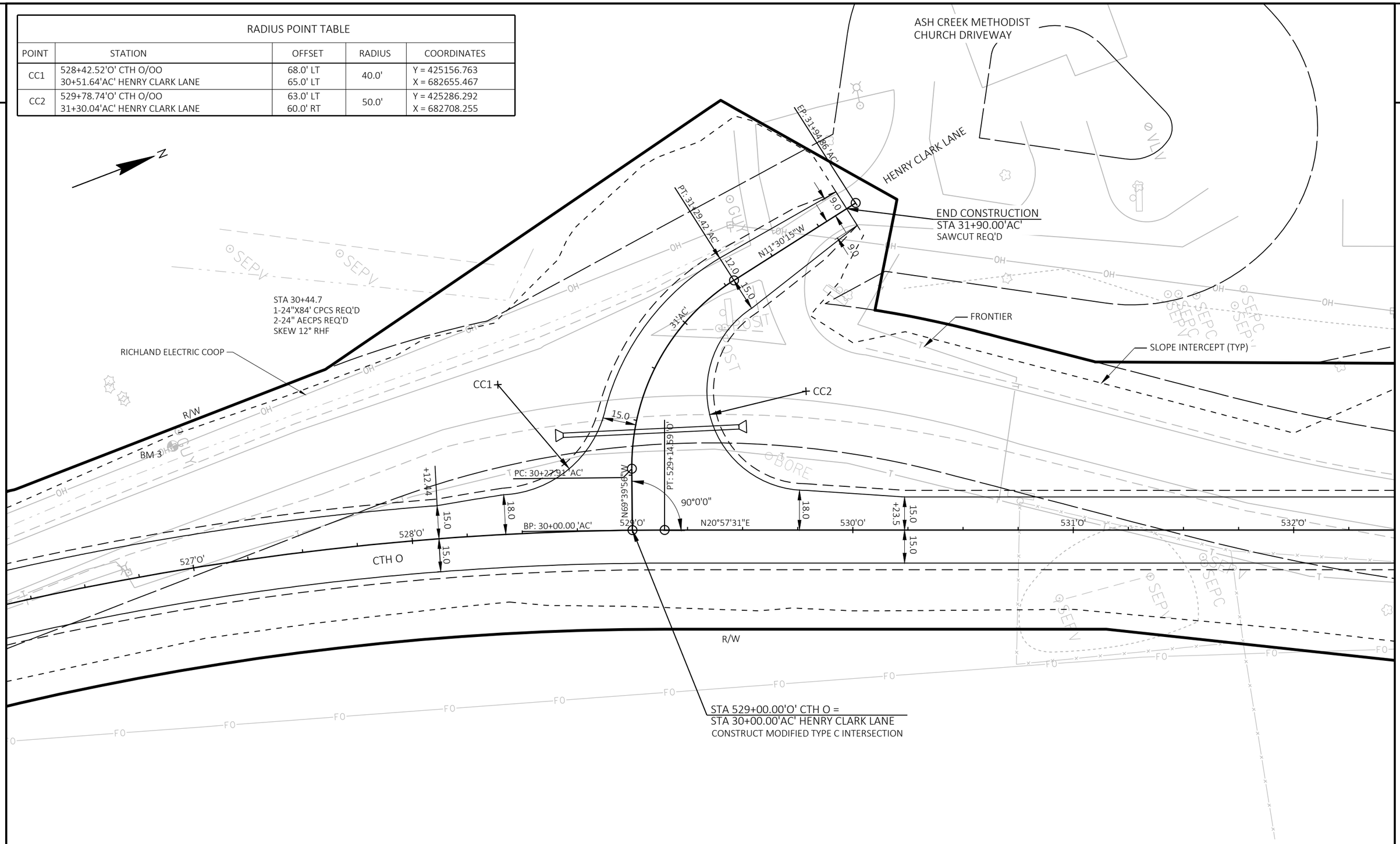
| ELEVATION TABLE | | | |
|---|---|---|---|
| POINT | STATION | OFFSET | ELEVATION |
| A | 16+61.95'OS' | 64.6' RT | 737.11 |
| B | 16+58.02'OS' | 45.6' RT | 737.17 |
| C | 16+47.18'OS' | 29.5' RT | 737.01 |
| D | 16+30.97'OS' | 18.7' RT | 736.71 |
| E | 16+12.03'OS' | 15.0' RT | 736.38 |
| F | 16+00.29'OS' | 22.5' LT | 736.05 |
| G | 16+23.43'OS' | 27.2' LT | 736.58 |
| H | 16+43.02'OS' | 39.5' LT | 737.07 |
| I | 16+55.97'OS' | 60.1' LT | 737.65 |
| J | 16+60.27'OS' | 83.4' LT | 737.89 |




| RADIUS POINT TABLE | | | | |
|---|---|---|---|---|
| POINT | STATION | OFFSET | RADIUS | COORDINATES |
| CC1 | 506+41.96'O' CTH O/OO<br>16+11.95'OS' CTH O SOUTH | 74.0' LT<br>65.0' RT | 50.0' | Y=422941.773<br>X=682596.444 |
| CC2 | 507+90.14'O' CTH O/OO<br>16+00.29'OS' CTH O SOUTH | 84.0' LT<br>82.5' LT | 60.0' | Y=423089.297<br>X=682585.102 |
| CC3 | 506+63.76'O' CTH O/OO<br>20+53.27'SK' SANTA KLAUS LANE | 53.0' RT<br>47.0' RT | 35.0' | Y=422964.222<br>X=682723.332 |
| CC4 | 507+52.45'O' CTH O/OO<br>20+47.49'SK' SANTA KLAUS LANE | 48.0' RT<br>42.0' LT | 30.0' | Y=423053.223<br>X=682717.552 |

| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | INTERSECTION DETAIL | SHEET 11 | E |
|---|---|---|---|---|---|

| RADIUS POINT TABLE | | | | |
|---|---|---|---|---|
| POINT | STATION | OFFSET | RADIUS | COORDINATES |
| CC1 | 528+42.52'O' CTH O/OO<br>30+51.64'AC' HENRY CLARK LANE | 68.0' LT<br>65.0' LT | 40.0' | Y = 425156.763<br>X = 682655.467 |
| CC2 | 529+78.74'O' CTH O/OO<br>31+30.04'AC' HENRY CLARK LANE | 63.0' LT<br>60.0' RT | 50.0' | Y = 425286.292<br>X = 682708.255 |




| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | INTERSECTION DETAIL | SHEET 12 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D\54190671\SHEETSPLAN\021101_ID.DWG
LAYOUT NAME - 02

PLOT DATE : 11/13/2023 7:16 PM PLOT BY : JARROD STARREN PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 42

2

| RADIUS POINT TABLE | | | | |
|---|---|---|---|---|
| POINT | STATION | OFFSET | RADIUS | COORDINATES |
| CC3 | 550+03.53'O' CTH O/OO<br>50+59.06'CC' CARD'L CREST | 68.0' LT<br>65.0' LT | 50.0' | Y = 426998.344<br>X = 683791.063 |
| CC4 | 550+31.77'O' CTH O/OO<br>50+43.00'CC' CARD'L CREST | 47.5' LT<br>33.9' LT | 15.0' | Y = 426998.692<br>X = 683826.061 |
| CC5 | 551+40.61'O' CTH O/OO<br>50+84.22'CC' CARD'L CREST | 73.0' LT<br>70.0' RT | 55.0' | Y = 427083.725<br>X = 683898.618 |
| CC6 | 51+07.00'CC' CARD'L CREST<br>39+62.24'B' BOVEE LANE | 37.8' LT<br>37.0' LT | 25.0' | Y = 427053.455<br>X = 683792.717 |

| ELEVATION TABLE | | | |
|---|---|---|---|
| POINT | STATION | OFFSET | ELEVATION |
| A | 50+09.62'CC' | 57.5' LT | 737.52 |
| B | 50+12.74'CC' | 46.2' LT | 737.10 |
| C | 50+16.26'CC' | 23.9' LT | 736.65 |
| D | 50+26.3.6'CC' | 27.2' LT | 736.35 |
| E | 50+36.12'CC' | 20.6' LT | 736.28 |
| F | 50+43.53'CC' | 18.9' LT | 736.29 |
| G | 50+50.80'CC' | 21.1' LT | 736.87 |
| H | 50+56.08'CC' | 26.6' LT | 737.58 |
| I | 50+58.00'CC' | 33.9' LT | 738.39 |
| J | 50+84.22'CC' | 18.0' RT | 739.78 |
| K | 50+61.31'CC' | 20.0' RT | 737.49 |
| L | 50+42.58'CC' | 34.1' RT | 734.70 |
| M | 50+31.39'CC' | 54.7' RT | 733.64 |
| N | 50+29.82'CC' | 78.1' RT | 733.07 |
| O | 50+82.00'CC' | 37.8' LT | 738.96 |
| P | 50+83.68'CC' | 28.8' LT | 739.27 |
| Q | 50+88.49'CC' | 21.0' LT | 739.90 |
| R | 50+95.79'CC' | 15.4' LT | 741.11 |
| S | 51+04.59'CC' | 12.9' LT | 742.29 |

N

PT: 53+17.01 'CC'

DITCH TO DRAIN

END CONSTRUCTION
STA 53+00.00'CC'
MATCH EXISTING
SAWCUT REQ'D

53'CC'

10.0 10.0

52'CC'

CARDINAL CREST RD

PC: 51+52.68 'CC'

STA 551+78 31.8' LT
CONSTRUCT 16.0' WIDE AGG PE
1 - 24-INCH X 24' CP CLASS III-A NON METAL
2 - AEW'S FOR CP 24-INCH
1 - REMOVE EXISTING 15" X 18' CVCMP

+34.33 10.0 10.0 +34.22

BOVEE LANE

BP: 38+51.45 'B'

PC: 38+79.24 'B'

N88°09'21"E

BEGIN CONSTRUCTION
STA 38+79.24'B'
MATCH EXISTING
SAWCUT REQ'D

39'B'

STA 50+87.5
1-18"X58' CPCS REQ'D
2-18" AECPS REQ'D
SKEW 21°-33' LHF

PT: 39+47.42 'B'

CC6

+04.59

S 12.9 51'CC'

R

Q

O P

12.0

15.0

90°0'0"

N62°06'46"E

CC3

I J

H

G

K

CC4

F

E

D

C

B

A

CONCRETE CURB & GUTTER 6-INCH
SLOPED 36-INCH TYPE D

RICHLAND ELECTRIC COOP

STA 50+47.6
1-24"X72' CPCS REQ'D
2-24" AECPS REQ'D
SKEW 8°-30' RHF

PT: 550+08.88 'O'

18.0

N27°53'14"W

81°32'6"

L

M

N

18.0

STA 50+70.00'CC' CARDINAL CREST RD =
STA 40+00.00'B' BOVEE LANE
CONSTRUCT MODIFIED TYPE C INTERSECTION

CONTRACTOR SHALL NOT
STORE ANY EQUIPMENT
WITHIN 50' OF
ENVIRONMENTALLY
SENSITIVE AREA

CC5

RICHLAND ELECTRIC COOP

DITCH TO DRAIN

ENVIRONMENTALLY
SENSITIVE AREA

PC: 552491.11'O'

548'O' 549'O' 550'O' 551'O' 552'O' 553'O' 554'O'

N53°38'52"E N53°38'52"E

CTH O/OO

18.0

15.0

FRONTIER

R/W

END PROJECT 5419-06-70
BEGIN PROJECT 5419-06-73
STA 552+00.00'O'

MATCH EXISTING
SAWCUT REQ'D

DITCH TO DRAIN

STA 550+58.98'O' CTH O =
STA 50+00.00'CC' CARDINAL CREST ROAD
CONSTRUCT MODIFIED TYPE C INTERSECTION

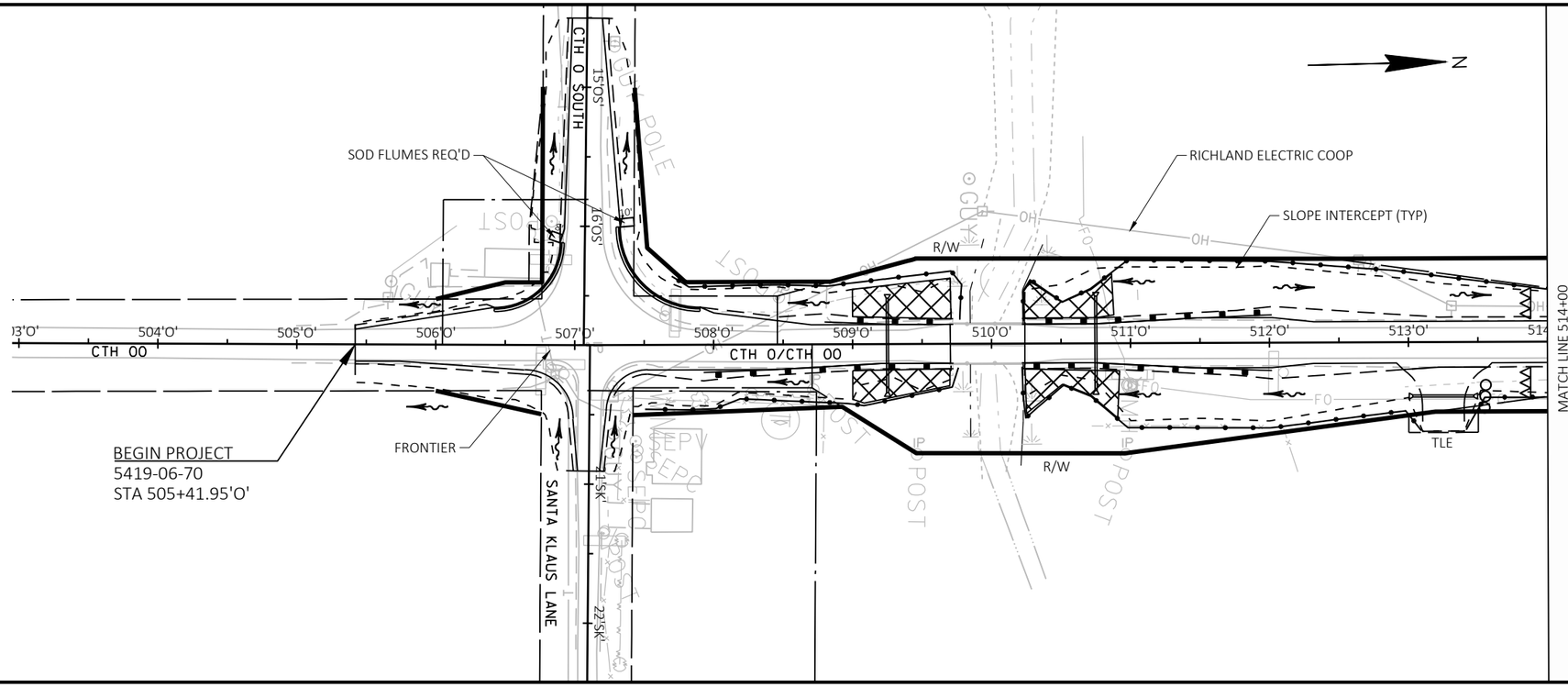
SLOPE INTERCEPT (TYP)

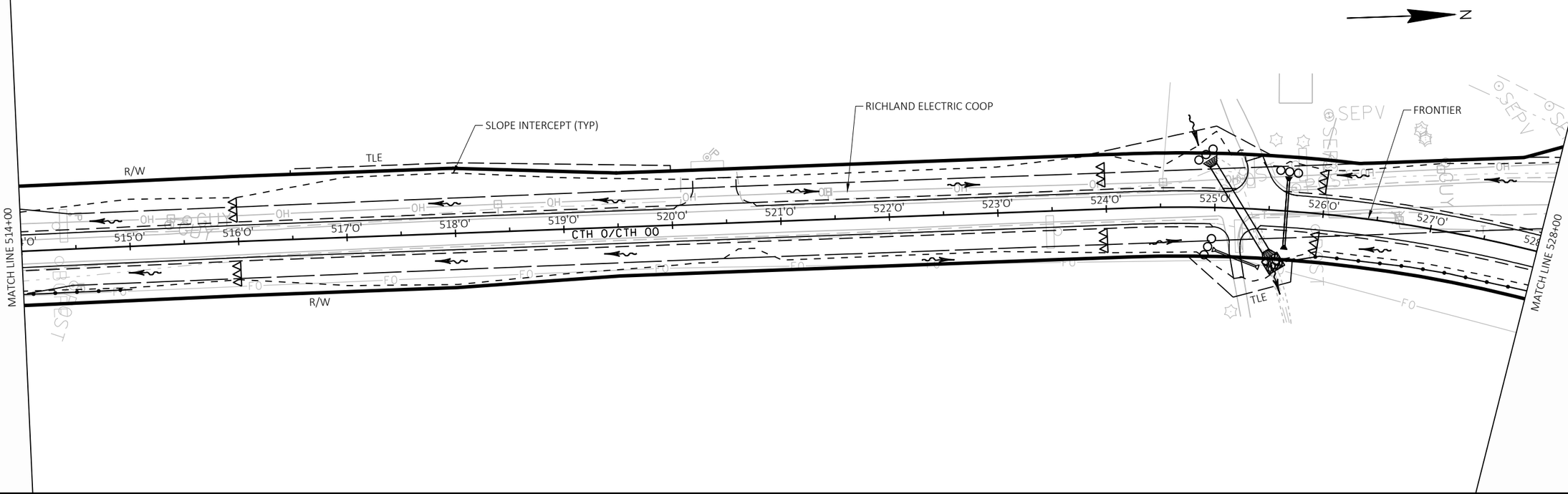
STA 551+90 28.4' RT
CONSTRUCT 16.0' WIDE AGG PE
1 - 18-INCH X 26' CP CLASS III-A NON METAL
2 - AEW'S FOR CP 18-INCH
1 - REMOVE EXISTING 15" X 18' CVCMP

| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | INTERSECTION DETAIL | SHEET 13 | E |
|---|---|---|---|---|---|

LEGEND

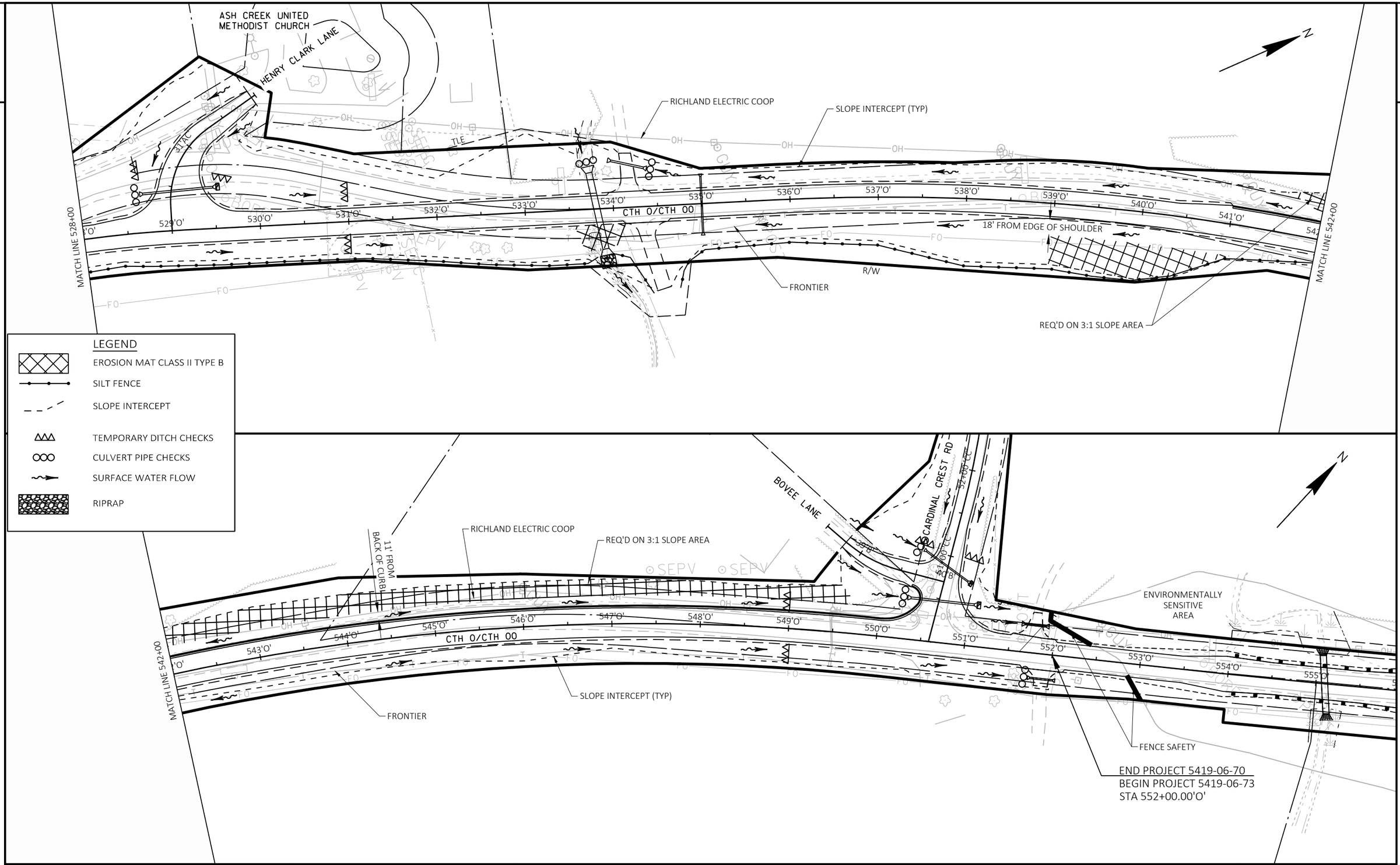
- EROSION MAT CLASS II TYPE B
- SILT FENCE
- SLOPE INTERCEPT
- TEMPORARY DITCH CHECKS
- CULVERT PIPE CHECKS
- SURFACE WATER FLOW
- RIPRAP



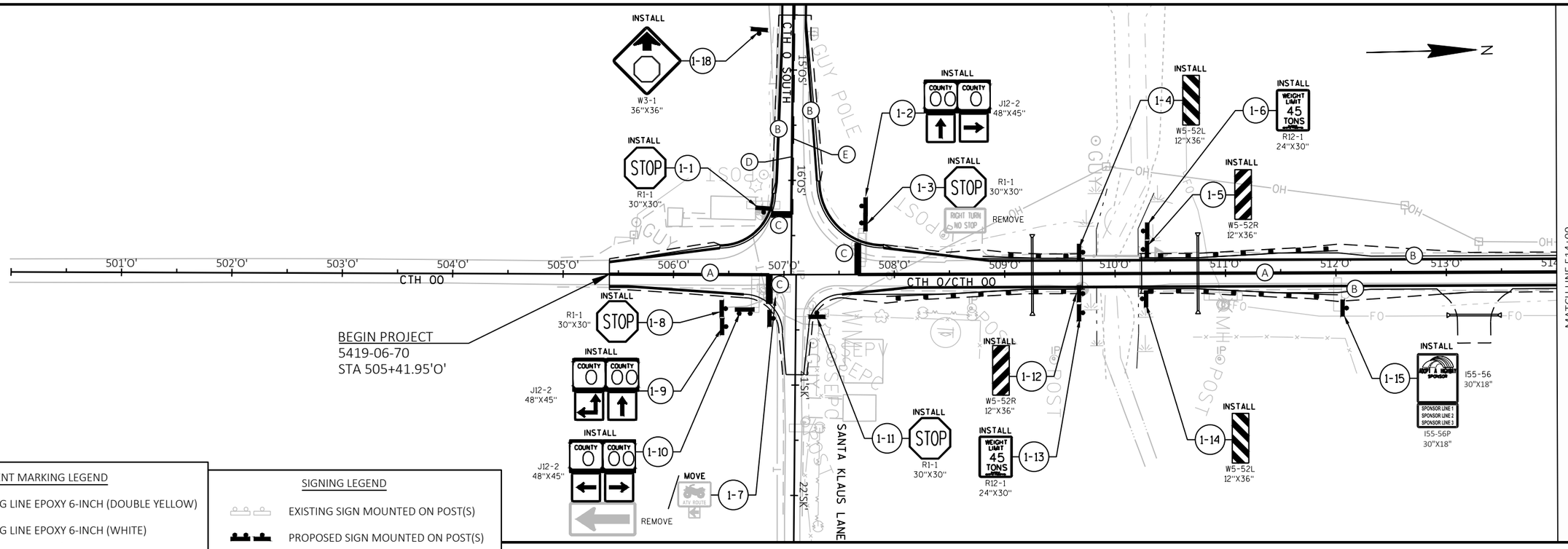

| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | EROSION CONTROL | SHEET 14 | E |
|---|---|---|---|---|---|

2




| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | EROSION CONTROL | SHEET 15 | E |
|---|---|---|---|---|---|

2

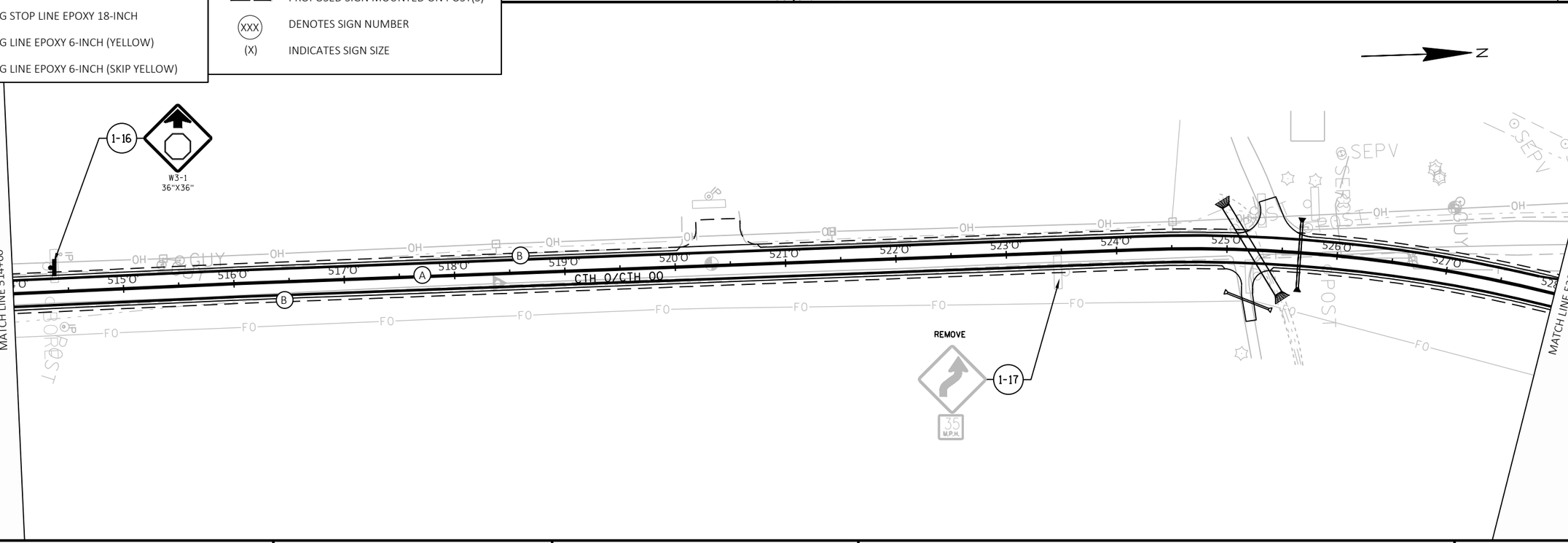



PAVEMENT MARKING LEGEND

- (A) MARKING LINE EPOXY 6-INCH (DOUBLE YELLOW)
- (B) MARKING LINE EPOXY 6-INCH (WHITE)
- (C) MARKING STOP LINE EPOXY 18-INCH
- (D) MARKING LINE EPOXY 6-INCH (YELLOW)
- (E) MARKING LINE EPOXY 6-INCH (SKIP YELLOW)

SIGNING LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE




| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | PERMANENT SIGNING AND PAVEMENT MARKING | SHEET 16 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D\54190671\SHEETSPLAN\023201-PS.DWG
LAYOUT NAME - 01

PLOT DATE : 11/14/2023 12:32 PM PLOT BY : JARROD STARREN PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

ASH CREEK UNITED METHODIST CHURCH

HENRY CLARK LANE

INSTALL STOP 2-1
R1-1
30"X30"

MOVE 2-2

REMOVE 2-4
35 M.P.H.

REMOVE 2-3
45 M.P.H.

CTH O/CTH OO

MATCH LINE 528+00

MATCH LINE 542+00

PAVEMENT MARKING LEGEND

- (A) MARKING LINE EPOXY 6-INCH (DOUBLE YELLOW)
- (B) MARKING LINE EPOXY 6-INCH (WHITE)
- (C) MARKING STOP LINE EPOXY 18-INCH
- (D) MARKING LINE EPOXY 6-INCH (YELLOW)
- (E) MARKING LINE EPOXY 6-INCH (SKIP YELLOW)

SIGNING LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE

INSTALL STOP 2-6
R1-1
30"X30"

INSTALL STOP 2-5
R1-1
30"X30"

BOVEE LANE

CARDINAL CREST RD

MOVE 2-7
BOVEE LN
CARDINAL CREST RD

ENVIRONMENTALLY SENSITIVE AREA

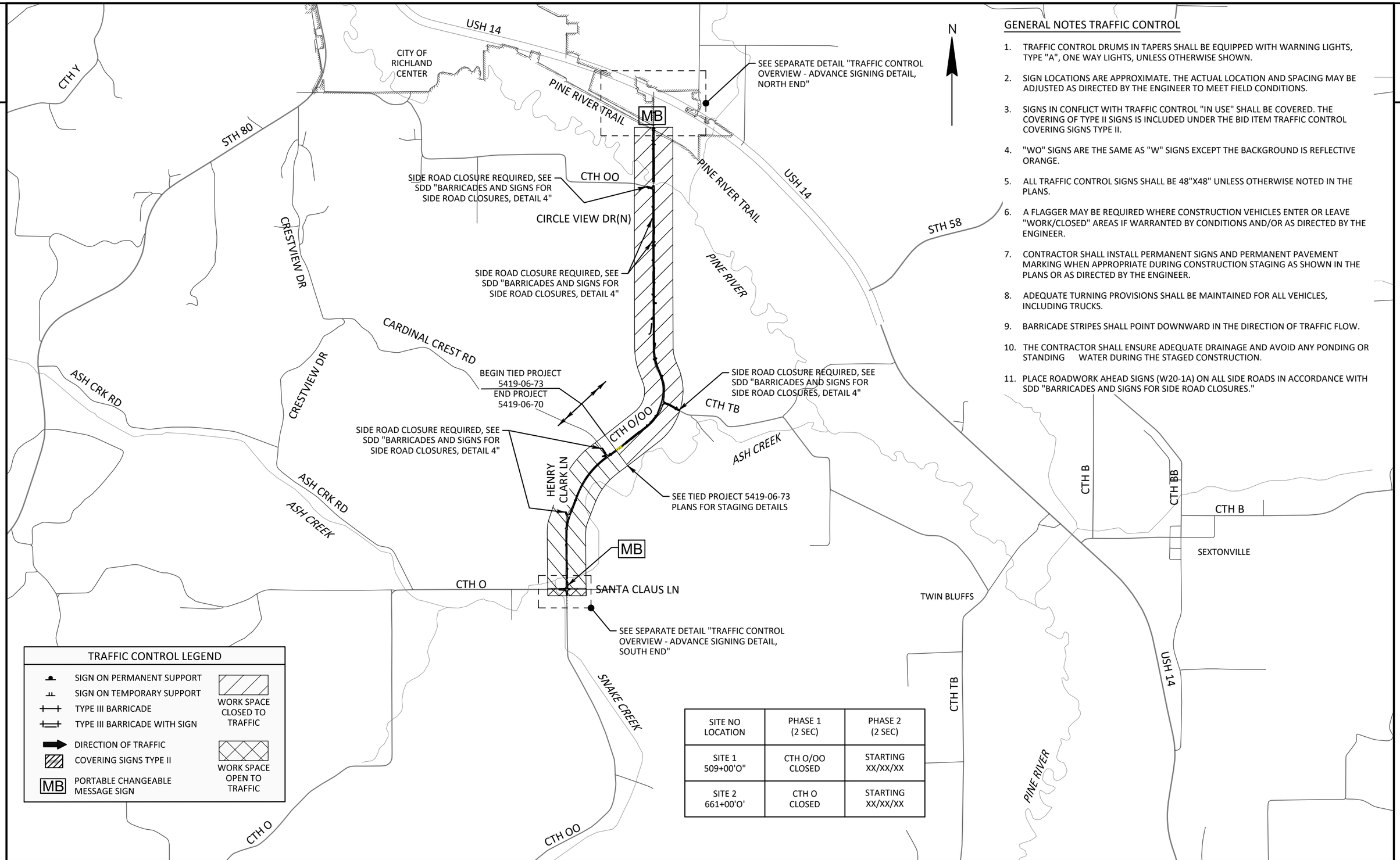
END PROJECT 5419-06-70
BEGIN PROJECT 5419-06-73
STA 552+00.00'O'

| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | PERMANENT SIGNING AND PAVEMENT MARKING | SHEET 17 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D\54190671\SHEETSPLAN\023201-PS.DWG
LAYOUT NAME - 02

PLOT DATE : 11/14/2023 11:00 AM PLOT BY : JARROD STARREN PLOT NAME : PLOT SCALE : 1 IN:100 FT

2




## GENERAL NOTES TRAFFIC CONTROL

1. TRAFFIC CONTROL DRUMS IN TAPERS SHALL BE EQUIPPED WITH WARNING LIGHTS, TYPE "A", ONE WAY LIGHTS, UNLESS OTHERWISE SHOWN.
2. SIGN LOCATIONS ARE APPROXIMATE. THE ACTUAL LOCATION AND SPACING MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER TO MEET FIELD CONDITIONS.
3. SIGNS IN CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE COVERED. THE COVERING OF TYPE II SIGNS IS INCLUDED UNDER THE BID ITEM TRAFFIC CONTROL COVERING SIGNS TYPE II.
4. "WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS REFLECTIVE ORANGE.
5. ALL TRAFFIC CONTROL SIGNS SHALL BE 48"X48" UNLESS OTHERWISE NOTED IN THE PLANS.
6. A FLAGGER MAY BE REQUIRED WHERE CONSTRUCTION VEHICLES ENTER OR LEAVE "WORK/CLOSED" AREAS IF WARRANTED BY CONDITIONS AND/OR AS DIRECTED BY THE ENGINEER.
7. CONTRACTOR SHALL INSTALL PERMANENT SIGNS AND PERMANENT PAVEMENT MARKING WHEN APPROPRIATE DURING CONSTRUCTION STAGING AS SHOWN IN THE PLANS OR AS DIRECTED BY THE ENGINEER.
8. ADEQUATE TURNING PROVISIONS SHALL BE MAINTAINED FOR ALL VEHICLES, INCLUDING TRUCKS.
9. BARRICADE STRIPES SHALL POINT DOWNWARD IN THE DIRECTION OF TRAFFIC FLOW.
10. THE CONTRACTOR SHALL ENSURE ADEQUATE DRAINAGE AND AVOID ANY PONDING OR STANDING WATER DURING THE STAGED CONSTRUCTION.
11. PLACE ROADWORK AHEAD SIGNS (W20-1A) ON ALL SIDE ROADS IN ACCORDANCE WITH SDD "BARRICADES AND SIGNS FOR SIDE ROAD CLOSURES."

### TRAFFIC CONTROL LEGEND

- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH SIGN
- DIRECTION OF TRAFFIC
- COVERING SIGNS TYPE II
- MB — PORTABLE CHANGEABLE MESSAGE SIGN
- WORK SPACE CLOSED TO TRAFFIC
- WORK SPACE OPEN TO TRAFFIC

| SITE NO LOCATION | PHASE 1 (2 SEC) | PHASE 2 (2 SEC) |
|---|---|---|
| SITE 1 509+00'O" | CTH O/OO CLOSED | STARTING XX/XX/XX |
| SITE 2 661+00'O' | CTH O CLOSED | STARTING XX/XX/XX |

| PROJECT NO: 5419-06-70 | HWY: CTH O/OO | COUNTY: RICHLAND | TRAFFIC CONTROL OVERVIEW | SHEET 18 E |
|---|---|---|---|---|

2

DRAWING NOTES:

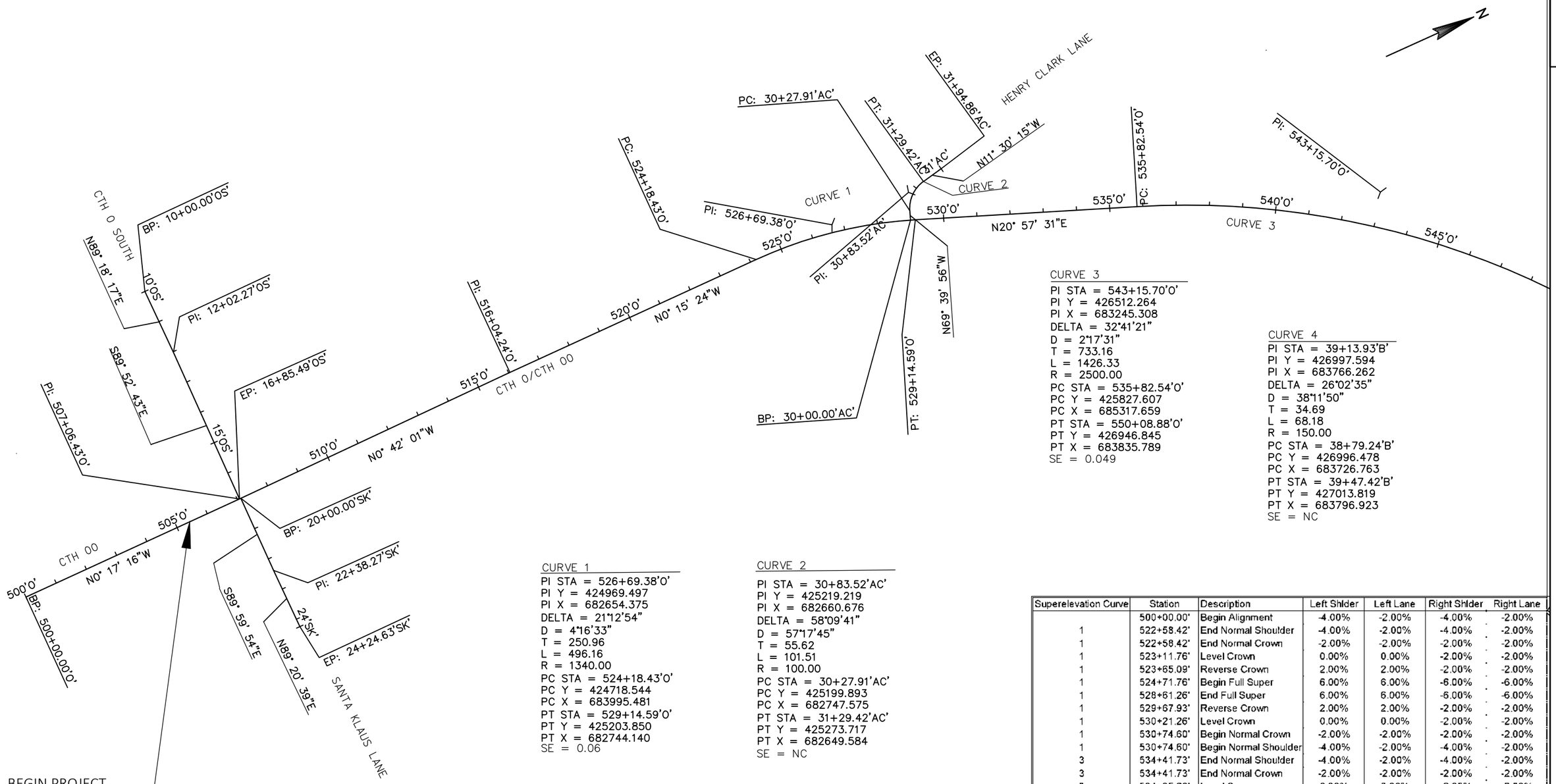
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF STANDARD DETAIL DRAWING "*BARRICADES AND SIGNS FOR VARIOUS CLOSURES, DETAIL E.*"




TRAFFIC CONTROL LEGEND

- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH SIGN
- DIRECTION OF TRAFFIC
- COVERING SIGNS TYPE II
- MB PORTABLE CHANGEABLE MESSAGE SIGN
- WORK SPACE CLOSED TO TRAFFIC
- WORK SPACE OPEN TO TRAFFIC

| PROJECT NO: 5419-06-70 | HWY: CTH O/OO | COUNTY: RICHLAND | TRAFFIC CONTROL - ADVANCE SIGNING DETAIL, SOUTH END | SHEET 19 E |
|---|---|---|---|---|




BEGIN PROJECT
5419-06-70
STA 505+41.95'O'
Y = 422842.145
X = 682670.944

CURVE 1
PI STA = 526+69.38'O'
PI Y = 424969.497
PI X = 682654.375
DELTA = 21°12'54"
D = 4°16'33"
T = 250.96
L = 496.16
R = 1340.00
PC STA = 524+18.43'O'
PC Y = 424718.544
PC X = 683995.481
PT STA = 529+14.59'O'
PT Y = 425203.850
PT X = 682744.140
SE = 0.06

CURVE 2
PI STA = 30+83.52'AC'
PI Y = 425219.219
PI X = 682660.676
DELTA = 58°09'41"
D = 57°17'45"
T = 55.62
L = 101.51
R = 100.00
PC STA = 30+27.91'AC'
PC Y = 425199.893
PC X = 682747.575
PT STA = 31+29.42'AC'
PT Y = 425273.717
PT X = 682649.584
SE = NC

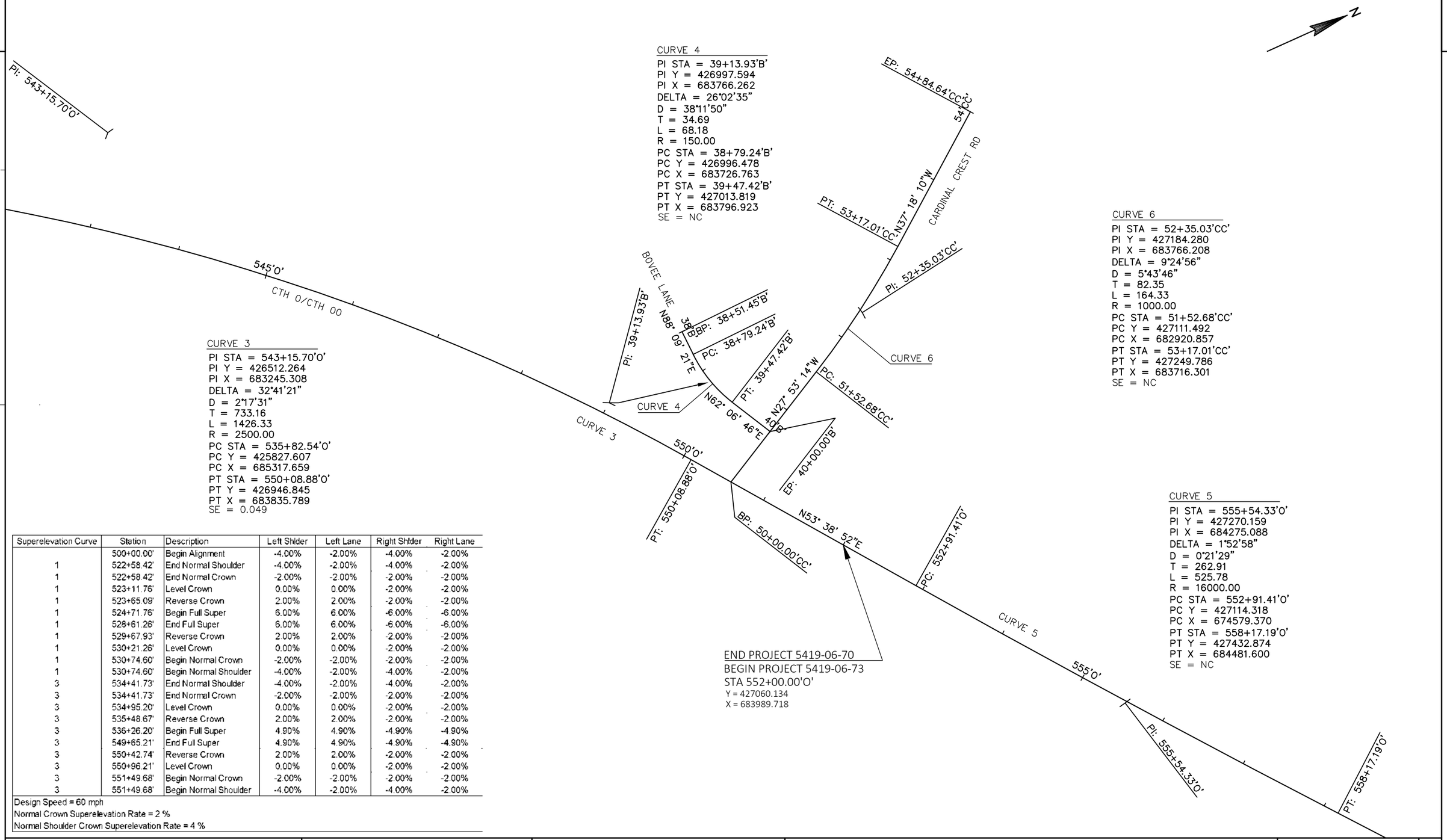
CURVE 3
PI STA = 543+15.70'O'
PI Y = 426512.264
PI X = 683245.308
DELTA = 32°41'21"
D = 2°17'31"
T = 733.16
L = 1426.33
R = 2500.00
PC STA = 535+82.54'O'
PC Y = 425827.607
PC X = 685317.659
PT STA = 550+08.88'O'
PT Y = 426946.845
PT X = 683835.789
SE = 0.049

CURVE 4
PI STA = 39+13.93'B'
PI Y = 426997.594
PI X = 683766.262
DELTA = 26°02'35"
D = 38°11'50"
T = 34.69
L = 68.18
R = 150.00
PC STA = 38+79.24'B'
PC Y = 426996.478
PC X = 683726.763
PT STA = 39+47.42'B'
PT Y = 427013.819
PT X = 683796.923
SE = NC

| Superelevation Curve | Station | Description | Left Shlder | Left Lane | Right Shlder | Right Lane |
|---|---|---|---|---|---|---|
| | 500+00.00' | Begin Alignment | -4.00% | -2.00% | -4.00% | -2.00% |
| 1 | 522+58.42' | End Normal Shoulder | -4.00% | -2.00% | -4.00% | -2.00% |
| 1 | 522+58.42' | End Normal Crown | -2.00% | -2.00% | -2.00% | -2.00% |
| 1 | 523+11.76' | Level Crown | 0.00% | 0.00% | -2.00% | -2.00% |
| 1 | 523+65.09' | Reverse Crown | 2.00% | 2.00% | -2.00% | -2.00% |
| 1 | 524+71.76' | Begin Full Super | 6.00% | 6.00% | -6.00% | -6.00% |
| 1 | 528+61.26' | End Full Super | 6.00% | 6.00% | -6.00% | -6.00% |
| 1 | 529+67.93' | Reverse Crown | 2.00% | 2.00% | -2.00% | -2.00% |
| 1 | 530+21.26' | Level Crown | 0.00% | 0.00% | -2.00% | -2.00% |
| 1 | 530+74.60' | Begin Normal Crown | -2.00% | -2.00% | -2.00% | -2.00% |
| 1 | 530+74.60' | Begin Normal Shoulder | -4.00% | -2.00% | -4.00% | -2.00% |
| 3 | 534+41.73' | End Normal Shoulder | -4.00% | -2.00% | -4.00% | -2.00% |
| 3 | 534+41.73' | End Normal Crown | -2.00% | -2.00% | -2.00% | -2.00% |
| 3 | 534+95.20' | Level Crown | 0.00% | 0.00% | -2.00% | -2.00% |
| 3 | 535+48.67' | Reverse Crown | 2.00% | 2.00% | -2.00% | -2.00% |
| 3 | 536+26.20' | Begin Full Super | 4.90% | 4.90% | -4.90% | -4.90% |
| 3 | 549+65.21' | End Full Super | 4.90% | 4.90% | -4.90% | -4.90% |
| 3 | 550+42.74' | Reverse Crown | 2.00% | 2.00% | -2.00% | -2.00% |
| 3 | 550+96.21' | Level Crown | 0.00% | 0.00% | -2.00% | -2.00% |
| 3 | 551+49.68' | Begin Normal Crown | -2.00% | -2.00% | -2.00% | -2.00% |
| 3 | 551+49.68' | Begin Normal Shoulder | -4.00% | -2.00% | -4.00% | -2.00% |

Design Speed = 60 mph
Normal Crown Superelevation Rate = 2 %
Normal Shoulder Crown Superelevation Rate = 4 %

2




CURVE 3
PI STA = 543+15.70'0'
PI Y = 426512.264
PI X = 683245.308
DELTA = 32°41'21"
D = 2°17'31"
T = 733.16
L = 1426.33
R = 2500.00
PC STA = 535+82.54'0'
PC Y = 425827.607
PC X = 685317.659
PT STA = 550+08.88'0'
PT Y = 426946.845
PT X = 683835.789
SE = 0.049

CURVE 4
PI STA = 39+13.93'B'
PI Y = 426997.594
PI X = 683766.262
DELTA = 26°02'35"
D = 38°11'50"
T = 34.69
L = 68.18
R = 150.00
PC STA = 38+79.24'B'
PC Y = 426996.478
PC X = 683726.763
PT STA = 39+47.42'B'
PT Y = 427013.819
PT X = 683796.923
SE = NC

CURVE 6
PI STA = 52+35.03'CC'
PI Y = 427184.280
PI X = 683766.208
DELTA = 9°24'56"
D = 5°43'46"
T = 82.35
L = 164.33
R = 1000.00
PC STA = 51+52.68'CC'
PC Y = 427111.492
PC X = 682920.857
PT STA = 53+17.01'CC'
PT Y = 427249.786
PT X = 683716.301
SE = NC

CURVE 5
PI STA = 555+54.33'0'
PI Y = 427270.159
PI X = 684275.088
DELTA = 1°52'58"
D = 0°21'29"
T = 262.91
L = 525.78
R = 16000.00
PC STA = 552+91.41'0'
PC Y = 427114.318
PC X = 674579.370
PT STA = 558+17.19'0'
PT Y = 427432.874
PT X = 684481.600
SE = NC

| Superelevation Curve | Station | Description | Left Shlder | Left Lane | Right Shlder | Right Lane |
|---|---|---|---|---|---|---|
| | 500+00.00' | Begin Alignment | -4.00% | -2.00% | -4.00% | -2.00% |
| 1 | 522+58.42' | End Normal Shoulder | -4.00% | -2.00% | -4.00% | -2.00% |
| 1 | 522+58.42' | End Normal Crown | -2.00% | -2.00% | -2.00% | -2.00% |
| 1 | 523+11.76' | Level Crown | 0.00% | 0.00% | -2.00% | -2.00% |
| 1 | 523+65.09' | Reverse Crown | 2.00% | 2.00% | -2.00% | -2.00% |
| 1 | 524+71.76' | Begin Full Super | 6.00% | 6.00% | -6.00% | -6.00% |
| 1 | 528+61.26' | End Full Super | 6.00% | 6.00% | -6.00% | -6.00% |
| 1 | 529+67.93' | Reverse Crown | 2.00% | 2.00% | -2.00% | -2.00% |
| 1 | 530+21.26' | Level Crown | 0.00% | 0.00% | -2.00% | -2.00% |
| 1 | 530+74.60' | Begin Normal Crown | -2.00% | -2.00% | -2.00% | -2.00% |
| 1 | 530+74.60' | Begin Normal Shoulder | -4.00% | -2.00% | -4.00% | -2.00% |
| 3 | 534+41.73' | End Normal Shoulder | -4.00% | -2.00% | -4.00% | -2.00% |
| 3 | 534+41.73' | End Normal Crown | -2.00% | -2.00% | -2.00% | -2.00% |
| 3 | 534+95.20' | Level Crown | 0.00% | 0.00% | -2.00% | -2.00% |
| 3 | 535+48.67' | Reverse Crown | 2.00% | 2.00% | -2.00% | -2.00% |
| 3 | 536+26.20' | Begin Full Super | 4.90% | 4.90% | -4.90% | -4.90% |
| 3 | 549+65.21' | End Full Super | 4.90% | 4.90% | -4.90% | -4.90% |
| 3 | 550+42.74' | Reverse Crown | 2.00% | 2.00% | -2.00% | -2.00% |
| 3 | 550+96.21' | Level Crown | 0.00% | 0.00% | -2.00% | -2.00% |
| 3 | 551+49.68' | Begin Normal Crown | -2.00% | -2.00% | -2.00% | -2.00% |
| 3 | 551+49.68' | Begin Normal Shoulder | -4.00% | -2.00% | -4.00% | -2.00% |

Design Speed = 60 mph
Normal Crown Superelevation Rate = 2 %
Normal Shoulder Crown Superelevation Rate = 4 %

| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | ALIGNMENT DETAIL | SHEET 21 E |
|---|---|---|---|---|

5419-06-70

| Line | Item | Item Description | Unit | Total | Qty |
|---|---|---|---|---|---|
| 0002 | 201.0105 | Clearing | STA | 13.000 | 13.000 |
| 0004 | 201.0205 | Grubbing | STA | 14.000 | 14.000 |
| 0006 | 203.0100 | Removing Small Pipe Culverts | EACH | 10.000 | 10.000 |
| 0008 | 203.0220 | Removing Structure (structure) 01. 525+33 | EACH | 1.000 | 1.000 |
| 0010 | 203.0220 | Removing Structure (structure) 02. 533+76 | EACH | 1.000 | 1.000 |
| 0022 | 205.0100 | Excavation Common | CY | 19,736.000 | 19,736.000 |
| 0026 | 208.0100 | Borrow | CY | 3,094.000 | 3,094.000 |
| 0028 | 213.0100 | Finishing Roadway (project) 01. 5419-06-70 | EACH | 1.000 | 1.000 |
| 0032 | 305.0110 | Base Aggregate Dense 3/4-Inch | TON | 975.000 | 975.000 |
| 0034 | 305.0120 | Base Aggregate Dense 1 1/4-Inch | TON | 8,310.000 | 8,310.000 |
| 0036 | 305.0130 | Base Aggregate Dense 3-Inch | TON | 9,220.000 | 9,220.000 |
| 0040 | 455.0605 | Tack Coat | GAL | 1,149.000 | 1,149.000 |
| 0042 | 460.2000 | Incentive Density HMA Pavement | DOL | 2,750.000 | 2,750.000 |
| 0044 | 460.5223 | HMA Pavement 3 LT 58-28 S | TON | 2,418.000 | 2,418.000 |
| 0046 | 460.5224 | HMA Pavement 4 LT 58-28 S | TON | 1,879.000 | 1,879.000 |
| 0048 | 465.0120 | Asphaltic Surface Driveways and Field Entrances | TON | 33.000 | 33.000 |
| 0054 | 520.1018 | Apron Endwalls for Culvert Pipe 18-Inch | EACH | 14.000 | 14.000 |
| 0056 | 520.1024 | Apron Endwalls for Culvert Pipe 24-Inch | EACH | 10.000 | 10.000 |
| 0060 | 520.3418 | Culvert Pipe Class III-A Non-metal 18-Inch | LF | 368.000 | 368.000 |
| 0062 | 520.3424 | Culvert Pipe Class III-A Non-metal 24-Inch | LF | 278.000 | 278.000 |
| 0076 | 521.1084 | Apron Endwalls for Culvert Pipe Steel 84-Inch | EACH | 2.000 | 2.000 |
| 0078 | 521.1283 | Apron Endwalls for Pipe Arch Steel 83x57-Inch | EACH | 2.000 | 2.000 |
| 0090 | 521.3184 | Culvert Pipe Corrugated Steel 84-Inch | LF | 88.000 | 88.000 |
| 0094 | 521.3783 | Pipe Arch Corrugated Steel 83x57-Inch | LF | 92.000 | 92.000 |
| 0096 | 601.0557 | Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type D | LF | 1,143.000 | 1,143.000 |
| 0104 | 606.0200 | Riprap Medium | CY | 221.000 | 221.000 |
| 0114 | 614.2300 | MGS Guardrail 3 | LF | 262.500 | 262.500 |
| 0118 | 614.2500 | MGS Thrie Beam Transition | LF | 157.600 | 157.600 |
| 0120 | 614.2610 | MGS Guardrail Terminal EAT | EACH | 4.000 | 4.000 |
| 0124 | 618.0100 | Maintenance and Repair of Haul Roads (project) 01. 5419-06-70 | EACH | 1.000 | 1.000 |
| 0128 | 619.1000 | Mobilization | EACH | 0.300 | 0.300 |
| 0130 | 624.0100 | Water | MGAL | 95.000 | 95.000 |
| 0132 | 625.0500 | Salvaged Topsoil | SY | 29,750.000 | 29,750.000 |
| 0134 | 627.0200 | Mulching | SY | 36,345.000 | 36,345.000 |
| 0136 | 628.1104 | Erosion Bales | EACH | 50.000 | 50.000 |
| 0138 | 628.1504 | Silt Fence | LF | 6,500.000 | 6,500.000 |
| 0140 | 628.1520 | Silt Fence Maintenance | LF | 6,500.000 | 6,500.000 |
| 0142 | 628.1905 | Mobilizations Erosion Control | EACH | 2.000 | 2.000 |
| 0144 | 628.1910 | Mobilizations Emergency Erosion Control | EACH | 3.000 | 3.000 |
| 0146 | 628.2023 | Erosion Mat Class II Type B | SY | 3,262.000 | 3,262.000 |
| 0148 | 628.7504 | Temporary Ditch Checks | LF | 160.000 | 160.000 |
| 0150 | 628.7555 | Culvert Pipe Checks | EACH | 10.000 | 10.000 |
| 0152 | 629.0205 | Fertilizer Type A | CWT | 23.000 | 23.000 |
| 0154 | 630.0120 | Seeding Mixture No. 20 | LB | 980.500 | 980.500 |
| 0156 | 630.0200 | Seeding Temporary | LB | 980.500 | 980.500 |
| 0158 | 630.0500 | Seed Water | MGAL | 740.000 | 740.000 |
| 0160 | 631.1100 | Sod Erosion Control | SY | 13.000 | 13.000 |
| 0162 | 633.5200 | Markers Culvert End | EACH | 12.000 | 12.000 |
| 0166 | 634.0614 | Posts Wood 4x6-Inch X 14-FT | EACH | 17.000 | 17.000 |
| 0168 | 634.0616 | Posts Wood 4x6-Inch X 16-FT | EACH | 3.000 | 3.000 |

5419-06-70

| Line | Item | Item Description | Unit | Total | Qty |
|---|---|---|---|---|---|
| 0170 | 637.2210 | Signs Type II Reflective H | SF | 93.760 | 93.760 |
| 0172 | 637.2230 | Signs Type II Reflective F | SF | 30.000 | 30.000 |
| 0174 | 638.2102 | Moving Signs Type II | EACH | 5.000 | 5.000 |
| 0176 | 638.2602 | Removing Signs Type II | EACH | 25.000 | 25.000 |
| 0178 | 638.3000 | Removing Small Sign Supports | EACH | 23.000 | 23.000 |
| 0180 | 638.4000 | Moving Small Sign Supports | EACH | 3.000 | 3.000 |
| 0182 | 642.5001 | Field Office Type B | EACH | 0.300 | 0.300 |
| 0184 | 643.0300 | Traffic Control Drums | DAY | 4,160.000 | 4,160.000 |
| 0188 | 643.0420 | Traffic Control Barricades Type III | DAY | 2,080.000 | 2,080.000 |
| 0190 | 643.0705 | Traffic Control Warning Lights Type A | DAY | 1,664.000 | 1,664.000 |
| 0192 | 643.0900 | Traffic Control Signs | DAY | 6,240.000 | 6,240.000 |
| 0194 | 643.1050 | Traffic Control Signs PCMS | DAY | 14.000 | 14.000 |
| 0200 | 643.5000 | Traffic Control 01. 5419-06-70 | EACH | 1.000 | 1.000 |
| 0210 | 645.0130 | Geotextile Type R | SY | 317.000 | 317.000 |
| 0212 | 646.2020 | Marking Line Epoxy 6-Inch | LF | 18,773.000 | 18,773.000 |
| 0216 | 646.6120 | Marking Stop Line Epoxy 18-Inch | LF | 74.000 | 74.000 |
| 0218 | 648.0100 | Locating No-Passing Zones | MI | 0.872 | 0.872 |
| 0220 | 650.4500 | Construction Staking Subgrade | LF | 5,543.000 | 5,543.000 |
| 0222 | 650.5000 | Construction Staking Base | LF | 5,543.000 | 5,543.000 |
| 0224 | 650.5500 | Construction Staking Curb Gutter and Curb & Gutter | LF | 1,143.000 | 1,143.000 |
| 0226 | 650.6000 | Construction Staking Pipe Culverts | EACH | 14.000 | 14.000 |
| 0228 | 650.9911 | Construction Staking Supplemental Control (project) 01. 5419-06-70 | EACH | 1.000 | 1.000 |
| 0232 | 650.9920 | Construction Staking Slope Stakes | LF | 5,543.000 | 5,543.000 |
| 0234 | 690.0150 | Sawing Asphalt | LF | 185.000 | 185.000 |
| 0236 | 740.0440 | Incentive IRI Ride | DOL | 3,530.000 | 3,530.000 |
| 0238 | ASP.1T0A | On-the-Job Training Apprentice at $5.00/HR | HRS | 400.000 | 400.000 |
| 0240 | ASP.1T0G | On-the-Job Training Graduate at $5.00/HR | HRS | 250.000 | 250.000 |
| 0242 | SPV.0060 | Special 01. Remove and Reset Mailboxes | EACH | 12.000 | 12.000 |
| 0244 | SPV.0060 | Special 02. Temporary Mailbox Station | EACH | 1.000 | 1.000 |
| 0246 | SPV.0060 | Special 03. Landmark Reference Monument | EACH | 1.000 | 1.000 |

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## CLEARING / GRUBBING

| STATION | LOCATION | 201.0105 CLEARING STA | 201.0205 GRUBBING STA |
|---|---|---|---|
| CTH O / CTH OO | | | |
| 507+00 - 508+00 | RT | 1 | 1 |
| 532+00 - 533+00 | RT | 1 | 1 |
| 533+00 - 534+00 | LT | 1 | 1 |
| 541+50 - 542+50 | LT | 1 | 1 |
| 546+50 - 547+50 | LT | 1 | 1 |
| 549+00 - 550+00 | LT | 1 | 1 |
| 551+00 - 552+00 | LT | * | 1 |
| 551+00 - 552+00 | RT | 1 | 1 |
| CARDINAL CREST ROAD | | | |
| 50+50 - 52+00 | RT | 2 | 2 |
| 50+50 - 53+00 | LT | 3 | 3 |
| UNDISTRIBUTED | LT/RT | 1 | 1 |
| ITEM TOTALS | | 13 | 14 |

* CLEARING BY COUNTY BEFORE PROJECT

## REMOVING CULVERT PIPES

| STATION | LOCATION | 203.0100 REMOVING SMALL PIPE CULVERTS EACH | 203.0220.01 REMOVING STRUCTURE (525+33) EACH | 203.0220.02 REMOVING STRUCTURE (533+76) EACH | DESCRIPTION |
|---|---|---|---|---|---|
| CTH O / CTH OO | | | | | |
| 508+69 | LT | 1 | | | 18" x 36' CVCMP |
| 513+25 | RT | 1 | | | 18" x 50' CVCMP |
| 525+19 | RT | 1 | | | 12" x 28' CVCMP |
| 525+33 | LT/RT | | 1 | | 72" x 42' CVCMP |
| 525+66 | LT/RT | 1 | | | 15" x 44' CVCMP |
| 533+76 | LT/RT | | | 1 | 84" x 60' CVCMP |
| 534+18 | LT | 1 | | | 18" x 30' CVCMP |
| 551+78 | LT | 1 | | | 15"X18' CVCMP |
| 551+90 | RT | 1 | | | 15"X18' CVCMP |
| HENRY CLARK LANE | | | | | |
| 30+37 | LT/RT | 1 | | | 24" x 60' CVCMP |
| CARDINAL CREST | | | | | |
| 50+20 | LT/RT | 1 | | | 15" x 48' CVCMP |
| 50+43 | LT/RT | 1 | | | 18" x 36' CVCMP |
| ITEM TOTALS | | 10 | 1 | 1 | |

## FINISHING ROADWAY

| STATION | LOCATION | 213.0100 EACH |
|---|---|---|
| CTH O / CTH OO | | |
| 505+41.95 - 552+00.00 | LT & RT | 1 |
| ITEM TOTAL | | 1 |

## BASE AGGREGATE DENSE

| STATION | LOCATION | 305.0110 3/4-INCH TON | 305.0120 1 1/4-INCH TON | 305.0130 3-INCH TON | 624.0100 WATER MGAL | COMMENTS |
|---|---|---|---|---|---|---|
| CTH O/OO | | | | | | |
| 505+41.95 - 509+70.39 | LT & RT | 53 | 706 | 910 | 9 | |
| 510+24.01 - 529+00.00 | LT & RT | 284 | 2812 | 3541 | 31 | |
| 529+00.00 - 552+00.00 | LT & RT | 257 | 3516 | 4323 | 38 | |
| CTH O SOUTH | | | | | | |
| 14+50.30 - 16+61.48 | LT & RT | 24 | 394 | 446 | 4 | |
| SANTA KLAUS LANE | | | | | | |
| 20+17.00 - 20+90.51 | LT & RT | 17 | 112 | | 1 | |
| HENRY CLARK LANE | | | | | | |
| 30+18.00 - 31+90.00 | LT & RT | 27 | 277 | | 3 | |
| CARDINAL CREST ROAD | | | | | | |
| 50+18.00 - 53+00.00 | LT & RT | 41 | 343 | | 4 | |
| BOVEE LANE | | | | | | |
| 38+79.24 - 39+88.00 | LT & RT | 14 | 150 | | 2 | |
| DRIVEWAYS | | | | | | |
| 513+25 | RT | 59 | | | 3 | |
| 520+40 | LT | 36 | | | | |
| 525+21 | RT | 21 | | | | |
| 525+36.5 | LT | 28 | | | | |
| 534+18 | LT | 29 | | | | |
| 534+37 | RT | 49 | | | | |
| 551+78 | LT | 21 | | | | |
| 551+90 | RT | 15 | | | | |
| ITEM TOTALS | | 975 | 8310 | 9220 | 95 | |

NOTE: ALL ITEMS AND QUANTITIES ON THIS SHEET ARE FOR ENGINEER ESTIMATE CATEGORY 0010, UNLESS OTHERWISE NOTED.

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| DIVISION | FROM/TO STATION | LOCATION | 205.0100 EXCAVATION COMMON (1) CUT (2) | SALVAGED/UNUSABLE PAVEMENT MATERIAL (4) | AVAILABLE MATERIAL (5) | UNEXPANDED FILL | EXPANDED FILL (6) FACTOR 1.30 | MASS ORDINATE +/- (7) | WASTE (8) | 208.0100 BORROW |
|---|---|---|---|---|---|---|---|---|---|---|
| DIVISION 1 | | | | | | | | | | |
| CTH O ML | 505+41.95 - 509+70.39 | LT & RT | 903 | 150 | 753 | 182 | 237 | 516 | 516 | 0 |
| CTH O ML | 510+24.01 - 552+00.00 | LT & RT | 14,343 | 1,190 | 13,153 | 12,498 | 16,247 | -3,094 | 0 | 3,094 |
| CTH O SOUTH | 14+50.30 - 16+61.483 | LT & RT | 424 | 65 | 359 | 16 | 21 | 338 | 338 | 0 |
| SANTA CLAUSE LANE | 20+18.00 - 20+90.51 | LT & RT | 184 | 15 | 169 | 0 | 0 | 169 | 169 | 0 |
| HENRY CLARK LANE | 30+18.00 - 31+90.00 | LT & RT | 822 | 39 | 783 | 48 | 62 | 721 | 721 | 0 |
| BOVEE LANE | 38+79.24 - 39+83.75 | LT & RT | 781 | 0 | 781 | 7 | 9 | 772 | 772 | 0 |
| CARDINAL CREST | 50+18.20 - 53+00.00 | LT & RT | 1,644 | 68 | 1,576 | 2 | 3 | 1,573 | 1,573 | 0 |
| PIPE EXCAVATION | 525+21 | LT & RT | 300 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PIPE EXCAVATION | 533+81 | LT & RT | 335 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| DIVISION 1 SUBTOTAL | | | 19,736 | 1,527 | 17,574 | 12,753 | 16,579 | 995 | 4,090 | 3,094 |
| GRAND TOTAL | | | 19,736 | 1,527 | 17,574 | 12,753 | 16,579 | 995 | 4,090 | 3,094 |
| TOTAL COMMON EXC | | | 19,736 | | | | | | | |

NOTES:
(1) COMMON EXCAVATION IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100
(2) SALVAGED/UNSUABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
(3) EBS EXCAVATION TO BE BACKFILLED WITH SELECT BORROW MATERIAL. NOTE: THIS IS DESIGNERS CHOICE, CAN BE BACKFILLED WITH BORROW, OR CUT AS WELL.
(4) SALVAGED/UNUSABLE PAVEMENT MATERIAL (ESTIMATED AT 4" DEPTH)
5) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSUABLE PAVEMENT MATERIAL
(6) EXPANDED FILL FACTOR = 1.3
(7) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION.
MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.
(8) FACTORS USED TO COMPUTE ANTICIPATED WASTE AND THE COMPUTED WASTE VOLUME IDENTIFIED ARE FOR GENERAL INFORMATION ONLY.

NOTE: ALL ITEMS AND QUANTITIES ON THIS SHEET ARE FOR ENGINEER ESTIMATE CATEGORY 0010, UNLESS OTHERWISE NOTED.

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## ASPHALTIC PAVEMENT ITEMS

| STATION | LOCATION | 455.0605 TACK COAT GAL | 460.5223 HMA PAVEMENT 3 LT 58-28 S* TON | 460.5224 HMA PAVEMENT 4 LT 58-28 S* TON |
|---|---|---|---|---|
| CTH O/OO | | | | |
| 505+41.95 - 509+70.39 | LT & RT | 100 | 214 | 166 |
| 510+24.01 - 529+00.00 | LT & RT | 380 | 803 | 624 |
| 529+00.00 - 552+00.00 | LT & RT | 490 | 1025 | 797 |
| CTH O SOUTH | | | | |
| 14+50.30 - 16+61.48 | LT & RT | 55 | 116 | 90 |
| SANTA KLAUS LANE | | | | |
| 20+17.00 - 20+90.51 | LT & RT | 14 | 29 | 22 |
| HENRY CLARK LANE | | | | |
| 30+18.00 - 31+90.00 | LT & RT | 42 | 88 | 69 |
| CARDINAL CREST ROAD | | | | |
| 50+18.00 - 53+00.00 | LT & RT | 48 | 101 | 78 |
| BOVEE LANE | | | | |
| 38+79.24 - 39+88.00 | LT & RT | 20 | 42 | 33 |
| ITEM TOTALS | | 1149 | 2418 | 1879 |

*112 LBS/(SY*IN) USED IN CALCULATIONS

## ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES

| STA | LOCATION | THICKNESS (IN) | 465.0120 TON |
|---|---|---|---|
| CTH O/CTH OO | | | |
| 525+19 | RT | 3.5 | 12 |
| 525+36.5 | LT | 3.5 | 21 |
| ITEM TOTAL | | | 33 |

## CULVERT PIPES

| STATION | LOCATION | 520.1018 APRON ENDWALLS FOR CULVERT PIPE 18-INCH EACH | 520.1024 APRON ENDWALLS FOR CULVERT PIPE 24-INCH EACH | 520.3418 CULVERT PIPE CLASS III-A NON-METAL 18-INCH LF | 520.3424 CULVERT PIPE CLASS III-A NON-METAL 24-INCH LF | 521.1084 APRON ENDWALLS FOR CULVERT PIPE STEEL 84-INCH EACH | 521.1283 APRON ENDWALLS FOR PIPE ARCH STEEL 83X57-INCH EACH | 521.3184 CULVERT PIPE CORRUGATED STEEL 84-INCH LF | 521.3783 PIPE ARCH CORRUGATED STEEL 83X57-INCH LF | 633.5200 MARKER CULVERT END EACH |
|---|---|---|---|---|---|---|---|---|---|---|
| CTH O / CTH OO | | | | | | | | | | |
| 509+25 | LT/RT | 2 | | 68 | | | | | | 2 |
| 510+75 | LT/RT | 2 | | 68 | | | | | | 2 |
| 513+25 | RT | 2 | | 44 | | | | | | |
| 525+21 | RT | 2 | | 40 | | | 2 | | | |
| 525+23 | LT/RT | | | | | | | | 92 | 2 |
| 525+66 | LT/RT | | 2 | | 60 | | | | | 2 |
| 533+81 | LT/RT | | | | | 2 | | 88 | | 2 |
| 534+18 | LT | | 2 | | 38 | | | | | |
| 535+00 | LT/RT | 2 | | 64 | | | | | | 2 |
| 551+78 | LT | | 2 | | 24 | | | | | |
| 551+90 | RT | 2 | | 26 | | | | | | |
| HENRY CLARK LANE | | | | | | | | | | |
| 30+44.7 | LT/RT | | 2 | | 84 | | | | | |
| CARDINAL CREST | | | | | | | | | | |
| 50+47.6 | LT/RT | | 2 | | 72 | | | | | |
| 50+87.5 | | 2 | | 58 | | | | | | |
| ITEM TOTALS | | 14 | 10 | 368 | 278 | 2 | 2 | 88 | 92 | 12 |

## CONCRETE CURB & GUTTER

| STATION - STATION | LOCATION | 601.0557 6-INCH SLOPED 36-INCH TYPE D LF |
|---|---|---|
| CTH O / CTH OO | | |
| 541+00.00 - 550+03.53 | LT | 904 |
| CTH O SOUTH | | |
| 16+00.29 16+60.29 | LT | 92 |
| 16+11.95 - 16+61.95 | RT | 75 |
| CARDINAL CREST ROAD | | |
| 50+11.60 - 50+56.00 | LT | 72 |
| ITEM TOTAL | | 1143 |

## RIPRAP AND GEOTEXTILE

| STATION | LOCATION | 606.0200 RIPRAP MEDIUM CY | 645.0130 GEOTEXTILE TYPE R SY | REMARKS |
|---|---|---|---|---|
| CTH O/CTH OO | | | | |
| 525+42 | RT | 96 | 124 | |
| 533+90 | RT | 77 | 104 | |
| HENRY CLARK LANE | | | | |
| 30+65 | RT | 17 | 31 | |
| CARDINAL CREST | | | | |
| 50+54 | RT | 17 | 31 | |
| 50+76 | RT | 14 | 27 | |
| ITEM TOTALS | | 221 | 317 | |

## GUARDRAIL ITEMS

| STATION | TO | STATION | LOCATION | 614.2300 MGS GUARDRAIL 3 LF | 614.2500 MGS THRIE BEAM TRANSITION LF | 614.2610 MGS GUARDRAIL TERMINAL EAT EACH |
|---|---|---|---|---|---|---|
| CTH O / CTH OO | | | | | | |
| 507+92.71 | - | 508+45.80 | RT | | | 1 |
| 508+45.80 | - | 509+33.19 | RT | 87.5 | | |
| 509+33.19 | - | 509+72.59 | RT | | 39.40 | |
| 508+79.92 | - | 509+33.01 | LT | | | 1 |
| 509+33.01 | - | 509+72.40 | LT | | 39.40 | |
| 510+21.88 | - | 510+61.27 | LT | | 39.40 | |
| 510+61.27 | - | 511+48.66 | LT | 87.5 | | |
| 511+48.66 | - | 512+01.75 | LT | | | 1 |
| 510+21.79 | - | 510+61.18 | RT | | 39.40 | |
| 510+61.18 | - | 511+48.58 | RT | 87.5 | | |
| 511+48.58 | - | 512+01.66 | RT | | | 1 |
| ITEM TOTALS | | | | 262.5 | 157.6 | 4 |

NOTE: ALL ITEMS AND QUANTITIES ON THIS SHEET ARE FOR ENGINEER ESTIMATE CATEGORY 0010, UNLESS OTHERWISE NOTED.

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## MAINTENANCE AND REPAIR OF HAUL ROADS

| STATION | LOCATION | 618.0100 EACH |
|---|---|---|
| CAT 0020 | | |
| CTH O / CTH OO | | |
| 505+41.95 - 552+00.00 | LT & RT | 1 |
| ITEM TOTAL | | 1 |

NOTE: THIS ITEM AND QUANTITY IS FOR ENGINEER ESTIMATE CATEGORY 0020.

## MOBILIZATION

| STATION | LOCATION | 619.1000 EACH |
|---|---|---|
| CTH O / CTH OO | | |
| 505+41.95 - 552+00.00 | LT & RT | 0.3 |
| ITEM TOTAL | | 0.3 |

## SALVAGED TOPSOIL, MULCHING AND SEEDING

| STATION | LOCATION | 625.0500 SALVAGED TOPSOIL SY | 627.0200 MULCHING SY | 629.0205 FERTILIZER TYPE A CWT | 630.0120 SEEDING MIXTURE NO. 20 LB | 630.0200 SEEDING TEMPORARY LB | 630.0500 SEED WATER MGAL |
|---|---|---|---|---|---|---|---|
| CTH O/CTH OO | | | | | | | |
| 505+41.95 - 509+70.39 | LT & RT | 1050 | 1310 | 0.8 | 35.4 | 35.4 | 20.0 |
| 510+24.01 - 529+00.00 | LT & RT | 8780 | 10040 | 6.3 | 271.1 | 271.1 | 200.0 |
| 529+00.00 - 552+00.00 | LT & RT | 13170 | 14420 | 9.1 | 389.3 | 389.3 | 300.0 |
| CTH O SOUTH | | | | | | | |
| 14+50.30 - 16+61.48 | LT & RT | 310 | 430 | 0.3 | 11.6 | 11.6 | 10.0 |
| SANTA KLAUS LANE | | | | | | | |
| 20+17.00 - 20+90.51 | LT & RT | 80 | 110 | 0.1 | 3.0 | 3.0 | 0.0 |
| HENRY CLARK LANE | | | | | | | |
| 30+52.00 - 31+90.00 | LT & RT | 1000 | 1080 | 0.7 | 29.2 | 29.2 | 20.0 |
| CARDINAL CREST ROAD | | | | | | | |
| 51+05.00 - 53+00.00 | LT & RT | 1130 | 1280 | 0.8 | 34.6 | 34.6 | 30.0 |
| BOVEE LANE | | | | | | | |
| 38+79.24 - 39+88.00 | LT & RT | 350 | 420 | 0.3 | 11.3 | 11.3 | 10.0 |
| UNDISTRIBUTED | | 3880 | 7255 | 4.6 | 195.0 | 195.0 | 150.0 |
| ITEM TOTALS | | 29750 | 36345 | 23.0 | 980.5 | 980.5 | 740.0 |

## EROSION BALES

| STATION | LOCATION | 628.1104 EACH |
|---|---|---|
| UNDISTRIBUTED | LT/RT | 50 |
| ITEM TOTAL | | 50 |

## SILT FENCE ITEMS

| STATION | LOCATION | 628.1504 SILT FENCE LF | 628.1520 SILT FENCE MAINTENANCE LF |
|---|---|---|---|
| CTH O/CTH OO | | | |
| 505+00 - 525+00 | LT & RT | 3416 | 3416 |
| 525+00 - 534+00 | LT & RT | 805 | 805 |
| 534+00 - 552+00 | LT & RT | 750 | 750 |
| UNDISTRIBUTED | | 1529 | 1529 |
| ITEM TOTALS | | 6500 | 6500 |

## MOBILIZATIONS EROSION CONTROL

| STATION | | 628.1905 EROSION CONTROL EACH | 628.1910 EMERGENCY EROSION CONTROL EACH |
|---|---|---|---|
| CTH O / CTH OO | | | |
| 505+41.95 - 552+00.00 | LT & RT | 2 | 3 |
| ITEM TOTALS | | 2 | 3 |

## EROSION MAT CLASS II TYPE B

| STATION | LOCATION | 628.2023 SY |
|---|---|---|
| CTH O/CTH OO | | |
| 505+00 - 525+00 | LT & RT | 625 |
| 525+00 - 534+00 | LT & RT | 147 |
| 534+00 - 552+00 | LT & RT | 2489 |
| ITEM TOTAL | | 3262 |

## TEMPORARY DITCH CHECKS

| STATION | LOCATION | 628.7504 LF |
|---|---|---|
| CTH O/CTH OO | | |
| 505+00 - 525+00 | LT & RT | 60 |
| 525+00 - 534+00 | LT & RT | 60 |
| 534+00 - 552+00 | LT & RT | 40 |
| ITEM TOTAL | | 160 |

## CULVERT PIPE CHECKS

| STATION | LOCATION | 628.7555 EACH |
|---|---|---|
| CTH O / CTH OO | | |
| 513+25 | RT | 1 |
| 525+00 | LT/RT | 2 |
| 525+66 | LT | 1 |
| 533+69 | LT | 1 |
| 534+43 | LT | 1 |
| 550+27 | LT | 1 |
| 551+60 | LT | 1 |
| HENRY CLARK | | |
| 30+43 | LT | 1 |
| CARDINAL CREST | | |
| 51+00 | LT | 1 |
| ITEM TOTAL | | 10 |

## SOD EROSION CONTROL

| STATION | LOCATION | 631.1100 SY |
|---|---|---|
| CTH O SOUTH | | |
| 15+97 | LT | 6 |
| 16+09 | RT | 7 |
| ITEM TOTAL | | 13 |

NOTE: ALL ITEMS AND QUANTITIES ON THIS SHEET ARE FOR ENGINEER ESTIMATE CATEGORY 0010, UNLESS OTHERWISE NOTED.

## PERMANENT SIGNING

| SIGN GROUP CODE | SIGN CODE | MESSAGE | SIZE | 634.0614 POSTS WOOD 4X6-INCH 14-FT EACH | 634.0616 POSTS WOOD 4X6-INCH 16-FT EACH | 637.2210 SIGNS TYPE II REFLECTIVE H SF | 637.2230 SIGNS TYPE II REFLECTIVE F SF | 638.2102 MOVING SIGNS TYPE II EACH | 638.2602 REMOVING SIGNS TYPE II EACH | 638.3000 REMOVING SMALL SIGN SUPPORTS EACH | 638.4000 MOVING SMALL SIGN SUPPORTS EACH | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-1 | R1-1 | STOP | 30 X 30 | 1 | | 5.18 | | | 1 | 1 | | |
| 1-2 | J12-2 | CTH OO/CTH O<br>UA ARROW/LT ARROW | 48 X 45 | 1 | | 15.00 | | | 1 | 1 | | |
| 1-3 | R1-1 | STOP | 30 X 30 | | 1 | 5.18 | | | 1 | 1 | | |
| | R1-51 | RIGHT TURN NO STOP | 30 X 18 | | | | | | | | | |
| 1-4 | W5-52L | CLEARANCE STRIPER | 12 X 36 | 1 | | | 3.00 | | 1 | 1 | | |
| 1-5 | W5-52R | CLEARANCE STRIPER | 12 X 36 | 1 | | | 3.00 | | 1 | 1 | | |
| 1-6 | R12-1 | WEIGHT LIMIT 45 TONS | | 1 | | | | | 1 | 1 | | |
| 1-7 | | ATV | | | | | | 1 | | | 1 | |
| | | ARROW | | | | | | 1 | | | | |
| 1-8 | R1-1 | STOP | 30 X 30 | 1 | | 5.18 | | | 1 | 1 | | |
| 1-9 | J12-2 | CTH OO/CTH O<br>U/LA ARROW/UA ARROW | 48 X 45 | 1 | | 15.00 | | | 1 | 1 | | |
| 1-10 | J12-2 | CTH OO/CTH O<br>U/LA ARROW/UA ARROW | 48 X 45 | | 2 | 15.00 | | | 1 | 2 | | |
| | W1-6 | NIGHT ARROW (SINGLE) | 48 X 24 | | | | | | | | | |
| 1-11 | R1-1 | STOP | 30 X 30 | 1 | | 5.18 | | | 1 | 1 | | |
| 1-12 | W5-52L | CLEARANCE STRIPER | 12 X 36 | 1 | | | 3.00 | | 1 | 1 | | |
| 1-13 | R12-1 | WEIGHT LIMIT 45 TONS | 24 X 30 | 1 | | 5.00 | | | 1 | 1 | | |
| 1-14 | W5-52R | CLEARANCE STRIPER | 12 X 36 | 1 | | | 3.00 | | 1 | 1 | | |
| 1-15 | I55-56 | ADOPT A HIGHWAY | 30 X 18 | 1 | | 3.75 | | | 1 | 1 | | |
| | I55-56P | SPONSOR | 30 X 18 | | | 3.75 | | | | | | |
| 1-16 | W3-1 | STOP AHEAD | 36 X 36 | 1 | | | 9.00 | | 1 | 1 | | |
| 1-17 | | CURVES | | | | | | | 1 | 1 | | |
| | | ADVISORY SPEED PLATE 35 | | | | | | | 1 | | | |
| 1-18 | W3-1 | STOP AHEAD | 36 X 36 | 1 | | | 9.00 | | 1 | 1 | | |
| 2-1 | R1-1 | STOP | 30 X 30 | 1 | | 5.18 | | | 1 | 1 | | |
| 2-2 | | UNITED METHODIST CHURCH | | | | | | 1 | | | 1 | |
| 2-3 | | CURVE | | | | | | | 1 | 1 | | |
| | | ADVISORY SPEED PLATE 45 | | | | | | | 1 | | | |
| 2-4 | | CURVES | | | | | | | 1 | 1 | | |
| | | ADVISORY SPEED PLATE 35 | | | | | | | 1 | | | |
| 2-5 | R1-1 | STOP | 30 X 30 | 1 | | 5.18 | | | 1 | 1 | | |
| 2-6 | R1-1 | STOP | 30 X 30 | 1 | | 5.18 | | | 1 | 1 | | |
| 2-7 | | BOVEE LN | | | | | | 1 | | | 1 | |
| | | CARDINAL CREST LN | | | | | | 1 | | | | |
| ITEM TOTALS | | | | 17 | 3 | 93.76 | 30.00 | 5 | 25 | 23 | 3 | |

## FIELD OFFICE TYPE B

| STATION | | 642.5001 EACH |
|---|---|---|
| CTH O / CTH OO<br>505+41.95 - 552+00.00 | LT & RT | 0.3 |
| ITEM TOTAL | | 0.3 |

NOTE: ALL ITEMS AND QUANTITIES ON THIS SHEET ARE FOR ENGINEER ESTIMATE CATEGORY 0010, UNLESS OTHERWISE NOTED.

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## TRAFFIC CONTROL

| STATION | 643.5000.01 PROJECT (5419-06-70) EACH | # OF DRUMS | 643.0300 DRUMS DAY | # OF BARRICADES III | 643.0420 BARRICADES TYPE III DAY | # OF SIGNS | 643.1050 SIGNS PCMS DAY | # OF TYPE A LIGHTS | 643.0705 WARNING LIGHTS TYPE A DAY | # OF SIGNS | 643.0900 SIGNS DAY | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CTH O / CTH OO<br>505+41.95 - 552+00.00 | 1 | 20 | 4160 | 10 | 2080 | 1 | 14 | 8 | 1664 | 30 | 6240 | |
| ITEM TOTALS | 1 | | 4160 | | 2080 | | 14 | 8 | 1664 | | 6240 | |

## MARKING

| STATION | LOCATION | 646.2020 LINE EPOXY 6-INCH LF | 646.6120 STOP LINE EPOXY 18-INCH LF | REMARKS |
|---|---|---|---|---|
| CTH O / CTH OO | | | | |
| 505+41.95 - 552+00.0 | CL | 9155 | 55 | DOUBLE YELLOW |
| 505+41.95 - 552+00.0 | LT | 4273 | | EDGELINE WHITE |
| 505+41.95 - 552+00.0 | RT | 4560 | | EDGELINE WHITE |
| CTH O SOUTH/SANTA KLAUSE LANE | CL/LT/RT | 525 | 19 | YELLOW/SKIP YELLOW/EDGELINE |
| HENRY CLARK LANE | CL | 100 | | DOUBLE YELLOW |
| CARDINAL CREST | CL | 160 | | DOUBLE YELLOW |
| ITEM TOTALS | | 18773 | 74 | |

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## LOCATING NO-PASSING ZONES

| STATION | LOCATION | 648.0100 MI |
|---|---|---|
| CTH O / CTH OO<br>505+41.95 - 552+00.00 | LT & RT | 0.872 |
| ITEM TOTAL | | 0.872 |

NOTE: ALL ITEMS AND QUANTITIES ON THIS SHEET ARE FOR ENGINEER ESTIMATE CATEGORY 0010, UNLESS OTHERWISE NOTED.

## CONSTRUCTION STAKING

| STATION | LOCATION | 650.4500 SUBGRADE LF | 650.5000 BASE LF | 650.9920 SLOPE STAKES LF | 650.9911 SUPPLEMENTAL CONTROL (5419-06-70) LS |
|---|---|---|---|---|---|
| CTH O/CTH OO | | | | | |
| 505+41.95 - 509+70.39 | LT & RT | 429 | 429 | 429 | 1 |
| 510+24.01 - 552+00.00 | LT & RT | 4176 | 4176 | 4176 | |
| CTH C SOUTH | | | | | |
| 14+50.30 - 16+85.49 | LT & RT | 236 | 236 | 236 | |
| SANTA KLAUS LANE | | | | | |
| 20+00.00 - 20+90.51 | LT & RT | 91 | 91 | 91 | |
| HENRY CLARK LANE | | | | | |
| 30+00.00 - 31+90.00 | LT & RT | 190 | 190 | 190 | |
| CARDINAL CREST ROAD | | | | | |
| 50+00.00 - 53+00.00 | LT & RT | 300 | 300 | 300 | |
| BOVEE LANE | | | | | |
| 38+79.24 - 40+00.00 | LT & RT | 121 | 121 | 121 | |
| ITEM TOTALS | | 5543 | 5543 | 5543 | 1 |

## CONSTRUCTION STAKING

| STATION | LOCATION | 650.6000 PIPE CULVERTS EACH |
|---|---|---|
| CTH O / CTH OO | | |
| 509+25 | LT/RT | 1 |
| 510+75 | LT/RT | 1 |
| 513+25 | RT | 1 |
| 525+19 | RT | 1 |
| 525+23 | LT/RT | 1 |
| 525+39 | LT | 1 |
| 533+81 | LT/RT | 1 |
| 534+18 | LT | 1 |
| 535+00 | LT/RT | 1 |
| 551+78 | LT | 1 |
| 551+90 | RT | 1 |
| HENRY CLARK LANE | | |
| 30+44.7 | LT/RT | 1 |
| CARDINAL CREST | | |
| 50+47.6 | LT/RT | 1 |
| 50+87.5 | LT/RT | 1 |
| ITEM TOTAL | | 14 |

## REMOVE AND RESET MAILBOXES

| STATION | LOCATION | SPV.0060.01 REMOVE AND RESET MAILBOXES EACH | REMARKS |
|---|---|---|---|
| CAT 0010 | | | |
| CTH O / CTH OO | | | |
| 505+42 - 552+00 | LT & RT | 12 | COORDINATE WITH RICHLAND COUNTY & USPS |
| CAT 0010 SUBTOTAL | | 12 | |
| ITEM TOTAL | | 12 | |

## TEMPORARY MAILBOX

| STATION | SPV.0060.02 TEMPORARY MAILBOX EACH | REMARKS |
|---|---|---|
| CAT 0010 | | |
| CTH O / CTH OO | | |
| 506+00 | 1 | LOCATE AS DETERMINED BY RICHLAND COUNTY & USPS |
| ITEM TOTAL | 1 | |

## CONSTRUCTION STAKING

| STATION | LOCATION | 650.5500 CURB GUTTER AND CURB & GUTTER LF |
|---|---|---|
| CTH O / CTH OO | | |
| 541+00.00 - 550+03.53 | LT | 904 |
| CTH O SOUTH | | |
| 16+00.29 16+60.29 | LT | 92 |
| 16+11.95 - 16+61.95 | RT | 75 |
| CARDINAL CREST ROAD | | |
| 50+11.60 - 50+56.00 | LT | 72 |
| ITEM TOTAL | | 1143 |

## SAWING

| STATION | LOCATION | 690.0150 ASPHALT LF | REMARKS |
|---|---|---|---|
| CTH O/CTH OO | | | |
| 505+41.95 | LT & RT | 23 | BEGIN PROJECT |
| 525+19 | RT | 10 | |
| 525+39 | LT | 16 | |
| 552+00.00 | LT & RT | 22 | END PROJECT |
| CTH O SOUTH | | | |
| 14+50.30 | LT & RT | 22 | |
| SANTA KLAUS LANE | | | |
| 20+90.51 | LT & RT | 16 | |
| HENRY CLARK LANE | | | |
| 31+90.00 | LT & RT | 18 | |
| CARDINAL CREST ROAD | | | |
| 53+00.00 | LT & RT | 19 | |
| BOVEE LANE | | | |
| 38+79.24 | LT & RT | 14 | |
| DRIVEWAYS | | | |
| 525+21 | RT | 9 | |
| 525+36.5 | LT | 16 | |
| ITEM TOTAL | | 185 | |

## LANDMARK REFERENCE MONUMENTS

| STATION | LOCATION | SPV.0060.03 LANDMARK REFERENCE MONUMENTS EACH | REMARKS |
|---|---|---|---|
| CAT 0010 | | | |
| CTH O / CTH OO | | | |
| 520+34.37 | 1' LT | 1 | 9N 1E S QUARTER SECTION 33 |
| ITEM TOTAL | | 1 | |

NOTE: ALL ITEMS AND QUANTITIES ON THIS SHEET ARE FOR ENGINEER ESTIMATE CATEGORY 0010, UNLESS OTHERWISE NOTED.

## CONVENTIONAL SIGNS AND ABBREVIATIONS

| | |
|---|---|
| AP | ACCESS POINT |
| AC | ACRES |
| AG | AGRICULTURAL |
| ALUM. | ALUMINUM |
| ANT | ANTENNA |
| B | BARN |
| BLDG | BUILDING |
| ℄ | CENTERLINE |
| CONC | CONCRETE |
| COR | CORNER |
| CSM | CERTIFIED SURVEY MAP |
| CTH | COUNTY TRUNK HIGHWAY |
| DOC | DOCUMENT |
| EASE | EASEMENT |
| ETAL | AND OTHERS |
| FDN | FOUNDATION |
| FE | FIELD ENTRANCE |
| FRL | FRACTIONAL |
| G | GARAGE |
| GP | GAS PUMPS |
| GRAV | GRAVEL |
| GV | GAS |
| HSE | HOUSE |
| IP | IRON PIPE OR PIN |
| L | LENGTH OF CURVE |
| LC | LONG CHORD OR LAND CONTRACT |
| LCB | LONG CHORD BEARING |
| LT | LEFT |
| MH | MANHOLE |
| MON | MONUMENT |
| OL | OUTLOT |
| P | PAGE |
| PC | POINT OF CURVATURE |
| PE | PRIVATE ENTRANCE |
| PI | POINT OF INTERSECTION |
| PK | PARKER-KALON FASTENER |
| PL | PROPERTY LINE |
| PLE | PERMANENT LIMITED EASEMENT |
| PT | POINT OF TANGENCY |
| R | RADIUS OR RANGE |
| RDE | RESTRICTED DEVELOPMENT EASEMENT |
| REM | REMAINING |
| ℟ | REFERENCE LINE |
| RT | RIGHT |
| R/W | RIGHT OF WAY |
| S | SHED |
| SEC | SECTION |
| SEPV | SEPTIC VENT |
| STH | STATE TRUNK HIGHWAY |
| STA | STATION |
| T | TANGENT LENGTH OF CURVE OR TOWN |
| TAV | TAVERN |
| TLE | TEMPORARY LIMITED EASEMENT |
| USH | UNITED STATES HIGHWAY |
| V | VOLUME |
| W | WALL |
| X | EAST COORDINATE (GRID) |
| Y | NORTH COORDINATE (GRID) |
| N | NORTH COORDINATE (GROUND) OR NORTH |
| E | EAST COORDINATE (GROUND), EAST OR EXTERNAL |
| △ | CENTRAL ANGLE OR DELTA |

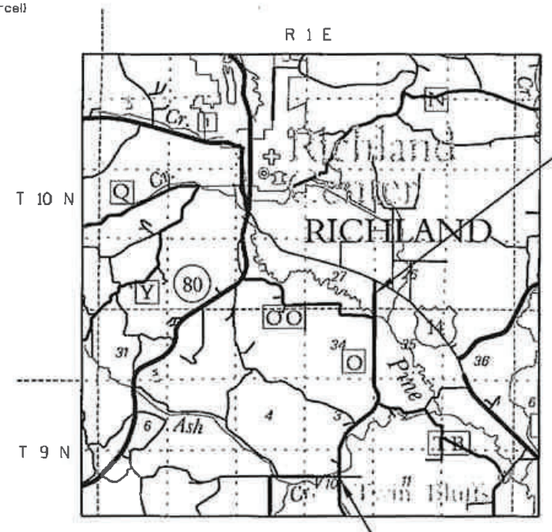
- STATE LINE
- COUNTY LINE
- TOWN OR RANGE LINE
- SECTION LINE
- QUARTER LINE
- SIXTEENTH LINE
- PROPOSED OR NEW R/W LINE
- EXISTING R/W LINE
- LOT LINE
- P.L. ± 58.1 PROPERTY LINE
- NO ACCESS (By Previous Acquisition)
- NO ACCESS (By Acquisition)
- NO ACCESS (By Statutory Authority)
- CORPORATE LIMITS
- FEE ACQUISITION (Cross-hatching varies by parcel)
- PLE ACQUISITION (Pattern varies by parcel)
- TLE ACQUISITION (Pattern varies by parcel)

- SECTION CORNER
- 608 RIGHT OF WAY POINT (NOT MONUMENTED)
- 243 RIGHT OF WAY POINT (MONUMENTED)
- IP (Type) RECOVERED IRON PIN/PIPE
- TRIANGULATION POINT OR HORIZONTAL CONTROL STATION
- INLET
- HYDRANT

| | COMPENSABLE | NON COMPENSABLE |
|---|---|---|
| TELEPHONE POLE | ● | ⊖ |
| POWER POLE | ■ | □ |

- (Size)W WATER
- (Size)G GAS
- T TELEPHONE OR TELEGRAPH
- E ELECTRIC
- TV CABLE TELEVISION
- FO FIBER OPTIC
- (Size)SAN SANITARY SEWER
- (Size)SS STORM SEWER
- CAUTION NOTATION FOR COMBUSTIBLE FLUIDS
- SERVICE PEDESTAL
- (Label) SILO, MANHOLE OR WELL, ETC.

- RAILROAD
- BRIDGE
- (Label) BUILDING
- (Label) FOUNDATION OR RUINS
- FENCE
- MARSH AREA
- LAKE OR POND
- WOODED OR SHRUB AREA
- TREE
- BUILDING TO BE REMOVED




END RELOCATION ORDER
STA. 657+00.00
Y= 436,832.295
X= 685,268.184
1099.91 FEET SOUTH AND 1.55 FEET WEST OF THE WEST QUARTER CORNER OF SECTION 27, T10N, R1E.

BEGIN RELOCATION ORDER
STA. 506+00.00
Y= 422,800.192
X= 682,670.653
1216.04 FEET NORTH AND 12.62 FEET EAST OF THE CENTER QUARTER CORNER OF SECTION 10, T9N, R1E.

LAYOUT SCALE 0 1 2 MI.

TOTAL NET LENGTH OF CENTERLINE = 2.860 MI.

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATES, RICHLAND COUNTY, NAD 83 (91) IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

RIGHT OF WAY MONUMENTS ARE TYPE-2 (3/4" X 24" REBAR) AND ARE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

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

| R/W PROJECT NUMBER | SHEET NUMBER | TOTAL SHEETS |
|---|---|---|
| 5419-06-01 | | |
| FEDERAL PROJECT NUMBER | 4.01 | 9 |

PLAT OF RIGHT-OF-WAY REQUIRED FOR
STH 80 - RICHLAND CENTER
CTH 00 TO USH 14
CTH 0 RICHLAND CO.

CONSTRUCTION PROJECT NUMBER

RECEIVED
NOV 13 2023
DEREK S. KALISH
RICHLAND COUNTY CLERK

RECEIVED
SEP 05 2023
DEREK S. KALISH
RICHLAND COUNTY CLERK

ORIGINAL PLAT PREPARED BY
SEH
10 N. BRIDGE STREET
CHIPPEWA FALLS, WI 54729

WISCONSIN
JASON L. CANCE
S-2688
CHIPPEWA FALLS WI
LAND SURVEYOR

DATE: 9-1-2023 (Signature)

| REVISION DATE | RICHLAND COUNTY |
|---|---|
| 11-07-2023 N.C. | APPROVED FOR RICHLAND COUNTY DATE: 9-5-2023 (Signature) |

E

# SCHEDULE OF LANDS & INTERESTS REQUIRED

AREAS SHOWN IN THE TOTAL ACRES COLUMN MAY BE APPROXIMATE AND ARE DERIVED FROM TAX ROLLS OR OTHER AVAILABLE SOURCES AND MAY NOT INCLUDE LANDS OF THE OWNER WHICH ARE NOT CONTIGUOUS TO THE AREA TO BE ACQUIRED.

OWNER NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO RICHLAND COUNTY.

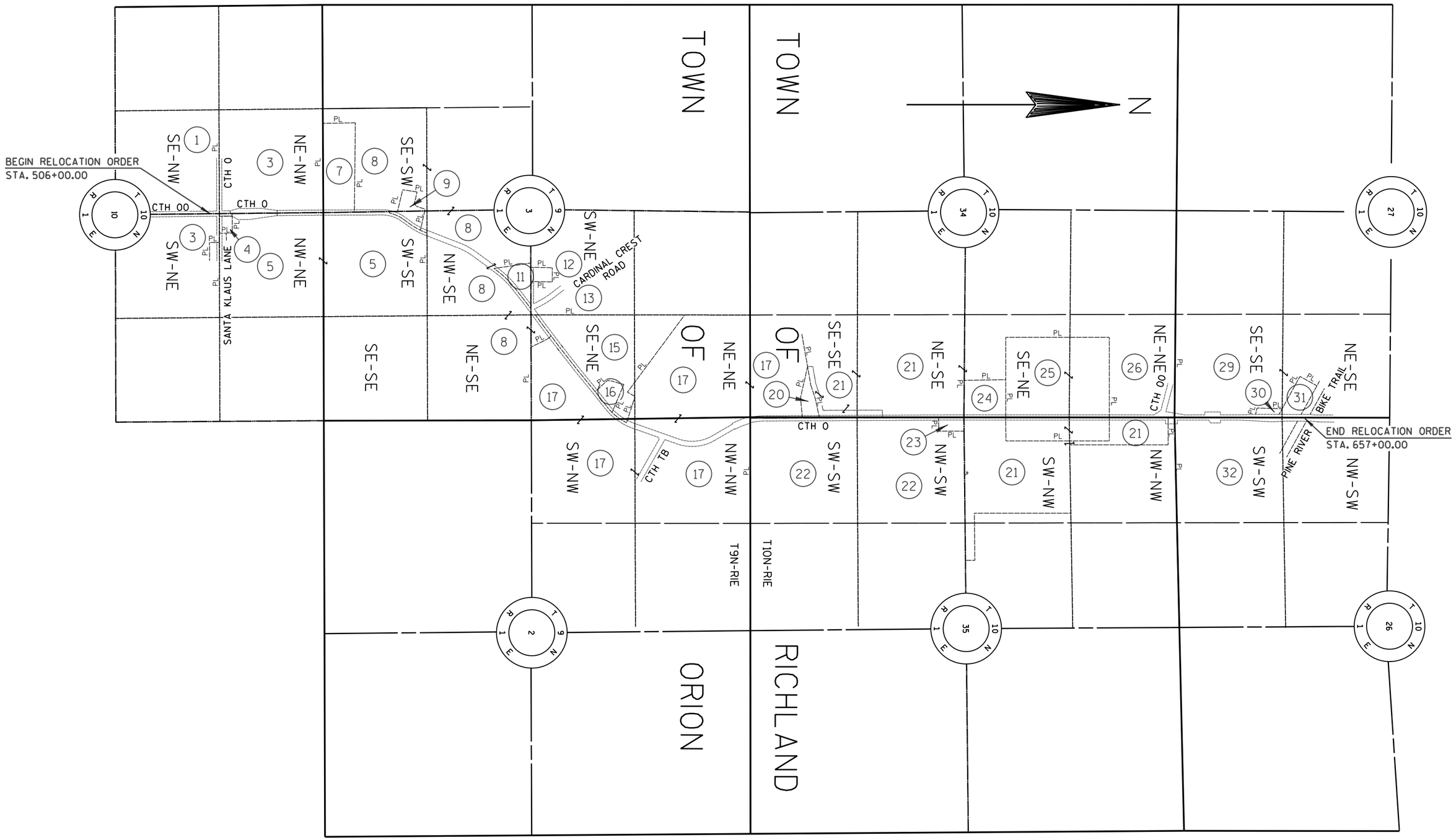
| PARCEL NUMBER | SHEET NUMBER | OWNER (S) | INTEREST REQUIRED | TOTAL ACRES | R/W ACRES REQUIRED | | | TOTAL ACRES REM. | PLE ACRES | TLE ACRES |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | NEW | EXISTING | TOTAL | | | |
| 1 | 4.04 | KELLAND LAND LLC | FEE/TLE | 27.00 | 0.01 | 0.20 | 0.21 | 26.79 | - | 0.02 |
| | | | | | | | | | | |
| 3 | 4.04 | SCHMITZ FARMLAND TRUST DATED OCTOBER 27, 2021 | FEE/TLE | 68.18 | 0.46 | 0.77 | 1.23 | 66.95 | - | 0.05 |
| 4 | 4.04 | KELLY G. MULLARNEY | FEE | 1.00 | 0.04 | 0.01 | 0.05 | 0.95 | - | - |
| 5 | 4.04,4.05 | DEBRA J. KLINZING | FEE/PLE/TLE | 70.24 | 1.41 | 1.74 | 3.15 | 67.09 | 0.10 | 0.02 |
| | | | | | | | | | | |
| 7 | 4.05 | JUNCTION VIEW DAIRY LLC | FEE/PLE | 10.58 | 0.15 | 0.27 | 0.42 | 10.16 | 0.01 | - |
| 8 | 4.05, 4.06 | KIRK M. STIBBE AND SHELLY M. STIBBE & BRENT H. STIBBE AND SARAH M. STIBBE | FEE/PLE/TLE | 109.92 | 1.90 | 2.66 | 4.56 | 105.36 | 0.10 | 0.03 |
| 9 | 4.05 | ASH CREEK UNITED METHODIST CHURCH | FEE/TLE | 1.00 | 0.09 | 0.46 | 0.55 | 0.45 | - | 0.01 |
| | | | | | | | | | | |
| 11 | 4.05 | RUSSELL L. BAKKEN | FEE | 2.88 | 0.29 | 0.51 | 0.80 | 2.08 | - | - |
| 12 | 4.05 | BRIAN L. LAWRENCE | FEE | 19.00 | 0.16 | 0.30 | 0.46 | 18.54 | - | - |
| 13 | 4.05 | JEFFREY D. BAUER & SUZANNE S. BAUER | FEE | 20.00 | 0.10 | 0.34 | 0.44 | 19.56 | - | - |
| | | | | | | | | | | |
| 15 | 4.06 | REGINALD A. EMSHOFF | FEE/TLE | 26.99 | 0.58 | 1.10 | 1.68 | 25.31 | - | 0.28 |
| 16 | 4.06 | IRENE AND RAYMOND EWERS TRUST DATED FEBRUARY 9, 2018 | FEE/TLE | 1.77 | - | 0.25 | 0.25 | 1.52 | - | 0.05 |
| 17 | 4.06, 4.07 | SCHMITZ FARMAND TRUST DATED OCTOBER 27,2021 | FEE/TLE | 164.00 | 4.99 | 5.03 | 10.02 | 153.98 | - | 0.13 |
| | | | | | | | | | | |
| | | | | | | | | | | |
| 20 | 4.07 | JOHN L. GHASTIN & SUSAN K. GHASTIN | FEE/TLE | 1.92 | 0.14 | 0.14 | 0.28 | 1.64 | - | 0.10 |
| 21 | 4.07, 4.08 | UNBEHAUN LAND, LLC | FEE/TLE | 97.96 | 1.65 | 2.33 | 3.98 | 93.98 | - | 0.74 |
| 22 | 4.07 | STEVEN J. HANOLD, AS TRUSTEE OF THE HANOLD IRREVOCABLE TRUST DATED 6-13-2012 | FEE/TLE | 81.00 | 2.05 | 2.03 | 4.08 | 76.92 | - | 0.11 |
| 23 | 4.07 | STEVEN J. HANOLD | FEE/TLE | 1.30 | 0.04 | 0.24 | 0.28 | 1.02 | - | 0.08 |
| 24 | 4.08 | DAVID W. UNBEHAUN & CATHERINE M. UNBEHAUN | FEE | 5.84 | 0.29 | 0.40 | 0.69 | 5.15 | - | - |
| 25 | 4.08 | PINE VALLEY MANOR | FEE | 40.00 | 1.03 | 2.00 | 3.03 | 36.97 | - | - |
| 26 | 4.08 | SCHMITZ FARMLAND TRUST DATED OCTOBER 27, 2021 | FEE | 66.00 | 0.39 | 0.62 | 1.01 | 64.99 | - | - |
| | | | | | | | | | | |
| | | | | | | | | | | |
| 29 | 4.09 | SCHMITZ FARMLAND LLC | FEE/TLE | 35.00 | 0.21 | - | 0.21 | 34.79 | - | 0.02 |
| 30 | 4.09 | JOHN C. & ERICA S. FJELSTED | TLE | 0.45 | - | - | - | 0.45 | - | 0.07 |
| 31 | 4.09 | EQUITY COOPERATIVE LIVESTOCK SALES ASSOCIATION | TLE | 3.75 | - | - | - | 3.75 | - | 0.06 |
| 32 | 4.09 | SCHMITZ LLC | FEE | 34.00 | 0.25 | - | 0.25 | 33.75 | - | - |
| | | | | | | | | | | |
| | | | | | | | | | | |
| 45 | 4.04 - 4.07 | RICHLAND ELECTRIC COOPERATIVE | RELEASE OF RIGHTS | | | | | | | |
| | | | | | | | | | | |
| 47 | 4.04 - 4.09 | FRONTIER COMMUNICATIONS | RELEASE OF RIGHTS | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| 50 | 4.08 - 4.09 | WE ENERGIES | RELEASE OF RIGHTS | | | | | | | |
| 51 | 4.08 - 4.09 | GENUINE TELECOM | RELEASE OF RIGHTS | | | | | | | |

| POINT | Y | X | POINT | Y | X | POINT | Y | X |
|---|---|---|---|---|---|---|---|---|
| 200 | 422900.192 | 682670.653 | 297 | 427836.769 | 684905.344 | 384 | 434962.268 | 685196.731 |
| 201 | 422900.027 | 682637.820 | 298 | 427978.241 | 685110.033 | 385 | 435047.582 | 685049.119 |
| 202 | 422949.966 | 682625.402 | 299 | 428302.420 | 685342.193 | 386 | 435078.559 | 685057.458 |
| 203 | 422976.234 | 682625.270 | 300 | 428601.493 | 685447.888 | 387 | 435111.315 | 685066.277 |
| 204 | 422975.768 | 682484.566 | 301 | 428879.259 | 685510.493 | 388 | 435097.353 | 685196.808 |
| 205 | 423007.009 | 682484.632 | 302 | 429153.369 | 685428.552 | 389 | 435207.338 | 685215.041 |
| 206 | 423041.769 | 682484.706 | 303 | 429593.435 | 685320.863 | 390 | 435207.296 | 685266.859 |
| 207 | 423051.765 | 682599.728 | 304 | 429778.622 | 685257.387 | 391 | 435207.230 | 685347.449 |
| 208 | 423079.635 | 682624.222 | 305 | 429789.657 | 685259.021 | 392 | 435074.021 | 685347.513 |
| 209 | 423183.785 | 682622.949 | 306 | 429813.362 | 685335.429 | 393 | 435074.003 | 685311.750 |
| 214 | 423245.390 | 682605.766 | 307 | 429837.842 | 685414.334 | 394 | 435021.528 | 685311.707 |
| 215 | 423545.373 | 682603.278 | 308 | 429685.072 | 685488.861 | 395 | 434032.314 | 685312.106 |
| 216 | 423903.861 | 682599.146 | 309 | 429254.298 | 685607.069 | 396 | 433957.310 | 685302.136 |
| 217 | 424099.853 | 682598.268 | 310 | 428872.865 | 685640.335 | 397 | 433692.310 | 685302.243 |
| 218 | 424249.896 | 682607.596 | 311 | 428717.588 | 685613.904 | 398 | 433407.320 | 685327.358 |
| 219 | 424374.895 | 682607.037 | 312 | 428669.814 | 685639.626 | 399 | 433232.320 | 685327.429 |
| 220 | 424375.119 | 682657.036 | 313 | 428572.869 | 685809.975 | 400 | 433082.318 | 685322.489 |
| 221 | 424375.321 | 682702.036 | 314 | 428409.416 | 686042.999 | 401 | 432482.318 | 685322.731 |
| 222 | 424250.322 | 682702.595 | 315 | 428380.724 | 686026.697 | 402 | 433468.278 | 685221.333 |
| 223 | 424100.346 | 682708.267 | 316 | 428352.031 | 686010.395 | 403 | 433482.278 | 685221.328 |
| 224 | 423904.780 | 682709.143 | 317 | 428370.646 | 685963.464 | 404 | 433490.275 | 685214.324 |
| 225 | 423620.055 | 682712.623 | 318 | 428481.575 | 685758.104 | 405 | 433807.274 | 685212.197 |
| 226 | 423396.539 | 682744.517 | 319 | 428527.399 | 685610.550 | 406 | 433827.275 | 685215.189 |
| 227 | 423246.551 | 682745.761 | 320 | 428513.075 | 685569.901 | 410 | 435157.295 | 685267.720 |
| 228 | 423193.052 | 682712.842 | 321 | 428366.313 | 685513.590 | 411 | 435157.345 | 685206.753 |
| 230 | 423042.507 | 682720.063 | 322 | 427938.770 | 685215.471 | 412 | 435257.787 | 685223.405 |
| 231 | 423011.222 | 682720.062 | 323 | 427838.613 | 685101.580 | 413 | 435574.059 | 685222.976 |
| 232 | 422976.507 | 682720.061 | 324 | 427680.623 | 684901.063 | 414 | 435574.046 | 685197.271 |
| 233 | 422900.359 | 682703.820 | 325 | 427576.482 | 684728.495 | 415 | 435773.662 | 685197.174 |
| 245 | 424300.120 | 682657.372 | 326 | 427401.454 | 684506.356 | 416 | 435773.671 | 685217.321 |
| 246 | 424299.896 | 682607.373 | 327 | 427082.101 | 684087.048 | 417 | 436132.320 | 685217.613 |
| 247 | 424718.312 | 682605.499 | 328 | 427023.891 | 684016.392 | 418 | 436182.311 | 685228.436 |
| 248 | 424935.181 | 682621.538 | 329 | 426970.544 | 683943.907 | 419 | 436223.663 | 685226.941 |
| 249 | 425086.370 | 682620.985 | 330 | 427267.878 | 684334.411 | 420 | 436803.057 | 685228.075 |
| 250 | 425297.326 | 682571.130 | 331 | 427255.959 | 684343.543 | 421 | 436780.978 | 685268.142 |
| 251 | 425355.937 | 682641.768 | 332 | 427134.905 | 684183.477 | 422 | 436756.269 | 685312.982 |
| 252 | 425328.627 | 682685.110 | 333 | 427146.934 | 684174.498 | 423 | 436623.745 | 685312.720 |
| 253 | 425368.280 | 682710.524 | 340 | 429742.389 | 685359.645 | 424 | 436423.494 | 685322.337 |
| 254 | 425413.614 | 682742.802 | 341 | 429710.902 | 685275.174 | 425 | 436250.778 | 685312.710 |
| 255 | 425683.969 | 682847.729 | 342 | 429778.622 | 685257.387 | 426 | 435773.717 | 685312.321 |
| 256 | 425764.834 | 682916.182 | 343 | 429789.657 | 685259.021 | 427 | 435773.729 | 685337.174 |
| 257 | 425841.913 | 682945.706 | 344 | 430127.401 | 685192.670 | 428 | 435648.729 | 685337.235 |
| 258 | 426030.357 | 683026.757 | 345 | 430477.065 | 685204.319 | 429 | 435634.002 | 685315.462 |
| 259 | 426072.213 | 683042.991 | 346 | 430532.117 | 685219.128 | 430 | 435224.006 | 685316.176 |
| 260 | 426287.664 | 683161.271 | 347 | 431132.113 | 685217.053 | 431 | 435224.021 | 685347.441 |
| 261 | 426399.991 | 683231.625 | 348 | 431332.060 | 685201.361 | 432 | 435157.230 | 685347.473 |
| 262 | 426713.601 | 683491.927 | 349 | 431432.060 | 685201.015 | 433 | 435126.840 | 685070.457 |
| 263 | 426846.279 | 683646.612 | 350 | 431757.110 | 685214.891 | | | |
| 264 | 426919.831 | 683734.752 | 351 | 432132.107 | 685213.593 | | | |
| 265 | 426981.822 | 683732.061 | 352 | 432482.266 | 685192.731 | | | |
| 266 | 427014.819 | 683730.999 | 353 | 432582.266 | 685192.691 | | | |
| 267 | 427127.327 | 683738.575 | 354 | 432582.296 | 685267.691 | | | |
| 268 | 427229.787 | 683690.051 | 355 | 432582.318 | 685322.691 | | | |
| 269 | 427249.786 | 683716.301 | 356 | 432482.318 | 685322.731 | | | |
| 270 | 427269.784 | 683742.551 | 357 | 432368.256 | 685300.105 | | | |
| 271 | 427062.938 | 683900.740 | 358 | 432232.408 | 685300.449 | | | |
| 272 | 427099.190 | 683960.973 | 359 | 432107.447 | 685311.679 | | | |
| 273 | 427060.134 | 683989.718 | 360 | 431832.448 | 685312.631 | | | |
| 274 | 427023.891 | 684016.392 | 361 | 431432.568 | 685348.014 | | | |
| 275 | 426910.603 | 683862.462 | 362 | 431332.569 | 685348.360 | | | |
| 276 | 426304.906 | 683281.504 | 363 | 431082.494 | 685327.225 | | | |
| 277 | 426162.564 | 683233.074 | 364 | 430682.600 | 685358.609 | | | |
| 278 | 425804.355 | 683043.760 | 365 | 430432.567 | 685349.474 | | | |
| 279 | 425540.508 | 682942.697 | 366 | 430090.619 | 685365.981 | | | |
| 280 | 425374.902 | 682857.847 | 367 | 429946.665 | 685362.720 | | | |
| 281 | 425187.754 | 682786.163 | 368 | 429774.484 | 685445.746 | | | |
| 282 | 424718.747 | 682700.498 | 369 | 433457.274 | 685212.338 | | | |
| 283 | 424300.321 | 682702.372 | 375 | 432482.296 | 685267.731 | | | |
| 289 | 427886.414 | 684993.540 | 376 | 432482.266 | 685192.731 | | | |
| 290 | 427006.786 | 683917.233 | 377 | 432582.266 | 685192.691 | | | |
| 291 | 427062.938 | 683900.740 | 378 | 432732.276 | 685217.630 | | | |
| 292 | 427146.532 | 684039.628 | 379 | 433082.276 | 685217.489 | | | |
| 293 | 427464.293 | 684456.844 | 380 | 433232.274 | 685212.429 | | | |
| 294 | 427601.233 | 684549.855 | 381 | 434157.274 | 685212.056 | | | |
| 295 | 427678.594 | 684648.040 | 382 | 434262.276 | 685217.013 | | | |
| 296 | 427774.880 | 684826.797 | 383 | 434832.276 | 685216.783 | | | |

4

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| | | | | | |
|---|---|---|---|---|---|
| REVISION DATE 11-7-2023 | DATE | SCALE, FEET 0 N/A | HWY: C.T.H. O | STATE R/W PROJECT NUMBER 5419-06-01 | PLAT SHEET NO: 4.02 |
| | | | COUNTY: RICHLAND | CONSTRUCTION PROJECT NUMBER | PS&E SHEET 32 E |




| REVISION DATE 11-7-2023 | DATE | NOT TO SCALE | HWY: C.T.H. O | STATE R/W PROJECT NUMBER 5419-06-01 | PLAT SHEET NO: 4.03 | |
|---|---|---|---|---|---|---|
| | | | COUNTY: RICHLAND | CONSTRUCTION PROJECT NUMBER | PS&E SHEET 33 | E |

FILE NAME : X:\PT\R\RICHD\163696\Civil 3D 2020\54190001\RW\cad - rw staff only\rlctho00.dgn PLOT TIME : 8:08:14 AM PLOT DATE : 11/9/2023 PLOT BY : SEH PLOT NAME : PLOT SCALE : N/A

WISDOT/CADDS SHEET 70

BASIS OF EXISTING R/W
EXISTING R/W FOR CTH O, CTH OO, AND SANTA KLAUS LANE
ESTABLISHED FROM CENTER LINE OF EXISTING PAVEMENT
(PER WIS. STAT. 82.31(2) AND FROM PREVIOUS PROJECT 5419-04-21

GN

TOWN OF ORION

SE-NW 10-9-1E

NE-NW 10-9-1E

SW-NE 10-9-1E

NW-NE 10-9-1E

BP: 10+00.00'OS'
Y=423,005.186
X=681,984.648

PI: 12+02.27'OS'
Y=423,007.640
X=682,186.907

APPROXIMATE 1/16 LINE

SECTION LINE

MATCH LINE = SECTION LINE
SEE SHEET 4.05

CAST IRON MON
STA. 520+34.37
1.12' LT
Y= 424,334.481
X= 682,656.102

603

T 9 N R 1 E 10

DETAIL
NOT TO SCALE

1/4 LINE AND REFERENCE LINE ARE NOT PARALLEL

SECTION LINE

1/4 LINE

REFERENCE LINE

VARIABLE DISTANCE

BEGIN RELOCATION ORDER
STA 506+00.00'0'
Y=422,900.192
X=682,670.653

BP: 500+00.00'O'

TLE-SLOPES
0.02 AC.

C.T.H. O

C.T.H. 00

1/4 LINE

505'O'

510'O'

515'O'

520'O'

R=N00°17'16"W

R=N00°42'01"W

R=N00°15'24"W

66'

140'

ASH CREEK

SEE DETAIL

REFERENCE LINE / SECTION LINE INTERSECTION
509+04.58
Y=423204.759
X=682667.696

REFERENCE LINE / SECTION LINE INTERSECTION
518+41.42
Y=424141.542
X=682658.082

PI: 516+04.24'O'
Y=423,904.362
X=682,659.144

R/W PROJECT 5419-04-21

TLE-SLOPES
0.05 AC.

SLOPE INTERCEPTS

601

T 9 N R 1 E 10

3/4" DIA REBAR
Y= 421,684.155
X= 682,683.276

47 FRONTIER COMMUNICATIONS
20' EASEMENT
VOL. 42, PG. 512
DOC. # 152404

1 KELLAND LAND LLC

3 SCHMITZ FARMLAND TRUST
DATED OCTOBER 27, 2021

4 KELLY G. MULLARNEY

5 DEBRA J. KLINZING

45 RICHLAND ELECTRIC COOPERATIVE

47 FRONTIER COMMUNICATIONS

PI: 22+38.27'SK'
Y=423,011.217
X=682,908.335

EP: 24+24.63'SK'
Y=423,013.350
X=683,094.676

SANTA KLAUS LN

APPROXIMATE 1/16 LINE

45 RICHLAND ELECTRIC COOPERATIVE
AMBIGUOUS EASEMENT
VOL. 248, EASEMENTS PG. 621
DOC. # 214138

AMBIGUOUS EASEMENT
VOL. 2, EASEMENTS PG. 375
DOC. # 88440

47 FRONTIER COMMUNICATIONS
AMBIGUOUS EASEMENT
VOL. 183, PG. 655
DOC. # 186801

DETAIL
NOT TO SCALE

TOWN OF ORION LEASE
DOC. NO. 47572

C.T.H. O

C.T.H. 00

1/4 LINE

1/16 LINE

SANTA KLAUS LN

PISTA 507+06.43'0' =
STA 16+85.49'OS'
Y=423,006.616
X=682,670.118

STA 507+11.03'0' =
STA 20+00.00'SK'
Y=423,011.224
X=682,670.062

ANGLE OF QUARTER LINE EXAGGERATED FOR GRAPHICAL REPRESENTATION

REFERENCE LINE / SECTION LINE INTERSECTION
506+31.96
Y=422932.152
X=682670.492

| TLE STATION OUT TABLE | | |
|---|---|---|
| POINT | STATION | OFFSET |
| 500 | 513+50.00"O" | 50.00' RT |
| 501 | 513+50.00"O" | 65.00' RT |
| 502 | 513+00.00"O" | 65.00' RT |
| 503 | 513+00.00"O" | 52.51' RT |
| 548 | 16+40.77"OS" | 40.00' RT |
| 549 | 16+00.00"OS" | 40.00' RT |
| 580 | 516+50.00"O" | 60.00' LT |
| 581 | 516+50.00"O" | 65.00' LT |
| 582 | 518+00.00"O" | 65.00' LT |
| 583 | 520+00.00"O" | 55.00' LT |
| 584 | 520+00.00"O" | 50.00' LT |

| FEE COURSE TABLE | | |
|---|---|---|
| COURSE | BEARING | DISTANCE |
| 601-603 | N00°35'15"W | 2650.47' |
| 603-220 | N01°19'01"E | 40.65' |
| 200-201 | S89°42'44"W | 32.83' |
| 201-202 | N13°57'51"W | 51.46' |
| 202-203 | N00°17'16"W | 26.27' |
| 203-204 | S89°48'37"W | 140.70' |
| 204-205 | N00°07'17"E | 31.24' |
| 205-206 | N00°07'17"E | 34.76' |
| 206-207 | N85°01'58"E | 115.46' |
| 207-208 | N41°18'42"E | 37.10' |
| 208-209 | N00°42'01"W | 104.16' |
| 209-214 | N15°35'06"W | 63.96' |
| 214-215 | N00°28'31"W | 299.99' |
| 215-216 | N00°39'37"W | 358.51' |
| 216-217 | N00°15'24"W | 195.99' |
| 217-218 | N03°33'27"E | 150.33' |
| 218-219 | N00°15'24"W | 125.00' |
| 219-220 | N89°44'36"E | 50.00' |
| 220-221 | N89°44'36"E | 45.00' |
| 221-222 | S00°15'24"E | 125.00' |
| 222-223 | S02°09'56"E | 150.08' |
| 223-224 | S00°15'24"E | 195.57' |
| 224-225 | S00°42'01"E | 284.75' |
| 225-226 | S08°07'15"E | 225.78' |
| 226-227 | S00°28'31"E | 149.99' |
| 227-228 | S31°36'15"W | 62.82' |
| 228-230 | S02°44'45"E | 150.72' |
| 230-231 | S00°00'06"W | 31.28' |
| 231-232 | S00°00'06"W | 34.72' |
| 232-233 | S12°02'23"W | 77.86' |
| 233-200 | S89°42'44"W | 33.17' |

| FEE STATION OUT TABLE | | |
|---|---|---|
| POINT | STATION | OFFSET |
| 200 | 506+00.00"O" | 0.00' LT |
| 201 | 506+00.00"O" | 32.83' LT |
| 202 | 506+50.00"O" | 45.00' LT |
| 203 | 506+76.27"O" | 45.00' LT |
| 204 | 15+00.00"OS" | 31.24' RT |
| 205 | 15+00.00"OS" | 0.00' LT |
| 206 | 15+00.00"OS" | 34.76' LT |
| 207 | 16+15.00"OS" | 45.00' LT |
| 208 | 507+80.00"O" | 45.00' LT |
| 209 | 508+84.16"O" | 45.00' LT |
| 214 | 509+45.97"O" | 61.43' LT |
| 215 | 512+45.96"O" | 60.25' LT |
| 216 | 516+04.24"O" | 60.00' LT |
| 217 | 518+00.00"O" | 60.00' LT |
| 218 | 519+50.00"O" | 50.00' LT |
| 219 | 520+75.00"O" | 50.00' LT |
| 220 | 520+75.00"O" | 0.00' LT |
| 221 | 520+75.00"O" | 45.00' RT |
| 222 | 519+50.00"O" | 45.00' RT |
| 223 | 518+00.00"O" | 50.00' RT |
| 224 | 516+04.04"O" | 50.00' RT |
| 225 | 513+19.30"O" | 50.00' RT |
| 226 | 510+95.41"O" | 79.16' RT |
| 227 | 509+45.42"O" | 78.57' RT |
| 228 | 508+92.32"O" | 45.00' RT |
| 230 | 20+50.00"SK" | 31.28' LT |
| 231 | 20+50.00"SK" | 0.00' LT |
| 232 | 20+50.00"SK" | 34.72' RT |
| 233 | 506+00.00"O" | 33.17' RT |

| | | | | | |
|---|---|---|---|---|---|
| REVISION DATE 11-7-2023 | DATE | SCALE, FEET 0 100 200 | HWY: C.T.H. O | STATE R/W PROJECT NUMBER 5419-06-01 | PLAT SHEET NO: 4.04 |
| | GRID FACTOR N/A | | COUNTY: RICHLAND | CONSTRUCTION PROJECT NUMBER | PS&E SHEET 34 E |

FILE NAME : X:\PT\R\RICHD\163696\Civil 3D 2020\54190001\RW\cad - rw staff only\rdctho01V8.dgn PLOT TIME : 8:08:15 AM PLOT DATE : 11/9/2023 PLOT BY : SEH PLOT NAME : PLOT SCALE : N/A

WISDOT/CADDS SHEET 75

4

4

BASIS OF EXISTING R/W
EXISTING R/W FOR CTH O, BOVEE LANE, AND CARDINAL CREST ROAD ARE ESTABLISHED FROM CENTER LINE OF EXISTING PAVEMENT (PER WIS. STAT. 82.31(2)

MATCH LINE = SECTION LINE
SEE SHEET 4.04

4

7 JUNCTION VIEW DAIRY LLC

SEE DETAIL

SLOPE INTERCEPTS

PLE DRAINAGE 0.01 AC.

8 KIRK M. STIBBE AND SHELLY M. STIBBE & BRENT H. STIBBE AND SARAH M. STIBBE

PLE DRAINAGE 0.04 AC.

PI STA 526+69.38'O'
PI Y =424,969.497
PI X =682,654.375
DELTA =21^12'54"(RT)
R =1,340.00'
D =4^16'33"
T =250.96'
L =496.16'

45 RICHLAND ELECTRIC COOPERATIVE
AMBIGUOUS EASEMENT
VOL. 2, EASEMENTS PG. 472
DOC. # 88537

9 ASH CREEK UNITED METHODIST CHURCH

LOT 2

LOT 1

CSM NO. 1220
V. 11, P. 135
DOC. 334250

(CHURCH & CEMETERY)

TLE-SLOPES 0.01 AC.

TLE-SLOPES 0.03 AC.

520'0'

525'0'

530'0'

535'0'

540'0'

545'0'

R=N00°15'24"W

R=N20°57'31"E

C.T.H. O

1/4 LINE

47 FRONTIER COMMUNICATIONS
16.5' EASEMENT
VOL. 42, PG. 165
DOC. # 151646

47 FRONTIER COMMUNICATIONS

PLE DRAINAGE 0.05 AC.

PC: 524+18.43'O'

PI: 529+14.59'O'

PC: 534+82.54'O'

PI: 543+15.70'O'

5 DEBRA J. KLINZING

47 FRONTIER COMMUNICATIONS
AMBIGUOUS EASEMENT
VOL. 183, PG. 655
DOC. # 186801

SEPTIC SYSTEM EASEMENT
DOC. NO. 178117

45 RICHLAND ELECTRIC COOPERATIVE
AMBIGUOUS EASEMENT
VOL. 2, EASEMENTS PG. 375
DOC. # 88440

PLE - DRAINAGE 0.05 AC.

PLE-DRAINAGE 0.06 AC.

47 FRONTIER COMMUNICATIONS
AMBIGUOUS EASEMENT
VOL. 183, PG. 664
DOC. # 186810

45 RICHLAND ELECTRIC COOPERATIVE

8 KIRK M. STIBBE AND SHELLY M. STIBBE & BRENT H. STIBBE AND SARAH M. STIBBE

PI STA 543+15.70'O'
PI Y =426,512.264
PI X =683,245.308
DELTA =32^41'21"(RT)
R =2,500.00'
D =2^17'31"
T =733.16'
L =1426.33'

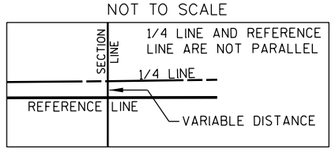
CAST IRON MON
STA. 520+34.37
1.12'LT
Y= 424,334.481
X= 682,656.102

CAST IRON MON
Y= 426,978.223
X= 685,615.821

T 9 N R 1 E 10 3 603 610

T 9 N R 1 E 3

DETAIL
NOT TO SCALE




| FEE CURVE DATA TABLE | | | | | | |
|---|---|---|---|---|---|---|
| CURVE | ARC LENGTH | RADIUS | CHORD BEARING | CHORD LENGTH | TANGENT BACK | TANGENT FORWARD |
| 247-248 | 217.68' | 1390.00 R' | N04°13'47"E | 217.46' | N00°15'25"W | N08°42'58"E |
| 252-253 | 47.12' | 483.00 R' | N32°39'23"E | 47.10' | N29°51'43"E | N35°27'04"E |
| 257-258 | 205.19' | 2540.00 R' | N23°16'22"E | 205.14' | N20°57'31"E | N25°35'14"E |
| 259-585 | 175.04' | 942.28 R' | N26°35'39"E | 174.79' | N21°16'21"E | N31°54'57"E |
| 275-276 | 843.42' | 2455.00 L' | S43°48'21"W | 839.27' | S53°38'52"W | S33°57'50"W |
| 281-282 | 479.50' | 1295.00 L' | S10°21'04"W | 476.77' | S20°57'31"W | S00°15'23"E |

**POINT 250 IS NOT ON PROPERTY LINE

**POINT 251 IS NOT ON 1/4 LINE

| TLE STATION OUT TABLE | | |
|---|---|---|
| POINT | STATION | OFFSET |
| 510 | 532+10.00"O" | 75.84' LT |
| 511 | 533+00.00"O" | 95.00' LT |

| PLE STATION OUT TABLE | | |
|---|---|---|
| POINT | STATION | OFFSET |
| 550 | 523+82.00"O" | 50.00' LT |
| 551 | 525+00.00"O" | 75.00' LT |
| 552 | 525+50.00"O" | 50.00' LT |
| 553 | 525+75.00"O" | 45.00' RT |
| 554 | 534+85.00"O" | 65.00' RT |
| 555 | 534+75.00"O" | 125.00' RT |
| 556 | 534+35.00"O" | 125.00' RT |
| 557 | 533+70.00"O" | 65.00' RT |
| 560 | 525+75.00"O" | 65.00' RT |
| 594 | 525+20.00"O" | 82.00' RT |
| 595 | 524+75.00"O" | 45.00' RT |

| FEE STATION OUT TABLE | | |
|---|---|---|
| POINT | STATION | OFFSET |
| 245 | 520+00.00"O" | 0.00' LT |
| 246 | 520+00.00"O" | 50.00' LT |
| 247 | 524+18.42"O" | 50.00' LT |
| 248 | 526+28.27"O" | 50.00' LT |
| 249 | 527+69.35"O" | 81.33' LT |
| 250 | 529+40.00"O" | 195.00' LT |
| 251 | 530+20.00"O" | 150.00' LT |
| 252 | 530+10.00"O" | 99.76' LT |
| 253 | 530+56.12"O" | 90.21' LT |
| 254 | 531+10.00"O" | 76.28' LT |
| 255 | 534+00.00"O" | 75.00' LT |
| 256 | 535+00.00"O" | 40.00' LT |
| 257 | 535+82.54"O" | 40.00' LT |
| 258 | 537+84.50"O" | 40.00' LT |
| 259 | 538+28.49"O" | 43.83' LT |
| 265 | 38+79.24"B" | 14.66' RT |
| 266 | 38+79.24"B" | 18.35' LT |
| 267 | 52+00.00"CC" | 50.00' LT |
| 268 | 53+17.01"CC" | 33.00' LT |
| 269 | 53+17.01"CC" | 0.00' LT |
| 270 | 53+17.01"CC" | 33.00' RT |
| 271 | 551+30.00"O" | 55.00' LT |
| 272 | 552+00.00"O" | 48.49' LT |
| 273 | 552+00.00"O" | 0.00' LT |
| 274 | 552+00.00"O" | 45.00' RT |
| 275 | 550+08.88"O" | 45.00' RT |
| 276 | 541+50.00"O" | 45.00' RT |
| 277 | 540+00.00"O" | 80.00' RT |
| 278 | 535+82.54"O" | 65.00' RT |
| 279 | 533+00.00"O" | 65.00' RT |
| 280 | 531+15.00"O" | 45.00' RT |
| 281 | 529+14.59"O" | 45.00' RT |
| 282 | 524+18.43"O" | 45.00' RT |
| 283 | 520+00.00"O" | 45.00' RT |
| 585 | 540+00.00"O" | 49.83' LT |
| 586 | 542.00.00"O" | 75.00' LT |
| 587 | 544+00.00"O" | 75.00' LT |
| 588 | 546+00.00"O" | 60.00' LT |
| 589 | 549+25.00"O" | 55.00' LT |

| FEE COURSE TABLE | | |
|---|---|---|
| COURSE | BEARING | DISTANCE |
| 605-265 | S89°48'55"W | 1571.00' |
| 265-610 | S89°48'55"W | 1116.25' |
| 610-603 | S00°52'22"E | 2644.05' |
| 603-245 | S02°07'00"E | 34.38' |
| 245-246 | S89°44'36"W | 50.00' |
| 246-247 | N00°15'24"W | 418.42' |
| 248-249 | N00°12'34"W | 151.19' |
| 249-250 | N13°17'48"W | 216.77' |
| 250-251 | N50°18'59"E | 91.79' |
| 251-252 | S57°47'06"E | 51.23' |
| 253-254 | N35°27'04"E | 55.65' |
| 254-255 | N21°12'42"E | 290.00' |
| 255-256 | N40°14'55"E | 105.95' |
| 256-257 | N20°57'31"E | 82.54' |
| 258-259 | N21°11'55"E | 44.89' |
| 585-586 | N25°49'18"E | 206.48' |
| 586-587 | N37°24'05"E | 205.95' |
| 587-588 | N46°09'35"E | 205.89' |
| 588-589 | N48°51'42"E | 332.28' |
| 589-265 | N03°57'40"W | 42.74' |
| 265-266 | N01°50'39"W | 33.01' |
| 266-267 | N03°51'08"E | 112.76' |
| 267-268 | N25°20'29"W | 113.37' |
| 268-269 | N52°41'50"E | 33.00' |
| 269-270 | N52°41'50"E | 33.00' |
| 270-271 | S37°24'27"E | 260.40' |
| 271-272 | N58°57'27"E | 70.30' |
| 272-273 | S36°21'08"E | 48.49' |
| 273-274 | S36°21'08"E | 45.00' |
| 274-275 | S53°38'52"W | 191.12' |
| 276-277 | S18°47'24"W | 150.35' |
| 277-278 | S27°51'24"W | 405.16' |
| 278-279 | S20°57'31"W | 282.54' |
| 279-280 | S27°07'43"W | 186.08' |
| 280-281 | S20°57'31"W | 200.41' |
| 282-283 | S00°15'24"W | 418.43' |
| 283-245 | S89°44'36"W | 45.00' |

| PLE COURSE TABLE | | |
|---|---|---|
| COURSE | BEARING | DISTANCE |
| 603-550 | N08°15'39"W | 351.05' |
| 246-550 | N00°15'24"W | 382.00' |
| 550-551 | N10°36'30"W | 124.54' |
| 551-552 | N29°49'57"E | 57.99' |
| 247-550 | S00°15'24"E | 36.42' |
| | | |
| 603-554 | N14°21'05"E | 1423.20' |
| 278-554 | S20°57'31"W | 97.54' |
| 554-555 | S59°34'45"E | 60.83' |
| 555-556 | S20°57'31"W | 40.00' |
| 556-557 | S63°40'05"W | 88.46' |
| 557-554 | N20°57'31"E | 115.00' |
| 557-279 | S20°57'31"W | 70.00' |
| | | |
| 603-553 | N05°36'25"E | 537.85' |
| 553-560 | S83°33'42"E | 20.00' |
| 560-594 | S12°50'40"E | 54.69' |
| 594-595 | S43°55'12"W | 56.62' |

| PLE CURVE DATA TABLE | | | | | | |
|---|---|---|---|---|---|---|
| CURVE | ARC LENGTH | RADIUS | CHORD BEARING | CHORD LENGTH | TANGENT BACK | TANGENT FORWARD |
| 552-247 | 136.49' | 1390.00' L | S02°33'22"W | 136.43' | S05°22'09"W | S00°15'25"E |
| 248-552 | 81.19' | 1390.00' L | S07°02'34"W | 81.18' | S08°42'58"W | S05°22'09"W |
| 595-553 | 96.64' | 1295.00' R | N04°18'01"E | 96.62' | N02°09'45"E | N06°26'18"E |
| 282-595 | 54.67' | 1295.00' R | N00°57'11"E | 54.67' | N00°15'23"W | N02°09'45"E |
| 553-281 | 328.19' | 1295.00' R | N13°41'54"E | 327.31' | N06°26'18"E | N13°41'54"E |

APPROXIMATE 1/16 LINE

8 KIRK M. STIBBE AND SHELLY M. STIBBE & BRENT H. STIBBE AND SARAH M. STIBBE

47 FRONTIER COMMUNICATIONS
16.5' EASEMENT
VOL. 42, PG. 171
DOC. # 151652

11 RUSSELL L. BAKKEN

BP: 38+51.45'B'
Y=426,995.583
X=683,703.814

BOVEE LANE

CEMETERY

33'

45 RICHLAND ELECTRIC COOPERATIVE
AMBIGUOUS EASEMENT
VOL. 158, EASEMENTS PG. 677
DOC. # 176480

45 RICHLAND ELECTRIC COOPERATIVE
AMBIGUOUS EASEMENT
VOL. 2, EASEMENTS PG. 313
DOC. # 88378

12 BRIAN L. LAWRENCE

PC: 38+79.24'B'

PT: 39+47.42'B'

R=N88°09'21"E

CARDINAL CREST RD.

R=N62°06'46"E

R=N27°53'14"W

R=N53°38'52"E

PI: 53+17.01'CC'
PI STA 53+17.01'CC'
PI Y =427,249.786
PI X =683,716.301

PI: 52+35.03'CC'

PC: 51+52.68'CC'

STA 40+00.00'B' =
STA 50+70.00'CC'
Y=427,038.414
X=683,843.399

PI: 39+13.93'B'

PI STA 39+13.93'B'
PI Y =426,997.594
PI X =683,766.262
DELTA =26^02'35"(LT)
R =150.00'
D =38^11'50"
T =34.69'
L =68.18'

PI: 550+08.88'O'

STA 550+58.98'OS' =
STA 50+00.00'CC'
Y=426,976.543
X=683,876.140

REFERENCE LINE / SECTION LINE INTERSECTION
550+68.71
Y=426982.311
X=683883.977

PROPERTY DATA FOR PARCEL 13

13 JEFFREY D. BAUER & SUZANNE S. BAUER

MANAGED FOREST LAND
DOC. NO. 242204

45 RICHLAND ELECTRIC COOPERATIVE
AMBIGUOUS EASEMENT
VOL. 155, EASEMENTS PG. 12
DOC. # 174727

PI STA 52+35.03'CC'
PI Y =427,184.280
PI X =683,766.208
DELTA =9^24'56"(LT)
R =1,000.00'
D =5^43'46"
T =82.35'
L =164.33'

CAST IRON MON
Y= 426,986.888
X= 685,303.053

T 9 N R 1 E 605 3 2

MATCH LINE = SIXTEENTH LINE
SEE SHEET 4.06

4

| | | | | |
|---|---|---|---|---|
| REVISION DATE 11-7-2023 | DATE | SCALE, FEET 0 100 200 | HWY: C.T.H. O | STATE R/W PROJECT NUMBER 5419-06-01 | PLAT SHEET NO: 4.05 | |
| | GRID FACTOR N/A | | COUNTY: RICHLAND | CONSTRUCTION PROJECT NUMBER | PS&E SHEET 35 | E |

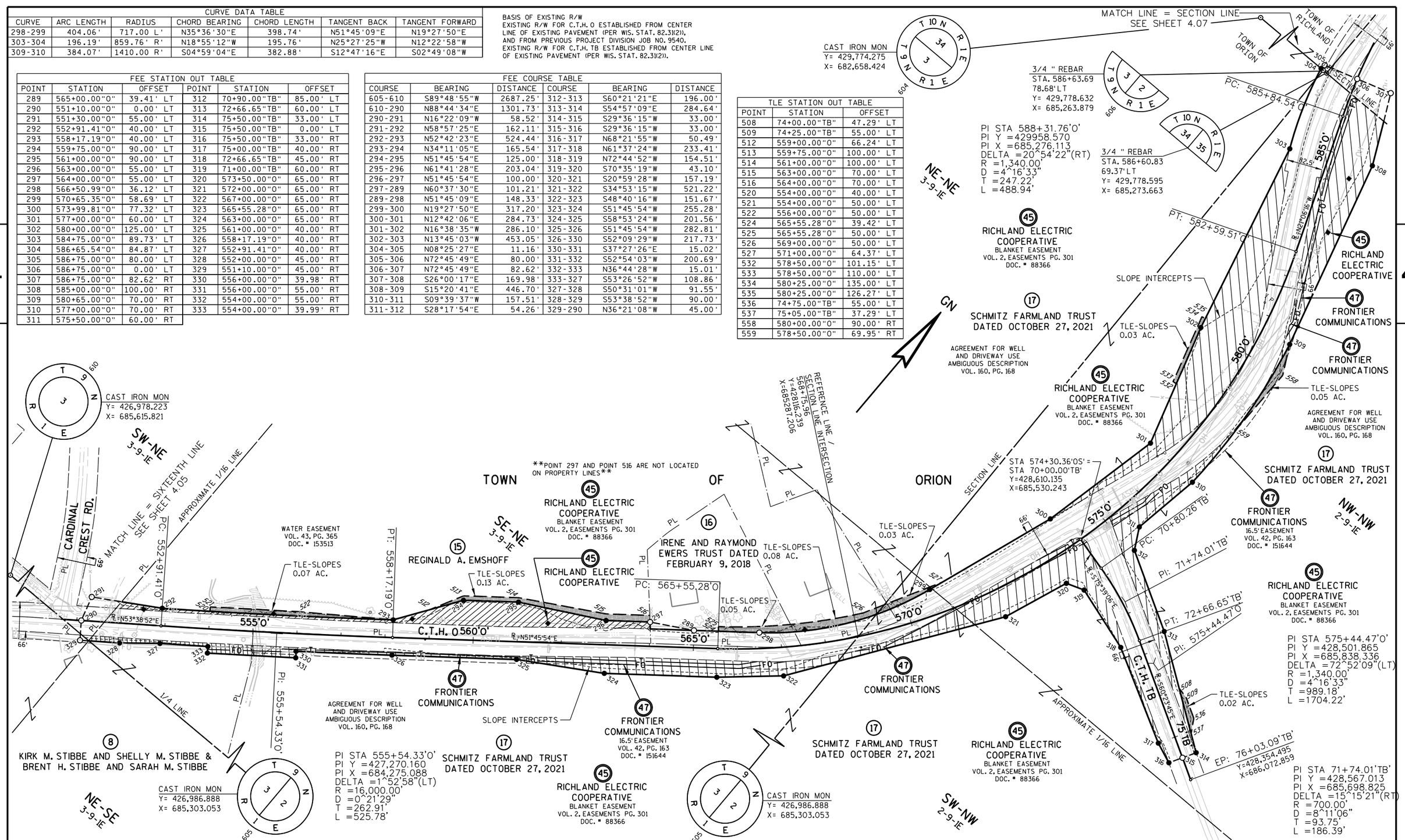
| CURVE DATA TABLE | | | | | | |
|---|---|---|---|---|---|---|
| CURVE | ARC LENGTH | RADIUS | CHORD BEARING | CHORD LENGTH | TANGENT BACK | TANGENT FORWARD |
| 298-299 | 404.06' | 717.00 L' | N35°36'30"E | 398.74' | N51°45'09"E | N19°27'50"E |
| 303-304 | 196.19' | 859.76' R' | N18°55'12"W | 195.76' | N25°27'25"W | N12°22'58"W |
| 309-310 | 384.07' | 1410.00 R' | S04°59'04"E | 382.88' | S12°47'16"E | S02°49'08"W |

BASIS OF EXISTING R/W
EXISTING R/W FOR C.T.H. O ESTABLISHED FROM CENTER LINE OF EXISTING PAVEMENT (PER WIS. STAT. 82.31(2)), AND FROM PREVIOUS PROJECT DIVISION JOB NO. 9540.
EXISTING R/W FOR C.T.H. TB ESTABLISHED FROM CENTER LINE OF EXISTING PAVEMENT (PER WIS. STAT. 82.31(2)).

| FEE STATION OUT TABLE | | | | | |
|---|---|---|---|---|---|
| POINT | STATION | OFFSET | POINT | STATION | OFFSET |
| 289 | 565+00.00"O" | 39.41' LT | 312 | 70+90.00"TB" | 85.00' LT |
| 290 | 551+10.00"O" | 0.00' LT | 313 | 72+66.65"TB" | 60.00' LT |
| 291 | 551+30.00"O" | 55.00' LT | 314 | 75+50.00"TB" | 33.00' LT |
| 292 | 552+91.41"O" | 40.00' LT | 315 | 75+50.00"TB" | 0.00' LT |
| 293 | 558+17.19"O" | 40.00' LT | 316 | 75+50.00"TB" | 33.00' RT |
| 294 | 559+75.00"O" | 90.00' LT | 317 | 75+00.00"TB" | 40.00' RT |
| 295 | 561+00.00"O" | 90.00' LT | 318 | 72+66.65"TB" | 45.00' RT |
| 296 | 563+00.00"O" | 55.00' LT | 319 | 71+00.00"TB" | 60.00' RT |
| 297 | 564+00.00"O" | 55.00' LT | 320 | 573+50.00"O" | 65.00' RT |
| 298 | 566+50.99"O" | 36.12' LT | 321 | 572+00.00"O" | 65.00' RT |
| 299 | 570+65.35"O" | 58.69' LT | 322 | 567+00.00"O" | 65.00' RT |
| 300 | 573+99.81"O" | 77.32' LT | 323 | 565+55.28"O" | 65.00' RT |
| 301 | 577+00.00"O" | 60.00' LT | 324 | 563+00.00"O" | 65.00' RT |
| 302 | 580+00.00"O" | 125.00' LT | 325 | 561+00.00"O" | 40.00' RT |
| 303 | 584+75.00"O" | 89.73' LT | 326 | 558+17.19"O" | 40.00' RT |
| 304 | 586+65.54"O" | 84.87' LT | 327 | 552+91.41"O" | 40.00' RT |
| 305 | 586+75.00"O" | 80.00' LT | 328 | 552+00.00"O" | 45.00' RT |
| 306 | 586+75.00"O" | 0.00' LT | 329 | 551+10.00"O" | 45.00' RT |
| 307 | 586+75.00"O" | 82.62' RT | 330 | 556+00.00"O" | 39.98' RT |
| 308 | 585+00.00"O" | 100.00' RT | 331 | 556+00.00"O" | 55.00' RT |
| 309 | 580+65.00"O" | 70.00' RT | 332 | 554+00.00"O" | 55.00' RT |
| 310 | 577+00.00"O" | 70.00' RT | 333 | 554+00.00"O" | 39.99' RT |
| 311 | 575+50.00"O" | 60.00' RT | | | |

| FEE COURSE TABLE | | | | | |
|---|---|---|---|---|---|
| COURSE | BEARING | DISTANCE | COURSE | BEARING | DISTANCE |
| 605-610 | S89°48'55"W | 2687.25' | 312-313 | S60°21'21"E | 196.00' |
| 610-290 | N88°44'34"E | 1301.73' | 313-314 | S54°57'09"E | 284.64' |
| 290-291 | N16°22'09"W | 58.52' | 314-315 | S29°36'15"W | 33.00' |
| 291-292 | N58°57'25"E | 162.11' | 315-316 | S29°36'15"W | 33.00' |
| 292-293 | N52°42'23"E | 524.44' | 316-317 | N68°21'55"W | 50.49' |
| 293-294 | N34°11'05"E | 165.54' | 317-318 | N61°37'24"W | 233.41' |
| 294-295 | N51°45'54"E | 125.00' | 318-319 | N72°44'52"W | 154.51' |
| 295-296 | N61°41'28"E | 203.04' | 319-320 | S70°35'19"W | 43.10' |
| 296-297 | N51°45'54"E | 100.00' | 320-321 | S20°59'28"W | 157.19' |
| 297-289 | N60°37'30"E | 101.21' | 321-322 | S34°53'15"W | 521.22' |
| 289-298 | N51°45'09"E | 148.33' | 322-323 | S48°40'16"W | 151.67' |
| 299-300 | N19°27'50"E | 317.20' | 323-324 | S51°45'54"W | 255.28' |
| 300-301 | N12°42'06"E | 284.73' | 324-325 | S58°53'24"W | 201.56' |
| 301-302 | N16°38'35"W | 286.10' | 325-326 | S51°45'54"W | 282.81' |
| 302-303 | N13°45'03"W | 453.05' | 326-330 | S52°09'29"W | 217.73' |
| 304-305 | N08°25'27"E | 11.16' | 330-331 | S37°27'26"E | 15.02' |
| 305-306 | N72°45'49"E | 80.00' | 331-332 | S52°54'03"W | 200.69' |
| 306-307 | N72°45'49"E | 82.62' | 332-333 | N36°44'28"W | 15.01' |
| 307-308 | S26°00'17"E | 169.98' | 333-327 | S53°26'52"W | 108.86' |
| 308-309 | S15°20'41"E | 446.70' | 327-328 | S50°31'01"W | 91.55' |
| 310-311 | S09°39'37"W | 157.51' | 328-329 | S53°38'52"W | 90.00' |
| 311-312 | S28°17'54"E | 54.26' | 329-290 | N36°21'08"W | 45.00' |

| TLE STATION OUT TABLE | | |
|---|---|---|
| POINT | STATION | OFFSET |
| 508 | 74+00.00"TB" | 47.29' LT |
| 509 | 74+25.00"TB" | 55.00' LT |
| 512 | 559+00.00"O" | 66.24' LT |
| 513 | 559+75.00"O" | 100.00' LT |
| 514 | 561+00.00"O" | 100.00' LT |
| 515 | 563+00.00"O" | 70.00' LT |
| 516 | 564+00.00"O" | 70.00' LT |
| 520 | 554+00.00"O" | 40.00' LT |
| 521 | 554+00.00"O" | 50.00' LT |
| 522 | 556+00.00"O" | 50.00' LT |
| 524 | 565+55.28"O" | 39.42' LT |
| 525 | 565+55.28"O" | 50.00' LT |
| 526 | 569+00.00"O" | 50.00' LT |
| 527 | 571+00.00"O" | 64.37' LT |
| 532 | 578+50.00"O" | 101.15' LT |
| 533 | 578+50.00"O" | 110.00' LT |
| 534 | 580+25.00"O" | 135.00' LT |
| 535 | 580+25.00"O" | 126.27' LT |
| 536 | 74+75.00"TB" | 55.00' LT |
| 537 | 75+05.00"TB" | 37.29' LT |
| 558 | 580+00.00"O" | 90.00' RT |
| 559 | 578+50.00"O" | 69.95' RT |




| | | | | | |
|---|---|---|---|---|---|
| REVISION DATE 11-7-2023 | DATE | SCALE, FEET 0 100 200 | HWY: C.T.H. O | STATE R/W PROJECT NUMBER 5419-06-01 | PLAT SHEET NO: 4.06 |
| | GRID FACTOR N/A | | COUNTY: RICHLAND | CONSTRUCTION PROJECT NUMBER | PS&E SHEET 36 E |

FILE NAME : X:\PT\R\RICHD\163696\Civil 3D 2020\54190001\RW\cad - rw staff only\rdctho03V8.dgn PLOT TIME : 8:08:17 AM PLOT DATE : 11/9/2023 PLOT BY : SEH PLOT NAME : PLOT SCALE : N/A

WISDOT/CADDS SHEET 75

BASIS OF EXISTING R/W
EXISTING FOR C.T.H. O ESTABLISHED FROM CENTER LINE OF EXISTING PAVEMENT (PER WIS. STAT. 82.31(2)), AND CSM NO. 372.

| FEE COURSE TABLE | | |
|---|---|---|
| COURSE | BEARING | DISTANCE |
| 604-606 | N89°54'15"E | 2605.46' |
| 606-3604 | S89°47'00"E | 9.78' |
| 3604-607 | N00°08'42"W | 2724.59' |
| 607-353 | N43°07'24"W | 108.36' |
| 353-354 | N89°58'37"E | 75.00' |
| 354-355 | N89°58'37"E | 55.00' |
| 355-356 | S00°01'23"E | 100.00' |
| 356-357 | S11°13'12"W | 116.28' |
| 357-358 | S00°08'42"E | 135.85' |
| 358-359 | S05°08'08"E | 125.47' |
| 359-360 | S00°11'54"E | 275.00' |
| 360-361 | S05°03'24"E | 401.44' |
| 361-362 | S00°11'54"E | 100.00' |
| 362-363 | S04°49'51"W | 250.97' |
| 363-364 | S04°29'15"E | 401.12' |
| 364-365 | S02°05'33"W | 250.20' |
| 365-366 | S02°45'50"E | 342.35' |
| 366-367 | S01°17'53"W | 143.99' |
| 367-368 | S25°44'37"E | 191.15' |
| 368-340 | S69°33'24"W | 91.89' |
| 340-341 | S69°33'24"W | 90.15' |
| 341-342 | N14°42'59"W | 70.02' |
| 342-343 | N08°25'27"E | 11.16' |
| 343-344 | N11°06'52"W | 344.20' |
| 344-345 | N01°54'29"E | 349.86' |
| 345-346 | N15°03'25"E | 57.01' |
| 346-347 | N00°11'54"W | 600.00' |
| 347-348 | N04°29'15"W | 200.56' |
| 348-349 | N00°11'54"W | 100.00' |
| 349-350 | N02°26'40"E | 325.35' |
| 350-351 | N00°11'54"W | 375.00' |
| 351-352 | N03°24'35"W | 350.78' |
| 352-353 | N00°01'23"W | 100.00' |

TOWN OF RICHLAND

SE-SE 34-10-1E

NE-SE 34-10-1E

SW-SW 35-10-1E

NW-SW 35-10-1E

GN

604 CAST IRON MON
Y= 429,774.275
X= 682,658.424

PI STA 588+31.76'0'
PI Y =429958.570
PI X =685,276.113
DELTA =20°54'22"(RT)
R =1,340.00'
D =4°16'33"
T =247.22'
L =488.94'

3/4 " REBAR
STA. 586+63.69
78.68'LT
Y= 429,778.632
X= 685,263.879

3/4 " REBAR
STA. 586+60.83
69.37'LT
Y= 429,778.595
X= 685,273.663

MATCH LINE = SECTION LINE
SEE SHEET 4.06

SECTION LINE

TOWN OF ORION

TOWN OF RICHLAND

(17) SCHMITZ FARMLAND TRUST DATED OCTOBER 27, 2021

(45) RICHLAND ELECTRIC COOPERATIVE
DRIVEWAY EASEMENT
VOL. 211, PG. 352, DOC. # 198272 &
VOL. 211, PG. 353, DOC. # 198273

DRIVEWAY EASEMENT
VOL. 359, PG. 689, DOC. # 248323

(45) RICHLAND ELECTRIC COOPERATIVE
AMBIGUOUS EASEMENT
VOL. 442, PG. 194
DOC. # 265520

CSM 372
V 3, CSM P 215
DOC#244178

LOT 1

OL 1

(47) FRONTIER COMMUNICATIONS
16.5' EASEMENT
VOL. 42, PG. 377
DOC. # 152113

(20) JOHN L. GHASTIN & SUSAN K. GHASTIN

TLE-SLOPES
0.10 AC.

TLE-DRIVEWAY/SLOPES
0.66 AC.

ACCESS ROAD

SLOPE INTERCEPTS

TLE-SLOPES
0.05 AC.

TLE-DRIVEWAY
0.04 AC.

TLE-DRIVEWAY
0.01 AC.

TLE-SLOPES
0.01 AC.

TLE-SLOPES
0.08 AC.

(21) UNBEHAUN LAND, LLC

(22) STEVEN J. HANOLD, AS TRUSTEE OF THE HANOLD IRREVOCABLE TRUST DATED 6-13-2012

(23) STEVEN J. HANOLD

(45) RICHLAND ELECTRIC COOPERATIVE
AMBIGUOUS EASEMENT
VOL. 2, EASEMENTS PG. 343

BLANKET MANURE EASEMENT
DOC. # 314609

APPROXIMATE 1/16 LINE

1/4 LINE

MATCH LINE = QUARTER LINE
SEE SHEET 4.08

PI: 590+73.48'0'

PI: 588+31.76'0'

PI: 612+35.89'0'
Y=432,368.182
X=685,267.777

PC: 585+84.54'0'

585'0' 590'0' 595'0' 600'0' 605'0' 610'0' 615'0'

C.T.H. O

R=N00°11'54"W

R=N00°01'23"W

WE ENERGY (GAS)

SEE DETAIL

CAST IRON MON
STA. 613+70.88
0.96'LT
Y= 432,503.175
X= 685,266.763

DETAIL
NOT TO SCALE

SECTION LINE AND REFERENCE LINE ARE NOT PARALLEL

SECTION 1/4 LINE

REFERENCE LINE

VARIABLE DISTANCE

| FEE STATION OUT TABLE | | |
|---|---|---|
| POINT | STATION | OFFSET |
| 340 | 586+00.00"O" | 0.00' LT |
| 341 | 586+00.00"O" | 90.15' LT |
| 342 | 586+65.54"O" | 84.87' LT |
| 343 | 586+75.00"O" | 80.00' LT |
| 344 | 590+00.00"O" | 85.00' LT |
| 345 | 593+45.00"O" | 70.00' LT |
| 346 | 594+00.00"O" | 55.00' LT |
| 347 | 600+00.00"O" | 55.00' LT |
| 348 | 602+00.00"O" | 70.00' LT |
| 349 | 603+00.00"O" | 70.00' LT |
| 350 | 606+25.00"O" | 55.00' LT |
| 351 | 610+00.00"O" | 55.00' LT |
| 352 | 613+50.00"O" | 75.00' LT |
| 353 | 614+50.00"O" | 75.00' LT |
| 354 | 614+50.00"O" | 0.00' LT |
| 355 | 614+50.00"O" | 55.00' RT |
| 356 | 613+50.00"O" | 55.00' RT |
| 357 | 612+35.84"O" | 32.33' RT |
| 358 | 611+00.00"O" | 32.20' RT |
| 359 | 609+75.00"O" | 43.00' RT |
| 360 | 607+00.00"O" | 43.00' RT |
| 361 | 603+00.00"O" | 77.00' RT |
| 362 | 602+00.00"O" | 77.00' RT |
| 363 | 599+50.00"O" | 55.00' RT |
| 364 | 595+50.00"O" | 85.00' RT |
| 365 | 593+00.00"O" | 75.00' RT |
| 366 | 589+50.00"O" | 85.00' RT |
| 367 | 588+00.00"O" | 60.00' RT |
| 368 | 586+00.00"O" | 91.89' RT |

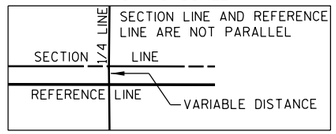
| TLE STATION OUT TABLE | | |
|---|---|---|
| POINT | STATION | OFFSET |
| 504 | 594+00.00"O" | 79.00' RT |
| 505 | 594+00.00"O" | 90.00' RT |
| 506 | 596+50.00"O" | 90.00' RT |
| 507 | 596+50.00"O" | 77.50' RT |
| 517 | 595+10.00"O" | 150.00' LT |
| 518 | 595+50.00"O" | 150.00' LT |
| 519 | 597+60.00"O" | 85.00' LT |
| 538 | 605+20.00"O" | 58.30' RT |
| 539 | 604+75.00"O" | 85.00' RT |
| 541 | 595+00.00"O" | 90.00' LT |
| 542 | 603+00.00"O" | 80.00' LT |
| 543 | 614+00.00"O" | 70.00' RT |
| 544 | 613+50.00"O" | 70.00' RT |
| 545 | 612+35.84"O" | 40.00' RT |
| 546 | 611+00.00"O" | 40.00' RT |
| 547 | 610+75.00"O" | 50.00' RT |
| 571 | 606+70.00"O" | 45.55' RT |
| 572 | 606+70.00"O" | 55.00' RT |
| 573 | 606+35.00"O" | 55.00' RT |
| 574 | 606+35.00"O" | 48.53' RT |
| 575 | 607+00.00"O" | 55.00' LT |
| 576 | 607+00.00"O" | 60.00' LT |
| 577 | 607+30.00"O" | 60.00' LT |
| 578 | 607+30.00"O" | 55.00' LT |
| 579 | 604+45.00"O" | 85.00' RT |
| 596 | 604+05.00"O" | 68.07' RT |

| | | | | | |
|---|---|---|---|---|---|
| REVISION DATE 11-7-2023 | DATE | SCALE, FEET 0 100 200 | HWY: C.T.H. O | STATE R/W PROJECT NUMBER 5419-06-01 | PLAT SHEET NO: 4.07 |
| | GRID FACTOR N/A | | COUNTY: RICHLAND | CONSTRUCTION PROJECT NUMBER | PS&E SHEET 37 E |

BASIS OF EXISTING R/W
EXISTING R/W FOR C.T.H. O ESTABLISHED FROM CENTER LINE OF EXISTING PAVEMENT (WIS. STAT. 82.31(2)), CSM NO. 411 AND PROJECT 5419-03-21.
EXISTING R/W FOR C.T.H. OO ESTABLISHED FROM CENTER LINE OF EXISTING PAVEMENT (WIS. STAT. 82.31(2)).

GN

DETAIL
NOT TO SCALE




TOWN OF RICHLAND

SE-NE 34-10-1E

NE-NE 34-10-1E

NW-NW 35-10-1E

SW-NW 35-10-1E

| TLE STATION OUT TABLE | | |
|---|---|---|
| POINT | STATION | OFFSET |
| 543 | 614+00.00"O" | 70.00' RT |
| 544 | 613+50.00"O" | 70.00' RT |
| 563 | 614+50.00"O" | 55.00' RT |
| 568 | 639+42.09"O" | 55.00' RT |
| 569 | 637+75.00"O" | 55.00' RT |
| 570 | 636+75.00"O" | 45.00' RT |

MATCH LINE = QUARTER LINE
SEE SHEET 4.07

PI: 612+35.89'O'
Y=432,368.182
X=685,267.777

LOT 1
CSM 411
V 4, CSM P 39
DOC#248581

(24) DAVID W. UNBEHAUN & CATHERINE M. UNBEHAUN

(47) FRONTIER COMMUNICATIONS
VOL. 214, PG. 672
DOC. # 199789

(47) FRONTIER COMMUNICATIONS

(47) FRONTIER COMMUNICATIONS

(25) PINE VALLEY MANOR

SLOPE INTERCEPTS

(51) GENUINE TELECOM

(47) FRONTIER COMMUNICATIONS
AMBIGUOUS EASEMENT
VOL. 219, PG. 471
DOC. # 202680

(26) SCHMITZ FARMLAND TRUST
DATED OCTOBER 27, 2021

AMBIGUOUS INGRESS / EGRESS EASEMENT
VOL. 176, PG. 245

(50) WE ENERGIES

(47) FRONTIER COMMUNICATIONS

C.T.H. OO

PI: 638+77.12
Y=435,009.413
X=685,266.712

BP: 60+00.00'OO'
Y=435,114.955
X=684,922.272

PC: 642+00.14'O'

PINE RIVER

SECTION LINE

MATCH LINE = SECTION LINE
SEE SHEET 4.09

615'O' | 620'O' | 625'O' C.T.H. O | 630'O' | 635'O' | 640'O'

R=N00°01'23"W

R=N00°23'27"E

66'

SEE DETAIL

TLE-SLOPES
0.02 AC.

RICHLAND ELECTRIC COOPERATIVE

SLOPE INTERCEPTS

TLE-SLOPES
0.05 AC.

RICHLAND COUNTY
20'UTILITY EASEMENT
VOL. 266, PG. 6
DOC. # 220573

STA 638+89.93'OS' =
STA 63+56.79'OO'
Y=435,022.199
X=685,266.799

SEE DETAIL

(21) UNBEHAUN LAND, LLC

(25) PINE VALLEY MANOR

(21) UNBEHAUN LAND, LLC

1/4 LINE

APPROXIMATE 1/16 LINE

SECTION LINE

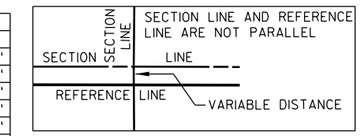
CAST IRON MON
STA. 613+70.88
0.96'LT
Y= 432,503.175
X= 685,266.763

CAST IRON MON
STA. 640+55.26
0.52'LT
Y= 435,187.554
X= 685,266.323

| FEE STATION OUT TABLE | | | | | |
|---|---|---|---|---|---|
| POINT | STATION | OFFSET | POINT | STATION | OFFSET |
| 369 | 623+25.00"O" | 55.00' LT | 391 | 640+75.00"O" | 80.59' RT |
| 375 | 613+50.00"O" | 0.00' LT | 392 | 639+41.79"O" | 80.76' RT |
| 376 | 613+50.00"O" | 75.00' LT | 393 | 639+41.74"O" | 45.00' RT |
| 377 | 614+50.00"O" | 75.00' LT | 394 | 638+89.21"O" | 45.00' RT |
| 378 | 616+00.00"O" | 50.00' LT | 395 | 629+00.00"O" | 45.00' RT |
| 379 | 619+50.00"O" | 50.00' LT | 396 | 628+25.00"O" | 35.00' RT |
| 380 | 621+00.00"O" | 55.00' LT | 397 | 625+60.00"O" | 35.00' RT |
| 381 | 630+25.00"O" | 55.00' LT | 398 | 622+75.00"O" | 60.00' RT |
| 382 | 631+30.00"O" | 50.00' LT | 399 | 621+00.00"O" | 60.00' RT |
| 383 | 637+00.00"O" | 50.00' LT | 400 | 619+50.00"O" | 55.00' RT |
| 384 | 638+30.00"O" | 70.00' LT | 401 | 613+50.00"O" | 55.00' RT |
| 385 | 61+40.00"OO" | 32.08' RT | 402 | 623+36.00"O" | 46.00' LT |
| 386 | 61+40.00"OO" | 0.00' LT | 403 | 623+50.00"O" | 46.00' LT |
| 387 | 61+40.00"OO" | 33.92' LT | 404 | 623+58.00"O" | 53.00' LT |
| 388 | 639+64.58"O" | 70.50' LT | 405 | 626+75.00"O" | 55.00' LT |
| 389 | 640+75.00"O" | 51.82' LT | 406 | 626+95.00"O" | 52.00' LT |
| 390 | 640+75.00"O" | 0.00' LT | 433 | 61+40.00"OO" | 50.00' LT |

| FEE COURSE TABLE | | | | | |
|---|---|---|---|---|---|
| COURSE | BEARING | DISTANCE | COURSE | BEARING | DISTANCE |
| 608-607 | S00°00'34"E | 2684.38' | 385-386 | N15°04'06"E | 32.08' |
| 607-375 | S02°39'16"E | 20.90' | 386-387 | N15°04'06"E | 33.92' |
| 375-376 | S89°58'37"W | 75.00' | 387-433 | N15°04'06"E | 16.08' |
| 376-377 | N00°01'23"W | 100.00' | 433-388 | S76°51'50"E | 129.75' |
| 377-378 | N09°26'21"E | 152.07' | 388-389 | N09°24'47"E | 111.49' |
| 378-379 | N00°01'23"W | 350.00' | 389-390 | S89°57'12"E | 51.82' |
| 379-380 | N01°55'56"W | 150.08' | 390-391 | S89°57'12"E | 80.59' |
| 380-369 | N00°01'23"W | 225.00' | 391-392 | S00°01'39"E | 133.21' |
| 369-402 | N39°15'59"E | 14.21' | 392-393 | S89°58'19"W | 35.76' |
| 402-403 | N00°01'23"W | 14.00' | 393-394 | S00°02'48"W | 52.48' |
| 403-404 | N41°12'33"W | 10.63' | 394-395 | S00°01'23"E | 989.21' |
| 404-405 | N00°23'05"W | 317.01' | 395-396 | S07°34'18"W | 75.66' |
| 405-406 | N08°30'28"E | 20.22' | 396-397 | S00°01'23"E | 265.00' |
| 406-381 | N00°32'38"W | 330.02' | 397-398 | S05°02'10"E | 286.09' |
| 381-382 | N02°42'12"E | 105.12' | 398-399 | S00°01'23"E | 175.00' |
| 382-383 | N00°01'23"W | 570.00' | 399-400 | S01°53'10"W | 150.08' |
| 383-384 | N08°46'09"W | 131.53' | 400-401 | S00°01'23"E | 600.00' |
| 384-385 | N59°58'25"W | 170.49' | 401-375 | S89°58'37"W | 55.00' |

DETAIL
NOT TO SCALE

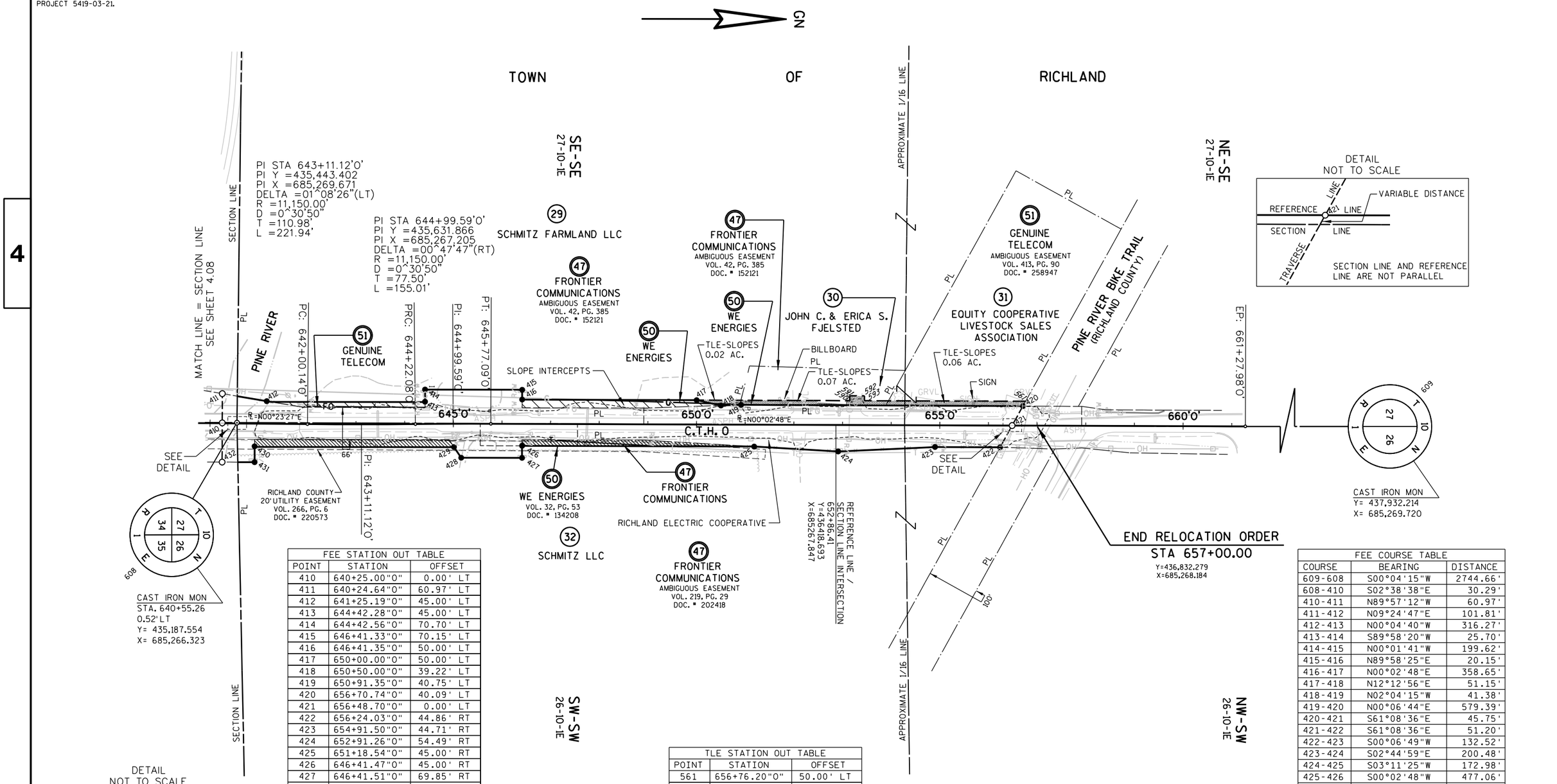



| | | | | | |
|---|---|---|---|---|---|
| REVISION DATE 11-7-2023 | DATE | SCALE, FEET 0 100 200 | HWY: C.T.H. O | STATE R/W PROJECT NUMBER 5419-06-01 | PLAT SHEET NO: 4.08 |
| | GRID FACTOR N/A | | COUNTY: RICHLAND | CONSTRUCTION PROJECT NUMBER | PS&E SHEET 38 E |

FILE NAME : X:\PT\R\RICHD\163696\Civil 3D 2020\54190001\RW\cad - rw staff only\rdctho05V8.dgn PLOT TIME : 8:08:19 AM PLOT DATE : 11/9/2023 PLOT BY : SEH PLOT NAME : PLOT SCALE : N/A

WISDOT/CADDS SHEET 75

BASIS OF EXISTING R/W
EXISTING R/W FOR C.T.H. O ESTABLISHED FROM CENTER LINE OF EXISTING PAVEMENT (WIS. STAT. 82.31(2)), AND PROJECT 5419-03-21.
EXISTING R/W FOR THE PINE RIVER BIKE TRAIL ESTABLISHED FROM PROJECT 5419-03-21.




| FEE STATION OUT TABLE | | |
|---|---|---|
| POINT | STATION | OFFSET |
| 410 | 640+25.00"O" | 0.00' LT |
| 411 | 640+24.64"O" | 60.97' LT |
| 412 | 641+25.19"O" | 45.00' LT |
| 413 | 644+42.28"O" | 45.00' LT |
| 414 | 644+42.56"O" | 70.70' LT |
| 415 | 646+41.33"O" | 70.15' LT |
| 416 | 646+41.35"O" | 50.00' LT |
| 417 | 650+00.00"O" | 50.00' LT |
| 418 | 650+50.00"O" | 39.22' LT |
| 419 | 650+91.35"O" | 40.75' LT |
| 420 | 656+70.74"O" | 40.09' LT |
| 421 | 656+48.70"O" | 0.00' LT |
| 422 | 656+24.03"O" | 44.86' RT |
| 423 | 654+91.50"O" | 44.71' RT |
| 424 | 652+91.26"O" | 54.49' RT |
| 425 | 651+18.54"O" | 45.00' RT |
| 426 | 646+41.47"O" | 45.00' RT |
| 427 | 646+41.51"O" | 69.85' RT |
| 428 | 645+16.12"O" | 69.85' RT |
| 429 | 645+01.44"O" | 48.00' RT |
| 430 | 640+92.04"O" | 48.00' RT |
| 431 | 640+92.27"O" | 79.26' RT |
| 432 | 640+25.48"O" | 79.75' RT |

| TLE STATION OUT TABLE | | |
|---|---|---|
| POINT | STATION | OFFSET |
| 561 | 656+76.20"O" | 50.00' LT |
| 590 | 653+15.00"O" | 50.00' LT |
| 591 | 653+15.00"O" | 60.00' LT |
| 592 | 656+45.00"O" | 60.00' LT |
| 593 | 656+45.00"O" | 50.00' LT |

| FEE COURSE TABLE | | |
|---|---|---|
| COURSE | BEARING | DISTANCE |
| 609-608 | S00°04'15"W | 2744.66' |
| 608-410 | S02°38'38"E | 30.29' |
| 410-411 | N89°57'12"W | 60.97' |
| 411-412 | N09°24'47"E | 101.81' |
| 412-413 | N00°04'40"W | 316.27' |
| 413-414 | S89°58'20"W | 25.70' |
| 414-415 | N00°01'41"W | 199.62' |
| 415-416 | N89°58'25"E | 20.15' |
| 416-417 | N00°02'48"E | 358.65' |
| 417-418 | N12°12'56"E | 51.15' |
| 418-419 | N02°04'15"W | 41.38' |
| 419-420 | N00°06'44"E | 579.39' |
| 420-421 | S61°08'36"E | 45.75' |
| 421-422 | S61°08'36"E | 51.20' |
| 422-423 | S00°06'49"W | 132.52' |
| 423-424 | S02°44'59"E | 200.48' |
| 424-425 | S03°11'25"W | 172.98' |
| 425-426 | S00°02'48"W | 477.06' |
| 426-427 | N89°58'20"E | 24.85' |
| 427-428 | S00°01'41"E | 125.00' |
| 428-429 | S55°55'35"W | 26.29' |
| 429-430 | S00°05'59"E | 410.00' |
| 430-431 | N89°58'19"E | 31.26 |
| 431-432 | S00°01'39"E | 66.79' |
| 432-410 | N89°57'12"W | 79.75' |

| | | | | | |
|---|---|---|---|---|---|
| REVISION DATE 11-7-2023 | DATE | SCALE: FEET 0 100 200 | HWY: C.T.H. O | STATE R/W PROJECT NUMBER 5419-06-01 | PLAT SHEET NO: 4.09 |
| | GRID FACTOR N/A | | COUNTY: RICHLAND | CONSTRUCTION PROJECT NUMBER | PS&E SHEET 39 E |

FILE NAME : X:\PT\R\RICHD\163696\Civil 3D 2020\54190001\RW\cad - rw staff only\rdctho06V8.dgn PLOT TIME : 8:08:20 AM PLOT DATE : 11/9/2023 PLOT BY : SEH PLOT NAME : PLOT SCALE : N/A

WISDOT/CADDS SHEET 75

## BENCHMARK TABLE

| NO. | STATION | DESCTIPTION | ELEV |
|---|---|---|---|
| 1 | 506+76.17'O' 52.2' LT | TOP NE COR TOP STEP CONC LANDING AREA OF TOWN HALL CTH O/CTH OO | 738.63 |
| 2 | 509+64.93'O' 20.2' RT | FD ALUMINUM DISC SE WINGWALL OF STRUCTURE B-52-15 | 739.59 |

= CLEARING AND GRUBBING

BEGIN CONSTRUCTION
STA 14+50.30'OS'
MATCH EXISTING
SAWCUT REQ'D

KELLAND LAND LLC

PL

TOWN OF ORION

CTH O SOUTH

15'OS'

S89°52'43"E

16'OS'

STA 15+00'OS' LT
CONSTRUCT 27.0' WIDE PE
(BY OTHERS)

STA 508+69'O' LT
1 - REMOVE EXISTING 18" X 36' CVCMP

ASH CREEK

WETLAND BOUNDARY (TYP)

SCHMITZ FARMLAND LLC

MGS GUARDRAIL TERMINAL EAT REQ'D
STA 508+79.92'O' TO STA 509+33.01'O' LT
STA 511+48.66'O' TO STA 512+01.75'O' LT
STA 507+92.71'O' TO STA 508+45.80'O' RT
STA 511+48.58'O' TO STA 512+01.66'O' RT

MGS GUARDRAIL 3 REQ'D
STA 510+61.27'O' TO STA 511+48.66'O' LT
STA 508+45.80'O' TO STA 509+33.19'O' RT
STA 510+61.18'O' TO STA 511+48.58'O' RT

RICHLAND ELECTRIC COOP

SLOPE INTERCEPT (TYP)

R/W

BP: 500+00.00

N

501'O' 502'O' 503'O' 504'O' 505'O' 506'O' 507'O' 508'O' 509'O' 510'O' 511'O' 512'O' 513'O' 514

N0°17'16"W

CTH OO

EP: 16+85.49

BP: 20+00.00

N0°42'01"W

CTH O/CTH OO

MATCH LINE 514+00

STA 507+06.43'O' CTH O0 =
STA 16+84.49'OS' CTH O SOUTH
CONSTRUCT MODIFIED
TYPE D INTERSECTION
SEE INTERSECTION DETAIL

PI: 506+06.43

S89°59'54"E

SANTA KLAUS LANE

STA 507+11.03'O' CTH O =
STA 20+00.00'SK' SANTA KLAUS LANE
CONSTRUCT MODIFIED
TYPE C INTERSECTION
SEE INTERSECTION DETAIL

KELLY G. MULLARNEY

WETLAND BOUNDARY (TYP)

DEBRA J. KLINZING

TLE

FRONTIER

EXCEPTION TO NET CENTERLINE LENGTH
STA 509+70.39'O' TO STA 510+24.01'O'
STR B-52-15

STA 513+25'O' RT
CONSTRUCT 30.0' WIDE BASE AGG FE
1 - 18-INCH X 44' CP CLASS III-A NON METAL
2 - AEW'S FOR CP 18-INCH
REMOVE EXISTING 18"x50' CVCMP

MGS THRIE BEAM TRANSITION
STA 509+33.01'O' TO STA 509+72.40'O' LT
STA 510+21.88'O' TO STA 510+61.27'O' LT
STA 509+33.19'O' TO STA 509+72.59'O' RT
STA 510+21.79'O' TO STA 510+61.18'O' RT

BEGIN PROJECT
5419-06-70
STA 505+41.95'O'
Y= 422842.145
X= 682670.944
MATCH EXISTING
SAWCUT REQ'D

SCHMITZ FARMLAND LLC

END CONSTRUCTION
STA 20+90.51'SK'
MATCH EXISTING
SAWCUT REQ'D

PI: 22+38.27

S22°51'

5

5

755 750 745 740 735 730 725 720

VCL = 100.00
K = 184.35

VCL = 360.00
K = 137.07

VCL = 150.00
K = 682.20

VCL = 400.00
K = 191.48

STA 505+41.95
EL 736.94

VPC STA 505+91.30
VPC EL 737.27

VPI STA 506+66.30
VPI EL 737.77

VPT STA 507+41.30
VPT EL 738.11

VPI STA 508+00.00
VPI EL 738.37

VPT STA 508+50.00
VPT EL 738.87

VPI STA 510+70.00
VPI EL 741.05

VPT STA 512+70.00
VPT EL 738.86

0.67%

0.45%

0.99%

-1.10%

-1.34%

VPC STA 507+50.00
VPC EL 738.14

STA 507+52.45
EL 735.91

SD RT

STA 508+50.00
EL 734.60

VPC STA 508+70.00
VPC EL 739.06

STA 509+25'O'
1 - 18-INCH X 68' CP CLASS III-A
NON METAL
2 - AEW'S FOR CP 18-INCH
(NON-DRAINAGE PIPE)

HP STA 510+60.06
HP EL 740.01

STA 510+75'O'
1 - 18-INCH X 68' CP CLASS III-A
NON METAL
2 - AEW'S FOR CP 18-INCH
(NON-DRAINAGE PIPE)

VPC STA 513+05.00
VPC EL 738.47

FINISHED R/L PROFILE

EXISTING R/L PROFILE

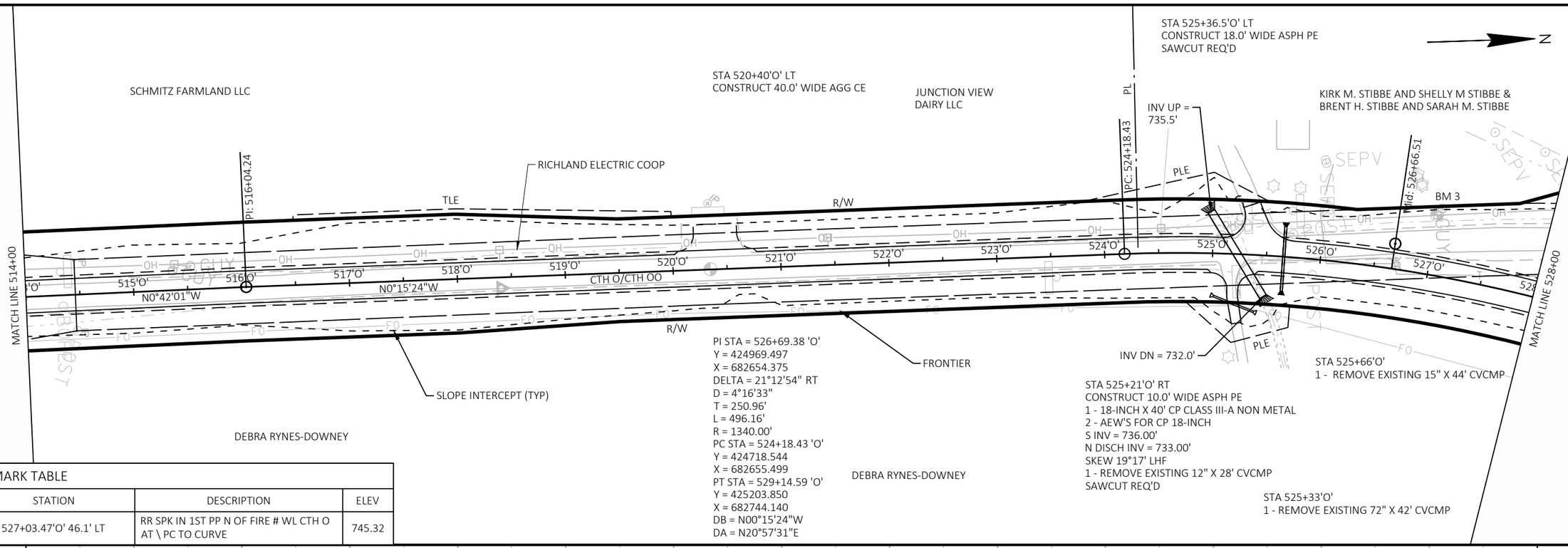
EXISTING R/L ELEVATION

FINISHED R/L ELEVATION

737.56 737.31 737.18 737.05 736.91 736.77 736.75 736.73 736.69 736.65 736.99 736.99 737.32 737.32 737.77 737.63 737.92 737.91 738.08 738.14 738.23 738.44 738.39 738.87 739.03 739.34 739.57 739.69 722.59 739.91 739.79 740.01 739.47 739.97 738.71 739.80 737.91 739.50 736.82 739.07 735.83 738.53 735.25 738.05 734.72 737.76

500 501 502 503 504 505 506 507 508 509 510 511 512 513 514

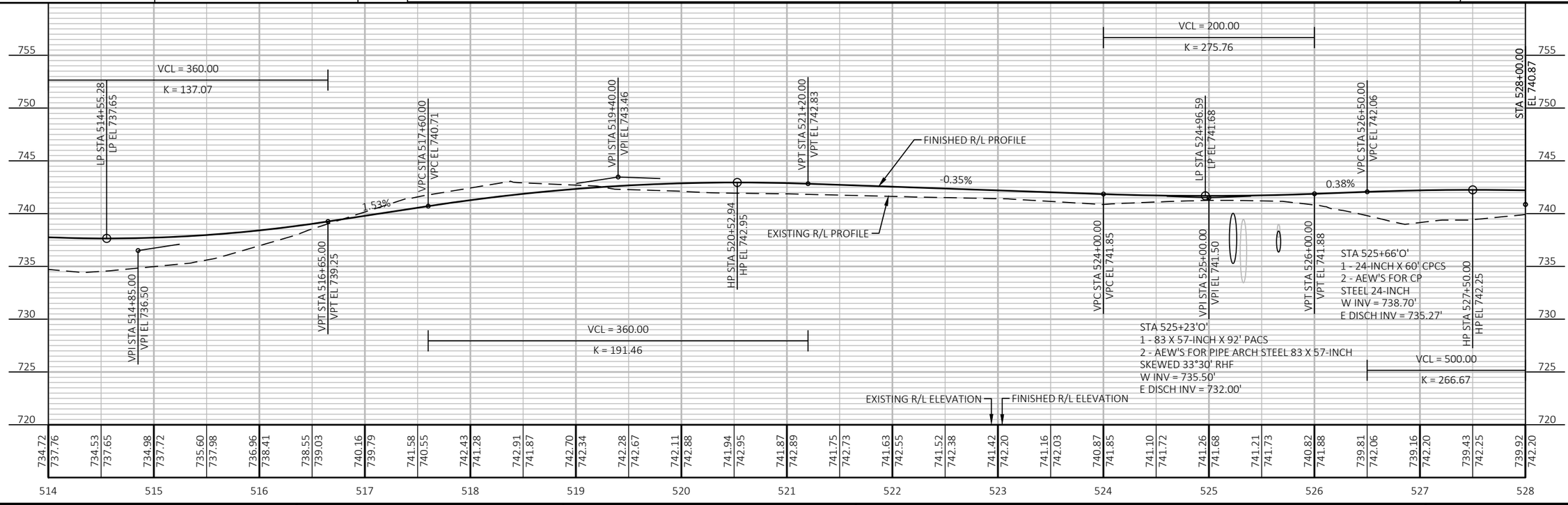
| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | PLAN AND PROFILE: CTH O/CTH OO | SHEET 40 | E |
|---|---|---|---|---|---|



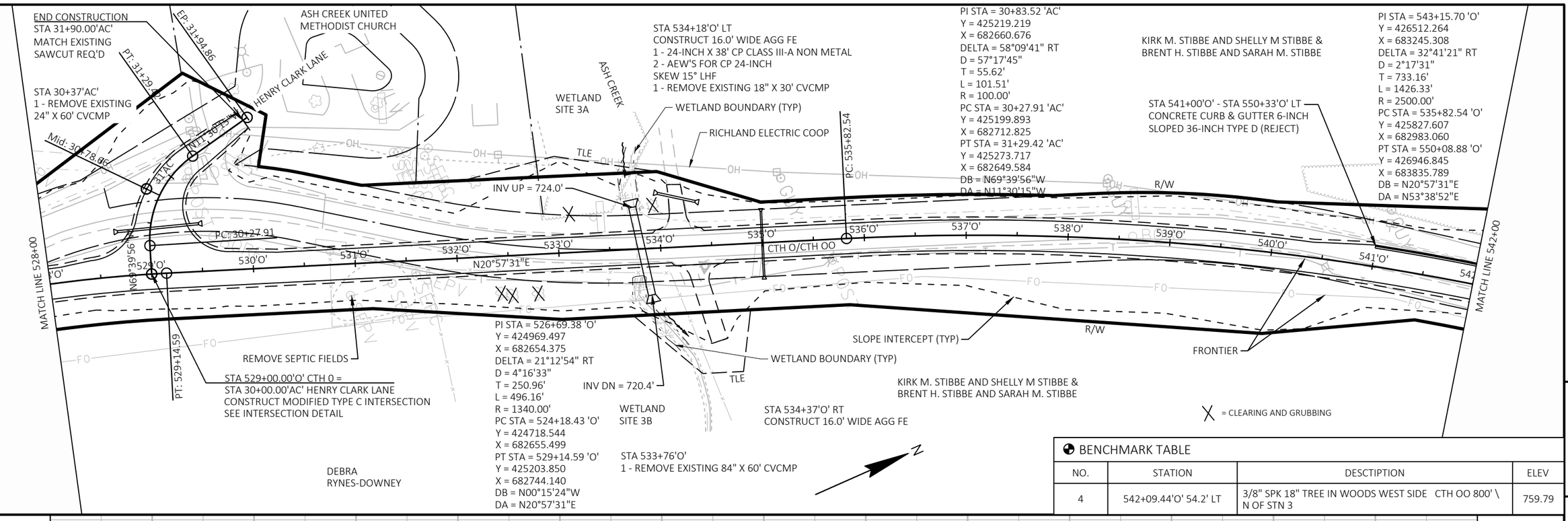

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| BENCHMARK TABLE | | | |
|---|---|---|---|
| NO. | STATION | DESCRIPTION | ELEV |
| 3 | 527+03.47'O' 46.1' LT | RR SPK IN 1ST PP N OF FIRE # WL CTH O AT \ PC TO CURVE | 745.32 |




| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | PLAN AND PROFILE: CTH O/CTH OO | SHEET 41 | E |
|---|---|---|---|---|---|

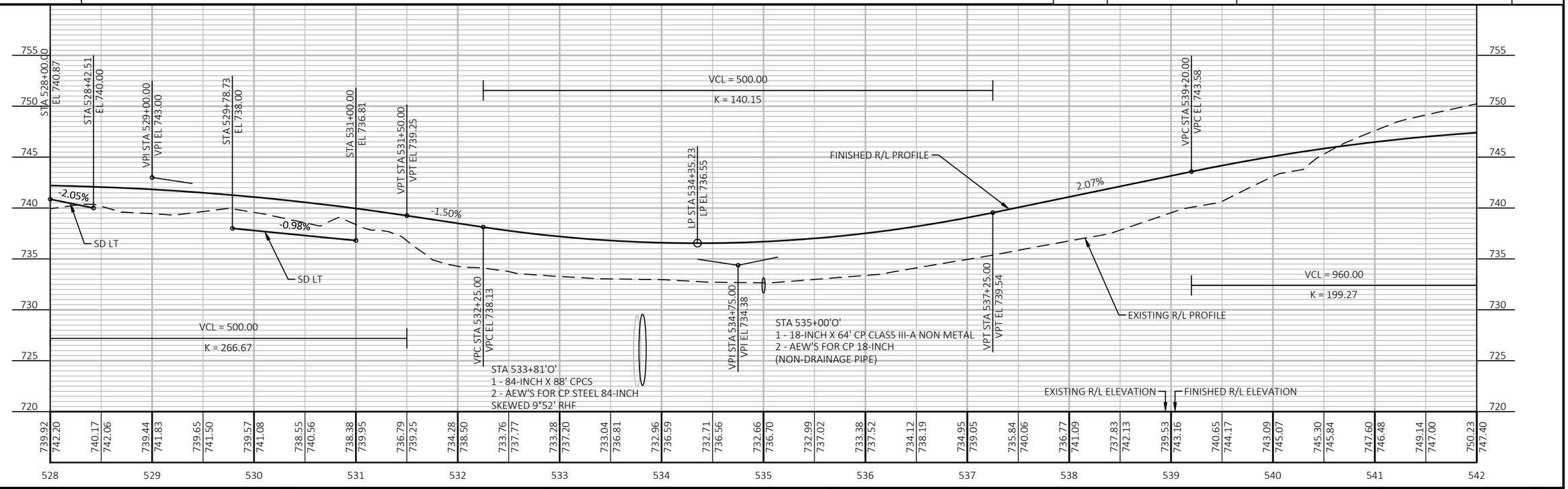



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BENCHMARK TABLE

| NO. | STATION | DESCTIPTION | ELEV |
|---|---|---|---|
| 4 | 542+09.44'O' 54.2' LT | 3/8" SPK 18" TREE IN WOODS WEST SIDE CTH OO 800' \ N OF STN 3 | 759.79 |




| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | PLAN AND PROFILE: CTH O/CTH OO | SHEET 42 | E |
|---|---|---|---|---|---|

BENCHMARK TABLE

| NO. | STATION | DESCTIPTION | ELEV |
|---|---|---|---|
| 4 | 542+09.44'O' 54.2' LT | 3/8" SPK 18" TREE IN WOODS WEST SIDE CTH OO 800' \ N OF STN 3 | 759.79 |
| 5 | 557+88.67'O' 54.8' LT | RR SPK IN 36" OAK 500'\ N OF FIRE # 28515 | 734.48 |

= CLEARING AND GRUBBING

KIRK M. STIBBE AND SHELLY M STIBBE & BRENT H. STIBBE AND SARAH M. STIBBE

RUSSELL L. BAKKEN

RICHLAND ELECTRIC COOP

PI STA = 39+13.93 'B'
Y = 426997.594
X = 683766.262
DELTA = 26°02'35" LT
D = 38°11'50"
T = 34.69'
L = 68.18'
R = 150.00'
PC STA = 38+79.24 'B'
Y = 426996.478
X = 683731.591
PT STA = 39+47.42 'B'
Y = 427013.819
X = 683796.923
DB = N88°09'21"E
DA = N62°06'46"E

CEMETERY

STA 50+20'CC'
1 - REMOVE EXISTING 15" X 48' CVCMP

Mid: 52+34.85

BP: 38+51.45

PC: 39+19.24

PT: 39+47.42

CARDINAL CREST ROAD

53'CC'

52'CC'

EP: 50+00.00

BEGIN CONSTRUCTION
STA 53+00.00'CC'
MATCH EXISTING
SAWCUT REQ'D

STA 551+78'O' 31.8' LT
CONSTRUCT 16.0' WIDE BASE AGG PE
1 - 24-INCH X 24' CP CLASS III-A NON METAL
2 - AEW'S FOR CP 24-INCH
1 - REMOVE EXISTING 15" X 18' CVCMP

STA 50+70.00'CC' CARDINAL CREST ROAD =
STA 40+00.00'B' BOVEE LANE
CONSTRUCT MODIFIED TYPE C INTERSECTION
SEE INTERSECTION DETAIL

PC: 51+52.68

PI STA = 543+15.70 'O'
Y = 426512.264
X = 683245.308
DELTA = 32°41'21" RT
D = 2°17'31"
T = 733.16'
L = 1426.33'
R = 2500.00'
PC STA = 535+82.54 'O'
Y = 425827.607
X = 682983.060
PT STA = 550+08.88 'O'
Y = 426946.845
X = 683835.789
DB = N20°57'31"E
DA = N53°38'52"E

PI STA = 52+35.03 'CC'
Y = 427184.280
X = 683766.208
DELTA = 9°24'56" LT
D = 5°43'46"
T = 82.35'
L = 164.33'
R = 1000.00'
PC STA = 51+52.68 'CC'
Y = 427111.492
X = 683804.726
PT STA = 53+17.01 'CC'
Y = 427249.786
X = 683716.301
DB = N27°53'14"W
DA = N37°18'10"W

REGINALD A. EMSHOFF

WETLAND BOUNDARY (TYP)

FENCE SAFETY

BEGIN CONSTRUCTION
STA 38+79.24'B'
MATCH EXISTING
SAWCUT REQ'D

STA 541+00'O' - STA 550+33'O' LT
CONCRETE CURB & GUTTER 6-INCH
SLOPED 36-INCH TYPE D (REJECT)

BM 4

MATCH LINE 542+00

Mid: 542+93.71

R/W

CTH O/CTH OO

543'O' 544'O' 545'O' 546'O' 547'O' 548'O' 549'O' 550'O' 551'O' 552'O' 553'O' 554'O' 555'O' 556'O'

N89°09'21"E

N62°06'46"E

N27°53'14"W

N53°38'52"E

Mid: 554+13.89

Mid: 555+54.30

PC: 552+91.41

+94
-38.41' LT

+94
-49.05' LT

+43.08
-16.19' LT

+86.58
13.58' RT

+05.06
40.00' RT

STA 550+58.98'O' CTH O =
STA 50+00.00'CC' CARDINAL CREST ROAD
CONSTRUCT MODIFIED TYPE C INTERSECTION
SEE INTERSECTION DETAIL

PT: 550+08.88

FRONTIER

SLOPE INTERCEPT (TYP)

KIRK M. STIBBE AND SHELLY M STIBBE & BRENT H. STIBBE AND SARAH M. STIBBE

STA 551+90'O' 28.4' RT
CONSTRUCT 16.0' WIDE BASE AGG PE
1 - 18-INCH X 26' CP CLASS III-A NON METAL
2 - AEW'S FOR CP 18-INCH
1 - REMOVE EXISTING 15" X 18' CVCMP

END PROJECT 5419-06-70
BEGIN PROJECT 5419-06-73
STA 552+00.00'O'
Y= 427060.134
X= 683989.718

CONTRACTOR SHALL NOT STORE ANY EQUIPMENT WITHIN 50' OF ENVIRONMENTALLY SENSITIVE AREA

KIRK M. STIBBE AND SHELLY M STIBBE & BRENT H. STIBBE AND SARAH M. STIBBE

ENVIRONMENTALLY SENSITIVE AREA

WETLAND BOUNDARY (TYP)

5

5

750 745 740 735 730 725 720 715

EXISTING R/L PROFILE

FINISHED R/L PROFILE

HP STA 543+32.01
HP EL 747.83

VPI STA 544+00.00
VPI EL 733.50

VPT STA 548+80.00
VPT EL 740.30

STA 549+00.00
EL 740.57

SD LT

-5.38%

-2.75%

VCL = 960.00
K = 199.27

STA 550+03.32
EL 735.00

VPC STA 550+60.00
VPC EL 735.35

STA 551+40.61
EL 730.30

-2.59%

-2.69%

SD LT

VCL = 360.00
K = 137.17

STA 552+00.00
EL 728.70

VPI STA 552+40.00
VPI EL 730.40

-0.13%

VPT STA 554+20.00
VPT EL 730.17

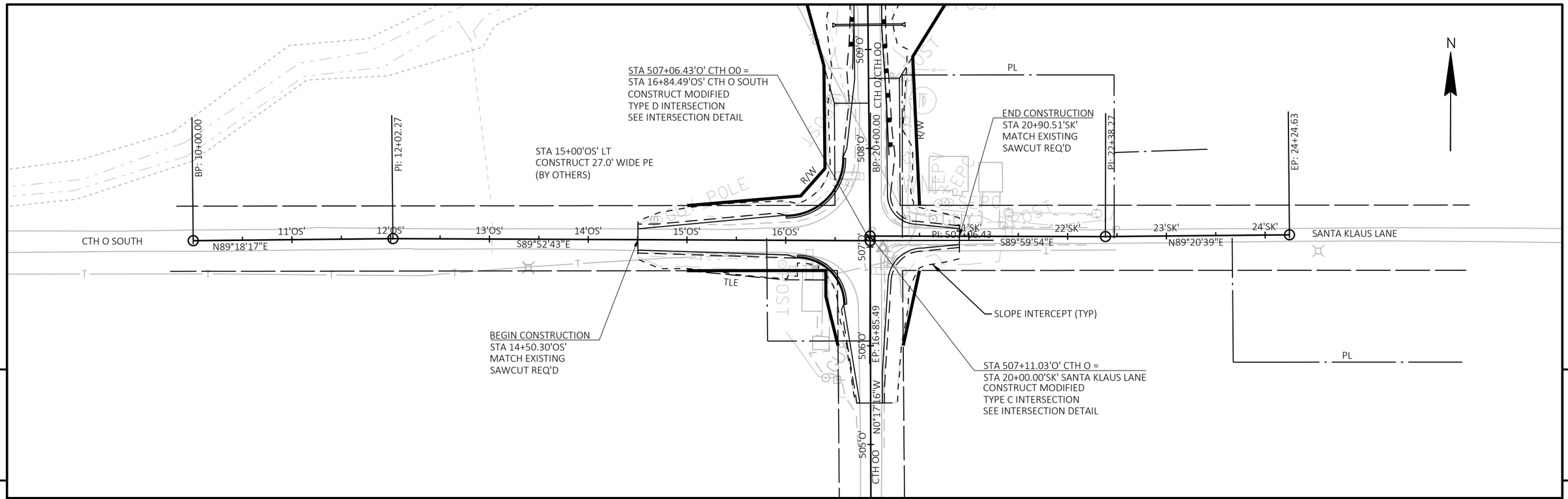
VPC STA 555+92.00
VPC EL 729.96

VCL = 300.00
K = 162.49

EXISTING R/L ELEVATION

FINISHED R/L ELEVATION

| | | |



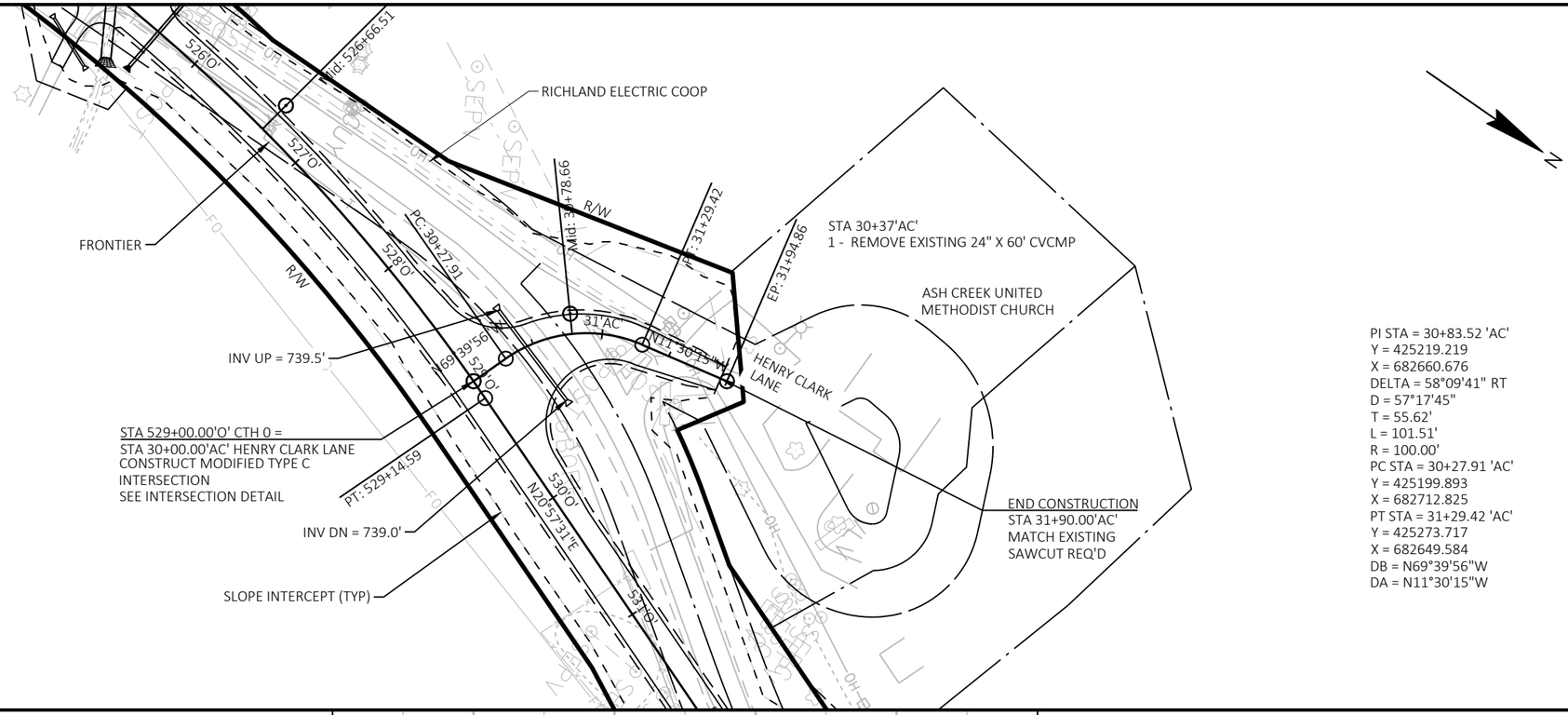

| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | PLAN AND PROFILE: CTH O SOUTH/ SANTA KLAUS LANE | SHEET 44 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D\54190671\SHEETSPLAN\050102_PP.DWG
LAYOUT NAME - 05

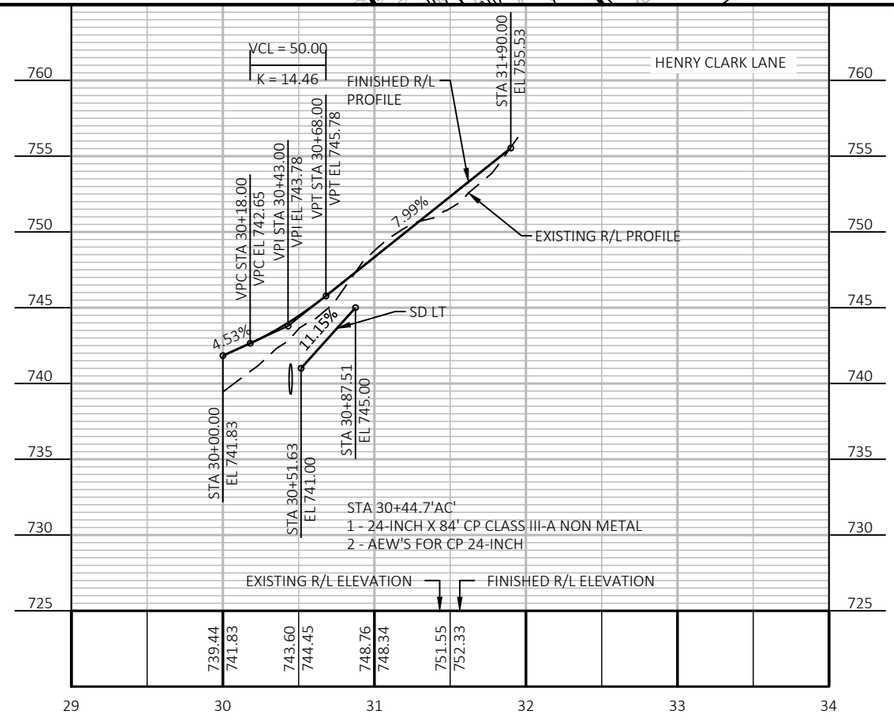
PLOT DATE : 11/13/2023 6:55 AM PLOT BY : ANNIE JEROME PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

PI STA = 526+69.38 'O'
Y = 424969.497
X = 682654.375
DELTA = 21°12'54" RT
D = 4°16'33"
T = 250.96'
L = 496.16'
R = 1340.00'
PC STA = 524+18.43 'O'
Y = 424718.544
X = 682655.499
PT STA = 529+14.59 'O'
Y = 425203.850
X = 682744.140
DB = N00°15'24"W
DA = N20°57'31"E

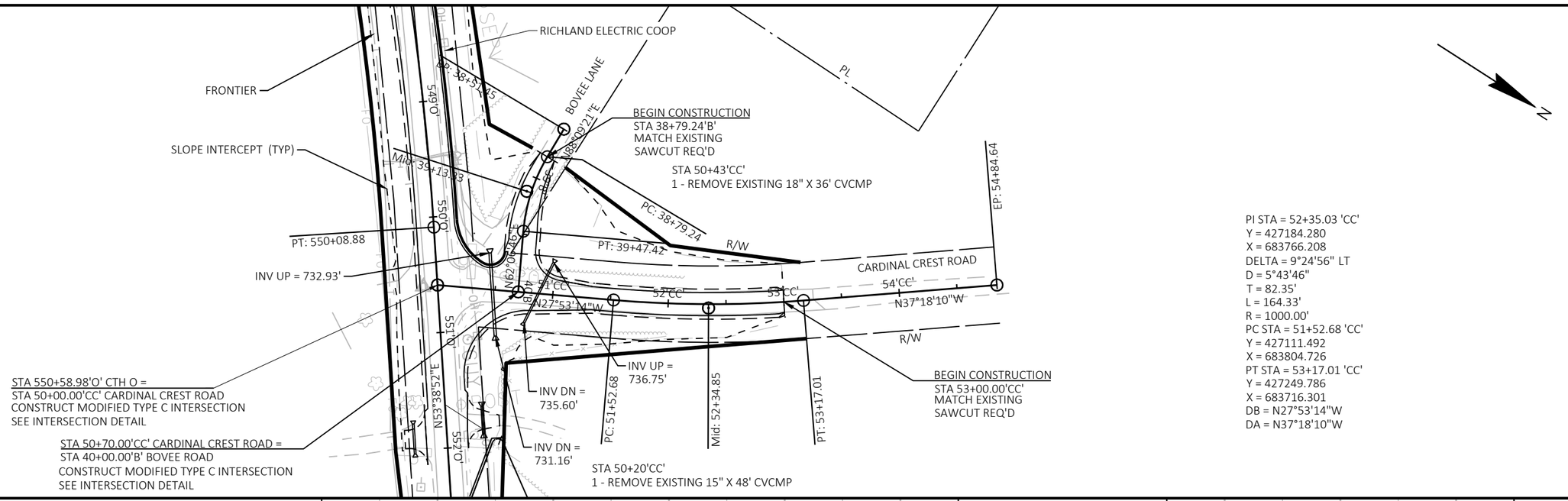



PI STA = 30+83.52 'AC'
Y = 425219.219
X = 682660.676
DELTA = 58°09'41" RT
D = 57°17'45"
T = 55.62'
L = 101.51'
R = 100.00'
PC STA = 30+27.91 'AC'
Y = 425199.893
X = 682712.825
PT STA = 31+29.42 'AC'
Y = 425273.717
X = 682649.584
DB = N69°39'56"W
DA = N11°30'15"W




| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | PLAN AND PROFILE: ASH CREEK | SHEET 45 | E |
|---|---|---|---|---|---|

PI STA = 39+13.93 'B'
Y = 426997.594
X = 683766.262
DELTA = 26°02'35" LT
D = 38°11'50"
T = 34.69'
L = 68.18'
R = 150.00'
PC STA = 38+79.24 'B'
Y = 426996.478
X = 683731.591
PT STA = 39+47.42 'B'
Y = 427013.819
X = 683796.923
DB = N88°09'21"E
DA = N62°06'46"E




PI STA = 52+35.03 'CC'
Y = 427184.280
X = 683766.208
DELTA = 9°24'56" LT
D = 5°43'46"
T = 82.35'
L = 164.33'
R = 1000.00'
PC STA = 51+52.68 'CC'
Y = 427111.492
X = 683804.726
PT STA = 53+17.01 'CC'
Y = 427249.786
X = 683716.301
DB = N27°53'14"W
DA = N37°18'10"W







| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | PLAN AND PROFILE: CARDINAL CREST ROAD/ BOVEE LANE | SHEET 46 | E |
|---|---|---|---|---|---|

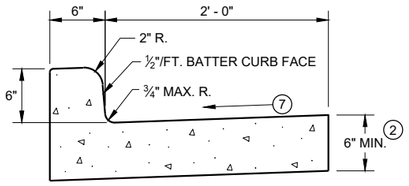
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LAYOUT NAME - 07
PLOT DATE : 11/13/2023 6:56 AM
PLOT BY : ANNIE JEROME
PLOT NAME :
PLOT SCALE : 1 IN:100 FT

# Standard Detail Drawing List

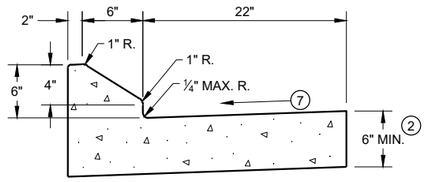
| | |
|---|---|
| 08D01-23A | CONCRETE CURB & GUTTER |
| 08D01-23B | CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS |
| 08D04-07 | CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES |
| 08D21-01 | DRIVEWAYS WITHOUT CURB & GUTTER |
| 08E08-03 | TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS |
| 08E09-06 | SILT FENCE |
| 08E15-01 | CULVERT PIPE CHECK |
| 08F01-11 | APRON ENDWALLS FOR CULVERT PIPE |
| 08F02-01 | APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE |
| 08F04-08 | JOINT TIES FOR CONCRETE PIPE  AND CONCRETE COLLAR DETAIL |
| 09A01-14A | AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND  D AND TEE INTERSECTION BYPASS LANE |
| 13C19-03 | HMA LONGITUDINAL JOINTS |
| 14B29-01 | SAFETY EDGE |
| 14B42-07A | MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL |
| 14B42-07B | MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL |
| 14B42-07C | MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL |
| 14B42-07D | MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL |
| 14B44-04A | MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS) |
| 14B44-04B | MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS) |
| 14B44-04C | MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS) |
| 14B45-05A | MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS) |
| 14B45-05B | MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS) |
| 14B45-05C | MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS) |
| 14B45-05D | MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS) |
| 14B45-05E | MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS) |
| 14B45-05F | MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS) |
| 14B45-05G | MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS) |
| 14B45-05H | MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS) |
| 14B45-05I | MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS) |
| 14B45-05J | MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS) |
| 14B45-05K | MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS) |
| 14B45-05L | MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS) |
| 15A03-02A | FLEXIBLE MARKER POST FOR CULVERT END |
| 15A03-02B | FLEXIBLE MARKER POST FOR CULVERT END |
| 15C02-09A | BARRICADES AND SIGNS FOR MAINLINE CLOSURES |
| 15C02-09B | BARRICADES AND SIGNS FOR VARIOUS CLOSURES |
| 15C03-05 | BARRICADES AND SIGNS FOR SIDEROAD CLOSURES |
| 15C04-05 | TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC |
| 15C08-23A | PERMANENT LONGITUDINAL PAVEMENT MARKINGS |
| 15C08-23C | PAVEMENT MARKING (TURN LANES) |
| 15C08-23D | PAVEMENT MARKING (TURN LANES) |
| 15C12-09A | TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION |
| 15C35-06A | PAVEMENT MARKING (INTERSECTIONS) |
| 15D39-02 | TRAFFIC CONTROL, DROP-OFF SIGNING |



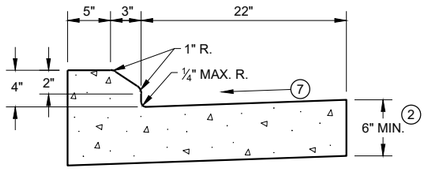
6



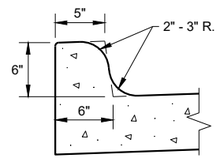

**TYPES A (1) & D**



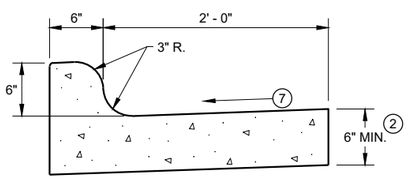

**6" SLOPED CURB TYPES G (1) & J**




**4" SLOPED CURB TYPES G (1) & J**

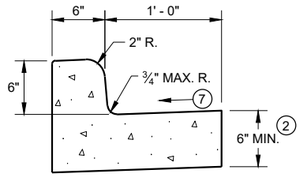



**TYPES K (1) & L**
(OPTIONAL CURB SHAPE)



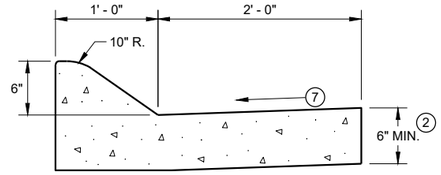

**TYPES K (1) & L**

**CONCRETE CURB AND GUTTER 30"**

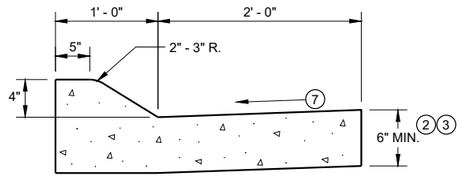



**TYPES A (1) & D**

**CONCRETE CURB AND GUTTER 18"**

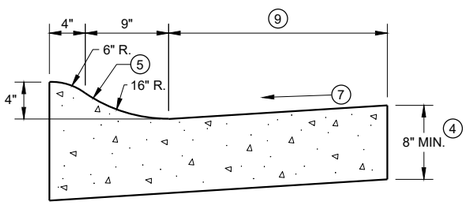



**6" SLOPED CURB TYPES A (1) & D**



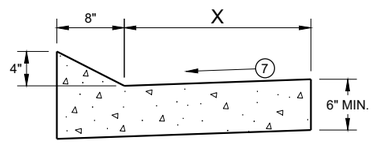

**4" SLOPED CURB TYPES A (1) & D**

**CONCRETE CURB AND GUTTER 36"**




**4" SLOPED CURB TYPES R (1) & T**

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

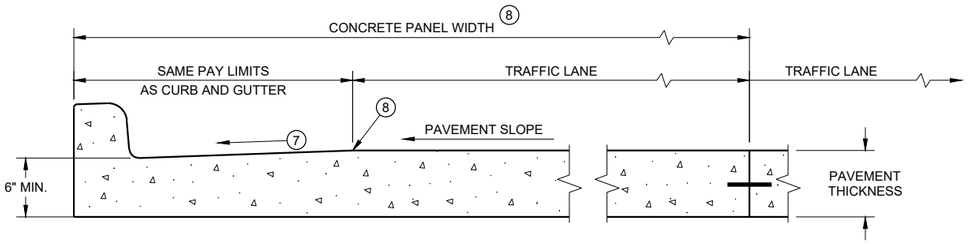



**TYPES TBT & TBTT (1)**

**CONCRETE CURB AND GUTTER**

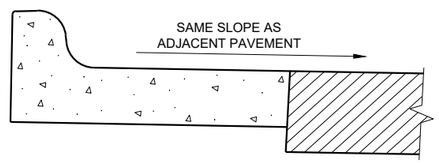
**PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE**

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




**PARTIAL SECTION OF PAVEMENT * WITH INTEGRAL CURB AND GUTTER**

* BIKE LANE IS NOT SHOWN




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

## GENERAL NOTES

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

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

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

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

(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.

(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(3) USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.

(4) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(5) UNLESS OTHERWISE NOTED, FOR STAKING PURPOSES THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

(6) WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.

(7) USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.

(8) INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.

(9) CONCRETE CURB AND GUTTER 4-INCH SLOPED 30-INCH TYPE "R" AND "T" = 17 INCHES
CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE "R" AND "T" = 23 INCHES

**CONCRETE CURB AND GUTTER**

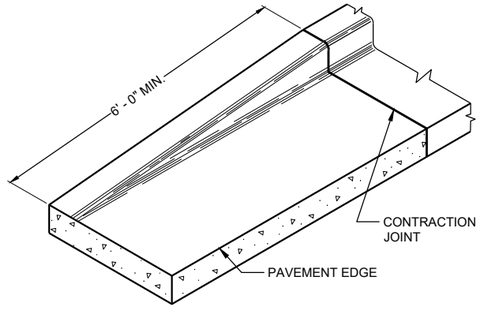
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



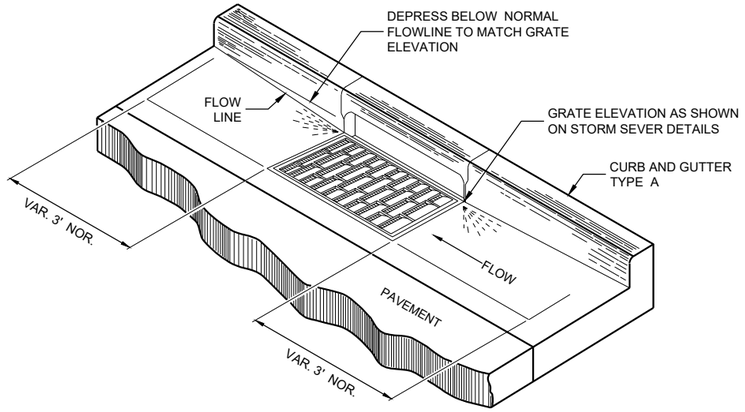
6

SDD 08D01 - 23a

SDD 08D01 - 23a




**END SECTIONCURB AND GUTTER**




**DETAIL OF CURB AND GUTTER AT INLETS**

(TYPICAL H INLET COVER SHOWN)

## GENERAL NOTES

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

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

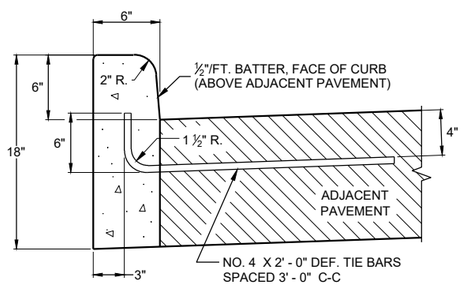
UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.

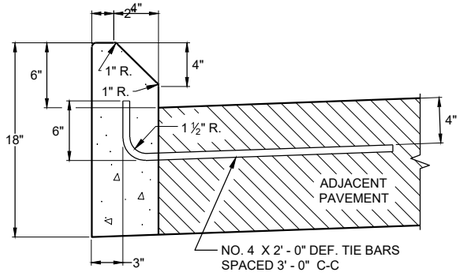
(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(10) REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.

(11) PLACE 1" THICK EXPANSION JOINT MATERIAL BETWEEN VERTICAL FACE CURB TYPES EXTENDING FROM THE TOP OF CURB TO 1 INCH BELOW THE ADJOINING CONCRETE SURFACE. RIGID CONCRETE STRUCTURES INCLUDE RAISED CONCRETE MEDIANS, CONCRETE SAFETY ISLANDS, SPLITTER ISLANDS, OR LOCATIONS IDENTIFIED ON THE PLANS.

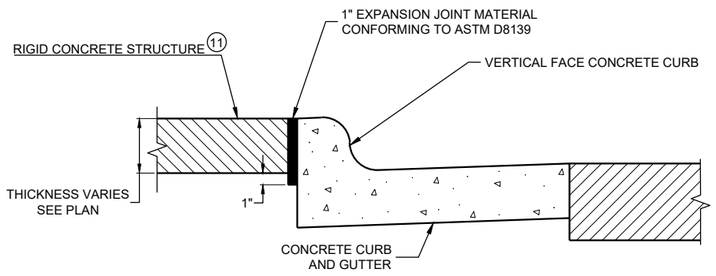



**TYPES A (1) & D**

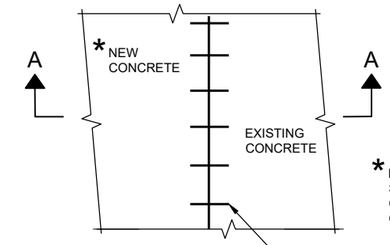



**TYPES G (1) & J**

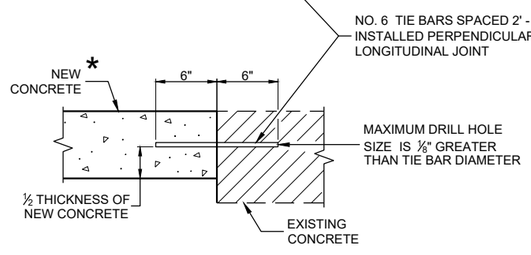
**CONCRETE CURB**




**EXPANSION JOINT DETAIL FOR VERTICAL CURB ABUTTING A RIGID STRUCTURE (11)**

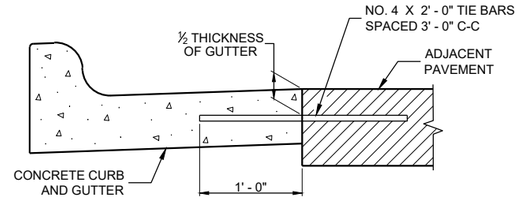



**PLAN VIEW**

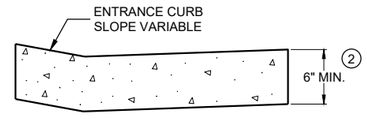



**SECTION A - A**

**TIE BARS DRILLED INTO EXISTING PAVEMENT**




**TYPICAL TIE BAR LOCATION (1)**




**DRIVEWAY ENTRANCE CURB (10)**

(WHEN DIRECTED BY THE ENGINEER)

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Rodnery Taylor — ROADWAY STANDARDS DEVE ENGINEER

FHWA





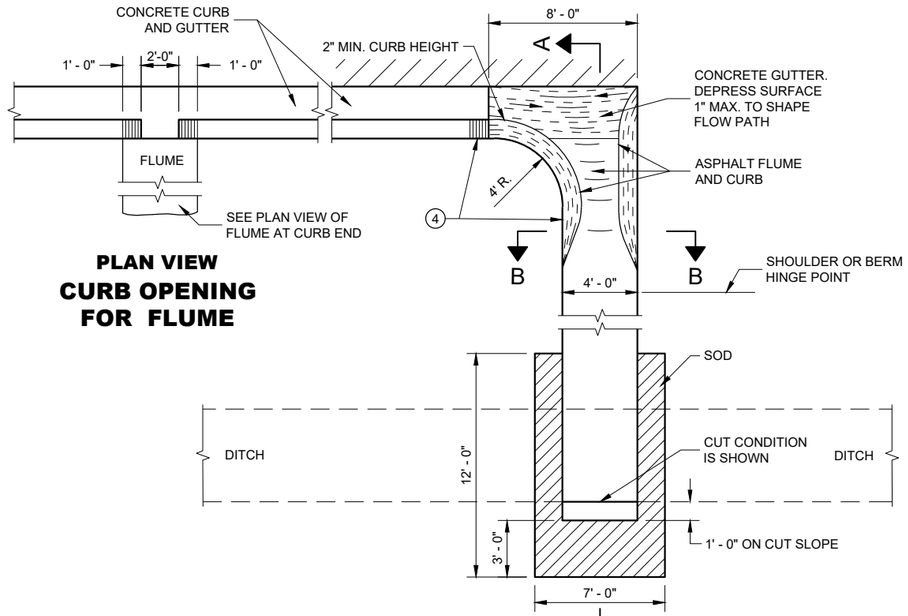
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SDD08D01 - 23b

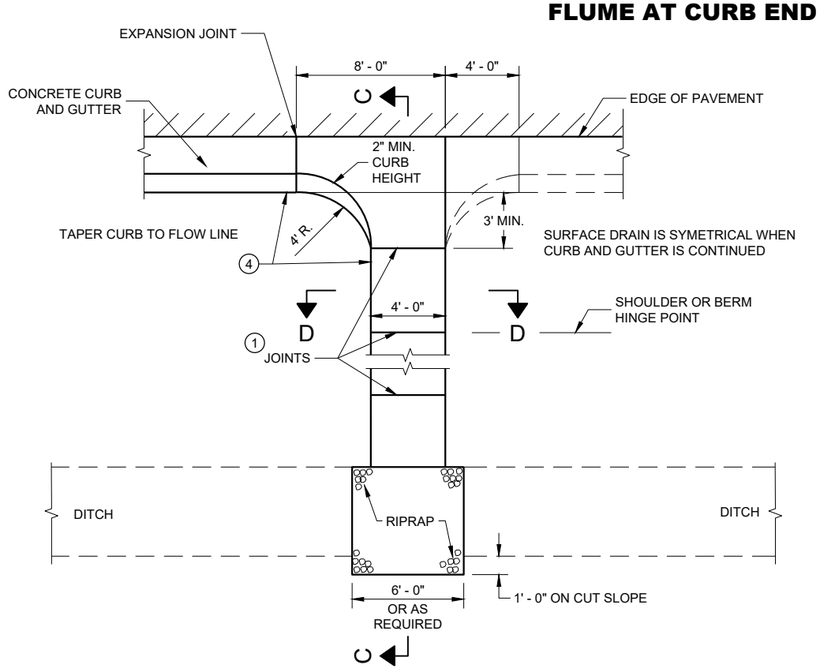
NOTE: TAPER CURB ENDS TO GUTTER IN 1' - 0"

## ASPHALTIC FLUME




**PLAN VIEW**
**CURB OPENING FOR FLUME**

**PLAN VIEW**
**FLUME AT CURB END**



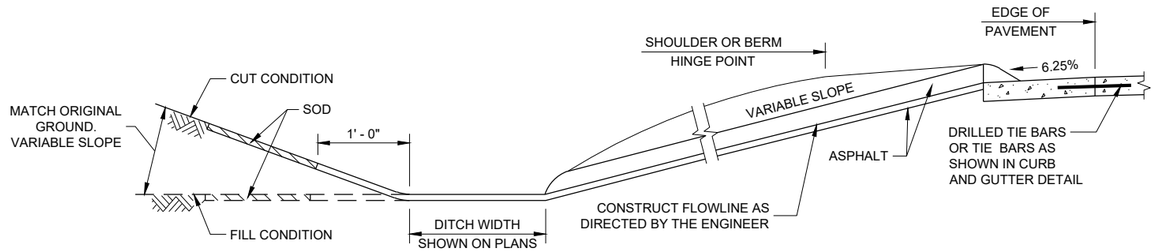

**PLAN VIEW**
**CONCRETE SURFACE DRAIN**

## GENERAL NOTES

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

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

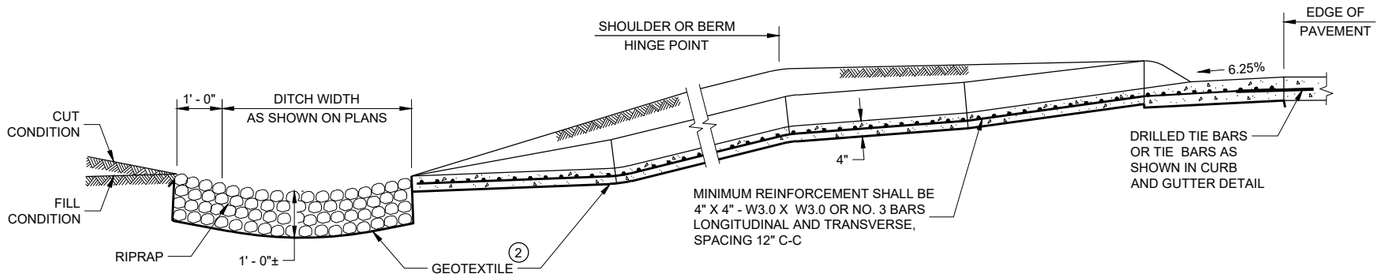
1. JOINTS SHALL BE ⅛" TO ¼" WIDE BY 1½" DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.
2. GEOTEXTILE TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.
3. CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED.
4. ANGLE OF FLUME IN RELATION TO BACK OF CURB TO BE CONSTRUCTED PER THE PLAN DETAILS OR AS DIRECTED BY THE ENGINEER. ANGLE OF FLUME MAY BE OTHER THAN 90 DEGREES AS SHOWN.



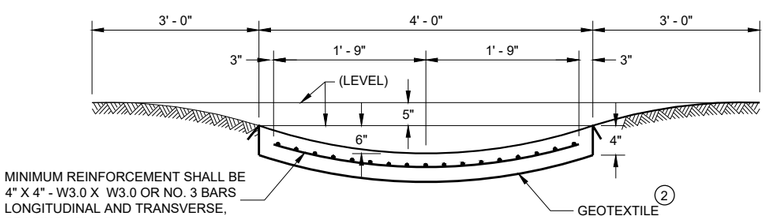

**SECTION A - A**




**SECTION B - B**




**SECTION C - C**




**SECTION D - D**

# CONCRETE SURFACE DRAINS AND ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

FHWA

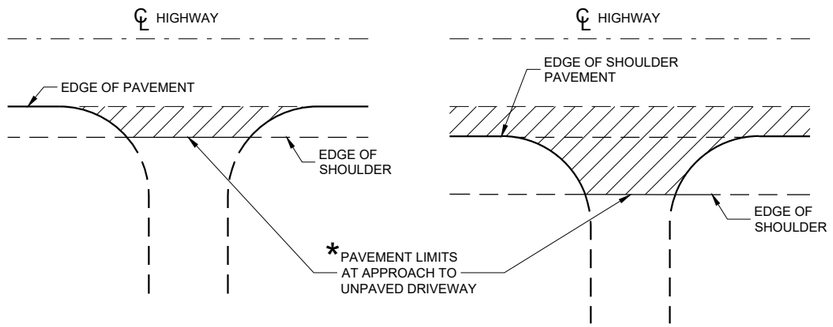


6

SDD 08D04 - 07

6

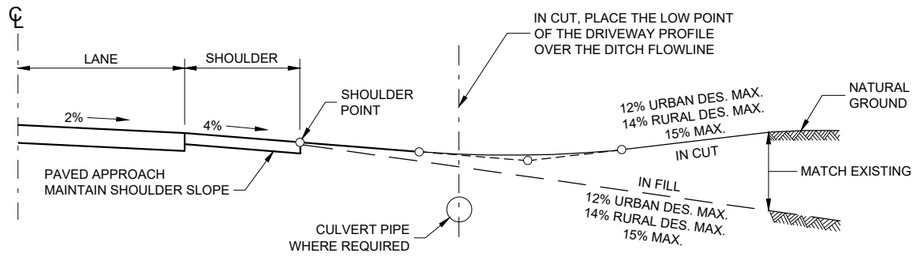
SDD 08D04 - 07



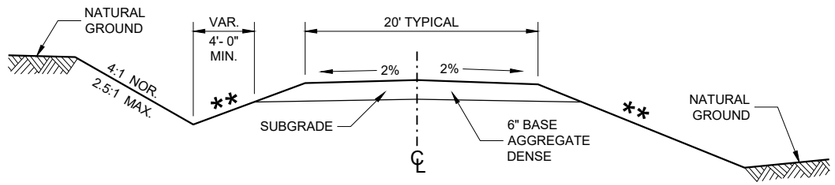

**PLAN VIEW**
(UNPAVED SHOULDER ON HIGHWAY)

**PLAN VIEW**
(PAVED SHOULDER ON HIGHWAY)

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




## TYPICAL DRIVEWAY PROFILES

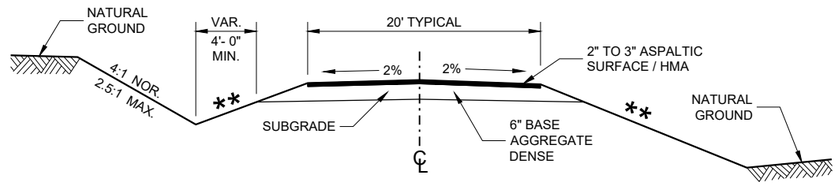



**IN CUT** **IN FILL**

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

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

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




**IN CUT** **IN FILL**

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

6

6

SDD 08D21 - 01

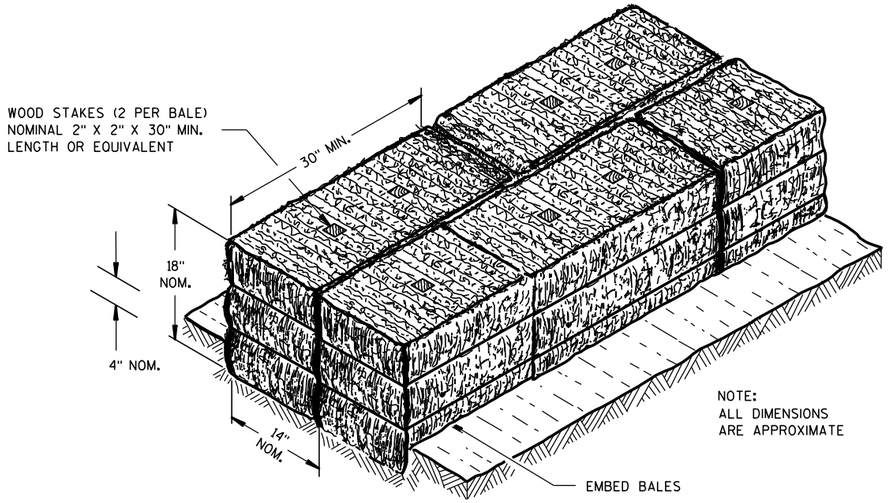
SDD 08D21 - 01

## DRIVEWAYS WITHOUT CURB AND GUTTER

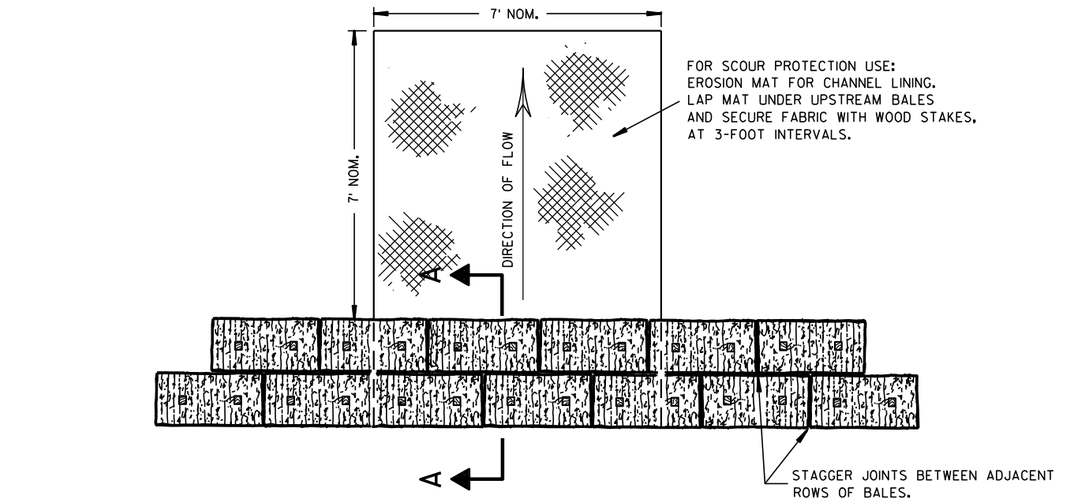
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December 2017 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE UNIT SUPERVISOR

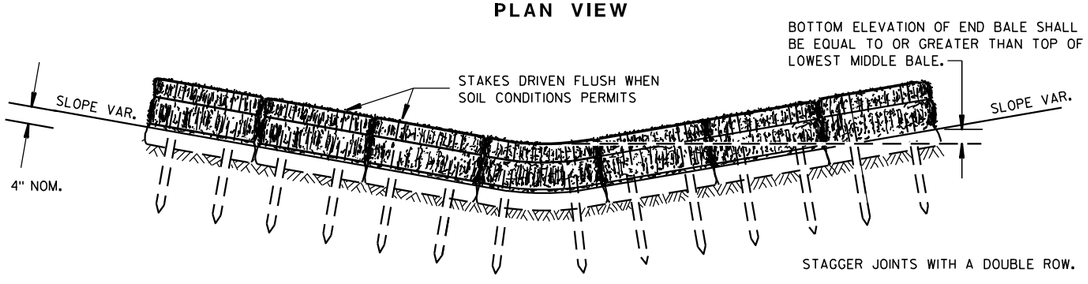
FHWA




**SECTION A-A**




**PLAN VIEW**



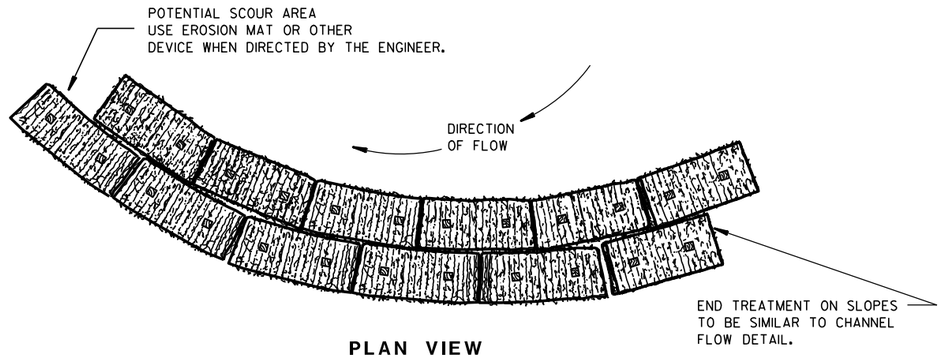

**FRONT ELEVATION**

## TEMPORARY DITCH CHECK USING EROSION BALES ①

## GENERAL NOTES

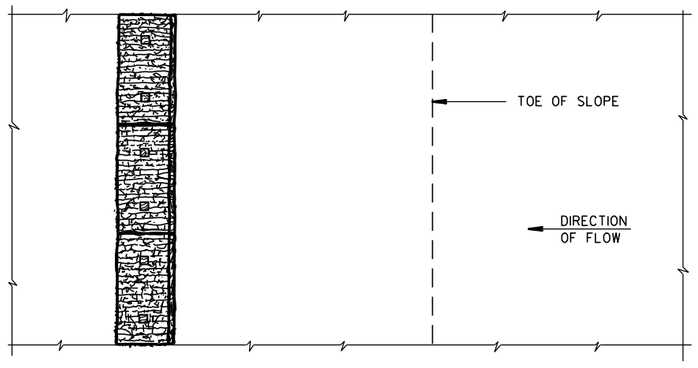
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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.

