SWL MAY 2016

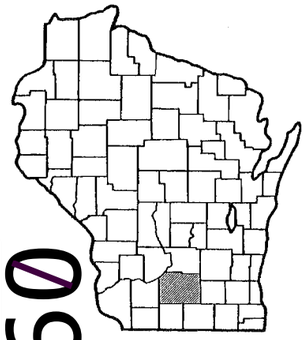
PROJECT ID: 5657-00-72

COUNTY: DANE

ORDER OF SHEETS

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

TOTAL SHEETS = 258



STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

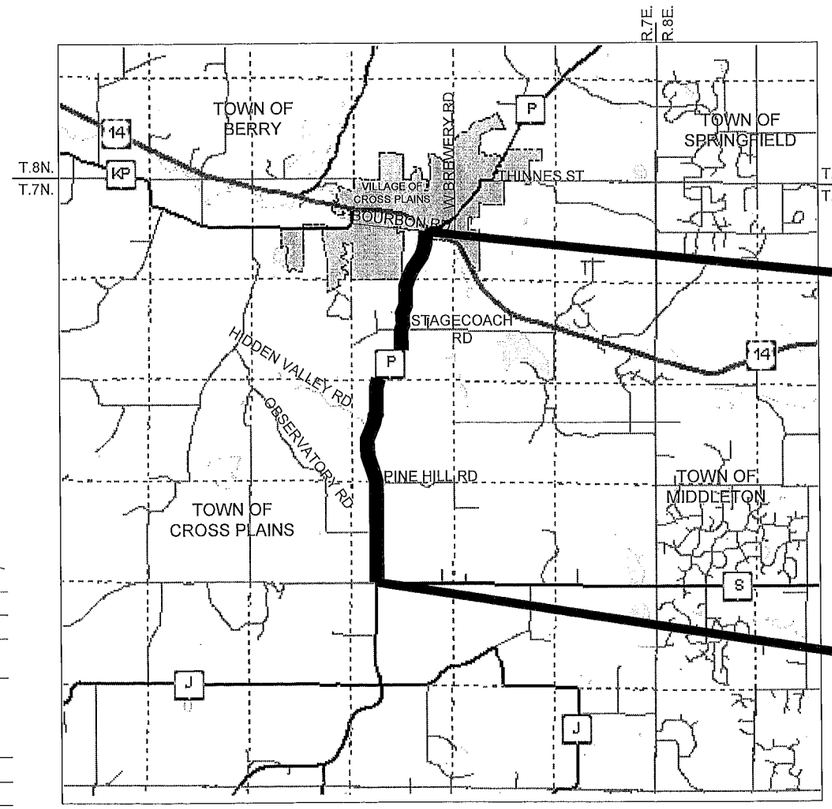
MOUNT HOREB - CROSS PLAINS

(CTH S - BOURBON ROAD)

CTH P
DANE COUNTY

STATE PROJECT NUMBER
5657-00-72

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
5657-00-72	WISC 2016166	1



END PROJECT 5657-00-72
STA. 194+27
Y = 495,925
X = 751,289

BEGIN PROJECT 5657-00-72
STA. 5+05
Y = 477,826
X = 748,583

LAYOUT
SCALE 0 1.5 MI

TOTAL LENGTH OF CENTERLINE = 3.584 MI. (RURAL)

Coordinates on this plan are referenced to the Wisconsin County Coordinate System (WCCS), 'DANE' County.

DESIGN DESIGNATION

A.A.D.T. (2016)	=	4,050
A.A.D.T. (2036)	=	4,400
D.H.V.	=	750
D.D.	=	60/40
T.	=	6.8%
DESIGN SPEED	=	55 MPH
ESALS	=	710,000 (ACC)

CONVENTIONAL SYMBOLS

PLAN
- CORPORATE LIMITS
- PROPERTY LINE
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE
- EXISTING CULVERT
- PROPOPSED CULVERT
- COMBUSTIBLE FLUIDS (Canola)
- MARSH AREA
- WOODED OR SHRUB AREA (WOODS)
- UTILITY PEDESTAL (PED)

PROFILE
- GRADE LINE
- ORIGINAL GROUND
- MARSH OR ROCK PROFILE (Rock / Label)
- SPECIAL DITCH
- GRADE ELEVATION (76.8)
- CULVERT (Profile View)

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

ACCEPTED FOR
COUNTY of DANE
2/8/16 Date — Commissioner

ORIGINAL PLANS PREPARED BY
DANE COUNTY HIGHWAY

WISCONSIN — MATTHEW R. RICE — E-29221 — BARABOO, WI — PROFESSIONAL ENGINEER

2/8/2016 Date — Matthew R. Rice Signature

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY Surveyor	DANE COUNTY
Designer	DANE COUNTY
Management Consultant	KL ENGINEERING

APPROVED FOR THE DEPARTMENT
DATE: 2/10/16 (Management Consultant Signature)

E

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\ti-page-p.dwg

PLOT DATE: 2/8/2016

PLOT BY: DANE COUNTY HIGHWAY DEPARTMENT

PLOT SCALE:

WISDOT/CADDS SHEET 10

GENERAL NOTES

TYPICAL SECTIONS SHOW THE GENERAL FEATURES THROUGHOUT THE PROJECT. PAVEMENT SLOPES, TERRACE SLOPES, ETC. MAY VARY WITHIN THE LIMITS OF THE SECTION.

EROSION CONTROL ITEMS SHOWN ON THE PLANS ARE AT SUGGESTED LOCATIONS. THE EXACT LOCATIONS AND DIMENSTIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

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

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

DISTURBED AREAS ARE TO BE FERTILIZED AND SEEDED AS DIRECTED BY THE ENGINEER. TEMP. SEEDING REQUIRED.

WHEN THE QUANTITY OF AN ITEMS LOWER OR UPPER LAYERS IS MEASURED FOR PAYMENT BY THE TON, THE DEPTH OR THICKNESS OF THE LAYER SHOWN ON THE PLANS IS APPROXIMATE AND ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

MISCELLANEOUS REMOVAL ITEMS REQUIRING RESTORATION OF CONCRETE OR ASPHALTIC CONCRETE SUCH AS DRIVEWAYS, SIDEWALKS OR SIDE STREETS, SHALL BE REMOVED TO AN EXISTING JOINT OR SAWED AS DETERMINED BY THE ENGINEER.

ALL RADII ARE MEASURED TO FLAG OF CURB UNLESS OTHERWISE SHOWN OR NOTED ON THE PLANS.

5¾-INCH HMA PAVEMENT SHALL CONSIST OF A 3½-INCH LOWER LAYER TYPE 3 MT 58-28S USING A 19MM AGGREGATE GRADATION AND A 2¼-INCH UPPER LAYER TYPE 4 MT 58-28H USING A 12.5MM AGGREGATE GRADATION.

EXISTING LANDMARK REFERENCE MONUMENTS WILL BE EITHER ADJUSTED OR REPLACED BY DANE COUNTY. DANE COUNTY SHALL BE CONTACTED A MINIMUM OF ONE WEEK PRIOR TO ANY PAVING OPERATIONS TO ALLOW SUFFICIENT TIME TO ADJUST REFERENCE MONUMENTS. THE CONTACT PERSON AT DANE COUNTY IS GREGGAR PETERSEN (608) 266-9081.

THE EXISTING DRIVEWAYS SHALL BE RESTORED IN KIND AS DIRECTED BY THE ENGINEER IN THE FIELD.

CURVE DATA IS BASED ON THE ARC DEFINITION.

EXPANSION JOINTS ARE TO BE CONSTRUCTED AT ALL RADIUS POINTS IN CURB AND GUTTER AND AS DIRECTED BY THE ENGINEER.

CURB HEIGHT AT THE END OF CURB AND GUTTER SHALL TAPER FROM 6 INCHES TO 0 INCHES IN 6'-0" OR AS DIRECTED BY THE ENGINEER.

RUNOFF COEFFICIENTS WILL REMAIN UNCHANGED. THE IMPERVIOUS SURFACE AREA WILL BE INCREASED BY 1.26 ACRES.

CONTROL POINT DATA AND LAYOUT INFORMATION WILL BE PROVIDED TO THE PROJECT ENGINEER AND CONTRACTOR. CONTACT THE DANE COUNTY HIGHWAY DEPARTMENT AT (608) 266-4037.

SECTION 2 ORDER OF SHEETS

GENERAL NOTES
PROJECT OVERVIEW
TYPICAL SECTIONS
DETOUR ROUTE PLAN
CONSTRUCTION DETAILS
INTERSECTION DETAILS
STORM SEWER PLANS
EROSION CONTROL PLANS
SIGNING PLANS

UTILITIES

GAS
MADISON GAS & ELECTRIC COMPANY
STEVE BEVERSDORF
133 S. BLAIR STREET
MADISON WI 53788
(608) 252-1552
sbeversdorf@mge.com

ELECTRIC
AMERICAN TRANSMISSION COMPANY
TONY MARCINIAK
P.O. BOX 47
WAUKESHA, WI 53187-6124
(262) 506-6814
amarciniak@atcllc.com

ELECTRIC
MADISON GAS & ELECTRIC COMPANY
RICH PARKER
133 S. BLAIR STREET
MADISON WI 53788
(608) 252-7379
rparker@mge.com

TELEPHONE
TDS TELECOM
JERRY MYERS
525 JUNCTION ROAD1
MADISON WI 53717
(608) 664-4404
jerry.myers@tdstelecom.com

TELEVISION & FIBER OPTIC
CHARTER COMMUNICATIONS
GLEN JAKUSZ
2701 DANIELS ST
MADISON WI 53718
(608) 209-9887
jakusz@chartercom.com

CONTACTS

DNR LIASON
WI DEPT OF NATURAL RESOURCES
ERIC HEGGELUND
3911 FISH HATCHERY RD
FITCHBURG WI 53711
(608) 275-3301
eric.heggelund@wisconsin.gov

DESIGN CONTACT
DANE COUNTY HIGHWAY DEPARTMENT
MATT RICE, HIGHWAY ENGINEER
2302 FISH HATCHERY RD
MADISON WI 53713
(608) 266-4037
rice@co.dane.wi.us

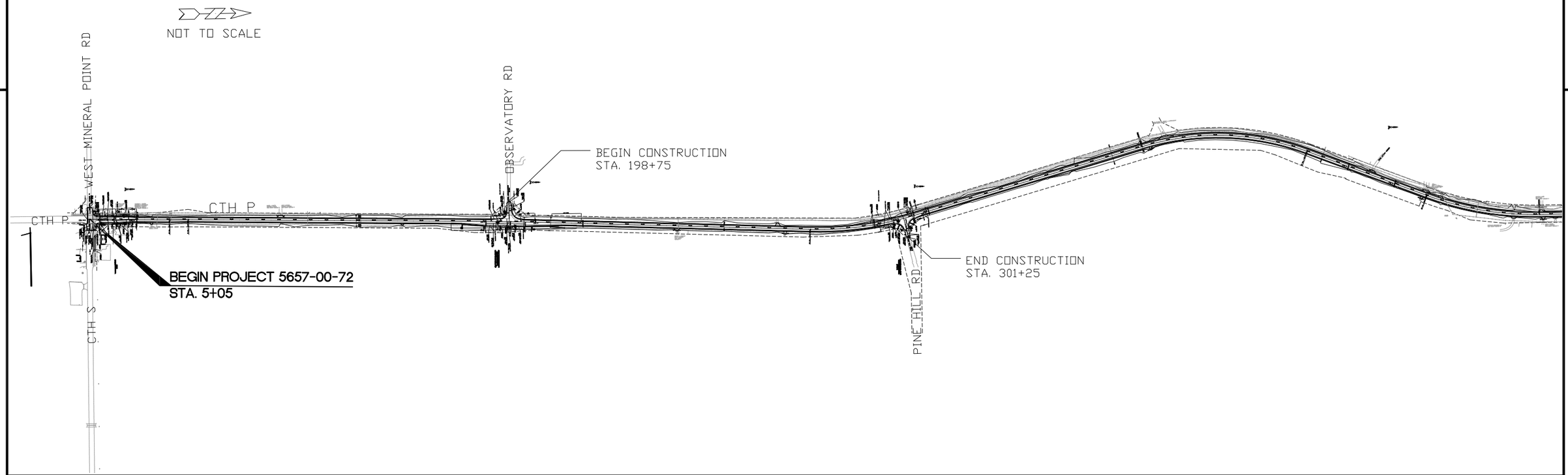
ABBREVIATIONS

AADT	ANNUAL AVERAGE DAILY TRAFFIC	IP	IRON PIPE
ASPH	ASPHALT OR ASPHALTIC	LB	POUND
BIT	BITUMINOUS	LF	LINEAR FOOT
BM	BENCH MARK	LS	LUMP SUM
℄	CENTER LINE	LT	LEFT
CONC	CONCRETE	PC	POINT OF CURVATURE
CPCA	CULVERT PIPE CORRUGATED ALUMINUM	PE	PRIVATE ENTRANCE
		PI	POINT OF INTERSECTION
CPCS	CULVERT PIPE CORRUGATED STEEL	PT	POINT OF TANGENCY
CPRC	CULVERT PIPE REINFORCED CONCRETE	R	RADIUS
		RT	RT
CPRCHE	CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL	R/W	RIGHT-OF-WAY
		SE	SUPERELEVATION
CTH	COUNTY TRUNK HIGHWAY	SF	SQUARE FOOT
CWT	HUNDREDWEIGHT	STA	STATION
CY	CUBIC YARD	SY	SQUARE YARD
DHV	DESIGN HOUR TRAFFIC VOLUME	TYP	TYPICAL
EBS	EXCAVATION BELOW SUBGRADE	VAR	VARIES OR VARIABLE
EL	ELEVATION	VPC	VERTICAL POINT OF CURVATURE
EXC	EXCAVATION	VPI	VERTICAL POINT OF INTERSECTION
EXIST	EXISTING	VPT	VERTICAL POINT OF TANGENCY
FE	FIELD ENTRANCE	X	EAST GRID COORDINATE
FT	FOOT	Y	NORTH GRID COORDINATE
IE	INVERT ELEVATION		

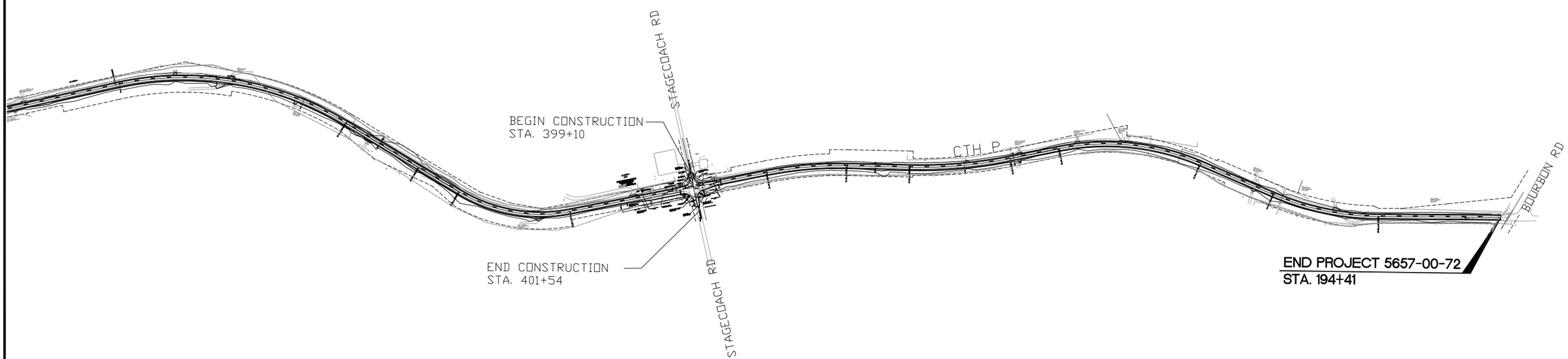
DIGGERS HOTLINE
Dial 811 or (800) 242-8511
www.DiggersHotline.com

*INDICATES UTILITY OR MUNICIPALITY IS NOT A MEMBER OF DIGGERS HOTLINE

NOT TO SCALE

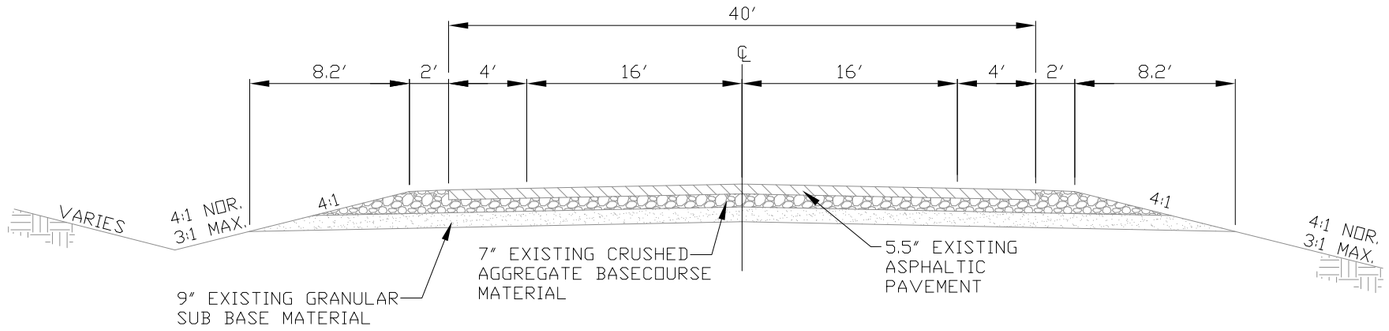


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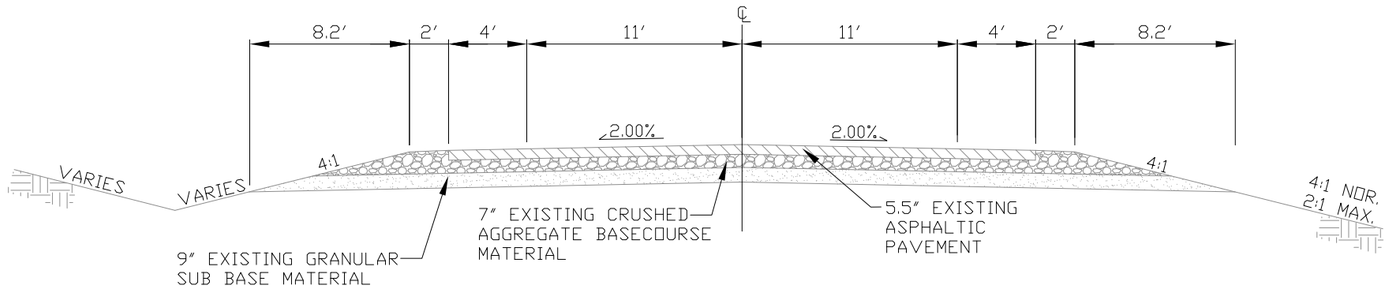


PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	PROJECT OVERVIEW	SHEET NO: 3

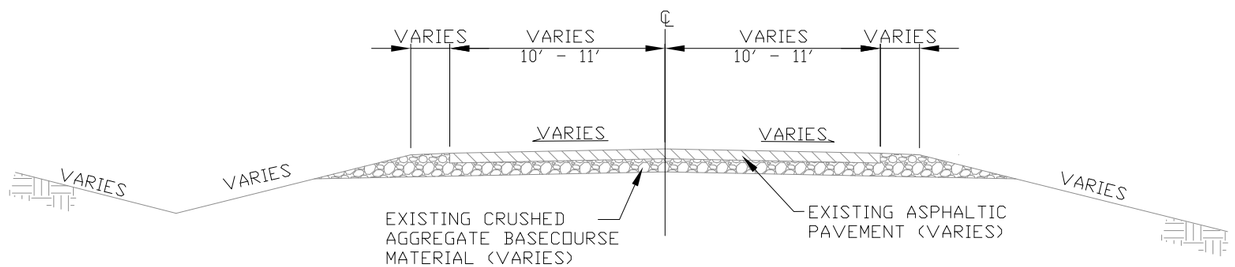
2



EXISTING TYPICAL SECTION
STA. 5+05 - STA.7+98



EXISTING TYPICAL SECTION
STA. 7+98 - STA. 194+27

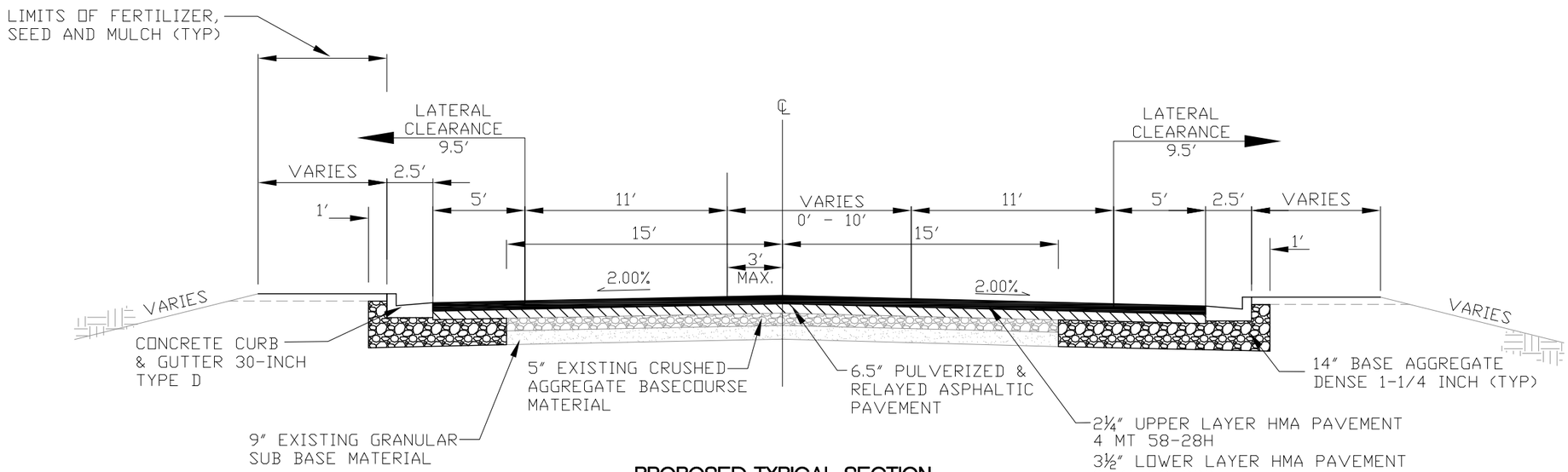


EXISTING TYPICAL SECTION
SIDE ROADS

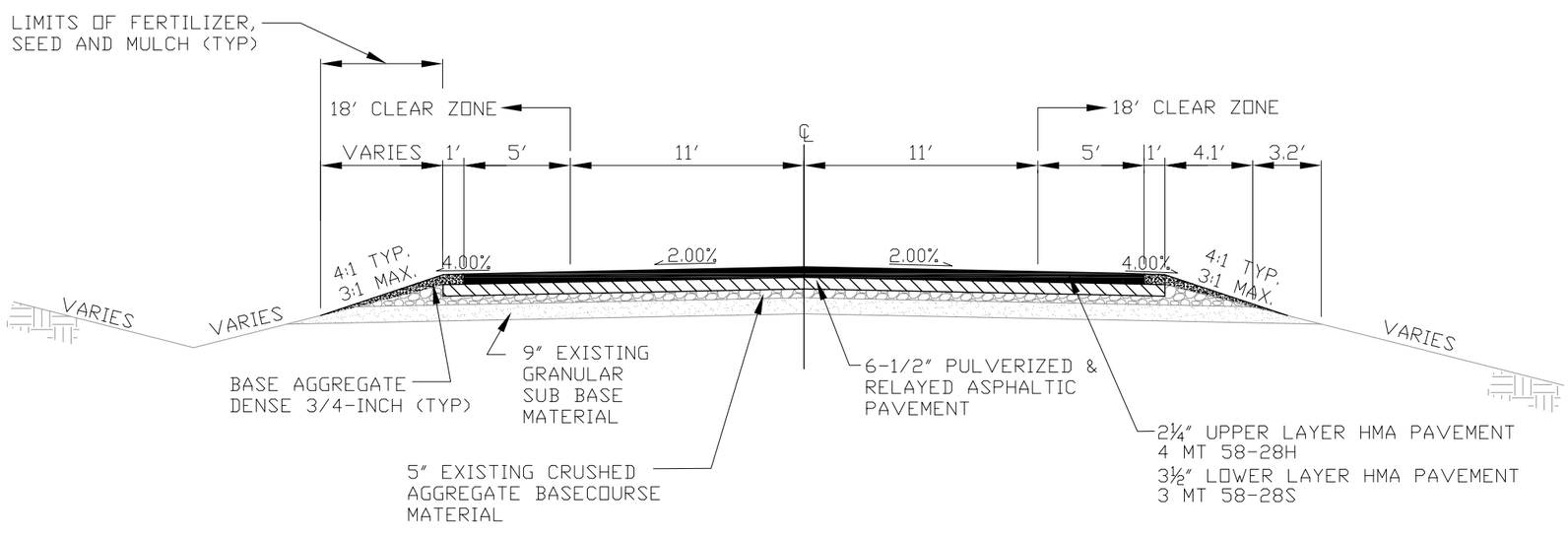
(OBSERVATORY ROAD)
(PINE HILL ROAD)
(STAGECOACH ROAD)

NOT TO SCALE

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	TYPICAL SECTIONS	SHEET NO: 4



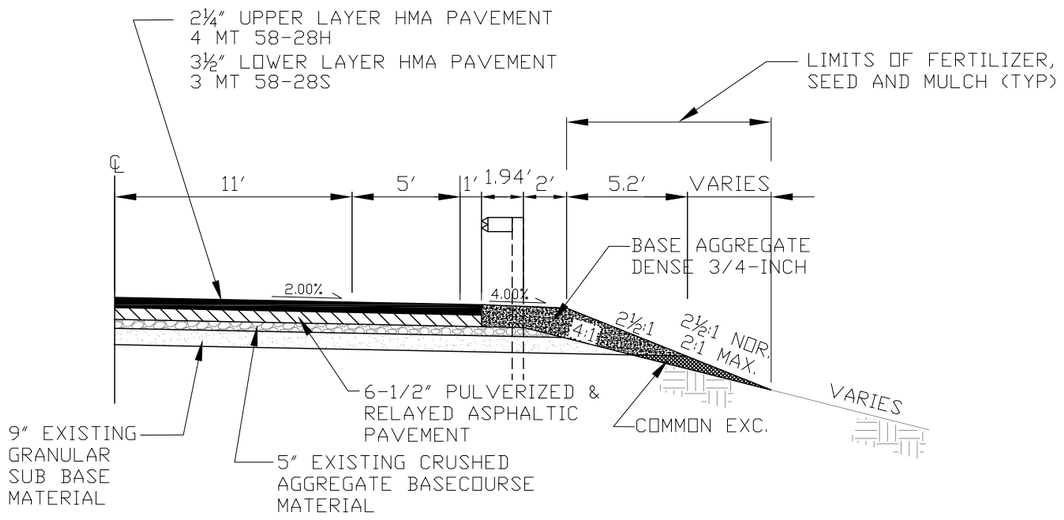
PROPOSED TYPICAL SECTION
STA. 5+05 - STA. 10+00



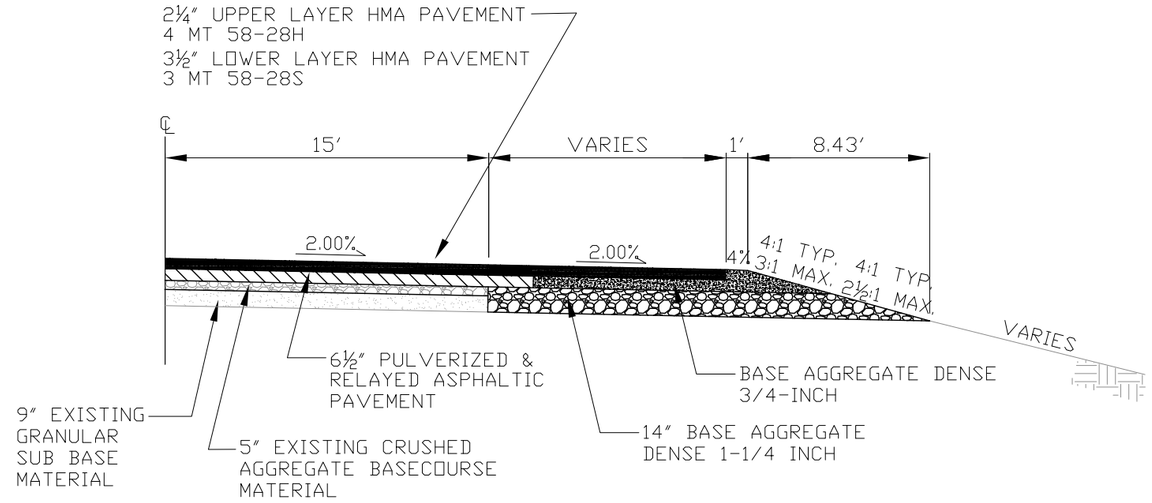
PROPOSED TYPICAL SECTION
STA. 10+00 - STA. 194+27

NOT TO SCALE

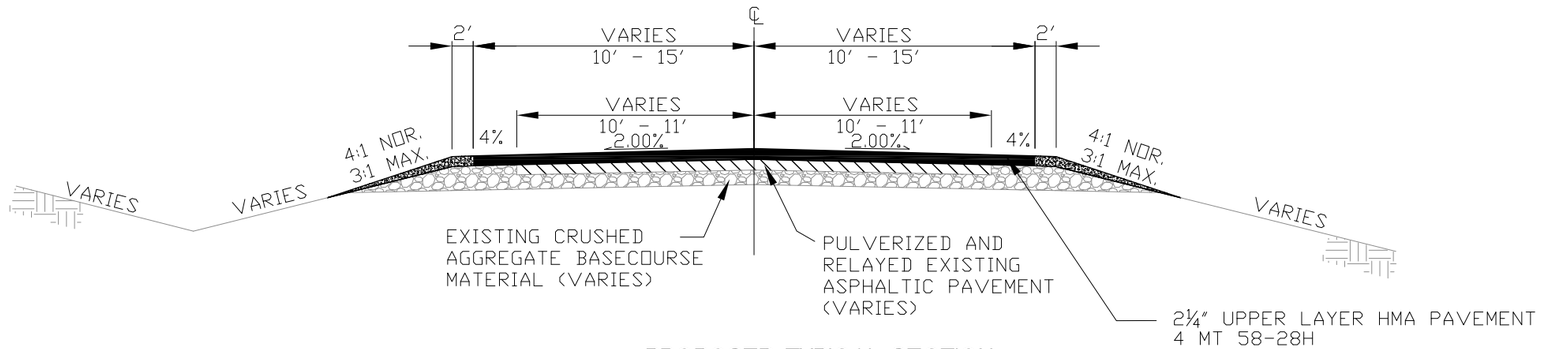
PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	TYPICAL SECTIONS	SHEET NO: 5



PROPOSED TYPICAL 1/2 SECTION
BEAMGUARD LOCATIONS



PROPOSED TYPICAL 1/2 SECTION - WIDENING
STA. 27+89-STA. 34+85 (RT)
STA. 138+87-STA. 142+75 (RT)



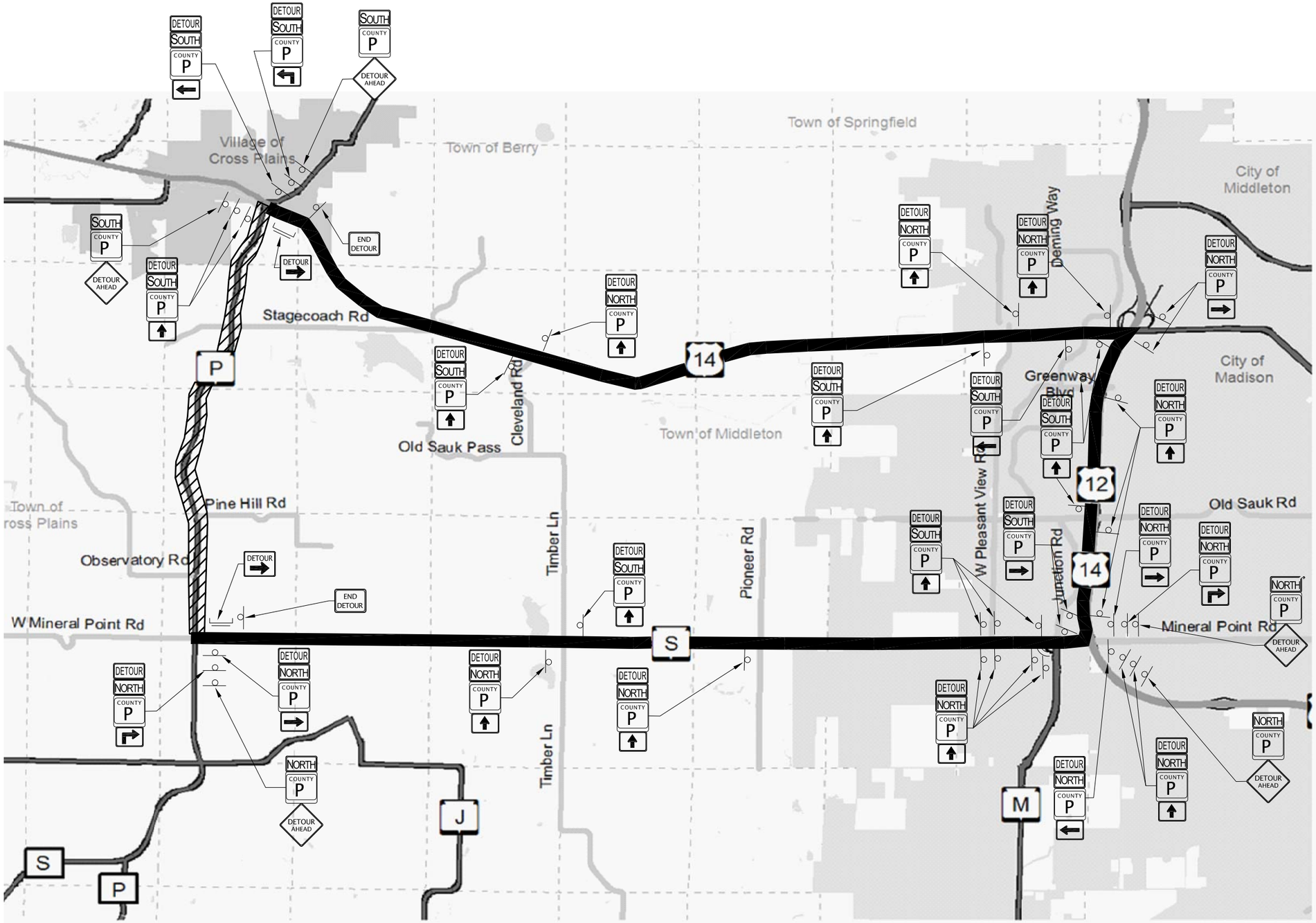
PROPOSED TYPICAL SECTION
SIDE ROADS

(OBSERVATORY ROAD)
(PINE HILL ROAD)
(STAGECOACH ROAD)

NOT TO SCALE

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	TYPICAL SECTIONS	SHEET NO: 6

2



NOTE:
SEE S.D.D. 15C2-6a AND 15C2-6c FOR TRAFFIC CONTROL DETOUR SIGN PLACEMENT

COUNTY P	M1-5A 24"x24"		M5-1L 21"x15"
SOUTH	M3-2 24"x12"		M5-1R 21"x15"
NORTH	M3-4 24"x12"		M6-1 21"x15"
DETOUR	M4-8 24"x12"		M6-3 21"x15"
END DETOUR	M4-8A 24"x18"	DETOUR	M4-9R OR MU-9L 48"x36"
DETOUR AHEAD	W20-2A 48"x48"		

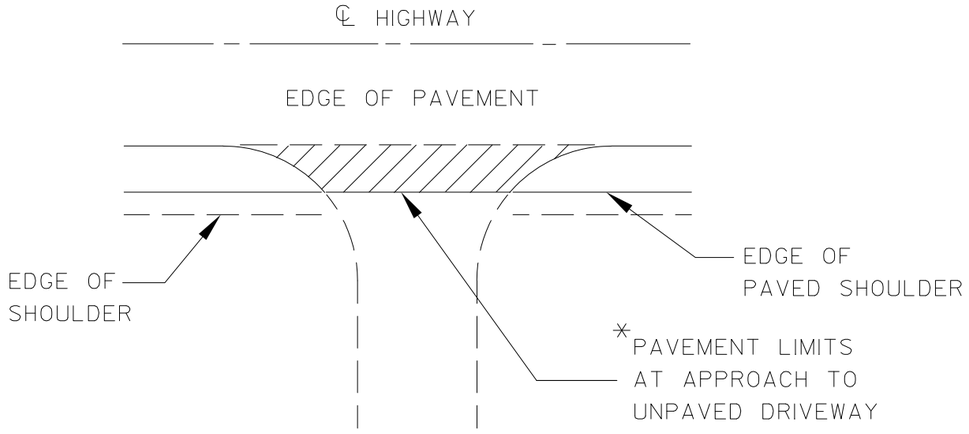
POST MOUNTED TRAFFIC CONTROL DETOUR SIGN

TYPE III BARRICADE WITH SIGN

DETOUR ROUTE

CONSTRUCTION ZONE (CLOSED TO THRU TRAFFIC)

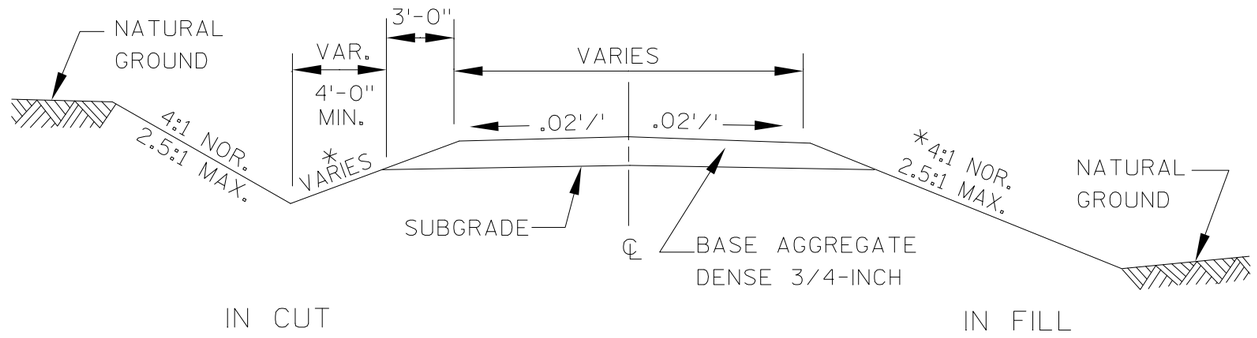
PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	DETOUR ROUTE PLAN	SHEET NO: 7



*WHERE DRIVEWAY IS PAVED, APPROACH PAVEMENT SHOULD BE EXTENDED TO MATCH PAVEMENT REMOVAL LIMITS AS SHOWN ON THE PLANS AND CROSS SECTIONS.

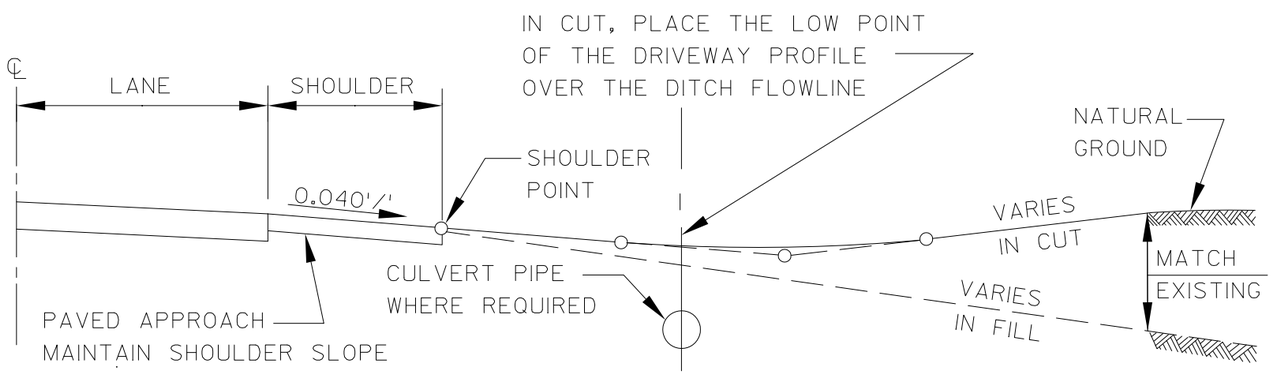
PLAN VIEW

RURAL DRIVEWAY INTERSECTION DETAIL



*6:1 WITHIN CLEAR ZONE

TYPICAL CROSS SECTION FOR PRIVATE DRIVE OR FIELD ENTRANCE

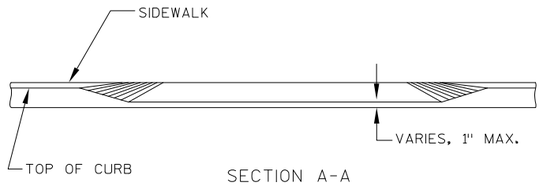


TYPICAL DRIVEWAY PROFILES

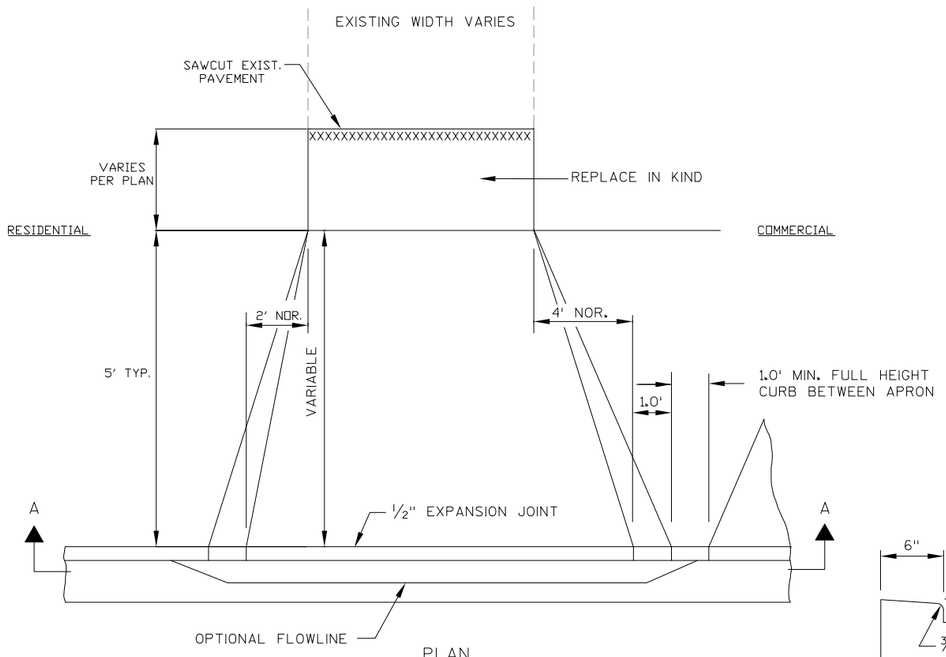
NOT TO SCALE

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CONSTRUCTION DETAILS	SHEET NO: 8

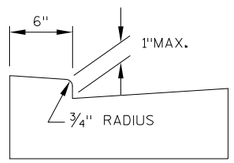
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SECTION A-A

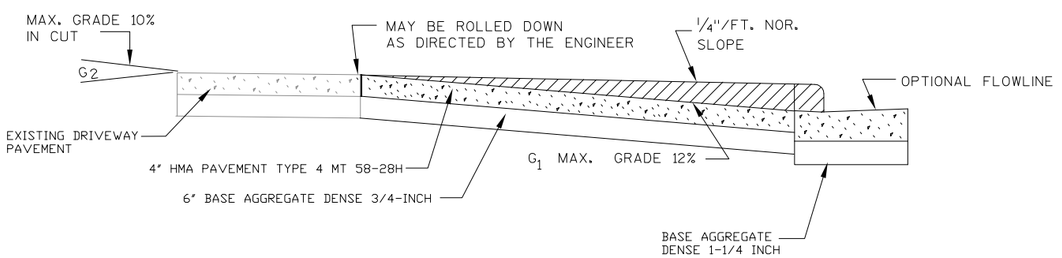


PLAN



OPTIONAL METHOD FOR CONCRETE GUTTER

NOTE: ALGEBRAIC DIFFERENCE BETWEEN TANGENT GRADES G_1 & G_2 EXTENDED IN FILLS, MAX. 15%

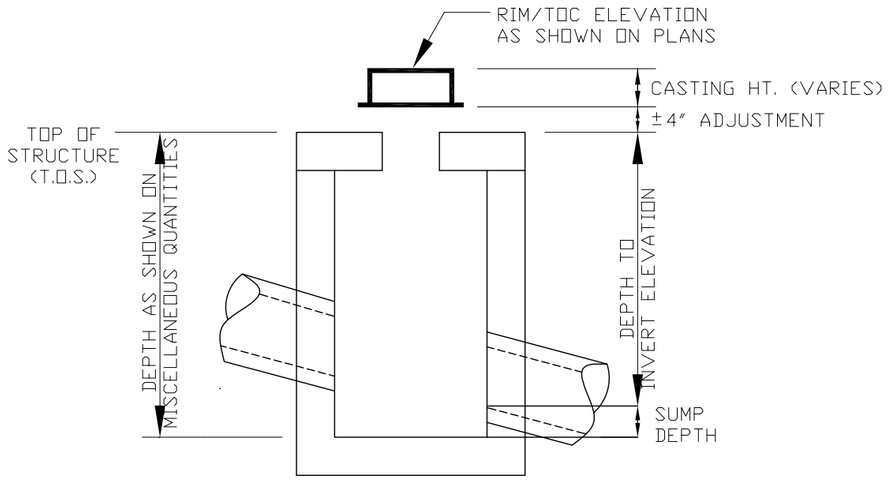


PROFILE

URBAN DRIVEWAY DETAIL

NOT TO SCALE

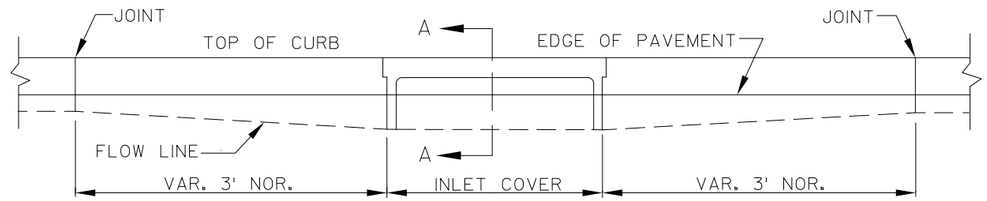
PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CONSTRUCTION DETAILS	SHEET NO: 9



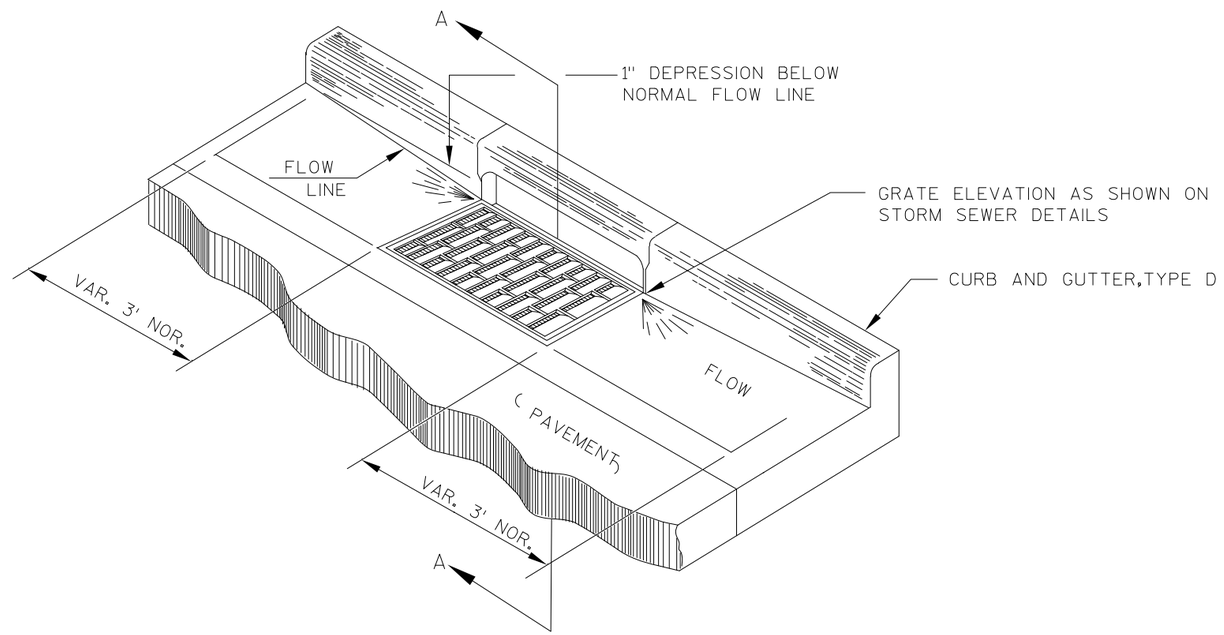
(MANHOLES 8-FT DIAMETER SHOWN)

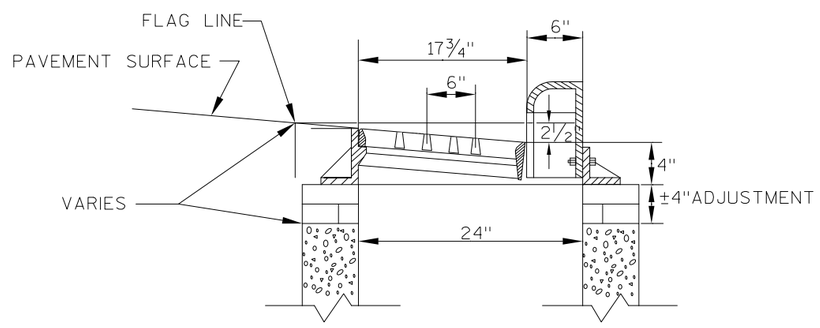
DETAIL FOR COMPUTING MANHOLE ELEVATIONS

NOT TO SCALE



ELEVATION





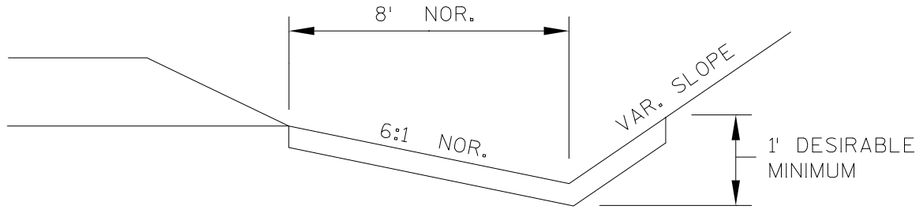
SECTION A-A

DETAIL OF CURB AND GUTTER AT INLETS

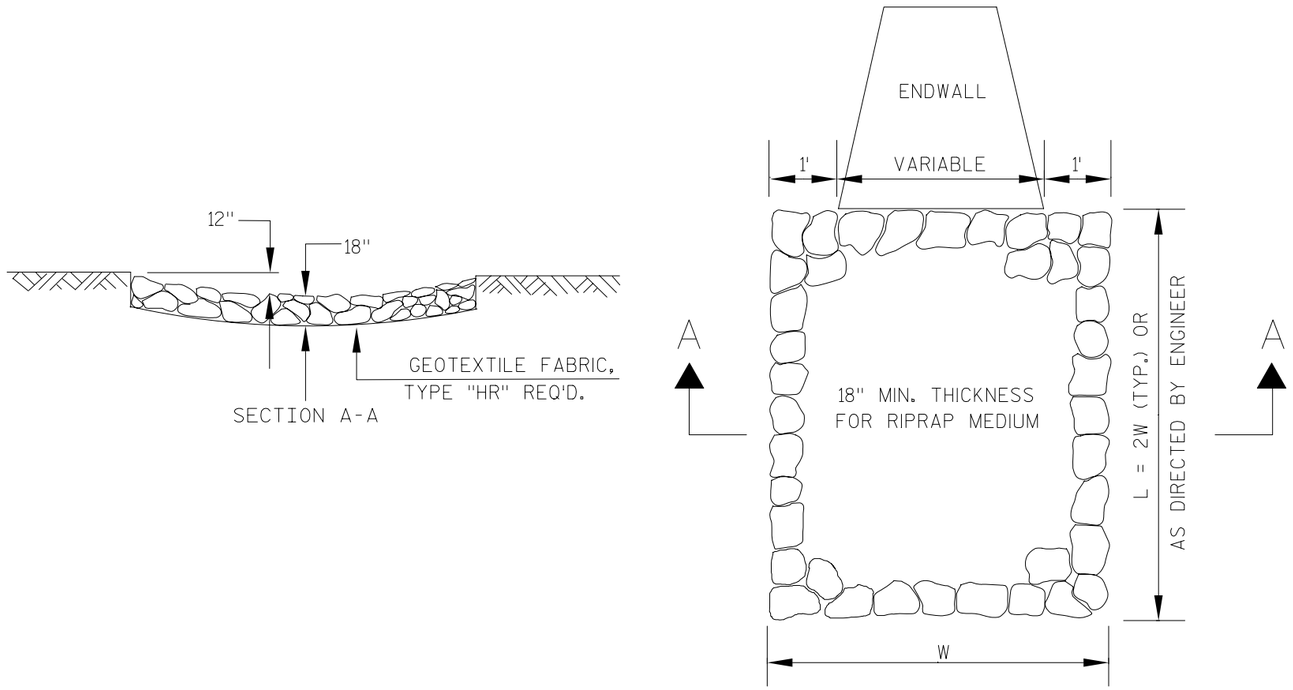
(TYPE 3-H INLET SHOWN)

(VARIES PER PLAN)

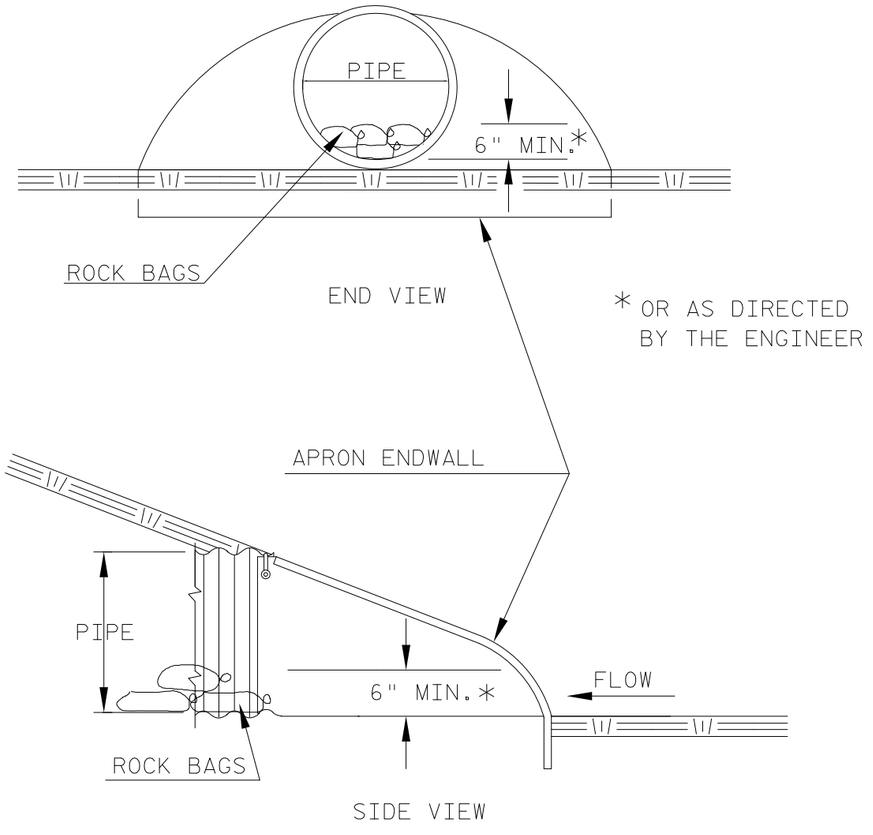
2



EROSION MAT DETAIL FOR DITCHES



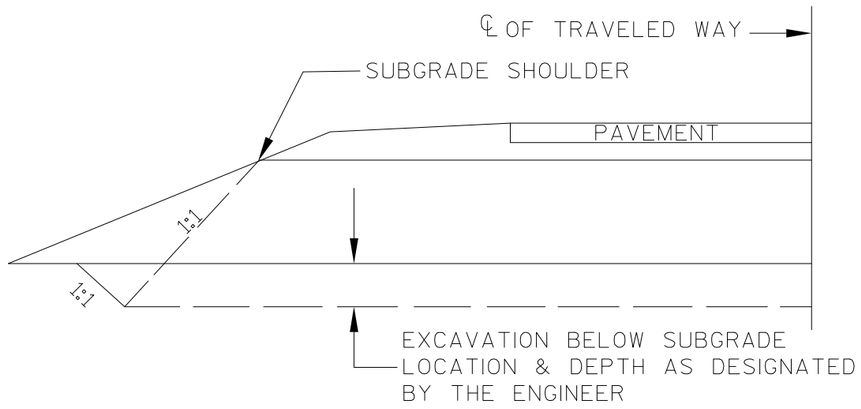
RIPRAP MEDIUM TREATMENT AT CULVERTS



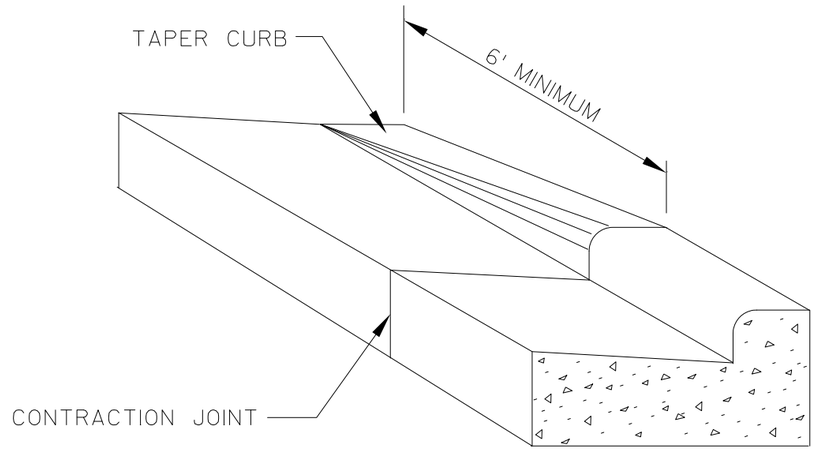
CULVERT PIPE CHECK

NOT TO SCALE

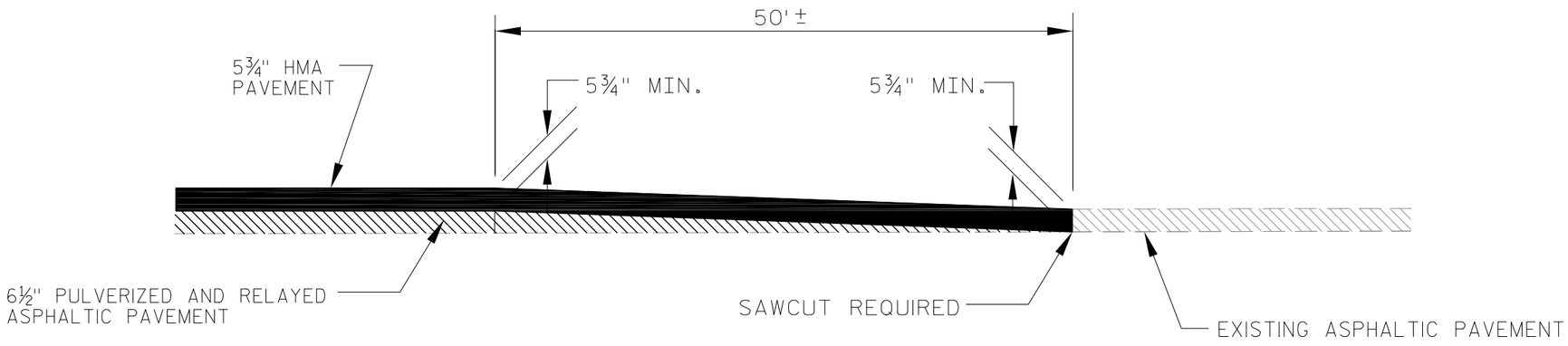
PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CONSTRUCTION DETAILS	SHEET NO: 11



DETAIL FOR EXCAVATION BELOW SUBGRADE



DETAIL OF CURB AND GUTTER TERMINI



OVERLAP JOINT, BUTTED DETAIL

NOT TO SCALE

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CONSTRUCTION DETAILS	SHEET NO: 12

2

SCALE
1" = 40'

CTH S
INTERSECTION DETAIL

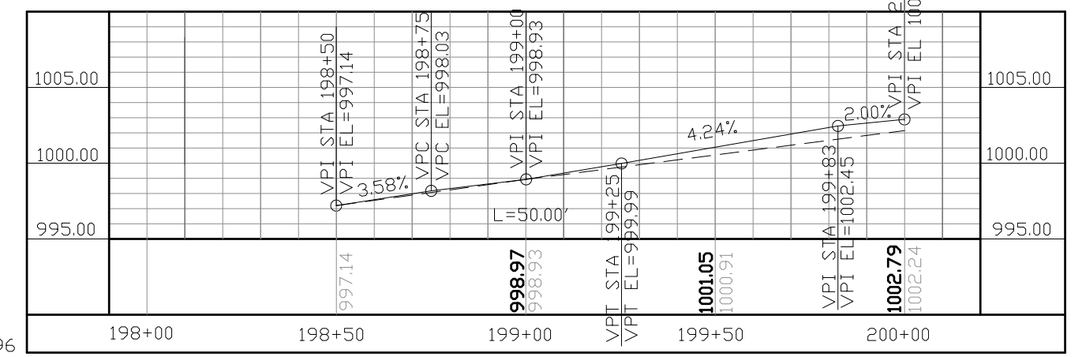
+01.00
TOC=995.26
5' 11' 11' 5'
+00.00
TOC=995.26
80'
CTH P
50'
SHIFT TAPER
R/W
+73.91
TOC=994.94
PAVEMENT MARKING
DIAGONAL EPOXY 12-INCH
WHITE (TYP.)
+49.35
TOC=994.72
+50.00
TOC=994.74
PAVEMENT MARKING
EPOXY 4-INCH
YELLOW, DOUBLE (TYP.)
SAWCUT & MATCH
EXISTING PAVEMENT
(TYP.)
CAUTION
CONC.
MADISON GAS
& ELECTRIC
80'
TURN BAY TAPER
ASPH.
7+00
+00.00
TOC=
994.23
+00.00
TOC=994.18
PAVEMENT MARKING
EPOXY 6-INCH
WHITE
TDS TELECOM
+68.91
TOC=993.99
5' 11' 10' 11' 5'
+50.00
TOC=993.98
+50.00
TOC=993.89
CONCRETE CURB &
GUTTER 30-INCH
TYPE D (TYP.)
PAVEMENT MARKING
WORDS EPOXY, WHITE
SLOPE INTERCEPTS
(TYP.)
125'
TURN LANE
+0.00
TOC=993.73
6+00
CTH P
+0.00
TOC=
993.64
PAVEMENT MARKING
ARROWS EPOXY TYPE 2,
WHITE (TYP.)
PAVEMENT MARKING
EPOXY 8-INCH, WHITE
R/W
BLDG.
CAUTION
1' 5' 11' 10' 11' 5' 1'
+65.05
TOC=993.48
STA. 5+75.17
69.00' R
REMOVING
PAVEMENT
MADISON GAS
& ELECTRIC
STA. 5+43.83
MATCH EXISTING
30" CONCRETE
CURB & GUTTER
+50.00
TOC=
993.48
TOC=
993.45
50'R
TOC=
992.26
CONCRETE CURB & GUTTER
30-INCH TYPE D (TYP.)
TOC=
992.50
TOC=
992.39
TOC=
991.03
74.5' LT
SAWCUT & MATCH
EXISTING PAVEMENT
MATCH EXISTING 30"
CONCRETE CURB & GUTTER
3" HMA PAVEMENT
TYPE 3 MT 58-28S
W. MINERAL POINT RD
BOP Sta. = 5+05.0000
PAVEMENT MARKING
STOP LINE EPOXY
18-INCH, WHITE (TYP.)
CTH S
72' RT
SAWCUT & MATCH
EXISTING PAVEMENT
R/W
STA. 4+87
SAWCUT & MATCH
EXISTING PAVEMENT
CTH P/S
BLDG.
REMOVING PAVEMENT
R/W
PAVEMENT MARKING
EPOXY 4-INCH
YELLOW, DOUBLE (TYP.)
BLDG.

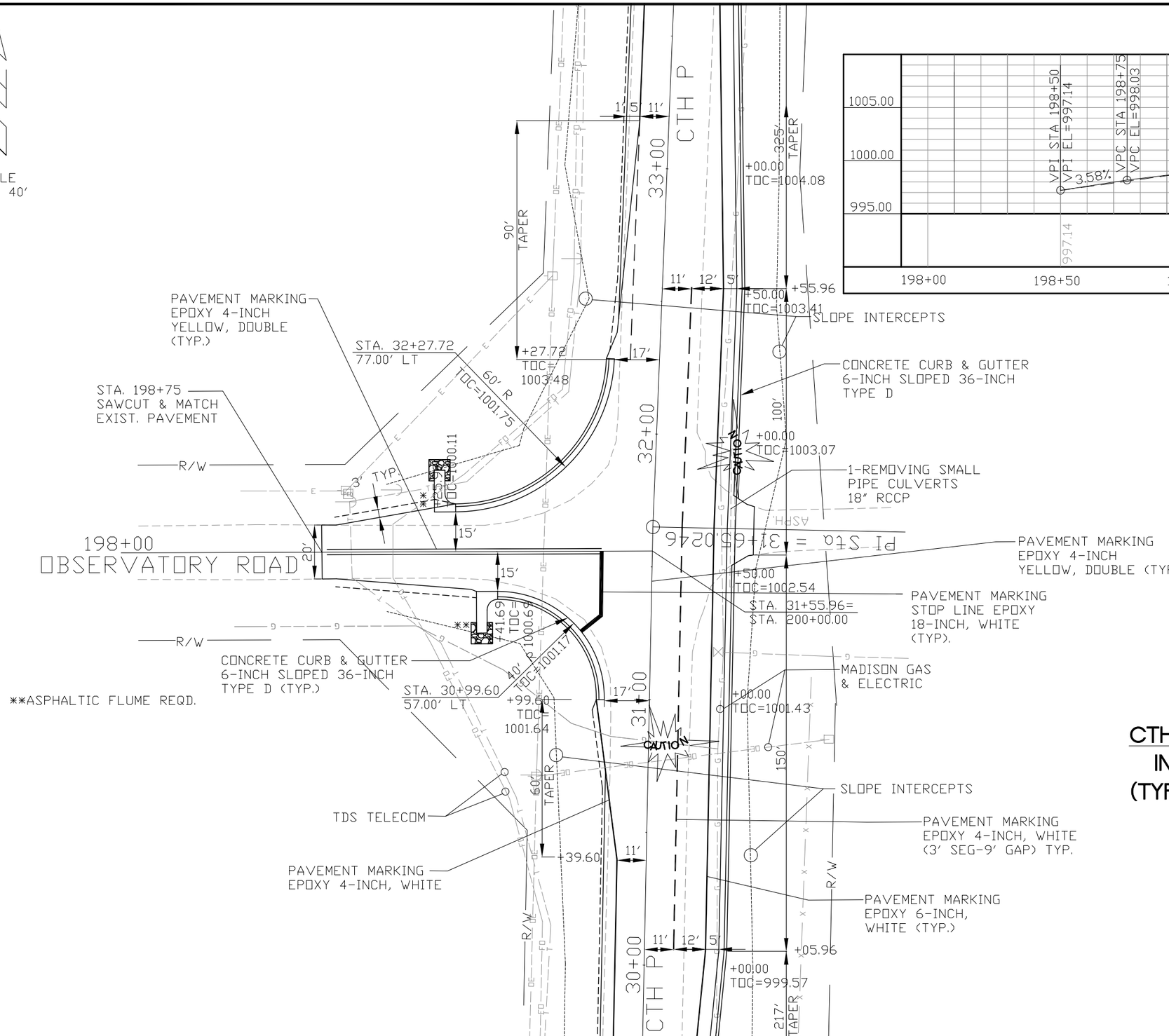
PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	INTERSECTION DETAIL	SHEET NO: 13

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\cth p (pine bluff to cross plains 2016.dwg
PLOT DATE: 1/27/2016
PLOT BY: DANE COUNTY HIGHWAY DEPT.
PLOT SCALE: NONE
WISDOT/CADDS SHEET 42

2

SCALE
1″ = 40′





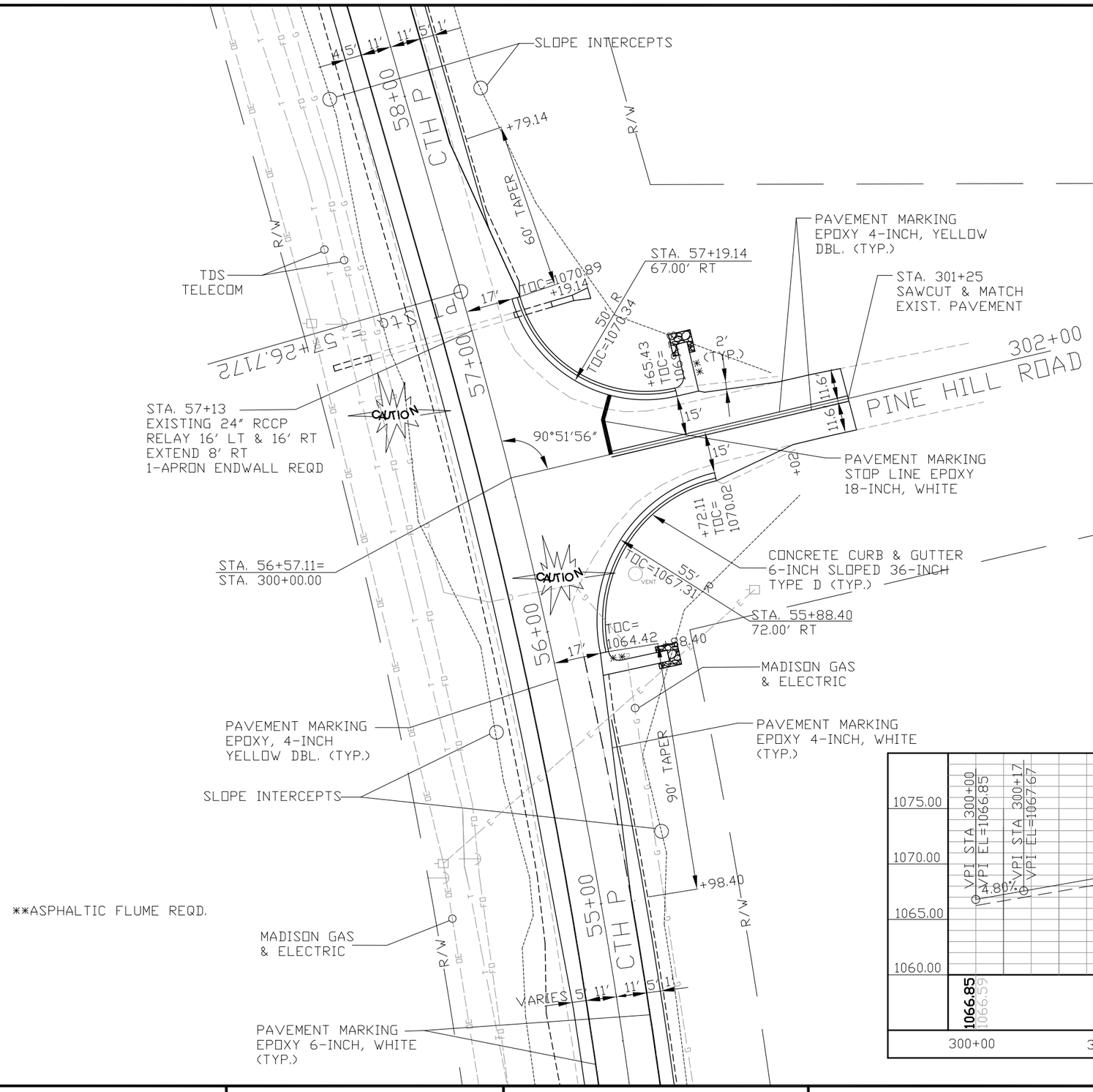
CTH P / OBSERVATORY RD
INTERSECTION DETAIL
(TYPE D W/ BYPASS LANE)

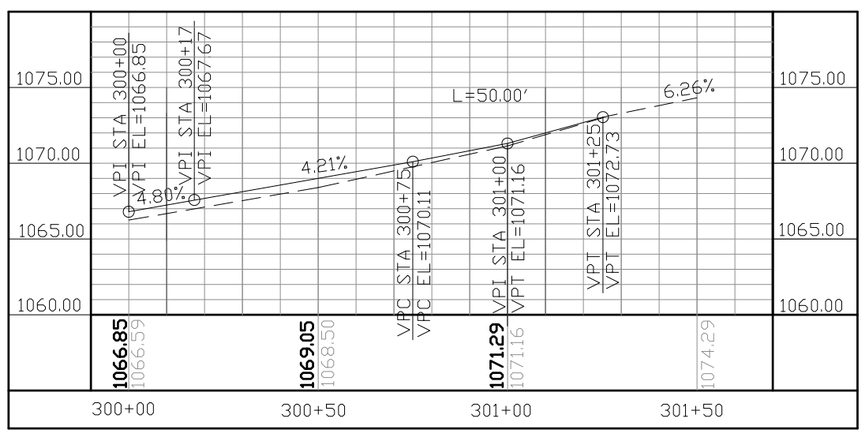
PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	INTERSECTION DETAIL	SHEET NO: 14

2

SCALE
1" = 40'

CTH P / PINE HILL ROAD
INTERSECTION DETAIL
(TYPE D)



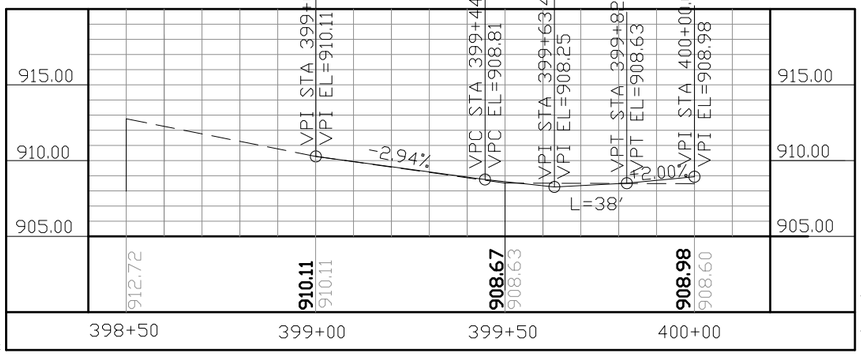


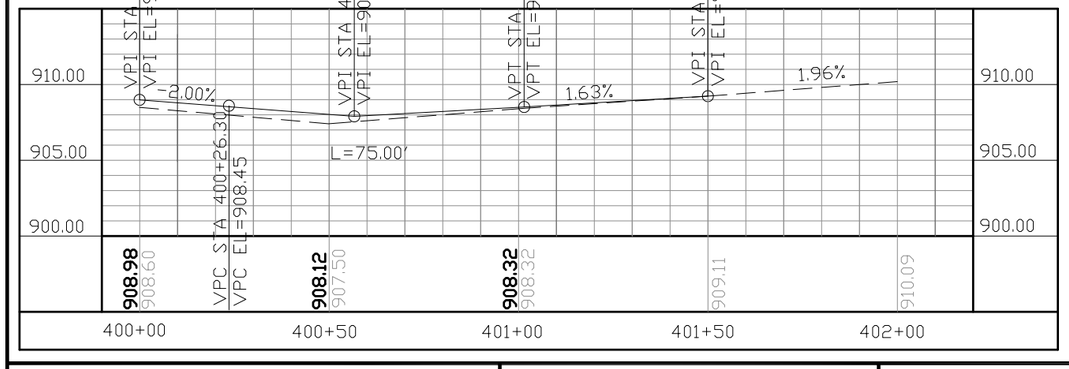
PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	INTERSECTION DETAIL	SHEET NO: 15

PLOT DATE: 2/8/2016 PLOT BY: DANE COUNTY HIGHWAY DEPT. PLOT SCALE: NONE

SCALE
1" = 40'

CTH P / STAGECOACH ROAD
INTERSECTION DETAIL
(TYPE B2 (EAST) / TYPE C MODIFIED (WEST)





R/W
GRAV
TDS TELECOM
PAVEMENT MARKING EPOXY 6-INCH, WHITE (TYP.)
MADISON GAS & ELECTRIC
PAVEMENT MARKING EPOXY 4-INCH, WHITE (TYP.)
STA. 399+10
SAWCUT & MATCH EXIST. PAVEMENT
STA. 143+50.08=
STA. 400+00.00
STA. 143+47.31=
STA. 400+00.00
STA. 142+96.37
57.00' LT
60' TAPER
40' R
CAUTION
17'
88°52'57"
STAGECOACH R
19.5'
12'
3' (TYP.)
12'
50' R
PAVEMENT MARKING EPOXY 4-INCH, YELLOW DBL. (TYP.)
STA. 144+10.08
67.00' LT
90' TAPER
139+00
140+00
141+00
142+00
143+00
144+00
145+0
CTH P
CTH P
+87.40
+24.90
PAVEMENT MARKING EPOXY 4-INCH, WHITE (3' SEG-9' GAP)
+74.90
187.5' TAPER
200' TURN LANE
PAVEMENT MARKING EPOXY 8-INCH, WHITE (3' SEG-9' GAP)
SLOPE INTERCEPTS (TYP.)
PAVEMENT MARKING EPOXY 8-INCH, WHITE
11'
5'
1'
2'
10'
5'
11'
+74.90
TOC= 908.8
TOC= 907.94
STA. 142+74.90
86.00' RT
50' R
+83.84
TOC=908.18
15'
3' (TYP.)
23'
CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE D (TYP.)
STA. 401+54
SAWCUT & MATCH EXIST. PAVEMENT
88°23'15"
26'
+04.33
TOC=908.8
100' TAPER
+04.33
15'
+67.65
TOC=908.12
STA. 144+04.33
66.00' RT
R/W
SLOPE INTERCEPTS (TYP.)
PAVEMENT MARKING STOP LINE EPOXY 18-INCH, WHITE (TYP.)
**ASPHALTIC FLUME REQD.
402+00
STAGECOACH RD

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	INTERSECTION DETAIL	SHEET NO: 16

SCALES:
1" = 40' HOR
1" = 5' VER

REMOVE EXISTING MANHOLE
REMOVE EXISTING INLET

REMOVE EXISTING
36" SSPRC

36'-STORM SEWER PIPE
REINFORCED CONCRETE
CLASS III 36-INCH

R/W

BOP = 5+05.00
N = 477826.38
E = 748582.75

STA. 5+26.60, 75.53' L
1-APRON ENDWALLS FOR
CULVERT PIPE SLOPED SIDE
DRAINS STEEL 36-INCH 6 TO 1

W MINERAL POINT RD

60'-RELAID STORM
SEWER 24-INCH

R/W

RECONSTRUCT
INLET

STA. 5+23.42, 38.62' LT
1-MANHOLES 8FT-DIA, H
1.0

6+00

CTH P

CTH P/S

REMOVE EXISTING
38"X57" CMCP

82.5' STORM SEWER PIPE REINFORCED
CONCRETE HORIZONTAL ELIPTICAL
CLASS HE-III 38X60-INCH

BOP STA. 5+05.0000

PI STA = 10+10.93
N = 478332.21
E = 748593.23
I = 01°00'36"L

2.0
STA. 5+30.73, 45.19' RT
1-MANHOLES 8FT-DIA, H

R/W

CTH S

PI STA = 11+28.65
N = 478449.93
E = 748593.59
I = 00°58'43"R

REMOVE EXISTING
38"X57" CMCP

248' STORM SEWER PIPE
REINFORCED CONCRETE
HORIZONTAL ELIPTICAL
CLASS HE-III 38X60-INCH

STA. 5+35.60, 288.70' RT
1-APRON ENDWALLS FOR
PIPE ARCH SLOPED SIDE
DRAINS STEEL
57X38-INCH 6 TO 1

R/W

SCALES:
1" = 50' HOR
1" = 5' VER

1000.00
995.00
990.00
985.00
980.00

5+00 5+50 6+00 6+50 7+00 7+50 8+00 8+50 9+00 9+50 10+00 10+50 11+00 11+50 12+00

1.0
992.35
TOC

2.0
991.85
TOC

60' RELAID STORM
SEWER 24-INCH
@ 3.17%

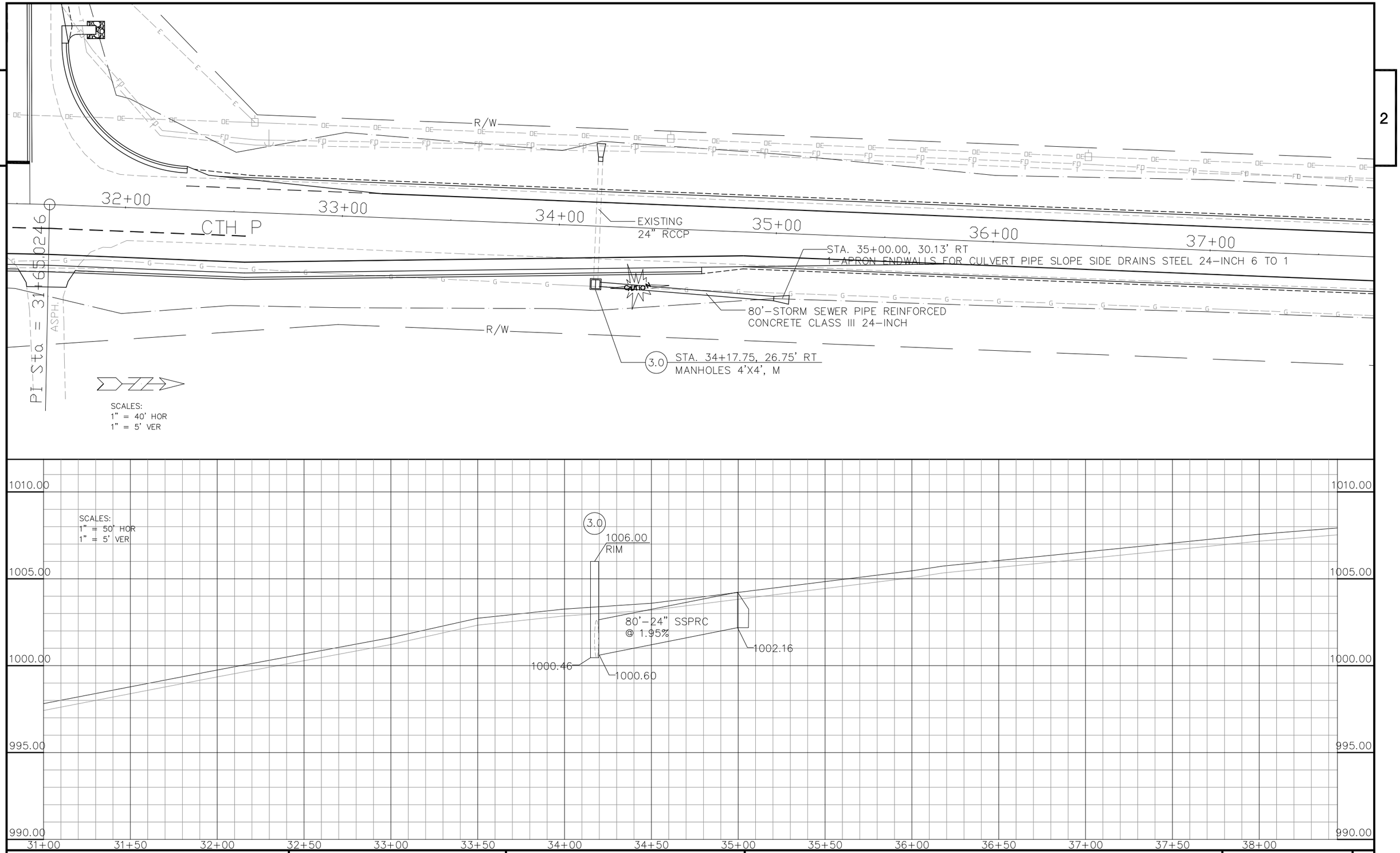
989.90
990.20
988.00
986.33
986.23
985.40
985.30
982.82

36'-36" SSPRC
@ 10.75%

82.5'-38X60-INCH
SSPRCHE @ 1.00%

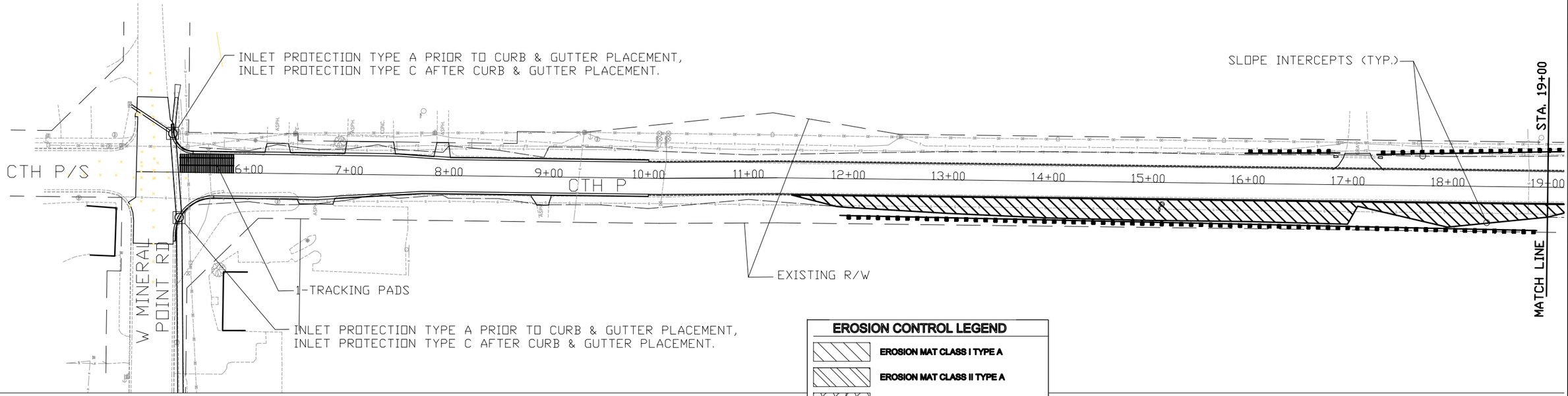
248'-38X60-INCH
SSPRCHE @ 1.00%

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	STORM SEWER	SHEET NO: 17



PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	STORM SEWER	SHEET NO: 18

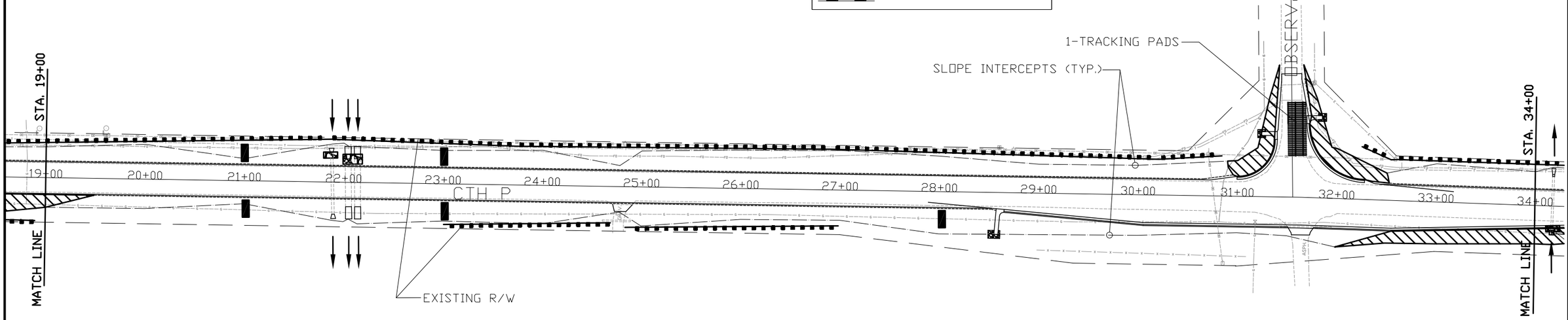
SCALE 1" = 100'



EROSION CONTROL LEGEND

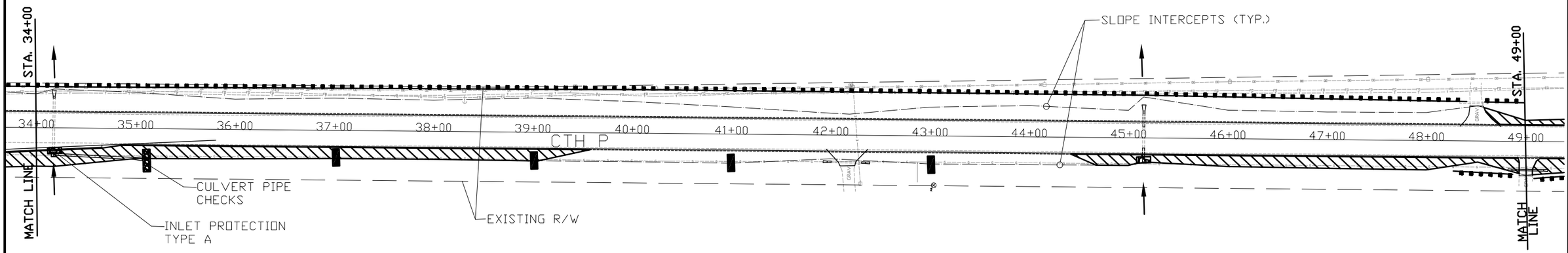
- EROSION MAT CLASS I TYPE A
- EROSION MAT CLASS II TYPE A
- CULVERT PIPE CHECKS
- TEMPORARY DITCH CHECKS
- SILT FENCE

SCALE 1" = 100'



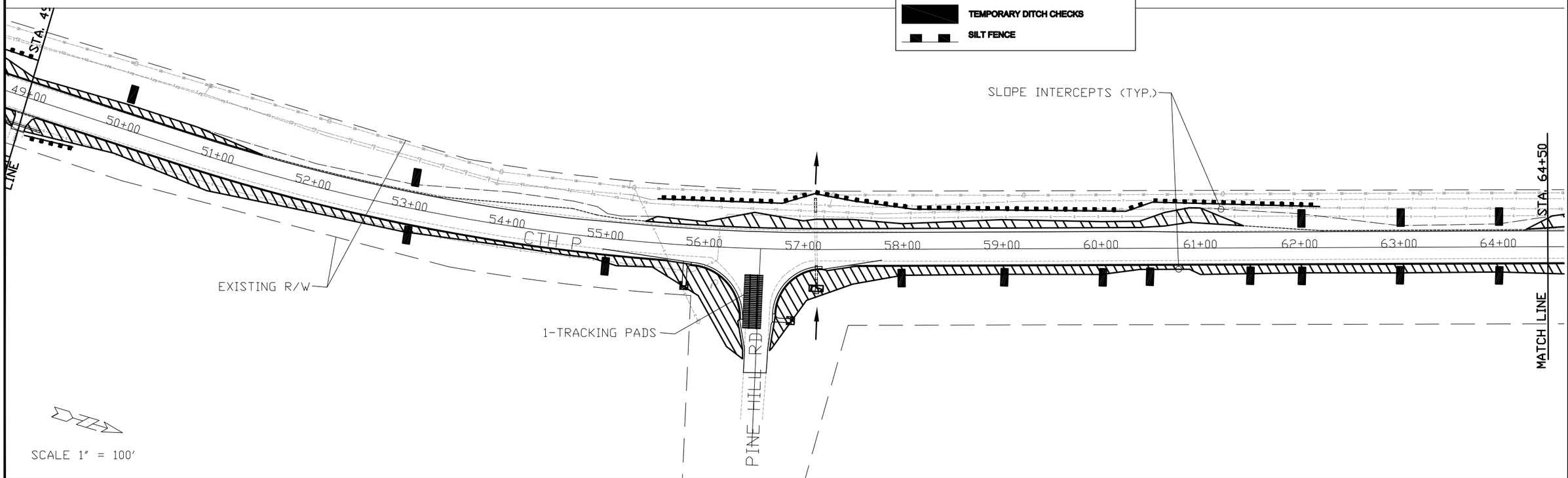
PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	EROSION CONTROL	SHEET NO: 19 E

SCALE 1" = 100'



EROSION CONTROL LEGEND

- EROSION MAT CLASS I TYPE A
- EROSION MAT CLASS II TYPE A
- CULVERT PIPE CHECKS
- TEMPORARY DITCH CHECKS
- SILT FENCE

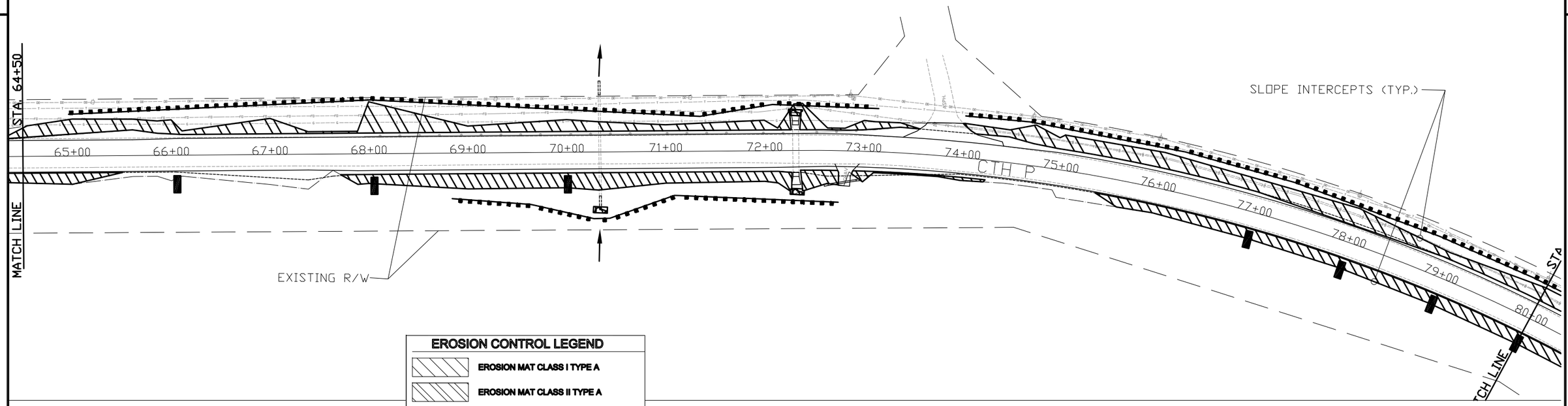


SCALE 1" = 100'

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	EROSION CONTROL	SHEET NO: E

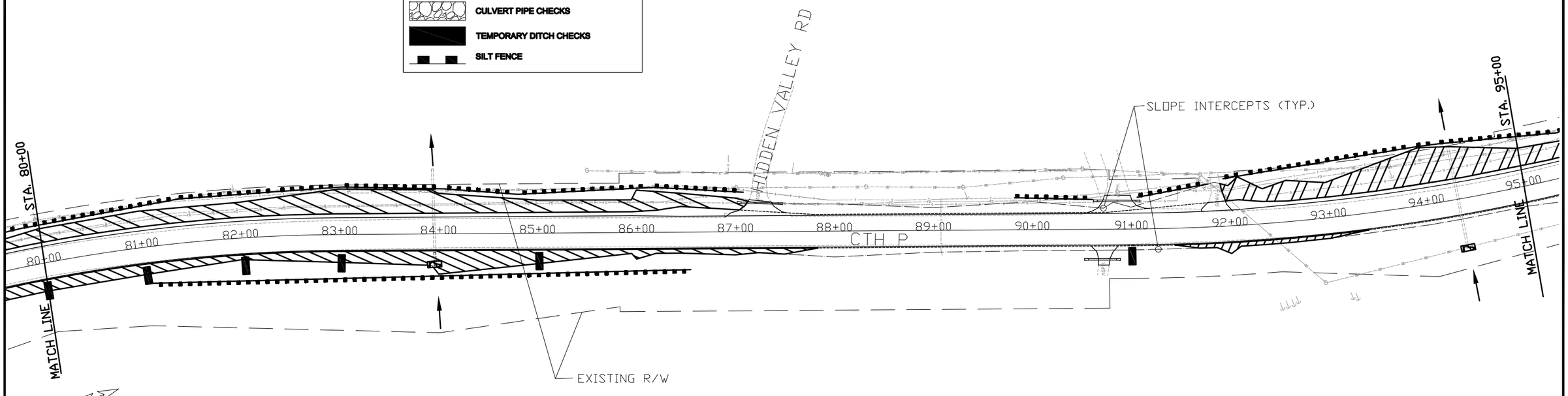
FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\erosion-p.dwg
PLOT DATE: 1/27/2016
PLOT BY: DANE COUNTY HIGHWAY DEPT.
PLOT SCALE: NONE
WISDOT/CADDS SHEET 42

SCALE 1" = 100'



EROSION CONTROL LEGEND

- EROSION MAT CLASS I TYPE A
- EROSION MAT CLASS II TYPE A
- CULVERT PIPE CHECKS
- TEMPORARY DITCH CHECKS
- SILT FENCE



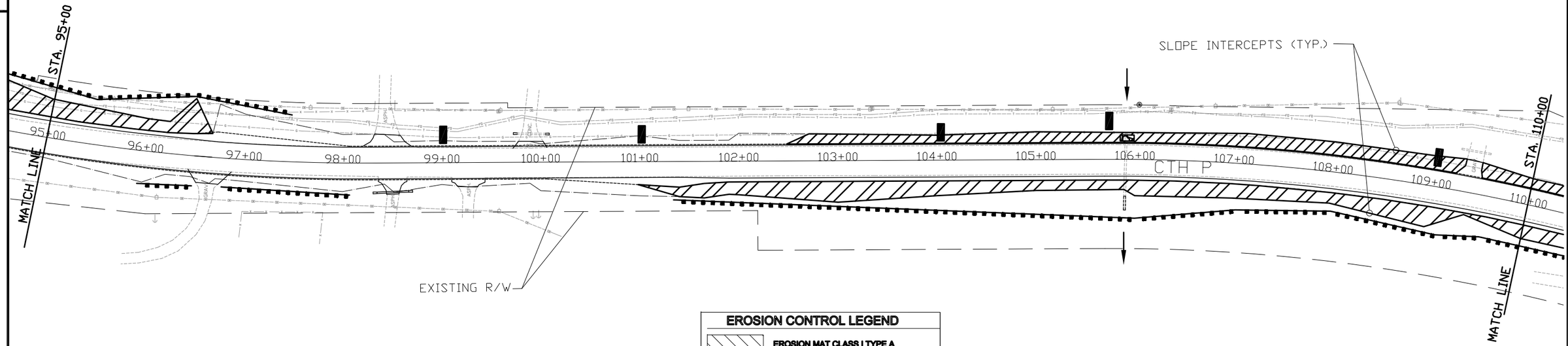
SCALE 1" = 100'

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	EROSION CONTROL	SHEET NO: E

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\erosion-p.dwg | PLOT DATE: 1/27/2016 | PLOT BY: DANE COUNTY HIGHWAY DEPT. | PLOT SCALE: NONE | WISDOT/CADDS SHEET 42

2

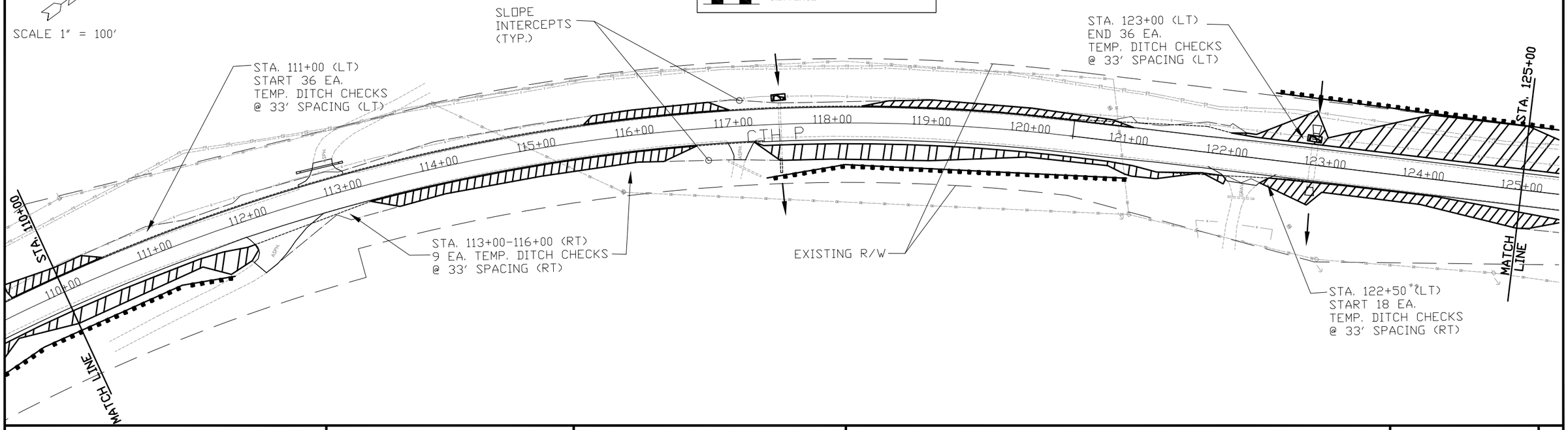
SCALE 1" = 100'



EROSION CONTROL LEGEND

- EROSION MAT CLASS I TYPE A
- EROSION MAT CLASS II TYPE A
- CULVERT PIPE CHECKS
- TEMPORARY DITCH CHECKS
- SILT FENCE

SCALE 1" = 100'



PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	EROSION CONTROL	SHEET NO: E

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth e to ush 14\erosion-p.dwg
PLOT DATE: 1/27/2016
PLOT BY: DANE COUNTY HIGHWAY DEPT.
PLOT SCALE: NONE
WISDOT/CADDS SHEET 42

2

SCALE 1" = 100'

STA. 125+00

MATCH LINE

STA. 127+00-129+00 (LT)
6 EA. TEMP. DITCH CHECKS
@ 33' SPACING (LT)

STA. 128+00 (RT)
END 18 EA.
TEMP. DITCH CHECKS
@ 33' SPACING (RT)

SLOPE INTERCEPTS (TYP.)

125+00 126+00 127+00 128+00 129+00 130+00 131+00 132+00 133+00 134+00 135+00 136+00 137+00 138+00 139+00 140+00 141+00

CTH P

EXISTING R/W

2

EROSION CONTROL LEGEND

- EROSION MAT CLASS I TYPE A
- EROSION MAT CLASS II TYPE A
- CULVERT PIPE CHECKS
- TEMPORARY DITCH CHECKS
- SILT FENCE

SCALE 1" = 100'

1-TRACKING PADS

STA. 141+00

MATCH LINE

141+00 142+00 143+00 144+00 145+00 146+00 147+00 148+00 149+00 150+00 151+00 152+00 153+00 154+00 155+00 156+00

CTH P

SLOPE INTERCEPTS (TYP.)

EXISTING R/W

1-TRACKING PADS

STAGECOACH RD

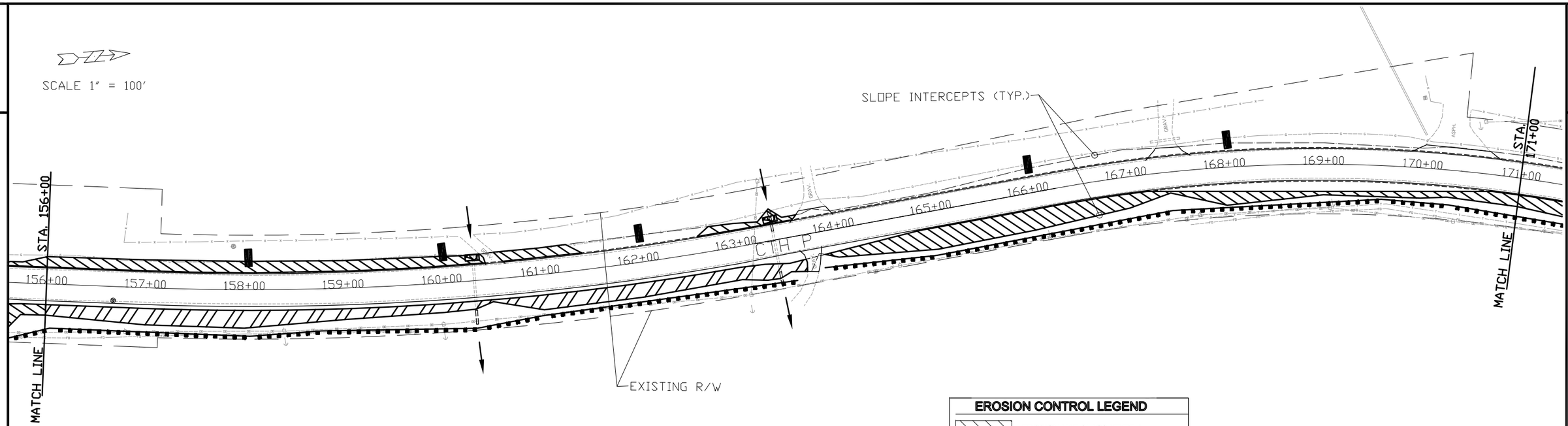
STA. 156+00

MATCH LINE

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	EROSION CONTROL	SHEET NO: E

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\erosion-p.dwg
PLOT DATE: 1/27/2016
PLOT BY: DANE COUNTY HIGHWAY DEPT.
PLOT SCALE: NONE
WISDOT/CADDS SHEET 42

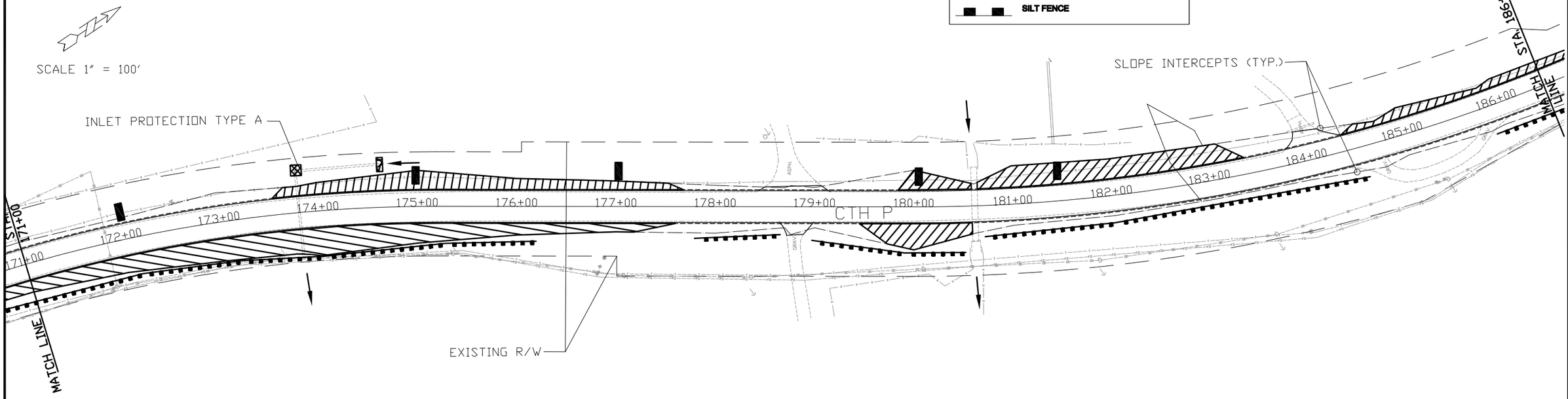
SCALE 1" = 100'



EROSION CONTROL LEGEND

- EROSION MAT CLASS I TYPE A
- EROSION MAT CLASS II TYPE A
- CULVERT PIPE CHECKS
- TEMPORARY DITCH CHECKS
- SILT FENCE

SCALE 1" = 100'

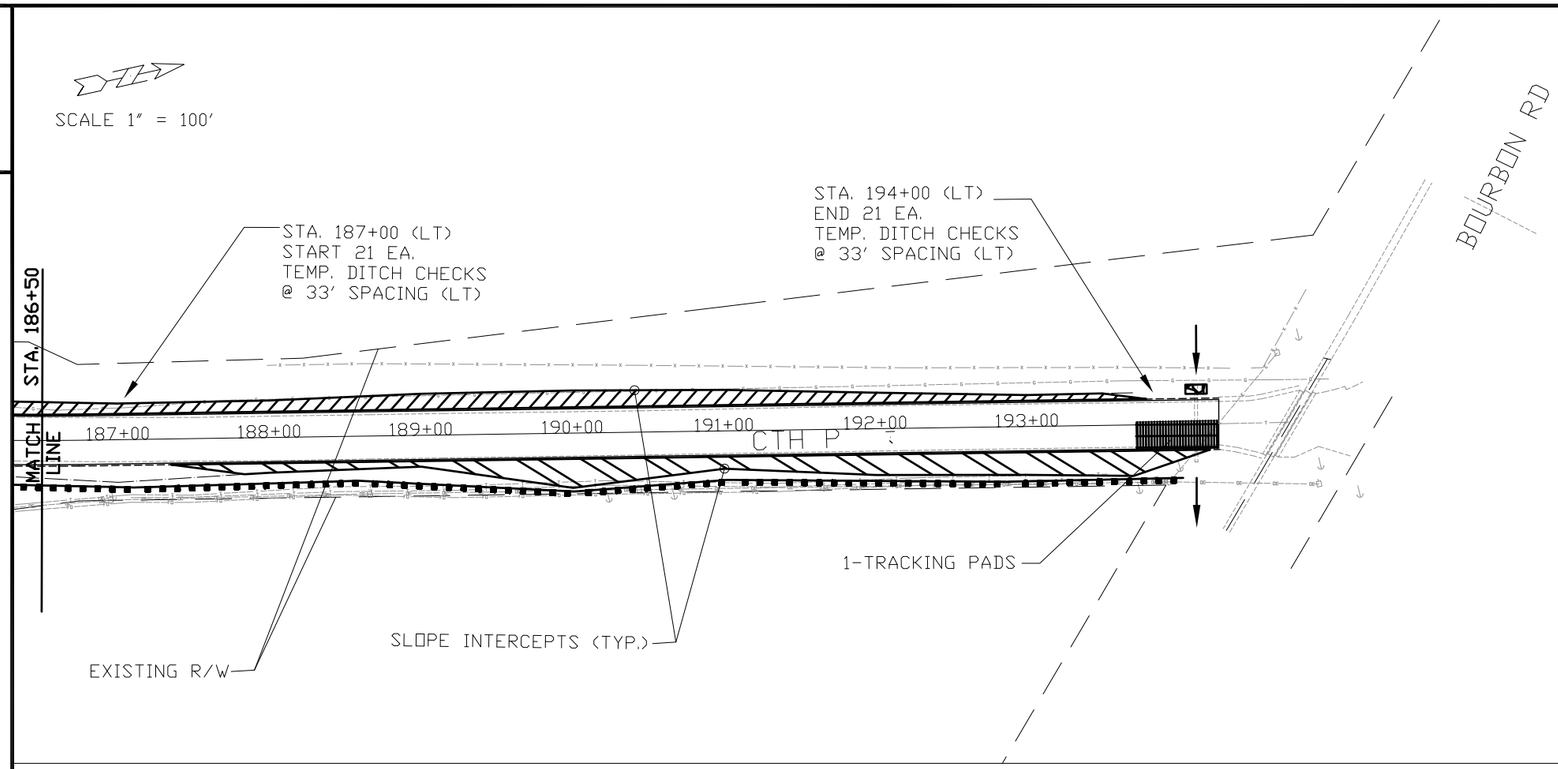


PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	EROSION CONTROL	SHEET NO: E

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth p to ush 14\erosion-p.dwg
PLOT DATE: 1/27/2016
PLOT BY: DANE COUNTY HIGHWAY DEPT.
PLOT SCALE: NONE
WISDOT/CADDS SHEET 42

2

SCALE 1" = 100'



EROSION CONTROL LEGEND

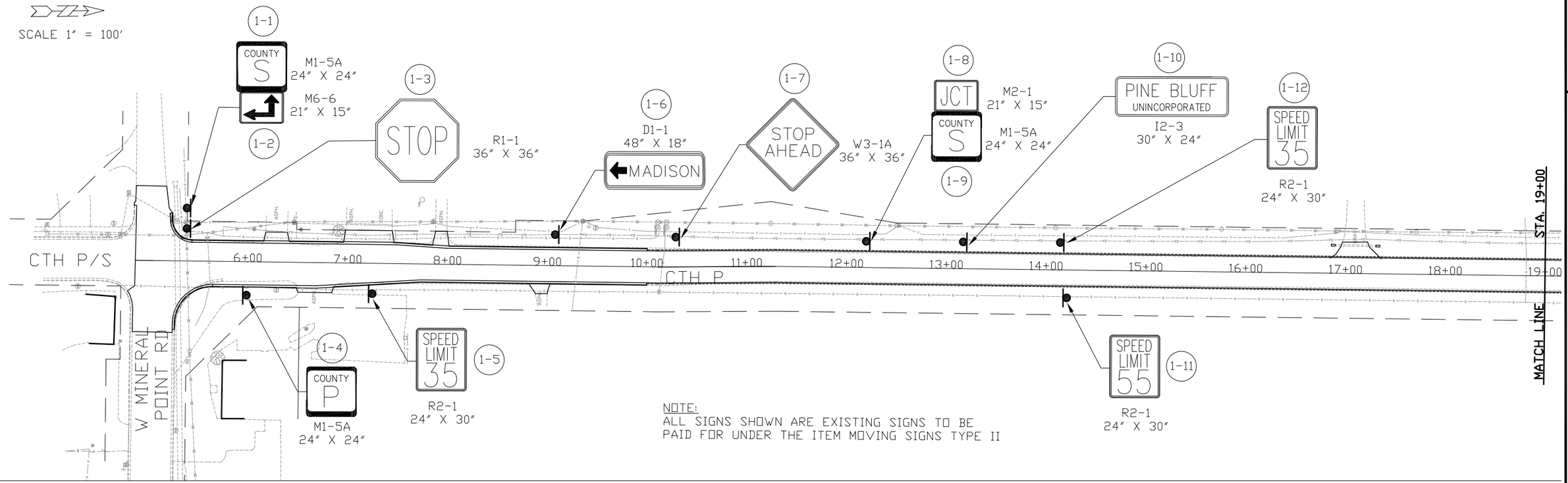
- EROSION MAT CLASS I TYPE A
- EROSION MAT CLASS II TYPE A
- CULVERT PIPE CHECKS
- TEMPORARY DITCH CHECKS
- SILT FENCE

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	EROSION CONTROL	SHEET NO: E

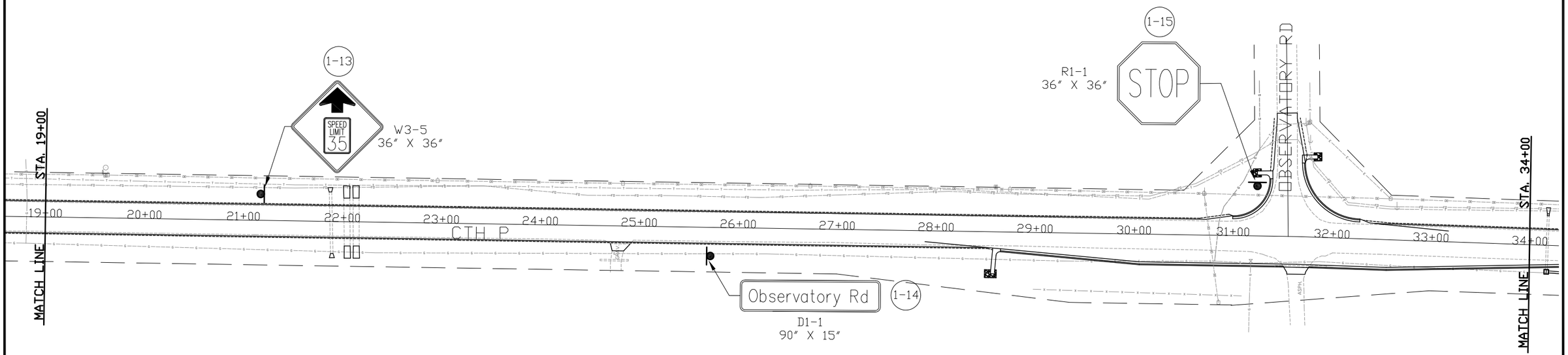
FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth e to ush 14\erosion-p.dwg
PLOT DATE: 1/27/2016
PLOT BY: DANE COUNTY HIGHWAY DEPT.
PLOT SCALE: NONE
WISDOT/CADDS SHEET 42

2

SCALE 1" = 100'



NOTE:
ALL SIGNS SHOWN ARE EXISTING SIGNS TO BE PAID FOR UNDER THE ITEM MOVING SIGNS TYPE II

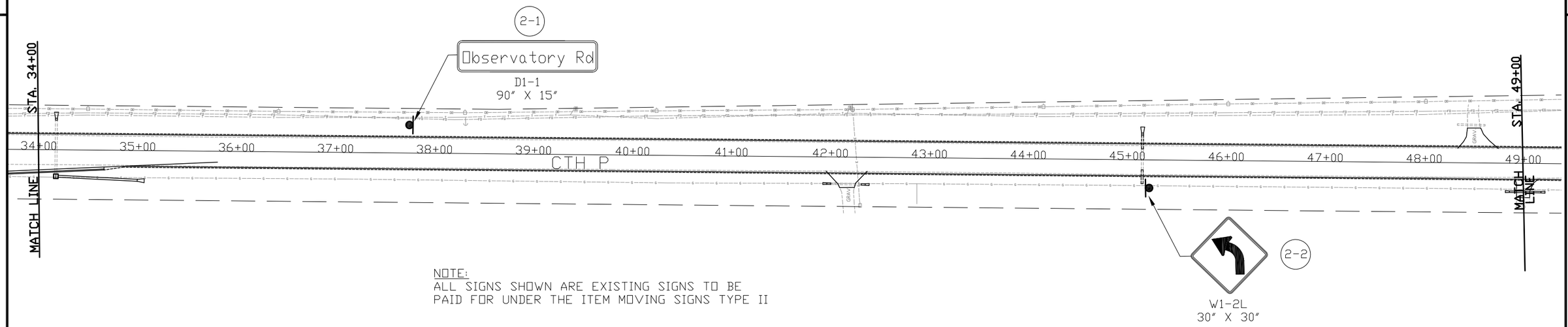


SCALE 1" = 100'

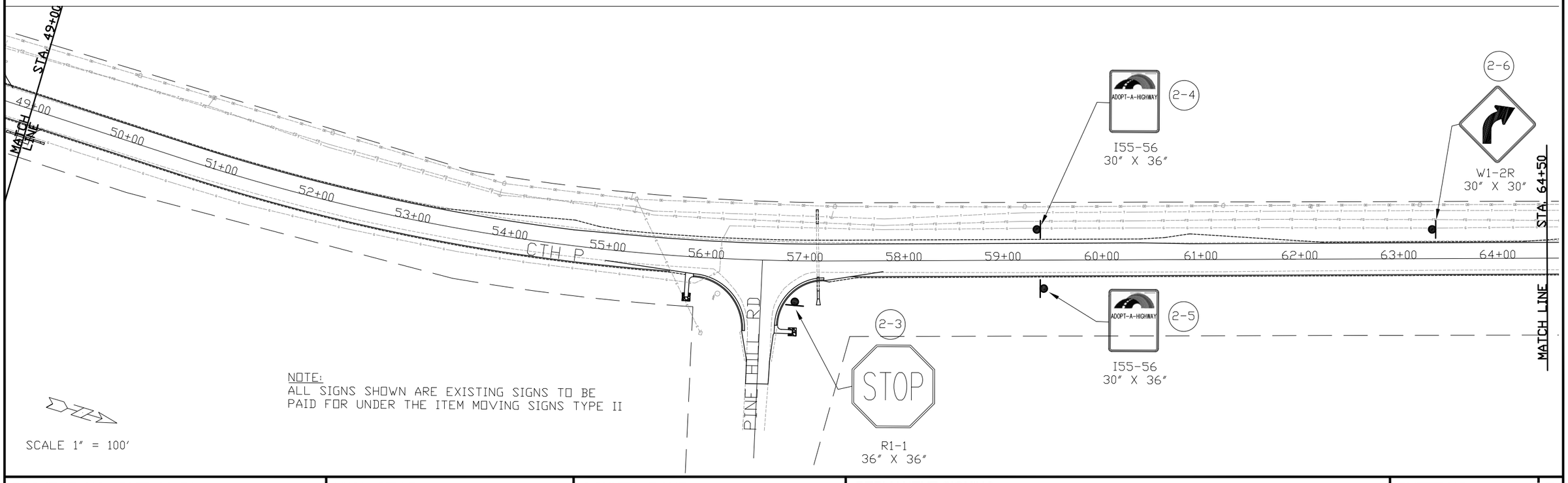
NOTE:
ALL SIGNS SHOWN ARE EXISTING SIGNS TO BE PAID FOR UNDER THE ITEM MOVING SIGNS TYPE II

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	PERMANENT SIGNING	SHEET NO: 26 E

SCALE 1" = 100'



NOTE:
ALL SIGNS SHOWN ARE EXISTING SIGNS TO BE
PAID FOR UNDER THE ITEM MOVING SIGNS TYPE II



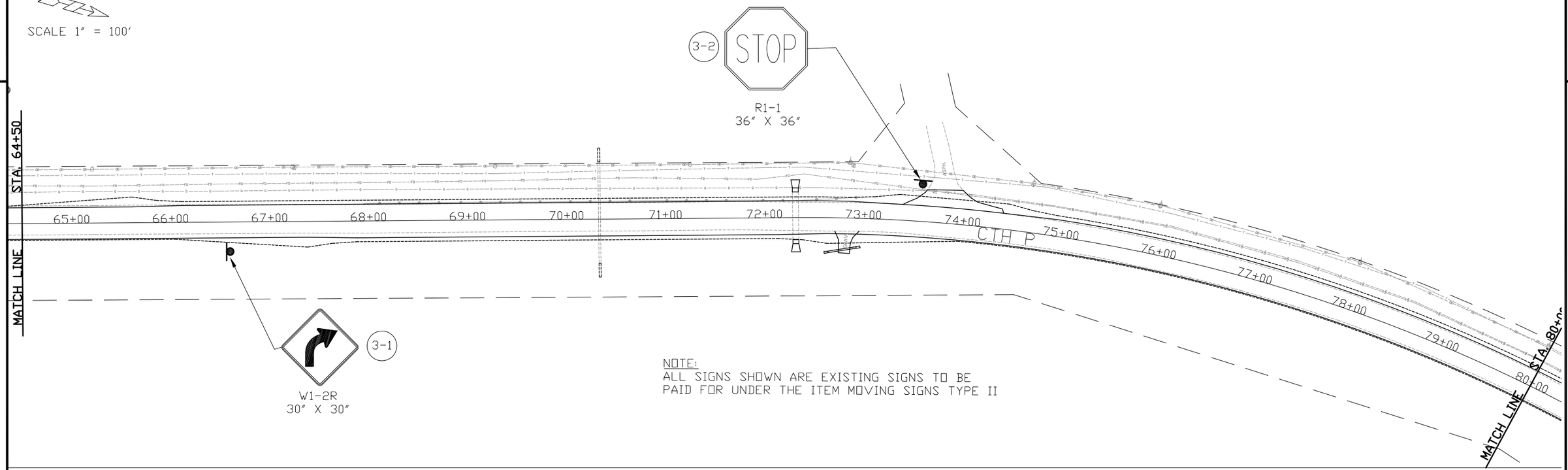
NOTE:
ALL SIGNS SHOWN ARE EXISTING SIGNS TO BE
PAID FOR UNDER THE ITEM MOVING SIGNS TYPE II

SCALE 1" = 100'

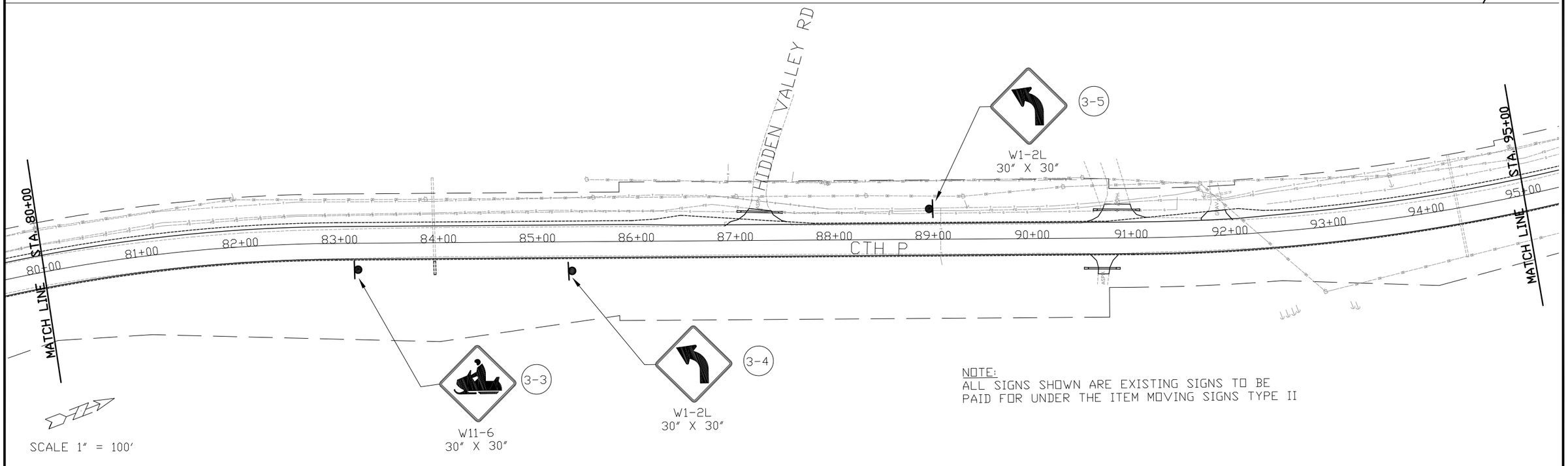
PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	PERMANENT SIGNING	SHEET NO: 27 E

2

SCALE 1" = 100'