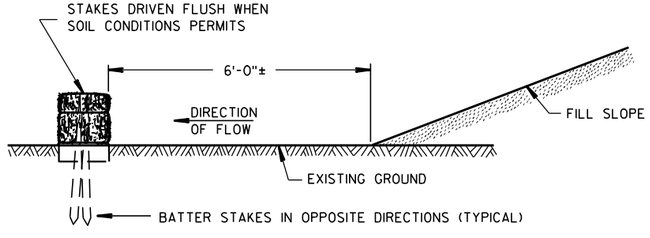



**PLAN VIEW**

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**

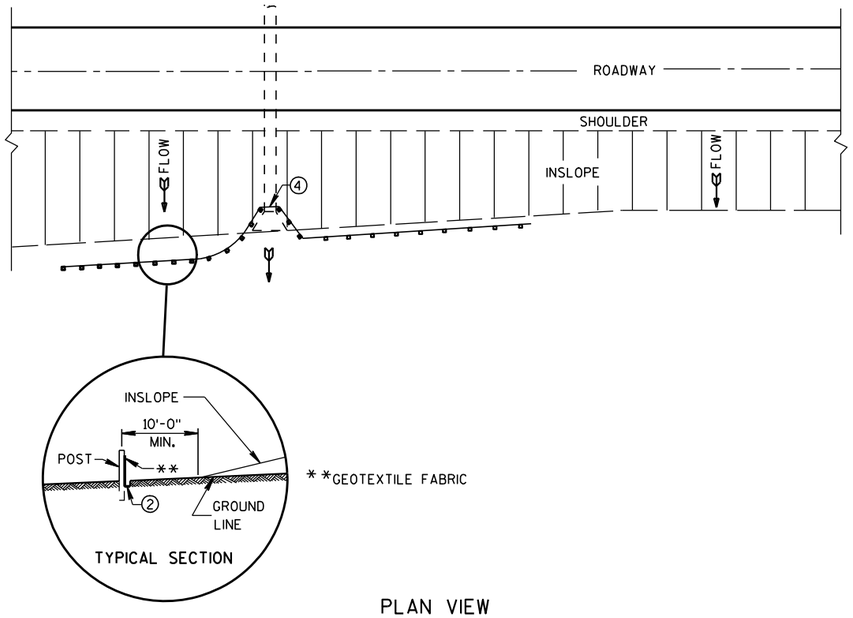
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/04/02 — DATE

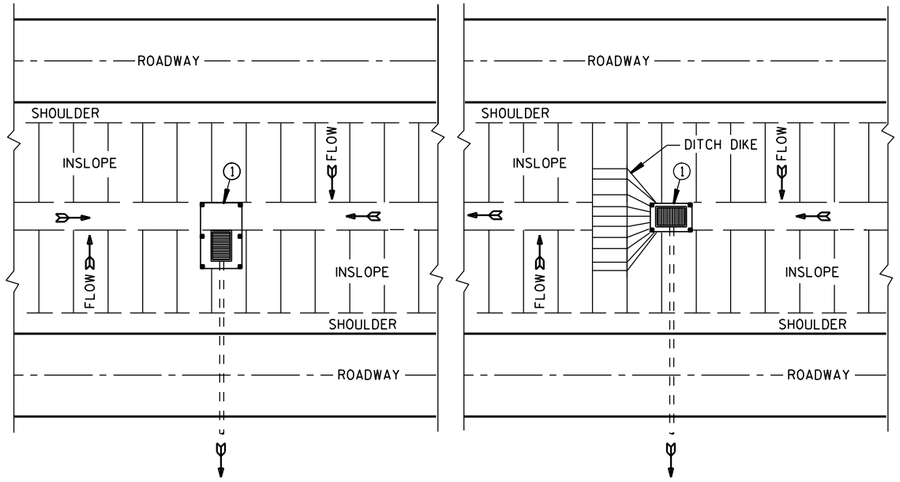
/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA




PLAN VIEW

## TYPICAL APPLICATION OF SILT FENCE



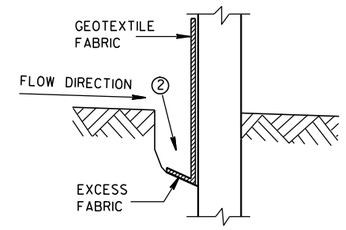

PLAN VIEW

## SILT FENCE AT MEDIAN SURFACE DRAINS

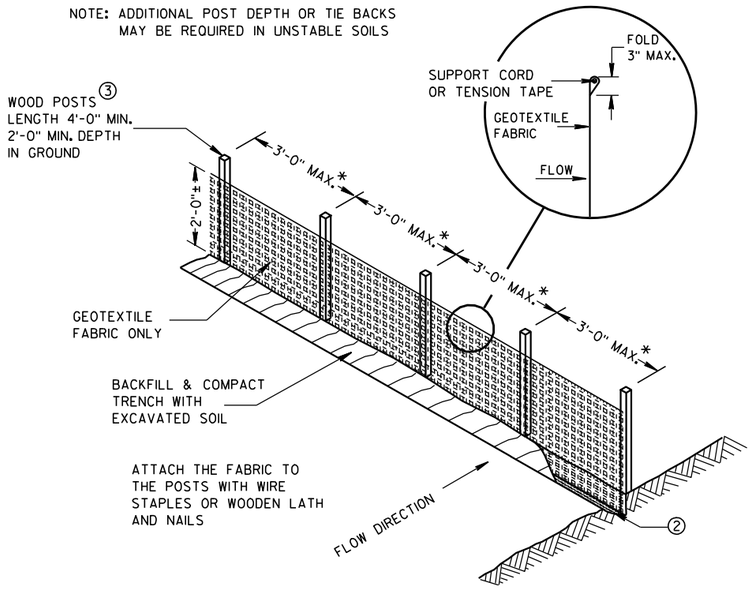
## GENERAL NOTES

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

1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.
4. SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
5. CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.

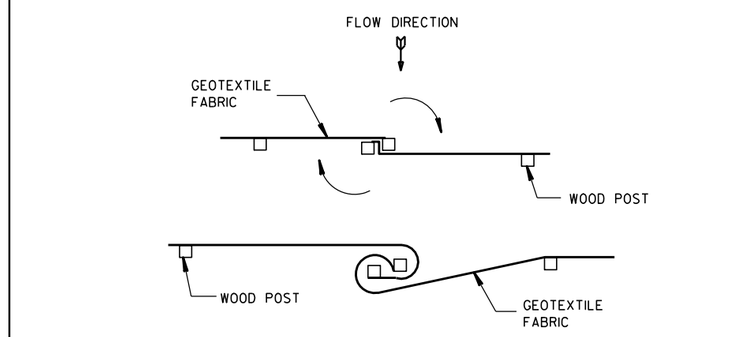



## TRENCH DETAIL

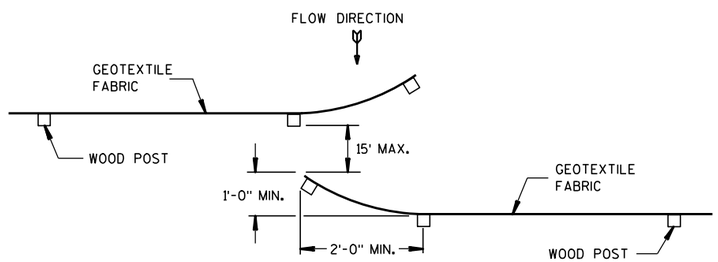



*NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

## SILT FENCE

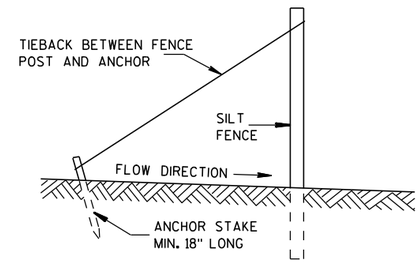



TWIST METHOD




HOOK METHOD

## JOINING TWO LENGTHS OF SILT FENCE 5




## SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

**SILT FENCE**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

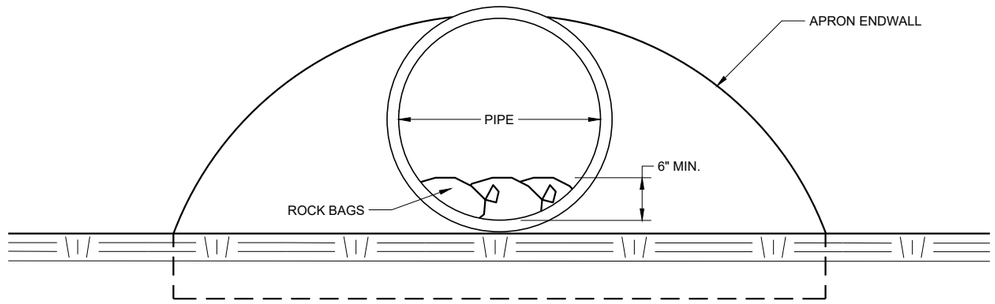


6

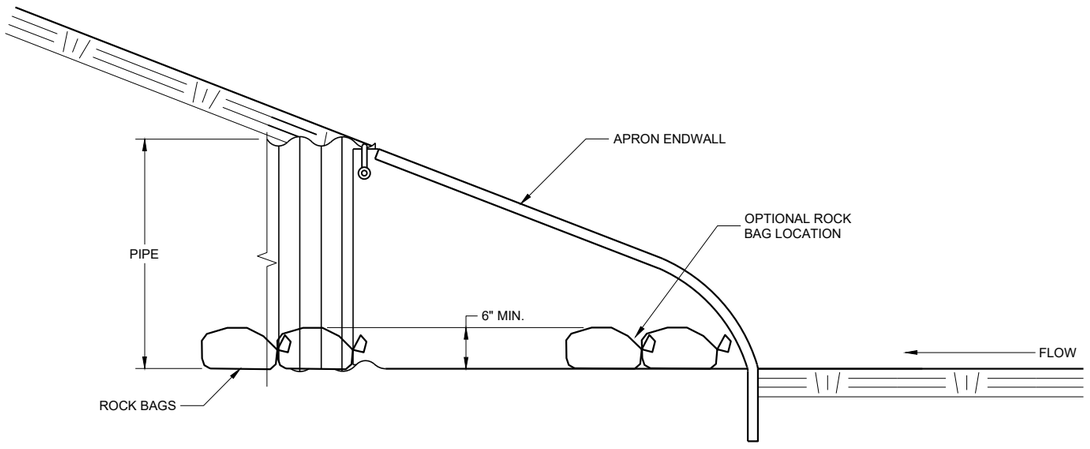
S.D.D. 8 E 9-6

6

S.D.D. 8 E 9-6




**END VIEW**




**SIDE VIEW**

## CULVERT PIPE CHECK

(INSTALL ON INLET END ONLY)

| CULVERT PIPE CHECK | |
|---|---|
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION | |
| APPROVED<br>May 2019<br>DATE | /S/ Daniel Schave<br>EROSION CONTROL ENGI |
| FHWA | |





6
SDD 08E15 - 01

## METAL APRON ENDWALLS

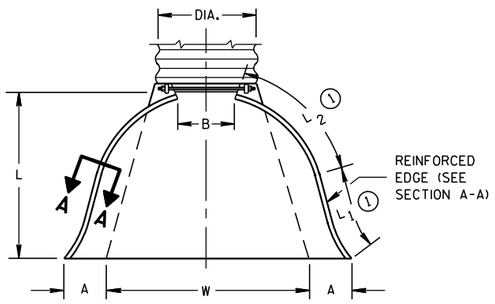
| PIPE DIA. (IN.) | MIN. THICK. (Inches) STEEL | MIN. THICK. (Inches) ALUM. | DIMENSIONS (Inches) A (±1") | B (MAX.) | H (±1") | L (±1 1/2") | L1 ① | L2 ① | W (±2") | APPROX. SLOPE | BODY |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 | .064 | .060 | 6 | 6 | 6 | 21 | 12 | 17 1/2 | 24 | 2 1/2 to 1 | 1 Pc. |
| 15 | .064 | .060 | 7 | 8 | 6 | 26 | 14 | 21 3/4 | 30 | 2 1/2 to 1 | 1 Pc. |
| 18 | .064 | .060 | 8 | 10 | 6 | 31 | 15 | 28 1/4 | 36 | 2 1/2 to 1 | 1 Pc. |
| 21 | .064 | .060 | 9 | 12 | 6 | 36 | 18 | 29 5/8 | 42 | 2 1/2 to 1 | 1 Pc. |
| 24 | .064 | .075 | 10 | 13 | 6 | 41 | 18 | 37 1/4 | 48 | 2 1/2 to 1 | 1 Pc. |
| 30 | .079 | .075 | 12 | 16 | 8 | 51 | 18 | 52 1/4 | 60 | 2 1/2 to 1 | 1 Pc. |
| 36 | .079 | .105 | 14 | 19 | 9 | 60 | 24 | 59 3/4 | 72 | 2 1/2 to 1 | 2 Pc. |
| 42 | .109 | .105 | 16 | 22 | 11 | 69 | 24 | 75 5/8 | 84 | 2 1/2 to 1 | 2 Pc. |
| 48 | .109 | .105 | 18 | 27 | 12 | 78 | 24 | 81 | 90 | 2 1/4 to 1 | 3 Pc. |
| 54 | .109 | .105 | 18 | 30 | 12 | 84 | 30 | 85 1/2 | 102 | 2 1/4 to 1 | 3 Pc. |
| 60 | .109× | .105× | 18 | 33 | 12 | 87 | — | — | 114 | 2 to 1 | 3 Pc. |
| 66 | .109× | .105× | 18 | 36 | 12 | 87 | — | — | 120 | 2 to 1 | 3 Pc. |
| 72 | .109× | .105× | 18 | 39 | 12 | 87 | — | — | 126 | 2 to 1 | 3 Pc. |
| 78 | .109× | .105× | 18 | 42 | 12 | 87 | — | — | 132 | 1 1/2 to 1 | 3 Pc. |
| 84 | .109× | .105× | 18 | 45 | 12 | 87 | — | — | 138 | 1 1/2 to 1 | 3 Pc. |
| 90 | .109× | .105× | 18 | 37 | 12 | 87 | — | — | 144 | 1 1/2 to 1 | 3 Pc. |
| 96 | .109× | .105× | 18 | 35 | 12 | 87 | — | — | 150 | 1 1/2 to 1 | 3 Pc. |

× EXCEPT CENTER PANEL SEE GENERAL NOTES

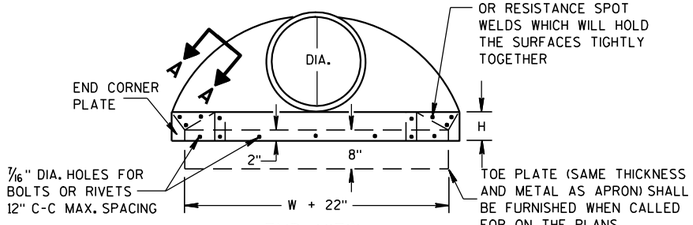
## REINFORCED CONCRETE APRON ENDWALLS

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

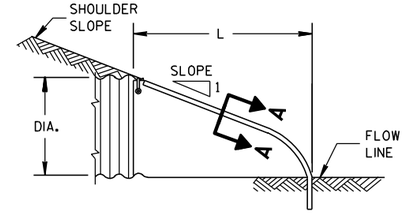
*MINIMUM
**MAXIMUM




PLAN VIEW

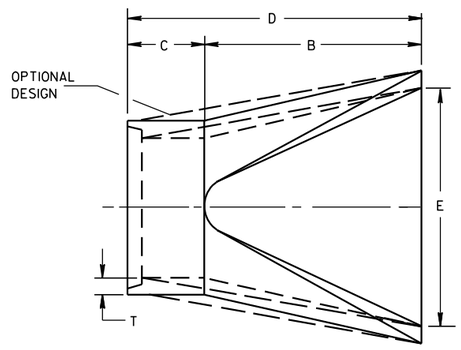



END VIEW

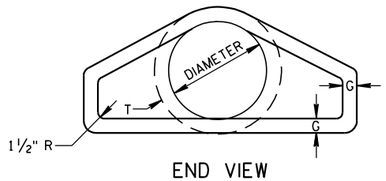



SIDE ELEVATION

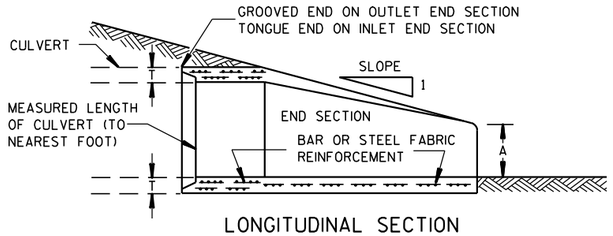
## METAL ENDWALLS




PLAN

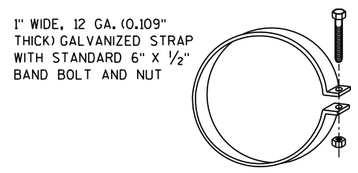



END VIEW



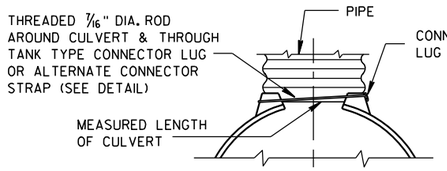

LONGITUDINAL SECTION

## CONCRETE ENDWALLS

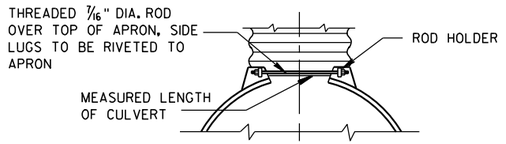



ALTERNATE FOR TYPE 1 CONNECTION

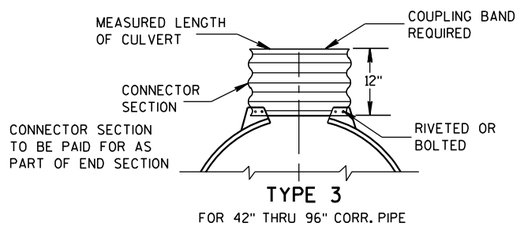
## END SECTION CONNECTOR STRAP



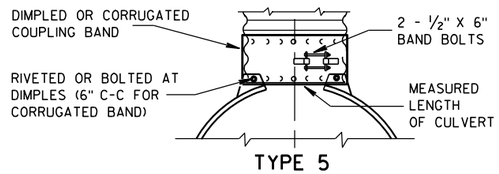

TYPE 1
FOR 12" THRU 24" CORR. PIPE




TYPE 2
FOR 30" THRU 96" CORR. PIPE




TYPE 3
FOR 42" THRU 96" CORR. PIPE




TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

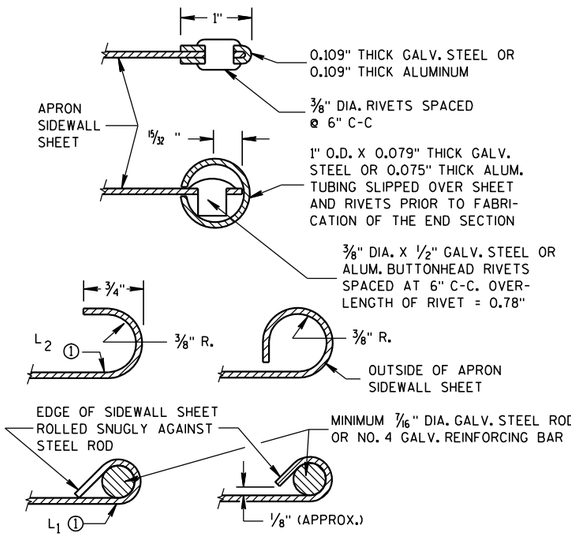
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

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

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

## CONNECTION DETAILS




## SECTION A-A

## GENERAL NOTES

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

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

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

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

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

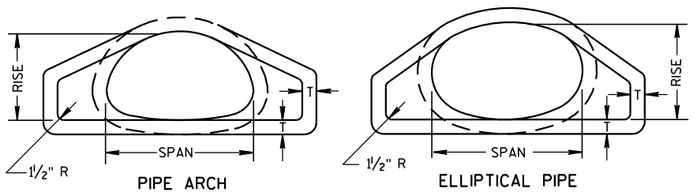
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

# APRON ENDWALLS FOR CULVERT PIPE

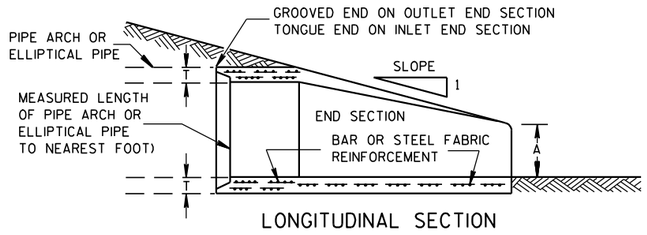
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

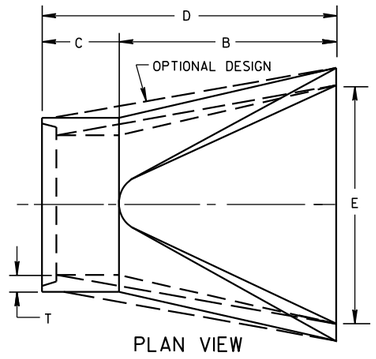

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S.D.D. 8 F 1-11




END VIEW

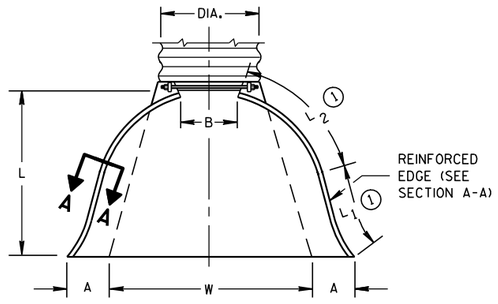



LONGITUDINAL SECTION

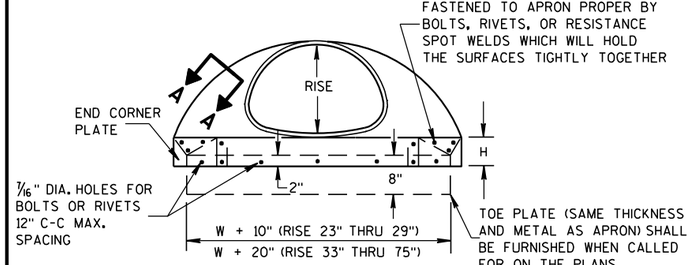



PLAN VIEW

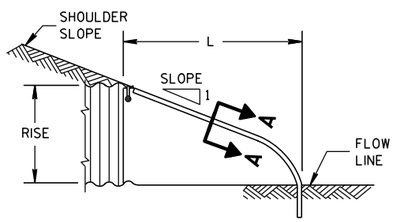
# CONCRETE ENDWALLS




PLAN VIEW

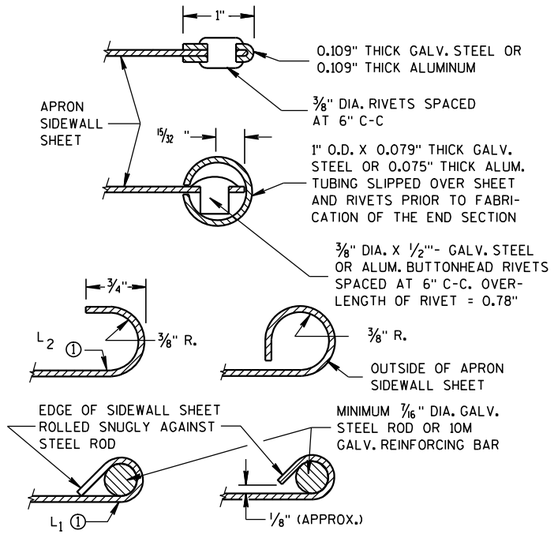



END VIEW




SIDE ELEVATION

# METAL ENDWALLS




SECTION A-A

## 2- 2/3" X 1/2" CORRUGATIONS

| EQUIV. DIA. (Inches) | (Inches) SPAN | (Inches) RISE | MIN. THICK. (Inches) STEEL | MIN. THICK. (Inches) ALUM. | DIMENSIONS (Inches) A (±1") | B (MAX.) | H (±1") | L (±1 1/2") | L1 ① | L2 ① | W (±2") | APPROX. SLOPE | BODY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 15 | 17 | 13 | .064 | .060 | 7 | 9 | 6 | 19 | 14 | 16 | 30 | 2½ to 1 | 1 Pc. |
| 18 | 21 | 15 | .064 | .060 | 7 | 10 | 6 | 23 | 14 | 19⅜ | 36 | 2½ to 1 | 1 Pc. |
| 21 | 24 | 18 | .064 | .060 | 8 | 12 | 6 | 28 | 18 | 21¾ | 42 | 2½ to 1 | 1 Pc. |
| 24 | 28 | 20 | .064 | .060 | 9 | 14 | 6 | 32 | 18 | 27½ | 48 | 2½ to 1 | 1 Pc. |
| 30 | 35 | 24 | .079 | .075 | 10 | 16 | 6 | 39 | 18 | 37⅝ | 60 | 2½ to 1 | 1 Pc. |
| 36 | 42 | 29 | .079 | .075 | 12 | 18 | 8 | 46 | 24 | 45⅜ | 75 | 2½ to 1 | 1 Pc. |
| 42 | 49 | 33 | .109 | .105 | 13 | 21 | 9 | 53 | 24 | 54¾ | 85 | 2½ to 1 | 2 Pc. |
| 48 | 57 | 38 | .109 | .105 | 18 | 26 | 12 | 63 | 24 | 68 | 90 | 2½ to 1 | 3 Pc. |
| 54 | 64 | 43 | .109 | .105 | 18 | 30 | 12 | 70 | 24 | 72¾ | 102 | 2¼ to 1 | 3 Pc. |
| 60 | 71 | 47 | .109* | .105* | 18 | 33 | 12 | 77 | 30 | 82¼ | 114 | 2¼ to 1 | 3 Pc. |
| 66 | 77 | 52 | .109* | .105* | 18 | 36 | 12 | 77 | — | — | 126 | 2 to 1 | 3 Pc. |
| 72 | 83 | 57 | .109* | .105* | 18 | 39 | 12 | 77 | — | — | 138 | 2 to 1 | 3 Pc. |

## 3" X 1" CORRUGATIONS

| EQUIV. DIA. (Inches) | (Inches) SPAN | (Inches) RISE | MIN. THICK. (Inches) STEEL | MIN. THICK. (Inches) ALUM. | DIMENSIONS (Inches) A (±1") | B (MAX.) | H (±1") | L (±1 1/2") | L1 ① | L2 ① | W (±2") | APPROX. SLOPE | BODY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 48 | 53 | 41 | .109 | .105 | 18 | 26 | 12 | 63 | 24 | 72¾ | 90 | 2½ to 1 | 2 Pc. |
| 54 | 60 | 46 | .109 | .105 | 18 | 30 | 12 | 70 | 30 | 82¼ | 102 | 2 to 1 | 2 Pc. |
| 60 | 66 | 51 | .109* | .105* | 18 | 33 | 12 | 77 | — | — | 114 | 1½ to 1 | 3 Pc. |
| 66 | 73 | 55 | .109* | .105* | 18 | 36 | 12 | 77 | — | — | 126 | 1½ to 1 | 3 Pc. |
| 72 | 81 | 59 | .109* | .105* | 18 | 39 | 12 | 77 | — | — | 138 | 2 to 1 | 3 Pc. |
| 78 | 87 | 63 | .109* | .105* | 22 | 38 | 12 | 77 | — | — | 148 | 1½ to 1 | 3 Pc. |
| 84 | 95 | 67 | .109* | .105* | 22 | 34 | 12 | 77 | — | — | 162 | 1½ to 1 | 3 Pc. |
| 90 | 103 | 71 | .109* | .105* | 22 | 38 | 12 | 77 | — | — | 174 | 1½ to 1 | 3 Pc. |
| 96 | 112 | 75 | .109* | .105* | 24 | 40 | 12 | 77 | — | — | 174 | 1½ to 1 | 3 Pc. |

NOTE: ALL SPLICES TO BE LAP RIVETED OR BOLTED.

* EXCEPT CENTER PANEL SEE GENERAL NOTES

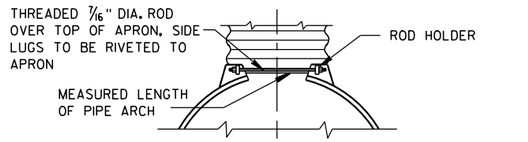
## REINFORCED CONCRETE PIPE ARCH

| EQUIV. DIA. (Inches) | DIMENSIONS (Inches) ** SPAN | ** RISE | T | A | B | C | D | E | APPROX. SLOPE |
|---|---|---|---|---|---|---|---|---|---|
| 24 | 29 | 18 | 3 | 8½ | 39 | 33 | 72 | 48 | 3 to 1 |
| 30 | 36 | 22 | 3½ | 9½ | 50 | 46 | 96 | 60 | 3 to 1 |
| 36 | 44 | 27 | 4 | 11⅛ | 60 | 36 | 96 | 72 | 3 to 1 |
| 42 | 51 | 31 | 4½ | 15 13/16 | 60 | 36 | 96 | 78 | 3 to 1 |
| 48 | 58 | 36 | 5 | 21 | 60 | 36 | 96 | 84 | 3 to 1 |
| 54 | 65 | 40 | 5½ | 25½ | 60 | 36 | 96 | 90 | 3 to 1 |
| 60 | 73 | 45 | 6 | 31 | 60 | 36 | 96 | 96 | 3 to 1 |
| 72 | 88 | 54 | 7 | 31 | 60 | 39 | 99 | 120 | 2 to 1 |
| 84 | 102 | 62 | 8 | 28½ | 83 | 19 | 102 | 144 | 2 to 1 |

## REINFORCED CONCRETE ELLIPTICAL PIPE

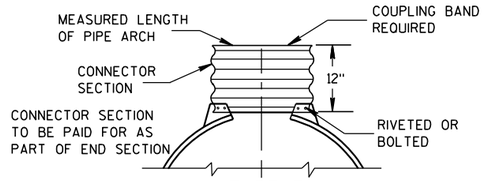
| EQUIV. DIA. (Inches) | DIMENSIONS (Inches) ** SPAN | ** RISE | T | A | B | C | D | E | APPROX. SLOPE |
|---|---|---|---|---|---|---|---|---|---|
| 24 | 30 | 19 | 3¼ | 8½ | 39 | 33 | 72 | 48 | 3 to 1 |
| 30 | 38 | 24 | 3¾ | 9½ | 54 | 18 | 72 | 60 | 3 to 1 |
| 36 | 45 | 29 | 4½ | 11⅛ | 60 | 24 | 84 | 72 | 2½ to 1 |
| 42 | 53 | 34 | 5 | 15¾ | 60 | 36 | 96 | 78 | 2½ to 1 |
| 48 | 60 | 38 | 5½ | 21 | 60 | 36 | 96 | 84 | 2½ to 1 |
| 54 | 68 | 43 | 6 | 25½ | 60 | 36 | 96 | 90 | 2½ to 1 |
| 60 | 76 | 48 | 6½ | 30 | 60 | 36 | 96 | 96 | 2½ to 1 |

**NOMINAL SIZE



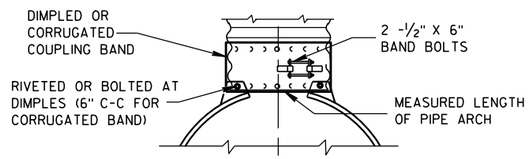

TYPE 2

FOR 17" X 13" THRU 112" X 75" PIPE ARCH




TYPE 3

FOR 64" X 43" THRU 112" X 75" PIPE ARCH




TYPE 5

ALTERNATE FOR:

ALL SIZES CORRUGATED PIPE ARCHES

NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL.

# CONNECTION DETAILS

# GENERAL NOTES

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

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

ALL THREE PIECE STEEL APRON ENDWALLS FOR 66" X 51" PIPE ARCH AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 66" X 51" PIPE ARCH AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE ARCH PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 77" X 52" THROUGH 112" X 75" APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

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

① FOR PIPE ARCH SIZES UP TO 73" X 55" A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

**APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/30/94 — DATE

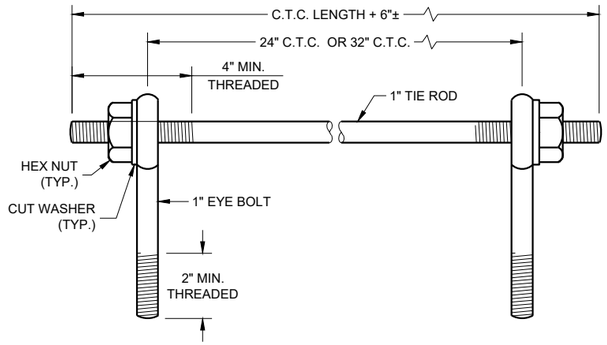
/S/ Rory L. Rhinesmith — CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

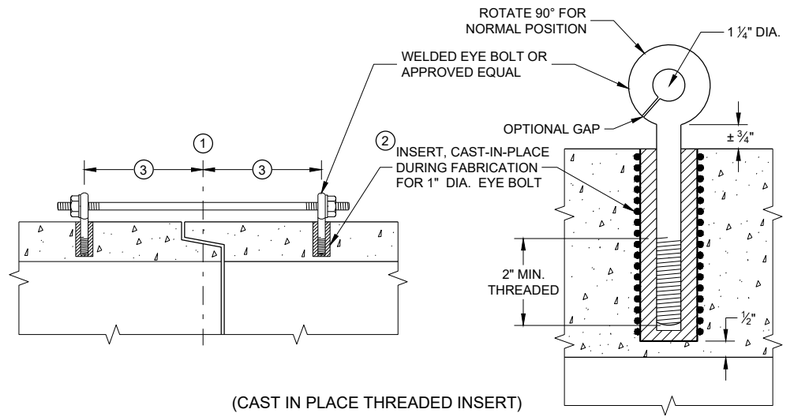


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S.D.D. 8 F 2-1




**EYE BOLTS AND TIE ROD**




(CAST IN PLACE THREADED INSERT)

**LONGITUDINAL SECTIONS**

# EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 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 APPLICABLE SPECIAL PROVISIONS.

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

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

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

(1) CENTER LINE OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.

(2) THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

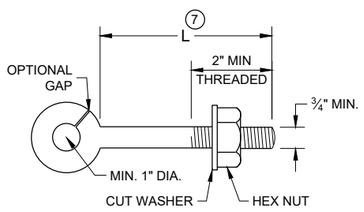
(3) HOLES SHALL BE CAST-IN-PLACE OR DRILLED PER THE APPLICABLE DETAIL, AND EQUAL DISTANCE FROM THE CENTERLINE OF THE JOINT.

(4) BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

(5) OPENING TO BE ROD DIAMETER PLUS 1 INCH.

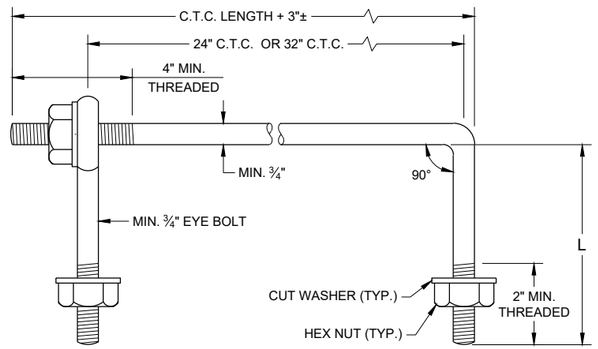
(6) LENGTH ADEQUATE TO EXTEND TO WITHIN ½ INCH OF THE INNER SURFACE OF THE PIPE.

(7) EYE BOLT LENGTH DETERMINED BY WALL THICKNESS, BELL THICKNESS AND BOLT PROJECTION INSIDE PIPE.

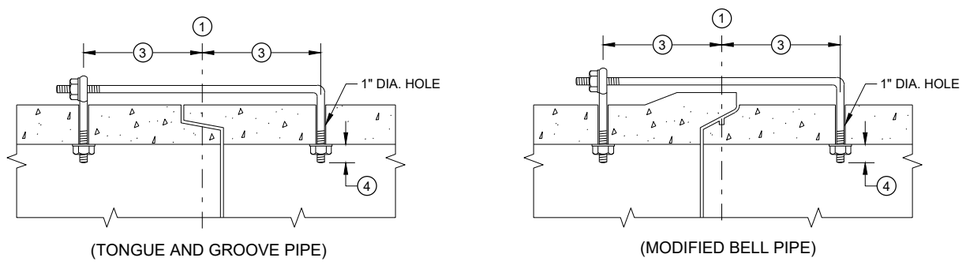



**EYE BOLT** (7)

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




**EYE BOLT AND TIE ROD**




(TONGUE AND GROOVE PIPE) (MODIFIED BELL PIPE)

**LONGITUDINAL SECTION**

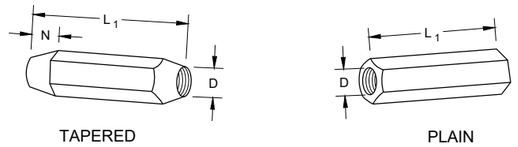
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

ADJUSTABLE TIE ROD TABLE

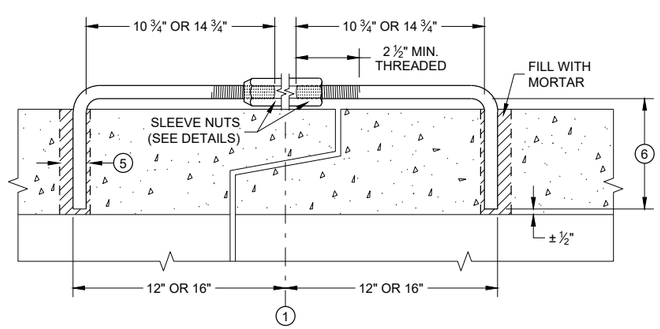
| PIPE DIAMETER | TIE ROD DIAMETER | D | $L_1$ | N |
|---|---|---|---|---|
| 12 - 60 | ⅝ | ⅝ | 5 | ½ |
| 66 - 84 | ¾ | ¾ | 5 | ½ |
| 90 - 144 | 1 | 1 | 7 | 1 7/16 |

DIMENSIONS SHOWN ARE IN INCHES



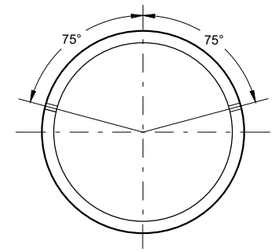

RIGHT AND LEFT THREADS

**SLEEVE NUTS**



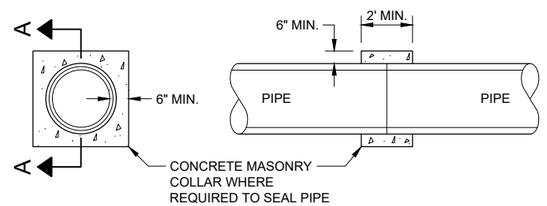

**LONGITUDINAL SECTION**

## ADJUSTABLE TIE ROD (ALTERNATE NO. 3)




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

**TRANSVERSE SECTION**




**SECTION A - A**

## CONCRETE COLLAR DETAIL

**JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

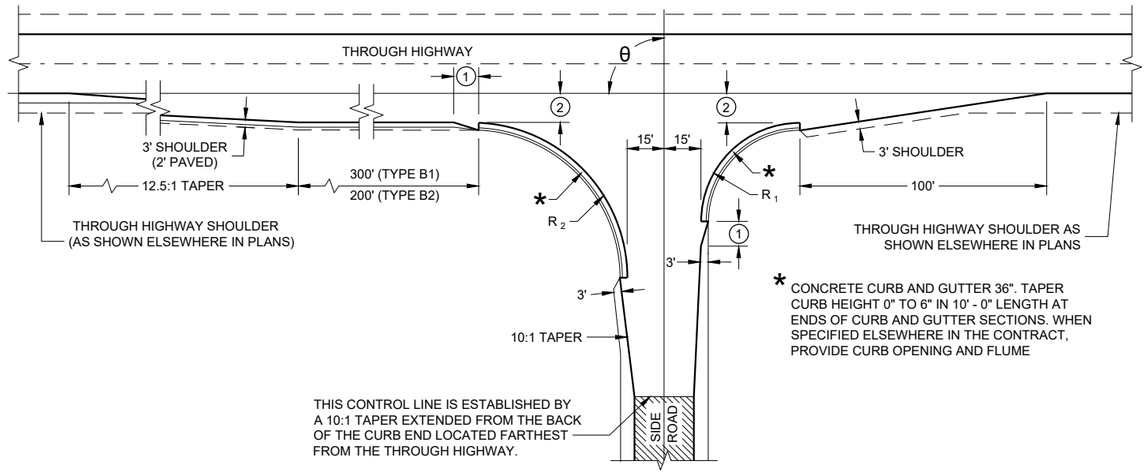
APPROVED
November 2021 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER

FHWA



SDD 08F04 - 08

SDD 08F04 - 08




* CONCRETE CURB AND GUTTER 36". TAPER CURB HEIGHT 0" TO 6" IN 10' - 0" LENGTH AT ENDS OF CURB AND GUTTER SECTIONS. WHEN SPECIFIED ELSEWHERE IN THE CONTRACT, PROVIDE CURB OPENING AND FLUME

## TYPE "B1" AND "B2"

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

| θ | $R_1$ | $R_2$ |
|---|---|---|
| 65 - 70 | 35 | 70 |
| 71 - 80 | 40 | 70 |
| 81 - 90 | 40 | 60 |
| 91 - 100 | 50 | 55 |
| 101 - 110 | 60 | 45 |

## GENERAL NOTES

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

SIDE ROAD SURFACING NOTE

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

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

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

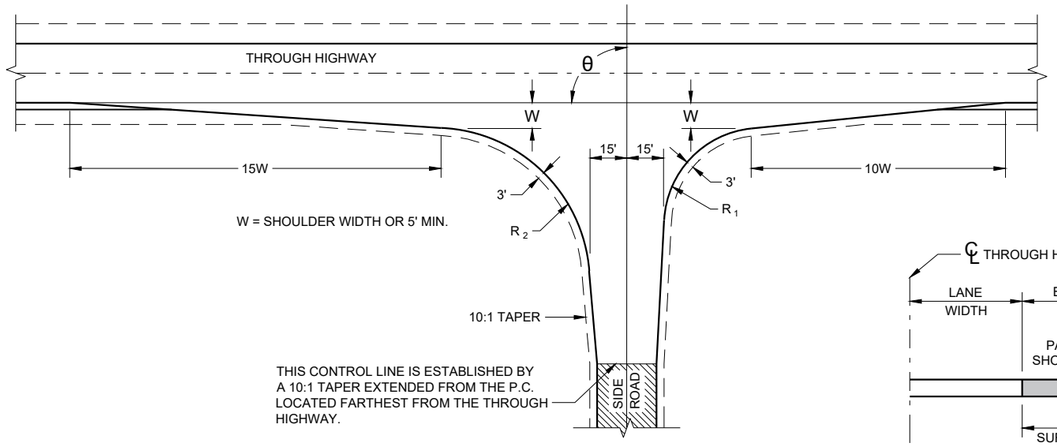
(1) 10-FT TYPICAL.

(2) 12-FT** PLUS ADDITIONAL WIDTH FOR BIKE LANE IF SHOWN ELSEWHERE IN THE PLAN.

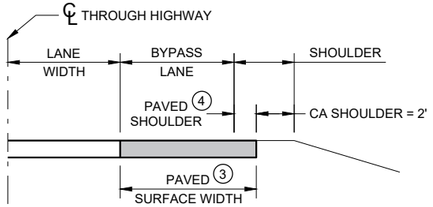
**10-FT MAY BE USED ON TYPE B2 ON RESURFACING PROJECTS IF SPECIFIED IN THE CONTRACT.

(3) BYPASS LANE PAVED SURFACE WIDTH OUTSIDE OF TRAVEL LANE
- ASPHALT = 12-FT PLUS PAVED SHOULDER WIDTH
- PC CONCRETE = 13-FT PLUS PAVED SHOULDER WIDTH

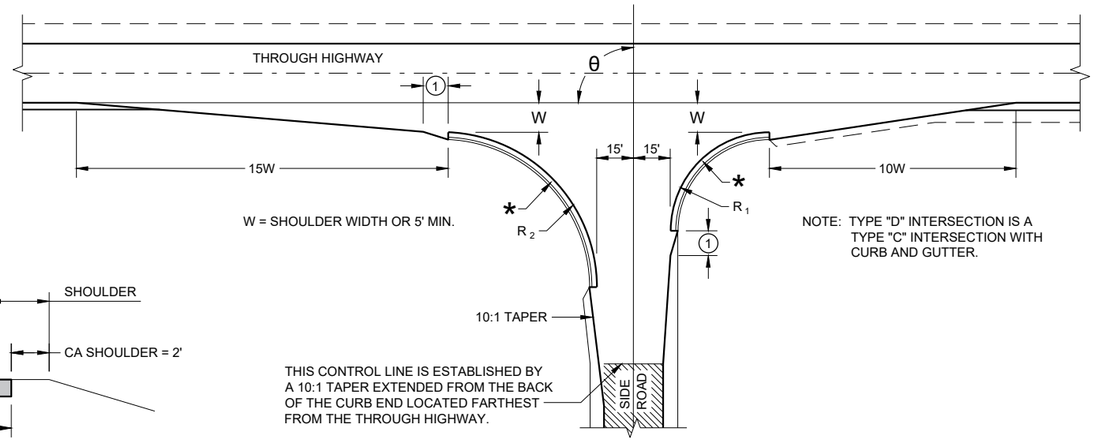
(4) BYPASS LANE PAVED SHOULDER WIDTH = THE GREATER OF 1-FT OR THE PAVED SHOULDER WIDTH OF THE THROUGH HIGHWAY.




## TYPE "C"

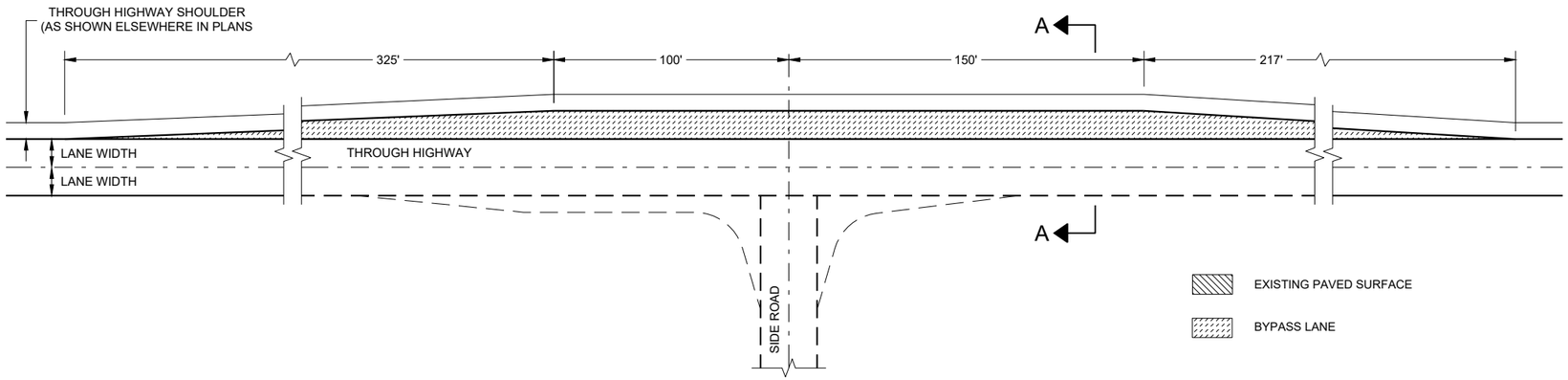



## SECTION A - A
(SHOWING BYPASS LANE AND SHOULDER)




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

## TYPE "D"




## TEE INTERSECTION BYPASS LANE DETAIL

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

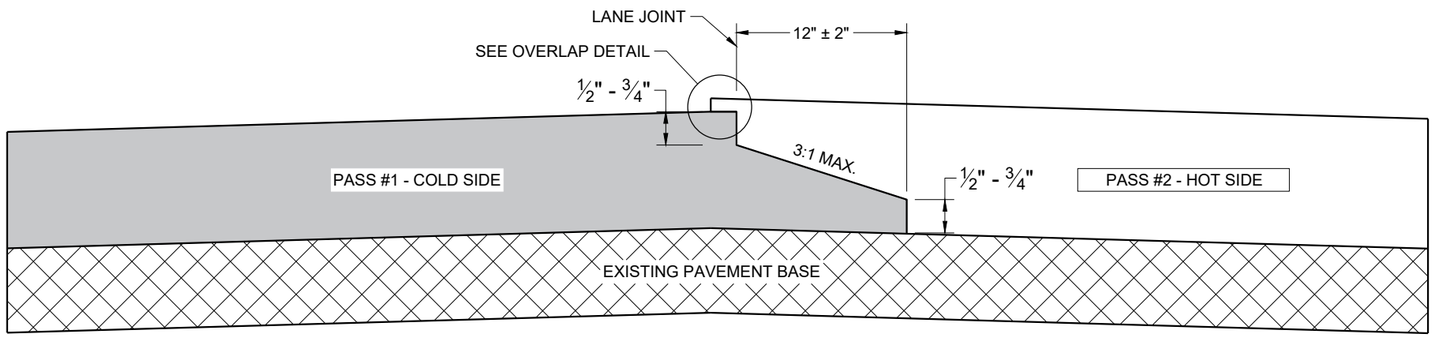


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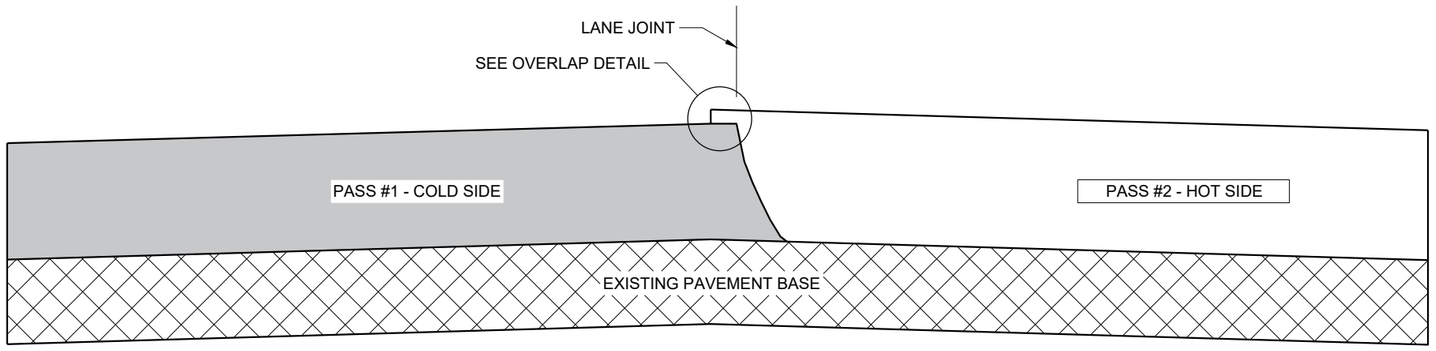
SDD 09A01 - 14a

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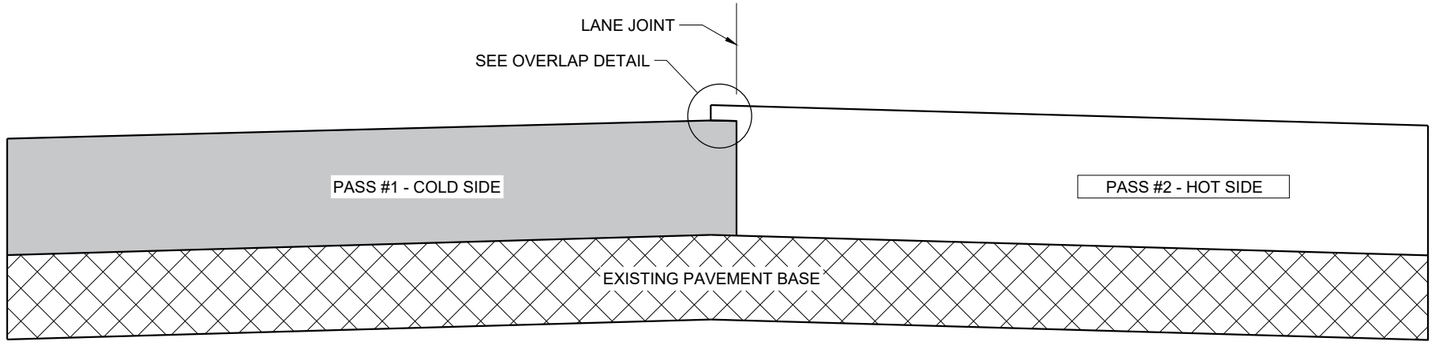
SDD 09A01 - 14a




**TYPICAL PAVEMENT CROSS SECTION**
**NOTCHED WEDGE JOINT**




**TYPICAL PAVEMENT CROSS SECTION**
**VERTICAL JOINT**




**TYPICAL PAVEMENT CROSS SECTION**
**VERTICAL JOINT (MILLED)**

## GENERAL NOTES

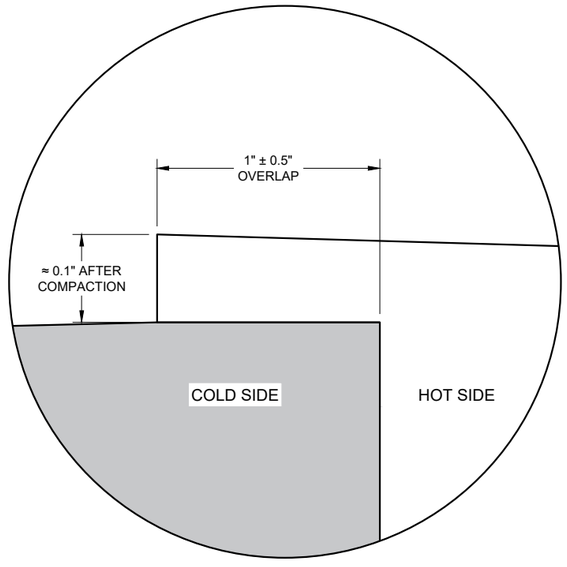
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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

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

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

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




**OVERLAP DETAIL (TYPICAL)**

**HMA LONGITUDINAL JOINTS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2020
DATE

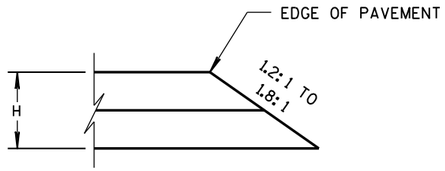
/S/ Steven Hefel
HMA PAVEMENT ENGIN

FHWA



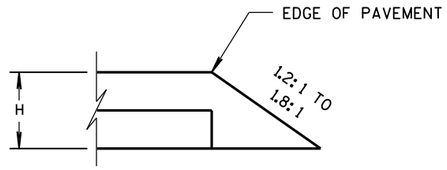

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SDD 13C19 - 03



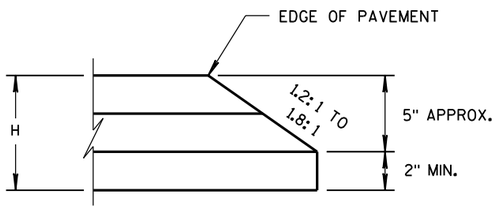

CONSTRUCTED WITH FINAL TWO LAYERS

FOR H 5" OR LESS



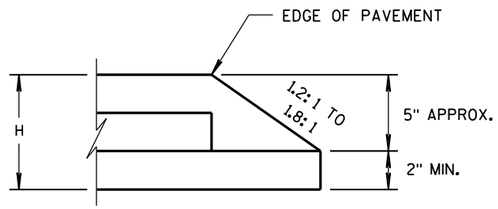

CONSTRUCTED WITH FINAL LAYER

FOR H 5" OR LESS




CONSTRUCTED WITH FINAL TWO LAYERS

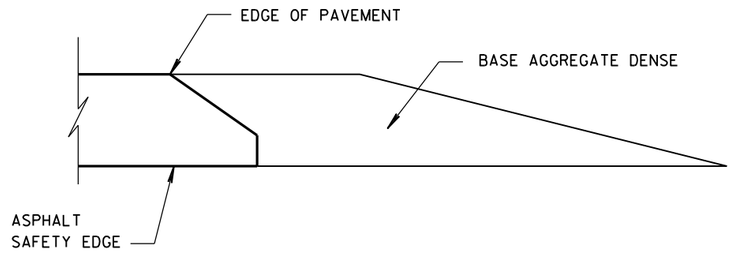
FOR H GREATER THAN 5"




CONSTRUCTED WITH FINAL LAYER

FOR H GREATER THAN 5"

## HMA PAVEMENT AND HMA OVERLAYS




## FINISHED SHOULDER AGGREGATE PLACEMENT

6

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S.D.D. 14 B 29-1

S.D.D. 14 B 29-1

SAFETY EDGE SM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/30/2012
DATE

/S/ Jerry H. Zoda
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

(1) WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

(2) USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.

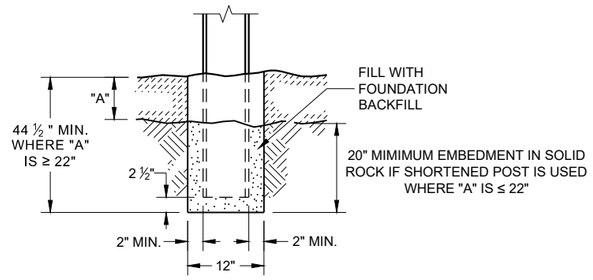
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.

(4) WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).

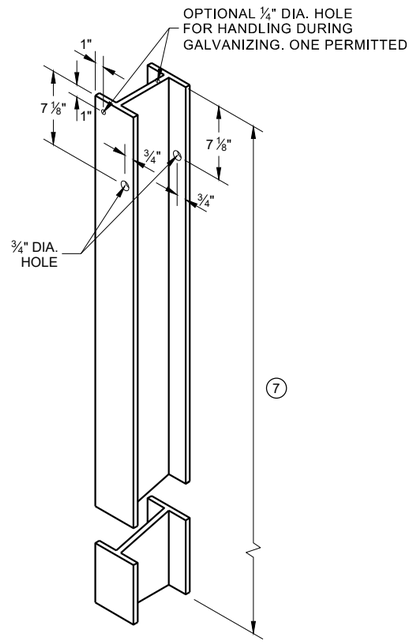
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ±1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

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

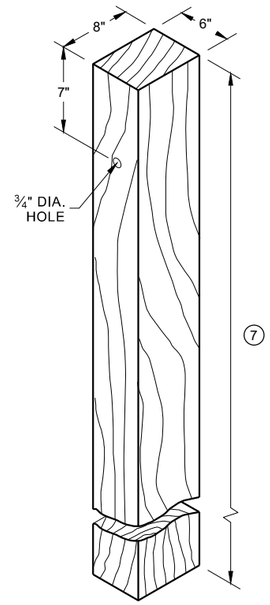
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



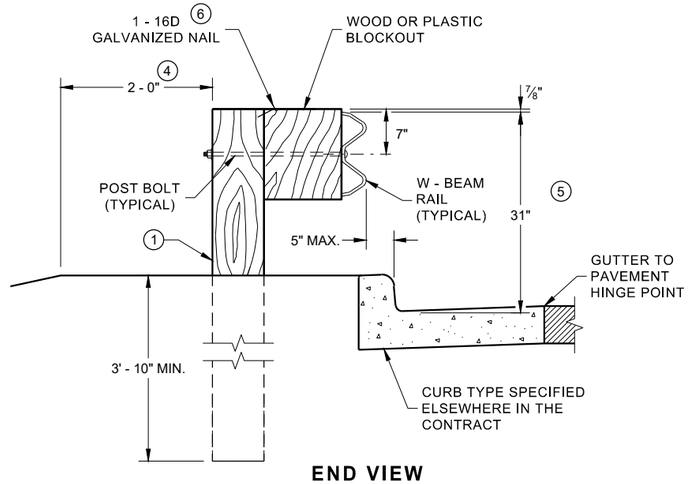

END VIEW
**SETTING STEEL OR WOOD POST IN ROCK** (3)



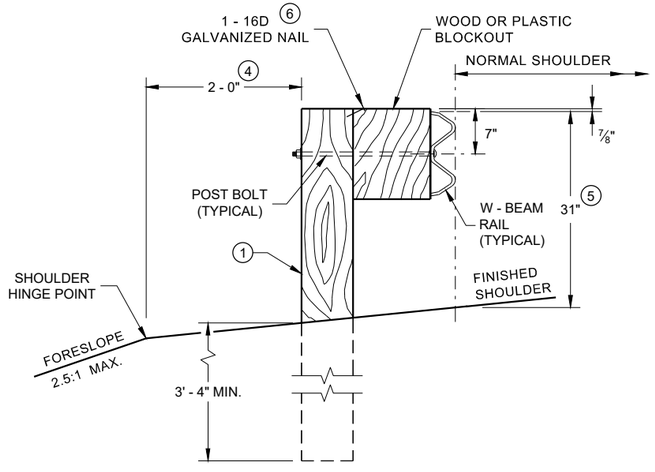

**STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9)** (1)



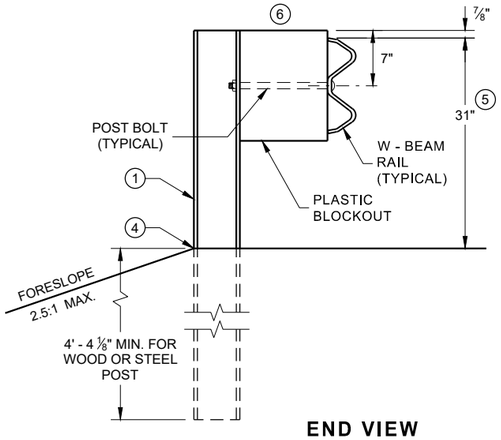

**WOOD POST (6" X 8") NOMINAL** (1)



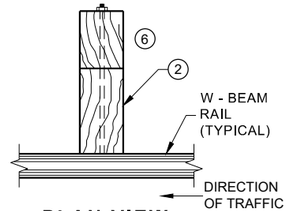

END VIEW
**LOCATED ALONG A CURBED ROADWAY**



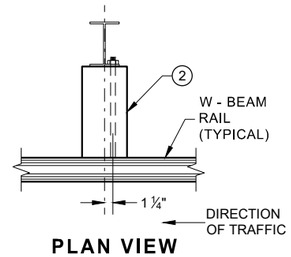

END VIEW
**LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION**



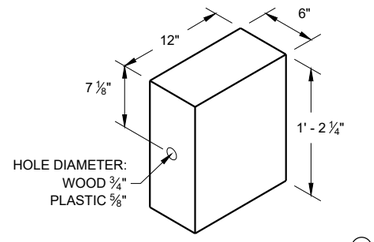

END VIEW
**MGS LONGER POST AT HALFPOST SPACING W BEAM (K)**




PLAN VIEW
**WOOD POST, BLOCKOUT & BEAM**



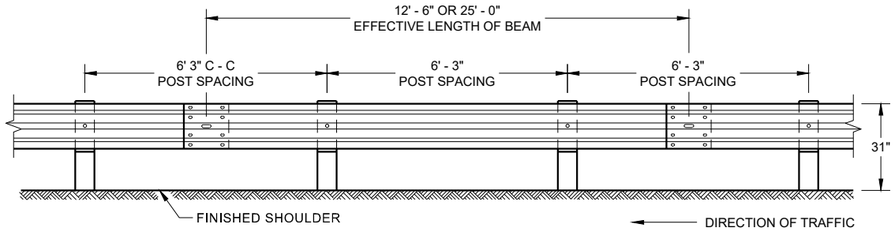

PLAN VIEW
**STEEL POST, PLASTIC BLOCKOUT & BEAM**



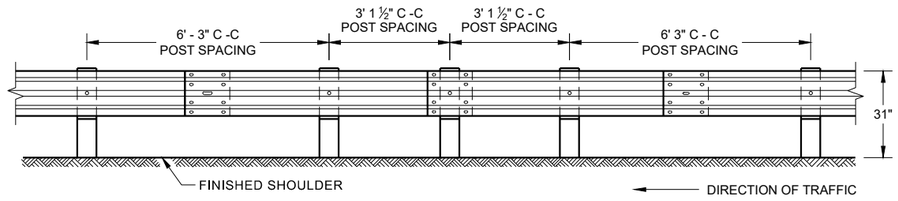

**WOOD OR PLASTIC BLOCKOUT** (2)

**MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL**

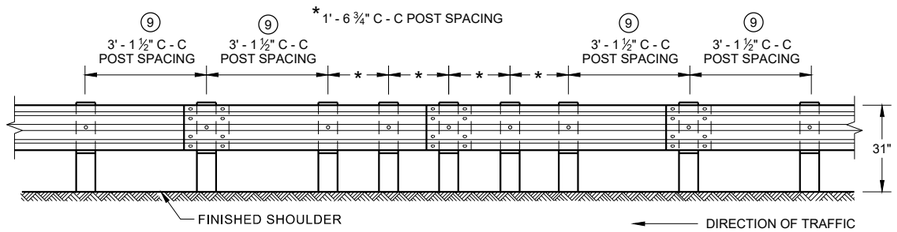
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



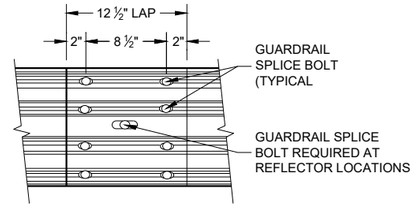

**FRONT VIEW**
**POST SPACING STANDARD INSTALLATION**




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




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




**FRONT VIEW**
**MID-SPAN BEAM SPLICE**

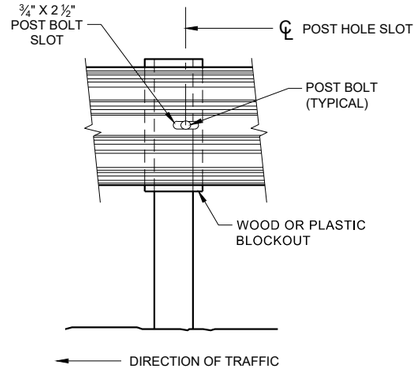
## GENERAL NOTES

⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

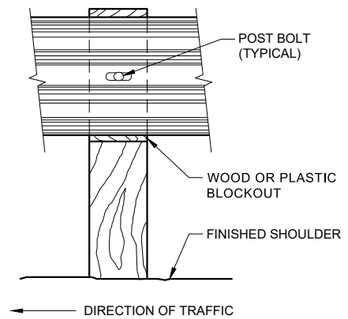
⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

POST BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND ⅝" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

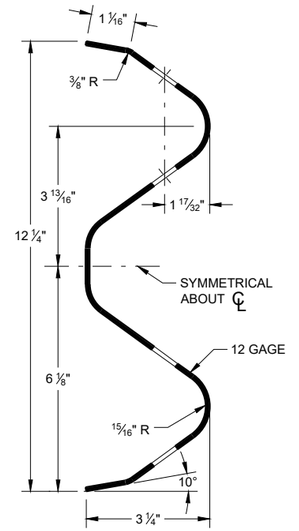
GUARD RAIL SPLICE BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



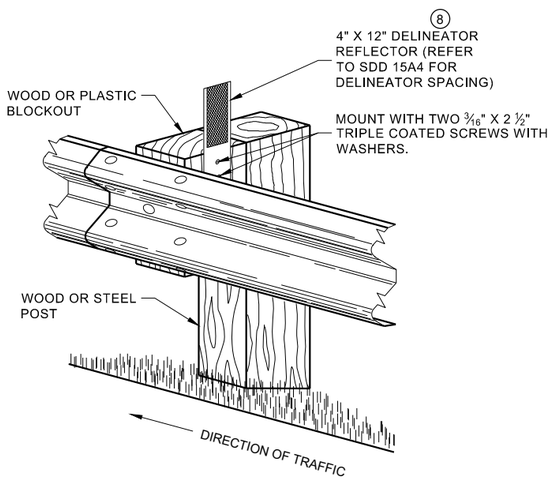

**FRONT VIEW AT STEEL POST**




**FRONT VIEW AT WOOD POST**




**SECTION THRU W-BEAM RAIL**




**ONE SIDED REFLECTOR DETAIL**
**AND TYPICAL INSTALLATION**

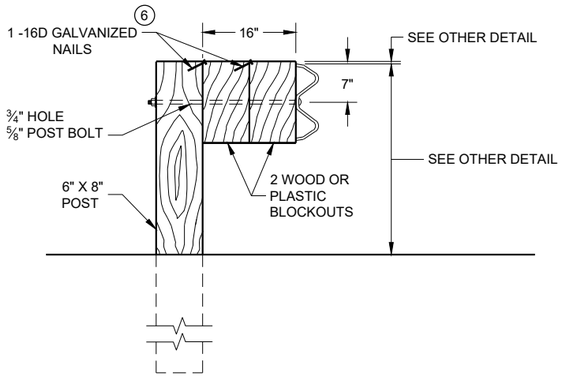
**MIDWEST GUARDRAIL SYSTEM**
**(MGS) GUARDRAIL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION




6


SDD 14B42 - 07b

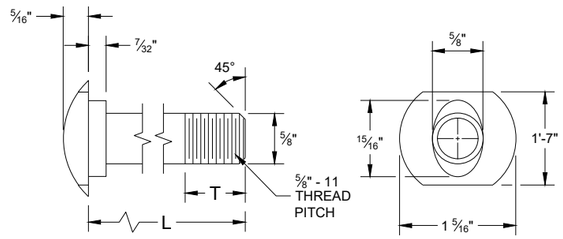



## DETAIL FOR 16" BLOCKOUT DEPTH

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

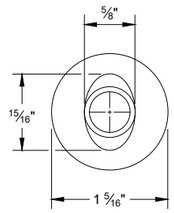
NOTE:

1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 3⁄16".
2. IF THE BOLT EXTENDS MORE THAN ¼" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

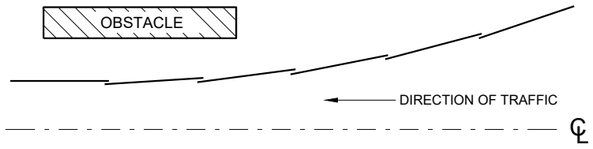



## POST BOLT TABLE

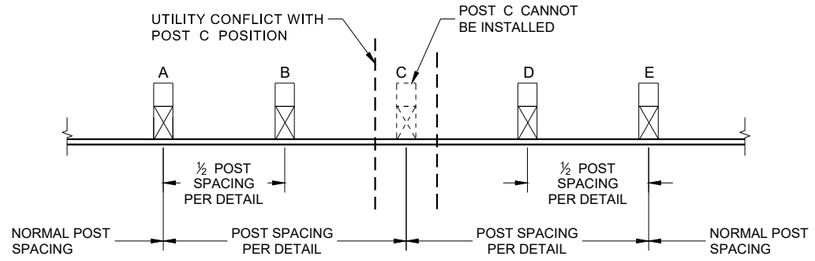
| L | T (MIN.) |
|---|---|
| 1 ¼" | 1 ⅛" |
| 2" | 1 ¾" |
| 10" | 4" |
| 14" | 4 1⁄16" |
| 18" | 4" |
| 21" | 4 1⁄16" |
| 25" | 4" |



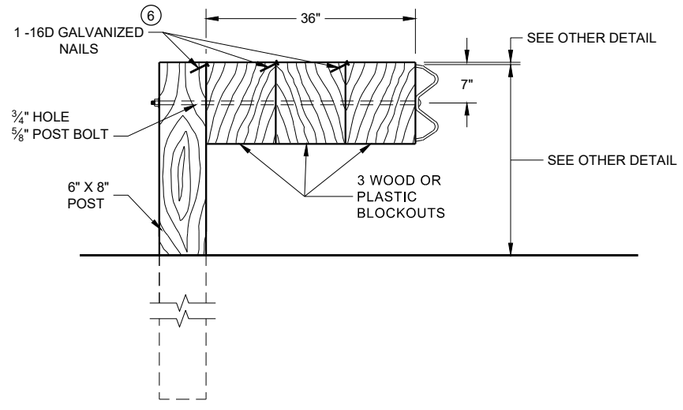

## ALTERNATE BOLT HEAD



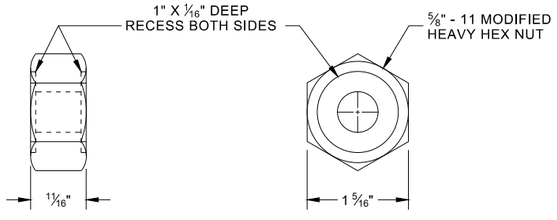

## PLAN VIEW
## BEAM LAPPING DETAIL



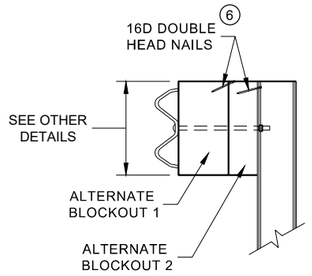

## POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



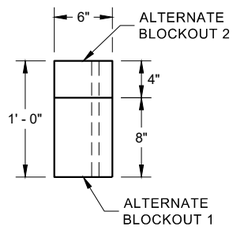

## DETAIL FOR 36" BLOCKOUT DEPTH




## POST BOLT, SPLICE BOLT AND RECESS NUT




SIDE VIEW




PLAN VIEW

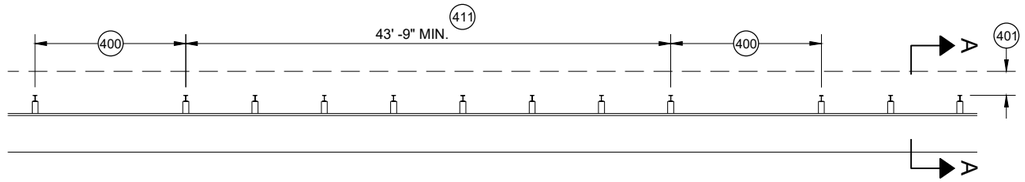
## ALTERNATE WOOD BLOCKOUT DETAIL

NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.

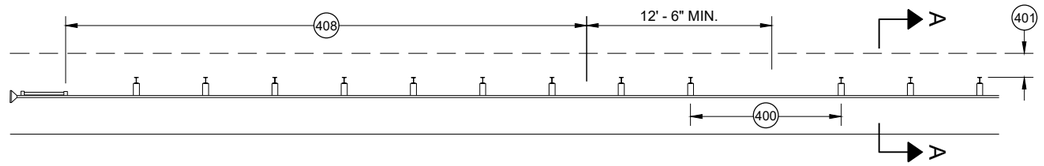
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

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

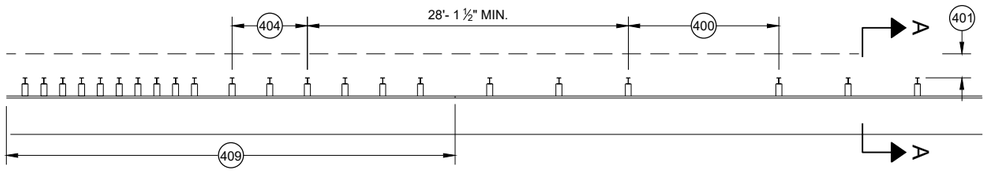
**MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL**



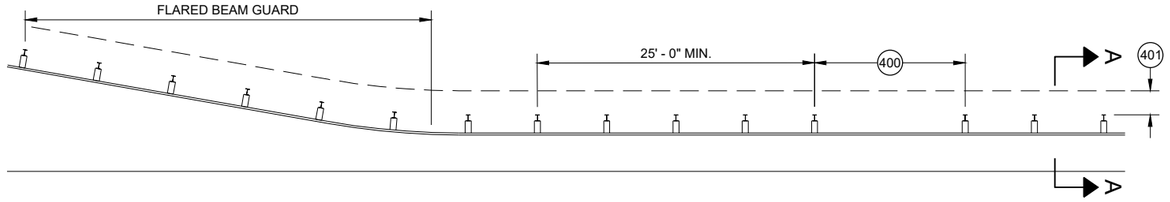

**MISSING POST IN MGS GUARDRAIL**



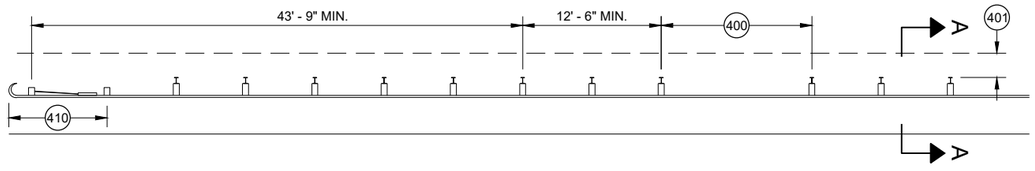

**MISSING POST IN MGS GUARDRAIL NEAR EAT**



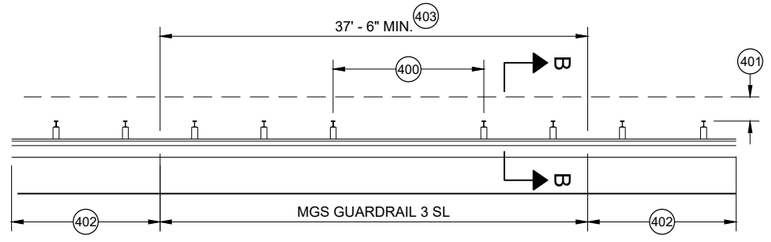

**MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION**




**MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD**

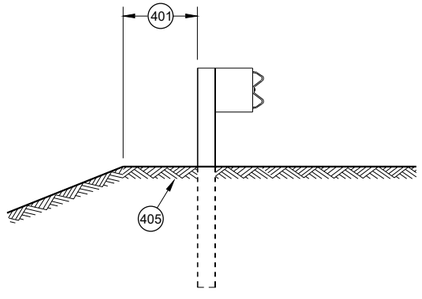



**MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL**

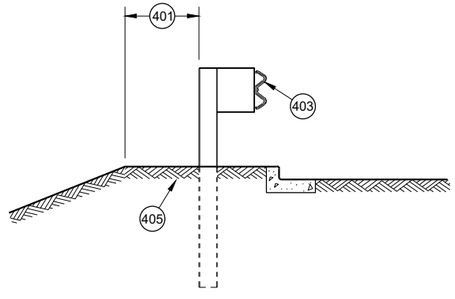



**MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL)** 407

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




**SECTION A - A** 406




**SECTION B - B** 406

**MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2021
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE
UNIT SUPERVISOR

FHWA



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SDD 14B42 - 07d

SDD 14B42 - 07d

## GENERAL NOTES

(A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE (HPL) AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.

(B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED

(C) DIFFERENT MANUFACTURERS REQUIRE DIFFERENT PERFORATED W - BEAM RAIL END PANELS. SEE MANUFACTURER'S INFORMATION.

(D) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF - TAPPING SCREWS. ONE SCREW PER CORNER.

(E) HARDWARE MAY VARY BETWEEN MANUFACTURER. SEE MANUFACTURER'S DRAWING FOR INFORMATION.

DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

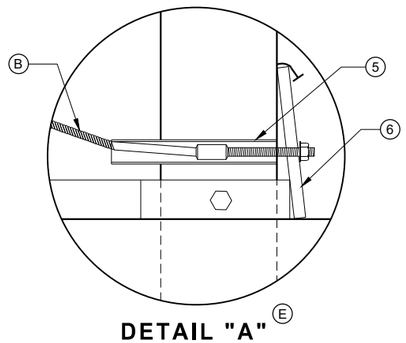
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

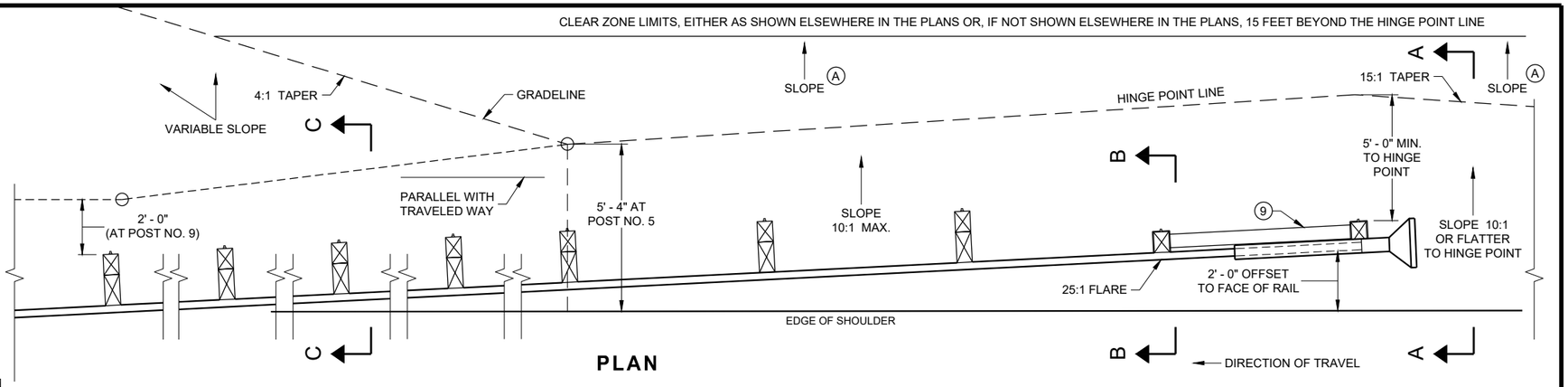
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

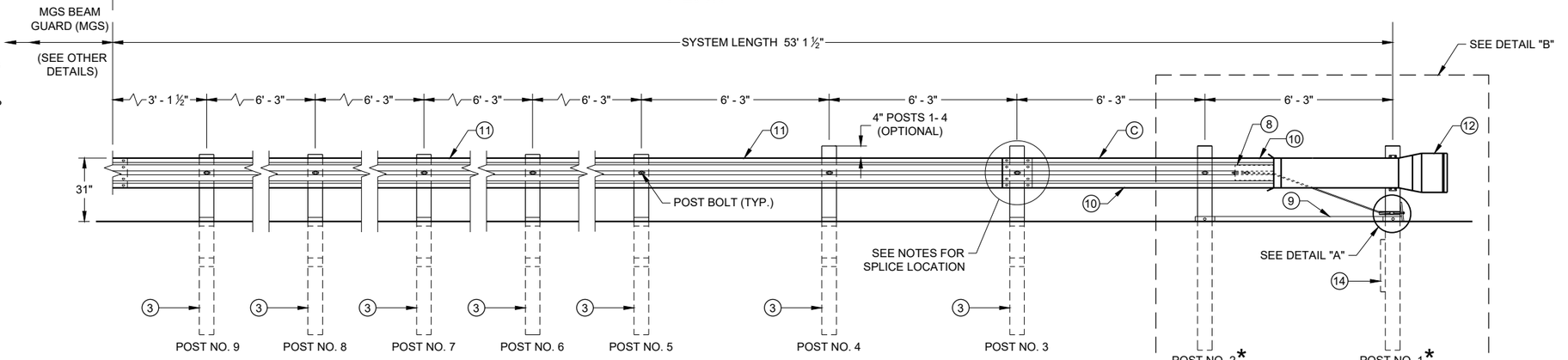
THE CENTER OF THE UPPER 3 ½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.



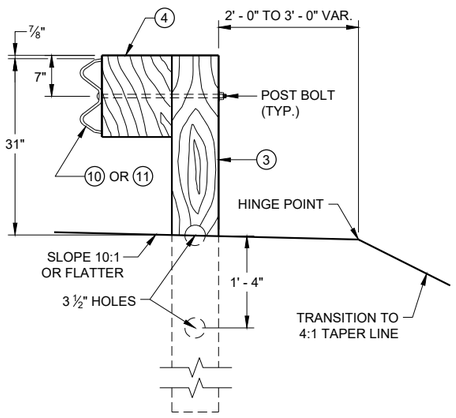

DETAIL "A" (E)



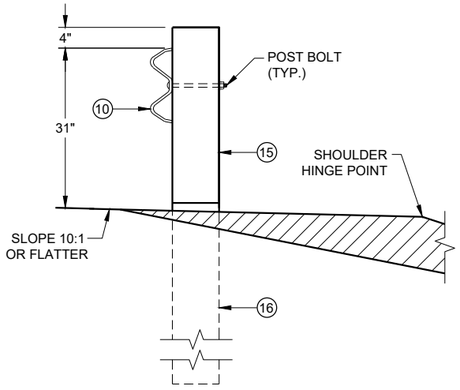

PLAN



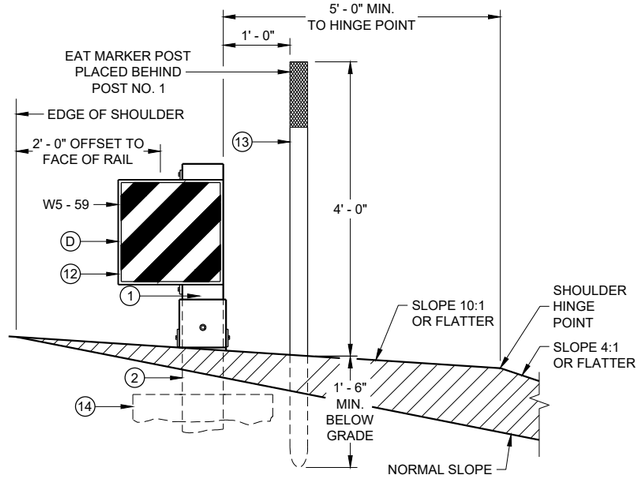

ELEVATION



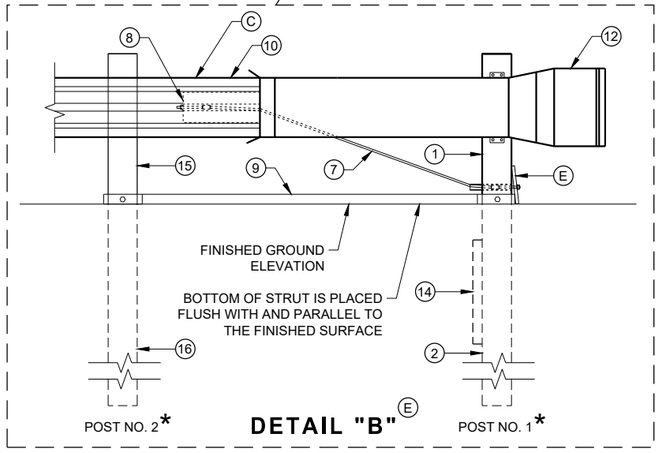

SECTION C - C
TYPICAL AT POST NOS. 3 - 9




SECTION B - B
TYPICAL AT POST NO. 2*




SECTION A - A
TYPICAL AT POST NO. 1*




DETAIL "B" (E)

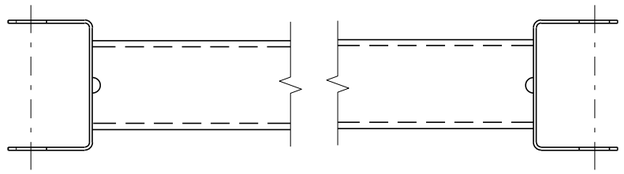
**MIDWEST GUARDRAIL SYSTEM**
**ENERGY ABSORBING TERMINAL (MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a



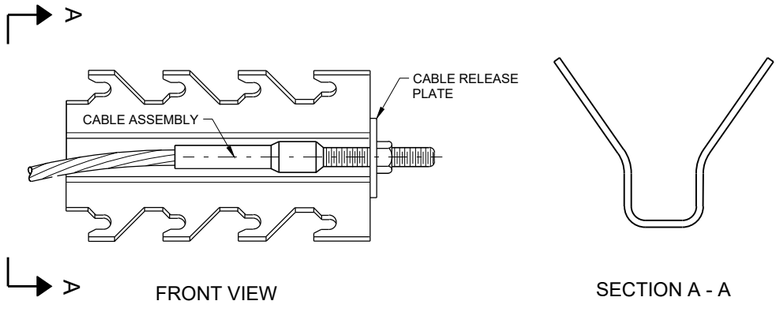
SDD 14B44 - 04a



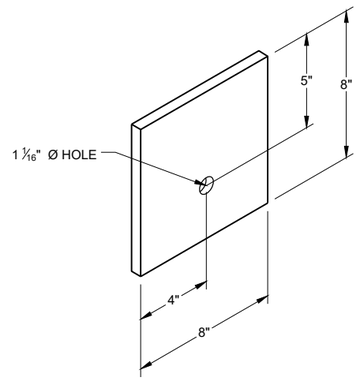
## GENERIC GROUND STRUT ⑨ Ⓔ

## BILL OF MATERIALS

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




## GENERIC ANCHOR CABLE BOX ⑨ Ⓔ




## BEARING PLATE ⑥ Ⓔ

6

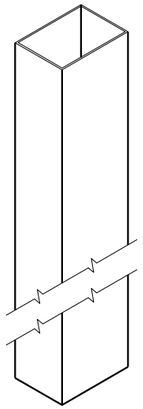
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SDD 14B44 - 04b

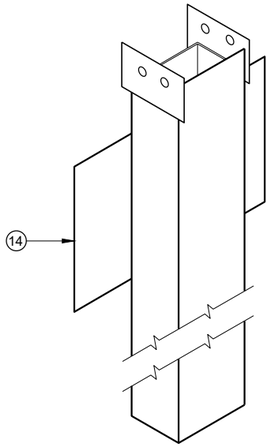
SDD 14B44 - 04b

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

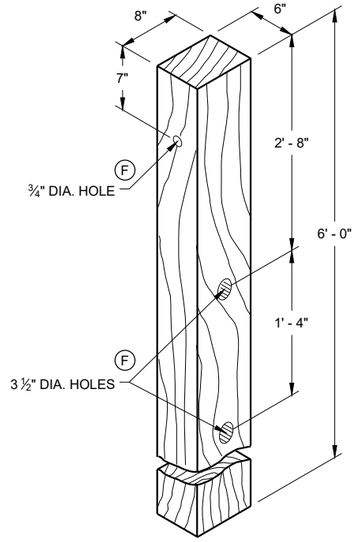
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



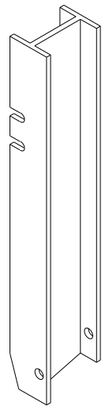
**UPPER POST NO. 1** (1) (E)



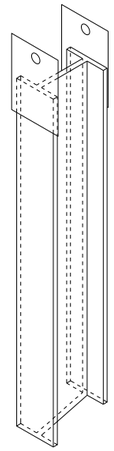

**LOWER POST NO. 1** (2) (E)



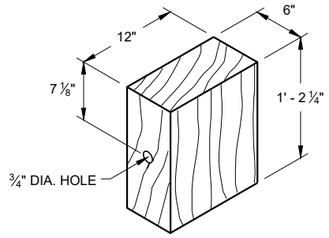

**WOOD CRT POST** (3) (E)
POSTS NUMBER 3-9



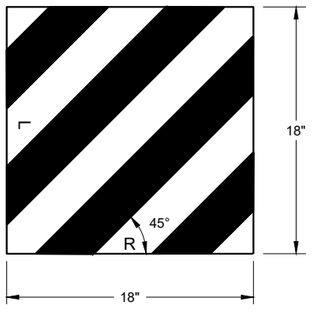
**UPPER POST NO. 2** (15) (E)



**LOWER POST NO. 2** (16) (E)

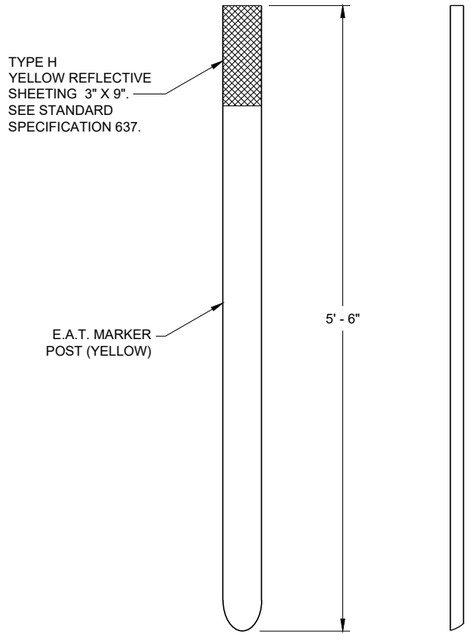



**WOOD BLOCKOUT** (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



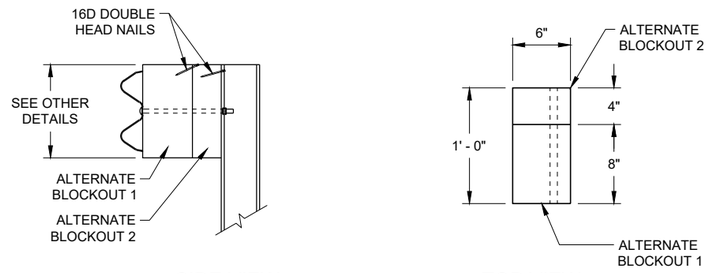

W5 - 59

**REFLECTIVE SHEETING DETAIL** (E)




FRONT VIEW SIDE VIEW

**E.A.T. MARKER POST** (13)




SIDE VIEW TOP VIEW

**ALTERNATE WOOD BLOCKOUT DETAIL**

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

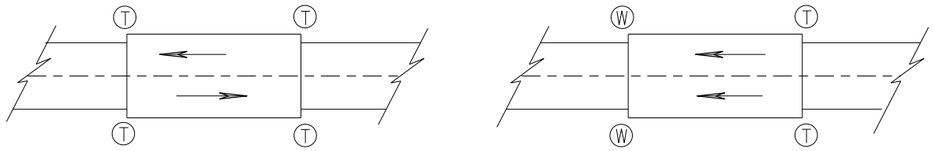
APPROVED
7/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE UNIT SUPERVISOR

FHWA




6


SDD 14B44 - 04c




**TWO WAY TRAFFIC**




**ONE WAY TRAFFIC**

(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

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

## GENERAL NOTES

IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

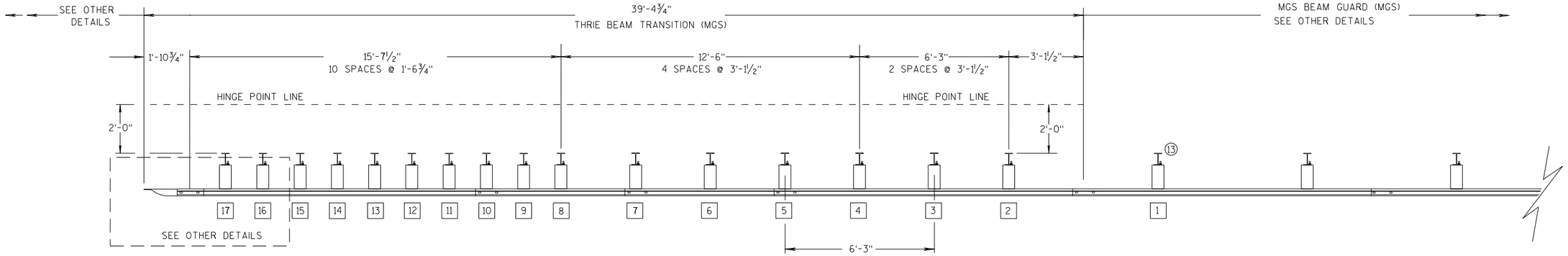
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

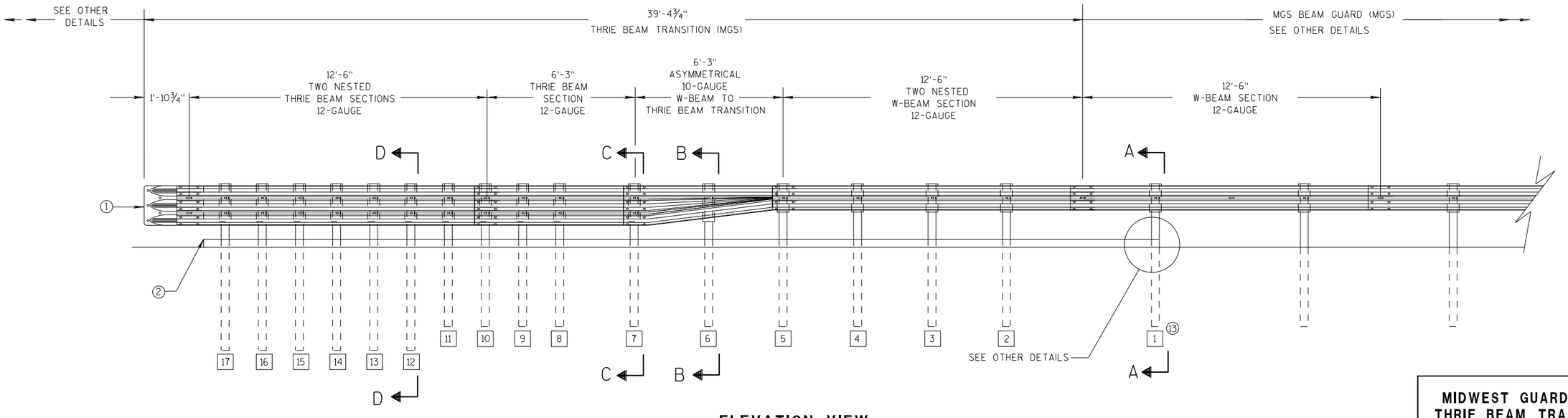
(1) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

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

(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD14B42




**PLAN VIEW**




**ELEVATION VIEW**

## MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR







6

S.D.D. 14 B 45-5a

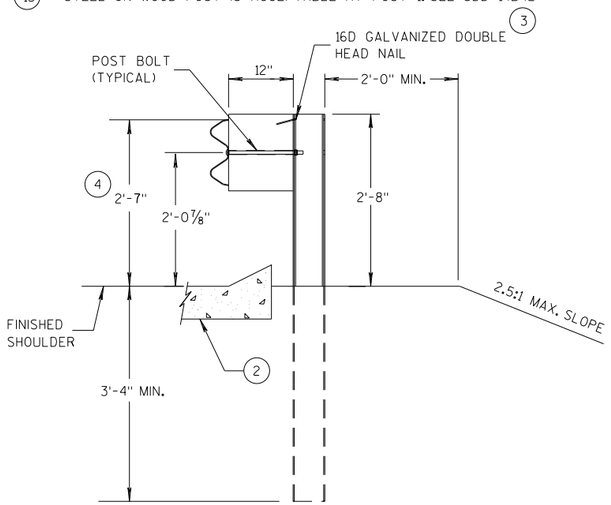
## GENERAL NOTES

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

(3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

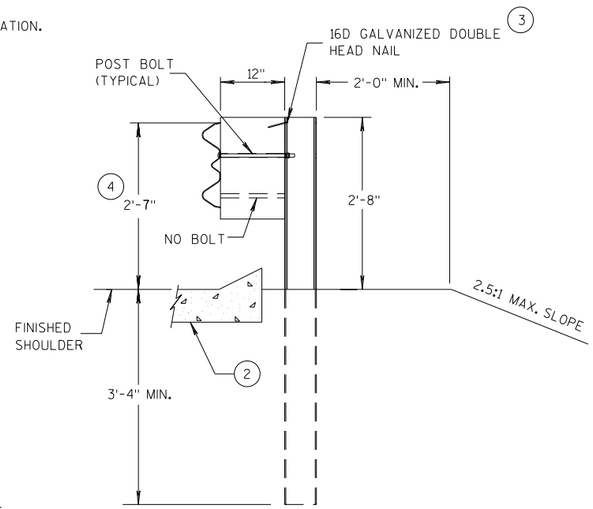
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

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



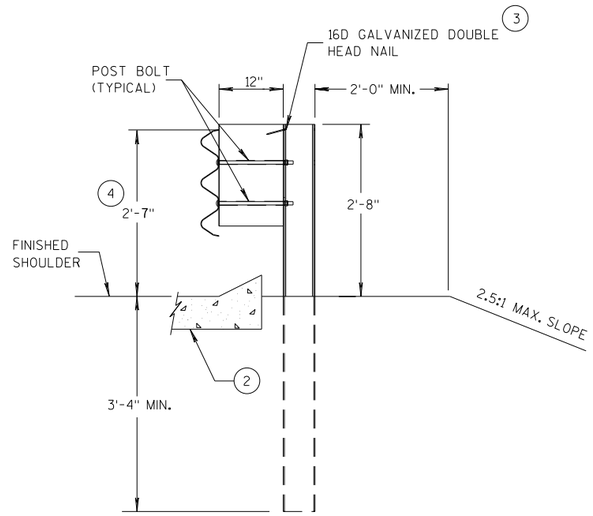

SECTION A-A (13)

**POSTS 1-5**



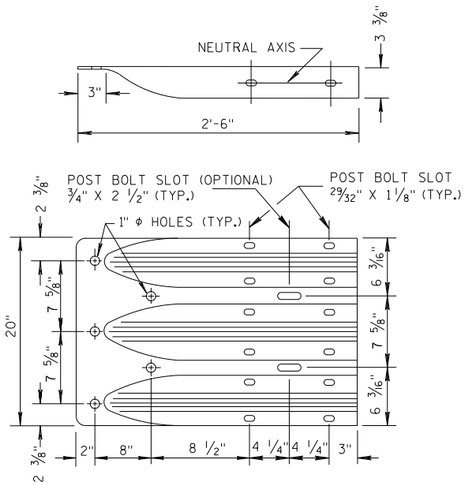

SECTION B-B

**POST 6**

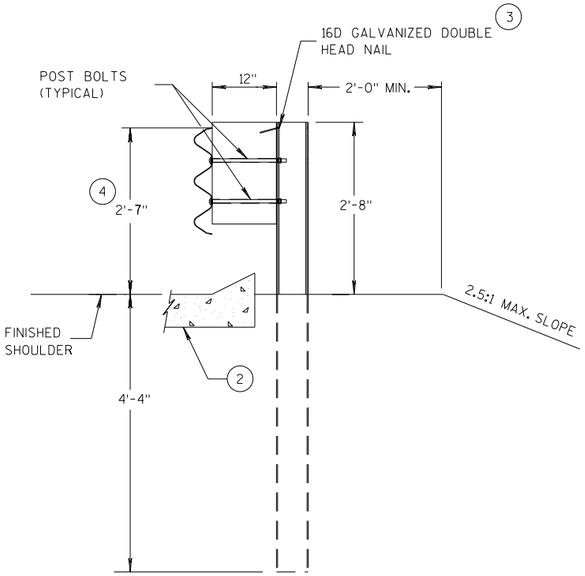



SECTION C-C

**POSTS 7-11**

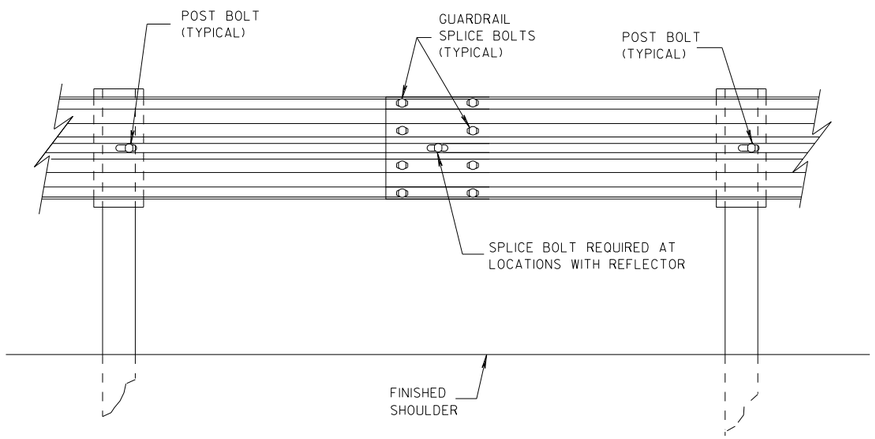



**THRIE BEAM TERMINAL CONNECTOR**




SECTION D-D

**POSTS 12-17**




**SPLICE DETAIL**

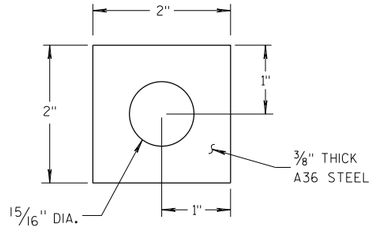
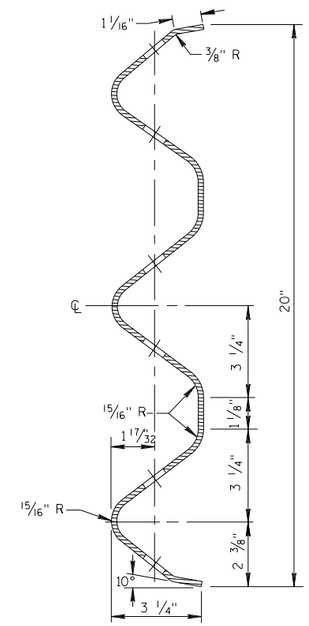



**PLATE WASHER DETAIL**




**SECTION THRU THRIE BEAM RAIL ELEMENT**

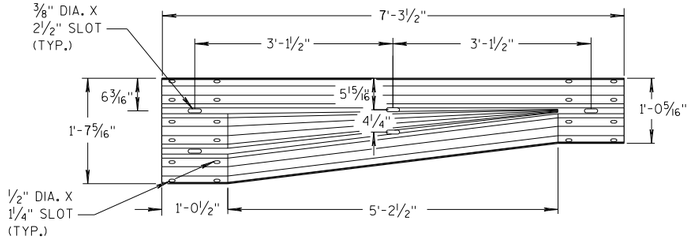
**MIDWEST GUARDRAIL SYSTEM**
**THRIE BEAM TRANSITION (MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

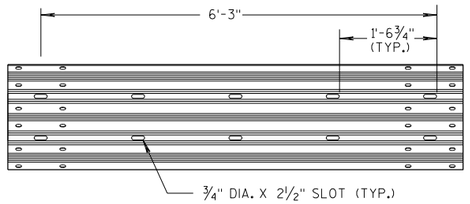



6

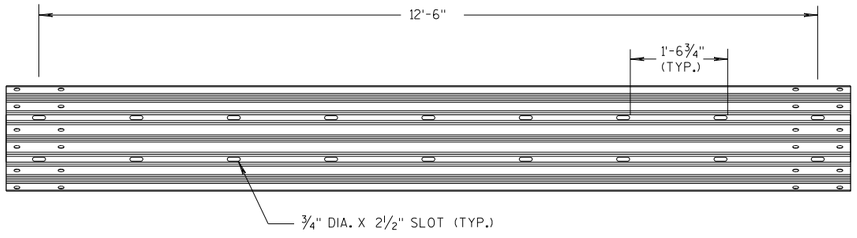
S.D.D. 14 B 45-5b



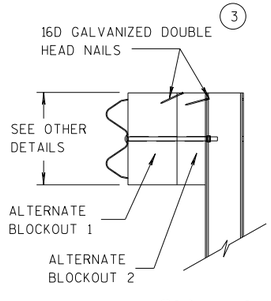

## W-BEAM TO THRIE BEAM TRANSITION SECTION



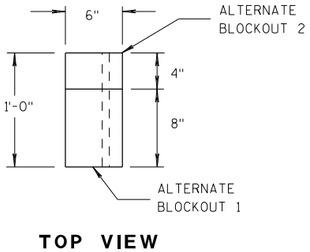

## 6'-3" THRIE BEAM SECTION




## 12'-6" THRIE BEAM SECTION

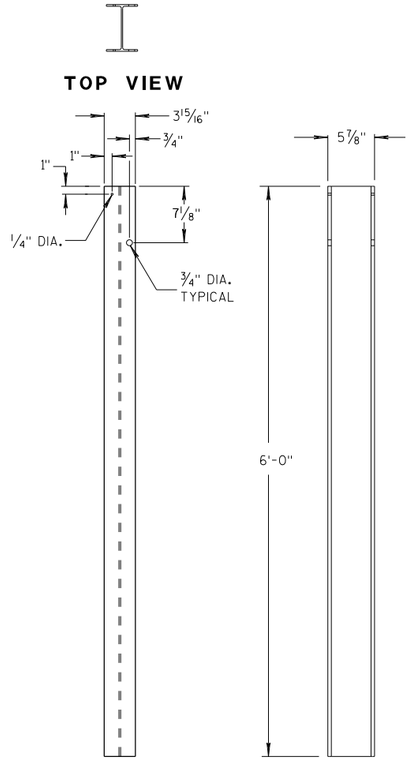



SIDE VIEW



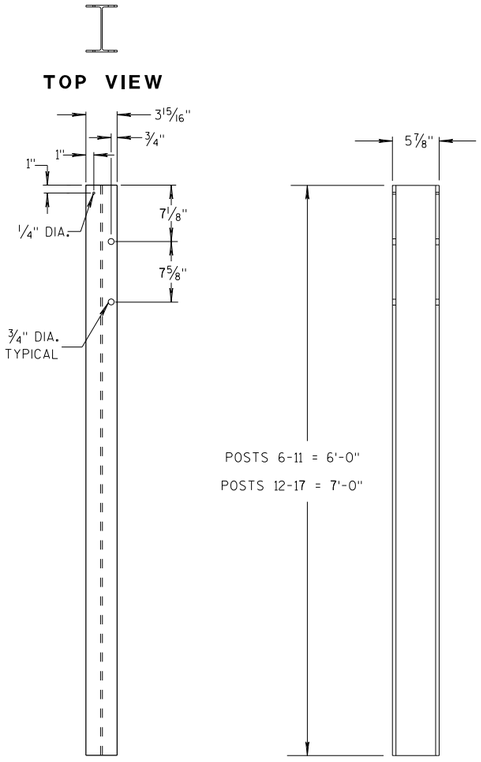

TOP VIEW

## ALTERNATE WOOD BLOCKOUT DETAIL



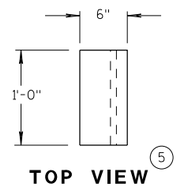

FRONT VIEW SIDE VIEW

## STEEL POSTS 1-5 (13)

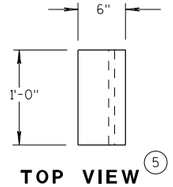



FRONT VIEW SIDE VIEW

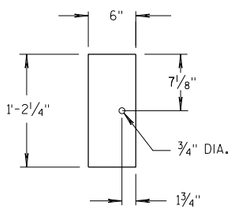
## STEEL POSTS 6-17




TOP VIEW (5)

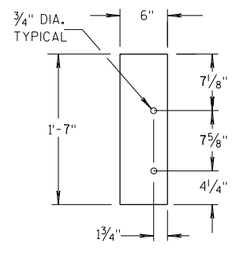



TOP VIEW (5)




FRONT VIEW

## BLOCKOUT POSTS 1-5




FRONT VIEW

## BLOCKOUT POSTS 6-17

## GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

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

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

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

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

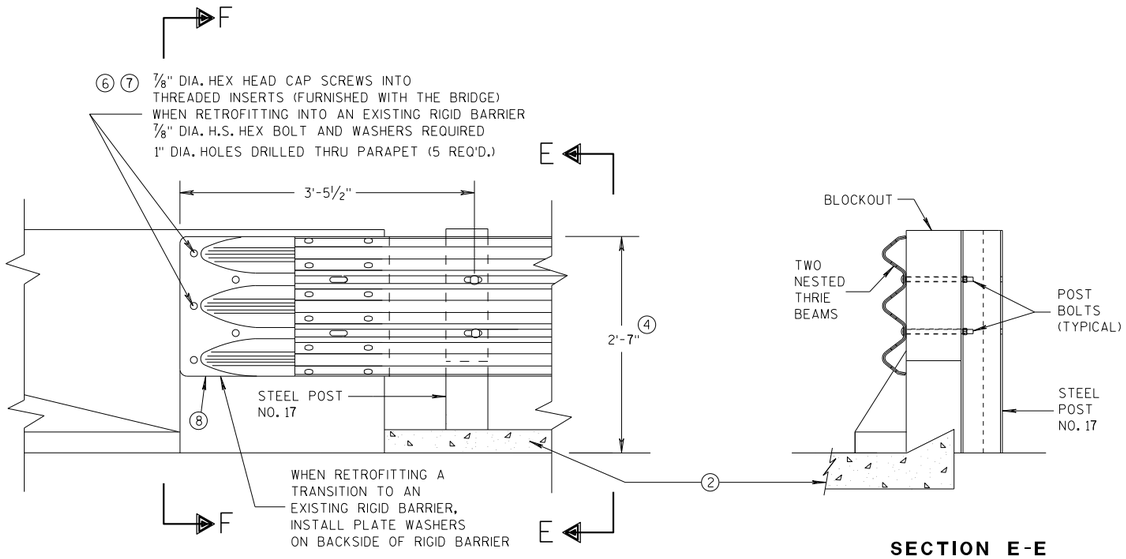
**MIDWEST GUARDRAIL SYSTEM**
**THRIE BEAM TRANSITION (MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR




6

S.D.D. 14 B 45-5c




FRONT VIEW

SECTION E-E

# THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

## GENERAL NOTES

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

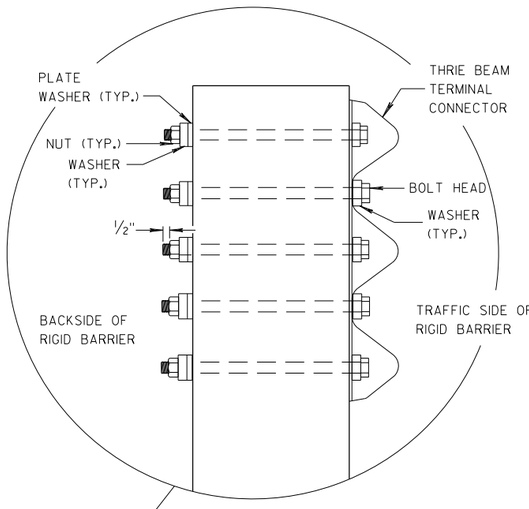
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

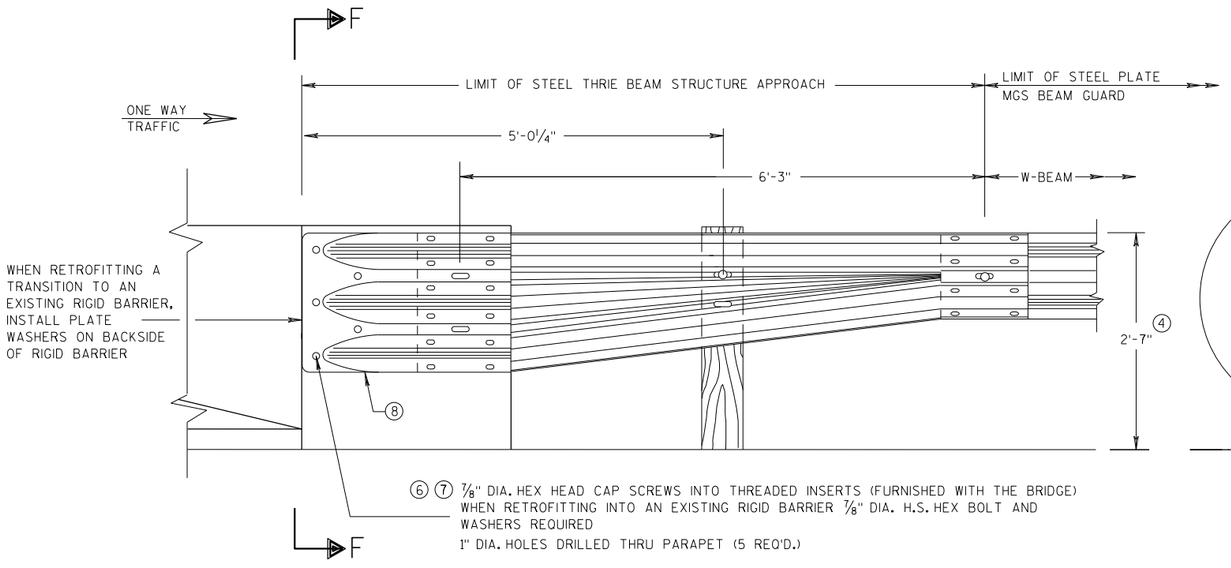
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

⑥ DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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

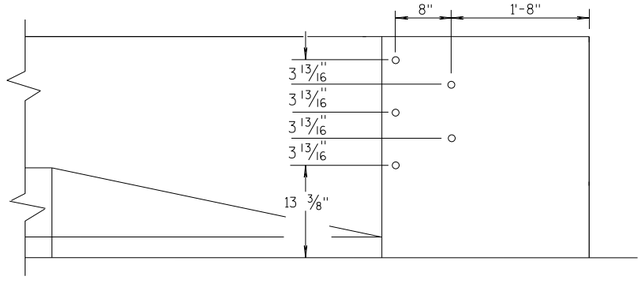
⑧ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".




FRONT VIEW

SECTION F-F




DRILL HOLE LOCATION

# W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

**(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)**

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
07/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS D UNIT SUPERVIS
NT
FHWA



6

S.D.D. 14 B 45-5d

6

S.D.D. 14 B 45-5d

# GENERAL NOTES

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

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

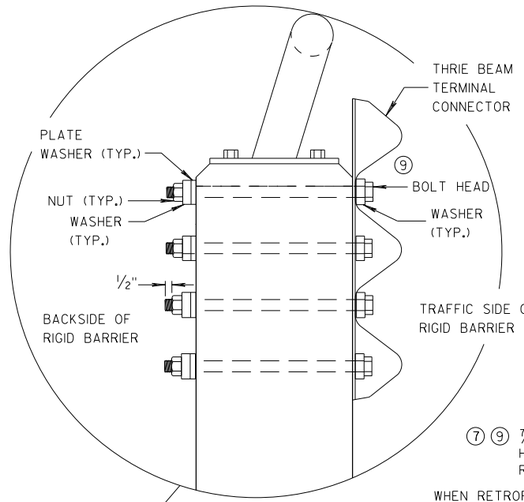
(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

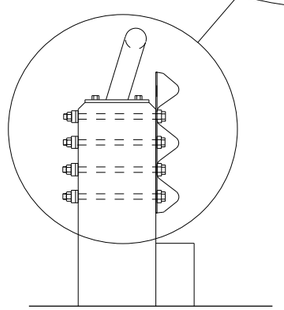
(6) DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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

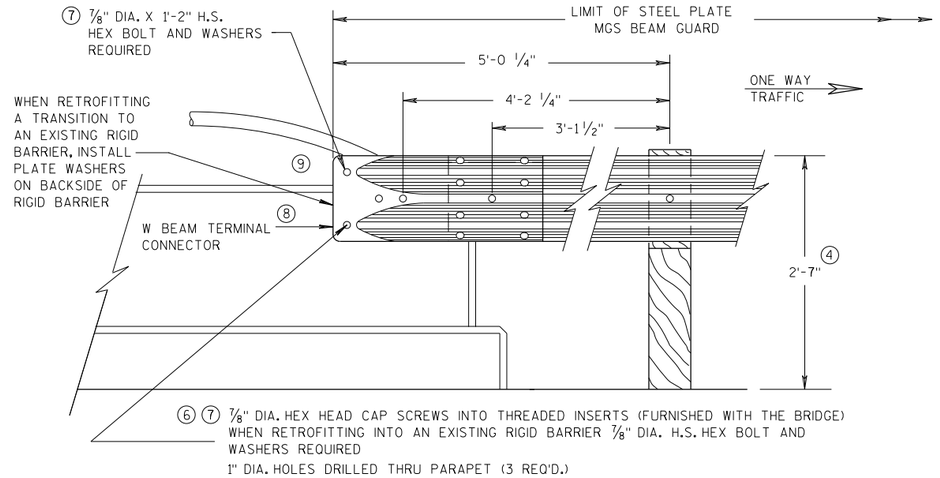
(8) THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 ½".

(9) BOLT, NUT AND WASHERS NOT REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PAPAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE EDGE OF PARAPET.



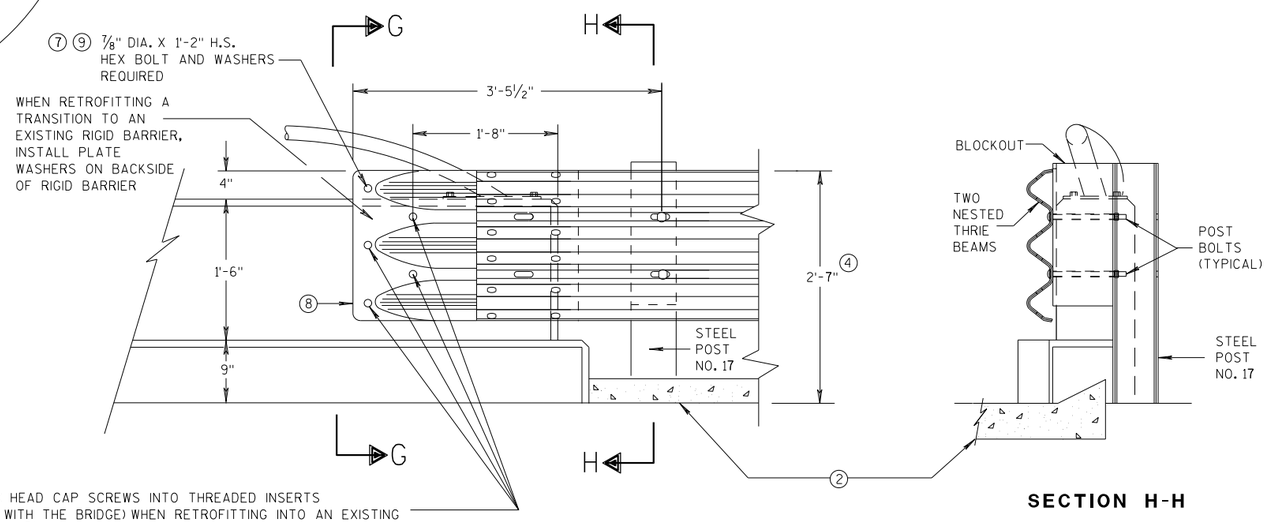
SECTION G-G




FRONT VIEW

## W BEAM CONNECTION TO VERTICAL FACE PARAPET

### (USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)




FRONT VIEW




SECTION H-H

## THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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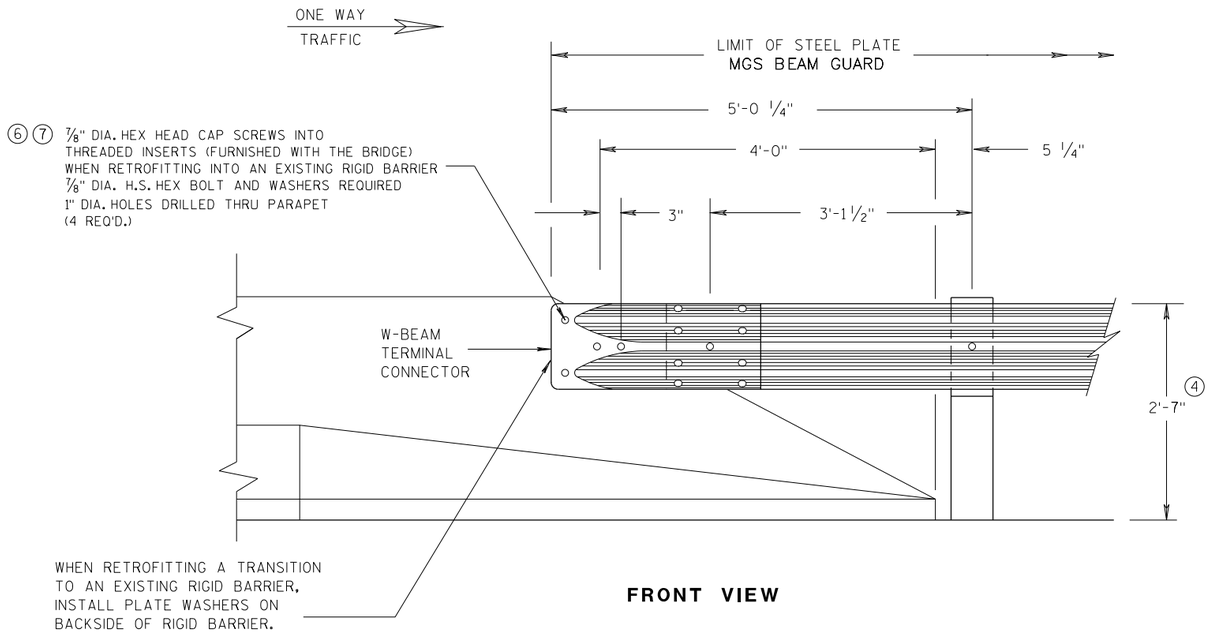


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S.D.D. 14 B 45-5e

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S.D.D. 14 B 45-5e




FRONT VIEW

## W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

(USE ONLY AT TRAFFIC EXIT END OF ONE WAY BRIDGE)

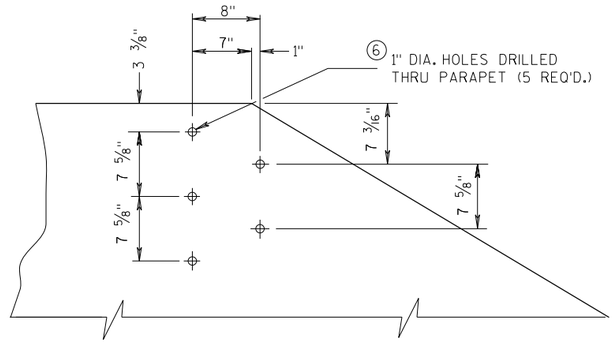
## GENERAL NOTES

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

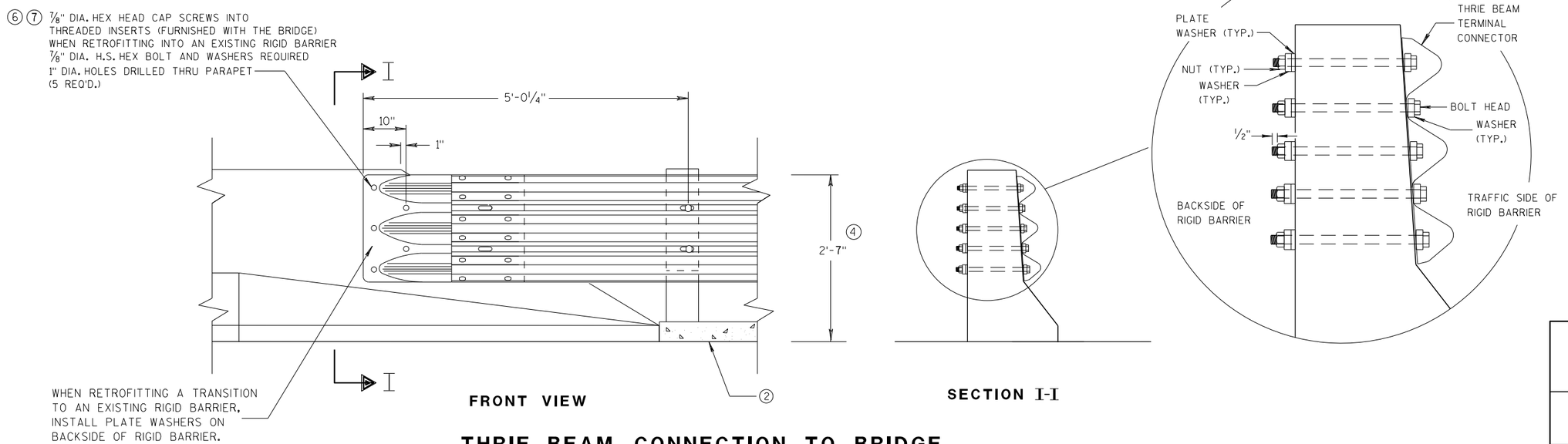
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

⑥ DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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




DRILL HOLE LOCATION AND PATTERN
FOR THRIE BEAM CONNECTION




FRONT VIEW

SECTION I-I

## THRIE BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS

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

STATE OF WISCONSIN
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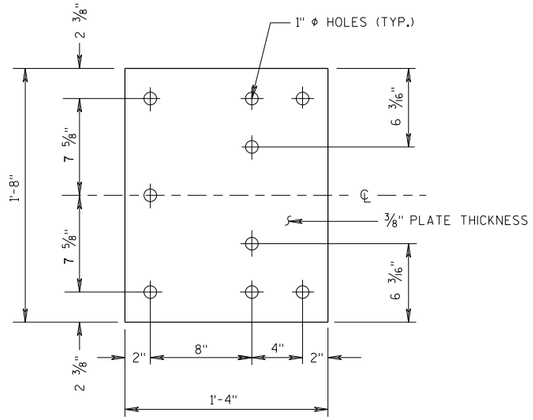


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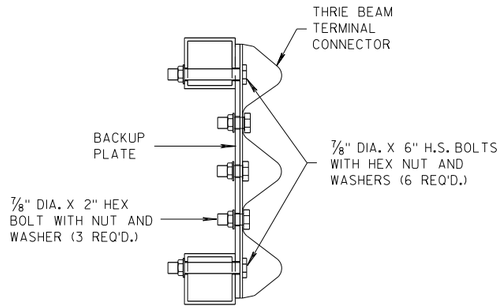
S.D.D. 14 B 45-5f

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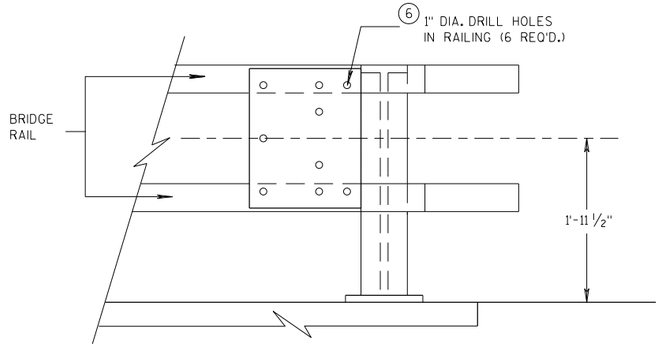
S.D.D. 14 B 45-5f




## BACK-UP PLATE DETAIL




## SECTION J-J

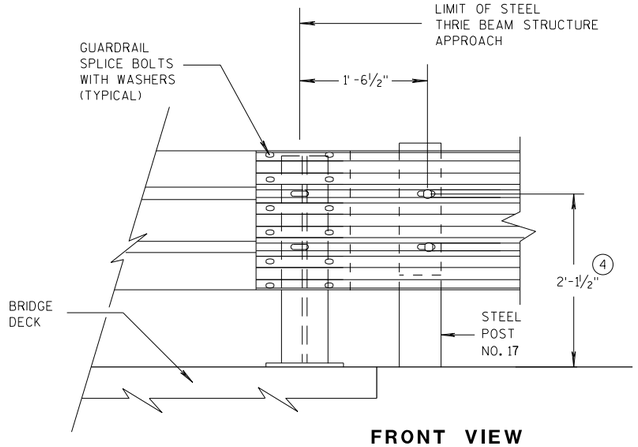



## BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

# GENERAL NOTES

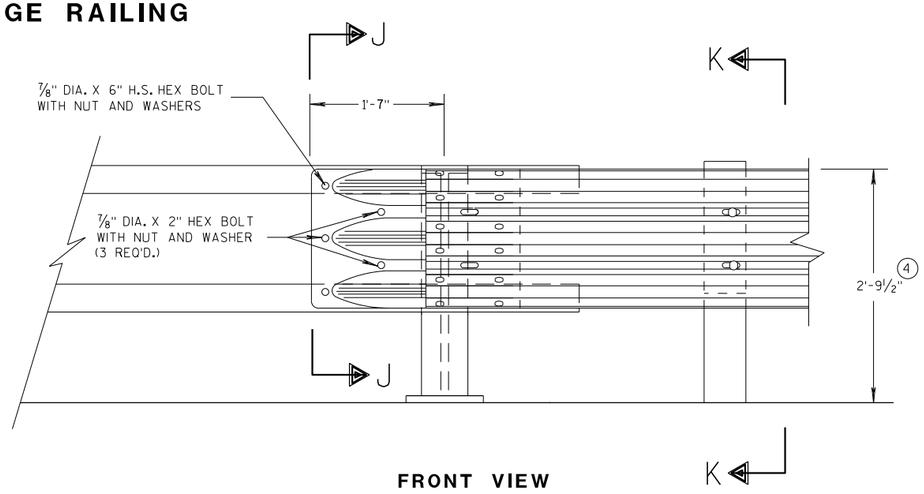
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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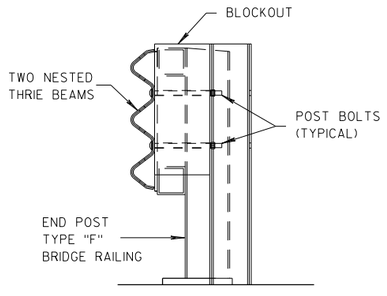



FRONT VIEW

## THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"




FRONT VIEW




SECTION K-K

## THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"

## MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
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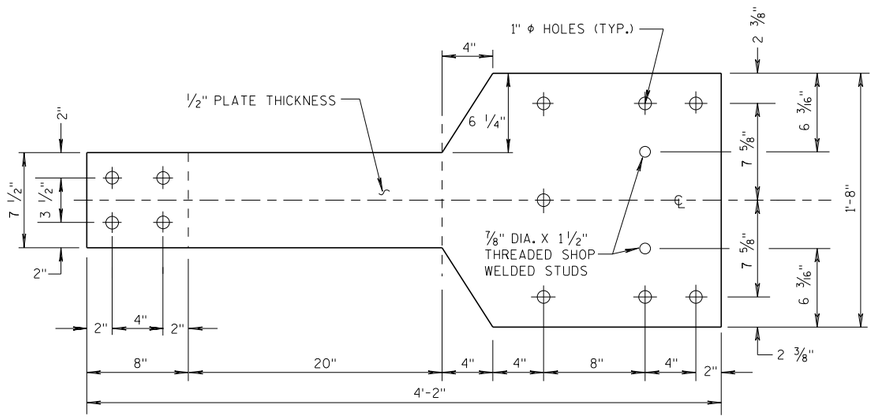
S.D.D. 14 B 45-5g

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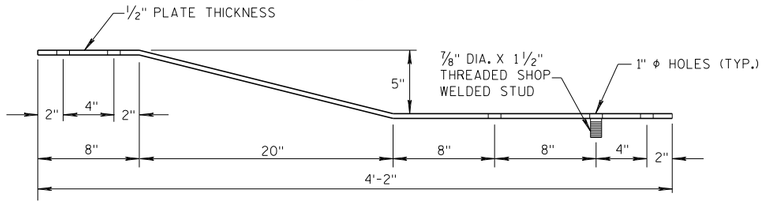
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## GENERAL NOTES

(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

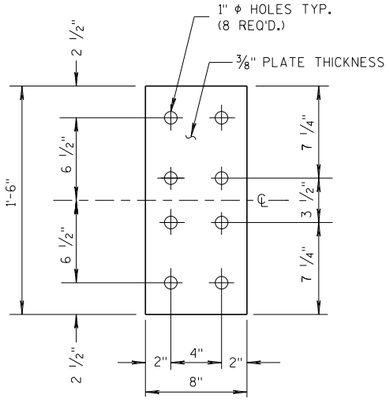



FRONT VIEW

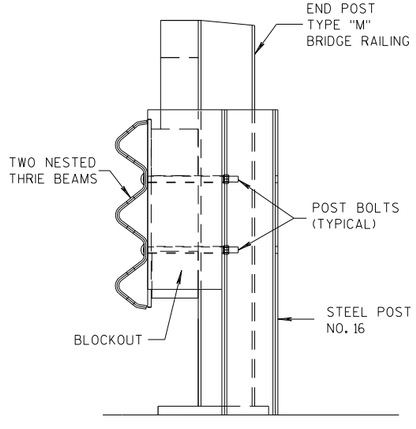



PLAN VIEW

## BACK-UP PLATE DETAIL, TYPE "M"

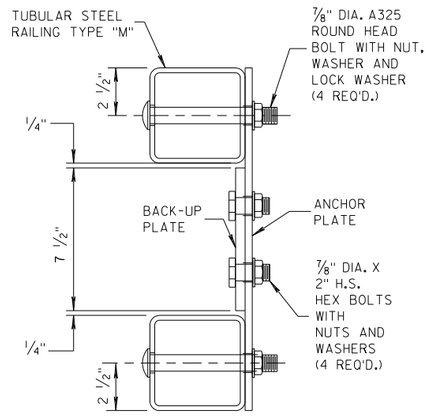



FRONT VIEW

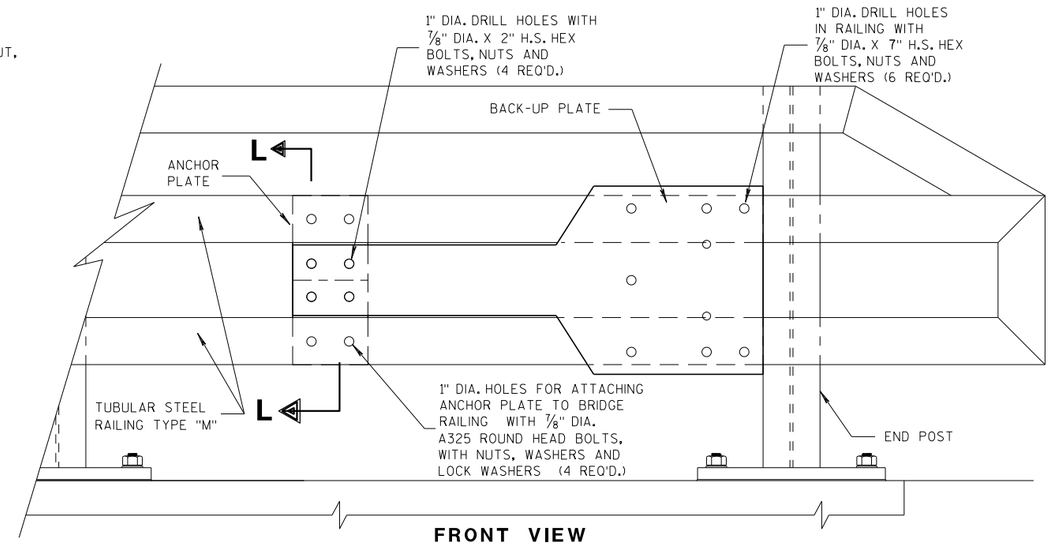



SECTION M-M

## ANCHOR PLATE DETAIL, TYPE "M"

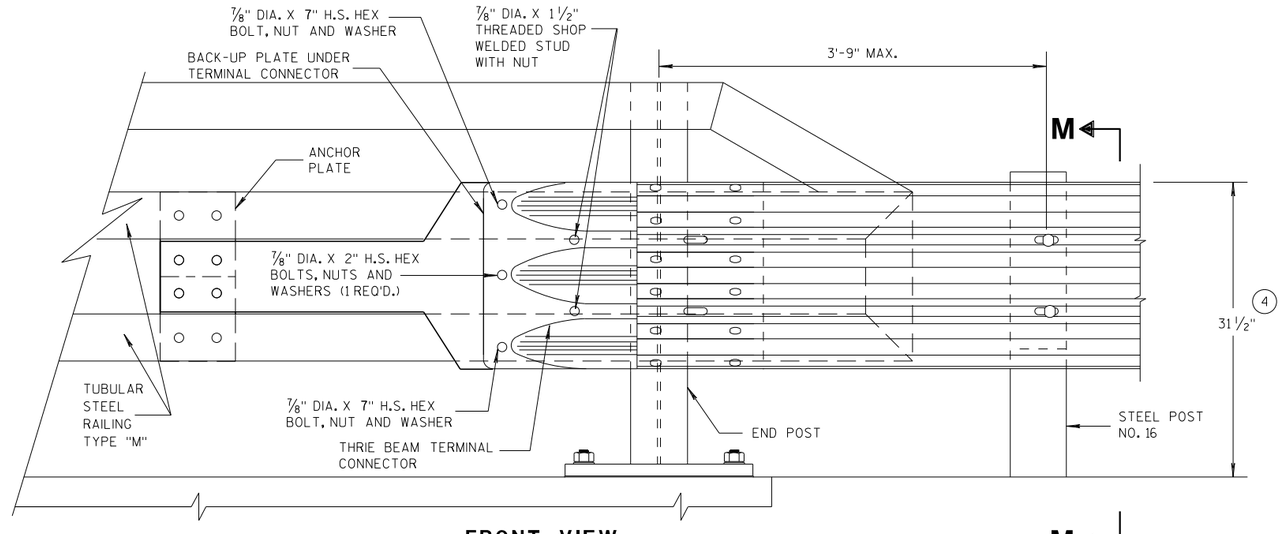



SECTION L-L

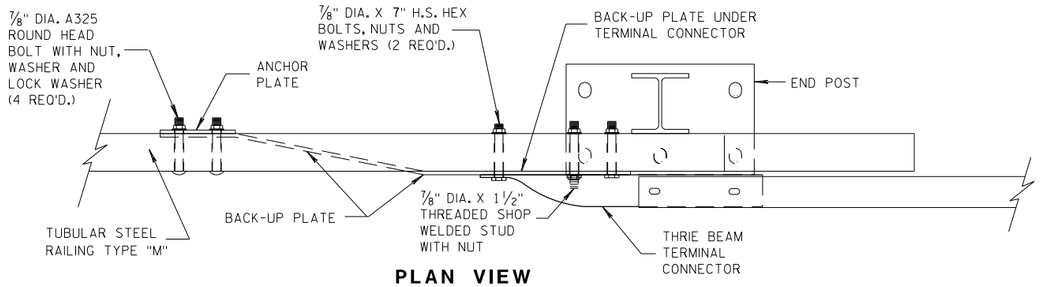



FRONT VIEW

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




FRONT VIEW




PLAN VIEW

## THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

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

STATE OF WISCONSIN
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## GENERAL NOTES

COVER PLATE PANELS ARE 3/16" THICK.

ALL STIFFENERS ARE 1/4" THICK.

CONNECTOR PLATE SHALL BE FABRICATED FROM ASTM GRADE A36 STEEL AND GALVANIZED.

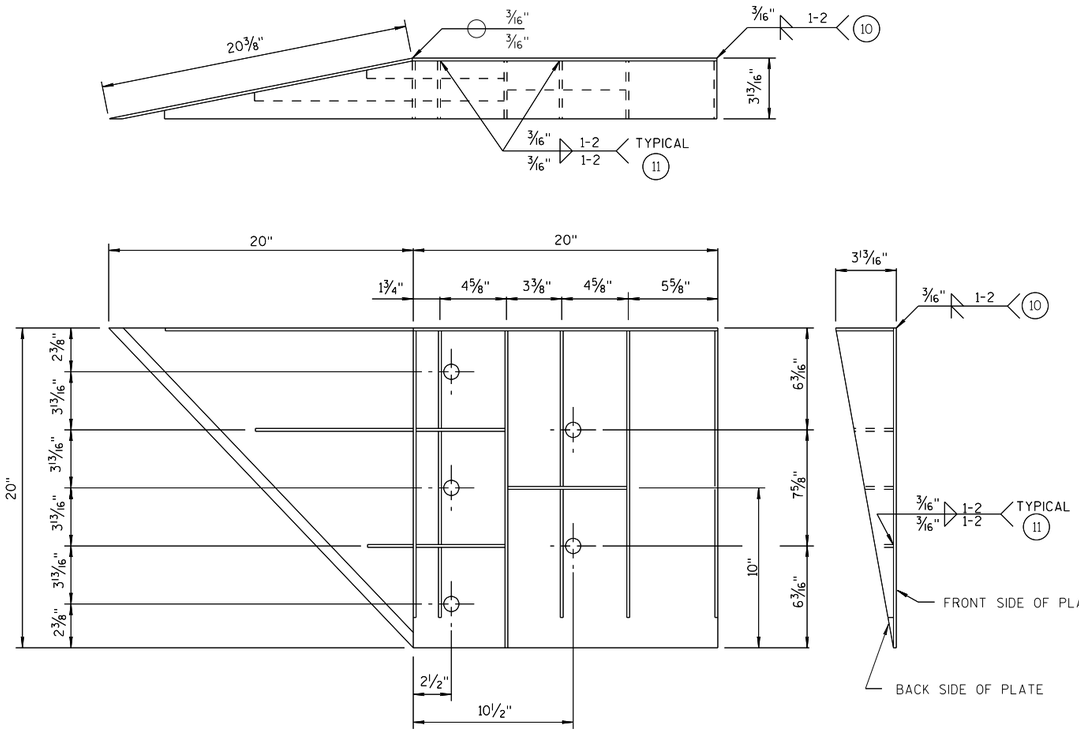
FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.

ALL HOLE DIAMETERS SHALL BE 1".

FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

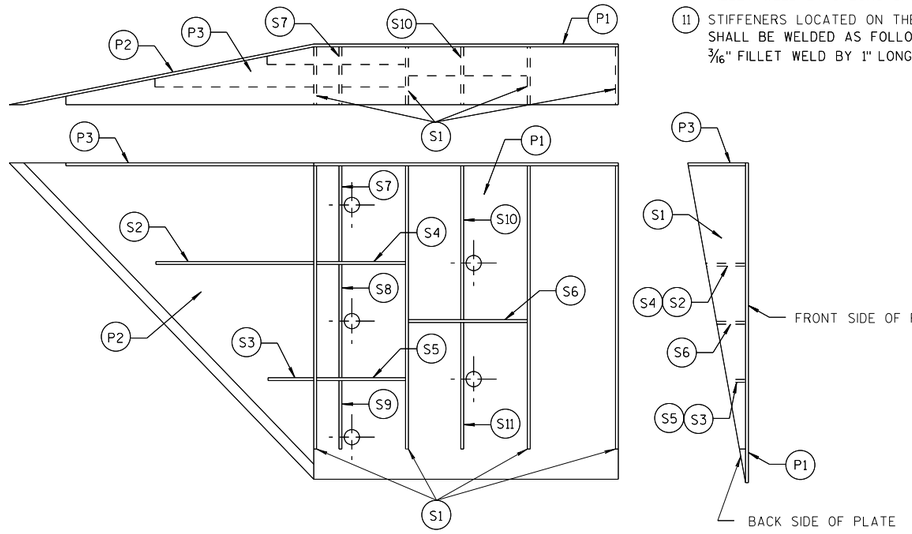
(10) STIFFENERS LOCATED AT THE OUTSIDE EDGES OF THE COVER PLATES SHALL BE WELDED AS FOLLOWS:
SINGLE BEVEL GROOVE WELD ON EXTERNAL SIDES AND 3/16" FILLET WELD BY 1" LONG SPACED AT 2" ON INTERNAL SIDES.

(11) STIFFENERS LOCATED ON THE INSIDE OF THE COVER PLATE SHALL BE WELDED AS FOLLOWS:
3/16" FILLET WELD BY 1" LONG SPACED AT 2".




### WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)




### PLATE AND STIFFENER IDENTIFICATION

(VIEWED FROM BACK SIDE OF PLATE)

**CONNECTOR PLATE DIMENSION (PER ASSEMBLY)**

| PLATE | QUANTITY | SHAPE | SIZE (A x B x C x D) | THICKNESS |
|---|---|---|---|---|
| P1 | 1 | | 20" x 20" | 3/16" |
| P2 | 1 | | 20" x 20" x 28 9/16" | 3/16" |
| P3 | 1 | | 39" x 3 5/8" x 20" x 19 5/16" | 3/16" |
| S1 | 4 | | 18 7/16" x 3 5/8" x 18 3/4" | 1/4" |
| S2 | 1 | | 10 1/4" x 2 7/16" x 10 3/8" x 1/2" | 1/4" |
| S3 | 1 | | 3" x 1 1/16" x 3 1/8" x 1/2" | 1/4" |
| S4 | 1 | | 6 1/8" x 2 7/16" | 1/4" |
| S5 | 1 | | 6 1/8" x 1 1/16" | 1/4" |
| S6 | 1 | | 7 3/4" x 1 3/4" | 1/4" |
| S7 | 1 | | 2 9/16" x 6" x 3 5/8" x 5 7/8" | 1/4" |
| S8 | 1 | | 1 5/32" x 7 1/2" x 2 1/2" x 7 3/8" | 1/4" |
| S9 | 1 | | 6 1/16" x 6 3/16" x 1 3/32" | 1/4" |
| S10 | 1 | | 1 7/8" x 9 7/8" x 3 5/8" x 9 11/16" | 1/4" |
| S11 | 1 | | 8 1/2" x 8 3/4" x 1 13/16" | 1/4" |

### SINGLE SLOPE CONNECTION PLATE

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

STATE OF WISCONSIN
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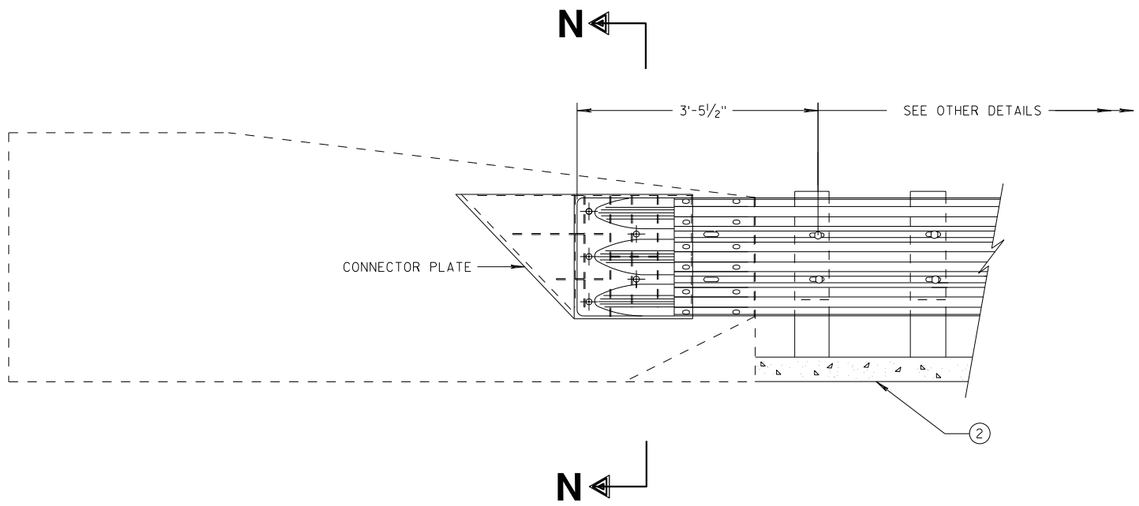
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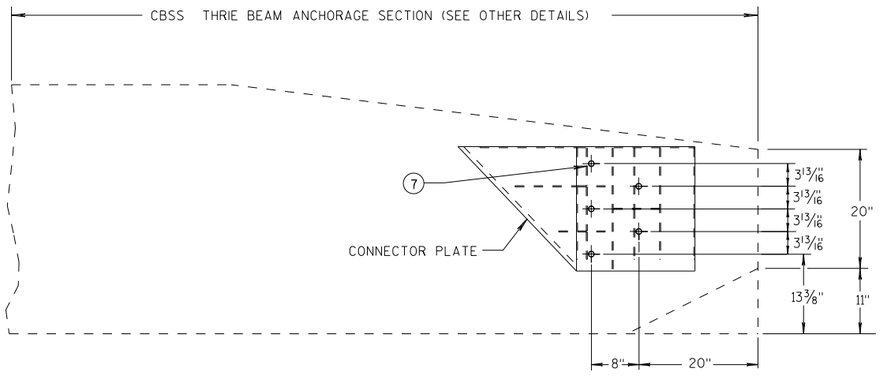


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## THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER



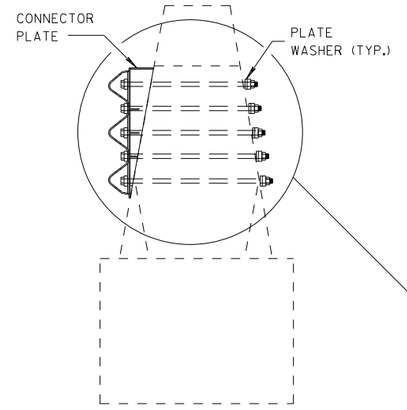

## SINGLE SLOPE CONNECTION PLATE PLACEMENT

## GENERAL NOTES

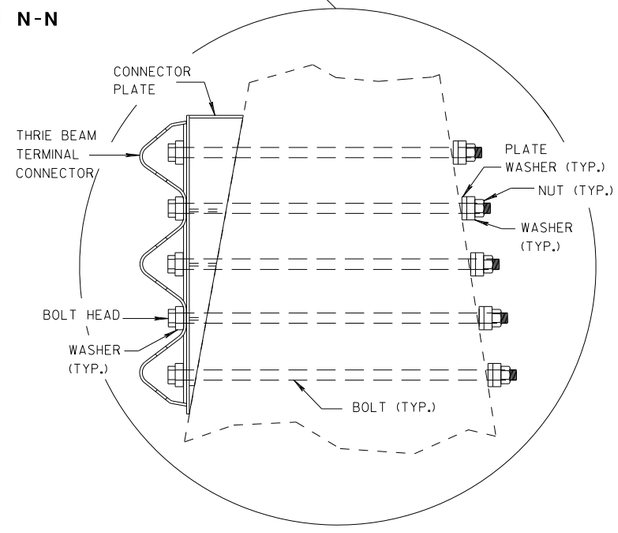
CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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SECTION N-N




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

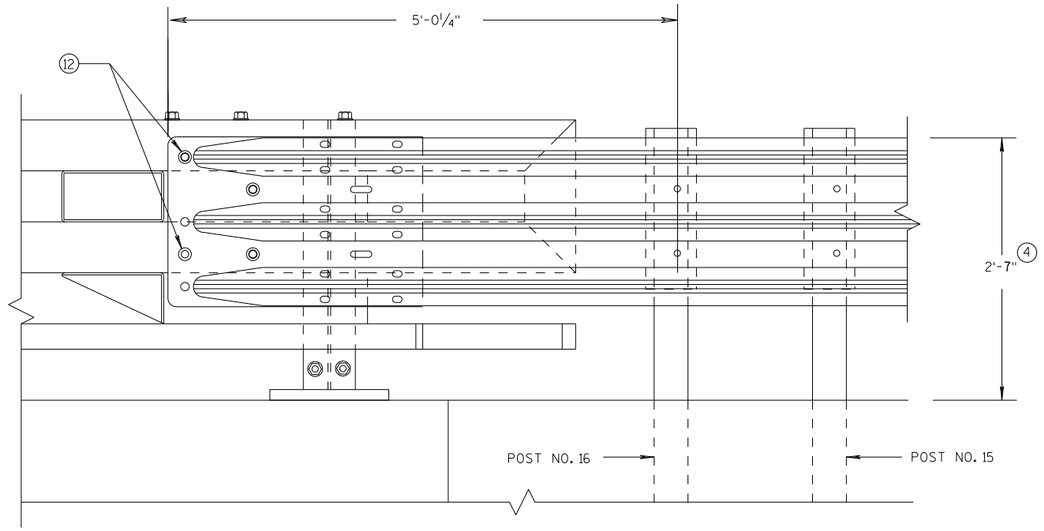
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FHWA



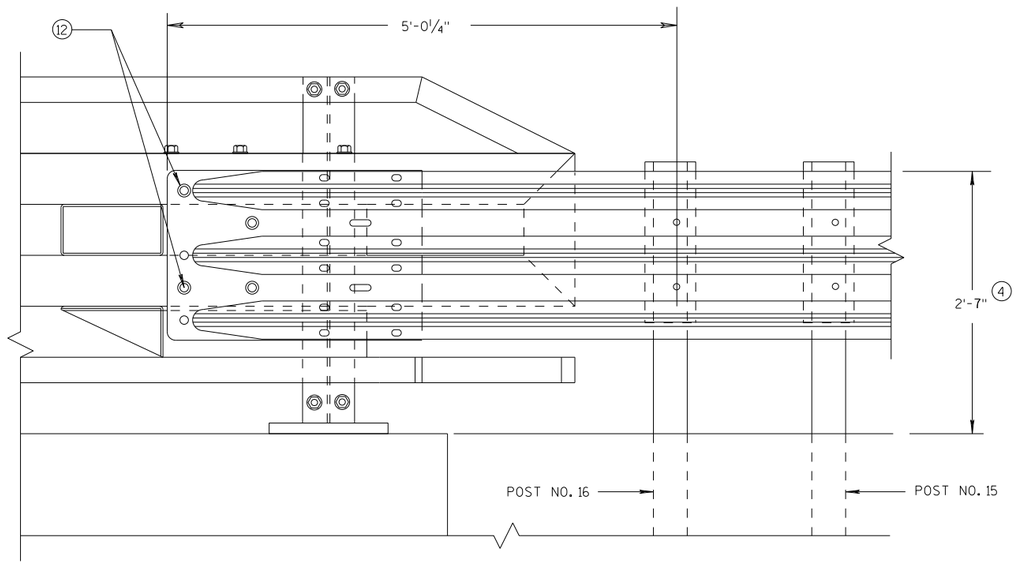

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S.D.D. 14 B 45-5j




## ELEVATION OF DETAIL AT NY3 END POST

### THRIE BEAM RAIL ATTACHMENT




## ELEVATION OF DETAIL AT NY4 END POST

### THRIE BEAM RAIL ATTACHMENT

## GENERAL NOTES

(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

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

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

STATE OF WISCONSIN
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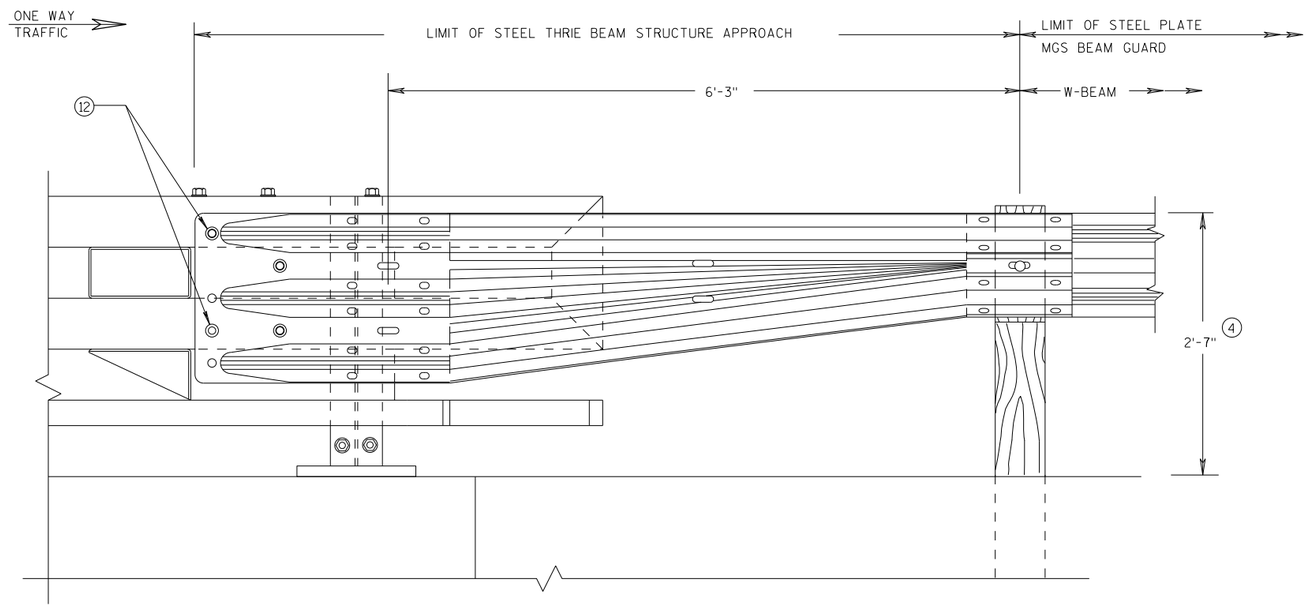


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S.D.D. 14 B 45-5k




FRONT VIEW

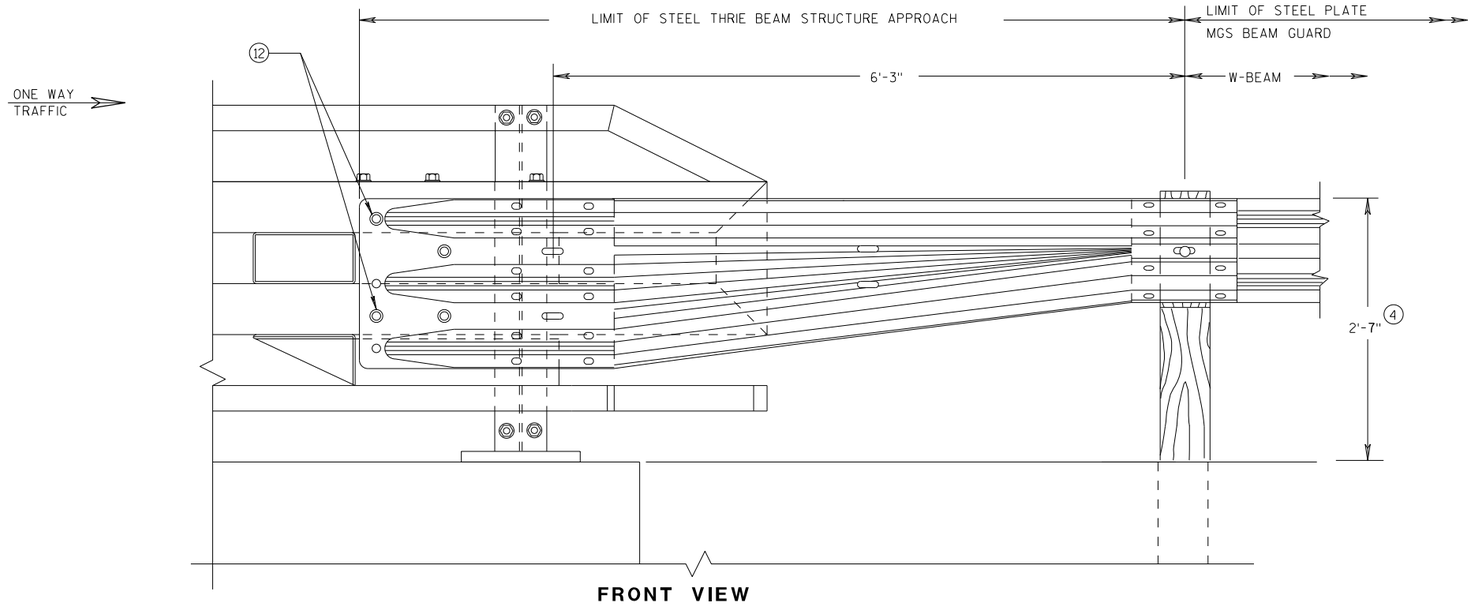
## W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY3"

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

## GENERAL NOTES

(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

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




FRONT VIEW

## W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY4"

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

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

STATE OF WISCONSIN
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/S/ Rodney Taylor
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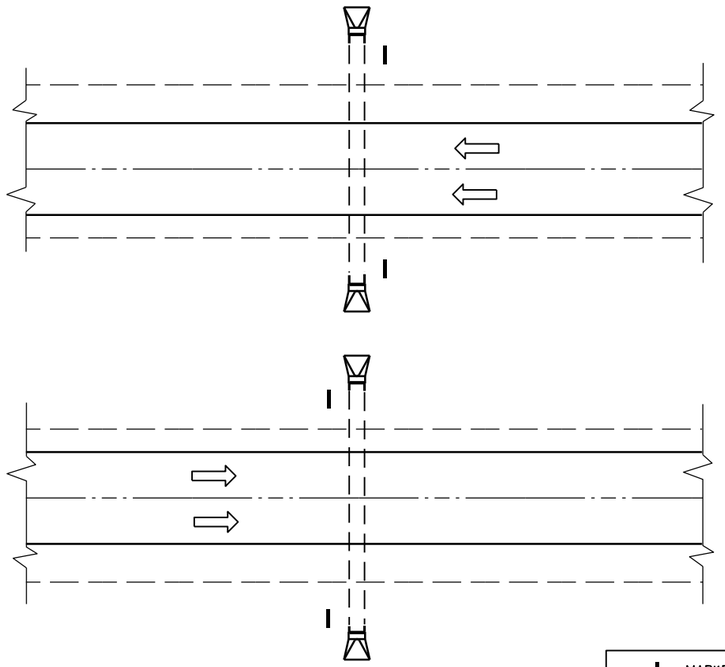
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S.D.D. 14 B 45-5L

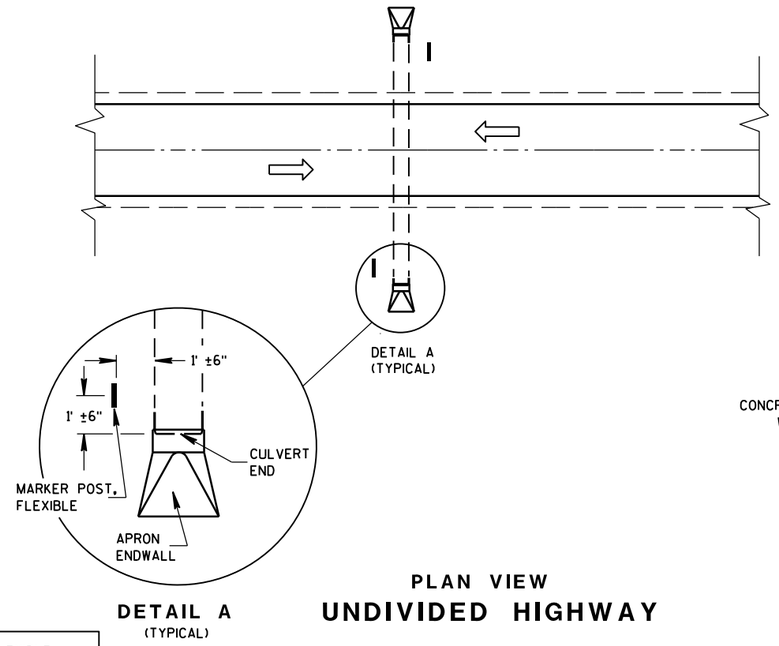
6

S.D.D. 14 B 45-5L



PLAN VIEW

## DIVIDED HIGHWAY




DETAIL A
(TYPICAL)

PLAN VIEW

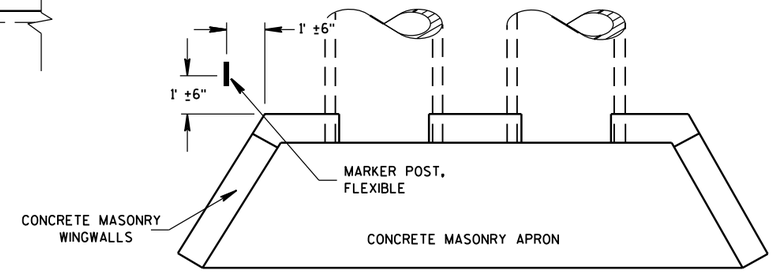
## UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

## GENERAL NOTES

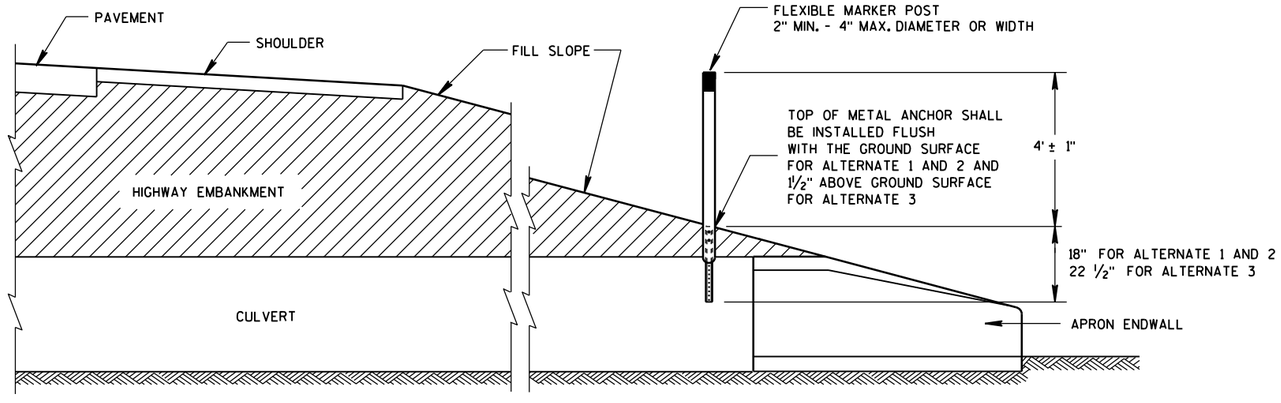
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.




PLAN VIEW

## CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

## FLEXIBLE MARKER POST LOCATION




CROSS SECTION

## FLEXIBLE MARKER POST

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

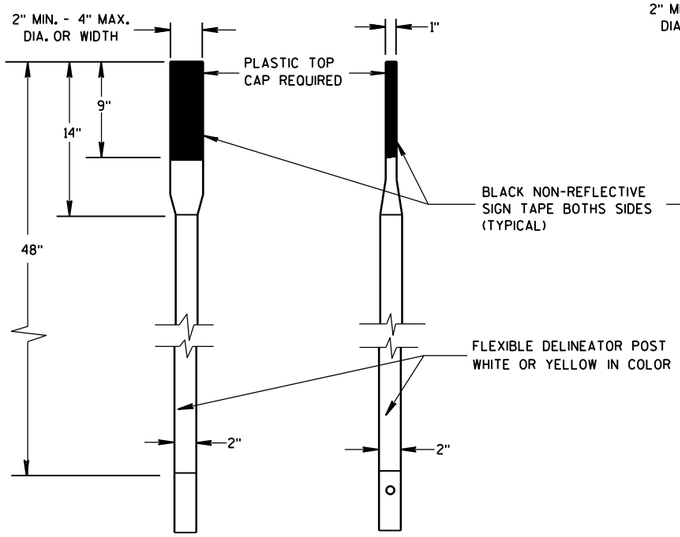


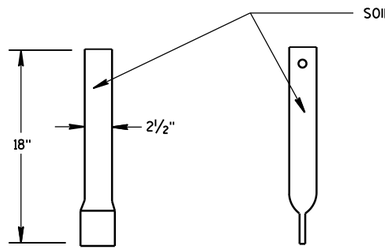
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S.D.D. 15 A 3-2a

6

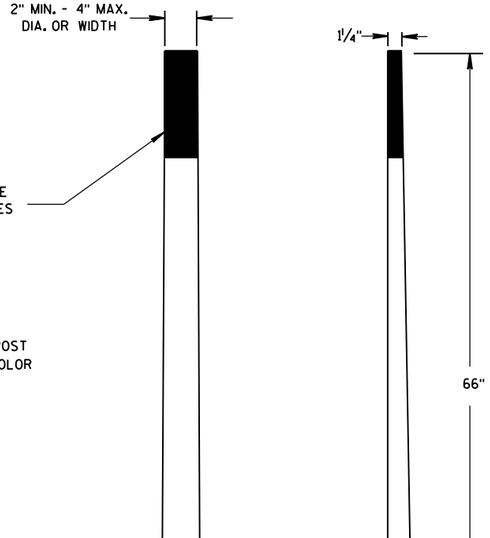
S.D.D. 15 A 3-2a



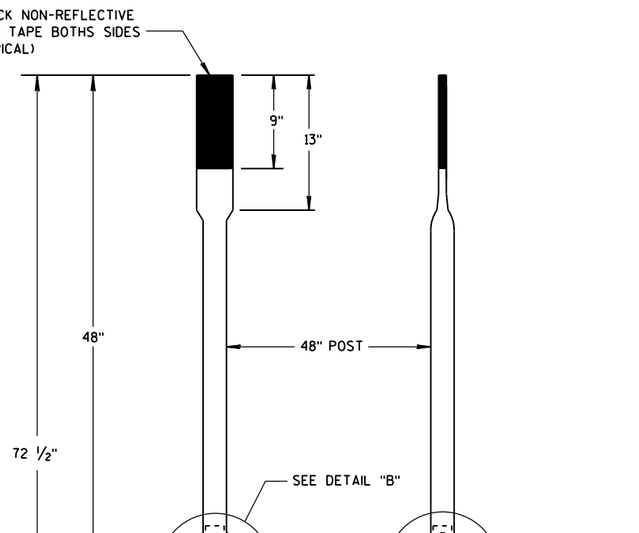

FRONT VIEW SIDE VIEW

ALTERNATE 1




FRONT VIEW SIDE VIEW

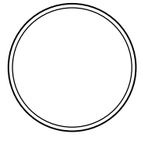
ALTERNATE 2



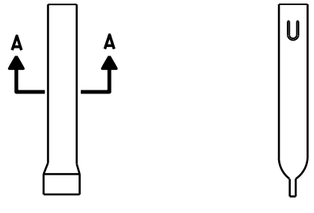

FRONT VIEW SIDE VIEW

ALTERNATE 3

## FLEXIBLE MARKER POSTS

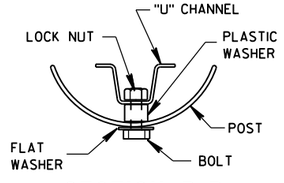


SECTION A-A

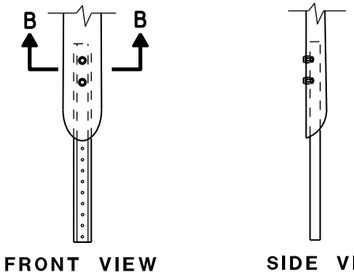



FRONT VIEW SIDE VIEW

ALTERNATE 1

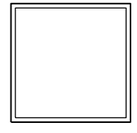



SECTION B-B

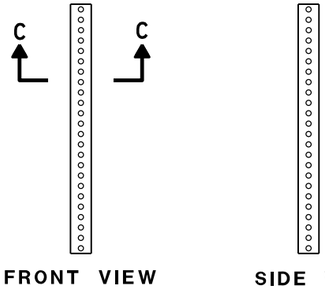



FRONT VIEW SIDE VIEW

ALTERNATE 2



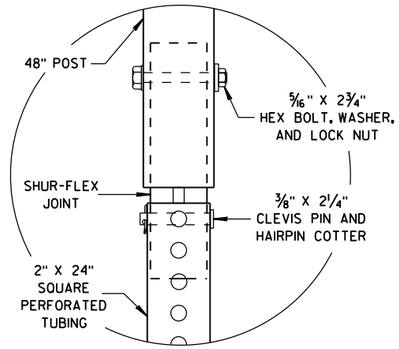
SECTION C-C



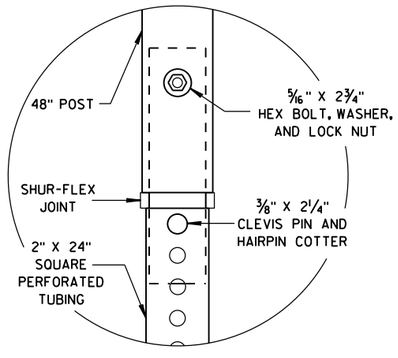

FRONT VIEW SIDE VIEW

ALTERNATE 3

## FLEXIBLE MARKER POST ANCHORS




DETAIL B




DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

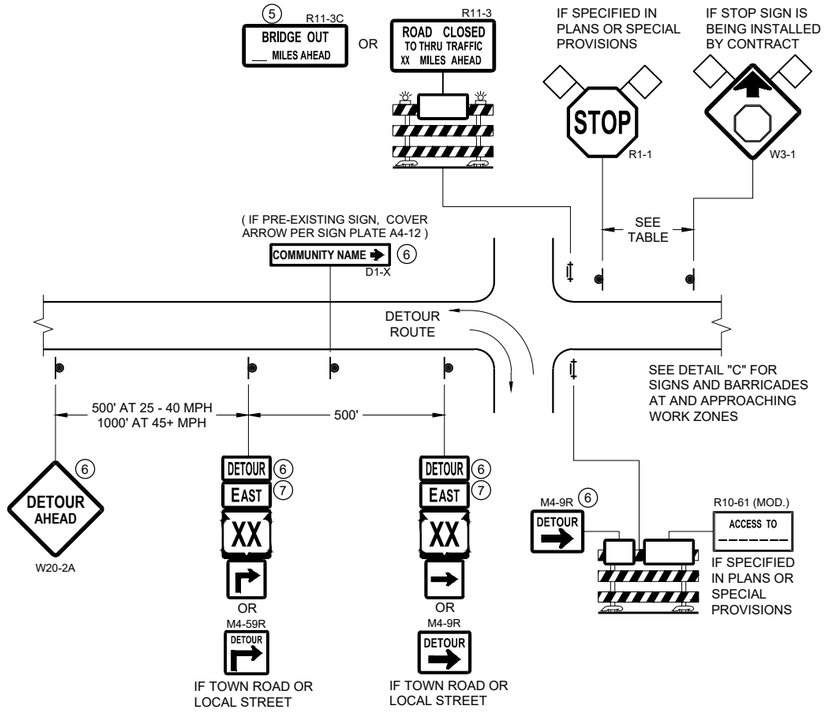


6

S.D.D. 15 A 3-2b

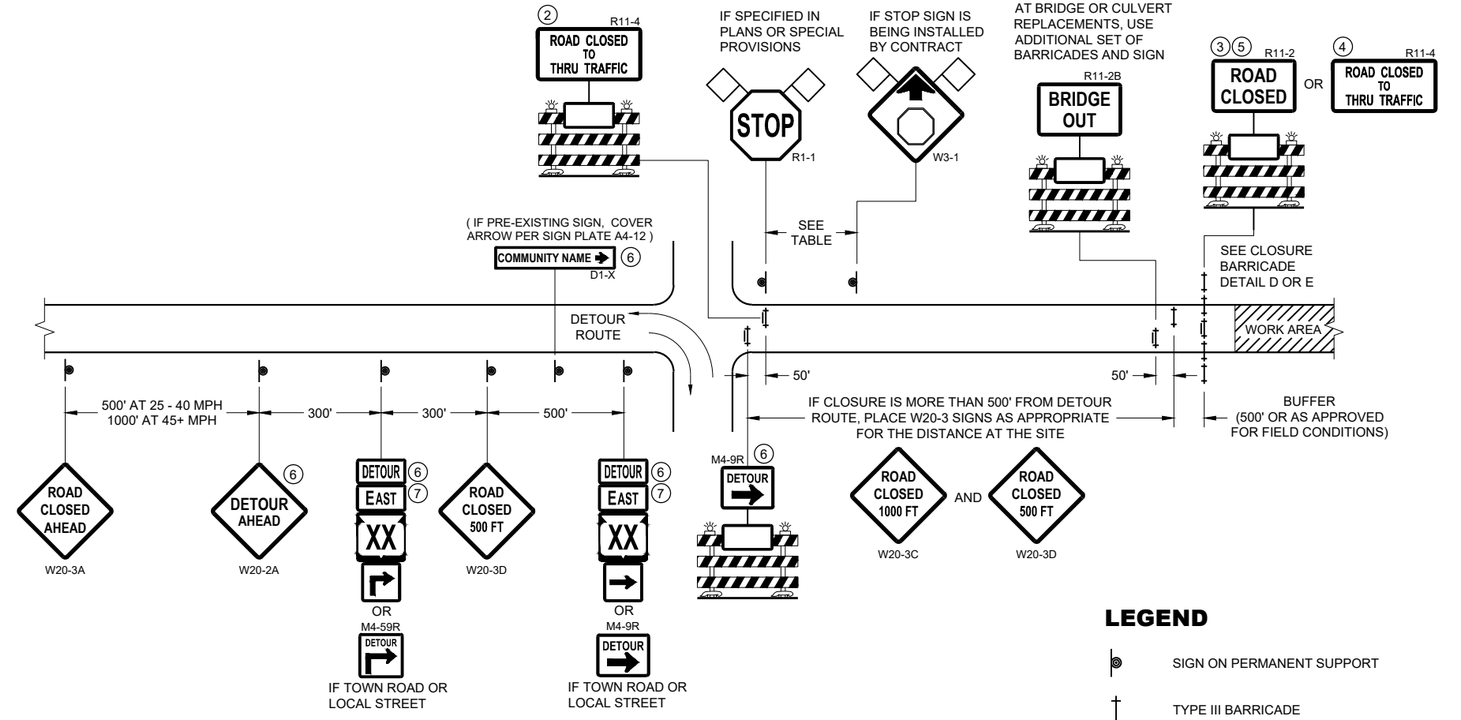
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S.D.D. 15 A 3-2b



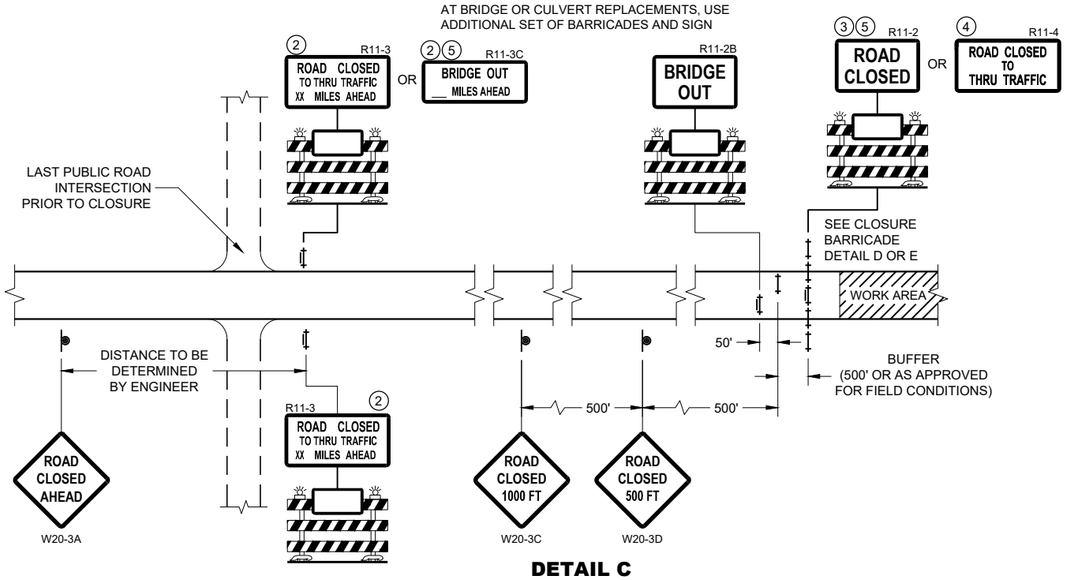

## DETAIL A
## MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN OR EQUAL TO ½ MILE FROM DETOUR ROUTE ( 1000 FEET IF URBAN )




## DETAIL B
## MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN ½ MILE FROM DETOUR ROUTE ( 1000 FEET IF URBAN )




## DETAIL C
## MAINLINE CLOSURE, NO POSTED DETOUR

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

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

## LEGEND

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

## BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

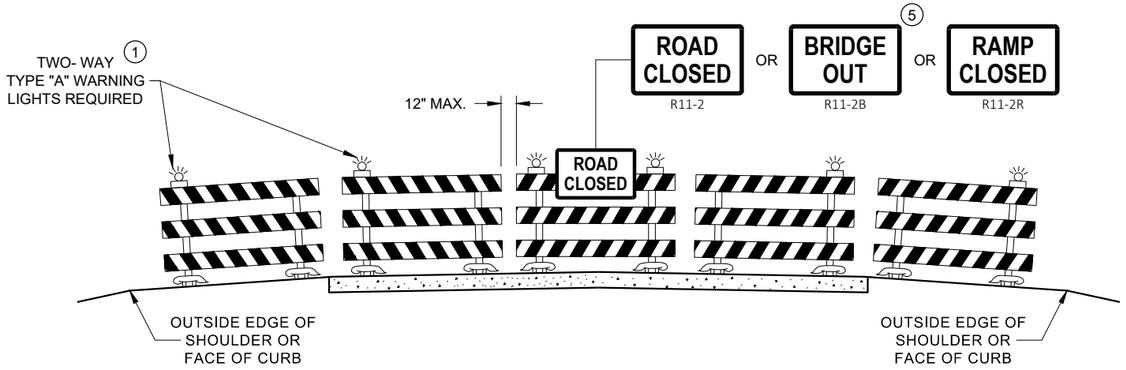
FHWA



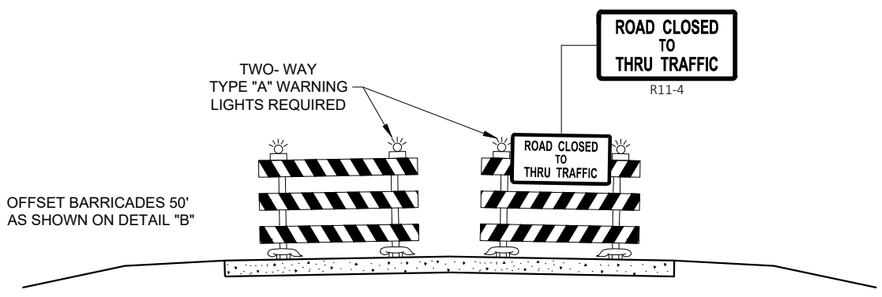
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SDD 15C02 - 09a

SDD 15C02 - 09a




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




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

SEE SDD 15C2 - SHEET "a" FOR LEGEND

## GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

(1) TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING.

(2) THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT AN INTERSECTION.

(3) FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "D".

(4) FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "E".

(5) FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11 - 2 AND R11 - 3 SIGNS.

(6) INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.

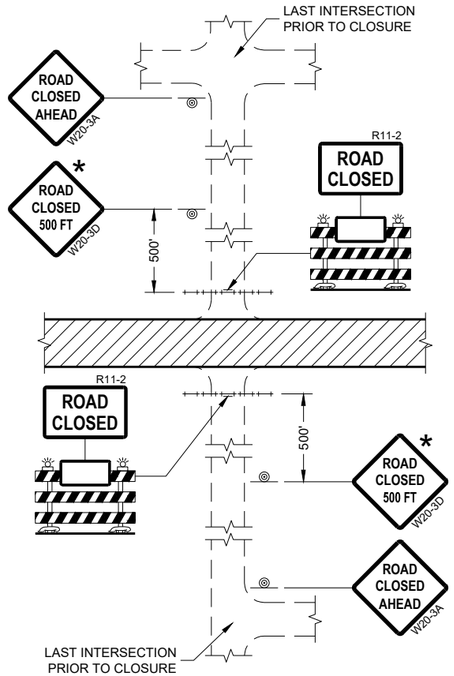
(7) "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

**BARRICADES AND SIGNS FOR VARIOUS CLOSURES**

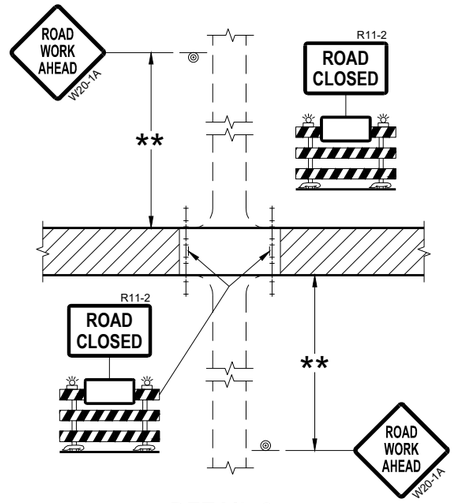
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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


6
SDD 15C02 - 09b




**DETAIL 1**
(NO ACCESS TO PROJECT)




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

## GENERAL NOTES

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

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

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

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

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

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

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

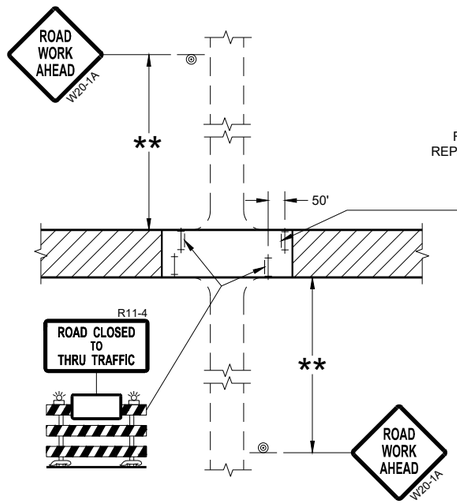
TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

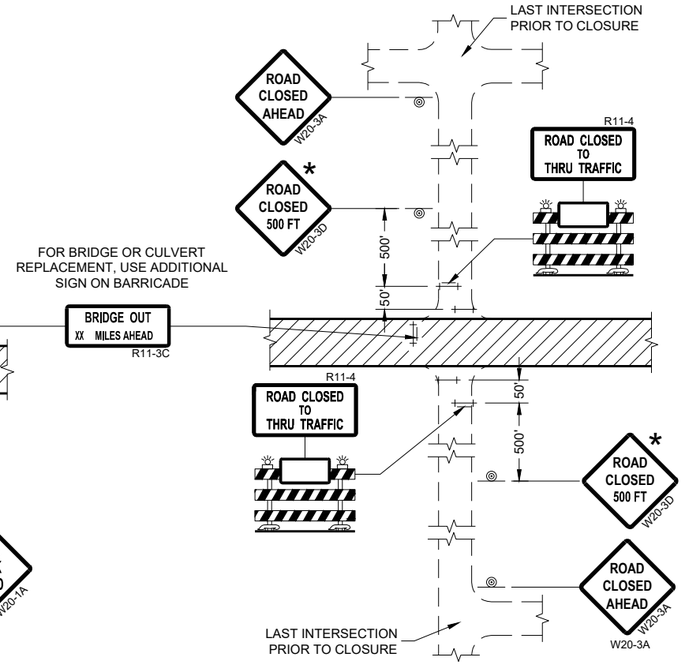
THE R11-2, R11-3, AND R11-4 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

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

* OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FEET OR LESS FROM THE WORK ZONE.

** 500' MAX. OR AT LAST INTERSECTION, WHICHEVER IS CLOSEST.




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

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

## LEGEND

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

**BARRICADES AND SIGNS FOR SIDEROAD CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA


6
SDD 15C03 - 05

## GENERAL NOTES

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

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

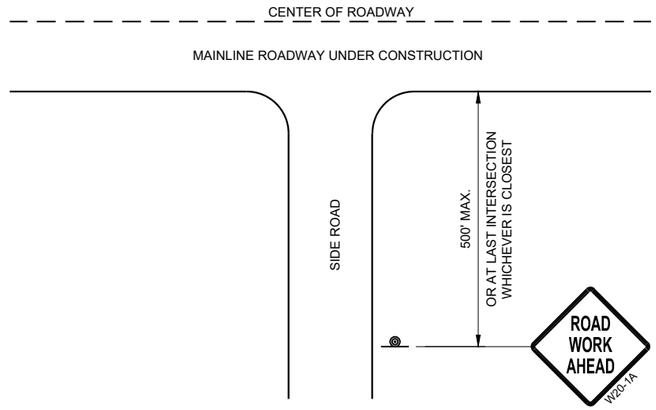
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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

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

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

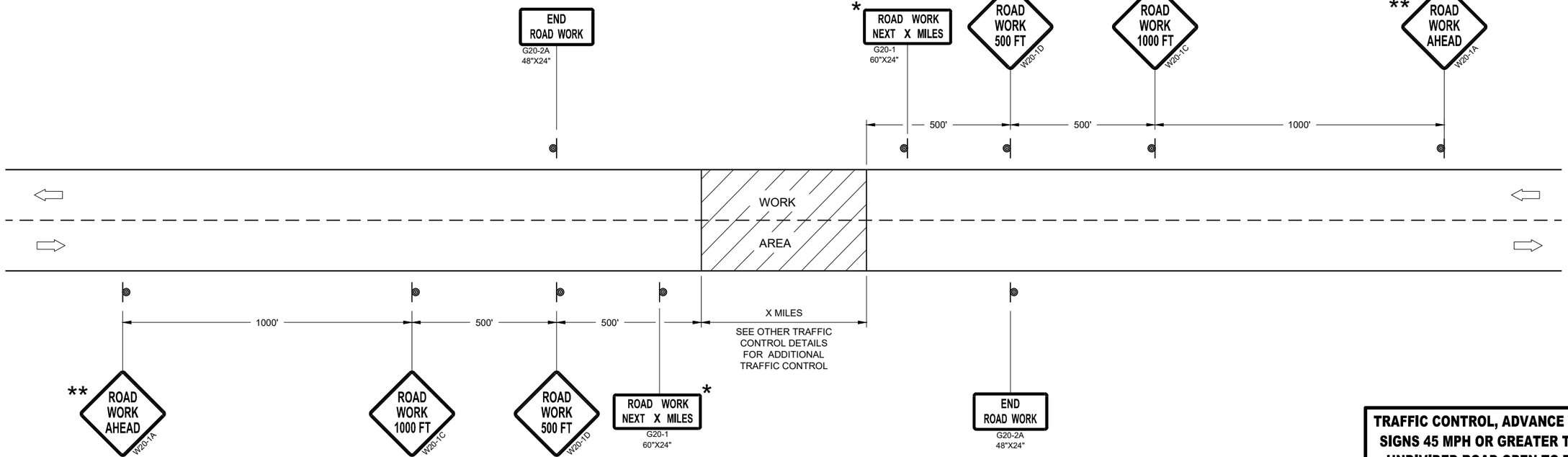
** PLACE AN ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.




**TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL**

## LEGEND

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




**TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER**

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA




6


SDD 15C04 - 05

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

## GENERAL NOTES

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

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

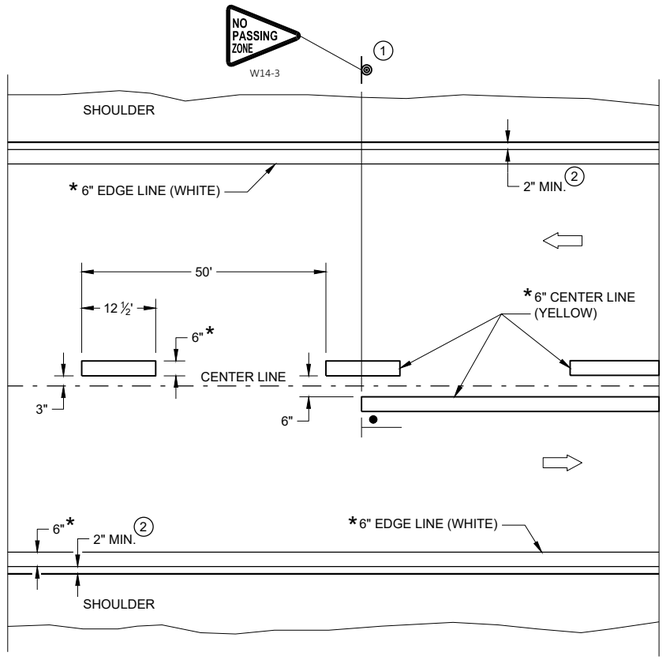
(2) MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

## LEGEND

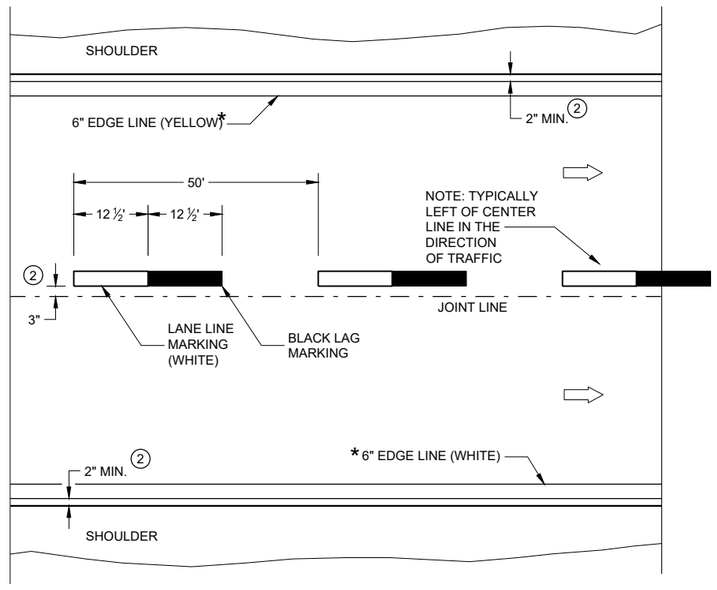
"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC




TWO WAY TRAFFIC




ONE WAY TRAFFIC

**PERMANENT PAVEMENT MARKING**

**PERMANENT LONGITUDINAL PAVEMENT MARKINGS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Jeannie Silver — STATEWIDE SIGNING AND M ENGINEER

FHWA





6

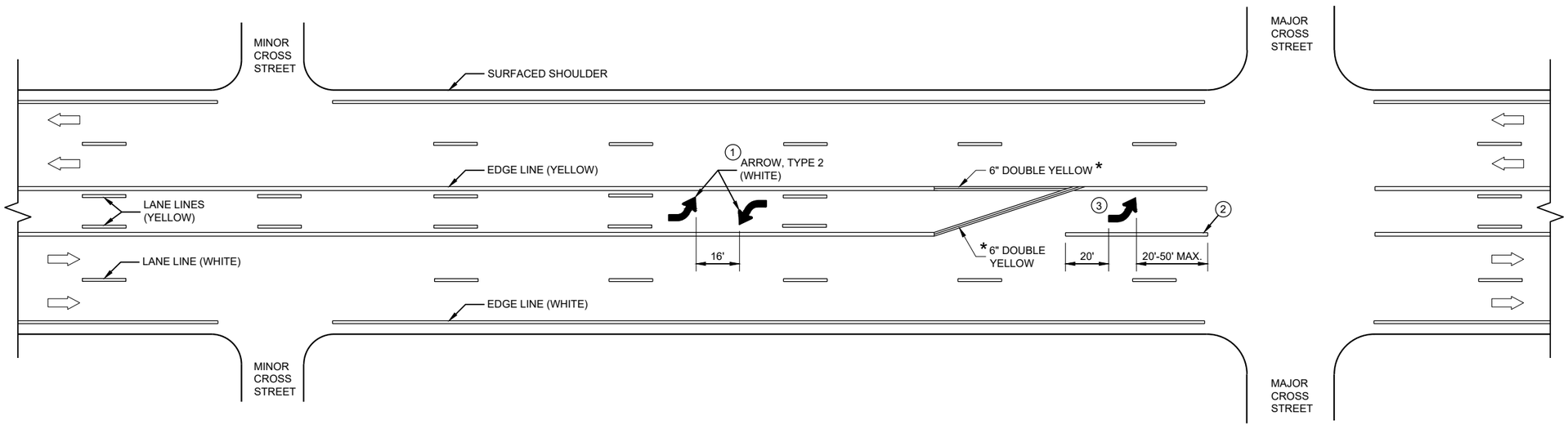
SDD 15C08-23a

## GENERAL NOTES

1. A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
2. 10" WHITE
3. TURN BAY LENGTH OF LESS THAN 48' DOES NOT REQUIRE PAVEMENT ARROWS OR TEXT.

DIRECTION OF TRAFFIC

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES




## TWO WAY LEFT TURN LANE

6

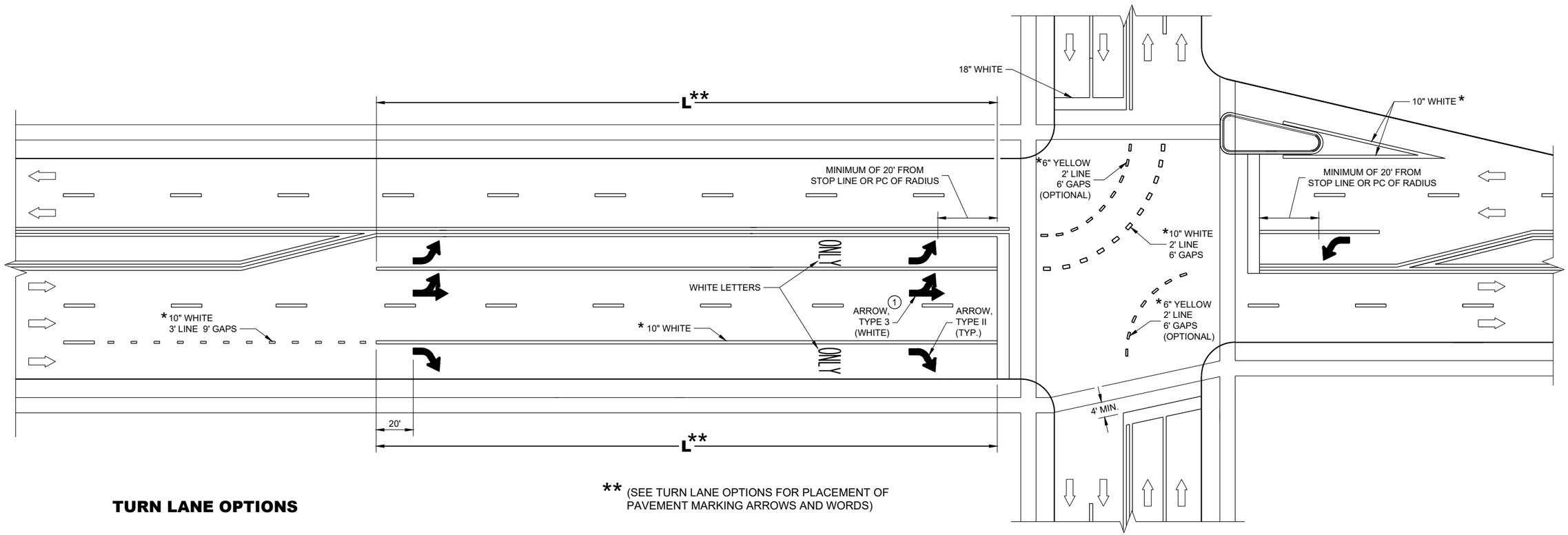
SDD 15C08-23c

**PAVEMENT MARKING (TURN LANES)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA· 87

6

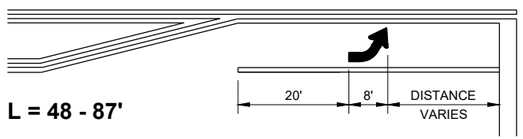
SDD 15C08-23c



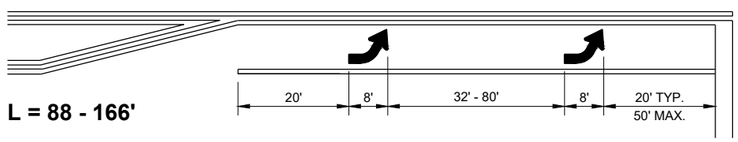

** (SEE TURN LANE OPTIONS FOR PLACEMENT OF PAVEMENT MARKING ARROWS AND WORDS)

## TURN LANE OPTIONS

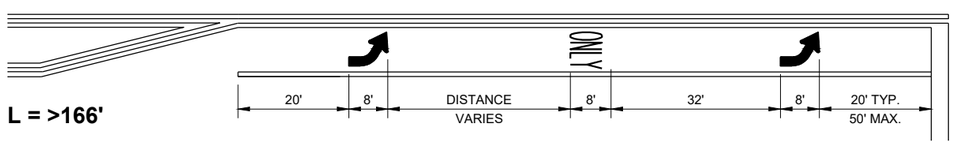
LENGTH OF TURN BAY ( **L** ) OF 0 - 47' DOES NOT REQUIRE PAVEMENT MARKING ARROWS OR WORDS




**L = 48 - 87'**




**L = 88 - 166'**




**L = >166'**

## GENERAL NOTES

1. QUANTITY AND LOCATION OF TYPE 3 ARROWS ARE THE SAME AS THE TYPE II ARROWS IN THE ADJACENT TURN LANE. FOR TURN LANES WITH A PHYSICAL SEPARATION IN THE SAME DIRECTION OF TRAVEL, THE ARROWS AND "ONLY" MARKING MAY BE ELIMINATED.

DIRECTION OF TRAFFIC

**L** = LENGTH OF TURN BAY

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

**PAVEMENT MARKING (TURN LANES)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION





6

SDD 15C08-23d

## LEGEND

SIGN ON PORTABLE OR PERMANENT SUPPORT

TEMPORARY PORTABLE RUMBLE STRIP ARRAY

DIRECTION OF TRAFFIC

WORK AREA

FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

## GENERAL NOTES

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

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

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

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

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

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

## FLAGGING

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

(1) FOR MOVING WORK OPERATIONS, POST ADDITIONAL W20-7A FLAGGER SIGNS AT APPROXIMATELY 3,500' INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.

(2) SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

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

## TEMPORARY PORTABLE RUMBLE STRIPS

UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

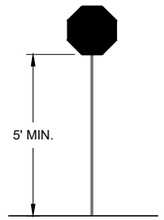
(3) EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER

ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FROM THE APPROVED PRODUCTS LIST.

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

DO NOT INSTALL TEMPORARY PORTABLE RUMBLE STRIPS ON GRAVEL, MILLED SURFACES, OR ASPHALT THAT HAS BEEN PAVED LESS THAN 12 HOURS.




**STOP/SLOW PADDLE ON SUPPORT STAFF**

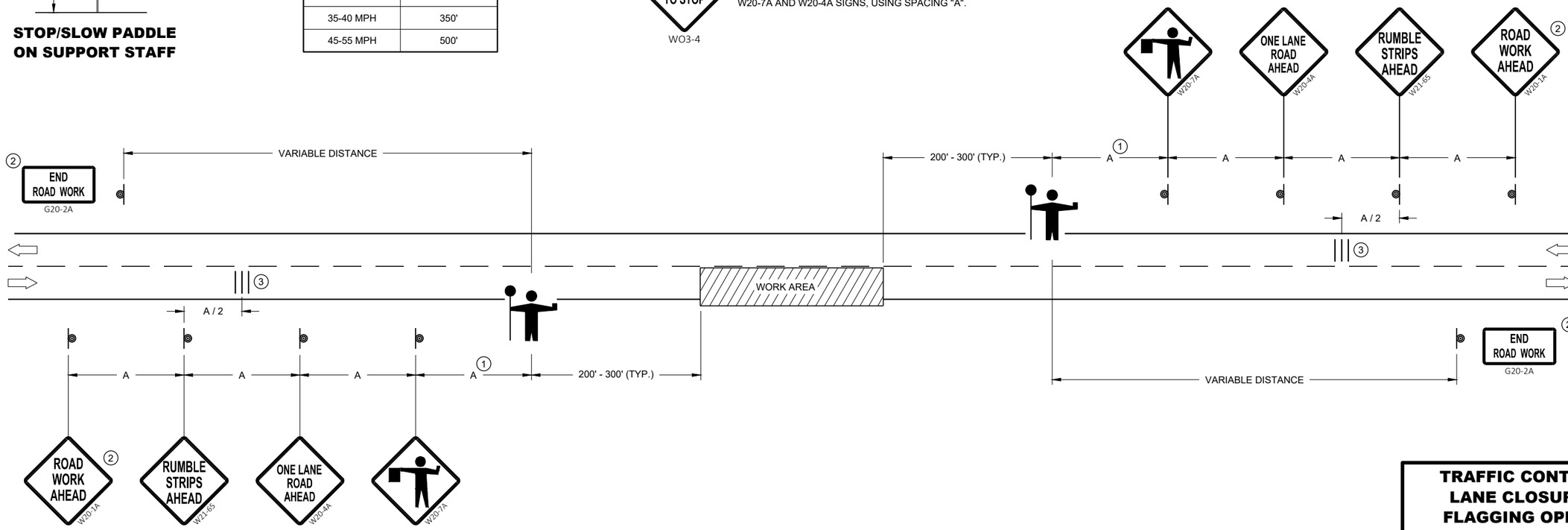
## SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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




WO3-4

USE OF WO3-4 SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7A AND W20-4A SIGNS, USING SPACING "A".




# TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

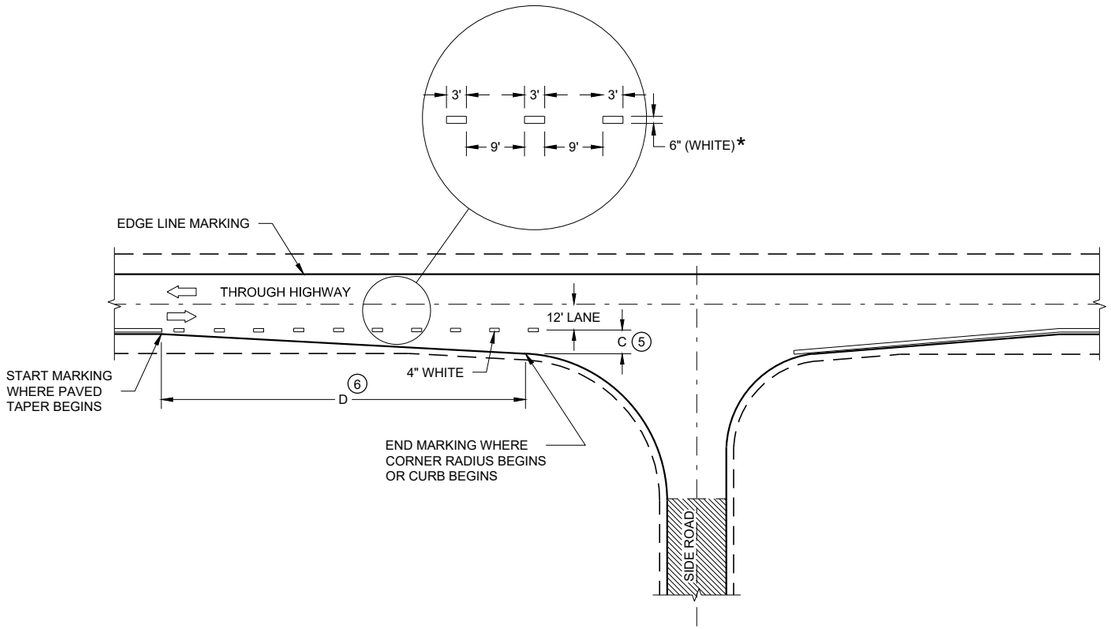


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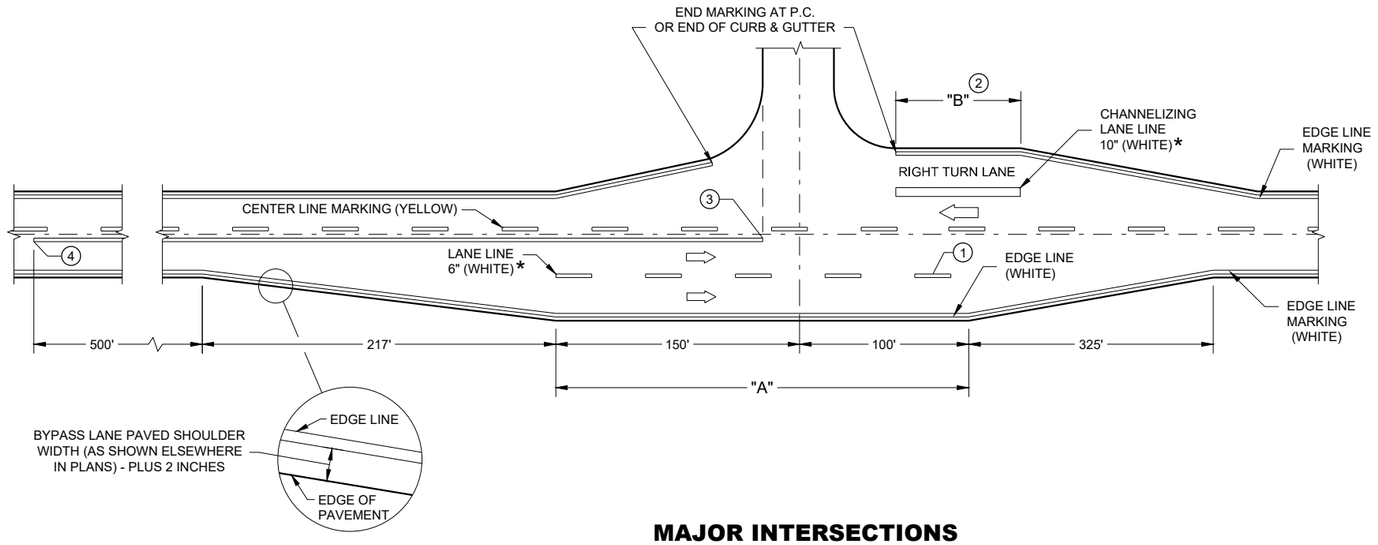
SDD 15C12 - 09a

6

SDD 15C12 - 09a




## MINOR INTERSECTION




## MAJOR INTERSECTIONS

## (INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

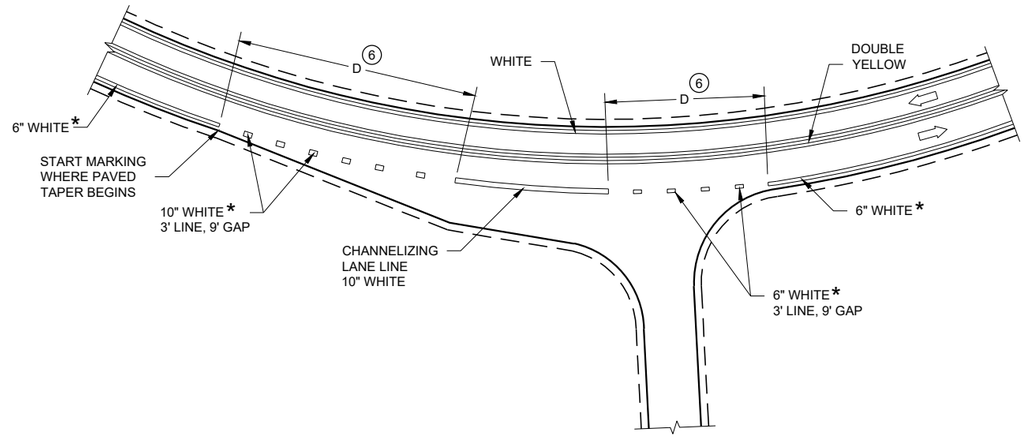
## GENERAL NOTES

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

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

## LEGEND

DIRECTION OF TRAVEL




## INTERSECTION ON OUTSIDE OF CURVE

**PAVEMENT MARKING (INTERSECTIONS)**

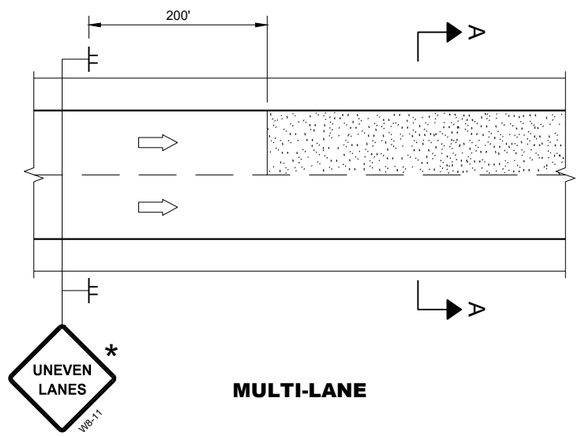
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



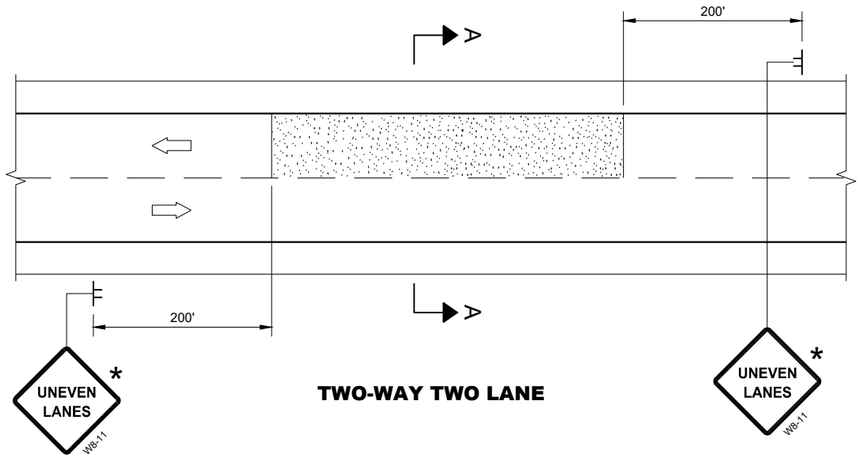


6

SDD 15C35-06a




**MULTI-LANE**




**TWO-WAY TWO LANE**

## GENERAL NOTES

FOR SPOT LOCATIONS USE ENGINEERING JUDGEMENT WHEN PLACING ADDITIONAL SIGNS.

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

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

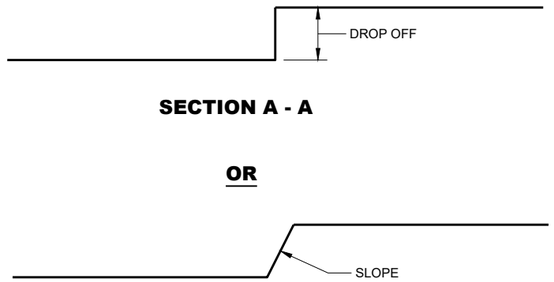
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

* IF THE DROP-OFF IS CONTINUOUS ALONG THE PROJECT, PLACE ADDITIONAL SIGNS EVERY 1 MILE AND AFTER EVERY ENTRANCE RAMP.

(1) USE CLOSER SPACING WHEN DELINEATING DROP-OFF.

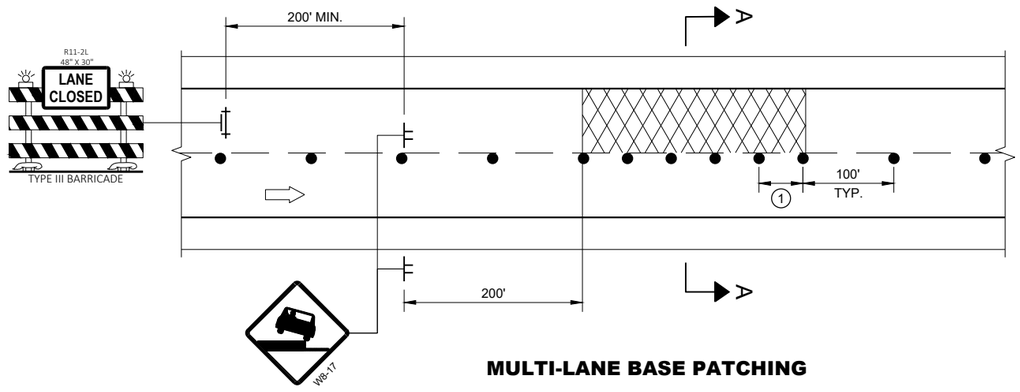
## LEGEND

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



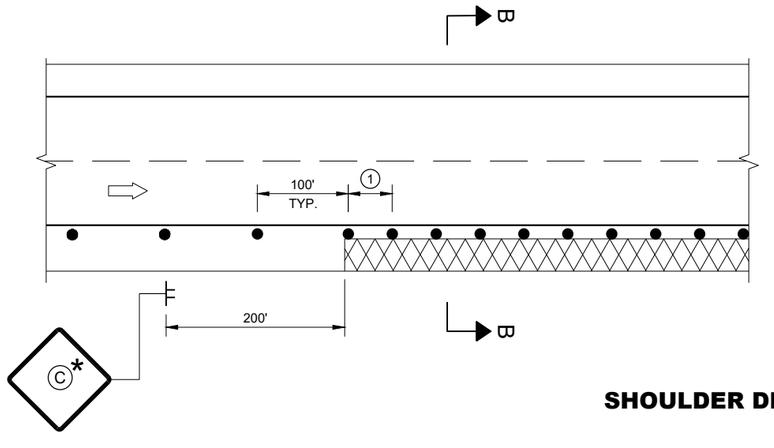

**SECTION A - A**

**SECTION A - A**

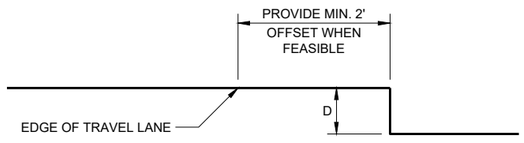



**MULTI-LANE BASE PATCHING**

**ADJACENT LANE DROP-OFFS**




**SHOULDER DROP-OFFS**




**SECTION B - B**

| D | SIGN (C) |
|---|---|
| < 2" WITH A SLOPE STEEPER THAN 3:1 | LOW SHOULDER<br>WO8-9 |
| 2" < 6" WITH A SLOPE STEEPER THAN 3:1 | SHOULDER DROP - OFF<br>W8-9A<br>PROVIDE A 3:1 OR FLATTER SLOPE OF MATERIAL ADJACENT TO THE PAVEMENT |

**TRAFFIC CONTROL, DROP-OFF SIGNING**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA



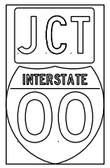
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SDD 15D39 - 02

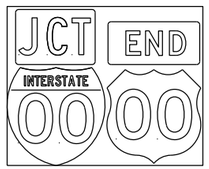
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SDD 15D39 - 02

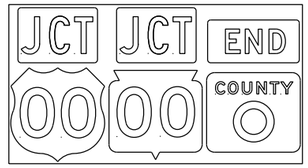
# TYPICAL ASSEMBLIES



J1-1



J1-2



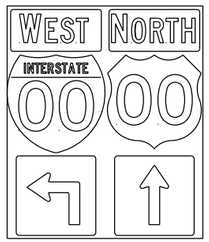
J1-3



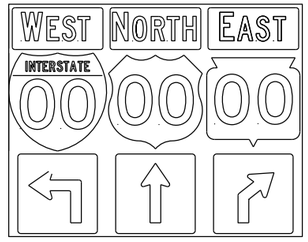
JR1-1



J2-1



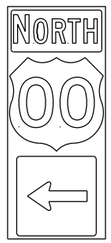
J2-2



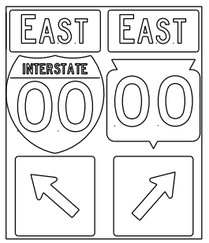
J2-3



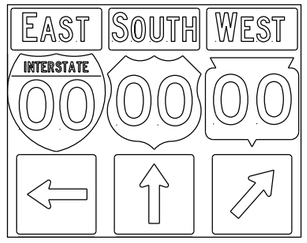
JV
( Typical Vertical J-Assembly
See Note 10 and 11 )



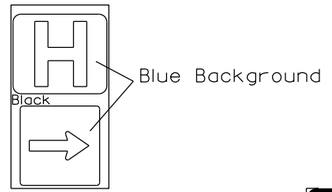
J3-1



J3-2



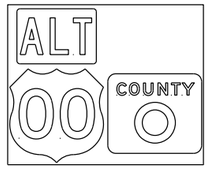
J3-3



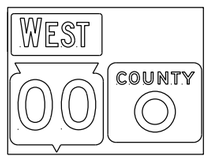
JH-1



J4-1



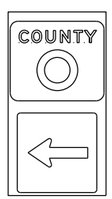
J4-2



J4-2



J12-1



J13-1



J32-1



J33-1



J22-1



J23-1



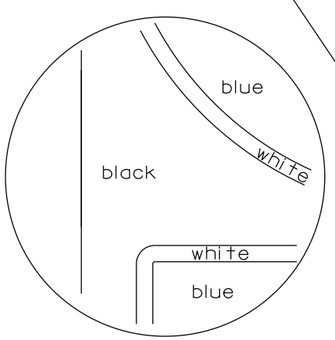
JR13-1

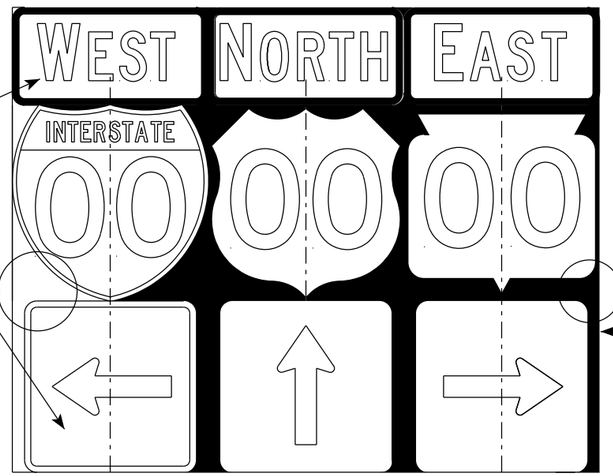


JR23-1



JR99-1




NOTES

1. Signs are Type II - Type H Reflective
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 inchs (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.

ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/21 PLATE NO. A2-1S.9

PROJECT NO:

SHEET NO: 92 E

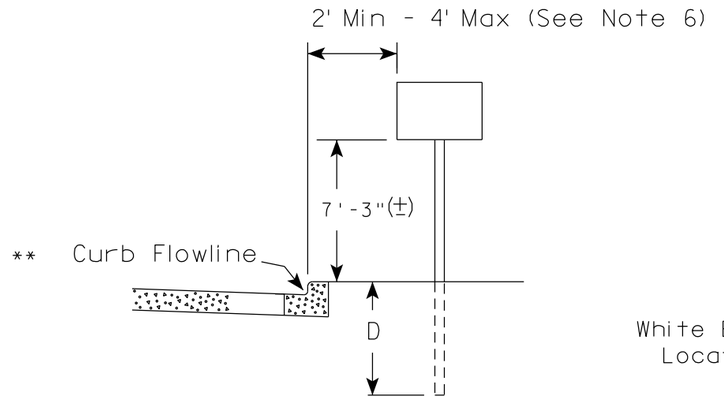
FILE NAME : C:\CAEfiles\Projects\tr_stdplate_A21S.dgn PLOT DATE : 18-MAR 2021 1:37 PLOT BY : mscj9h PLOT NAME :

WISDOT/CADDS SHEET 42

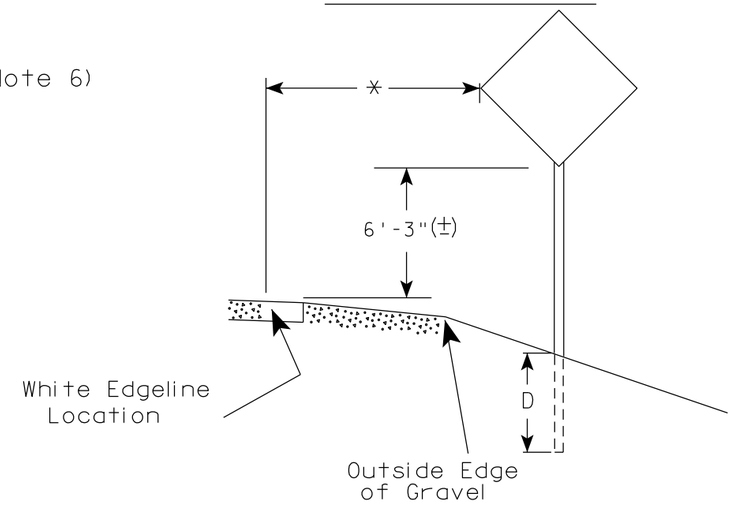
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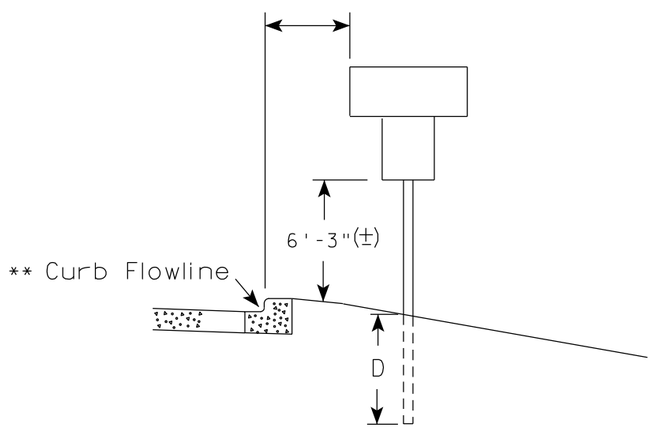
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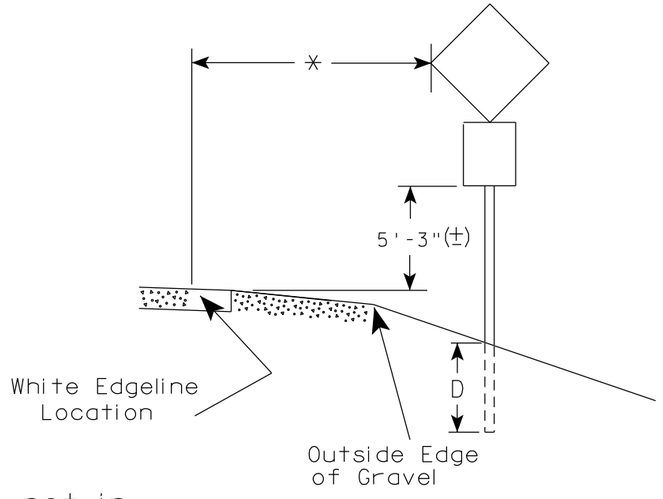
## URBAN AREA




## RURAL AREA (See Note 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. Offset of signs is measured from the flow line.

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

### POST EMBEDMENT DEPTH

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

### GENERAL NOTES

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

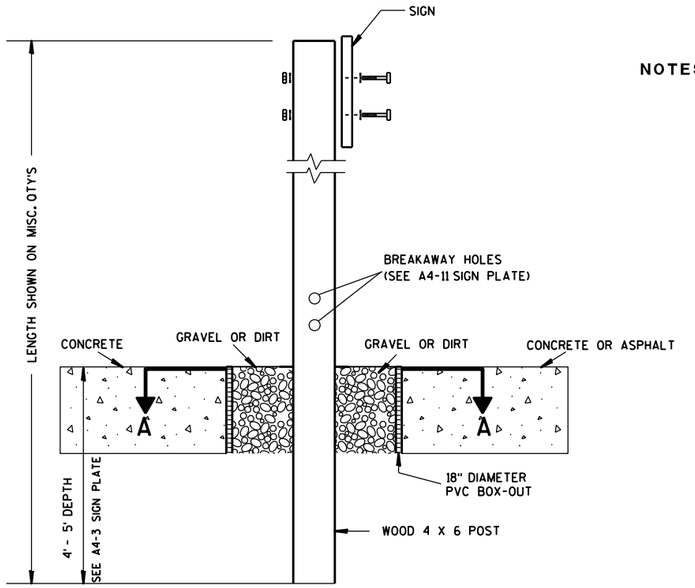
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/13/2020 PLATE NO. A4-3.22

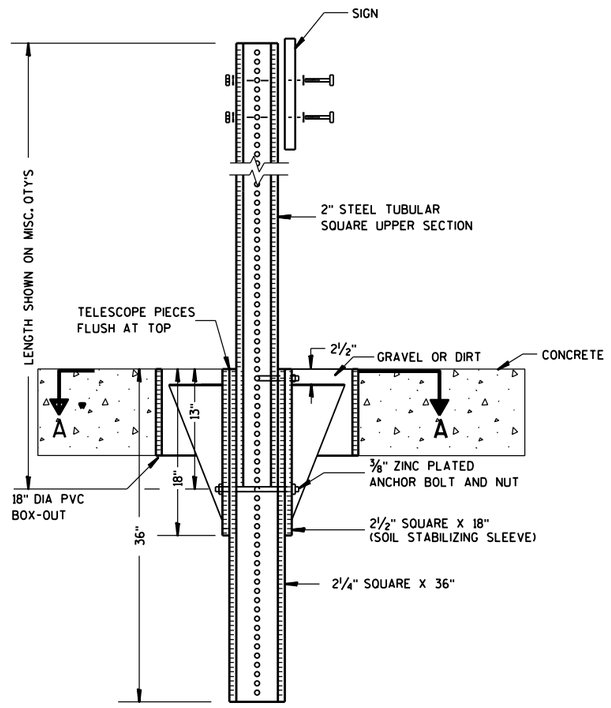
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 93 | E |
|---|---|---|---|---|---|




**ELEVATION VIEW**

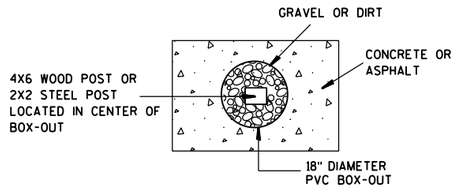
**DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT**

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




**ELEVATION VIEW**

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




**PLAN VIEW**

**FOR NEW CONCRETE/ASPHALT INSTALLATIONS**

# SIGN POST BOX-OUTS A4-3B

*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
for State Traffic Engineer

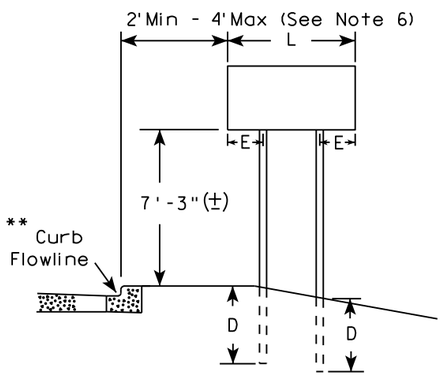
DATE 1/27/14 PLATE NO. A4-3B.1



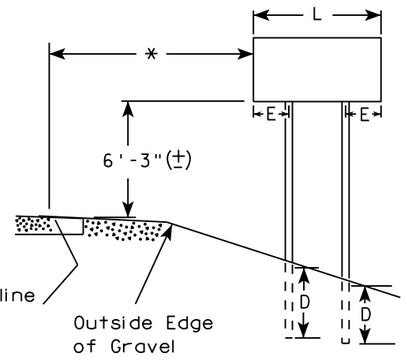
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: | E |
|---|---|---|---|---|---|

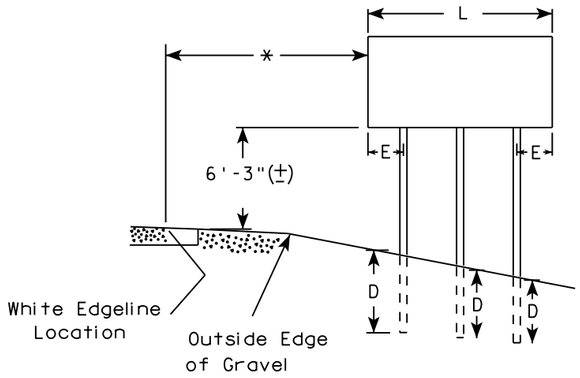
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

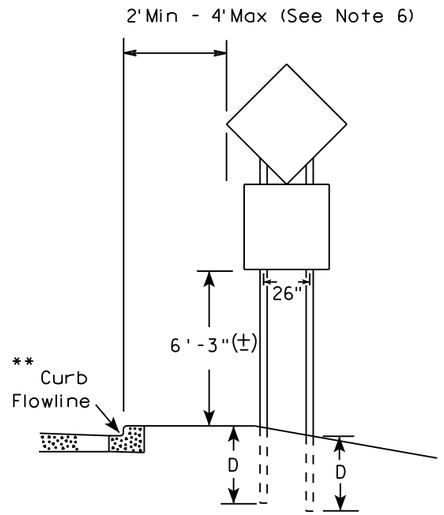
## URBAN AREA



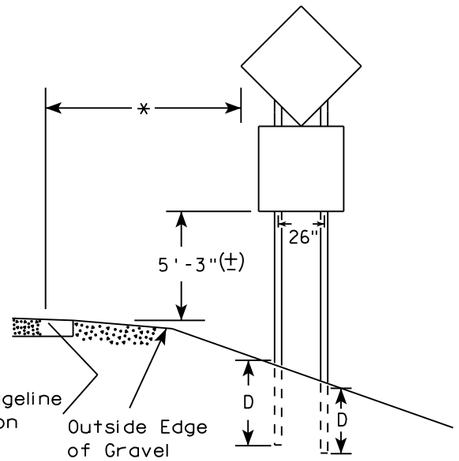

## RURAL AREA (See Note 3)




48" DIAMOND WARNING SIGN




48" DIAMOND WARNING SIGN

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

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

## GENERAL NOTES

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

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

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

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

## POST EMBEDMENT DEPTH

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

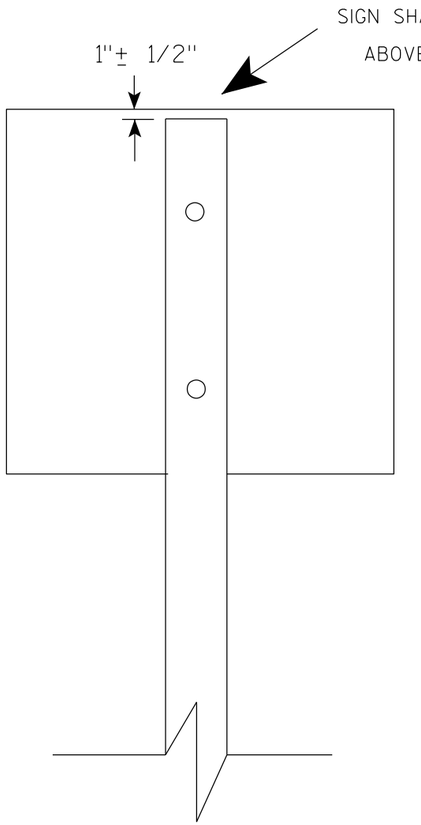
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

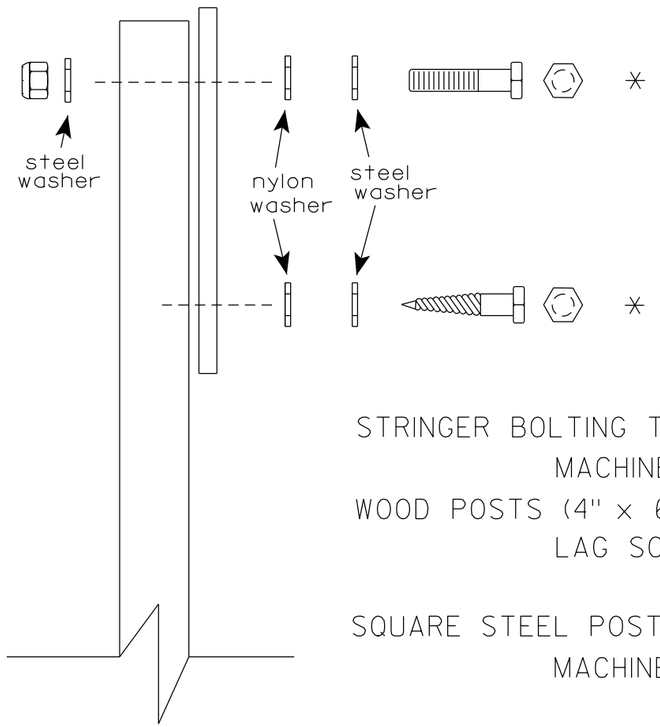
*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 8/21/17 PLATE NO. A4-4.15

| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 95 | 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 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

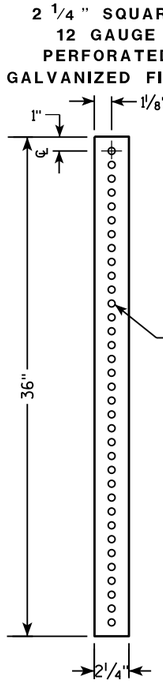
*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
for State Traffic Engineer

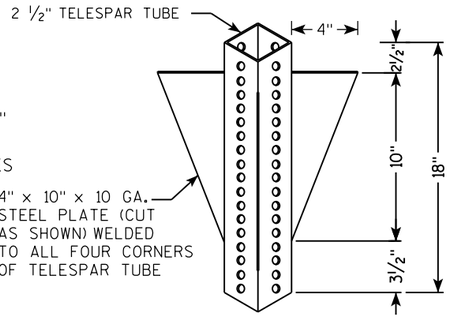
DATE 4/1/2020 PLATE NO. A4-8.9

## TELESCOPIC TUBING ANCHORS
## TWO PIECE SYSTEM

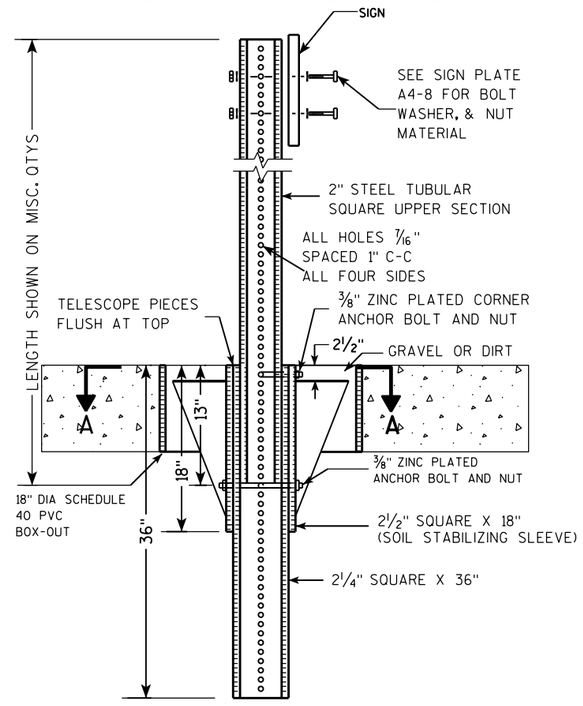
**2 1/4 " SQUARE**
**12 GAUGE**
**PERFORATED**
**GALVANIZED FINISH**



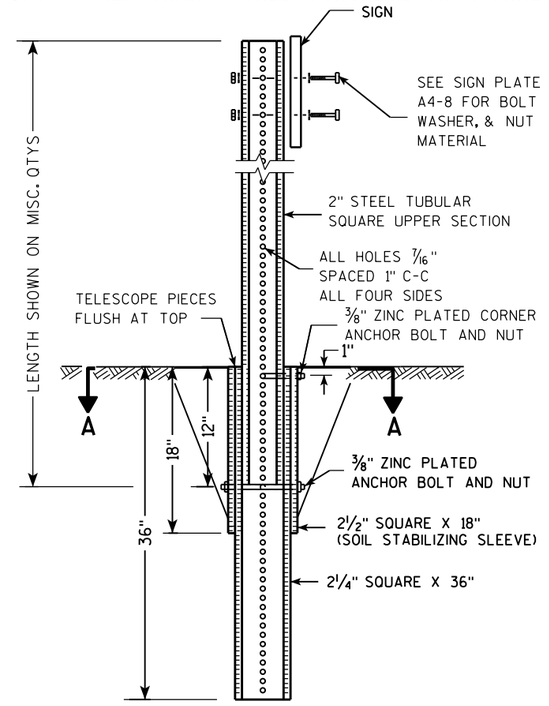

**2 1/2 " SQUARE**
**12 GAUGE**
**OMNI-DIRECTIONAL**
**PERFORATED**
**SOIL STABILIZING SLEEVE**
**GALVANIZED FINISH**

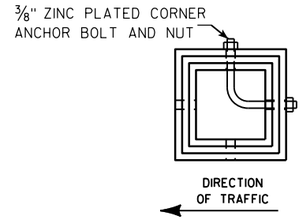



## DETAIL OF TUBULAR STEEL SIGN POST
**(IN POURED CONCRETE OR ASPHALT)**




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




**SECTION A-A**

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

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

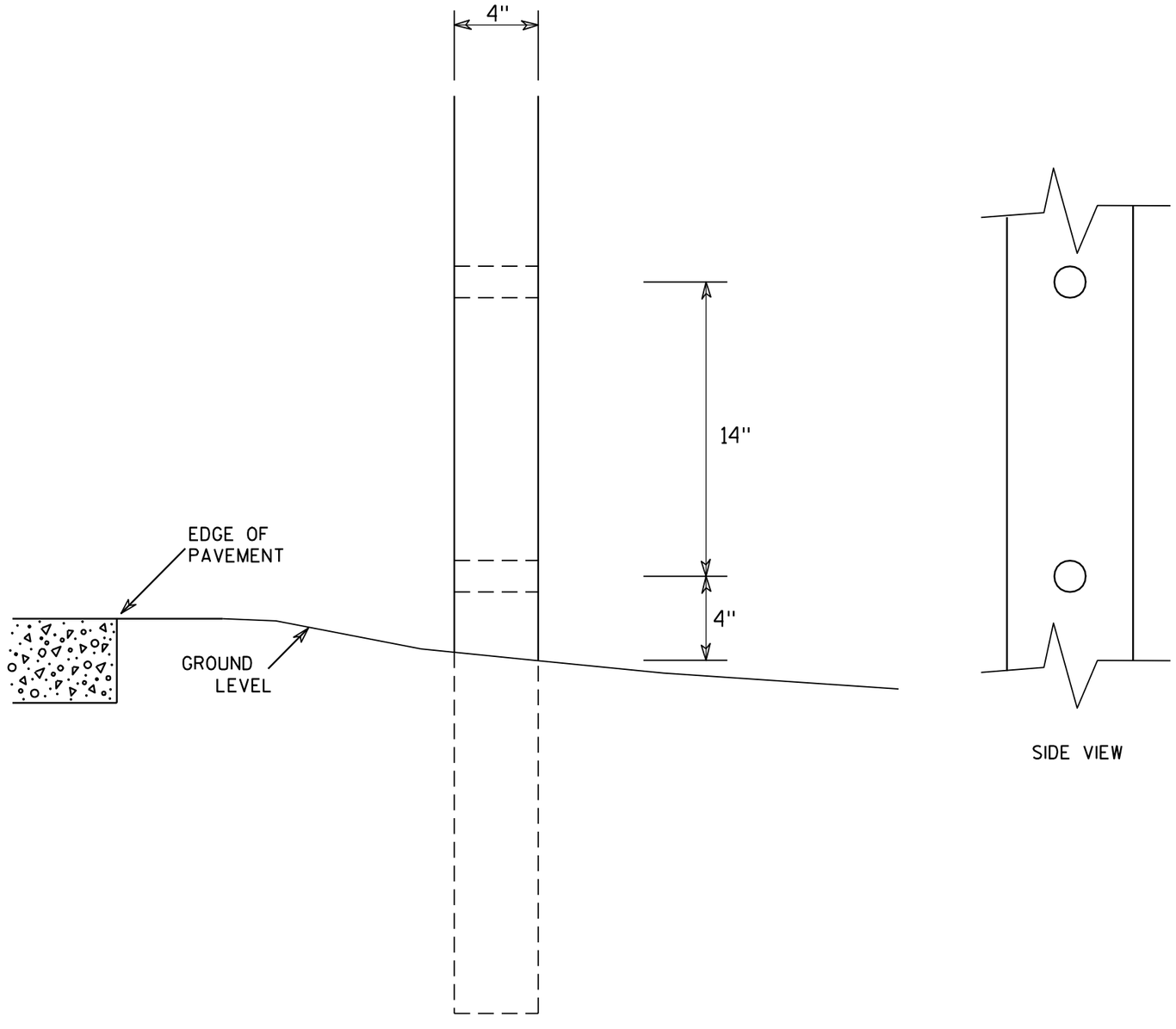
TUBULAR STEEL
SIGN POST
A4-9

*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
*for* State Traffic Engineer

DATE 2/05/15 PLATE 97 A4-9.9

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






SIDE VIEW

GENERAL NOTES

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

7

7

# 4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

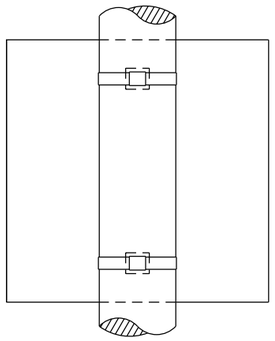
APPROVED Chester J Spang for State Traffic Engineer

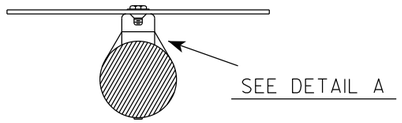
DATE 3/27/97 PLATE NO. A4-11.2

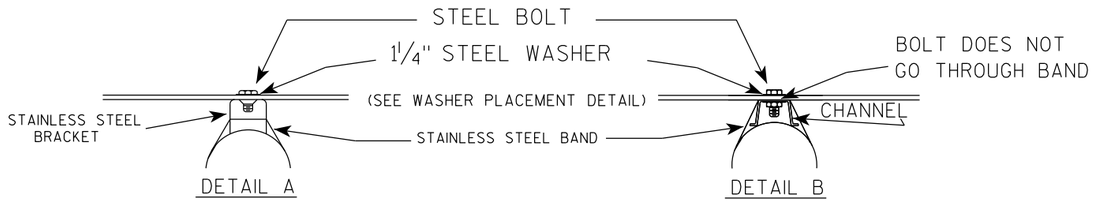
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 98 | E |
|---|---|---|---|---|---|

# BANDING

SINGLE SIGN



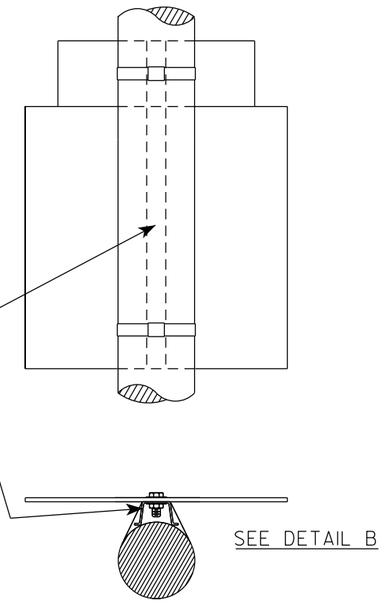


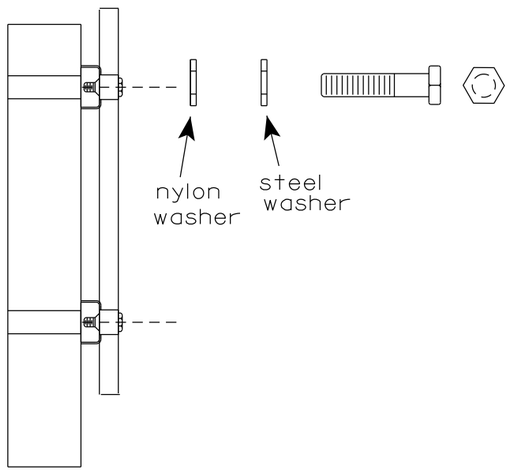

## GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be ¾" in width and 0.025" thickness.
4. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
   b. Electro-galvanized in accordance with ASTM designation: B 633, Type III, SC 3

"J" ASSEMBLY




WASHER PLACEMENT




WASHERS (ALL POSTS) -
1-1/4" O.D. X ⅜" I.D. X 1/16" STEEL
1-1/4" O.D. X ⅜" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

STANDARD SIGN
SIGN BANDING DETAILS

*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
for State Traffic Engineer

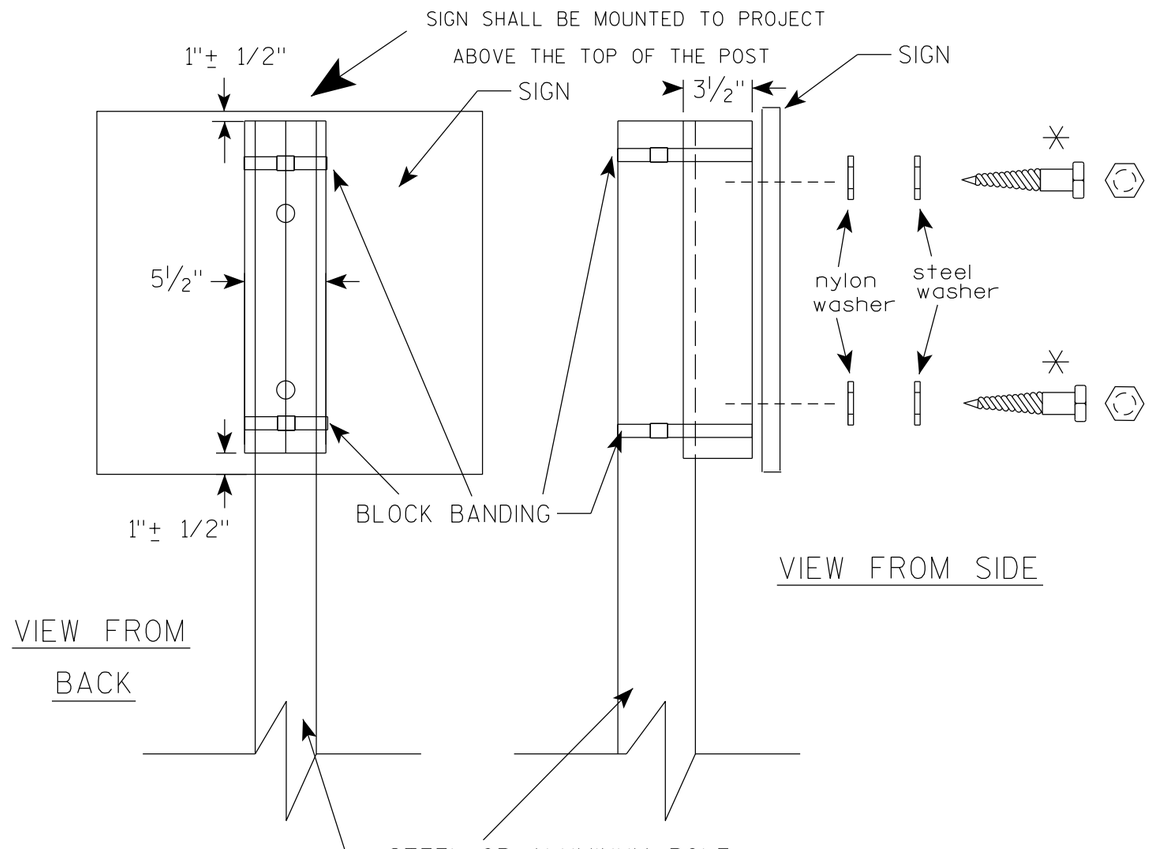
DATE 6/10/19 PLATE NO. A5-9.4

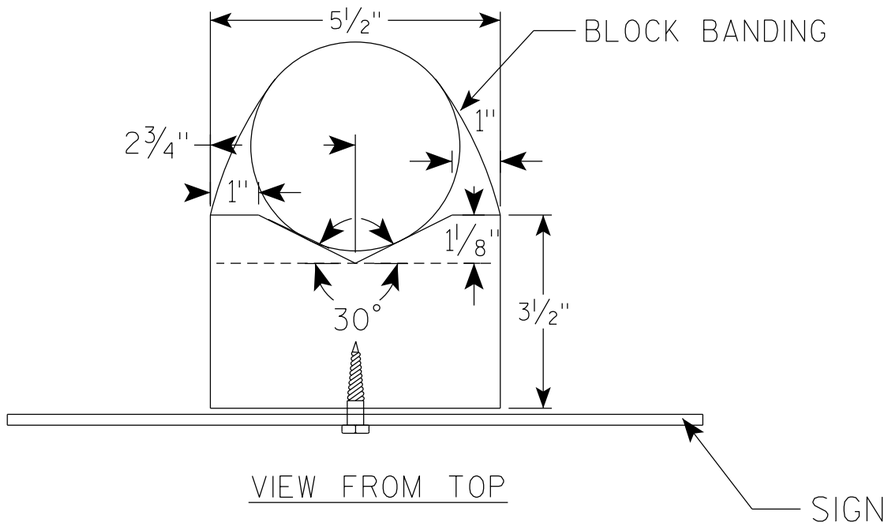
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 99 | E |
|---|---|---|---|---|---|

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A59.dgn PLOT DATE : 10-JUN 2019 4:10 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

7

7




## GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WisDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, ¾" WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORNALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
   b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✳ LAG BOLTS SHALL BE ⅜" X 2½"

# BLOCK BANDING DETAIL ( V-BLOCK OPTION )

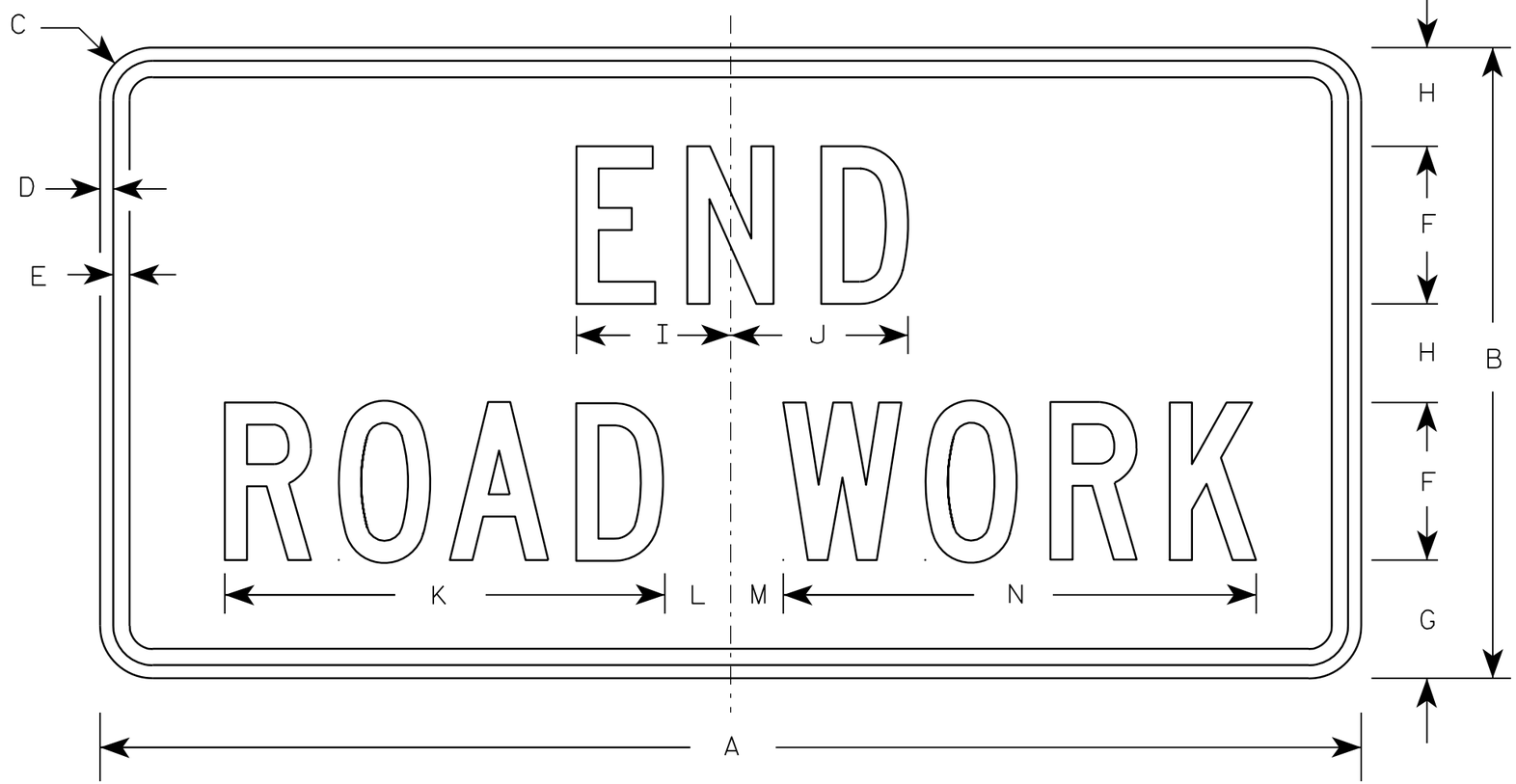
*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/19/2022 PLATE NO. A5-10.3

PROJECT NO:

SHEET NO: 100 E




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 m2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 |

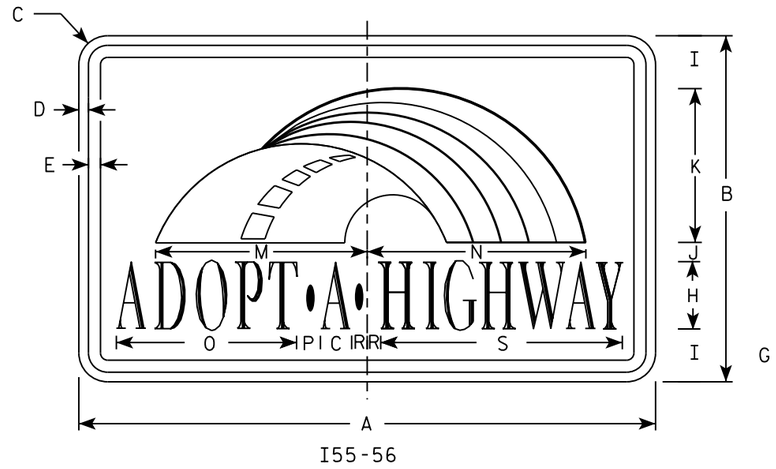
STANDARD SIGN
G20-2A

WISCONSIN DEPT OF TRANSPORTATION

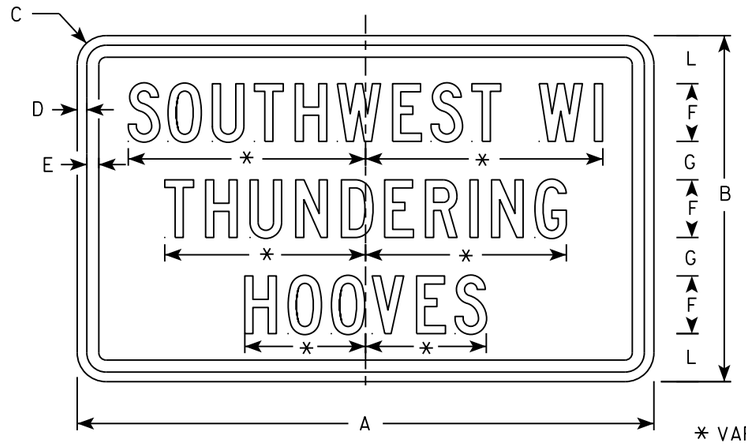
APPROVED Matthew R Rauch
for State Traffic Engineer

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

| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 101 | E |
|---|---|---|---|---|---|



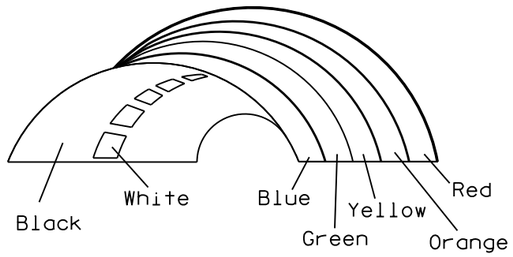

I55-56




I55-56P

* VARIES

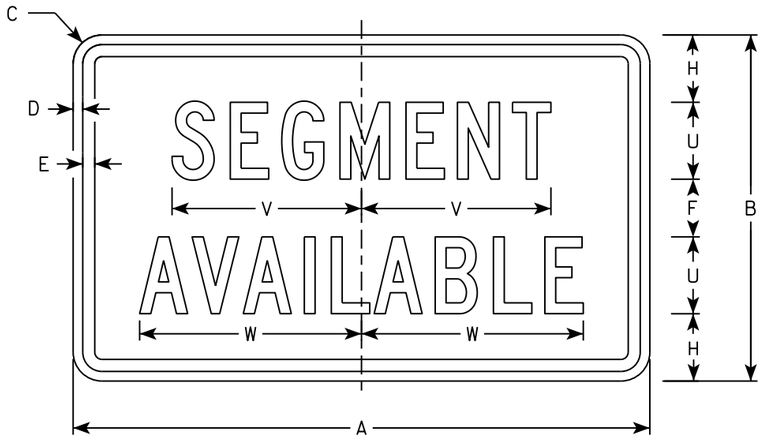
Background Colors of Symbol*




*1/4" Black Border between each color of rainbow and border of rainbow

## NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - (See Note 4)
3. Message Series - (See Note 5)
4. Border - Blue
   Adopt a Highway - Red
   All other Text - Blue
5. Adopt a Highway - Dutch 8011L
   All other Text - Series C
6. Contractor shall provide and install a new post bracket in accordance with the I55-56B sign detail.




I55-56S

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | 30 | 18 | 1 1/2 | 1/2 | 5/8 | 3 | 2 | 3 1/2 | 2 3/4 | 1 | 8 | 2 1/2 | 11 1/4 | 11 1/8 | 9 3/8 | 1 1/4 | | 3/4 | 12 5/8 | 7 1/2 | 4 | 9 7/8 | 11 1/2 | | | | 3.75 |
| 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

STANDARD SIGN
I55-56

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

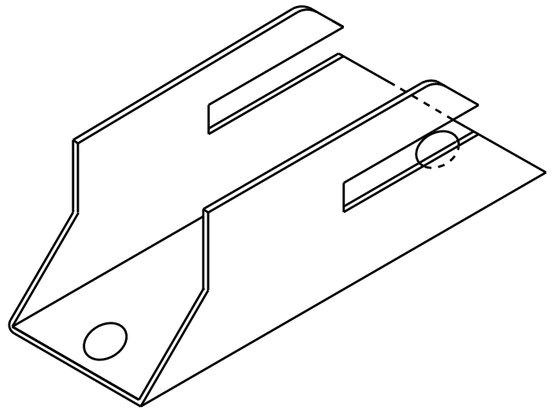
DATE 2/20/18 PLATE NO. I55-56.4

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 102 | E

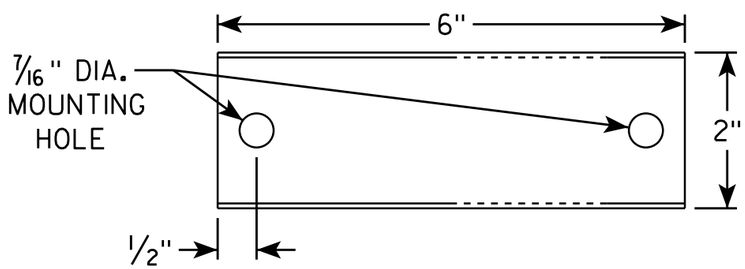
## NOTES

1. Must be capable of permanent attachment to a wood or steel channel sign post utilizing the fastening hardware specified on the A4-8 sign plate.
2. Shall be entirely primed and painted with two coats of a black powder coated enamel paint.
3. Shall be made with 12 gauge steel, and incorporate no welds, no hinged components, no threaded lock-type components, and no parts which are loose or can be separated from the main body.
4. Shall have rounded edges with at least 1/8" radii.
5. Shall not have unrounded and uncoated metal edges which can contact the back surface of the roll-up sign.
6. Top of bracket shall be mounted 2' below the bottom of the I55-56 sign.
7. Cost of bracket and fastening hardware shall be incidental to the I55-56 sign.

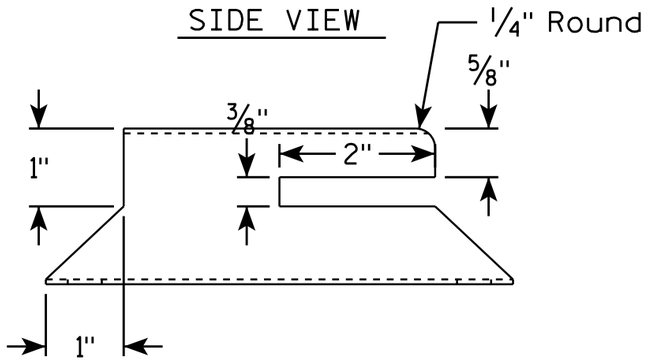
## ISOMETRIC VIEW



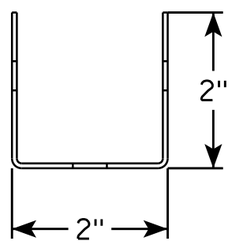
## TOP VIEW



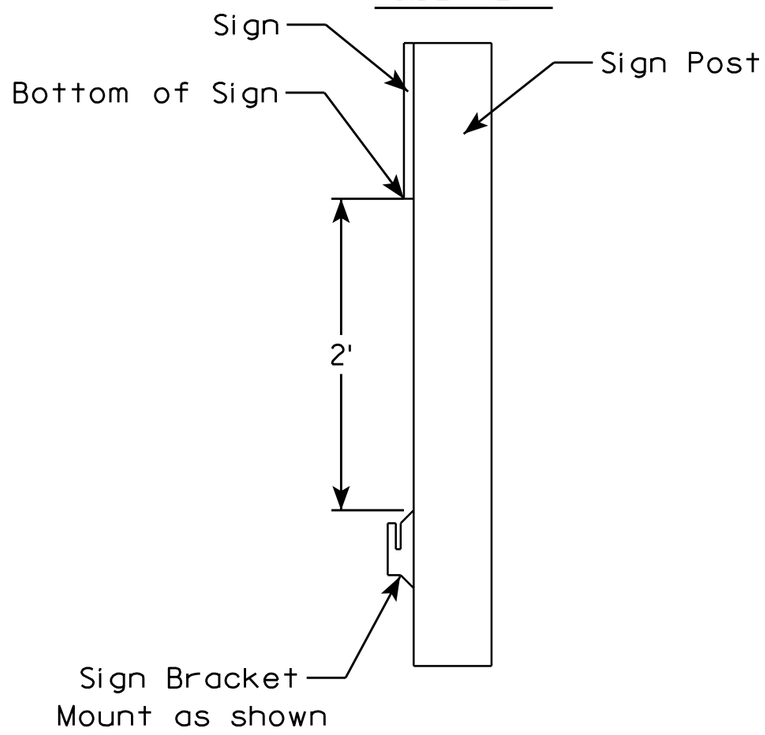

## SIDE VIEW




## END VIEW




## SIDE VIEW




ROLLUP SIGN BRACKET
I55-56B

WISCONSIN DEPT OF TRANSPORTATION

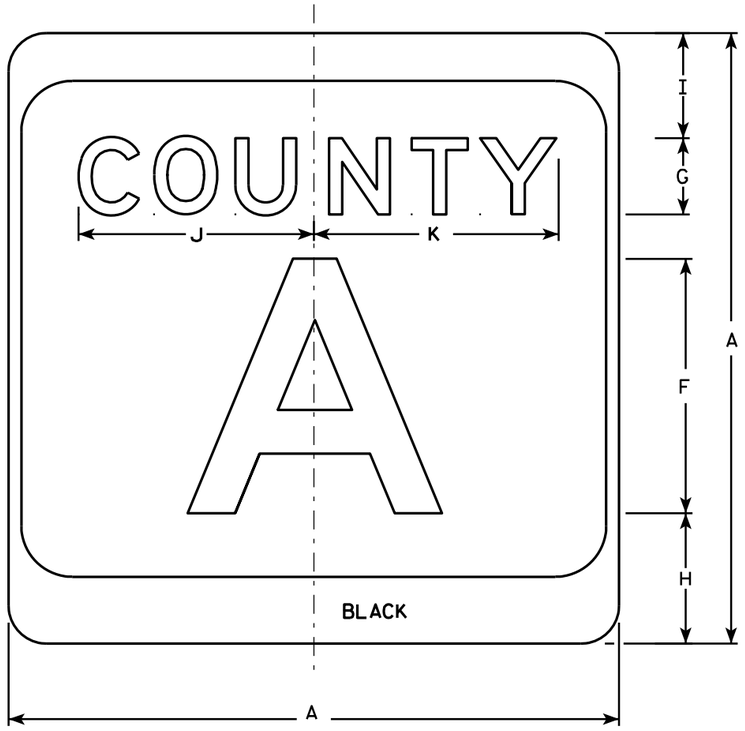
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/26/16 PLATE I55-56B.2

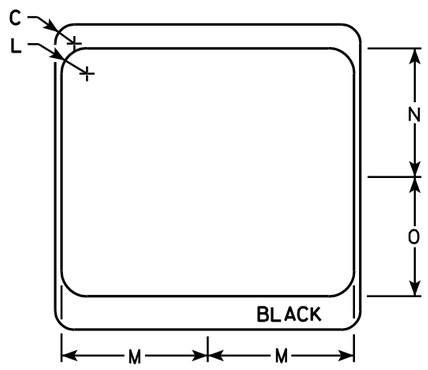
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: | E |
|---|---|---|---|---|---|

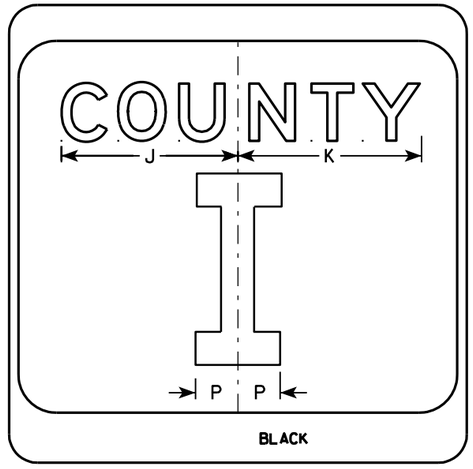


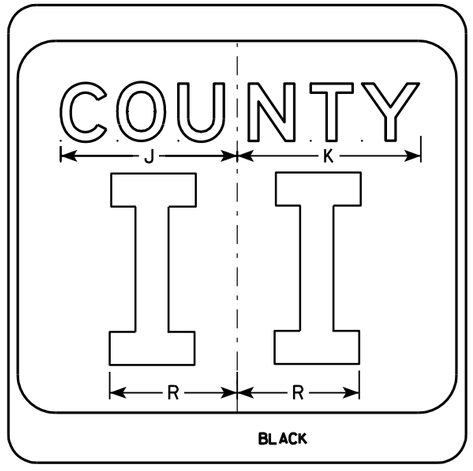
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\I5556B.DGN PLOT DATE : 26-APR-2016 17:29 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 1.945842:1.000000
WISDOT/CADDS SHEET 42




M1-5A




NOTES

1. Sign is Type II - see Note 7 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White & Black - See Note 7
   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. 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.
6. Substitute appropriate letters & optically center to achieve proper balance.
7. 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 |

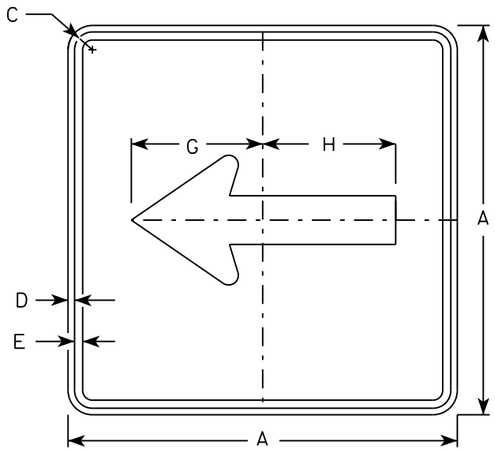
CTH MARKER
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

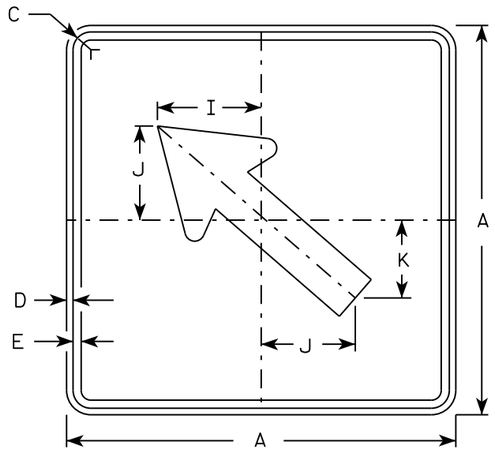
APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 104 | E



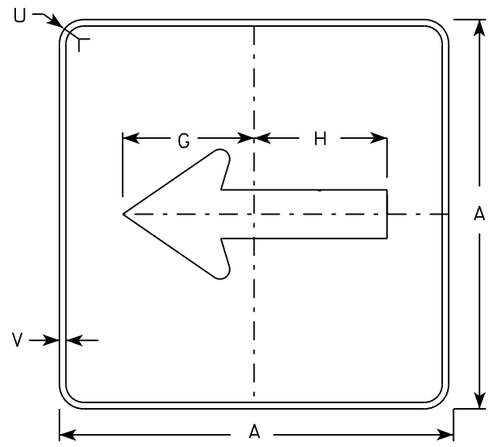

M6-1
MM6-1
MO6-1
MP6-1



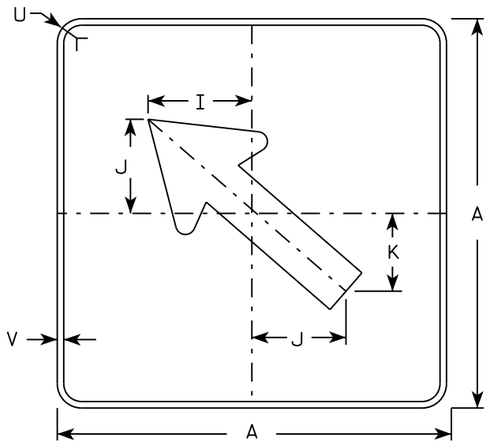

M6-2
MM6-2
MO6-2
MP6-2

NOTES

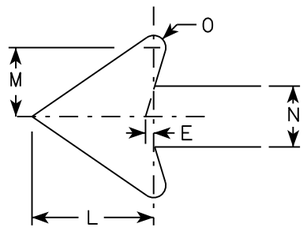
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - 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
   MO6-1 and MO6-2 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




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




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




| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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

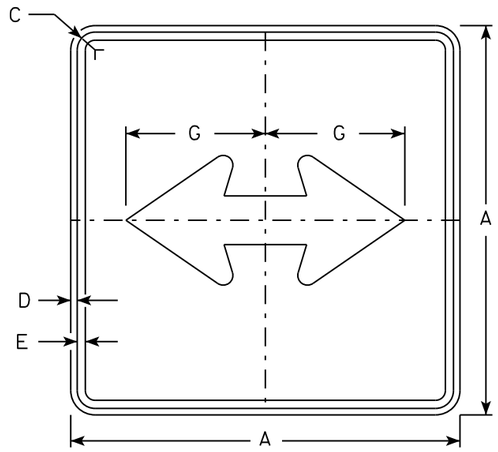
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE 105 M6-1.15

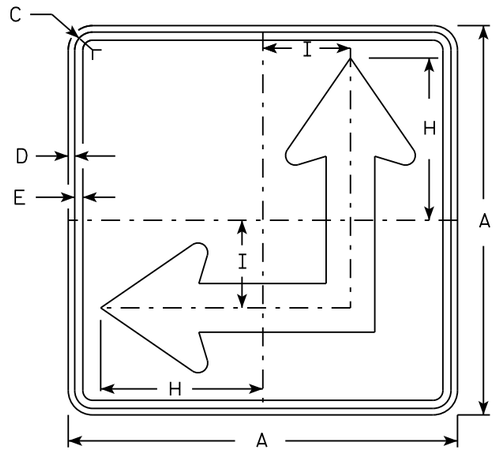
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: | E |
|---|---|---|---|---|---|



FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M61.DGN PLOT DATE : 01-DEC-2015 17:57 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



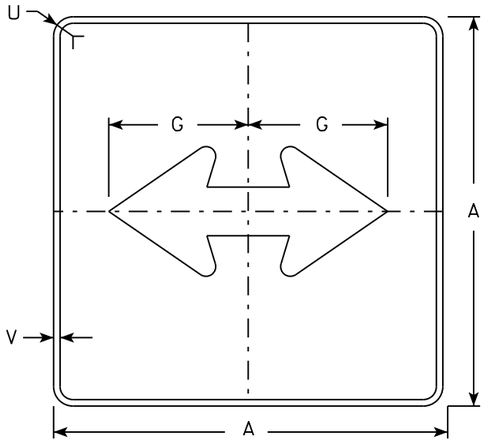

M6-4
MM6-4
MO6-4
MP6-4



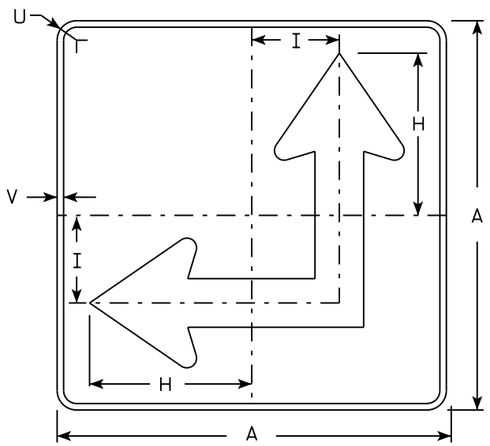

M6-6
MM6-6
MO6-6
MP6-6

NOTES

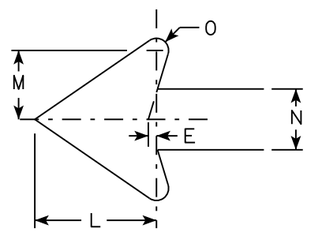
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See Note 4
   Message - See Note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-4 and M6-6 Background - 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
   MO6-4 and MO6-6 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.




MB6-4
MK6-4
MN6-4
MR6-4




MB6-6
MK6-6
MN6-6
MR6-6




| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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 |

STANDARD SIGN
M6-4 & M6-6
SERIES

WISCONSIN DEPT OF TRANSPORTATION

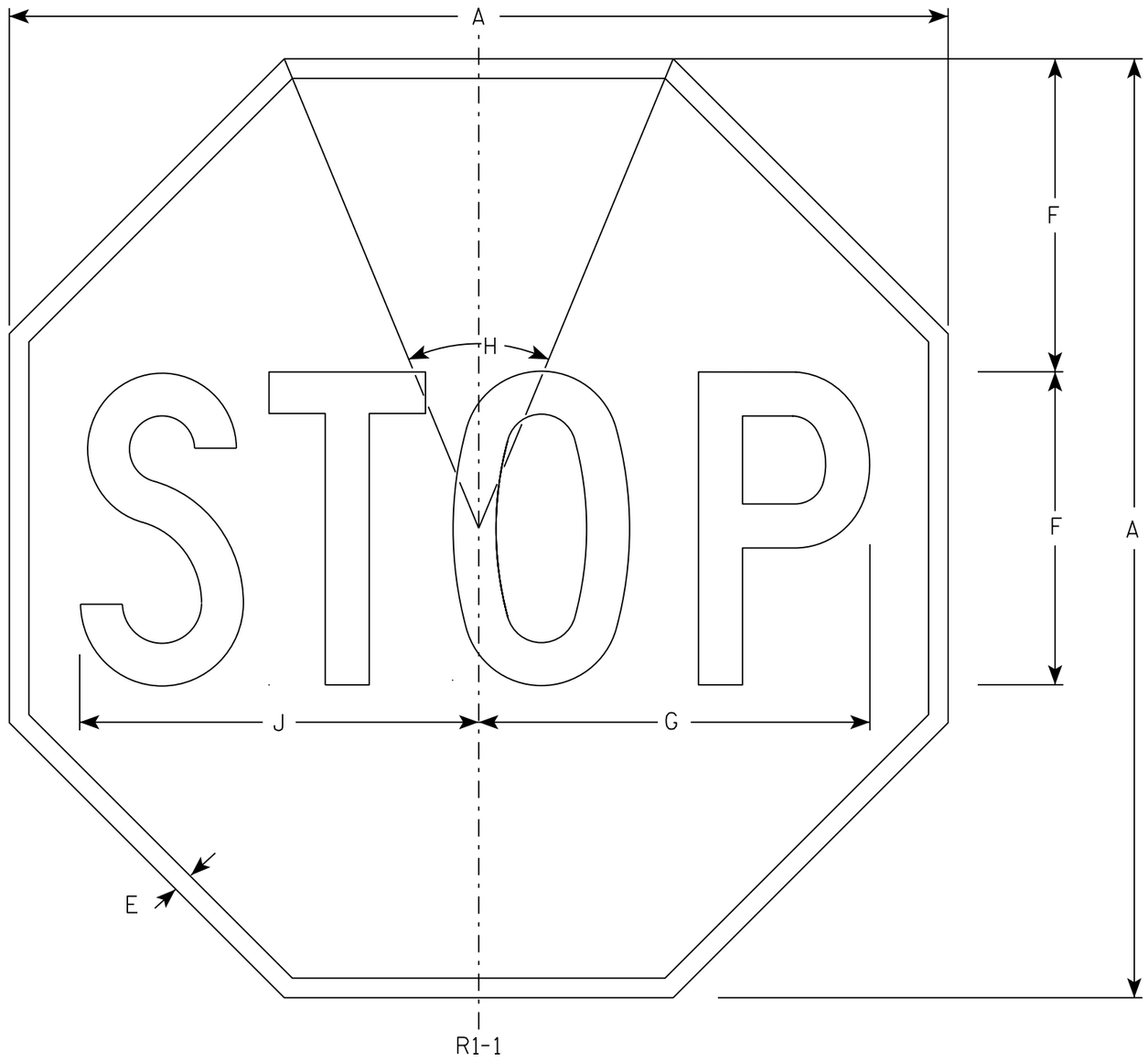
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE 106 M6-4.10

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



FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M64.DGN PLOT DATE : 01-DEC-2015 17:58 PLOT BY : $$ platuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000




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

| 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 |

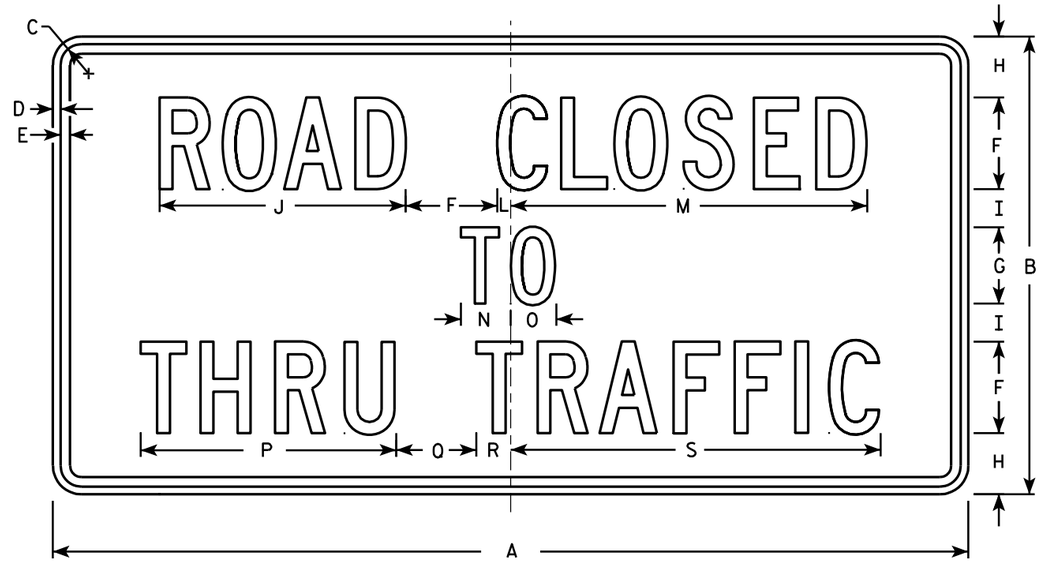
# STANDARD SIGN
# R1-1

*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
*for* State Traffic Engineer

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

| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 107 | E |
|---|---|---|---|---|---|




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 | 1/2 | 5/8 | 6 | 5 | 4 | 2 1/2 | 16 1/8 | | 7/8 | 23 3/8 | 3 1/4 | 3 | 16 3/4 | 5 1/4 | 2 1/4 | 24 1/4 | | | | | | | | 12.5 |
| 2M | 60 | 30 | 1 3/8 | 1/2 | 5/8 | 6 | 5 | 4 | 2 1/2 | 16 1/8 | | 7/8 | 23 3/8 | 3 1/4 | 3 | 16 3/4 | 5 1/4 | 2 1/4 | 24 1/4 | | | | | | | | 12.5 |
| 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

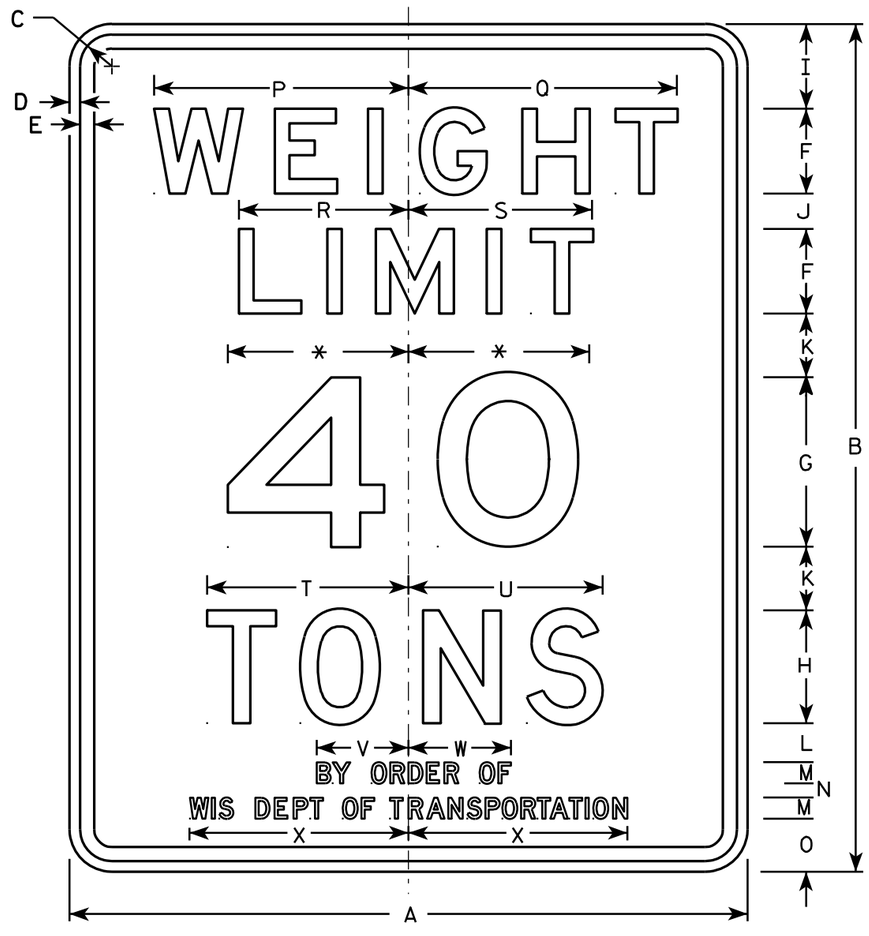
STANDARD SIGN
R11 - 4

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

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

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 108 | E




R12-1

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 - 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, 2 & 3 are series E
   Lines 4, 5, & 6 are series D.
6. Substitute appropriate numeral and optically adjust spacing to achieve proper balance.
7. Substitute name of county or town on County Trunk and Town Highways respectively. Community name on City or Village Streets including Connecting Highways is optional.

* Varies (see note 6)

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 24 | 30 | 1 1/8 | 3/8 | 1/2 | 3 | 6 | 4 | 3 | 1 1/4 | 2 1/4 | 1 3/8 | 3/4 | 1/2 | 1 7/8 | 9 | 9 1/2 | 6 | 6 1/2 | 7 1/8 | 6 7/8 | 3 1/4 | 3 5/8 | 7 3/4 | | | 5.0 |
| 2S | 24 | 30 | 1 1/8 | 3/8 | 1/2 | 3 | 6 | 4 | 3 | 1 1/4 | 2 1/4 | 1 3/8 | 3/4 | 1/2 | 1 7/8 | 9 | 9 1/2 | 6 | 6 1/2 | 7 1/8 | 6 7/8 | 3 1/4 | 3 5/8 | 7 3/4 | | | 5.0 |
| 2M | 24 | 30 | 1 1/8 | 3/8 | 1/2 | 3 | 6 | 4 | 3 | 1 1/4 | 2 1/4 | 1 3/8 | 3/4 | 1/2 | 1 7/8 | 9 | 9 1/2 | 6 | 6 1/2 | 7 1/8 | 6 7/8 | 3 1/4 | 3 5/8 | 7 3/4 | | | 5.0 |
| 3 | 36 | 48 | 1 3/8 | 1/2 | 5/8 | 6 | 10 | 8 | 4 1/2 | 2 1/2 | 2 1/4 | 1 1/2 | 3/4 | 1/2 | 3 | 13 1/2 | 14 1/4 | 9 | 9 3/4 | 10 5/8 | 10 1/4 | 3 1/4 | 3 5/8 | 7 3/4 | | | 12.0 |
| 4 | 48 | 60 | 2 1/4 | 3/4 | 1 | 6 | 12 | 8 | 6 | 2 1/2 | 4 1/2 | 2 3/4 | 1 1/2 | 1 | 3 3/4 | 18 | 19 | 12 | 13 | 14 1/4 | 13 3/4 | 6 1/2 | 7 1/4 | 15 1/2 | | | 20.0 |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

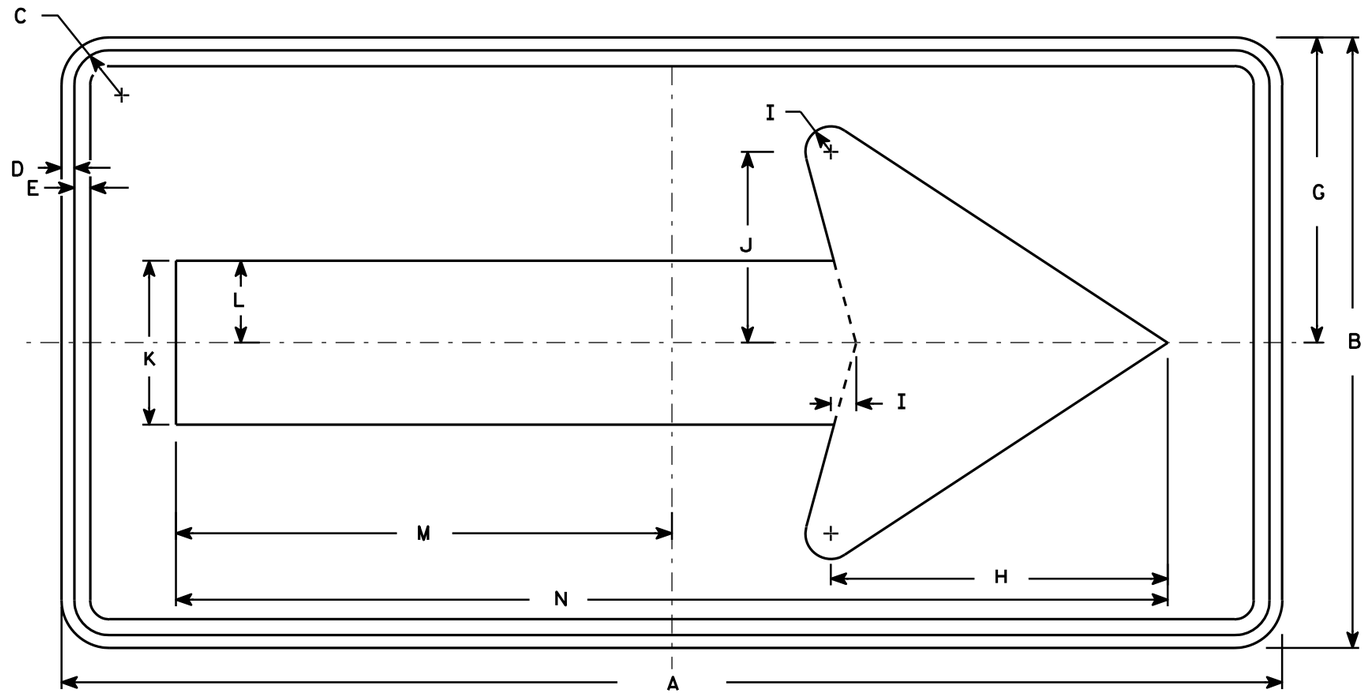
STANDARD SIGN
R12-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R12-1.8

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 109 | E




W1-6

## NOTES

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

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

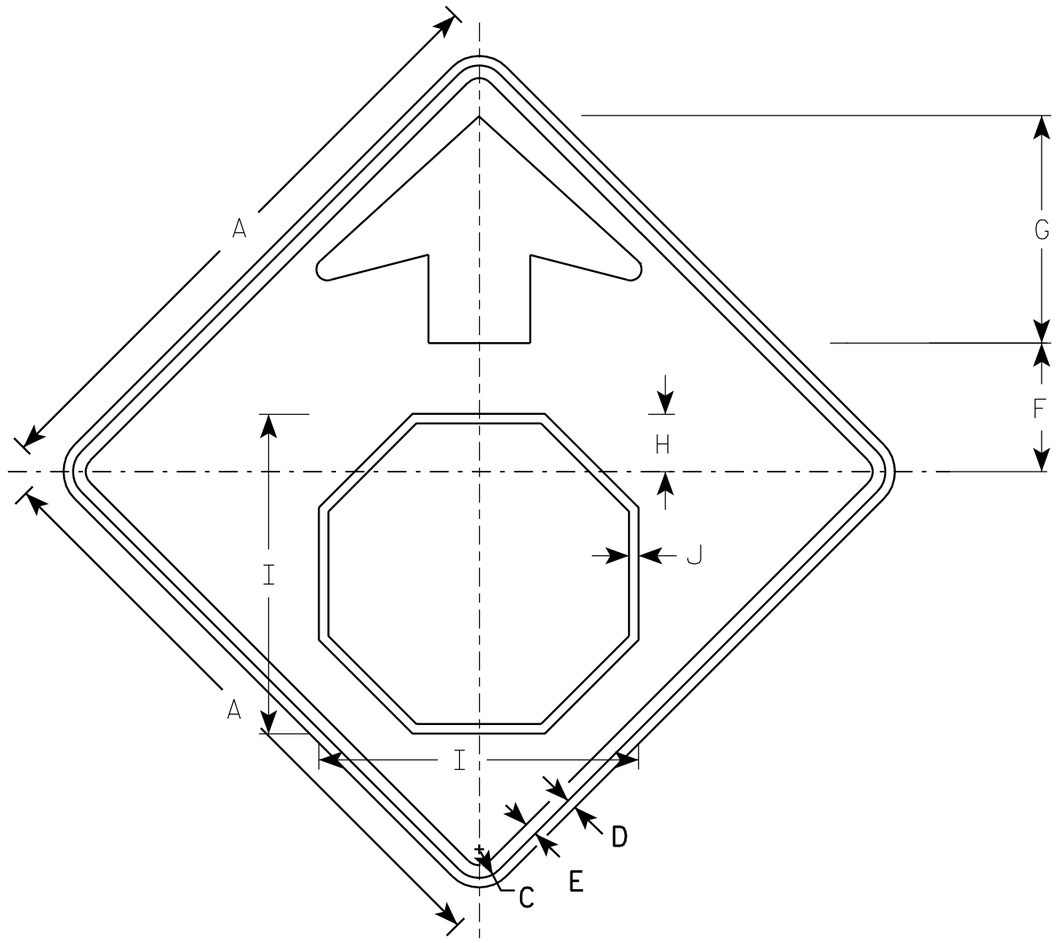
STANDARD SIGN
W1-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W1-6.8

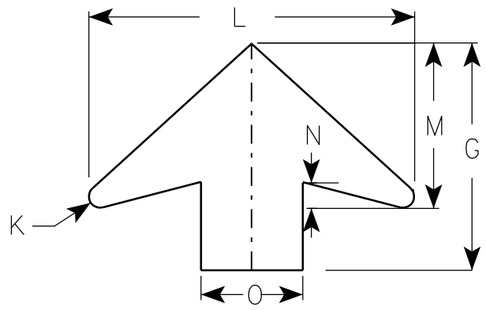
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 110 |
|---|---|---|---|---|




W3-1

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 |

STANDARD SIGN
W3-1

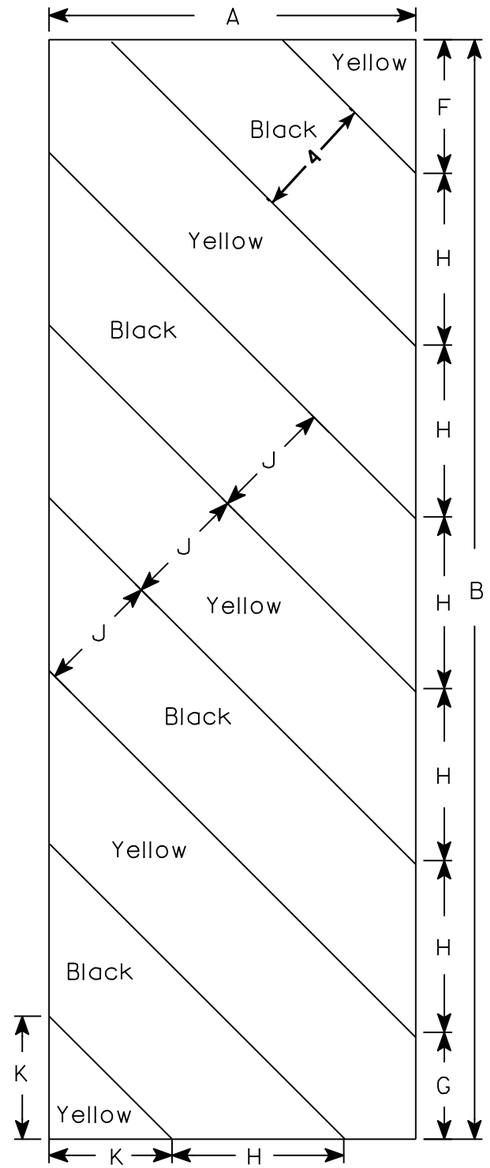
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

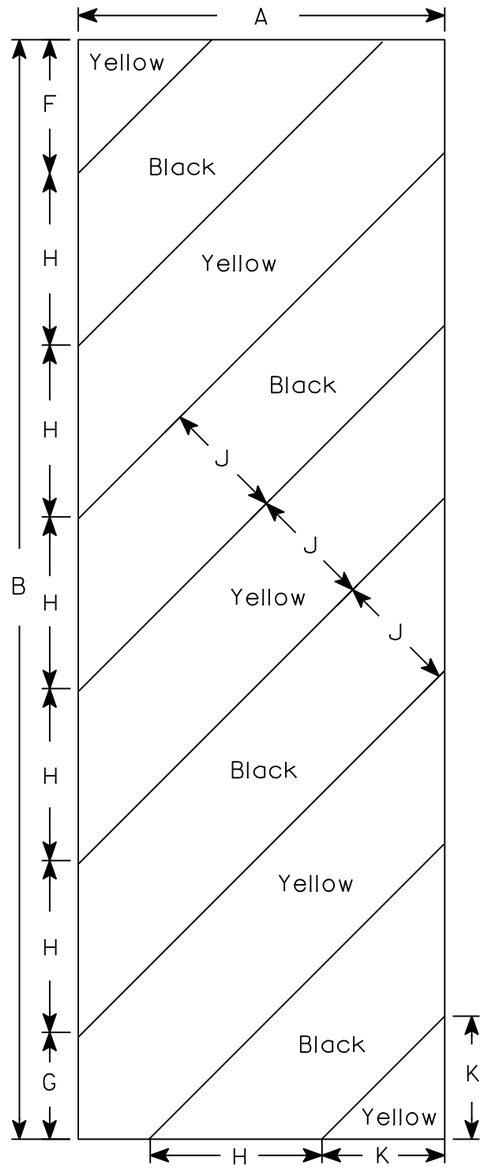
DATE 6/7/10 PLATE NO. W3-1.12

PROJECT NO:

SHEET NO: 111 E




W5-52L




W5-52R

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. Alternate colors of stripes as shown.

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

STANDARD SIGN

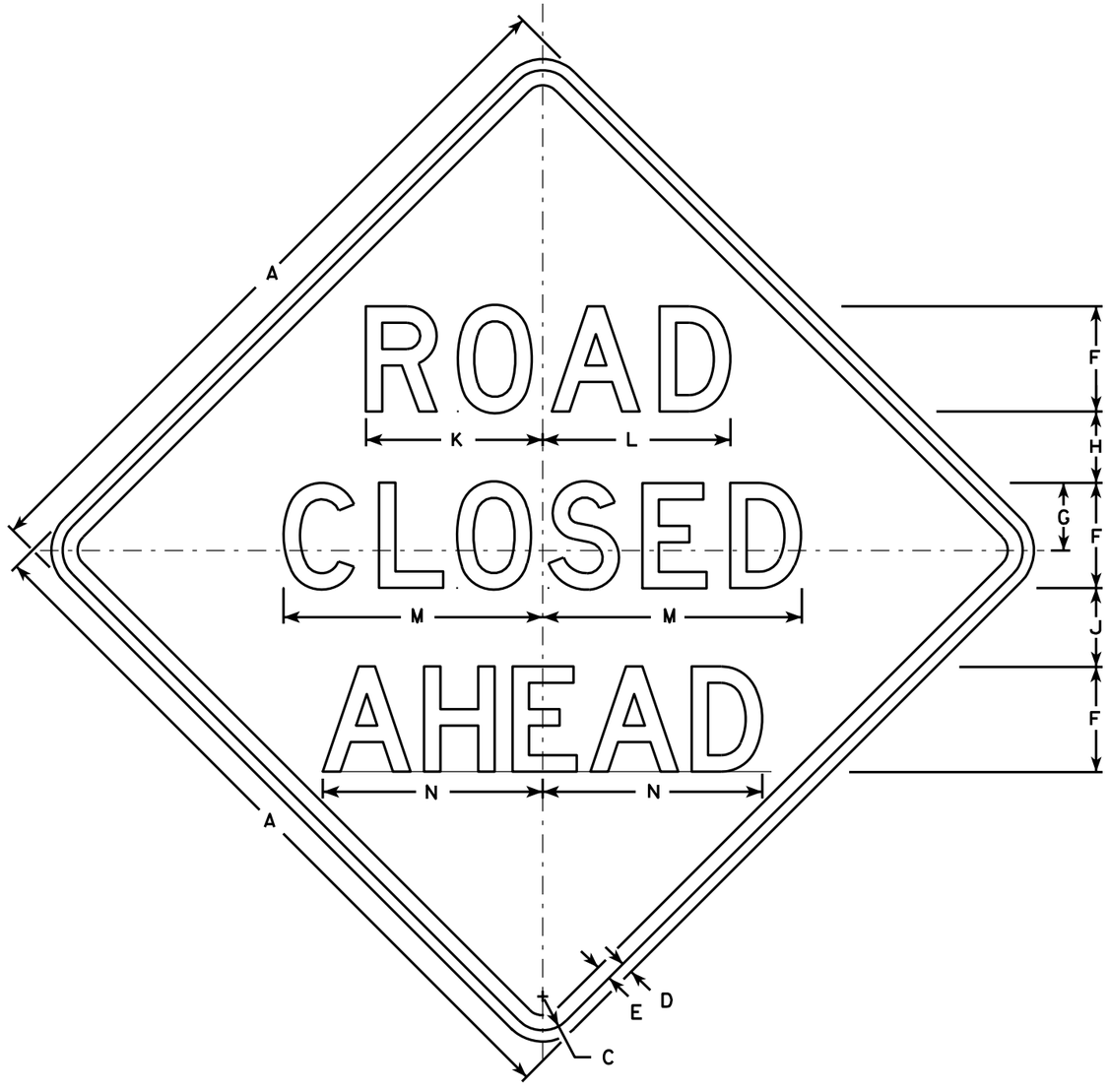
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

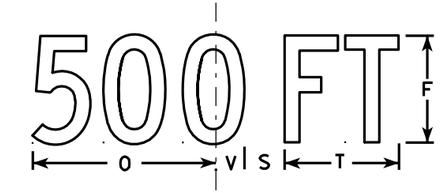
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/29/12 PLATE NO. W5-52.9

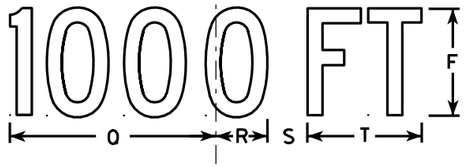
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 112 | E |
|---|---|---|---|---|---|



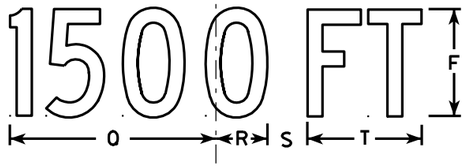

W20-3A



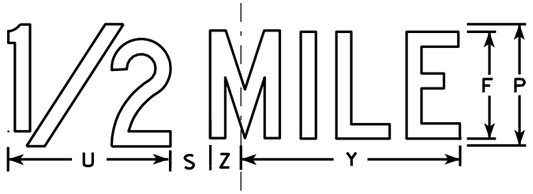

W20-3D



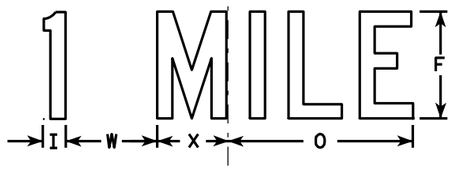

W20-3C




W20-3B




W20-3G




W20-3F

NOTES

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

| 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: 113 | E


7

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W203.DGN PLOT DATE : 18-MAR-2011 12:08 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 9.931739:1.000000
WISDOT/CADDS SHEET 42

DIVISION 1 - CTH O-CTH OO-PROPOSED

| STATION | REAL STATION | DISTANCE | AREA (SF) CUT | AREA (SF) FILL | VOLUME CUT CY | VOLUME FILL CY | CUMULATIVE VOLUME CUT 1.00 CY | CUMULATIVE VOLUME EXPANDED FILL 1.30 CY | CUMULATIVE VOLUME MASS ORDINATE CY |
|---|---|---|---|---|---|---|---|---|---|
| 505+41.952 | 50541.95 | 0.00 | 45.43 | 0 | 0 | 0 | 0 | 0 | 0 |
| 505+50 | 50550.00 | 8.05 | 45.11 | 0.51 | 13 | 0 | 13 | 0 | 13 |
| 506+00 | 50600.00 | 50.00 | 60.76 | 0 | 98 | 0 | 111 | 0 | 111 |
| 506+41.952 | 50641.95 | 41.95 | 91.17 | 1.36 | 128 | 1 | 229 | 1 | 228 |
| 506+45 | 50645.00 | 3.05 | 94.2 | 1.35 | 10 | 0 | 239 | 1 | 238 |
| 506+50 | 50650.00 | 5.00 | 97.92 | 1.37 | 18 | 0 | 257 | 1 | 256 |
| 506+55 | 50655.00 | 5.00 | 102.76 | 1.48 | 19 | 0 | 276 | 1 | 275 |
| 506+60 | 50660.00 | 5.00 | 109.76 | 1.55 | 20 | 0 | 296 | 1 | 295 |
| 506+65 | 50665.00 | 5.00 | 119.94 | 1.44 | 21 | 0 | 317 | 1 | 316 |
| 506+70 | 50670.00 | 5.00 | 129.02 | 1.44 | 23 | 0 | 340 | 1 | 339 |
| 506+75 | 50675.00 | 5.00 | 137.58 | 0.19 | 25 | 0 | 365 | 1 | 364 |
| 506+80 | 50680.00 | 5.00 | 142.69 | 0 | 26 | 0 | 391 | 1 | 390 |
| 506+85 | 50685.00 | 5.00 | 127.46 | 0 | 25 | 0 | 416 | 1 | 415 |
| 506+90 | 50690.00 | 5.00 | 110.39 | 0 | 22 | 0 | 438 | 1 | 437 |
| 506+95 | 50695.00 | 5.00 | 95.69 | 0 | 19 | 0 | 457 | 1 | 456 |
| 507+00 | 50700.00 | 5.00 | 79.05 | 0 | 16 | 0 | 473 | 1 | 472 |
| 507+05 | 50705.00 | 5.00 | 66.39 | 0 | 13 | 0 | 486 | 1 | 485 |
| 507+10 | 50710.00 | 5.00 | 62.35 | 0 | 12 | 0 | 498 | 1 | 497 |
| 507+15 | 50715.00 | 5.00 | 66.11 | 0 | 13 | 0 | 510 | 1 | 509 |
| 507+20 | 50720.00 | 5.00 | 67.83 | 0 | 12 | 0 | 522 | 1 | 521 |
| 507+25 | 50725.00 | 5.00 | 65.55 | 0 | 12 | 0 | 534 | 1 | 533 |
| 507+30 | 50730.00 | 5.00 | 56.63 | 0 | 11 | 0 | 545 | 1 | 544 |
| 507+35 | 50735.00 | 5.00 | 51.51 | 0.78 | 10 | 0 | 555 | 1 | 554 |
| 507+40 | 50740.00 | 5.00 | 48.72 | 2.37 | 9 | 0 | 564 | 1 | 563 |
| 507+45 | 50745.00 | 5.00 | 49.42 | 5.67 | 9 | 1 | 573 | 3 | 570 |
| 507+50 | 50750.00 | 5.00 | 48.9 | 25.01 | 9 | 3 | 582 | 7 | 576 |
| 507+55 | 50755.00 | 5.00 | 45.7 | 27.64 | 9 | 5 | 591 | 13 | 578 |
| 507+60 | 50760.00 | 5.00 | 45.92 | 26.3 | 8 | 5 | 599 | 20 | 580 |
| 507+65 | 50765.00 | 5.00 | 45.88 | 24.72 | 9 | 5 | 608 | 26 | 582 |
| 507+70 | 50770.00 | 5.00 | 45.03 | 24.09 | 8 | 5 | 616 | 33 | 584 |
| 507+75 | 50775.00 | 5.00 | 43.89 | 23.38 | 8 | 4 | 624 | 38 | 586 |
| 507+80 | 50780.00 | 5.00 | 40.59 | 22.58 | 8 | 4 | 632 | 43 | 589 |
| 507+85 | 50785.00 | 5.00 | 38.53 | 22.18 | 7 | 4 | 639 | 48 | 591 |
| 507+90 | 50790.00 | 5.00 | 36.69 | 22.96 | 7 | 4 | 646 | 53 | 593 |
| 507+90.138 | 50790.14 | 0.14 | 36.62 | 23.02 | 0 | 0 | 646 | 53 | 593 |
| 508+00 | 50800.00 | 9.86 | 36.38 | 14.45 | 13 | 7 | 659 | 62 | 597 |
| 508+50 | 50850.00 | 50.00 | 33.18 | 33.39 | 64 | 44 | 723 | 120 | 603 |
| 509+00 | 50900.00 | 50.00 | 38.41 | 26.86 | 66 | 56 | 789 | 192 | 597 |
| 509+50 | 50950.00 | 50.00 | 46.45 | 5.14 | 79 | 30 | 868 | 231 | 637 |
| 509+70.39 | 50970.39 | 20.39 | 46.45 | 5.14 | 35 | 4 | 903 | 237 | 666 |
| STRUCTURE B-52-15 | | | | | | | | | |
| 510+24.01 | 51024.01 | | 37 | 8.42 | | | | | |
| 510+50 | 51050.00 | 25.99 | 37 | 8.42 | 36 | 8 | 939 | 247 | 692 |
| 511+00 | 51100.00 | 50.00 | 29.07 | 76.9 | 61 | 79 | 1,000 | 350 | 650 |
| 511+50 | 51150.00 | 50.00 | 8.49 | 119.34 | 35 | 182 | 1,035 | 586 | 449 |

DIVISION 1 - CTH O-CTH OO-PROPOSED (CONT'D)

| STATION | REAL STATION | DISTANCE | AREA (SF) CUT | AREA (SF) FILL | VOLUME CUT CY | VOLUME FILL CY | CUMULATIVE VOLUME CUT 1.00 CY | CUMULATIVE VOLUME EXPANDED FILL 1.30 CY | CUMULATIVE VOLUME MASS ORDINATE CY |
|---|---|---|---|---|---|---|---|---|---|
| 512+00 | 51200.00 | 50.00 | 0 | 190.67 | 8 | 287 | 1,043 | 959 | 84 |
| 512+50 | 51250.00 | 50.00 | 0.03 | 191.48 | 0 | 354 | 1,043 | 1,420 | -377 |
| 513+00 | 51300.00 | 50.00 | 0 | 157.59 | 0 | 323 | 1,043 | 1,840 | -797 |
| 513+50 | 51350.00 | 50.00 | 0 | 150.08 | 0 | 285 | 1,043 | 2,210 | -1,167 |
| 514+00 | 51400.00 | 50.00 | 0.44 | 141.85 | 0 | 270 | 1,043 | 2,561 | -1,518 |
| 514+50 | 51450.00 | 50.00 | 1.62 | 133.39 | 2 | 255 | 1,045 | 2,893 | -1,848 |
| 515+00 | 51500.00 | 50.00 | 12.81 | 95.76 | 13 | 212 | 1,058 | 3,168 | -2,110 |
| 515+50 | 51550.00 | 50.00 | 10.1 | 78.17 | 21 | 161 | 1,079 | 3,377 | -2,298 |
| 516+00 | 51600.00 | 50.00 | 27.93 | 18.73 | 35 | 90 | 1,114 | 3,494 | -2,380 |
| 516+50 | 51650.00 | 50.00 | 117.39 | 2.52 | 135 | 20 | 1,249 | 3,520 | 2,271 |
| 517+00 | 51700.00 | 50.00 | 237.15 | 0 | 328 | 2 | 1,577 | 3,523 | -1,946 |
| 517+50 | 51750.00 | 50.00 | 317.38 | 0 | 513 | 0 | 2,090 | 3,523 | -1,433 |
| 518+00 | 51800.00 | 50.00 | 281.9 | 0 | 555 | 0 | 2,645 | 3,523 | -878 |
| 518+50 | 51850.00 | 50.00 | 239.33 | 0 | 483 | 0 | 3,128 | 3,523 | -395 |
| 519+00 | 51900.00 | 50.00 | 151.38 | 0 | 362 | 0 | 3,490 | 3,523 | 33 |
| 519+50 | 51950.00 | 50.00 | 100.97 | 0.04 | 234 | 0 | 3,724 | 3,523 | 201 |
| 520+00 | 52000.00 | 50.00 | 70.56 | 0.29 | 159 | 0 | 3,883 | 3,523 | 360 |
| 520+50 | 52050.00 | 50.00 | 55.19 | 0.34 | 116 | 1 | 3,999 | 3,524 | 475 |
| 521+00 | 52100.00 | 50.00 | 53.48 | 0.18 | 101 | 0 | 4,100 | 3,524 | 576 |
| 521+50 | 52150.00 | 50.00 | 53.23 | 0.77 | 99 | 1 | 4,199 | 3,526 | 673 |
| 522+00 | 52200.00 | 50.00 | 53.57 | 1.98 | 99 | 3 | 4,298 | 3,530 | 769 |
| 522+50 | 52250.00 | 50.00 | 52.51 | 2.02 | 98 | 4 | 4,396 | 3,535 | 861 |
| 523+00 | 52300.00 | 50.00 | 53.75 | 2.64 | 98 | 4 | 4,494 | 3,540 | 954 |
| 523+50 | 52350.00 | 50.00 | 67.72 | 4.86 | 112 | 7 | 4,606 | 3,549 | 1,057 |
| 524+00 | 52400.00 | 50.00 | 88.44 | 10.33 | 145 | 14 | 4,751 | 3,567 | 1,184 |
| 524+50 | 52450.00 | 50.00 | 43.69 | 25.46 | 122 | 33 | 4,873 | 3,610 | 1,263 |
| 525+00 | 52500.00 | 50.00 | 141.45 | 104.1 | 171 | 120 | 5,044 | 3,766 | 1,278 |
| 525+50 | 52550.00 | 50.00 | 52.03 | 79.84 | 179 | 170 | 5,223 | 3,987 | 1,236 |
| 526+00 | 52600.00 | 50.00 | 4.37 | 38.35 | 52 | 109 | 5,275 | 4,129 | 1,146 |
| 526+50 | 52650.00 | 50.00 | 9.29 | 63.81 | 13 | 95 | 5,288 | 4,252 | 1,036 |
| 527+00 | 52700.00 | 50.00 | 15.67 | 84.81 | 23 | 138 | 5,311 | 4,432 | 879 |
| 527+50 | 52750.00 | 50.00 | 8.45 | 121.03 | 22 | 191 | 5,333 | 4,680 | 653 |
| 528+00 | 52800.00 | 50.00 | 12.91 | 112.37 | 20 | 216 | 5,353 | 4,961 | 392 |
| 528+42.524 | 52842.52 | 42.52 | 32.78 | 28.24 | 36 | 111 | 5,389 | 5,105 | 284 |
| 528+45 | 52845.00 | 2.48 | 35.11 | 29.67 | 3 | 3 | 5,392 | 5,109 | 283 |
| 528+50 | 52850.00 | 5.00 | 43.58 | 33.93 | 7 | 6 | 5,399 | 5,117 | 282 |
| 528+55 | 52855.00 | 5.00 | 54.54 | 39.04 | 9 | 7 | 5,408 | 5,126 | 282 |
| 528+60 | 52860.00 | 5.00 | 63.12 | 44.94 | 11 | 8 | 5,419 | 5,136 | 283 |
| 528+65 | 52865.00 | 5.00 | 69.44 | 50.62 | 12 | 9 | 5,431 | 5,148 | 283 |
| 528+70 | 52870.00 | 5.00 | 50.15 | 54.96 | 11 | 10 | 5,442 | 5,161 | 281 |
| 528+75 | 52875.00 | 5.00 | 16.67 | 57.72 | 6 | 10 | 5,448 | 5,174 | 274 |
| 528+80 | 52880.00 | 5.00 | 3.22 | 59.3 | 2 | 11 | 5,450 | 5,188 | 262 |
| 528+85 | 52885.00 | 5.00 | 0.27 | 60.18 | 0 | 11 | 5,450 | 5,203 | 247 |
| 528+90 | 52890.00 | 5.00 | 0 | 60.93 | 0 | 11 | 5,450 | 5,217 | 233 |
| 528+95 | 52895.00 | 5.00 | 0 | 59.92 | 0 | 11 | 5,450 | 5,231 | 219 |
| 529+00 | 52900.00 | 5.00 | 0 | 57.57 | 0 | 11 | 5,450 | 5,246 | 204 |
| 529+05 | 52905.00 | 5.00 | 0 | 59.38 | 0 | 11 | 5,450 | 5,260 | 190 |
| 529+10 | 52910.00 | 5.00 | 0 | 59.34 | 0 | 11 | 5,450 | 5,274 | 176 |
| 529+15 | 52915.00 | 5.00 | 1.01 | 58.95 | 0 | 11 | 5,450 | 5,288 | 162 |

DIVISION 1 - CTH O-CTH OO-PROPOSED (CONT'D)

| STATION | REAL STATION | DISTANCE | AREA (SF) CUT | AREA (SF) FILL | VOLUME CUT CY | VOLUME FILL CY | CUMULATIVE VOLUME CUT 1.00 CY | CUMULATIVE VOLUME EXPANDED FILL 1.30 CY | CUMULATIVE VOLUME MASS ORDINATE CY |
|---|---|---|---|---|---|---|---|---|---|
| 529+20 | 52920.00 | 5.00 | 2.98 | 58.26 | 0 | 11 | 5,450 | 5,303 | 147 |
| 529+25 | 52925.00 | 5.00 | 7.23 | 57.07 | 1 | 11 | 5,451 | 5,317 | 134 |
| 529+30 | 52930.00 | 5.00 | 13.52 | 55.61 | 2 | 10 | 5,453 | 5,330 | 123 |
| 529+35 | 52935.00 | 5.00 | 20.87 | 53.86 | 3 | 10 | 5,456 | 5,343 | 113 |
| 529+40 | 52940.00 | 5.00 | 29.94 | 51.8 | 5 | 10 | 5,461 | 5,356 | 105 |
| 529+45 | 52945.00 | 5.00 | 40.79 | 49.43 | 7 | 9 | 5,468 | 5,368 | 100 |
| 529+50 | 52950.00 | 5.00 | 58.01 | 46.71 | 9 | 9 | 5,477 | 5,379 | 98 |
| 529+55 | 52955.00 | 5.00 | 84.35 | 43.65 | 13 | 8 | 5,490 | 5,390 | 100 |
| 529+60 | 52960.00 | 5.00 | 97.98 | 40.36 | 17 | 8 | 5,507 | 5,400 | 107 |
| 529+65 | 52965.00 | 5.00 | 99.24 | 37.21 | 18 | 7 | 5,525 | 5,409 | 116 |
| 529+70 | 52970.00 | 5.00 | 101.63 | 33.83 | 19 | 7 | 5,544 | 5,418 | 126 |
| 529+75 | 52975.00 | 5.00 | 109.08 | 31.82 | 20 | 6 | 5,564 | 5,426 | 138 |
| 529+80 | 52980.00 | 5.00 | 135.99 | 33.16 | 23 | 6 | 5,587 | 5,434 | 153 |
| 529+80.624 | 52980.62 | 0.62 | 139.04 | 33.33 | 3 | 1 | 5,590 | 5,435 | 155 |
| 530+00 | 53000.00 | 19.38 | 169.43 | 38.61 | 111 | 26 | 5,701 | 5,469 | 232 |
| 530+50 | 53050.00 | 50.00 | 132.74 | 61.8 | 280 | 93 | 5,981 | 5,590 | 391 |
| 531+00 | 53100.00 | 50.00 | 73.77 | 13.4 | 191 | 70 | 6,172 | 5,681 | 491 |
| 531+50 | 53150.00 | 50.00 | 8.98 | 85.13 | 77 | 91 | 6,249 | 5,799 | 450 |
| 532+00 | 53200.00 | 50.00 | 0 | 182.94 | 8 | 248 | 6,257 | 6,122 | 135 |
| 532+50 | 53250.00 | 50.00 | 145.69 | 244.38 | 135 | 396 | 6,392 | 6,637 | -245 |
| 533+00 | 53300.00 | 50.00 | 125.38 | 241.89 | 251 | 450 | 6,643 | 7,222 | -579 |
| 533+50 | 53350.00 | 50.00 | 79.97 | 291.01 | 190 | 493 | 6,833 | 7,862 | -1,029 |
| 534+00 | 53400.00 | 50.00 | 44.5 | 281.8 | 115 | 530 | 6,948 | 8,551 | -1,603 |
| 534+50 | 53450.00 | 50.00 | 12.95 | 221.23 | 53 | 466 | 7,001 | 9,157 | -2,156 |
| 535+00 | 53500.00 | 50.00 | 1.72 | 223.82 | 14 | 412 | 7,015 | 9,693 | -2,678 |
| 535+50 | 53550.00 | 50.00 | 1.58 | 221.53 | 3 | 412 | 7,018 | 10,228 | -3,210 |
| 536+00 | 53600.00 | 50.00 | 0.79 | 211.8 | 2 | 401 | 7,020 | 10,750 | -3,730 |
| 536+50 | 53650.00 | 50.00 | 1.39 | 213.27 | 2 | 394 | 7,022 | 11,262 | -4,240 |
| 537+00 | 53700.00 | 50.00 | 0.68 | 217 | 2 | 398 | 7,024 | 11,779 | -4,755 |
| 537+50 | 53750.00 | 50.00 | 1.93 | 248.21 | 2 | 431 | 7,026 | 12,340 | -5,314 |
| 538+00 | 53800.00 | 50.00 | 0 | 262.27 | 2 | 473 | 7,028 | 12,955 | -5,927 |
| 538+50 | 53850.00 | 50.00 | 0.87 | 300.49 | 1 | 521 | 7,029 | 13,632 | -6,603 |
| 539+00 | 53900.00 | 50.00 | 0 | 298.69 | 1 | 555 | 7,030 | 14,353 | -7,323 |
| 539+50 | 53950.00 | 50.00 | 0 | 336 | 0 | 588 | 7,030 | 15,118 | -8,088 |
| 540+00 | 54000.00 | 50.00 | 7.32 | 241.85 | 7 | 535 | 7,037 | 15,813 | -8,776 |
| 540+50 | 54050.00 | 50.00 | 45.49 | 119.94 | 49 | 335 | 7,086 | 16,249 | -9,163 |
| 541+00 | 54100.00 | 50.00 | 69.55 | 27.41 | 107 | 136 | 7,193 | 16,426 | -9,233 |
| 541+50 | 54150.00 | 50.00 | 156.06 | 4.54 | 209 | 30 | 7,402 | 16,465 | -9,063 |
| 542+00 | 54200.00 | 50.00 | 235.12 | 0 | 362 | 4 | 7,764 | 16,470 | 8,706 |
| 542+50 | 54250.00 | 50.00 | 273.81 | 0 | 471 | 0 | 8,235 | 16,470 | -8,235 |
| 543+00 | 54300.00 | 50.00 | 305.47 | 0 | 536 | 0 | 8,771 | 16,470 | -7,699 |
| 543+50 | 54350.00 | 50.00 | 297.56 | 0 | 558 | 0 | 9,329 | 16,470 | -7,141 |
| 544+00 | 54400.00 | 50.00 | 266.38 | 0 | 522 | 0 | 9,851 | 16,470 | 6,619 |
| 544+50 | 54450.00 | 50.00 | 244.93 | 0.86 | 473 | 1 | 10,324 | 16,471 | -6,147 |
| 545+00 | 54500.00 | 50.00 | 242.63 | 0 | 451 | 1 | 10,775 | 16,472 | -5,697 |
| 545+50 | 54550.00 | 50.00 | 256.31 | 0 | 462 | 0 | 11,237 | 16,472 | -5,235 |
| 546+00 | 54600.00 | 50.00 | 220.72 | 0 | 442 | 0 | 11,679 | 16,472 | -4,793 |
| 546+50 | 54650.00 | 50.00 | 172.53 | 1.71 | 364 | 2 | 12,043 | 16,475 | -4,432 |
| 547+00 | 54700.00 | 50.00 | 168.05 | 0 | 315 | 2 | 12,358 | 16,478 | -4,120 |
| 547+50 | 54750.00 | 50.00 | 175.19 | 0.12 | 318 | 0 | 12,676 | 16,478 | -3,802 |

DIVISION 1 - CTH O-CTH OO-PROPOSED (CONT'D)

| STATION | REAL STATION | DISTANCE | AREA (SF) CUT | AREA (SF) FILL | VOLUME CUT CY | VOLUME FILL CY | CUMULATIVE VOLUME CUT 1.00 CY | CUMULATIVE VOLUME EXPANDED FILL 1.30 CY | CUMULATIVE VOLUME MASS ORDINATE CY |
|---|---|---|---|---|---|---|---|---|---|
| 548+00 | 54800.00 | 50.00 | 187.42 | 0 | 336 | 0 | 13,012 | 16,478 | -3,466 |
| 548+50 | 54850.00 | 50.00 | 187.64 | 0.52 | 347 | 0 | 13,359 | 16,478 | -3,119 |
| 549+00 | 54900.00 | 50.00 | 182.88 | 0 | 343 | 0 | 13,702 | 16,478 | -2,776 |
| 549+50 | 54950.00 | 50.00 | 208.03 | 0 | 362 | 0 | 14,064 | 16,478 | -2,414 |
| 549+56.302 | 54956.30 | 6.30 | 207.4 | 0 | 48 | 0 | 14,112 | 16,478 | -2,366 |
| 549+60 | 54960.00 | 3.70 | 205.79 | 0 | 28 | 0 | 14,140 | 16,478 | -2,338 |
| 549+65 | 54965.00 | 5.00 | 202.92 | 0 | 38 | 0 | 14,178 | 16,478 | -2,300 |
| 549+70 | 54970.00 | 5.00 | 199.6 | 0.36 | 37 | 0 | 14,215 | 16,478 | -2,263 |
| 549+75 | 54975.00 | 5.00 | 196.14 | 0.88 | 37 | 0 | 14,252 | 16,478 | -2,226 |
| 549+80 | 54980.00 | 5.00 | 193.02 | 1.19 | 36 | 0 | 14,288 | 16,478 | 2,190 |
| 549+85 | 54985.00 | 5.00 | 188.53 | 1.5 | 35 | 0 | 14,323 | 16,478 | -2,155 |
| 549+90 | 54990.00 | 5.00 | 179.33 | 1.84 | 34 | 0 | 14,357 | 16,478 | -2,121 |
| 549+95 | 54995.00 | 5.00 | 164.55 | 2.2 | 32 | 0 | 14,389 | 16,478 | -2,089 |
| 550+00 | 55000.00 | 5.00 | 143.68 | 2.59 | 29 | 0 | 14,418 | 16,478 | -2,060 |
| 550+05 | 55005.00 | 5.00 | 113.65 | 2.42 | 24 | 0 | 14,442 | 16,478 | 2,036 |
| 550+10 | 55010.00 | 5.00 | 124.33 | 1.85 | 22 | 0 | 14,464 | 16,478 | -2,014 |
| 550+15 | 55015.00 | 5.00 | 136.65 | 1.18 | 24 | 0 | 14,488 | 16,478 | -1,990 |
| 550+20 | 55020.00 | 5.00 | 119.1 | 0.54 | 24 | 0 | 14,512 | 16,478 | -1,966 |
| 550+25 | 55025.00 | 5.00 | 119.52 | 0.07 | 22 | 0 | 14,534 | 16,478 | -1,944 |
| 550+30 | 55030.00 | 5.00 | 118.86 | 0 | 22 | 0 | 14,556 | 16,478 | -1,922 |
| 550+35 | 55035.00 | 5.00 | 104.09 | 0.13 | 21 | 0 | 14,577 | 16,478 | -1,901 |
| 550+40 | 55040.00 | 5.00 | 99.88 | 0.42 | 19 | 0 | 14,596 | 16,478 | -1,882 |
| 550+45 | 55045.00 | 5.00 | 101.48 | 0 | 19 | 0 | 14,615 | 16,478 | -1,863 |
| 550+50 | 55050.00 | 5.00 | 91.77 | 0 | 18 | 0 | 14,633 | 16,478 | 1,845 |
| 550+55 | 55055.00 | 5.00 | 80.47 | 0 | 16 | 0 | 14,649 | 16,478 | -1,829 |
| 550+60 | 55060.00 | 5.00 | 69.48 | 0 | 14 | 0 | 14,663 | 16,478 | -1,815 |
| 550+65 | 55065.00 | 5.00 | 68.08 | 0 | 13 | 0 | 14,676 | 16,478 | -1,802 |
| 550+70 | 55070.00 | 5.00 | 71.91 | 0 | 13 | 0 | 14,689 | 16,478 | -1,789 |
| 550+75 | 55075.00 | 5.00 | 75.67 | 0 | 14 | 0 | 14,703 | 16,478 | 1,775 |
| 550+80 | 55080.00 | 5.00 | 78.59 | 0 | 14 | 0 | 14,717 | 16,478 | -1,761 |
| 550+85 | 55085.00 | 5.00 | 69.07 | 3.29 | 14 | 0 | 14,731 | 16,478 | -1,747 |
| 550+90 | 55090.00 | 5.00 | 64.99 | 4.51 | 12 | 1 | 14,743 | 16,479 | -1,736 |
| 550+95 | 55095.00 | 5.00 | 67.27 | 2.86 | 12 | 1 | 14,755 | 16,480 | -1,725 |
| 551+00 | 55100.00 | 5.00 | 76.55 | 2.73 | 13 | 1 | 14,768 | 16,481 | -1,713 |
| 551+05 | 55105.00 | 5.00 | 90.57 | 2.26 | 15 | 0 | 14,783 | 16,481 | -1,698 |
| 551+10 | 55110.00 | 5.00 | 119.11 | 1.93 | 19 | 0 | 14,802 | 16,481 | -1,679 |
| 551+15 | 55115.00 | 5.00 | 147.82 | 1.6 | 25 | 0 | 14,827 | 16,481 | -1,654 |
| 551+20 | 55120.00 | 5.00 | 154.84 | 1.34 | 28 | 0 | 14,855 | 16,481 | -1,626 |
| 551+25 | 55125.00 | 5.00 | 141.85 | 1.12 | 27 | 0 | 14,882 | 16,481 | -1,599 |
| 551+25.842 | 55125.84 | 0.84 | 138.88 | 1.08 | 4 | 0 | 14,886 | 16,481 | -1,595 |
| 551+50 | 55150.00 | 24.16 | 130.74 | 0.39 | 121 | 1 | 15,007 | 16,483 | -1,476 |
| 552+00 | 55200.00 | 50.00 | 127.54 | 0.44 | 239 | 1 | 15,246 | 16,484 | -1,238 |

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PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | EARTHWORK DATA | SHEET 115 | E

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D\54190671\SHEETSPLAN\090101_EW.DWG
LAYOUT NAME - 02

PLOT DATE : 11/16/2023 5:17 PM PLOT BY : ANNIE JEROME PLOT NAME : PLOT SCALE : 1" = 1'

WISDOT/CADDS SHEET 49

DIVISION 1 - CTH O SOUTH

| STATION | REAL STATION | DISTANCE | AREA (SF) | | VOLUME | | CUMULATIVE VOLUME | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | CUT | FILL | CUT | FILL | CUT 1.00 | EXPANDED FILL 1.30 | MASS ORDINATE |
| | | | | | CY | CY | CY | CY | CY |
| 14+50.30 | 1450.30 | 0.00 | 45 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15+00 | 1500.00 | 49.70 | 45.5 | 0.51 | 83 | 0 | 83 | 0 | 83 |
| 15+50 | 1550.00 | 50.00 | 55.56 | 0.02 | 94 | 0 | 177 | 0 | 177 |
| 16+00 | 1600.00 | 50.00 | 80.01 | 0 | 126 | 0 | 303 | 0 | 303 |
| 16+00.294 | 1600.29 | 0.29 | 73.27 | 6.95 | 1 | 0 | 304 | 0 | 304 |
| 16+05 | 1605.00 | 4.71 | 71.7 | 8 | 13 | 1 | 317 | 1 | 316 |
| 16+10 | 1610.00 | 5.00 | 73.02 | 9.34 | 13 | 2 | 330 | 4 | 326 |
| 16+15 | 1615.00 | 5.00 | 49.16 | 12.12 | 11 | 2 | 341 | 7 | 335 |
| 16+20 | 1620.00 | 5.00 | 49.45 | 13.15 | 9 | 2 | 350 | 9 | 341 |
| 16+25 | 1625.00 | 5.00 | 54.35 | 14.59 | 10 | 3 | 360 | 13 | 347 |
| 16+30 | 1630.00 | 5.00 | 61.07 | 13.62 | 11 | 3 | 371 | 17 | 354 |
| 16+35 | 1635.00 | 5.00 | 61.28 | 0.82 | 11 | 1 | 382 | 18 | 364 |
| 16+40 | 1640.00 | 5.00 | 54.36 | 0.07 | 11 | 0 | 393 | 18 | 375 |
| 16+45 | 1645.00 | 5.00 | 47.11 | 0 | 9 | 0 | 402 | 18 | 384 |
| 16+50 | 1650.00 | 5.00 | 36.9 | 0 | 8 | 0 | 410 | 18 | 392 |
| 16+55 | 1655.00 | 5.00 | 22.84 | 0 | 6 | 0 | 416 | 18 | 398 |
| 16+60 | 1660.00 | 5.00 | 5.16 | 0 | 3 | 0 | 419 | 18 | 401 |
| 16+61.483 | 1661.48 | 1.48 | 181.5 | 89.66 | 5 | 2 | 424 | 21 | 403 |

DIVISION 1 - SANTA KLAUS LANE

| STATION | AREA (SF) | | VOLUME | | CUMULATIVE VOLUME | | |
|---|---|---|---|---|---|---|---|
| | CUT | FILL | CUT | FILL | CUT 1.00 | EXPANDED FILL 1.30 | MASS ORDINATE |
| | | | CY | CY | CY | CY | CY |
| 20+18.001 | 277.33 | 0.00 | 0 | 0 | 0 | 0 | 0 |
| 20+20 | 13.62 | 0.00 | 11 | 0 | 11 | 0 | 11 |
| 20+25 | 44.78 | 0.00 | 5 | 0 | 16 | 0 | 16 |
| 20+30 | 87.98 | 0.00 | 12 | 0 | 28 | 0 | 28 |
| 20+35 | 138.77 | 0.00 | 21 | 0 | 49 | 0 | 49 |
| 20+40 | 131.40 | 0.00 | 25 | 0 | 74 | 0 | 74 |
| 20+45 | 98.03 | 0.00 | 21 | 0 | 95 | 0 | 95 |
| 20+50 | 69.80 | 0.00 | 16 | 0 | 111 | 0 | 111 |
| 20+53.271 | 65.37 | 0.00 | 8 | 0 | 119 | 0 | 119 |
| 20+90.503 | 28.45 | 0.20 | 65 | 0 | 184 | 0 | 184 |

DIVISION 1 - HENRY CLARK LANE

| STATION | AREA (SF) | | VOLUME | | CUMULATIVE VOLUME | | |
|---|---|---|---|---|---|---|---|
| | CUT | FILL | CUT | FILL | CUT 1.00 | EXPANDED FILL 1.30 | MASS ORDINATE |
| | | | CY | CY | CY | CY | CY |
| 30+18 | 110.06 | 82.53 | 0 | 0 | 0 | 0 | 0 |
| 30+20 | 0.00 | 2.22 | 4 | 3 | 4 | 4 | 0 |
| 30+25 | 0.07 | 3.47 | 0 | 1 | 4 | 5 | -1 |
| 30+30 | 3.64 | 1.68 | 0 | 0 | 4 | 5 | -1 |
| 30+35 | 10.17 | 0.00 | 1 | 0 | 5 | 5 | 0 |
| 30+40 | 18.20 | 0.00 | 3 | 0 | 8 | 5 | 3 |
| 30+45 | 36.07 | 0.00 | 5 | 0 | 13 | 5 | 8 |
| 30+50 | 68.00 | 0.00 | 10 | 0 | 23 | 5 | 18 |
| 30+55 | 76.98 | 0.00 | 13 | 0 | 36 | 5 | 31 |
| 30+60 | 79.57 | 0.21 | 14 | 0 | 50 | 5 | 45 |
| 30+65 | 88.05 | 0.85 | 16 | 0 | 66 | 5 | 61 |
| 30+67.09 | 93.15 | 1.03 | 7 | 0 | 73 | 5 | 68 |
| 31+00 | 202.48 | 0.65 | 180 | 1 | 253 | 7 | 247 |
| 31+50 | 213.71 | 25.07 | 385 | 24 | 638 | 38 | 600 |
| 31+90 | 34.37 | 0.00 | 184 | 19 | 822 | 62 | 760 |

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PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | EARTHWORK DATA | SHEET 116 | E

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D\54190671\SHEETSPLAN\090101_EW.DWG
LAYOUT NAME - 03

PLOT DATE : 11/16/2023 5:17 PM PLOT BY : ANNIE JEROME PLOT NAME : PLOT SCALE : 1" = 1'

WISDOT/CADDS SHEET 49

DIVISION 1 - BOVEE LANE

| STATION | AREA (SF) | | VOLUME | | CUMULATIVE VOLUME | | |
|---|---|---|---|---|---|---|---|
| | CUT | FILL | CUT | FILL | CUT 1.00 | EXPANDED FILL 1.30 | MASS ORDINATE |
| | | | CY | CY | CY | CY | CY |
| 38+79.241 | 20.97 | 0.02 | 0 | 0 | 0 | 0 | 0 |
| 39+00 | 298.31 | 1.45 | 123 | 1 | 123 | 1 | 122 |
| 39+50 | 248.59 | 1.78 | 506 | 3 | 629 | 5 | 624 |
| 39+62.242 | 167.89 | 3.95 | 94 | 1 | 723 | 7 | 717 |
| 39+65 | 136.08 | 4.56 | 16 | 0 | 739 | 7 | 733 |
| 39+70 | 89.57 | 6.17 | 21 | 1 | 760 | 8 | 752 |
| 39+75 | 53.28 | 0.00 | 13 | 1 | 773 | 9 | 764 |
| 39+80 | 18.22 | 0.00 | 7 | 0 | 780 | 9 | 771 |
| 39+83.752 | 0.10 | 0.00 | 1 | 0 | 781 | 9 | 772 |

DIVISION 1 - CARDINAL CREST ROAD

| STATION | AREA (SF) | | VOLUME | | CUMULATIVE VOLUME | | |
|---|---|---|---|---|---|---|---|
| | CUT | FILL | CUT | FILL | CUT 1.00 | EXPANDED FILL 1.30 | MASS ORDINATE |
| | | | CY | CY | CY | CY | CY |
| 50+18.20 | 0.00 | 0.00 | 0 | 0 | 0 | 0 | 0 |
| 50+20 | 7.97 | 0.00 | 0 | 0 | 0 | 0 | 0 |
| 50+25 | 29.89 | 0.00 | 4 | 0 | 4 | 0 | 4 |
| 50+30 | 51.42 | 0.00 | 8 | 0 | 12 | 0 | 12 |
| 50+35 | 71.00 | 0.00 | 11 | 0 | 23 | 0 | 23 |
| 50+40 | 77.84 | 0.00 | 14 | 0 | 37 | 0 | 37 |
| 50+45 | 71.45 | 0.18 | 14 | 0 | 51 | 0 | 51 |
| 50+50 | 61.56 | 7.47 | 12 | 1 | 63 | 1 | 62 |
| 50+55 | 77.25 | 0.75 | 13 | 1 | 76 | 3 | 73 |
| 50+60 | 100.39 | 0.00 | 16 | 0 | 92 | 3 | 89 |
| 50+65 | 115.71 | 0.00 | 20 | 0 | 112 | 3 | 109 |
| 50+70 | 104.04 | 0.00 | 20 | 0 | 132 | 3 | 129 |
| 50+75 | 96.31 | 0.00 | 19 | 0 | 151 | 3 | 148 |
| 50+80 | 101.66 | 0.00 | 18 | 0 | 169 | 3 | 166 |
| 50+84.222 | 110.24 | 0.00 | 17 | 0 | 186 | 3 | 183 |
| 51+00 | 216.81 | 0.00 | 96 | 0 | 282 | 3 | 279 |
| 51+50 | 257.68 | 0.00 | 439 | 0 | 721 | 3 | 718 |
| 52+00 | 203.95 | 0.00 | 427 | 0 | 1,148 | 3 | 1,145 |
| 52+50 | 133.79 | 0.00 | 313 | 0 | 1,461 | 3 | 1,458 |
| 53+00 | 63.31 | 0.00 | 183 | 0 | 1,644 | 3 | 1,641 |

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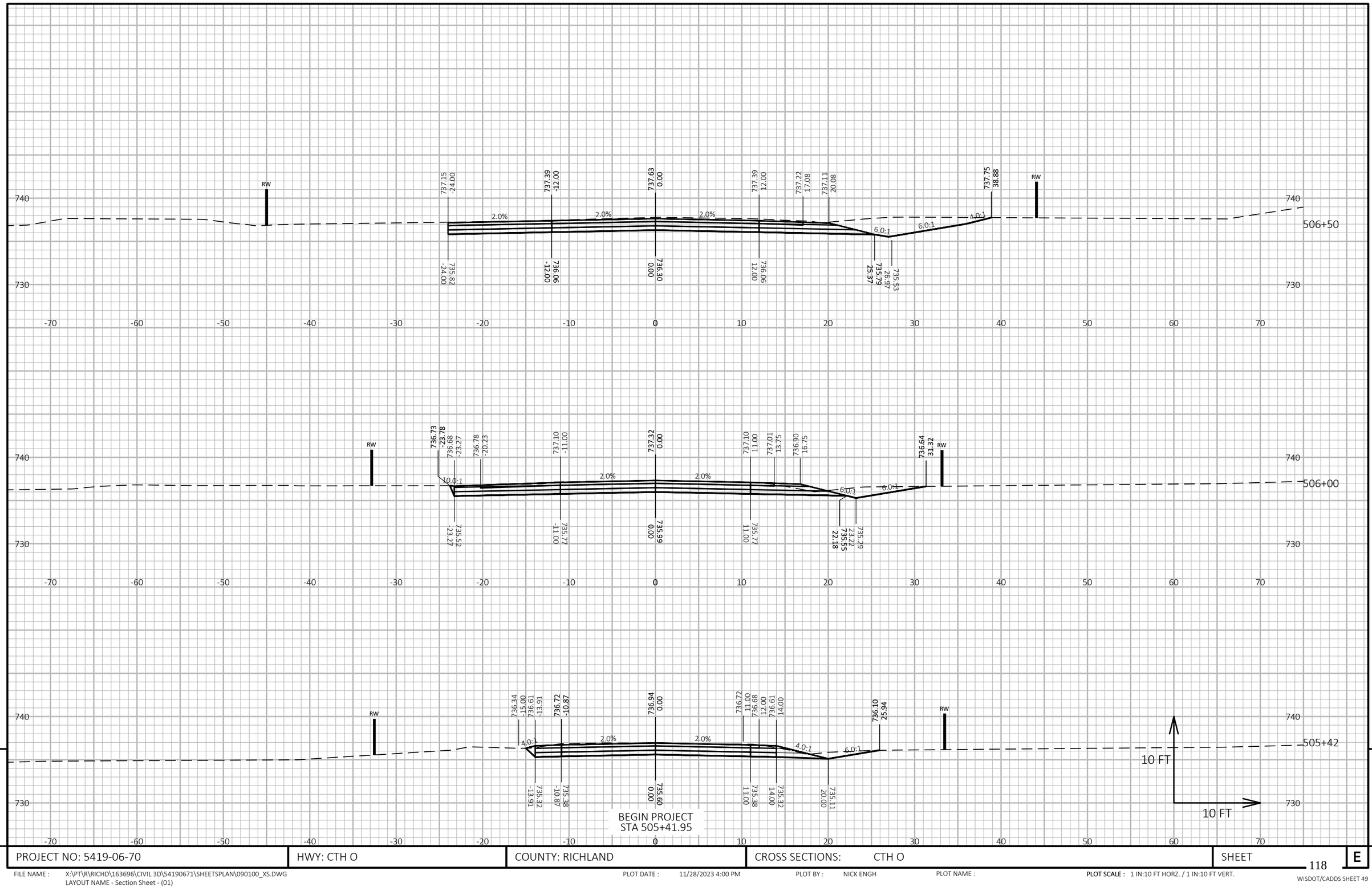
9

PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | EARTHWORK DATA | SHEET 117 | E

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D\54190671\SHEETSPLAN\090101_EW.DWG
LAYOUT NAME - 04

PLOT DATE : 11/16/2023 5:17 PM PLOT BY : ANNIE JEROME PLOT NAME : PLOT SCALE : 1" = 1'

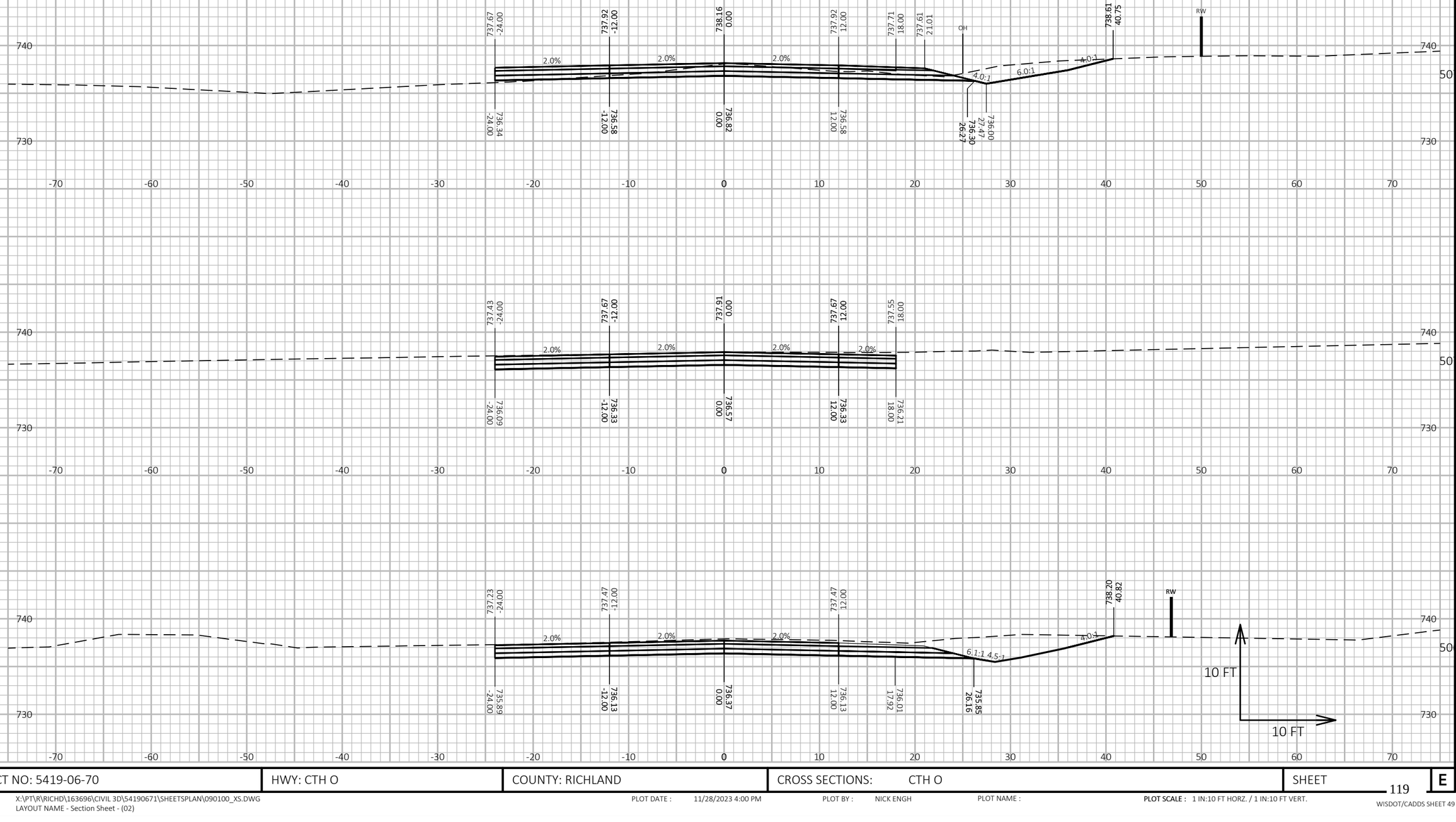
WISDOT/CADDS SHEET 49




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| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 118 | E |
|---|---|---|---|---|---|



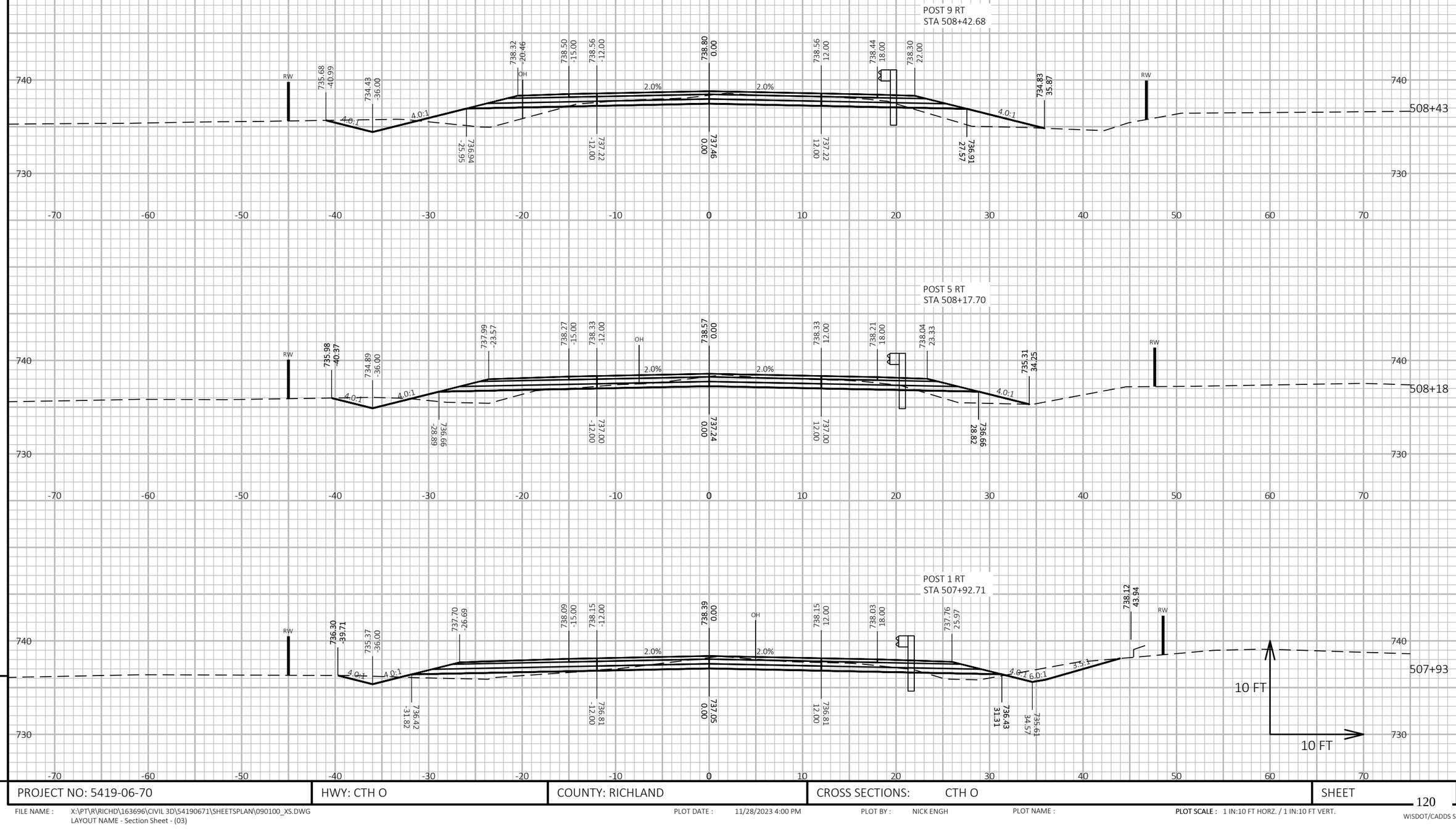

| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET | E |
|---|---|---|---|---|---|



FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D\54190671\SHEETSPLAN\090100_XS.DWG
LAYOUT NAME - Section Sheet - (02)

PLOT DATE : 11/28/2023 4:00 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49




9

9

| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 120 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D\54190671\SHEETSPLAN\090100_XS.DWG
LAYOUT NAME - Section Sheet - (03)

PLOT DATE : 11/28/2023 4:00 PM

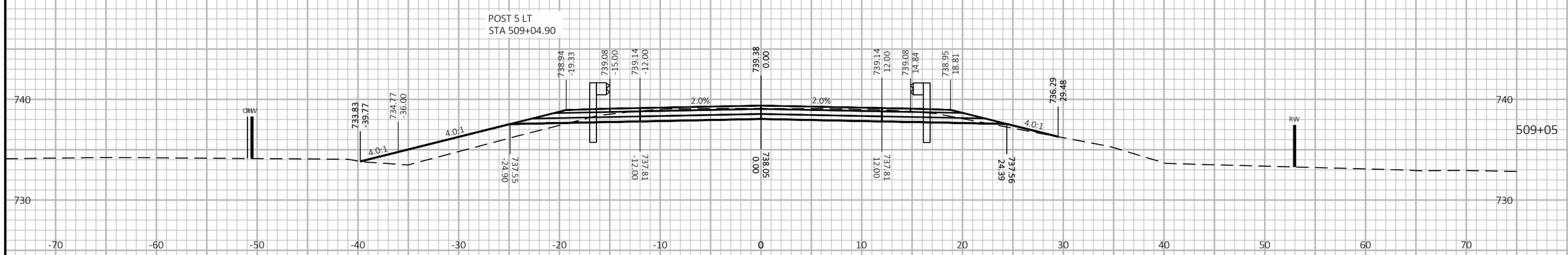
PLOT BY : NICK ENGH

PLOT NAME :

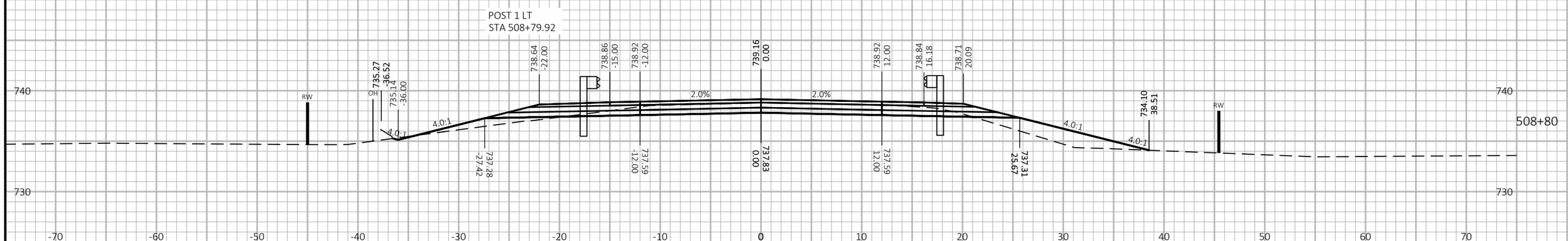
**PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

POST 5 LT
STA 509+04.90




POST 1 LT
STA 508+79.92







9

9

| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET | E |
|---|---|---|---|---|---|

121

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D\54190671\SHEETSPLAN\090100_XS.DWG
LAYOUT NAME - Section Sheet - (04)

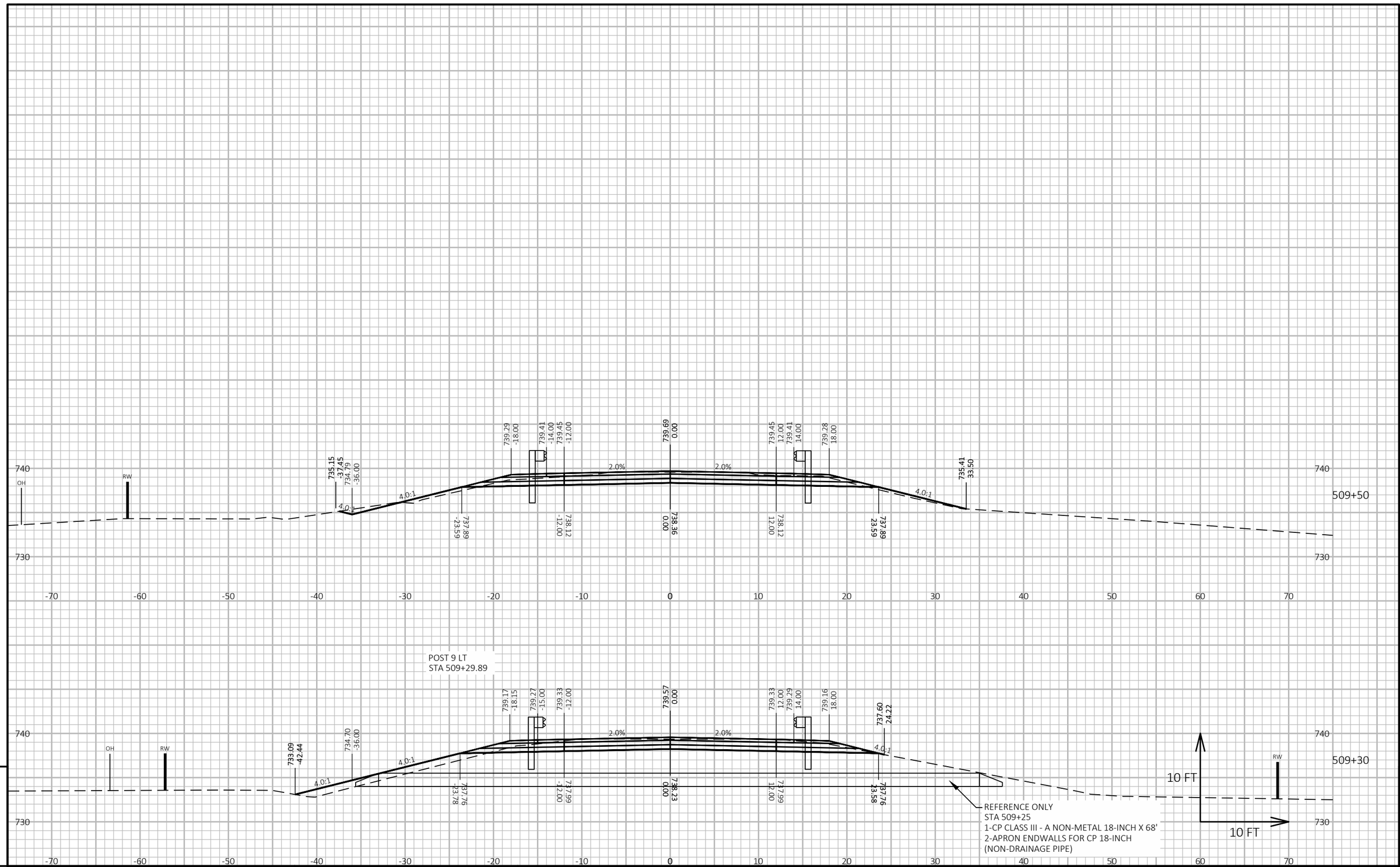
PLOT DATE : 11/28/2023 4:00 PM

PLOT BY : NICK ENGH

PLOT NAME :

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

WISDOT/CADDS SHEET 49




9

9

| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET | E |
|---|---|---|---|---|---|



FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D\54190671\SHEETSPLAN\090100_XS.DWG
LAYOUT NAME - Section Sheet - (05)

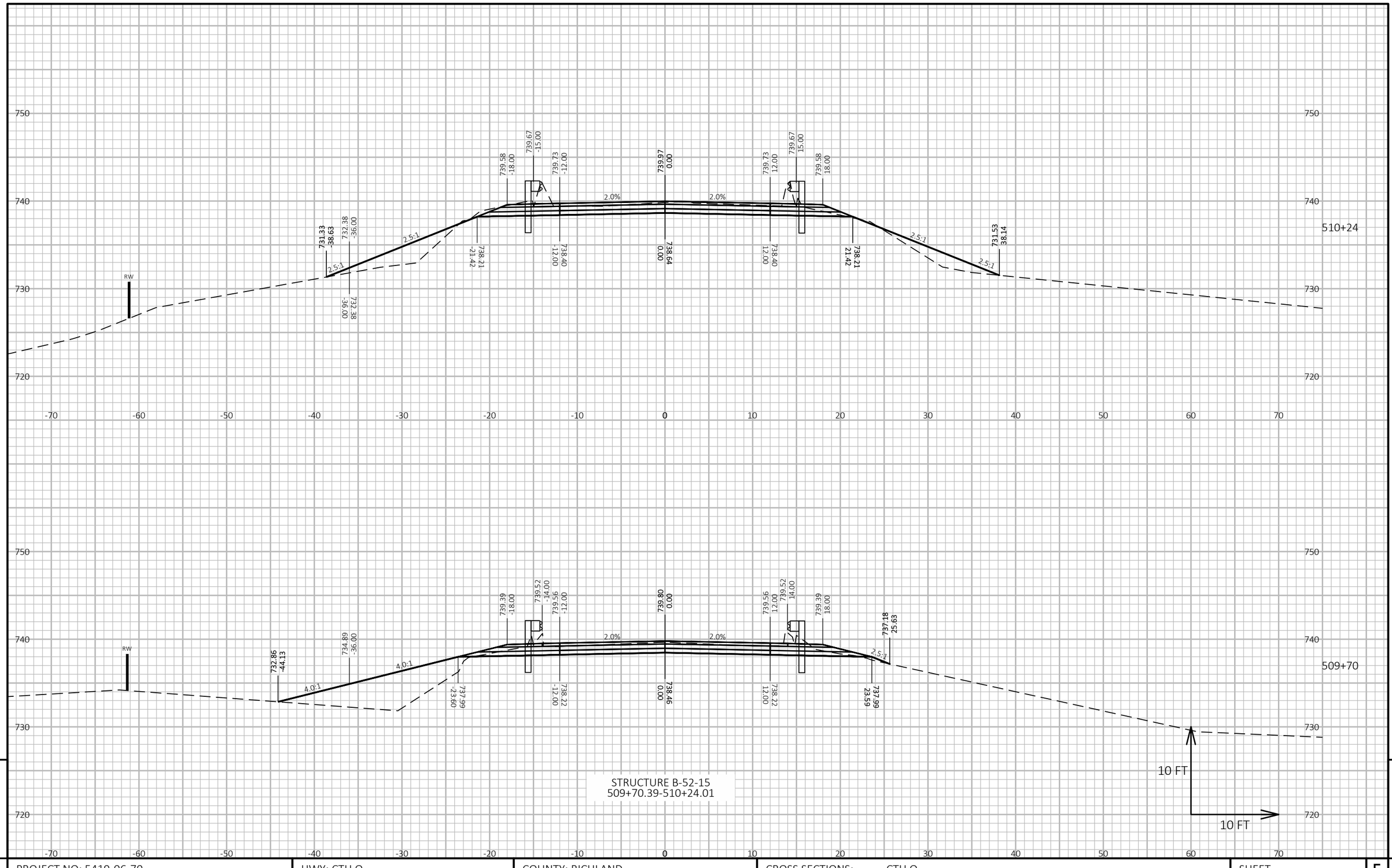
PLOT DATE : 11/28/2023 4:00 PM

PLOT BY : NICK ENGH

PLOT NAME :

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

WISDOT/CADDS SHEET 49




9

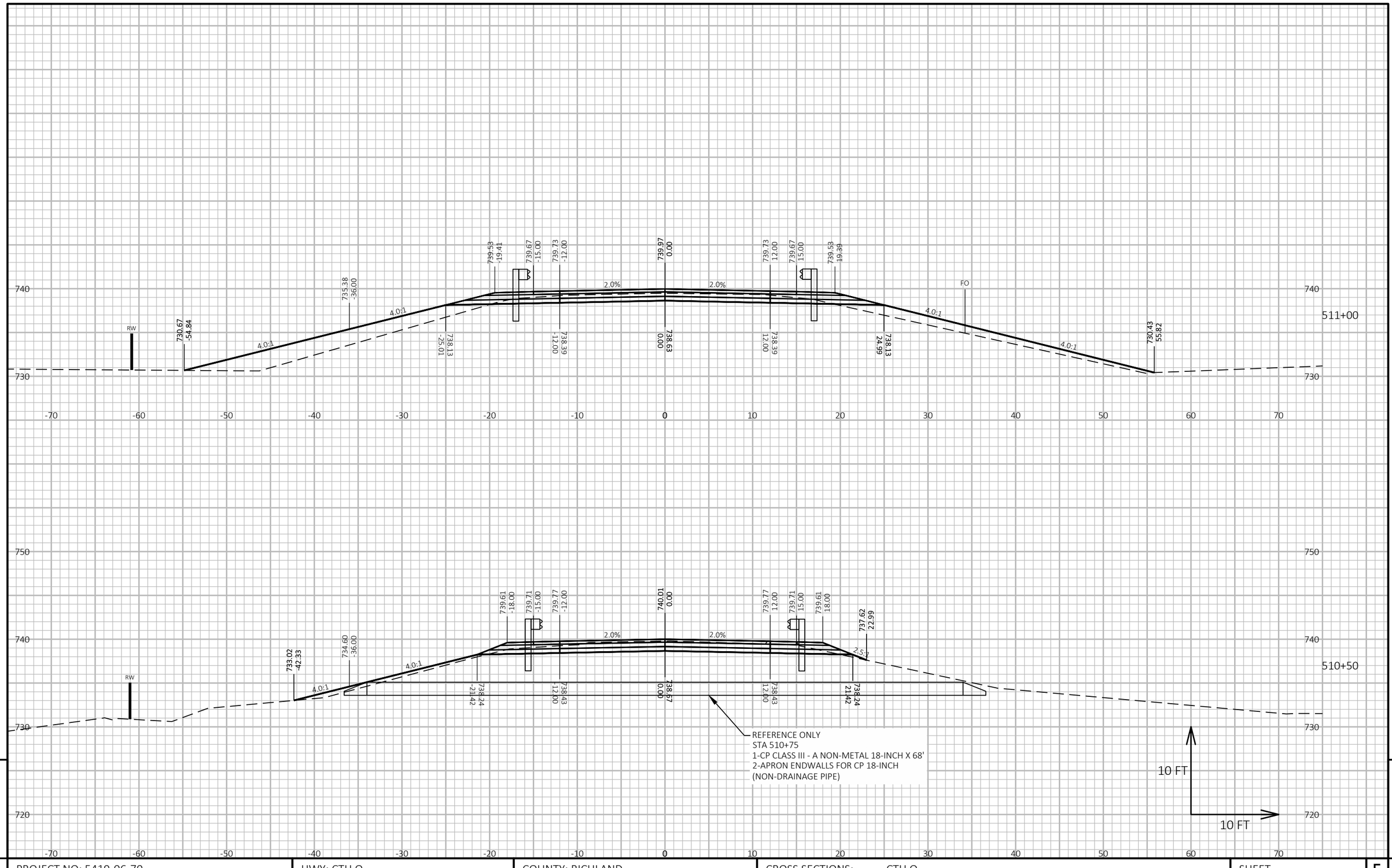
9

| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 123 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D\54190671\SHEETSPLAN\090100_XS.DWG
LAYOUT NAME - Section Sheet - (06)

PLOT DATE : 11/28/2023 4:00 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



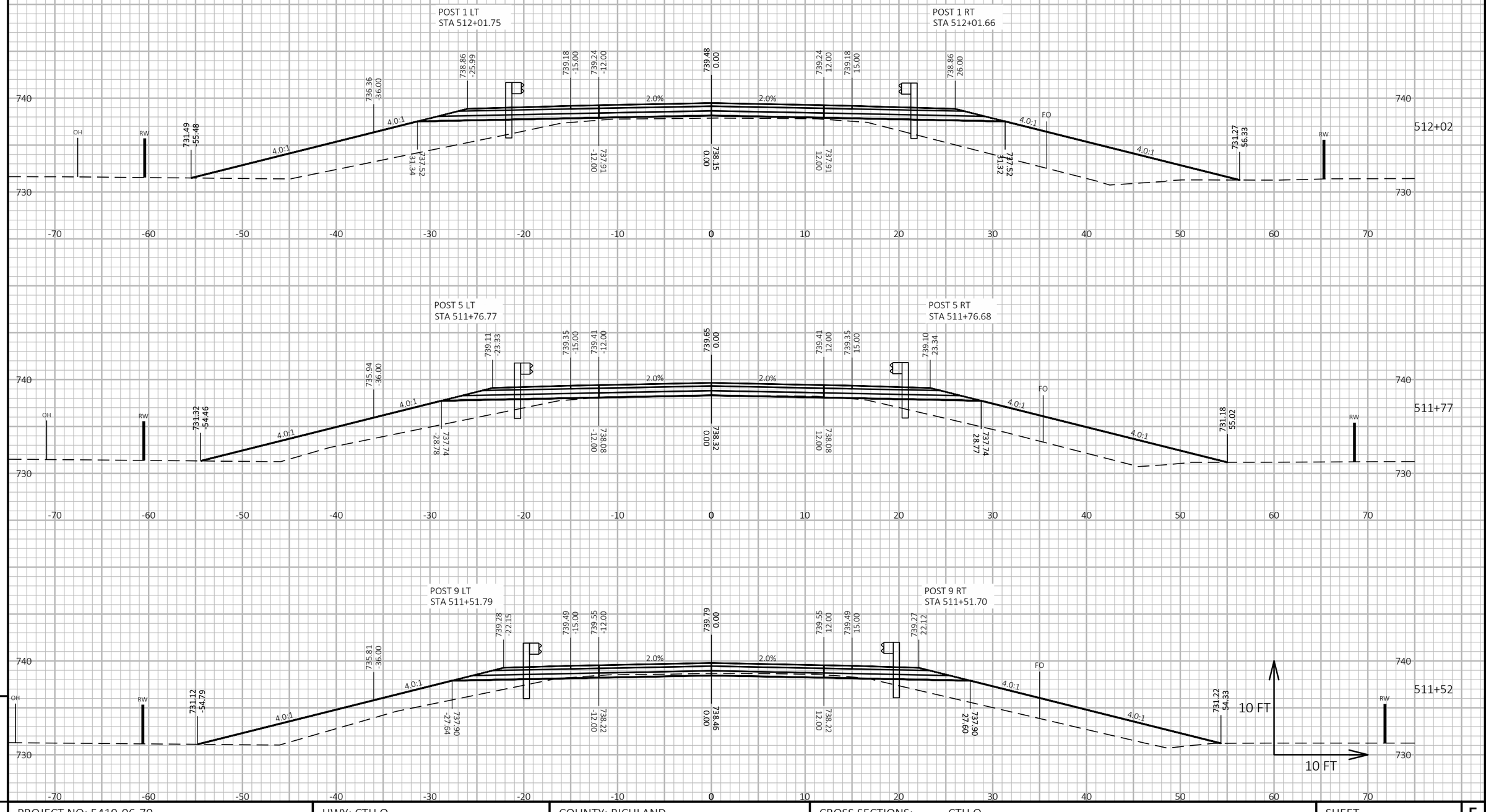

9

9

| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 124 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D\54190671\SHEETSPLAN\090100_XS.DWG
LAYOUT NAME - Section Sheet - (07)

PLOT DATE : 11/28/2023 4:00 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.




9

9

| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET | E |
|---|---|---|---|---|---|

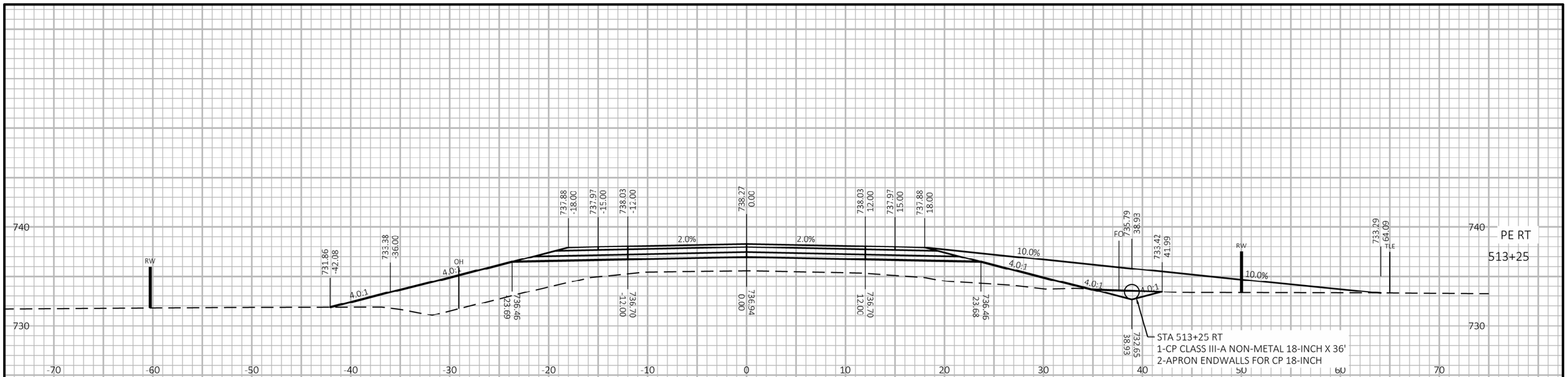
125

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D\54190671\SHEETSPLAN\090100_XS.DWG
LAYOUT NAME - Section Sheet - (08)

PLOT DATE : 11/28/2023 4:00 PM PLOT BY : NICK ENGH PLOT NAME :

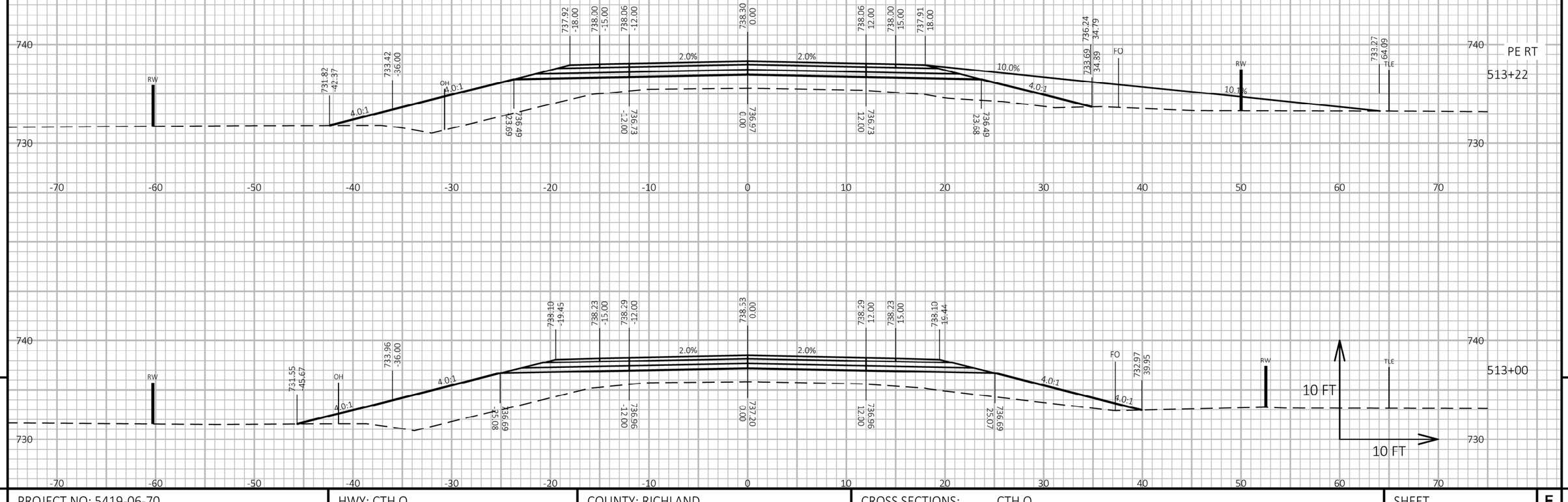
**PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49




STA 513+21.75
END SHOULDER TAPER LT

STA 513+21.66
END SHOULDER TAPER RT







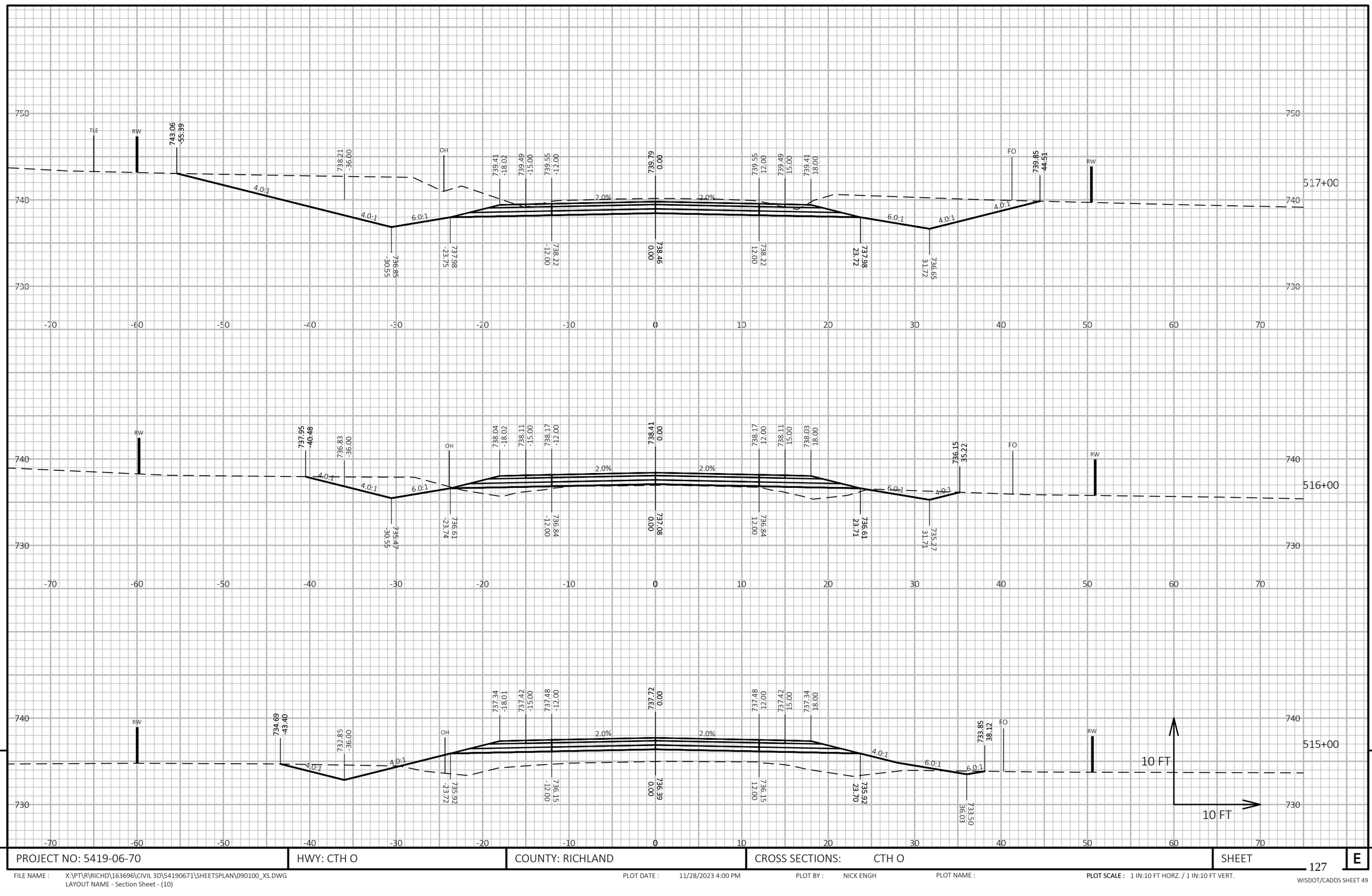
9

9

| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D\5419067 1\SHEETSPLAN\090100_XS.DWG
LAYOUT NAME - Section Sheet - (09)

PLOT DATE : 11/30/2023 9:07 AM PLOT BY : NICK ENGH PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

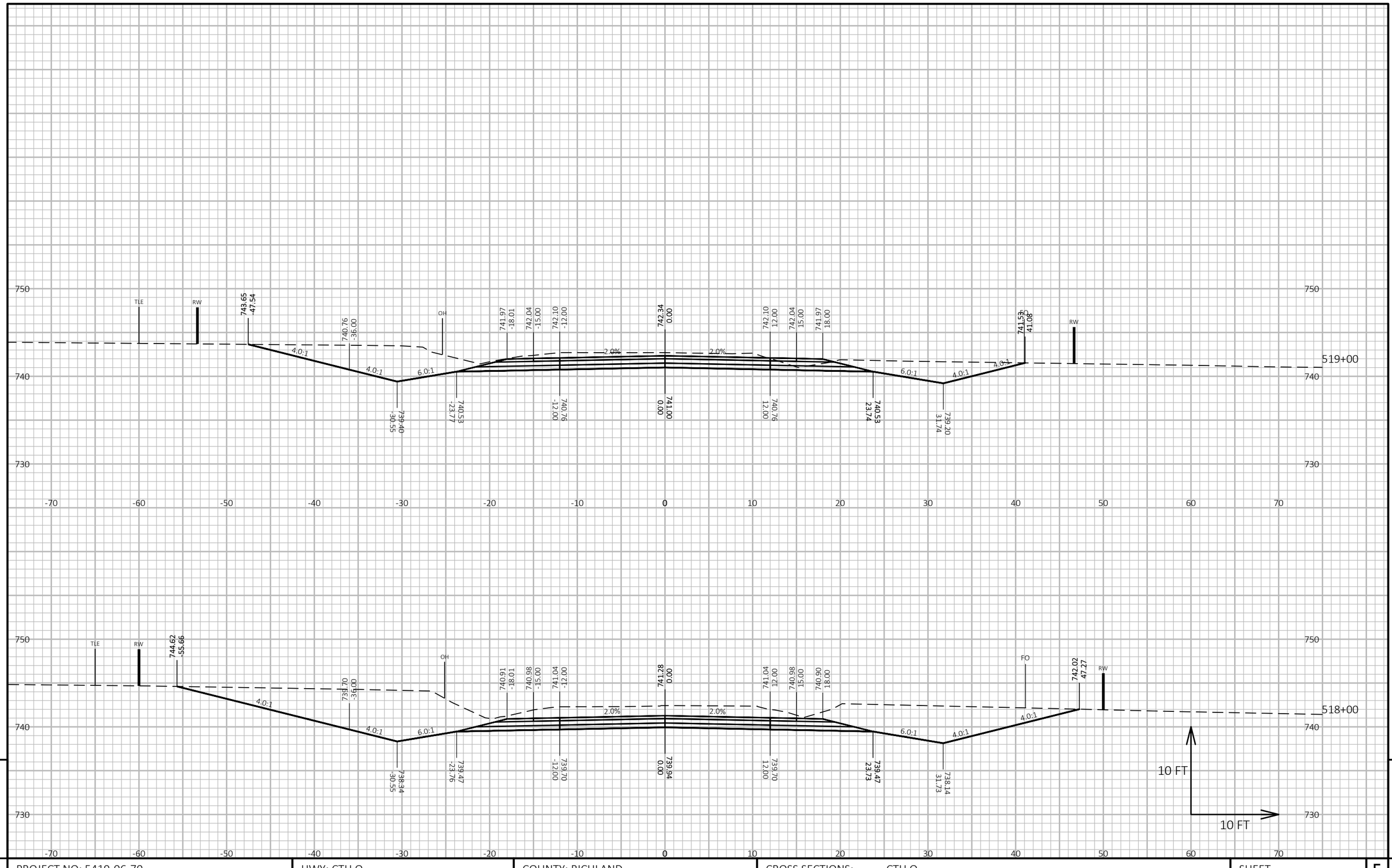



| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 127 E |
|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D\54190671\SHEETSPLAN\090100_XS.DWG
LAYOUT NAME - Section Sheet - (10)

PLOT DATE : 11/28/2023 4:00 PM PLOT BY : NICK ENGH PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

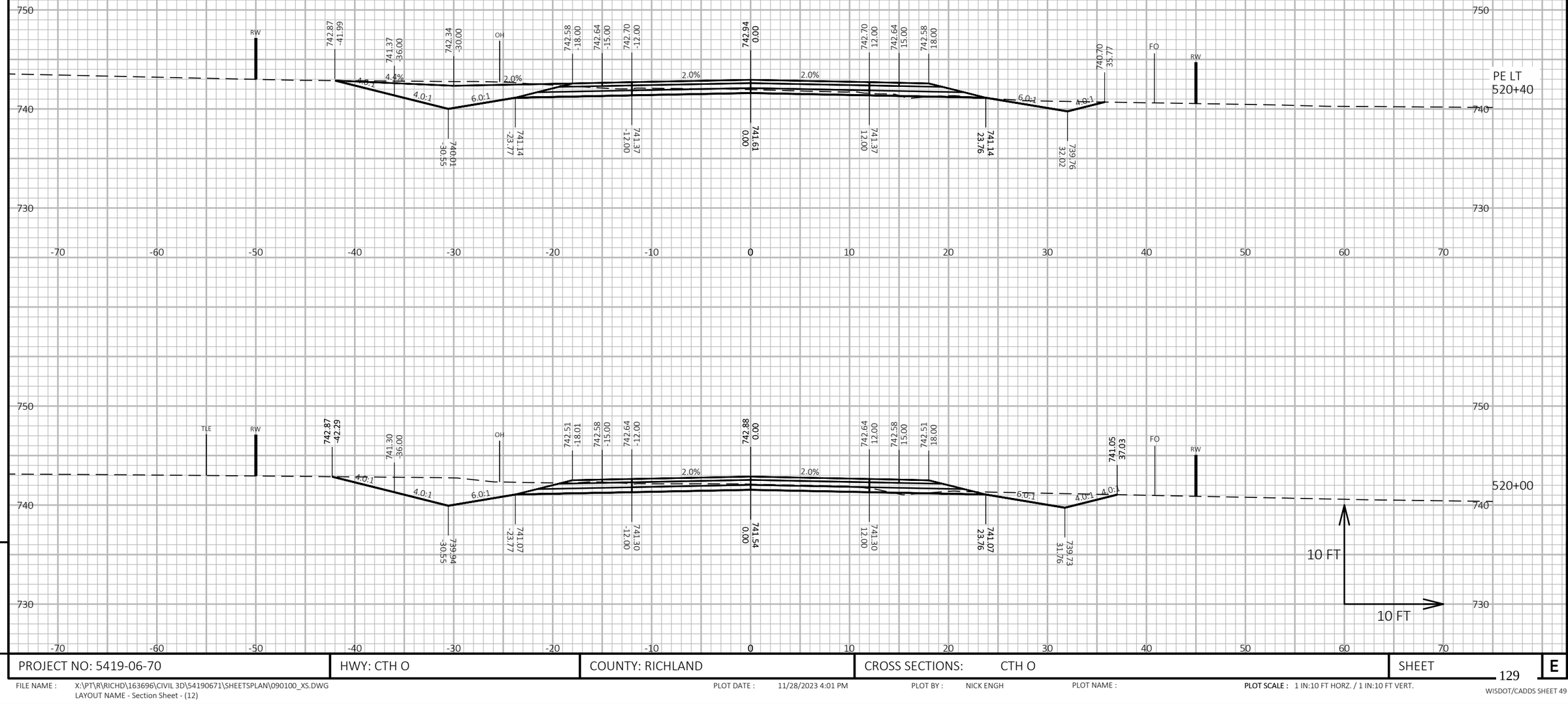



| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET | |
|---|---|---|---|---|---|
| | | | | 128 | E |

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D\54190671\SHEETSPLAN\090100_XS.DWG
LAYOUT NAME - Section Sheet - (11)

PLOT DATE : 11/28/2023 4:00 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49




9

9

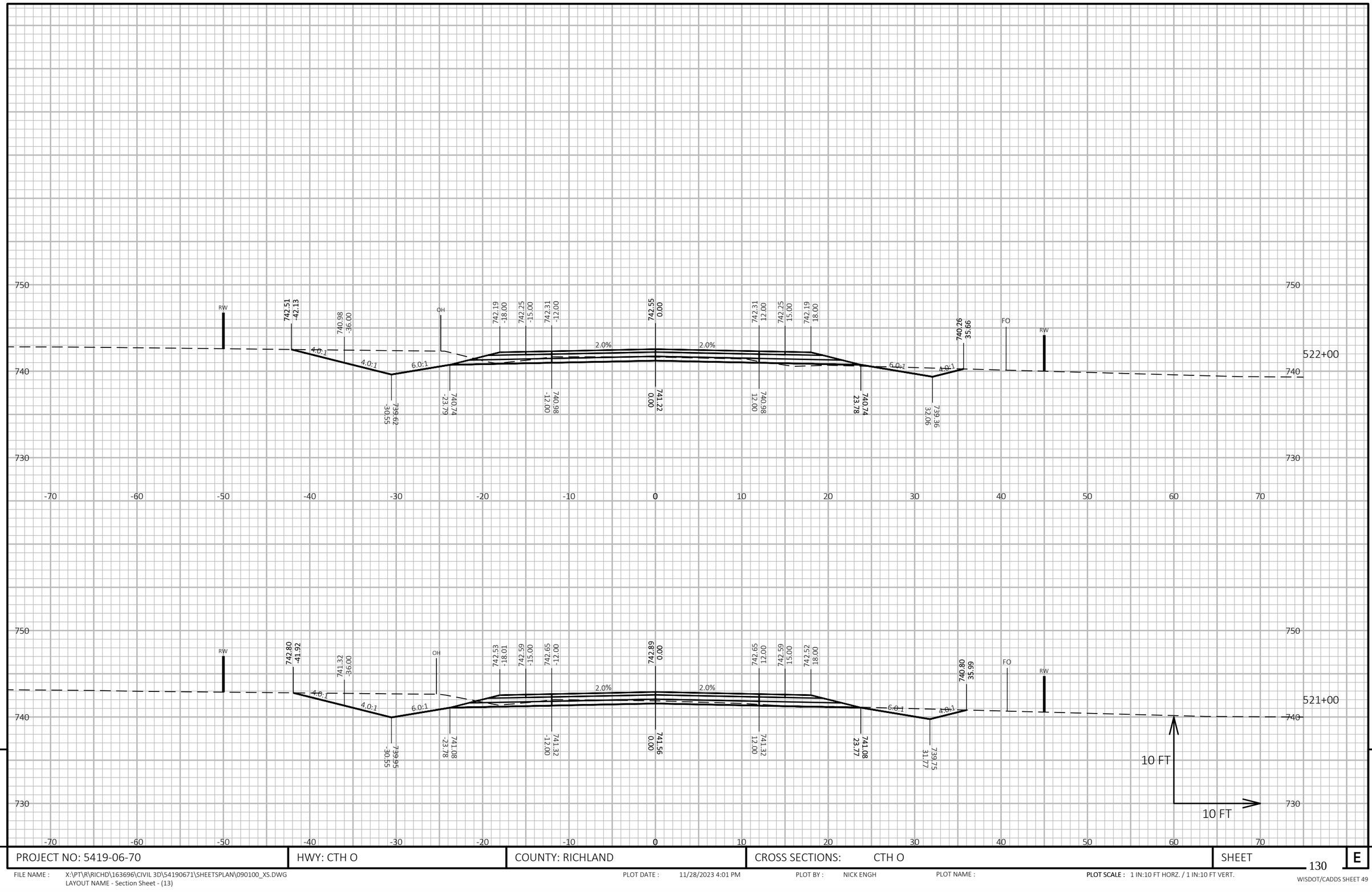
| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET | E |
|---|---|---|---|---|---|

129

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D\54190671\SHEETSPLAN\090100_XS.DWG
LAYOUT NAME - Section Sheet - (12)

PLOT DATE : 11/28/2023 4:01 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

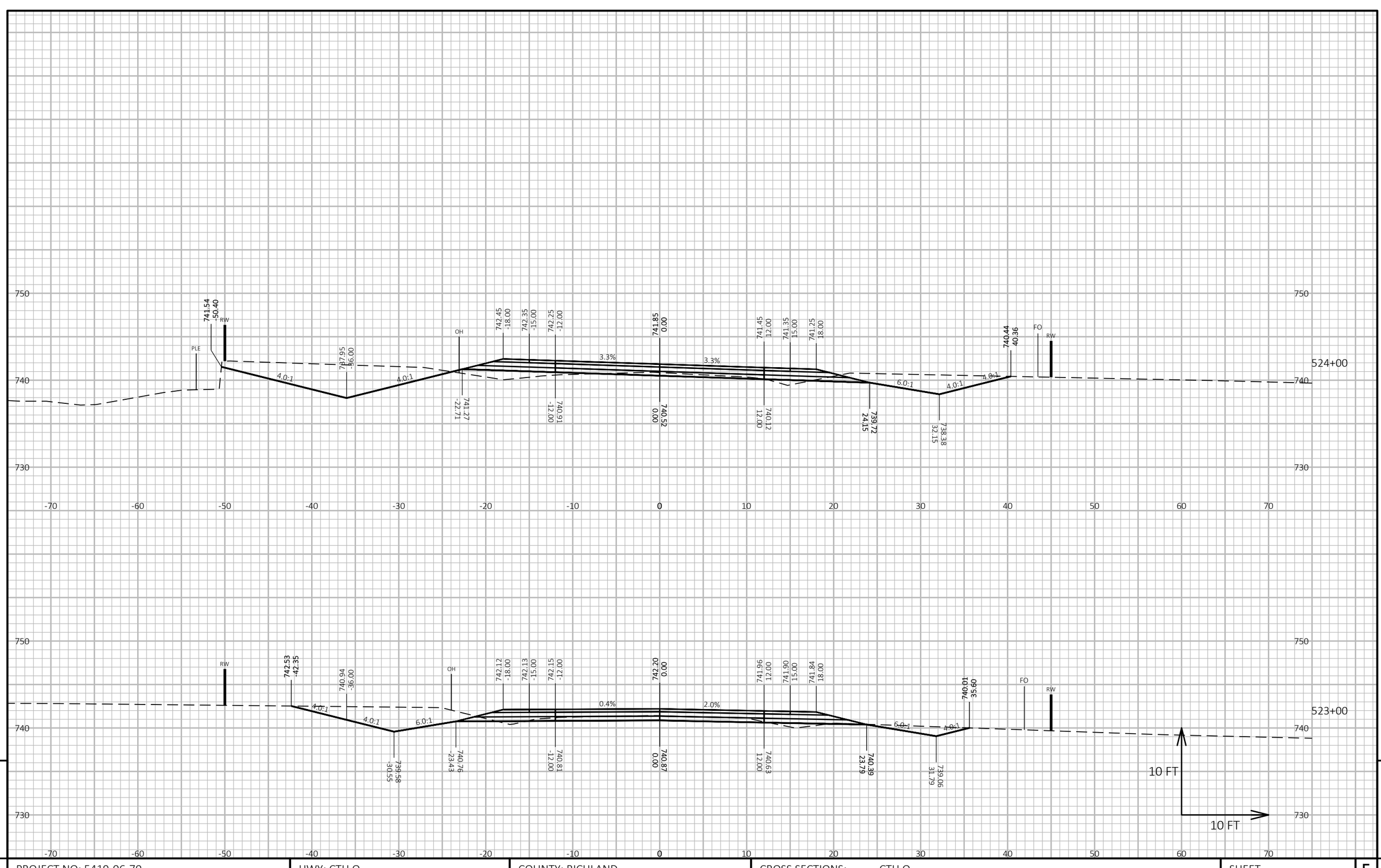



| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 130 E |
|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D\54190671\SHEETSPLAN\090100_XS.DWG
LAYOUT NAME - Section Sheet - (13)

PLOT DATE : 11/28/2023 4:01 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49




9

9

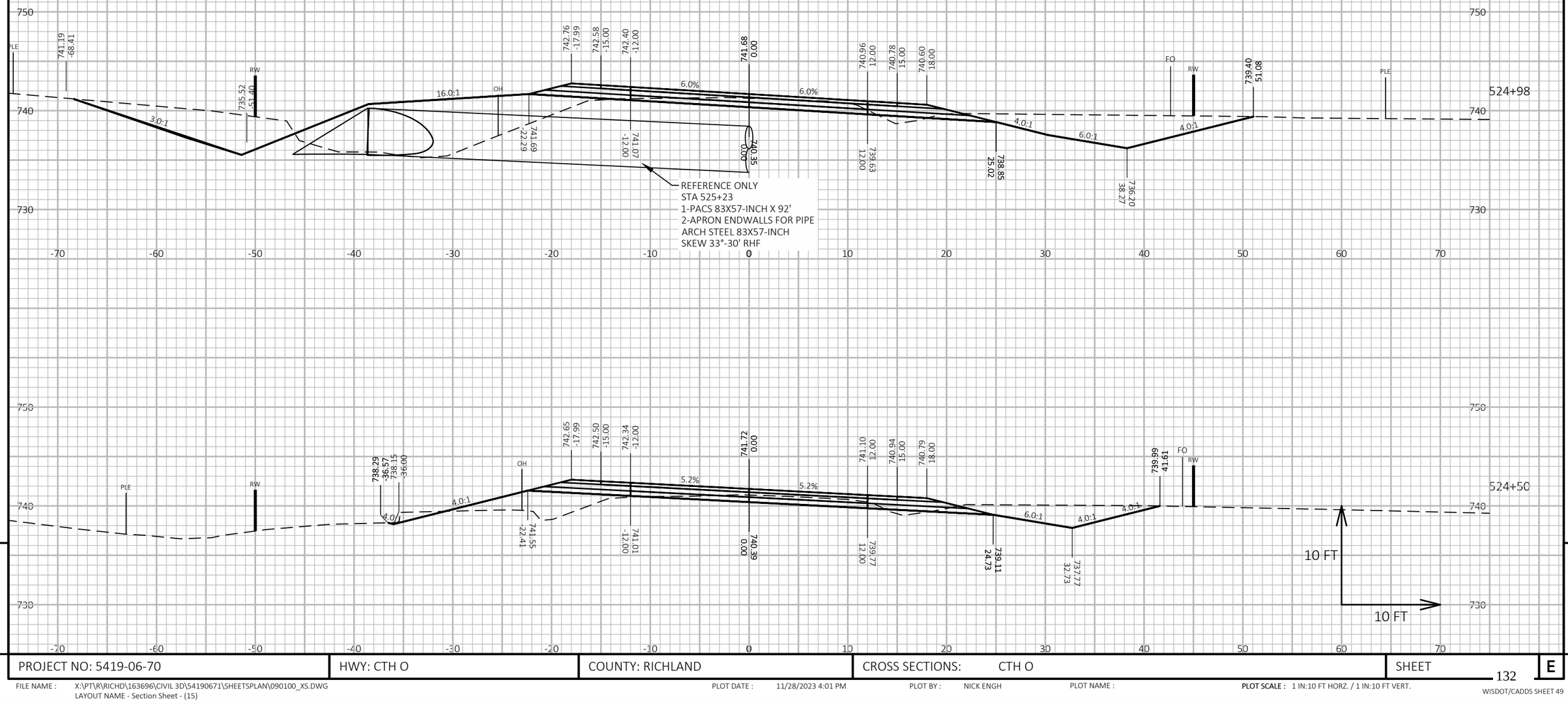
| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET | E |
|---|---|---|---|---|---|

131

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D\54190671\SHEETSPLAN\090100_XS.DWG
LAYOUT NAME - Section Sheet - (14)

PLOT DATE : 11/28/2023 4:01 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49




9

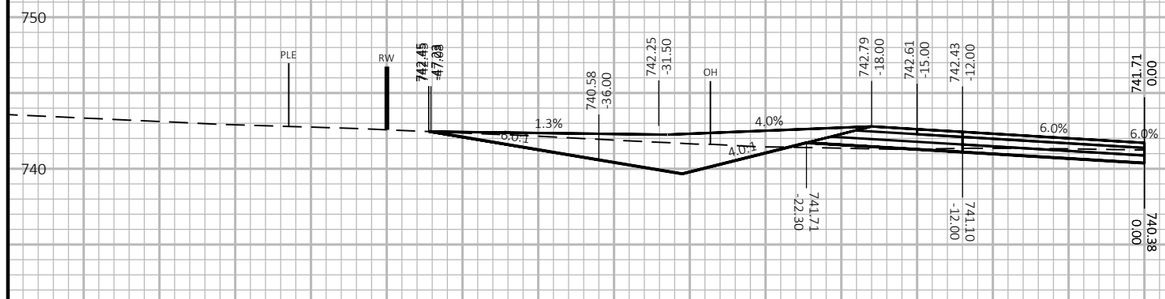
9

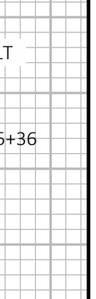
| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 132 | E |
|---|---|---|---|---|---|

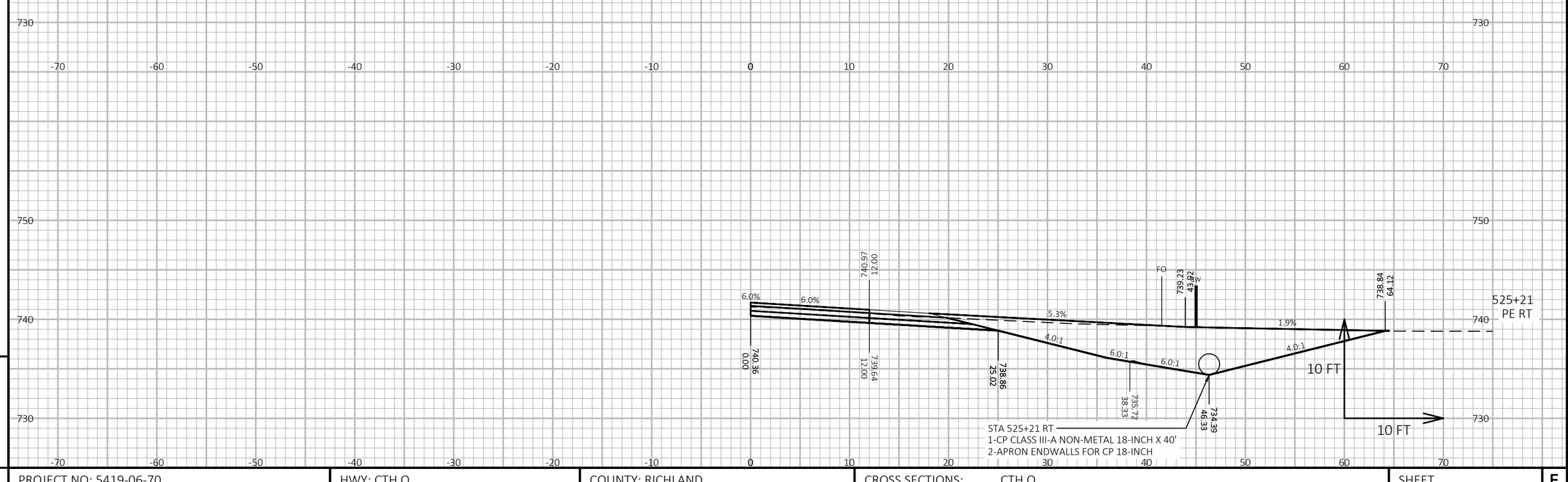
FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D\54190671\SHEETSPLAN\090100_XS.DWG
LAYOUT NAME - Section Sheet - (15)

PLOT DATE : 11/28/2023 4:01 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49







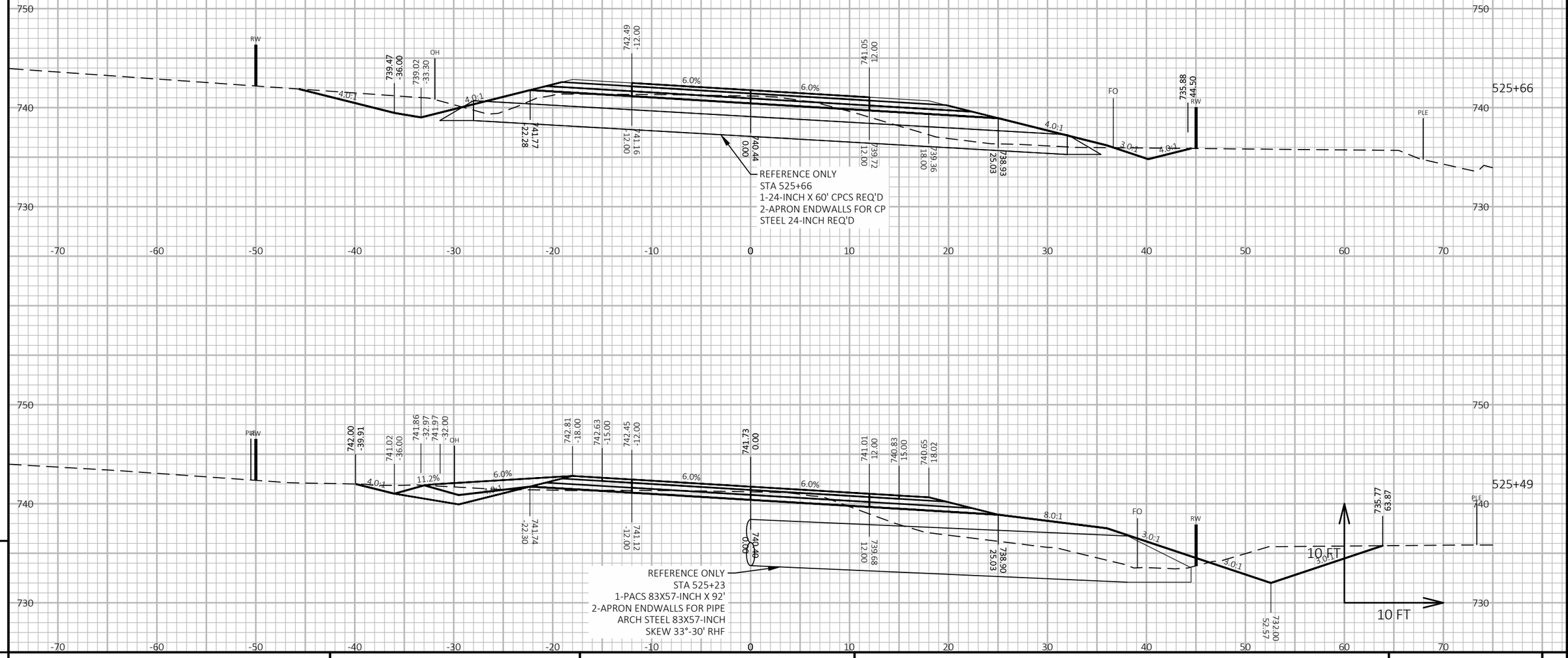
9

9

| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 133 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D\54190671\SHEETSPLAN\090100_XS.DWG
LAYOUT NAME - Section Sheet - (16)

PLOT DATE : 11/28/2023 4:01 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.




9

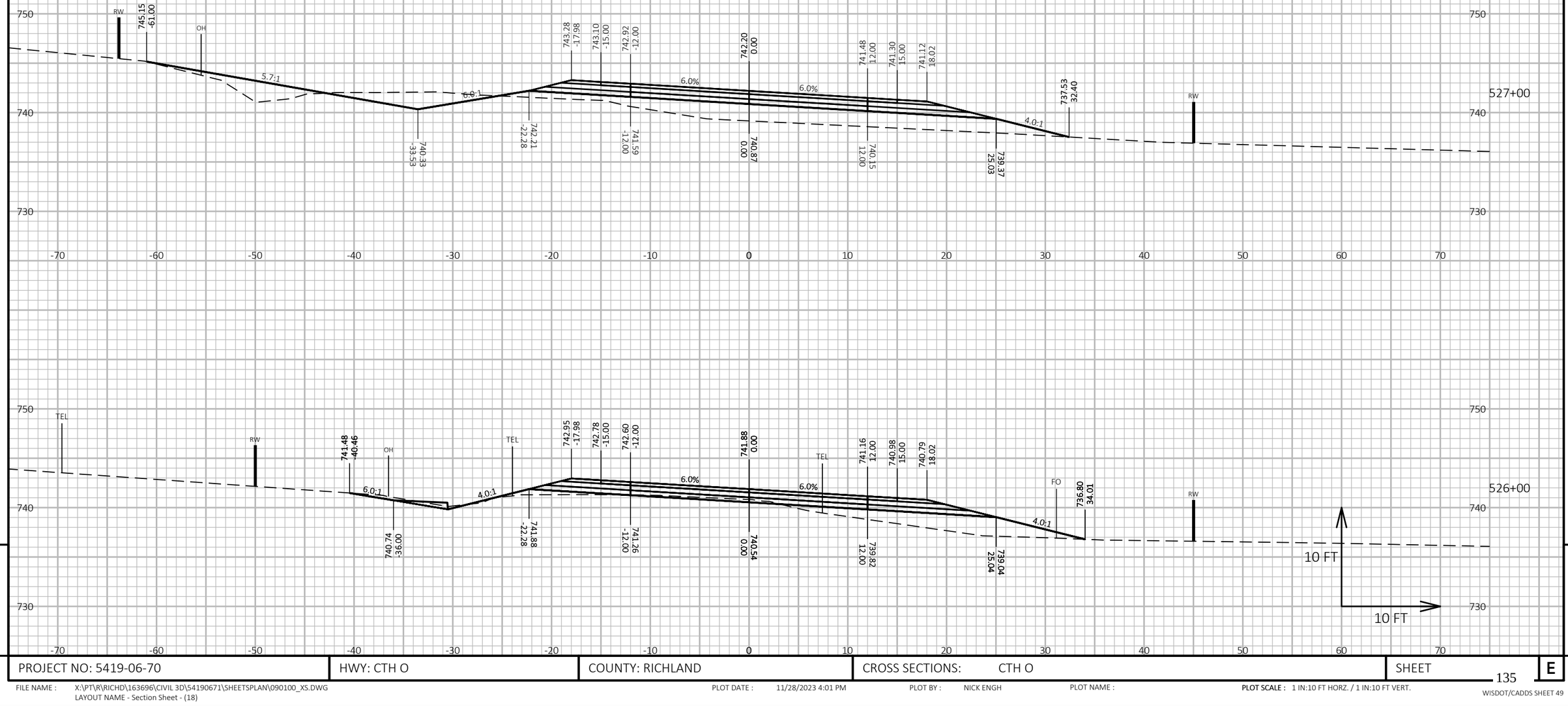
9

| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: | SHEET 134 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D\54190671\SHEETSPLAN\090100_XS.DWG
LAYOUT NAME - Section Sheet - (17)

PLOT DATE : 11/28/2023 4:01 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

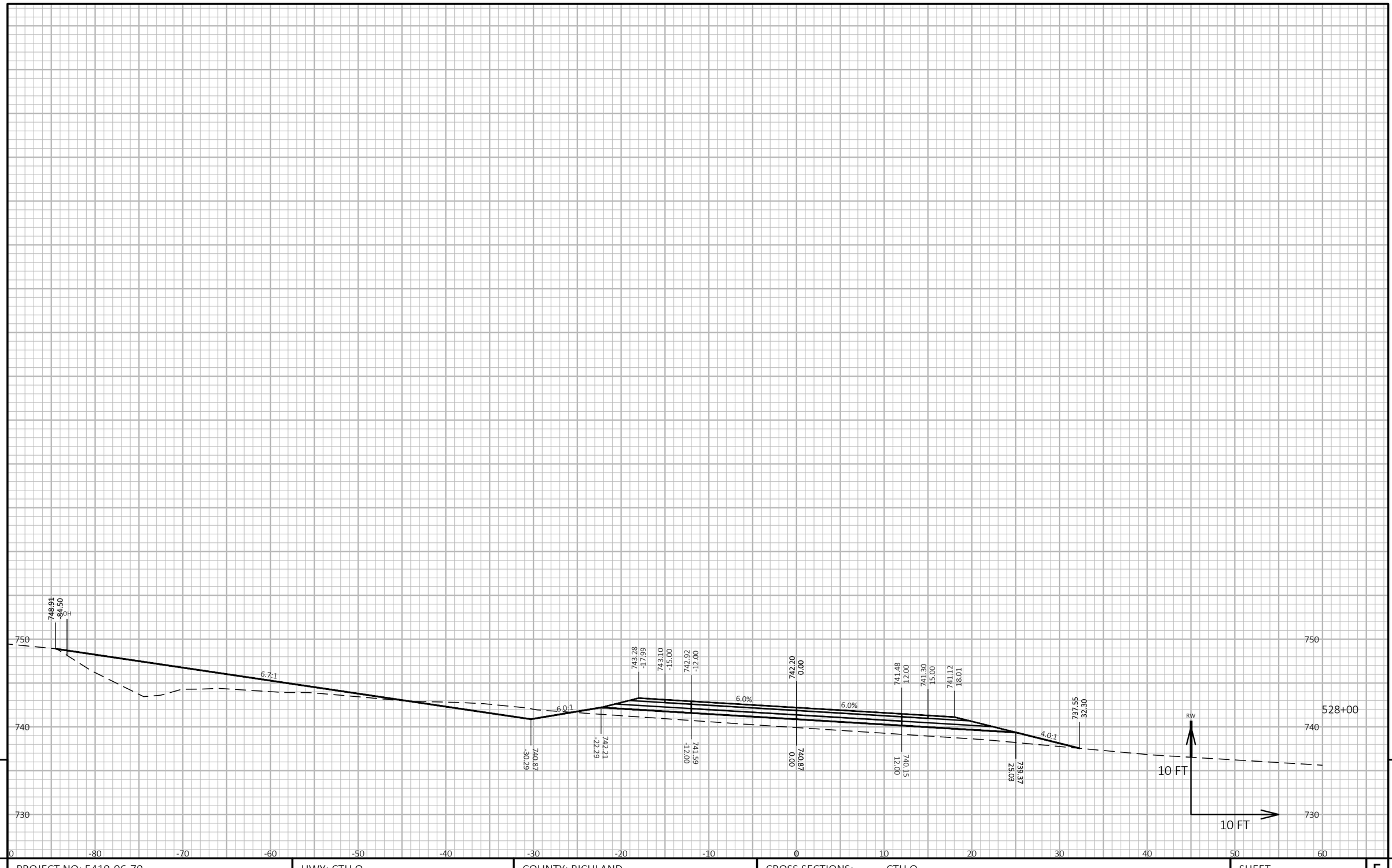



| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET | |
|---|---|---|---|---|---|
| | | | | 135 | E |

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D\54190671\SHEETSPLAN\090100_XS.DWG
LAYOUT NAME - Section Sheet - (18)

PLOT DATE : 11/28/2023 4:01 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



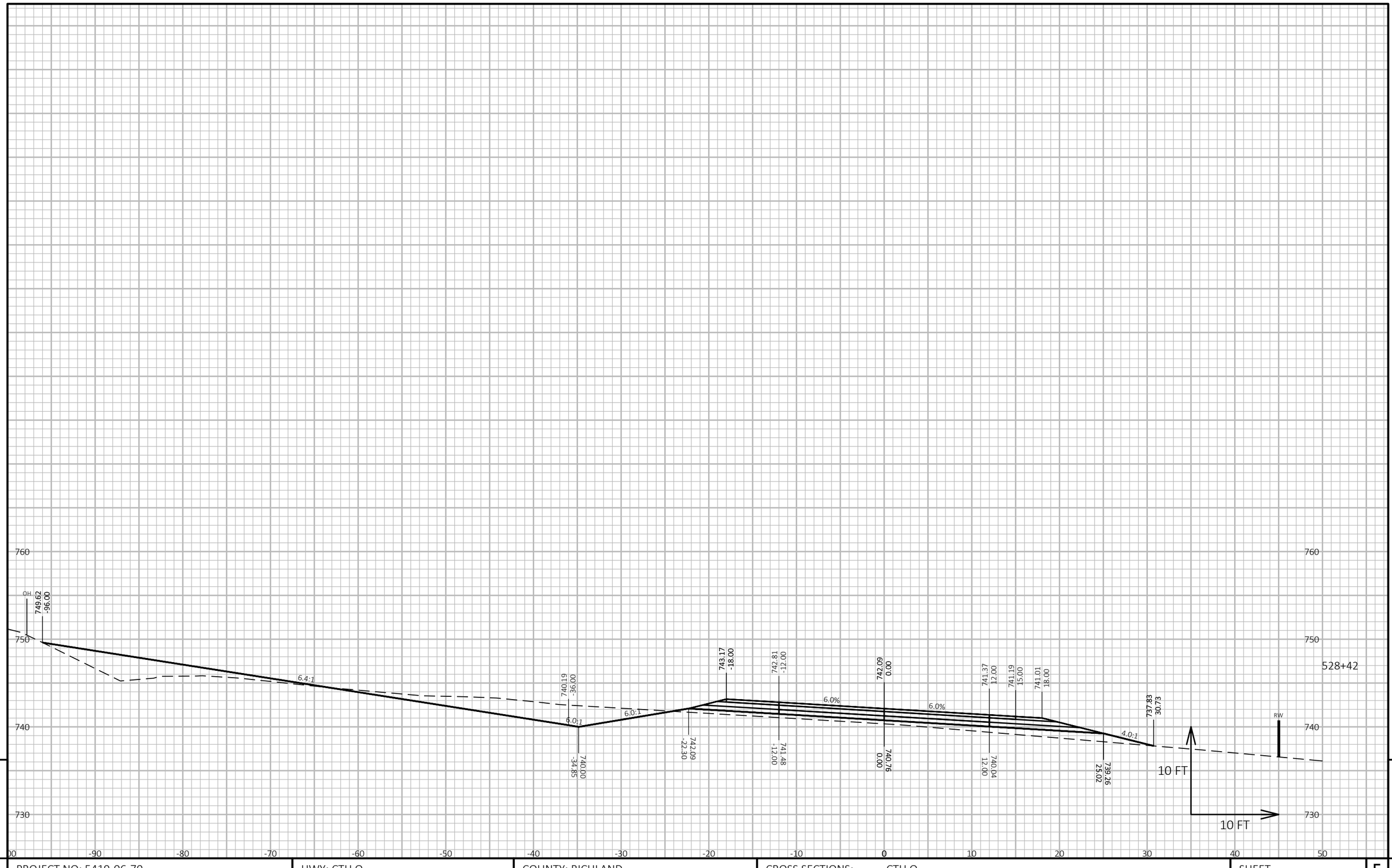

9

9

| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 136 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D\54190671\SHEETSPLAN\090100_XS.DWG
LAYOUT NAME - Section Sheet - (19)

PLOT DATE : 11/28/2023 4:01 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



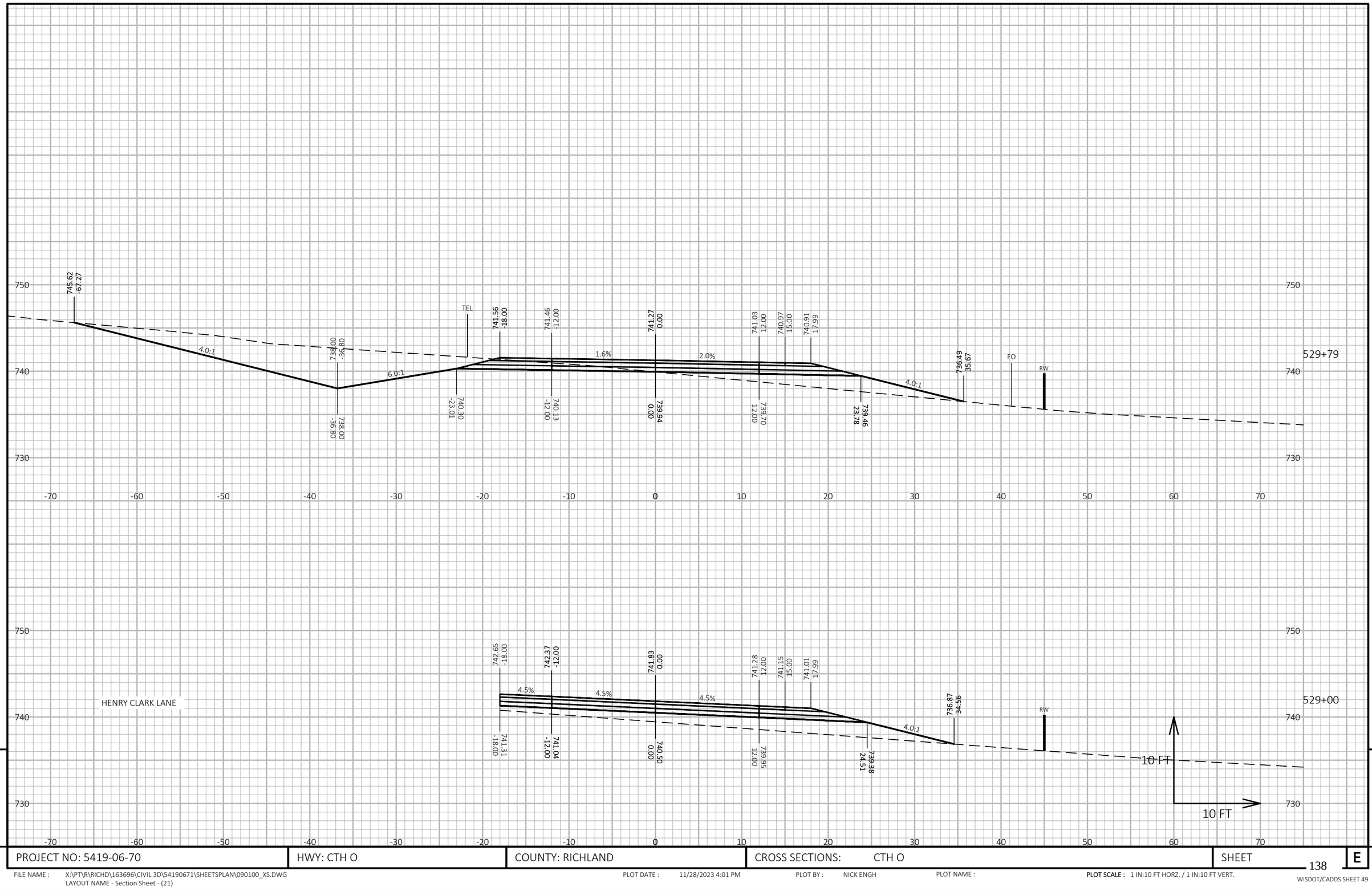

9

9

| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 137 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D\54190671\SHEETSPLAN\090100_XS.DWG
LAYOUT NAME - Section Sheet - (20)

PLOT DATE : 11/28/2023 4:01 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.




9

9

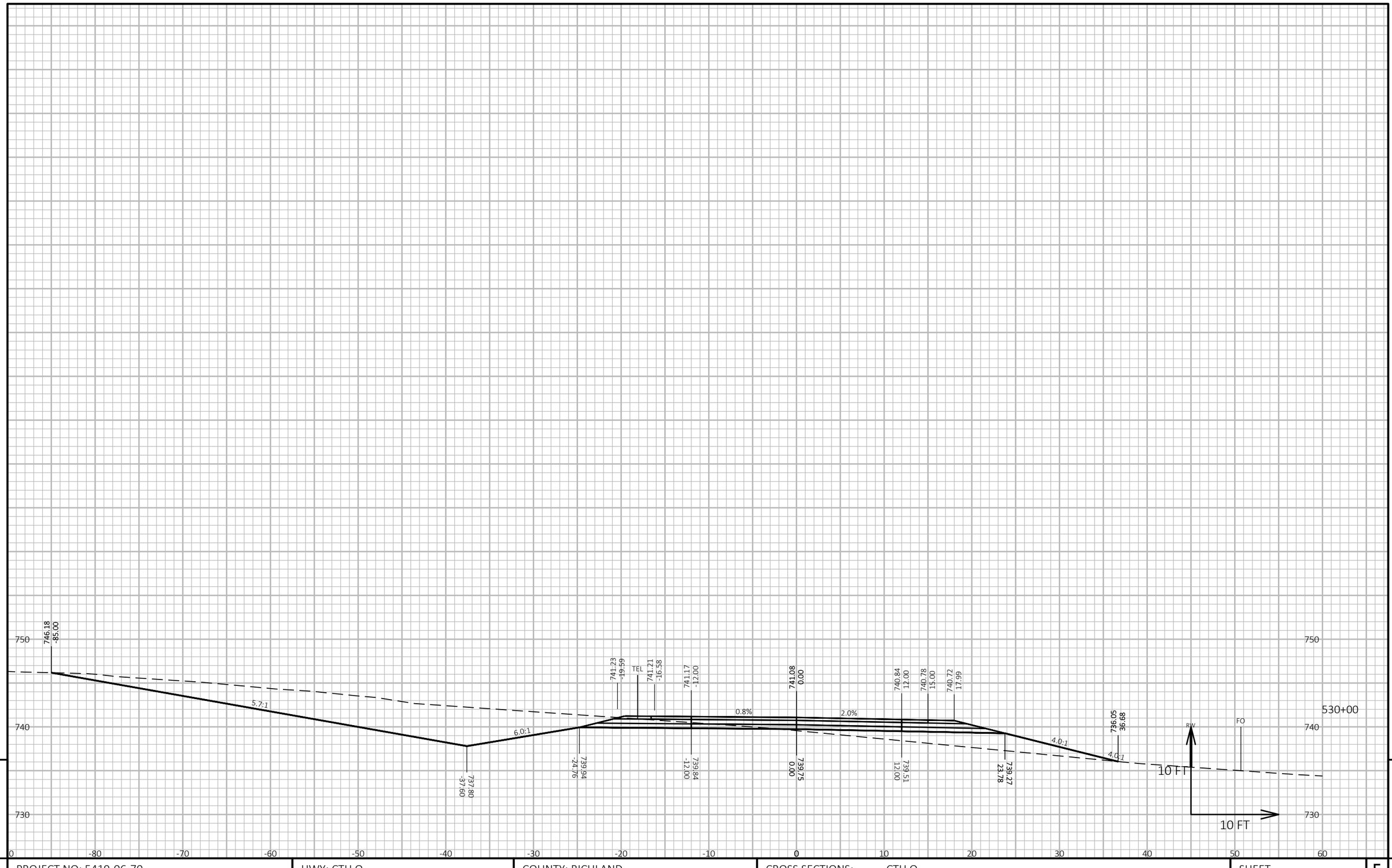
| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET | E |
|---|---|---|---|---|---|

138

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D\54190671\SHEETSPLAN\090100_XS.DWG
LAYOUT NAME - Section Sheet - (21)

PLOT DATE : 11/28/2023 4:01 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49




9

9

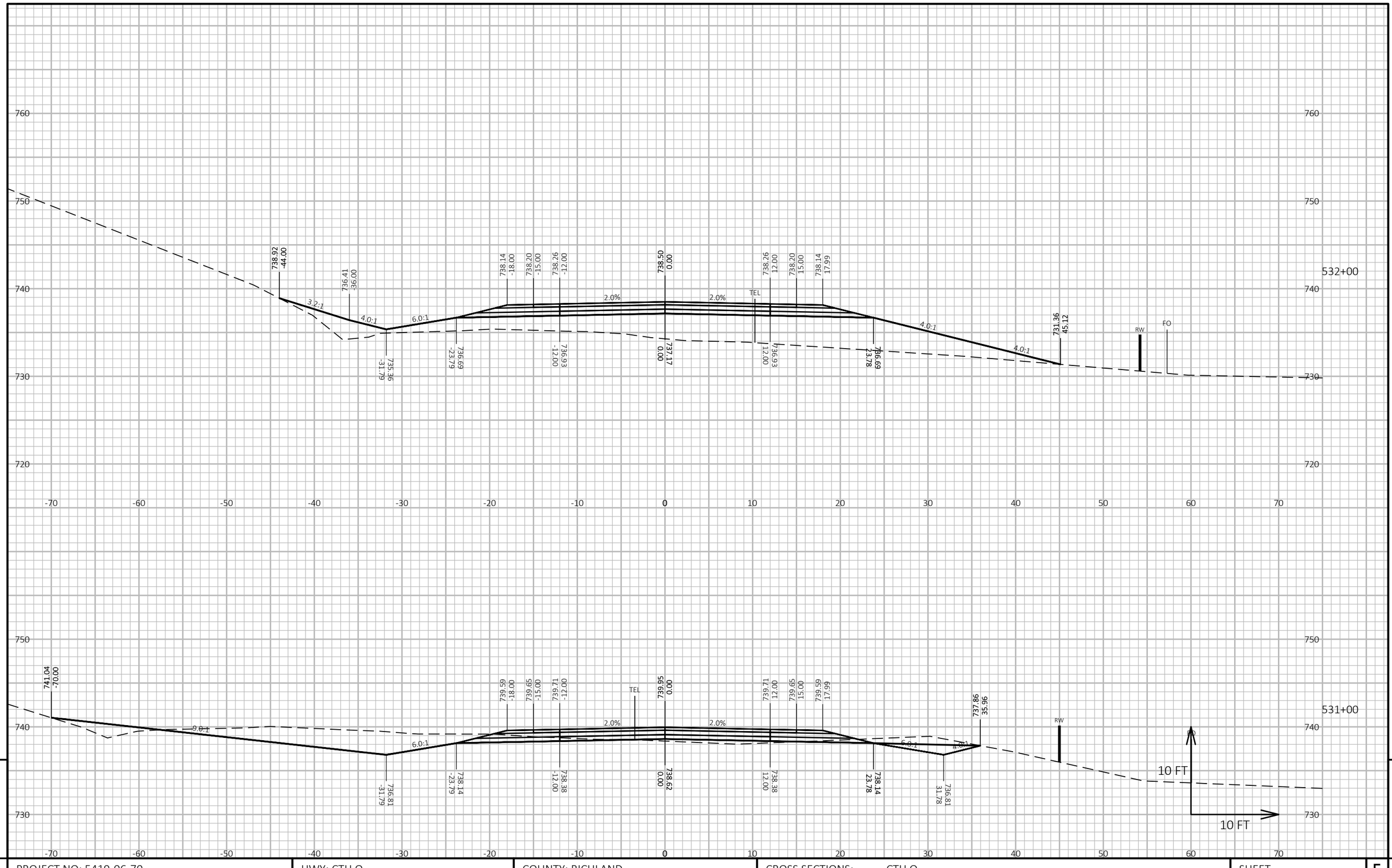
| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET | E |
|---|---|---|---|---|---|



FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D\54190671\SHEETSPLAN\090100_XS.DWG
LAYOUT NAME - Section Sheet - (22)

PLOT DATE : 11/28/2023 4:01 PM PLOT BY : NICK ENGH PLOT NAME :

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



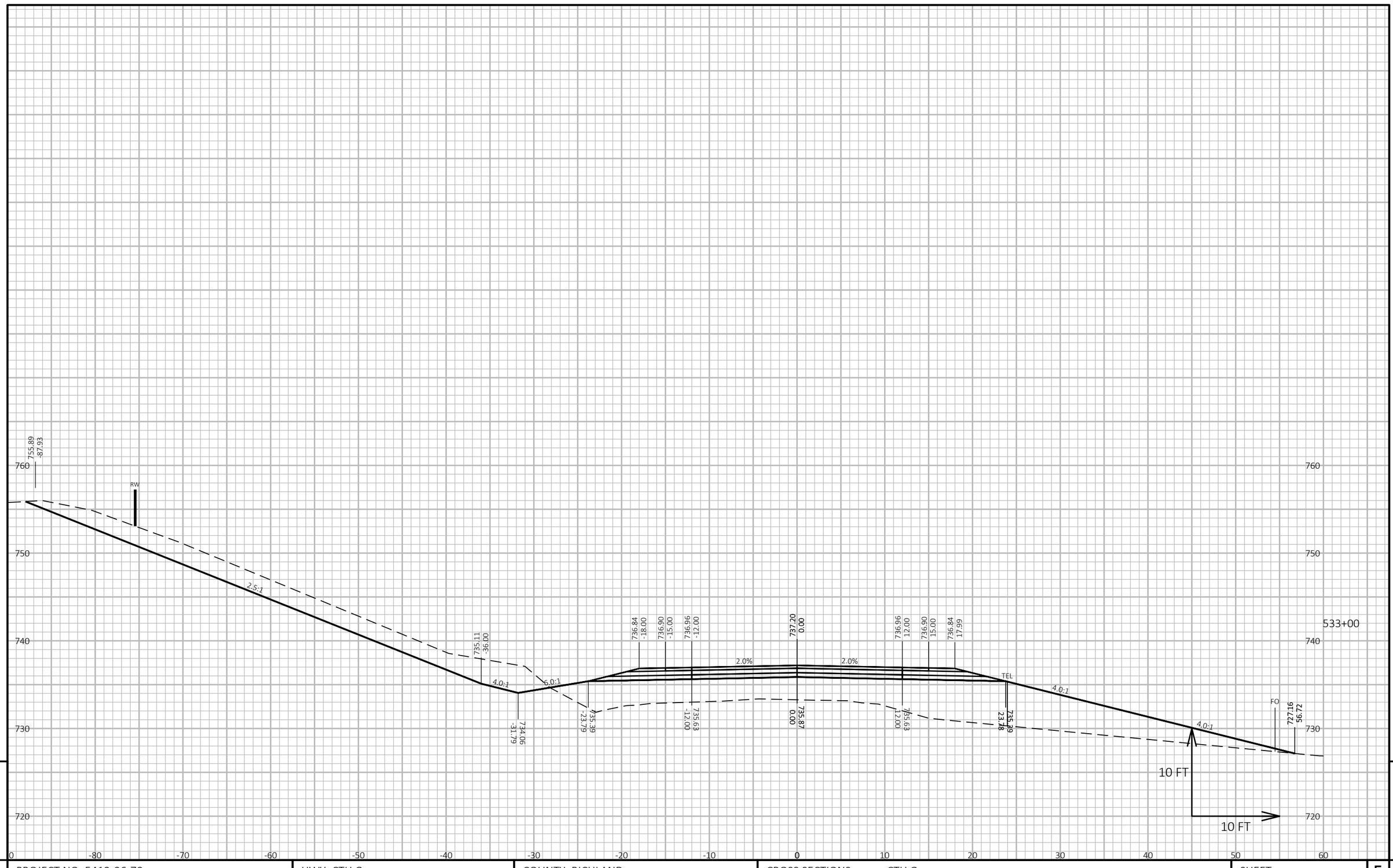

9

9

| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 140 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D\54190671\SHEETSPLAN\090100_XS.DWG
LAYOUT NAME - Section Sheet - (23)

PLOT DATE : 11/28/2023 4:01 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.




9

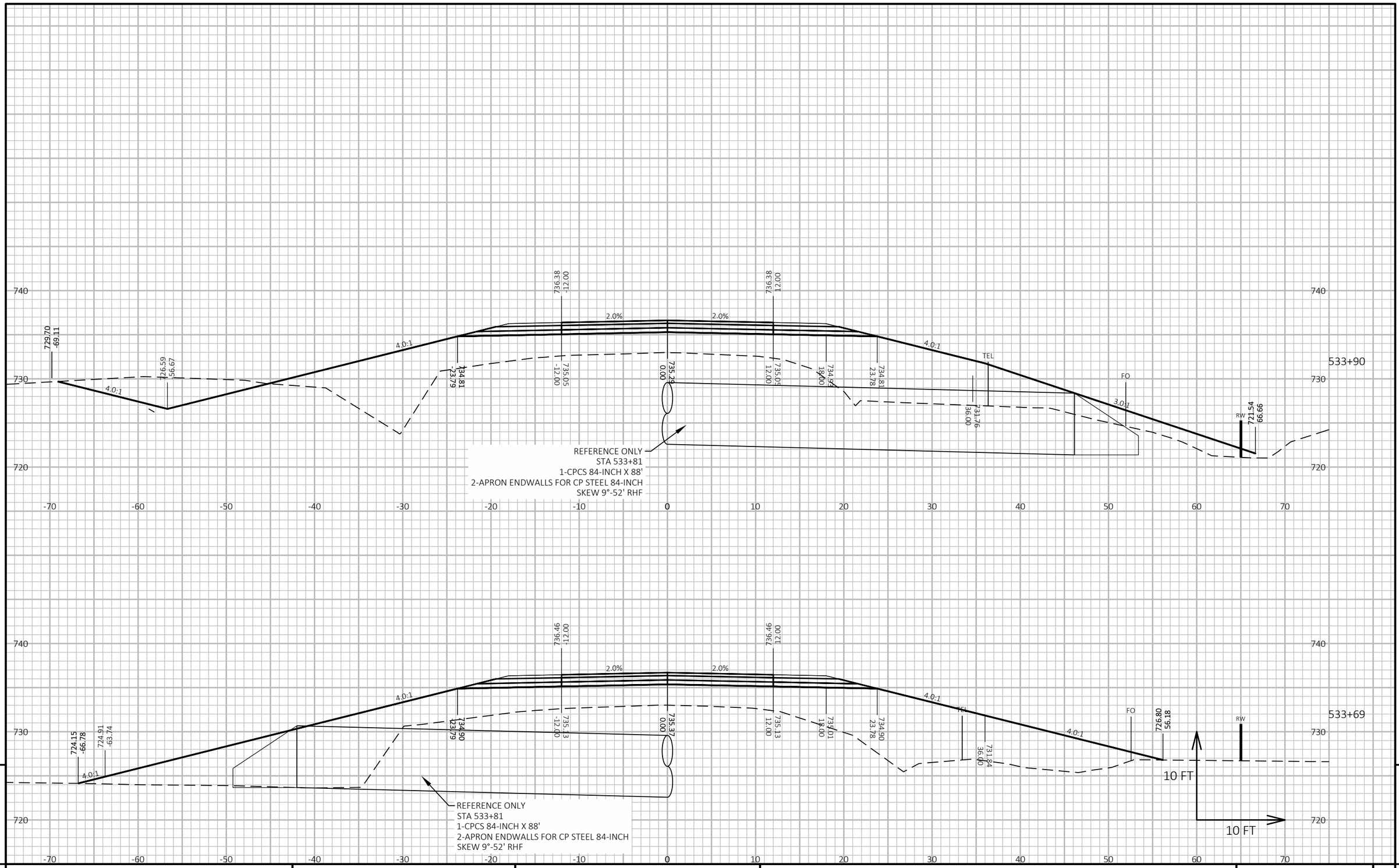
9

| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET | E |
|---|---|---|---|---|---|



FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D\54190671\SHEETSPLAN\090100_XS.DWG
LAYOUT NAME - Section Sheet - (24)

PLOT DATE : 11/28/2023 4:02 PM PLOT BY : NICK ENGH PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

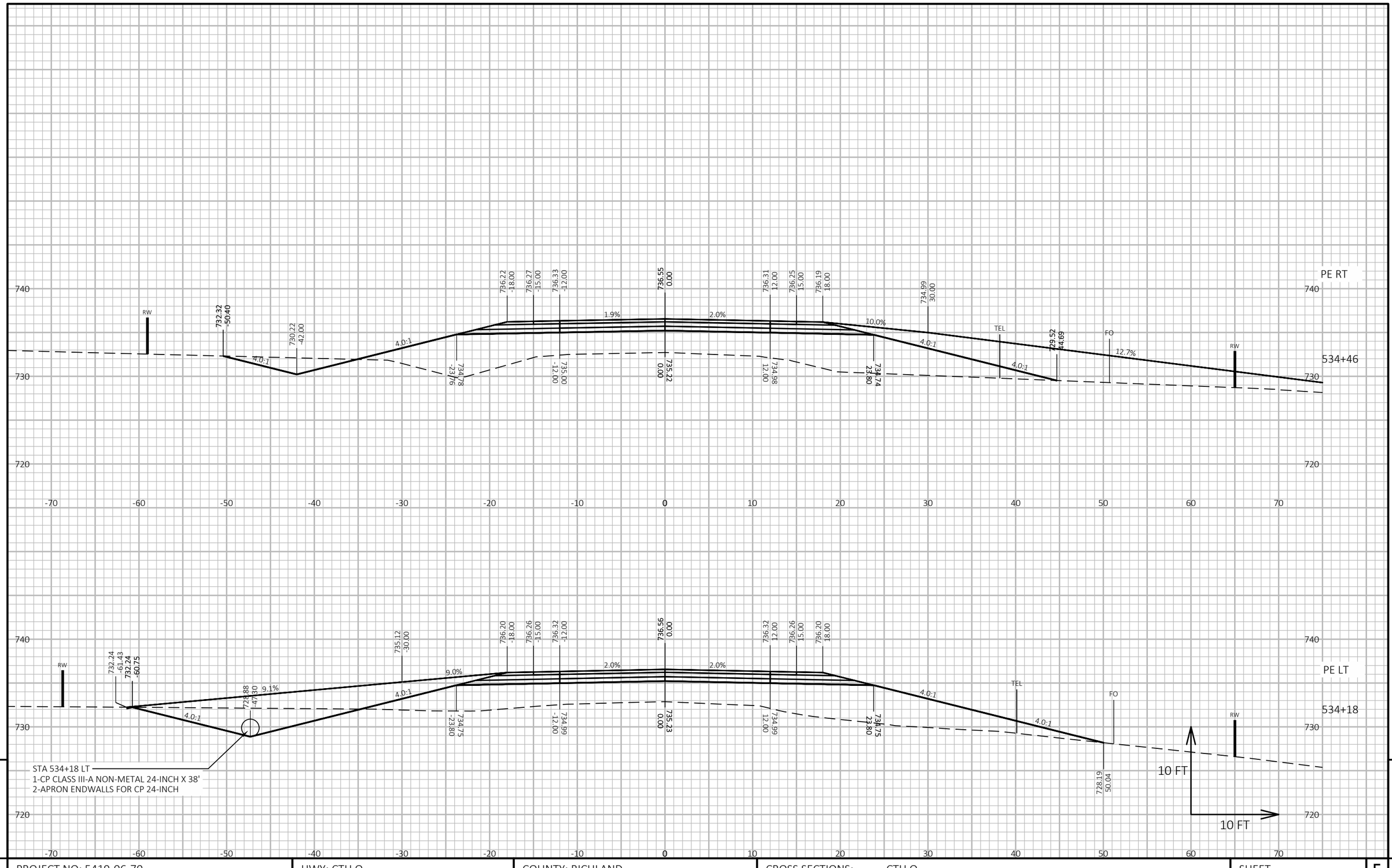



| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 142 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D\54190671\SHEETSPLAN\090100_XS.DWG
LAYOUT NAME - Section Sheet - (25)

PLOT DATE : 11/28/2023 4:02 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49




9

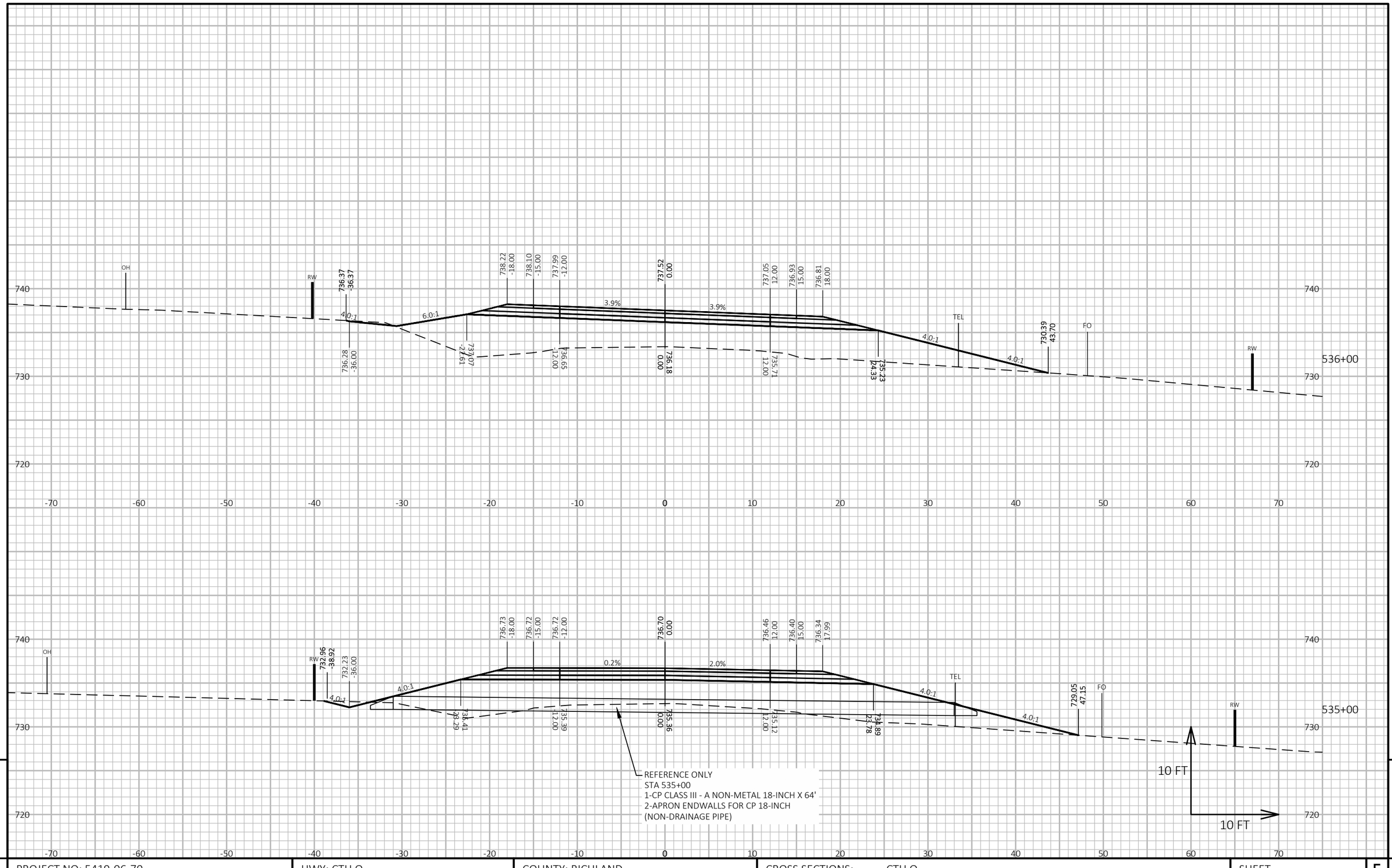
9

| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 143 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D\54190671\SHEETSPLAN\090100_XS.DWG
LAYOUT NAME - Section Sheet - (26)

PLOT DATE : 11/28/2023 4:02 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

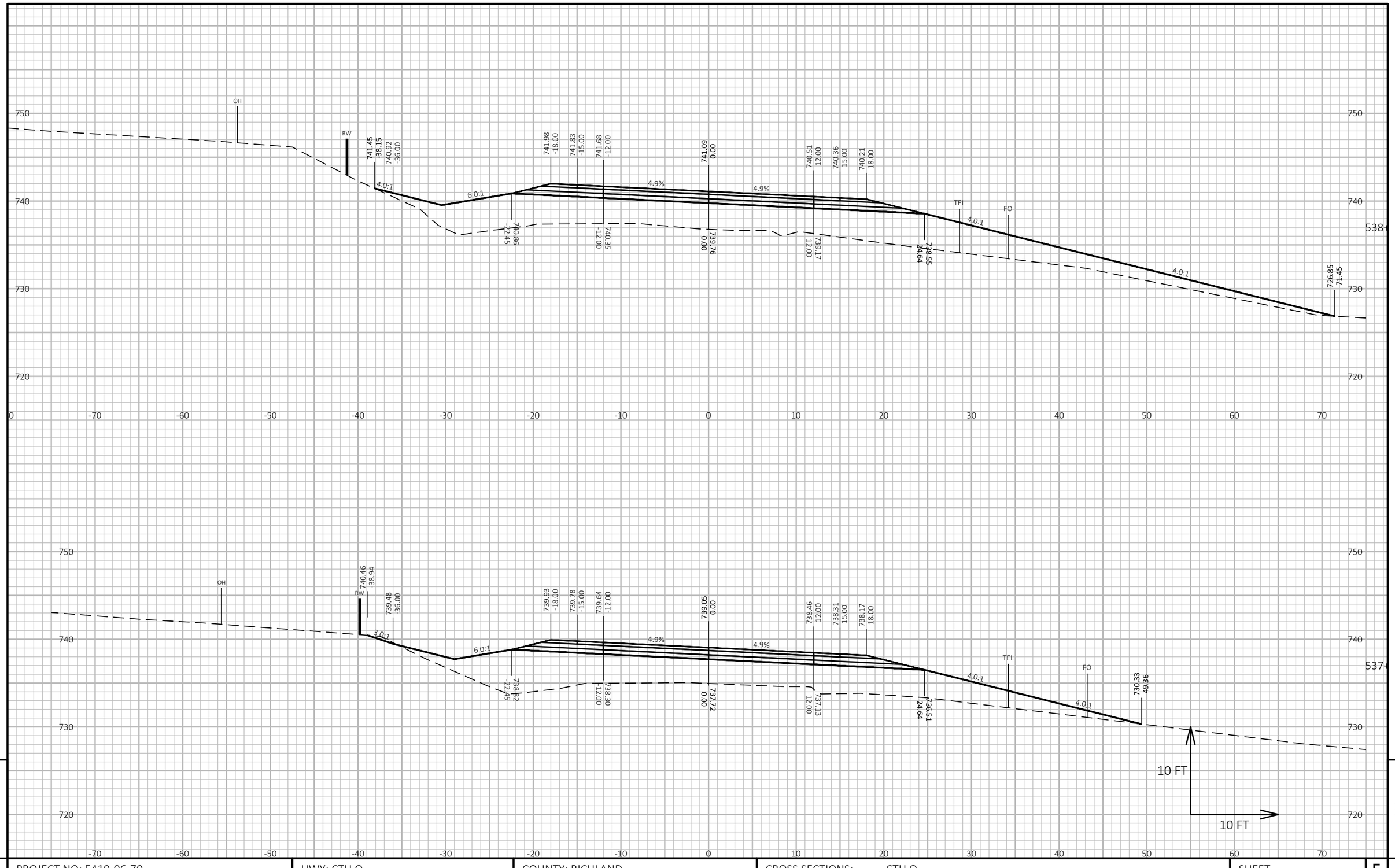



| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 144 E |
|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D\54190671\SHEETSPLAN\090100_XS.DWG
LAYOUT NAME - Section Sheet - (27)

PLOT DATE : 11/28/2023 4:02 PM PLOT BY : NICK ENGH PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

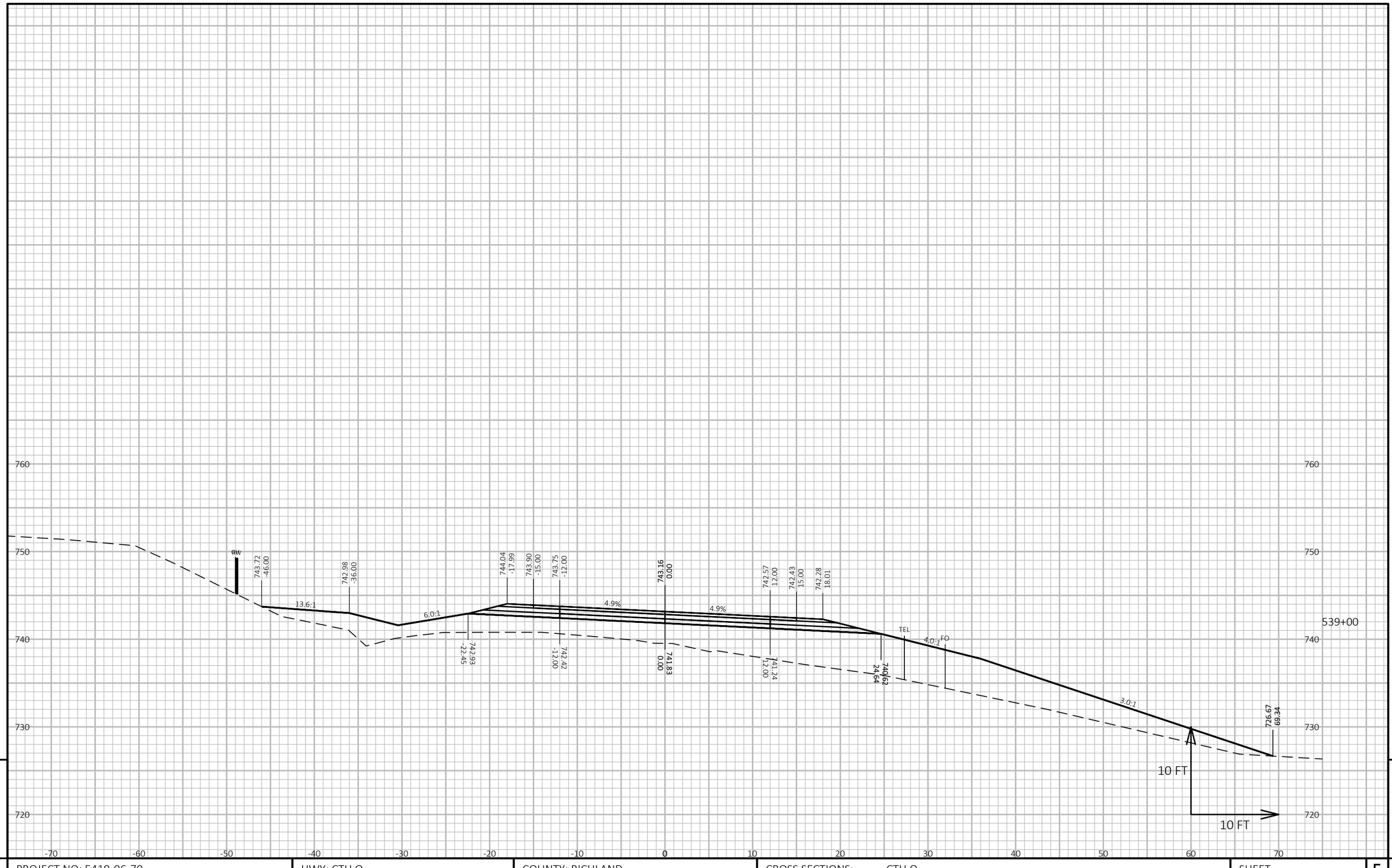



| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 145 E |
|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D\54190671\SHEETSPLAN\090100_XS.DWG
LAYOUT NAME - Section Sheet - (28)

PLOT DATE : 11/28/2023 4:02 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49




9

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| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET | E |
|---|---|---|---|---|---|

146

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D\54190671\SHEETSPLAN\090100_XS.DWG
LAYOUT NAME - Section Sheet - (29)

PLOT DATE : 11/28/2023 4:02 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



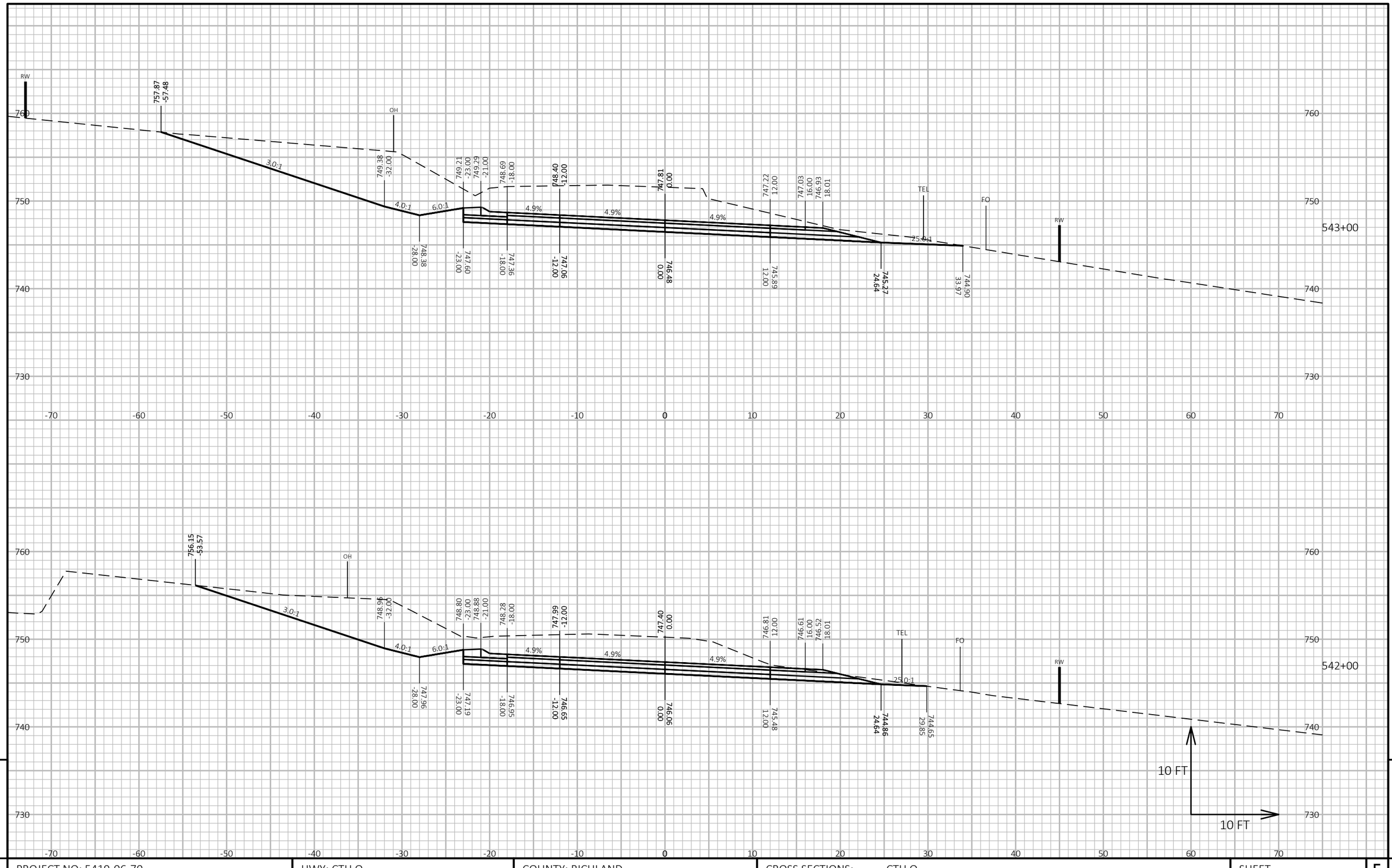

9

9

| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 147 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D\54190671\SHEETSPLAN\090100_XS.DWG
LAYOUT NAME - Section Sheet - (30)

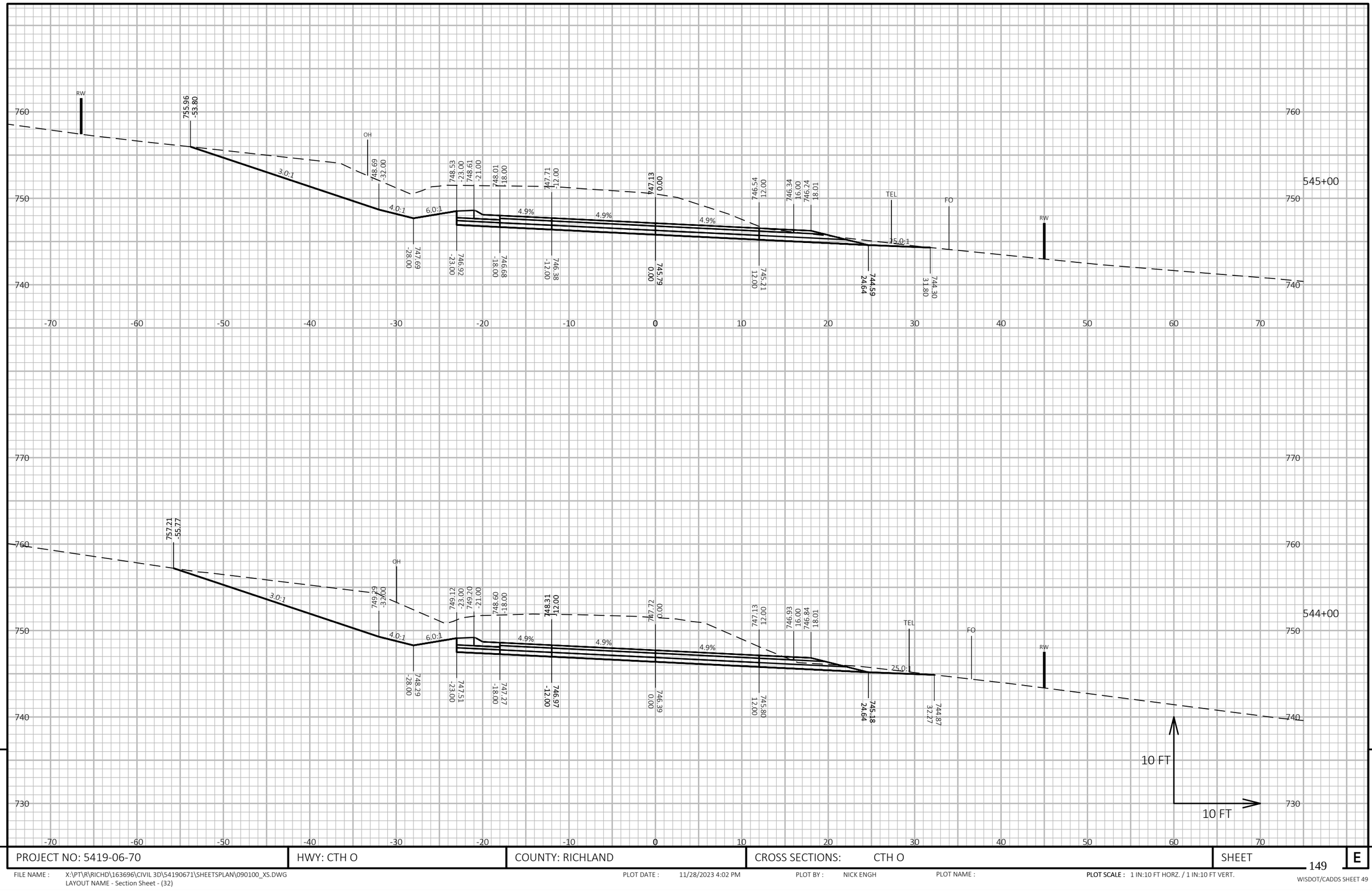
PLOT DATE : 11/28/2023 4:02 PM PLOT BY : NICK ENGH PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.




| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 148 E |
|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D\54190671\SHEETSPLAN\090100_XS.DWG
LAYOUT NAME - Section Sheet - (31)

PLOT DATE : 11/28/2023 4:02 PM PLOT BY : NICK ENGH PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



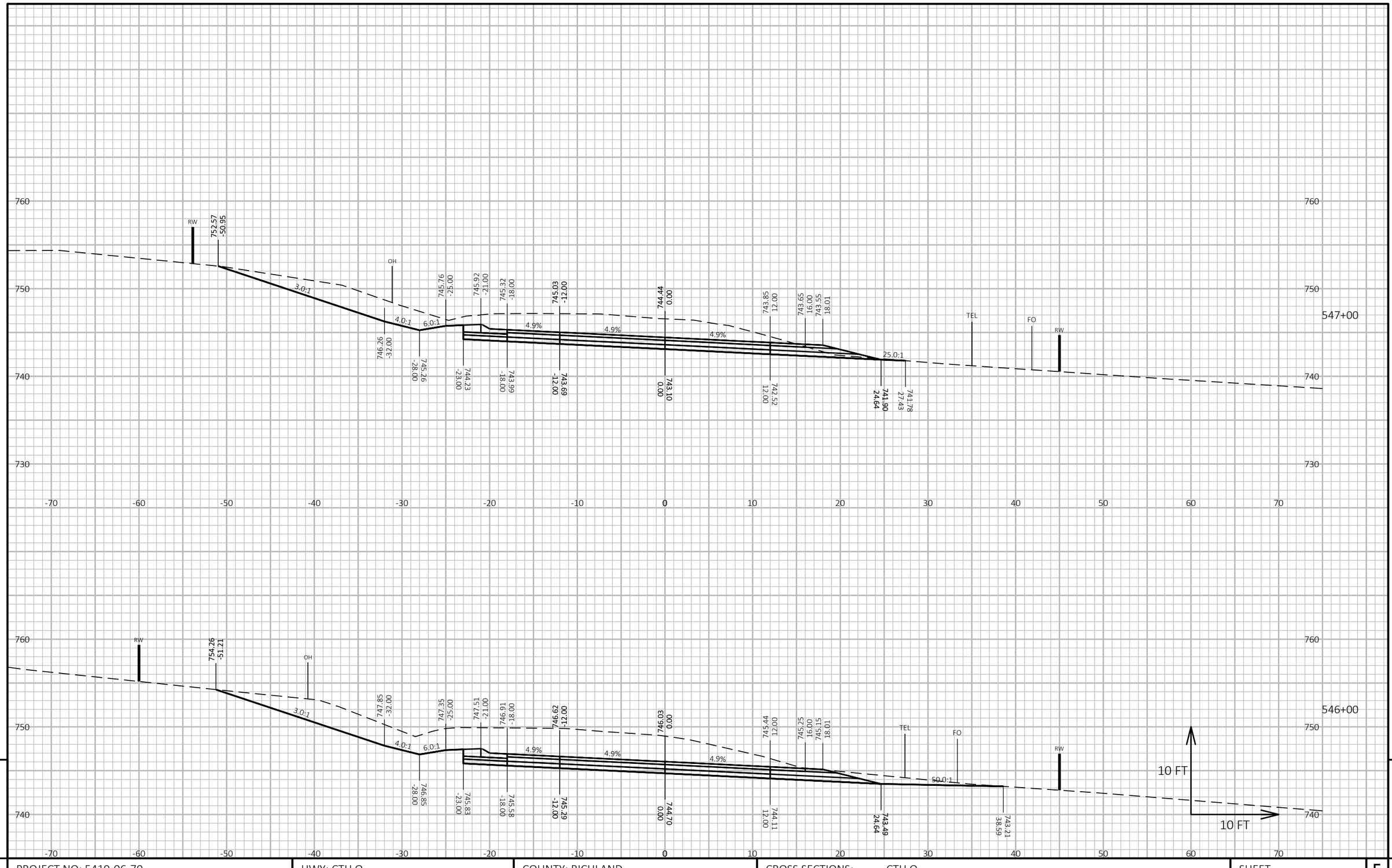

9

9

| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 149 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D\54190671\SHEETSPLAN\090100_XS.DWG
LAYOUT NAME - Section Sheet - (32)

PLOT DATE : 11/28/2023 4:02 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.




| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 150 E |
|---|---|---|---|---|

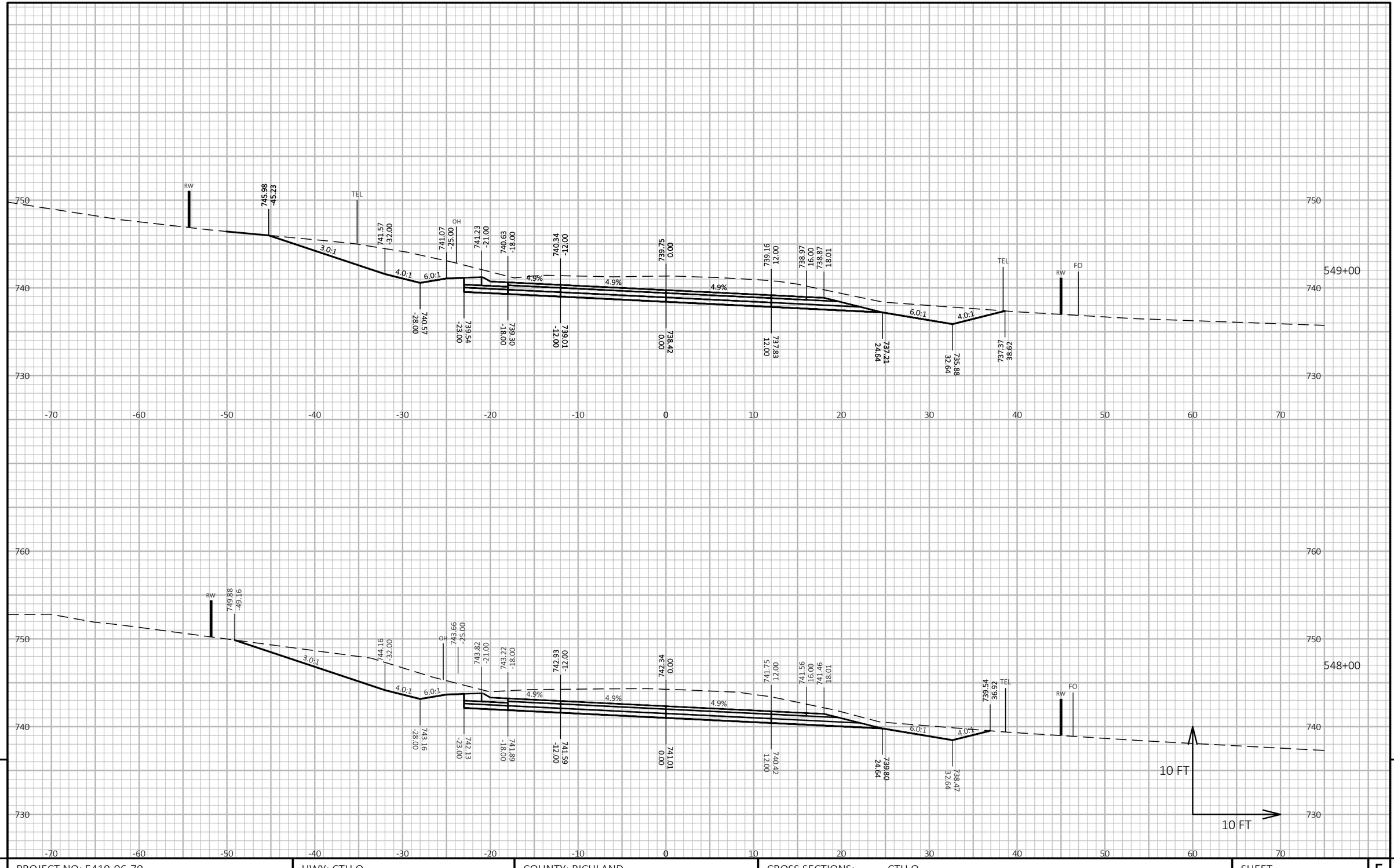
FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D\54190671\SHEETSPLAN\090100_XS.DWG
LAYOUT NAME - Section Sheet - (33)

PLOT DATE : 11/28/2023 4:02 PM PLOT BY : NICK ENGH PLOT NAME :

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

WISDOT/CADDS SHEET 49

9 9

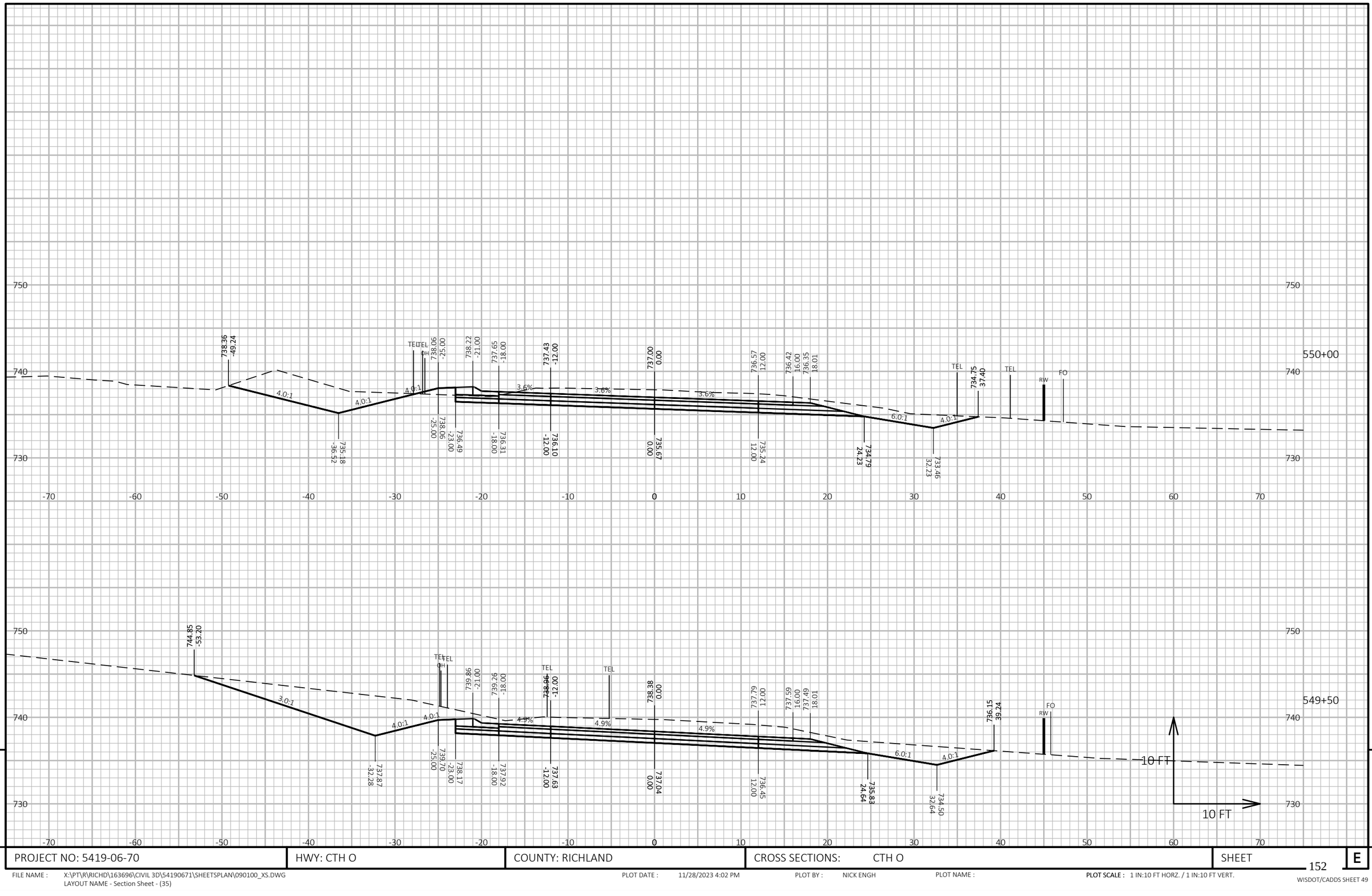



| | | | | |
|---|---|---|---|---|
| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 151 E |

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D\54190671\SHEETSPLAN\090100_XS.DWG
LAYOUT NAME - Section Sheet - (34)

PLOT DATE : 11/28/2023 4:02 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

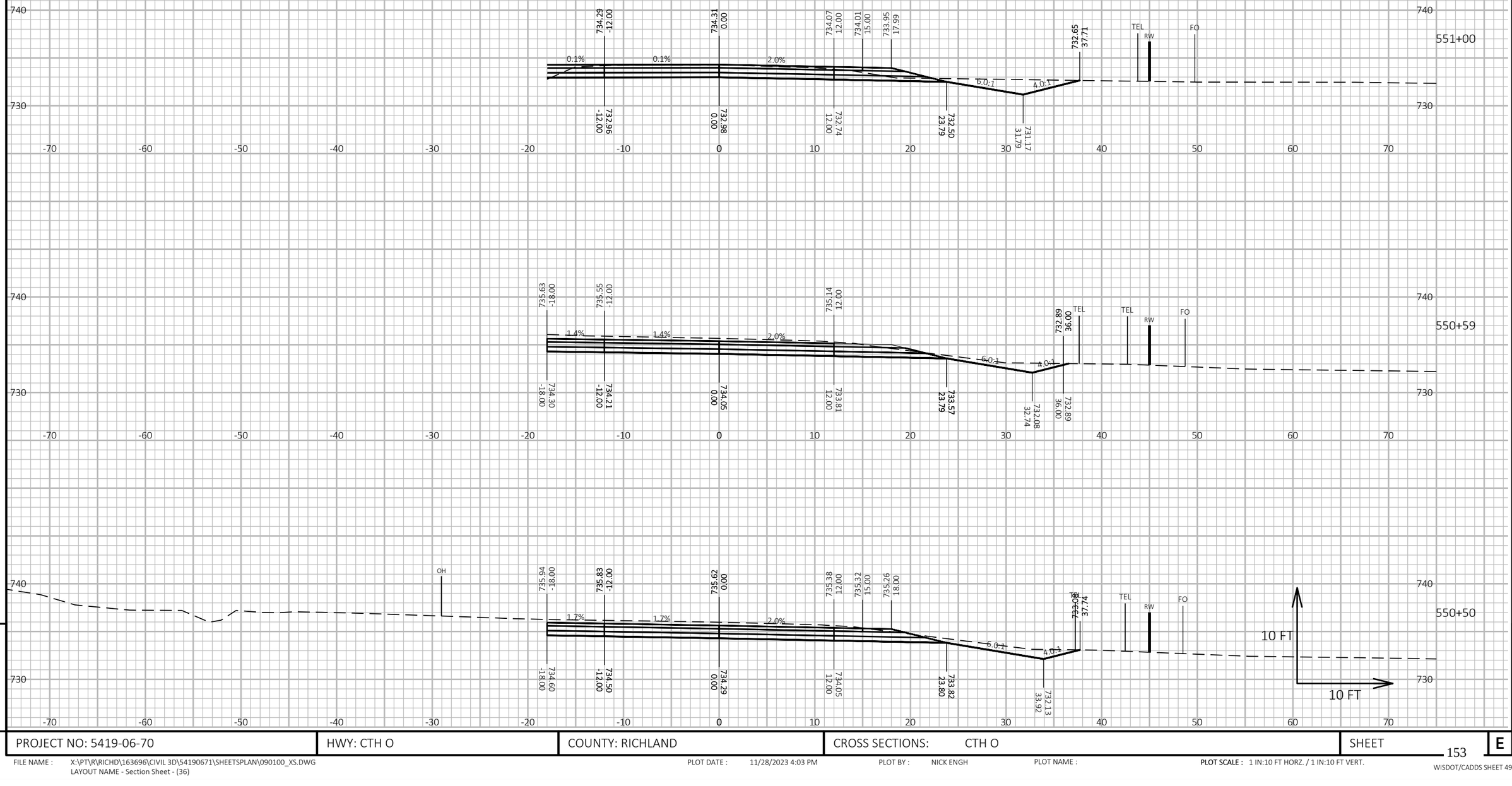



| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET | E |
|---|---|---|---|---|---|



FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D\54190671\SHEETSPLAN\090100_XS.DWG
LAYOUT NAME - Section Sheet - (35)

PLOT DATE : 11/28/2023 4:02 PM PLOT BY : NICK ENGH PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.




9

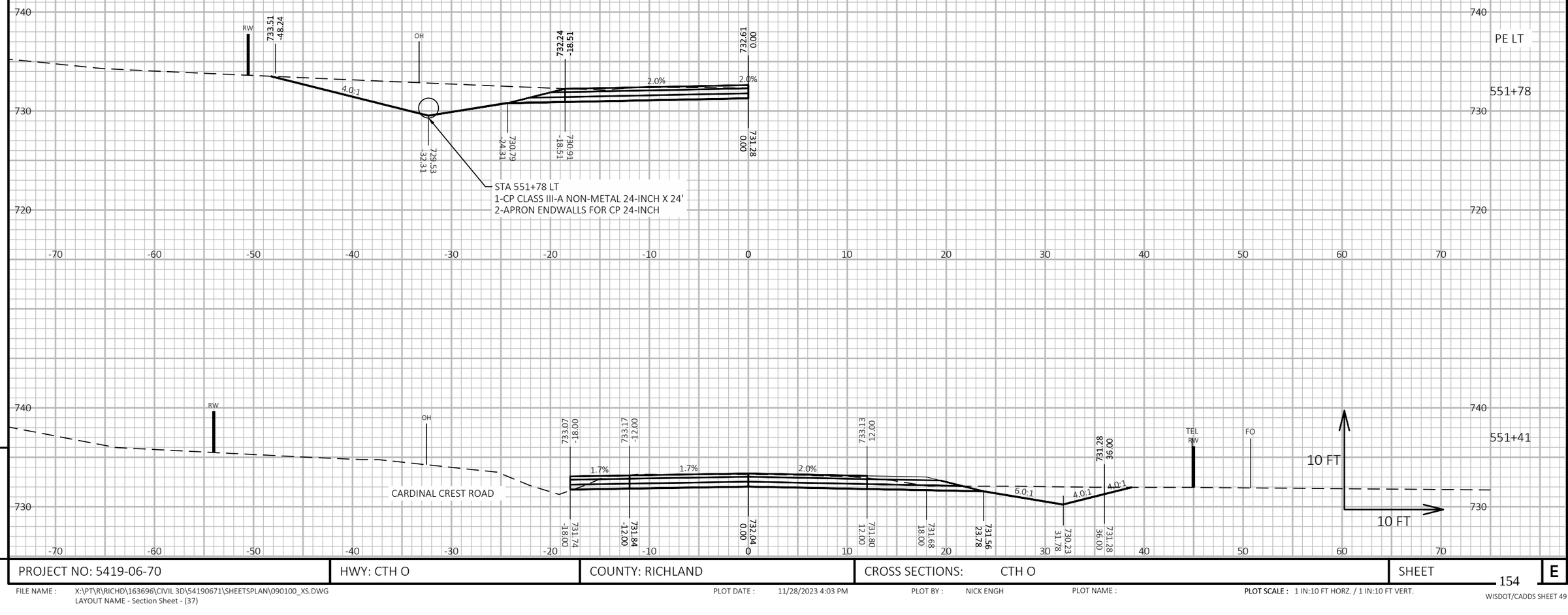
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| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 153 | E |
|---|---|---|---|---|---|


FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D\54190671\SHEETSPLAN\090100_XS.DWG
LAYOUT NAME - Section Sheet - (36)

PLOT DATE : 11/28/2023 4:03 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49




9

9

| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 154 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D\54190671\SHEETSPLAN\090100_XS.DWG
LAYOUT NAME - Section Sheet - (37)

PLOT DATE : 11/28/2023 4:03 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

END PROJECT
STA 552+00.00

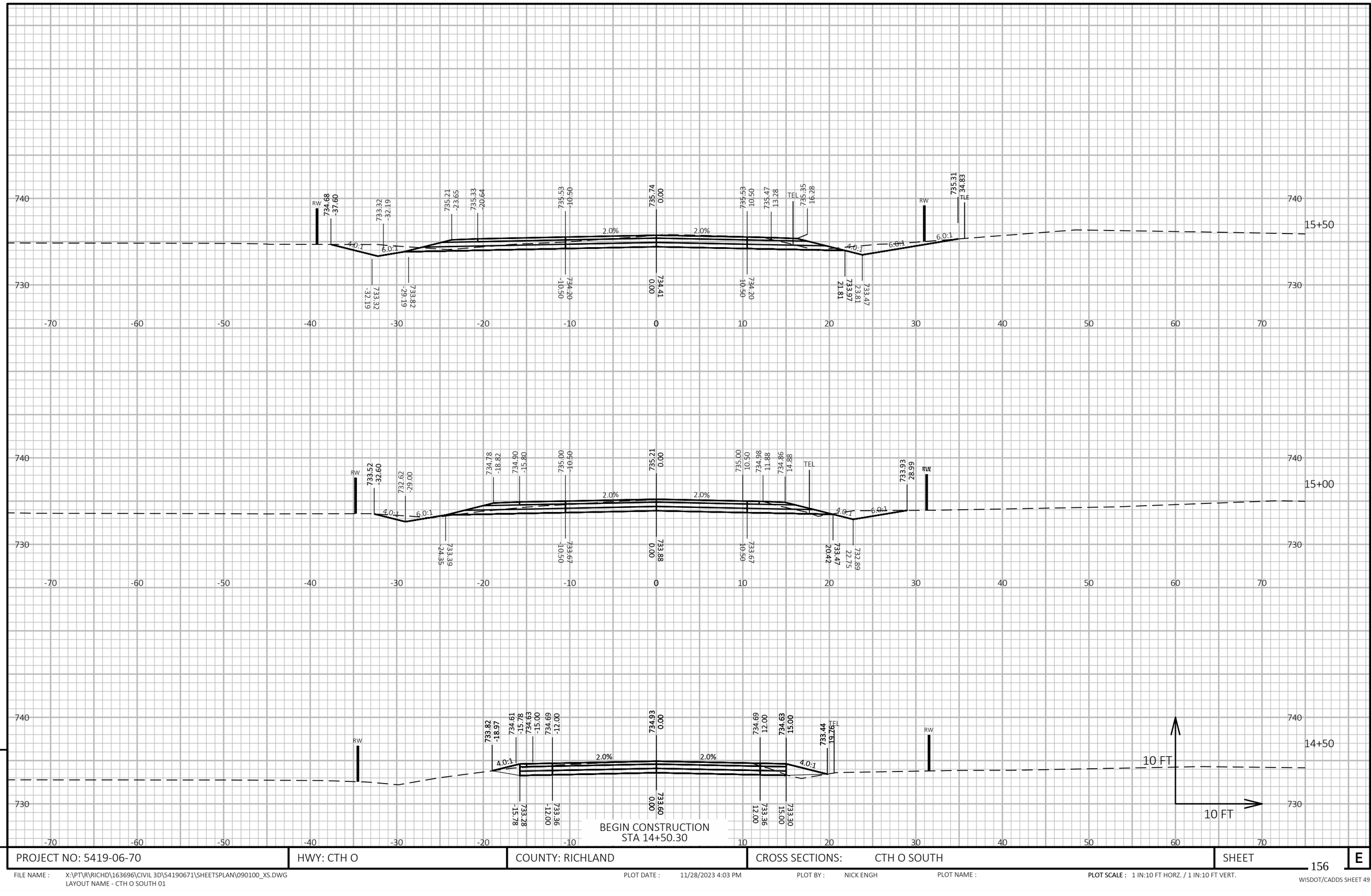
740
730
720
-70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70
552+00
RW
732.72
42.79
FO
732.62
32.00
731.85
-18.00
732.21
0.00
731.85
18.00
730.96
37.60
RW
TEL
FO
3.0:1
4.0:1
2.0%
2.0%
6.0:1
4.0:1
4.0:1
729.07
-31.81
730.41
-23.80
730.52
-18.00
730.88
0.00
730.52
18.00
730.41
23.80
729.07
31.80

740
730
720
0 10 20 30 40 50 60 70
PE RT
551+90
732.37
18.00
730.30
36.00
RW
TEL
FO
2.0%
6.0:1
4.0:1
4.0:1
731.06
0.00
730.70
18.00
730.58
23.80
729.25
31.80
730.30
36.00
STA 551+90 RT
1-CP CLASS III-A NON-METAL 18-INCH X 26'
2-APRON ENDWALLS FOR CP 18-INCH
10 FT
10 FT

9

| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D\54190671\SHEETSPLAN\090100_XS.DWG
LAYOUT NAME - Section Sheet - (38)
PLOT DATE : 11/30/2023 11:13 AM PLOT BY : NICK ENGH PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.