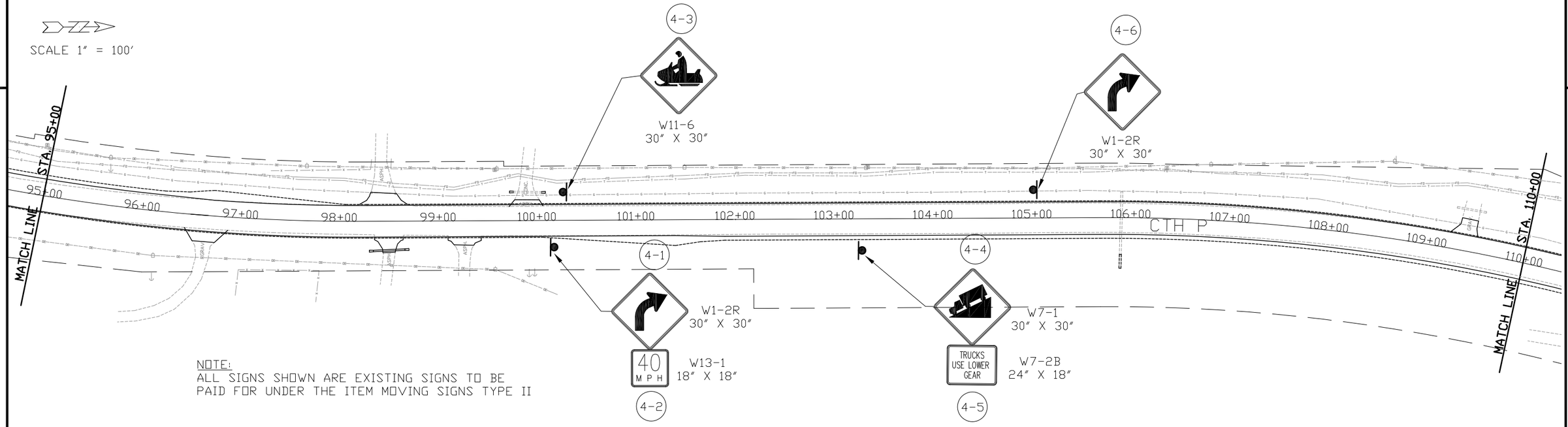
NOTE:
ALL SIGNS SHOWN ARE EXISTING SIGNS TO BE
PAID FOR UNDER THE ITEM MOVING SIGNS TYPE II

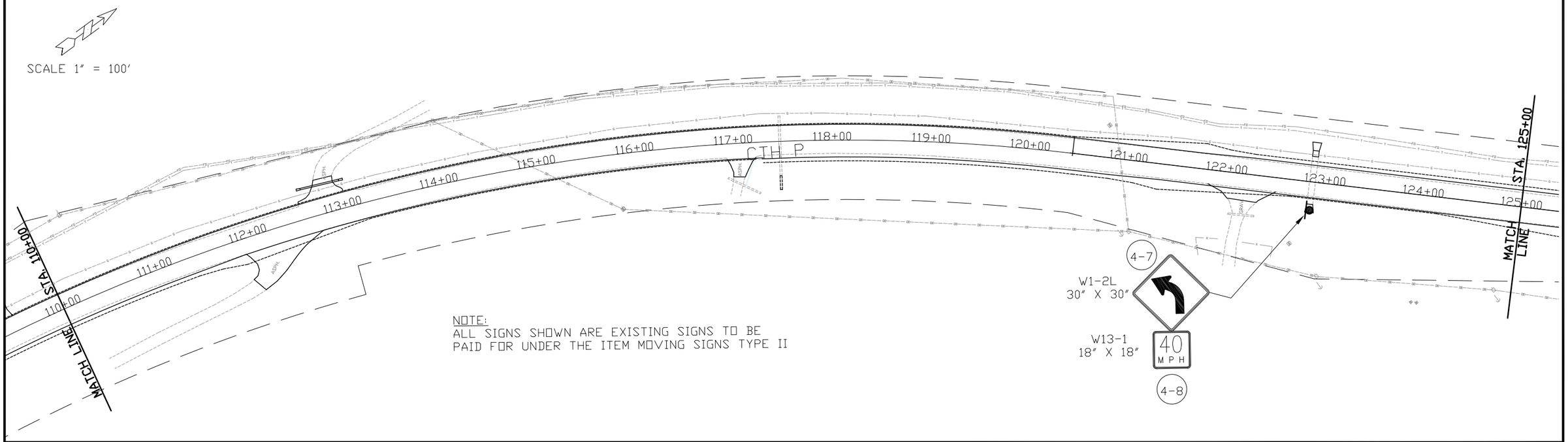


SCALE 1" = 100'

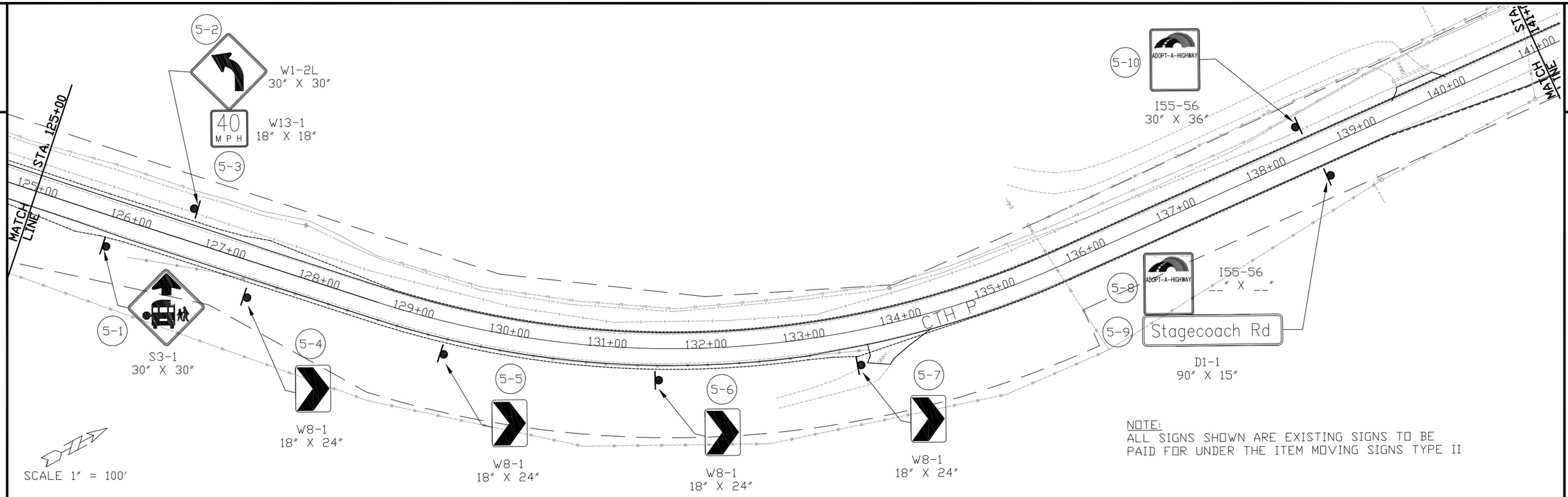
NOTE:
ALL SIGNS SHOWN ARE EXISTING SIGNS TO BE
PAID FOR UNDER THE ITEM MOVING SIGNS TYPE II

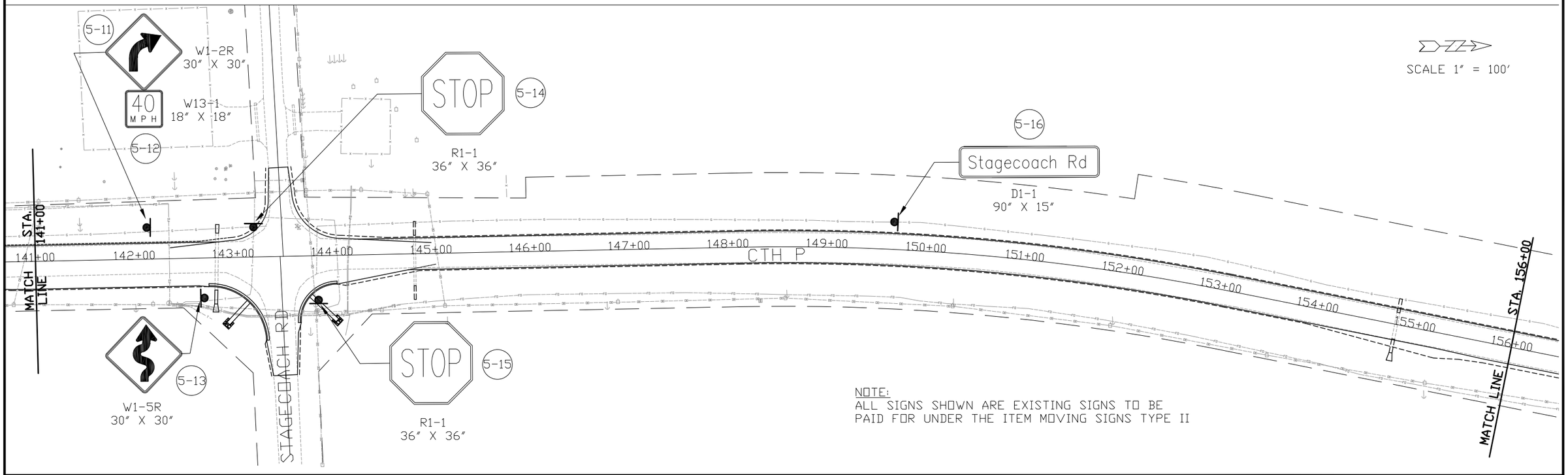
PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	PERMANENT SIGNING	SHEET NO: 28 E





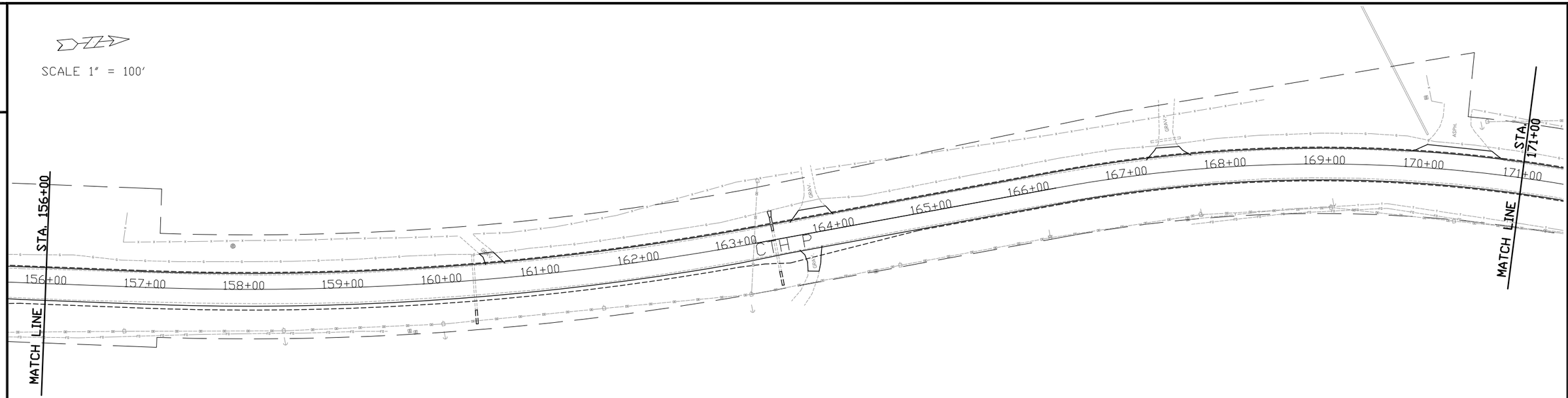
PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	PERMANENT SIGNING	SHEET NO: 29 E



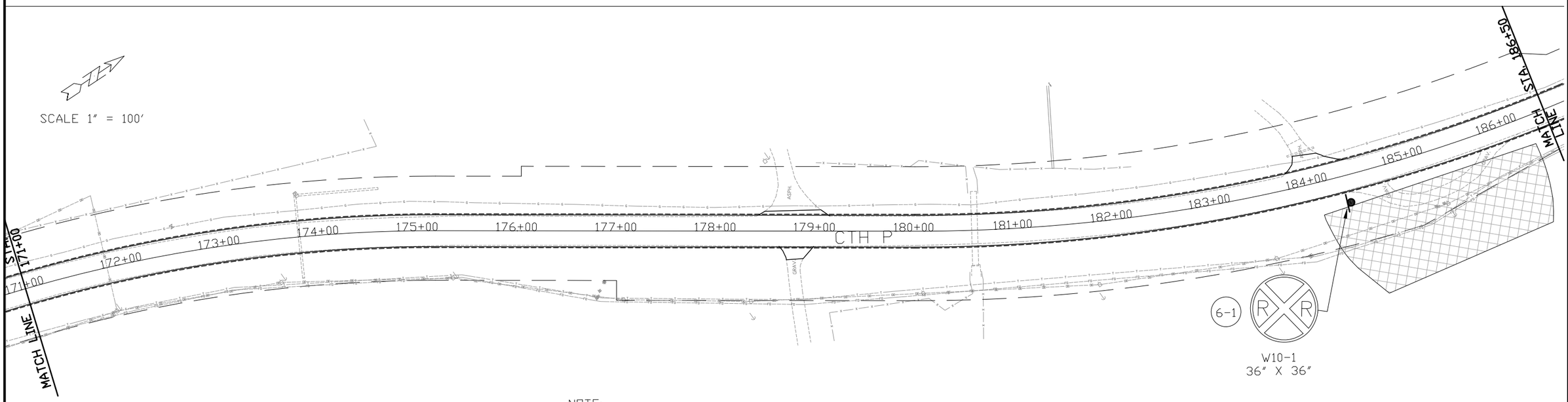


PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	PERMANENT SIGNING	SHEET NO: 30 E

SCALE 1" = 100'



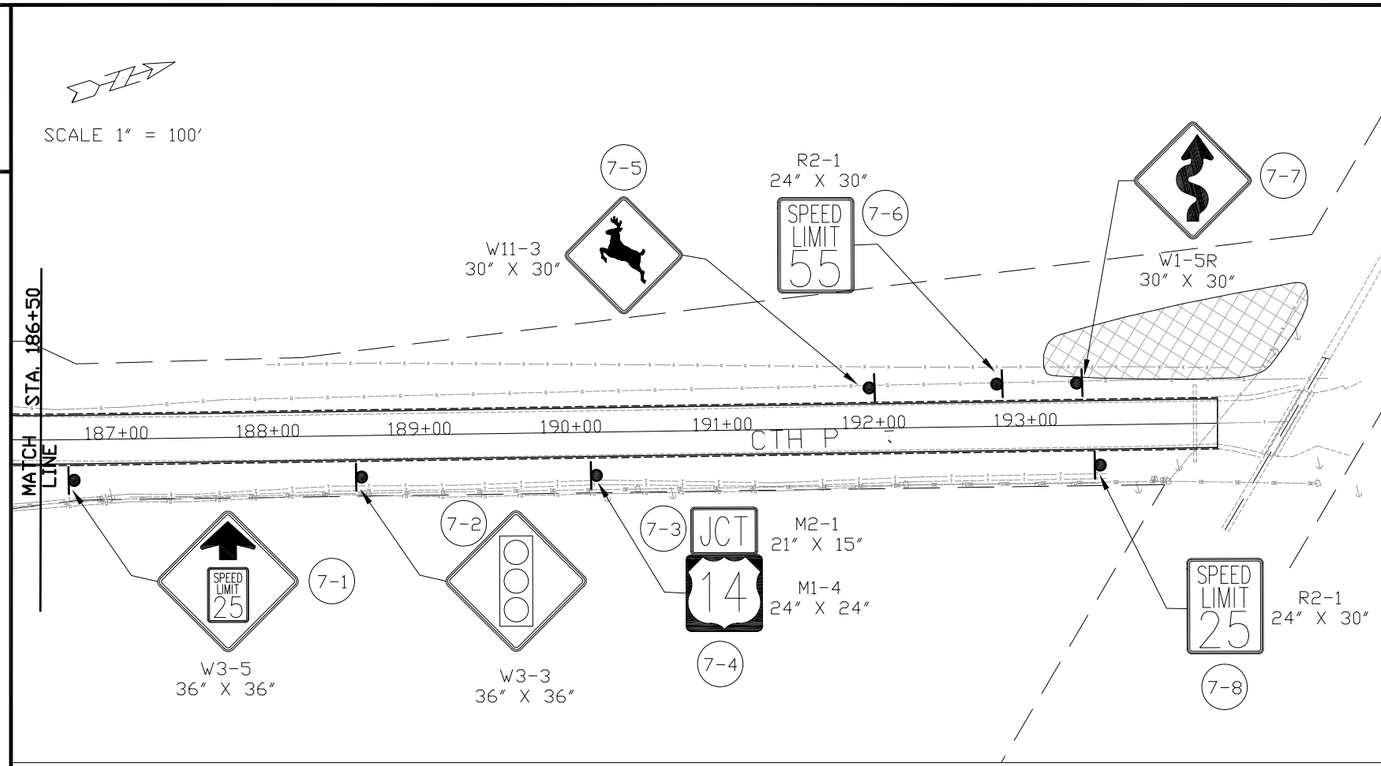
SCALE 1" = 100'



NOTE:
ALL SIGNS SHOWN ARE EXISTING SIGNS TO BE PAID FOR UNDER THE ITEM MOVING SIGNS TYPE II

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	PERMANENT SIGNING	SHEET NO: 31 E

SCALE 1" = 100'



NOTE:
ALL SIGNS SHOWN ARE EXISTING SIGNS TO BE PAID FOR UNDER THE ITEM MOVING SIGNS TYPE II

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	PERMANENT SIGNING	SHEET NO: 32 E

DATE 09MAR16 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	5657-00-72 QUANTITY
0010	203.0100	Removing Small Pipe Culverts	EACH	8.000	8.000
0020	204.0100	Removing Pavement	SY	1,600.000	1,600.000
0030	204.0150	Removing Curb & Gutter	LF	120.000	120.000
0040	204.0165	Removing Guardrail	LF	1,300.000	1,300.000
0050	204.0210	Removing Manholes	EACH	1.000	1.000
0060	204.0220	Removing Inlets	EACH	1.000	1.000
0070	204.0245	Removing Storm Sewer (size) 01. 57" x 38"	LF	340.000	340.000
0080	204.0245	Removing Storm Sewer (size) 02. 36"	LF	40.000	40.000
0090	205.0100	Excavation Common	CY	3,302.000	3,302.000
0100	205.9010.S	Grading and Shaping Intersection (location) 01. Observatory Road	LS	1.000	1.000
0110	205.9010.S	Grading and Shaping Intersection (location) 02. Pine Hill Road	LS	1.000	1.000
0120	205.9010.S	Grading and Shaping Intersection (location) 03. Stagecoach Road	LS	1.000	1.000
0130	208.0100	Borrow	CY	9,836.000	9,836.000
0140	213.0100	Finishing Roadway (project) 01. 5657-00-72	EACH	1.000	1.000
0150	305.0110	Base Aggregate Dense 3/4-Inch	TON	11,850.000	11,850.000
0160	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	4,420.000	4,420.000
0170	305.0130	Base Aggregate Dense 3-Inch	TON	3,700.000	3,700.000
0180	325.0100	Pulverize and Relay	SY	65,485.000	65,485.000
0190	374.1020.S	QMP Pulverize and Relay Compaction	SY	65,485.000	65,485.000
0200	440.4410	Incentive IRI Ride	DOL	14,320.000	14,320.000
0210	455.0605	Tack Coat	GAL	3,710.000	3,710.000
0220	460.2000	Incentive Density HMA Pavement	DOL	15,455.000	15,455.000
0230	460.4110.S	Reheating HMA Pavement Longitudinal Joints	LF	37,850.000	37,850.000
0240	460.6223	HMA Pavement 3 MT 58-28 S	TON	14,705.000	14,705.000
0250	460.6424	HMA Pavement 4 MT 58-28 H	TON	9,435.000	9,435.000
0260	465.0315	Asphaltic Flumes	SY	82.000	82.000
0270	520.8000	Concrete Collars for Pipe	EACH	12.000	12.000
0280	521.0118	Culvert Pipe Corrugated Steel 18-Inch	LF	268.000	268.000
0290	521.0336	Apron Endwalls for Culvert Pipe Sloped Cross Drains Steel 36-Inch 4 to 1	EACH	1.000	1.000
0300	521.1030	Apron Endwalls for Culvert Pipe Steel 30-Inch	EACH	2.000	2.000
0310	521.1518	Apron Endwalls for Culvert Pipe Sloped Side Drains Steel 18-Inch 6 to 1	EACH	20.000	20.000
0320	521.1524	Apron Endwalls for Culvert Pipe Sloped Side Drains Steel 24-Inch 6 to 1	EACH	1.000	1.000
0330	521.1536	Apron Endwalls for Culvert Pipe Sloped Side Drains Steel 36-Inch 6 to 1	EACH	1.000	1.000
0340	521.1757	Apron Endwalls for Pipe Arch Sloped Side Drains Steel 57x38-Inch 6 to 1	EACH	1.000	1.000
0350	522.0124	Culvert Pipe Reinforced Concrete Class III 24-Inch	LF	12.000	12.000
0360	522.0136	Culvert Pipe Reinforced Concrete Class III 36-Inch	LF	20.000	20.000
0370	522.0172	Culvert Pipe Reinforced Concrete Class III 72-Inch	LF	18.000	18.000
0380	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	4.000	4.000
0390	522.1036	Apron Endwalls for Culvert Pipe Reinforced Concrete 36-Inch	EACH	2.000	2.000

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DATE 09MAR16 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	5657-00-72 QUANTITY
0400	522.1072	Apron Endwalls for Culvert Pipe Reinforced Concrete 72-Inch	EACH	3.000	3.000
0410	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	1,045.000	1,045.000
0420	601.0557	Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type D	LF	1,070.000	1,070.000
0430	606.0200	Riprap Medium	CY	50.000	50.000
0440	608.0324	Storm Sewer Pipe Reinforced Concrete Class III 24-Inch	LF	80.000	80.000
0450	608.0336	Storm Sewer Pipe Reinforced Concrete Class III 36-Inch	LF	36.000	36.000
0460	609.0124	Relaid Storm Sewer 24-Inch	LF	340.000	340.000
0470	609.0136	Relaid Storm Sewer 36-Inch	LF	32.000	32.000
0480	610.0138	Storm Sewer Pipe Reinforced Concrete Horizontal Elliptical Class HE-III 38x60-Inch	LF	331.000	331.000
0490	611.0430	Reconstructing Inlets	EACH	1.000	1.000
0500	611.0550	Manhole Covers Type M	EACH	1.000	1.000
0510	611.0624	Inlet Covers Type H	EACH	2.000	2.000
0520	611.2008	Manholes 8-FT Diameter	EACH	2.000	2.000
0530	611.2044	Manholes 4x4-FT	EACH	1.000	1.000
0540	611.8120.S	Cover Plates Temporary	EACH	2.000	2.000
0550	614.0305	Steel Plate Beam Guard Class A	LF	350.000	350.000
0560	614.0370	Steel Plate Beam Guard Energy Absorbing Terminal	EACH	1.000	1.000
0570	614.0390	Steel Plate Beam Guard Short Radius Terminal	EACH	1.000	1.000
0580	614.2300	MGS Guardrail 3	LF	5,100.000	5,100.000
0590	614.2330	MGS Guardrail 3 K	LF	100.000	100.000
0600	614.2610	MGS Guardrail Terminal EAT	EACH	17.000	17.000
0610	616.0700.S	Fence Safety	LF	350.000	350.000
0620	619.1000	Mobilization	EACH	1.000	1.000
0630	623.0200	Dust Control Surface Treatment	SY	7,300.000	7,300.000
0640	624.0100	Water	MGAL	143.000	143.000
0650	625.0500	Salvaged Topsoil	SY	47,260.000	47,260.000
0660	627.0200	Mulching	SY	16,900.000	16,900.000
0670	628.1504	Silt Fence	LF	17,800.000	17,800.000
0680	628.1520	Silt Fence Maintenance	LF	17,800.000	17,800.000
0690	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0700	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0710	628.2002	Erosion Mat Class I Type A	SY	18,000.000	18,000.000
0720	628.2021	Erosion Mat Class II Type A	SY	12,380.000	12,380.000
0730	628.7005	Inlet Protection Type A	EACH	4.000	4.000
0740	628.7015	Inlet Protection Type C	EACH	2.000	2.000
0750	628.7504	Temporary Ditch Checks	LF	370.000	370.000
0760	628.7555	Culvert Pipe Checks	EACH	88.000	88.000
0770	628.7560	Tracking Pads	EACH	6.000	6.000
0780	629.0210	Fertilizer Type B	CWT	30.000	30.000
0790	630.0120	Seeding Mixture No. 20	LB	1,280.000	1,280.000
0800	630.0200	Seeding Temporary	LB	200.000	200.000
0810	630.0300	Seeding Borrow Pit	LB	200.000	200.000
0820	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	20.000	20.000
0830	638.2102	Moving Signs Type II	EACH	72.000	72.000
0840	642.5001	Field Office Type B	EACH	1.000	1.000
0850	643.0100	Traffic Control (project) 01. 5657-00-72	EACH	1.000	1.000

DATE 09MAR16 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	5657-00-72 QUANTITY
0860	643.0300	Traffic Control Drums	DAY	1,250.000	1,250.000
0870	643.0420	Traffic Control Barricades Type III	DAY	2,160.000	2,160.000
0880	643.0705	Traffic Control Warning Lights Type A	DAY	3,240.000	3,240.000
0890	643.0900	Traffic Control Signs	DAY	2,484.000	2,484.000
0900	643.0920	Traffic Control Covering Signs Type II	EACH	3.000	3.000
0910	643.2000	Traffic Control Detour (project) 01. 5657-00-72	EACH	1.000	1.000
0920	643.3000	Traffic Control Detour Signs	DAY	18,360.000	18,360.000
0930	645.0120	Geotextile Fabric Type HR	SY	90.000	90.000
0940	646.0106	Pavement Marking Epoxy 4-Inch	LF	32,609.000	32,609.000
0950	646.0116	Pavement Marking Epoxy 6-Inch	LF	37,040.000	37,040.000
0960	646.0126	Pavement Marking Epoxy 8-Inch	LF	365.000	365.000
0970	647.0110	Pavement Marking Railroad Crossings Epoxy	EACH	1.000	1.000
0980	647.0166	Pavement Marking Arrows Epoxy Type 2	EACH	2.000	2.000
0990	647.0356	Pavement Marking Words Epoxy	EACH	1.000	1.000
1000	647.0566	Pavement Marking Stop Line Epoxy 18-Inch	LF	195.000	195.000
1010	647.0726	Pavement Marking Diagonal Epoxy 12-Inch	LF	40.000	40.000
1020	648.0100	Locating No-Passing Zones	MI	4.000	4.000
1030	649.0402	Temporary Pavement Marking Paint 4-Inch	LF	200.000	200.000
1040	650.4000	Construction Staking Storm Sewer	EACH	6.000	6.000
1050	650.4500	Construction Staking Subgrade	LF	14,226.000	14,226.000
1060	650.5000	Construction Staking Base	LF	14,226.000	14,226.000
1070	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	2,115.000	2,115.000
1080	650.6000	Construction Staking Pipe Culverts	EACH	24.000	24.000
1090	650.8000	Construction Staking Resurfacing Reference	LF	5,197.000	5,197.000
1100	650.9910	Construction Staking Supplemental Control (project) 01. 5657-00-72	LS	1.000	1.000
1110	650.9920	Construction Staking Slope Stakes	LF	13,230.000	13,230.000
1120	690.0150	Sawing Asphalt	LF	935.000	935.000
1130	690.0250	Sawing Concrete	LF	50.000	50.000
1140	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	600.000	600.000
1150	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	325.000	325.000
1160	SPV.0060	Special 01. Apron Endwalls for Pipe Arch Sloped Cross Drains Steel 71x47-inch 4 to 1	EACH	4.000	4.000
1170	SPV.0060	Special 02. Apron Endwalls for Culvert Pipe Sloped Cross Drains Steel 72-inch 4 to 1	EACH	1.000	1.000
1180	SPV.0060	Special 03. Traversable Driveway Side Slopes	EACH	14.000	14.000
1190	SPV.0060	Special 04. Utility Line Opening (ULO)	EACH	10.000	10.000

3

REMOVING SMALL PIPE CULVERTS

STA.	LOCATION	TYPE	203.0100 QTY EACH
31+50	RT	18" RCCP	1
49+00	RT	18" RCCP	1
72+81	RT	18" RCCP	1
87+23	LT	18" RCCP	1
90+72	RT	18" RCCP	1
90+82	LT	18" RCCP	1
98+52	RT	18" RCCP	1
112+87	LT	18" RCCP	1
		TOTAL	8

REMOVING PAVEMENT

STA.	LOCATION	TYPE	L	W	204.0100 QTY SY
5+25	RT	ASPH	95'	10'	105
6+28	LT	ASPH	24'	10'	30
6+68	LT	ASPH	37'	5'	20
7+29	LT	CONC	50'	14'	80
7+94	LT	ASPH	15'	15'	25
8+95	RT	ASPH	16'	11'	20
31+50	RT	ASPH	40'	22'	100
73+77	LT	ASPH	95'	7'	75
87+23	LT	ASPH	55'	6'	40
90+72	RT	ASPH	17'	18'	35
90+82	LT	ASPH	38'	18'	75
98+42	LT	ASPH	32'	14'	50
98+52	RT	ASPH	18'	18'	35
99+26	RT	ASPH	28'	10'	35
99+89	LT	ASPH	30'	6'	20
112+00	RT	ASPH	68'	12'	90
112+87	LT	ASPH	24'	20'	55
117+00	RT	ASPH	18'	18'	35
170+27	LT	ASPH	74'	8'	65
178+70	LT	ASPH	60'	6'	40
184+00	LT	ASPH	40'	10'	45
4+87-5+25	LT & RT	ASPH			525
				TOTAL	1600

REMOVING CURB & GUTTER

STA.	LOCATION	204.0150 QTY LF
5+20-5+60	RT	80
5+20-5+45	LT	40
	TOTAL	120

REMOVING GUARDRAIL

STA.	LOCATION	204.0165 QTY LF
67+90-73+00	LT	525
126+00-133+50	RT	775
	TOTAL	1300

REMOVING MANHOLES

STA.	LOCATION	204.0210 QTY EACH
5+28	40' LT	1
	TOTAL	1

REMOVING INLETS

STA.	LOCATION	204.0220 QTY EACH
5+24	42' LT	1
	TOTAL	1

REMOVING STORM SEWER

STA.	LOCATION	204.0245.01 REMOVING STORM SEWER (57"X38") QTY LF	204.0245.02 REMOVING STORM SEWER (36") QTY LF
CTH P/S NW QUAD (-300' EAST)	LT	340	--
5+26	LT	--	40
	TOTAL	340	40

EXCAVATION COMMON

STA.	LOCATION	205.0100 QTY CY
5+05-194+27	MAINLINE	2002
PROJECT	UNDISTRIBUTED	1300
	TOTAL	3302

GRADING AND SHAPING INTERSECTION

LOCATION	* CUT	* EXPANDED FILL	* BORROW	205.9010.S.01 QTY LS	205.9010.S.02 QTY LS	205.9010.S.03 QTY LS
OBSERVATORY RD	68	90	22	1	--	--
PINE HILL RD	38	414	376	--	1	--
STAGECOACH RD	203	466	263	--	--	1
TOTAL	309	970	661	1	1	1

FILL QUANTITIES EXPANDED BY A FACTOR OF 1.25
*QUANTITIES FOR ESTIMATING PURPOSES ONLY

BORROW

STA.	LOCATION	208.0100 QTY CY
5+05-194+27	MAINLINE	9836
	TOTAL	9836

BASE AGGREGATE SUMMARY

STA.	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH QTY TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH QTY TON	305.0130 BASE AGGREGATE DENSE 3-INCH QTY TON
5+05-194+27	MAINLINE	10880	3725	--
OBSERVATORY RD	SHOULDERS	22	160	--
PINE HILL RD	SHOULDERS	30	200	--
STAGECOACH RD (EAST)	SHOULDERS	18	270	--
STAGECOACH RD (WEST)	SHOULDERS	40	65	--
PROJECT	DRIVEWAYS	860	--	--
PROJECT	UNDISTRIBUTED	--	--	3700
	TOTAL	11850	4420	3700

PULVERIZE AND RELAY SUMMARY

STA.	LOCATION	325.0100 PULVERIZE AND RELAY QTY SY	374.1020.S QMP PULVERIZE AND RELAY COMPACTION QTY SY
5+05-194+27	MAINLINE	63540	63540
OBSERVATORY RD	INTERSECTION	335	335
PINE HILL RD	INTERSECTION	440	440
STAGECOACH RD (EAST)	INTERSECTION	405	405
STAGECOACH RD (WEST)	INTERSECTION	235	235
CTH S / CTH P	INTERSECTION	530	530
	TOTAL	65485	65485

ASPHALTIC ITEMS SUMMARY

STA.	LOCATION	455.0605 TACK COAT QTY GAL	460.4110.S REHEATING HMA PAVEMENT LONGITUDINAL JOINTS QTY LF	460.6223 HMA PAVEMENT 3 MT 58-28S QTY TON	460.6424 HMA PAVEMENT 4 MT 58-28H QTY TON	465.0315 ASPHALTIC FLUMES QTY SY
5+05-194+27	MAINLINE	3500	37850	13910	8890	--
CTH P / CTH S	INTERSECTION	30	--	120	80	--
OBSERVATORY RD	INTERSECTION	30	--	90	60	--
PINE HILL RD	INTERSECTION	30	--	120	80	--
STAGECOACH RD (EAST)	INTERSECTION	50	--	205	135	--
STAGECOACH RD (WEST)	INTERSECTION	20	--	65	45	--
PROJECT	DRIVEWAYS	50	--	195	125	--
5+25	69' RT CTH P	--	--	--	--	10
5+25	RT - MORGANS	--	--	--	20	--
28+65	17' RT CTH P	--	--	--	--	10
30+99	17' LT CTH P	--	--	--	--	10
55+88	17' RT CTH P	--	--	--	--	10
199+26	15' LT OBSERVATORY RD	--	--	--	--	10
199+42	15' RT OBSERVATORY RD	--	--	--	--	10
300+65	15' LT PINE HILL RD	--	--	--	--	10
400+41	32' RT STAGECOACH RD	--	--	--	--	6
400+41	29' LT STAGECOACH RD	--	--	--	--	6
	TOTAL	3710	37850	14705	9435	82

CULVERT PIPE SUMMARY

STA.	LOCATION	521.0118* CULVERT PIPE CORRUGATED STEEL 18-INCH QTY LF	521.0336 APRON ENDWALLS FOR CULVERT PIPE SLOPED CROSS DRAINS STEEL 36-INCH 4 TO 1 QTY EACH	521.1030 APRON ENDWALLS FOR CULVERT PIPE STEEL 30-INCH QTY EACH	521.1518 APRON ENDWALLS FOR CULVERT PIPE SLOPED SIDE DRAINS STEEL 18-INCH 6 TO 1 QTY EACH	521.1524 APRON ENDWALLS FOR CULVERT PIPE SLOPED SIDE DRAINS STEEL 24-INCH 6 TO 1 QTY EACH	521.1536 APRON ENDWALLS FOR CULVERT PIPE SLOPED SIDE DRAINS STEEL 36-INCH 6 TO 1 QTY EACH	521.1757 APRON ENDWALLS FOR PIPE ARCH SLOPED SIDE DRAINS STEEL 57X38-INCH 6 TO 1 QTY EACH	522.0124 CULVERT PIPE REINFORCED CONCRETE CLASS III 24-INCH QTY LF	522.0136 CULVERT PIPE REINFORCED CONCRETE CLASS III 36-INCH QTY LF	522.0172 CULVERT PIPE REINFORCED CONCRETE CLASS III 72-INCH QTY LF	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH QTY EACH	522.1036 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 36-INCH QTY EACH	522.1072 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 72-INCH QTY EACH	SPV.0060.01 APRON ENDWALLS FOR PIPE ARCH SLOPED CROSS DRAINS STEEL 71X47-INCH 4 TO 1 QTY EACH	SPV.0060.02 APRON ENDWALLS FOR CULVERT PIPE SLOPED CROSS DRAINS STEEL 72-INCH 4 TO 1 QTY EACH
5+26.60	STRUCTURE 1.0-OUTFALL	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--
5+36.90	STRUCTURE 2.0-OUTFALL	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--
17+10	LT	--	--	--	2	--	--	--	--	--	--	--	--	--	--	--
21+88	LT & RT	--	--	2	--	--	--	--	--	--	--	--	--	--	--	--
22+05	LT & RT	--	--	--	--	--	--	--	--	--	--	--	--	--	2	--
22+14	LT & RT	--	--	--	--	--	--	--	--	--	--	--	--	--	2	--
34+18	LT & RT	--	--	--	--	--	--	--	2	--	--	1	--	--	--	--
35+00	STRUCTURE 3.0-OUTFALL	--	--	--	--	1	--	--	--	--	--	--	--	--	--	--
42+19	RT	8	--	--	2	--	--	--	--	--	--	--	--	--	--	--
45+15	LT & RT	--	--	--	--	--	--	--	2	--	--	1	--	--	--	--
49+00	RT	32	--	--	2	--	--	--	--	--	--	--	--	--	--	--
57+13	LT & RT	--	--	--	--	--	--	--	8	--	--	1	--	--	--	--
72+30	LT & RT	--	--	--	--	--	--	--	--	--	12	--	--	2	--	--
72+81	RT	36	--	--	2	--	--	--	--	--	--	--	--	--	--	--
83+93	RT	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
87+23	LT	38	--	--	2	--	--	--	--	--	--	--	--	--	--	--
90+72	RT	40	--	--	2	--	--	--	--	--	--	--	--	--	--	--
90+82	LT	42	--	--	2	--	--	--	--	--	--	--	--	--	--	--
98+52	RT	32	--	--	2	--	--	--	--	--	--	--	--	--	--	--
99+89	LT	--	--	--	2	--	--	--	--	--	--	--	--	--	--	--
105+89	RT	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
112+87	LT	40	--	--	2	--	--	--	--	--	--	--	--	--	--	--
117+46	RT	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
122+86	LT & RT	--	--	--	--	--	--	--	--	--	6	--	--	1	--	1
142+81	LT & RT	--	1	--	--	--	--	--	--	16	--	--	1	--	--	--
154+81	LT & RT	--	--	--	--	--	--	--	--	4	--	--	1	--	--	--
160+32	RT	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
163+38	LT & RT	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--
173+80	RT	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
194+10	RT	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	TOTAL	268	1	2	20	1	1	1	12	20	18	4	2	3	4	1

*MINIMUM STEEL THICKNESS=0.064 INCHES

3

CONCRETE CURB AND GUTTER

STA.	LOCATION	601.0557 CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE D QTY LF	601.0411 CONCRETE CURB & GUTTER 30-INCH TYPE D QTY LF
5+20-10+00	LT	--	545
5+25-10+00	RT	--	500
28+66-34+66	RT	605	--
OBSERVATORY ROAD	LT	90	--
OBSERVATORY ROAD	RT	60	--
PINE HILL ROAD	LT	75	--
PINE HILL ROAD	RT	85	--
STAGECOACH ROAD (EAST)	LT	65	--
STAGECOACH ROAD (WEST)	RT	90	--
	TOTAL	1070	1045

RIPRAP MEDIUM

STA.	LOCATION	606.0200 QTY CY
2.0	DISCHARGE	10
28+65	RT	10
55+88	RT	5
143+20	RT	5
143+75	RT	5
199+32	RT	5
199+16	LT	5
300+66	LT	5
	TOTAL	50

3

STORM SEWER STRUCTURE SUMMARY

STRUCTURE NO.	STA.	OFFSET	SIZE & PIPE MATERIAL	SPV.0060.04 UTILITY LINE OPENING QTY EACH	520.8000 CONCRETE COLLARS FOR PIPE QTY EACH	608.0324 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 24-INCH QTY LF	608.0336 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 36-INCH QTY LF	609.0124 RELAID STORM SEWER 24-INCH QTY LF	609.0136 RELAID STORM SEWER 36-INCH QTY LF	610.0138 STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 38X60-INCH QTY LF	611.0430 RECONSTRUCTING INLETS QTY EACH	611.0550 MANHOLE COVERS TYPE M QTY EACH	611.0624 INLET COVERS TYPE H QTY EACH	611.2008 MANHOLES 8-FT DIAMETER QTY EACH	611.2044 MANHOLES 4X4-FT QTY EACH	611.8120.S COVER PLATES TEMPORARY QTY EACH
INLET - 1.0	5+23.42	36.62' LT		1	---	---	36	---	---	---	---	---	---	---	---	1
1.0 - 2.0	5+23.42	38.62' LT		---	---	---	--	---	---	83	---	---	1	1	---	---
INLET - 1.0				---	---	---	---	60	---	---	1	---	---	---	---	---
2.0 - OUTFALL	5+30.73	45.19' RT		1	---	---	---	---	---	248	---	---	1	1	---	1
3.0	34+17.75	26.75' RT		---	---	80	---	---	---	---	---	1	---	---	1	---
	34+18	LT & RT	24" RCCP	1	2	---	---	32	---	---	---	---	---	---	---	---
	45+15	LT & RT	24" RCCP	---	1 LT	---	---	32	---	---	---	---	---	---	---	---
	57+13	LT & RT	24" RCCP	---	1 RT	---	---	32	---	---	---	---	---	---	---	---
	70+32	LT & RT		---	---	---	---	32	---	---	---	--	---	---	---	---
	72+30	LT & RT	72" RCCP	---	2	---	---	---	---	---	---	---	---	---	---	---
	83+93	RT		---	---	---	---	16	---	---	---	---	---	---	---	---
	105+89	RT		---	---	---	---	16	---	---	---	---	---	---	---	---
	117+46	RT		---	---	---	---	16	---	---	---	---	---	---	---	---
	122+86	LT & RT	24" RCCP	---	2	---	---	---	---	---	---	---	---	---	---	---
	142+81	LT & RT	36" RCCP	---	2	---	---	---	---	---	---	---	---	---	---	---
	144+82	LT & RT		---	---	---	---	32	---	---	---	---	---	---	---	---
	154+81	LT & RT	36" RCCP	---	1 RT	---	---	---	32	---	---	---	---	---	---	---
	160+32	RT		---	---	---	---	16	---	---	---	---	---	---	---	---
	163+38	LT & RT	24" RCCP	---	1 LT	---	---	32	---	---	---	---	---	---	---	---
	173+80	RT		---	---	---	---	24	---	---	---	---	---	---	---	---
	PROJECT	UNDISTRIBUTED		7												
			TOTAL	10	12	80	36	340	32	331	1	1	2	2	1	2

GUARDRAIL SUMMARY

STA.	LOCATION	614.0370 STEEL PLATE BEAMGUARD ENERGY ABSORBING TERMINAL QTY EACH	614.0305 STEEL PLATE BEAMGUARD CLASS A QTY LF	614.0390 STEEL PLATE BEAMGUARD SHORT RADIUS TERMINAL QTY EACH	614.2300 MGS GUARDRAIL 3 QTY LF	614.2330 MGS GUARDRAIL 3K QTY LF	614.2610 MGS GUARDRAIL TERMINAL EAT QTY EACH
54+64-55+14	LT	--	--	--	--	--	1
55+14-60+39	LT	--	--	--	525	--	--
60+39-60+89	LT	--	--	--	--	--	1
65+61-66+11	LT	--	--	--	--	--	1
66+11-72+86	LT	--	--	--	675	--	--
72+86-73+36	LT	--	--	--	--	--	1
67+38.5-67+88.5	RT	--	--	--	--	--	1
67+88.5-72+13.5	RT	--	--	--	425	--	--
72+13.5-72+63.5	RT	--	--	--	--	--	1
74+45-74+95	LT	--	--	--	--	--	1
74+95-85+95	LT	--	--	--	1100	--	--
85+95-86+45	LT	--	--	--	--	--	1
92+10-92+60	LT	--	--	--	--	--	1
92+60-96+22.5	LT	--	--	--	362.5	--	--
96+22.5-96+72.5	LT	--	--	--	--	--	1
101+40-101+90	RT	--	--	--	--	--	1
101+90-109+52.5	RT	--	--	--	762.5	--	--
109+52.5-110+52.5	RT	--	--	--	--	100	--
110+52.5-111+40	RT	--	--	--	87.5	--	--
111+40-111+90	RT	--	--	--	--	--	1
117+30	RT	--	--	1	--	--	--
117+32-120+82	RT	--	350	--	--	--	--
120+82-121+32	RT	1	--	--	--	--	1
121+77.5-122+27.5	LT	--	--	--	--	--	1
122+27.5-126+90	LT	--	--	--	462.5	--	--
126+90-127+40	LT	--	--	--	--	--	1
125+50-126+00	RT	--	--	--	--	--	1
126+00-133+00	RT	--	--	--	700	--	--
133+00-133+50	RT	--	--	--	--	--	1
	TOTAL	1	350	1	5100	100	17

FINISHING ITEMS SUMMARY

STA.	LOCATION	625.0500 SALVAGED TOPSOIL QTY SY	627.0200 MULCHING QTY SY	629.0210 FERTILIZER TYPE B QTY CWT	630.0120 SEEDING MIXTURE NO. 20 QTY LB	630.0300 SEEDING BORROW PIT QTY LB
5+05-194+27	MAINLINE LT/RT	47260	16900	30	1280	--
PROJECT	UNDISTRIBUTED	--	--	--	--	200
	TOTAL	47260	16900	30	1280	200

FENCE SAFETY

STA.	LOCATION	616.0700.S QTY LF
184+00-186+50	RT	250
193+00-194+00	LT	100
	TOTAL	350

DUST CONTROL SURFACE TREATMENT

STA.	LOCATION	623.0200 QTY SY
4+87-10+00	MAINLINE	7300
	TOTAL	7300

WATER

STA.	LOCATION	624.0100 QTY MGAL
5+05-194+27	MAINLINE	104
OBSERVATORY ROAD	INTERSECTION	2
PINE HILL ROAD	INTERSECTION	2
STAGECOACH ROAD (EAST)	INTERSECTION	2
STAGECOACH ROAD (WEST)	INTERSECTION	1
PROJECT	DRIVEWAYS	6
PROJECT	UNDISTRIBUTED EBS	26
	TOTAL	143

MOBILIZATIONS EROSION CONTROL

STA.	LOCATION	628.1905 QTY EACH
PROJECT	MAINLINE	2
	TOTAL	2

MOBILIZATIONS EMERGENCY EROSION CONTROL

STA.	LOCATION	628.1910 QTY EACH
PROJECT	MAINLINE	2
	TOTAL	2

EROSION CONTROL ITEMS SUMMARY

STA.	LOCATION	628.1504 SILT FENCE QTY LF	628.1520 SILT FENCE MAINTENANCE QTY LF	628.2002 EROSION MAT CLASS I TYPE A QTY SY	628.2021 EROSION MAT CLASS II TYPE A QTY SY	628.7005 INLET PROTECTION TYPE A QTY EACH	628.7015 INLET PROTECTION TYPE C QTY EACH	628.7504 TEMPORARY DITCH CHECKS QTY LF	628.7555 CULVERT PIPE CHECKS QTY EACH	628.7560 TRACKING PADS QTY EACH	630.0200 SEEDING TEMPORARY QTY LB
5+05-194+27	MAINLINE LT/RT	--	--	16930	12150	--	--	--	--	--	--
5+23	LT	--	--	--	--	1	1	--	--	--	--
5+25	LT	--	--	--	--	--	--	--	--	1	--
5+30	RT	--	--	--	--	1	1	--	--	--	--
12+00-19+00	RT	700	700	--	--	--	--	--	--	--	--
16+00-31+00	LT	1500	1500	--	--	--	--	--	--	--	--
21+00	LT/RT	--	--	--	--	--	--	10	--	--	--
21+88	LT	--	--	--	--	--	--	--	3	--	--
22+05	LT	--	--	--	--	--	--	--	7	--	--
22+14	LT	--	--	--	--	--	--	--	7	--	--
23+00	LT/RT	--	--	--	--	--	--	10	--	--	--
23+00-27+00	RT	400	400	--	--	--	--	--	--	--	--
28+00	RT	--	--	--	--	--	--	5	--	--	--
32+00-49+00	LT	1700	1700	--	--	--	--	--	--	--	--
34+18	RT	--	--	--	--	1	--	--	--	--	--
35+00	RT	--	--	--	--	--	--	5	3	--	--
37+00	RT	--	--	--	--	--	--	5	--	--	--
39+00	RT	--	--	--	--	--	--	5	--	--	--
41+00	RT	--	--	--	--	--	--	5	--	--	--
43+00	RT	--	--	--	--	--	--	5	--	--	--
45+15	RT	--	--	--	--	--	--	--	3	--	--
48+50-49+50	RT	100	100	--	--	--	--	--	--	--	--
50+00	LT	--	--	--	--	--	--	5	--	--	--
53+00	LT/RT	--	--	--	--	--	--	10	--	--	--
55+00	RT	--	--	--	--	--	--	5	--	--	--
55+50-62+50	LT	700	700	--	--	--	--	--	--	--	--
58+00	RT	--	--	--	--	--	--	5	--	--	--
59+00	RT	--	--	--	--	--	--	5	--	--	--
57+13	RT	--	--	--	--	--	--	--	3	--	--
60+00	RT	--	--	--	--	--	--	5	--	--	--
61+00	RT	--	--	--	--	--	--	5	--	--	--
62+00	LT/RT	--	--	--	--	--	--	10	--	--	--
63+00	LT/RT	--	--	--	--	--	--	10	--	--	--
64+00	LT/RT	--	--	--	--	--	--	10	--	--	--
65+00-73+50	LT	850	850	--	--	--	--	--	--	--	--
66+00	RT	--	--	--	--	--	--	5	--	--	--
68+00	RT	--	--	--	--	--	--	5	--	--	--
69+00-73+00	RT	400	400	--	--	--	--	--	--	--	--
70+00	RT	--	--	--	--	--	--	5	--	--	--
70+32	RT	--	--	--	--	--	--	--	3	--	--
74+00-87+00	LT	1300	1300	--	--	--	--	--	--	--	--
77+00-85+00	RT	--	--	--	--	--	--	40	--	--	--
81+00-86+50	RT	550	550	--	--	--	--	--	--	--	--
83+93	RT	--	--	--	--	--	--	--	3	--	--
90+00-97+50	LT	750	750	--	--	--	--	--	--	--	--
91+00	RT	--	--	--	--	--	--	5	--	--	--
94+31	RT	--	--	--	--	--	--	--	3	--	--
96+00-98+00	RT	200	200	--	--	--	--	--	--	--	--
99+00	LT	--	--	--	--	--	--	5	--	--	--
101+00	LT	--	--	--	--	--	--	5	--	--	--
101+50-112+00	RT	1050	1050	--	--	--	--	--	--	--	--
104+00	LT	--	--	--	--	--	--	5	--	--	--
105+89	LT	--	--	--	--	--	--	--	3	--	--
106+00	LT	--	--	--	--	--	--	5	--	--	--
109+00	LT	--	--	--	--	--	--	5	--	--	--

EROSION CONTROL ITEMS SUMMARY (CONT.)

STA.	LOCATION	628.1504 SILT FENCE QTY LF	628.1520 SILT FENCE MAINTENANCE QTY LF	628.2002 EROSION MAT CLASS I TYPE A QTY SY	628.2021 EROSION MAT CLASS II TYPE A QTY SY	628.7005 INLET PROTECTION TYPE A QTY EACH	628.7015 INLET PROTECTION TYPE C QTY EACH	628.7504 TEMPORARY DITCH CHECKS QTY LF	628.7555 CULVERT PIPE CHECKS QTY EACH	628.7560 TRACKING PAD QTY EACH	630.0200 SEEDING TEMPORARY QTY LB
117+46	LT	--	--	--	--	--	--	--	3	--	--
117+00-121+00	RT	400	400	--	--	--	--	--	--	--	--
122+86	LT	--	--	--	--	--	--	--	7	--	--
122+00-126+00	LT	400	400	--	--	--	--	--	--	--	--
127+00-129+00	LT	--	--	--	--	--	--	30	--	--	--
127+50-133+50	RT	600	600	--	--	--	--	--	--	--	--
130+00-132+00	LT	200	200	--	--	--	--	--	--	--	--
134+00-136+00	LT	200	200	--	--	--	--	--	--	--	--
135+00-138+00	LT/RT	--	--	--	--	--	--	40	--	--	--
138+00-143+50	RT	550	550	--	--	--	--	--	--	--	--
140+00-142+00	LT	200	200	--	--	--	--	--	--	--	--
142+00	LT/RT	--	--	--	--	--	--	10	--	--	--
142+81	LT	--	--	--	--	--	--	--	5	--	--
143+50-151+50	RT	800	800	--	--	--	--	--	--	--	--
144+82	LT	--	--	--	--	--	--	--	3	--	--
146+00-150+00	LT	--	--	--	--	--	--	15	--	--	--
152+00-154+00	LT/RT	--	--	--	--	--	--	20	--	--	--
153+50-176+00	RT	2250	2250	--	--	--	--	--	--	--	--
154+81	LT	--	--	--	--	--	--	--	5	--	--
158+00-162+00	LT	--	--	--	--	--	--	15	--	--	--
160+32	LT	--	--	--	--	--	--	--	3	--	--
163+38	LT	--	--	--	--	--	--	--	3	--	--
166+00-168+00	LT	--	--	--	--	--	--	10	--	--	--
172+00	LT	--	--	--	--	--	--	5	--	--	--
173+75	LT	--	--	--	--	1	--	--	--	--	--
174+75	LT	--	--	--	--	--	--	--	3	--	--
175+00	LT	--	--	--	--	--	--	5	--	--	--
177+00	LT	--	--	--	--	--	--	5	--	--	--
177+50-184+50	RT	700	700	--	--	--	--	--	--	--	--
180+00	LT	--	--	--	--	--	--	5	--	--	--
181+50	LT	--	--	--	--	--	--	5	--	--	--
186+00-194+00	RT	800	800	--	--	--	--	--	--	--	--
194+10	LT	--	--	--	--	--	--	--	3	--	--
194+27	RT	--	--	--	--	--	--	--	--	1	--
198+75	LT/RT	--	--	--	--	--	--	--	--	1	--
198+75-199+83	OBSERVATORY ROAD	--	--	400	--	--	--	--	--	--	--
300+17-301+25	PINE HILL ROAD	--	--	430	--	--	--	--	--	--	--
301+25	LT/RT	--	--	--	--	--	--	--	--	1	--
399+10	LT/RT	--	--	--	--	--	--	--	--	1	--
399+10-399+83	STAGECOACH ROAD (WEST)	--	--	240	--	--	--	--	--	--	--
400+17-401+54	STAGECOACH ROAD (EAST)	--	--	--	230	--	--	--	--	--	--
401+54	LT/RT	--	--	--	--	--	--	--	--	1	--
PROJECT	UNDISTRIBUTED	500	500	--	--	--	--	--	15	--	200
	TOTAL	17800	17800	18000	12380	4	2	370	88	6	200

POSTS WOOD 4X6-INCH X 14-FT

STA.	LOCATION	634.0614 QTY EACH
PROJECT	UNDISTRIBUTED	20
TOTAL		20

MOVING SIGNS

SIGN NO.	STA.	LOCATION	SIGN CODE	SIGN DESCRIPTION	SIGN SIZE (WXH) IN.	638.2102 MOVING SIGNS TYPE II EACH	SIGN SUPPORT TYPE
1-1	5+42	LT	M1-5A	CTH S	24X24	1	1-4X6 WOOD POST
1-2	5+42	LT	M6-6	DIRECTIONAL ARROW	21X15	1	ON 1-1
1-3	5+42	LT	R1-1	STOP	36X36	2	1-4X6 WOOD POST
1-4	5+95	RT	M1-5A	CTH P	24X24	1	1-4X6 WOOD POST
1-5	7+21	RT	R2-1	SPEED LIMIT 35	24X30	2	1-4X6 WOOD POST
1-6	9+12	LT	D1-1	MADISON	48X18	1	1-4X6 WOOD POST
1-7	10+33	LT	W3-1A	STOP AHEAD	36X36	1	1-4X6 WOOD POST
1-8	12+23	LT	M2-1	JCT	21X15	1	1-4X6 WOOD POST
1-9	12+23	LT	M1-5A	CTH S	24X24	1	ON 1-8
1-10	13+20	LT	I2-3	PINE BLUFF INCORPORATED	30X24	1	1-4X6 WOOD POST
1-11	14+18	RT	R2-1	SPEED LIMIT 55	24X30	2	1-4X6 WOOD POST
1-12	14+18	LT	R2-1	SPEED LIMIT 35	24X30	2	1-4X6 WOOD POST
1-13	21+21	LT	W3-5	REDUCE SPEED AHEAD 35	36X36	2	1-4X6 WOOD POST
1-14	25+69	RT	D1-1	OBSERVATORY ROAD	90X15	1	2-4X6 WOOD POSTS
1-15	31+34	LT	R1-1	STOP	36X36	2	1-4X6 WOOD POST
2-1	37+79	LT	D1-1	OBSERVATORY ROAD	90X15	1	2-4X6 WOOD POSTS
2-2	45+18	RT	W1-2L	LEFT TURN ARROW	30X30	1	ON 1-8
2-3	56+90	RT	R1-1	STOP	36X36	2	1-4X6 WOOD POST
2-4	59+38	LT	I55-56	ADOPT A HIGHWAY	24X30	1	1-4X6 WOOD POST
2-5	59+38	RT	I55-56	ADOPT A HIGHWAY	24X30	1	1-4X6 WOOD POST
2-6	63+39	LT	W1-2R	RIGHT TURN ARROW	30X30	1	1-4X6 WOOD POST
3-1	66+56	RT	W1-2R	RIGHT TURN ARROW	30X30	1	1-4X6 WOOD POSTS
3-2	73+80	LT	R1-1	STOP	36X36	2	1-4X6 WOOD POST
3-3	83+14	RT	W11-6	SNOWMOBILE CROSSING	30X30	1	1-4X6 WOOD POSTS
3-4	85+30	RT	W1-2L	LEFT TURN ARROW	30X30	1	1-4X6 WOOD POSTS
3-5	89+00	LT	W1-2L	LEFT TURN ARROW	30X30	1	1-4X6 WOOD POSTS
4-1	100+14	RT	W1-2R	RIGHT TURN ARROW	30X30	1	1-4X6 WOOD POSTS
4-2	100+14	RT	W13-1	ADVISORY 40 MPH	18X18	1	ON 4-1
4-3	100+30	LT	W11-6	SNOWMOBILE CROSSING	30X30	1	1-4X6 WOOD POST
4-4	103+26	RT	W7-1	HILL	30X30	1	1-4X6 WOOD POST
4-5	103+26	RT	W7-2B	TRUCKS USE LOW GEAR	24X18	1	ON 4-4
4-6	105+05	LT	W1-2R	RIGHT TURN ARROW	30X30	1	1-4X6 WOOD POST
4-7	122+79	RT	W1-2L	LEFT TURN ARROW	30X30	1	1-4X6 WOOD POST
4-8	122+79	RT	W13-1	ADVISORY 40 MPH	18X18	1	1-4X6 WOOD POST
5-1	125+80	RT	S3-1	SCHOOL BUS STOP AHEAD	30X30	1	1-4X6 WOOD POST
5-2	126+60	LT	W1-26	LEFT TURN ARROW	30X30	1	1-4X6 WOOD POST
5-3	126+60	LT	W13-1	ADVISORY 40 MPH	18X18	1	ON 5-2
5-4	127+33	RT	W1-8	CHEVRON	18X24	1	3" STEEL CHANNEL
5-5	129+39	RT	W1-8	CHEVRON	18X24	1	3" STEEL CHANNEL
5-6	131+56	RT	W1-8	CHEVRON	18X24	1	3" STEEL CHANNEL
5-7	133+67	RT	W1-8	CHEVRON	18X24	1	2" STEEL SQUARE
5-8	138+48	LT	I55-56	ADOPT A HIGHWAY	24X30	1	1-4X6 WOOD POST
5-9	138+53	RT	I55-56	ADOPT A HIGHWAY	24X30	1	1-4X6 WOOD POST
5-10	138+53	RT	D1-1	STAGECOACH ROAD	90X15	1	2-4X6 WOOD POSTS
5-11	142+17	LT	W1-2R	RIGHT TURN ARROW	30X30	1	1-4X6 WOOD POST
5-12	142+17	LT	W13-1	ADVISORY 40 MPH	18X18	1	1-4X6 WOOD POST
5-13	142+65	RT	W1-5R	WINDING ROAD AHEAD	30X30	1	1-4X6 WOOD POST
5-14	143+39	LT	R1-1	STOP	36X36	2	1-4X6 WOOD POST
5-15	143+81	RT	R1-1	STOP	36X36	2	1-4X6 WOOD POST
5-16	149+72	LT	D1-1	STAGECOACH ROAD	90X15	1	2-4X6 WOOD POSTS
6-1	184+36	RT	W10-1	RR CROSSING	36X36	2	1-4X6 WOOD POST
7-1	186+68	RT	W3-5	REDUCED SPEED AHEAD 25 MPH	36X36	2	1-4X6 WOOD POST
7-2	188+58	RT	W3-3	SIGNAL AHEAD	36X36	2	1-4X6 WOOD POST
7-3	190+11	RT	M2-1	JCT	21X15	1	1-4X6 WOOD POST
7-4	190+11	RT	M1-4	USH 14	24X24	1	ON 7-3
7-5	192+01	LT	W11-3	DEER CROSSING	30X30	1	1-4X6 WOOD POST
7-6	192+86	LT	R2-1	SPEED LIMIT 55 MPH	24X30	1	1-4X6 WOOD POST
7-7	193+39	LT	W1-5R	WINDING ROAD AHEAD	30X30	1	1-4X6 WOOD POST
7-8	193+44	RT	R2-1	SPEED LIMIT 25 MPH	24X30	1	1-4X6 WOOD POST
					TOTAL	72	

TRAFFIC CONTROL ITEMS SUMMARY

LOCATION	DESCRIPTION	643.0100 TRAFFIC CONTROL (5657-00-72) QTY EACH	643.0300 TRAFFIC CONTROL DRUMS QTY DAY	643.0420 TRAFFIC CONTROL BARRICADES TYPE III QTY DAY	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A QTY DAY	643.0900 TRAFFIC CONTROL SIGNS QTY DAY	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II QTY EACH	643.3000 TRAFFIC CONTROL DETOUR SIGNS QTY DAY
CTH P/CTH S INTERSECTION	MAINLINE CLOSURE	--	--	432	648	648	2	--
CTH P/BOURBON ROAD INTERSECTION	MAINLINE CLOSURE	--	--	432	648	432	--	--
USH 14/CTH P INTERSECTION	MAINLINE CLOSURE	--	--	--	--	--	1	--
CTH P/STAGECOACH ROAD INTERSECTION	SIDEROAD CLOSURE	--	--	432	864	432	--	--
CTH P/PINE HILL ROAD INTERSECTION	SIDEROAD CLOSURE	--	--	216	216	324	--	--
CTH P/OBSERVATORY ROAD INTERSECTION	SIDEROAD CLOSURE	--	--	216	216	324	--	--
CTH P/HIDDEN VALLEY ROAD INTERSECTION	SIDEROAD CLOSURE	--	--	216	216	324	--	--
CTH P/CTH S INTERSECTION	DETOUR	--	--	108	216	--	--	1512
CTH P/BOURBON ROAD INTERSECTION	DETOUR	--	--	108	216	--	--	2592
CTH M/CTH S INTERSECTION	DETOUR	--	--	--	--	--	--	3024
CTH S/USH 12 INTERSECTION	DETOUR	--	--	--	--	--	--	4104
USH 12/USH 14 INTERSECTION	DETOUR	--	--	--	--	--	--	1728
CTH P/USH 14 INTERSECTION	DETOUR	--	--	--	--	--	--	216
DETOUR ROUTE	DETOUR	--	--	--	--	--	--	5184
PROJECT	UNDISTRIBUTED	1	1250	--	--	--	--	--
	TOTAL	1	1250	2160	3240	2484	3	18360

TEMPORARY PAVEMENT MARKING SUMMARY

STA.	LOCATION	649.0402 TEMPORARY PAVEMENT MARKING PAINT 4-INCH QTY LF
5+05-194+27	CENTERLINE	200
	TOTAL	200

GEOTEXTILE FABRIC TYPE HR

STA.	LOCATION	645.0120 QTY SY
2.0	DISCHARGE	15
28+65	RT	15
55+88	RT	10
143+20	RT	10
143+75	RT	10
199+32	RT	10
199+16	LT	10
300+66	LT	10
	TOTAL	90

LOCATING NO-PASSING ZONES

STA.	LOCATION	648.0100 QTY MI
5+05-194+27	CENTERLINE	4
	TOTAL	4

SAWING PAVEMENT

STA.	LOCATION	690.0150 SAWING ASPHALT QTY LF	690.0250 SAWING CONCRETE QTY LF
5+05	MAINLINE	165	--
5+25	MORGANS	95	--
6+28	LT	22	--
6+68	RT	35	--
7+29	LT	--	50
7+94	LT	12	--
8+95	RT	14	--
31+50	RT	18	--
73+77	LT	68	--
87+23	LT	45	--
90+72	RT	12	--
90+82	LT	27	--
98+42	LT	25	--
98+52	RT	13	--
99+26	RT	22	--
112+00	RT	52	--
112+87	LT	20	--
117+00	RT	14	--
170+27	LT	65	--
178+70	LT	58	--
184+00	LT	35	--
194+27	MAINLINE	30	--
198+75	OBSERVATORY ROAD	20	--
301+25	PINE HILL ROAD	24	--
399+10	STAGECOACH ROAD	20	--
401+54	STAGECOACH ROAD	24	--
	TOTAL	935	50

3

PAVEMENT MARKING ITEMS SUMMARY

STA.	LOCATION	DESCRIPTION	646.0106 PAVEMENT MARKING EPOXY 4-INCH QTY LF	646.0116 PAVEMENT MARKING EPOXY 6-INCH QTY LF	646.0126 PAVEMENT MARKING EPOXY 8-INCH QTY LF	647.0110 PAVEMENT MARKING RAILROAD CROSSINGS EPOXY QTY EACH	647.0166 PAVEMENT MARKING ARROWS EPOXY TYPE 2 QTY EACH	647.0356 PAVEMENT MARKING WORDS EPOXY QTY EACH	647.0566 PAVEMENT MARKING STOP LINE EPOXY 18-INCH QTY LF	647.0726 PAVEMENT MARKING DIAGONAL EPOXY 12-INCH QTY LF
5+05-5+33	RT	WHITE	--	--	--	--	--	--	35	--
5+40-10+00	CENTERLINE	YELLOW, DOUBLE SOLID	1170	--	--	--	--	--	--	--
5+44	LT	WHITE	--	--	--	--	--	--	30	--
5+44-6+69	LT	WHITE, LANE LINE	--	--	125	--	--	--	--	--
5+44-31+00	LT	WHITE, EDGELINE	--	2560	--	--	--	--	--	--
5+60	LT		--	--	--	--	1	--	--	--
5+65-55+00	RT	WHITE, EDGELINE	--	4950	--	--	--	--	--	--
6+14	RT	ONLY	--	--	--	--	--	1	--	--
6+50	LT		--	--	--	--	1	--	--	--
6+69-7+99	CENTERLINE	WHITE	--	--	--	--	--	--	--	40
10+00-21+45	CENTERLINE	YELLOW, SOLID, SKIP (12½ SEG-37½ GAP)	1435	--	--	--	--	--	--	--
21+25-45+25	CENTERLINE	YELLOW, SKIP (12½ SEG-37½ GAP)	610	--	--	--	--	--	--	--
30+06-32+56	RT	WHITE, SKIP (3' SEG-9' GAP)	65	--	--	--	--	--	--	--
30+40-31+00	LT	WHITE, EDGELINE	65	--	--	--	--	--	--	--
31+25-31+56	LT	WHITE	--	--	--	--	--	--	35	--
32+28-33+18	LT	WHITE, SKIP (3' SEG-9' GAP)	--	25	--	--	--	--	--	--
33+18-142+97	LT	WHITE, EDGELINE	--	10980	--	--	--	--	--	--
45+25-56+00	CENTERLINE	YELLOW, SOLID, SKIP (12½ SEG-37½ GAP)	1350	--	--	--	--	--	--	--
54+99-55+88	RT	WHITE, SKIP (3' SEG-9' GAP)	25	--	--	--	--	--	--	--
55+00-55+00	RT	WHITE, SKIP (3' SEG-9' GAP)	--	25	--	--	--	--	--	--
56+00-133+50	CENTERLINE	YELLOW, DOUBLE SOLID	15500	--	--	--	--	--	--	--
56+56-56+77	RT	WHITE	--	--	--	--	--	--	25	--
57+19-57+79	RT	WHITE, EDGELINE	60	--	--	--	--	--	--	--
57+79-138+88	RT	WHITE, EDGELINE	--	8170	--	--	--	--	--	--
133+50-142+50	CENTERLINE	YELLOW, SOLID, SKIP (12½ SEG-37½ GAP)	1130	--	--	--	--	--	--	--
138+87-140+75	RT	WHITE, SKIP (3' SEG-9' GAP)	100	--	--	--	--	--	--	--
139+25-140+75	RT	WHITE, EDGELINE	155	350	40	--	--	--	--	--
140+75-142+75	RT	WHITE, EDGELINE	400	--	200	--	--	--	--	--
142+36-143+00	LT	WHITE, EDGELINE	64	--	--	--	--	--	--	--
142+50-153+50	CENTERLINE	YELLOW, SOLID, SKIP (12½ SEG-37½ GAP)	1375	--	--	--	--	--	--	--
143+26-143+50	LT	WHITE	--	--	--	--	--	--	25	--
143+50-143+71	RT	WHITE	--	--	--	--	--	--	25	--
144+04-145+04	RT	WHITE, EDGELINE	100	--	--	--	--	--	--	--
144+04-194+26	RT	WHITE, EDGELINE	--	5025	--	--	--	--	--	--
144+10-145+00	LT	WHITE, SKIP (3' SEG-9' GAP)	--	25	--	--	--	--	--	--
145+00-194+26	LT	WHITE, EDGELINE	--	4930	--	--	--	--	--	--
153+50-194+27	CENTERLINE	YELLOW, DOUBLE SOLID	8160	--	--	--	--	--	--	--
191+85-192+55	RT	WHITE	--	--	--	1	--	--	--	--
STAGECOACH ROAD	CENTERLINE	YELLOW, DOUBLE SOLID	300	--	--	--	--	--	--	--
PINE HILL ROAD	CENTERLINE	YELLOW, DOUBLE SOLID	180	--	--	--	--	--	--	--
OBSERVATORY ROAD	CENTERLINE	YELLOW, DOUBLE SOLID	200	--	--	--	--	--	--	--
CTH P/CTH S INTERSECTION	LT	WHITE	--	--	--	--	--	--	20	--
CTH S	CENTERLINE	YELLOW, DOUBLE SOLID	165	--	--	--	--	--	--	--
	TOTAL		32609	37040	365	1	2	1	195	40

CONSTRUCTION STAKING SUMMARY

STA.	LOCATION	650.4000 CONSTRUCTION STAKING STORM SEWER QTY EACH	650.4500 CONSTRUCTION STAKING SUBGRADE QTY LF	650.5000 CONSTRUCTION STAKING BASE QTY LF	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER QTY LF	650.6000 CONSTRUCTION STAKING PIPE CULVERTS QTY EACH	650.8000 CONSTRUCTION STAKING RESURFACING REFERENCE QTY LF	650.9910 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (5657-00-72) QTY LS	650.9920 CONSTRUCTION STAKING SLOPE STAKES QTY LF
5+05	CTH S	--	113	113	--	--	--	--	--
5+05-10+00	MAINLINE	--	495	495	--	--	--	--	--
5+20-10+00	LT	--	--	--	545	--	--	--	--
5+25-10+00	RT	--	--	--	500	--	--	--	--
5+23.42	38.62' LT	1	--	--	--	--	--	--	--
5+26.60	75.53' LT	1	--	--	--	--	--	--	--
5+30.73	45.19' RT	1	--	--	--	--	--	--	--
5+36.90	288.69' RT	1	--	--	--	--	--	--	--
10+00-12+00	MAINLINE	--	--	--	--	--	200	--	--
12+00-36+00	MAINLINE	--	2400	2400	--	--	--	--	2400
28+66-34+66	RT	--	--	--	605	--	--	--	--
31+56	OBSERVATORY ROAD	--	103	103	--	--	--	--	--
34+17+75	26.75' RT	1	--	--	--	--	--	--	--
35+00	30.13' RT	1	--	--	--	--	--	--	--
36+00-53+00	MAINLINE	--	--	--	--	--	1700	--	--
53+00-61+00	MAINLINE	--	800	800	--	--	--	--	800
56+57	PINE HILL ROAD	--	109	109	--	--	--	--	--
61+00-64+00	MAINLINE	--	--	--	--	--	300	--	--
64+00-87+23	MAINLINE	--	2323	2323	--	--	--	--	2323
87+23-92+00	MAINLINE	--	--	--	--	--	477	--	--
92+00-97+00	MAINLINE	--	500	500	--	--	--	--	500
97+00-100+00	MAINLINE	--	--	--	--	--	300	--	--
100+00-112+00	MAINLINE	--	1200	1200	--	--	--	--	1200
112+00-117+00	MAINLINE	--	--	--	--	--	500	--	--
117+00-133+50	MAINLINE	--	1650	1650	--	--	--	--	1650
133+50-139+70	MAINLINE	--	--	--	--	--	620	--	--
139+70-150+00	MAINLINE	--	1030	1030	--	--	--	--	1030
143+47	STAGECOACH ROAD	--	176	176	--	--	--	--	--
150+00-153+00	MAINLINE	--	--	--	--	--	300	--	--
153+00-177+00	MAINLINE	--	2400	2400	--	--	--	--	2400
177+00-180+00	MAINLINE	--	--	--	--	--	300	--	--
180+00-185+00	MAINLINE	--	500	500	--	--	--	--	500
185+00-190+00	MAINLINE	--	--	--	--	--	500	--	--
190+00-194+27	MAINLINE	--	427	427	--	--	--	--	427
OBSERVATORY ROAD	LT & RT	--	--	--	150	--	--	--	--
PINE HILL ROAD	LT & RT	--	--	--	160	--	--	--	--
STAGECOACH ROAD (EAST)	LT & RT	--	--	--	155	--	--	--	--
17+10	DRIVEWAY LT	--	--	--	--	1	--	--	--
34+18	MAINLINE	--	--	--	--	1	--	--	--
42+19	DRIVEWAY RT	--	--	--	--	1	--	--	--
45+15	MAINLINE	--	--	--	--	1	--	--	--
49+00	DRIVEWAY LT	--	--	--	--	1	--	--	--
57+13	MAINLINE	--	--	--	--	1	--	--	--
70+32	MAINLINE	--	--	--	--	1	--	--	--
72+30	MAINLINE	--	--	--	--	1	--	--	--
72+81	DRIVEWAY RT	--	--	--	--	1	--	--	--
83+93	MAINLINE	--	--	--	--	1	--	--	--
87+23	DRIVEWAY LT	--	--	--	--	1	--	--	--
90+72	DRIVEWAY RT	--	--	--	--	1	--	--	--

CONSTRUCTION STAKING SUMMARY (CONTINUED)

STA.	LOCATION	650.4000 CONSTRUCTION STAKING STORM SEWER QTY EACH	650.4500 CONSTRUCTION STAKING SUBGRADE QTY LF	650.5000 CONSTRUCTION STAKING BASE QTY LF	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER QTY LF	650.6000 CONSTRUCTION STAKING PIPE CULVERTS QTY EACH	650.8000 CONSTRUCTION STAKING RESURFACING REFERENCE QTY LF	650.9910 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (5657-00-72) QTY LS	650.9920 CONSTRUCTION STAKING SLOPE STAKES QTY LF
90+82	DRIVEWAY LT	--	--	--	--	1	--	--	--
98+52	DRIVEWAY RT	--	--	--	--	1	--	--	--
105+89	MAINLIN	--	--	--	--	1	--	--	--
112+87	DRIVEWAY LT	--	--	--	--	1	--	--	--
117+46	MAINLINE	--	--	--	--	1	--	--	--
122+86	MAINLINE	--	--	--	--	1	--	--	--
142+81	MAINLINE	--	--	--	--	1	--	--	--
144+82	MAINLINE	--	--	--	--	1	--	--	--
154+81	MAINLINE	--	--	--	--	1	--	--	--
160+32	MAINLINE	--	--	--	--	1	--	--	--
163+38	MAINLINE	--	--	--	--	1	--	--	--
173+80	MAINLINE	--	--	--	--	1	--	--	--
PROJECT	UNDISTRIBUTED	--	--	--	--	--	--	1	--
	TOTAL	6	14226	14226	2115	24	5197	1	13230

TRAVERSABLE DRIVEWAY SIDE SLOPES

STA.	LOCATION	SPV.0060.03 QTY EACH
17+10	LT	1
31+50	RT	1
42+19	RT	1
49+00	RT	1
72+81	RT	1
87+23	LT	1
90+72	RT	1
90+82	LT	1
98+52	RT	1
99+26	RT	1
99+89	LT	1
109+38	LT	1
112+87	LT	1
106+50	LT	1
	TOTAL	14

SCALES:
1" = 50' HOR
1" = 5' VER

BEGIN PROJECT 5657-00-72
STA. 5+05

BOP Sta. = 5+05.0000
BOP = 5+05.00
N = 477826.38
E = 748582.75

PI STA = 10+10.93
N = 478332.21
E = 748593.23
I = 01°00'36"L

PI STA = 11+28.65
N = 478449.93
E = 748593.59
I = 00°58'43"R

TDS TELECOM
MADISON GAS & ELECTRIC
CTH P
R/W
ASPH.
CONC.
CAUTION
6+00
7+00
8+00
9+00
10+00
11+00
12+00
+00.00 TOC=995.10
+08.00 TOC=995.60
+50.00 TOC=995.60
+00.00 TOC=996.04
+08.00 TOC=996.04
+50.00 TOC=996.47
+00.00 TOC=996.91
2.5' 5' 11' 11' 5' 2.5'
1' 5' 11' 11' 5' 1'
STA. 12+00
MATCH LINE
SEE CTH P/CTH S INTERSECTION DETAIL
+00.00 TOC=995.16
+50.00 TOC=990.60
+00.00 TOC=996.04
+50.00 TOC=996.49
+00.00 TOC=996.91
PI Sta. = 10+10.93
PI Sta. = 11+28.65
SLOPE INTERCEPTS (TYP.)
MADISON GAS & ELECTRIC
SAWCUT & MATCH EXISTING PAVEMENT
STA. 10+00.00 END CONCRETE CURB & GUTTER 30-INCH TYPE D

BOP STA = 5+50.00
BOP EL = 993.48
PROPOSED ℄ PROFILE
EXISTING ℄ PROFILE
0.50%
0.97%
VPI STA = 10+00.00
VPI EL = 996.85

VPI STA = 7+00.00
VPI EL = 994.15
g1 = −0.50%
g2 = 0.97%
CURVE LEN = 0.00

VPC STA = 10+00.00
VPC EL = 996.85
g1 = +0.97%
g2 = +1.00%
CURVE LEN = 0.00

VPI STA = 11+88.9
VPI EL =
g1 = +1.00%
g2 = −1.70%
CURVE LEN = 533.3'
K = 205
55 MPH DESIRABLE

1000.00
995.00
990.00
985.00
980.00

5+00	5+50	6+00	6+50	7+00	7+50	8+00	8+50	9+00	9+50	10+00	10+50	11+00	11+50	12+00
993.48	993.48	**993.73**	993.98	**993.98**	**994.23**	993.82	**994.72**	**995.20**	994.82	**995.69**	**996.18**	995.88	**996.66**	**997.15**	996.75	**997.43**	997.03	**997.03**	996.69

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	PLAN AND PROFILE	SHEET NO: 47

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\pp01.dwg
PLOT DATE: 1/27/2016
PLOT BY: DANE COUNTY HIGHWAY DEPT.
PLOT SCALE: NONE
WISDOT/CADDS SHEET 21

SCALES:
1" = 50' HOR
1" = 5' VER

PI STA = 11+28.65
N = 478449.93
E = 748593.59
I = 00°58'43"R

STA. 17+10
1-TRAVERSABLE DRIVEWAY
(SEE CROSS SECTION SHEETS)

MADISON GAS
& ELECTRIC

TDS TELECOM

STA. 12+00

STA. 18+00

R/W

1'
5'
11'
11'
5'
1'

CAUTION

CTH P

CTH P

MATCH LINE

MATCH LINE

PI Sta = 11+28.65

MADISON GAS
& ELECTRIC

SLOPE INTERCEPTS
(TYP.)

-1.70%

PROPOSED ℄ PROFILE

EXISTING ℄ PROFILE

VPC STA = 14+55.5

VPI STA = 16+64.7
VPI EL =
g1 = -1.70%
g2 = 0.00%
CURVE LEN = 418.4'
K = 246
70 MPH DESIRABLE

| | | |

SCALES:
1" = 50' HOR
1" = 5' VER

TDS TELECOM

MADISON GAS & ELECTRIC

STA. 21+88
EXISTING 30" CSCP
2-APRON ENDWALLS
FOR CULVERT PIPE
STEEL 30-INCH

STA. 22+14
EXISTING 71"X47" CSPA
2-APRON ENDWALLS FOR
PIPE ARCH SLOPED
CROSS DRAINS STEEL
71X47-INCH 4 TO 1

STA. 18+00
MATCH LINE
STA. 24+00
MATCH LINE

R/W

1'
5'
11'
11'
5'
1'

18+00 19+00 20+00 21+00 22+00 23+00 24+00

CTH P

CAUTION

SLOPE INTERCEPTS
(TYP.)

MADISON GAS
& ELECTRIC

STA. 22+05
EXISTING 71"X47" CSPA
2-APRON ENDWALLS FOR PIPE ARCH SLOPED
CROSS DRAINS STEEL 71X47-INCH 4 TO 1

1000.00
995.00
990.00
985.00
980.00

VPT STA = 18+73.9

PROPOSED ℄ PROFILE

−0.00%

EXISTING ℄ PROFILE

VPC STA = 23+65.00

17+00	17+50	18+00	18+50	19+00	19+50	20+00	20+50	21+00	21+50	22+00	22+50	23+00	23+50	24+00
991.56	991.16	**991.07**	990.67	**990.86**	990.47	**990.89**	990.50	**990.80**	990.40	**991.00**	990.60	**990.99**	990.60	**991.11**	990.71

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	PLAN AND PROFILE	SHEET NO: 49

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\pp03.dwg
PLOT DATE: 1/27/2016
PLOT BY: DANE COUNTY HIGHWAY DEPT.
PLOT SCALE: NONE
WISDOT/CADDS SHEET 21

SCALES:
1" = 50' HOR
1" = 5' VER

STA. 28+65.55, 17.00'R
BEGIN CONCRETE CURB
& GUTTER 36-INCH
6-INCH SLOPED TYPE D

MADISON GAS
& ELECTRIC

TDS TELECOM

STA. 24+00

STA. 30+00

MATCH LINE

MATCH LINE

R/W

1'
5'
11'
11'
5'
1'

24+00 25+00 26+00 27+00 28+00 29+00 30+00

CTH P

CTH P

+52.79

CAUTION

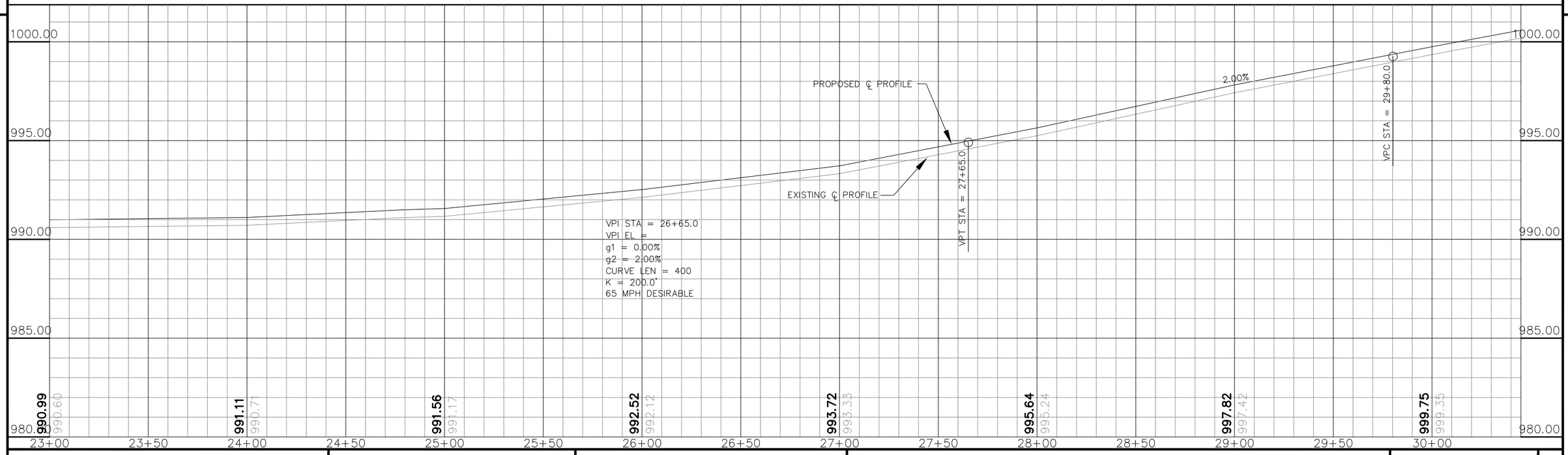
ASPHALTIC
FLUME REQD

STA. 27+88.96, 11.00' RT
BEGIN TAPER

RIPRAP MEDIUM
OVER GEOTEXTILE
FABRIC TYPE HR

MADISON GAS
& ELECTRIC

SLOPE
INTERCEPTS
(TYP.)



PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	PLAN AND PROFILE	SHEET NO: 50

SCALES:
1" = 50' HOR
1" = 5' VER

TDS TELECOM

OBSERVATORY

SEE OBSERVATORY ROAD INTERSECTION DETAIL

PI STA = 31+65.02
N = 480486.89
E = 748634.64
I = 01°06'30"R

TDS TELECOM

STA. 34+18
EXIST 24" RCCP
RELAY 16' LT & 16' RT
EXTEND 2' RT
1-APRON ENDWALLS FOR CULVERT
PIPE REINFORCED CONCRETE 24-INCH

MADISON GAS & ELECTRIC

STA. 35+80.96, 11.00'R
END TAPER

STA. 30+00

MATCH LINE

CAUTION

30+00 31+00 32+00 33+00 34+00 35+00 36+00

CTH P

CTH P +85.38

1' 5' 11' 11' 5' 1'

STA. 36+00

MATCH LINE

R/W

PI Sta = 31+65.0246

ASPH.

SEE STORM SEWER DETAIL SHEET

1-REMOVING SMALL PIPE CULVERTS 18" RCCP

SLOPE INTERCEPTS (TYP.)

STA. 34+66.26, 17.00'R
END CONCRETE CURB & GUTTER 36-INCH 6-INCH SLOPED TYPE D

MADISON GAS & ELECTRIC

1010.00
1005.00
1000.00
995.00
990.00

PROPOSED ℄ PROFILE

EXISTING ℄ PROFILE

1.00%

VPI STA = 31+80.0
VPI EL =
g1 = 2.00%
g2 = 1.00%
CURVE LEN = 400.0'
K = 400
65 MPH DESIRABLE

VPT STA = 33+80.0

997.82	999.75	1001.61	1003.26	1004.22
997.42	999.35	1001.22	1002.86	1003.82

1005.46	1006.55	1007.56		
1005.06	1006.15	1007.17		

29+00 29+50 30+00 30+50 31+00 31+50 32+00 32+50 33+00 33+50 34+00 34+50 35+00 35+50 36+00

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	PLAN AND PROFILE	SHEET NO: 51

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\pp05.dwg | PLOT DATE: 1/27/2016 | PLOT BY: DANE COUNTY HIGHWAY DEPT. | PLOT SCALE: NONE | WISDOT/CADDS SHEET 21

SCALES:
1" = 50' HOR
1" = 5' VER

MADISON GAS & ELECTRIC

TDS TELECOM

STA. 36+00

STA. 42+00

MATCH LINE

MATCH LINE

CTH P

CTH P

CAUTION

SLOPE INTERCEPTS (TYP.)

MADISON GAS & ELECTRIC

R/W

1' 5' 11' 11' 5' 1'

36+00 37+00 38+00 39+00 40+00 41+00 42+00

PROPOSED ℄ PROFILE

EXISTING ℄ PROFILE

1.00%

1.00%

1015.00
1010.00
1005.00
1000.00
995.00

35+00	35+50	36+00	36+50	37+00	37+50	38+00	38+50	39+00	39+50	40+00	40+50	41+00	41+50	42+00
1006.55		1007.56		1008.37		1009.67		1010.62		1011.78		1012.67		1013.41
1006.15		1007.17		1007.97		1009.27		1010.23		1011.39		1012.28		1013.02

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	PLAN AND PROFILE	SHEET NO: 52

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\pp06.dwg PLOT DATE: 1/27/2016 PLOT BY: DANE COUNTY HIGHWAY DEPT. PLOT SCALE: NONE

WISDOT/CADDS SHEET 21

SCALES:
1" = 50' HOR
1" = 5' VER

MADISON GAS & ELECTRIC

TDS TELECOM

STA. 45+15
EXISTING 24" RCCP
RELAID STORM SEWER 24-INCH 16'LT & 16'RT
EXTEND 2' LT
1-APRON ENDWALLS FOR CULVERT
PIPE REINFORCED CONCRETE 24-INCH

R/W

STA. 42+00
MATCH LINE

42+00 43+00 44+00 45+00 46+00 47+00 48+00

CTH P

1' 5' 11' 11' 5' 1'

GRAVEL

CAUTION

STA. 48+00
MATCH LINE

STA. 42+19
TRAVERSABLE DRIVEWAY
(SEE CROSS SECTION SHEETS)

SLOPE INTERCEPTS
(TYP.)

MADISON GAS & ELECTRIC

1025.00
1020.00
1015.00
1010.00
1005.00

PROPOSED ℄ PROFILE

EXISTING ℄ PROFILE

CURVE LEN = 533.3'

1.00%

VPC STA = 43+10.0

VPI STA =47+00.0
VPI EL =
g1 = 1.00%
g2 = 5.00%
CURVE LEN = 780.10'
K = 195
70 MPH DESIRABLE

41+00	41+50	42+00	42+50	43+00
1012.67		1013.41		1014.68
1012.28		1013.02		1014.28

43+50	44+00	44+50	45+00	45+50	46+00
	1015.91		1017.75		1019.93
	1015.51		1017.36		1019.54

46+50	47+00	47+50	48+00
	1022.49		1025.85
	1022.10		1025.46

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	PLAN AND PROFILE	SHEET NO: 53

SCALES:
1" = 50' HOR
1" = 5' VER

MADISON GAS & ELECTRIC

TDS TELECOM

PI STA = 53+97.07
N = 482716.19
E = 748722.81
I = 18°17'15"L

STA. 48+00

STA. 54+00

MATCH LINE

MATCH LINE

R/W

GRAV

48+00

49+00

CTH P

50+00

51+00

52+00

53+00

54+00

CTH P

1'
5'
11'
11'
5'
1'

CAUTION

MADISON GAS & ELECTRIC

STA. 49+00
1-TRAVERSABLE DRIVEWAY
(SEE CROSS SECTION SHEETS)

PC Sta. = 50+61.44

SLOPE INTERCEPTS
(TYP.)

CIRCULAR
Da = 02°45'00"
T = 335.35
R = 2083.48
L = 665.00
C = 662.18
E = 26.82

5

5

1045.00
1040.00
1035.00
1030.00
1025.00

PROPOSED ℄ PROFILE

5.00%

EXISTING ℄ PROFILE

VPT STA = 50+90.0

1022.49	1025.85	1029.72	1033.79	1038.44
1022.10	1025.46	0.00	1033.39	1038.09

1043.64	1048.82	1054.05		
1043.36	1048.58	1053.85		

47+00 47+50 48+00 48+50 49+00 49+50 50+00 50+50 51+00 51+50 52+00 52+50 53+00 53+50 54+00

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	PLAN AND PROFILE	SHEET NO: 54

SCALES:
1" = 50' HOR
1" = 5' VER

PI STA = 53+97.07
N = 482716.19
E = 748722.81
I = 18°17'15"L

CIRCULAR
Da = 02°45'00"
T = 335.35
R = 2083.48
L = 665.00
C = 662.18
E = 26.82

STA. 54+64
BEGIN MGS GUARDRAIL
TERMINAL EAT

STA. 55+14
BEGIN MGS GUARDRAIL 3

TDS
TELECOM

MADISON GAS
& ELECTRIC

PI Sta= 57+26.7172

STA. 54+00
MATCH LINE

STA. 60+00
MATCH LINE

CTH P

PINE HILL RD.

CAUTION

MADISON GAS
& ELECTRIC

SEE PINE HILL
ROAD INTERSECTION
DETAIL SHEET

STA. 57+13
EXIST 24" RCCP
RELAID STORM ~~SEWER 24-INCH~~
16'LT & 16'RT
EXTEND 8' RT
1-APRON ENDWALLS FOR CULVERT
PIPE REINFORCED CONCRETE 24-INCH

SLOPE INTERCEPTS
(TYP.)

5'
11'
11'
5'
1'

R/W

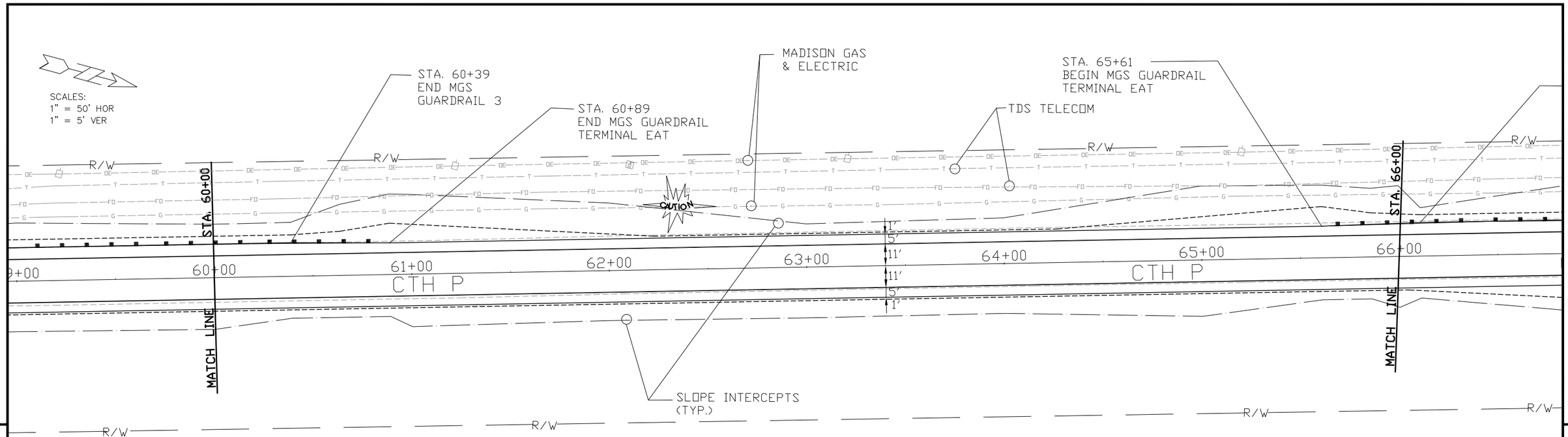
PROPOSED ℄ PROFILE

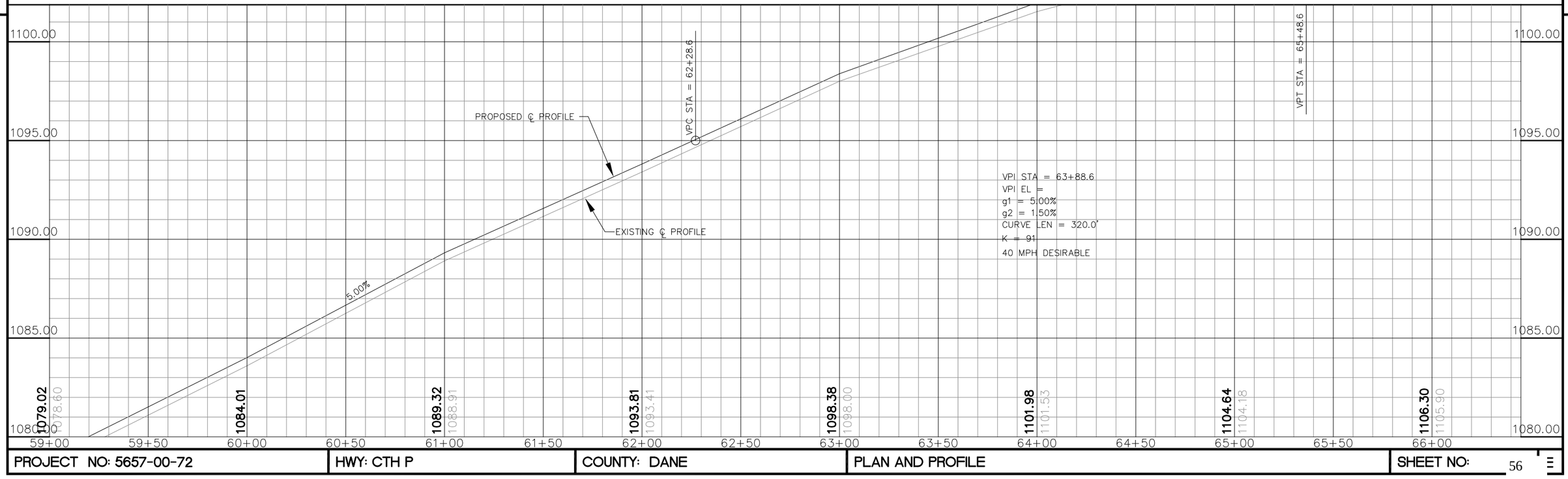
EXISTING ℄ PROFILE

5.00%

1048.82	1054.05	1058.90	1063.81	1069.01	1073.90	1079.02	1084.01
1048.58		1058.72	1063.57	1068.73	1073.53	1078.60	1083.60

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	PLAN AND PROFILE	SHEET NO: 55





PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	PLAN AND PROFILE	SHEET NO: 56

SCALES:
1" = 50' HOR
1" = 5' VER

STA. 66+11
BEGIN MGS GUARDRAIL 3

STA. 68+00
BEGIN REMOVING
GUARDRAIL

STA. 70+32
EXISTING 24" RCCP
RELAID STORM SEWER
24-INCH 16'LT & 16'RT

TDS TELECOM

MADISON GAS
& ELECTRIC

CIRCULAR
Da = 03°28'59"
T = 551.52
R = 1645.00
L = 1064.29
C = 1045.83
E = 89.99

PC STA = 70+32.6566

STA. 66+00

STA. 72+00

MATCH LINE

MATCH LINE

R/W

CAUTION

CAUTION

66+00 67+00 68+00 69+00 70+00 71+00 72+00

CTH P

CTH P

6'
11'
11'
5'

STA. 67+38.5
BEGIN MGS GUARDRAIL
TERMINAL EAT

STA. 67+88.5
BEGIN MGS GUARDRAIL 3

SLOPE INTERCEPTS
(TYP.)

PROPOSED ℄ PROFILE

EXISTING ℄ PROFILE

1.50%

3.00%

VPC STA = 68+35.0

VPT STA = 70+45.0

VPC STA = 71+31.4

VPI STA = 69+40.0
VPI EL =
g1 = 1.50%
g2 = 3.00%
CURVE LEN = 210.0'
K = 140
60 MPH DESIRABLE

1120.00
1115.00
1110.00
1105.00
1100.00

1104.64 1104.18
1106.30 1105.90
1107.73 1107.33
1109.17 1108.74
1110.71 1110.28
1113.25 1112.81
1115.88 1115.46
1119.24 1118.81

65+00 65+50 66+00 66+50 67+00 67+50 68+00 68+50 69+00 69+50 70+00 70+50 71+00 71+50 72+00

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	PLAN AND PROFILE	SHEET NO: 57

SCALES:
1" = 50' HOR
1" = 5' VER

STA. 72+30
EXISTING 72" RCCP
EXTEND 4'LT & 8'RT
2-APRON ENDWALLS FOR CULVERT PIPE
REINFORCED CONCRETE, 72-INCH

STA. 72+86
END MGS
GUARDRAIL 3

STA. 73+36
END MGS GUARDRAIL
TERMINAL EAT

STA. 74+45
BEGIN MGS GUARDRAIL
TERMINAL EAT

STA. 74+95
BEGIN MGS GUARDRAIL 3

MADISON GAS
& ELECTRIC

TDS
TELECOM

CIRCULAR
Da = 03°28'59"
T = 551.52
R = 1645.00
L = 1064.29
C = 1045.83
E = 89.99

PI STA = 77+84.18
N = 485016.03
E = 748062.30
I = 37°04'10"R

72+32.6566

45 MPH

CAUTION

R/W

STA. 72+00

MATCH LINE

72+00 73+00 74+00 75+00 76+00 77+00 78+00

CTH P

6'
11'
11'
5'
1'

SAWCUT & MATCH
EXISTING PAVEMENT

STA. 72+90
END REMOVING
GUARDRAIL

STA. 72+63.5
END MGS GUARDRAIL
TERMINAL EAT

STA. 72+81
1-TRAVERSABLE DRIVEWAY
(SEE CROSS SECTION SHEETS)

STA. 72+13.5
END MGS GUARDRAIL 3

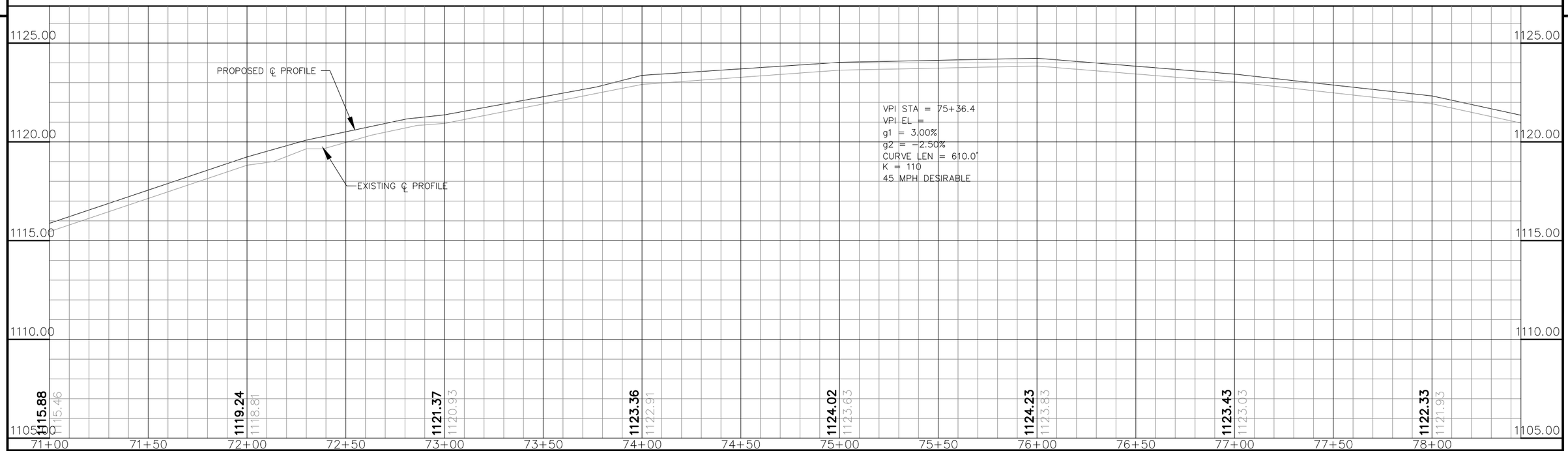
SLOPE INTERCEPTS
(TYP.)

STA. 78+00

MATCH LINE

5

5

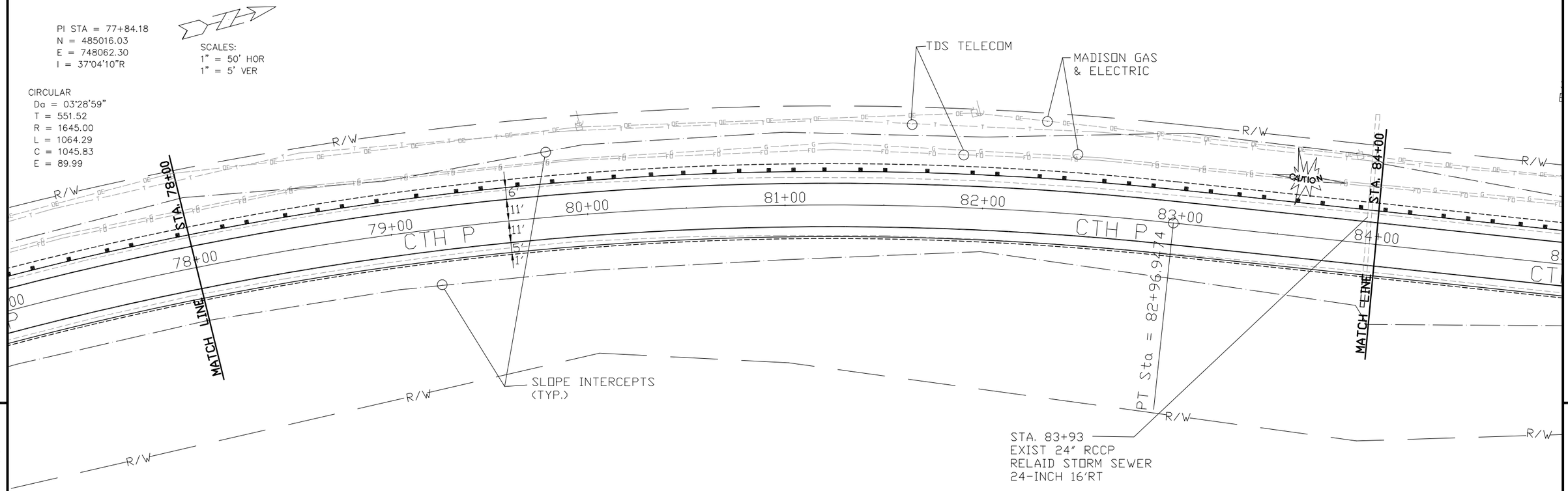


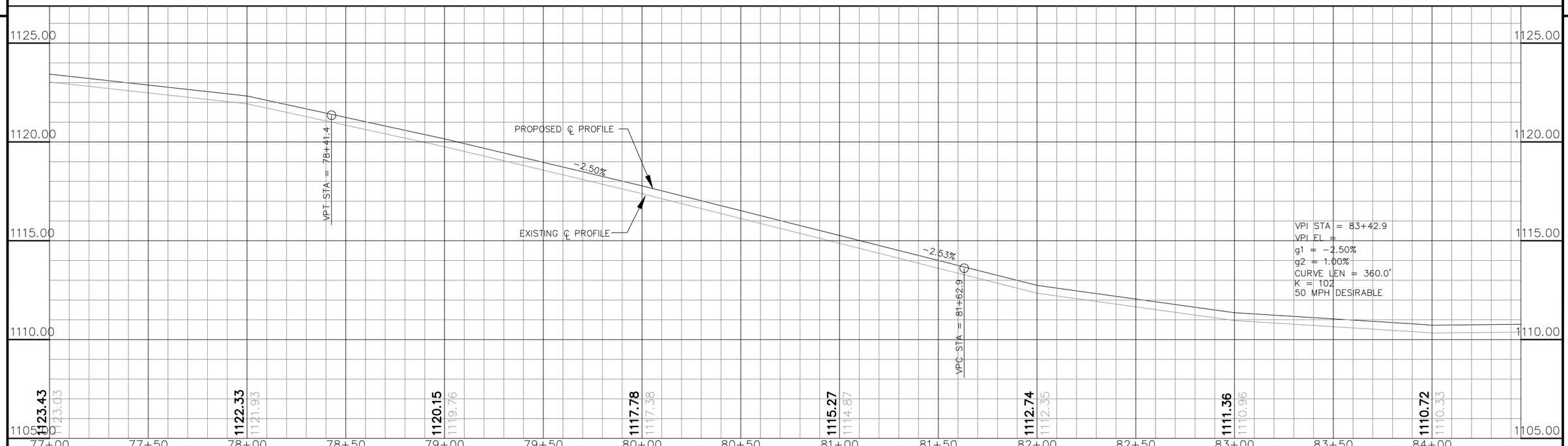
PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	PLAN AND PROFILE	SHEET NO: 58

PI STA = 77+84.18
N = 485016.03
E = 748062.30
I = 37°04'10"R

SCALES:
1" = 50' HOR
1" = 5' VER

CIRCULAR
Da = 03°28'59"
T = 551.52
R = 1645.00
L = 1064.29
C = 1045.83
E = 89.99





PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	PLAN AND PROFILE	SHEET NO: 59

SCALES:
1" = 50' HOR
1" = 5' VER

STA. 85+95
END MGS GUARDRAIL 3

STA. 86+45
END MGS GUARDRAIL
TERMINAL EAT

TDS
TELECOM

HIDDEN VALLEY

STA. 87+23
1-TRAVERSABLE DRIVEWAY
(SEE CROSS SECTION SHEETS)

MADISON GAS
& ELECTRIC

R/W

CAUTION

STA. 84+00

STA. 90+00

84+00 85+00 86+00 87+00 88+00 89+00 90+00

CTH P

1'
5'
11'
11'
5'
1'

MATCH LINE

SAWCUT & MATCH
EXISTING PAVEMENT

SLOPE INTERCEPTS
(TYP.)

ASPH

PROPOSED ℄ PROFILE

1.00%

EXISTING ℄ PROFILE

VPT STA = 85+22.9

VPC STA = 87+42.5

VPI STA = 89+62.5
VPI EL =
g1 = 1.00%
g2 = -3.00%
CURVE LEN = 440.0'
K = 110
45 MPH DESIRABLE

1120.00
1115.00
1110.00
1105.00
1100.00

1111.36 1110.96
1110.72 1110.33
1110.84 1110.45
1111.75 1111.36
1112.80 1112.40
1113.82 1113.42
1113.49 1113.09
1112.53 1112.14

83+00 83+50 84+00 84+50 85+00 85+50 86+00 86+50 87+00 87+50 88+00 88+50 89+00 89+50 90+00

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	PLAN AND PROFILE	SHEET NO: 60

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\pp14.dwg
PLOT DATE: 1/27/2016
PLOT BY: DANE COUNTY HIGHWAY DEPT.
PLOT SCALE: NONE
WISDOT/CADDS SHEET 21

SCALES:
1" = 50' HOR
1" = 5' VER

STA. 90+82
1-TRAVERSABLE DRIVEWAY
(SEE CROSS SECTION SHEETS)

SAWCUT &
MATCH
EXISTING
PAVEMENT

TDS
TELECOM

STA. 92+10
BEGIN MGS GUARDRAIL
TERMINAL EAT

MADISON GAS
& ELECTRIC

STA. 92+60
BEGIN MGS GUARDRAIL 3

PI STA = 94+69.68
N = 486625.26
E = 748681.50
I = 21°20'19"L

R/W

STA. 90+00

MATCH LINE

CAUTION

90+00

91+00

92+00

93+00

94+00

95+00

96+00

CTH P

5'
11'
11'
5'
1'

GRAVEL

ASPHALT

PC Sta = 91+02.22

STA. 90+72
1-TRAVERSABLE DRIVEWAY
(SEE CROSS SECTION SHEETS)

SAWCUT & MATCH
EXISTING PAVEMENT

SLOPE INTERCEPTS
(TYP.)

STA. 94+31
EXISTING 24" RCCP

CIRCULAR
Da = 02°56'18"
T = 367.38
R = 1950.00
L = 726.24
C = 722.05
E = 34.30

STA. 96+00

MATCH LINE

1115.00
1110.00
1105.00
1100.00
1095.00

VPT STA = 91+82.5

VPC STA = 92+10.0

-3.00%

PROPOSED ℄ PROFILE

EXISTING ℄ PROFILE

VPT STA = 94+70.0

-0.50%

VPI STA = 93+40.0
VPI EL =
g1 = -3.00%
g2 = -0.50%
CURVE LEN = 260.0'
K = 104
50 MPH DESIRABLE

1113.49	1112.53	1110.70	1107.73	1105.21
1113.09	1112.14	1110.31	1107.33	1104.81

1103.69	1102.93	1102.42		
1103.29	1102.53	1102.02		

89+00 89+50 90+00 90+50 91+00 91+50 92+00 92+50 93+00 93+50 94+00 94+50 95+00 95+50 96+00

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	PLAN AND PROFILE	SHEET NO: 61

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\pp15.dwg
PLOT DATE: 1/27/2016
PLOT BY: DANE COUNTY HIGHWAY DEPT.
PLOT SCALE: NONE
WISDOT/CADDS SHEET 21

SCALES:
1" = 50' HOR
1" = 5' VER

PI STA = 94+69.68
N = 486625.26
E = 748681.50
I = 21°20'19"L

STA. 96+22.5
END MGS GUARDRAIL 3

STA. 96+72.5
END MGS GUARDRAIL
TERMINAL EAT

STA. 98+28.5408
PT

STA. 99+89
1-TRAVERSABLE DRIVEWAY
(SEE CROSS SECTION SHEETS)

SAWCUT & MATCH
EXISTING PAVEMENT

TDS
TELECOM

STA. 96+00
MATCH LINE

STA. 102+00
MATCH LINE

CTH P

R/W

ASPH

CONC

GRAV

CAUTION

5'
11'
11'
5'
1'

MADISON GAS
& ELECTRIC

SAWCUT & MATCH
EXISTING PAVEMENT

STA. 99+26
1-TRAVERSABLE DRIVEWAY
(SEE CROSS SECTION SHEETS)

SLOPE
INTERCEPTS
(TYP.)

STA. 98+52
1-TRAVERSABLE DRIVEWAY
(SEE CROSS SECTION SHEETS)

STA. 101+40
BEGIN MGS GUARDRAIL
TERMINAL EAT

STA. 101+90
BEGIN MGS
GUARDRAIL 3

PROPOSED ℄ PROFILE

EXISTING ℄ PROFILE

-0.50%

1102.93 (1102.53)	1102.42 (1102.02)	1102.11 (1101.71)	1101.79 (1101.40)	1101.44 (1101.05)
1100.62 (1100.22)	1099.93 (1099.54)	1099.41 (1099.01)		

PROJECT NO: 5657-00-72 | HWY: CTH P | COUNTY: DANE | PLAN AND PROFILE | SHEET NO: 62

SCALES:
1" = 50' HOR
1" = 5' VER

CIRCULAR

T = 776.51
R = 1925.00
L = 1476.16
C = 1440.26
E = 150.72

TDS TELECOM

MADISON GAS
& ELECTRIC

PC Sta = 105+69.1979

CAUTION

STA. 102+00

STA. 108+00

MATCH LINE

MATCH LINE

R/W

CTH P

CTH P

1'
5'
11'
11'
5'

00 102+00 103+00 104+00 105+00 106+00 107+00 108+00

SLOPE INTERCEPTS
(TYP.)

STA. 105+89
EXIST 24" RCCP
RELAID STORM SEWER
24-INCH 16'RT

PROPOSED ℄ PROFILE

EXISTING ℄ PROFILE

-0.50%

1105.00
1100.00
1095.00
1090.00
1085.00

101+00	101+50	102+00	102+50	103+00	103+50	104+00	104+50	105+00	105+50	106+00	106+50	107+00	107+50	108+00
1099.93	1099.54	**1099.41**	1099.01	**1098.95**	1098.55	**1098.55**	1098.16	**1098.05**	1097.66	**1097.76**	1097.36	**1097.28**	1096.88	**1096.64**	1096.25

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	PLAN AND PROFILE	SHEET NO: 63

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\pp17.dwg
PLOT DATE: 1/27/2016
PLOT BY: DANE COUNTY HIGHWAY DEPT.
PLOT SCALE: NONE
WISDOT/CADDS SHEET 21

SCALES:
1" = 50' HOR
1" = 5' VER

STA. 108+00
MATCH LINE
CAUTION
GRA.
R/W
TDS TELECOM
MADISON GAS
& ELECTRIC
108+00
109+00
110+00
111+00
112+00
113+00
114+00
CTH P
STA. 112+87
1-TRAVERSABLE DRIVEWAY
(SEE CROSS SECTION SHEETS)
1'
5'
11'
11'
5'
ASPH.
STA. 114+00
STA. 111+40
END MGS GUARDRAIL 3
SLOPE INTERCEPTS
(TYP.)
SAWCUT & MATCH
EXISTING PAVEMENT
STA. 111+90
END MGS GUARDRAIL
TERMINAL EAT

VPC-STA = 108+13.1
VPI STA = 111+23.1
VPI EL =
g1 = -0.50%
g2 = -7.00%
CURVE LEN = 620.0'
K = 95
40 MPH DESIRABLE
PROPOSED ℄ PROFILE
EXISTING ℄ PROFILE

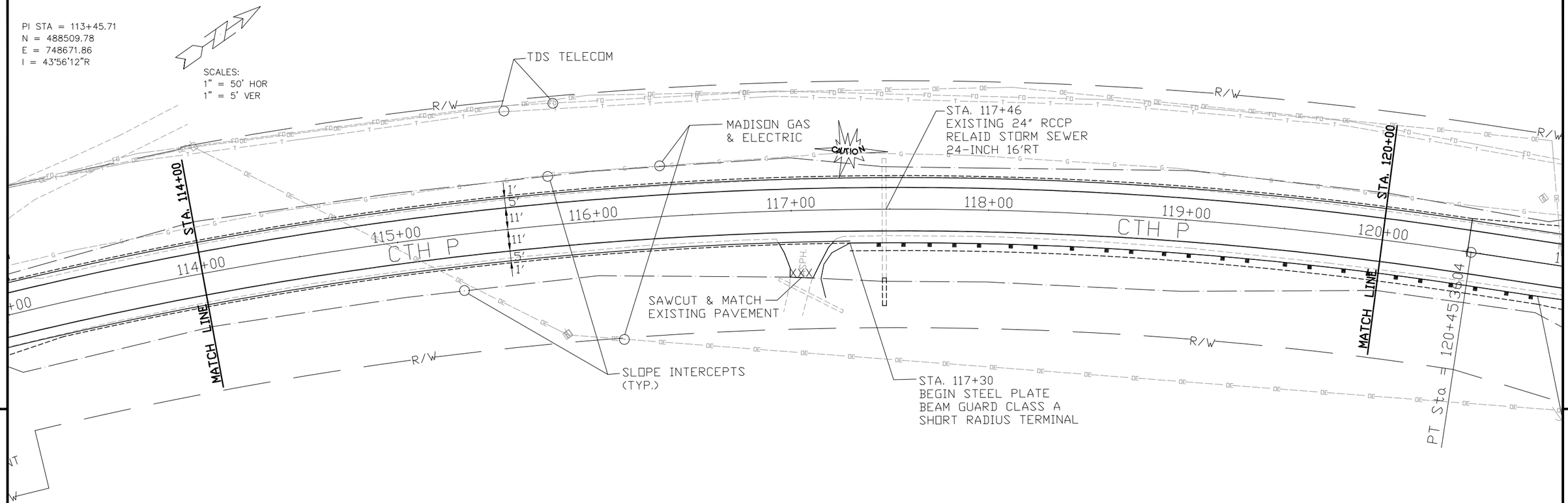
1090.00
1085.00
1080.00
1075.00
1070.00
1097.28 1096.88
1096.64 1096.25
1095.57 1095.18
1093.45 1093.06
1090.39 1089.99
1086.47 1086.08
1081.23 1080.83
1074.81 1074.41
107+00 107+50 108+00 108+50 109+00 109+50 110+00 110+50 111+00 111+50 112+00 112+50 113+00 113+50 114+00

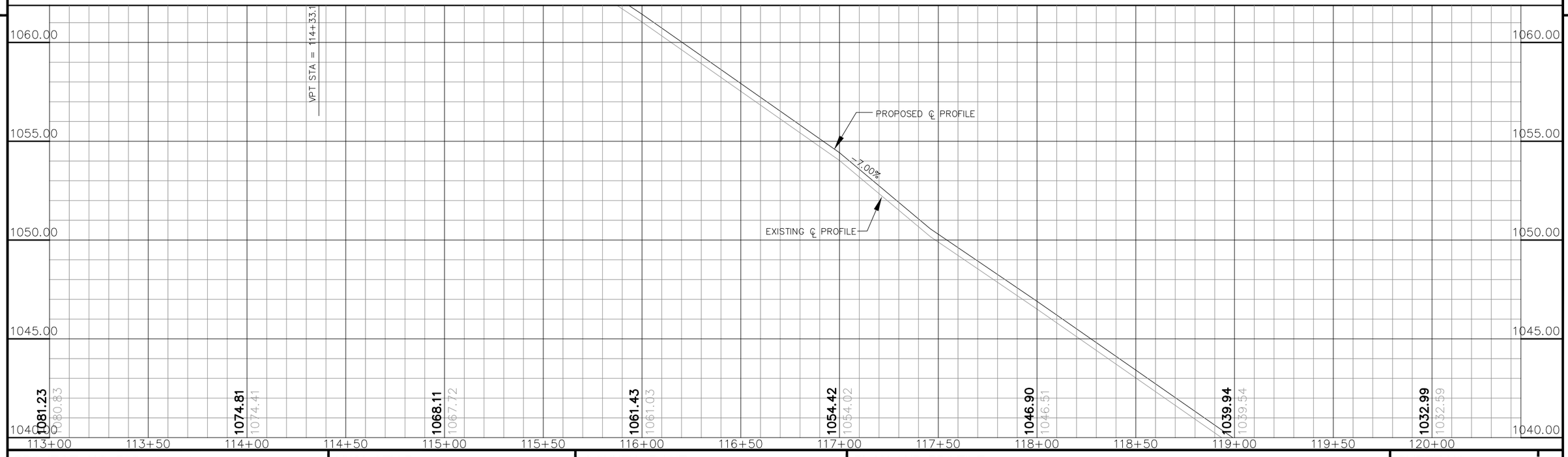
PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	PLAN AND PROFILE	SHEET NO: 64

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\pp18.dwg
PLOT DATE: 1/27/2016
PLOT BY: DANE COUNTY HIGHWAY DEPT.
PLOT SCALE: NONE
WISDOT/CADDS SHEET 21

PI STA = 113+45.71
N = 488509.78
E = 748671.86
I = 43°56'12"R

SCALES:
1" = 50' HOR
1" = 5' VER





PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	PLAN AND PROFILE	SHEET NO: 65

SCALES:
1" = 50' HOR
1" = 5' VER

STA. 121+77.5
BEGIN MGS GUARDRAIL
TERMINAL EAT

TDS
TELECOM

STA. 122+27.5
BEGIN MGS GUARDRAIL 3

MADISON GAS
& ELECTRIC

PI STA = 125+72.29
N = 489453.02
E = 749571.46
I = 00°23'43"L

STA. 120+00
MATCH LINE

STA. 126+00
MATCH LINE

PT Sta = 120+45.04

PI Sta = 125+72.05

CTH P

R/W

5'
11'
11'
5'

STA. 121+32
END STEEL PLATE
BEAMGUARD ENERGY
ABSORBING TERMINAL

STA. 120+82
END STEEL PLATE
BEAM GUARD
CLASS A

STA. 122+86
EXISTING 72" RCCP
EXTEND 6' LT
1-APRON ENDWALLS FOR CULVERT PIPE
REINFORCED CONCRETE 72-INCH LT
1-APRON ENDWALLS FOR CULVERT PIPE
SLOPED GROSS DRAINS STEEL 72-INCH
4 TO 1 RT

SLOPE INTERCEPTS
(TYP.)

STA. 125+50
BEGIN MGS GUARDRAIL
TERMINAL EAT

STA. 126+00
BEGIN MGS
GUARDRAIL 3

-7.00%

PROPOSED ℄ PROFILE

EXISTING ℄ PROFILE

1039.94	1032.99	1026.01	1018.74	1011.64	1004.75	997.83	990.84
1039.54	1032.59	1025.62	1018.34	1011.25	1004.36	997.44	990.45

1020.00
1015.00
1010.00
1005.00
1000.00

119+00 119+50 120+00 120+50 121+00 121+50 122+00 122+50 123+00 123+50 124+00 124+50 125+00 125+50 126+00

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	PLAN AND PROFILE	SHEET NO: 66

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\pp20.dwg
PLOT DATE: 1/27/2016
PLOT BY: DANE COUNTY HIGHWAY DEPT.
PLOT SCALE: NONE
WISDOT/CADDS SHEET 21

PI STA = 125+72.29
N = 489453.02
E = 749571.46
I = 00°23'43"L

SCALES:
1" = 50' HOR
1" = 5' VER

R/W

STA. 126+90
END MGS GUARDRAIL 3

STA. 127+40
END MGS GUARDRAIL
TERMINAL EAT

MADISON GAS
& ELECTRIC

TDS
TELECOM

STA. 126+00

126+00

127+00
CTH P

128+00

129+00

130+00

131+00
CTH P

132+00

STA. 132+00

CAUTION

PI Sta = 125+72.29

MATCH LINE

STA. 126+05
BEGIN REMOVING
GUARDRAIL

PC Sta = 128+63.29

1'
5'
11'
11'
6'

SLOPE INTERCEPTS
(TYP.)

MATCH LINE

PI STA = 132+35.03
N = 489935.75
E = 750025.54
I = 42°08'36"L

CIRCULAR
Da = 05°56'15"
T = 371.81
R = 965.00
L = 709.79
C = 693.90
E = 69.15

-7.00%

PROPOSED ℄ PROFILE

EXISTING ℄ PROFILE

| | | |

SCALES:
1" = 50' HOR
1" = 5' VER

R/W

STA. 132+00

MATCH LINE

132+00

133+00

134+00

135+00

136+00

137+00

138+00

CTH P

TDS
TELECOM

CAUTION

MADISON GAS
& ELECTRIC

1'
5'
11'
11'
5'
1'

PI STA = 132+35.03
N = 489935.75
E = 750025.54
I = 42°08'36"L

CIRCULAR
Da = 05°56'15"
T = 371.81
R = 965.00
L = 709.79
C = 693.90
E = 69.15

STA. 133+00
END MGS
GUARDRAIL 3

STA. 133+50
END MGS GUARDRAIL
TERMINAL EAT

STA. 133+60
END REMOVING
GUARDRAIL

PT Sta = 135+73.46

SLOPE INTERCEPTS
(TYP.)

STA. 138+00

MATCH LINE

VPC STA = 132+20.0

PROPOSED ℄ PROFILE

EXISTING ℄ PROFILE

945.00
940.00
935.00
930.00
925.00

955.73 955.35
948.74 948.34
941.91 941.52
935.62 935.22
930.10 929.70
925.45 925.05
921.22 920.82
917.76 917.37

131+00 131+50 132+00 132+50 133+00 133+50 134+00 134+50 135+00 135+50 136+00 136+50 137+00 137+50 138+00

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	PLAN AND PROFILE	SHEET NO: 68

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\pp22.dwg PLOT DATE: 1/27/2016 PLOT BY: DANE COUNTY HIGHWAY DEPT. PLOT SCALE: NONE WISDOT/CADDS SHEET 21

SCALES:
1" = 50' HOR
1" = 5' VER

TDS TELECOM

MADISON GAS & ELECTRIC

ATC

STAGECOACH RD

R/W

STA. 138+00

MATCH LINE

138+00 139+00 140+00 141+00 142+00 143+00 144+00

CTH P

1' 5' 11' 11' 5' 1'

11' 5' 12' 1'

CAUTION

SEE STAGECOACH RD INTERSECTION DETAIL SHEET

STA. 144+00

SLOPE INTERCEPTS (TYP.)

STA. 142+81
EXISTING 36" RCCP
EXTEND 16' RT
1-APRON ENDWALLS FOR CULVERT PIPE SLOPED
CROSS DRAINS STEEL 36-INCH 4 TO 1 LT
1-APRON ENDWALLS FOR CULVERT PIPE
REINFORCED CONCRETE 36-INCH RT

VPI STA = 138+20.00
VPI EL =
g1 = −7.00%
g2 = +0.50%
CURVE LEN = 1200.0'
K = 160
65 MPH DESIRABLE

PROPOSED ℄ PROFILE

EXISTING ℄ PROFILE

920.00 915.00 910.00 905.00 900.00

921.22 920.82 917.76 917.37 914.83 914.43 912.41 912.02 910.65 910.26 909.46 909.06 908.80 908.41 908.99 908.60

137+00 137+50 138+00 138+50 139+00 139+50 140+00 140+50 141+00 141+50 142+00 142+50 143+00 143+50 144+00

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	PLAN AND PROFILE	SHEET NO: 69

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\pp23.dwg PLOT DATE: 1/27/2016 PLOT BY: DANE COUNTY HIGHWAY DEPT. PLOT SCALE: NONE WISDOT/CADDS SHEET 21

SCALES:
1" = 50' HOR
1" = 5' VER

PI STA = 150+60.27
N = 491794.48
E = 750061.39
I = 12°26'34"R

CIRCULAR
Da = 02°30'07"
T = 249.64
R = 2290.00
L = 497.32
C = 496.34
E = 13.57

STAGECOACH

ATC

STA. 144+00

MATCH LINE

CAUTION

CTH P

SEE STAGECOACH RD INTERSECTION DETAIL SHEET

R/W

1'
5'
11'
11'
5'
1'

144+00
145+00
146+00
147+00
148+00
149+00
150+00

STA. 144+82
EXISTING 24" RCCP
RELAID STORM SEWER
24-INCH 16'LT & 16'RT

MADISON GAS
& ELECTRIC

SLOPE INTERCEPTS
(TYP.)

PC Sta = 148+10.63

TDS TELECOM

STA. 150+00

MATCH LINE

VPT STA = 144+20.0

PROPOSED ℄ PROFILE

EXISTING ℄ PROFILE

0.50%

VPC STA = 149+65.0

915.00
910.00
905.00
900.00
895.00

908.80 908.41
908.99 908.60
909.52 909.12
909.95 909.55
910.46 910.06
911.12 910.72
911.63 911.24
912.10 911.70

143+00 143+50 144+00 144+50 145+00 145+50 146+00 146+50 147+00 147+50 148+00 148+50 149+00 149+50 150+00

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	PLAN AND PROFILE	SHEET NO: 70

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\pp24.dwg
PLOT DATE: 1/27/2016
PLOT BY: DANE COUNTY HIGHWAY DEPT.
PLOT SCALE: NONE
WISDOT/CADDS SHEET 21

PI STA = 150+60.27
N = 491794.48
E = 750061.39
I = 12°26'34"R

CIRCULAR
Da = 02°30'07"
T = 249.64
R = 2290.00
L = 497.32
C = 496.34
E = 13.57
SE = 4.6%
70 MPH CURVE

STA. 150+00
MATCH LINE

R/W

MADISON GAS
& ELECTRIC

STA. 154+81
EXISTING 36" RCCP
RELAID STORM SEWER 36-INCH 16'LT & 16'RT
EXTEND 4'RT
1-APRON ENDWALLS FOR CULVERT PIPE
REINFORCED CONCRETE 36-INCH

CAUTION

STA. 156+00
MATCH LINE

1'
5'
11'
11'
5'
1'

150+00
151+00
152+00
153+00
154+00
155+00
156+00
CTH P
CTH P

PT Sta = 153+07.9506

TDS TELECOM

SLOPE INTERCEPTS
(TYP.)

STA. 155+25
BEGIN MGS
GUARDRAIL
TERMINAL EAT

STA. 155+75
BEGIN MGS
GUARDRAIL 3

SCALES:
1" = 50' HOR
1" = 5' VER

VPI STA = 151+00.00
VPI EL =
g1 = +0.50%
g2 = -1.00%
CURVE LEN = 270.0'
K = 180
50 MPH DESIRABLE

+0.50%

-1.00%

PROPOSED ℄ PROFILE

EXISTING ℄ PROFILE

VPC STA = 149+65.0

VPT STA = 52+35.0

915.00
910.00
905.00
900.00
895.00

911.63 911.24
912.10 911.70
911.79 911.39
911.28 910.89
910.51 910.11
909.49 909.10
908.43 908.04
907.18 906.79

149+00 149+50 150+00 150+50 151+00 151+50 152+00 152+50 153+00 153+50 154+00 154+50 155+00 155+50 156+00

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	PLAN AND PROFILE	SHEET NO: 71

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\pp25.dwg
PLOT DATE: 1/27/2016
PLOT BY: DANE COUNTY HIGHWAY DEPT.
PLOT SCALE: NONE
WISDOT/CADDS SHEET 21

SCALES:
1" = 50' HOR
1" = 5' VER

PI STA = 160+09.20
N = 492718.91
E = 750284.14
I = 12°38'25"L

CIRCULAR
Da = 02°01'41"
T = 312.89
R = 2825.00
L = 623.24
C = 621.97
E = 17.27

STA. 156+00
MATCH LINE
PC Sta = 156+96.3139
STA. 160+50
1-TRAVERSABLE DRIVEWAY
(SEE CROSS SECTION SHEETS)
MADISON GAS
& ELECTRIC
STA. 160+32
EXISTING 24" RCCP
RELAID STORM SEWER
24-INCH 16'RT
SLOPE INTERCEPTS
(TYP.)
CHARTER
STA. 162+00
MATCH LINE

CAUTION

R/W

1'
5'
11'
11'
6'

CTH P

156+00 157+00 158+00 159+00 160+00 161+00 162+00

-1.00%

PROPOSED ℄ PROFILE
EXISTING ℄ PROFILE

	155+00	156+00	157+00	158+00	159+00	160+00	161+00	162+00
EXISTING	908.04	906.79	905.78	904.81	903.84	902.85	901.84	900.89
PROPOSED	908.43	907.18	906.18	905.21	904.24	903.25	902.24	901.29

910.00
905.00
900.00
895.00
890.00

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	PLAN AND PROFILE	SHEET NO: 72

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\pp26.dwg
PLOT DATE: 1/27/2016
PLOT BY: DANE COUNTY HIGHWAY DEPT.
PLOT SCALE: NONE
WISDOT/CADDS SHEET 21

SCALES:
1" = 50' HOR
1" = 5' VER

CIRCULAR
Da = 03°53'04"
T = 459.42
R = 1475.00
L = 890.75
C = 877.27
E = 69.89
SE = 5.6%
60 MPH CURVE

STA. 162+00
MATCH LINE
CAUTION
GRAV.
MADISON GAS
& ELECTRIC
R/W
CTH P
162+00
163+00
164+00
165+00
166+00
167+00
168+00
STA. 168+00
MATCH LINE
1'
5'
11'
11'
5'
1'
PT Sta = 163+19.55
PC Sta = 166+27.49
SLOPE INTERCEPTS
(TYP.)
STA. 163+38
EXIST 24" RCCP
RELAID STORM SEWER 24-INCH 16'LT & 16'RT
1-APRON ENDWALL FOR CULVERT PIPE
REINFORCED CONCRETE 24-INCH
STA. 163+50
END MGS GUARDRAIL
TERMINAL EAT
STA. 163+00
END MGS
GUARDRAIL 3

VPC STA = 164+36.7
-1.00%
PROPOSED ℄ PROFILE
EXISTING ℄ PROFILE

905.00
900.00
895.00
890.00
885.00

902.24 901.84
901.29 900.89
900.09 899.69
899.31 898.92
898.33 897.93
897.80 897.40
897.05 896.65
896.61 896.21

161+00 161+50 162+00 162+50 163+00 163+50 164+00 164+50 165+00 165+50 166+00 166+50 167+00 167+50 168+00

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	PLAN AND PROFILE	SHEET NO: 73

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\pp27.dwg
PLOT DATE: 1/27/2016
PLOT BY: DANE COUNTY HIGHWAY DEPT.
PLOT SCALE: NONE
WISDOT/CADDS SHEET 21

SCALES:
1" = 50' HOR
1" = 5' VER

PI STA = 170+86.91
N = 493799.03
E = 750301.25
I = 34°36'03"R

SAWCUT & MATCH
EXISTING PAVEMENT

MADISON GAS
& ELECTRIC

CAUTION

ASPH.

GRAV.

STA. 168+00

MATCH LINE

STA. 174+00

MATCH LINE

R/W

1'
5'
11'
11'
5'
1'

169+00
170+00
171+00
172+00
173+00
174+00
168+00
167+00

CTH P

CTH P

CIRCULAR
Da = 03°53'04"
T = 459.42
R = 1475.00
L = 890.75
C = 877.27
E = 69.89

TDS
TELECOM

SLOPE INTERCEPTS
(TYP.)

STA. 173+80
EXIST 24" RCCP
RELAID STORM
SEWER 24-INCH
24' RT

905.00
900.00
895.00
890.00
885.00

PROPOSED ℄ PROFILE

EXISTING ℄ PROFILE

VPI STA = 168+66.7
VPI EL =
g1 = -1.00%
g2 = 0.50%
CURVE LEN = 860.0'
K = 537
70 MPH DESIRABLE

VPT STA = 172+96.7
VPC STA = 172+96.7

897.05 896.65
896.61 896.21
896.10 895.71
896.15 895.75
896.29 895.90
896.51 896.11
896.79 896.40
897.25 896.85

167+00 167+50 168+00 168+50 169+00 169+50 170+00 170+50 171+00 171+50 172+00 172+50 173+00 173+50 174+00

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	PLAN AND PROFILE	SHEET NO: 74

SCALES:
1" = 50' HOR
1" = 5' VER

CIRCULAR
Da = 03°24'01"
T = 340.90
R = 1685.00
L = 672.71
C = 668.26
E = 34.14

SAWCUT & MATCH
EXISTING PAVEMENT

MADISON GAS
& ELECTRIC

R/W

STA. 174+00

MATCH LINE

174+00 175+00 176+00 177+00 178+00 179+00 180+00

CTH P

1'
5'
11'
11'
5'
1'

ASPH.

CAUTION

STA. 180+00

MATCH LINE

PT Sta. = 175+18.24

PC Sta = 180+01.24

SLOPE INTERCEPTS
(TYP.)

GRAV

TDS
TELECOM

PI STA = 170+86.91
N = 493799.03
E = 750301.25
I = 34°36'03"R

VPI STA = 175+00.00
VPI EL =
g1 = 0.50%
g2 = 0.00%
CURVE LEN = 406.6
K = 813
70 MPH DESIRABLE

VPI STA = 177+03.3

PROPOSED ℄ PROFILE

0.00%

EXISTING ℄ PROFILE

905.00
900.00
895.00
890.00
885.00

173+00	173+50	174+00	174+50	175+00
896.79	896.40	897.25	896.85	897.74
175+50	176+00	176+50	177+00	177+50
897.34	898.00	897.61	898.03	897.64
178+00	178+50	179+00	179+50	180+00
898.11	897.72	898.10	897.70	898.03
				897.63

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	PLAN AND PROFILE	SHEET NO: 75

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\pp29.dwg
PLOT DATE: 1/27/2016
PLOT BY: DANE COUNTY HIGHWAY DEPT.
PLOT SCALE: NONE
WISDOT/CADDS SHEET 21

SCALES:
1" = 50' HOR
1" = 5' VER

PI STA = 183+42.11
N = 494843.67
E = 751046.61
I = 22°52'28"L

CIRCULAR
Da = 03°24'01"
T = 340.90
R = 1685.00
L = 672.71
C = 668.26
E = 34.14

R/W
STA. 180+00
MATCH LINE
PC Sta = 180+01.21
MADISON GAS & ELECTRIC
SAWCUT & MATCH EXISTING PAVEMENT
CAUTION
STA. 186+00
MATCH LINE
PT Sta = 186+73.88
CTH P
180+00
181+00
182+00
183+00
184+00
185+00
186+00
1'
5'
11'
11'
5'
1'
STA. 180+61
EXISTING 72" RCCP
TDS TELECOM
SLOPE INTERCEPTS (TYP.)
FENCE SAFETY REQD
MADISON GAS & ELECTRIC
ARCH. SITE

PROPOSED ℄ PROFILE
EXISTING ℄ PROFILE
0.00%
VPC STA = 185+43.8

905.00
900.00
895.00
890.00
885.00

| | | |

SCALES:
1" = 50' HOR
1" = 5' VER

R/W

STA. 186+00

MATCH LINE

+00 186+00 187+00 188+00 189+00 190+00 191+00 192+00

CTH P

1'
5'
11'
11'
5'
1'

CAUTION

MADISON GAS & ELECTRIC

FENCE SAFETY REQD

STA. 192+00

MATCH LINE

PT Sta. = 186+73.88

TDS TELECOM

ARCH. SITE

MADISON GAS & ELECTRIC

SLOPE INTERCEPTS (TYP.)

VPI STA = 187+68.8
VPI EL =
g1 = 0.00%
g2 = -3.20%
CURVE LEN = 450.0'
K = 140
50 MPH DESIRABLE

PROPOSED ℄ PROFILE

EXISTING ℄ PROFILE

-3.20%

VPT STA = 189+93.8

895.00
890.00
885.00
880.00
875.00

898.26 897.87
897.95 897.55
896.75 896.36
895.21 894.81
892.69 892.29
889.72 889.32
886.70 886.30
883.54 883.15

185+00 185+50 186+00 186+50 187+00 187+50 188+00 188+50 189+00 189+50 190+00 190+50 191+00 191+50 192+00

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	PLAN AND PROFILE	SHEET NO: 77

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\pp31.dwg | PLOT DATE: 1/28/2016 | PLOT BY: DANE COUNTY HIGHWAY DEPT. | PLOT SCALE: NONE | WISDOT/CADDS SHEET 21

SCALES:
1" = 50' HOR
1" = 5' VER

R/W

ARCH. SITE

SLOPE INTERCEPTS (TYP.)

STA. 194+10
EXISTING 24" RCCP

MADISON GAS & ELECTRIC

FENCE SAFETY REQD

SAWCUT & MATCH EXISTING PAVEMENT

CAUTION

STA. 192+00

MATCH LINE

192+00

193+00

CTH P

1'
5'
11'
11'
5'
1'

EOP = 193+74.22
N = 495859.65
E = 751274.34

R/W

TDS TELECOM

MADISON GAS & ELECTRIC

END PROJECT 5657-00-72
STA. 194+26.55

890.00
885.00
880.00
875.00
870.00

-3.20%

VPC STA = 192+84.4

PROPOSED ℄ PROFILE

EXISTING ℄ PROFILE

VPI STA = 193+84.4
VPI EL =
g1 = -3.20%
g2 = 0.00%
CURVE LEN = 200.0'
K = 62.5
40 MPH DESIRABLE

886.70 886.30
883.54 883.15
880.46 880.07

191+00 191+50 192+00 192+50 193+00 193+50 194+00 194+50 195+00 195+50 196+00 196+50 197+00 197+50 198+00

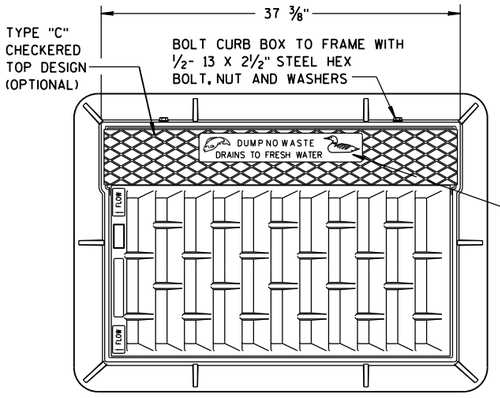
PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	PLAN AND PROFILE	SHEET NO: 78

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\pp32.dwg | PLOT DATE: 1/28/2016 | PLOT BY: DANE COUNTY HIGHWAY DEPT. | PLOT SCALE: NONE | WISDOT/CADDS SHEET 21

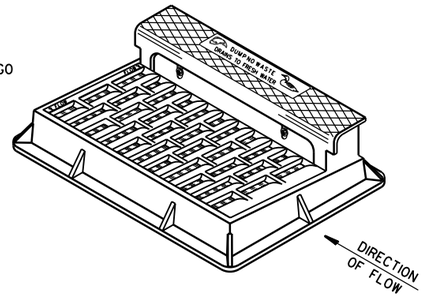
Standard Detail Drawing List

08A05-19A	INLET COVERS TYPE A, H, A-S, H-S & Z
08A05-19D	INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M
08B09-01	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER
08B10-01	MANHOLES 3X3-FT, 4X4-FT, 5X5-FT AND 6X6-FT
08D01-18	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E14-01	TRACKING PAD
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F02-01	APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
08F07-05	STEEL APRON ENDWALLS FOR CULVERT PIPE AND PIPE ARCH SLOPED SIDE FRAINS
08F08-02	STEEL APRON ENDWALLS FOR CULVERT PIPE AND PIPE ARCH SLOPED CROSS DRAINS
09A01-13A	AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND D AND TEE INTERSECTION BYPASS LANE
14B15-08A	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-08B	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-08C	STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS
14B18-06A	STEEL PLATE BEAM GUARD, CLASS "A" (AT BRIDGES, OBSTACLES AND SIDEROADS/DRIVEWAYS)
14B24-08A	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B24-08B	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B24-08C	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
14B42-03A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-03B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-03C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-02A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-02B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-02C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
15C02-06A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C03-03	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C07-12B	PAVEMENT MARKING WORDS
15C07-12C	PAVEMENT MARKING ARROWS
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C08-16B	PAVEMENT MARKING (INTERSECTIONS)
15C09-09A	SIGNING AND PAVEMENT MARKING DETAILS FOR RAILROAD-HIGHWAY GRADE CROSSINGS
15C18-03	MEDIAN ISLAND MARKING
15C29-03A	BICYCLE LANE MARKING
15C33-01	STOP LINE AND CROSSWALK PAVEMENT MARKING

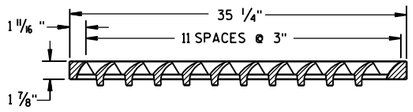
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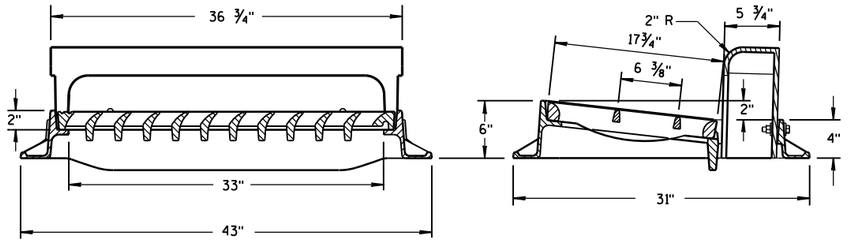


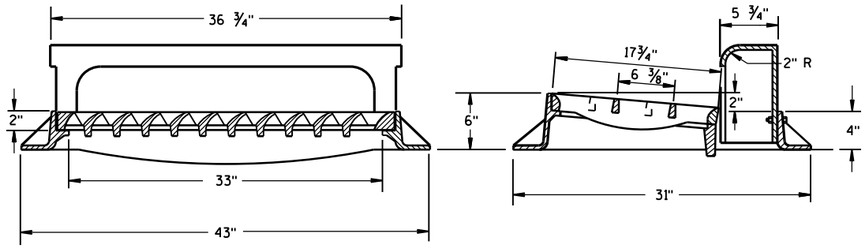
NOTE:
GRATE IS REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

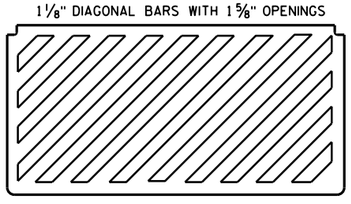






TYPE "H"

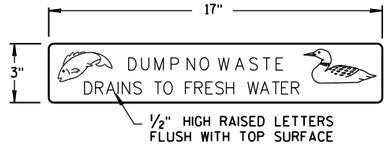
NOTE: EITHER CASTING IS ACCEPTABLE



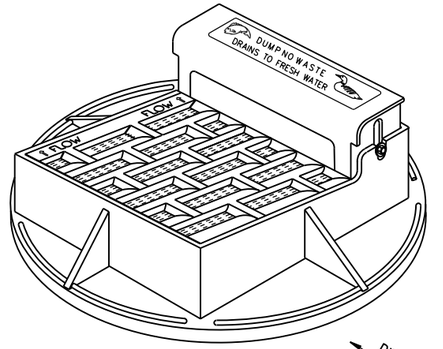
SPECIAL GRATE FOR TYPE "H" COVER

(MEASURES 35 1/4" X 17 3/4" X 2")

(NOTED AS TYPE H-S ON DRAINAGE TABLE)

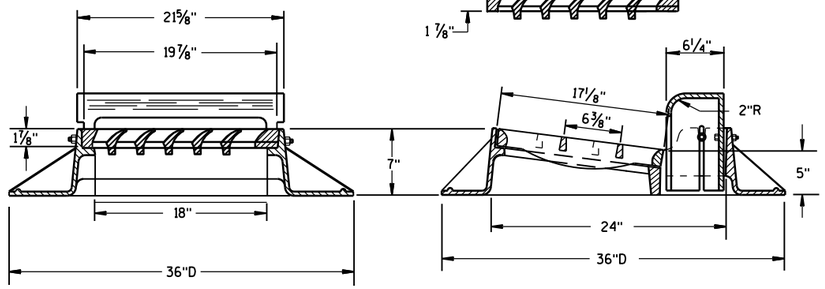


LOGO DETAIL



NOTE: CURB BOX ADJUSTABLE 4" TO 9"

NOTE:
GRATE IS REVERSIBLE.



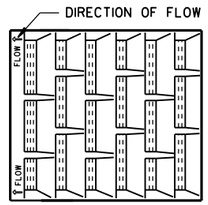
TYPE "A"

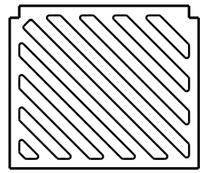
GENERAL NOTES

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.

DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

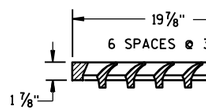


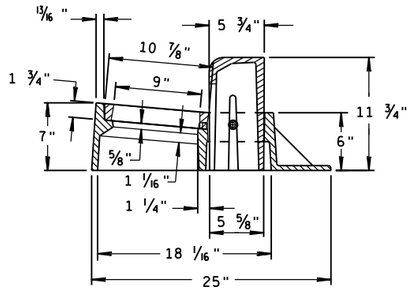


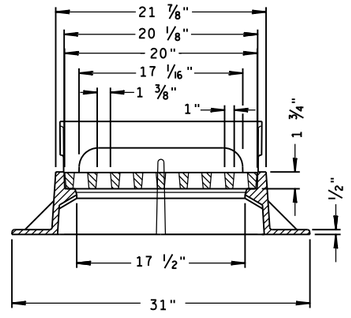
SPECIAL GRATE FOR TYPE "A" COVER

(MEASURES 19 3/4" X 17" X 1 7/8")

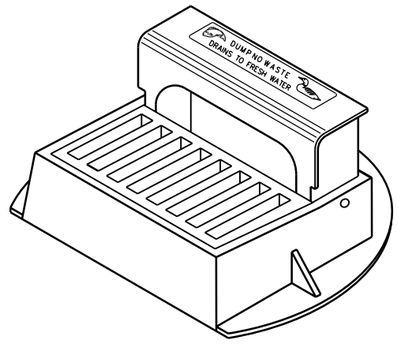
(NOTED AS TYPE A-S ON DRAINAGE TABLE)







TYPE "Z"



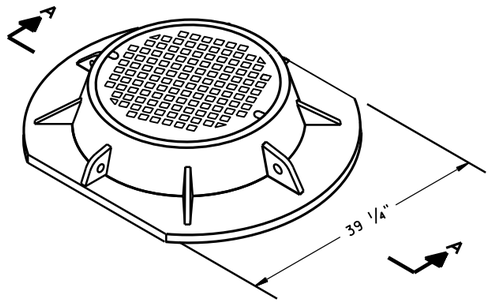
INLET COVERS TYPE A, H, A-S, H-S & Z

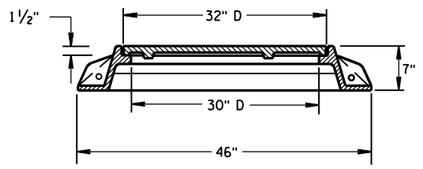
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

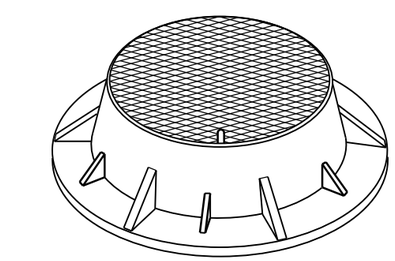
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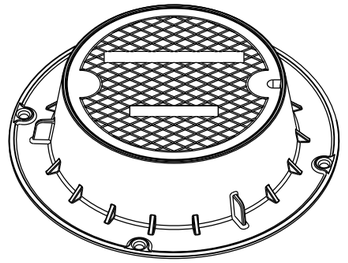
S.D.D. 8 A 5-19a

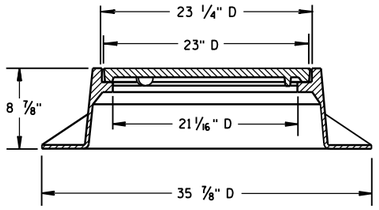


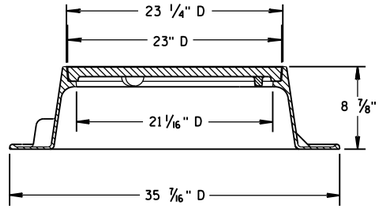


SECTION A-A
TYPE "K"









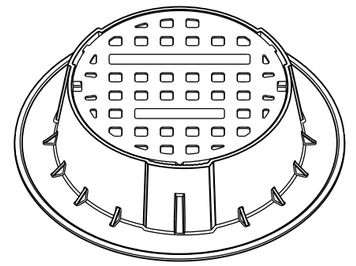
TYPE "J"
NOTE: EITHER CASTING IS ACCEPTABLE

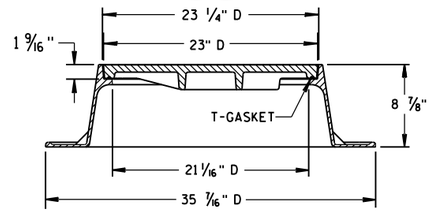
GENERAL NOTES

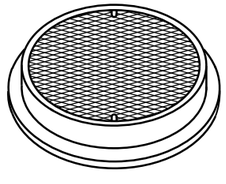
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

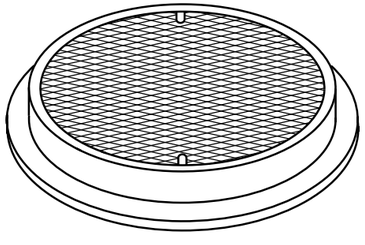
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

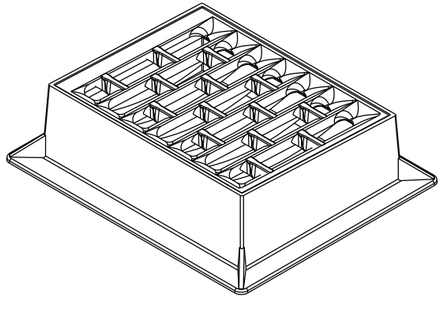
ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

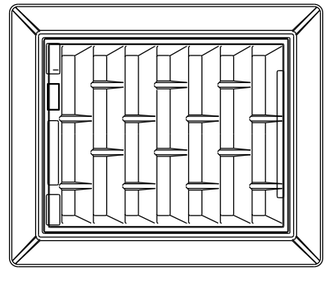


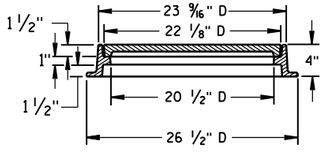




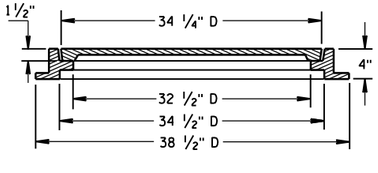




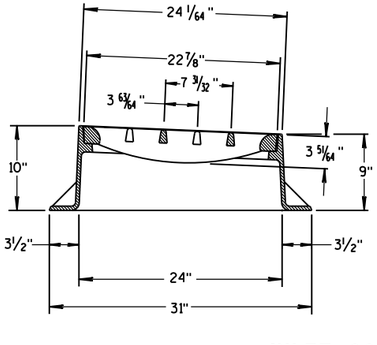


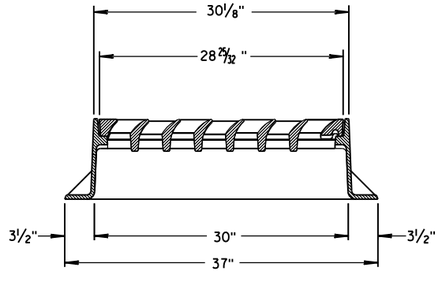


TYPE "L"

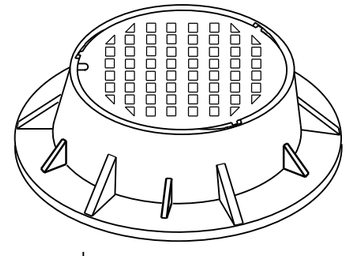


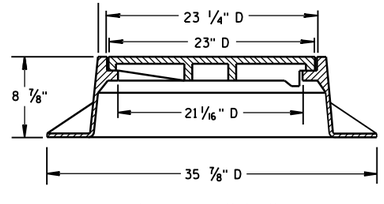
TYPE "M"





INLET COVER TYPE "BW"





TYPE "J" SPECIAL
TYPE "B" NON-ROCKING SELF-SEAL LID
(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)
NOTE: EITHER CASTING IS ACCEPTABLE

INLET COVER TYPE BW
MANHOLE COVERS, TYPE K, J, J-S, L & M

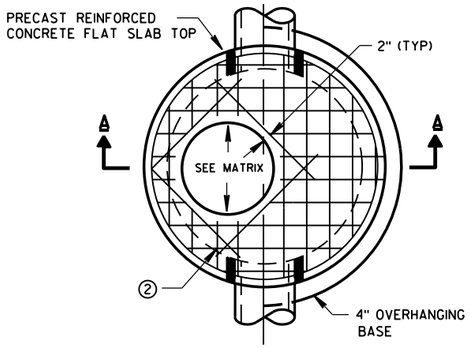
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013
DATE
FHWA

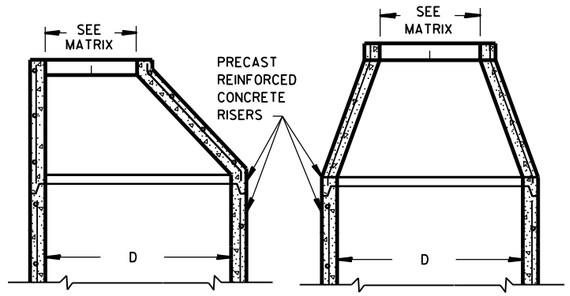
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

6

S.D.D. 8 A 5-19d

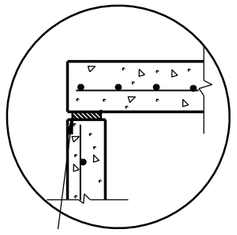


PLAN VIEW CIRCULAR OPENING

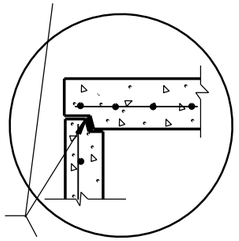


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

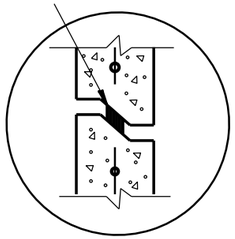


TOP WITH PLAIN END JOINT



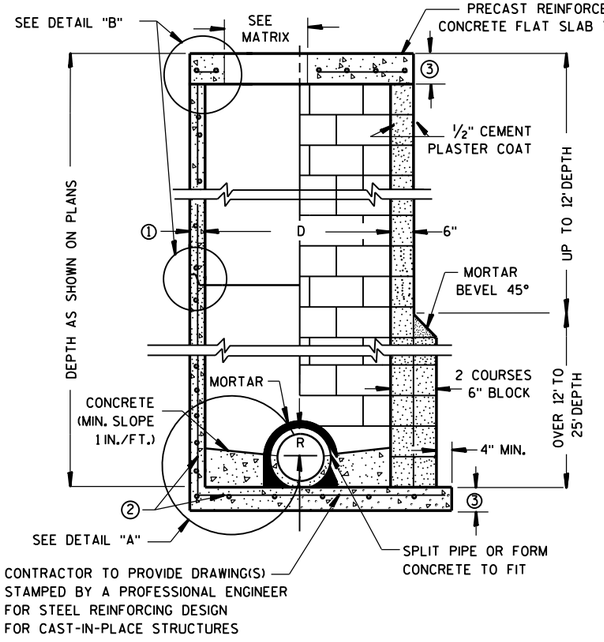
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C990 (TYP)

TOP WITH TONGUE AND GROOVE JOINT



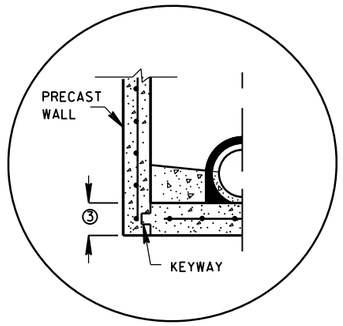
RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

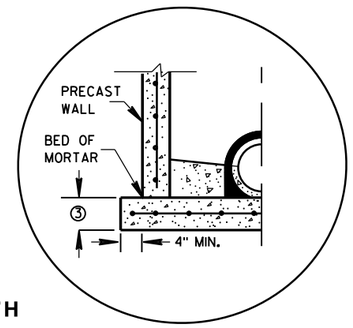


PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

CONCRETE BLOCK WITH CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ②

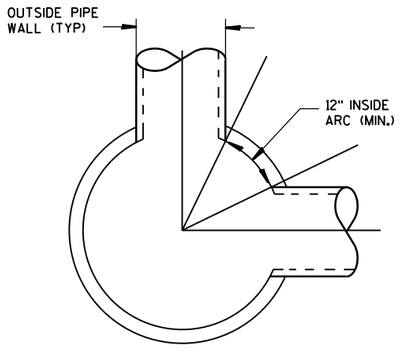


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "C"

GENERAL NOTES

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

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

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

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

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

PRECAST REINFORCED CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES. THE CONE TOPS SHALL BE INSTALLED ON A BED OF MORTAR.

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES, AND CONCENTRIC CONE TOPS SHALL BE USED ONLY ON STRUCTURES 5 FEET OR LESS IN DEPTH, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

STEPS MEETING AASHTO M199 AND THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH: 16 INCH C-C MAXIMUM SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM LENGTH OF 10 INCHES; MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF ½" AND MEET THE REQUIREMENTS OF ASTM A615.

CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

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

CONCRETE BLOCK WILL NOT BE PERMITED FOR STRUCTURES GREATER THAN 4 FEET IN DIAMETER.

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

ALL PRECAST MANHOLE UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M 199.

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

① MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT, 5 INCHES FOR 4-FT, 6 INCHES FOR 5-FT, 7 INCHES FOR 6-FT, 8 INCHES FOR 7-FT AND 9 INCHES FOR 8-FT DIAMETER PRECAST MANHOLES.

② FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

③ PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER OF 48" AND LESS SHALL HAVE A MINIMUM THICKNESS OF 6". PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER LARGER THAN 48" SHALL HAVE A MINIMUM THICKNESS OF 8".

MANHOLE COVER OPENING MATRIX

MANHOLE COVER TYPE	C	ALL J'S	K	L	M
OPENING SIZE (FT)					
2 DIA.	X	X		X	
3 DIA.			X		X

PIPE MATRIX

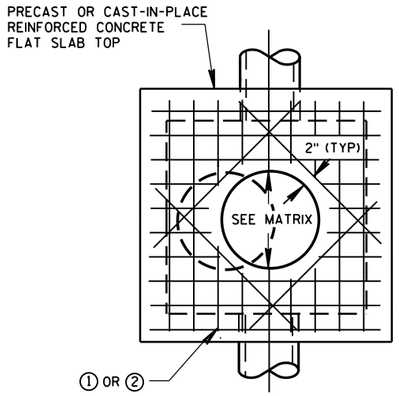
MANHOLE SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18
5-FT	36	24
6-FT	42	36
7-FT	48	36
8-FT	60	42

MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER

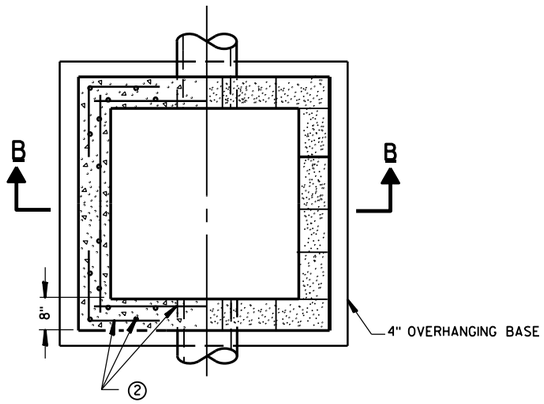
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

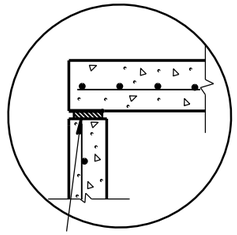
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S.D.D. 8 B 9-1



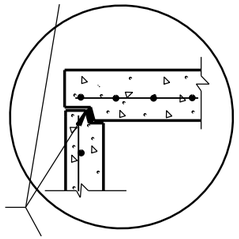
PLAN VIEW
CIRCULAR OPENING



SECTION A-A
PLAN VIEW

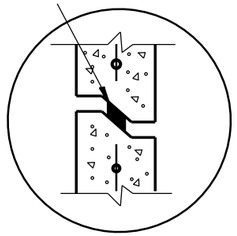


TOP WITH PLAIN END JOINT



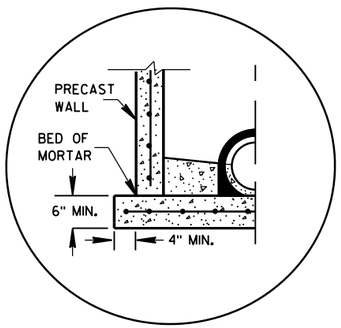
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)

TOP WITH TONGUE AND GROOVE JOINT



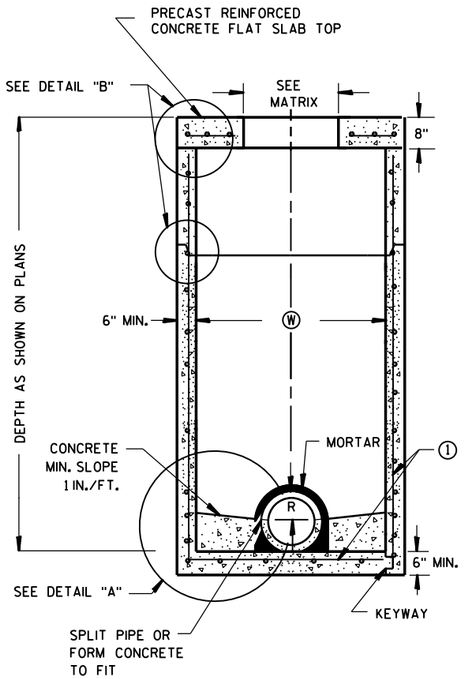
RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

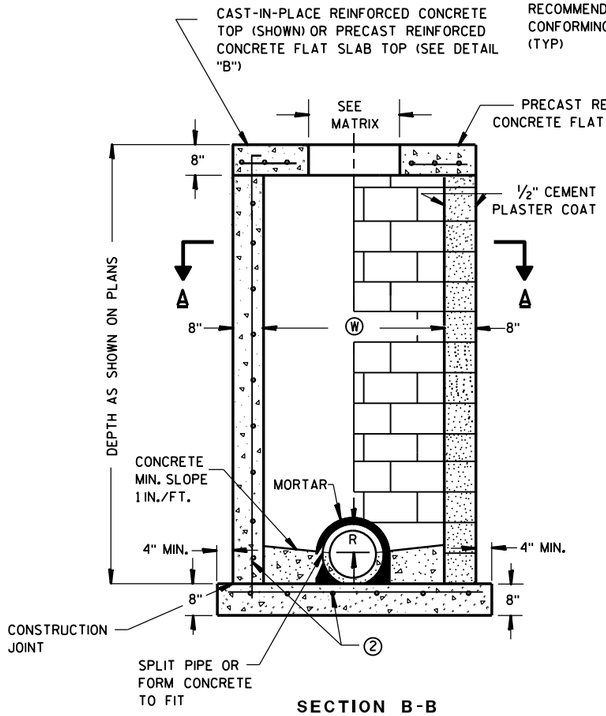


SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE



SECTION B-B

PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE

CAST-IN-PLACE REINFORCED CONCRETE

CONCRETE BLOCK WITH CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE

GENERAL NOTES

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

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

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

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

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

PRECAST REINFORCED FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES. THE TOPS SHALL BE INSTALLED ON A BED OF MORTAR.

STEPS MEETING AASHTO M199 AND THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH: 16 INCH C-C MAXIMUM SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM LENGTH OF 10 INCHES; MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF ½ INCH AND MEET THE REQUIREMENTS OF ASTM A615.

CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

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

CONCRETE BLOCK WILL NOT BE PERMITED FOR STRUCTURES GREATER THAN 4 FEET IN WIDTH.

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

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

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

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

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

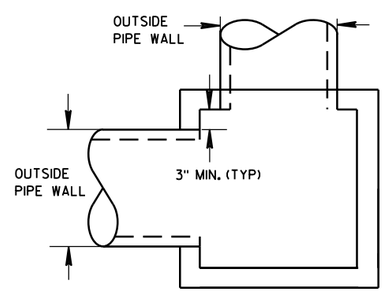
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

MANHOLE COVER OPENING MATRIX

MANHOLE COVER TYPE	C	ALL J'S	K	L	M
OPENING SIZE (FT)					
2 DIA.	X	X		X	
3 DIA.			X		X

PIPE MATRIX

MANHOLE SIZE	MAXIMUM INSIDE PIPE DIAMETER	
	WIDTH (W) (IN)	LENGTH (L) (IN)
3X3-FT	24	24
4X4-FT	30	30
5X5-FT	42	42
6X6-FT	54	54



DETAIL "C"

SQUARE MANHOLES W/ FLAT TOP

MANHOLES 3X3-FT, 4X4-FT, 5X5-FT AND 6X6-FT

MANHOLES 3X3-FT, 4X4-FT 5X5-FT AND 6X6-FT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

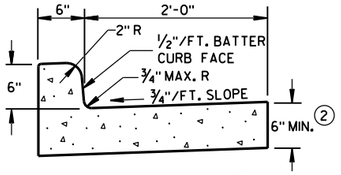
APPROVED
6/5/2012
DATE
FHWA

/S/ Jerry H. Zoda
ROADWAY STANDARDS ENGINEER

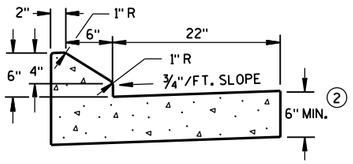
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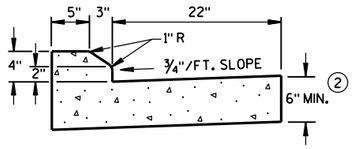
S.D.D. 8 B 10-1



TYPES A & D ①

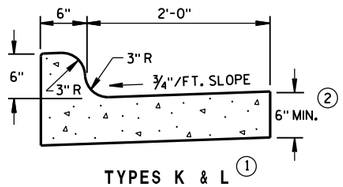


6" SLOPED CURB TYPES G & J ①

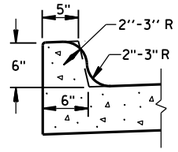


4" SLOPED CURB TYPES G & J ①

CONCRETE CURB & GUTTER 30"

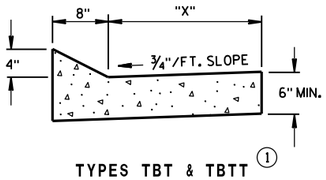


TYPES K & L ①



OPTIONAL CURB SHAPE FOR TYPES K & L ①

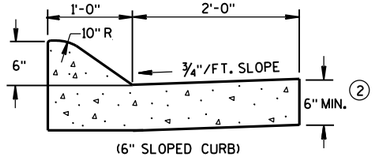
CONCRETE CURB & GUTTER 30"



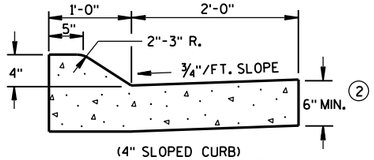
TYPES TBT & TBTT ①

CONCRETE CURB & GUTTER

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

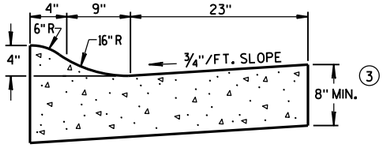


(6" SLOPED CURB)



(4" SLOPED CURB)

TYPES A & D ①



4" SLOPED CURB TYPES R & T ① ④

CONCRETE CURB & GUTTER 36"

GENERAL NOTES

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

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

INTEGRAL CURB & GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB & GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE. A LONGITUDINAL CONSTRUCTION JOINT IS NOT REQUIRED WITH INTEGRAL CURB AND GUTTER.

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

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

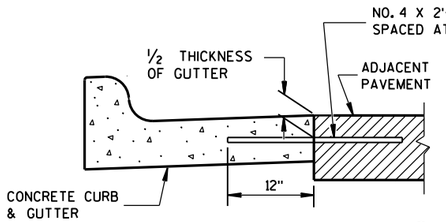
① TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBTT.

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

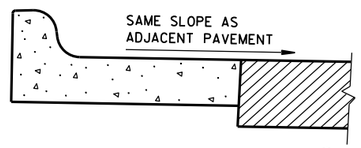
③ THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

④ THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

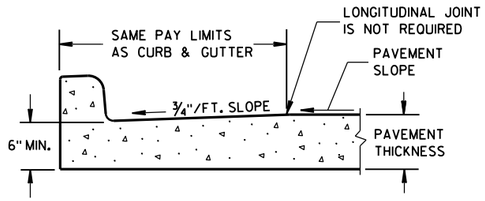
⑤ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.



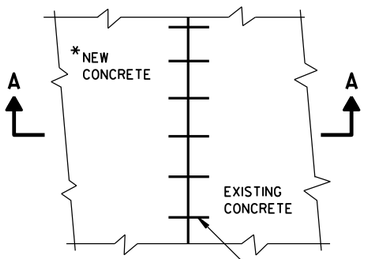
TYPICAL TIE BAR LOCATION ①



REVERSE SLOPE GUTTER ⑤
(TYPICAL FOR ALL CURB & GUTTER TYPES)

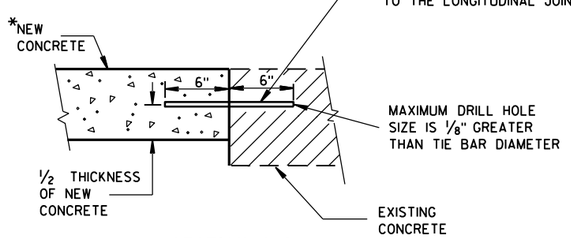


PARTIAL SECTION OF PAVEMENT
WITH INTEGRAL CURB & GUTTER



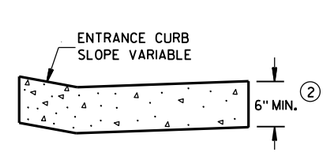
PLAN VIEW

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

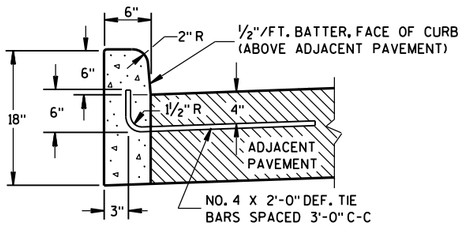


SECTION A-A

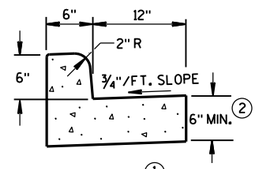
TIE BARS DRILLED
INTO EXISTING PAVEMENT



DRIVEWAY ENTRANCE CURB
(WHEN DIRECTED BY THE ENGINEER)

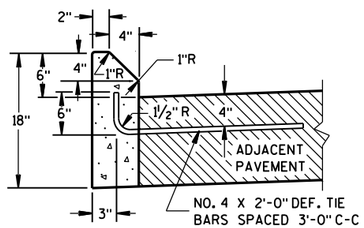


① TYPES A & D



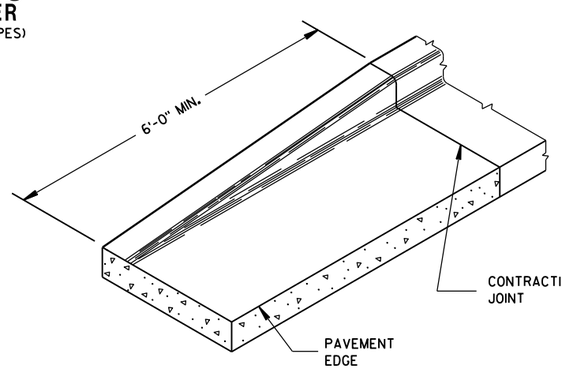
① TYPES A & D

CONCRETE CURB & GUTTER 18"



① TYPES G & J

CONCRETE CURB



END SECTION CURB & GUTTER

CONCRETE CURB, CONCRETE CURB & GUTTER AND TIES

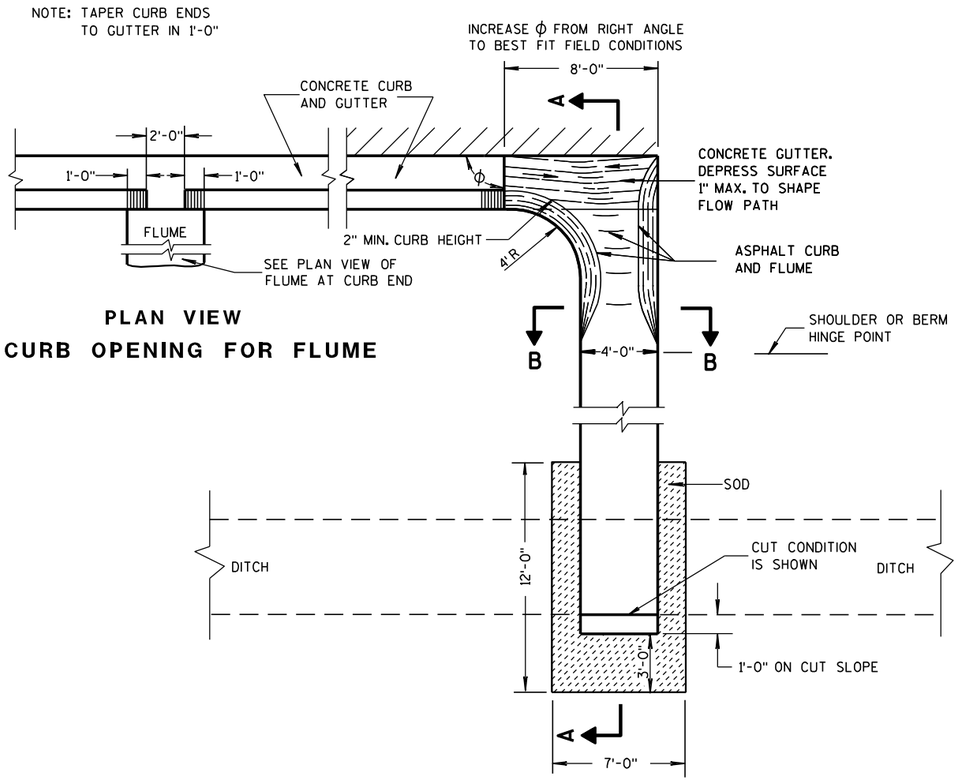
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

6

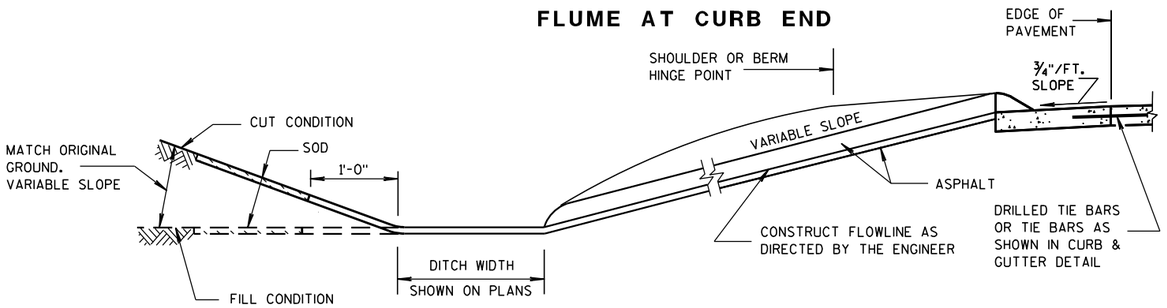
S.D.D. 8 D 1-18

ASPHALTIC FLUME

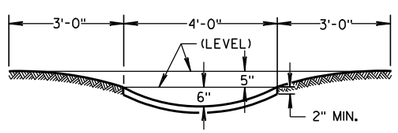


PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



SECTION A-A



SECTION B-B

GENERAL NOTES

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

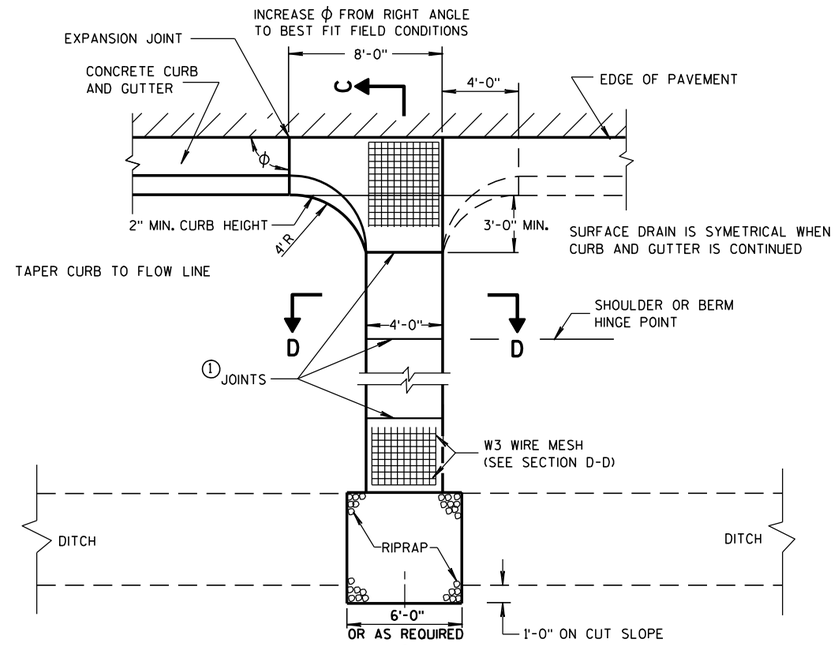
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

① JOINTS SHALL BE $\frac{1}{8}$ TO $\frac{1}{4}$ INCH WIDE BY $1\frac{1}{2}$ INCHES DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.

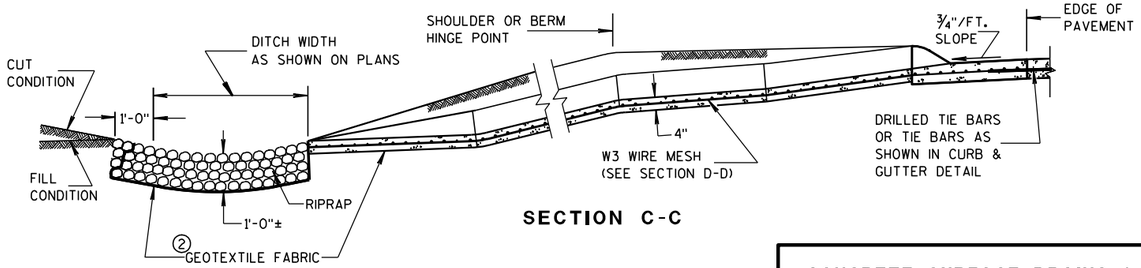
② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.

③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED

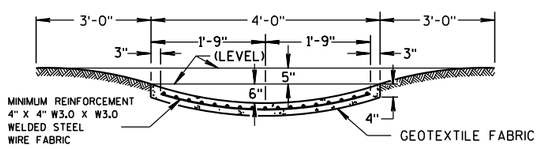
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

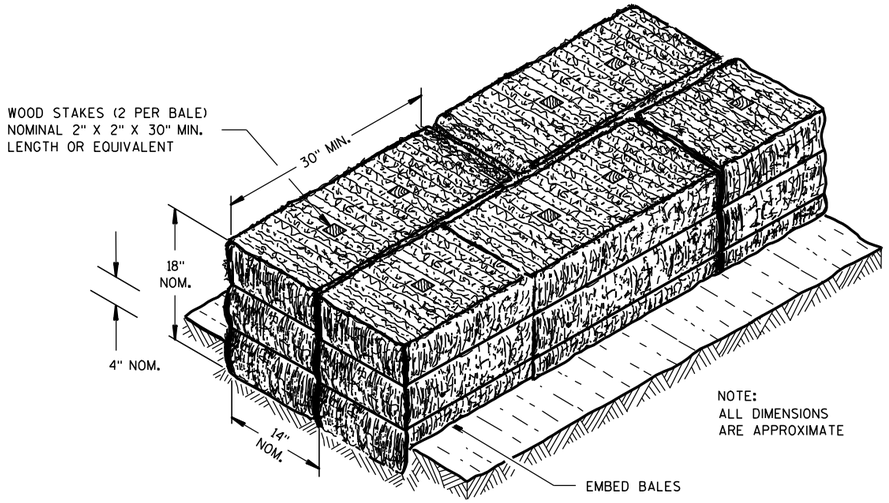
CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

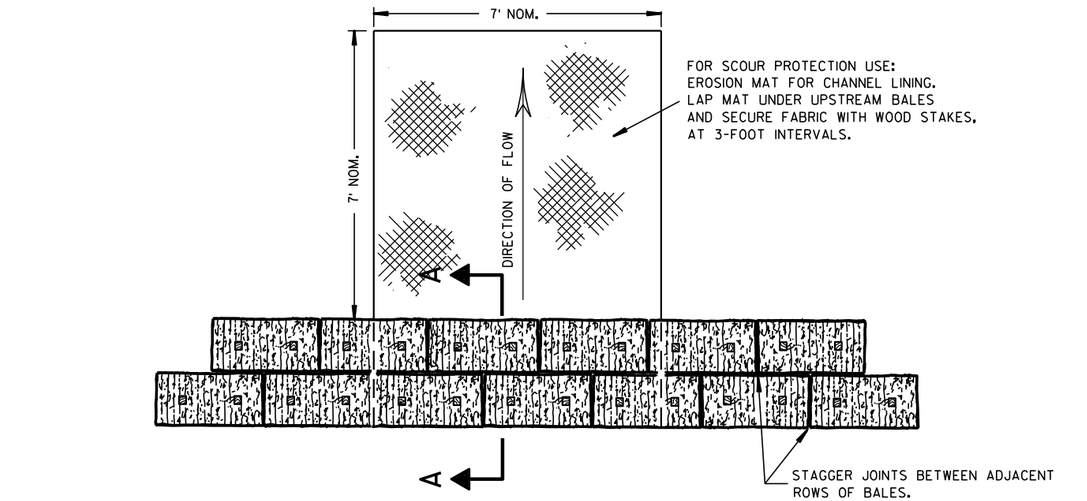
APPROVED

9-4-08 DATE — /S/ Jerry H. Zogg ROADWAY STANDARDS ENGINEER — MENT

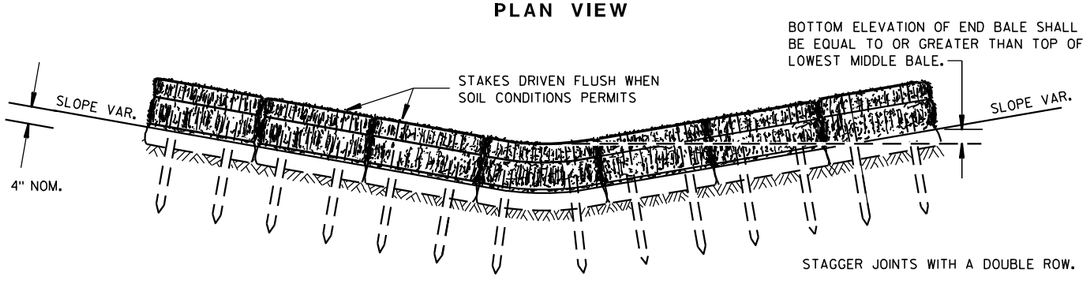
FHWA



SECTION A-A



PLAN VIEW



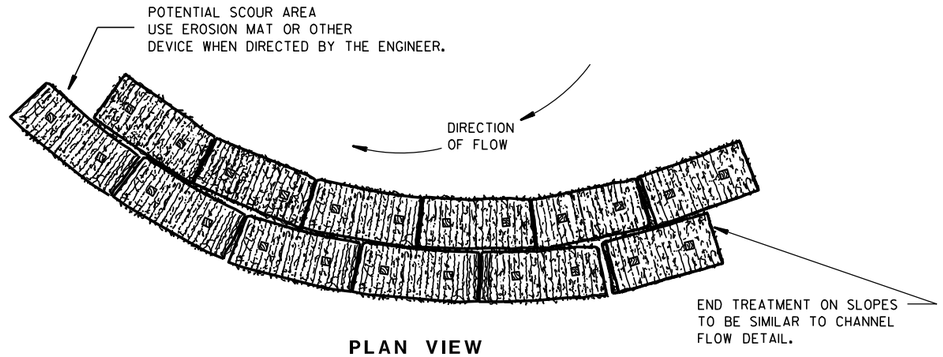
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

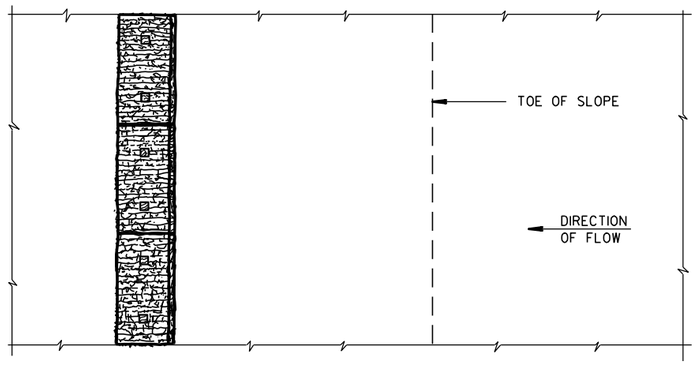
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

(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.

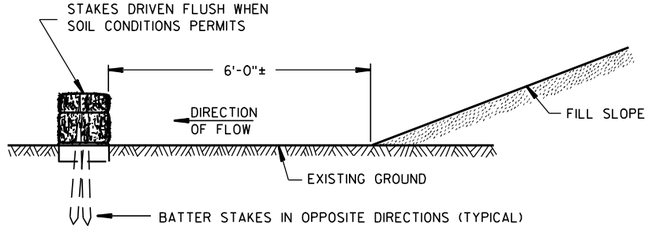


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

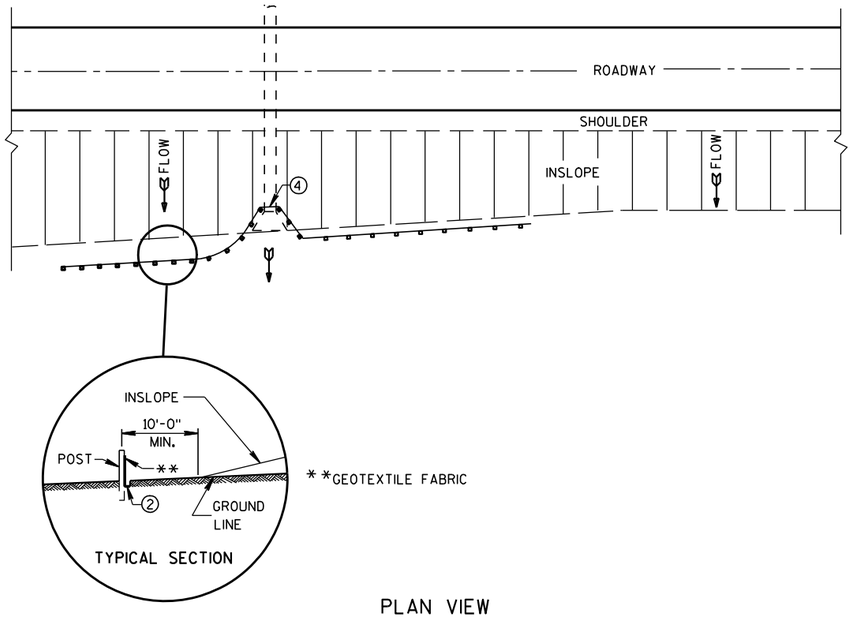
WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

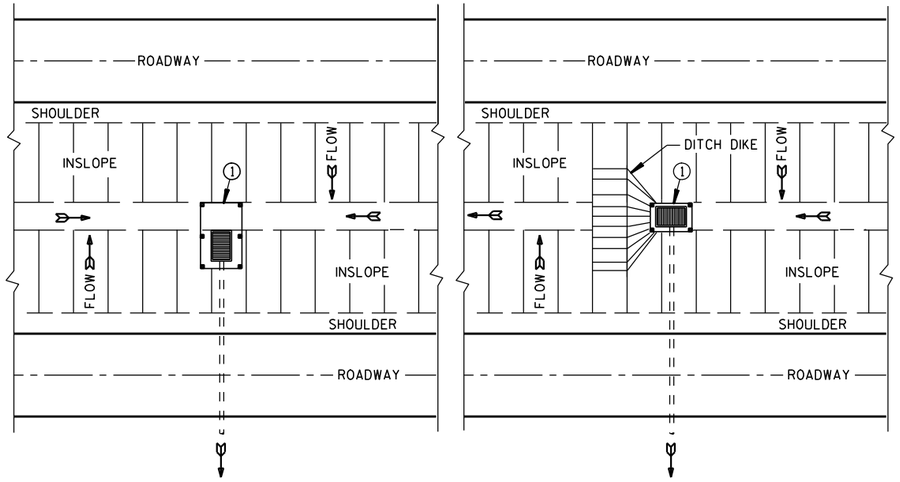
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/04/02 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA



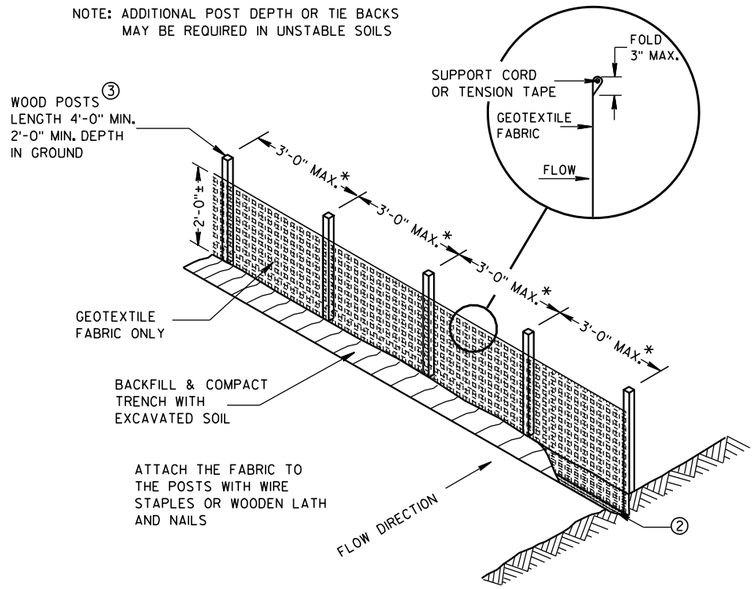
PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



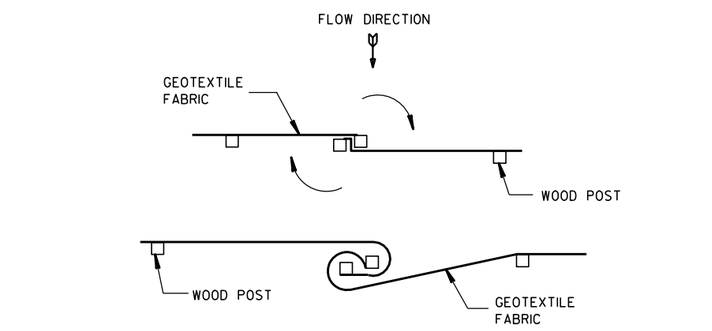
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

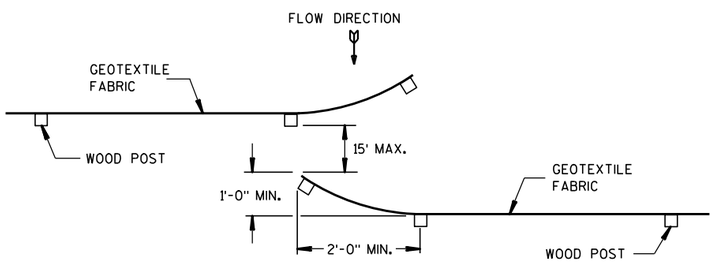


*NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

SILT FENCE



TWIST METHOD



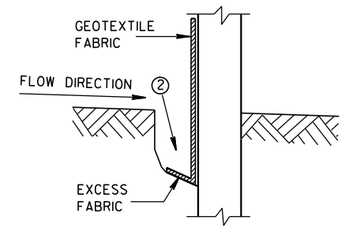
HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5

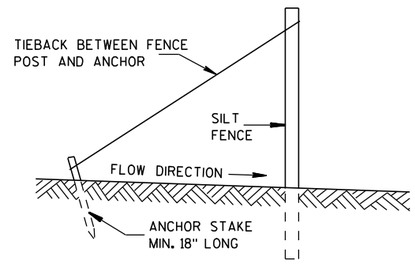
GENERAL NOTES

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 TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

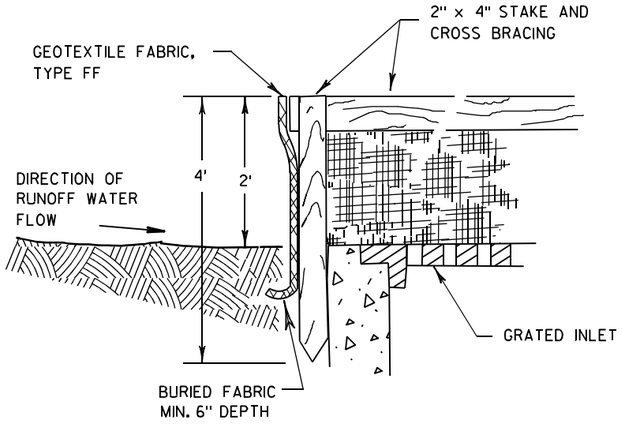
SILT FENCE

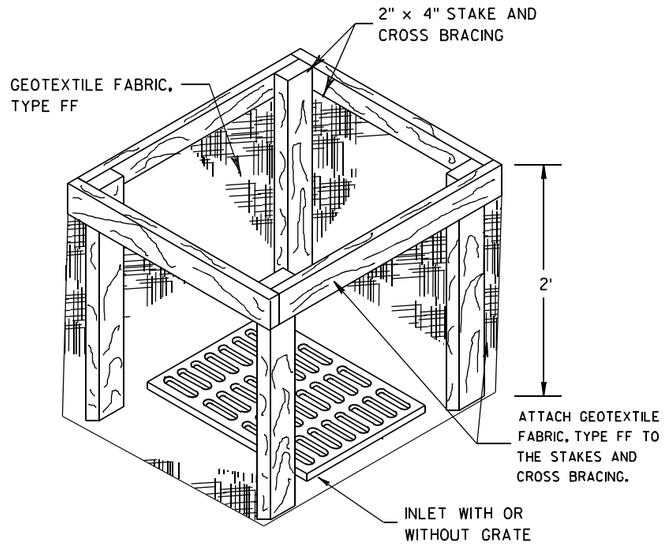
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

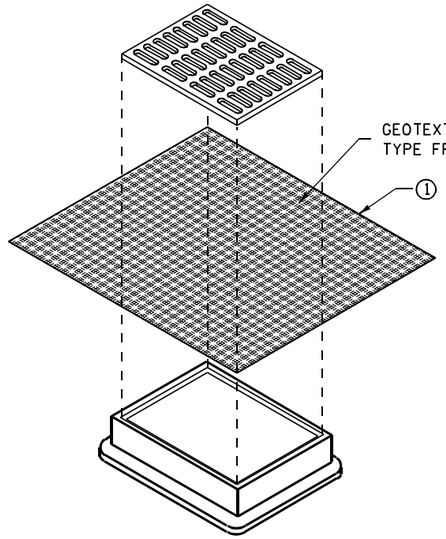
S.D.D. 8 E 9-6

6



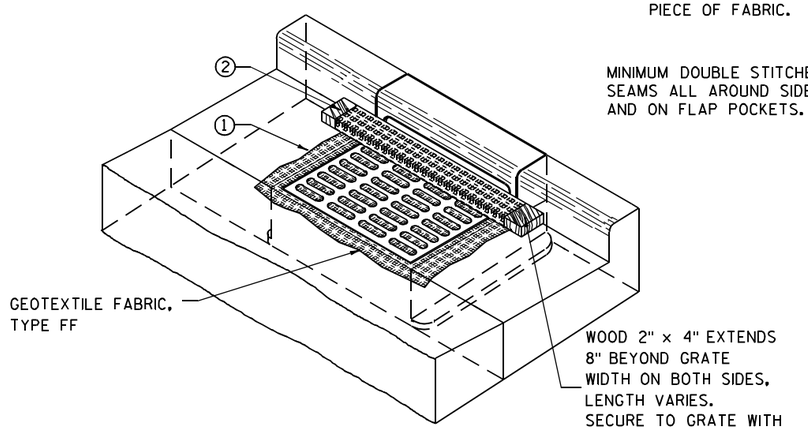


INLET PROTECTION, TYPE A

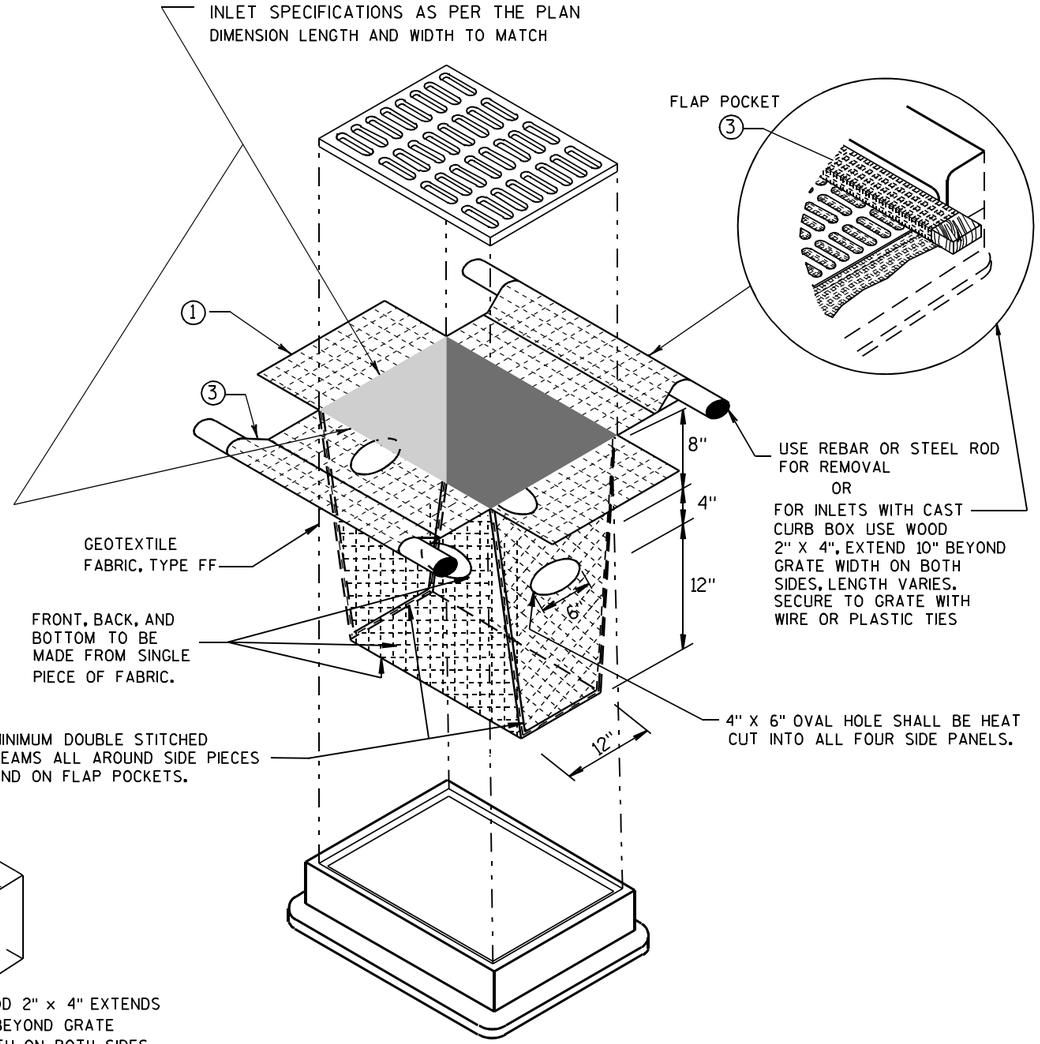


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

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

GENERAL NOTES

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

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

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

① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.

② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.

③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.

INSTALLATION NOTES

TYPE B & C

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

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

TYPE D

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

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

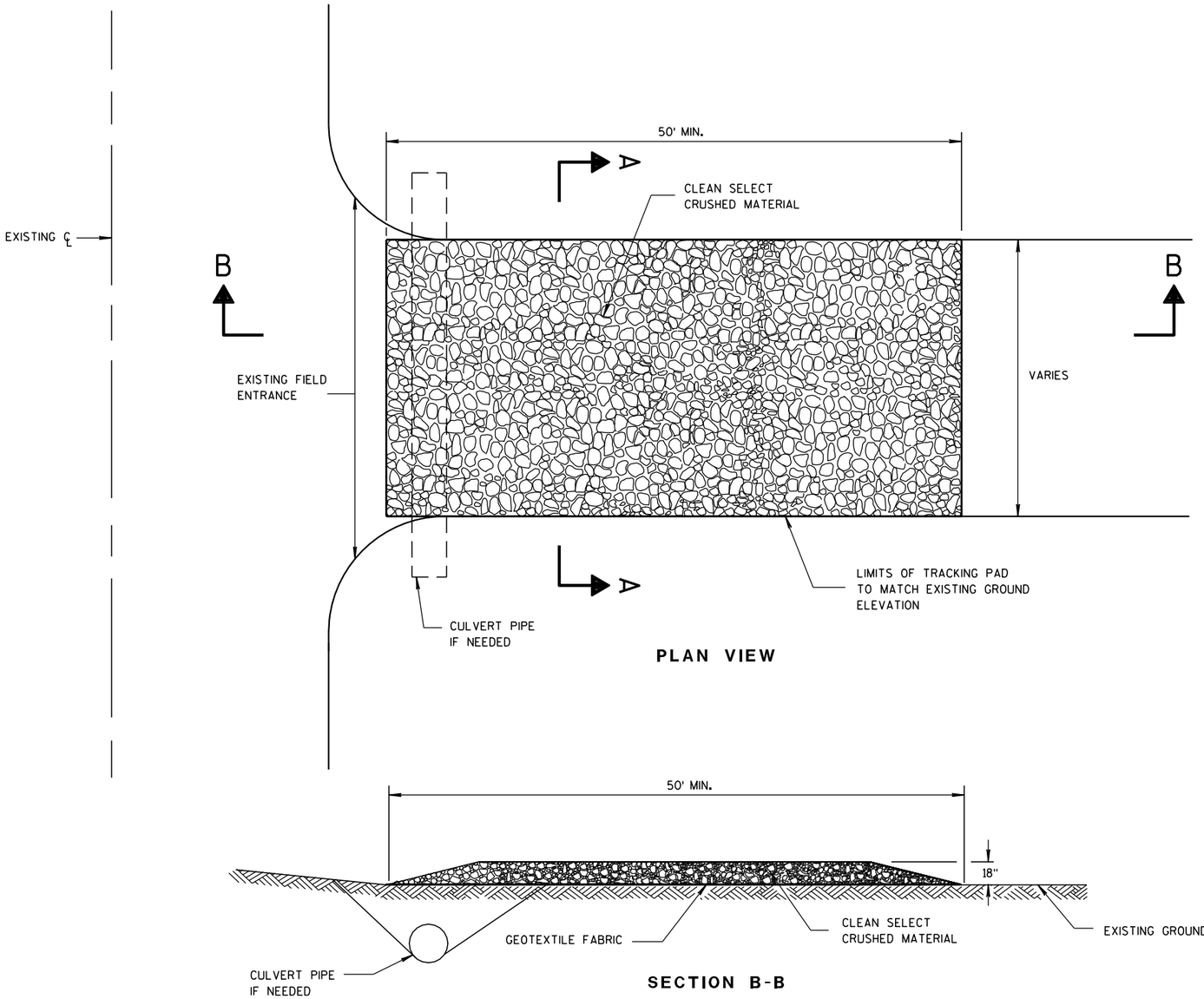
THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE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

INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6
S.D.D. 8 E 10-2



PLAN VIEW

SECTION B-B

GENERAL NOTES

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

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

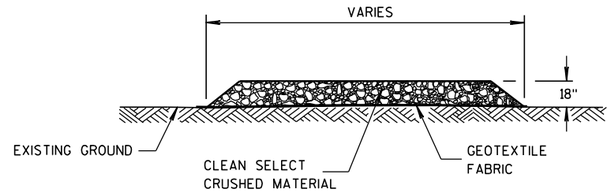
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

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

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

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

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



SECTION A-A

TRACKING PAD

6

S.D.D. 8 E 14-1

TRACKING PAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/24/2011	/S/ Jerry H. Zoda	
DATE	ROADWAY STANDARDS ENGINEER	ENT

FHWA

6

S.D.D. 8 E 14-1

METAL APRON ENDWALLS

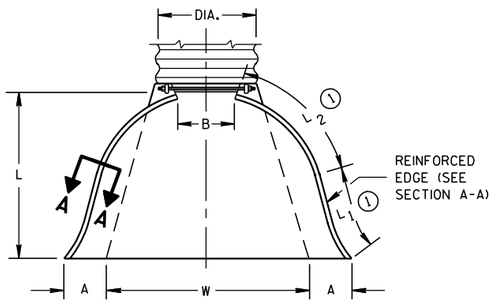
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	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

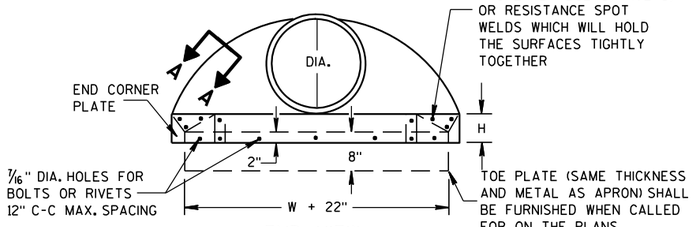
REINFORCED CONCRETE APRON ENDWALLS

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

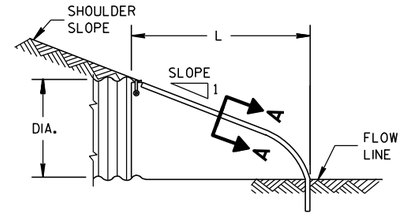
*MINIMUM
**MAXIMUM



PLAN VIEW

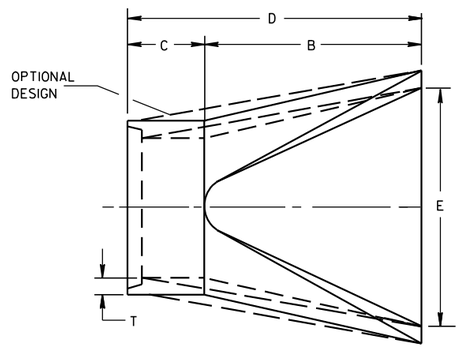


END VIEW

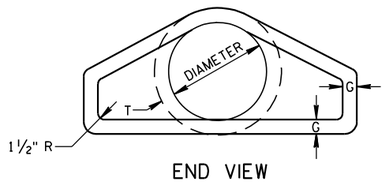


SIDE ELEVATION

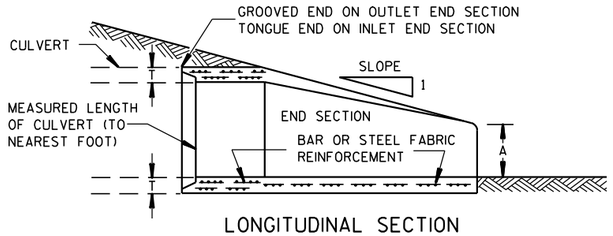
METAL ENDWALLS



PLAN

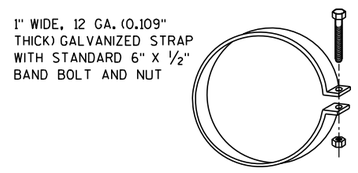


END VIEW



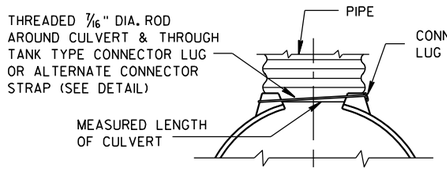
LONGITUDINAL SECTION

CONCRETE ENDWALLS

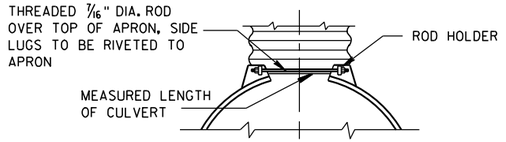


ALTERNATE FOR TYPE 1 CONNECTION

END SECTION CONNECTOR STRAP

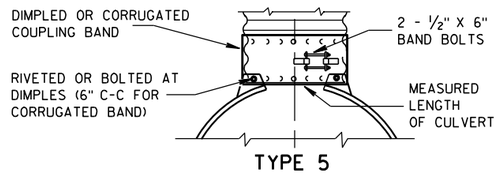


TYPE 1
FOR 12" THRU 24" CORR. PIPE



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

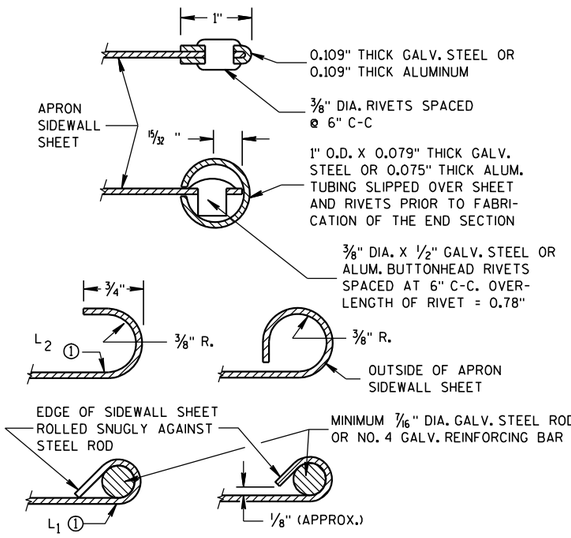
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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.

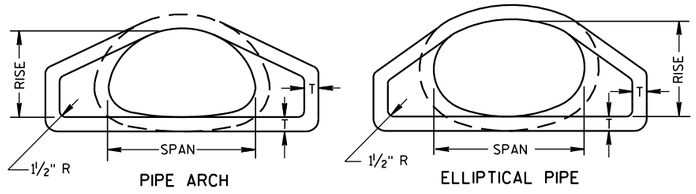
APRON ENDWALLS FOR CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

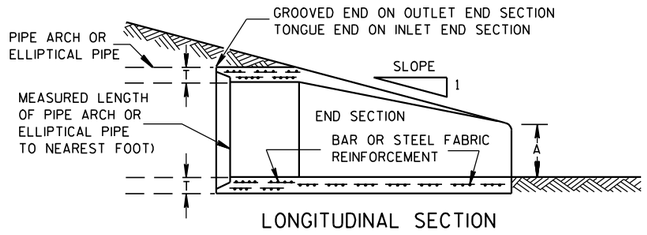
APPROVED
11/30/94 — DATE
/S/ Rory L. Rhinesmith — CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

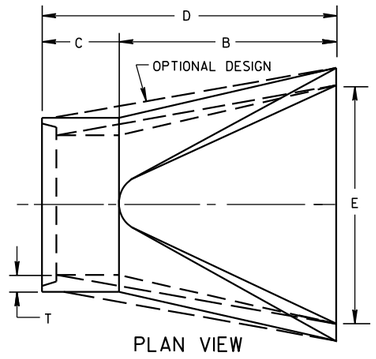
S.D.D. 8 F 1-11



END VIEW

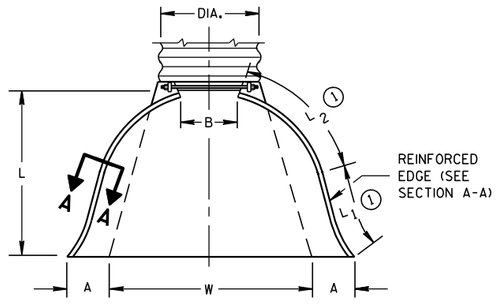


LONGITUDINAL SECTION

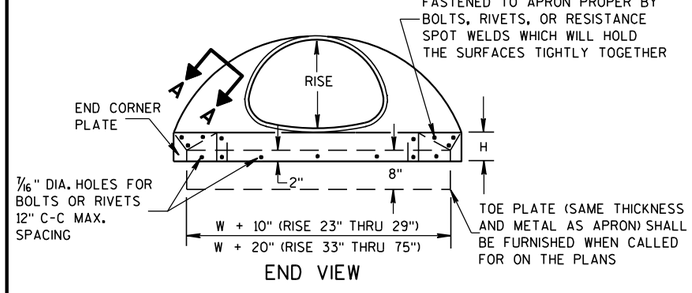


PLAN VIEW

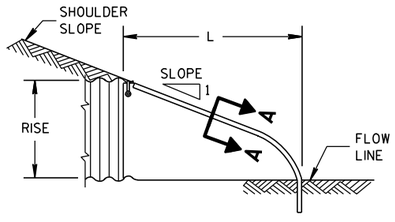
CONCRETE ENDWALLS



PLAN VIEW

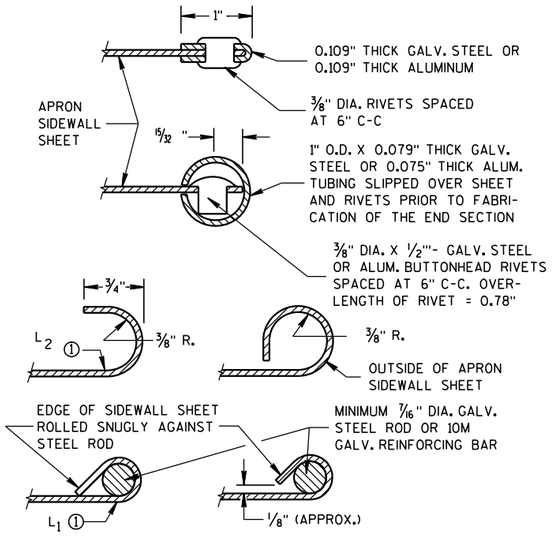


END VIEW



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

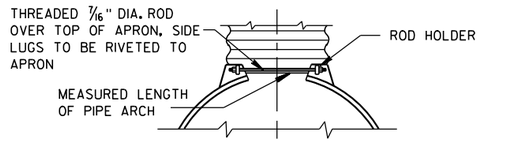
REINFORCED CONCRETE PIPE ARCH

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

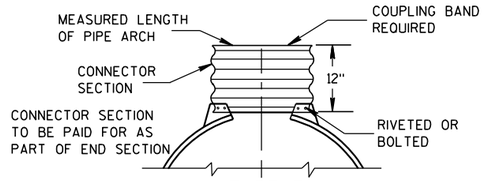
EQUIV. DIA. (Inches)	DIMENSIONS (Inches) ** SPAN	** RISE	T	A	B	C	D	E	APPROX. SLOPE
24	30	19	3¼	8½	39	33	72	48	3 to 1
30	38	24	3¾	9½	54	18	72	60	3 to 1
36	45	29	4½	11⅛	60	24	84	72	2½ to 1
42	53	34	5	15¾	60	36	96	78	2½ to 1
48	60	38	5½	21	60	36	96	84	2½ to 1
54	68	43	6	25½	60	36	96	90	2½ to 1
60	76	48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

**NOMINAL SIZE



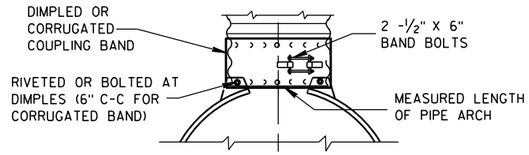
TYPE 2

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

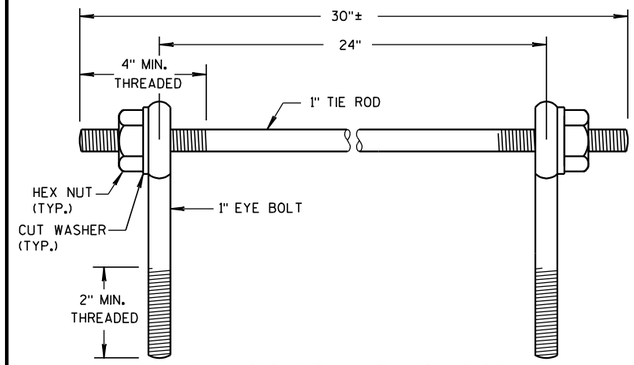
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

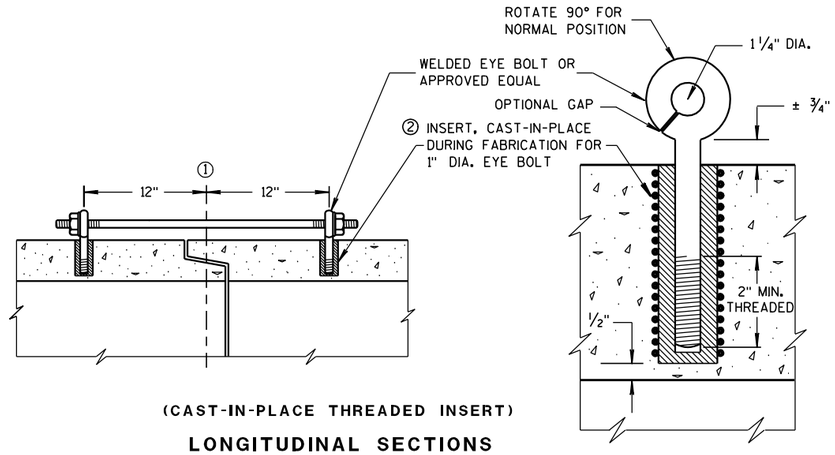
11/30/94 — DATE

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

FHWA



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 ℄ OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.

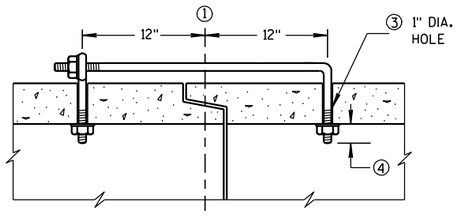
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

③ HOLES SHALL BE CAST-IN-PLACE OR DRILLED 12 INCHES FROM ℄ OF TONGUE AND GROOVE.

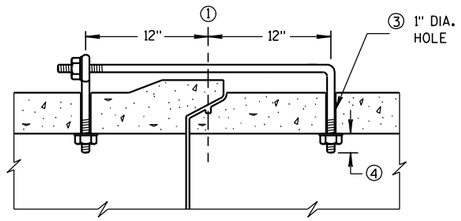
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.

⑥ LENGTH ADEQUATE TO EXTEND TO WITHIN 1/2 INCH OF THE INNER SURFACE OF THE PIPE.



(TONGUE & GROOVE PIPE)

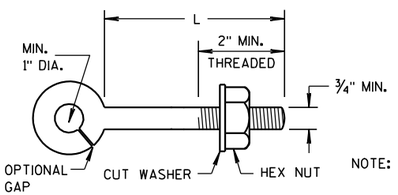


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

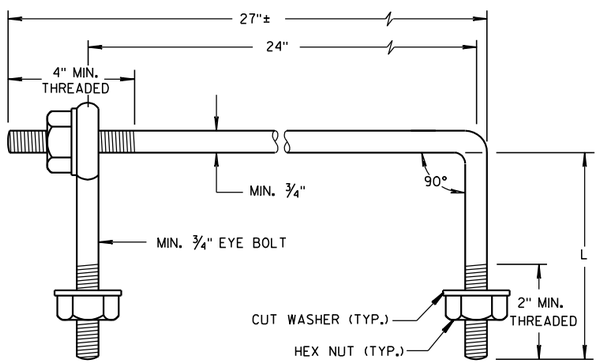
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



NOTE:

EYE BOLT

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



EYE BOLT AND TIE ROD

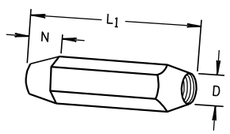
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

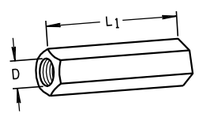
ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L_1	N
12-60	5/8	5/8	5	1/2
66-84	3/4	3/4	5	1/2
90-108	1	1	7	1 1/16

DIMENSIONS SHOWN ARE IN INCHES



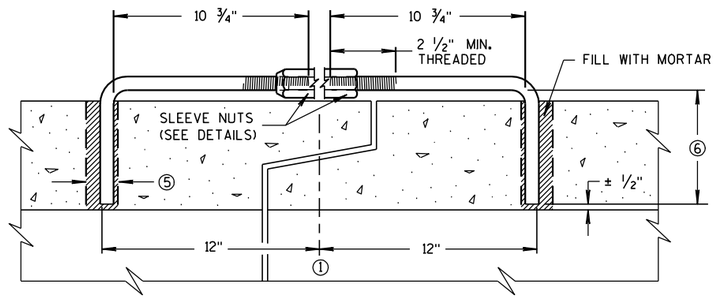
TAPERED



PLAIN

RIGHT AND LEFT THREADS

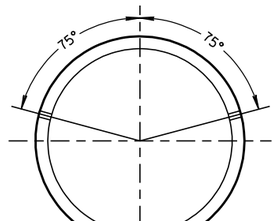
SLEEVE NUTS



LONGITUDINAL SECTION

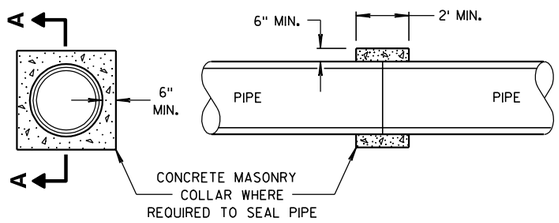
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



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

TRANSVERSE SECTION



SECTION A-A

CONCRETE COLLAR DETAIL

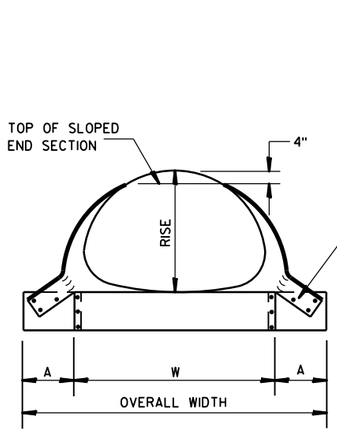
JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

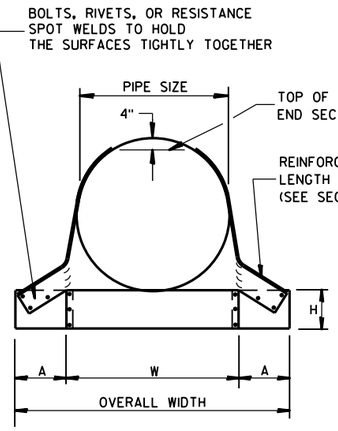
APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
92
FHWA

6

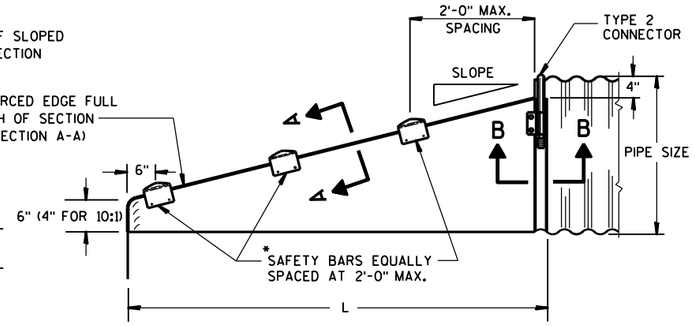
S.D.D. 8 F 4-7



FRONT VIEW



FRONT VIEW



SIDE VIEW

GENERAL NOTES

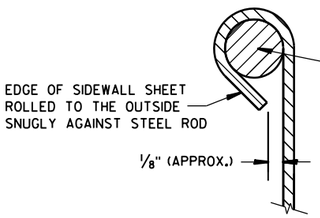
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

SLOPED END SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS, SECTION 521 FOR STEEL APRON ENDWALLS.

SAFETY BARS SHALL BE FABRICATED FROM GALVANIZED STEEL PIPE MEETING THE REQUIREMENTS OF ASTM A-53, GRADE B, SCHEDULE 40 OR APPROVED EQUAL.

STEEL APRON ENDWALLS FOR CULVERT PIPE
SLOPED SIDE DRAINS

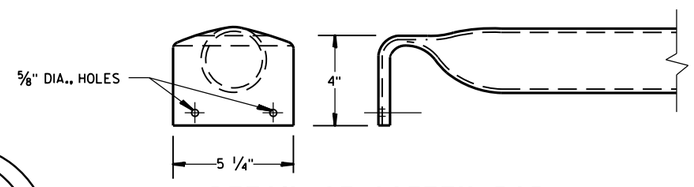
PIPE DIA. (IN.)	MIN. THICK. (Inches)	DIMENSIONS (Inches)				L DIMENSIONS					
		A	H	W	OVERALL WIDTH	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES
15	.064	8	6	21	37	4:1	20	6:1	30	10:1	70
18	.064	8	6	24	40	4:1	32	6:1	48	10:1	100
21	.064	8	6	27	43	4:1	44	6:1	66	10:1	130
24	.064	8	6	30	46	4:1	56	6:1	84	10:1	160
30	.109	12	9	36	60	4:1	80	6:1	120	10:1	220
36	.109	12	9	42	66	4:1	104	6:1	156	10:1	280
42	.109	16	12	48	80	4:1	128	6:1	192	——	——
48	.109	16	12	54	86	4:1	152	6:1	228	——	——
54	.109	16	12	60	92	4:1	176	6:1	264	——	——
60	.109	16	12	66	98	4:1	200	6:1	300	——	——



SECTION A-A

*NOTE:
THREE SAFETY BARS ARE SHOWN. ACTUAL NUMBER OF BARS REQUIRED AT A 2'-0" C-C MAX. SPACING WILL VARY DEPENDING ON THE LENGTH OF THE END SECTION.

3" GALVANIZED PIPE. FLATTEN ENDS, THEN BEND OUTSIDE 4" TO MATCH END SECTION SIDES.

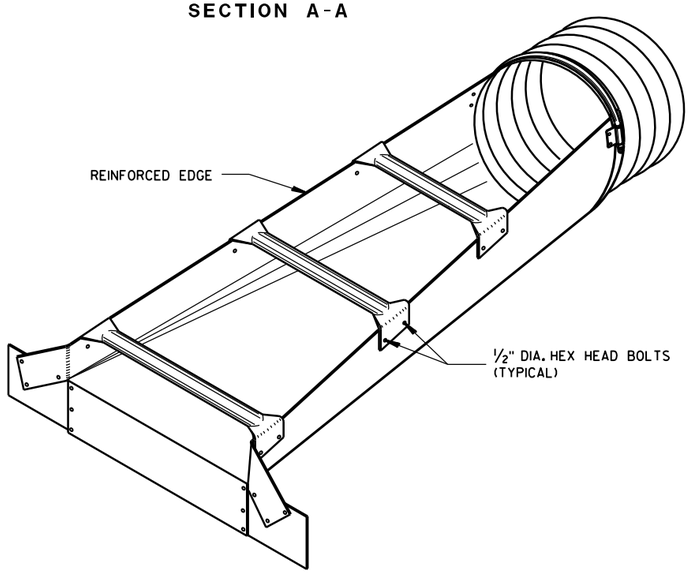


DETAIL OF SAFETY BAR

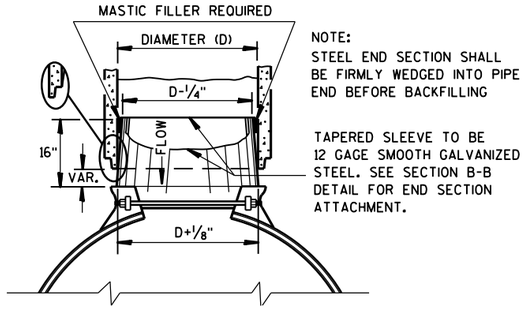
STEEL APRON ENDWALLS FOR PIPE ARCH
SLOPED SIDE DRAINS

EQUIV. DIA. (Inches)	(Inches) SPAN	(Inches) RISE	MIN. THICK. (Inches) ①	DIMENSIONS (Inches) A	H	W	OVERALL WIDTH	L DIMENSIONS SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES
15	17	13	.064 *	7	6	30	44	4:1	19	6:1	30	10:1 ②	70
18	21	15	.064 *	8	6	27	43	4:1	20	6:1	30	10:1	70
21	24	18	.064 *	8	6	30	46	4:1	32	6:1	48	10:1	100
24	28	20	.064 *	8	6	34	50	4:1	40	6:1	60	10:1	120
30	35	24	.079 *	12	9	41	65	4:1	56	6:1	84	10:1	160
36	42	29	.109 *	12	9	48	72	4:1	76	6:1	114	10:1	210
42	49	33	.109	16	12	55	87	4:1	92	6:1	138	——	——
48	57	38	.109	16	12	63	95	4:1	112	6:1	168	——	——
54	64	43	.109	16	12	70	102	4:1	132	6:1	198	——	——

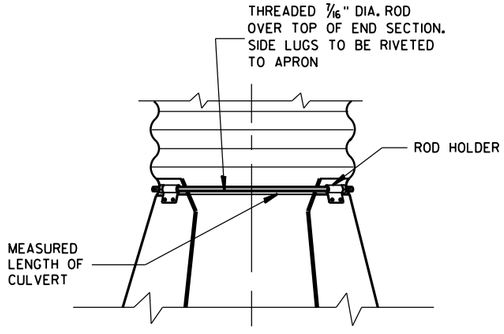
① * MINIMUM THICKNESS OF ALL 10:1 SLOPED SIDE DRAINS IS 0.109".
② ACTUAL SLOPE GREATER THAN 10:1.



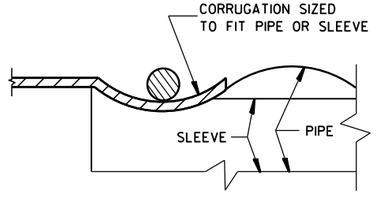
ISOMETRIC VIEW



STEEL ADAPTER SLEEVE FOR CONCRETE PIPE



TYPE 2
CONNECTION DETAIL



SECTION B-B

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

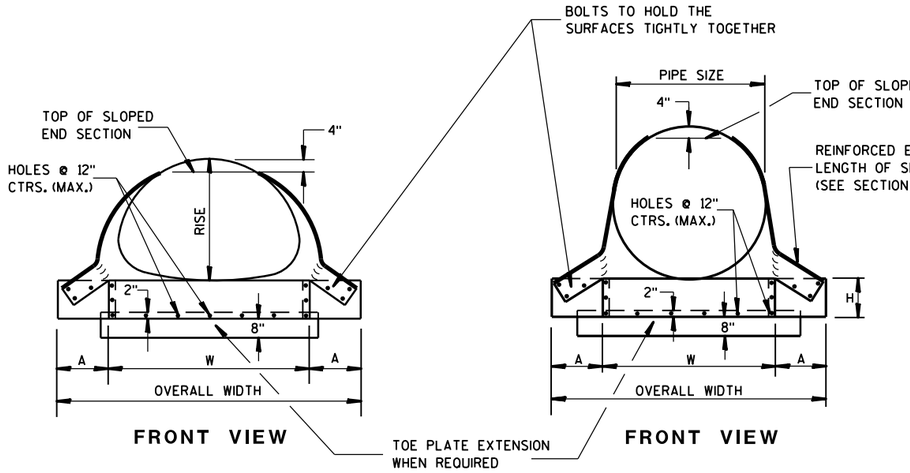
APPROVED
9/14/2012 DATE
/S/ Jerry H. Zoda
ROADWAY STANDARDS ENGINEER
FHWA

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S.D.D. 8 F 7-5

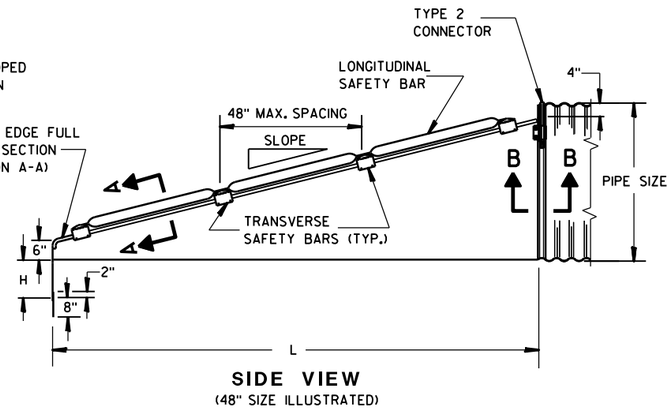
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S.D.D. 8 F 7-5



FRONT VIEW

FRONT VIEW



SIDE VIEW
(48" SIZE ILLUSTRATED)

GENERAL NOTES

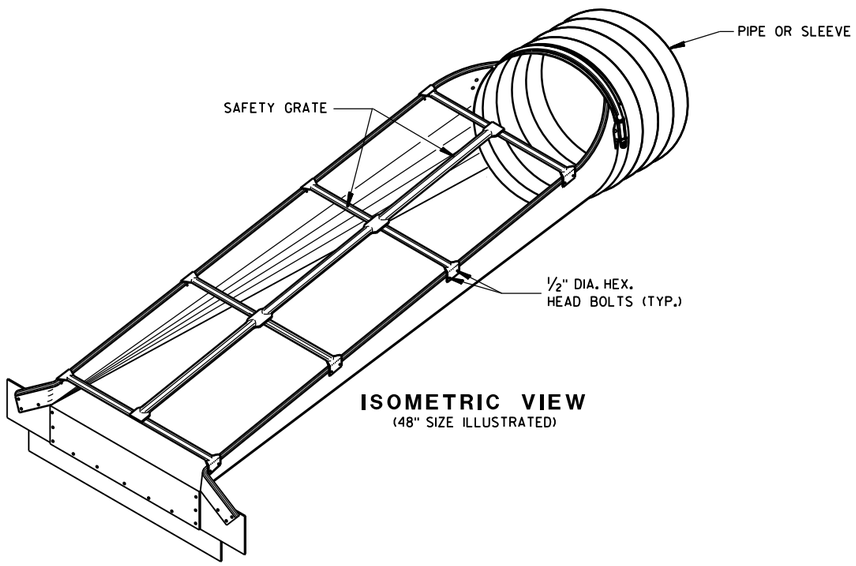
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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

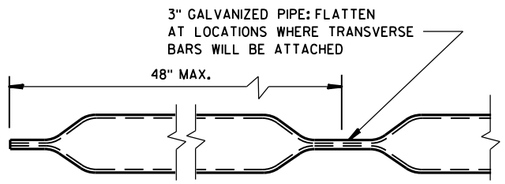
SLOPED STEEL ENDWALLS LOCATED AT THE ENDS OF CONCRETE CULVERT PIPE SHALL BE FURNISHED WITH STEEL ADAPTER SLEEVES.

STEEL APRON ENDWALLS FOR CULVERT PIPE CROSS DRAINS

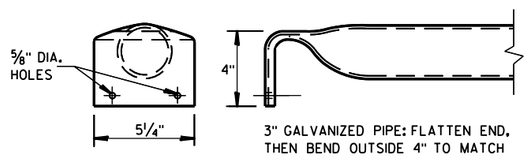
PIPE DIA. (IN.)	MIN. THICK.		DIMENSIONS (Inches)				L DIMENSIONS			
	IN.	GAGE	A	H	W	OVERALL WIDTH	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES
36	.109	12	12	9	42	66	4:1	104	6:1	156
42	.109	12	16	12	48	80	4:1	128	6:1	192
48	.109	12	16	12	54	86	4:1	152	6:1	228
54	.109	12	16	12	60	92	4:1	176	6:1	264
60	.109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



ISOMETRIC VIEW
(48" SIZE ILLUSTRATED)



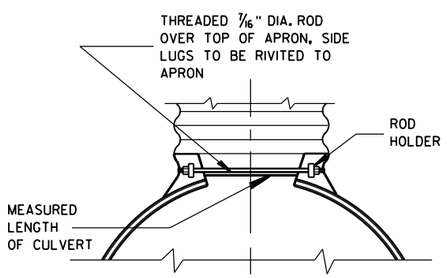
LONGITUDINAL SAFETY BAR



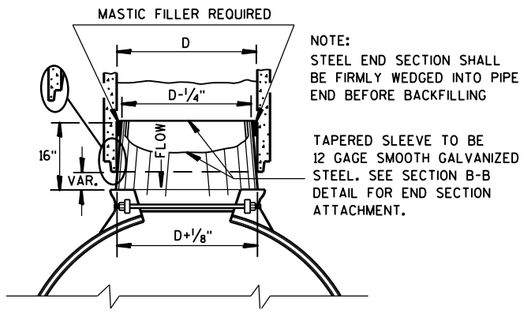
TRANSVERSE SAFETY BAR

STEEL APRON ENDWALLS FOR PIPE ARCH SLOPED CROSS DRAINS

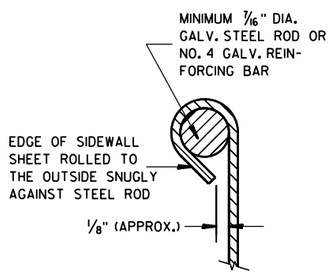
EQUIV. DIA. (IN.)	INCHES		MIN. THICK.		DIMENSIONS (Inches)				L DIMENSIONS			
	SPAN	RISE	IN.	GAGE	A	H	W	OVERALL WIDTH	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES
30	35	24	.079	14	12	9	41	65	4:1	56	6:1	84
36	42	29	.109	12	12	9	48	72	4:1	76	6:1	114
42	49	33	.109	12	16	12	55	87	4:1	92	6:1	138
48	57	38	.109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



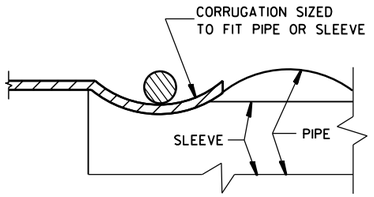
TYPE 2 CONNECTOR DETAIL



STEEL ADAPTER SLEEVE FOR CONCRETE PIPE



SECTION A-A



SECTION B-B

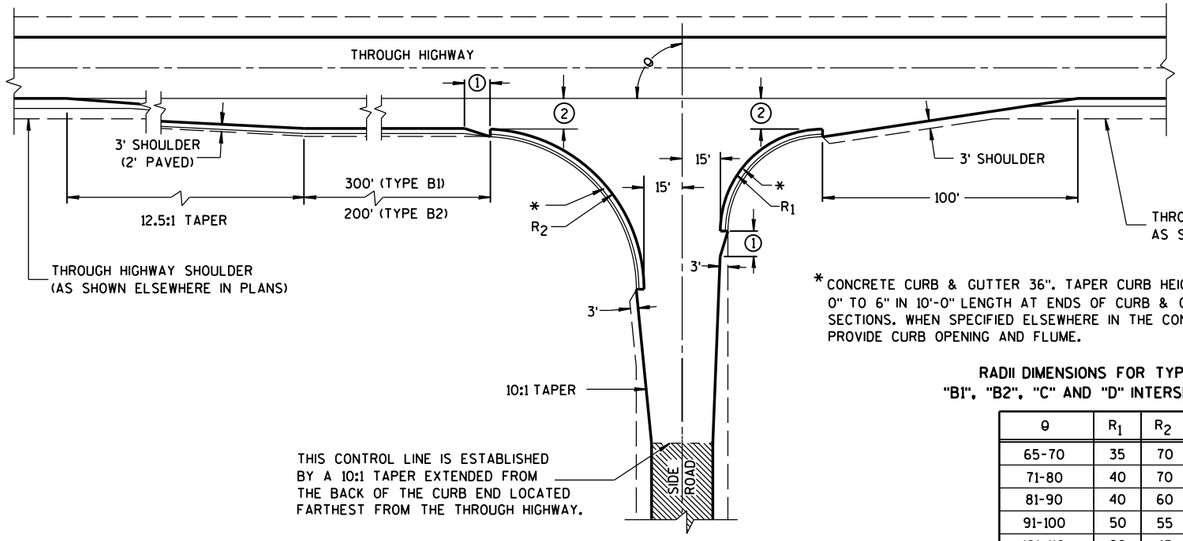
STEEL APRON ENDWALLS FOR CULVERT PIPE AND PIPE ARCH SLOPED CROSS DRAINS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

S.D.D. 8 F 8-2

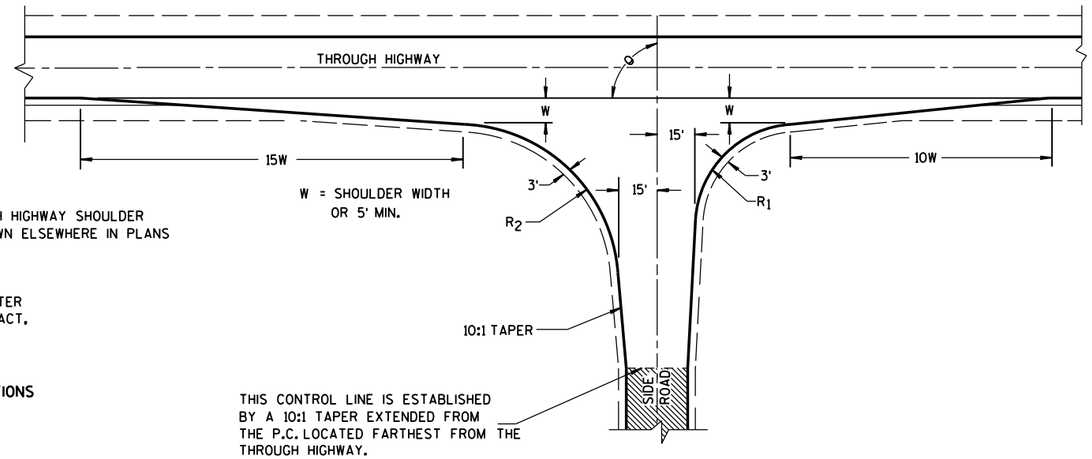


TYPE "B1" AND "B2"

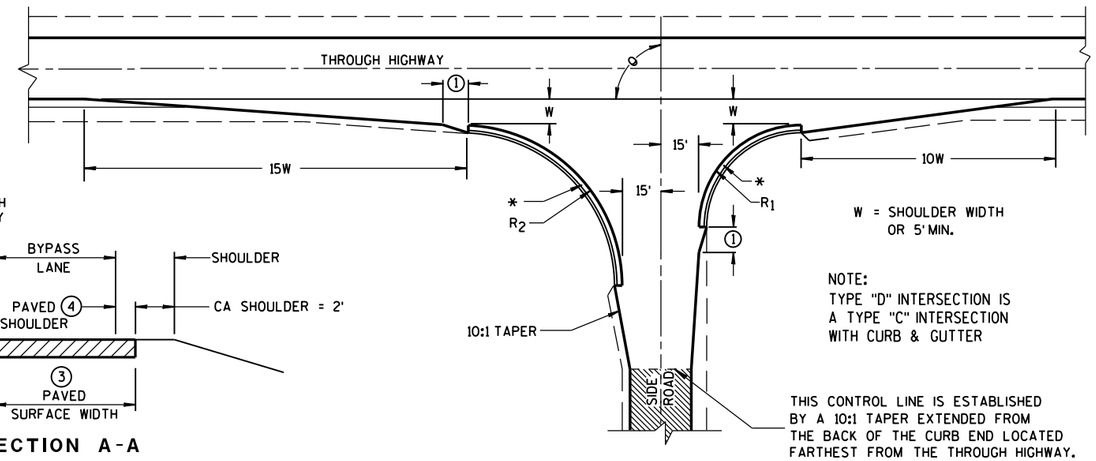
*CONCRETE CURB & GUTTER 36". TAPER CURB HEIGHT 0" TO 6" IN 10'-0" LENGTH AT ENDS OF CURB & GUTTER SECTIONS. WHEN SPECIFIED ELSEWHERE IN THE CONTRACT, PROVIDE CURB OPENING AND FLUME.

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



TYPE "C"



TYPE "D"

GENERAL NOTES

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

SIDE ROAD SURFACING NOTE

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

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

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

EXISTING PAVED SURFACE

BYPASS LANE

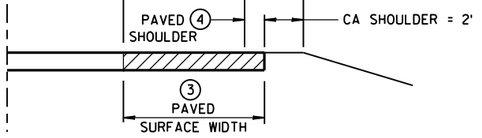
(1) 10-FT TYPICAL.

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

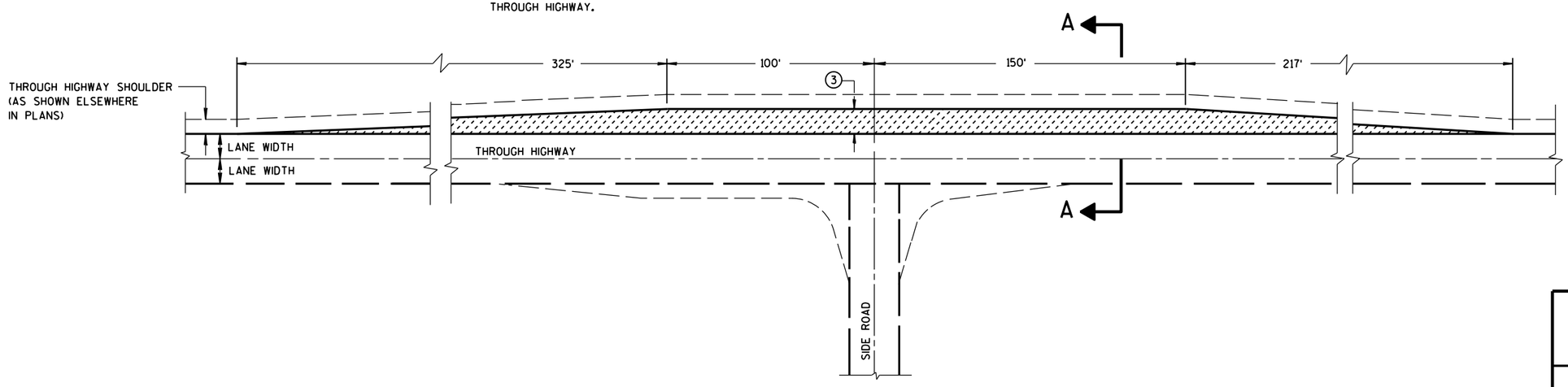
**10-FT MAY BE USED ON TYPE B2 ON RESURFACING PROJECTS IF SPECIFIED IN THE CONTRACT.

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

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



SECTION A-A
(SHOWING BYPASS LANE AND SHOULDER)



TEE INTERSECTION BYPASS LANE DETAIL

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

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S.D.D. 9 A 1-13a

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) 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.

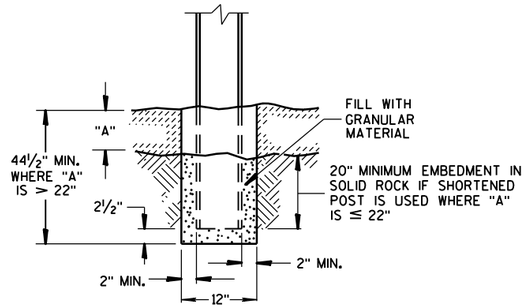
(5) IF THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING, W BEAM (LHW).

(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.

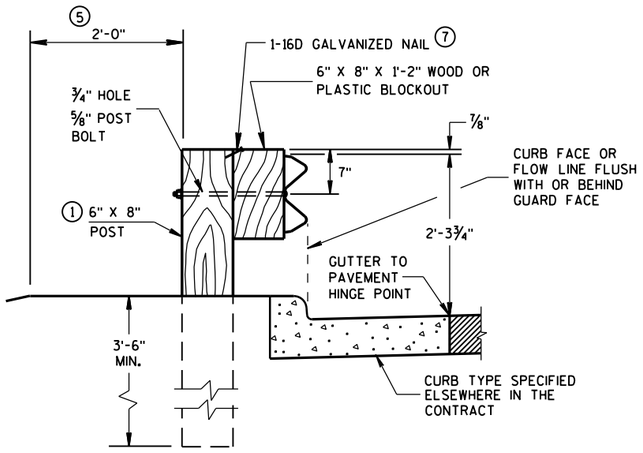
(7) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

INSTALL BEAM GUARD SECTIONS AND ALL NECESSARY HARDWARE ACCORDING TO THE APPLICABLE PLAN AND CURRENT STANDARD AND SUPPLEMENTAL SPECIFICATIONS.