9

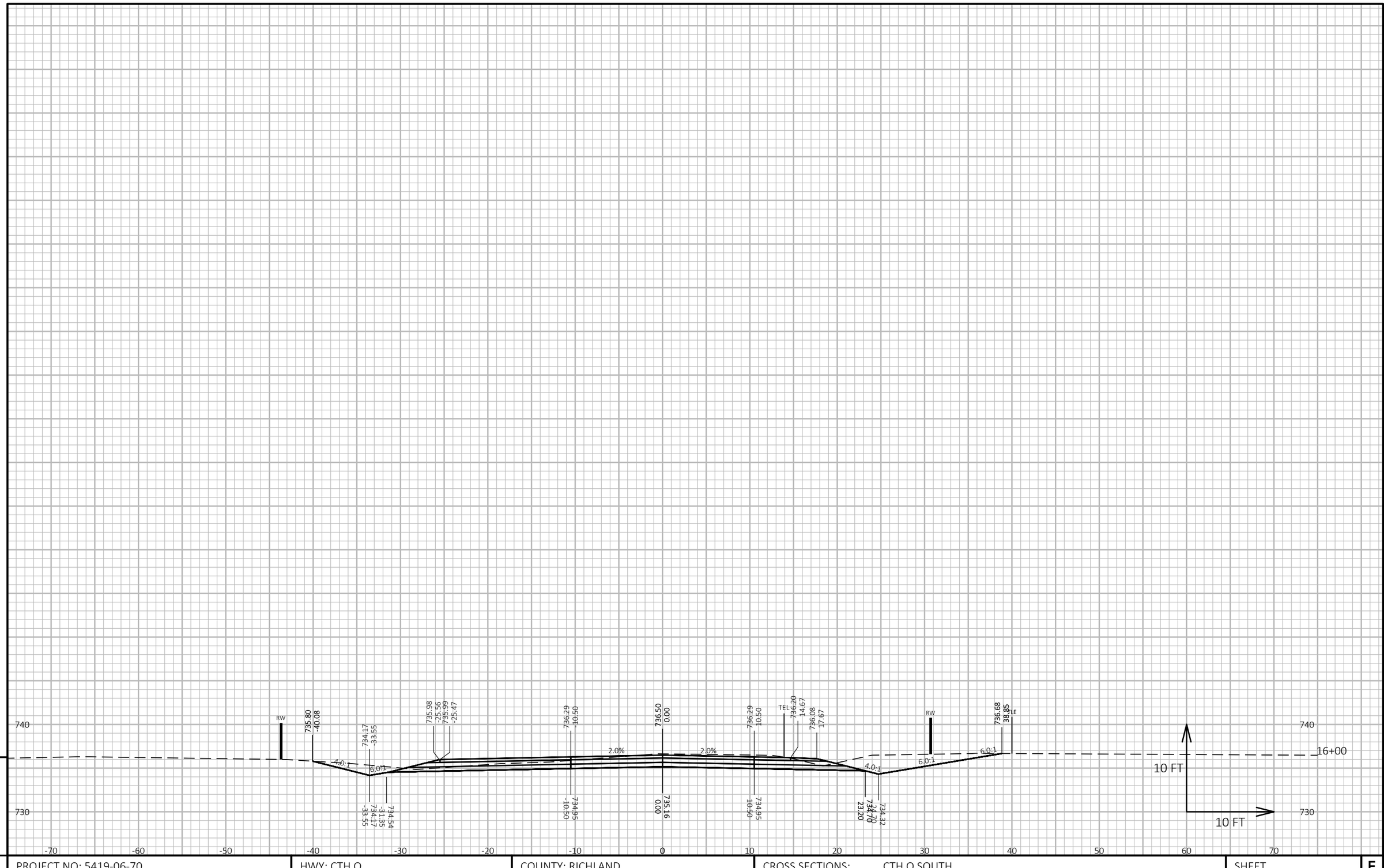
9

| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O SOUTH | SHEET 156 E |
|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D\54190671\SHEETSPLAN\090100_XS.DWG
LAYOUT NAME - CTH O SOUTH 01

PLOT DATE : 11/28/2023 4:03 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49




9

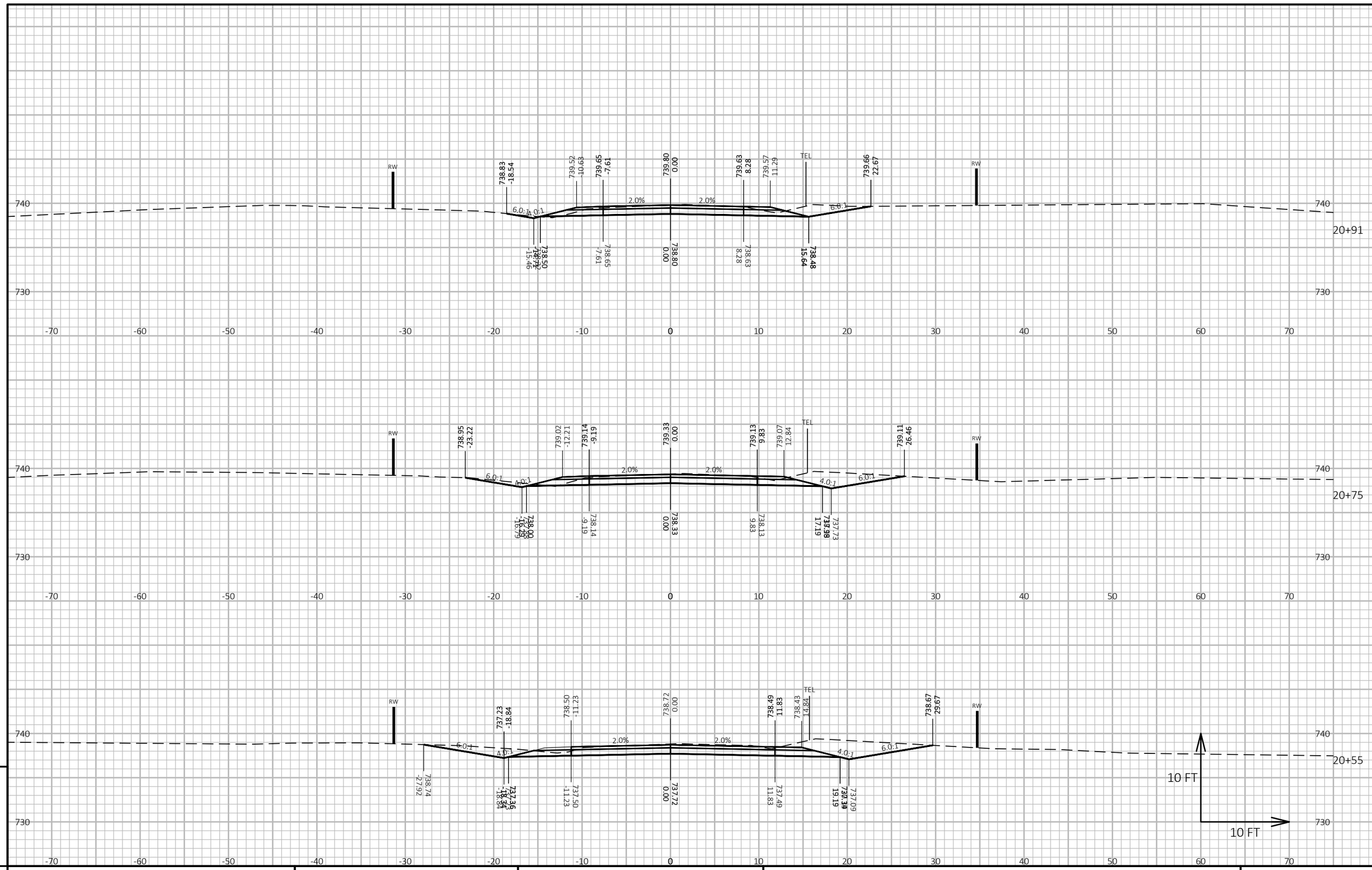
9

| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O SOUTH | SHEET | E |
|---|---|---|---|---|---|



FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D\54190671\SHEETSPLAN\090100_XS.DWG
LAYOUT NAME - CTH O SOUTH 02

PLOT DATE : 11/28/2023 4:03 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.




9

9

| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: SANTA KLAUS LANE | SHEET 158 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D\S4190671\SHEETSPLAN\090100_XS.DWG
LAYOUT NAME - SANTA KLAUS LANE

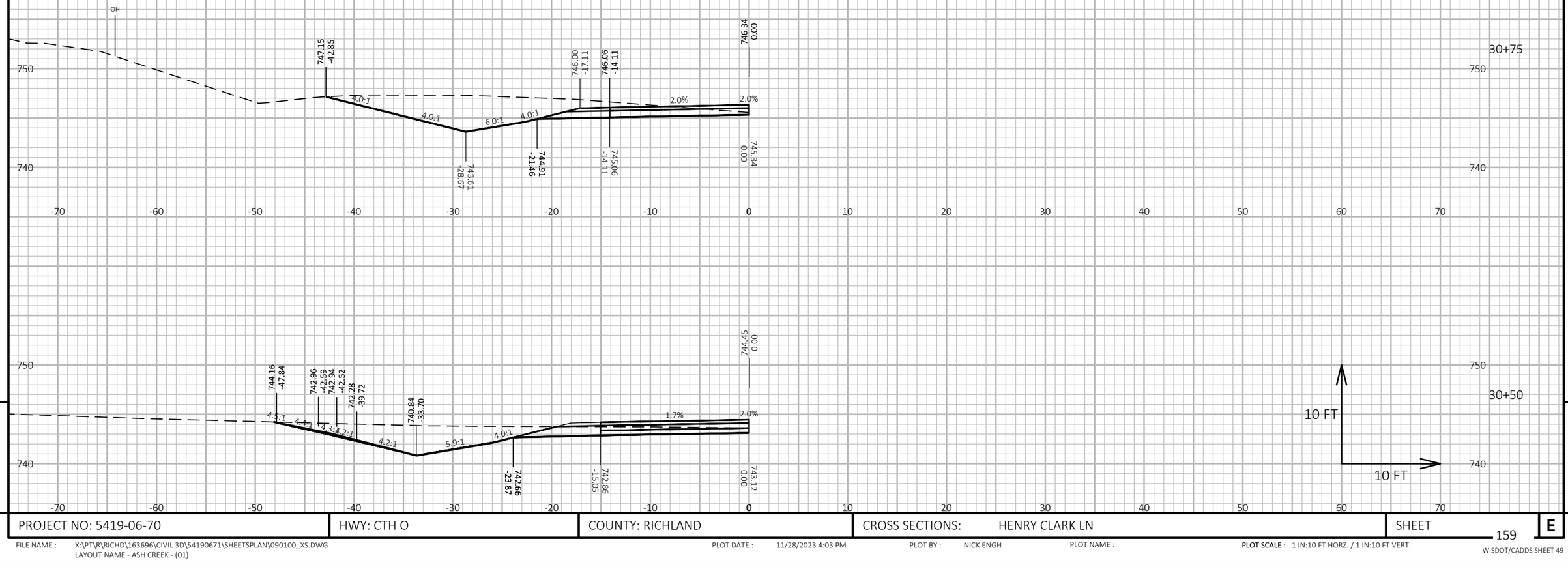
PLOT DATE : 11/28/2023 4:03 PM

PLOT BY : NICK ENGH

PLOT NAME :

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

WISDOT/CADDS SHEET 49




9

9

| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: HENRY CLARK LN | SHEET 159 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D\54190671\SHEETSPLAN\090100_XS.DWG
LAYOUT NAME - ASH CREEK - (01)

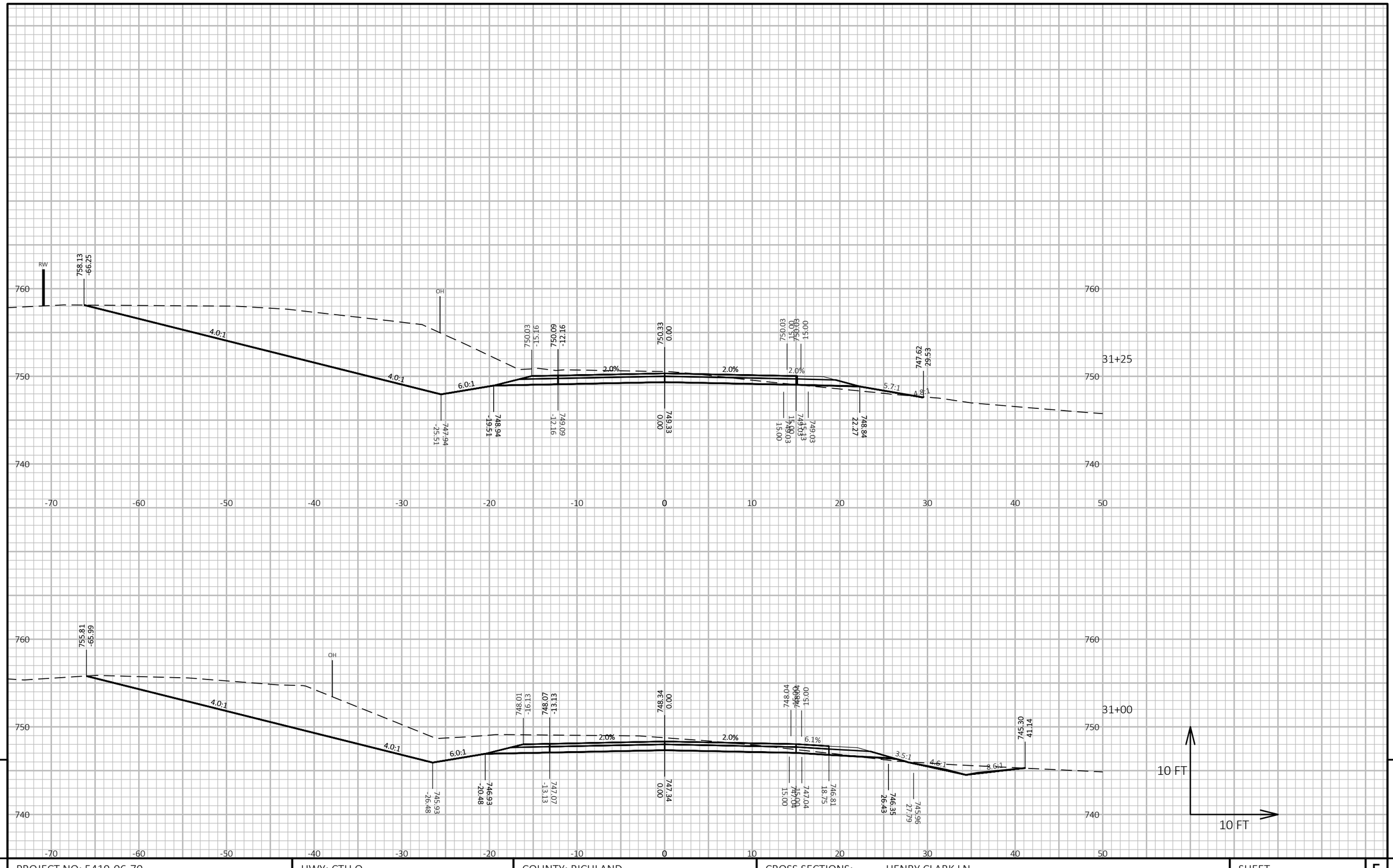
PLOT DATE : 11/28/2023 4:03 PM

PLOT BY : NICK ENGH

PLOT NAME :

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

WISDOT/CADDS SHEET 49




| | | | | |
|---|---|---|---|---|
| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: HENRY CLARK LN | SHEET E |

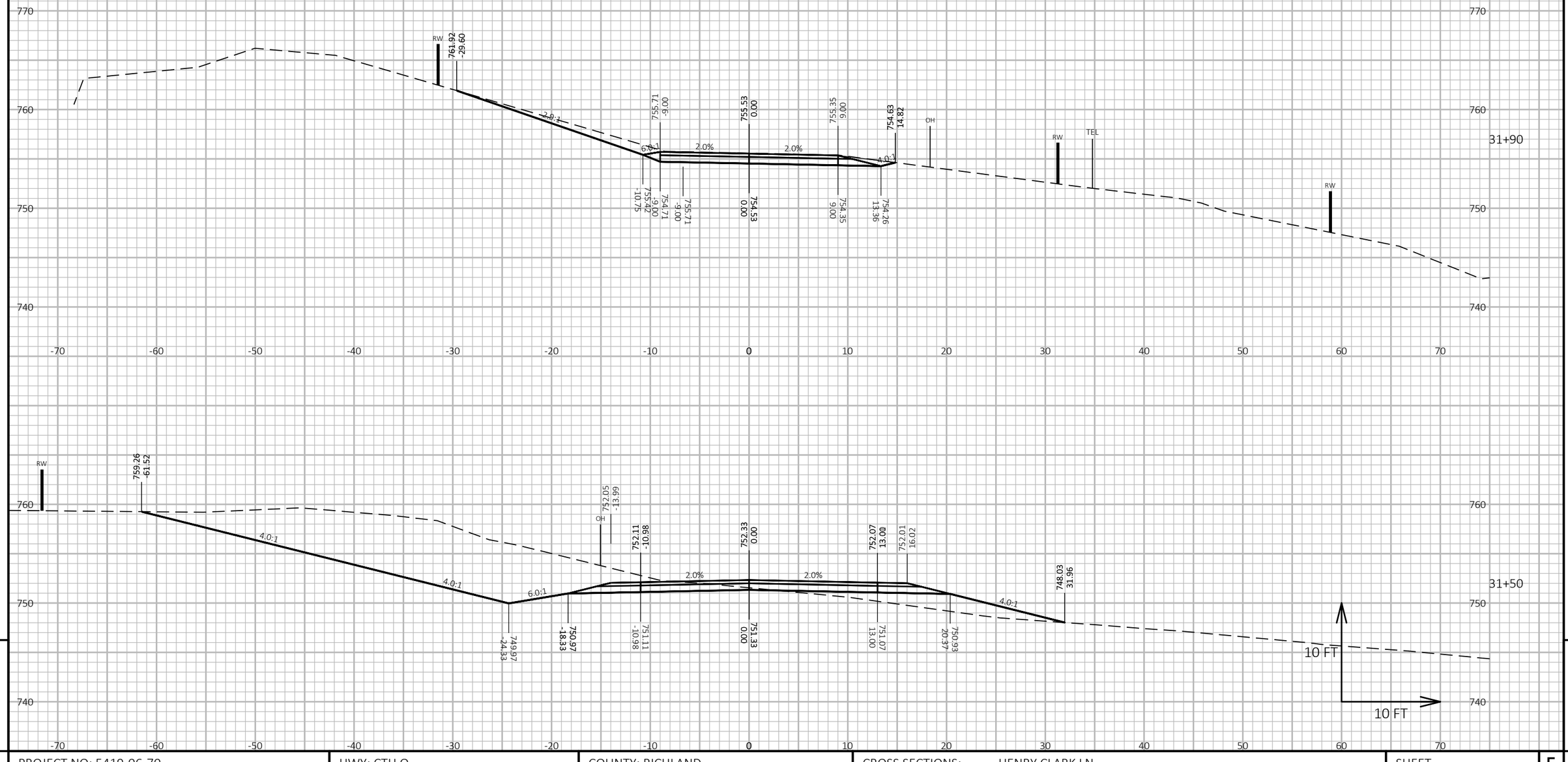
FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D\54190671\SHEETSPLAN\090100_XS.DWG
LAYOUT NAME - ASH CREEK - (02)

PLOT DATE : 11/28/2023 4:03 PM PLOT BY : NICK ENGH PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



WISDOT/CADDS SHEET 49

END CONSTRUCTION
STA 31+90.00



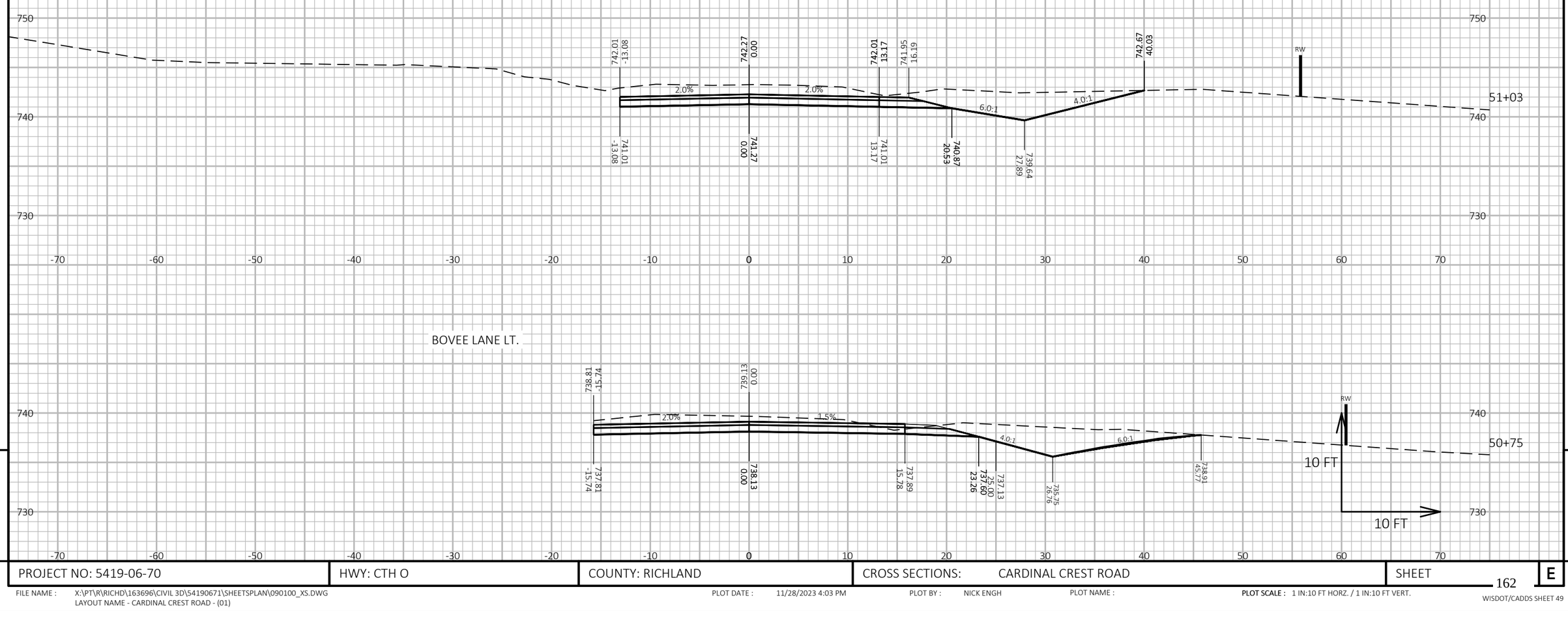

| | | | | |
|---|---|---|---|---|
| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: HENRY CLARK LN | SHEET E |

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D\54190671\SHEETSPLAN\090100_XS.DWG
LAYOUT NAME - ASH CREEK - (03)

PLOT DATE : 11/28/2023 4:03 PM PLOT BY : NICK ENGH PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



WISDOT/CADDS SHEET 49




9

9

| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CARDINAL CREST ROAD | SHEET | E |
|---|---|---|---|---|---|

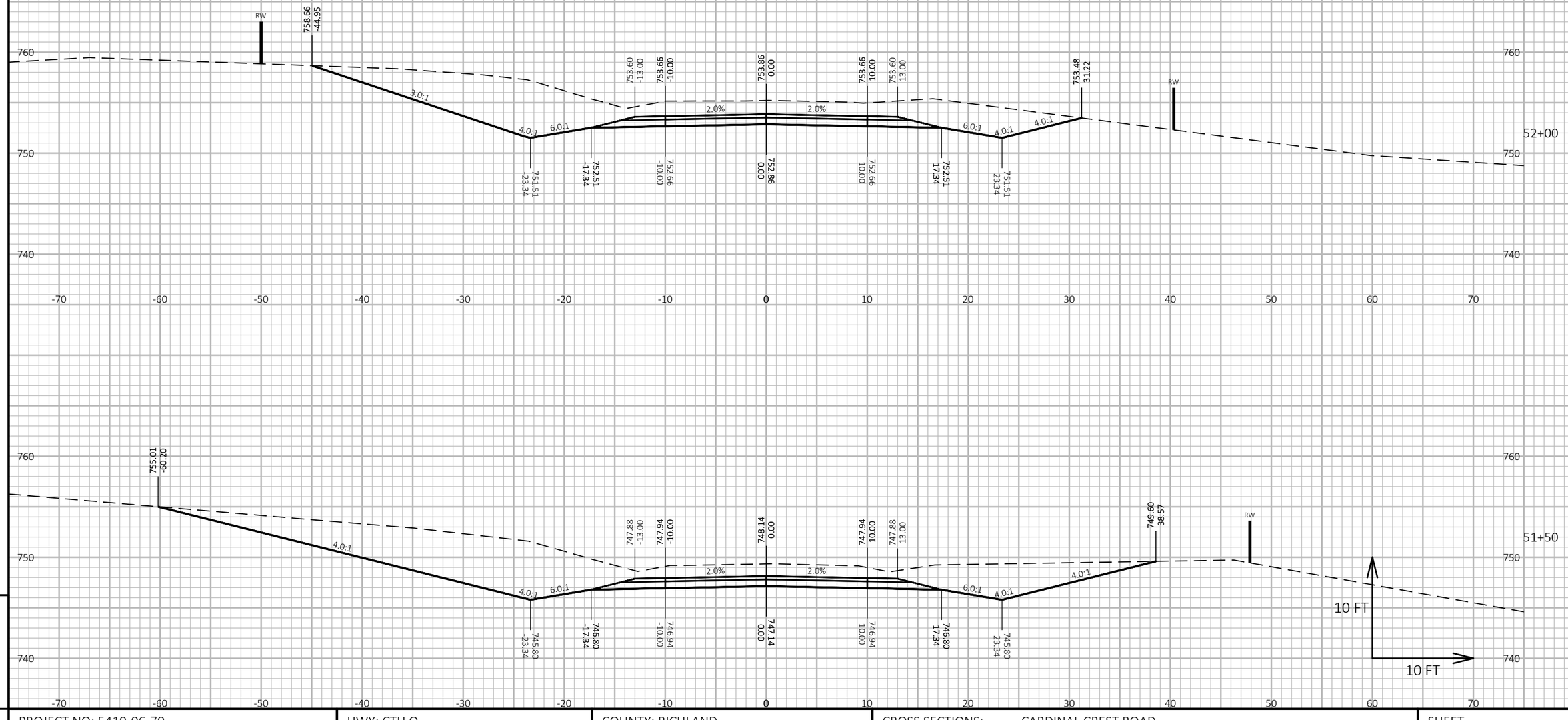


FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D\54190671\SHEETSPLAN\090100_XS.DWG
LAYOUT NAME - CARDINAL CREST ROAD - (01)

PLOT DATE : 11/28/2023 4:03 PM PLOT BY : NICK ENGH PLOT NAME :

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

WISDOT/CADDS SHEET 49




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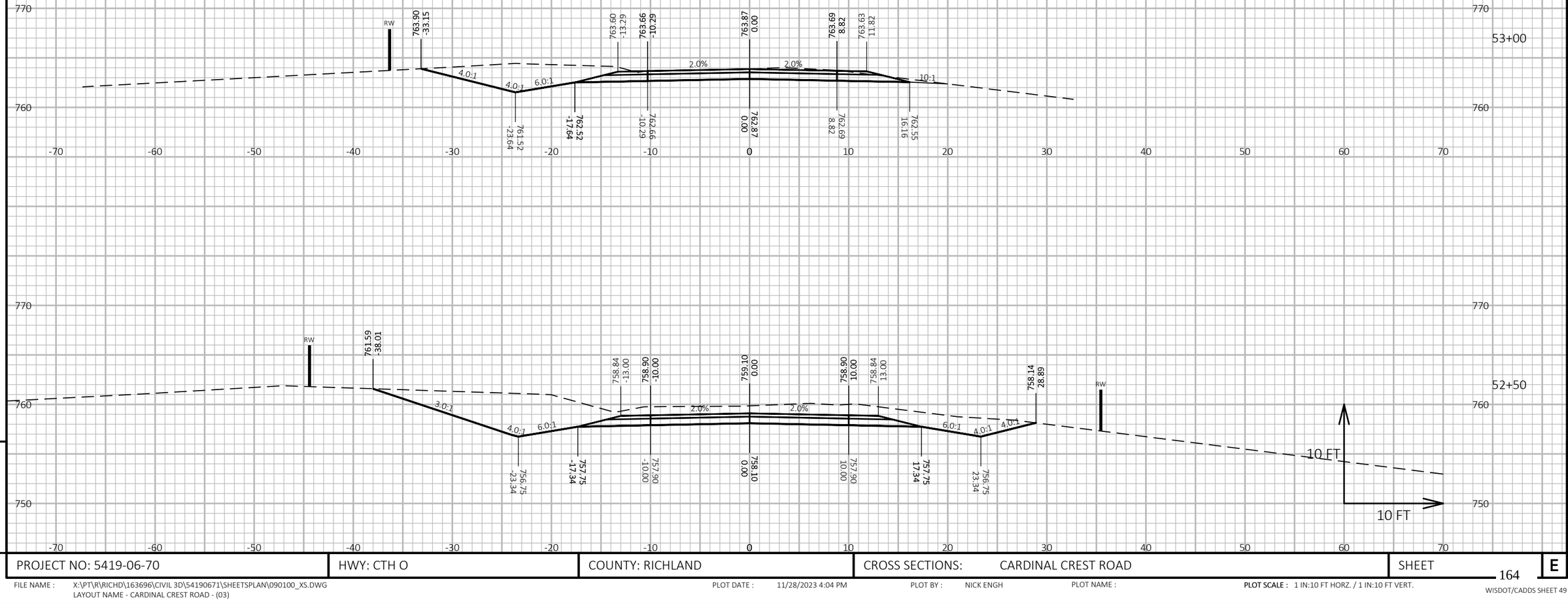
| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CARDINAL CREST ROAD | SHEET | E |
|---|---|---|---|---|---|



FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D\54190671\SHEETSPLAN\090100_XS.DWG
LAYOUT NAME - CARDINAL CREST ROAD - (02)

PLOT DATE : 11/28/2023 4:03 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

END CONSTRUCTION
STA 53+00.00




| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CARDINAL CREST ROAD | SHEET 164 E |
|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D\54190671\SHEETSPLAN\090100_XS.DWG
LAYOUT NAME - CARDINAL CREST ROAD - (03)

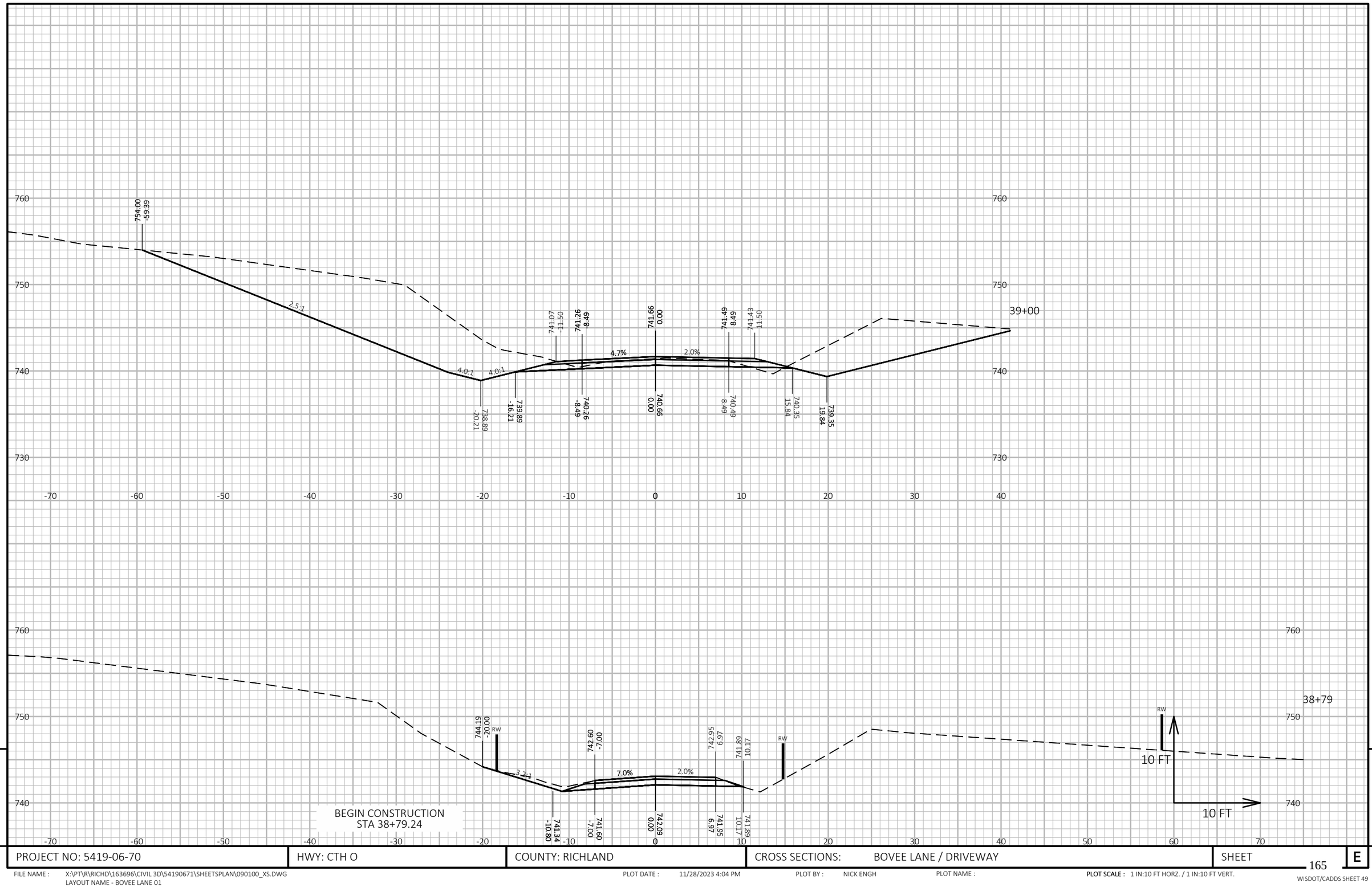
PLOT DATE : 11/28/2023 4:04 PM

PLOT BY : NICK ENGH

PLOT NAME :

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

WISDOT/CADDS SHEET 49




9

9

| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: BOVEE LANE / DRIVEWAY | SHEET | E |
|---|---|---|---|---|---|



FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D\54190671\SHEETSPLAN\090100_XS.DWG
LAYOUT NAME - BOVEE LANE 01

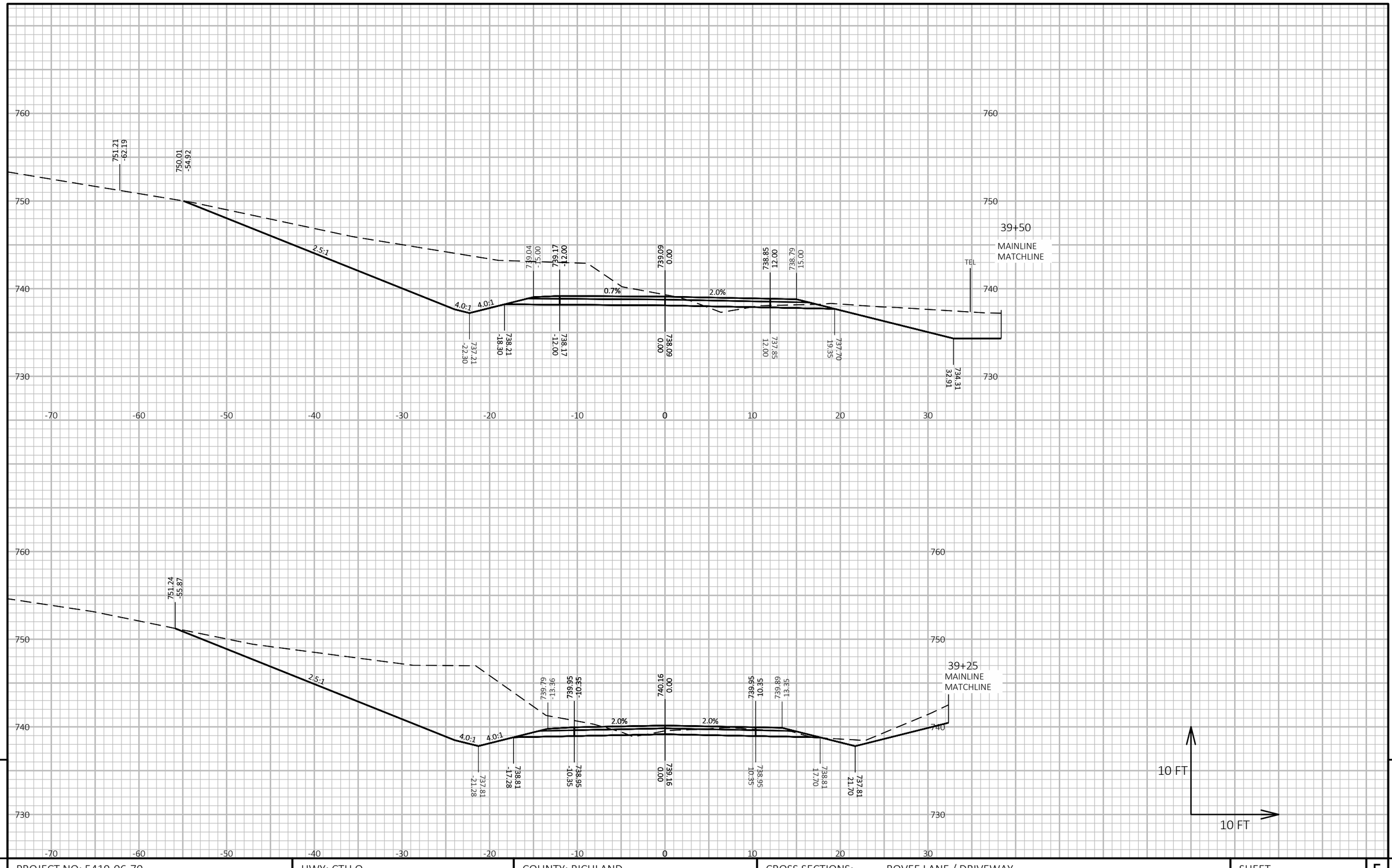
PLOT DATE : 11/28/2023 4:04 PM

PLOT BY : NICK ENGH

PLOT NAME :

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

WISDOT/CADDS SHEET 49




9

9

| PROJECT NO: 5419-06-70 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: BOVEE LANE / DRIVEWAY | SHEET | E |
|---|---|---|---|---|---|



FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D\54190671\SHEETSPLAN\090100_XS.DWG
LAYOUT NAME - BOVEE LANE 02

PLOT DATE : 11/28/2023 4:04 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

Notes

**Wisconsin Department of Transportation**

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov

LAX APRIL 2024

PROJECT ID: 5419-06-73
WITH: 5419-06-70

COUNTY: RICHLAND

ORDER OF SHEETS


Section No. 1 Title
Section No. 2 Typical Sections and Details
Section No. 3 Estimate of Quantities
Section No. 3 Miscellaneous Quantities
Section No. 4 Right of Way Plat
Section No. 5 Plan and Profile (Includes Erosion Control Plans)
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 = 248



03

N

DESIGN DESIGNATION 5419-06-01

| | | | |
|---|---|---|---|
| A.A.D.T. | 2025 | = | 860 |
| A.A.D.T. | 2045 | = | 900 |
| D.H.V. | | = | 112 |
| D.D. | | = | 50% |
| T. | | = | 6.1% ADT |
| DESIGN SPEED | | = | 55 MPH |
| ESALS | | = | 116,800 |

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 (300'EB')
- 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) (ROCK)
- SPECIAL DITCH (LABEL)
- GRADE ELEVATION (95.36)
- CULVERT (Profile View)

UTILITIES
- ELECTRIC (E)
- OVERHEAD UTILITY (OH)
- FIBER OPTIC (FO)
- GAS (G)
- SANITARY SEWER (SAN)
- STORM SEWER (SS)
- TELEPHONE (T)
- WATER (W)
- UTILITY PEDESTAL
- POWER POLE
- TELEPHONE POLE

# STATE OF WISCONSIN
# DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

# STH 80 - RICHLAND CENTER

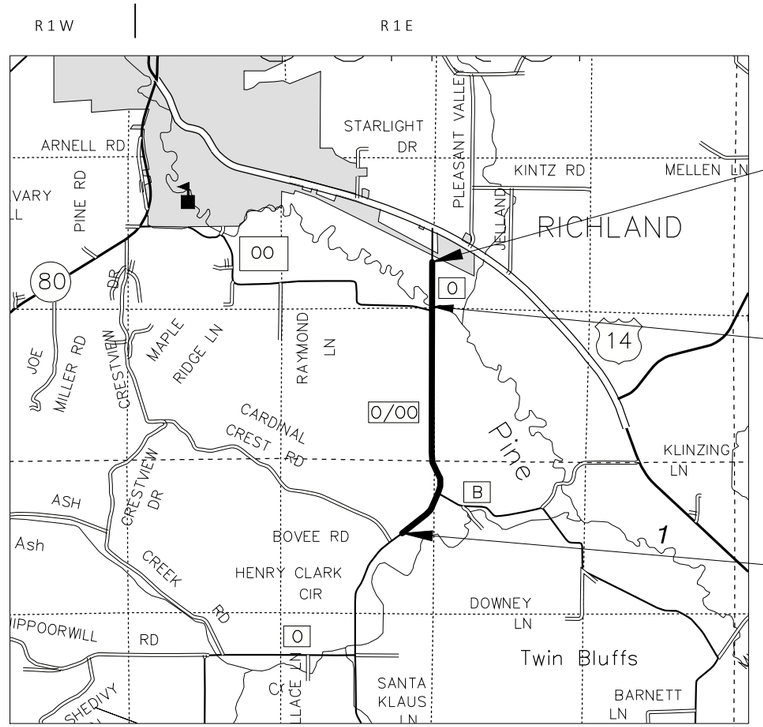
**CARDINAL CREST ROAD TO USH 14**

## CTH O

RICHLAND COUNTY

| STATE PROJECT | FEDERAL PROJECT | |
|---|---|---|
| | PROJECT | CONTRACT |
| 5419-06-73 | WISC 2024313 | 1 |
| | | |
| | | |
| | | |

STATE PROJECT NUMBER
5419-06-73




END PROJECT
STA 657+15.00'O'

EXCEPTION TO NET CENTERLINE LENGTH
STA 639+76.00'O' TO STA 640+97.40'O'
STR B-52-137

BEGIN PROJECT
STA 552+00.00'O'
Y = 427060.134
X = 683989.718

LAYOUT
SCALE 0 1 MILE

TOTAL NET LENGTH OF CENTERLINE = 1.99 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), RICHLAND COUNTY NAD83 ( 1991 ), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES.

ELEVATIONS ARE REFERENCED TO NAVD 88.

ACCEPTED FOR
COUNTY of RICHLAND
Joshua Elder
11/30/2023 Highway Commissioner
(Date) (Signature & Title of Official)

ORIGINAL PLANS PREPARED BY
SEH
WISCONSIN JARROD S. STARREN 38465 EAU CLAIRE, WI PROFESSIONAL ENGINEER
11/28/2023
(Date) (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY
- Surveyor: SEH
- Designer: SEH
- Project Manager: VALERIE GUIDER, PE
- Regional Examiner: REGIONAL EXAMINER
- Regional Supervisor: KYLE HEMP , PE

APPROVED FOR THE DEPARTMENT
DATE: 11/30/2023
(Signature)

E

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\010101_TI.DWG
LAYOUT NAME - 010101_TI - 010101-TI

PLOT DATE : 11/28/2023 12:05 PM PLOT BY : JARROD STARREN PLOT NAME :

WHEN THE QUANTITY OF BASE AGGREGATE OR ASPHALTIC SURFACE IS MEASURED FOR PAYMENT BY THE TON OR CUBIC YARD, 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.

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.

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

THE EXACT LOCATION OF THE EROSION CONTROL DEVICES SHALL BE DETERMINED IN THE FIELD, AS DIRECTED BY THE ENGINEER.

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, ARE TO BE 4-INCH SALVAGED TOPSOILED, FERTILIZED, AND SEEDED AND MULCHED. FINISHED SEEDED SURFACE SHALL BE 1-INCH BELOW THE TOP OF ADJACENT CONCRETE, AS DIRECTED BY THE ENGINEER.

BEARINGS SHOWN ON THE PLANS ARE GROUND BEARINGS TO THE NEAREST SECOND.

THE LOCATION OF ALL DRIVEWAYS WILL BE DETERMINED BY THE ENGINEER.

ALL CURB AND GUTTER RADII, PAVEMENT DIMENSIONS AND STATIONS ARE SHOWN TO THE EDGE OF PAVEMENT UNLESS NOTED OTHERWISE.

ALL SIDE ROAD EARTHWORK QUANTITIES ARE INCLUDED IN MAINLINE EARTHWORK QUANTITIES.

A VERTICAL SAWCUT SHALL BE MADE THROUGH EXISTING DRIVEWAYS AND PAVEMENTS AT REMOVAL LIMITS.

ALL STORM SEWER INVERTS, ELEVATIONS, PIPE LENGTHS, AND GRADES ARE COMPUTED CENTER-TO-CENTER OF STRUCTURES.

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

ASPHALTIC SURFACE/HMA PAVEMENT SHALL BE CONSTRUCTED WITH THE FOLLOWING LAYER THICKNESSES:

| PAVEMENT THICKNESS (INCH) | LOWER (INCH) | NOM AGG SIZE (MM) | MIDDLE (INCH) | NOM AGG SIZE (MM) | UPPER (INCH) | NOM AGG SIZE (MM) |
|---|---|---|---|---|---|---|
| 4 | 2.25 | --- | --- | --- | 1.75 | --- |

EXISTING PIPE CULVERT AND/OR CONCRETE BOX CULVERT SIZES SHOWN ARE APPROXIMATE AND THE CONTRACTOR SHALL BASE ITS BID ON ACTUAL FIELD CONDITIONS.

WETLANDS ARE PRESENT AT:
STA 553+75 TO STA 555+50 LT AND RT
STA 639+50 TO STA 652+00 LT AND RT

DO NOT OPERATE MACHINERY OUTSIDE OF THE SLOPE INTERCEPTS IN THESE AREAS.

## UTILITY CONTACTS

ALLIANT ENERGY - ELECTRIC
900 PRAIRIE DRIVE
SPRING GREEN, WI 53588
TELEPHONE: 608.844.9605
ATTENTION: PAT MCINTYRE
EMAIL: PATRICKMCINTYRE@ALLIANTENERGY.COM

CHARTER COMMUNICATIONS - COMLN
315 KING STREET
DODGEVILLE, WI 53556
OFFICE: 608.219.1321
ATTENTION: NEIL HUNTAMER
EMAIL: NEIL.HUNTAMER@CHARTER.COM

CITY OF RICHLAND CENTER - ELECTRIC
PO BOX 312
450 S MAIN STREET
RICHLAND CENTER, WI 53581
TELEPHONE: 608.604.6456
ATTENTION: SCOTT GALD
EMAIL: SGALD@CITYUTILITIESOFRC.COM

CITY OF RICHLAND CENTER - SANITARY SEWER
PO BOX 312
450 S MAIN STREET
RICHLAND CENTER, WI 53581
TELEPHONE: 608.604.4917
ATTENTION: TODD FISCHER
EMAIL: RCWWKC@MWT.NET

FRONTIER COMMUNICATIONS - COMLN
451 BROADWAY DRIVE
SUN PRAIRIE, WI 53590
TELEPHONE: 608.622.3807
ATTENTION: CHRIS BLUMER
EMAIL: CHRISTOPHER.BLUMER@FTR.COM

GENUINE TELECOM - COMLN
430 W UNION STREET
RICHLAND CENTER, WI 53581
TELEPHONE: 608.604.6062
ATTENTION: BRANDON KINNEY
EMAIL: BKINNEY@GENUINETEL.COM

RICHLAND ELECTRIC COOPERATIVE - ELECTRIC
PO BOX 439RICHLAND CENTER, WI 53581
TELEPHONE: 608.647.3173
CELL#: 608.475.2444
ATTENTION: CURT BROCKWAY
EMAIL: CBROCKWAY@REC.COOP

WE ENERGIES - GAS
210 NORTH 29th AVENUE
MONROE, WI 53566
TELEPHONE: 608.328.5679
CELL#: 608.426.1715
ATTENTION: ADAM MARING
EMAIL: ADAM.MARING@WE-ENERGIES.COM

## DESIGN CONTACT

SEH INC
10 NORTH BRIDGE STREET
CHIPPEWA FALLS, WI 54729
TELEPHONE: 715.720.6261
ATTENTION: JARROD STARREN
EMAIL: JSTARREN@SEHINC.COM

RICHLAND COUNTY
RICHLAND COUNTY HWY DEPARTMENT
120 BOWEN CIRCLE
RICHLAND CENTER, WI 53581
OFFICE: 608.647.4707
SHOP#: 608.604.7624
ATTENTION: JOSH ELDER
EMAIL: JOSH.ELDER@CO.RICHLAND.WI.US

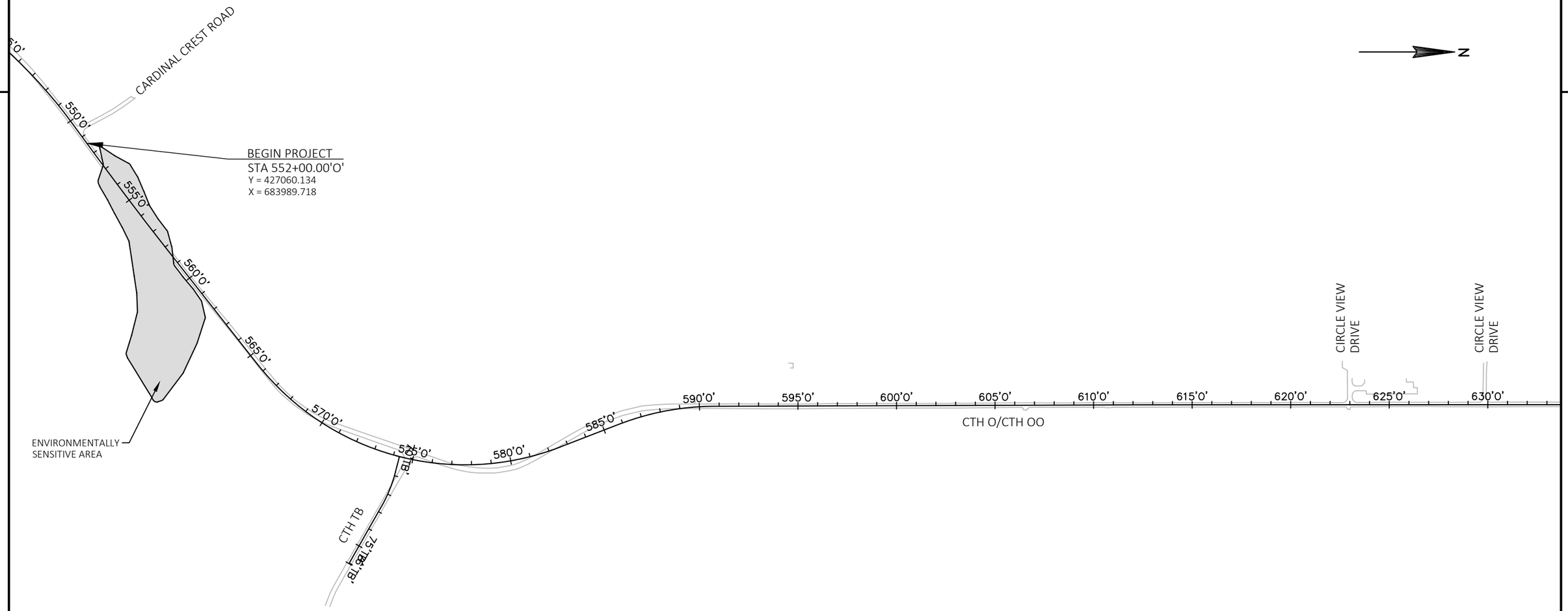
## DNR CONTACT

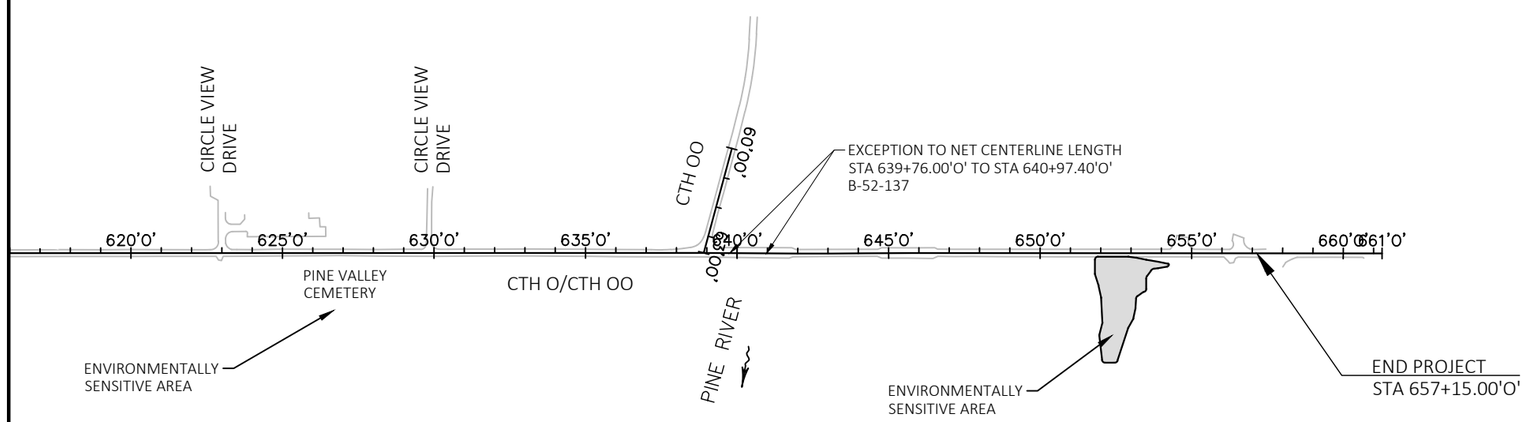
DNR SOUTH CENTRAL REGION
3911 FISH HATCHERY ROAD
FITCHBURG, WI 53711
TELEPHONE: 608.275.3008
ATTENTION: ANDREW BARTA
EMAIL: ANDREW.BARTA@WISCONSIN.GOV

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

## ORDER OF SECTION NO 2 SHEETS

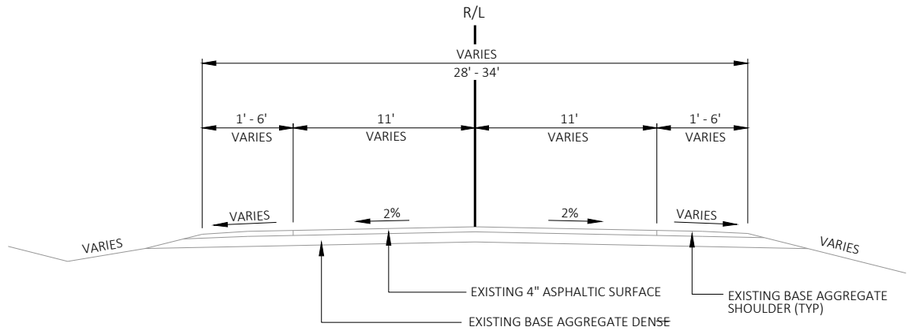
TYPICAL SECTIONS
CONSTRUCTION DETAILS
INTERSECTION DETAILS
EROSION CONTROL
PERMANENT SIGNING & PAVEMENT MARKING
TRAFFIC CONTROL AND CONSTRUCTION STAGING
ALIGNMENT DETAIL



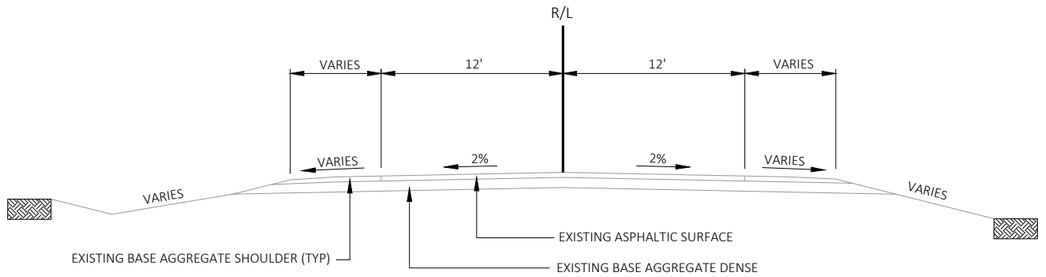

| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | PROJECT OVERVIEW | SHEET 3 | E |
|---|---|---|---|---|---|

2



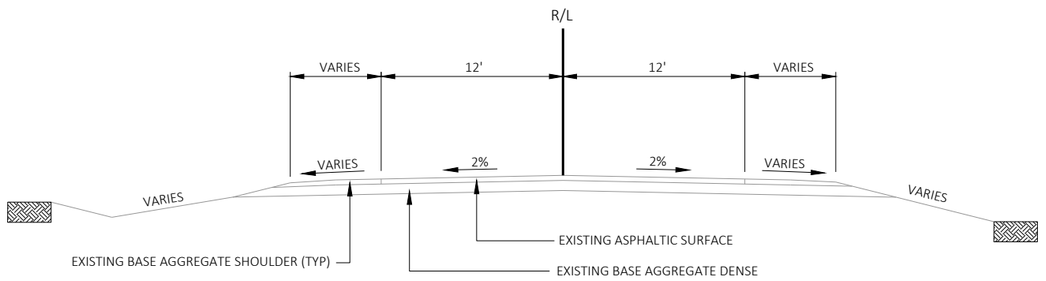

TYPICAL EXISTING SECTION

CTH O
STA 552+00.00'O' TO STA 657+15.00'O'




TYPICAL EXISTING SECTION

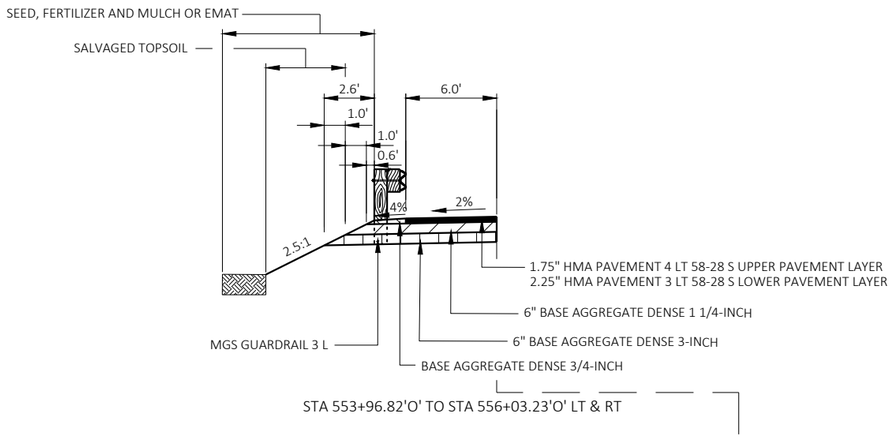
CTH TB
STA 70+00.00'TB' TO STA 75+50.00'TB'




TYPICAL EXISTING SECTION

CTH OO
STA 61+47.25'OO' TO STA 63+56.70'OO'

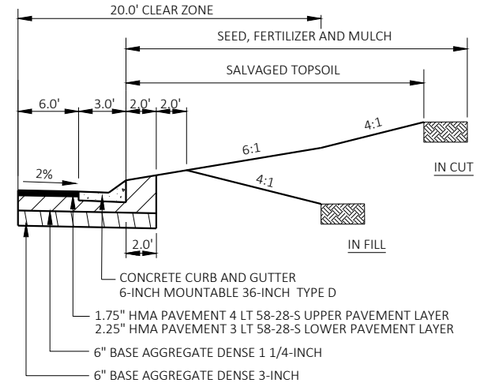
| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | TYPICAL SECTIONS | SHEET 4 | E |
|---|---|---|---|---|---|




STA 553+96.82'O' TO STA 556+03.23'O' LT & RT

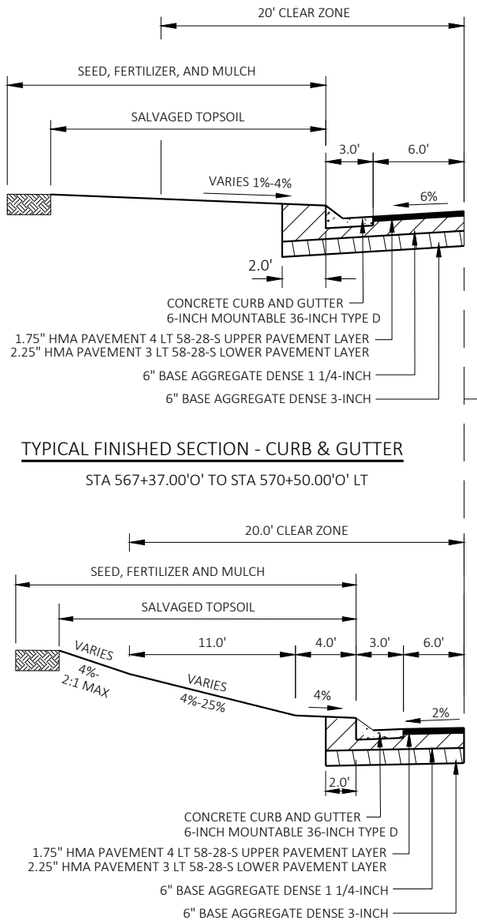
| Superelevation Curve | Station | Description | Left Shlder | Left Lane | Right Shlder | Right Lane |
|---|---|---|---|---|---|---|
| 3 | 550+42.74' | Reverse Crown | 2.00% | 2.00% | -2.00% | -2.00% |
| 3 | 550+96.21' | Level Crown | 0.00% | 0.00% | -2.00% | -2.00% |
| 3 | 551+49.68' | Begin Normal Crown | -2.00% | -2.00% | -2.00% | -2.00% |
| 3 | 551+49.68' | Begin Normal Shoulder | 4.00% | 2.00% | 4.00% | 2.00% |
| 7 | 563+95.28' | End Normal Shoulder | -4.00% | -2.00% | -4.00% | -2.00% |
| 7 | 563+95.28' | End Normal Crown | 2.00% | 2.00% | 2.00% | 2.00% |
| 7 | 564+48.61' | Level Crown | -2.00% | -2.00% | 0.00% | 0.00% |
| 7 | 565+01.94' | Reverse Crown | -2.00% | -2.00% | 2.00% | 2.00% |
| 7 | 566+08.61' | Begin Full Super | -6.00% | -6.00% | 6.00% | 6.00% |
| 7 | 582+06.18' | End Full Super | -6.00% | -6.00% | 6.00% | 6.00% |
| 7 | 583+12.84' | Reverse Crown | -2.00% | -2.00% | 2.00% | 2.00% |
| 7 | 583+66.18' | Level Crown | -2.00% | -2.00% | 0.00% | 0.00% |
| 7 | 584+19.51' | Begin Normal Crown | -2.00% | -2.00% | -2.00% | -2.00% |
| 7 | 584+19.51' | Begin Normal Shoulder | -4.00% | -2.00% | -4.00% | -2.00% |
| 9 | 584+24.53' | End Normal Shoulder | -4.00% | -2.00% | -4.00% | -2.00% |
| 9 | 584+24.53' | End Normal Crown | -2.00% | -2.00% | -2.00% | -2.00% |
| 9 | 584+77.87' | Level Crown | 0.00% | 0.00% | -2.00% | -2.00% |
| 9 | 585+31.20' | Reverse Crown | 2.00% | 2.00% | 2.00% | 2.00% |
| 9 | 586+37.87' | Begin Full Super | 6.00% | 6.00% | -6.00% | -6.00% |
| 9 | 590+20.15' | End Full Super | 6.00% | 6.00% | 6.00% | 6.00% |
| 9 | 591+26.82' | Reverse Crown | 2.00% | 2.00% | -2.00% | -2.00% |
| 9 | 591+80.15' | Level Crown | 0.00% | 0.00% | -2.00% | -2.00% |
| 9 | 592+33.48' | Begin Normal Crown | -2.00% | -2.00% | -2.00% | -2.00% |
| 9 | 592+33.48' | Begin Normal Shoulder | -4.00% | -2.00% | -4.00% | -2.00% |
| | 661+27.98' | End Alignment | -4.00% | -2.00% | -4.00% | -2.00% |

Design Speed = 60 mph
Normal Crown Superelevation Rate = 2 %
Normal Shoulder Crown Superelevation Rate = 4 %




TYPICAL FINISHED SECTION - CURB & GUTTER

STA 610+48.00'O' TO STA 615+00.00'O' RT



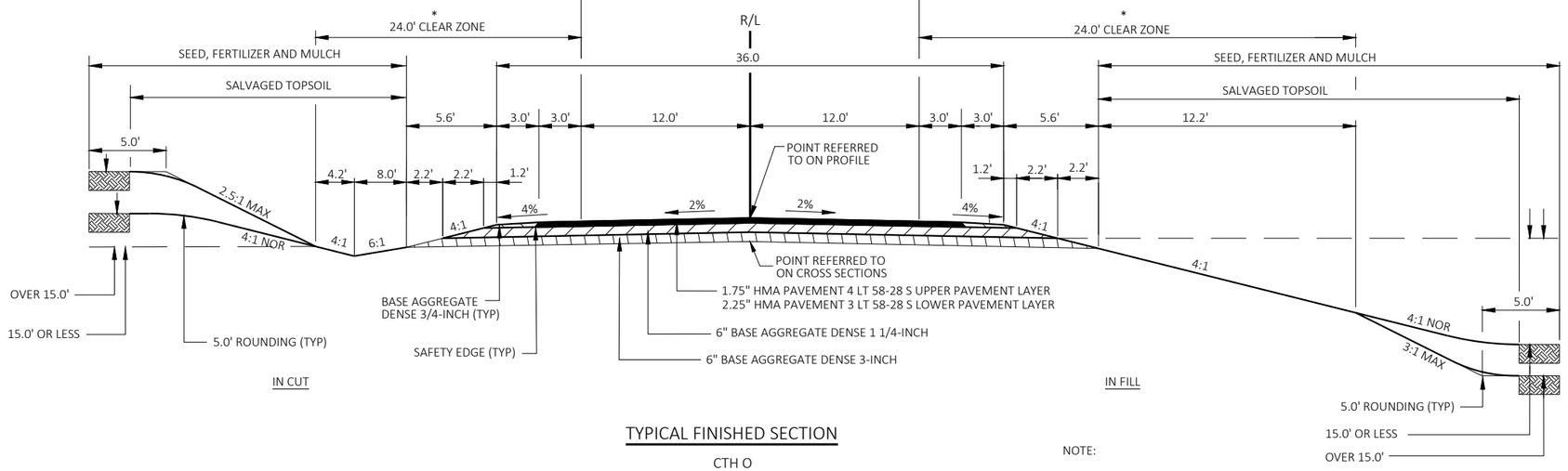

TYPICAL FINISHED SECTION - CURB & GUTTER

STA 567+37.00'O' TO STA 570+50.00'O' LT




TYPICAL FINISHED SECTION - CURB & GUTTER

STA 558+00.00'O' TO STA 562+70.00'O' LT

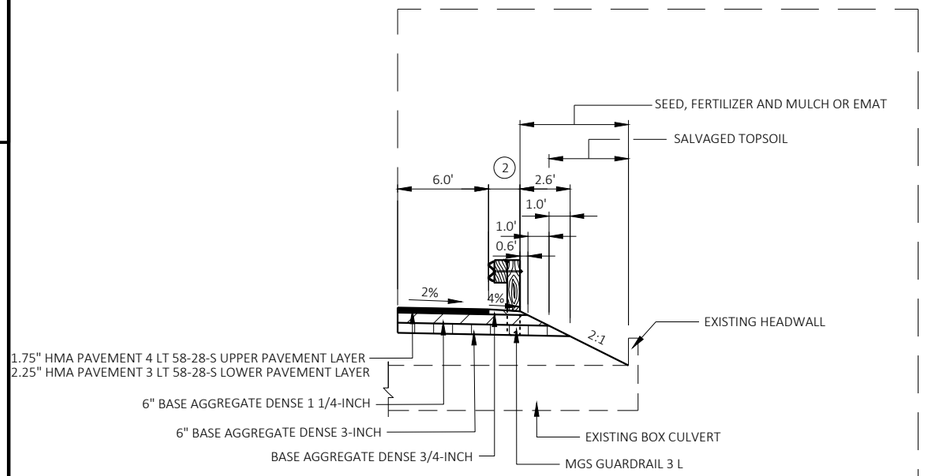



TYPICAL FINISHED SECTION

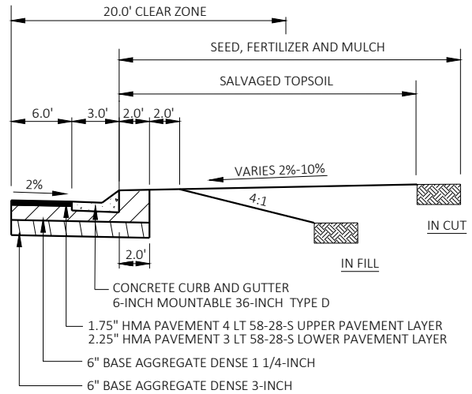
CTH O
STA 552+00.00'O' TO STA 623+00.00'O'

NOTE:

* 20.0' CLEAR ZONE MINIMUM
STA 552+00.00'O' TO STA 564+00.00'O' LT/RT
STA 558+00.00'O' TO STA 562+00.00'O' LT
STA 567+38.00'O' TO STA 570+50.00'O' LT
STA 610+48.00'O' TO STA 615+00.00'O' RT

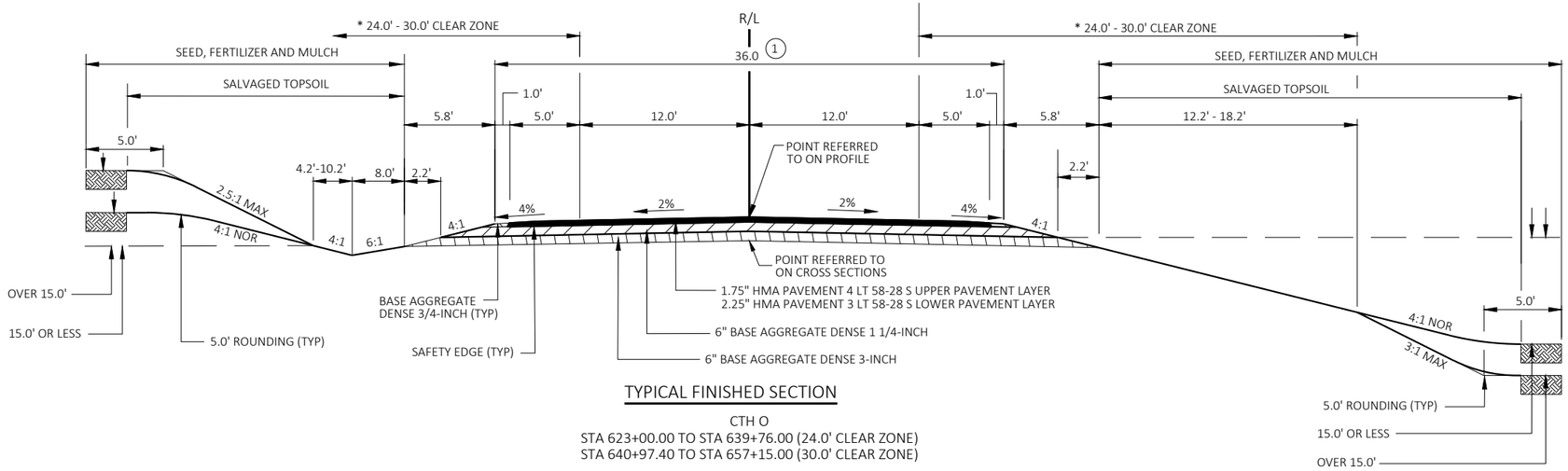



STA 645+50.00'O' TO STA 645+75.00'O' LT & RT




TYPICAL FINISHED SECTION - CURB & GUTTER

STA 625+50.00'O' TO STA 627+50.00'O' RT




TYPICAL FINISHED SECTION

CTH O

STA 623+00.00 TO STA 639+76.00 (24.0' CLEAR ZONE)

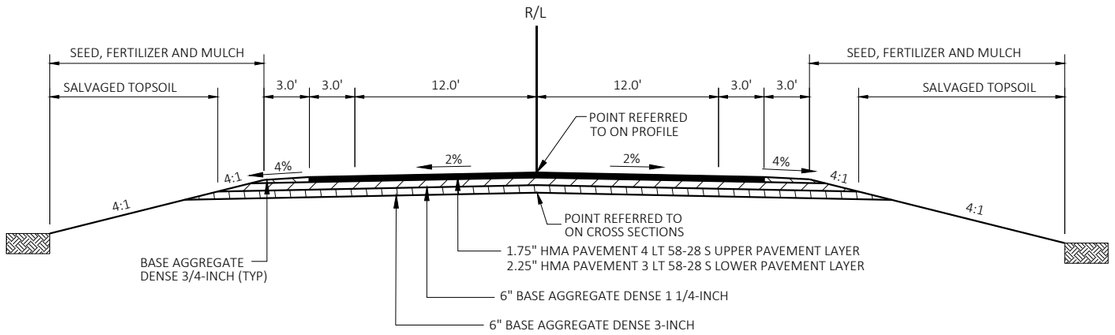
STA 640+97.40 TO STA 657+15.00 (30.0' CLEAR ZONE)

NOTE:

1. WIDTH VARIES 19' LT AND 15' RT ACROSS STRUCTURE B-52-137.
2. REDUCE SHOULDER FROM 4' TO 2' OVER EXISTING BOX CULVERT. SHOULDER VARIES FROM 4' TO 2' FROM:
   STA 645+00'O' TO STA 645+50'O'
   STA 645+75'O' TO STA

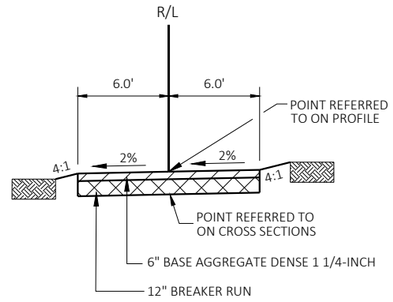
* 20.0' CLEAR ZONE MINIMUM
STA 625+50.00'O' TO STA 627+50.00'O' RT
STA 651+75.00'O' TO STA 654+25.00'O' RT

| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | TYPICAL SECTIONS | SHEET 6 | E |
|---|---|---|---|---|---|



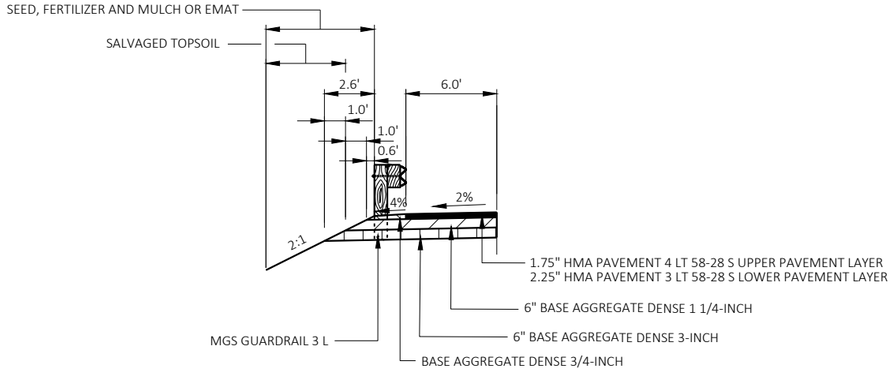

TYPICAL FINISHED SECTION

CTH TB
STA 70+00.00'TB' TO STA 75+50.00'TB'

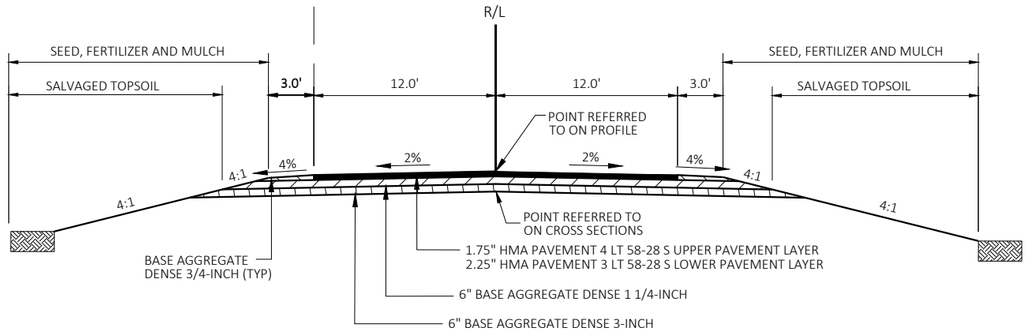



TYPICAL FINISHED SECTION

DRIVEWAY
STA 595+03 TO STA 598+50



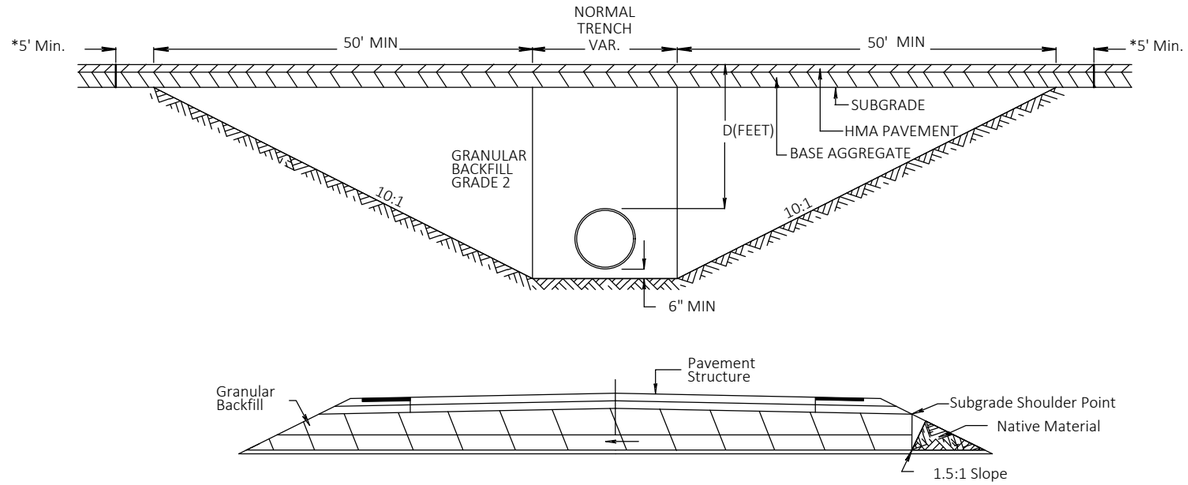

STA 62+04.59'OO' TO STA 62+67.05'OO' LT




TYPICAL FINISHED SECTION

CTH OO
STA 61+47.25'OO' TO STA 63+56.70'OO'

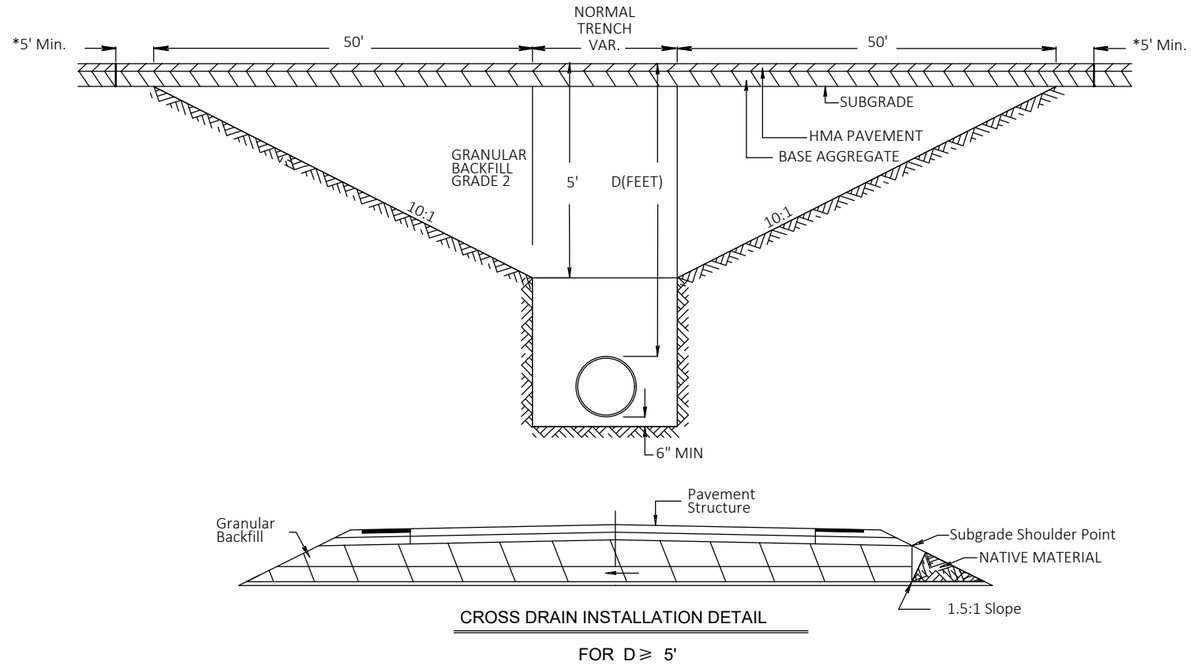
| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | TYPICAL SECTIONS | SHEET 7 | E |
|---|---|---|---|---|---|




CROSS DRAIN INSTALLATION DETAIL

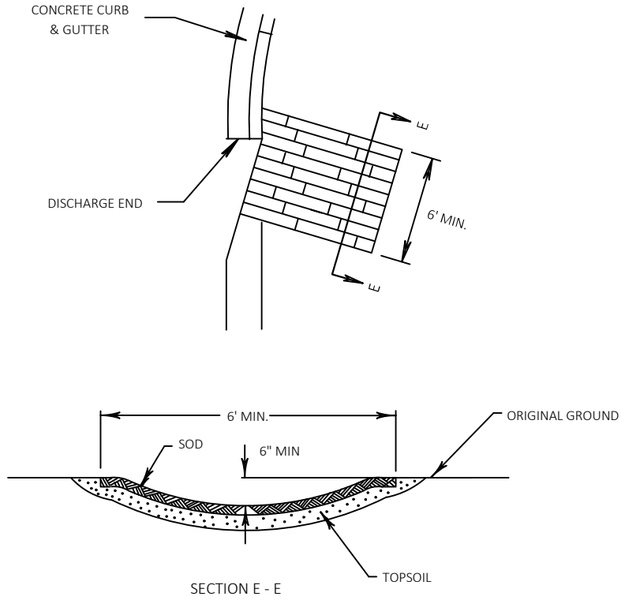
FOR D ≤ 5'

* Pavement Removal Limits (Typical)

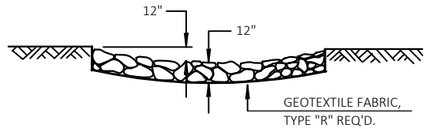



CROSS DRAIN INSTALLATION DETAIL

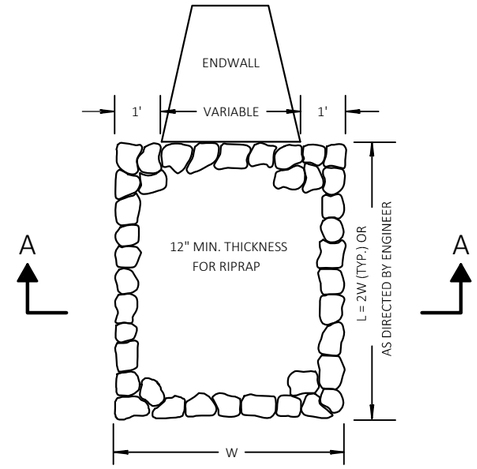
FOR D ≥ 5'



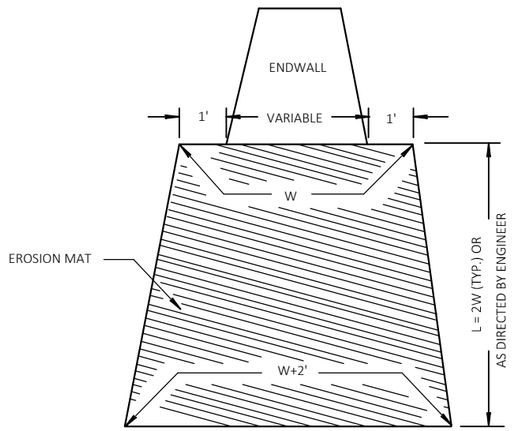

SOD FLUME DETAIL AT CURB ENDS




SECTION A-A




RIPRAP TREATMENT AT CULVERTS



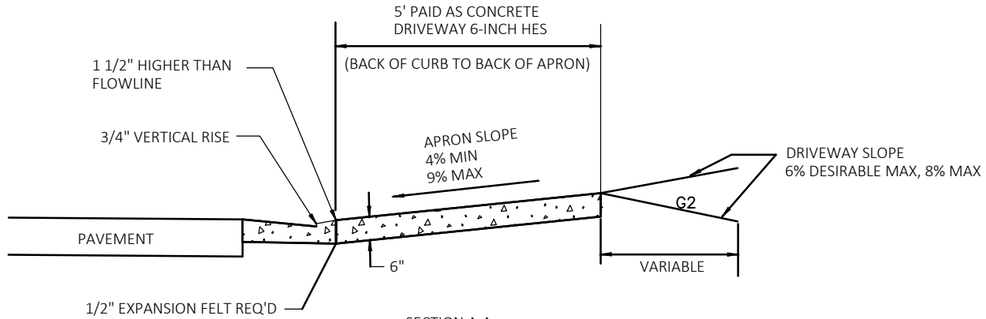

EROSION MAT TREATMENT AT CULVERTS

## RUNOFF COEFFICIENT TABLE

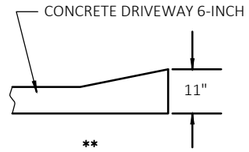
| | HYDROLOGIC SOIL GROUP | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | | | B | | | C | | | D | | |
| | SLOPE RANGE (PERCENT) | | | SLOPE RANGE (PERCENT) | | | SLOPE RANGE (PERCENT) | | | SLOPE RANGE (PERCENT) | | |
| LAND USE: | 0-2 | 2-6 | 6 & OVER | 0-2 | 2-6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

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

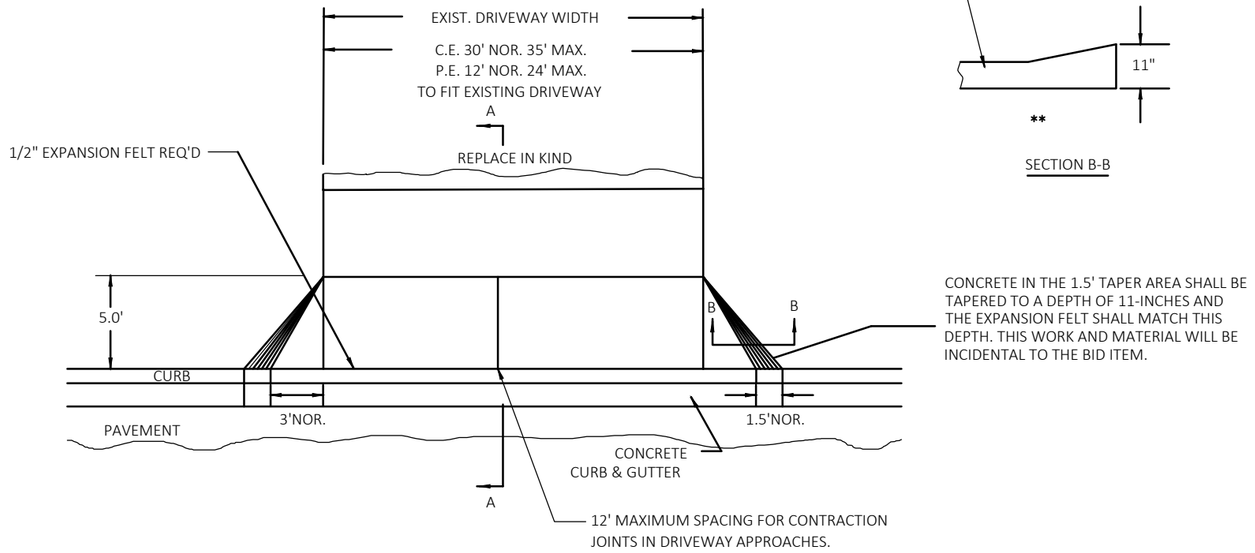
2




SECTION A-A



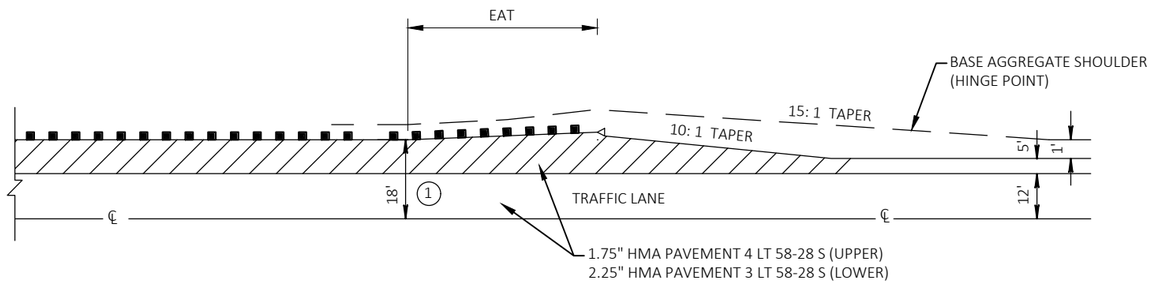

SECTION B-B




CONCRETE IN THE 1.5' TAPER AREA SHALL BE TAPERED TO A DEPTH OF 11-INCHES AND THE EXPANSION FELT SHALL MATCH THIS DEPTH. THIS WORK AND MATERIAL WILL BE INCIDENTAL TO THE BID ITEM.

PLAN VIEW

## DRIVEWAY ENTRANCE DETAIL WITH CURB & GUTTER

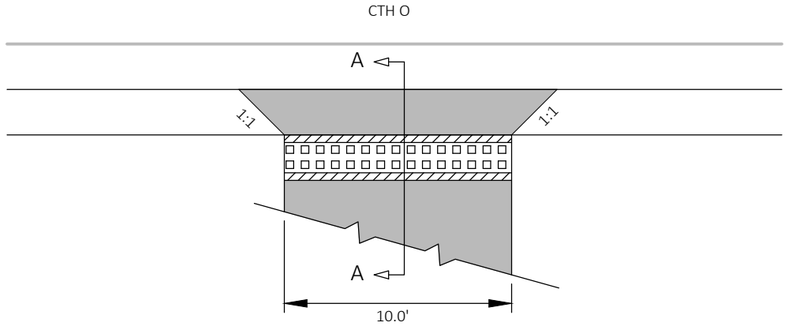



## PAVING ALONG BEAM GUARD

NOTE:

(1) WIDTH VARIES 15' TO 18' SEE PAVING DETAIL FOR WIDTHS.

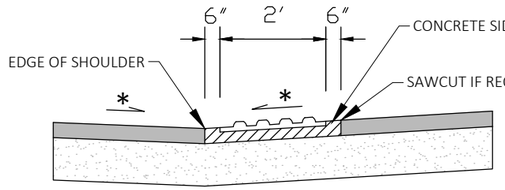
| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CONSTRUCTION DETAILS | SHEET 10 | E |
|---|---|---|---|---|---|




LANE EDGE

EDGE OF PAVED SHOULDER

EDGE OF GRAVEL SHOULDER




SECTION A-A

DETECTABLE WARNING FIELD IN CONCRETE SIDEWALK

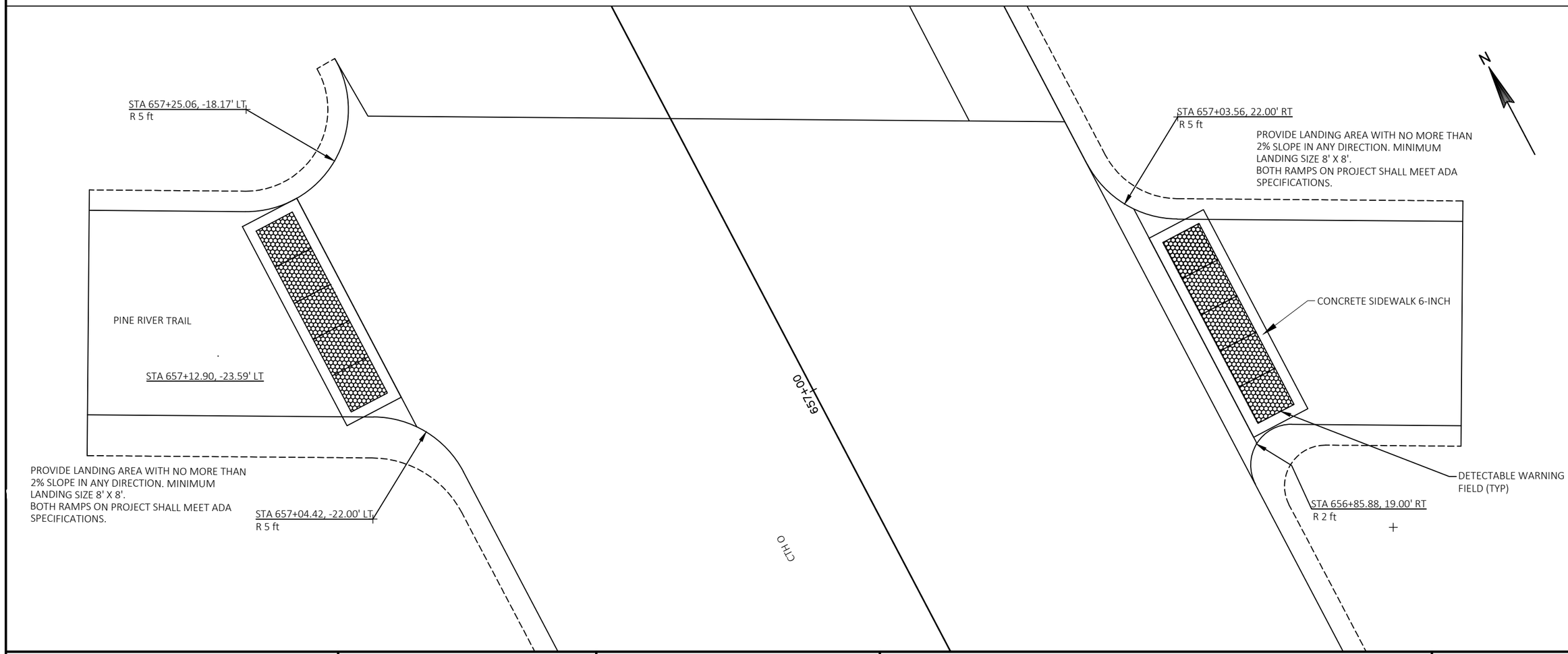
HMA PAVEMENT WIDENING 4-INCHES

SHARED-USE PATH

BASE AGGREGATE DENSE

* ROLLOVER CANNOT EXCEED 11% BETWEEN SHARED-USE PATH AND PAVED SHOULER

## PINE RIVER TRAIL CROSSING WITH DETECTABLE WARNING FIELD




| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CONSTRUCTION DETAILS | SHEET 11 | E |
|---|---|---|---|---|---|

2

| ELEVATION TABLE | | | |
|---|---|---|---|
| POINT | STATION | OFFSET | ELEVATION |
| A | 70+22.11 'TB' | 71.8' RT | 735.99 |
| B | 70+27.56 'TB' | 49.8' RT | 736.07 |
| C | 70+40.79 'TB' | 31.4' RT | 735.95 |
| D | 70+59.91 'TB' | 19.2' RT | 736.00 |
| E | 70+82.24 'TB' | 15.0' RT | 736.17 |
| F | 70+62.92 'TB' | 15.0' LT | 736.08 |
| G | 70+74.96 'TB' | 17.9' LT | 736.13 |
| H | 70+35.20 'TB' | 26.2' LT | 736.18 |
| I | 70+26.43 'TB' | 38.6' LT | 736.23 |
| J | 70+22.95 'TB' | 53.4' LT | 736.19 |

RICHLAND ELECTRIC COOP

WE ENERGIES

15.0'
+62.8

STA 574+30.36'O' CTH O =
STA 70+00.00'TB' CTH B
CONSTRUCT TYPE B1 INTERSECTION

CAUTION

SLOPE INTERCEPT (TYP)

575'O'

24.0'

J

I

CC2

BP: 70+00.00 'TB'

PC: 70+80.26'TB'

R/W

H

G

F

15.0'

71'TB'

S75°39'06"E

15.0'

E

15.0'

+13.3

72'TB'

PT: 72+66.65 'TB'

TLE

D

C

73'TB'

574'O'

B

CTH TB

74'TB'

S60°23'45"E

15.0'

+98.8

75'TB'

15.0'

+97.8

11.7'

11.3'

24.0'

A

R/W

CC1

CONCRETE CURB & GUTTER 6-INCH
SLOPED 36-INCH TYPE D (TYP)

CTH O/CTH OO

BORE

FRONTIER

573'O'

572'O'

STA 71+50'TB' RT
1 - 18-INCH X 70' CP CLASS III-A NON-METAL REQ'D
2 - AEW'S FOR CP 18-INCH REQ'D
(NON DRAINAGE PIPE)
ELEV IN/OUT = 730.00'

PI STA = 71+74.01 'TB'
Y = 428567.013
X = 685698.825
DELTA = 15°15'21" RT
D = 8°11'06"
T = 93.75'
L = 186.39'
R = 700.00'
PC STA = 70+80.26 'TB'
Y = 428590.245
X = 685608.002
PT STA = 72+66.65 'TB'
Y = 428520.701
X = 685780.334
DB = S75°39'06"E
DA = S60°23'45"E

PI STA = 575+44.47 'O'
Y = 428501.865
X = 685838.336
DELTA = 72°52'09" LT
D = 4°16'33"
T = 989.18'
L = 1704.22'
R = 1340.00'
PC STA = 565+55.28 'O'
Y = 427889.669
X = 685061.353
PT STA = 582+59.51 'O'
Y = 429424.701
X = 685482.163
DB = N51°45'54"E
DA = N21°06'16"W

STA 74+50'TB' LT
CONSTRUCT 30.0' WIDE AGG FE
1 - 18-INCH X 38' CP CLASS III-A NON-METAL REQ'D
2 - AEW'S FOR CP 18-INCH REQ'D

END CONSTRUCTION
STA 75+50.00'TB'
MATCH EXISTING
SAWCUT REQ'D

STA 74+50'TB' RT
CONSTRUCT 30.0' WIDE AGG FE
1 - 18-INCH X 46' CP CLASS III-A NON-METAL REQ'D
2 - AEW'S FOR CP 18-INCH REQ'D

STA 75+55'TB' RT
1 - REMOVE EXISTING 12" X 28' CVCMP

| RADIUS POINT TABLE | | | | |
|---|---|---|---|---|
| POINT | STATION | OFFSET | RADIUS | COORDINATES |
| CC1 | 573+59.75'O' CTH O<br>70+82.24'TB' CTH TB | 84.0' RT<br>75.0' RT | 60.0' | Y = 428517.145<br>X = 685591.121 |
| CC2 | 574+82.87'O' CTH O<br>70+62.92'TB' CTH TB | 64.0' RT<br>55.0' LT | 40.0' | Y = 428647.826<br>X = 685604.833 |

| PROJECT NO: 5419-06-73 | HWY: CTH O/OO | COUNTY: RICHLAND | INTERSECTION DETAIL | SHEET 12 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\021101_ID.DWG
LAYOUT NAME - 01
PLOT DATE : 1/26/2024 12:06 PM
PLOT BY : NICK ENGH
PLOT NAME :
PLOT SCALE : ##########
WISDOT/CADDS SHEET 42

2

| RADIUS POINT TABLE | | | | |
|---|---|---|---|---|
| POINT | STATION | OFFSET | RADIUS | COORDINATES |
| CC1 | 638+33.28'O' CTH O<br>62+96.14'OO' CTH OO | 78.0' LT<br>75.0' RT | 60.0' | Y = 434965.547<br>X = 685188.730 |
| CC2 | 639+64.28'O' CTH O<br>62+80.87'OO' CTH OO | 59.0' LT<br>57.0' LT | 42.0' | Y = 435096.976<br>X = 685208.308 |

| ELEVATION TABLE | | | |
|---|---|---|---|
| POINT | STATION | OFFSET | ELEVATION |
| A | 63+54.07'OO' | 59.4 RT | 713.12 |
| B | 63+46.00'OO' | 41.7' RT | 713.07 |
| C | 63+32.64'OO' | 27.4' RT | 713.01 |
| D | 63+15.42'OO' | 18.2' RT | 712.95 |
| E | 63+96.15'OO' | 15.0' RT | 712.89 |
| F | 63+79.55'OO' | 15.0' LT | 712.90 |
| G | 63+94.88'OO' | 17.4' LT | 712.82 |
| H | 63+08.31'OO' | 25.2' LT | 712.74 |
| I | 63+17.98'OO' | 37.3' LT | 712.67 |
| J | 63+22.59'OO' | 52.2' LT | 712.74 |
| K | 63+21.50'OO' | 67.6' LT | 712.84 |

N

BEGIN CONSTRUCTION
STA 61+47.25'OO'
MATCH EXISTING
SAWCUT REQ'D

STEEL PLATE BEAM GUARD SHORT RADIUS
STA 62+67.05'OO' STA 639+64.87'O'
SHOP BEND TO R = 40.0'

STEEL PLATE BEAM GUARD CLASS A
STA 62+54.55'OO' TO STA 62+67.05'OO'

STEEL PLATE BEAM GUARD EAT
STA 62+04.59'OO' TO STA 62+54.55'OO'

CONCRETE CURB & GUTTER
6-INCH SLOPED 36-INCH
TYPE D

CONCRETE CURB & GUTTER
DRIVEWAY CURB 36-INCH
TYPE D (SPECIAL)

ASPHALT FLUME REQ'D

CAUTION

GENUINE

FRONTIER

ALLIANT ENERGY

WE ENERGIES

PINE RIVER

RICHLAND COUNTY-SAN

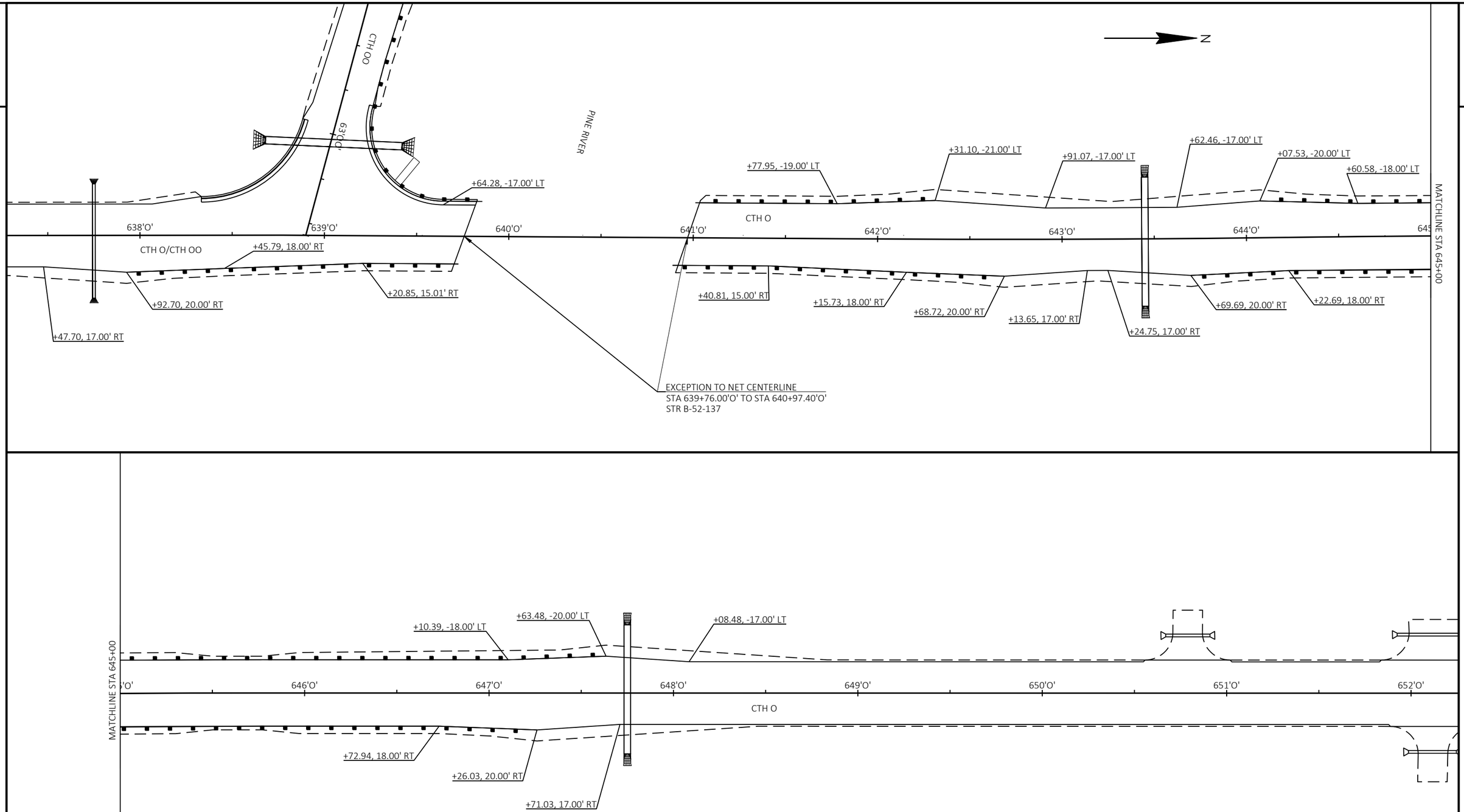
SLOPE INTERCEPT (TYP)

STA 638+89.25'O' CTH O =
STA 63+56.70'OO' CTH OO
CONSTRUCT MODIFIED TYPE D INTERSECTION

EXCEPTION TO NET CENTERLINE LENGTH =
STA 639+76.00'O' TO STA 640+97.40'O'
STR B-52-137 (MATCH EXISTING DECK)

| PROJECT NO: 5419-06-73 | HWY: CTH O/OO | COUNTY: RICHLAND | INTERSECTION DETAIL | SHEET 13 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\021102_ID.DWG
LAYOUT NAME - 01
PLOT DATE : 1/26/2024 12:05 PM
PLOT BY : NICK ENGH
PLOT NAME :
PLOT SCALE : ##########




2

| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | PAVING DETAIL | SHEET 14 | E |
|---|---|---|---|---|---|

2

CARDINAL CREST ROAD

RICHLAND ELECTRIC COOP

TLE

R/W

548'O' 549'O' 550'O' 551'O' 552'O' 553'O' 554'O' 555'O' 556'O' 557'O' 558'O' 559'O' 560'O' 561'O' 562'O'

CTH O/CTH OO

MATCH LINE 563+00

R/W

FRONTIER

BEGIN PROJECT
STA 552+00.00'O'

SLOPE INTERCEPT (TYP)

ENVIRONMENTALLY
SENSITIVE AREA

LEGEND

- EROSION MAT CLASS II TYPE B
- SILT FENCE
- SLOPE INTERCEPT
- ASPH — ASPHALTIC FLUME
- TEMPORARY DITCH CHECKS
- CULVERT PIPE CHECKS
- SURFACE WATER FLOW
- RIPRAP

MATCH LINE 563+00

564'O' 565'O' 566'O' 567'O' 568'O' 569'O' 570'O' 571'O' 572'O' 573'O' 574'O' 575'O' 576'O'

CTH O/CTH OO

TLE

RICHLAND ELECTRIC COOP

R/W

SLOPE INTERCEPT (TYP)

R/W

FRONTIER

WE ENERGIES

CAUTION

38' CTH TB

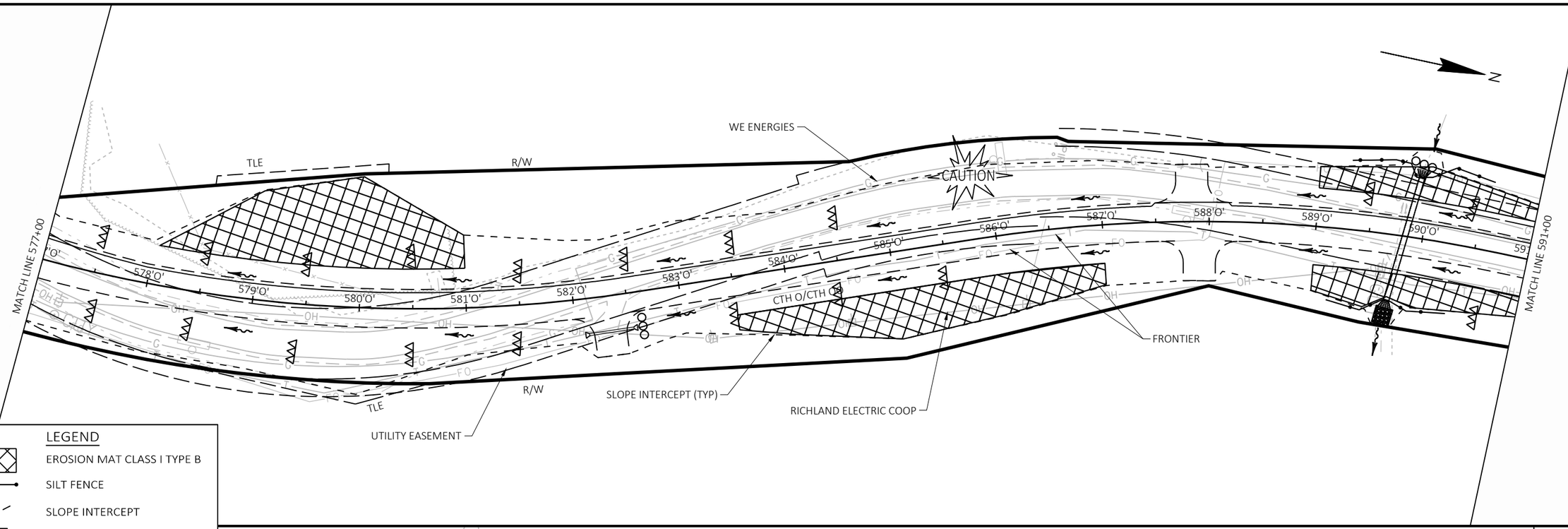
71'TB'

72'TB'

MATCH LINE 577+00

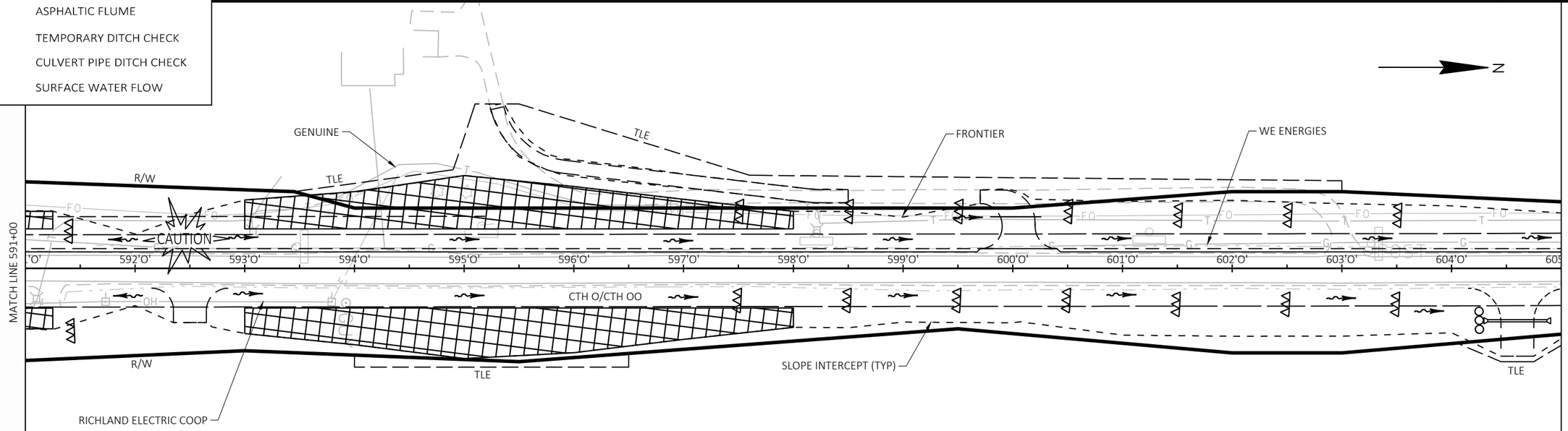
| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | EROSION CONTROL | SHEET 15 | E |
|---|---|---|---|---|---|

2




LEGEND

- EROSION MAT CLASS I TYPE B
- SILT FENCE
- SLOPE INTERCEPT
- ASPH — ASPHALTIC FLUME
- TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW

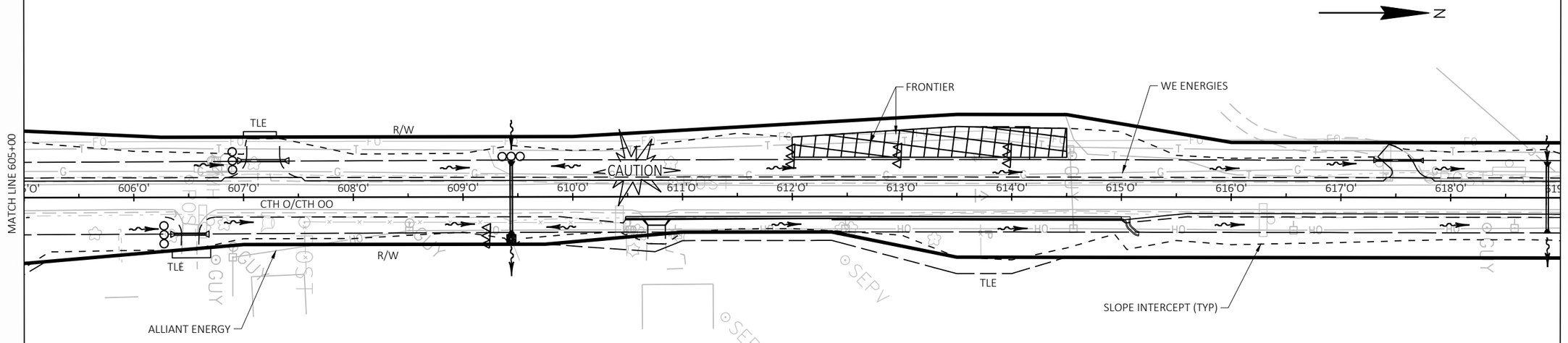



| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | EROSION CONTROL | SHEET 16 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\022001_EC.DWG
LAYOUT NAME - 02

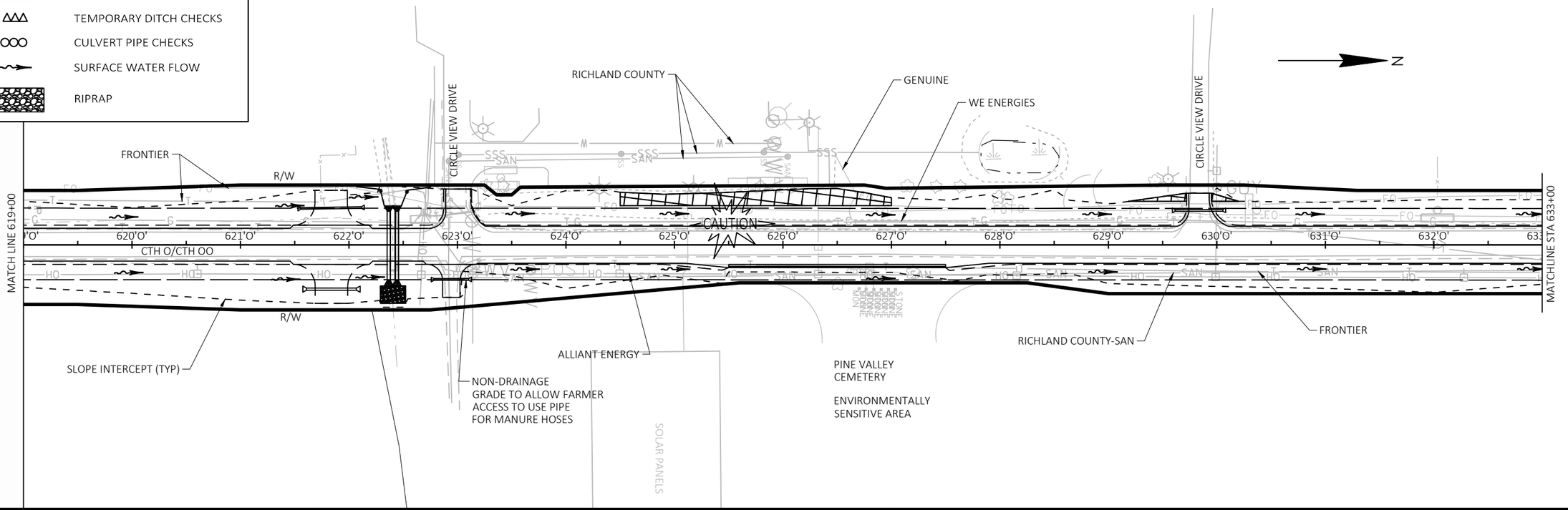
PLOT DATE : 1/22/2024 5:30 PM PLOT BY : JARROD STARREN PLOT NAME : PLOT SCALE : 1 IN:100 FT

2




## LEGEND

- EROSION MAT CLASS II TYPE B
- SILT FENCE
- SLOPE INTERCEPT
- ASPH — ASPHALTIC FLUME
- TEMPORARY DITCH CHECKS
- CULVERT PIPE CHECKS
- SURFACE WATER FLOW
- RIPRAP

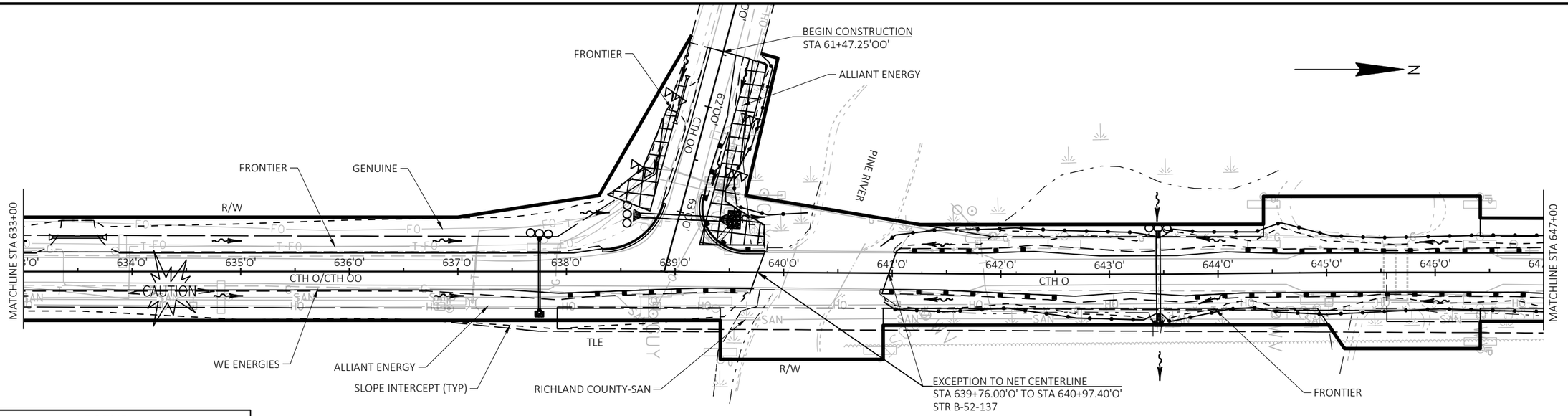



| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | EROSION CONTROL | SHEET 17 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\022001_EC.DWG
LAYOUT NAME - 03

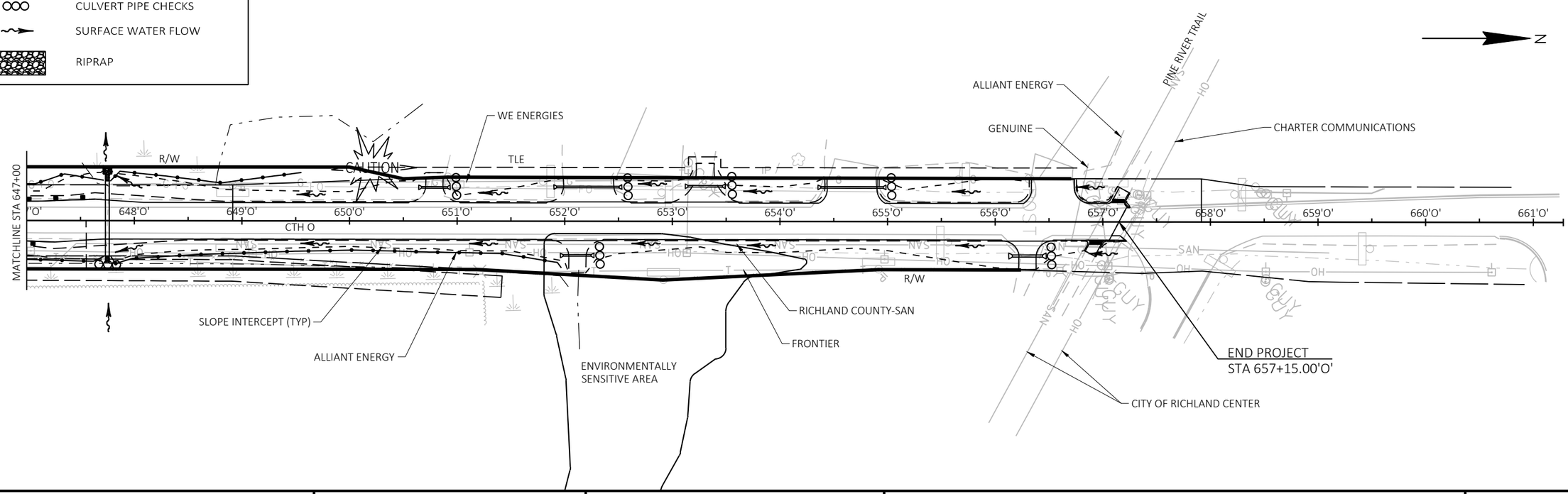
PLOT DATE : 1/22/2024 5:30 PM PLOT BY : JARROD STARREN PLOT NAME : PLOT SCALE : 1 IN:100 FT

2




LEGEND

- EROSION MAT CLASS II TYPE B
- SILT FENCE
- SLOPE INTERCEPT
- ASPH — ASPHALTIC FLUME
- TEMPORARY DITCH CHECKS
- CULVERT PIPE CHECKS
- SURFACE WATER FLOW
- RIPRAP



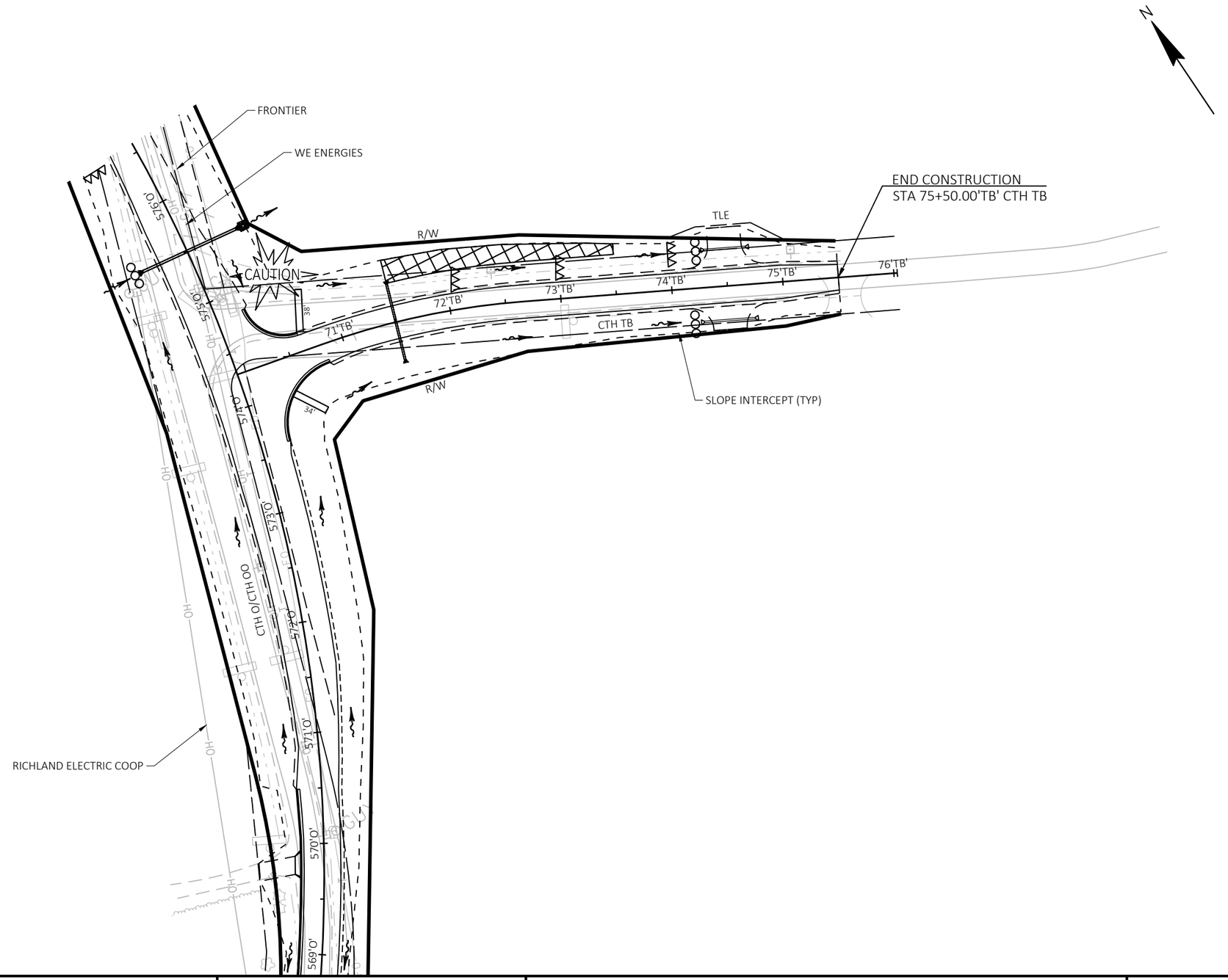

| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | EROSION CONTROL | SHEET 18 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\022001_EC.DWG
LAYOUT NAME - 04
PLOT DATE : 1/22/2024 5:01 PM
PLOT BY : JARROD STARREN
PLOT NAME :
PLOT SCALE : ##########
WISDOT/CADDS SHEET 44

2

LEGEND

- EROSION MAT CLASS II TYPE B
- SILT FENCE
- SLOPE INTERCEPT
- ASPH — ASPHALTIC FLUME
- TEMPORARY DITCH CHECKS
- CULVERT PIPE CHECKS
- SURFACE WATER FLOW
- RIPRAP




| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | EROSION CONTROL | SHEET 19 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\022001_EC.DWG
LAYOUT NAME - 05

PLOT DATE : 1/22/2024 5:29 PM PLOT BY : JARROD STARREN PLOT NAME : PLOT SCALE : ############

2

CARDINAL CREST ROAD

REMOVE
45 M.P.H.
1-3

MOVE
2 8 5 1 6
1-1

549'O' 550'O' 551'O' 552'O' 553'O' 554'O' 555'O' 556'O' 557'O' 558'O' 559'O' 560'O' 561'O' 562'O'

MATCHLINE 563+00

CTH O/CTH OO

BEGIN PROJECT
STA 552+00.00'O'

MOVE
2 8 1 5 6
1-2

REMOVE
40 M.P.H.
1-4

ENVIRONMENTALLY
SENSITIVE AREA

PAVEMENT MARKING LEGEND

- (A) MARKING LINE EPOXY 6-INCH (DOUBLE YELLOW)
- (B) MARKING LINE EPOXY 6-INCH (WHITE)
- (C) MARKING STOP LINE EPOXY 18-INCH
- (D) MARKING LINE EPOXY 10-INCH (WHITE)
- (E) MARKING LINE EPOXY 6-INCH (DASHED WHITE)

SIGNING LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE

MOVE
2 1 8 5 6
1-6

INSTALL
S3-1
30"X30"
1-7

INSTALL
40 TON BRIDGE
1.2 MILES AHEAD
R12-55
48"X18"
1-8

REMOVE
40 M.P.H.
1-11

INSTALL
W1-7
48"X24"
1-12

INSTALL
COUNTY TB
J12-1
24"X45"
1-15

MATCHLINE 563+00

564'O' 565'O' 566'O' 567'O' 568'O' 569'O' 570'O' 571'O' 572'O' 573'O' 574'O' 575'O' 576'O'

CTH O/CTH OO

INSTALL
JCT
COUNTY TB
J1-1
24"X39"
1-5

REMOVE
1-9

INSTALL
COUNTY TB
J12-1
24"X45"
1-10

CTH T

INSTALL
COUNTY O
COUNTY OO
J12-2
48"X45"
1-14

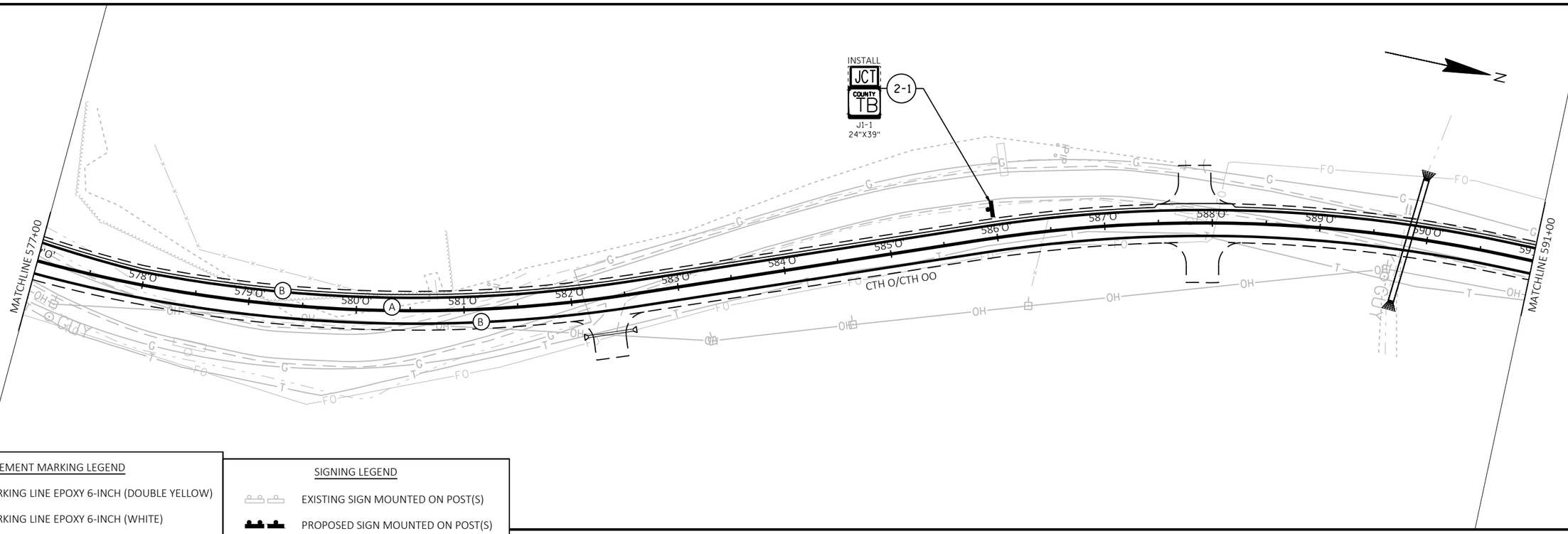
INSTALL
STOP
R1-1
30"X30"
1-13

MATCHLINE 577+00

| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | PERMANENT SIGNING AND PAVEMENT MARKING | SHEET 20 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\023201_PS.DWG
LAYOUT NAME - 01

PLOT DATE : 11/16/2023 2:50 PM PLOT BY : ANNIE JEROME PLOT NAME : PLOT SCALE : 1 IN:100 FT

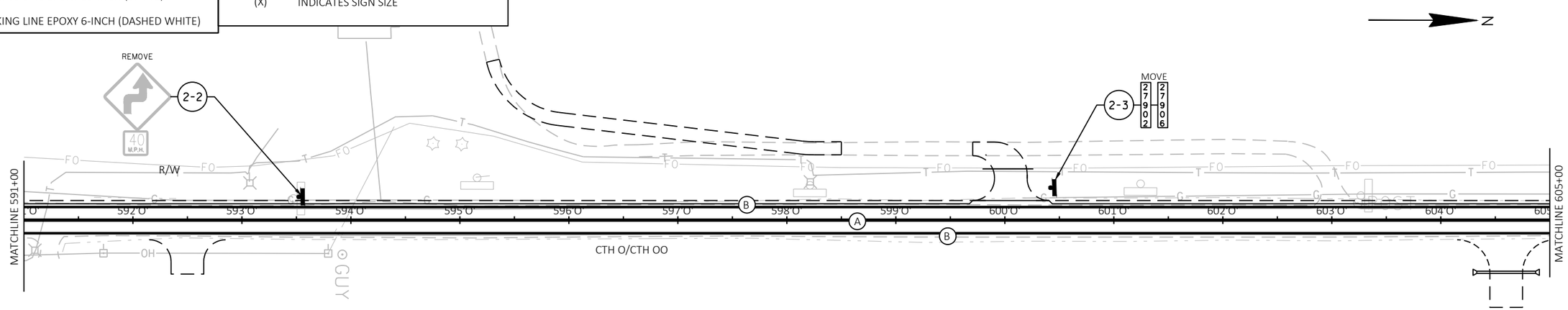



PAVEMENT MARKING LEGEND

- (A) MARKING LINE EPOXY 6-INCH (DOUBLE YELLOW)
- (B) MARKING LINE EPOXY 6-INCH (WHITE)
- (C) MARKING STOP LINE EPOXY 18-INCH
- (D) MARKING LINE EPOXY 10-INCH (WHITE)
- (E) MARKING LINE EPOXY 6-INCH (DASHED WHITE)

SIGNING LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE

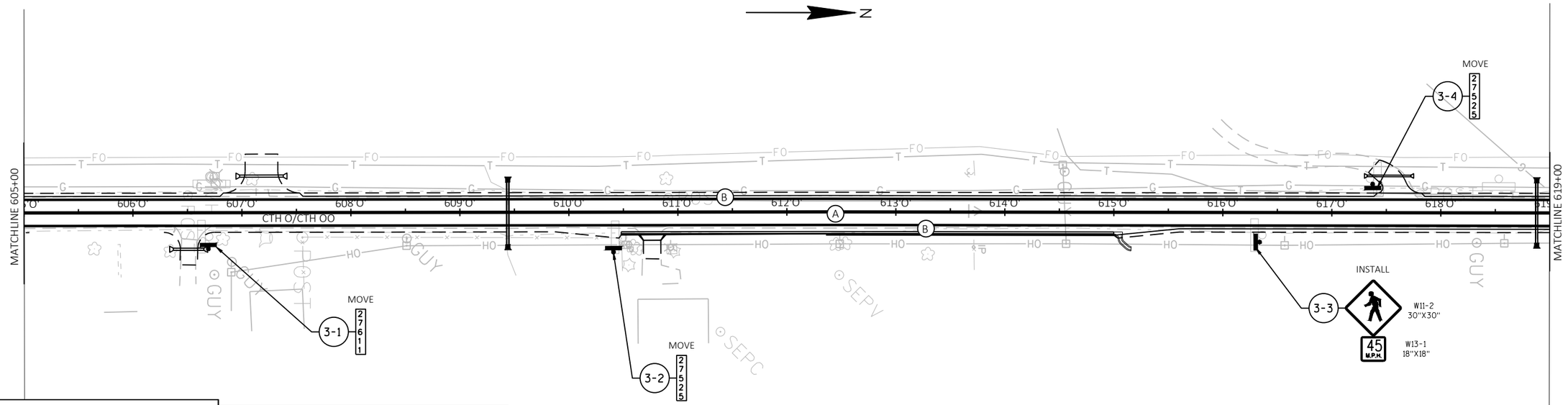



| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | PERMANENT SIGNING AND PAVEMENT MARKING | SHEET 21 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\023201_PS.DWG
LAYOUT NAME - 02

PLOT DATE : 11/16/2023 2:50 PM PLOT BY : ANNIE JEROME PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

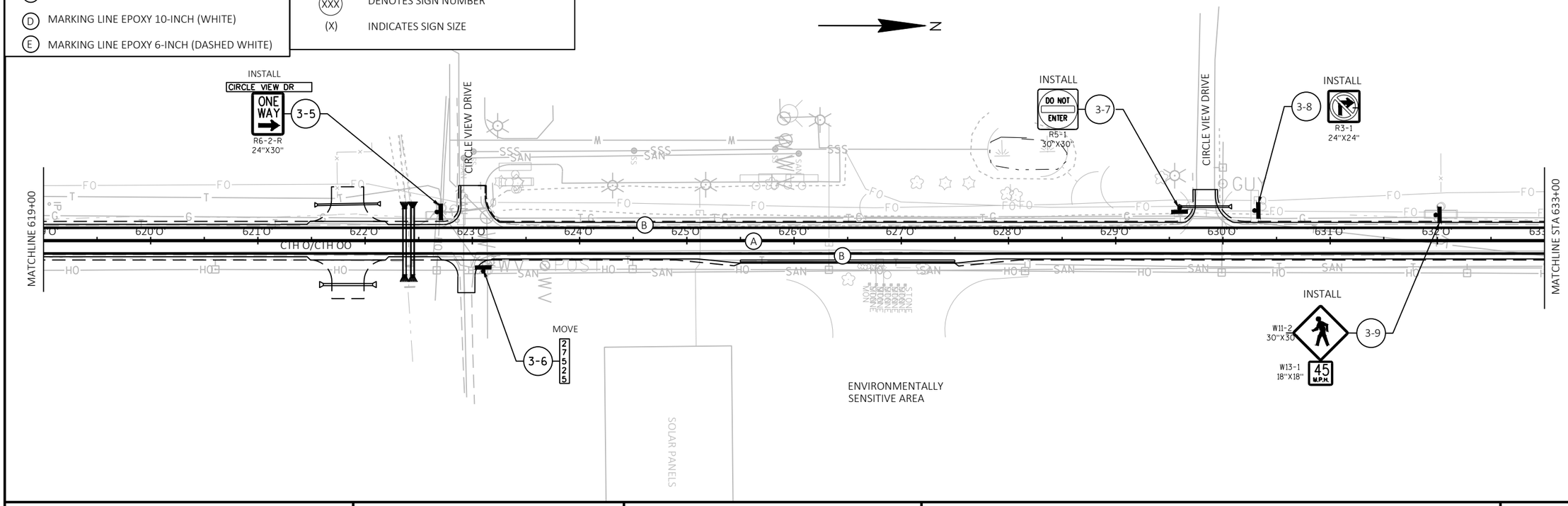



PAVEMENT MARKING LEGEND

- (A) MARKING LINE EPOXY 6-INCH (DOUBLE YELLOW)
- (B) MARKING LINE EPOXY 6-INCH (WHITE)
- (C) MARKING STOP LINE EPOXY 18-INCH
- (D) MARKING LINE EPOXY 10-INCH (WHITE)
- (E) MARKING LINE EPOXY 6-INCH (DASHED WHITE)

SIGNING LEGEND

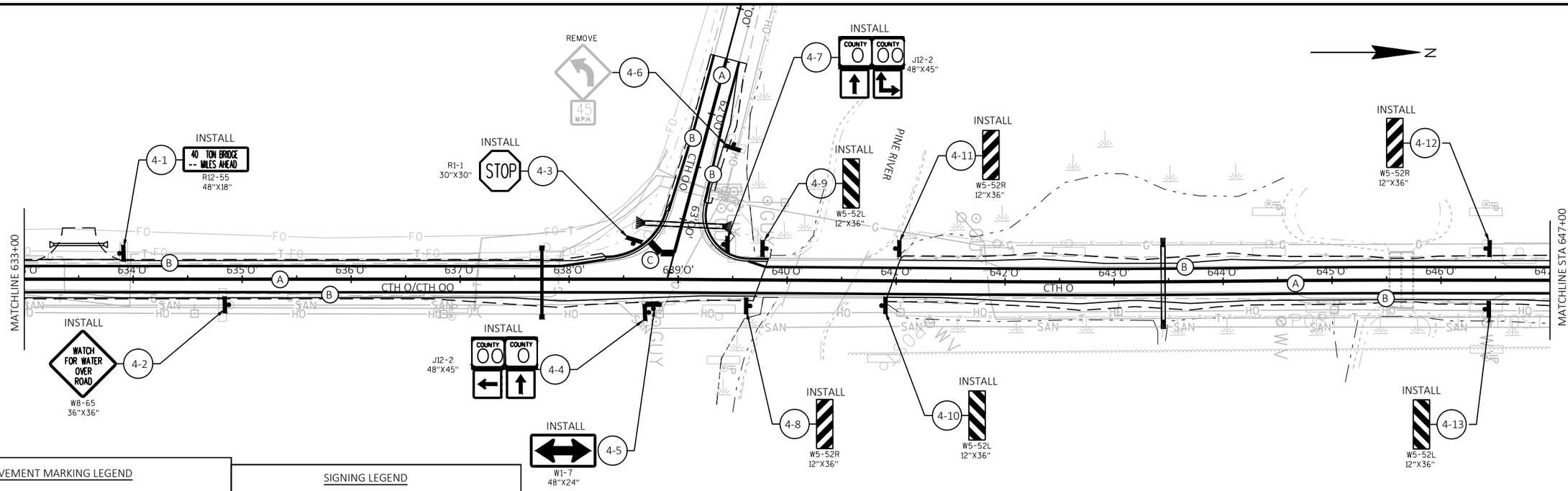
- EXISTING SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE




| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | PERMANENT SIGNING AND PAVEMENT MARKING | SHEET 22 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\023201_PS.DWG
LAYOUT NAME - 03

PLOT DATE : 11/16/2023 2:51 PM PLOT BY : ANNIE JEROME PLOT NAME : PLOT SCALE : 1 IN:100 FT

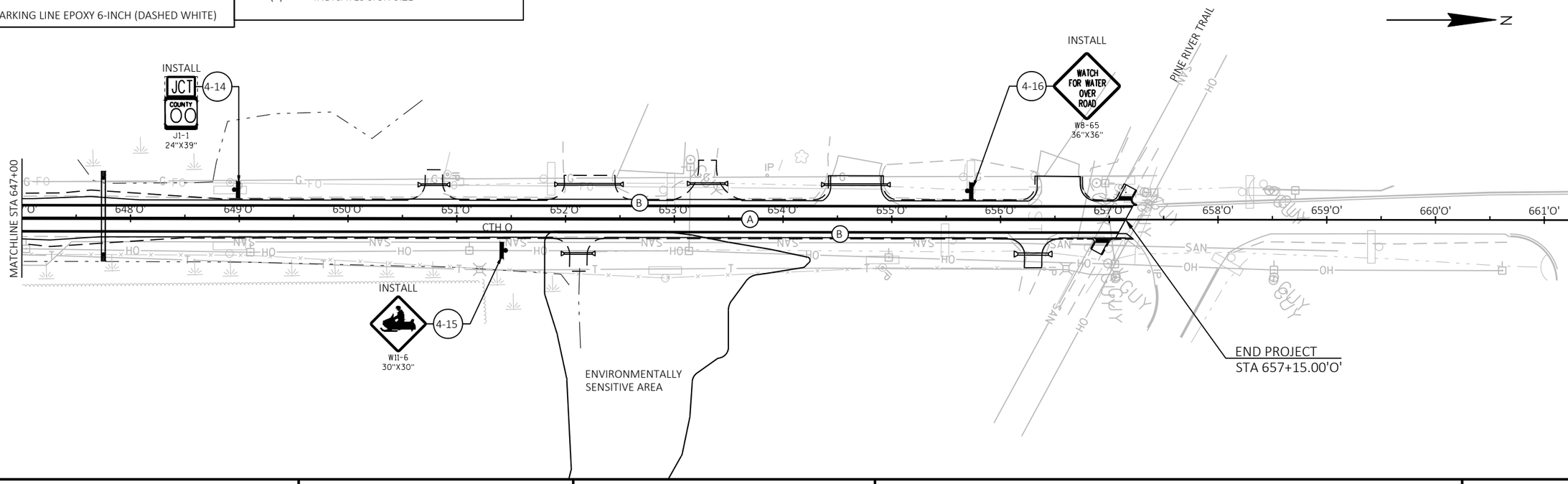



PAVEMENT MARKING LEGEND

- (A) MARKING LINE EPOXY 6-INCH (DOUBLE YELLOW)
- (B) MARKING LINE EPOXY 6-INCH (WHITE)
- (C) MARKING STOP LINE EPOXY 18-INCH
- (D) MARKING LINE EPOXY 10-INCH (WHITE)
- (E) MARKING LINE EPOXY 6-INCH (DASHED WHITE)

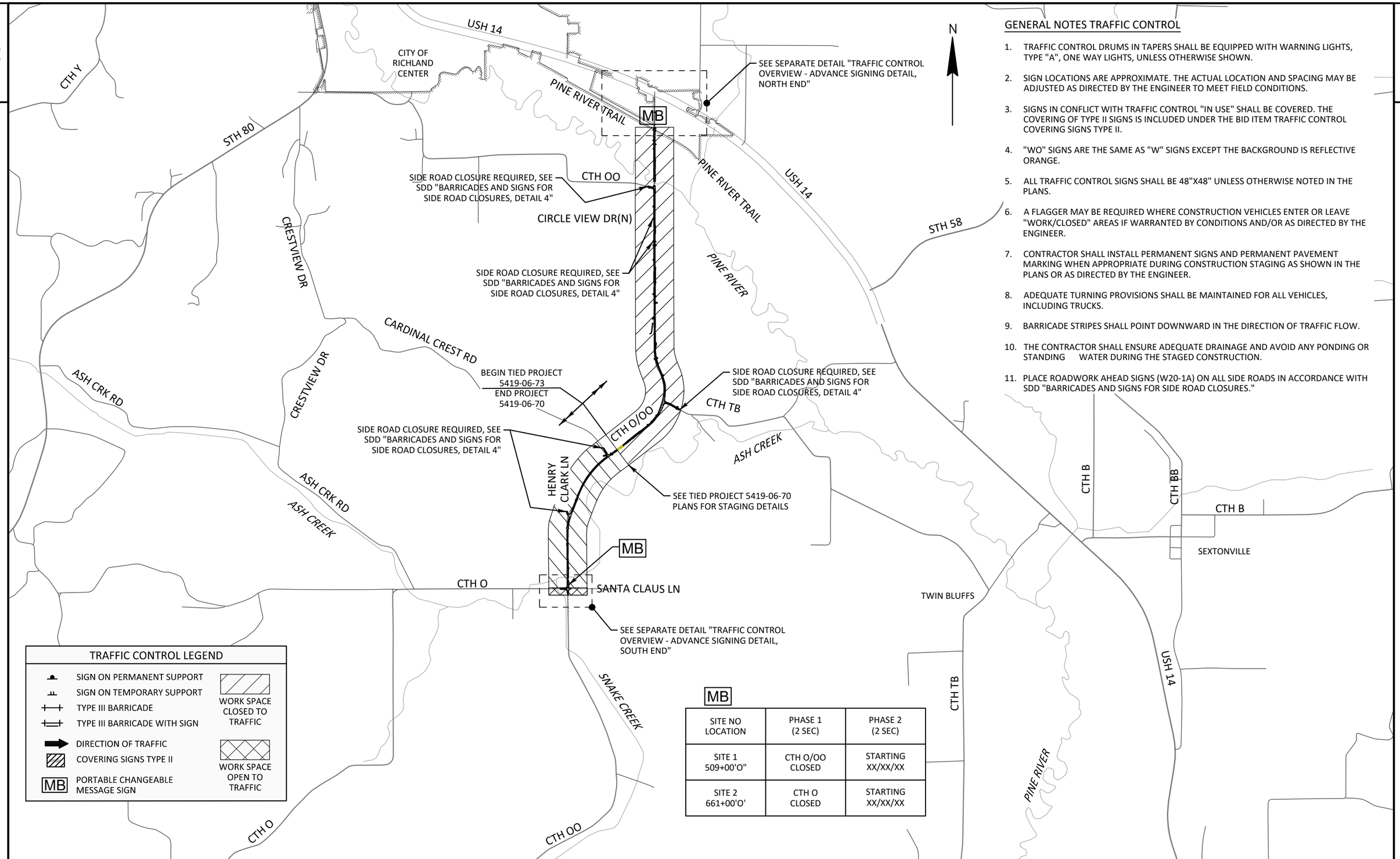
SIGNING LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE




| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | PERMANENT SIGNING AND PAVEMENT MARKING | SHEET 23 | E |
|---|---|---|---|---|---|

2




## GENERAL NOTES TRAFFIC CONTROL

1. TRAFFIC CONTROL DRUMS IN TAPERS SHALL BE EQUIPPED WITH WARNING LIGHTS, TYPE "A", ONE WAY LIGHTS, UNLESS OTHERWISE SHOWN.
2. SIGN LOCATIONS ARE APPROXIMATE. THE ACTUAL LOCATION AND SPACING MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER TO MEET FIELD CONDITIONS.
3. SIGNS IN CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE COVERED. THE COVERING OF TYPE II SIGNS IS INCLUDED UNDER THE BID ITEM TRAFFIC CONTROL COVERING SIGNS TYPE II.
4. "WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS REFLECTIVE ORANGE.
5. ALL TRAFFIC CONTROL SIGNS SHALL BE 48"X48" UNLESS OTHERWISE NOTED IN THE PLANS.
6. A FLAGGER MAY BE REQUIRED WHERE CONSTRUCTION VEHICLES ENTER OR LEAVE "WORK/CLOSED" AREAS IF WARRANTED BY CONDITIONS AND/OR AS DIRECTED BY THE ENGINEER.
7. CONTRACTOR SHALL INSTALL PERMANENT SIGNS AND PERMANENT PAVEMENT MARKING WHEN APPROPRIATE DURING CONSTRUCTION STAGING AS SHOWN IN THE PLANS OR AS DIRECTED BY THE ENGINEER.
8. ADEQUATE TURNING PROVISIONS SHALL BE MAINTAINED FOR ALL VEHICLES, INCLUDING TRUCKS.
9. BARRICADE STRIPES SHALL POINT DOWNWARD IN THE DIRECTION OF TRAFFIC FLOW.
10. THE CONTRACTOR SHALL ENSURE ADEQUATE DRAINAGE AND AVOID ANY PONDING OR STANDING WATER DURING THE STAGED CONSTRUCTION.
11. PLACE ROADWORK AHEAD SIGNS (W20-1A) ON ALL SIDE ROADS IN ACCORDANCE WITH SDD "BARRICADES AND SIGNS FOR SIDE ROAD CLOSURES."

### TRAFFIC CONTROL LEGEND

- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH SIGN
- DIRECTION OF TRAFFIC
- COVERING SIGNS TYPE II
- MB PORTABLE CHANGEABLE MESSAGE SIGN
- WORK SPACE CLOSED TO TRAFFIC
- WORK SPACE OPEN TO TRAFFIC

MB

| SITE NO LOCATION | PHASE 1 (2 SEC) | PHASE 2 (2 SEC) |
|---|---|---|
| SITE 1 509+00'O" | CTH O/OO CLOSED | STARTING XX/XX/XX |
| SITE 2 661+00'O' | CTH O CLOSED | STARTING XX/XX/XX |

| PROJECT NO: 5419-06-73 | HWY: CTH O/OO | COUNTY: RICHLAND | TRAFFIC CONTROL OVERVIEW | SHEET 24 |
|---|---|---|---|---|

2

2

N

USH 14

PE

CE

M1-5A
COUNTY O
ROAD CLOSED AHEAD
W20-3A

350'
(FROM STOPLINE)

900'
(FROM STOPLINE)

CTH O

ROAD CLOSED 500 FT
W20-3D

END ROAD WORK
G20-2A
48"X24"

FE
MB

660'0'

500'

R11-4
60"X30"

ROAD CLOSED TO THRU TRAFFIC

SEE SEPARATE DETAIL FOR PEDESTRIAN ACCOMENDATIONS

50'

65'0'

CTH O (CLOSED)

PINE RIVER TRAIL

PLEASANT VALLEY DR

DRAWING NOTES:

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF STANDARD DETAIL DRAWING "*BARRICADES AND SIGNS FOR VARIOUS CLOSURES, DETAIL E.*"

TRAFFIC CONTROL LEGEND

- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH SIGN
- DIRECTION OF TRAFFIC
- COVERING SIGNS TYPE II
- MB — PORTABLE CHANGEABLE MESSAGE SIGN
- WORK SPACE CLOSED TO TRAFFIC
- WORK SPACE OPEN TO TRAFFIC

| PROJECT NO: 5419-06-70/73 | HWY: CTH O/OO | COUNTY: RICHLAND | TRAFFIC CONTROL - ADVANCE SIGNING DETAIL, NORTH END | SHEET 25 E |
|---|---|---|---|---|

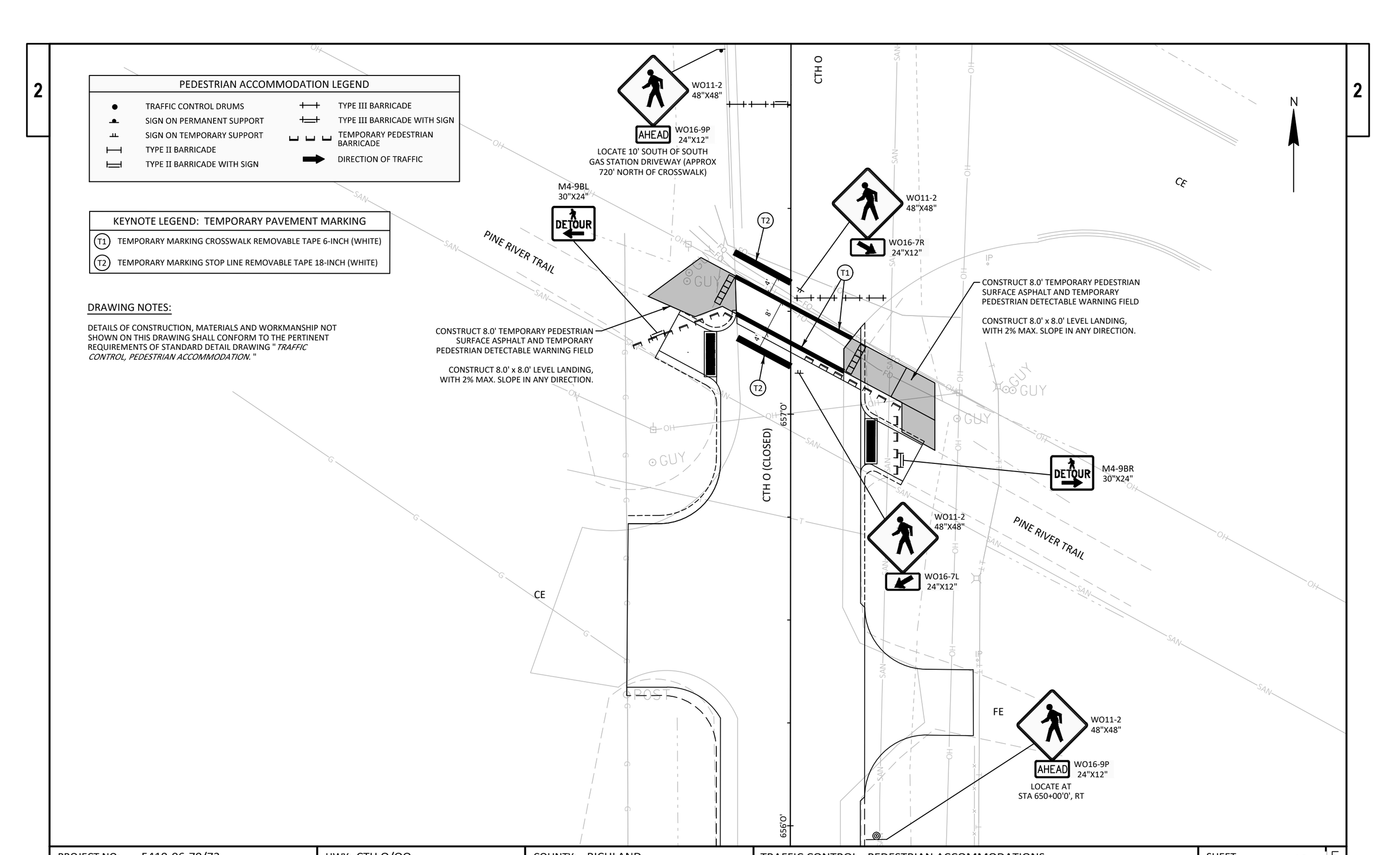
FILE NAME : X:\PT\R\RICHD\163696\Civil 3D 2020\54190001\SheetsPlan\025001_tc (Adv Sign Details).dwg
PLOT DATE : 11/9/2023 3:03 PM
PLOT BY : SEH
LAYOUT NAME : 02
PLOT SCALE : 1.0 IN = 200.0 FT
WISDOT/CADDS SHEET 42

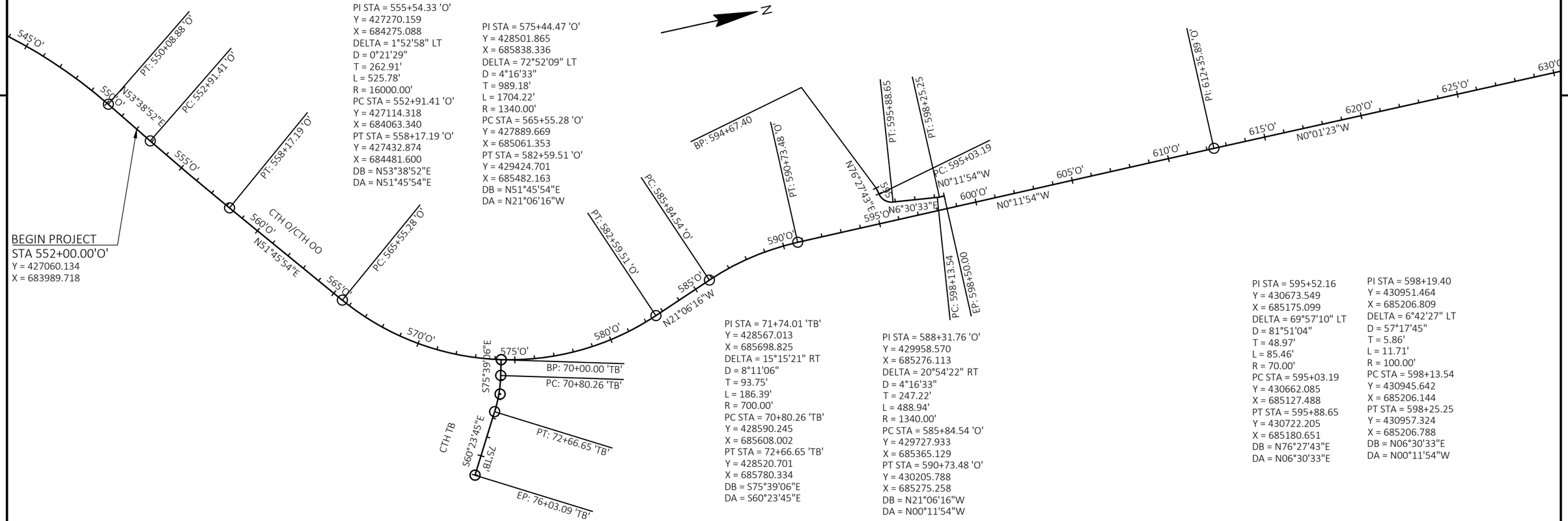
| PEDESTRIAN ACCOMMODATION LEGEND | | | |
|---|---|---|---|
| ● | TRAFFIC CONTROL DRUMS | ⊢⊣ | TYPE III BARRICADE |
| ⊥● | SIGN ON PERMANENT SUPPORT | ⊢⊣ | TYPE III BARRICADE WITH SIGN |
| ⊥ | SIGN ON TEMPORARY SUPPORT | ⌴⌴⌴ | TEMPORARY PEDESTRIAN BARRICADE |
| ⊢⊣ | TYPE II BARRICADE | ➡ | DIRECTION OF TRAFFIC |
| ⊢⊣ | TYPE II BARRICADE WITH SIGN | | |

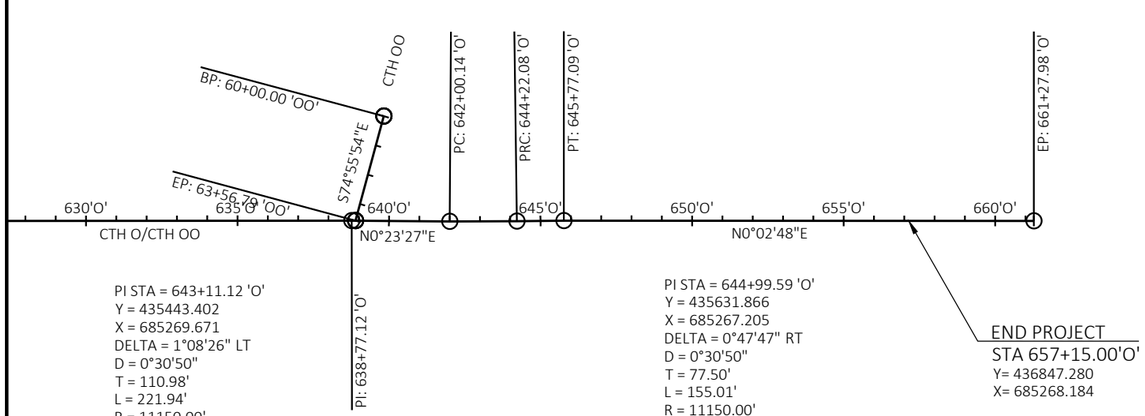
| KEYNOTE LEGEND: TEMPORARY PAVEMENT MARKING | |
|---|---|
| T1 | TEMPORARY MARKING CROSSWALK REMOVABLE TAPE 6-INCH (WHITE) |
| T2 | TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH (WHITE) |

DRAWING NOTES:

DETAILS OF CONSTRUCT, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF STANDARD DETAIL DRAWING " *TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION.* "






| Superelevation Curve | Station | Description | Left Shlder | Left Lane | Right Shlder | Right Lane |
|---|---|---|---|---|---|---|
| 3 | 551+49.68' | Begin Normal Crown | -2.00% | -2.00% | -2.00% | -2.00% |
| 3 | 551+49.68' | Begin Normal Shoulder | -4.00% | -2.00% | -4.00% | -2.00% |
| 7 | 563+95.28' | End Normal Shoulder | -4.00% | -2.00% | -4.00% | -2.00% |
| 7 | 563+95.28' | End Normal Crown | -2.00% | -2.00% | -2.00% | -2.00% |
| 7 | 564+48.61' | Level Crown | -2.00% | -2.00% | 0.00% | 0.00% |
| 7 | 565+01.94' | Reverse Crown | -2.00% | -2.00% | 2.00% | 2.00% |
| 7 | 566+08.61' | Begin Full Super | -6.00% | -6.00% | 6.00% | 6.00% |
| 7 | 582+06.18' | End Full Super | -6.00% | -6.00% | 6.00% | 6.00% |
| 7 | 583+12.84' | Reverse Crown | -2.00% | -2.00% | 2.00% | 2.00% |
| 7 | 583+66.18' | Level Crown | -2.00% | -2.00% | 0.00% | 0.00% |
| 7 | 584+19.51' | Begin Normal Crown | -2.00% | -2.00% | -2.00% | -2.00% |
| 7 | 584+19.51' | Begin Normal Shoulder | -4.00% | -2.00% | -4.00% | -2.00% |
| 9 | 584+24.53' | End Normal Shoulder | -4.00% | -2.00% | -4.00% | -2.00% |
| 9 | 584+24.53' | End Normal Crown | -2.00% | -2.00% | -2.00% | -2.00% |
| 9 | 584+77.87' | Level Crown | 0.00% | 0.00% | -2.00% | -2.00% |
| 9 | 585+31.20' | Reverse Crown | 2.00% | 2.00% | -2.00% | -2.00% |
| 9 | 586+37.87' | Begin Full Super | 6.00% | 6.00% | -6.00% | -6.00% |
| 9 | 590+20.15' | End Full Super | 6.00% | 6.00% | -6.00% | -6.00% |
| 9 | 591+26.82' | Reverse Crown | 2.00% | 2.00% | -2.00% | -2.00% |
| 9 | 591+80.15' | Level Crown | 0.00% | 0.00% | -2.00% | -2.00% |
| 9 | 592+33.48' | Begin Normal Crown | -2.00% | -2.00% | -2.00% | -2.00% |
| 9 | 592+33.48' | Begin Normal Shoulder | -4.00% | -2.00% | -4.00% | -2.00% |
| | 661+27.98' | End Alignment | -4.00% | -2.00% | -4.00% | -2.00% |

Design Speed = 60 mph
Normal Crown Superelevation Rate = 2 %
Normal Shoulder Crown Superelevation Rate = 4 %

| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | ALIGNMENT | SHEET 27 | E |
|---|---|---|---|---|---|

5419-06-73

| Line | Item | Item Description | Unit | Total | Qty |
|---|---|---|---|---|---|
| 0002 | 201.0105 | Clearing | STA | 15.000 | 15.000 |
| 0004 | 201.0205 | Grubbing | STA | 15.000 | 15.000 |
| 0006 | 203.0100 | Removing Small Pipe Culverts | EACH | 23.000 | 23.000 |
| 0012 | 203.0220 | Removing Structure (structure) 03. 555+10 | EACH | 1.000 | 1.000 |
| 0014 | 203.0220 | Removing Structure (structure) 04. 589+75 | EACH | 1.000 | 1.000 |
| 0016 | 203.0220 | Removing Structure (structure) 05. 622+41 | EACH | 1.000 | 1.000 |
| 0018 | 204.0180 | Removing Delineators and Markers | EACH | 3.000 | 3.000 |
| 0020 | 204.0195 | Removing Concrete Bases | EACH | 1.000 | 1.000 |
| 0022 | 205.0100 | Excavation Common | CY | 77,639.000 | 77,639.000 |
| 0024 | 205.0200 | Excavation Rock | CY | 8,400.000 | 8,400.000 |
| 0030 | 213.0100 | Finishing Roadway (project) 02. 5419-06-73 | EACH | 1.000 | 1.000 |
| 0032 | 305.0110 | Base Aggregate Dense 3/4-Inch | TON | 2,895.000 | 2,895.000 |
| 0034 | 305.0120 | Base Aggregate Dense 1 1/4-Inch | TON | 18,010.000 | 18,010.000 |
| 0036 | 305.0130 | Base Aggregate Dense 3-Inch | TON | 21,540.000 | 21,540.000 |
| 0038 | 311.0115 | Breaker Run | CY | 4,900.000 | 4,900.000 |
| 0040 | 455.0605 | Tack Coat | GAL | 2,425.000 | 2,425.000 |
| 0042 | 460.2000 | Incentive Density HMA Pavement | DOL | 5,860.000 | 5,860.000 |
| 0044 | 460.5223 | HMA Pavement 3 LT 58-28 S | TON | 5,192.000 | 5,192.000 |
| 0046 | 460.5224 | HMA Pavement 4 LT 58-28 S | TON | 3,962.000 | 3,962.000 |
| 0048 | 465.0120 | Asphaltic Surface Driveways and Field Entrances | TON | 75.000 | 75.000 |
| 0050 | 465.0315 | Asphaltic Flumes | SY | 7.000 | 7.000 |
| 0052 | 520.1015 | Apron Endwalls for Culvert Pipe 15-Inch | EACH | 2.000 | 2.000 |
| 0054 | 520.1018 | Apron Endwalls for Culvert Pipe 18-Inch | EACH | 26.000 | 26.000 |
| 0056 | 520.1024 | Apron Endwalls for Culvert Pipe 24-Inch | EACH | 18.000 | 18.000 |
| 0058 | 520.3415 | Culvert Pipe Class III-A Non-metal 15-Inch | LF | 56.000 | 56.000 |
| 0060 | 520.3418 | Culvert Pipe Class III-A Non-metal 18-Inch | LF | 534.000 | 534.000 |
| 0062 | 520.3424 | Culvert Pipe Class III-A Non-metal 24-Inch | LF | 444.000 | 444.000 |
| 0064 | 521.0542 | Apron Endwalls for Pipe Arch Sloped Cross Drains Steel 42x29-Inch 4 to 1 | EACH | 4.000 | 4.000 |
| 0066 | 521.1018 | Apron Endwalls for Culvert Pipe Steel 18-Inch | EACH | 4.000 | 4.000 |
| 0068 | 521.1024 | Apron Endwalls for Culvert Pipe Steel 24-Inch | EACH | 4.000 | 4.000 |
| 0070 | 521.1036 | Apron Endwalls for Culvert Pipe Steel 36-Inch | EACH | 4.000 | 4.000 |
| 0072 | 521.1048 | Apron Endwalls for Culvert Pipe Steel 48-Inch | EACH | 2.000 | 2.000 |
| 0074 | 521.1060 | Apron Endwalls for Culvert Pipe Steel 60-Inch | EACH | 2.000 | 2.000 |
| 0076 | 521.1084 | Apron Endwalls for Culvert Pipe Steel 84-Inch | EACH | 2.000 | 2.000 |
| 0080 | 521.3118 | Culvert Pipe Corrugated Steel 18-Inch | LF | 110.000 | 110.000 |
| 0082 | 521.3124 | Culvert Pipe Corrugated Steel 24-Inch | LF | 118.000 | 118.000 |
| 0084 | 521.3136 | Culvert Pipe Corrugated Steel 36-Inch | LF | 128.000 | 128.000 |
| 0086 | 521.3148 | Culvert Pipe Corrugated Steel 48-Inch | LF | 74.000 | 74.000 |
| 0088 | 521.3160 | Culvert Pipe Corrugated Steel 60-Inch | LF | 118.000 | 118.000 |
| 0090 | 521.3184 | Culvert Pipe Corrugated Steel 84-Inch | LF | 66.000 | 66.000 |
| 0092 | 521.3742 | Pipe Arch Corrugated Steel 42x29-Inch | LF | 140.000 | 140.000 |
| 0096 | 601.0557 | Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type D | LF | 1,748.000 | 1,748.000 |
| 0098 | 602.0415 | Concrete Sidewalk 6-Inch | SF | 70.000 | 70.000 |
| 0100 | 602.0505 | Curb Ramp Detectable Warning Field Yellow | SF | 40.000 | 40.000 |
| 0102 | 602.3010 | Concrete Surface Drains | CY | 4.000 | 4.000 |
| 0104 | 606.0200 | Riprap Medium | CY | 96.000 | 96.000 |
| 0106 | 614.0200 | Steel Thrie Beam Structure Approach | LF | 20.600 | 20.600 |
| 0108 | 614.0305 | Steel Plate Beam Guard Class A | LF | 12.500 | 12.500 |
| 0110 | 614.0345 | Steel Plate Beam Guard Short Radius | LF | 87.500 | 87.500 |
| 0112 | 614.0370 | Steel Plate Beam Guard Energy Absorbing Terminal | EACH | 1.000 | 1.000 |

5419-06-73

| Line | Item | Item Description | Unit | Total | Qty |
|---|---|---|---|---|---|
| 0114 | 614.2300 | MGS Guardrail 3 | LF | 487.500 | 487.500 |
| 0116 | 614.2340 | MGS Guardrail 3 L | LF | 425.000 | 425.000 |
| 0118 | 614.2500 | MGS Thrie Beam Transition | LF | 118.200 | 118.200 |
| 0120 | 614.2610 | MGS Guardrail Terminal EAT | EACH | 11.000 | 11.000 |
| 0122 | 616.0700.S | Fence Safety | LF | 190.000 | 190.000 |
| 0126 | 618.0100 | Maintenance and Repair of Haul Roads (project) 02. 5419-06-73 | EACH | 1.000 | 1.000 |
| 0128 | 619.1000 | Mobilization | EACH | 0.700 | 0.700 |
| 0130 | 624.0100 | Water | MGAL | 215.000 | 215.000 |
| 0132 | 625.0500 | Salvaged Topsoil | SY | 72,880.000 | 72,880.000 |
| 0134 | 627.0200 | Mulching | SY | 82,810.000 | 82,810.000 |
| 0138 | 628.1504 | Silt Fence | LF | 2,900.000 | 2,900.000 |
| 0140 | 628.1520 | Silt Fence Maintenance | LF | 2,900.000 | 2,900.000 |
| 0142 | 628.1905 | Mobilizations Erosion Control | EACH | 2.000 | 2.000 |
| 0144 | 628.1910 | Mobilizations Emergency Erosion Control | EACH | 3.000 | 3.000 |
| 0146 | 628.2023 | Erosion Mat Class II Type B | SY | 11,714.000 | 11,714.000 |
| 0148 | 628.7504 | Temporary Ditch Checks | LF | 330.000 | 330.000 |
| 0150 | 628.7555 | Culvert Pipe Checks | EACH | 31.000 | 31.000 |
| 0152 | 629.0205 | Fertilizer Type A | CWT | 58.000 | 58.000 |
| 0154 | 630.0120 | Seeding Mixture No. 20 | LB | 2,240.000 | 2,240.000 |
| 0156 | 630.0200 | Seeding Temporary | LB | 2,240.000 | 2,240.000 |
| 0158 | 630.0500 | Seed Water | MGAL | 1,865.000 | 1,865.000 |
| 0160 | 631.1100 | Sod Erosion Control | SY | 49.000 | 49.000 |
| 0162 | 633.5200 | Markers Culvert End | EACH | 26.000 | 26.000 |
| 0164 | 634.0612 | Posts Wood 4x6-Inch X 12-FT | EACH | 3.000 | 3.000 |
| 0166 | 634.0614 | Posts Wood 4x6-Inch X 14-FT | EACH | 23.000 | 23.000 |
| 0168 | 634.0616 | Posts Wood 4x6-Inch X 16-FT | EACH | 4.000 | 4.000 |
| 0170 | 637.2210 | Signs Type II Reflective H | SF | 137.110 | 137.110 |
| 0172 | 637.2230 | Signs Type II Reflective F | SF | 90.000 | 90.000 |
| 0174 | 638.2102 | Moving Signs Type II | EACH | 7.000 | 7.000 |
| 0176 | 638.2602 | Removing Signs Type II | EACH | 42.000 | 42.000 |
| 0178 | 638.3000 | Removing Small Sign Supports | EACH | 35.000 | 35.000 |
| 0180 | 638.4000 | Moving Small Sign Supports | EACH | 8.000 | 8.000 |
| 0182 | 642.5001 | Field Office Type B | EACH | 0.700 | 0.700 |
| 0184 | 643.0300 | Traffic Control Drums | DAY | 8,320.000 | 8,320.000 |
| 0186 | 643.0410 | Traffic Control Barricades Type II | DAY | 416.000 | 416.000 |
| 0188 | 643.0420 | Traffic Control Barricades Type III | DAY | 5,200.000 | 5,200.000 |
| 0190 | 643.0705 | Traffic Control Warning Lights Type A | DAY | 3,744.000 | 3,744.000 |
| 0192 | 643.0900 | Traffic Control Signs | DAY | 8,736.000 | 8,736.000 |
| 0194 | 643.1050 | Traffic Control Signs PCMS | DAY | 14.000 | 14.000 |
| 0196 | 643.3350 | Temporary Marking Crosswalk Removable Tape 6-inch | LF | 65.000 | 65.000 |
| 0198 | 643.3850 | Temporary Marking Stop Line Removable Tape 18-Inch | LF | 30.000 | 30.000 |
| 0202 | 643.5000 | Traffic Control 02. 5419-06-73 | EACH | 1.000 | 1.000 |
| 0204 | 644.1410 | Temporary Pedestrian Surface Asphalt | SF | 395.000 | 395.000 |
| 0206 | 644.1605 | Temporary Pedestrian Detectable Warning Field | SF | 25.000 | 25.000 |
| 0208 | 644.1810 | Temporary Pedestrian Barricade | LF | 70.000 | 70.000 |
| 0210 | 645.0130 | Geotextile Type R | SY | 268.000 | 268.000 |
| 0212 | 646.2020 | Marking Line Epoxy 6-Inch | LF | 44,503.000 | 44,503.000 |
| 0214 | 646.4020 | Marking Line Epoxy 10-Inch | LF | 202.000 | 202.000 |
| 0216 | 646.6120 | Marking Stop Line Epoxy 18-Inch | LF | 52.000 | 52.000 |
| 0218 | 648.0100 | Locating No-Passing Zones | MI | 1.990 | 1.990 |

5419-06-73

| Line | Item | Item Description | Unit | Total | Qty |
|---|---|---|---|---|---|
| 0220 | 650.4500 | Construction Staking Subgrade | LF | 14,551.000 | 14,551.000 |
| 0222 | 650.5000 | Construction Staking Base | LF | 14,551.000 | 14,551.000 |
| 0224 | 650.5500 | Construction Staking Curb Gutter and Curb & Gutter | LF | 1,748.000 | 1,748.000 |
| 0226 | 650.6000 | Construction Staking Pipe Culverts | EACH | 32.000 | 32.000 |
| 0230 | 650.9911 | Construction Staking Supplemental Control (project) 02. 5419-06-73 | EACH | 1.000 | 1.000 |
| 0232 | 650.9920 | Construction Staking Slope Stakes | LF | 14,551.000 | 14,551.000 |
| 0234 | 690.0150 | Sawing Asphalt | LF | 319.000 | 319.000 |
| 0236 | 740.0440 | Incentive IRI Ride | DOL | 7,970.000 | 7,970.000 |
| 0238 | ASP.1T0A | On-the-Job Training Apprentice at $5.00/HR | HRS | 800.000 | 800.000 |
| 0240 | ASP.1T0G | On-the-Job Training Graduate at $5.00/HR | HRS | 575.000 | 575.000 |
| 0242 | SPV.0060 | Special 01. Remove and Reset Mailboxes | EACH | 15.000 | 15.000 |
| 0244 | SPV.0060 | Special 02. Temporary Mailbox Station | EACH | 1.000 | 1.000 |
| 0246 | SPV.0060 | Special 03. Landmark Reference Monument | EACH | 3.000 | 3.000 |

## CLEARING / GRUBBING

| STATION | LOCATION | 201.0105 CLEARING STA | 201.0205 GRUBBING STA |
|---|---|---|---|
| CAT 0030 | | | |
| CTH O / CTH OO | | | |
| 558+50 - 562+50 | LT | 4 | 4 |
| 565+00 - 566+00 | LT | 1 | 1 |
| 569+00 - 570+00 | LT | 1 | 1 |
| 578+00 - 581+00 | LT | 3 | 3 |
| 594+00 - 595+00 | LT | 1 | 1 |
| 605+50 - 607+50 | LT & RT | 2 | 2 |
| 610+50 - 613+50 | LT & RT | 3 | 3 |
| CAT 0030 SUBTOTAL | | 15 | 15 |
| ITEM TOTALS | | 15 | 15 |

## REMOVING PIPE CULVERTS

| STATION | LOCATION | 203.0100 REMOVING SMALL PIPE CULVERTS EACH | 203.0220.03 REMOVING STRUCTURE (555+10) EACH | 203.0220.04 REMOVING STRUCTURE (589+75) EACH | 203.0220.05 REMOVING STRUCTURE (622+41) EACH | DESCRIPTION |
|---|---|---|---|---|---|---|
| CAT 0030 | | | | | | |
| CTH O / CTH OO | | | | | | |
| 555+10 | LT & RT | | 1 | | | 84" X 60' CVCMP |
| 563+68 | LT & RT | 1 | | | | 18" X 34' CVCMP |
| 565+86 | LT | 1 | | | | 15" X 30' CVCMP |
| 575+50 | LT & RT | 1 | | | | 24" X 48' CVCMP |
| 587+84 | LT | 1 | | | | 15" X 28' CVCMP |
| 589+75 | LT & RT | | | 1 | | C-356-36 4'x6'x55' |
| 600+05 | LT | 1 | | | | 18" X 40' CVCMP |
| 606+51 | RT | 1 | | | | 12" X 38' CVCMP |
| 607+18 | LT | 1 | | | | 12" X 16' CVCMP |
| 609+44 | LT & RT | 1 | | | | 18" X 40' CVCMP |
| 610+76 | RT | 1 | | | | 15" X 30' CVCMP |
| 617+58 | LT | 1 | | | | 18" X 30' CVCMP |
| 618+88 | LT & RT | 1 | | | | 15" X 30' CVCMP |
| 621+84 | LT | 1 | | | | 15" X 18' CVCMP |
| 622+41 | LT & RT | | | | 1 | 5'x4'x50' BOX CULV |
| CTH TB | | | | | | |
| 75+55 | RT | 1 | | | | 12" X 28' CVCMP |
| CAT 0030 SUBTOTAL | | 13 | 1 | 1 | 1 | |
| CAT 0010 | | | | | | |
| CTH O / CTH OO | | | | | | |
| 629+84 | LT | 1 | | | | 15" X 32' CVCMP |
| 643+45 | LT & RT | 1 | | | | 36" X 54' CVCMP |
| 647+75 | LT & RT | 1 | | | | 36" X 55' CVCMP |
| 650+75 | LT | 1 | | | | 15" X 30' CVCMP |
| 652+12 | RT | 1 | | | | 18" X 30' CVCMP |
| 652+22 | LT | 1 | | | | 18" X 60' CVCMP |
| 653+26 | LT | 1 | | | | 18" X 46' CVCMP |
| 654+67 | LT | 1 | | | | 18" X 61' CVCMP |
| 656+30 | RT | 1 | | | | 24" X 32' CVCMP |
| CTH OO | | | | | | |
| 63+09 | LT & RT | 1 | | | | 48" X 68' CVCMP |
| CAT 0010 SUBTOTAL | | 10 | 0 | 0 | 0 | |
| ITEM TOTALS | | 23 | 1 | 1 | 1 | |

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## EXCAVATION

| DIVISION | FROM/TO STATION | LOCATION | 205.0100 EXCAVATION COMMON (1) CUT (2) | SALVAGED/UNUSABLE PAVEMENT MATERIAL (4) | AVAILABLE MATERIAL (5) | 205.0200 EXCAVATION ROCK (7) | EXPANDED ROCK (12) FACTOR 1.50 | UNEXPANDED FILL | EXPANDED FILL (6) FACTOR 1.30 | MASS ORDINATE +/- (7) | WASTE (8) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CATEGORY 0030 | | | | | | | | | | | |
| CTH O | 552+00 - 624+00 | LT & RT | 67,155 | 2,068 | 65,087 | 8,400 | 12,600 | 34,281 | 44,565 | 20,522 | 20,522 |
| CTH TB | 70+24 - 75+50 | LT & RT | 272 | 180 | 92 | 0 | 0 | 3,892 | 5,060 | -4,968 | -4,968 |
| DW LT | 595+00 - 598+50 | LT | 213 | 0 | 213 | 0 | 0 | 5 | 6 | 207 | 207 |
| PIPE EXCAVATION | 555+08 | LT & RT | 315 | | | | | | | | |
| PIPE EXCAVATION | 622+41 | LT & RT | 355 | | | | | | | | |
| CATEGORY 0030 SUBTOTAL | | | 68,310 | 2,248 | 65,392 | 8,400 | 12,600 | 38,178 | 49,631 | 15,761 | 15,761 |
| CATEGORY 0010 | | | | | | | | | | | |
| CTH O | 624+00 - 639+76 | LT & RT | 5,182 | 467 | 4,715 | 0 | 0 | 121 | 157 | 4,558 | 4,558 |
| CTH O | 640+97.4 - 657+15 | LT & RT | 3,547 | 560 | 2,987 | 0 | 0 | 273 | 355 | 2,632 | 2,632 |
| CTH OO NORTH | 61+47.25 - 63+38 | LT & RT | 600 | 70 | 530 | 0 | 0 | 134 | 174 | 356 | 356 |
| CATEGORY 0010 SUBTOTAL | | | 9,329 | 1,097 | 8,232 | 0 | 0 | 528 | 686 | 7,546 | 7,546 |
| | | | | | | | | | | | |
| TOTAL COMMON EXC | | | 77,639 | | | 8,400 | | | | | |

NOTES:
(1) COMMON EXCAVATION IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100
(2) SALVAGED/UNSUABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
(3) EBS EXCAVATION TO BE BACKFILLED WITH SELECT BORROW MATERIAL. NOTE: THIS IS DESIGNERS CHOICE, CAN BE BACKFILLED WITH BORROW, OR CUT AS WELL.
(4) SALVAGED/UNUSABLE PAVEMENT MATERIAL (ESTIMATED AT 4" DEPTH)
5) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSUABLE PAVEMENT MATERIAL
(6) EXPANDED FILL FACTOR = 1.3
(7) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION.
MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.
(8) FACTORS USED TO COMPUTE ANTICIPATED WASTE AND THE COMPUTED WASTE VOLUME IDENTIFIED ARE FOR GENERAL INFORMATION ONLY.

## FINISHING ROADWAY

| STATION | LOCATION | 213.0100 EACH |
|---|---|---|
| CAT 0030 | | |
| CTH O / CTH OO | | |
| 552+00 - 624+00 | LT & RT | 0.7 |
| CAT 0030 SUBTOTAL | | 0.7 |
| CAT 0010 | | |
| CTH O / CTH OO | | |
| 624+00 - 657+15 | LT & RT | 0.3 |
| CAT 0010 SUBTOTAL | | 0.3 |
| ITEM TOTAL | | 1.0 |

## BASE AGGREGATE DENSE

| STATION | LOCATION | 305.0110 3/4-INCH TON | 305.0120 1 1/4-INCH TON | 305.0130 3-INCH TON | 311.0115 BREAKER RUN CY | 624.0100 WATER MGAL | COMMENTS |
|---|---|---|---|---|---|---|---|
| CAT 0030 | | | | | | | |
| CTH O/OO | | | | | | | |
| 552+00.00 - 574+30.36 | LT & RT | 388 | 3819 | 4518 | | 43 | |
| 574+30.36 - 624+00.00 | LT & RT | 866 | 7703 | 9310 | | 86 | INCLUDES CIRCLE VIEW DRIVE |
| CTH TB | | | | | | | |
| 70+24.00 - 75+50.00 | LT & RT | 89 | 833 | 1002 | | 9 | |
| DRIVEWAYS | | | | | | | |
| 595+03 - 598+50 | LT & RT | | 155 | | 4900 | 4 | |
| 565+86 | LT | 23 | | | | | |
| 569+79 | LT | 26 | | | | | |
| 582+32 | RT | 53 | | | | 1 | |
| 587+84 | LT | 50 | | | | 1 | |
| 587+91 | RT | 51 | | | | 1 | |
| 592+50 | RT | 46 | | | | | |
| 600+05 | LT | 79 | | | | 1 | |
| 604+60 | RT | 92 | | | | 1 | |
| 606+51 | RT | 24 | | | | | |
| 607+18 | LT | 51 | | | | 1 | |
| 610+76 | RT | 16 | | | | | |
| 617+58 | LT | 29 | | | | | |
| 621+84 | LT | 5 | | | | | |
| 621+84 | RT | 50 | | | | 1 | |
| 622+94 | RT | 24 | | | | | |
| 74+50 | LT | 50 | | | | 1 | CTH TB |
| 74+50 | RT | 33 | | | | | CTH TB |
| CAT 0030 SUBTOTAL | | 2045 | 12510 | 14830 | 4900 | 150 | |
| CAT 0010 | | | | | | | |
| CTH O/OO | | | | | | | |
| 624+00.00 - 639+76.00 | LT & RT | 160 | 2463 | 2970 | | 28 | INCLUDES CIRCLE VIEW DRIVE |
| 640+97.40 - 657+15.00 | LT & RT | 273 | 2693 | 3336 | | 31 | |
| CTH 00 | | | | | | | |
| 61+47.25 - 63+38.85 | LT & RT | 35 | 344 | 404 | | 4 | |
| 62+00 | RT | 55 | | | | | |
| DRIVEWAYS | | | | | | | |
| 633+50 | LT | 53 | | | | 1 | |
| 650+75 | LT | 24 | | | | | |
| 652+12 | RT | 26 | | | | | |
| 652+22 | LT | 49 | | | | | |
| 653+26 | LT | 41 | | | | | |
| 654+67 | LT | 52 | | | | 1 | |
| 656+30 | RT | 24 | | | | | |
| 656+53 | LT | 45 | | | | | |
| 657+04 | LT | 7 | | | | | |
| 657+04 | RT | 6 | | | | | |
| CAT 0010 SUBTOTAL | | 850 | 5500 | 6710 | 0 | 65 | |
| ITEM TOTALS | | 2895 | 18010 | 21540 | 4900 | 215 | |

## ASPHALTIC PAVEMENT ITEMS

| STATION | LOCATION | 455.0605 TACK COAT GAL | 460.5223 HMA PAVEMENT 3 LT 58-28 S* TON | 460.5224 HMA PAVEMENT 4 LT 58-28 S* TON | COMMENTS |
|---|---|---|---|---|---|
| CAT 0030 | | | | | |
| CTH O/OO | | | | | |
| 552+00.00 - 574+30.36 | LT & RT | 500 | 1091 | 820 | |
| 574+30.36 - 624+00.00 | LT & RT | 1040 | 2206 | 1704 | INCLUDES CIRCLE VIEW DRIVE |
| CTH TB | | | | | |
| 70+24.00 - 75+50.00 | LT & RT | 111 | 233 | 181 | |
| CAT 0030 SUBTOTAL | | 1651 | 3530 | 2705 | |
| CAT 0010 | | | | | |
| CTH O/OO | | | | | |
| 624+00.00 - 639+76.00 | LT & RT | 350 | 769 | 570 | INCLUDES CIRCLE VIEW DRIVE |
| 640+97.40 - 657+15.00 | LT & RT | 380 | 798 | 616 | |
| CTH 00 | | | | | |
| 61+47.25 | LT & RT | 44 | 95 | 71 | |
| CAT 0010 SUBTOTAL | | 774 | 1662 | 1257 | |
| ITEM TOTALS | | 2425 | 5192 | 3962 | |

*112 LBS/(SY*IN) USED IN CALCULATIONS

## ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES

| STA | LOCATION | THICKNESS (IN) | 465.0120 TON |
|---|---|---|---|
| CAT 0030 | | | |
| CTH O/CTH OO | | | |
| 622+94 | RT | 3.5 | 13 |
| CAT 0030 SUBTOTAL | | | 13 |
| CAT 0010 | | | |
| CTH O/CTH OO | | | |
| 654+67 | LT | 3.5 | 25 |
| 656+30 | RT | 3.5 | 11 |
| 656+53 | LT | 3.5 | 21 |
| 657+04 | LT | 3.5 | 3 |
| 657+04 | RT | 3.5 | 2 |
| CAT 0010 SUBTOTAL | | | 62 |
| ITEM TOTAL | | | 75 |

## FLUMES

| STATION | LOCATION | 465.0315 ASPHALTIC FLUMES SY | 602.3010 CONCRETE SURFACE DRAINS CY |
|---|---|---|---|
| CAT 0030 | | | |
| CTH O / CTH OO | | | |
| 558+00 | LT | | 1 |
| 567+30 | LT | | 2 |
| 615+00 | RT | | 1 |
| CAT 0030 SUBTOTAL | | | 4 |
| CAT 0010 | | | |
| CTH OO | | | |
| 63+00 | LT | 7 | |
| CAT 0010 SUBTOTAL | | 7 | 0 |
| ITEM TOTALS | | 7 | 4 |

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## CULVERT PIPES

| STATION | LOCATION | 520.1015 APRON ENDWALLS FOR CULVERT PIPE 15-INCH EACH | 520.1018 APRON ENDWALLS FOR CULVERT PIPE 18-INCH EACH | 520.1024 APRON ENDWALLS FOR CULVERT PIPE 24-INCH EACH | 520.3415 CULVERT PIPE CLASS III-A NON-METAL 15-INCH LF | 520.3418 CULVERT PIPE CLASS III-A NON-METAL 18-INCH LF | 520.3424 CULVERT PIPE CLASS III-A NON-METAL 24-INCH LF | 521.0542 APRON ENDWALLS FOR PIPE ARCH SLOPED CROSS DRAINS STEEL 42x29-INCH 4:1 EACH | 521.1018 APRON ENDWALLS FOR CULVERT PIPE STEEL 18-INCH EACH | 521.1024 APRON ENDWALLS FOR CULVERT PIPE STEEL 24-INCH EACH | 521.1036 APRON ENDWALLS FOR CULVERT PIPE STEEL 36-INCH EACH | 521.1048 APRON ENDWALLS FOR CULVERT PIPE STEEL 48-INCH EACH | 521.1060 APRON ENDWALLS FOR CULVERT PIPE STEEL 60-INCH EACH | 521.1084 APRON ENDWALLS FOR CULVERT PIPE STEEL 84-INCH EACH | 521.3118 CULVERT PIPE CORRUGATED STEEL 18-INCH LF | 521.3124 CULVERT PIPE CORRUGATED STEEL 24-INCH LF | 521.3136 CULVERT PIPE CORRUGATED STEEL 36-INCH LF | 521.3148 CULVERT PIPE CORRUGATED STEEL 48-INCH LF | 521.3160 CULVERT PIPE CORRUGATED STEEL 60-INCH LF | 521.3184 CULVERT PIPE CORRUGATED STEEL 84-INCH LF | 521.3742 PIPE ARCH CORRUGATED STEEL 42x29-INCH LF | 633.5200 MARKERS CULVERT END EACH | 650.6000 CONSTRUCTION STAKING PIPE CULVERTS EACH | DESCRIPTION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CAT 0030 | | | | | | | | | | | | | | | | | | | | | | | | |
| CTH O | | | | | | | | | | | | | | | | | | | | | | | | |
| 555+05.5 | CL | | | | | | | | | | | | | 2 | | | | | | | 66 | | 2 | 1 | |
| 563+68 | CL | | | 2 | | | 78 | | | | | | | | | | | | | | | | 2 | 1 | |
| 565+86 | LT | | 2 | | | 26 | | | | | | | | | | | | | | | | | | 1 | PE |
| 575+50 | CL | | | 2 | | | 82 | | | | | | | | | | | | | | | | 2 | 1 | |
| 582+32 | RT | | | 2 | | | 42 | | | | | | | | | | | | | | | | | 1 | FE |
| 589+90.90 | CL | | | | | | | | | | | | 2 | | | | | | | 118 | | | 2 | 1 | |
| 600+05 | LT | | | | | | | | 2 | | | | | | | 48 | | | | | | | | 1 | PE |
| 604+60 | RT | | | 2 | | | 54 | | | | | | | | | | | | | | | | | 1 | FE |
| 606+51 | RT | | | 2 | | | 28 | | | | | | | | | | | | | | | | | 1 | PE |
| 607+18 | LT | | | 2 | | | 40 | | | | | | | | | | | | | | | | | 1 | FE |
| 609+44 | CL | | | | | | | | | 2 | | | | | | | 60 | | | | | | 2 | 1 | |
| 617+58 | LT | | 2 | | | 40 | | | | | | | | | | | | | | | | | | 1 | PE |
| 618+88 | CL | | | | | | | | | 2 | | | | | | | 58 | | | | | | 2 | 1 | |
| 621+84 | LT | 2 | | | 56 | | | | | | | | | | | | | | | | | | | 1 | FE |
| 621+84 | RT | | | 2 | | | 46 | | | | | | | | | | | | | | | | | 1 | FE |
| 622+36.75 | CL | | | | | | | | | | 2 | | | | | | | 64 | | | | | 2 | 1 | |
| 622+44.25 | CL | | | | | | | | | | 2 | | | | | | | 64 | | | | | 2 | 1 | |
| 622+94 | RT | | 2 | | | 32 | | | | | | | | | | | | | | | | | | 1 | NON-DRAINAGE |
| CTH TB | | | | | | | | | | | | | | | | | | | | | | | | | |
| 71+50 | CL | | 2 | | | 70 | | | | | | | | | | | | | | | | | 2 | 1 | NON-DRAINAGE |
| 74+50 | LT | | 2 | | | 38 | | | | | | | | | | | | | | | | | | 1 | |
| 74+50 | RT | | 2 | | | 46 | | | | | | | | | | | | | | | | | | 1 | |
| CAT 0030 SUBTOTAL | | 2 | 12 | 14 | 56 | 252 | 370 | 0 | 2 | 4 | 4 | 0 | 2 | 2 | 48 | 118 | 128 | 0 | 118 | 66 | 0 | 18 | 21 | | |
| CAT 0010 | | | | | | | | | | | | | | | | | | | | | | | | | |
| CTH O/CTH OO | | | | | | | | | | | | | | | | | | | | | | | | | |
| 629+84 | LT | | 2 | | | 44 | | | | | | | | | | | | | | | | | | 1 | CE |
| 633+50 | LT | | | 2 | | | 46 | | | | | | | | | | | | | | | | | 1 | FE |
| 637+75 | CL | | | | | | | | 2 | | | | | | 62 | | | | | | | 2 | 1 | |
| 643+45 | CL | | | | | | | 2 | | | | | | | | | | | | 70 | 2 | 1 | CROSS DRAIN | |
| 647+75 | CL | | | | | | | 2 | | | | | | | | | | | | 70 | 2 | 1 | CROSS DRAIN | |
| 650+75 | LT | | 2 | | | 24 | | | | | | | | | | | | | | | | | | 1 | PE |
| 652+12 | RT | | 2 | | | 26 | | | | | | | | | | | | | | | | | | 1 | PE |
| 652+22 | LT | | 2 | | | 58 | | | | | | | | | | | | | | | | | | 1 | PE |
| 653+30 | LT | | 2 | | | 32 | | | | | | | | | | | | | | | | | | 1 | PE |
| 654+67 | LT | | 2 | | | 58 | | | | | | | | | | | | | | | | | | 1 | PE |
| 656+30 | RT | | | 2 | | | 28 | | | | | | | | | | | | | | | | | 1 | PE |
| CTH OO | | | | | | | | | | | | | | | | | | | | | | | | | |
| 62+00 | RT | | 2 | | | 40 | | | | | | | | | | | | | | | | | | 1 | |
| 63+04 | CL | | | | | | | | | | | 2 | | | | | | | | | | | 2 | 1 | CROSS DRAIN |
| CAT 0010 SUBTOTAL | | 0 | 14 | 4 | 0 | 282 | 74 | 4 | 2 | 0 | 0 | 2 | 0 | 0 | 62 | 0 | 0 | 74 | 0 | 0 | 140 | 8 | 13 | | |
| ITEM TOTALS | | 2 | 26 | 18 | 56 | 534 | 444 | 4 | 4 | 4 | 4 | 2 | 2 | 2 | 110 | 118 | 128 | 74 | 118 | 66 | 140 | 26 | 34 | | |

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## CONCRETE CURB & GUTTER

| STATION - STATION | LOCATION | 601.0557 6-INCH SLOPED 36-INCH TYPE D LF | 650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER LF |
|---|---|---|---|
| CAT 0030 | | | |
| CTH O / CTH OO | | | |
| 558+00.00 - 562+70.00 | 18.0' LT | 470 | 470 |
| 567+37.00 - 570+50.00 | 18.0' LT | 313 | 313 |
| 610+48.00 - 615+00.00 | 18.0' RT | 452 | 452 |
| CTH TB | | | |
| 70+22.11 - 70+82.24 | LT & RT | 146 | 146 |
| CAT 0030 SUBTOTAL | | 1381 | 1381 |
| CAT 0010 | | | |
| CTH O / CTH OO | | | |
| 625+50.00 - 627+50.00 | 18.0' RT | 200 | 200 |
| CTH OO | | | |
| 62+96.14 - 63+54.07 | RT | 167 | 167 |
| CAT 0010 SUBTOTAL | | 367 | 367 |
| ITEM TOTALS | | 1748 | 1748 |

## CURB RAMPS

| STATION - STATION | LOCATION | 602.0415 CONCRETE SIDEWALK 6-INCH SF | 602.0505 CURB RAMP DETECTABLE WARNING FIELD YELLOW SF |
|---|---|---|---|
| CAT 0010 | | | |
| CTH O / CTH OO | | | |
| 657+09.0 - 657+20.0 | LT | 33.0 | |
| 657+09.5 - 657+19.5 | LT | | 20 |
| 657+88.0 - 656+99.0 | RT | 33.0 | |
| 657+88.5 - 656+98.5 | RT | | 20 |
| UNDISTRIBUTED | LT/RT | 4.0 | |
| CAT 0010 TOTAL | | 70.0 | 40 |

* QUANTITY FOR BASE AGGEGATE UNDER SIDEWALK INCLUDED IN BASE AGGREGATE TABLE

## RIPRAP AND GEOTEXTILE FABRIC

| STATION | LOCATION | 606.0200 RIPRAP MEDIUM CY | 645.0130 GEOTEXTILE FABRIC TYPE R SY | REMARKS |
|---|---|---|---|---|
| CAT 0030 | | | | |
| CTH O / CTH OO | | | | |
| 555+05 | LT&RT | 18.3 | 51.0 | |
| 589+90 | LT&RT | 16.1 | 45.0 | |
| 622+40 | LT&RT | 20.6 | 56.0 | |
| CAT 0030 SUBTOTAL | | 55.0 | 152.0 | |
| CAT 0010 | | | | |
| CTH O / CTH OO | | | | |
| 643+45 | LT&RT | 13.3 | 38 | |
| 647+75 | LT&RT | 13.3 | 38 | |
| 63+04 | LT&RT | 14.4 | 40 | |
| CAT 0010 SUBTOTAL | | 41.0 | 116.0 | |
| ITEM TOTALS | | 96.0 | 268.0 | |

*INSTALL THE SAME LENGTH AND WIDTH ON BOTH LT & RT SIDES WHEN LT/RT INDICATED

## GUARDRAIL ITEMS

| STATION TO STATION | | | LOCATION | 614.0200 STEEL THRIE BEAM STRUCTURE APPROACH LF | 614.0305 STEEL PLATE BEAM GUARD CLASS A LF | 614.0345 STEEL PLATE BEAM GUARD SHORT RADIUS LF | 614.0370 STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL EACH | 614.2300 MGS GUARDRAIL 3 LF | 614.2340 MGS GUARDRAIL 3 L LF | 614.2500 MGS THRIE BEAM TRANSITION LF | 614.2610 MGS GUARDRAIL TERMINAL EAT EACH | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CAT 0030 | | | | | | | | | | | | |
| CTH O / CTH OO | | | | | | | | | | | | |
| 553+96.82 | - | 554+49.97 | LT | | | | | | | | 1 | |
| 553+96.98 | - | 554+50.01 | RT | | | | | | | | 1 | |
| 554+49.97 | - | 555+50.08 | LT | | | | | | 100 | | | 12'-6" CENTER SPAN LENGTH |
| 554+50.01 | - | 555+49.90 | RT | | | | | | 100 | | | 12'-6" CENTER SPAN LENGTH |
| 555+49.90 | - | 556+02.92 | RT | | | | | | | | 1 | |
| 555+50.08 | - | 556+03.23 | LT | | | | | | | | 1 | |
| CAT 0030 SUBTOTAL | | | | 0 | 0 | 0 | 0 | 0 | 200 | 0 | 4 | |
| CAT 0010 | | | | | | | | | | | | |
| CTH O / CTH OO | | | | | | | | | | | | |
| 637+92.70 | - | 638+45.79 | RT | | | | | | | | 1 | |
| 638+45.79 | - | 639+33.35 | RT | | | | | 87.5 | | | | |
| 639+33.35 | - | 639+72.74 | RT | | | | | | | 39.4 | | |
| 639+64.87 | - | 639+85.52 | | 20.6 | | | | | | | | |
| 640+88.91 | - | 641+28.31 | RT | | | | | | | 39.4 | | |
| 641+01.04 | - | 641+40.45 | LT | | | | | | | 39.4 | | |
| 641+28.31 | - | 642+15.73 | RT | | | | | 87.5 | | | | |
| 641+40.45 | - | 641+77.95 | LT | | | | | 37.5 | | | | |
| 641+77.95 | - | 642+31.10 | LT | | | | | | | | 1 | |
| 642+15.73 | - | 642+68.72 | RT | | | | | | | | 1 | |
| 643+69.69 | - | 644+22.91 | RT | | | | | | | | 1 | |
| 644+07.53 | - | 644+60.42 | LT | | | | | | | | 1 | |
| 644+22.91 | - | 645+10.42 | RT | | | | | 87.5 | | | | |
| 644+60.42 | - | 645+10.42 | LT | | | | | 50 | | | | |
| 645+10.42 | - | 646+22.92 | RT | | | | | | 112.5 | | | |
| 645+10.42 | - | 646+22.92 | LT | | | | | | 112.5 | | | |
| 646+22.92 | - | 646+72.94 | RT | | | | | 50 | | | | |
| 646+22.92 | - | 647+10.42 | LT | | | | | 87.5 | | | | |
| 646+72.94 | - | 647+26.03 | RT | | | | | | | | 1 | |
| 647+10.42 | - | 647+63.48 | LT | | | | | | | | 1 | |
| CTH OO | | | | | | | | | | | | |
| 62+04.59 | - | 62+54.55 | LT | | | | 1 | | | | | |
| 62+54.55 | - | 62+67.05 | LT | | 12.5 | | | | | | | |
| 62+67.05 | - | 639+64.87 | LT | | | 87.5 | | | | | | |
| CAT 0010 SUBTOTAL | | | | 20.6 | 12.5 | 87.5 | 1.0 | 487.5 | 225.0 | 118.2 | 7.0 | |
| ITEM TOTALS | | | | 20.6 | 12.5 | 87.5 | 1.0 | 487.5 | 425.0 | 118.2 | 11.0 | |

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## FENCE SAFETY

| STATION | LOCATION | 616.0700.S LF |
|---|---|---|
| CAT 0030 | | |
| CTH O / CTH OO | | |
| 551+94 - 552+43 | LT | 66 |
| 552+86 - 553+05 | RT | 34 |
| CAT 0030 SUBTOTAL | | 100 |
| CAT 0010 | | |
| CTH O | | |
| 651+55 - 651+79 | RT | 48 |
| 654+07 - 654+38 | RT | 42 |
| CAT 0010 SUBTOTAL | | 90 |
| ITEM TOTAL | | 190 |

## MOBILIZATION

| STATION | LOCATION | 619.1000 EACH |
|---|---|---|
| CAT 0030 | | |
| CTH O / CTH OO | | |
| 552+00 - 624+00 | LT & RT | 0.5 |
| CAT 0030 SUBTOTAL | | 0.5 |
| CAT 0010 | | |
| CTH O / CTH OO | | |
| 624+00 - 657+15 | LT & RT | 0.2 |
| CAT 0010 SUBTOTAL | | 0.2 |
| ITEM TOTAL | | 0.7 |

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## MAINTENANCE AND REPAIR OF HAUL ROADS

| STATION | LOCATION | 618.0100 EACH |
|---|---|---|
| CAT 0020 | | |
| CTH O / CTH OO | | |
| 551+40.60 - 657+15.00 | LT & RT | 1 |
| CAT 0020 SUBTOTAL | | 1 |
| ITEM TOTAL | | 1 |

## SALVAGED TOPSOIL, MULCHING AND SEEDING

| STATION | LOCATION | 625.0500 SALVAGED TOPSOIL SY | 627.0200 MULCHING SY | 629.0205 FERTILIZER TYPE A CWT | 630.0120 SEEDING MIXTURE NO. 20 LB | 630.0200 TEMPORARY SEEDING LB | 630.0500 SEED WATER MGAL |
|---|---|---|---|---|---|---|---|
| CAT 0030 | | | | | | | |
| CTH O/OO | | | | | | | |
| 552+00.00 - 574+30.36 | LT & RT | 11965 | 11965 | 7.5 | 323.0 | 323.0 | 270.0 |
| 574+30.36 - 624+00.00 | LT & RT | 38917 | 38917 | 24.5 | 1050.8 | 1050.8 | 870.0 |
| CTH TB | | | | | | | |
| 70+24.00 - 75+50.00 | LT & RT | 3092 | 3092 | 1.9 | 83.5 | 83.5 | 70.0 |
| UNDISTRIBUTED | | 5401 | 13491 | 8.6 | 366.2 | 366.2 | 305.0 |
| CAT 0030 SUBTOTAL | | 59375 | 67465 | 42.5 | 1823.5 | 1823.5 | 1515.0 |
| CAT 0010 | | | | | | | |
| CTH O/OO | | | | | | | |
| 624+00.00 - 639+76.00 | LT & RT | 7393 | 7393 | 4.7 | 199.6 | 199.6 | 170.0 |
| 640+97.40 - 657+15.00 | LT & RT | 3736 | 3736 | 2.4 | 100.9 | 100.9 | 80.0 |
| CTH 00 | | | | | | | |
| 61+47.25 - 63+38.85 | LT & RT | 1146 | 1146 | 0.7 | 30.9 | 30.9 | 30.0 |
| UNDISTRIBUTED | | 1230 | 3070 | 7.8 | 84.9 | 84.9 | 70.0 |
| CAT 0010 SUBTOTAL | | 13505 | 15345 | 15.5 | 416.5 | 416.5 | 350.0 |
| ITEM TOTALS | | 72880 | 82810 | 58.0 | 2240.0 | 2240.0 | 1865.0 |

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## EROSION MAT CLASS II TYPE B

| STATION | LOCATION | 628.2023 SY |
|---|---|---|
| CAT 0030 | | |
| CTH O/CTH OO | | |
| 552+00 - 553+90 | LT | 158 |
| 554+30 - 556+50 | LT | 325 |
| 559+00 - 562+50 | LT | 1468 |
| 579+00 - 581+00 | LT | 1755 |
| 584+00 - 587+00 | RT | 1281 |
| 589+00 - 592+25 | LT & RT | 1223 |
| 592+75 - 598+50 | LT & RT | 3774 |
| 612+00 - 614+00 | LT | 688 |
| 624+50 - 626+50 | LT | 354 |
| 629+75 - 630+25 | LT | 53 |
| 638+00 - 640+00 | LT | 636 |
| ITEM TOTAL | | 11714 |

## SILT FENCE ITEMS

| STATION | LOCATION | 628.1504 SILT FENCE LF | 628.1520 SILT FENCE MAINTENANCE LF |
|---|---|---|---|
| CAT 0030 | | | |
| CTH O/CTH OO | | | |
| 554+50 - 555+50 | LT | 100 | 100 |
| 554+50 - 555+50 | RT | 100 | 100 |
| 589+50 - 599+50 | LT | 100 | 100 |
| 589+50 - 599+50 | RT | 100 | 100 |
| 622+00 - 623+00 | LT | 100 | 100 |
| 622+00 - 623+00 | RT | 100 | 100 |
| CAT 0030 SUBTOTAL | | 600 | 600 |
| CAT 0010 | | | |
| 641+00 - 649+00 | LT | 800 | 800 |
| 641+00 - 652+00 | RT | 1100 | 1100 |
| CTH OO | | | |
| 61+50 - 63+00 | LT | 200 | 200 |
| UNDISTRIBUTED | | 200 | 200 |
| CAT 0010 SUBTOTAL | | 2300 | 2300 |
| ITEM TOTALS | | 2900 | 2900 |

## MOBILIZATIONS EROSION CONTROL

| STATION | | 628.1905 EROSION CONTROL EACH | 628.1910 EMERGENCY EROSION CONTROL EACH |
|---|---|---|---|
| CAT 0030 | | | |
| CTH O / CTH OO | | | |
| 552+00 - 624+00 | LT & RT | 1 | 2 |
| CAT 0030 SUBTOTAL | | 1 | 2 |
| CAT 0010 | | | |
| CTH O / CTH OO | | | |
| 624+00 - 657+15 | LT & RT | 1 | 1 |
| CAT 0010 SUBTOTAL | | 1 | 1 |
| ITEM TOTALS | | 2 | 3 |

## TEMPORARY DITCH CHECKS

| STATION | LOCATION | 628.7504 LF |
|---|---|---|
| CAT 0030 | | |
| CTH O/CTH OO | | |
| 555+10 | LT | 10 |
| 567+50 | RT | 10 |
| 576+50 - 582+50 | RT | 120 |
| 597+50 - 603+50 | LT/RT | 140 |
| 609+00 | RT | 10 |
| 612+00 - 614+0 | LT | 40 |
| ITEM TOTAL | | 330 |

## CULVERT PIPE CHECKS

| STATION | LOCATION | 628.7555 EACH |
|---|---|---|
| CAT 0030 | | |
| CTH O | | |
| 555+05.5 | CL | 1 |
| 563+68 | CL | 1 |
| 565+86 | LT | 1 |
| 575+50 | CL | 1 |
| 582+32 | RT | 1 |
| 589+90.90 | CL | 1 |
| 600+05 | LT | 1 |
| 604+60 | RT | 1 |
| 606+51 | RT | 1 |
| 607+18 | LT | 1 |
| 609+44 | CL | 1 |
| 617+58 | LT | 1 |
| 618+88 | CL | 1 |
| 621+84 | LT | 1 |
| 621+84 | RT | 1 |
| 622+36.75 | CL | 1 |
| 622+44.25 | CL | 1 |
| CTH TB | | |
| 74+50 | LT | 1 |
| 74+50 | RT | 1 |
| CAT 0030 SUBTOTAL | | 19 |
| CAT 0010 | | |
| CTH O/CTH OO | | |
| 629+84 | LT | 1 |
| 633+50 | LT | 1 |
| 637+75 | LT | 1 |
| 643+45 | CL | 1 |
| 647+75 | CL | 1 |
| 650+75 | LT | 1 |
| 652+12 | RT | 1 |
| 652+22 | LT | 1 |
| 653+30 | LT | 1 |
| 654+67 | LT | 1 |
| 656+30 | RT | 1 |
| CTH OO | | |
| 63+04 | CL | 1 |
| CAT 0010 SUBTOTAL | | 12 |
| ITEM TOTAL | | 31 |

## SOD EROSION CONTROL

| STATION | LOCATION | 631.1100 SY |
|---|---|---|
| CTH TB | | |
| 70+43 | RT | 23 |
| 70+66 | LT | 26 |
| ITEM TOTAL | | 49 |
| CAT 0030 SUBTOTAL | | 49 |

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## PERMANENT SIGNING

| SIGN GROUP CODE | SIGN CODE | MESSAGE | SIZE | 637.2210 SIGNS TYPE II REFLECTIVE H SF | 637.2230 SIGNS TYPE II REFLECTIVE F SF | 634.0612 POSTS WOOD 4X6-INCH 12-FT EACH | 634.0614 POSTS WOOD 4X6-INCH 14-FT EACH | 634.0616 POSTS WOOD 4X6-INCH 16-FT EACH | 638.2102 MOVING SIGNS TYPE II EACH | 638.2602 REMOVING SIGNS TYPE II EACH | 638.3000 REMOVING SMALL SIGN SUPPORTS EACH | 638.4000 MOVING SMALL SIGN SUPPORTS EACH | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CAT 0030 | | | | | | | | | | | | | |
| 1-1 | | FIRE NUMBER | | | | | | | 1 | | | 1 | |
| 1-2 | | FIRE NUMBER | | | | | | | | | | 1 | |
| 1-3 | W1-2L | LEFT CURVE | 30 X 30 | | | | | | | 1 | 1 | | |
| | W13-1 | ADVISORY SPEED PLATE 45 | 18 X 18 | | | | | | | 1 | | | |
| 1-4 | W1-2L | LEFT CURVE | 30 X 30 | | | | | | | 1 | 1 | | |
| | W13-1 | ADVISORY SPEED PLATE 40 | 18 X 18 | | | | | | | 1 | | | |
| 1-5 | J1-1 | JCT TB | 24 X 39 | 6.50 | | | 1 | | | 1 | 1 | | |
| 1-6 | | FIRE NUMBER | | | | | | | 1 | | | 1 | |
| 1-7 | S3-1 | SCHOOL BUS STOP AHEAD | 30 X 30 | | 6.25 | | 1 | | | 1 | 1 | | |
| 1-8 | R12-55 | 40 TON BRIDGE | 48 X 48 | 16.00 | | | | 1 | | 1 | 1 | | |
| 1-9 | W1-3R | RIGHT REVERSE TURN | 36 X 36 | | | | | | | 1 | 1 | | |
| 1-10 | J12-1 | CTH TB WITH ARROW | 24 X 45 | 7.50 | | | 1 | | | 1 | 1 | | |
| 1-11 | W1-2R | RIGHT CURVE | 30 X 30 | | 6.25 | | 1 | | | 1 | 1 | | |
| | W13-1 | ADVISORY SPEED PLATE 40 | 18 X 18 | | 2.25 | | | | | 1 | | | |
| 1-12 | W1-7 | DOUBLE ARROW | 48 X 24 | | 8.00 | 1 | | | | 1 | 1 | | |
| 1-13 | R1-1 | STOP | 30 X 30 | 5.18 | | | 1 | | | 1 | 1 | | |
| 1-14 | J12-2 | CTH O/CTH OO WITH ARROWS | 48 X 45 | 15.00 | | | 1 | | | 1 | 1 | | |
| 1-15 | J12-1 | CTH TB WITH ARROW | 24 X 45 | 7.50 | | | 1 | | | 1 | 1 | | |
| 2-1 | J1-1 | JCT TB | 24 X 39 | 6.50 | | | 1 | | | 1 | 1 | | |
| 2-2 | W1-3R | RIGHT REVERSE TURN | 36 X 36 | | | | | | | 1 | 1 | | |
| | W13-1 | ADVISORY SPEED PLATE 40 | 18 X 18 | | | | | | | 1 | | | |
| 2-3 | | FIRE NUMBER | | | | | | | 1 | | | 1 | |
| 3-1 | | FIRE NUMBER | | | | | | | 1 | | | 1 | |
| 3-2 | | FIRE NUMBER | | | | | | | 1 | | | 1 | |
| 3-3 | W11-2 | PEDESTRIAN | 30 X 30 | | 6.25 | | | 1 | | 1 | 1 | | |
| | W13-1 | ADVISORY SPEED PLATE 40 | 18 X 18 | | 2.25 | | | | | 1 | | | |
| 3-4 | | FIRE NUMBER | | | | | | | 1 | | | 1 | |
| 3-5 | R6-2R | ONE-WAY | 24 X 30 | 5.00 | | | 1 | | | 1 | 1 | | |
| 3-6 | | FIRE NUMBER | | | | | | | 1 | | | 1 | |
| CAT 0030 SUBTOTAL | | | | 69.18 | 31.25 | 1 | 9 | 2 | 7 | 21 | 16 | 8 | |
| CAT 0010 | | | | | | | | | | | | | |
| 3-7 | R5-1 | DO NOT ENTER | 30 X 30 | 6.25 | | | 1 | | | 1 | 1 | | |
| 3-8 | R3-1 | NO RIGHT TURN | 24 X 24 | 4.00 | | 1 | | | | 1 | 1 | | |
| 3-9 | W11-2 | PEDESTRIAN | 30 X 30 | | 6.25 | | | 1 | | 1 | 1 | | |
| | W13-1 | ADVISORY SPEED PLATE 40 | 18 X 18 | | 2.25 | | | | | 1 | | | |
| 4-1 | R12-55 | 40 TON BRIDGE | 48 X 48 | 16.00 | | | | 1 | | 1 | 1 | | |
| 4-2 | W8-65 | WATCH FOR WATER | 36 X 36 | | 9.00 | | 1 | | | 1 | 1 | | |
| 4-3 | R1-1 | STOP | 30 X 30 | 5.18 | | | 1 | | | 1 | 1 | | |
| 4-4 | J12-2 | CTH O/CTH OO WITH ARROWS | 48 X 45 | 15.00 | | | 1 | | | 1 | 1 | | |
| 4-5 | W1-7 | DOUBLE ARROW | 48 X 24 | | 8.00 | 1 | | | | 1 | 1 | | |
| 4-6 | W1-2L | LEFT CURVE | 30 X 30 | | | | | | | 1 | 1 | | |
| | W13-1 | ADVISORY SPEED PLATE 45 | 18 X 18 | | | | | | | 1 | | | |
| 4-7 | J12-2 | CTH O/CTH OO WITH ARROWS | 48 X 45 | 15.00 | | | 1 | | | 1 | 1 | | |
| 4-8 | W5-52R | CLEARANCE STRIPER | 12 X 36 | | 3.00 | | 1 | | | 1 | 1 | | |
| 4-9 | W5-52L | CLEARANCE STRIPER | 12 X 36 | | 3.00 | | 1 | | | 1 | 1 | | |
| 4-10 | W5-52L | CLEARANCE STRIPER | 12 X 36 | | 3.00 | | 1 | | | 1 | 1 | | |
| 4-11 | W5-52R | CLEARANCE STRIPER | 12 X 36 | | 3.00 | | 1 | | | 1 | 1 | | |
| 4-12 | W5-52R | CLEARANCE STRIPER | 12 X 36 | | 3.00 | | 1 | | | 1 | 1 | | |
| 4-13 | W5-52L | CLEARANCE STRIPER | 12 X 36 | | 3.00 | | 1 | | | 1 | 1 | | |
| 4-14 | J1-1 | JCT OO | 24 X 39 | 6.50 | | | 1 | | | 1 | 1 | | |
| 4-15 | W11-6 | SNOWMOBILE | 30 X 30 | | 6.25 | | 1 | | | 1 | 1 | | |
| 4-16 | W8-65 | WATCH FOR WATER | 36 X 36 | | 9.00 | | 1 | | | 1 | 1 | | |
| CAT 0010 SUBTOTAL | | | | 67.93 | 58.75 | 2 | 14 | 2 | 0 | 21 | 19 | 0 | |
| ITEM TOTALS | | | | 137.11 | 90.00 | 3 | 23 | 4 | 7 | 42 | 35 | 8 | |

## FIELD OFFICE TYPE B

| STATION | | 642.5001 EACH |
|---|---|---|
| CAT 0030 | | |
| CTH O / CTH OO | | |
| 552+00 - 624+00 | LT & RT | 0.5 |
| CAT 0030 SUBTOTAL | | 0.5 |
| CAT 0010 | | |
| CTH O / CTH OO | | |
| 624+00 - 657+15 | LT & RT | 0.2 |
| CAT 0010 SUBTOTAL | | 0.2 |
| ITEM TOTAL | | 0.7 |

## TRAFFIC CONTROL

| STATION | 643.5000.02 PROJECT (5419-06-70) EACH | # OF DRUMS | 643.0300 DRUMS DAY | # OF BARRICADES II | 643.0410 BARRICADES TYPE II DAY | # OF BARRICADES II | 643.0420 BARRICADES TYPE III DAY | # OF SIGNS | SIGN ON TEMPORARY SUPPORT DAY | # OF SIGNS | 643.1050 SIGNS PCMS DAY | # OF TYPE A LIGHTS | 643.0705 WARNING LIGHTS TYPE A DAY | # OF SIGNS | 643.0900 SIGNS DAY | 644.1810 TEMPORARY PEDESTRIAN BARRICADE LF | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CTH O / CTH OO | | | | | | | | | | | | | | | | | |
| CAT 0030 | | | | | | | | | | | | | | | | | |
| 552+00 - 624+00 | 0.7 | 20 | 4160 | | 0 | 8 | 1664 | | 0 | 0 | 0 | 8 | 1664 | 12 | 2496 | | |
| CAT 0030 SUBTOTAL | 0.7 | 20 | 4160 | 0 | 0 | 8 | 1664 | 0 | 0 | 0 | 0 | 8 | 1664 | 12 | 2496 | 0 | |
| CTH O / CTH OO | | | | | | | | | | | | | | | | | |
| CAT 0010 | | | | | | | | | | | | | | | | | |
| 624+00 - 657+15 | 0.3 | 20 | 4160 | 2 | 416 | 17 | 3536 | 2 | 416 | 1 | 14 | 10 | 2080 | 30 | 6240 | 70 | |
| CAT 0010 SUBTOTAL | 0.3 | 20 | 4160 | 2 | 416 | 17 | 3536 | 2 | 416 | 1 | 14 | 10 | 2080 | 30 | 6240 | 70 | |
| ITEM TOTALS | 1 | | 8320 | | 416 | | 5200 | | 416 | | 14 | | 3744 | | 8736 | 70 | |

## TEMPORARY MARKING

| STATION | LOCATION | 643.3350 CROSSWALK REMOVABLE TAPE 6-INCH LF | 643.3850 STOP LINE REMOVABLE TAPE 18-INCH LF |
|---|---|---|---|
| CAT 0010 | | | |
| CTH O / CTH OO | | | |
| 656+91 - 657+35 | LT & RT | 65 | 30 |
| CAT 0010 SUBTOTAL | | 65 | 30 |
| ITEM TOTALS | | 65 | 30 |

## TEMPORARY PEDESTRIAN SURFACE ASPHALT

| STATION | LOCATION | 644.1410 SF |
|---|---|---|
| CAT 0010 | | |
| CTH O / CTH OO | | |
| 656+91 - 657+35 | LT & RT | 395 |
| CAT 0010 SUBTOTAL | | 395 |
| ITEM TOTAL | | 395 |

## TEMPORARY PEDESTRIAN DETECTABLE WARNING FIELD

| STATION | LOCATION | 644.1605 SF |
|---|---|---|
| CAT 0010 | | |
| CTH O / CTH OO | | |
| 656+91 - 657+35 | LT & RT | 25 |
| CAT 0010 SUBTOTAL | | 25 |
| ITEM TOTAL | | 25 |

## MARKING

| STATION | LOCATION | 646.2020 LINE EPOXY 6-INCH LF | 646.4020 LINE EPOXY 10-INCH LF | 646.6120 STOP LINE EPOXY 18-INCH LF | REMARKS |
|---|---|---|---|---|---|
| CAT 0030 | | | | | |
| CTH O / CTH OO | | | | | |
| 552+00 - 624+00 | CL | 14400 | | | DOUBLE YELLOW |
| 552+00 - 624+00 | LT | 7185 | | | EDGELINE WHITE |
| 552+00 - 624+00 | RT | 7091 | 202 | | EDGELINE WHITE & TURN LANE |
| 573+30 - 575+80 | LT | 62 | | | DASHED WHITE |
| CTH TB | LT & RT | 1983 | | 26 | DOUBLE YELLOW/EDGELINE WHITE |
| CAT 0030 SUBTOTAL | | 30721 | 202 | 26 | |
| CAT 0010 | | | | | |
| CTH O / CTH OO | | | | | |
| 624+00 - 657+15 | CL | 6630 | | | DOUBLE YELLOW |
| | LT | 3192 | | | EDGELINE WHITE |
| | RT | 3309 | | | EDGELINE/TURN LANE WHITE |
| CTH OO | LT & RT | 651 | | 26 | DOUBLE YELLOW/EDGELINE WHITE |
| CAT 0010 SUBTOTAL | | 13782 | 0 | 26 | |
| ITEM TOTALS | | 44503 | 202 | 52 | |

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## LOCATING NO-PASSING ZONES

| STATION | LOCATION | 648.0100 MI |
|---|---|---|
| CAT 0030 | | |
| CTH O / CTH OO | | |
| 552+00 - 624+00 | LT & RT | 1.36 |
| CAT 0030 SUBTOTAL | | 1.36 |
| CAT 0010 | | |
| CTH O / CTH OO | | |
| 624+00 - 657+15 | LT & RT | 0.63 |
| CAT 0010 SUBTOTAL | | 0.63 |
| ITEM TOTAL | | 1.99 |

## REMOVE AND RESET MAILBOXES

| STATION | LOCATION | SPV.0060.01 REMOVE AND RESET MAILBOXES EACH | REMARKS |
|---|---|---|---|
| CAT 0030 | | | |
| CTH O / CTH OO | | | |
| 552+00 - 624+00 | LT & RT | 10 | COORDINATE WITH RICHLAND COUNTY & USPS |
| CAT 0030 SUBTOTAL | | 10 | |
| CAT 0010 | | | |
| CTH O / CTH OO | | | |
| 624+00 - 657+15 | LT & RT | 5 | COORDINATE WITH RICHLAND COUNTY & USPS |
| CAT 0010 SUBTOTAL | | 5 | |
| ITEM TOTAL | | 15 | |

## SAWING

| STATION | LOCATION | 690.0150 ASPHALT LF | REMARKS |
|---|---|---|---|
| CAT 0030 | | | |
| CTH O / CTH OO | | | |
| 552+00.00 | LT & RT | 36 | BEGIN PROJECT |
| CTH TB | | | |
| 70+00.00 - 75+50.00 | LT & RT | 24 | |
| DRIVEWAY | | | |
| 622+94 | RT | 16 | |
| 623+00.60 | LT | 24 | CIRCLE VIEW DRIVE |
| CAT 0030 SUBTOTAL | | 100 | |
| CAT 0010 | | | |
| CTH O / CTH OO | | | |
| 657+15.00 | LT & RT | 52 | END PROJECT |
| CTH OO | | | |
| 61+47.25 | LT & RT | 23 | |
| DRIVEWAY | | | |
| 629+84 | LT | 19 | CIRCLE VIEW DRIVE |
| 654+67 | LT | 47 | |
| 656+30 | RT | 16 | |
| 656+53 | LT | 40 | |
| 657+04 | LT | 11 | |
| 657+04 | RT | 11 | |
| CAT 0010 SUBTOTAL | | 219 | |
| ITEM TOTAL | | 319 | |

## TEMPORARY MAILBOX

| STATION | SPV.0060.02 TEMPORARY MAILBOX EACH | REMARKS |
|---|---|---|
| CAT 0010 | | |
| CTH O / CTH OO | | |
| 658+00 | 1 | LOCATE AS DETERMINED BY RICHLAND COUNTY & USPS |
| ITEM TOTAL | 1 | |

## CONSTRUCTION STAKING

| STATION | LOCATION | 650.4500 SUBGRADE LF | 650.5000 BASE LF | 650.9920 SLOPE STAKES LF | 650.9910.01 SUPPLEMENTAL CONTROL (5419-06-73) LS |
|---|---|---|---|---|---|
| CAT 0030 | | | | | |
| CTH O / CTH OO | | | | | |
| 552+00.00 - 574+30.36 | R/L | 2230 | 2230 | 2230 | 0.7 |
| 574+30.36 - 624+00.00 | R/L | 4970 | 4970 | 4970 | |
| CTH TB | | | | | |
| 70+00.00 - 75+50.00 | R/L | 550 | 550 | 550 | |
| CAT 0030 SUBTOTAL | | 7750 | 7750 | 7750 | 0.7 |
| CAT 0010 | | | | | |
| CTH O / CTH OO | | | | | |
| 624+00.00 - 639+76.00 | R/L | 3152 | 3152 | 3152 | 0.3 |
| 640+97.40 - 657+15.00 | R/L | 3235 | 3235 | 3235 | |
| CTH 00 | | | | | |
| 61+50.00 - 63+56.68 | R/L | 414 | 414 | 414 | |
| CAT 0010 SUBTOTAL | | 6801 | 6801 | 6801 | 0.3 |
| ITEM TOTALS | | 14551 | 14551 | 14551 | 1.0 |

## LANDMARK REFERENCE & SURVEY MONUMENTS

| STATION | LOCATION | 204.0180 REMOVING DELINEATORS AND MARKERS EACH | 204.0195 REMOVING CONCRETE BASES EACH | SPV.0060.03 LANDMARK REFERENCE MONUMENTS EACH | REMARKS |
|---|---|---|---|---|---|
| CAT 0030 | | | | | |
| CTH O / CTH OO | | | | | |
| 574+50 | 125' RT | 3 | 1 | | DESTROYING SURVEY MONUMENT |
| 586+60.83 | 69.37' LT | | | 1 | 10N 1E SE Corner Section 34 |
| 613+70.88 | 0.96' LT | | | 1 | 10N 1E E Quarter Section 34 |
| CAT 0030 SUBTOTAL | | | | 2 | |
| CAT 0010 | | | | | |
| CTH O / CTH OO | | | | | |
| 640+55.26 | | | | 1 | 10N 1E NE Corner Section 34 |
| CAT 0010 SUBTOTAL | | | | 1 | |
| ITEM TOTAL | | 3 | 1 | 3 | |

NOTE: ALL ITEMS AND QUANTITIES ON THIS SHEET ARE FOR ENGINEER ESTIMATE CATEGORY 0010, UNLESS OTHERWISE NOTED.

## CONVENTIONAL SIGNS AND ABBREVIATIONS

| | |
|---|---|
| AP | ACCESS POINT |
| AC | ACRES |
| AG | AGRICULTURAL |
| ALUM. | ALUMINUM |
| ANT | ANTENNA |
| B | BARN |
| BLDG | BUILDING |
| ℄ | CENTERLINE |
| CONC | CONCRETE |
| COR | CORNER |
| CSM | CERTIFIED SURVEY MAP |
| CTH | COUNTY TRUNK HIGHWAY |
| DOC | DOCUMENT |
| EASE | EASEMENT |
| ETAL | AND OTHERS |
| FDN | FOUNDATION |
| FE | FIELD ENTRANCE |
| FRL | FRACTIONAL |
| G | GARAGE |
| GP | GAS PUMPS |
| GRAV | GRAVEL |
| GV | GAS |
| HSE | HOUSE |
| IP | IRON PIPE OR PIN |
| L | LENGTH OF CURVE |
| LC | LONG CHORD OR LAND CONTRACT |
| LCB | LONG CHORD BEARING |
| LT | LEFT |
| MH | MANHOLE |
| MON | MONUMENT |
| OL | OUTLOT |
| P | PAGE |
| PC | POINT OF CURVATURE |
| PE | PRIVATE ENTRANCE |
| PI | POINT OF INTERSECTION |
| PK | PARKER-KALON FASTENER |
| PL | PROPERTY LINE |
| PLE | PERMANENT LIMITED EASEMENT |
| PT | POINT OF TANGENCY |
| R | RADIUS OR RANGE |
| RDE | RESTRICTED DEVELOPMENT EASEMENT |
| REM | REMAINING |
| ℟ | REFERENCE LINE |
| RT | RIGHT |
| R/W | RIGHT OF WAY |
| S | SHED |
| SEC | SECTION |
| SEPV | SEPTIC VENT |
| STH | STATE TRUNK HIGHWAY |
| STA | STATION |
| T | TANGENT LENGTH OF CURVE OR TOWN |
| TAV | TAVERN |
| TLE | TEMPORARY LIMITED EASEMENT |
| USH | UNITED STATES HIGHWAY |
| V | VOLUME |
| W | WALL |
| X | EAST COORDINATE (GRID) |
| Y | NORTH COORDINATE (GRID) |
| N | NORTH COORDINATE (GROUND) OR NORTH |
| E | EAST COORDINATE (GROUND), EAST OR EXTERNAL |
| △ | CENTRAL ANGLE OR DELTA |

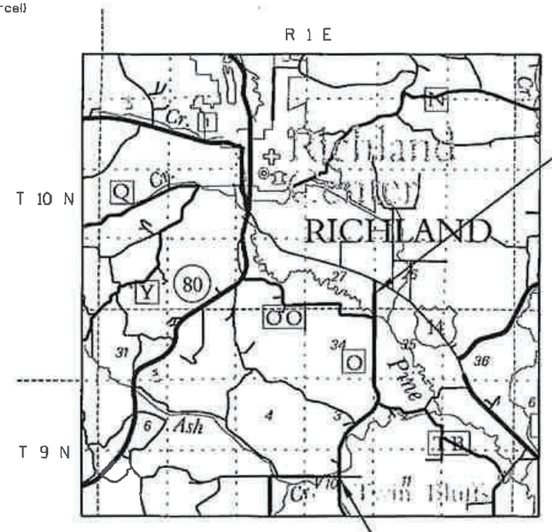
- STATE LINE
- COUNTY LINE
- TOWN OR RANGE LINE
- SECTION LINE
- QUARTER LINE
- SIXTEENTH LINE
- PROPOSED OR NEW R/W LINE
- EXISTING R/W LINE
- LOT LINE
- P.L. ± 58.1 PROPERTY LINE
- NO ACCESS (By Previous Acquisition)
- NO ACCESS (By Acquisition)
- NO ACCESS (By Statutory Authority)
- CORPORATE LIMITS
- FEE ACQUISITION (Cross-hatching varies by parcel)
- PLE ACQUISITION (Pattern varies by parcel)
- TLE ACQUISITION (Pattern varies by parcel)

- SECTION CORNER
- 608 RIGHT OF WAY POINT (NOT MONUMENTED)
- 243 RIGHT OF WAY POINT (MONUMENTED)
- IP (Type) RECOVERED IRON PIN/PIPE
- TRIANGULATION POINT OR HORIZONTAL CONTROL STATION
- INLET
- HYDRANT

| | COMPENSABLE | NON COMPENSABLE |
|---|---|---|
| TELEPHONE POLE | ● | ⊖ |
| POWER POLE | ■ | □ |

- (Size)W WATER
- (Size)G GAS
- T TELEPHONE OR TELEGRAPH
- E ELECTRIC
- TV CABLE TELEVISION
- FO FIBER OPTIC
- (Size)SAN SANITARY SEWER
- (Size)SS STORM SEWER
- CAUTION NOTATION FOR COMBUSTIBLE FLUIDS
- SERVICE PEDESTAL
- (Label) SILO, MANHOLE OR WELL, ETC.

- RAILROAD
- BRIDGE
- (Label) BUILDING
- (Label) FOUNDATION OR RUINS
- FENCE
- MARSH AREA
- LAKE OR POND
- WOODED OR SHRUB AREA
- TREE
- BUILDING TO BE REMOVED




END RELOCATION ORDER
STA. 657+00.00
Y= 436,832.295
X= 685,268.184
1099.91 FEET SOUTH AND 1.55 FEET WEST OF THE WEST QUARTER CORNER OF SECTION 27, T10N, R1E.

BEGIN RELOCATION ORDER
STA. 506+00.00
Y= 422,800.192
X= 682,670.653
1216.04 FEET NORTH AND 12.62 FEET EAST OF THE CENTER QUARTER CORNER OF SECTION 10, T9N, R1E.

LAYOUT SCALE 0 1 2 MI.

TOTAL NET LENGTH OF CENTERLINE = 2.860 MI.

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATES, RICHLAND COUNTY, NAD 83 (91) IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

RIGHT OF WAY MONUMENTS ARE TYPE-2 (3/4" X 24" REBAR) AND ARE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

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

| R/W PROJECT NUMBER | SHEET NUMBER | TOTAL SHEETS |
|---|---|---|
| 5419-06-01 | | |
| FEDERAL PROJECT NUMBER | 4.01 | 9 |

PLAT OF RIGHT-OF-WAY REQUIRED FOR
STH 80 - RICHLAND CENTER
CTH 00 TO USH 14
CTH 0 RICHLAND CO.

CONSTRUCTION PROJECT NUMBER

RECEIVED
NOV 13 2023
DEREK S. KALISH
RICHLAND COUNTY CLERK

RECEIVED
SEP 05 2023
DEREK S. KALISH
RICHLAND COUNTY CLERK

ORIGINAL PLAT PREPARED BY
SEH
10 N. BRIDGE STREET
CHIPPEWA FALLS, WI 54729

WISCONSIN
JASON L. CANCE
S-2688
CHIPPEWA FALLS WI
LAND SURVEYOR

DATE: 9-1-2023 (Signature)

| REVISION DATE | RICHLAND COUNTY |
|---|---|
| 11-07-2023 N.C. | APPROVED FOR RICHLAND COUNTY DATE: 9-5-2023 (Signature) |

E

# SCHEDULE OF LANDS & INTERESTS REQUIRED

AREAS SHOWN IN THE TOTAL ACRES COLUMN MAY BE APPROXIMATE AND ARE DERIVED FROM TAX ROLLS OR OTHER AVAILABLE SOURCES AND MAY NOT INCLUDE LANDS OF THE OWNER WHICH ARE NOT CONTIGUOUS TO THE AREA TO BE ACQUIRED.