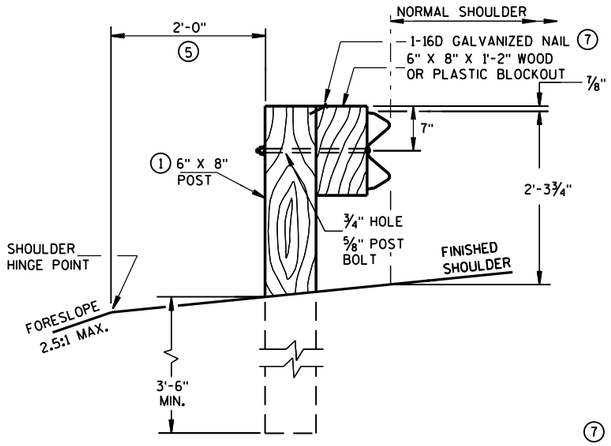
ALL DIMENSIONS ARE SUBJECT TO MANUFACTURER'S TOLERANCES EXCEPT WHERE ALLOWABLE TOLERANCES ARE SHOWN.



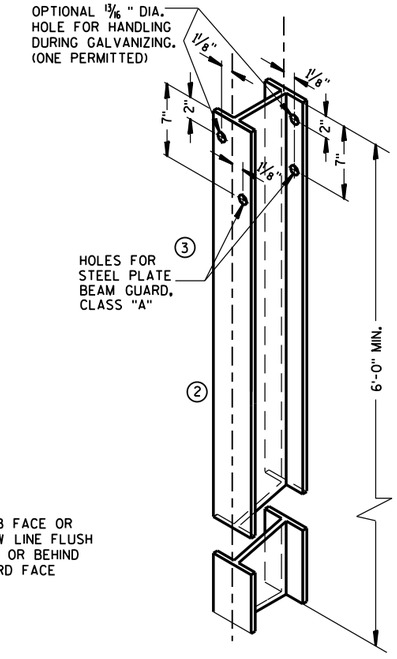
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (6)



END VIEW
LOCATED ALONG A CURBED ROADWAY

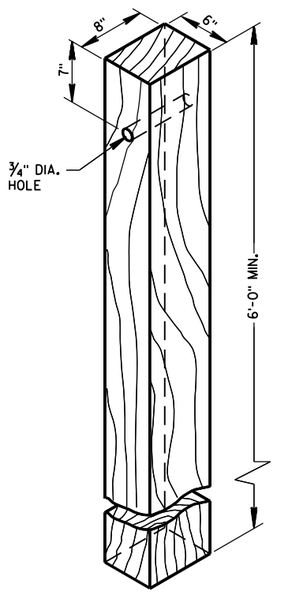


END VIEW
LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION

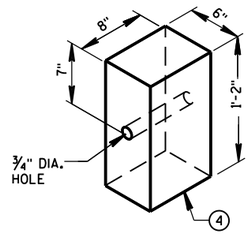


STEEL POST &
HOLE PUNCHING DETAIL
(W6 X 9) (1)

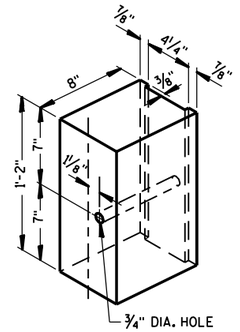
ALL HOLES 13/16" DIAMETER EXCEPT AS NOTED



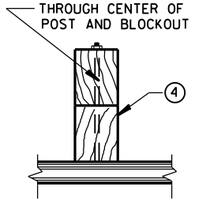
WOOD POST
(6"X8") NOMINAL



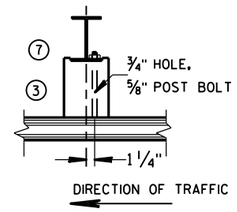
WOOD OR PLASTIC
BLOCKOUT FOR
WOOD POSTS



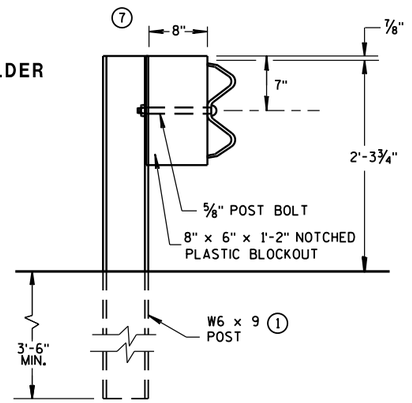
TYPICAL NOTCHED (1)
PLASTIC BLOCKOUT
FOR STEEL POSTS



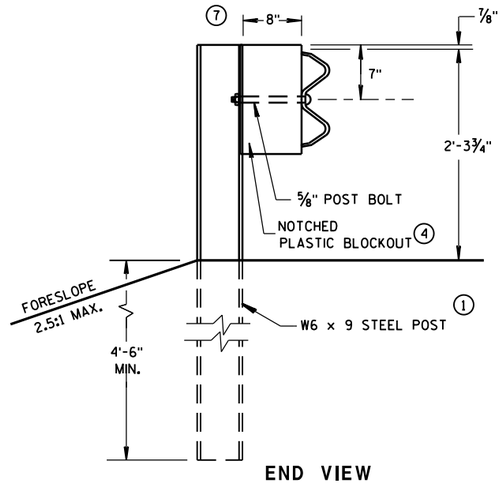
PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



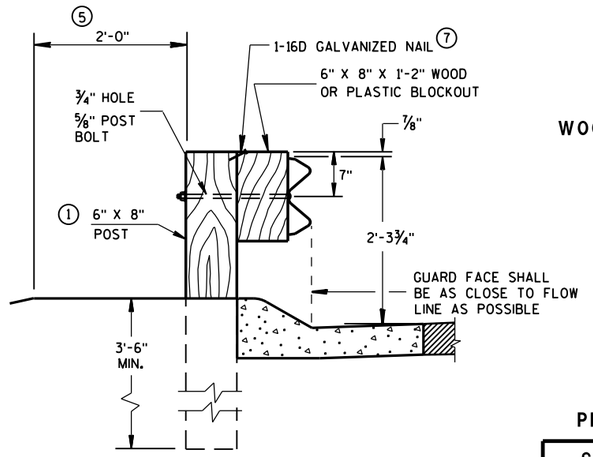
PLAN VIEW
STEEL POST, NOTCHED
PLASTIC BLOCKOUT & BEAM



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

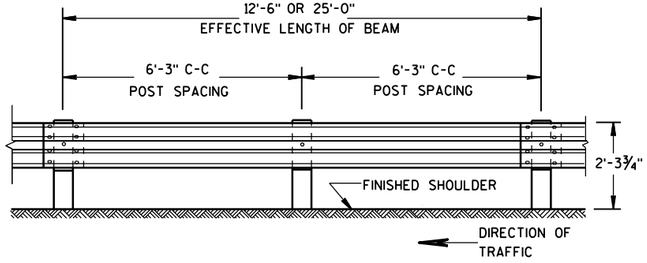
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO 96

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S.D.D. 14 B 15-8a

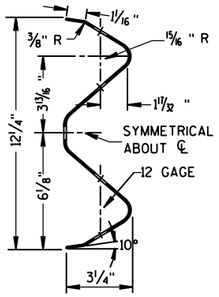
6

S.D.D. 14 B 15-8a

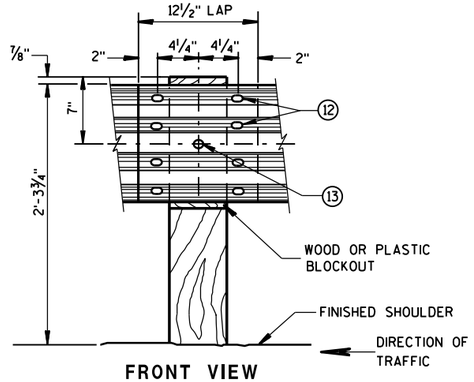


FRONT VIEW

POST SPACING STANDARD INSTALLATION



SECTION THRU W BEAM



FRONT VIEW

BEAM SPLICE AT WOOD POST AND POST MOUNTING DETAIL

GENERAL NOTES

(8) PROVIDE SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH YELLOW REFLECTIVE SHEETING. SHEETING IS TYPE H. SEE STANDARD SPECIFICATION 637.

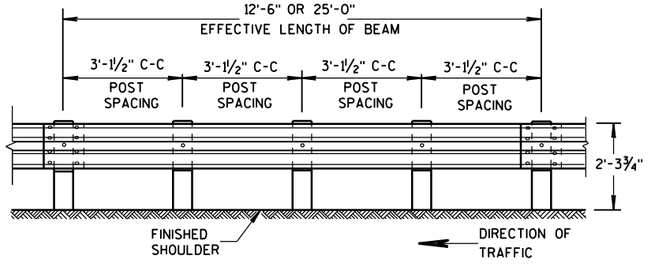
(9) DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

(10) REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.

(11) PROVIDE AN ANGLE OF BEND OF 90° ± 1° FOR TWO-SIDED REFLECTORS.

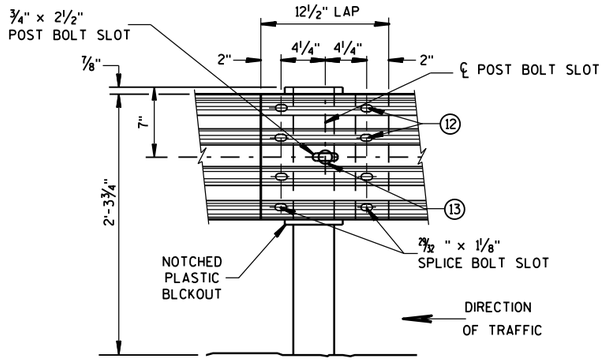
(12) 8 -⅝" ϕ X 2" BUTTON HEAD BOLTS WITH OVAL SHOULDERS & RECESS NUTS.

(13) ⅝" DIA. BUTTON HEAD BOLT AND RECESS NUT WITH ⅝" DIA. F844 FLAT WASHER UNDER NUT.



FRONT VIEW

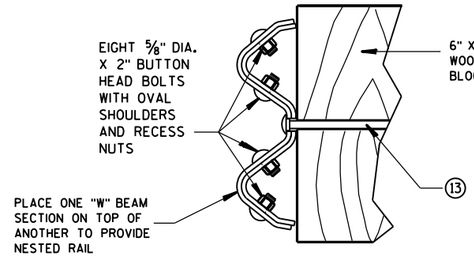
POST SPACING FOR LONGER POST AT HALF POST SPACING W BEAM (LHW)



FRONT VIEW

BEAM SPLICE AT STEEL POST

TYPICAL SPLICING DETAILS OF STEEL PLATE BEAM GUARD

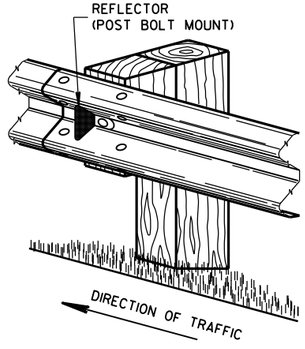


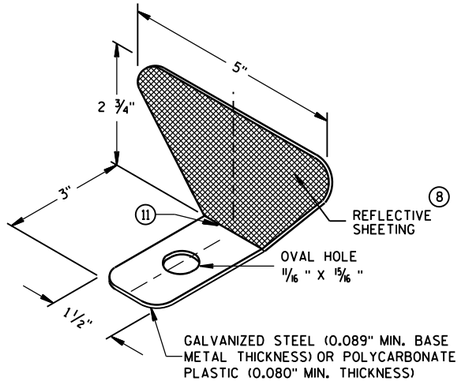
NESTED W BEAM (NW)

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

REFLECTOR SPACING (9)

	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200'	50' C-C	1	3
	> 200'	100' C-C	1	
TWO WAY TRAFFIC	< 200'	25' C-C	1 (10)	6
	> 200'	50' C-C	1	
TWO WAY TRAFFIC	< 200'	50' C-C	2 (11)	3
	> 200'	100' C-C	2	





ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION (8)

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

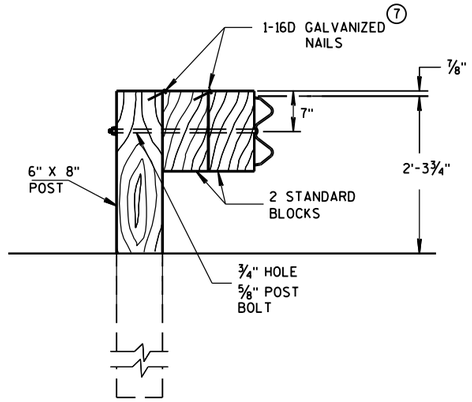
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 97

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S.D.D. 14 B 15-8b

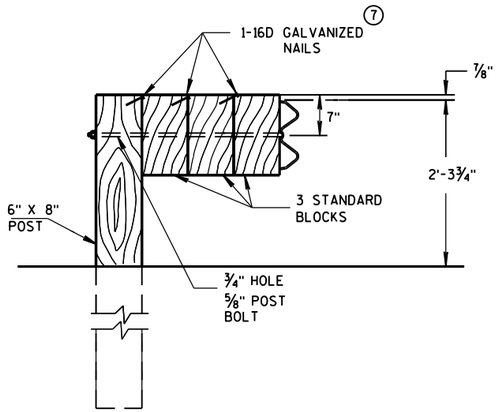
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S.D.D. 14 B 15-8b



DETAIL FOR DOUBLE BLOCKS

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

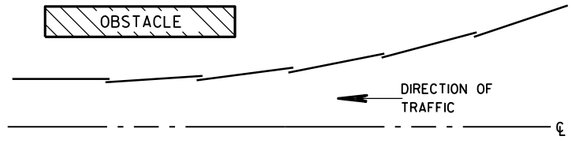


DETAIL FOR TRIPLE BLOCKS

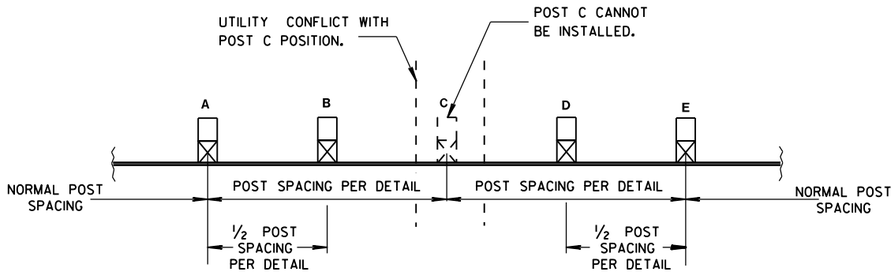
TRIPLE BLOCK DETAIL IS LIMITED TO ONE LOCATION WITHIN A BEAM GUARD RUN.

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

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



PLAN VIEW
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION

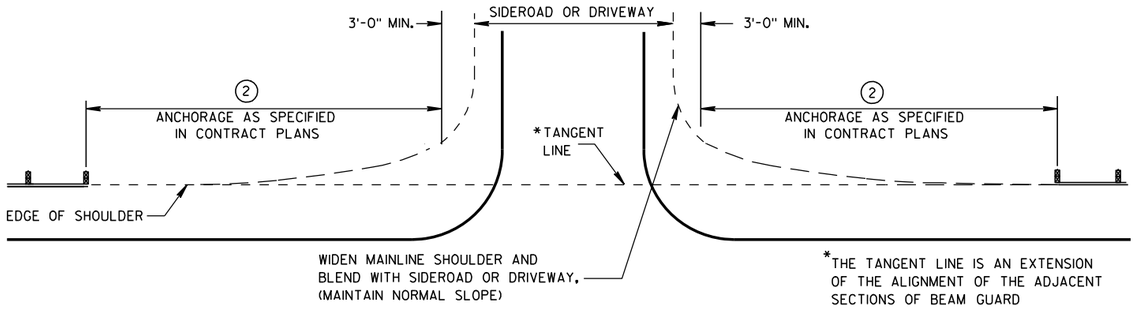
STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

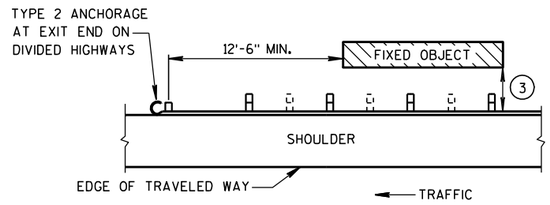
APPROVED
June 2014 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

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S.D.D. 14 B 15-8c



BEAM GUARD AT SIDEROADS OR DRIVEWAYS



BEAM GUARD AT OBSTACLES EXIT END - ONE WAY TRAFFIC

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.

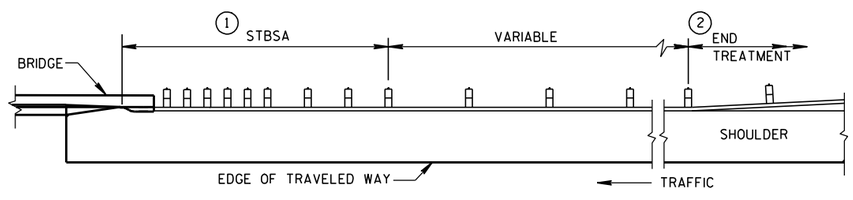
THE LOCATIONS AND LENGTHS OF BEAM GUARD ARE SHOWN ELSEWHERE IN THE PLAN.

(1) STEEL THRIE BEAM STRUCTURAL APPROACH (STBSA) - SEE CURRENT SDD 14B20.

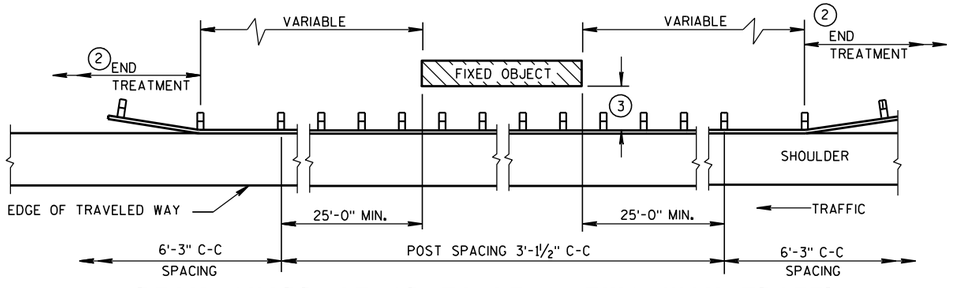
(2) USE AN APPROVED END TREATMENT FOR THE TRAFFIC APPROACH SIDE OF BRIDGE/OBSTACLES. USE TYPE 2 ANCHORAGE ONLY AT THE DOWNSTREAM ENDS OF BEAM GUARD LOCATED ALONG ROADWAYS WITH ONE WAY TRAFFIC.

(3)

MINIMUM LATERAL DISTANCE FROM FACE OF BEAM GUARD TO FIXED OBJECT	POST SPACING
3'-6"	3' - 1½"
4'-6"	6' - 3"

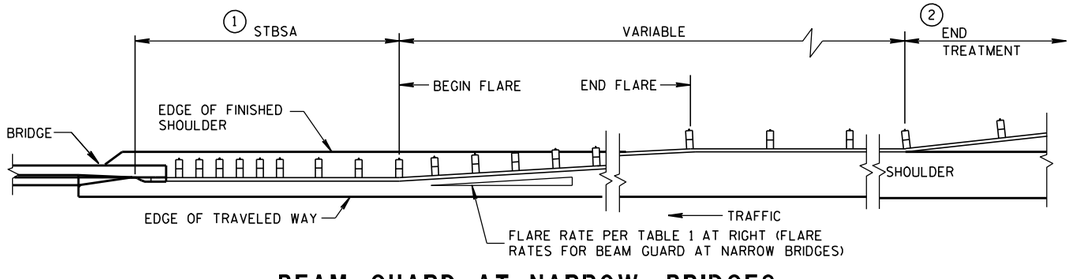


BEAM GUARD AT FULL WIDTH BRIDGES



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

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

6

S.D.D. 14 B 18-6a

6

S.D.D. 14 B 18-6a

BILL OF MATERIALS

NOTE NO.	QTY.	DESCRIPTION
(1)	4	WOOD BREAKAWAY TERMINAL POST: 5½" X 7½" X 3'-9"
(2)	**	STEEL TUBE: OPTION 1 - QUANITY OF 4 TS 8" X 6" X 0.188", 4'-6" LONG OR OPTION 2 - QUANITY OF 2 TS 8" X 6" X 0.188", 6'-0" AND 2 TS 8" X 6" X 0.188", 4'-6" LONG
(3)	2	SOIL PLATE: 2'-0" X 1'-6" X ¼" **
(4)	4	WOOD BREAKAWAY CRT POST: 6" X 8" X 6'-0"
(5)	6	WOOD OFFSET BLOCKS: 6' X 8" X 1'-2"
(6)	1	PIPE SLEEVE: 2" X 5 ½" STANDARD PIPE
(7)	1	BEARING PLATE
(8)	1	BCT CABLE ASSEMBLY
(9)	1	CABLE ANCHOR BOX
(10)	1	STRUT & YOKE
(11)	1	STEEL PLATE BEAM, END PANEL 12 GA. 13'-6½" LONG FOR SKT-350, ET-2000 AND ET-2000 PLUS
(12)	3	STEEL PLATE BEAM: 12 GA. 13'-6½"
(13)	1	ET-2000/ET-2000 PLUS GUARDRAIL EXTRUDER OR SKT-350 IMPACT HEAD: AS FURNISHED BY MANUFACTURER
(14)	1	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE F PER SECTION 637 OF THE STANDARD SPECIFICATIONS
(15)	1	E.A.T. MARKER POST

GENERAL NOTES

FOLLOW MANUFACTURE'S BOLTING RECOMMENDATIONS. IF NONE ARE AVAILABLE, INSTALL ⅝" ø X 1'-6" BUTTON HEAD BOLTS AT ALL POSTS EXCEPT FOR POST 1.

(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) THE 13 SLOT FIRST RAIL PANEL MAY BE USED IN LIEU OF THE 3 SLOT RAIL PANEL ON SKT-350 ONLY.

(D) THE TOP OF THE STEEL TUBE ON POSTS 1 THROUGH 4 SHALL NOT BE MORE THAN 3" ABOVE THE FINISH GROUND ELEVATION.

(E) THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST 5 THROUGH 8 SHALL BE ¾" ABOVE THE FINISHED GROUND LINE.

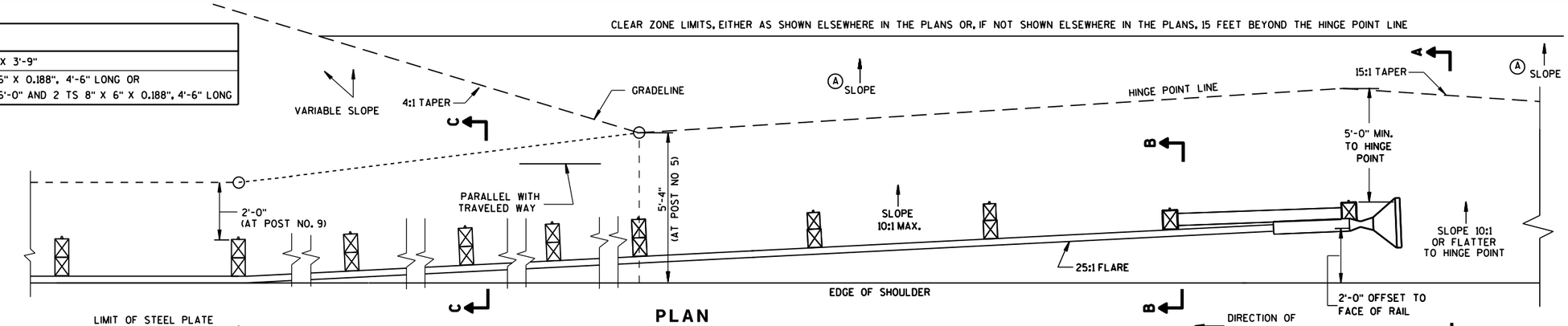
(F) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS. ONE SCREW PER CORNER.

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

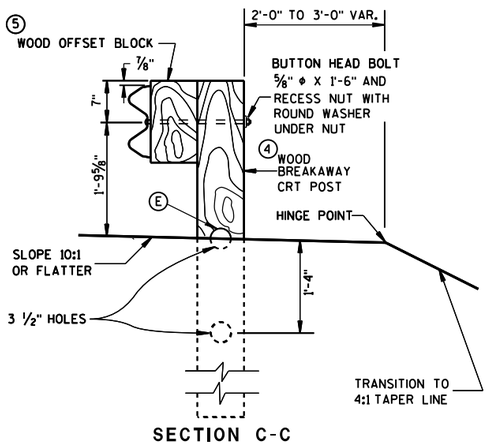
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

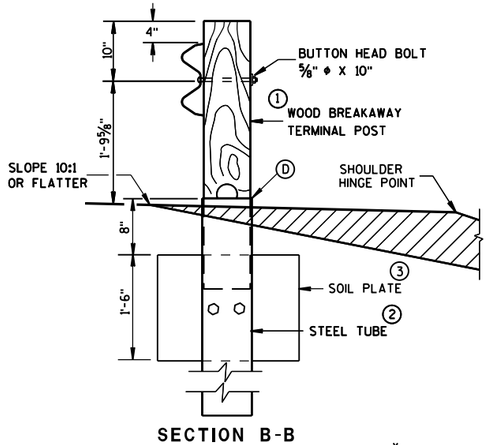
** SDD SHOWS 4 - 54 INCH STEEL TUBES WITH SOIL PLATES INSTALLED ON POST 1 AND POST 2. POST 3 AND 4 DO NOT NEED SOIL PLATES. AN ALTERNATIVE INSTALLATION WOULD CONSIST OF 2 - 72 INCH STEEL TUBES ON POST 1 AND POST 2 AND 54 INCH SOIL TUBES ON POSTS 3 AND 4. THE ALTERNATIVE INSTALLATION DOES NOT REQUIRE SOIL PLATES.



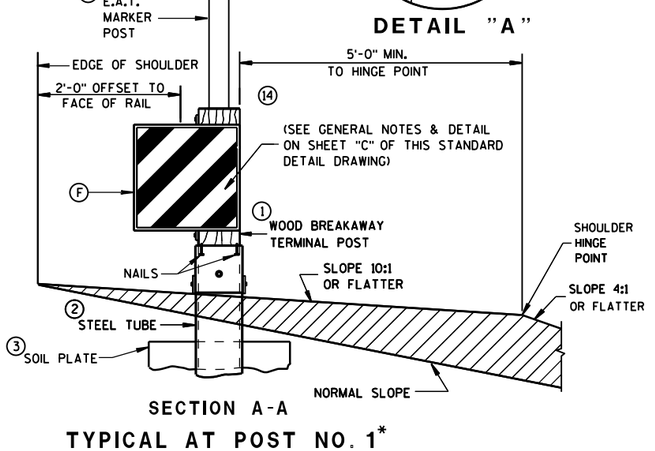
ELEVATION



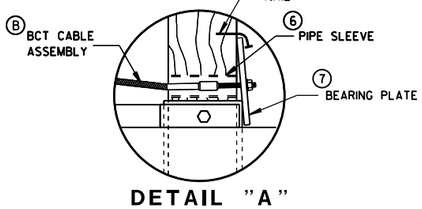
SECTION C-C
TYPICAL AT POST NOS. 6, 8



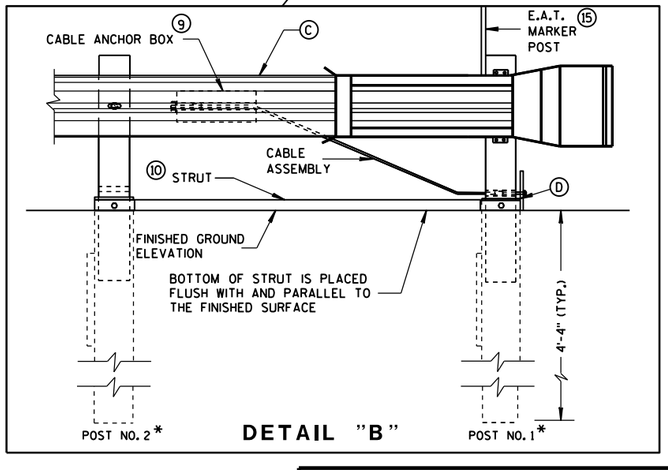
SECTION B-B
TYPICAL AT POST NO. 2*



SECTION A-A
TYPICAL AT POST NO. 1*



DETAIL "A"



DETAIL "B"

STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL

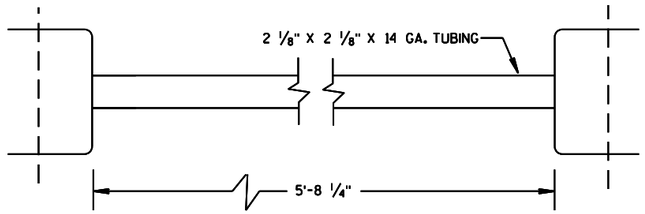
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 100

6

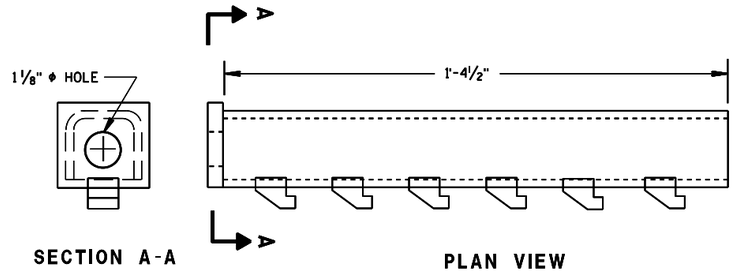
S.D.D. 14 B 24-8a

6

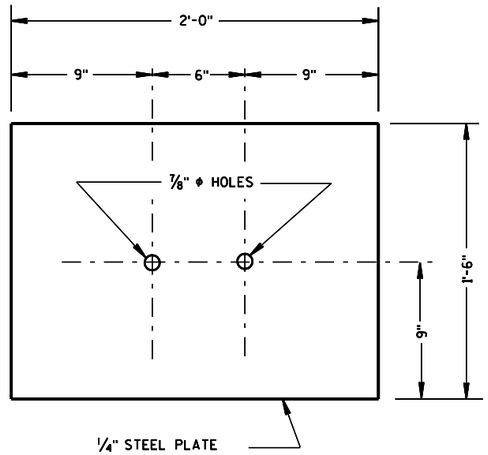
S.D.D. 14 B 24-8a



⑩ STRUT DETAIL (SKT-350)

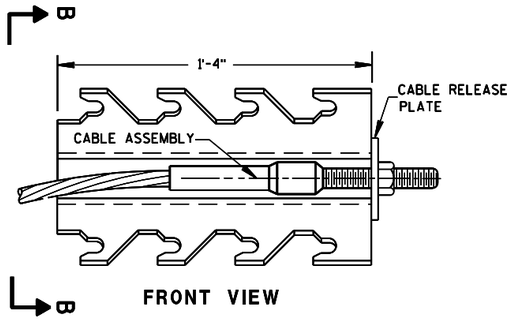


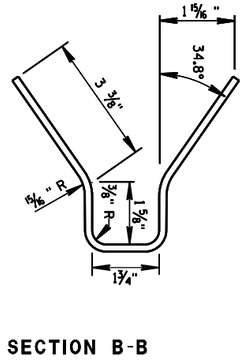
⑨ CABLE ANCHOR BOX (ET-2000/ET-2000 PLUS)



③ SOIL PLATE

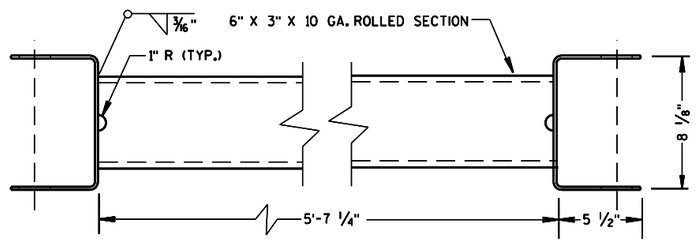
(SKT-350, ET-2000/ET-2000 PLUS)





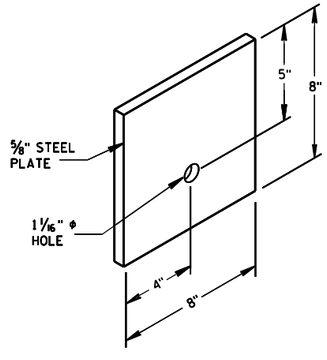
⑨ CABLE ANCHOR BOX (SKT-350)

(SKT-350)



⑩ STRUT DETAIL (ET-2000/ET-2000 PLUS)

(ET-2000/ET-2000 PLUS)



⑦ STEEL BEARING PLATE

(SKT-350, ET-2000/ET-2000 PLUS)

6

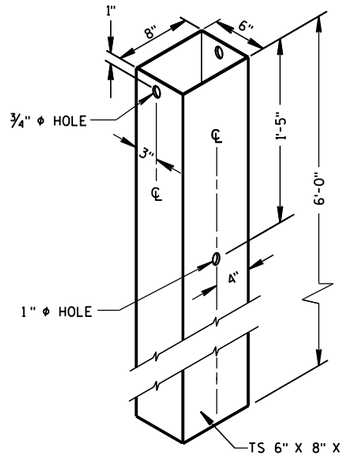
6

S.D.D. 14 B 24-8b

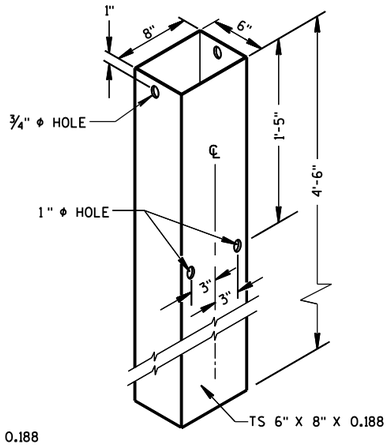
S.D.D. 14 B 24-8b

STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

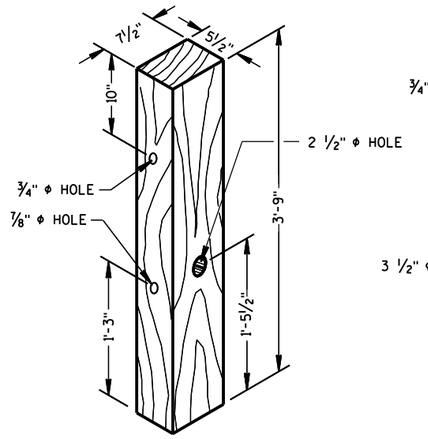
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI



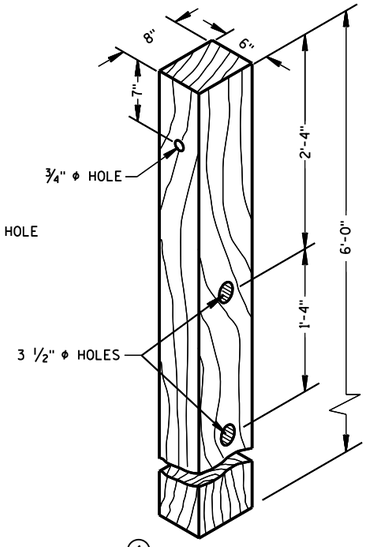
② 72" STEEL TUBE
(POSTS NO. 1-4



② 54" STEEL TUBE
(POSTS NO. 1-4



① TERMINAL POST
(POSTS NO. 1-4



④ CRT POST
(POSTS NO'S 5-8

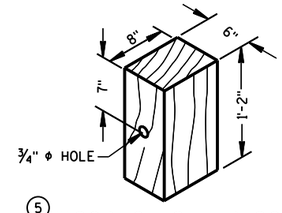
WOOD BREAKAWAY POSTS

GENERAL NOTES

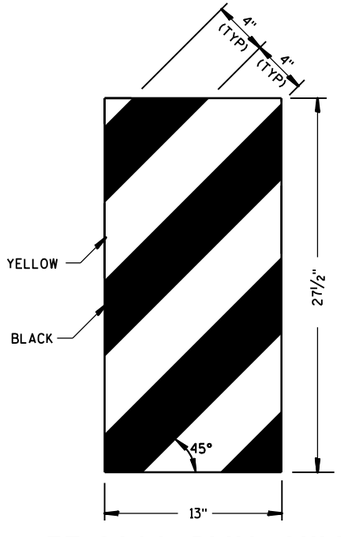
WHEN ROCK IS ENCOUNTERED DURING EXCAVATION, A 12 INCH DIA. POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK MAY BE USED IF APPROVED BY THE ENGINEER. GRANULAR MATERIAL SHALL BE PLACED IN THE BOTTOM OF THE HOLE APPROXIMATELY 2 ½" INCHES DEEP TO PROVIDE DRAINAGE. THE SOIL TUBES SHALL BE FIELD CUT TO LENGTH, PLACED IN THE HOLE AND BACKFILLED WITH ADEQUATELY COMPACTED MATERIAL EXCAVATED FROM THE HOLE.

SEE APPROVED PRODUCTS LIST FOR ACCEPTABLE E. A. T. MARKER POST.

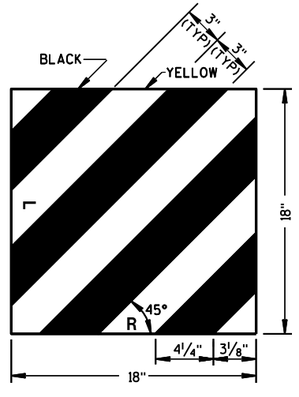
(G) ½" DIA. X 3" LAG BOLT WITH WASHER.



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

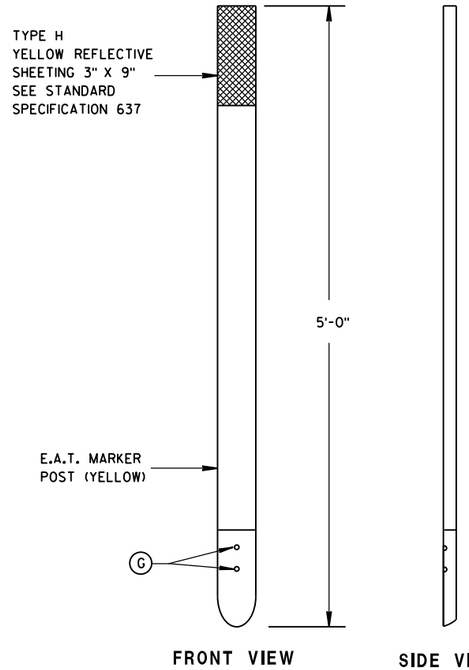


ET-2000 PLUS ONLY



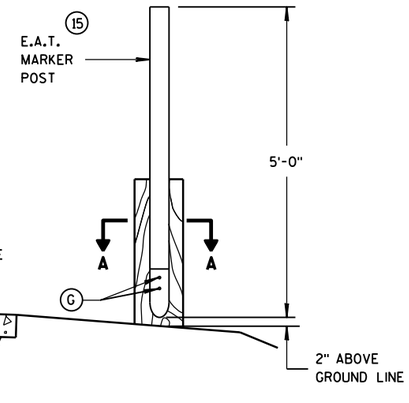
ET-2000 AND SKT-350

⑭ REFLECTIVE SHEETING DETAILS

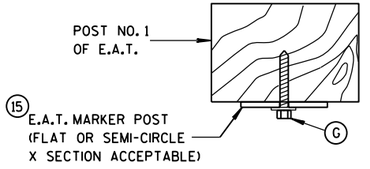


FRONT VIEW SIDE VIEW

⑮ E.A.T. MARKER POST



TYPICAL INSTALLATION OF E.A.T.
MARKER POST BACKSIDE OF POST NO. 1
(E.A.T. AND RAIL REMOVED FOR CLARITY)



SECTION A-A

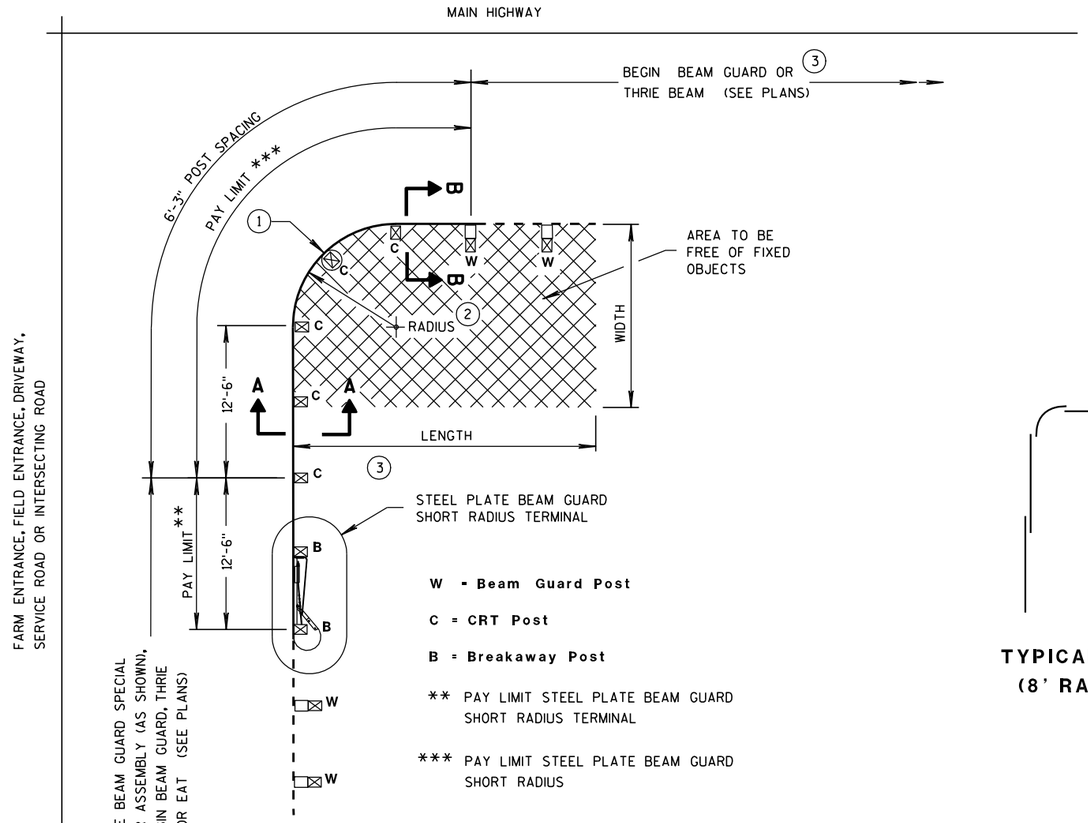
STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

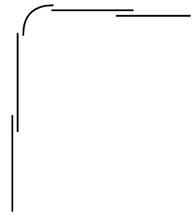
APPROVED
June 2014
DATE
/S/ Jerry H. Zoda
ROADWAY STANDARDS ENGINEER
FHWA

6

S.D.D. 14 B 24-8c



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.

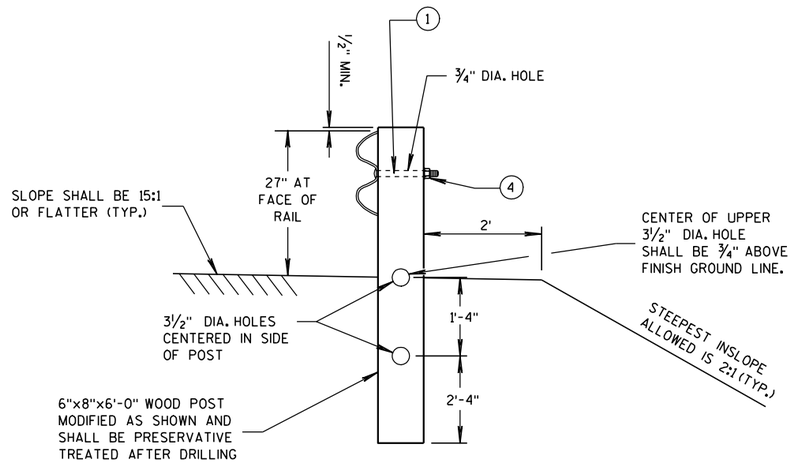
(2) RADIUS FROM 8' - 36'. SEE PLAN.

(3) HEIGHT TRANSITION MAY BE REQUIRED. SEE PLAN OR PROJECT ENGINEER.

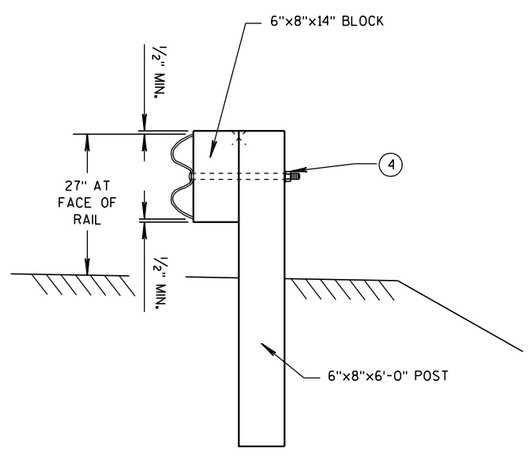
(4) 5/8" ø X 1'-6" BUTTON HEAD BOLT AND RECESS NUT WITH ROUND WASHER UNDER NUT.

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

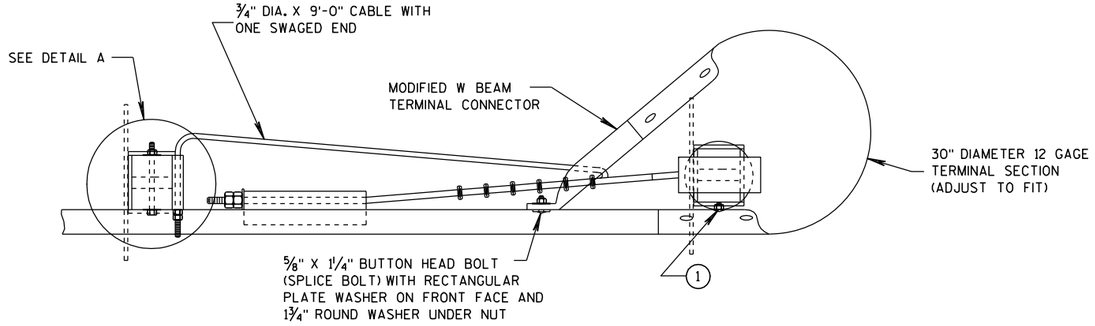
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

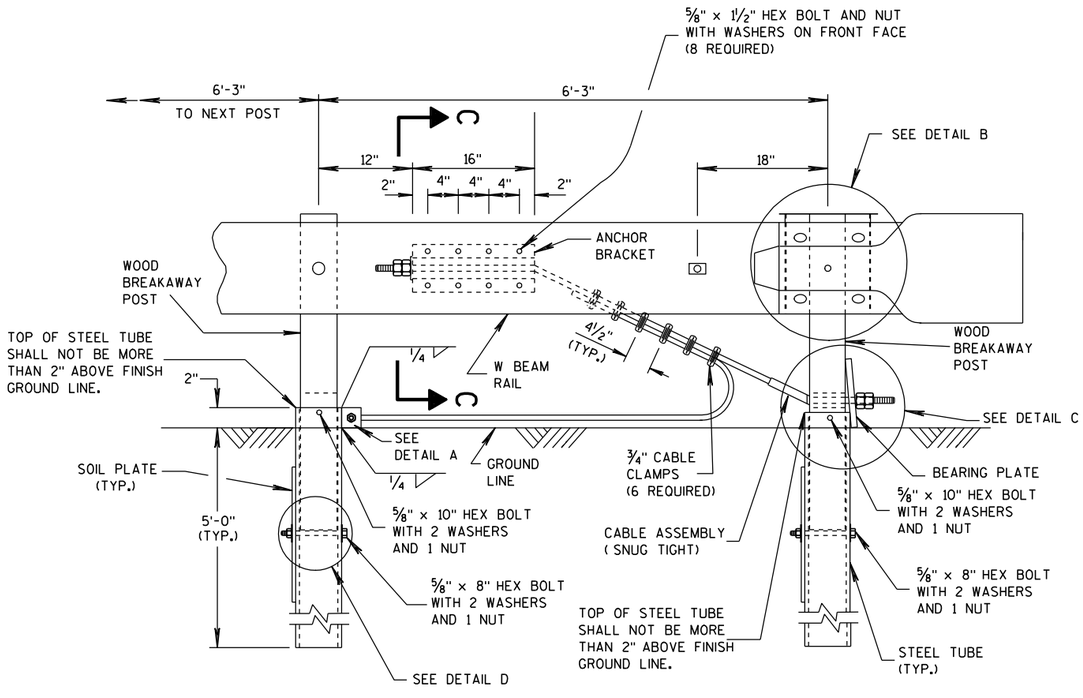
S.D.D. 14 B 27-1a

6

S.D.D. 14 B 27-1a



PLAN VIEW



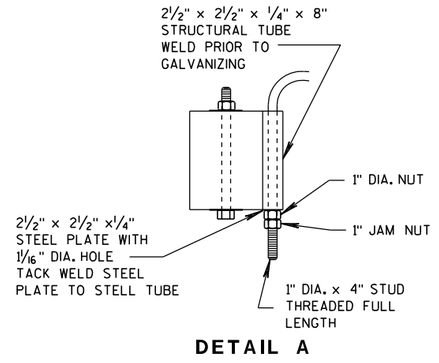
ELEVATION VIEW

STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL

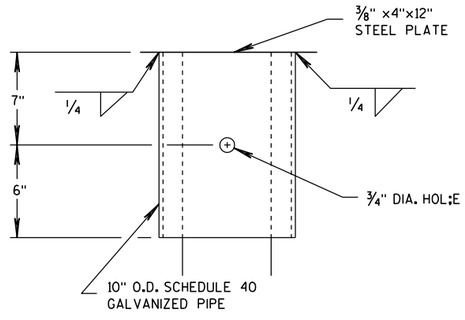
GENERAL NOTES

(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

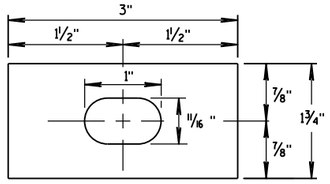
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

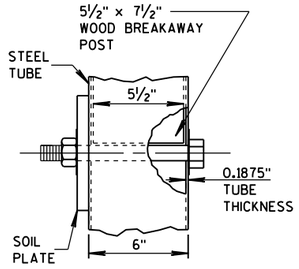
S.D.D. 14 B 27-1b

6

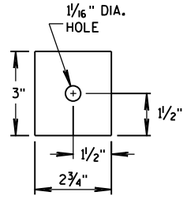
S.D.D. 14 B 27-1b



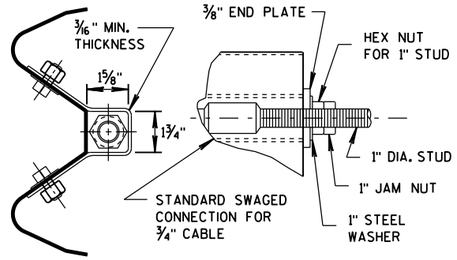
RECTANGULAR PLATE WASHER



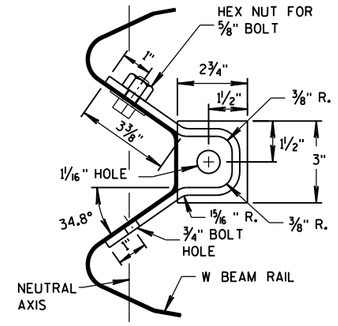
DETAIL D



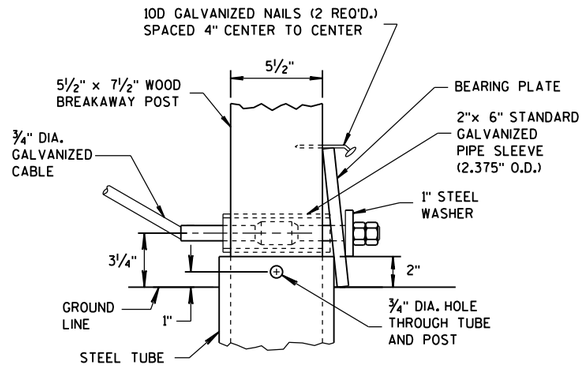
END PLATE



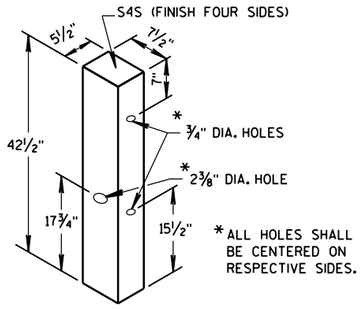
SECTION C-C
(END PLATE REMOVED)



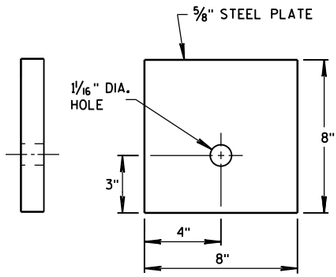
ANCHOR BRACKET



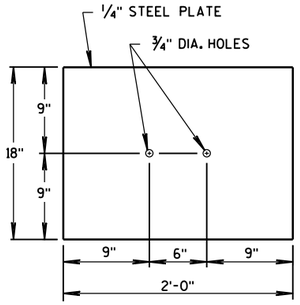
DETAIL C



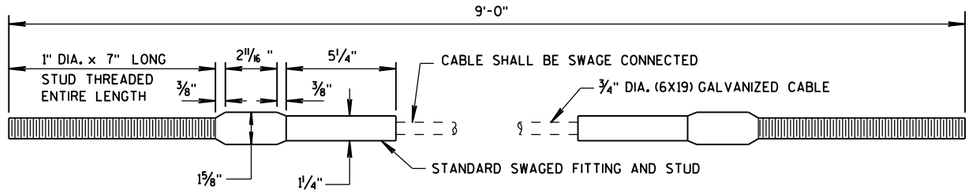
WOOD BREAKAWAY POST



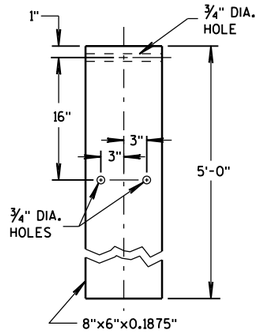
BEARING PLATE



SOIL PLATE



CABLE ASSEMBLY



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 DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 14 B 27-1c

6

S.D.D. 14 B 27-1c

GENERAL NOTES

(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.

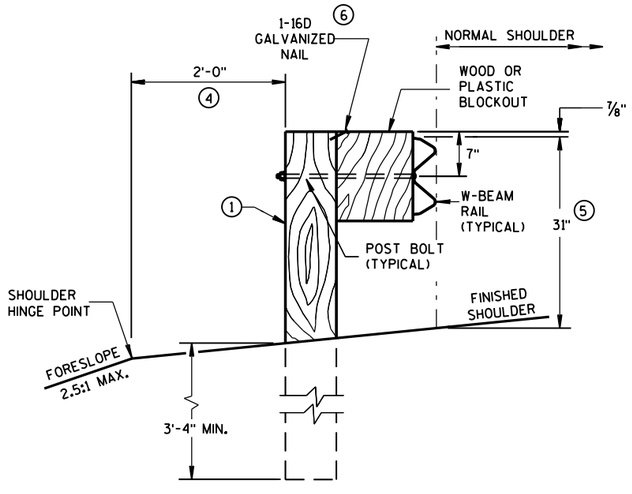
(2) USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.

(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2½ 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).

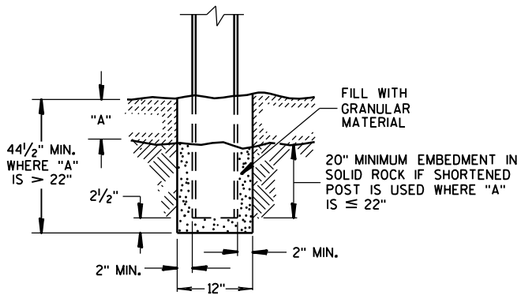
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ± 1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27¾" TO 32".

(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.



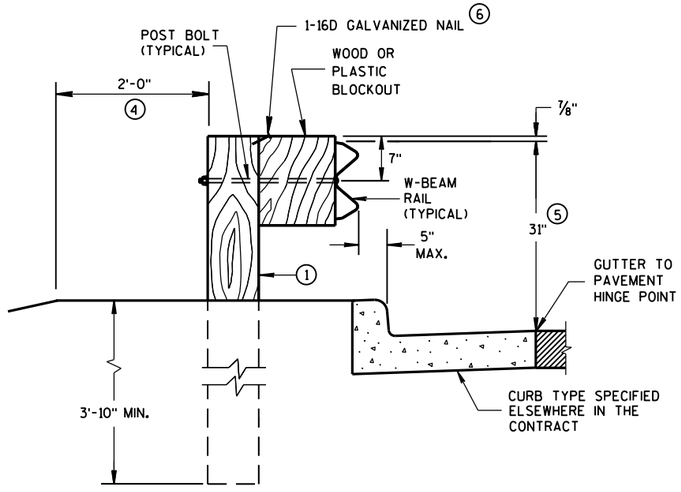
END VIEW

LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



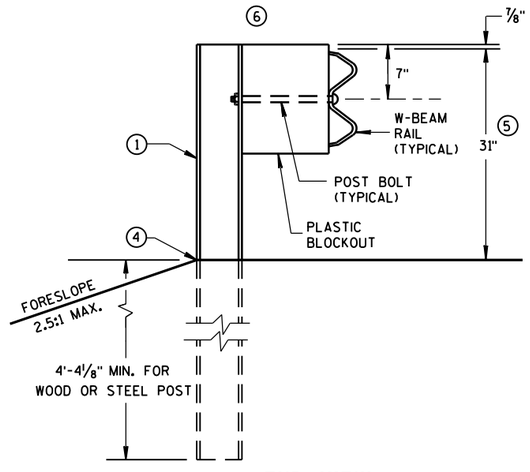
END VIEW

SETTING STEEL OR WOOD POST IN ROCK (3)



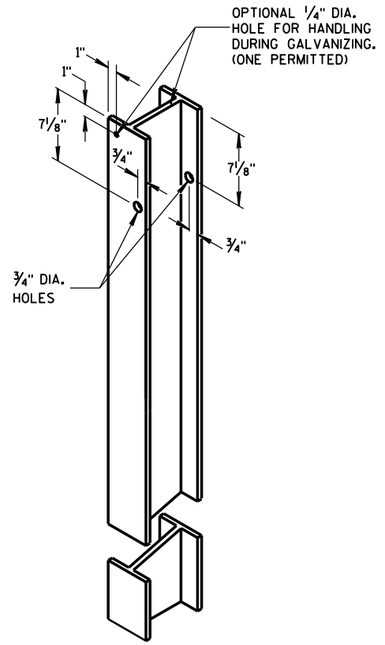
END VIEW

LOCATED ALONG A CURBED ROADWAY

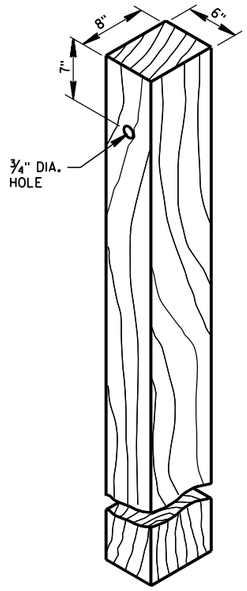


END VIEW

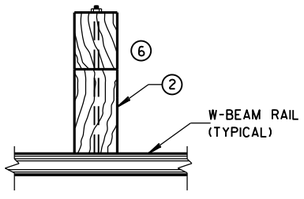
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



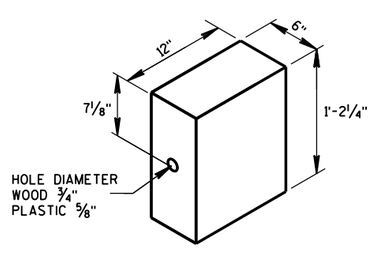
STEEL POST &
HOLE PUNCHING DETAIL
(w6X9) (1)



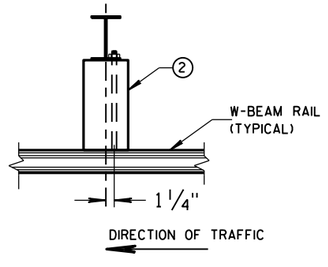
WOOD POST
(6" X 8") NOMINAL (1)



PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



WOOD OR
PLASTIC BLOCKOUT (2)

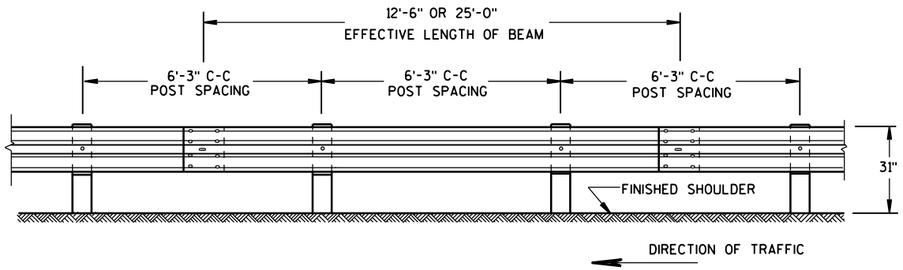


PLAN VIEW
STEEL POST,
PLASTIC BLOCKOUT & BEAM

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

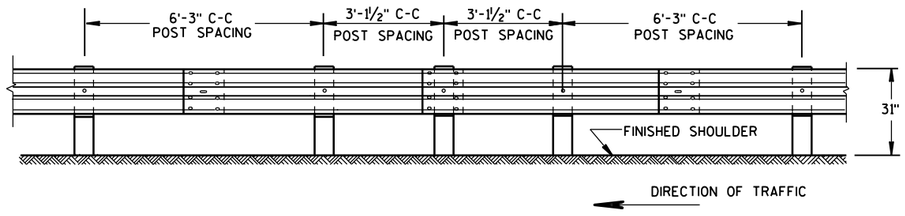
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 14 B 42-3a



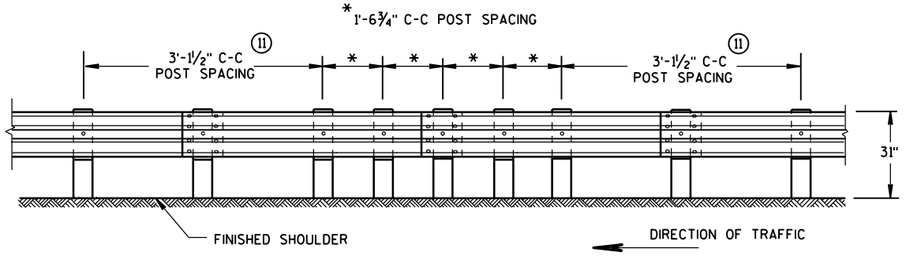
FRONT VIEW

POST SPACING STANDARD INSTALLATION



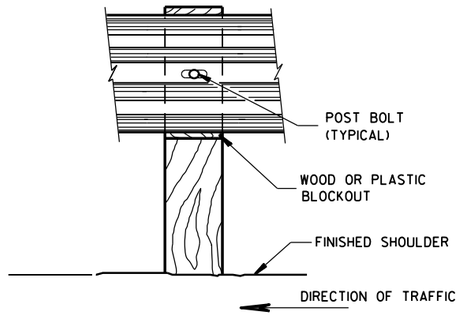
FRONT VIEW

HALF POST SPACING (HS) AND HALF POST SPACING WITH LONGER POSTS (K)

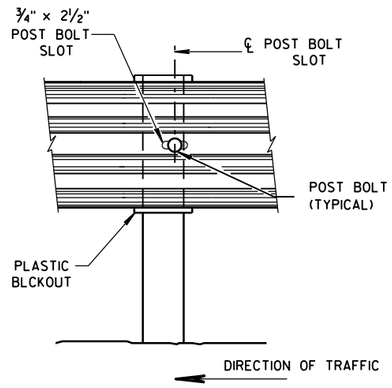


FRONT VIEW

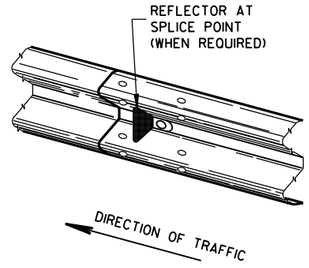
QUARTER POST SPACING (QS)

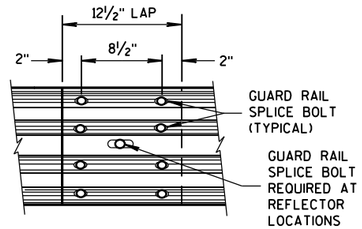


FRONT VIEW AT WOOD POST



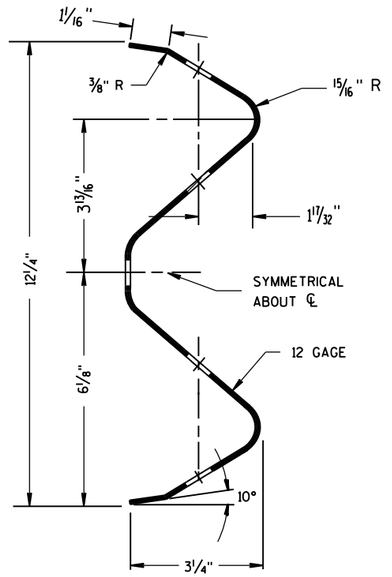
FRONT VIEW AT STEEL POST



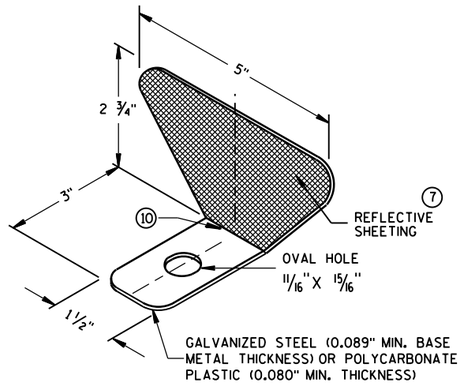


FRONT VIEW

MID-SPAN BEAM SPLICE



SECTION THRU W-BEAM RAIL



ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION ⑦

GENERAL NOTES

⑦ PROVIDE SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH YELLOW REFLECTIVE SHEETING. SHEETING IS TYPE H. SEE STANDARD SPECIFICATION 637.

⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL. RAIL SPLICE LOCATIONS ARE THE ONLY ACCEPTABLE LOCATIONS FOR REFLECTORS.

⑨ REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.

⑩ PROVIDE AN ANGLE OF BEND OF 90° ± 1° FOR TWO-SIDED REFLECTORS.

⑪ 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.

REFLECTOR SPACING ⑧

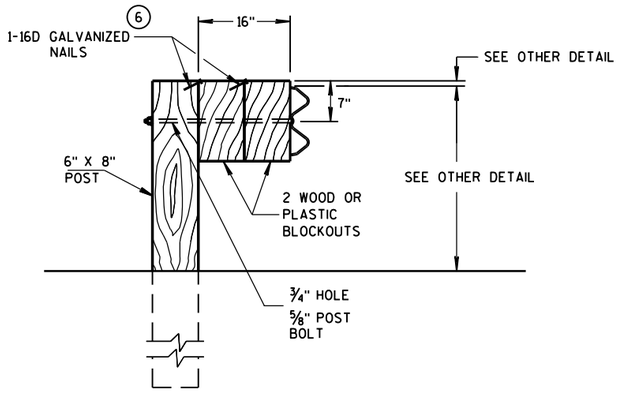
	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200' > 200'	50' C-C 100' C-C	1 1	3
TWO WAY TRAFFIC	< 200' > 200'	25' C-C 50' C-C	1 ⑨ 1	6
TWO WAY TRAFFIC	< 200' > 200'	50' C-C 100' C-C	2 2 ⑩	3

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

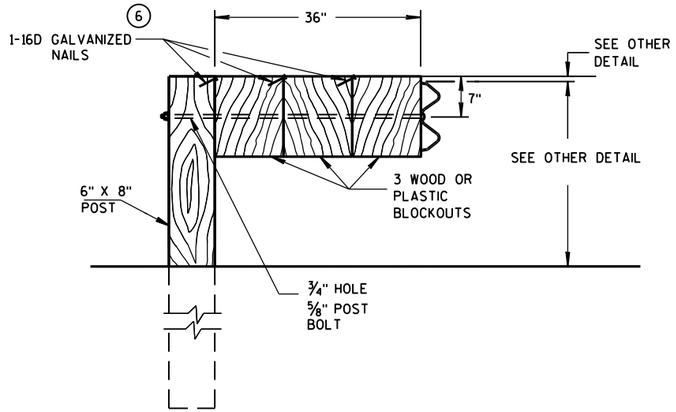
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S.D.D. 14 B 42-3b



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.

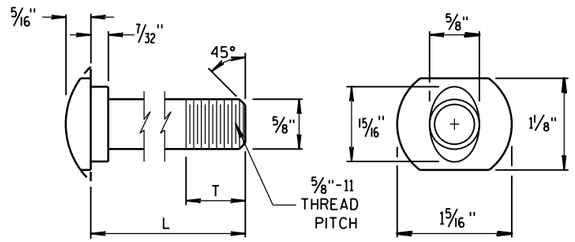


DETAIL FOR 36" BLOCKOUT DEPTH

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.

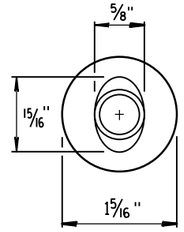
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

NOTE: 1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 1/16".
2. IF THE BOLT EXTENDS MORE THAN 1/4" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

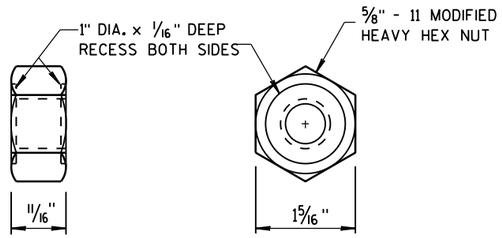


POST BOLT TABLE

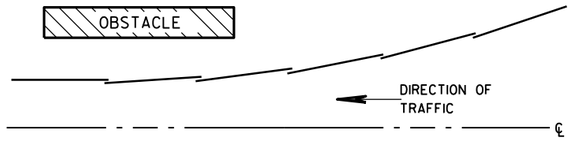
L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



ALTERNATE BOLT HEAD

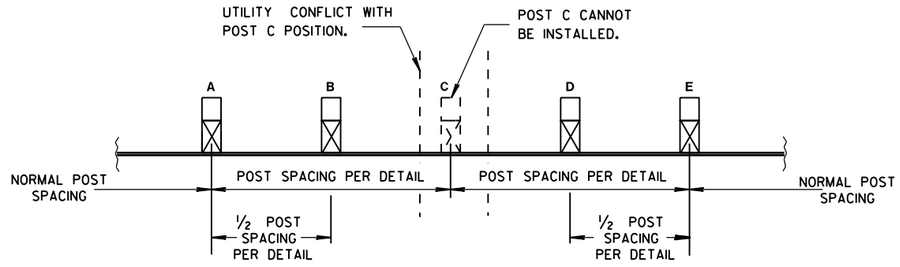


POST BOLT AND RECESS NUT

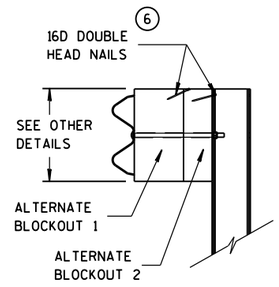


PLAN VIEW

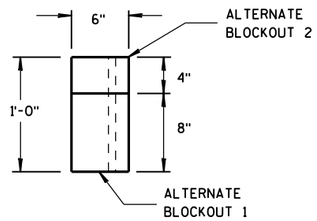
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



SIDE VIEW



TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
FHWA

6
S.D.D. 14 B 42-3c

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 MANUFACTURES REQUIRE DIFFERENT PERFORATED W-BEAM RAIL END PANELS. SEE MANUFACTURES INFORMATION.

(D) THE TOP OF THE STEEL TUBE ON POST 1 AND POST 2 SHALL NOT BE MORE THAN 3" ABOVE THE FINISH GROUND ELEVATION.

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

(G) ½" DIAMETER X 3" LONG LAG BOLT AND WASHER.

(H) HARDWARE VARIES BETWEEN DIFFERENT MANUFACTURES. SEE MANUFACTURE'S DRAWING FOR INFORMATION.

(I) DIMENSIONS MAY VARY. SEE MANUFACTURE'S INFORMATION.

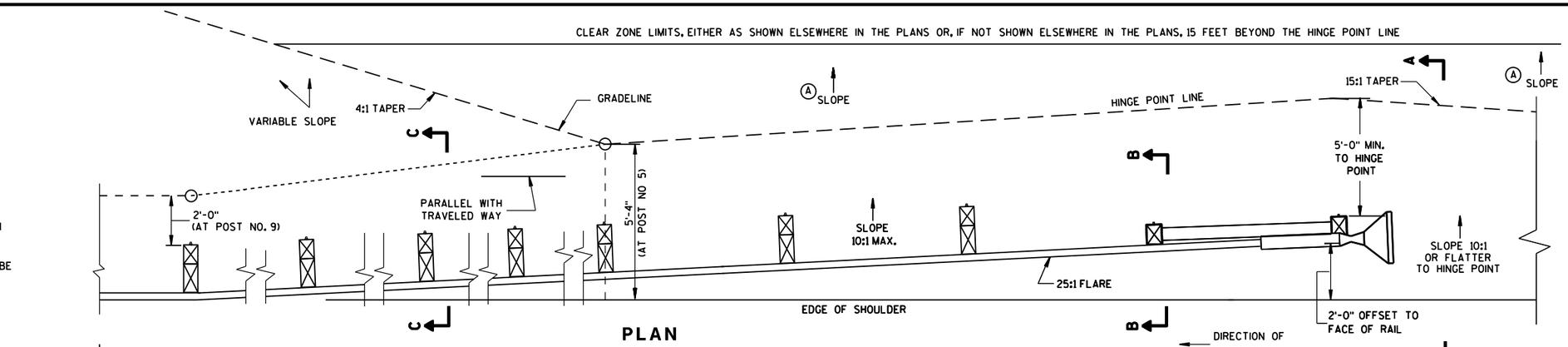
SEE SDD 14B42 FOR MORE INFORMATION.

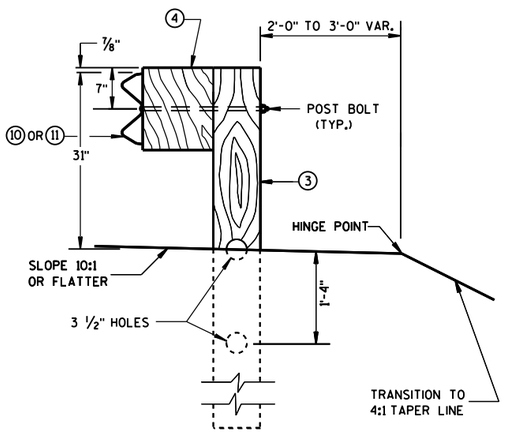
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

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

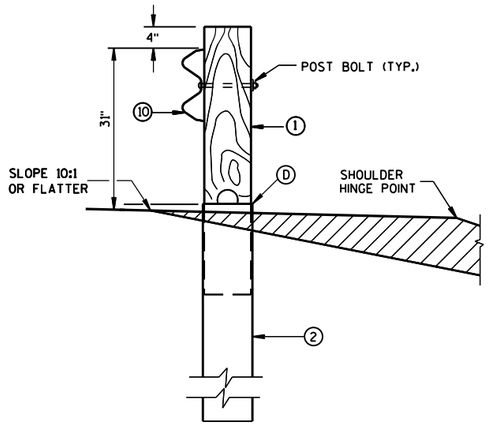
W-BEAM RAIL SPLICES ARE LOCATED AT POST NUMBER 3, AND BETWEEN POST 5 AND 6, BETWEEN POSTS 7 AND 8, AND MIDDLE OF THE SPAN AFTER POST 9.

THE CENTER OF THE UPPER 3½" 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.

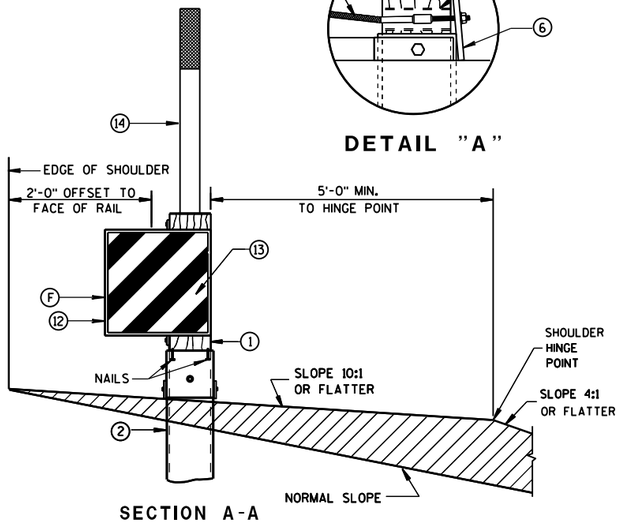




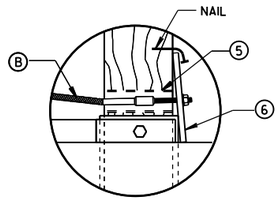
SECTION C-C
TYPICAL AT POST NOS. 3-9



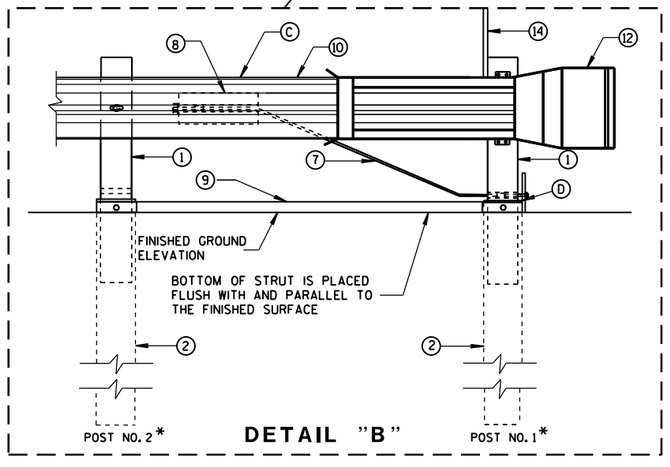
SECTION B-B
TYPICAL AT POST NO. 2*



SECTION A-A
TYPICAL AT POST NO. 1*



DETAIL "A"

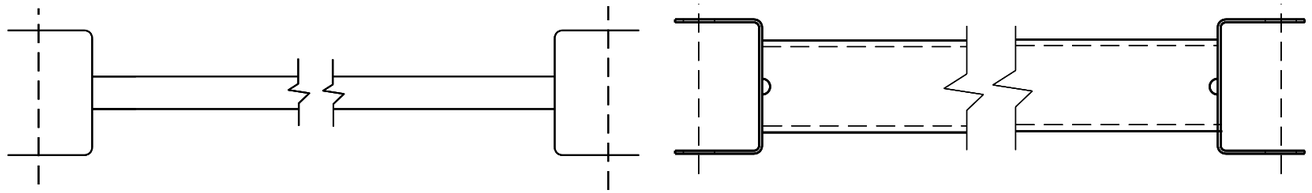


DETAIL "B"

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

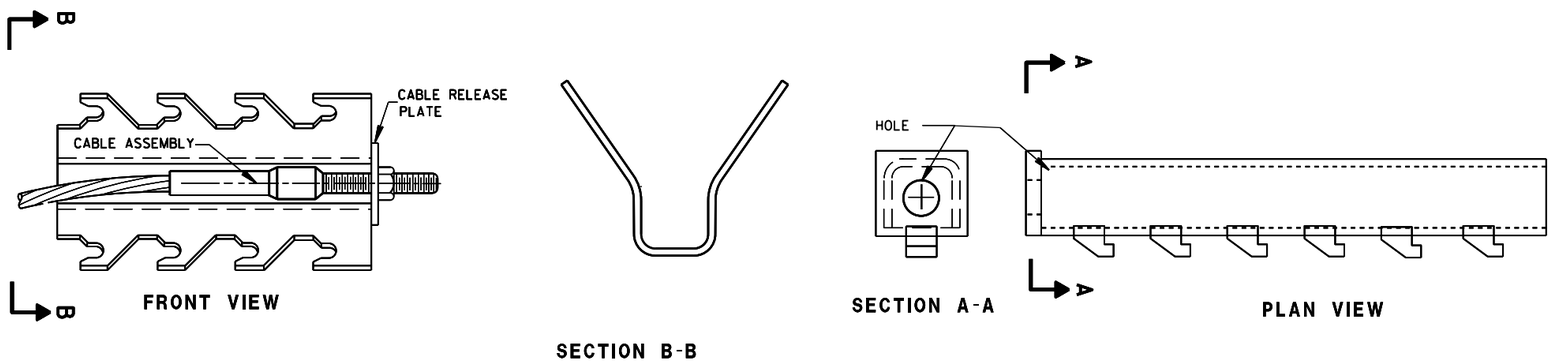
S.D.D. 14 B 44-2a



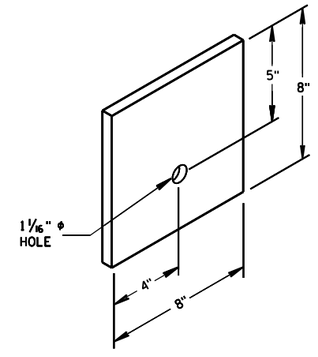
GENERIC GROUND STRUT (9) (H)

BILL OF MATERIALS

PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
(1)	WOOD BREAKAWAY POST
(2)	6" X 8" X 0.188", 6'-0" LONG FOUNDATION TUBE AT POSTS 1 AND 2
(3)	WOOD CRT
(4)	WOOD BLOCKOUT
(5)	PIPE SLEEVE
(6)	BEARING PLATE
(7)	BCT CABLE ASSEMBLY
(8)	ANCHOR CABLE BOX
(9)	GROUND STRUT
(10)	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
(11)	STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
(12)	END SECTION EAT
(13)	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE F PER SECTION 637 OF THE STANDARD SPECIFICATIONS
(14)	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)



GENERIC ANCHOR CABLE BOX (8) (H)



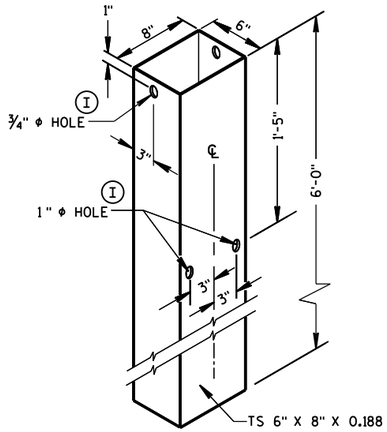
BEARING PLATE (6)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

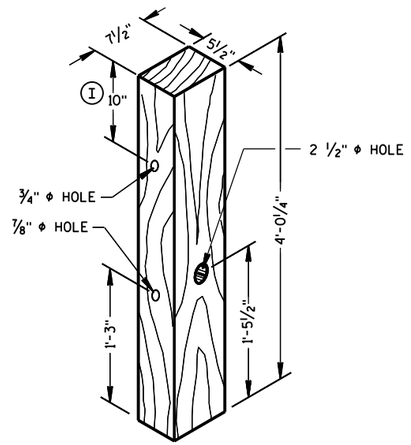
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 44-2b

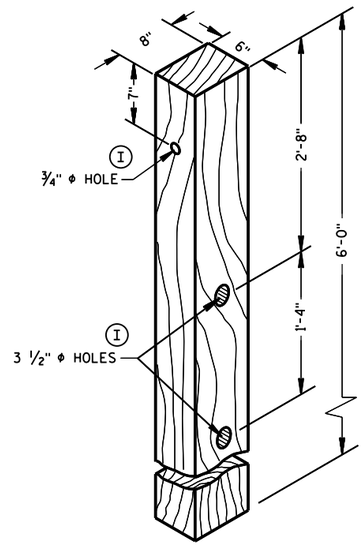


FOUNDATION TUBE (2)



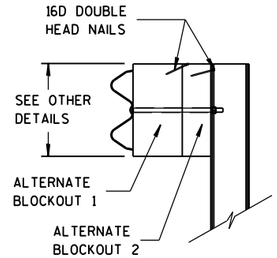
POSTS NUMBER 1 AND 2

WOOD BREAKAWAY POST (1)

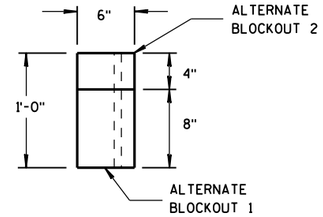


POSTS NUMBER 3-9

WOOD CRT POST (3)

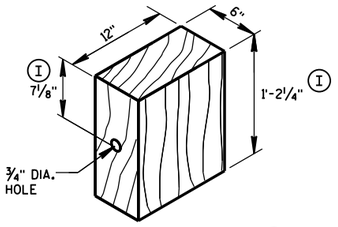


SIDE VIEW



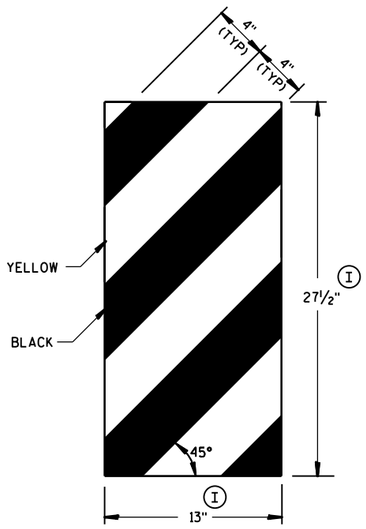
TOP VIEW

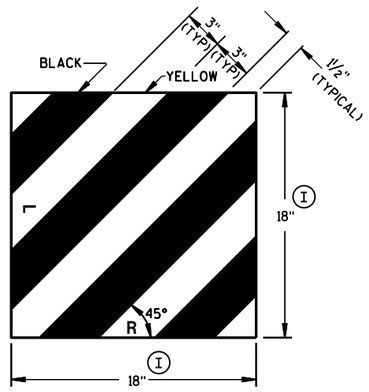
ALTERNATE WOOD BLOCKOUT DETAIL



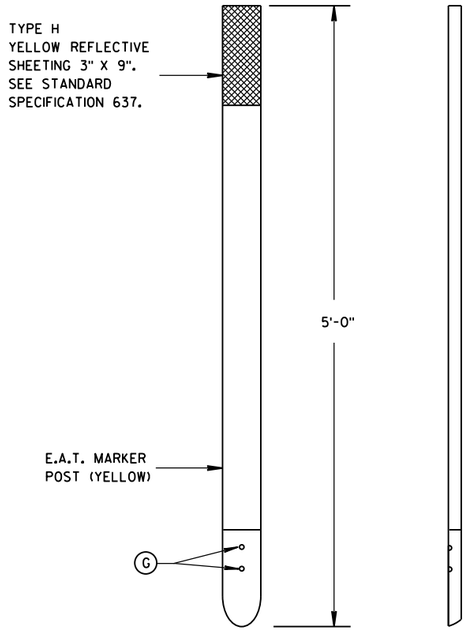
WOOD BLOCKOUT (4)

REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2





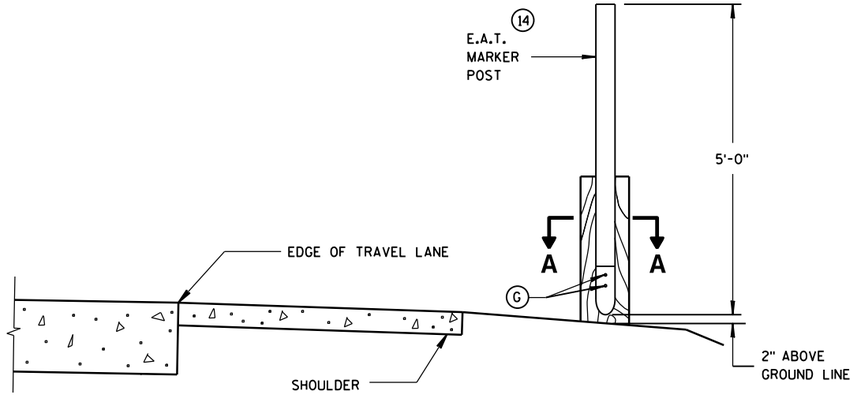
GENERIC REFLECTIVE SHEETING (13) (H)



FRONT VIEW

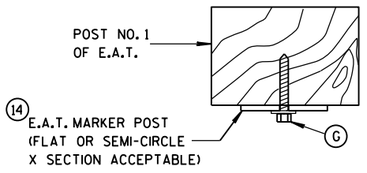
SIDE VIEW

E.A.T. MARKER POST (14)



TYPICAL INSTALLATION OF E.A.T. MARKER POST BACKSIDE OF POST NO. 1

(E.A.T. AND RAIL REMOVED FOR CLARITY)



SECTION A-A

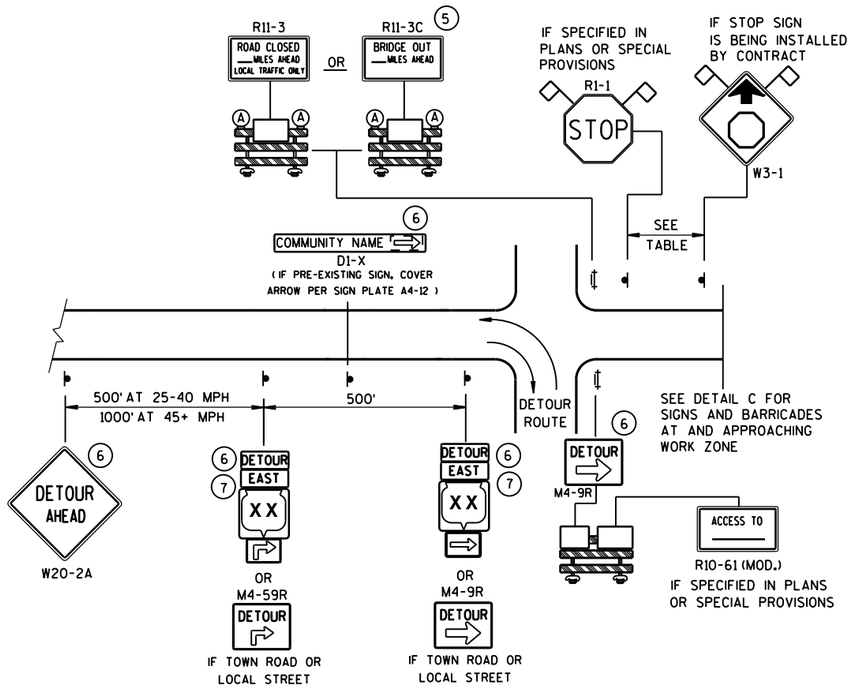
MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

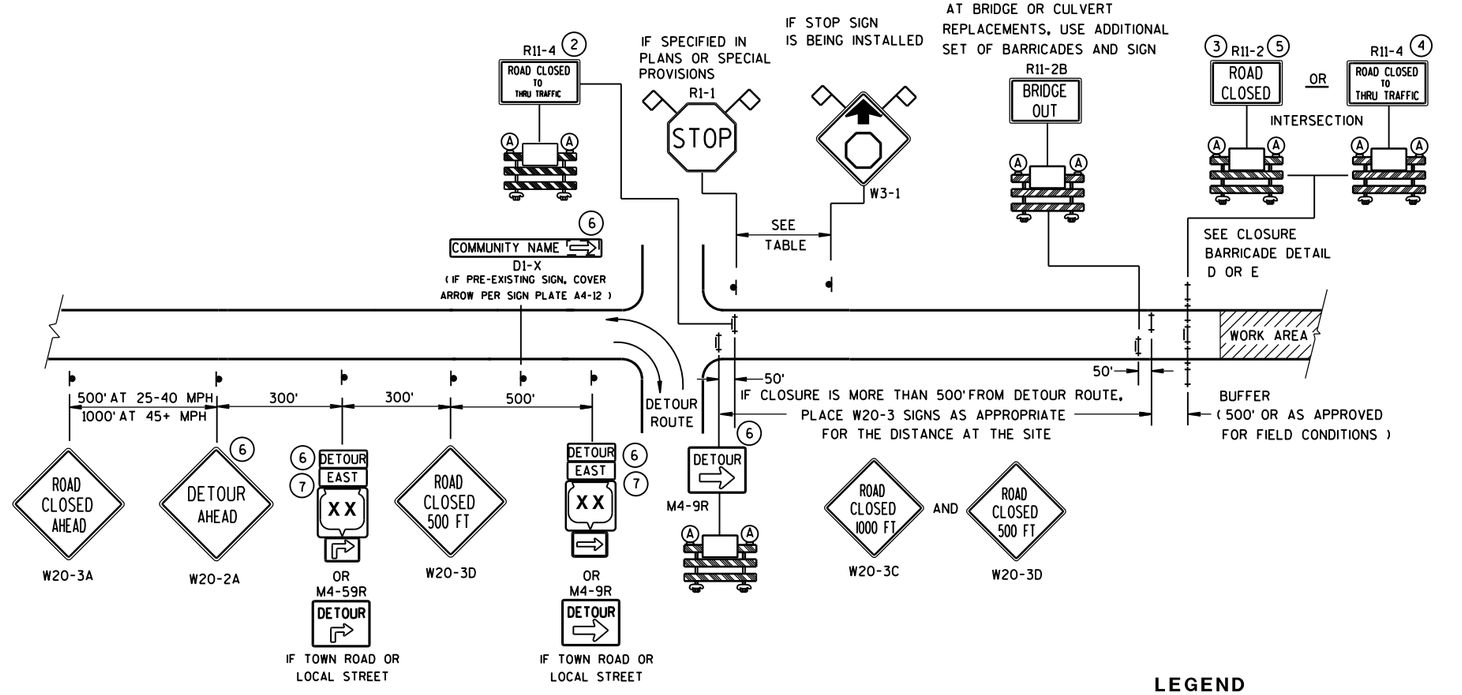
6

S.D.D. 14 B 44-2c



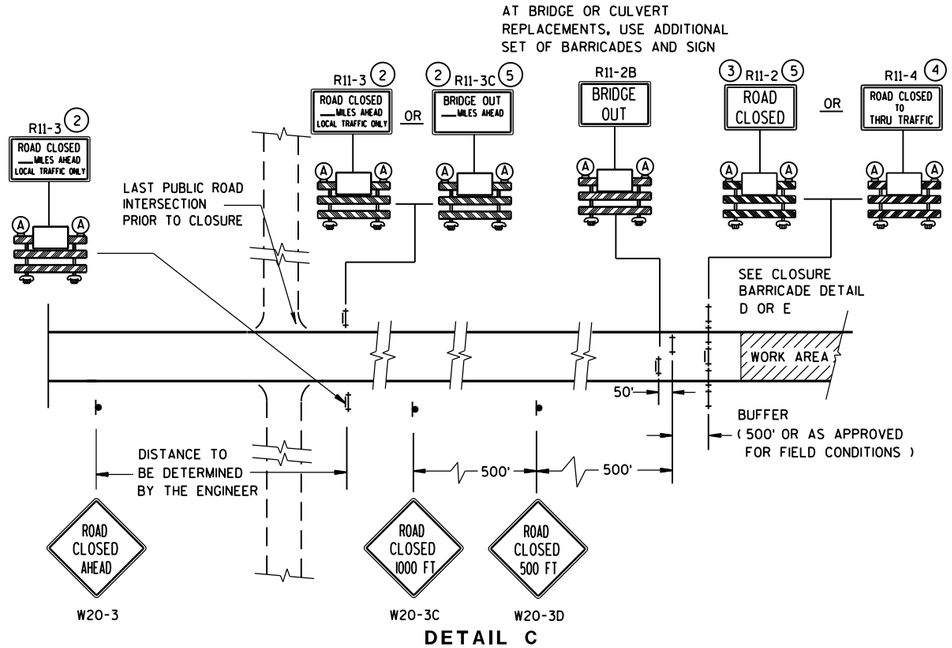
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN 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
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- DETOUR / EAST — M4-8 / M3-X
- XX — M1-4; COUNTY XX — M1-5A; XX — M1-6
- M05-1 OR M06-1
- FLAGS, 16" X 16" MIN., (ORANGE)

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

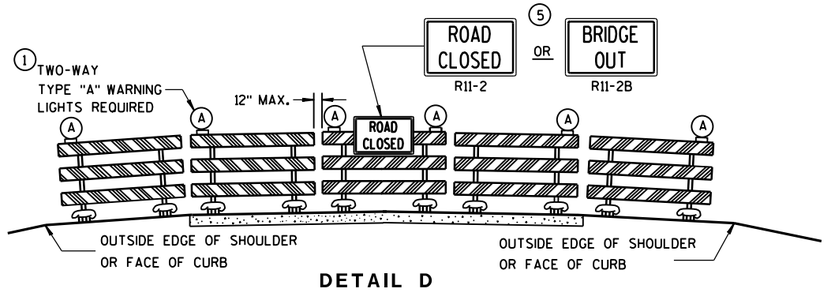
Sept. 2015 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA

6

S.D.D. 15 C 2-6a

6

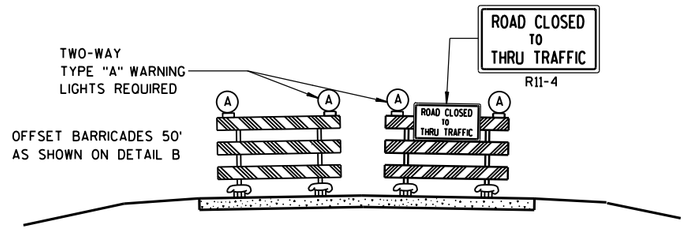
S.D.D. 15 C 2-6a



DETAIL D

ROAD CLOSURE BARRICADE DETAIL

APPROACH VIEW



DETAIL E

LANE CLOSURE BARRICADE DETAIL

APPROACH VIEW

SEE SDD 15C2-SHEET "**a**" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
- R11-2 SHALL BE 48" X 30".
- R11-3, R11-4 AND R10-61 SHALL BE 60" X 30".
- M4-9 SHALL BE 30" X 24".
- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1-1 SHALL BE 36" X 36".

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

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

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

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

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

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

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

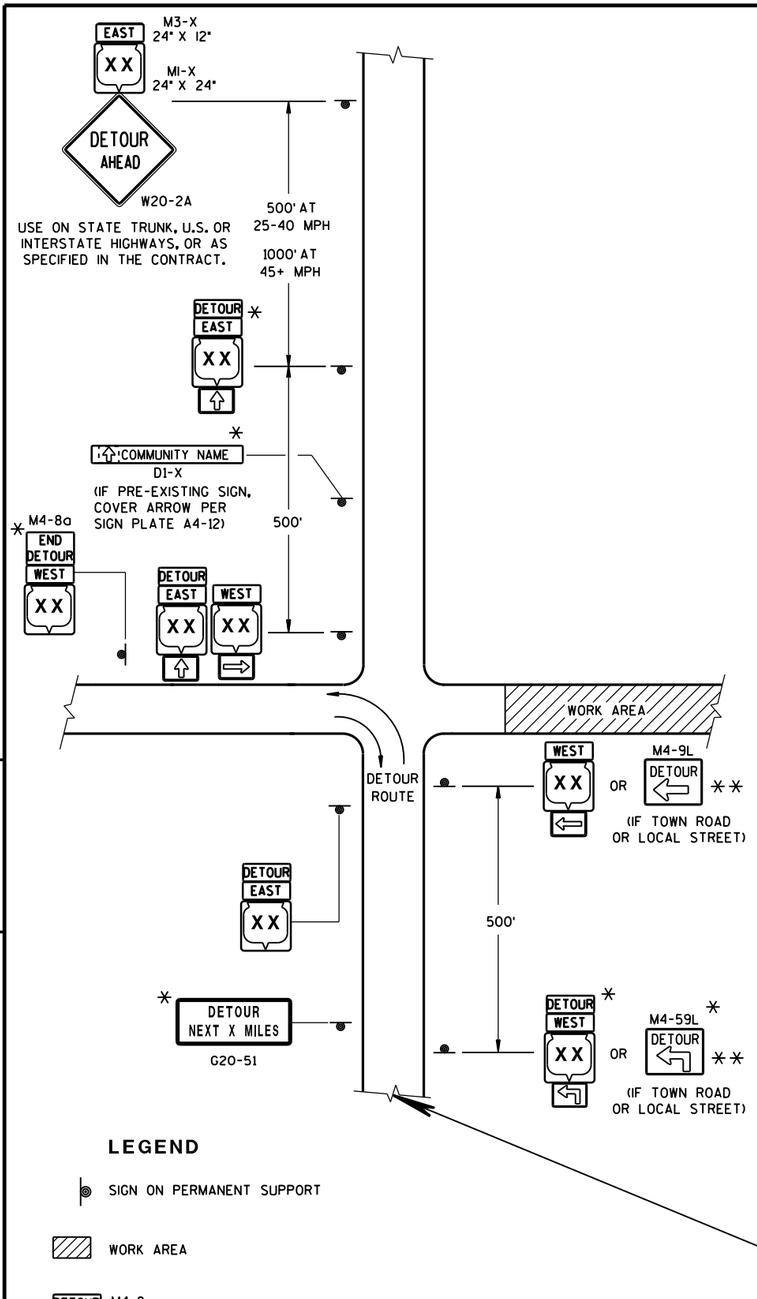
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Sept. 2015 — DATE

/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO SAFETY ENGI — FHWA

6

S.D.D. 15 C 2-6b



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

GENERAL NOTES

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

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

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

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

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

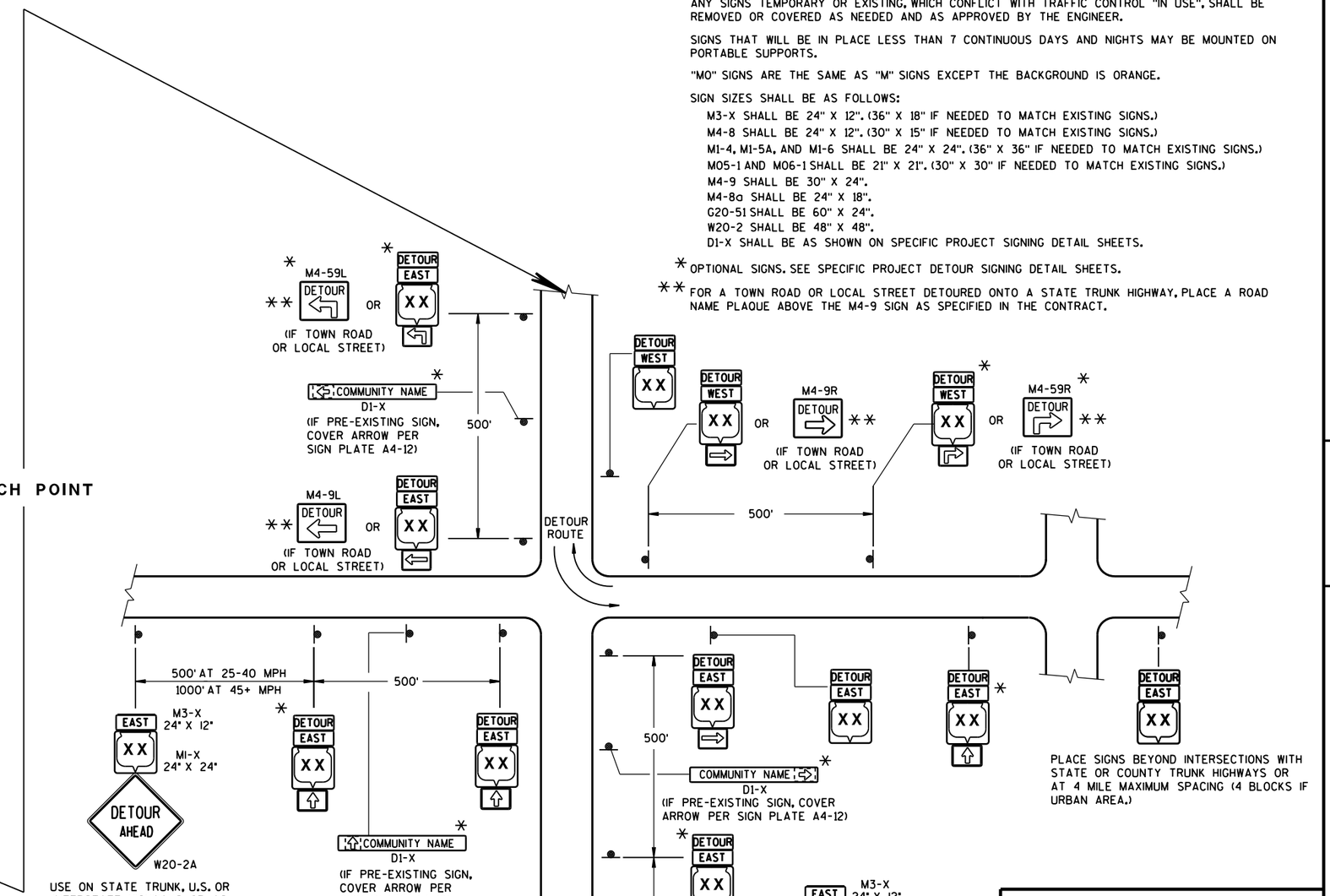
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- MO5-1 AND MO6-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-9 SHALL BE 30" X 24".
- M4-8a SHALL BE 24" X 18".
- G20-51 SHALL BE 60" X 24".
- W20-2 SHALL BE 48" X 48".
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

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

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



LEGEND

- SIGN ON PERMANENT SUPPORT
- WORK AREA
- DETOUR EAST — M4-8 / M3-X
- M1-4 OR M1-5A (COUNTY) OR M1-6
- MO5-1 OR MO6-1 OR MO6-1

SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS AND DETAIL A OR B ON SDD 15C2-SHEET "a"

DETAIL F

DETOUR SIGNING

DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

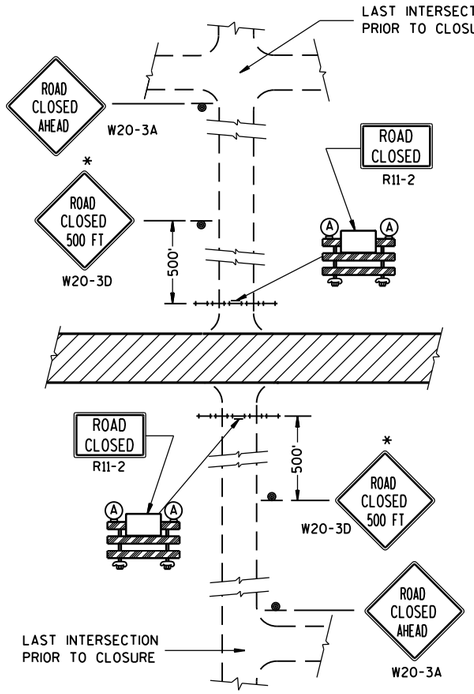
Sept. 2015 — DATE

/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO... SAFETY ENGI... FIC

FHWA

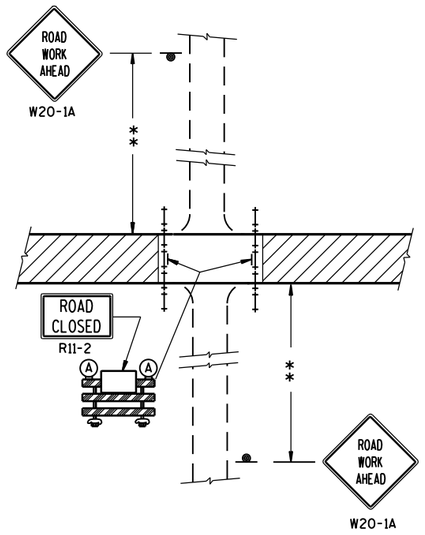
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S.D.D. 15 C 2-6c



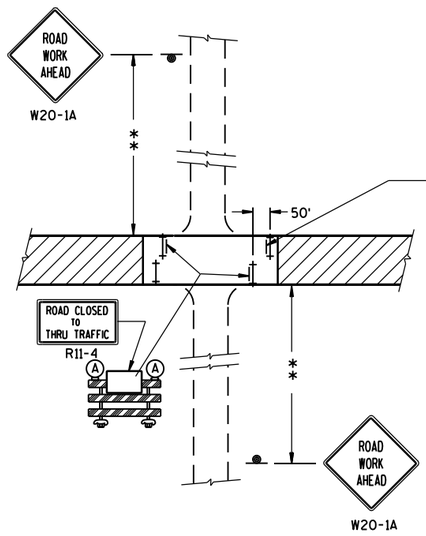
DETAIL 1

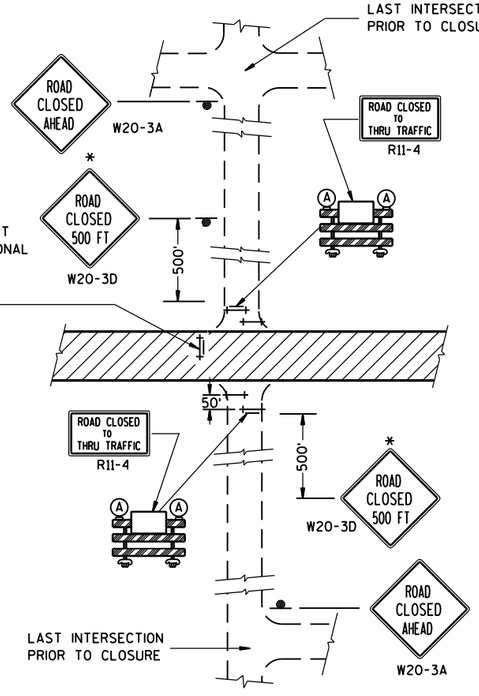
(NO ACCESS TO PROJECT)



DETAIL 2

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





DETAIL 3

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

DETAIL 4

(CONTRACTOR, LOCAL BUSINESS AND RESIDENT ACCESS TO PROJECT)

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

LEGEND

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

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2015 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO[illegible]FIC SAFETY ENGI[illegible]
FHWA

6

S.D.D. 15 C 3-3

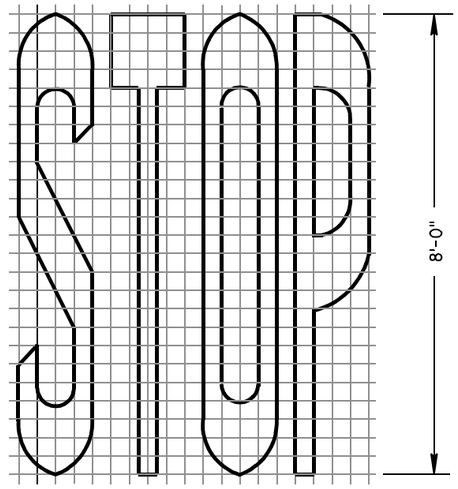
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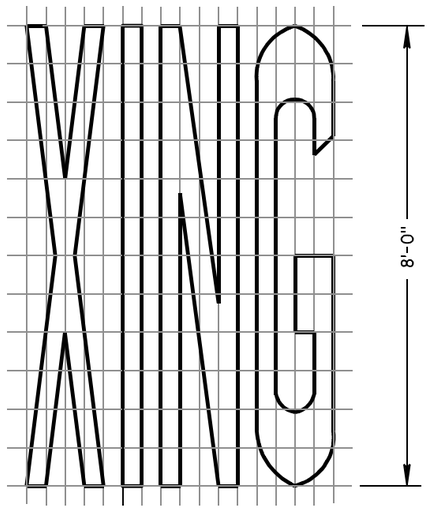
S.D.D. 15 C 3-3

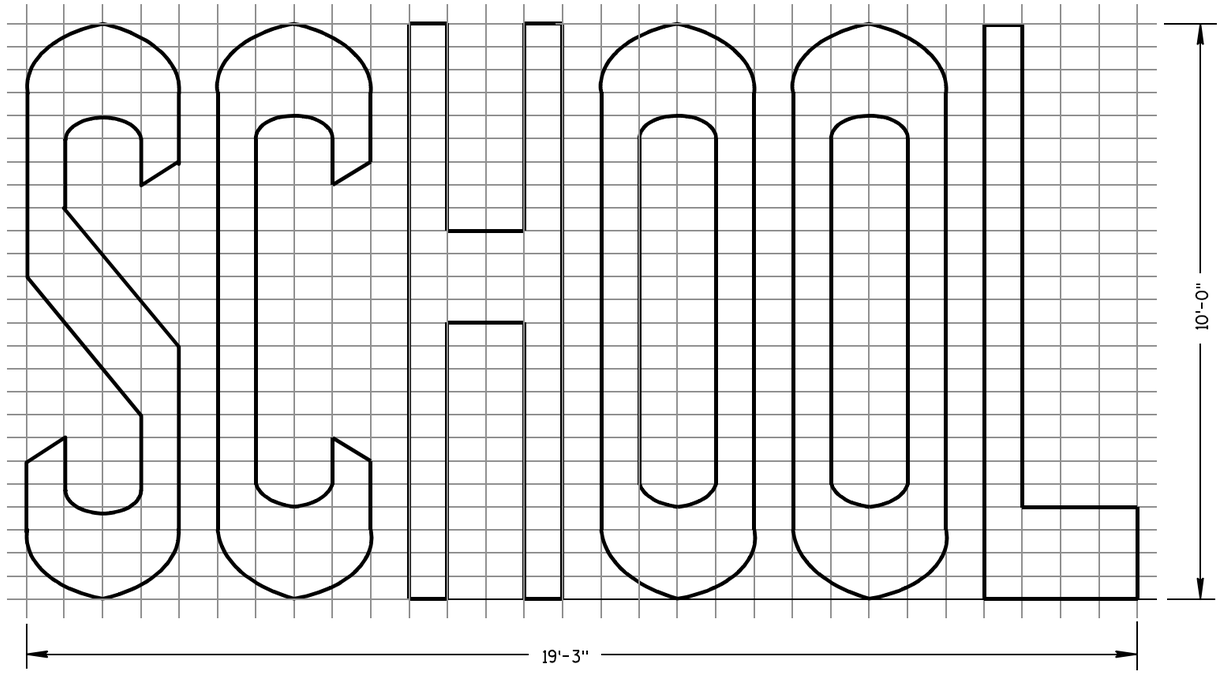
GENERAL NOTES

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

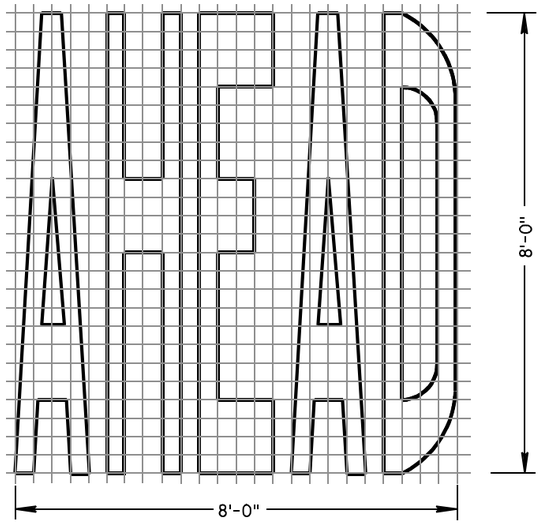
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES OF THAT BOOK ARE ACCEPTABLE.

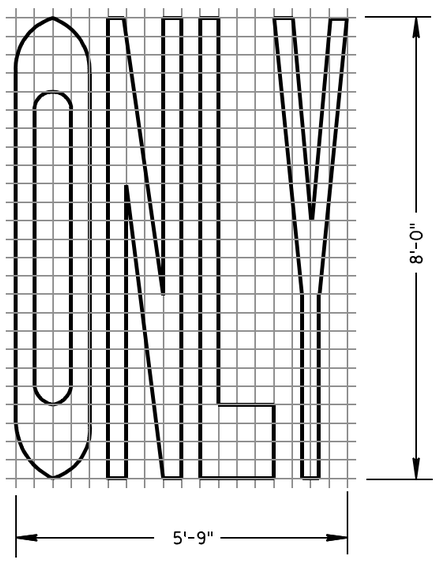


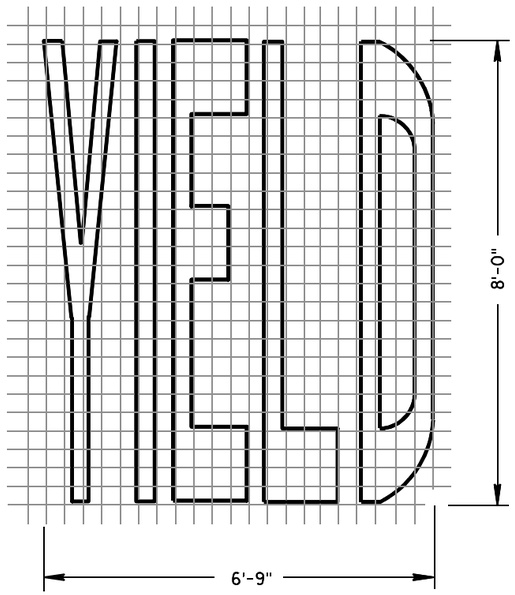


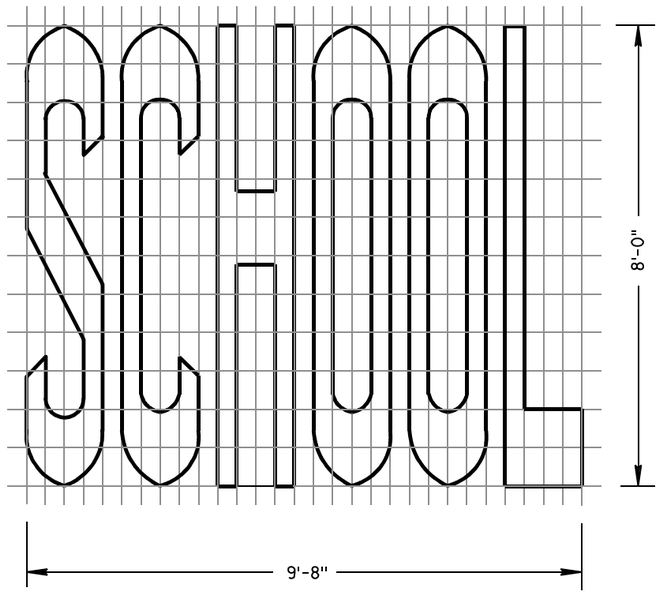


TWO-LANE









SINGLE-LANE

PAVEMENT MARKING WORDS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7-1-11 DATE — /S/ Thomas N. Nothohm STATE TRAFFIC ENGINEER — IGN

FHWA

6

S.D.D. 15 C 7-12b

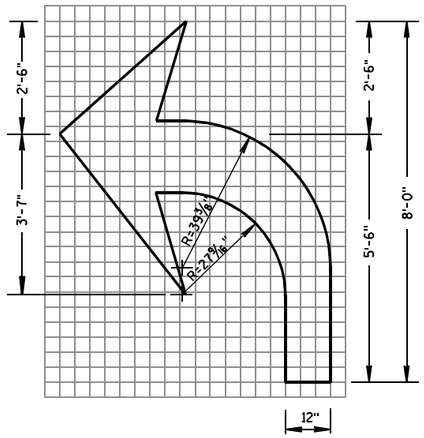
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S.D.D. 15 C 7-12b

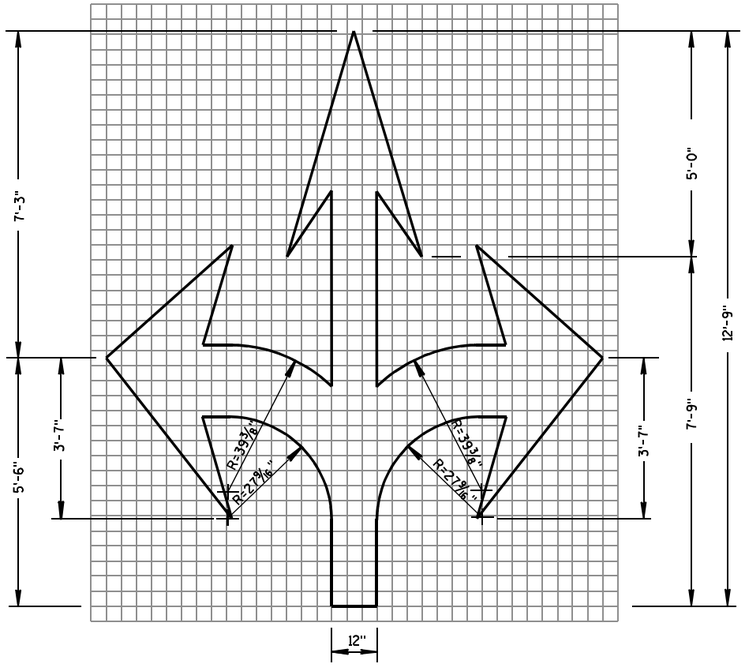
GENERAL NOTES

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

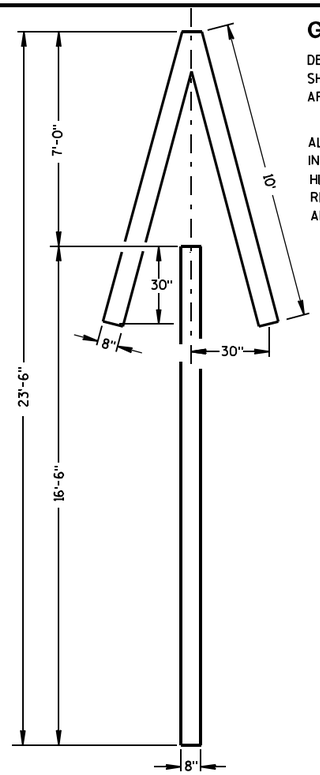
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES OF THAT BOOK ARE ACCEPTABLE.



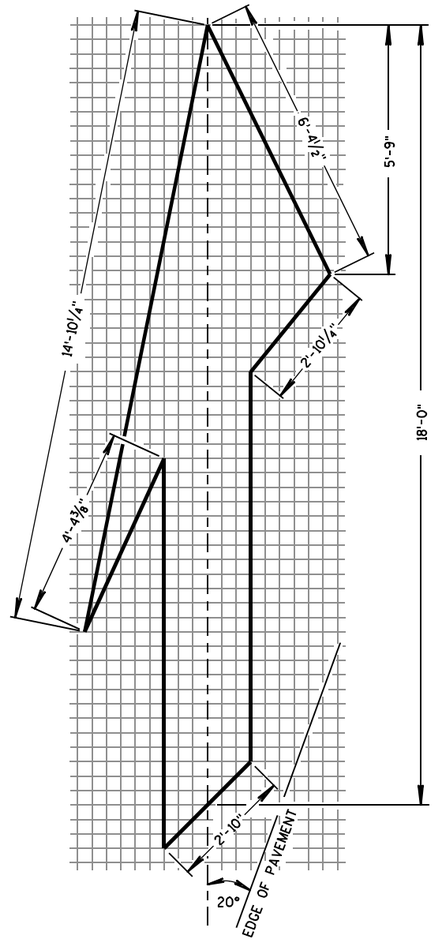
TYPE 2



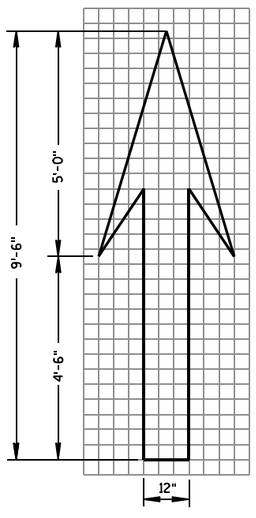
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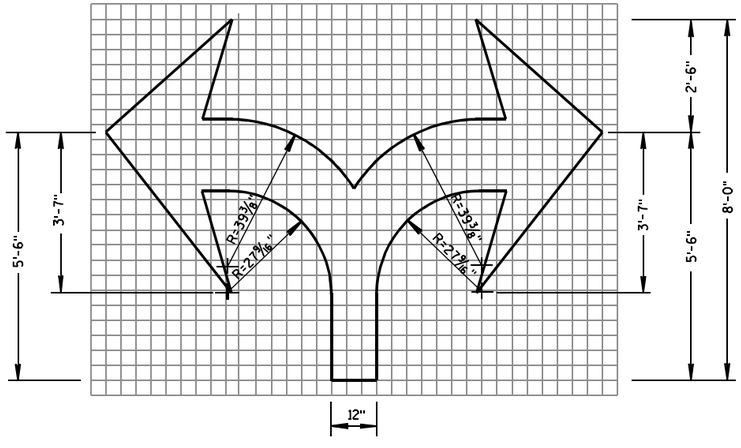
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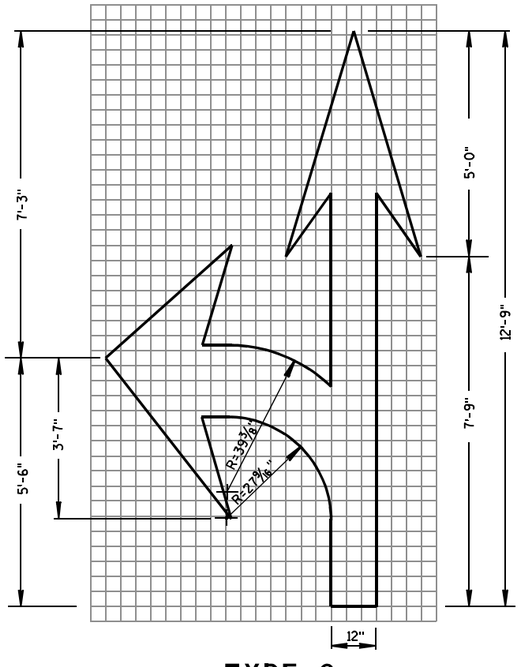
TYPE 5 LANE DROP ARROW



TYPE 1



TYPE 7



TYPE 3

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

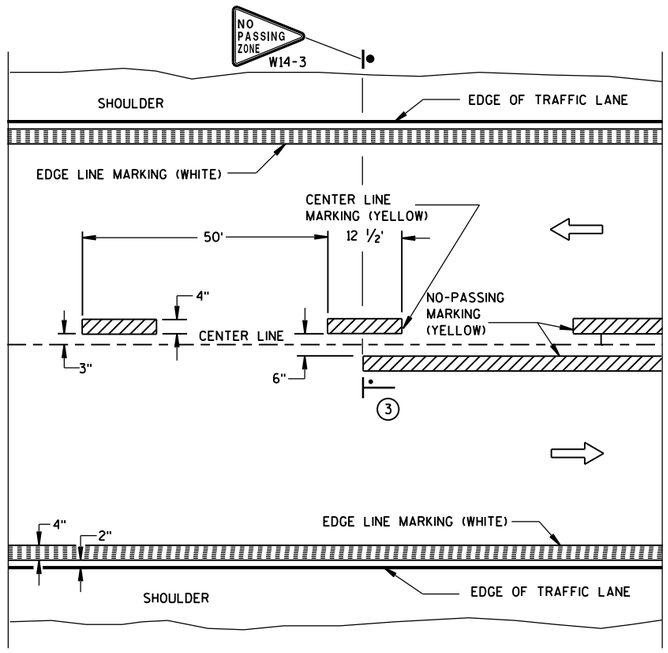
7/1/11 — DATE

/S/ Thomas N. Nothdurft — STATE TRAFFIC ENGINEER

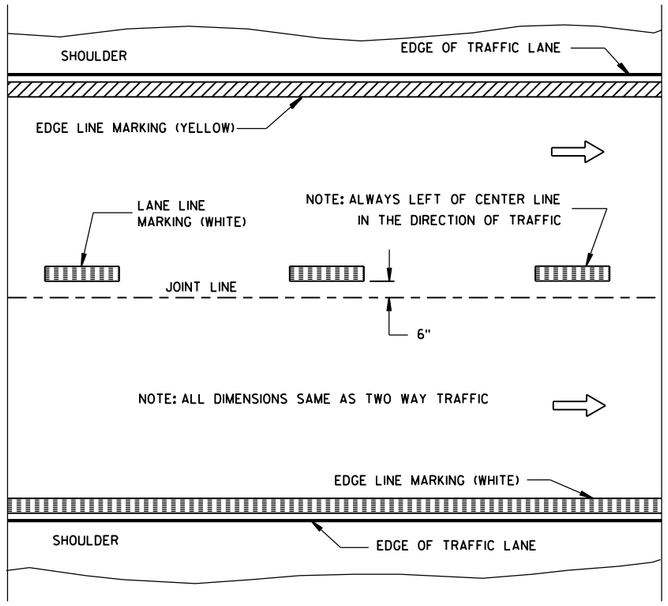
FHWA

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S.D.D. 15 C 7-12c

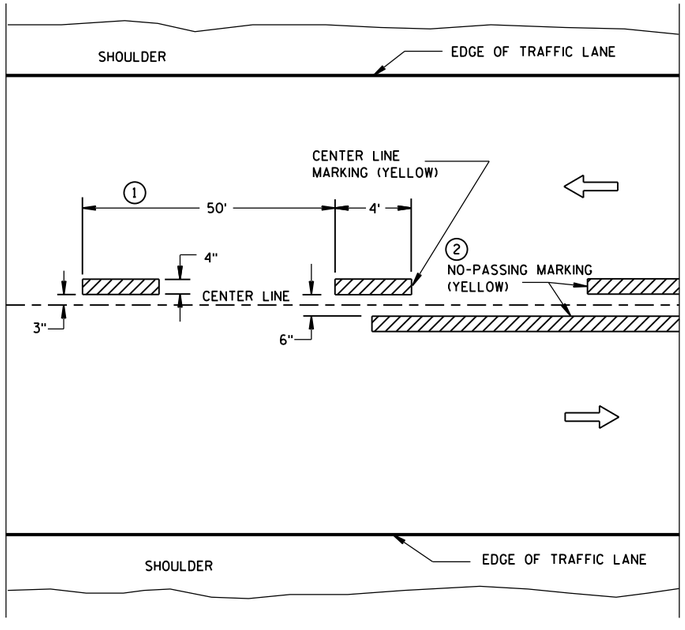


TWO WAY TRAFFIC

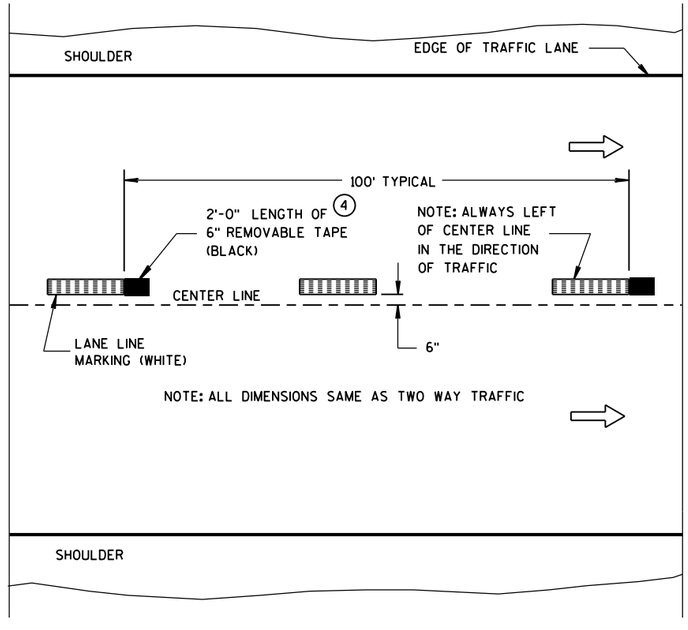


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

(SHOWS CYCLE FOR TEMPORARY CENTER LINE OR TEMPORARY LANE LINE MARKING)

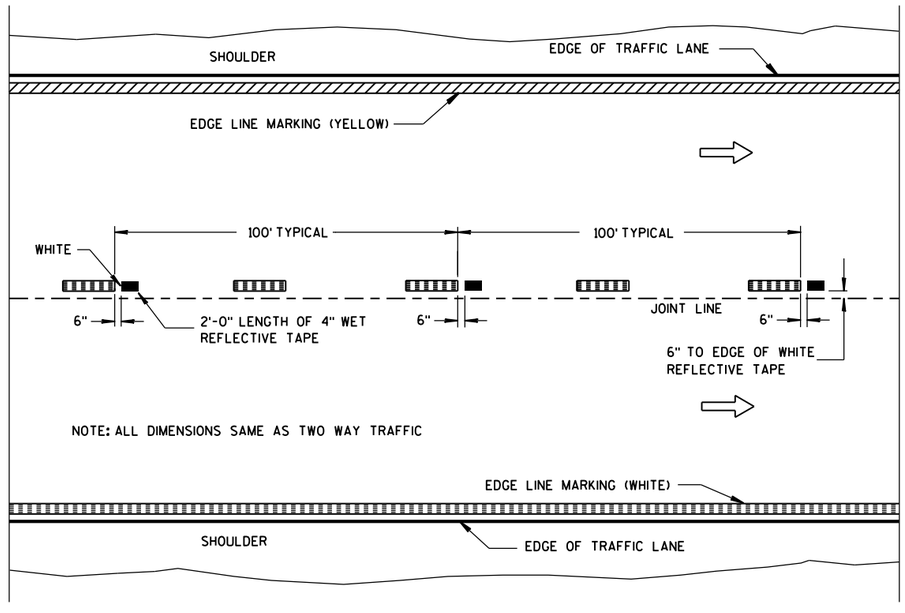
GENERAL NOTES

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

1. HALF CYCLE LENGTHS (25'±) WITH 2' MINIMUM STRIPE LENGTHS SHALL BE PROVIDED ON ROADWAYS (INCLUDING TEMPORARY TRAVELED WAYS) WITH REVERSE CURVATURE, CURVATURE OF OVER 5 DEGREES OR WHEN DIRECTED BY THE ENGINEER TO MARK UNUSUAL ALIGNMENT OF THE TRAVELED WAY.
2. NO PASSING ZONE TEMPORARY PAVEMENT MARKING IS REQUIRED TO BE PLACED, WHERE APPROPRIATE, ALONG WITH CENTERLINE TEMPORARY PAVEMENT MARKING WHEN A SAME DAY PERMANENT PAVEMENT MARKING ITEM IS INCLUDED IN THE CONTRACT.
3. NO PASSING ZONE MARKINGS ARE PLACED ACCORDING TO "T" MARKINGS. IF EXISTING NO PASSING ZONE W14-3 SIGNS ARE BEYOND 50 FEET IN EITHER DIRECTION, THE SIGNS SHALL BE MOVED TO THE "T" MARKINGS.
4. CONCRETE ONLY.

NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL



WET REFLECTIVE TAPE SUPPLEMENT TO
SPRAYED OR NON WET REFLECTIVE TAPE LANE LINE

LEGEND

"T" MARKING

POST MOUNTED SIGN

PAVEMENT MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5-13-2013 — DATE

/S/ Travis Feltes — STATE TRAFFIC E

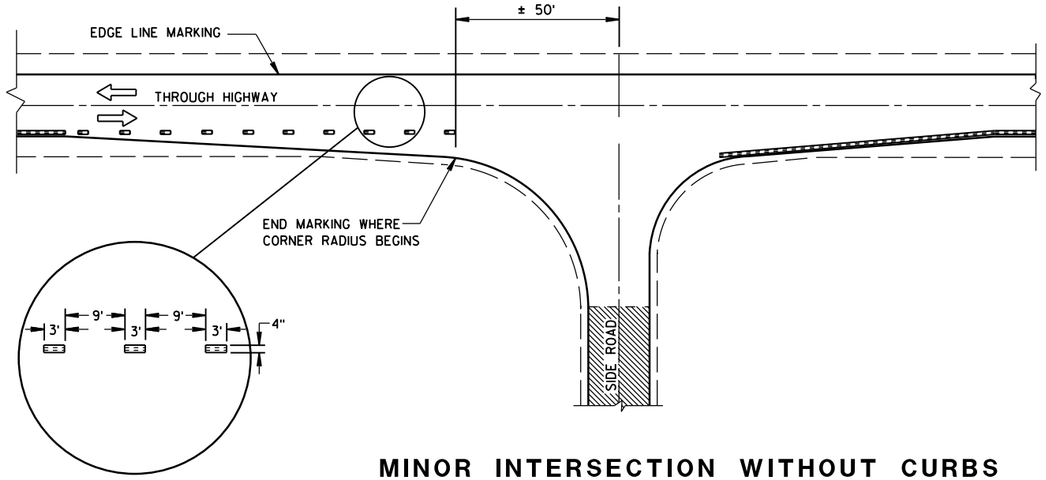
FHWA

6

S.D.D. 15 C 8-16a

6

S.D.D. 15 C 8-16a



MINOR INTERSECTION WITHOUT CURBS

GENERAL NOTES

EDGE LINES SHALL BE OMITTED THROUGH INTERSECTIONS. EDGE LINES SHALL BE CONTINUED 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) ALTERNATIVE MARKING SHALL BE PROVIDED WHEN SPECIFIED IN THE CONTRACT. TYPICAL SITUATIONS WHERE THIS MARKING MAY BE REQUIRED ARE WHERE THE INTERSECTION IS ON A SHARP HORIZONTAL CURVE OR CREST VERTICAL CURVE IN AN UNLIGHTED AREA SUCH THAT THE EDGE LINE MAY BE MISLEADING TO THE MOTORIST OR DISAPPEAR FROM SIGHT.

(4) THE EDGE LINE IN THE TAPER AREAS OF THE BYPASS LANE AND THE BYPASS LANE SHALL BE LOCATED 1-FOOT FROM EDGE OF PAVEMENT TO THE OUTSIDE EDGE OF EDGE LINE.

(5) BARRIER LINE ENDS AT SIDE ROAD PAVEMENT/SURFACE EDGE EXTENSION.

(6) BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.

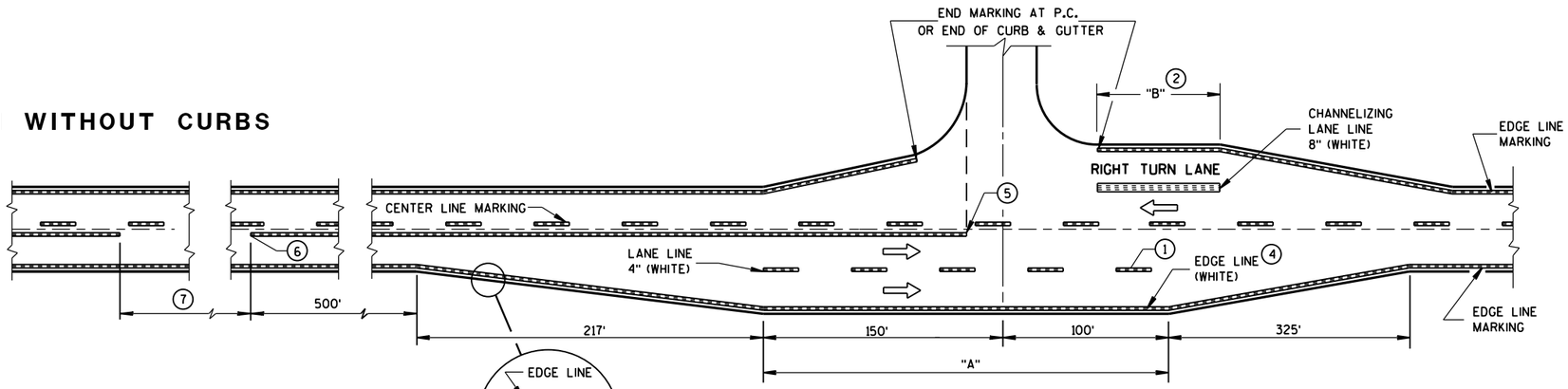
(7) IF THE DISTANCE BETWEEN 2 SUCCESSIVE NO-PASSING ZONES IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES, CONNECT THE 2 ZONES.

(8) 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

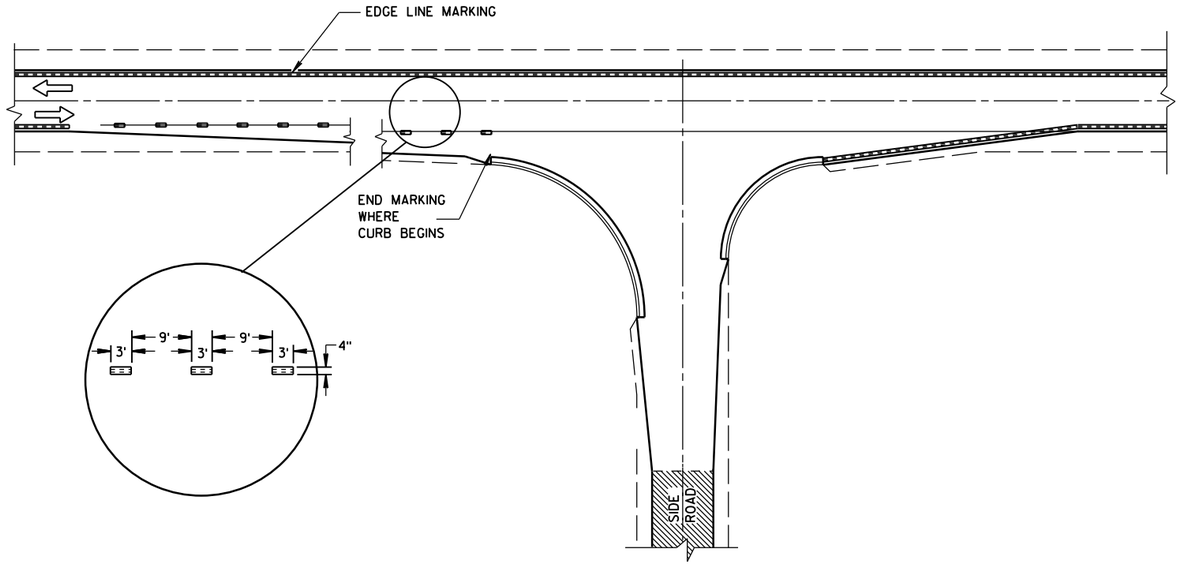
(7)

POSTED SPEED (MPH)	MINIMUM DISTANCE BETWEEN ZONES (FEET)
25 - 30	528
35 - 40	528
45 - 50	686
55	792



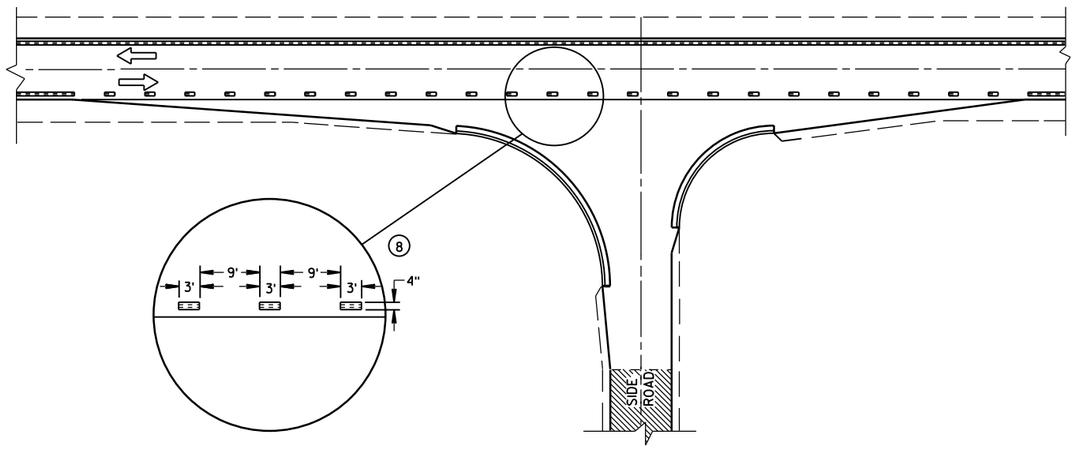
MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANES)



MINOR INTERSECTION WITH CURBS

(TYPICAL MARKING)



MINOR INTERSECTION WITH CURBS

(3) (FOR SPECIAL CONDITIONS AS SPECIFIED)

PAVEMENT MARKING
(INTERSECTIONS)

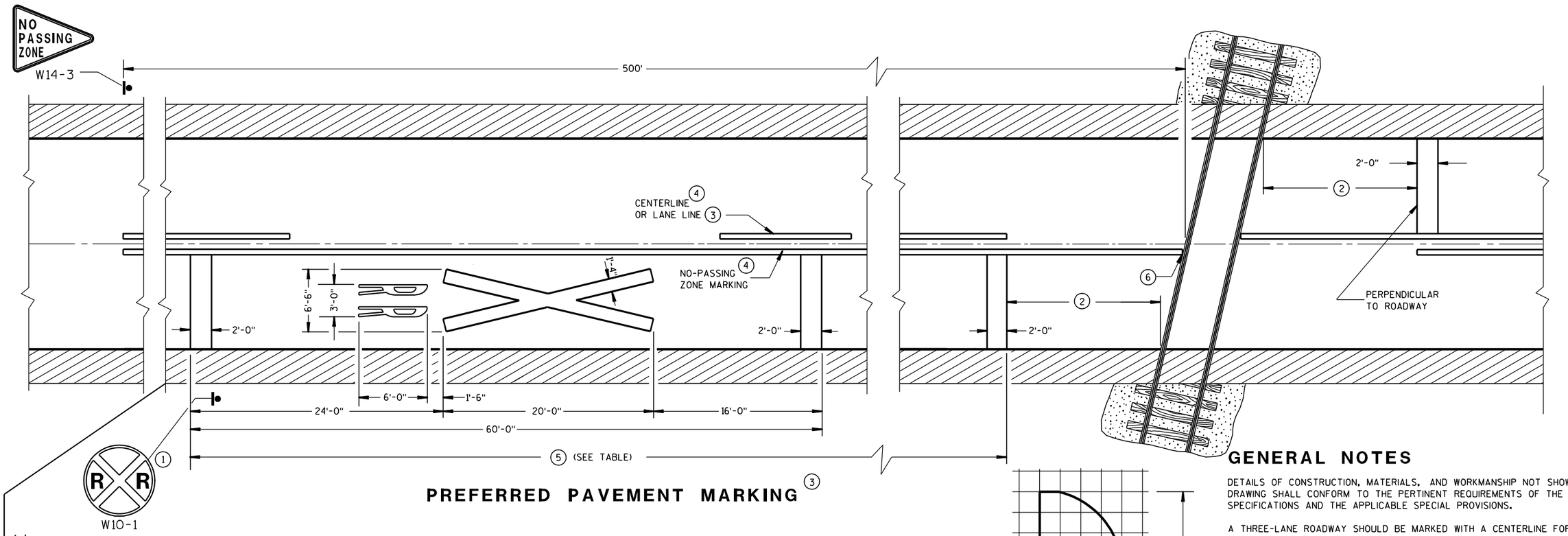
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

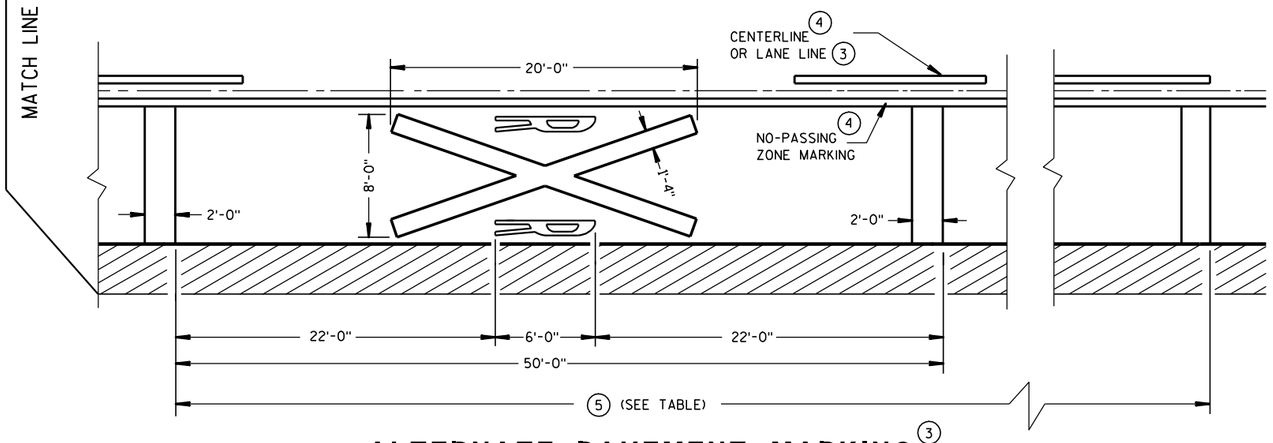
S.D.D. 15 C 8-16b

6

S.D.D. 15 C 8-16b



PREFERRED PAVEMENT MARKING 3

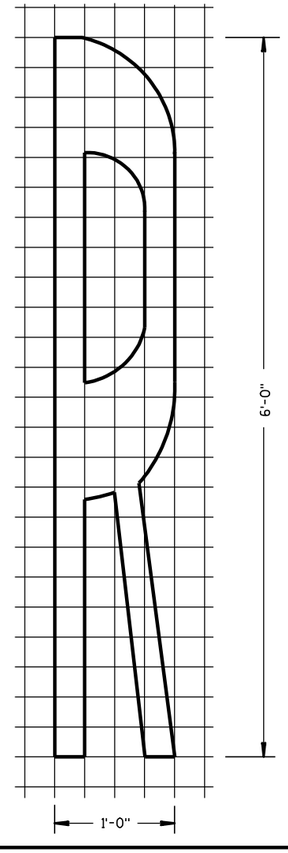


ALTERNATE PAVEMENT MARKING 3

5

Posted Speed (M.P.H.)	Dimension Range (Feet)
25	150*- 250
30	200*- 300
35	250*- 450
40	300*- 500
45	400*- 650
50	550*- 800
55	750*- 1000
60	1000*- 1250
65	1000*- 1250

* THE MINIMUM DISTANCES IN THE TABLE ARE DESIRABLE AND SHOULD BE USED. THE DISTANCES MAY BE INCREASED UP TO THE MAXIMUM TO ALLOW FOR FIELD CONDITIONS SUCH AS THE CLOSE PROXIMITY OF DRIVEWAYS, BRIDGES, SIDEROADS OR OTHER FEATURES THAT WOULD PROHIBIT THE MINIMUM DISTANCES FROM BEING USED.



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.

A THREE-LANE ROADWAY SHOULD BE MARKED WITH A CENTERLINE FOR TWO-LANE APPROACH OPERATION ON THE APPROACH TO A CROSSING.

ON MULTI-LANE ROADS THE TRANSVERSE BANDS SHOULD EXTEND ACROSS ALL APPROACH LANES, AND INDIVIDUAL R X R SYMBOLS SHOULD BE USED IN EACH APPROACH LANE. ALL LETTERS AND SYMBOLS SHALL BE IN CONFORMANCE WITH THE "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS" (ADOPTED BY THE FEDERAL HIGHWAY ADMINISTRATION).

CENTER OR LANE LINES AND NO-PASSING ZONE MARKINGS SHOWN ON THIS DRAWING ARE REQUIRED AND PAID FOR UNDER OTHER ITEMS IN THE CONTRACT.

1. A PORTION OF THE PAVEMENT MARKING SYMBOL SHOULD BE DIRECTLY OPPOSITE THE ADVANCE WARNING SIGN (W10-1).
2. MINIMUM 8' FROM ANY RAILROAD WARNING DEVICES (SIGNALS, GATES, ETC.) OR 25' FROM THE NEAREST RAIL, WHICHEVER DISTANCE IS GREATER.
3. REFLECTIVE WHITE.
4. REFLECTIVE YELLOW 500' MINIMUM. MARKING LIMITS MAY BE EXTENDED AS DIRECTED BY THE ENGINEER TO MEET ADJACENT NO-PASSING ZONE MARKINGS.
5. TABLE BASED UPON 2C-4 WISCONSIN SUPPLEMENT OF MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
6. FOR MULTIPLE TRACK CROSSINGS, THE BARRIER LINE SHALL EXTEND TO THE NEAR RAIL OF THE FURTHEST TRACK IN THE DIRECTION OF HIGHWAY TRAVEL.

SIGNING AND PAVEMENT MARKING DETAILS FOR RAILROAD-HIGHWAY GRADE CROSSINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

1-9-2012
DATE

/S/ Thomas N. [illegible]
STATE TRAFFIC ENGINEER

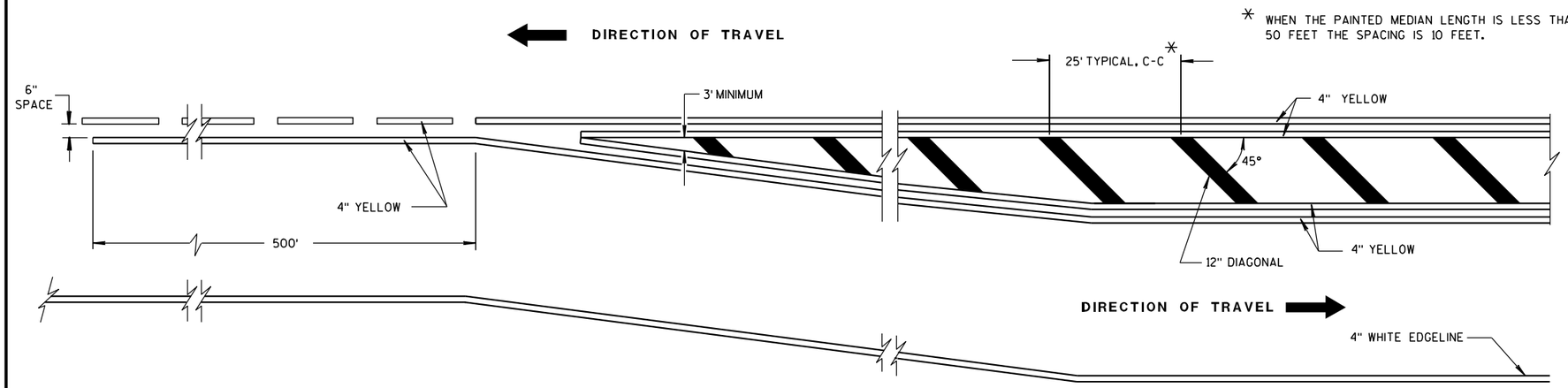
FHWA

6

S.D.D. 15 C 9-9a

6

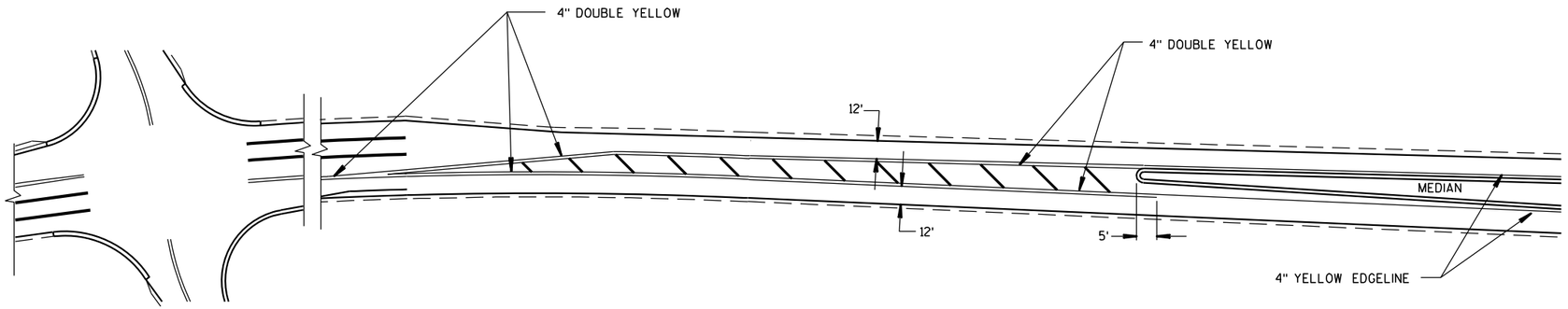
S.D.D. 15 C 9-9a



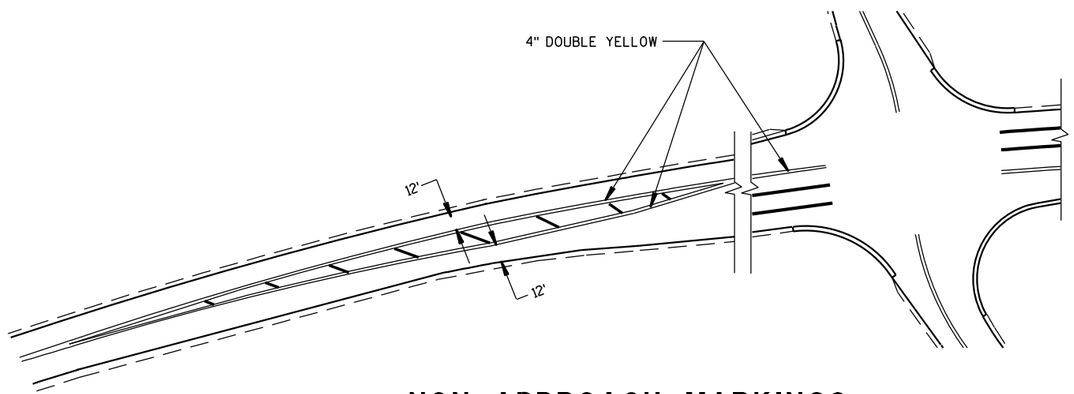
MEDIAN ISLAND DETAIL

GENERAL NOTE

DIAGONALS ARE OPTIONAL WHEN PAINTED ISLAND IS LESS THAN 6 FEET AT WIDEST POINT.



APPROACH MARKINGS FOR OTHER MEDIAN TYPES



NON APPROACH MARKINGS

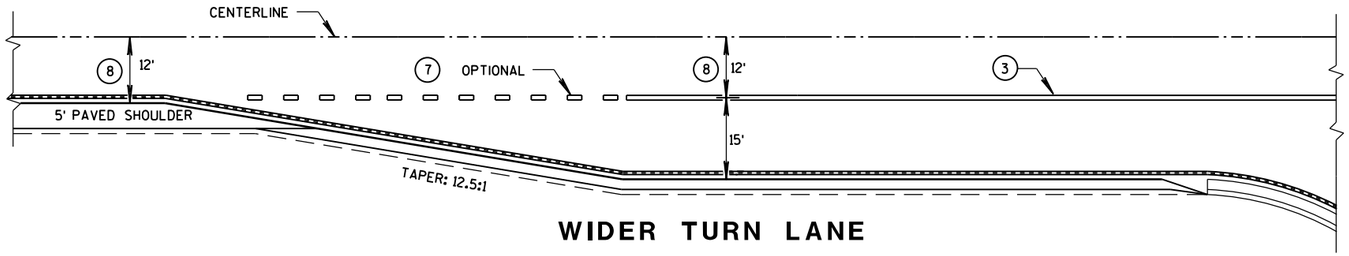
MEDIAN ISLAND MARKING	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 2-5-09 DATE	/S/ Thomas N. Nothohm STATE TRAFFIC ENGINEER
FHWA	

6

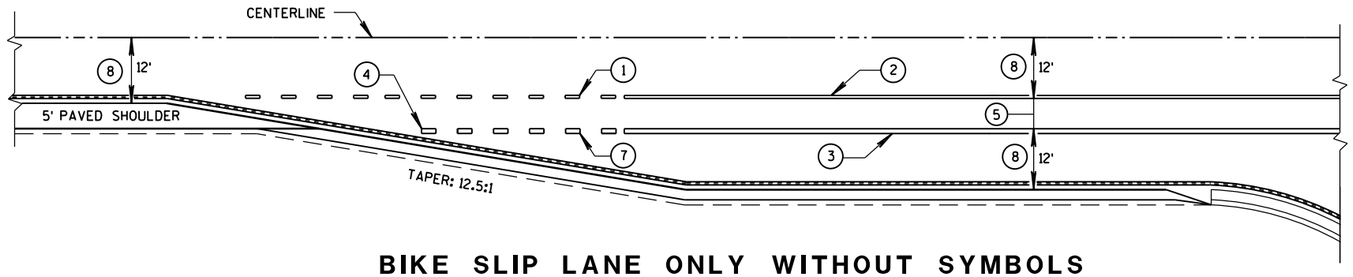
S.D.D. 15 C 18-3

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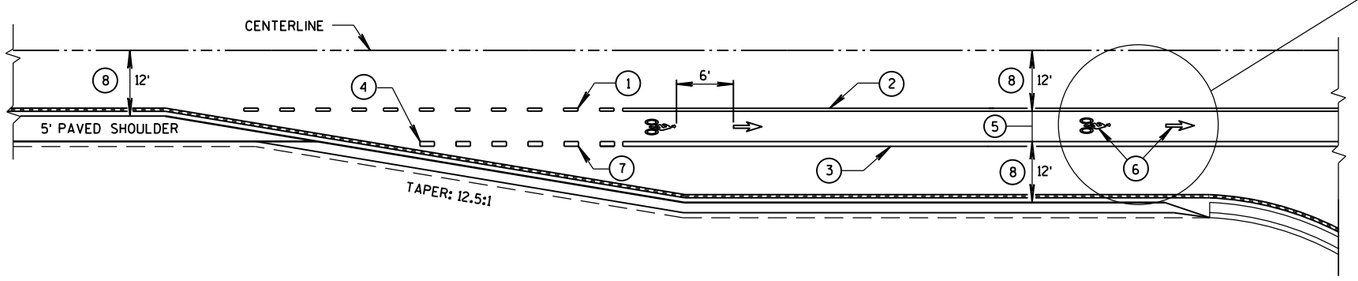
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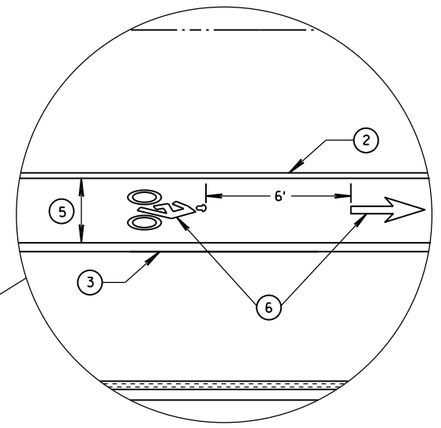
WIDER TURN LANE



BIKE SLIP LANE ONLY WITHOUT SYMBOLS



BIKE LANE WITH SYMBOLS



GENERAL NOTES

1. 3' LINE, 9' GAP - 4-INCH WIDE, WHITE.
2. 4-INCH, WHITE.
3. 8-INCH, WHITE.
4. IF SIGNED AND/OR MARKED AS A BICYCLE FACILITY INCLUDE SECOND LINE OF LINE-SPACE MARKING, OTHERWISE DO NOT.
5. BIKE ACCOMMODATION FOR CONCRETE PAVEMENT IS 5' WIDE.
   BIKE ACCOMMODATION FOR ASPHALT PAVEMENT IS A MINIMUM OF 4', 5' AT ≥ 45 MPH.
6. REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.
7. 3' LINE, 9' GAP - 8-INCH WIDE, WHITE.
8. REFER TO CONTRACT PLANS.

BICYCLE LANE MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

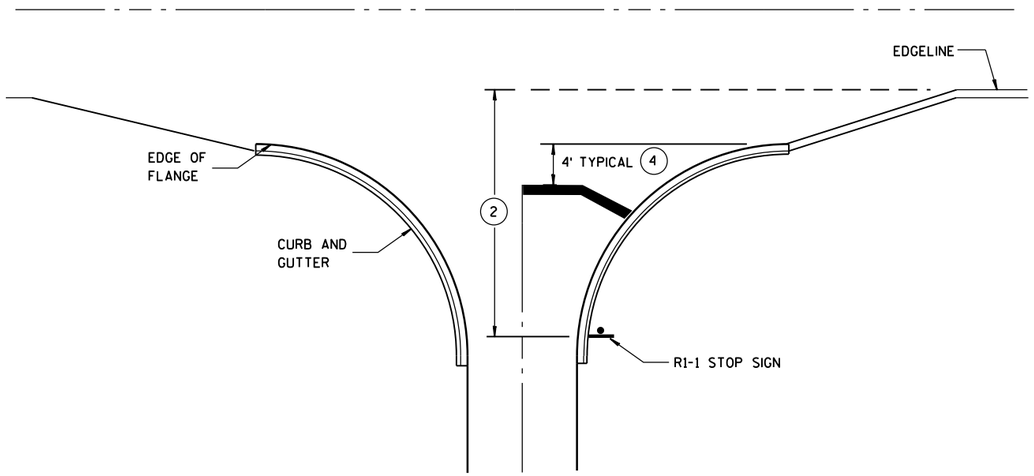
4/30/2013
DATE

/S/ Travis Feltes
STATE TRAFFIC E

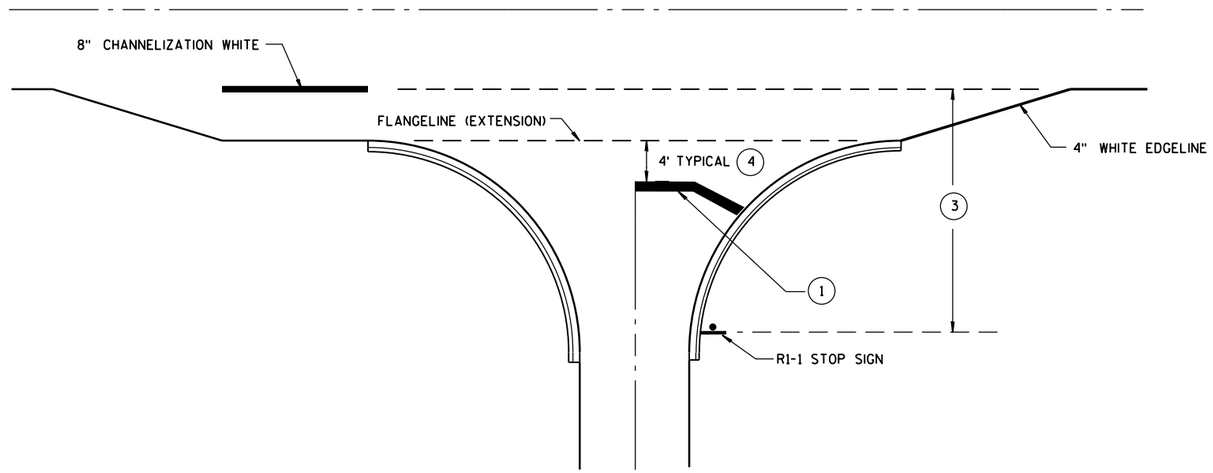
FHWA

6

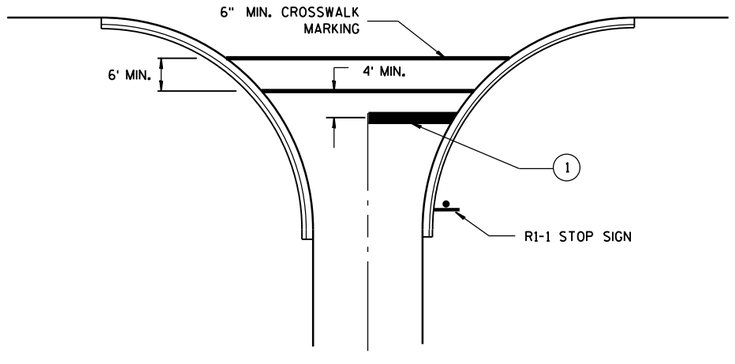
S.D.D. 15 C 29-3a



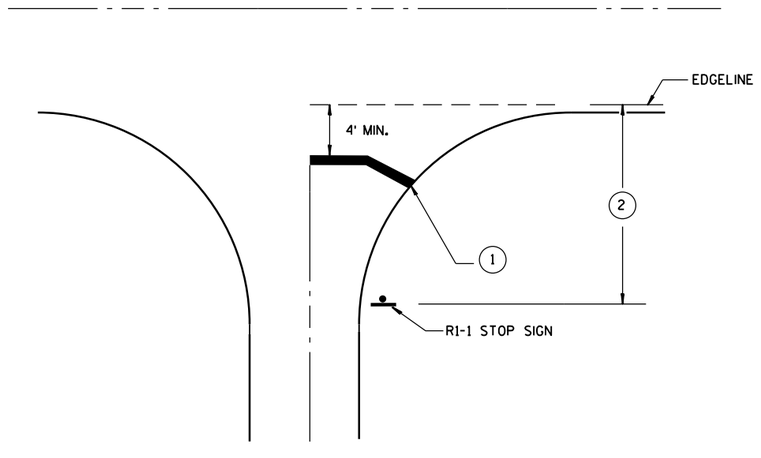
TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

GENERAL NOTES

1. 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE PROJECT ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
2. IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE THAN NO STOP LINE IS REQUIRED.
3. IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION THAN NO STOP LINE IS REQUIRED.
4. MOVE CLOSER TO EDGE OF TRAVEL LANE AS NEEDED FOR VISIBILITY AND SIGHT LINES.

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4/30/2013
DATE

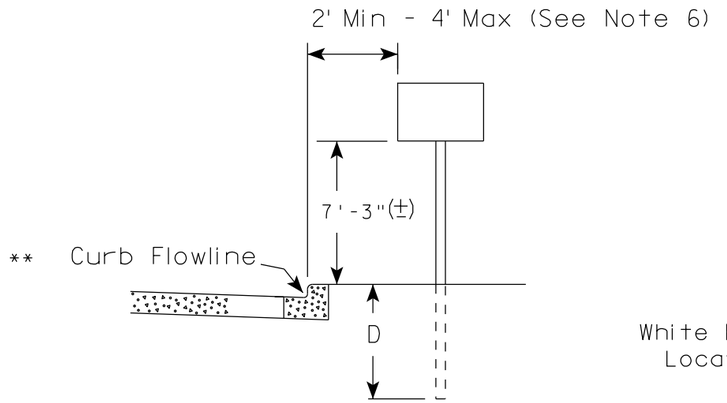
/S/ Travis Feltes
STATE TRAFFIC E

FHWA

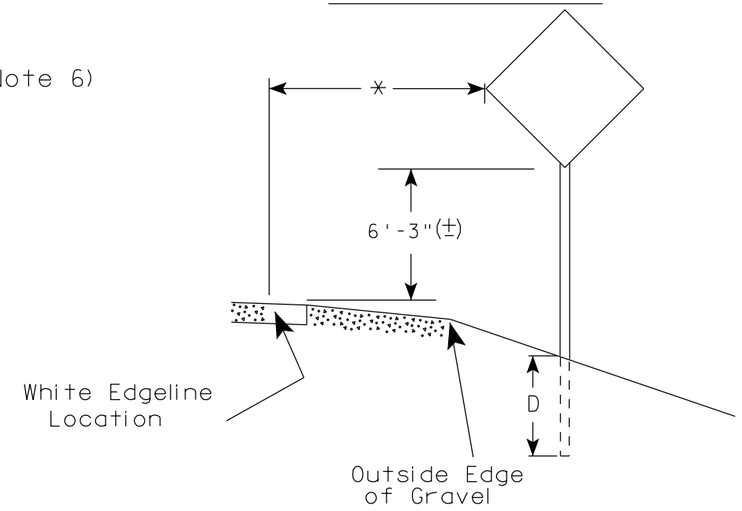
6

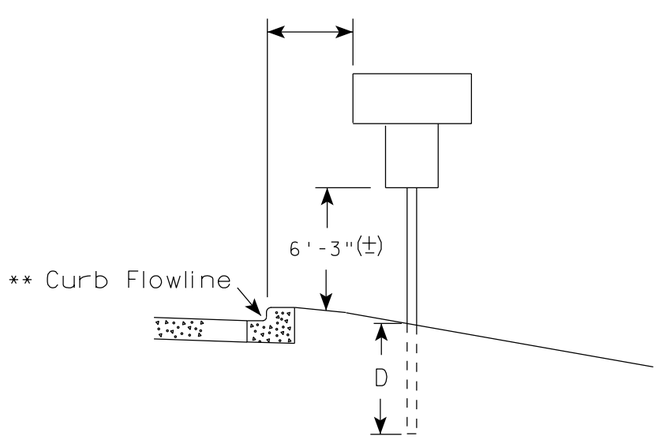
S.D.D. 15 C 33-1

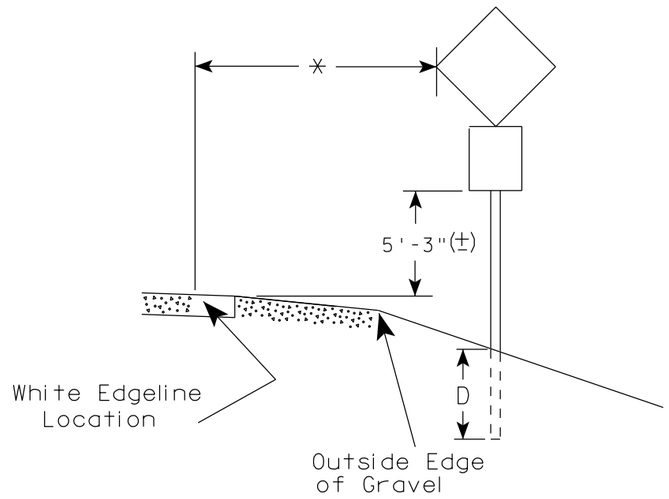
URBAN AREA



RURAL AREA (See Note 2)







GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for J assemblies (A2-1S) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding signs shall be mounted at a height of 5'-3" (±) or as directd by the Engineer.
9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).

POST EMBEDMENT DEPTH

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

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

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

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

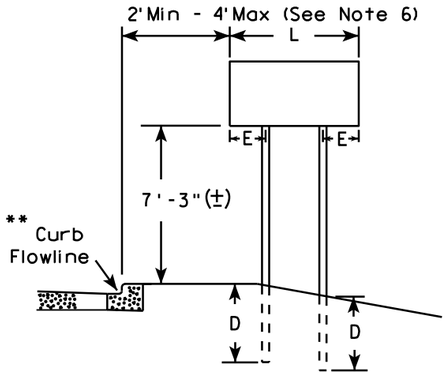
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

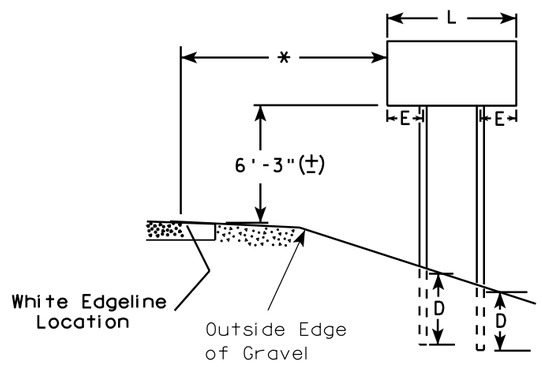
DATE 7/23/15 PLATE NO. A4-3.20

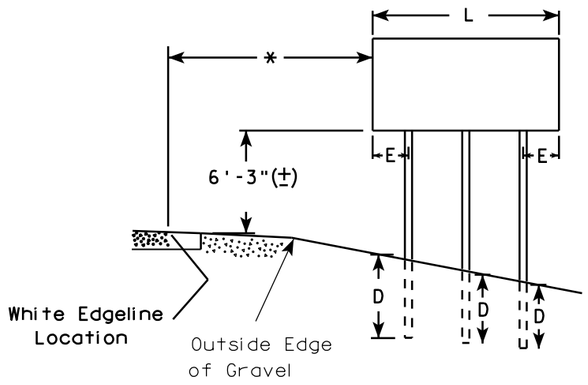
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

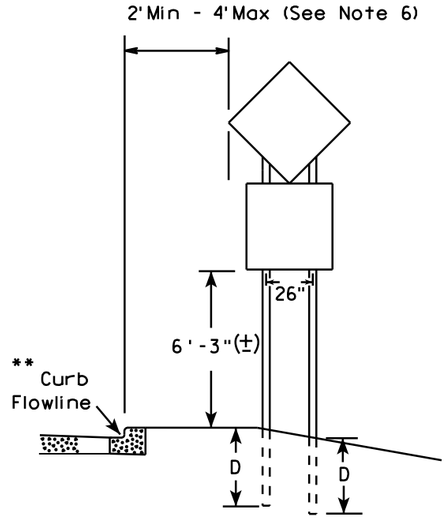
URBAN AREA



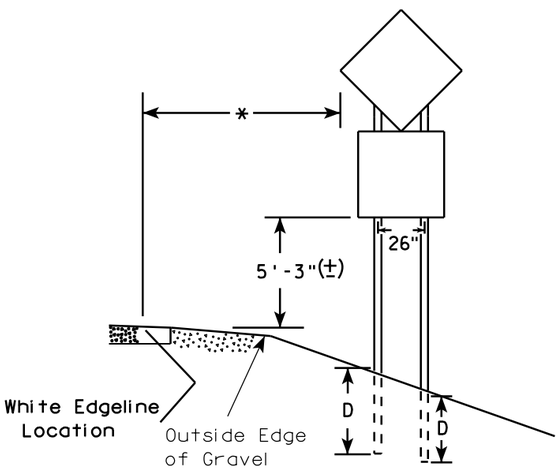
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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. Minimum mounting height for J assemblies (A2-1S) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
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.

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
Greater than 48" Less than 60"	12"
60" to 120"	L/5

***

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 120" less than 168"	12"

SIGN SHAPE OTHER THAN DIAMOND (FOUR POSTS REQUIRED)	
L	E
168" and greater	12"

POST EMBEDMENT DEPTH

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

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

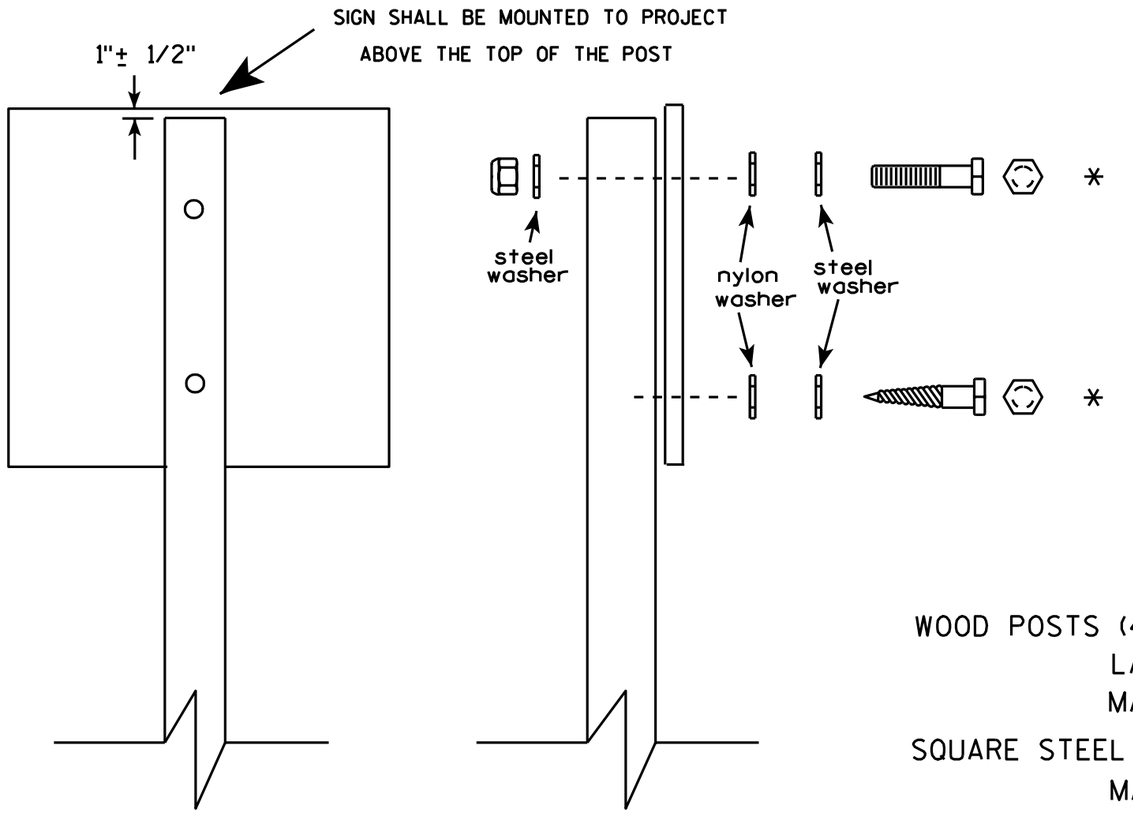
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/23/15 PLATE NO. A4-4 125 14

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A44.DGN PLOT DATE : 23-JUL-2015 15:23 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 107.021305:1.000000

WISDOT/CADDS SHEET 42



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

a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3

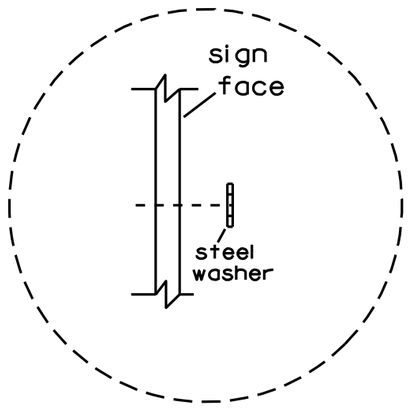
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

WOOD POSTS (4" x 4" or 4" x 6")
LAG SCREWS - 3/8" X 3"
MACHINE BOLTS - 5/16" X 6-1/2" or 7" Length w/ nuts

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

WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON for all Type H signs.



Washer Placement when Sign Has Other Than Type H or Type F Face

* 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

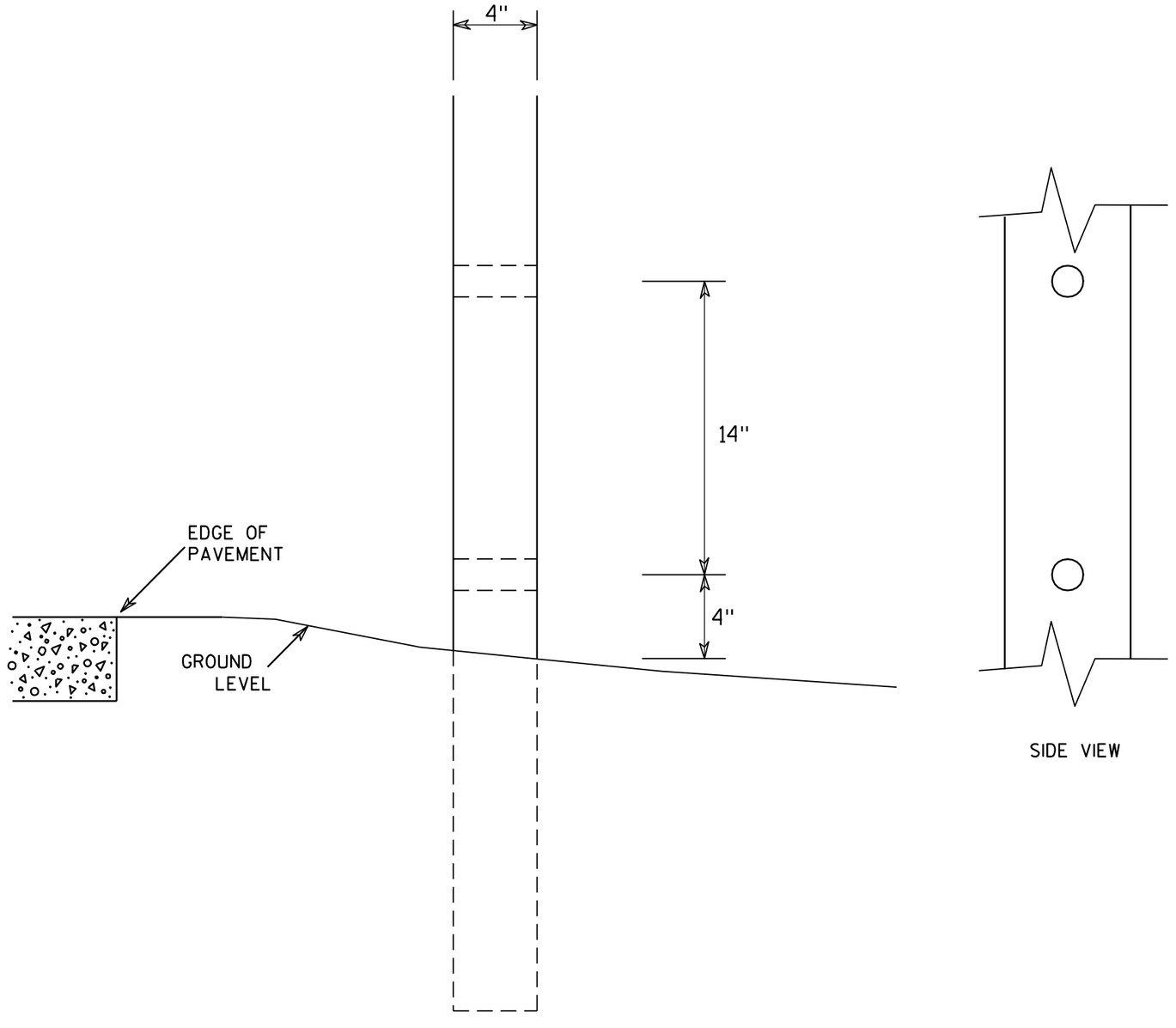
DATE 3/23/10 PLATE NO. A4-8.7

7

7

PROJECT NO:

SHEET NO: 126 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.

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: 127	E

AVERAGE END AREA VOLUMES - CTH P

STA.	VOLUME (C.Y.) CUT	FILL	EXPANDED FILL	CUMULATIVE VOLUME (C.Y.) COMMON EXC.	EXPANDED FILL	MASS HAUL
5+50.00	0.00	0.00	0.00	0.00	0.00	0.00
6+00.00	98.21	0.96	1.20	98.21	1.20	97.01
6+28.00	50.70	0.61	0.76	148.91	1.96	146.95
6+50.00	35.17	1.44	1.80	184.08	3.76	180.32
6+68.00	29.45	1.15	1.44	213.53	5.20	208.33
7+00.00	43.99	1.23	1.54	257.52	6.74	250.78
7+29.00	32.14	2.11	2.64	289.66	9.37	280.29
7+50.00	18.92	1.68	2.10	308.58	11.48	297.11
7+94.00	37.80	2.13	2.66	346.38	14.14	332.24
8+00.00	4.90	0.73	0.91	351.28	15.05	336.23
8+50.00	27.96	8.43	10.54	379.24	25.59	353.65
8+95.00	31.94	5.70	7.13	411.18	32.71	378.47
9+00.00	4.24	0.87	1.09	415.42	33.80	381.62
9+50.00	35.56	11.74	14.68	450.98	48.48	402.51
10+00.00	38.67	7.63	9.54	489.65	58.01	431.64
11+00.00	54.02	3.55	4.44	543.67	62.45	481.22
12+00.00	16.82	5.73	7.16	560.49	69.61	490.88
13+00.00	10.75	23.06	28.83	571.24	98.44	472.80
14+00.00	6.75	57.67	72.09	577.99	170.53	407.47
15+00.00	0.79	85.30	106.63	578.78	277.15	301.63
16+00.00	0.10	77.25	96.56	578.88	373.71	205.17
17+00.00	7.83	54.15	67.69	586.71	441.40	145.31
17+10.00	0.69	2.45	3.06	587.40	444.46	142.94
18+00.00	0.00	44.06	55.08	587.40	499.54	87.86
20+00.00	8.36	50.03	62.54	598.90	644.78	-45.88
21+00.00	15.74	32.65	40.81	614.64	685.59	-70.95
21+88.00	9.74	56.07	70.09	624.38	755.68	-131.30
22+00.00	0.00	18.74	23.43	624.38	779.10	-154.72
22+05.00	0.00	9.77	12.21	624.38	791.31	-166.93
22+14.00	0.22	18.24	22.80	624.60	814.11	-189.51
23+00.00	0.00	128.08	160.10	624.60	974.21	-349.61
24+00.00	0.00	112.67	140.84	624.60	1115.05	-490.45
24+78.00	0.00	52.58	65.73	624.60	1180.78	-556.18
25+00.00	0.32	9.45	11.81	624.92	1192.59	-567.67
26+00.00	5.89	73.04	91.30	630.81	1283.89	-653.08
27+00.00	8.61	61.51	76.89	639.42	1360.78	-721.36
28+00.00	22.19	52.72	65.90	661.61	1426.68	-765.07
29+00.00	30.30	109.98	137.48	691.91	1564.15	-872.24
30+00.00	21.07	122.09	152.61	712.98	1716.76	-1003.78
31+00.00	32.63	90.04	112.55	745.61	1829.31	-1083.70
31+50.00	43.56	28.13	35.16	789.17	1864.48	-1075.31
32+00.00	53.09	60.69	75.86	842.26	1940.34	-1098.08
32+50.00	28.68	77.38	96.73	870.94	2037.06	-1166.12
33+00.00	12.36	49.72	62.15	883.30	2099.21	-1215.91
34+00.00	25.31	144.92	181.15	908.61	2280.36	-1371.75
34+18.00	4.30	39.39	49.24	912.91	2329.60	-1416.69
35+00.00	9.82	143.06	178.83	922.73	2508.43	-1585.70
36+00.00	4.65	58.35	72.94	927.38	2581.36	-1653.98
37+00.00	8.12	38.56	48.20	935.50	2629.56	-1694.06
38+00.00	11.74	31.44	39.30	947.24	2668.86	-1721.62
39+00.00	12.15	32.87	41.09	959.39	2709.95	-1750.56
40+00.00	8.38	32.47	40.59	967.77	2750.54	-1782.77
41+00.00	7.37	23.30	29.13	975.14	2779.66	-1804.52
42+00.00	19.77	8.03	10.04	994.91	2789.70	-1794.79
42+19.00	3.24	0.18	0.23	998.15	2789.93	-1791.78
43+00.00	0.87	10.27	12.84	999.02	2802.76	-1803.74
44+00.00	3.12	24.08	30.10	1002.14	2832.86	-1830.72
45+00.00	5.92	21.38	26.73	1008.06	2859.59	-1851.53
45+15.00	1.45	4.24	5.30	1009.51	2864.89	-1855.38
46+00.00	7.56	25.99	32.49	1017.07	2897.38	-1880.31

AVERAGE END AREA VOLUMES - CTH P

STA.	VOLUME (C.Y.) CUT	FILL	EXPANDED FILL	CUMULATIVE VOLUME (C.Y.) COMMON EXC.	EXPANDED FILL	MASS HAUL
47+00.00	4.43	25.60	32.00	1021.50	2929.38	-1907.88
48+00.00	7.76	30.59	38.24	1029.26	2967.61	-1938.35
48+52.00	2.61	11.55	14.44	1031.87	2982.05	-1950.18
49+00.00	0.00	5.65	7.06	1031.87	2989.11	-1957.24
50+00.00	0.00	12.34	15.43	1031.87	3004.54	-1972.67
51+00.00	0.61	15.90	19.88	1032.48	3024.41	-1991.93
52+00.00	7.49	17.36	21.70	1039.97	3046.11	-2006.14
53+00.00	18.34	14.55	18.19	1058.31	3064.30	-2005.99
54+00.00	18.11	17.79	22.24	1076.42	3086.54	-2010.12
54+64.00	9.21	14.41	18.01	1085.63	3104.55	-2018.92
54+89.00	4.54	3.63	4.54	1090.17	3109.09	-2018.92
55+00.00	2.25	1.10	1.38	1092.42	3110.46	-2018.04
55+14.00	1.58	0.98	1.23	1094.00	3111.69	-2017.69
55+50.00	5.72	1.65	2.06	1099.72	3113.75	-2014.03
56+00.00	12.77	33.36	41.70	1112.49	3155.45	-2042.96
56+50.00	12.83	35.25	44.06	1125.32	3199.51	-2074.19
57+00.00	10.89	56.99	71.24	1136.21	3270.75	-2134.54
57+13.00	1.83	31.84	39.80	1138.04	3310.55	-2172.51
57+50.00	3.70	61.12	76.40	1141.74	3386.95	-2245.21
58+00.00	2.53	17.69	22.11	1144.27	3409.06	-2264.79
59+00.00	5.13	21.99	27.49	1149.40	3436.55	-2287.15
60+00.00	2.88	27.78	34.73	1152.28	3471.28	-2319.00
60+39.00	0.00	6.92	8.65	1152.28	3479.93	-2327.65
60+64.00	0.00	4.68	5.85	1152.28	3485.78	-2333.50
60+89.00	0.00	12.93	16.16	1152.28	3501.94	-2349.66
61+00.00	0.00	9.01	11.26	1152.28	3513.20	-2360.92
62+00.00	1.80	62.68	78.35	1154.08	3591.55	-2437.47
63+00.00	18.76	23.56	29.45	1172.84	3621.00	-2448.16
64+00.00	16.72	11.23	14.04	1189.56	3635.04	-2445.48
65+00.00	5.95	30.83	38.54	1195.51	3673.58	-2478.07
65+61.00	5.95	25.01	31.26	1201.46	3704.84	-2503.38
65+86.00	3.39	6.44	8.05	1204.85	3712.89	-2508.04
66+00.00	1.64	4.84	6.05	1206.49	3718.94	-2512.45
66+11.00	0.75	2.76	3.45	1207.24	3722.39	-2515.15
67+00.00	3.46	31.74	39.68	1210.70	3762.06	-2551.36
67+38.50	0.00	28.38	35.48	1210.70	3797.54	-2586.84
67+63.50	0.00	9.81	12.26	1210.70	3809.80	-2599.10
67+88.50	0.00	4.81	6.01	1210.70	3815.81	-2605.11
68+00.00	0.05	8.00	10.00	1210.75	3825.81	-2615.06
69+00.00	8.16	100.47	125.59	1218.91	3951.40	-2732.49
70+00.00	5.23	101.58	126.98	1224.14	4078.38	-2854.24
70+32.00	2.76	31.70	39.63	1226.90	4118.00	-2891.10
71+00.00	8.12	49.97	62.46	1235.02	4180.46	-2945.44
72+00.00	1.61	46.27	57.84	1236.63	4238.30	-3001.67
72+13.50	0.00	5.63	7.04	1236.63	4245.34	-3008.71
72+30.00	0.00	47.92	59.90	1236.63	4305.24	-3068.61
72+38.50	0.00	44.01	55.01	1236.63	4360.25	-3123.62
72+63.50	0.00	63.76	79.70	1236.63	4439.95	-3203.32
72+81.00	0.00	1.23	1.54	1236.63	4441.49	-3204.86
72+86.00	0.00	0.34	0.43	1236.63	4441.91	-3205.28
73+00.00	0.00	4.05	5.06	1236.63	4446.98	-3210.35
73+11.00	0.00	3.72	4.65	1236.63	4451.63	-3214.99
73+36.00	0.00	4.00	5.00	1236.63	4456.63	-3220.00
73+77.00	0.00	2.54	3.18	1236.63	4459.80	-3223.17
74+00.00	0.00	1.58	1.98	1236.63	4461.78	-3225.14
74+45.00	0.00	6.89	8.61	1236.63	4470.39	-3233.76
74+70.00	0.00	11.30	14.13	1236.63	4484.51	-3247.88
74+95.00	0.00	13.96	17.45	1236.63	4501.96	-3265.33
75+00.00	0.00	2.94	3.68	1236.63	4505.64	-3269.01
76+00.00	0.00	76.99	96.24	1236.63	4601.88	-3365.25

NOTES:
MASS HAUL = CUT VOL. - EXPANDED FILL VOL.
AN EXPANDED FACTOR OF 1.25 WAS USED FOR FILL VOLUMES.
TOTALS COLUMNS SHOW ROUNDED VALUES OF CUMULATIVE CUT, EXPANDED FILL & MASS HAUL VOLUMES.

9

PROJECT NO: 5657-00-72 | HWY: CTH P | COUNTY: DANE | COMPUTER EARTHWORK DATA | SHEET NO: 128

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\earthwork data.dwg
PLOT DATE: 2/8/16
PLOT BY: DANE COUNTY HIGHWAY DEPT.
PLOT SCALE: NONE
WISDOT/CADDS SHEET 42

AVERAGE END AREA VOLUMES - CTH P

STA.	VOLUME (C.Y.) CUT	FILL	EXPANDED FILL	CUMULATIVE VOLUME (C.Y.) COMMON EXC.	EXPANDED FILL	MASS HAUL
77+00.00	0.00	59.66	74.58	1236.63	4676.45	-3439.82
78+00.00	0.00	53.69	67.11	1236.63	4743.56	-3506.93
79+00.00	0.92	47.64	59.55	1237.55	4803.11	-3565.56
80+00.00	0.00	60.84	76.05	1237.55	4879.16	-3641.61
81+00.00	0.00	95.94	119.93	1237.55	4999.09	-3761.54
82+00.00	0.00	88.15	110.19	1237.55	5109.28	-3871.73
83+00.00	0.00	96.73	120.91	1237.55	5230.19	-3992.64
83+93.00	0.00	114.20	142.75	1237.55	5372.94	-4135.39
84+00.00	0.09	7.83	9.79	1237.64	5382.73	-4145.09
85+00.00	7.38	75.74	94.67	1245.02	5477.40	-4232.38
85+95.00	0.00	49.26	61.58	1245.02	5538.98	-4293.96
86+00.00	0.00	3.96	4.95	1245.02	5543.93	-4298.91
86+20.00	0.00	20.37	25.46	1245.02	5569.39	-4324.37
86+45.00	0.00	21.81	27.26	1245.02	5596.65	-4351.63
87+00.00	-0.12	33.15	41.44	1244.90	5638.09	-4393.19
87+23.00	5.61	4.53	5.66	1250.51	5643.75	-4393.24
88+00.00	18.42	4.66	5.83	1268.93	5649.58	-4380.64
89+00.00	12.52	6.87	8.59	1281.45	5658.16	-4376.71
90+00.00	12.79	8.32	10.40	1294.24	5668.56	-4374.32
90+72.00	11.85	5.21	6.51	1306.09	5675.08	-4368.98
90+82.00	0.20	0.24	0.30	1306.29	5675.38	-4369.08
91+00.00	0.00	0.44	0.55	1306.29	5675.93	-4369.64
91+86.00	0.00	16.93	21.16	1306.29	5697.09	-4390.80
92+00.00	0.00	4.62	5.78	1306.29	5702.86	-4396.57
92+10.00	0.00	7.86	9.83	1306.29	5712.69	-4406.40
92+35.00	0.00	21.50	26.88	1306.29	5739.56	-4433.27
92+60.00	0.00	12.51	15.64	1306.29	5755.20	-4448.91
93+00.00	0.00	22.05	27.56	1306.29	5782.76	-4476.47
94+00.00	1.32	139.75	174.69	1307.61	5957.45	-4649.84
94+31.00	0.50	73.67	92.09	1308.11	6049.54	-4741.43
95+00.00	0.67	109.43	136.79	1308.78	6186.33	-4877.55
96+00.00	0.00	51.40	64.25	1308.78	6250.58	-4941.80
96+22.50	0.00	4.14	5.18	1308.78	6255.75	-4946.97
96+47.50	0.00	3.75	4.69	1308.78	6260.44	-4951.66
96+67.00	0.00	2.87	3.59	1308.78	6264.03	-4955.24
96+72.50	0.00	4.58	5.73	1308.78	6269.75	-4960.97
97+00.00	0.00	43.39	54.24	1308.78	6323.99	-5015.21
98+00.00	0.00	87.86	109.83	1308.78	6433.81	-5125.03
98+42.00	-0.11	6.74	8.43	1308.67	6442.24	-5133.57
98+52.00	0.80	0.71	0.89	1309.47	6443.13	-5133.65
99+00.00	5.20	1.42	1.78	1314.67	6444.90	-5130.23
99+26.00	2.79	0.17	0.21	1317.46	6445.11	-5127.65
99+89.00	7.95	0.26	0.33	1325.41	6445.44	-5120.03
100+00.00	1.59	0.65	0.81	1327.00	6446.25	-5119.25
101+00.00	13.73	31.27	39.09	1340.73	6485.34	-5144.61
101+40.00	1.72	21.08	26.35	1342.45	6511.69	-5169.24
101+65.00	0.00	15.43	19.29	1342.45	6530.98	-5188.53
101+90.00	0.00	13.40	16.75	1342.45	6547.73	-5205.28
102+00.00	0.25	4.61	5.76	1342.70	6553.49	-5210.79
103+00.00	15.57	55.01	68.76	1358.27	6622.25	-5263.98
104+00.00	11.48	57.62	72.03	1369.75	6694.28	-5324.52
105+00.00	2.53	56.48	70.60	1372.28	6764.88	-5392.59
105+89.00	0.00	46.39	57.99	1372.28	6822.86	-5450.58
106+00.00	0.00	4.63	5.79	1372.28	6828.65	-5456.37
107+00.00	0.00	59.43	74.29	1372.28	6902.94	-5530.66
108+00.00	0.00	72.86	91.08	1372.28	6994.01	-5621.73
109+00.00	0.00	71.91	89.89	1372.28	7083.90	-5711.62
109+38.00	0.00	21.50	26.88	1372.28	7110.78	-5738.50
110+00.00	0.00	22.88	28.60	1372.28	7139.38	-5767.10
111+00.00	0.00	47.74	59.68	1372.28	7199.05	-5826.77

AVERAGE END AREA VOLUMES - CTH P

STA.	VOLUME (C.Y.) CUT	FILL	EXPANDED FILL	CUMULATIVE VOLUME (C.Y.) COMMON EXC.	EXPANDED FILL	MASS HAUL
111+40.00	0.25	12.06	15.08	1372.53	7214.13	-5841.60
111+65.00	1.14	13.53	16.91	1373.67	7231.04	-5857.37
111+90.00	0.00	19.03	23.79	1373.67	7254.83	-5881.16
112+00.00	0.00	7.84	9.80	1373.67	7264.63	-5890.96
112+87.00	0.00	46.44	58.05	1373.67	7322.68	-5949.01
113+00.00	0.00	1.44	1.80	1373.67	7324.48	-5950.81
114+00.00	0.00	23.00	28.75	1373.67	7353.23	-5979.56
115+00.00	0.00	24.85	31.06	1373.67	7384.29	-6010.62
116+00.00	0.00	25.36	31.70	1373.67	7415.99	-6042.32
117+00.00	0.00	26.95	33.69	1373.67	7449.68	-6076.01
117+46.00	0.00	13.47	16.84	1373.67	7466.51	-6092.84
118+00.00	0.00	21.95	27.44	1373.67	7493.95	-6120.28
119+00.00	0.00	41.36	51.70	1373.67	7545.65	-6171.98
120+00.00	0.00	25.82	32.28	1373.67	7577.93	-6204.26
120+82.00	0.00	10.89	13.61	1373.67	7591.54	-6217.87
121+00.00	0.00	3.93	4.91	1373.67	7596.45	-6222.78
121+07.00	0.00	2.31	2.89	1373.67	7599.34	-6225.67
121+32.00	0.00	7.60	9.50	1373.67	7608.84	-6235.17
121+77.50	0.00	11.11	13.89	1373.67	7622.73	-6249.06
122+00.00	2.13	3.47	4.34	1375.80	7627.06	-6251.26
122+02.50	0.15	0.40	0.50	1375.95	7627.56	-6251.61
122+18.00	1.27	1.57	1.96	1377.22	7629.53	-6252.31
122+27.50	0.63	0.03	0.04	1377.85	7629.56	-6251.71
122+86.00	50.31	16.22	20.28	1428.16	7649.84	-6221.68
123+00.00	12.87	5.38	6.73	1441.03	7656.56	-6215.53
124+00.00	9.27	77.58	96.98	1450.30	7753.54	-6303.24
125+00.00	4.05	184.29	230.36	1454.35	7983.90	-6529.55
125+50.00	4.16	88.35	110.44	1458.51	8094.34	-6635.83
125+75.00	3.94	19.03	23.79	1462.45	8118.13	-6655.68
126+00.00	4.11	9.55	11.94	1466.56	8130.06	-6663.50
126+90.00	20.05	19.74	24.68	1486.61	8154.74	-6668.13
127+00.00	2.81	0.70	0.88	1489.42	8155.61	-6666.19
127+15.00	3.79	2.37	2.96	1493.21	8158.58	-6665.37
127+40.00	1.76	6.48	8.10	1494.97	8166.68	-6671.71
128+00.00	0.00	29.19	36.49	1494.97	8203.16	-6708.19
129+00.00	0.00	88.65	110.81	1494.97	8313.98	-6819.01
130+00.00	0.00	73.30	91.63	1494.97	8405.60	-6910.63
131+00.00	0.00	31.13	38.91	1494.97	8444.51	-6949.54
132+00.00	0.00	33.08	41.35	1494.97	8485.86	-6990.89
133+00.00	0.00	39.12	48.90	1494.97	8534.76	-7039.79
133+25.00	0.00	22.54	28.18	1494.97	8562.94	-7067.97
133+50.00	0.41	23.73	29.66	1495.38	8592.60	-7097.22
133+69.00	2.39	5.31	6.64	1497.77	8599.24	-7101.47
134+00.00	3.60	2.21	2.76	1501.37	8602.00	-7100.63
135+00.00	0.00	16.19	20.24	1501.37	8622.24	-7120.87
136+00.00	0.00	17.59	21.99	1501.37	8644.23	-7142.86
137+00.00	7.81	10.08	12.60	1509.18	8656.83	-7147.65
138+00.00	18.39	5.75	7.19	1527.57	8664.01	-7136.44
139+00.00	16.29	14.43	18.04	1543.86	8682.05	-7138.19
139+70.00	25.00	8.68	10.85	1568.86	8692.90	-7124.04
140+00.00	13.74	14.08	17.60	1582.60	8710.50	-7127.90
141+00.00	27.40	133.59	166.99	1610.00	8877.49	-7267.49
141+50.00	9.48	83.74	104.68	1619.48	8982.16	-7362.68
142+00.00	9.15	78.27	97.84	1628.63	9080.00	-7451.37
142+50.00	8.94	82.82	103.53	1637.57	9183.53	-7545.96
142+81.00	8.92	86.32	107.90	1646.49	9291.43	-7644.94
143+00.00	7.17	63.50	79.38	1653.66	9370.80	-7717.14
143+50.00	13.57	72.62	90.78	1667.23	9461.58	-7794.35
144+00.00	8.40	105.55	131.94	1675.63	9593.51	-7917.88
144+50.00	8.62	163.38	204.23	1684.25	9797.74	-8113.49

NOTES:
MASS HAUL = CUT VOL. - EXPANDED FILL VOL.
AN EXPANDED FACTOR OF 1.25 WAS USED FOR FILL VOLUMES.
TOTALS COLUMNS SHOW ROUNDED VALUES OF CUMULATIVE CUT, EXPANDED FILL & MASS HAUL VOLUMES.

PROJECT NO: 5657-00-72 | HWY: CTH P | COUNTY: DANE | COMPUTER EARTHWORK DATA | SHEET NO: 129

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PLOT DATE: 2/8/16
PLOT BY: DANE COUNTY HIGHWAY DEPT.
PLOT SCALE: NONE
WISDOT/CADDS SHEET 42

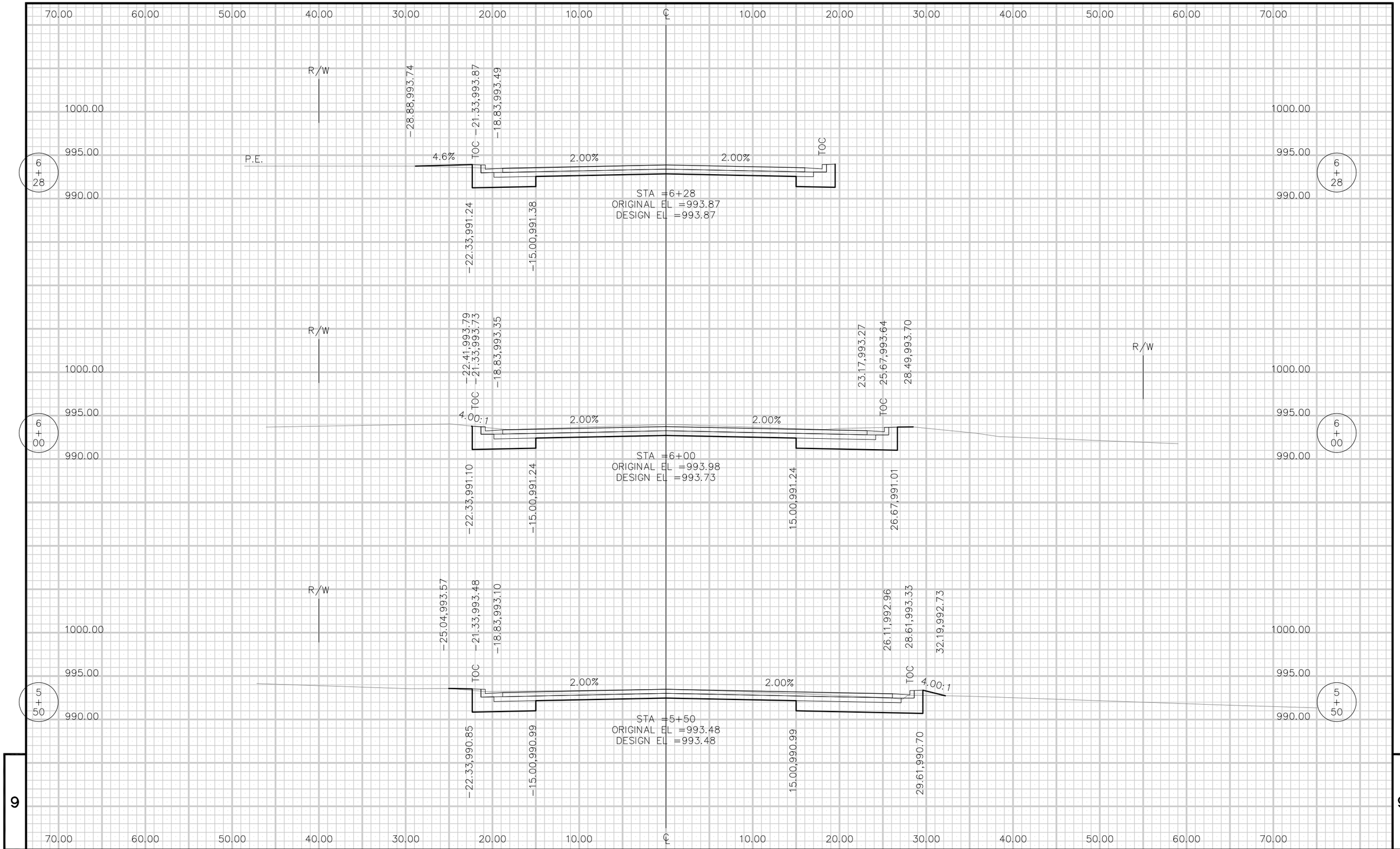
AVERAGE END AREA VOLUMES - CTH P

STA.	VOLUME (C.Y.) CUT	FILL	EXPANDED FILL	CUMULATIVE VOLUME (C.Y.) COMMON EXC.	EXPANDED FILL	MASS HAUL
144+82.00	4.46	49.21	61.51	1688.71	9859.25	-8170.54
145+00.00	1.08	11.74	14.68	1689.79	9873.93	-8184.14
145+50.00	4.57	19.64	24.55	1694.36	9898.48	-8204.12
146+00.00	7.50	12.20	15.25	1701.86	9913.73	-8211.87
147+00.00	20.11	19.68	24.60	1721.97	9938.33	-8216.36
148+00.00	8.73	23.86	29.83	1730.70	9968.15	-8237.45
149+00.00	0.00	29.07	36.34	1730.70	10004.49	-8273.79
150+00.00	0.00	27.23	34.04	1730.70	10038.53	-8307.83
151+00.00	0.00	20.69	25.86	1730.70	10064.39	-8333.69
152+00.00	5.42	12.61	15.76	1736.12	10080.15	-8344.03
153+00.00	6.44	18.14	22.68	1742.56	10102.83	-8360.27
154+00.00	4.06	30.06	37.58	1746.62	10140.40	-8393.78
154+81.00	9.79	39.01	48.76	1756.41	10189.16	-8432.75
155+00.00	2.79	13.99	17.49	1759.20	10206.65	-8447.45
155+25.00	0.57	32.54	40.68	1759.77	10247.33	-8487.56
155+50.00	0.50	45.64	57.05	1760.27	10304.38	-8544.10
155+75.00	2.15	26.79	33.49	1762.42	10337.86	-8575.44
156+00.00	2.82	7.00	8.75	1765.24	10346.61	-8581.37
157+00.00	10.00	42.10	52.63	1775.24	10399.24	-8624.00
158+00.00	3.82	55.92	69.90	1779.06	10469.14	-8690.08
159+00.00	0.00	59.05	73.81	1779.06	10542.95	-8763.89
160+00.00	0.00	48.61	60.76	1779.06	10603.71	-8824.65
160+32.00	0.00	11.26	14.08	1779.06	10617.79	-8838.73
160+50.00	2.70	2.69	3.36	1781.76	10621.15	-8839.39
161+00.00	9.38	10.34	12.93	1791.14	10634.08	-8842.94
162+00.00	4.66	35.25	44.06	1795.80	10678.14	-8882.34
163+00.00	6.87	24.61	30.76	1802.67	10708.90	-8906.23
163+25.00	0.38	10.94	13.68	1803.05	10722.58	-8919.53
163+38.00	0.00	11.93	14.91	1803.05	10737.49	-8934.44
163+50.00	0.00	9.59	11.99	1803.05	10749.48	-8946.43
163+70.00	0.00	4.90	6.13	1803.05	10755.60	-8952.55
163+81.00	0.03	0.38	0.48	1803.08	10756.08	-8953.00
164+00.00	0.33	0.38	0.48	1803.41	10756.55	-8953.14
165+00.00	6.87	11.09	13.86	1810.28	10770.41	-8960.13
166+00.00	0.88	39.78	49.73	1811.16	10820.14	-9008.98
167+00.00	0.00	41.67	52.09	1811.16	10872.23	-9061.07
167+43.00	1.88	5.45	6.81	1813.04	10879.04	-9066.00
168+00.00	4.70	16.43	20.54	1817.74	10899.58	-9081.84
169+00.00	7.48	42.11	52.64	1825.22	10952.21	-9126.99
170+00.00	4.79	24.92	31.15	1830.01	10983.36	-9153.35
170+27.00	1.37	3.78	4.73	1831.38	10988.09	-9156.71
171+00.00	5.68	10.14	12.68	1837.06	11000.76	-9163.70
172+00.00	3.56	19.84	24.80	1840.62	11025.56	-9184.94
173+00.00	0.35	34.37	42.96	1840.97	11068.53	-9227.56
173+80.00	2.93	43.50	54.38	1843.90	11122.90	-9279.00
174+00.00	1.58	15.02	18.78	1845.48	11141.68	-9296.20
175+00.00	8.77	78.75	98.44	1854.25	11240.11	-9385.86
176+00.00	5.76	49.47	61.84	1860.01	11301.95	-9441.94
177+00.00	9.99	23.50	29.38	1870.00	11331.33	-9461.33
178+00.00	20.50	8.00	10.00	1890.50	11341.33	-9450.82
178+70.00	10.99	1.05	1.31	1901.49	11342.64	-9441.15
178+76.00	0.58	0.10	0.13	1902.07	11342.76	-9440.69
179+00.00	2.99	0.40	0.50	1905.06	11343.26	-9438.20
180+00.00	4.69	29.51	36.89	1909.75	11380.15	-9470.40
180+61.00	0.00	20.97	26.21	1909.75	11406.36	-9496.61
181+00.00	0.32	9.59	11.99	1910.07	11418.35	-9508.28
182+00.00	6.80	46.69	58.36	1916.87	11476.71	-9559.84
183+00.00	5.37	63.80	79.75	1922.24	11556.46	-9634.22
184+00.00	8.75	40.02	50.03	1930.99	11606.49	-9675.50
184+75.00	8.97	4.19	5.24	1939.96	11611.73	-9671.76

AVERAGE END AREA VOLUMES - CTH P

STA.	VOLUME (C.Y.) CUT	FILL	EXPANDED FILL	CUMULATIVE VOLUME (C.Y.) COMMON EXC.	EXPANDED FILL	MASS HAUL
185+00.00	1.09	4.81	6.01	1941.05	11617.74	-9676.69
185+85.00	0.00	15.54	19.43	1941.05	11637.16	-9696.11
186+00.00	0.00	1.20	1.50	1941.05	11638.66	-9697.61
187+00.00	0.00	15.70	19.63	1941.05	11658.29	-9717.24
188+00.00	3.82	12.53	15.66	1944.87	11673.95	-9729.08
189+00.00	14.59	10.56	13.20	1959.46	11687.15	-9727.69
19+00.00	3.14	66.16	82.70	590.54	582.24	8.30
190+00.00	11.97	29.56	36.95	1971.43	11724.10	-9752.67
191+00.00	10.46	29.79	37.24	1981.89	11761.34	-9779.45
192+00.00	7.23	17.25	21.56	1989.12	11782.90	-9793.78
193+00.00	5.76	21.15	26.44	1994.88	11809.34	-9814.46
193+70.00	7.42	22.65	28.31	2002.30	11837.65	-9835.35
			TOTAL	2002.30	11837.65	-9835.35

NOTES:
MASS HAUL = CUT VOL. - EXPANDED FILL VOL.
AN EXPANDED FACTOR OF 1.25 WAS USED FOR FILL VOLUMES.
TOTALS COLUMNS SHOW ROUNDED VALUES OF CUMULATIVE CUT, EXPANDED FILL & MASS HAUL VOLUMES.

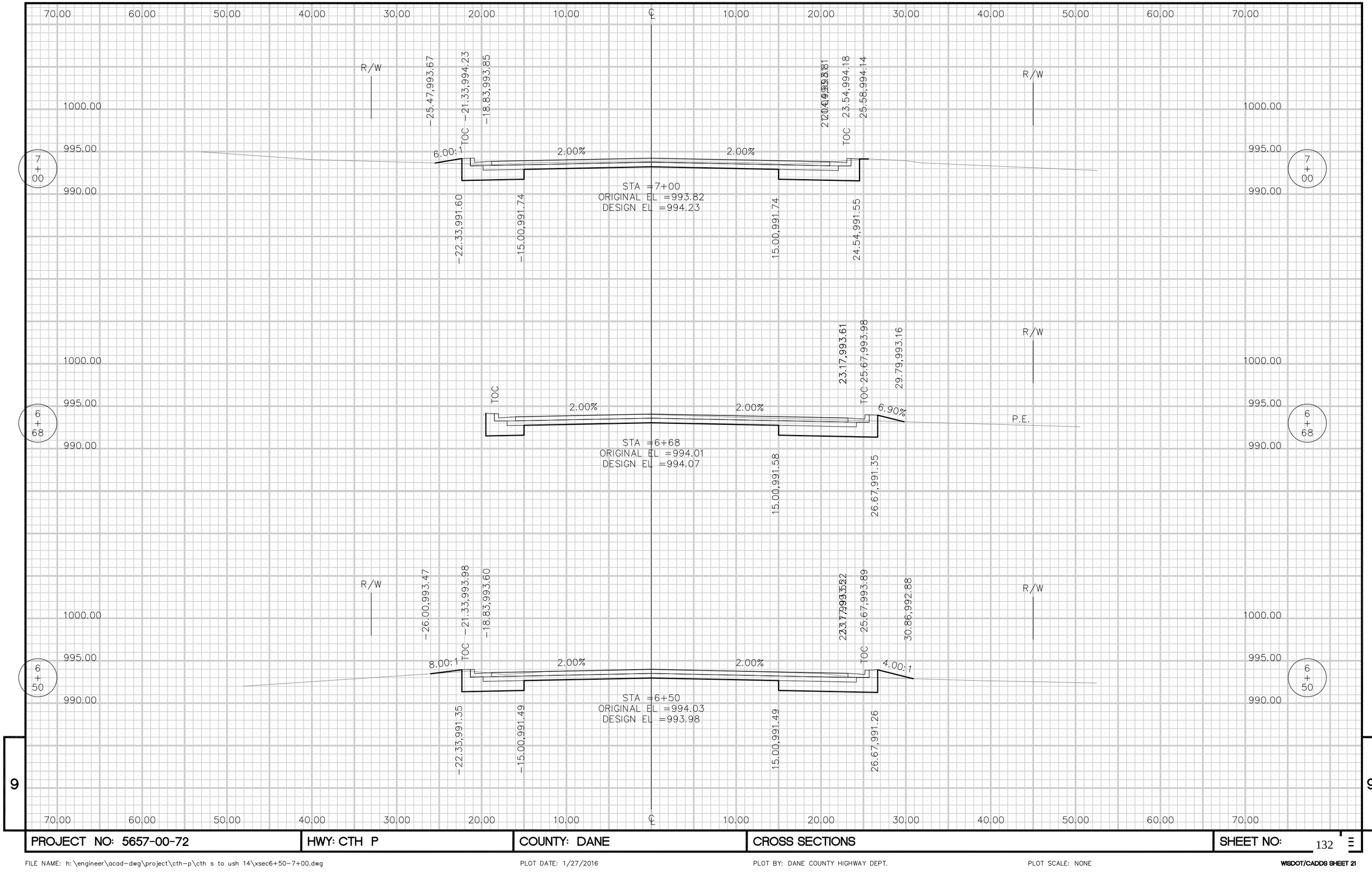


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PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 131

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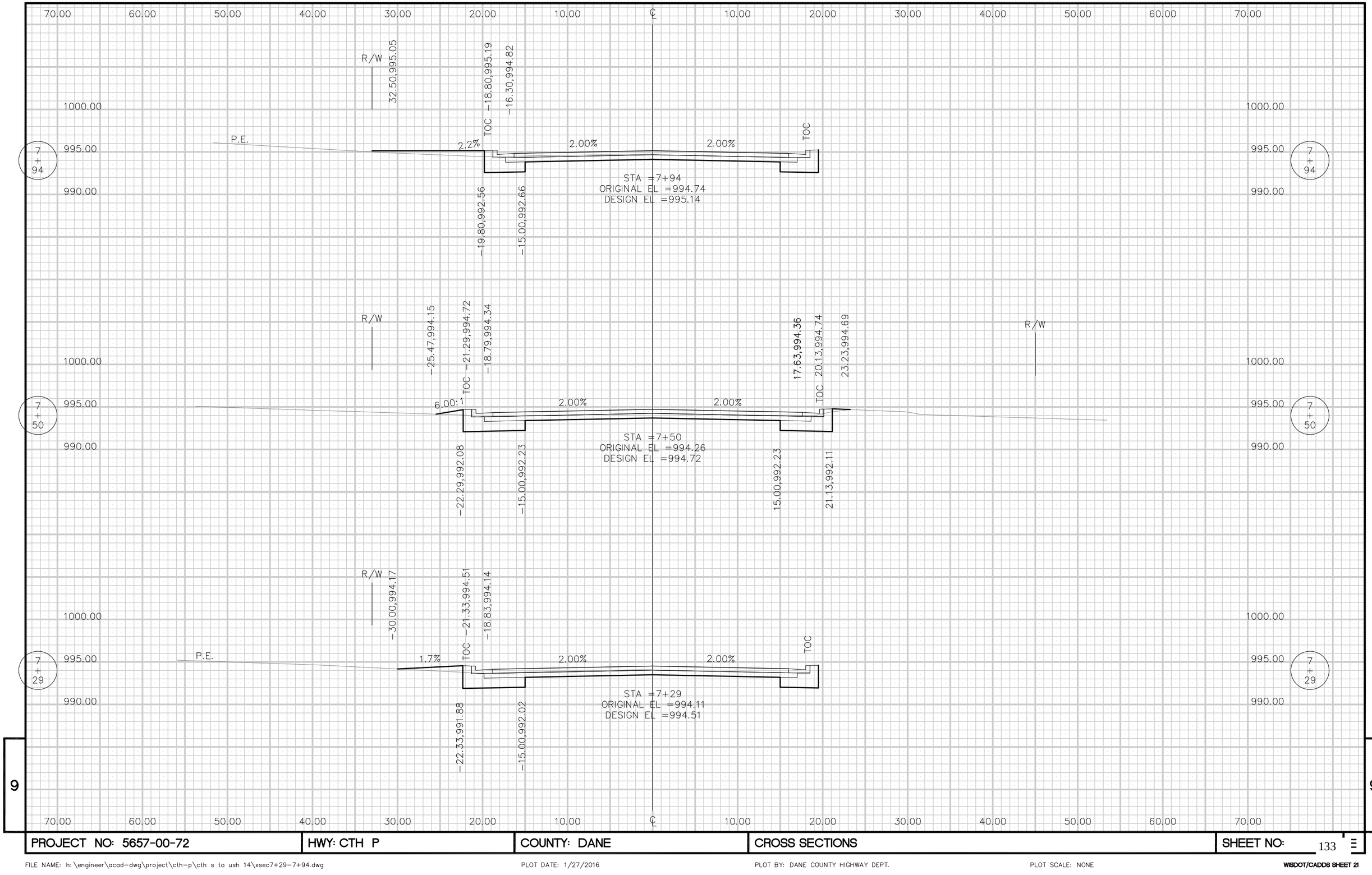


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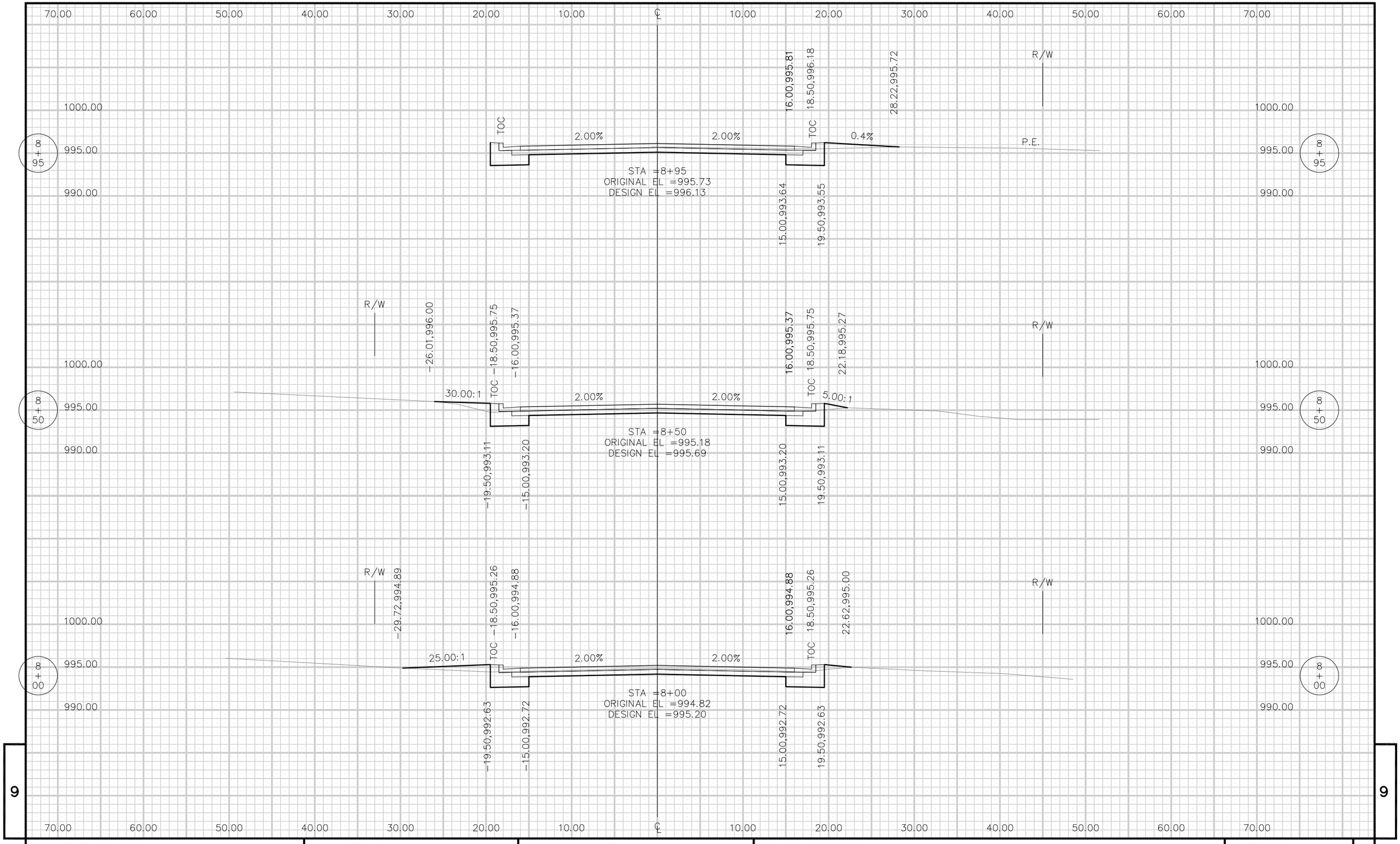
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PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 133

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PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 134

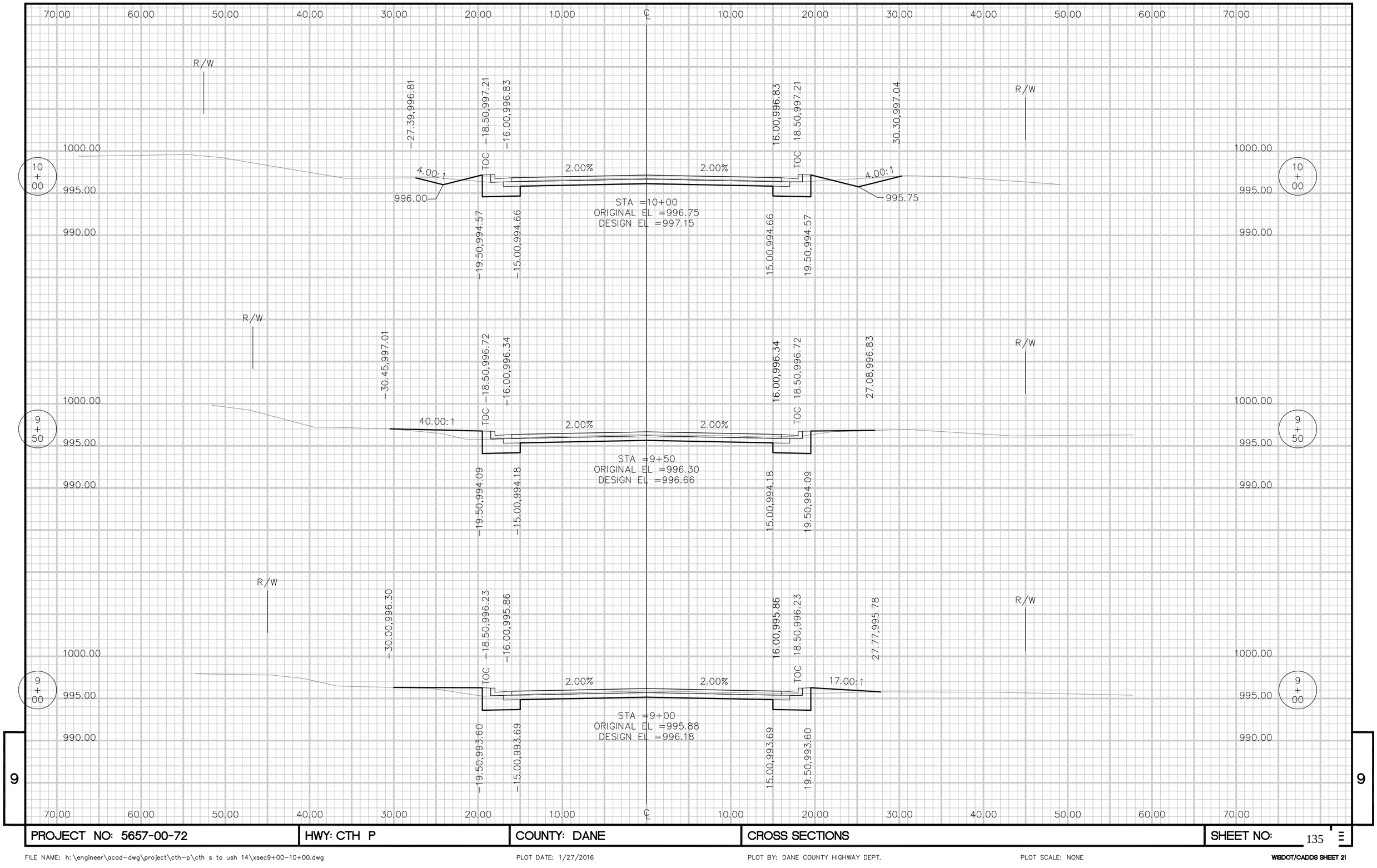
FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec8+00-8+95.dwg

PLOT DATE: 1/27/2016

PLOT BY: DANE COUNTY HIGHWAY DEPT.

PLOT SCALE: NONE

WISDOT/CADDS SHEET 21

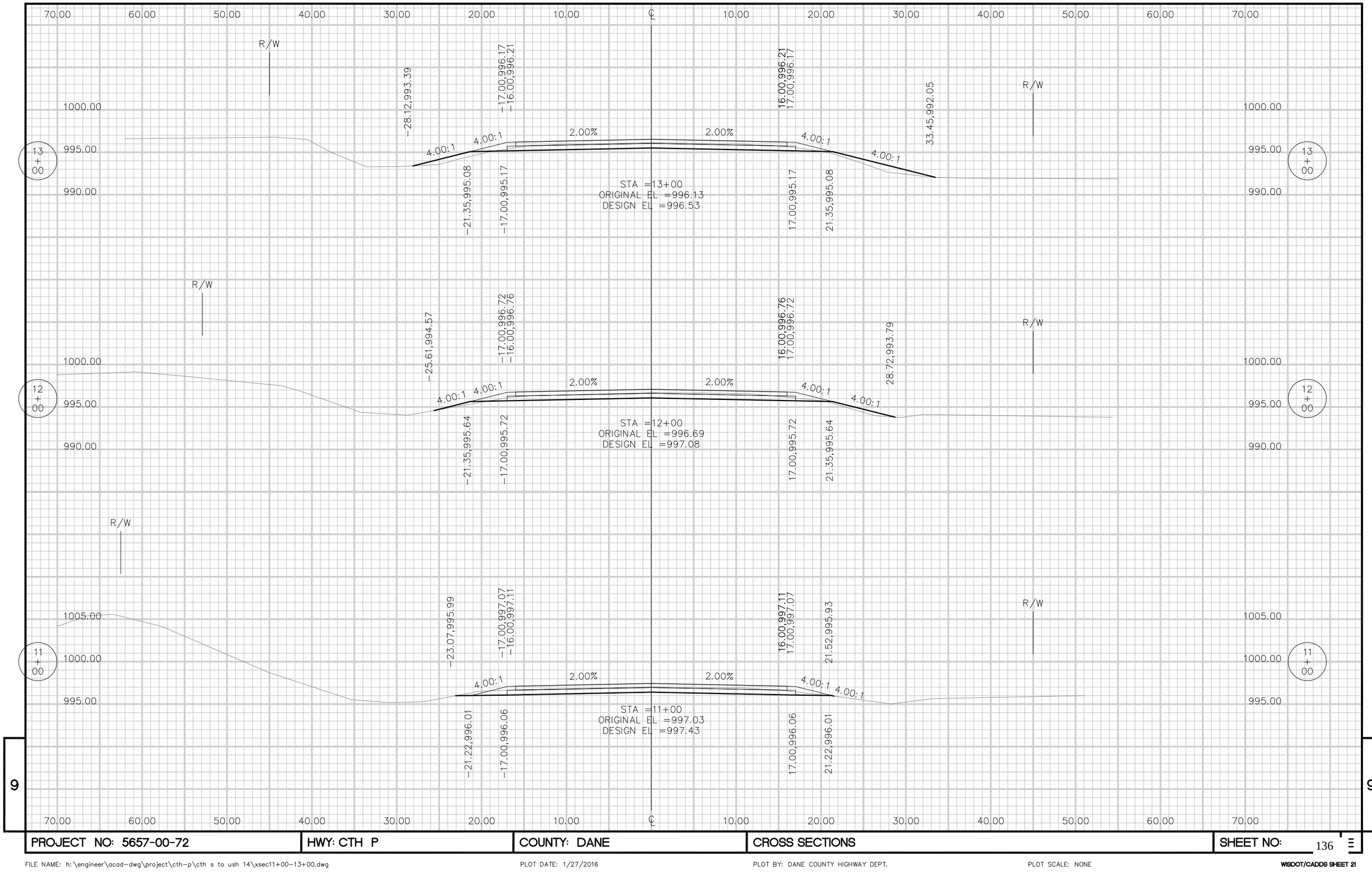


9

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PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 135

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec9+00-10+00.dwg | PLOT DATE: 1/27/2016 | PLOT BY: DANE COUNTY HIGHWAY DEPT. | PLOT SCALE: NONE | WISDOT/CADDS SHEET 21

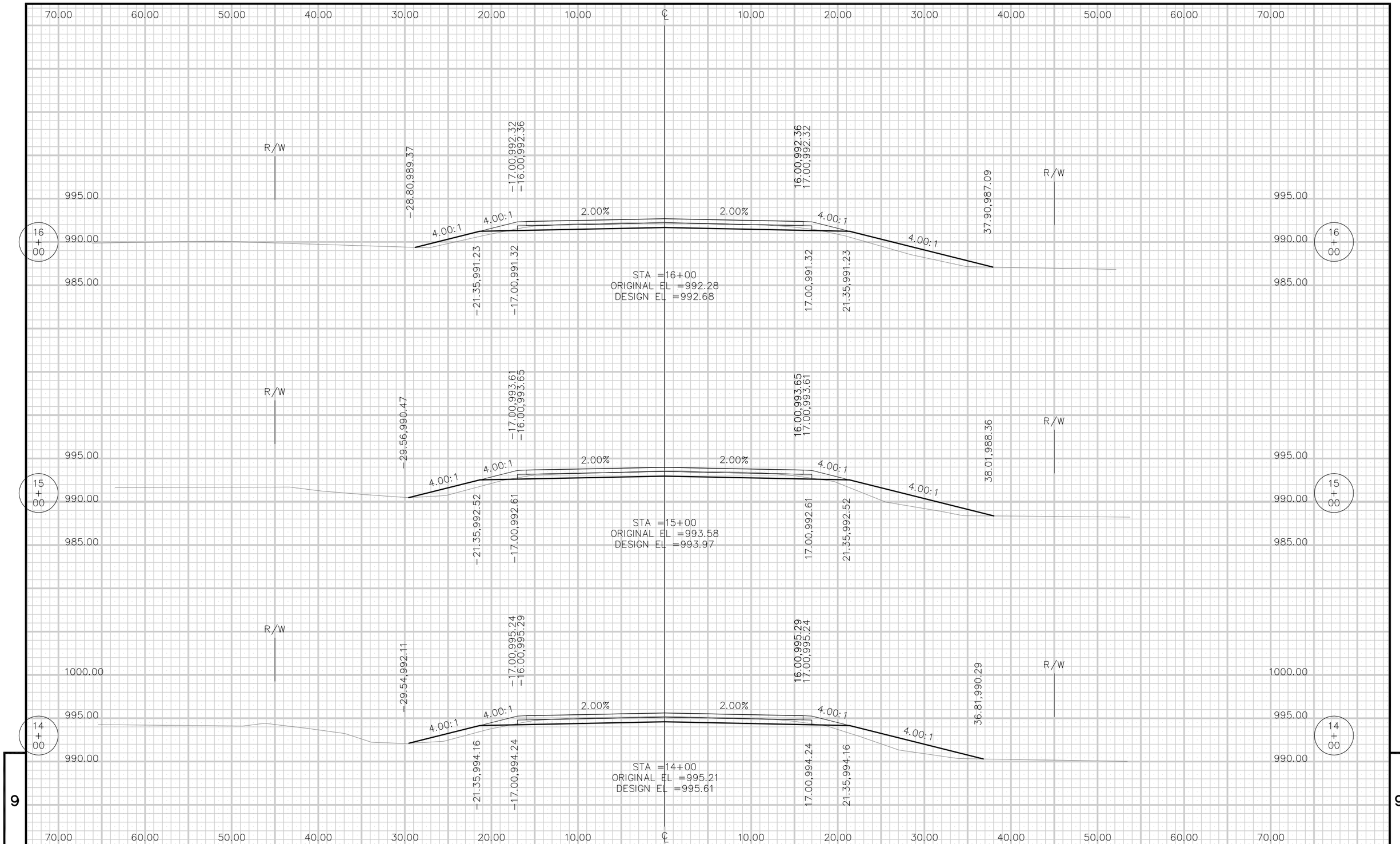


9

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PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 136

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec11+00-13+00.dwg | PLOT DATE: 1/27/2016 | PLOT BY: DANE COUNTY HIGHWAY DEPT. | PLOT SCALE: NONE | WISDOT/CADDS SHEET 21



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PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 137

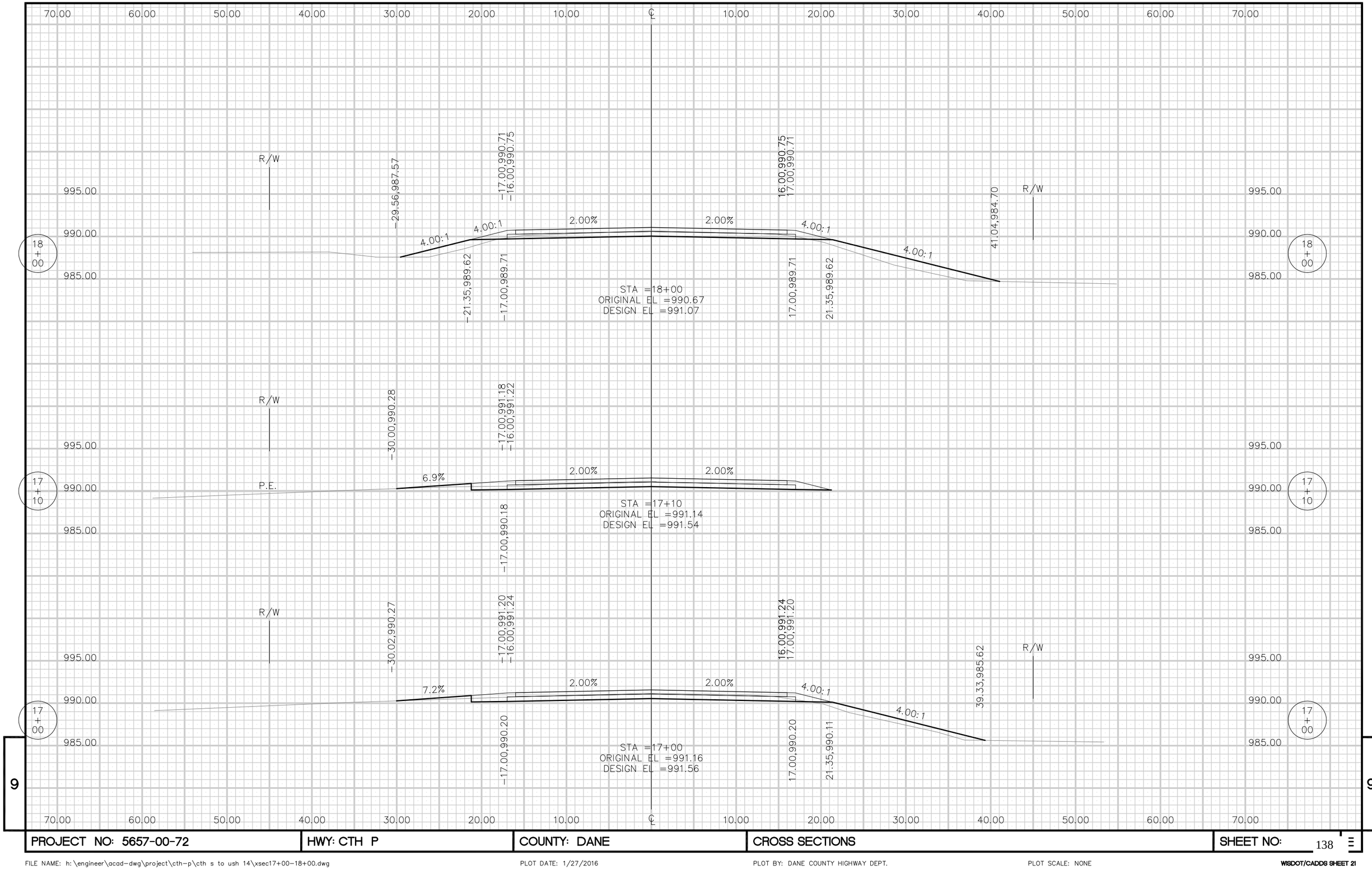
FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec14+00-16+00.dwg

PLOT DATE: 1/27/2016

PLOT BY: DANE COUNTY HIGHWAY DEPT.

PLOT SCALE: NONE

WISDOT/CADDS SHEET 21



PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 138

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec17+00-18+00.dwg | PLOT DATE: 1/27/2016 | PLOT BY: DANE COUNTY HIGHWAY DEPT. | PLOT SCALE: NONE | WISDOT/CADDS SHEET 21

70.00 60.00 50.00 40.00 30.00 20.00 10.00 ℄ 10.00 20.00 30.00 40.00 50.00 60.00 70.00

21 + 00

995.00
990.00
985.00

R/W

-22.34,989.10
-17.00,990.44
-16.00,990.48

16.00,990.48
17.00,990.44
23.21,988.88

4.00:1 4.00:1 2.00% 2.00% 4.00:1 4.00:1

-21.22,989.38
-17.00,989.43

17.00,989.43
21.22,989.38

STA =21+00
ORIGINAL EL =990.57
DESIGN EL =990.80

-17.00,990.53
-16.00,990.57

16.00,990.57
17.00,990.53

20 + 00

990.00
985.00
980.00

R/W

-35.15,986.00

29.60,986.68

4.00:1 4.00:1 2.00% 2.00% 4.00:1 3.00:1

-21.35,989.44
-17.00,989.53

17.00,989.53
21.32,989.45

STA =20+00
ORIGINAL EL =990.50
DESIGN EL =990.89

-17.00,990.50
-16.00,990.54

16.00,990.54
17.00,990.50

19 + 00

990.00
985.00
980.00

R/W

-31.03,986.99

29.96,986.53

4.00:1 4.00:1 2.00% 2.00% 4.00:1 3.00:1

-21.35,989.41
-17.00,989.50

17.00,989.50
21.32,989.42

STA =19+00
ORIGINAL EL =990.47
DESIGN EL =990.86

70.00 60.00 50.00 40.00 30.00 20.00 10.00 ℄ 10.00 20.00 30.00 40.00 50.00 60.00 70.00

9

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 139

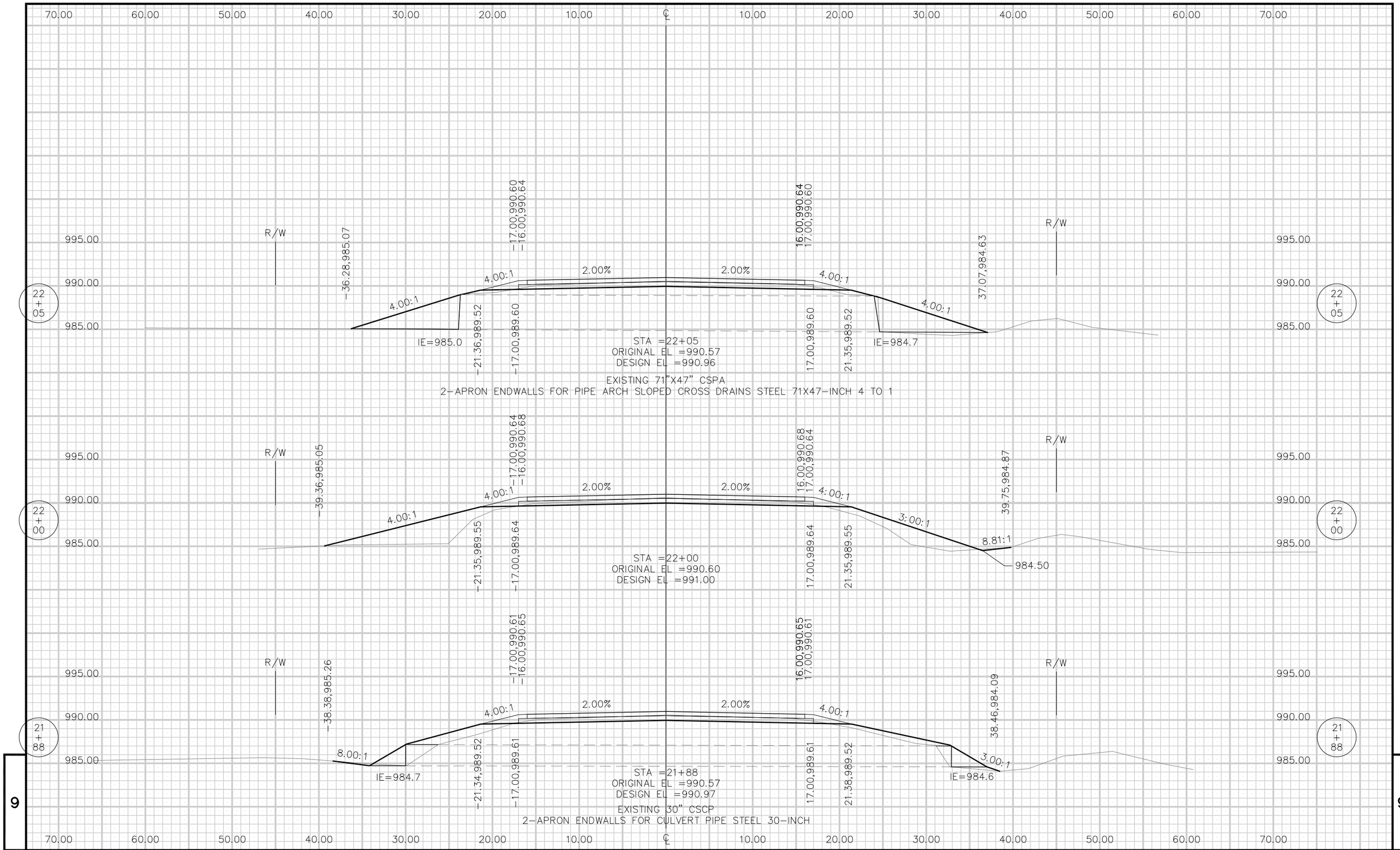
FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec19+00-21+00.dwg

PLOT DATE: 1/27/2016

PLOT BY: DANE COUNTY HIGHWAY DEPT.

PLOT SCALE: NONE

WISDOT/CADDS SHEET 21



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9

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 140

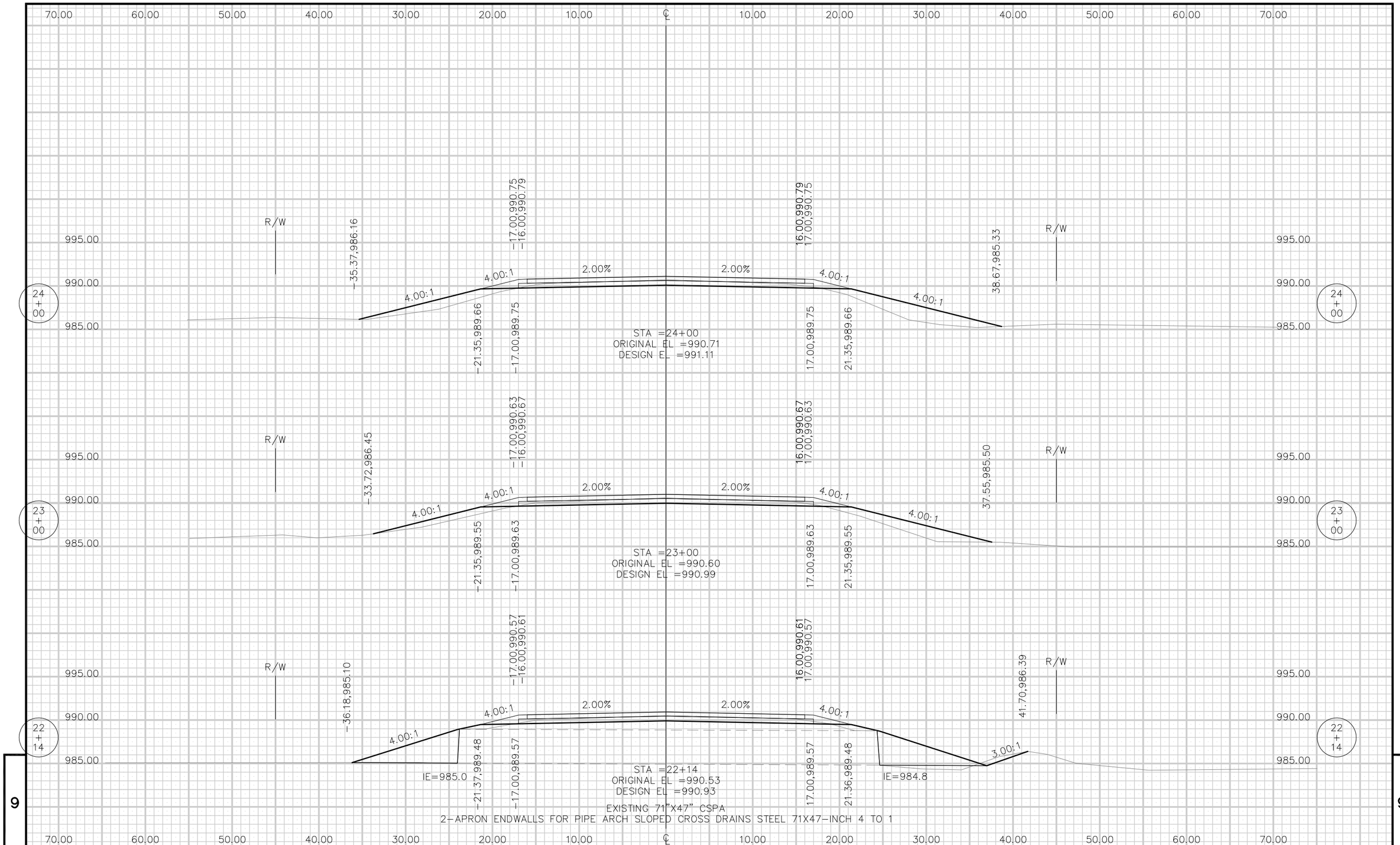
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PLOT DATE: 1/27/2016

PLOT BY: DANE COUNTY HIGHWAY DEPT.