OWNER NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO RICHLAND COUNTY.

| PARCEL NUMBER | SHEET NUMBER | OWNER (S) | INTEREST REQUIRED | TOTAL ACRES | R/W ACRES REQUIRED | | | TOTAL ACRES REM. | PLE ACRES | TLE ACRES |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | NEW | EXISTING | TOTAL | | | |
| 1 | 4.04 | KELLAND LAND LLC | FEE/TLE | 27.00 | 0.01 | 0.20 | 0.21 | 26.79 | - | 0.02 |
| | | | | | | | | | | |
| 3 | 4.04 | SCHMITZ FARMLAND TRUST DATED OCTOBER 27, 2021 | FEE/TLE | 68.18 | 0.46 | 0.77 | 1.23 | 66.95 | - | 0.05 |
| 4 | 4.04 | KELLY G. MULLARNEY | FEE | 1.00 | 0.04 | 0.01 | 0.05 | 0.95 | - | - |
| 5 | 4.04,4.05 | DEBRA J. KLINZING | FEE/PLE/TLE | 70.24 | 1.41 | 1.74 | 3.15 | 67.09 | 0.10 | 0.02 |
| | | | | | | | | | | |
| 7 | 4.05 | JUNCTION VIEW DAIRY LLC | FEE/PLE | 10.58 | 0.15 | 0.27 | 0.42 | 10.16 | 0.01 | - |
| 8 | 4.05, 4.06 | KIRK M. STIBBE AND SHELLY M. STIBBE & BRENT H. STIBBE AND SARAH M. STIBBE | FEE/PLE/TLE | 109.92 | 1.90 | 2.66 | 4.56 | 105.36 | 0.10 | 0.03 |
| 9 | 4.05 | ASH CREEK UNITED METHODIST CHURCH | FEE/TLE | 1.00 | 0.09 | 0.46 | 0.55 | 0.45 | - | 0.01 |
| | | | | | | | | | | |
| 11 | 4.05 | RUSSELL L. BAKKEN | FEE | 2.88 | 0.29 | 0.51 | 0.80 | 2.08 | - | - |
| 12 | 4.05 | BRIAN L. LAWRENCE | FEE | 19.00 | 0.16 | 0.30 | 0.46 | 18.54 | - | - |
| 13 | 4.05 | JEFFREY D. BAUER & SUZANNE S. BAUER | FEE | 20.00 | 0.10 | 0.34 | 0.44 | 19.56 | - | - |
| | | | | | | | | | | |
| 15 | 4.06 | REGINALD A. EMSHOFF | FEE/TLE | 26.99 | 0.58 | 1.10 | 1.68 | 25.31 | - | 0.28 |
| 16 | 4.06 | IRENE AND RAYMOND EWERS TRUST DATED FEBRUARY 9, 2018 | FEE/TLE | 1.77 | - | 0.25 | 0.25 | 1.52 | - | 0.05 |
| 17 | 4.06, 4.07 | SCHMITZ FARMAND TRUST DATED OCTOBER 27,2021 | FEE/TLE | 164.00 | 4.99 | 5.03 | 10.02 | 153.98 | - | 0.13 |
| | | | | | | | | | | |
| | | | | | | | | | | |
| 20 | 4.07 | JOHN L. GHASTIN & SUSAN K. GHASTIN | FEE/TLE | 1.92 | 0.14 | 0.14 | 0.28 | 1.64 | - | 0.10 |
| 21 | 4.07, 4.08 | UNBEHAUN LAND, LLC | FEE/TLE | 97.96 | 1.65 | 2.33 | 3.98 | 93.98 | - | 0.74 |
| 22 | 4.07 | STEVEN J. HANOLD, AS TRUSTEE OF THE HANOLD IRREVOCABLE TRUST DATED 6-13-2012 | FEE/TLE | 81.00 | 2.05 | 2.03 | 4.08 | 76.92 | - | 0.11 |
| 23 | 4.07 | STEVEN J. HANOLD | FEE/TLE | 1.30 | 0.04 | 0.24 | 0.28 | 1.02 | - | 0.08 |
| 24 | 4.08 | DAVID W. UNBEHAUN & CATHERINE M. UNBEHAUN | FEE | 5.84 | 0.29 | 0.40 | 0.69 | 5.15 | - | - |
| 25 | 4.08 | PINE VALLEY MANOR | FEE | 40.00 | 1.03 | 2.00 | 3.03 | 36.97 | - | - |
| 26 | 4.08 | SCHMITZ FARMLAND TRUST DATED OCTOBER 27, 2021 | FEE | 66.00 | 0.39 | 0.62 | 1.01 | 64.99 | - | - |
| | | | | | | | | | | |
| | | | | | | | | | | |
| 29 | 4.09 | SCHMITZ FARMLAND LLC | FEE/TLE | 35.00 | 0.21 | - | 0.21 | 34.79 | - | 0.02 |
| 30 | 4.09 | JOHN C. & ERICA S. FJELSTED | TLE | 0.45 | - | - | - | 0.45 | - | 0.07 |
| 31 | 4.09 | EQUITY COOPERATIVE LIVESTOCK SALES ASSOCIATION | TLE | 3.75 | - | - | - | 3.75 | - | 0.06 |
| 32 | 4.09 | SCHMITZ LLC | FEE | 34.00 | 0.25 | - | 0.25 | 33.75 | - | - |
| | | | | | | | | | | |
| | | | | | | | | | | |
| 45 | 4.04 - 4.07 | RICHLAND ELECTRIC COOPERATIVE | RELEASE OF RIGHTS | | | | | | | |
| | | | | | | | | | | |
| 47 | 4.04 - 4.09 | FRONTIER COMMUNICATIONS | RELEASE OF RIGHTS | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| 50 | 4.08 - 4.09 | WE ENERGIES | RELEASE OF RIGHTS | | | | | | | |
| 51 | 4.08 - 4.09 | GENUINE TELECOM | RELEASE OF RIGHTS | | | | | | | |

| POINT | Y | X | POINT | Y | X | POINT | Y | X |
|---|---|---|---|---|---|---|---|---|
| 200 | 422900.192 | 682670.653 | 297 | 427836.769 | 684905.344 | 384 | 434962.268 | 685196.731 |
| 201 | 422900.027 | 682637.820 | 298 | 427978.241 | 685110.033 | 385 | 435047.582 | 685049.119 |
| 202 | 422949.966 | 682625.402 | 299 | 428302.420 | 685342.193 | 386 | 435078.559 | 685057.458 |
| 203 | 422976.234 | 682625.270 | 300 | 428601.493 | 685447.888 | 387 | 435111.315 | 685066.277 |
| 204 | 422975.768 | 682484.566 | 301 | 428879.259 | 685510.493 | 388 | 435097.353 | 685196.808 |
| 205 | 423007.009 | 682484.632 | 302 | 429153.369 | 685428.552 | 389 | 435207.338 | 685215.041 |
| 206 | 423041.769 | 682484.706 | 303 | 429593.435 | 685320.863 | 390 | 435207.296 | 685266.859 |
| 207 | 423051.765 | 682599.728 | 304 | 429778.622 | 685257.387 | 391 | 435207.230 | 685347.449 |
| 208 | 423079.635 | 682624.222 | 305 | 429789.657 | 685259.021 | 392 | 435074.021 | 685347.513 |
| 209 | 423183.785 | 682622.949 | 306 | 429813.362 | 685335.429 | 393 | 435074.003 | 685311.750 |
| 214 | 423245.390 | 682605.766 | 307 | 429837.842 | 685414.334 | 394 | 435021.528 | 685311.707 |
| 215 | 423545.373 | 682603.278 | 308 | 429685.072 | 685488.861 | 395 | 434032.314 | 685312.106 |
| 216 | 423903.861 | 682599.146 | 309 | 429254.298 | 685607.069 | 396 | 433957.310 | 685302.136 |
| 217 | 424099.853 | 682598.268 | 310 | 428872.865 | 685640.335 | 397 | 433692.310 | 685302.243 |
| 218 | 424249.896 | 682607.596 | 311 | 428717.588 | 685613.904 | 398 | 433407.320 | 685327.358 |
| 219 | 424374.895 | 682607.037 | 312 | 428669.814 | 685639.626 | 399 | 433232.320 | 685327.429 |
| 220 | 424375.119 | 682657.036 | 313 | 428572.869 | 685809.975 | 400 | 433082.318 | 685322.489 |
| 221 | 424375.321 | 682702.036 | 314 | 428409.416 | 686042.999 | 401 | 432482.318 | 685322.731 |
| 222 | 424250.322 | 682702.595 | 315 | 428380.724 | 686026.697 | 402 | 433468.278 | 685221.333 |
| 223 | 424100.346 | 682708.267 | 316 | 428352.031 | 686010.395 | 403 | 433482.278 | 685221.328 |
| 224 | 423904.780 | 682709.143 | 317 | 428370.646 | 685963.464 | 404 | 433490.275 | 685214.324 |
| 225 | 423620.055 | 682712.623 | 318 | 428481.575 | 685758.104 | 405 | 433807.274 | 685212.197 |
| 226 | 423396.539 | 682744.517 | 319 | 428527.399 | 685610.550 | 406 | 433827.275 | 685215.189 |
| 227 | 423246.551 | 682745.761 | 320 | 428513.075 | 685569.901 | 410 | 435157.295 | 685267.720 |
| 228 | 423193.052 | 682712.842 | 321 | 428366.313 | 685513.590 | 411 | 435157.345 | 685206.753 |
| 230 | 423042.507 | 682720.063 | 322 | 427938.770 | 685215.471 | 412 | 435257.787 | 685223.405 |
| 231 | 423011.222 | 682720.062 | 323 | 427838.613 | 685101.580 | 413 | 435574.059 | 685222.976 |
| 232 | 422976.507 | 682720.061 | 324 | 427680.623 | 684901.063 | 414 | 435574.046 | 685197.271 |
| 233 | 422900.359 | 682703.820 | 325 | 427576.482 | 684728.495 | 415 | 435773.662 | 685197.174 |
| 245 | 424300.120 | 682657.372 | 326 | 427401.454 | 684506.356 | 416 | 435773.671 | 685217.321 |
| 246 | 424299.896 | 682607.373 | 327 | 427082.101 | 684087.048 | 417 | 436132.320 | 685217.613 |
| 247 | 424718.312 | 682605.499 | 328 | 427023.891 | 684016.392 | 418 | 436182.311 | 685228.436 |
| 248 | 424935.181 | 682621.538 | 329 | 426970.544 | 683943.907 | 419 | 436223.663 | 685226.941 |
| 249 | 425086.370 | 682620.985 | 330 | 427267.878 | 684334.411 | 420 | 436803.057 | 685228.075 |
| 250 | 425297.326 | 682571.130 | 331 | 427255.959 | 684343.543 | 421 | 436780.978 | 685268.142 |
| 251 | 425355.937 | 682641.768 | 332 | 427134.905 | 684183.477 | 422 | 436756.269 | 685312.982 |
| 252 | 425328.627 | 682685.110 | 333 | 427146.934 | 684174.498 | 423 | 436623.745 | 685312.720 |
| 253 | 425368.280 | 682710.524 | 340 | 429742.389 | 685359.645 | 424 | 436423.494 | 685322.337 |
| 254 | 425413.614 | 682742.802 | 341 | 429710.902 | 685275.174 | 425 | 436250.778 | 685312.710 |
| 255 | 425683.969 | 682847.729 | 342 | 429778.622 | 685257.387 | 426 | 435773.717 | 685312.321 |
| 256 | 425764.834 | 682916.182 | 343 | 429789.657 | 685259.021 | 427 | 435773.729 | 685337.174 |
| 257 | 425841.913 | 682945.706 | 344 | 430127.401 | 685192.670 | 428 | 435648.729 | 685337.235 |
| 258 | 426030.357 | 683026.757 | 345 | 430477.065 | 685204.319 | 429 | 435634.002 | 685315.462 |
| 259 | 426072.213 | 683042.991 | 346 | 430532.117 | 685219.128 | 430 | 435224.006 | 685316.176 |
| 260 | 426287.664 | 683161.271 | 347 | 431132.113 | 685217.053 | 431 | 435224.021 | 685347.441 |
| 261 | 426399.991 | 683231.625 | 348 | 431332.060 | 685201.361 | 432 | 435157.230 | 685347.473 |
| 262 | 426713.601 | 683491.927 | 349 | 431432.060 | 685201.015 | 433 | 435126.840 | 685070.457 |
| 263 | 426846.279 | 683646.612 | 350 | 431757.110 | 685214.891 | | | |
| 264 | 426919.831 | 683734.752 | 351 | 432132.107 | 685213.593 | | | |
| 265 | 426981.822 | 683732.061 | 352 | 432482.266 | 685192.731 | | | |
| 266 | 427014.819 | 683730.999 | 353 | 432582.266 | 685192.691 | | | |
| 267 | 427127.327 | 683738.575 | 354 | 432582.296 | 685267.691 | | | |
| 268 | 427229.787 | 683690.051 | 355 | 432582.318 | 685322.691 | | | |
| 269 | 427249.786 | 683716.301 | 356 | 432482.318 | 685322.731 | | | |
| 270 | 427269.784 | 683742.551 | 357 | 432368.256 | 685300.105 | | | |
| 271 | 427062.938 | 683900.740 | 358 | 432232.408 | 685300.449 | | | |
| 272 | 427099.190 | 683960.973 | 359 | 432107.447 | 685311.679 | | | |
| 273 | 427060.134 | 683989.718 | 360 | 431832.448 | 685312.631 | | | |
| 274 | 427023.891 | 684016.392 | 361 | 431432.568 | 685348.014 | | | |
| 275 | 426910.603 | 683862.462 | 362 | 431332.569 | 685348.360 | | | |
| 276 | 426304.906 | 683281.504 | 363 | 431082.494 | 685327.225 | | | |
| 277 | 426162.564 | 683233.074 | 364 | 430682.600 | 685358.609 | | | |
| 278 | 425804.355 | 683043.760 | 365 | 430432.567 | 685349.474 | | | |
| 279 | 425540.508 | 682942.697 | 366 | 430090.619 | 685365.981 | | | |
| 280 | 425374.902 | 682857.847 | 367 | 429946.665 | 685362.720 | | | |
| 281 | 425187.754 | 682786.163 | 368 | 429774.484 | 685445.746 | | | |
| 282 | 424718.747 | 682700.498 | 369 | 433457.274 | 685212.338 | | | |
| 283 | 424300.321 | 682702.372 | 375 | 432482.296 | 685267.731 | | | |
| 289 | 427886.414 | 684993.540 | 376 | 432482.266 | 685192.731 | | | |
| 290 | 427006.786 | 683917.233 | 377 | 432582.266 | 685192.691 | | | |
| 291 | 427062.938 | 683900.740 | 378 | 432732.276 | 685217.630 | | | |
| 292 | 427146.532 | 684039.628 | 379 | 433082.276 | 685217.489 | | | |
| 293 | 427464.293 | 684456.844 | 380 | 433232.274 | 685212.429 | | | |
| 294 | 427601.233 | 684549.855 | 381 | 434157.274 | 685212.056 | | | |
| 295 | 427678.594 | 684648.040 | 382 | 434262.276 | 685217.013 | | | |
| 296 | 427774.880 | 684826.797 | 383 | 434832.276 | 685216.783 | | | |

4

4

REVISION DATE 11-7-2023

DATE

SCALE, FEET
0 N/A

HWY: C.T.H. O

COUNTY: RICHLAND

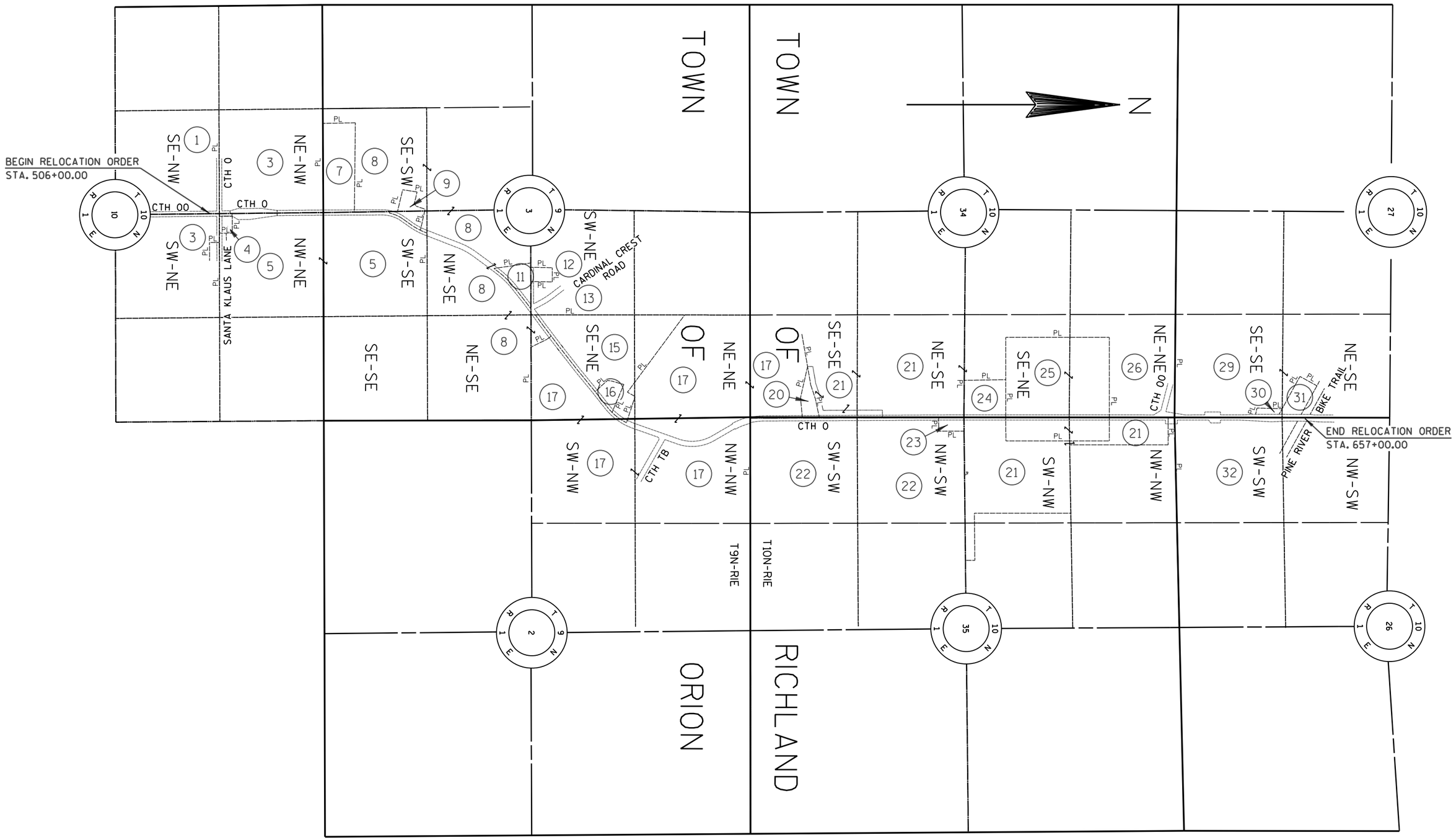
STATE R/W PROJECT NUMBER 5419-06-01

CONSTRUCTION PROJECT NUMBER

PLAT SHEET NO: 4.02

PS&E SHEET 43

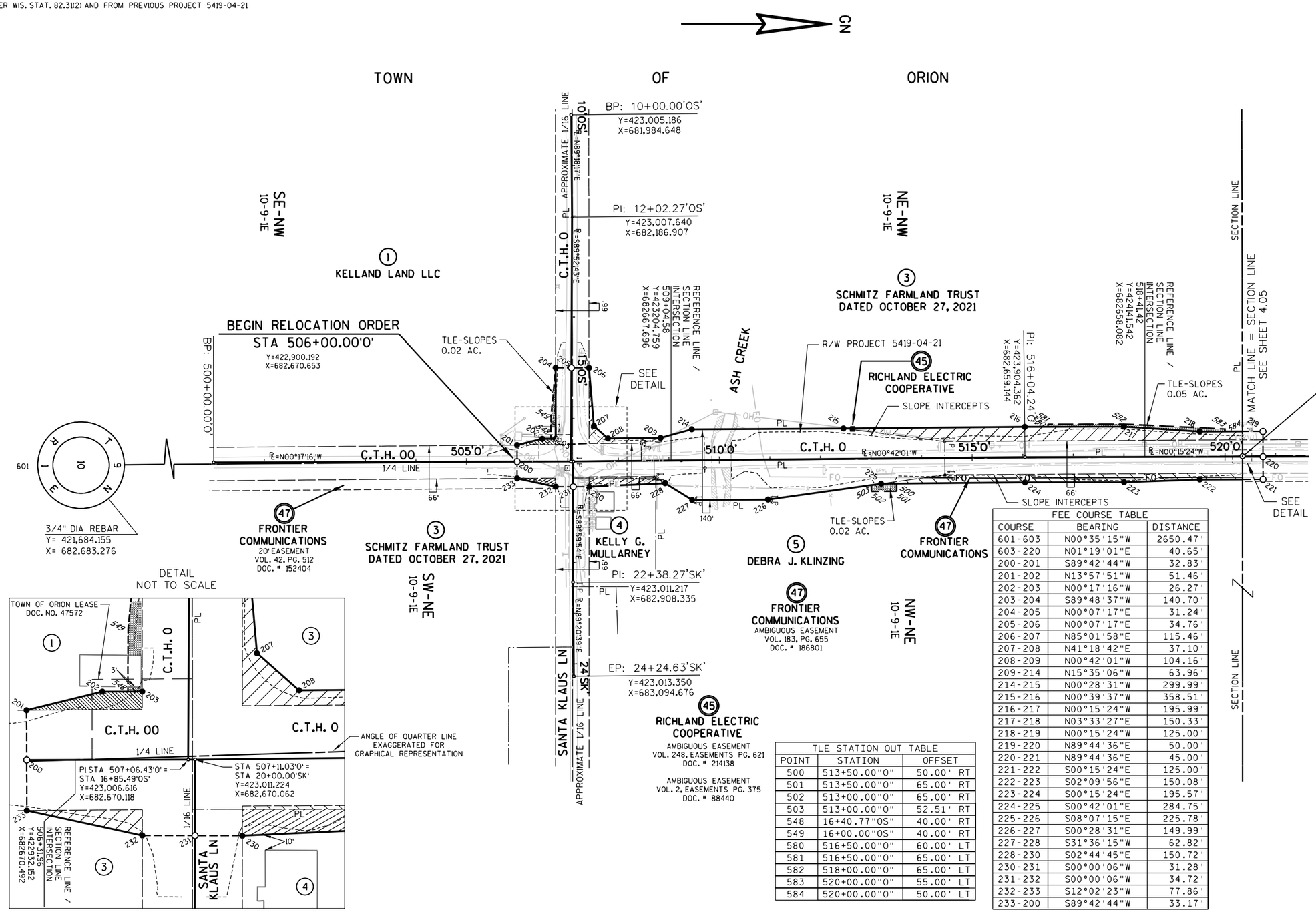
E




4

| | | | | | | |
|---|---|---|---|---|---|---|
| REVISION DATE 11-7-2023 | DATE | NOT TO SCALE | HWY: C.T.H. O | STATE R/W PROJECT NUMBER 5419-06-01 | PLAT SHEET NO: 4.03 | |
| | | | COUNTY: RICHLAND | CONSTRUCTION PROJECT NUMBER | PS&E SHEET 44 | E |

BASIS OF EXISTING R/W
EXISTING R/W FOR CTH O, CTH OO, AND SANTA KLAUS LANE
ESTABLISHED FROM CENTER LINE OF EXISTING PAVEMENT
(PER WIS. STAT. 82.31(2) AND FROM PREVIOUS PROJECT 5419-04-21




| TLE STATION OUT TABLE | | |
|---|---|---|
| POINT | STATION | OFFSET |
| 500 | 513+50.00"O" | 50.00' RT |
| 501 | 513+50.00"O" | 65.00' RT |
| 502 | 513+00.00"O" | 65.00' RT |
| 503 | 513+00.00"O" | 52.51' RT |
| 548 | 16+40.77"OS" | 40.00' RT |
| 549 | 16+00.00"OS" | 40.00' RT |
| 580 | 516+50.00"O" | 60.00' LT |
| 581 | 516+50.00"O" | 65.00' LT |
| 582 | 518+00.00"O" | 65.00' LT |
| 583 | 520+00.00"O" | 55.00' LT |
| 584 | 520+00.00"O" | 50.00' LT |

| FEE COURSE TABLE | | |
|---|---|---|
| COURSE | BEARING | DISTANCE |
| 601-603 | N00°35'15"W | 2650.47' |
| 603-220 | N01°19'01"E | 40.65' |
| 200-201 | S89°42'44"W | 32.83' |
| 201-202 | N13°57'51"W | 51.46' |
| 202-203 | N00°17'16"W | 26.27' |
| 203-204 | S89°48'37"W | 140.70' |
| 204-205 | N00°07'17"E | 31.24' |
| 205-206 | N00°07'17"E | 34.76' |
| 206-207 | N85°01'58"E | 115.46' |
| 207-208 | N41°18'42"E | 37.10' |
| 208-209 | N00°42'01"W | 104.16' |
| 209-214 | N15°35'06"W | 63.96' |
| 214-215 | N00°28'31"W | 299.99' |
| 215-216 | N00°39'37"W | 358.51' |
| 216-217 | N00°15'24"W | 195.99' |
| 217-218 | N03°33'27"E | 150.33' |
| 218-219 | N00°15'24"W | 125.00' |
| 219-220 | N89°44'36"E | 50.00' |
| 220-221 | N89°44'36"E | 45.00' |
| 221-222 | S00°15'24"E | 125.00' |
| 222-223 | S02°09'56"E | 150.08' |
| 223-224 | S00°15'24"E | 195.57' |
| 224-225 | S00°42'01"E | 284.75' |
| 225-226 | S08°07'15"E | 225.78' |
| 226-227 | S00°28'31"E | 149.99' |
| 227-228 | S31°36'15"W | 62.82' |
| 228-230 | S02°44'45"E | 150.72' |
| 230-231 | S00°00'06"W | 31.28' |
| 231-232 | S00°00'06"W | 34.72' |
| 232-233 | S12°02'23"W | 77.86' |
| 233-200 | S89°42'44"W | 33.17' |

| FEE STATION OUT TABLE | | |
|---|---|---|
| POINT | STATION | OFFSET |
| 200 | 506+00.00"O" | 0.00' LT |
| 201 | 506+00.00"O" | 32.83' LT |
| 202 | 506+50.00"O" | 45.00' LT |
| 203 | 506+76.27"O" | 45.00' LT |
| 204 | 15+00.00"OS" | 31.24' RT |
| 205 | 15+00.00"OS" | 0.00' LT |
| 206 | 15+00.00"OS" | 34.76' LT |
| 207 | 16+15.00"OS" | 45.00' LT |
| 208 | 507+80.00"O" | 45.00' LT |
| 209 | 508+84.16"O" | 45.00' LT |
| 214 | 509+45.97"O" | 61.43' LT |
| 215 | 512+45.96"O" | 60.25' LT |
| 216 | 516+04.24"O" | 60.00' LT |
| 217 | 518+00.00"O" | 60.00' LT |
| 218 | 519+50.00"O" | 50.00' LT |
| 219 | 520+75.00"O" | 50.00' LT |
| 220 | 520+75.00"O" | 0.00' LT |
| 221 | 520+75.00"O" | 45.00' RT |
| 222 | 519+50.00"O" | 45.00' RT |
| 223 | 518+00.00"O" | 50.00' RT |
| 224 | 516+04.04"O" | 50.00' RT |
| 225 | 513+19.30"O" | 50.00' RT |
| 226 | 510+95.41"O" | 79.16' RT |
| 227 | 509+45.42"O" | 78.57' RT |
| 228 | 508+92.32"O" | 45.00' RT |
| 230 | 20+50.00"SK" | 31.28' LT |
| 231 | 20+50.00"SK" | 0.00' LT |
| 232 | 20+50.00"SK" | 34.72' RT |
| 233 | 506+00.00"O" | 33.17' RT |

| | | | | | |
|---|---|---|---|---|---|
| REVISION DATE 11-7-2023 | DATE | SCALE, FEET 0 100 200 | HWY: C.T.H. O | STATE R/W PROJECT NUMBER 5419-06-01 | PLAT SHEET NO: 4.04 |
| | GRID FACTOR N/A | | COUNTY: RICHLAND | CONSTRUCTION PROJECT NUMBER | PS&E SHEET 45 E |

FILE NAME : X:\PT\R\RICHD\163696\Civil 3D 2020\54190001\RW\cad - rw staff only\rdctho01V8.dgn PLOT TIME : 8:08:15 AM PLOT DATE : 11/9/2023 PLOT BY : SEH PLOT NAME : PLOT SCALE : N/A

WISDOT/CADDS SHEET 75

BASIS OF EXISTING R/W
EXISTING R/W FOR CTH O, BOVEE LANE, AND CARDINAL CREST ROAD ARE ESTABLISHED FROM CENTER LINE OF EXISTING PAVEMENT (PER WIS. STAT. 82.31(2)

MATCH LINE = SECTION LINE
SEE SHEET 4.04

4

7 JUNCTION VIEW DAIRY LLC

SE-SW 3-9-1E

SEE DETAIL

SLOPE INTERCEPTS

PLE DRAINAGE 0.01 AC.

8 KIRK M. STIBBE AND SHELLY M. STIBBE & BRENT H. STIBBE AND SARAH M. STIBBE

PLE DRAINAGE 0.04 AC.

PI STA 526+69.38'O'
PI Y =424,969.497
PI X =682,654.375
DELTA =21^12'54"(RT)
R =1,340.00'
D =4^16'33"
T =250.96'
L =496.16'

45 RICHLAND ELECTRIC COOPERATIVE
AMBIGUOUS EASEMENT
VOL. 2, EASEMENTS PG. 472
DOC. # 88537

LOT 2 9 ASH CREEK UNITED METHODIST CHURCH LOT 1

CSM NO. 1220
V. 11, P. 135
DOC. 334250

(CHURCH & CEMETERY)

TLE-SLOPES 0.01 AC.

TLE-SLOPES 0.03 AC.

520'0" 525'0" 530'0" 535'0" 540'0" 545'0" 550'0"

R=N00°15'24"W

R=N20°57'31"E

47 FRONTIER COMMUNICATIONS
16.5' EASEMENT
VOL. 42, PG. 165
DOC. # 151646

PLE DRAINAGE 0.05 AC.

47 FRONTIER COMMUNICATIONS

47 FRONTIER COMMUNICATIONS
AMBIGUOUS EASEMENT
VOL. 183, PG. 655
DOC. # 186801

5 DEBRA J. KLINZING

SEPTIC SYSTEM EASEMENT
DOC. NO. 178117

45 RICHLAND ELECTRIC COOPERATIVE
AMBIGUOUS EASEMENT
VOL. 2, EASEMENTS PG. 375
DOC. # 88440

PLE - DRAINAGE 0.05 AC.

PLE-DRAINAGE 0.06 AC.

47 FRONTIER COMMUNICATIONS
AMBIGUOUS EASEMENT
VOL. 183, PG. 664
DOC. # 186810

45 RICHLAND ELECTRIC COOPERATIVE
AMBIGUOUS EASEMENT
VOL. 2, EASEMENTS PG. 472
DOC. # 88537

8 KIRK M. STIBBE AND SHELLY M. STIBBE & BRENT H. STIBBE AND SARAH M. STIBBE

45 RICHLAND ELECTRIC COOPERATIVE

47 FRONTIER COMMUNICATIONS

45 RICHLAND ELECTRIC COOPERATIVE
AMBIGUOUS EASEMENT
VOL. 158, EASEMENTS PG. 677
DOC. # 176480

11 RUSSELL L. BAKKEN

47 FRONTIER COMMUNICATIONS
16.5' EASEMENT
VOL. 42, PG. 171
DOC. # 151652

12 BRIAN L. LAWRENCE

CEMETERY

BOVEE LANE

CARDINAL CREST RD.

C.T.H. O

1/4 LINE

APPROXIMATE 1/16 LINE

SECTION LINE

PC: 524+18.43'O'
PT: 529+14.59'O'
PC: 535+82.54'O'
PT: 543+15.70'O'
PC: 38+79.24'B'
PT: 39+47.42'B'
PI: 39+13.93'B'
PC: 51+52.68'CC'
PT: 53+17.01'CC'
PI: 52+35.03'CC'

CAST IRON MON
STA. 520+34.37
1.12'LT
Y= 424,334.481
X= 682,656.102

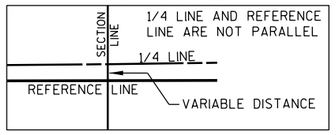
CAST IRON MON
Y= 426,978.223
X= 685,615.821

PI STA 543+15.70'O'
PI Y =426,512.264
PI X =683,245.308
DELTA =32^41'21"(RT)
R =2,500.00'
D =2^17'31"
T =733.16'
L =1426.33'

**POINT 250 IS NOT ON PROPERTY LINE

**POINT 251 IS NOT ON 1/4 LINE

DETAIL
NOT TO SCALE




| FEE CURVE DATA TABLE | | | | | | |
|---|---|---|---|---|---|---|
| CURVE | ARC LENGTH | RADIUS | CHORD BEARING | CHORD LENGTH | TANGENT BACK | TANGENT FORWARD |
| 247-248 | 217.68' | 1390.00 R' | N04°13'47"E | 217.46' | N00°15'25"W | N08°42'58"E |
| 252-253 | 47.12' | 483.00 R' | N32°39'23"E | 47.10' | N29°51'43"E | N35°27'04"E |
| 257-258 | 205.19' | 2540.00 R' | N23°16'22"E | 205.14' | N20°57'31"E | N25°35'14"E |
| 259-585 | 175.04' | 942.28 R' | N26°35'39"E | 174.79' | N21°16'21"E | N31°54'57"E |
| 275-276 | 843.42' | 2455.00 L' | S43°48'21"W | 839.27' | S53°38'52"W | S33°57'50"W |
| 281-282 | 479.50' | 1295.00 L' | S10°21'04"W | 476.77' | S20°57'31"W | S00°15'23"E |

| TLE STATION OUT TABLE | | |
|---|---|---|
| POINT | STATION | OFFSET |
| 510 | 532+10.00"O" | 75.84' LT |
| 511 | 533+00.00"O" | 95.00' LT |

| PLE STATION OUT TABLE | | |
|---|---|---|
| POINT | STATION | OFFSET |
| 550 | 523+82.00"O" | 50.00' LT |
| 551 | 525+00.00"O" | 75.00' LT |
| 552 | 525+50.00"O" | 50.00' LT |
| 553 | 525+75.00"O" | 45.00' RT |
| 554 | 534+85.00"O" | 65.00' RT |
| 555 | 534+75.00"O" | 125.00' RT |
| 556 | 534+35.00"O" | 125.00' RT |
| 557 | 533+70.00"O" | 65.00' RT |
| 560 | 525+75.00"O" | 65.00' RT |
| 594 | 525+20.00"O" | 82.00' RT |
| 595 | 524+75.00"O" | 45.00' RT |

| FEE STATION OUT TABLE | | |
|---|---|---|
| POINT | STATION | OFFSET |
| 245 | 520+00.00"O" | 0.00' LT |
| 246 | 520+00.00"O" | 50.00' LT |
| 247 | 524+18.42"O" | 50.00' LT |
| 248 | 526+28.27"O" | 50.00' LT |
| 249 | 527+69.35"O" | 81.33' LT |
| 250 | 529+40.00"O" | 195.00' LT |
| 251 | 530+20.00"O" | 150.00' LT |
| 252 | 530+10.00"O" | 99.76' LT |
| 253 | 530+56.12"O" | 90.21' LT |
| 254 | 531+10.00"O" | 76.28' LT |
| 255 | 534+00.00"O" | 75.00' LT |
| 256 | 535+00.00"O" | 40.00' LT |
| 257 | 535+82.54"O" | 40.00' LT |
| 258 | 537+84.50"O" | 40.00' LT |
| 259 | 538+28.49"O" | 43.83' LT |
| 265 | 38+79.24"B" | 14.66' RT |
| 266 | 38+79.24"B" | 18.35' LT |
| 267 | 52+00.00"CC" | 50.00' LT |
| 268 | 53+17.01"CC" | 33.00' LT |
| 269 | 53+17.01"CC" | 0.00' LT |
| 270 | 53+17.01"CC" | 33.00' RT |
| 271 | 551+30.00"O" | 55.00' LT |
| 272 | 552+00.00"O" | 48.49' LT |
| 273 | 552+00.00"O" | 0.00' LT |
| 274 | 552+00.00"O" | 45.00' RT |
| 275 | 550+08.88"O" | 45.00' RT |
| 276 | 541+50.00"O" | 45.00' RT |
| 277 | 540+00.00"O" | 80.00' RT |
| 278 | 535+82.54"O" | 65.00' RT |
| 279 | 533+00.00"O" | 65.00' RT |
| 280 | 531+15.00"O" | 45.00' RT |
| 281 | 529+14.59"O" | 45.00' RT |
| 282 | 524+18.43"O" | 45.00' RT |
| 283 | 520+00.00"O" | 45.00' RT |
| 585 | 540+00.00"O" | 49.83' LT |
| 586 | 542.00.00"O" | 75.00' LT |
| 587 | 544+00.00"O" | 75.00' LT |
| 588 | 546+00.00"O" | 60.00' LT |
| 589 | 549+25.00"O" | 55.00' LT |

| FEE COURSE TABLE | | |
|---|---|---|
| COURSE | BEARING | DISTANCE |
| 605-265 | S89°48'55"W | 1571.00' |
| 265-610 | S89°48'55"W | 1116.25' |
| 610-603 | S00°52'22"E | 2644.05' |
| 603-245 | S02°07'00"E | 34.38' |
| 245-246 | S89°44'36"W | 50.00' |
| 246-247 | N00°15'24"W | 418.42' |
| 248-249 | N00°12'34"W | 151.19' |
| 249-250 | N13°17'48"W | 216.77' |
| 250-251 | N50°18'59"E | 91.79' |
| 251-252 | S57°47'06"E | 51.23' |
| 253-254 | N35°27'04"E | 55.65' |
| 254-255 | N21°12'42"E | 290.00' |
| 255-256 | N40°14'55"E | 105.95' |
| 256-257 | N20°57'31"E | 82.54' |
| 258-259 | N21°11'55"E | 44.89' |
| 585-586 | N25°49'18"E | 206.48' |
| 586-587 | N37°24'05"E | 205.95' |
| 587-588 | N46°09'35"E | 205.89' |
| 588-589 | N48°51'42"E | 332.28' |
| 589-265 | N03°57'40"W | 42.74' |
| 265-266 | N01°50'39"W | 33.01' |
| 266-267 | N03°51'08"E | 112.76' |
| 267-268 | N25°20'29"W | 113.37' |
| 268-269 | N52°41'50"E | 33.00' |
| 269-270 | N52°41'50"E | 33.00' |
| 270-271 | S37°24'27"E | 260.40' |
| 271-272 | N58°57'27"E | 70.30' |
| 272-273 | S36°21'08"E | 48.49' |
| 273-274 | S36°21'08"E | 45.00' |
| 274-275 | S53°38'52"W | 191.12' |
| 276-277 | S18°47'24"W | 150.35' |
| 277-278 | S27°51'24"W | 405.16' |
| 278-279 | S20°57'31"W | 282.54' |
| 279-280 | S27°07'43"W | 186.08' |
| 280-281 | S20°57'31"W | 200.41' |
| 282-283 | S00°15'24"W | 418.43' |
| 283-245 | S89°44'36"W | 45.00' |

| PLE COURSE TABLE | | |
|---|---|---|
| COURSE | BEARING | DISTANCE |
| 603-550 | N08°15'39"W | 351.05' |
| 246-550 | N00°15'24"W | 382.00' |
| 550-551 | N10°36'30"W | 124.54' |
| 551-552 | N29°49'57"E | 57.99' |
| 247-550 | S00°15'24"E | 36.42' |
| | | |
| 603-554 | N14°21'05"E | 1423.20' |
| 278-554 | S20°57'31"W | 97.54' |
| 554-555 | S59°34'45"E | 60.83' |
| 555-556 | S20°57'31"W | 40.00' |
| 556-557 | S63°40'05"W | 88.46' |
| 557-554 | N20°57'31"E | 115.00' |
| 557-279 | S20°57'31"W | 70.00' |
| | | |
| 603-553 | N05°36'25"E | 537.85' |
| 553-560 | S83°33'42"E | 20.00' |
| 560-594 | S12°50'40"E | 54.69' |
| 594-595 | S43°55'12"W | 56.62' |

| PLE CURVE DATA TABLE | | | | | | |
|---|---|---|---|---|---|---|
| CURVE | ARC LENGTH | RADIUS | CHORD BEARING | CHORD LENGTH | TANGENT BACK | TANGENT FORWARD |
| 552-247 | 136.49' | 1390.00' L | S02°33'22"W | 136.43' | S05°22'09"W | S00°15'25"E |
| 248-552 | 81.19' | 1390.00' L | S07°02'34"W | 81.18' | S08°42'58"W | S05°22'09"W |
| 595-553 | 96.64' | 1295.00' R | N04°18'01"E | 96.62' | N02°09'45"E | N06°26'18"E |
| 282-595 | 54.67' | 1295.00' R | N00°57'11"E | 54.67' | N00°15'23"W | N02°09'45"E |
| 553-281 | 328.19' | 1295.00' R | N13°41'54"E | 327.31' | N06°26'18"E | N13°41'54"E |

PROPERTY DATA FOR PARCEL 13

13 JEFFREY D. BAUER & SUZANNE S. BAUER
MANAGED FOREST LAND
DOC. NO. 242204

45 RICHLAND ELECTRIC COOPERATIVE
AMBIGUOUS EASEMENT
VOL. 155, EASEMENTS PG. 12
DOC. # 174727

PI STA 39+13.93'B'
PI Y =426,997.594
PI X =683,766.262
DELTA =26^02'35"(LT)
R =150.00'
D =38^11'50"
T =34.69'
L =68.18'

PI STA 52+35.03'CC'
PI Y =427,184.280
PI X =683,766.208
DELTA =9^24'56"(LT)
R =1,000.00'
D =5^43'46"
T =82.35'
L =164.33'

STA 550+58.98'OS' =
STA 50+00.00'CC'
Y=426,976.543
X=683,876.140

STA 40+00.00'B' =
STA 50+70.00'CC'
Y=427,038.414
X=683,843.399

REFERENCE LINE / SECTION LINE INTERSECTION
550+68.71
Y=426982.311
X=683883.977

CAST IRON MON
Y= 426,986.888
X= 685,303.053

BP: 38+51.45'B'
Y=426,995.583
X=683,703.814

MATCH LINE = SIXTEENTH LINE
SEE SHEET 4.06

4

| | | | | |
|---|---|---|---|---|
| REVISION DATE 11-7-2023 | DATE | SCALE, FEET 0 100 200 | HWY: C.T.H. O | STATE R/W PROJECT NUMBER 5419-06-01 | PLAT SHEET NO: 4.05 | |
| | GRID FACTOR N/A | | COUNTY: RICHLAND | CONSTRUCTION PROJECT NUMBER | PS&E SHEET 46 | E |

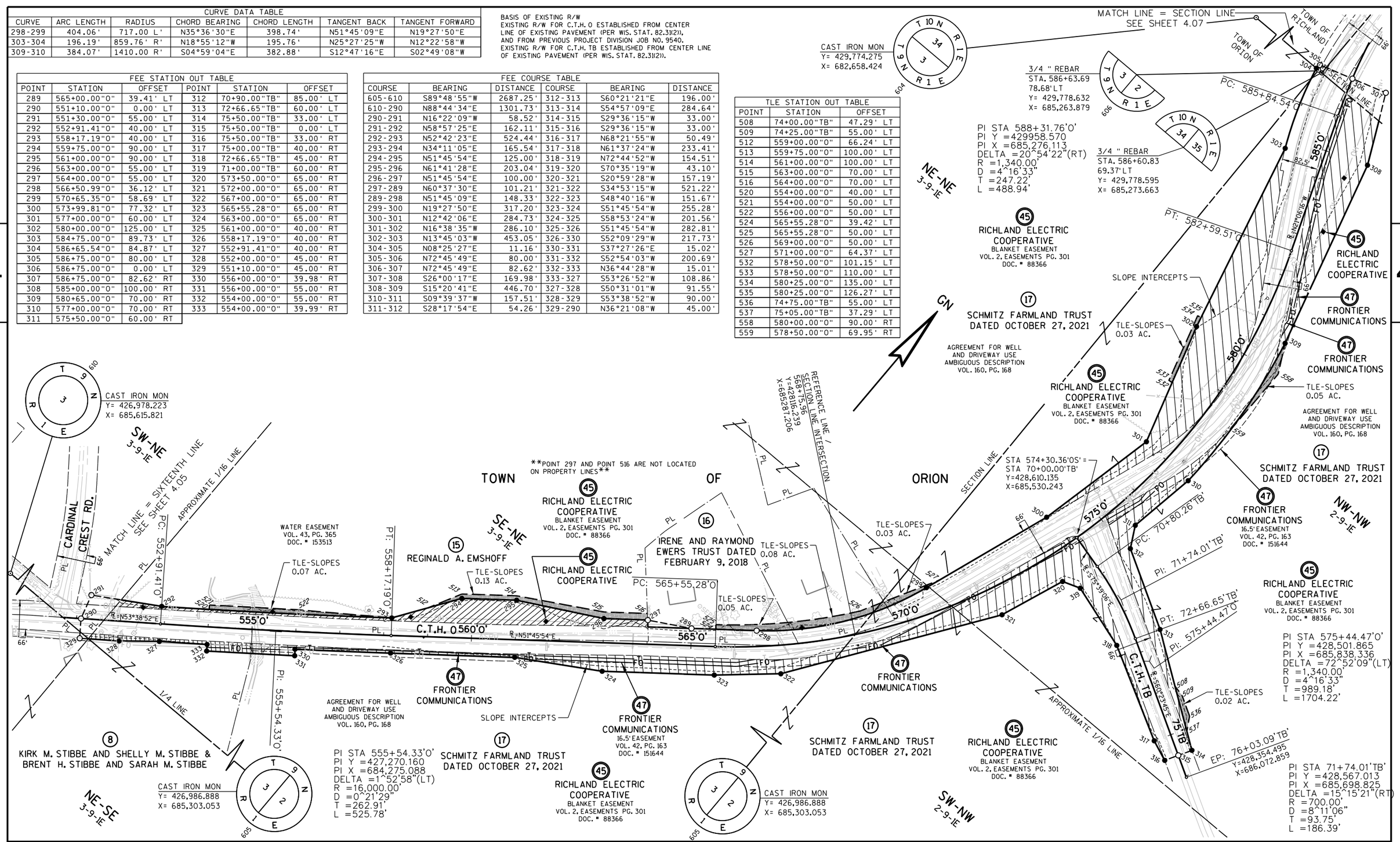
| CURVE DATA TABLE | | | | | | |
|---|---|---|---|---|---|---|
| CURVE | ARC LENGTH | RADIUS | CHORD BEARING | CHORD LENGTH | TANGENT BACK | TANGENT FORWARD |
| 298-299 | 404.06' | 717.00 L' | N35°36'30"E | 398.74' | N51°45'09"E | N19°27'50"E |
| 303-304 | 196.19' | 859.76' R' | N18°55'12"W | 195.76' | N25°27'25"W | N12°22'58"W |
| 309-310 | 384.07' | 1410.00 R' | S04°59'04"E | 382.88' | S12°47'16"E | S02°49'08"W |

BASIS OF EXISTING R/W
EXISTING R/W FOR C.T.H. O ESTABLISHED FROM CENTER LINE OF EXISTING PAVEMENT (PER WIS. STAT. 82.31(2)), AND FROM PREVIOUS PROJECT DIVISION JOB NO. 9540.
EXISTING R/W FOR C.T.H. TB ESTABLISHED FROM CENTER LINE OF EXISTING PAVEMENT (PER WIS. STAT. 82.31(2)).

| FEE STATION OUT TABLE | | | | | |
|---|---|---|---|---|---|
| POINT | STATION | OFFSET | POINT | STATION | OFFSET |
| 289 | 565+00.00"O" | 39.41' LT | 312 | 70+90.00"TB" | 85.00' LT |
| 290 | 551+10.00"O" | 0.00' LT | 313 | 72+66.65"TB" | 60.00' LT |
| 291 | 551+30.00"O" | 55.00' LT | 314 | 75+50.00"TB" | 33.00' LT |
| 292 | 552+91.41"O" | 40.00' LT | 315 | 75+50.00"TB" | 0.00' LT |
| 293 | 558+17.19"O" | 40.00' LT | 316 | 75+50.00"TB" | 33.00' RT |
| 294 | 559+75.00"O" | 90.00' LT | 317 | 75+00.00"TB" | 40.00' RT |
| 295 | 561+00.00"O" | 90.00' LT | 318 | 72+66.65"TB" | 45.00' RT |
| 296 | 563+00.00"O" | 55.00' LT | 319 | 71+00.00"TB" | 60.00' RT |
| 297 | 564+00.00"O" | 55.00' LT | 320 | 573+50.00"O" | 65.00' RT |
| 298 | 566+50.99"O" | 36.12' LT | 321 | 572+00.00"O" | 65.00' RT |
| 299 | 570+65.35"O" | 58.69' LT | 322 | 567+00.00"O" | 65.00' RT |
| 300 | 573+99.81"O" | 77.32' LT | 323 | 565+55.28"O" | 65.00' RT |
| 301 | 577+00.00"O" | 60.00' LT | 324 | 563+00.00"O" | 65.00' RT |
| 302 | 580+00.00"O" | 125.00' LT | 325 | 561+00.00"O" | 40.00' RT |
| 303 | 584+75.00"O" | 89.73' LT | 326 | 558+17.19"O" | 40.00' RT |
| 304 | 586+65.54"O" | 84.87' LT | 327 | 552+91.41"O" | 40.00' RT |
| 305 | 586+75.00"O" | 80.00' LT | 328 | 552+00.00"O" | 45.00' RT |
| 306 | 586+75.00"O" | 0.00' LT | 329 | 551+10.00"O" | 45.00' RT |
| 307 | 586+75.00"O" | 82.62' RT | 330 | 556+00.00"O" | 39.98' RT |
| 308 | 585+00.00"O" | 100.00' RT | 331 | 556+00.00"O" | 55.00' RT |
| 309 | 580+65.00"O" | 70.00' RT | 332 | 554+00.00"O" | 55.00' RT |
| 310 | 577+00.00"O" | 70.00' RT | 333 | 554+00.00"O" | 39.99' RT |
| 311 | 575+50.00"O" | 60.00' RT | | | |

| FEE COURSE TABLE | | | | | |
|---|---|---|---|---|---|
| COURSE | BEARING | DISTANCE | COURSE | BEARING | DISTANCE |
| 605-610 | S89°48'55"W | 2687.25' | 312-313 | S60°21'21"E | 196.00' |
| 610-290 | N88°44'34"E | 1301.73' | 313-314 | S54°57'09"E | 284.64' |
| 290-291 | N16°22'09"W | 58.52' | 314-315 | S29°36'15"W | 33.00' |
| 291-292 | N58°57'25"E | 162.11' | 315-316 | S29°36'15"W | 33.00' |
| 292-293 | N52°42'23"E | 524.44' | 316-317 | N68°21'55"W | 50.49' |
| 293-294 | N34°11'05"E | 165.54' | 317-318 | N61°37'24"W | 233.41' |
| 294-295 | N51°45'54"E | 125.00' | 318-319 | N72°44'52"W | 154.51' |
| 295-296 | N61°41'28"E | 203.04' | 319-320 | S70°35'19"W | 43.10' |
| 296-297 | N51°45'54"E | 100.00' | 320-321 | S20°59'28"W | 157.19' |
| 297-289 | N60°37'30"E | 101.21' | 321-322 | S34°53'15"W | 521.22' |
| 289-298 | N51°45'09"E | 148.33' | 322-323 | S48°40'16"W | 151.67' |
| 299-300 | N19°27'50"E | 317.20' | 323-324 | S51°45'54"W | 255.28' |
| 300-301 | N12°42'06"E | 284.73' | 324-325 | S58°53'24"W | 201.56' |
| 301-302 | N16°38'35"W | 286.10' | 325-326 | S51°45'54"W | 282.81' |
| 302-303 | N13°45'03"W | 453.05' | 326-330 | S52°09'29"W | 217.73' |
| 304-305 | N08°25'27"E | 11.16' | 330-331 | S37°27'26"E | 15.02' |
| 305-306 | N72°45'49"E | 80.00' | 331-332 | S52°54'03"W | 200.69' |
| 306-307 | N72°45'49"E | 82.62' | 332-333 | N36°44'28"W | 15.01' |
| 307-308 | S26°00'17"E | 169.98' | 333-327 | S53°26'52"W | 108.86' |
| 308-309 | S15°20'41"E | 446.70' | 327-328 | S50°31'01"W | 91.55' |
| 310-311 | S09°39'37"W | 157.51' | 328-329 | S53°38'52"W | 90.00' |
| 311-312 | S28°17'54"E | 54.26' | 329-290 | N36°21'08"W | 45.00' |

| TLE STATION OUT TABLE | | |
|---|---|---|
| POINT | STATION | OFFSET |
| 508 | 74+00.00"TB" | 47.29' LT |
| 509 | 74+25.00"TB" | 55.00' LT |
| 512 | 559+00.00"O" | 66.24' LT |
| 513 | 559+75.00"O" | 100.00' LT |
| 514 | 561+00.00"O" | 100.00' LT |
| 515 | 563+00.00"O" | 70.00' LT |
| 516 | 564+00.00"O" | 70.00' LT |
| 520 | 554+00.00"O" | 40.00' LT |
| 521 | 554+00.00"O" | 50.00' LT |
| 522 | 556+00.00"O" | 50.00' LT |
| 524 | 565+55.28"O" | 39.42' LT |
| 525 | 565+55.28"O" | 50.00' LT |
| 526 | 569+00.00"O" | 50.00' LT |
| 527 | 571+00.00"O" | 64.37' LT |
| 532 | 578+50.00"O" | 101.15' LT |
| 533 | 578+50.00"O" | 110.00' LT |
| 534 | 580+25.00"O" | 135.00' LT |
| 535 | 580+25.00"O" | 126.27' LT |
| 536 | 74+75.00"TB" | 55.00' LT |
| 537 | 75+05.00"TB" | 37.29' LT |
| 558 | 580+00.00"O" | 90.00' RT |
| 559 | 578+50.00"O" | 69.95' RT |




| | | | | | |
|---|---|---|---|---|---|
| REVISION DATE 11-7-2023 | DATE | SCALE, FEET 0 100 200 | HWY: C.T.H. O | STATE R/W PROJECT NUMBER 5419-06-01 | PLAT SHEET NO: 4.06 |
| | GRID FACTOR N/A | | COUNTY: RICHLAND | CONSTRUCTION PROJECT NUMBER | PS&E SHEET 47 E |

FILE NAME : X:\PT\R\RICHD\163696\Civil 3D 2020\54190001\RW\cad - rw staff only\rdctho03V8.dgn PLOT TIME : 8:08:17 AM PLOT DATE : 11/9/2023 PLOT BY : SEH PLOT NAME : PLOT SCALE : N/A

BASIS OF EXISTING R/W
EXISTING FOR C.T.H. O ESTABLISHED FROM CENTER LINE OF EXISTING PAVEMENT (PER WIS. STAT. 82.31(2)), AND CSM NO. 372.

| FEE COURSE TABLE | | |
|---|---|---|
| COURSE | BEARING | DISTANCE |
| 604-606 | N89°54'15"E | 2605.46' |
| 606-3604 | S89°47'00"E | 9.78' |
| 3604-607 | N00°08'42"W | 2724.59' |
| 607-353 | N43°07'24"W | 108.36' |
| 353-354 | N89°58'37"E | 75.00' |
| 354-355 | N89°58'37"E | 55.00' |
| 355-356 | S00°01'23"E | 100.00' |
| 356-357 | S11°13'12"W | 116.28' |
| 357-358 | S00°08'42"E | 135.85' |
| 358-359 | S05°08'08"E | 125.47' |
| 359-360 | S00°11'54"E | 275.00' |
| 360-361 | S05°03'24"E | 401.44' |
| 361-362 | S00°11'54"E | 100.00' |
| 362-363 | S04°49'51"W | 250.97' |
| 363-364 | S04°29'15"E | 401.12' |
| 364-365 | S02°05'33"W | 250.20' |
| 365-366 | S02°45'50"E | 342.35' |
| 366-367 | S01°17'53"W | 143.99' |
| 367-368 | S25°44'37"E | 191.15' |
| 368-340 | S69°33'24"W | 91.89' |
| 340-341 | S69°33'24"W | 90.15' |
| 341-342 | N14°42'59"W | 70.02' |
| 342-343 | N08°25'27"E | 11.16' |
| 343-344 | N11°06'52"W | 344.20' |
| 344-345 | N01°54'29"E | 349.86' |
| 345-346 | N15°03'25"E | 57.01' |
| 346-347 | N00°11'54"W | 600.00' |
| 347-348 | N04°29'15"W | 200.56' |
| 348-349 | N00°11'54"W | 100.00' |
| 349-350 | N02°26'40"E | 325.35' |
| 350-351 | N00°11'54"W | 375.00' |
| 351-352 | N03°24'35"W | 350.78' |
| 352-353 | N00°01'23"W | 100.00' |

TOWN OF RICHLAND

SE-SE 34-10-1E

NE-SE 34-10-1E

SW-SW 35-10-1E

NW-SW 35-10-1E

CN

604 CAST IRON MON
Y= 429,774.275
X= 682,658.424

PI STA 588+31.76'0'
PI Y =429958.570
PI X =685,276.113
DELTA =20°54'22"(RT)
R =1,340.00'
D =4°16'33"
T =247.22'
L =488.94'

3/4 " REBAR
STA. 586+63.69
78.68'LT
Y= 429,778.632
X= 685,263.879

3/4 " REBAR
STA. 586+60.83
69.37'LT
Y= 429,778.595
X= 685,273.663

MATCH LINE = SECTION LINE
SEE SHEET 4.06

SECTION LINE

TOWN OF ORION

TOWN OF RICHLAND

(17) SCHMITZ FARMLAND TRUST DATED OCTOBER 27, 2021

(45) RICHLAND ELECTRIC COOPERATIVE
DRIVEWAY EASEMENT
VOL. 211, PG. 352, DOC. # 198272 &
VOL. 211, PG. 353, DOC. # 198273

DRIVEWAY EASEMENT
VOL. 359, PG. 689, DOC. # 248323

(45) RICHLAND ELECTRIC COOPERATIVE
AMBIGUOUS EASEMENT
VOL. 442, PG. 194
DOC. # 265520

CSM 372
V 3, CSM P 215
DOC#244178

LOT 1

OL 1

(47) FRONTIER COMMUNICATIONS
16.5' EASEMENT
VOL. 42, PG. 377
DOC. # 152113

(20) JOHN L. GHASTIN & SUSAN K. GHASTIN

TLE-SLOPES
0.10 AC.

TLE-DRIVEWAY/SLOPES
0.66 AC.

ACCESS ROAD

SLOPE INTERCEPTS

TLE-SLOPES
0.05 AC.

TLE-DRIVEWAY
0.04 AC.

TLE-DRIVEWAY
0.01 AC.

TLE-SLOPES
0.01 AC.

TLE-SLOPES
0.08 AC.

(21) UNBEHAUN LAND, LLC

(22) STEVEN J. HANOLD, AS TRUSTEE OF THE HANOLD IRREVOCABLE TRUST DATED 6-13-2012

(23) STEVEN J. HANOLD

(45) RICHLAND ELECTRIC COOPERATIVE
AMBIGUOUS EASEMENT
VOL. 2, EASEMENTS PG. 343

BLANKET MANURE EASEMENT
DOC. # 314609

APPROXIMATE 1/16 LINE

1/4 LINE

PC: 585+84.54'0'

PI: 588+31.76'0'

PT: 590+73.48'0'

PI: 612+35.89'0'
Y=432,368.182
X=685,267.777

MATCH LINE = QUARTER LINE
SEE SHEET 4.08

SEE DETAIL

WE ENERGY (GAS)

C.T.H. O

585'0' 590'0' 595'0' 600'0' 605'0' 610'0' 615'0'

R=N00°11'54"W

R=N00°01'23"W

| FEE STATION OUT TABLE | | |
|---|---|---|
| POINT | STATION | OFFSET |
| 340 | 586+00.00"O" | 0.00' LT |
| 341 | 586+00.00"O" | 90.15' LT |
| 342 | 586+65.54"O" | 84.87' LT |
| 343 | 586+75.00"O" | 80.00' LT |
| 344 | 590+00.00"O" | 85.00' LT |
| 345 | 593+45.00"O" | 70.00' LT |
| 346 | 594+00.00"O" | 55.00' LT |
| 347 | 600+00.00"O" | 55.00' LT |
| 348 | 602+00.00"O" | 70.00' LT |
| 349 | 603+00.00"O" | 70.00' LT |
| 350 | 606+25.00"O" | 55.00' LT |
| 351 | 610+00.00"O" | 55.00' LT |
| 352 | 613+50.00"O" | 75.00' LT |
| 353 | 614+50.00"O" | 75.00' LT |
| 354 | 614+50.00"O" | 0.00' LT |
| 355 | 614+50.00"O" | 55.00' RT |
| 356 | 613+50.00"O" | 55.00' RT |
| 357 | 612+35.84"O" | 32.33' RT |
| 358 | 611+00.00"O" | 32.20' RT |
| 359 | 609+75.00"O" | 43.00' RT |
| 360 | 607+00.00"O" | 43.00' RT |
| 361 | 603+00.00"O" | 77.00' RT |
| 362 | 602+00.00"O" | 77.00' RT |
| 363 | 599+50.00"O" | 55.00' RT |
| 364 | 595+50.00"O" | 85.00' RT |
| 365 | 593+00.00"O" | 75.00' RT |
| 366 | 589+50.00"O" | 85.00' RT |
| 367 | 588+00.00"O" | 60.00' RT |
| 368 | 586+00.00"O" | 91.89' RT |

| TLE STATION OUT TABLE | | |
|---|---|---|
| POINT | STATION | OFFSET |
| 504 | 594+00.00"O" | 79.00' RT |
| 505 | 594+00.00"O" | 90.00' RT |
| 506 | 596+50.00"O" | 90.00' RT |
| 507 | 596+50.00"O" | 77.50' RT |
| 517 | 595+10.00"O" | 150.00' LT |
| 518 | 595+50.00"O" | 150.00' LT |
| 519 | 597+60.00"O" | 85.00' LT |
| 538 | 605+20.00"O" | 58.30' RT |
| 539 | 604+75.00"O" | 85.00' RT |
| 541 | 595+00.00"O" | 90.00' LT |
| 542 | 603+00.00"O" | 80.00' LT |
| 543 | 614+00.00"O" | 70.00' RT |
| 544 | 613+50.00"O" | 70.00' RT |
| 545 | 612+35.84"O" | 40.00' RT |
| 546 | 611+00.00"O" | 40.00' RT |
| 547 | 610+75.00"O" | 50.00' RT |
| 571 | 606+70.00"O" | 45.55' RT |
| 572 | 606+70.00"O" | 55.00' RT |
| 573 | 606+35.00"O" | 55.00' RT |
| 574 | 606+35.00"O" | 48.53' RT |
| 575 | 607+00.00"O" | 55.00' LT |
| 576 | 607+00.00"O" | 60.00' LT |
| 577 | 607+30.00"O" | 60.00' LT |
| 578 | 607+30.00"O" | 55.00' LT |
| 579 | 604+45.00"O" | 85.00' RT |
| 596 | 604+05.00"O" | 68.07' RT |

DETAIL
NOT TO SCALE

SECTION LINE AND REFERENCE LINE ARE NOT PARALLEL

SECTION 1/4 LINE

REFERENCE LINE

VARIABLE DISTANCE

CAST IRON MON
STA. 613+70.88
0.96'LT
Y= 432,503.175
X= 685,266.763

| | | | | | |
|---|---|---|---|---|---|
| REVISION DATE 11-7-2023 | DATE | SCALE, FEET 0 100 200 | HWY: C.T.H. O | STATE R/W PROJECT NUMBER 5419-06-01 | PLAT SHEET NO: 4.07 |
| | GRID FACTOR N/A | | COUNTY: RICHLAND | CONSTRUCTION PROJECT NUMBER | PS&E SHEET 48 E |

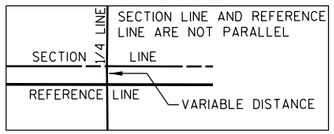
FILE NAME : X:\PT\R\RICHD\163696\Civil 3D 2020\54190001\RW\cad - rw staff only\rdctho04V8.dgn PLOT TIME : 8:08:18 AM PLOT DATE : 11/9/2023 PLOT BY : SEH PLOT NAME : PLOT SCALE : N/A

WISDOT/CADDS SHEET 75

BASIS OF EXISTING R/W
EXISTING R/W FOR C.T.H. O ESTABLISHED FROM CENTER LINE OF EXISTING PAVEMENT (WIS. STAT. 82.31(2)), CSM NO. 411 AND PROJECT 5419-03-21.
EXISTING R/W FOR C.T.H. OO ESTABLISHED FROM CENTER LINE OF EXISTING PAVEMENT (WIS. STAT. 82.31(2)).

GN

DETAIL
NOT TO SCALE




TOWN OF RICHLAND

SE-NE 34-10-1E

NE-NE 34-10-1E

NW-NW 35-10-1E

SW-NW 35-10-1E

| TLE STATION OUT TABLE | | |
|---|---|---|
| POINT | STATION | OFFSET |
| 543 | 614+00.00"O" | 70.00' RT |
| 544 | 613+50.00"O" | 70.00' RT |
| 563 | 614+50.00"O" | 55.00' RT |
| 568 | 639+42.09"O" | 55.00' RT |
| 569 | 637+75.00"O" | 55.00' RT |
| 570 | 636+75.00"O" | 45.00' RT |

MATCH LINE = QUARTER LINE
SEE SHEET 4.07

PI: 612+35.89'O'
Y=432,368.182
X=685,267.777

LOT 1
CSM 411
V 4, CSM P 39
DOC#248581

(24) DAVID W. UNBEHAUN & CATHERINE M. UNBEHAUN

(47) FRONTIER COMMUNICATIONS
VOL. 214, PG. 672
DOC. # 199789

(47) FRONTIER COMMUNICATIONS

(47) FRONTIER COMMUNICATIONS

(25) PINE VALLEY MANOR

SLOPE INTERCEPTS

(51) GENUINE TELECOM

(47) FRONTIER COMMUNICATIONS
AMBIGUOUS EASEMENT
VOL. 219, PG. 471
DOC. # 202680

(26) SCHMITZ FARMLAND TRUST
DATED OCTOBER 27, 2021

AMBIGUOUS INGRESS / EGRESS EASEMENT
VOL. 176, PG. 245

(50) WE ENERGIES

(47) FRONTIER COMMUNICATIONS

SECTION LINE

C.T.H. OO

PI: 638+77.12
Y=435,009.413
X=685,266.712

BP: 60+00.00'OO'
Y=435,114.955
X=684,922.272

PC: 642+00.14'O'

PINE RIVER

MATCH LINE = SECTION LINE
SEE SHEET 4.09

615'O' | 620'O' | 625'O' C.T.H. O | 630'O' | 635'O' | 640'O'

R=N00°01'23"W

R=N00°23'27"E

66'

SEE DETAIL

TLE-SLOPES
0.02 AC.

RICHLAND ELECTRIC COOPERATIVE

SLOPE INTERCEPTS

TLE-SLOPES
0.05 AC.

RICHLAND COUNTY
20'UTILITY EASEMENT
VOL. 266, PG. 6
DOC. # 220573

STA 638+89.93'OS' =
STA 63+56.79'OO'
Y=435,022.199
X=685,266.799

SEE DETAIL

(21) UNBEHAUN LAND, LLC

(25) PINE VALLEY MANOR

(21) UNBEHAUN LAND, LLC

1/4 LINE

APPROXIMATE 1/16 LINE

SECTION LINE

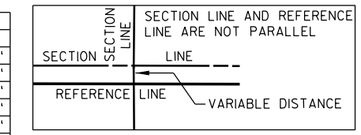
CAST IRON MON
STA. 613+70.88
0.96'LT
Y= 432,503.175
X= 685,266.763

CAST IRON MON
STA. 640+55.26
0.52'LT
Y= 435,187.554
X= 685,266.323

| FEE STATION OUT TABLE | | | | | |
|---|---|---|---|---|---|
| POINT | STATION | OFFSET | POINT | STATION | OFFSET |
| 369 | 623+25.00"O" | 55.00' LT | 391 | 640+75.00"O" | 80.59' RT |
| 375 | 613+50.00"O" | 0.00' LT | 392 | 639+41.79"O" | 80.76' RT |
| 376 | 613+50.00"O" | 75.00' LT | 393 | 639+41.74"O" | 45.00' RT |
| 377 | 614+50.00"O" | 75.00' LT | 394 | 638+89.21"O" | 45.00' RT |
| 378 | 616+00.00"O" | 50.00' LT | 395 | 629+00.00"O" | 45.00' RT |
| 379 | 619+50.00"O" | 50.00' LT | 396 | 628+25.00"O" | 35.00' RT |
| 380 | 621+00.00"O" | 55.00' LT | 397 | 625+60.00"O" | 35.00' RT |
| 381 | 630+25.00"O" | 55.00' LT | 398 | 622+75.00"O" | 60.00' RT |
| 382 | 631+30.00"O" | 50.00' LT | 399 | 621+00.00"O" | 60.00' RT |
| 383 | 637+00.00"O" | 50.00' LT | 400 | 619+50.00"O" | 55.00' RT |
| 384 | 638+30.00"O" | 70.00' LT | 401 | 613+50.00"O" | 55.00' RT |
| 385 | 61+40.00"OO" | 32.08' RT | 402 | 623+36.00"O" | 46.00' LT |
| 386 | 61+40.00"OO" | 0.00' LT | 403 | 623+50.00"O" | 46.00' LT |
| 387 | 61+40.00"OO" | 33.92' LT | 404 | 623+58.00"O" | 53.00' LT |
| 388 | 639+64.58"O" | 70.50' LT | 405 | 626+75.00"O" | 55.00' LT |
| 389 | 640+75.00"O" | 51.82' LT | 406 | 626+95.00"O" | 52.00' LT |
| 390 | 640+75.00"O" | 0.00' LT | 433 | 61+40.00"OO" | 50.00' LT |

| FEE COURSE TABLE | | | | | |
|---|---|---|---|---|---|
| COURSE | BEARING | DISTANCE | COURSE | BEARING | DISTANCE |
| 608-607 | S00°00'34"E | 2684.38' | 385-386 | N15°04'06"E | 32.08' |
| 607-375 | S02°39'16"E | 20.90' | 386-387 | N15°04'06"E | 33.92' |
| 375-376 | S89°58'37"W | 75.00' | 387-433 | N15°04'06"E | 16.08' |
| 376-377 | N00°01'23"W | 100.00' | 433-388 | S76°51'50"E | 129.75' |
| 377-378 | N09°26'21"E | 152.07' | 388-389 | N09°24'47"E | 111.49' |
| 378-379 | N00°01'23"W | 350.00' | 389-390 | S89°57'12"E | 51.82' |
| 379-380 | N01°55'56"W | 150.08' | 390-391 | S89°57'12"E | 80.59' |
| 380-369 | N00°01'23"W | 225.00' | 391-392 | S00°01'39"E | 133.21' |
| 369-402 | N39°15'59"E | 14.21' | 392-393 | S89°58'19"W | 35.76' |
| 402-403 | N00°01'23"W | 14.00' | 393-394 | S00°02'48"W | 52.48' |
| 403-404 | N41°12'33"W | 10.63' | 394-395 | S00°01'23"E | 989.21' |
| 404-405 | N00°23'05"W | 317.01' | 395-396 | S07°34'18"W | 75.66' |
| 405-406 | N08°30'28"E | 20.22' | 396-397 | S00°01'23"E | 265.00' |
| 406-381 | N00°32'38"W | 330.02' | 397-398 | S05°02'10"E | 286.09' |
| 381-382 | N02°42'12"E | 105.12' | 398-399 | S00°01'23"E | 175.00' |
| 382-383 | N00°01'23"W | 570.00' | 399-400 | S01°53'10"W | 150.08' |
| 383-384 | N08°46'09"W | 131.53' | 400-401 | S00°01'23"E | 600.00' |
| 384-385 | N59°58'25"W | 170.49' | 401-375 | S89°58'37"W | 55.00' |

DETAIL
NOT TO SCALE

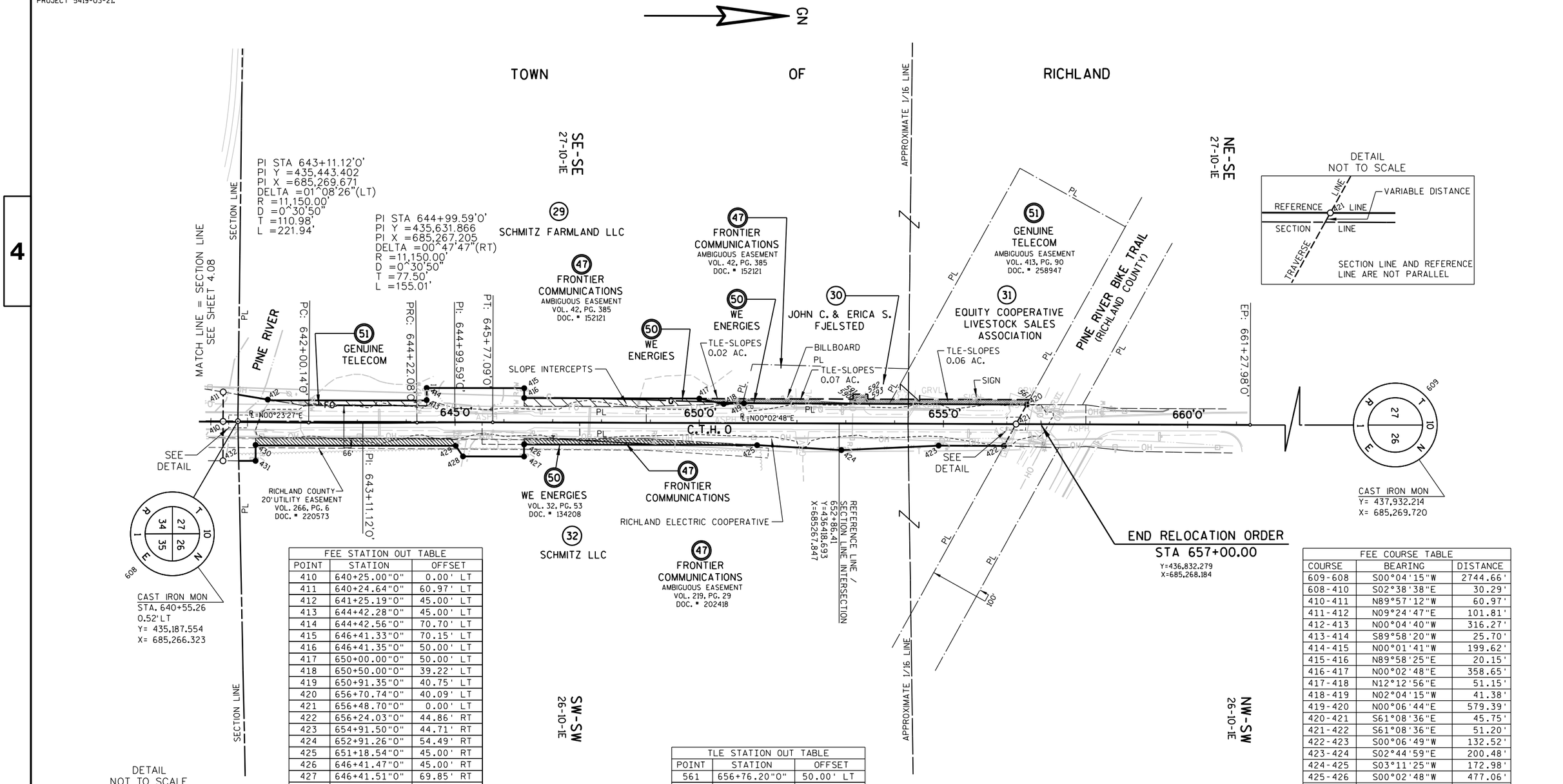



| | | | | | |
|---|---|---|---|---|---|
| REVISION DATE 11-7-2023 | DATE | SCALE, FEET 0 100 200 | HWY: C.T.H. O | STATE R/W PROJECT NUMBER 5419-06-01 | PLAT SHEET NO: 4.08 |
| | GRID FACTOR N/A | | COUNTY: RICHLAND | CONSTRUCTION PROJECT NUMBER | PS&E SHEET 49 E |

FILE NAME : X:\PT\R\RICHD\163696\Civil 3D 2020\54190001\RW\cad - rw staff only\rdctho05V8.dgn PLOT TIME : 8:08:19 AM PLOT DATE : 11/9/2023 PLOT BY : SEH PLOT NAME : PLOT SCALE : N/A

WISDOT/CADDS SHEET 75

BASIS OF EXISTING R/W
EXISTING R/W FOR C.T.H. O ESTABLISHED FROM CENTER LINE OF EXISTING PAVEMENT (WIS. STAT. 82.31(2)), AND PROJECT 5419-03-21.
EXISTING R/W FOR THE PINE RIVER BIKE TRAIL ESTABLISHED FROM PROJECT 5419-03-21.




DETAIL
NOT TO SCALE




DETAIL
NOT TO SCALE




| FEE STATION OUT TABLE | | |
|---|---|---|
| POINT | STATION | OFFSET |
| 410 | 640+25.00"O" | 0.00' LT |
| 411 | 640+24.64"O" | 60.97' LT |
| 412 | 641+25.19"O" | 45.00' LT |
| 413 | 644+42.28"O" | 45.00' LT |
| 414 | 644+42.56"O" | 70.70' LT |
| 415 | 646+41.33"O" | 70.15' LT |
| 416 | 646+41.35"O" | 50.00' LT |
| 417 | 650+00.00"O" | 50.00' LT |
| 418 | 650+50.00"O" | 39.22' LT |
| 419 | 650+91.35"O" | 40.75' LT |
| 420 | 656+70.74"O" | 40.09' LT |
| 421 | 656+48.70"O" | 0.00' LT |
| 422 | 656+24.03"O" | 44.86' RT |
| 423 | 654+91.50"O" | 44.71' RT |
| 424 | 652+91.26"O" | 54.49' RT |
| 425 | 651+18.54"O" | 45.00' RT |
| 426 | 646+41.47"O" | 45.00' RT |
| 427 | 646+41.51"O" | 69.85' RT |
| 428 | 645+16.12"O" | 69.85' RT |
| 429 | 645+01.44"O" | 48.00' RT |
| 430 | 640+92.04"O" | 48.00' RT |
| 431 | 640+92.27"O" | 79.26' RT |
| 432 | 640+25.48"O" | 79.75' RT |

| TLE STATION OUT TABLE | | |
|---|---|---|
| POINT | STATION | OFFSET |
| 561 | 656+76.20"O" | 50.00' LT |
| 590 | 653+15.00"O" | 50.00' LT |
| 591 | 653+15.00"O" | 60.00' LT |
| 592 | 656+45.00"O" | 60.00' LT |
| 593 | 656+45.00"O" | 50.00' LT |

| FEE COURSE TABLE | | |
|---|---|---|
| COURSE | BEARING | DISTANCE |
| 609-608 | S00°04'15"W | 2744.66' |
| 608-410 | S02°38'38"E | 30.29' |
| 410-411 | N89°57'12"W | 60.97' |
| 411-412 | N09°24'47"E | 101.81' |
| 412-413 | N00°04'40"W | 316.27' |
| 413-414 | S89°58'20"W | 25.70' |
| 414-415 | N00°01'41"W | 199.62' |
| 415-416 | N89°58'25"E | 20.15' |
| 416-417 | N00°02'48"E | 358.65' |
| 417-418 | N12°12'56"E | 51.15' |
| 418-419 | N02°04'15"W | 41.38' |
| 419-420 | N00°06'44"E | 579.39' |
| 420-421 | S61°08'36"E | 45.75' |
| 421-422 | S61°08'36"E | 51.20' |
| 422-423 | S00°06'49"W | 132.52' |
| 423-424 | S02°44'59"E | 200.48' |
| 424-425 | S03°11'25"W | 172.98' |
| 425-426 | S00°02'48"W | 477.06' |
| 426-427 | N89°58'20"E | 24.85' |
| 427-428 | S00°01'41"E | 125.00' |
| 428-429 | S55°55'35"W | 26.29' |
| 429-430 | S00°05'59"E | 410.00' |
| 430-431 | N89°58'19"E | 31.26 |
| 431-432 | S00°01'39"E | 66.79' |
| 432-410 | N89°57'12"W | 79.75' |

| | | | | | |
|---|---|---|---|---|---|
| REVISION DATE 11-7-2023 | DATE | SCALE: FEET 0 100 200 | HWY: C.T.H. O | STATE R/W PROJECT NUMBER 5419-06-01 | PLAT SHEET NO: 4.09 |
| | GRID FACTOR N/A | | COUNTY: RICHLAND | CONSTRUCTION PROJECT NUMBER | PS&E SHEET 50 E |

FILE NAME : X:\PT\R\RICHD\163696\Civil 3D 2020\54190001\RW\cad - rw staff only\rdctho06V8.dgn PLOT TIME : 8:08:20 AM PLOT DATE : 11/9/2023 PLOT BY : SEH PLOT NAME : PLOT SCALE : N/A

WISDOT/CADDS SHEET 75

MGS GUARDRAIL TERMINAL EAT REQ'D
STA 553+96.82'O' TO STA 554+49.97'O' LT
STA 555+50.08'O' TO STA 556+03.23'O' LT
STA 553+96.98'O' TO STA 554+50.01'O' RT
STA 555+49.90'O' TO STA 556+02.92'O' RT
MGS GUARDRAIL 3 L
STA 554+49.97'O' TO STA 555+50.08'O' LT (12'-6" CENTER SPAN LENGTH)
STA 554+50.01'O' TO STA 555+49.90'O' RT (12'-6" CENTER SPAN LENGTH)

REGINALD A. EMSHOFF

STA 558+00'O' - STA 562+70'O' LT
CONCRETE CURB & GUTTER 6-INCH
MOUNTABLE 36-INCH TYPE D REQ'D

RICHLAND ELECTRIC COOP

CARDINAL CREST ROAD

PT: 550+08.88 'O'

WETLAND BOUNDARY (TYP)

PC: 552+91.41 'O'

CONCRETE FLUME REQ'D

PT: 558+17.19 'O'

WETLAND SITE 2A

TLE

BM 5

R/W

MATCHLINE 563+00

548'O' 549'O' 550'O' N53°38'52"E 551'O' 552'O' 553'O' 554'O' 555'O' 556'O' 557'O' 558'O' 559'O' 560'O' N51°45'54"E 561'O' 562'O'

CTH O/CTH OO

PI STA = 555+54.33 'O'
Y = 427270.159
X = 684275.088
DELTA = 1°52'58" LT
D = 0°21'29"
T = 262.91'
L = 525.78'
R = 16000.00'
PC STA = 552+91.41 'O'
Y = 427114.318
X = 684063.340
PT STA = 558+17.19 'O'
Y = 427432.874
X = 684481.600
DB = N53°38'52"E
DA = N51°45'54"E

BEGIN PROJECT
STA 552+00.00'O'
Y = 427060.134
X = 683989.718
MATCH EXISTING
SAWCUT REQ'D

FENCE SAFETY

SLOPE INTERCEPT (TYP)

WETLAND SITE 2B

WETLAND BOUNDARY (TYP)

CONTRACTOR SHALL NOT
STORE ANY EQUIPMENT
WITHIN 50' OF
ENVIRONMENTALLY
SENSITIVE AREA

ENVIRONMENTALLY
SENSITIVE AREA

FRONTIER

KIRK M. STIBBE AND
SHELLY M STIBBE &
BRENT H. STIBBE AND
SARAH M. STIBBE

STA 555+10'O'
1 - REMOVE EXISTING 84" X 60' CVCMP

BENCHMARK TABLE

| NO. | STATION | DESCRIPTION | ELEV |
|---|---|---|---|
| 5 | 557+88.67'O' 54.8' LT | RR SPK IN 36" OAK 500'\ N OF FIRE # 28515 | 734.48 |

5

5

750 745 740 735 730 725 720 715

VPT STA 548+80.00
VPT EL 740.30

VCL = 360.00
K = 137.17

VCL = 300.00
K = 162.49

VPI STA 560+50.00
VPI EL 735.07

VPT STA 562+00.00
VPT EL 735.37

-2.75%

FINISHED R/L PROFILE

LP STA 556+12.39
LP EL 729.95

VPC STA 559+00.00
VPC EL 732.49

1.72%

-0.13%

VCL = 960.00
K = 199.27

VPC STA 550+60.00
VPC EL 735.35

VPI STA 552+40.00
VPI EL 730.40

EXISTING R/L PROFILE

VPT STA 554+20.00
VPT EL 730.17

VPC STA 555+92.00
VPC EL 729.96

VPI STA 557+42.00
VPI EL 729.77

VPT STA 558+92.00
VPT EL 732.35

VCL = 300.00
K = 197.68

STA 555+05.5'O'
1 - 84-INCH X 66' CPCS REQ'D
2 - AEW'S FOR CP STEEL
84-INCH REQ'D
SKEW 8°04' RHF
N INV = 718.70'
S DISCH = 718.00'

EXISTING R/L ELEVATION — FINISHED R/L ELEVATION

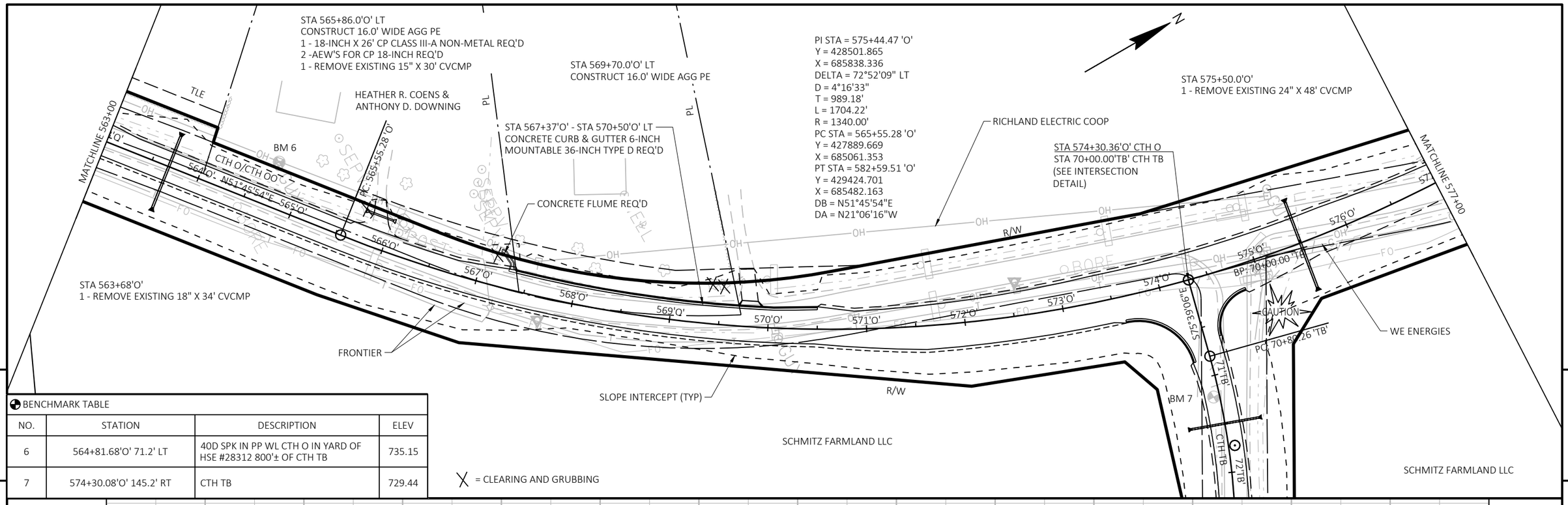
744.26 742.34 742.93 741.10 741.35 739.75 739.76 738.38 737.87 737.00 735.97 735.62 734.28 734.31 733.03 733.17 731.84 732.21 731.00 731.44 730.47 730.85 730.14 730.44 729.86 730.21 729.81 730.14 729.74 730.07 729.68 730.01 729.63 729.95 729.57 729.99 729.84 730.18 730.40 730.53 730.95 731.03 731.49 731.68 732.35 732.49 733.51 733.29 734.60 733.96 735.66 734.50 735.37 734.92 734.59 735.21 733.73 735.37 732.68 735.48 731.84 735.58

548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563

| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | PLAN AND PROFILE: CTH O | SHEET 51 | E |
|---|---|---|---|---|---|

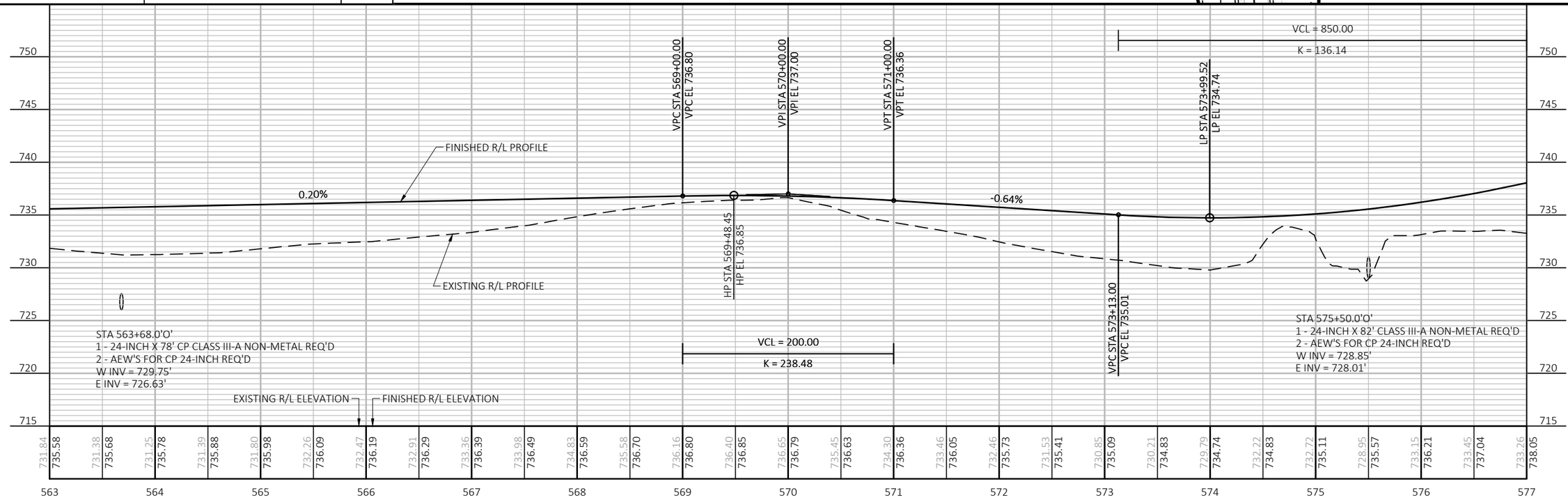
FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\050101_PP.DWG
LAYOUT NAME - 01

PLOT DATE : 1/26/2024 12:00 PM PLOT BY : NICK ENGH PLOT NAME : PLOT SCALE : 1 IN:100 FT




BENCHMARK TABLE

| NO. | STATION | DESCRIPTION | ELEV |
|---|---|---|---|
| 6 | 564+81.68'O' 71.2' LT | 40D SPK IN PP WL CTH O IN YARD OF HSE #28312 800'± OF CTH TB | 735.15 |
| 7 | 574+30.08'O' 145.2' RT | CTH TB | 729.44 |




| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | PLAN AND PROFILE: CTH O | SHEET 52 | E |
|---|---|---|---|---|---|

BENCHMARK TABLE

| NO. | STATION | DESCRIPTION | ELEV |
|---|---|---|---|
| 8 | 577+30.45'O' 60.5' RT | 4 SPK IN 2ND PP N OF CTH TB E SIDE OF CTH O | 776.87 |
| 9 | 589+91.03'O' 20.5' LT | TOP N CONC CORNER OF BOX CULVERT C-356-36 W SIDE CTH O | 776.87 |

PI STA = 575+44.47 'O'
Y = 428501.865
X = 685838.336
DELTA = 72°52'09" LT
D = 4°16'33"
T = 989.18'
L = 1704.22'
R = 1340.00'
PC STA = 565+55.28 'O'
Y = 427889.669
X = 685061.353
PT STA = 582+59.51 'O'
Y = 429424.701
X = 685482.163
DB = N51°45'54"E
DA = N21°06'16"W

STA 587+84.0'O' LT
CONSTRUCT 30.0' WIDE AGG FE
1 -REMOVE EXISTING 15" X 28' CVCMP

STA 589+75.0'O'
1 - REMOVE EXISTING BOX CULVERT
C-356-36
4' X 6' X 55'

STA 587+91.0'O' RT
CONSTRUCT 30.0' WIDE AGG FE

PI STA = 588+31.76 'O'
Y = 429958.570
X = 685276.113
DELTA = 20°54'22" RT
D = 4°16'33"
T = 247.22'
L = 488.94'
R = 1340.00'
PC STA = 585+84.54 'O'
Y = 429727.933
X = 685365.129
PT STA = 590+73.48 'O'
Y = 430205.788
X = 685275.258
DB = N21°06'16"W
DA = N00°11'54"W

STA 582+32.0'O' RT
CONSTRUCT 30.0' WIDE AGG FE
1 - 24-INCH X 42' CP CLASS III-A NON-METAL REQ'D
2 - AEW'S FOR CP 24-INCH REQ'D

STEVEN J. HANOLD, AS TRUSTEE
OF THE HANOLD IRREVOCABLE
TRUST DATED 6-13-2012

= CLEARING AND GRUBBING

SCHMITZ FARMLAND LLC

WE ENERGIES

CAUTION

TLE

R/W

SLOPE INTERCEPT (TYP)

MATCHLINE 577+00

MATCHLINE 591+00

BM 8

BM 9

CTH O/CTH OO

N21°06'16"W

SCHMITZ FARMLAND LLC

FRONTIER

RICHLAND ELECTRIC COOP

VCL = 850.00
K = 136.14

VCL = 2020.00
K = 190.04

VPC STA 581+90.00
VPC EL 757.66

VPT STA 581+63.00
VPT EL 756.14

5.61%

FINISHED R/L PROFILE

EXISTING R/L PROFILE

EXISTING R/L ELEVATION

FINISHED R/L ELEVATION

STA 589+90.90'O'
1 - 60-INCH X 118' CPCS REQ'D
2 - AEW'S FOR CP STEEL 60-INCH REQ'D
SKEW 9°40' LHF

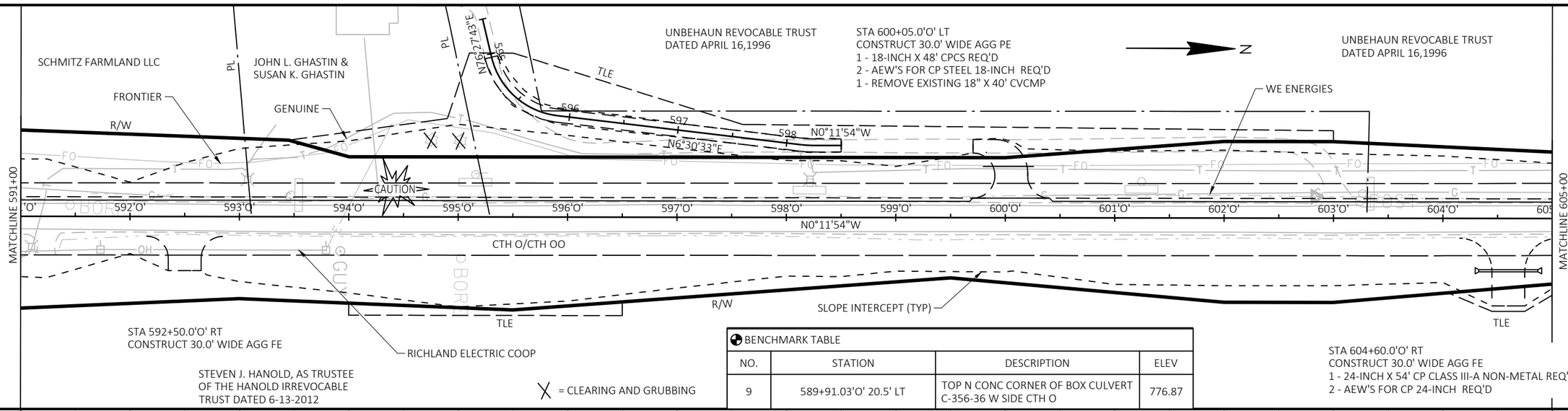
| 577 | 578 | 579 | 580 | 581 | 582 | 583 | 584 | 585 | 586 | 587 | 588 | 589 | 590 | 591 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 733.26 | 738.05 | 733.33 | 739.25 | 735.33 | 740.63 | 739.77 | 742.19 | 740.88 | 743.94 | 753.26 | 745.87 | 758.65 | 747.98 | 749.21 | 750.28 | 751.80 | 752.76 | 756.67 | 755.42 | 760.25 | 758.22 | 763.43 | 760.93 | 766.87 | 763.51 | 773.70 | 765.96 | 781.56 | 768.28 | 789.41 | 770.46 | 794.88 | 772.52 | 797.99 | 774.44 | 794.94 | 776.23 | 789.50 | 777.89 | 784.37 | 779.42 | 780.12 | 780.81 | 776.84 | 782.08 | 777.60 | 783.21 | 778.63 | 784.21 | 778.74 | 785.08 | 779.10 | 785.82 | 779.62 | 786.43 | 780.70 | 786.90 |

PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | PLAN AND PROFILE: CTH O | SHEET 53 | E

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\050101_PP.DWG
LAYOUT NAME - 03

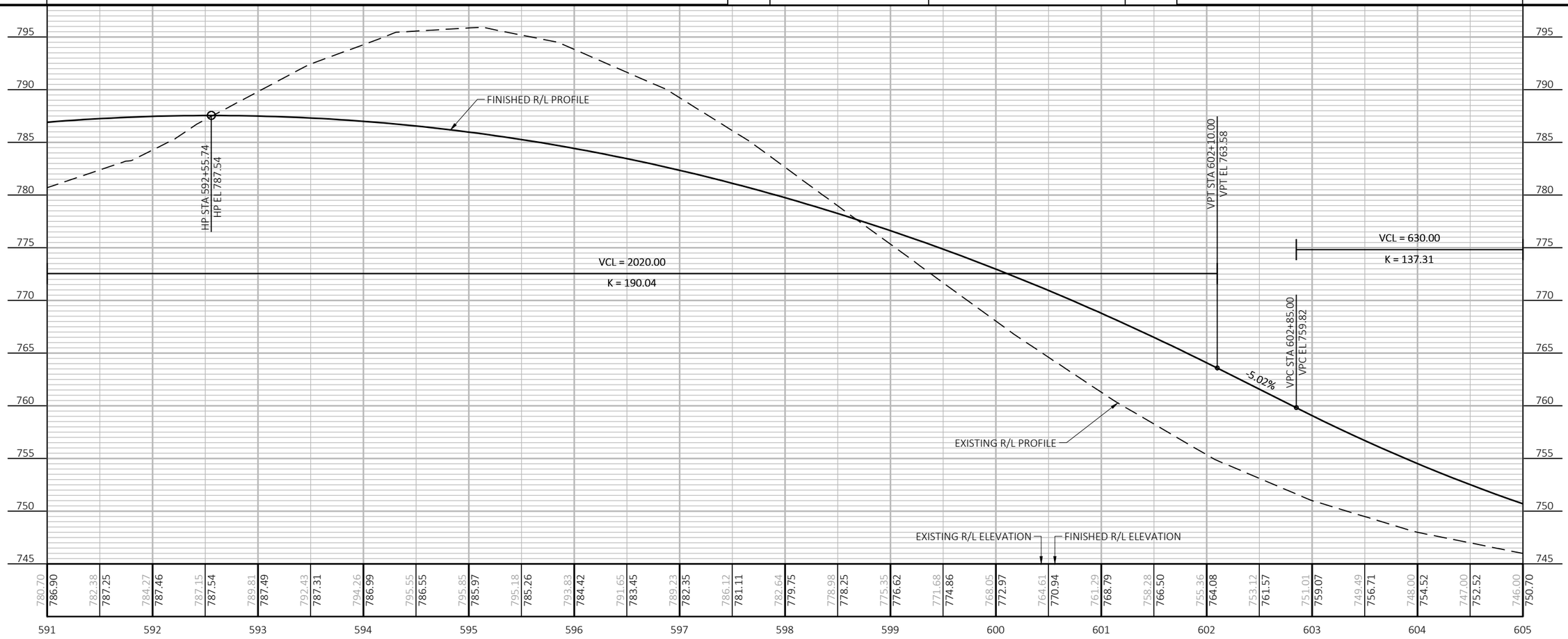
PLOT DATE : 1/26/2024 12:00 PM | PLOT BY : NICK ENGH | PLOT NAME : | PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44




BENCHMARK TABLE

| NO. | STATION | DESCRIPTION | ELEV |
|---|---|---|---|
| 9 | 589+91.03'O' 20.5' LT | TOP N CONC CORNER OF BOX CULVERT C-356-36 W SIDE CTH O | 776.87 |




| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | PLAN AND PROFILE: CTH O | SHEET 54 | E |
|---|---|---|---|---|---|

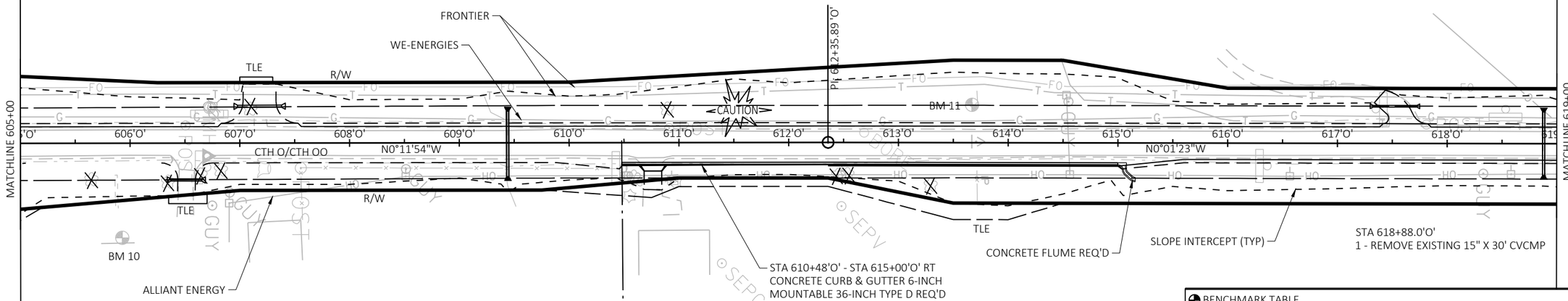
STA 607+18.0'O' LT
CONSTRUCT 30.0' WIDE AGG FE
1 - 24-INCH X 40' CP CLASS III-A NON-METAL REQ'D
2 - AEW'S FOR CP 24-INCH REQ'D
1 - REMOVE EXISTING 12" X 16' CVCMP

STA 609+44.0'O'
1 - REMOVE EXISTING 18" X 40' CVCMP

UNBEHAUN REVOCABLE TRUST
DATED APRIL 16,1996

N

STA 617+58.0'O' LT
CONSTRUCT 18.0' WIDE AGG PE
1 - 18-INCH X 40' CP CLASS III-A NON-METAL REQ'D
2 - AEW'S FOR CP 18-INCH REQ'D
1 - REMOVE EXISTING 18" X 30' CVCMP




STA 606+51.0'O' RT
CONSTRUCT 16.0' WIDE AGG PE
1 - 24-INCH X 28' CP CLASS III-A NON-METAL REQ'D
2 - AEW'S FOR CP 24-INCH REQ'D
1 - REMOVE EXISTING 12" X 38' CVCMP

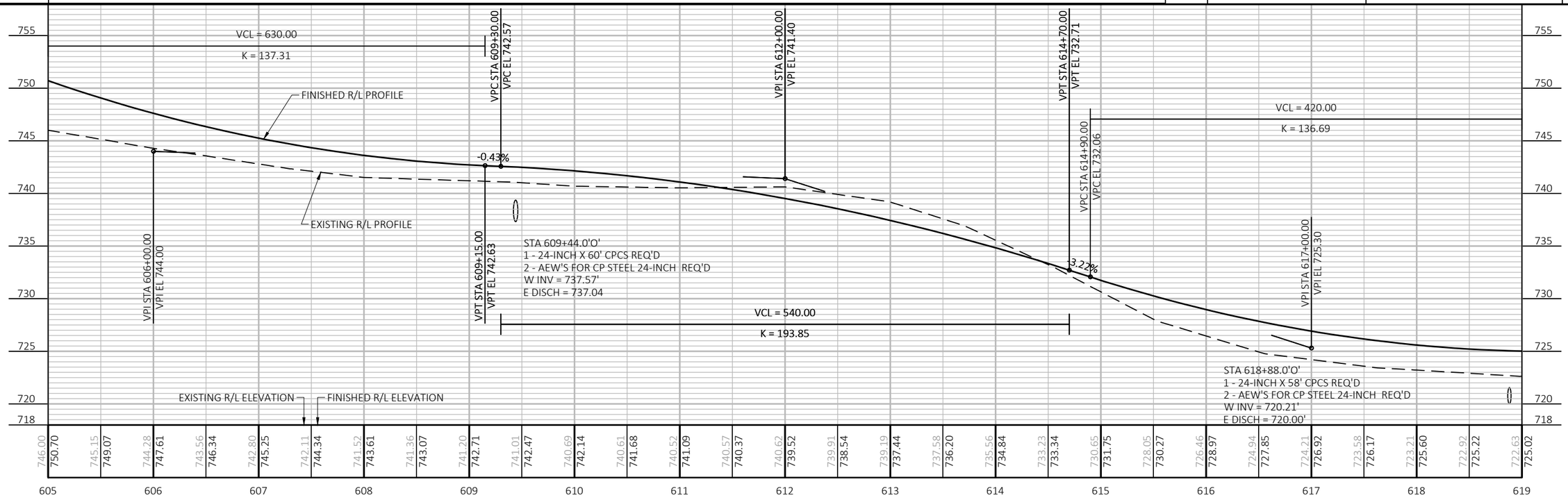
STA 610+76.0'O' RT
CONSTRUCT 16.0' WIDE AGG PE
1 - REMOVE EXISTING 15" X 30' CVCMP

STEVEN J. HANOLD, AS TRUSTEE
OF THE HANOLD IRREVOCABLE
TRUST DATED 6-13-2012

X = CLEARING AND GRUBBING

BENCHMARK TABLE

| NO. | STATION | DESCRIPTION | ELEV |
|---|---|---|---|
| 10 | 605+96.46'O' 86.1' RT | TOP NW CORNER CONC RAILING AT HSE #27911 | 750.51 |
| 11 | 613+69.44'O' 43.1' RT | RR SPK IN 60" TREE WL CTH O 500'± N OF DRIVEWAY 27611 AT 1/4 CORNER SEC LINE | 745.46 |




| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | PLAN AND PROFILE: CTH O | SHEET 55 E |
|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\050101_PP.DWG
LAYOUT NAME - 05
PLOT DATE : 1/26/2024 12:01 PM PLOT BY : NICK ENGH PLOT NAME : PLOT SCALE : 1 IN:100 FT

STA 621+84.0'O' LT
CONSTRUCT 30.0' WIDE AGG FE
1 - 15-INCH X 32' CP CLASS III-A NON-METAL REQ'D
2 - AEW'S FOR CP 15-INCH REQ'D
1 - REMOVE EXISTING 15" X 18' CVCMP

STA 623+00.60.0'O' LT
CONSTRUCT 24.0' WIDE ASPH CE
SAWCUT REQ'D

STA 629+84'O' LT
CONSTRUCT 18.0' WIDE ASPH CE
1 - 18-INCH X 44' CP CLASS III-A NON-METAL REQ'D
2 - AEW'S FOR CP 18-INCH REQ'D
1- REMOVE EXISTING 15" X 32' CVCMP
SAWCUT REQ'D

N

DAVID W. UNBEHAUN &
CATHERINE M. UNDEHAUN

RICHLAND COUNTY-WATER
RICHLAND COUNTY-SAN
PINE VALLEY MANOR
ALLIANT ENERGY
RICHLAND COUNTY-SS
FRONTIER
CIRCLE VIEW DRIVE
WE ENERGIES

STA 622+73.28
-31.05' LT
Y=433405.567
X=685236.311

STA 623+41.99
-42.00' LT
Y=433474.265
X=685225.331

STA 629+56.27
-33.00' LT
Y=434088.548
X=685234.083

STA 630+20.03
-42.00' LT
Y=434152.311
X=685225.058

PL
R/W
CAUTION
RICHLAND COUNTY
BM 13
BM 12
CTH O/CTH OO
MATCHLINE 619+00
MATCHLINE STA 633+00
620'O' 621'O' 622'O' 623'O' 624'O' 625'O' N0°01'23"W 626'O' 627'O' 628'O' 629'O' 630'O' 631'O' 632'O'
SLOPE INTERCEPT (TYP)
ALLIANT ENERGY
RICHLAND COUNTY-ELEC
RICHLAND COUNTY-SAN
PINE VALLEY CEMETERY
ENVIRONMENTALLY SENSITIVE AREA
SOLAR PANELS

STA 625+50'O' - STA 627+50'O' RT
CONCRETE CURB & GUTTER 6-INCH
MOUNTABLE 36-INCH TYPE D REQ'D

DAVID W. UNBEHAUN &
CATHERINE M. UNDEHAUN

STA 622+41'O'
1 - REMOVE EXISTING BOX CULVERT
5' X 4' X 50'

STA 621+84.0'O' RT
CONSTRUCT 30.0' WIDE AGG FE
1 - 24-INCH X 46' CP CLASS III-A NON-METAL REQ'D
2 - AEW'S FOR CP 24-INCH REQ'D

STA 622+94.0'O' RT
CONSTRUCT 16.0' WIDE ASPH FE
1 - 18-INCH X 32' CP CLASS III-A NON-METAL REQ'D
2 - AEW'S FOR CP 18-INCH REQ'D
NON-DRAINAGE PIPE
SAWCUT REQ'D

PINE VALLEY MANOR

BENCHMARK TABLE

| NO. | STATION | DESCRIPTION | ELEV |
|---|---|---|---|
| 12 | 623+16.98'O' 35.98' RT | TNH EL CTH O AT NE CORNER ENTRANCE TO WATER TREATMENT PLANT AT CTH D | 723.90 |
| 13 | 629+36.40'O' 57.1 LT | RR SPK IN 36" TREE WL CTH O AT N ENTRANCE TO PINE VALLEY CARE CENTER | 717.61 |

VCL = 420.00
K = 136.69
VPI STA 619+10.00
VPT EL 725.00
VPC STA 621+50.00
VPC EL 724.65
VPI STA 622+50.00
VPI EL 724.50
VPT STA 623+50.00
VPT EL 723.38
FINISHED R/L PROFILE
-0.15%
STA 622+36.75'O'
1 - 36-INCH X 64' CPCS REQ'D
2 - AEW'S FOR CP STEEL 36-INCH REQ'D
W INV ELEV = 718.53'
E DISCH ELEV = 718.13'
VCL = 200.00
K = 205.41
STA 622+44.25'O'
1 - 36-INCH X 64' CPCS REQ'D
2 - AEW'S FOR CP STEEL 36-INCH REQ'D
W INV ELEV = 718.53'
E DISCH ELEV = 718.13'
EXISTING R/L ELEVATION
FINISHED R/L ELEVATION
-1.12%
VPC STA 627+74.00
VPC EL 718.63
VCL = 600.00
K = 678.31
VPI STA 630+74.00
VPI EL 715.27
EXISTING R/L PROFILE

740 735 730 725 720 715 710 705

722.63 725.02 722.80 724.94 722.96 724.87 723.25 724.79 723.53 724.72 723.75 724.65 723.97 724.51 724.08 724.26 723.73 723.88 723.15 723.38 722.57 722.82 722.20 722.26 721.83 721.70 721.42 721.14 720.93 720.58 720.33 720.02 719.66 719.46 718.83 718.90 718.03 718.34 717.50 717.82 717.16 717.34 716.99 716.89 716.74 716.48 716.37 716.10 715.99 715.76 715.67 715.46 715.40 715.20 715.08 714.97 714.74 714.78

619 620 621 622 623 624 625 626 627 628 629 630 631 632 633

| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | PLAN AND PROFILE: CTH O | SHEET 56 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\050101_PP.DWG
LAYOUT NAME - 06
PLOT DATE : 1/26/2024 12:01 PM
PLOT BY : NICK ENGH
PLOT NAME :
PLOT SCALE : 1 IN:100 FT

MGS GUARDRAIL 3 L
STA 645+10.42'O' TO STA 646+22.92'O' RT
STA 645+10.42'O' TO STA 646+22.92'O' LT

MGS THRIE BEAM TRANSTITION
STA 639+33.35'O' TO STA 639+72.74'O' RT
STA 640+88.91'O' TO STA 641+28.31'O' RT
STA 641+01.04'O' TO STA 641+40.45'O' LT

STA 633+50'O' LT
CONSTRUCT 30.0' WIDE AGG FE
1 - 24-INCH X 46' CP CLASS III-A NON-METAL REQ'D
2 - AEW'S FOR CP 24-INCH REQ'D
1- REMOVE EXISTING 15" X 32' CVCMP
SAWCUT REQ'D

STA 62+00.0'O' RT
CONSTRUCT 24.0' WIDE AGG FE
1 - 18-INCH X 40' CP CLASS III-A NON-METAL REQ'D
2 - AEW'S FOR CP 18-INCH REQ'D

BEGIN CONSTRUCTION
STA 61+47.25'OO'
MATCH EXISTING
SAWCUT REQ'D

STEEL THRIE BEAM STRUCTURE APPROACH
STA 639+64.87'O' TO STA 639+85.52'O'

STEEL PLATE BEAM GUARD SHORT RADIUS
STA 62+67.05'OO' STA 639+64.87'O'

STEEL PLATE BEAM GUARD CLASS A
STA 62+54.55'OO' TO STA 62+67.05'OO'

STEEL PLATE BEAM GUARD EAT
STA 62+04.59'OO' TO STA 62+54.55'OO'

STA 643+45'O'
1-REMOVE EXISTING 36" X 54" CVCMP

FRONTIER
ALLIANT ENERGY
WETLAND SITE 1D
PINE RIVER
WETLAND BOUNDARY (TYP)
ASPHALTIC FLUME REQ'D
WETLAND SITE 1A
SLOPE INTERCEPT (TYP)
GENUINE
R/W
MATCHLINE STA 633+00
MATCH LINE 647+00
CAUTION
BM 15
PRC: 644+22.08 'O'
PT: 645+77.09 'O'
PC: 642+00.14 'O'
CTH O
BM 14
TLE
WE ENERGIES
RICHLAND COUNTY-SAN
STA 638+88.93'O' CTH O =
STA 63+56.68'OO' CTH OO
(SEE INTERSECTION DETAIL)
WETLAND SITE 1C
WETLAND SITE 1B

EXCEPTION TO NET CENTERLINE
STA 639+76.00'O' TO STA 640+97.40'O'
STR B-52-137 (MATCH EXISTING DECK)

PI STA = 643+11.12 'O'
Y = 435443.402
X = 685269.671
DELTA = 1°08'26" LT
D = 0°30'50"
T = 110.98'
L = 221.94'
R = 11150.00'
PC STA = 642+00.14 'O'
Y = 435332.429
X = 685268.915
PT STA = 644+22.08 'O'
Y = 435554.367
X = 685268.219
DB = N00°23'27"E
DA = N00°44'59"W
SE = NC

PI STA = 644+99.59 'O'
Y = 435631.866
X = 685267.205
DELTA = 0°47'47" RT
D = 0°30'50"
T = 77.50'
L = 155.01'
R = 11150.00'
PC STA = 644+22.08 'O'
Y = 435554.367
X = 685268.219
PT STA = 645+77.09 'O'
Y = 435709.370
X = 685267.268
DB = N00°44'59"W
DA = N00°02'48"E
SE = NC

MGS GUARDRAIL TERMINAL EAT REQ'D
STA 637+92.70'O' TO STA 638+45.79'O' RT
STA 642+15.73'O' TO STA 642+68.72'O' RT
STA 641+77.95'O' TO STA 642+31.10'O' LT
STA 643+69.69'O' TO STA 644+22.91'O' RT
STA 646+72.94'O' TO STA 647+26.03'O' RT
STA 644+07.53'O' TO STA 644+60.42'O' LT
STA 647+10.42'O' TO STA 647+63.48'O' LT

MGS GUARDRAIL 3 REQ'D
STA 638+45.79'O' TO STA 639+33.35'O' RT
STA 641+28.31'O' TO STA 642+15.73'O' RT
STA 641+40.45'O' TO STA 641+77.95'O' LT
STA 644+22.91'O' TO STA 645+10.42'O' RT
STA 646+22.92'O' TO STA 646+72.94'O' RT
STA 644+60.42'O' TO STA 645+10.42'O' LT
STA 646+22.92'O' TO STA 647+10.42'O' LT

WETLAND BOUNDARY (TYP)

VCL = 600.00
K = 678.31
STA 633+74.00
EL 711.42
VPT STA 633+74.00
VPT EL 714.56
FINISHED R/L PROFILE
EXISTING R/L PROFILE
-0.24%
-0.01%
0.02%
-0.50%
-0.50%
-2.15%
SD LT & RT
SD LT
SD RT
STA 637+50.00
EL 709.54
STA 638+33.28
EL 707.75
STA 639+65.00
EL 708.46
STA 639+75.78
EL 713.15
STA 640+96.95
EL 713.14

STA 637+75'O'
1 - 18-INCH X 62' CPCS REQ'D
2 - AEW'S FOR CP STEEL 18-INCH REQ'D
(NON DRAINAGE PIPE)
W INV ELEV = 709.30
E DISCH ELEV = 709.30

STA 643+45'O'
1 - 42-INCH X 29-INCH X 70' PACS REQ'D
2 - AEW'S FOR PIPE ARCH SLOPED CROSS DRAINS
STEEL 42-INCH X 29-INCH 4:1 REQ'D
W INV ELEV = 707.64
E DISCH ELEV = 707.32

STA 645+63.54'O'
B-52-138
TO REMAIN IN PLACE

EXISTING R/L ELEVATION
FINISHED R/L ELEVATION

| 633 | 634 | 635 | 636 | 637 | 638 | 639 | 640 | 641 | 642 | 643 | 644 | 645 | 646 | 647 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 714.74 / 714.78 | 714.51 / 714.63 | 714.39 / 714.50 | 714.26 / 714.39 | 714.14 / 714.27 | 714.03 / 714.15 | 713.90 / 714.03 | 713.77 / 713.92 | 713.65 / 713.80 | 713.46 / 713.68 | 713.25 / 713.56 | 713.30 / 713.44 | 713.34 / 713.33 | 713.33 / 713.21 | 705.32 / 713.15 | 702.34 / 713.14 | 713.30 / 713.14 | 713.19 / 713.15 | 713.15 / 713.16 | 713.27 / 713.17 | 713.40 / 713.17 | 713.32 / 713.18 | 713.24 / 713.19 | 713.16 / 713.20 | 713.25 / 713.21 | 713.40 / 713.22 | 713.47 / 713.23 | 713.49 / 713.24 | 713.43 / 713.25 |

| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | PLAN AND PROFILE: CTH O | SHEET 57 | E |
|---|---|---|---|---|---|

| BENCHMARK TABLE | | | |
|---|---|---|---|
| NO. | STATION | DESCRIPTION | ELEV |
| 16 | 657+17.47'O' 41.8' RT | RR SPK IN PP @ NE COR CTH O & BIKE PATH | 721.54 |

STA 652+22'O' LT
CONSTRUCT 46.6' WIDE AGG PE
1 - 18-INCH X 58' CP CLASS III-A NON-METAL REQ'D
2 - AEW'S FOR CP 18-INCH REQ'D
1 - REMOVE EXISTING 18" X 60' CVCMP

STA 654+67'O' LT
CONSTRUCT 46.5' WIDE ASPH PE
1 - 18-INCH X 58' CP CLASS III-A NON-METAL REQ'D
2 - AEW'S FOR CP 18-INCH REQ'D
1 - REMOVE EXISTING 18" X 61' CVCMP
SAWCUT REQ'D

STA 656+53'O' LT
CONSTRUCT 40.0' WIDE ASPH PE
SAWCUT REQ'D

MATHEW F. SCHMITZ &
HEATHER D. SCHMITZ

STA 650+75'O' LT
CONSTRUCT 16.0' WIDE AGG PE
1 - 18-INCH X 24' CP CLASS III-A NON-METAL REQ'D
2 - AEW'S FOR CP 18-INCH REQ'D
1 - REMOVE EXISTING 15" X 30' CVCMP

STA 653+30.5'O' LT
CONSTRUCT 16.0' WIDE AGG PE
1 - 18-INCH X 32' CP CLASS III-A NON-METAL REQ'D
2 - AEW'S FOR CP 18-INCH REQ'D
1 - REMOVE EXISTING 18" X 46' CVCMP

EQUITY CO-OP
LIVESTOCK

WETLAND
BOUNDARY (TYP)

GENUINE

R/W

RICHARD A. FRUIT &
MARY JEAN FRUIT

WE-ENERGIES

CHARTER COMMUNICAITONS

P/NE RIVER TRAIL

TLE

EP: 661+27.98'O'

MATCH LINE 647+00

CAUTION

CTH O

R/W

BM 16

FENCE SAFETY

FRONTIER

RICHLAND COUNTY-SAN

ALLIANT ENERGY

SLOPE INTERCEPT (TYP)

FENCE SAFETY

CONTRACTOR SHALL NOT
STORE ANY EQUIPMENT
WITHIN 50' OF
ENVIRONMENTALLY
SENSITIVE AREA

CITY OF
RICHLAND
CENTER

STA 647+75'O'
1-REMOVE EXISTING 36" X 55' CVCMP

STA 652+12'O' RT
CONSTRUCT 16.0' WIDE AGG PE
1 - 18-INCH X 26' CP CLASS III-A NON-METAL REQ'D
2 - AEW'S FOR CP 18-INCH REQ'D
1 - REMOVE EXISTING 18" X 30' CVCMP

ENVIRONMENTALLY
SENSITIVE AREA

STA 657+04'O' LT/RT
CONSTRUCT 10.0' WIDE ASPH TRAIL
SKEW 28°17'19" LHF
SAWCUT REQ'D

END PROJECT
STA 657+15.00'O'
Y = 436847.280
X = 685268.184
MATCH EXISTING
SAWCUT REQ'D

RAYMOND
KOCH

STA 656+30'O' RT
CONSTRUCT 16.0' WIDE ASPH FE
1 - 24-INCH X 28' CP CLASS III-A NON-METAL REQ'D
2 - AEW'S FOR CP 24-INCH REQ'D
1 - REMOVE EXISTING 24" X 32' CVCMP
SAWCUT REQ'D

N0°02'48"E

'O' 648'O' 649'O' 650'O' 651'O' 652'O' 653'O' 654'O' 655'O' 656'O' 657'O' 658'O' 659'O' 660'O' 661'O'

VPC STA 652+81.00
VPC EL 718.59

VPI STA 654+96.00
VPI EL 723.73

VPT STA 657+11.00
VPT EL 724.00

VCL = 330.00
K = 139.11

0.12%

STA 647+75'O'
1 - 42-INCH X 29-INCH X 70' PACS REQ'D
2 - AEW'S FOR PIPE ARCH SLOPED CROSS DRAINS
STEEL 42-INCH X 29-INCH 4:1 REQ'D
W DISCH ELEV = 707.70
E INV ELEV = 708.00

FINISHED R/L PROFILE

2.39%

EXISTING R/L PROFILE

VPC STA 648+95.00
VPC EL 713.28

VPI STA 650+60.00
VPI EL 713.31

VPT STA 652+25.00
VPT EL 717.25

STA 657+15.01
EL 724.00

VCL = 430.00
K = 189.70

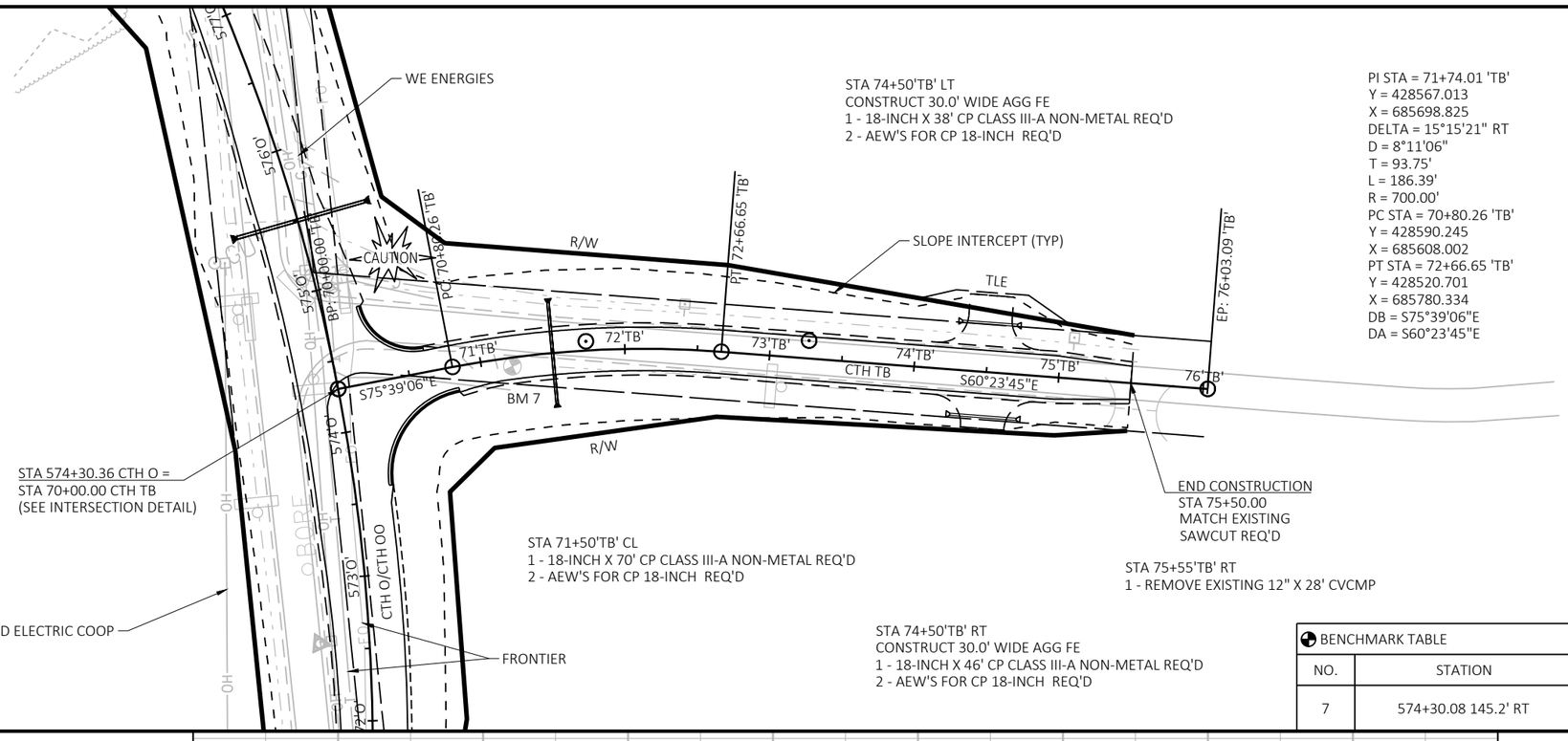
EXISTING R/L ELEVATION

FINISHED R/L ELEVATION

735 730 725 720 715 710 705 700

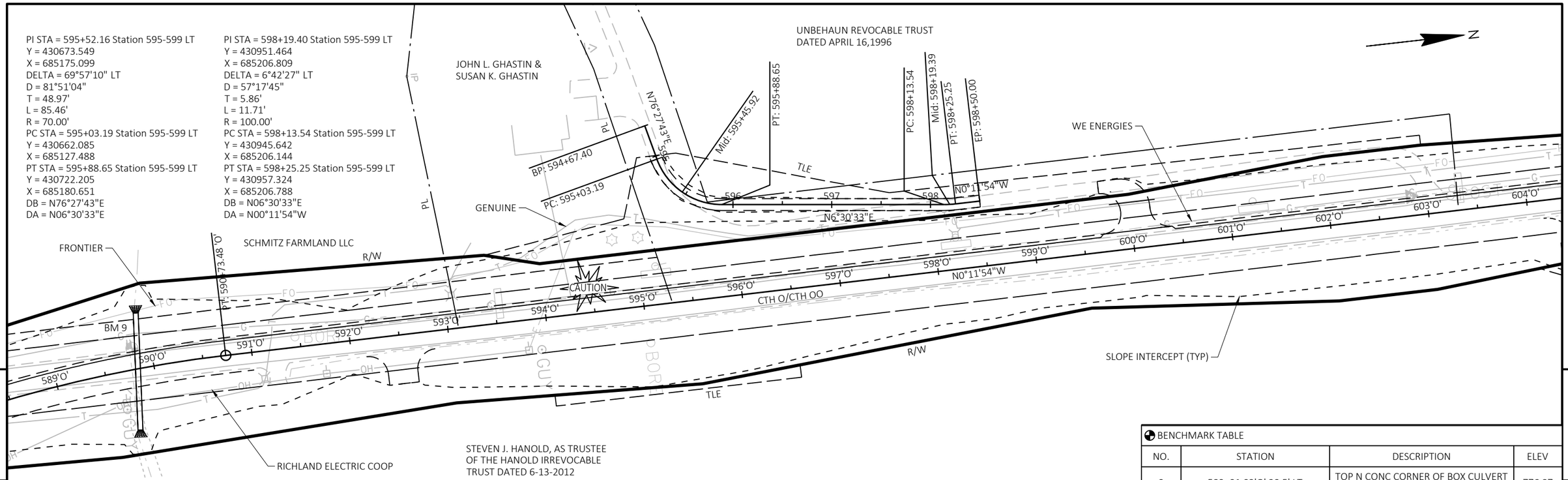
| | | |

PI STA = 575+44.47 'O'
Y = 428501.865
X = 685838.336
DELTA = 72°52'09" LT
D = 4°16'33"
T = 989.18'
L = 1704.22'
R = 1340.00'
PC STA = 565+55.28 'O'
Y = 427889.669
X = 685061.353
PT STA = 582+59.51 'O'
Y = 429424.701
X = 685482.163
DB = N51°45'54"E
DA = N21°06'16"W


WE ENERGIES
CAUTION
R/W
SLOPE INTERCEPT (TYP)
TLE
CTH TB
S60°23'45"E
S75°39'06"E
BM 7
71'TB'
72'TB'
73'TB'
74'TB'
75'TB'
76'TB'
BP: 70+00.00 'TB'
PC: 70+82.26 'TB'
PT: 72+66.65 'TB'
EP: 76+03.09 'TB'
576'O'
575'O'
574'O'
573'O'
572'O'
CTH O/CTH OO
FRONTIER
RICHLAND ELECTRIC COOP
OHO
OHO
OHO

PI STA = 595+52.16 Station 595-599 LT
Y = 430673.549
X = 685175.099
DELTA = 69°57'10" LT
D = 81°51'04"
T = 48.97'
L = 85.46'
R = 70.00'
PC STA = 595+03.19 Station 595-599 LT
Y = 430662.085
X = 685127.488
PT STA = 595+88.65 Station 595-599 LT
Y = 430722.205
X = 685180.651
DB = N76°27'43"E
DA = N06°30'33"E

PI STA = 598+19.40 Station 595-599 LT
Y = 430951.464
X = 685206.809
DELTA = 6°42'27" LT
D = 57°17'45"
T = 5.86'
L = 11.71'
R = 100.00'
PC STA = 598+13.54 Station 595-599 LT
Y = 430945.642
X = 685206.144
PT STA = 598+25.25 Station 595-599 LT
Y = 430957.324
X = 685206.788
DB = N06°30'33"E
DA = N00°11'54"W

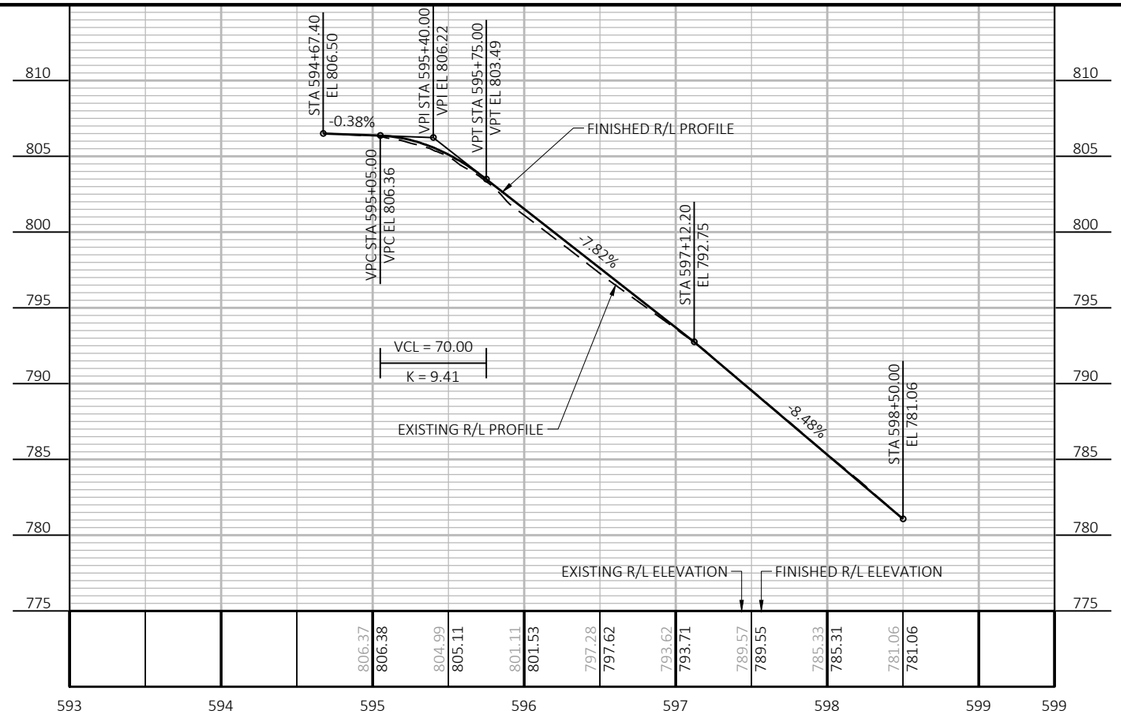



5

5

BENCHMARK TABLE

| NO. | STATION | DESCRIPTION | ELEV |
|---|---|---|---|
| 9 | 589+91.03'O' 20.5' LT | TOP N CONC CORNER OF BOX CULVERT C-356-36 W SIDE CTH O | 776.87 |

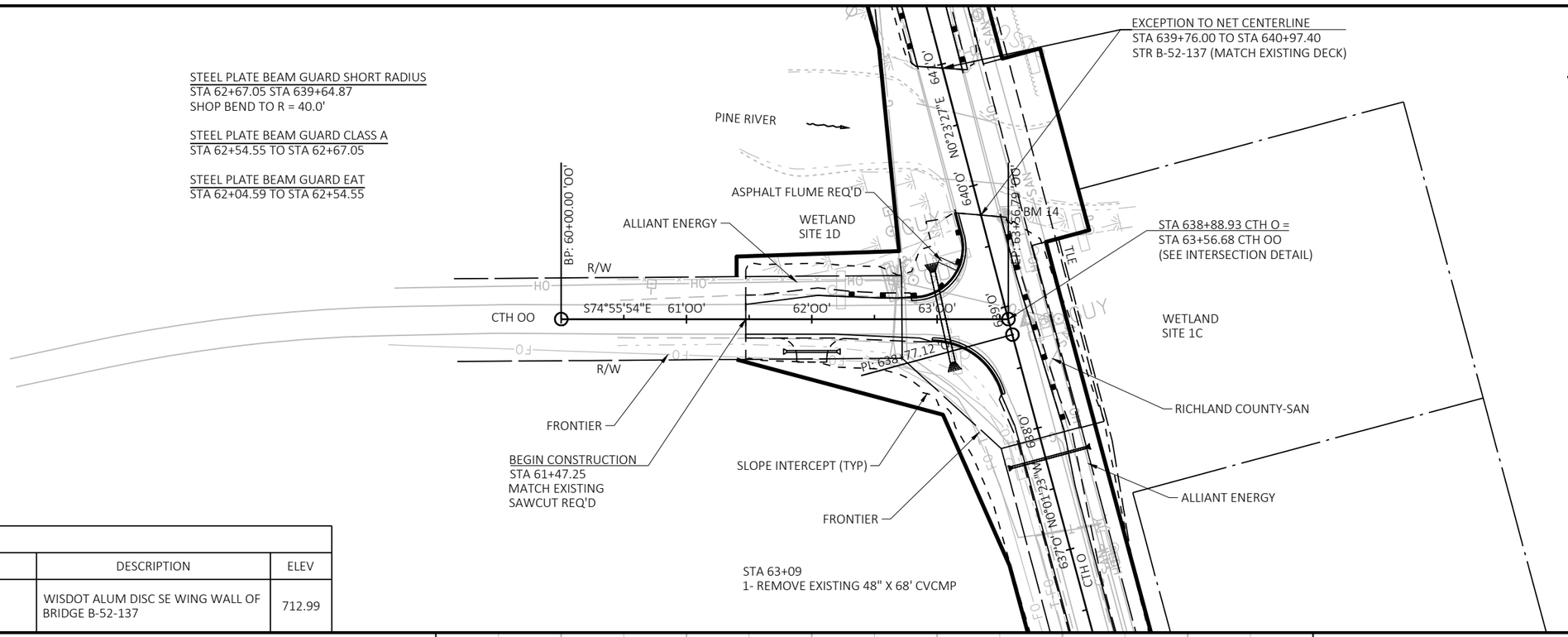



| PROJECT NO: 5419-06-73 | HWY: CTH O/OO | COUNTY: RICHLAND | PLAN AND PROFILE: DRIVEWAY | SHEET 60 | E |
|---|---|---|---|---|---|

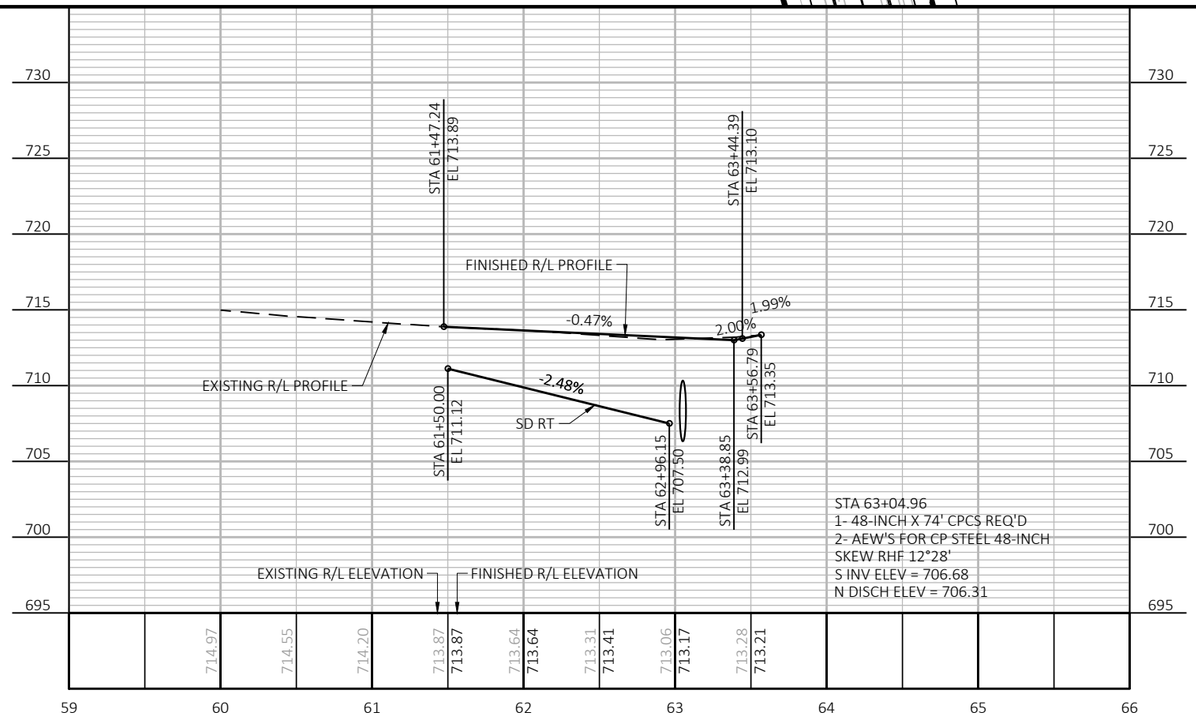
STEEL PLATE BEAM GUARD SHORT RADIUS
STA 62+67.05 STA 639+64.87
SHOP BEND TO R = 40.0'

STEEL PLATE BEAM GUARD CLASS A
STA 62+54.55 TO STA 62+67.05

STEEL PLATE BEAM GUARD EAT
STA 62+04.59 TO STA 62+54.55




| BENCHMARK TABLE | | | |
|---|---|---|---|
| NO. | STATION | DESCRIPTION | ELEV |
| 14 | 639+74.89 26.4' RT | WISDOT ALUM DISC SE WING WALL OF BRIDGE B-52-137 | 712.99 |




| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | PLAN AND PROFILE: CTH OO | SHEET 61 | E |
|---|---|---|---|---|---|

# Standard Detail Drawing List

| | |
|---|---|
| 08D01-23A | CONCRETE CURB & GUTTER |
| 08D01-23B | CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS |
| 08D04-07 | CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES |
| 08D21-01 | DRIVEWAYS WITHOUT CURB & GUTTER |
| 08E08-03 | TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS |
| 08E09-06 | SILT FENCE |
| 08E15-01 | CULVERT PIPE CHECK |
| 08F01-11 | APRON ENDWALLS FOR CULVERT PIPE |
| 08F02-01 | APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE |
| 08F04-08 | JOINT TIES FOR CONCRETE PIPE  AND CONCRETE COLLAR DETAIL |
| 09A01-14A | AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND  D AND TEE INTERSECTION BYPASS LANE |
| 13C19-03 | HMA LONGITUDINAL JOINTS |
| 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 |
| 14B18-06A | STEEL PLATE BEAM GUARD, CLASS "A" (AT BRIDGES, OBSTACLES AND  SIDEROADS/DRIVEWAYS) |
| 14B20-12A | STEEL THRIE BEAM STRUCTURE APPROACH |
| 14B20-12B | STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO  SQUARE END PARAPETS |
| 14B20-12C | STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO VERTICAL FACED PARAPETS |
| 14B20-12D | STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SLOPED END PARAPETS |
| 14B20-12E | STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO BRIDGE  RAILING TYPES "F" AND "W" |
| 14B20-12F | STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO BRIDGE RAILING TYPE "M" |
| 14B20-12G | STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTOR PLATE DETAIL |
| 14B20-12H | STEEL THRIE BEAM STRUCTURE APPROACH, SINGLE SLOPE ATTACHMENT |
| 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 |
| 14B27-01A | STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL |
| 14B27-01B | STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL |
| 14B27-01C | STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL |
| 14B29-01 | SAFETY EDGE |
| 14B42-07A | MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL |
| 14B42-07B | MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL |
| 14B42-07C | MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL |
| 14B42-07D | MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL |
| 14B43-04A | MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L) |
| 14B43-04B | MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L) |
| 14B43-04C | MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L) |
| 14B44-04A | MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS) |
| 14B44-04B | MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS) |
| 14B44-04C | MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS) |
| 14B45-05A | MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS) |
| 14B45-05B | MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS) |
| 14B45-05C | MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS) |
| 14B45-05D | MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS) |
| 14B45-05E | MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS) |
| 14B45-05F | MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS) |
| 14B45-05G | MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS) |
| 14B45-05H | MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS) |
| 14B45-05I | MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS) |
| 14B45-05J | MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS) |
| 14B45-05K | MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS) |
| 14B45-05L | MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS) |
| 15A03-02A | FLEXIBLE MARKER POST FOR CULVERT END |
| 15A03-02B | FLEXIBLE MARKER POST FOR CULVERT END |
| 15C02-09A | BARRICADES AND SIGNS FOR MAINLINE CLOSURES |
| 15C02-09B | BARRICADES AND SIGNS FOR VARIOUS CLOSURES |
| 15C03-05 | BARRICADES AND SIGNS FOR SIDEROAD CLOSURES |
| 15C04-05 | TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC |
| 15C08-23A | PERMANENT LONGITUDINAL PAVEMENT MARKINGS |
| 15C08-23C | PAVEMENT MARKING (TURN LANES) |
| 15C08-23D | PAVEMENT MARKING (TURN LANES) |
| 15C12-09A | TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION |
| 15C33-04 | STOP LINE AND CROSSWALK PAVEMENT MARKING |
| 15C35-06A | PAVEMENT MARKING (INTERSECTIONS) |
| 15D30-09A | TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION |
| 15D30-09G | TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION |

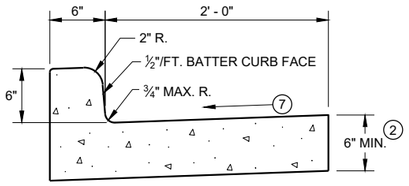
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# Standard Detail Drawing List

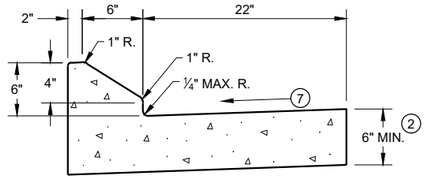
| | |
|---|---|
| 15D30-09L | TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION |
| 15D39-02 | TRAFFIC CONTROL, DROP-OFF SIGNING |
| 16A01-07 | LANDMARK REFERENCE MONUMENTS AND COVERS |



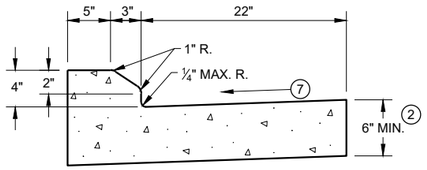
6



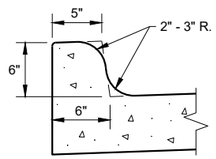

**TYPES A (1) & D**



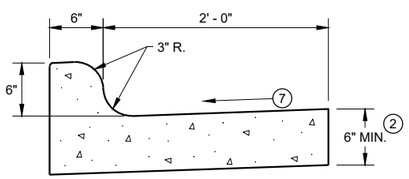

**6" SLOPED CURB TYPES G (1) & J**




**4" SLOPED CURB TYPES G (1) & J**

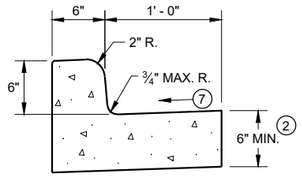



**TYPES K (1) & L**
(OPTIONAL CURB SHAPE)



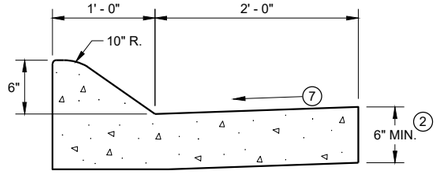

**TYPES K (1) & L**

**CONCRETE CURB AND GUTTER 30"**

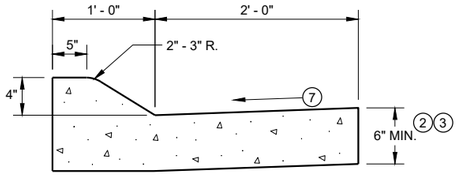



**TYPES A (1) & D**

**CONCRETE CURB AND GUTTER 18"**

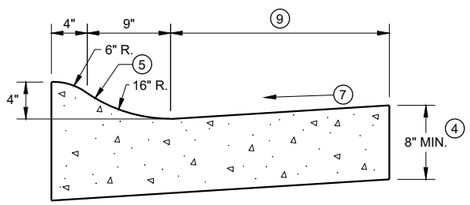



**6" SLOPED CURB TYPES A (1) & D**



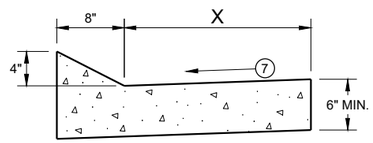

**4" SLOPED CURB TYPES A (1) & D**

**CONCRETE CURB AND GUTTER 36"**




**4" SLOPED CURB TYPES R (1) & T**

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

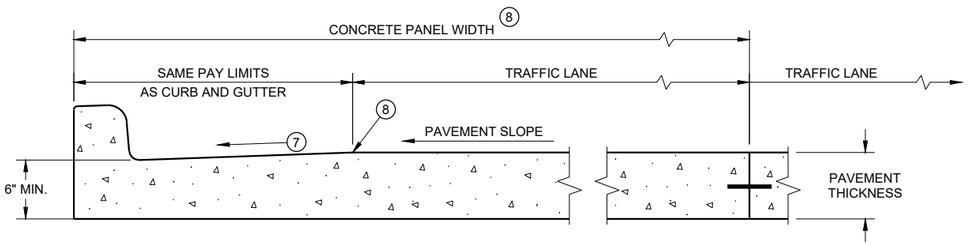



**TYPES TBT & TBTT (1)**

**CONCRETE CURB AND GUTTER**

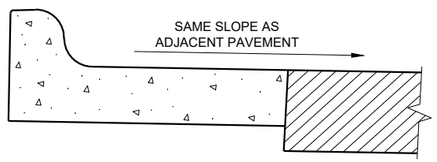
**PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE**

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




**PARTIAL SECTION OF PAVEMENT * WITH INTEGRAL CURB AND GUTTER**

* BIKE LANE IS NOT SHOWN




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

## GENERAL NOTES

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

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

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

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

(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.

(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(3) USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.

(4) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(5) UNLESS OTHERWISE NOTED, FOR STAKING PURPOSES THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

(6) WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.

(7) USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.

(8) INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.

(9) CONCRETE CURB AND GUTTER 4-INCH SLOPED 30-INCH TYPE "R" AND "T" = 17 INCHES
CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE "R" AND "T" = 23 INCHES

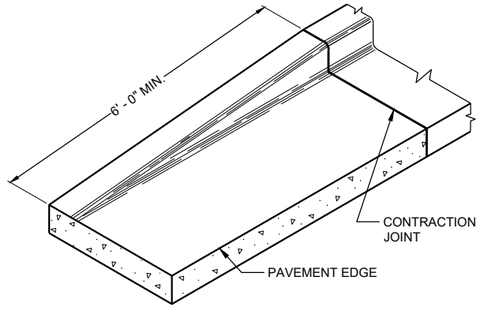
**CONCRETE CURB AND GUTTER**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

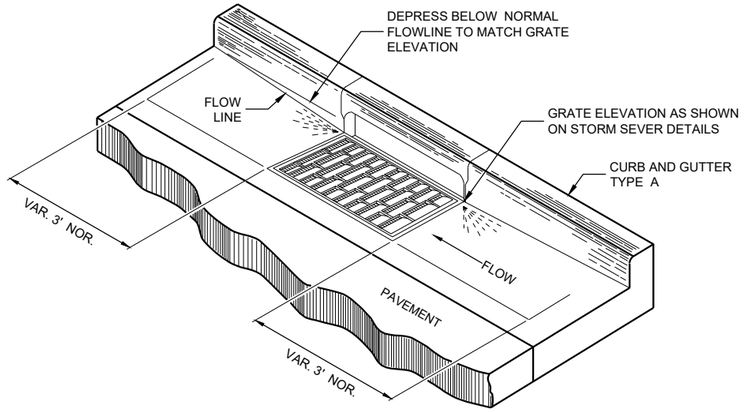



6


SDD 08D01 - 23a




**END SECTIONCURB AND GUTTER**




**DETAIL OF CURB AND GUTTER AT INLETS**

(TYPICAL H INLET COVER SHOWN)

## GENERAL NOTES

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

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

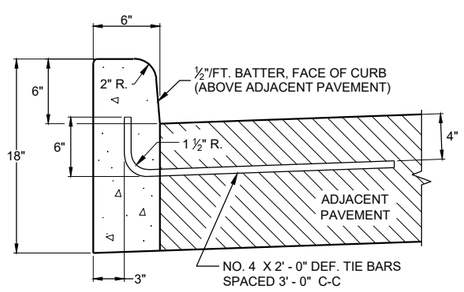
UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.

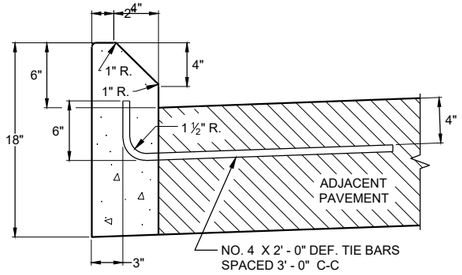
(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(10) REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.

(11) PLACE 1" THICK EXPANSION JOINT MATERIAL BETWEEN VERTICAL FACE CURB TYPES EXTENDING FROM THE TOP OF CURB TO 1 INCH BELOW THE ADJOINING CONCRETE SURFACE. RIGID CONCRETE STRUCTURES INCLUDE RAISED CONCRETE MEDIANS, CONCRETE SAFETY ISLANDS, SPLITTER ISLANDS, OR LOCATIONS IDENTIFIED ON THE PLANS.

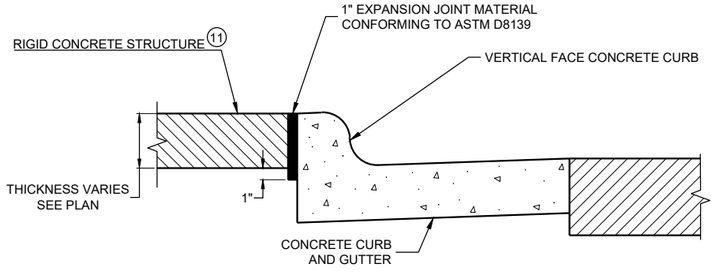



**TYPES A (1) & D**

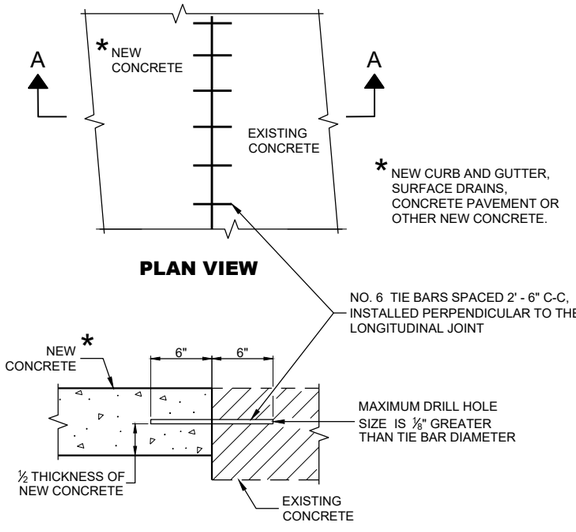



**TYPES G (1) & J**

**CONCRETE CURB**



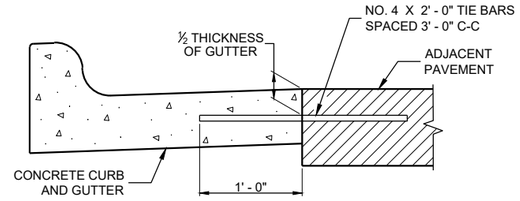

**EXPANSION JOINT DETAIL FOR VERTICAL CURB ABUTTING A RIGID STRUCTURE (11)**



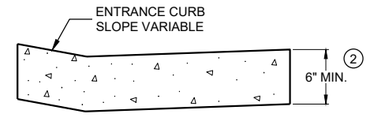

**PLAN VIEW**

**SECTION A - A**

**TIE BARS DRILLED INTO EXISTING PAVEMENT**




**TYPICAL TIE BAR LOCATION (1)**




**DRIVEWAY ENTRANCE CURB (10)**

(WHEN DIRECTED BY THE ENGINEER)

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Rodnery Taylor — ROADWAY STANDARDS DEVE ENGINEER

FHWA





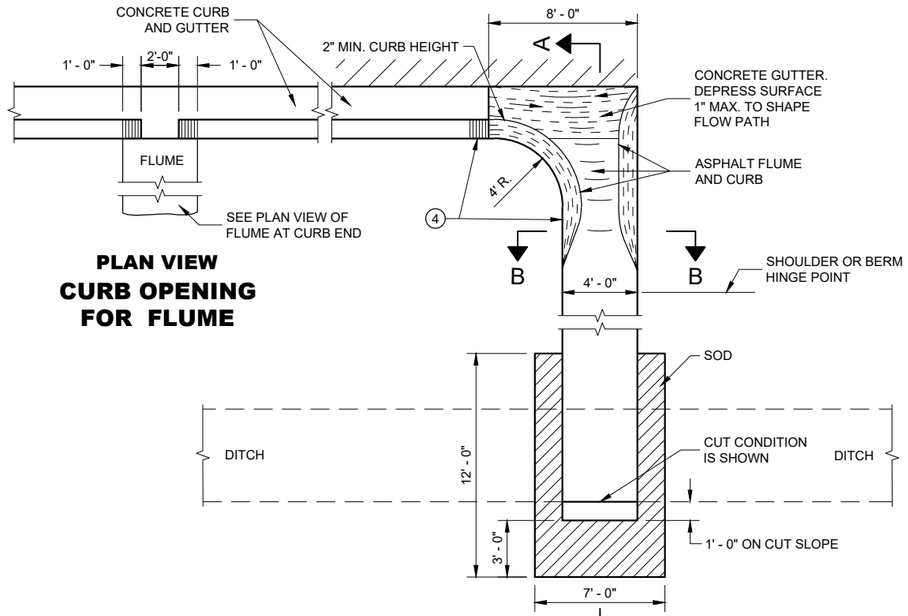
6



SDD08D01 - 23b

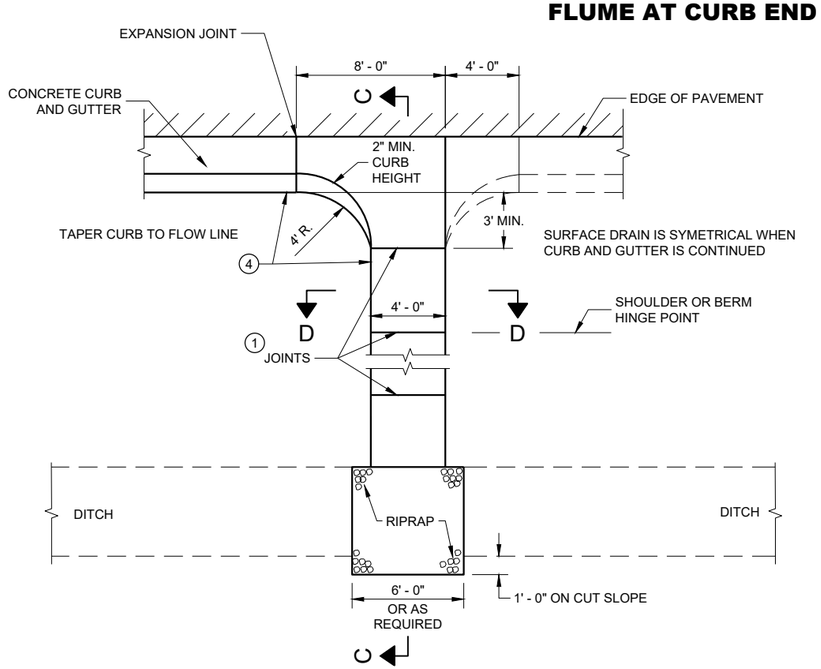
NOTE: TAPER CURB ENDS TO GUTTER IN 1' - 0"

## ASPHALTIC FLUME




**PLAN VIEW**
**CURB OPENING FOR FLUME**

**PLAN VIEW**
**FLUME AT CURB END**



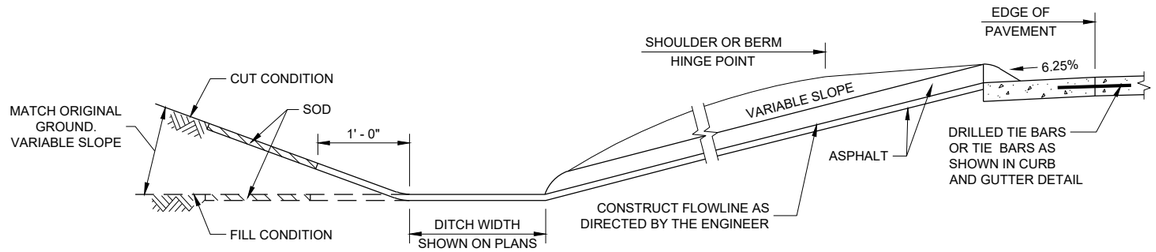

**PLAN VIEW**
**CONCRETE SURFACE DRAIN**

## GENERAL NOTES

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

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

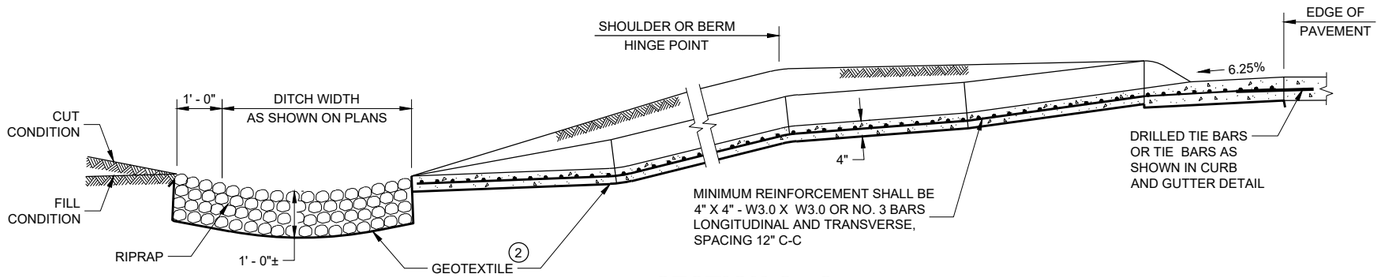
1. JOINTS SHALL BE ⅛" TO ¼" WIDE BY 1½" DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.
2. GEOTEXTILE TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.
3. CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED.
4. ANGLE OF FLUME IN RELATION TO BACK OF CURB TO BE CONSTRUCTED PER THE PLAN DETAILS OR AS DIRECTED BY THE ENGINEER. ANGLE OF FLUME MAY BE OTHER THAN 90 DEGREES AS SHOWN.



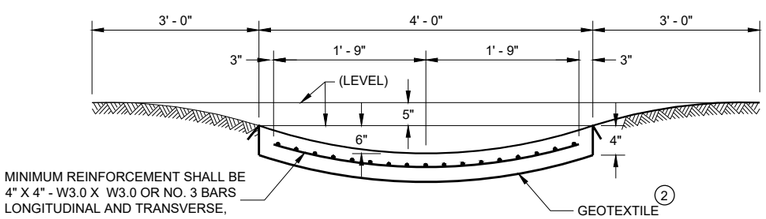

**SECTION A - A**




**SECTION B - B**




**SECTION C - C**




**SECTION D - D**

**CONCRETE SURFACE DRAINS AND ASPHALTIC FLUMES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

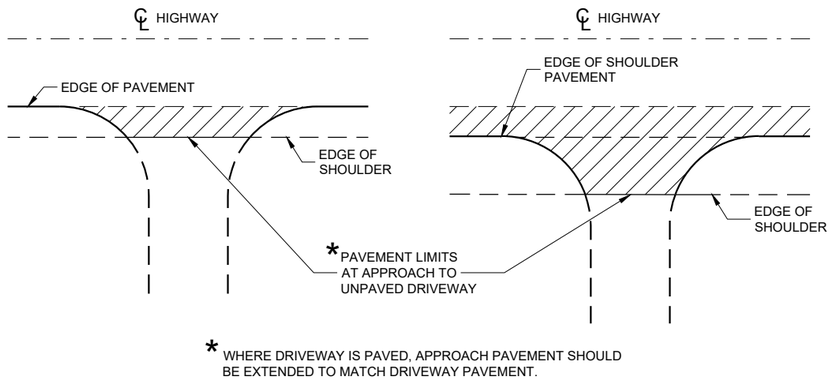
/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

FHWA




6

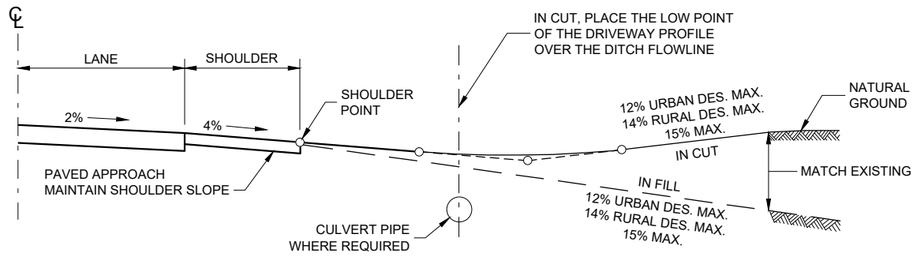

SDD 08D04 - 07



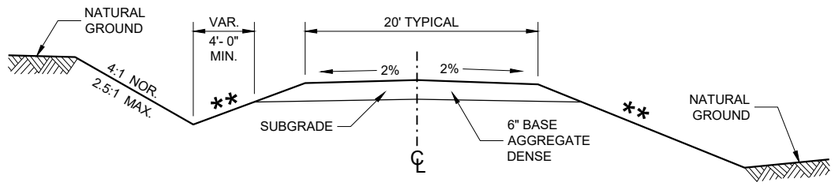

**PLAN VIEW**
(UNPAVED SHOULDER ON HIGHWAY)

**PLAN VIEW**
(PAVED SHOULDER ON HIGHWAY)

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




## TYPICAL DRIVEWAY PROFILES

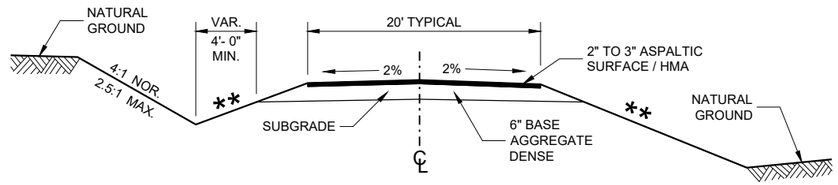



IN CUT IN FILL

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

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

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




IN CUT IN FILL

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

6

SDD 08D21 - 01

6

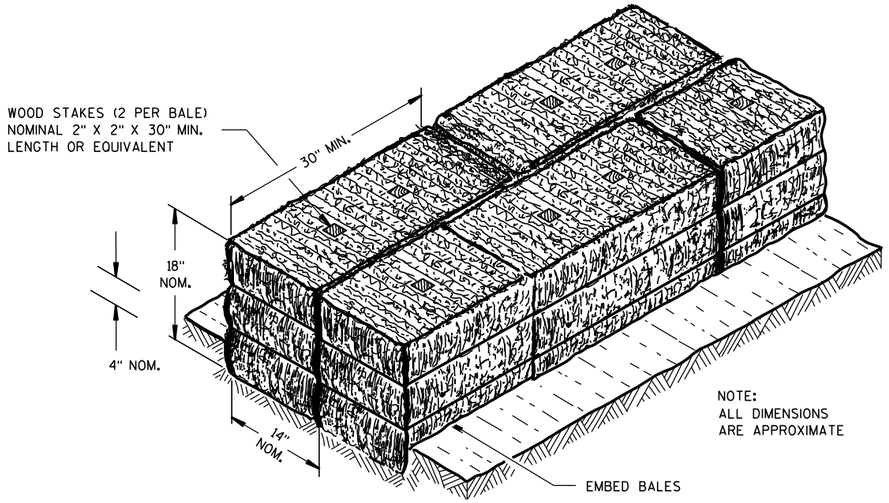
SDD 08D21 - 01

**DRIVEWAYS WITHOUT CURB AND GUTTER**

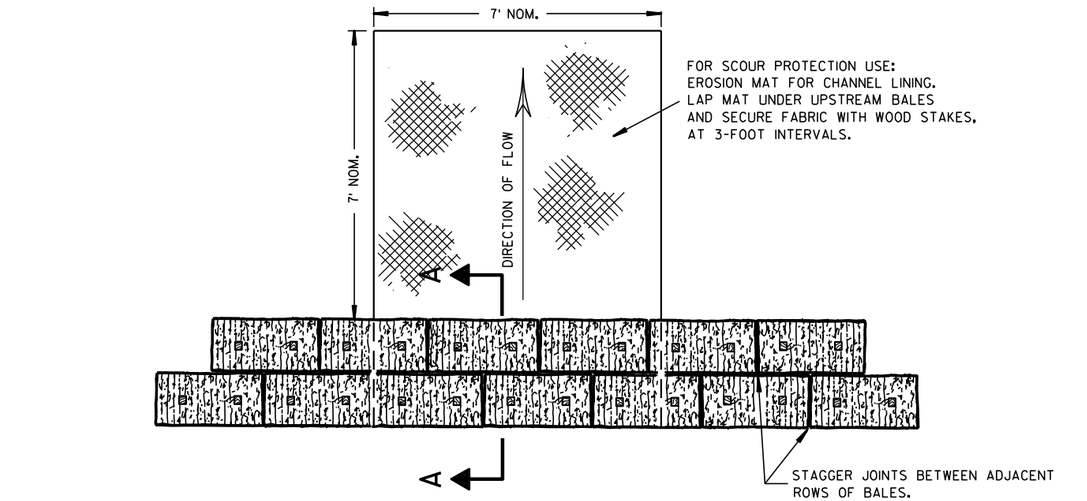
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December 2017 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE UNIT SUPERVISOR

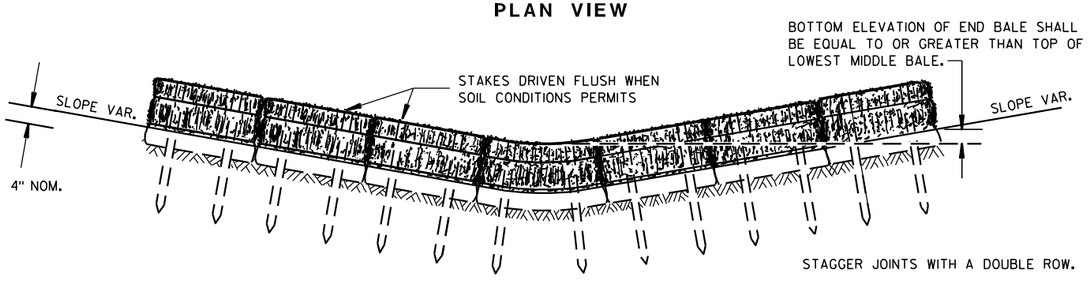
FHWA




**SECTION A-A**




**PLAN VIEW**



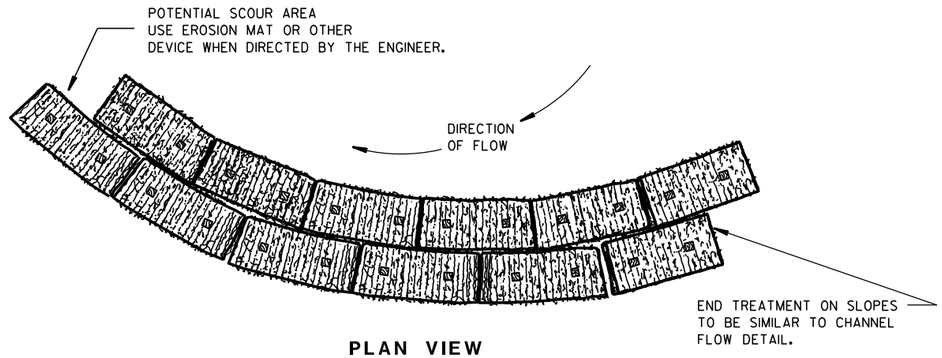

**FRONT ELEVATION**

## TEMPORARY DITCH CHECK USING EROSION BALES (1)

## GENERAL NOTES

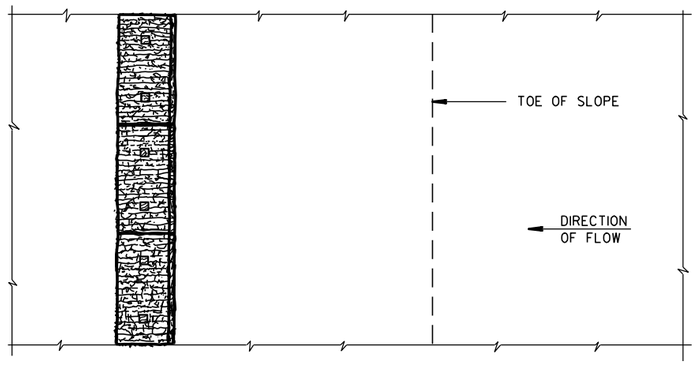
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

(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.

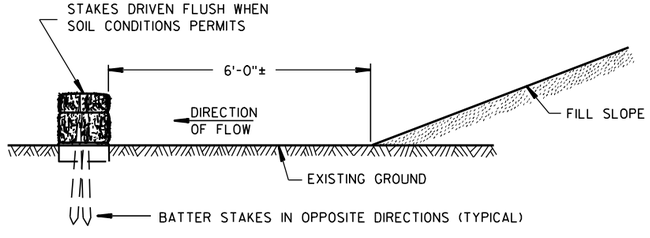



**PLAN VIEW**

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 Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

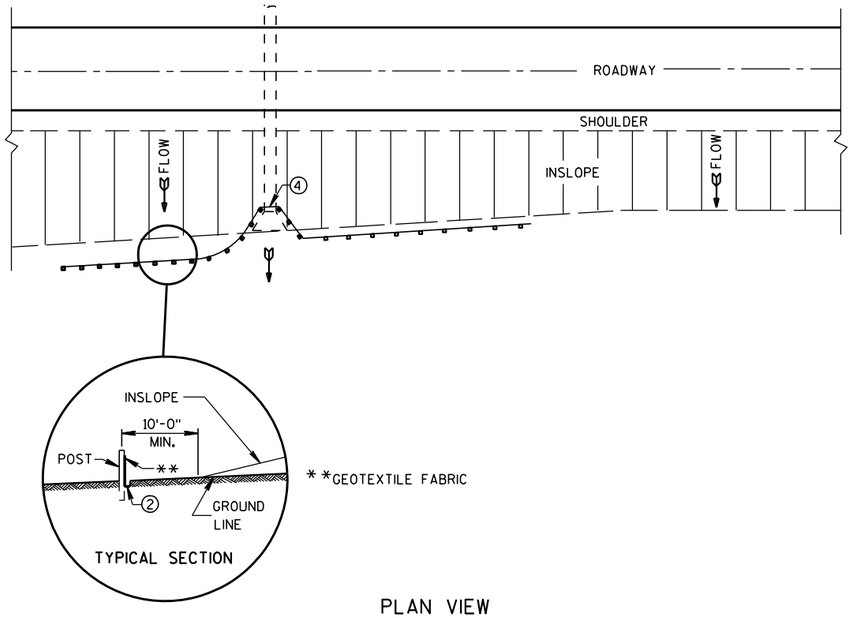




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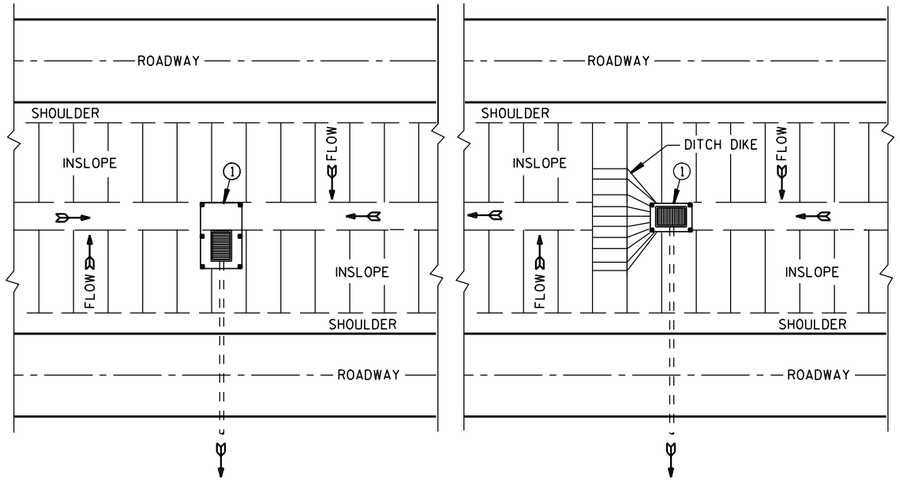


S.D.D. 8 E 8-3




PLAN VIEW

## TYPICAL APPLICATION OF SILT FENCE



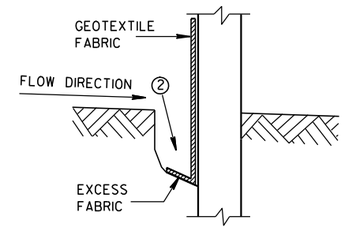

PLAN VIEW

## SILT FENCE AT MEDIAN SURFACE DRAINS

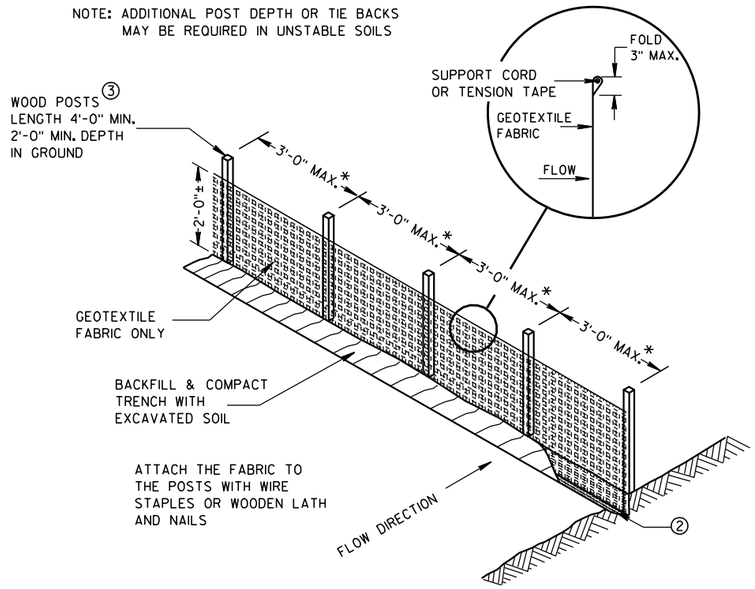
## GENERAL NOTES

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

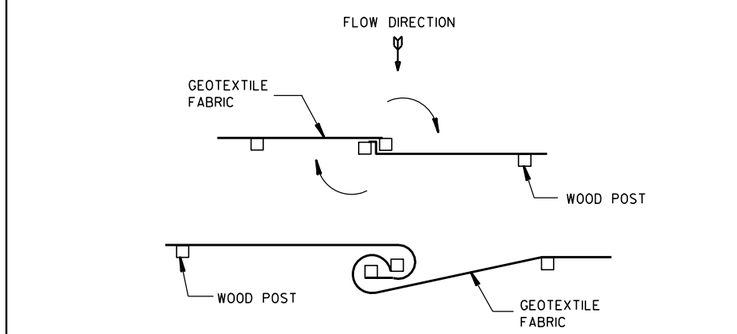
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.
4. SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
5. CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



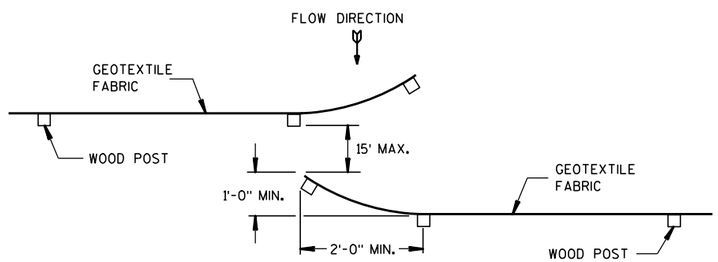

## TRENCH DETAIL




## SILT FENCE

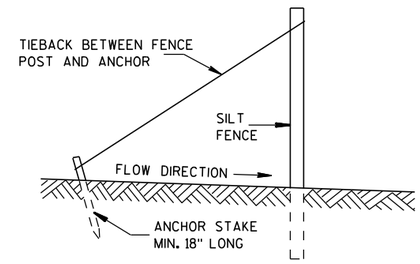



TWIST METHOD




HOOK METHOD

## JOINING TWO LENGTHS OF SILT FENCE 5




## SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

**SILT FENCE**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

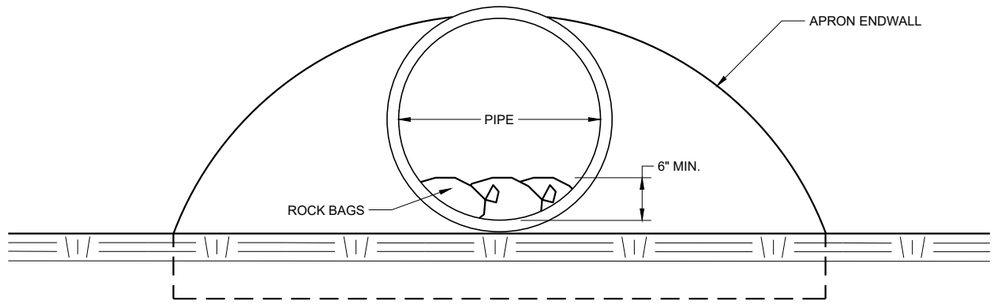


6

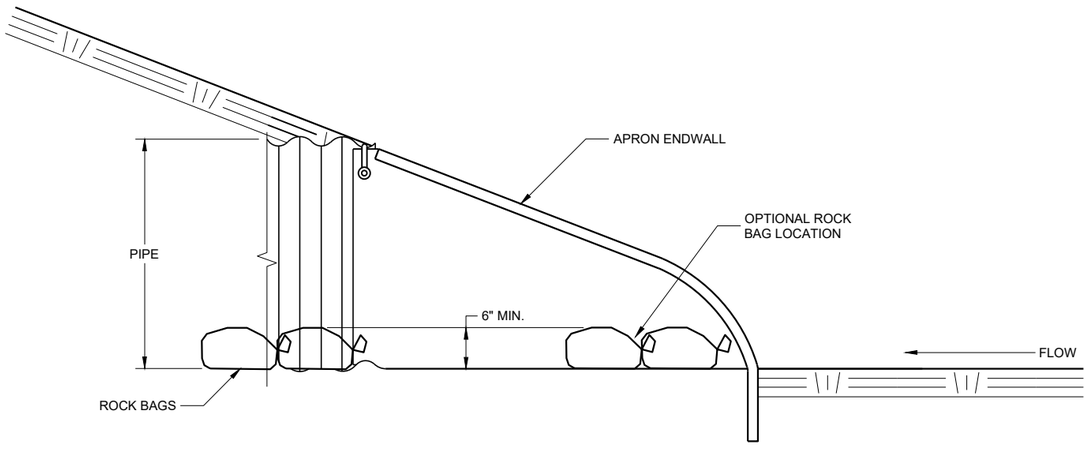
S.D.D. 8 E 9-6

6

S.D.D. 8 E 9-6




**END VIEW**




**SIDE VIEW**

## CULVERT PIPE CHECK

(INSTALL ON INLET END ONLY)

**CULVERT PIPE CHECK**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019 — DATE
/S/ Daniel Schave — EROSION CONTROL ENGI
FHWA



6

SDD 08E15 - 01

6

SDD 08E15 - 01

## METAL APRON ENDWALLS

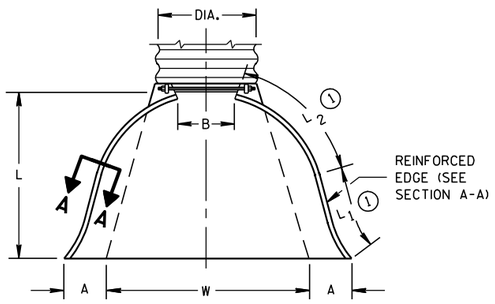
| PIPE DIA. (IN.) | MIN. THICK. (Inches) STEEL | MIN. THICK. (Inches) ALUM. | DIMENSIONS (Inches) A (±1") | B (MAX.) | H (±1") | L (±1 1/2") | L1 ① | L2 ① | W (±2") | APPROX. SLOPE | BODY |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 | .064 | .060 | 6 | 6 | 6 | 21 | 12 | 17 1/2 | 24 | 2 1/2 to 1 | 1 Pc. |
| 15 | .064 | .060 | 7 | 8 | 6 | 26 | 14 | 21 3/4 | 30 | 2 1/2 to 1 | 1 Pc. |
| 18 | .064 | .060 | 8 | 10 | 6 | 31 | 15 | 28 1/4 | 36 | 2 1/2 to 1 | 1 Pc. |
| 21 | .064 | .060 | 9 | 12 | 6 | 36 | 18 | 29 5/8 | 42 | 2 1/2 to 1 | 1 Pc. |
| 24 | .064 | .075 | 10 | 13 | 6 | 41 | 18 | 37 1/4 | 48 | 2 1/2 to 1 | 1 Pc. |
| 30 | .079 | .075 | 12 | 16 | 8 | 51 | 18 | 52 1/4 | 60 | 2 1/2 to 1 | 1 Pc. |
| 36 | .079 | .105 | 14 | 19 | 9 | 60 | 24 | 59 3/4 | 72 | 2 1/2 to 1 | 2 Pc. |
| 42 | .109 | .105 | 16 | 22 | 11 | 69 | 24 | 75 5/8 | 84 | 2 1/2 to 1 | 2 Pc. |
| 48 | .109 | .105 | 18 | 27 | 12 | 78 | 24 | 81 | 90 | 2 1/4 to 1 | 3 Pc. |
| 54 | .109 | .105 | 18 | 30 | 12 | 84 | 30 | 85 1/2 | 102 | 2 1/4 to 1 | 3 Pc. |
| 60 | .109× | .105× | 18 | 33 | 12 | 87 | — | — | 114 | 2 to 1 | 3 Pc. |
| 66 | .109× | .105× | 18 | 36 | 12 | 87 | — | — | 120 | 2 to 1 | 3 Pc. |
| 72 | .109× | .105× | 18 | 39 | 12 | 87 | — | — | 126 | 2 to 1 | 3 Pc. |
| 78 | .109× | .105× | 18 | 42 | 12 | 87 | — | — | 132 | 1 1/2 to 1 | 3 Pc. |
| 84 | .109× | .105× | 18 | 45 | 12 | 87 | — | — | 138 | 1 1/2 to 1 | 3 Pc. |
| 90 | .109× | .105× | 18 | 37 | 12 | 87 | — | — | 144 | 1 1/2 to 1 | 3 Pc. |
| 96 | .109× | .105× | 18 | 35 | 12 | 87 | — | — | 150 | 1 1/2 to 1 | 3 Pc. |

× EXCEPT CENTER PANEL SEE GENERAL NOTES

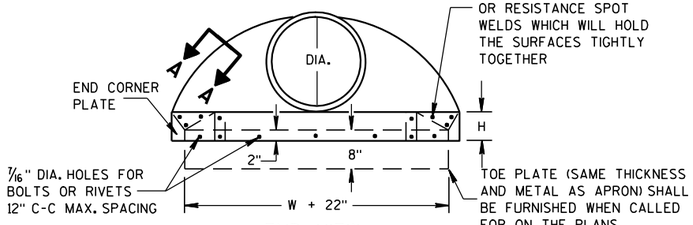
## REINFORCED CONCRETE APRON ENDWALLS

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

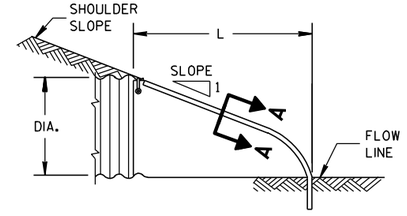
*MINIMUM
**MAXIMUM




PLAN VIEW

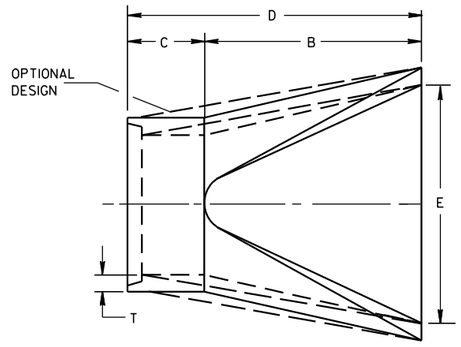



END VIEW

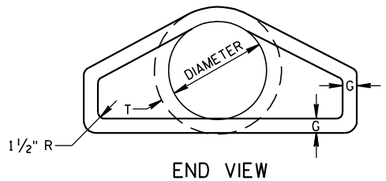



SIDE ELEVATION

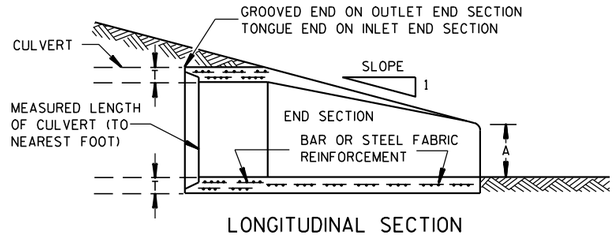
## METAL ENDWALLS




PLAN

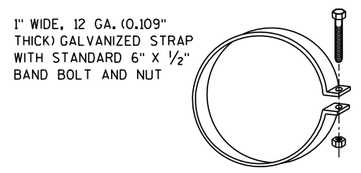



END VIEW



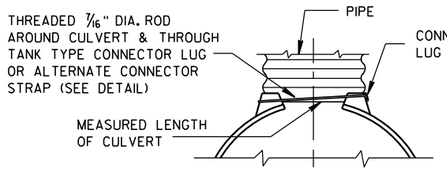

LONGITUDINAL SECTION

## CONCRETE ENDWALLS

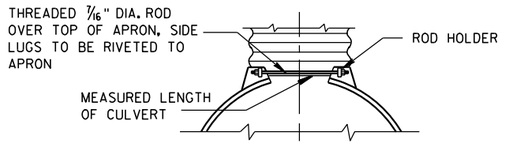



ALTERNATE FOR TYPE 1 CONNECTION

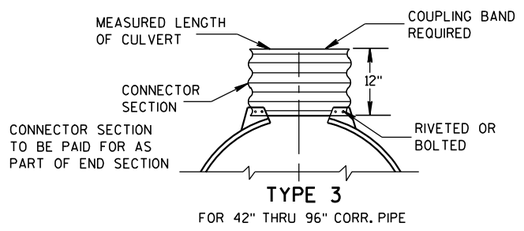
## END SECTION CONNECTOR STRAP



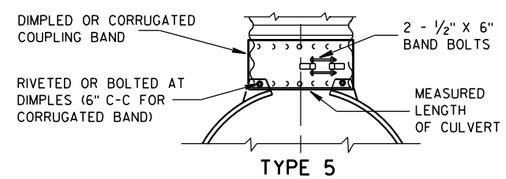

TYPE 1
FOR 12" THRU 24" CORR. PIPE




TYPE 2
FOR 30" THRU 96" CORR. PIPE




TYPE 3
FOR 42" THRU 96" CORR. PIPE




TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

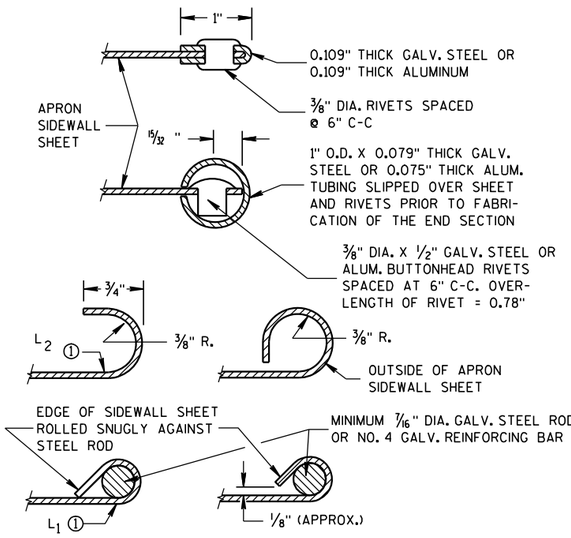
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

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

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

## CONNECTION DETAILS




## SECTION A-A

## GENERAL NOTES

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

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

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

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

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

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

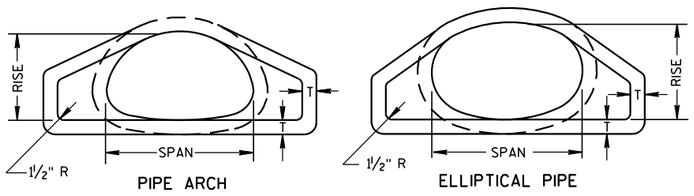
# APRON ENDWALLS FOR CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

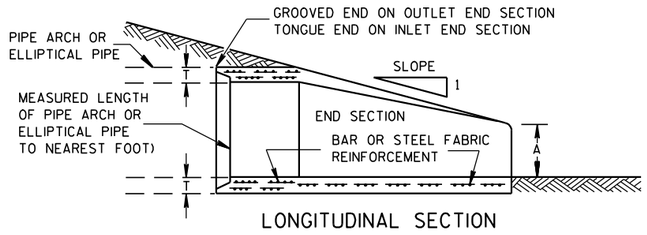
APPROVED
11/30/94 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA



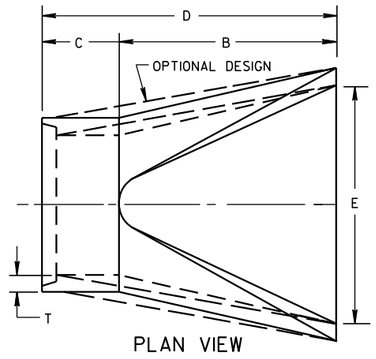

6
S.D.D. 8 F 1-11




END VIEW

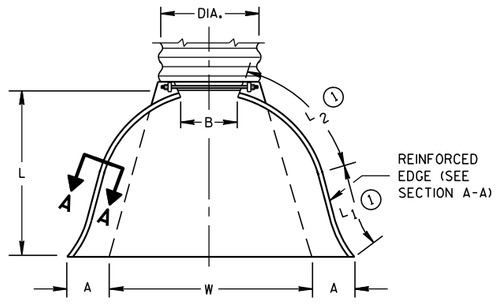



LONGITUDINAL SECTION

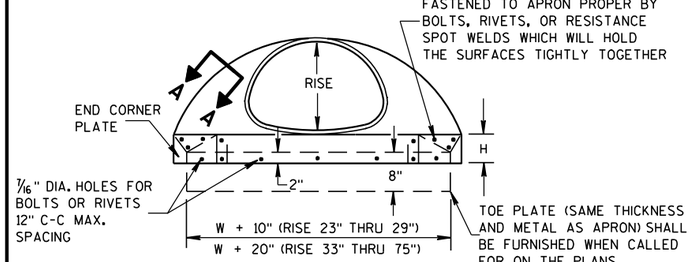



PLAN VIEW

## CONCRETE ENDWALLS

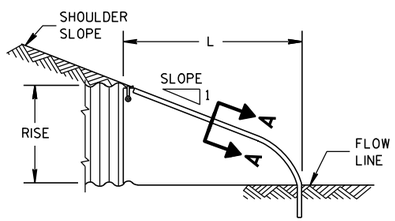



PLAN VIEW



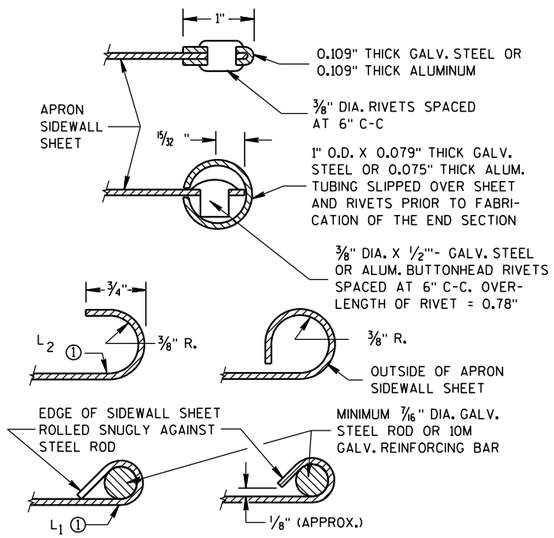

END CORNER PLATES MAY BE FASTENED TO APRON PROPER BY BOLTS, RIVETS, OR RESISTANCE SPOT WELDS WHICH WILL HOLD THE SURFACES TIGHTLY TOGETHER

END VIEW




SIDE ELEVATION

## METAL ENDWALLS




## SECTION A-A

### 2- 2/3" X 1/2" CORRUGATIONS

| EQUIV. DIA. (Inches) | (Inches) SPAN | (Inches) RISE | MIN. THICK. (Inches) STEEL | MIN. THICK. (Inches) ALUM. | DIMENSIONS (Inches) A (±1") | B (MAX.) | H (±1") | L (±1 1/2") | L1 ① | L2 ① | W (±2") | APPROX. SLOPE | BODY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 15 | 17 | 13 | .064 | .060 | 7 | 9 | 6 | 19 | 14 | 16 | 30 | 2½ to 1 | 1 Pc. |
| 18 | 21 | 15 | .064 | .060 | 7 | 10 | 6 | 23 | 14 | 19⅜ | 36 | 2½ to 1 | 1 Pc. |
| 21 | 24 | 18 | .064 | .060 | 8 | 12 | 6 | 28 | 18 | 21¾ | 42 | 2½ to 1 | 1 Pc. |
| 24 | 28 | 20 | .064 | .060 | 9 | 14 | 6 | 32 | 18 | 27½ | 48 | 2½ to 1 | 1 Pc. |
| 30 | 35 | 24 | .079 | .075 | 10 | 16 | 6 | 39 | 18 | 37⅝ | 60 | 2½ to 1 | 1 Pc. |
| 36 | 42 | 29 | .079 | .075 | 12 | 18 | 8 | 46 | 24 | 45⅜ | 75 | 2½ to 1 | 1 Pc. |
| 42 | 49 | 33 | .109 | .105 | 13 | 21 | 9 | 53 | 24 | 54¾ | 85 | 2½ to 1 | 2 Pc. |
| 48 | 57 | 38 | .109 | .105 | 18 | 26 | 12 | 63 | 24 | 68 | 90 | 2½ to 1 | 3 Pc. |
| 54 | 64 | 43 | .109 | .105 | 18 | 30 | 12 | 70 | 24 | 72¾ | 102 | 2¼ to 1 | 3 Pc. |
| 60 | 71 | 47 | .109* | .105* | 18 | 33 | 12 | 77 | 30 | 82¼ | 114 | 2¼ to 1 | 3 Pc. |
| 66 | 77 | 52 | .109* | .105* | 18 | 36 | 12 | 77 | — | — | 126 | 2 to 1 | 3 Pc. |
| 72 | 83 | 57 | .109* | .105* | 18 | 39 | 12 | 77 | — | — | 138 | 2 to 1 | 3 Pc. |

### 3" X 1" CORRUGATIONS

| EQUIV. DIA. (Inches) | (Inches) SPAN | (Inches) RISE | MIN. THICK. (Inches) STEEL | MIN. THICK. (Inches) ALUM. | DIMENSIONS (Inches) A (±1") | B (MAX.) | H (±1") | L (±1 1/2") | L1 ① | L2 ① | W (±2") | APPROX. SLOPE | BODY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 48 | 53 | 41 | .109 | .105 | 18 | 26 | 12 | 63 | 24 | 72¾ | 90 | 2½ to 1 | 2 Pc. |
| 54 | 60 | 46 | .109 | .105 | 18 | 30 | 12 | 70 | 30 | 82¼ | 102 | 2 to 1 | 2 Pc. |
| 60 | 66 | 51 | .109* | .105* | 18 | 33 | 12 | 77 | — | — | 114 | 1½ to 1 | 3 Pc. |
| 66 | 73 | 55 | .109* | .105* | 18 | 36 | 12 | 77 | — | — | 126 | 1½ to 1 | 3 Pc. |
| 72 | 81 | 59 | .109* | .105* | 18 | 39 | 12 | 77 | — | — | 138 | 2 to 1 | 3 Pc. |
| 78 | 87 | 63 | .109* | .105* | 22 | 38 | 12 | 77 | — | — | 148 | 1½ to 1 | 3 Pc. |
| 84 | 95 | 67 | .109* | .105* | 22 | 34 | 12 | 77 | — | — | 162 | 1½ to 1 | 3 Pc. |
| 90 | 103 | 71 | .109* | .105* | 22 | 38 | 12 | 77 | — | — | 174 | 1½ to 1 | 3 Pc. |
| 96 | 112 | 75 | .109* | .105* | 24 | 40 | 12 | 77 | — | — | 174 | 1½ to 1 | 3 Pc. |

NOTE: ALL SPLICES TO BE LAP RIVETED OR BOLTED.

* EXCEPT CENTER PANEL SEE GENERAL NOTES

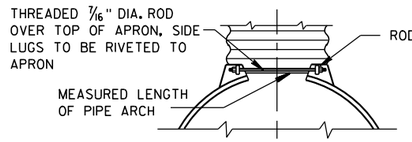
### REINFORCED CONCRETE PIPE ARCH

| EQUIV. DIA. (Inches) | DIMENSIONS (Inches) ** SPAN | ** RISE | T | A | B | C | D | E | APPROX. SLOPE |
|---|---|---|---|---|---|---|---|---|---|
| 24 | 29 | 18 | 3 | 8½ | 39 | 33 | 72 | 48 | 3 to 1 |
| 30 | 36 | 22 | 3½ | 9½ | 50 | 46 | 96 | 60 | 3 to 1 |
| 36 | 44 | 27 | 4 | 11⅛ | 60 | 36 | 96 | 72 | 3 to 1 |
| 42 | 51 | 31 | 4½ | 15 13/16 | 60 | 36 | 96 | 78 | 3 to 1 |
| 48 | 58 | 36 | 5 | 21 | 60 | 36 | 96 | 84 | 3 to 1 |
| 54 | 65 | 40 | 5½ | 25½ | 60 | 36 | 96 | 90 | 3 to 1 |
| 60 | 73 | 45 | 6 | 31 | 60 | 36 | 96 | 96 | 3 to 1 |
| 72 | 88 | 54 | 7 | 31 | 60 | 39 | 99 | 120 | 2 to 1 |
| 84 | 102 | 62 | 8 | 28½ | 83 | 19 | 102 | 144 | 2 to 1 |

### REINFORCED CONCRETE ELLIPTICAL PIPE

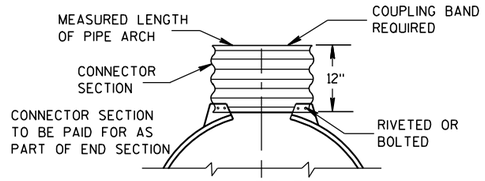
| EQUIV. DIA. (Inches) | DIMENSIONS (Inches) ** SPAN | ** RISE | T | A | B | C | D | E | APPROX. SLOPE |
|---|---|---|---|---|---|---|---|---|---|
| 24 | 30 | 19 | 3¼ | 8½ | 39 | 33 | 72 | 48 | 3 to 1 |
| 30 | 38 | 24 | 3¾ | 9½ | 54 | 18 | 72 | 60 | 3 to 1 |
| 36 | 45 | 29 | 4½ | 11⅛ | 60 | 24 | 84 | 72 | 2½ to 1 |
| 42 | 53 | 34 | 5 | 15¾ | 60 | 36 | 96 | 78 | 2½ to 1 |
| 48 | 60 | 38 | 5½ | 21 | 60 | 36 | 96 | 84 | 2½ to 1 |
| 54 | 68 | 43 | 6 | 25½ | 60 | 36 | 96 | 90 | 2½ to 1 |
| 60 | 76 | 48 | 6½ | 30 | 60 | 36 | 96 | 96 | 2½ to 1 |

**NOMINAL SIZE



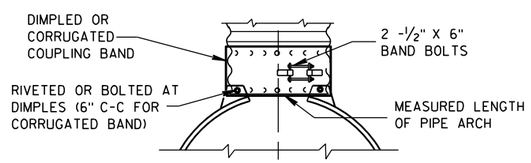

TYPE 2

FOR 17" X 13" THRU 112" X 75" PIPE ARCH




TYPE 3

FOR 64" X 43" THRU 112" X 75" PIPE ARCH




TYPE 5

ALTERNATE FOR:

ALL SIZES CORRUGATED PIPE ARCHES

NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL.

## CONNECTION DETAILS

## GENERAL NOTES

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

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

ALL THREE PIECE STEEL APRON ENDWALLS FOR 66" X 51" PIPE ARCH AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 66" X 51" PIPE ARCH AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE ARCH PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 77" X 52" THROUGH 112" X 75" APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

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

① FOR PIPE ARCH SIZES UP TO 73" X 55" A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

**APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/30/94 — DATE

/S/ Rory L. Rhinesmith — CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

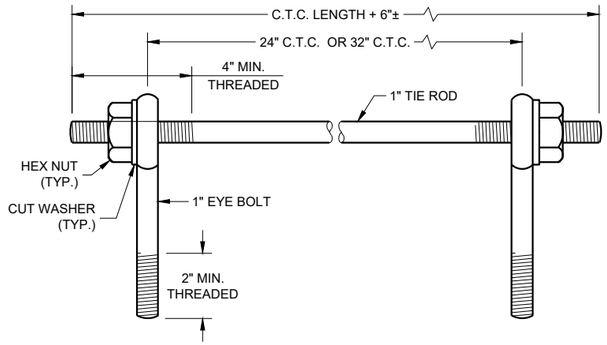


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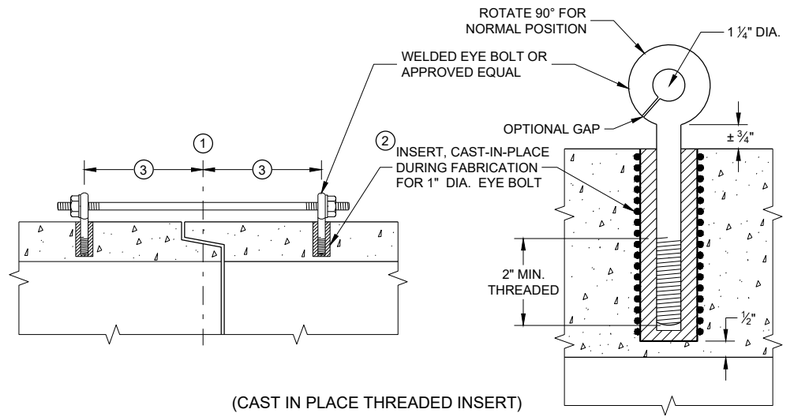
S.D.D. 8 F 2-1

6

S.D.D. 8 F 2-1




**EYE BOLTS AND TIE ROD**




(CAST IN PLACE THREADED INSERT)

**LONGITUDINAL SECTIONS**

## EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 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 APPLICABLE SPECIAL PROVISIONS.

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

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

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

(1) CENTER LINE OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.

(2) THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

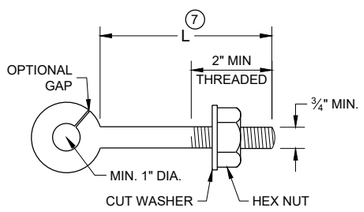
(3) HOLES SHALL BE CAST-IN-PLACE OR DRILLED PER THE APPLICABLE DETAIL, AND EQUAL DISTANCE FROM THE CENTERLINE OF THE JOINT.

(4) BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

(5) OPENING TO BE ROD DIAMETER PLUS 1 INCH.

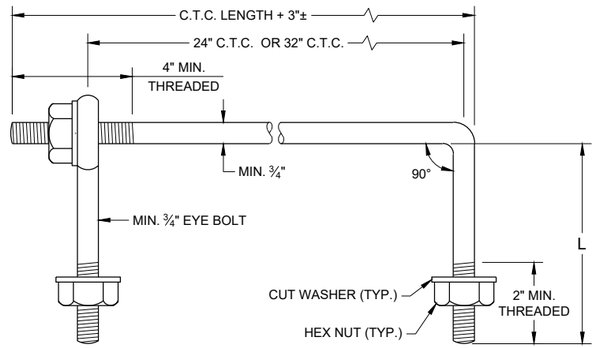
(6) LENGTH ADEQUATE TO EXTEND TO WITHIN ½ INCH OF THE INNER SURFACE OF THE PIPE.

(7) EYE BOLT LENGTH DETERMINED BY WALL THICKNESS, BELL THICKNESS AND BOLT PROJECTION INSIDE PIPE.

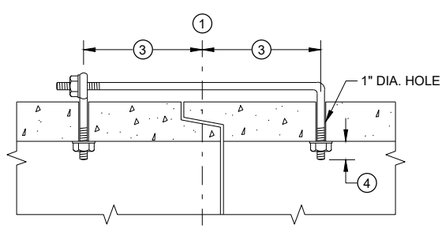



**EYE BOLT** (7)

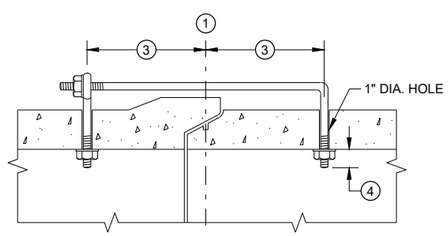
NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" OR 38" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.




**EYE BOLT AND TIE ROD**




(TONGUE AND GROOVE PIPE)




(MODIFIED BELL PIPE)

**LONGITUDINAL SECTION**

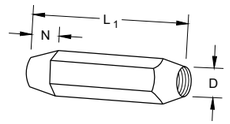
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

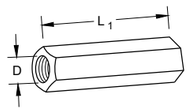
ADJUSTABLE TIE ROD TABLE

| PIPE DIAMETER | TIE ROD DIAMETER | D | $L_1$ | N |
|---|---|---|---|---|
| 12 - 60 | ⅝ | ⅝ | 5 | ½ |
| 66 - 84 | ¾ | ¾ | 5 | ½ |
| 90 - 144 | 1 | 1 | 7 | 1 7/16 |

DIMENSIONS SHOWN ARE IN INCHES



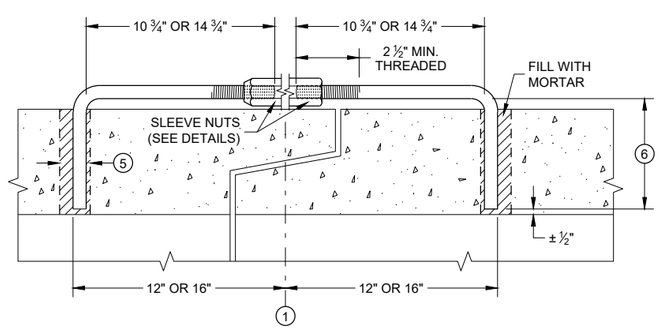

TAPERED




PLAIN

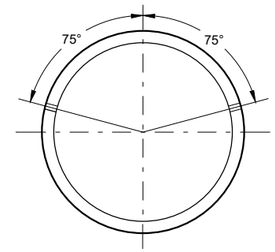
RIGHT AND LEFT THREADS

**SLEEVE NUTS**



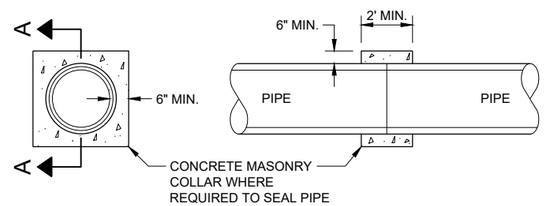

**LONGITUDINAL SECTION**

## ADJUSTABLE TIE ROD (ALTERNATE NO. 3)




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

**TRANSVERSE SECTION**




**SECTION A - A**

## CONCRETE COLLAR DETAIL

**JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL**

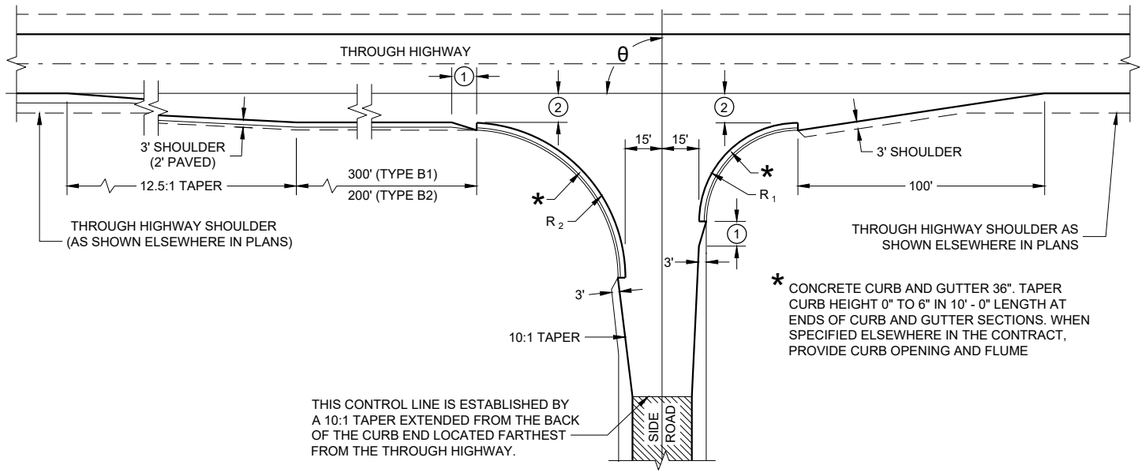
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2021 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER
FHWA



SDD 08F04 - 08

SDD 08F04 - 08




* CONCRETE CURB AND GUTTER 36". TAPER CURB HEIGHT 0" TO 6" IN 10' - 0" LENGTH AT ENDS OF CURB AND GUTTER SECTIONS. WHEN SPECIFIED ELSEWHERE IN THE CONTRACT, PROVIDE CURB OPENING AND FLUME

## TYPE "B1" AND "B2"

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

| θ | $R_1$ | $R_2$ |
|---|---|---|
| 65 - 70 | 35 | 70 |
| 71 - 80 | 40 | 70 |
| 81 - 90 | 40 | 60 |
| 91 - 100 | 50 | 55 |
| 101 - 110 | 60 | 45 |

## GENERAL NOTES

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

SIDE ROAD SURFACING NOTE

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

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

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

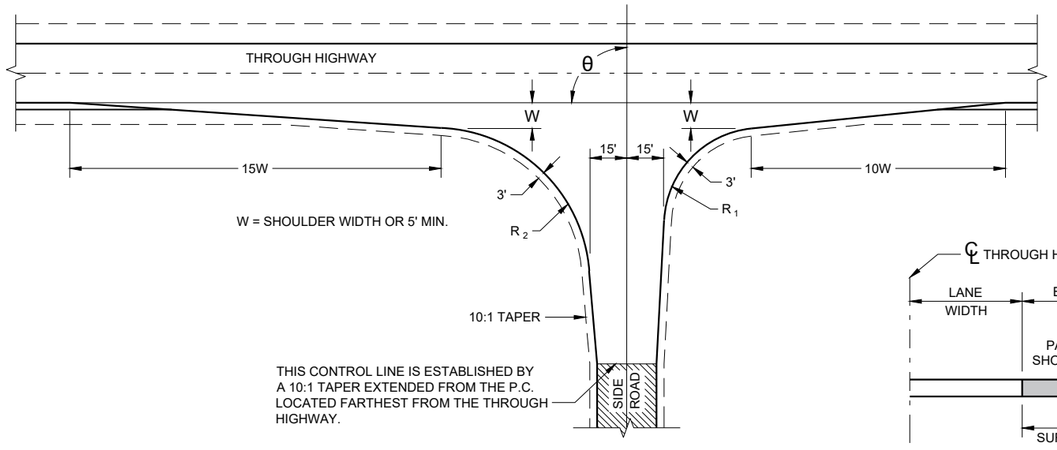
(1) 10-FT TYPICAL.

(2) 12-FT** PLUS ADDITIONAL WIDTH FOR BIKE LANE IF SHOWN ELSEWHERE IN THE PLAN.

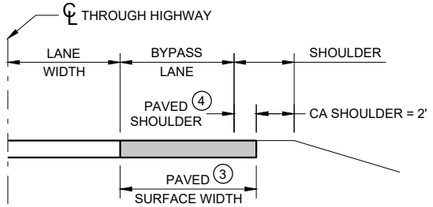
**10-FT MAY BE USED ON TYPE B2 ON RESURFACING PROJECTS IF SPECIFIED IN THE CONTRACT.

(3) BYPASS LANE PAVED SURFACE WIDTH OUTSIDE OF TRAVEL LANE
- ASPHALT = 12-FT PLUS PAVED SHOULDER WIDTH
- PC CONCRETE = 13-FT PLUS PAVED SHOULDER WIDTH

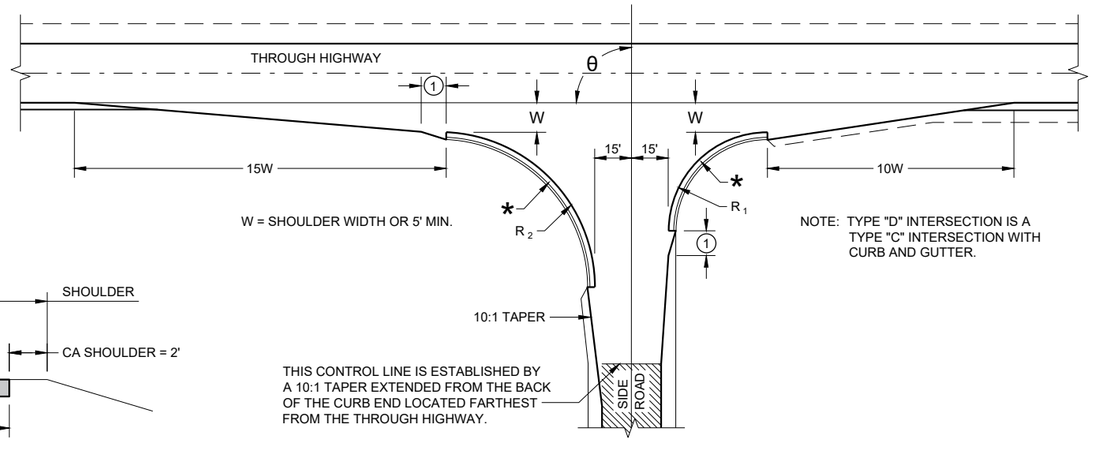
(4) BYPASS LANE PAVED SHOULDER WIDTH = THE GREATER OF 1-FT OR THE PAVED SHOULDER WIDTH OF THE THROUGH HIGHWAY.




## TYPE "C"

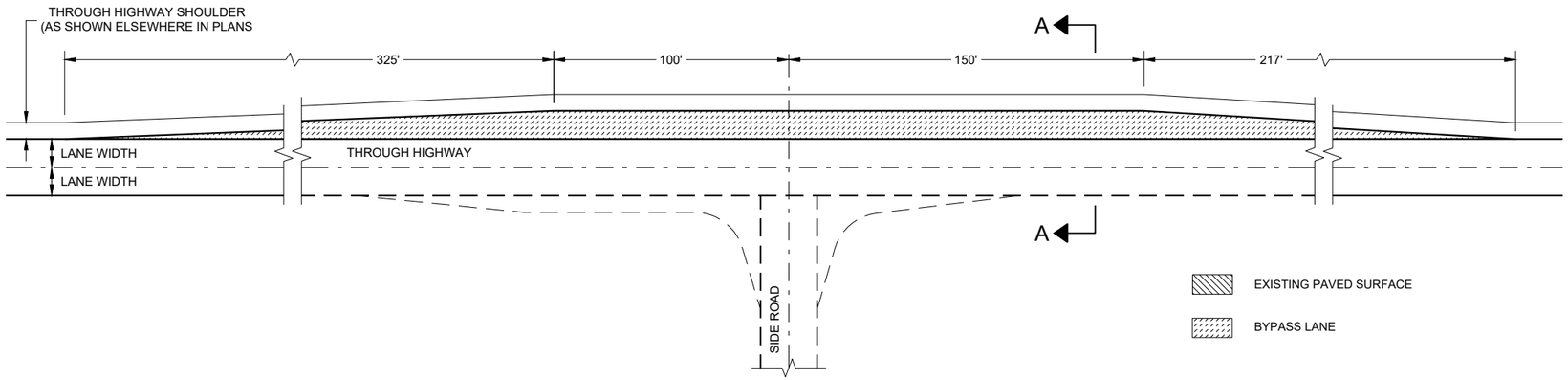



## SECTION A - A
(SHOWING BYPASS LANE AND SHOULDER)




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

## TYPE "D"




## TEE INTERSECTION BYPASS LANE DETAIL

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

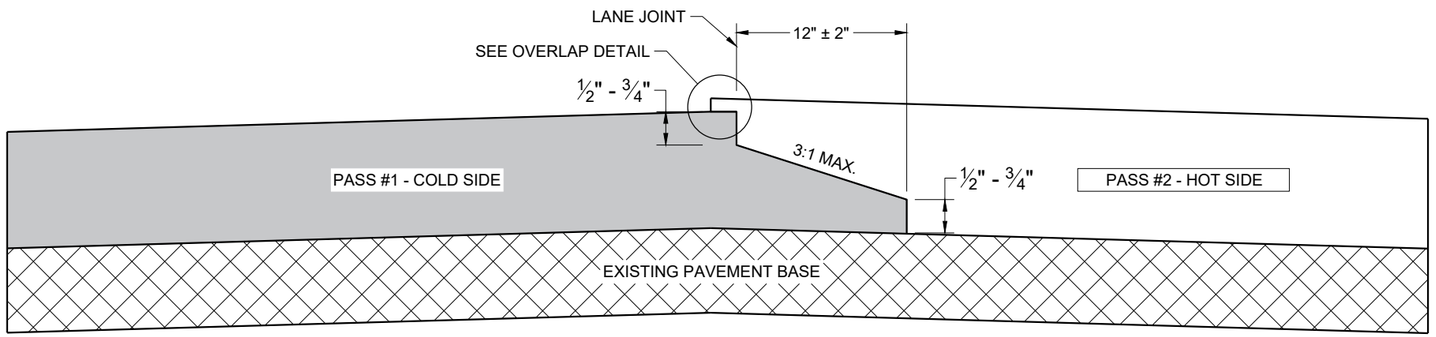


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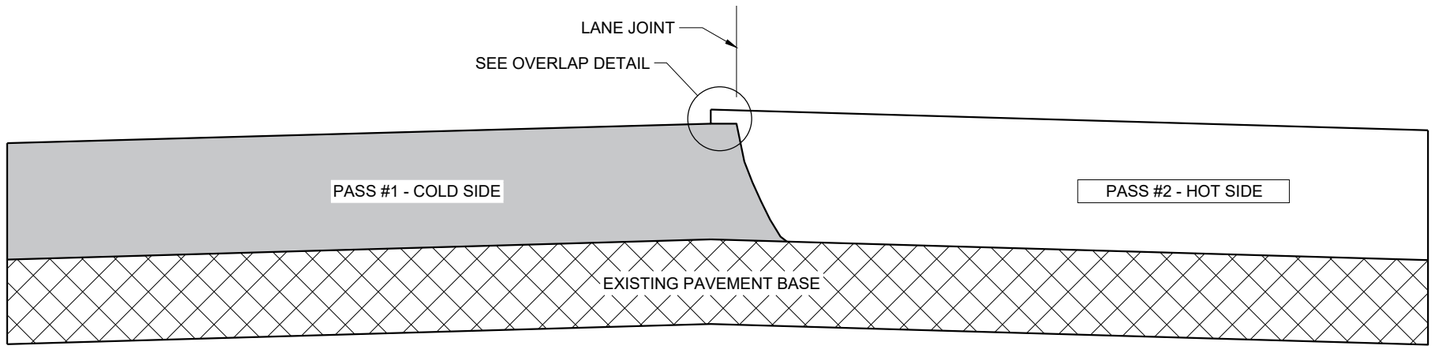
SDD 09A01 - 14a

6

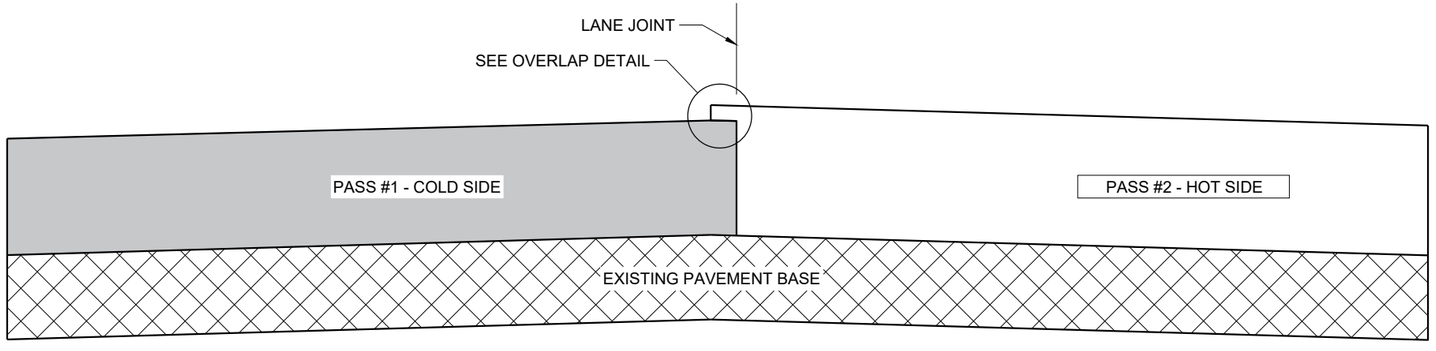
SDD 09A01 - 14a




**TYPICAL PAVEMENT CROSS SECTION**
**NOTCHED WEDGE JOINT**




**TYPICAL PAVEMENT CROSS SECTION**
**VERTICAL JOINT**




**TYPICAL PAVEMENT CROSS SECTION**
**VERTICAL JOINT (MILLED)**

## GENERAL NOTES

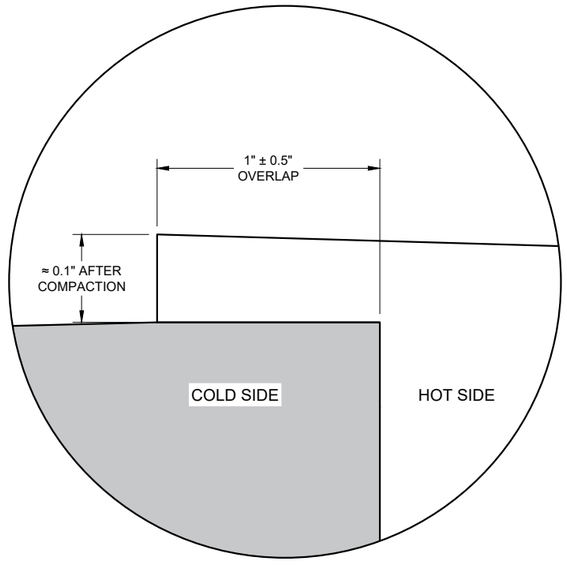
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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

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

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

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




**OVERLAP DETAIL (TYPICAL)**

| | |
|---|---|
| **HMA LONGITUDINAL JOINTS** | |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION | |
| APPROVED<br>November 2020<br>DATE | /S/ Steven Hefel<br>HMA PAVEMENT ENGIN |

FHWA



6

SDD 13C19 - 03

6

SDD 13C19 - 03

## GENERAL NOTES

(1) 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.

(2) 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.

(3) INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

(4) USE EITHER WOOD OR APPROVED PLASTIC BLOCKOUTS ON WOOD POSTS.

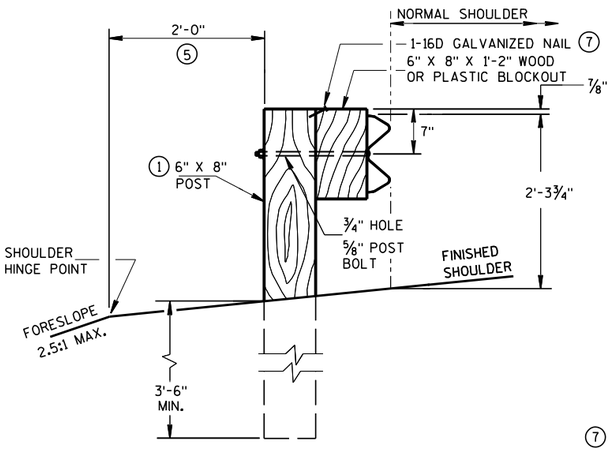
(5) IF THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING, W BEAM (LHW).

(6) 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 2½ INCHES DEEP. CUT THE POSTS TO LENGTH AND PLACE IN YHE HOLE. BACKFILL WITH MATERIAL EXCAVATED FROM THE HOLE AND COMPACT ADEQUATEY.

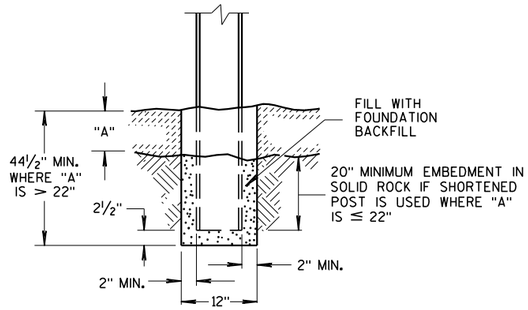
(7) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

INSTALL BEAM GUARD SECTIONS AND ALL NECESSARY HARDWARE ACCORDING TO THE APPLICABLE PLAN AND CURRENT STANDARD AND SUPPLEMENTAL SPECIFICATIONS.

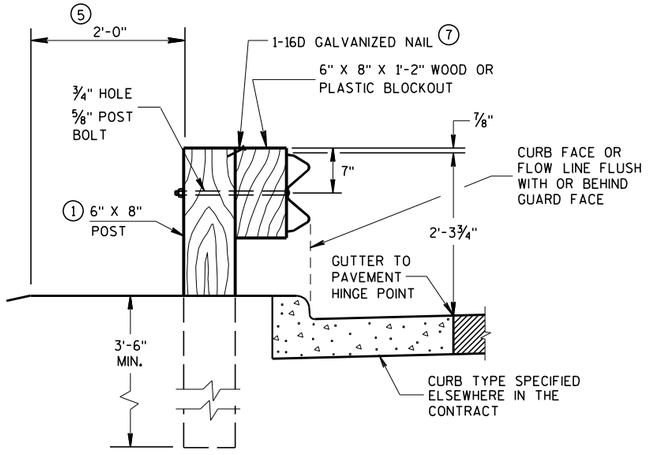
ALL DIMENSIONS ARE SUBJECT TO MANUFACTURER'S TOLERANCES EXCEPT WHERE ALLOWABLE TOLERANCES ARE SHOWN.



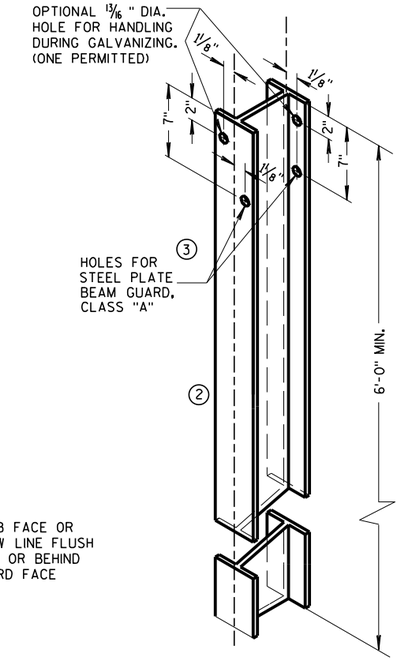

END VIEW
LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION




END VIEW
SETTING STEEL OR WOOD POST IN ROCK (6)

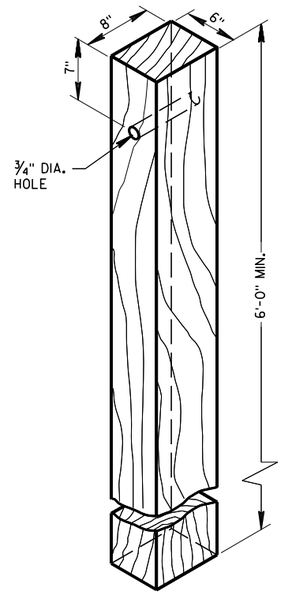



END VIEW
LOCATED ALONG A CURBED ROADWAY

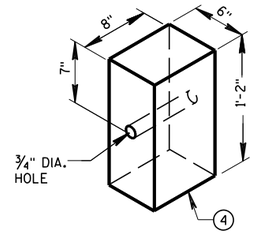



STEEL POST &
HOLE PUNCHING DETAIL
(W6 X 9) (1)

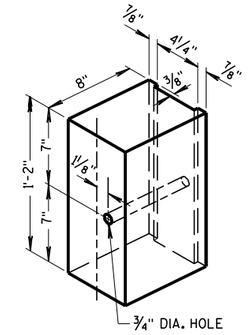
ALL HOLES 13/16" DIAMETER EXCEPT AS NOTED



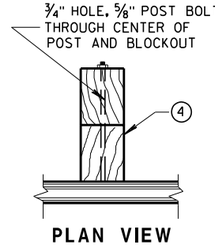

WOOD POST
(6"X8") NOMINAL



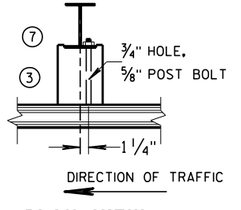

WOOD OR PLASTIC
BLOCKOUT FOR
WOOD POSTS



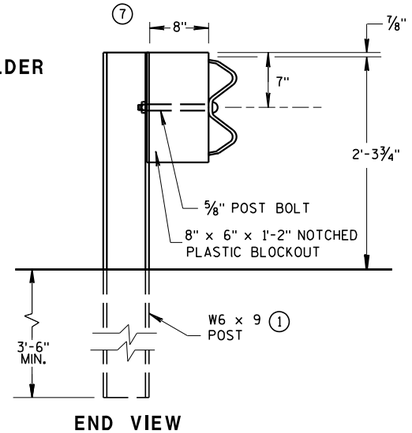

TYPICAL NOTCHED
PLASTIC BLOCKOUT
FOR STEEL POSTS (1)



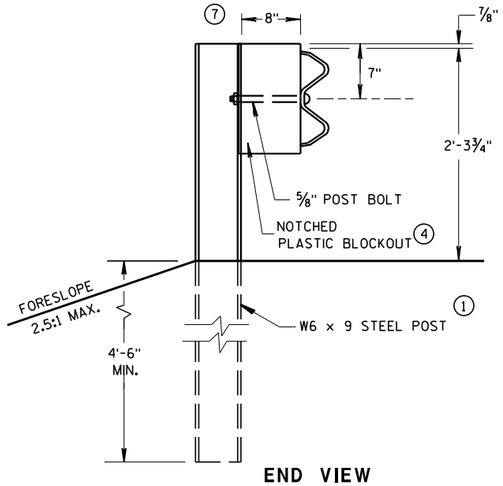

PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



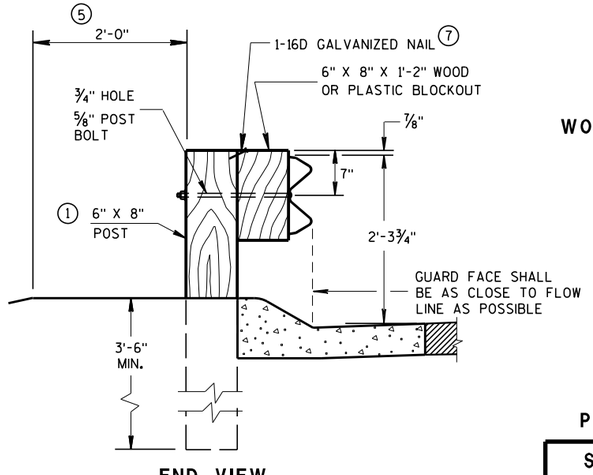

PLAN VIEW
STEEL POST, NOTCHED
PLASTIC BLOCKOUT & BEAM




END VIEW
STEEL POST & NOTCHED
PLASTIC BLOCKOUT ALTERNATIVE
STANDARD INSTALLATION




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




END VIEW
LOCATED ALONG A
MOUNTABLE CURBED ROADWAY

## TYPICAL INSTALLATION OF STEEL PLATE BEAM GUARD

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

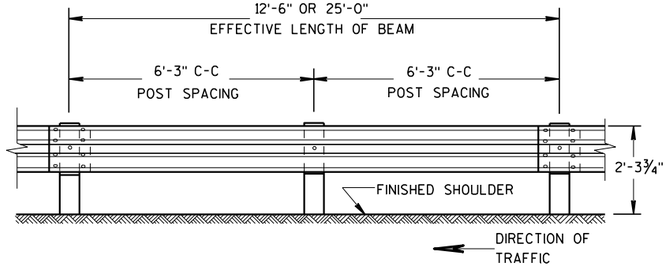


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S.D.D. 14 B 15-11a

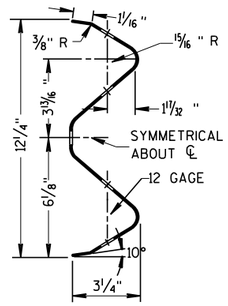
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S.D.D. 14 B 15-11a

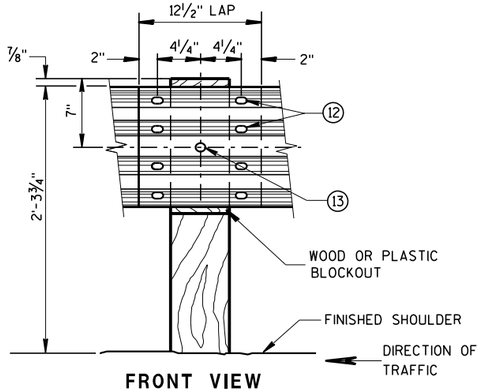



FRONT VIEW

## POST SPACING STANDARD INSTALLATION




## SECTION THRU W BEAM




FRONT VIEW

## BEAM SPLICE AT WOOD POST AND POST MOUNTING DETAIL

## 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.

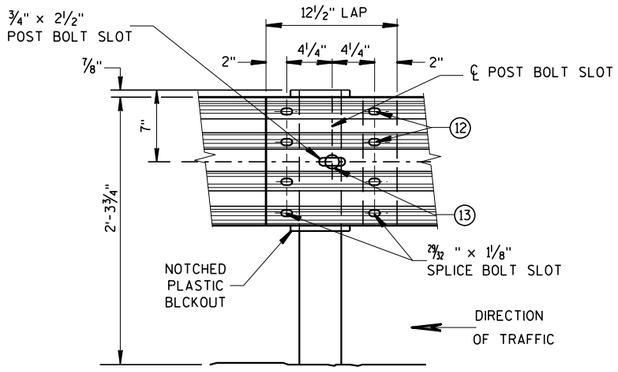
(12) 8 -5/8" ϕ X 2" BUTTON HEAD BOLTS WITH OVAL SHOULDERS & RECESS NUTS.

(13) 5/8" DIA. BUTTON HEAD BOLT AND RECESS NUT WITH 5/8" DIA. F844 FLAT WASHER UNDER NUT.



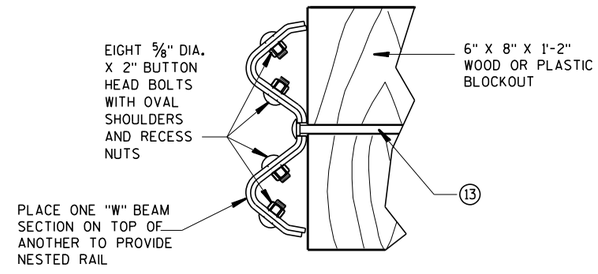

FRONT VIEW

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




FRONT VIEW

BEAM SPLICE AT STEEL POST

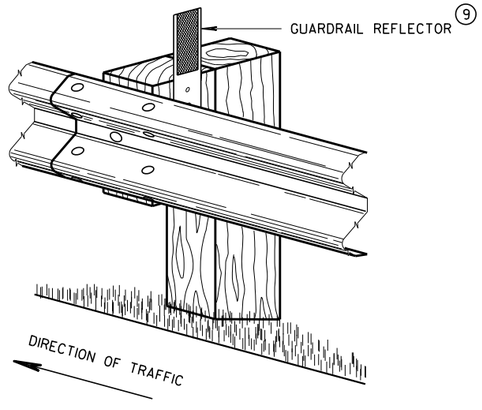



## NESTED W BEAM (NW)

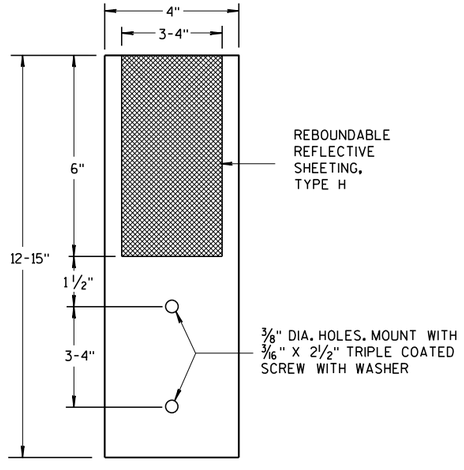
USE ALL OTHER STANDARD BEAM GUARD DETAILS FOR CONSTRUCTING NESTED W BEAM (NW)

## TYPICAL SPLICING DETAILS OF STEEL PLATE BEAM GUARD

* USE DOUBLE SIDED WHITE GUADRAIL 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**

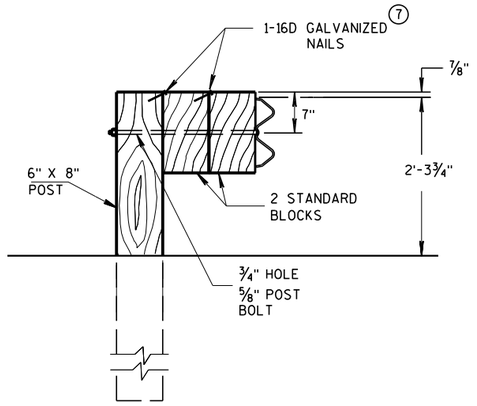
STATE OF WISCO 77
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 14 B 15-11b

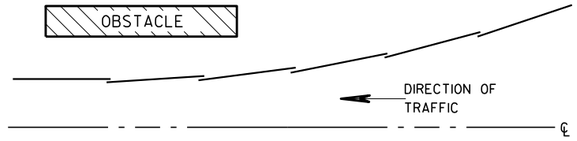
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S.D.D. 14 B 15-11b

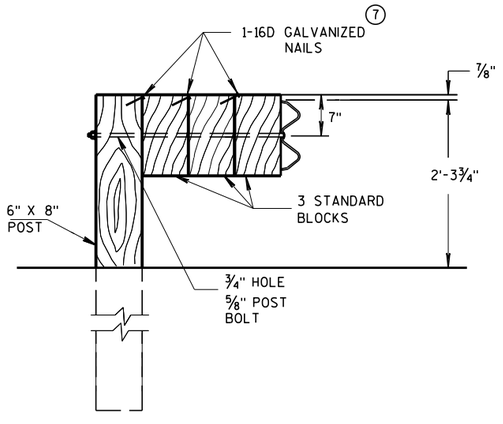



**DETAIL FOR DOUBLE BLOCKS**

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

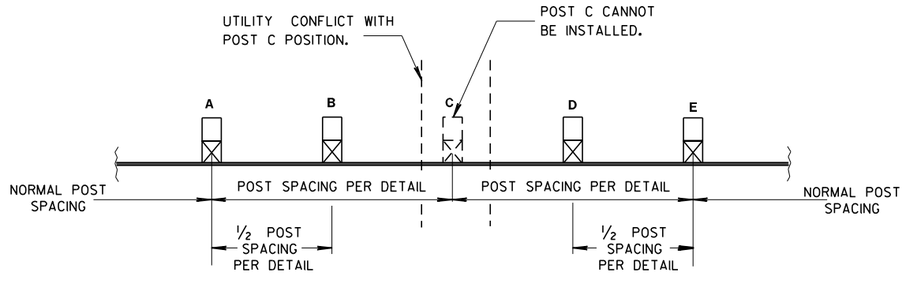



**PLAN VIEW**
**BEAM LAPPING DETAIL**




**DETAIL FOR TRIPLE BLOCKS**

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




**POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION**

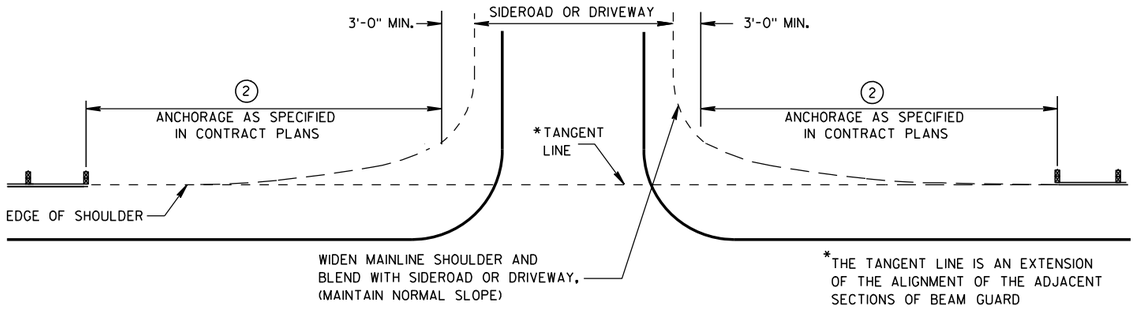
NOTES: USE DOUBLE OR TRIPLE BLOCKS WHEN UNDERGROUND OBSTACLES PREVENT THE POST FROM BEING INSTALLED.

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.

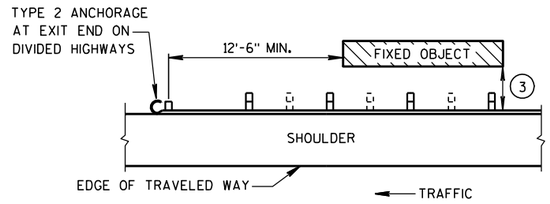
# STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

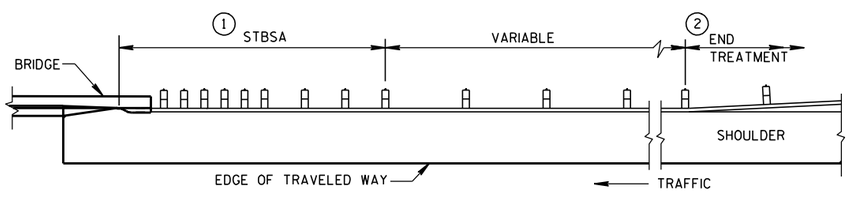
APPROVED
June 2017 — DATE
/S/ Rodney Taylor
ROADWAY STANDARDS UNIT SUPERVISOR
FHWA



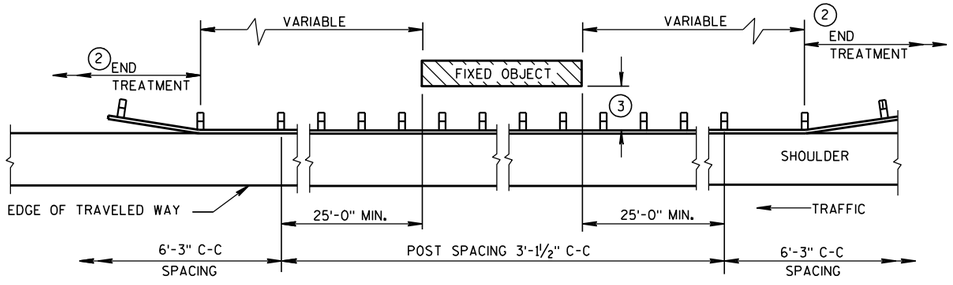

## BEAM GUARD AT SIDEROADS OR DRIVEWAYS




## BEAM GUARD AT OBSTACLES EXIT END - ONE WAY TRAFFIC

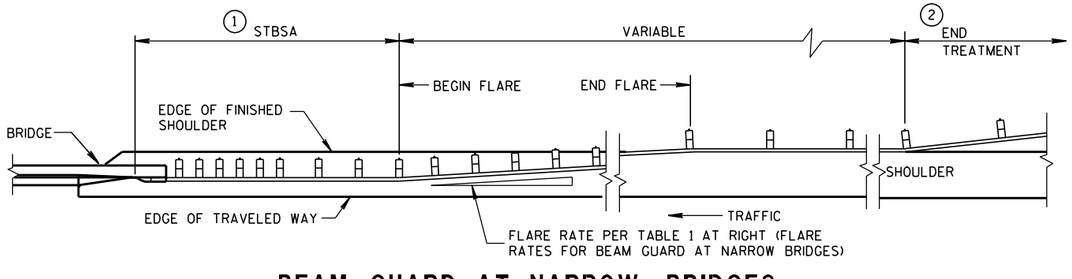



## BEAM GUARD AT FULL WIDTH BRIDGES




## BEAM GUARD AT OBSTACLES - TWO WAY TRAFFIC

(RAIL TO OBSTACLE CLEARANCE 3'-6" TO 4'-6")




## BEAM GUARD AT NARROW BRIDGES

(FLARED TO SHOULDER EDGE, THEN PARALLEL TO ROADWAY)

**TABLE 1**
**FLARE RATES FOR BEAM GUARD AT NARROW BRIDGES**

| POSTED SPEED (MPH) | FLARE RATE |
|---|---|
| 25 | 13:1 |
| 30 | 15:1 |
| 35 | 16:1 |
| 40 | 18:1 |
| 45 | 21:1 |
| 50 | 24:1 |
| 55 | 26:1 |
| 65 | 30:1 |

## GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE PERTINENT STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

W6 X 9 OR W6 X 8.5 STEEL POSTS WITH 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.

THE LOCATIONS AND LENGTHS OF BEAM GUARD ARE SHOWN ELSEWHERE IN THE PLAN.

(1) STEEL THRIE BEAM STRUCTURAL APPROACH (STBSA) - SEE CURRENT SDD 14B20.

(2) USE AN APPROVED END TREATMENT FOR THE TRAFFIC APPROACH SIDE OF BRIDGE/OBSTACLES. USE TYPE 2 ANCHORAGE ONLY AT THE DOWNSTREAM ENDS OF BEAM GUARD LOCATED ALONG ROADWAYS WITH ONE WAY TRAFFIC.

(3)

| MINIMUM LATERAL DISTANCE FROM FACE OF BEAM GUARD TO FIXED OBJECT | POST SPACING |
|---|---|
| 3'-6" | 3' - 1½" |
| 4'-6" | 6' - 3" |

**STEEL PLATE BEAM GUARD CLASS "A" AT BRIDGES, OBSTACLES AND SIDEROADS/DRIVEWAYS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8-21-07 — DATE

/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

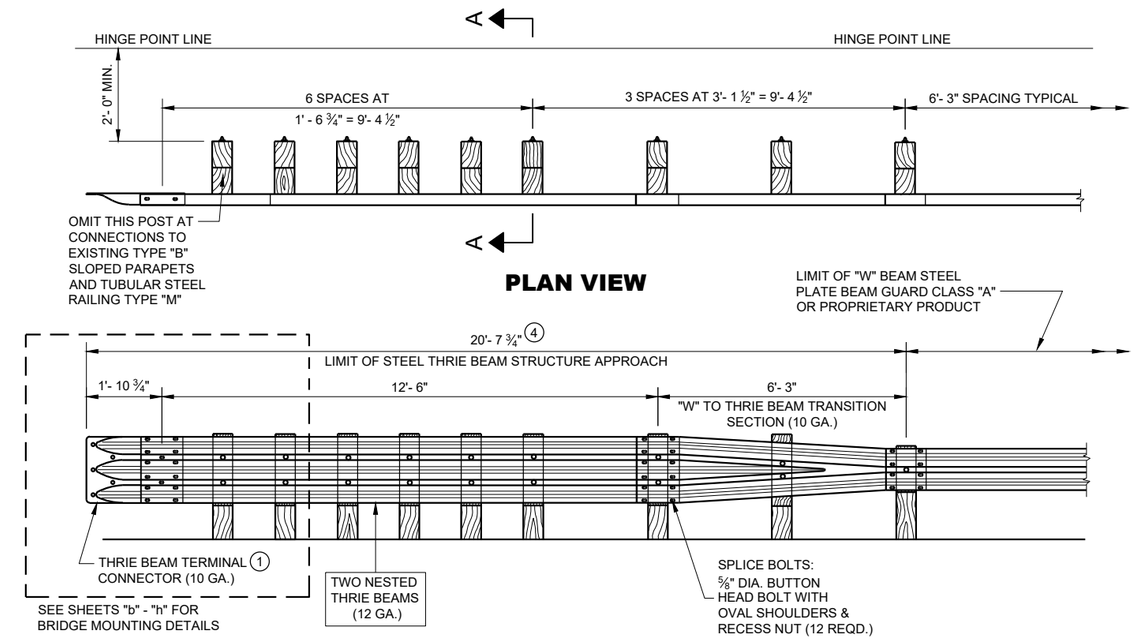




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S.D.D. 14 B 18-6a



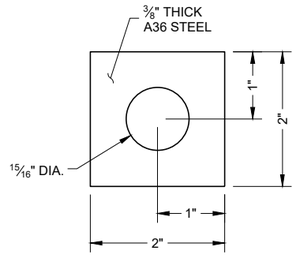




PLATE WASHER DETAIL

## GENERAL NOTES

BOLT THE THRIE BEAM TO ALL POSTS AND BLOCKOUTS. DRILL OR PUNCH BOLT HOLES IN THE BEAM IF THE POST SPACING IS LESS THAN 6'-3".

DO NOT USE STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS IN THE STEEL THRIE BEAM STRUCTURAL APPROACH AND THE TRANSITION SECTION OF STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATIONS.

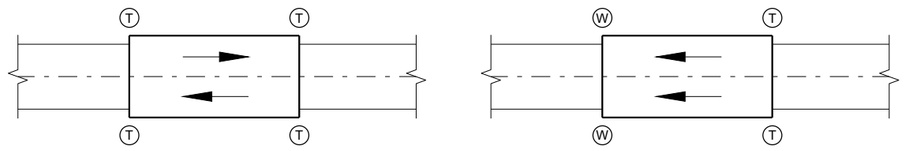
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2 ½" , AND 12" DIAMETER AROUND POST. SEE 14B15 FOR MORE DETAILS.

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

(2) MINIMUM EMBEDMENT SHALL BE 4'- 0".

(3) POST BOLTS ARE ⅝" DIAMETER ASTM A307 BUTTON HEAD BOLT. A POST BOLT REQUIRES A ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX AND A ⅝" DIAMETER F844 FLAT WASHER. LENGTH OF POST BOLT MAY VARY.

(4) ALL WOOD POSTS MUST BE 6" X 8" AND AT LEAST 7'-0" LONG.




TWO WAY TRAFFIC

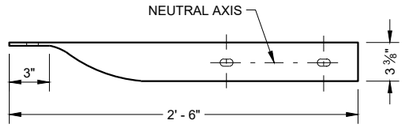


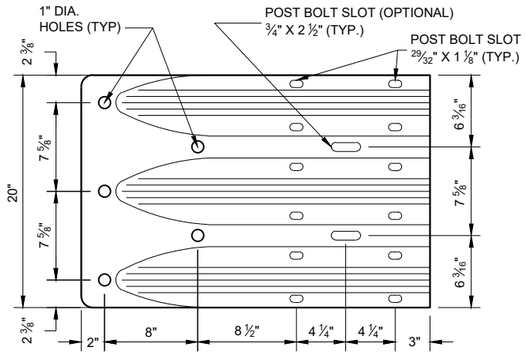

ONE WAY TRAFFIC

(T) THRIE BEAM CONNECTION

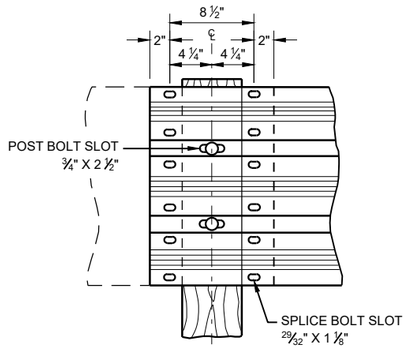
(W) W-BEAM CONNECTION WHEN REQUIRED

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

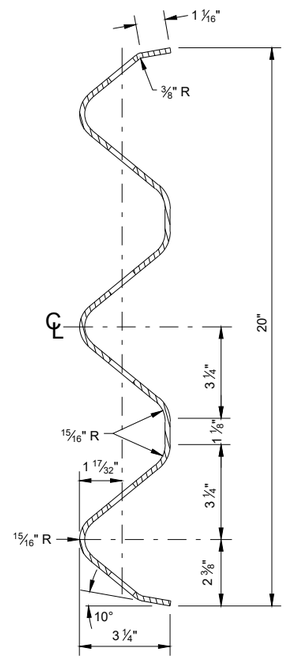


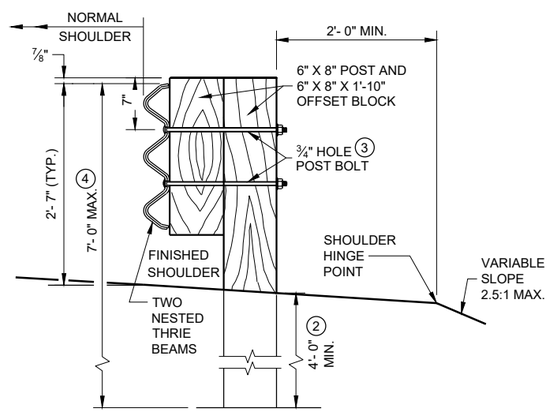

THRIE BEAM TERMINAL CONNECTOR




THRIE BEAM SPLICE




SECTION THRU BEAM RAIL ELEMENT




SECTION A-A

**STEEL THRIE BEAM STRUCTURE APPROACH**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER

FHWA

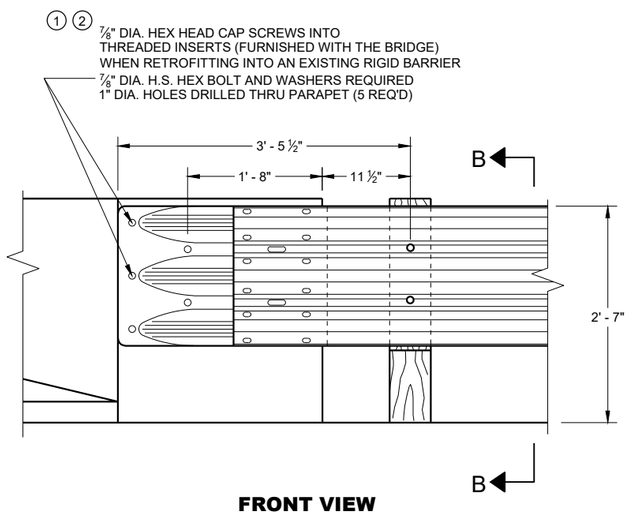




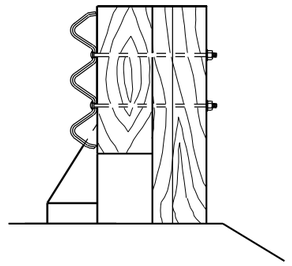
6

SDD 14B20 - 12a

SDD 14B20 - 12a




**FRONT VIEW**



**SECTION B - B**

## THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

## GENERAL NOTES

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

BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A325, A449 AND GALVANIZED PER STANDARD SPECIFICATIONS 614.

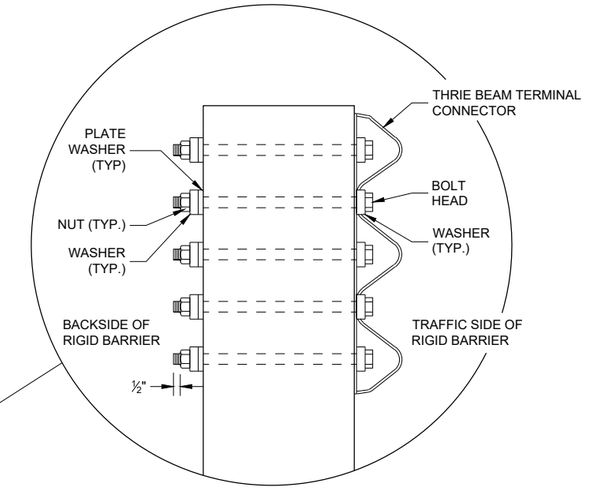
① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

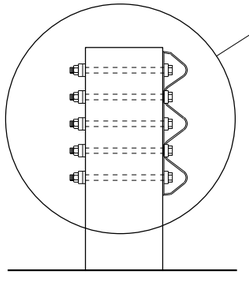
② BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM TERMINAL CONNECTOR. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

③ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 ½".

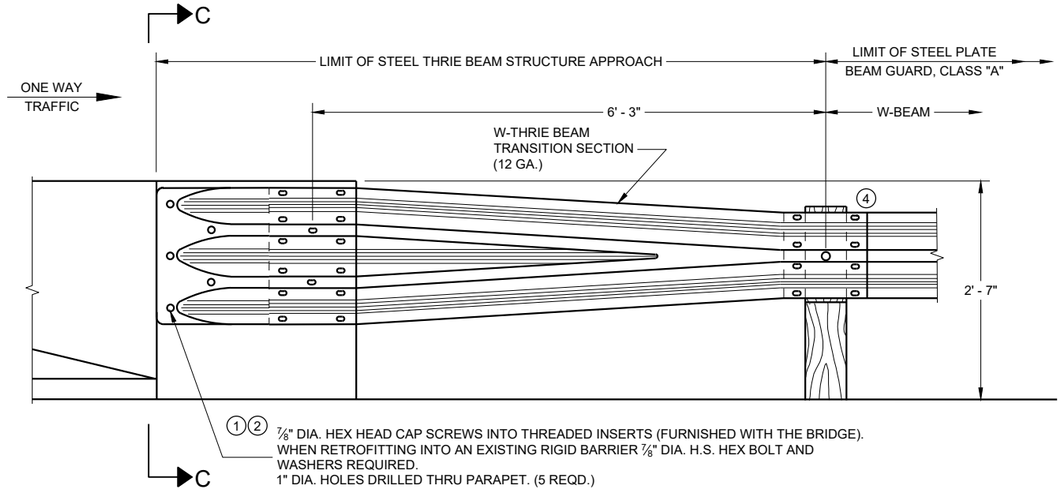
④ W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POST WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS.

DO NOT USE STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS IN THE STEEL THRIE BEAM STRUCTURAL APPROACH AND THE TRANSITION SECTION OF STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATIONS.



**SECTION C - C**




① ② ⅞" DIA. HEX HEAD CAP SCREWS INTO THREADED INSERTS (FURNISHED WITH THE BRIDGE). WHEN RETROFITTING INTO AN EXISTING RIGID BARRIER ⅞" DIA. H.S. HEX BOLT AND WASHERS REQUIRED.
1" DIA. HOLES DRILLED THRU PARAPET. (5 REQD.)

**FRONT VIEW**

## W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

**(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGE)**

## STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SQUARE END PARAPETS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

FHWA





6



SDD 14B20 - 12b

## GENERAL NOTES

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

BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A325, A449 AND GALVANIZED PER STANDARD SPECIFICATIONS 614.

(1) DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

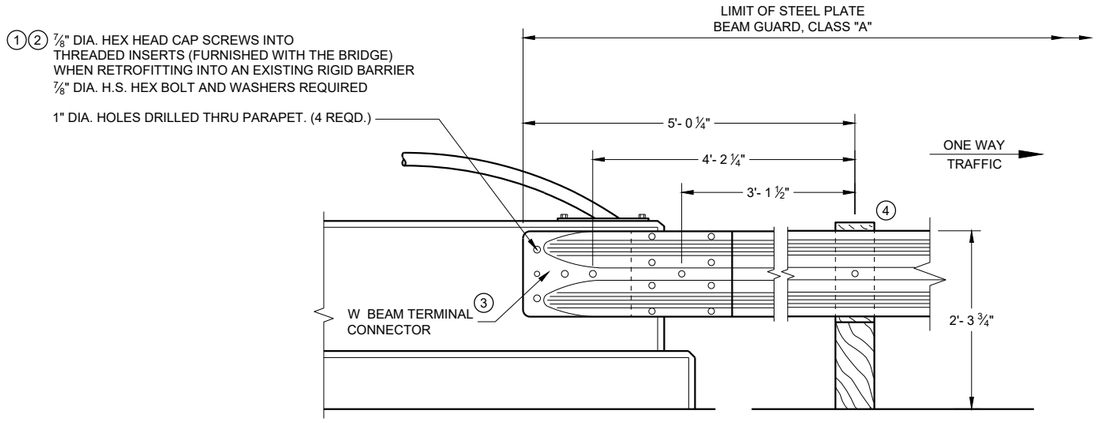
(2) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM TERMINAL CONNECTOR. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

(3) THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 ½".

(4) W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POST WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS.

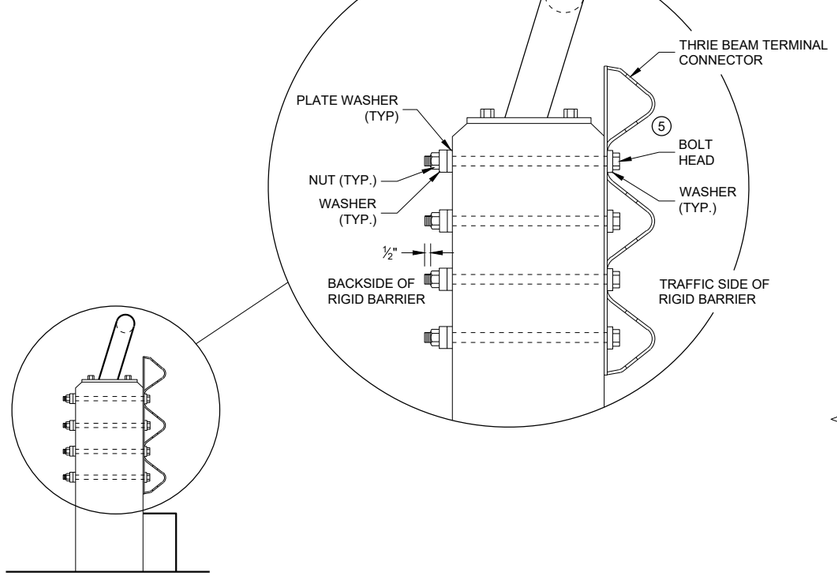
(5) BOLT, NUT AND WASHERS NO REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PARAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE THE EDGE OF PARAPET.

DO NOT USE STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS IN THE STEEL THRIE BEAM STRUCTURAL APPROACH AND THE TRANSITION SECTION OF STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATIONS.

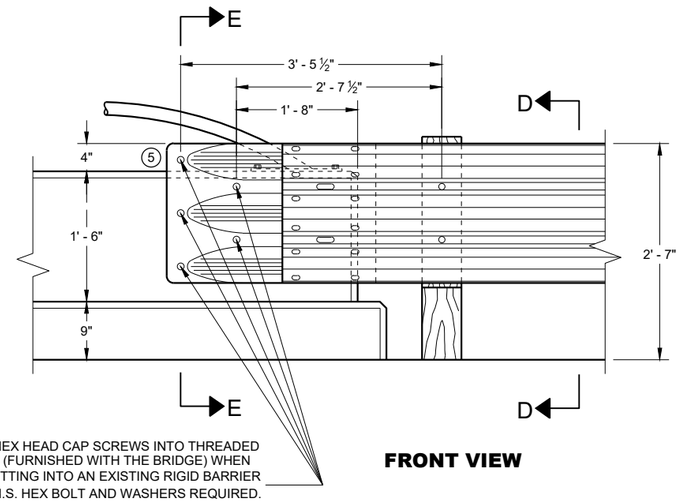



**FRONT VIEW**

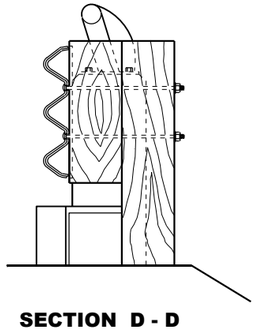
## W BEAM CONNECTION TO VERTICAL FACE PARAPET
### (USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)




**SECTION E - E**




**FRONT VIEW**



**SECTION D - D**

## THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS

**STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO VERTICAL FACED PARAPETS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

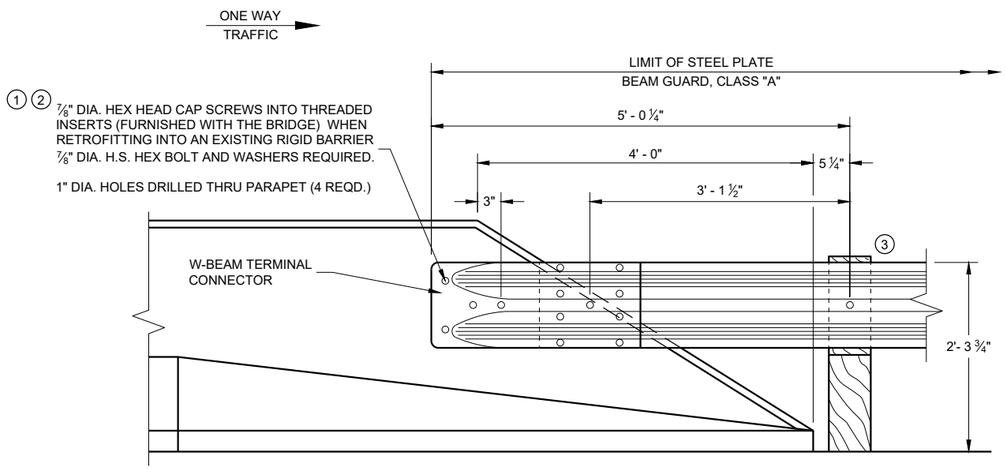
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**FRONT VIEW**

## W BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS

**(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)**

## GENERAL NOTES

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

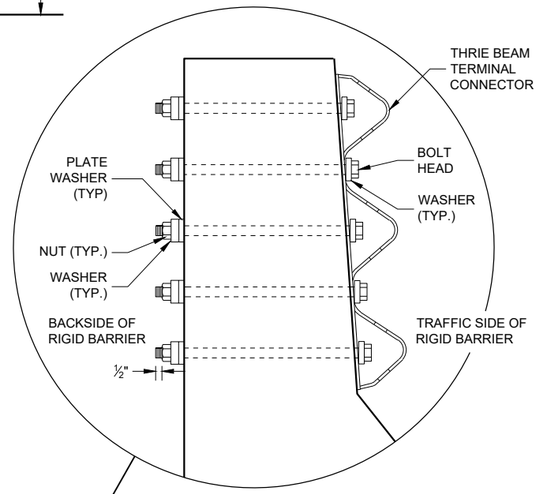
BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A325, A449 AND GALVANIZED PER STANDARD SPECIFICATIONS 614.

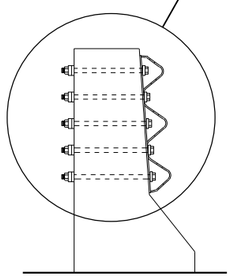
1. DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

2. BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM TERMINAL CONNECTOR. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

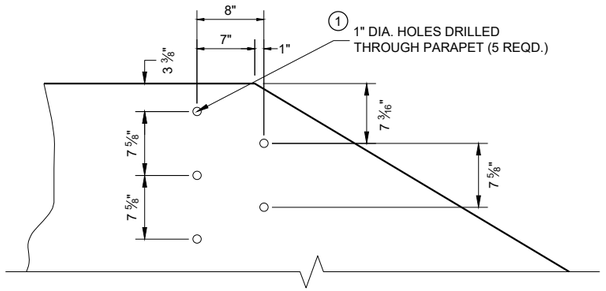
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   DO NOT USE STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS IN THE STEEL THRIE BEAM STRUCTURAL APPROACH AND THE TRANSITION SECTION OF STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATIONS.

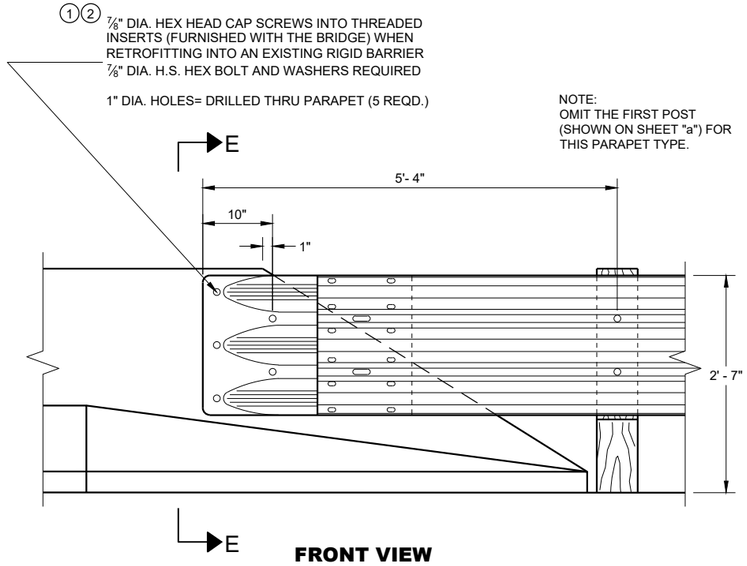


**SECTION E - E**




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




**FRONT VIEW**

## THRIE BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS

**STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SLOPED END PARAPETS**

STATE OF WISCONSIN
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APPROVED
November 2022
DATE

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ROADWAY STANDARDS DEVE ENGINEER

FHWA

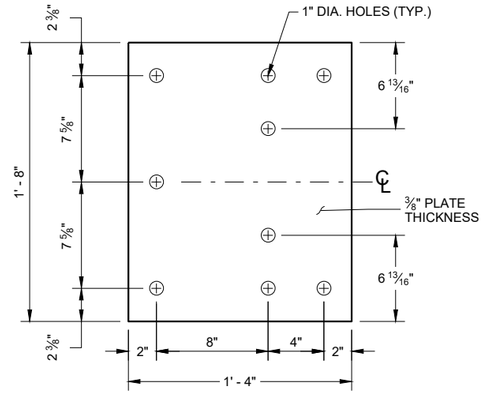




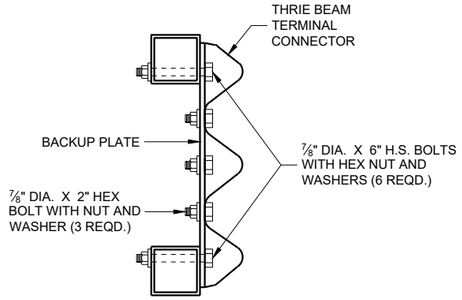
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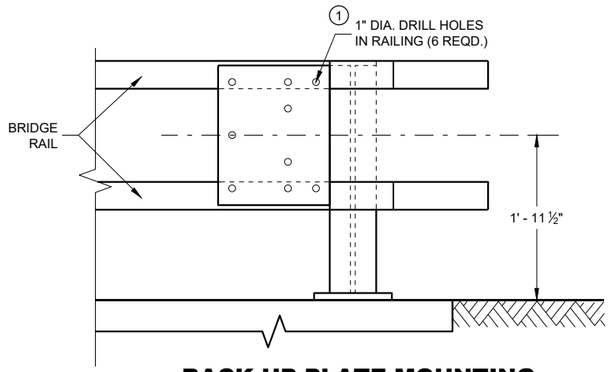
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**BACK-UP PLATE DETAIL**




**SECTION G - G**



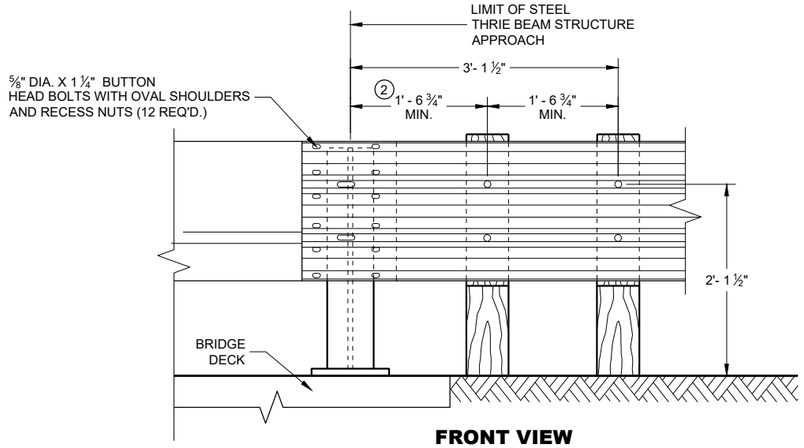

**BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING**

## GENERAL NOTES

BOLTS, PLATES, NUTS AND WASHERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATION A 325 AND BE GALVANIZED IN ACCORDANCE WITH ASTM A 153.

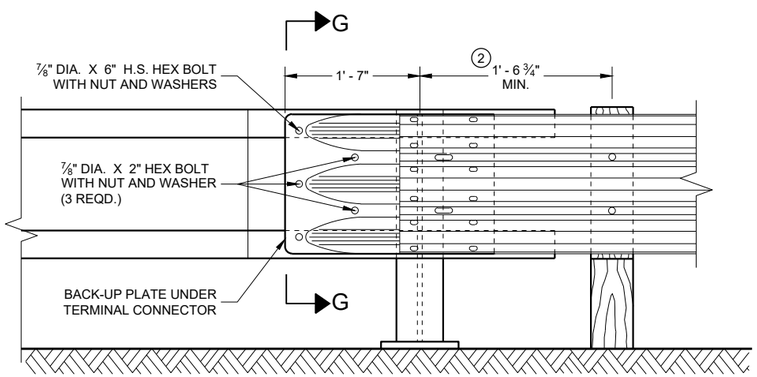
(1) DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(2) VARY THIS DIMENSION DEPENDING ON ABUTMENT TYPE, WINGWALL DETAILS, AND ANGLE OF SKEW. PLACE THE FIRST WOOD POST OFF THE BRIDGE SHALL AS CLOSE AS FEASIBLE TO THE STEEL END POST.

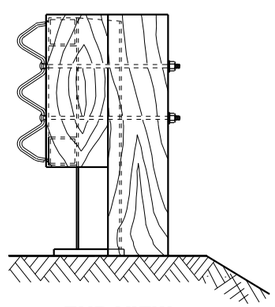



**FRONT VIEW**

**THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"**




**FRONT VIEW**



**END VIEW**

**THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"**

**STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO BRIDGE RAILING TYPES "F" & "W"**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

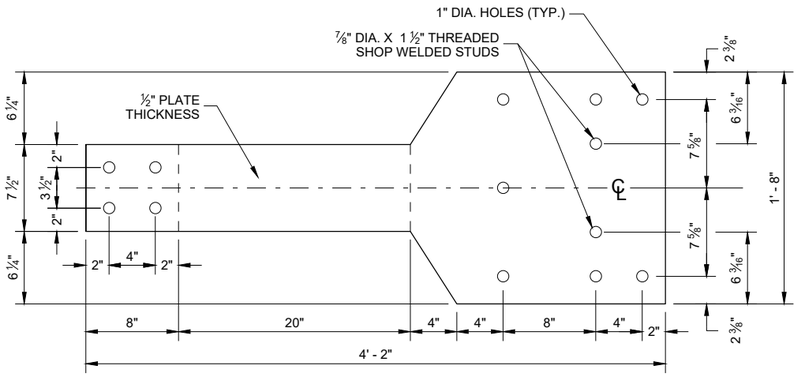
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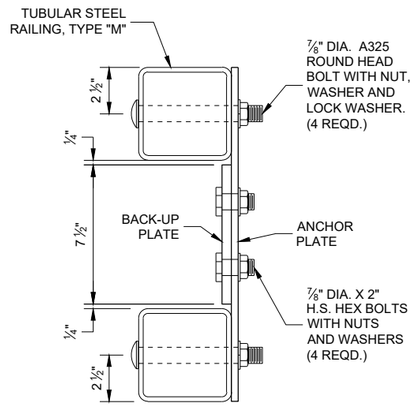

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## GENERAL NOTES

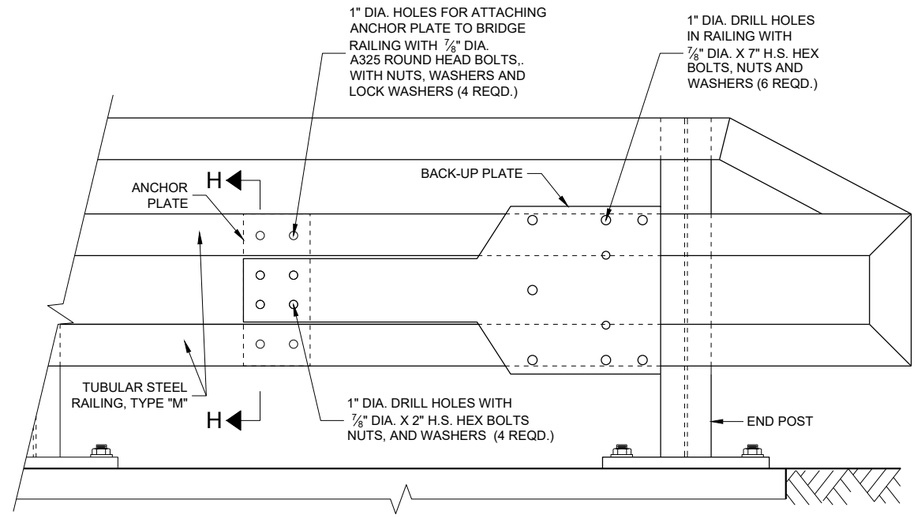
(1) VARY THIS DIMENSION DEPENDING ON ABUTMENT TYPE, WINGWALL DETAILS, AN ANGLE OF SKEW. PLACE THE FIRST WOOD POST OFF THE BRIDGE SHALL BE AS CLOSE AS FEASIBLE TO THE STEEL END POST.




**FRONT VIEW**

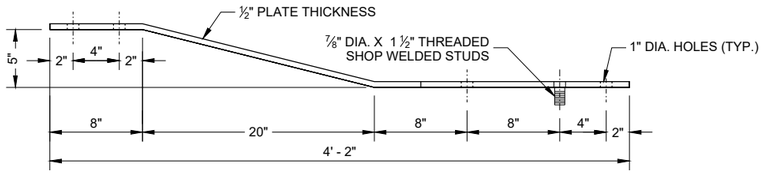



**SECTION H - H**



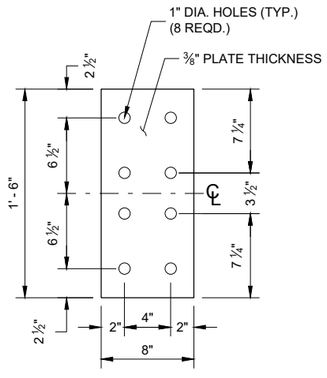

**FRONT VIEW**

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



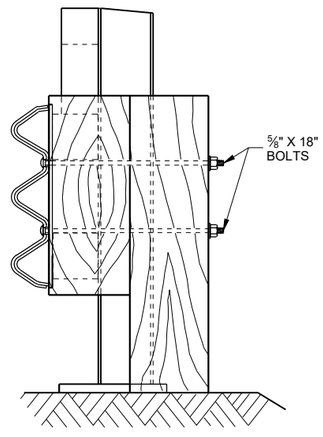

**PLAN VIEW**

**BACK-UP PLATE DETAIL, TYPE "M"**

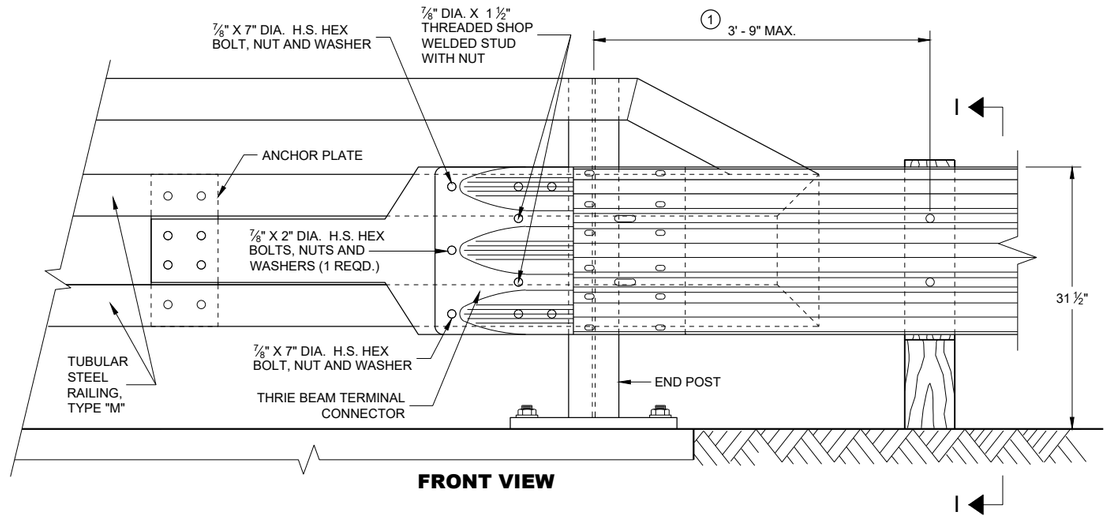



**PLAN VIEW**

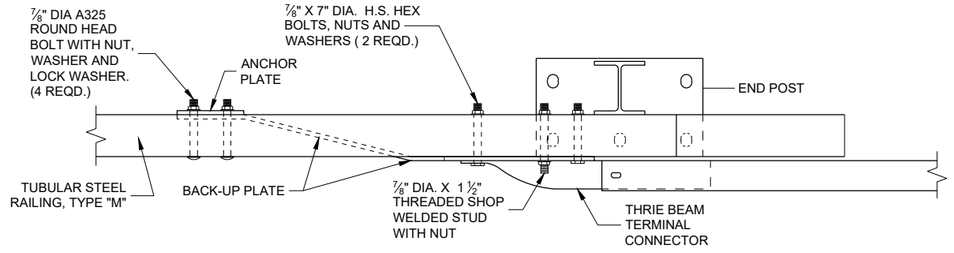
**ANCHOR PLATE DETAIL, TYPE "M"**




**SECTION I - I**




**FRONT VIEW**




**PLAN VIEW**

**THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"**

**STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO BRIDGE RAILING TYPE "M"**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022
DATE

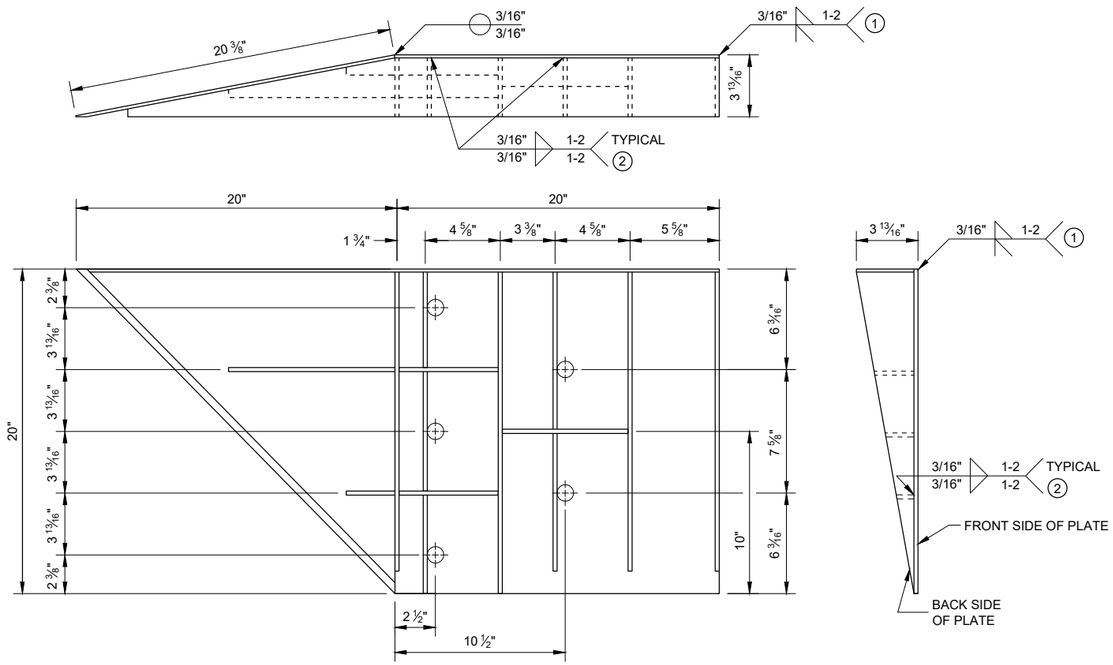
/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

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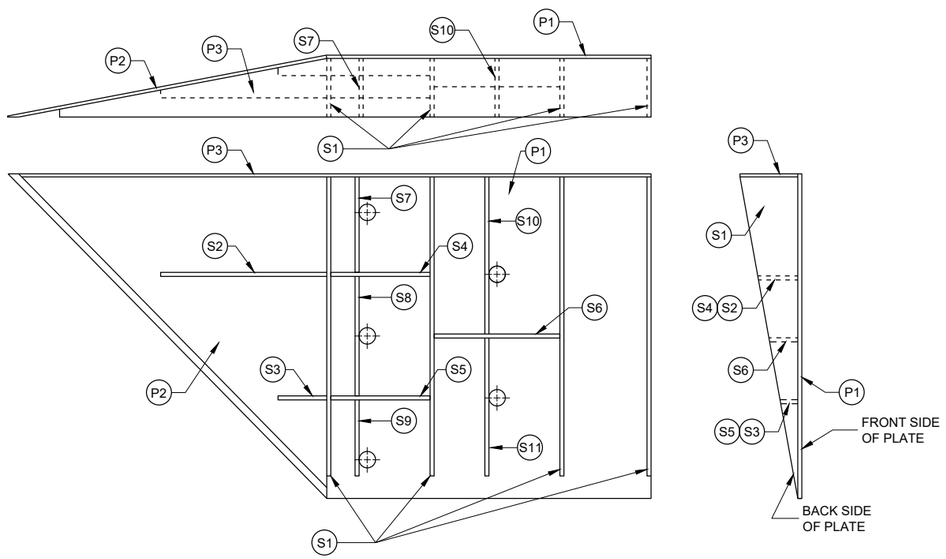


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## WELDING INSTRUCTION

**(VIEWED FROM BACK SIDE OF PLATE)**




## PLATE AND STIFFENER IDENTIFICATION

**(VIEWED FROM BACK SIDE OF PLATE)**

## GENERAL NOTES

COVER PLATE PANELS ARE 3/16" THICK.

ALL STIFFENERS ARE 1/4" THICK

CONNECTOR PLATE SHALL BE FABRICATED FROM ASTM GRADE A36 STEEL AND GALVANIZED.

FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.

ALL HOLE DIAMETERS SHALL BE 1".

FOR OPPOSITE SIDE INSTALLATION, MIRROR DRAWINGS.

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

(2) STIFFENERS LOCATED ON THE INSIDE OF THE COVER PLATE SHALL BE WELDED AS FOLLOWS:
3/16" FILLET WELD BY 1" LONG SPACED AT 2".

CONNECTOR PLATED DIMENSION (PER ASSEMBLY)

| PLATE | QUANTITY | SHAPE | SIZE (A x B x C x D) | THICKNESS |
|---|---|---|---|---|
| P1 | 1 | | 20" x 20" | 3/16" |
| P2 | 1 | | 20" x 20" x 28 9/16" | 3/16" |
| P3 | 1 | | 39" x 3 5/8" x 20" x 19 5/16" | 3/16" |
| S1 | 4 | | 18 7/16" x 3 5/8" x 18 3/4" | 1/4" |
| S2 | 1 | | 10 1/4" x 2 7/16" x 10 3/8" x 1/2" | 1/4" |
| S3 | 1 | | 3" x 1 1/16" x 3 1/8" x 1/2" | 1/4" |
| S4 | 1 | | 6 1/8" x 2 7/16" | 1/4" |
| S5 | 1 | | 6 1/8" x 1 1/16" | 1/4" |
| S6 | 1 | | 7 3/4" x 1 3/4" | 1/4" |
| S7 | 1 | | 2 9/16" x 6" x 3 5/8" x 5 7/8" | 1/4" |
| S8 | 1 | | 1 5/32" x 7 1/2" x 2 1/2" x 7 3/8" | 1/4" |
| S9 | 1 | | 6 1/16" x 6 3/16" x 1 3/32" | 1/4" |
| S10 | 1 | | 1 7/8" x 9 7/8" x 3 5/8" x 9 1/16" | 1/4" |
| S11 | 1 | | 8 1/2" x 8 3/4" x 1 13/16" | 1/4" |

## STEEL THRIE BEAM STRUCTURE APPROACH

**STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTOR PLATE DETAIL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER
FHWA

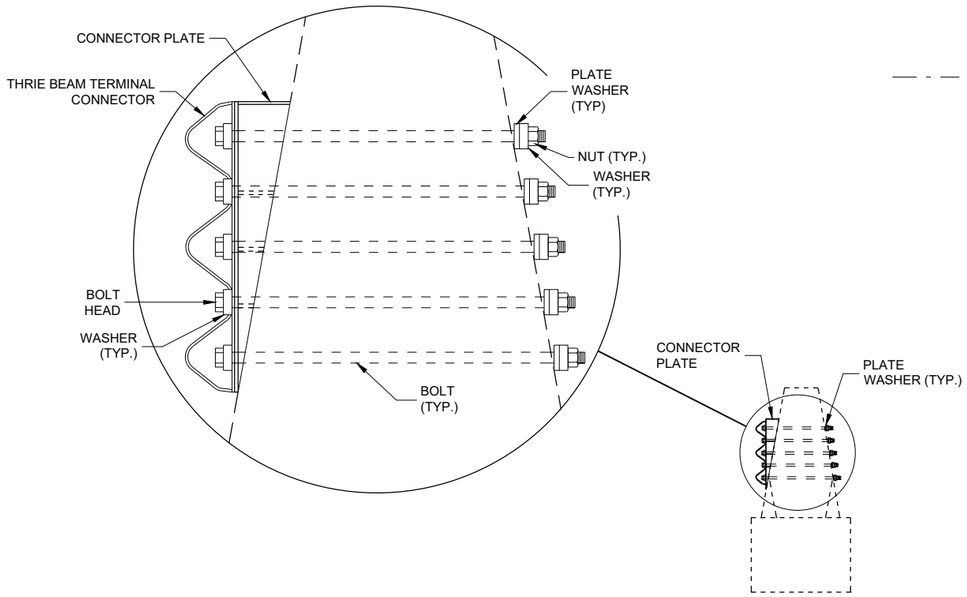


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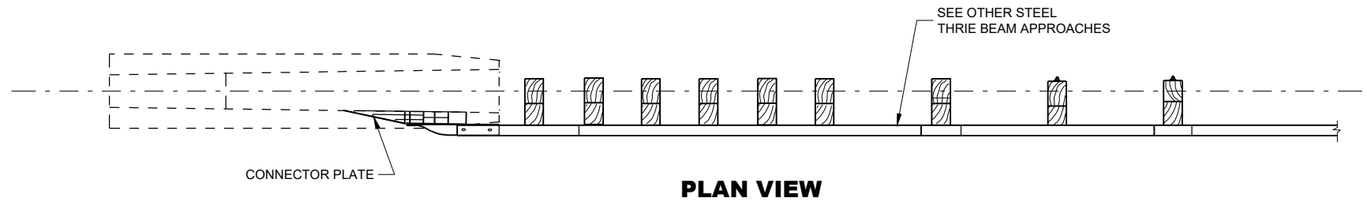
SDD 14B20 - 12g

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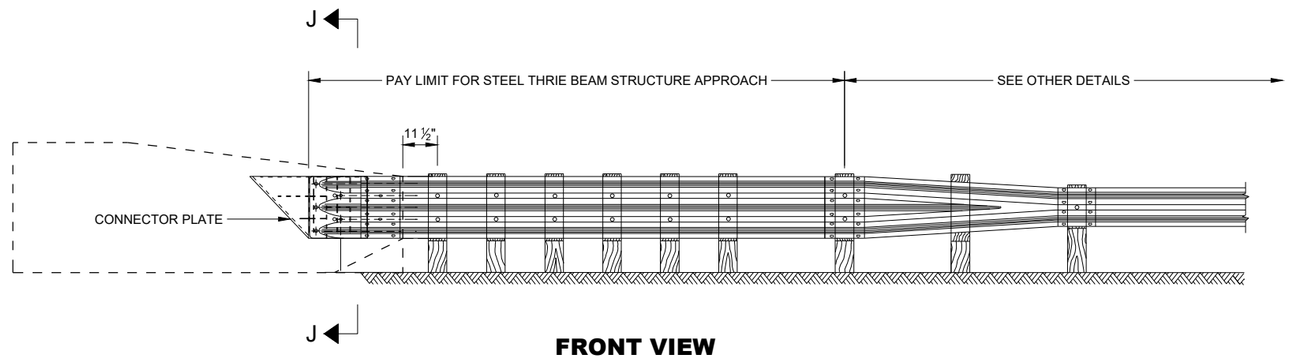
SDD 14B20 - 12g



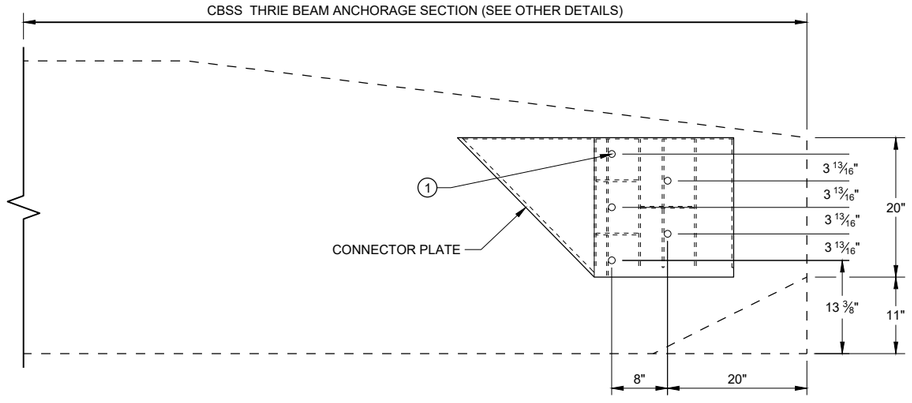

**SECTION J - J**




**PLAN VIEW**




**FRONT VIEW**




**CONNECTOR PLATE PLACEMENT**

## GENERAL NOTES

CONSTRUCT PER STANDARD SPECIFICATION 614.

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

(1) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM TERMINAL CONNECTOR. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X ⅝" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

# STEEL THRIE BEAM STRUCTURE APPROACH

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER
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## BILL OF MATERIALS

| NOTE NO. | DESCRIPTION |
|---|---|
| ① | WOOD BREAKAWAY TERMINAL POST: 5½" X 7½" 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 ½" 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'-6½" |
| 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.

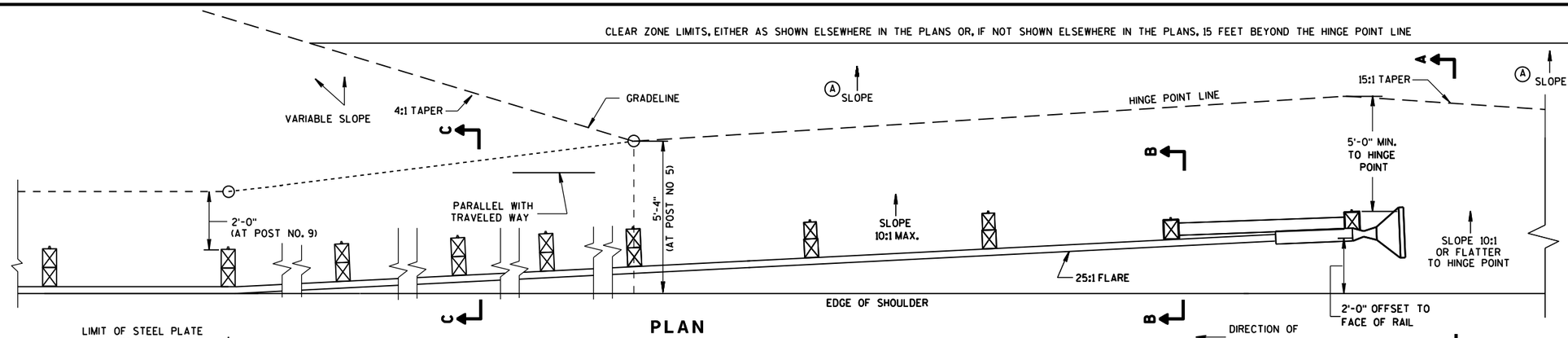
(E) THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST 3 THROUGH 8 SHALL BE ¾" ABOVE THE FINISHED GROUND LINE.

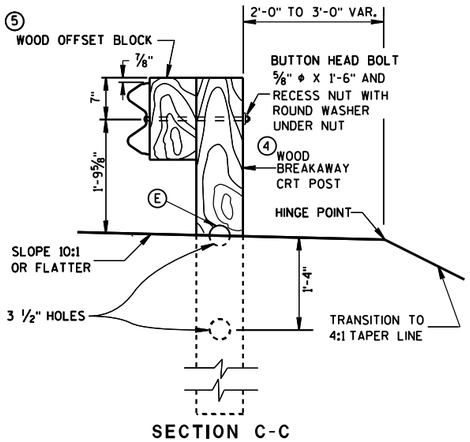
(F) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS. ONE SCREW PER CORNER.

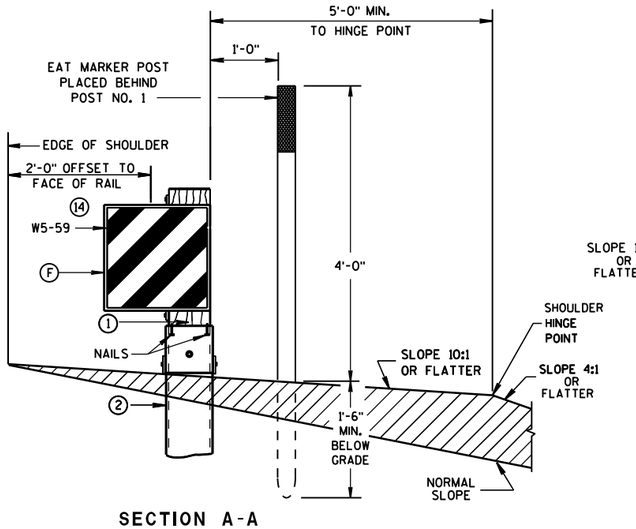
STEEL POSTS SHALL NOT BE ALLOWED FOR USE WITH ENERGY ABSORBING TERMINALS.

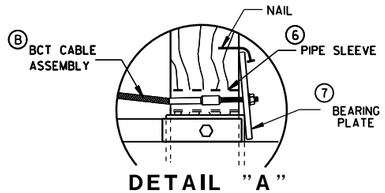
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

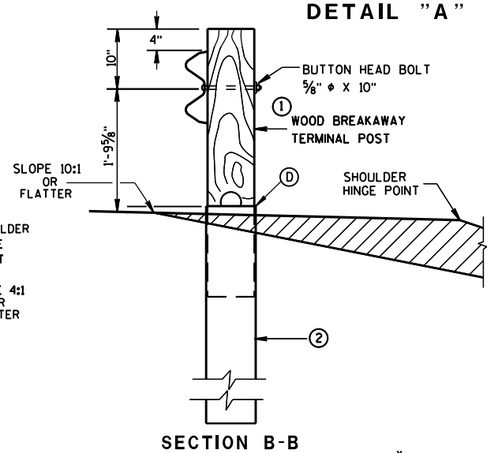
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

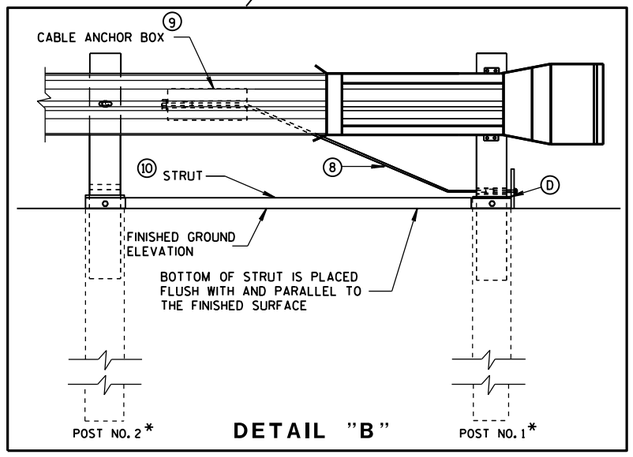


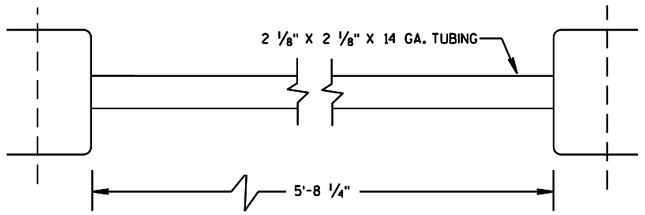

STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

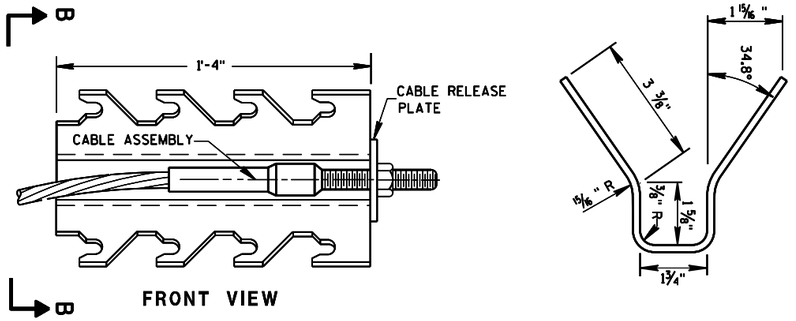



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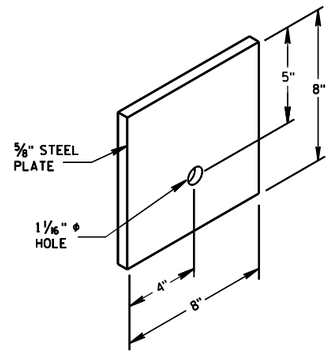

S.D.D. 14 B 24-9a




⑩ STRUT DETAIL




⑨ CABLE ANCHOR BOX




⑦ STEEL BEARING PLATE

6

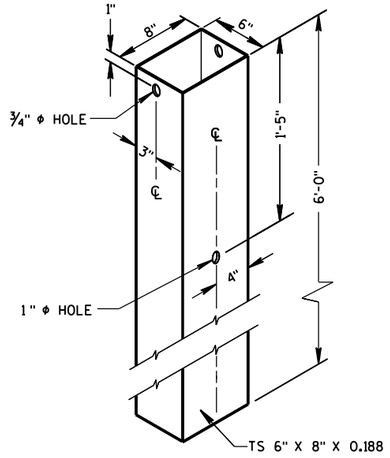
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S.D.D. 14 B 24-9b

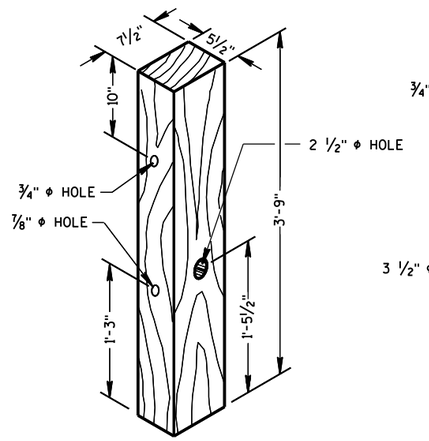
S.D.D. 14 B 24-9b

STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

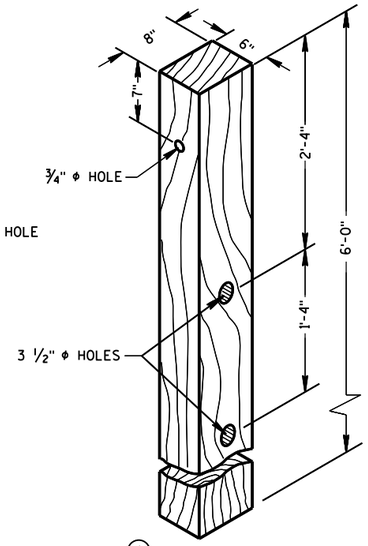
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI




② 72" STEEL TUBE
(POSTS NO. 1-2




① TERMINAL POST

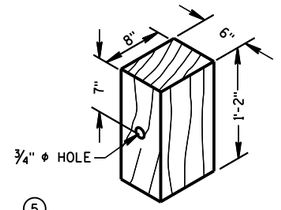



④ CRT POST
(POSTS NO'S 5-8

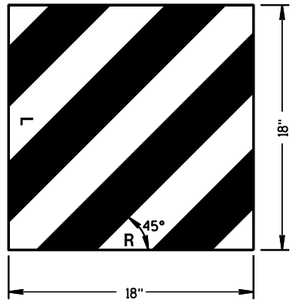
## WOOD BREAKAWAY POSTS

## GENERAL NOTES

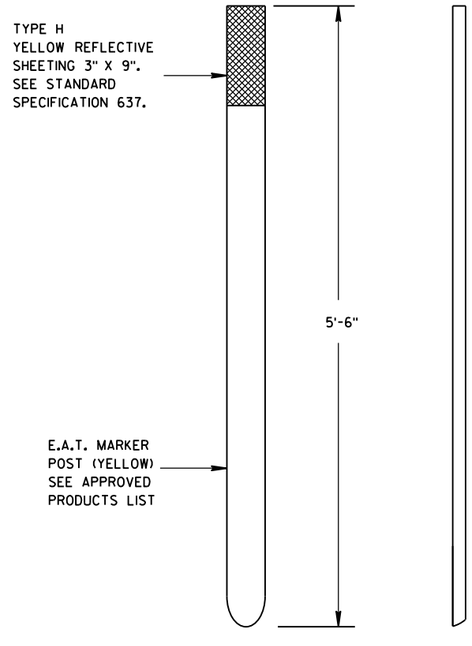
WHEN ROCK IS ENCOUNTERED DURING EXCAVATION, A 12 INCH DIA. POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK MAY BE USED IF APPROVED BY THE ENGINEER. GRANULAR MATERIAL SHALL BE PLACED IN THE BOTTOM OF THE HOLE APPROXIMATELY 2 1/2" INCHES DEEP TO PROVIDE DRAINAGE. THE SOIL TUBES SHALL BE FIELD CUT TO LENGTH,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




E.A.T. MARKER POST

STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017
DATE
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS
UNIT SUPERV...

90

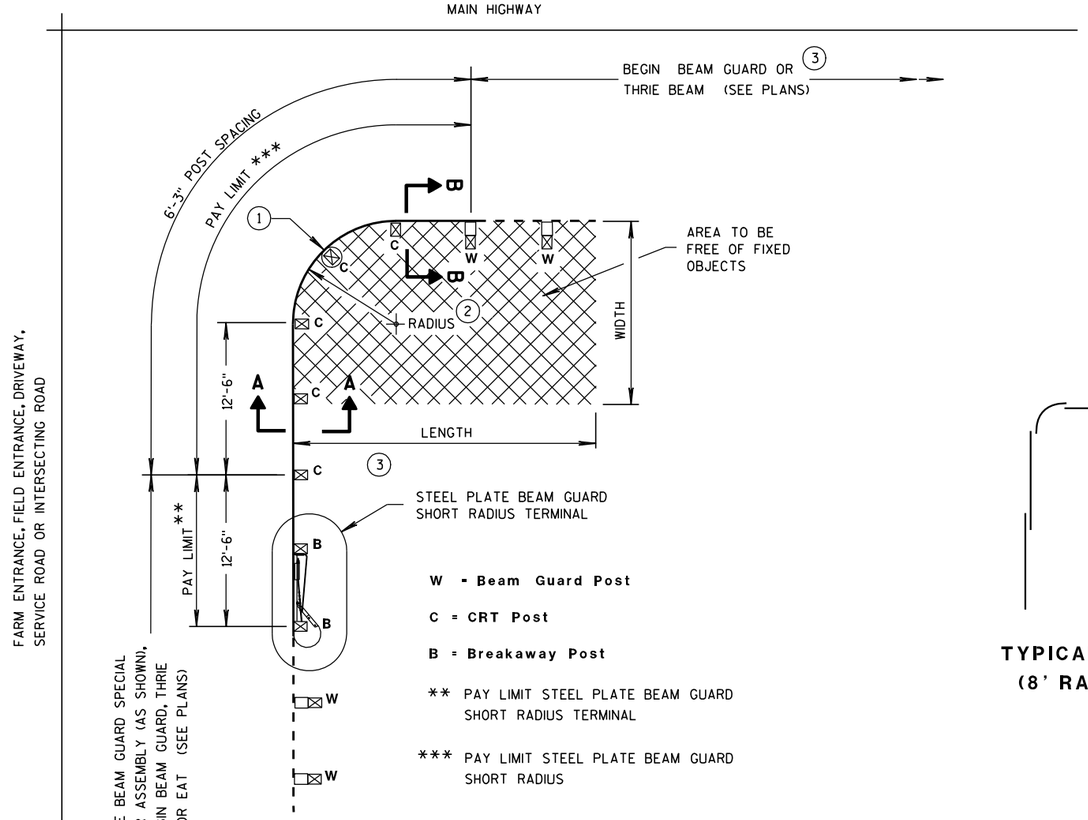
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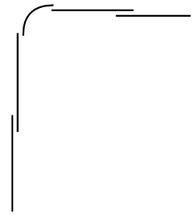
S.D.D. 14 B 24-9c

6

S.D.D. 14 B 24-9c




**TYPICAL LAYOUT**
**(8' RADIUS SHOWN)**



**TYPICAL LAP SPLICES**
**(8' RADIUS SHOWN)**

## GENERAL NOTES

ALL ANGLES, CHANNELS, AND PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A36 AND THE STRUCTURAL TUBING SHALL CONFORM TO ASTM A 500. WELDING SHALL MEET THE CURRENT REQUIREMENTS OF THE AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE ANSI/AWS D1.1. ALL STRUCTURAL STEEL SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A 123. PUNCHING, DRILLING, CUTTING, OR WELDING WILL NOT BE PERMITTED AFTER GALVANIZING. FURNISH AND INSTALL HARDWARE PER STANDARD SPECIFICATION 614.2. UNLESS NOTED OTHERWISE.

SHOP BEND CURVED RAIL SECTIONS.

SEE STANDARD DETAIL DRAWING 14 B 15 FOR OTHER DETAIL.

(1) ON THE 8 FOOT RADIUS INSTALLATION, DO NOT INSTALL BUTTON HEAD BOLT AT CENTER CRT POST.

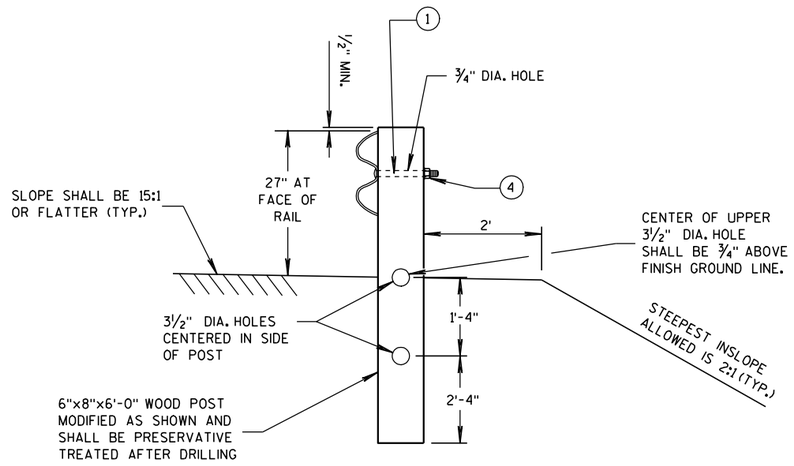
(2) RADIUS FROM 8' - 36'. SEE PLAN.

(3) HEIGHT TRANSITION MAY BE REQUIRED. SEE PLAN OR PROJECT ENGINEER.

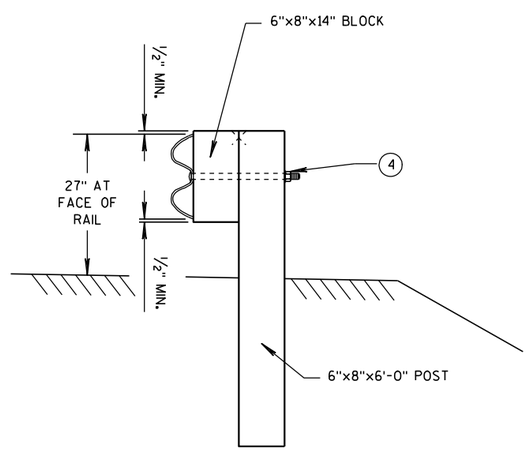
(4) 5/8" ø X 1'-6" BUTTON HEAD BOLT AND RECESS NUT WITH ROUND WASHER UNDER NUT.

| RADIUS | NUMBER OF CRT POSTS | *NUMBER AND LENGTH OF CURVED RAILS | REQUIRED AREA FREE OF FIXED OBJECTS (LENGTH x WIDTH) |
|---|---|---|---|
| 8' | 5 | 1 at 12.5' | 25' x 15' |
| 16' | 7 | 1 at 25' | 30' x 15' |
| 24' | 9 | 1 at 25' and 1 at 12.5' | 40' x 20' |
| 32' | 11 | 2 at 25' | 50' x 20' |

* THE NUMBER OF RAILS IS BASED ON A 90° INTERSECTION. SEE PLAN FOR NON 90° INSTALLATIONS.




**SECTION A-A**
**(CRT POST)**




**SECTION B-B**
**(BEAM GUARD POST)**

# STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL

STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

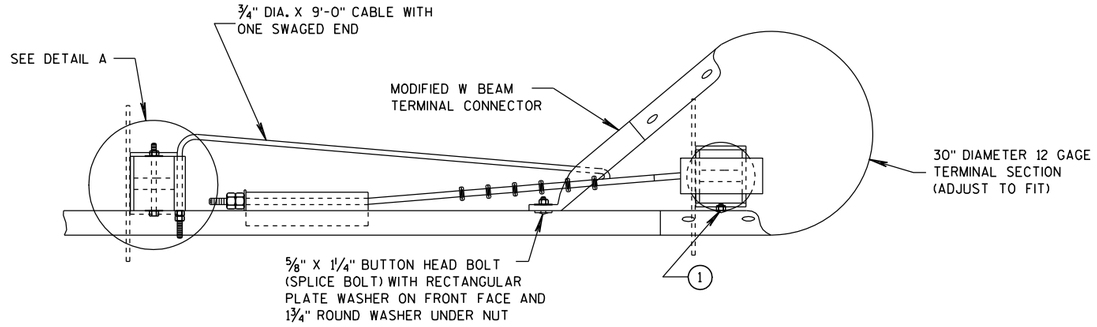


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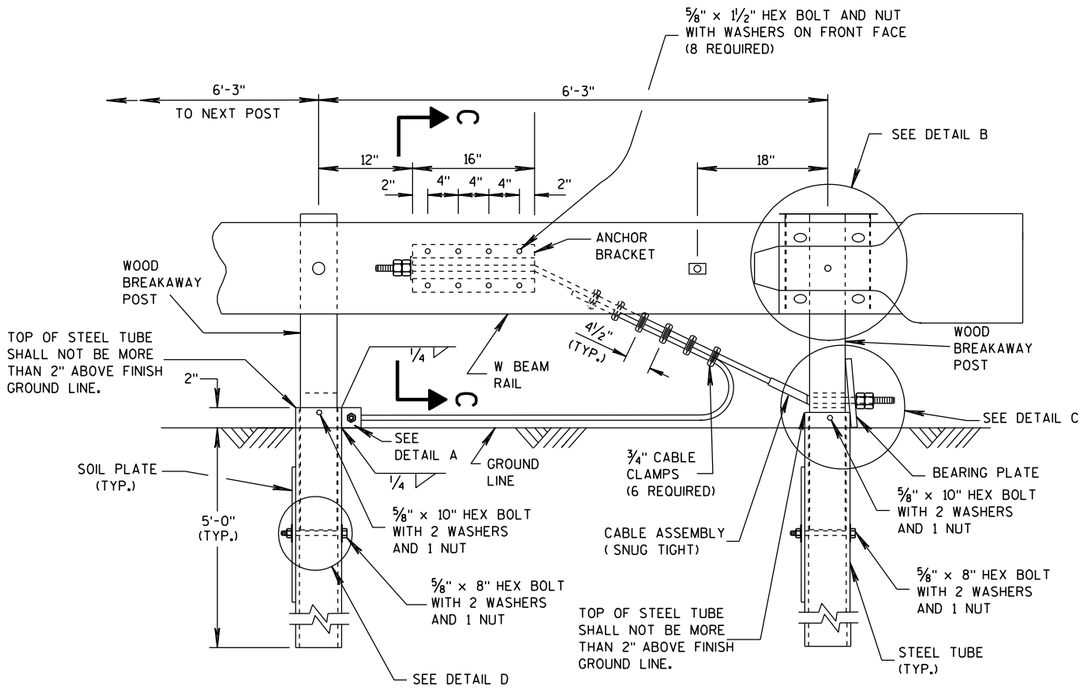
S.D.D. 14 B 27-1a

6

S.D.D. 14 B 27-1a




**PLAN VIEW**



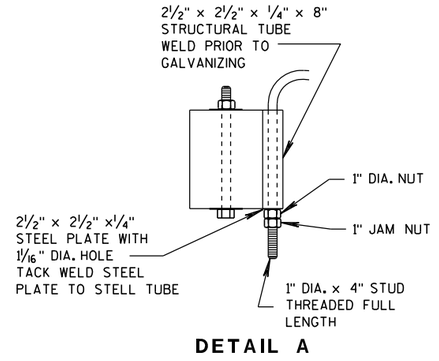

**ELEVATION VIEW**

# STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL

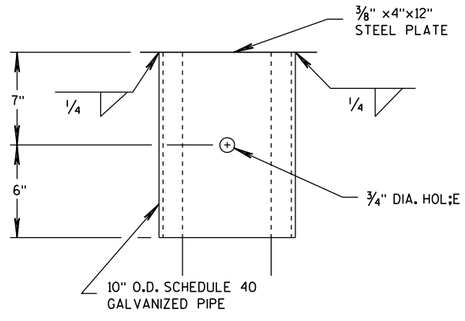
## GENERAL NOTES

(1) ATTACH W BEAM RAIL TO THE STEEL PIPE WITH A ⅝" X 2" BUTTON HEAD BOLT WITH NO WASHER. CONNECTION TO THE POST IS NOT REQUIRED.

INSTALL GALVANIZED ¾" (6X19) PREFORMED WIRE OR INDEPENDENT WIRE ROPE CORE CONFORMING TO AASHTO M 30. MANUFACTURE WIRE ROPE OUT OF IMPROVED PLOW STEEL WITH A MINIMUM BREAKING STRENGTH OF 42,800 PSI.




**DETAIL A**




**DETAIL B**

(BEAM GUARD AND TERMINAL SECTION NOT SHOWN)

**STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

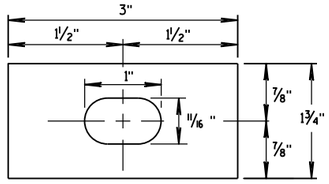


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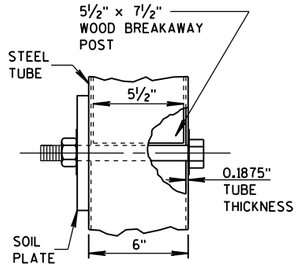
S.D.D. 14 B 27-1b

6

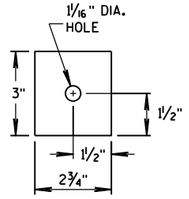
S.D.D. 14 B 27-1b



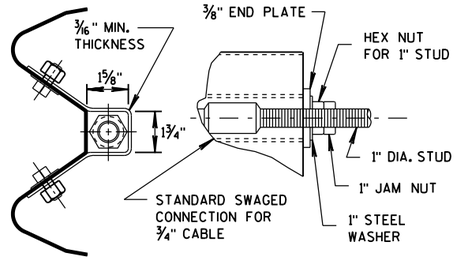

**RECTANGULAR PLATE WASHER**



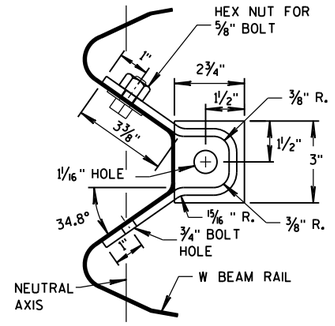

**DETAIL D**



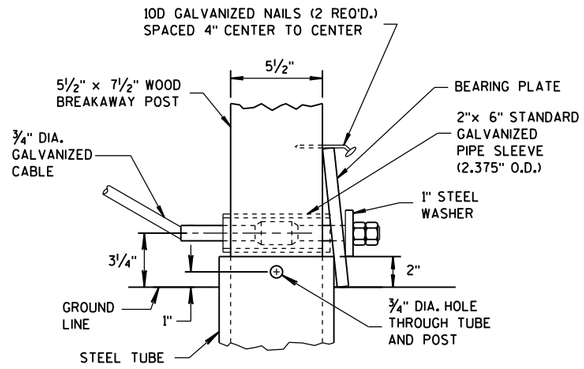

**END PLATE**



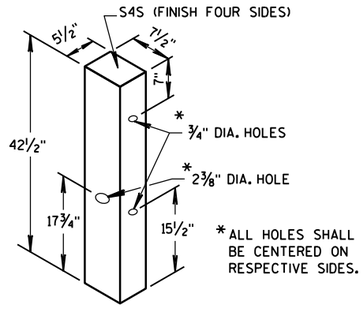

**SECTION C-C**
**(END PLATE REMOVED)**



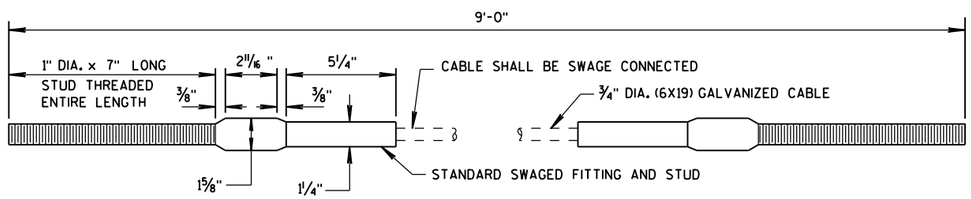

**ANCHOR BRACKET**



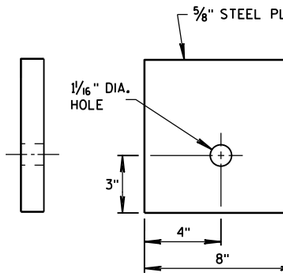

**DETAIL C**



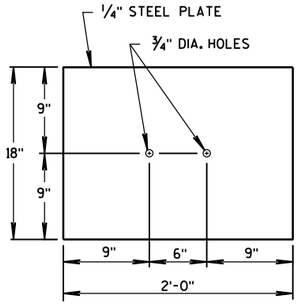

**WOOD BREAKAWAY POST**



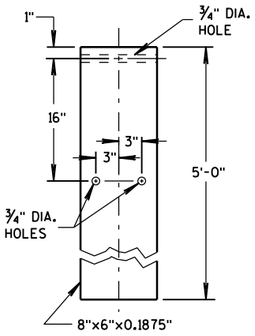

**CABLE ASSEMBLY**




**BEARING PLATE**




**SOIL PLATE**




**STEEL TUBE**

**STEEL PLATE BEAM GUARD**
**SHORT RADIUS TERMINAL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
12/18/08 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

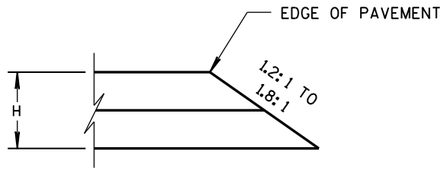


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S.D.D. 14 B 27-1c

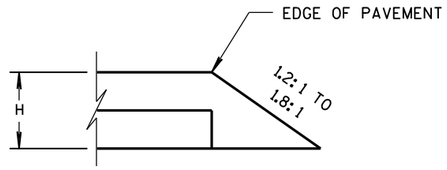
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S.D.D. 14 B 27-1c



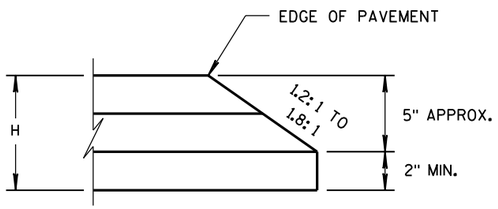

**CONSTRUCTED WITH FINAL TWO LAYERS**

**FOR H 5" OR LESS**



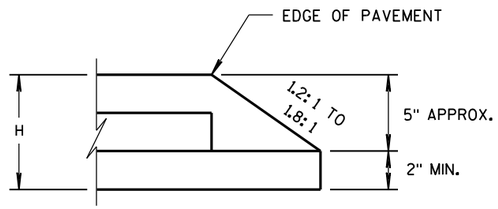

**CONSTRUCTED WITH FINAL LAYER**

**FOR H 5" OR LESS**




**CONSTRUCTED WITH FINAL TWO LAYERS**

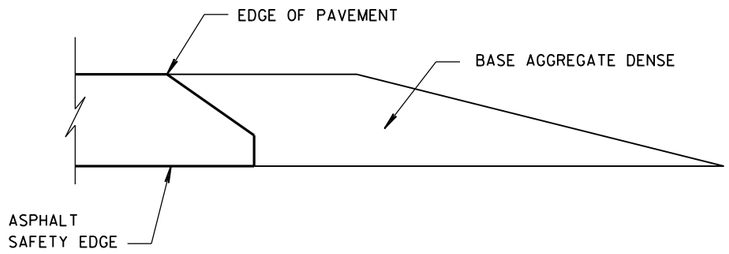
**FOR H GREATER THAN 5"**




**CONSTRUCTED WITH FINAL LAYER**

**FOR H GREATER THAN 5"**

## HMA PAVEMENT AND HMA OVERLAYS




## FINISHED SHOULDER AGGREGATE PLACEMENT

6

6

S.D.D. 14 B 29-1

S.D.D. 14 B 29-1

SAFETY EDGE SM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/30/2012
DATE

/S/ Jerry H. Zoda
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

(1) WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

(2) USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.

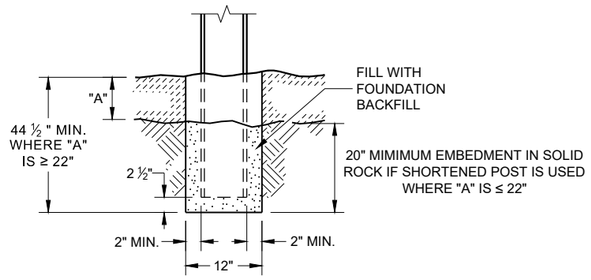
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.

(4) WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).

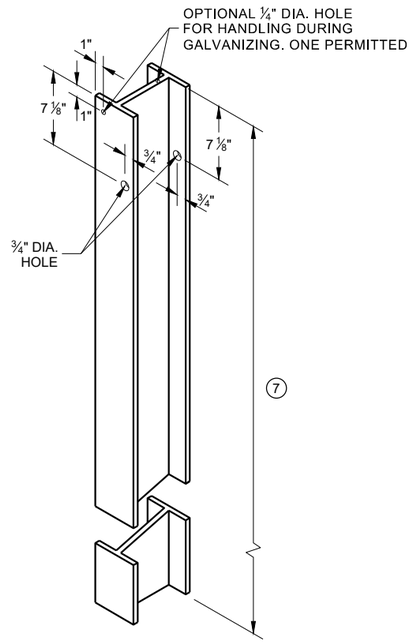
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ±1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

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

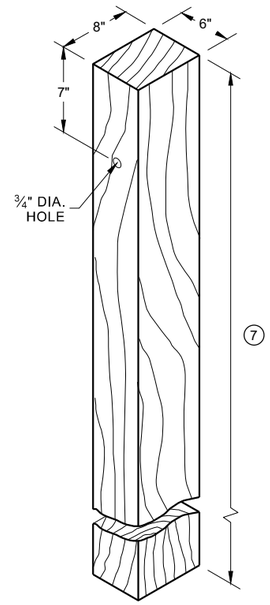
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



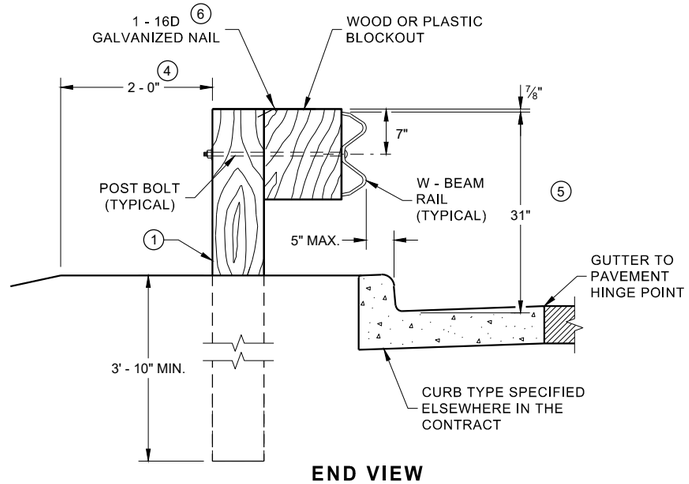

END VIEW
**SETTING STEEL OR WOOD POST IN ROCK** (3)



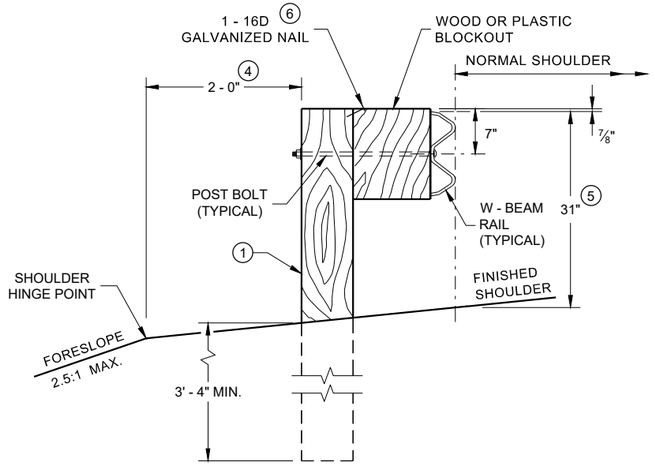

**STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9)** (1)



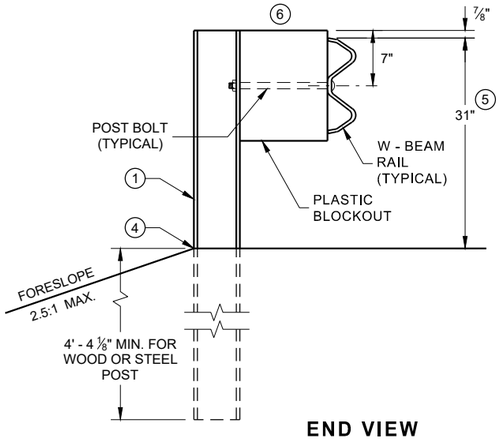

**WOOD POST (6" X 8") NOMINAL** (1)



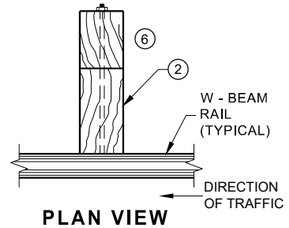

END VIEW
**LOCATED ALONG A CURBED ROADWAY**



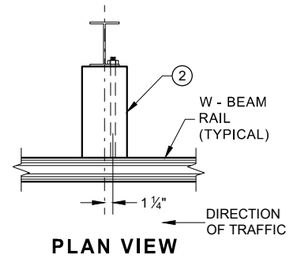

END VIEW
**LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION**



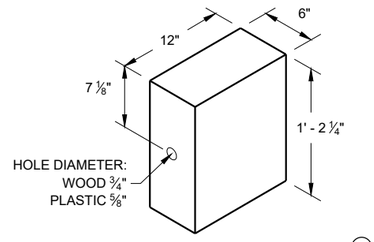

END VIEW
**MGS LONGER POST AT HALFPOST SPACING W BEAM (K)**




PLAN VIEW
**WOOD POST, BLOCKOUT & BEAM**




PLAN VIEW
**STEEL POST, PLASTIC BLOCKOUT & BEAM**




**WOOD OR PLASTIC BLOCKOUT** (2)

**MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

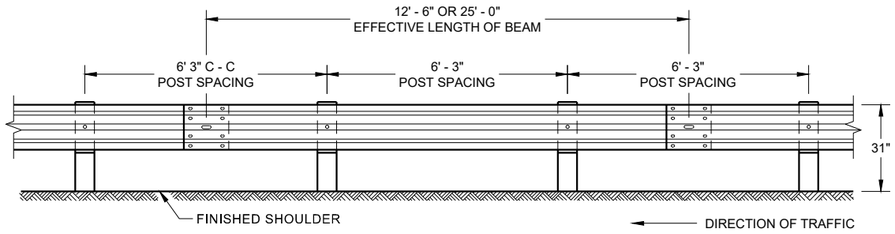


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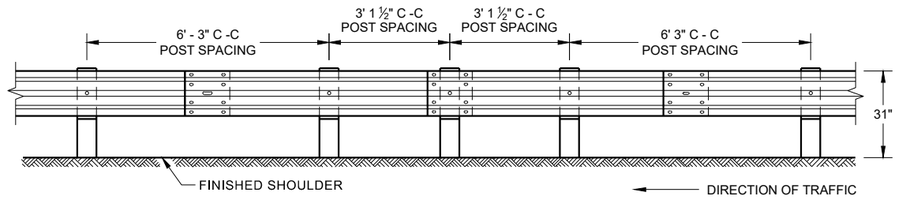
SDD 14B42 - 07a

6

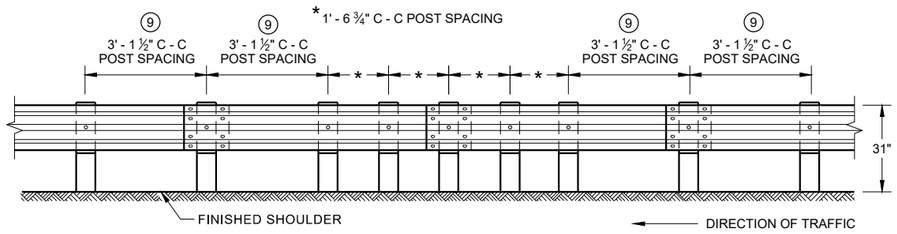
SDD 14B42 - 07a



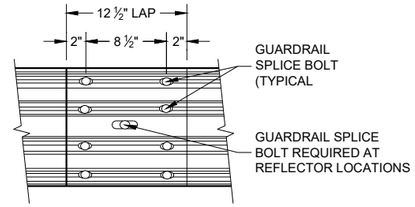

**FRONT VIEW**
**POST SPACING STANDARD INSTALLATION**



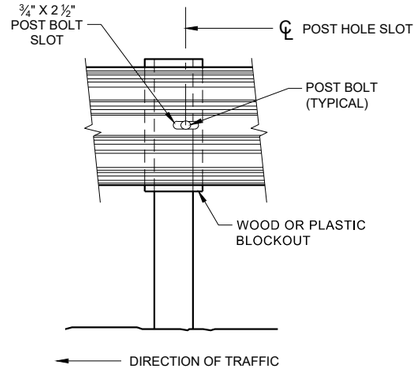

**FRONT VIEW**
**HALF POST SPACING (HS) AND**
**HALF POST SPACING WITH LONGER POSTS (K)**



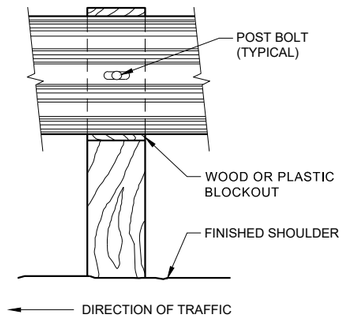

**FRONT VIEW**
**QUARTER POST SPACING (QS)**



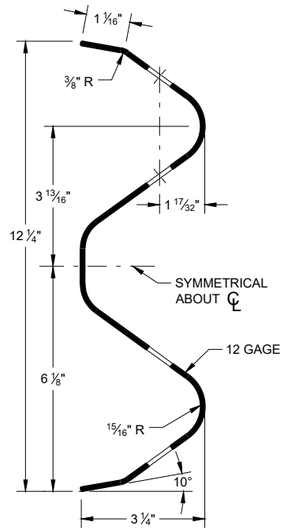

**FRONT VIEW**
**MID-SPAN BEAM SPLICE**



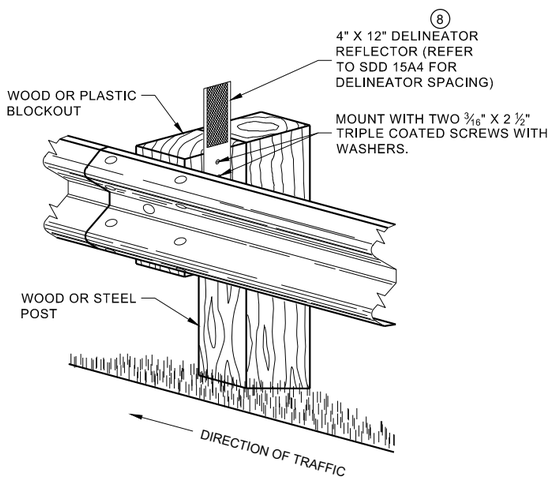

**FRONT VIEW AT STEEL POST**




**FRONT VIEW AT WOOD POST**




**SECTION THRU W-BEAM RAIL**




**ONE SIDED REFLECTOR DETAIL**
**AND TYPICAL INSTALLATION**

## GENERAL NOTES

⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

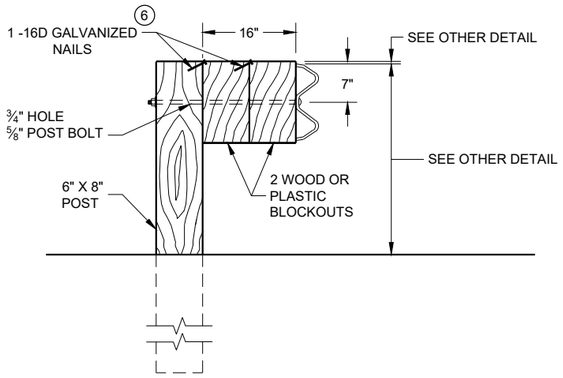
POST BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND ⅝" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

GUARD RAIL SPLICE BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.

**MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION


6
SDD 14B42 - 07b

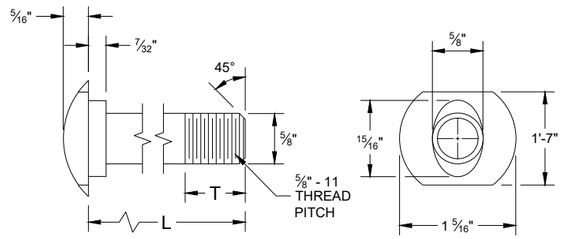



## DETAIL FOR 16" BLOCKOUT DEPTH

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

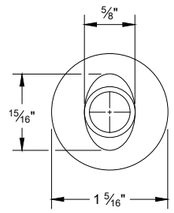
NOTE:

1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 3⁄16".
2. IF THE BOLT EXTENDS MORE THAN ¼" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

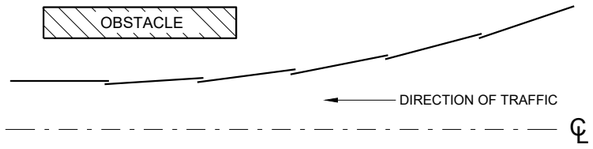



## POST BOLT TABLE

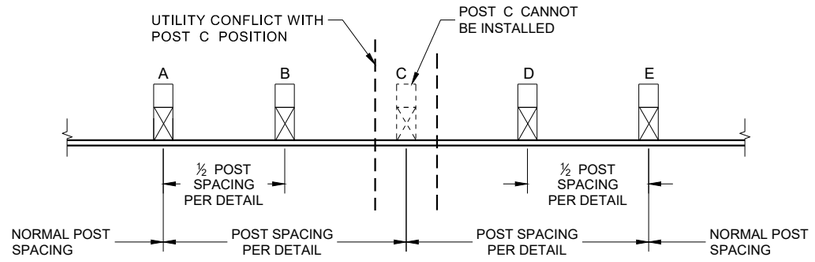
| L | T (MIN.) |
|---|---|
| 1 ¼" | 1 ⅛" |
| 2" | 1 ¾" |
| 10" | 4" |
| 14" | 4 1⁄16" |
| 18" | 4" |
| 21" | 4 1⁄16" |
| 25" | 4" |



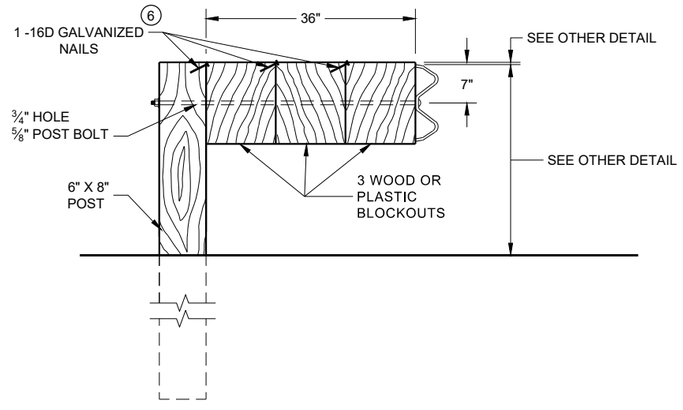

## ALTERNATE BOLT HEAD



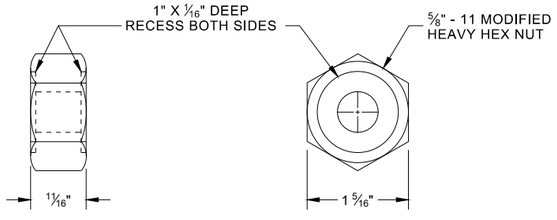

## PLAN VIEW
## BEAM LAPPING DETAIL



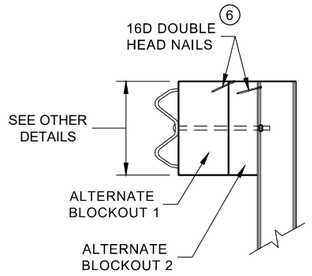

## POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



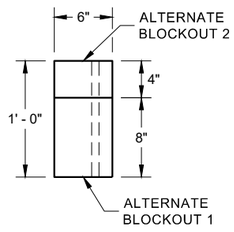

## DETAIL FOR 36" BLOCKOUT DEPTH




## POST BOLT, SPLICE BOLT AND RECESS NUT




SIDE VIEW




PLAN VIEW

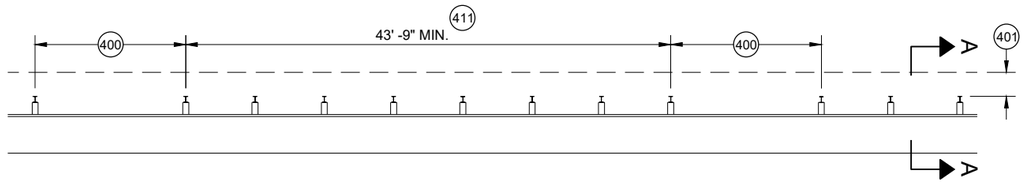
## ALTERNATE WOOD BLOCKOUT DETAIL

NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.

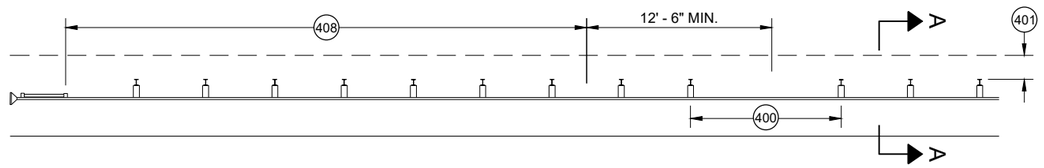
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

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

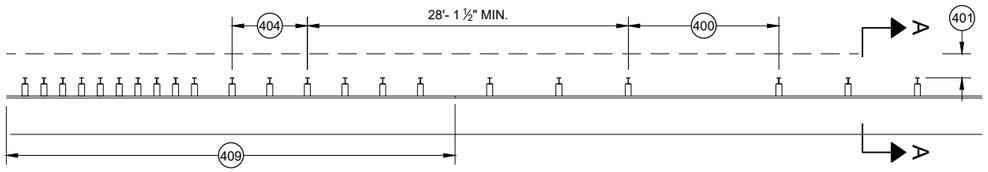
**MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL**



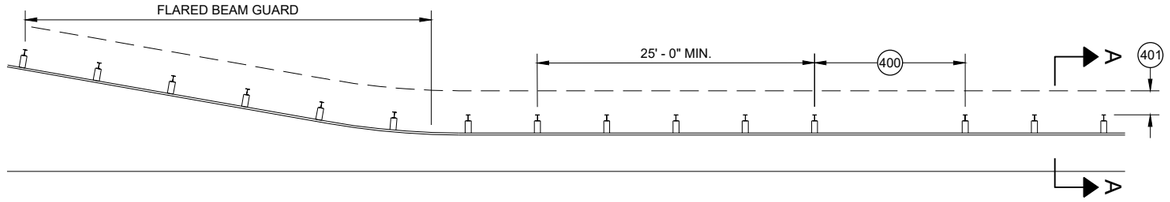

**MISSING POST IN MGS GUARDRAIL**



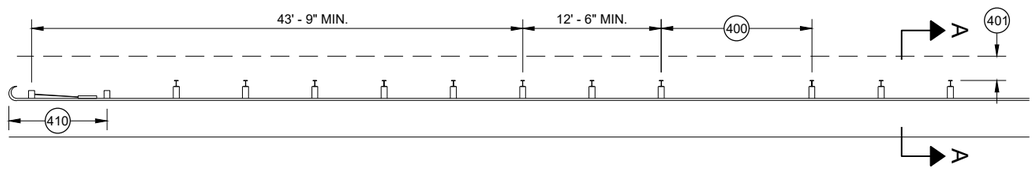

**MISSING POST IN MGS GUARDRAIL NEAR EAT**



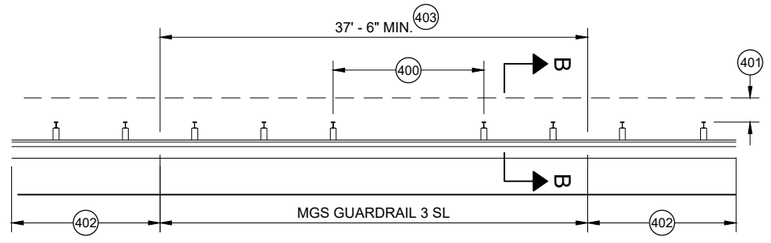

**MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION**




**MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD**

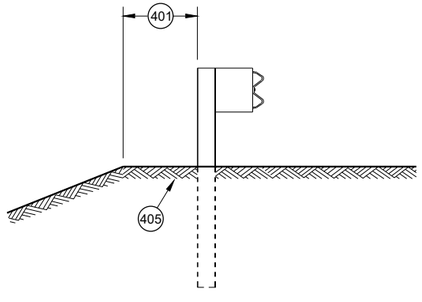



**MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL**

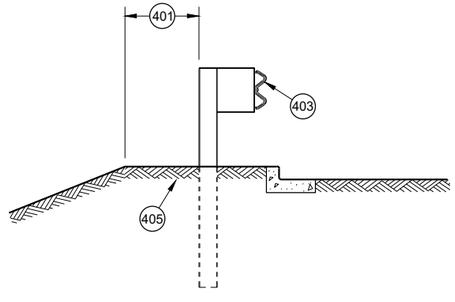



**MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL)** 407

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




**SECTION A - A** 406




**SECTION B - B** 406

**MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA




6


SDD 14B42 - 07d

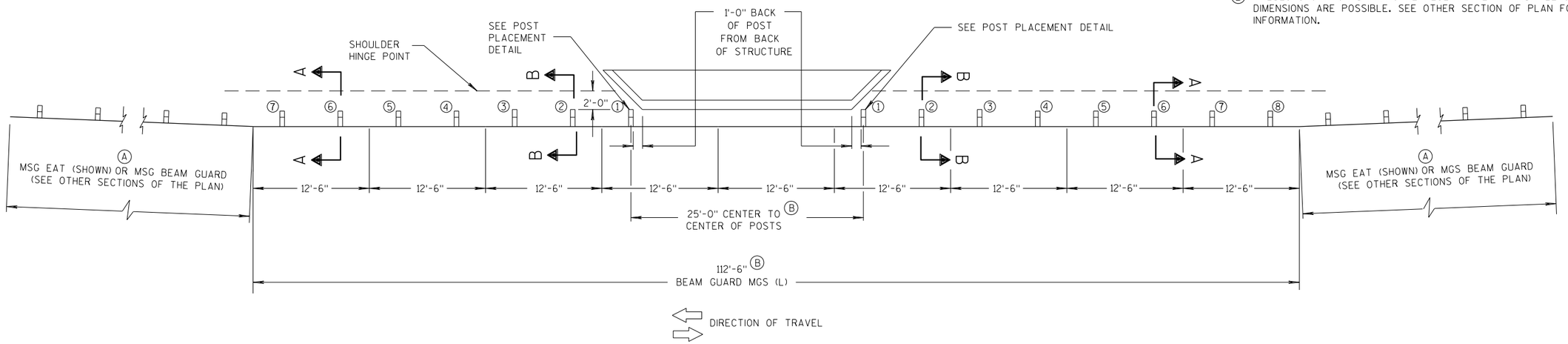
## GENERAL NOTES

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

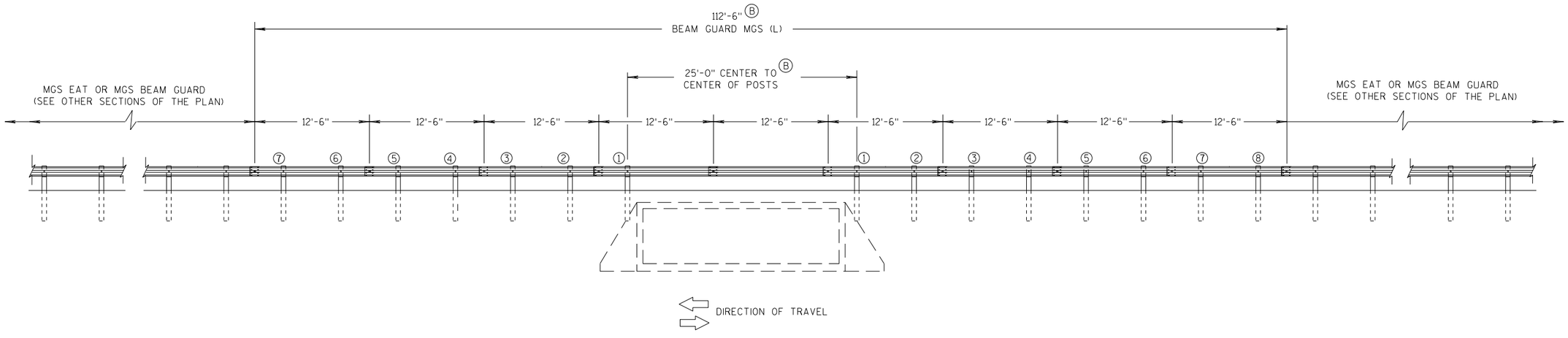
SEE SDD 14 B 42 FOR MORE DETAILS.

(A) FLARE FOR MGS EAT SHOWN. IF INSTALLING MGS NO FLARE NEEDED.

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




**PLAN VIEW**




**ELEVATION VIEW**

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

**MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION




6

S.D.D. 14 B 43-4a

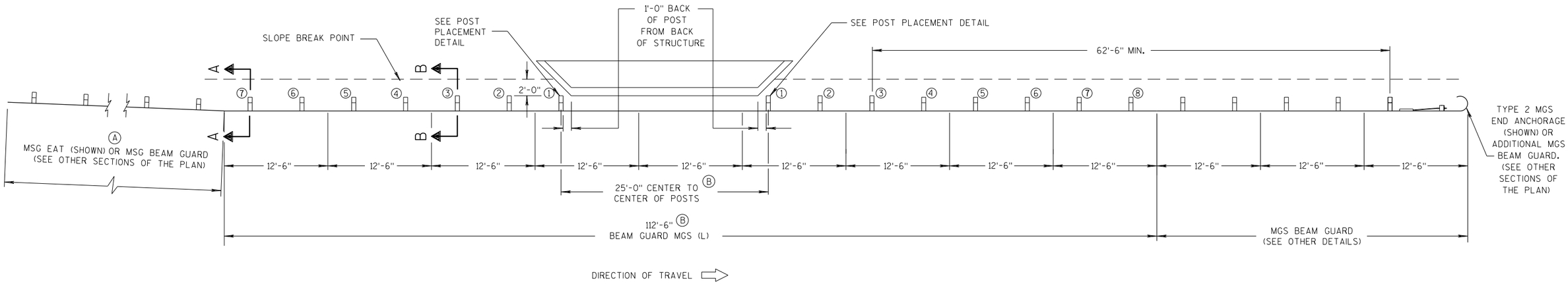
## GENERAL NOTES

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

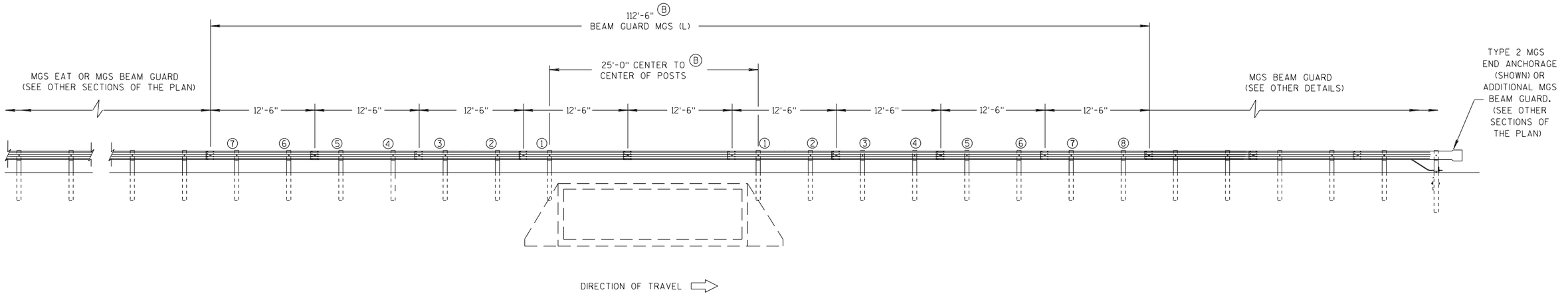
SEE SDD 14 B 42 FOR MORE DETAILS.

(A) FLARE FOR MGS EAT SHOWN. IF INSTALLING MGS NO FLARE NEEDED.

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




**PLAN VIEW**




**ELEVATION VIEW**

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

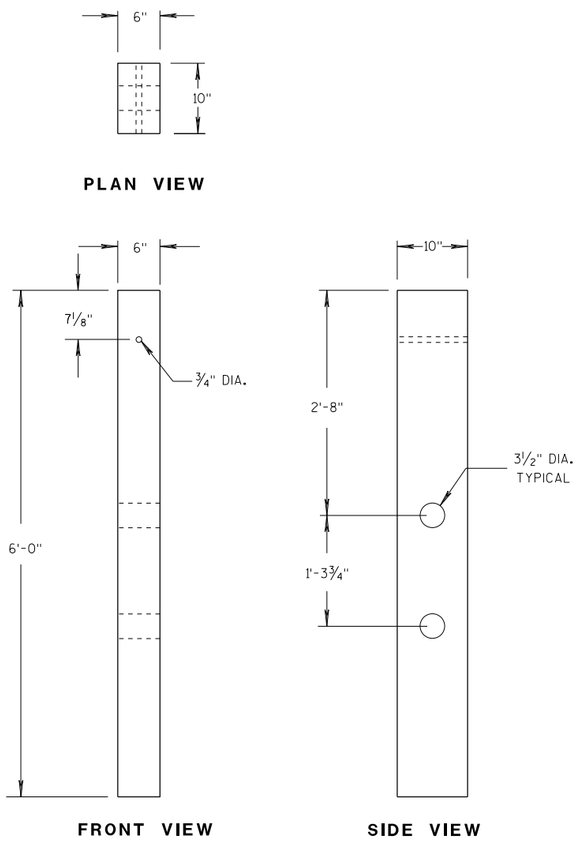
| MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L) | |
|---|---|
| STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION | 100 |

6

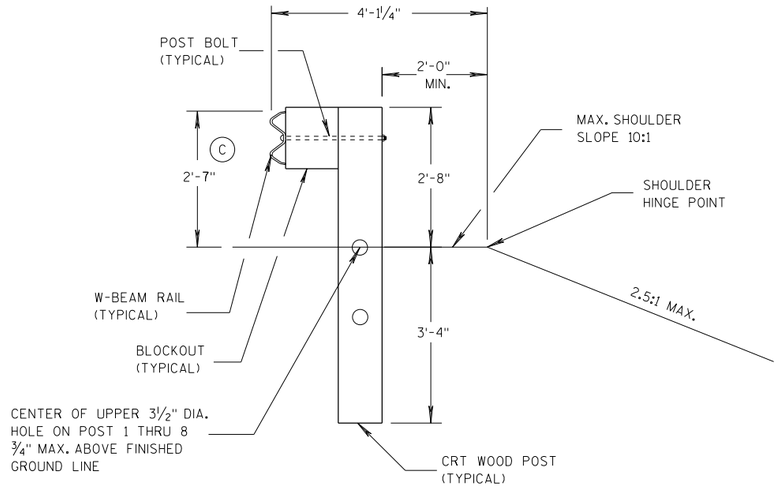
S.D.D. 14 B 43-4b

6

S.D.D. 14 B 43-4b



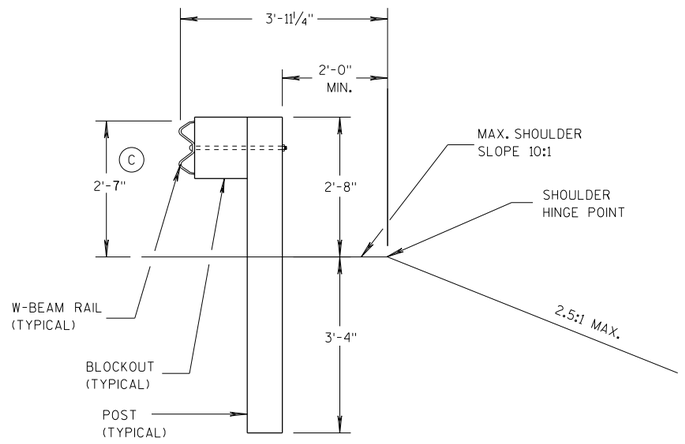

## CRT WOOD POST




**SECTION B-B**

## POSTS NO. 1-3

SEE OTHER DETAILS



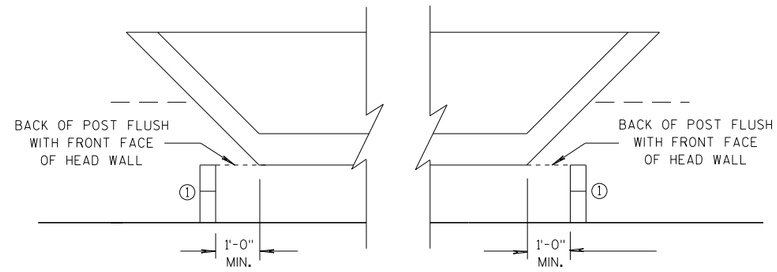

**SECTION A-A**

## POSTS NO. 4-8

SEE OTHER DETAILS

## GENERAL NOTES

(C) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".




## POST PLACEMENT DETAIL

## MIDWEST GUARDRAIL SYSTEM
## LONG SPAN MGS (L)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
07/2018
DATE
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS D 101 NT
ENGINEER

6

S.D.D. 14 B 43-4c

6

S.D.D. 14 B 43-4c

## GENERAL NOTES

(A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE (HPL) AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.

(B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED

(C) DIFFERENT MANUFACTURERS REQUIRE DIFFERENT PERFORATED W - BEAM RAIL END PANELS. SEE MANUFACTURER'S INFORMATION.

(D) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF - TAPPING SCREWS. ONE SCREW PER CORNER.

(E) HARDWARE MAY VARY BETWEEN MANUFACTURER. SEE MANUFACTURER'S DRAWING FOR INFORMATION.

DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

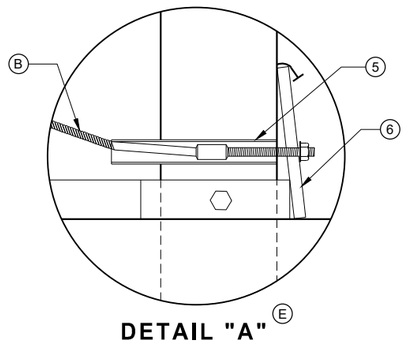
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

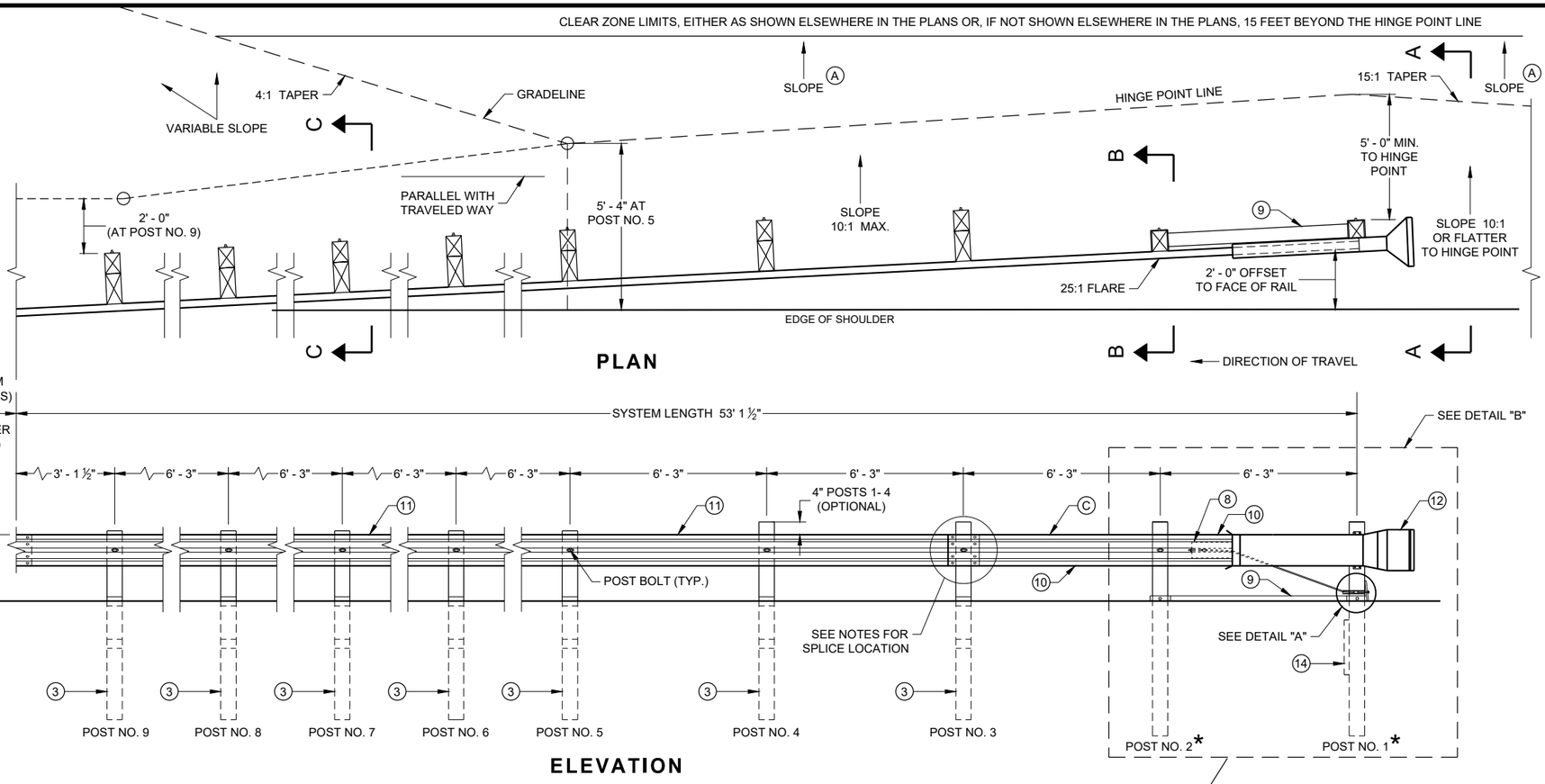
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

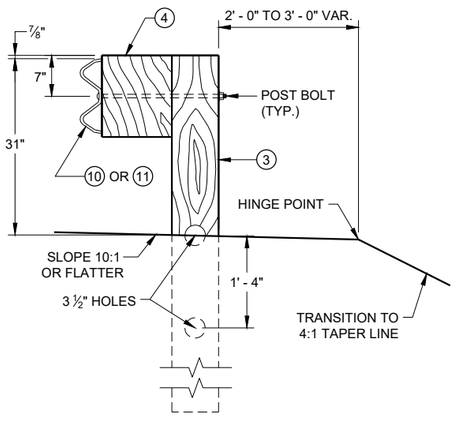
SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

THE CENTER OF THE UPPER 3 ½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.

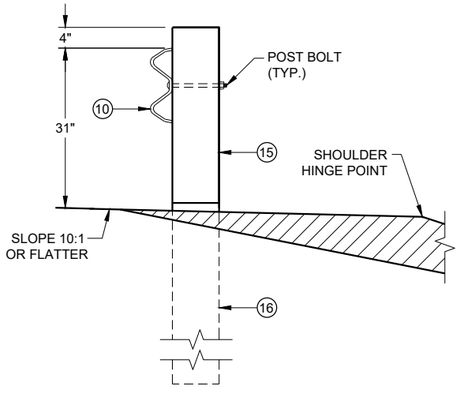



DETAIL "A" (E)

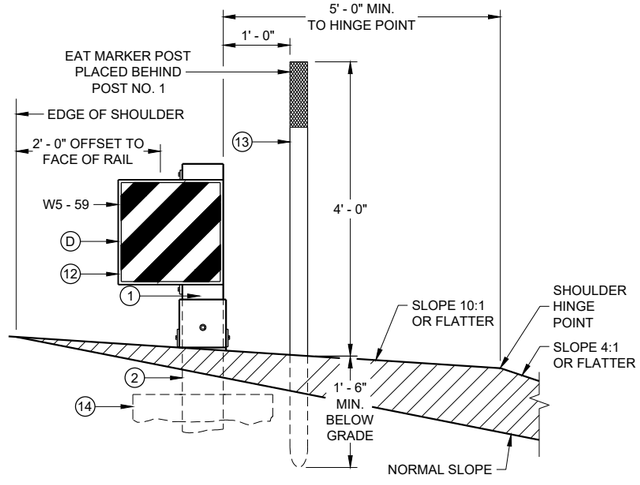


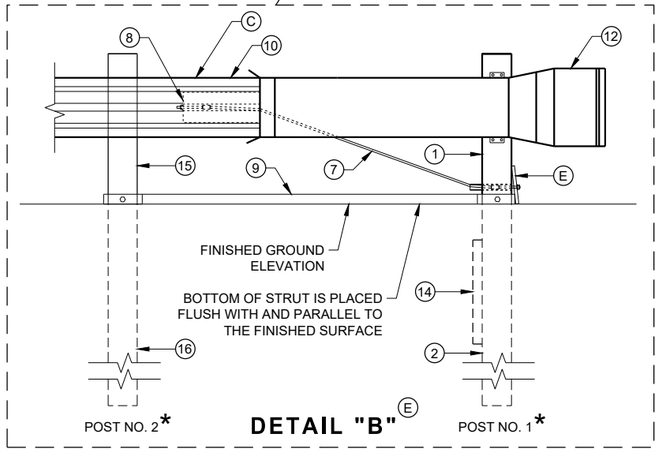

SECTION C - C
TYPICAL AT POST NOS. 3 - 9




SECTION B - B
TYPICAL AT POST NO. 2*




SECTION A - A
TYPICAL AT POST NO. 1*



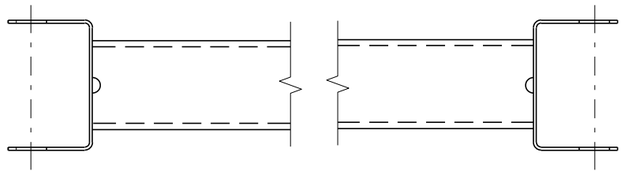

**MIDWEST GUARDRAIL SYSTEM**
**ENERGY ABSORBING TERMINAL (MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a



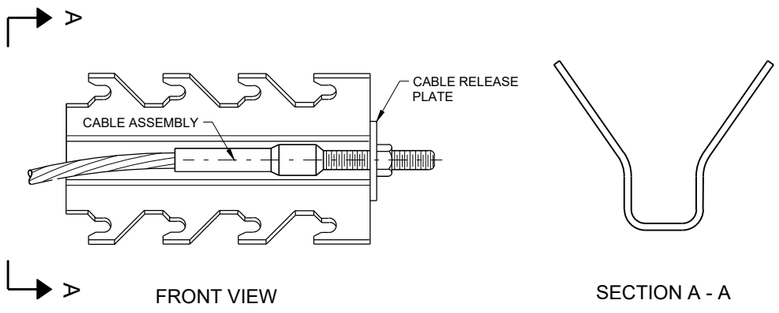
SDD 14B44 - 04a



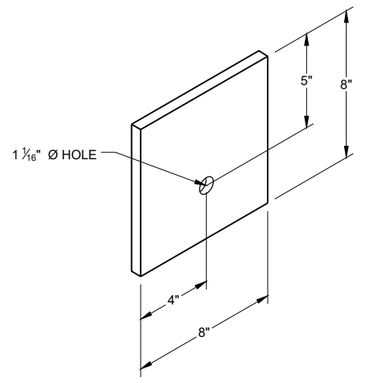
## GENERIC GROUND STRUT ⑨ Ⓔ

## BILL OF MATERIALS

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




## GENERIC ANCHOR CABLE BOX ⑧ Ⓔ




## BEARING PLATE ⑥ Ⓔ

6

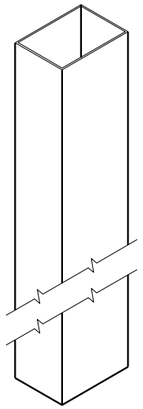
6

SDD 14B44 - 04b

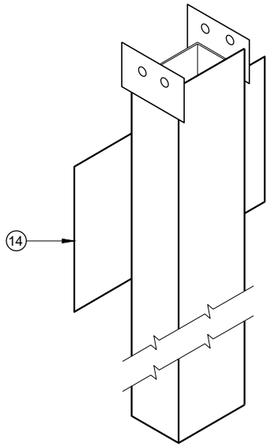
SDD 14B44 - 04b

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

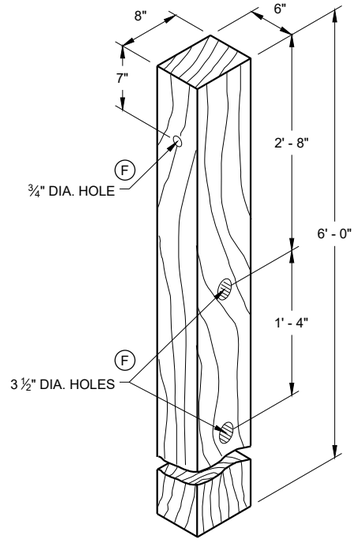
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA



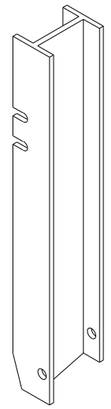
**UPPER POST NO. 1** (1) (E)



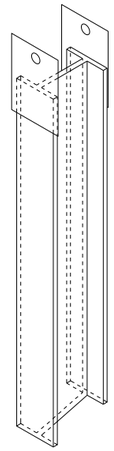

**LOWER POST NO. 1** (2) (E)



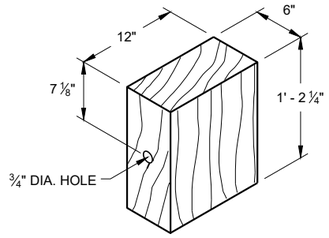

**WOOD CRT POST** (3) (E)
POSTS NUMBER 3-9



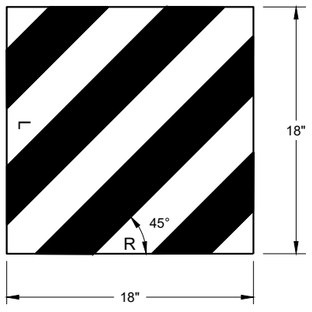
**UPPER POST NO. 2** (15) (E)



**LOWER POST NO. 2** (16) (E)

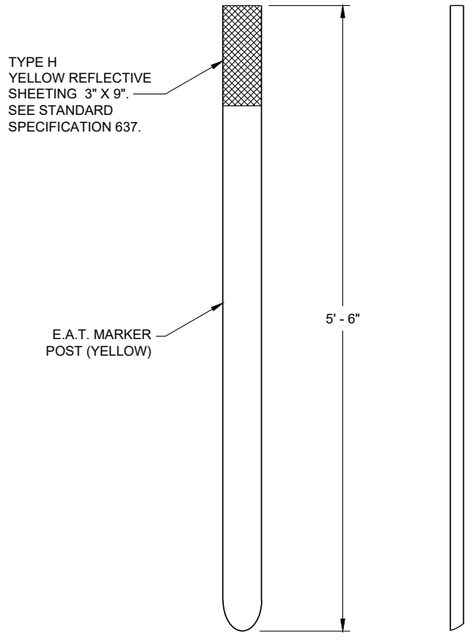



**WOOD BLOCKOUT** (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



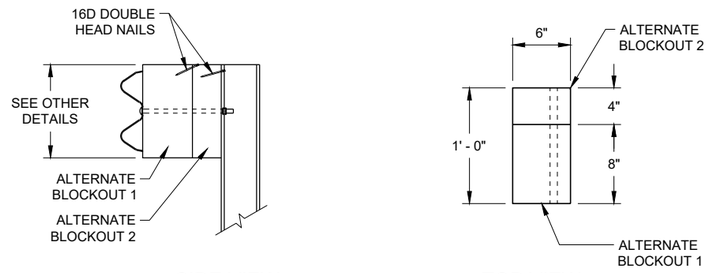

W5 - 59

**REFLECTIVE SHEETING DETAIL** (E)




FRONT VIEW SIDE VIEW

**E.A.T. MARKER POST** (13)




SIDE VIEW TOP VIEW

**ALTERNATE WOOD BLOCKOUT DETAIL**

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

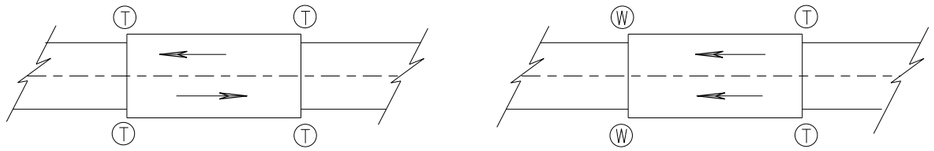
APPROVED
7/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE UNIT SUPERVISOR

FHWA




6


SDD 14B44 - 04c




**TWO WAY TRAFFIC**




**ONE WAY TRAFFIC**

(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

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

## GENERAL NOTES

IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

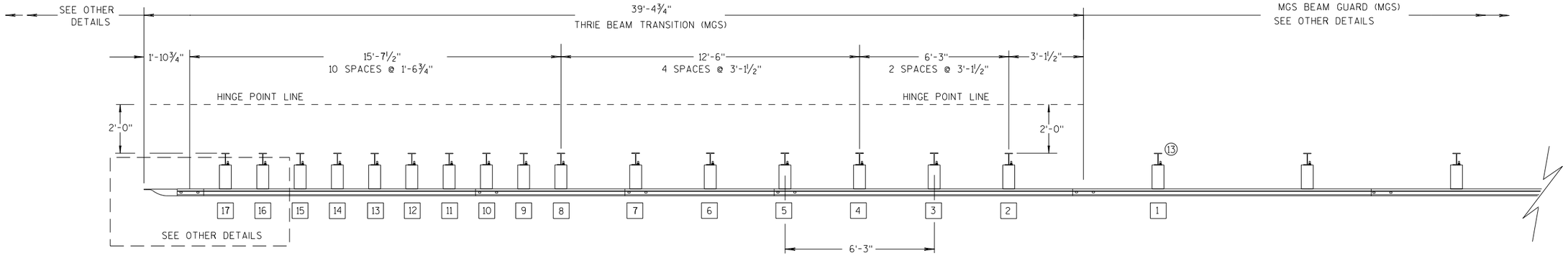
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

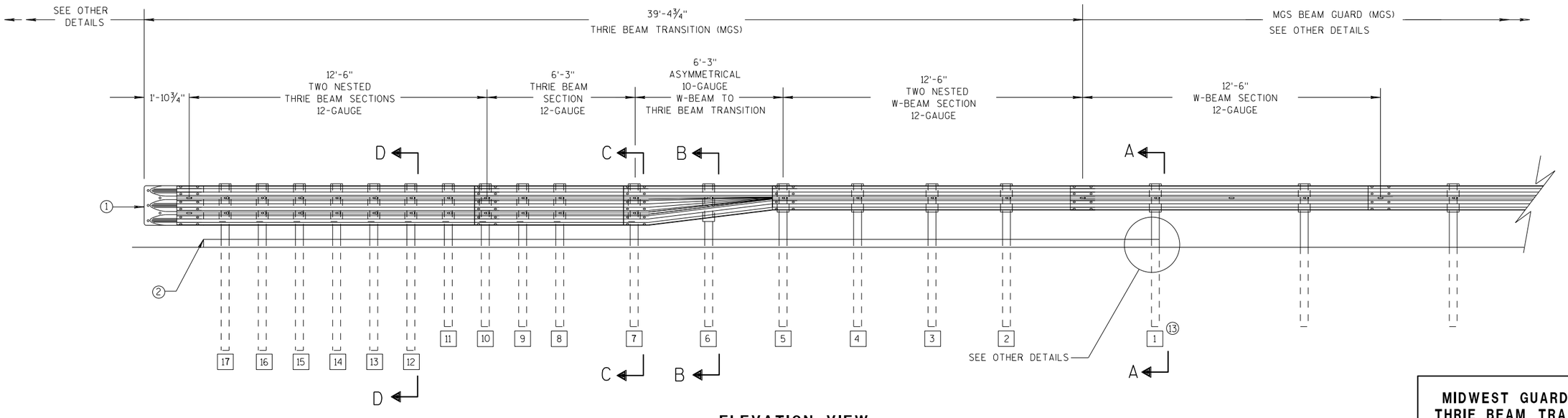
(1) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

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

(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD14B42




**PLAN VIEW**




**ELEVATION VIEW**

## MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR







6

S.D.D. 14 B 45-5a

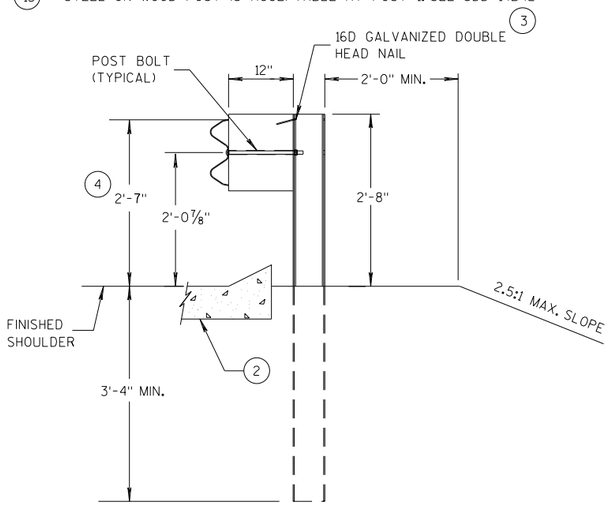
## GENERAL NOTES

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

(3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

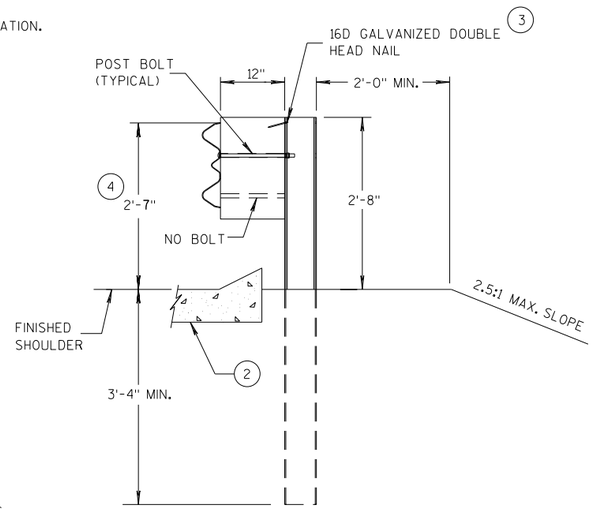
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

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



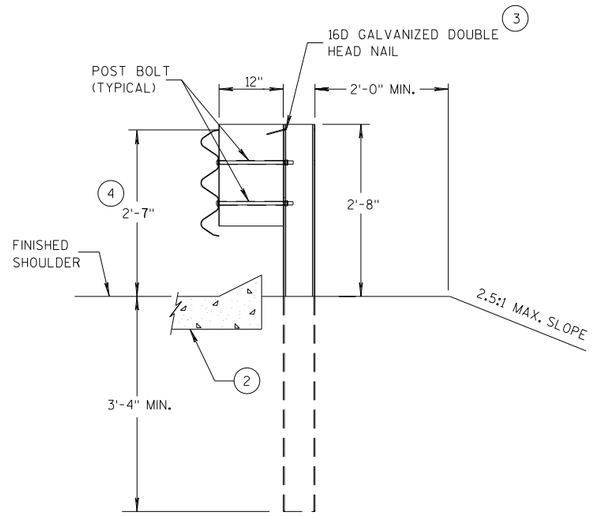

SECTION A-A (13)

**POSTS 1-5**



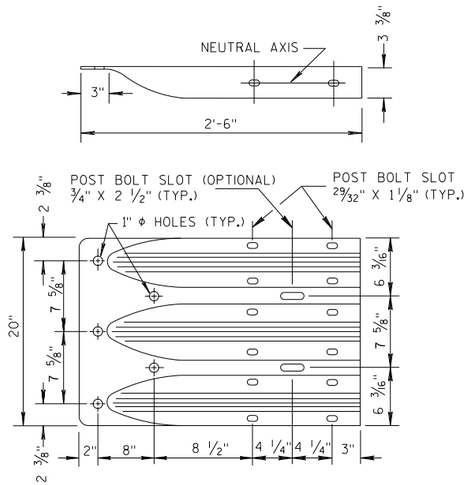

SECTION B-B

**POST 6**

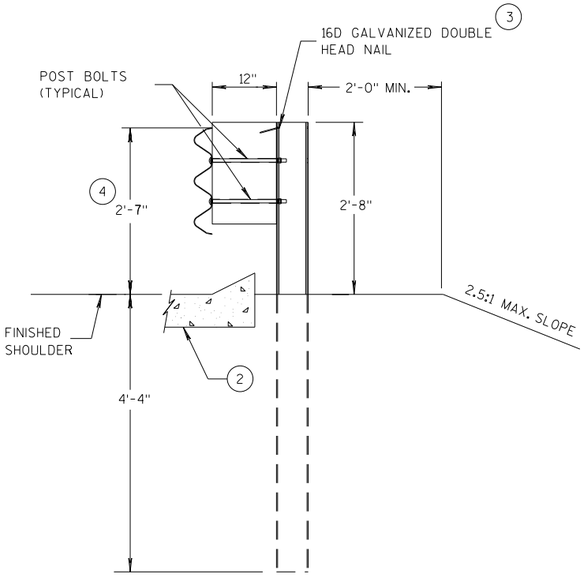



SECTION C-C

**POSTS 7-11**

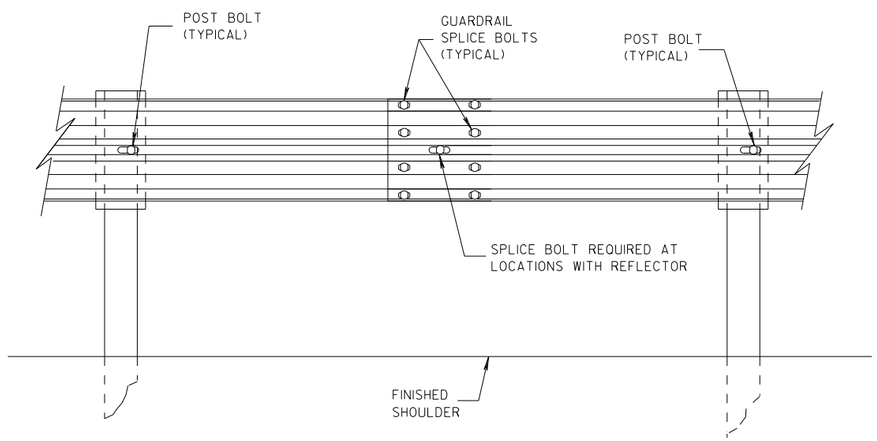



**THRIE BEAM TERMINAL CONNECTOR**




SECTION D-D

**POSTS 12-17**




**SPLICE DETAIL**

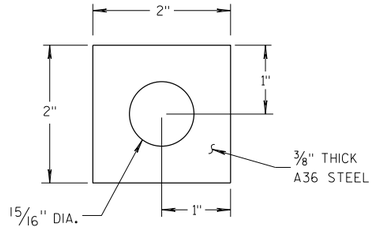
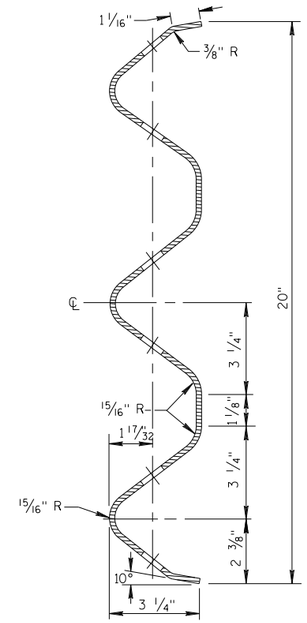



**PLATE WASHER DETAIL**




**SECTION THRU THRIE BEAM RAIL ELEMENT**

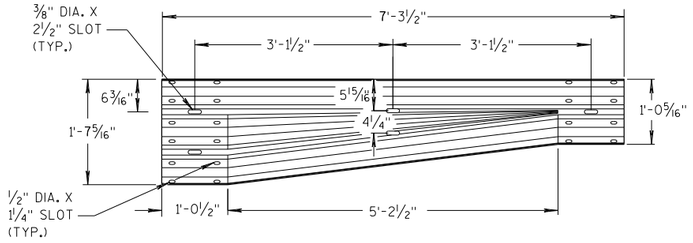
**MIDWEST GUARDRAIL SYSTEM**
**THRIE BEAM TRANSITION (MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

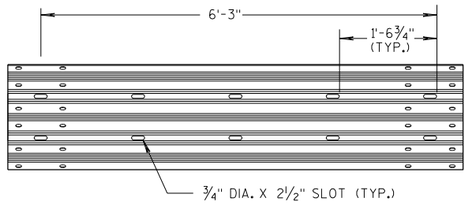



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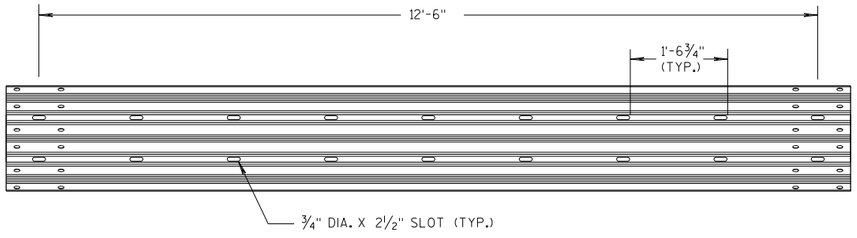
S.D.D. 14 B 45-5b



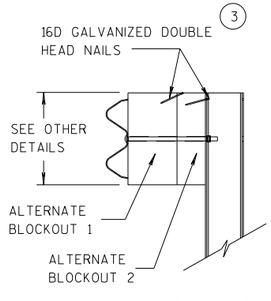

## W-BEAM TO THRIE BEAM TRANSITION SECTION



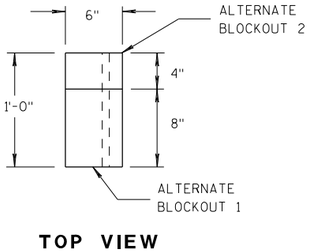

## 6'-3" THRIE BEAM SECTION




## 12'-6" THRIE BEAM SECTION

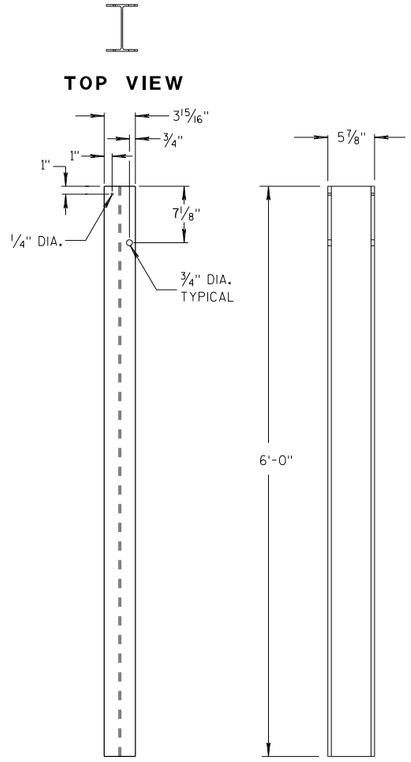



SIDE VIEW



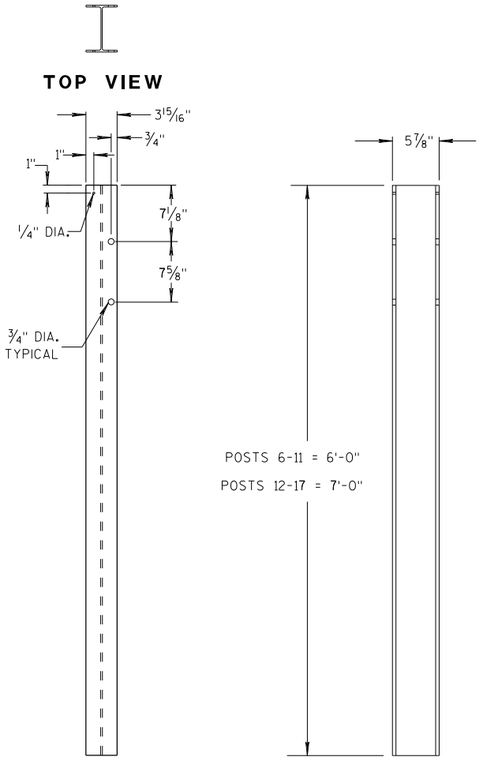

TOP VIEW

## ALTERNATE WOOD BLOCKOUT DETAIL



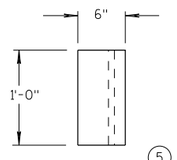

FRONT VIEW SIDE VIEW

## STEEL POSTS 1-5 (13)

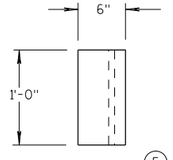



FRONT VIEW SIDE VIEW

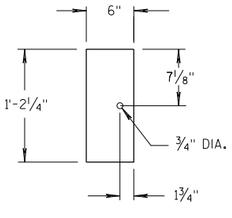
## STEEL POSTS 6-17




TOP VIEW (5)

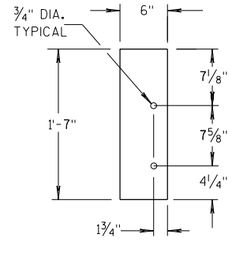



TOP VIEW (5)




FRONT VIEW

## BLOCKOUT POSTS 1-5




FRONT VIEW

## BLOCKOUT POSTS 6-17

## GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

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

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

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

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

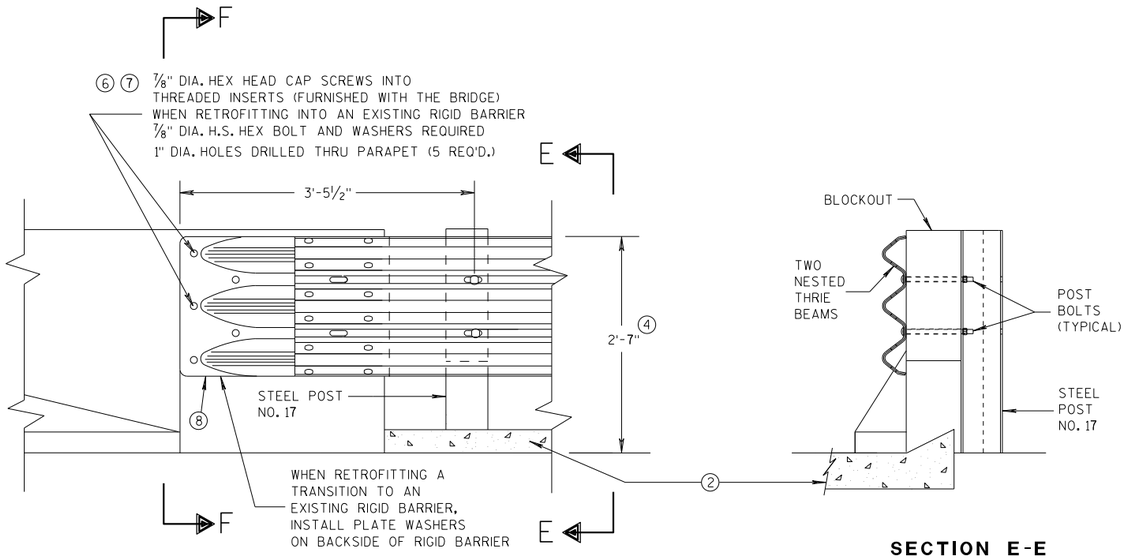
**MIDWEST GUARDRAIL SYSTEM**
**THRIE BEAM TRANSITION (MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOF





6
S.D.D. 14 B 45-5c




FRONT VIEW

SECTION E-E

# THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

## GENERAL NOTES

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

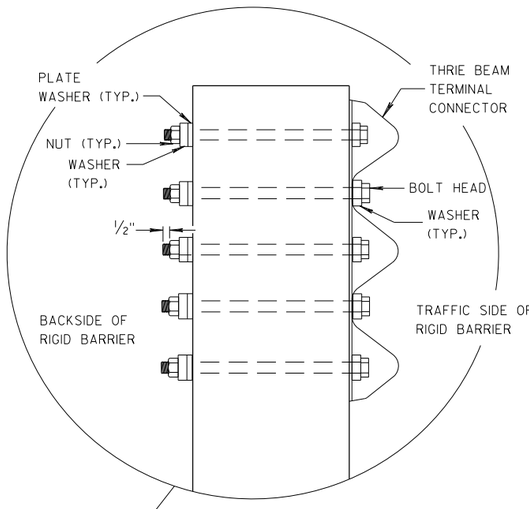
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

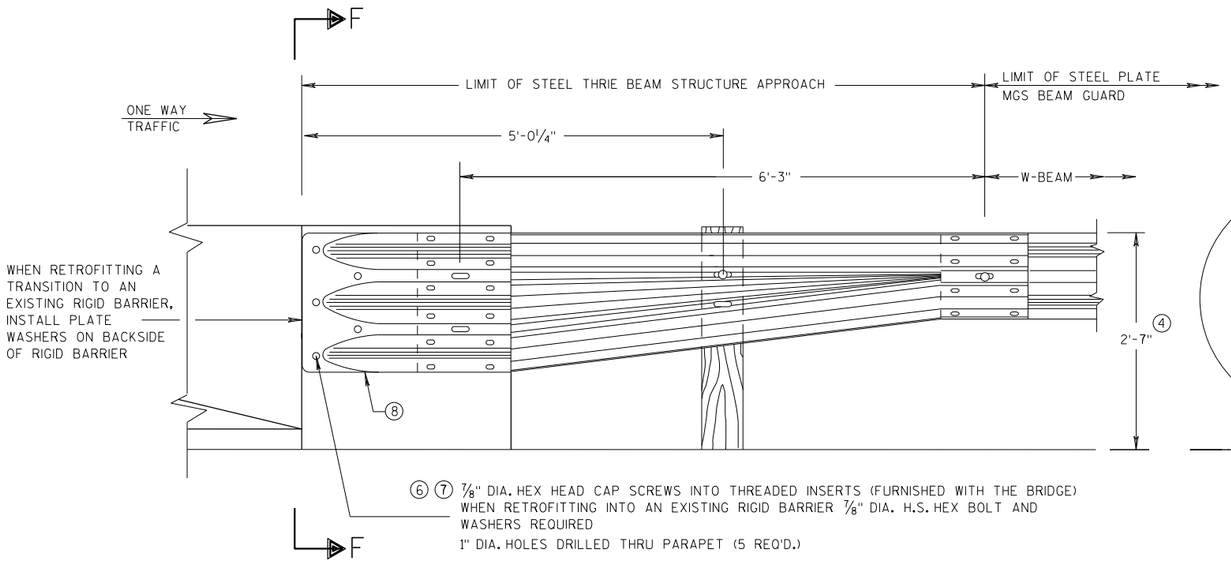
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

⑥ DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

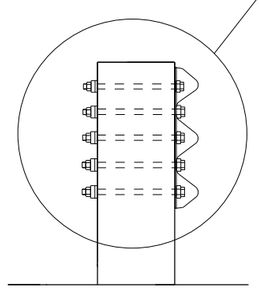
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE.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

⑧ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

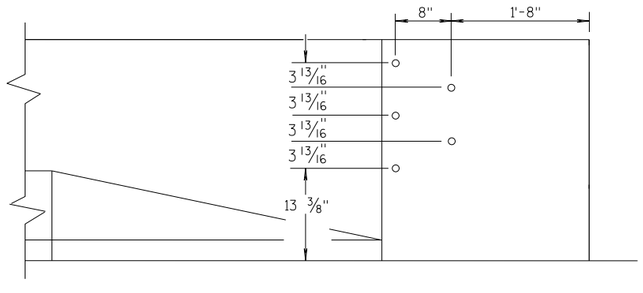



FRONT VIEW



SECTION F-F




DRILL HOLE LOCATION

# W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

**(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)**

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
07/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS D UNIT SUPERVIS ...NT
FHWA



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S.D.D. 14 B 45-5d

# GENERAL NOTES

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

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

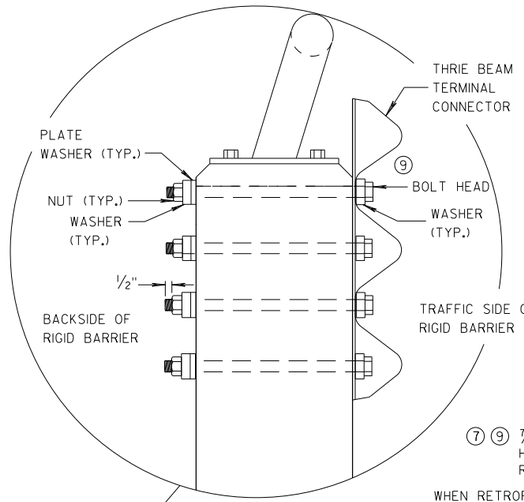
(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

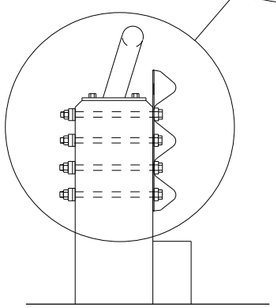
(6) DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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

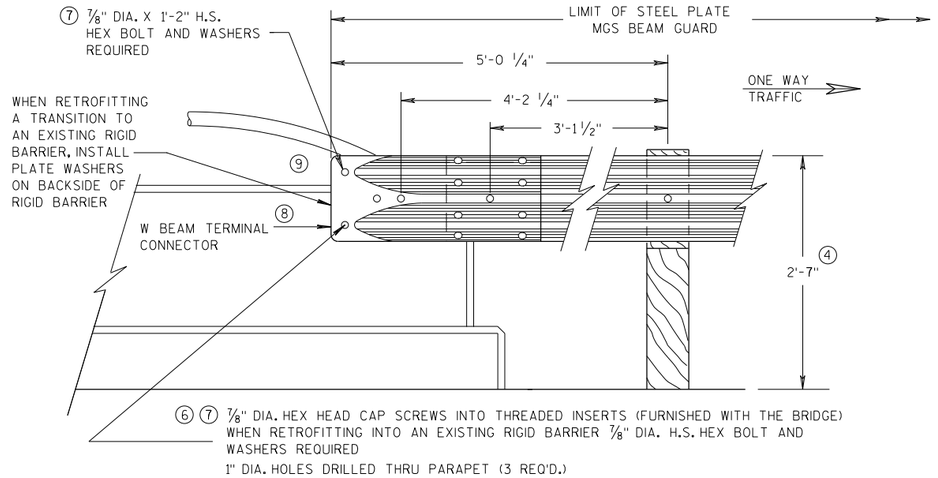
(8) THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 ½".

(9) BOLT, NUT AND WASHERS NOT REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PAPAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE EDGE OF PARAPET.



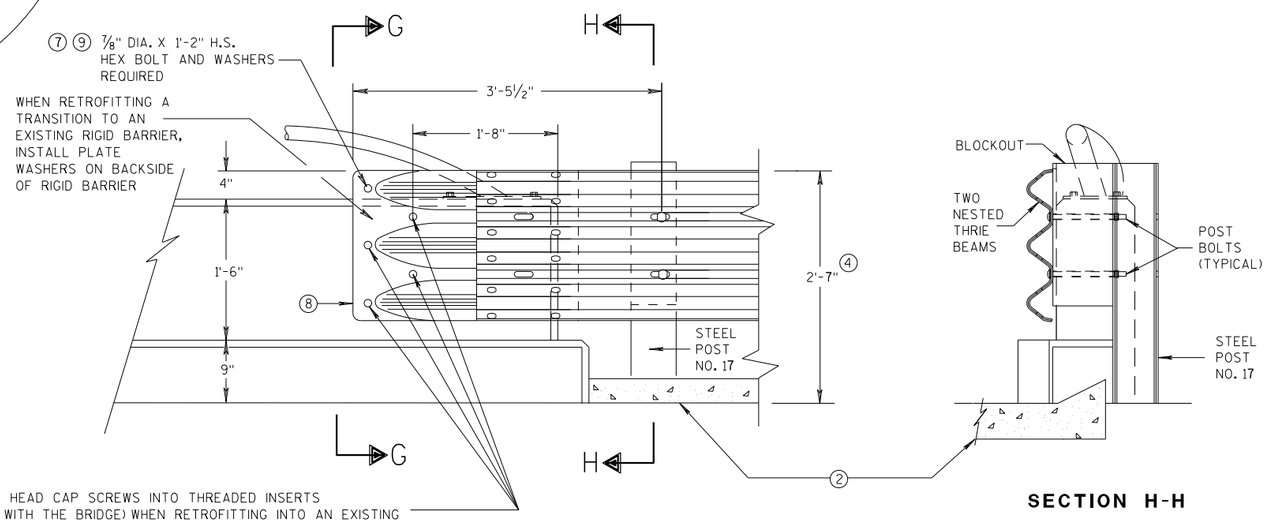
SECTION G-G




**FRONT VIEW**

## W BEAM CONNECTION TO VERTICAL FACE PARAPET

**(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)**




**FRONT VIEW**




SECTION H-H

## THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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FHWA

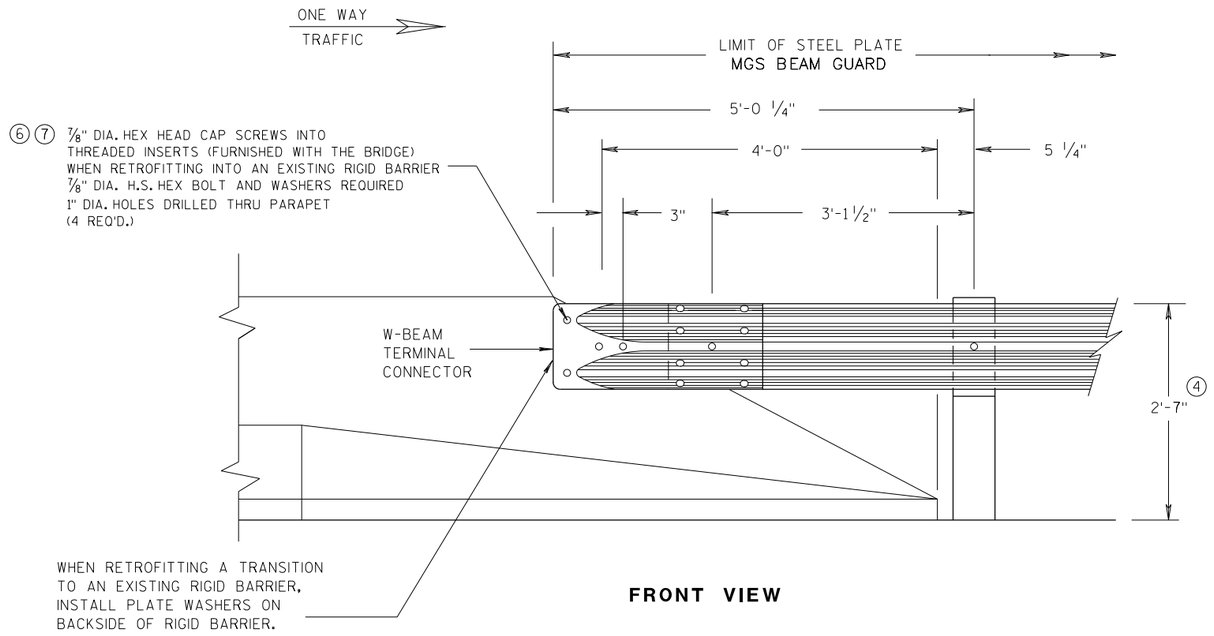


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S.D.D. 14 B 45-5e

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S.D.D. 14 B 45-5e




FRONT VIEW

## W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

(USE ONLY AT TRAFFIC EXIT END OF ONE WAY BRIDGE)

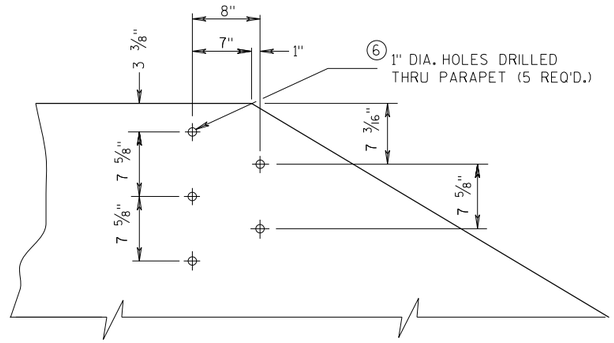
## GENERAL NOTES

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

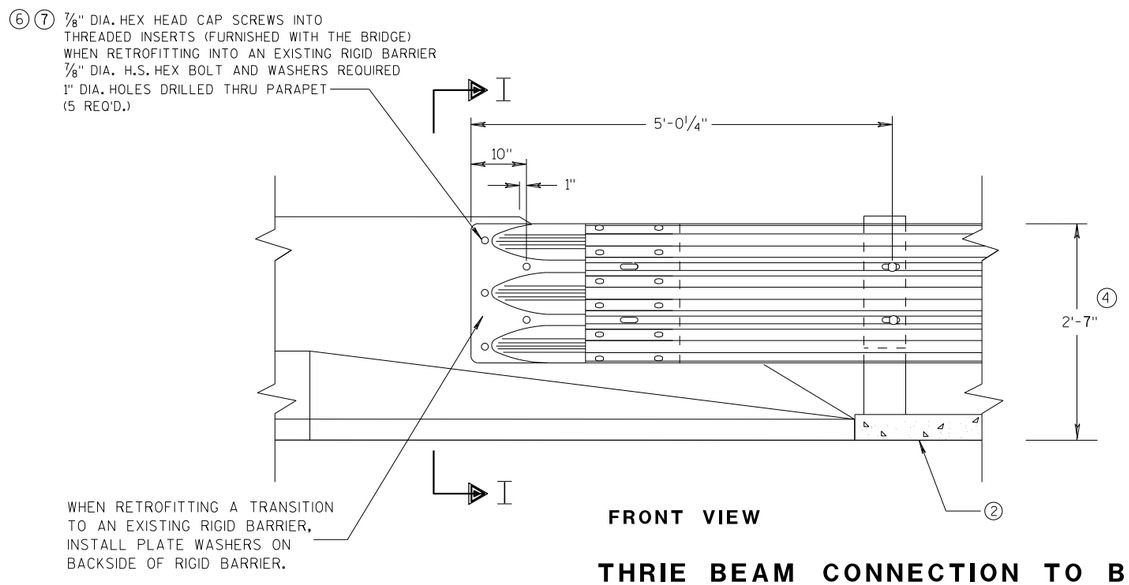
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

⑥ DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

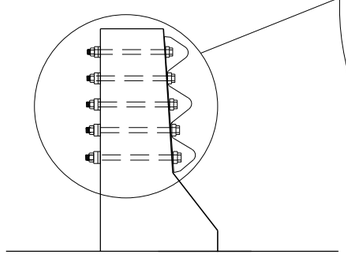
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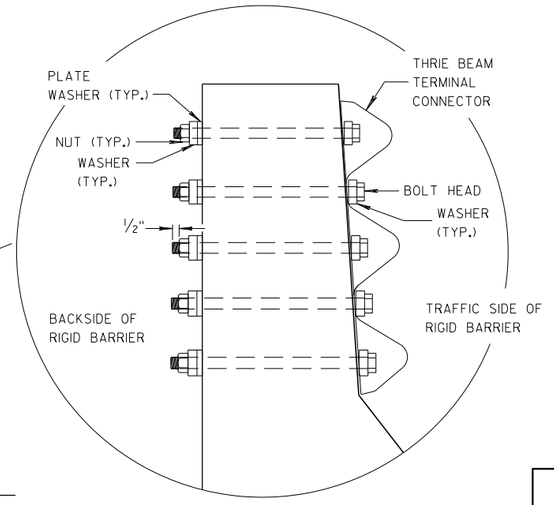

DRILL HOLE LOCATION AND PATTERN FOR THRIE BEAM CONNECTION




FRONT VIEW



SECTION I-I




## THRIE BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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07/2018
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS [illegible] UNIT SUPERVI[illegible]ENT
FHWA

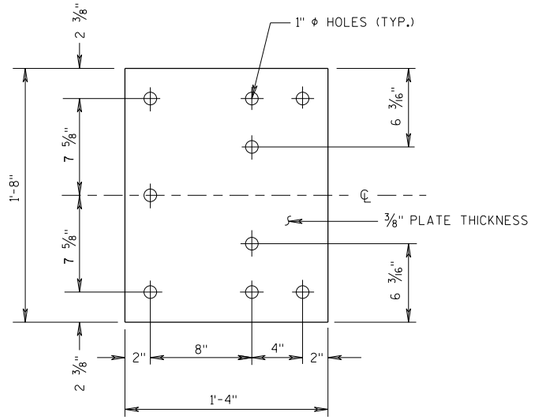


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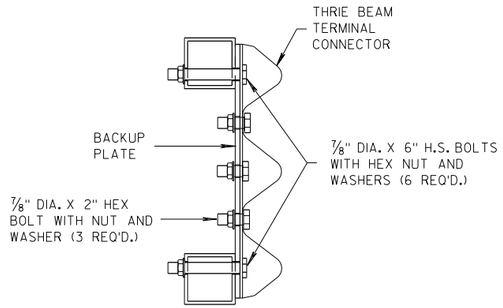
S.D.D. 14 B 45-5f

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S.D.D. 14 B 45-5f




## BACK-UP PLATE DETAIL

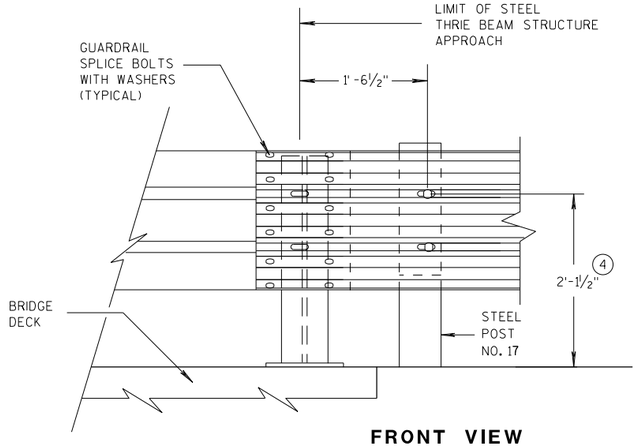



## SECTION J-J

## GENERAL NOTES

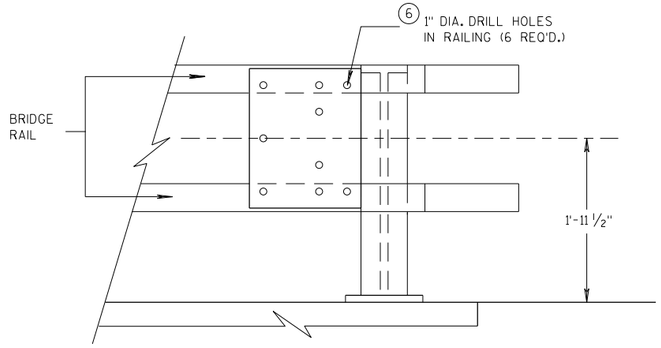
(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

(6) DRILLING HOLES THROUGH THE PAPRPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

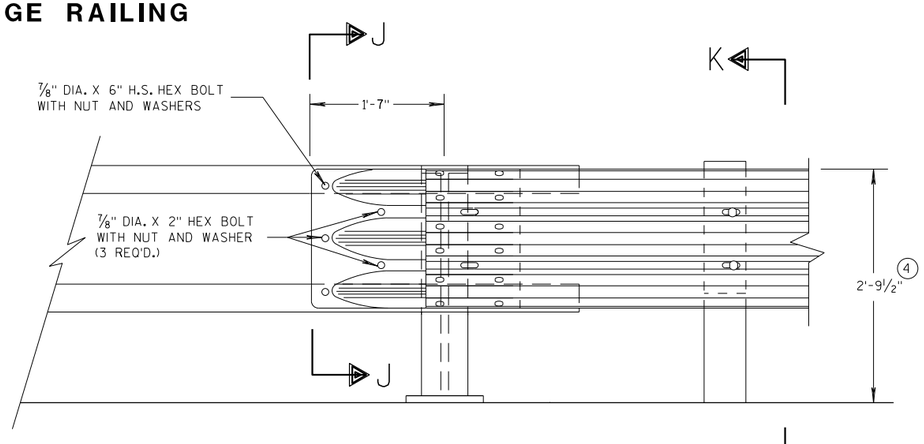



FRONT VIEW

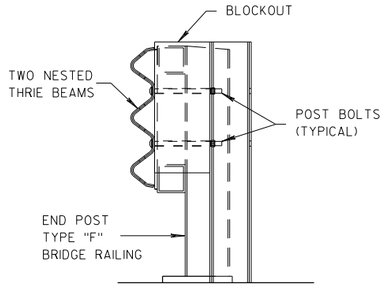
## THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"




## BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING




FRONT VIEW




SECTION K-K

## THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"

## MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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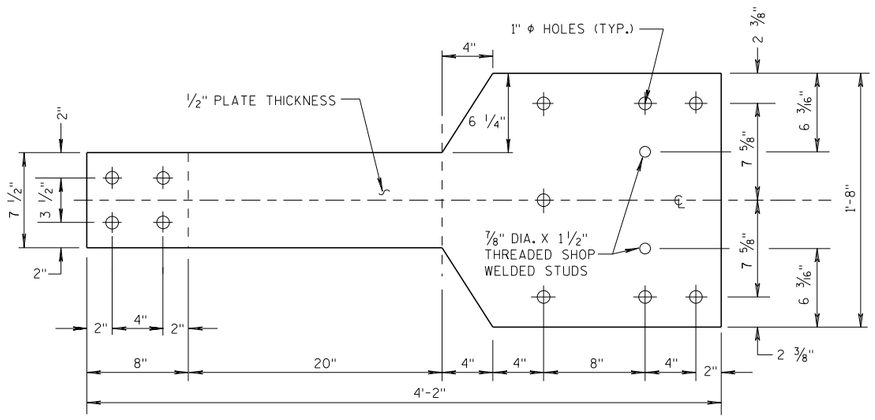
S.D.D. 14 B 45-5g

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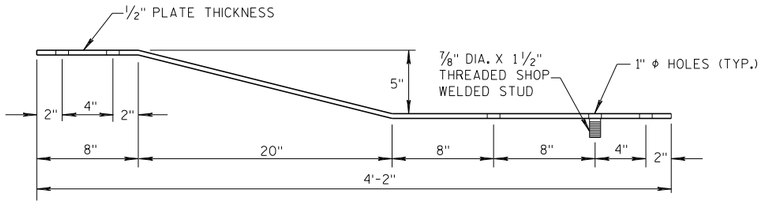
S.D.D. 14 B 45-5g

## GENERAL NOTES

(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

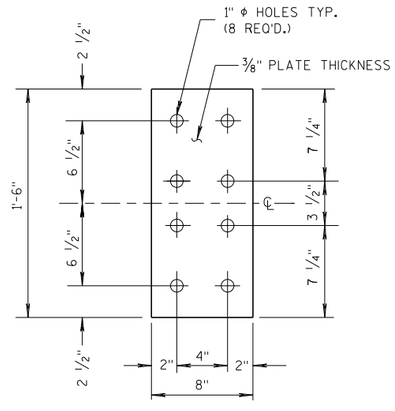



FRONT VIEW



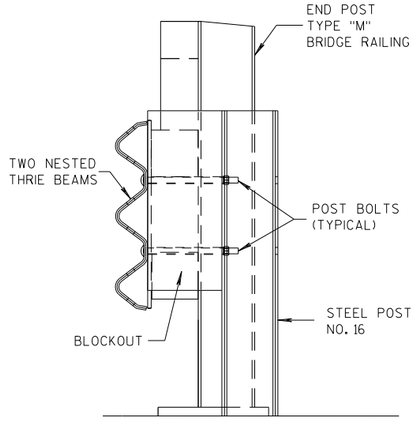

PLAN VIEW

## BACK-UP PLATE DETAIL, TYPE "M"

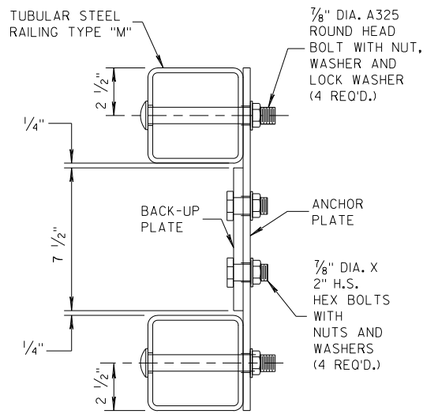



FRONT VIEW

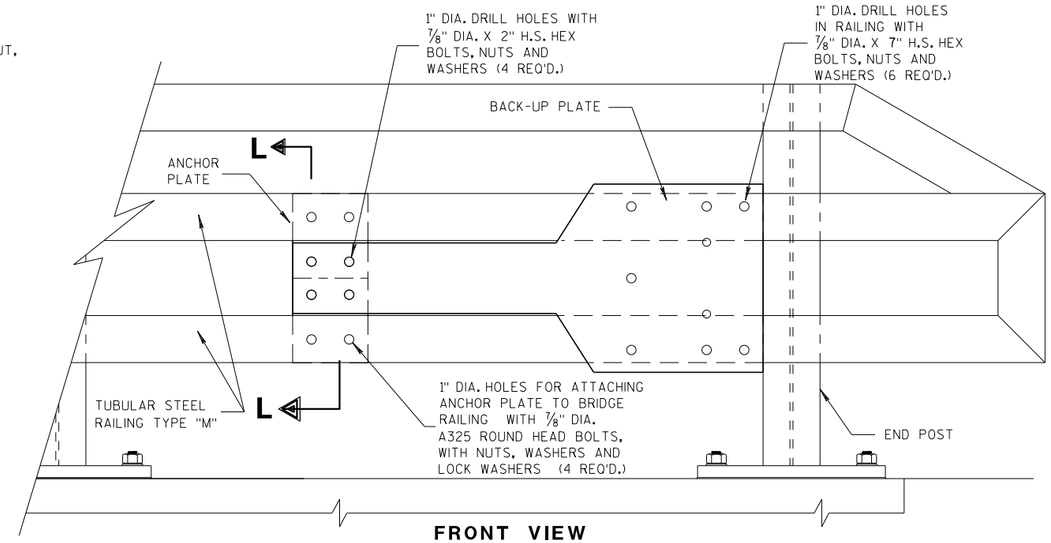
## ANCHOR PLATE DETAIL, TYPE "M"




SECTION M-M

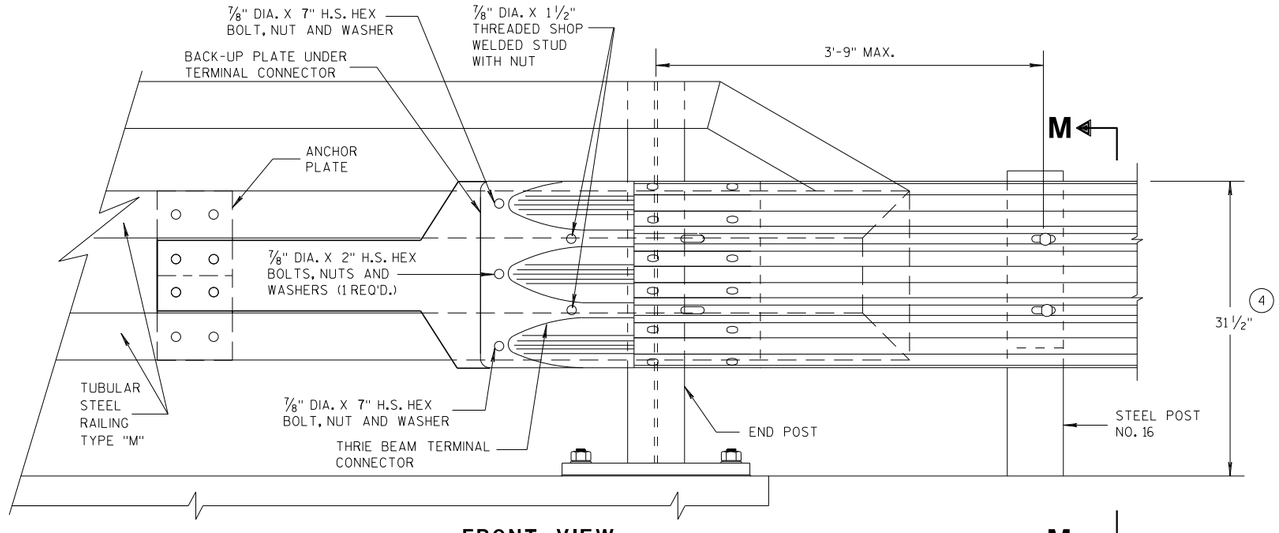



SECTION L-L

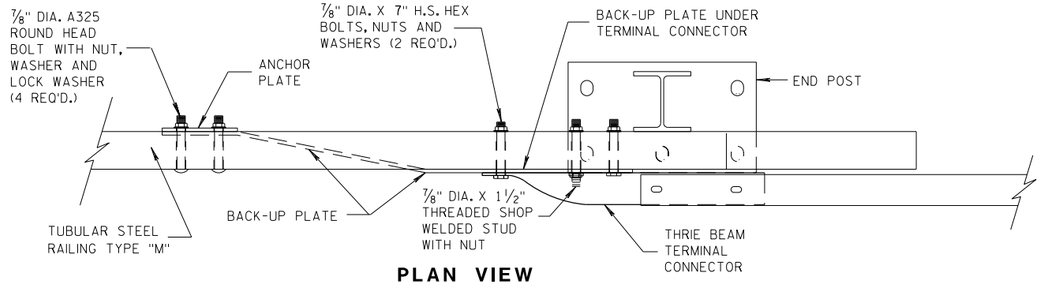



FRONT VIEW

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




FRONT VIEW




PLAN VIEW

## THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
07/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS UNIT SUPERVISOR
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S.D.D. 14 B 45-5h

## GENERAL NOTES

COVER PLATE PANELS ARE 3/16" THICK.

ALL STIFFENERS ARE 1/4" THICK.

CONNECTOR PLATE SHALL BE FABRICATED FROM ASTM GRADE A36 STEEL AND GALVANIZED.

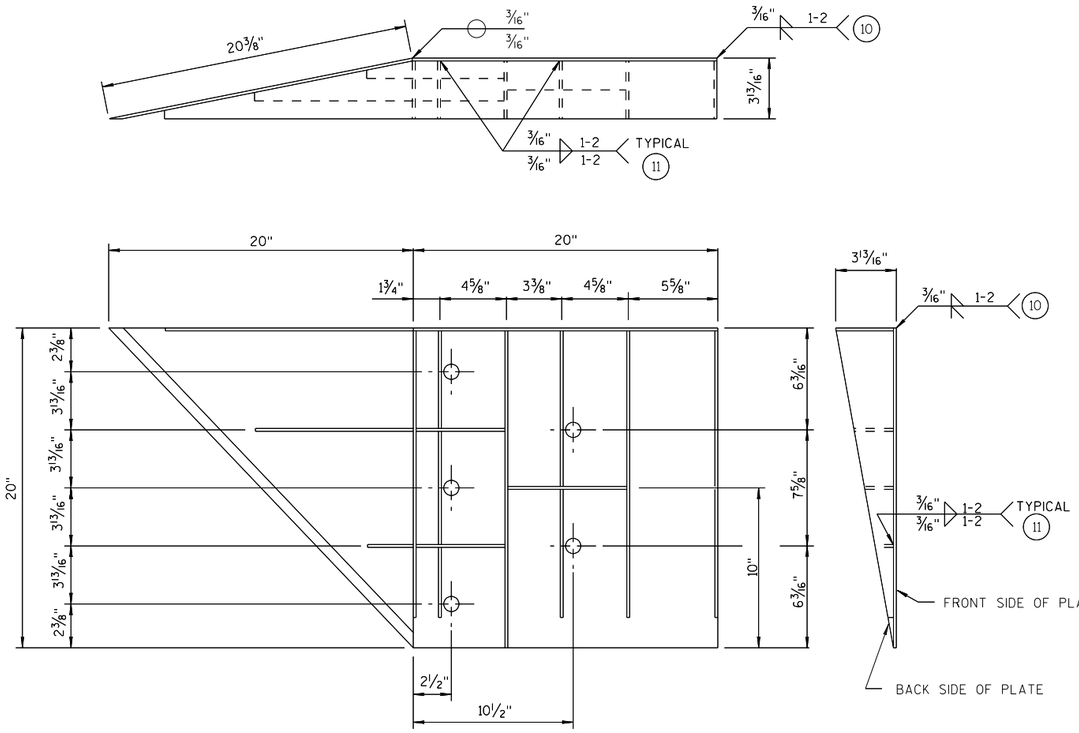
FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.

ALL HOLE DIAMETERS SHALL BE 1".

FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

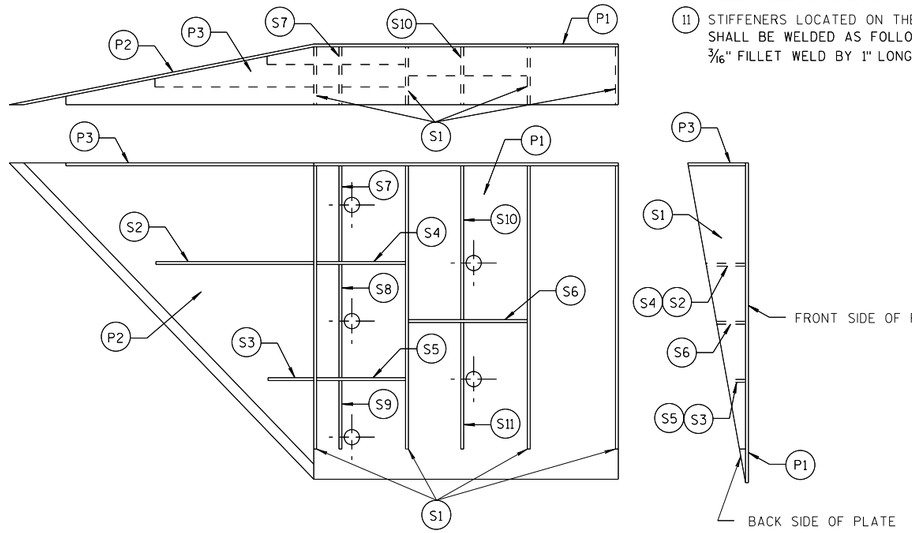
(10) STIFFENERS LOCATED AT THE OUTSIDE EDGES OF THE COVER PLATES SHALL BE WELDED AS FOLLOWS:
SINGLE BEVEL GROOVE WELD ON EXTERNAL SIDES AND 3/16" FILLET WELD BY 1" LONG SPACED AT 2" ON INTERNAL SIDES.

(11) STIFFENERS LOCATED ON THE INSIDE OF THE COVER PLATE SHALL BE WELDED AS FOLLOWS:
3/16" FILLET WELD BY 1" LONG SPACED AT 2".




### WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)




### PLATE AND STIFFENER IDENTIFICATION

(VIEWED FROM BACK SIDE OF PLATE)

**CONNECTOR PLATE DIMENSION (PER ASSEMBLY)**

| PLATE | QUANTITY | SHAPE | SIZE (A x B x C x D) | THICKNESS |
|---|---|---|---|---|
| P1 | 1 | | 20" x 20" | 3/16" |
| P2 | 1 | | 20" x 20" x 28 9/16" | 3/16" |
| P3 | 1 | | 39" x 3 5/8" x 20" x 19 5/16" | 3/16" |
| S1 | 4 | | 18 7/16" x 3 5/8" x 18 3/4" | 1/4" |
| S2 | 1 | | 10 1/4" x 2 7/16" x 10 3/8" x 1/2" | 1/4" |
| S3 | 1 | | 3" x 1 1/16" x 3 1/8" x 1/2" | 1/4" |
| S4 | 1 | | 6 1/8" x 2 7/16" | 1/4" |
| S5 | 1 | | 6 1/8" x 1 1/16" | 1/4" |
| S6 | 1 | | 7 3/4" x 1 3/4" | 1/4" |
| S7 | 1 | | 2 9/16" x 6" x 3 5/8" x 5 7/8" | 1/4" |
| S8 | 1 | | 1 5/32" x 7 1/2" x 2 1/2" x 7 3/8" | 1/4" |
| S9 | 1 | | 6 1/16" x 6 3/16" x 1 3/32" | 1/4" |
| S10 | 1 | | 1 7/8" x 9 7/8" x 3 5/8" x 9 11/16" | 1/4" |
| S11 | 1 | | 8 1/2" x 8 3/4" x 1 13/16" | 1/4" |

### SINGLE SLOPE CONNECTION PLATE

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018
DATE
FHWA

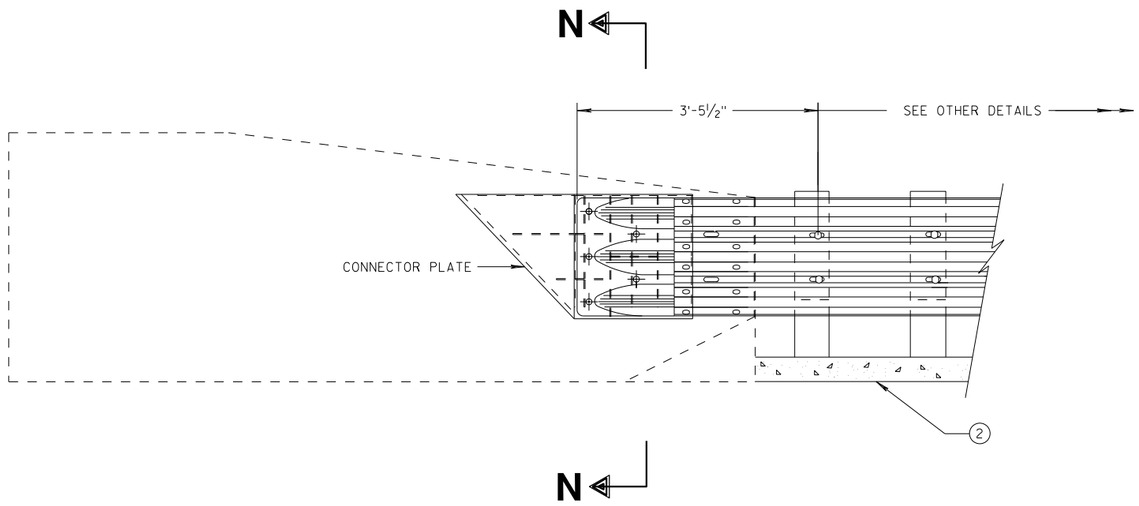
/S/ Rodney Taylor
ROADWAY STANDARDS I
UNIT SUPERVI



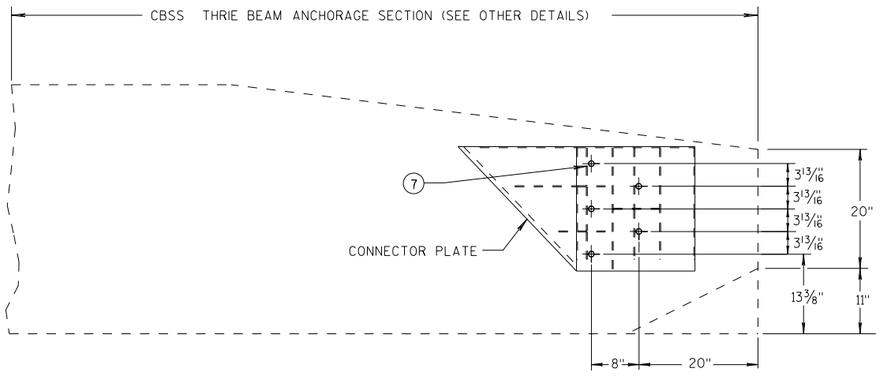


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S.D.D. 14 B 45-5i




## THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER



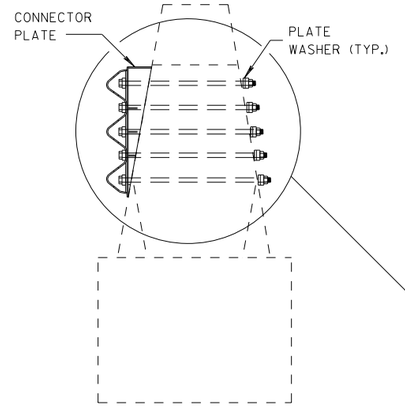

## SINGLE SLOPE CONNECTION PLATE PLACEMENT

## GENERAL NOTES

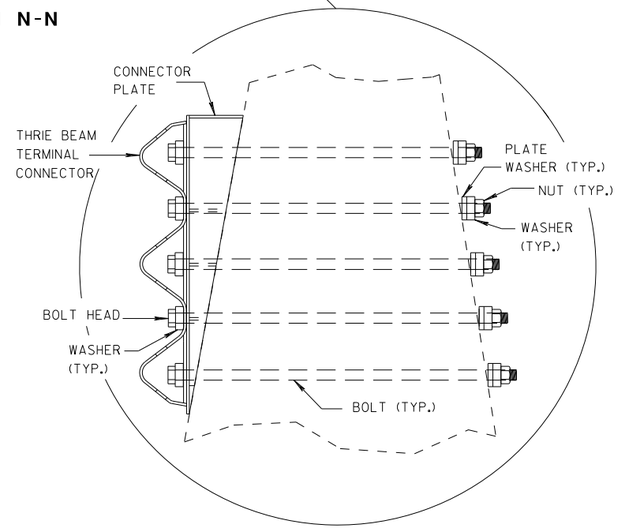
CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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

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




SECTION N-N




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

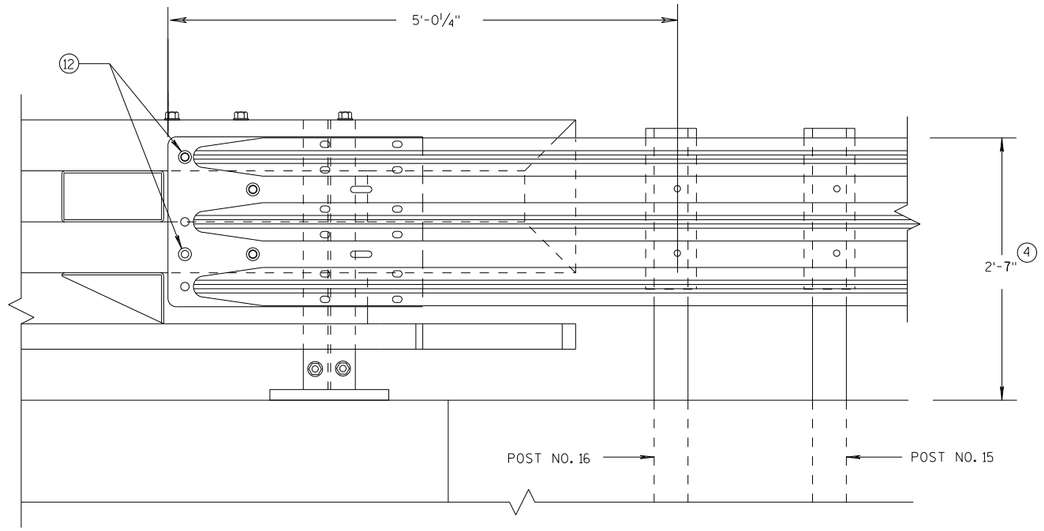
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DI UNIT SUPERVIS
FHWA



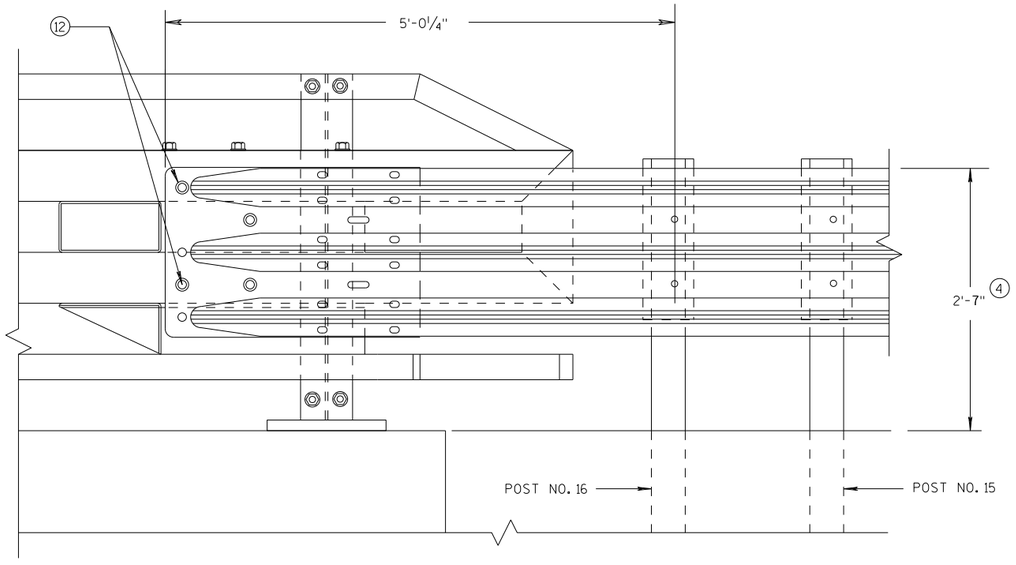

6

S.D.D. 14 B 45-5j




## ELEVATION OF DETAIL AT NY3 END POST

### THRIE BEAM RAIL ATTACHMENT




## ELEVATION OF DETAIL AT NY4 END POST

### THRIE BEAM RAIL ATTACHMENT

## GENERAL NOTES

(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS D
UNIT SUPERVIS
FHWA



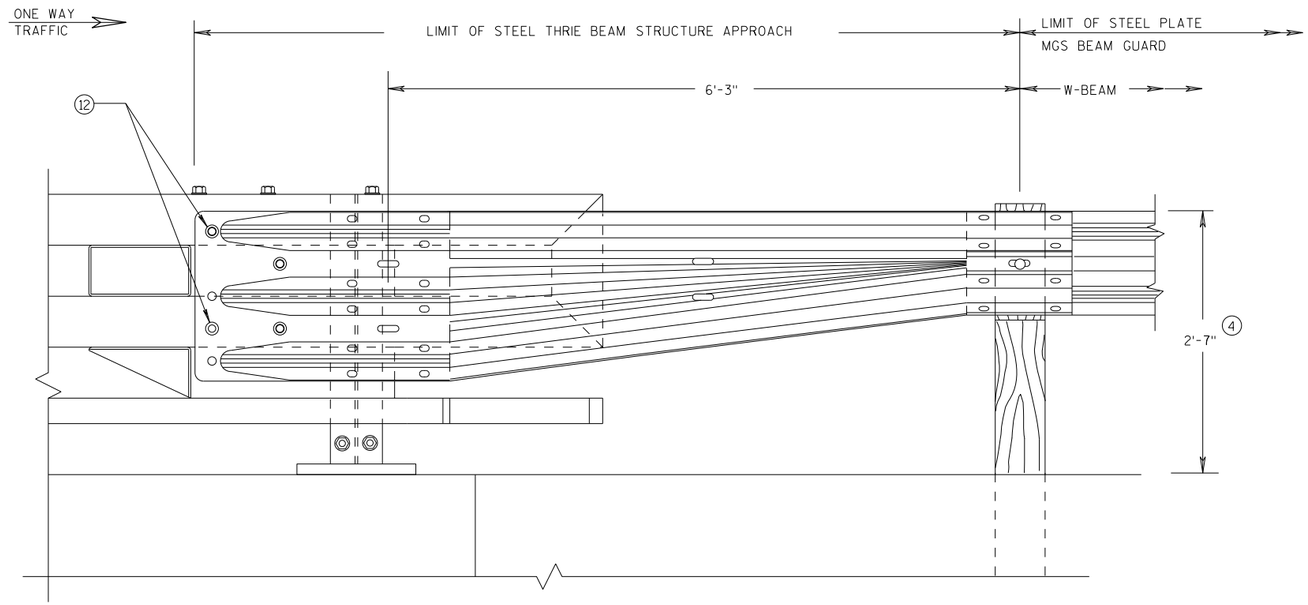
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6

S.D.D. 14 B 45-5k

6

S.D.D. 14 B 45-5k




FRONT VIEW

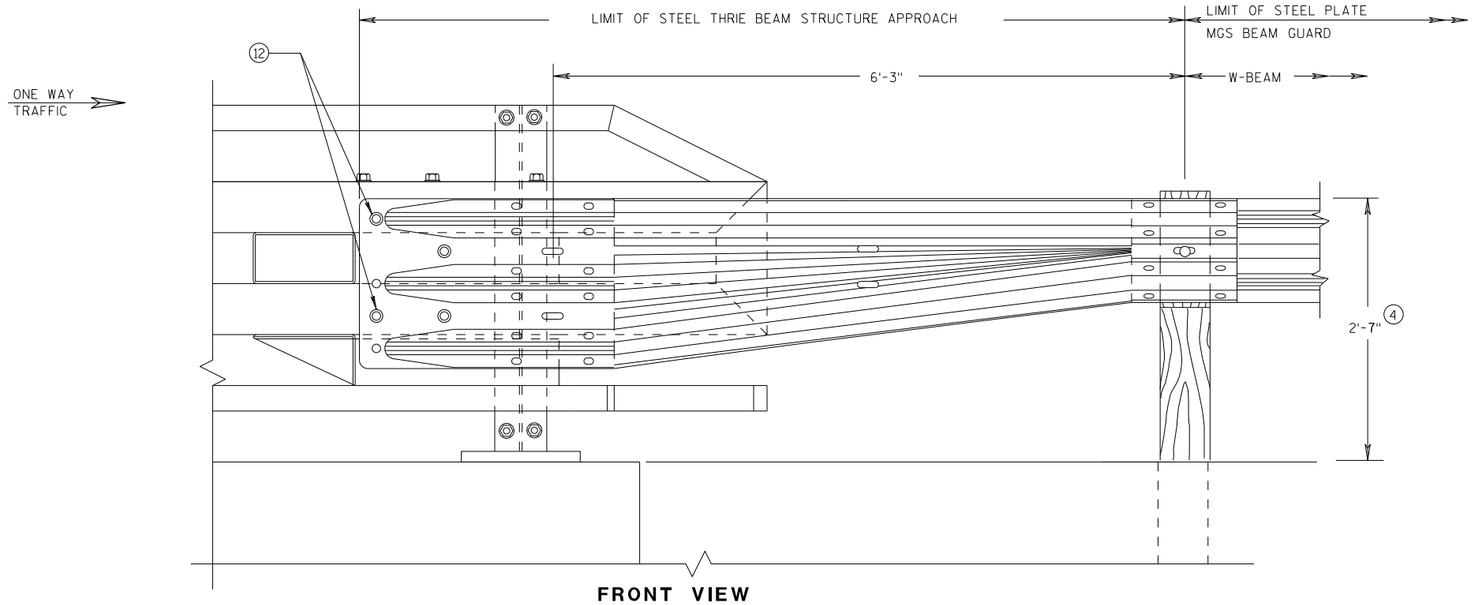
## W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY3"

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

## GENERAL NOTES

(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

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




FRONT VIEW

## W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY4"

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018 DATE
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS D
UNIT SUPERVIS

NT

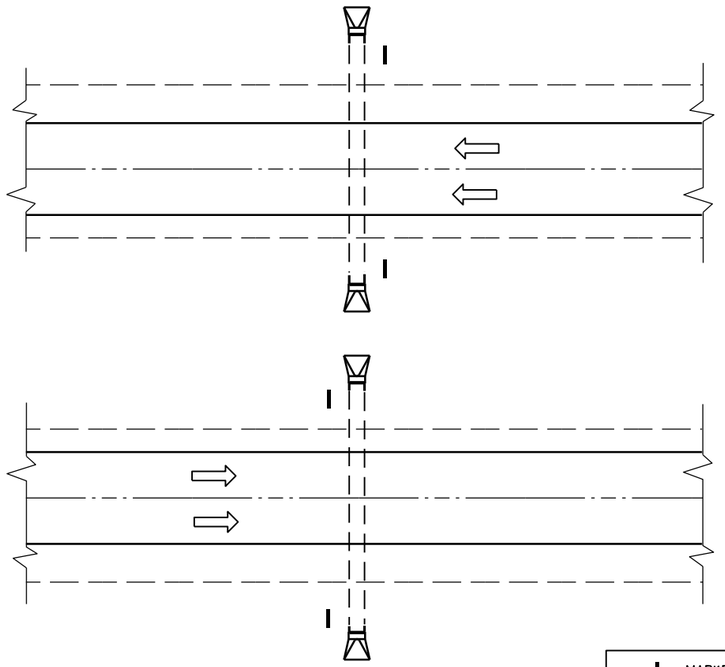


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S.D.D. 14 B 45-5L

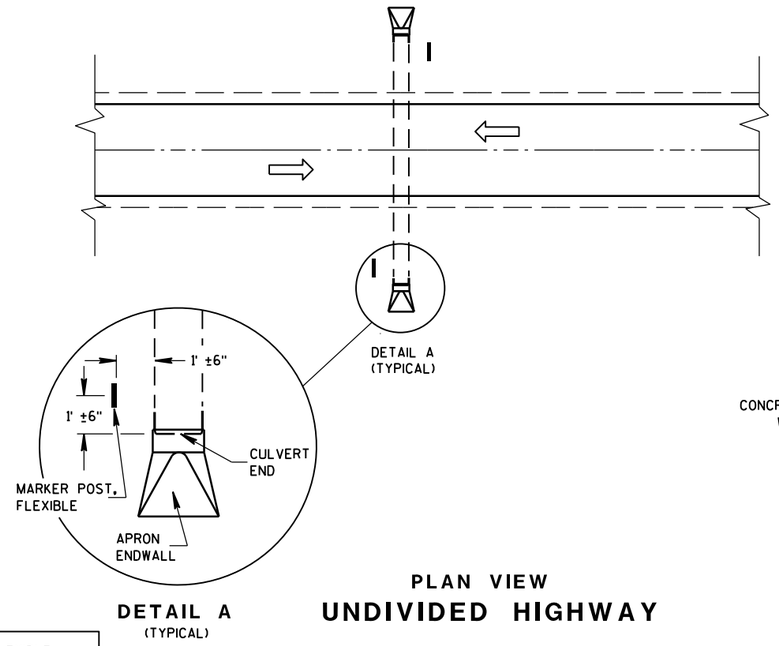
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S.D.D. 14 B 45-5L



PLAN VIEW

## DIVIDED HIGHWAY




DETAIL A
(TYPICAL)

PLAN VIEW

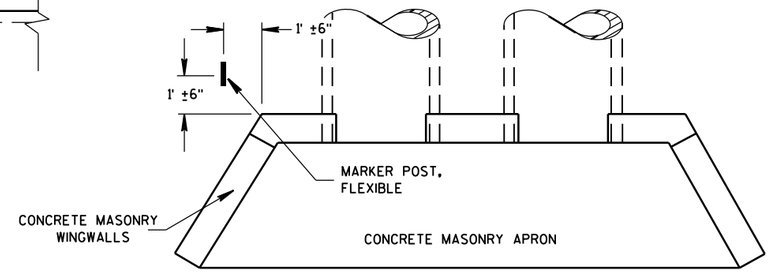
## UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

## GENERAL NOTES

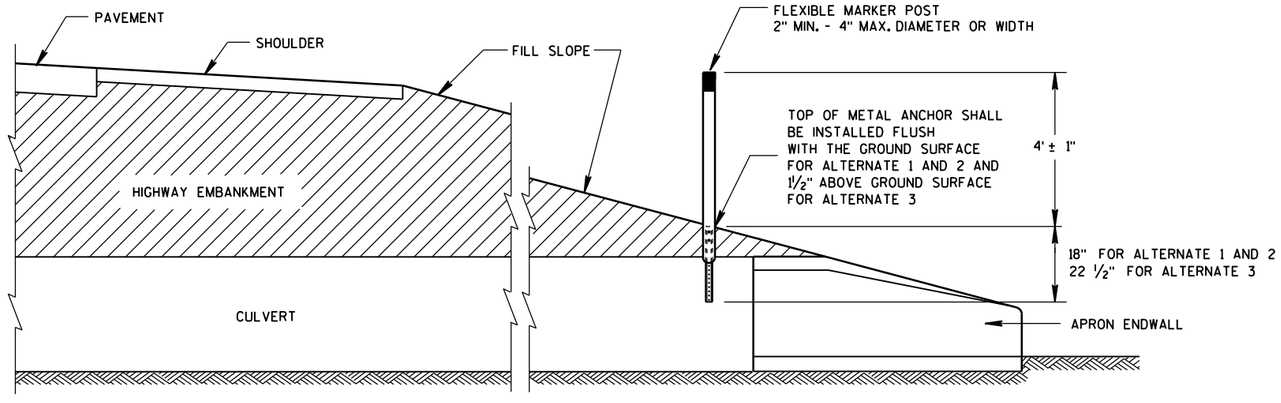
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.




PLAN VIEW

## CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

## FLEXIBLE MARKER POST LOCATION




CROSS SECTION

## FLEXIBLE MARKER POST

FLEXIBLE MARKER POST FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

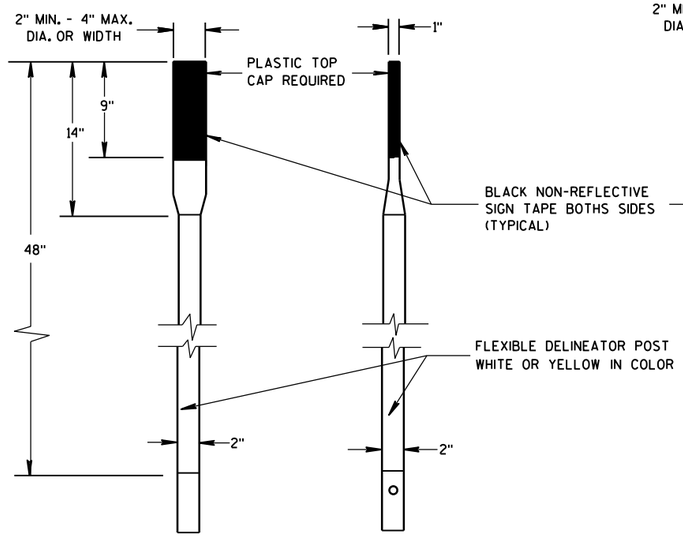


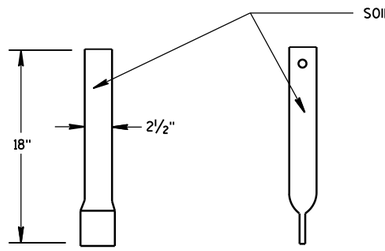


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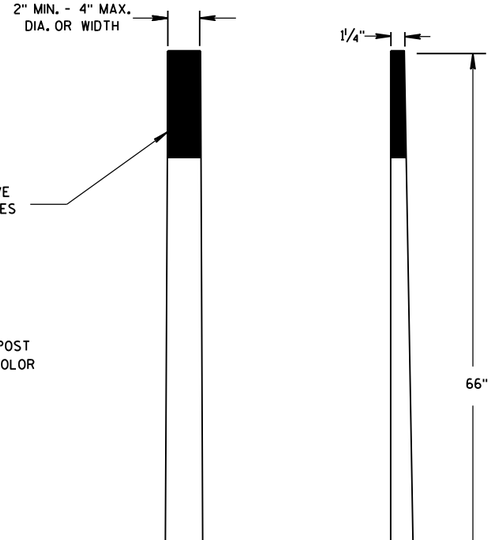
S.D.D. 15 A 3-2a



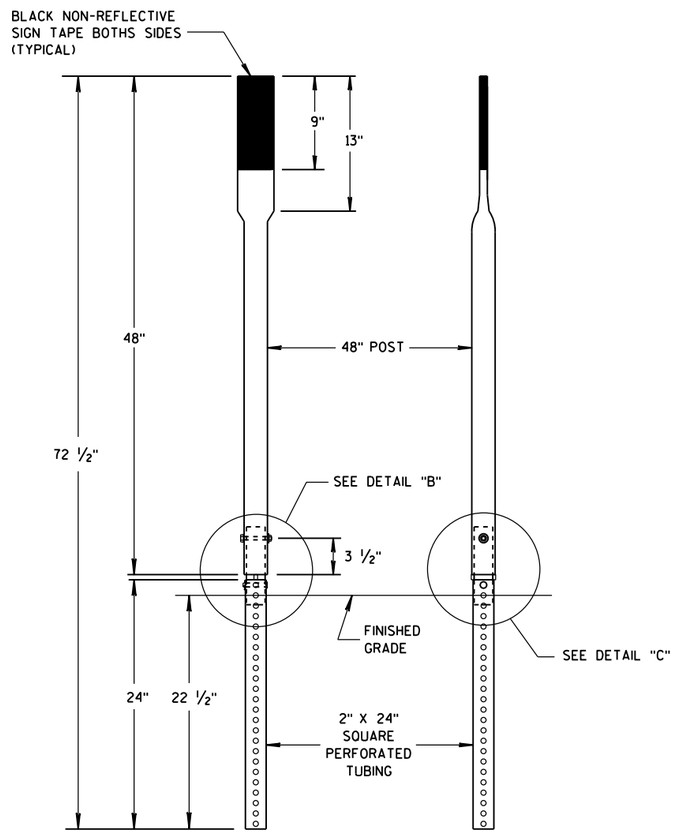

FRONT VIEW SIDE VIEW

ALTERNATE 1




FRONT VIEW SIDE VIEW

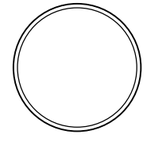
ALTERNATE 2



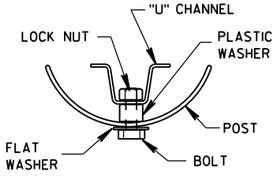

FRONT VIEW SIDE VIEW

ALTERNATE 3

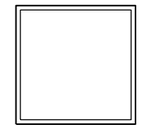
## FLEXIBLE MARKER POSTS



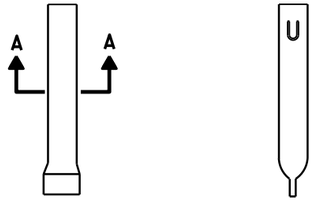
SECTION A-A




SECTION B-B

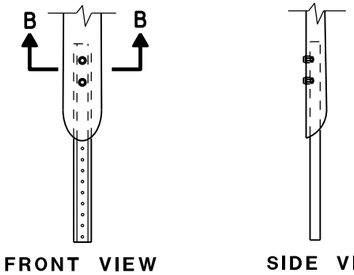


SECTION C-C



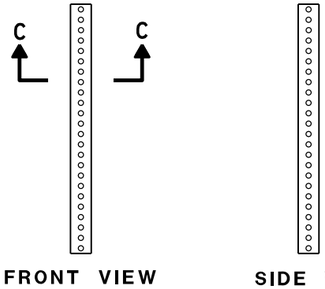

FRONT VIEW SIDE VIEW

ALTERNATE 1




FRONT VIEW SIDE VIEW

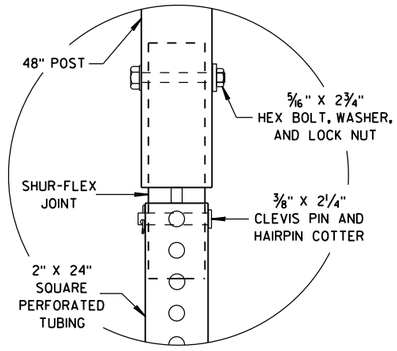
ALTERNATE 2



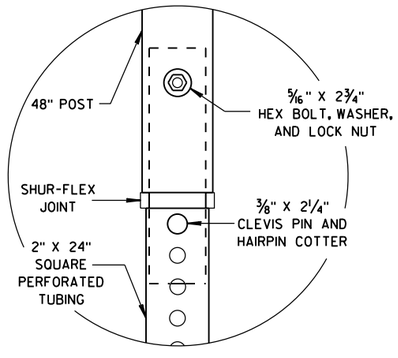

FRONT VIEW SIDE VIEW

ALTERNATE 3

## FLEXIBLE MARKER POST ANCHORS




DETAIL B




DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

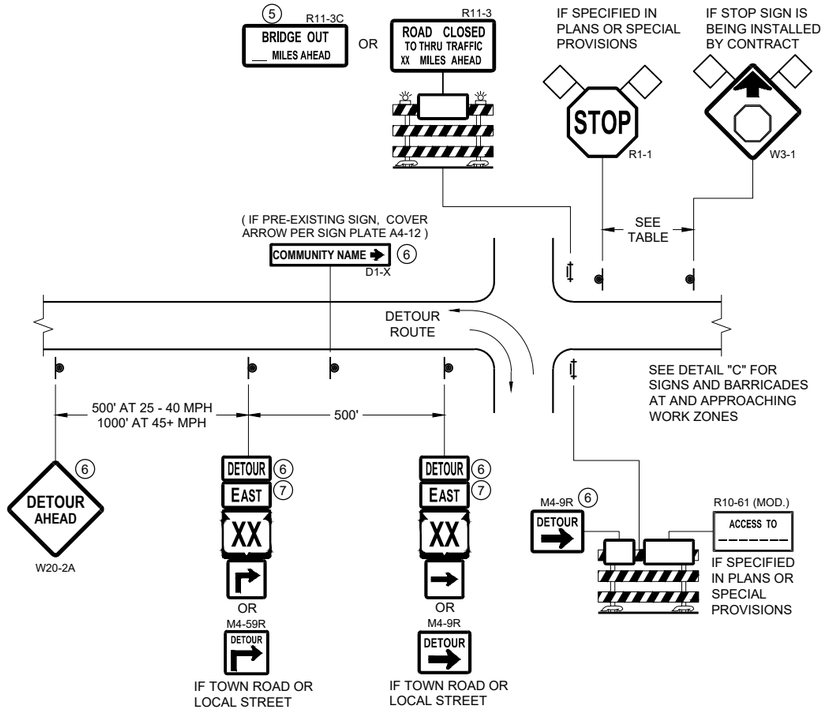


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S.D.D. 15 A 3-2b

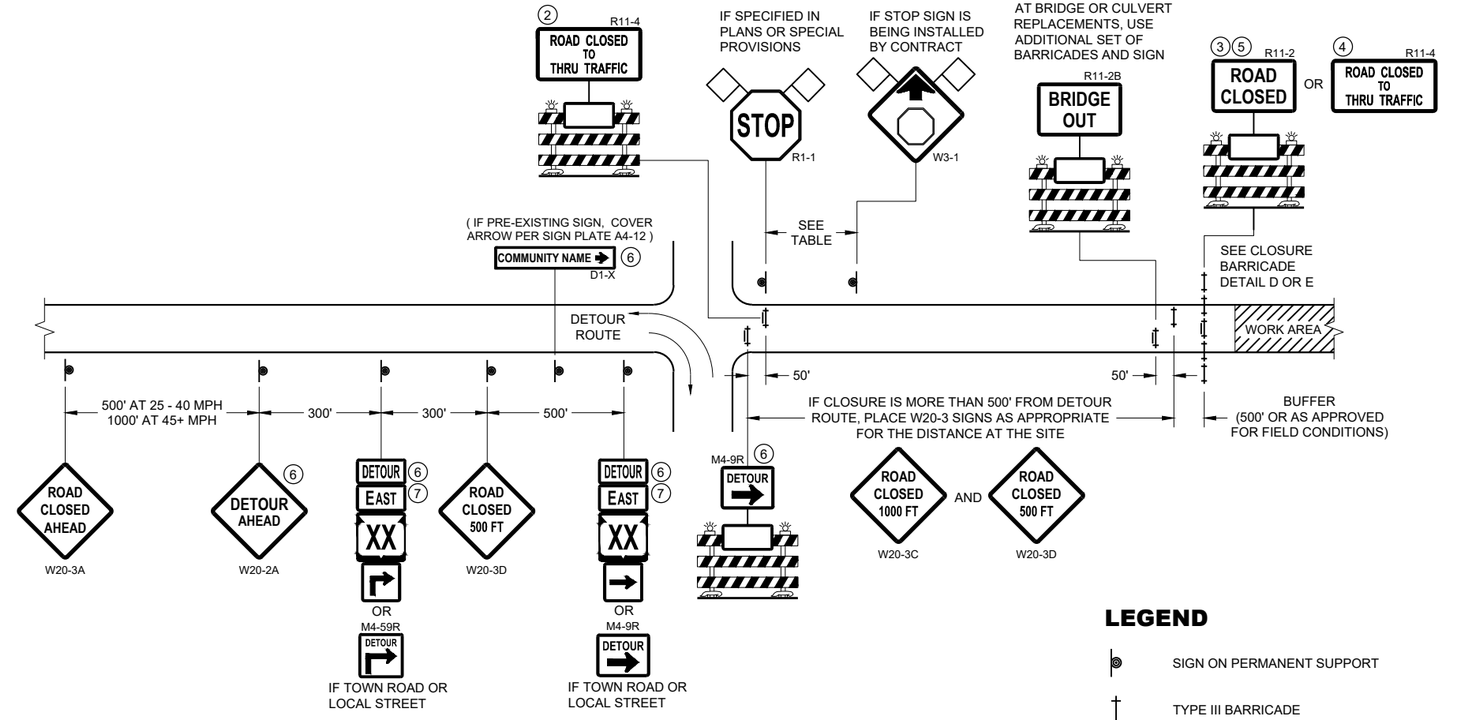
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S.D.D. 15 A 3-2b



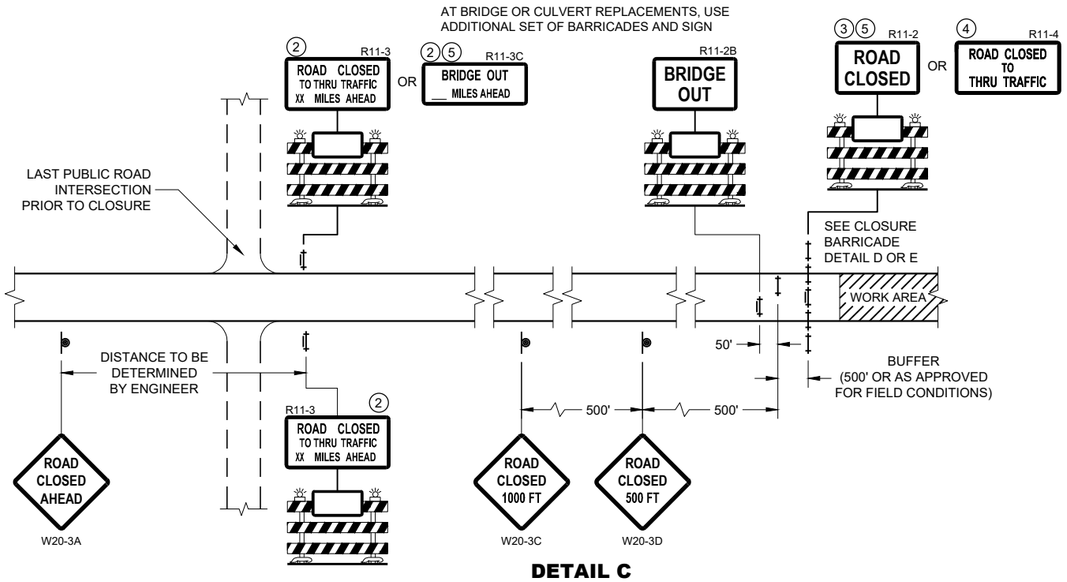

## DETAIL A
## MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN OR EQUAL TO ½ MILE FROM DETOUR ROUTE ( 1000 FEET IF URBAN )




## DETAIL B
## MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN ½ MILE FROM DETOUR ROUTE ( 1000 FEET IF URBAN )




## DETAIL C
## MAINLINE CLOSURE, NO POSTED DETOUR

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

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

## LEGEND

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

DETOUR M4 - 8
EAST M3 - X
XX M1 - 4 OR XX M1 - 6 OR COUNTY X M1 - 5A
M05 - 1 OR M06 - 1

## BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

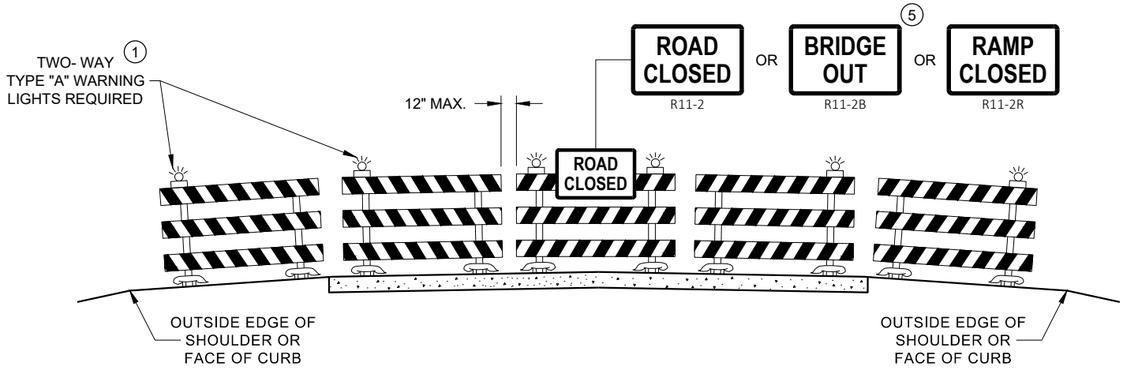
FHWA



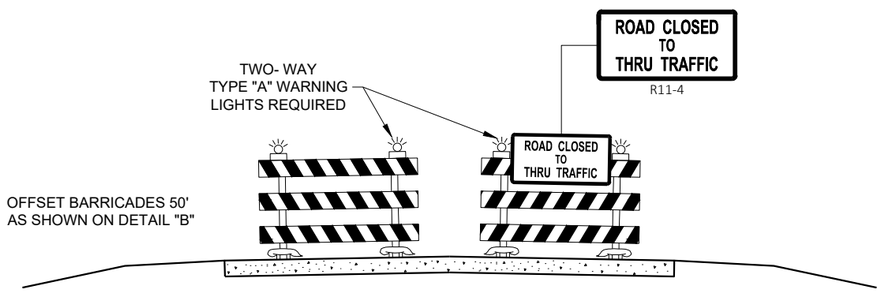
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SDD 15C02 - 09a

SDD 15C02 - 09a




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




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

SEE SDD 15C2 - SHEET "a" FOR LEGEND

## GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

(1) TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING.

(2) THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT AN INTERSECTION.

(3) FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "D".

(4) FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "E".

(5) FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11 - 2 AND R11 - 3 SIGNS.

(6) INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.

(7) "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

**BARRICADES AND SIGNS FOR VARIOUS CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE
FHWA

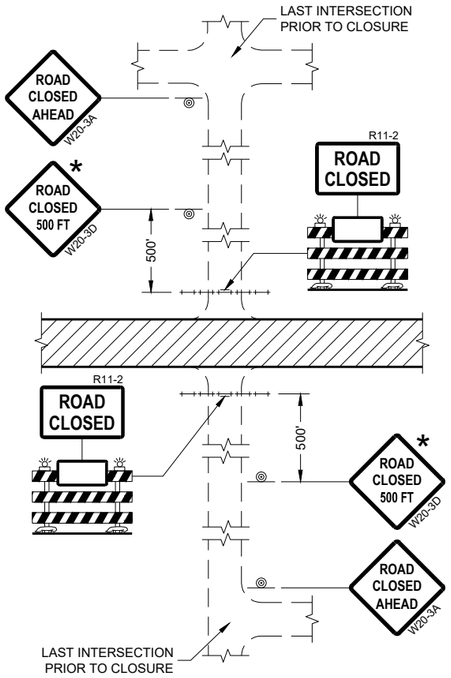


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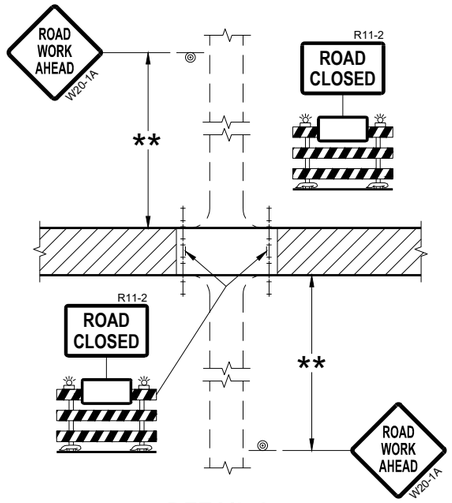
SDD 15C02 - 09b

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SDD 15C02 - 09b




**DETAIL 1**
(NO ACCESS TO PROJECT)




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

## GENERAL NOTES

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

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

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

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

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

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

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

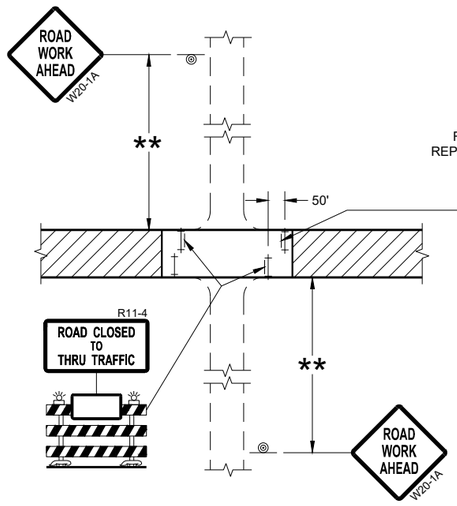
TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

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

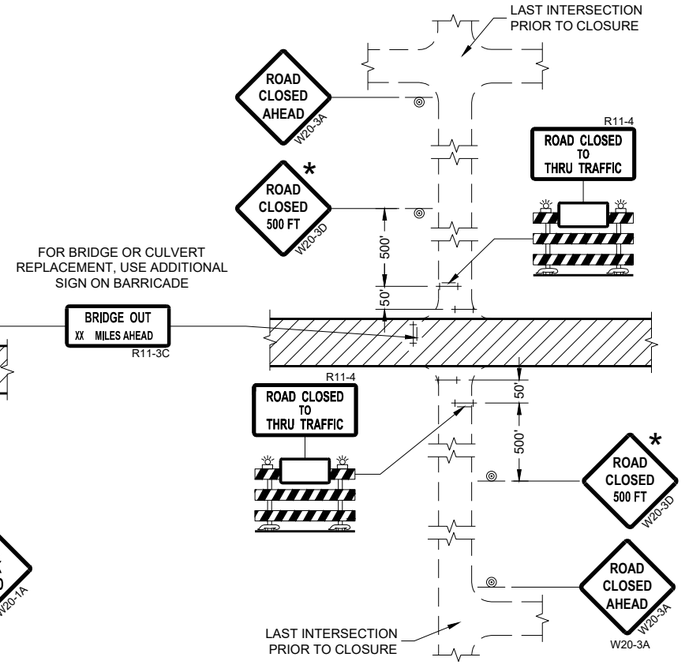
ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
R11-2 SHALL BE 48" X 30".
R11-4 AND R11-3 SHALL BE 60" X 30".

* OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FEET OR LESS FROM THE WORK ZONE.

** 500' MAX. OR AT LAST INTERSECTION, WHICHEVER IS CLOSEST.




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




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

## LEGEND

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

**BARRICADES AND SIGNS FOR SIDEROAD CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA





6

SDD 15C03 - 05

## GENERAL NOTES

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

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

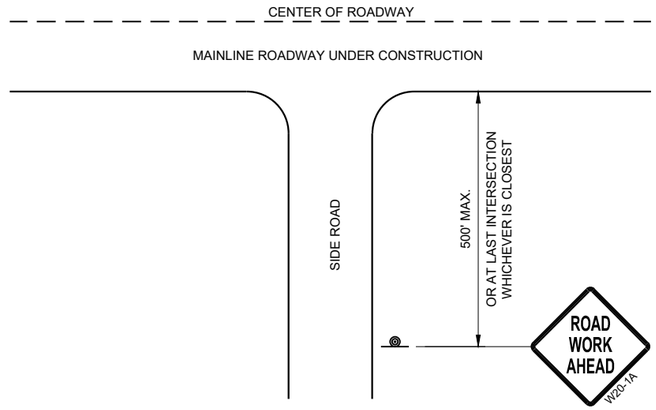
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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

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

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

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



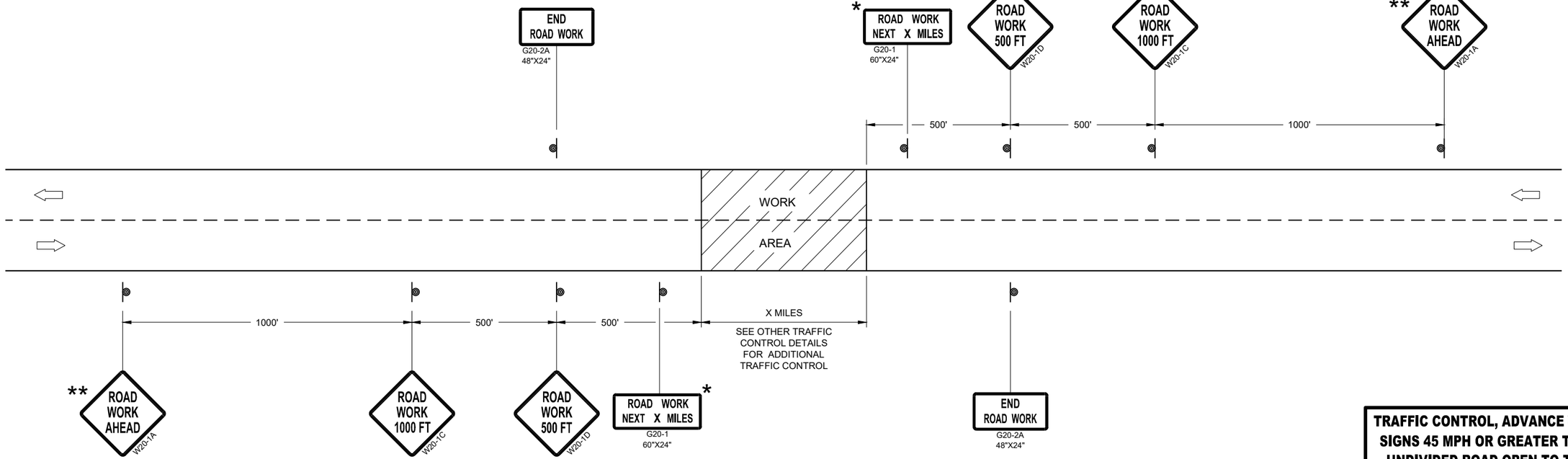

**TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL**

## LEGEND

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC

WORK AREA




**TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER**

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA




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SDD 15C04 - 05

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

## GENERAL NOTES

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

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

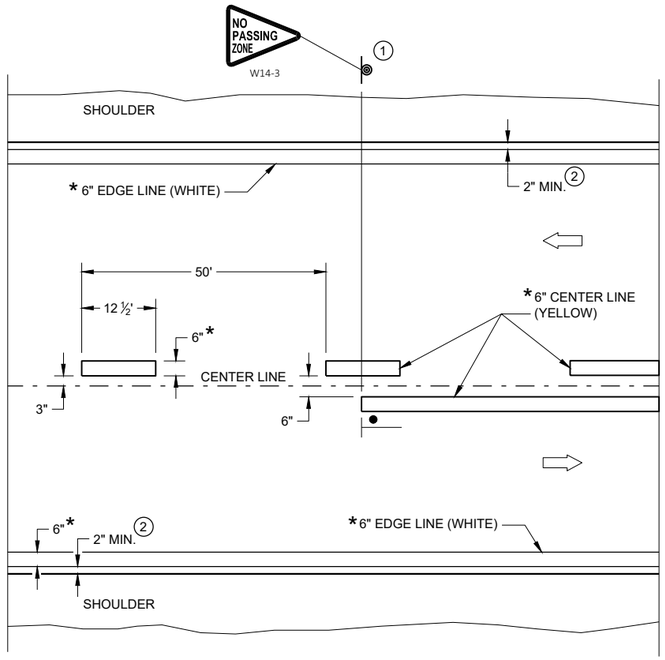
(2) MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

## LEGEND

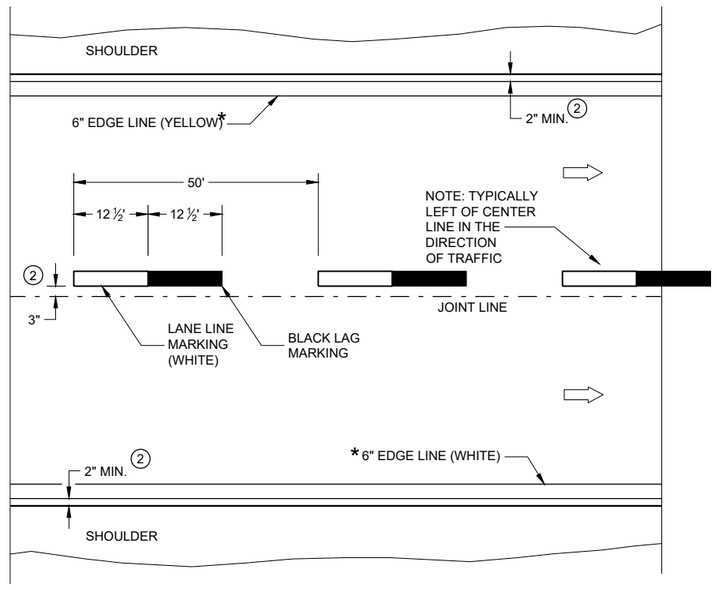
"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC




TWO WAY TRAFFIC




ONE WAY TRAFFIC

**PERMANENT PAVEMENT MARKING**

**PERMANENT LONGITUDINAL PAVEMENT MARKINGS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Jeannie Silver — STATEWIDE SIGNING AND M ENGINEER

FHWA



6

SDD 15C08-23a

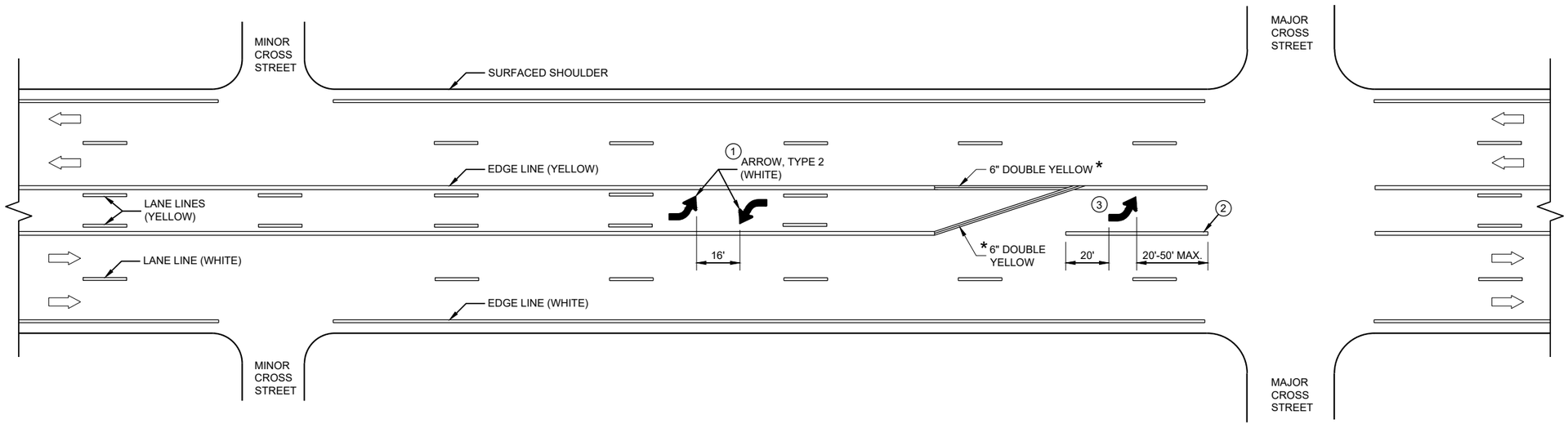
SDD 15C08-23a

## GENERAL NOTES

1. A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
2. 10" WHITE
3. TURN BAY LENGTH OF LESS THAN 48' DOES NOT REQUIRE PAVEMENT ARROWS OR TEXT.

DIRECTION OF TRAFFIC

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



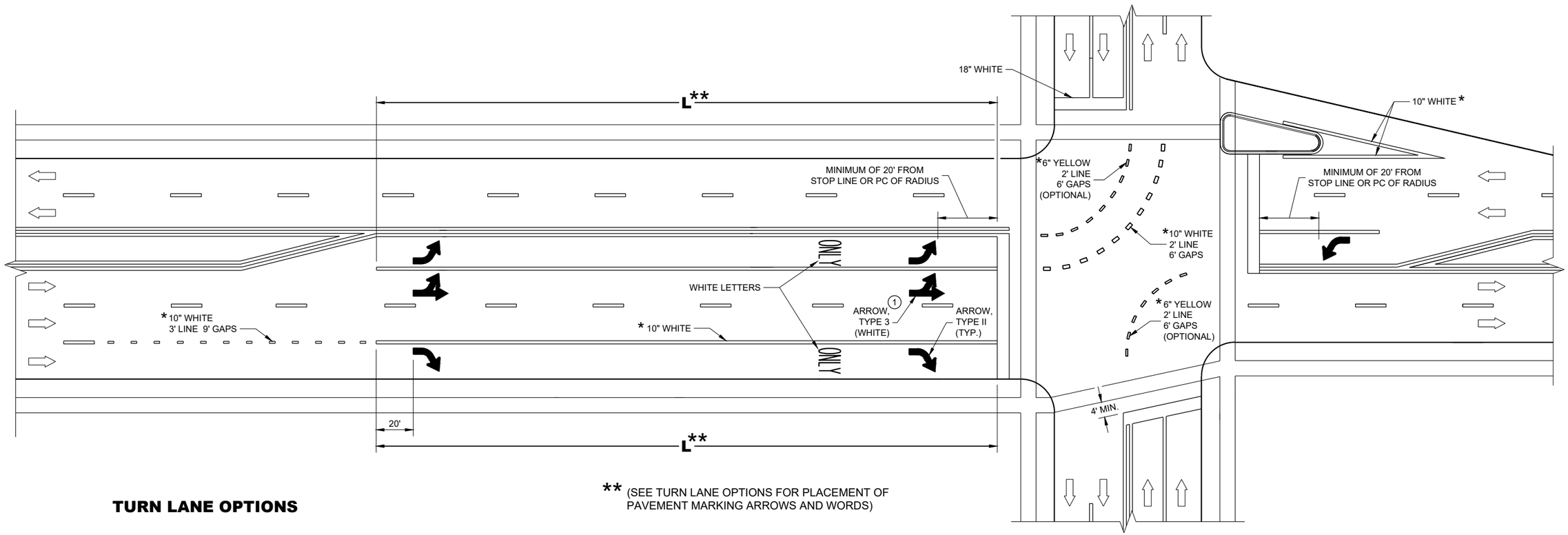

**TWO WAY LEFT TURN LANE**

**PAVEMENT MARKING (TURN LANES)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA 124

SDD 15C08-23c

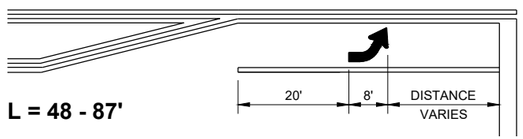
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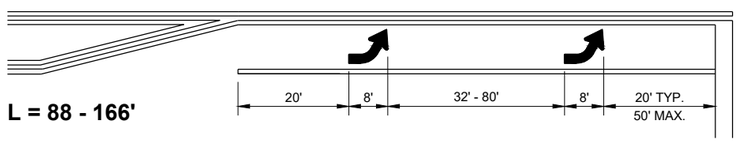

** (SEE TURN LANE OPTIONS FOR PLACEMENT OF PAVEMENT MARKING ARROWS AND WORDS)

## TURN LANE OPTIONS

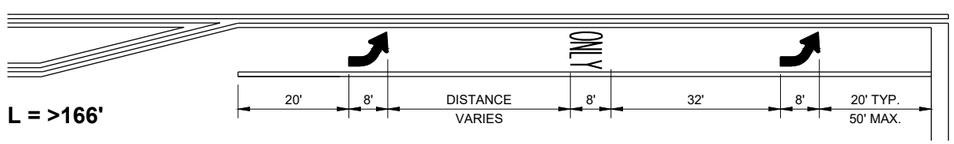
LENGTH OF TURN BAY ( **L** ) OF 0 - 47' DOES NOT REQUIRE PAVEMENT MARKING ARROWS OR WORDS




**L = 48 - 87'**




**L = 88 - 166'**




**L = >166'**

## GENERAL NOTES

(1) QUANTITY AND LOCATION OF TYPE 3 ARROWS ARE THE SAME AS THE TYPE II ARROWS IN THE ADJACENT TURN LANE. FOR TURN LANES WITH A PHYSICAL SEPARATION IN THE SAME DIRECTION OF TRAVEL, THE ARROWS AND "ONLY" MARKING MAY BE ELIMINATED.

DIRECTION OF TRAFFIC

**L** = LENGTH OF TURN BAY

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

**PAVEMENT MARKING (TURN LANES)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION





6

SDD 15C08-23d

## LEGEND

SIGN ON PORTABLE OR PERMANENT SUPPORT

TEMPORARY PORTABLE RUMBLE STRIP ARRAY

DIRECTION OF TRAFFIC

WORK AREA

FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

## GENERAL NOTES

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

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

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

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

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

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

## FLAGGING

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

(1) FOR MOVING WORK OPERATIONS, POST ADDITIONAL W20-7A FLAGGER SIGNS AT APPROXIMATELY 3,500' INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.

(2) SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

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

## TEMPORARY PORTABLE RUMBLE STRIPS

UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

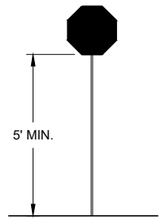
(3) EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER

ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FROM THE APPROVED PRODUCTS LIST.

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

DO NOT INSTALL TEMPORARY PORTABLE RUMBLE STRIPS ON GRAVEL, MILLED SURFACES, OR ASPHALT THAT HAS BEEN PAVED LESS THAN 12 HOURS.




**STOP/SLOW PADDLE ON SUPPORT STAFF**

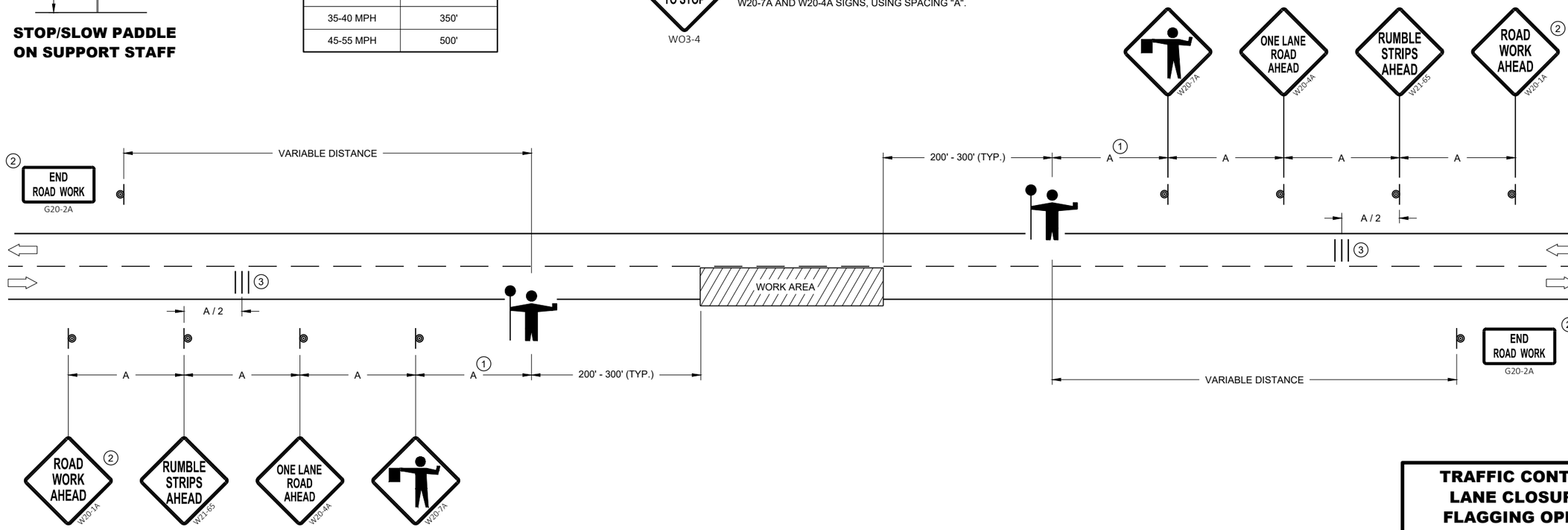
## SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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




WO3-4

USE OF WO3-4 SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7A AND W20-4A SIGNS, USING SPACING "A".




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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA



6

SDD 15C12 - 09a

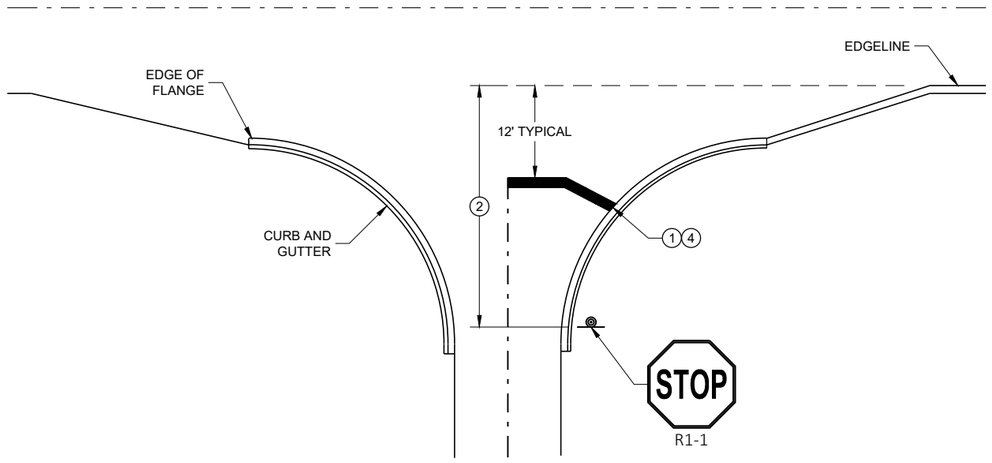
6

SDD 15C12 - 09a

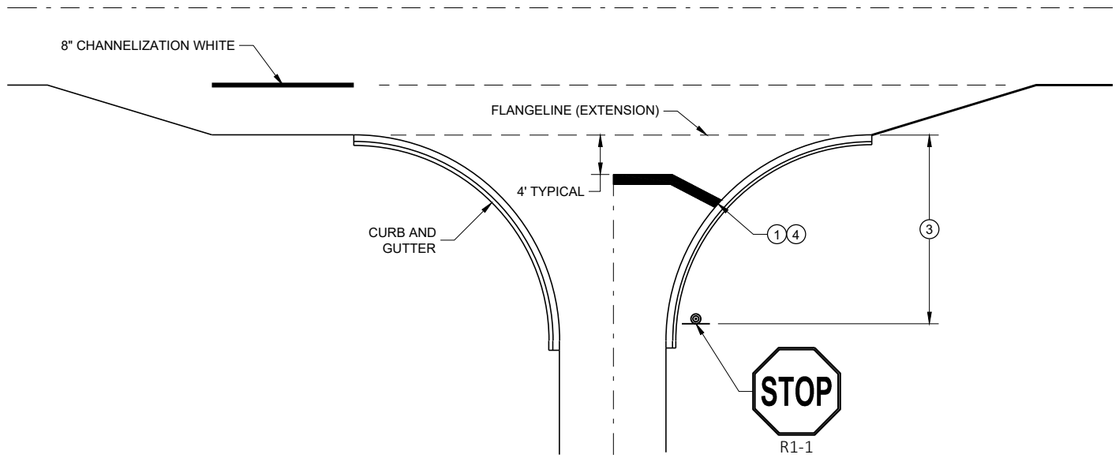
## GENERAL NOTES

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

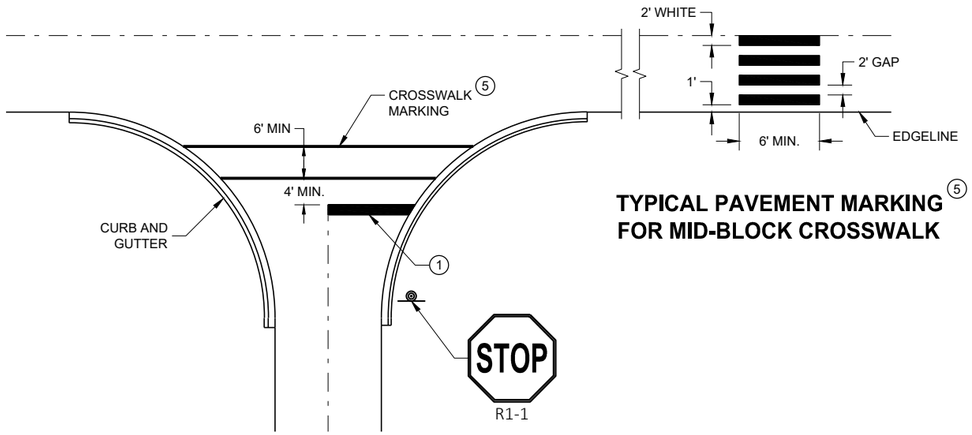
1. 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
2. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
3. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE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




**TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER**

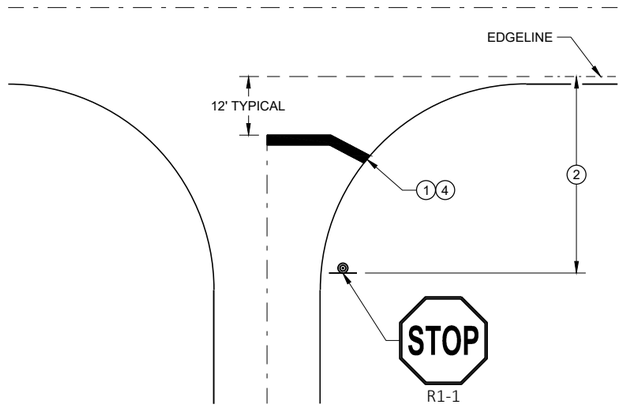



**TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE**




**TYPICAL PAVEMENT MARKING FOR MID-BLOCK CROSSWALK** 5

**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
November 2019
DATE

/S/ Matthew Rauch
STATE SIGNING AND MAF ENGINEER

FHWA

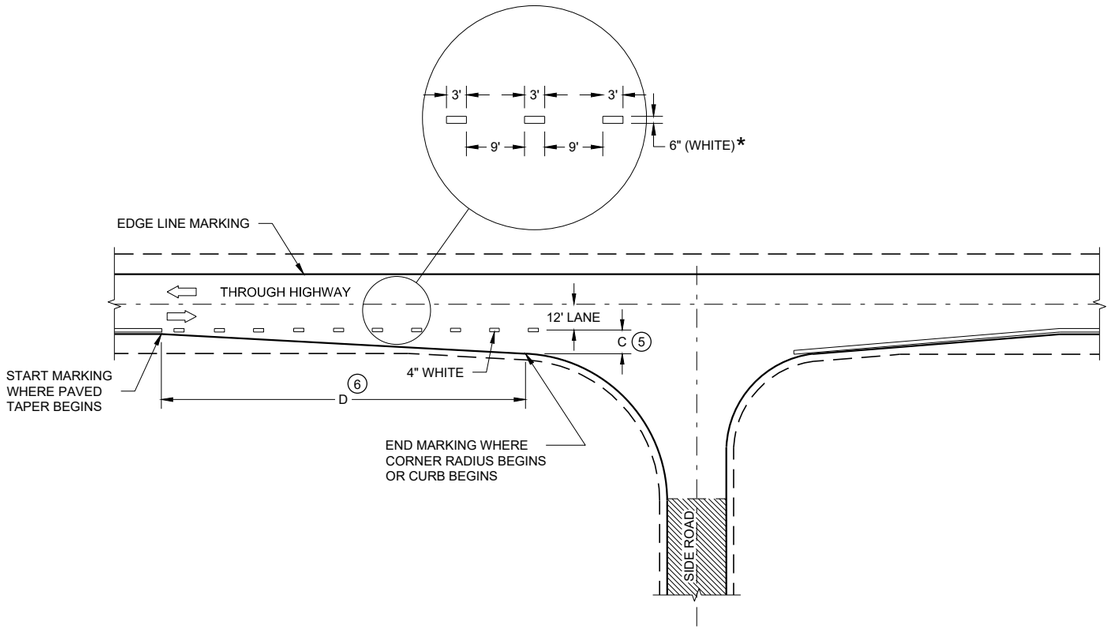


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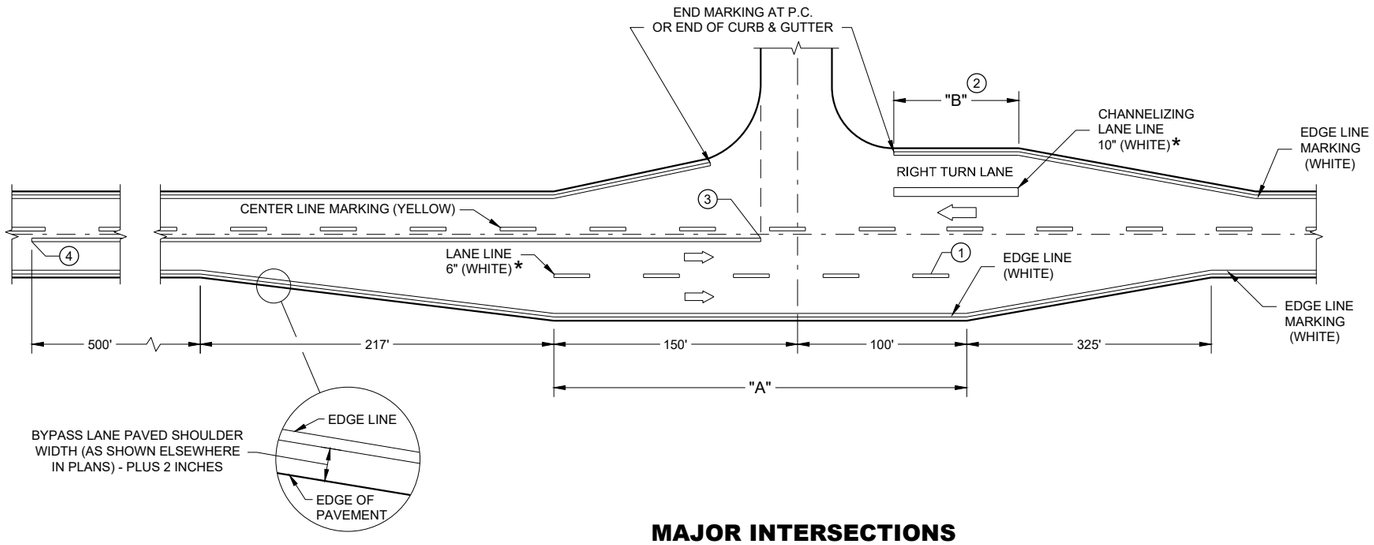
SDD 15C33 - 04

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SDD 15C33 - 04




## MINOR INTERSECTION




## MAJOR INTERSECTIONS

## (INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

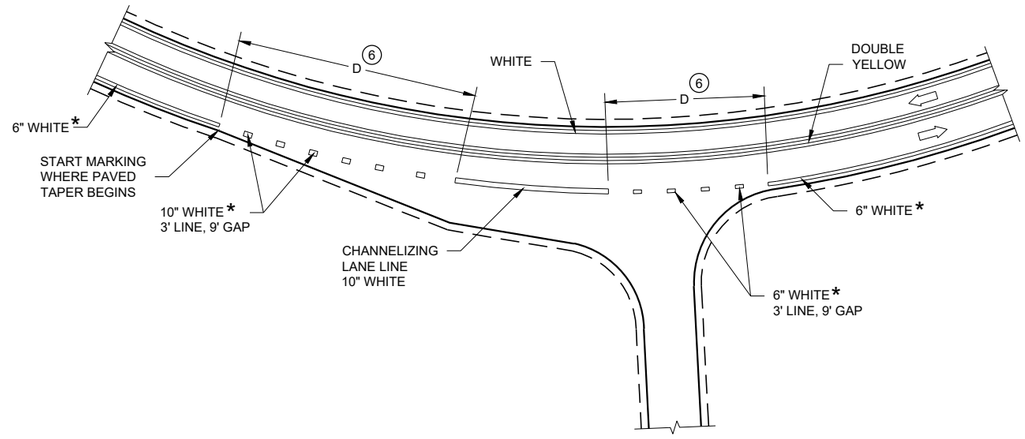
## GENERAL NOTES

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

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

## LEGEND

DIRECTION OF TRAVEL




## INTERSECTION ON OUTSIDE OF CURVE

**PAVEMENT MARKING (INTERSECTIONS)**



SDD 15C35-06a

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## GENERAL NOTES

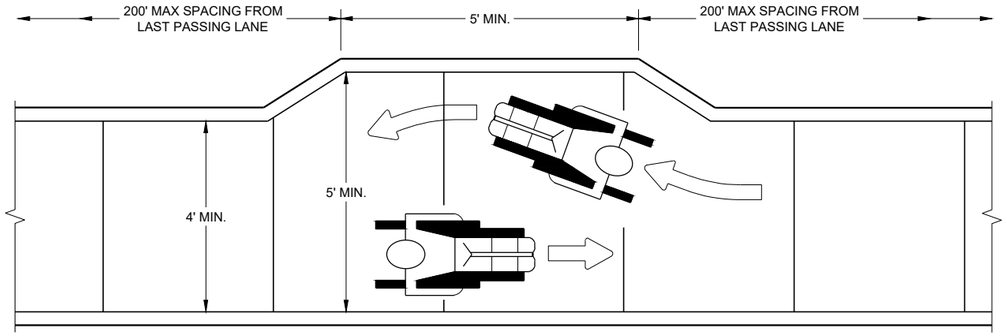
BARRICADE DEVICE SELECTED FROM APPROVED PRODUCT LIST

(1) REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.

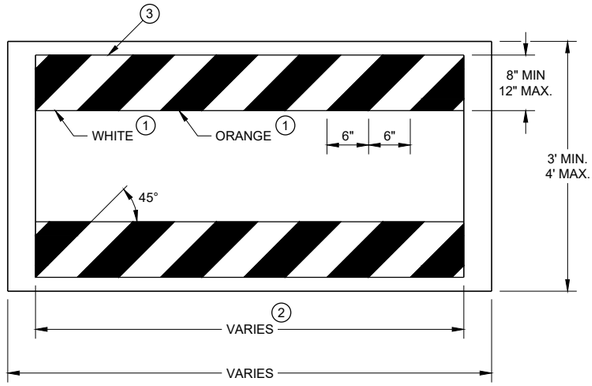
(2) SHEETING REQUIRED ON MORE THAN 50% OF BARRICADE WIDTH.

(3) PLACE SHEETING ON BOTH SIDES OF THE BARRICADE.

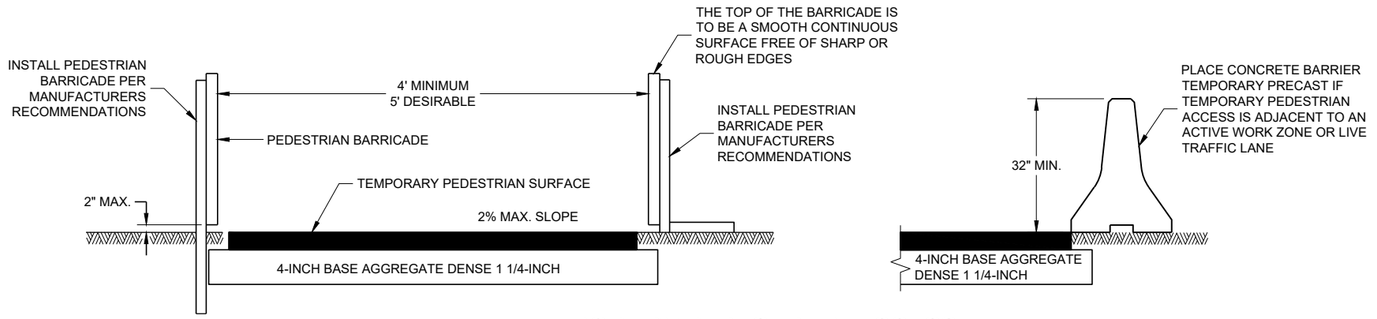
* USE THIS DETAIL FOR SHEETING PLACEMENT REFERENCE.




**NARROW SIDEWALK PASSING DETAIL**




**TEMPORARY PEDESTRIAN BARRICADE***




**TEMPORARY PEDESTRIAN ACCESS**





**TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION**



6
SDD 15D30 - 09a

## LEGEND

- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- UNDER PEDESTRIAN TRAFFIC
- TEMPORARY PEDESTRIAN SURFACE
- TEMPORARY PEDESTRIAN BARRICADE
- OPTIONAL TEMPORARY PEDESTRIAN BARRICADE
- DIRECTION OF TRAFFIC

## GENERAL NOTES

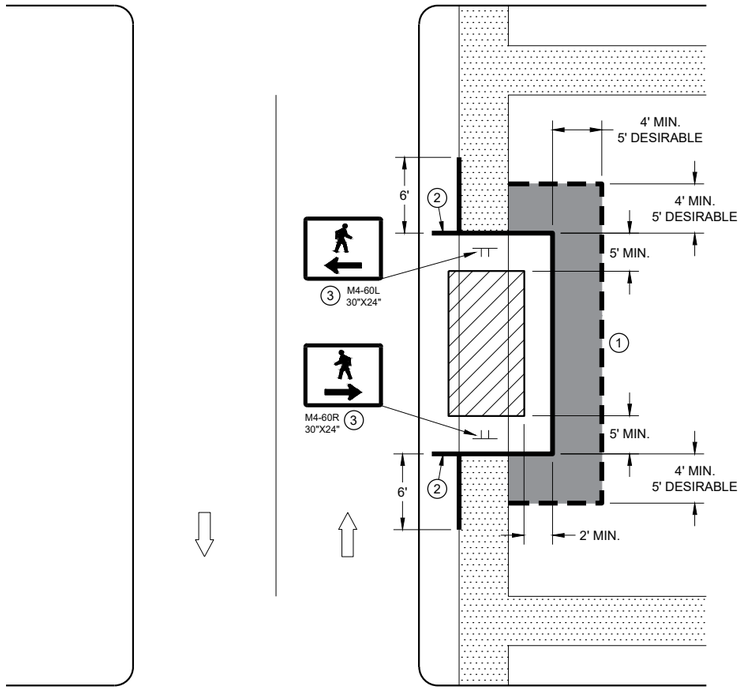
TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISCONSIN STANDARD SIGN PLATES.

WHERE TEMPORARY BARRICADE RUNS PARALLEL ALONG SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.

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

1. USE TEMPORARY PEDESTRIAN BARRICADE TO SEPARATE PEDESTRIANS FROM DROP OFFS OR FOR ADDITIONAL PEDESTRIAN CHANNELIZATION.
2. IF TEMPORARY PEDESTRIAN BARRICADE PANEL IS WIDER THAN THE SIDEWALK WIDTH, THE PORTION OF EXCESS PANEL SHOULD EXTEND INTO THE TERRACE.
3. MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF SIGN.




**SIDEWALK DIVERSION**
**SINGLE SIDE**

6

SDD 15D30 - 09g

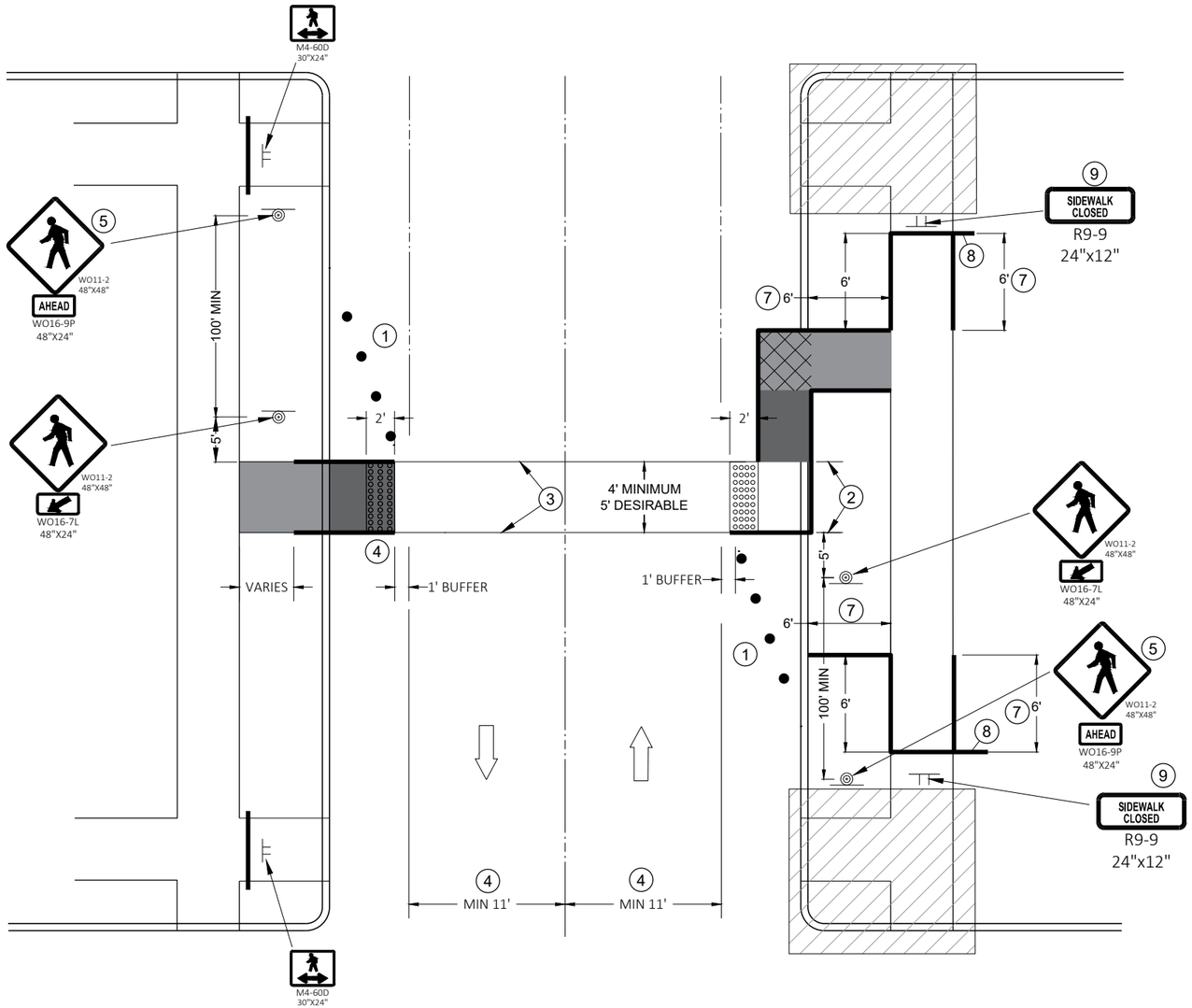
**TRAFFIC CONTROL,**
**PEDESTRIAN ACCOMMODATION**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



6

SDD15D30 - 09g




## TEMPORARY PEDESTRIAN CROSSING

## GENERAL NOTES

TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISCONSIN STANDARD SIGN PLATES.

SEE OTHER PEDESTRIAN ACCOMMODATION DETAILS FOR SIGNING AND DEVICES FOR DIFFERENT PEDESTRIAN FACILITIES CLOSURES.

1. SHOULDER OR LANE CLOSURE ADVANCED WARNING AND PROPER BUFFER SPACE REQUIRED.
2. 4 FEET MINIMUM, 5 FEET DESIRABLE.
3. WHITE 6" TEMPORARY PAVEMENT MARKING.
4. IF MINIMUM LANE WIDTHS CAN'T BE ATTAINED, PERPENDICULAR CURB RAMPS MAY NEED TO BE UTILIZED.
5. IF MINIMUM 100' SPACING FROM THE MID-BLOCK CROSSING CANNOT BE ATTAINED BEFORE THE INTERSECTION, REMOVE THIS SIGN ASSEMBLY.
6. IF TERRACE IS LESS THAN 6 FEET WIDE, OMIT TEMPORARY PEDESTRIAN BARRICADE FROM THE SIDEWALK TO THE CURB.
7. PLACE BARRICADE CLOSURE SO THAT THE TEMPORARY PEDESTRIAN BARRICADE END IS AT THE LAST OPEN SIDEWALK ACCESS TO RESIDENCES OR BUSINESSES BEFORE THE SIDEWALK CLOSURE.
8. IF TEMPORARY PEDESTRIAN BARRICADE PANEL IS WIDER THAN THE SIDEWALK WIDTH, THE PORTION OF THE EXCESS PANEL SHOULD EXTEND INTO THE TERRACE.
9. MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF THE SIGN.

## LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY CURB RAMP
- TEMPORARY DETECTABLE WARNING FIELD
- TEMPORARY PEDESTRIAN SURFACE "A"
- TEMPORARY PEDESTRIAN SURFACE "B"
- WORK AREA
- TEMPORARY PEDESTRIAN BARRICADE
- DIRECTION OF TRAFFIC

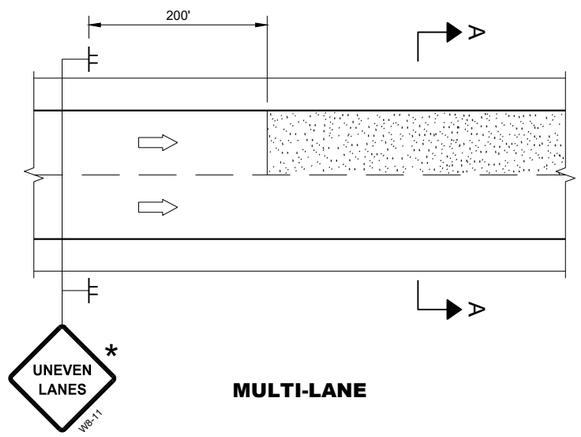
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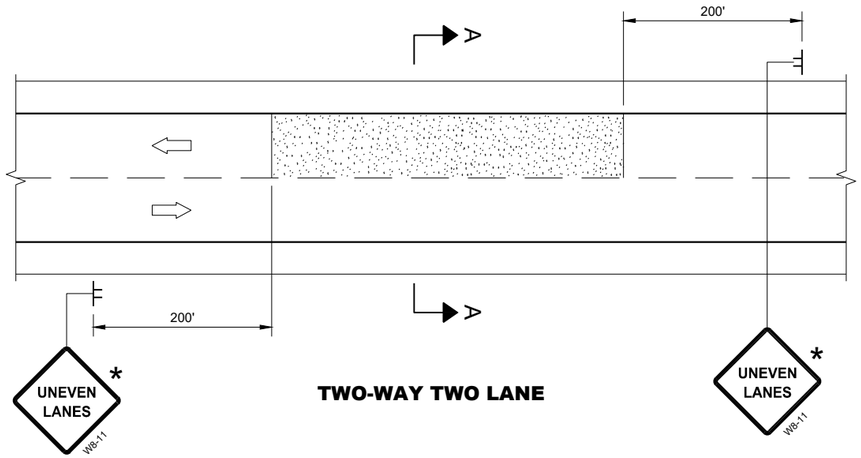
**TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION**



SDD 15D30 - 09L




**MULTI-LANE**




**TWO-WAY TWO LANE**

## GENERAL NOTES

FOR SPOT LOCATIONS USE ENGINEERING JUDGEMENT WHEN PLACING ADDITIONAL SIGNS.

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

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

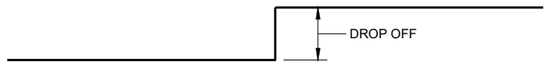
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

* IF THE DROP-OFF IS CONTINUOUS ALONG THE PROJECT, PLACE ADDITIONAL SIGNS EVERY 1 MILE AND AFTER EVERY ENTRANCE RAMP.

(1) USE CLOSER SPACING WHEN DELINEATING DROP-OFF.

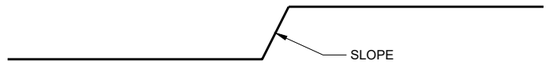
## LEGEND

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

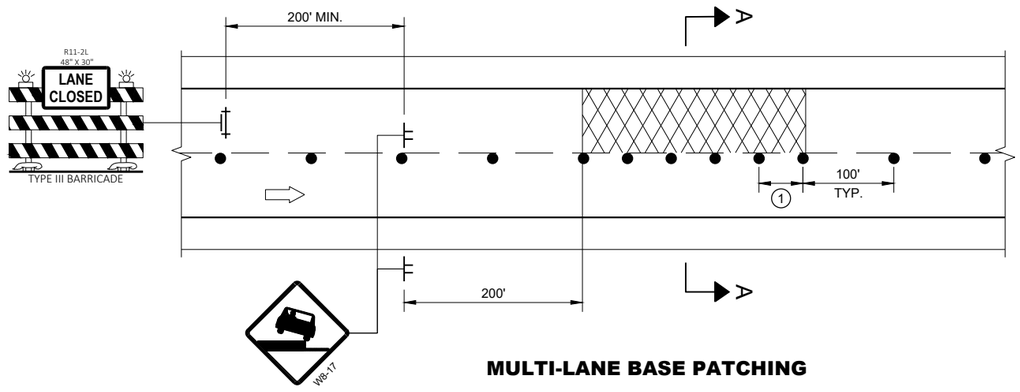



**SECTION A - A**

**OR**

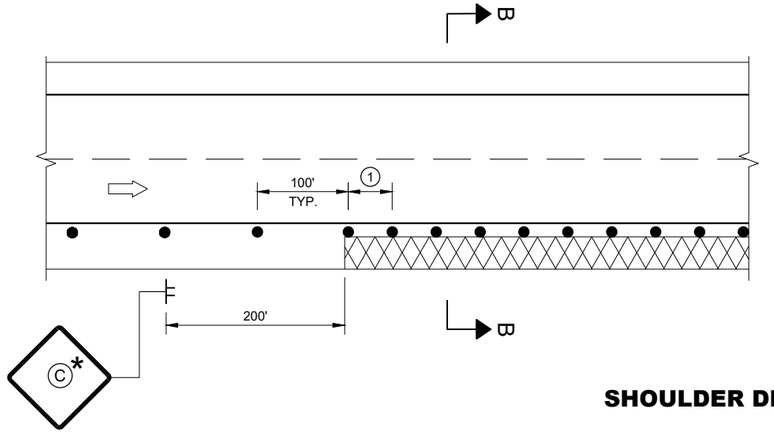



**SECTION A - A**

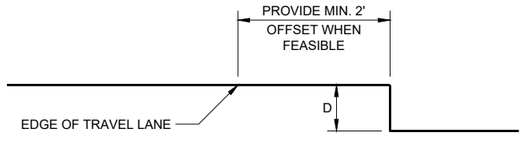



**MULTI-LANE BASE PATCHING**

**ADJACENT LANE DROP-OFFS**




**SHOULDER DROP-OFFS**




**SECTION B - B**

| D | SIGN (C) |
|---|---|
| < 2" WITH A SLOPE STEEPER THAN 3:1 | LOW SHOULDER<br>WO8-9 |
| 2" < 6" WITH A SLOPE STEEPER THAN 3:1 | SHOULDER DROP - OFF<br>W8-9A<br>PROVIDE A 3:1 OR FLATTER SLOPE OF MATERIAL ADJACENT TO THE PAVEMENT |

**TRAFFIC CONTROL, DROP-OFF SIGNING**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

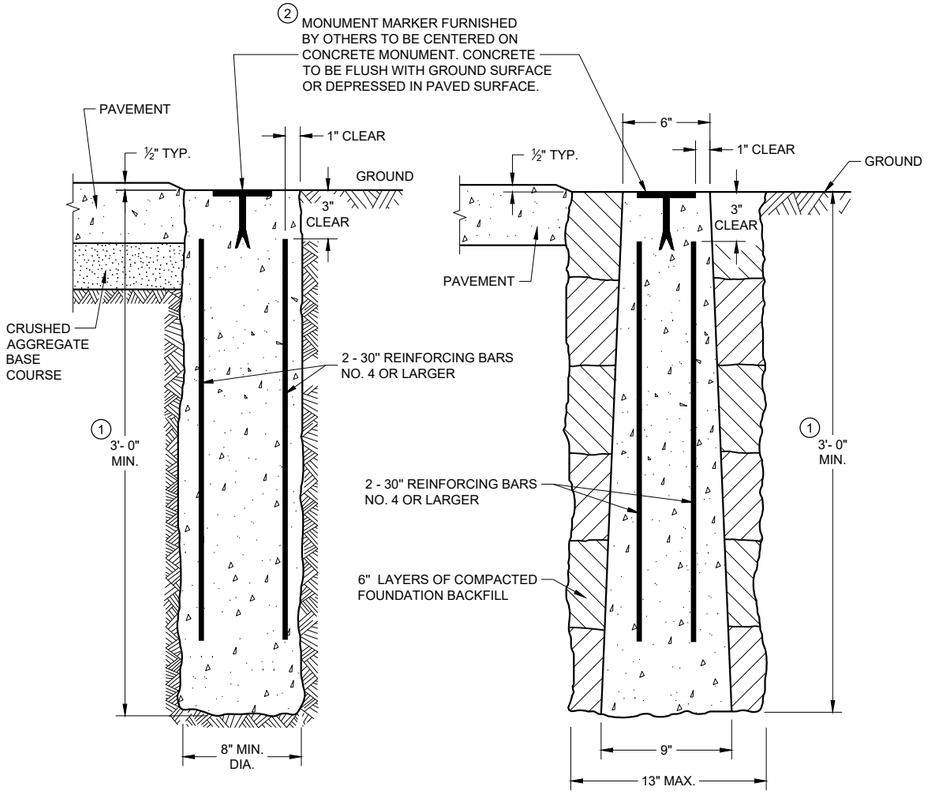


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SDD 15D39 - 02

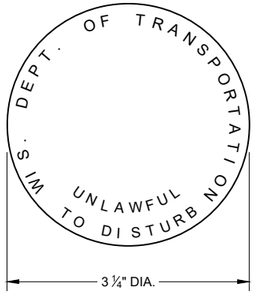
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SDD 15D39 - 02



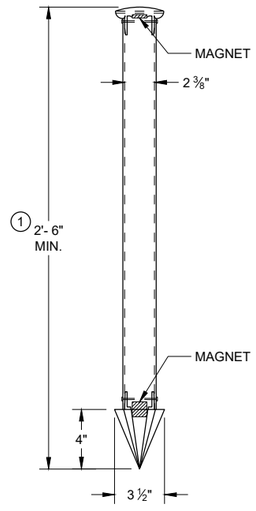

**CAST-IN-PLACE** **PRECAST**

## CONCRETE MONUMENTS
### TYPE A

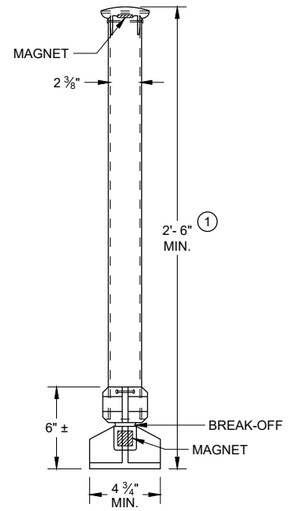



② **WIS DOT MONUMENT MARKER LOGO**

FOR TYPES "A", "C" & "D"

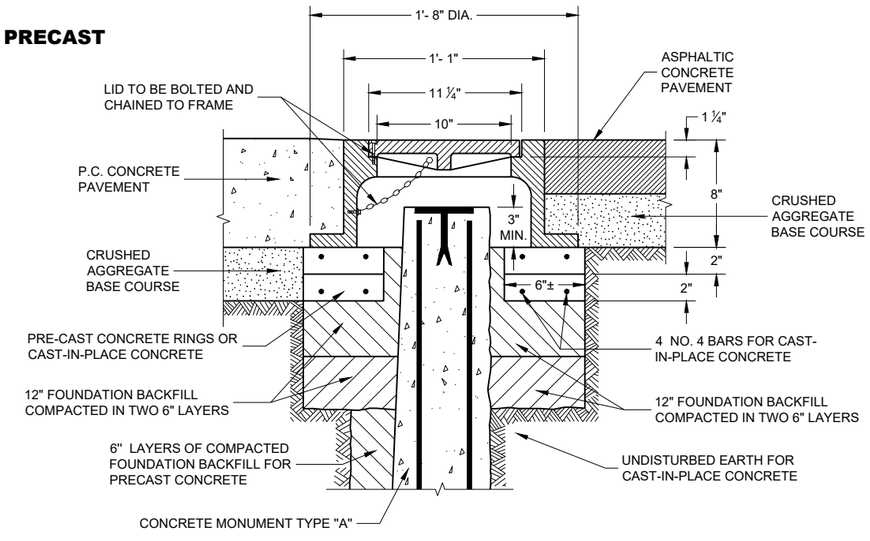



**TYPE C DRIVEN MONUMENT**




**TYPE D NON-DRIVEN BREAK-OFF MONUMENT**

## ALUMINUM MONUMENTS
(INCLUDES MARKER)




## CAST IRON MONUMENT COVER
(APPROXIMATE WEIGHT 95 LBS)

## 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.

DETAILED DRAWINGS OF PROPOSED ALTERNATE DESIGNS FOR METAL MONUMENTS OR MONUMENT COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

PERMANENT MAGNETS SHALL BE INSERTED NEAR THE TOP AND BOTTOM OF ALL ALUMINUM MONUMENTS SO THE MONUMENT CAN EASILY BE DETECTED BY A METAL DETECTOR.

THE CAST IRON MONUMENT COVER SHALL BE A "NON-ROCKING" TYPE. ADJUSTMENT OF THE COVER TO GRADE MAY BE ACCOMPLISHED BY THE USE OF MORTAR AND BRICK, OR BY EITHER PRECAST OR CAST-IN-PLACE REINFORCED CONCRETE GRADE RINGS.

MONUMENTS SHALL BE LOCATED AND PLACED AT THE DIRECTION OF THE ENGINEER.

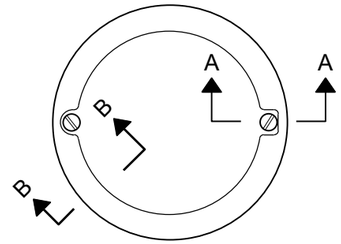
ALUMINUM MONUMENTS AND MONUMENT COVERS SHALL BE MADE FROM AN ALUMINUM AND MAGNESIUM ALLOY AS DETERMINED BY THE MANUFACTURER.

THE MONUMENT COVERS DETAILED ON THIS DRAWING ARE NOT EQUAL ALTERNATES. MONUMENT COVERS SHALL BE CAST IRON UNLESS ALUMINUM IS SPECIFIED ELSEWHERE IN THE CONTRACT.

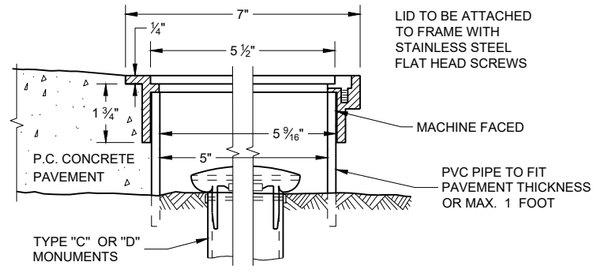
MONUMENT SHALL BE CAST-IN-PLACE CONCRETE UNLESS PRECAST CONCRETE OR ALUMINUM MONUMENTS ARE SPECIFIED IN THE CONTRACT OR PERMITTED BY THE ENGINEER.

① MINIMUM LENGTH SHALL BE 4'-0" FOR MONUMENTS INSTALLED IN PAVED AREAS.

② AN OFFICIAL COUNTY MONUMENT MARKER SUPPLIED BY A COUNTY MAY BE REQUIRED FOR SOME SECTION CORNERS AND WITNESS MONUMENTS INSTEAD OF THIS WISDOT MARKER.




**TOP VIEW**




**SECTION B-B** **SECTION A-A**

## ALUMINUM MONUMENT COVER
(APPROXIMATE WEIGHT 2 LBS)
(FOR CONCRETE PAVEMENT ONLY)

**LANDMARK REFERENCE MONUMENTS AND COVERS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018
DATE

/S/ Raymond A. Kumapayii
CHIEF SURVEYING AND MA
ENGINEER

FHWA

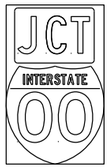


SDD 16A01 - 07

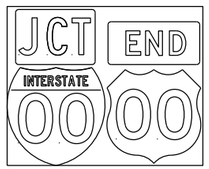
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SDD 16A01 - 07

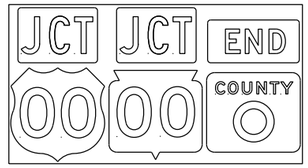
# TYPICAL ASSEMBLIES



J1-1



J1-2



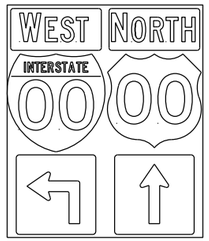
J1-3



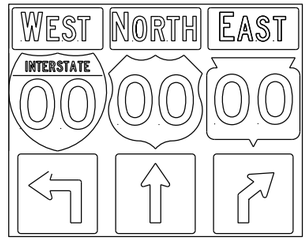
JR1-1



J2-1



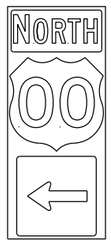
J2-2



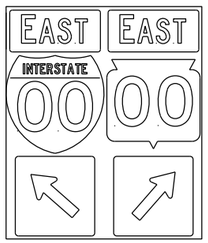
J2-3



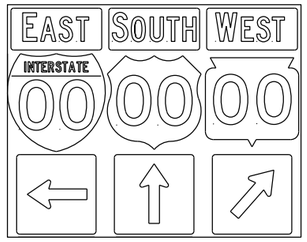
JV
( Typical Vertical J-Assembly
See Note 10 and 11 )



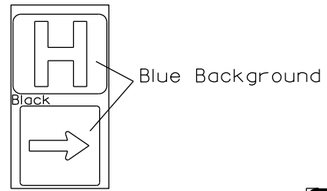
J3-1



J3-2



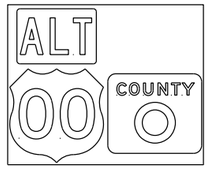
J3-3



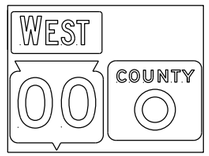
JH-1



J4-1



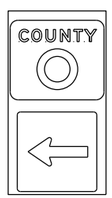
J4-2



J4-2



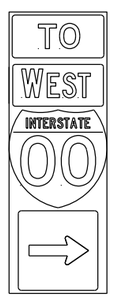
J12-1



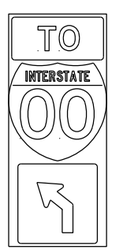
J13-1



J32-1



J33-1



J22-1



J23-1



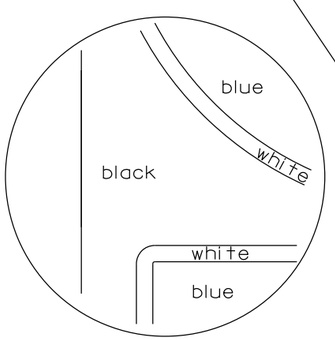
JR13-1

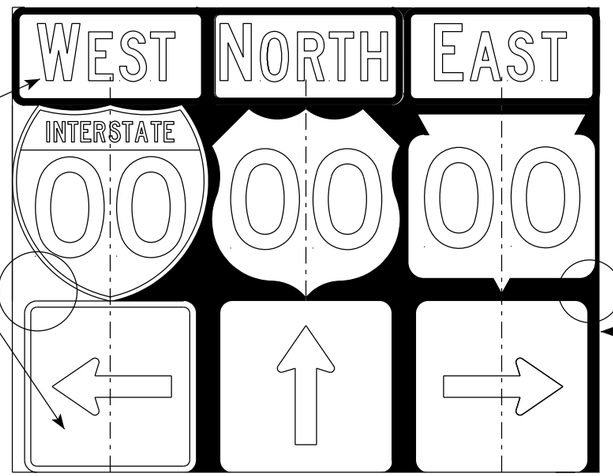


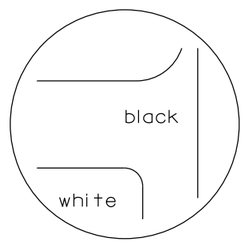
JR23-1



JR99-1



black background

## NOTES

1. Signs are Type II - Type H Reflective
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 inchs (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.

ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/21 PLATE NO. A2-1S.9

PROJECT NO:

SHEET NO: 134 E

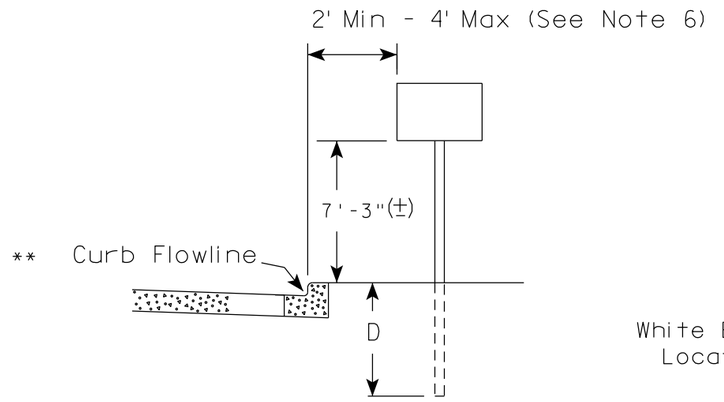
FILE NAME : C:\CAEfiles\Projects\tr_stdplate_A21S.dgn PLOT DATE : 18-MAR 2021 1:37 PLOT BY : mscj9h PLOT NAME :

WISDOT/CADDS SHEET 42

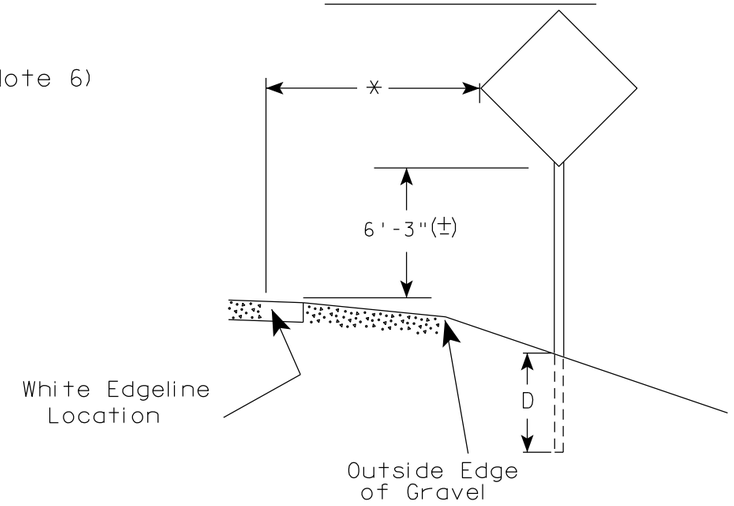
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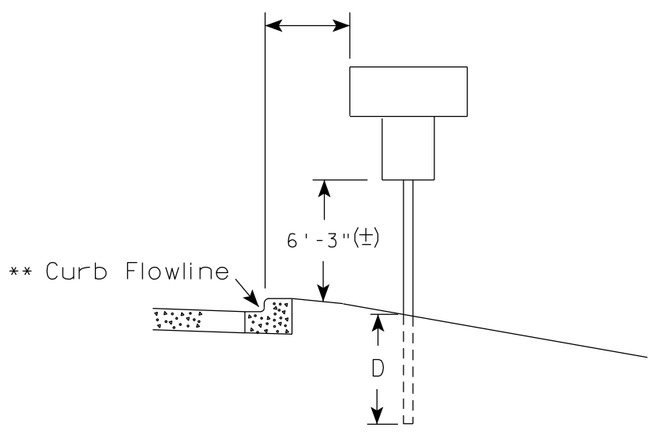
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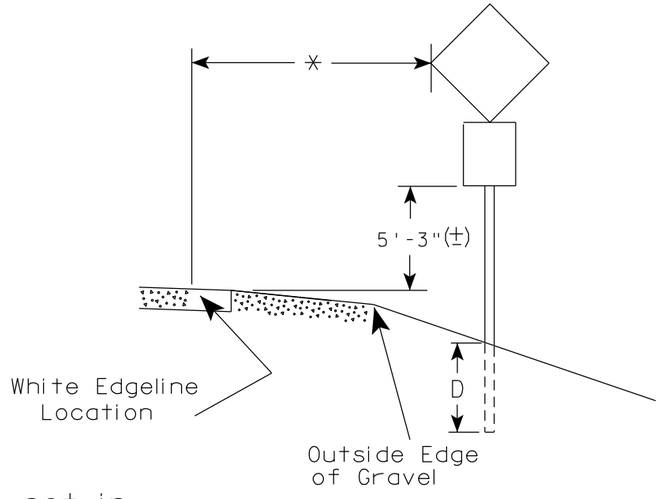
## URBAN AREA




## RURAL AREA (See Note 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. Offset of signs is measured from the flow line.

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

### POST EMBEDMENT DEPTH

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

### GENERAL NOTES

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

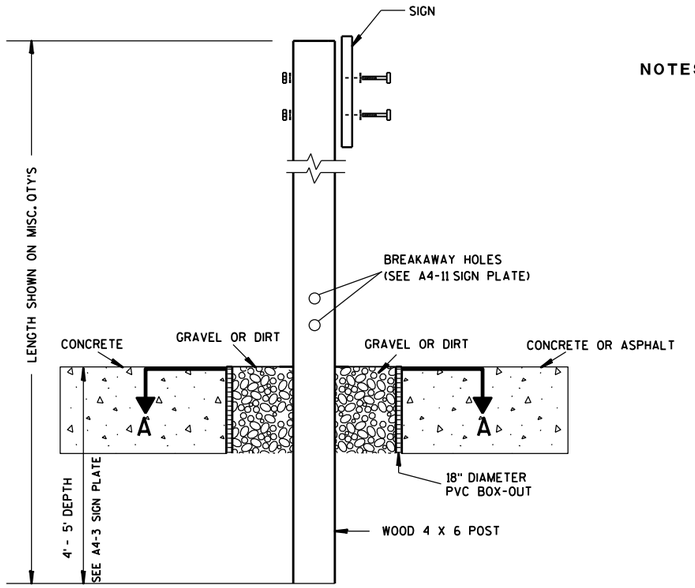
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/13/2020 PLATE NO. A4-3.22

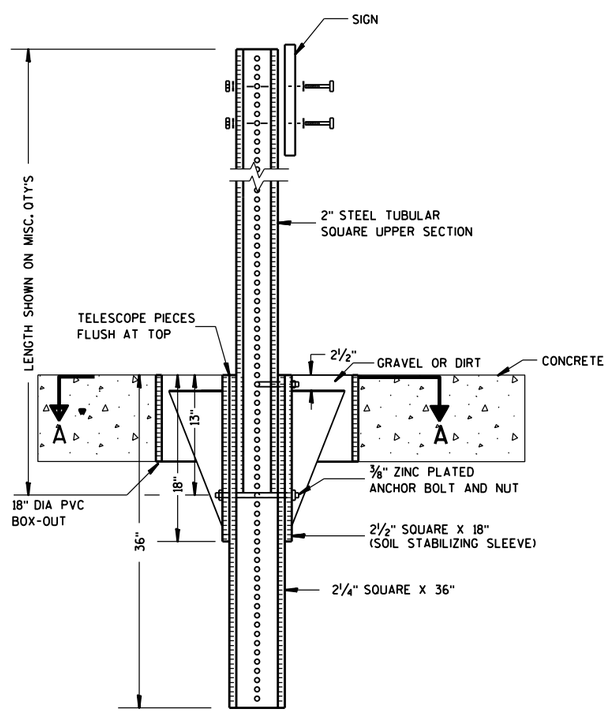
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 135 | E |
|---|---|---|---|---|---|




**ELEVATION VIEW**

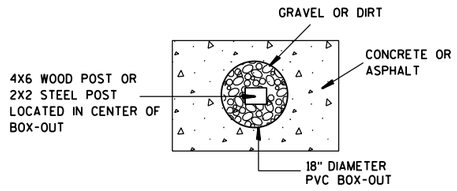
**DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT**

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




**ELEVATION VIEW**

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




**PLAN VIEW**

**FOR NEW CONCRETE/ASPHALT INSTALLATIONS**

# SIGN POST BOX-OUTS A4-3B

*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
for State Traffic Engineer

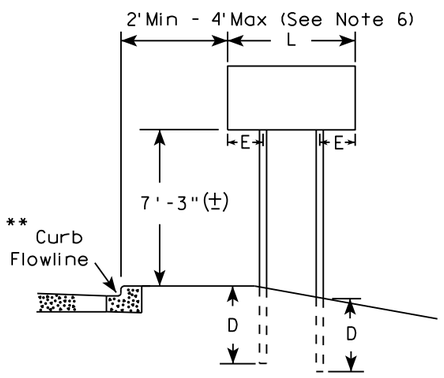
DATE 1/27/14 PLATE NO. A4-3B.1

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

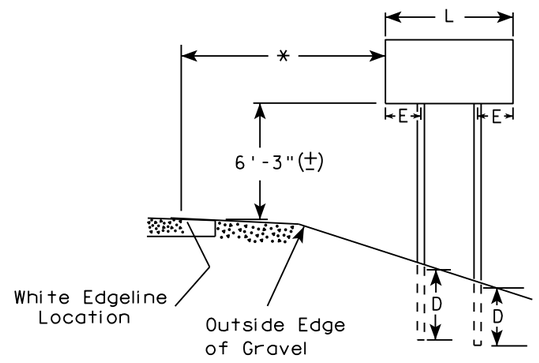


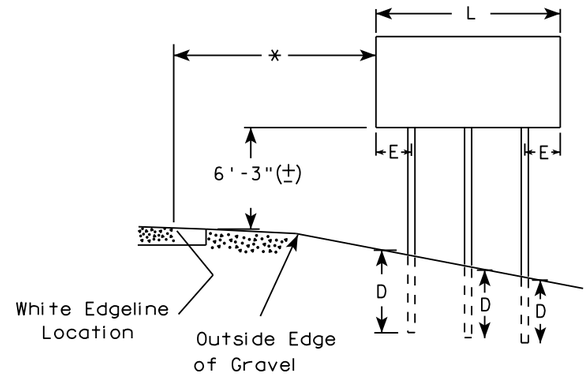
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

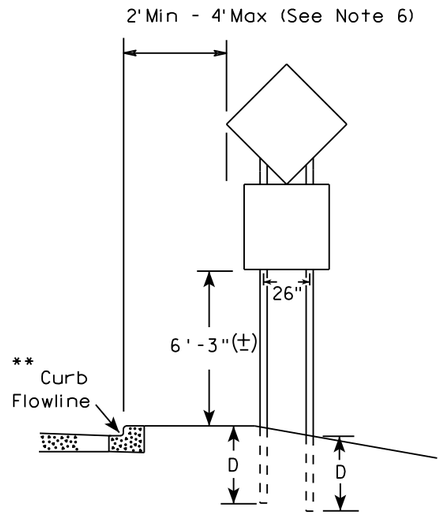
## URBAN AREA



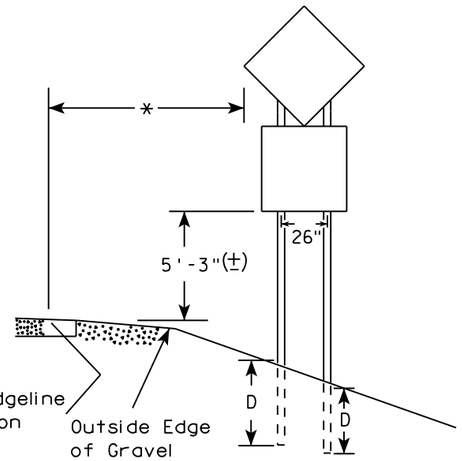

## RURAL AREA (See Note 3)




48" DIAMOND WARNING SIGN




48" DIAMOND WARNING SIGN

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

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

### GENERAL NOTES

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

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

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

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

### POST EMBEDMENT DEPTH

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

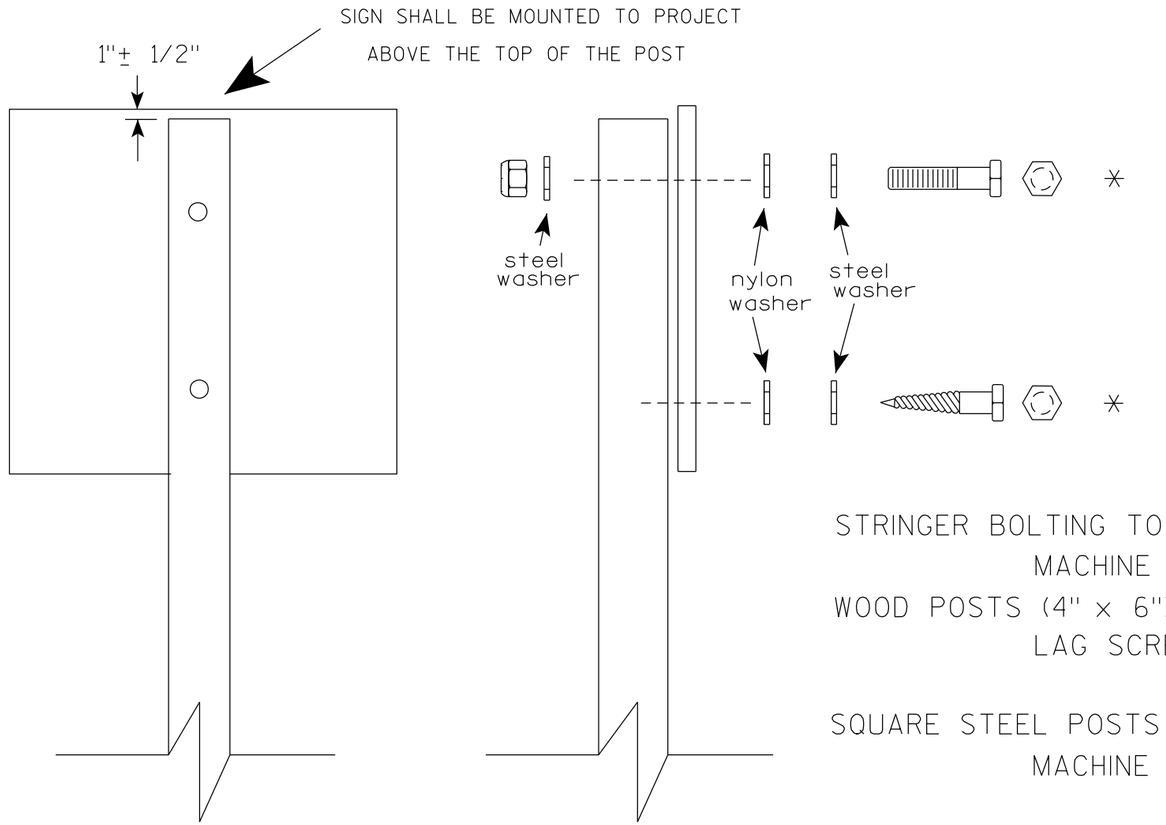
**TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS**

*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 8/21/17 PLATE NO. A4-4.15

| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 137 | 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 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

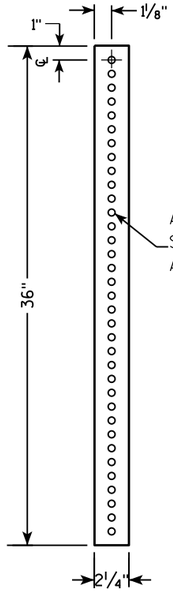
*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
for State Traffic Engineer

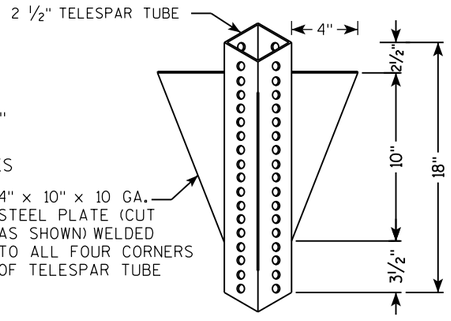
DATE 4/1/2020 PLATE NO. A4-8.9

## TELESCOPIC TUBING ANCHORS
## TWO PIECE SYSTEM

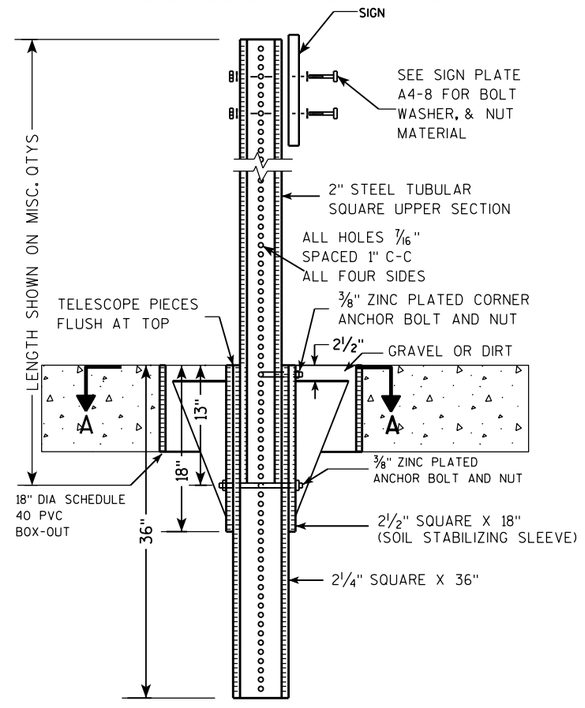
**2 1/4 " SQUARE**
**12 GAUGE**
**PERFORATED**
**GALVANIZED FINISH**



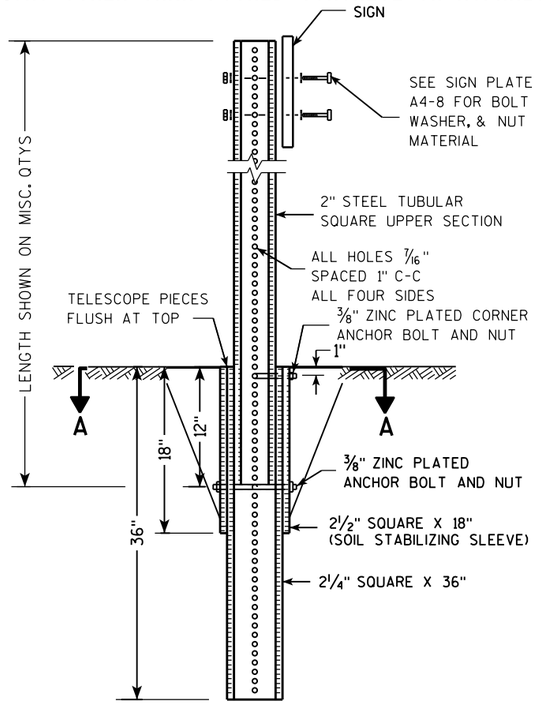

**2 1/2 " SQUARE**
**12 GAUGE**
**OMNI-DIRECTIONAL**
**PERFORATED**
**SOIL STABILIZING SLEEVE**
**GALVANIZED FINISH**

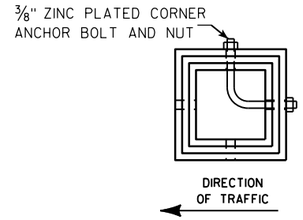



## DETAIL OF TUBULAR STEEL SIGN POST
**(IN POURED CONCRETE OR ASPHALT)**




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




**SECTION A-A**

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

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

TUBULAR STEEL
SIGN POST
A4-9

*WISCONSIN DEPT OF TRANSPORTATION*

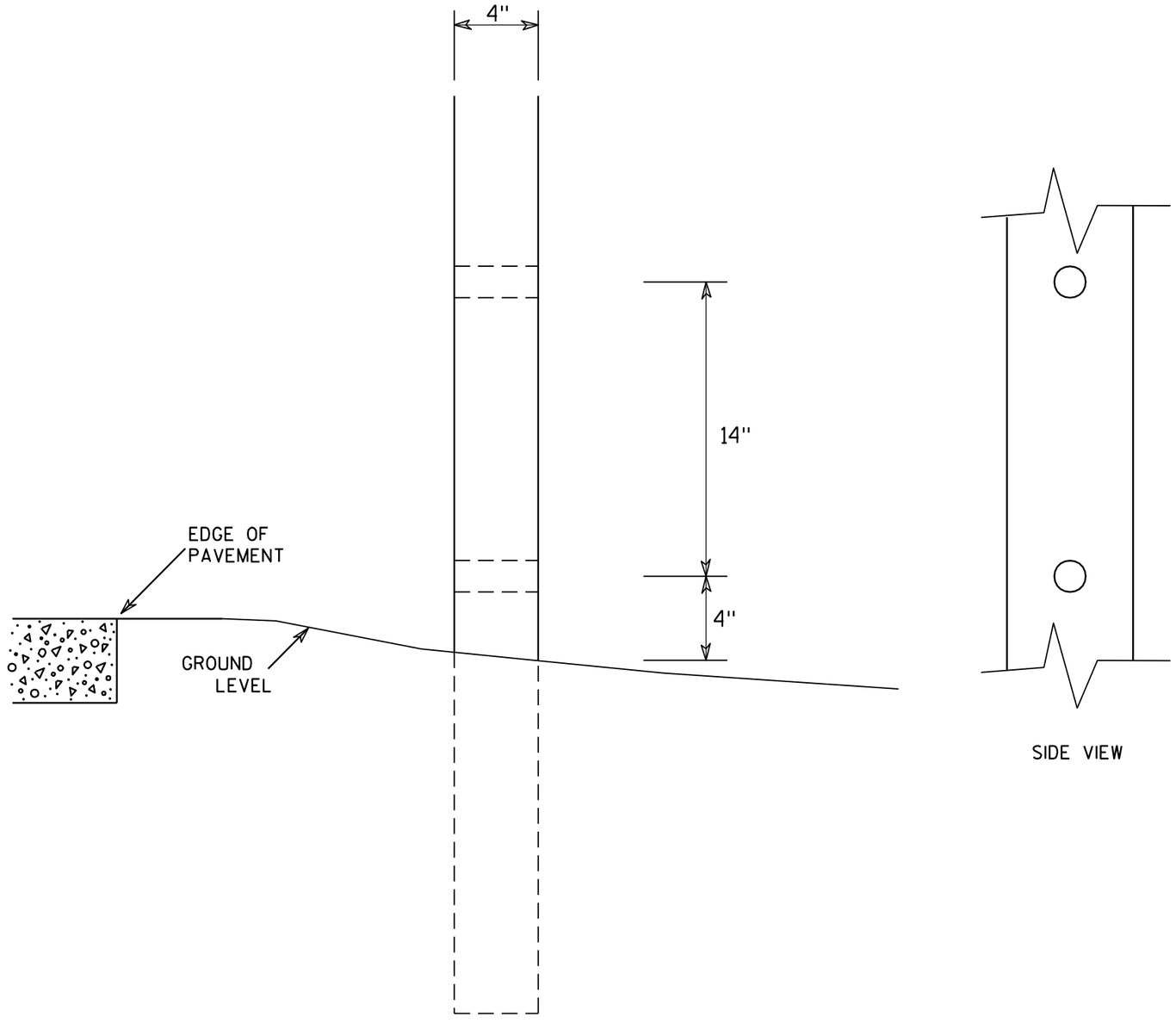
APPROVED Matthew R Rauch
*for* State Traffic Engineer

DATE 2/05/15 PLATE A4-9.9



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

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A49.DGN PLOT DATE : 05-FEB-2015 17:09 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42






SIDE VIEW

GENERAL NOTES

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

# 4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

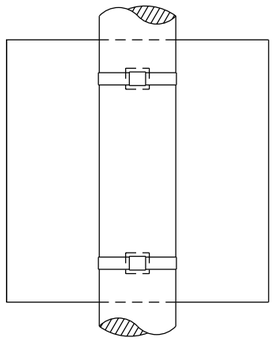
APPROVED Chester J Spang for State Traffic Engineer

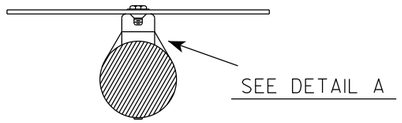
DATE 3/27/97 PLATE NO. A4-11.2

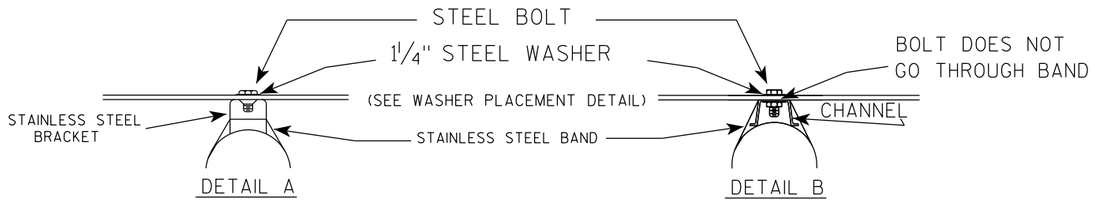
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 140 | E |
|---|---|---|---|---|---|

# BANDING

SINGLE SIGN



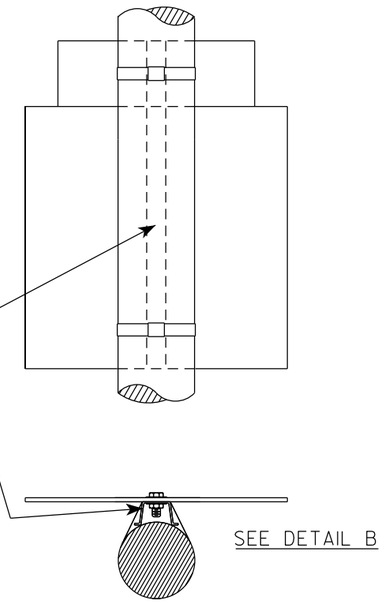


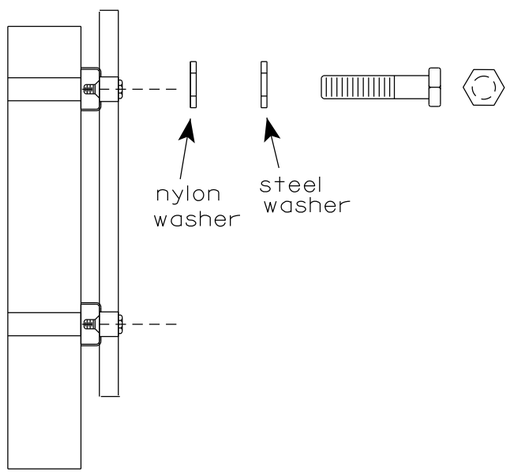

## GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be ¾" in width and 0.025" thickness.
4. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
   b. Electro-galvanized in accordance with ASTM designation: B 633, Type III, SC 3

"J" ASSEMBLY




WASHER PLACEMENT




WASHERS (ALL POSTS) -
1-1/4" O.D. X ⅜" I.D. X 1/16" STEEL
1-1/4" O.D. X ⅜" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

STANDARD SIGN
SIGN BANDING DETAILS

*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
for State Traffic Engineer

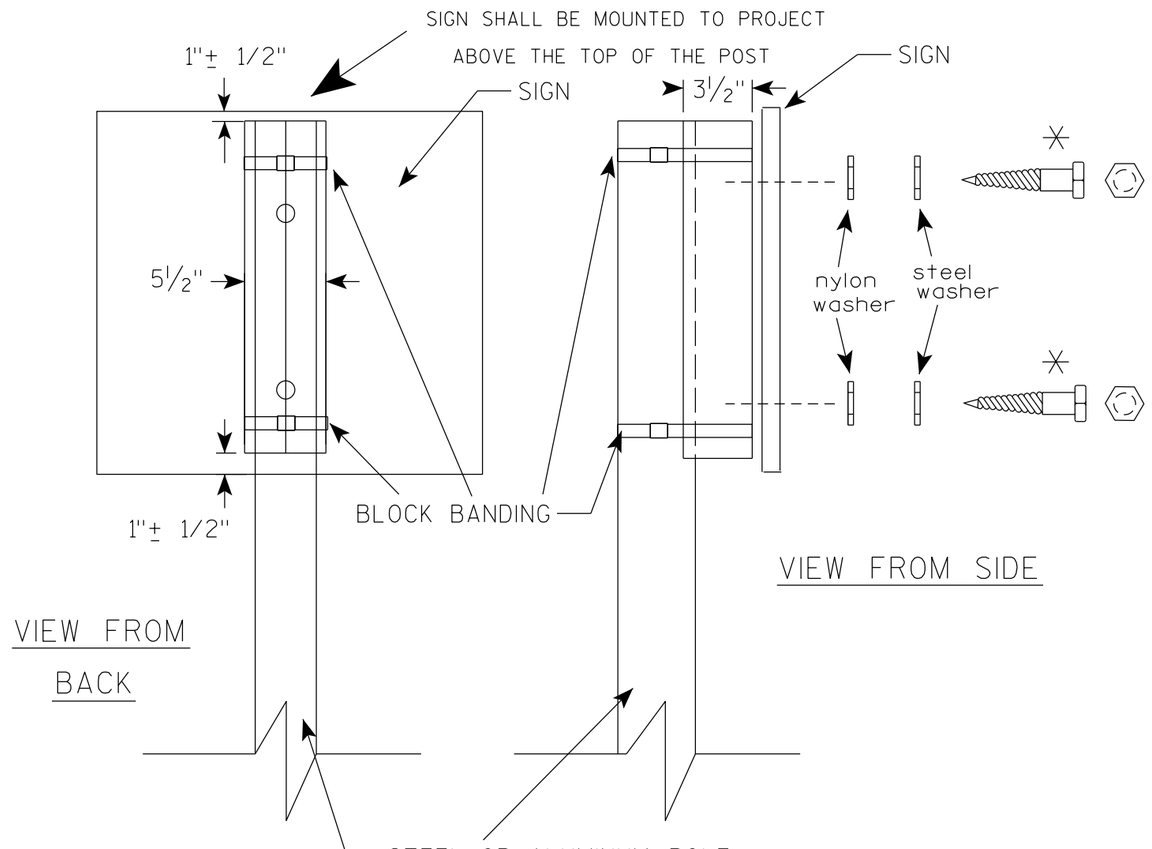
DATE 6/10/19 PLATE NO. A5-9.4

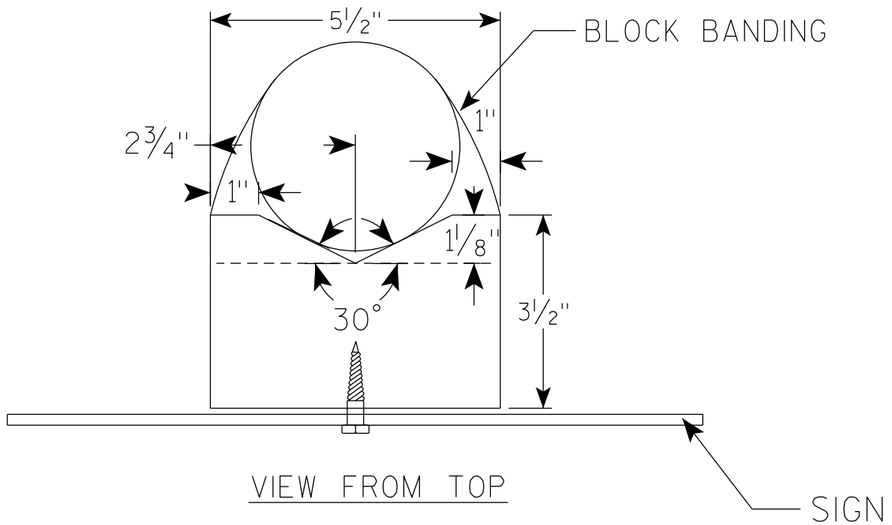
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 141 | E |
|---|---|---|---|---|---|

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A59.dgn PLOT DATE : 10-JUN 2019 4:10 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

7

7




## GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WisDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, ¾" WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORNALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
   b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✳ LAG BOLTS SHALL BE ⅜" X 2½"

# BLOCK BANDING DETAIL ( V-BLOCK OPTION )

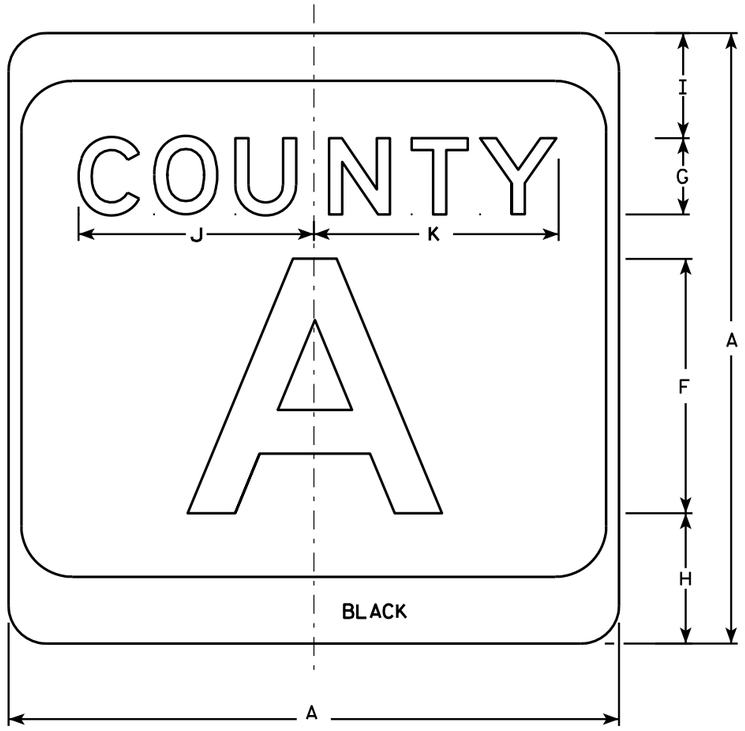
*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
for State Traffic Engineer

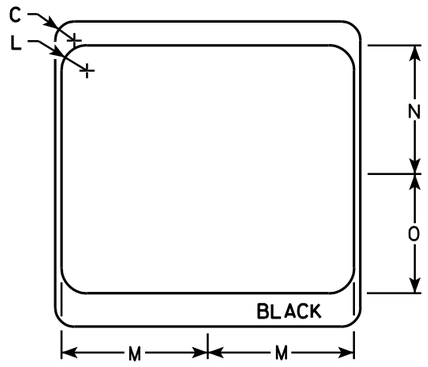
DATE 4/19/2022 PLATE NO. A5-10.3

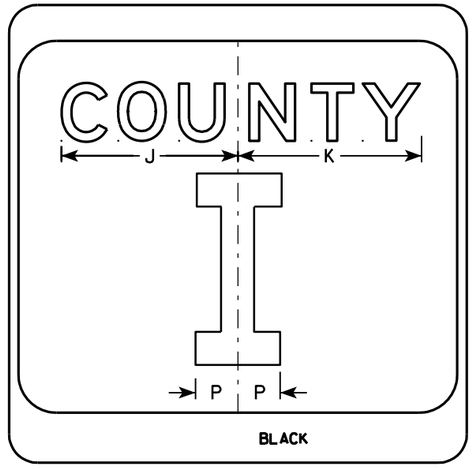
PROJECT NO:

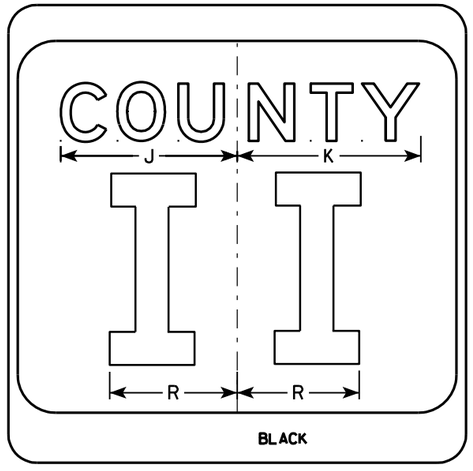
SHEET NO: 142 E




M1-5A




NOTES

1. Sign is Type II - see Note 7 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White & Black - See Note 7
   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. 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.
6. Substitute appropriate letters & optically center to achieve proper balance.
7. 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 |

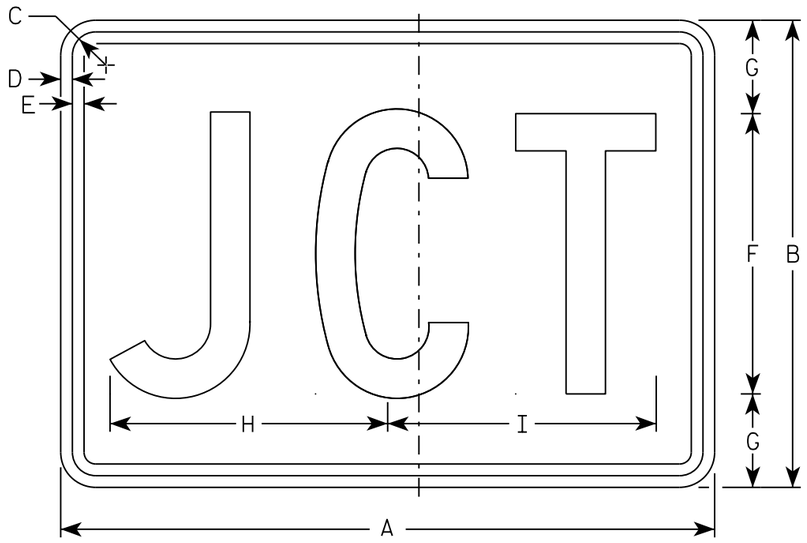
CTH MARKER
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

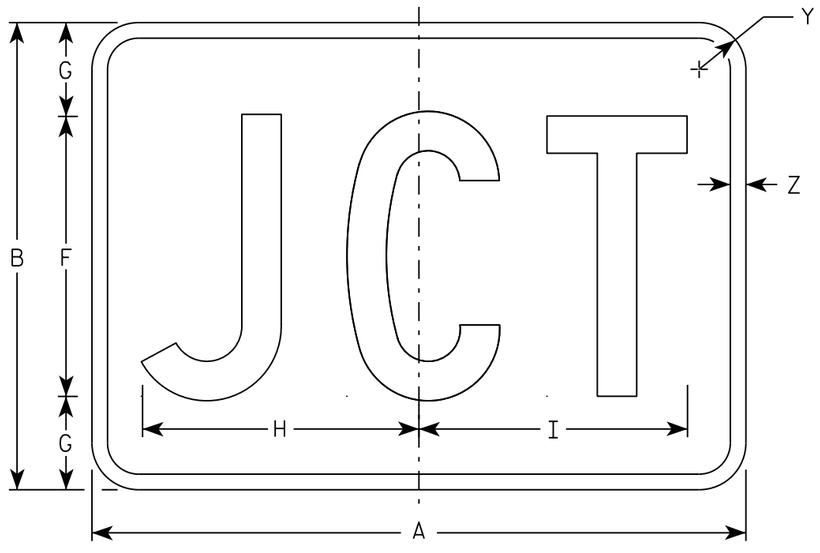
APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 143 | E




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 | Q | 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 |

STANDARD SIGN
M2-1

WISCONSIN DEPT OF TRANSPORTATION

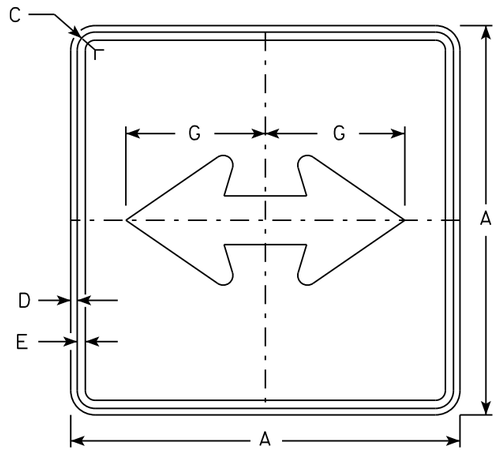
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE 144 12-1.12

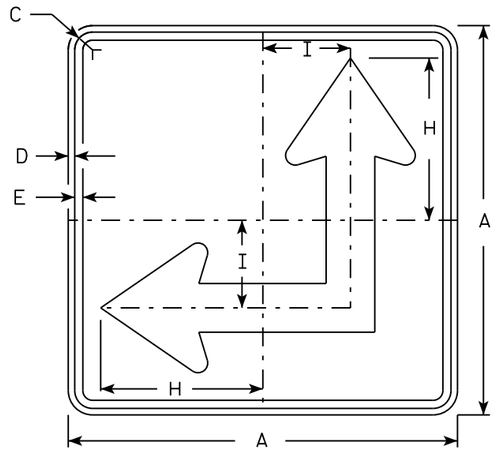
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: | E |
|---|---|---|---|---|---|



FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M21.DGN PLOT DATE : 01-DEC-2015 17:54 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 4.864603:1.000000



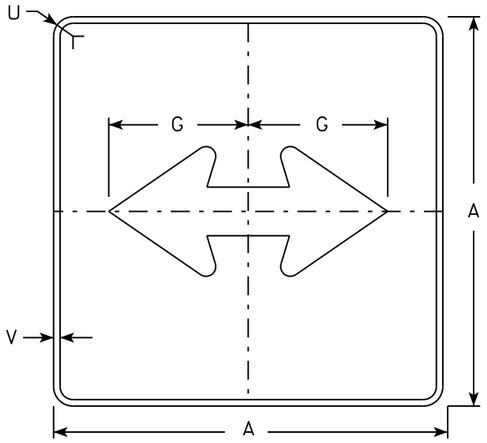

M6-4
MM6-4
MO6-4
MP6-4



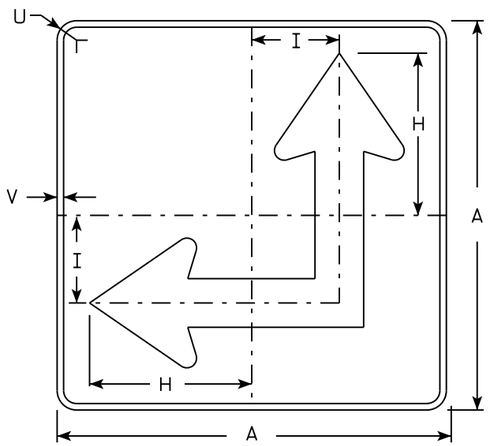

M6-6
MM6-6
MO6-6
MP6-6

NOTES

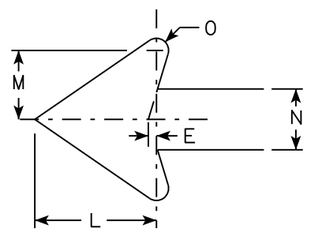
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See Note 4
   Message - See Note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-4 and M6-6 Background - 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
   MO6-4 and MO6-6 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.




MB6-4
MK6-4
MN6-4
MR6-4




MB6-6
MK6-6
MN6-6
MR6-6




| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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 |

STANDARD SIGN
M6-4 & M6-6
SERIES

WISCONSIN DEPT OF TRANSPORTATION

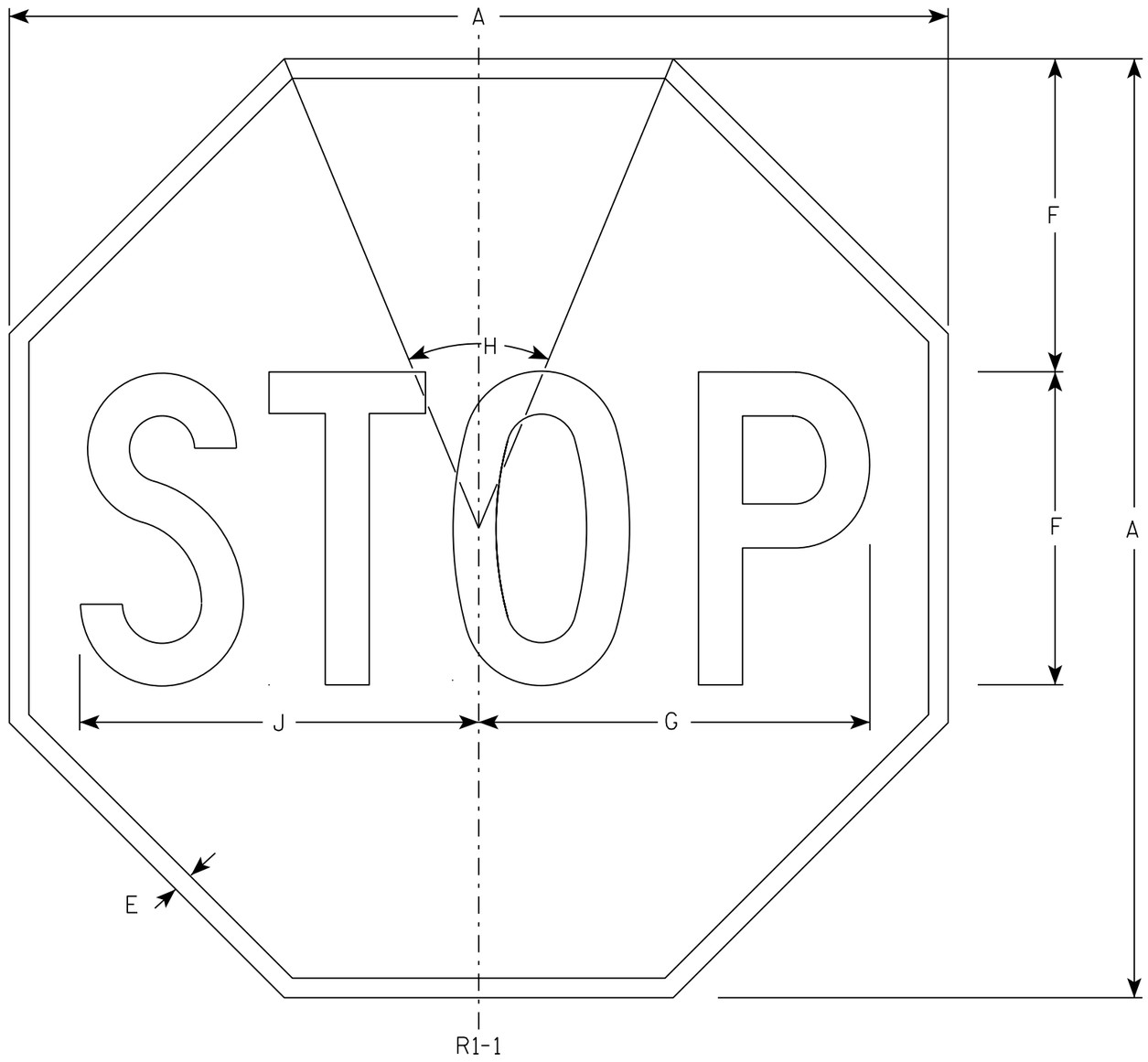
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE 145 M6-4.10

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



FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M64.DGN PLOT DATE : 01-DEC-2015 17:58 PLOT BY : $$ platuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000




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

| 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

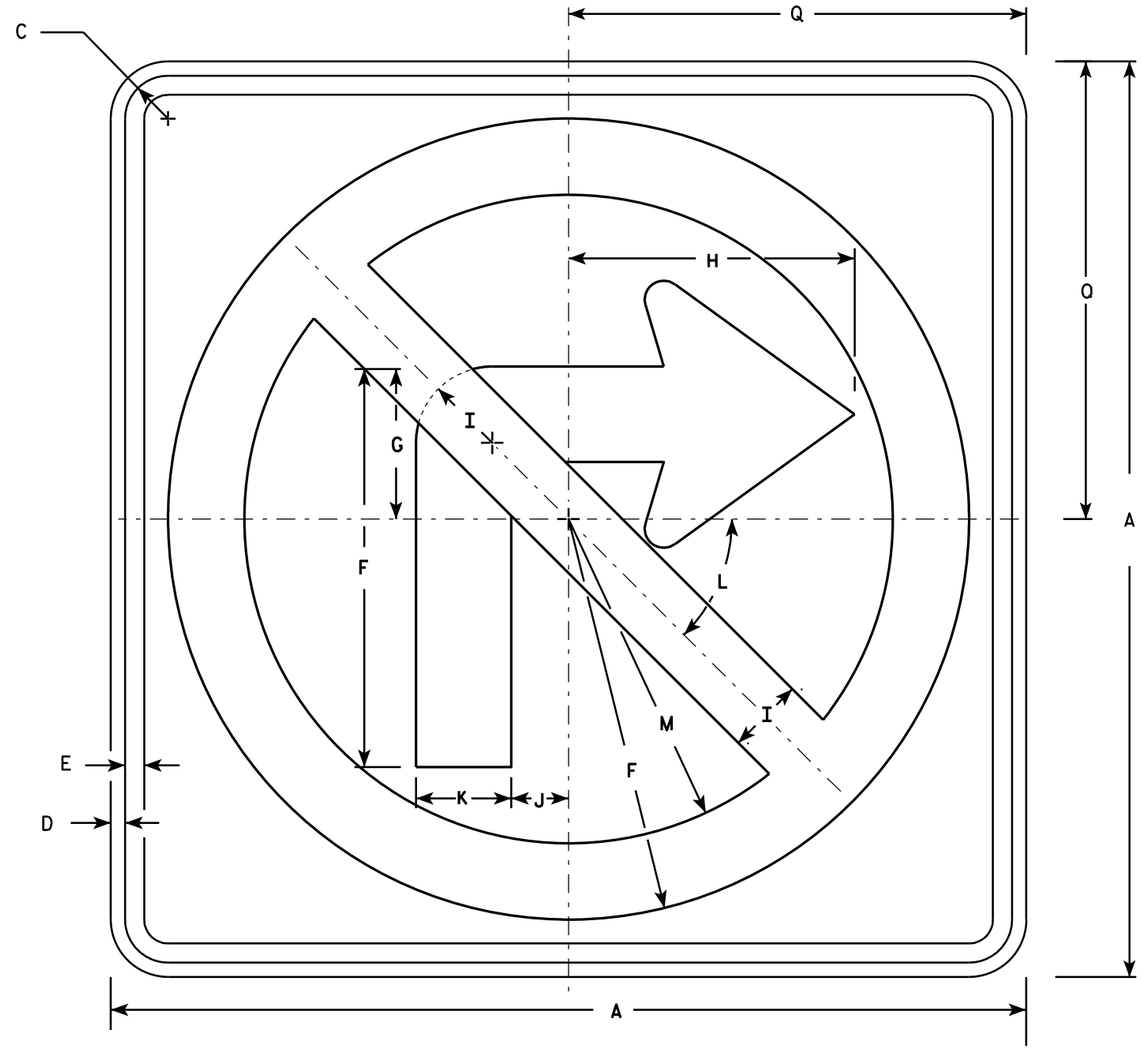
*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch

*for* State Traffic Engineer

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

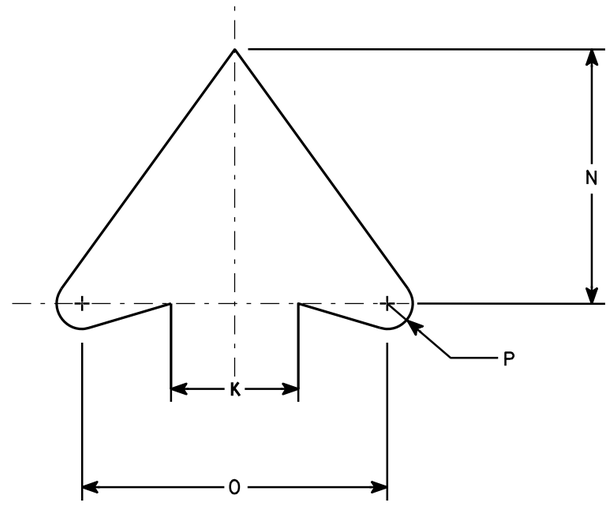
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 146 | E |
|---|---|---|---|---|---|




R3-1

## 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 - 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. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.




ARROW DETAIL

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 24 | | 1 1/8 | 3/8 | 1/2 | 10 1/2 | 4 | 7 1/2 | 2 | 1 1/2 | 2 1/2 | 45 | 8 1/2 | 5 | 6 | 1/2 | 12 | | | | | | | | | | 4.0 |
| 2S | 24 | | 1 1/8 | 3/8 | 1/2 | 10 1/2 | 4 | 7 1/2 | 2 | 1 1/2 | 2 1/2 | 45° | 8 1/2 | 5 | 6 | 1/2 | 12 | | | | | | | | | | 4.0 |
| 2M | 36 | | 1 5/8 | 5/8 | 3/4 | 15 3/4 | 6 | 11 1/4 | 3 | 2 1/4 | 3 3/4 | 45 | 12 3/4 | 7 1/2 | 9 | 3/4 | 18 | | | | | | | | | | 9.0 |
| 3 | 36 | | 1 5/8 | 5/8 | 3/4 | 15 3/4 | 6 | 11 1/4 | 3 | 2 1/4 | 3 3/4 | 45 | 12 3/4 | 7 1/2 | 9 | 3/4 | 18 | | | | | | | | | | 9.0 |
| 4 | 36 | | 1 5/8 | 5/8 | 3/4 | 15 3/4 | 6 | 11 1/4 | 3 | 2 1/4 | 3 3/4 | 45° | 12 3/4 | 7 1/2 | 9 | 3/4 | 18 | | | | | | | | | | 9.0 |
| 5 | 48 | | 2 1/4 | 3/4 | 1 | 21 | 8 | 15 | 4 | 3 | 5 | 45° | 17 | 10 | 12 | 1 | 24 | | | | | | | | | | 16.0 |

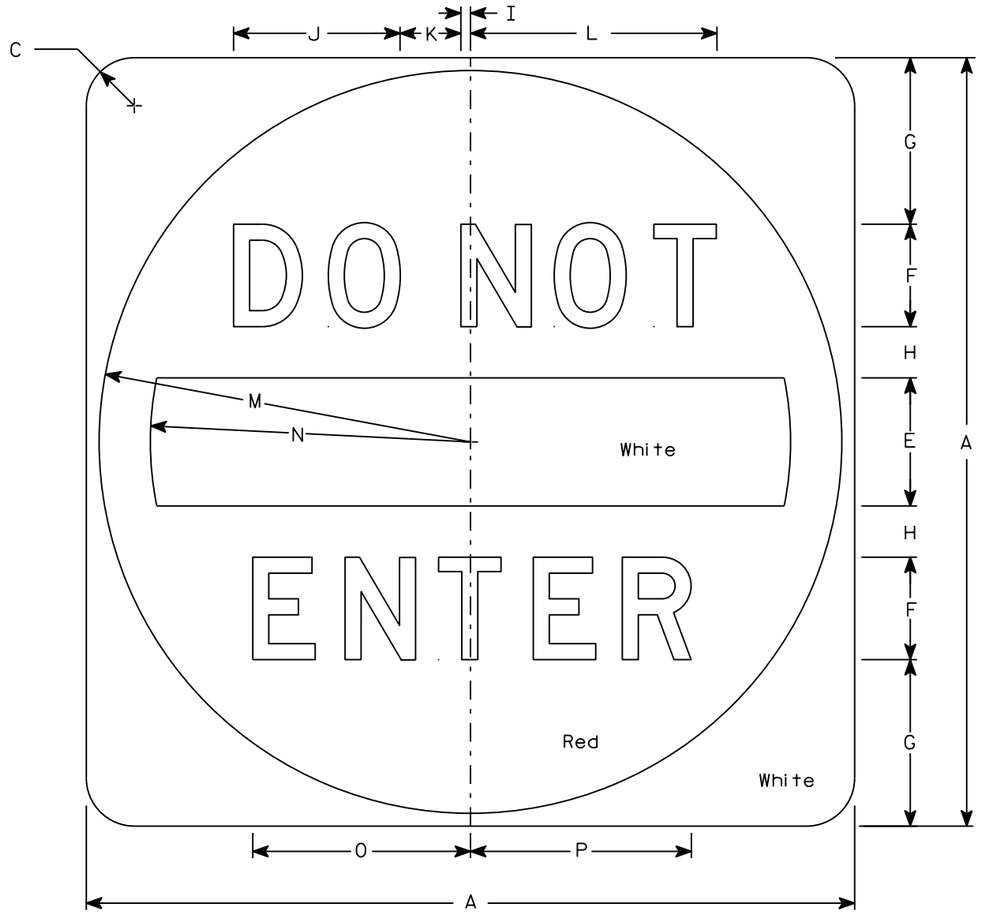
# STANDARD SIGN
# R3-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-1.5

| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 147 | E |
|---|---|---|---|---|---|




R5-1

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - See detail
   Message - White
3. Message Series - D

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2S | 30 | | 1 7/8 | | 5 | 4 | 6 1/2 | 2 | 3/8 | 6 1/2 | 2 3/8 | 9 5/8 | 14 1/2 | 12 1/2 | 8 1/2 | 8 5/8 | | | | | | | | | | | 6.25 |
| 2M | 36 | | 2 1/4 | | 6 | 5 | 7 1/2 | 2 1/2 | 1/2 | 8 1/8 | 3 | 12 1/8 | 17 1/2 | 15 | 10 5/8 | 10 3/4 | | | | | | | | | | | 9.0 |
| 3 | 36 | | 2 1/4 | | 6 | 5 | 7 1/2 | 2 1/2 | 1/2 | 8 1/8 | 3 | 12 1/8 | 17 1/2 | 15 | 10 5/8 | 10 3/4 | | | | | | | | | | | 9.0 |
| 4 | 36 | | 2 1/4 | | 6 | 5 | 7 1/2 | 2 1/2 | 1/2 | 8 1/8 | 3 | 12 1/8 | 17 1/2 | 15 | 10 5/8 | 10 3/4 | | | | | | | | | | | 9.0 |
| 5 | 48 | | 3 | | 8 | 6 | 11 | 3 | 5/8 | 9 3/4 | 3 5/8 | 14 1/2 | 23 1/2 | 20 | 12 3/4 | 12 7/8 | | | | | | | | | | | 16.0 |

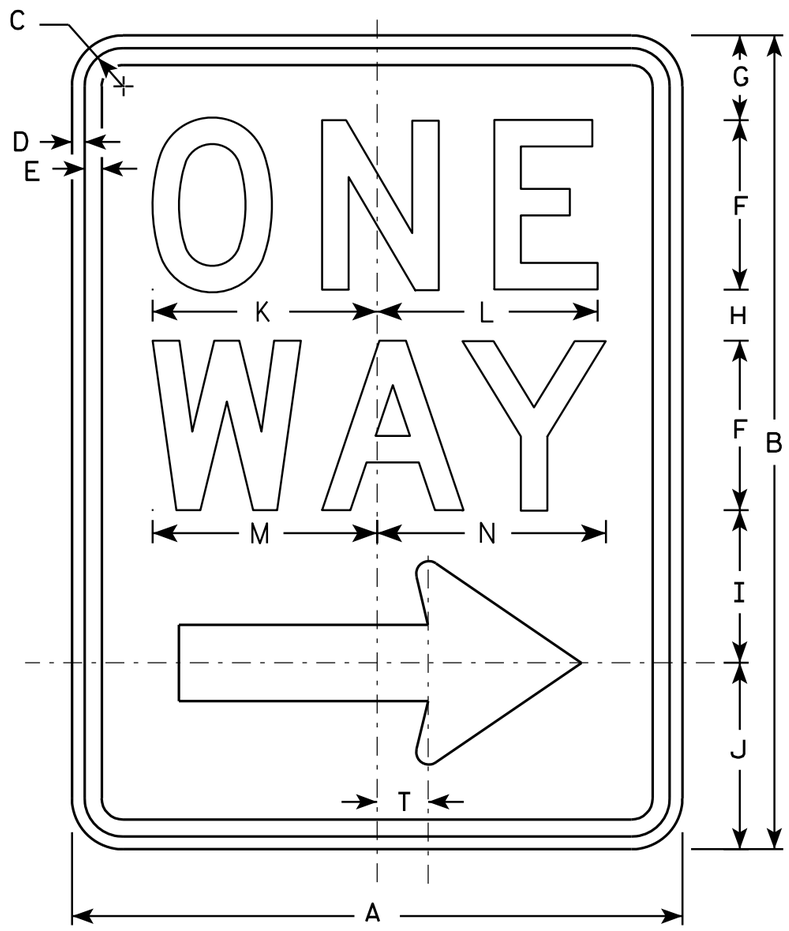
STANDARD SIGN
R5-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/15/18 PLATE NO. R5-1.16

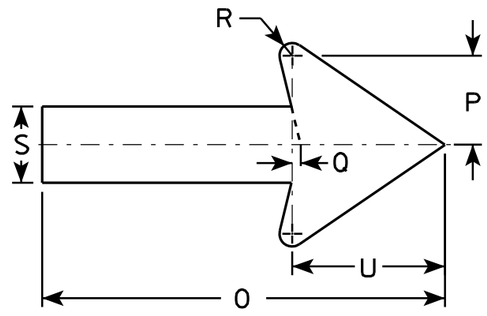
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 148 | E




R6-2R

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. R6-2L same as R6-2R except arrow points to the left.




| 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 18 | 24 | 1 1/8 | 3/8 | 1/2 | 5 | 2 1/2 | 1 1/2 | 4 1/2 | 5 1/2 | 6 5/8 | 6 1/2 | 6 5/8 | 6 3/4 | 11 7/8 | 2 5/8 | 1/4 | 3/8 | 2 1/4 | 1 1/2 | 4 1/2 | | | | | |
| 2S | 24 | 30 | 1 1/8 | 3/8 | 1/2 | 6 | 3 | 2 1/2 | 5 1/2 | 7 | 8 1/8 | 8 1/8 | 8 1/2 | 8 5/8 | 16 | 3 1/2 | 3/8 | 1/2 | 3 | 2 | 6 | | | | | |
| 2M | 30 | 36 | 1 3/8 | 1/2 | 5/8 | 8 | 2 1/2 | 2 5/8 | 6 7/8 | 8 | 10 1/2 | 10 1/2 | 11 1/4 | 11 1/4 | 20 | 4 3/8 | 1/2 | 5/8 | 3 3/4 | 2 1/2 | 7 1/2 | | | | | |
| 3 | 36 | 48 | 1 7/8 | 1/2 | 5/8 | 10 | 5 1/4 | 3 1/4 | 9 | 10 1/2 | 12 3/4 | 12 3/4 | 13 1/4 | 13 1/2 | 24 | 5 5/8 | 1/2 | 3/4 | 4 3/4 | 3 | 9 | | | | | |
| 4 | 36 | 48 | 1 7/8 | 1/2 | 5/8 | 10 | 5 1/4 | 3 1/4 | 9 | 10 1/2 | 12 3/4 | 12 3/4 | 13 1/4 | 13 1/2 | 24 | 5 5/8 | 1/2 | 3/4 | 4 3/4 | 3 | 9 | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | |

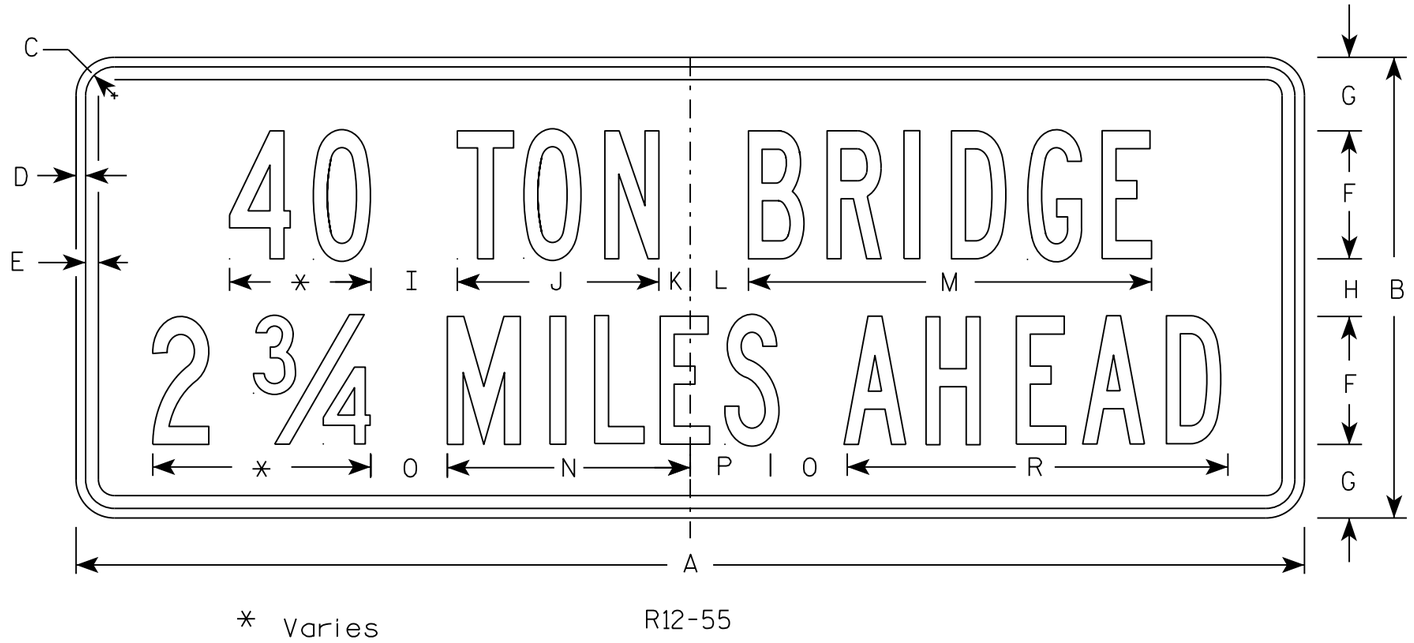
STANDARD SIGN
R6-2 R&L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/2/10 PLATE NO. R6-2.8

| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 149 | E |
|---|---|---|---|---|---|




* Varies

R12-55

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - B for Size 2, Series D for Sizes 3 & 4
4. Corners and border shall be rounded.
5. Substitute appropriate numerals to nearest quarter mile 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 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2S | 48 | 18 | 1 1/8 | 3/8 | 1/2 | 5 | 2 7/8 | 2 1/4 | 3 3/8 | 7 7/8 | 1 1/4 | 2 1/4 | 15 3/4 | 9 1/2 | 3 | 3 1/8 | | 14 7/8 | | | | | | | | | 6.0 |
| 2M | 48 | 18 | 1 1/8 | 3/8 | 1/2 | 5 | 2 7/8 | 2 1/4 | 3 3/8 | 7 7/8 | 1 1/4 | 2 1/4 | 15 3/4 | 9 1/2 | 3 | 3 1/8 | | 14 7/8 | | | | | | | | | 6.0 |
| 3 | 90 | 24 | 2 1/4 | 3/4 | 1 | 6 | 4 | 4 | 6 | 15 1/4 | 2 1/2 | 3 1/2 | 30 5/8 | 18 3/8 | 6 | 6 1/4 | | 28 3/8 | | | | | | | | | 15.0 |
| 4 | 120 | 30 | 2 1/4 | 3/4 | 1 | 8 | 5 1/4 | 3 5/8 | 8 | 19 5/8 | 4 | 3 | 39 1/2 | 24 1/2 | 7 | 6 3/4 | | 36 3/8 | | | | | | | | | 25.0 |
| 5 | 120 | 30 | 2 1/4 | 3/4 | 1 | 8 | 5 1/4 | 3 5/8 | 8 | 19 5/8 | 4 | 3 | 39 1/2 | 24 1/2 | 7 | 6 3/4 | | 36 3/8 | | | | | | | | | 25.0 |

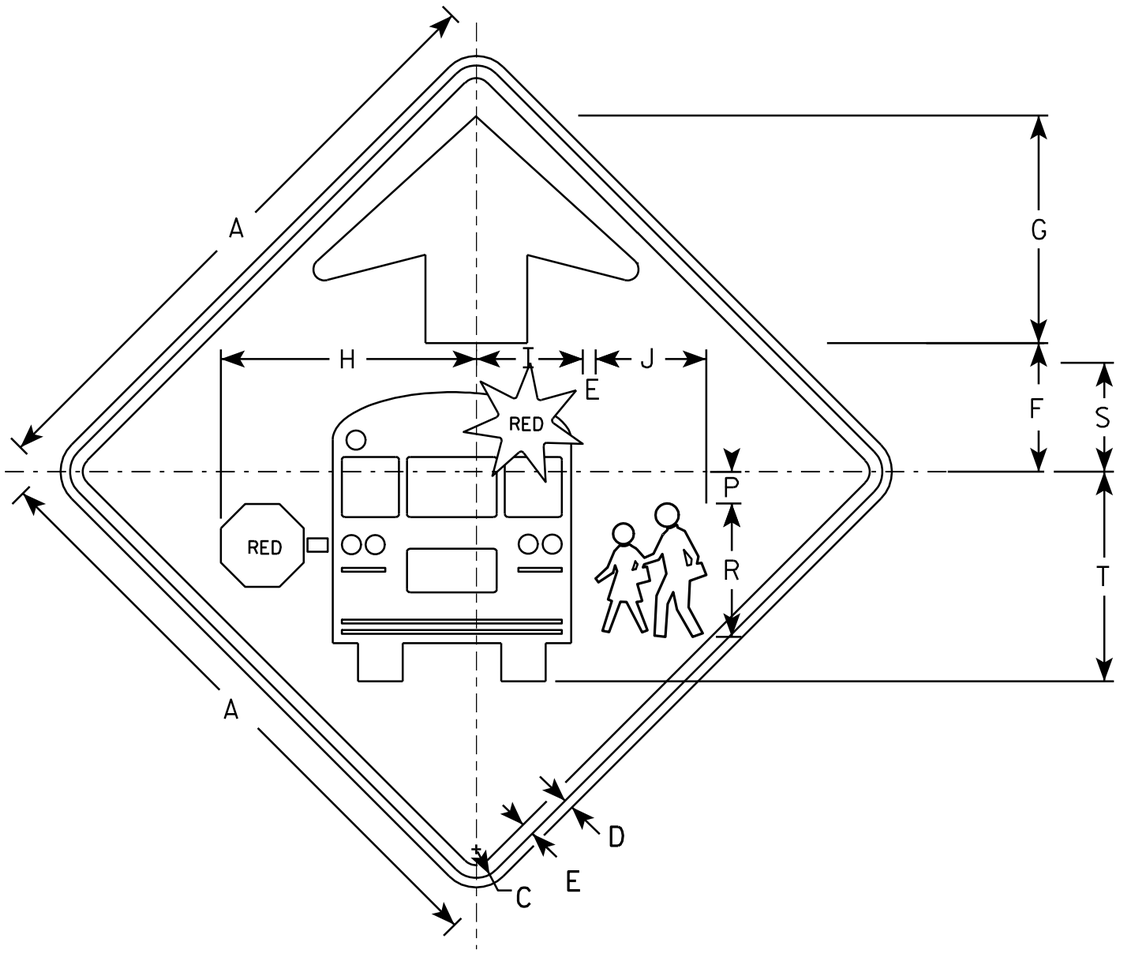
STANDARD SIGN
R12-55

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/22/17 PLATE NO. R12-55.7

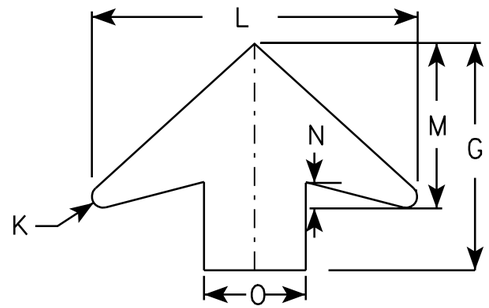
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 150 | E




S3-1

## 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-GREEN
   Message - BLACK except as noted
   Circles except PEDS- RED BACKGROUND
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.




ARROW DETAIL

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 30 | | 1 3/8 | 1/2 | 5/8 | 6 1/4 | 11 1/4 | 12 1/2 | 5 1/4 | 5 1/2 | 1/2 | 16 | 8 | 1 1/4 | 5 | 1 1/2 | | 6 5/8 | 5 3/8 | 10 3/8 | | | | | | | 6.25 |
| 2 | 36 | | 1 5/8 | 5/8 | 3/4 | 7 1/2 | 13 1/2 | 15 1/8 | 6 1/4 | 6 1/2 | 5/8 | 19 1/4 | 9 3/4 | 1 5/8 | 6 | 1 7/8 | | 7 7/8 | 6 3/8 | 12 3/8 | | | | | | | 9.0 |
| 3 | 48 | | 2 1/4 | 3/4 | 1 | 10 | 17 7/8 | 20 1/8 | 8 3/8 | 8 3/4 | 7/8 | 25 5/8 | 13 | 2 | 8 | 2 1/2 | | 10 1/2 | 8 1/2 | 16 1/2 | | | | | | | 16.0 |
| 4 | 48 | | 2 1/4 | 3/4 | 1 | 10 | 17 7/8 | 20 1/8 | 8 3/8 | 8 3/4 | 7/8 | 25 5/8 | 13 | 2 | 8 | 2 1/2 | | 10 1/2 | 8 1/2 | 16 1/2 | | | | | | | 16.0 |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

STANDARD SIGN
S3-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

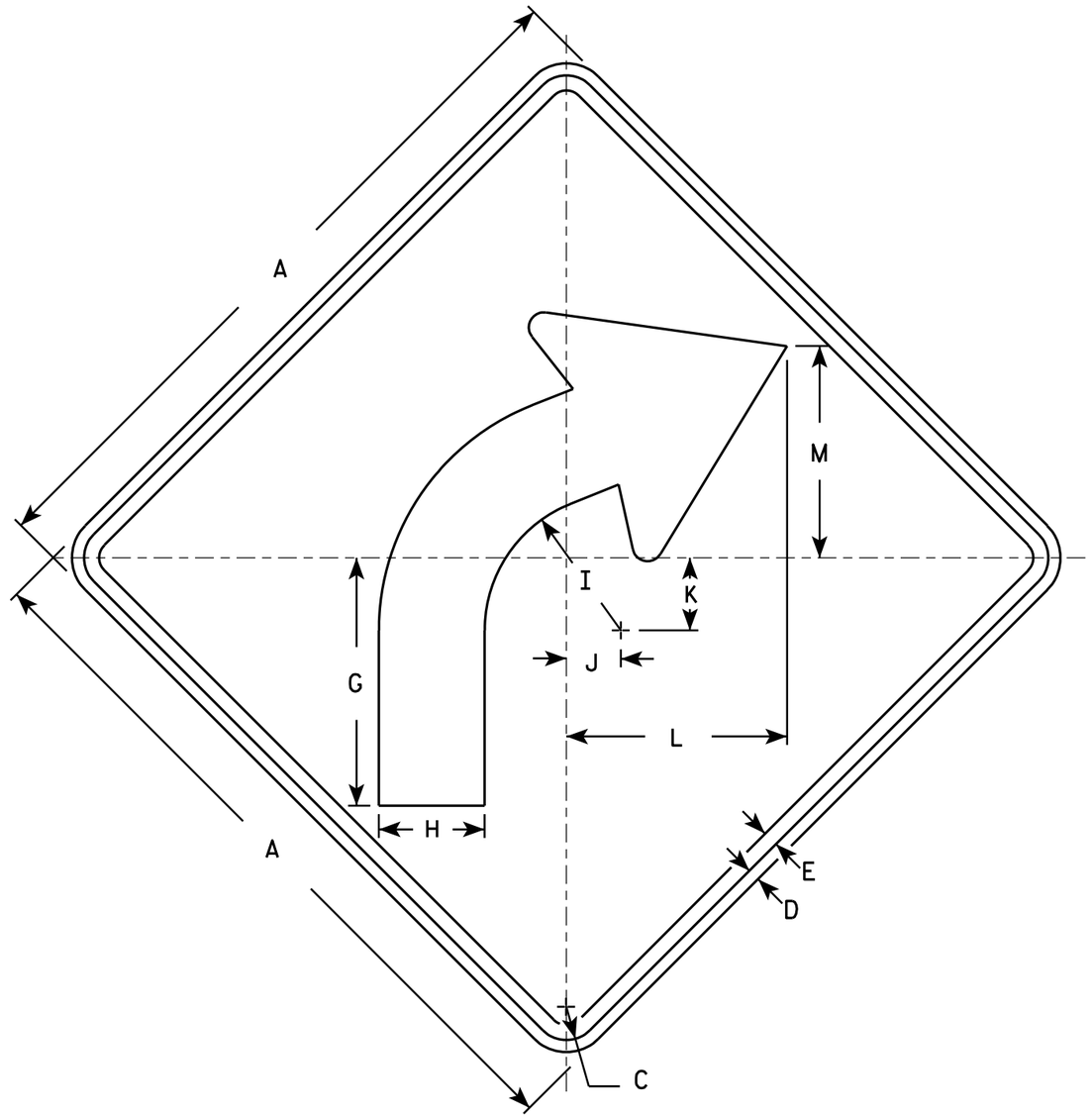
DATE 6/8/10 PLATE NO. S3-1.6

PROJECT NO:

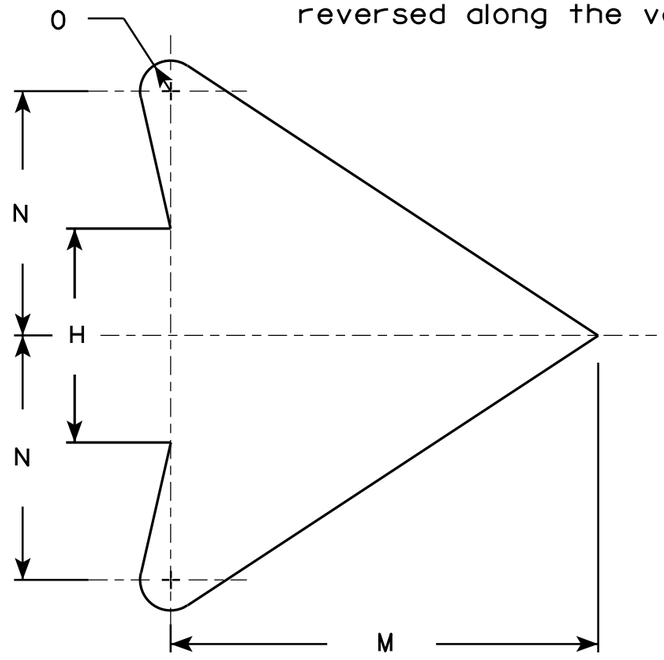
SHEET NO: 151 E

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. 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. W1-2L is the same as W1-2R except the arrow is reversed along the vertical centerline.




W1-2R




ARROW DETAIL

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

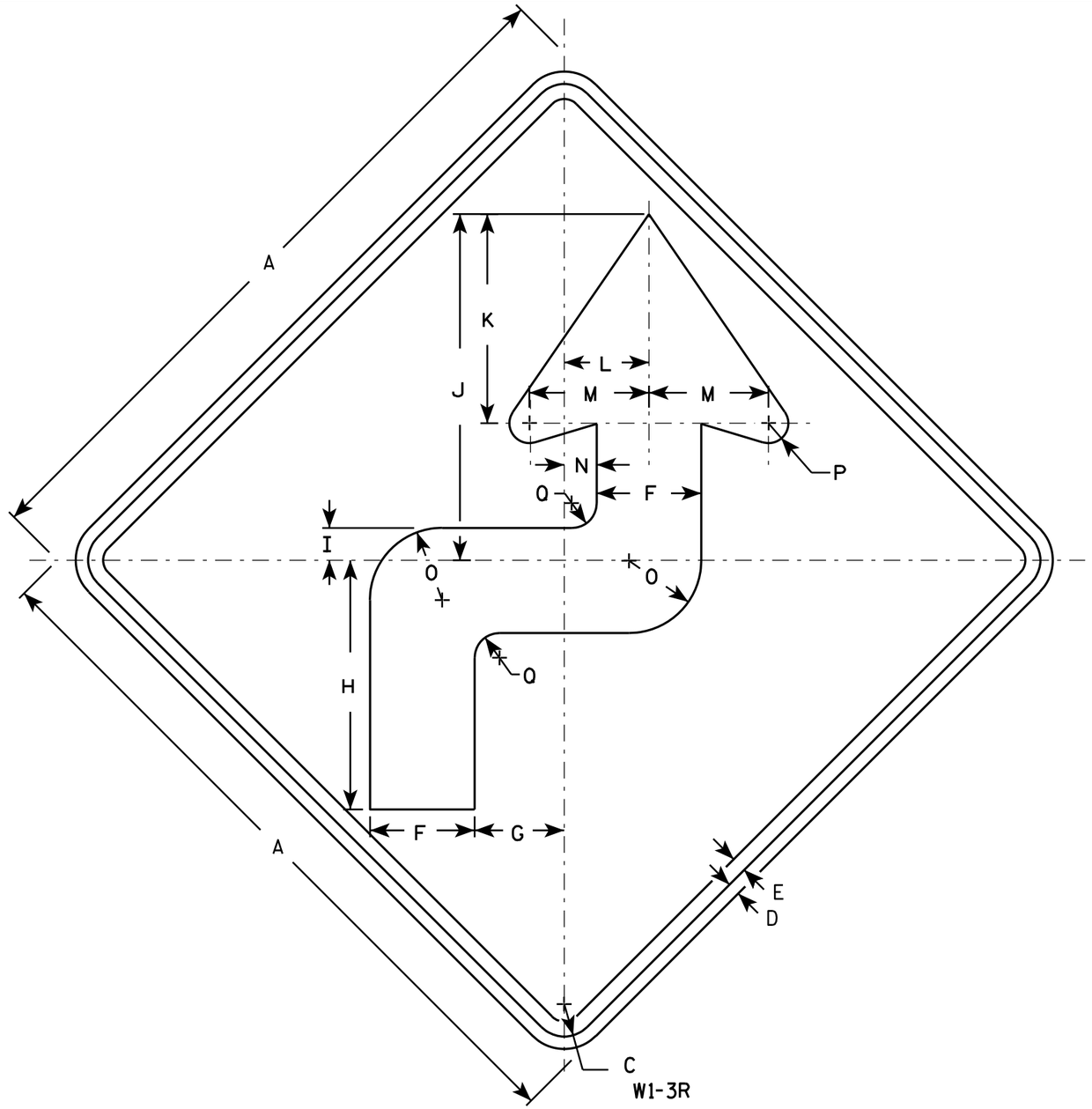
STANDARD SIGN
W1-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/15/12 PLATE NO. W1-2.10

| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 152 | 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. 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. W1-3L is the same as W1-3R except the arrow 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 | 24 | | 1 1/8 | 3/8 | 1/2 | 3 1/2 | 3 | 8 3/8 | 1 1/8 | 11 5/8 | 7 | 2 3/4 | 4 | 1 1/8 | 2 1/2 | 5/8 | 7/8 | | | | | | | | | | 4.0 |
| 2S | 36 | | 1 5/8 | 5/8 | 3/4 | 5 1/4 | 4 1/2 | 12 1/2 | 1 5/8 | 17 3/8 | 10 1/2 | 4 1/4 | 6 | 1 5/8 | 3 5/8 | 1 | 1 1/4 | | | | | | | | | | 9.0 |
| 2M | 36 | | 1 5/8 | 5/8 | 3/4 | 5 1/4 | 4 1/2 | 12 1/2 | 1 5/8 | 17 3/8 | 10 1/2 | 4 1/4 | 6 | 1 5/8 | 3 5/8 | 1 | 1 1/4 | | | | | | | | | | 9.0 |
| 3 | 36 | | 1 5/8 | 5/8 | 3/4 | 5 1/4 | 4 1/2 | 12 1/2 | 1 5/8 | 17 3/8 | 10 1/2 | 4 1/4 | 6 | 1 5/8 | 3 5/8 | 1 | 1 1/4 | | | | | | | | | | 9.0 |
| 4 | 36 | | 1 5/8 | 5/8 | 3/4 | 5 1/4 | 6 | 12 1/2 | 1 5/8 | 17 3/8 | 10 1/2 | 4 1/4 | 6 | 1 5/8 | 3 5/8 | 1 | 1 1/4 | | | | | | | | | | 9.0 |
| 5 | 48 | | 2 1/4 | 3/4 | 1 | 7 | 6 | 16 5/8 | 2 1/4 | 23 1/4 | 14 | 5 5/8 | 8 | 2 1/8 | 4 7/8 | 1 1/4 | 1 5/8 | | | | | | | | | | 16.0 |

STANDARD SIGN
W1-3

WISCONSIN DEPT OF TRANSPORTATION

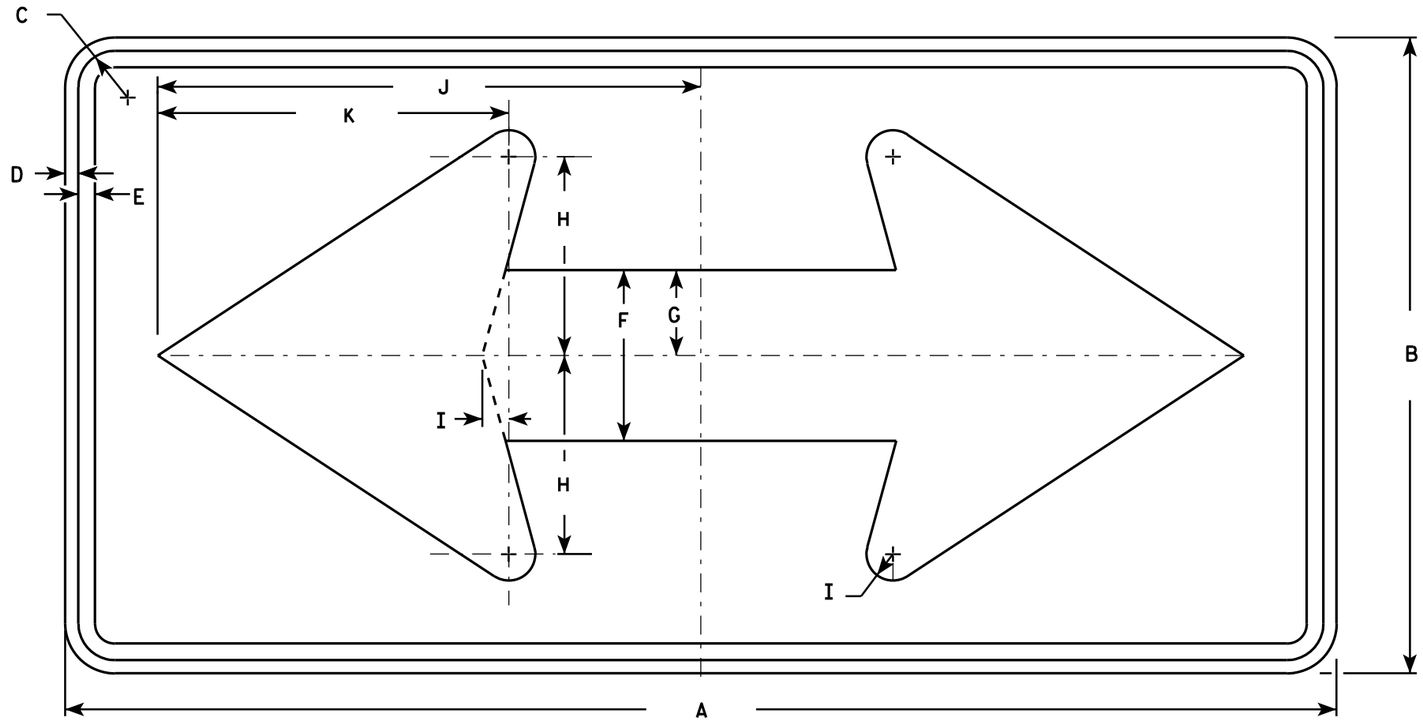
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/17/12 PLATE NO. W1-3.8

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 153 | E


7

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W13.DGN PLOT DATE : 17-MAY-2012 13:09 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 6.698561:1.000000 WISDOT/CADDS SHEET 42




W1-7

NOTES

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

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

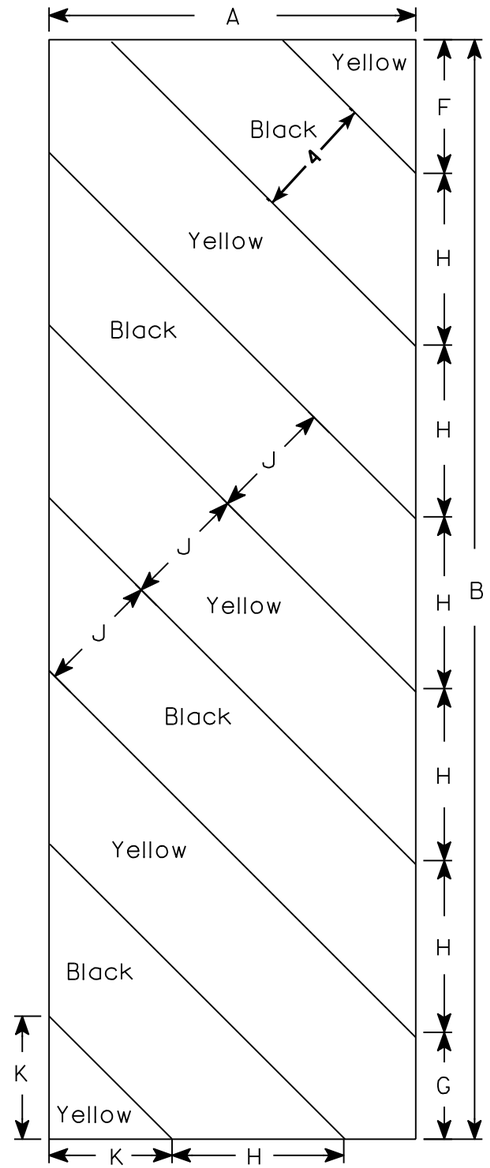
STANDARD SIGN
W1-7

WISCONSIN DEPT OF TRANSPORTATION

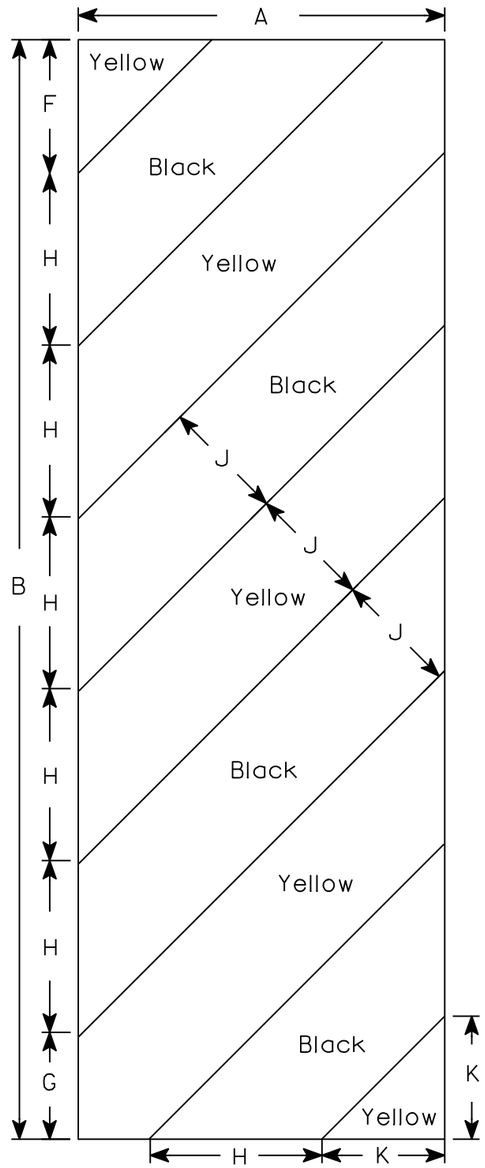
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W1-7.7

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 154 | E




W5-52L




W5-52R

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. Alternate colors of stripes as shown.

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

STANDARD SIGN

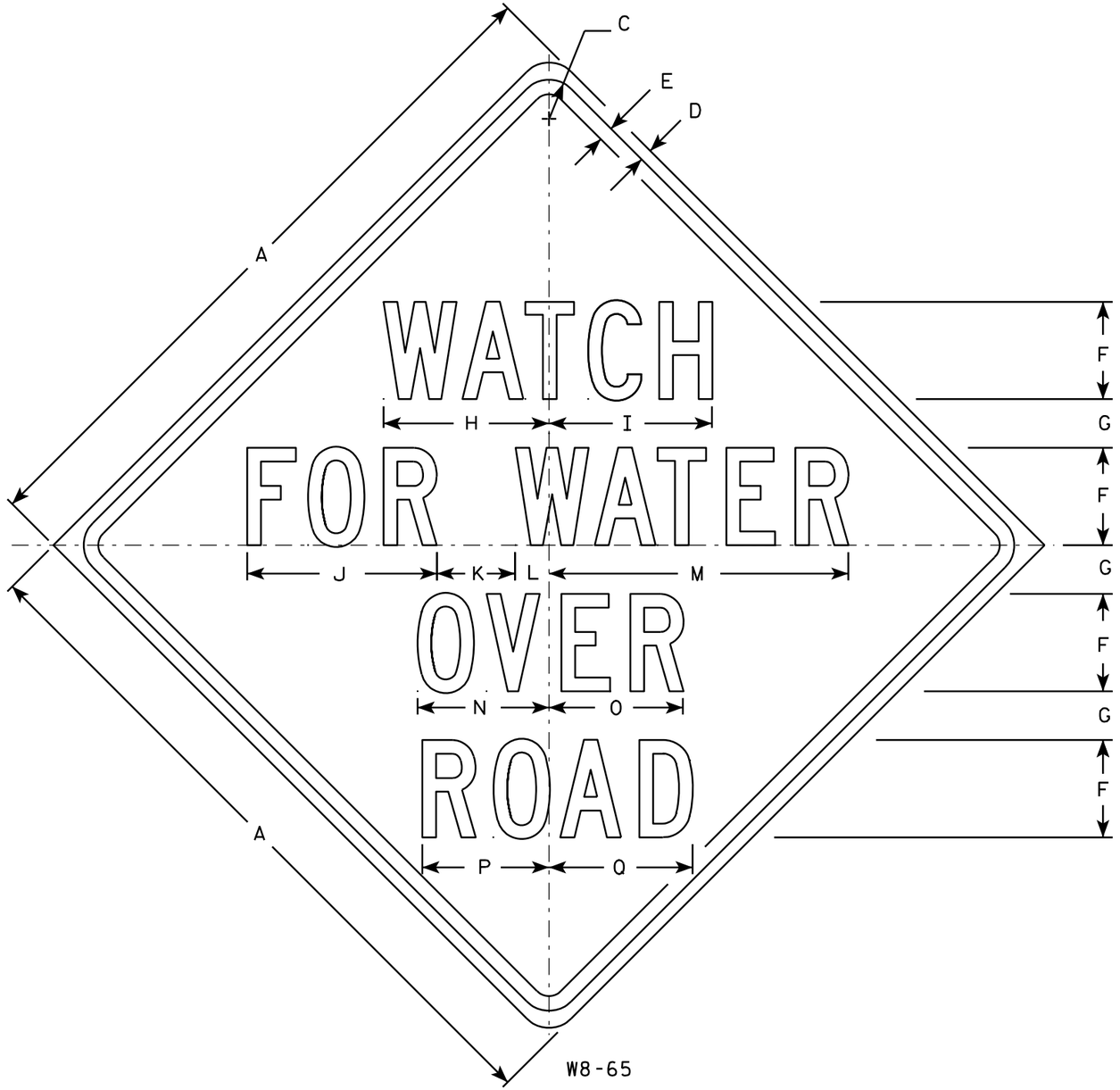
W5-52L & W5-52R

*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/29/12 PLATE NO. W5-52.9

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 155 | 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 - 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 | 36 | | 1 5/8 | 5/8 | 3/4 | 5 | 2 1/2 | 8 1/2 | 8 3/8 | 9 3/4 | 4 | 1 3/4 | 15 3/8 | 6 3/4 | 6 7/8 | 6 1/2 | 7 3/8 | | | | | | | | | | 9.0 |
| 2M | 36 | | 1 5/8 | 5/8 | 3/4 | 5 | 2 1/2 | 8 1/2 | 8 3/8 | 9 3/4 | 4 | 1 3/4 | 15 3/8 | 6 3/4 | 6 7/8 | 6 1/2 | 7 3/8 | | | | | | | | | | 9.0 |
| 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

STANDARD SIGN
W8-65

WISCONSIN DEPT OF TRANSPORTATION

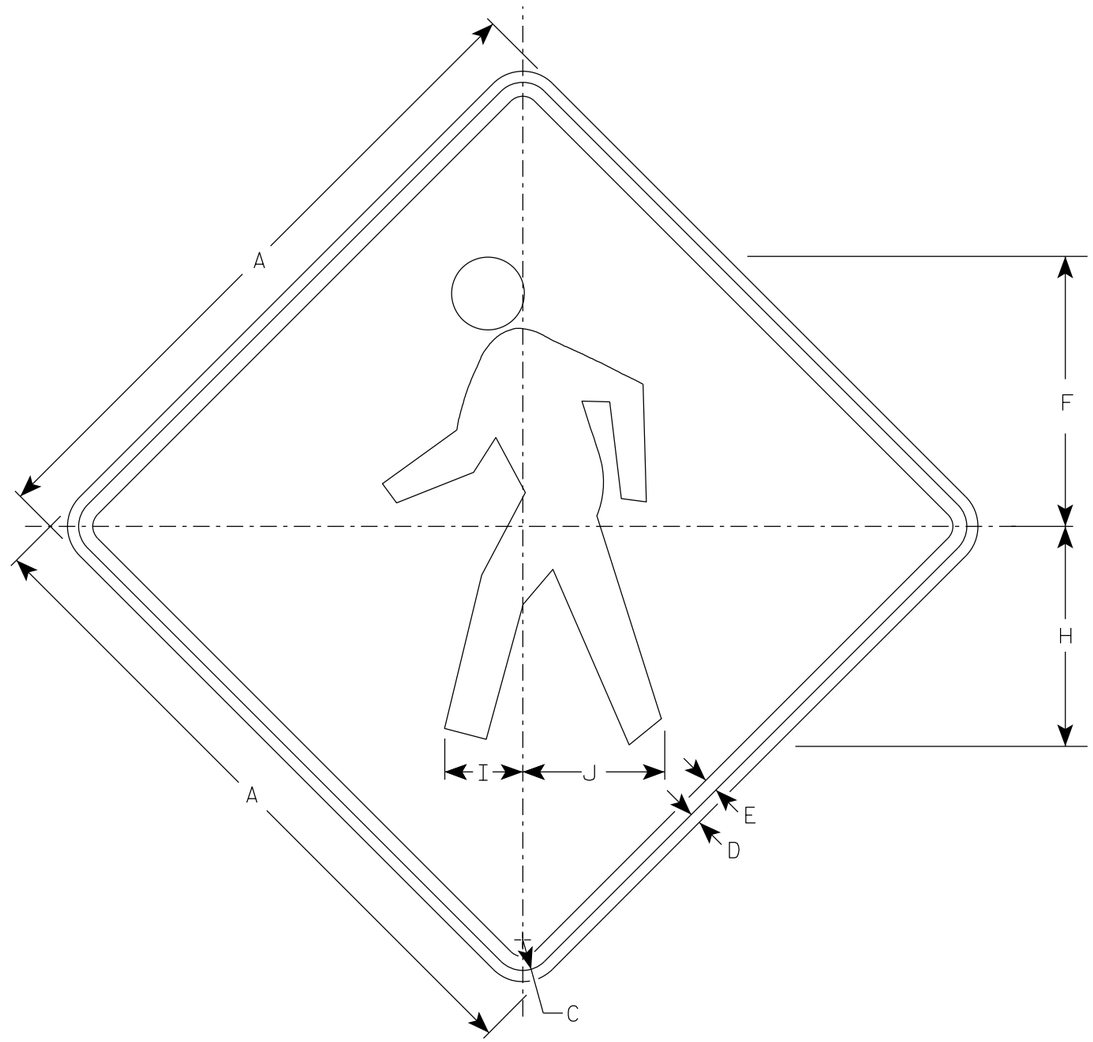
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 03/18/13 PLATE NO. W8-65.5

| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 156 | E |
|---|---|---|---|---|---|

NOTES

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




W11-2

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 24 | | 1 1/8 | 3/8 | 1/2 | 9 3/4 | | 7 7/8 | 2 7/8 | 5 1/8 | | | | | | | | | | | | | | | | | 4.0 |
| 2S | 30 | | 1 3/8 | 1/2 | 5/8 | 12 1/8 | | 9 7/8 | 3 1/2 | 6 3/8 | | | | | | | | | | | | | | | | | 6.25 |
| 2M | 36 | | 1 5/8 | 5/8 | 3/4 | 14 1/2 | | 11 7/8 | 4 1/4 | 7 5/8 | | | | | | | | | | | | | | | | | 9.0 |
| 3 | 36 | | 1 5/8 | 5/8 | 3/4 | 14 1/2 | | 11 7/8 | 4 1/4 | 7 5/8 | | | | | | | | | | | | | | | | | 9.0 |
| 4 | 48 | | 2 1/4 | 3/4 | 1 | 19 3/8 | | 15 3/4 | 5 5/8 | 10 1/4 | | | | | | | | | | | | | | | | | 16.0 |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

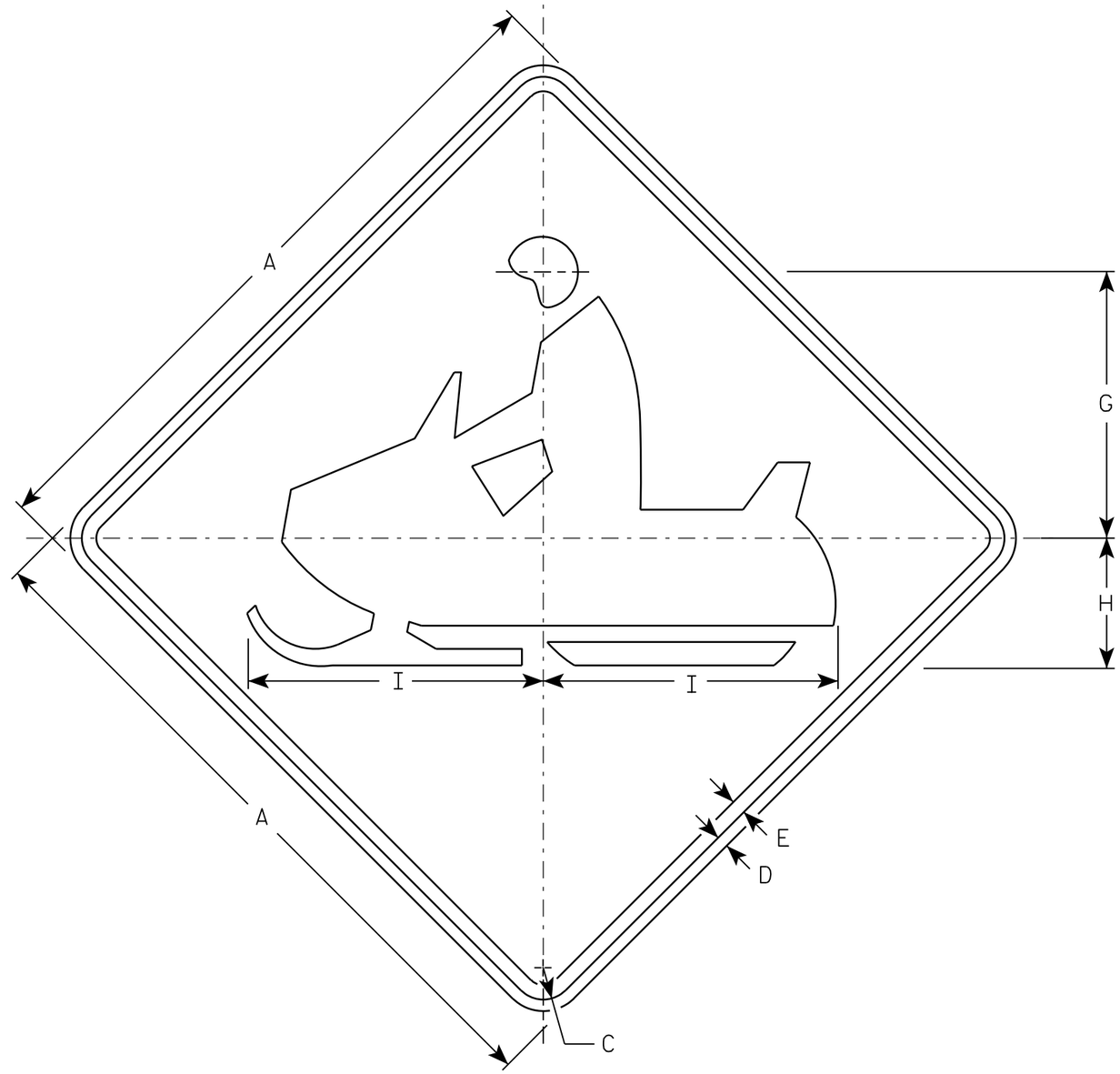
# STANDARD SIGN
# W11-2

*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/8/2020 PLATE NO. W11-2.8

| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 157 | E |
|---|---|---|---|---|---|




W11-6

NOTES

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

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 24 | | 1 1/8 | 3/8 | 1/2 | | 9 1/2 | 4 1/2 | 10 1/4 | | | | | | | | | | | | | | | | | | 4.0 |
| 2S | 30 | | 1 3/8 | 1/2 | 5/8 | | 11 1/2 | 5 5/8 | 12 3/4 | | | | | | | | | | | | | | | | | | 6.25 |
| 2M | 30 | | 1 3/8 | 1/2 | 5/8 | | 11 1/2 | 5 5/8 | 12 3/4 | | | | | | | | | | | | | | | | | | 6.25 |
| 3 | 36 | | 1 5/8 | 5/8 | 3/4 | | 14 1/8 | 6 3/4 | 15 1/4 | | | | | | | | | | | | | | | | | | 9.0 |
| 4 | 48 | | 2 1/4 | 3/4 | 1 | | 19 | 9 | 20 1/2 | | | | | | | | | | | | | | | | | | 16.0 |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

STANDARD SIGN
W11-6

WISCONSIN DEPT OF TRANSPORTATION

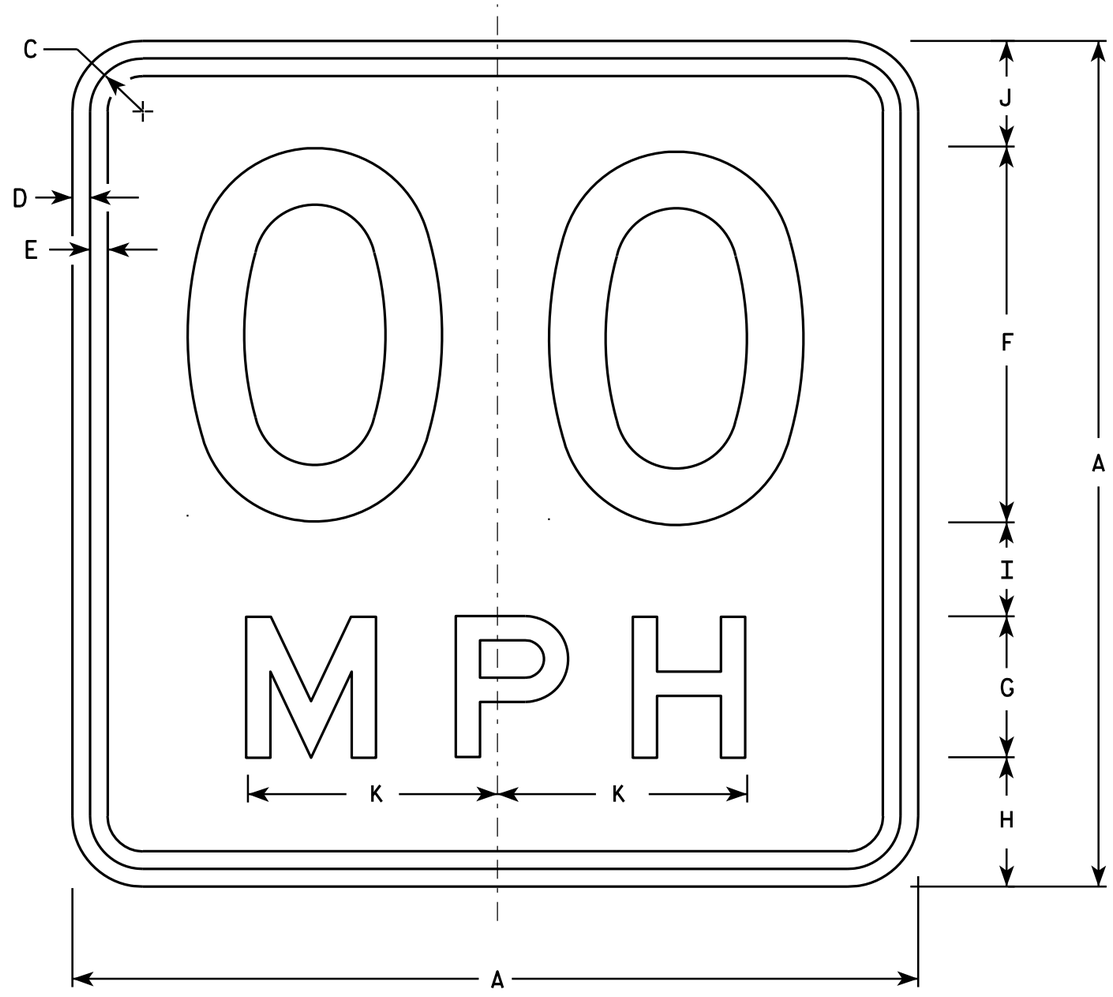
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/13/13 PLATE NO. W11-6.8

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 158 | E


7

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W116.DGN PLOT DATE : 13-MAR-2013 12:57 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 5.954276:1.000000
WISDOT/CADDS SHEET 42




W13-1

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

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Message Series - See Note 6
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically space about centerline to achieve proper balance.
6. Line 1 is Series D
   Line 2 is Series E

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

STANDARD SIGN
W13-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 5/31/12 PLATE NO. W13-1.16

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 159 | E

CTH-O *Expanded = 1.3

| STATION | END AREA CUT (S.F.) | END AREA FILL (S.F.) | VOLUME CUT (C.Y.) | VOLUME FILL (C.Y.) | CUMULATIVE VOLUME CUT (C.Y.) | CUMULATIVE VOLUME *FILL (C.Y.) | MASS HAUL (C.Y.) |
|---|---|---|---|---|---|---|---|
| 552+00 | 98.3 | 1.3 | | | | | |
| 552+70 | 52.4 | 2.3 | 195.4 | 4.7 | 195 | 6 | 189 |
| 552+83 | 53.1 | 2.4 | 25.4 | 1.1 | 221 | 8 | 213 |
| 553+00 | 54.5 | 2.5 | 33.9 | 1.5 | 255 | 9 | 245 |
| 553+48 | 53.9 | 5.5 | 96.4 | 7.1 | 351 | 19 | 332 |
| 553+97 | 27.4 | 30.0 | 73.8 | 32.2 | 425 | 61 | 364 |
| 554+22 | 29.8 | 29.4 | 26.5 | 27.5 | 451 | 96 | 355 |
| 554+47 | 34.7 | 22.4 | 29.9 | 24.0 | 481 | 128 | 354 |
| 555+10 | 34.2 | 263.6 | 80.4 | 333.7 | 562 | 562 | 0 |
| 555+53 | 55.2 | 23.5 | 71.2 | 228.6 | 633 | 859 | -226 |
| 555+78 | 47.5 | 19.6 | 47.5 | 20.0 | 680 | 885 | -204 |
| 556+03 | 49.3 | 15.8 | 44.8 | 16.4 | 725 | 906 | -181 |
| 556+52 | 57.1 | 1.5 | 96.5 | 15.7 | 822 | 926 | -105 |
| 557+17 | 77.6 | 0.2 | 162.1 | 2.0 | 984 | 929 | 55 |
| 557+30 | 76.9 | 0.1 | 37.2 | 0.1 | 1021 | 929 | 92 |
| 558+00 | 49.0 | 0.0 | 163.3 | 0.1 | 1184 | 929 | 255 |
| 559+00 | 138.5 | 10.7 | 347.2 | 19.8 | 1532 | 955 | 577 |
| 561+00 | 380.9 | 23.6 | 1923.6 | 127.0 | 3455 | 1120 | 2335 |
| 562+00 | 57.2 | 85.7 | 811.2 | 202.4 | 4266 | 1383 | 2883 |
| 562+70 | 0.0 | 258.7 | 74.1 | 446.4 | 4340 | 1963 | 2377 |
| 563+00 | 0.0 | 278.2 | 0.0 | 298.3 | 4340 | 2351 | 1989 |
| 563+68 | 13.2 | 362.1 | 16.6 | 806.3 | 4357 | 3399 | 958 |
| 564+00 | 0.0 | 325.1 | 7.8 | 407.2 | 4365 | 3929 | 436 |
| 565+00 | 0.0 | 308.6 | 0.0 | 1173.5 | 4365 | 5454 | -1089 |
| 565+86 | 3.1 | 258.4 | 4.9 | 903.0 | 4370 | 6628 | -2258 |
| 566+00 | 2.4 | 251.1 | 1.4 | 132.1 | 4371 | 6800 | 2429 |
| 567+00 | 1.3 | 177.1 | 6.9 | 793.0 | 4378 | 7831 | -3453 |
| 567+50 | 0.0 | 110.6 | 1.2 | 266.4 | 4379 | 8177 | -3798 |
| 568+00 | 0.0 | 50.9 | 0.0 | 149.5 | 4379 | 8371 | -3992 |
| 569+00 | 20.5 | 12.3 | 38.0 | 117.0 | 4417 | 8524 | -4106 |
| 569+70 | 43.0 | 17.5 | 82.3 | 38.7 | 4500 | 8574 | 4074 |
| 570+00 | 45.2 | 24.3 | 49.0 | 23.2 | 4549 | 8604 | -4056 |
| 570+50 | 37.9 | 49.6 | 76.9 | 68.4 | 4625 | 8693 | -4068 |
| 571+00 | 85.0 | 83.2 | 113.8 | 123.0 | 4739 | 8853 | -4114 |
| 572+00 | 94.6 | 165.8 | 332.6 | 461.0 | 5072 | 9452 | -4380 |
| 573+00 | 105.7 | 247.3 | 370.9 | 764.9 | 5443 | 10447 | 5004 |
| 573+60 | 107.6 | 163.1 | 237.0 | 456.0 | 5680 | 11039 | -5360 |
| 574+00 | 105.8 | 161.6 | 158.1 | 240.5 | 5838 | 11352 | -5514 |
| 574+30 | 104.1 | 136.4 | 116.6 | 165.6 | 5954 | 11567 | -5613 |
| 574+83 | 124.7 | 211 | 224.6 | 154.6 | 6179 | 11768 | -5589 |
| 575+00 | 122.8 | 204.4 | 77.9 | 71.0 | 6257 | 11861 | 5604 |
| 575+50 | 72.3 | 243.8 | 180.6 | 415.0 | 6438 | 12400 | -5963 |
| 576+00 | 0.0 | 255.5 | 66.9 | 462.4 | 6504 | 13001 | -6497 |
| 577+00 | 3.7 | 324.7 | 6.9 | 1074.4 | 6511 | 14398 | -7887 |
| 578+00 | 16.3 | 198.4 | 37.0 | 968.7 | 6548 | 15567 | -9109 |
| 579+00 | 495.9 | 129.2 | 948.5 | 606.7 | 7497 | 16446 | -8949 |
| 580+00 | 2193.2 | 34.6 | 4979.8 | 303.3 | 12477 | 16840 | -4364 |
| 581+00 | 318.2 | 2.0 | 4650.7 | 67.8 | 17127 | 16928 | 199 |
| 582+00 | 209.7 | 35.2 | 977.5 | 68.9 | 18105 | 17018 | 1087 |
| 582+32 | 229.3 | 16.5 | 260.1 | 30.6 | 18365 | 17058 | 1307 |
| 583+00 | 416.3 | 0.0 | 813.0 | 20.8 | 19178 | 17085 | 2093 |
| 584+00 | 836.0 | 0.0 | 2319.1 | 0.0 | 21497 | 17085 | 4412 |
| 585+00 | 970.0 | 0.0 | 3344.4 | 0.0 | 24841 | 17085 | 7757 |
| 586+00 | 947.0 | 0.0 | 3550.0 | 0.0 | 28391 | 17085 | 11307 |
| 587+00 | 461.8 | 0.0 | 2608.9 | 0.0 | 31000 | 17085 | 13916 |

CTH-O (CONT'D) *Expanded = 1.3

| STATION | END AREA CUT (S.F.) | END AREA FILL (S.F.) | VOLUME CUT (C.Y.) | VOLUME FILL (C.Y.) | CUMULATIVE VOLUME CUT (C.Y.) | CUMULATIVE VOLUME *FILL (C.Y.) | MASS HAUL (C.Y.) |
|---|---|---|---|---|---|---|---|
| 587+84 | 19.9 | 145.5 | 749.3 | 226.3 | 31750 | 17379 | 14371 |
| 587+91 | 16.6 | 176.3 | 4.7 | 41.7 | 31754 | 17433 | 14321 |
| 589+00 | 0.0 | 603.6 | 33.6 | 1574.2 | 31788 | 19480 | 12308 |
| 589+74 | 0.0 | 1074.7 | 0.0 | 2299.9 | 31788 | 22469 | 9318 |
| 589+91 | 0.0 | 877.4 | 0.0 | 614.6 | 31788 | 23268 | 8519 |
| 590+00 | 0.0 | 828.2 | 0.0 | 284.3 | 31788 | 23638 | 8150 |
| 591+00 | 0.0 | 529.8 | 0.0 | 2514.8 | 31788 | 26907 | 4881 |
| 591+24 | 0.0 | 438.3 | 0.0 | 430.3 | 31788 | 27467 | 4321 |
| 592+00 | 1.6 | 112.2 | 2.3 | 774.8 | 31790 | 28474 | 3316 |
| 592+50 | 194.4 | 0.0 | 181.5 | 103.9 | 31972 | 28609 | 3363 |
| 593+00 | 606.5 | 0.0 | 741.6 | 0.0 | 32713 | 28609 | 4104 |
| 594+00 | 1236.3 | 0.0 | 3412.6 | 0.0 | 36126 | 28609 | 7517 |
| 595+00 | 2151.8 | 0.0 | 6274.3 | 0.0 | 42400 | 28609 | 13791 |
| 596+00 | 1816.8 | 0.0 | 7349.3 | 0.0 | 49750 | 28609 | 21141 |
| 597+00 | 1134.6 | 0.0 | 5465.6 | 0.0 | 55215 | 28609 | 26606 |
| 598+00 | 559.4 | 0.0 | 3137.0 | 0.0 | 58352 | 28609 | 29743 |
| 599+00 | 118.4 | 21.7 | 1255.2 | 40.2 | 59607 | 28661 | 30946 |
| 600+05 | 25.5 | 241.1 | 279.8 | 511.0 | 59887 | 29326 | 30562 |
| 601+00 | 19.8 | 466.9 | 79.7 | 1245.6 | 59967 | 30945 | 29022 |
| 602+00 | 8.0 | 601.1 | 51.5 | 1977.8 | 60018 | 33516 | 26502 |
| 603+00 | 8.8 | 522.5 | 31.0 | 2080.7 | 60049 | 36221 | 23828 |
| 604+00 | 17.0 | 384.3 | 47.7 | 1679.3 | 60097 | 38404 | 21693 |
| 604+60 | 13.2 | 284.7 | 33.6 | 743.3 | 60131 | 39370 | 20760 |
| 605+00 | 12.1 | 232.8 | 18.8 | 383.3 | 60149 | 39869 | 20281 |
| 606+00 | 23.3 | 127.8 | 65.6 | 667.8 | 60215 | 40737 | 19478 |
| 606+51 | 12.2 | 94.4 | 33.5 | 209.9 | 60249 | 41010 | 19239 |
| 607+00 | 8.6 | 81.7 | 18.9 | 159.8 | 60267 | 41217 | 19050 |
| 607+18 | 10.3 | 72.4 | 6.3 | 51.4 | 60274 | 41284 | 18990 |
| 608+00 | 8.0 | 66.5 | 27.8 | 210.9 | 60302 | 41558 | 18743 |
| 609+00 | 5.5 | 45.7 | 25.0 | 207.8 | 60327 | 41828 | 18498 |
| 609+44 | 27.3 | 71.2 | 26.7 | 95.3 | 60353 | 41952 | 18401 |
| 610+00 | 13.5 | 41.8 | 42.3 | 117.2 | 60396 | 42105 | 18291 |
| 610+50 | 44.4 | 24.3 | 53.7 | 61.2 | 60449 | 42284 | 18265 |
| 610+76 | 78.7 | 5.8 | 59.3 | 14.5 | 60509 | 42203 | 18305 |
| 611+00 | 113.7 | 2.6 | 85.5 | 3.7 | 60594 | 42208 | 18386 |
| 612+00 | 280.7 | 0.0 | 730.4 | 4.9 | 61324 | 42214 | 19110 |
| 613+00 | 402.2 | 0.0 | 1264.6 | 0.0 | 62589 | 42214 | 20375 |
| 614+00 | 528.6 | 0.0 | 1723.7 | 0.0 | 64313 | 42214 | 22098 |
| 615+00 | 185.5 | 3.3 | 1322.4 | 6.1 | 65635 | 42222 | 23413 |
| 616+00 | 6.4 | 82.4 | 355.3 | 158.7 | 65990 | 42428 | 23562 |
| 617+00 | 2.3 | 115.5 | 16.1 | 366.5 | 66007 | 42905 | 23102 |
| 617+58 | 10.0 | 89.5 | 13.2 | 220.2 | 66020 | 43191 | 22829 |
| 618+00 | 10.4 | 88.2 | 15.9 | 138.2 | 66036 | 43371 | 22665 |
| 618+88 | 14.5 | 106.1 | 40.6 | 316.6 | 66076 | 43782 | 22294 |
| 619+00 | 8.7 | 80.9 | 5.2 | 41.6 | 66081 | 43837 | 22245 |
| 620+00 | 13.2 | 64.3 | 40.6 | 268.9 | 66122 | 44186 | 21936 |
| 621+00 | 54.0 | 23.3 | 124.4 | 162.2 | 66246 | 44397 | 21849 |
| 621+84 | 95.5 | 10.9 | 232.5 | 53.2 | 66479 | 44466 | 22013 |
| 622+00 | 99.2 | 12.7 | 57.7 | 7.0 | 66537 | 44475 | 22061 |
| 622+37 | 85.5 | 12.6 | 126.6 | 17.3 | 66663 | 44498 | 22166 |
| 622+44 | 97.9 | 33.6 | 23.8 | 6.0 | 66687 | 44506 | 22182 |
| 623+00 | 96.0 | 0.0 | 201.1 | 34.8 | 66888 | 44551 | 22337 |
| 624+00 | 48.1 | 5.8 | 266.9 | 10.7 | 67155 | 44565 | 22590 |

NOTE: ALL ITEMS AND QUANTITIES ON THIS SHEET ARE FOR ENGINEER ESTIMATE CATEGORY 0030, UNLESS OTHERWISE NOTED.

9

9

PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | EARTHWORK DATA | SHEET 160 | E

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090101_EW.DWG
LAYOUT NAME - 01

PLOT DATE : 11/15/2023 9:12 AM PLOT BY : ANNIE JEROME PLOT NAME : PLOT SCALE : 1" = 1'

WISDOT/CADDS SHEET 49

CTH 0 *Expanded = 1.3

| STATION | END AREA CUT (S.F.) | END AREA FILL (S.F.) | VOLUME CUT (C.Y.) | VOLUME FILL (C.Y.) | CUMULATIVE VOLUME CUT (C.Y.) | *FILL (C.Y.) | MASS HAUL (C.Y.) |
|---|---|---|---|---|---|---|---|
| 624+00 | 48.1 | 5.8 | | | | | |
| 624+50 | 69.1 | 0.8 | 108.5 | 6.1 | 109 | 8 | 101 |
| 625+00 | 72.1 | 0.3 | 130.8 | 1.0 | 239 | 9 | 230 |
| 625+50 | 79.1 | 0.3 | 140.1 | 0.5 | 379 | 10 | 370 |
| 626+00 | 88.4 | 0.0 | 155.1 | 0.2 | 535 | 10 | 524 |
| 626+50 | 95.4 | 0.0 | 170.2 | 0.0 | 705 | 10 | 695 |
| 627+00 | 76.3 | 1.5 | 158.9 | 1.3 | 864 | 12 | 852 |
| 627+50 | 50.0 | 8.2 | 116.9 | 9.0 | 981 | 24 | 957 |
| 628+00 | 39.0 | 7.5 | 82.5 | 14.5 | 1063 | 42 | 2021 |
| 629+00 | 48.1 | 3.2 | 161.3 | 19.7 | 1224 | 68 | 1156 |
| 630+00 | 112.6 | 0.0 | 297.5 | 5.9 | 1522 | 76 | 1446 |
| 631+00 | 100.2 | 0.0 | 394.0 | 0.0 | 1916 | 76 | 1840 |
| 632+00 | 135.4 | 0.0 | 436.2 | 0.0 | 2352 | 76 | 2276 |
| 633+00 | 82.2 | 2.1 | 402.8 | 3.9 | 2755 | 81 | 2674 |
| 633+50 | 75.6 | 3.4 | 146.0 | 5.1 | 2901 | 87 | 2813 |
| 634+00 | 77.6 | 1.0 | 141.9 | 4.1 | 3043 | 93 | 2950 |
| 635+00 | 107.1 | 0.0 | 342.1 | 1.9 | 3385 | 95 | 3290 |
| 636+00 | 111.4 | 0.4 | 404.7 | 0.8 | 3790 | 96 | 3693 |
| 636+73 | 121.0 | 0.1 | 314.1 | 0.7 | 4104 | 97 | 4006 |
| 637+00 | 122.2 | 0.1 | 121.6 | 0.1 | 4225 | 97 | 4128 |
| 637+48 | 124.2 | 0.4 | 219.0 | 0.4 | 4444 | 98 | 4346 |
| 637+75 | 132.9 | 2.1 | 128.5 | 1.2 | 4573 | 99 | 4473 |
| 637+93 | 136.7 | 3.9 | 89.8 | 2.0 | 4663 | 102 | 4561 |
| 638+28 | 137.5 | 11.2 | 126.9 | 7.0 | 4789 | 111 | 4678 |
| 638+33 | 67.5 | 0.6 | 56.9 | 3.3 | 4846 | 115 | 4731 |
| 638+43 | 67.5 | 0.1 | 25.0 | 0.1 | 4871 | 115 | 4756 |
| 639+00 | 65.6 | 0.0 | 140.4 | 0.1 | 5012 | 116 | 4896 |
| 639+64 | 60.5 | 21.3 | 149.4 | 25.3 | 5161 | 148 | 5013 |
| 639+76 | 32.4 | 10.6 | 20.7 | 7.1 | 5182 | 158 | 5024 |
| STRUCURE B-52-137 | | | | | | | |
| 640+97 | 42.2 | 0.0 | | | | | |
| 641+03 | 62.9 | 0.0 | 10.9 | 0.0 | 5193 | 158 | 5035 |
| 641+25 | 67.8 | 0.0 | 53.3 | 0.0 | 5246 | 158 | 5088 |
| 641+81 | 59.7 | 0.0 | 132.2 | 0.0 | 5378 | 158 | 5221 |
| 642+06 | 58.2 | 1.2 | 54.6 | 0.6 | 5433 | 158 | 5274 |
| 642+19 | 59.9 | 1.7 | 28.4 | 0.7 | 5461 | 159 | 5302 |
| 642+31 | 61.6 | 2.4 | 27.0 | 0.9 | 5488 | 161 | 5328 |
| 642+44 | 63.5 | 1.3 | 30.1 | 0.9 | 5518 | 162 | 5357 |
| 642+69 | 67.9 | 3.9 | 60.8 | 2.4 | 5579 | 165 | 5414 |
| 643+00 | 69.7 | 8.2 | 79.0 | 7.0 | 5658 | 174 | 5484 |
| 643+25 | 64.2 | 19.4 | 62.0 | 12.8 | 5720 | 191 | 5530 |
| 643+45 | 64.4 | 46.7 | 47.7 | 24.5 | 5768 | 222 | 5545 |
| 643+70 | 60.2 | 20.4 | 57.7 | 31.0 | 5826 | 263 | 5563 |
| 643+95 | 56.9 | 9.4 | 54.2 | 13.8 | 5880 | 281 | 5599 |
| 644+08 | 55.5 | 5.2 | 27.0 | 3.5 | 5907 | 285 | 5621 |
| 644+20 | 54.1 | 1.6 | 24.4 | 1.5 | 5931 | 287 | 5644 |
| 644+33 | 53.4 | 0.9 | 25.9 | 0.6 | 5957 | 288 | 5669 |
| 644+58 | 55.3 | 0.0 | 50.3 | 0.4 | 6007 | 288 | 5719 |
| 645+00 | 63.5 | 1.6 | 92.4 | 1.3 | 6100 | 290 | 5810 |

CTH 0 (CONT'D) *Expanded = 1.3

| STATION | END AREA CUT (S.F.) | END AREA FILL (S.F.) | VOLUME CUT (C.Y.) | VOLUME FILL (C.Y.) | CUMULATIVE VOLUME CUT (C.Y.) | *FILL (C.Y.) | MASS HAUL (C.Y.) |
|---|---|---|---|---|---|---|---|
| 645+50 | 62.6 | 0.1 | 116.8 | 1.6 | 6217 | 292 | 5924 |
| 645+64 | 63.4 | 0.4 | 32.7 | 0.1 | 6249 | 292 | 5957 |
| 645+75 | 64.4 | 0.3 | 26.0 | 0.1 | 6275 | 293 | 5983 |
| 646+00 | 65.7 | 3.8 | 60.2 | 1.9 | 6335 | 295 | 6040 |
| 646+76 | 64.6 | 0.0 | 183.3 | 5.3 | 6519 | 302 | 6217 |
| 647+01 | 61.3 | 4.2 | 58.3 | 1.9 | 6577 | 304 | 6273 |
| 647+13 | 60.0 | 5.6 | 27.0 | 2.2 | 6604 | 307 | 6297 |
| 647+26 | 58.7 | 11.9 | 28.6 | 4.2 | 6633 | 313 | 6320 |
| 647+38 | 58.7 | 25.1 | 26.1 | 8.2 | 6659 | 323 | 6335 |
| 647+63 | 59.6 | 42.1 | 54.8 | 31.1 | 6714 | 364 | 6350 |
| 647+75 | 59.3 | 56.3 | 26.4 | 21.8 | 6740 | 392 | 6348 |
| 648+00 | 59.8 | 20.1 | 55.1 | 35.4 | 6795 | 438 | 6357 |
| 648+46 | 56.2 | 3.0 | 98.8 | 19.7 | 6894 | 464 | 6430 |
| 648+83 | 53.7 | 1.5 | 75.3 | 3.1 | 6969 | 468 | 6501 |
| 649+00 | 56.9 | 1.3 | 34.8 | 0.9 | 7004 | 469 | 6535 |
| 650+00 | 63.0 | 0.3 | 222.0 | 3.0 | 7226 | 473 | 6753 |
| 650+75 | 71.3 | 0.4 | 186.5 | 1.0 | 7412 | 474 | 6938 |
| 651+00 | 53.0 | 2.5 | 57.5 | 1.3 | 7470 | 476 | 6994 |
| 652+00 | 65.9 | 0.0 | 220.1 | 4.7 | 7690 | 482 | 7208 |
| 652+12 | 64.2 | 0.0 | 28.9 | 0.0 | 7719 | 482 | 7237 |
| 653+00 | 46.9 | 0.7 | 181.1 | 1.1 | 7900 | 483 | 7417 |
| 653+30 | 47.2 | 0.0 | 52.3 | 0.4 | 7952 | 484 | 7468 |
| 654+00 | 45.6 | 1.8 | 170.2 | 2.4 | 8073 | 487 | 7586 |
| 655+00 | 47.2 | 1.1 | 171.8 | 5.3 | 8244 | 494 | 7750 |
| 656+00 | 59.8 | 3.2 | 198.2 | 7.9 | 8443 | 504 | 7938 |
| 656+53 | 76.9 | 1.8 | 134.2 | 4.8 | 8577 | 510 | 8066 |
| 657+00 | 61.6 | 0.0 | 120.6 | 1.5 | 8697 | 512 | 8185 |
| 657+15 | 51.5 | 0.0 | 31.4 | 0.0 | 8729 | 512 | 8216 |

CTH OO *Expanded = 1.3

| STATION | END AREA CUT (S.F.) | END AREA FILL (S.F.) | VOLUME CUT (C.Y.) | VOLUME FILL (C.Y.) | CUMULATIVE VOLUME CUT (C.Y.) | *FILL (C.Y.) | MASS HAUL (C.Y.) |
|---|---|---|---|---|---|---|---|
| 61+47 | 55.7 | 0.0 | | | | | |
| 61+50 | 55.7 | 48.5 | 5.7 | 2.5 | 6 | 3 | 2 |
| 61+60 | 58.2 | 41.9 | 21.1 | 16.7 | 27 | 25 | 2 |
| 62+05 | 65.5 | 30.0 | 103.0 | 60.0 | 130 | 103 | 27 |
| 62+30 | 75.9 | 2.3 | 65.5 | 15.0 | 195 | 122 | 73 |
| 62+55 | 84.2 | 0.0 | 74.1 | 1.1 | 269 | 124 | 146 |
| 62+79 | 101.5 | 0.0 | 82.5 | 0.0 | 352 | 124 | 228 |
| 62+97 | 122.8 | 21.1 | 74.8 | 7.0 | 427 | 133 | 294 |
| 63+05 | 64.6 | 36.3 | 27.8 | 8.5 | 455 | 144 | 310 |
| 63+39 | 167.8 | 0.0 | 145.7 | 22.7 | 600 | 174 | 427 |

NOTE: ALL ITEMS AND QUANTITIES ON THIS SHEET ARE FOR ENGINEER ESTIMATE CATEGORY 0010, UNLESS OTHERWISE NOTED.

CTH O - EXCAVATION ROCK *Expanded = 1

| STATION | END AREA CUT (S.F.) | END AREA FILL (S.F.) | VOLUME CUT (C.Y.) | VOLUME FILL (C.Y.) | CUMULATIVE VOLUME CUT (C.Y.) | CUMULATIVE VOLUME *FILL (C.Y.) | MASS HAUL (C.Y.) |
|---|---|---|---|---|---|---|---|
| 583+00 | 0.0 | 0.0 | | | | | |
| 584+00 | 394.0 | 0.0 | 729.6 | 0.0 | 730 | 0 | 730 |
| 585+00 | 1065.0 | 0.0 | 2701.9 | 0.0 | 3432 | 0 | 3432 |
| 586+00 | 809.0 | 0.0 | 3470.4 | 0.0 | 6902 | 0 | 6902 |
| 587+00 | 0.0 | 0.0 | 1498.1 | 0.0 | 8400 | 0 | 8400 |

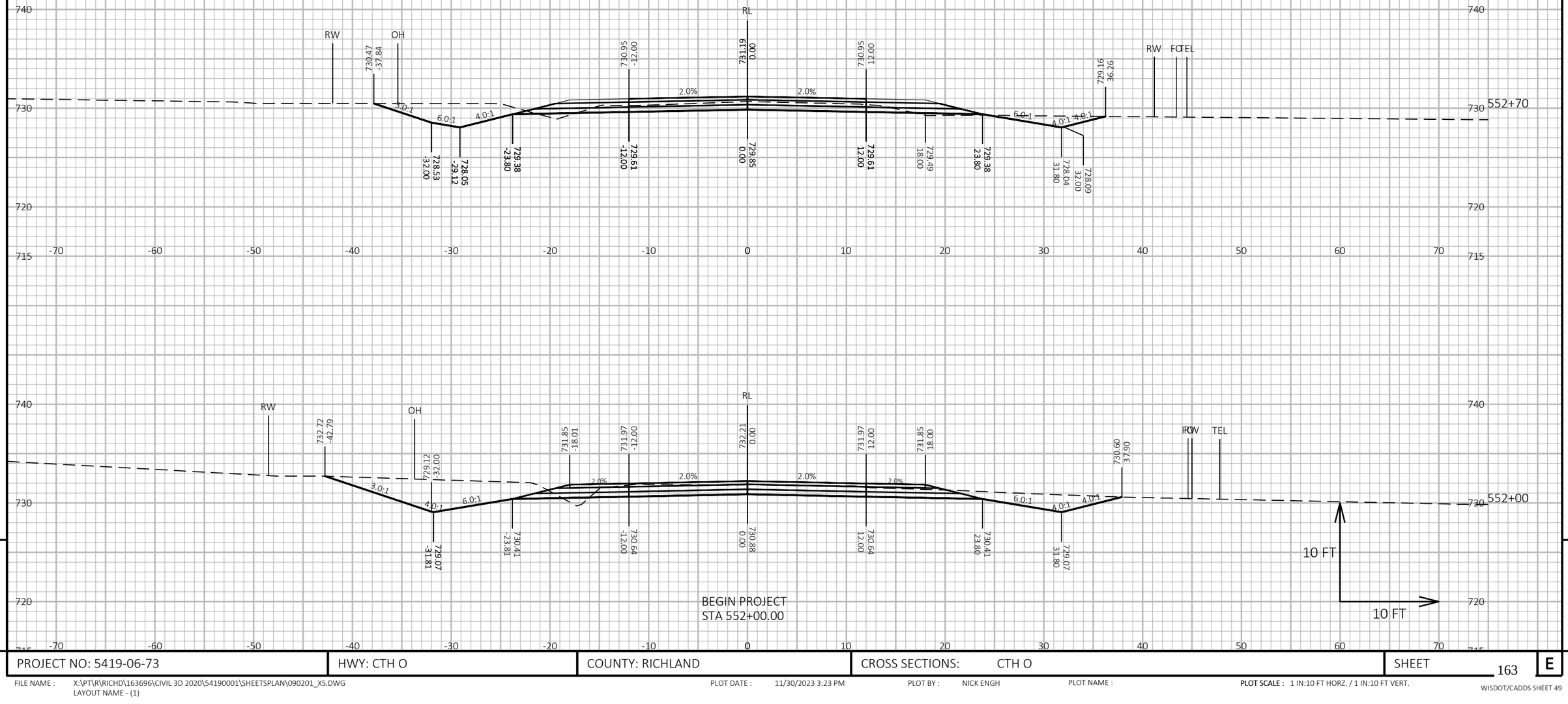
CTH-TB *Expanded = 1.3

| STATION | END AREA CUT (S.F.) | END AREA FILL (S.F.) | VOLUME CUT (C.Y.) | VOLUME FILL (C.Y.) | CUMULATIVE VOLUME CUT (C.Y.) | CUMULATIVE VOLUME *FILL (C.Y.) | MASS HAUL (C.Y.) |
|---|---|---|---|---|---|---|---|
| 70+24 | 0.0 | 489.0 | | | | | |
| 70+82 | 27.0 | 313.0 | 29.0 | 861.4 | 29 | 1120 | -1091 |
| 71+00 | 4.1 | 335.7 | 10.4 | 216.2 | 39 | 1401 | -1361 |
| 71+50 | 3.5 | 381.3 | 7.0 | 663.9 | 46 | 2264 | -2218 |
| 72+00 | 4.4 | 345.5 | 7.3 | 673.0 | 54 | 3139 | -3085 |
| 72+50 | 6.3 | 263.0 | 9.9 | 563.4 | 64 | 3871 | -3808 |
| 73+00 | 7.7 | 174.6 | 13.0 | 405.2 | 77 | 4398 | -4321 |
| 73+50 | 7.6 | 100.9 | 14.2 | 255.1 | 91 | 4730 | -4639 |
| 74+00 | 8.5 | 49.7 | 14.9 | 139.4 | 106 | 4911 | -4805 |
| 74+50 | 21.6 | 25.2 | 27.9 | 69.4 | 134 | 5001 | -4868 |
| 75+00 | 37.8 | 10.5 | 55.0 | 33.1 | 189 | 5044 | -4856 |
| 75+50 | 52.4 | 2.7 | 83.5 | 12.2 | 272 | 5060 | -4788 |

DRIVEWAY LT. *Expanded = 1.3

| STATION | END AREA CUT (S.F.) | END AREA FILL (S.F.) | VOLUME CUT (C.Y.) | VOLUME FILL (C.Y.) | CUMULATIVE VOLUME CUT (C.Y.) | CUMULATIVE VOLUME *FILL (C.Y.) | MASS HAUL (C.Y.) |
|---|---|---|---|---|---|---|---|
| 595+00 | 17.9 | 0.1 | | | | | |
| 595+50 | 16.5 | 1.3 | 31.8 | 1.3 | 32 | 2 | 30 |
| 596+00 | 13.0 | 0.7 | 27.3 | 1.8 | 59 | 4 | 55 |
| 596+50 | 13.9 | 0.5 | 24.9 | 1.0 | 84 | 5 | 79 |
| 597+00 | 17.1 | 0.0 | 28.7 | 0.5 | 113 | 6 | 107 |
| 597+50 | 18.2 | 0.0 | 32.6 | 0.0 | 145 | 6 | 139 |
| 598+00 | 18.6 | 0.0 | 34.0 | 0.0 | 179 | 6 | 173 |
| 598+50 | 18.3 | 0.0 | 34.1 | 0.0 | 213 | 6 | 207 |

NOTE: ALL ITEMS AND QUANTITIES ON THIS SHEET ARE FOR ENGINEER ESTIMATE CATEGORY 0030, UNLESS OTHERWISE NOTED.




9

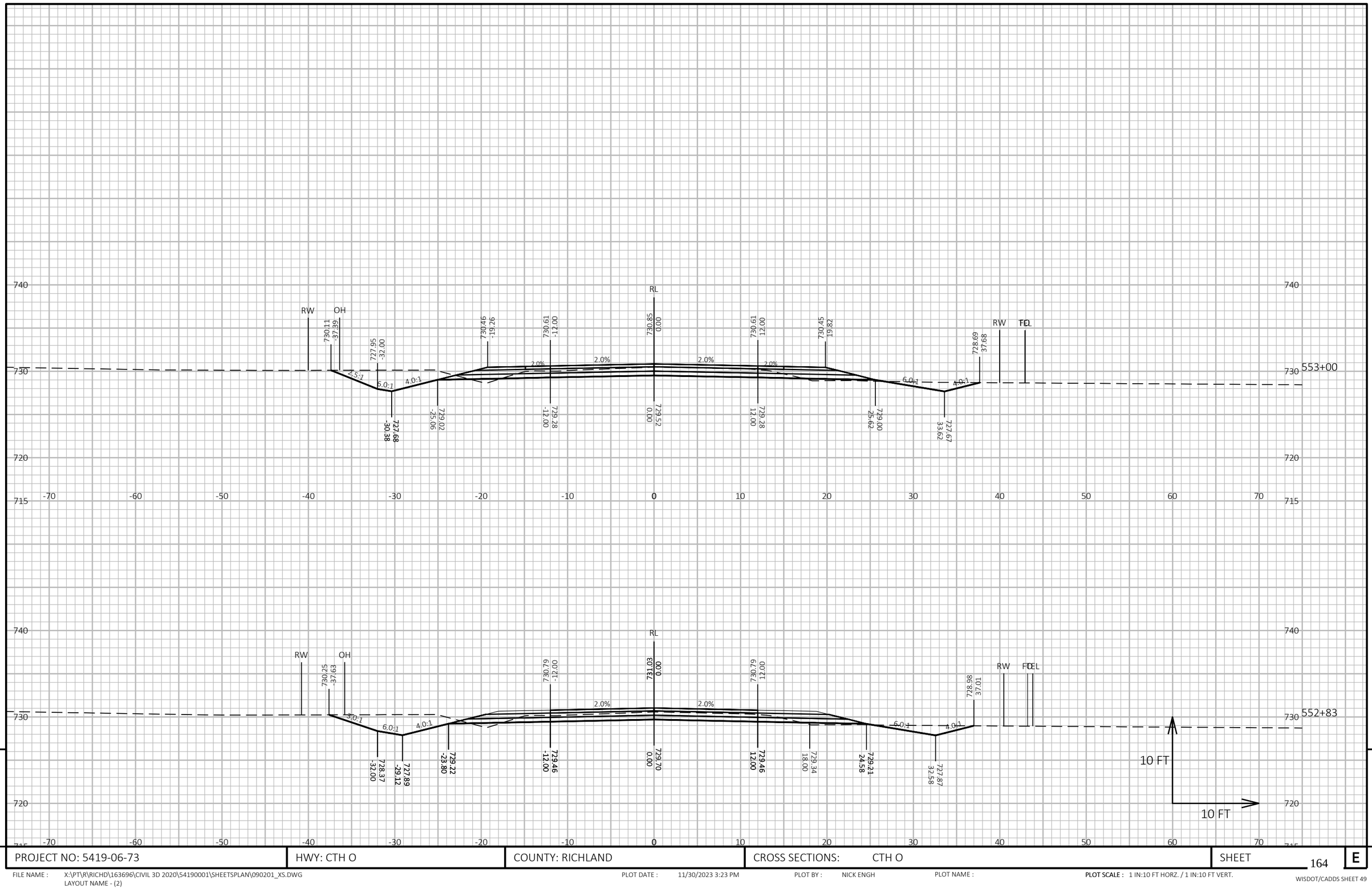
9

| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 163 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - (1)

PLOT DATE : 11/30/2023 3:23 PM PLOT BY : NICK ENGH PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49




| | | | | |
|---|---|---|---|---|
| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 164 E |

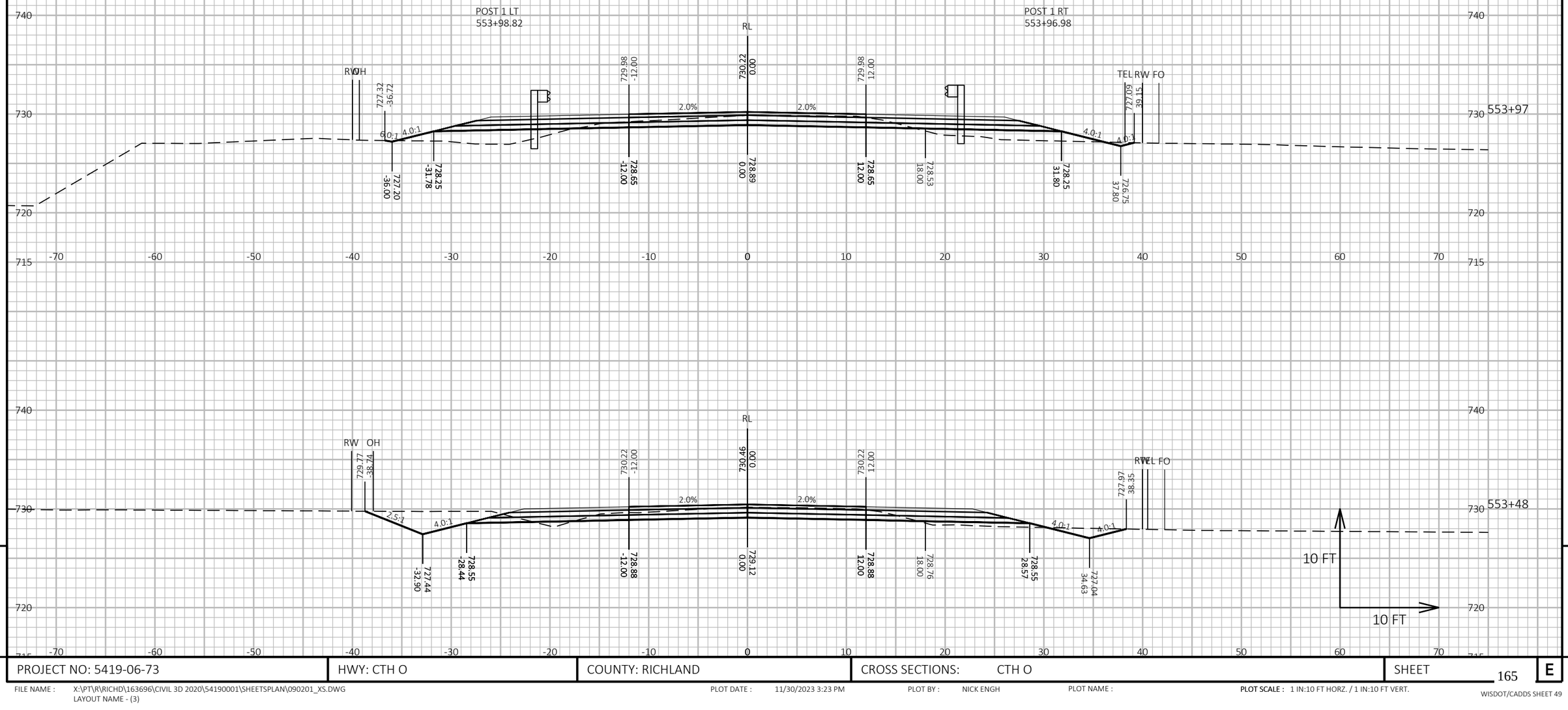
FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - (2)

PLOT DATE : 11/30/2023 3:23 PM PLOT BY : NICK ENGH PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

9

9




9

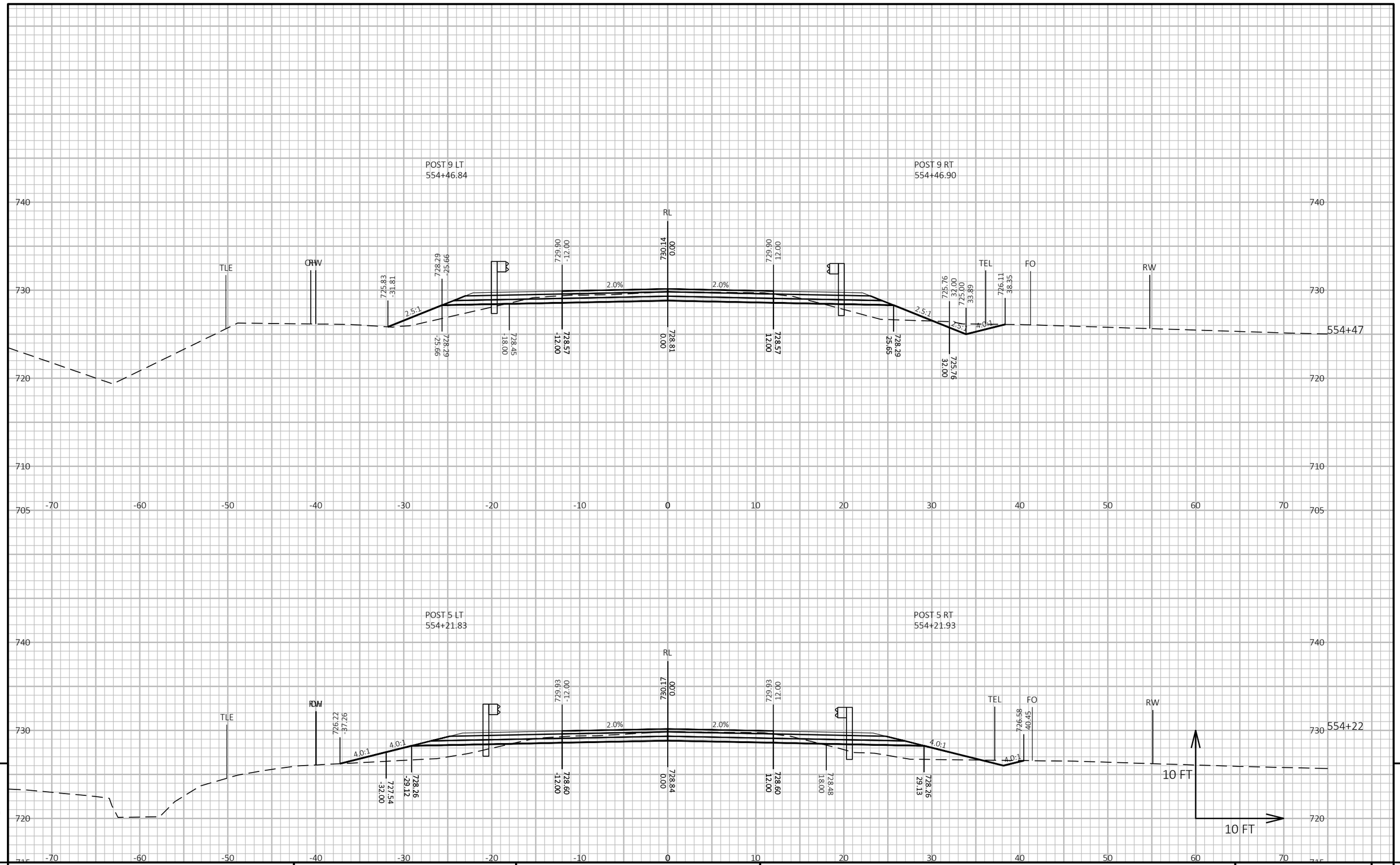
9

| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 165 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - (3)

PLOT DATE : 11/30/2023 3:23 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49




9

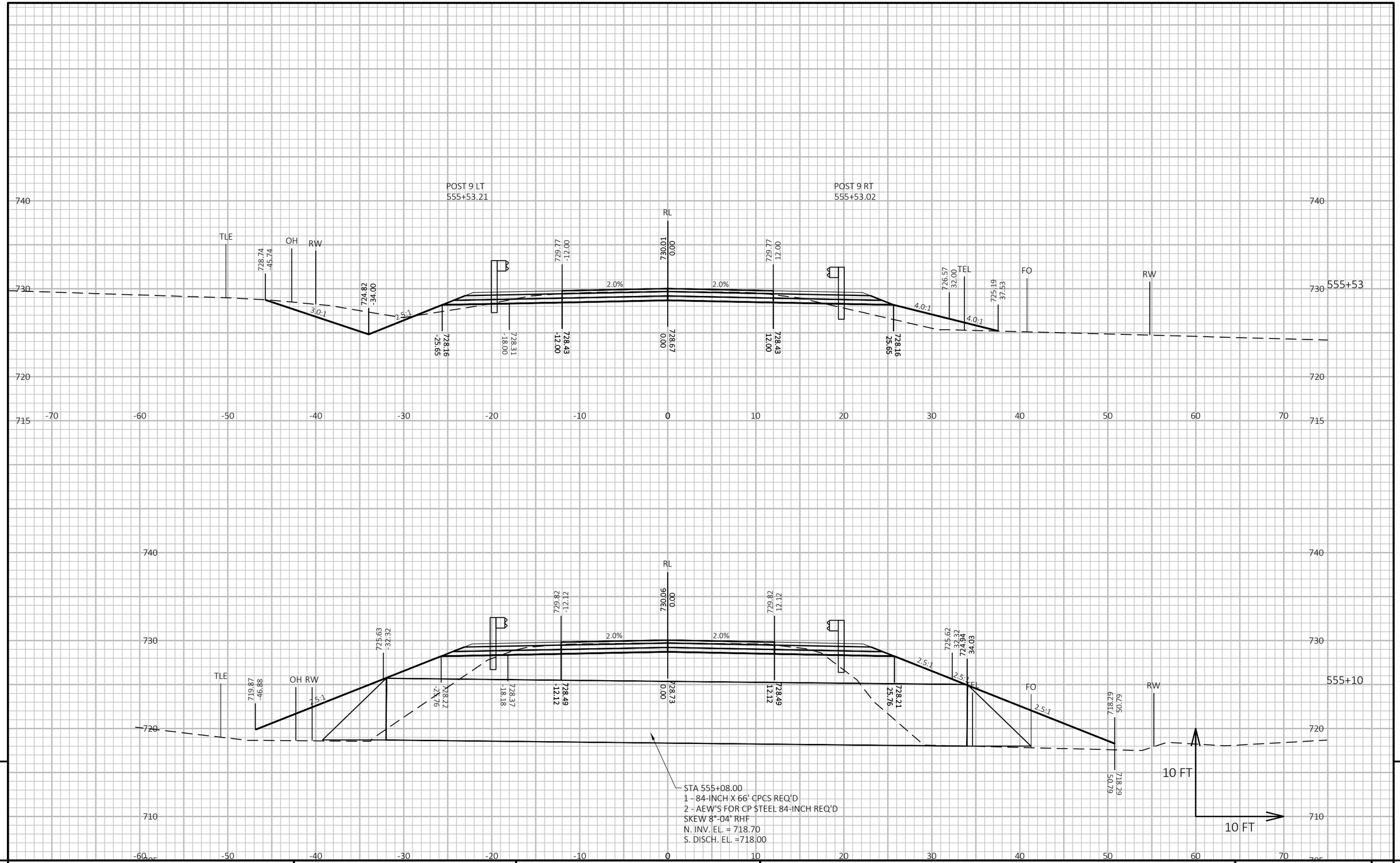
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| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 166 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - (4)

PLOT DATE : 11/30/2023 3:23 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49




9

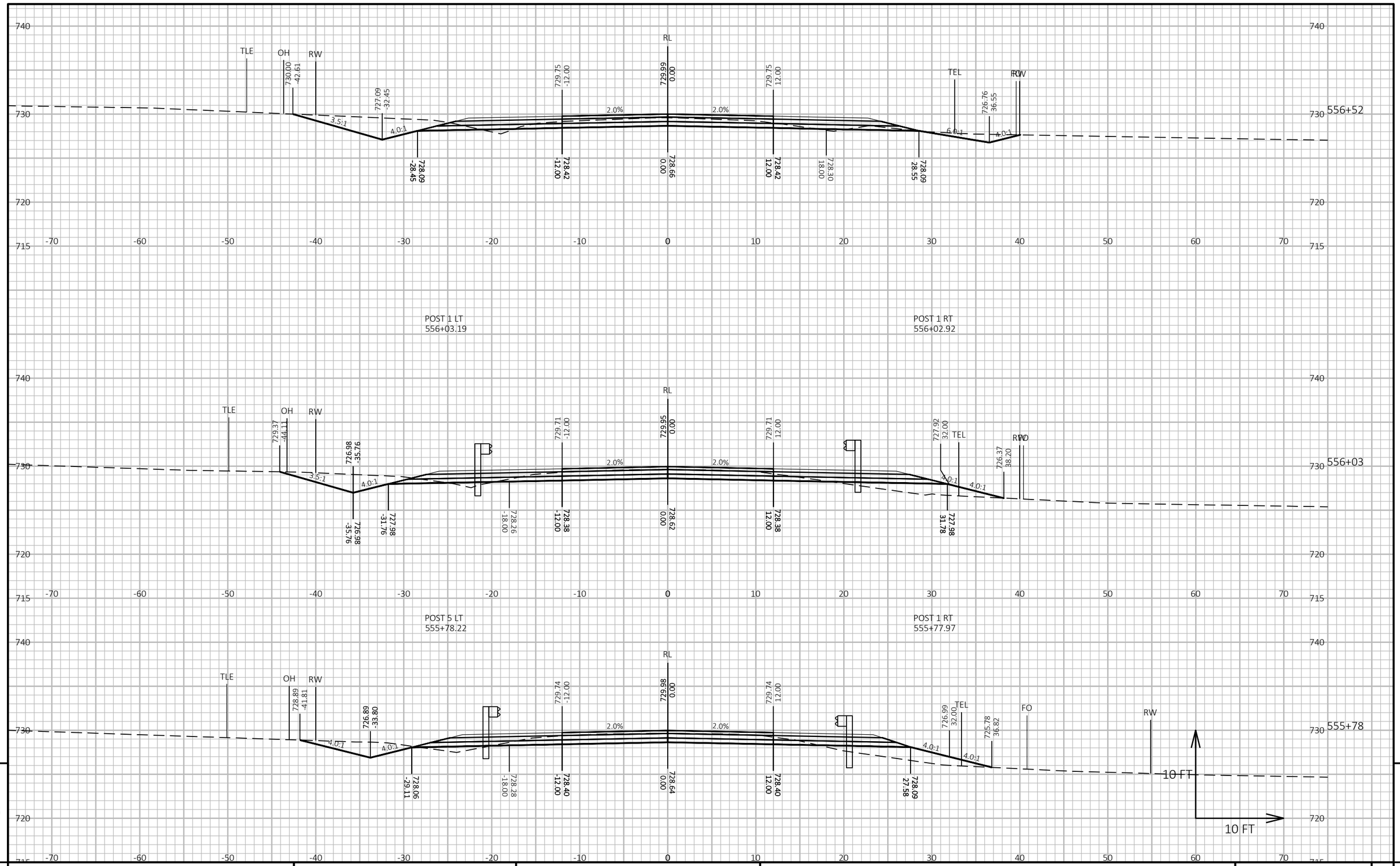
9

| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 167 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - (5)

PLOT DATE : 11/30/2023 3:24 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49




9

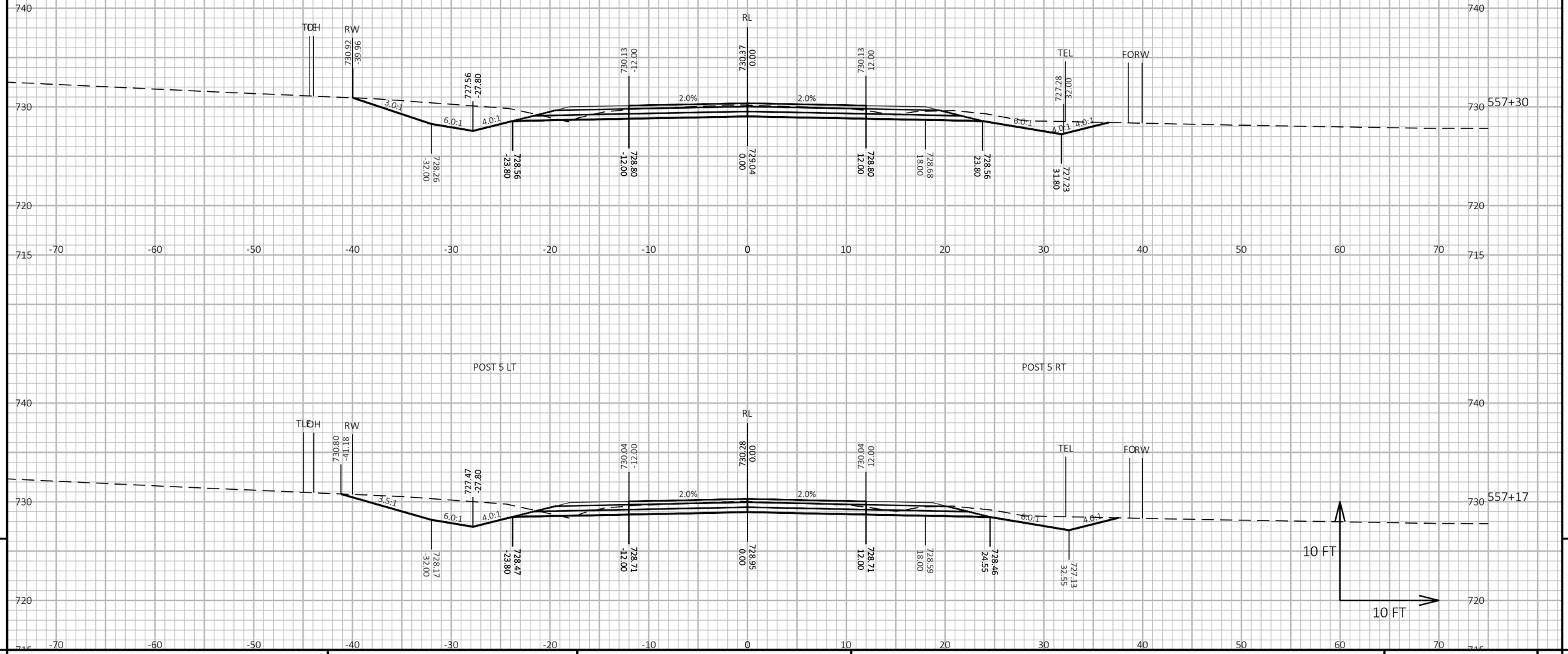
9

| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 168 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - (6)

PLOT DATE : 11/30/2023 3:24 PM PLOT BY : NICK ENGH PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49




POST 5 LT

POST 5 RT




9

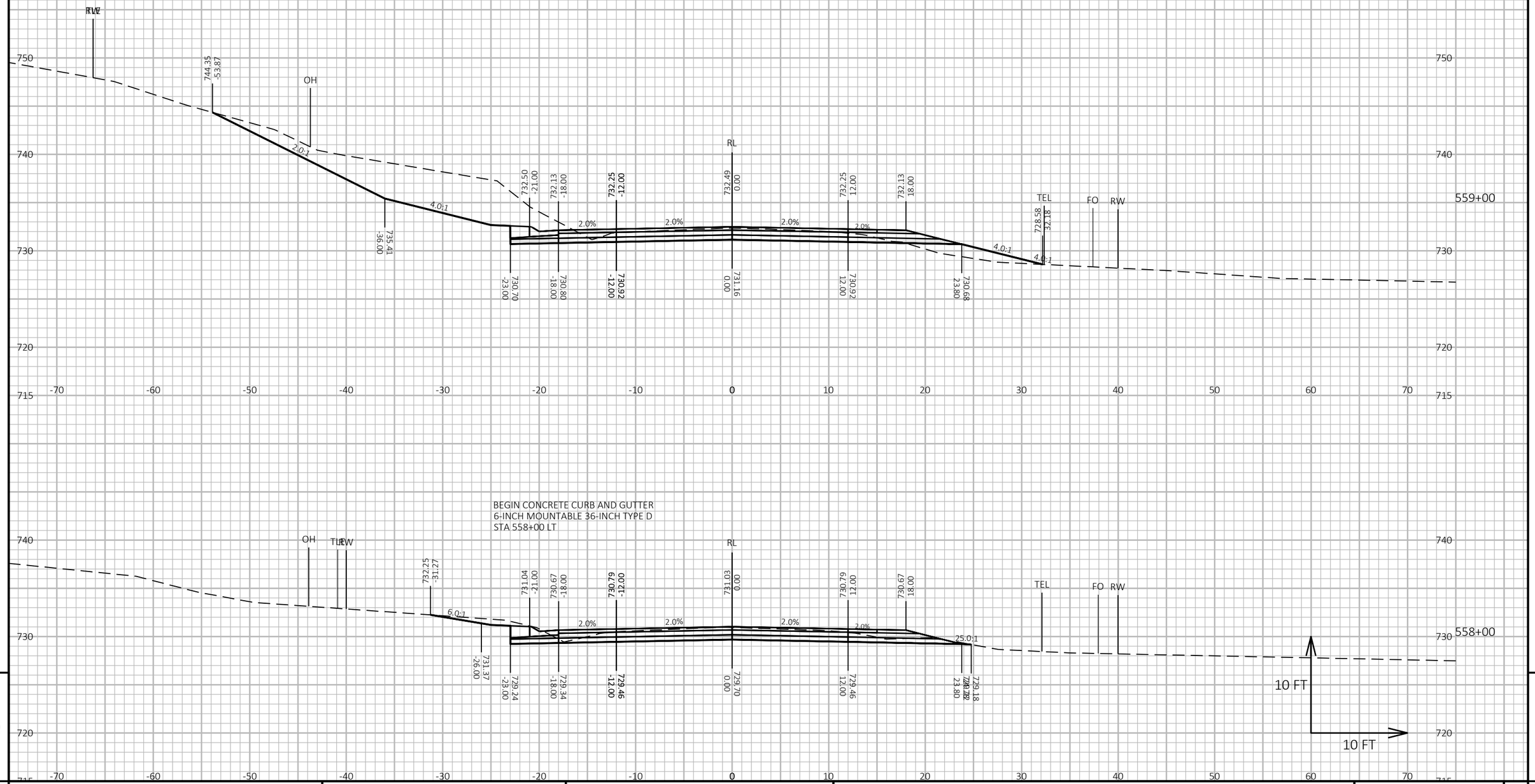
9

| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 169 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - (7)

PLOT DATE : 11/30/2023 3:24 PM PLOT BY : NICK ENGH PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

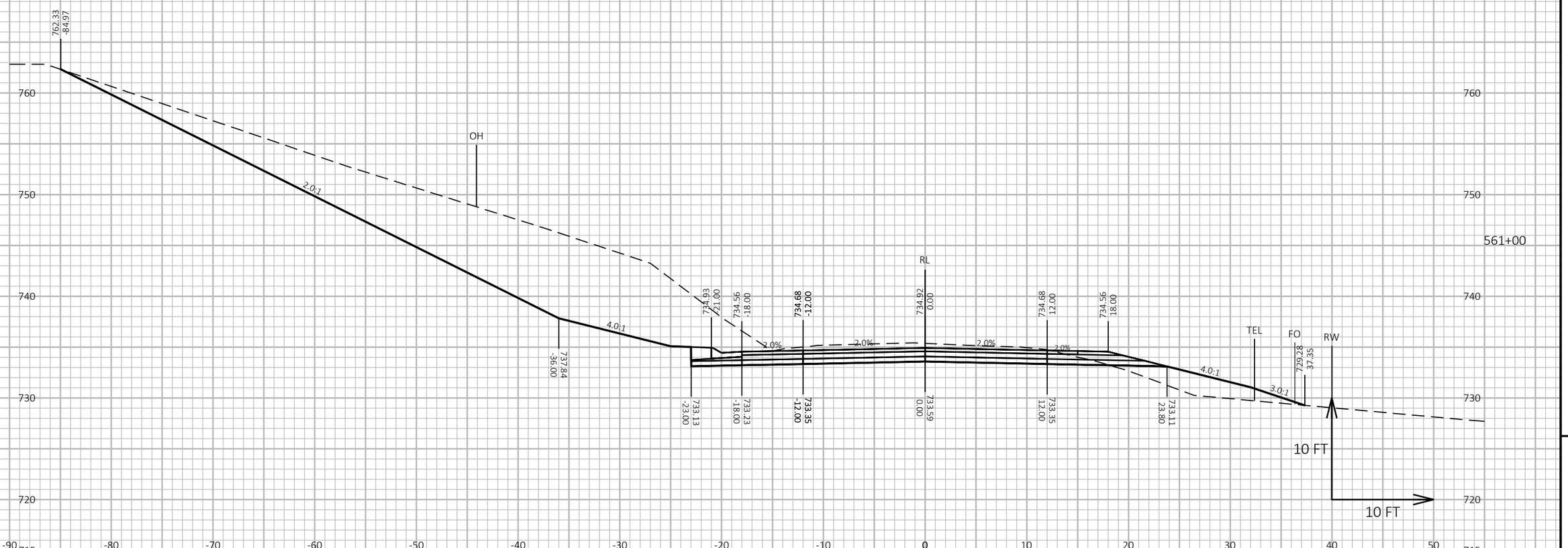



| | | | | |
|---|---|---|---|---|
| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 170 E |

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - (8)

PLOT DATE : 11/30/2023 3:24 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49




9

9

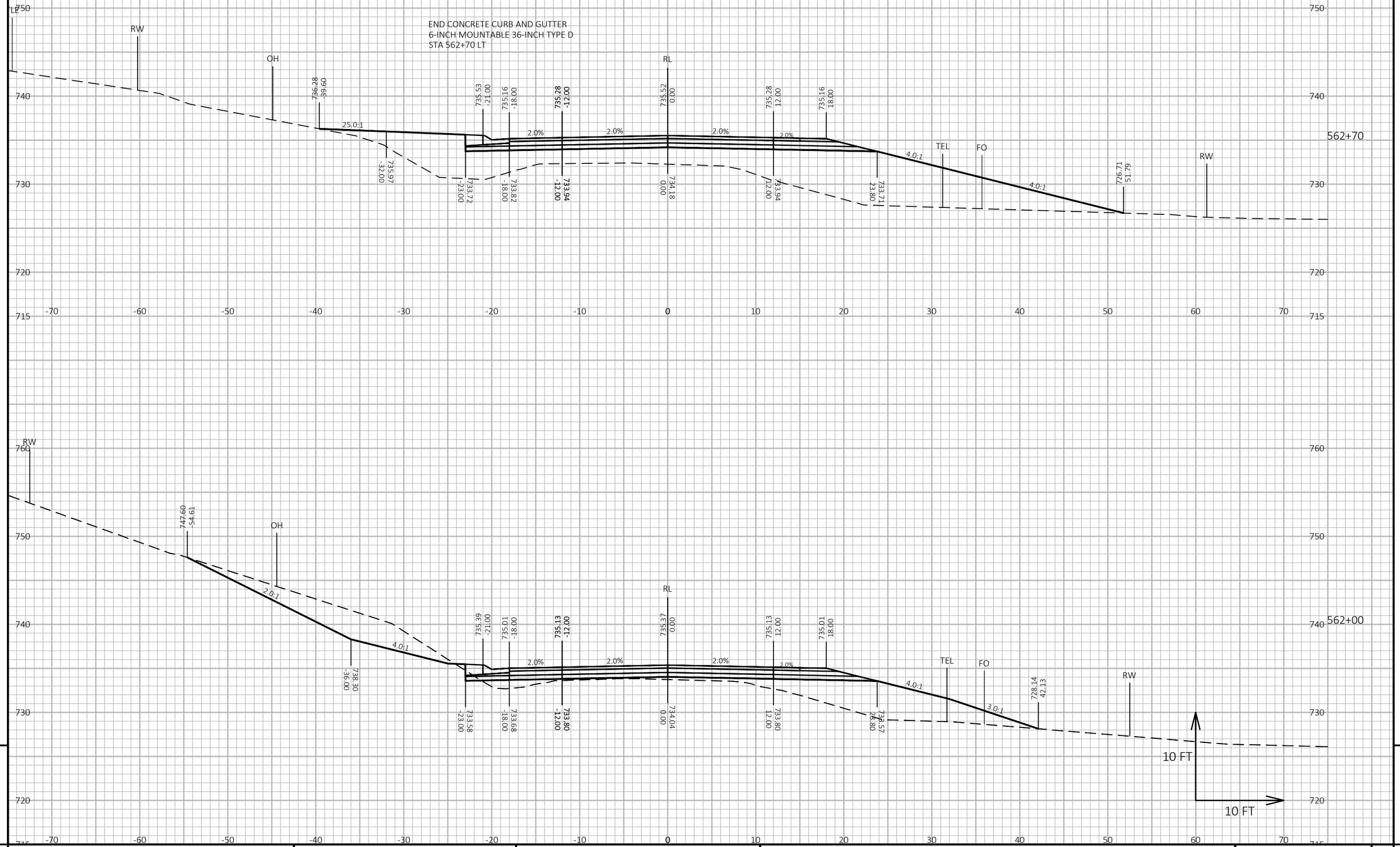
| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 171 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - (9)

PLOT DATE : 11/30/2023 3:25 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

END CONCRETE CURB AND GUTTER
6-INCH MOUNTABLE 36-INCH TYPE D
STA 562+70 LT




9

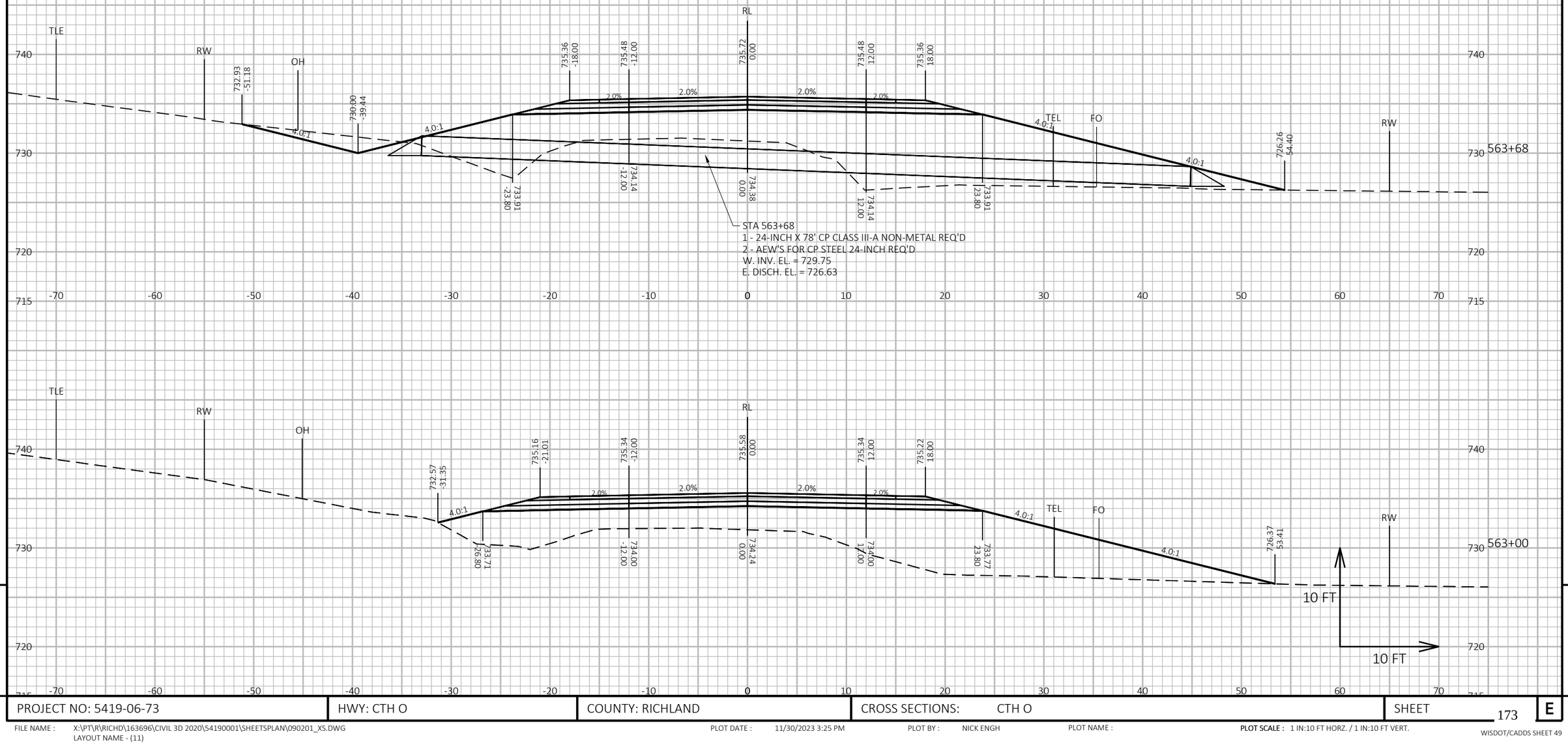
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| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 172 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - (10)

PLOT DATE : 11/30/2023 3:25 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49




9

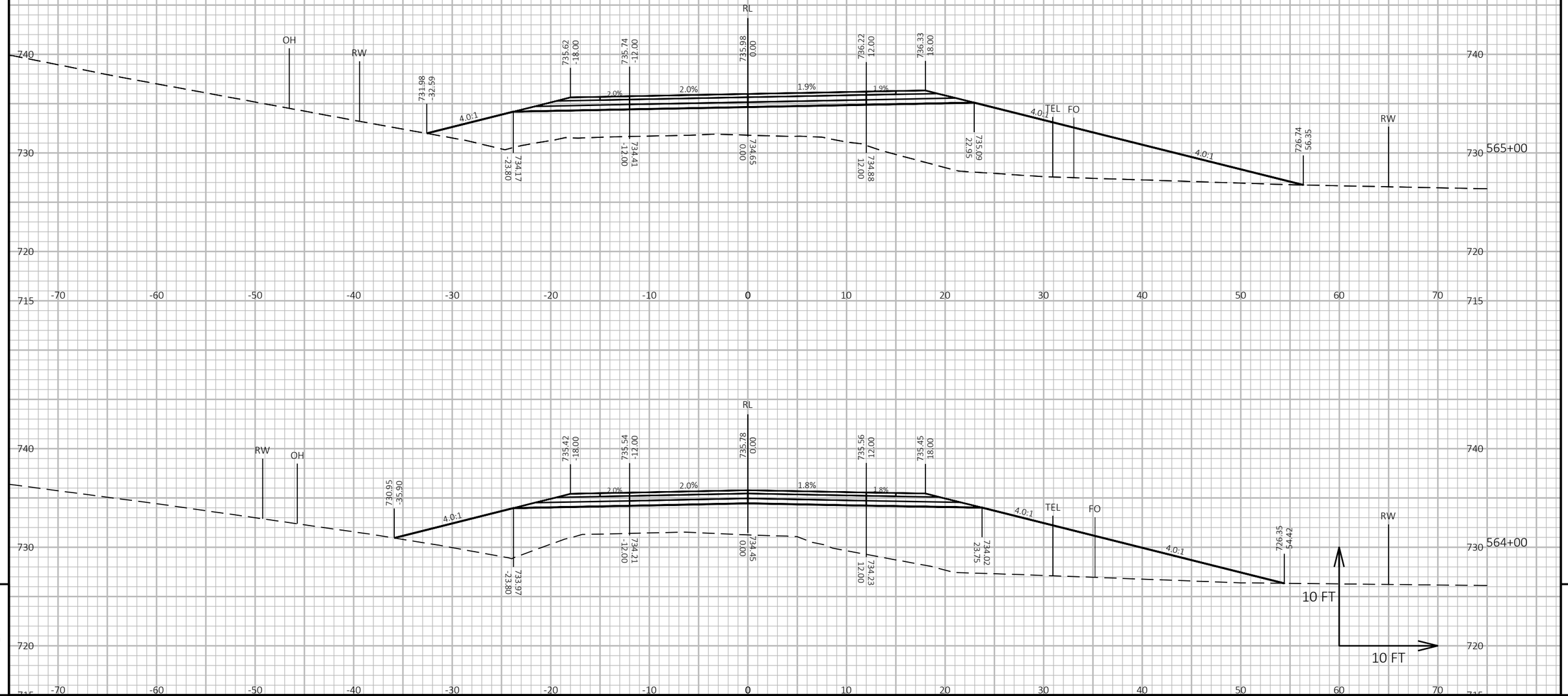
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| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 173 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - (11)

PLOT DATE : 11/30/2023 3:25 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49




9

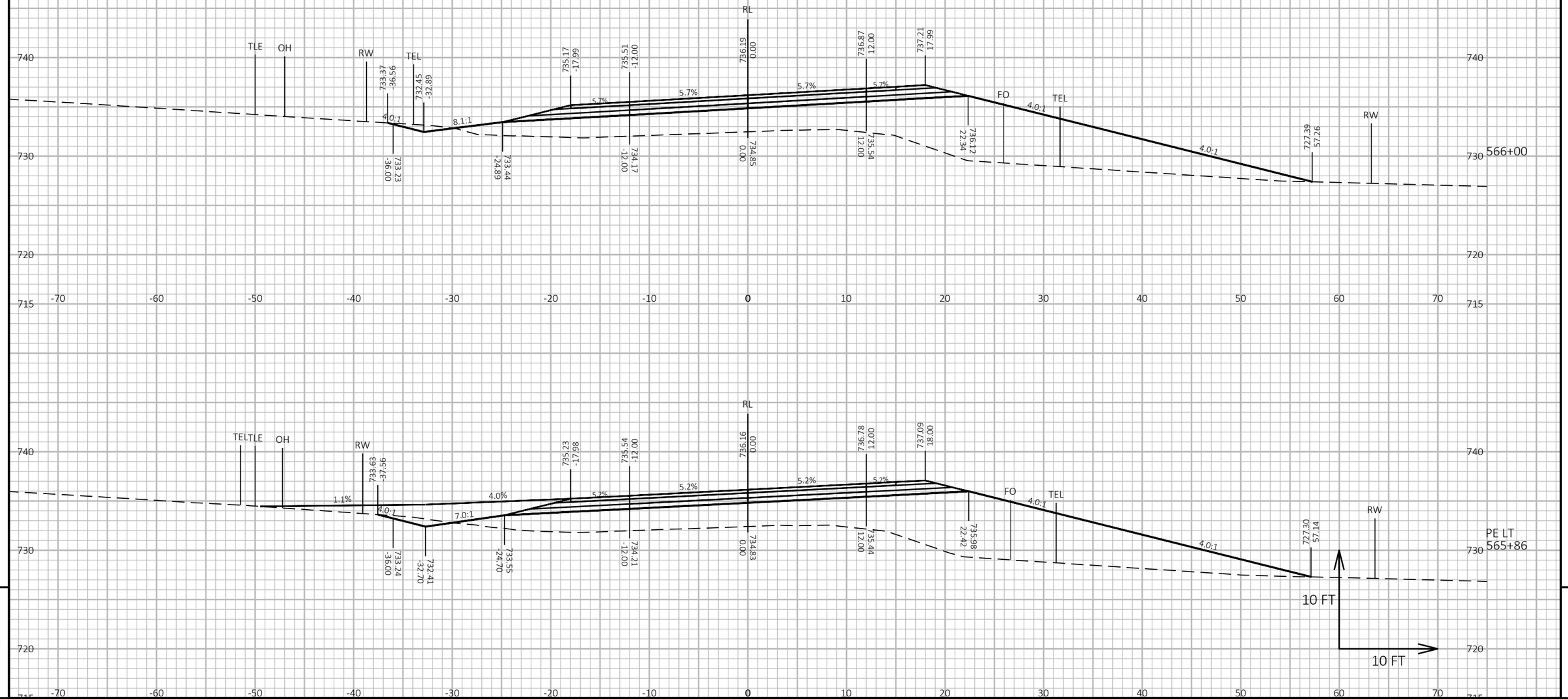
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| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 174 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - (12)

PLOT DATE : 11/30/2023 3:26 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



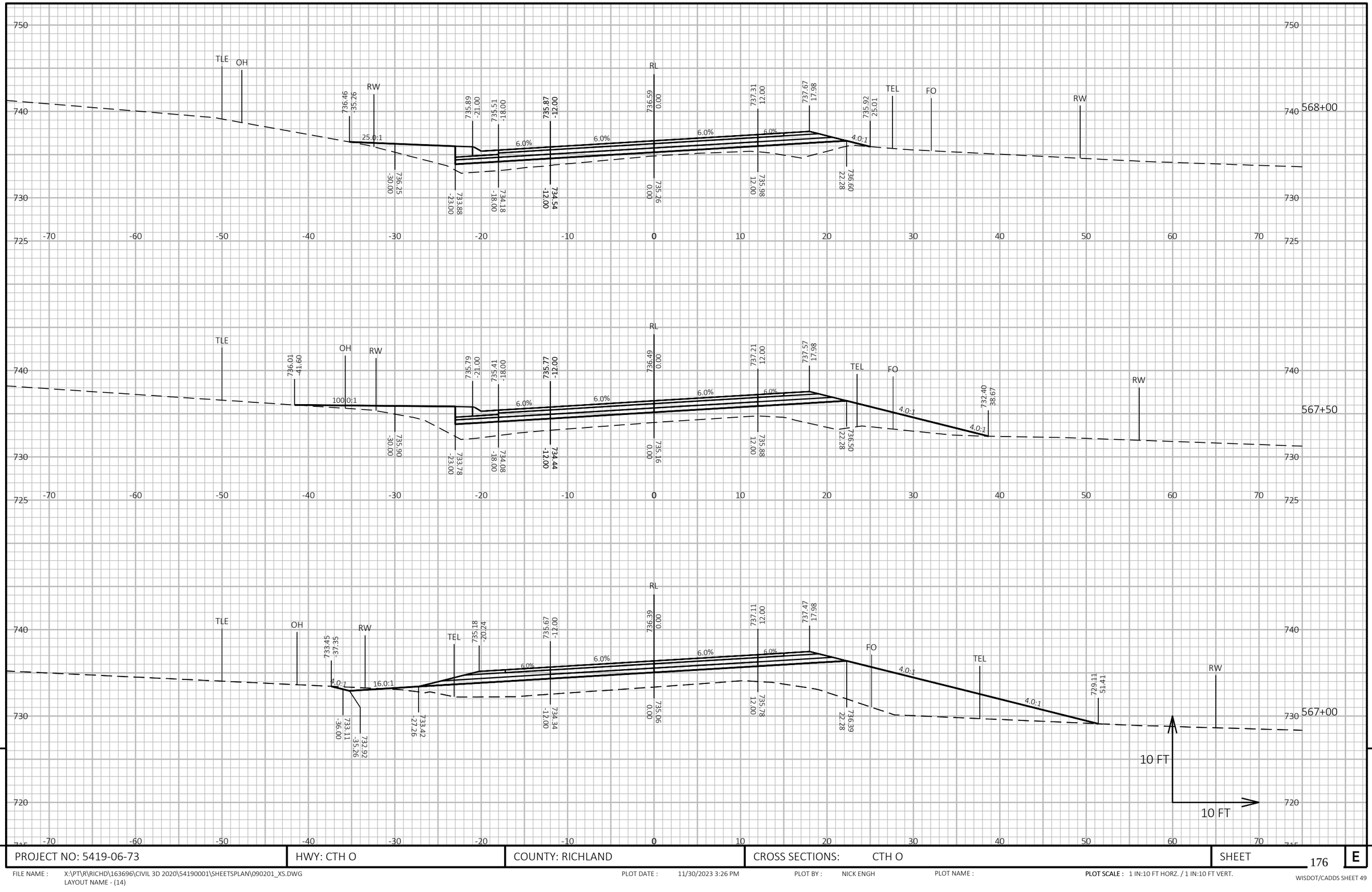

| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 175 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - (13)

PLOT DATE : 11/30/2023 3:26 PM PLOT BY : NICK ENGH PLOT NAME :

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

WISDOT/CADDS SHEET 49



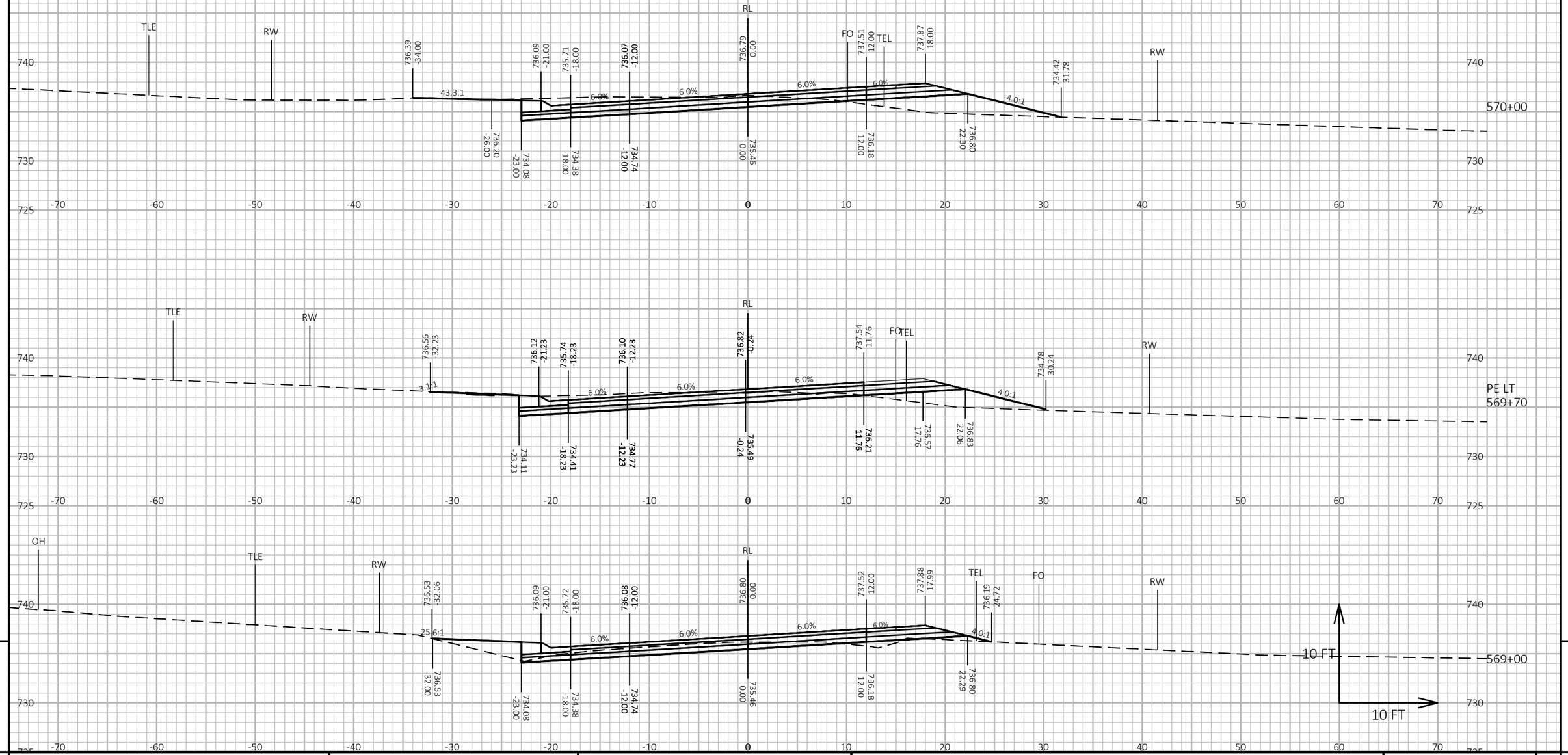

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| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 176 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - (14)

PLOT DATE : 11/30/2023 3:26 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.




9

9

| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 177 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - (15)

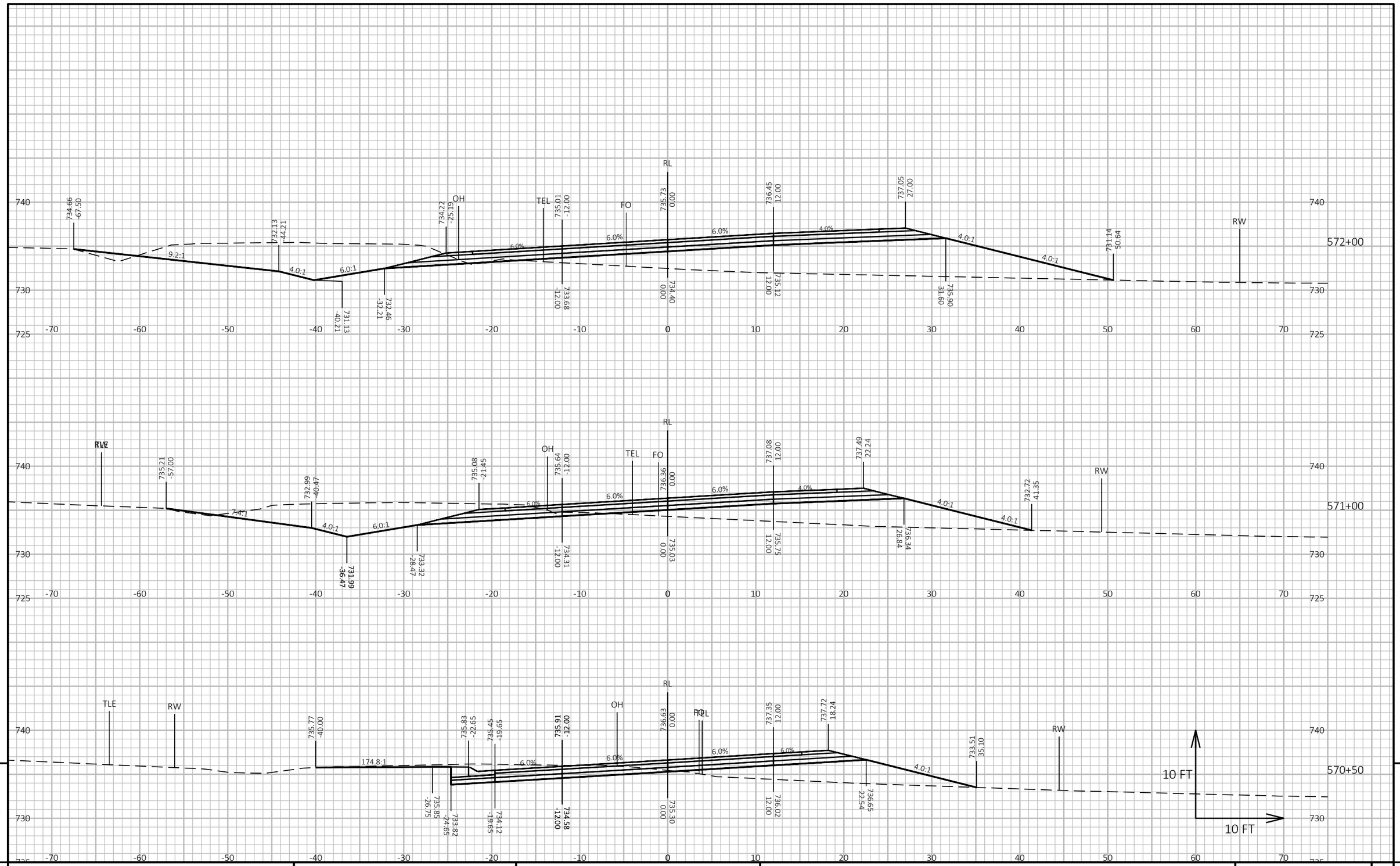
PLOT DATE : 11/30/2023 3:26 PM

PLOT BY : NICK ENGH

PLOT NAME :

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

WISDOT/CADDS SHEET 49

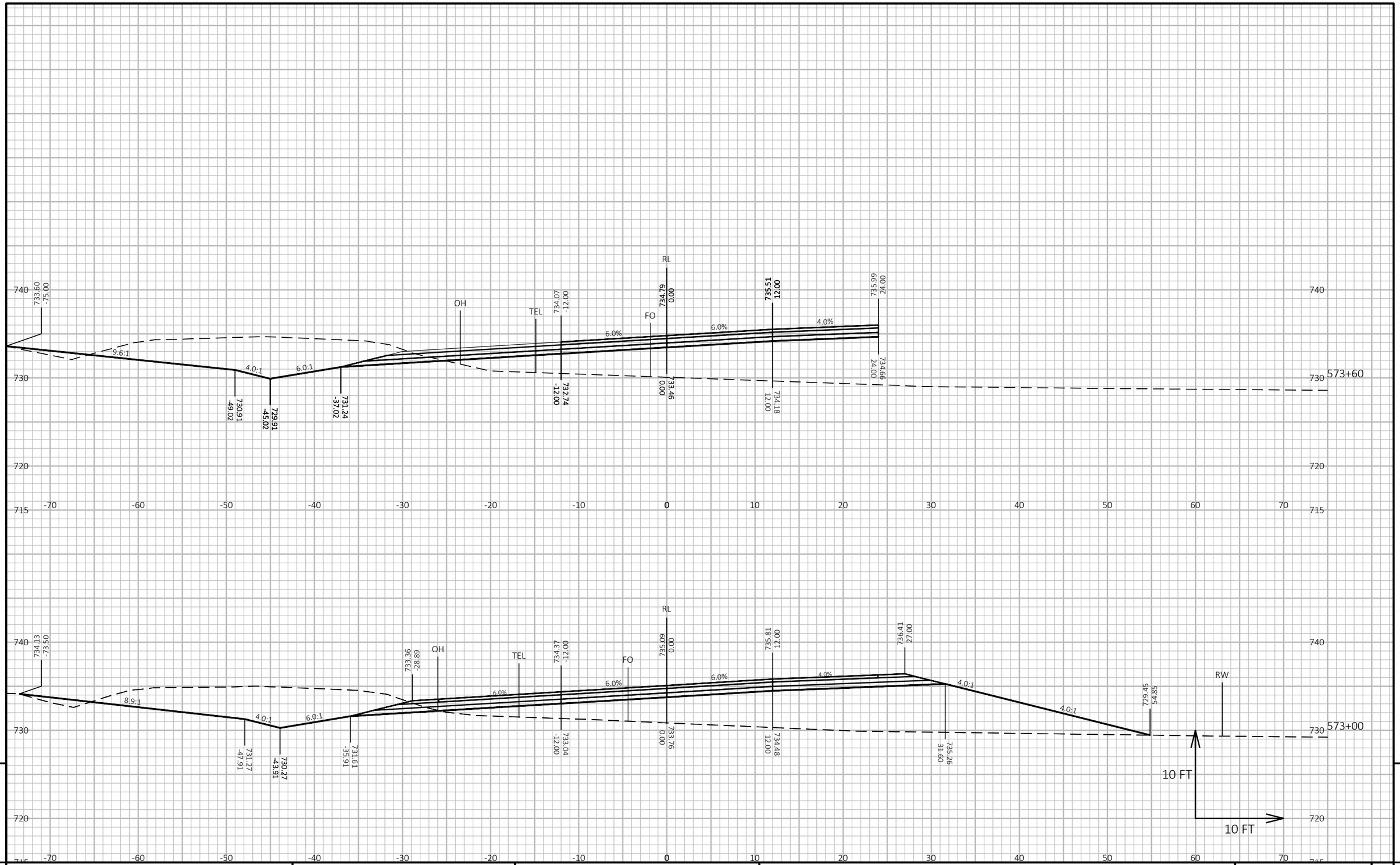



| | | | | |
|---|---|---|---|---|
| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 178 E |

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - (16)

PLOT DATE : 11/30/2023 3:27 PM PLOT BY : NICK ENGH PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49




9

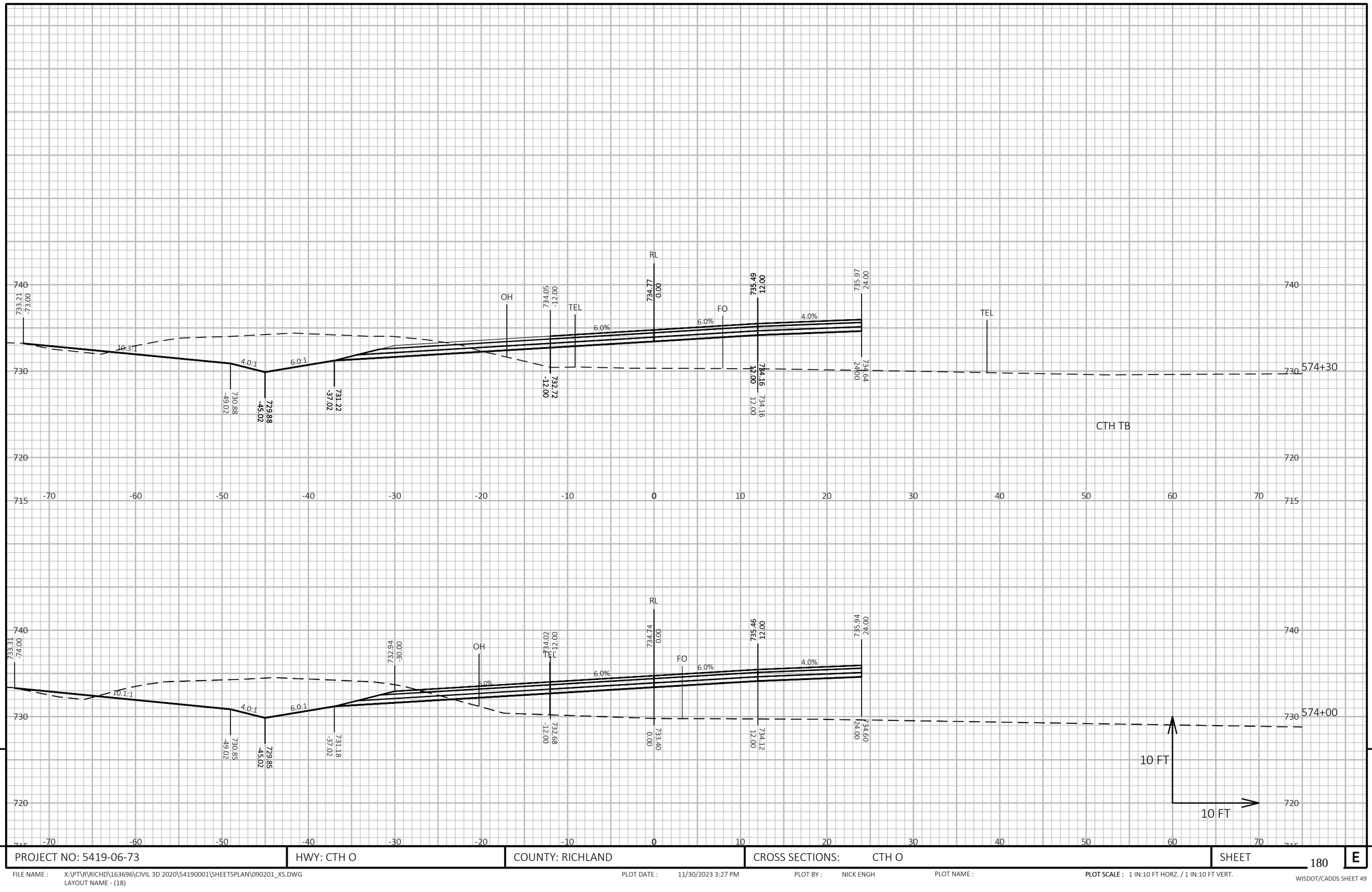
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| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 179 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - (17)

PLOT DATE : 11/30/2023 3:27 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

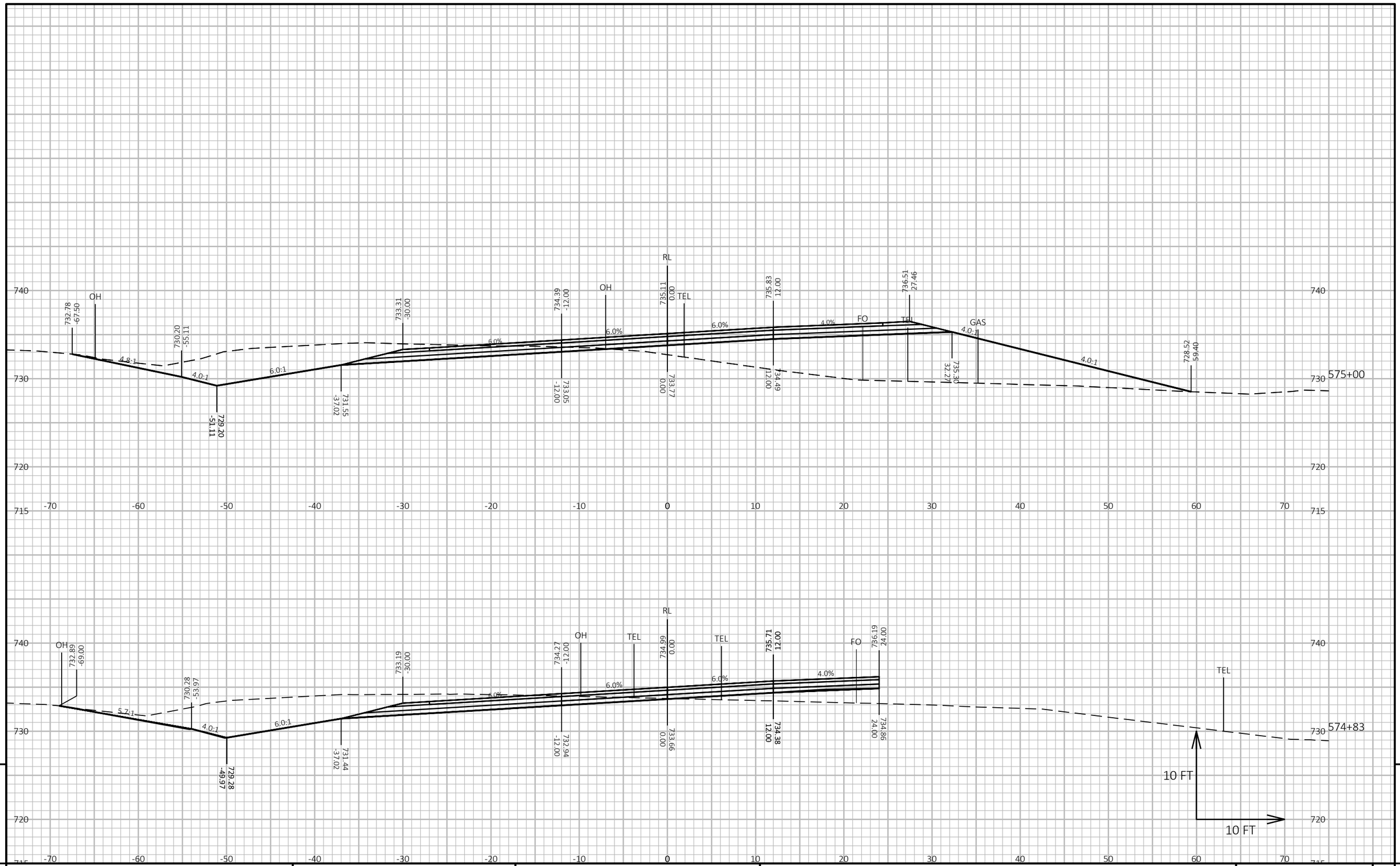



| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 180 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - (18)

PLOT DATE : 11/30/2023 3:27 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49




9

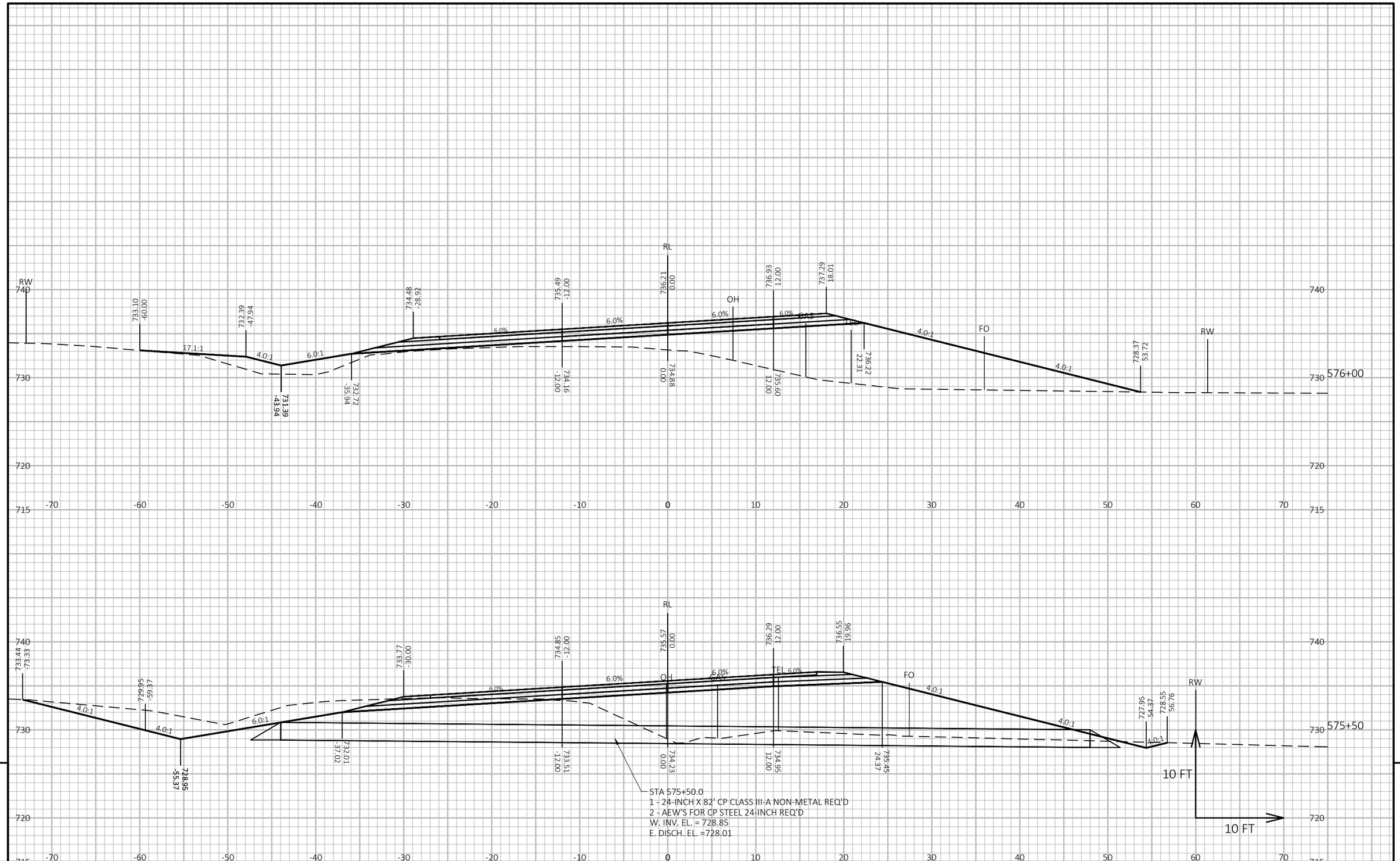
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| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 181 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - (19)

PLOT DATE : 11/30/2023 3:27 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



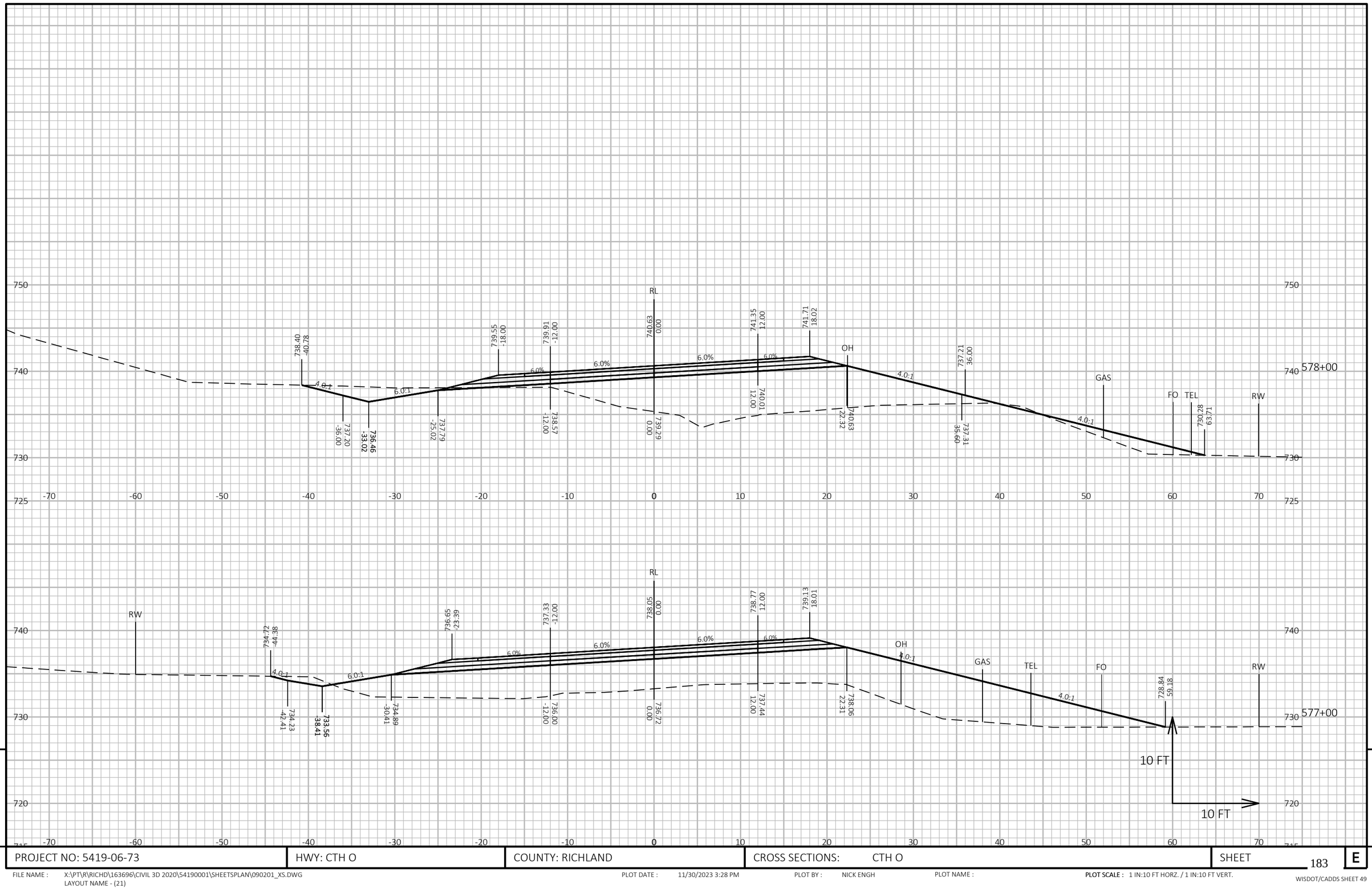

9

9

| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 182 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - (20)

PLOT DATE : 11/30/2023 3:28 PM PLOT BY : NICK ENGH PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

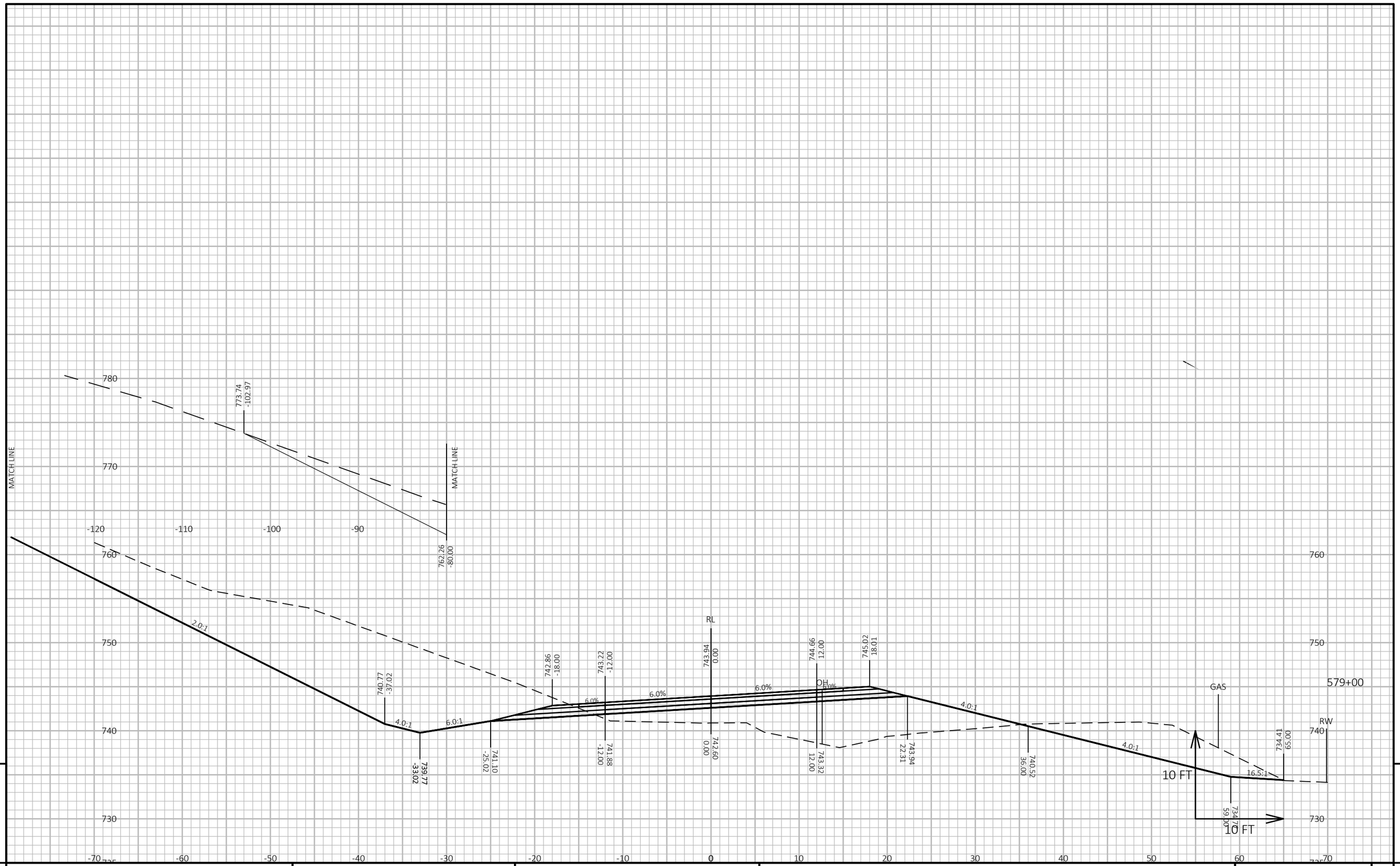



| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 183 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - (21)

PLOT DATE : 11/30/2023 3:28 PM PLOT BY : NICK ENGH PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49




9

9

| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 184 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - (22)

PLOT DATE : 11/30/2023 3:28 PM PLOT BY : NICK ENGH PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

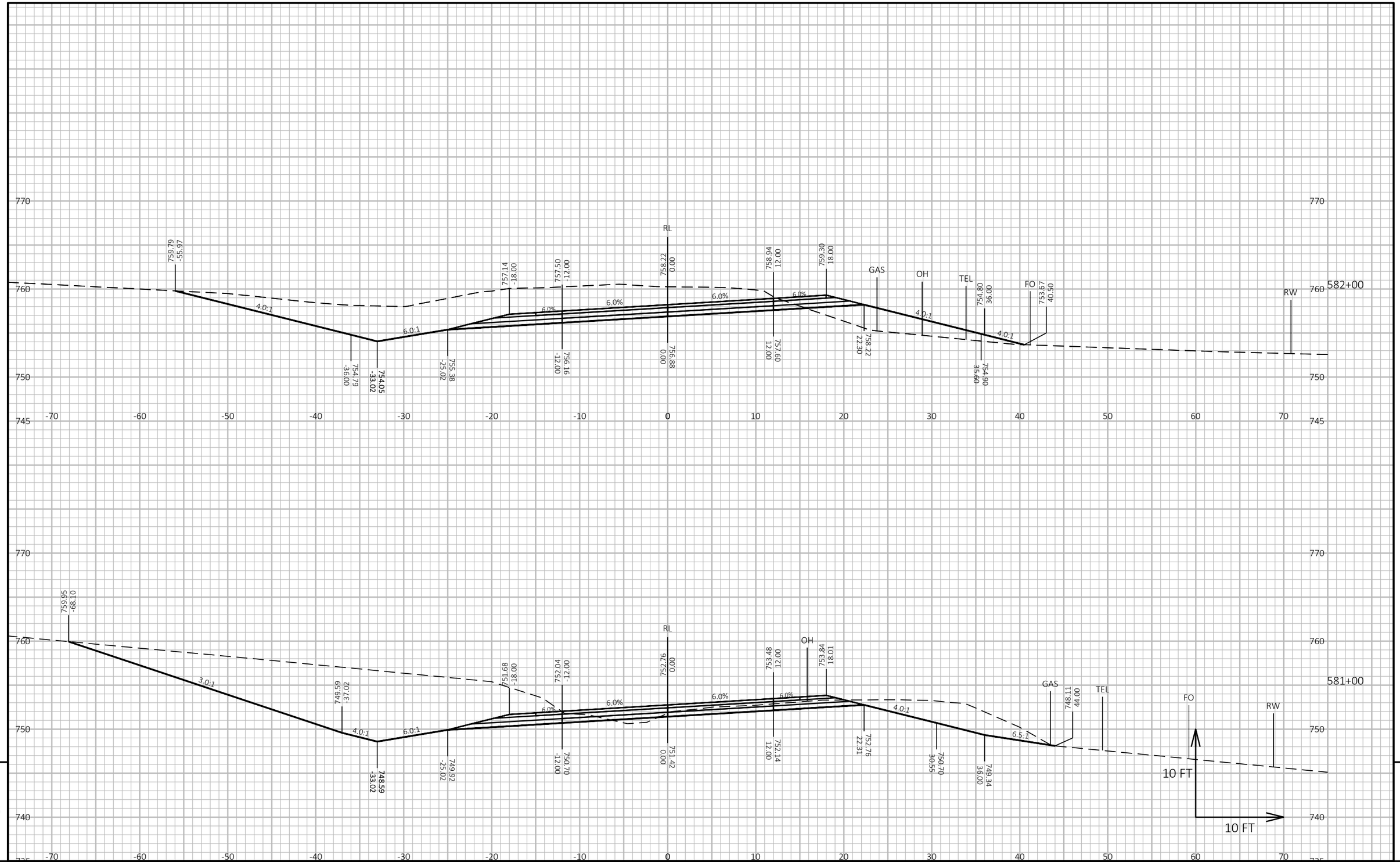
WISDOT/CADDS SHEET 49

800
790
780
770
760
750
740
730
720
787.51
-122.41
MATCH LINE
763.80
-75.00
-120
-110
-100
-90
-80
780
770
MATCH LINE
2.0:1
-70
-60
-50
-40
-30
-20
-10
0
10
20
30
40
50
60
70
780
770
760
750
740
730
720
OH
RL
580+00
GAS
RW
TEL
744.81
-37.02
746.90
-18.00
747.26
-12.00
747.98
0.00
748.70
12.00
749.06
18.01
747.98
22.31
744.56
36.00
741.81
47.00
739.84
61.00
743.81
-33.02
745.14
-25.02
745.93
-12.00
746.65
0.00
747.37
12.00
6.0%
6.0%
6.0%
6.0%
4.0:1
4.0:1
4.0:1
4.0:1
17.2:1
10 FT
10 FT
9
9

| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 185 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - (23)

PLOT DATE : 11/30/2023 3:28 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.




9

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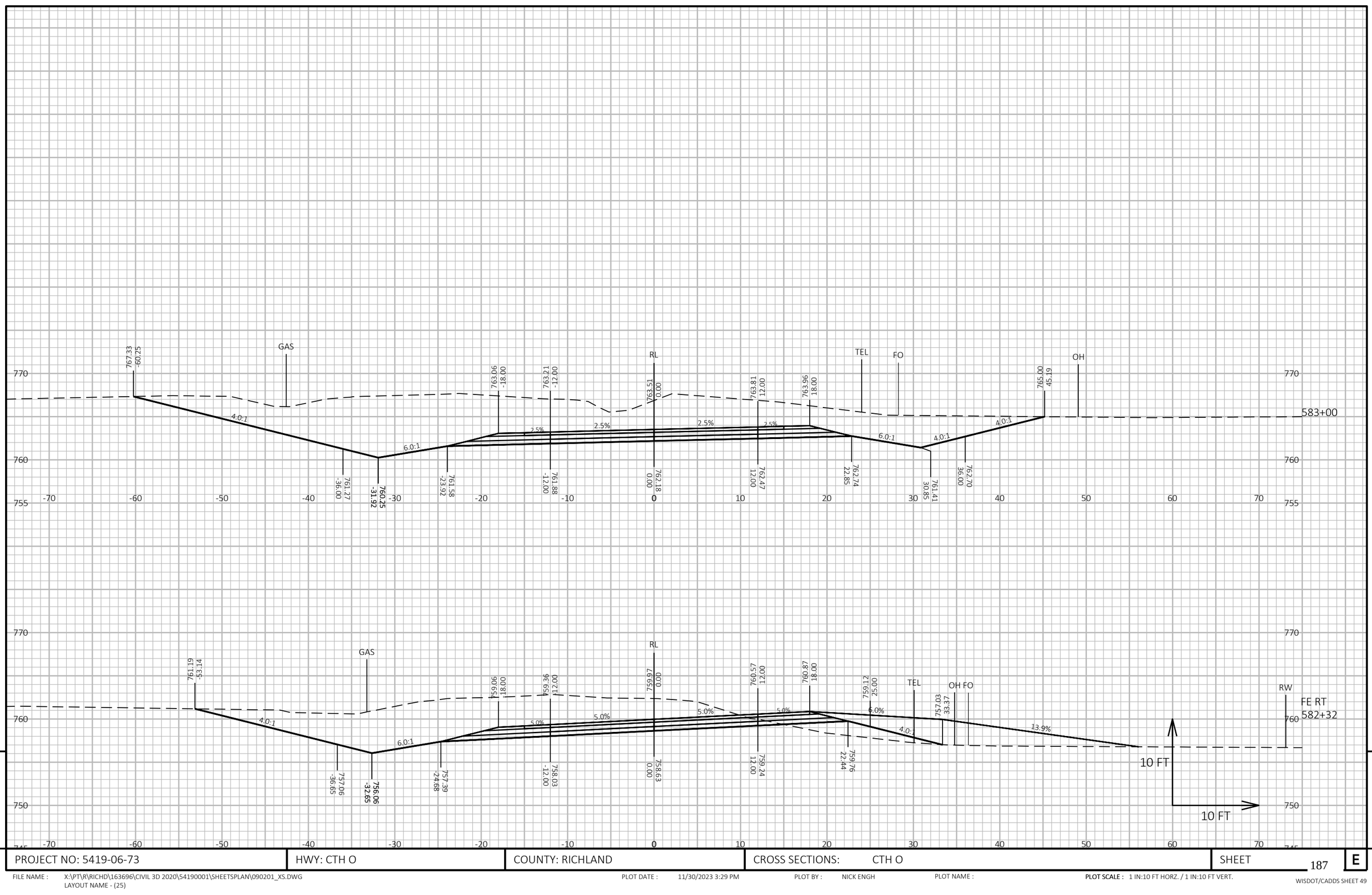
| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 186 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - (24)

PLOT DATE : 11/30/2023 3:29 PM PLOT BY : NICK ENGH PLOT NAME :

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

WISDOT/CADDS SHEET 49

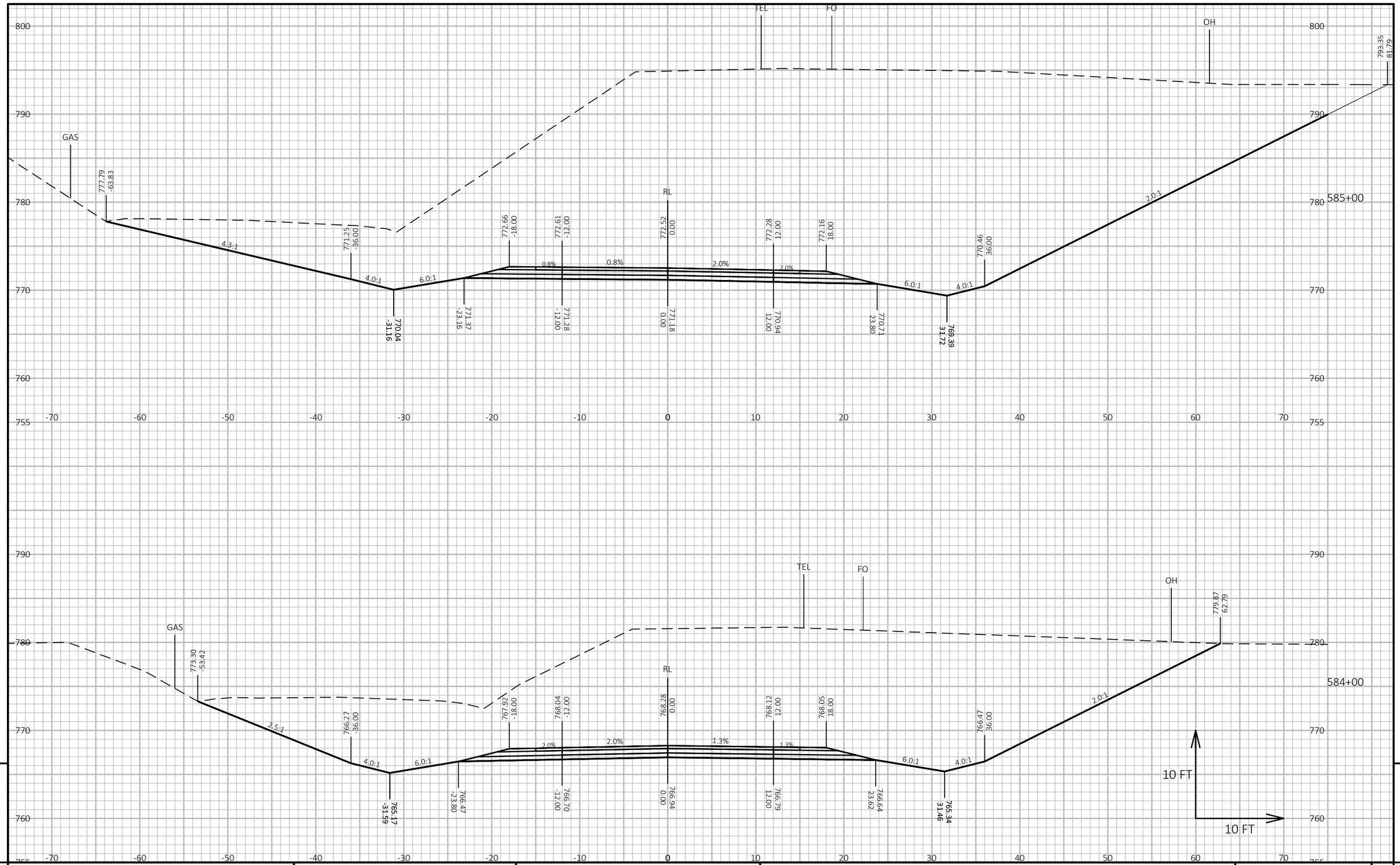



| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 187 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - (25)

PLOT DATE : 11/30/2023 3:29 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

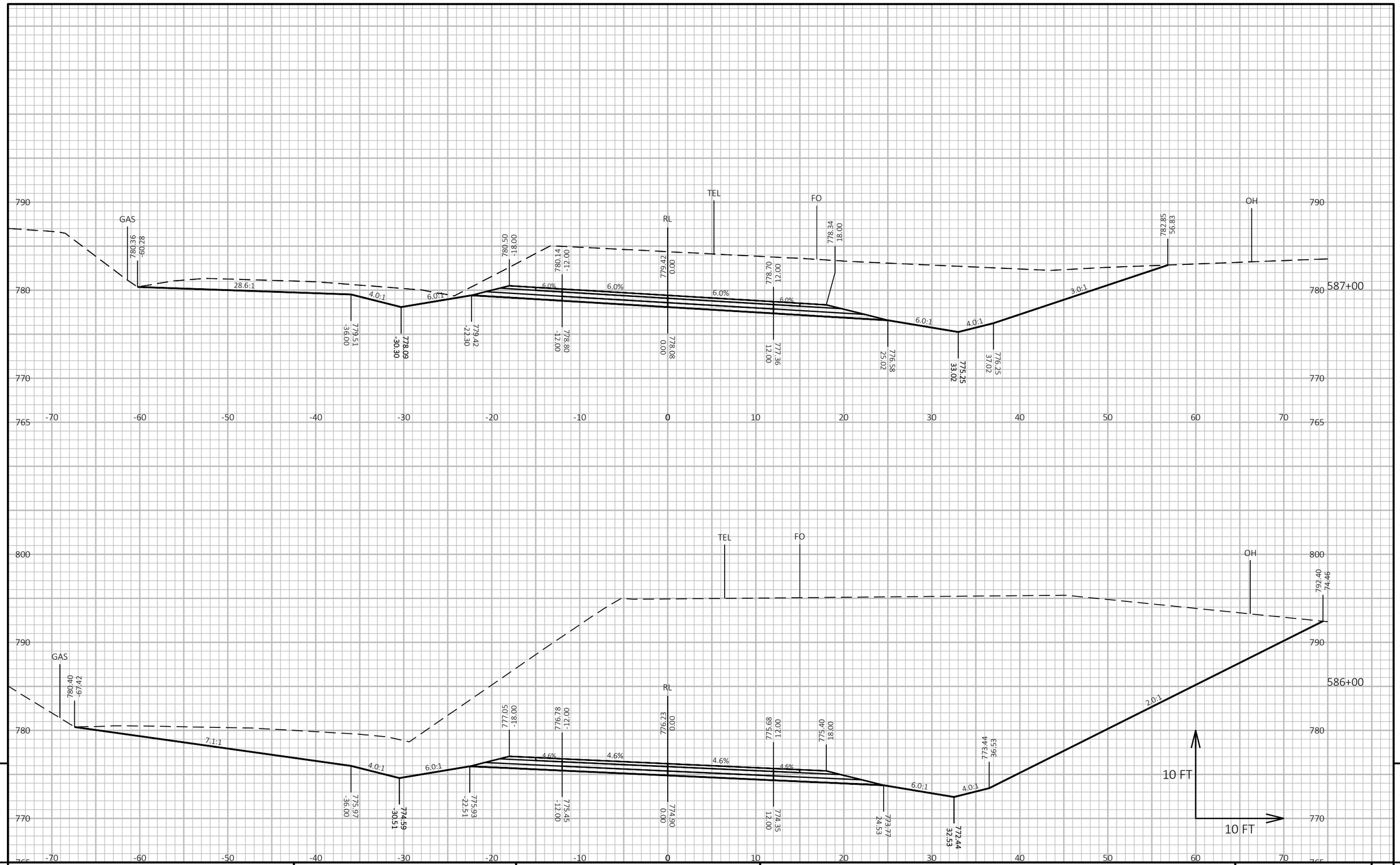



| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 188 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - (26)

PLOT DATE : 11/30/2023 3:29 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



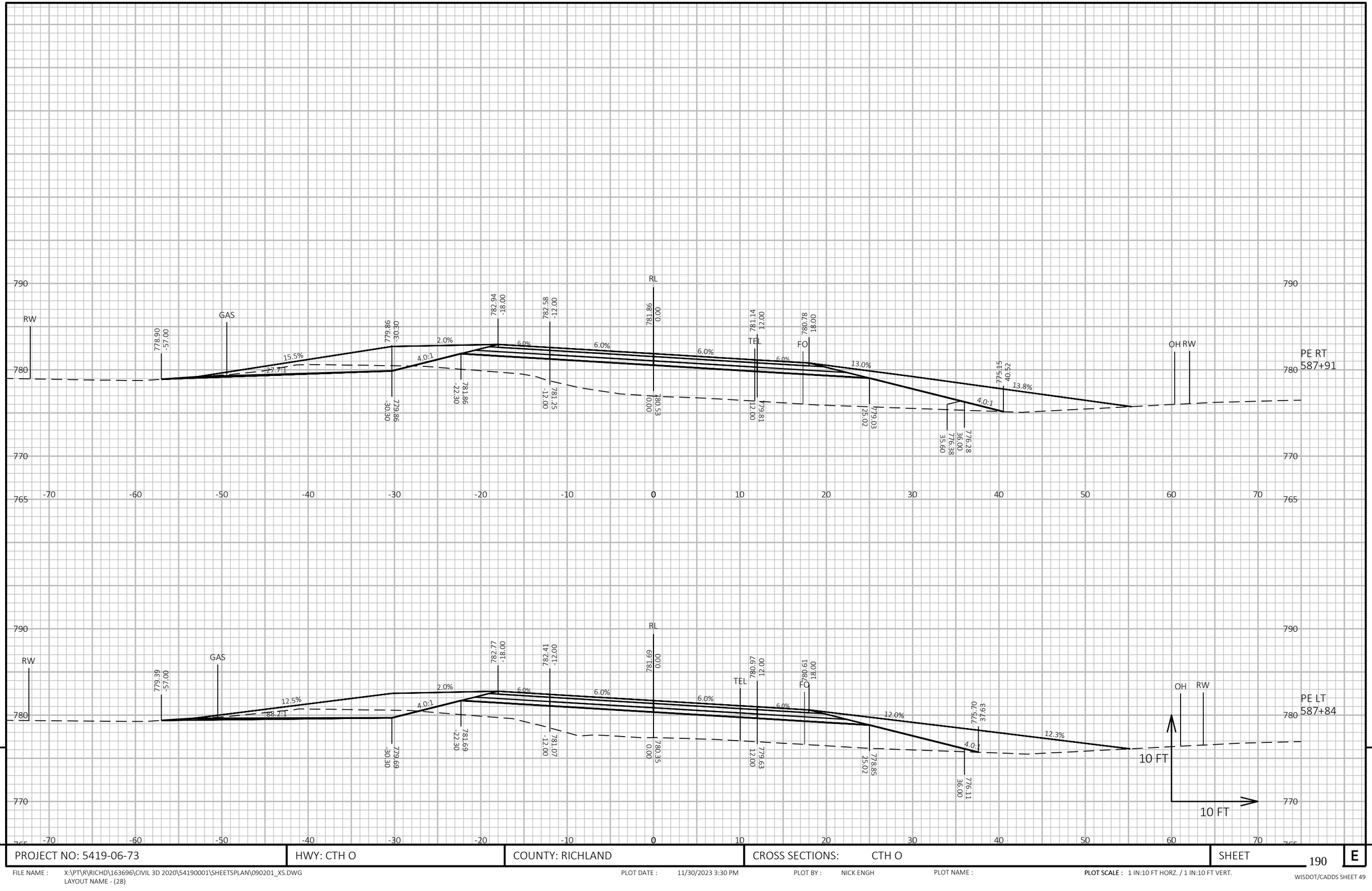

| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 189 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - (27)

PLOT DATE : 11/30/2023 3:29 PM PLOT BY : NICK ENGH PLOT NAME :

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

WISDOT/CADDS SHEET 49




9

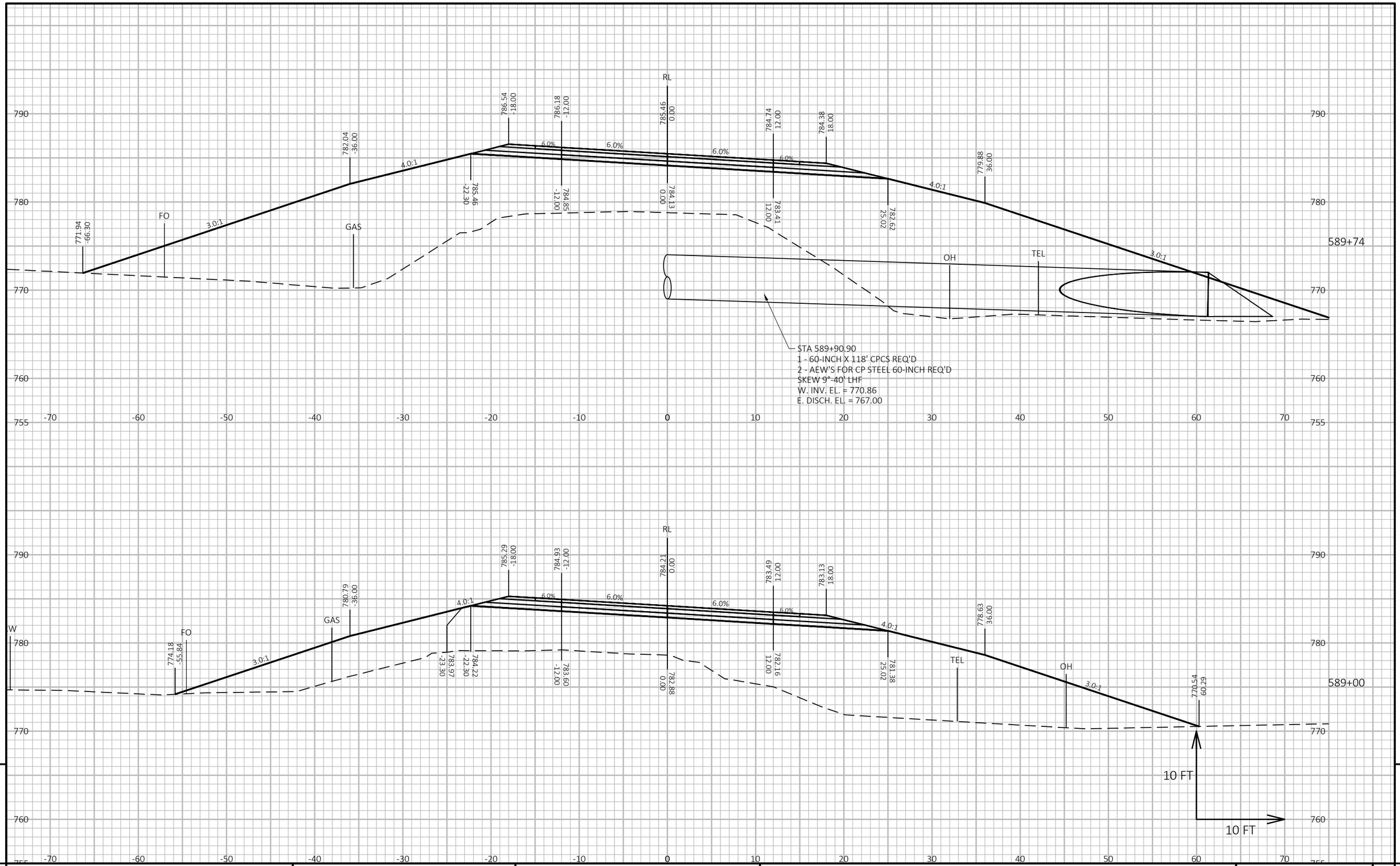
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| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 190 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - (28)

PLOT DATE : 11/30/2023 3:30 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49




9

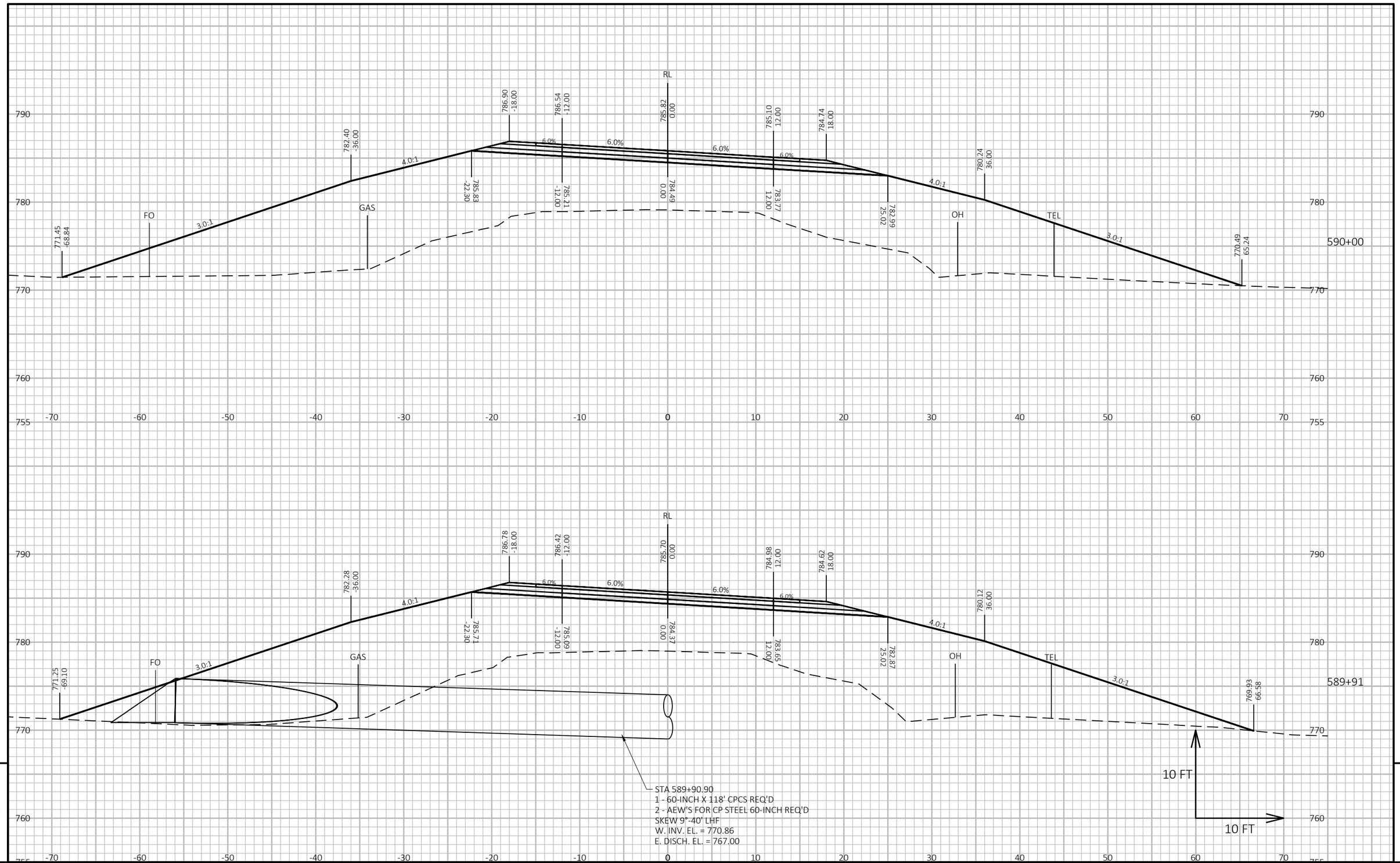
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| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 191 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - (29)

PLOT DATE : 11/30/2023 3:30 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49




9

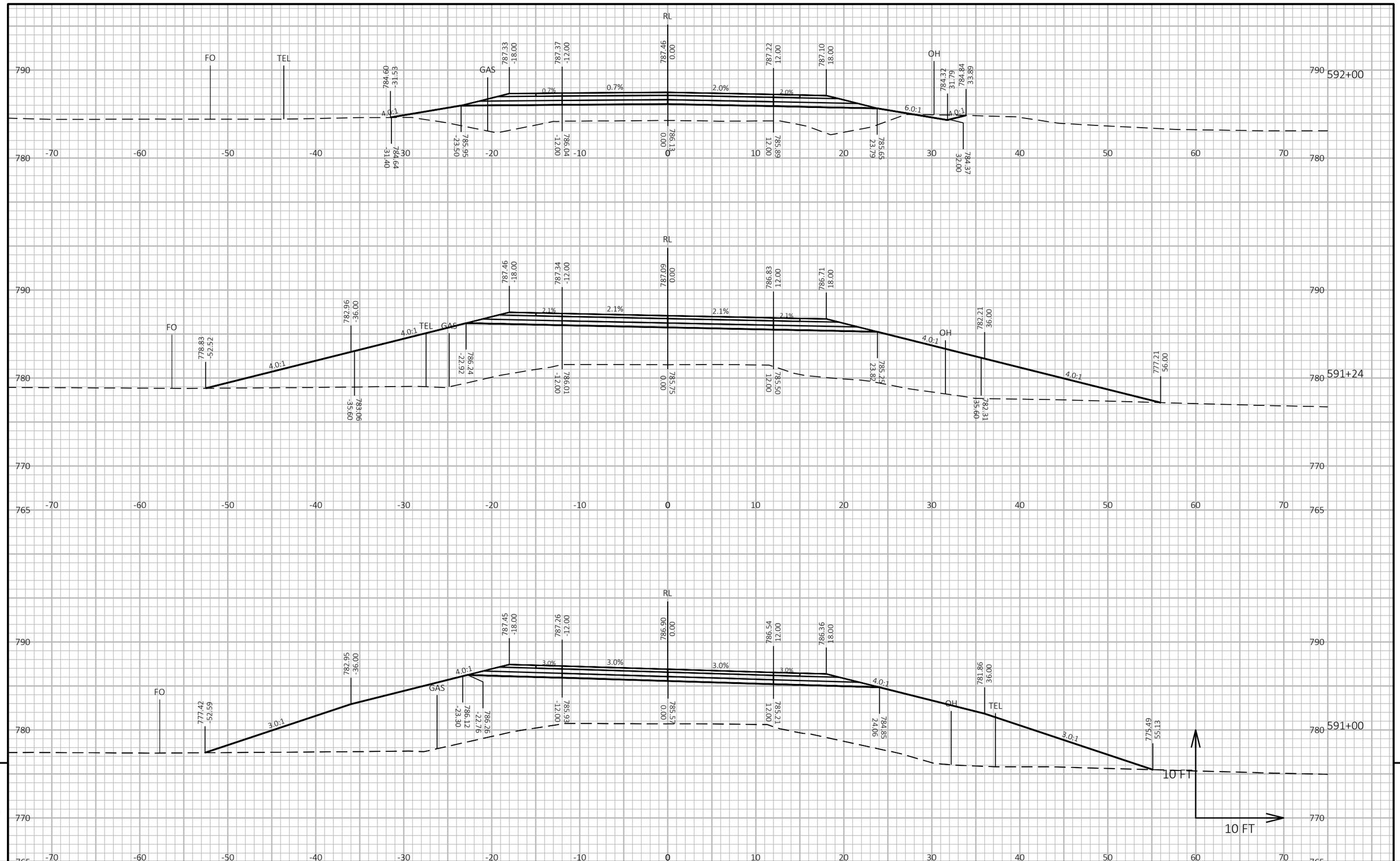
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| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 192 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - (30)

PLOT DATE : 11/30/2023 3:30 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

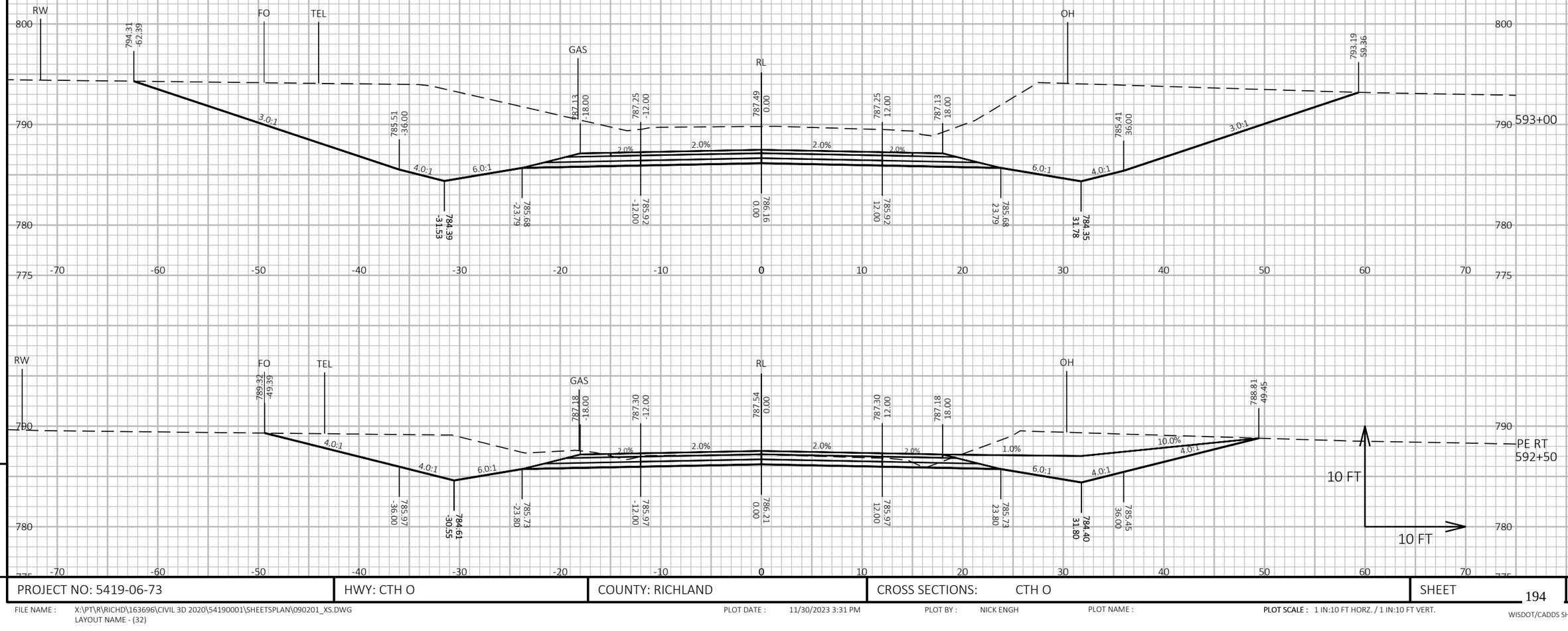



| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 193 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - (31)

PLOT DATE : 11/30/2023 3:30 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49




9

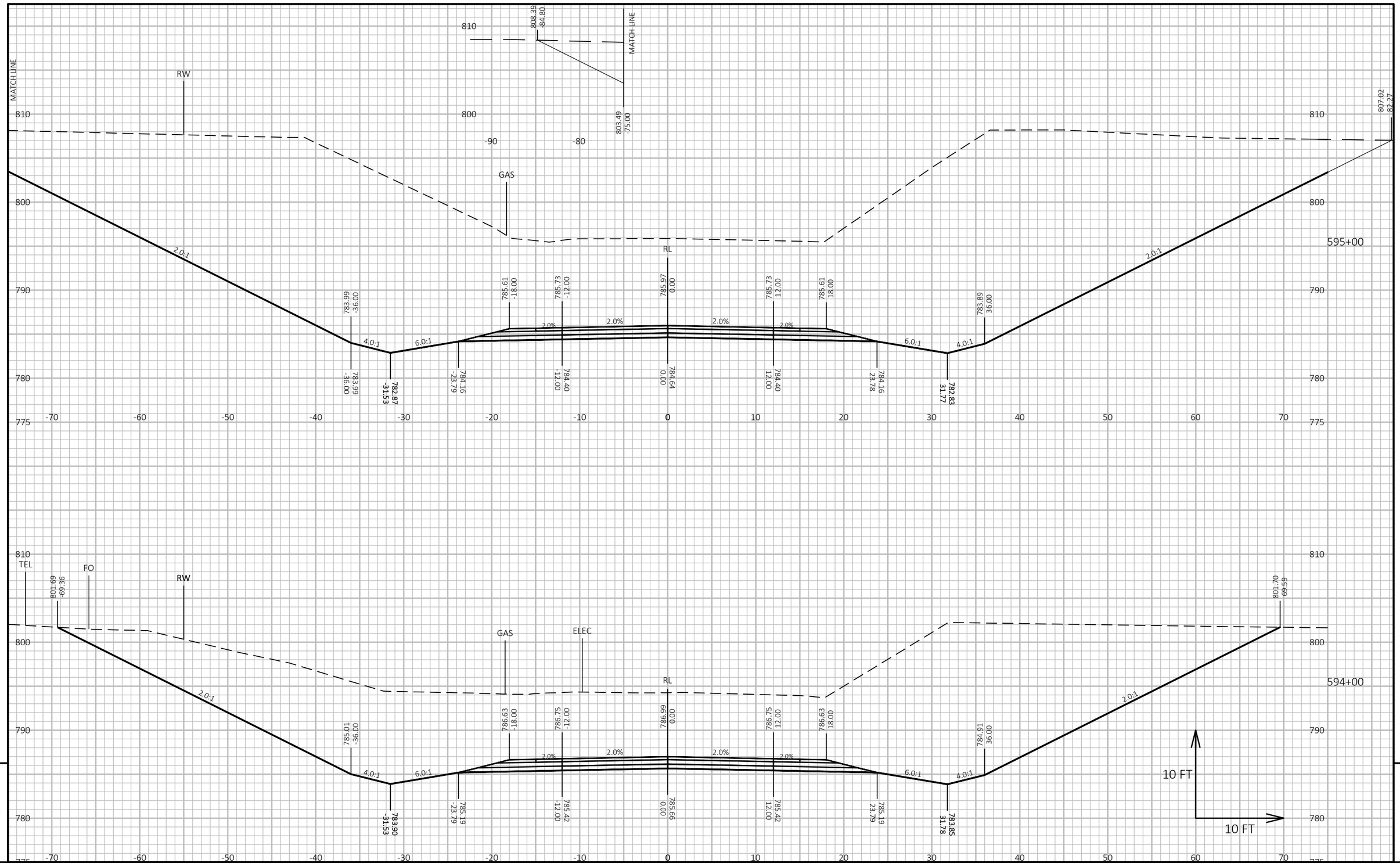
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| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 194 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - (32)

PLOT DATE : 11/30/2023 3:31 PM PLOT BY : NICK ENGH PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

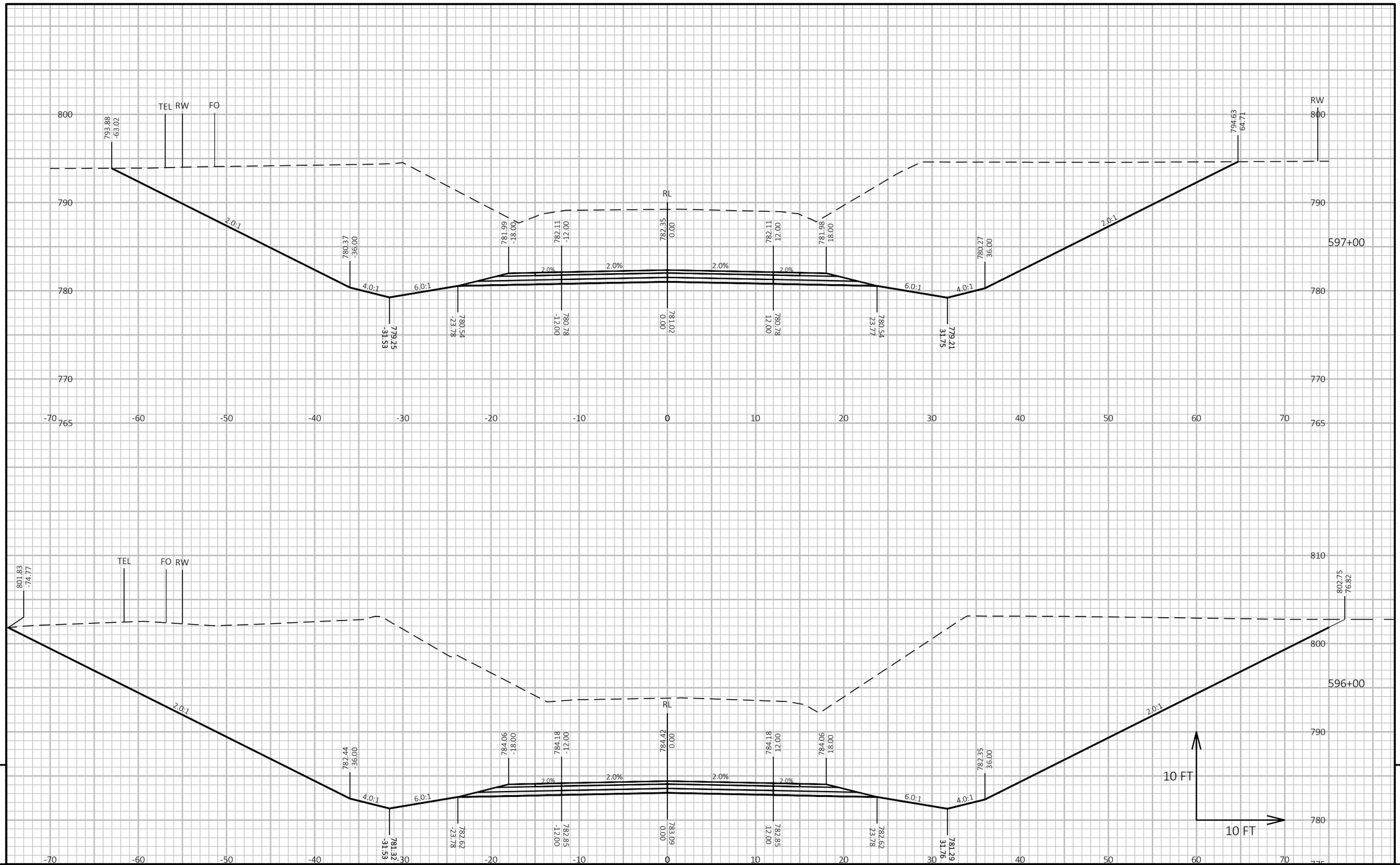



| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 195 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - (33)

PLOT DATE : 11/30/2023 3:31 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49




9 9

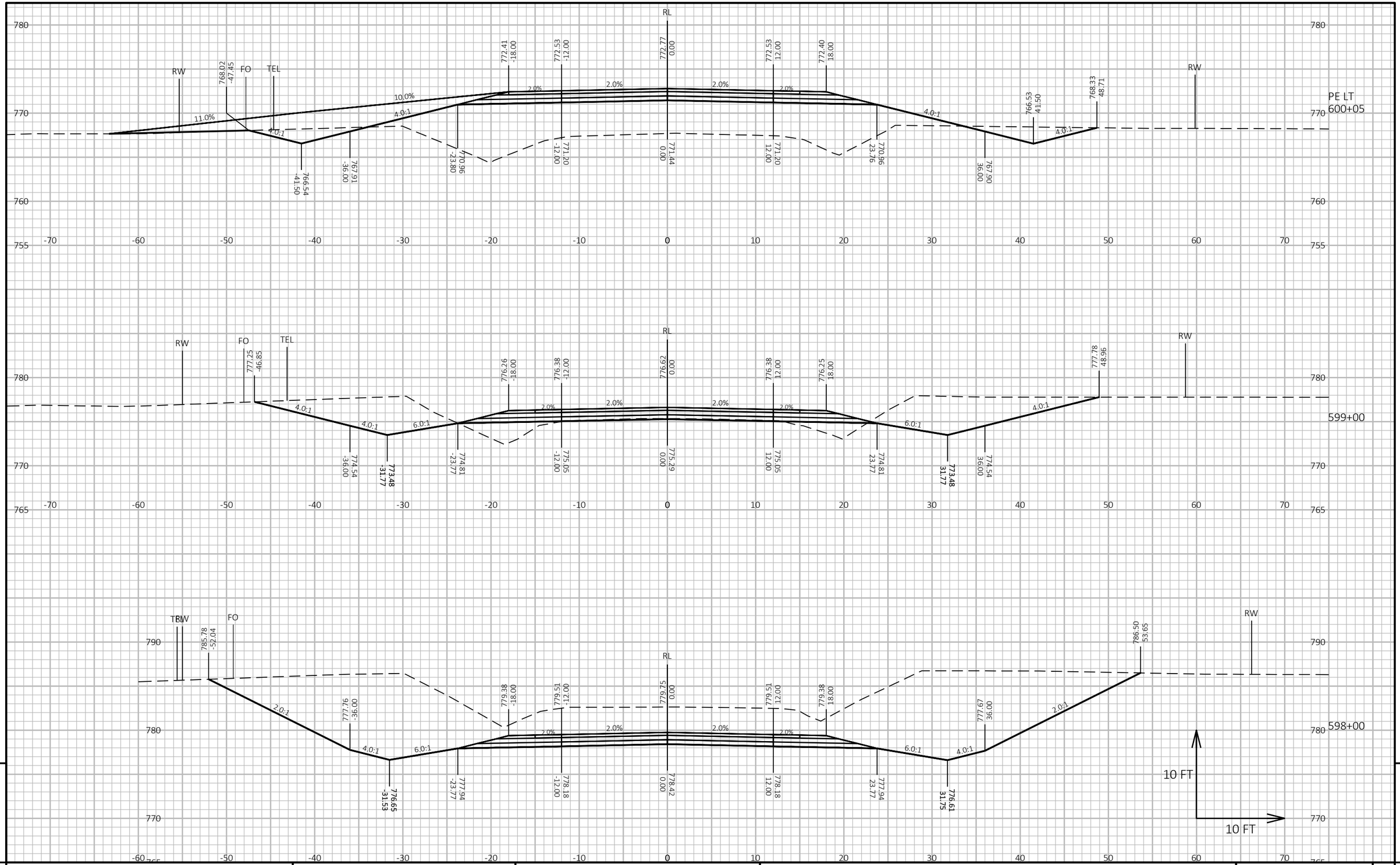
| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 196 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - (34)

PLOT DATE : 11/30/2023 3:31 PM PLOT BY : NICK ENGH PLOT NAME :

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

WISDOT/CADDS SHEET 49




9

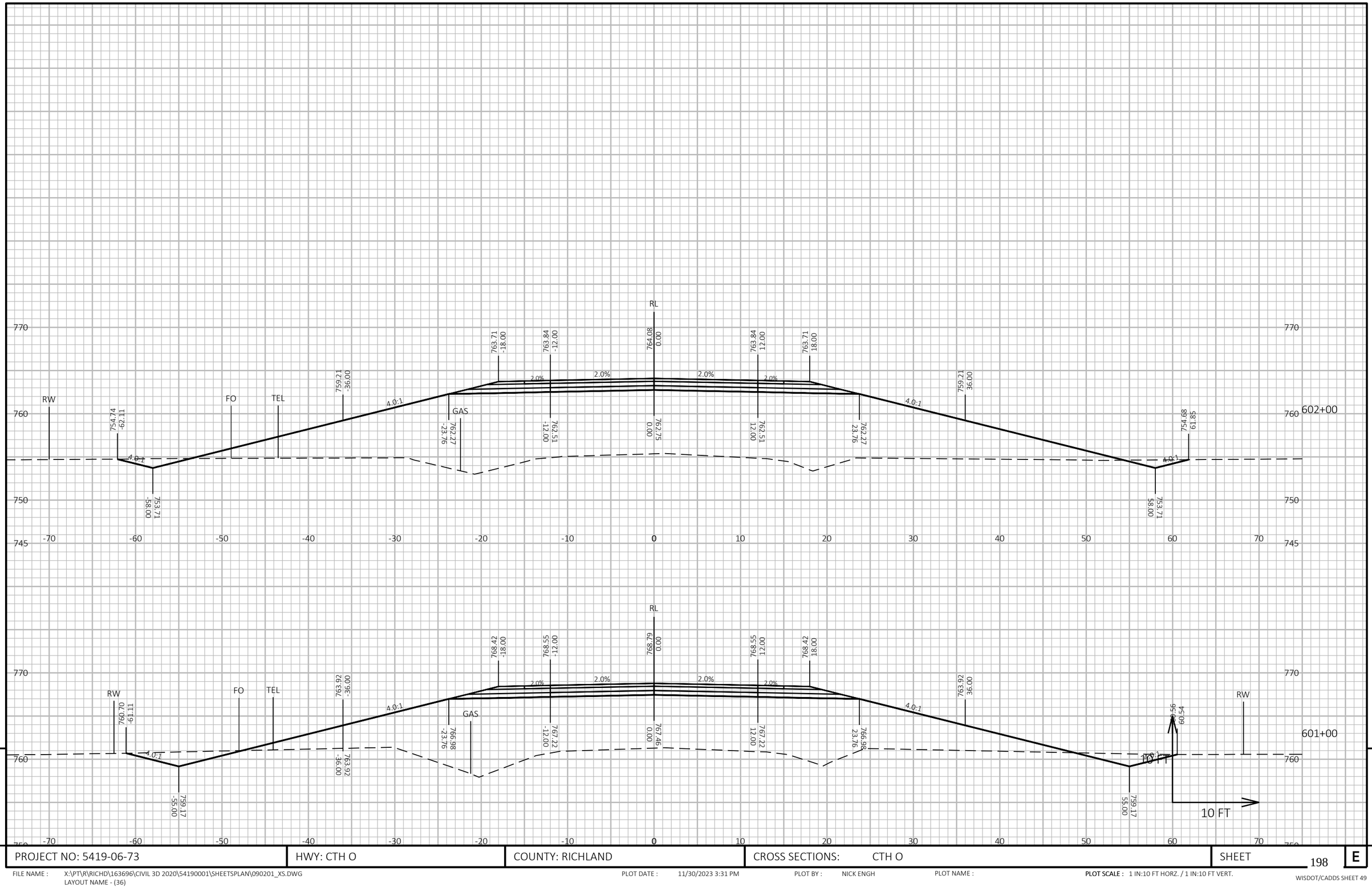
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| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 197 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - (35)

PLOT DATE : 11/30/2023 3:31 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



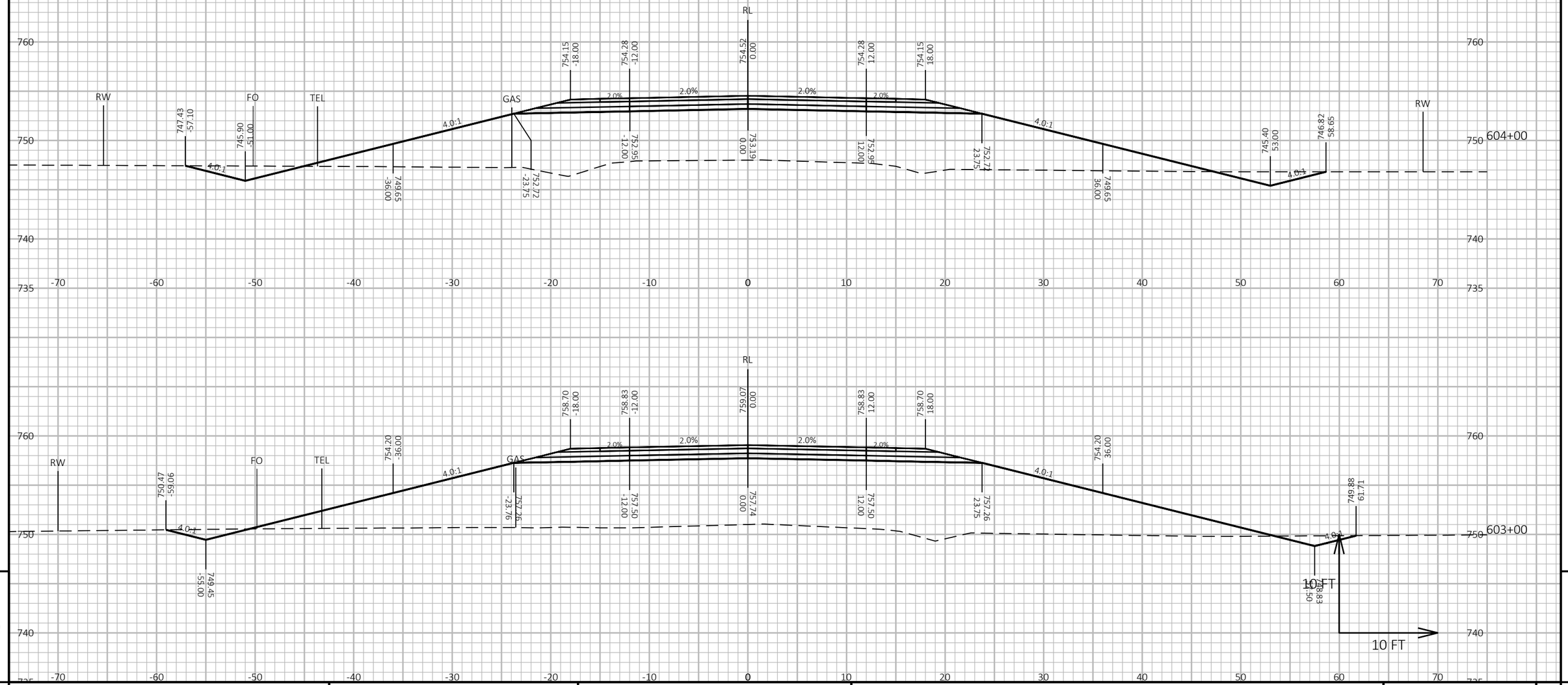

| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 198 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - (36)

PLOT DATE : 11/30/2023 3:31 PM PLOT BY : NICK ENGH PLOT NAME :

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

WISDOT/CADDS SHEET 49




9

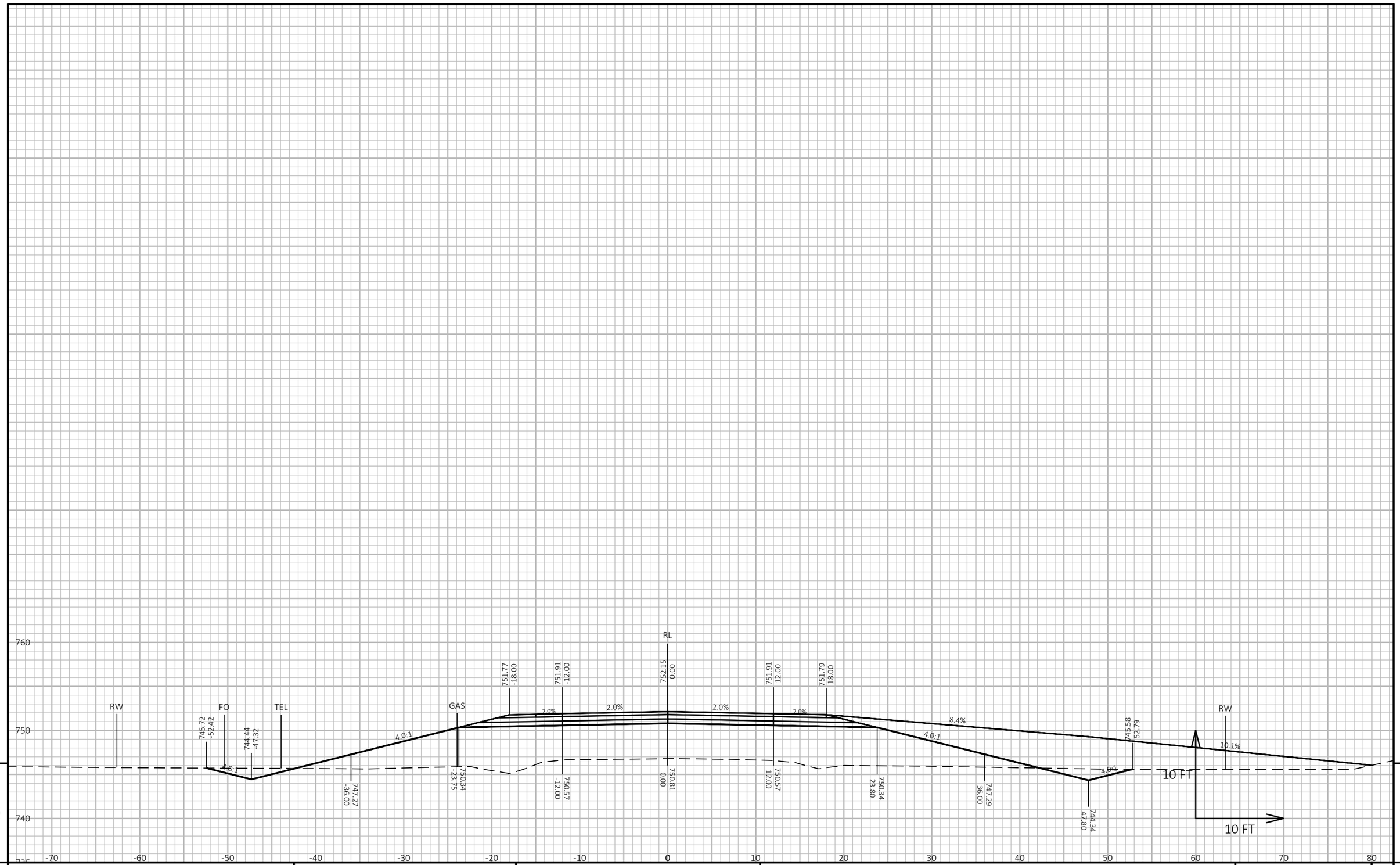
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| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 199 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - (37)

PLOT DATE : 11/30/2023 3:32 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

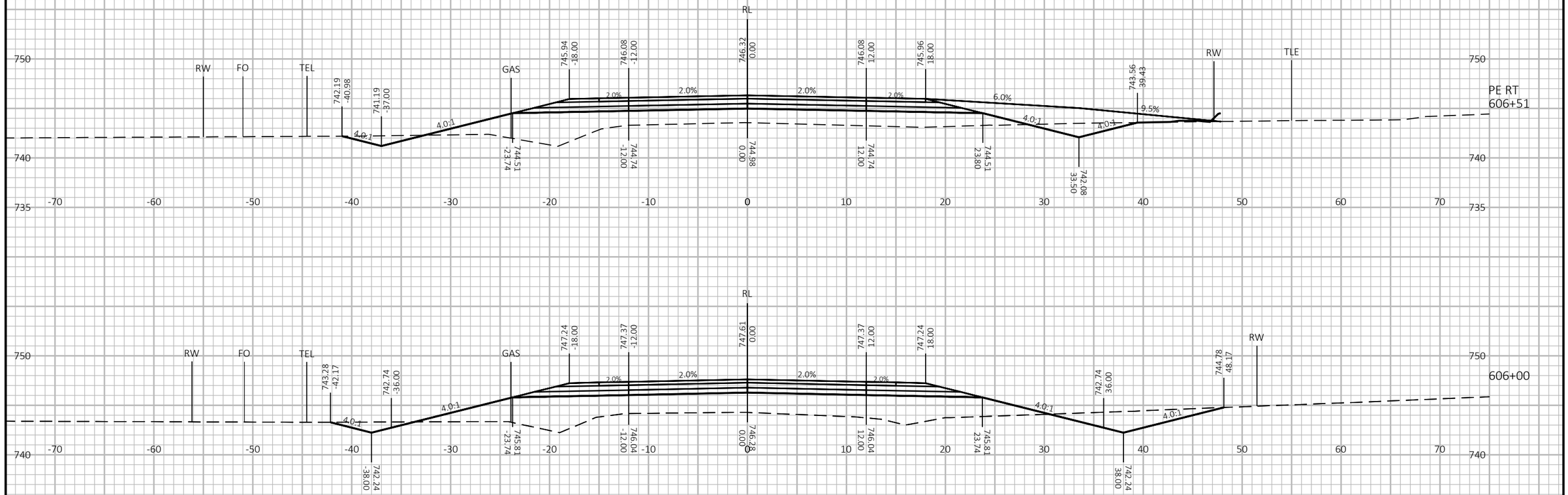



9 9

| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 200 | E |
|---|---|---|---|---|---|

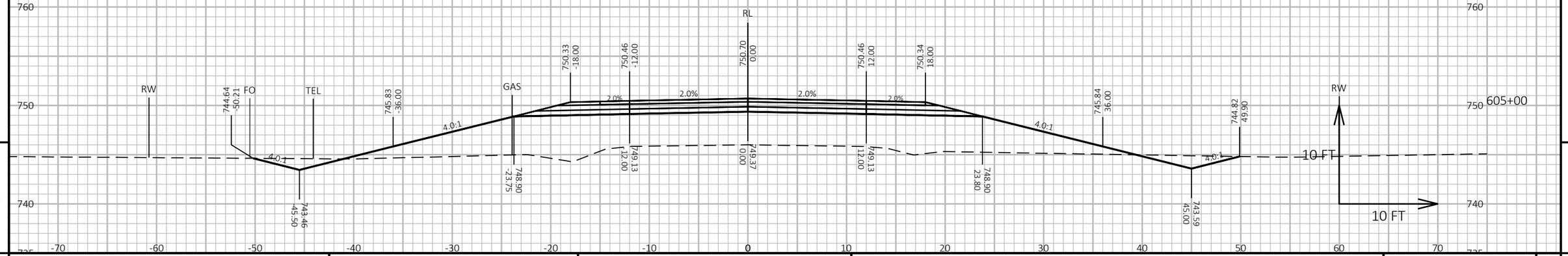
FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - (38)

PLOT DATE : 11/30/2023 3:32 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.









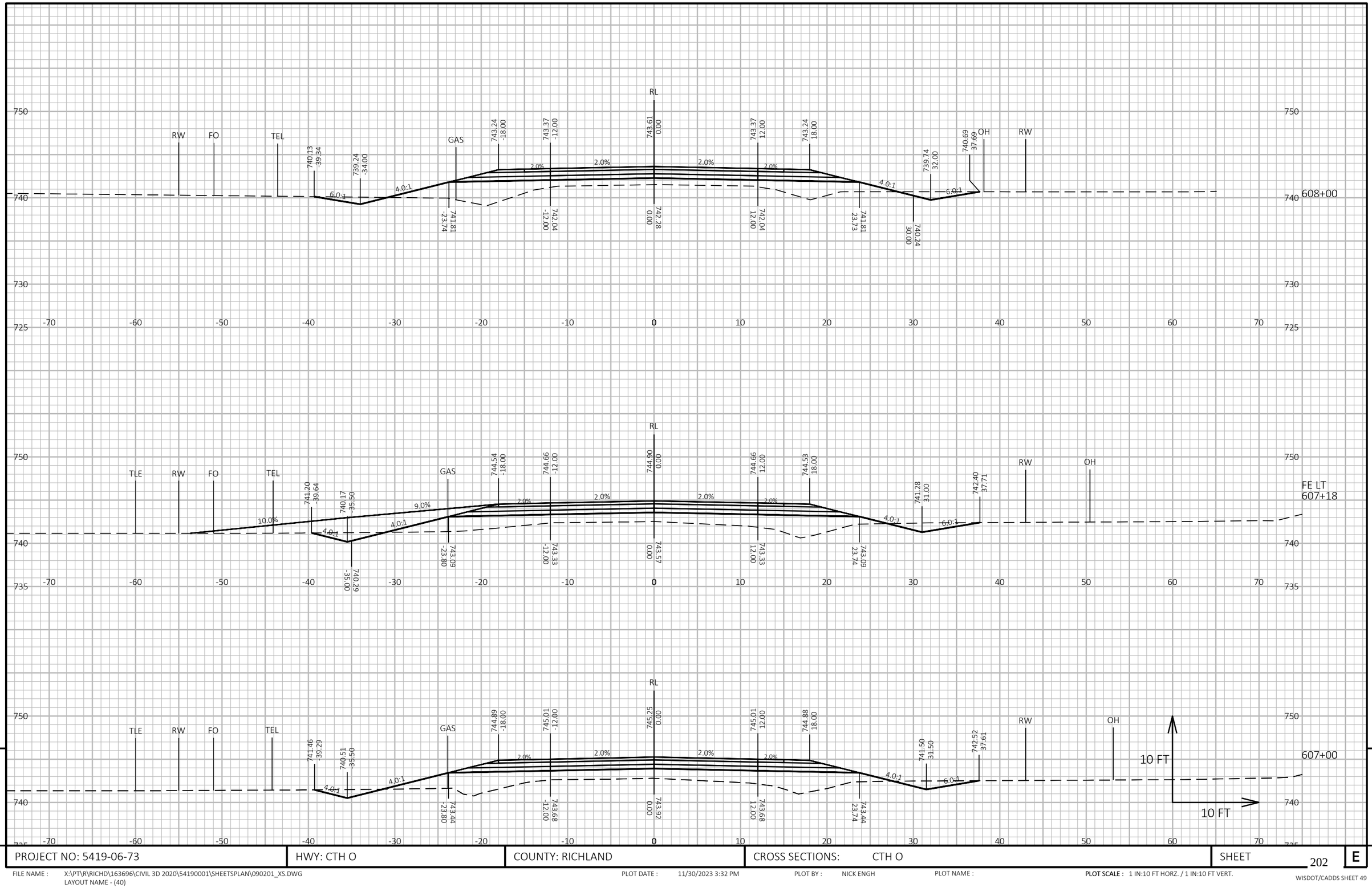

9

9

| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 201 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - (39)

PLOT DATE : 11/30/2023 3:32 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



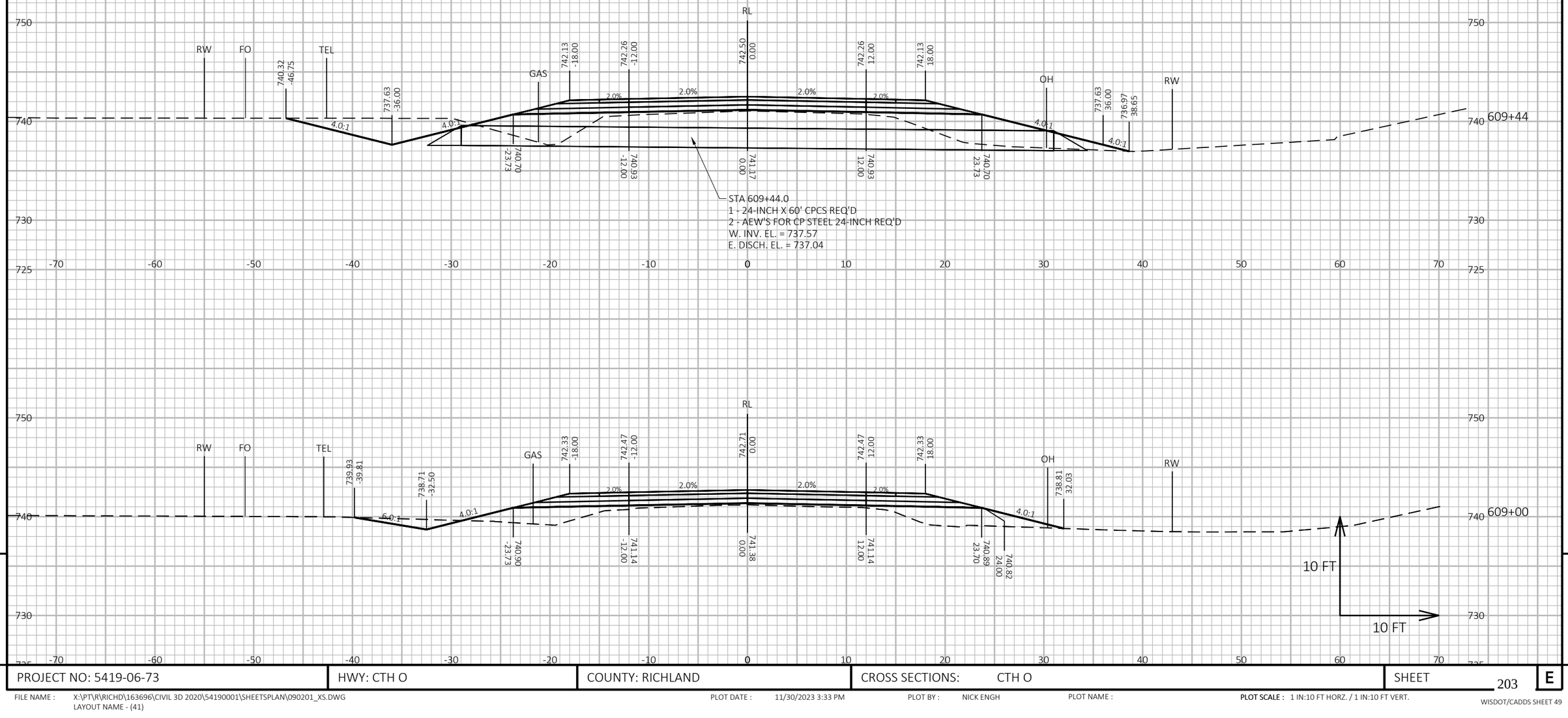

9

| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 202 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - (40)

PLOT DATE : 11/30/2023 3:32 PM PLOT BY : NICK ENGH PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

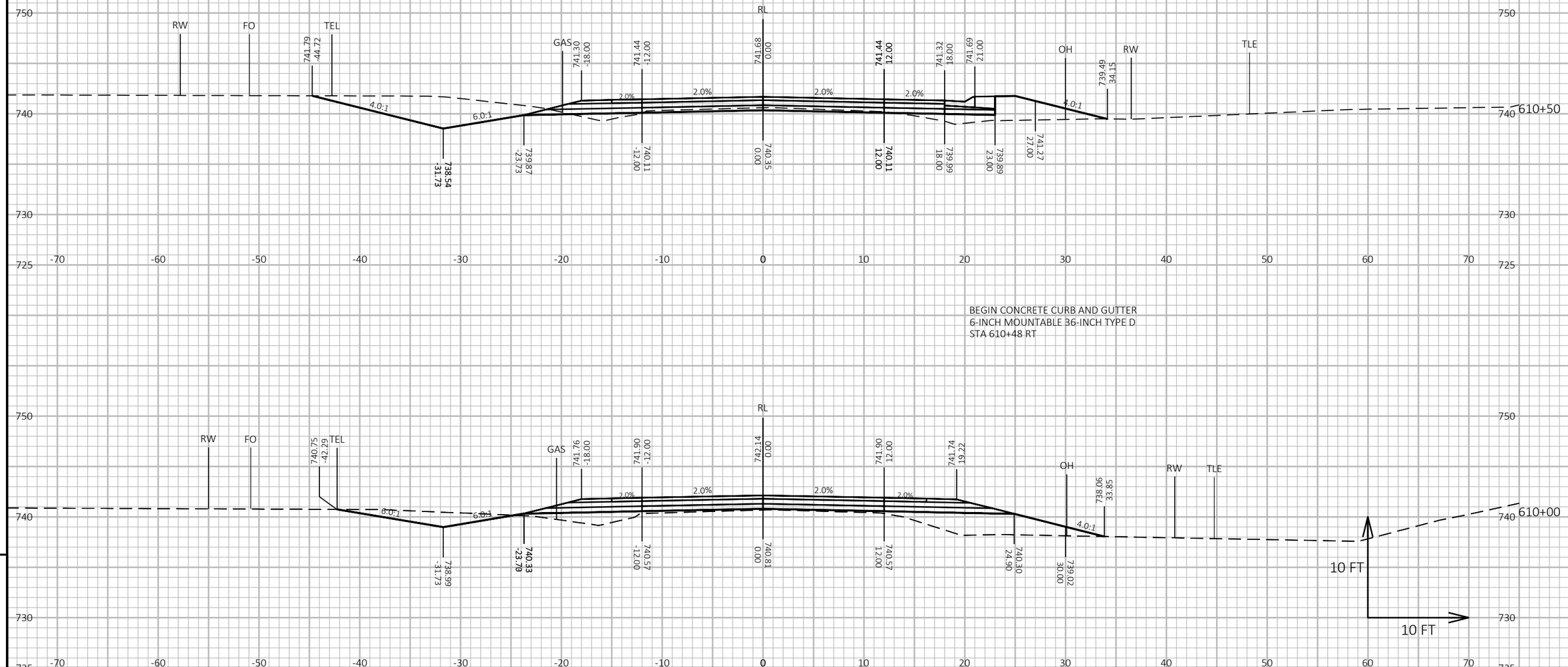



| | | | | |
|---|---|---|---|---|
| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 203 E |

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - (41)

PLOT DATE : 11/30/2023 3:33 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49




9

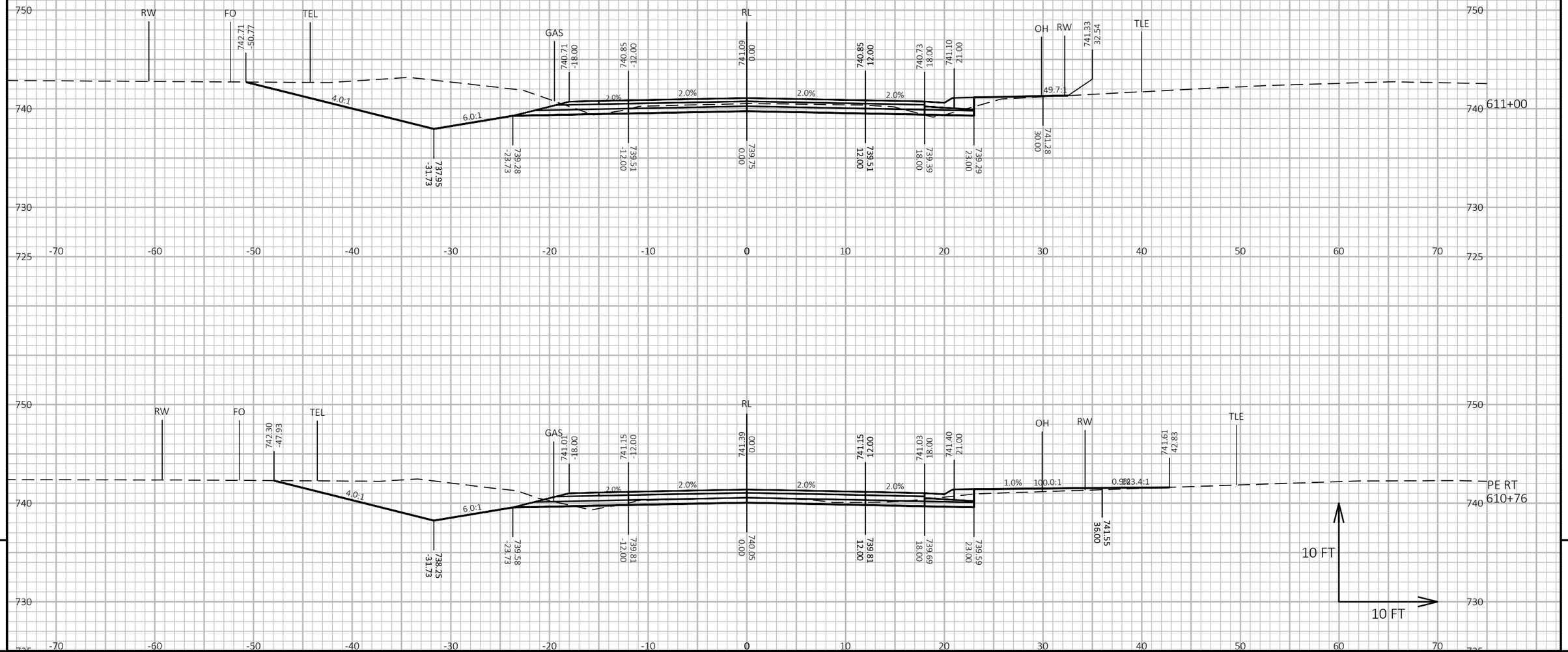
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| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 204 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - (42)

PLOT DATE : 11/30/2023 3:33 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49




9

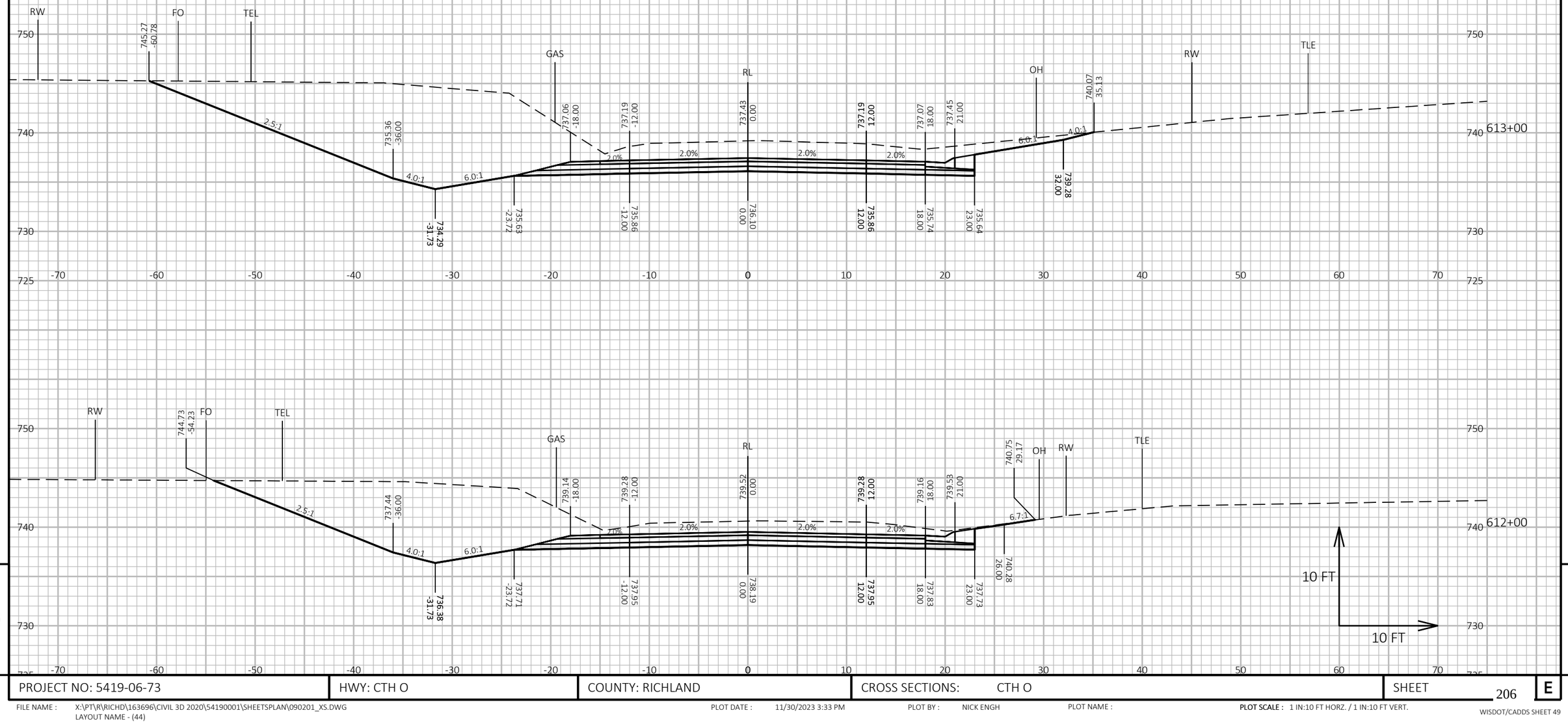
9

| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 205 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - (43)

PLOT DATE : 11/30/2023 3:33 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



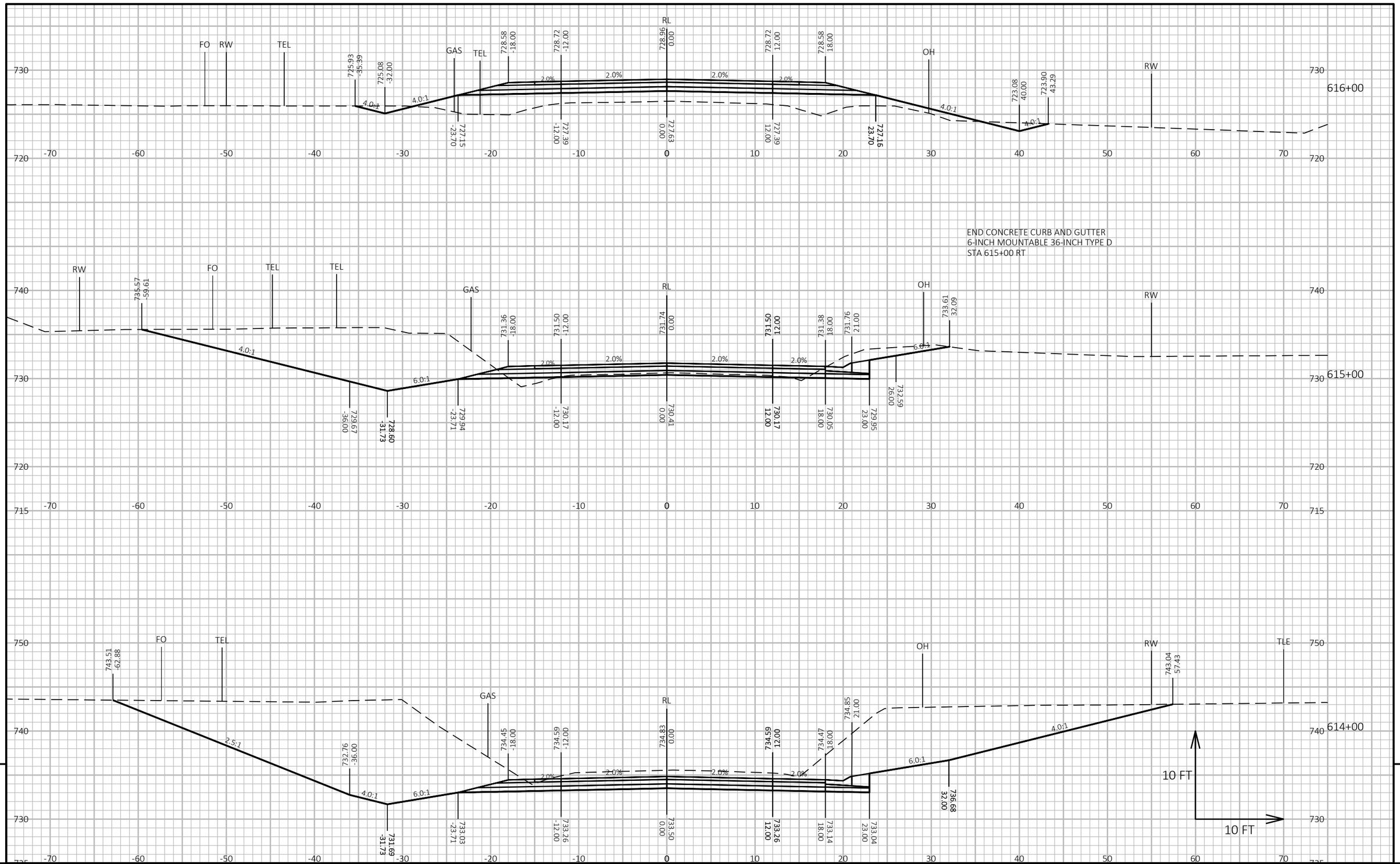

9 9

| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 206 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - (44)

PLOT DATE : 11/30/2023 3:33 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49




9

9

| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 207 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - (45)

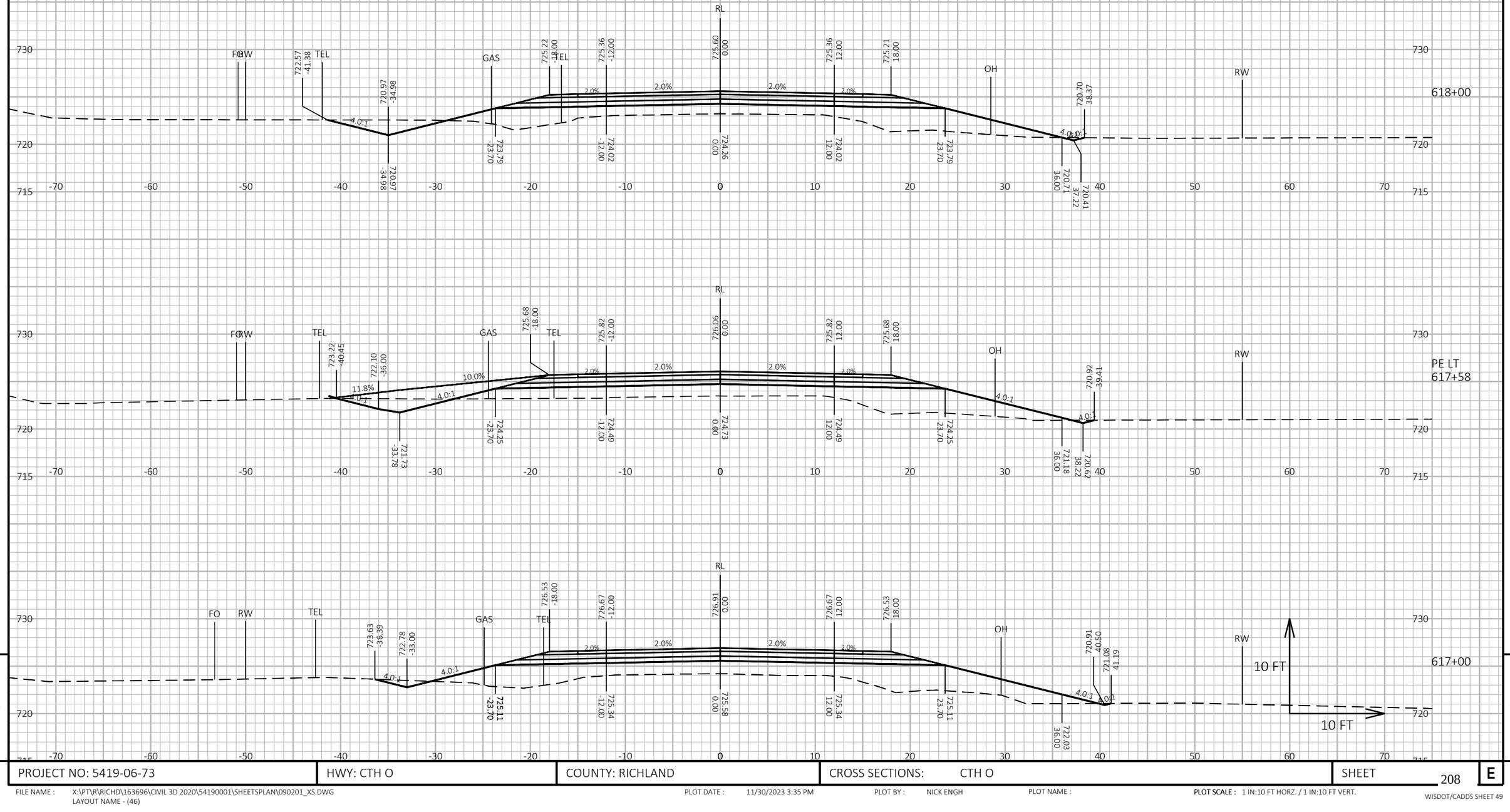
PLOT DATE : 11/30/2023 3:34 PM

PLOT BY : NICK ENGH

PLOT NAME :

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

WISDOT/CADDS SHEET 49

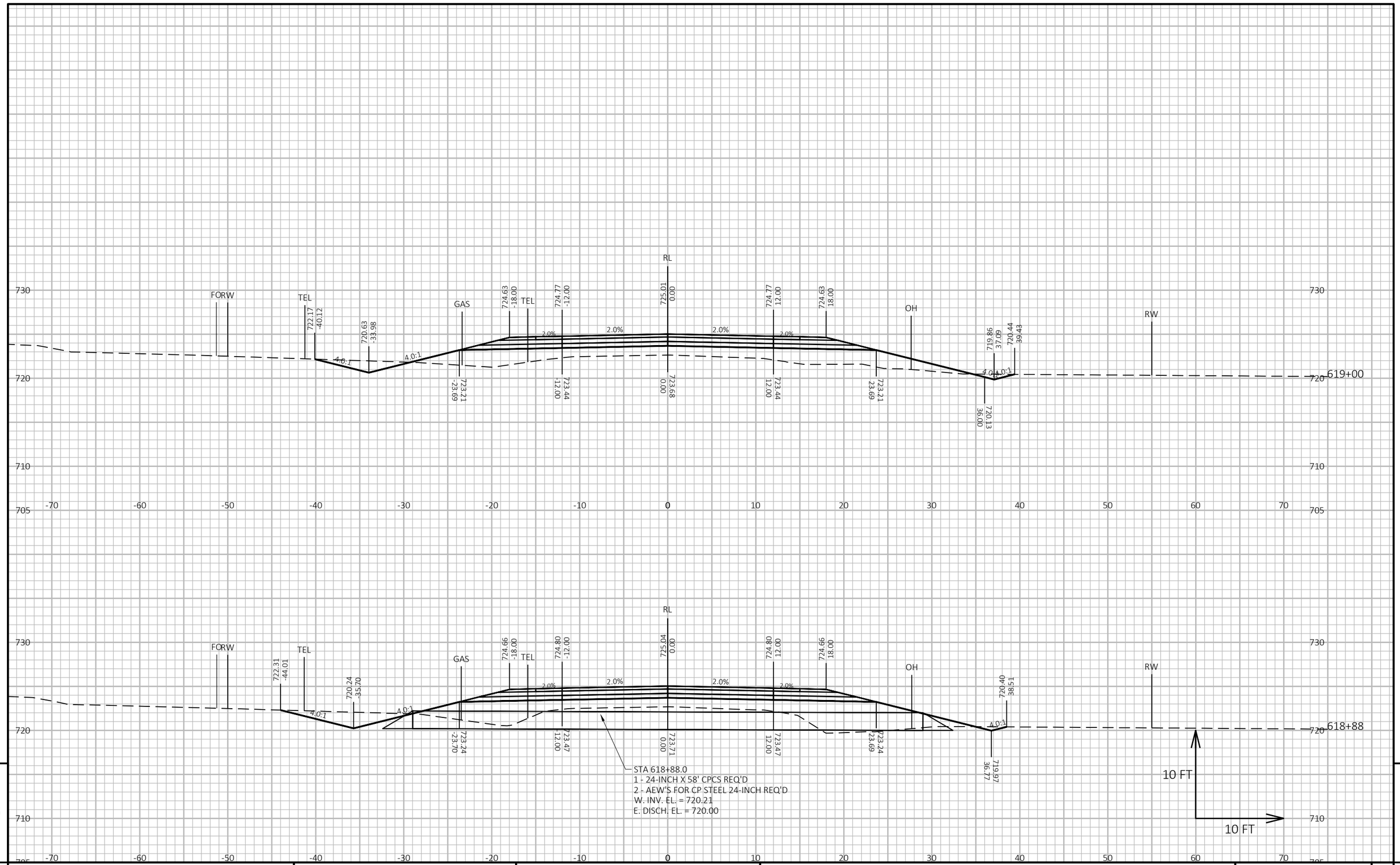



| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 208 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - (46)

PLOT DATE : 11/30/2023 3:35 PM PLOT BY : NICK ENGH PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49




9

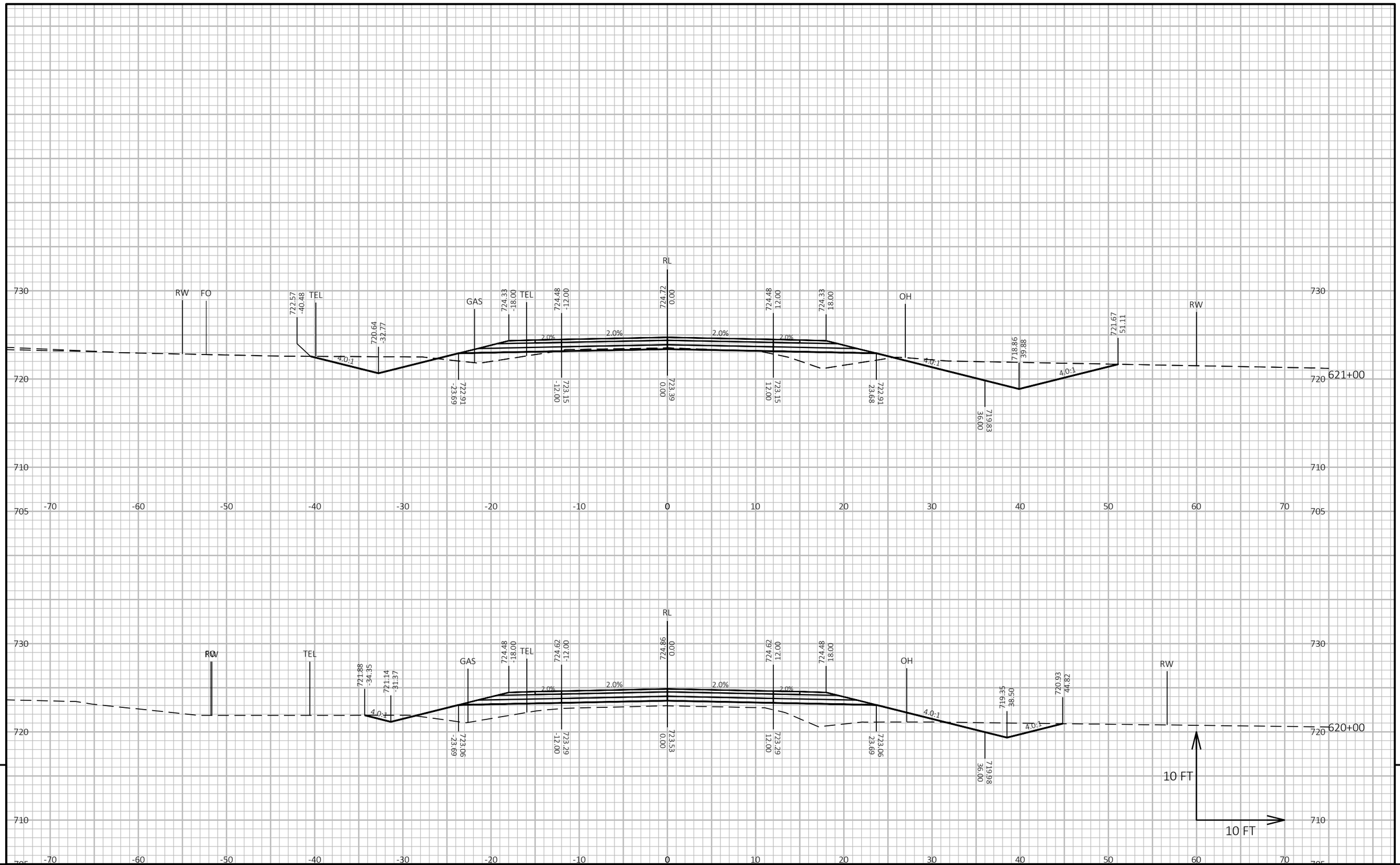
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| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 209 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - (47)

PLOT DATE : 11/30/2023 3:36 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

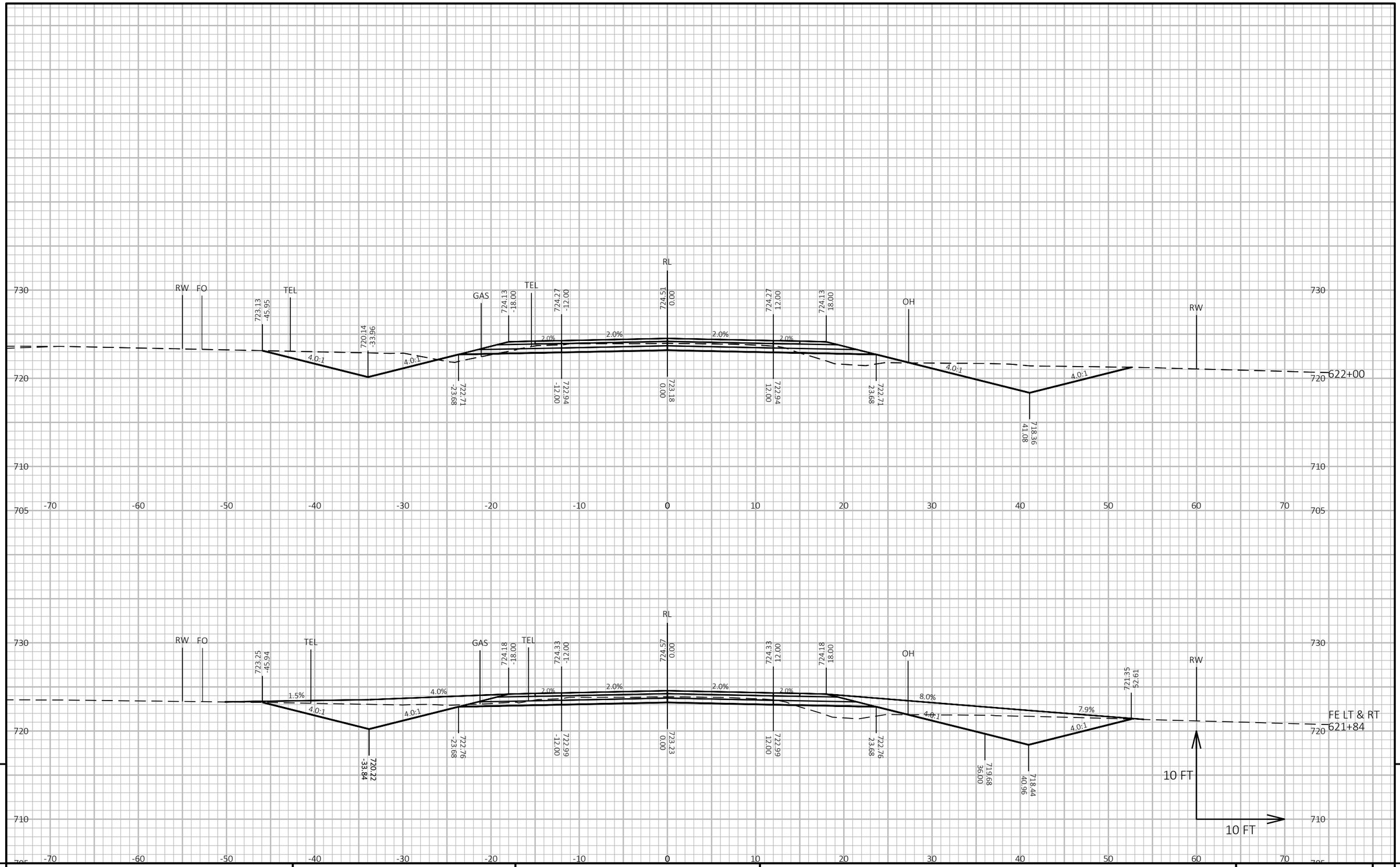



| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 210 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - (48)

PLOT DATE : 11/30/2023 3:36 PM PLOT BY : NICK ENGH PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49




9

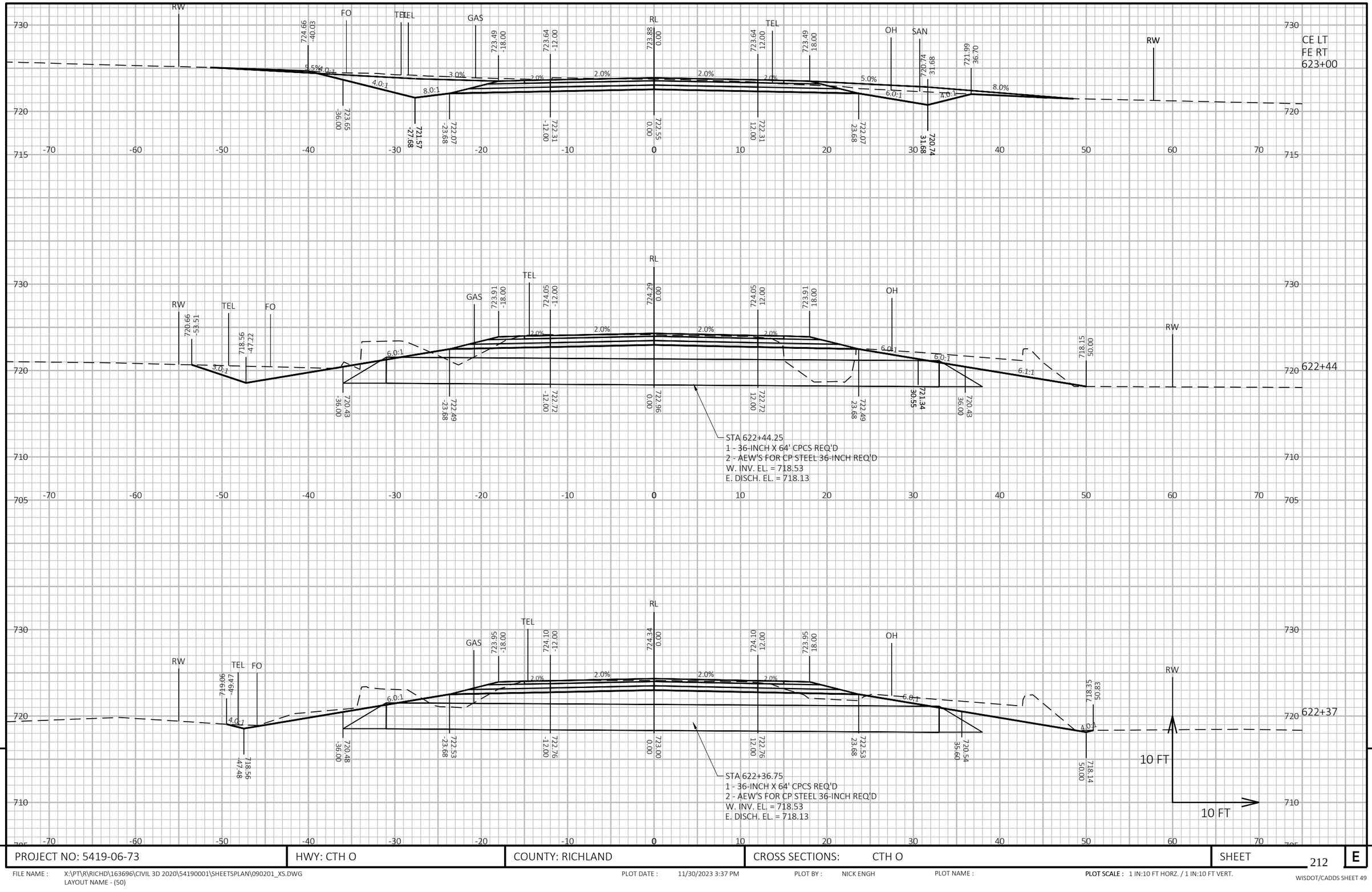
9

| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 211 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - (49)

PLOT DATE : 11/30/2023 3:37 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

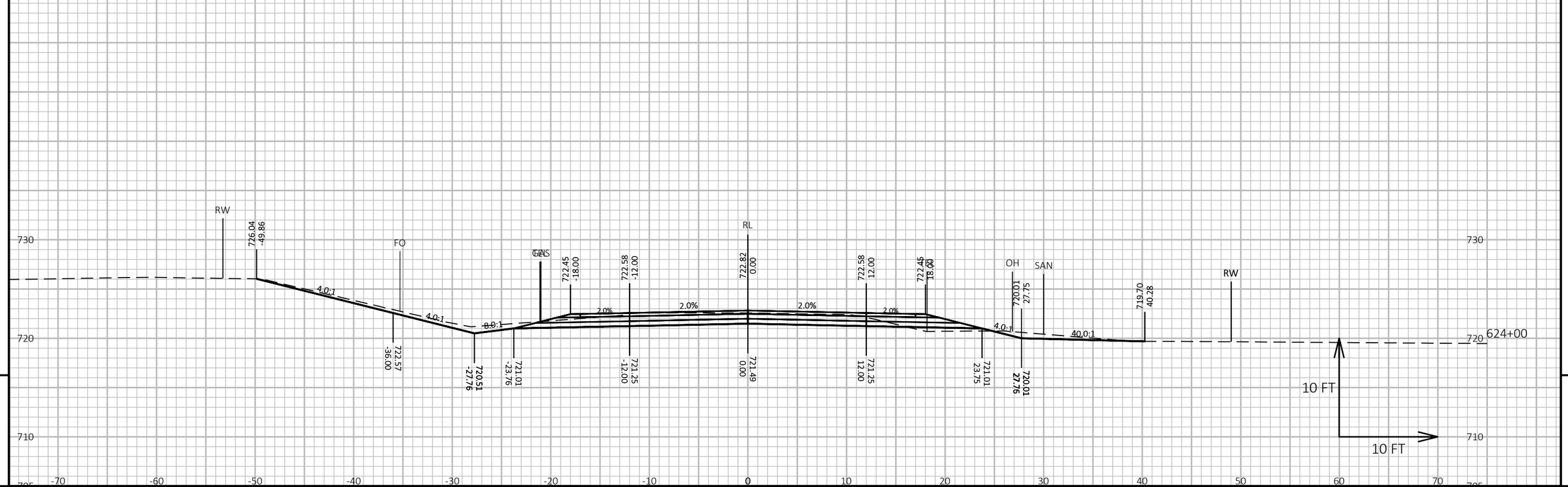



| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 212 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - (50)

PLOT DATE : 11/30/2023 3:37 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49




9

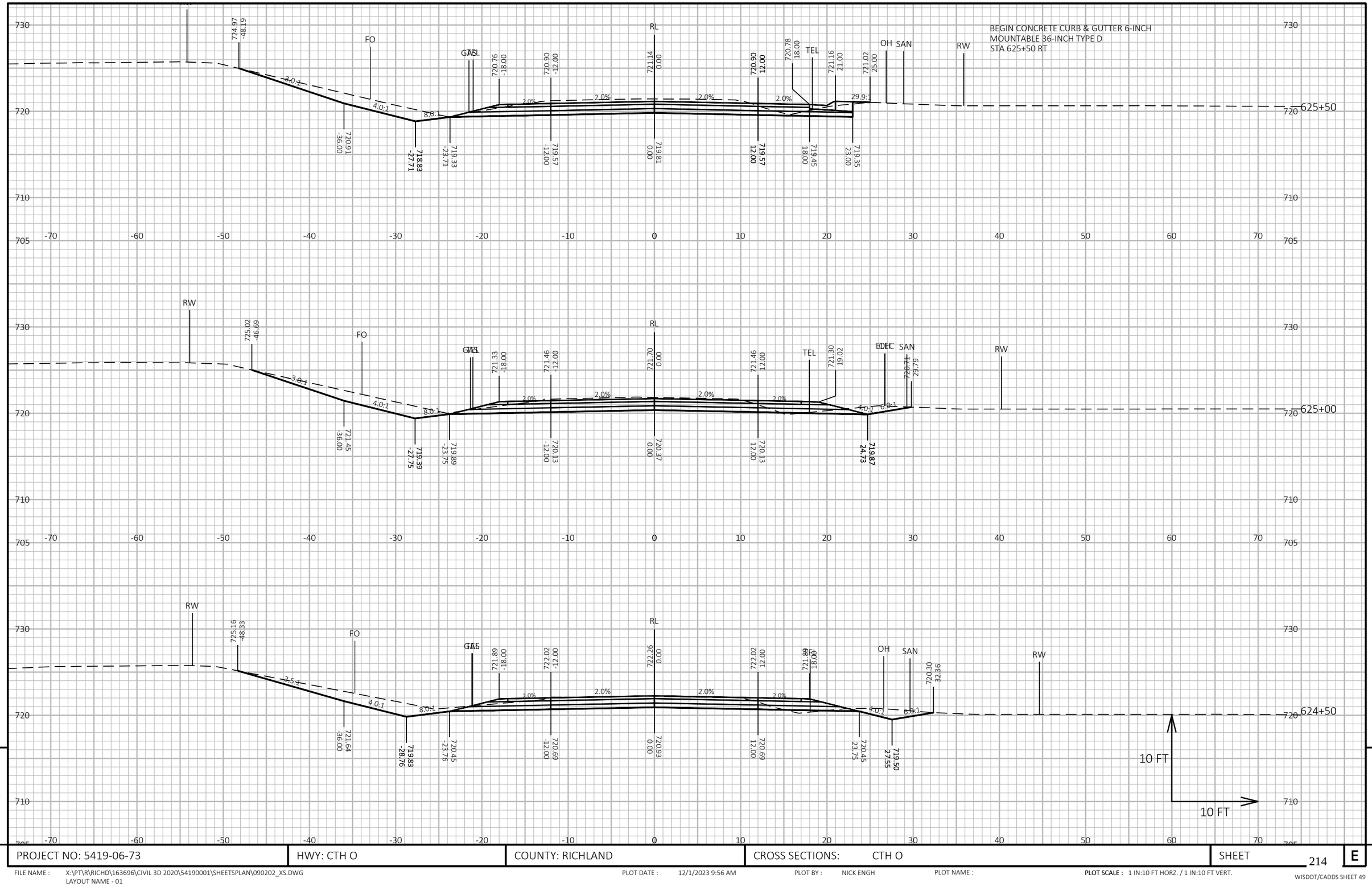
9

| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 213 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - (51)

PLOT DATE : 11/30/2023 3:37 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

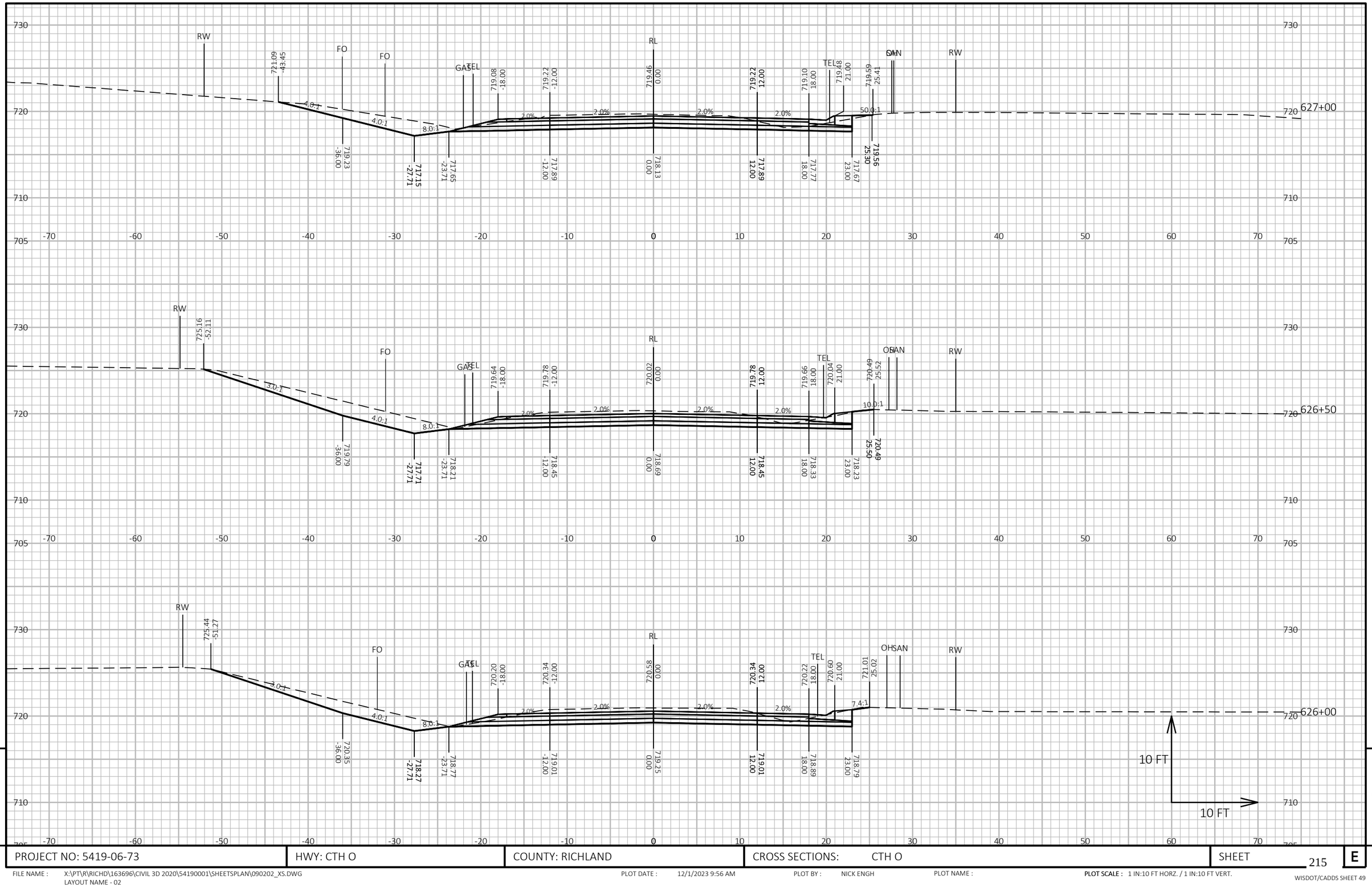



| | | | | |
|---|---|---|---|---|
| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 214 E |

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 01

PLOT DATE : 12/1/2023 9:56 AM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49




9

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| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 215 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 02

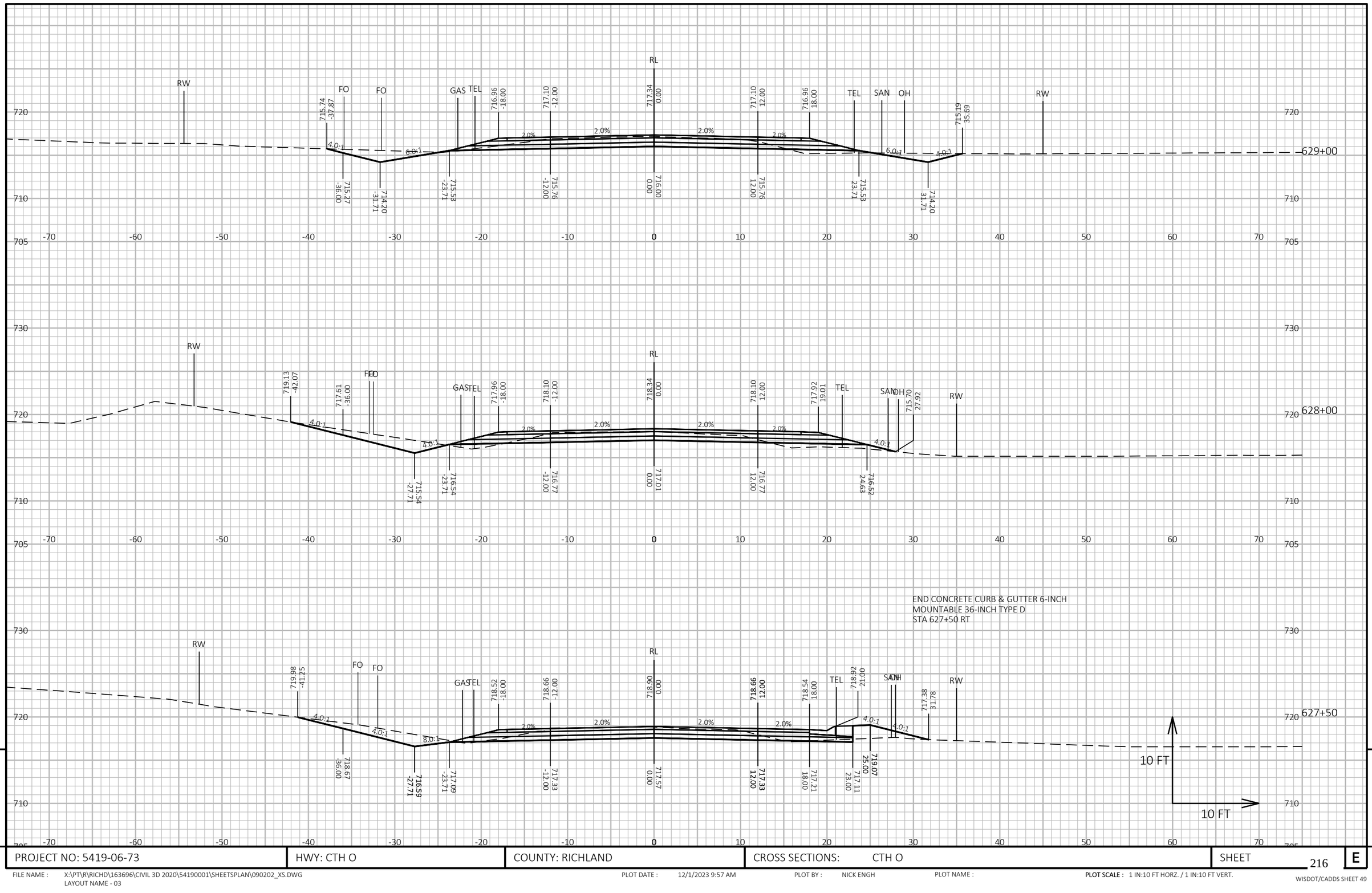
PLOT DATE : 12/1/2023 9:56 AM

PLOT BY : NICK ENGH

PLOT NAME :

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

WISDOT/CADDS SHEET 49

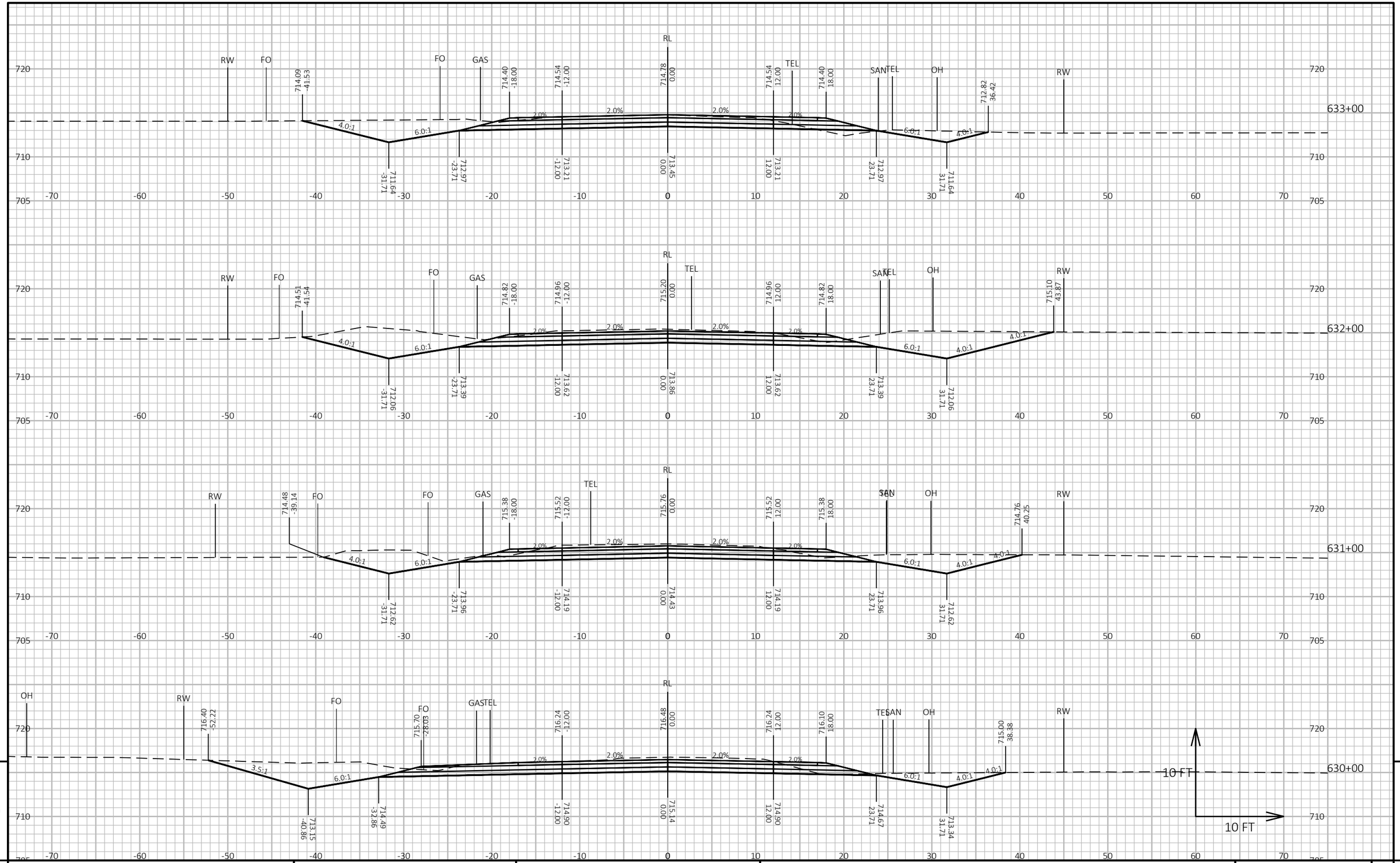



| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 216 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 03

PLOT DATE : 12/1/2023 9:57 AM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49




9

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| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 217 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 04

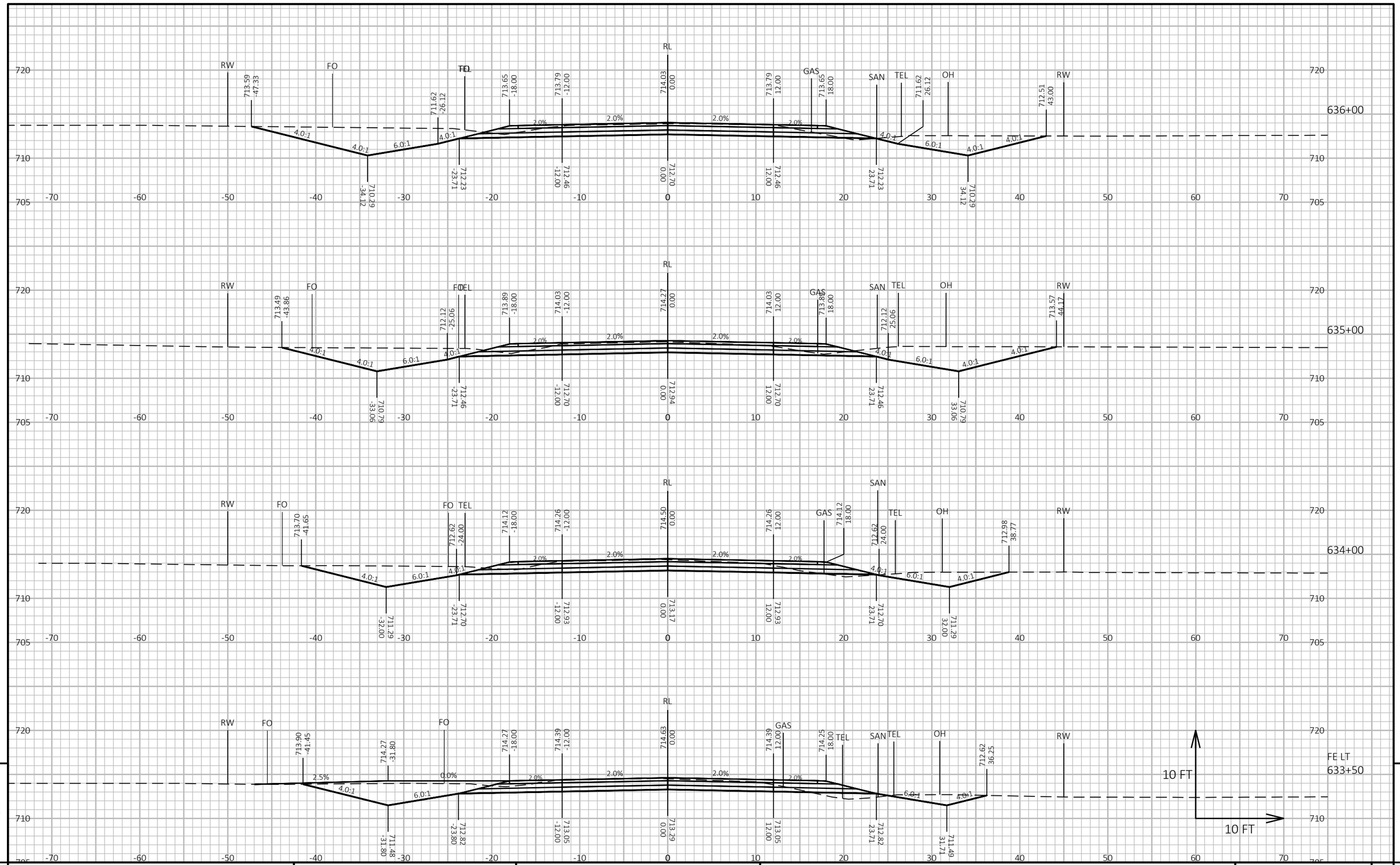
PLOT DATE : 12/1/2023 9:57 AM

PLOT BY : NICK ENGH

PLOT NAME :

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

WISDOT/CADDS SHEET 49




9

9

| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 218 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 05

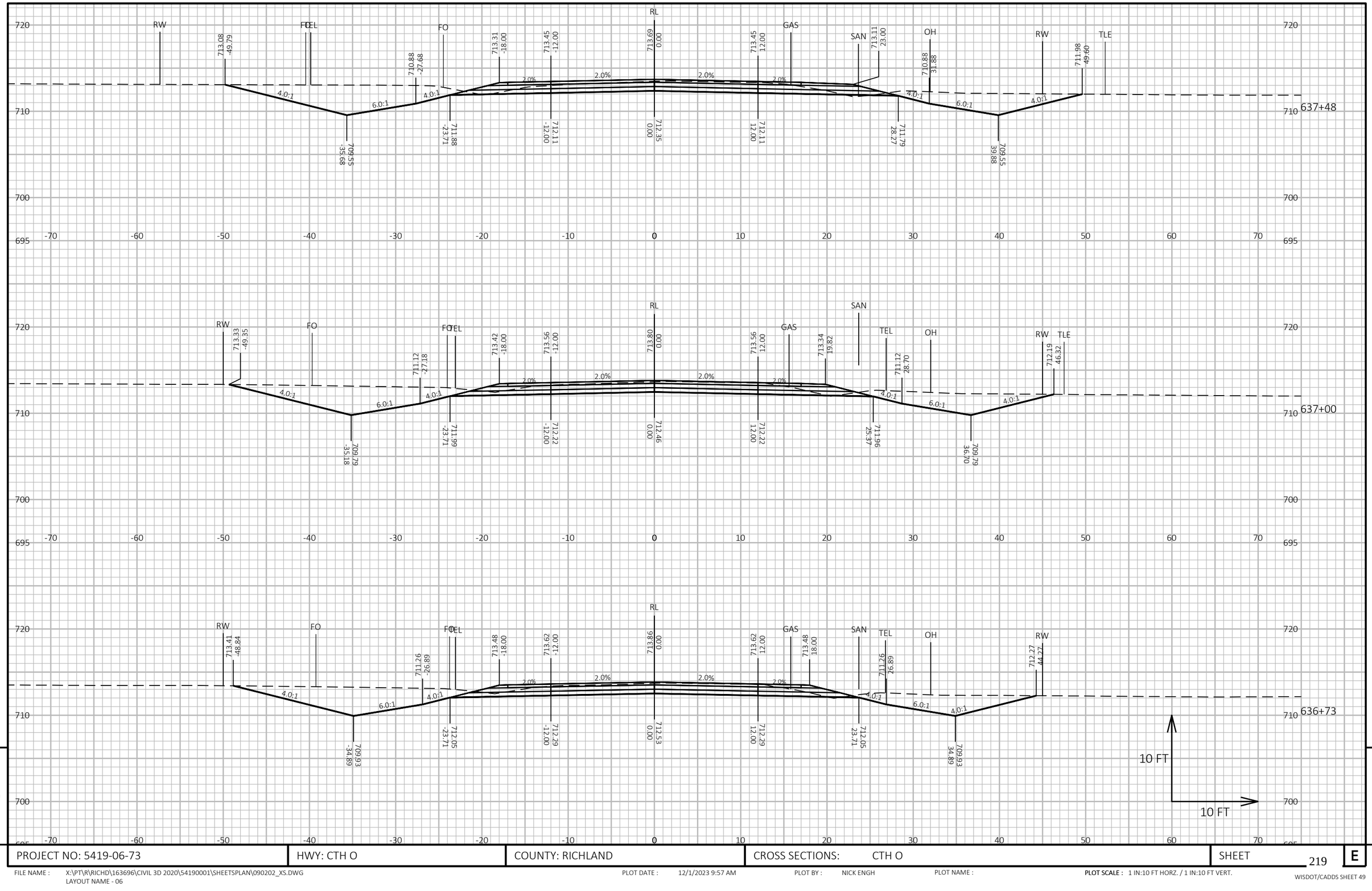
PLOT DATE : 12/1/2023 9:57 AM

PLOT BY : NICK ENGH

PLOT NAME :

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

WISDOT/CADDS SHEET 49




9

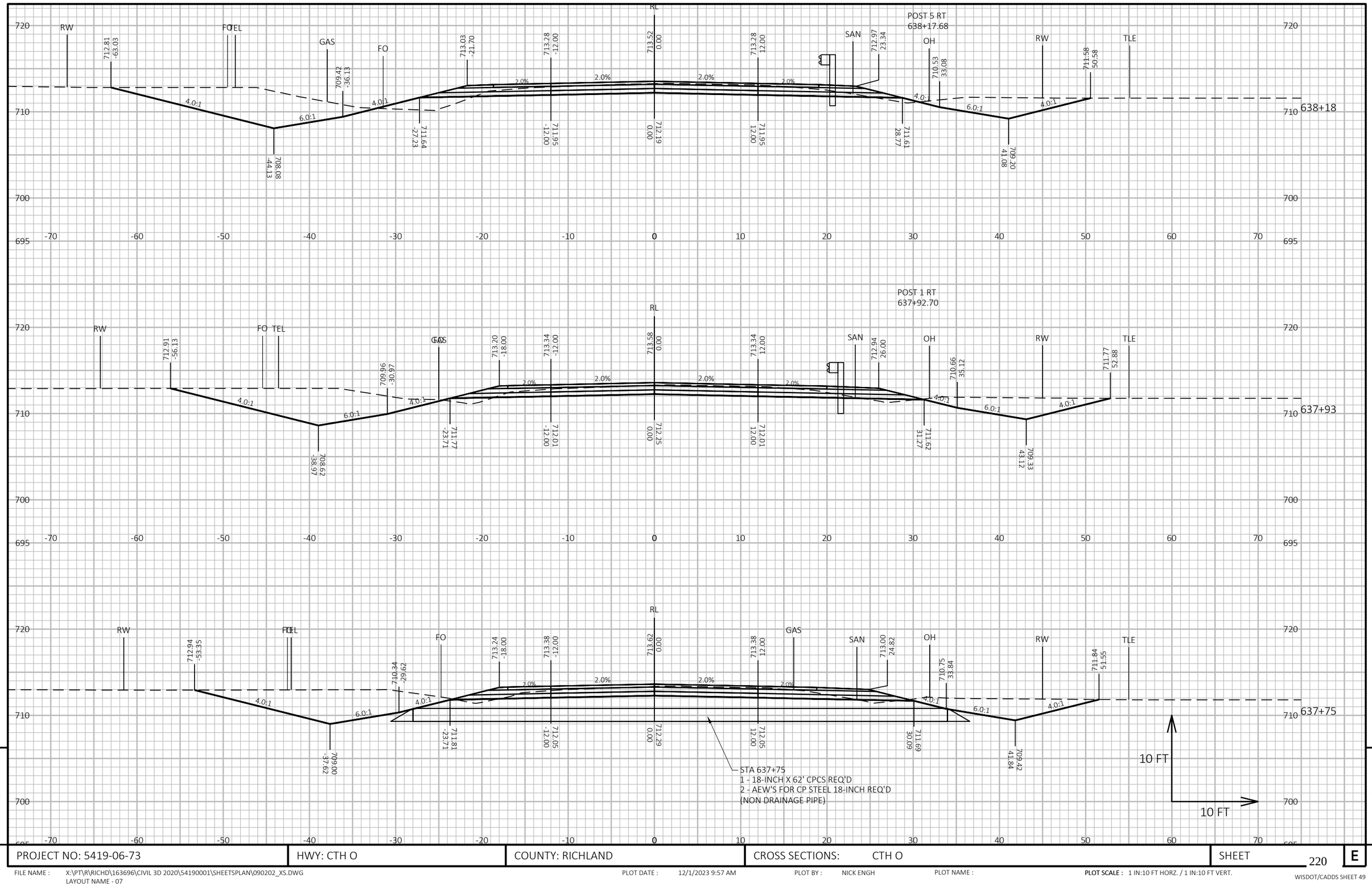
9

| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 219 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 06

PLOT DATE : 12/1/2023 9:57 AM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

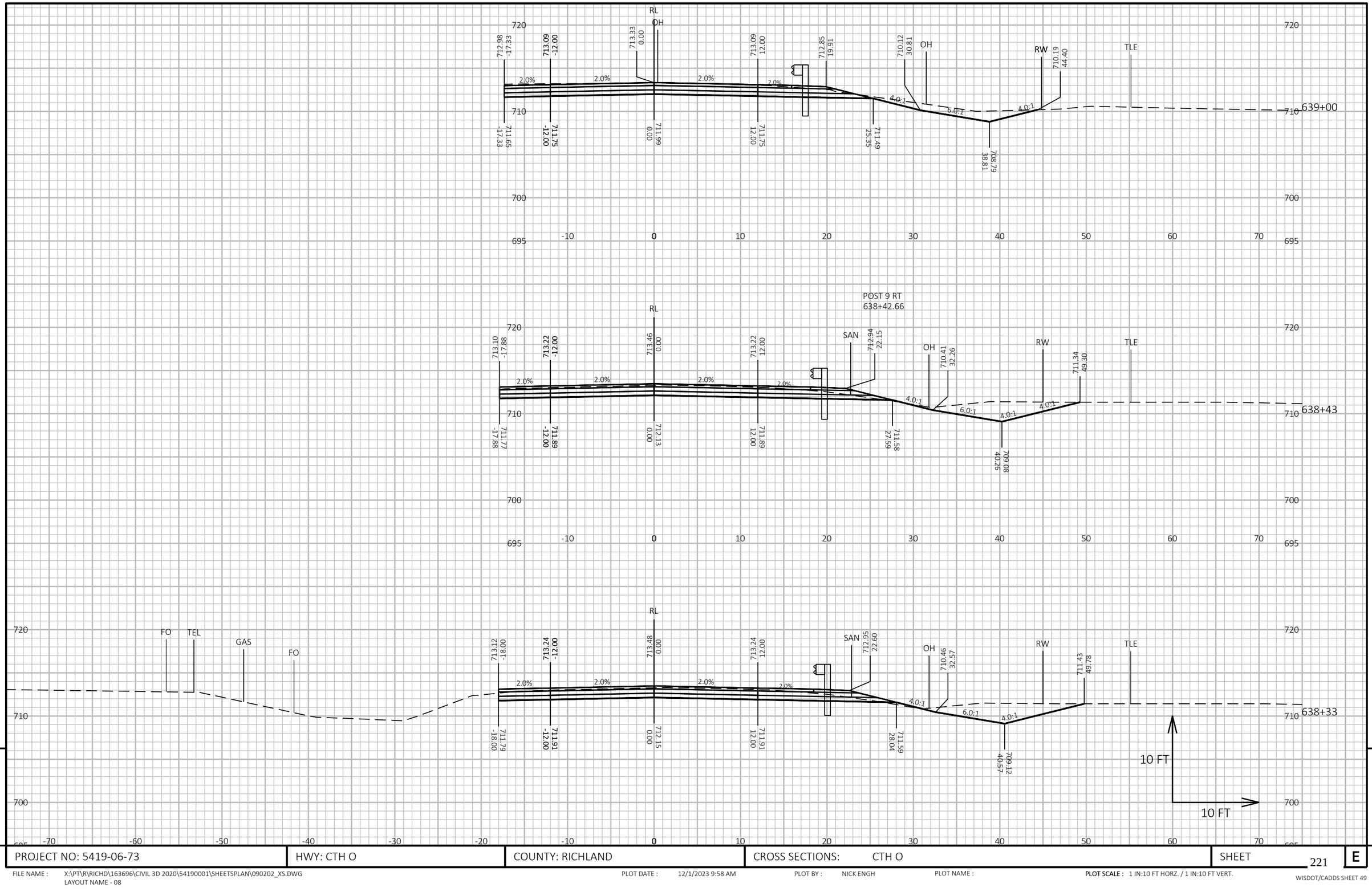



| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 220 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 07

PLOT DATE : 12/1/2023 9:57 AM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



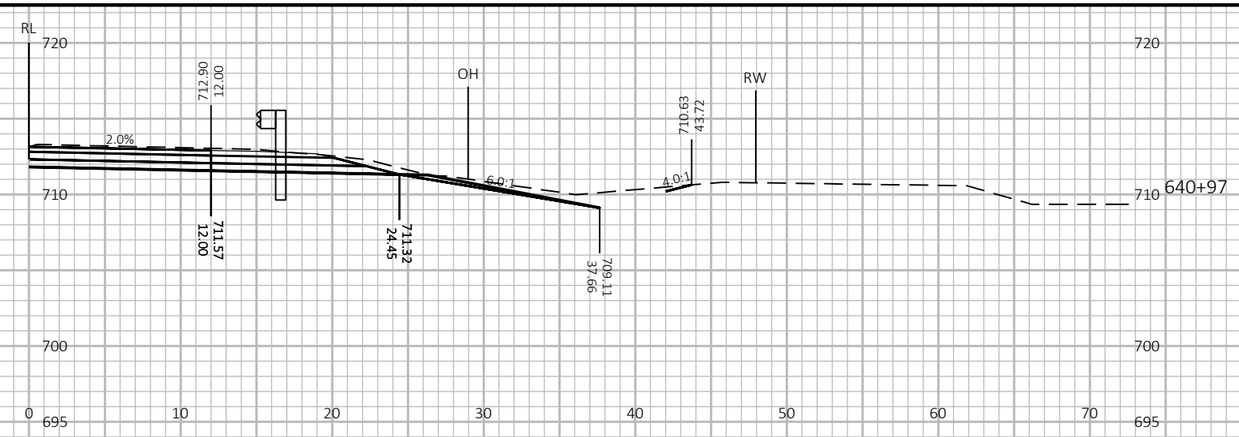

9

9

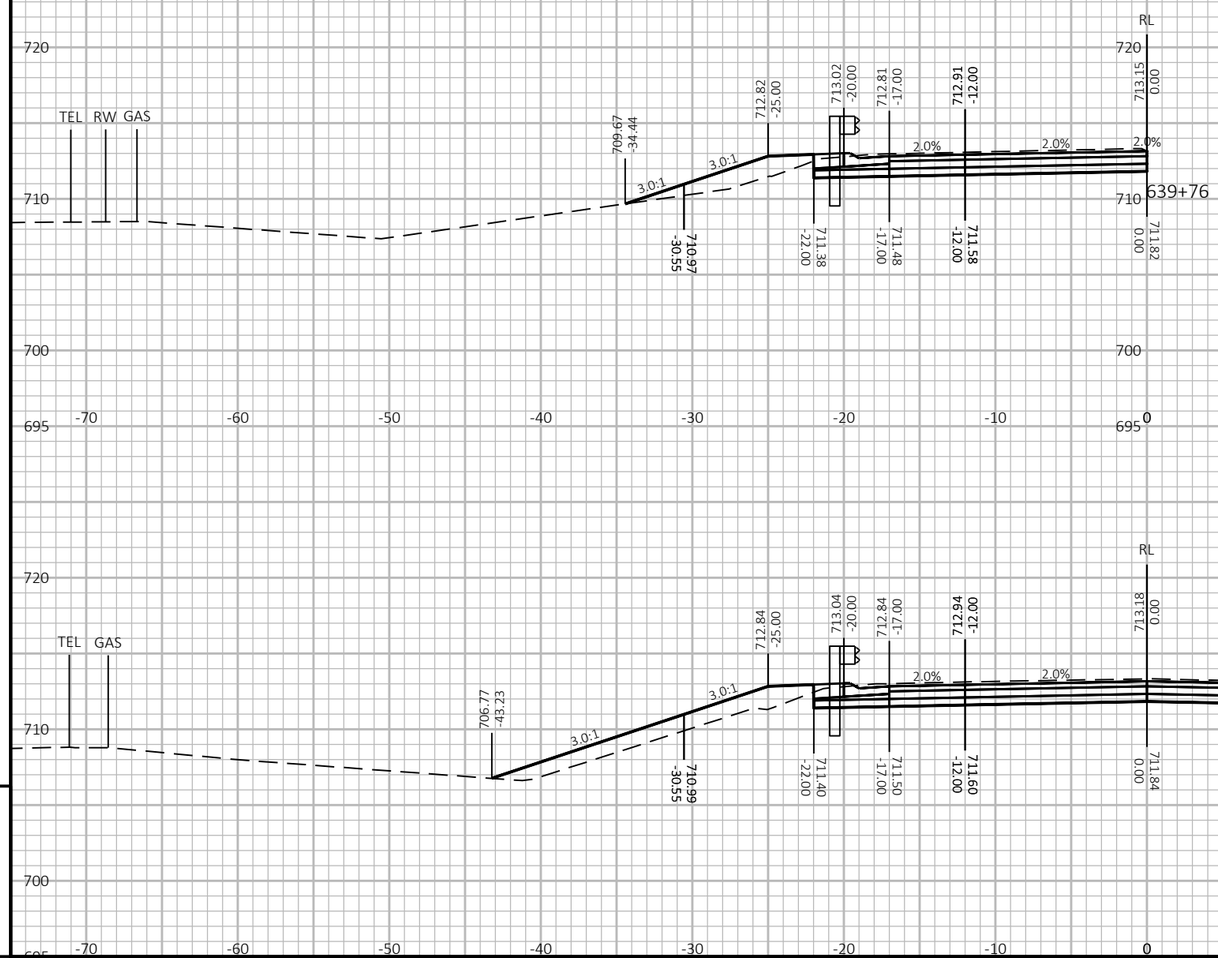
| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 221 | E |
|---|---|---|---|---|---|

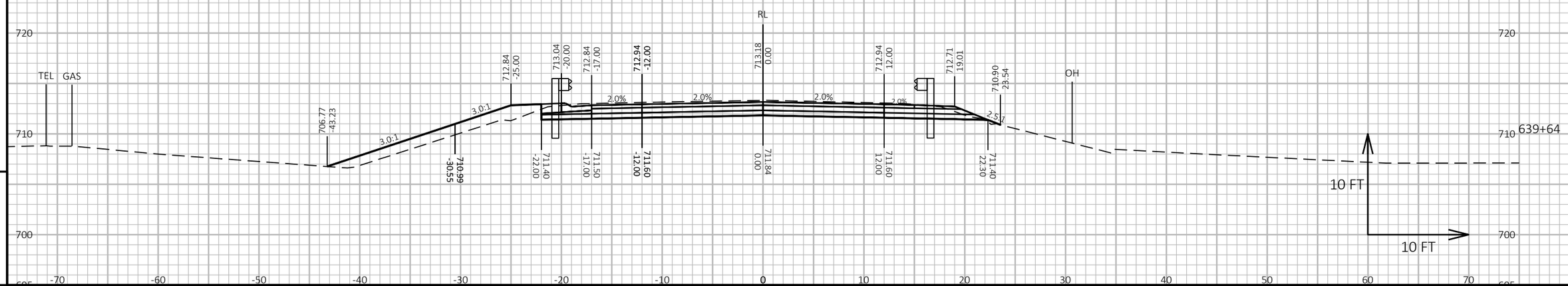
FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 08

PLOT DATE : 12/1/2023 9:58 AM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.




EXCEPTION TO NET CENTERLINE LENGTH
STA 639+76.00 TO STA 640+97.40
STR B-52-137




9

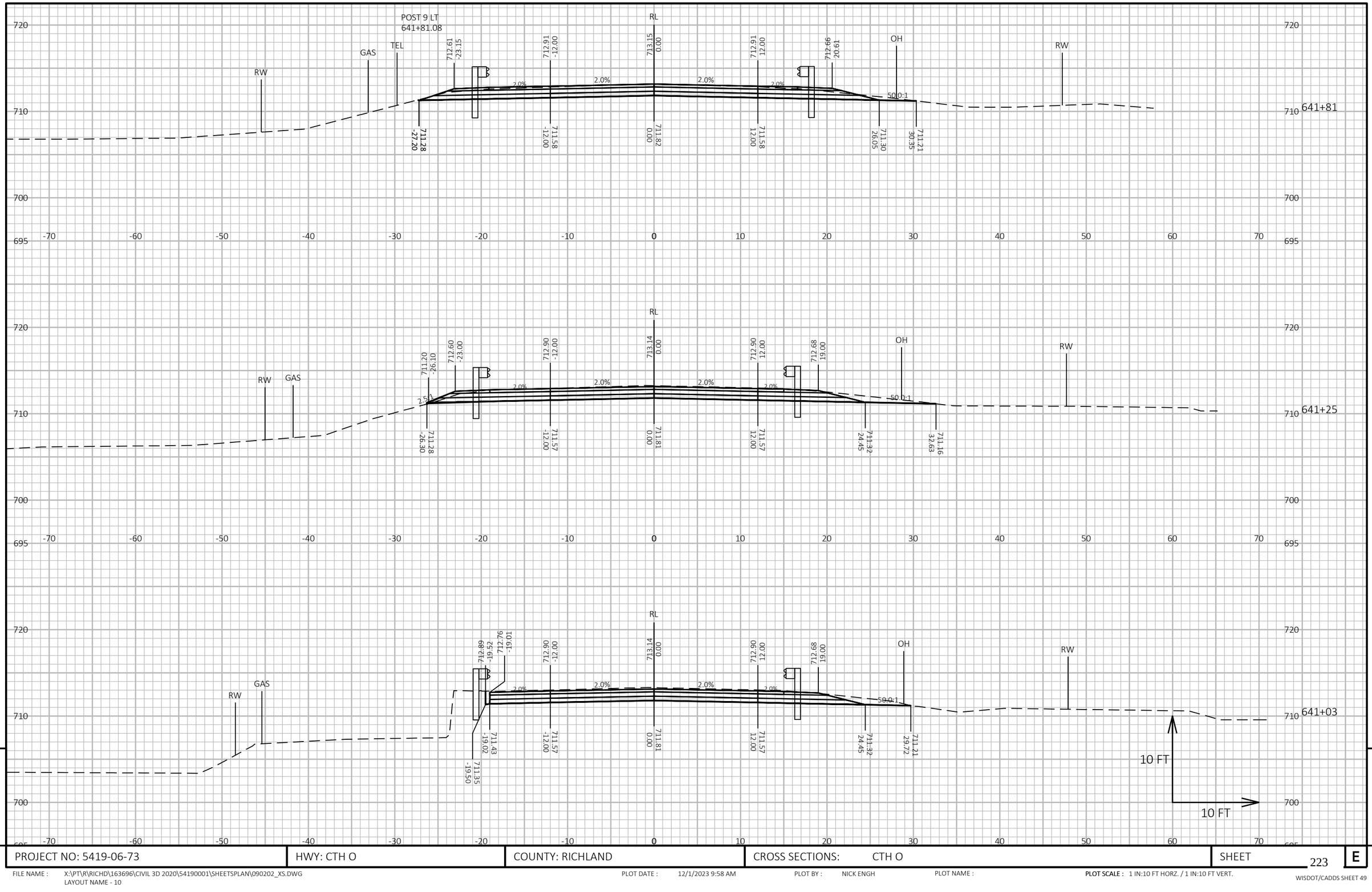
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| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 222 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 09

PLOT DATE : 12/1/2023 9:58 AM PLOT BY : NICK ENGH PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



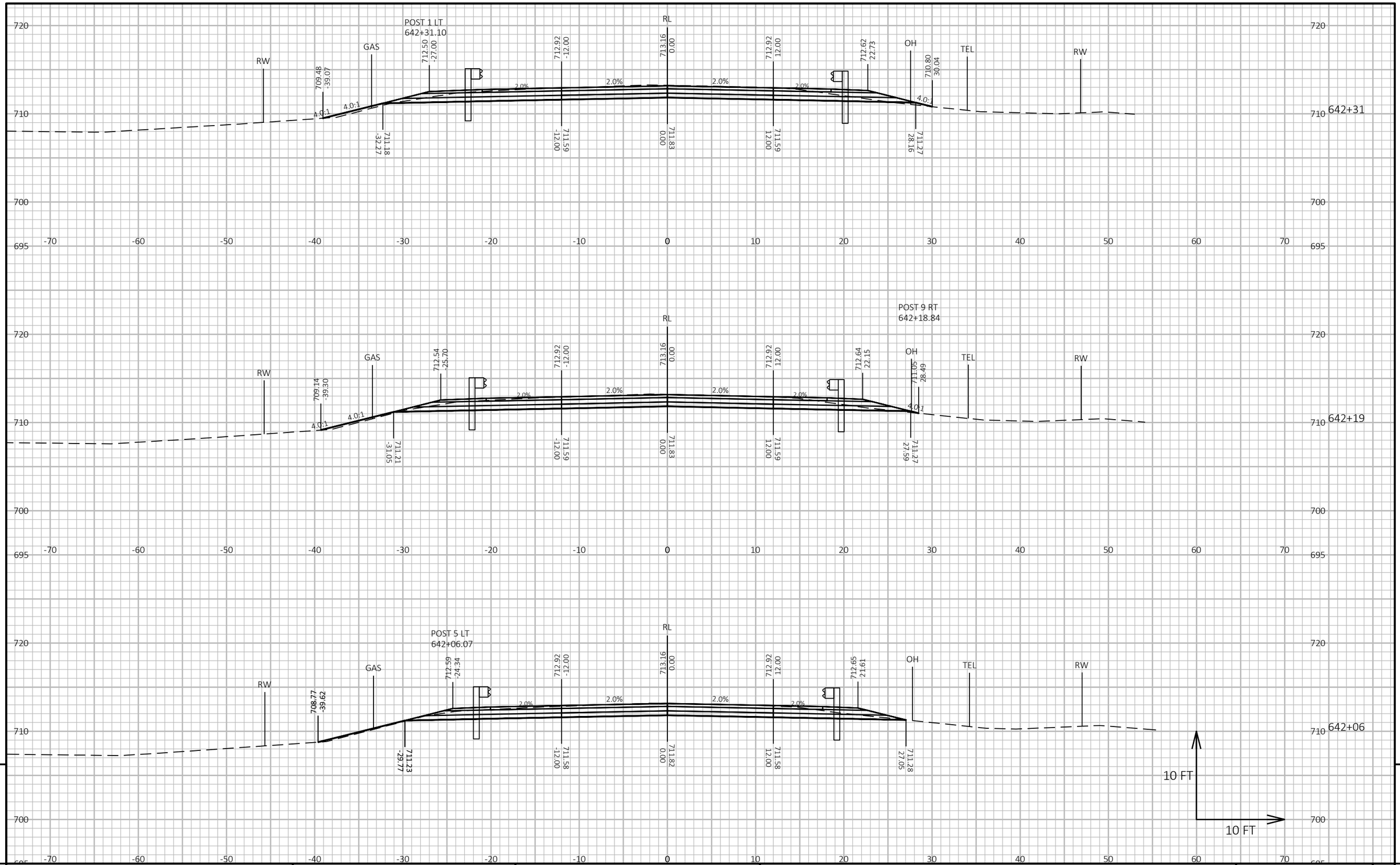

| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 223 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 10

PLOT DATE : 12/1/2023 9:58 AM PLOT BY : NICK ENGH PLOT NAME :

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

WISDOT/CADDS SHEET 49




9

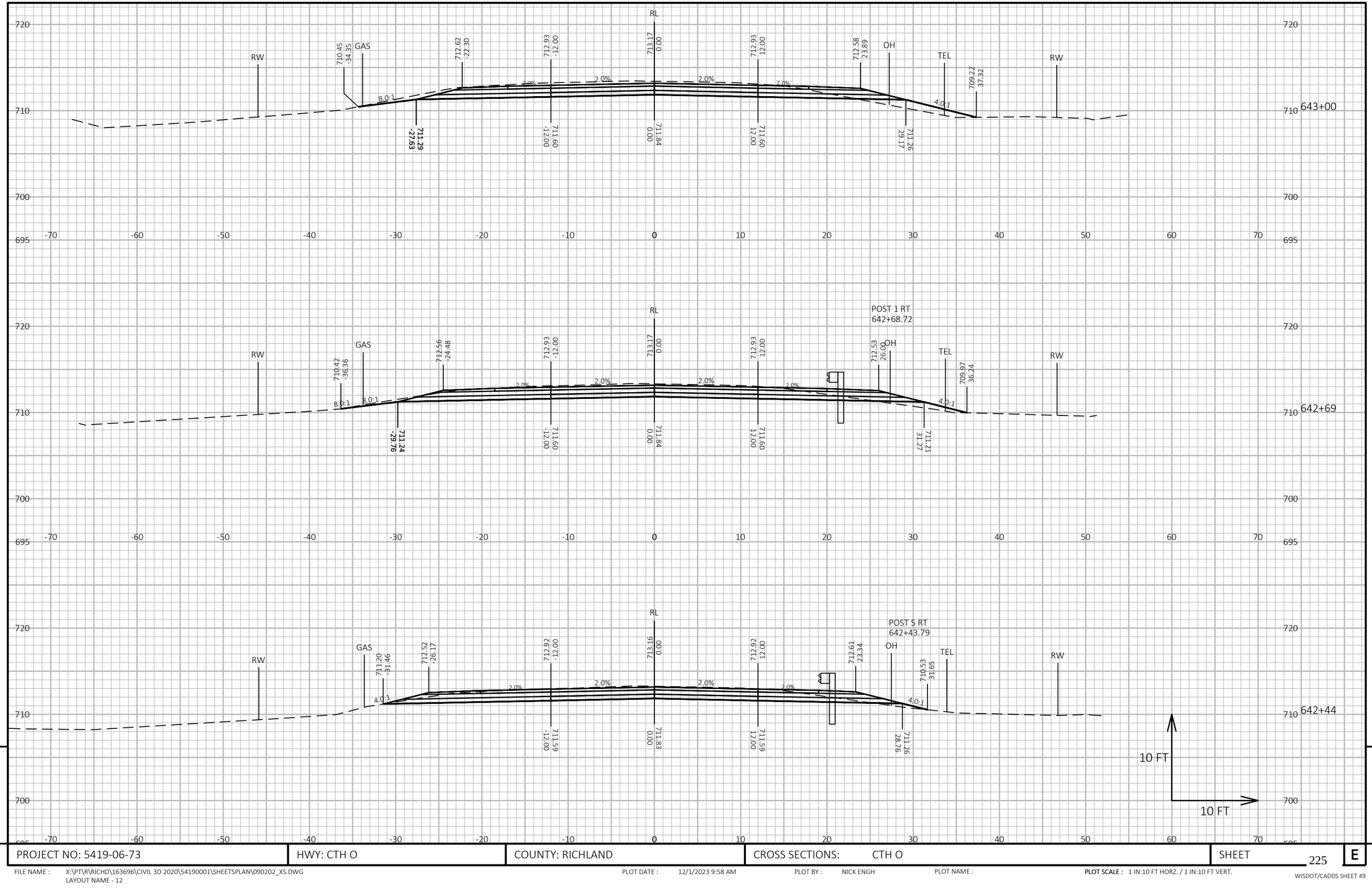
9

| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 224 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 11

PLOT DATE : 12/1/2023 9:58 AM PLOT BY : NICK ENGH PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

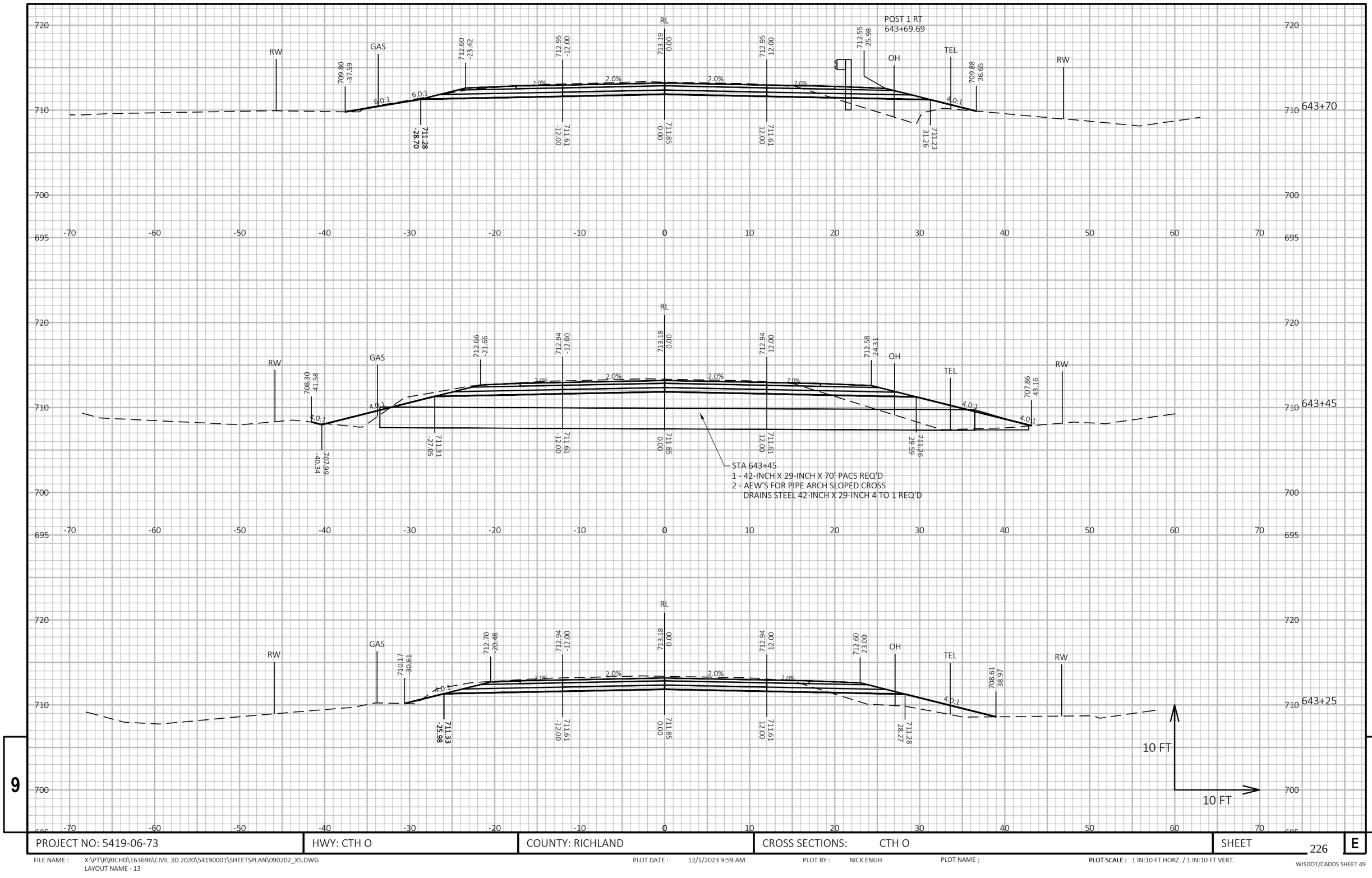



| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 225 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 12

PLOT DATE : 12/1/2023 9:58 AM PLOT BY : NICK ENGH PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49




9

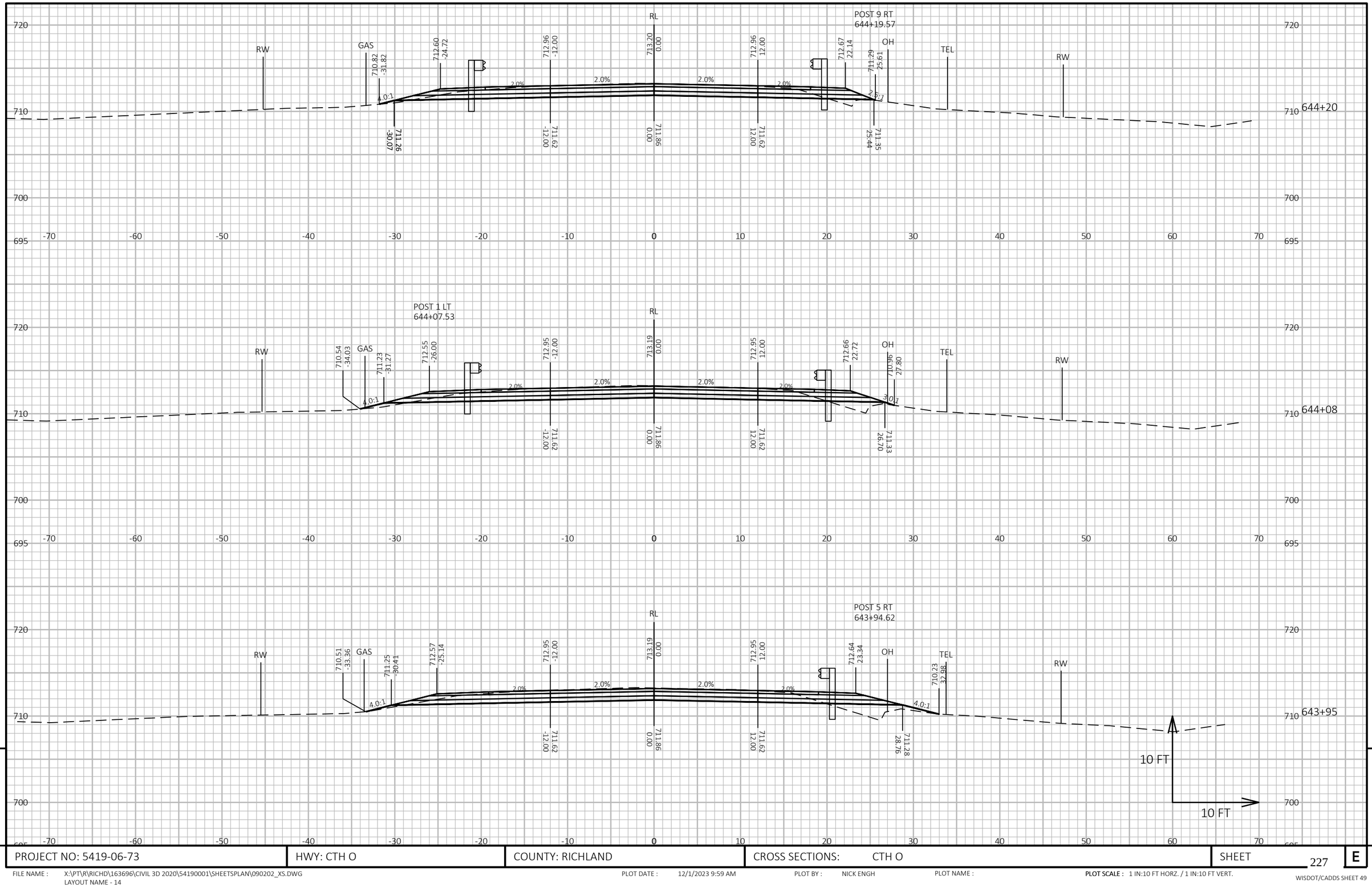
9

| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 226 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 13

PLOT DATE : 12/1/2023 9:59 AM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49




9

9

| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 227 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 14

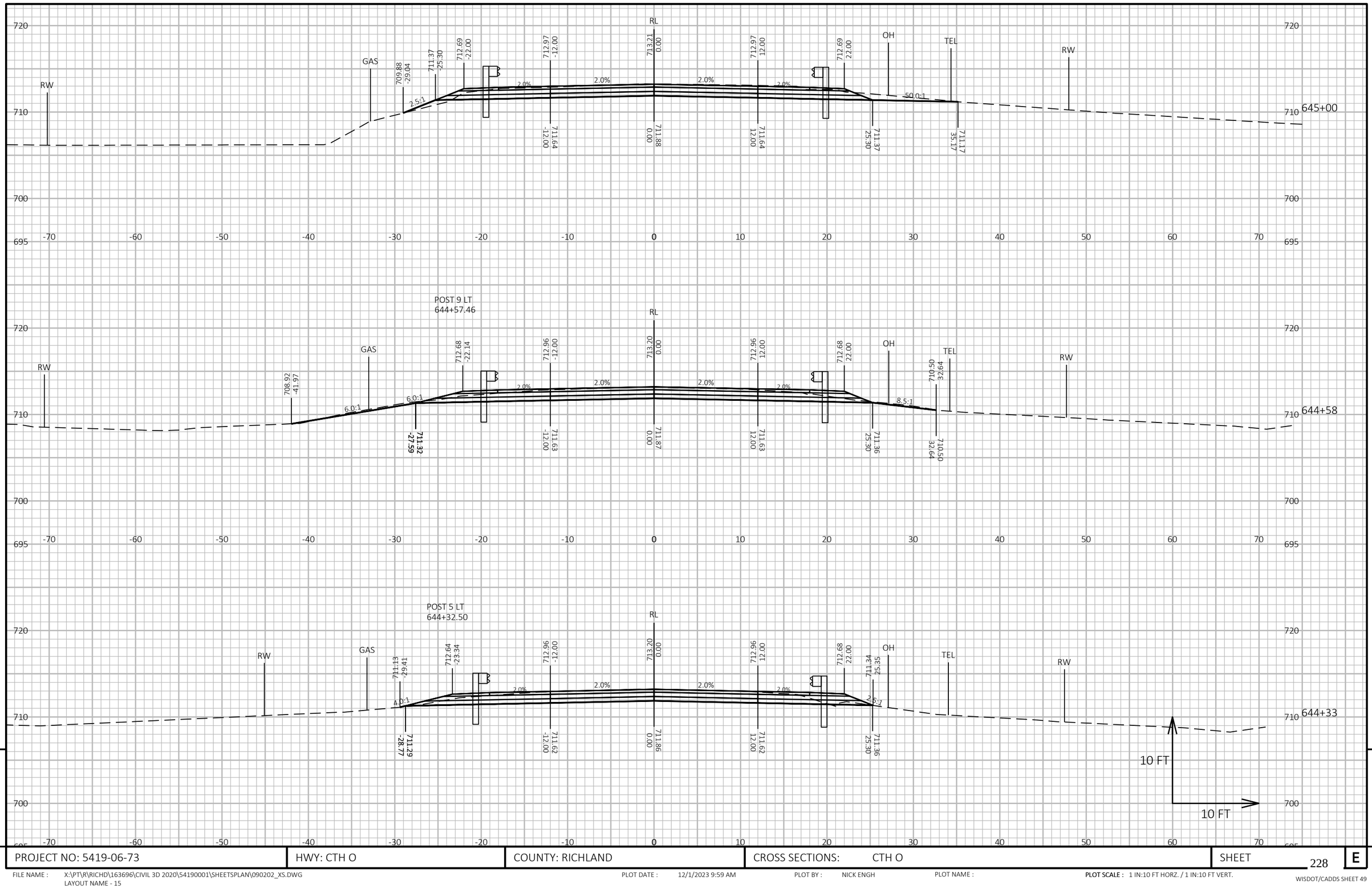
PLOT DATE : 12/1/2023 9:59 AM

PLOT BY : NICK ENGH

PLOT NAME :

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

WISDOT/CADDS SHEET 49




9

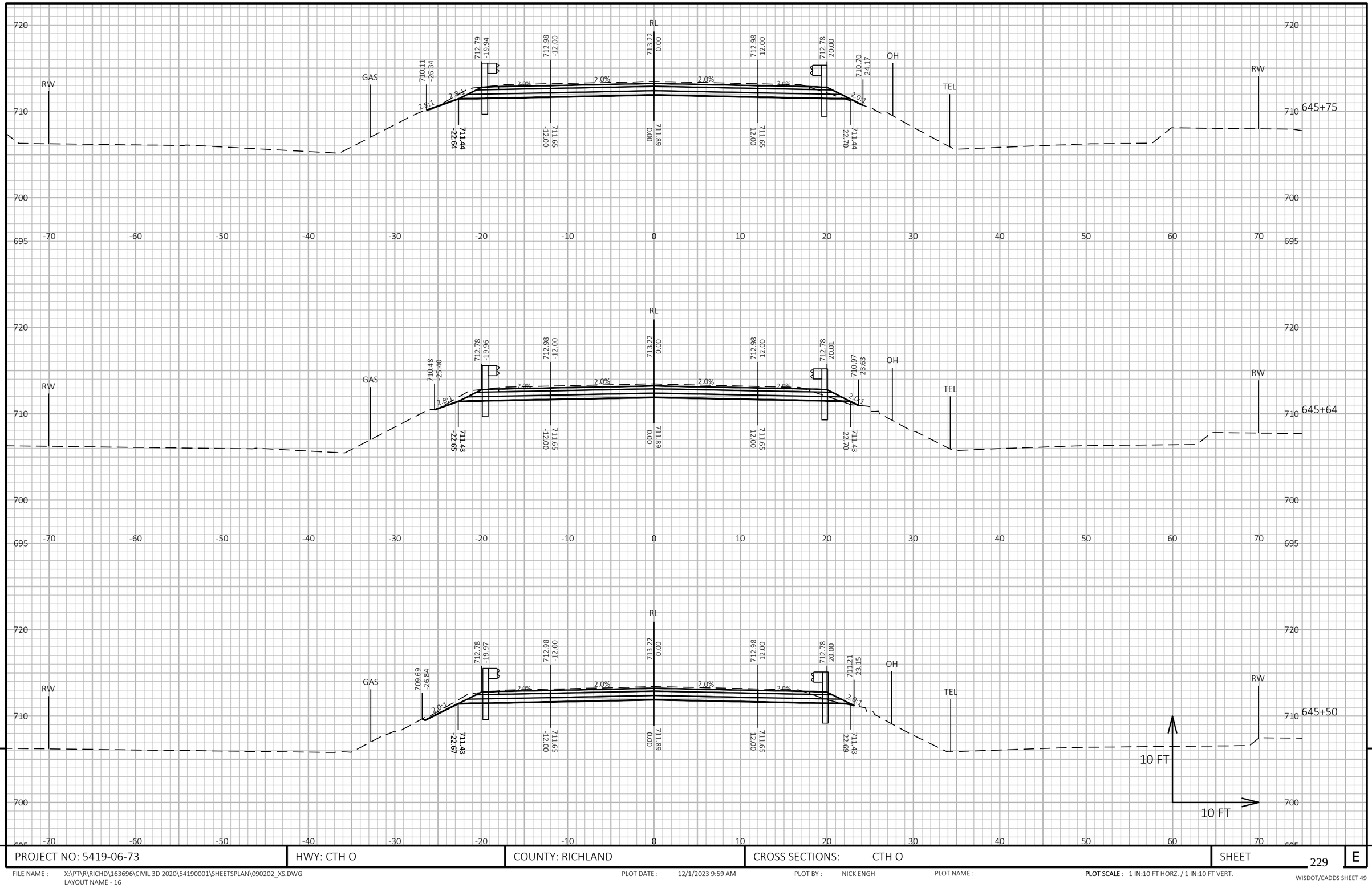
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| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 228 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 15

PLOT DATE : 12/1/2023 9:59 AM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

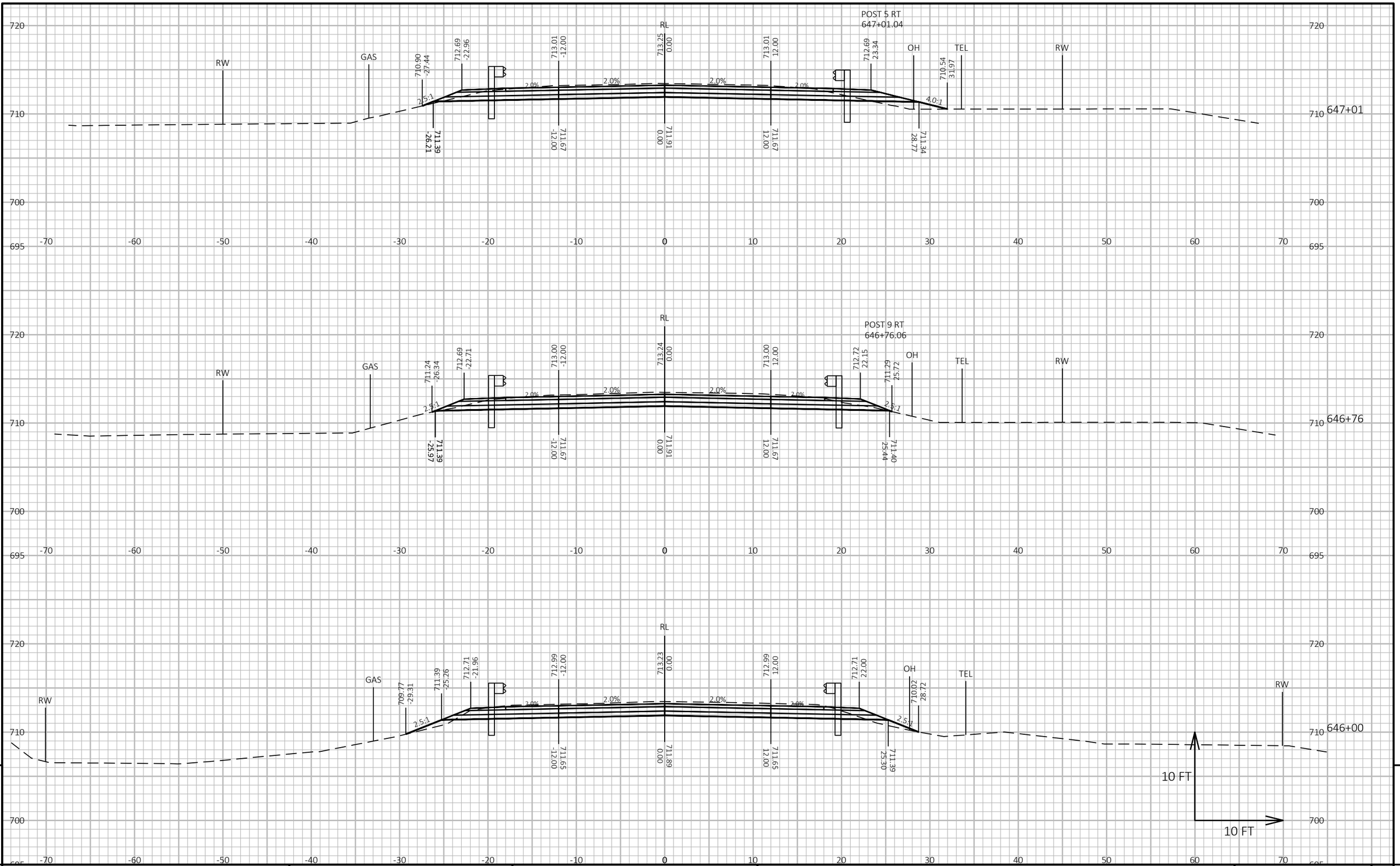



| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 229 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 16

PLOT DATE : 12/1/2023 9:59 AM PLOT BY : NICK ENGH PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49




9

9

| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 230 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 17

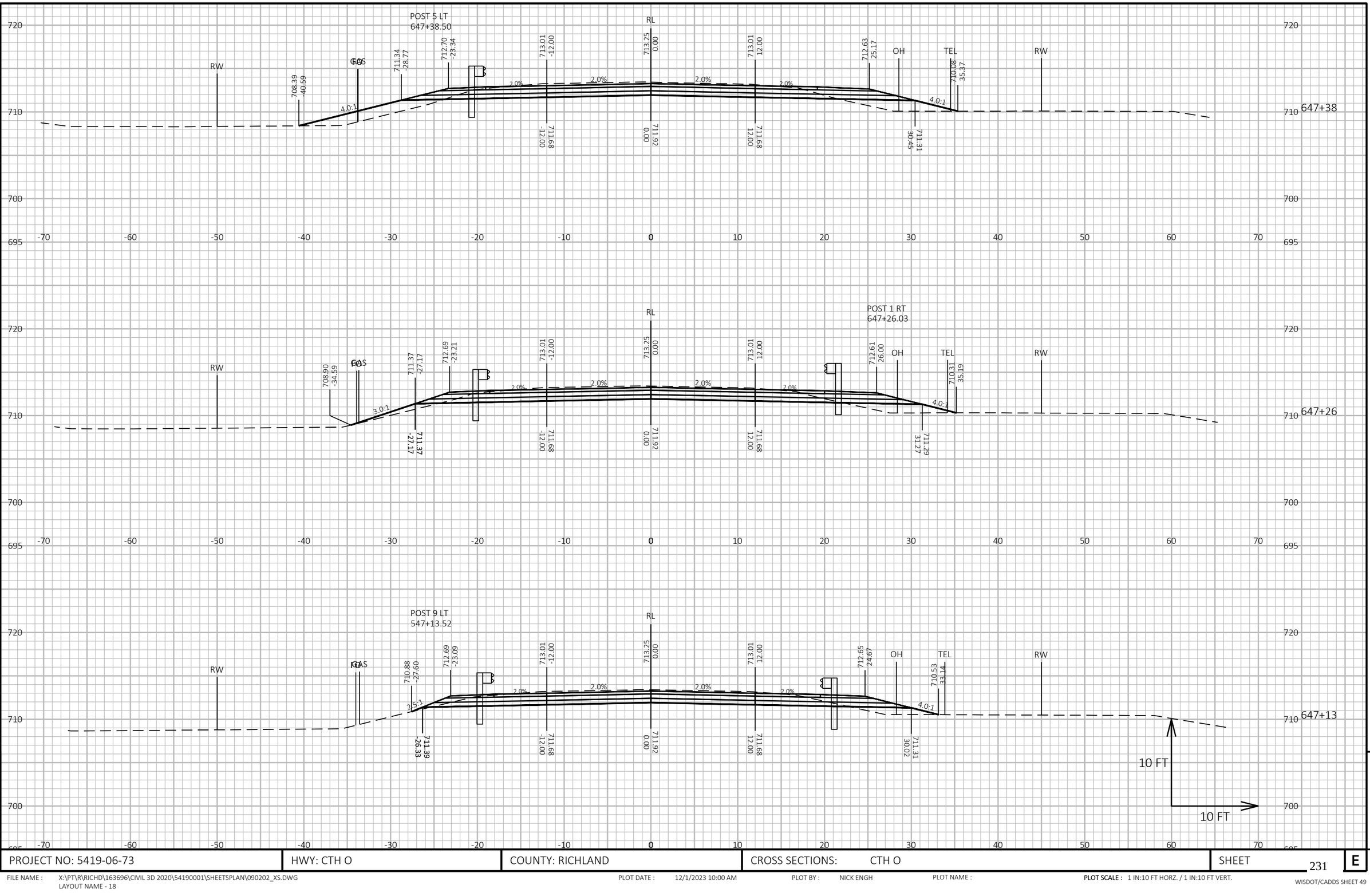
PLOT DATE : 12/1/2023 9:59 AM

PLOT BY : NICK ENGH

PLOT NAME :

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

WISDOT/CADDS SHEET 49




9

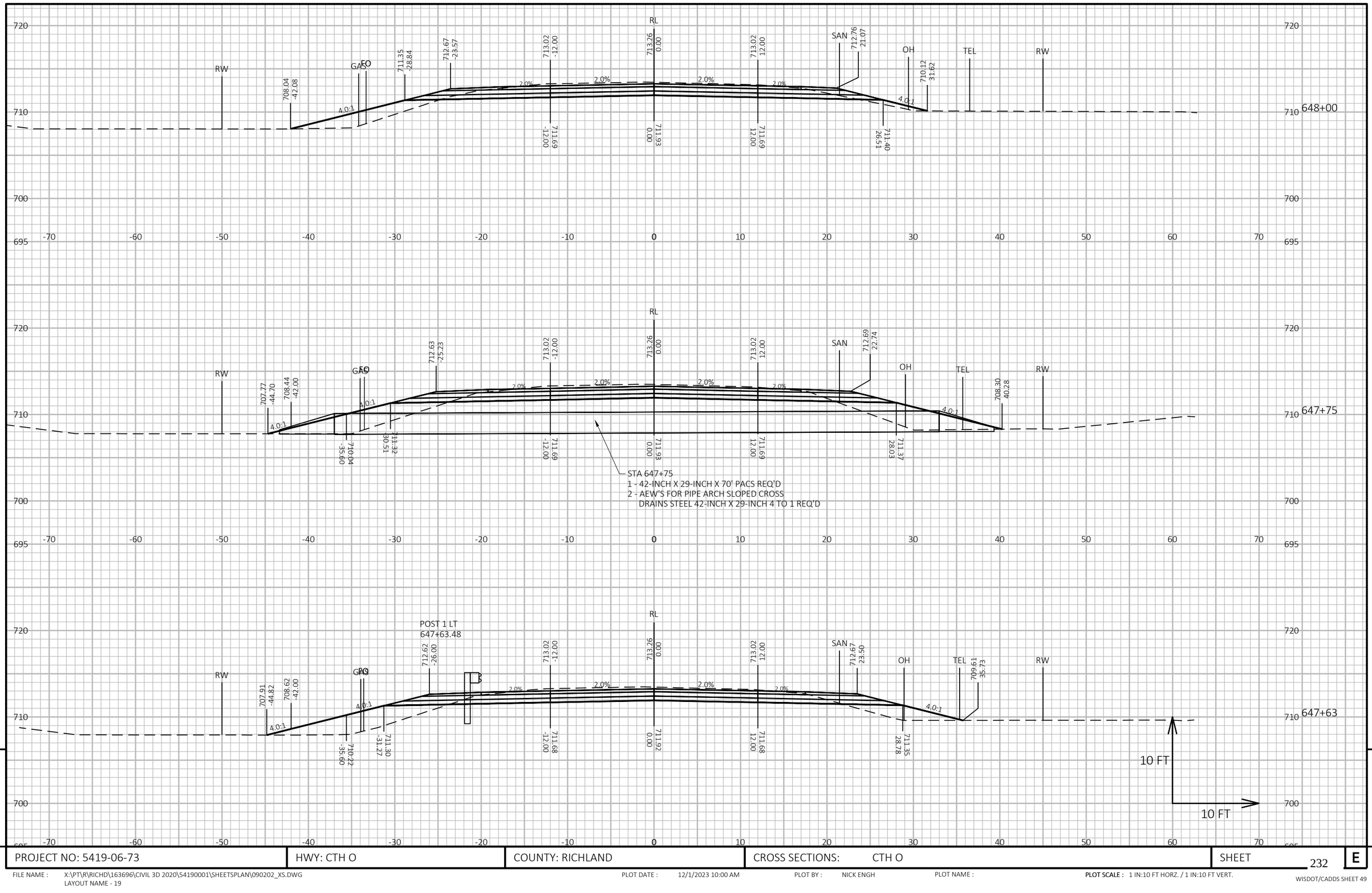
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| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 231 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 18

PLOT DATE : 12/1/2023 10:00 AM PLOT BY : NICK ENGH PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49




9

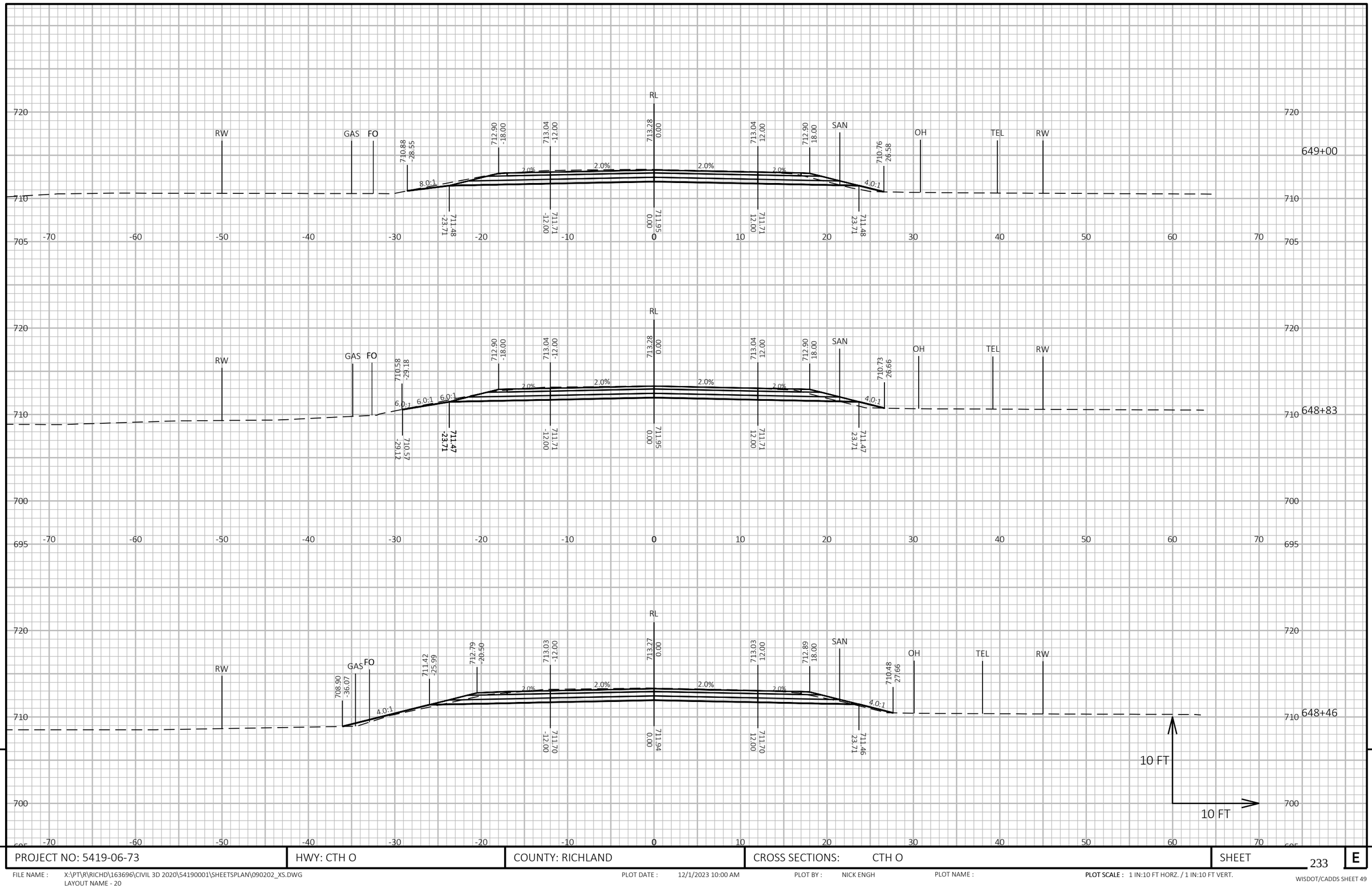
9

| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 232 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 19

PLOT DATE : 12/1/2023 10:00 AM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49




9

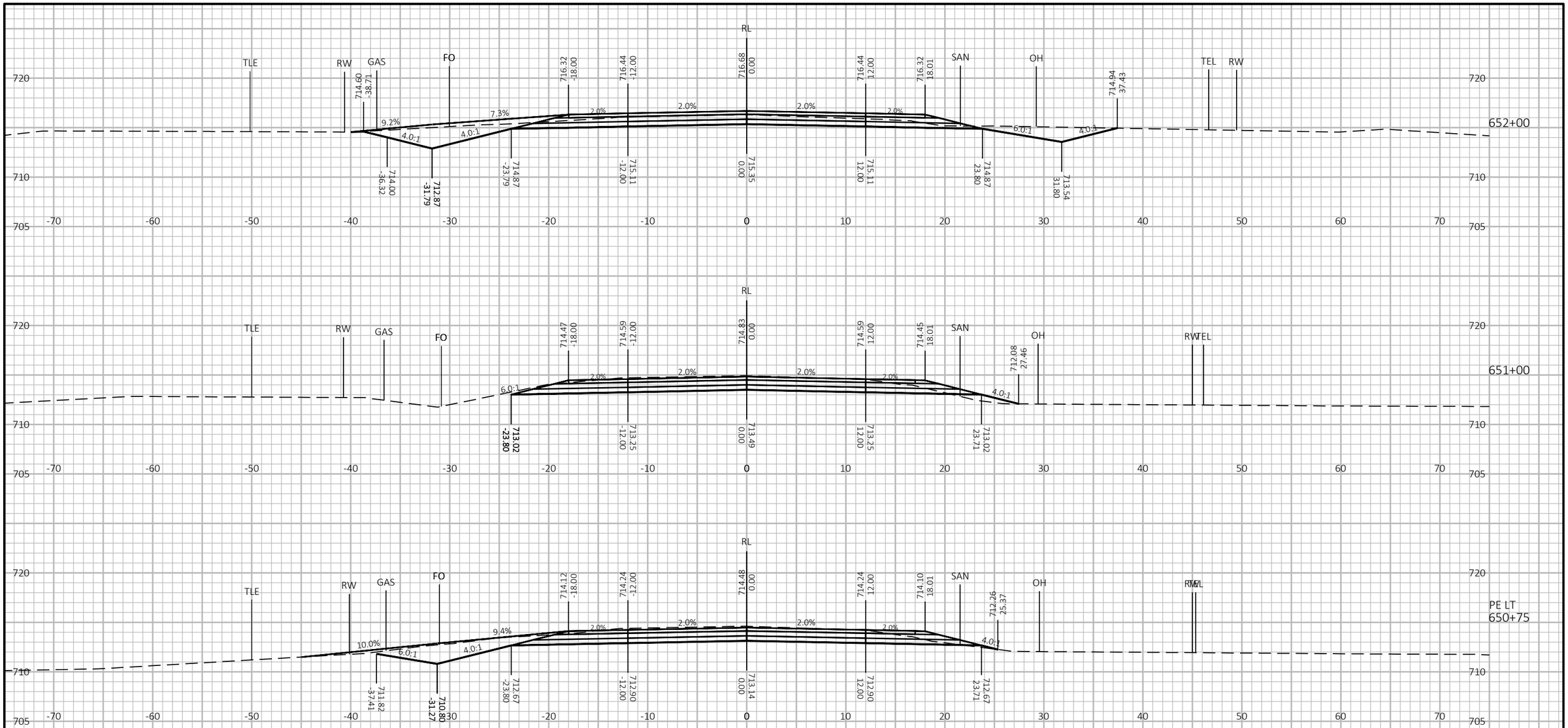
9

| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 233 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 20

PLOT DATE : 12/1/2023 10:00 AM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49




9

9

| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 234 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 21

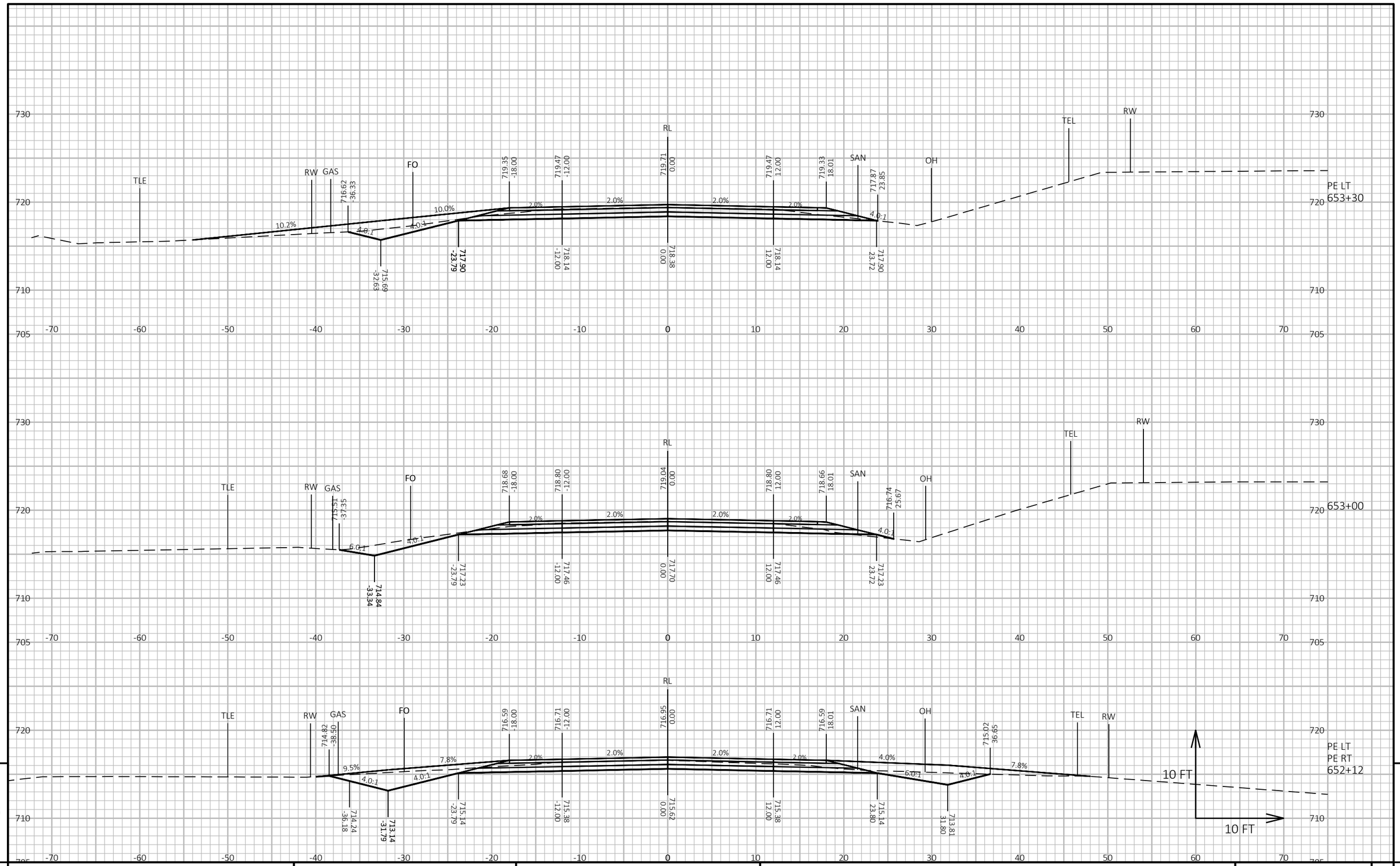
PLOT DATE : 12/1/2023 10:00 AM

PLOT BY : NICK ENGH

PLOT NAME :

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

WISDOT/CADDS SHEET 49




9

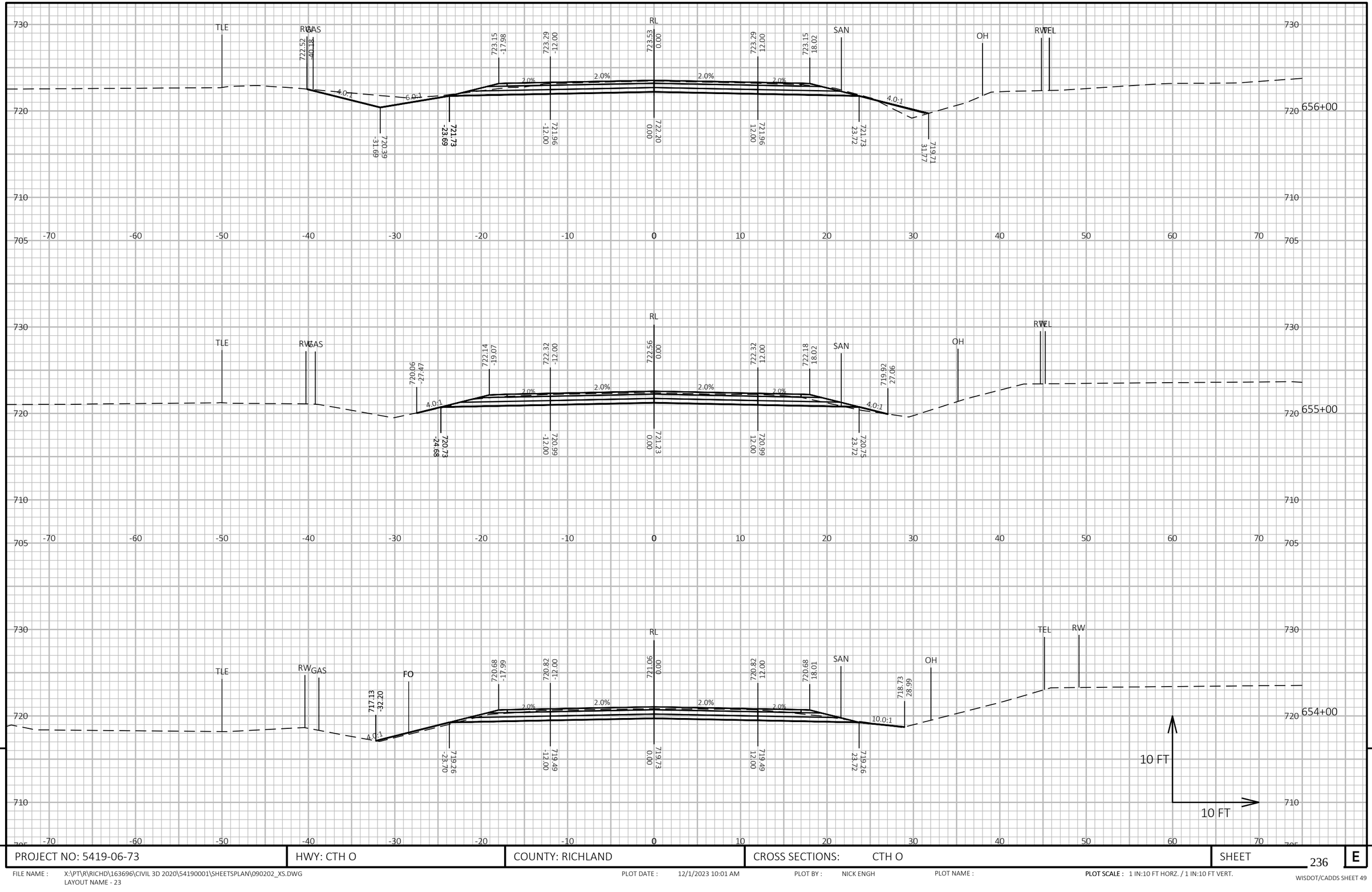
9

| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 235 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 22

PLOT DATE : 12/1/2023 10:00 AM PLOT BY : NICK ENGH PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49




9

9

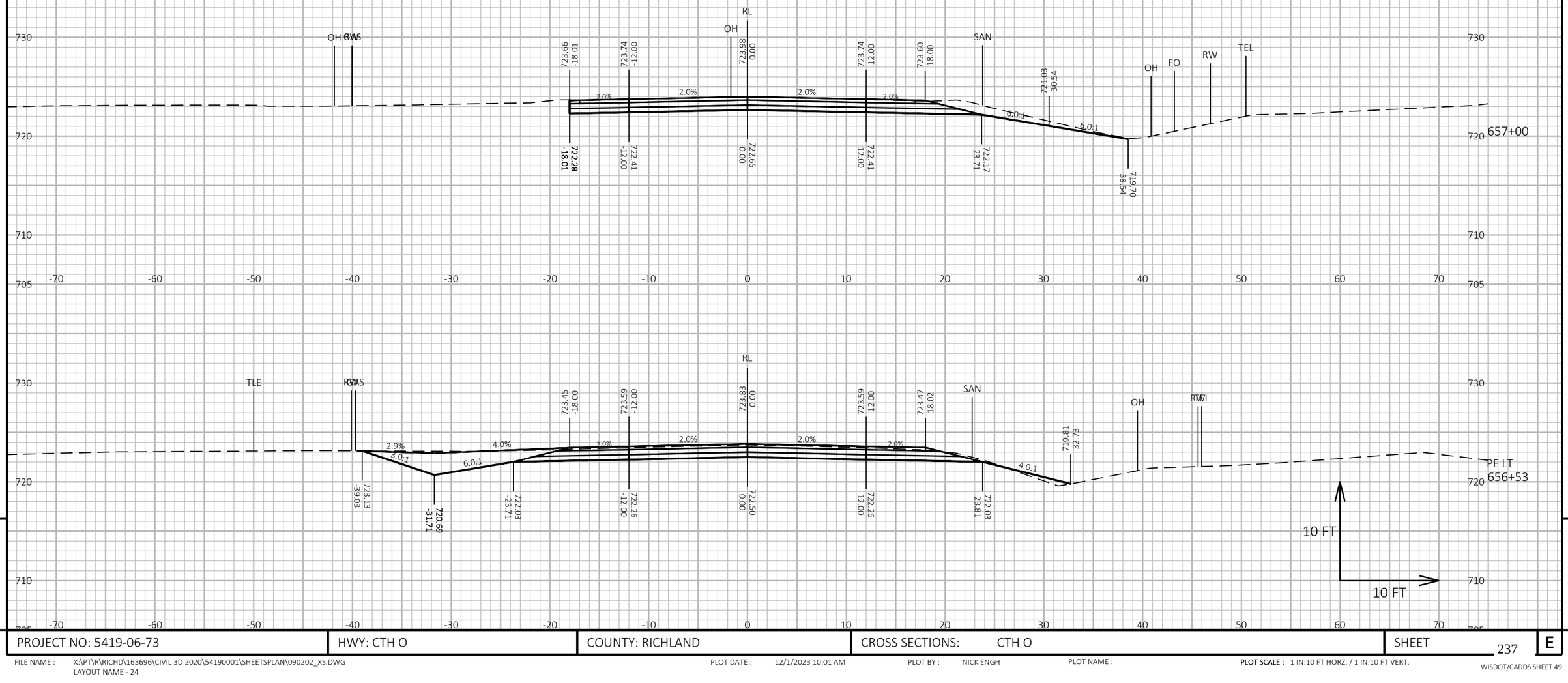
| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 236 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 23

PLOT DATE : 12/1/2023 10:01 AM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

END PROJECT
STA 657+15.00




9

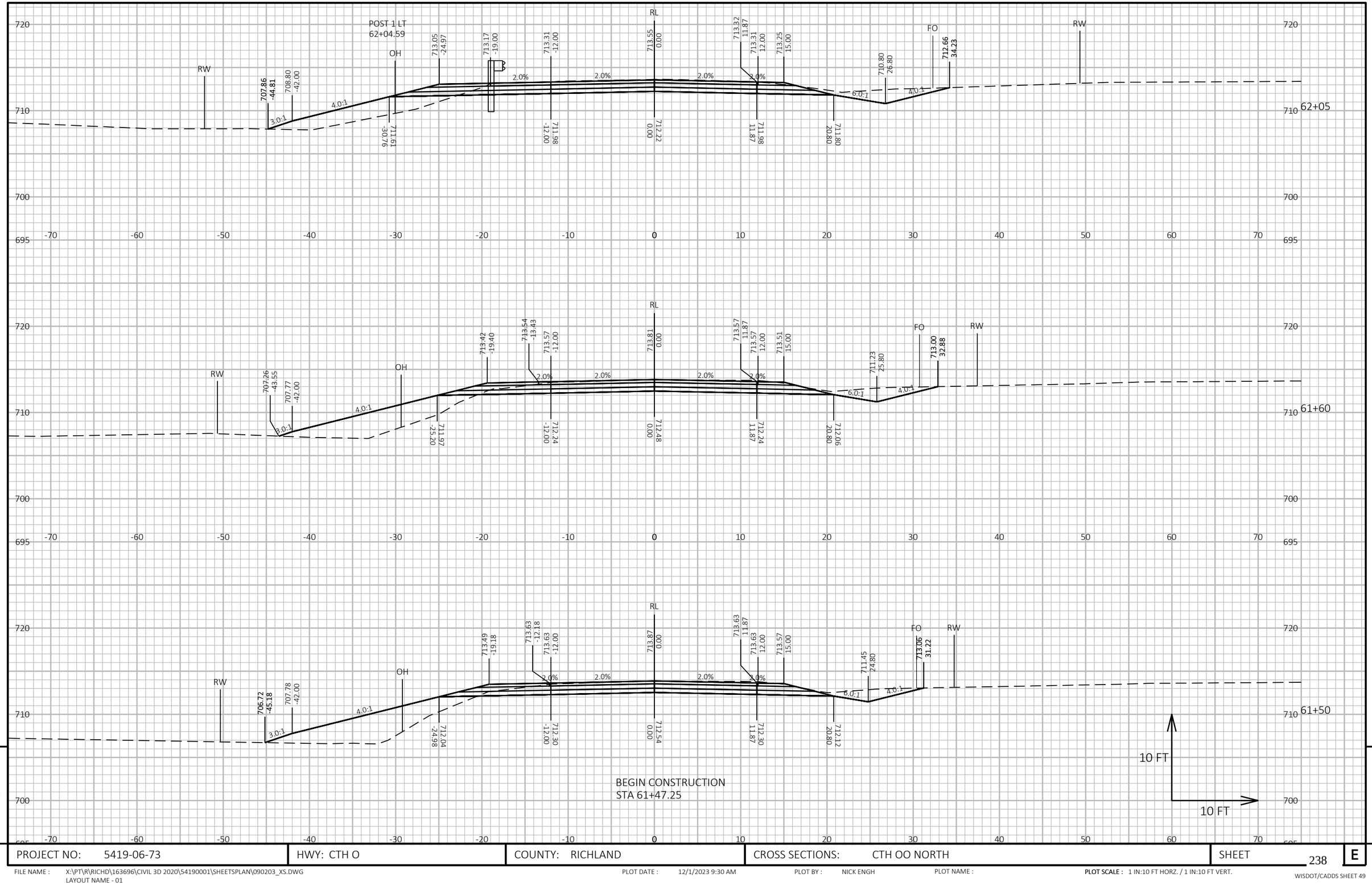
9

| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH O | SHEET 237 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 24

PLOT DATE : 12/1/2023 10:01 AM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49




9

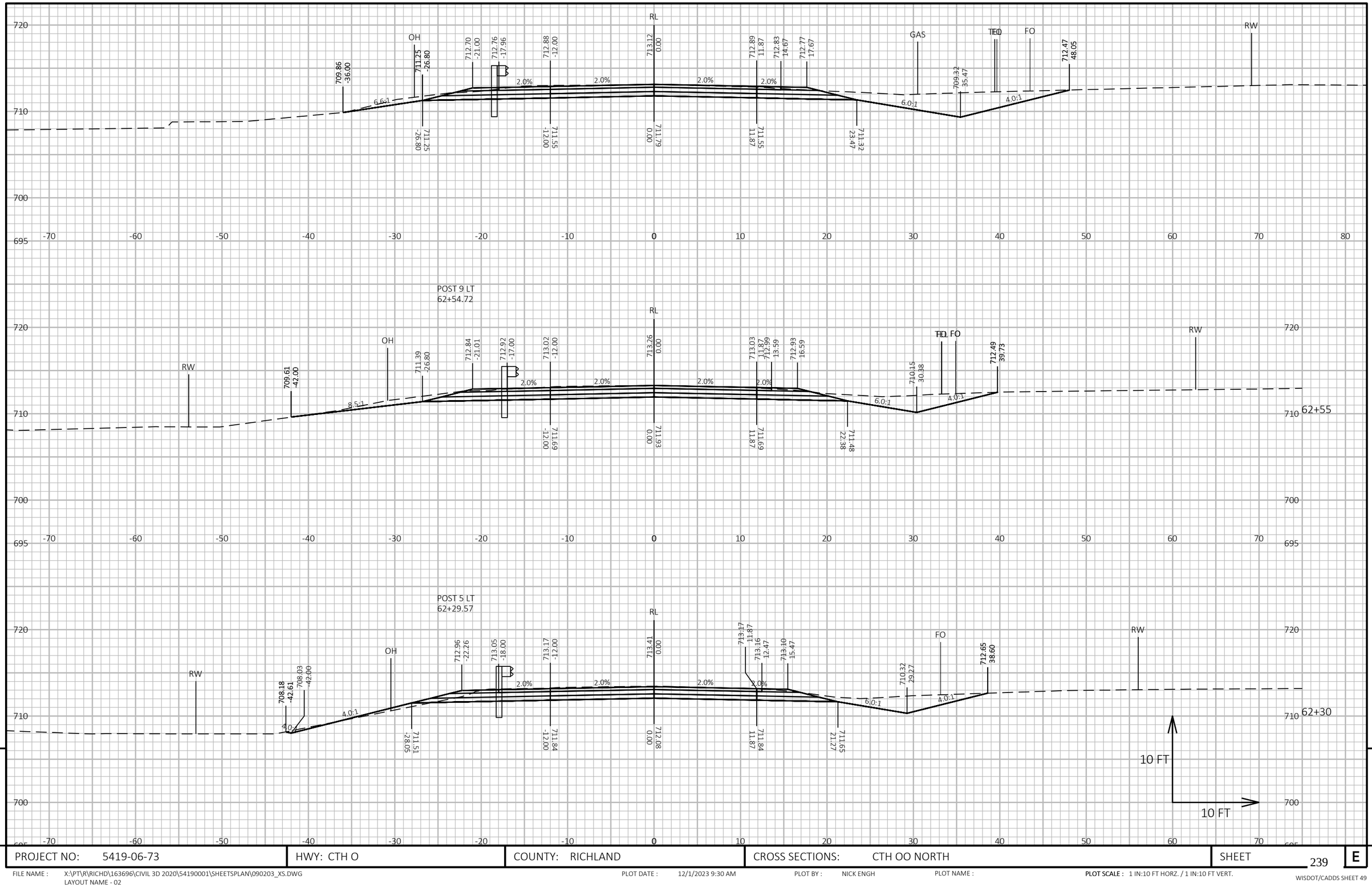
9

| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH OO NORTH | SHEET 238 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090203_XS.DWG
LAYOUT NAME - 01

PLOT DATE : 12/1/2023 9:30 AM PLOT BY : NICK ENGH PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

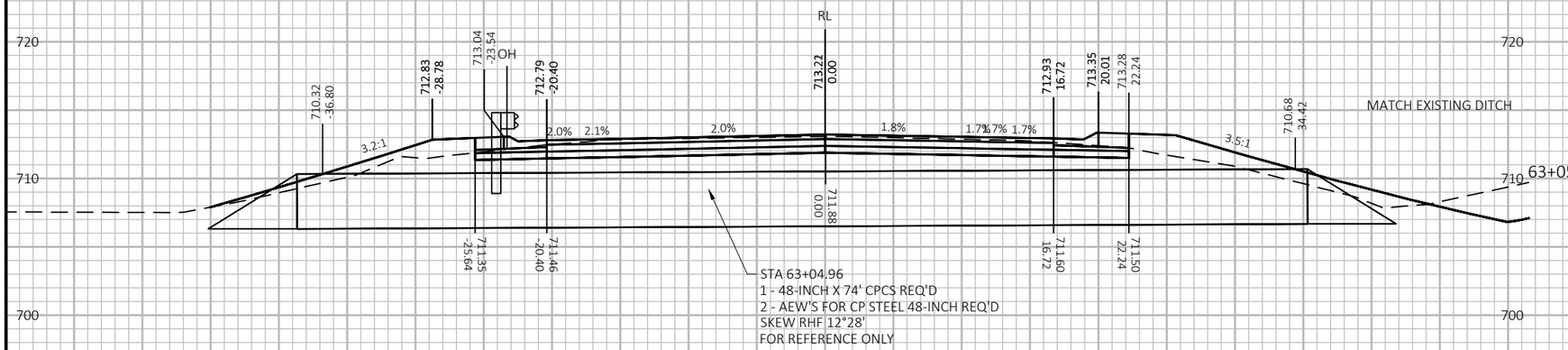



| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH OO NORTH | SHEET 239 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090203_XS.DWG
LAYOUT NAME - 02

PLOT DATE : 12/1/2023 9:30 AM PLOT BY : NICK ENGH PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49







9

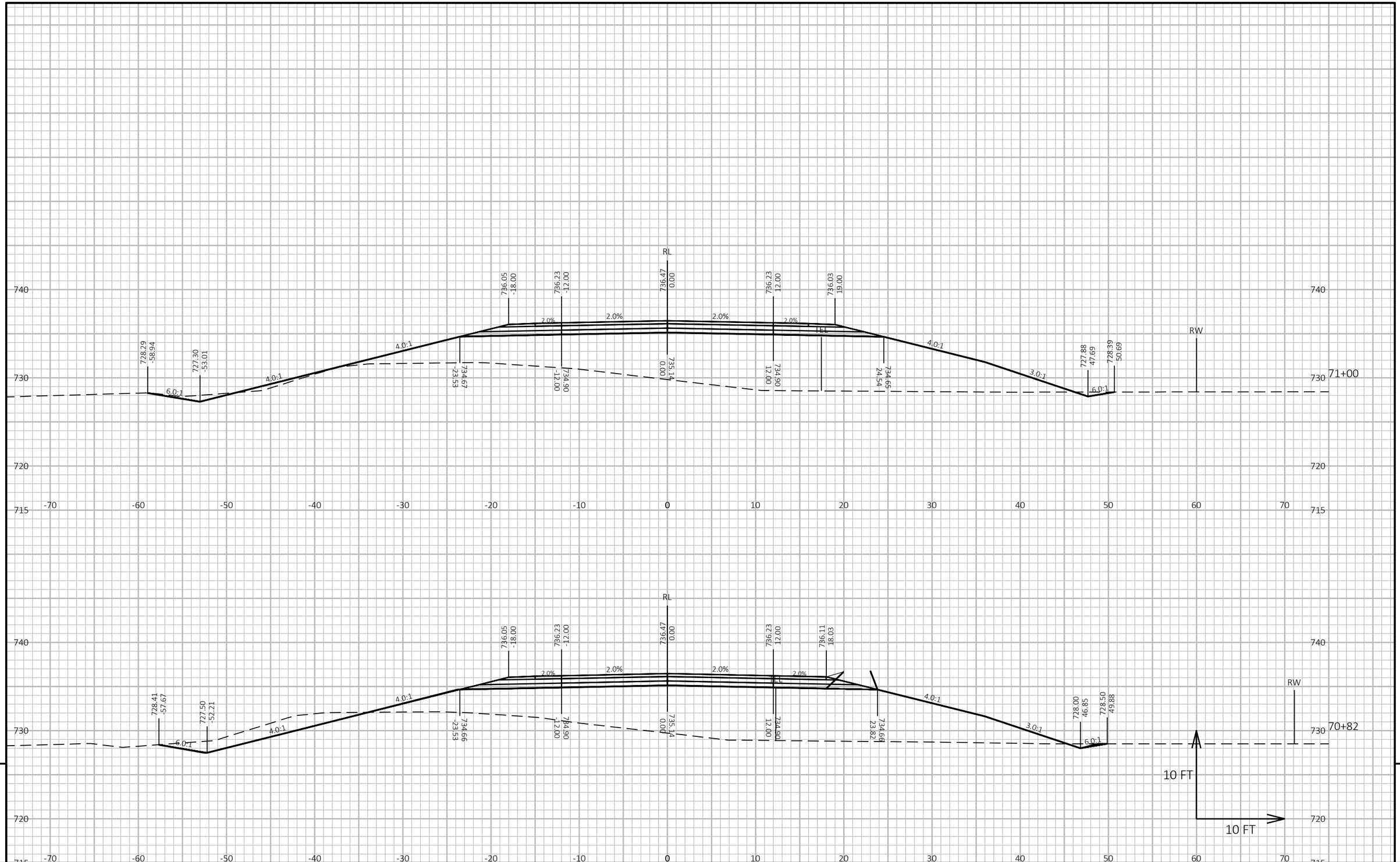
9

| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH OO NORTH | SHEET 240 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090203_XS.DWG
LAYOUT NAME - 03

PLOT DATE : 12/1/2023 10:45 AM PLOT BY : NICK ENGH PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49




9

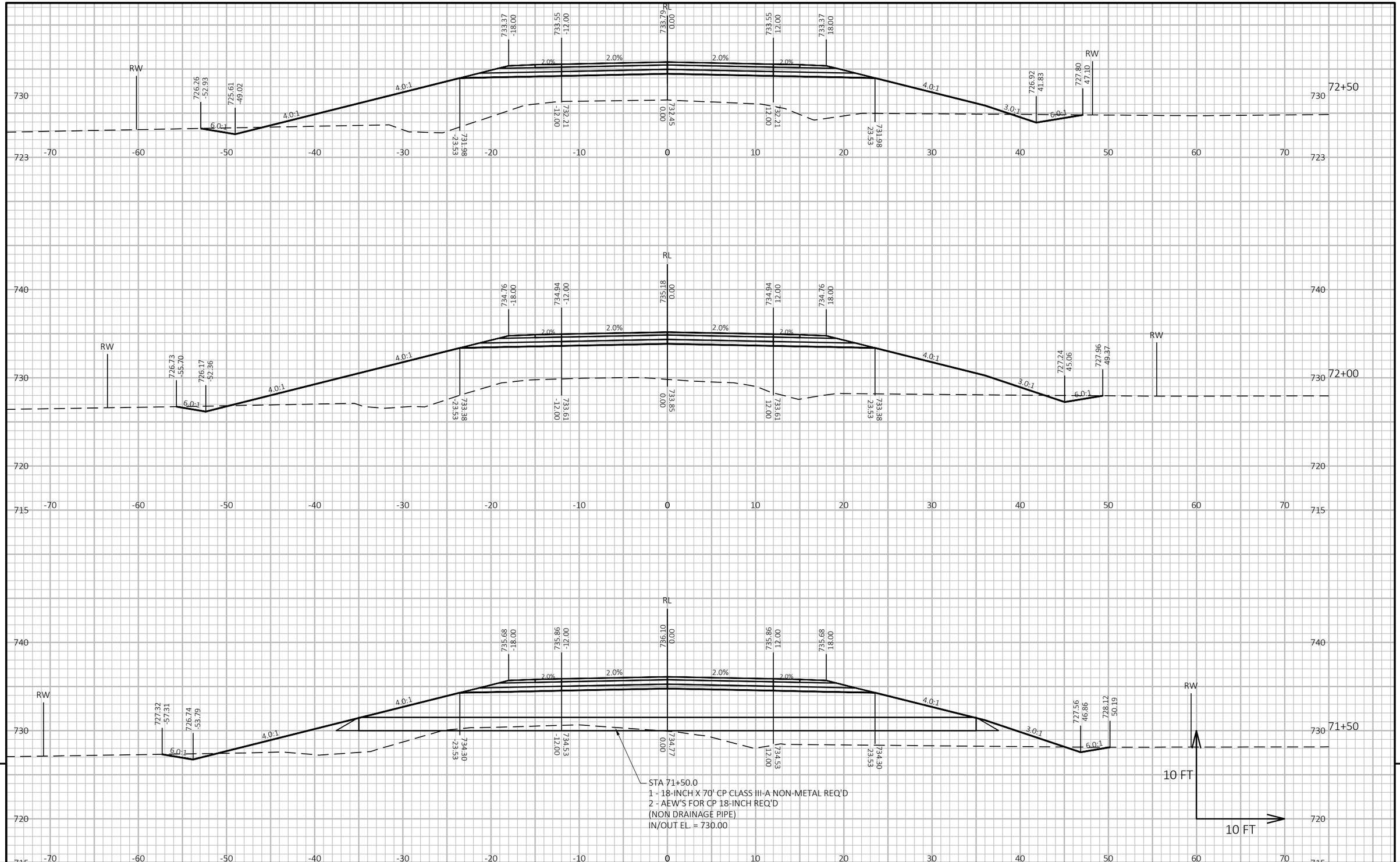
9

| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH TB | SHEET 241 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - CTH TB - (01)

PLOT DATE : 11/30/2023 3:38 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49




9

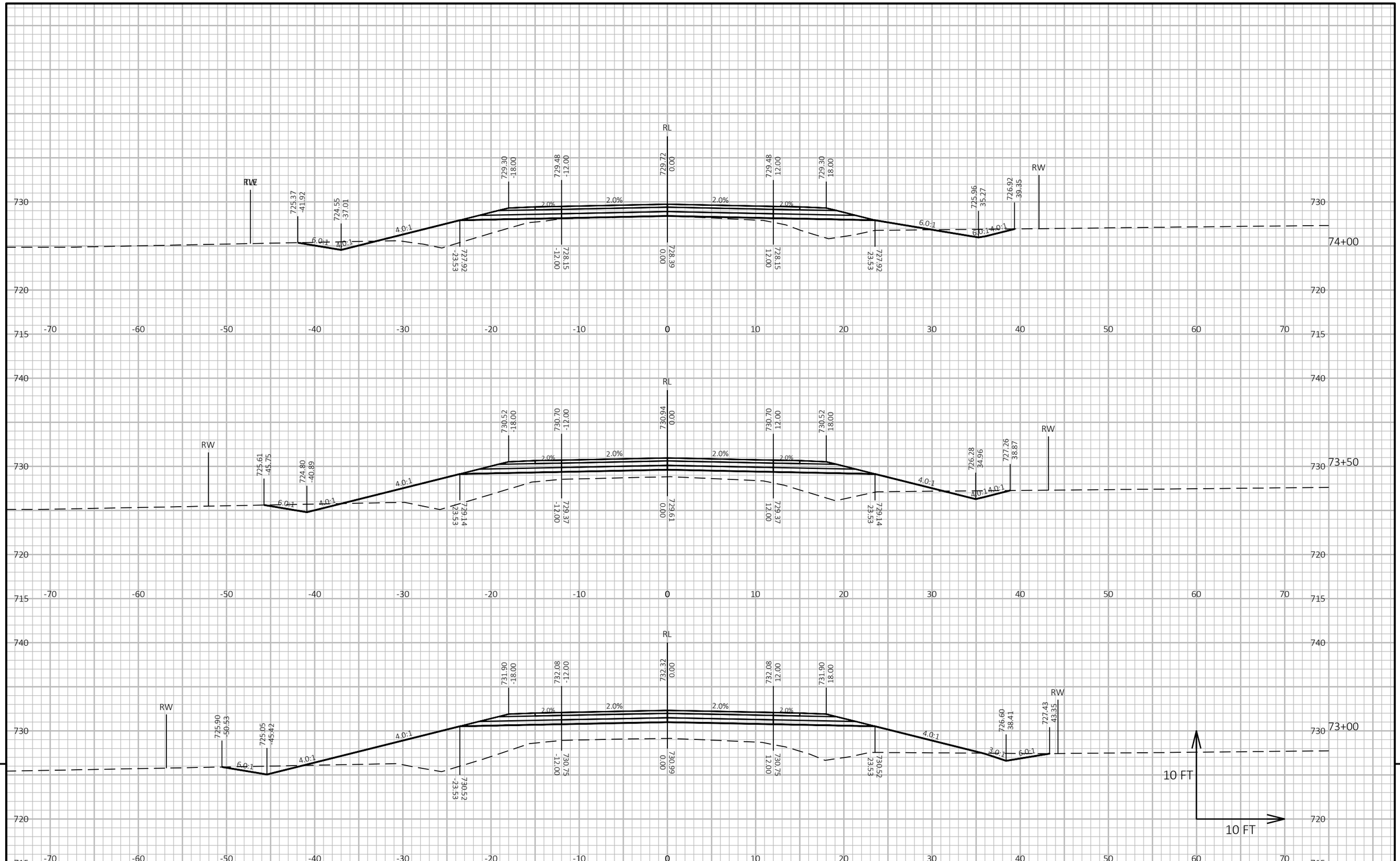
9

| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH TB | SHEET 242 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - CTH TB - (02)

PLOT DATE : 11/30/2023 3:38 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49




9

9

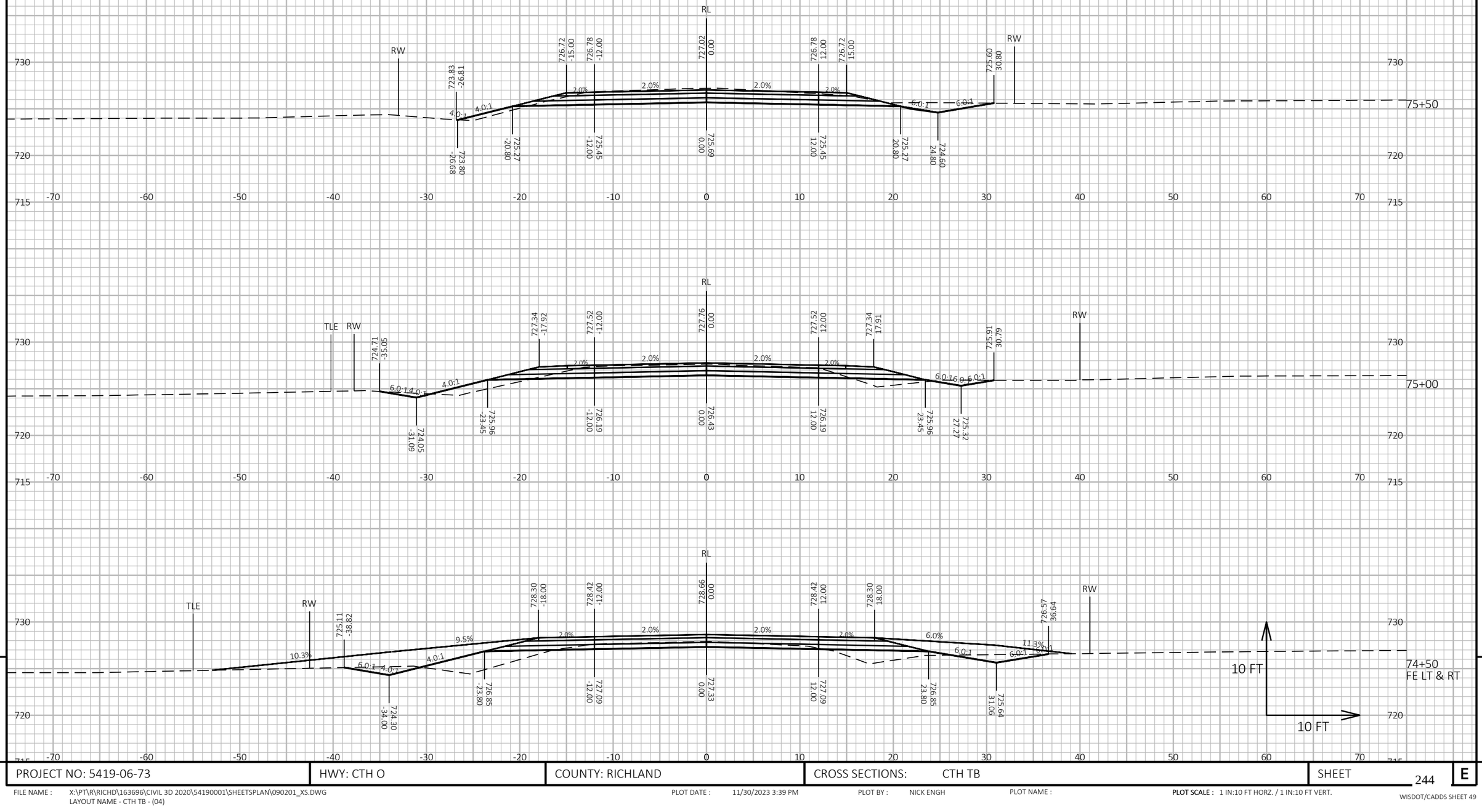
| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH TB | SHEET 243 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - CTH TB - (03)

PLOT DATE : 11/30/2023 3:38 PM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

END CONSTRUCTION
STA 75+50.00'TB'




| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: CTH TB | SHEET 244 | E |
|---|---|---|---|---|---|

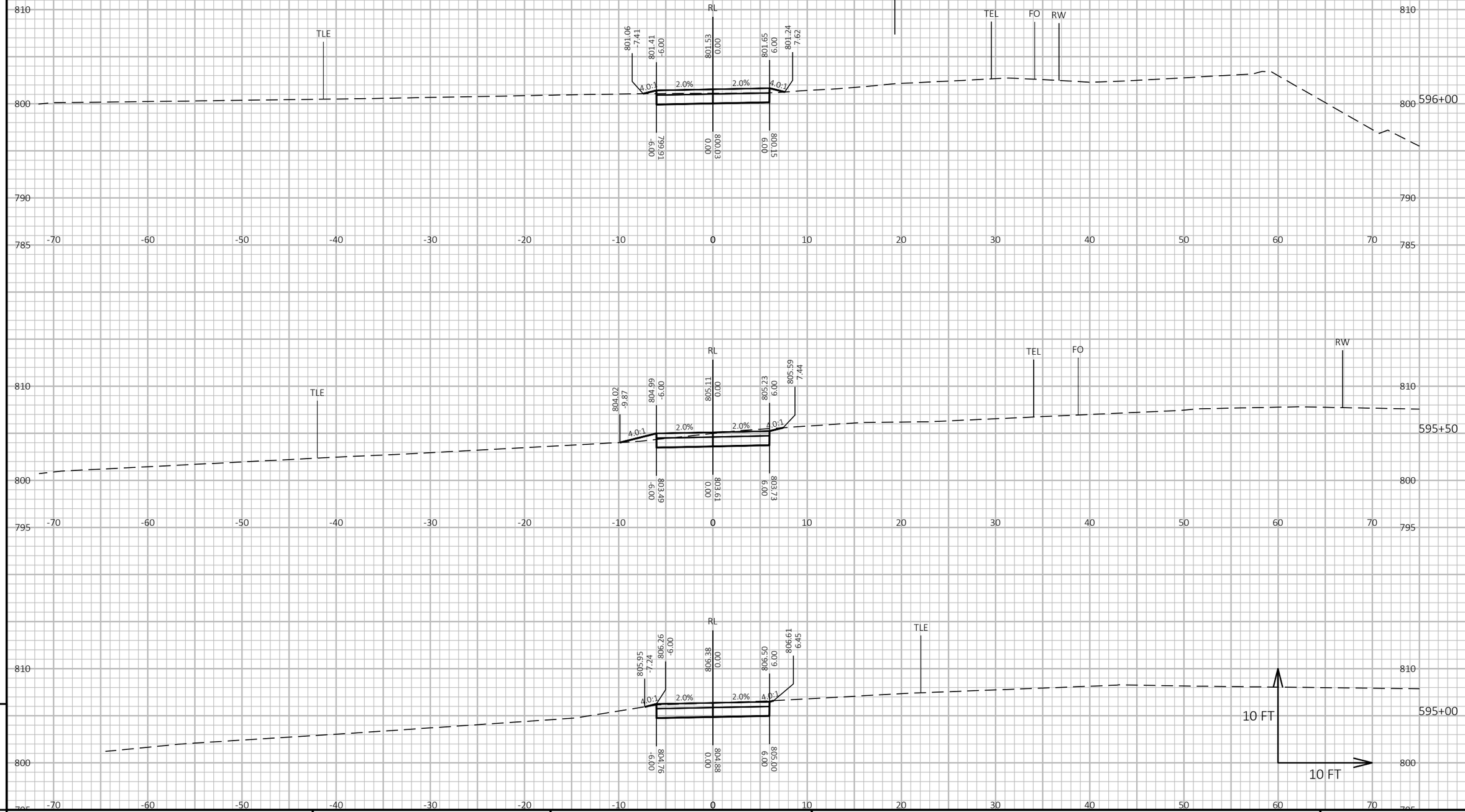
FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - CTH TB - (04)

PLOT DATE : 11/30/2023 3:39 PM PLOT BY : NICK ENGH PLOT NAME :

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

WISDOT/CADDS SHEET 49

SEE MAINLINE CROSS SECTIONS




| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: DRIVEWAY | SHEET 245 | E |
|---|---|---|---|---|---|

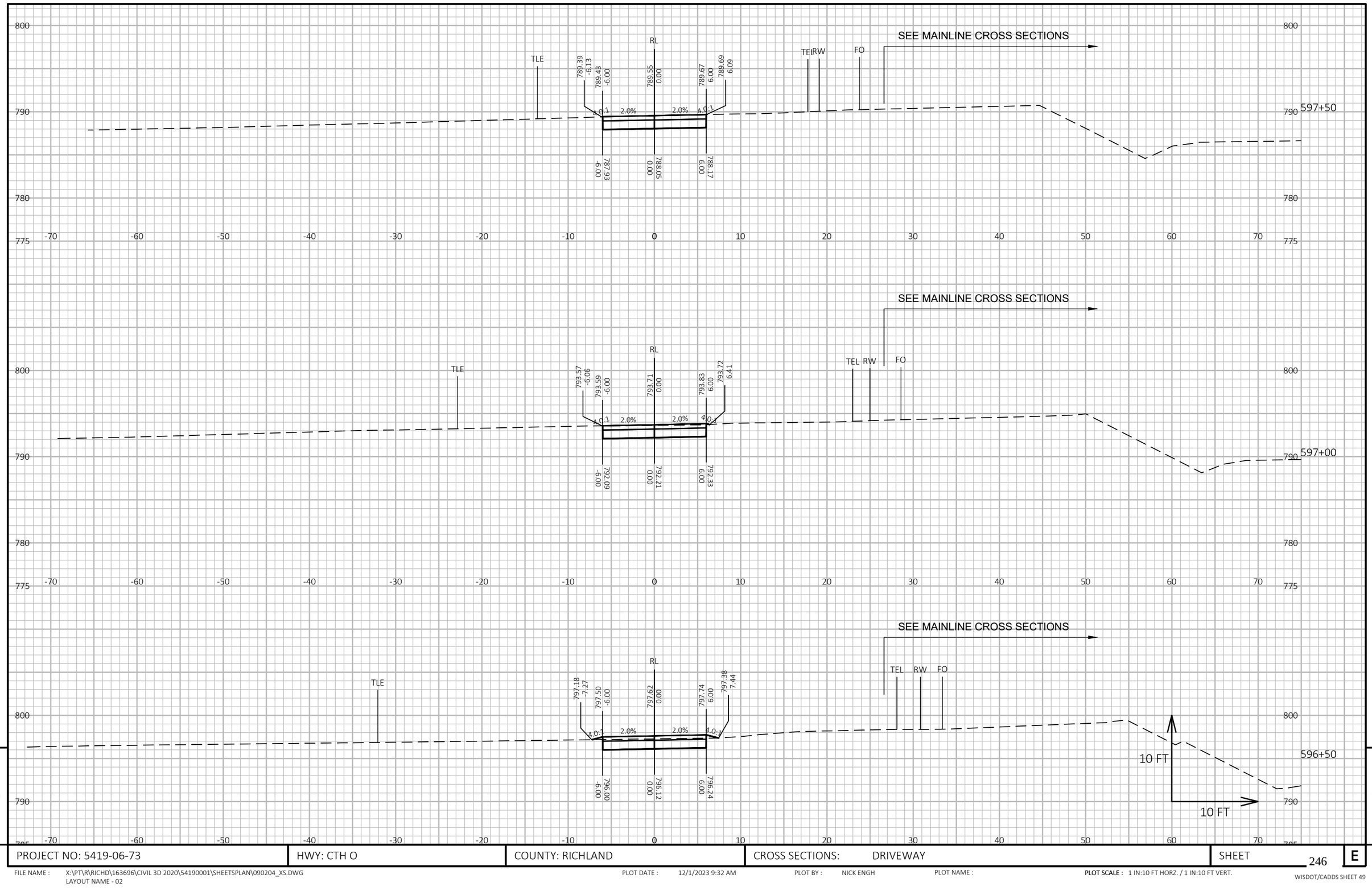
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LAYOUT NAME - 01

PLOT DATE : 12/1/2023 9:32 AM PLOT BY : NICK ENGH PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

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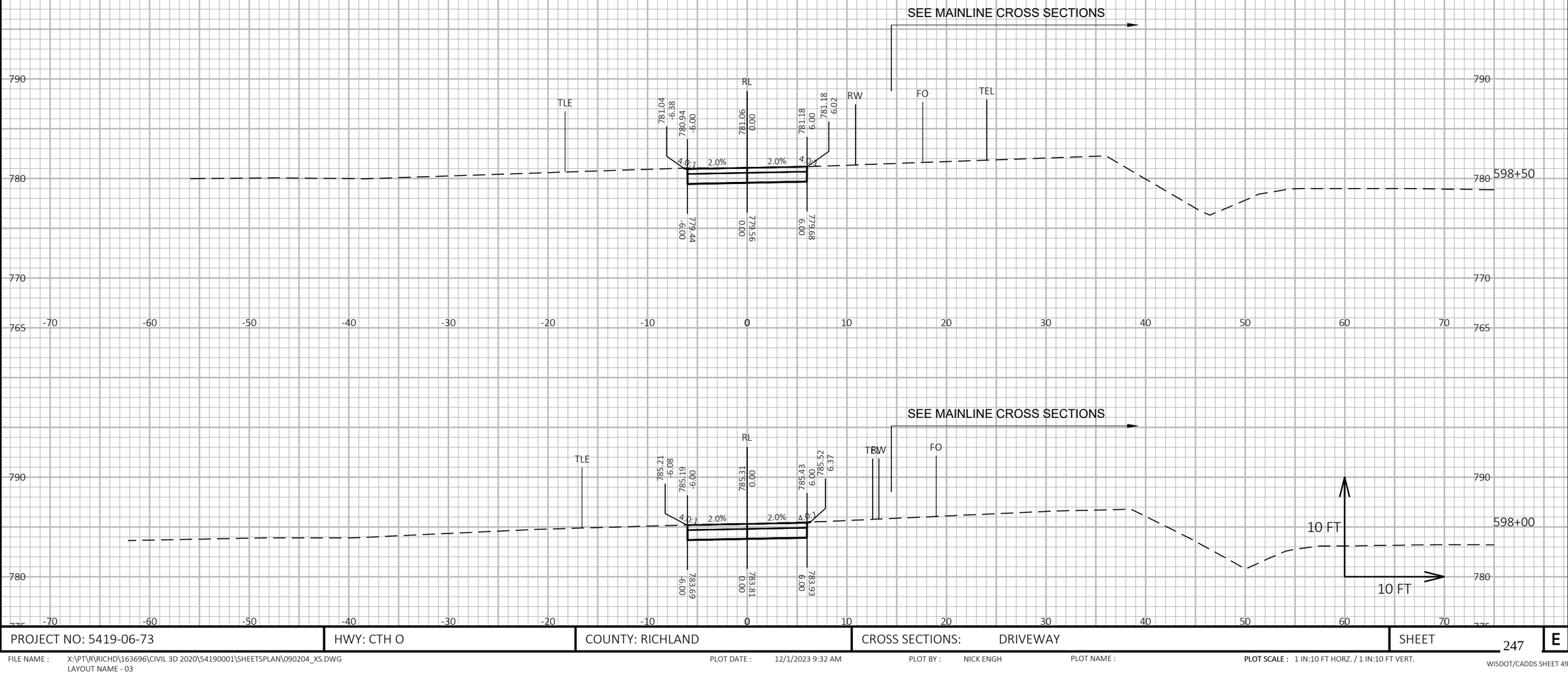



| | | | | | |
|---|---|---|---|---|---|
| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: DRIVEWAY | SHEET 246 | E |

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090204_XS.DWG
LAYOUT NAME - 02

PLOT DATE : 12/1/2023 9:32 AM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49




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| PROJECT NO: 5419-06-73 | HWY: CTH O | COUNTY: RICHLAND | CROSS SECTIONS: DRIVEWAY | SHEET 247 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PT\R\RICHD\163696\CIVIL 3D 2020\54190001\SHEETSPLAN\090204_XS.DWG
LAYOUT NAME - 03

PLOT DATE : 12/1/2023 9:32 AM PLOT BY : NICK ENGH PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

**Wisconsin Department of Transportation**

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