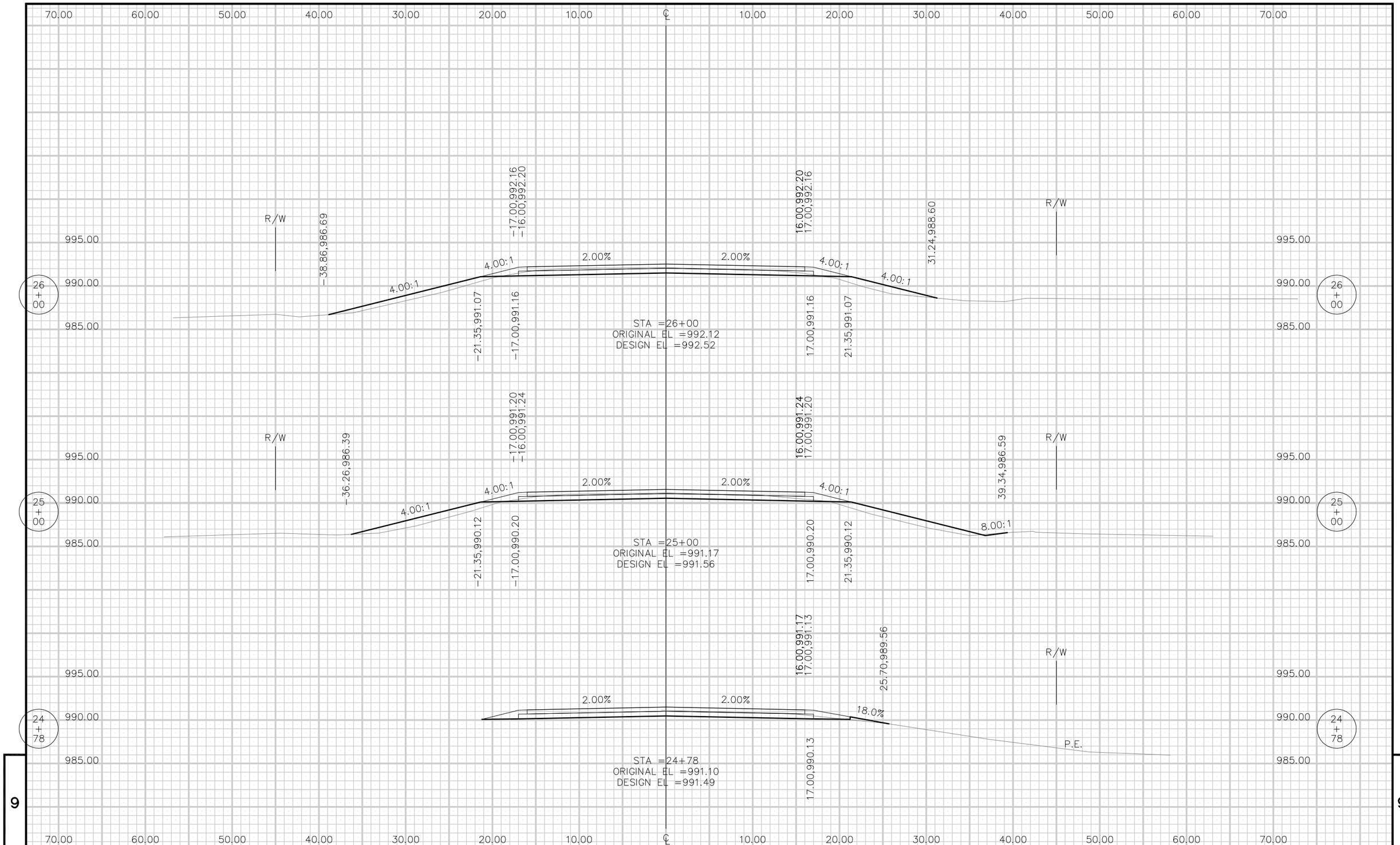
PLOT SCALE: NONE

WISDOT/CADDS SHEET 21



PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 141

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec22+14-24+00.dwg | PLOT DATE: 1/27/2016 | PLOT BY: DANE COUNTY HIGHWAY DEPT. | PLOT SCALE: NONE | WISDOT/CADDS SHEET 21



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PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 142

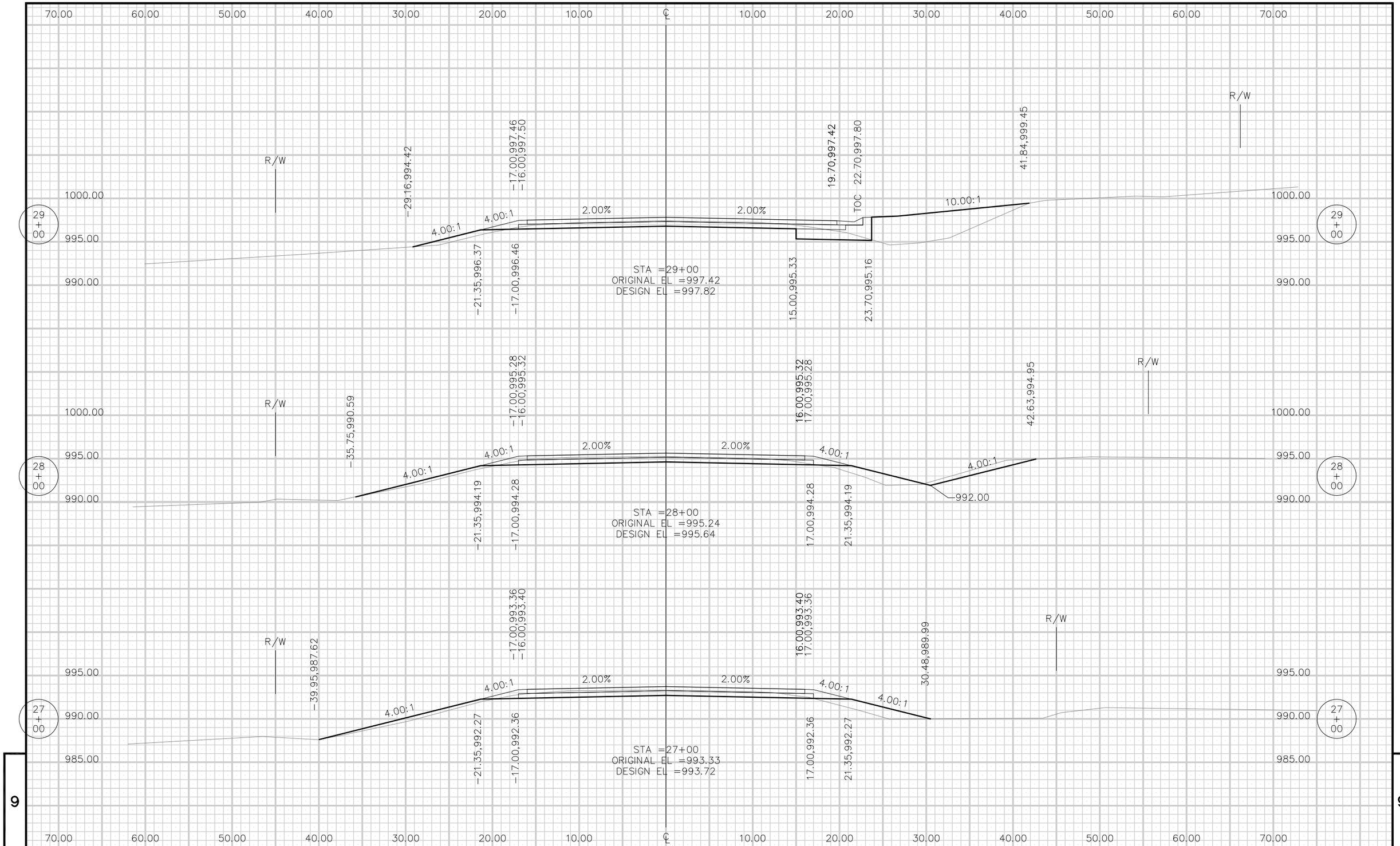
FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec24+78-26+00.dwg

PLOT DATE: 1/27/2016

PLOT BY: DANE COUNTY HIGHWAY DEPT.

PLOT SCALE: NONE

WISDOT/CADDS SHEET 21



PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 143

70.00 60.00 50.00 40.00 30.00 20.00 10.00 ℄ 10.00 20.00 30.00 40.00 50.00 60.00 70.00

R/W

28.00,1002.17 TOC 31.00,1002.54 39.00,1002.67

1005.00 1000.00 995.00

31 + 50

OBSERVATORY ROAD

2.00% 80.00:1

STA =31+50
ORIGINAL EL =1002.33
DESIGN EL =1002.73

15.00,1000.24 32.00,999.90

1010.00 1005.00 1000.00

31 + 00

-35.94,998.82 -20.00,1001.65 -17.00,1001.27

4.00:1 TOC 2.00% 2.00% 25.00:1

28.00,1001.05 TOC 31.00,1001.43 36.77,1001.66

-21.00,999.00 -15.00,999.12

STA =31+00
ORIGINAL EL =1001.22
DESIGN EL =1001.61

15.00,999.12 32.00,998.78

R/W

30 + 00

-29.64,996.23 -17.00,999.39 -16.00,999.43

4.00:1 4.00:1 2.00% 2.00% 25.00:1

27.53,999.20 TOC 30.53,999.57 40.95,999.99

-21.35,998.30 -17.00,998.39

STA =30+00
ORIGINAL EL =999.35
DESIGN EL =999.75

15.00,997.26 31.53,996.93

70.00 60.00 50.00 40.00 30.00 20.00 10.00 ℄ 10.00 20.00 30.00 40.00 50.00 60.00 70.00

9 9

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 144

70.00 60.00 50.00 40.00 30.00 20.00 10.00 ℄ 10.00 20.00 30.00 40.00 50.00 60.00 70.00

1005.00
1000.00
995.00

33 + 00

R/W

-38.51,998.72

4.00:1

-22.36,1002.76

-18.14,1003.81

-16.00,1003.90

4.00:1

-18.14,1002.81

2.00%

2.00%

STA =33+00
ORIGINAL EL =1003.82
DESIGN EL =1004.22

15.00,1001.73

25.70,1003.70

TOC 28.70,1004.08

29.70,1001.43

25.00:1

42.22,1004.62

R/W

1010.00
1005.00
1000.00

32 + 50

R/W

-27.38,1000.97

4.00:1

-22.99,1002.07

-18.61,1003.17

-16.00,1003.27

4.00:1

-18.61,1002.17

2.00%

2.00%

STA =32+50
ORIGINAL EL =1003.20
DESIGN EL =1003.59

15.00,1001.10

28.00,1003.03

TOC 31.00,1003.41

32.00,1000.76

25.00:1

43.20,1003.89

R/W

1010.00
1005.00
1000.00

32 + 00

R/W

-50.09,998.49

4.00:1

-27.79,1000.51

TOC -26.79,1003.16

-23.79,1002.78

-15.00,1000.77

2.00%

2.00%

STA =32+00
ORIGINAL EL =1002.86
DESIGN EL =1003.26

15.00,1000.77

28.00,1002.70

TOC 31.00,1003.07

32.00,1000.43

25.00:1

48.88,1003.79

R/W

70.00 60.00 50.00 40.00 30.00 20.00 10.00 ℄ 10.00 20.00 30.00 40.00 50.00 60.00 70.00

9

9

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 145

70.00 60.00 50.00 40.00 30.00 20.00 10.00 ℄ 10.00 20.00 30.00 40.00 50.00 60.00 70.00

R/W

-36.44,1000.06

-17.00,1006.19
-16.00,1006.23

16.00,1006.23
17.00,1006.19

30.13,1002.16

1005.00
1000.00
995.00

35 + 00

4.00:1 2.00% 2.00% 4.00:1 3.00:1 3.00:1

-21.31,1005.10

-17.00,1005.19

17.00,1005.19

21.31,1005.10

1002.16

STA =35+00
ORIGINAL EL =1006.15
DESIGN EL =1006.55

R/W

-39.12,998.62

-17.04,1005.37
-16.00,1005.41

19.52,1005.34

22.52,1005.72

38.86,1004.60

1005.00
1000.00
995.00

34 + 18

4.00:1 2.00% 2.00% 10.00:1 5.00:1

IE=999.3

-21.26,1004.32

-17.04,1004.37

15.00,1003.24

23.52,1003.07

SEE STORM SEWER
DETAIL SHEET

STA =34+18
ORIGINAL EL =1005.34
DESIGN EL =1005.73

EXISTING 24" RCCP
RELAID STORM SEWER 24-INCH - 16' LT & 16' RT
EXTEND 2'LT
1-APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH

R/W

-34.15,999.80

-17.21,1005.09
-16.00,1005.14

20.47,1005.05

TOC 23.47,1005.42

38.72,1004.48

1005.00
1000.00
995.00

34 + 00

4.00:1 2.00% 2.00% 14.50:1 3.00:1

-21.53,1004.00

-17.21,1004.09

15.00,1002.97

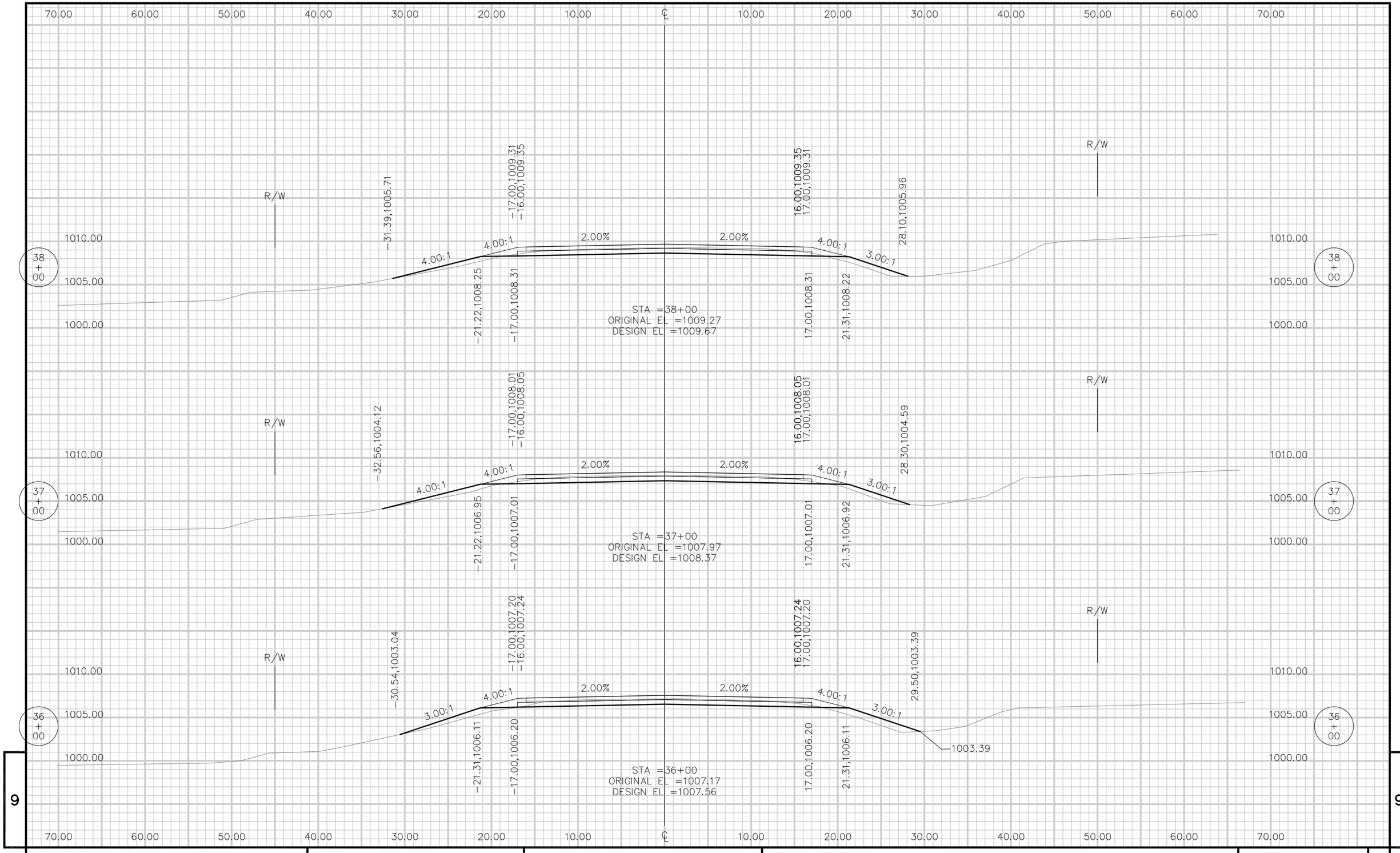
24.47,1002.78

STA =34+00
ORIGINAL EL =1005.06
DESIGN EL =1005.46

70.00 60.00 50.00 40.00 30.00 20.00 10.00 ℄ 10.00 20.00 30.00 40.00 50.00 60.00 70.00

9 9

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 146



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PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 147

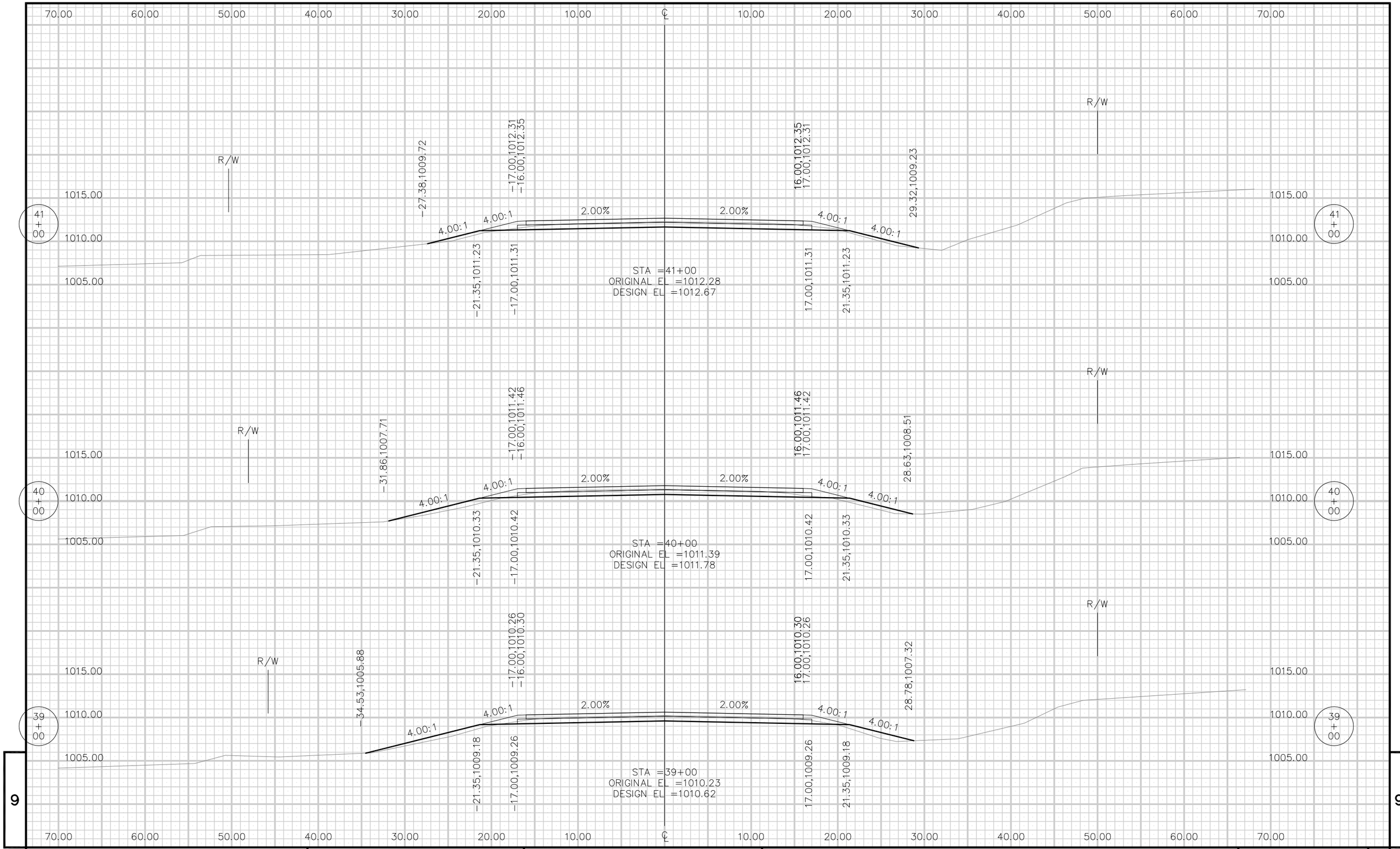
FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec36+00-38+00.dwg

PLOT DATE: 1/27/2016

PLOT BY: DANE COUNTY HIGHWAY DEPT.

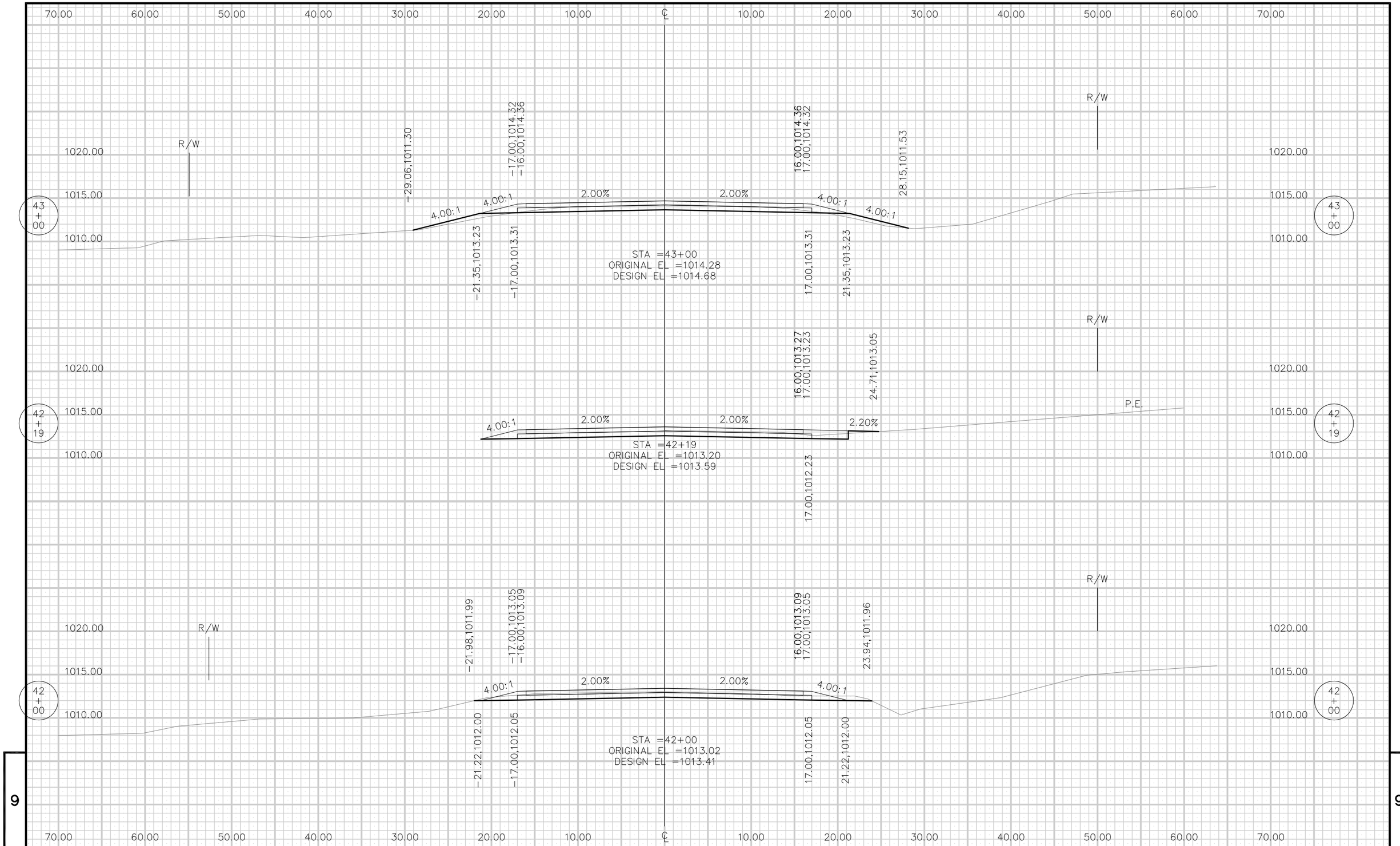
PLOT SCALE: NONE

WISDOT/CADDS SHEET 21



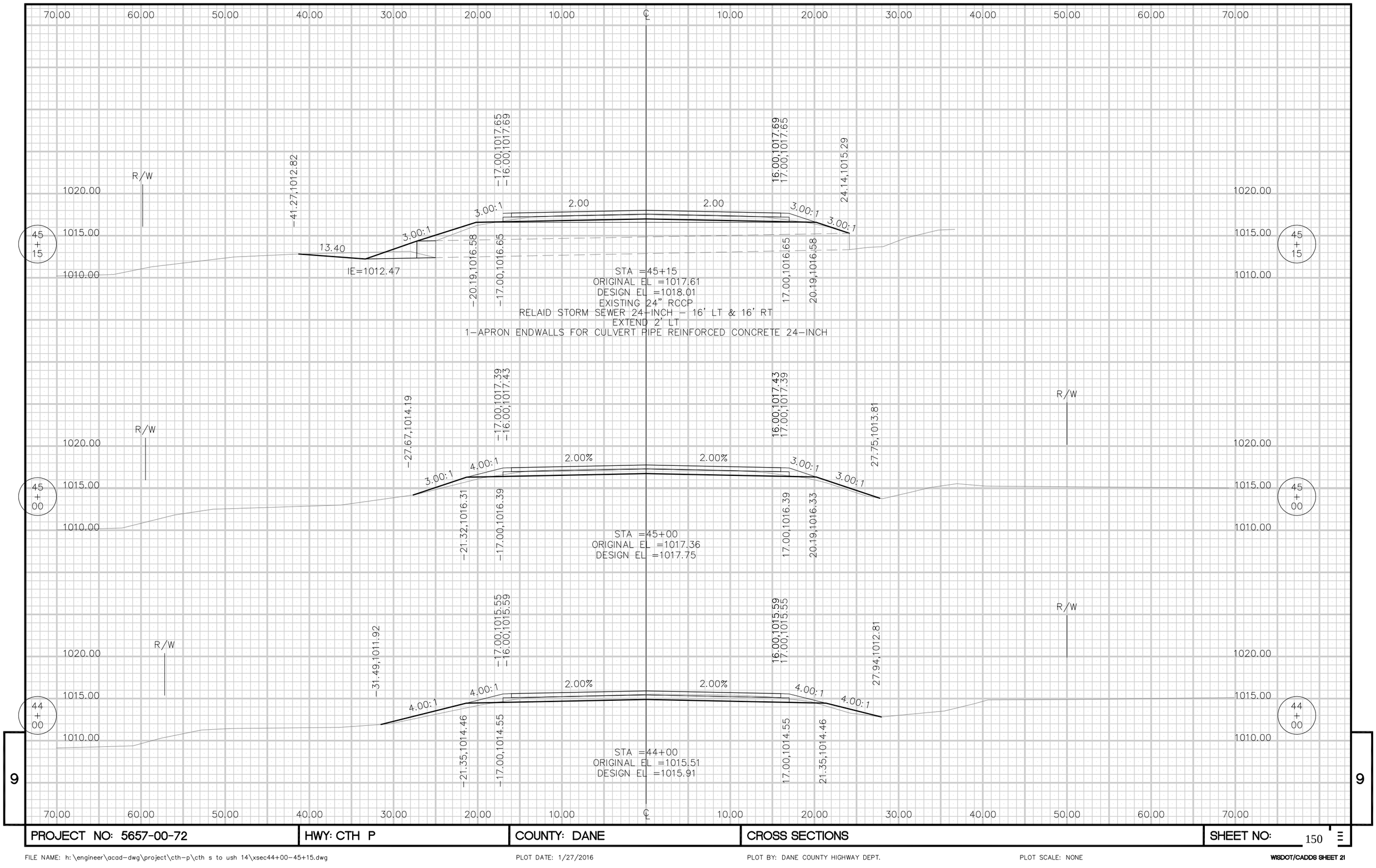
PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 148

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec39+00-41+00.dwg | PLOT DATE: 1/27/2016 | PLOT BY: DANE COUNTY HIGHWAY DEPT. | PLOT SCALE: NONE | WISDOT/CADDS SHEET 21



PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 149

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec42+00-43+00.dwg | PLOT DATE: 1/27/2016 | PLOT BY: DANE COUNTY HIGHWAY DEPT. | PLOT SCALE: NONE | WISDOT/CADDS SHEET 21

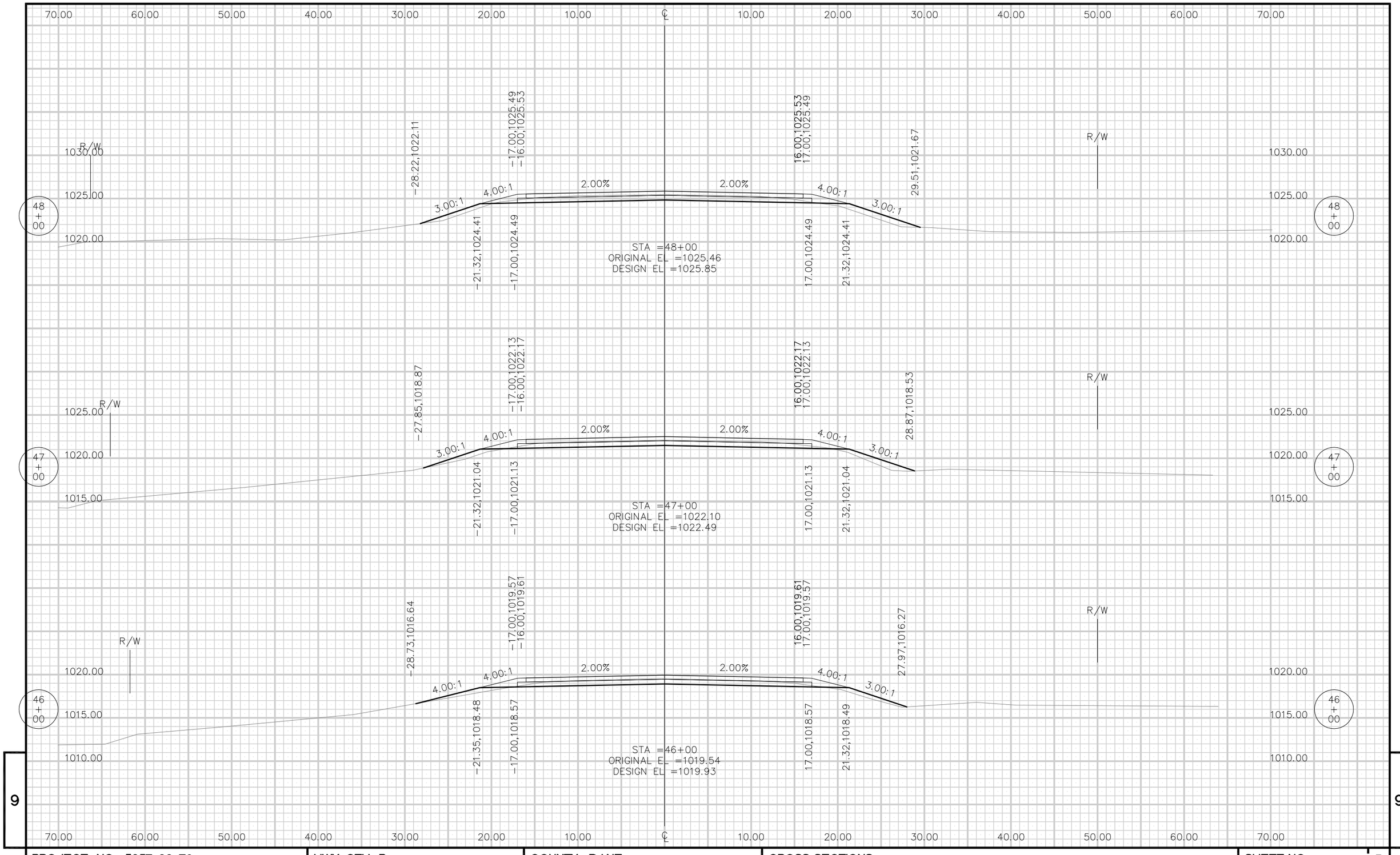


9

9

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 150

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec44+00-45+15.dwg | PLOT DATE: 1/27/2016 | PLOT BY: DANE COUNTY HIGHWAY DEPT. | PLOT SCALE: NONE | WISDOT/CADDS SHEET 21

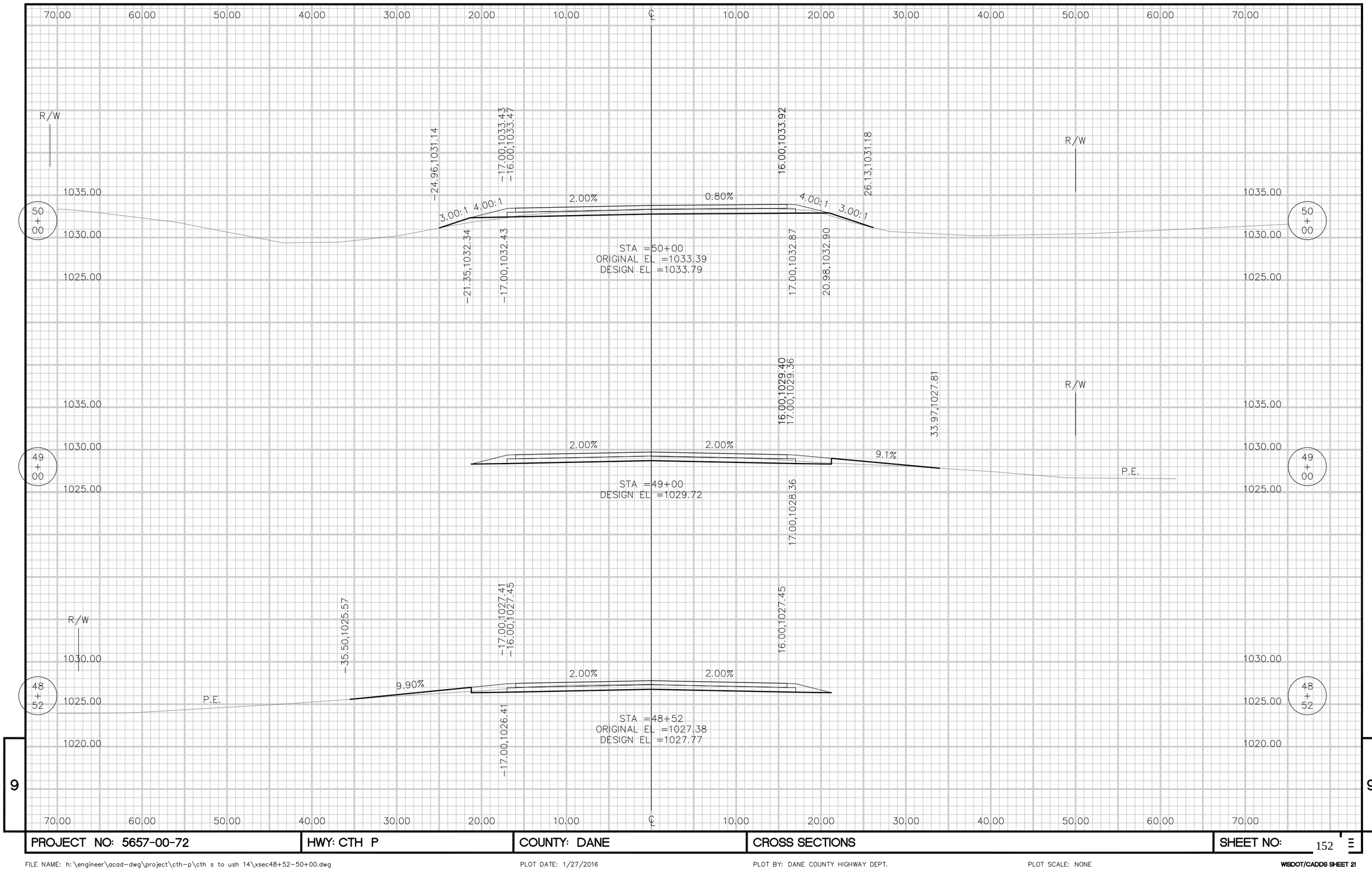


9

9

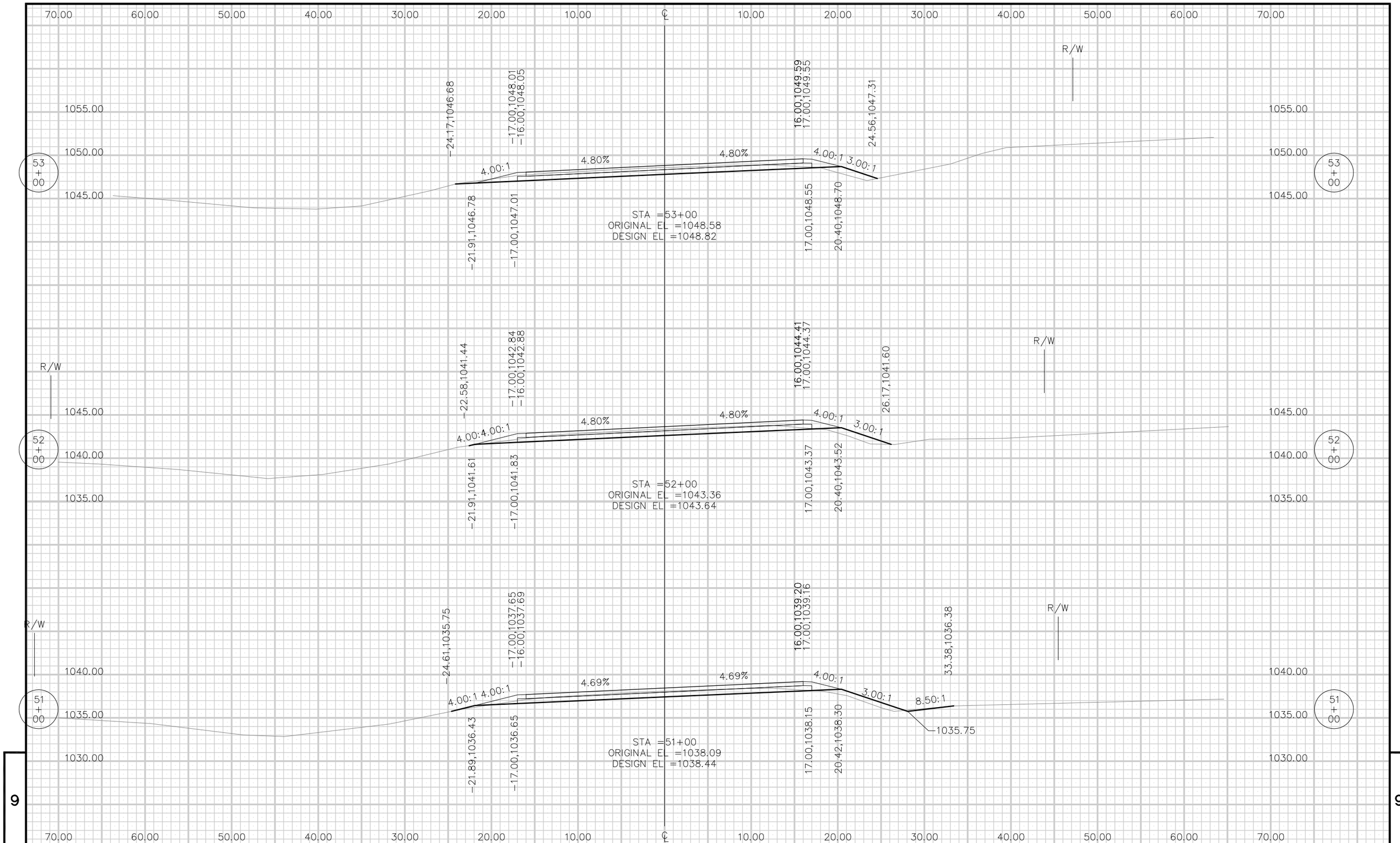
PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 151

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec46+00-48+00.dwg | PLOT DATE: 1/27/2016 | PLOT BY: DANE COUNTY HIGHWAY DEPT. | PLOT SCALE: NONE | WISDOT/CADDS SHEET 21



PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 152

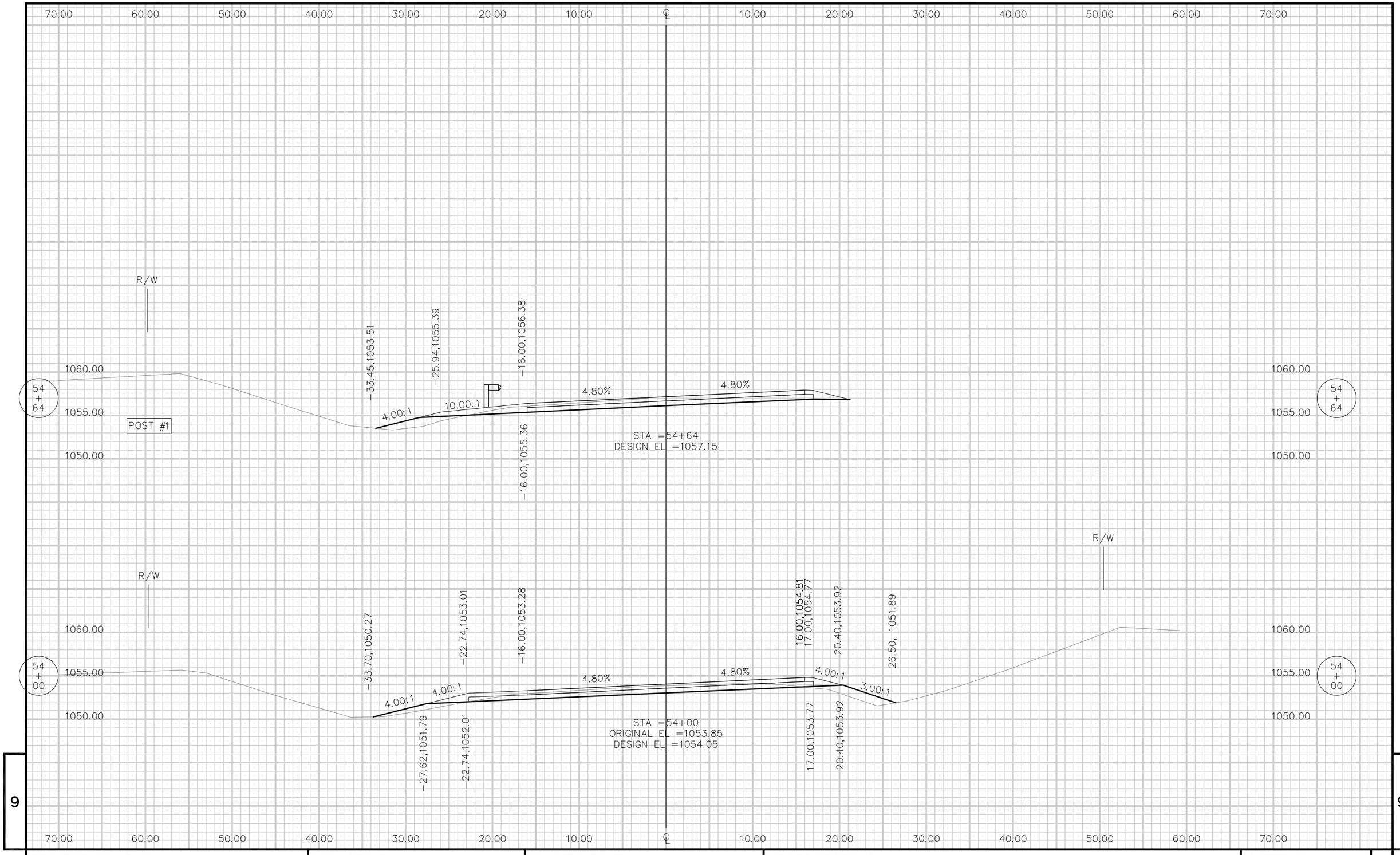
FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec48+52-50+00.dwg | PLOT DATE: 1/27/2016 | PLOT BY: DANE COUNTY HIGHWAY DEPT. | PLOT SCALE: NONE | WISDOT/CADDS SHEET 21



9

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PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 153



9

9

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 154

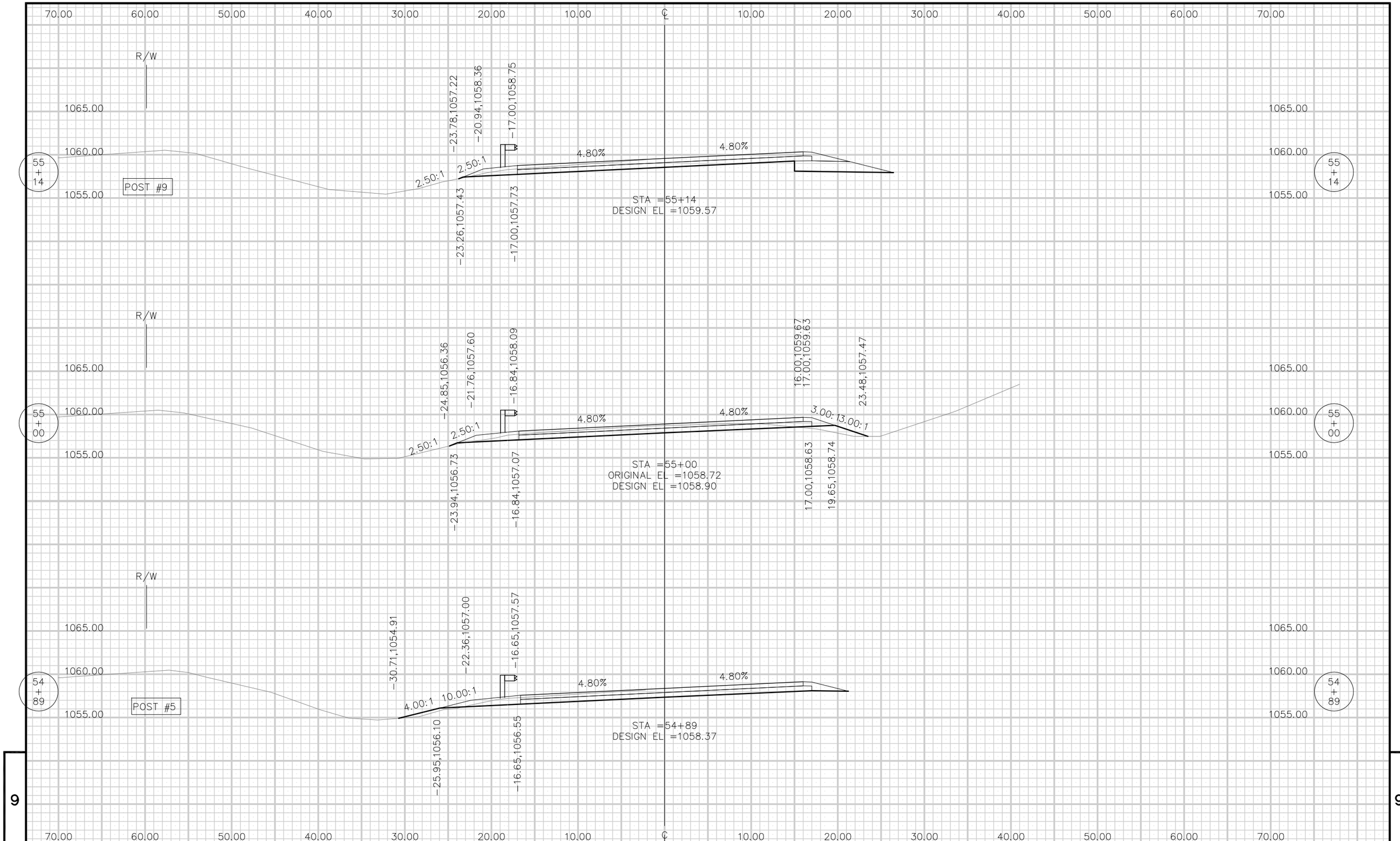
FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec54+00-54+64.dwg

PLOT DATE: 1/27/2016

PLOT BY: DANE COUNTY HIGHWAY DEPT.

PLOT SCALE: NONE

WISDOT/CADDS SHEET 21



9

9

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 155

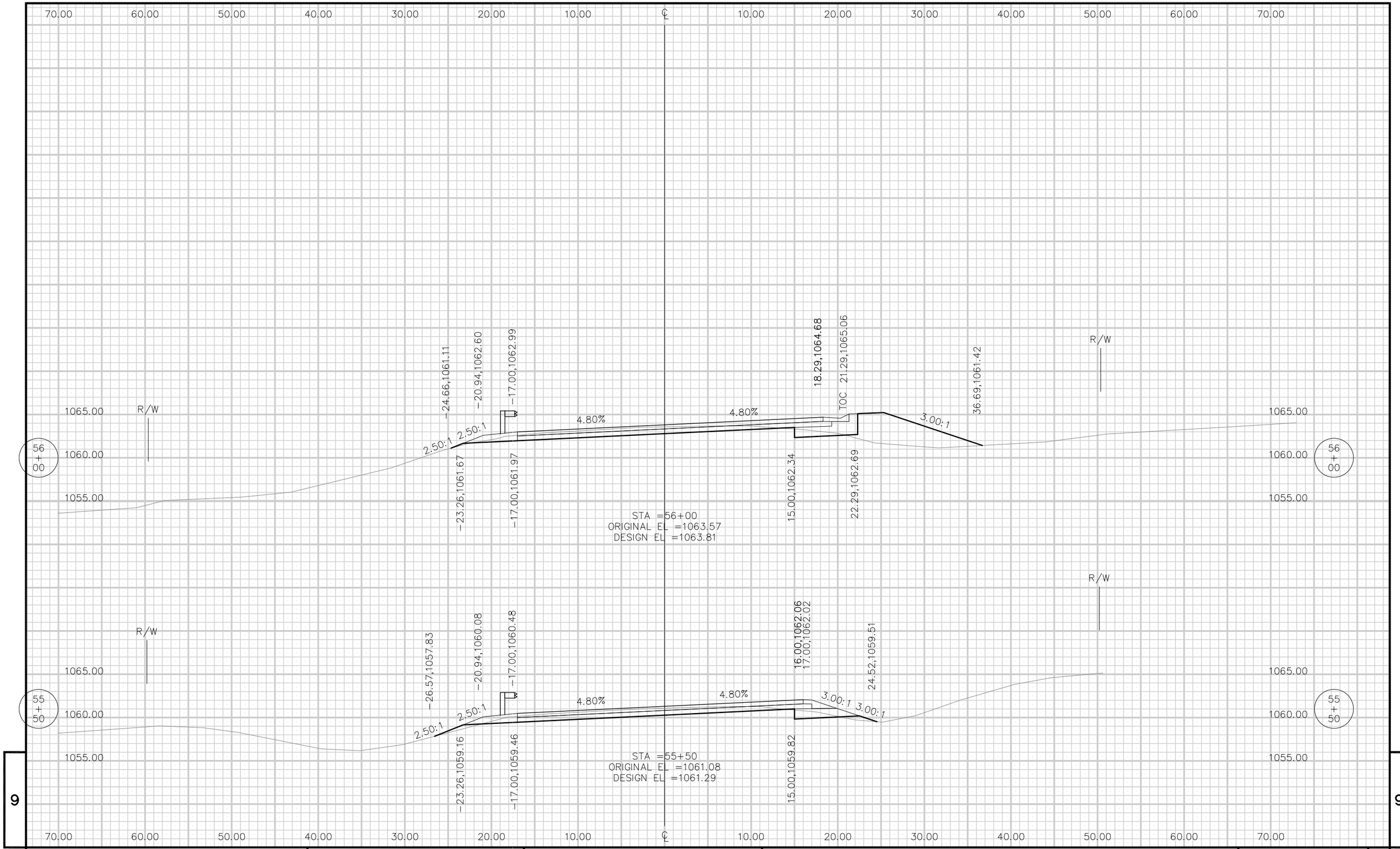
FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec54+89-55+14.dwg

PLOT DATE: 1/27/2016

PLOT BY: DANE COUNTY HIGHWAY DEPT.

PLOT SCALE: NONE

WISDOT/CADDS SHEET 21



PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 156

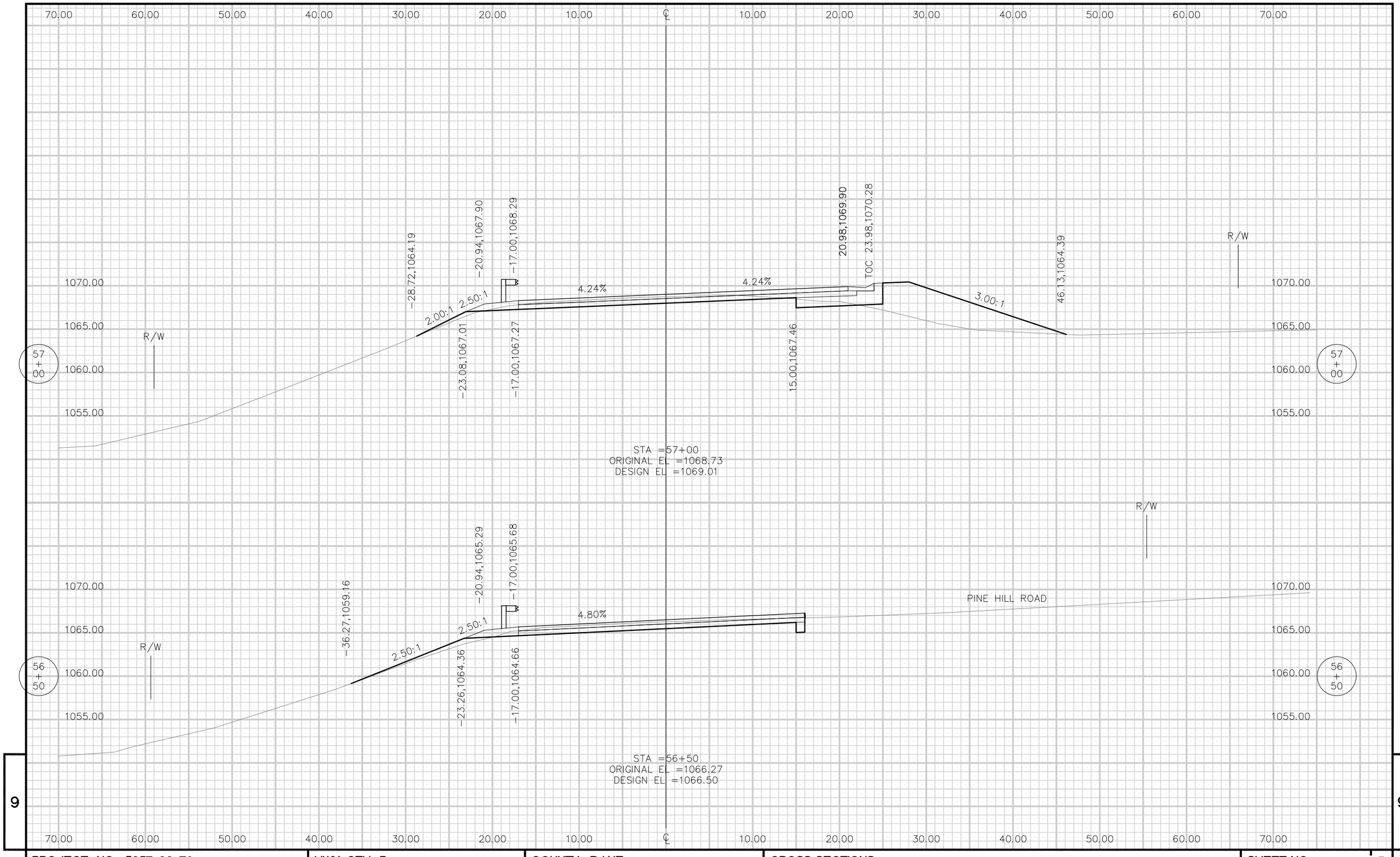
FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec55+50-56+00.dwg

PLOT DATE: 1/27/2016

PLOT BY: DANE COUNTY HIGHWAY DEPT.

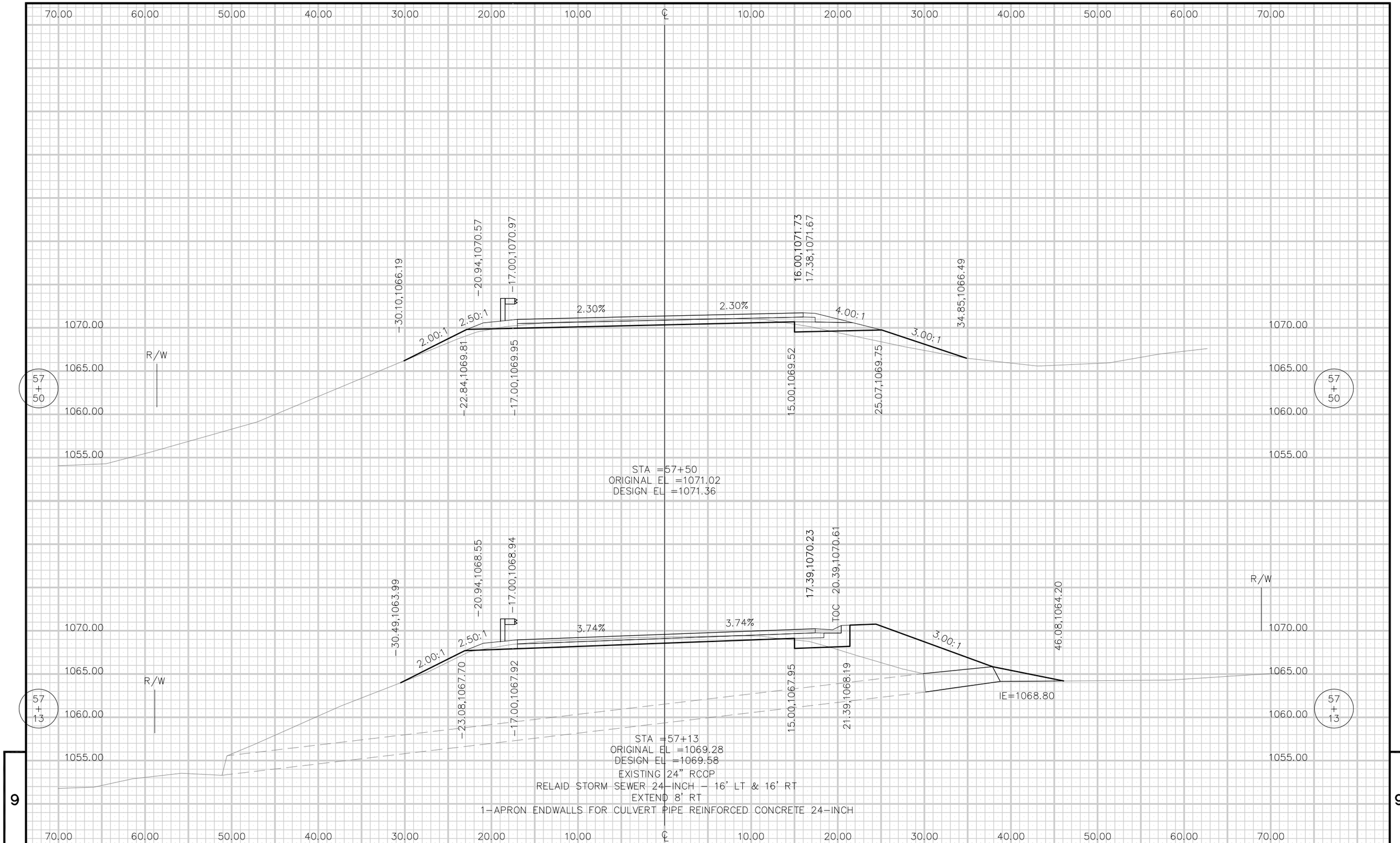
PLOT SCALE: NONE

WISDOT/CADDS SHEET 21



PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 157

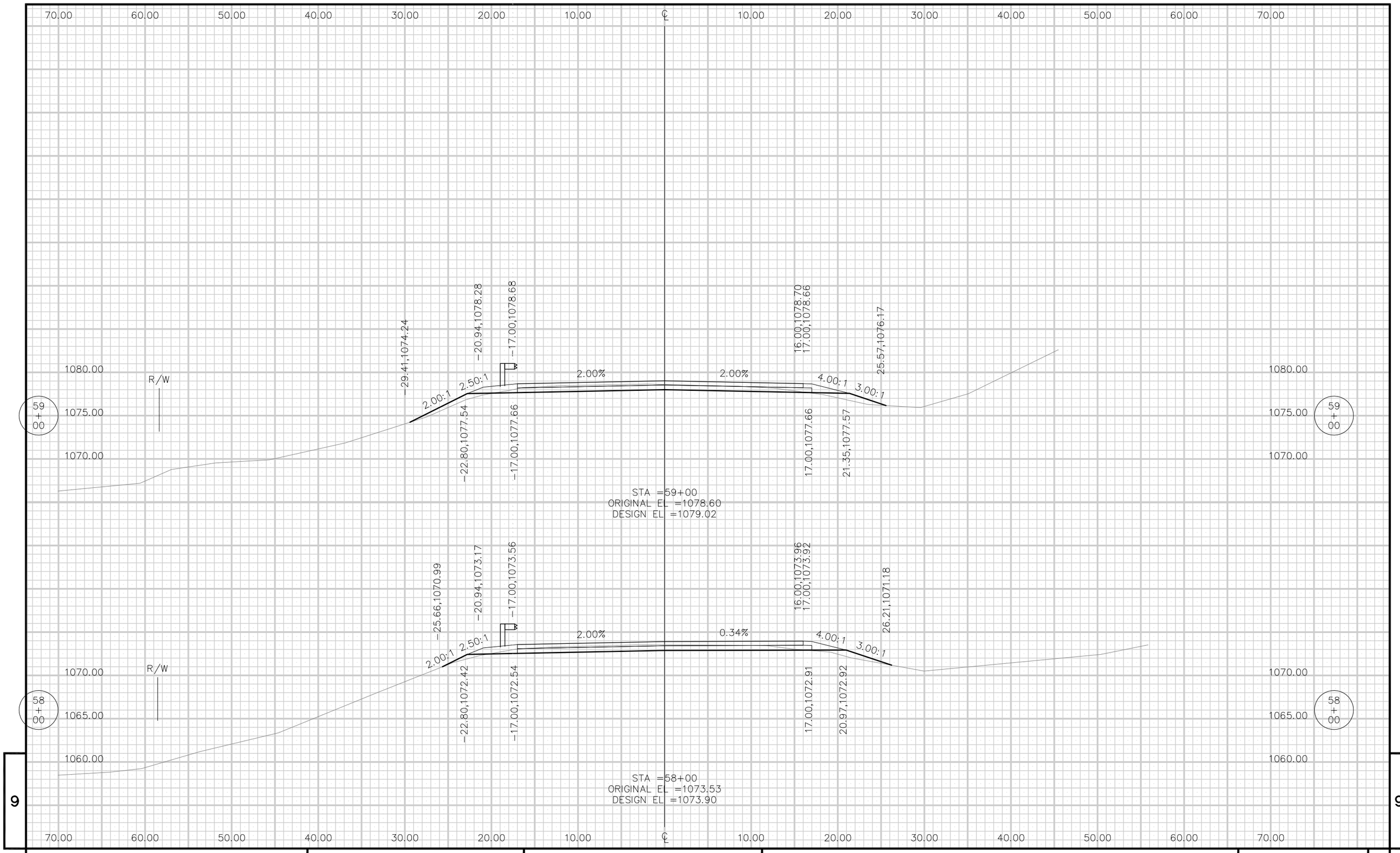
FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec56+50-57+00.dwg | PLOT DATE: 1/27/2016 | PLOT BY: DANE COUNTY HIGHWAY DEPT. | PLOT SCALE: NONE | WISDOT/CADDS SHEET 21



9

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 158

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec57+13-57+50.dwg | PLOT DATE: 1/27/2016 | PLOT BY: DANE COUNTY HIGHWAY DEPT. | PLOT SCALE: NONE | WISDOT/CADDS SHEET 21



9

9

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 159

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec58+00-59+00.dwg

PLOT DATE: 1/27/2016

PLOT BY: DANE COUNTY HIGHWAY DEPT.

PLOT SCALE: NONE

WISDOT/CADDS SHEET 21

70.00 60.00 50.00 40.00 30.00 20.00 10.00 ℄ 10.00 20.00 30.00 40.00 50.00 60.00 70.00

1090.00
1085.00
1080.00

60 + 64

POST #5

-35.95,1083.09
-22.33,1086.49
-16.50,1087.08
4.00:1
4.00:1
2.00%
2.00%
-24.74,1085.89
-16.50,1086.06

STA =60+64
DESIGN EL =1087.41

60 + 39

POST #9

-27.25,1082.83
-20.94,1085.35
-17.00,1085.74
2.50:1
2.50:1
2.50:1
2.00%
2.00%
-22.80,1084.60
-17.00,1084.72

STA =60+39
DESIGN EL =1086.08

R/W

60 + 00

-27.02,1080.85
-20.94,1083.28
-17.00,1083.67
16.00,1083.69
17.00,1083.65
26.18,1080.95
2.50:1
2.50:1
2.50:1
2.00%
2.00%
4.00:1
3.00:1
-22.80,1082.54
-17.00,1082.65
17.00,1082.65
21.35,1082.57

STA =60+00
ORIGINAL EL =1083.60
DESIGN EL =1084.01

9

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 160

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec60+00-60+64.dwg

PLOT DATE: 1/27/2016

PLOT BY: DANE COUNTY HIGHWAY DEPT.

PLOT SCALE: NONE

WISDOT/CADDS SHEET 21

70.00 60.00 50.00 40.00 30.00 20.00 10.00 ℄ 10.00 20.00 30.00 40.00 50.00 60.00 70.00

R/W

1095.00
1090.00
1085.00

62+00

-34.21,1089.47
-18.53,1093.39
-16.00,1093.49
16.00,1093.49
17.00,1093.45
25.28,1091.06

4.00:1 4.00:1 2.00% 2.00% 4.00:1 3.00:1

-22.76,1092.33
-18.53,1092.39
17.00,1092.45
21.35,1092.36

STA =62+00
ORIGINAL EL =1093.41
DESIGN EL =1093.81

R/W

1095.00
1090.00
1085.00

61+00

-40.33,1084.85
-25.21,1088.63
-16.00,1089.00
16.00,1089.00
17.00,1088.96
26.57,1086.13

4.00:1 4.00:1 2.00% 2.00% 4.00:1 3.00:1

-29.69,1087.51
-25.21,1087.63
17.00,1087.96
21.35,1087.87

STA =61+00
ORIGINAL EL =1088.91
DESIGN EL =1089.32

1090.00
1085.00
1080.00

60+89

POST #1

-40.68,1084.33
-25.94,1088.01
-16.00,1088.41
16.00,1088.41

4.00:1 4.00:1 2.00% 2.00%

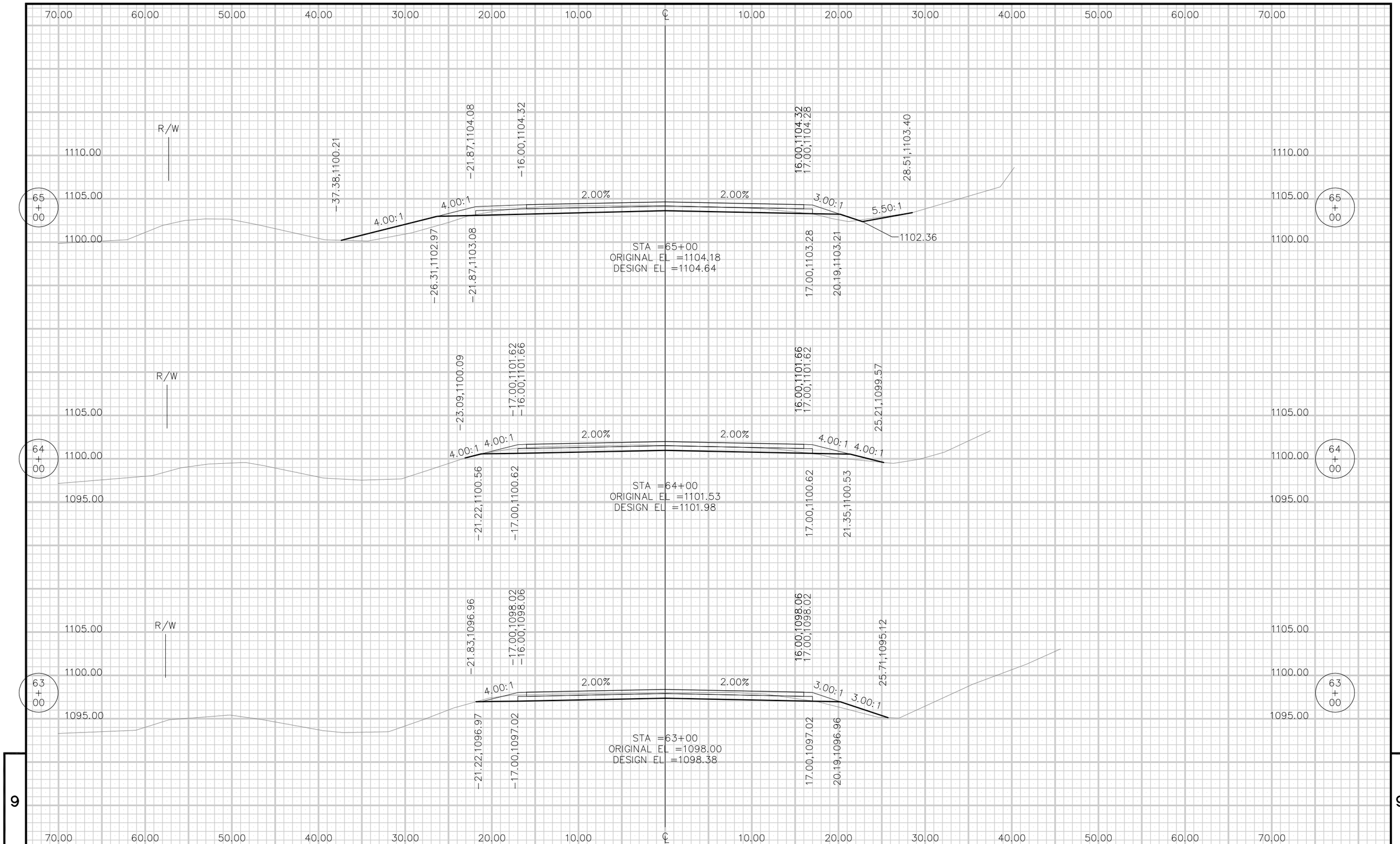
-30.16,1086.96
-25.94,1087.01

STA =60+89
DESIGN EL =1088.73

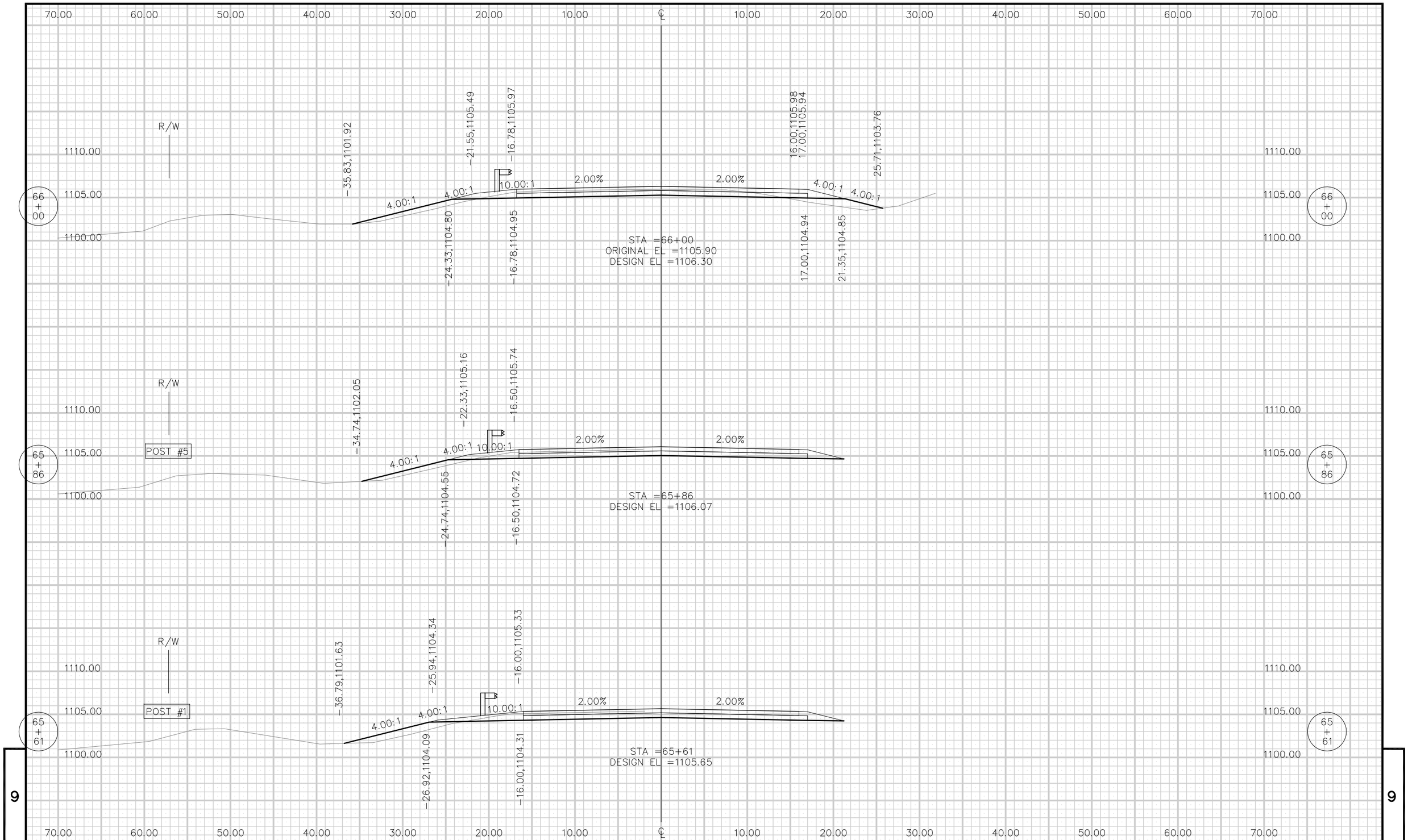
9 9

70.00 60.00 50.00 40.00 30.00 20.00 10.00 ℄ 10.00 20.00 30.00 40.00 50.00 60.00 70.00

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 161



PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 162



9

9

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 163

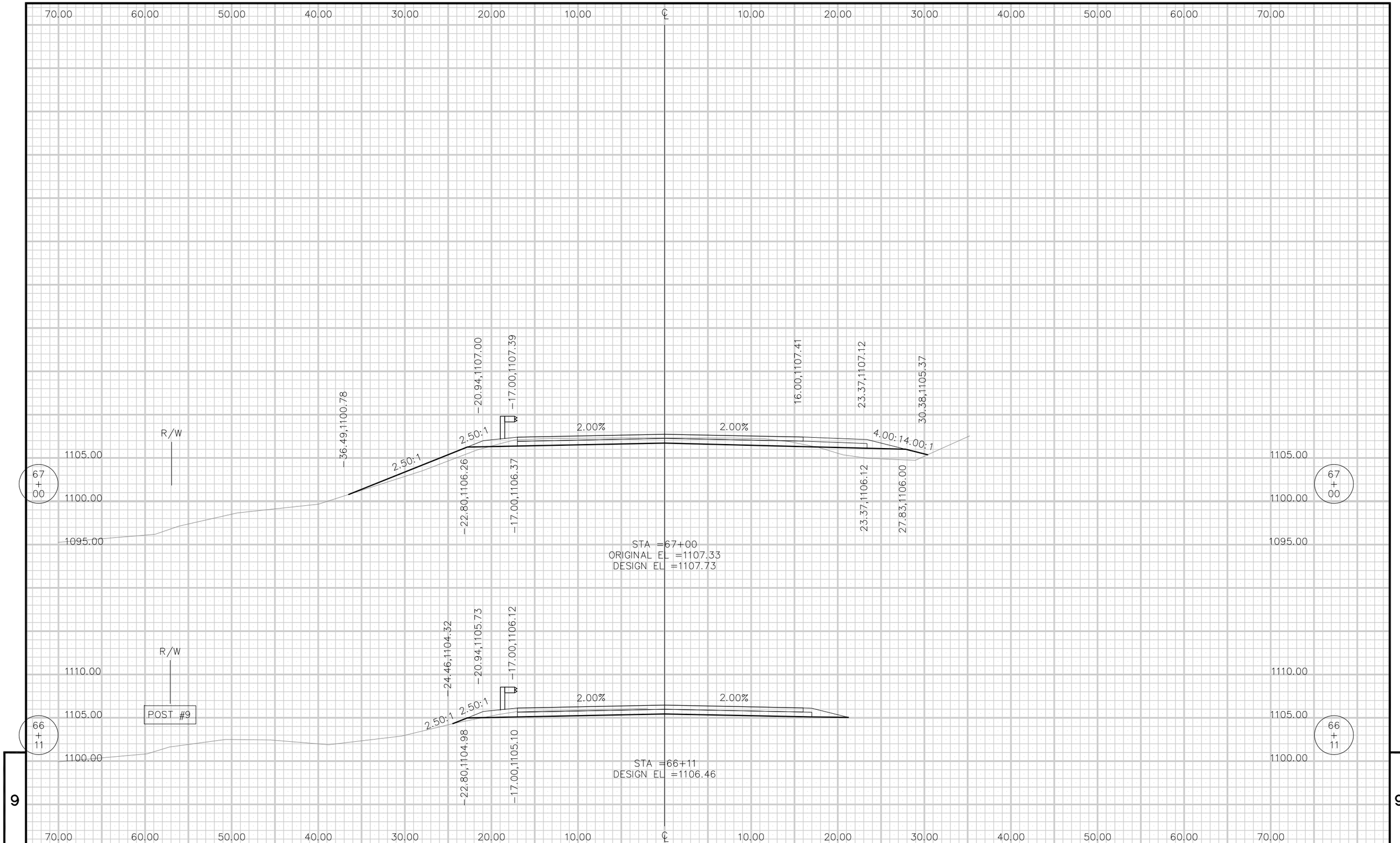
FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec65+61-66+00.dwg

PLOT DATE: 1/27/2016

PLOT BY: DANE COUNTY HIGHWAY DEPT.

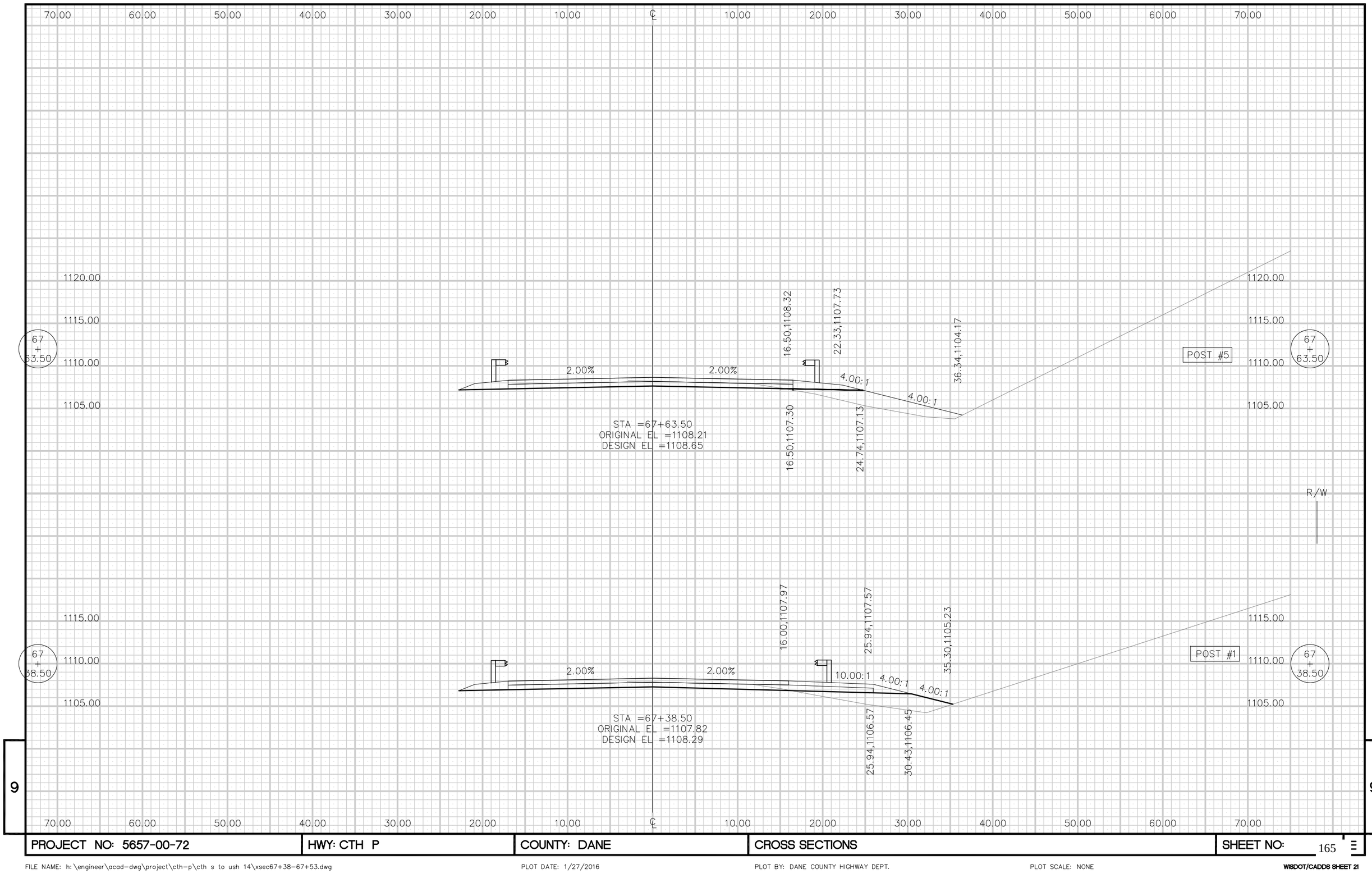
PLOT SCALE: NONE

WISDOT/CADDS SHEET 21



PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 164

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec66+11-67+00.dwg | PLOT DATE: 1/27/2016 | PLOT BY: DANE COUNTY HIGHWAY DEPT. | PLOT SCALE: NONE | WISDOT/CADDS SHEET 21

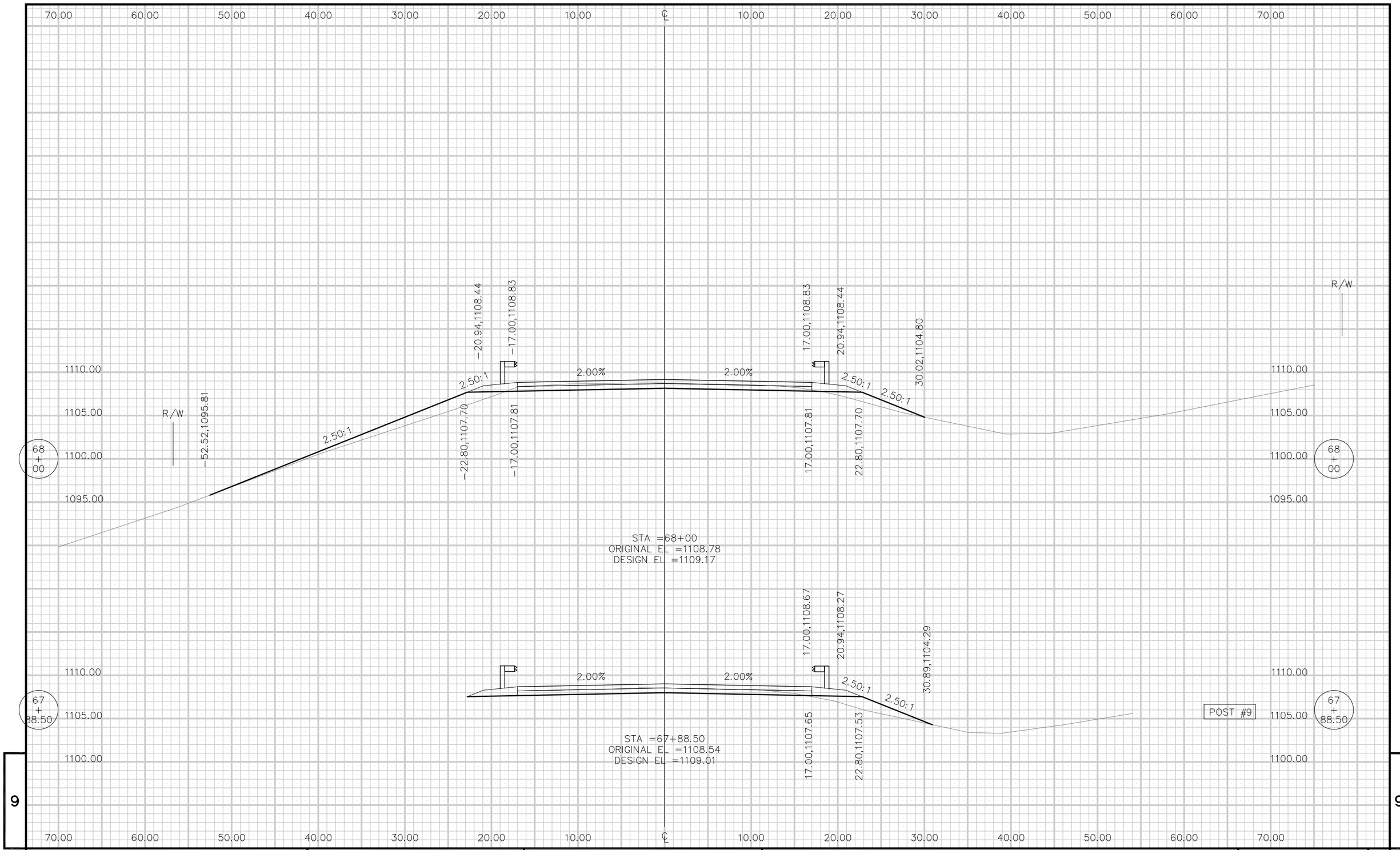


9

9

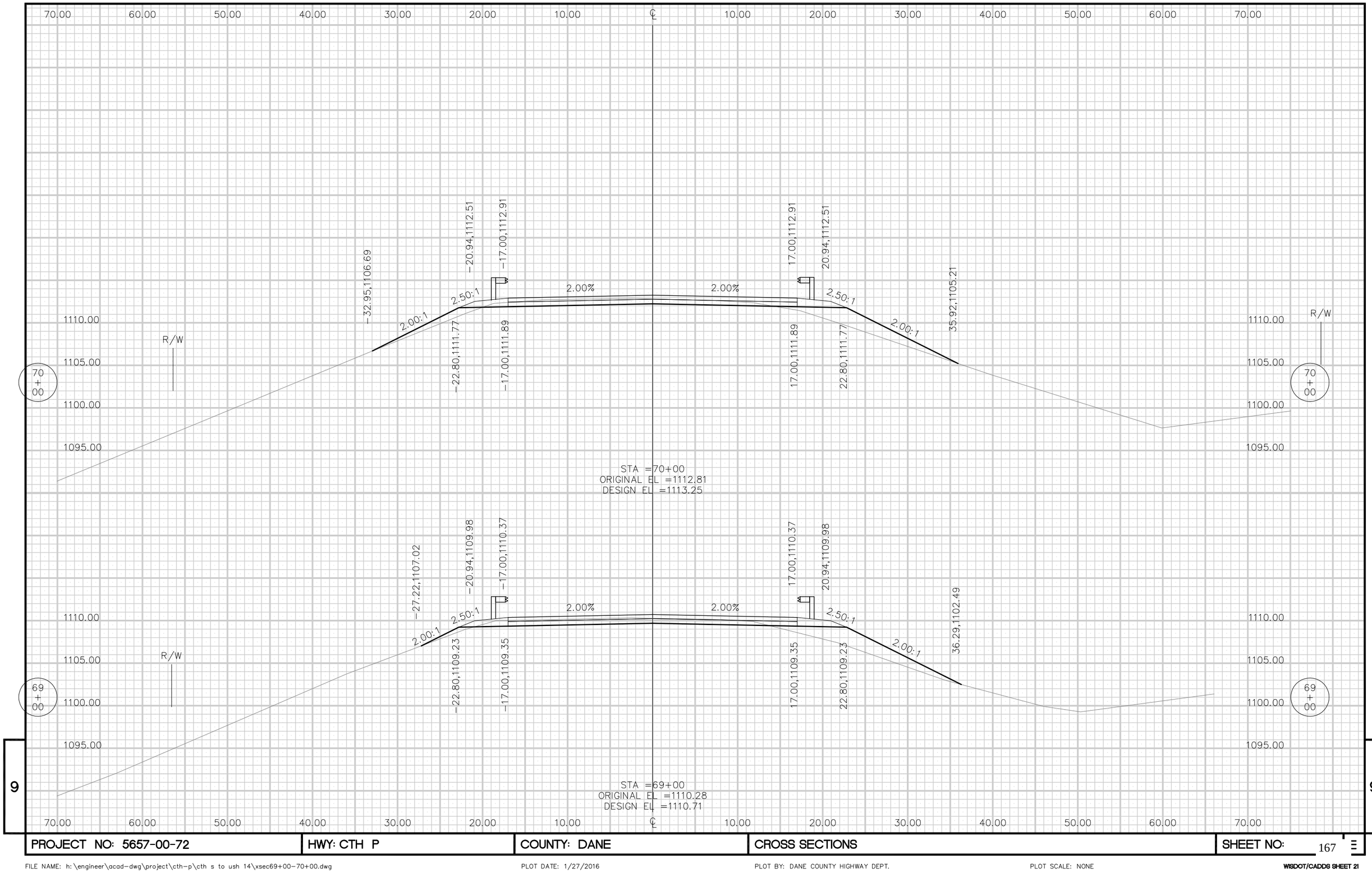
PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 165

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec67+38-67+53.dwg | PLOT DATE: 1/27/2016 | PLOT BY: DANE COUNTY HIGHWAY DEPT. | PLOT SCALE: NONE | WISDOT/CADDS SHEET 21



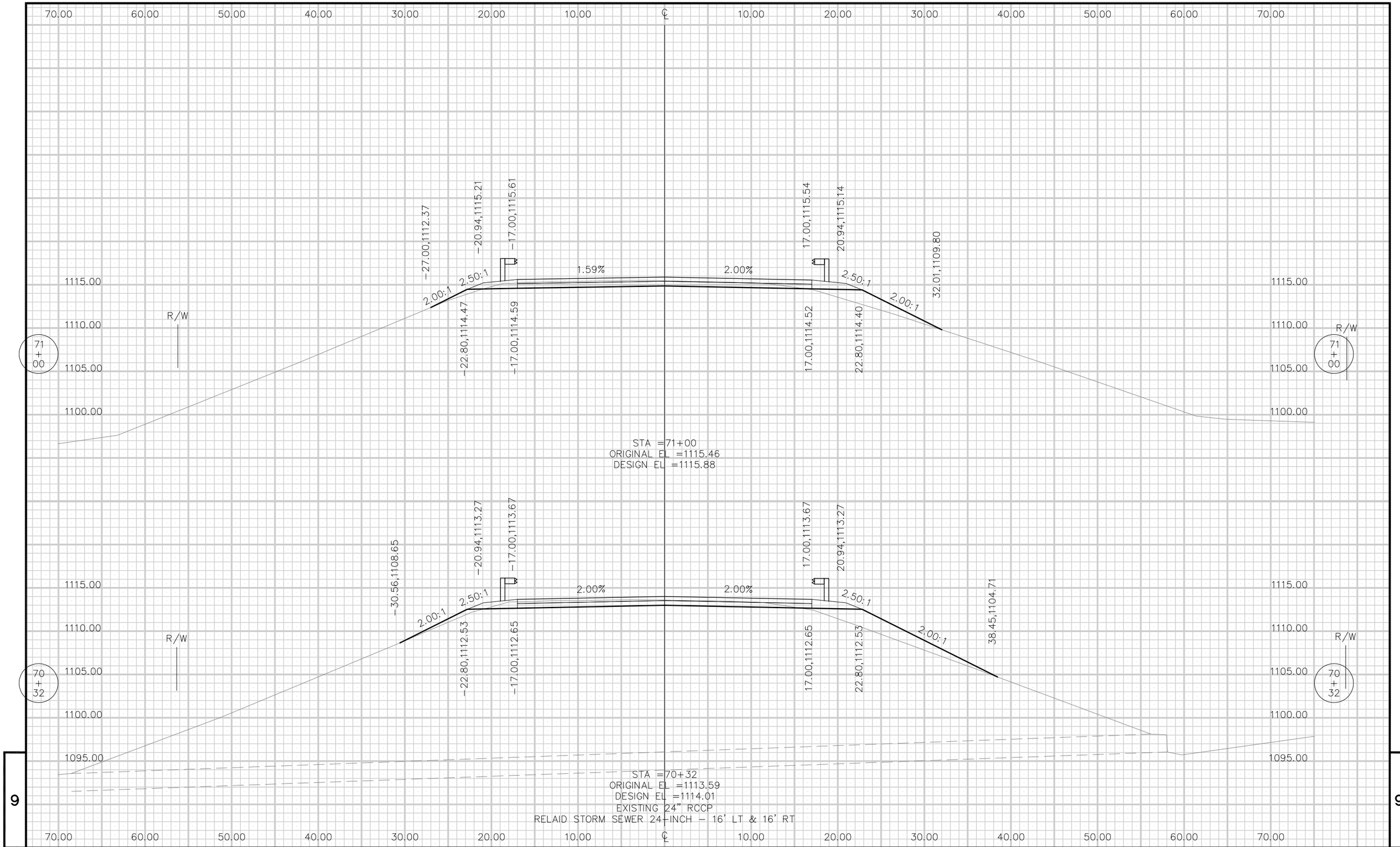
PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 166

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec67+38-68+00.dwg | PLOT DATE: 1/27/2016 | PLOT BY: DANE COUNTY HIGHWAY DEPT. | PLOT SCALE: NONE | WISDOT/CADDS SHEET 21



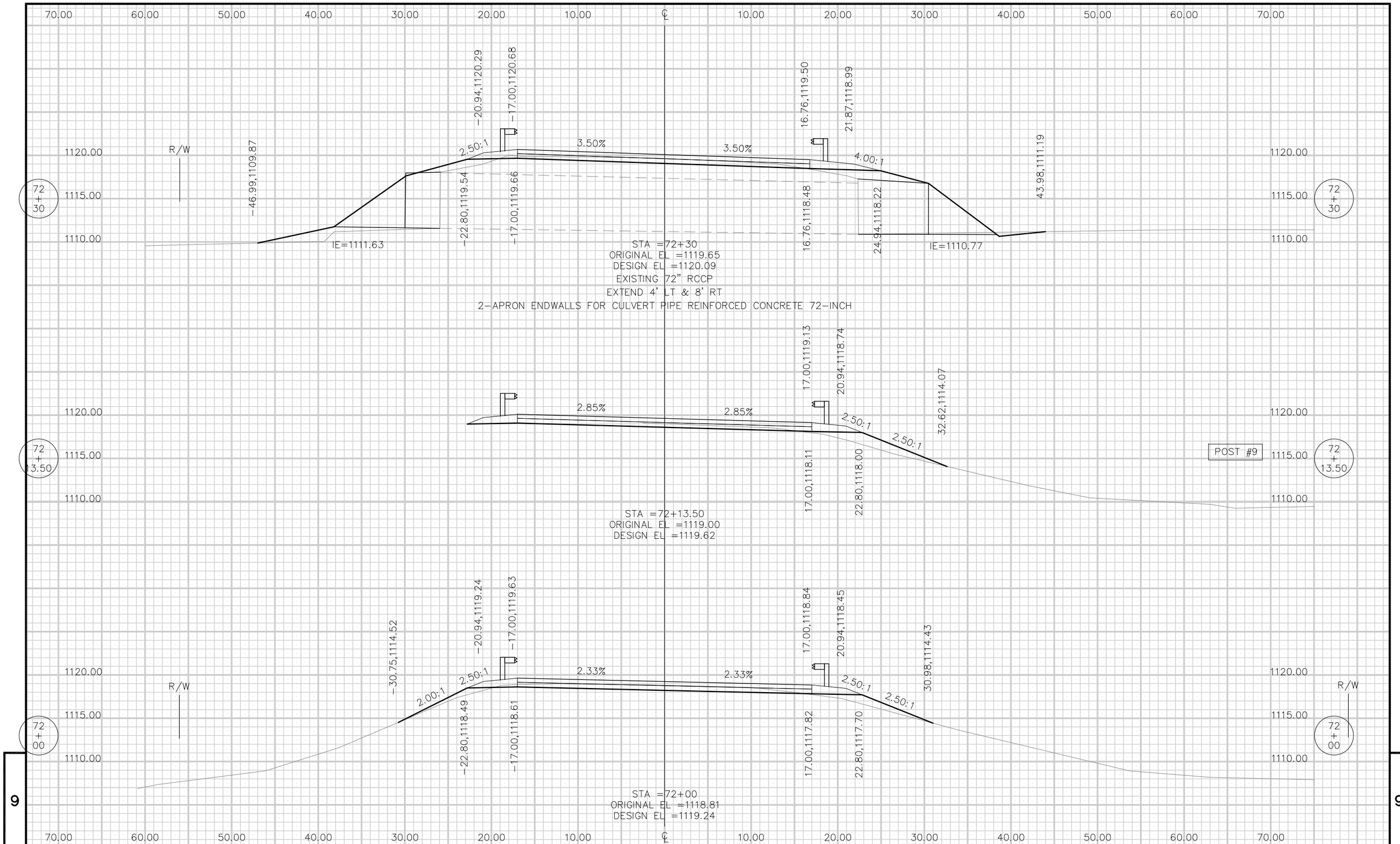
PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 167

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec69+00-70+00.dwg | PLOT DATE: 1/27/2016 | PLOT BY: DANE COUNTY HIGHWAY DEPT. | PLOT SCALE: NONE | WISDOT/CADDS SHEET 21



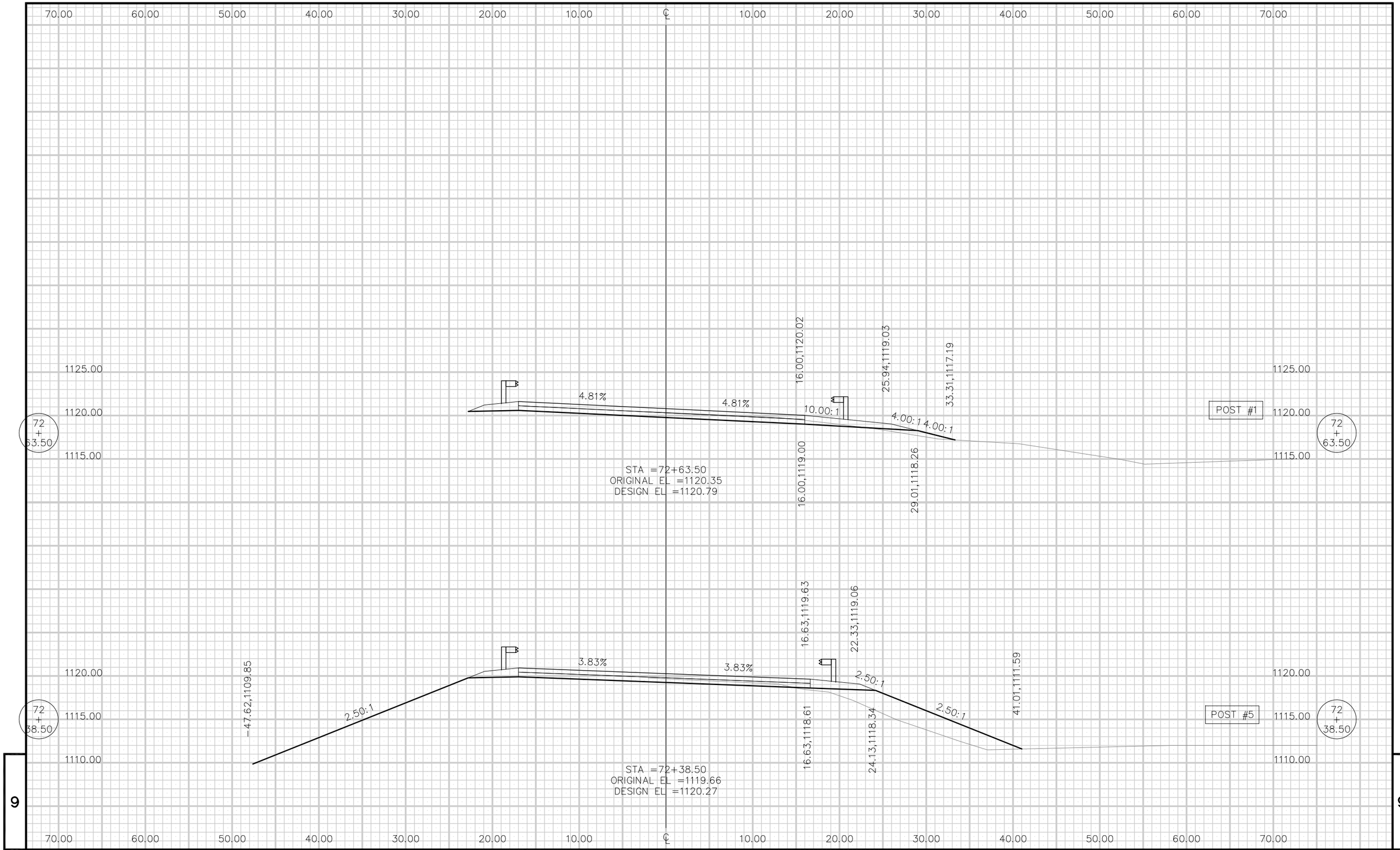
PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 168

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec70+32-71+00.dwg | PLOT DATE: 1/27/2016 | PLOT BY: DANE COUNTY HIGHWAY DEPT. | PLOT SCALE: NONE | WISDOT/CADDS SHEET 21



PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 169

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec72+00-72+30.dwg | PLOT DATE: 1/27/2016 | PLOT BY: DANE COUNTY HIGHWAY DEPT. | PLOT SCALE: NONE | WISDOT/CADDS SHEET 21



9

9

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 170

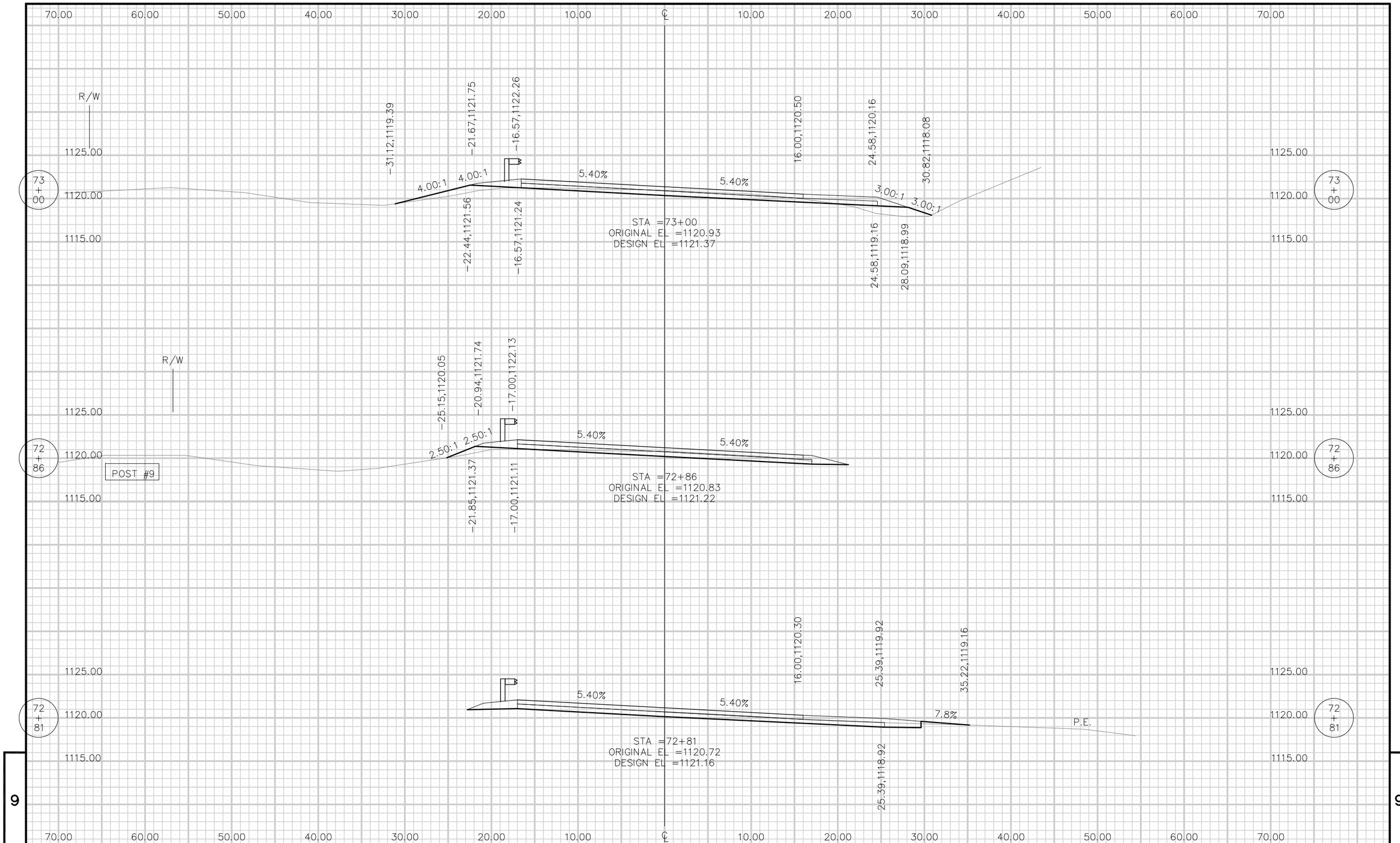
FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec72+38-72+53.dwg

PLOT DATE: 1/27/2016

PLOT BY: DANE COUNTY HIGHWAY DEPT.

PLOT SCALE: NONE

WISDOT/CADDS SHEET 21



PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 171

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec72+81-73+00.dwg | PLOT DATE: 1/27/2016 | PLOT BY: DANE COUNTY HIGHWAY DEPT. | PLOT SCALE: NONE | WISDOT/CADDS SHEET 21

70.00 60.00 50.00 40.00 30.00 20.00 10.00 ℄ 10.00 20.00 30.00 40.00 50.00 60.00 70.00

1125.00
1120.00
1115.00

73 + 77

P.E.

2.0% 5.40% 5.40%

-32.92,1123.13
-25.08,1123.28
-16.00,1123.64
-25.08,1122.28

STA =73+77
DESIGN EL =1122.78

-30.46,1120.76
-16.00,1122.89

4.00:1 10.00:1 5.40% 5.40%

73 + 36

POST #1

-25.94,1121.90
-16.00,1121.87

STA =73+36
DESIGN EL =1122.03

-30.29,1119.86
-22.33,1121.85
-16.31,1122.45

4.00:1 4.00:1 5.40% 5.40%

73 + 11

POST #5

-22.64,1121.77
-16.31,1121.43

STA =73+11
DESIGN EL =1121.57

9

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 172

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec73+11-73+77.dwg PLOT DATE: 1/27/2016 PLOT BY: DANE COUNTY HIGHWAY DEPT. PLOT SCALE: NONE WISDOT/CADDS SHEET 21

70.00 60.00 50.00 40.00 30.00 20.00 10.00 ℄ 10.00 20.00 30.00 40.00 50.00 60.00 70.00

R/W

1125.00
1120.00
1115.00

74 + 70

POST #5

-41.35,1119.35
-22.33,1124.10
-16.31,1124.70
4.00:1
4.00:1
5.40%
5.40%
-22.64,1124.03
-16.31,1123.68

STA =74+70
DESIGN EL =1123.82

-33.10,1121.74
-25.94,1123.53
-16.00,1124.52
10.00:1
4.00:1
4.00:1
5.40%
5.40%

74 + 45

POST #1

-29.01,1122.76
-16.00,1123.50

STA =74+45
DESIGN EL =1123.66

1130.00
1125.00
1120.00

74 + 00

-34.66,1123.07
-25.05,1123.86
-16.00,1124.23
16.00,1122.50
17.00,1122.46
23.21,1120.39
12.10:1
5.40%
5.40%
3.00:1
3.00:1

-25.05,1122.86
17.00,1121.46
20.56,1121.27

STA =74+00
ORIGINAL EL =1122.91
DESIGN EL =1123.36

9

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 173

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec74+00-74+70.dwg PLOT DATE: 1/27/2016 PLOT BY: DANE COUNTY HIGHWAY DEPT. PLOT SCALE: NONE

WISDOT/CADDS SHEET 21

70.00 60.00 50.00 40.00 30.00 20.00 10.00 ℄ 10.00 20.00 30.00 40.00 50.00 60.00 70.00

1125.00
1120.00
1115.00

R/W

2.50:1
2.50:1
5.40%
5.40%
4.00:1
4.00:1

-35.61,1118.68
-20.94,1124.55
-17.00,1124.94
-21.85,1124.18
-17.00,1123.92
16.00,1123.16
17.00,1123.12
28.05,1120.36
17.00,1122.12
21.22,1122.06

75 + 00

STA =75+00
ORIGINAL EL =1123.63
DESIGN EL =1124.02

-32.08,1120.06
-20.94,1124.51
-17.00,1124.91
-21.85,1124.15
-17.00,1123.89

POST #9

74 + 95

STA =74+95
DESIGN EL =1123.99

9

9

70.00 60.00 50.00 40.00 30.00 20.00 10.00 ℄ 10.00 20.00 30.00 40.00 50.00 60.00 70.00

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 174

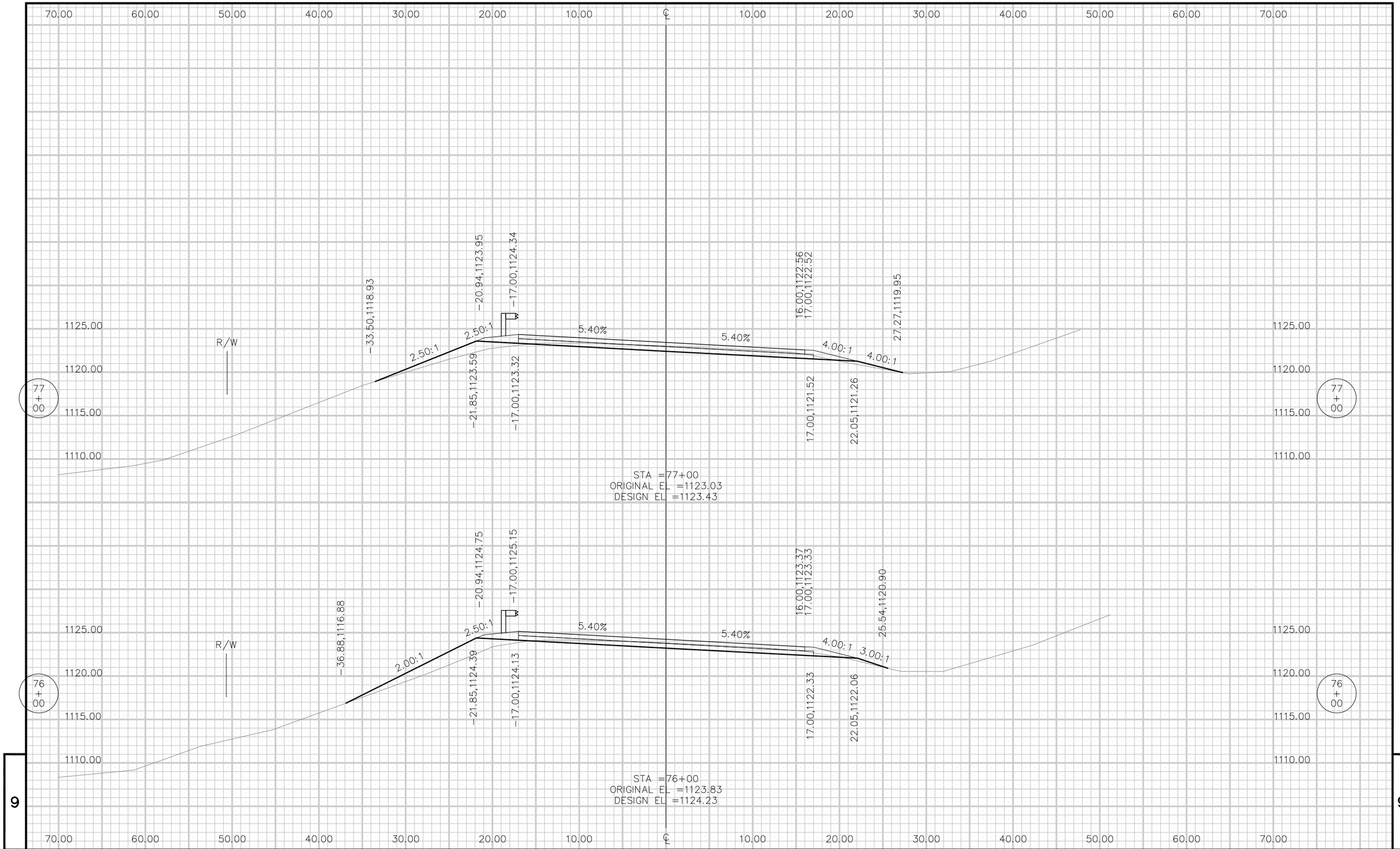
FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec74+95-75+00.dwg

PLOT DATE: 1/27/2016

PLOT BY: DANE COUNTY HIGHWAY DEPT.

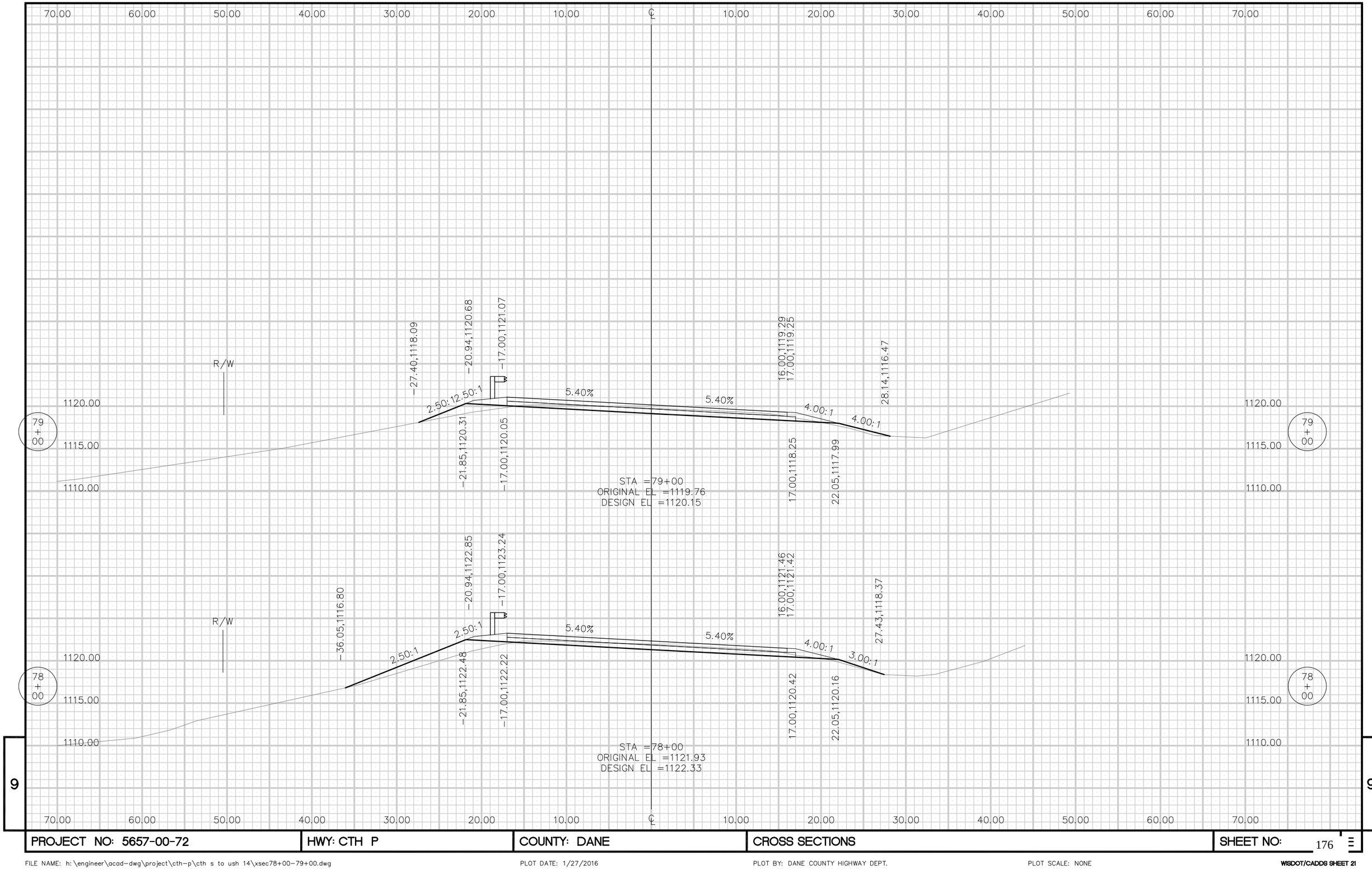
PLOT SCALE: NONE

WISDOT/CADDS SHEET 21



PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 175

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec76+00-77+00.dwg | PLOT DATE: 1/27/2016 | PLOT BY: DANE COUNTY HIGHWAY DEPT. | PLOT SCALE: NONE | WISDOT/CADDS SHEET 21



9

9

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 176

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec78+00-79+00.dwg

PLOT DATE: 1/27/2016

PLOT BY: DANE COUNTY HIGHWAY DEPT.

PLOT SCALE: NONE

WISDOT/CADDS SHEET 21

70.00 60.00 50.00 40.00 30.00 20.00 10.00 ℄ 10.00 20.00 30.00 40.00 50.00 60.00 70.00

1115.00
1110.00
1105.00
1120.00
1115.00
1110.00

81 + 00
80 + 00

R/W

-37.00,1107.85
-20.94,1115.79
-17.00,1116.19
-21.85,1115.43
-17.00,1115.16
16.00,1114.40
17.00,1114.36
17.00,1113.36
22.05,1113.10
27.56,1111.26

2.00:1
2.50:1
5.40%
5.40%
4.00:1
3.00:1

STA =81+00
ORIGINAL EL =1114.87
DESIGN EL =1115.27

-35.18,1112.60
-20.94,1118.30
-17.00,1118.69
-21.85,1117.94
-17.00,1117.67
16.00,1116.91
17.00,1116.87
17.00,1115.87
22.05,1115.61
28.55,1113.44

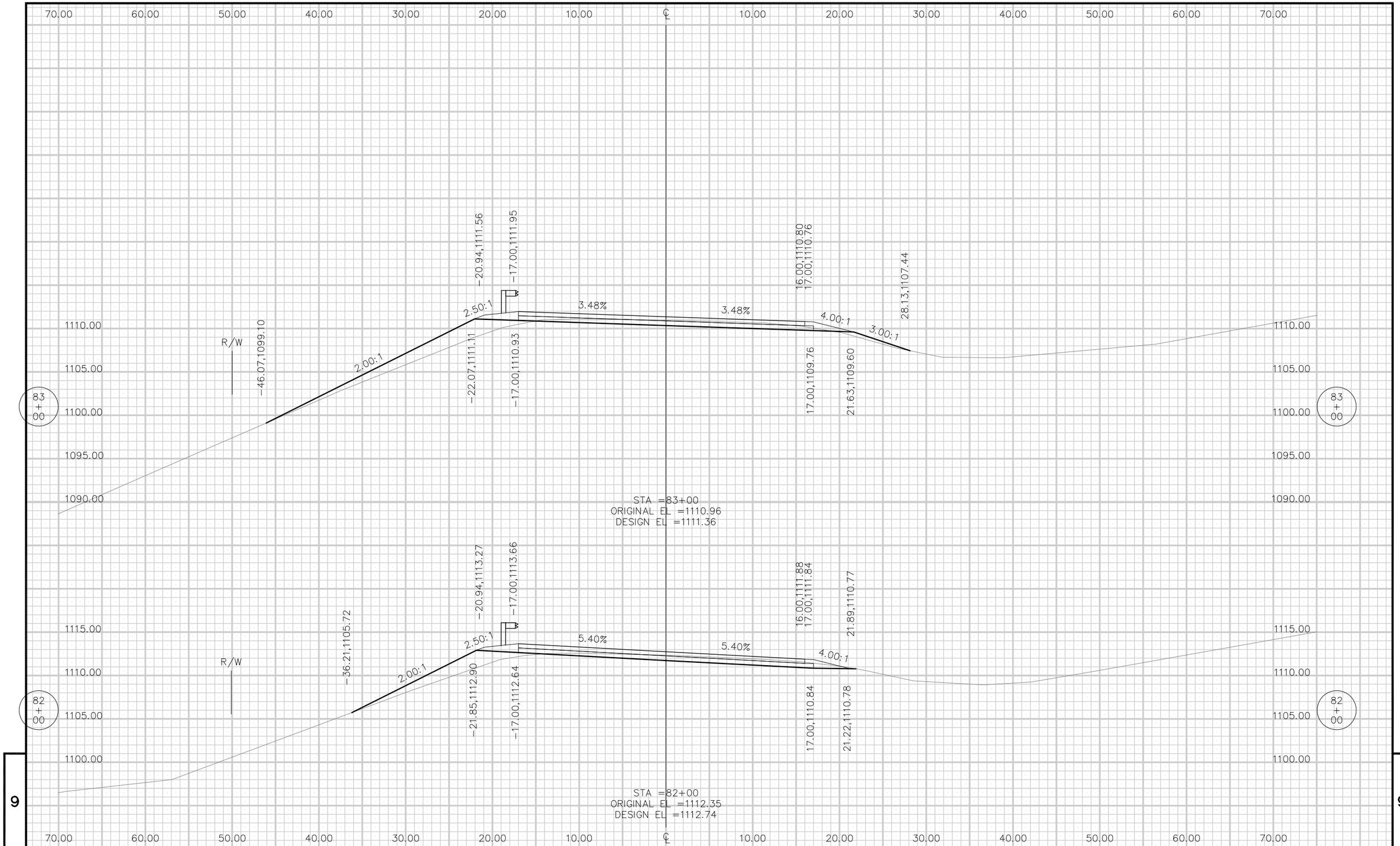
2.50:1
2.50:1
5.40%
5.40%
4.00:1
3.00:1

STA =80+00
ORIGINAL EL =1117.38
DESIGN EL =1117.78

9

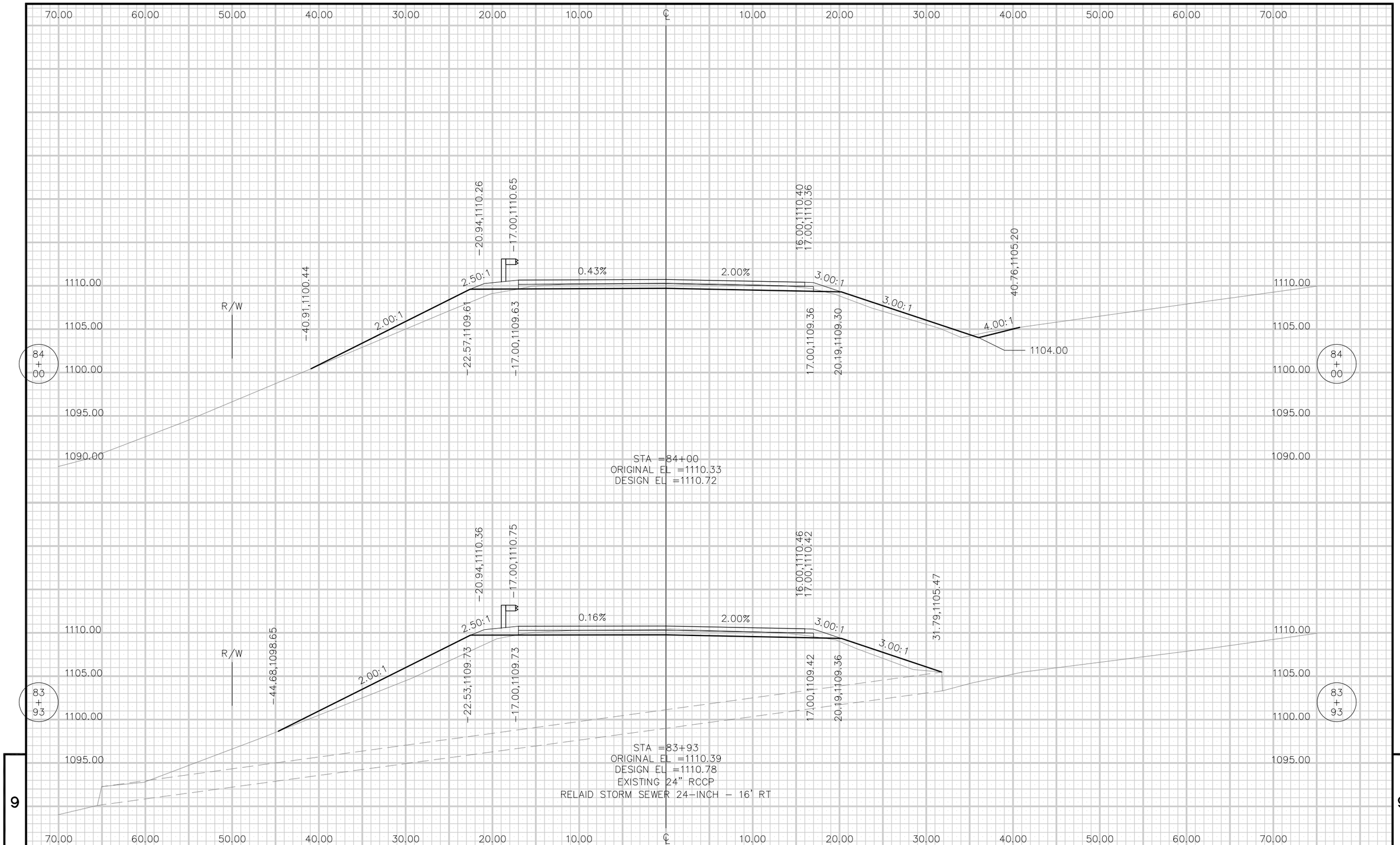
PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 177

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec80+00-81+00.dwg PLOT DATE: 1/27/2016 PLOT BY: DANE COUNTY HIGHWAY DEPT. PLOT SCALE: NONE



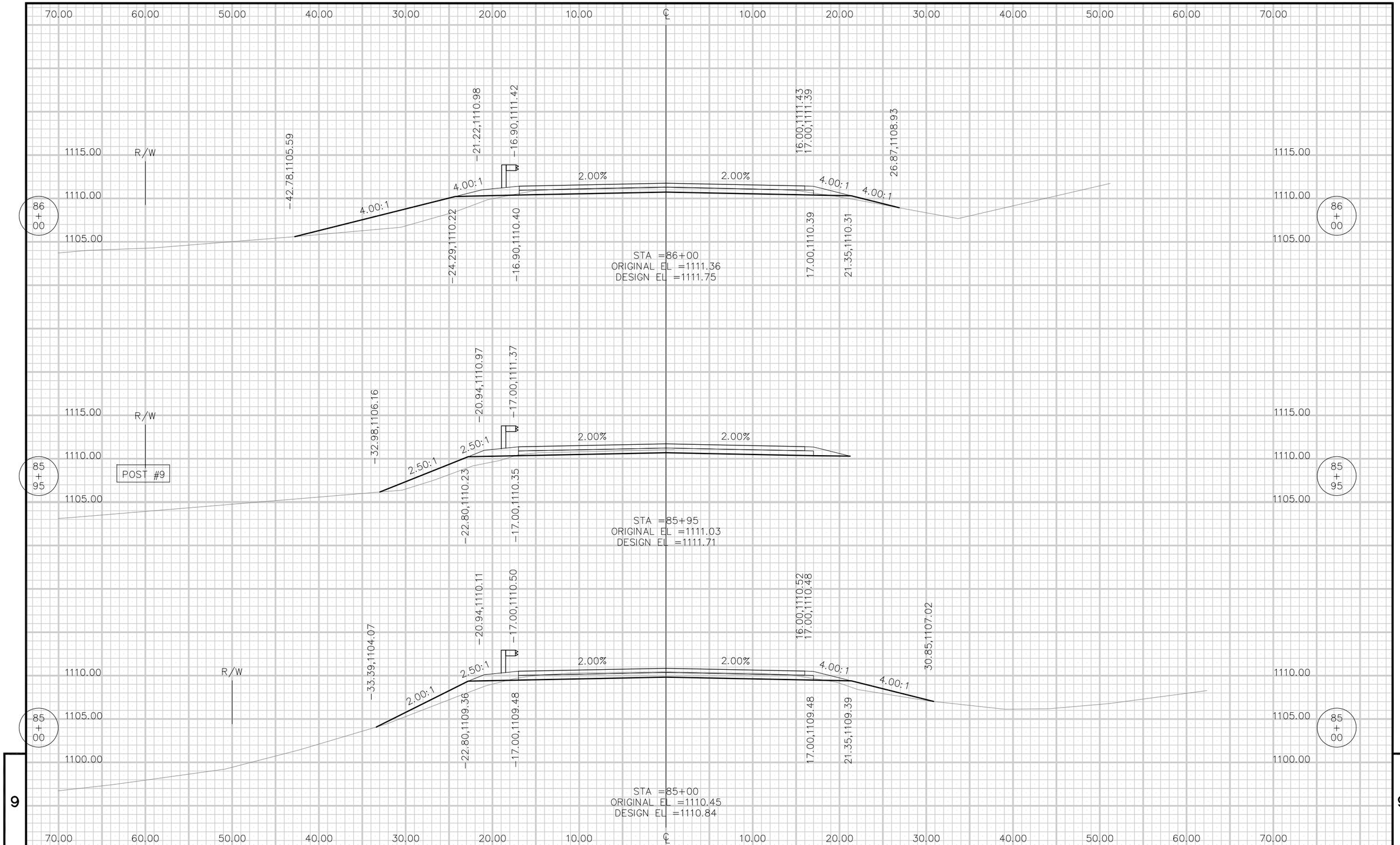
PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 178

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec82+00-83+00.dwg | PLOT DATE: 1/27/2016 | PLOT BY: DANE COUNTY HIGHWAY DEPT. | PLOT SCALE: NONE | WISDOT/CADDS SHEET 21



PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 179

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec83+93-84+00.dwg | PLOT DATE: 1/27/2016 | PLOT BY: DANE COUNTY HIGHWAY DEPT. | PLOT SCALE: NONE | WISDOT/CADDS SHEET 21



PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 180

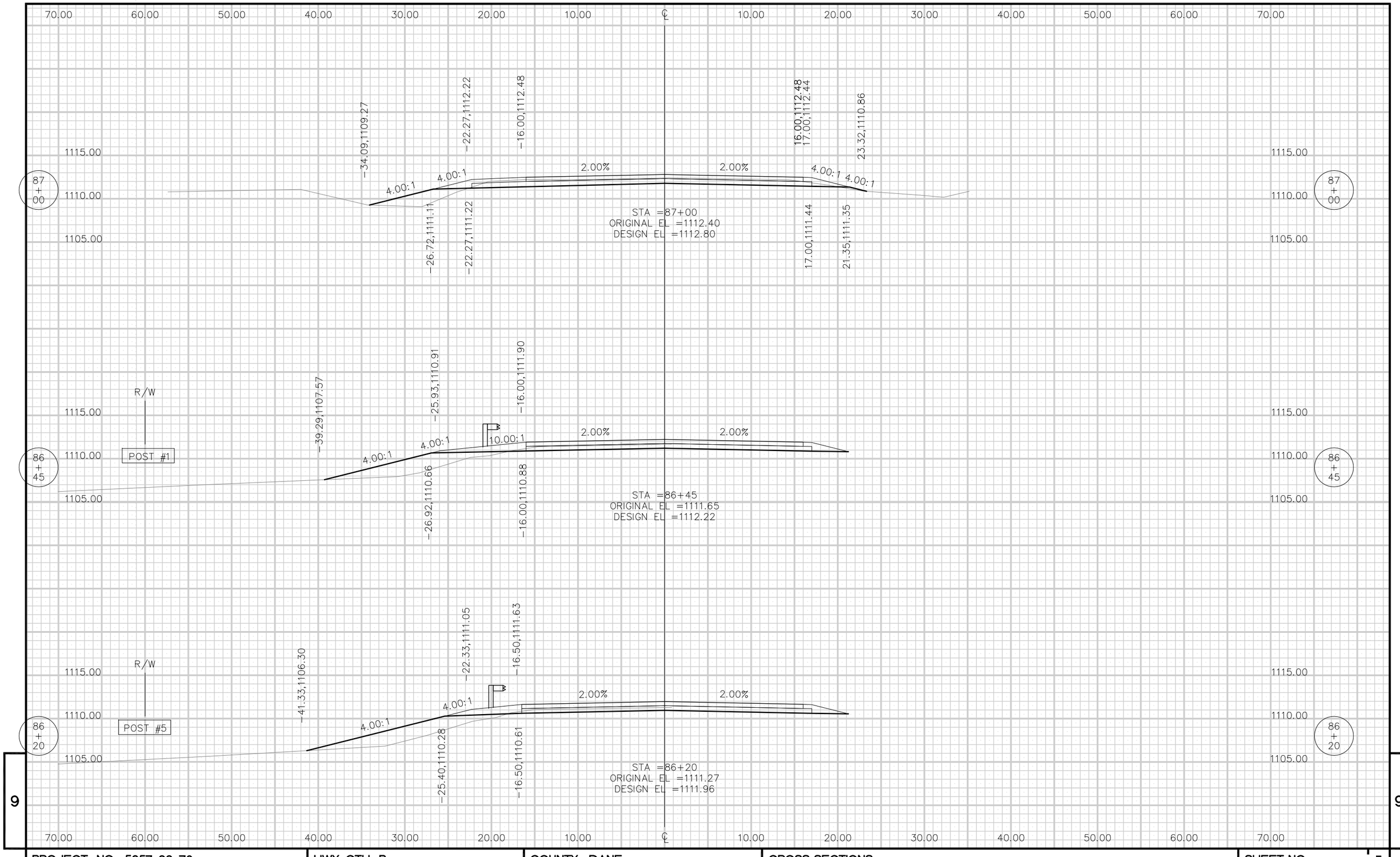
FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec85+00-86+00.dwg

PLOT DATE: 1/27/2016

PLOT BY: DANE COUNTY HIGHWAY DEPT.

PLOT SCALE: NONE

WISDOT/CADDS SHEET 21



9

9

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 181

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec86+20-87+00.dwg

PLOT DATE: 1/27/2016

PLOT BY: DANE COUNTY HIGHWAY DEPT.

PLOT SCALE: NONE

WISDOT/CADDS SHEET 21

70.00 60.00 50.00 40.00 30.00 20.00 10.00 ℄ 10.00 20.00 30.00 40.00 50.00 60.00 70.00

1120.00
1115.00
1110.00

89 + 00

-22.95,1111.64
-17.00,1113.13
-16.00,1113.17
16.00,1113.17
17.00,1113.13
22.11,1111.85

4.00:1 4.00:1 2.00% 2.00% 4.00:1 4.00:1

-21.35,1112.04
-17.00,1112.13
17.00,1112.13
21.35,1112.04

STA =89+00
ORIGINAL EL =1113.09
DESIGN EL =1113.49

88 + 00

-27.54,1110.82
-17.00,1113.46
-16.00,1113.50
16.00,1113.50
17.00,1113.46
26.15,1111.17

4.00:1 4.00:1 2.00% 2.00% 4.00:1 4.00:1

-21.35,1112.37
-17.00,1112.45
17.00,1112.45
21.35,1112.37

STA =88+00
ORIGINAL EL =1113.42
DESIGN EL =1113.82

R/W

87 + 23

HIDDEN VALLEY ROAD

-28.29,1112.28
-20.74,1112.50
-16.00,1112.69

2.80% 2.00% 2.00%

-20.74,1111.50

STA =87+23
ORIGINAL EL =1112.62
DESIGN EL =1113.01

9

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 182

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec87+23-89+00.dwg PLOT DATE: 1/27/2016 PLOT BY: DANE COUNTY HIGHWAY DEPT. PLOT SCALE: NONE

WISDOT/CADDS SHEET 21

70.00 60.00 50.00 40.00 30.00 20.00 10.00 ℄ 10.00 20.00 30.00 40.00 50.00 60.00 70.00

1115.00
1110.00
1105.00

90 + 82

P.E.

8.50% 2.53% 2.53%

-27.25,1109.88
-17.54,1110.71
-16.00,1110.77
-17.54,1109.70

STA =90+82
ORIGINAL EL =1110.78
DESIGN EL =1111.17

16.00,1111.64
17.00,1111.60
21.22,1111.65

90 + 72

P.E.

2.14% 2.14% 1.2%

STA =90+72
ORIGINAL EL =1110.90
DESIGN EL =1111.30

17.00,1110.60

90 + 00

-28.42,1109.32
-17.00,1112.17
-16.00,1112.21

4.00:1 4.00:1 2.00% 0.68% 4.00:1

STA =90+00
ORIGINAL EL =1112.14
DESIGN EL =1112.53

16.00,1112.42
17.00,1112.38
21.26,1111.34

-21.35,1111.08
-17.00,1111.17
17.00,1111.38
21.22,1111.33

9

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 183

70.00 60.00 50.00 40.00 30.00 20.00 10.00 ℄ 10.00 20.00 30.00 40.00 50.00 60.00 70.00

R/W

1110.00
1105.00
1100.00

92 + 00

-40.78,1102.74
-25.58,1106.54
-16.00,1106.93
16.00,1108.53
17.00,1108.49
27.90,1105.14

4.00:1
4.00:1
5.00%
5.00%
4.00:1
3.00:1

-30.47,1105.32
-25.58,1105.54
17.00,1107.49
20.38,1107.64

STA =92+00
ORIGINAL EL =1107.33
DESIGN EL =1107.73

R/W

-44.99,1104.11
-24.99,1106.96
-16.00,1107.32
16.00,1108.92

1110.00
1105.00

91 + 86

14.2%
5.00%
5.00%

P.E.

-24.99,1105.96

STA =91+86
ORIGINAL EL =1107.72
DESIGN EL =1108.12

R/W

-22.06,1109.33
-19.15,1110.06
-16.00,1110.18
16.00,1111.22
17.00,1111.18
21.28,1110.09

1115.00
1110.00
1105.00

91 + 00

4.00:1
3.24%
3.24%
4.00:1
3.70:1

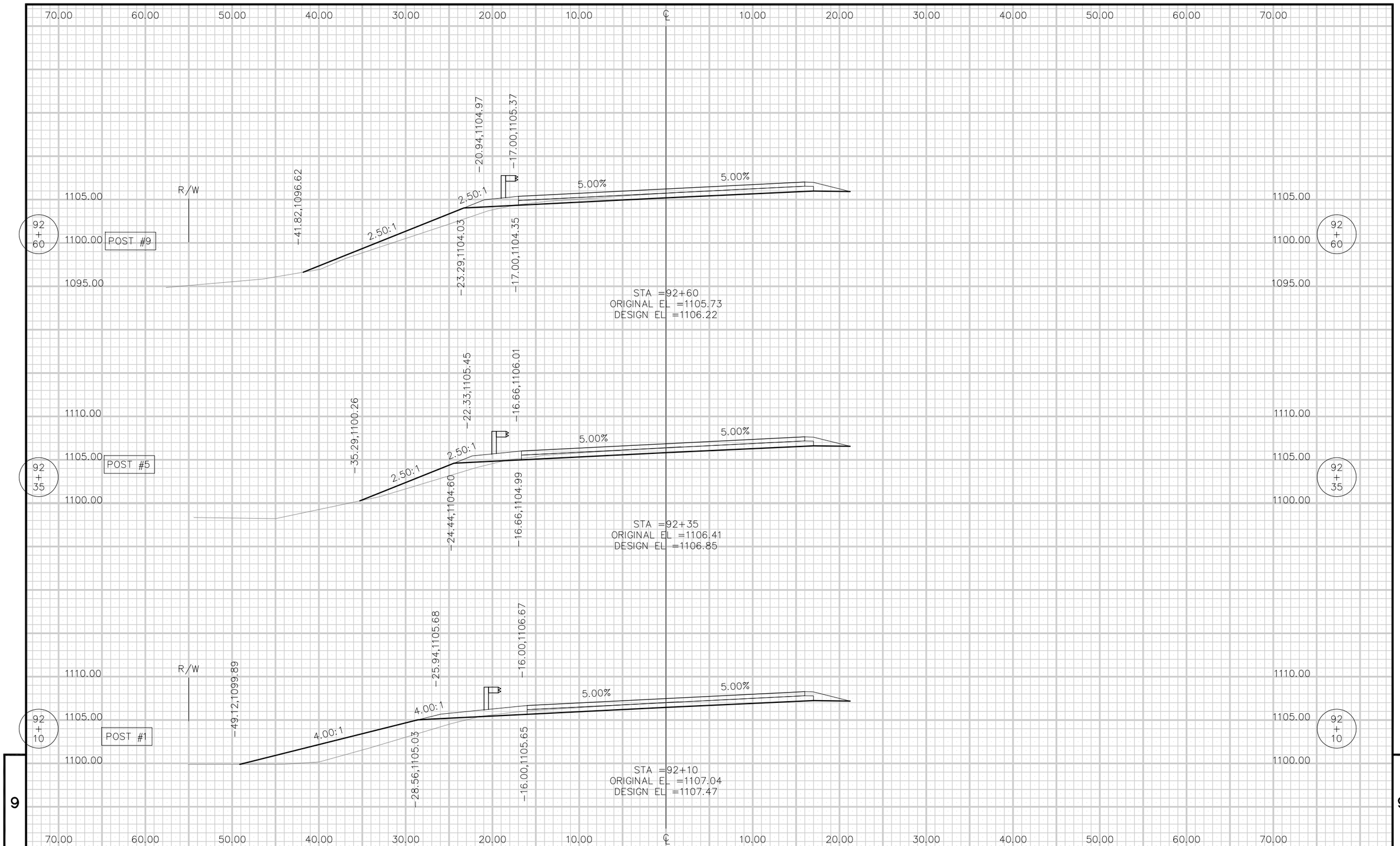
-19.15,1109.06
17.00,1110.18
20.58,1110.28

STA =91+00
ORIGINAL EL =1110.31
DESIGN EL =1110.70

70.00 60.00 50.00 40.00 30.00 20.00 10.00 ℄ 10.00 20.00 30.00 40.00 50.00 60.00 70.00

9 9

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 184

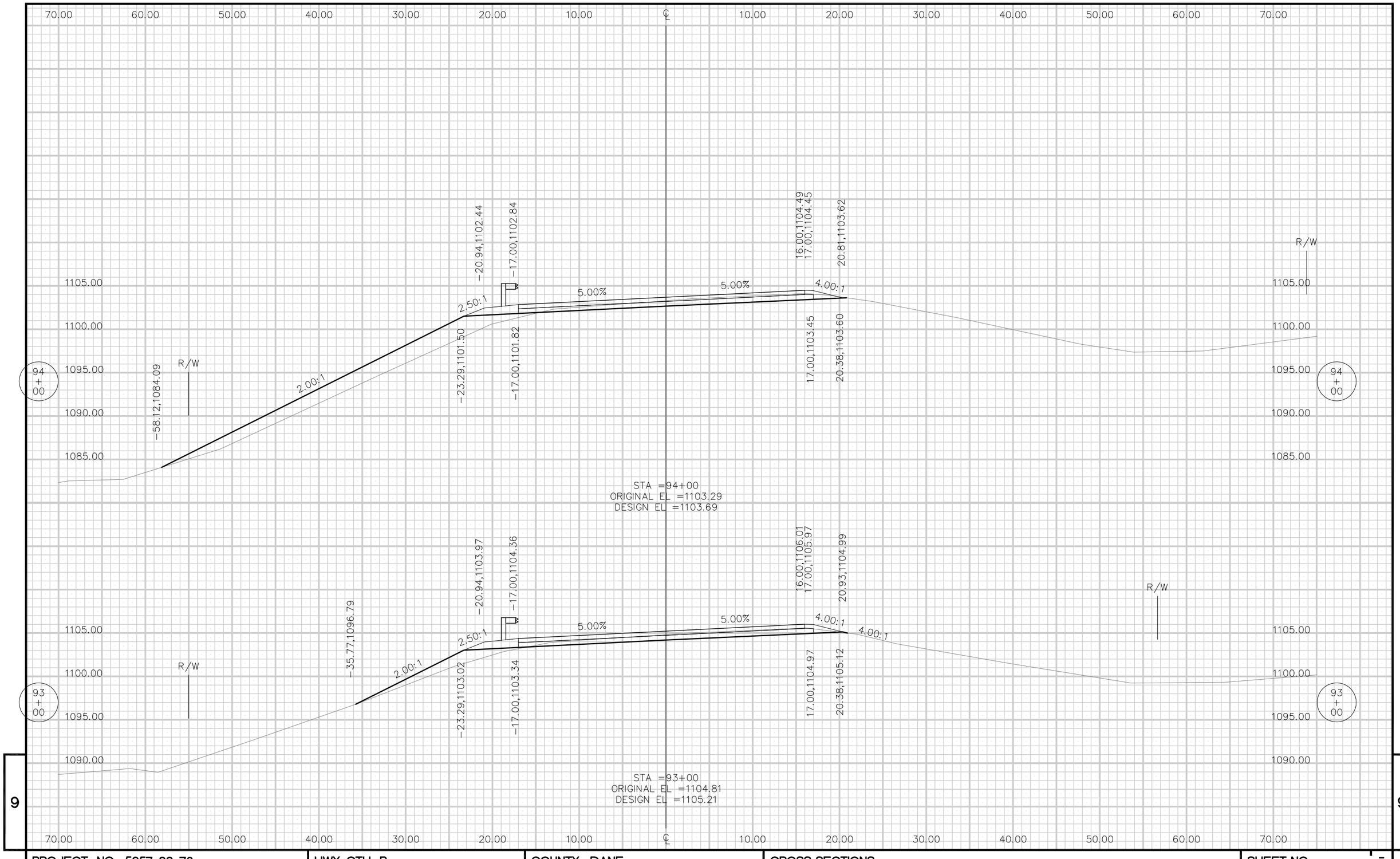


9

9

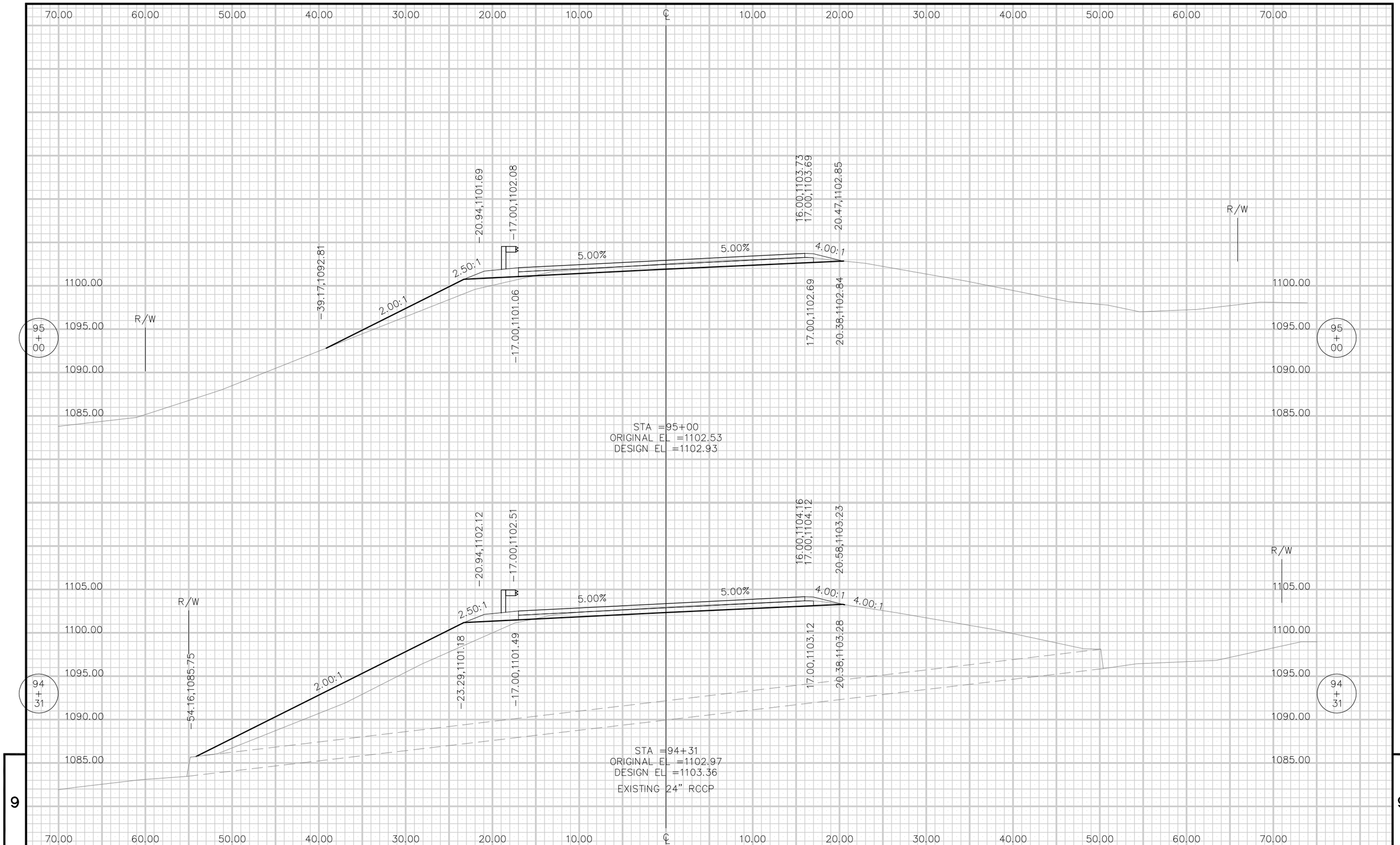
PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 185

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec92+10-92+60.dwg | PLOT DATE: 1/27/2016 | PLOT BY: DANE COUNTY HIGHWAY DEPT. | PLOT SCALE: NONE | WISDOT/CADDS SHEET 21



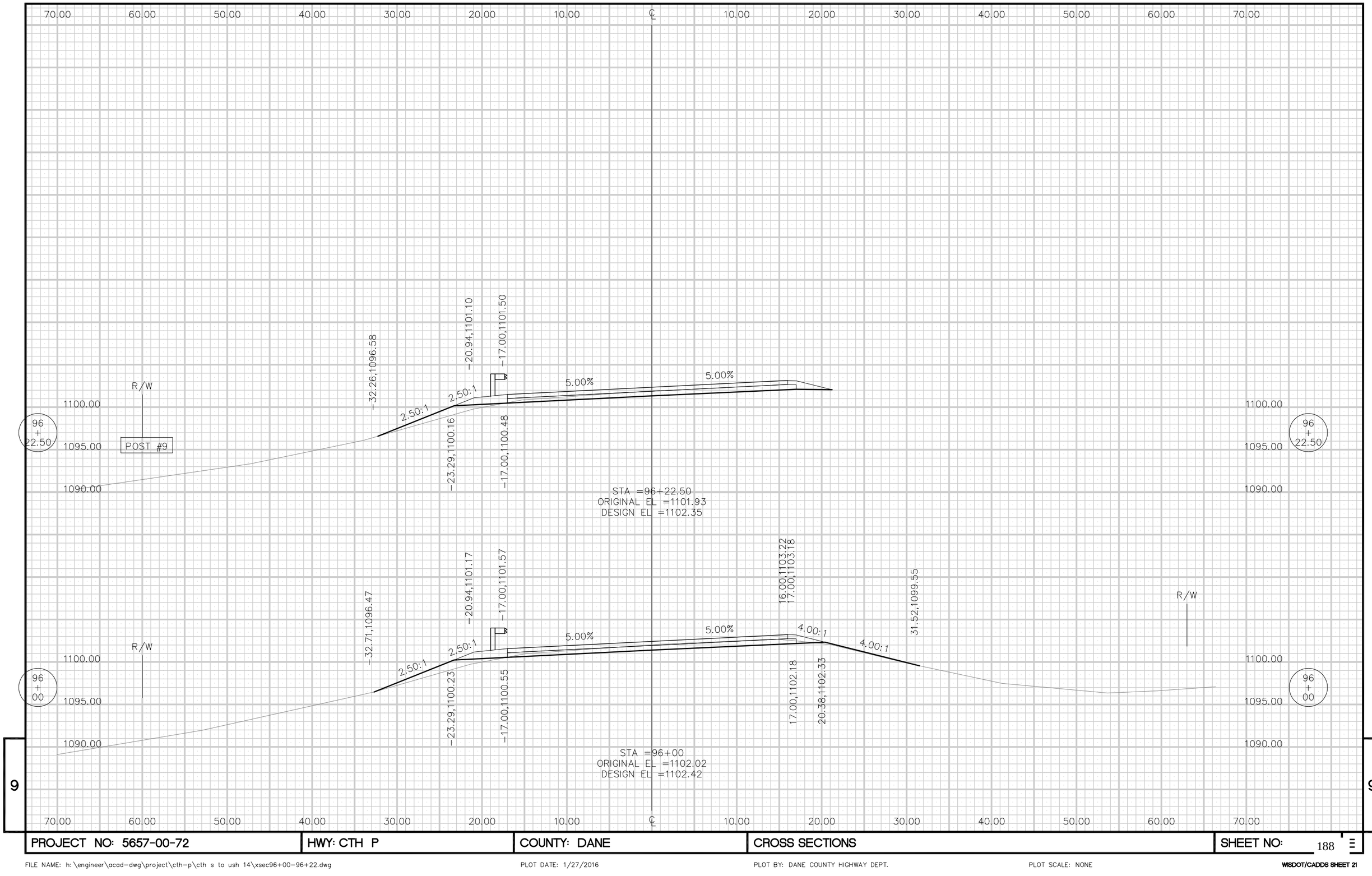
PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 186

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec93+00-94+00.dwg | PLOT DATE: 1/27/2016 | PLOT BY: DANE COUNTY HIGHWAY DEPT. | PLOT SCALE: NONE | WISDOT/CADDS SHEET 21



PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 187

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec94+31-95+00.dwg | PLOT DATE: 1/27/2016 | PLOT BY: DANE COUNTY HIGHWAY DEPT. | PLOT SCALE: NONE | WISDOT/CADDS SHEET 21



9

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 188

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec96+00-96+22.dwg | PLOT DATE: 1/27/2016 | PLOT BY: DANE COUNTY HIGHWAY DEPT. | PLOT SCALE: NONE | WISDOT/CADDS SHEET 21

70.00 60.00 50.00 40.00 30.00 20.00 10.00 ℄ 10.00 20.00 30.00 40.00 50.00 60.00 70.00

1105.00
1100.00
1095.00

96 + 72.50

R/W
POST #1
-54.00,1093.38
-25.94,1100.40
-16.00,1101.39
-28.56,1099.74
-16.00,1100.37
4.00:1
4.00:1
10.00:1
5.00%
5.00%

STA =96+72.50
ORIGINAL EL =1101.72
DESIGN EL =1102.19

16.00,1103.01
17.00,1102.97
26.23,1102.55

96 + 67

5.00%
5.00%
4.40%
P.E.

STA =96+67
ORIGINAL EL =1101.81
DESIGN EL =1102.21

17.00,1101.97

96 + 47.50

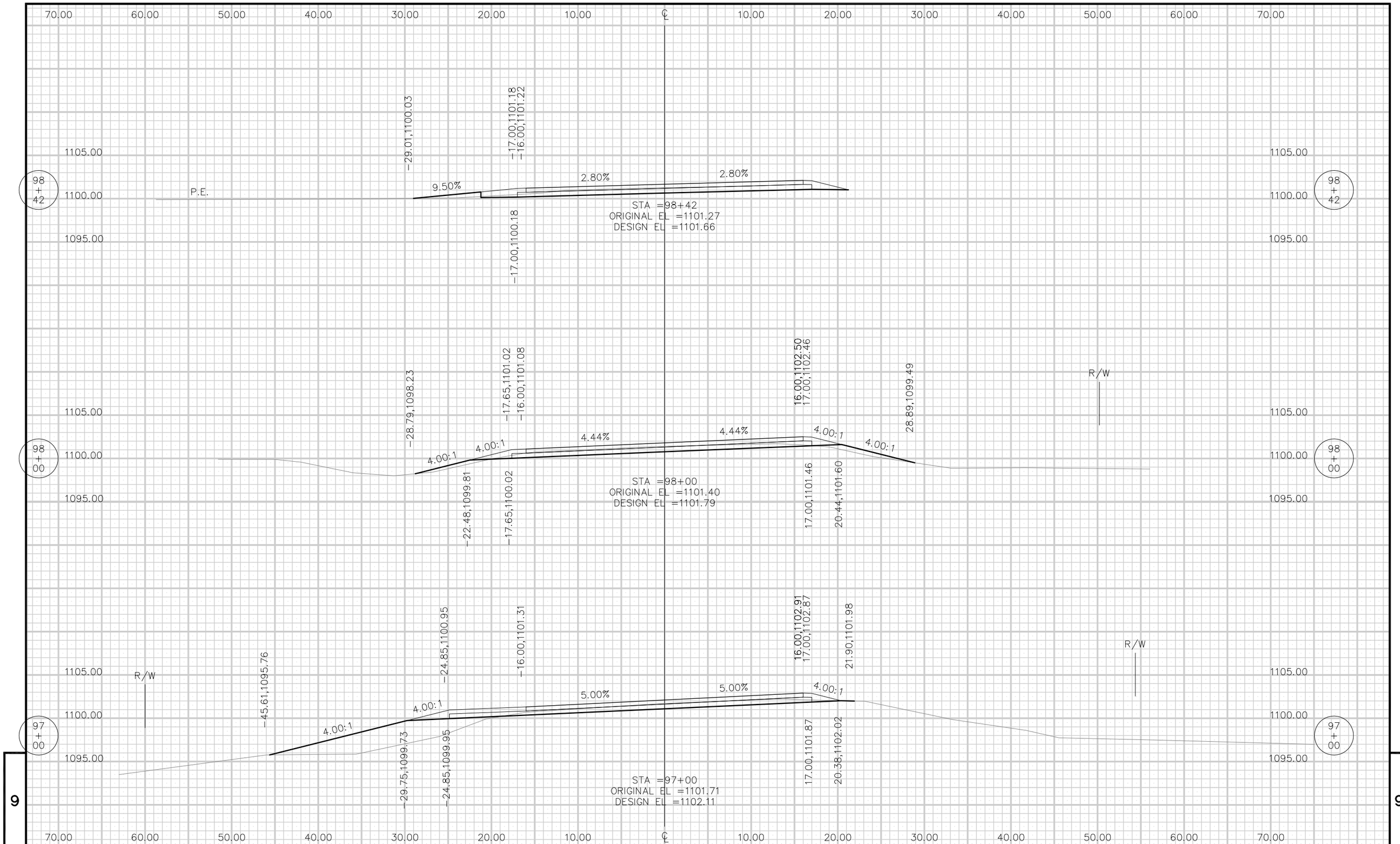
R/W
POST #5
-57.80,1092.00
-22.33,1100.87
-16.66,1101.44
-26.02,1099.95
-16.66,1100.42
4.00:1
4.00:1
10.00:1
5.00%
5.00%

STA =96+47.50
ORIGINAL EL =1101.85
DESIGN EL =1102.27

9

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 189

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec96+47-96+72.dwg | PLOT DATE: 1/27/2016 | PLOT BY: DANE COUNTY HIGHWAY DEPT. | PLOT SCALE: NONE | WISDOT/CADDS SHEET 21



PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 190

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec97+00-98+42.dwg | PLOT DATE: 1/27/2016 | PLOT BY: DANE COUNTY HIGHWAY DEPT. | PLOT SCALE: NONE | WISDOT/CADDS SHEET 21

70.00 60.00 50.00 40.00 30.00 20.00 10.00 ℄ 10.00 20.00 30.00 40.00 50.00 60.00 70.00

1105.00
1100.00
1095.00

99 + 26

16.00,1101.16
17.00,1101.12
24.51,1100.88
R/W
2.00%
0.49%
3.60%
P.E.
STA =99+26
ORIGINAL EL =1100.84
DESIGN EL =1101.24
17.00,1100.12

1110.00
1105.00
1100.00

99 + 00

-22.33,1099.75
-17.00,1101.08
-16.00,1101.12
16.00,1101.53
17.00,1101.49
22.04,1100.23
R/W
4.00:1
4.00:1
2.00%
0.53%
4.00:1
4.00:1
STA =99+00
ORIGINAL EL =1101.05
DESIGN EL =1101.44
-21.35,1100.00
-17.00,1100.08
17.00,1100.49
20.94,1100.50

1105.00
1100.00
1095.00

98 + 52

16.00,1101.96
17.00,1101.92
29.81,1101.47
R/W
2.41%
2.41%
3.50%
P.E.
STA =98+52
ORIGINAL EL =1101.17
DESIGN EL =1101.57
17.00,1100.92

70.00 60.00 50.00 40.00 30.00 20.00 10.00 ℄ 10.00 20.00 30.00 40.00 50.00 60.00 70.00

9 9

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 191

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec98+52-99+26.dwg PLOT DATE: 1/27/2016 PLOT BY: DANE COUNTY HIGHWAY DEPT. PLOT SCALE: NONE WISDOT/CADDS SHEET 21

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 192

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec99+89-101+00.dwg | PLOT DATE: 1/27/2016 | PLOT BY: DANE COUNTY HIGHWAY DEPT. | PLOT SCALE: NONE | WISDOT/CADDS SHEET 21

70.00 60.00 50.00 40.00 30.00 20.00 10.00 ℄ 10.00 20.00 30.00 40.00 50.00 60.00 70.00

1100.00
1095.00
1090.00

101 + 90

2.00% 2.00%

2.50:1 2.50:1

17.00,1099.12
20.94,1098.73
33.33,1093.77
17.00,1098.10
22.80,1097.98

R/W

POST #9

STA =101+90
ORIGINAL EL =1099.03
DESIGN EL =1099.46

101 + 90

16.50,1099.26
22.33,1098.68
36.85,1095.05
16.50,1098.24
24.74,1098.08

4.00:1 4.00:1

R/W

POST #5

STA =101+65
ORIGINAL EL =1099.23
DESIGN EL =1099.59

101 + 65

16.00,1099.40
25.94,1098.41
35.45,1096.03
16.00,1098.38
26.92,1098.16

4.00:1 4.00:1

R/W

POST #1

STA =101+40
ORIGINAL EL =1099.32
DESIGN EL =1099.72

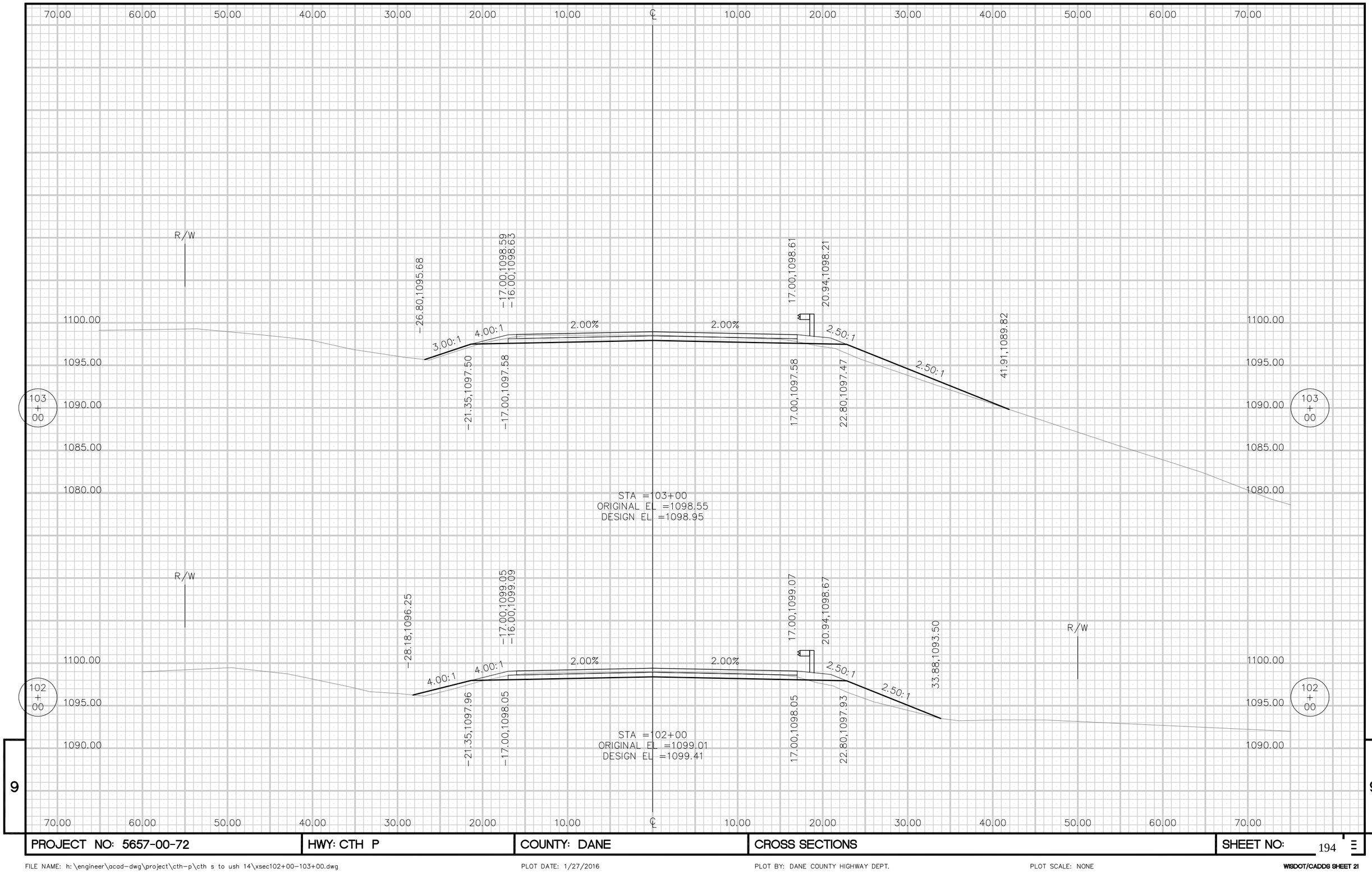
101 + 40

9

9

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 193

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec101+40-101+90.dwg PLOT DATE: 1/27/2016 PLOT BY: DANE COUNTY HIGHWAY DEPT. PLOT SCALE: NONE WISDOT/CADDS SHEET 21

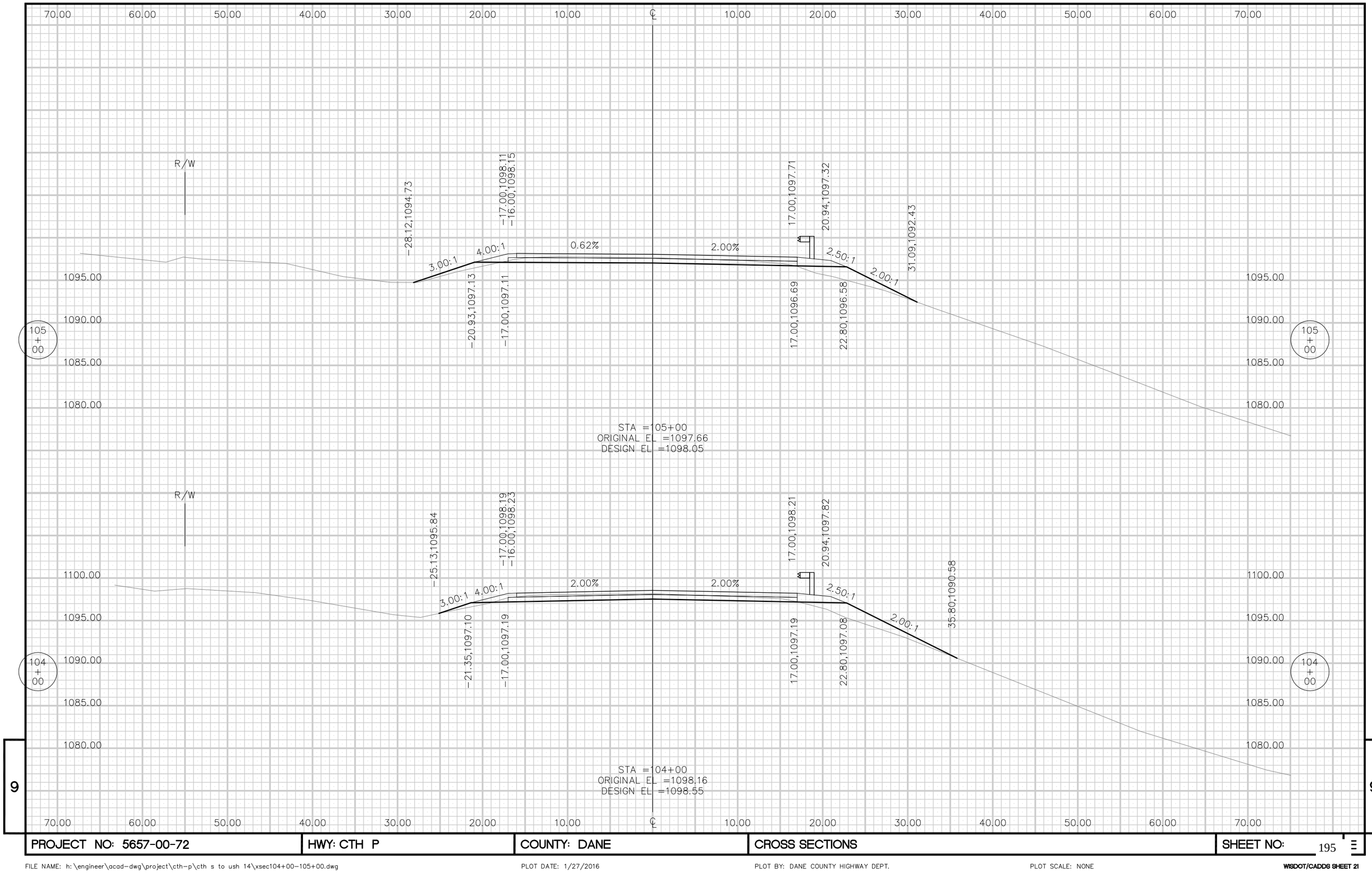


9

9

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 194

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec102+00-103+00.dwg | PLOT DATE: 1/27/2016 | PLOT BY: DANE COUNTY HIGHWAY DEPT. | PLOT SCALE: NONE | WISDOT/CADDS SHEET 21



9

9

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 195

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec104+00-105+00.dwg

PLOT DATE: 1/27/2016

PLOT BY: DANE COUNTY HIGHWAY DEPT.

PLOT SCALE: NONE

WISDOT/CADDS SHEET 21

70.00 60.00 50.00 40.00 30.00 20.00 10.00 ℄ 10.00 20.00 30.00 40.00 50.00 60.00 70.00

R/W

28.60,1094.80
−17.00,1098.44
−16.00,1098.48
17.00,1096.99
20.94,1096.60
36.62,1090.33
3.00:1
4.00:1
4.52%
4.52%
2.50:1
2.50:1
−20.43,1097.58
−17.00,1097.44
17.00,1095.97
23.21,1095.69

1095.00
1090.00
1085.00
1080.00

106 + 00

STA =106+00
ORIGINAL EL =1097.36
DESIGN EL =1097.76

R/W

−25.71,1095.35
−17.00,1098.41
−16.00,1098.45
17.00,1097.10
20.94,1096.71
30.48,1092.16
3.00:1
3.00:1
4.10%
4.10%
2.50:1
2.00:1
−19.70,1097.51
−17.00,1097.41
17.00,1096.08
23.14,1095.83

1095.00
1090.00
1085.00

105 + 89

STA =105+89
ORIGINAL EL =1097.40
DESIGN EL =1097.80

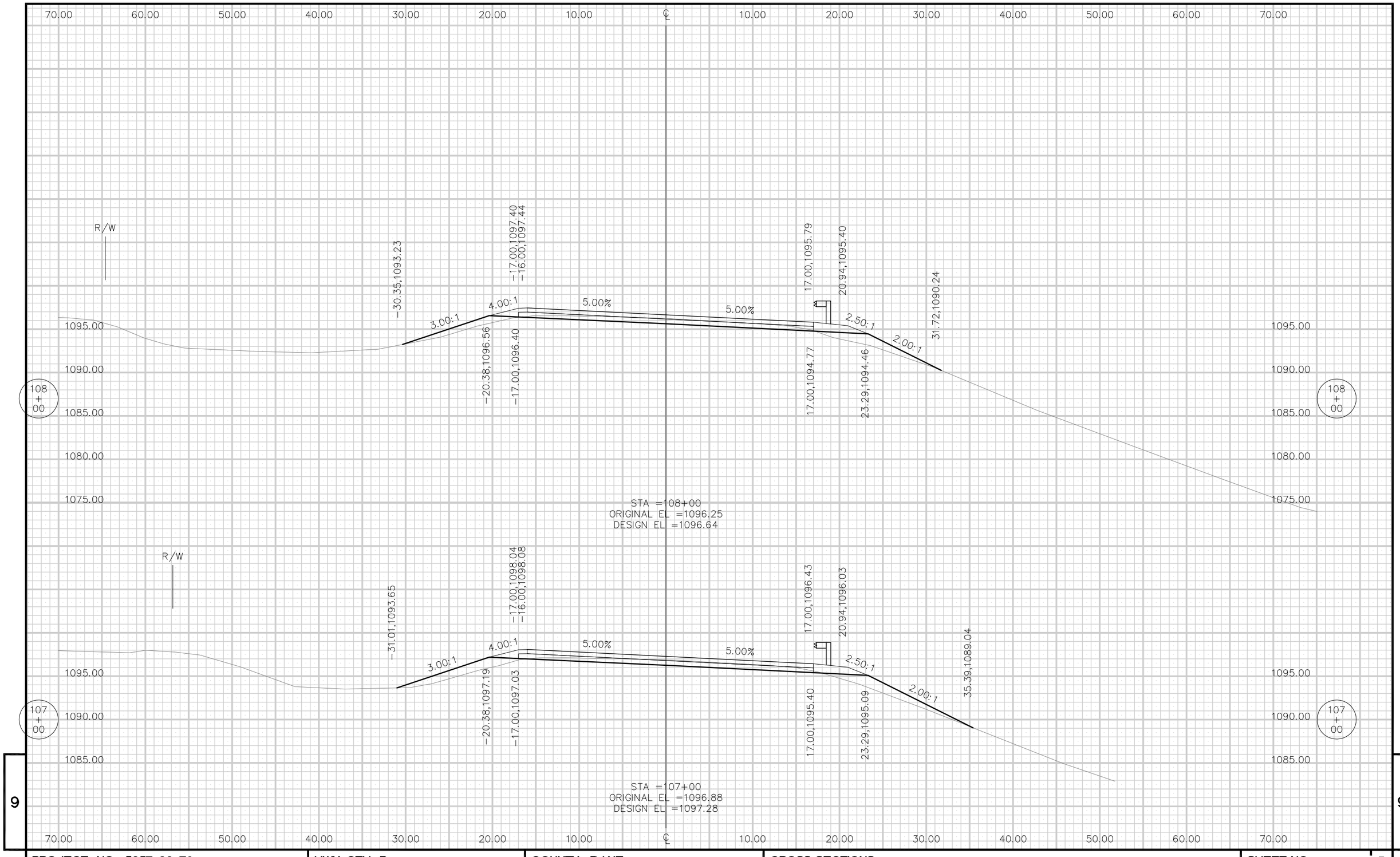
EXISTING 24" RCCP
RELAID STORM SEWER 24-INCH – 16' RT

70.00 60.00 50.00 40.00 30.00 20.00 10.00 ℄ 10.00 20.00 30.00 40.00 50.00 60.00 70.00

9 9

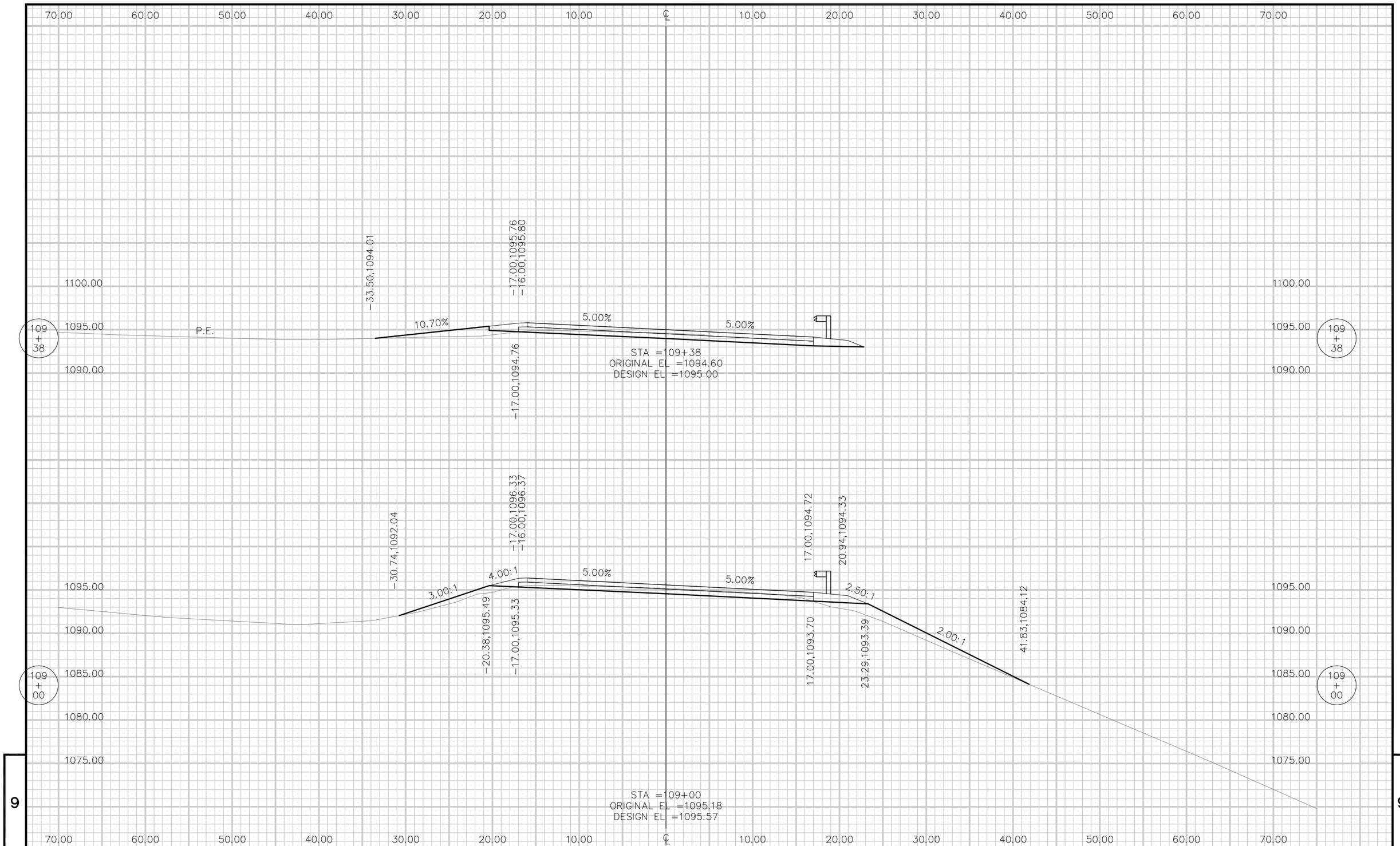
PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 196

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec105+89-106+00.dwg PLOT DATE: 1/27/2016 PLOT BY: DANE COUNTY HIGHWAY DEPT. PLOT SCALE: NONE



PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 197

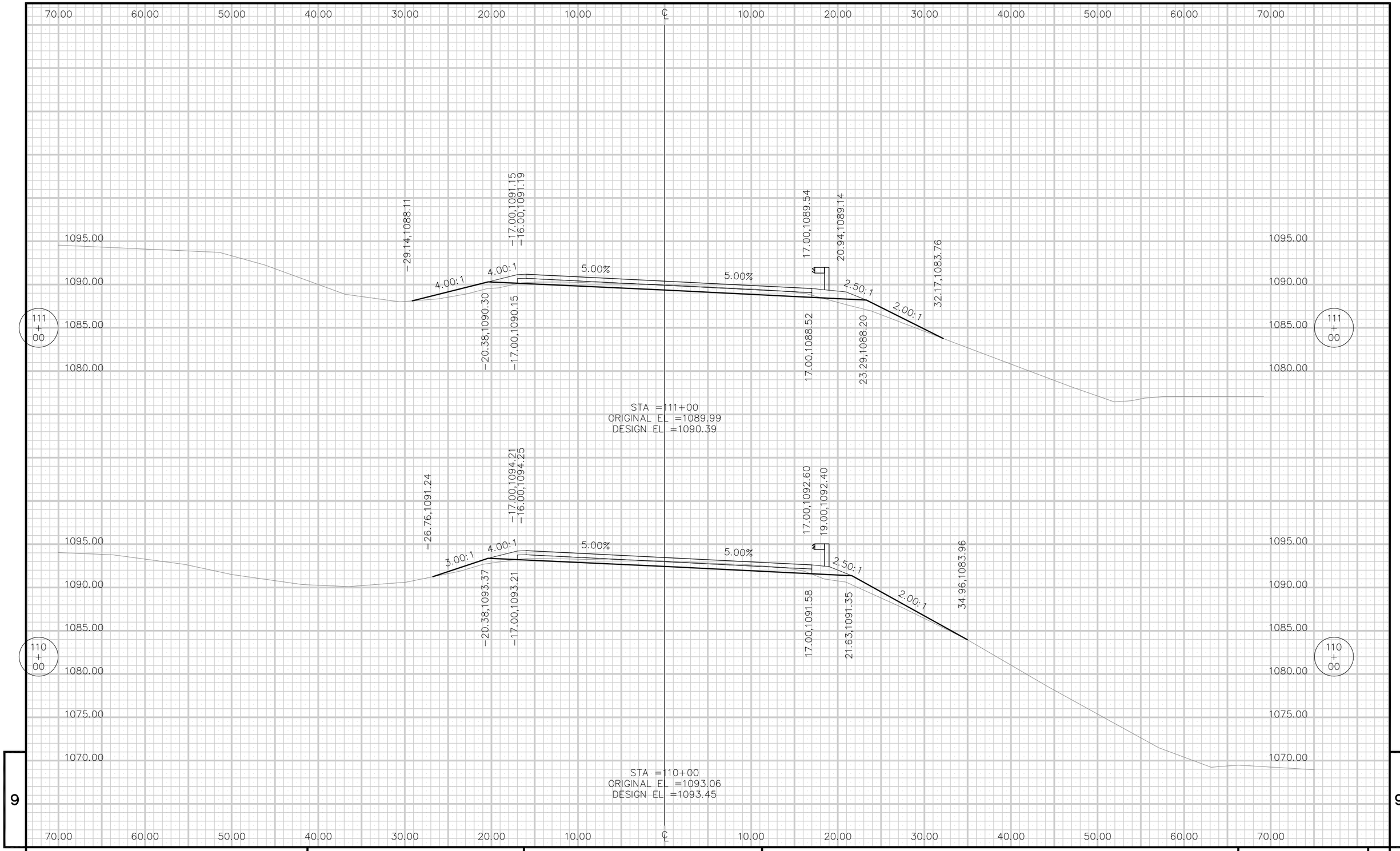
FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec107+00-108+00.dwg | PLOT DATE: 1/27/2016 | PLOT BY: DANE COUNTY HIGHWAY DEPT. | PLOT SCALE: NONE | WISDOT/CADDS SHEET 21



9

9

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 198



9

9

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 199

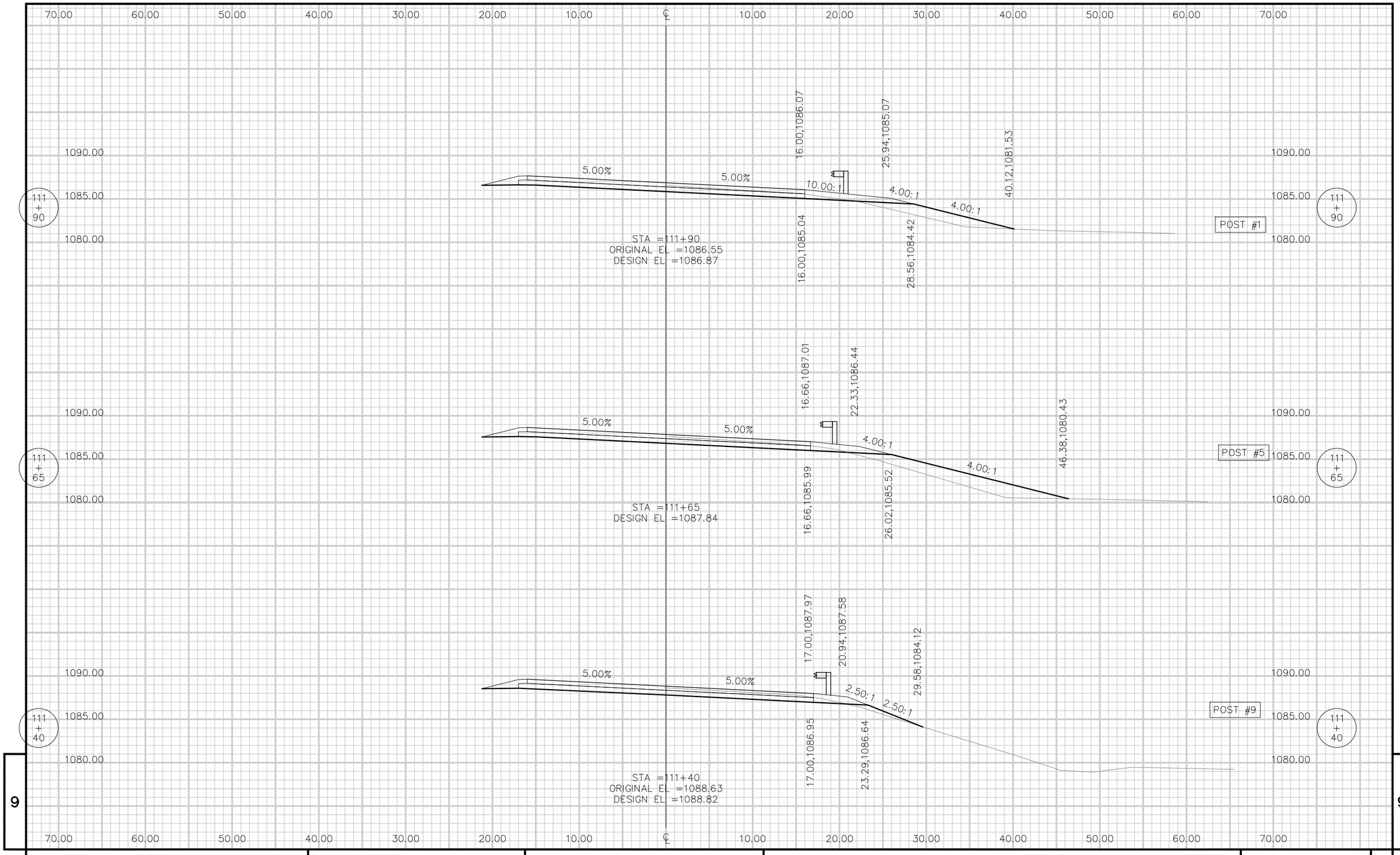
FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec110+00-111+00.dwg

PLOT DATE: 1/27/2016

PLOT BY: DANE COUNTY HIGHWAY DEPT.

PLOT SCALE: NONE

WISDOT/CADDS SHEET 21



9

9

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 200

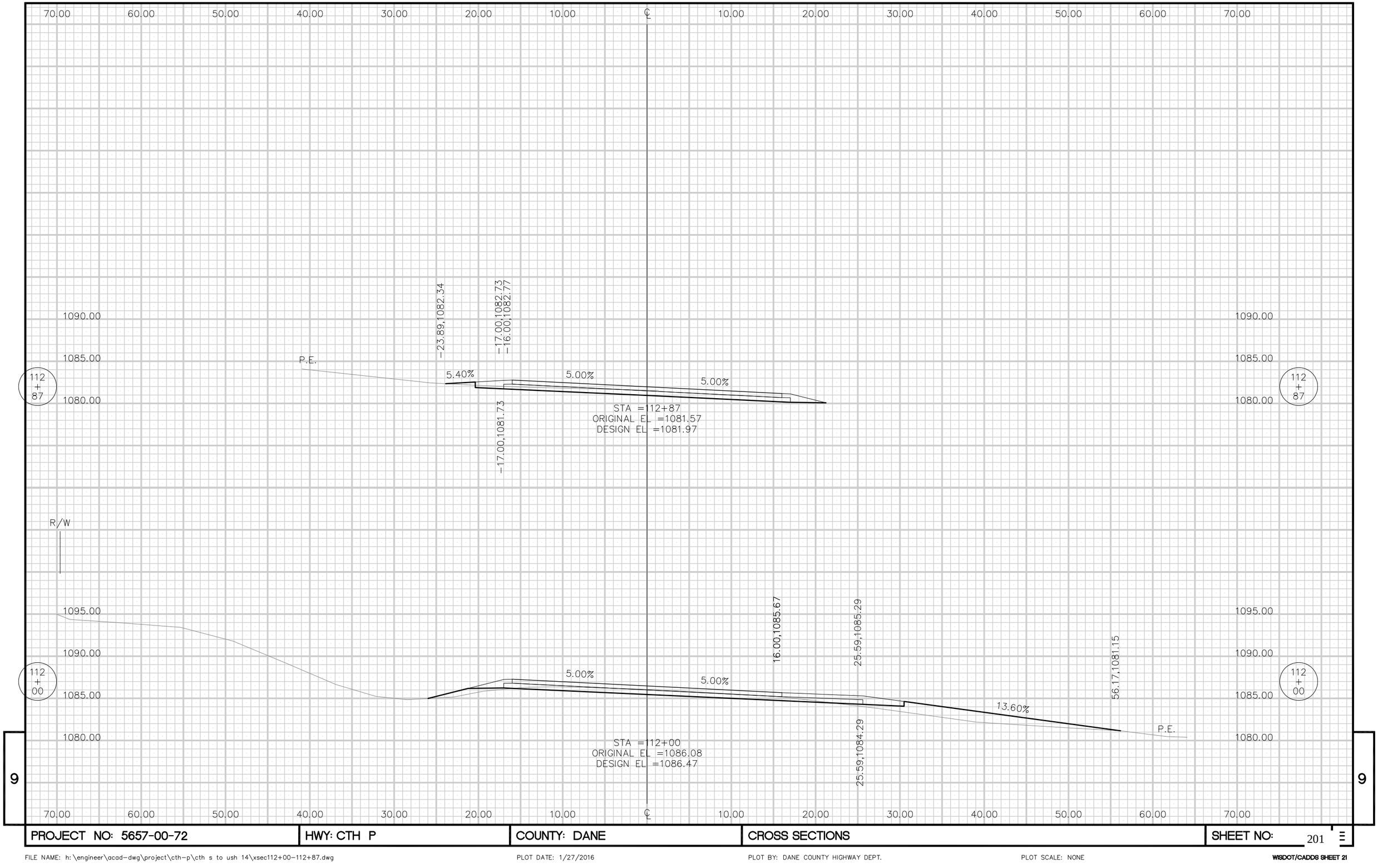
FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec111+40-111+90.dwg

PLOT DATE: 1/27/2016

PLOT BY: DANE COUNTY HIGHWAY DEPT.

PLOT SCALE: NONE

WISDOT/CADDS SHEET 21



9

9

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 201

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec112+00-112+87.dwg

PLOT DATE: 1/27/2016

PLOT BY: DANE COUNTY HIGHWAY DEPT.

PLOT SCALE: NONE

WISDOT/CADDS SHEET 21

70.00 60.00 50.00 40.00 30.00 20.00 10.00 ℄ 10.00 20.00 30.00 40.00 50.00 60.00 70.00

R/W

1090.00
1085.00
1080.00
1075.00
1070.00

114 + 00

-26.65,1073.16
-17.00,1075.57
-16.00,1075.61
16.00,1074.01
17.00,1073.97
27.31,1070.95

4.00:1 4.00:1 5.00% 5.00% 4.00:1 3.00:1

-20.38,1074.72
-17.00,1074.57
17.00,1072.97
21.96,1072.73

STA =114+00
ORIGINAL EL =1074.41
DESIGN EL =1074.81

-20.03,1081.23
-17.00,1081.99
-16.00,1082.03
16.00,1080.43
19.29,1080.29
29.94,1077.63

4.00:1 5.00% 5.00% 4.00:1 4.00:1

-17.00,1080.98
19.29,1079.29
24.22,1079.06

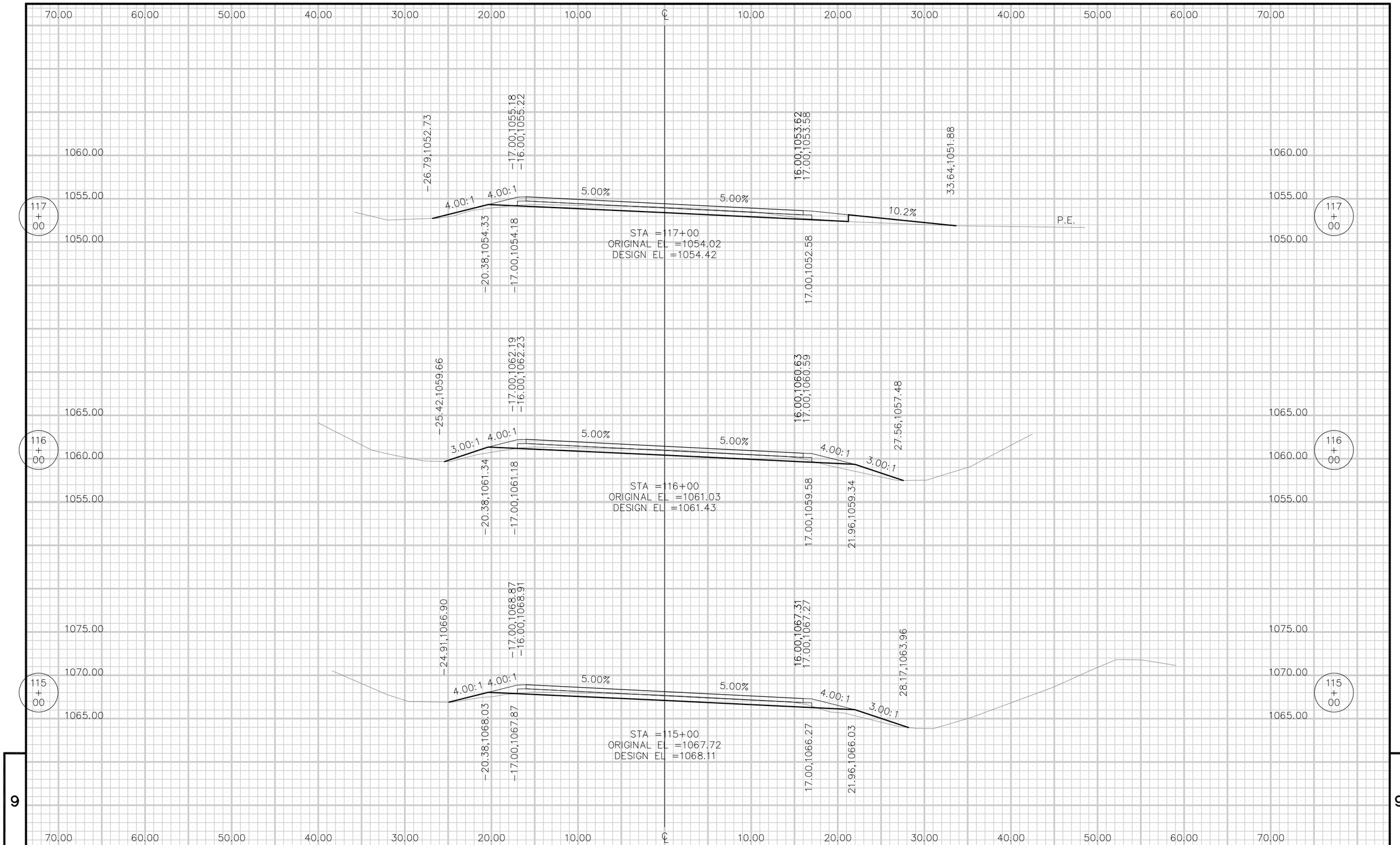
STA =113+00
ORIGINAL EL =1080.83
DESIGN EL =1081.23

113 + 00

9

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 202

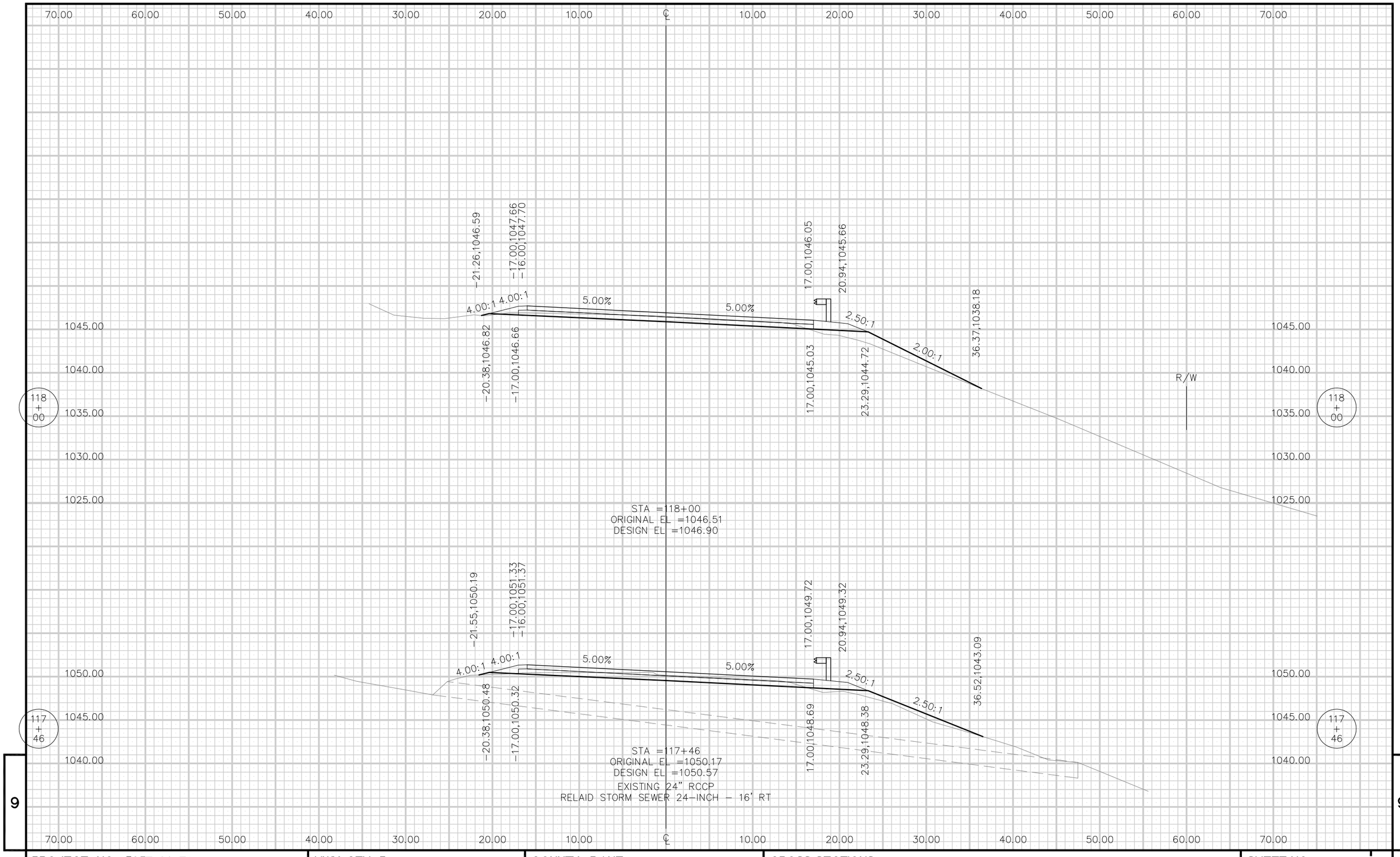
FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec113+00-114+00.dwg PLOT DATE: 1/27/2016 PLOT BY: DANE COUNTY HIGHWAY DEPT. PLOT SCALE: NONE WISDOT/CADDS SHEET 21



9

9

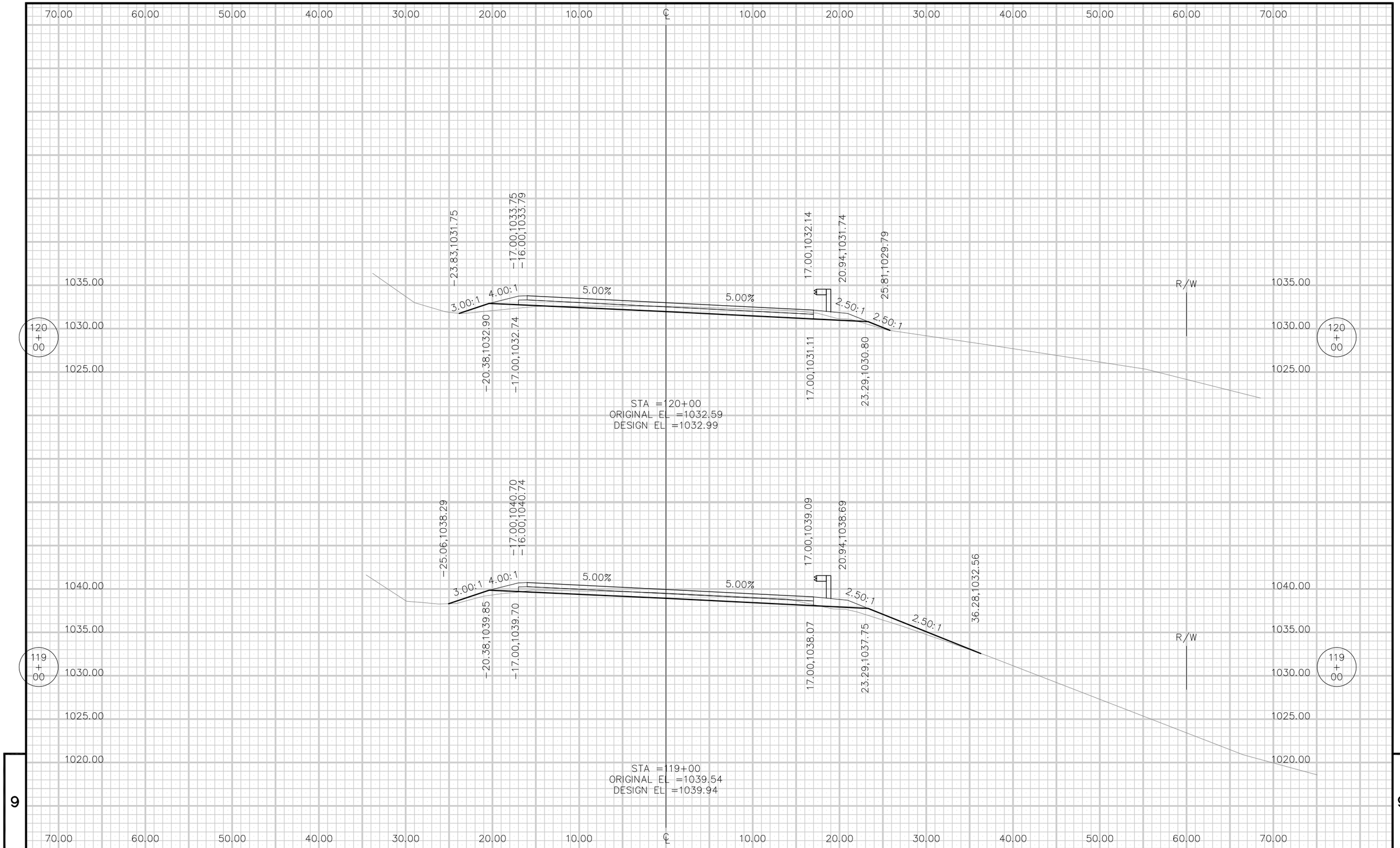
PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 203



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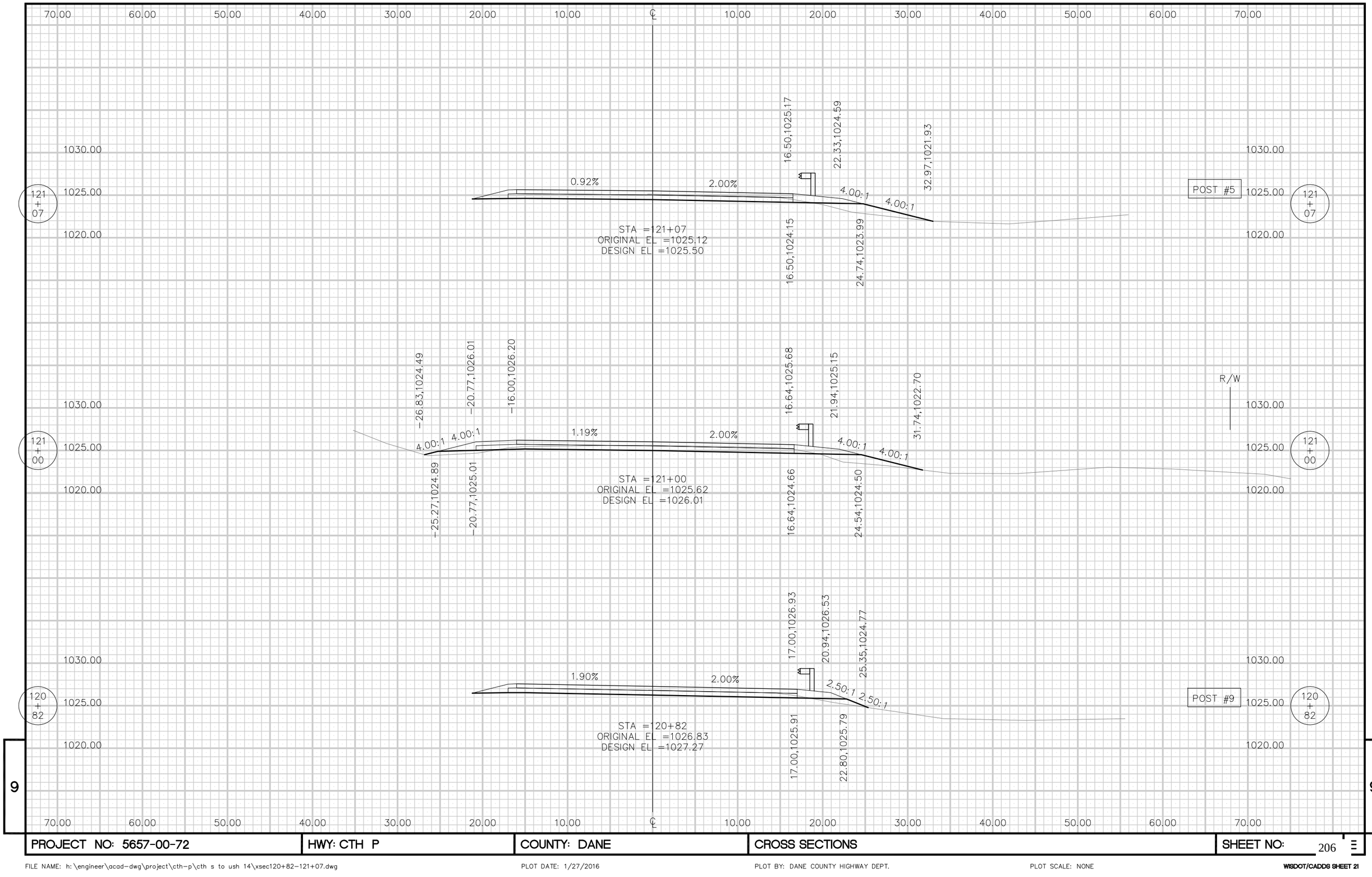
PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 204



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PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 205



PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 206

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec120+82-121+07.dwg | PLOT DATE: 1/27/2016 | PLOT BY: DANE COUNTY HIGHWAY DEPT. | PLOT SCALE: NONE | WISDOT/CADDS SHEET 21

70.00 60.00 50.00 40.00 30.00 20.00 10.00 ℄ 10.00 20.00 30.00 40.00 50.00 60.00 70.00

1020.00
1015.00
1010.00

122 + 00

-29.11,1016.18
-22.69,1017.79
-16.45,1018.41
16.00,1018.42
21.40,1018.20
29.77,1016.11
4.00:1 4.00:1 2.00% 2.00% 4.00:1 4.00:1
-24.96,1017.22
-16.45,1017.39
21.40,1017.20
25.83,1017.09

STA =122+00
ORIGINAL EL =1018.34
DESIGN EL =1018.74

1025.00
1020.00
1015.00

121 + 77.50

POST #1

-30.49,1017.95
-25.94,1019.09
-16.00,1020.08
4.00:1 4.00:1 10.00:1 1.85% 2.00%
-26.85,1018.86
-16.00,1019.06

STA =121+77.50
ORIGINAL EL =1020.06
DESIGN EL =1020.37

1025.00
1020.00
1015.00

121 + 32

16.00,1023.36
25.94,1022.37
32.67,1020.69
0.06% 2.00% 4.00:1 4.00:1
16.00,1022.34
26.92,1022.12

STA =121+32
ORIGINAL EL =1023.23
DESIGN EL =1023.68

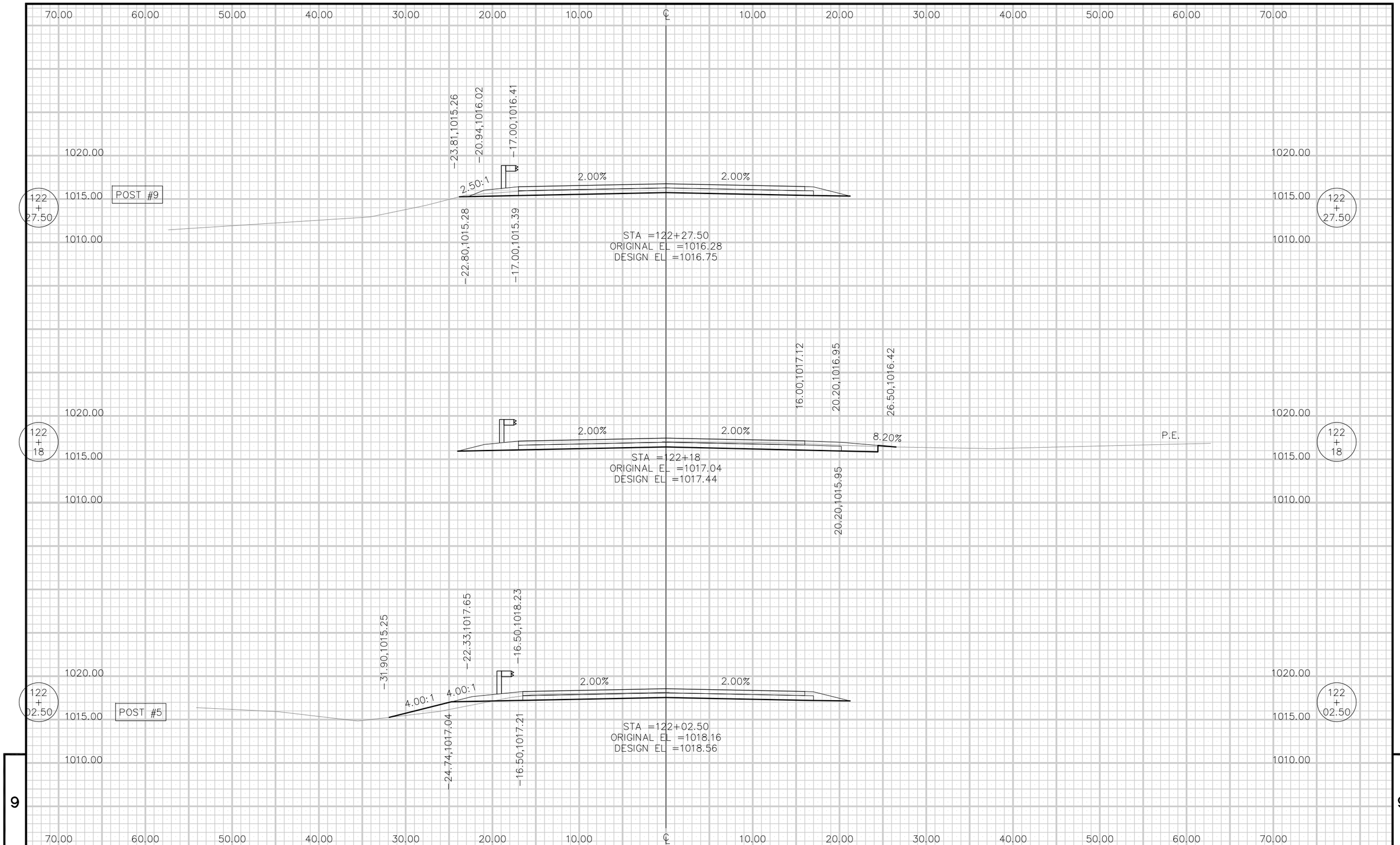
POST #1

70.00 60.00 50.00 40.00 30.00 20.00 10.00 ℄ 10.00 20.00 30.00 40.00 50.00 60.00 70.00

9 9

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 207

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec121+32-122+00.dwg PLOT DATE: 1/27/2016 PLOT BY: DANE COUNTY HIGHWAY DEPT. PLOT SCALE: NONE



PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 208

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec122+02-122+27.dwg | PLOT DATE: 1/27/2016 | PLOT BY: DANE COUNTY HIGHWAY DEPT. | PLOT SCALE: NONE | WISDOT/CADDS SHEET 21

70.00 60.00 50.00 40.00 30.00 20.00 10.00 ℄ 10.00 20.00 30.00 40.00 50.00 60.00 70.00

-28.91,1007.72
-20.94,1010.91
-17.00,1011.30
16.00,1011.32
17.00,1011.28
26.43,1008.50
2.50:1 2.50:1
2.00%
2.00%
4.00:1
3.00:1
R/W
1010.00
1005.00
1000.00
123 + 00
-22.80,1010.17
-17.00,1010.28
17.00,1010.28
21.35,1010.20

STA =123+00
ORIGINAL EL =1011.25
DESIGN EL =1011.64

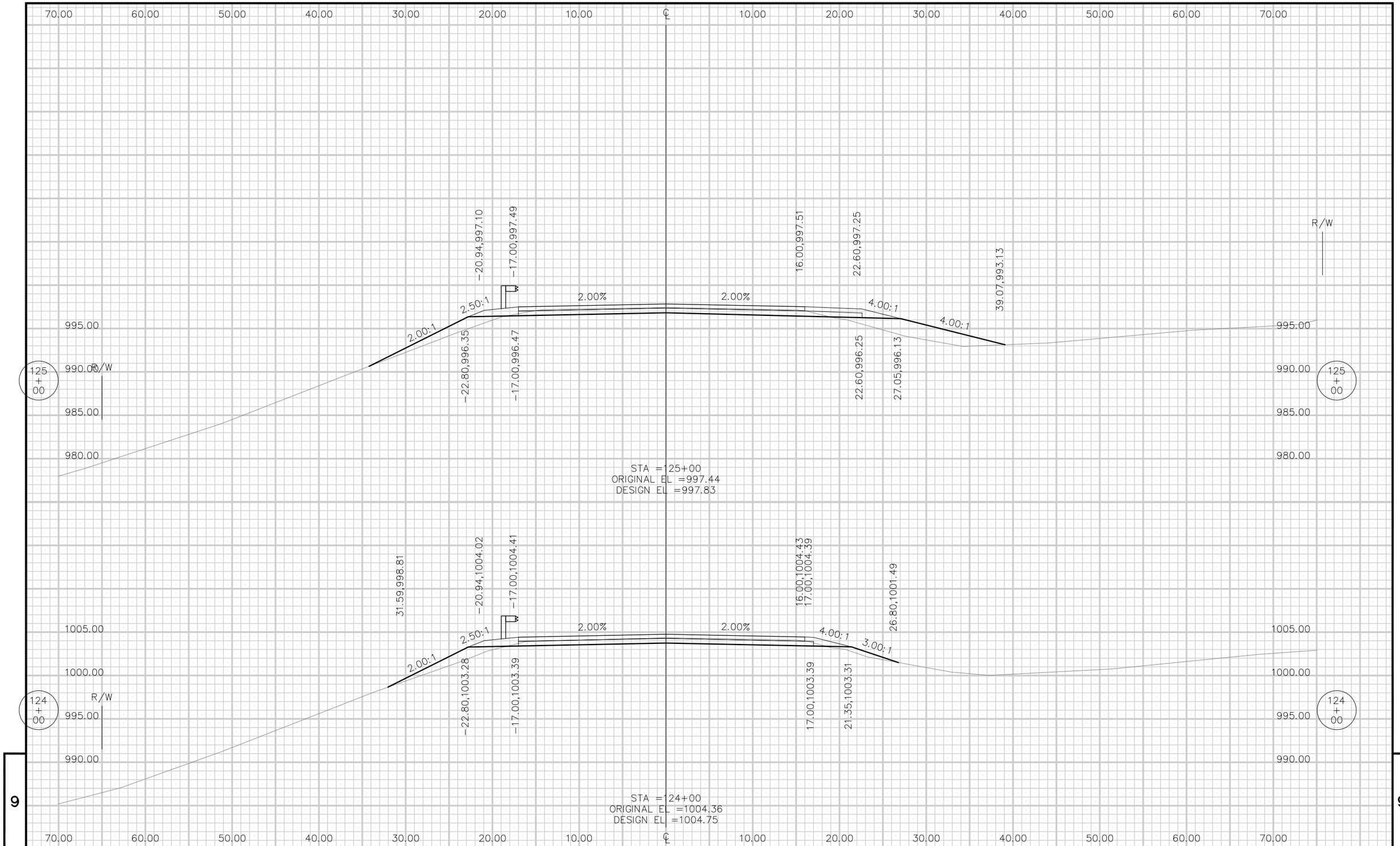
-20.94,1011.80
-17.00,1012.19
16.00,1012.21
17.00,1012.17
40.93,1007.04
-54.86,1002.01
2.50:1 2.50:1
2.00%
2.00%
3.00:1
4.00:1
2.50:1
18.83:1
R/W
1010.00
1005.00
1000.00
122 + 86
-22.80,1011.06
-17.00,1011.17
17.00,1011.17
20.19,1011.11
IE=1001.50

STA =122+86
ORIGINAL EL =1012.14
DESIGN EL =1012.53
EXISTING 72" RCCP
EXTEND 6' LT
1-APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 72-INCH (LT)
1-APRON ENDWALLS FOR CULVERT PIPE SLOPED CROSS DRAINS STEEL 72-INCH 4 TO 1 (RT)

70.00 60.00 50.00 40.00 30.00 20.00 10.00 ℄ 10.00 20.00 30.00 40.00 50.00 60.00 70.00

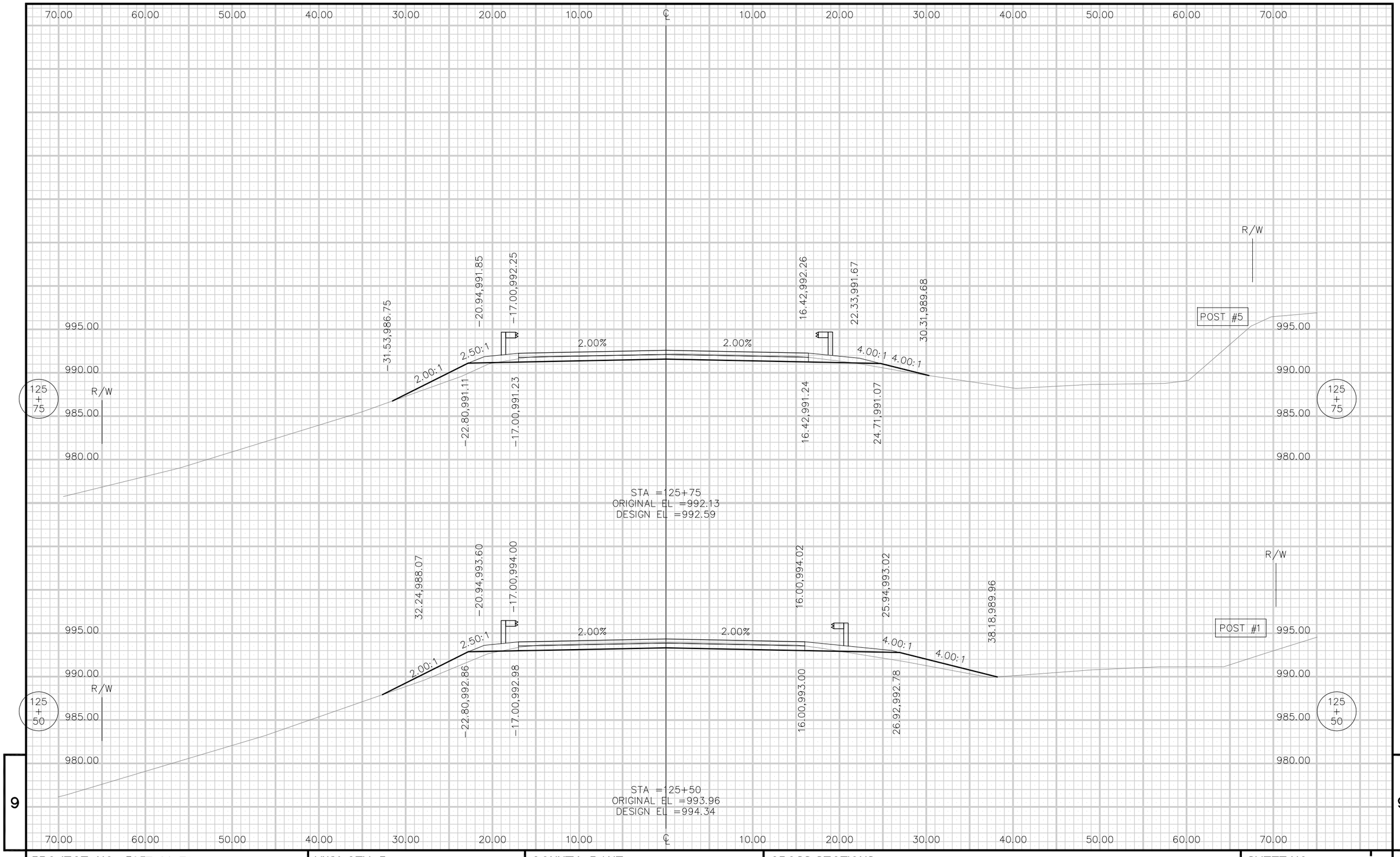
9 9

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 209



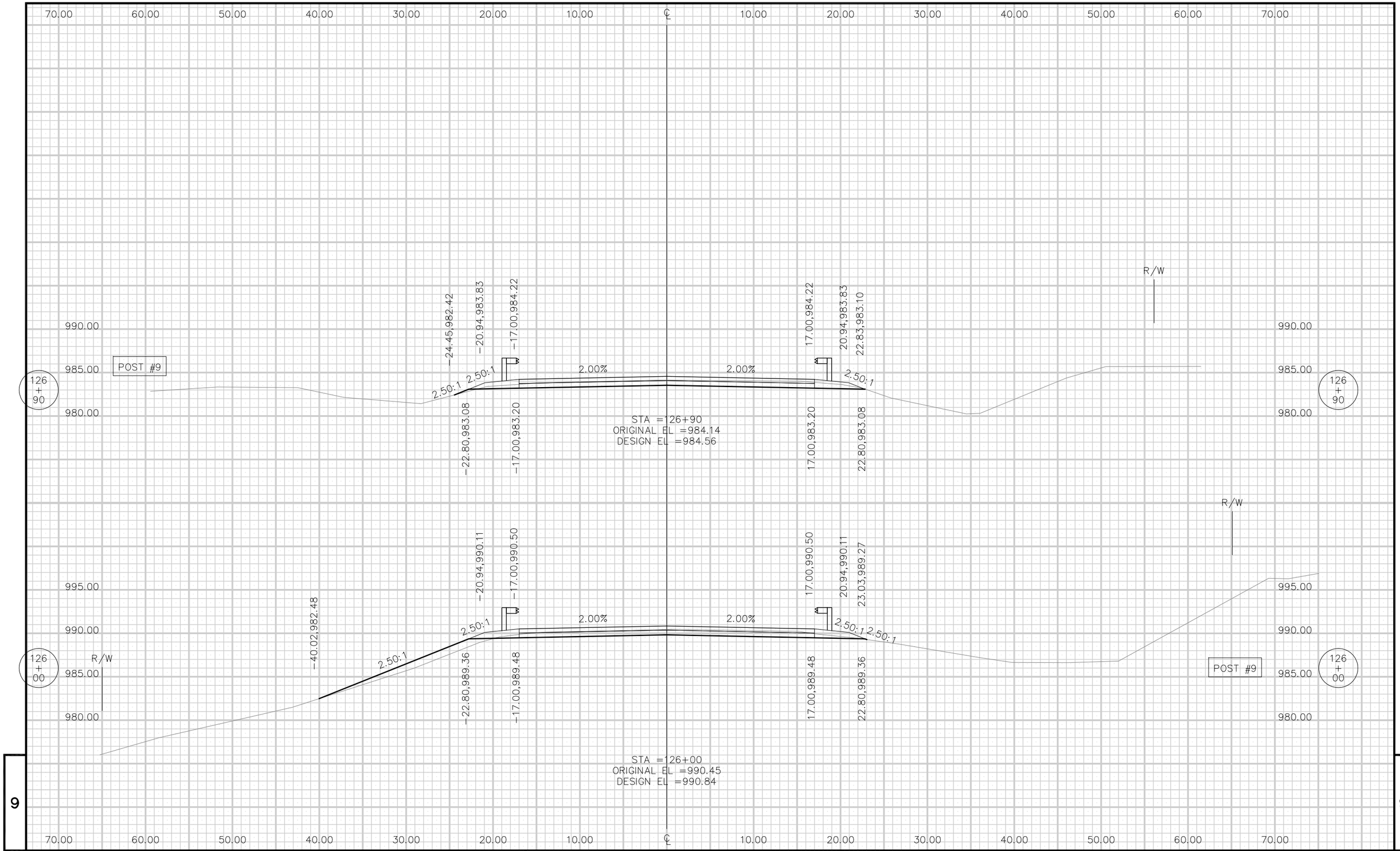
PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 210

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec124+00-125+00.dwg | PLOT DATE: 1/27/2016 | PLOT BY: DANE COUNTY HIGHWAY DEPT. | PLOT SCALE: NONE | WISDOT/CADDS SHEET 21



PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 211

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec125+50-125+75.dwg | PLOT DATE: 1/27/2016 | PLOT BY: DANE COUNTY HIGHWAY DEPT. | PLOT SCALE: NONE | WISDOT/CADDS SHEET 21

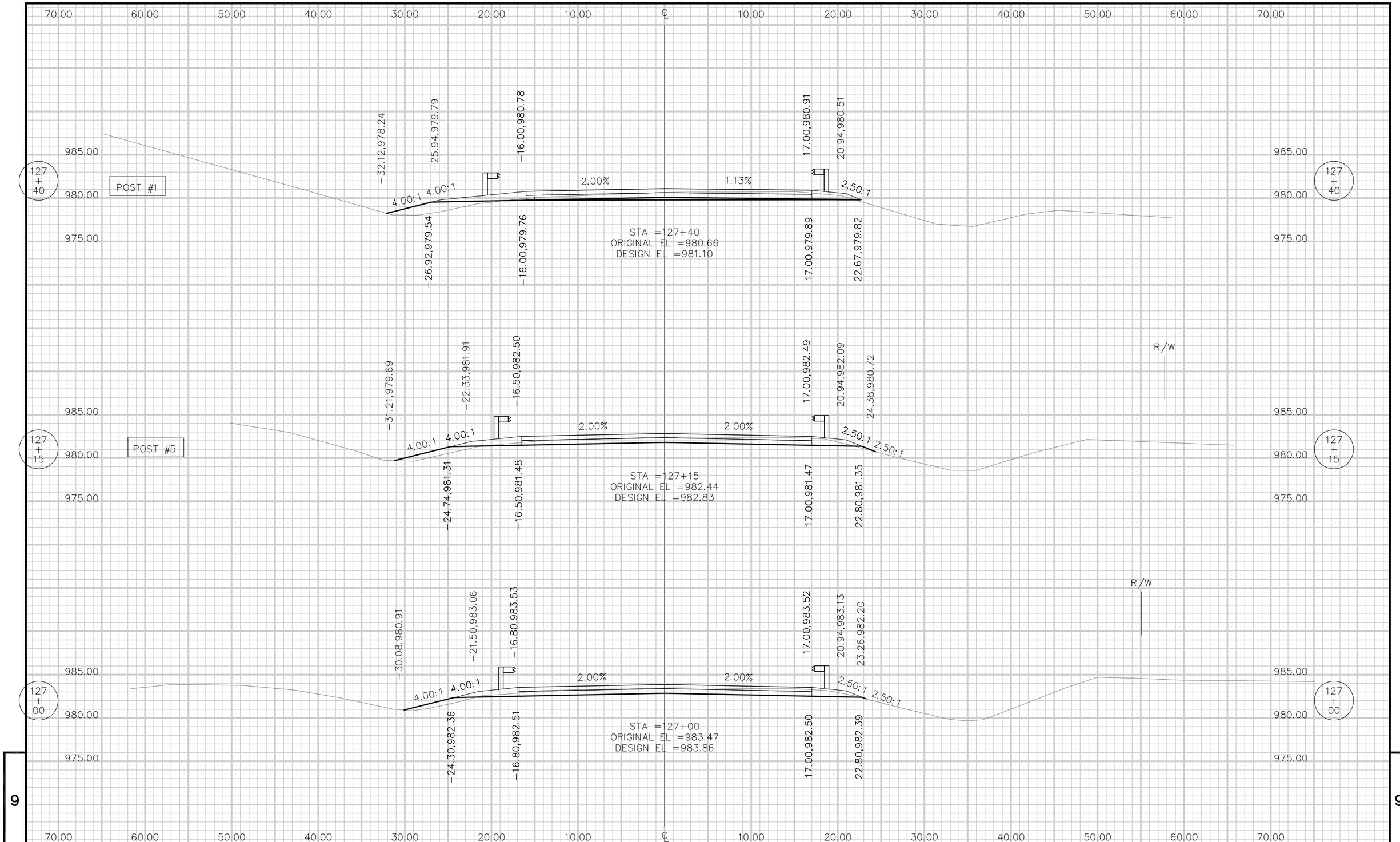


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PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 212

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec126+00-126+90.dwg | PLOT DATE: 1/27/2016 | PLOT BY: DANE COUNTY HIGHWAY DEPT. | PLOT SCALE: NONE | WISDOT/CADDS SHEET 21

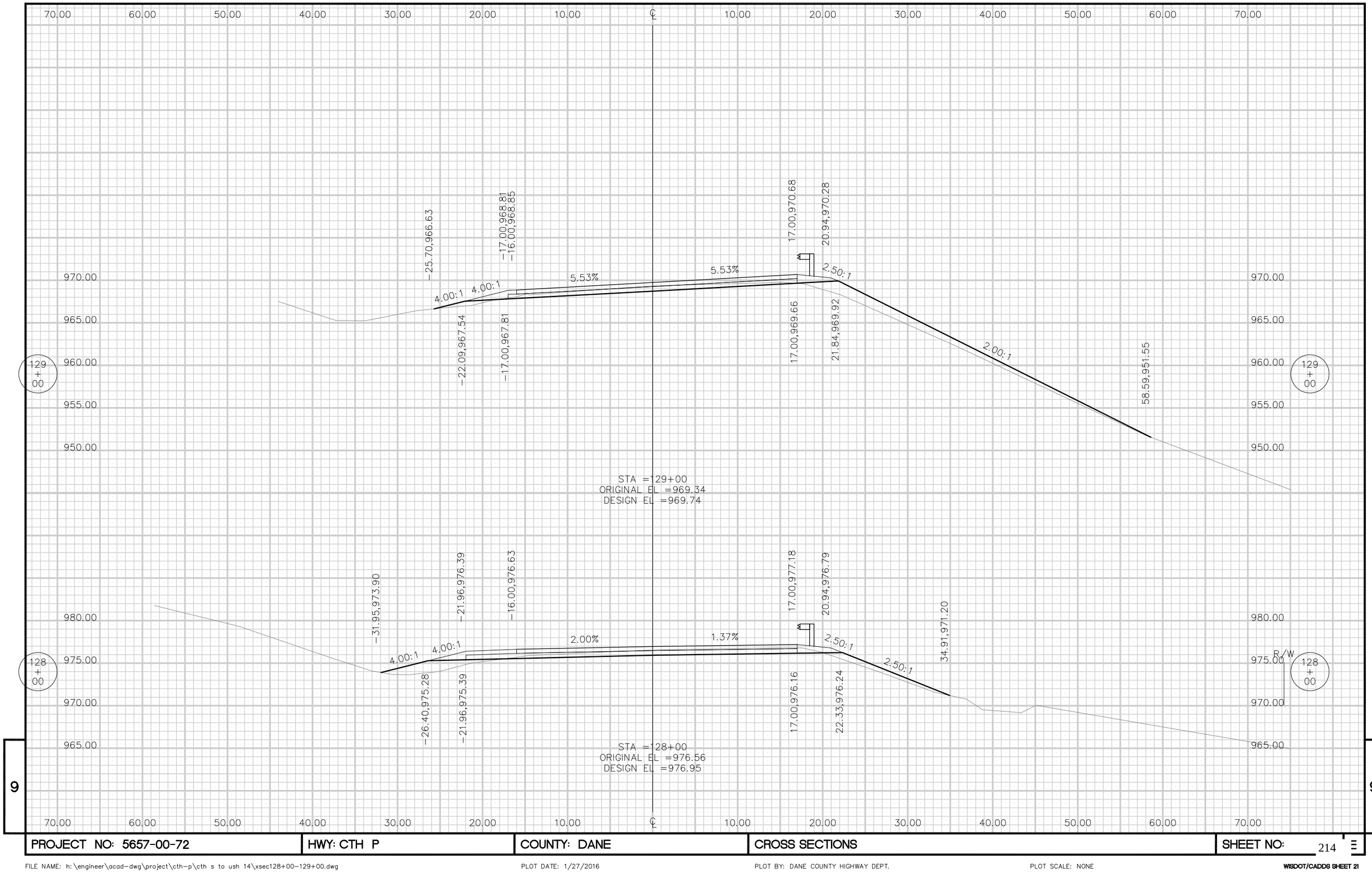


9

9

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 213

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec127+00-127+40.dwg | PLOT DATE: 1/27/2016 | PLOT BY: DANE COUNTY HIGHWAY DEPT. | PLOT SCALE: NONE | WISDOT/CADDS SHEET 21



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PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 214

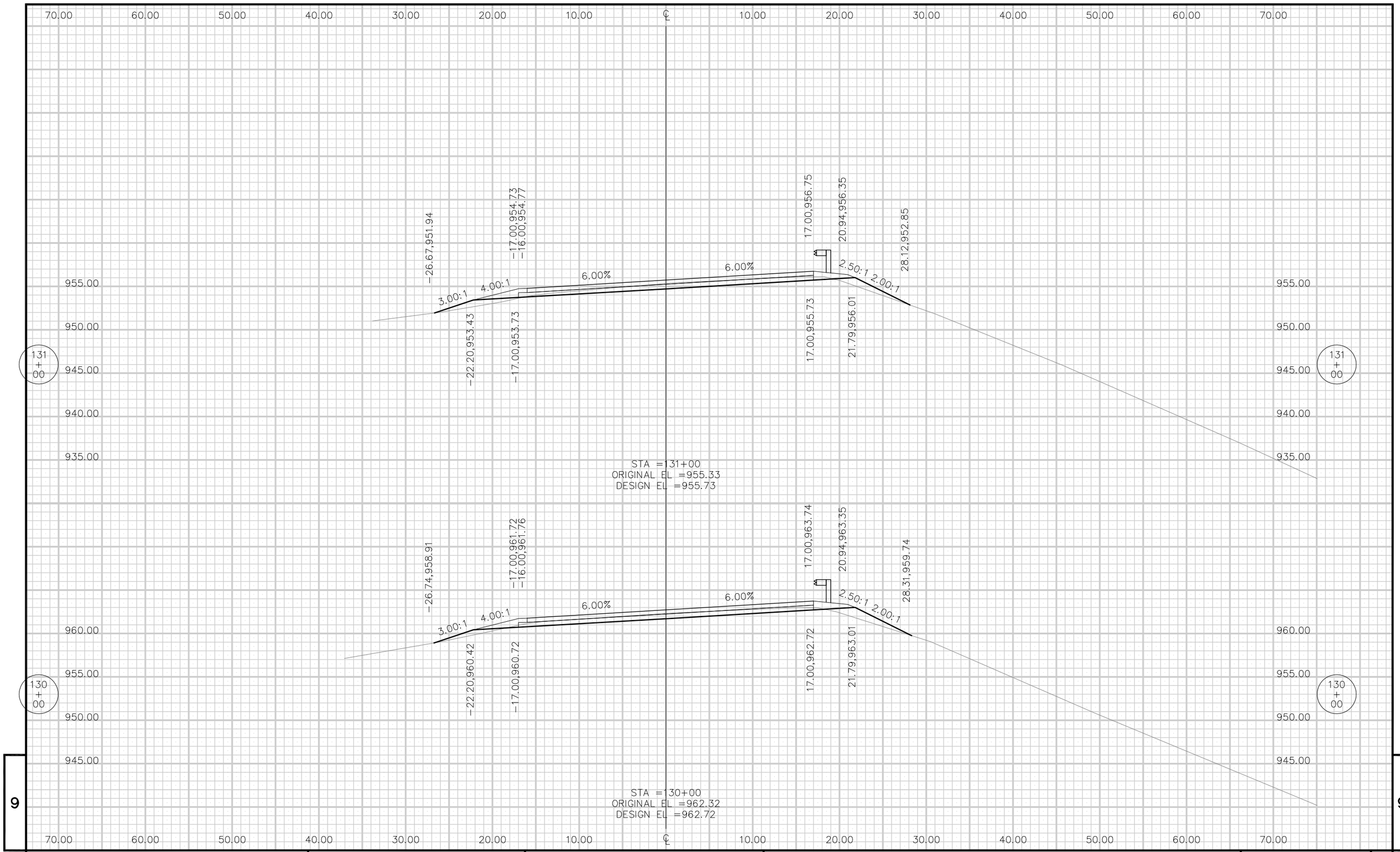
FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec128+00-129+00.dwg

PLOT DATE: 1/27/2016

PLOT BY: DANE COUNTY HIGHWAY DEPT.

PLOT SCALE: NONE

WISDOT/CADDS SHEET 21



PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 215

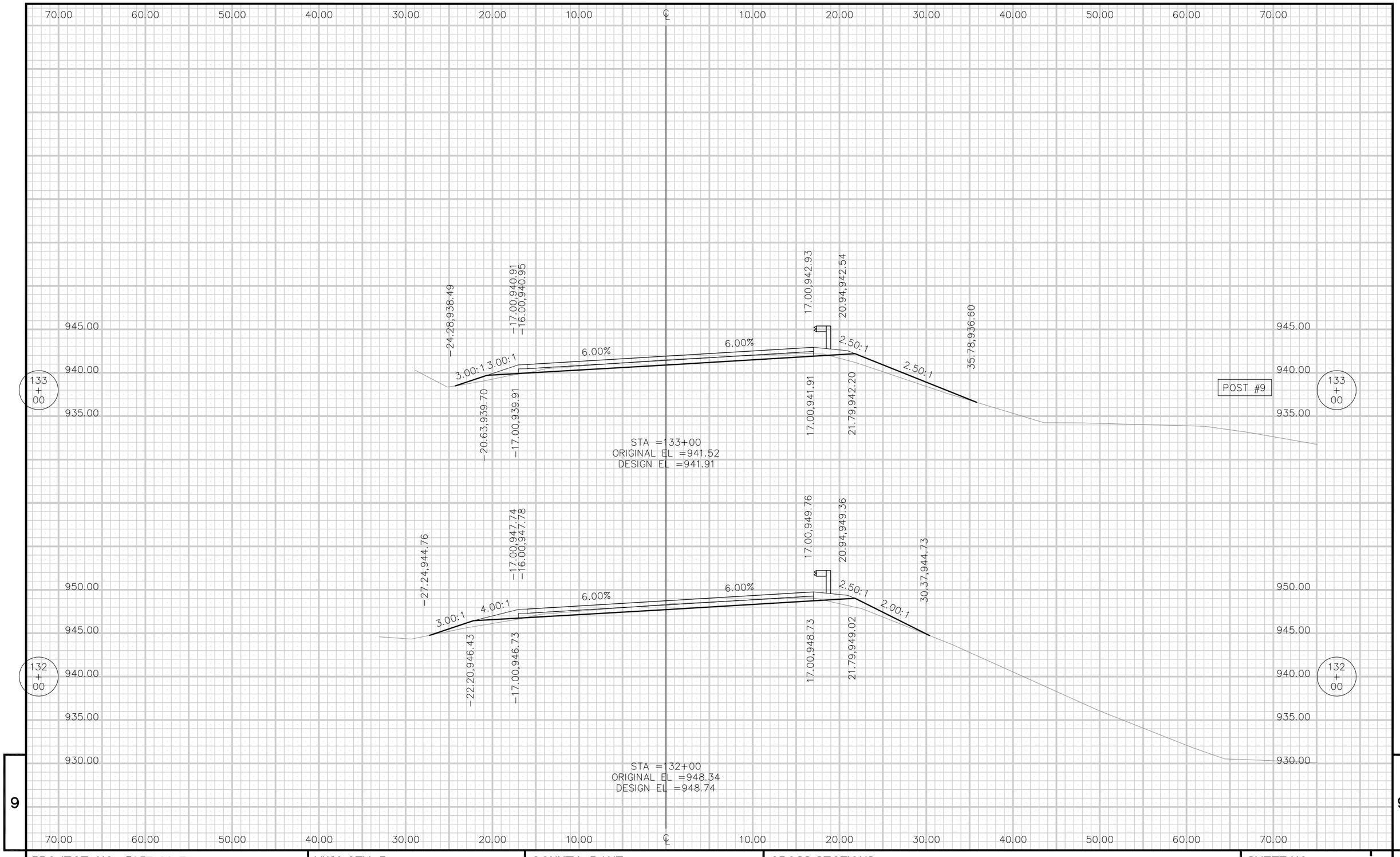
FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec130+00-131+00.dwg

PLOT DATE: 1/27/2016

PLOT BY: DANE COUNTY HIGHWAY DEPT.

PLOT SCALE: NONE

WISDOT/CADDS SHEET 21

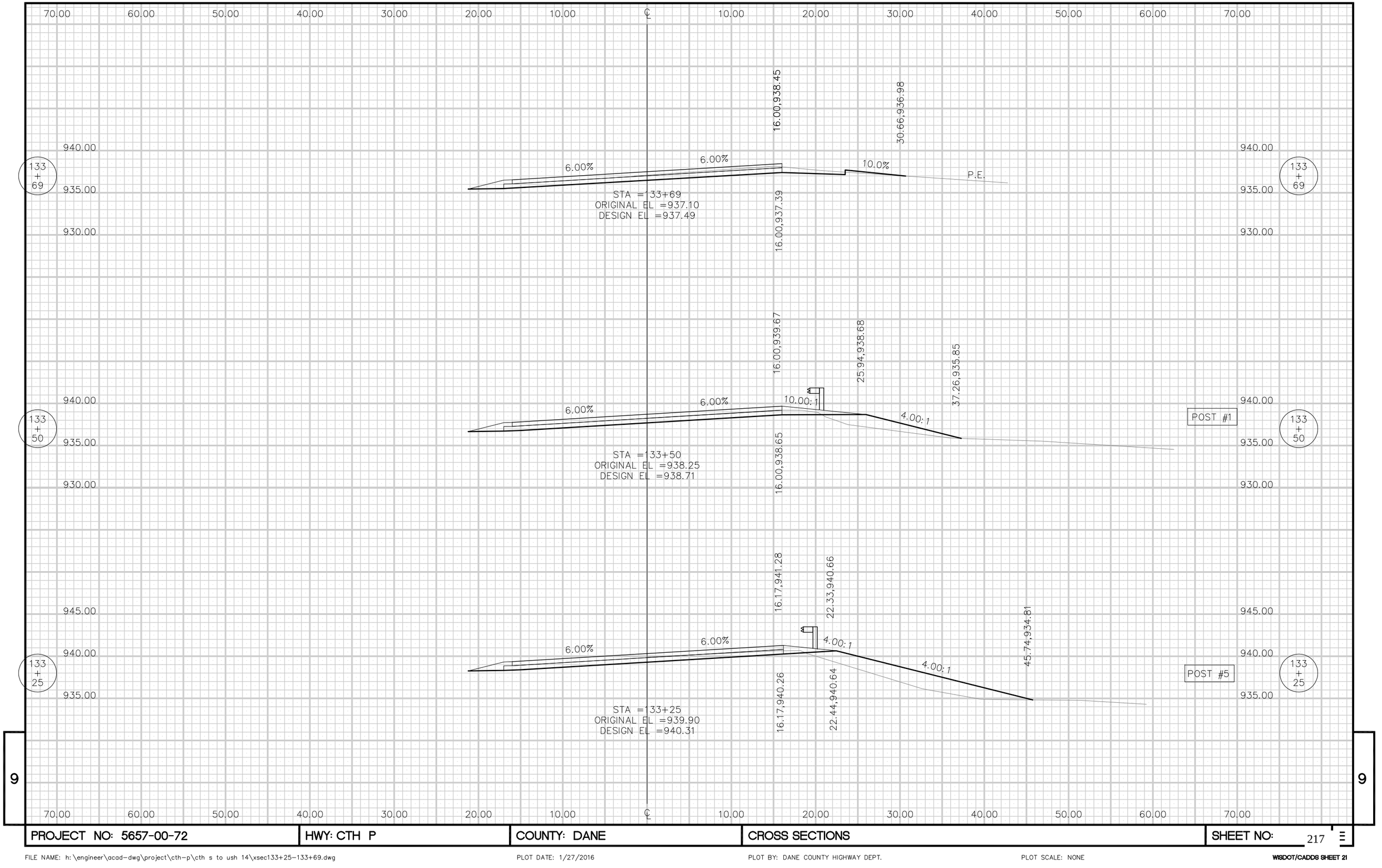


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PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 216

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec132+00-133+00.dwg | PLOT DATE: 1/27/2016 | PLOT BY: DANE COUNTY HIGHWAY DEPT. | PLOT SCALE: NONE | WISDOT/CADDS SHEET 21



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PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 217

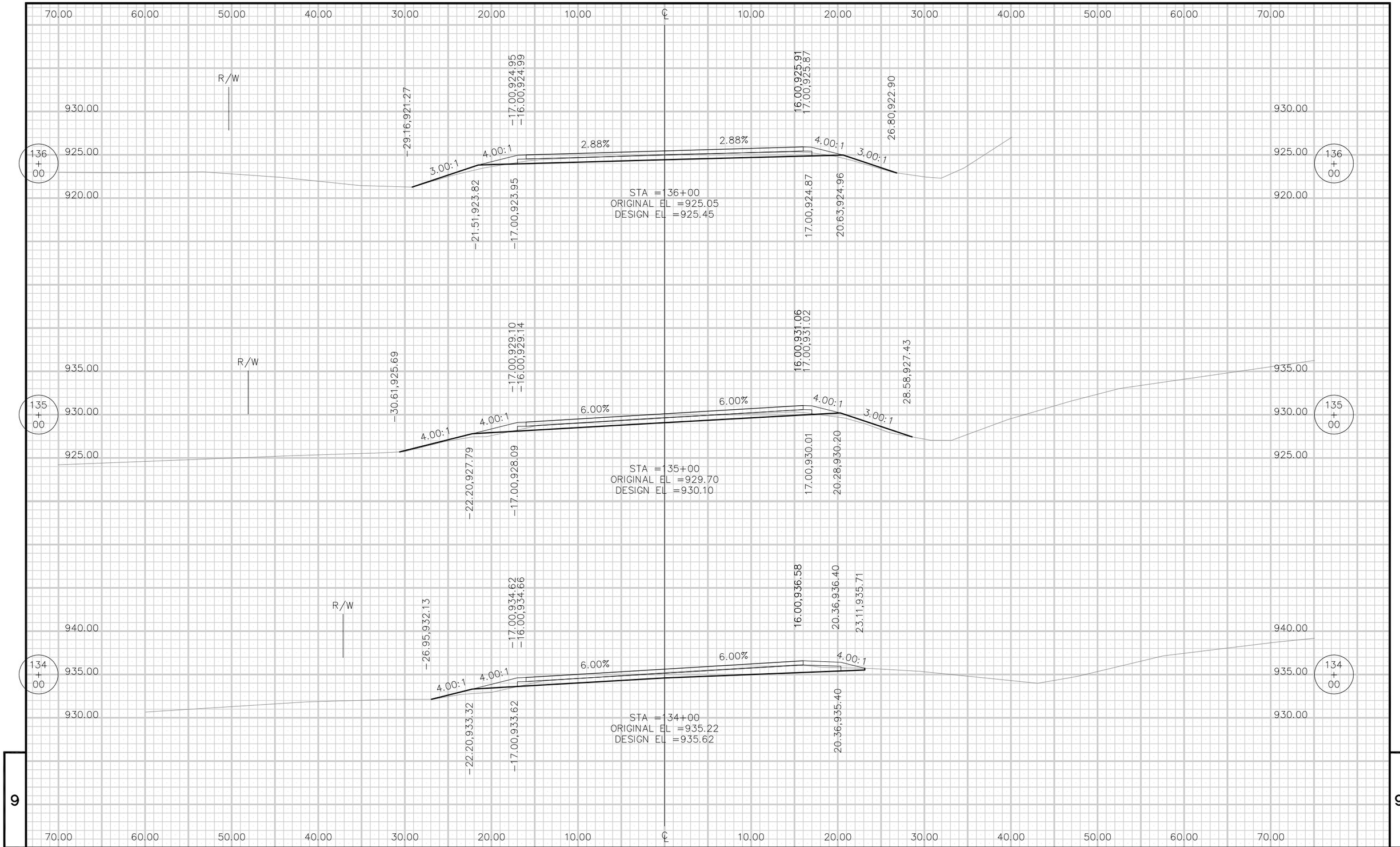
FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec133+25-133+69.dwg

PLOT DATE: 1/27/2016

PLOT BY: DANE COUNTY HIGHWAY DEPT.

PLOT SCALE: NONE

WISDOT/CADDS SHEET 21

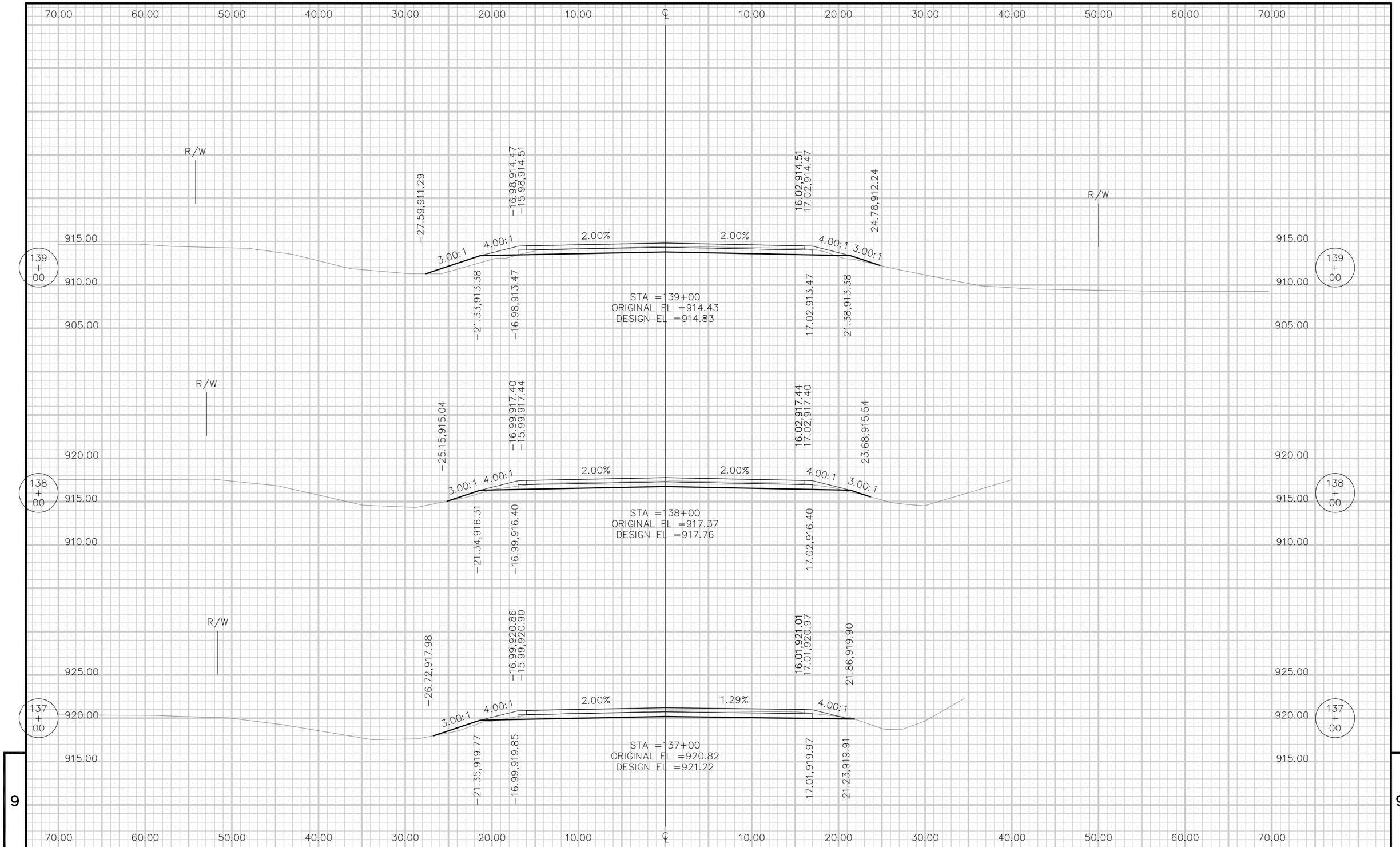


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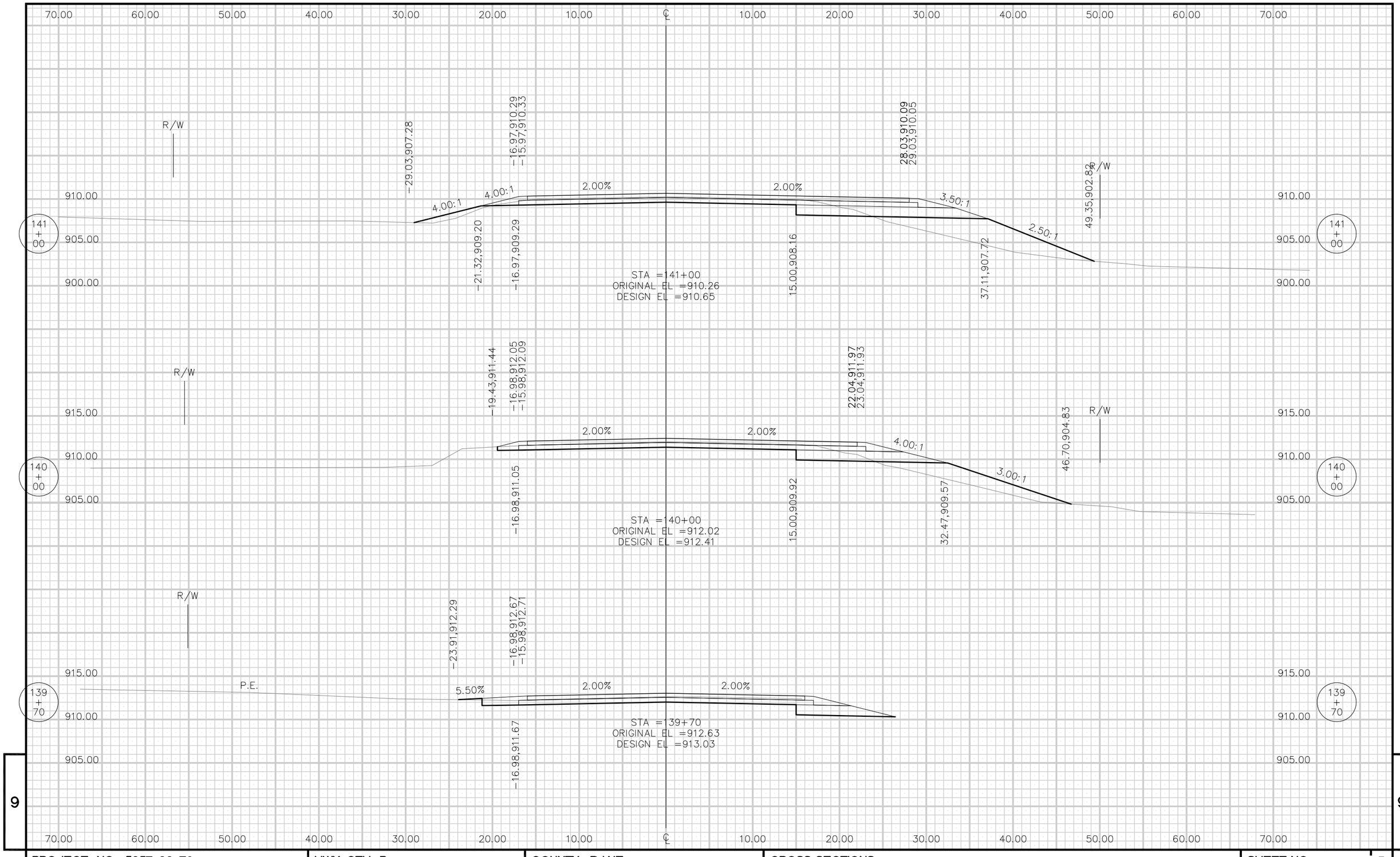
PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 218

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec134+00-136+00.dwg | PLOT DATE: 1/27/2016 | PLOT BY: DANE COUNTY HIGHWAY DEPT. | PLOT SCALE: NONE | WISDOT/CADDS SHEET 21



PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 219

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec137+00-139+00.dwg | PLOT DATE: 1/27/2016 | PLOT BY: DANE COUNTY HIGHWAY DEPT. | PLOT SCALE: NONE | WISDOT/CADDS SHEET 21



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PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 220

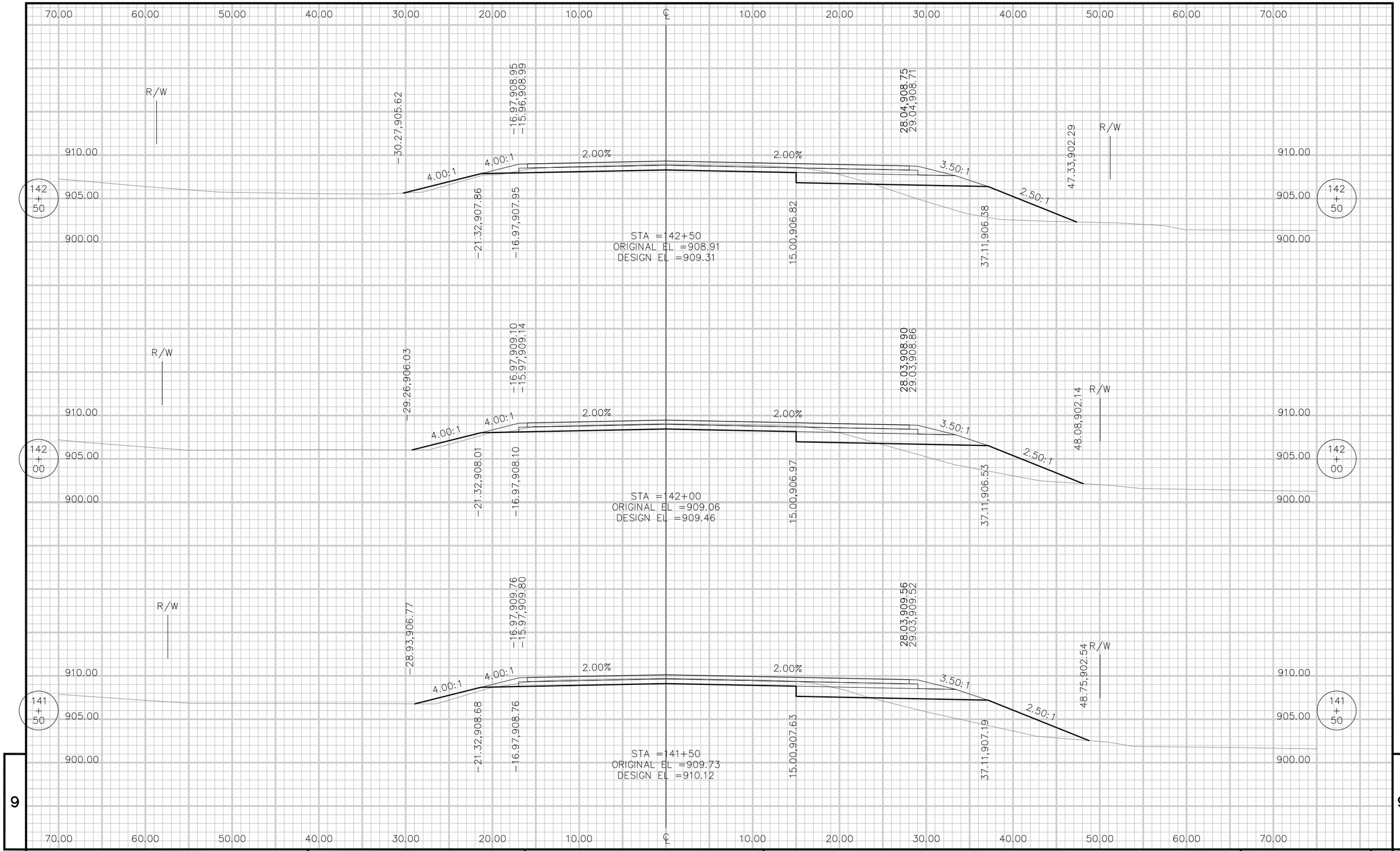
FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec139+70-141+00.dwg

PLOT DATE: 1/27/2016

PLOT BY: DANE COUNTY HIGHWAY DEPT.

PLOT SCALE: NONE

WISDOT/CADDS SHEET 21



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PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 221

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec141+50-142+50.dwg

PLOT DATE: 1/27/2016

PLOT BY: DANE COUNTY HIGHWAY DEPT.

PLOT SCALE: NONE

WISDOT/CADDS SHEET 21

70.00 60.00 50.00 40.00 30.00 20.00 10.00 ℄ 10.00 20.00 30.00 40.00 50.00 60.00 70.00

R/W

915.00 910.00 905.00

STAGECOACH ROAD (WEST)

143 + 50

-18.00,908.41

16.06,908.31

STAGECOACH ROAD (EAST)

143 + 50

STA =143+50
ORIGINAL EL =908.60
DESIGN EL =908.99

15.00,906.50

R/W

910.00 905.00 900.00

143 + 00

-21.23,907.40

-17.16,908.46

-16.96,908.46

4.00:1 4.00:1 2.00% 2.00% 3.00:1

31.56,908.17

TOC 34.56,908.55

58.83,901.95

910.00 905.00 900.00

143 + 00

-21.18,907.41

-16.96,907.46

STA =143+00
ORIGINAL EL =908.41
DESIGN EL =908.80

15.00,906.32

35.56,905.90

R/W

910.00 905.00 900.00

142 + 81

-37.01,904.77

-16.96,908.58

-15.96,908.62

26.35,908.41

TOC 29.35,908.79

61.38,902.72

4.00:1 2.00% 2.00% 7.00:1 5.00:1

-21.18,907.53

-16.96,907.58

STA =142+81
ORIGINAL EL =908.55
DESIGN EL =908.94
EXISTING 36" RCCP
EXTEND 16' RT
1-APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 36-INCH (RT)
1-APRON ENDWALLS FOR CULVERT PIPE SLOPED CROSS DRAINS STEEL 36-INCH 4 TO 1 (LT)

15.00,906.45

30.35,906.15

IE=901.60

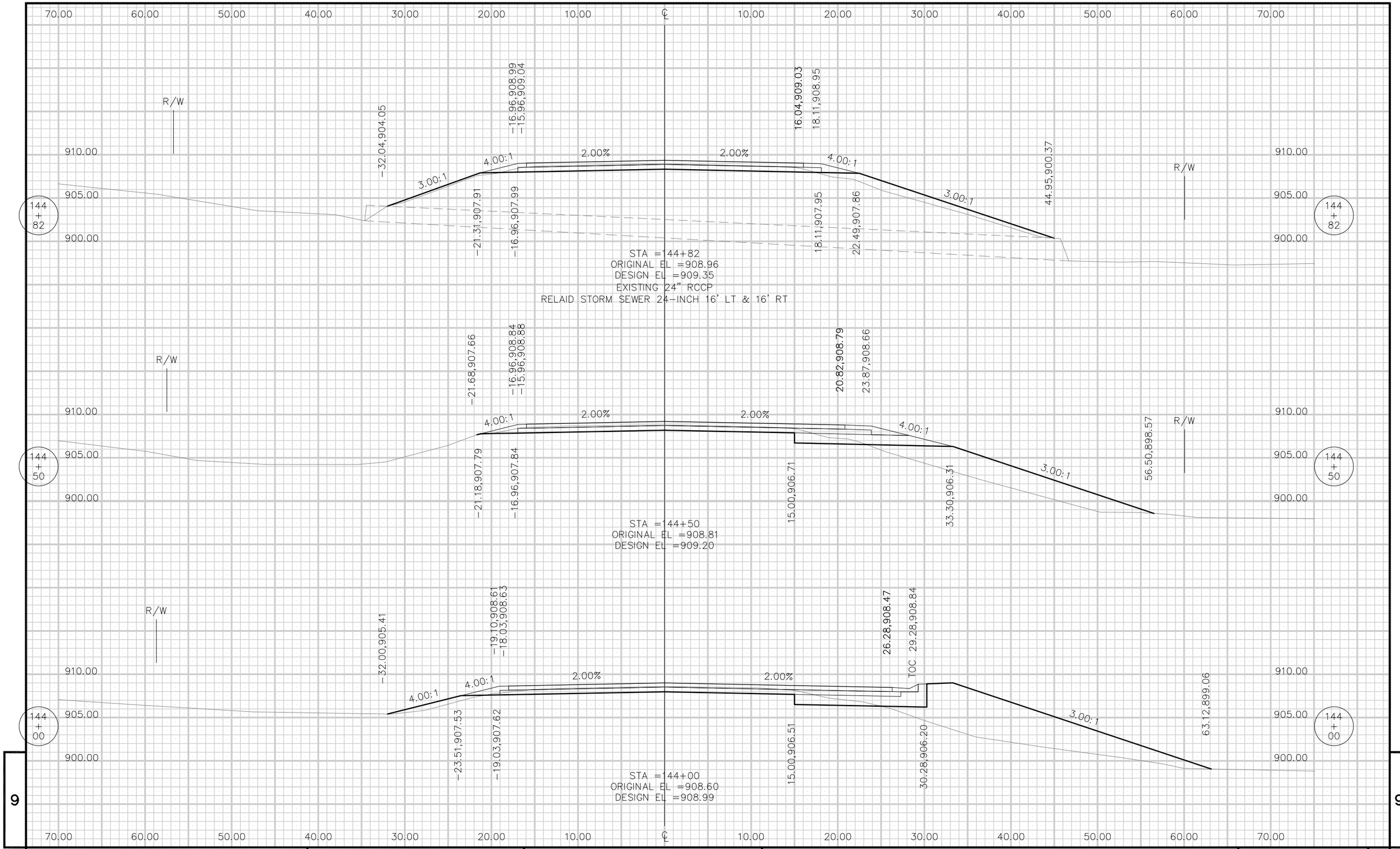
142 + 81

910.00 905.00 900.00

70.00 60.00 50.00 40.00 30.00 20.00 10.00 ℄ 10.00 20.00 30.00 40.00 50.00 60.00 70.00

9 9

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 222



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PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 223

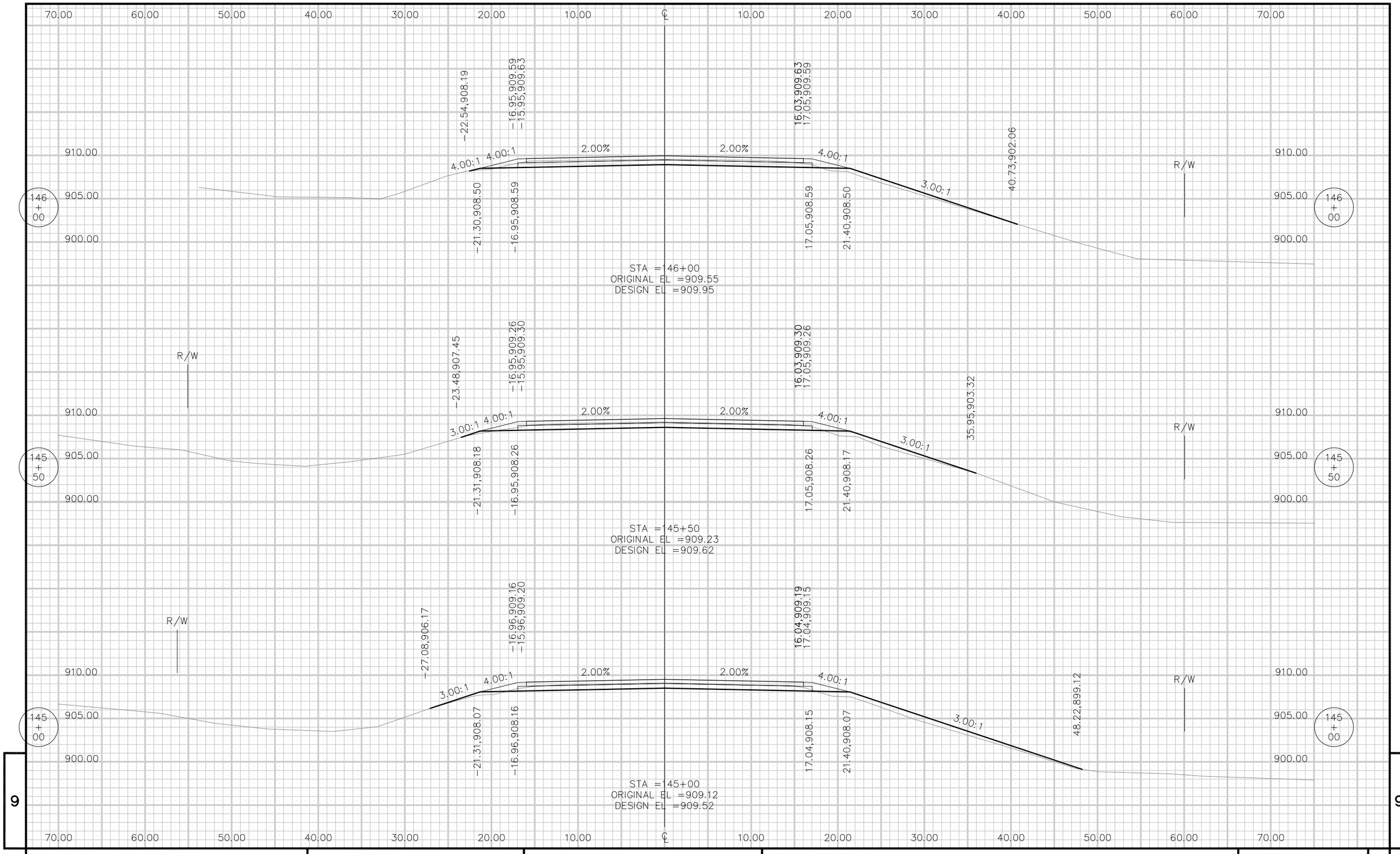
FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec144+00-144+82.dwg

PLOT DATE: 1/27/2016

PLOT BY: DANE COUNTY HIGHWAY DEPT.

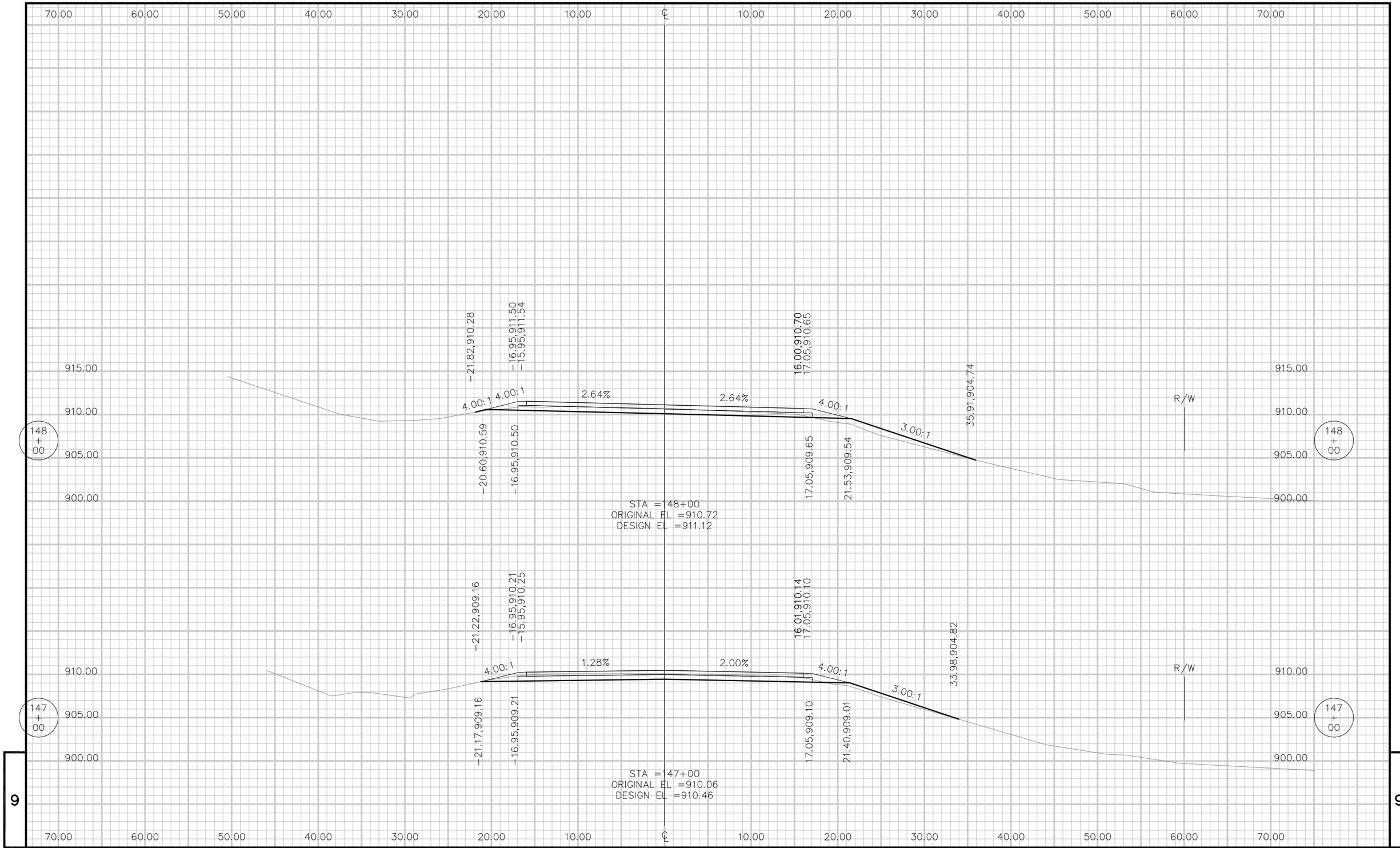
PLOT SCALE: NONE

WISDOT/CADDS SHEET 21



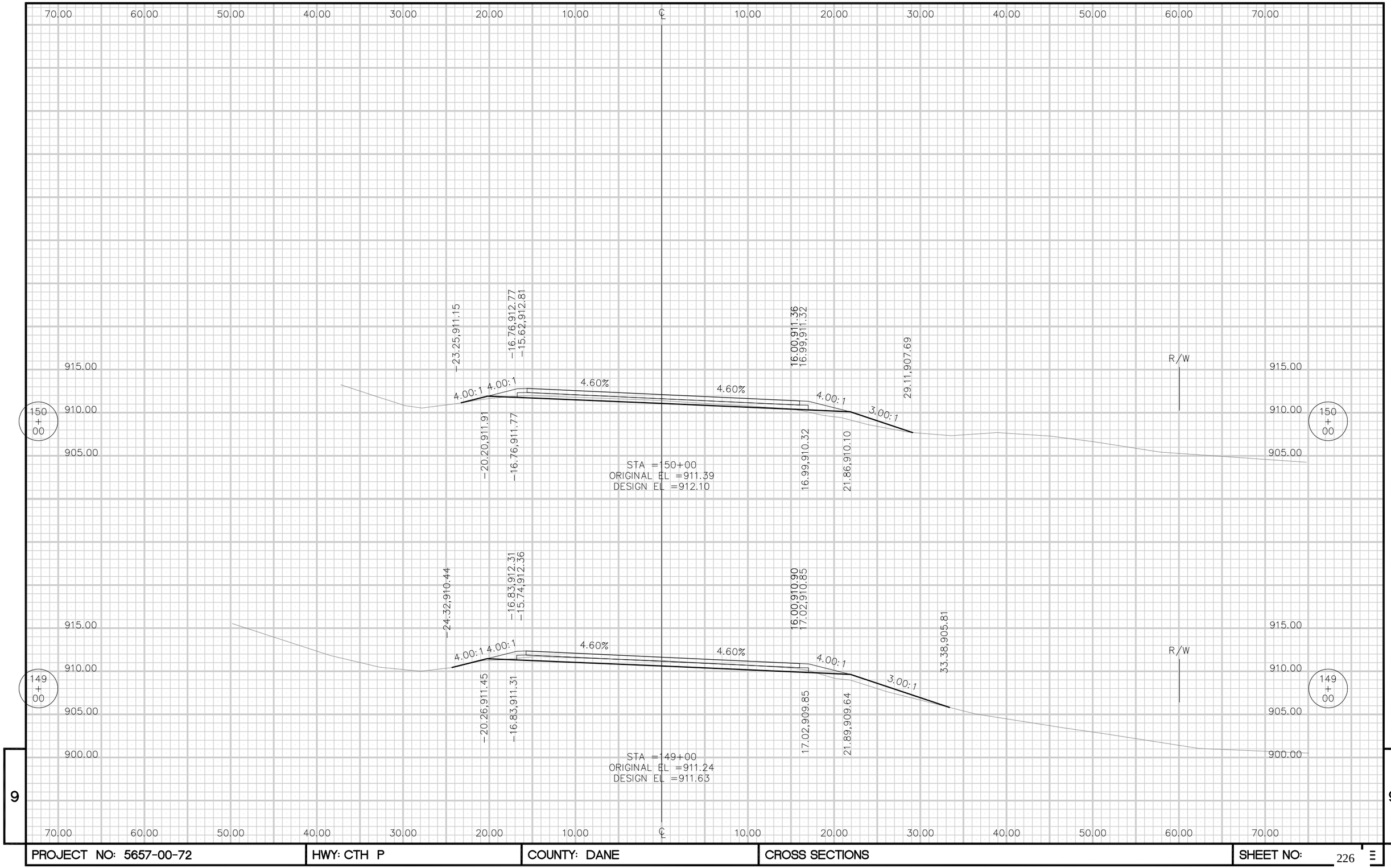
PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 224

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec145+00-146+00.dwg | PLOT DATE: 1/27/2016 | PLOT BY: DANE COUNTY HIGHWAY DEPT. | PLOT SCALE: NONE | WISDOT/CADDS SHEET 21



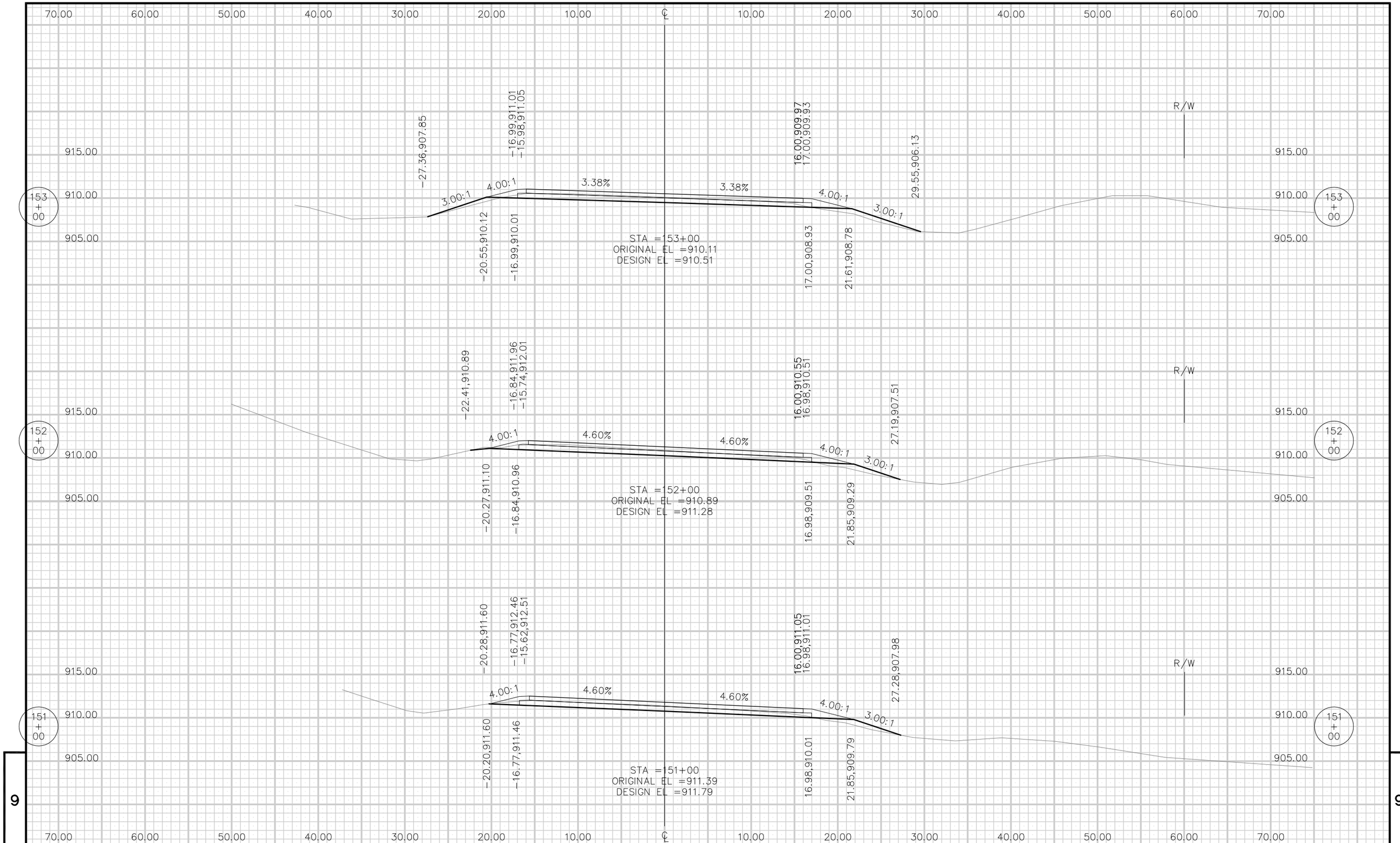
PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 225

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec147+00-148+00.dwg | PLOT DATE: 1/27/2016 | PLOT BY: DANE COUNTY HIGHWAY DEPT. | PLOT SCALE: NONE | WISDOT/CADDS SHEET 21



PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 226

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec149+00-150+00.dwg | PLOT DATE: 1/27/2016 | PLOT BY: DANE COUNTY HIGHWAY DEPT. | PLOT SCALE: NONE | WISDOT/CADDS SHEET 21



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PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 227

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec151+00-153+00.dwg

PLOT DATE: 1/27/2016

PLOT BY: DANE COUNTY HIGHWAY DEPT.

PLOT SCALE: NONE

WISDOT/CADDS SHEET 21

9

9

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 228

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec154+00-155+00.dwg

PLOT DATE: 1/27/2016

PLOT BY: DANE COUNTY HIGHWAY DEPT.

PLOT SCALE: NONE

WISDOT/CADDS SHEET 21

70.00 60.00 50.00 40.00 30.00 20.00 10.00 ℄ 10.00 20.00 30.00 40.00 50.00 60.00 70.00

905.00
900.00
895.00

155 + 75

2.00% 2.00% 2.50:1 2.50:1

17.00,907.16
20.94,906.76
31.87,902.39
17.00,906.13
22.80,906.02

R/W

POST #9

STA =155+75
ORIGINAL EL =907.19
DESIGN EL =907.50

16.50,907.48
22.33,906.89

905.00
900.00
895.00

155 + 50

2.00% 2.00% 4.00:1 4.00:1

58.94,897.64
16.50,906.46
24.74,906.29

R/W

POST #5

STA =155+50
ORIGINAL EL =907.47
DESIGN EL =907.81

16.00,907.80
25.94,906.81

910.00
905.00
900.00

155 + 25

2.00% 2.00% 4.00:1 4.00:1

58.96,898.55
16.00,906.78
26.92,906.56

R/W

POST #1

STA =155+25
DESIGN EL =908.12

70.00 60.00 50.00 40.00 30.00 20.00 10.00 ℄ 10.00 20.00 30.00 40.00 50.00 60.00 70.00

9 9

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 229

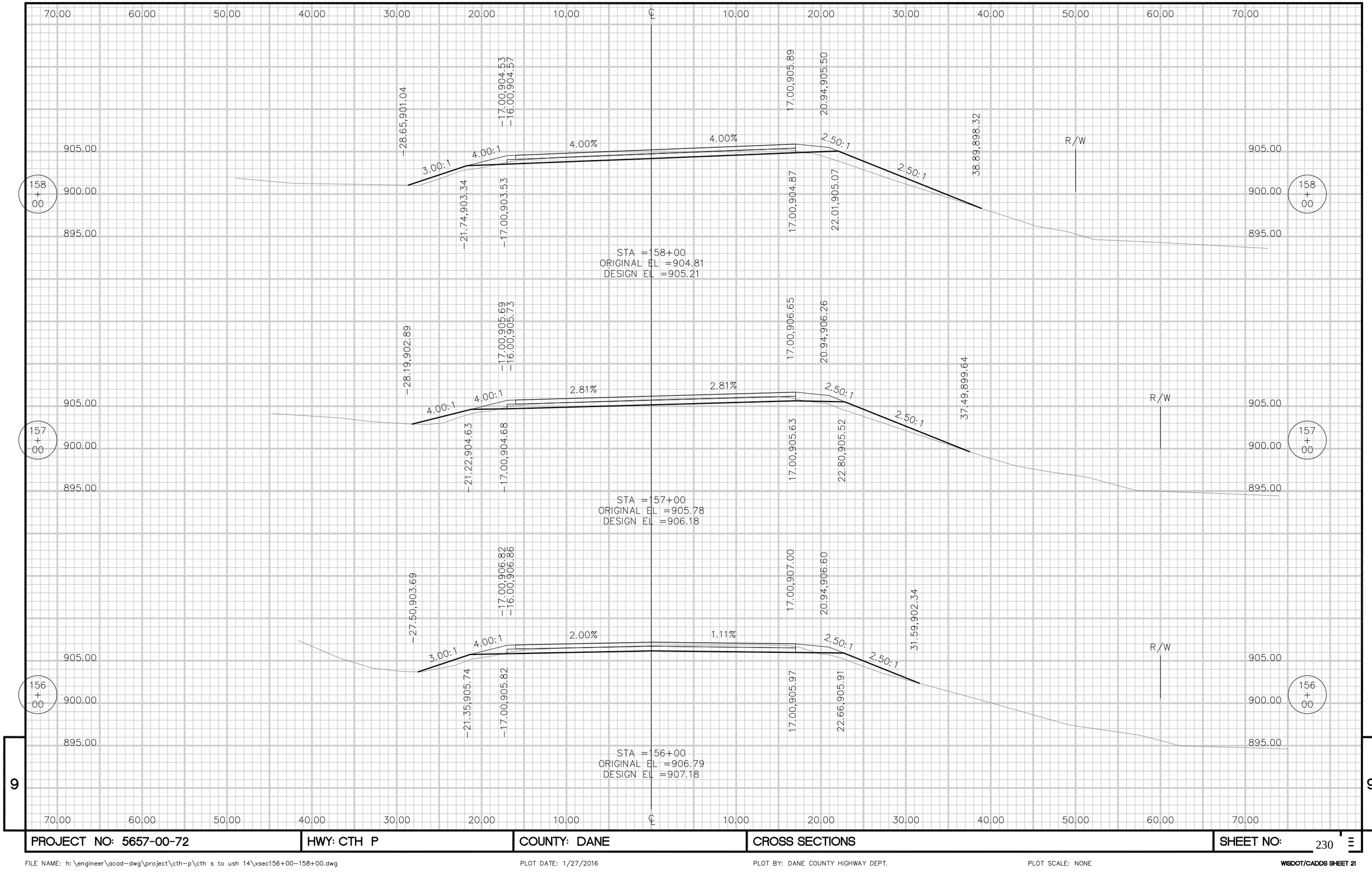
FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec155+25-155+75.dwg

PLOT DATE: 1/27/2016

PLOT BY: DANE COUNTY HIGHWAY DEPT.

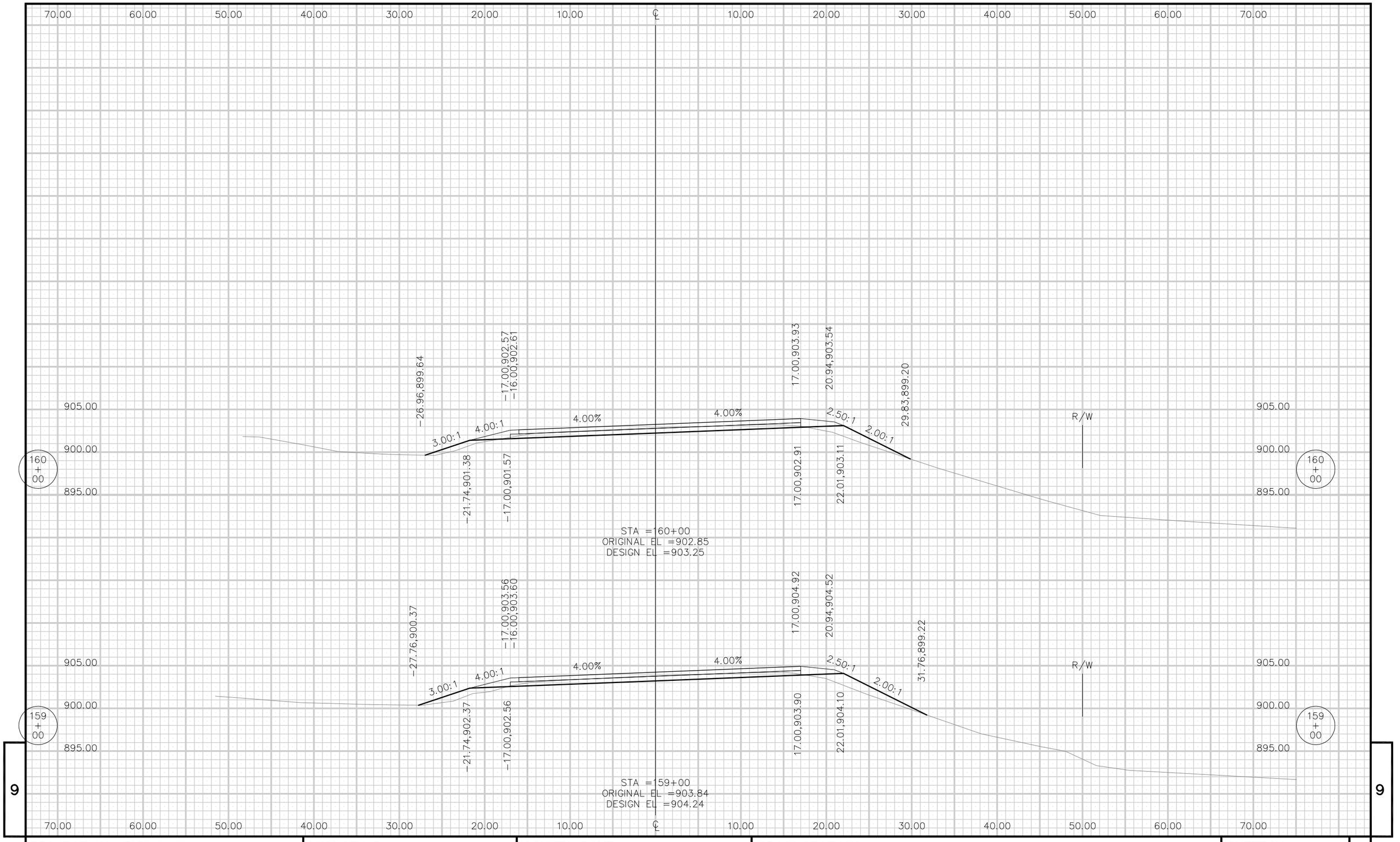
PLOT SCALE: NONE

WISDOT/CADDS SHEET 21



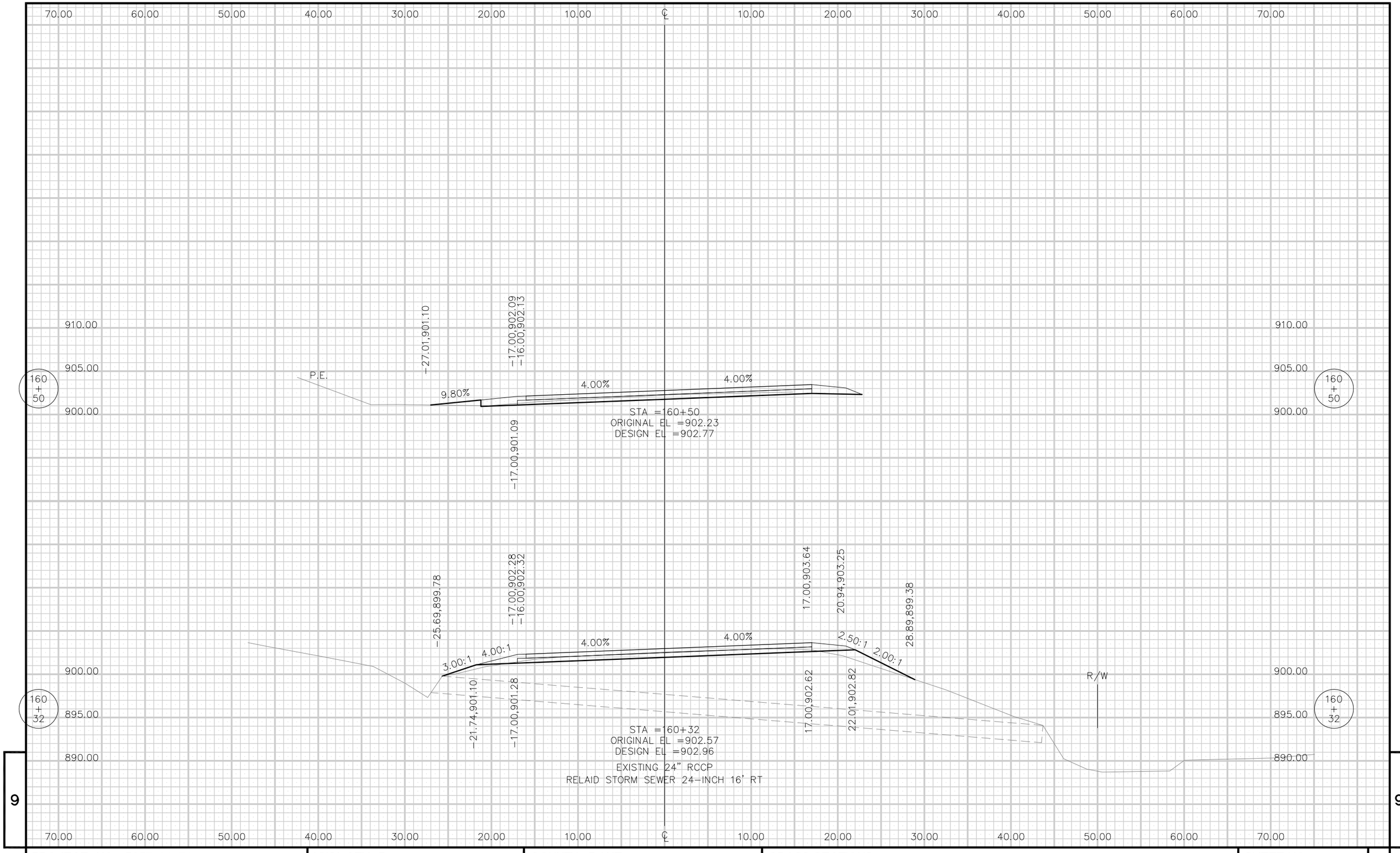
PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 230

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec156+00-158+00.dwg | PLOT DATE: 1/27/2016 | PLOT BY: DANE COUNTY HIGHWAY DEPT. | PLOT SCALE: NONE | WISDOT/CADDS SHEET 21



PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 231

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec159+00-160+00.dwg | PLOT DATE: 1/27/2016 | PLOT BY: DANE COUNTY HIGHWAY DEPT. | PLOT SCALE: NONE | WISDOT/CADDS SHEET 21



9

9

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 232

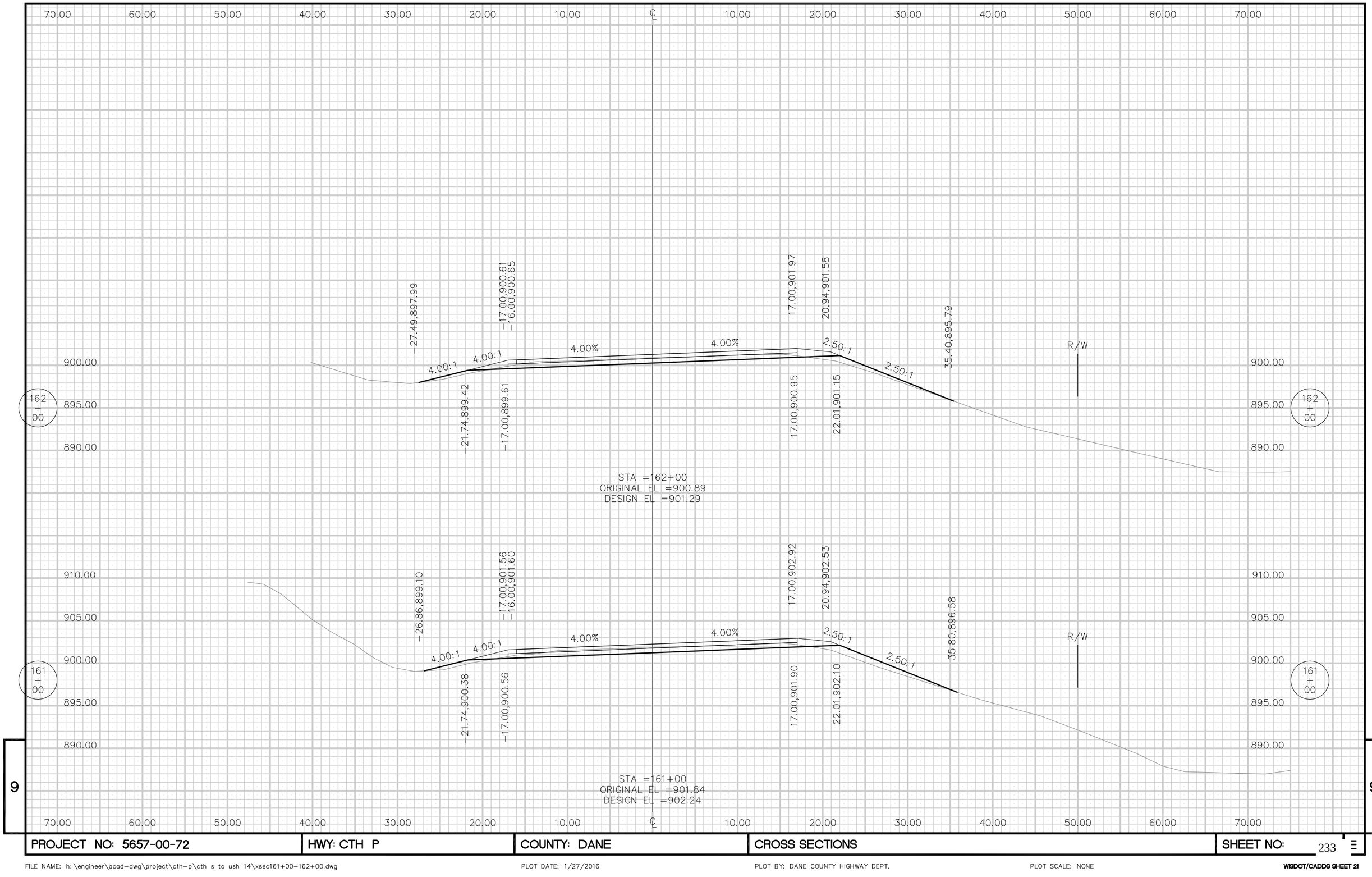
FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec160+32-160+50.dwg

PLOT DATE: 1/27/2016

PLOT BY: DANE COUNTY HIGHWAY DEPT.

PLOT SCALE: NONE

WISDOT/CADDS SHEET 21



PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 233

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec161+00-162+00.dwg | PLOT DATE: 1/27/2016 | PLOT BY: DANE COUNTY HIGHWAY DEPT. | PLOT SCALE: NONE | WISDOT/CADDS SHEET 21

70.00 60.00 50.00 40.00 30.00 20.00 10.00 ℄ 10.00 20.00 30.00 40.00 50.00 60.00 70.00

R/W

-32.07,896.28
-17.00,899.57
-16.00,899.61
16.22,900.24
24.21,899.44
39.28,895.67

900.00
895.00
890.00

163 + 38

4.00:1 2.00% 1.94% 4.00:1 4.00:1

-21.35,898.48
-17.00,898.56
16.22,899.22
24.46,899.38

STA =163+38
ORIGINAL EL =899.53
DESIGN EL =899.93
EXISTING 24" RCCP
RELAID STORM SEWER 24-INCH 16' LT & 16'RT
1-APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH (LT)

16.46,900.38
22.33,899.80
38.73,895.70

2.45% 2.45% 4.00:1 4.00:1

163 + 25

16.46,899.36
23.39,899.53

STA =163+25
ORIGINAL EL =899.55
DESIGN EL =899.98

POST #5

-23.97,897.75
-17.00,899.50
-16.00,899.54
17.00,900.67
20.94,900.28
33.51,895.25

4.00:1 4.00:1 3.43% 3.43% 2.50:1 2.50:1

163 + 00

-21.62,898.34
-17.00,898.50
17.00,899.65
22.07,899.82

STA =163+00
ORIGINAL EL =899.69
DESIGN EL =900.09

POST #9

70.00 60.00 50.00 40.00 30.00 20.00 10.00 ℄ 10.00 20.00 30.00 40.00 50.00 60.00 70.00

9 9

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 234

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec163+00-163+38.dwg PLOT DATE: 1/27/2016 PLOT BY: DANE COUNTY HIGHWAY DEPT. PLOT SCALE: NONE WISDOT/CADDS SHEET 21

70.00 60.00 50.00 40.00 30.00 20.00 10.00 ℄ 10.00 20.00 30.00 40.00 50.00 60.00 70.00

R/W

905.00 900.00 895.00

163 + 81

-24.32,898.57
-17.00,898.85
-16.00,898.89

P.E.

3.90% 2.00% 0.26%

STA =163+81
ORIGINAL EL =898.82
DESIGN EL =899.21

-17.00,897.85

16.00,899.62
24.61,899.28
37.78,897.37

R/W

163 + 70

2.00% 0.69% 14.4%

P.E.

STA =163+70
ORIGINAL EL =899.12
DESIGN EL =899.51

24.61,898.27

16.00,900.01
25.94,899.01
34.59,896.85

R/W

POST #1

163 + 50

2.00% 1.47% 4.00:1

STA =163+50
ORIGINAL EL =899.27
DESIGN EL =899.77

16.00,898.98

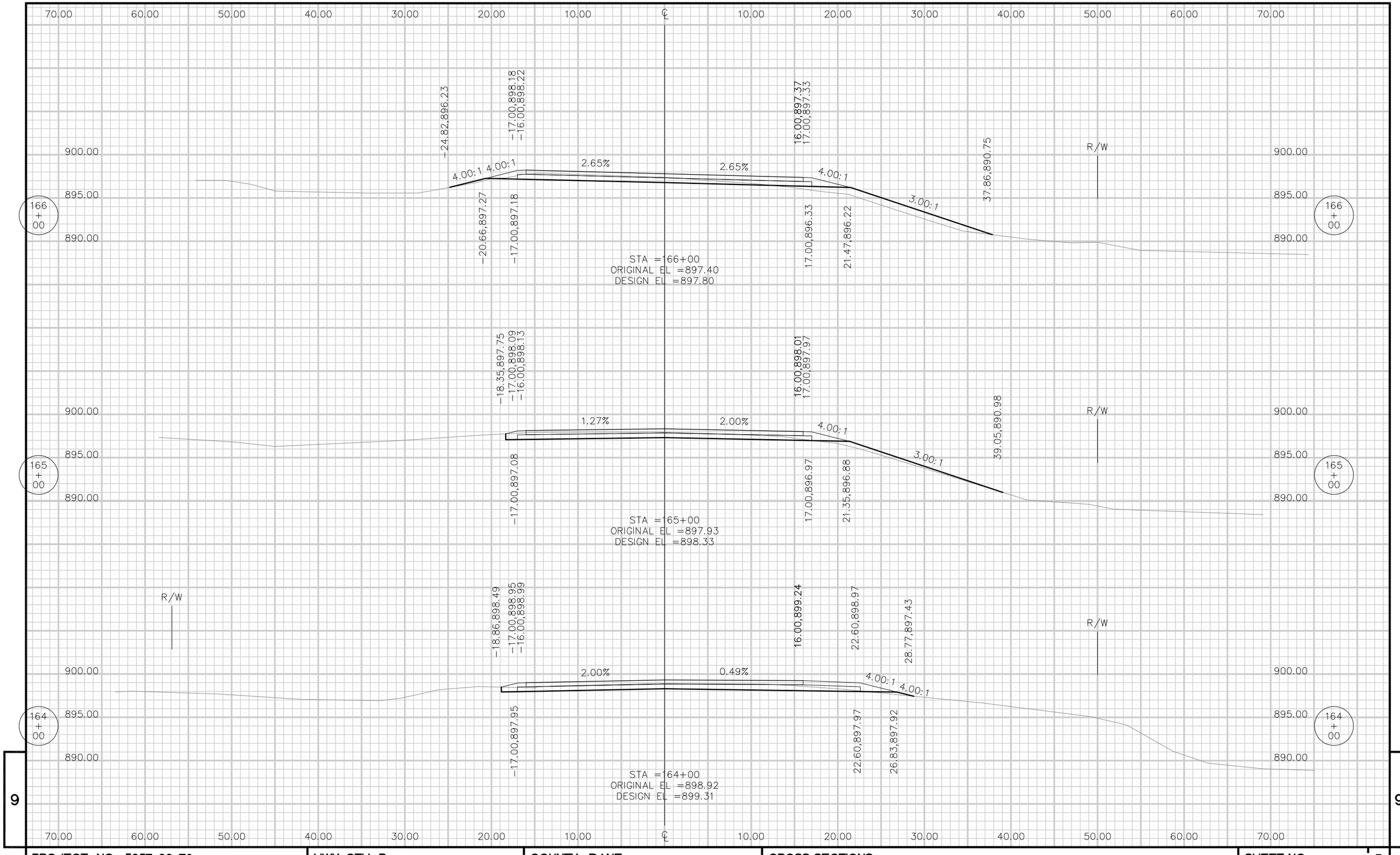
9

9

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 235

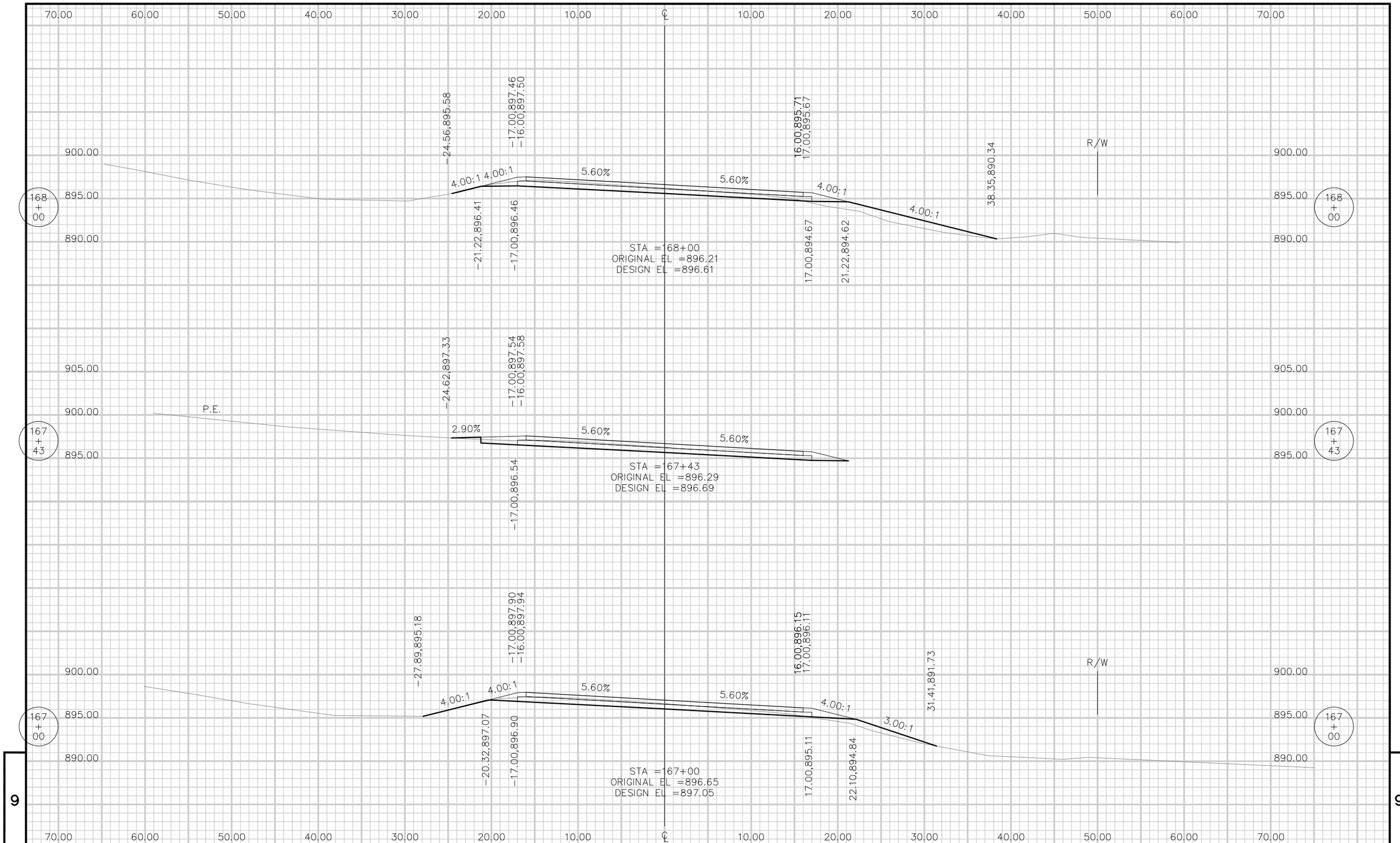
FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec163+50-163+81.dwg PLOT DATE: 1/27/2016 PLOT BY: DANE COUNTY HIGHWAY DEPT. PLOT SCALE: NONE

WISDOT/CADDS SHEET 21



PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 236

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec164+00-166+00.dwg | PLOT DATE: 1/27/2016 | PLOT BY: DANE COUNTY HIGHWAY DEPT. | PLOT SCALE: NONE | WISDOT/CADDS SHEET 21



9

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 237

9

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec167+00-168+00.dwg | PLOT DATE: 1/27/2016 | PLOT BY: DANE COUNTY HIGHWAY DEPT. | PLOT SCALE: NONE | WISDOT/CADDS SHEET 21

70.00 60.00 50.00 40.00 30.00 20.00 10.00 ℄ 10.00 20.00 30.00 40.00 50.00 60.00 70.00

900.00
895.00
890.00

P.E.

7.70% 5.60% 5.60% 4.00:1 4.00:1

R/W

170 + 27

−23.57,896.58
−17.00,897.08
−16.00,897.12
16.00,895.33
17.00,895.29
27.49,892.67
−17.00,896.08
17.00,894.29
22.10,894.01

STA =170+27
ORIGINAL EL =895.83
DESIGN EL =896.23

170 + 00

−19.92,896.28
−17.00,897.01
−16.00,897.05
16.00,895.25
17.00,895.21
30.64,891.09
−17.00,896.01
17.00,894.21
22.10,893.94

4.00:1 5.60% 5.60% 4.00:1 3.00:1

STA =170+00
ORIGINAL EL =895.75
DESIGN EL =896.15

169 + 00

−21.61,896.00
−17.00,896.96
−16.00,897.00
16.00,895.21
17.00,895.17
30.77,891.00
−20.32,896.13
−17.00,895.96
17.00,894.16
22.10,893.89

4.00:1 5.60% 5.60% 4.00:1 3.00:1

STA =169+00
ORIGINAL EL =895.71
DESIGN EL =896.10

9

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 238

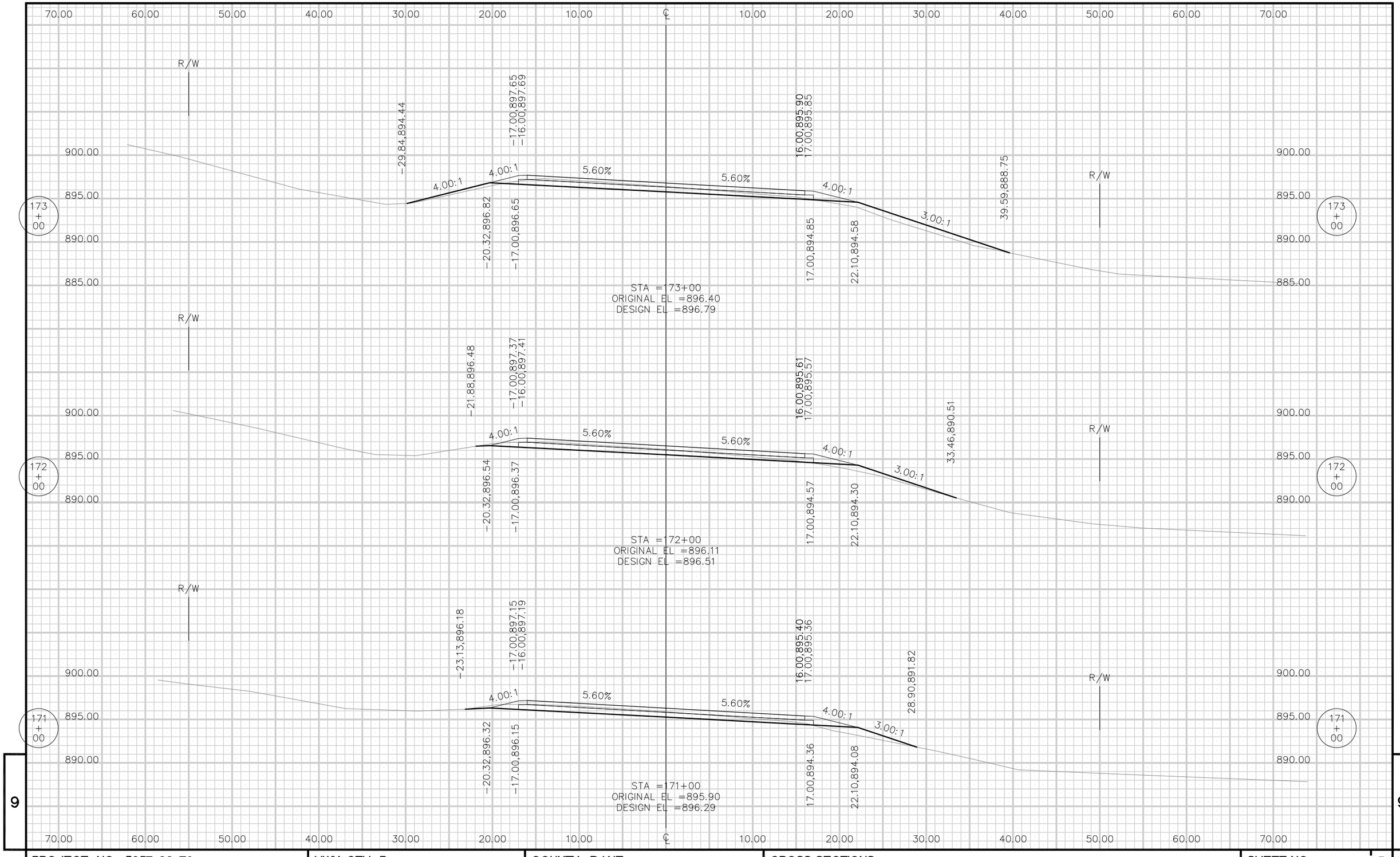
FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec169+00-170+27.dwg

PLOT DATE: 1/27/2016

PLOT BY: DANE COUNTY HIGHWAY DEPT.

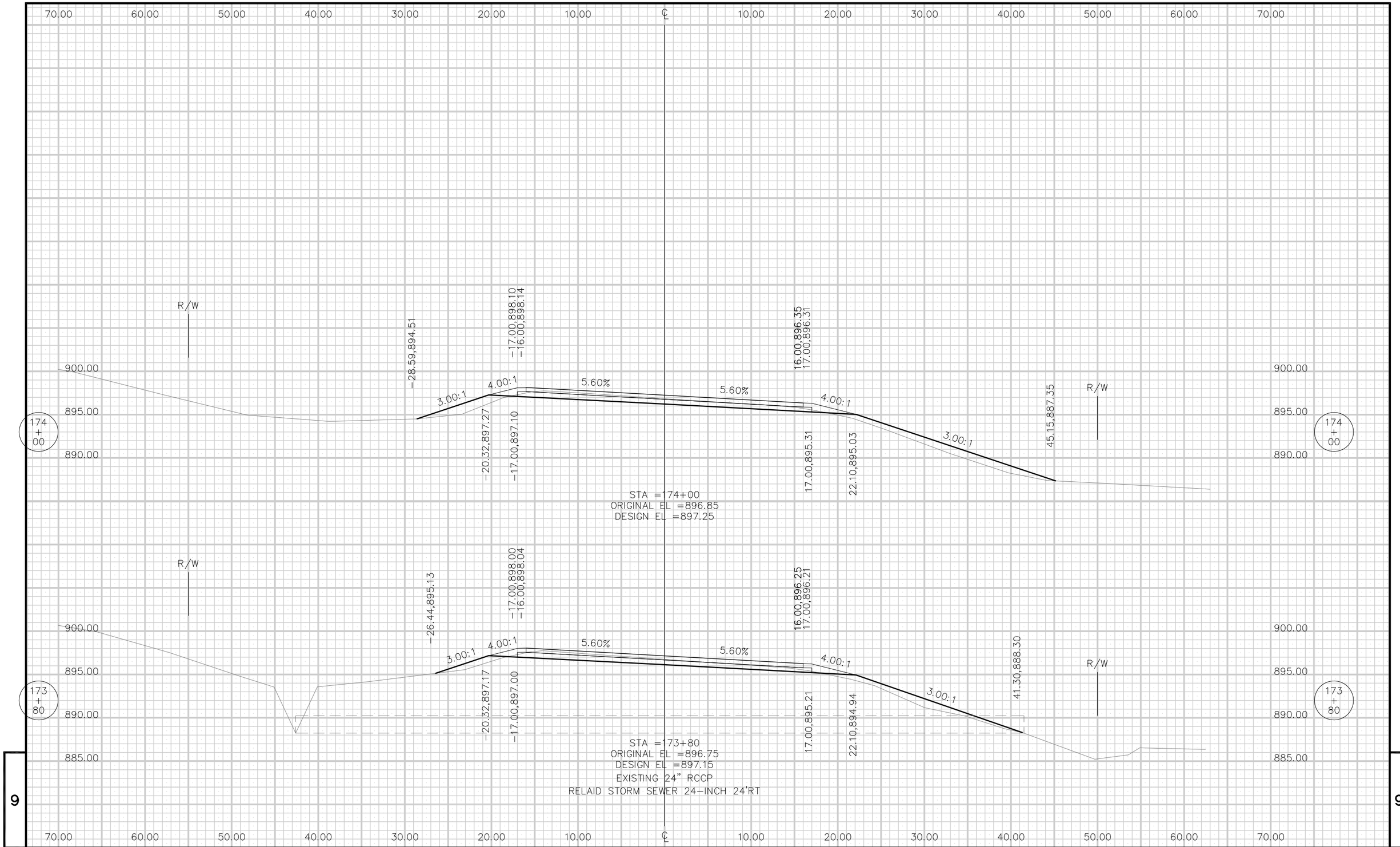
PLOT SCALE: NONE

WISDOT/CADDS SHEET 21



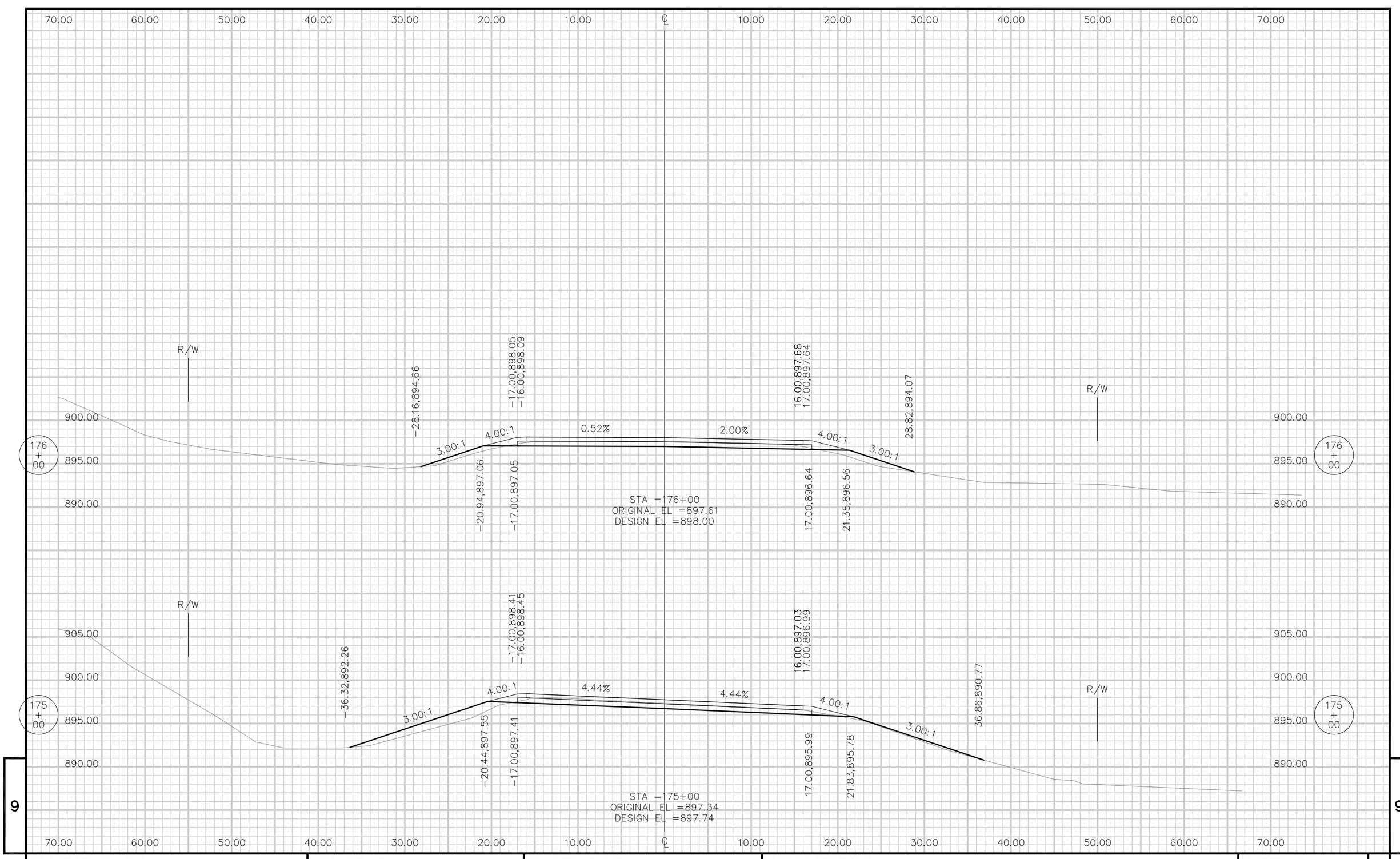
PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 239

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec171+00-173+00.dwg | PLOT DATE: 1/27/2016 | PLOT BY: DANE COUNTY HIGHWAY DEPT. | PLOT SCALE: NONE | WISDOT/CADDS SHEET 21



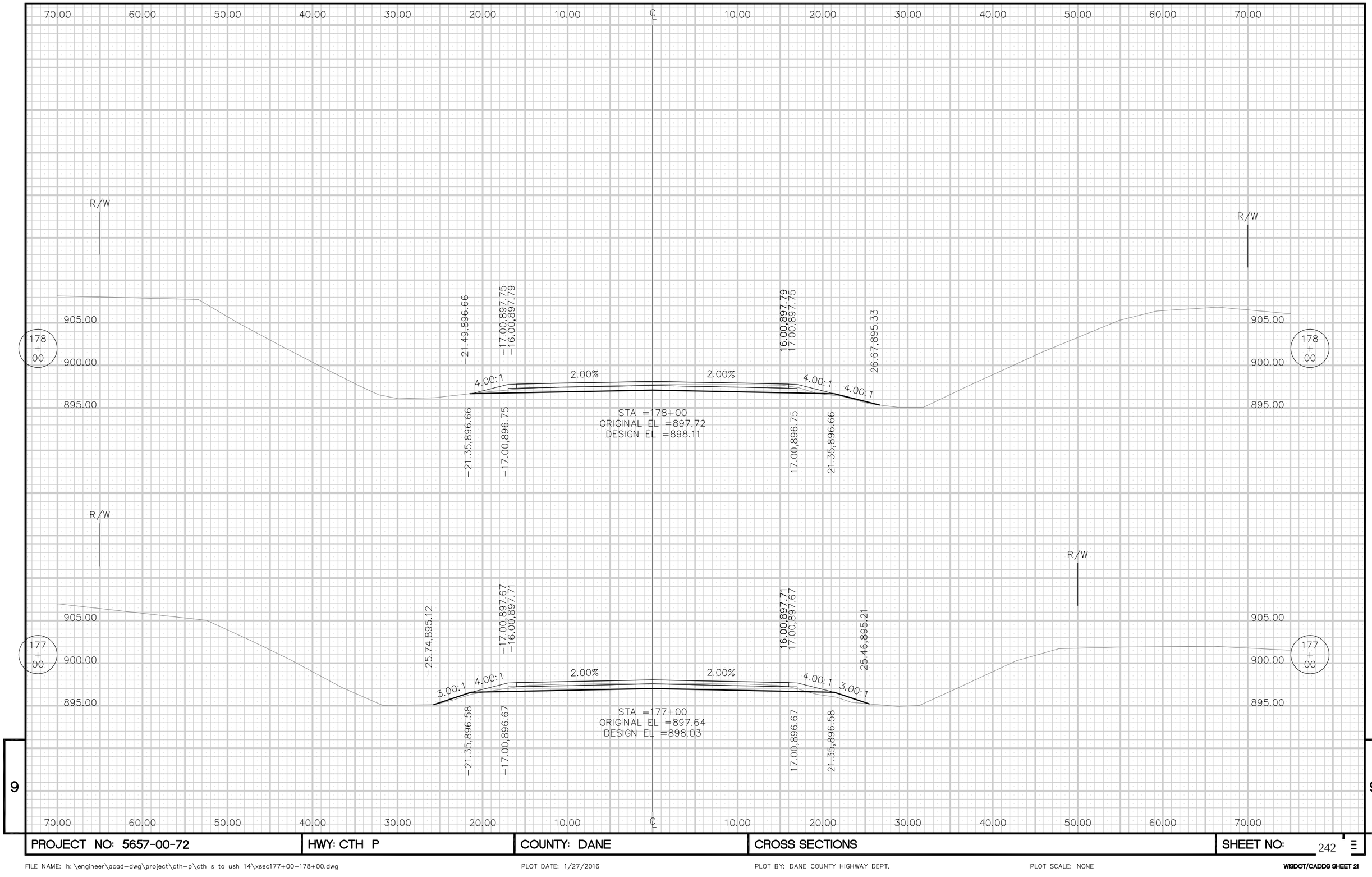
PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 240

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec173+80-174+00.dwg | PLOT DATE: 1/27/2016 | PLOT BY: DANE COUNTY HIGHWAY DEPT. | PLOT SCALE: NONE | WISDOT/CADDS SHEET 21



9 9

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 241



9

9

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 242

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec177+00-178+00.dwg

PLOT DATE: 1/27/2016

PLOT BY: DANE COUNTY HIGHWAY DEPT.

PLOT SCALE: NONE

WISDOT/CADDS SHEET 21

70.00 60.00 50.00 40.00 30.00 20.00 10.00 ℄ 10.00 20.00 30.00 40.00 50.00 60.00 70.00

R/W

-19.43,897.13
-17.00,897.74
-16.00,897.78

16.00,898.03
17.00,897.99

21.20,896.96

R/W

900.00
895.00
890.00

179 + 00

4.00:1 2.00% 0.44% 4.00:1

-17.00,896.74

STA =179+00
ORIGINAL EL =897.70
DESIGN EL =898.10

17.00,896.99

21.09,896.97

900.00
895.00
890.00

179 + 00

16.00,897.91
17.00,897.87

28.01,896.98

R/W

900.00
895.00
890.00

178 + 76

2.00% 1.38% 6.30%

P.E.

STA =178+76
ORIGINAL EL =897.74
DESIGN EL =898.13

17.00,896.87

900.00
895.00
890.00

178 + 76

R/W

-19.02,897.67
-16.00,897.79

905.00
900.00
895.00

178 + 70

P.E.

4.00% 2.00% 1.62%

STA =178+70
ORIGINAL EL =897.71
DESIGN EL =898.11

-17.00,896.75

905.00
900.00
895.00

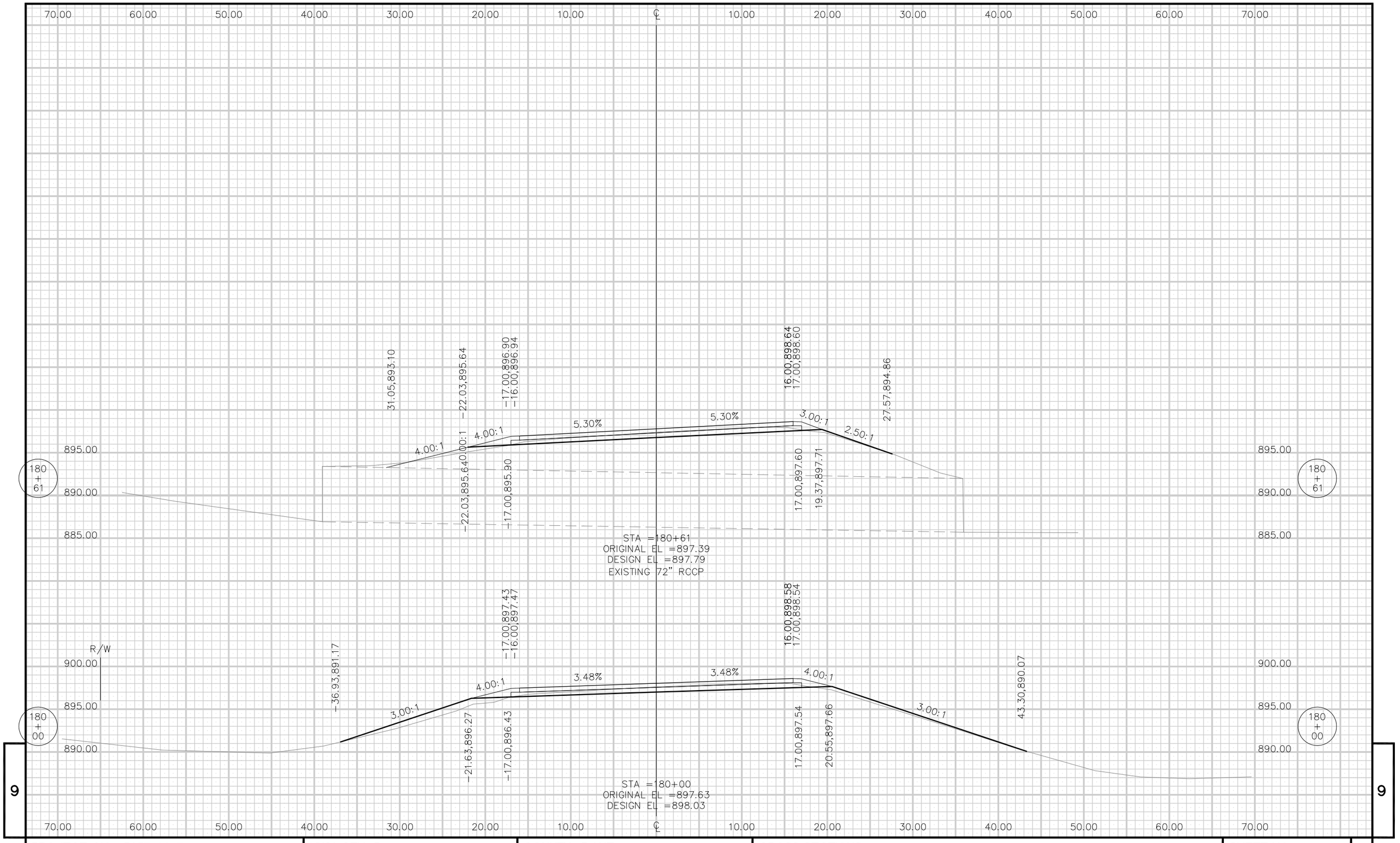
178 + 70

70.00 60.00 50.00 40.00 30.00 20.00 10.00 ℄ 10.00 20.00 30.00 40.00 50.00 60.00 70.00

9

9

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 243



9

9

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 244

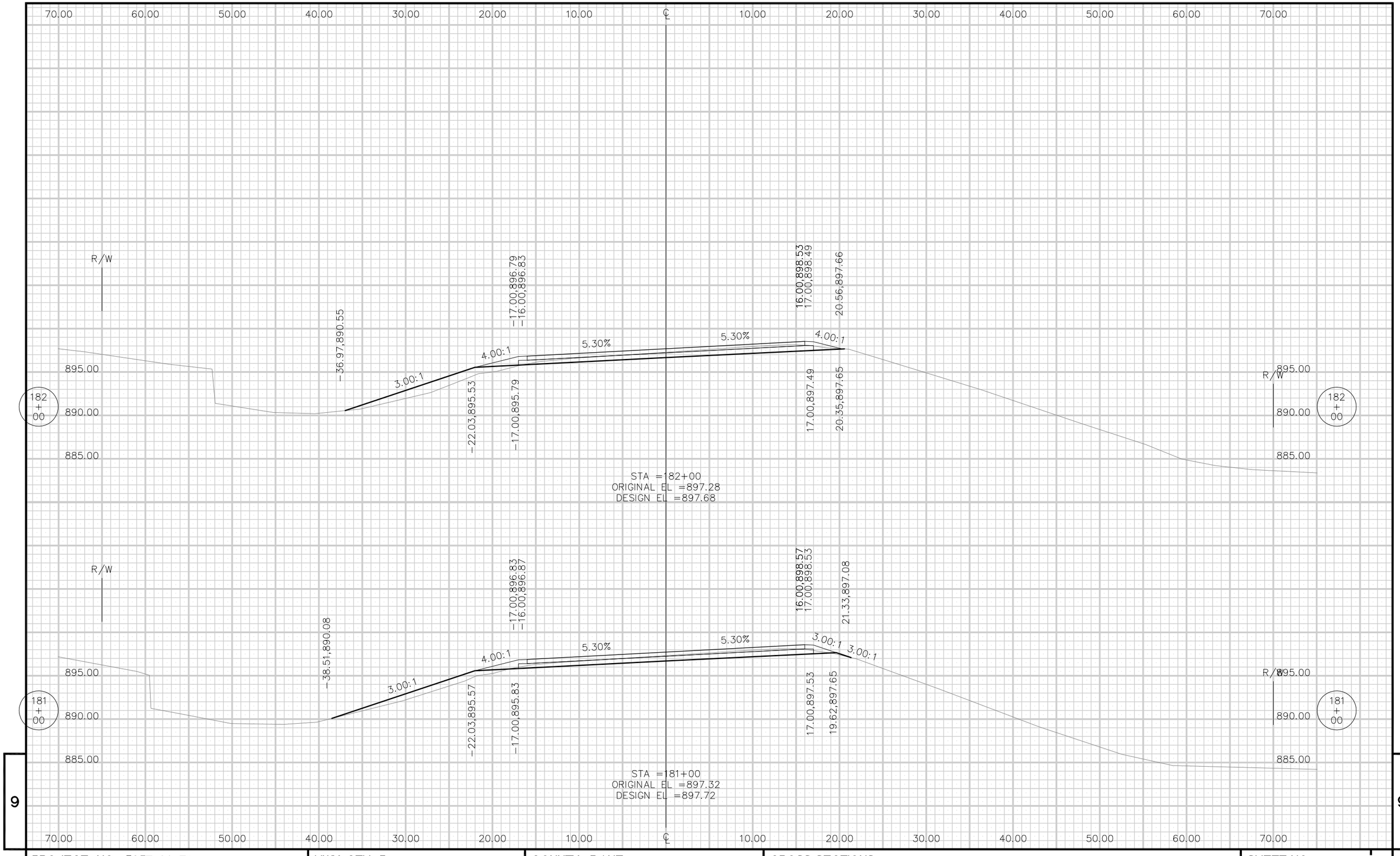
FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec180+00-180+61.dwg

PLOT DATE: 1/27/2016

PLOT BY: DANE COUNTY HIGHWAY DEPT.

PLOT SCALE: NONE

WISDOT/CADDS SHEET 21



9

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 245

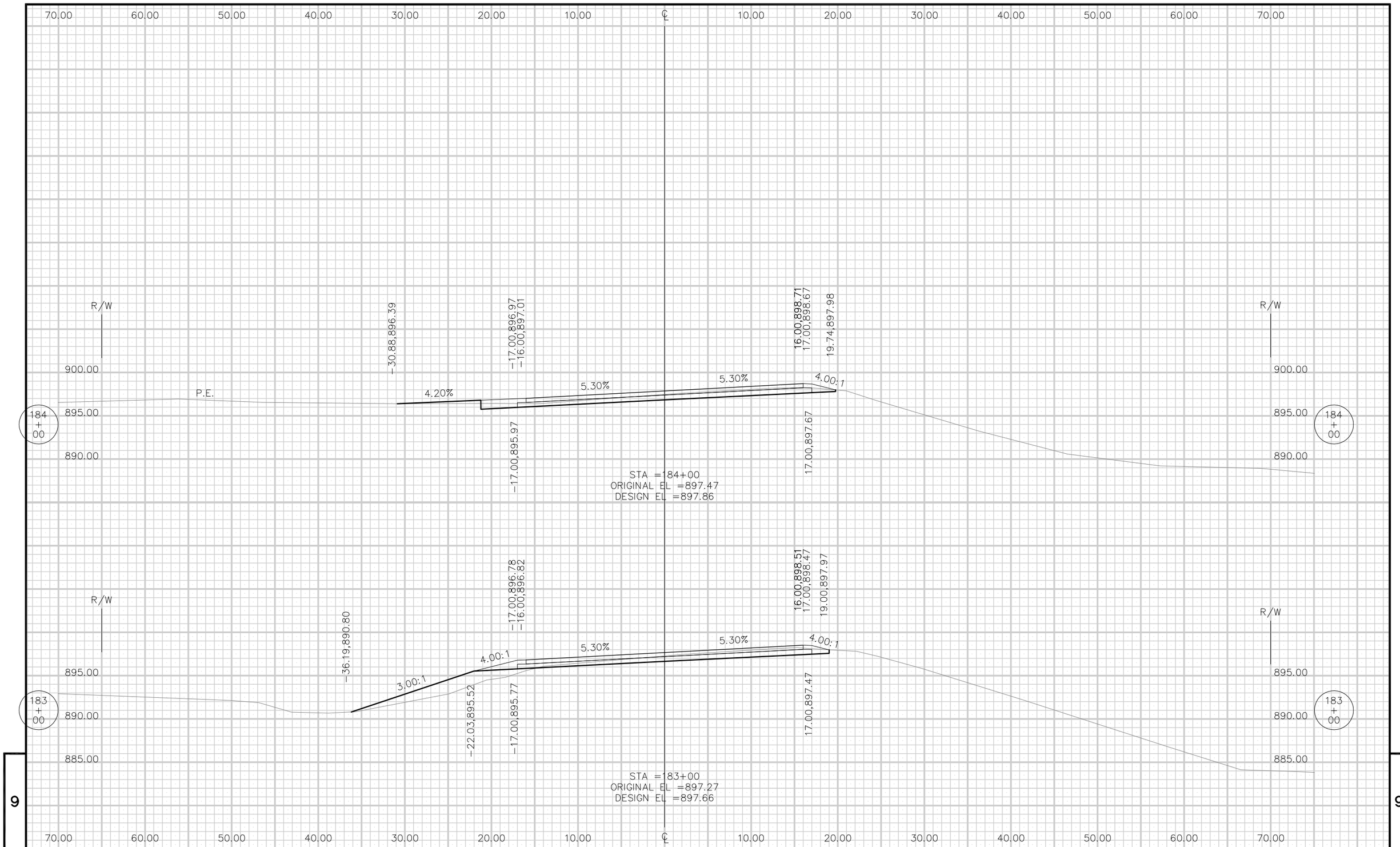
FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec181+00-182+00.dwg

PLOT DATE: 1/27/2016

PLOT BY: DANE COUNTY HIGHWAY DEPT.

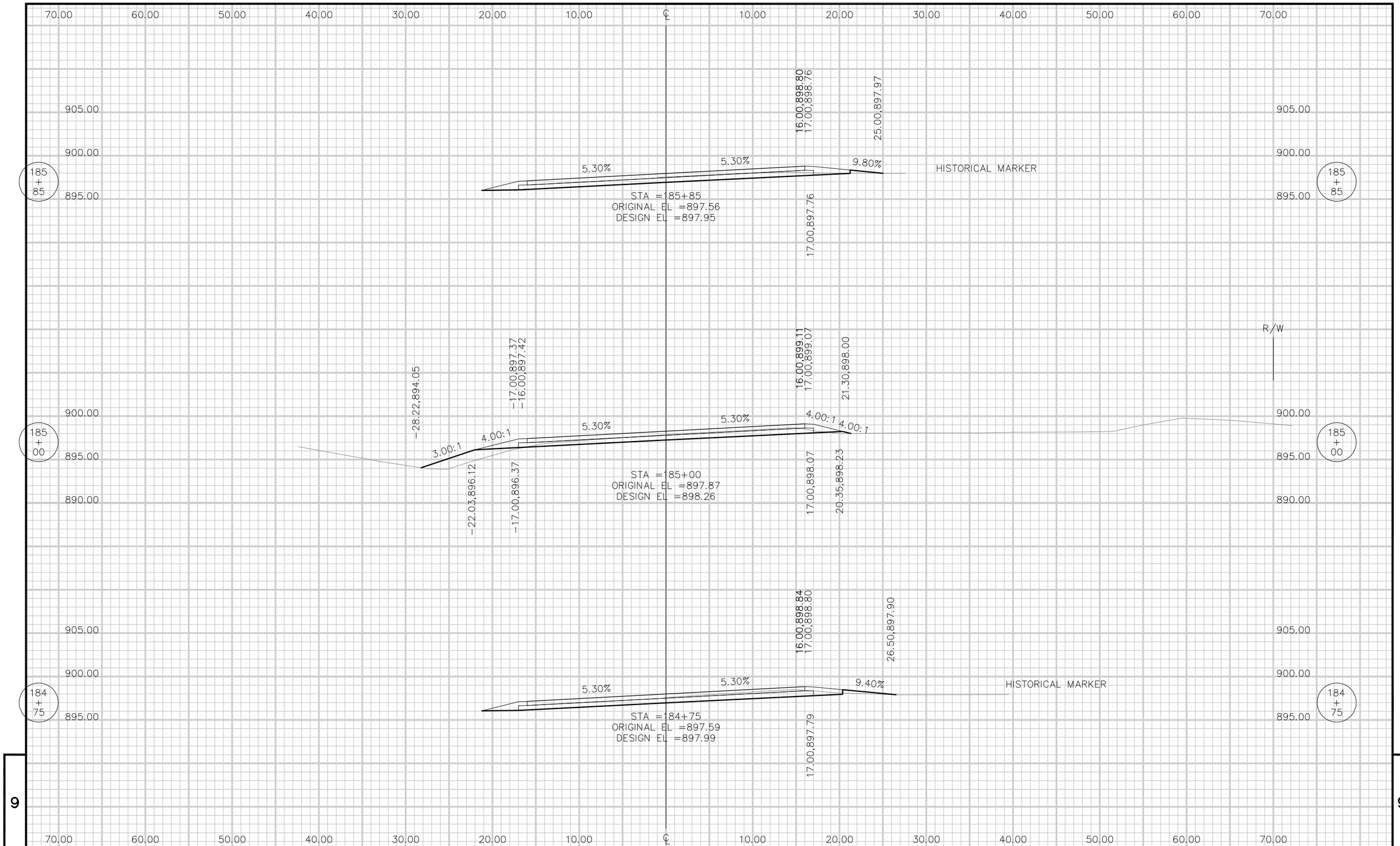
PLOT SCALE: NONE

WISDOT/CADDS SHEET 21



PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 246

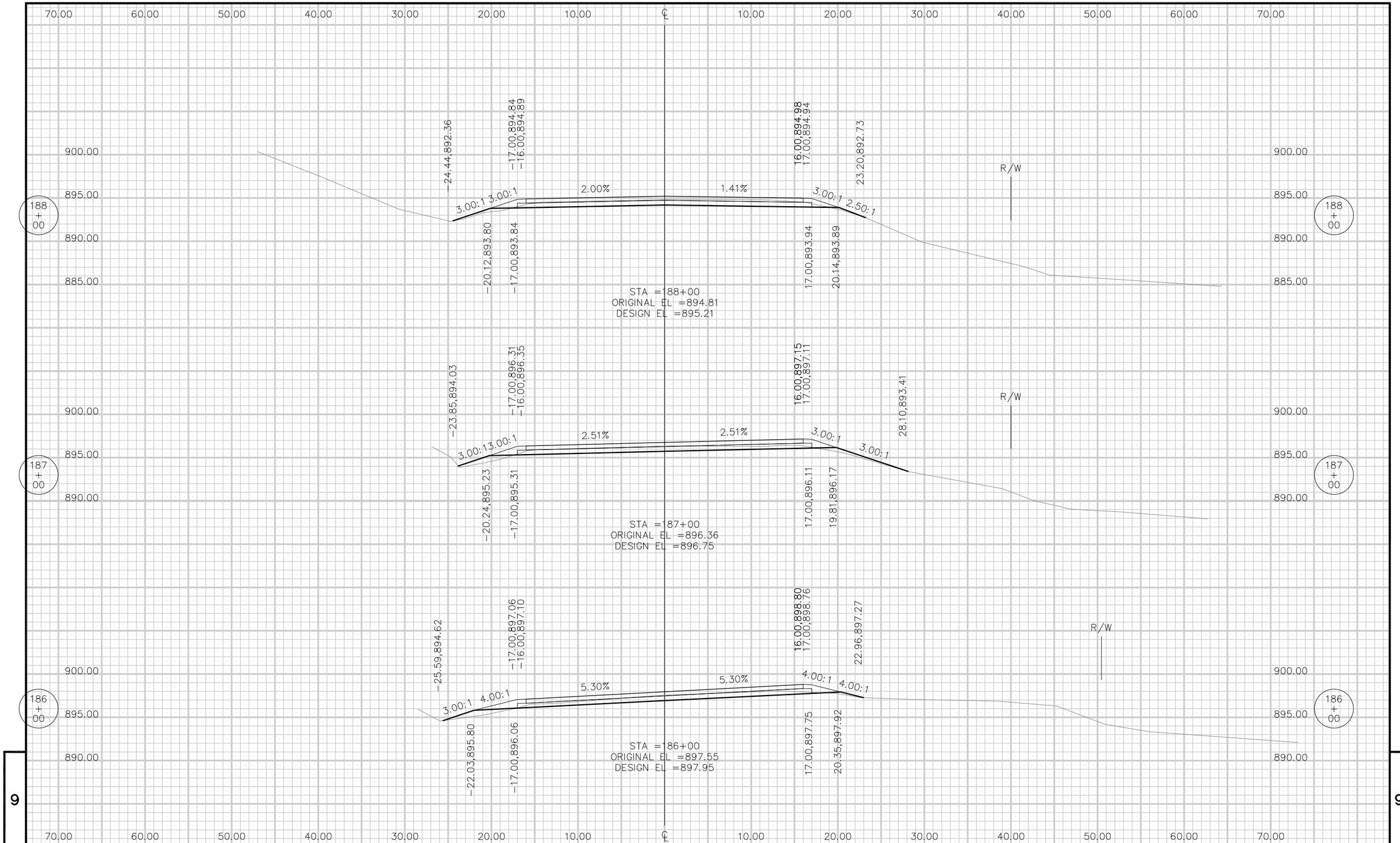
FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec183+00-184+00.dwg | PLOT DATE: 1/27/2016 | PLOT BY: DANE COUNTY HIGHWAY DEPT. | PLOT SCALE: NONE | WISDOT/CADDS SHEET 21



9

9

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 247



9

9

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 248

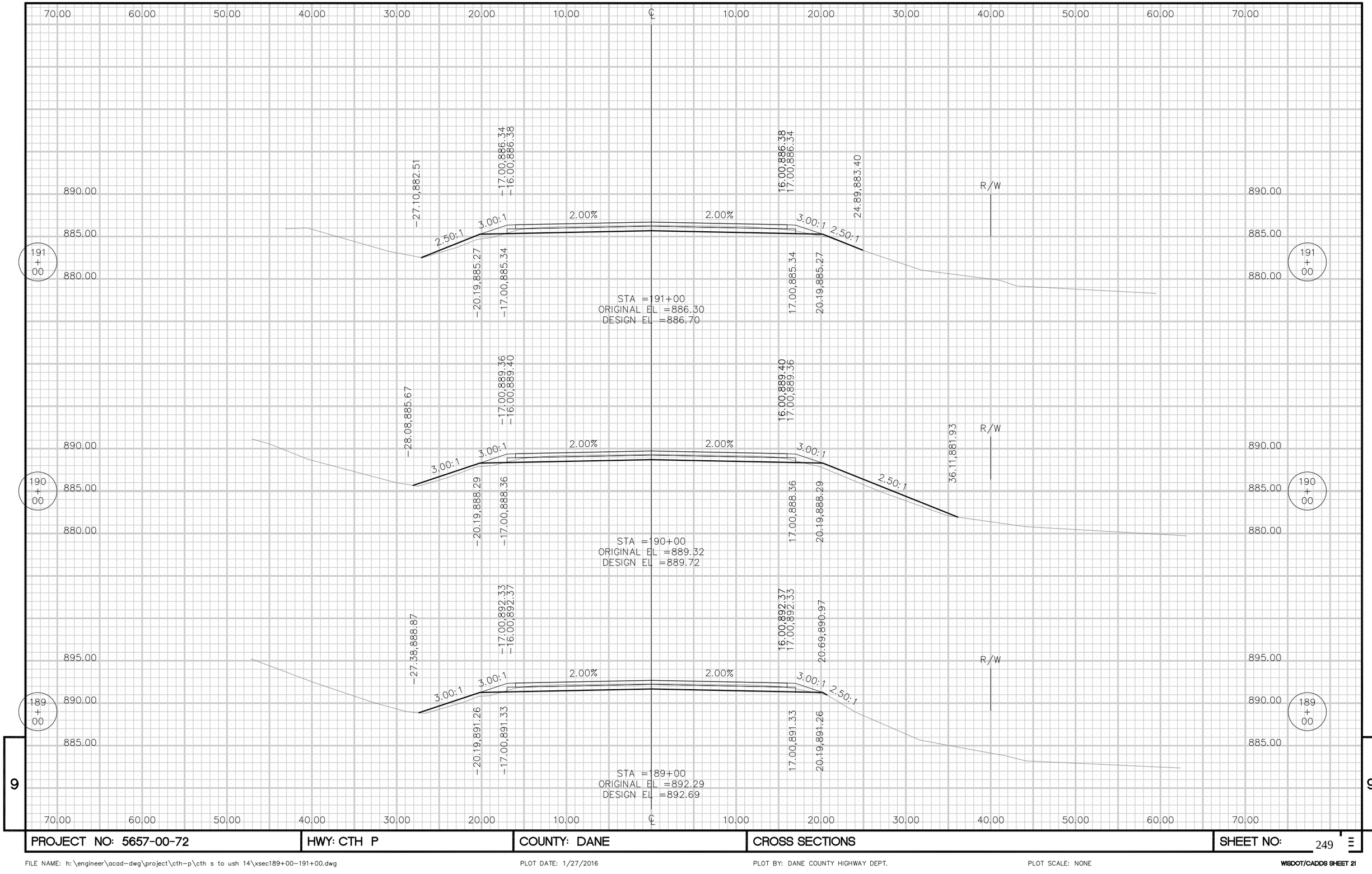
FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec186+00-188+00.dwg

PLOT DATE: 1/27/2016

PLOT BY: DANE COUNTY HIGHWAY DEPT.

PLOT SCALE: NONE

WISDOT/CADDS SHEET 21



9

9

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 249

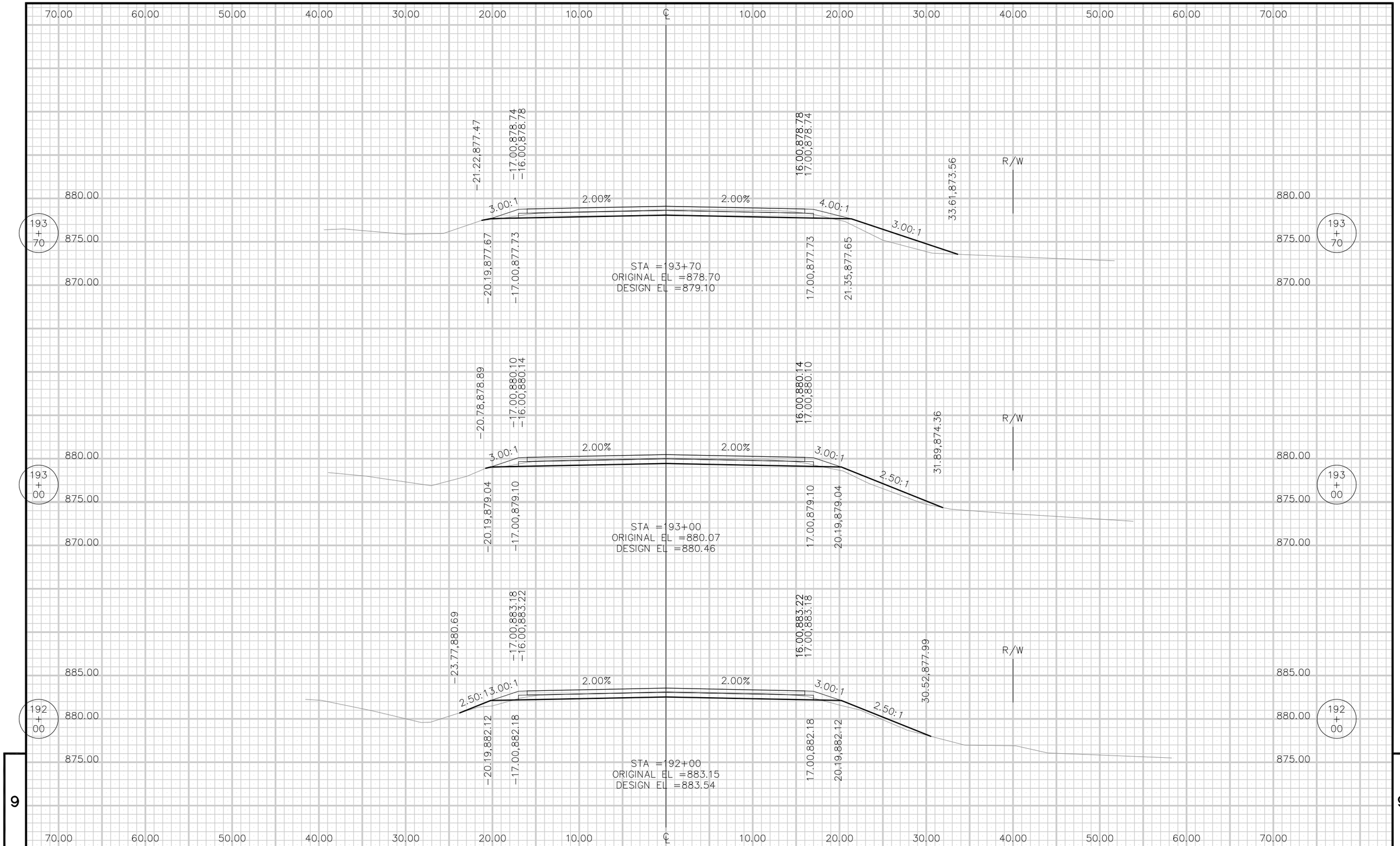
FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec189+00-191+00.dwg

PLOT DATE: 1/27/2016

PLOT BY: DANE COUNTY HIGHWAY DEPT.

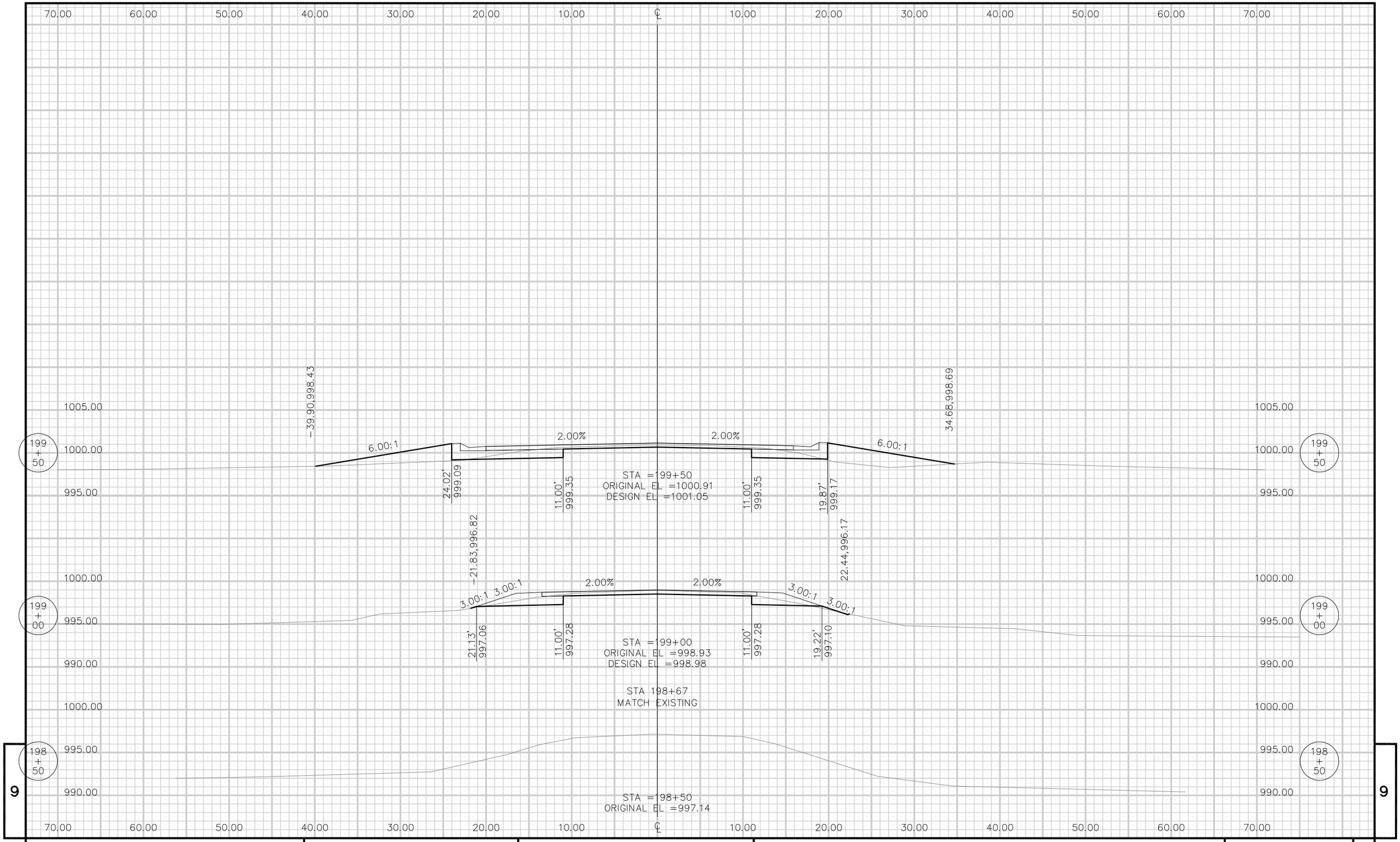
PLOT SCALE: NONE

WISDOT/CADDS SHEET 21



PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS	SHEET NO: 250

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec192+00-193+70.dwg | PLOT DATE: 1/27/2016 | PLOT BY: DANE COUNTY HIGHWAY DEPT. | PLOT SCALE: NONE | WISDOT/CADDS SHEET 21



9

9

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS - OBSERVATORY ROAD	SHEET NO: 251

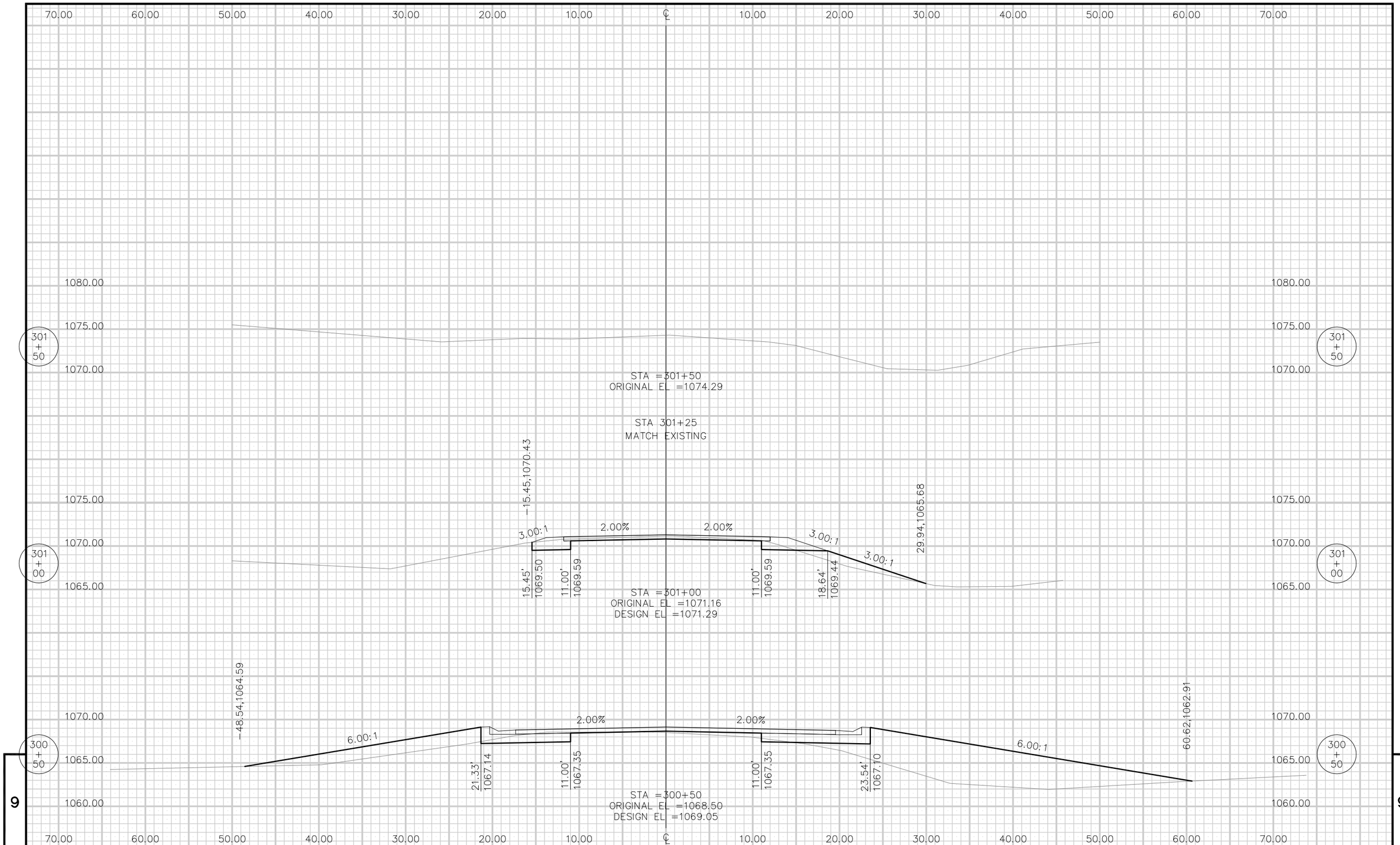
FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec198+50-199+50.dwg

PLOT DATE: 1/27/2016

PLOT BY: DANE COUNTY HIGHWAY DEPT.

PLOT SCALE: NONE

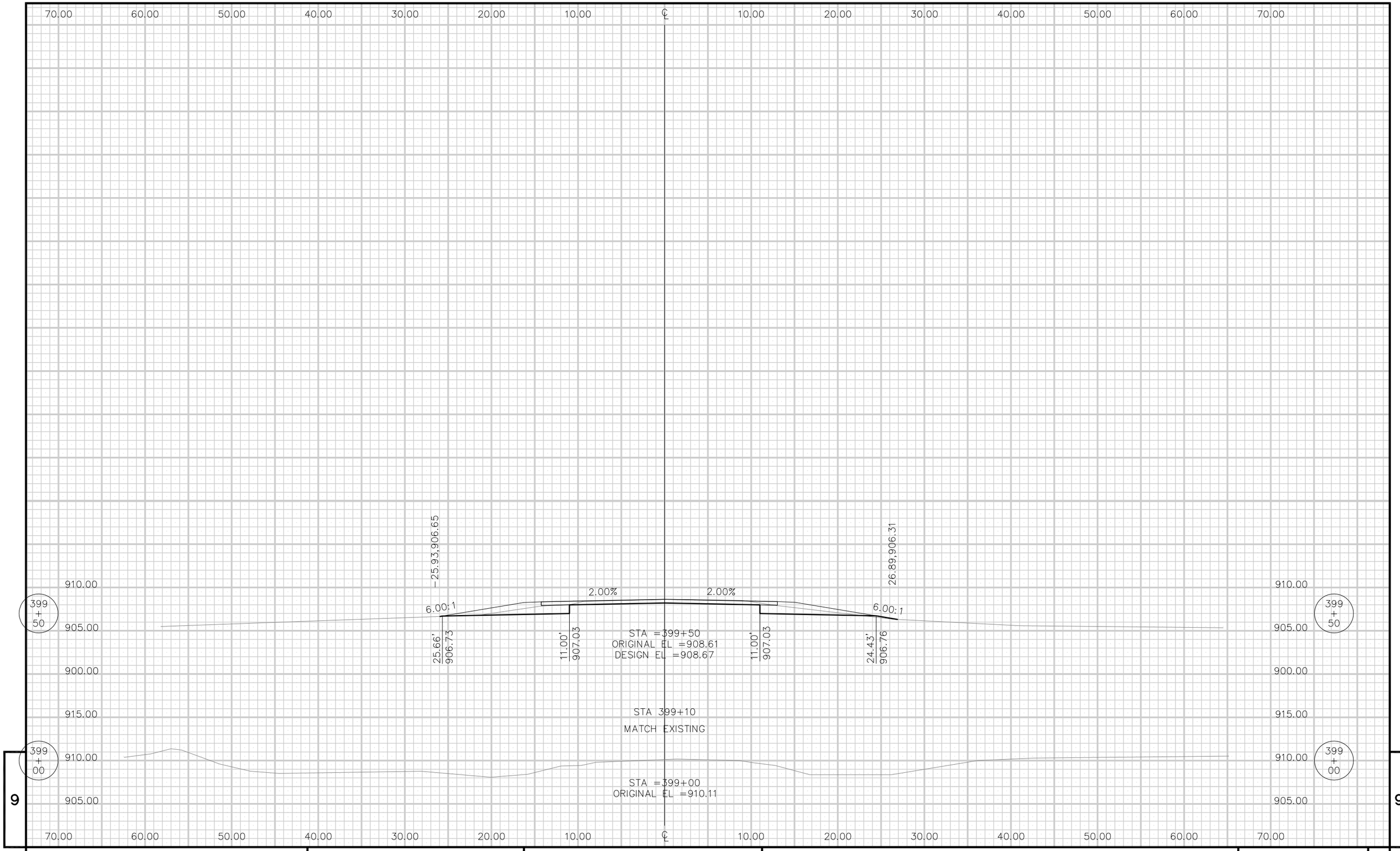
WISDOT/CADDS SHEET 21



9

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS - PINE HILL ROAD	SHEET NO: 252

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec300+50-301+50.dwg | PLOT DATE: 1/27/2016 | PLOT BY: DANE COUNTY HIGHWAY DEPT. | PLOT SCALE: NONE | WISDOT/CADDS SHEET 21



PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS - STAGECOACH ROAD (WEST)	SHEET NO: 253

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec399+00-399+50.dwg | PLOT DATE: 1/27/2016 | PLOT BY: DANE COUNTY HIGHWAY DEPT. | PLOT SCALE: NONE | WISDOT/CADDS SHEET 21

70.00 60.00 50.00 40.00 30.00 20.00 10.00 ℄ 10.00 20.00 30.00 40.00 50.00 60.00 70.00

STA 401+54
MATCH EXISTING

910.00
905.00
900.00
401 + 50

ORIGINAL EL =909.11

22,905.49

3.00:1 2.00% 2.00% 3.00:1 3.00:1 8.00:1

19.65' 906.44
11.00' 906.65
11.00' 906.65
22.11' 906.39

40.58,901.74

IE=901.30

STA =401+00
ORIGINAL EL =908.31
DESIGN EL =908.32

401 + 00

45,900.04

6.00:1 2.00% 2.00% 6.00:1

23.16' 906.17
11.00' 906.41
11.00' 906.41
29.39' 906.05

62.01,902.53

STA =400+50
ORIGINAL EL =907.50
DESIGN EL =908.12

400 + 50

9

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS - STAGECOACH ROAD (EAST)	SHEET NO: 254

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\xsec400+50-401+50.dwg PLOT DATE: 1/27/2016 PLOT BY: DANE COUNTY HIGHWAY DEPT. PLOT SCALE: NONE WISDOT/CADDS SHEET 21

70.00 60.00 50.00 40.00 30.00 20.00 10.00 ℄ 10.00 20.00 30.00 40.00 50.00 60.00 70.00

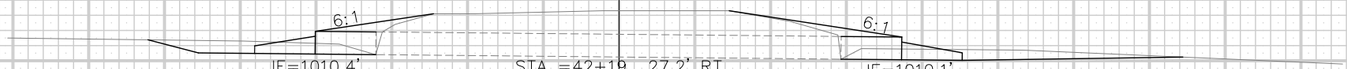
1030.00 1025.00 1020.00 1015.00 1010.00 1005.00 1000.00 995.00 990.00 985.00

49 + 00



STA =49+00 28.6' RT
ORIGINAL EL =1027.98
1 – REMOVING SMALL PIPE CULVERTS – 18" RCCP
1 – 32' CULVERT PIPE CORRUGATED STEEL 18–INCH
2 – APRON ENDWALLS FOR CULVERT PIPE SLOPED SIDE DRAINS STEEL 18–INCH 6 TO 1
GRADE TO 6 TO 1 SLOPES

42 + 19



STA =42+19 27.2' RT
ORIGINAL EL =1013.30
EXISTING 18" CMCP
EXTEND 4' LT & 4' RT CULVERT PIPE CORRUGATED STEEL 18–INCH
2 – APRON ENDWALLS FOR CULVERT PIPE SLOPED SIDE DRAINS STEEL 18–INCH 6 TO 1

31 + 50

STA =31+50 29.5' RT
ORIGINAL EL =1002.49
1 – REMOVING SMALL PIPE CULVERTS – 18" RCCP

17 + 10



STA = 17+10 27.9' LT
ORIGINAL EL =990.31
EXISTING 18" CMCP
2 – APRON ENDWALLS FOR CULVERT PIPE SLOPED SIDE DRAINS STEEL 18–INCH 6 TO 1

9

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS (DRIVEWAYS)	SHEET NO: 255 E

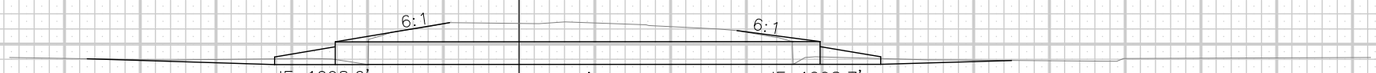
FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\driveways\driveway xsec sheets (consolidated)\drivexsecsheet1.dwg PLOT DATE: 1/27/2016 PLOT BY: DANE COUNTY HIGHWAY DEPT. PLOT SCALE: NONE

WISDOT/CADDS SHEET 21

70.00 60.00 50.00 40.00 30.00 20.00 10.00 ℄ 10.00 20.00 30.00 40.00 50.00 60.00 70.00

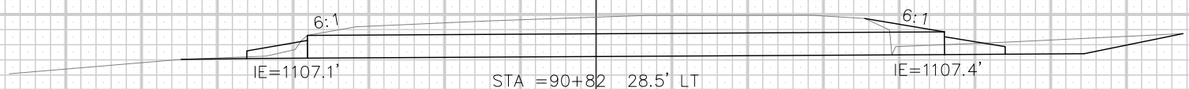
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98 + 52



STA =98+52 29.4' RT
ORIGINAL EL =1101.36
1 – REMOVING SMALL PIPE CULVERTS – 18" RCCP
1 – 32' CULVERT PIPE CORRUGATED STEEL 18–INCH
2 – APRON ENDWALLS FOR CULVERT PIPE SLOPED SIDE DRAINS STEEL 18–INCH 6 TO 1
GRADE TO 6 TO 1 SLOPES

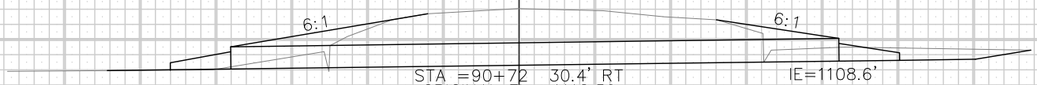
90 + 82



STA =90+82 28.5' LT
ORIGINAL EL =1109.82
1 – REMOVING SMALL PIPE CULVERTS – 18" RCCP
1 – 42' CULVERT PIPE CORRUGATED STEEL 18–INCH
2 – APRON ENDWALLS FOR CULVERT PIPE SLOPED SIDE DRAINS STEEL 18–INCH 6 TO 1
GRADE TO 6 TO 1 SLOPES

IE=1107.8'

90 + 72



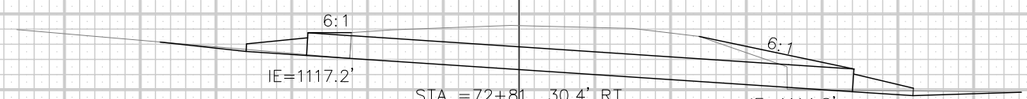
STA =90+72 30.4' RT
ORIGINAL EL =1112.59
1 – REMOVING SMALL PIPE CULVERTS – 18" RCCP
1 – 40' CULVERT PIPE CORRUGATED STEEL 18–INCH
2 – APRON ENDWALLS FOR CULVERT PIPE SLOPED SIDE DRAINS STEEL 18–INCH 6 TO 1
GRADE TO 6 TO 1 SLOPES

87 + 23



STA =87+23 29.0' LT
ORIGINAL EL =1112.27
1 – REMOVING SMALL PIPE CULVERTS – 18" CMCP
1 – 38' CULVERT PIPE CORRUGATED STEEL 18–INCH
2 – APRON ENDWALLS FOR CULVERT PIPE SLOPED SIDE DRAINS STEEL 18–INCH 6 TO 1
GRADE TO 6 TO 1 SLOPES

72 + 81



STA =72+81 30.4' RT
ORIGINAL EL =1119.23
1 – REMOVING SMALL PIPE CULVERTS – 18" RCCP
1 – 36' CULVERT PIPE CORRUGATED STEEL 18–INCH
2 – APRON ENDWALLS FOR CULVERT PIPE SLOPED SIDE DRAINS STEEL 18–INCH 6 TO 1
GRADE TO 6 TO 1 SLOPES

70.00 60.00 50.00 40.00 30.00 20.00 10.00 ℄ 10.00 20.00 30.00 40.00 50.00 60.00 70.00

9 9

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS (DRIVEWAYS)	SHEET NO: 256

70.00 60.00 50.00 40.00 30.00 20.00 10.00 ℄ 10.00 20.00 30.00 40.00 50.00 60.00 70.00

1085.00
905.00
160 + 50 — 900.00
895.00

10.6:1 6:1

STA =160+50 29.0' LT
ORIGINAL EL =901.20
NO CULVERT
GRADE TO 6 TO 1 SLOPES

1085.00
112 + 87 — 1080.00
1075.00

6:1 6:1

IE=1078.3' IE=1080.8'

STA =112+87 28.1' LT
ORIGINAL EL =1082.63
1 – REMOVING SMALL PIPE CULVERTS – 18" RCCP
1 – 40' CULVERT PIPE CORRUGATED STEEL 18–INCH
2 – APRON ENDWALLS FOR CULVERT PIPE SLOPED SIDE DRAINS STEEL 18–INCH 6 TO 1
GRADE TO 6 TO 1 SLOPES

1105.00
99 + 89 — 1100.00
1095.00

6:1 6:1

IE=1098.2' IE=1098.5'

STA =99+89 28.3' LT
ORIGINAL EL =1100.59
EXISTING 18" RCCP
2 – APRON ENDWALLS FOR CULVERT PIPE SLOPED SIDE DRAINS STEEL 18–INCH 6 TO 1
GRADE TO 6 TO 1 SLOPES

1105.00
99 + 26 — 1100.00
1095.00

6:1 6:1

STA =99+26 29.0' RT
ORIGINAL EL =1100.88
NO CULVERT
GRADE TO 6 TO 1 SLOPES

70.00 60.00 50.00 40.00 30.00 20.00 10.00 ℄ 10.00 20.00 30.00 40.00 50.00 60.00 70.00

9 9

PROJECT NO: 5657-00-72	HWY: CTH P	COUNTY: DANE	CROSS SECTIONS (DRIVEWAYS)	SHEET NO: 257

FILE NAME: h:\engineer\acad-dwg\project\cth-p\cth s to ush 14\driveways\driveway xsec sheets (consolidated)\drivexsecsheet3.dwg PLOT DATE: 1/27/2016 PLOT BY: DANE COUNTY HIGHWAY DEPT. PLOT SCALE: NONE

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov