GRE

MARCH 2019

PROJECT ID: 4516-07-71

WITH: N/A

COUNTY: BROWN

35

ORDER OF SHEETS

Section No	1	Title
Section No	2	Typical Sections and Details
Section No	2	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 = 252



N

DESIGN DESIGNATION 4516-07-71

A.A.D.T	2018	=	1,200
A.A.D.T	2038	=	2,300
D.H.V.		=	2,350 (2018)
D.D.		=	59/41 (2018)
T.		=	13.0% (2018)
DESIGN SPEED		=	40 MPH
ESALS		=	440,000

CONVENTIONAL SYMBOLS

PLAN		PROFILE	
CORPORATE LIMITS		GRADE LINE	
PROPERTY LINE		ORIGINAL GROUND	
LOT LINE		MARSH OR ROCK PROFILE (To be noted as such)	ROCK
LIMITED HIGHWAY EASEMENT		SPECIAL DITCH	LABEL
EXISTING RIGHT OF WAY		GRADE ELEVATION	95.36
PROPOSED OR NEW R/W LINE		CULVERT (Profile View)	
SLOPE INTERCEPT		UTILITIES	
REFERENCE LINE		ELECTRIC	E
EXISTING CULVERT		FIBER OPTIC	FO
PROPOSED CULVERT (Box or Pipe)		GAS	G
COMBUSTIBLE FLUIDS	CAUTION	SANITARY SEWER	SAN
		STORM SEWER	SS
		TELEPHONE	T
MARSH AREA		WATER	W
		UTILITY PEDESTAL	
		POWER POLE	
WOODED OR SHRUB AREA		TELEPHONE POLE	

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

V BELLEVUE, S HURON ROAD

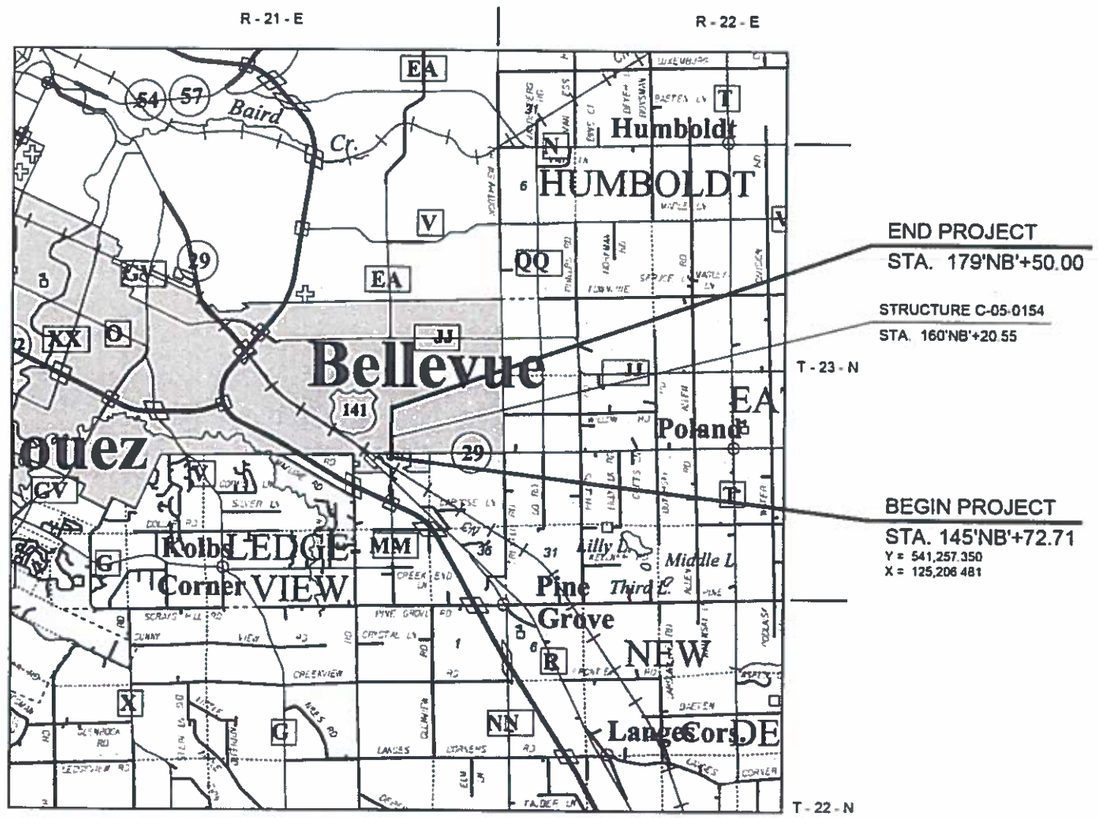
STH 29 TO WILLOW ROAD

LOCAL STREET

BROWN

STATE PROJECT NUMBER
4516-07-71

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
4516-07-71	WISC 2019195	1



END PROJECT
STA. 179'NB'+50.00

STRUCTURE C-05-0154
STA. 160'NB'+20.55

BEGIN PROJECT
STA. 145'NB'+72.71
Y = 541,257.350
X = 125,206.481

LAYOUT SCALE 0 2 MI

TOTAL NET LENGTH OF CENTERLINE = 0.640 MILES

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

ACCEPTED FOR BROWN COUNTY

DATE: 10/18/18 (Signature)

Engineering Manager
TITLE

ORIGINAL PLANS PREPARED BY

OMNNI ASSOCIATES

WISCONSIN MARGARET A. HOBLEY E-28570 APPLETON WI PROFESSIONAL ENGINEER

10/10/2018

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor OMNNI ASSOCIATES, INC

Designer OMNNI ASSOCIATES, INC

Management Consultant SHORT ELLIOT HENDRICKSON

APPROVED FOR THE DEPARTMENT

DATE: 10/19/18

(Management Consultant Signature)

E

FILE NAME F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607 010101 TI.DWG

PLOT DATE 9/19/2018 9:41 AM

PLOT BY ANDREW WESTBROOK

PLOT NAME

GENERAL NOTES

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

THE CONTRACTOR SHALL NOTIFY DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK. ANY UTILITY WHICH IS NOT A MEMBER OF THE DIGGERS HOTLINE MUST BE CONTACTED SEPERATELY.

ALL DISTURBED AREAS, NOT OTHERWISE SURFACED ARE TO BE TOPSOILED, SEEDED, FERTILIZED, AND MULCHED OR E-MATTED AS SHOWN IN THE PLAN.

FERTILIZER SHALL NOT BE USED WITHIN 10 FEET OF NAVIGABLE WATERWAYS AND WETLANDS.

DISTURBED AREAS ADJACENT TO LAWNS SHALL BE SEEDED WITH MIXTURE NO. 40 AND ALL OTHER AREAS SHALL BE SEEDED WITH MIXTURE NO. 10. SEED MIX NO. 30 SHALL BE USED WITHIN 15 FEET OF THE SHOULDER IN RURAL SECTIONS AND 15 FEET OF THE BACK OF CURB IN URBAN SECTIONS THAT ARE NOT ADJACENT TO LAWN TYPE TURF.

THE EXACT LOCATIONS AND LIMITS OF PRIVATE ENTRANCES, FIELD ENTRANCES AND COMMERCIAL ENTRANCES SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.DRIVEWAYS SHALL BE REPLACED IN KIND.

THE EXACT LOCATIONS OF ALL EROSION CONTROL ITEMS SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

THE LOCATIONS AND GRADES OF CURB RAMP OPENINGS SHALL BE VERIFIED BY THE ENGINEER IN THE FIELD.

IMMEDIATELY AFTER CONSTRUCTION OF ANY INLET, CONTRACTOR SHALL CONSTRUCT THE EROSION CONTROL PROTECTION IN ACCORDANCE WITH THE DETAILS SHOWN ON THE PLANS.

ALL MANHOLE AND INLET OFFSETS ARE GIVEN TO THE CENTER OF THE STRUCTURE. ALL ENDWALL OFFSETS ARE GIVEN TO THE END OF PIPE.

PRIOR TO ORDERING DRAINAGE PIPES AND STRUCTURES, THE CONTRACTOR SHALL FIELD VERIFY RELATED DRAINAGE INFORMATION IN THE PLAN WITH THE ENGINEER. THIS INCLUDES VERIFICATION OF INVERT ELEVATIONS AT ALL PROPOSED STORM SEWER

BOXOUTS SHALL BE PROVIDED IN CONCRETE SIDEWALK BY THE CONTRACTOR FOR SIGN PLACEMENT. THE COST OF THE BOXOUTS SHALL BE INCIDENTAL TO CONCRETE MEDIAN. LOCATIONS SHALL BE DETERMINED BY THE ENGINEER. NO BREAKER RUN SHALL BE PLACED IN THE LOCATION OF BOXOUT.

WETLAND AREAS ARE SHOWN ON THE PLANS, CONTRACTOR SHALL LIMIT CONSTRUCTION ACTIVITIES TO WORK WITHIN THE SLOPE INTERCEPTS IN THE WETLAND AREAS.

UTILITIES

ELECTRIC & GAS
WISCONSIN PUBLIC SERVICE CORPORATION
2850 SOUTH ASHLAND AVENUE
PO BOX 19001
GREEN BAY, WI 54307-9001
ATTN: RANDY STEIER (ELECTRIC)
TELEPHONE: (920) 617-5167
CELL: (920) 655-1596
EMAIL: RDSteier@wisconsinpublicservice.com

ATTN: DAVID CZARNECKI (GAS)
TELEPHONE: (920) 421-4746
CELL: (920) 617-5132
EMAIL: DFCzarnecki@wisconsinpublicservice.com

WATER
CENTRAL BROWN COUNTY WATER AUTHORITY
1303 S 8TH ST
MANITOWOC, WI 54220
ATTN: ROBERT MICHAELSON
TELEPHONE: (920) 686-4354
CELL: (920) 374-0959
EMAIL: rmichaelson@mpu.org

SEWER/WATER
VILLAGE OF BELLEVUE
2828 ALLOUEZ AVENUE
BELLEVUE, WI 54311
ATTN: SHAWN GEIGER
TELEPHONE: (920) 593-5517
CELL: (920) 606-3924
EMAIL: sgeiger@villageofbellevue.org

COMMUNICATION
CENTURYLINK
212 CHURCH AVE
CASCO, WI 54205
ATTN: MATT GUNDERSON
TELEPHONE: (920) 837-2344
CELL: (920) 896-2867
EMAIL: matt.gunderson@centurylink.com

COMMUNICATION
AT&T
205 S. JEFFERSON STREET
GREEN BAY, WI 54301
ATTN: JOE KASSAB
OFFICE: (920) 433-4200
CELL: (920)202-4002
EMAIL: joseph.kassab@att.com

COMMUNICATION
NETLEC
1700 INDUSTRIAL DRIVE
GREEN BAY, WI 54302
ATTN: DENNIS LAFAVE
CELL: 920-619-9774
EMAIL: dlafave@mi-tech.us

COMMUNICATION
CHARTER COMMUNICATIONS
3520 EAST DESTINATION DRIVE
APPLETON, WI 54915
ATTN: VINCE ALBIN
TELEPHONE: (920) 831-9249
CELL: (920) 378-0444
EMAIL: vince.albin@charter.com

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

OTHER CONTACTS

BROWN COUNTY
NICK UITENBROEK
2198 GLENDALE AVENUE
GREEN BAY, WI 54303
TELEPHONE: (920) 662-2152
EMAIL: uitenbroek_ns@co.brown.wi.us

DNR LIAISON
JIM DOPERALSKI
DEPARTMENT OF NATURAL RESOURCES
2984 SHAWANO AVENUE
GREEN BAY, WI 54307-0448
TELEPHONE: (920) 662-5119
EMAIL: james.doperalski@wisconsin.gov

EROSION CONTROL NOTES

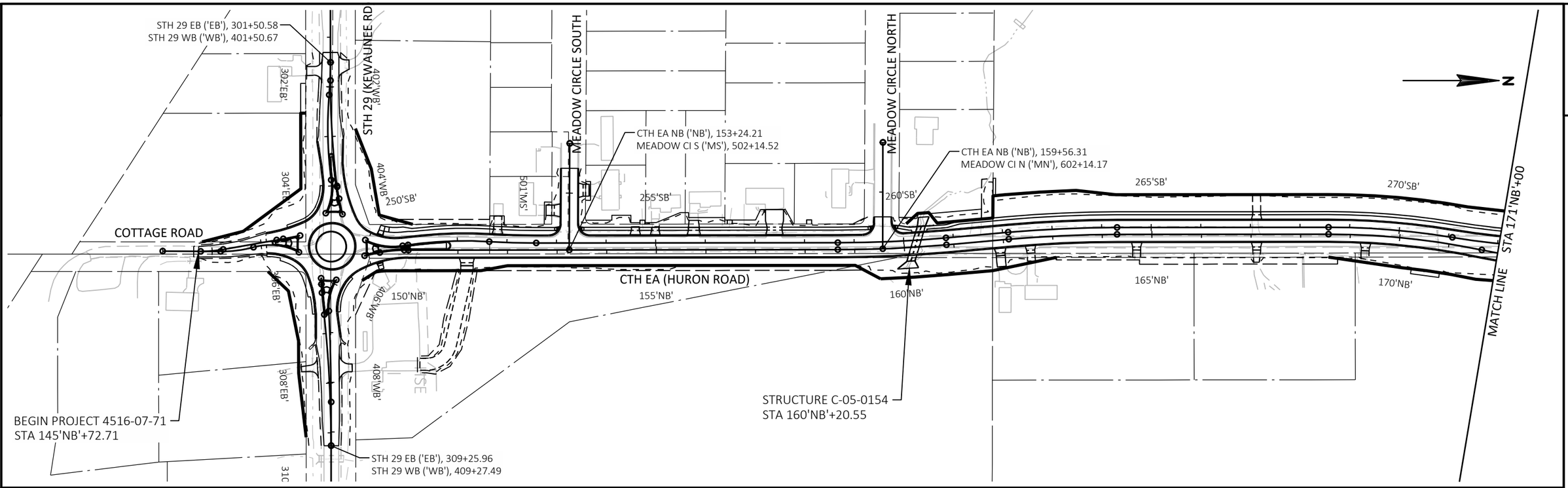
RUNOFF COEFFICIENTS FOR THIS PROJECT: EXISTING PAVEMENT 0.95, EXISTING SLOPES 0.30, NEW PAVEMENT 0.95, NEW SLOPES 0.30.

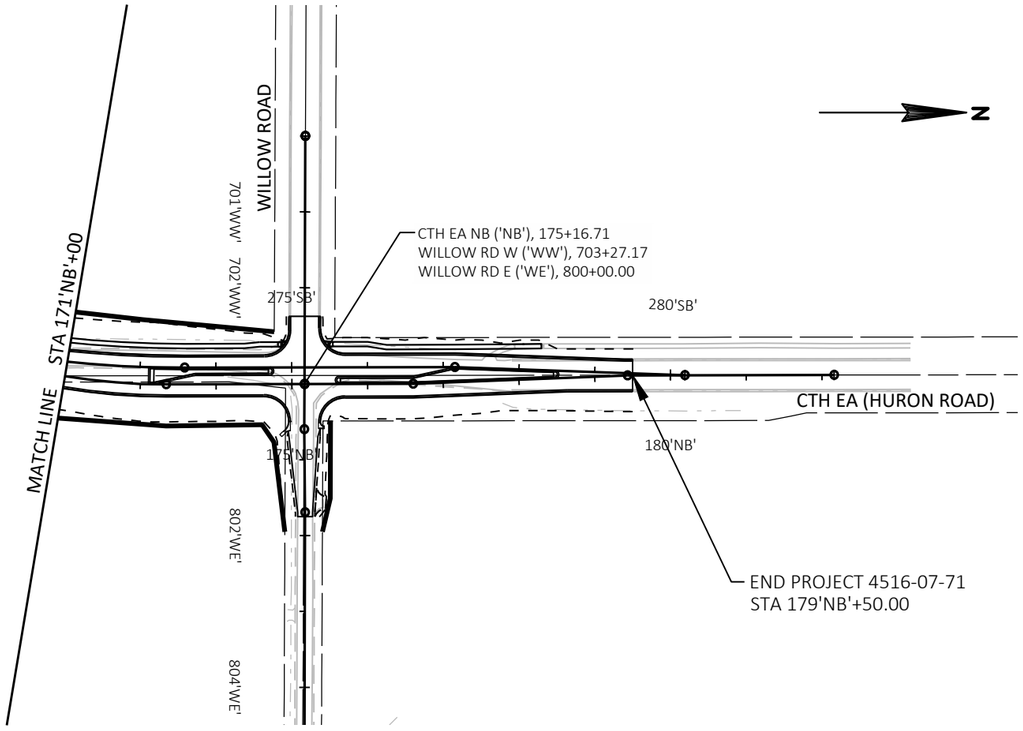
TOTAL PROJECT AREA = 11.7 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 10.3 ACRES

ORDER OF "SECTION 2" SHEETS

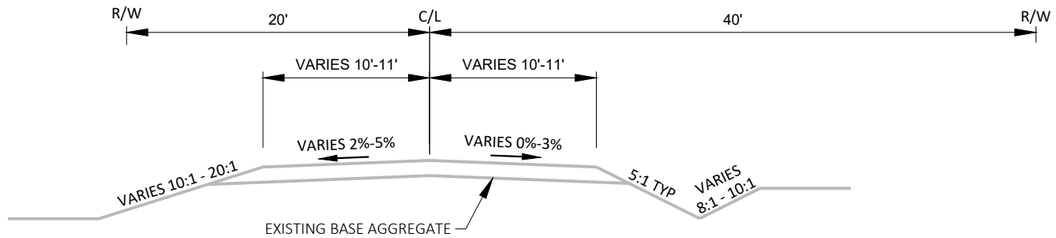
SHEET TITLE

GENERAL NOTES
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
PAVING DETAILS
EROSION CONTROL
STORM SEWER
PLANTING PLAN
SIGNING AND PAVEMENT MARKING
LIGHTING PLAN
TRAFFIC CONTROL
ALIGNMENT PLAN



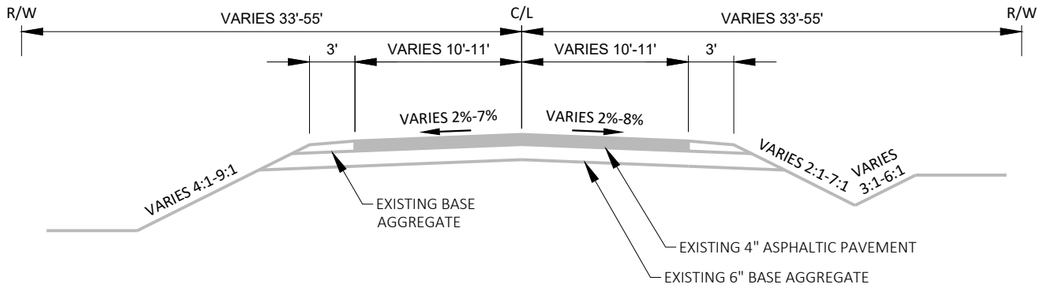


PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	PROJECT OVERVIEW	SHEET 3



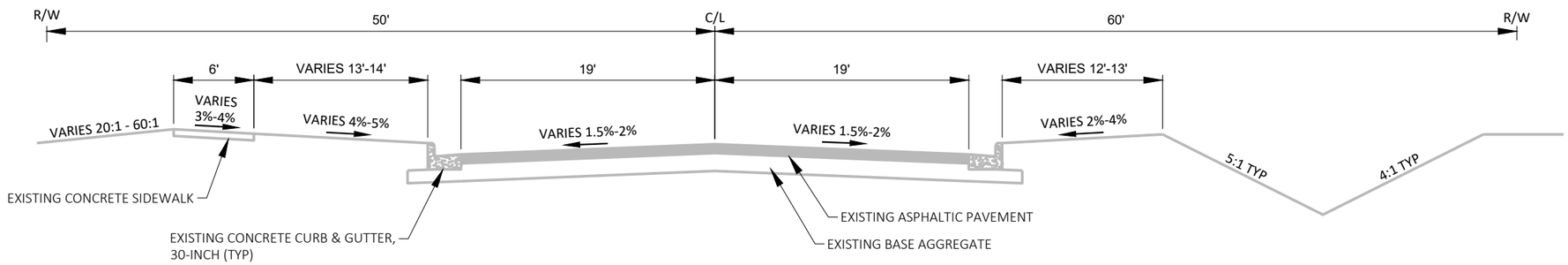
EXISTING TYPICAL SECTION FOR CTH EA (COTTAGE RD)

STA 145+73 TO STA 147+80



EXISTING TYPICAL SECTION FOR CTH EA (S. HURON ROAD)

STA 149+25 TO STA 177+90

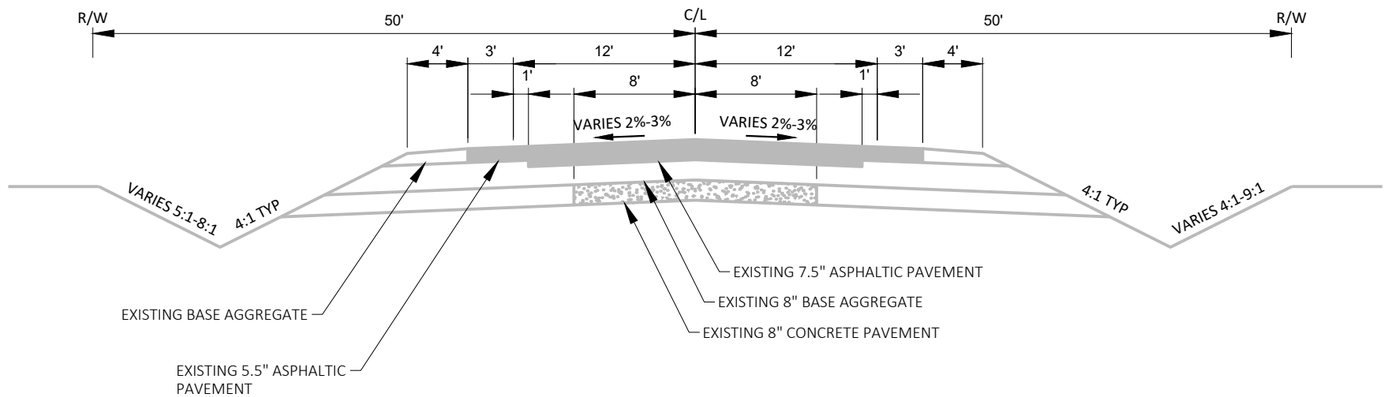


EXISTING TYPICAL SECTION FOR CTH EA (S. HURON RD)

STA 177+90 TO STA 179+50

PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	TYPICAL SECTIONS - EXISTING	SHEET 4	E

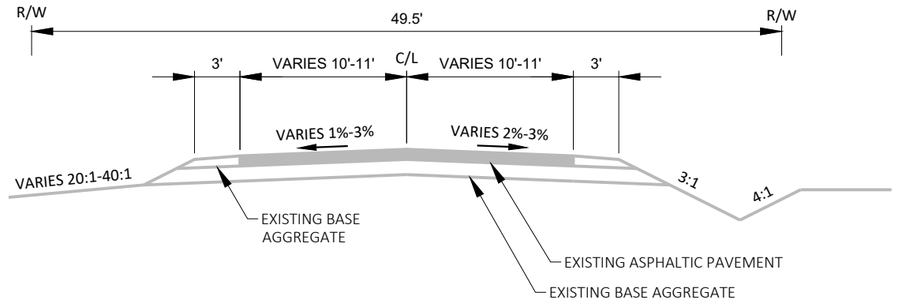
2



EXISTING TYPICAL SECTION FOR STH 29

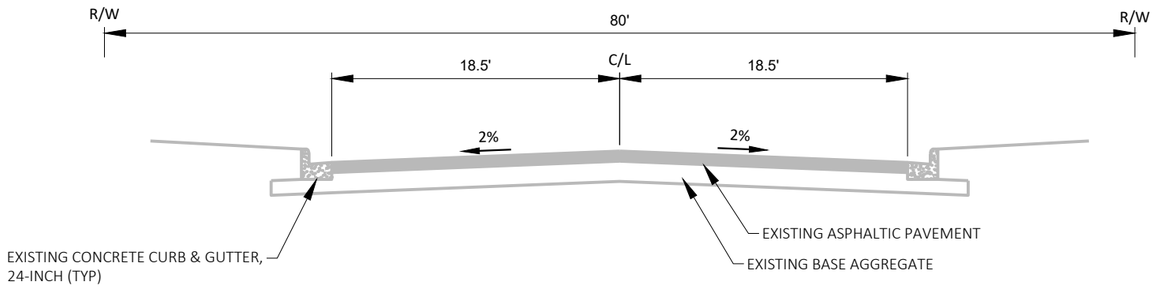
STA 301+30 TO STA 309+26

PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	TYPICAL SECTIONS - EXISTING	SHEET 5	E



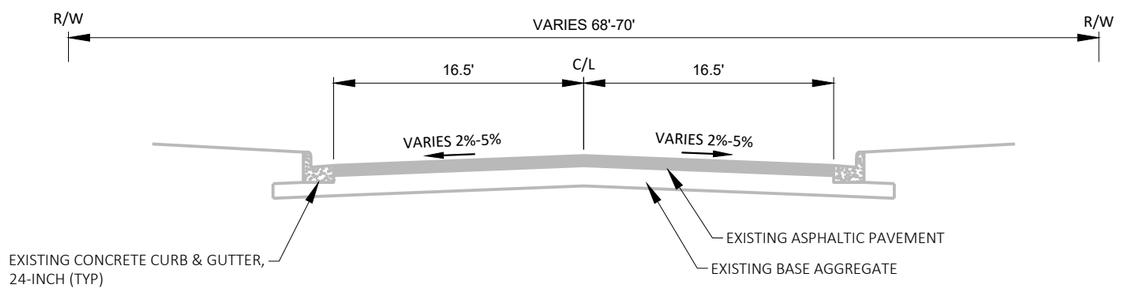
EXISTING TYPICAL SECTION FOR WILLOW ROAD EAST

SOUTH: STA 800+25 TO STA 801+75



EXISTING TYPICAL SECTION FOR WILLOW ROAD WEST

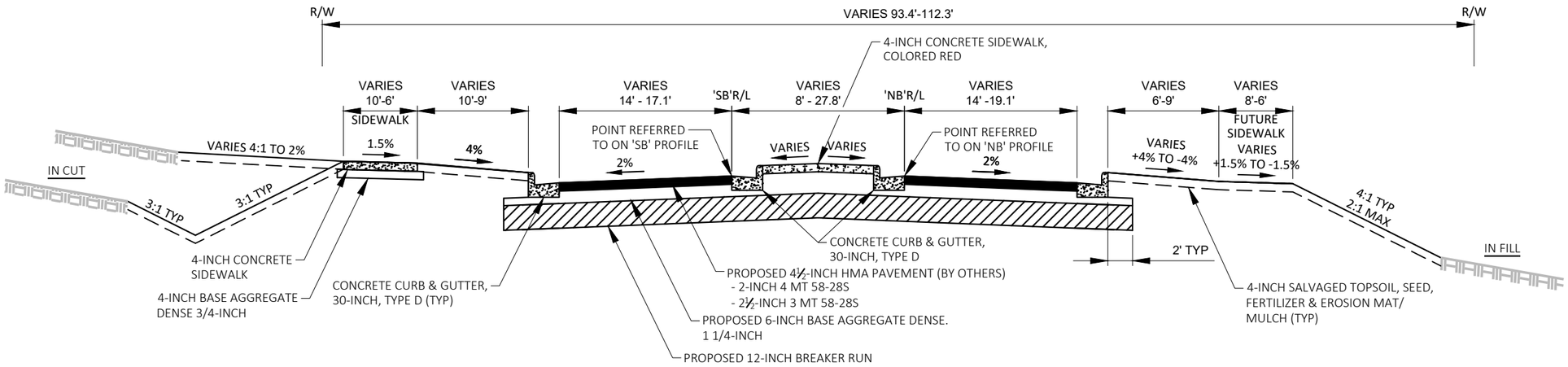
SOUTH: STA 702+38 TO STA 702+55



EXISTING TYPICAL SECTION FOR MEADOW CIRCLE SOUTH & NORTH

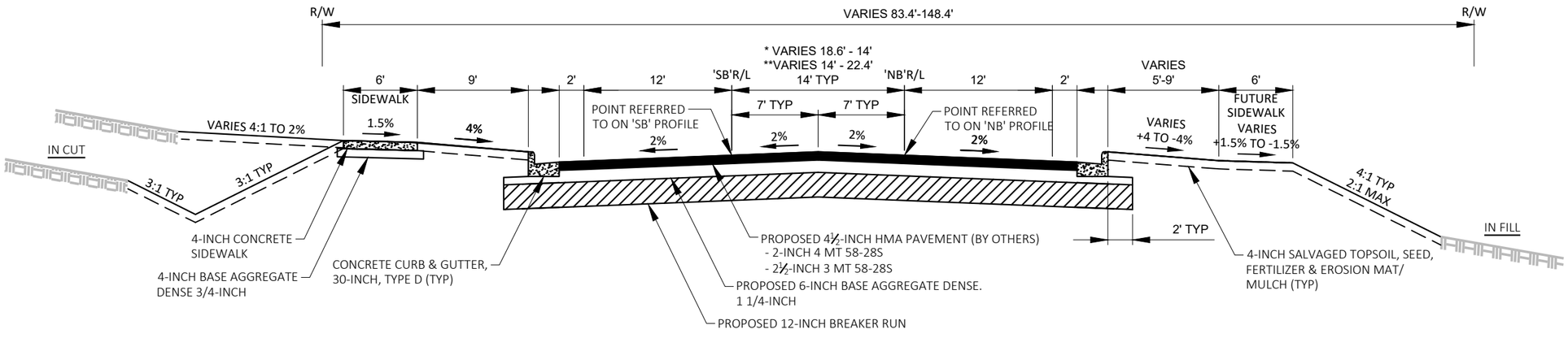
SOUTH: STA 500+50 TO STA 501+55
NORTH: STA 601+50 TO STA 601+55

2



TYPICAL FINISHED SECTION FOR CTH EA (S. HURON ROAD)

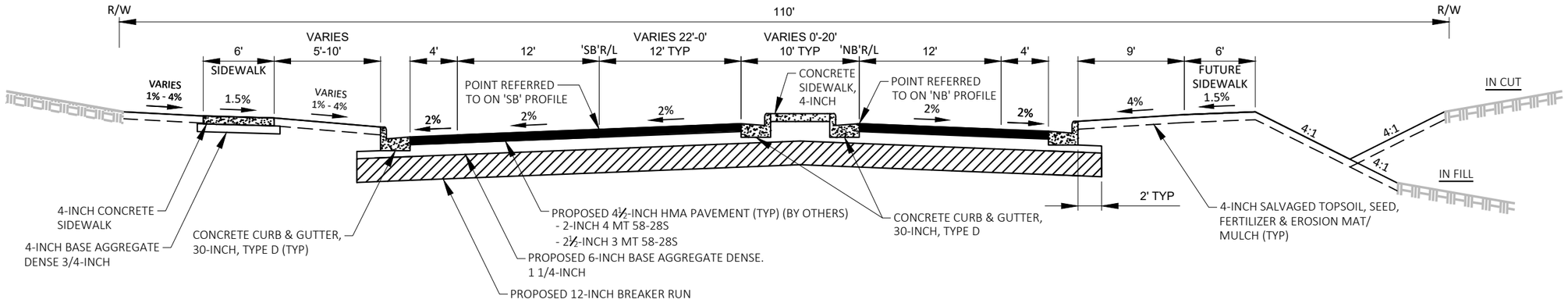
STA 149'NB'+19 TO STA 150'NB'+76



TYPICAL FINISHED SECTION FOR CTH EA (S. HURON ROAD)

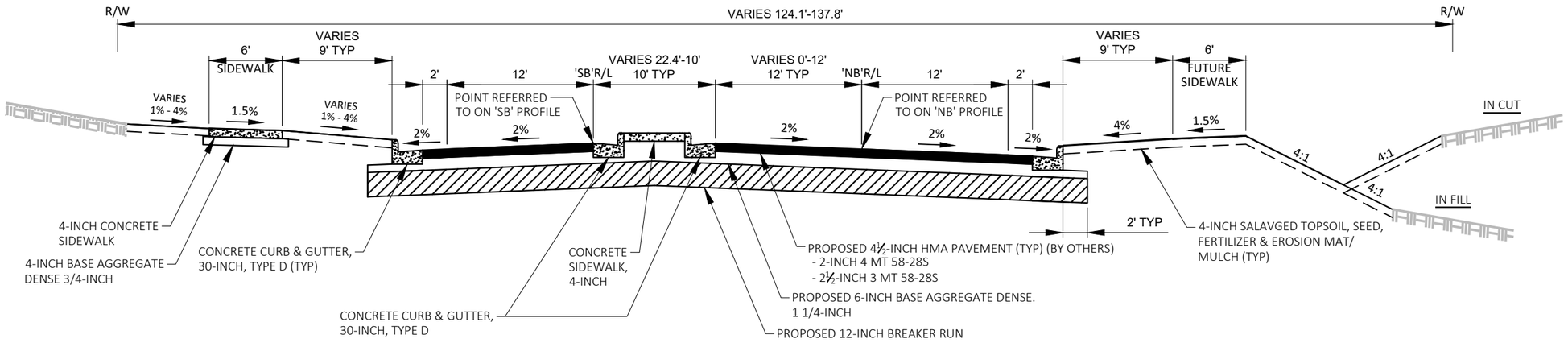
STA 152'NB'+58 TO STA 171'NB'+05
* STA 150'NB'+76 TO STA 152'NB'+58
** STA 171'NB'+05 TO STA 173'NB'+11

2



TYPICAL FINISHED SECTION FOR CTH EA (S. HURON ROAD)

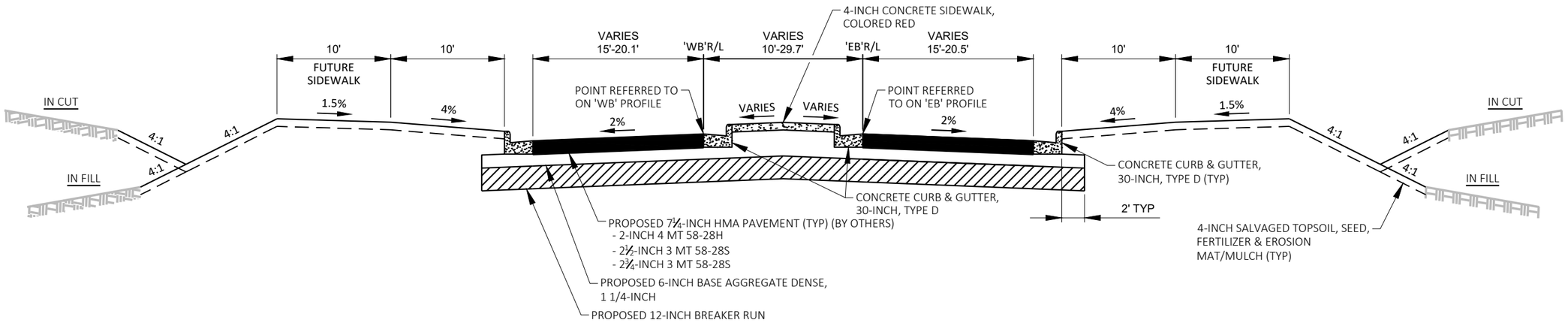
STA 175'NB'+18 TO STA 179'NB'+50



TYPICAL FINISHED SECTION FOR CTH EA (S. HURON ROAD)

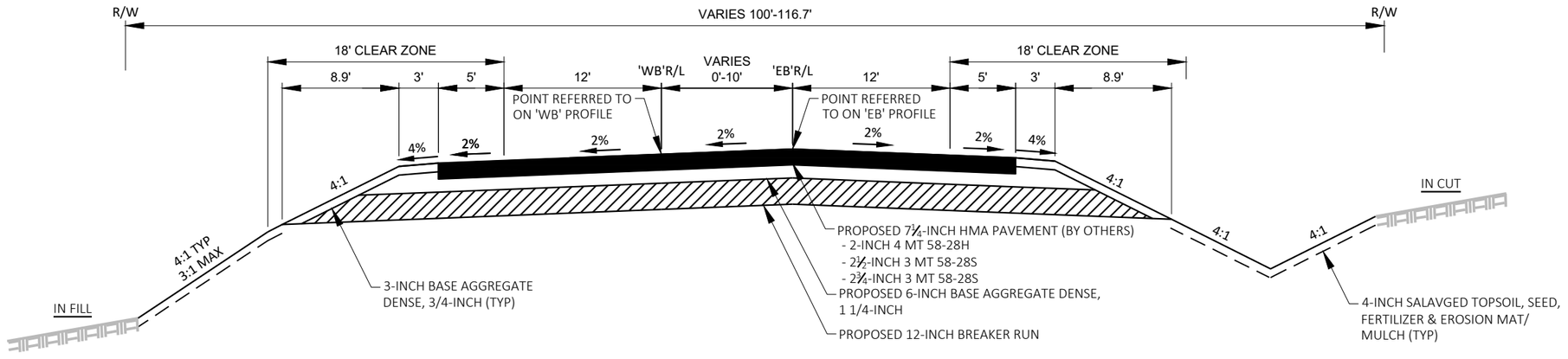
STA 173'NB'+11 TO STA 175'NB'+18

2



TYPICAL FINISHED SECTION FOR STH 29 (KEWAUNEE ROAD) AND COTTAGE ROAD

STA 303'EB'+40 TO STA 304'EB'+57
STA 305'EB'+88 TO STA 306'EB'+58
STA 147'NB'+26 TO STA 147'NB'+78

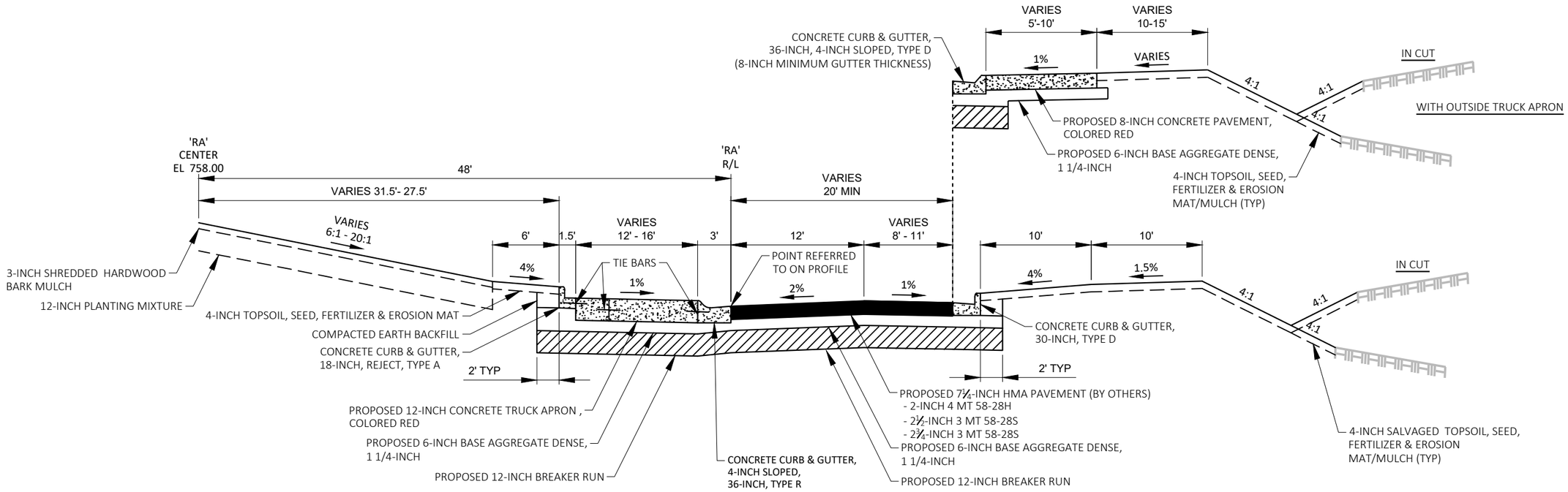


TYPICAL FINISHED SECTION FOR STH 29 (KEWAUNEE ROAD)

STA 301'EB'+31 TO STA 303'EB'+40
STA 306'EB'+58 TO STA 309'EB'+26

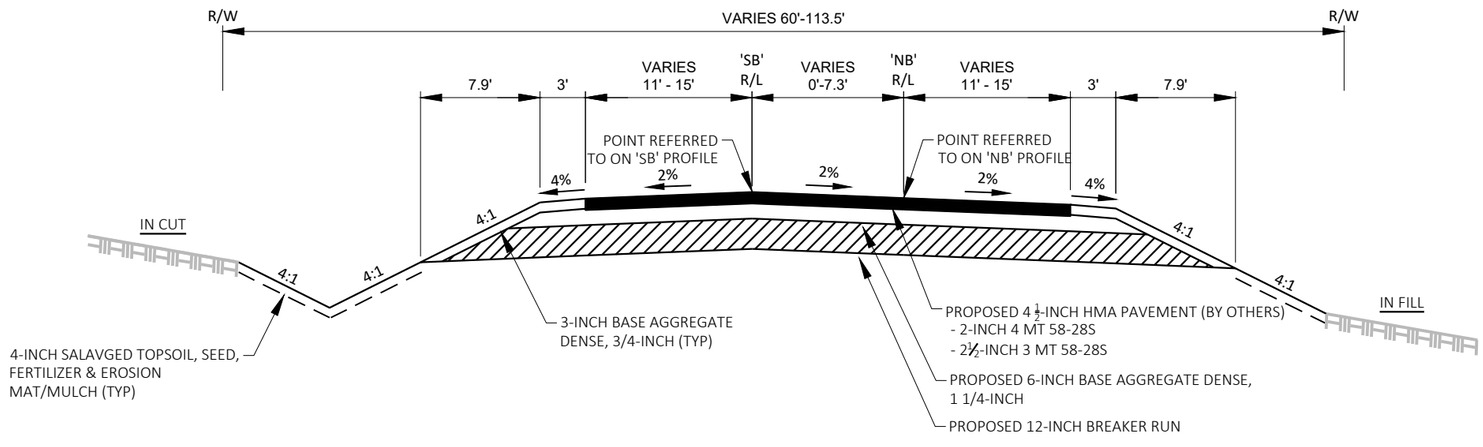
PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	TYPICAL SECTIONS - PROPOSED	SHEET 9	E

2



TYPICAL FINISHED SECTION FOR STH 29 & CTH EA ROUNDABOUT

STA 10'RA'+00 TO STA 13'RA'+01.59

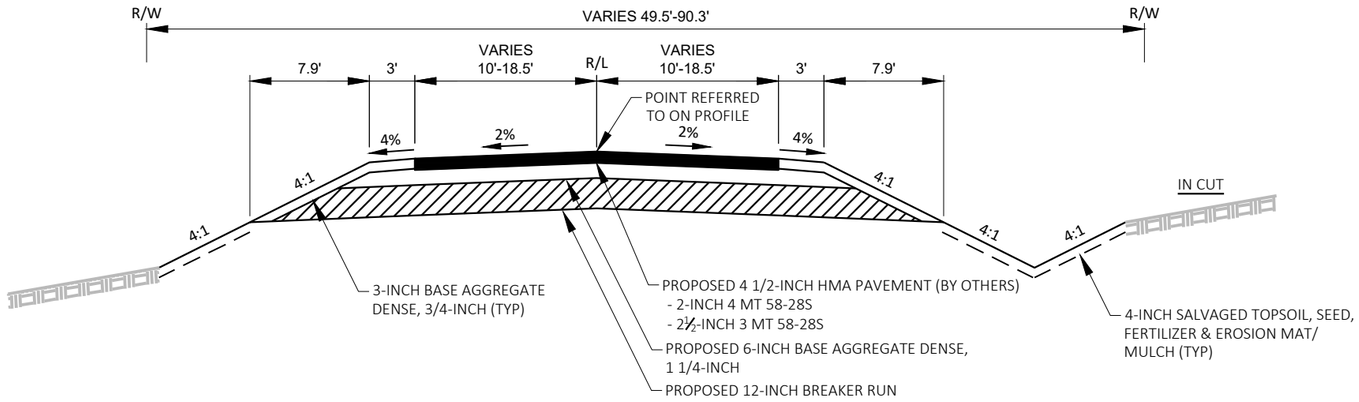


TYPICAL FINISHED SECTION FOR COTTAGE ROAD

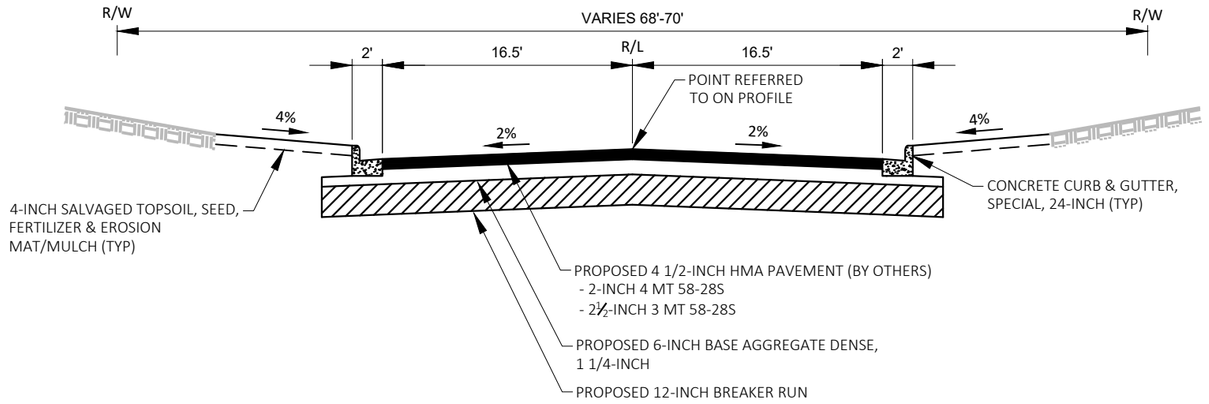
STA 145'NB'+73 TO STA 147'NB'+26

PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	TYPICAL SECTIONS - PROPOSED	SHEET 10	E

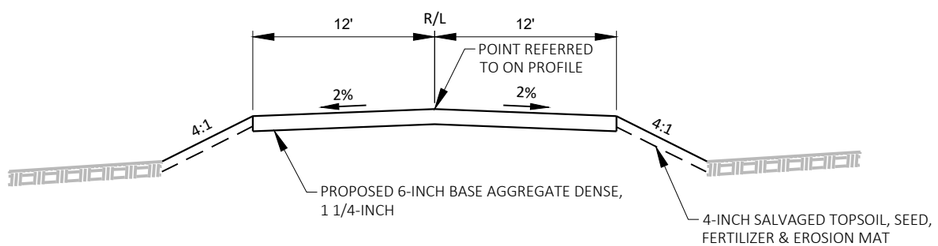
2



TYPICAL FINISHED SECTION FOR WILLOW ROAD
STA 800'WE'+50 TO STA 801'WE'+75

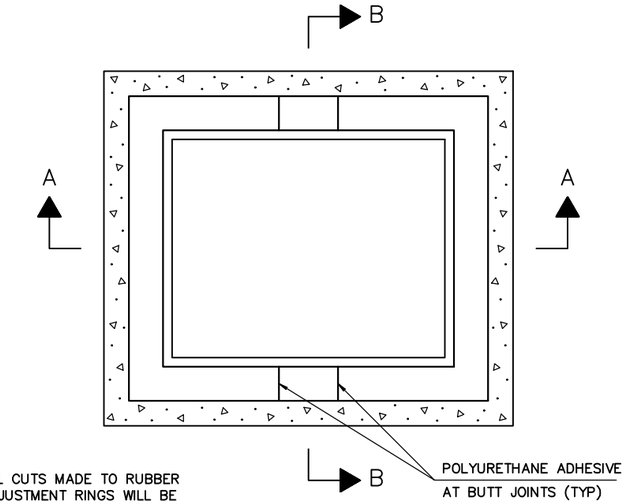


TYPICAL FINISHED SECTION FOR MEADOW CIRCLE SOUTH & NORTH
STA 500'MS'+50 TO STA 501'MS'+87
STA 601'MN'+50 TO STA 601'MN'+87



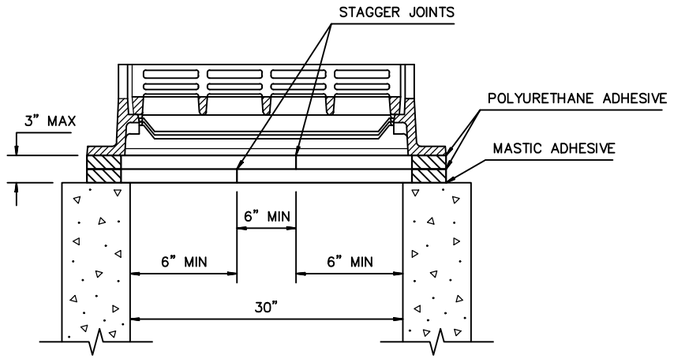
TYPICAL FINISHED SECTION FOR VFW DRIVEWAY
STA 30+30 TO STA 32+75

PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	TYPICAL SECTIONS - PROPOSED	SHEET 11	E

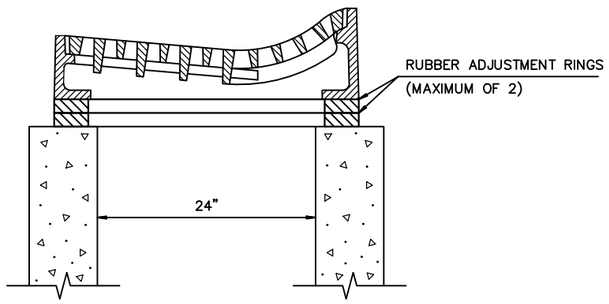


NOTE: ALL CUTS MADE TO RUBBER ADJUSTMENT RINGS WILL BE PERPENDICULAR AND PROVIDE A TIGHT JOINT.

PLAN VIEW

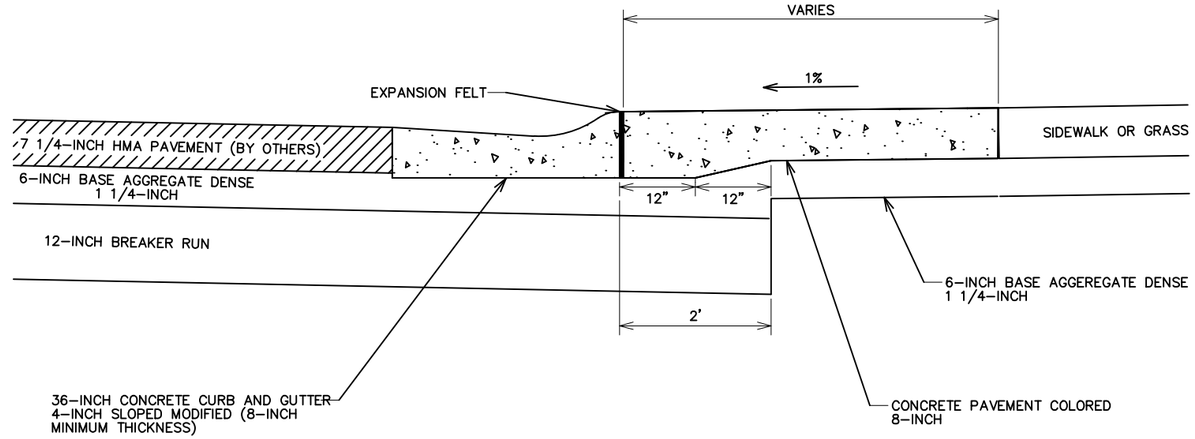


SECTION A–A

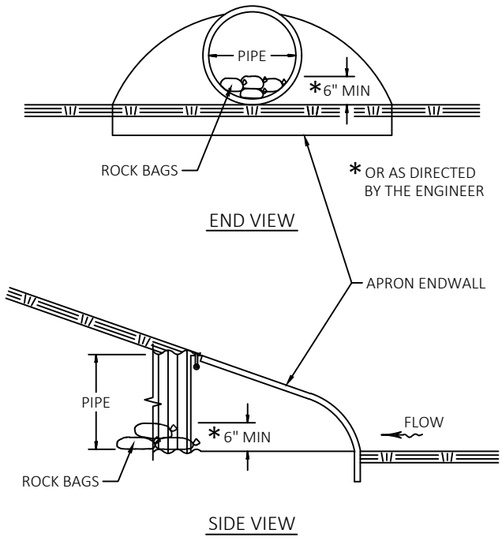


SECTION B–B

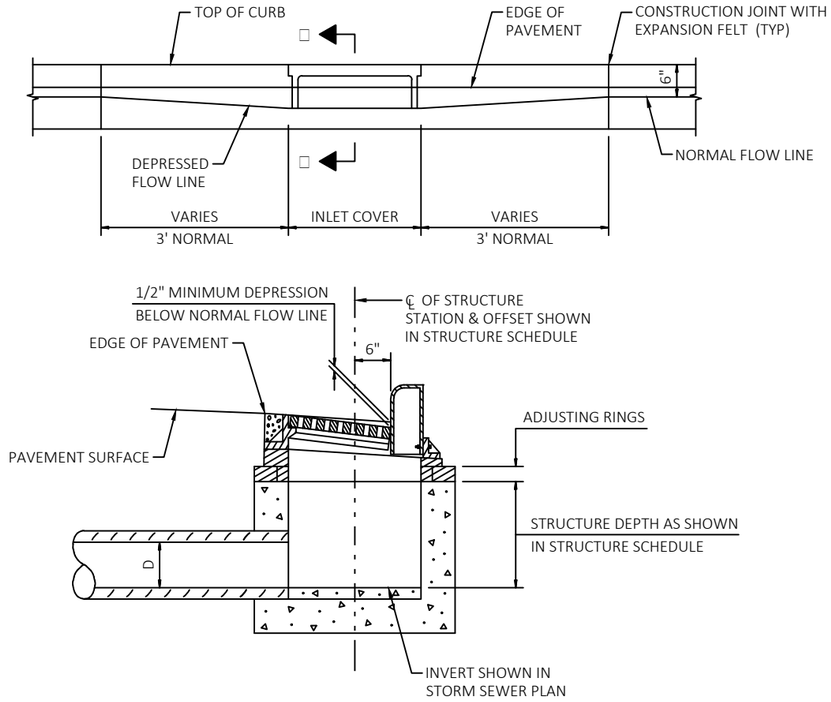
RUBBER RING CUTTING DETAIL FOR INLET, SPECIAL



CONCRETE PAVEMENT COLORED 8–INCH

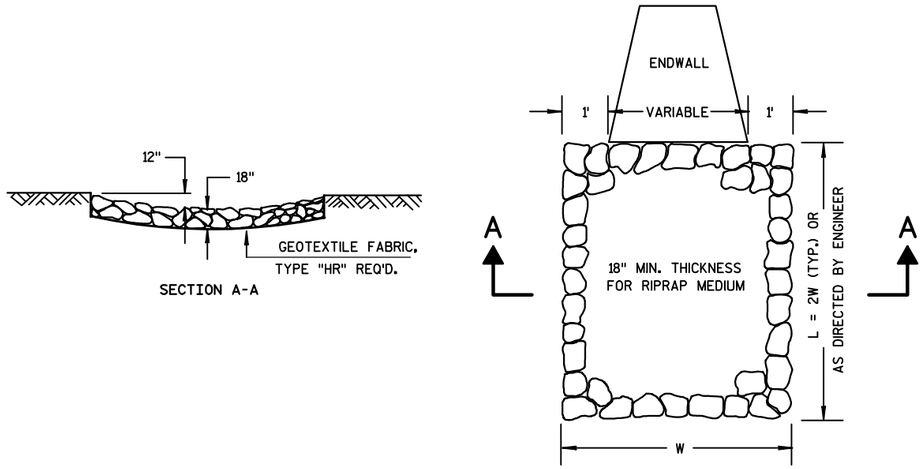


CULVERT PIPE CHECKS

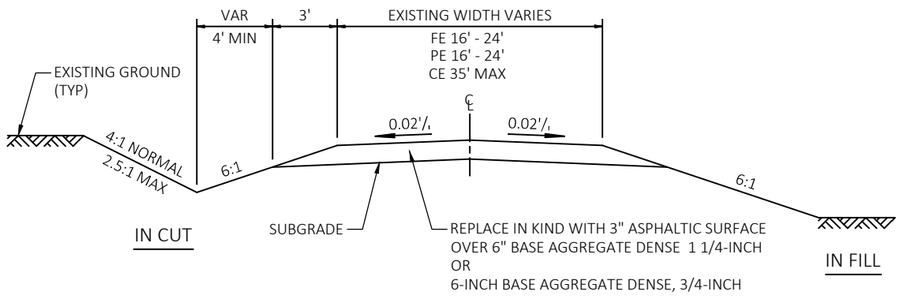


SECTION A-A

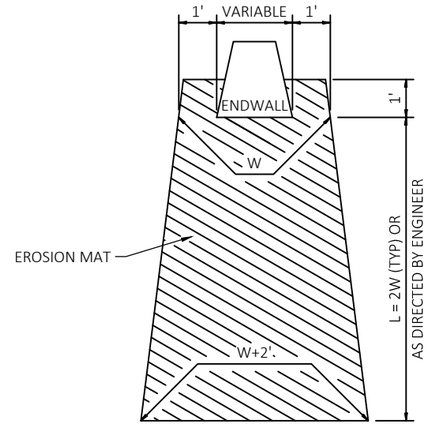
DETAIL OF CURB AND GUTTER AT INLETS



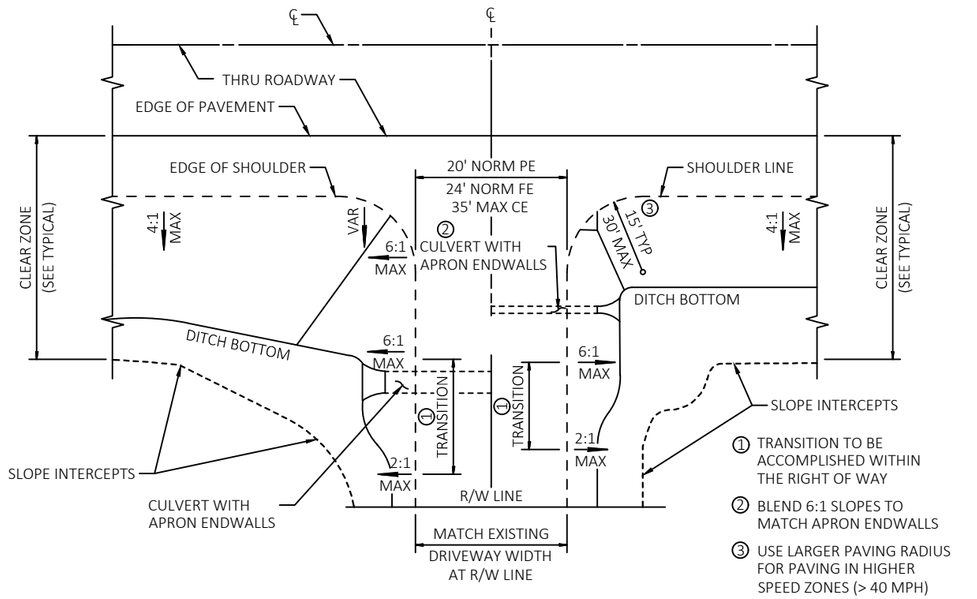
RIPRAP MEDIUM TREATMENT AT CULVERTS



TYPICAL CROSS SECTION FOR DRIVEWAYS



EROSION MAT TREATMENT AT CULVERTS

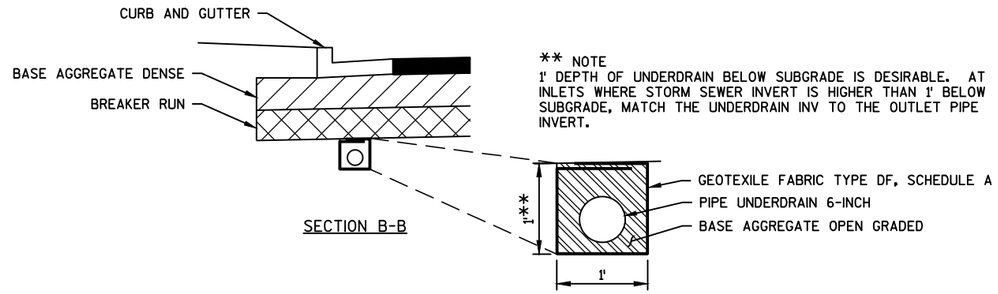


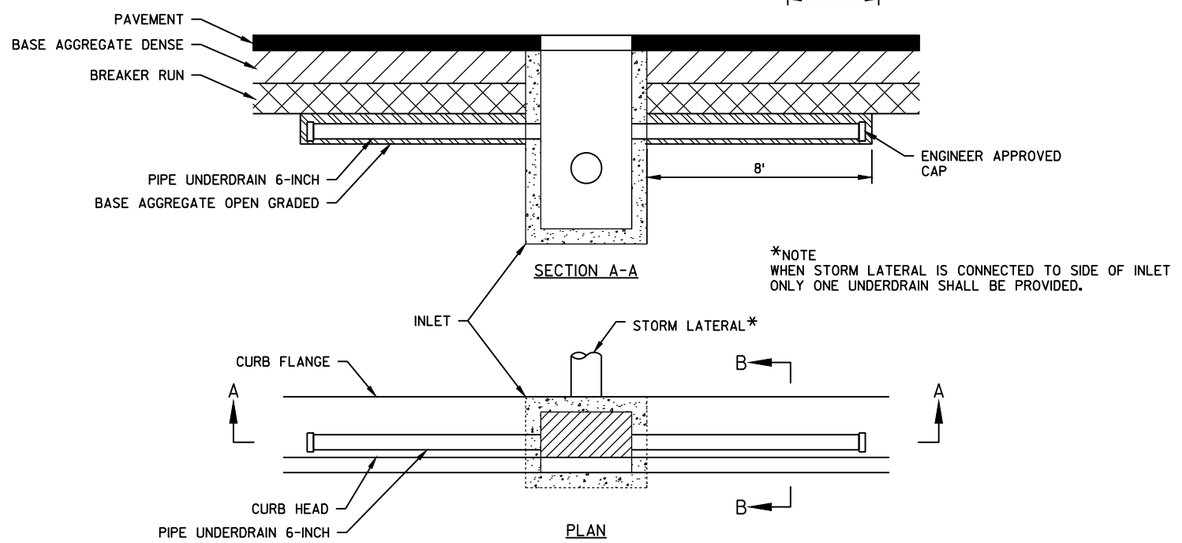
FOR CULVERTS OVER 24" DIAMETER

FOR CULVERTS 24" DIAMETER & LESS

PLAN VIEW

RURAL DRIVEWAY GRADING AND/OR PAVING DETAIL



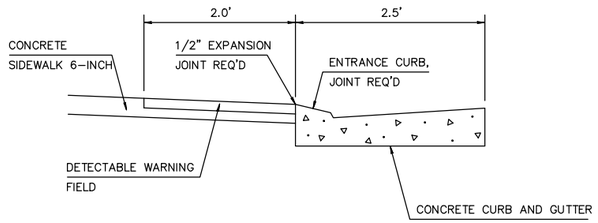


PIPE UNDERDRAIN DETAIL

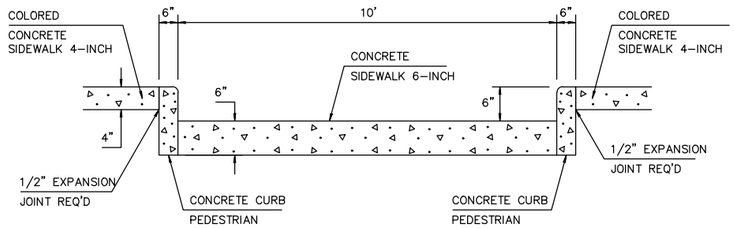
LOCATED AT PROFILE LOW POINTS: SEE PLAN

PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	CONSTRUCTION DETAILS	SHEET 13

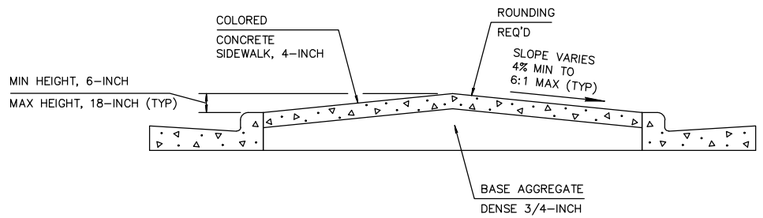
FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-021002-CD.DWG
LAYOUT NAME - 415607-021002-cd
415607-021002-□d
PLOT DATE : 7/11/2018 1:21 PM
PLOT BY : OMNNI ASSOCIATES - CRAIG KNUTH
PLOT SCALE : ##########
WISDOT/CADDS SHEET 42



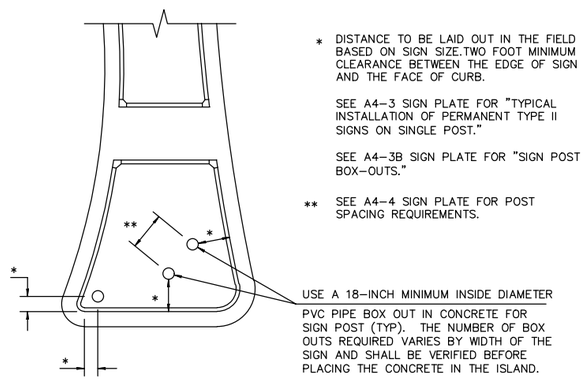
SECTION A–A



SECTION B–B



SECTION C–C



* DISTANCE TO BE LAID OUT IN THE FIELD BASED ON SIGN SIZE.TWO FOOT MINIMUM CLEARANCE BETWEEN THE EDGE OF SIGN AND THE FACE OF CURB.

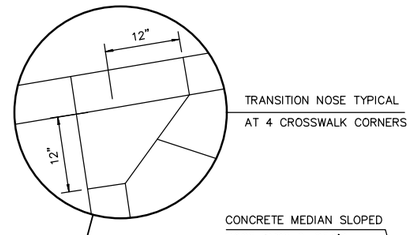
SEE A4–3 SIGN PLATE FOR "TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POST."

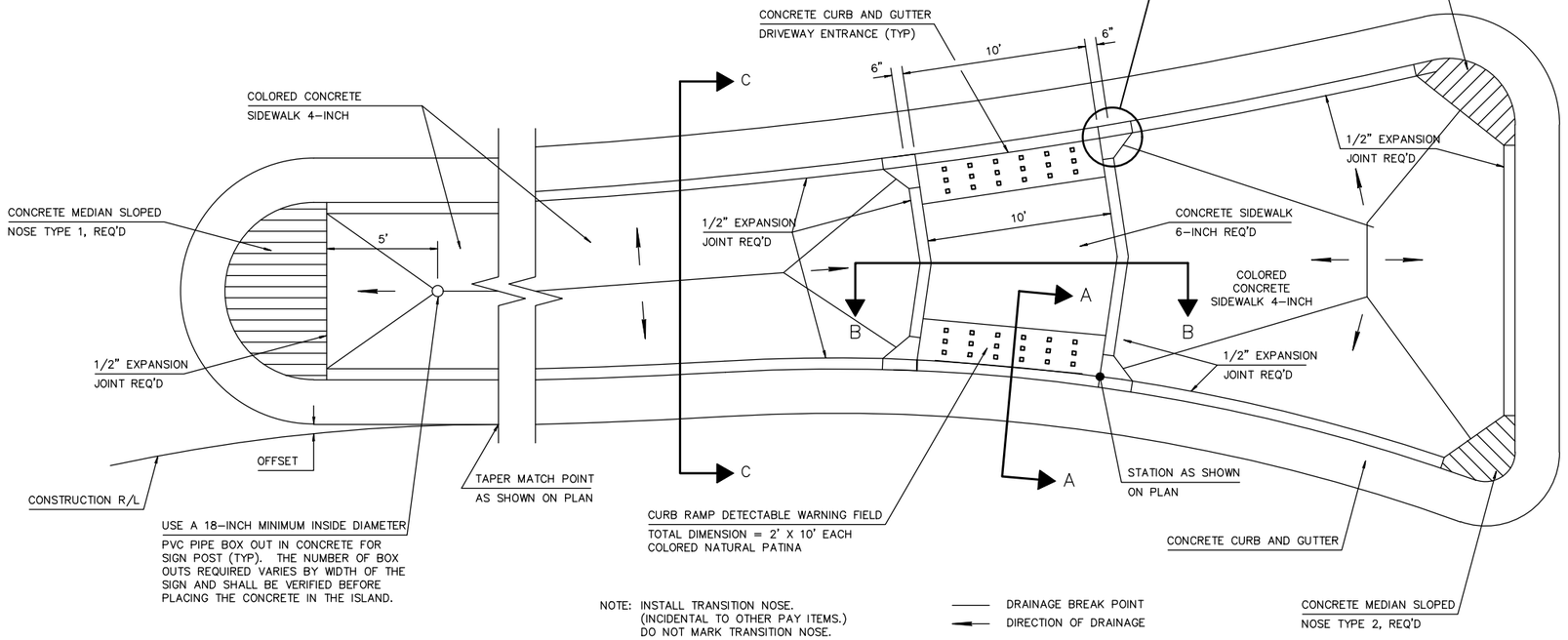
SEE A4–3B SIGN PLATE FOR "SIGN POST BOX–OUTS."

** SEE A4–4 SIGN PLATE FOR POST SPACING REQUIREMENTS.

ISLAND SIGN LOCATION DETAIL (TYP)

NOTIFY THE REGIONAL TRAFFIC UNIT AT 920–492–5653 A MINIMUM OF TWO WEEKS PRIOR TO THE NEED FOR SIGN PLACEMENT TO ALLOW FOR STAKING OF ANY PERMANENT SIGNING REQUIRED ON THE PROJECT.





NOTE: INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS.) DO NOT MARK TRANSITION NOSE.

DRAINAGE BREAK POINT

DIRECTION OF DRAINAGE

SPLITTER ISLAND DETAIL

2

N

PROPOSED ROW, TYP

TLE

EXISTING TOP OF BANK

PLE

SLOPE INTERCEPT, TYP

EXISTING TOP OF BANK

TLE

746.043
+00.0
12.8' RT

743.790
+00.0
6.0' RT

Y = 542866.718
X = 125095.764

R20.00'

BP: 10+00.00
Y: 542873.320
X: 125115.380
743.790
+00.0
0.0' RT

5.33'
S3° 41' 08"E

PC: 10+05.33
Y: 542868.003
X: 125115.722

AEW200

746.044
+25.0
13.1' RT

745.612
+67.0
12.3' RT

745.250
+50.0
11.0' RT

743.690
+25.0
6.0' RT

743.522
+67.0
6.0' RT

743.590
+50.0
6.0' RT

10+25

743.690
+25.0
0.0'

45.53'
S88° 51' 58"W

10+50

743.590
+50.0
0.0'

10+75

743.522
+67.0
0.0'

745.535
+50.0
5.8' LT

747.311
+25.0
10.9' LT

EP: 10+83.17
Y: 542845.821
X: 125050.636

PT: 10+37.63
Y: 542846.722
X: 125096.159

PI STA = 10+26.24
Y = 542847.135
X = 125117.066
DELTA = 92°33'06"
D = 286°28'44"
T = 20.91'
L = 32.31'
R = 20.00'
PC STA = 10+05.33
PT STA = 10+37.63

PC: 262+10.87

PC: 162+10.92

262+00

162+00

CTH EA

36" CMP

PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	CONSTRUCTION DETAIL - DITCH OUTFALL	SHEET 15	E

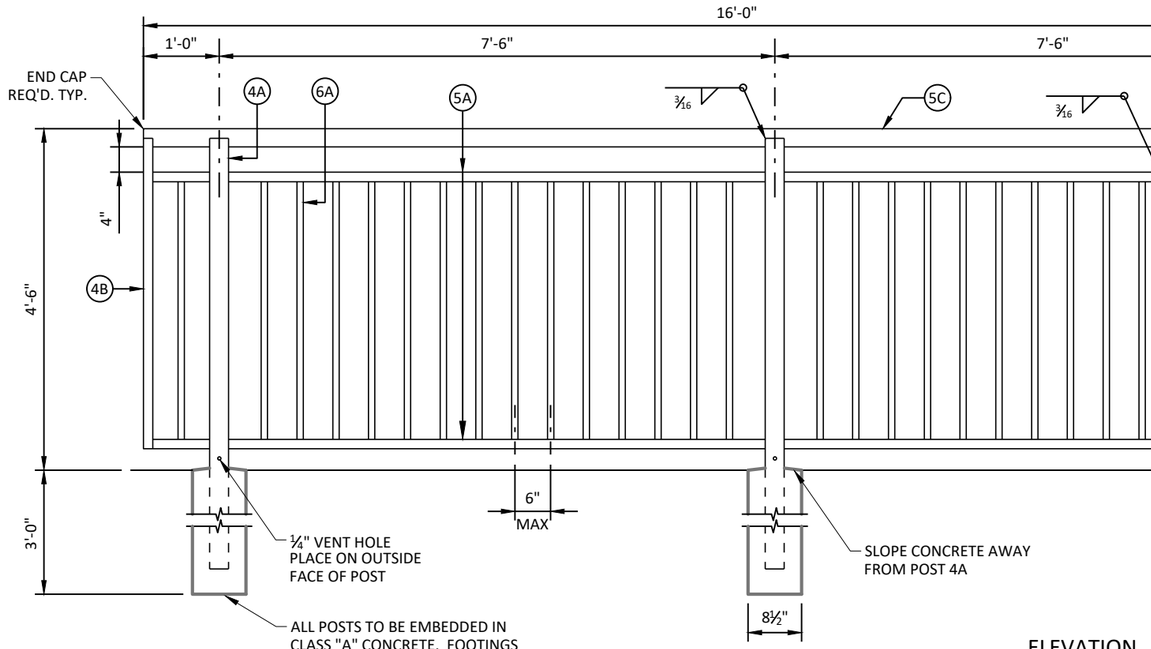
FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-021004-CD.DWG
LAYOUT NAME - 451607-021004-cd

PLOT DATE : 8/16/2018 10:26 AM

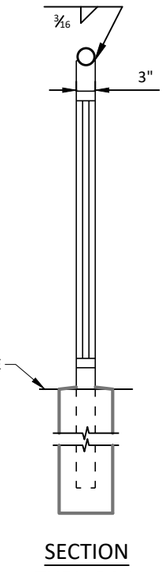
PLOT BY : OMNNI ASSOCIATES - ANDREW WESTBROOK

PLOT SCALE : ##########

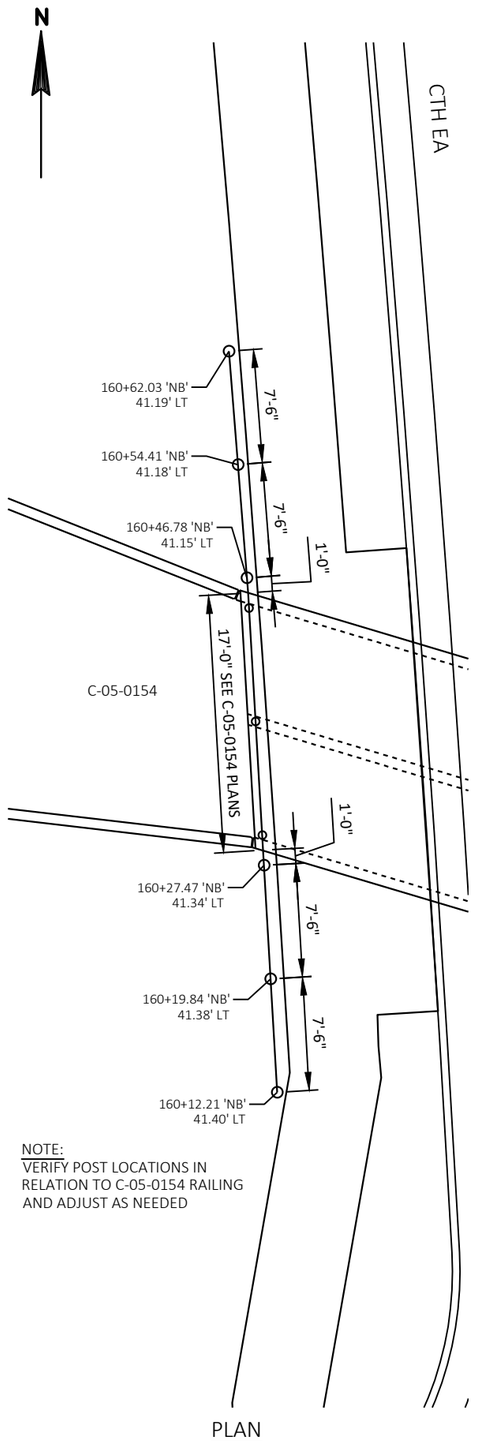
WISDOT/CADDS SHEET 42



ELEVATION



SECTION
THRU RAIL

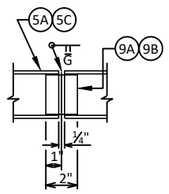


PLAN

NOTE:
VERIFY POST LOCATIONS IN RELATION TO C-05-0154 RAILING AND ADJUST AS NEEDED

RAILING AT NW CORNER OF CULVERT C-05-0154

SW CORNER MIRROR OF NW CORNER



SHOP RAIL
SPLICE DETAIL
(LOCATION MUST BE
SHOWN ON SHOP DRAWINGS)

RAILING NOTES

BID ITEM SHALL BE "RAILING STEEL TYPE C2 01. C-5-154", WHICH SHALL INCLUDE ALL STEEL ITEMS SHOWN AND CONCRETE FOOTINGS.

ALL PLATES, BARS, AND RECTANGULAR SLEEVES SHALL CONFORM TO ASTM A709 GRADE 36. All STRUCTURAL TUBING SHALL CONFORM TO ASTM A500 GRADE B.

ALL MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, THE STEEL RAILING SHALL BE GIVEN A NO. 6 BLAST CLEANING PER SSPC SPECIFICATIONS. PAINT OVER GALVANIZING WITH AN APPROVED TIE COAT AND TOP COAT AS SPECIFIED IN THE CONTRACT DOCUMENTS. THE RAILING SHALL BE PAINTED FEDERAL COLOR NO. 20059, BROWN.

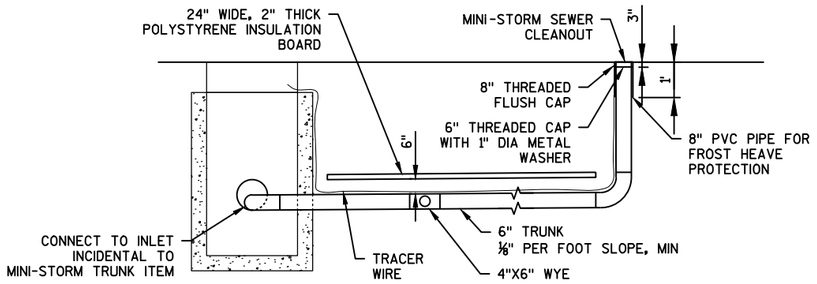
RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE 3 OR 4 POSTS.

VENT HOLES SHALL BE DRILLED IN POST AND RAIL MEMBERS AS REQUIRED TO FACILITATE GALVANIZING AND DRAINAGE.

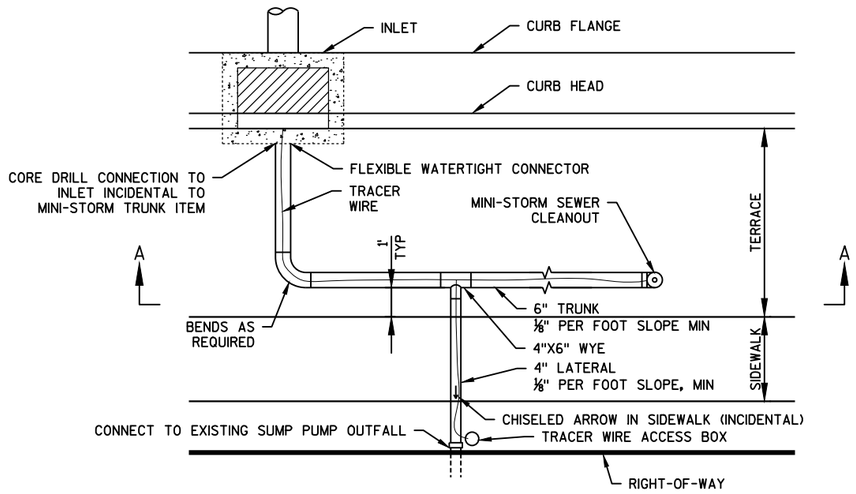
TOUCH-UP PAINTING TO BE DONE AT COMPLETION OF STEEL RAILING INSTALLATION TO THE SATISFACTION OF THE ENGINEER AT NO EXTRA COST.

LEGEND

- (4A) STRUCTURAL TUBING 3" X 3" X 3/16". PLACE VERTICAL. WELD TO NO. 5.
- (4B) STRUCTURAL TUBING 3" X 1½" X 3/16". PLACE VERTICAL. WELD TO NO. 5.
- (5A) STRUCTURAL TUBING 3" X 1½" X 3/16" RAILS. WELD TO NO. 4. INSIDE OF TUBE TO BE PAINTED AT ALL FIELD ERECTION & EXPANSION JOINTS.
- (5C) STRUCTURAL TUBING 2½" DIA. (STANDARD SIZE) (2.875" O.D.). WELD TO NO. 4. INSIDE OF TUBE TO BE PAINTED AT ALL FIELD ERECTION & EXPANSION JOINTS.
- (6A) BAR 1" X 1" PICKETS. WELD TO NO. 5. PLACE VERTICAL.
- (9A) RECTANGULAR SLEEVE FABRICATED FROM 3/16" PLATES. PROVIDE "SLIDING FIT".
- (9B) CIRCULAR SLEEVE FABRICATED FROM STRUCTURAL TUBING 2" DIA. (STANDARD SIZE) (2.375" O.D.)

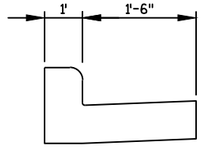


SECTION A-A



PLAN

MINI STORM TRUNK DETAIL

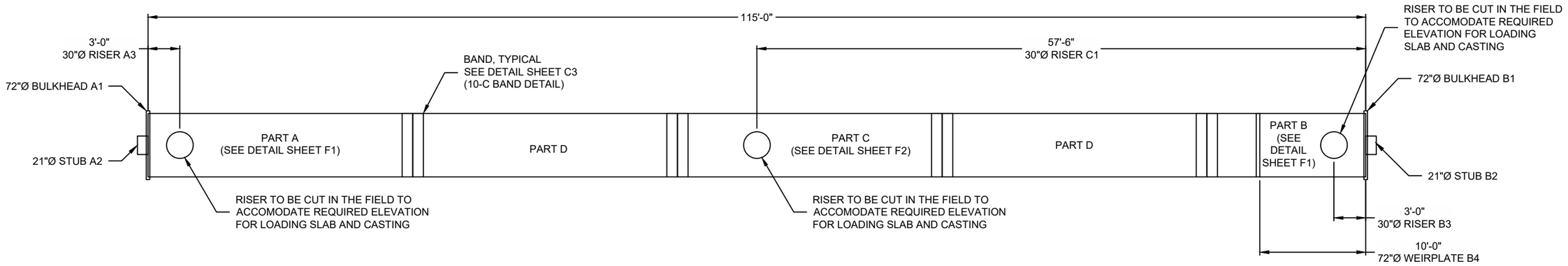


NOTE: REFER TO SDD FOR OTHER DIMENSIONS

CONCRETE CURB AND GUTTER 24-INCH TYPE D

RISER INFORMATION		
PIECE	RIM ELEV.	SYSTEM INVERT
30"Ø RISER A3	749.15	740.76
30"Ø RISER B3	748.75	740.76
30"Ø RISER C1	749.14	740.76

STUB INFORMATION		
PIECE	STUB INVERT	SYSTEM INVERT
21"Ø STUB A2	743.76	740.76
21"Ø STUB B2	743.76	740.76



ASSEMBLY

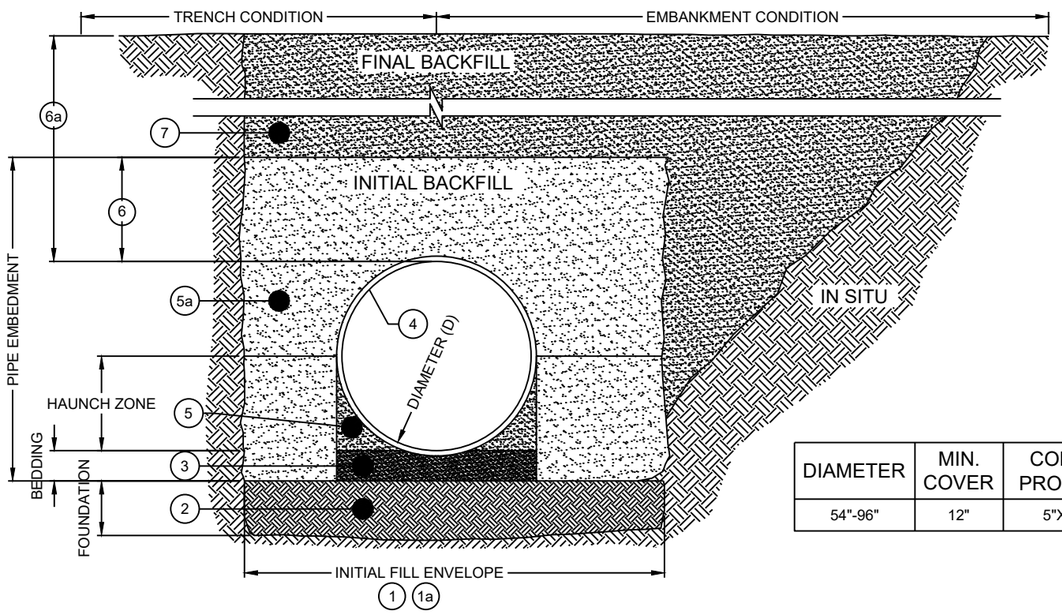
SCALE: 1" = 10'
PIPE STORAGE: 3,252 CF
LOADING: H20
PIPE INV. = 740.76'±

- **PIPE STORAGE = 3,252 CF**
- **MAINLINE PIPE GAGE = 14**
- **WALL TYPE = SOLID**
- **DIAMETER = 72"**
- **FINISH = ALT2**
- **CORRUGATION = 5X1**

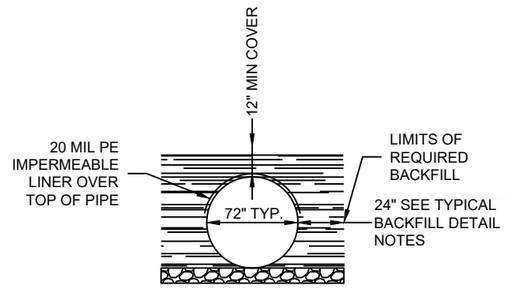
NOTES

- ALL RISER AND STUB DIMENSIONS ARE TO CENTERLINE.
- ALL ELEVATIONS, DIMENSIONS, AND LOCATIONS OF RISERS AND INLETS, SHALL BE VERIFIED BY THE ENGINEER PRIOR TO RELEASING FOR FABRICATION.
- ALL RISERS AND STUBS ARE 2⅔" x ½" CORRUGATION AND 16 GAGE UNLESS OTHERWISE NOTED.
- RISERS TO BE FIELD TRIMMED TO GRADE AS REQUIRED, BY CONTRACTOR.

PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	CONSTRUCTION DETAIL - UNDERGROUND DETENTION (SHEET 1 OF 6)	SHEET 18



DIAMETER	MIN. COVER	CORR. PROFILE
54"-96"	12"	5"X1"



TYPICAL SECTION VIEW
NOT TO SCALE

- **BACKFILL REQUIREMENTS FOLLOW THE GUIDELINES OF AASHTO LRFD BRIDGE DESIGN (SEC 12) and CONSTRUCTION (SEC 26).**

1 MINIMUM TRENCH WIDTH MUST ALLOW ROOM FOR PROPER COMPACTION OF HAUNCH MATERIALS UNDER THE PIPE.
THE MINIMUM TRENCH WIDTH (12.6.6.1):
PIPE > 12": 1.5D + 12"

1a MINIMUM EMBANKMENT WIDTH (in feet) FOR INITIAL FILL ENVELOPE (12.6.6.2):
PIPE 24" - 144": D + 4'0"

2 THE FOUNDATION UNDER THE PIPE AND SIDE BACKFILL SHALL BE ADEQUATE TO SUPPORT THE LOADS ACTING UPON IT (26.5.2).

3 CORRUGATED STEEL PIPE (CSP) [HEL-COR].

4 HAUNCH ZONE MATERIAL SHALL BE HAND SHOVELED OR SHOVEL SLICED INTO PLACE TO ALLOW FOR PROPER COMPACTION (26.5.4).

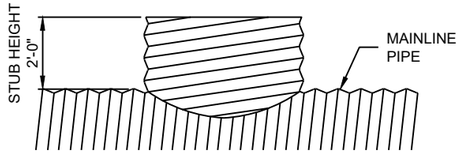
5 INITIAL BACKFILL ABOVE PIPE MAY INCLUDE ROAD BASE MATERIAL (AND RIGID PAVEMENT IF APPLICABLE). SEE TABLE ABOVE.

TYPICAL BACKFILL DETAIL
NOT TO SCALE

FABRICATION BoM

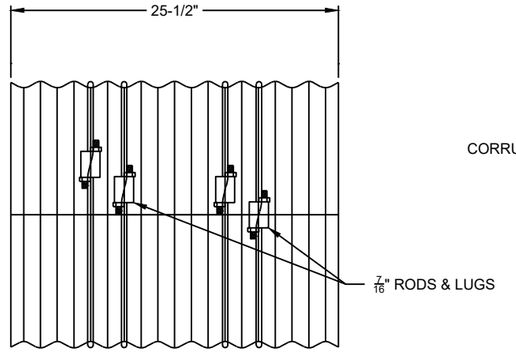
FITTING	TYPE	QTY	Ø	CORRUGATION	GAUGE	FINISH	WALL TYPE	LENGTH	TOTAL
A	PIPE	1	72	5X1	14	ALT2	SOLID	25	25
A1	BULKHEAD	1	72		12	ALT2	SOLID		
A2	STUB	1	21	2 2/3X1/2	16	ALT2	SOLID	1	1
A3	RISER	1	30	2 2/3X1/2	16	ALT2	SOLID	2.66	2.66
B	PIPE	1	72	5X1	14	ALT2	SOLID	15	15
B1	BULKHEAD	1	72		12	ALT2	SOLID		
B2	STUB	1	21	2 2/3X1/2	16	ALT2	SOLID	1	1
B3	RISER	1	30	2 2/3X1/2	16	ALT2	SOLID	2.26	2.26
B4	WEIR PLATE	1	72		12	ALT2	SOLID		
C	PIPE	1	72	5X1	14	ALT2	SOLID	25	25
C1	RISER	1	30	2 2/3X1/2	16	ALT2	SOLID	2.65	2.65
D	PIPE	2	72	5X1	14	ALT2	SOLID	25	50
BAND	10-C MOD	4	72	W/RODS&LUGS RV	16	ALT2			
GASKETS	FLAT	4	72	24 WIDE					
*RISER BAND	F-12	2	30	7 TECHCO	16	ALT2			

*NOT INCLUDED IF RISER CAN BE SHIPPED AS SINGLE PIECE

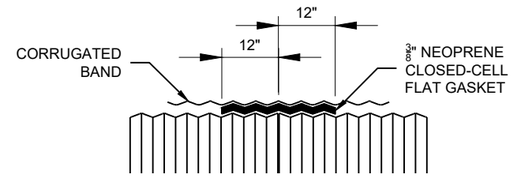


ELEVATION VIEW OF CMP & RISER

PLAIN END CMP RISER PIPE



CONNECTION DETAIL
4 RODS AND LUGS



FLAT GASKET

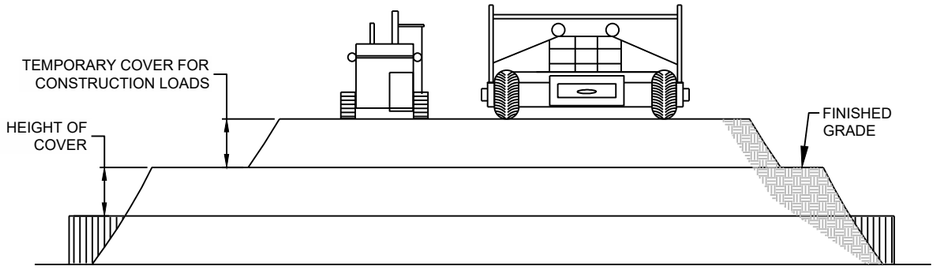
2 2/3"x1/2" RIVETED PIPE

GENERAL NOTES:

- BAND FASTENERS ARE ATTACHED WITH SPOT WELDS, RIVETS OR HAND WELDS.
- NEOPRENE GASKET REQUIRED (SEE DETAILS ABOVE).

12" RISER BAND DETAIL
NOT TO SCALE

10-C BAND DETAIL
NOT TO SCALE



CONSTRUCTION LOADS

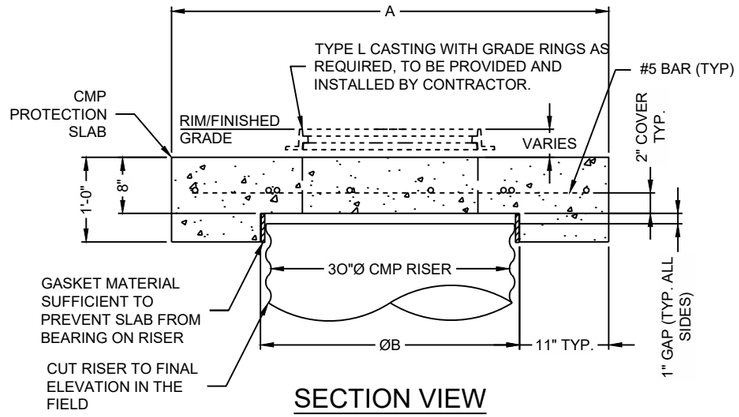
FOR TEMPORARY CONSTRUCTION VEHICLE LOADS, AN EXTRA AMOUNT OF COMPACTED COVER MAY BE REQUIRED OVER THE TOP OF THE PIPE. THE HEIGHT-OF-COVER SHALL MEET THE MINIMUM REQUIREMENTS SHOWN IN THE TABLE BELOW. THE USE OF HEAVY CONSTRUCTION EQUIPMENT NECESSITATES GREATER PROTECTION FOR THE PIPE THAN FINISHED GRADE COVER MINIMUMS FOR NORMAL HIGHWAY TRAFFIC.

PIPE SPAN, INCHES	AXLE LOADS (kips)			
	18-50	50-75	75-110	110-150
	MINIMUM COVER (FT)			
48-72	3.0	3.0	3.5	4.0

*MINIMUM COVER MAY VARY, DEPENDING ON LOCAL CONDITIONS. THE CONTRACTOR MUST PROVIDE THE ADDITIONAL COVER REQUIRED TO AVOID DAMAGE TO THE PIPE. MINIMUM COVER IS MEASURED FROM THE TOP OF THE PIPE TO THE TOP OF THE MAINTAINED CONSTRUCTION ROADWAY SURFACE.

CONSTRUCTION LOADING DIAGRAM

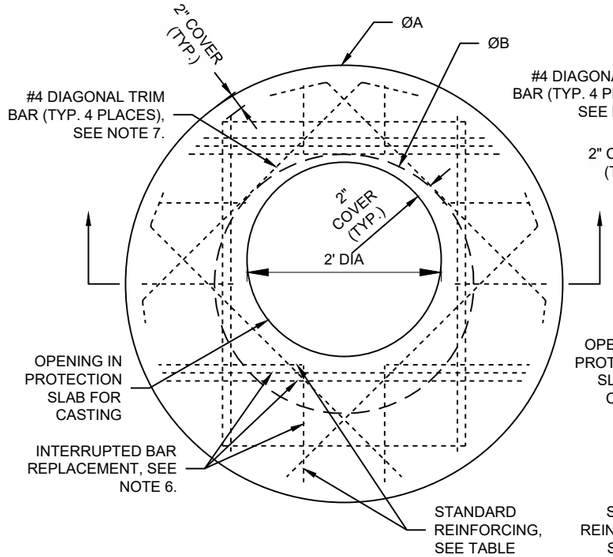
SCALE: N.T.S.



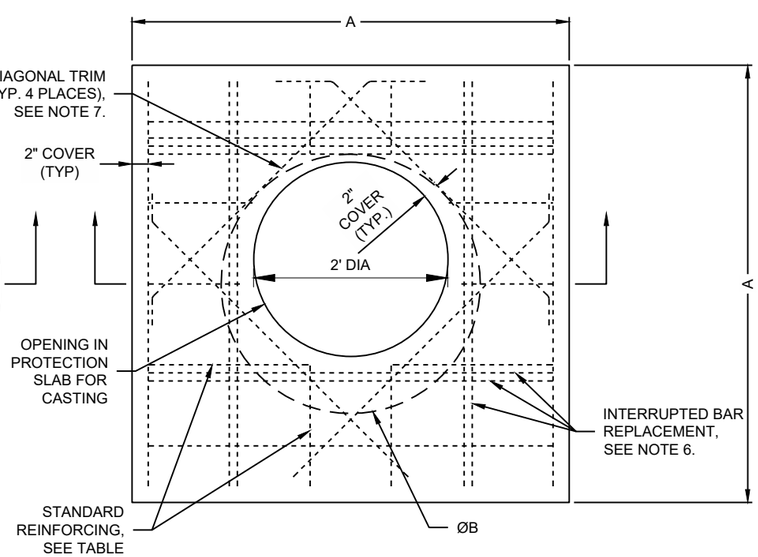
SECTION VIEW

REINFORCING TABLE				
Ø CMP RISER	A	Ø B	REINFORCING	**BEARING PRESSURE (PSF)
30"	Ø 4'-6" 4'-6" x 4'-6"	32"	#5 @ 10" OCEW #5 @ 9" OCEW	2,260 1,670

** ASSUMED SOIL BEARING CAPACITY



ROUND OPTION PLAN VIEW



SQUARE OPTION PLAN VIEW

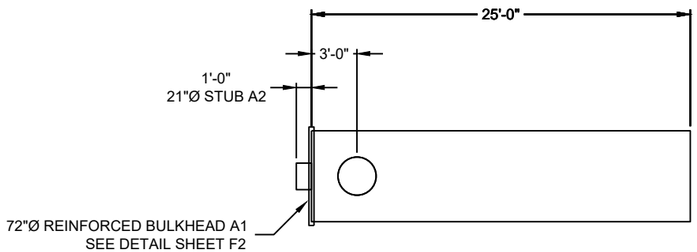
NOTES:

1. PROVIDE ADDITIONAL REINFORCING AROUND OPENINGS EQUAL TO THE BARS INTERRUPTED, HALF EACH SIDE. ADDITIONAL BARS TO BE IN THE SAME PLANE.
2. TRIM OPENING WITH DIAGONAL #4 BARS, EXTEND BARS A MINIMUM OF 12" BEYOND OPENING, BEND BARS AS REQUIRED TO MAINTAIN BAR COVER.
3. MANHOLE CAP SHALL BE PLACED ON PIPE BACKFILL MATERIAL.
4. GASKET MATERIAL BETWEEN MANHOLE CAP AND CMP RISER TO BE STIFF EHOUGH SO THAT CONCRETE CAN NEVER ENGAGE WITH THE RISER CORRUGATIONS.

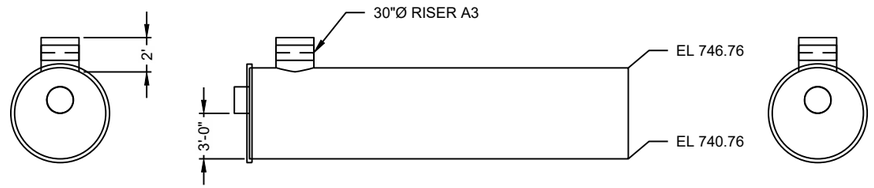
MANHOLE CAP DETAIL

NOT TO SCALE

2



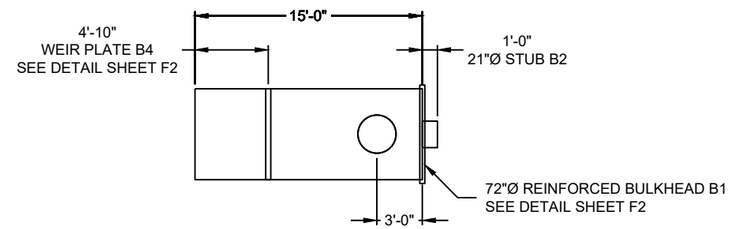
PLAN VIEW



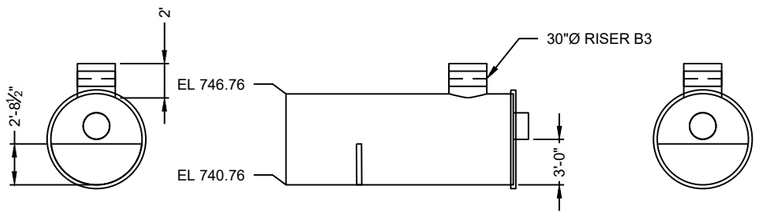
LEFT VIEW ELEVATION VIEW RIGHT VIEW

PART A

SCALE: 1" = 10'



PLAN VIEW



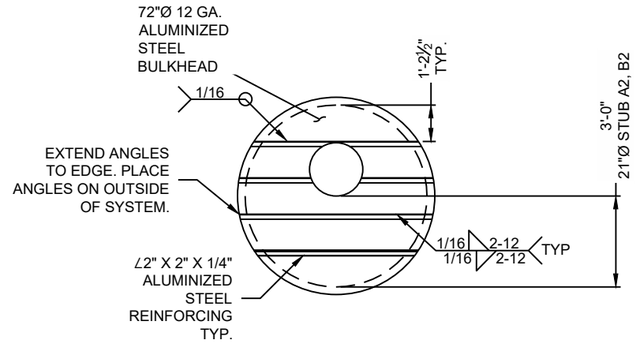
LEFT VIEW ELEVATION VIEW RIGHT VIEW

PART B

SCALE: 1" = 10'

PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	CONSTRUCTION DETAIL - UNDERGROUND DETENTION (SHEET 5 OF 6)	SHEET 22	E

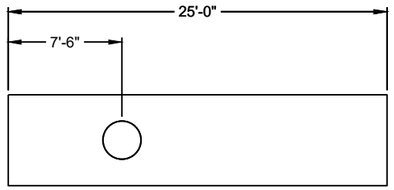
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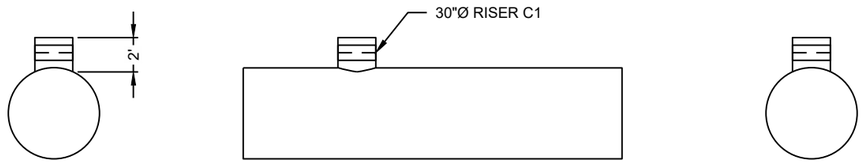
END VIEW

BULKHEAD REINFORCEMENT DETAIL

TYPICAL
NOT TO SCALE



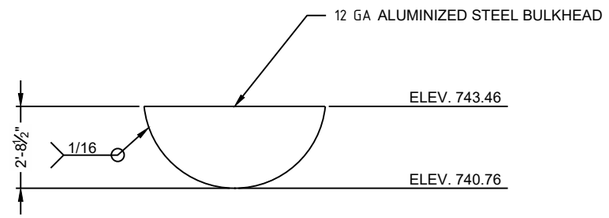
PLAN VIEW



LEFT VIEW | ELEVATION VIEW | RIGHT VIEW

PART C

SCALE: 1" = 10'

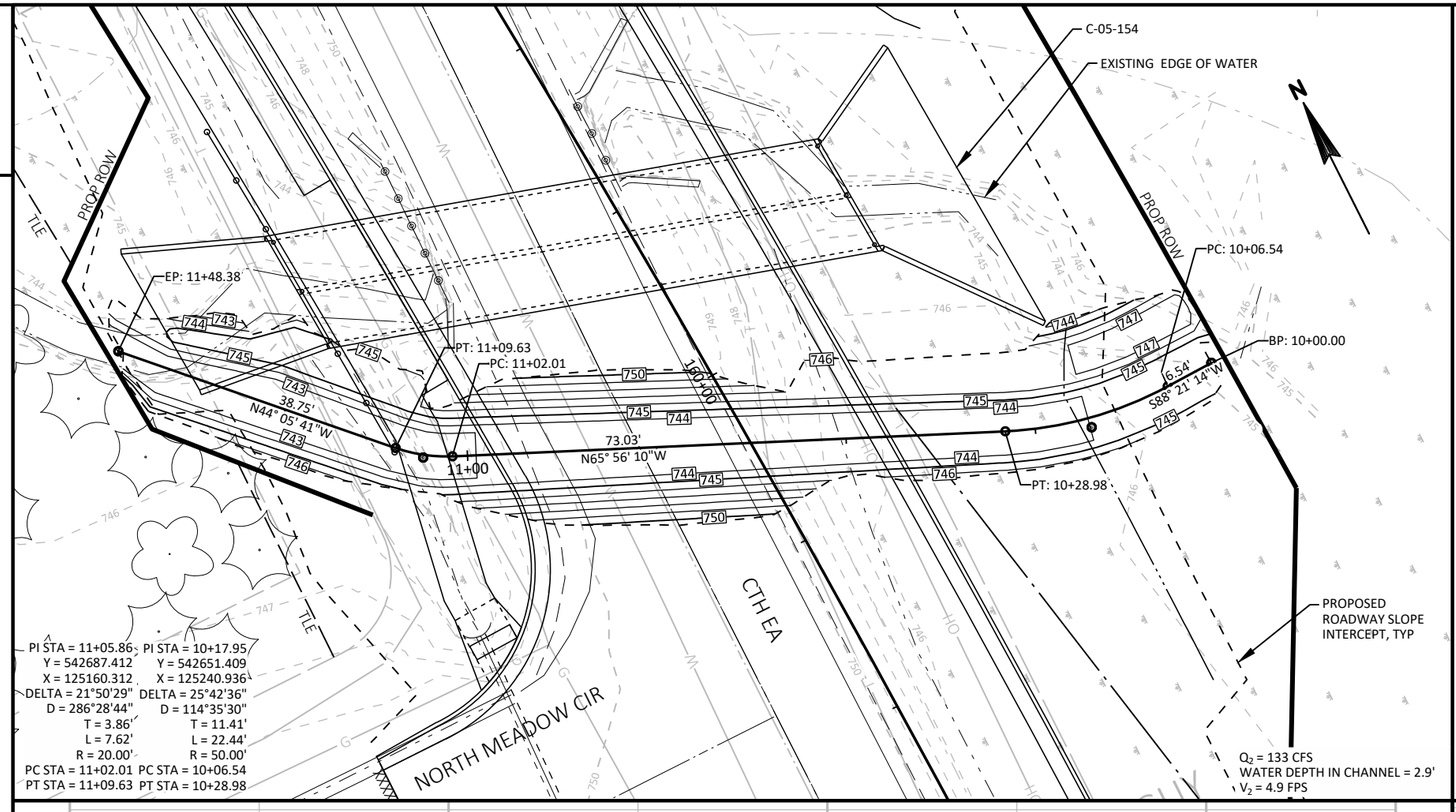


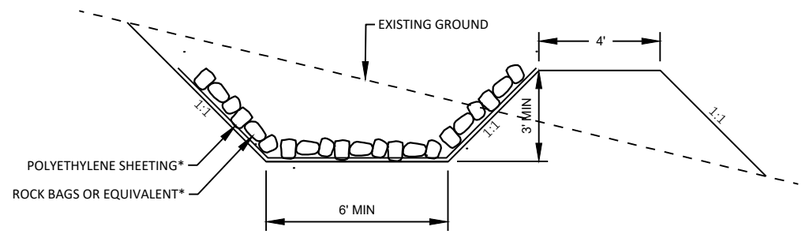
END VIEW

WEIR PLATE DETAIL

PART B4
NOT TO SCALE

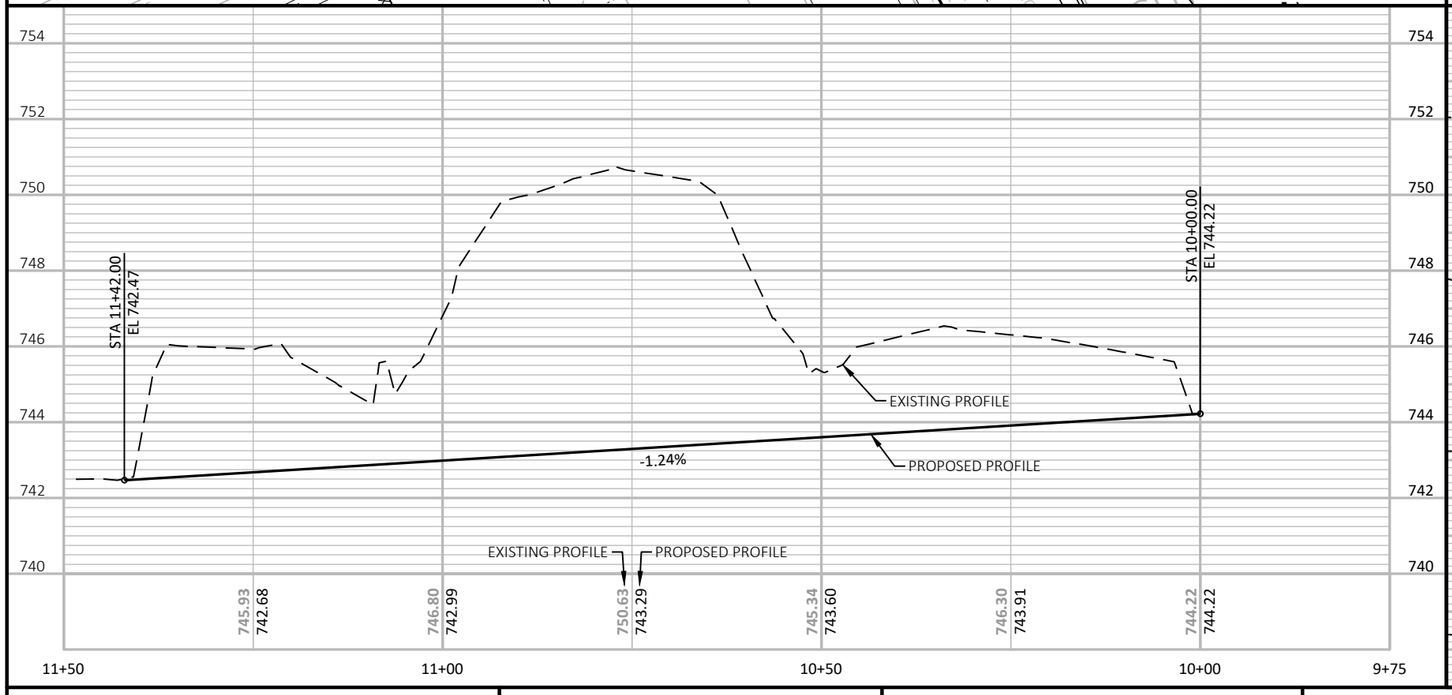
PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	CONSTRUCTION DETAIL - UNDERGROUND DETENTION (SHEET 6 OF 6)	SHEET 23	E

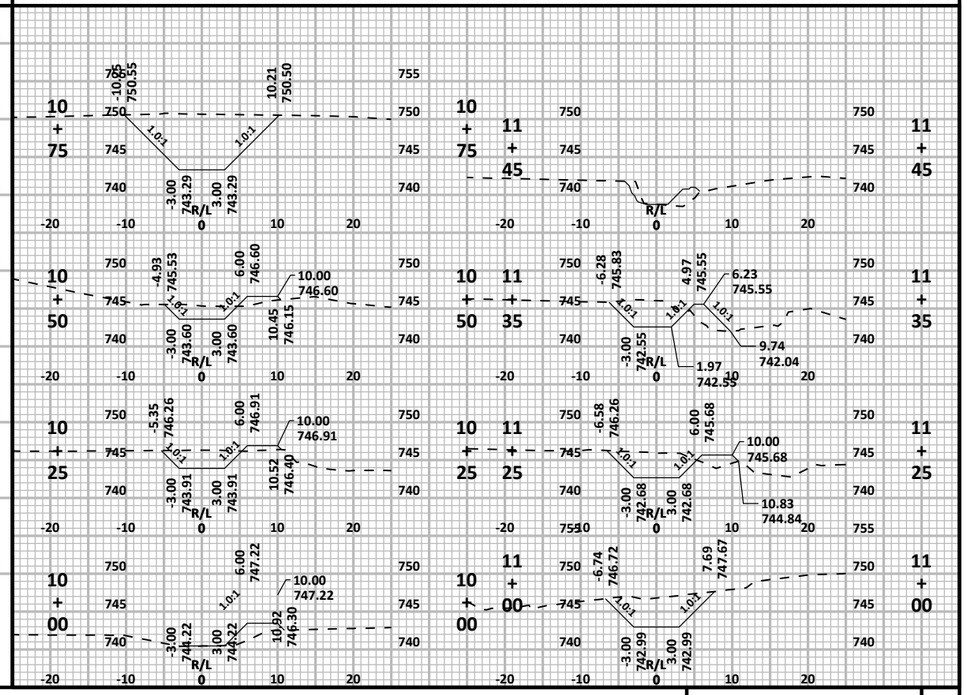


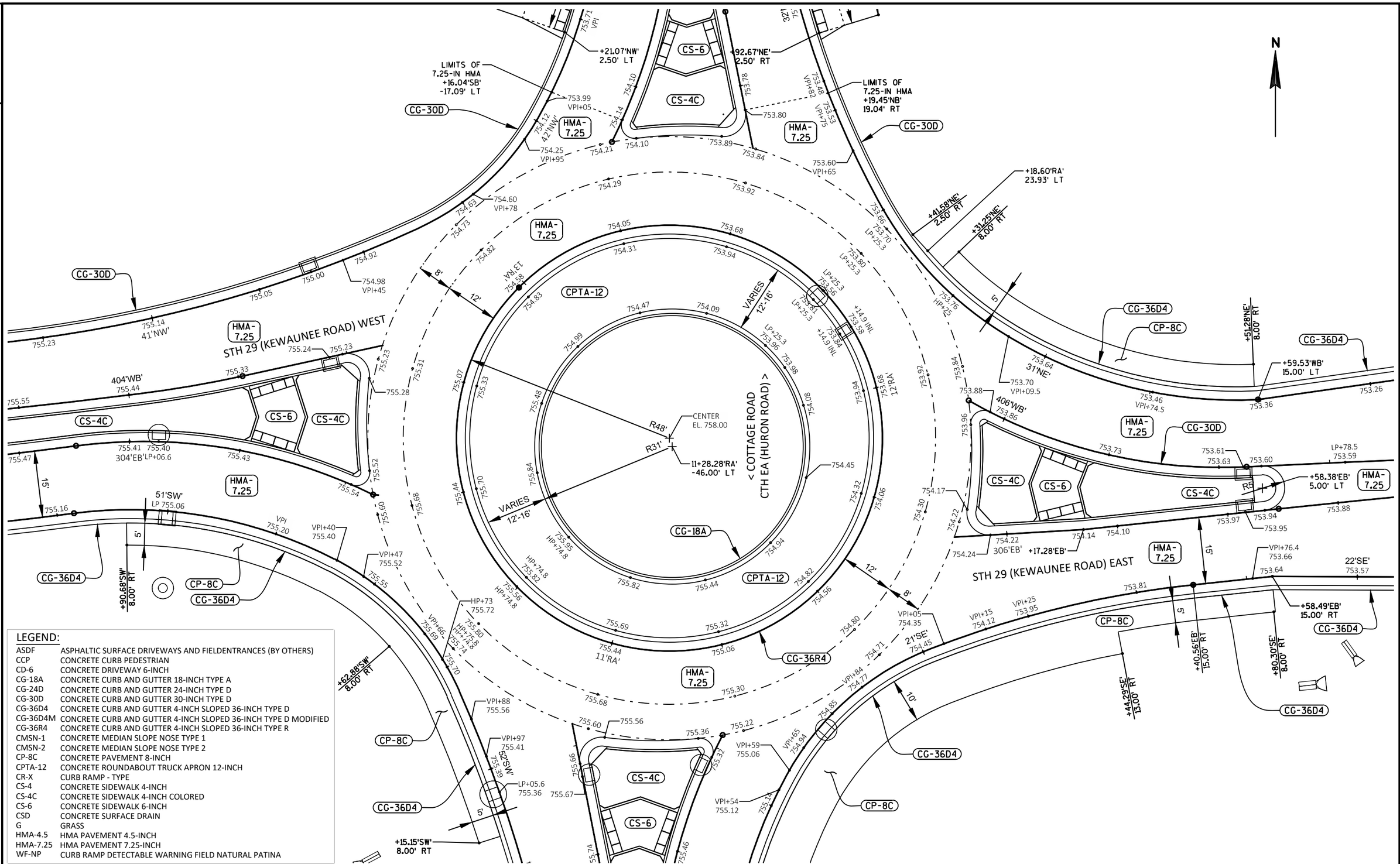


TEMPORARY WATER DIVERSION CHANNEL

*INCIDENTAL TO TEMPORARY WATER DIVERSION ITEM





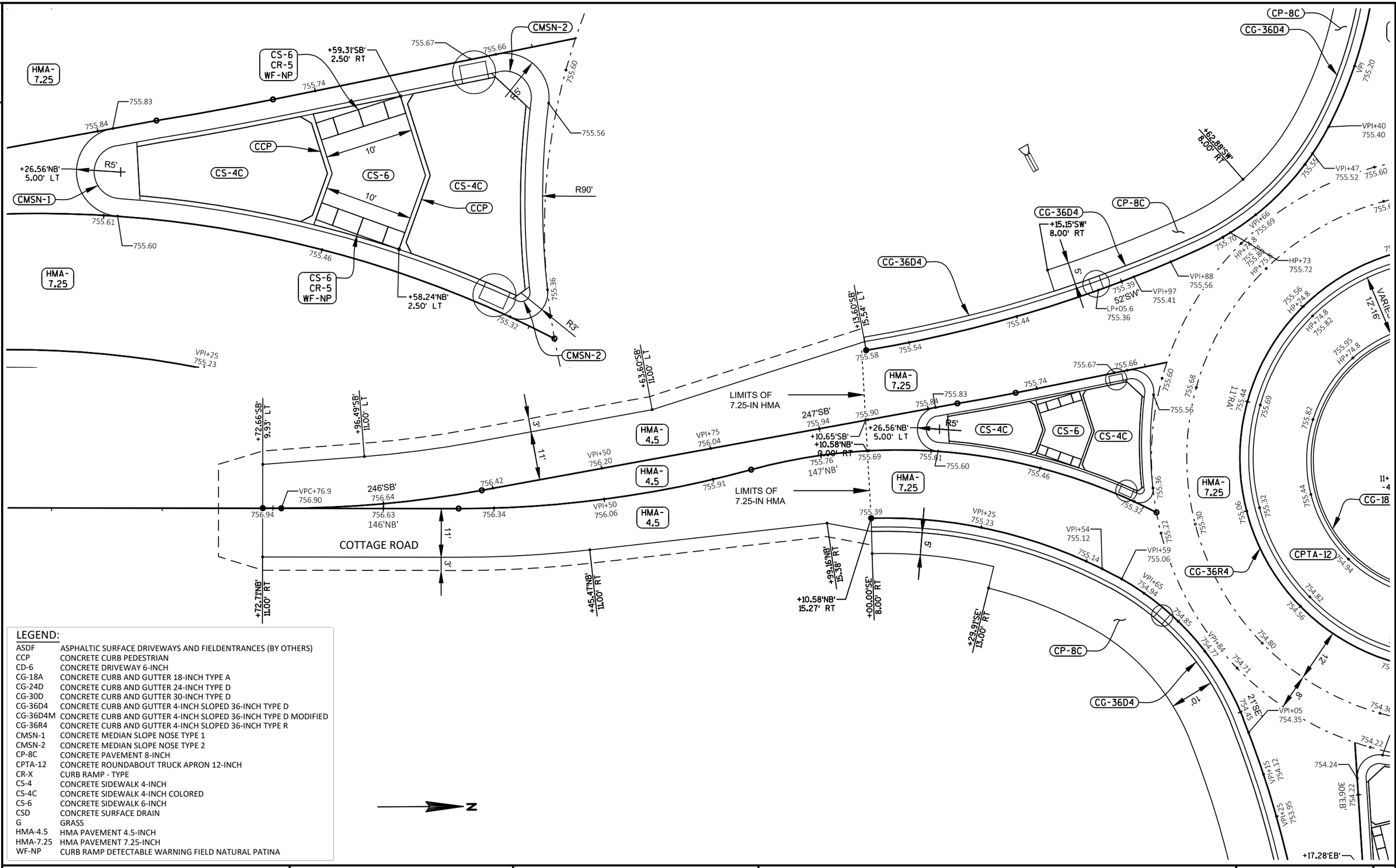


LEGEND:

ASDF	ASPHALTIC SURFACE DRIVEWAYS AND FIELDENTRANCES (BY OTHERS)
CCP	CONCRETE CURB PEDESTRIAN
CD-6	CONCRETE DRIVEWAY 6-INCH
CG-18A	CONCRETE CURB AND GUTTER 18-INCH TYPE A
CG-24D	CONCRETE CURB AND GUTTER 24-INCH TYPE D
CG-30D	CONCRETE CURB AND GUTTER 30-INCH TYPE D
CG-36D4	CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE D
CG-36D4M	CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE D MODIFIED
CG-36R4	CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE R
CMSN-1	CONCRETE MEDIAN SLOPE NOSE TYPE 1
CMSN-2	CONCRETE MEDIAN SLOPE NOSE TYPE 2
CP-8C	CONCRETE PAVEMENT 8-INCH
CPTA-12	CONCRETE ROUNDABOUT TRUCK APRON 12-INCH
CR-X	CURB RAMP - TYPE
CS-4	CONCRETE SIDEWALK 4-INCH
CS-4C	CONCRETE SIDEWALK 4-INCH COLORED
CS-6	CONCRETE SIDEWALK 6-INCH
CSD	CONCRETE SURFACE DRAIN
G	GRASS
HMA-4.5	HMA PAVEMENT 4.5-INCH
HMA-7.25	HMA PAVEMENT 7.25-INCH
WF-NP	CURB RAMP DETECTABLE WARNING FIELD NATURAL PATINA

PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	PAVING DETAIL: ROUNDABOUT	SHEET 25

FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-021200-PD.DWG
LAYOUT NAME - 451607-021201-pd
PLOT DATE : 12/31/2018 11:06 AM
PLOT BY : OMNNI ASSOCIATES - CRAIG KNUTH
PLOT SCALE : ##########
451607-021201-pd
WISDOT/CADDS SHEET 42



LEGEND:

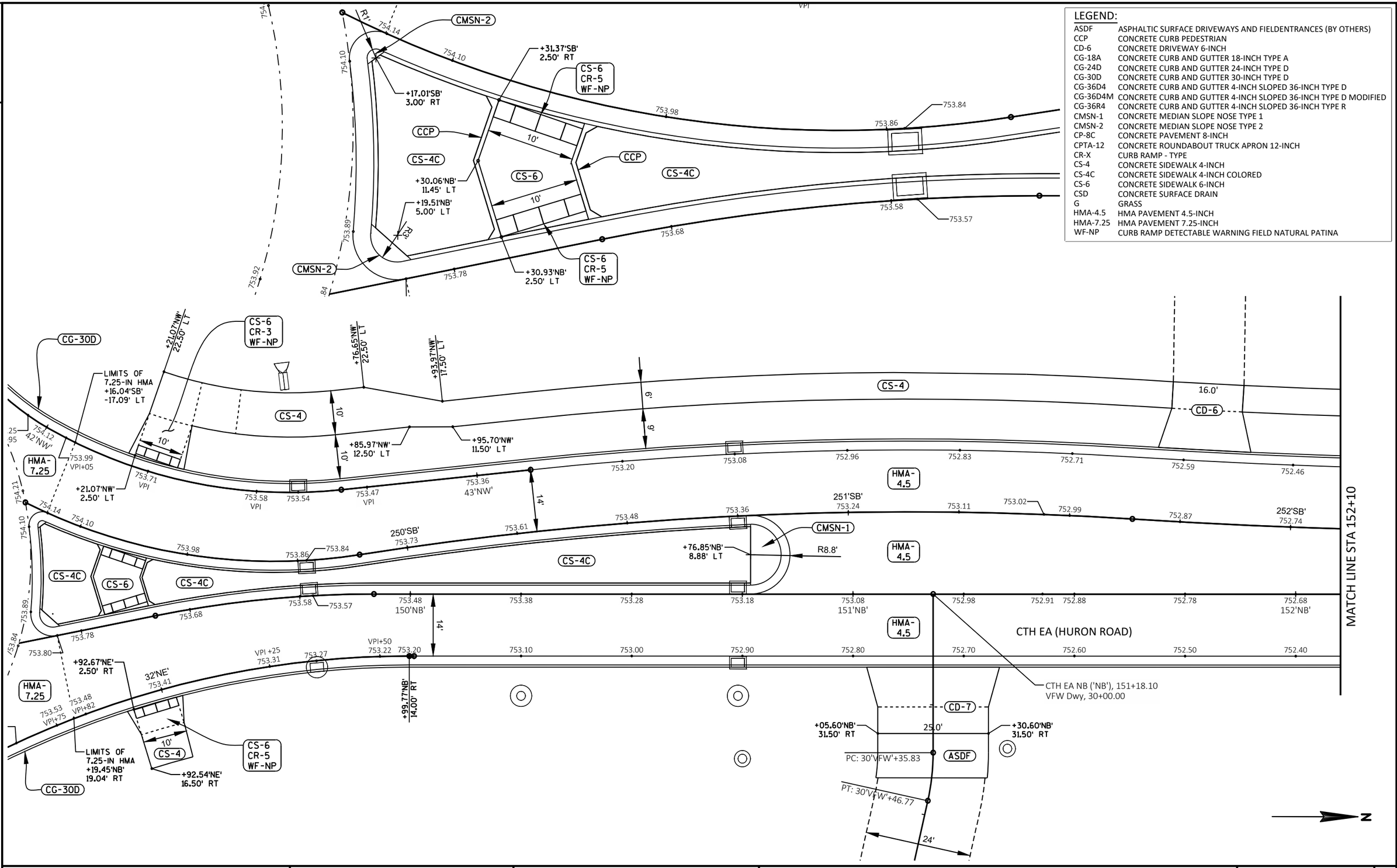
ASDF	ASPHALTIC SURFACE DRIVEWAYS AND FIELDENTRANCES (BY OTHERS)
CCP	CONCRETE CURB PEDESTRIAN
CD-6	CONCRETE DRIVEWAY 6-INCH
CG-18A	CONCRETE CURB AND GUTTER 18-INCH TYPE A
CG-24D	CONCRETE CURB AND GUTTER 24-INCH TYPE D
CG-30D	CONCRETE CURB AND GUTTER 30-INCH TYPE D
CG-36D4	CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE D
CG-36D4M	CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE D MODIFIED
CG-36R4	CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE R
CMSN-1	CONCRETE MEDIAN SLOPE NOSE TYPE 1
CMSN-2	CONCRETE MEDIAN SLOPE NOSE TYPE 2
CP-8C	CONCRETE PAVEMENT 8-INCH
CPTA-12	CONCRETE ROUNDABOUT TRUCK APRON 12-INCH
CR-X	CURB RAMP - TYPE
CS-4	CONCRETE SIDEWALK 4-INCH
CS-4C	CONCRETE SIDEWALK 4-INCH COLORED
CS-6	CONCRETE SIDEWALK 6-INCH
CSD	CONCRETE SURFACE DRAIN
G	GRASS
HMA-4.5	HMA PAVEMENT 4.5-INCH
HMA-7.25	HMA PAVEMENT 7.25-INCH
WF-NP	CURB RAMP DETECTABLE WARNING FIELD NATURAL PATINA

PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	PAVING DETAIL: COTTAGE ROAD (SOUTH LEG)	SHEET 26

2

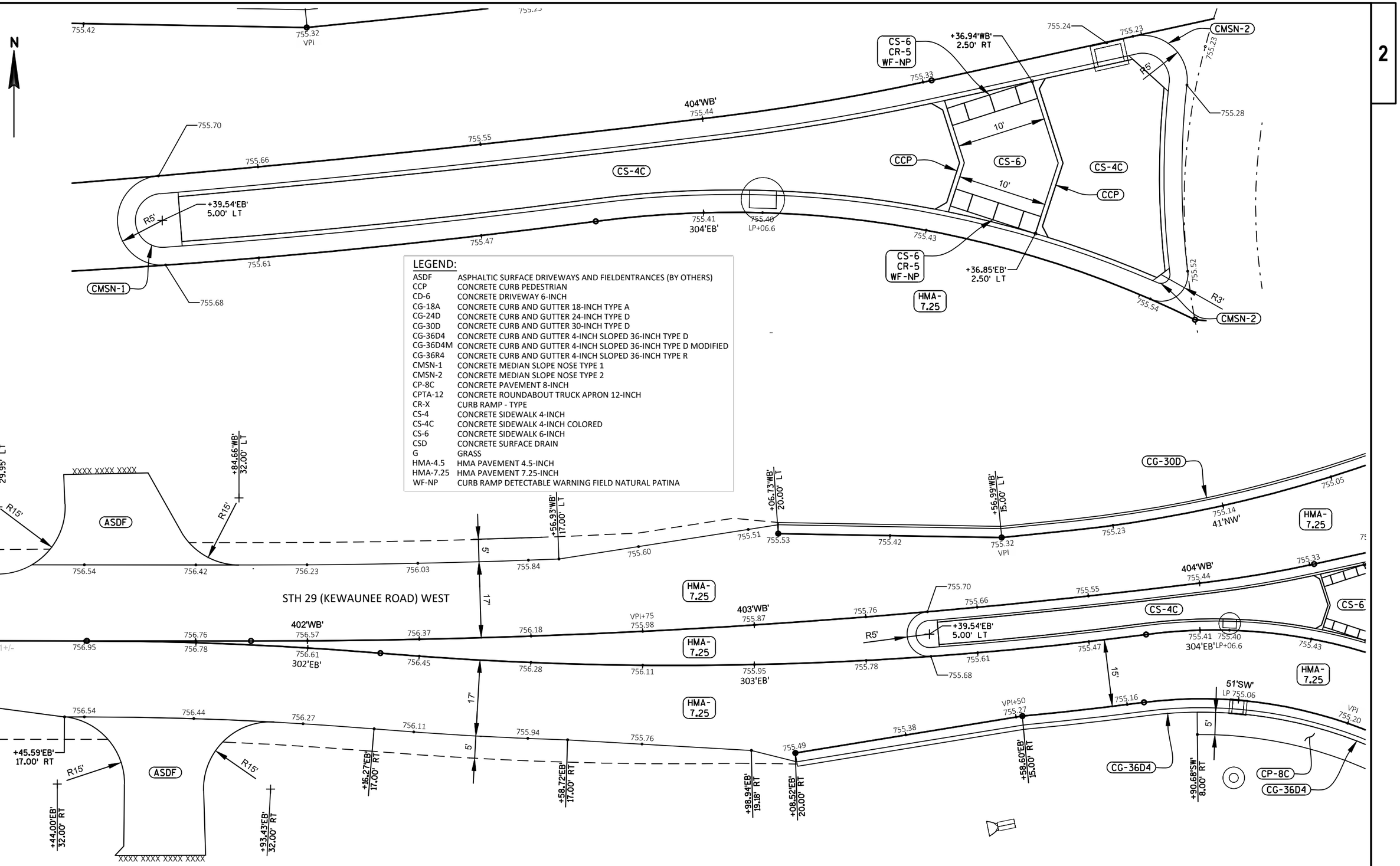
LEGEND:

ASDF	ASPHALTIC SURFACE DRIVEWAYS AND FIELDENTRANCES (BY OTHERS)
CCP	CONCRETE CURB PEDESTRIAN
CD-6	CONCRETE DRIVEWAY 6-INCH
CG-18A	CONCRETE CURB AND GUTTER 18-INCH TYPE A
CG-24D	CONCRETE CURB AND GUTTER 24-INCH TYPE D
CG-30D	CONCRETE CURB AND GUTTER 30-INCH TYPE D
CG-36D4	CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE D
CG-36D4M	CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE D MODIFIED
CG-36R4	CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE R
CMSN-1	CONCRETE MEDIAN SLOPE NOSE TYPE 1
CMSN-2	CONCRETE MEDIAN SLOPE NOSE TYPE 2
CP-8C	CONCRETE PAVEMENT 8-INCH
CPTA-12	CONCRETE ROUNDABOUT TRUCK APRON 12-INCH
CR-X	CURB RAMP - TYPE
CS-4	CONCRETE SIDEWALK 4-INCH
CS-4C	CONCRETE SIDEWALK 4-INCH COLORED
CS-6	CONCRETE SIDEWALK 6-INCH
CSD	CONCRETE SURFACE DRAIN
G	GRASS
HMA-4.5	HMA PAVEMENT 4.5-INCH
HMA-7.25	HMA PAVEMENT 7.25-INCH
WF-NP	CURB RAMP DETECTABLE WARNING FIELD NATURAL PATINA



PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	PAVING DETAIL: CTHE EA (NORTH LEG)	SHEET 27

2



LEGEND:

ASDF	ASPHALTIC SURFACE DRIVEWAYS AND FIELDENTRANCES (BY OTHERS)
CCP	CONCRETE CURB PEDESTRIAN
CD-6	CONCRETE DRIVEWAY 6-INCH
CG-18A	CONCRETE CURB AND GUTTER 18-INCH TYPE A
CG-24D	CONCRETE CURB AND GUTTER 24-INCH TYPE D
CG-30D	CONCRETE CURB AND GUTTER 30-INCH TYPE D
CG-36D4	CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE D
CG-36D4M	CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE D MODIFIED
CG-36R4	CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE R
CMSN-1	CONCRETE MEDIAN SLOPE NOSE TYPE 1
CMSN-2	CONCRETE MEDIAN SLOPE NOSE TYPE 2
CP-8C	CONCRETE PAVEMENT 8-INCH
CPTA-12	CONCRETE ROUNDABOUT TRUCK APRON 12-INCH
CR-X	CURB RAMP - TYPE
CS-4	CONCRETE SIDEWALK 4-INCH
CS-4C	CONCRETE SIDEWALK 4-INCH COLORED
CS-6	CONCRETE SIDEWALK 6-INCH
CSD	CONCRETE SURFACE DRAIN
G	GRASS
HMA-4.5	HMA PAVEMENT 4.5-INCH
HMA-7.25	HMA PAVEMENT 7.25-INCH
WF-NP	CURB RAMP DETECTABLE WARNING FIELD NATURAL PATINA

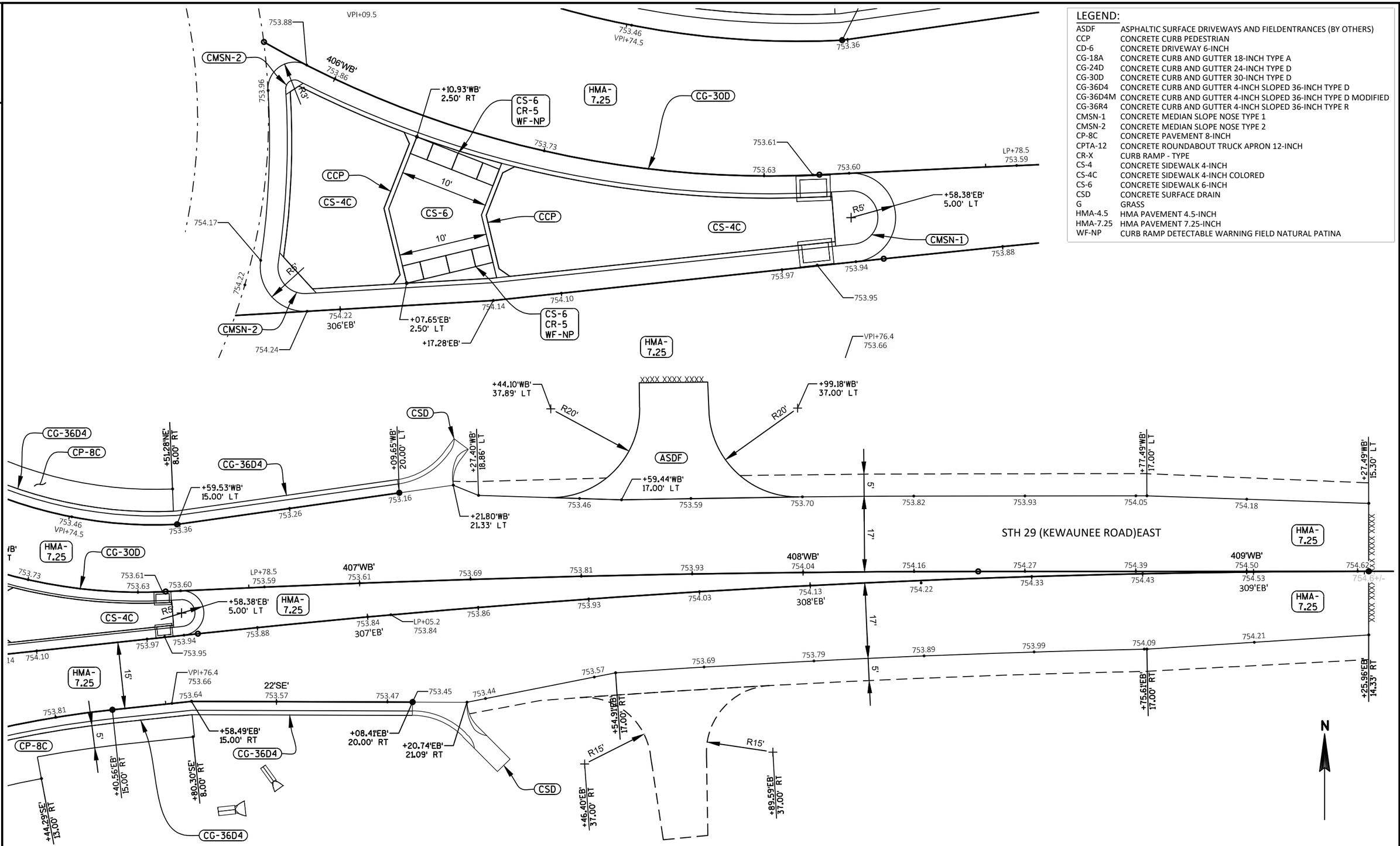
PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	PAVING DETAIL: STH 29 (WEST LEG)	SHEET 28

FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-021200-PD.DWG
LAYOUT NAME - 451607-021207-pd
PLOT DATE : 12/31/2018 11:07 AM
PLOT BY : OMNNI ASSOCIATES - CRAIG KNUTH
PLOT SCALE : ##########
451607-021207-pd
WISDOT/CADDS SHEET 42

2

LEGEND:

ASDF	ASPHALTIC SURFACE DRIVEWAYS AND FIELDENTRANCES (BY OTHERS)
CCP	CONCRETE CURB PEDESTRIAN
CD-6	CONCRETE DRIVEWAY 6-INCH
CG-18A	CONCRETE CURB AND GUTTER 18-INCH TYPE A
CG-24D	CONCRETE CURB AND GUTTER 24-INCH TYPE D
CG-30D	CONCRETE CURB AND GUTTER 30-INCH TYPE D
CG-36D4	CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE D
CG-36D4M	CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE D MODIFIED
CG-36R4	CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE R
CMSN-1	CONCRETE MEDIAN SLOPE NOSE TYPE 1
CMSN-2	CONCRETE MEDIAN SLOPE NOSE TYPE 2
CP-8C	CONCRETE PAVEMENT 8-INCH
CPTA-12	CONCRETE ROUNDABOUT TRUCK APRON 12-INCH
CR-X	CURB RAMP - TYPE
CS-4	CONCRETE SIDEWALK 4-INCH
CS-4C	CONCRETE SIDEWALK 4-INCH COLORED
CS-6	CONCRETE SIDEWALK 6-INCH
CSD	CONCRETE SURFACE DRAIN
G	GRASS
HMA-4.5	HMA PAVEMENT 4.5-INCH
HMA-7.25	HMA PAVEMENT 7.25-INCH
WF-NP	CURB RAMP DETECTABLE WARNING FIELD NATURAL PATINA

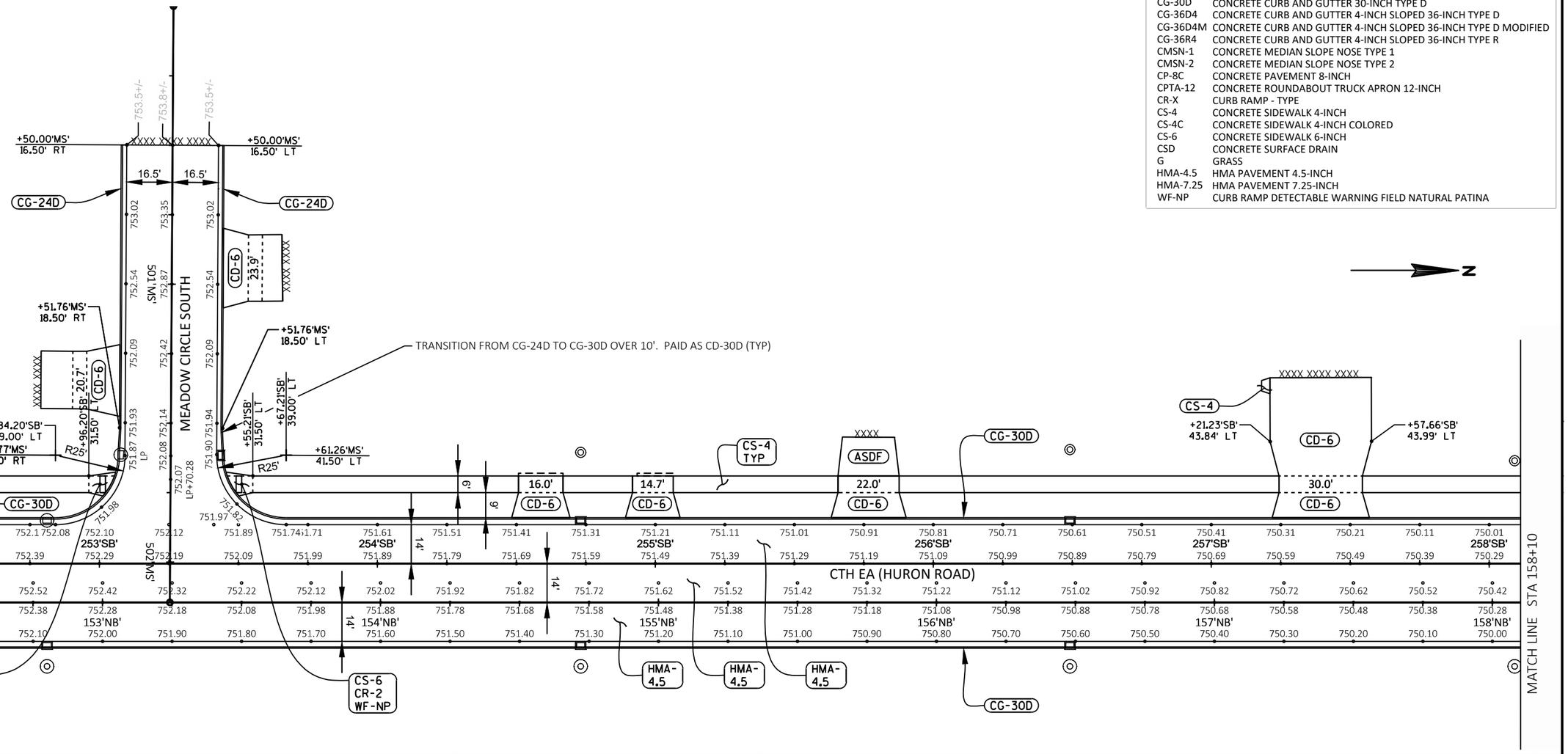


PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	PAVING DETAIL: STH 29 (EAST LEG)	SHEET 29

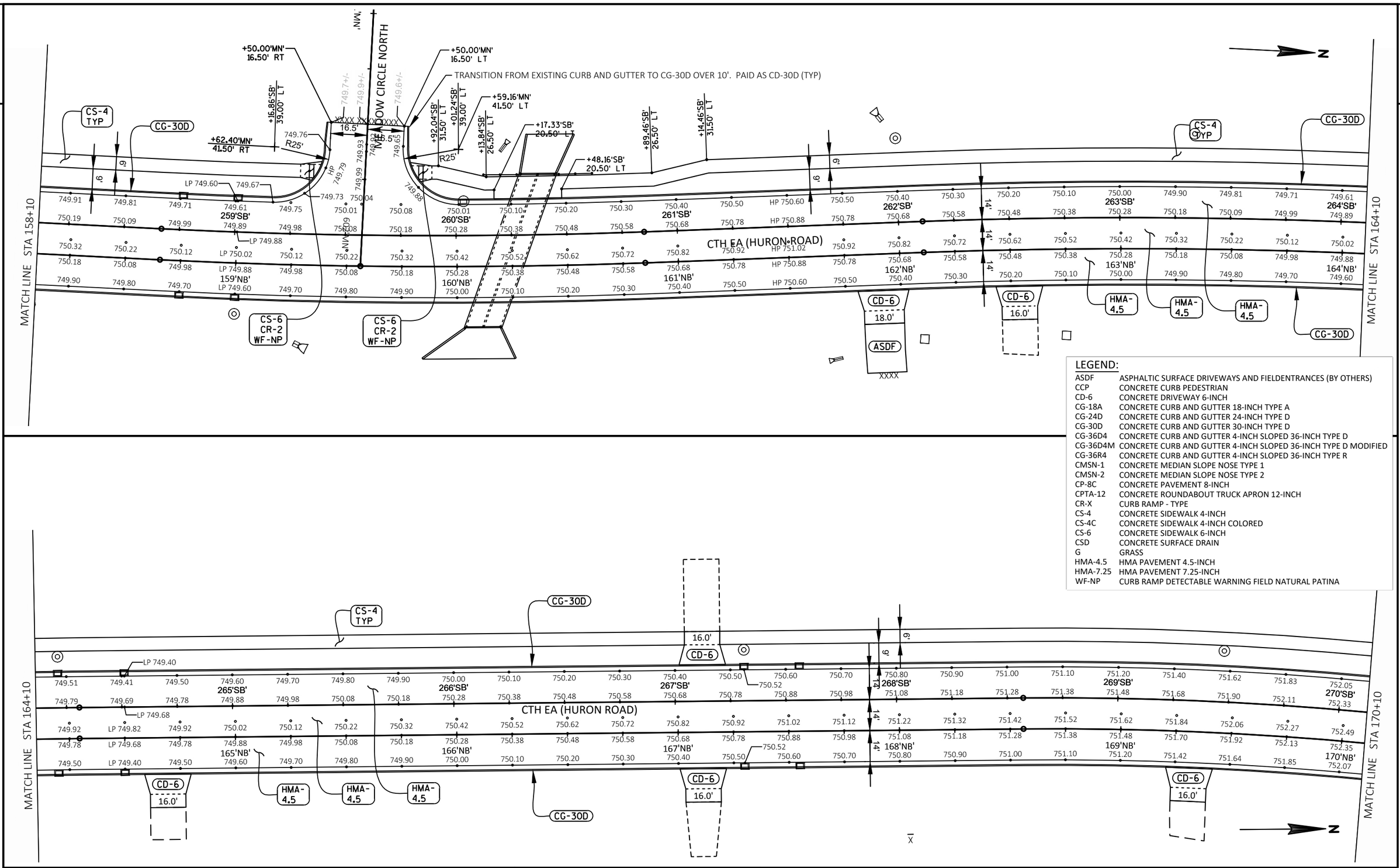
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LEGEND:

ASDF	ASPHALTIC SURFACE DRIVEWAYS AND FIELDENTRANCES (BY OTHERS)
CCP	CONCRETE CURB PEDESTRIAN
CD-6	CONCRETE DRIVEWAY 6-INCH
CG-18A	CONCRETE CURB AND GUTTER 18-INCH TYPE A
CG-24D	CONCRETE CURB AND GUTTER 24-INCH TYPE D
CG-30D	CONCRETE CURB AND GUTTER 30-INCH TYPE D
CG-36D4	CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE D
CG-36D4M	CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE D MODIFIED
CG-36R4	CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE R
CMSN-1	CONCRETE MEDIAN SLOPE NOSE TYPE 1
CMSN-2	CONCRETE MEDIAN SLOPE NOSE TYPE 2
CP-8C	CONCRETE PAVEMENT 8-INCH
CPTA-12	CONCRETE ROUNDABOUT TRUCK APRON 12-INCH
CR-X	CURB RAMP - TYPE
CS-4	CONCRETE SIDEWALK 4-INCH
CS-4C	CONCRETE SIDEWALK 4-INCH COLORED
CS-6	CONCRETE SIDEWALK 6-INCH
CSD	CONCRETE SURFACE DRAIN
G	GRASS
HMA-4.5	HMA PAVEMENT 4.5-INCH
HMA-7.25	HMA PAVEMENT 7.25-INCH
WF-NP	CURB RAMP DETECTABLE WARNING FIELD NATURAL PATINA



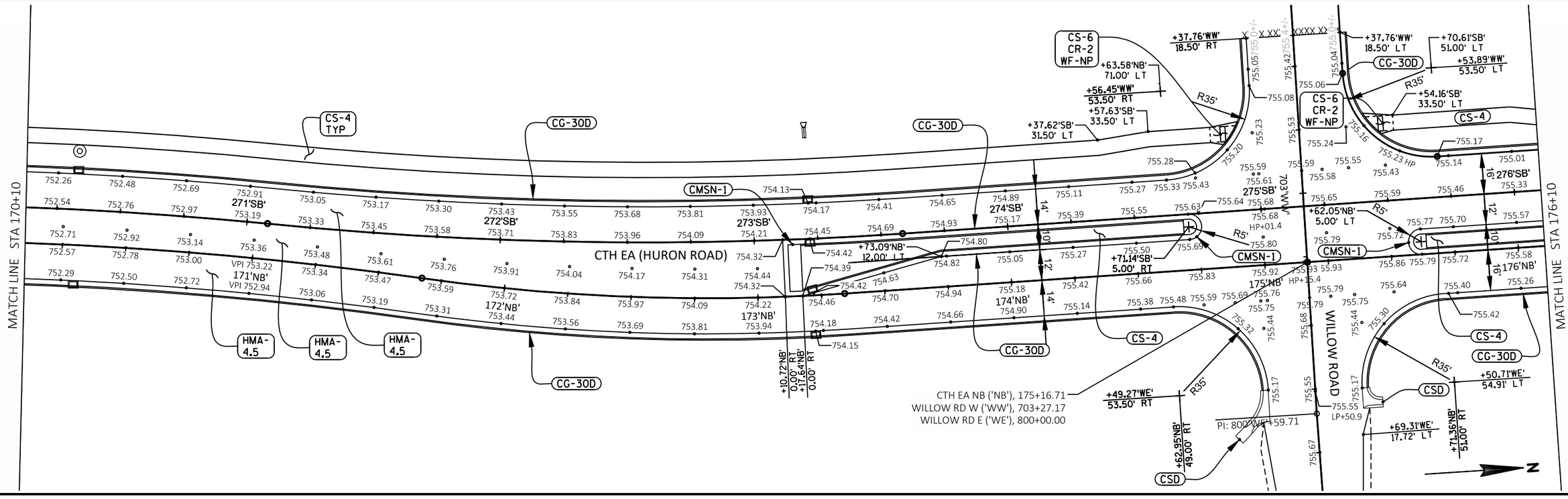
PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	PAVING DETAIL: CTH EA (HURON ROAD)	SHEET 30	E

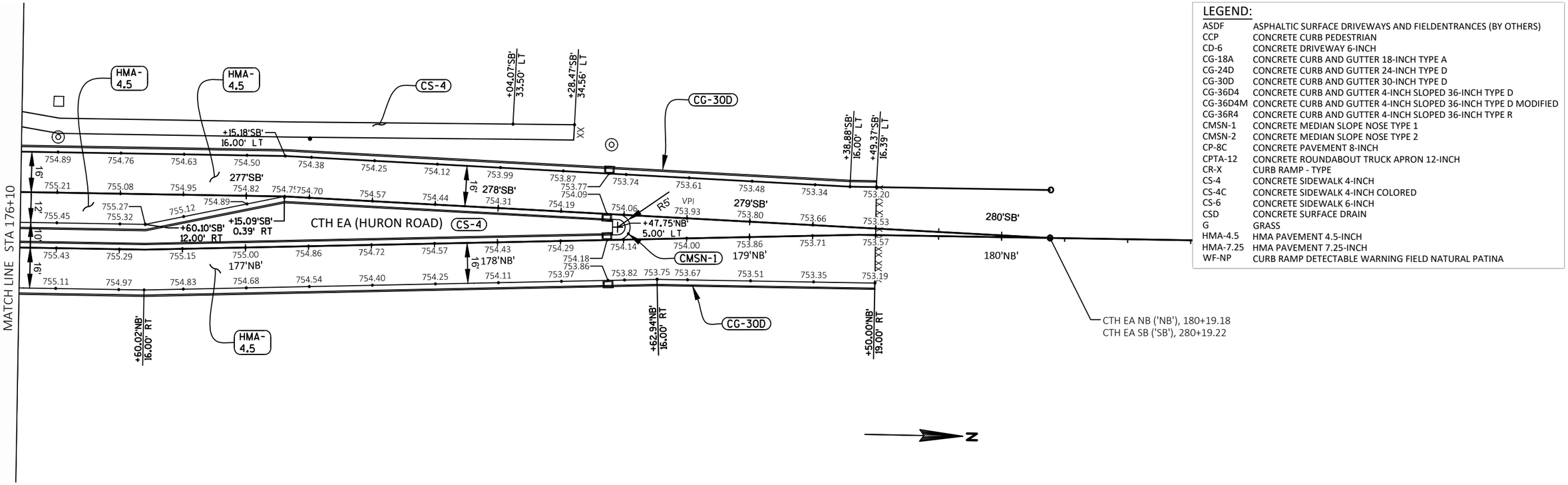


LEGEND:

ASDF	ASPHALTIC SURFACE DRIVEWAYS AND FIELDENTRANCES (BY OTHERS)
CCP	CONCRETE CURB PEDESTRIAN
CD-6	CONCRETE DRIVEWAY 6-INCH
CG-18A	CONCRETE CURB AND GUTTER 18-INCH TYPE A
CG-24D	CONCRETE CURB AND GUTTER 24-INCH TYPE D
CG-30D	CONCRETE CURB AND GUTTER 30-INCH TYPE D
CG-36D4	CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE D
CG-36D4M	CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE D MODIFIED
CG-36R4	CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE R
CMSN-1	CONCRETE MEDIAN SLOPE NOSE TYPE 1
CMSN-2	CONCRETE MEDIAN SLOPE NOSE TYPE 2
CP-8C	CONCRETE PAVEMENT 8-INCH
CPTA-12	CONCRETE ROUNDABOUT TRUCK APRON 12-INCH
CR-X	CURB RAMP - TYPE
CS-4	CONCRETE SIDEWALK 4-INCH
CS-4C	CONCRETE SIDEWALK 4-INCH COLORED
CS-6	CONCRETE SIDEWALK 6-INCH
CSD	CONCRETE SURFACE DRAIN
G	GRASS
HMA-4.5	HMA PAVEMENT 4.5-INCH
HMA-7.25	HMA PAVEMENT 7.25-INCH
WF-NP	CURB RAMP DETECTABLE WARNING FIELD NATURAL PATINA

PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	PAVING DETAIL: CTH EA (HURON ROAD)	SHEET 31	E

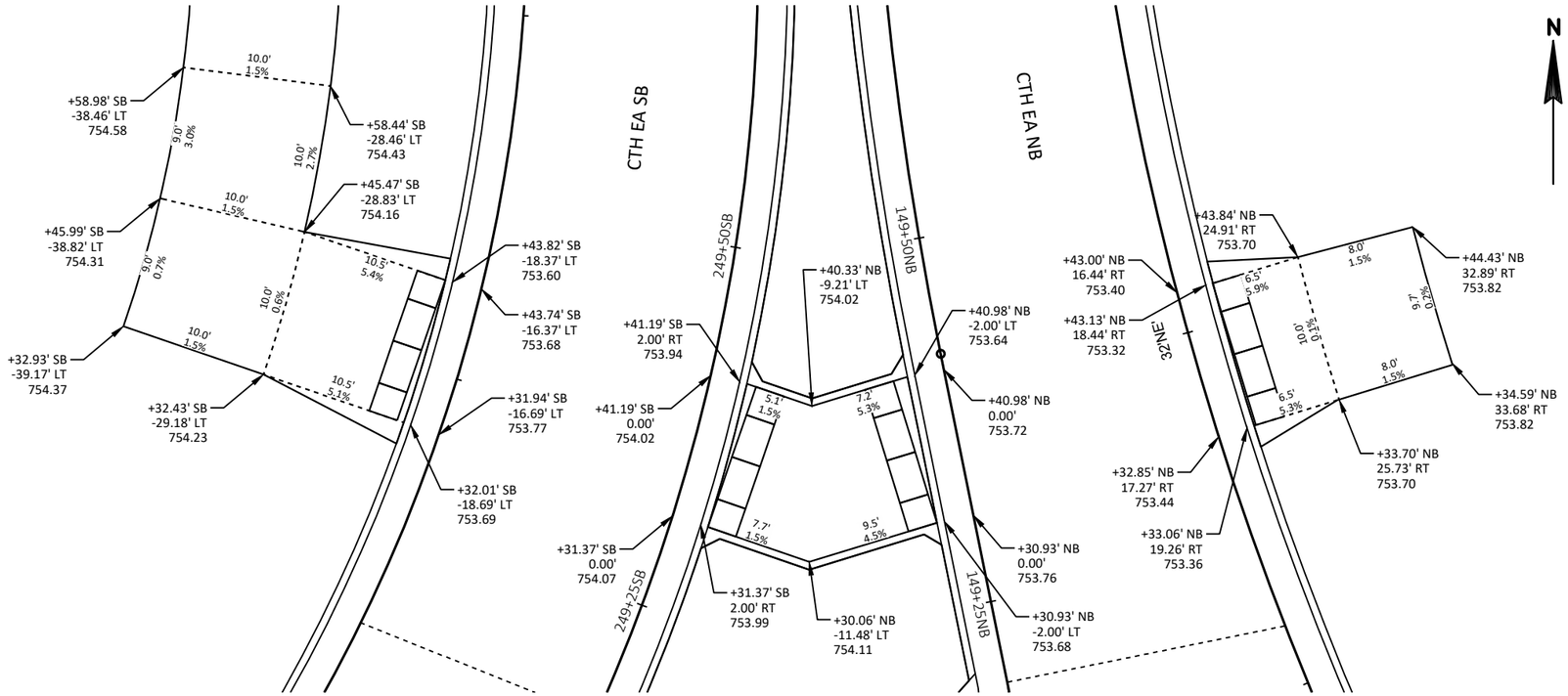


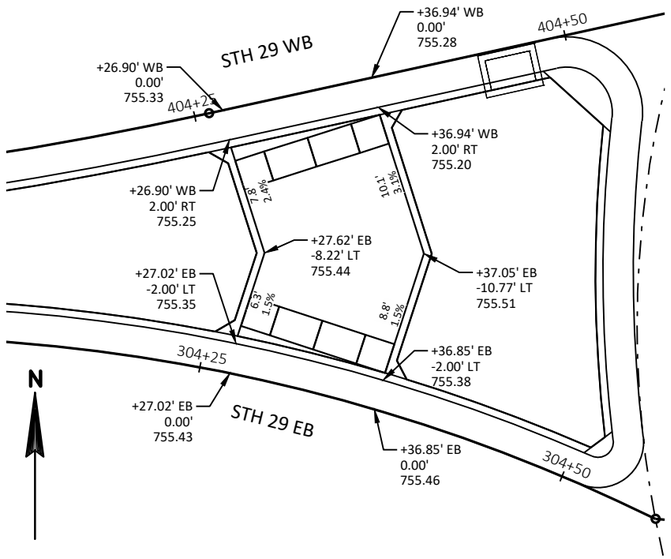


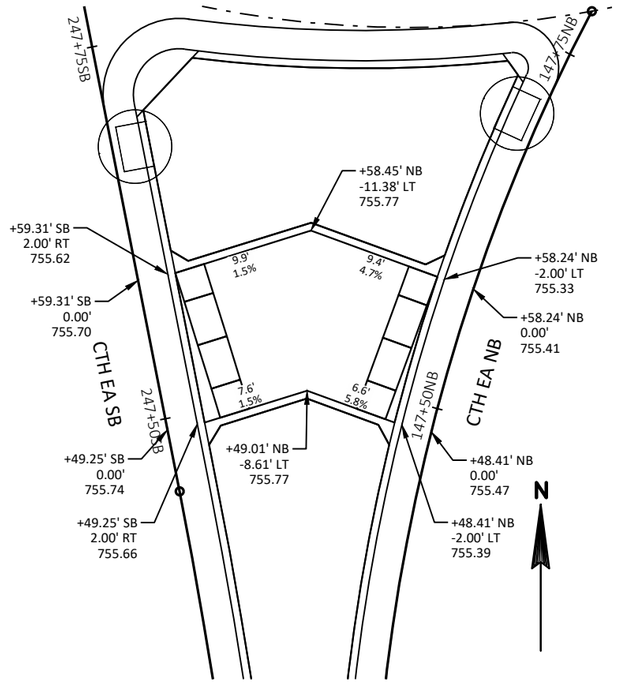
LEGEND:

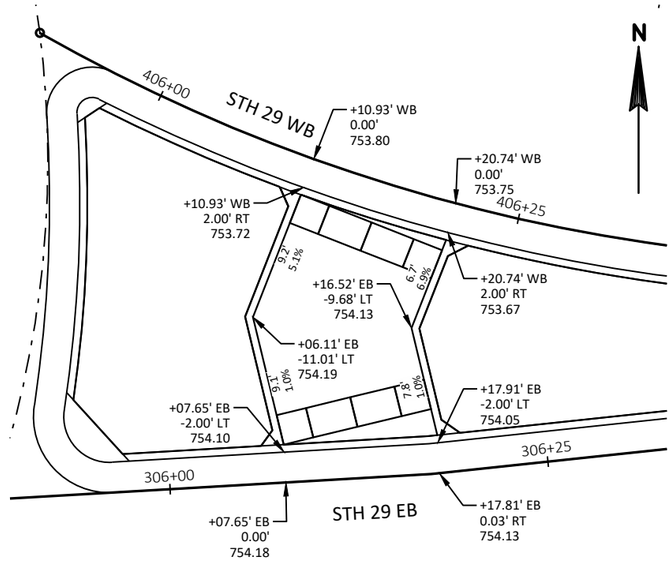
ASDF	ASPHALTIC SURFACE DRIVEWAYS AND FIELDENTRANCES (BY OTHERS)
CCP	CONCRETE CURB PEDESTRIAN
CD-6	CONCRETE DRIVEWAY 6-INCH
CG-18A	CONCRETE CURB AND GUTTER 18-INCH TYPE A
CG-24D	CONCRETE CURB AND GUTTER 24-INCH TYPE D
CG-30D	CONCRETE CURB AND GUTTER 30-INCH TYPE D
CG-36D4	CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE D
CG-36D4M	CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE D MODIFIED
CG-36R4	CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE R
CMSN-1	CONCRETE MEDIAN SLOPE NOSE TYPE 1
CMSN-2	CONCRETE MEDIAN SLOPE NOSE TYPE 2
CP-8C	CONCRETE PAVEMENT 8-INCH
CPTA-12	CONCRETE ROUNDABOUT TRUCK APRON 12-INCH
CR-X	CURB RAMP - TYPE
CS-4	CONCRETE SIDEWALK 4-INCH
CS-4C	CONCRETE SIDEWALK 4-INCH COLORED
CS-6	CONCRETE SIDEWALK 6-INCH
CSD	CONCRETE SURFACE DRAIN
G	GRASS
HMA-4.5	HMA PAVEMENT 4.5-INCH
HMA-7.25	HMA PAVEMENT 7.25-INCH
WF-NP	CURB RAMP DETECTABLE WARNING FIELD NATURAL PATINA

PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	PAVING DETAIL: CTH EA (HURON ROAD)	SHEET 32	E

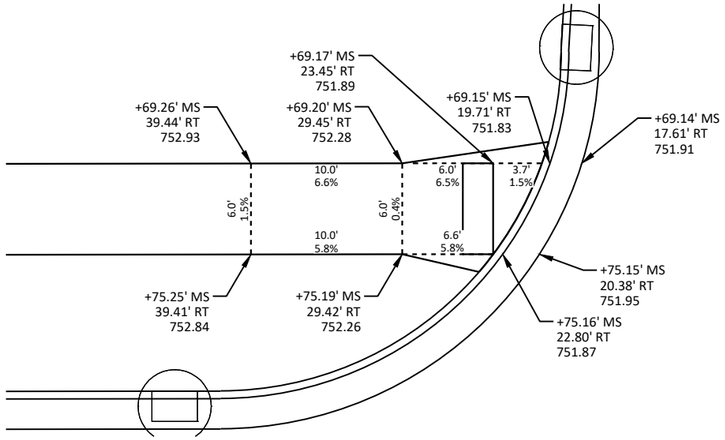






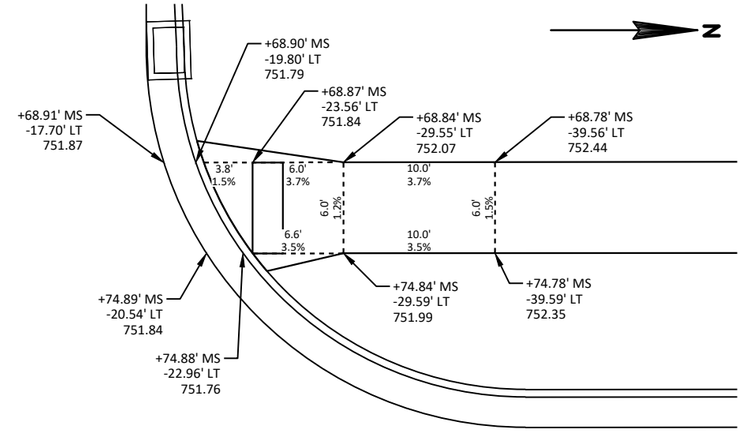


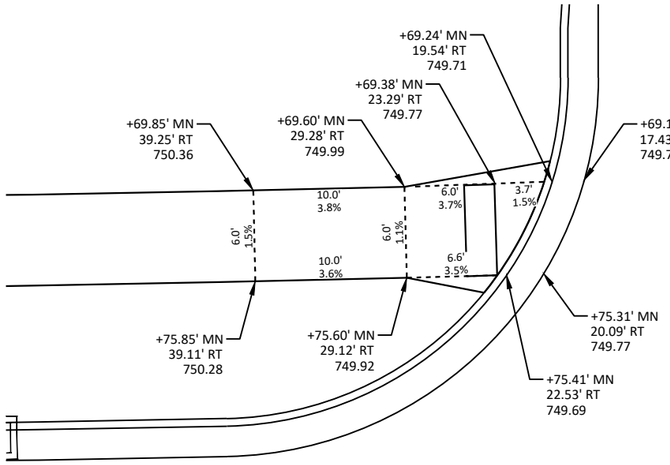
PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	PAVING DETAIL: CURB RAMPS	SHEET 33



MEADOW CIRCLE SOUTH

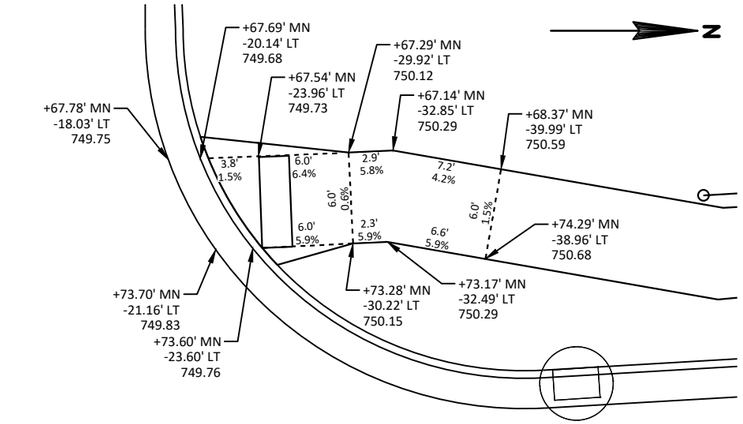
501+75MS

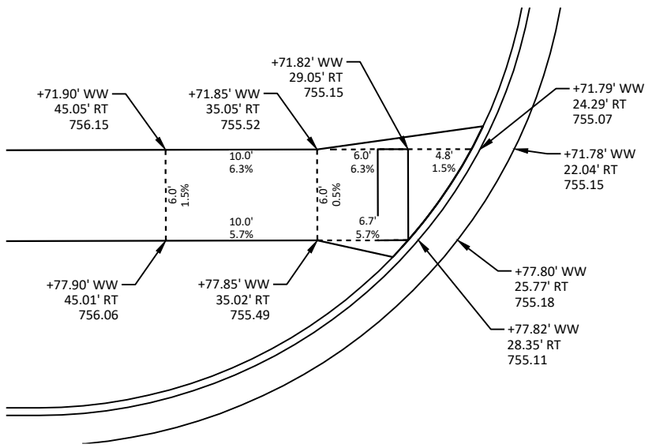




MEADOW CIRCLE NORTH

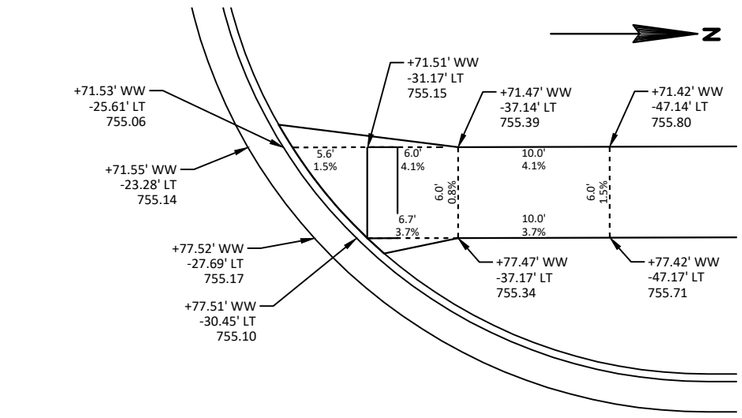
601+75MN





WILLOW RD WEST

702+75WW



PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	PAVING DETAIL: CURB RAMPS	SHEET

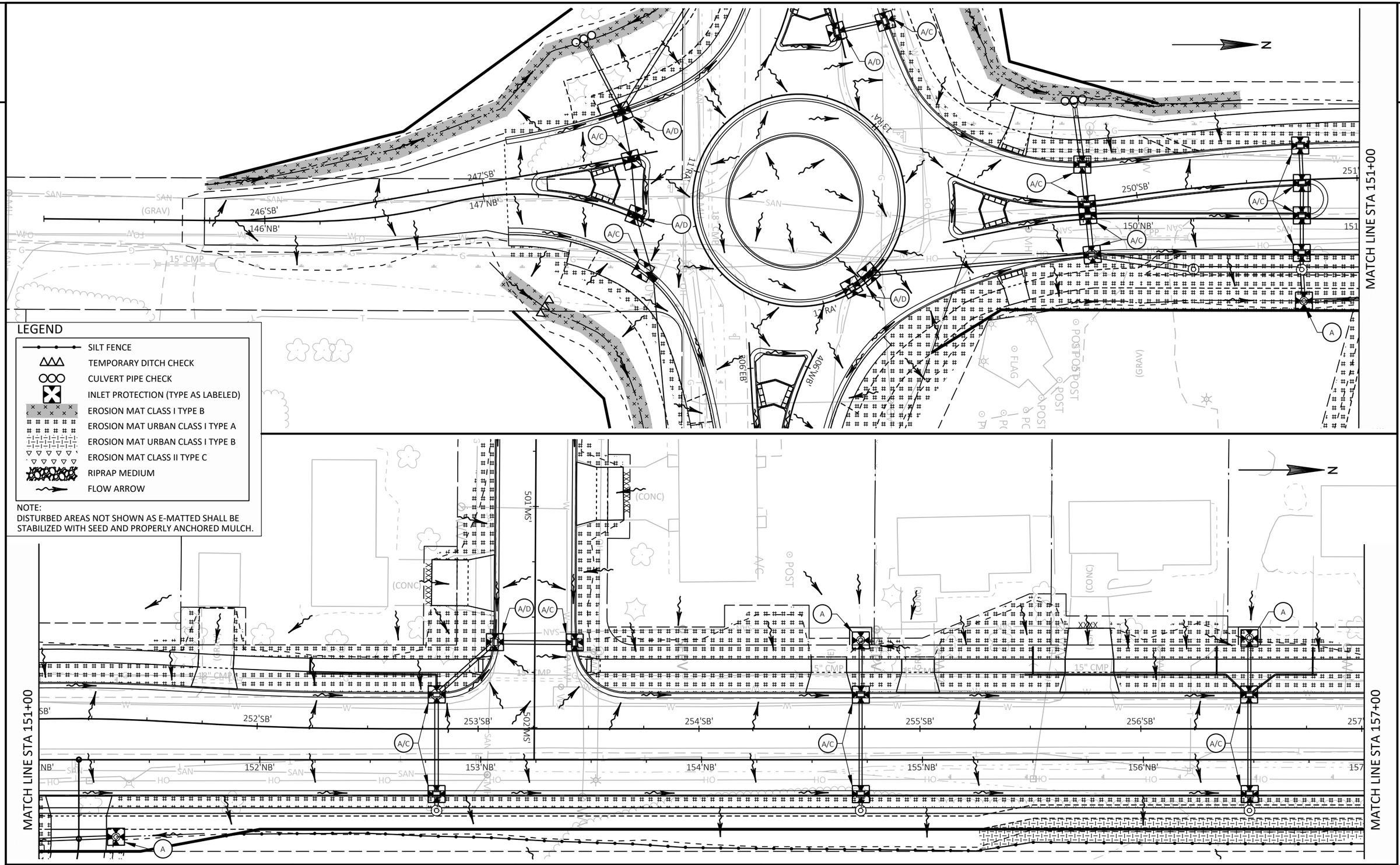
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LAYOUT NAME - 451607-021221-pd

PLOT DATE : 9/28/2018 7:51 AM

PLOT BY : OMNNI ASSOCIATES - ANDREW WESTBROOK

PLOT SCALE : ##########

2



PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	EROSION CONTROL	SHEET 35

FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-022000_EC.DWG
LAYOUT NAME - 451607-022001-ec
PLOT DATE : 12/26/2018 9:28 AM
PLOT BY : OMNNI ASSOCIATES - ANDREW WESTBROOK
PLOT SCALE : ##########
WISDOT/CADDS SHEET 44

2

MATCH LINE STA 157+00

MATCH LINE STA 163+00

MATCH LINE STA 163+00

MATCH LINE STA 169+00

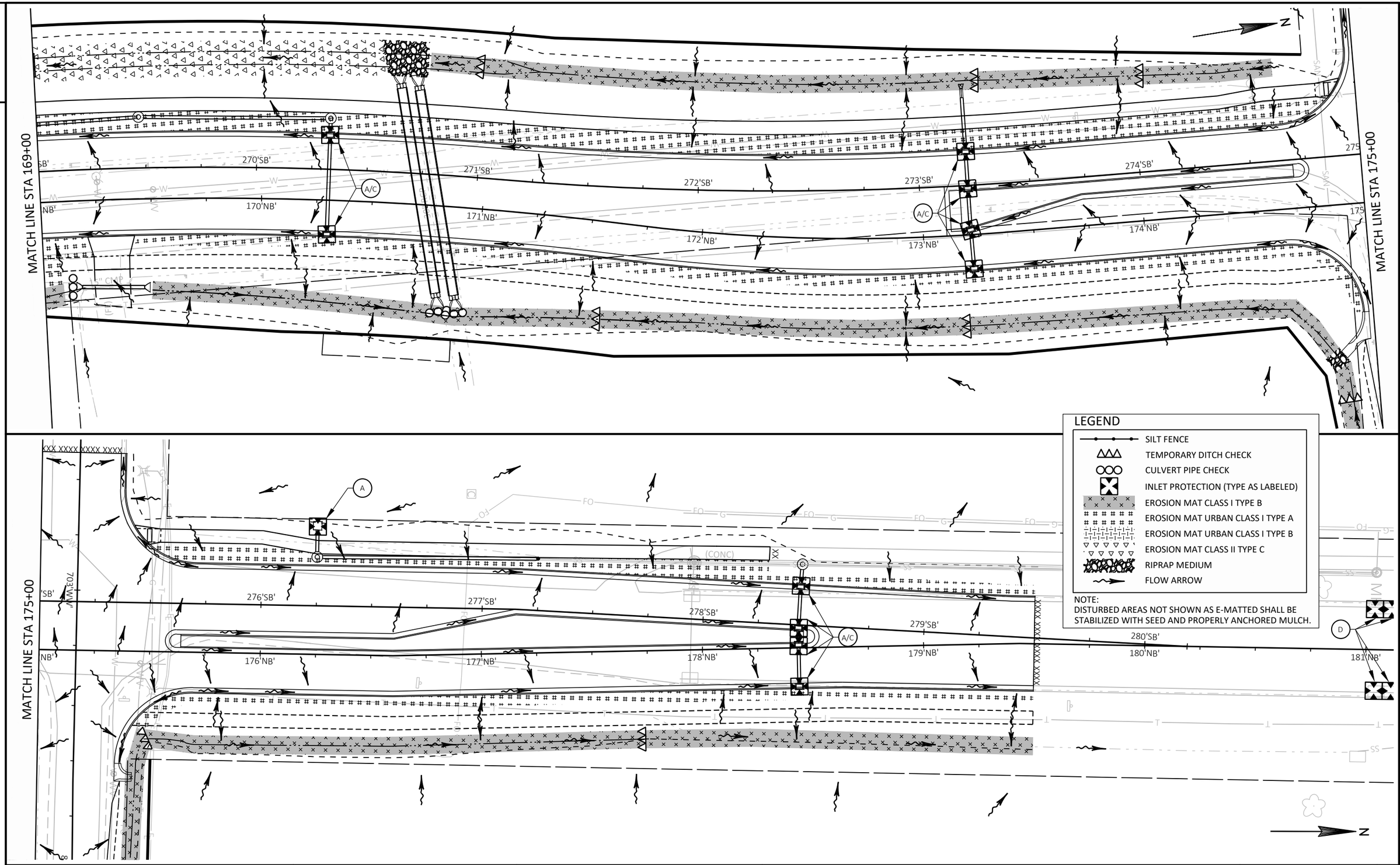
LEGEND

SILT FENCE	EROSION MAT CLASS I TYPE B
TEMPORARY DITCH CHECK	EROSION MAT URBAN CLASS I TYPE A
CULVERT PIPE CHECK	EROSION MAT URBAN CLASS I TYPE B
INLET PROTECTION (TYPE AS LABELED)	EROSION MAT CLASS II TYPE C
FLOW ARROW	RIPRAP MEDIUM

NOTE:
DISTURBED AREAS NOT SHOWN AS E-MATTED SHALL BE STABILIZED WITH SEED AND PROPERLY ANCHORED MULCH.

PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	EROSION CONTROL	SHEET 36

2



PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	EROSION CONTROL	SHEET 37

2

2

STH 29 (KEWAUNEE ROAD)

301'EB'

302'EB'

402'WB'

303'EB'

403'WB'

304'EB'

404'WB'

306'EB'

406'WB'

307'EB'

407'WB'

308'EB'

408'WB'

309'EB'

409'WB'

310'EB'

13'RA'

14'RA'

11'RA'

18" CMP

12" CMP

XXXX

A/C

A/D

N

POST

FLAG

GUY

SAN

OH

T

G

W

FO

BOX CULVERT

LEGEND

- SILT FENCE
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- INLET PROTECTION (TYPE AS LABELED)
- EROSION MAT CLASS I TYPE B
- EROSION MAT URBAN CLASS I TYPE A
- EROSION MAT URBAN CLASS I TYPE B
- EROSION MAT CLASS II TYPE C
- RIPRAP MEDIUM
- FLOW ARROW

NOTE:
DISTURBED AREAS NOT SHOWN AS E-MATTED SHALL BE STABILIZED WITH SEED AND PROPERLY ANCHORED MULCH.

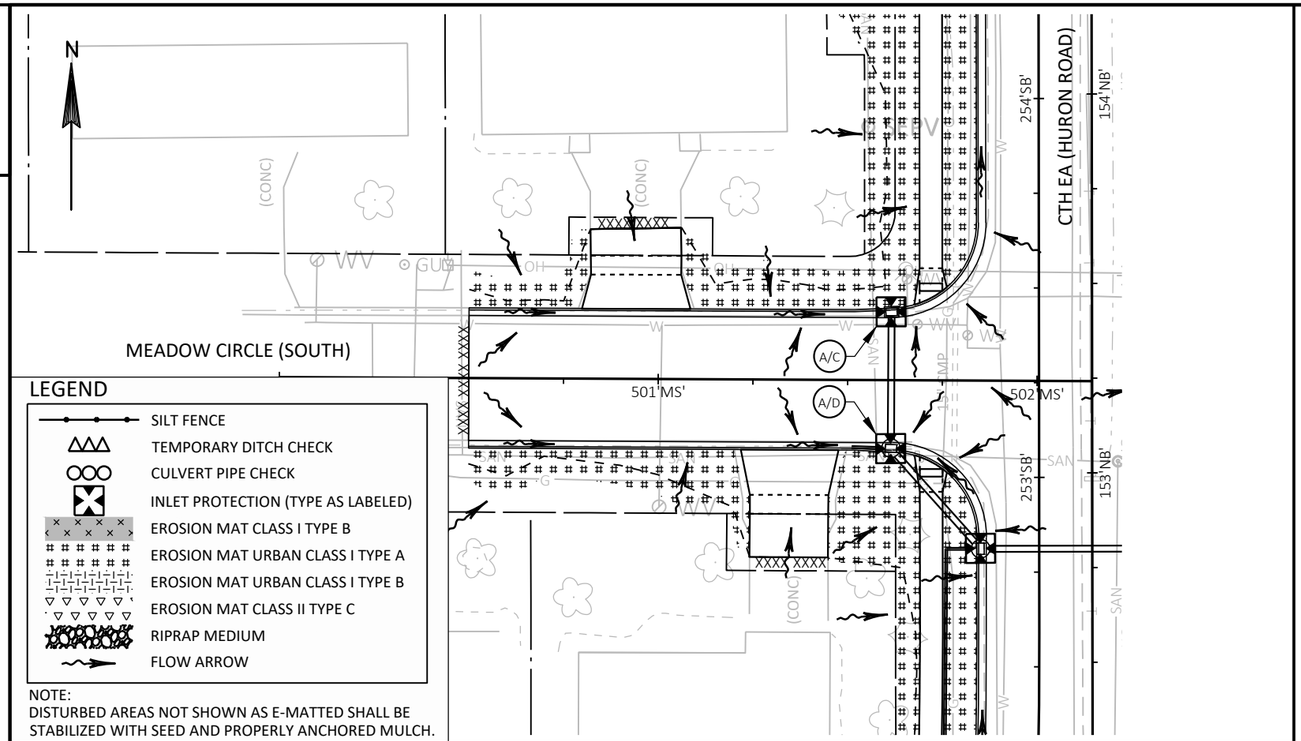
PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	EROSION CONTROL	SHEET 38

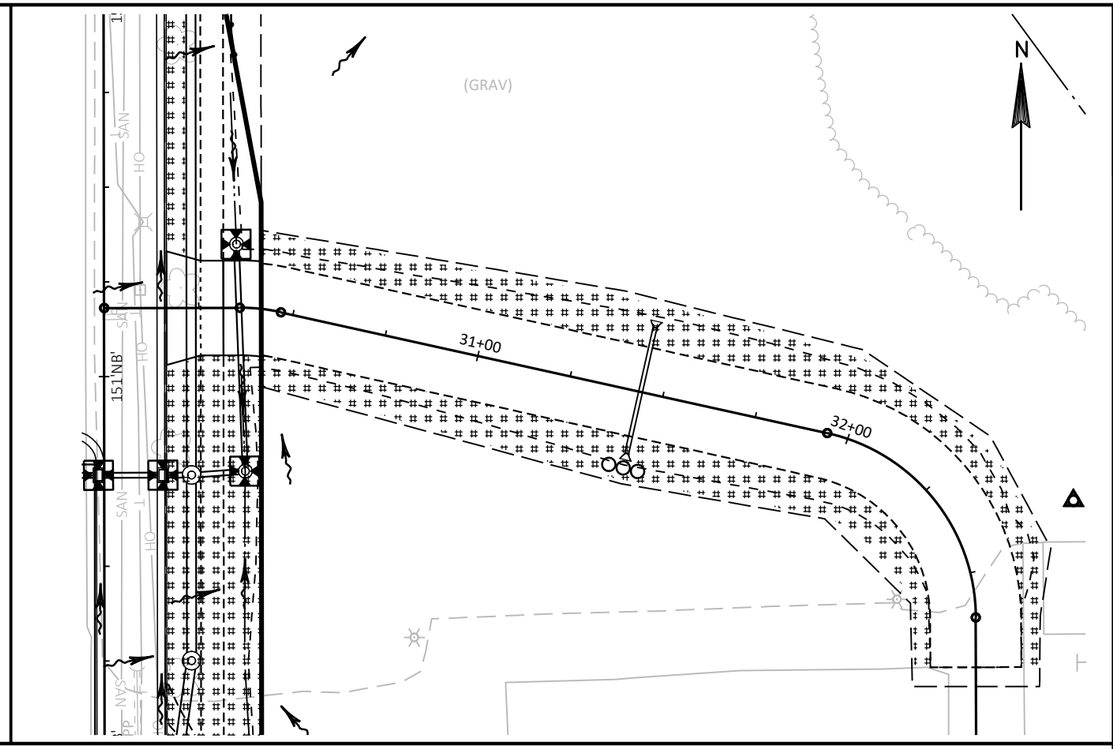
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LAYOUT NAME - 451607-022004-ec

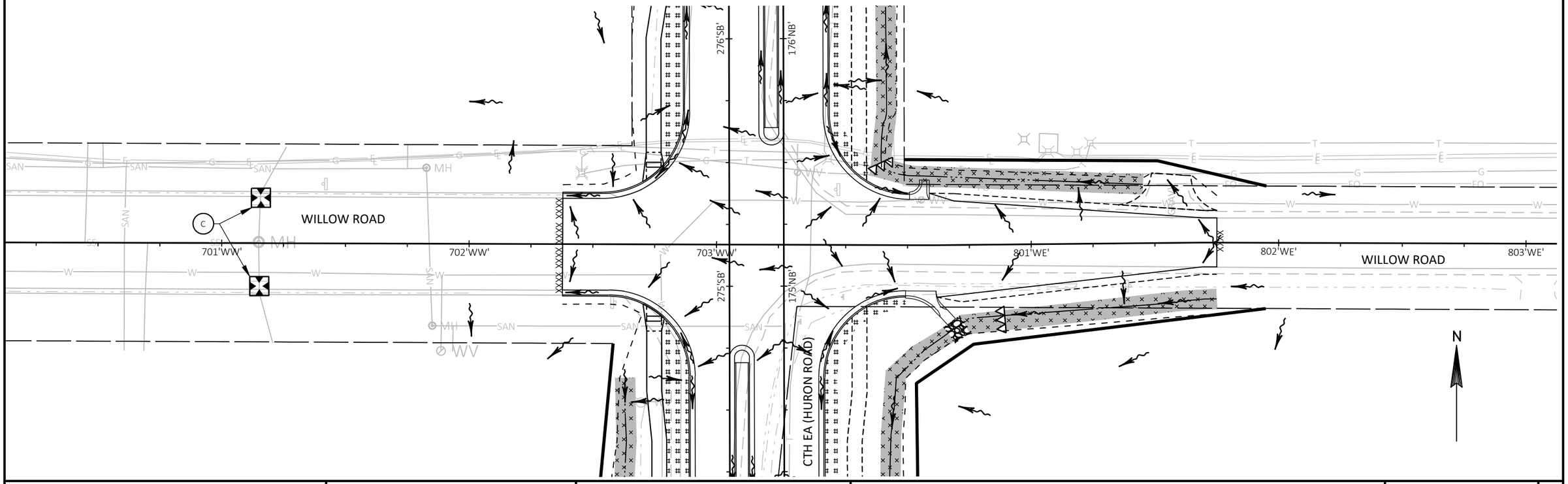
PLOT DATE : 12/26/2018 9:29 AM

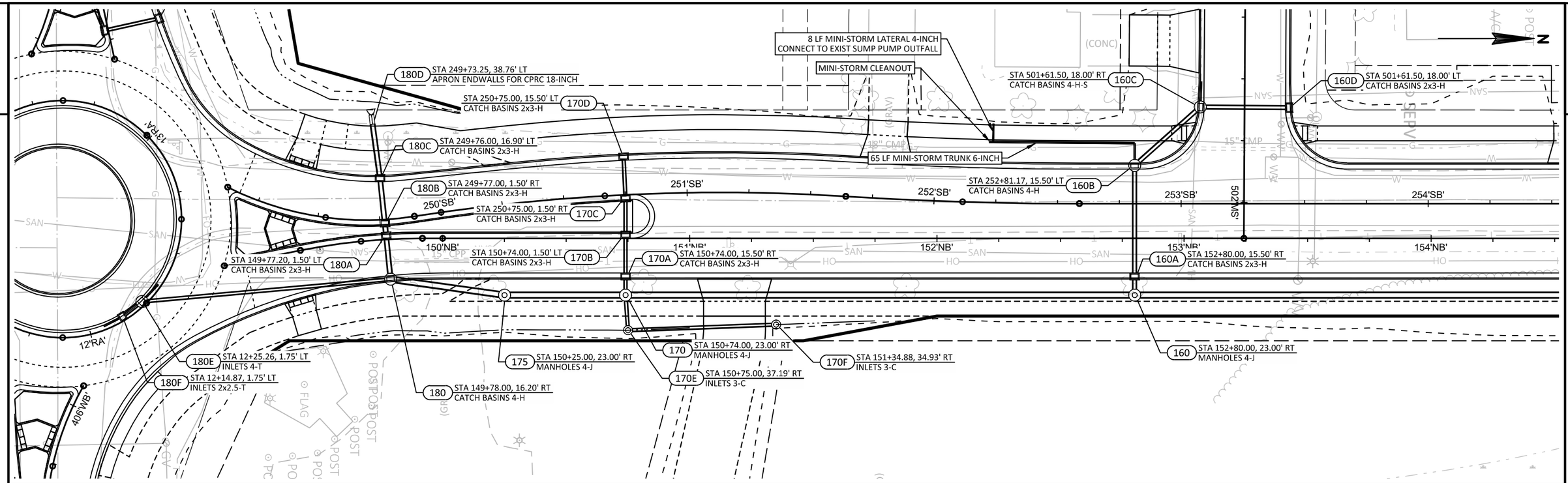
PLOT BY : OMNNI ASSOCIATES - ANDREW WESTBROOK

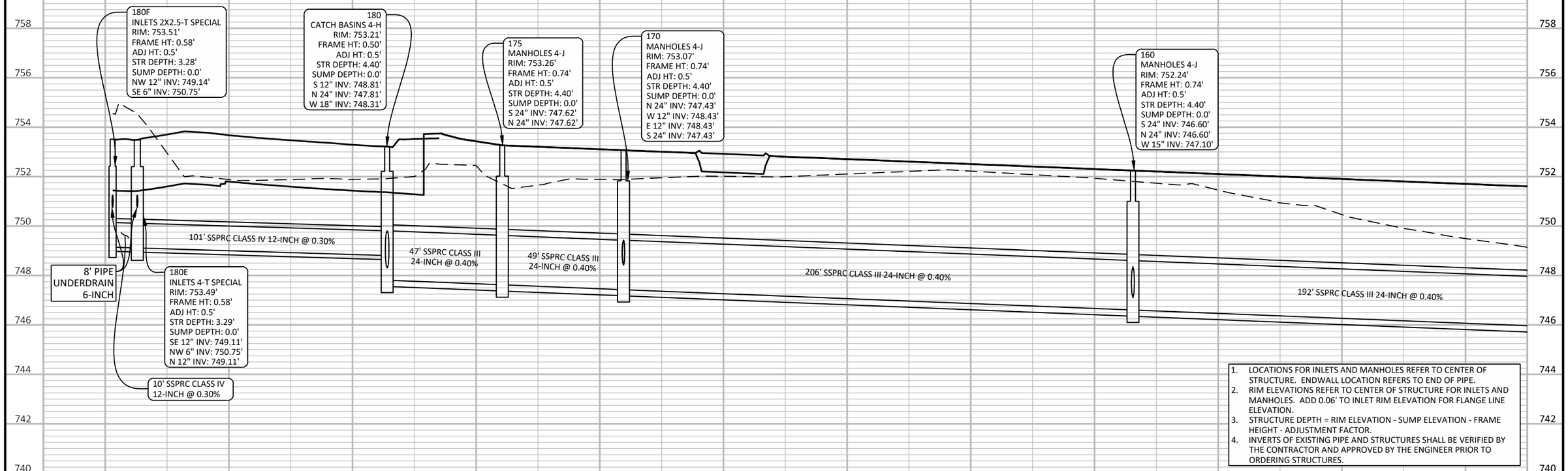
PLOT SCALE : ##########


N
MEADOW CIRCLE (SOUTH)
CTH EA (HURON ROAD)
254'SB'
154'NB'
501'MS'
502'MS'
253'SB'
153'NB'
A/C
A/D
(CONC)
LEGEND
SILT FENCE
TEMPORARY DITCH CHECK
CULVERT PIPE CHECK
INLET PROTECTION (TYPE AS LABELED)
EROSION MAT CLASS I TYPE B
EROSION MAT URBAN CLASS I TYPE A
EROSION MAT URBAN CLASS I TYPE B
EROSION MAT CLASS II TYPE C
RIPRAP MEDIUM
FLOW ARROW
NOTE:
DISTURBED AREAS NOT SHOWN AS E-MATTED SHALL BE
STABILIZED WITH SEED AND PROPERLY ANCHORED MULCH.


N
(GRAV)
151'NB'
31+00
32+00

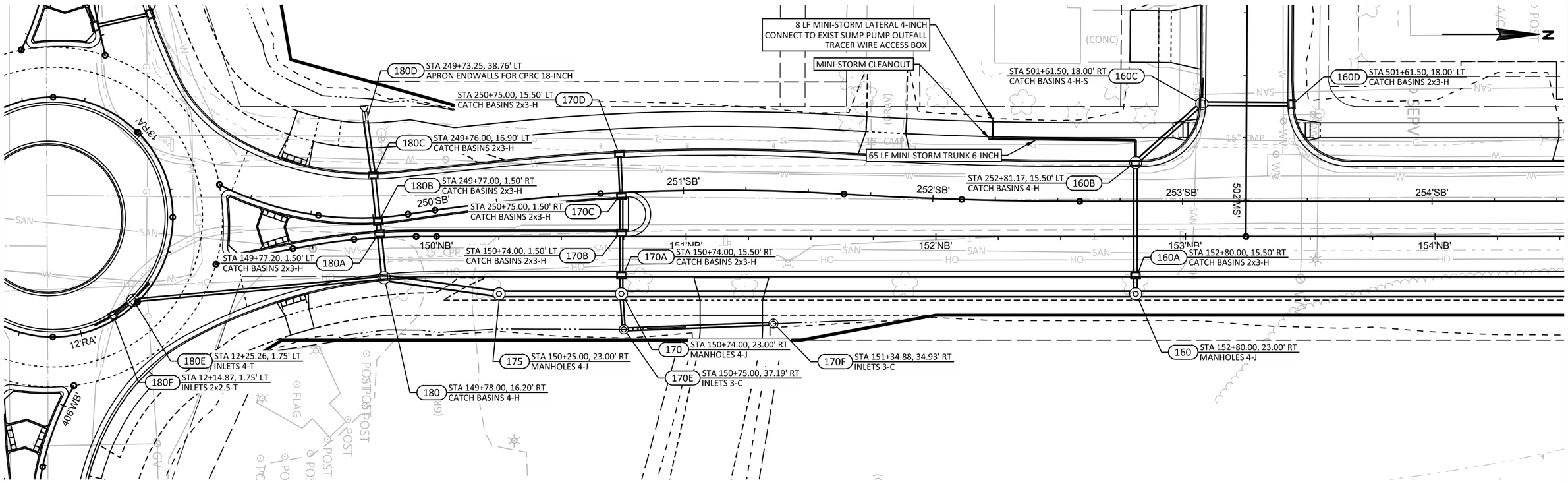

WILLOW ROAD
701'WW'
702'WW'
703'WW'
801'WE'
802'WE'
803'WE'
276'SB'
176'NB'
275'SB'
175'NB'
CTH EA (HURON ROAD)
C
MH
WV
N

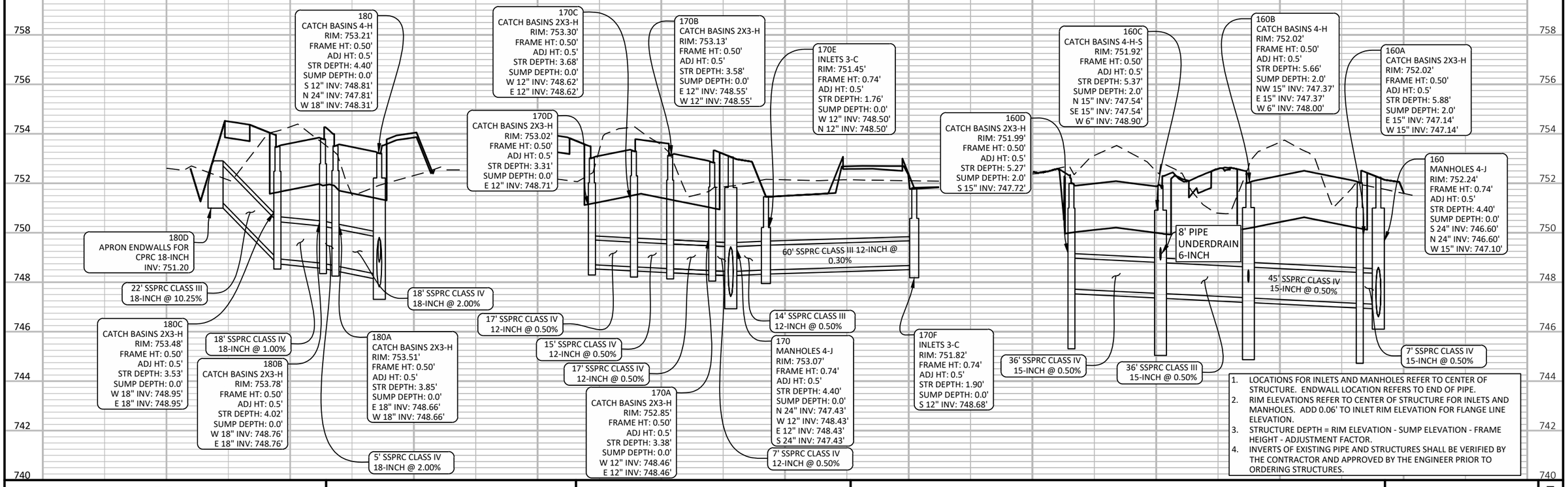




1. LOCATIONS FOR INLETS AND MANHOLES REFER TO CENTER OF STRUCTURE. ENDWALL LOCATION REFERS TO END OF PIPE.
2. RIM ELEVATIONS REFER TO CENTER OF STRUCTURE FOR INLETS AND MANHOLES. ADD 0.06' TO INLET RIM ELEVATION FOR FLANGE LINE ELEVATION.
3. STRUCTURE DEPTH = RIM ELEVATION - SUMP ELEVATION - FRAME HEIGHT - ADJUSTMENT FACTOR.
4. INVERTS OF EXISTING PIPE AND STRUCTURES SHALL BE VERIFIED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER PRIOR TO ORDERING STRUCTURES.

PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	STORM SEWER	SHEET 40	E

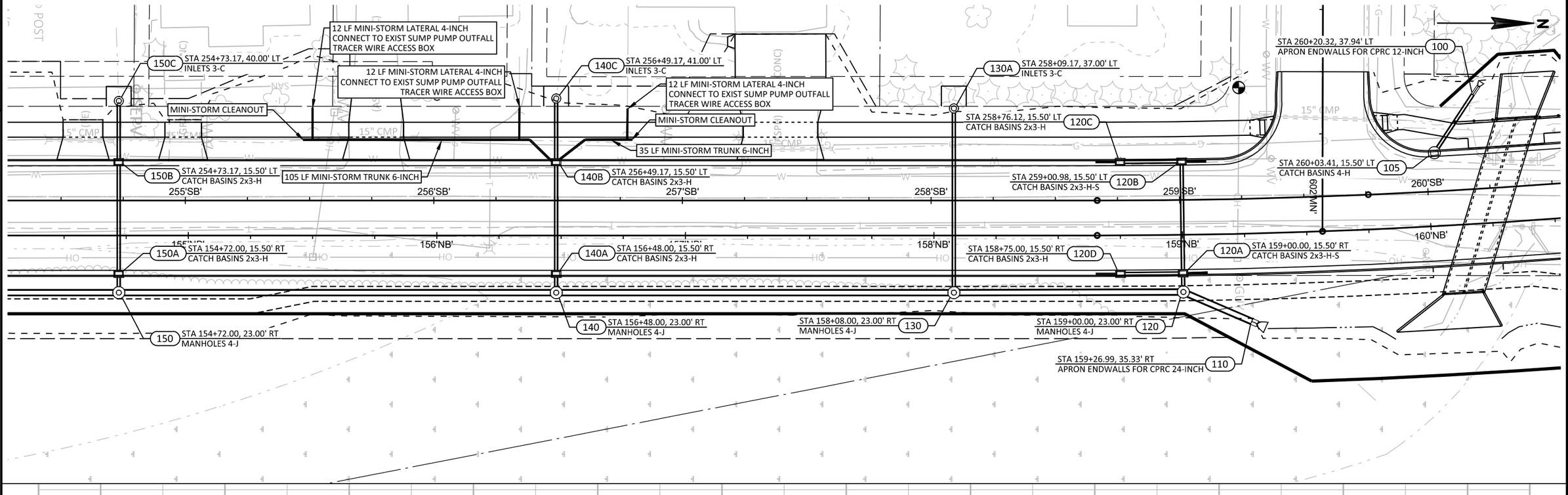


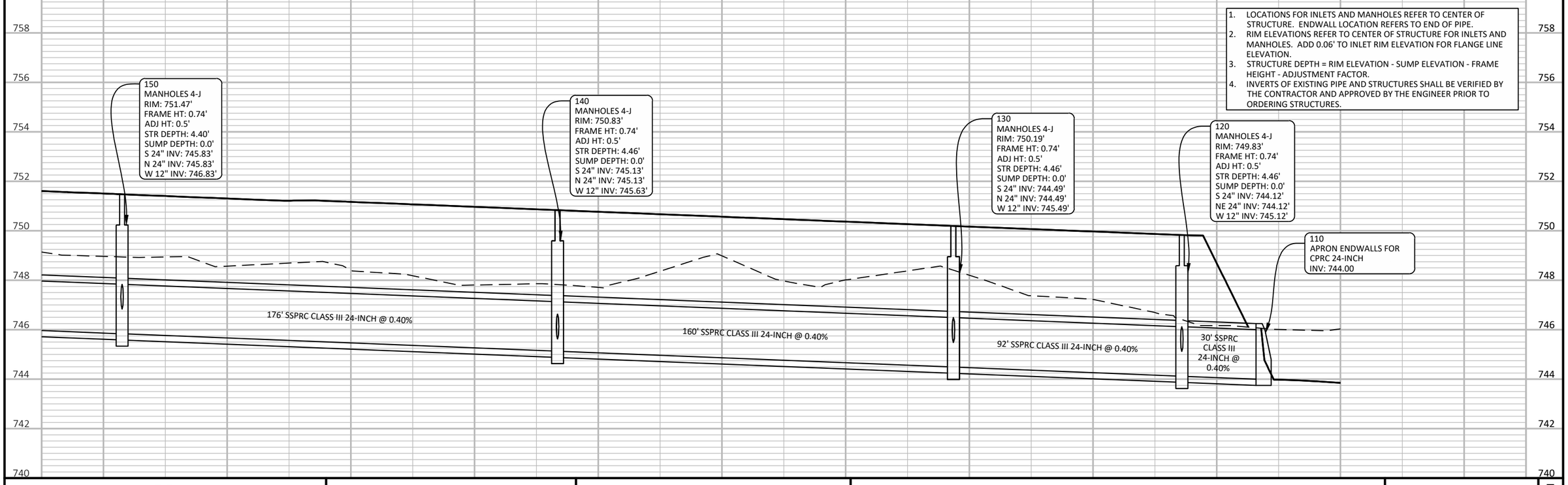


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PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	STORM SEWER	SHEET 41	E

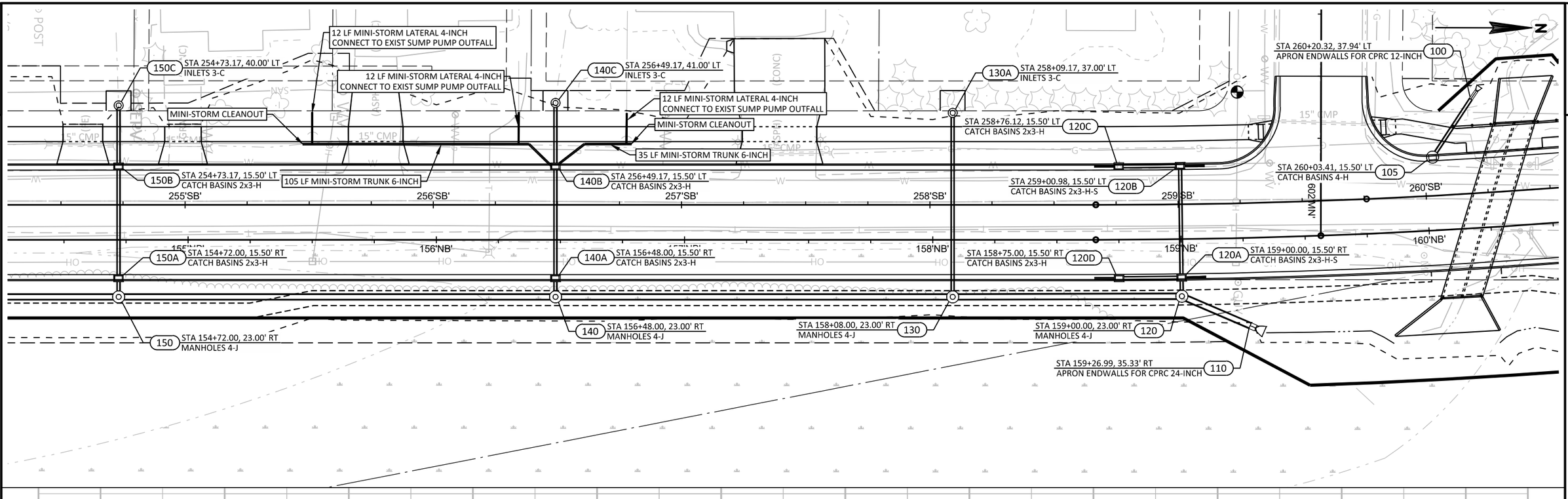
FILE NAME : F:\TR\OBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-022501-SS.DWG
LAYOUT NAME - 451607-022502-ss
PLOT DATE : 9/28/2018 11:45 AM PLOT BY : ANDREW WESTBROOK PLOT NAME : PLOT SCALE : 1 IN:40 FT



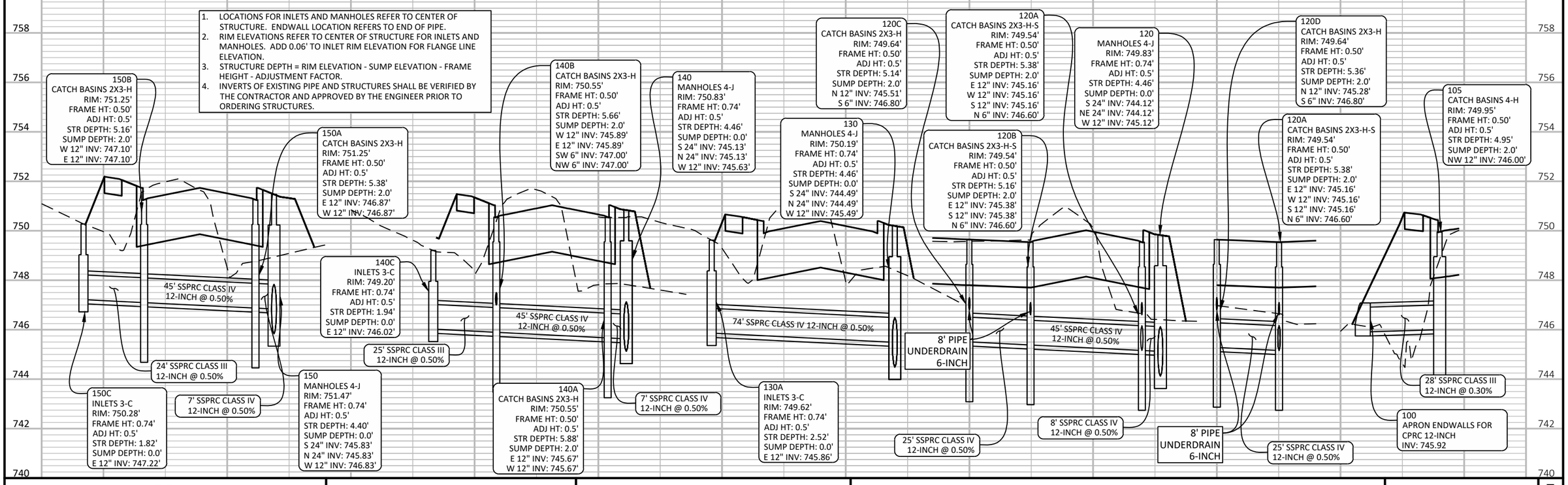


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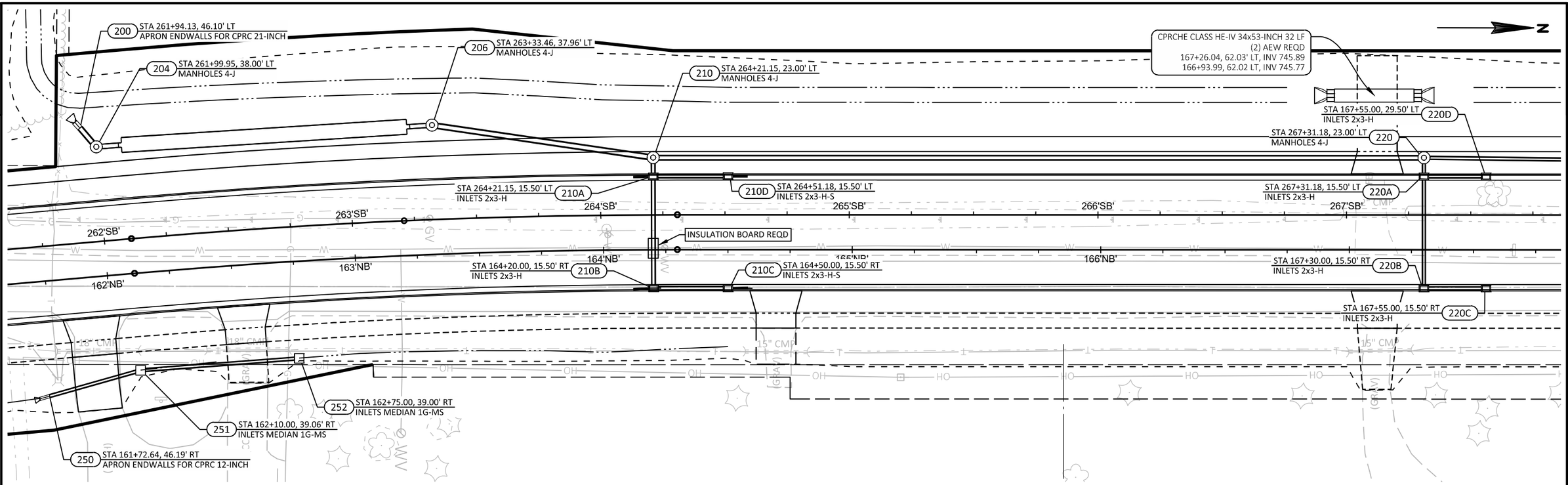
PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	STORM SEWER	SHEET 42	E

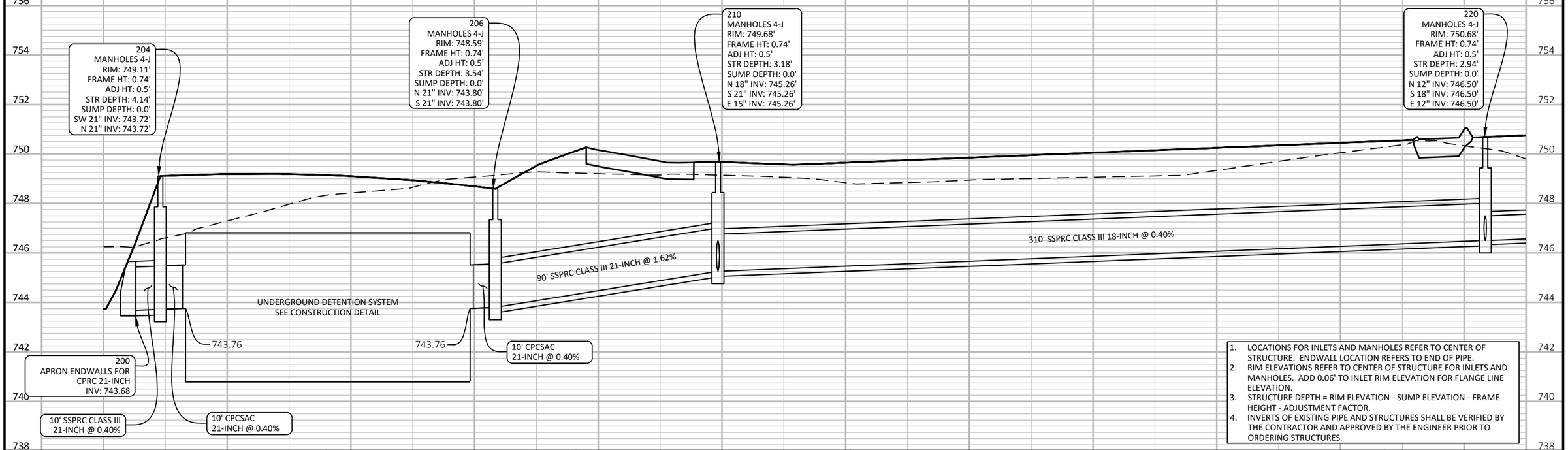


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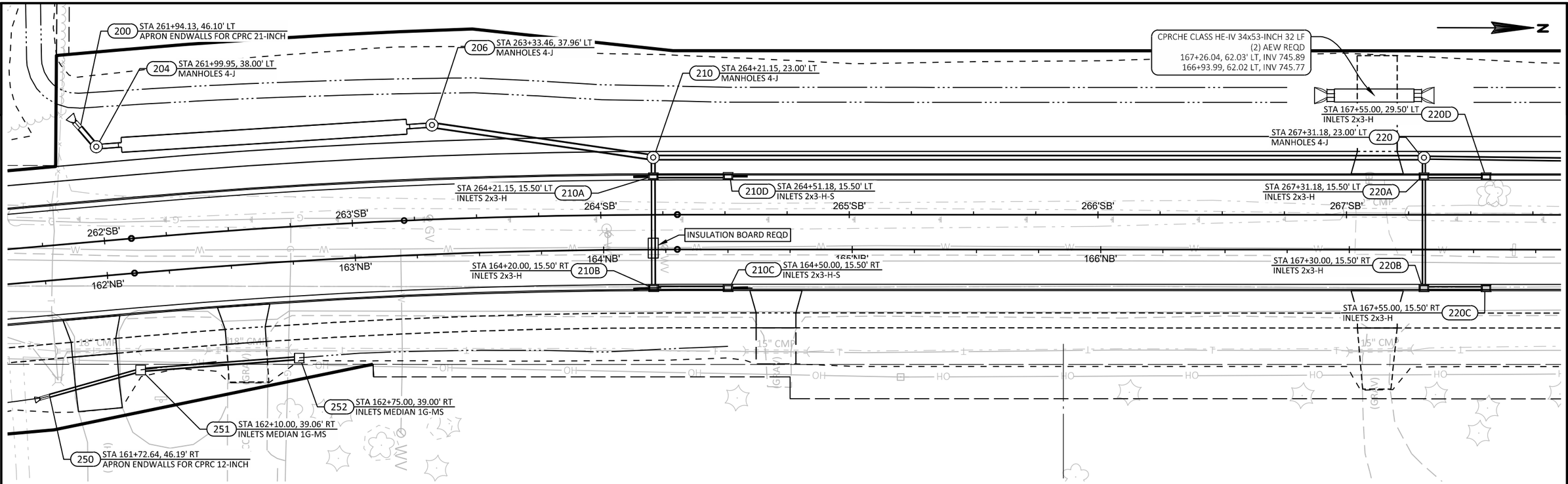
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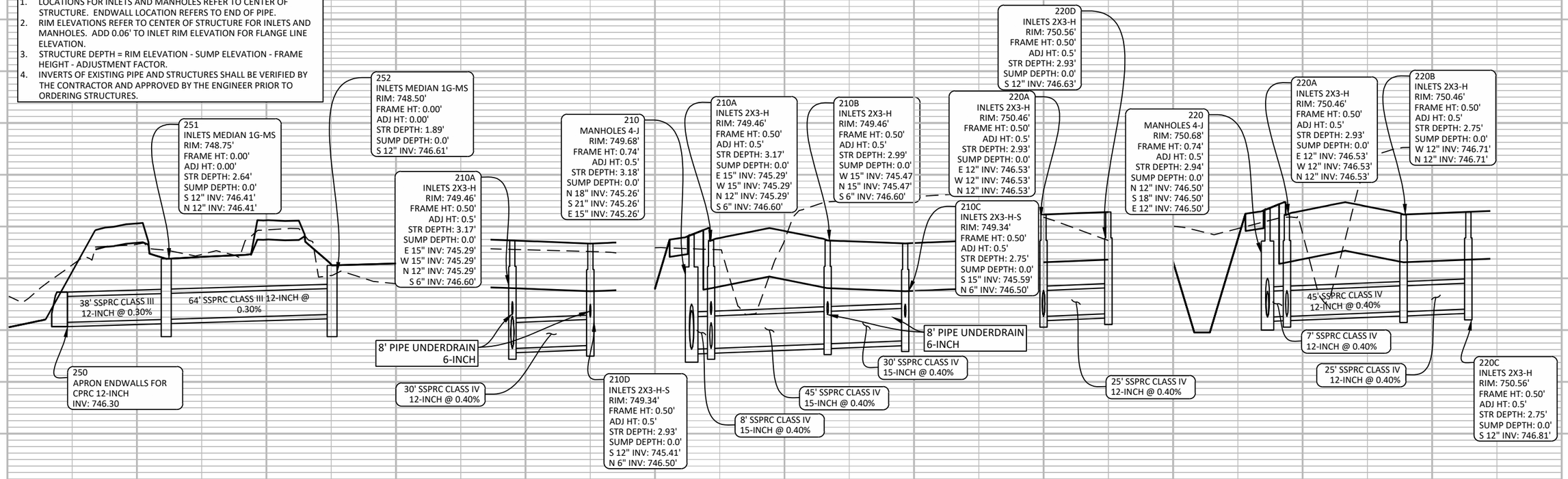


PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	STORM SEWER	SHEET 44	E

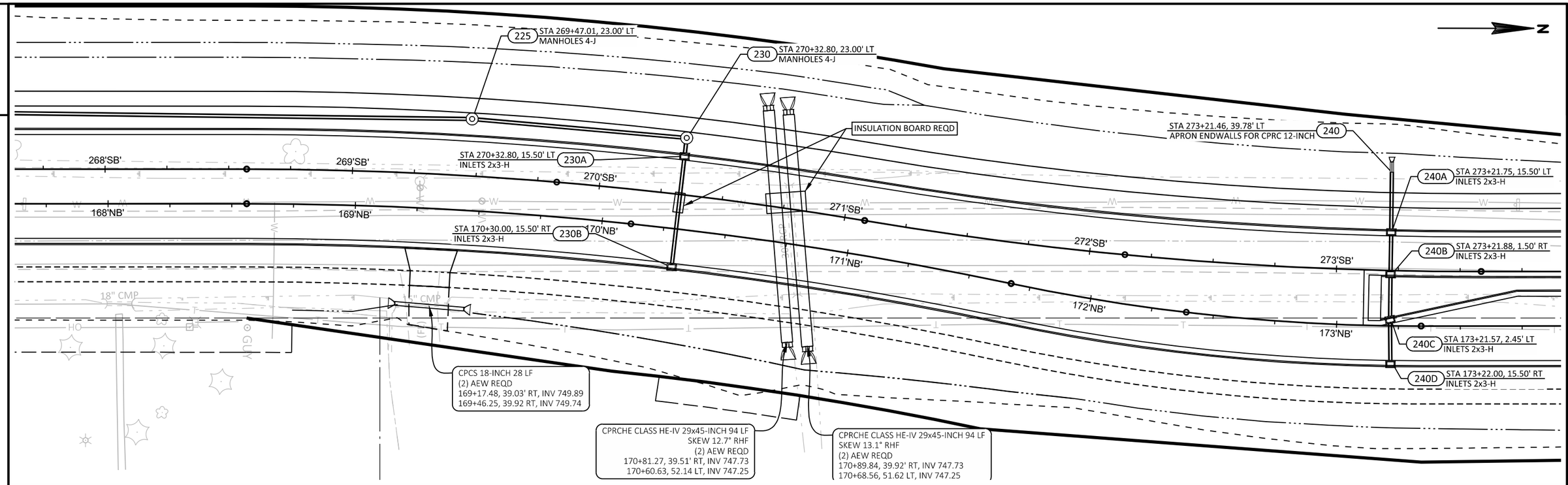
FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-022501-SS.DWG
LAYOUT NAME - 451607-022505-ss
PLOT DATE : 10/11/2018 9:38 AM
PLOT BY : ANDREW WESTBROOK
PLOT NAME :
PLOT SCALE : 1 IN:40 FT



1. LOCATIONS FOR INLETS AND MANHOLES REFER TO CENTER OF STRUCTURE. ENDWALL LOCATION REFERS TO END OF PIPE.
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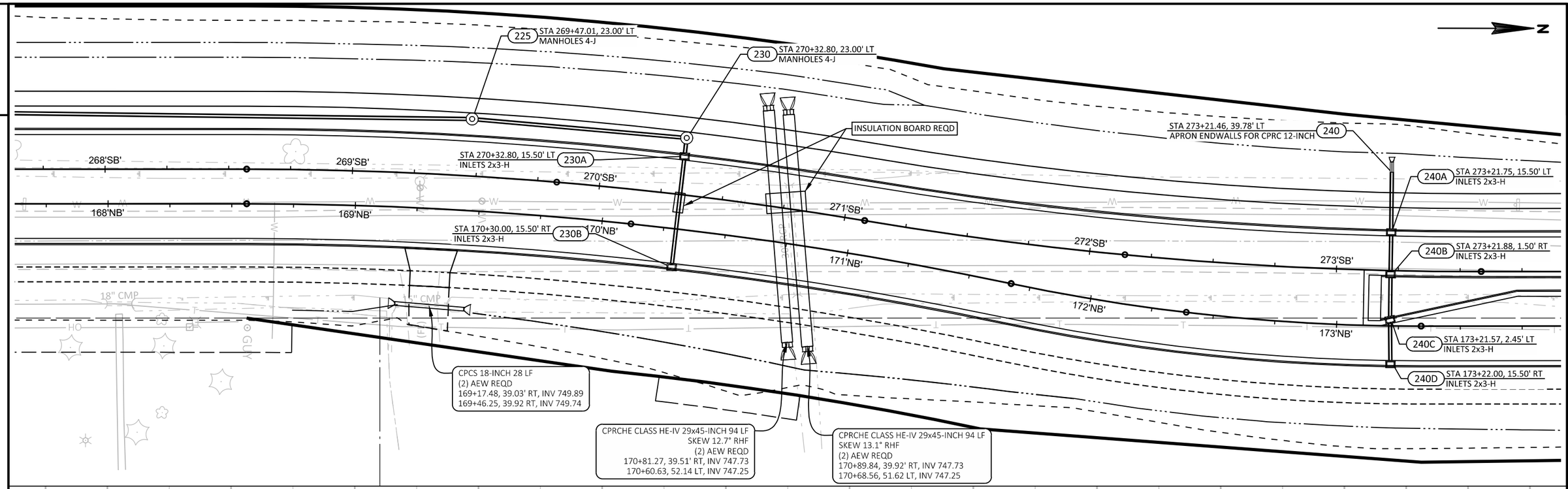


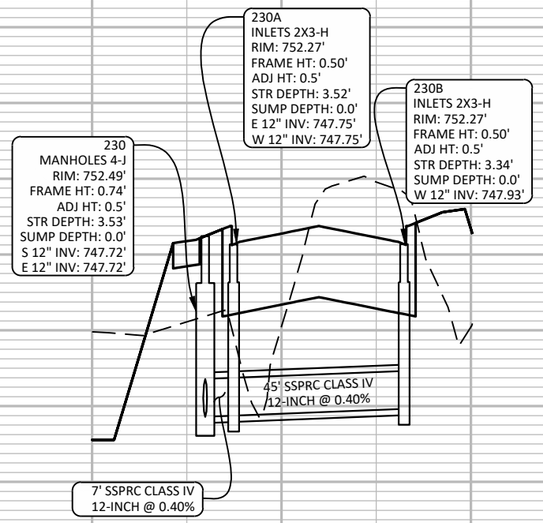
PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	STORM SEWER	SHEET 45 E

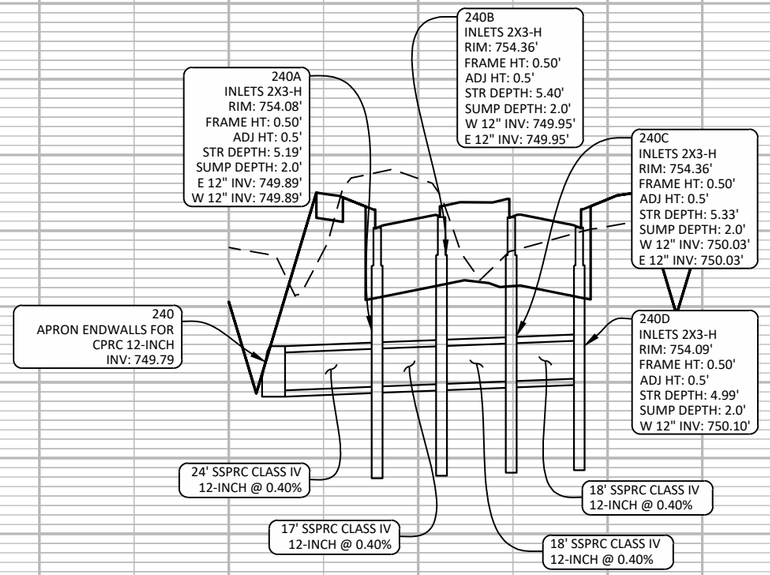


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PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	STORM SEWER	SHEET 46	E

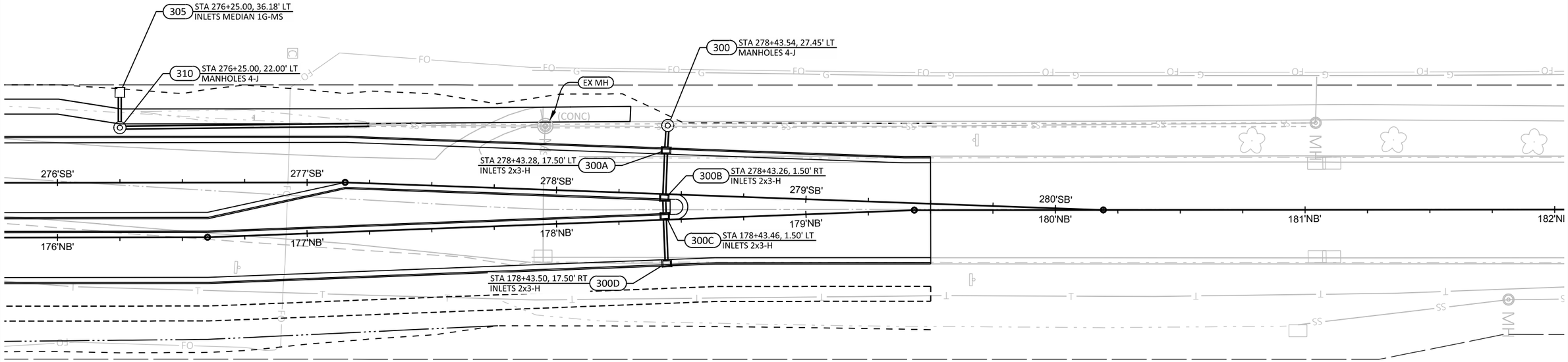


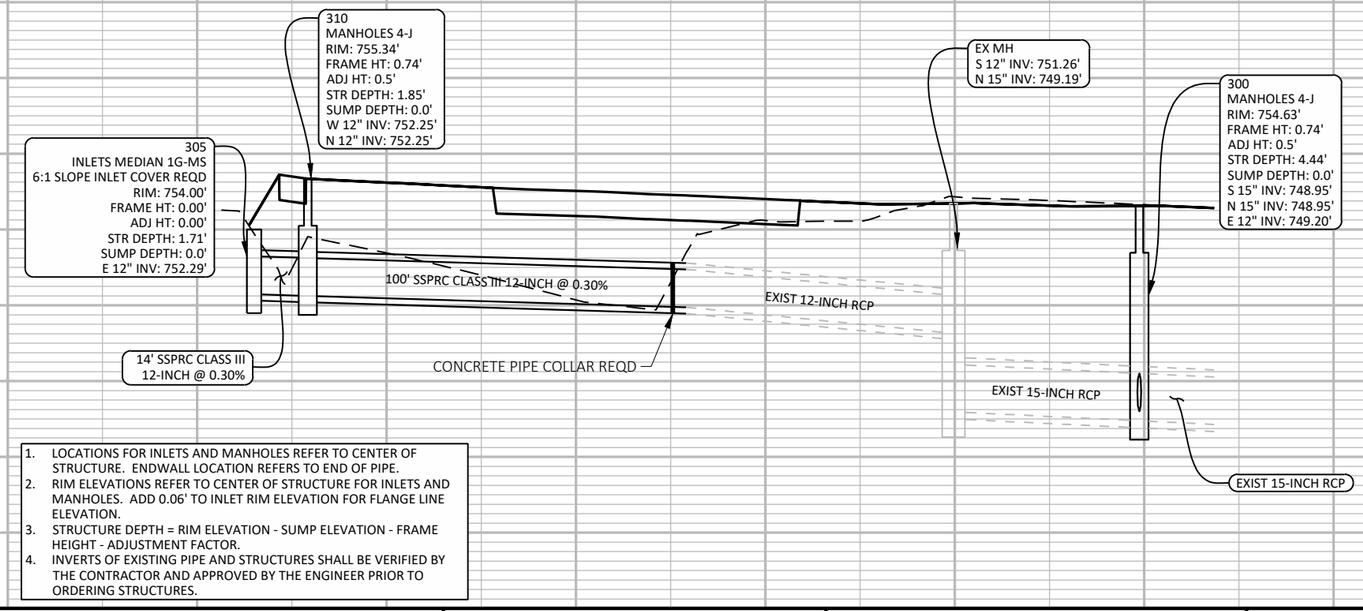


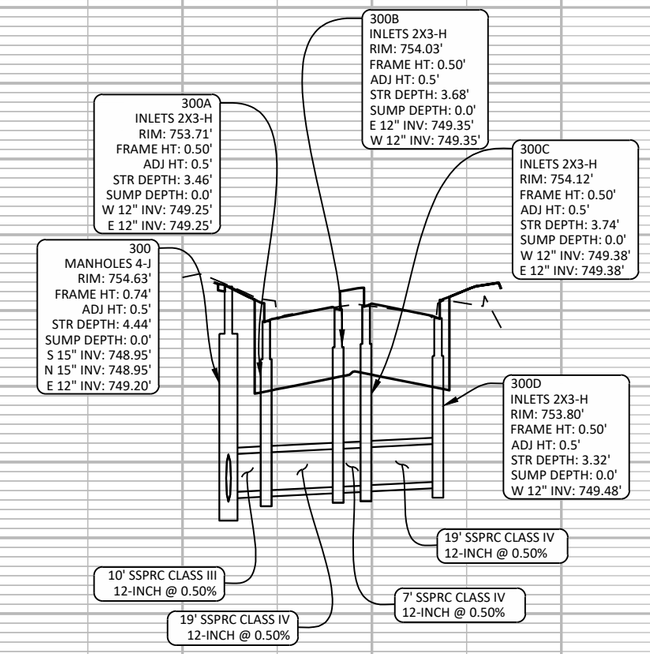


760 758 756 754 752 750 748 746 744 742

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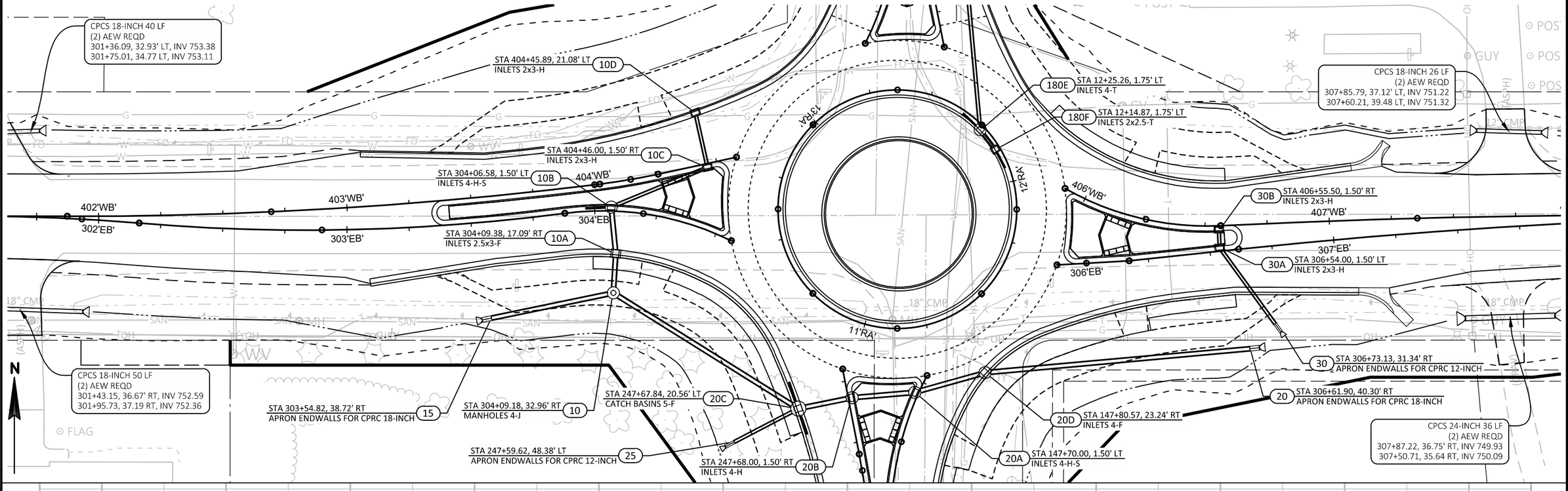


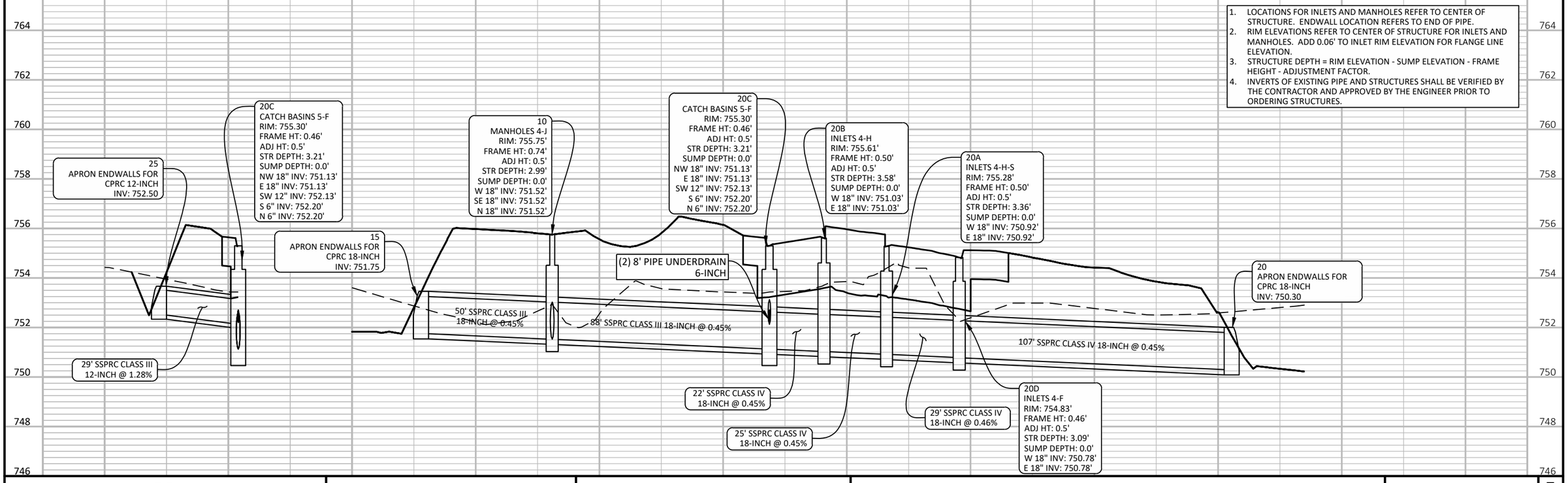


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PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	STORM SEWER	SHEET 48	E

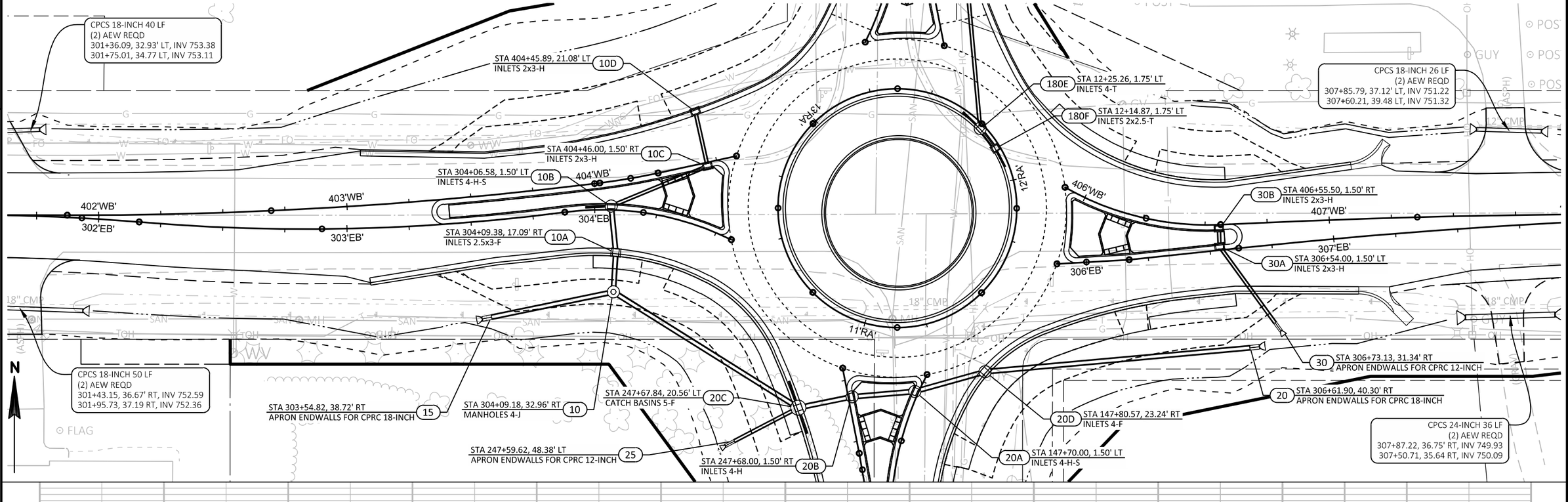
FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-022501-SS.DWG
LAYOUT NAME - 451607-022509-ss
PLOT DATE : 9/28/2018 11:45 AM PLOT BY : ANDREW WESTBROOK PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 41

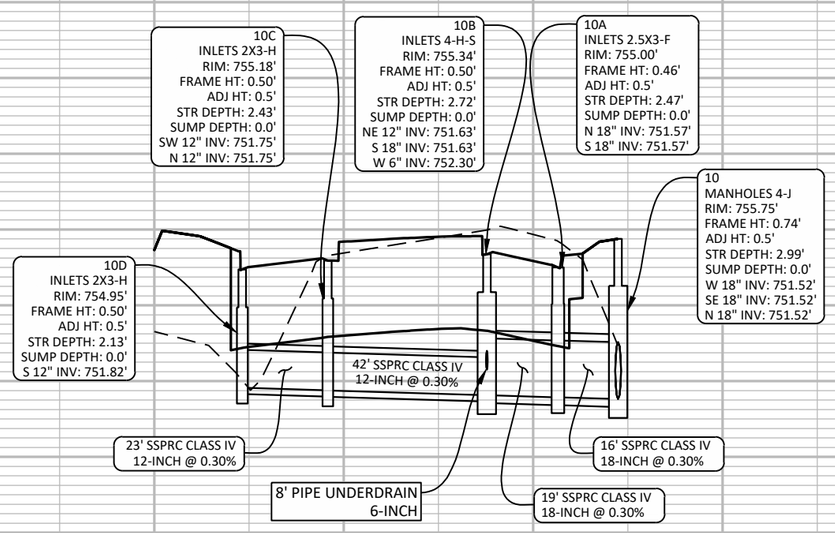


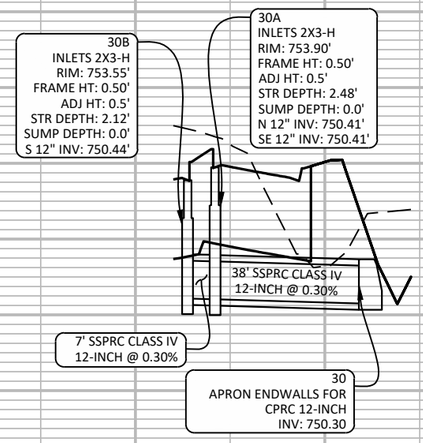


1. LOCATIONS FOR INLETS AND MANHOLES REFER TO CENTER OF STRUCTURE. ENDWALL LOCATION REFERS TO END OF PIPE.
2. RIM ELEVATIONS REFER TO CENTER OF STRUCTURE FOR INLETS AND MANHOLES. ADD 0.06' TO INLET RIM ELEVATION FOR FLANGE LINE ELEVATION.
3. STRUCTURE DEPTH = RIM ELEVATION - SUMP ELEVATION - FRAME HEIGHT - ADJUSTMENT FACTOR.
4. INVERTS OF EXISTING PIPE AND STRUCTURES SHALL BE VERIFIED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER PRIOR TO ORDERING STRUCTURES.

PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	STORM SEWER	SHEET 49 E



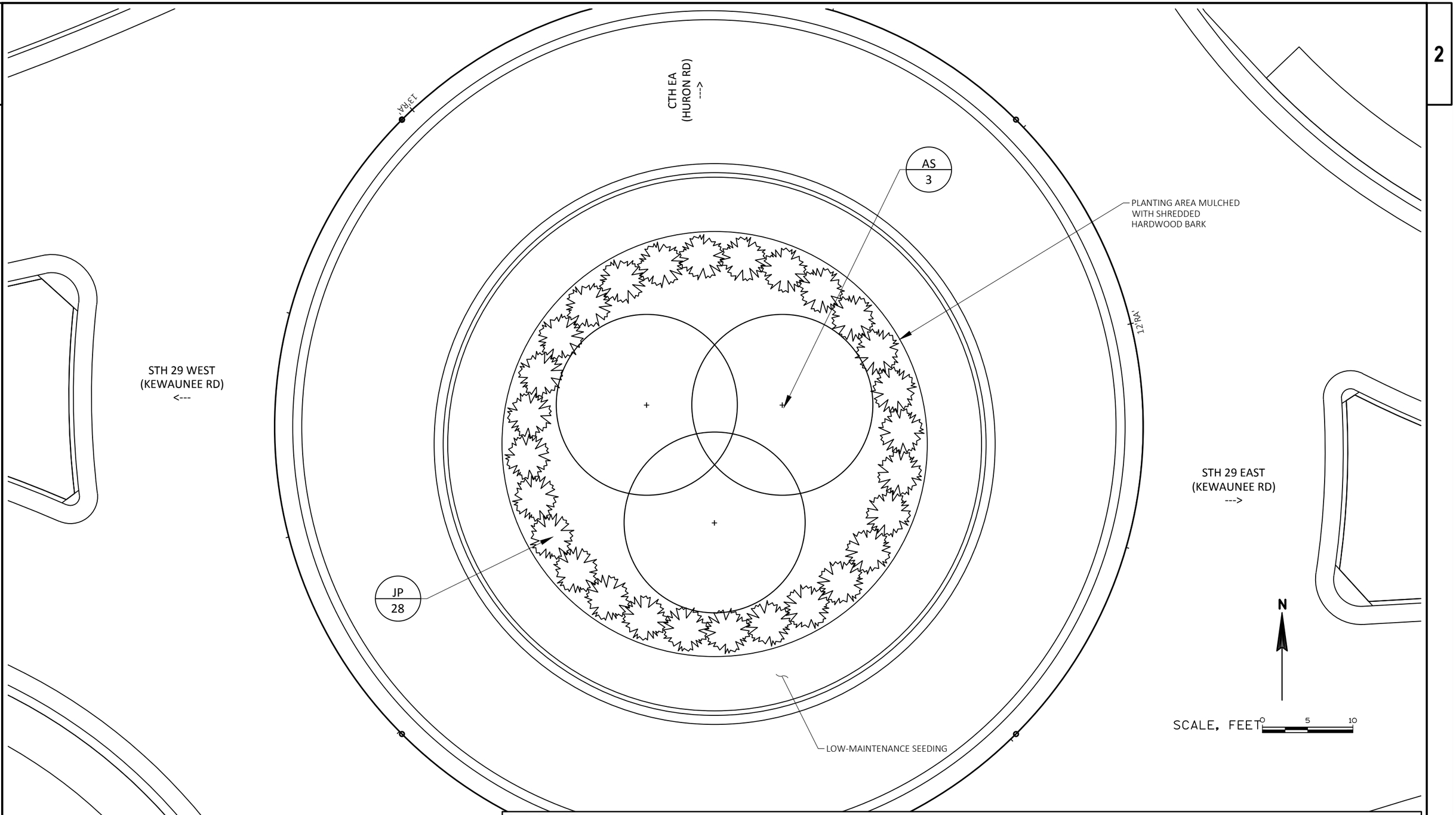




1. LOCATIONS FOR INLETS AND MANHOLES REFER TO CENTER OF STRUCTURE. ENDWALL LOCATION REFERS TO END OF PIPE.
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4. INVERTS OF EXISTING PIPE AND STRUCTURES SHALL BE VERIFIED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER PRIOR TO ORDERING STRUCTURES.

PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	STORM SEWER	SHEET 50	E

FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-022501-SS.DWG
LAYOUT NAME - 451607-022511-ss
PLOT DATE : 9/28/2018 11:46 AM PLOT BY : ANDREW WESTBROOK PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 41



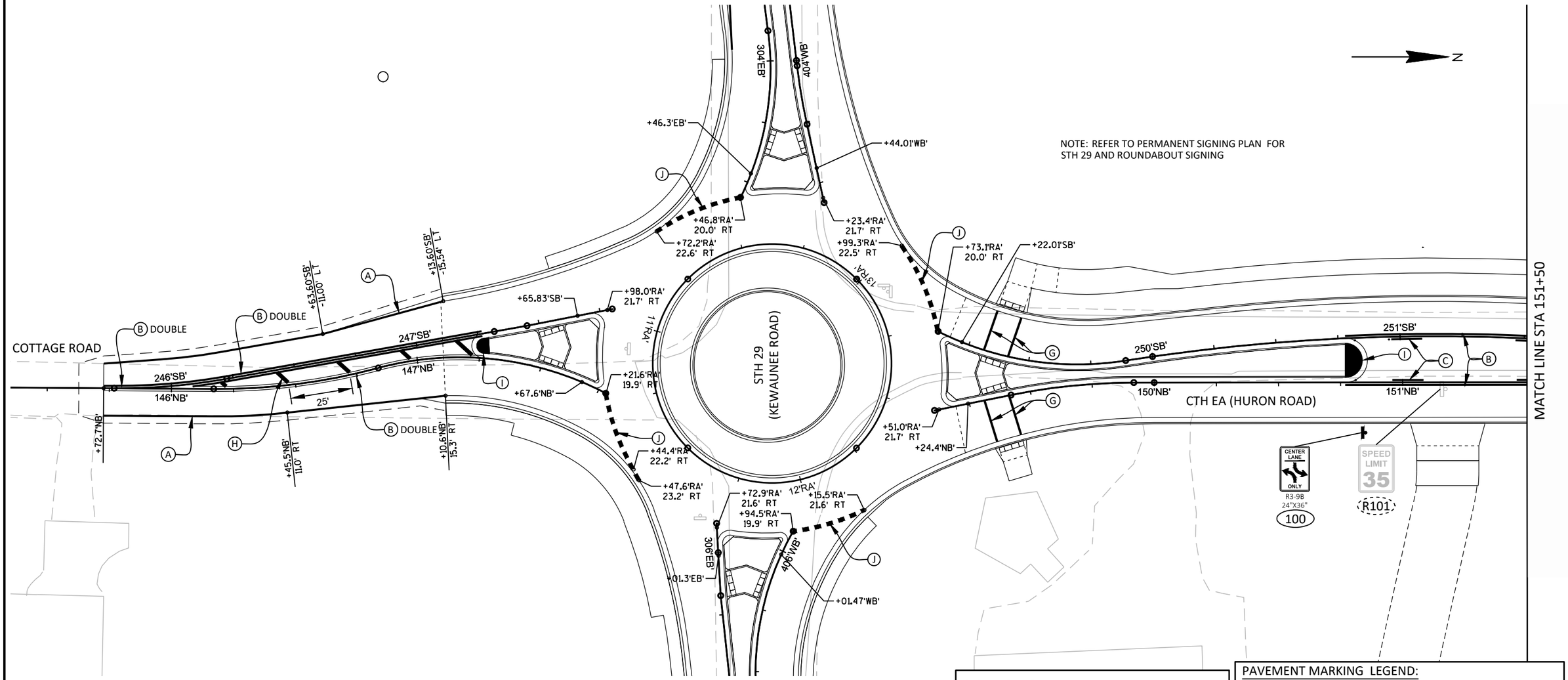
PLANT LIST

QTY	SYM	COMMON NAME	SCIENTIFIC NAME	TYPE	AVERAGE MATURE HEIGHT	PLANT SPACING	SIZE WHEN PLANTED	ROOT MODE	HOLE SIZE	HOLE DEPTH	FERTILIZER UNITS	BRACE
3	AS	APPLE SERVICEBERRY	AMELANCHIER X GRANDFLORA 'AUTUMN BRILLIANCE"	3S	20'-25'	15' OC	6-FT HT	B&B	24"	12"	3	YES
28	JP	JUNIPER, PFITZER "KALLAY'S COMPACT"	JUNIPERUS CHINENSIS "PFITZERIANA KALLAY"	3E	2'-3'	5' OC	24" SP/*3	CONT	36"	18"	2	NO

PROJECT NO: 4516-07-71 | HWY: CTH EA | COUNTY: BROWN | PLANTING | SHEET 51

FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-023100-PL.DWG
LAYOUT NAME - 451607-023101-pl
PLOT DATE : 9/27/2018 11:24 AM PLOT BY : OMNNI ASSOCIATES - CRAIG KNUTH PLOT SCALE : ##########
451607-023101-p
WISDOT/CADDS SHEET 42

2



SIGNING LEGEND

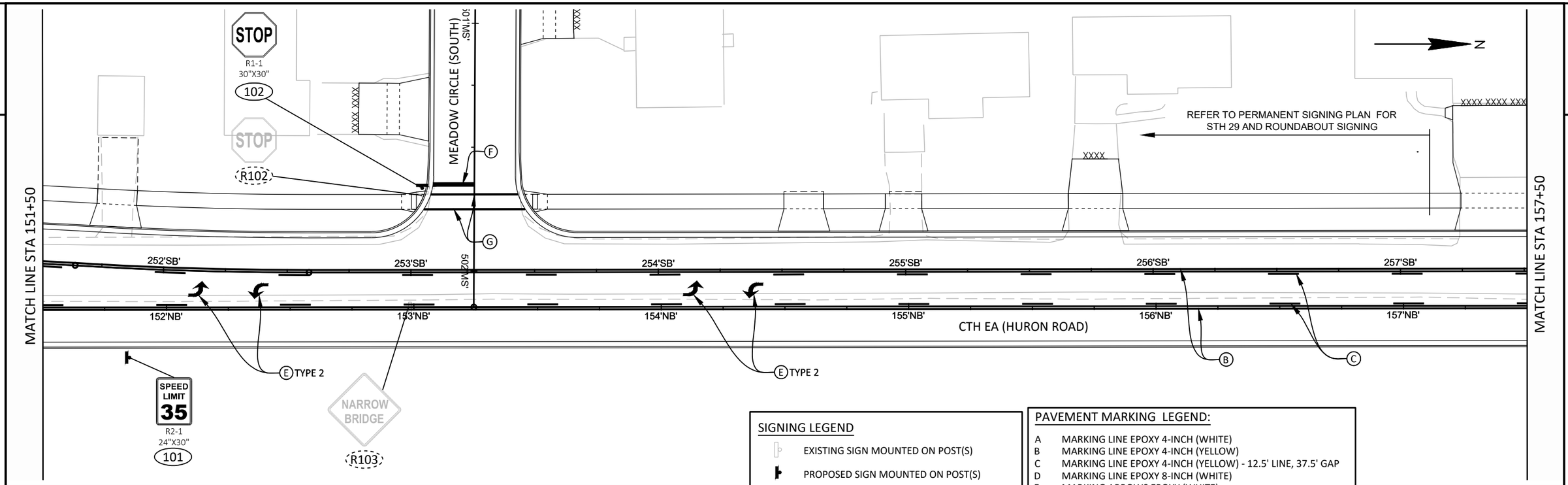
- EXISTING SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- R000 — REMOVE EXISTING SIGN (BY OTHERS)
- 000 — PROPOSED SIGN (BY OTHERS)
- M000 — MOVE EXISTING SIGN (BY OTHERS)

PAVEMENT MARKING LEGEND:

A	MARKING LINE EPOXY 4-INCH (WHITE)
B	MARKING LINE EPOXY 4-INCH (YELLOW)
C	MARKING LINE EPOXY 4-INCH (YELLOW) - 12.5' LINE, 37.5' GAP
D	MARKING LINE EPOXY 8-INCH (WHITE)
E	MARKING ARROWS EPOXY (WHITE)
F	MARKING STOP LINE EPOXY 18-INCH (WHITE)
G	MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH (WHITE)
H	MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
I	MARKING ISLAND NOSE EPOXY (YELLOW)
J	MARKING DOTTED EXTENSION EPOXY 18-INCH (WHITE)

PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 52	E

FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-023200-PS&PM.DWG
LAYOUT NAME - 451607-023201-ps&pm
PLOT DATE : 10/17/2018 1:28 PM
PLOT BY : OMNNI ASSOCIATES - CRAIG KNUTH
PLOT SCALE : ##########
451607-023201-ps&pm
WISDOT/CADDS SHEET 42

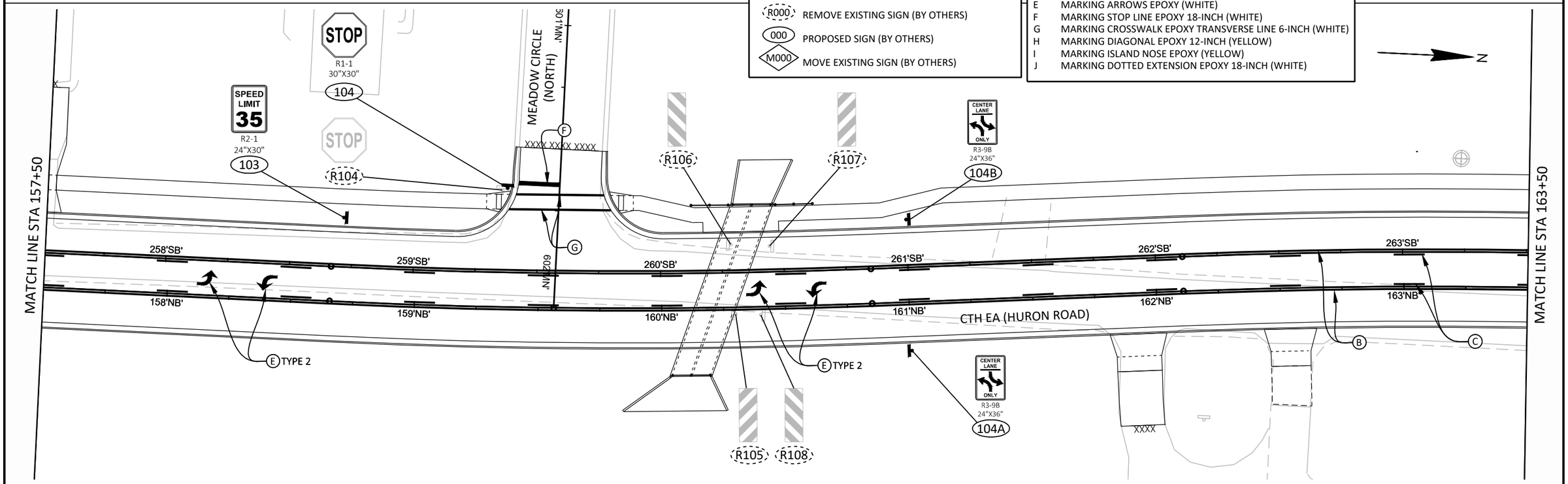


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J	MARKING DOTTED EXTENSION EPOXY 18-INCH (WHITE)



PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 53 E

2

MATCH LINE STA 163+50

E TYPE 2

264'SB' 265'SB' 266'SB' 267'SB' 268'SB' 269'SB'

164'NB' 165'NB' 166'NB' 167'NB' 168'NB' 169'NB'

CTH EA (HURON ROAD)

B C

NARROW BRIDGE

R109

E TYPE 2

MATCH LINE STA 169+50

N

2

SPEED LIMIT 35

R2-1
24"X30"
105

SIGNING LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- R000 REMOVE EXISTING SIGN (BY OTHERS)
- 000 PROPOSED SIGN (BY OTHERS)
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H	MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
I	MARKING ISLAND NOSE EPOXY (YELLOW)
J	MARKING DOTTED EXTENSION EPOXY 18-INCH (WHITE)

MATCH LINE STA 169+50

E TYPE 2

270'SB' 271'SB' 272'SB' 273'SB' 274'SB' 275'SB'

170'NB' 171'NB' 172'NB' 173'NB' 174'NB' 175'NB'

CTH EA (HURON ROAD)

B C I D

+73.1'NB'

CENTER LANE ONLY

R3-9B
24"X36"
105A

SPEED LIMIT 35

R110

SPEED LIMIT 35

R2-1
24"X30"
107

STOP

R1-1
30"X30"
109

STOP

R111

F G

703'NW'

E TYPE 2

I

E TYPE 2

R4-7
24"X30"
106
BOX OUT

R4-7
24"X30"
108
BOX OUT

STOP

R112

STOP

R1-1
30"X30"
110

F

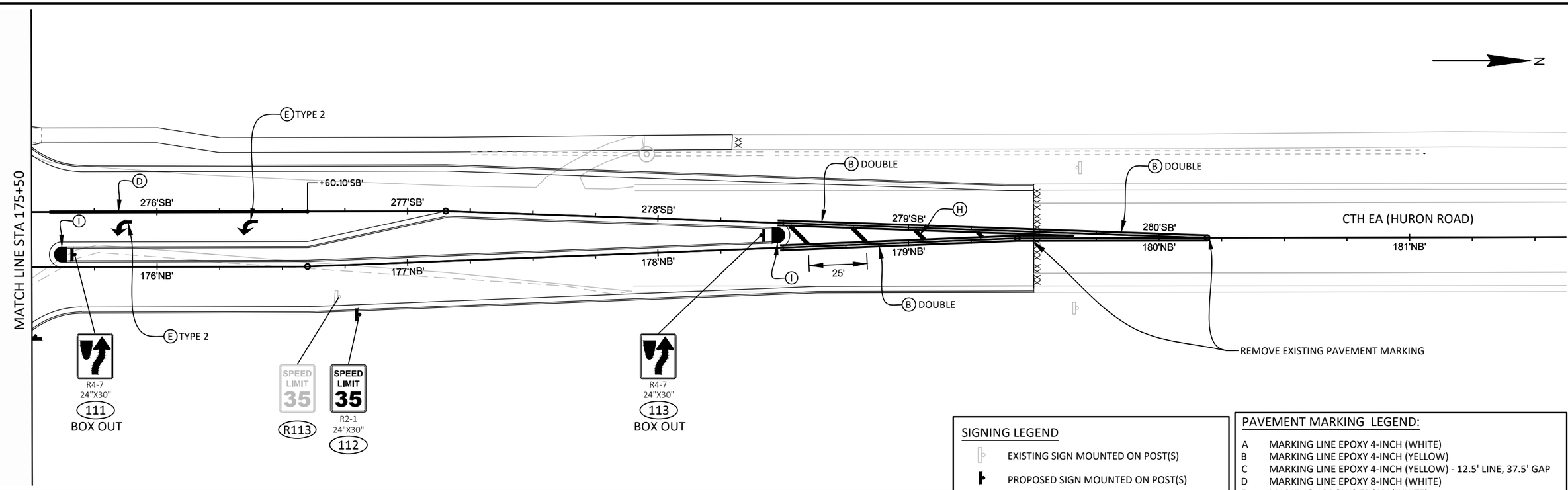
WILLOW ROAD

MATCH LINE STA 175+50

N

PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 54	E

FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-023200-PS&PM.DWG
LAYOUT NAME - 451607-023203-ps&pm
PLOT DATE : 10/17/2018 1:28 PM PLOT BY : OMNNI ASSOCIATES - CRAIG KNUTH PLOT SCALE : ##########
451607-023203-ps&pm
WISDOT/CADDS SHEET 42



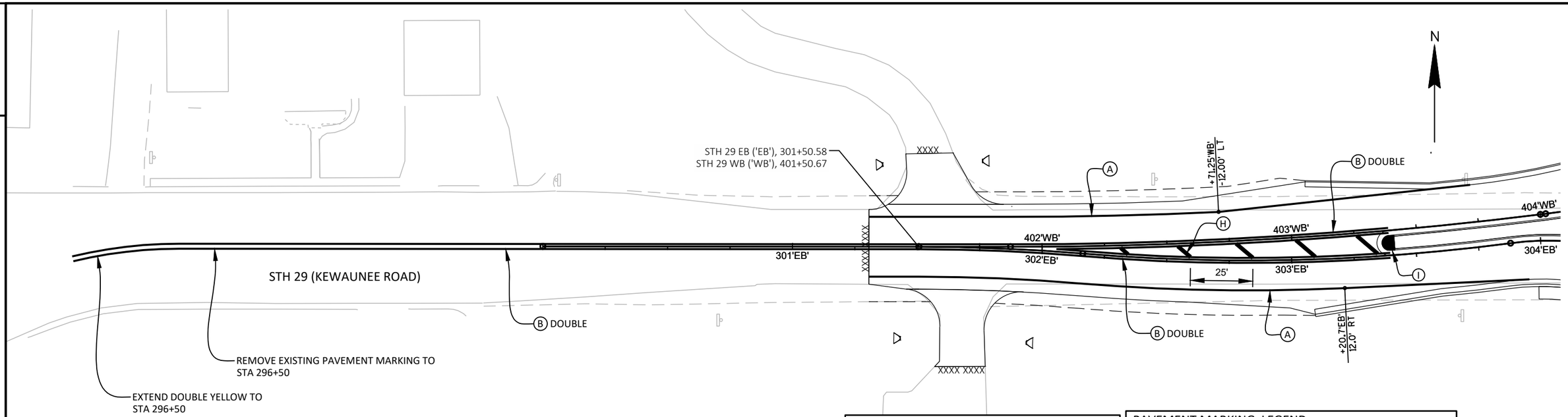
SIGNING LEGEND

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- PROPOSED SIGN MOUNTED ON POST(S)
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H	MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
I	MARKING ISLAND NOSE EPOXY (YELLOW)
J	MARKING DOTTED EXTENSION EPOXY 18-INCH (WHITE)

2

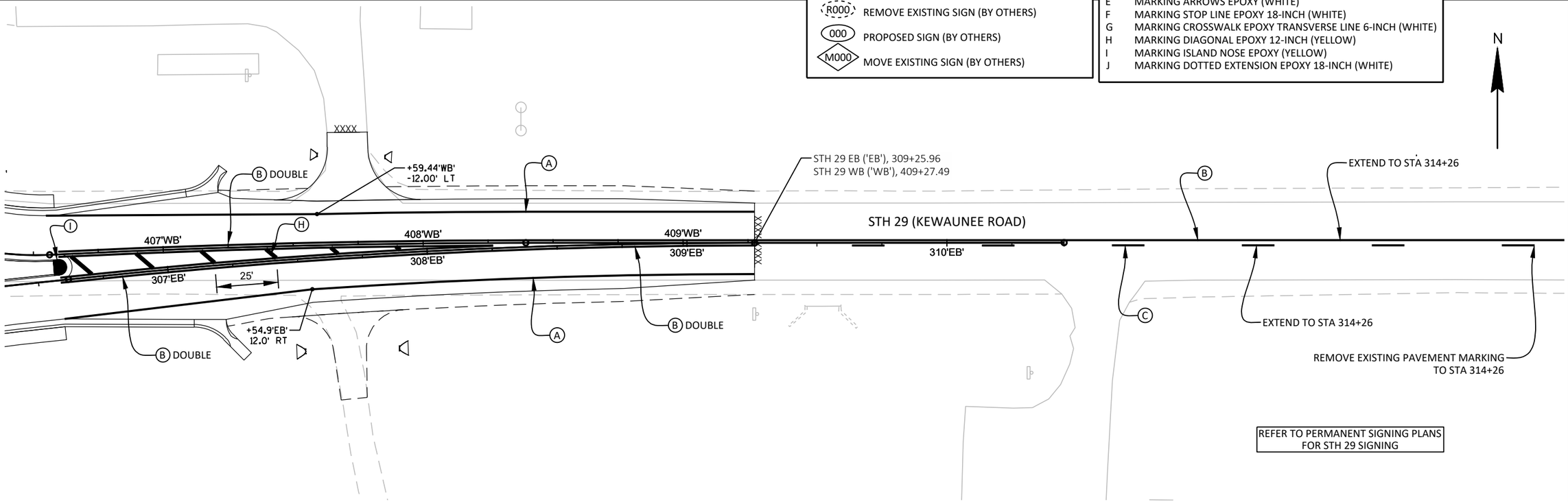


SIGNING LEGEND

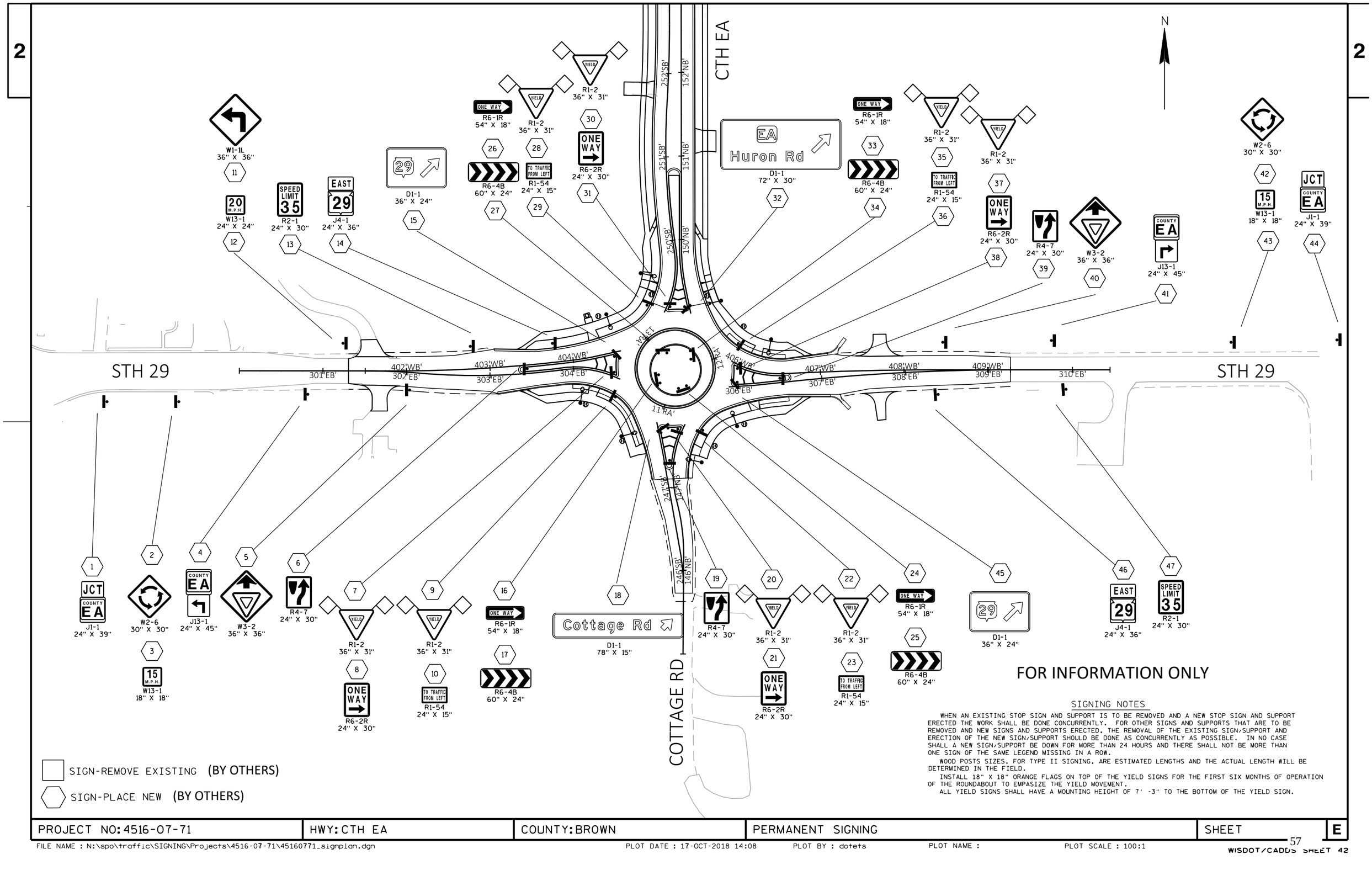
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REFER TO PERMANENT SIGNING PLANS FOR STH 29 SIGNING



SIGN-REMOVE EXISTING (BY OTHERS)

SIGN-PLACE NEW (BY OTHERS)

FOR INFORMATION ONLY

SIGNING NOTES

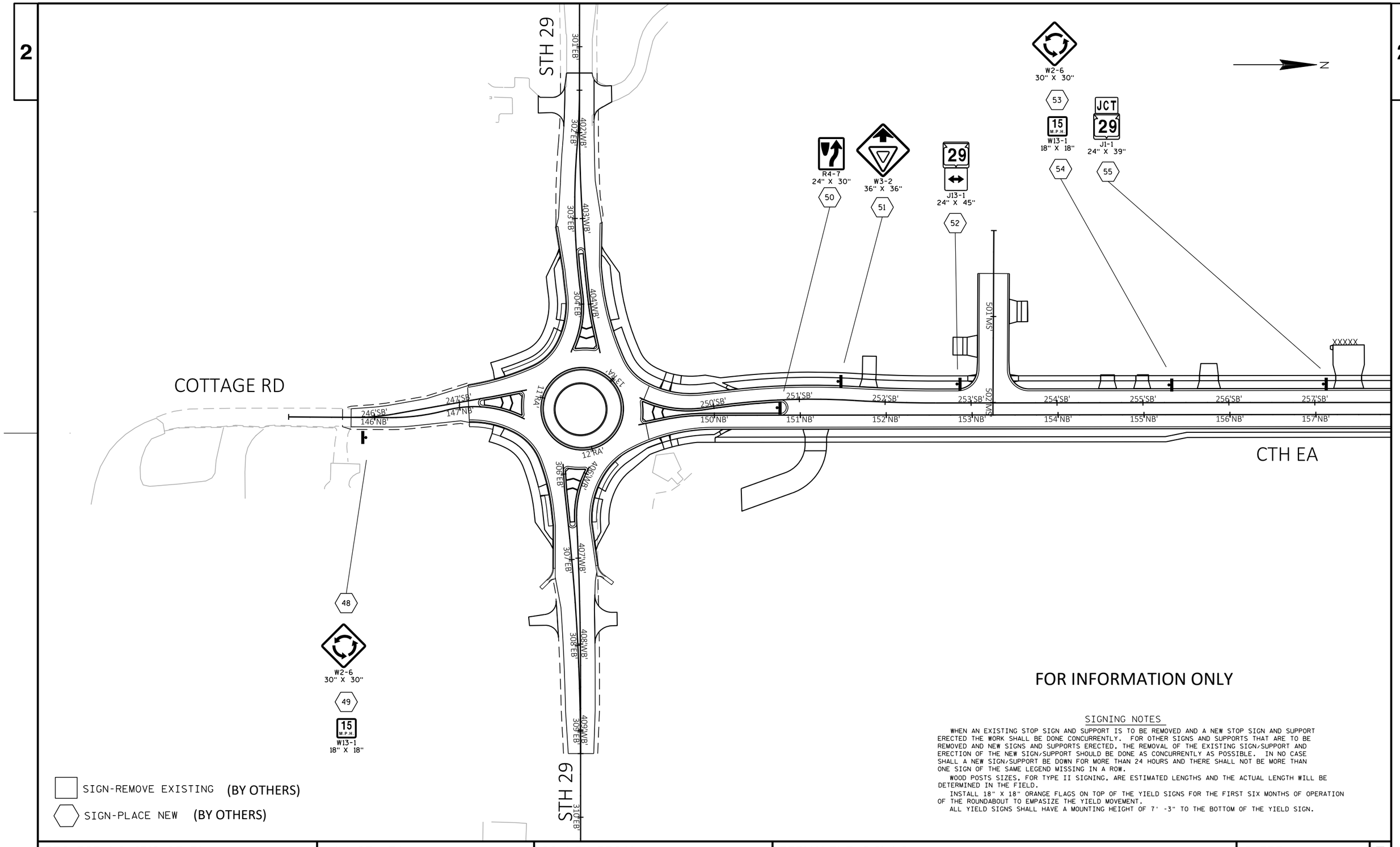
WHEN AN EXISTING STOP SIGN AND SUPPORT IS TO BE REMOVED AND A NEW STOP SIGN AND SUPPORT ERECTED THE WORK SHALL BE DONE CONCURRENTLY. FOR OTHER SIGNS AND SUPPORTS THAT ARE TO BE REMOVED AND NEW SIGNS AND SUPPORTS ERECTED, THE REMOVAL OF THE EXISTING SIGN/SUPPORT AND ERECTION OF THE NEW SIGN/SUPPORT SHOULD BE DONE AS CONCURRENTLY AS POSSIBLE. IN NO CASE SHALL A NEW SIGN/SUPPORT BE DOWN FOR MORE THAN 24 HOURS AND THERE SHALL NOT BE MORE THAN ONE SIGN OF THE SAME LEGEND MISSING IN A ROW.

WOOD POSTS SIZES, FOR TYPE II SIGNING, ARE ESTIMATED LENGTHS AND THE ACTUAL LENGTH WILL BE DETERMINED IN THE FIELD.

INSTALL 18" X 18" ORANGE FLAGS ON TOP OF THE YIELD SIGNS FOR THE FIRST SIX MONTHS OF OPERATION OF THE ROUNDABOUT TO EMPASIZE THE YIELD MOVEMENT.

ALL YIELD SIGNS SHALL HAVE A MOUNTING HEIGHT OF 7' -3" TO THE BOTTOM OF THE YIELD SIGN.

PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	PERMANENT SIGNING	SHEET	E



FOR INFORMATION ONLY

SIGNING NOTES

WHEN AN EXISTING STOP SIGN AND SUPPORT IS TO BE REMOVED AND A NEW STOP SIGN AND SUPPORT ERECTED THE WORK SHALL BE DONE CONCURRENTLY. FOR OTHER SIGNS AND SUPPORTS THAT ARE TO BE REMOVED AND NEW SIGNS AND SUPPORTS ERECTED, THE REMOVAL OF THE EXISTING SIGN/SUPPORT AND ERECTION OF THE NEW SIGN/SUPPORT SHOULD BE DONE AS CONCURRENTLY AS POSSIBLE. IN NO CASE SHALL A NEW SIGN/SUPPORT BE DOWN FOR MORE THAN 24 HOURS AND THERE SHALL NOT BE MORE THAN ONE SIGN OF THE SAME LEGEND MISSING IN A ROW.

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PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	PERMANENT SIGNING	SHEET	E

FILE NAME : N:\spo\traffic\SIGNING\Projects\4516-07-71\45160771_signplan.dgn PLOT DATE : 17-OCT-2018 14:08 PLOT BY : dotets PLOT NAME : PLOT SCALE : 100:1

2

CTH EA

N

STH 29

STH 29

COTTAGE RD

W1-1L
36" X 36"
70

20 M.P.H.
W13-1
24" X 24"
71

STOP
R1-1
30" X 30"
74

72

W1-1L
36" X 36"

73

20 M.P.H.
W13-1
24" X 24"

75

STOP
R1-1
30" X 30"

76

NO PASSING ZONE
W14-3
48" X 36"

77

SPEED LIMIT 35
R2-1
24" X 30"

SIGN-REMOVE EXISTING (BY OTHERS)

SIGN-PLACE NEW (BY OTHERS)

FOR INFORMATION ONLY

SIGNING NOTES

WHEN AN EXISTING STOP SIGN AND SUPPORT IS TO BE REMOVED AND A NEW STOP SIGN AND SUPPORT ERECTED THE WORK SHALL BE DONE CONCURRENTLY. FOR OTHER SIGNS AND SUPPORTS THAT ARE TO BE REMOVED AND NEW SIGNS AND SUPPORTS ERECTED, THE REMOVAL OF THE EXISTING SIGN/SUPPORT AND ERECTION OF THE NEW SIGN/SUPPORT SHOULD BE DONE AS CONCURRENTLY AS POSSIBLE. IN NO CASE SHALL A NEW SIGN/SUPPORT BE DOWN FOR MORE THAN 24 HOURS AND THERE SHALL NOT BE MORE THAN ONE SIGN OF THE SAME LEGEND MISSING IN A ROW.

WOOD POSTS SIZES, FOR TYPE II SIGNING, ARE ESTIMATED LENGTHS AND THE ACTUAL LENGTH WILL BE DETERMINED IN THE FIELD.

INSTALL 18" X 18" ORANGE FLAGS ON TOP OF THE YIELD SIGNS FOR THE FIRST SIX MONTHS OF OPERATION OF THE ROUNDABOUT TO EMPASIZE THE YIELD MOVEMENT.

ALL YIELD SIGNS SHALL HAVE A MOUNTING HEIGHT OF 7' -3" TO THE BOTTOM OF THE YIELD SIGN.

PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	PERMANENT SIGNING	SHEET	E

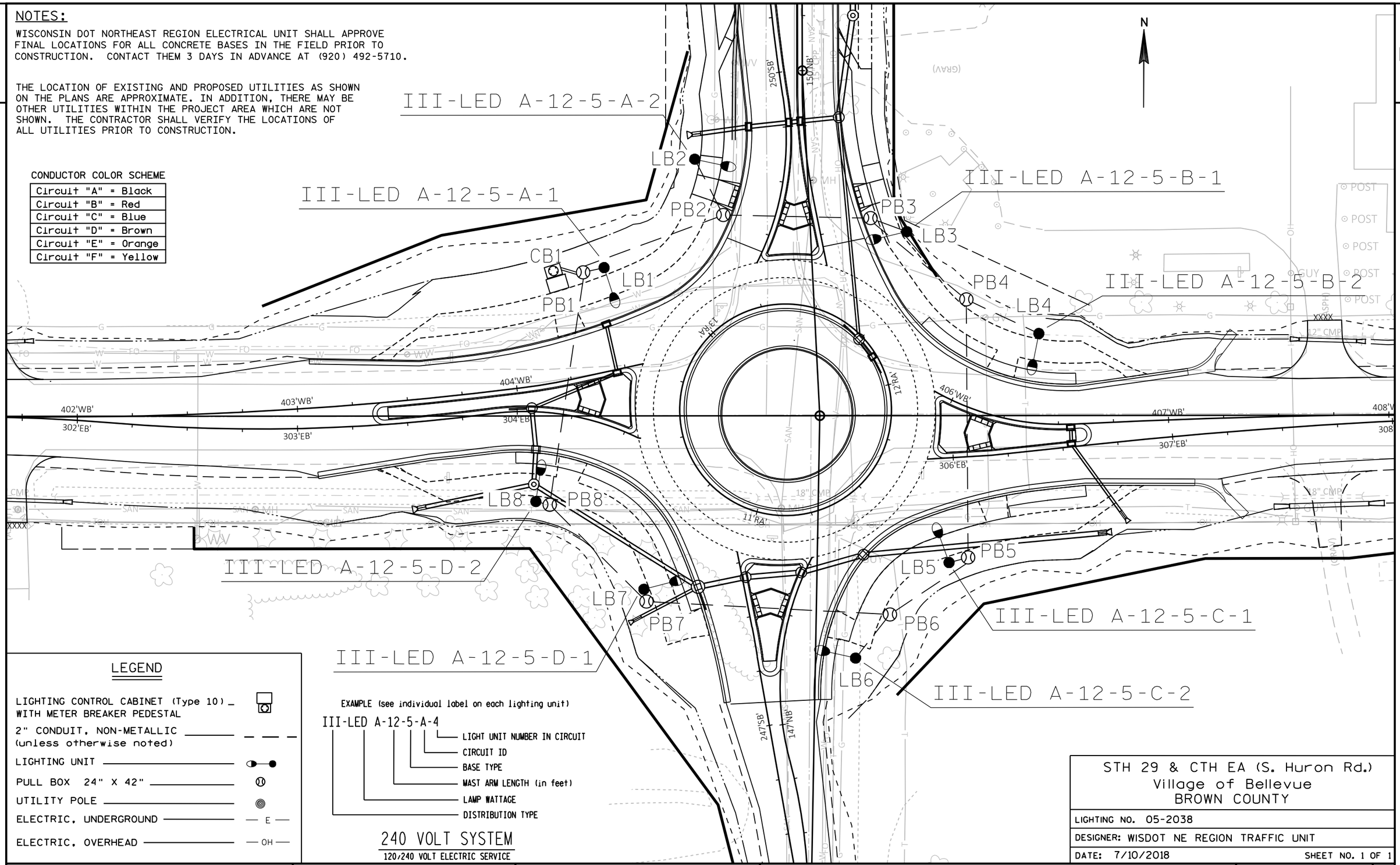
NOTES:

WISCONSIN DOT NORTHEAST REGION ELECTRICAL UNIT SHALL APPROVE FINAL LOCATIONS FOR ALL CONCRETE BASES IN THE FIELD PRIOR TO CONSTRUCTION. CONTACT THEM 3 DAYS IN ADVANCE AT (920) 492-5710.

THE LOCATION OF EXISTING AND PROPOSED UTILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE. IN ADDITION, THERE MAY BE OTHER UTILITIES WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES PRIOR TO CONSTRUCTION.

CONDUCTOR COLOR SCHEME

Circuit "A" = Black
Circuit "B" = Red
Circuit "C" = Blue
Circuit "D" = Brown
Circuit "E" = Orange
Circuit "F" = Yellow



LEGEND

- LIGHTING CONTROL CABINET (Type 10) WITH METER BREAKER PEDESTAL
- 2" CONDUIT, NON-METALLIC (unless otherwise noted)
- LIGHTING UNIT
- PULL BOX 24" X 42"
- UTILITY POLE
- ELECTRIC, UNDERGROUND — E —
- ELECTRIC, OVERHEAD — OH —

EXAMPLE (see individual label on each lighting unit)

III-LED A-12-5-A-4

- LIGHT UNIT NUMBER IN CIRCUIT
- CIRCUIT ID
- BASE TYPE
- MAST ARM LENGTH (in feet)
- LAMP WATTAGE
- DISTRIBUTION TYPE

240 VOLT SYSTEM

120/240 VOLT ELECTRIC SERVICE

STH 29 & CTH EA (S. Huron Rd.)
Village of Bellevue
BROWN COUNTY

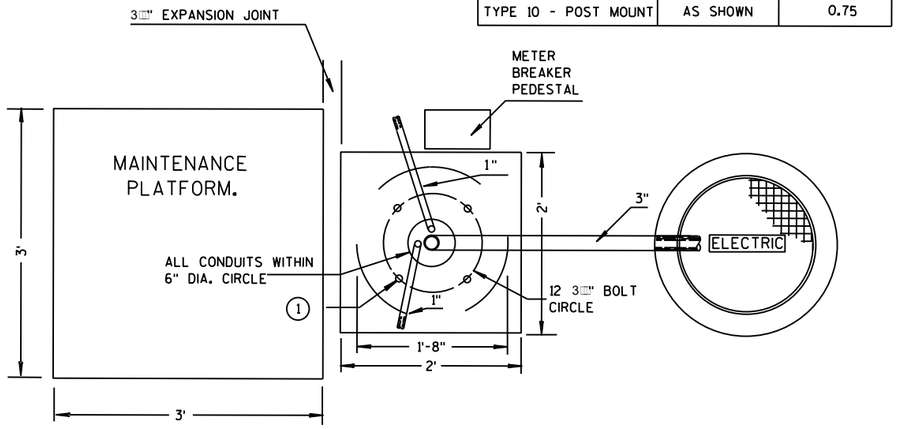
LIGHTING NO. 05-2038

DESIGNER: WISDOT NE REGION TRAFFIC UNIT

DATE: 7/10/2018 SHEET NO. 1 OF 1

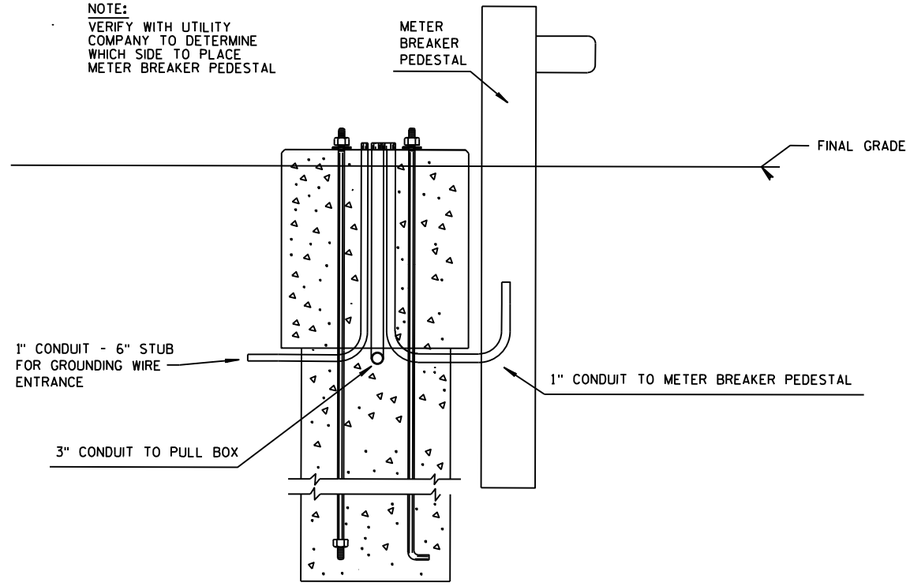
PROJECT NO: 4516-07-71	HWY: STH 29	COUNTY: BROWN	PLAN: CONSTRUCTION DETAIL - LIGHTING	SHEET 60

CONTROL CABINET BASE TYPE	DIMENSIONS	C.Y. CONCRETE (APPROX.)
TYPE 10 - POST MOUNT	AS SHOWN	0.75

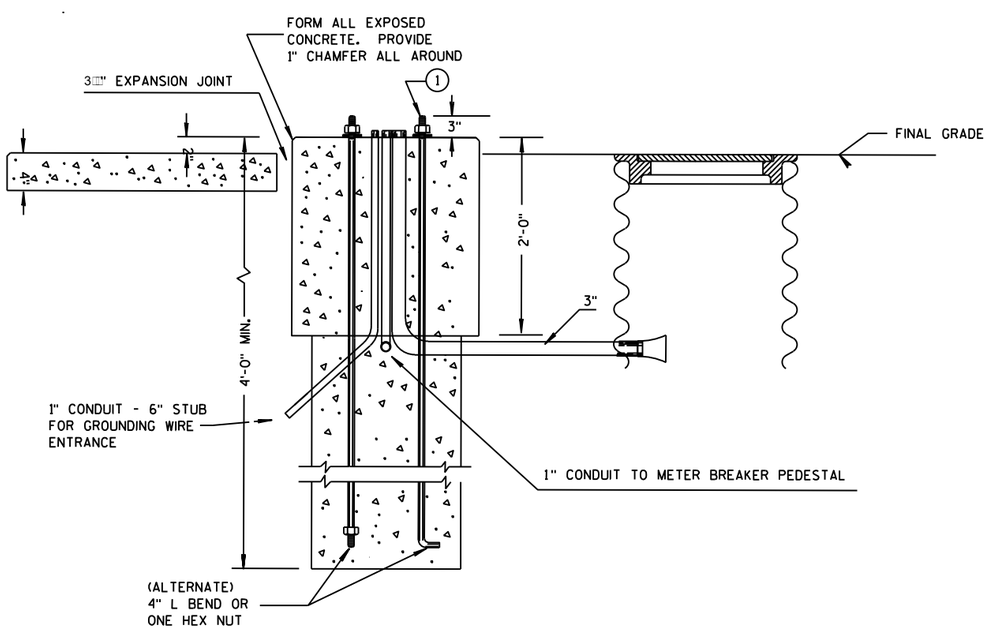


PLAN VIEW

NOTE:
VERIFY WITH UTILITY COMPANY TO DETERMINE WHICH SIDE TO PLACE METER BREAKER PEDESTAL



FRONT VIEW



PROFILE VIEW

GENERAL NOTES

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

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

CONDUIT HEIGHT ABOVE THE CONCRETE BASE SHALL BE 1 INCH.

CONTROL CABINET BASE TOP SURFACES SHALL BE TROWEL FINISHED AND LEVEL.

WHEN A TYPE 10 CONTROL CABINET BASE IS USED TO POST MOUNT A CONTROL CABINET, A 36" SQUARE 4" THICK CONCRETE MAINTENANCE PLATFORM SHALL BE REQUIRED ON THE DOOR SIDE OF THE CABINET. THE TOP 1 INCH SHALL BE ABOVE FINISHED GRADE AND BE BROOM FINISHED AND LEVEL.

MAINTENANCE PLATFORMS ARE NOT REQUIRED WHEN THE SURROUNDING AREA IS PAVED.

ALL CONDUIT ENDS AT THE TOP OF THE CONCRETE BASE SHALL PLUGGED IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF THE CONCRETE BASE BEFORE INSTALLATION OF CABLE OR WIRE.

WHEN ANCHOR RODS USING THE ALTERNATE L BEND ARE FURNISHED FOR THE TYPE 10 BASE, THE 4" L BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH.

THE "L" BEND SHALL NOT BE THREADED.

STRAIGHT ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD.

FOUR (4) ANCHOR RODS, 1" DIA. X 3'-6"
ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 AND 641.2.2 OF THE STANDARD SPECIFICATIONS AND IN ACCORDANCE WITH A-449, OR ASTM. A-687 (GRADE 105).

120/240 VOLT ELECTRIC SERVICE

DATE: 8/9/2018

SHEET NO. 1 OF 1

PROJECT NO: 4516-07-71	HWY: STH 29	COUNTY: BROWN	PLAN: CONSTRUCTION DETAIL - LIGHTING	SHEET 61

TRAFFIC CONTROL GENERAL NOTES

1. DRAWINGS SHOW TRAFFIC CONTROL FOR A TYPICAL SITUATION. ADDITIONAL TRAFFIC CONTROL DEVICES MAY BE REQUIRED AND/OR LAYOUT DETAILS MODIFIED DEPENDING ON METHODS OR SEQUENCE OF OPERATIONS.

2. ALL TRAFFIC CONTROL SIGNING WILL CONFORM TO PART VI OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009 EDITION & THE WISCONSIN SUPPLEMENT DATED MAY 25, 2011.

3. WARNING LIGHTS SHALL NOT BE WORKING ON "COVERED" OR "DOWNED" SIGN OR BARRICADE.

4. DURING HOURS OF DARKNESS, ALL BARRICADES USED TO SHIELD A HAZARD SHALL BE EQUIPPED WITH TYPE "A" LIGHTS.

5. PORTABLE CHANGEABLE MESSAGE SIGNS SHALL BE PLACED SEVEN DAYS IN ADVANCE OF INITIAL ROAD CONSTRUCTION AND SEVEN DAYS IN ADVANCE OF ROAD CLOSURES. (BY OTHERS)

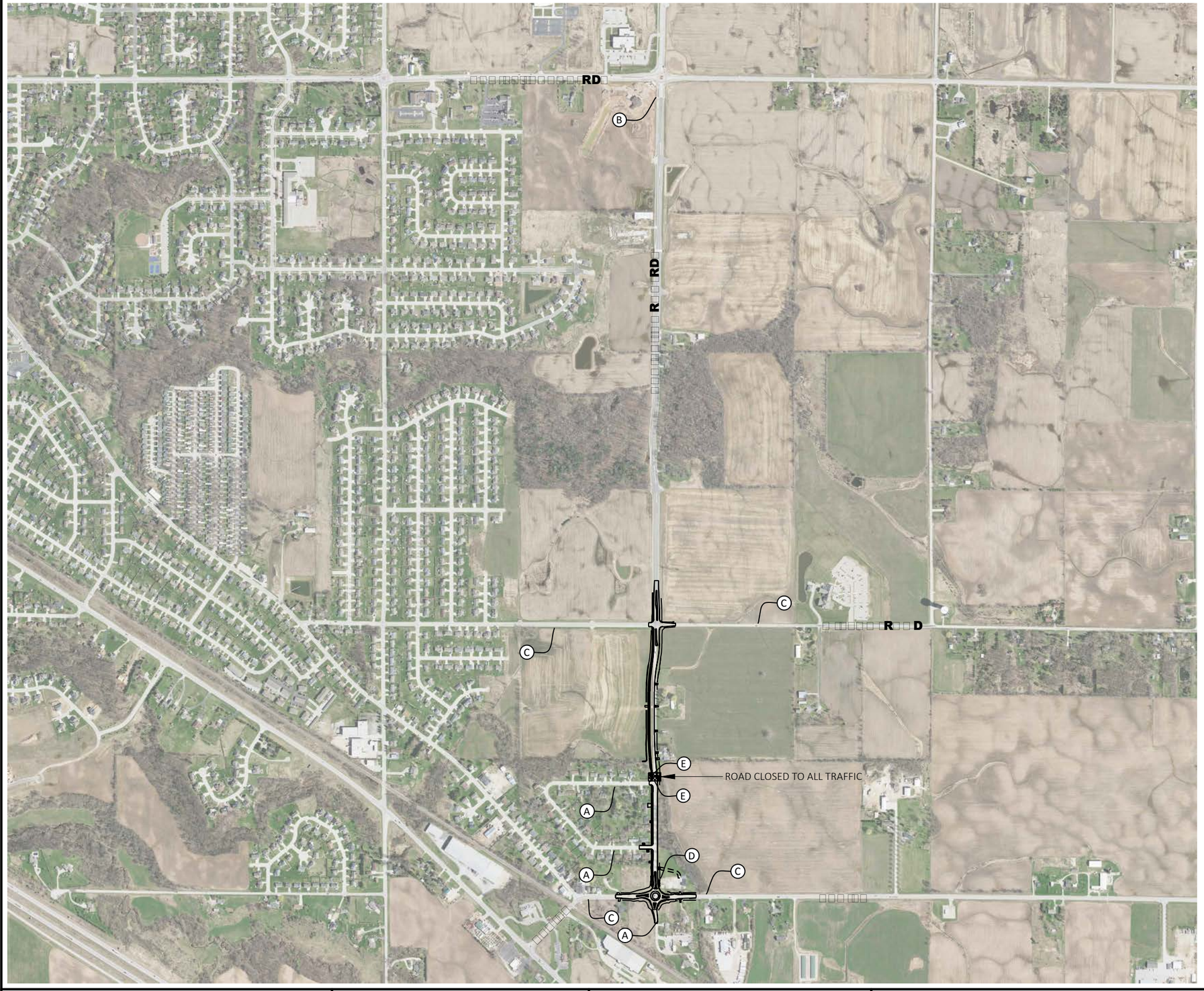
6. LAYOUT INFORMATION PROVIDED IS NOT INTENDED TO REPLACE WHAT IS PROVIDED IN APPLICABLE STANDARD DETAIL DRAWINGS.

7. SEE ADDITIONAL TRAFFIC CONTROL DETAIL SHEETS AND STANDARD DETAIL DRAWINGS FOR ADDITIONAL TRAFFIC CONTROL REQUIREMENTS.

PORTABLE CHANGEABLE MESSAGE SIGNS (BY OTHERS)

			PRIOR TO CONSTRUCTION		STAGE 1		STAGE 2	
SITE NO	LOCATION	ROADWAY CONDITION/ CONSTRUCTION	PHASE I (2 SEC)	PHASE II (2 SEC)	PHASE I (2 SEC)	PHASE II (2 SEC)	PHASE I (2 SEC)	PHASE II (2 SEC)
PCMS 1	ON NB CTH EA	GENERAL	CTH EA ROAD WORK	BEGINS XX/XX/XX	CTH EA TO CLOSE	XX/XX/XX	(NO MESSAGE)	
PCMS 2	ON SB CTH EA	GENERAL	CTH EA ROAD WORK	BEGINS XX/XX/XX	CTH EA TO CLOSE	XX/XX/XX	STH 29 TO CLOSE	XX/XX/XX
PCMS 3	ON EB STH 29	GENERAL	CTH EA ROAD WORK	BEGINS XX/XX/XX	(NO MESSAGE)		STH 29 TO CLOSE	XX/XX/XX
PCMS 4	ON WB STH 29	GENERAL	CTH EA ROAD WORK	BEGINS XX/XX/XX	(NO MESSAGE)		STH 29 TO CLOSE	XX/XX/XX

PCMS TO BE INSTALLED SEVEN DAYS IN ADVANCE OF CONSTRUCTION AND SEVEN DAYS IN ADVANCE OF ROAD CLOSURES



N

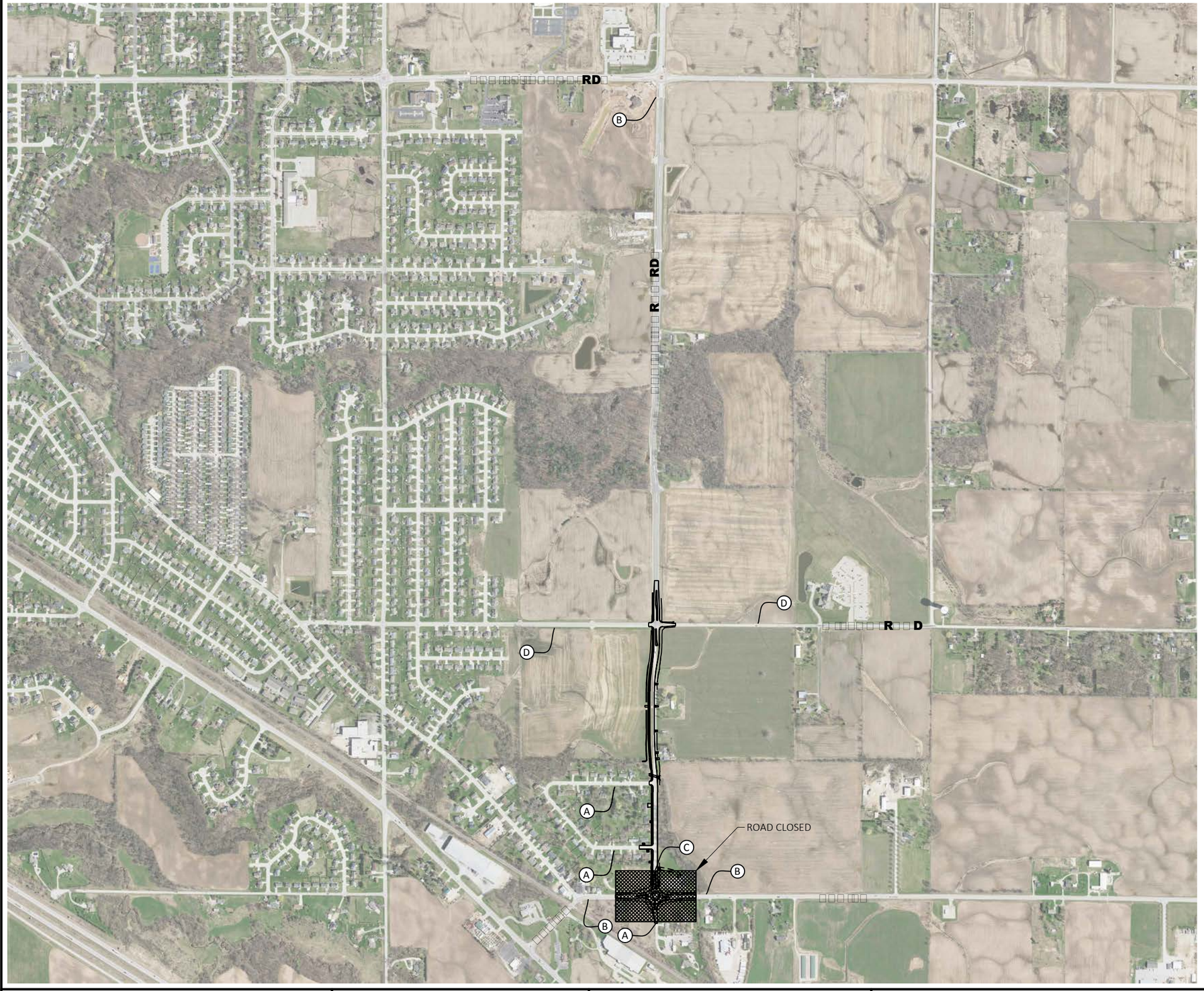
NOTES:

- (A) SEE SDD "BARRICADES AND SIGNS FOR SIDEROAD CLOSURES" DETAIL 4
- (B) SEE SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES" DETAIL A & E
- (C) SEE SDD "BARRICADES AND SIGNS FOR SIDEROAD CLOSURES" DETAIL 3
- (D) SEE SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES" DETAIL B
- (E) SEE SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES" DETAIL D (FOR USE ONLY DURING BOX CULVERT CONSTRUCTION)

PROJECT NO: 4616-07-71	HWY: CTH EA	COUNTY: BROWN	TRAFFIC CONTROL OVERVIEW - STH 29 OPEN	SHEET 63

FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-025000-TC_OVERVIEW.DWG
LAYOUT NAME - 451607-025001-tc_overview

PLOT DATE : 9/10/2018 9:51 AM PLOT BY : OMNNI ASSOCIATES - ANDREW WESTBROOK PLOT SCALE : ############



N

NOTES:

(A) SEE SDD "BARRICADES AND SIGNS FOR SIDEROAD CLOSURES" DETAIL 4

(B) SEE SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES" DETAIL A & E

(C) SEE SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES" DETAIL D

(D) SEE SDD "BARRICADES AND SIGNS FOR SIDEROAD CLOSURES" DETAIL 3

PROJECT NO: 4616-07-71	HWY: CTH EA	COUNTY: BROWN	TRAFFIC CONTROL OVERVIEW - STH 29 CLOSED	SHEET 64

FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-025000-TC_OVERVIEW.DWG
LAYOUT NAME - 451607-025002-tc_overview

PLOT DATE : 9/10/2018 9:51 AM PLOT BY : OMNNI ASSOCIATES - ANDREW WESTBROOK PLOT SCALE : ############

WISDOT/CADDS SHEET 42

2

2

STH 29

301'EB'

302'EB'

303'EB'

304'EB

306'EB'

307'

147'NB'

146'NB'

COTTAGE ROAD

(ASPH)

(GRAV)

18" CMP

15" CMP

FOR INFORMATION ONLY

N

LEGEND:

WORK ZONE

TRAFFIC FLOW ARROW AND VEHICLE SWEPT PATH

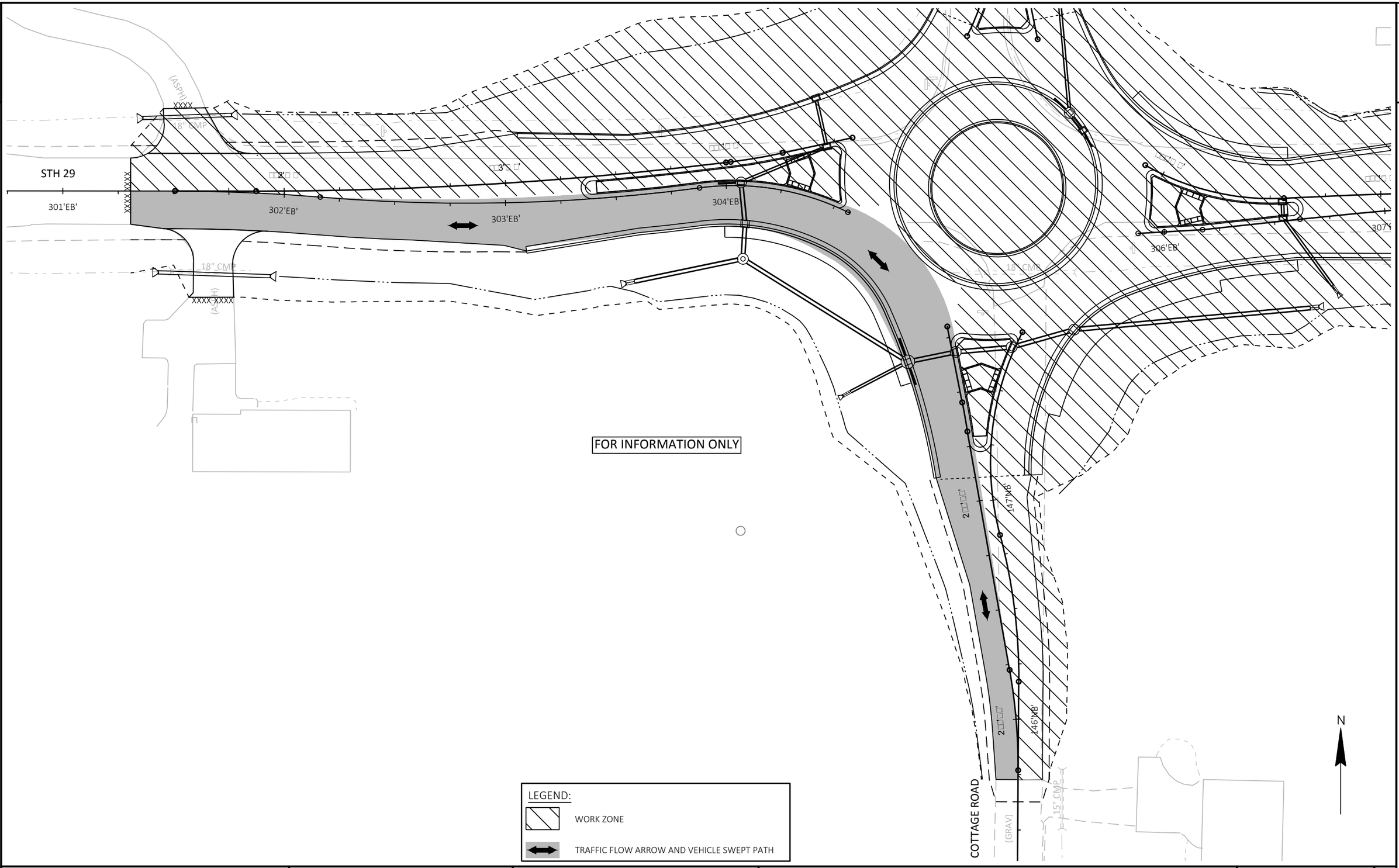
PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	TRAFFIC CONTROL - JERR-DAN 50T DESIGN VEHICLE SWEPT PATH	SHEET --

FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-025003-TC_S1A-S1B.DWG
LAYOUT NAME - 451607-025003-tc_STAGE 1A & 1B

PLOT DATE : 9/10/2018 9:51 AM PLOT BY : OMNNI ASSOCIATES - ANDREW WESTBROOK PLOT SCALE : ##########

WISDOT/CADDS SHEET 42

2



PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	TRAFFIC CONTROL - JERR-DAN 50T DESIGN VEHICLE SWEPT PATH	SHEET -- 66

FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-025004-TC-S2.DWG
LAYOUT NAME - 451607-025004-tc_STAGE 2
PLOT DATE : 9/10/2018 9:51 AM
PLOT BY : OMNNI ASSOCIATES - ANDREW WESTBROOK
PLOT SCALE : ##########
WISDOT/CADDS SHEET 42

PI 'WB' STA = 401+50.67
Y = 541523.117
X = 124825.829

PI 'WB' STA = 402+94.88
Y = 541523.009
X = 124970.046
DELTA = 007°08'05.7"
D = 001°39'38.7"
T = 107.54'
L = 214.81'
R = 1725.00'
PC 'WB' STA = 401+87.34
Y = 541523.090
X = 124862.501
PT 'WB' STA = 404+02.15
Y = 541536.287
X = 125076.767
BK = S89° 57' 25.4"E
AH = N82° 54' 28.8"E

PI 'WB' STA = 404+14.07
Y = 541537.758
X = 125088.593
DELTA = 005°14'54.7"
D = 011°01'06.3"
T = 11.92'
L = 23.82'
R = 260.00'
PC 'WB' STA = 404+02.15
Y = 541536.287
X = 125076.767
PT 'WB' STA = 404+25.97
Y = 541540.305
X = 125100.235
BK = N82° 54' 28.8"E
AH = N77° 39' 34.2"E

PI 'WB' STA = 404+58.24
Y = 541547.202
X = 125131.760

PI 'NW' STA = 41+15.16
Y = 541553.116
X = 125095.221
DELTA = 018°31'43.3"
D = 009°32'57.5"
T = 48.94'
L = 97.02'
R = 300.00'
PC 'NW' STA = 40+66.23
Y = 541547.885
X = 125046.566
PT 'NW' STA = 41+63.25
Y = 541573.536
X = 125139.691
BK = N83° 51' 51.4"E
AH = N65° 20' 08.1"E

PI 'NW' STA = 40+00.00
Y = 541547.091
X = 124980.429

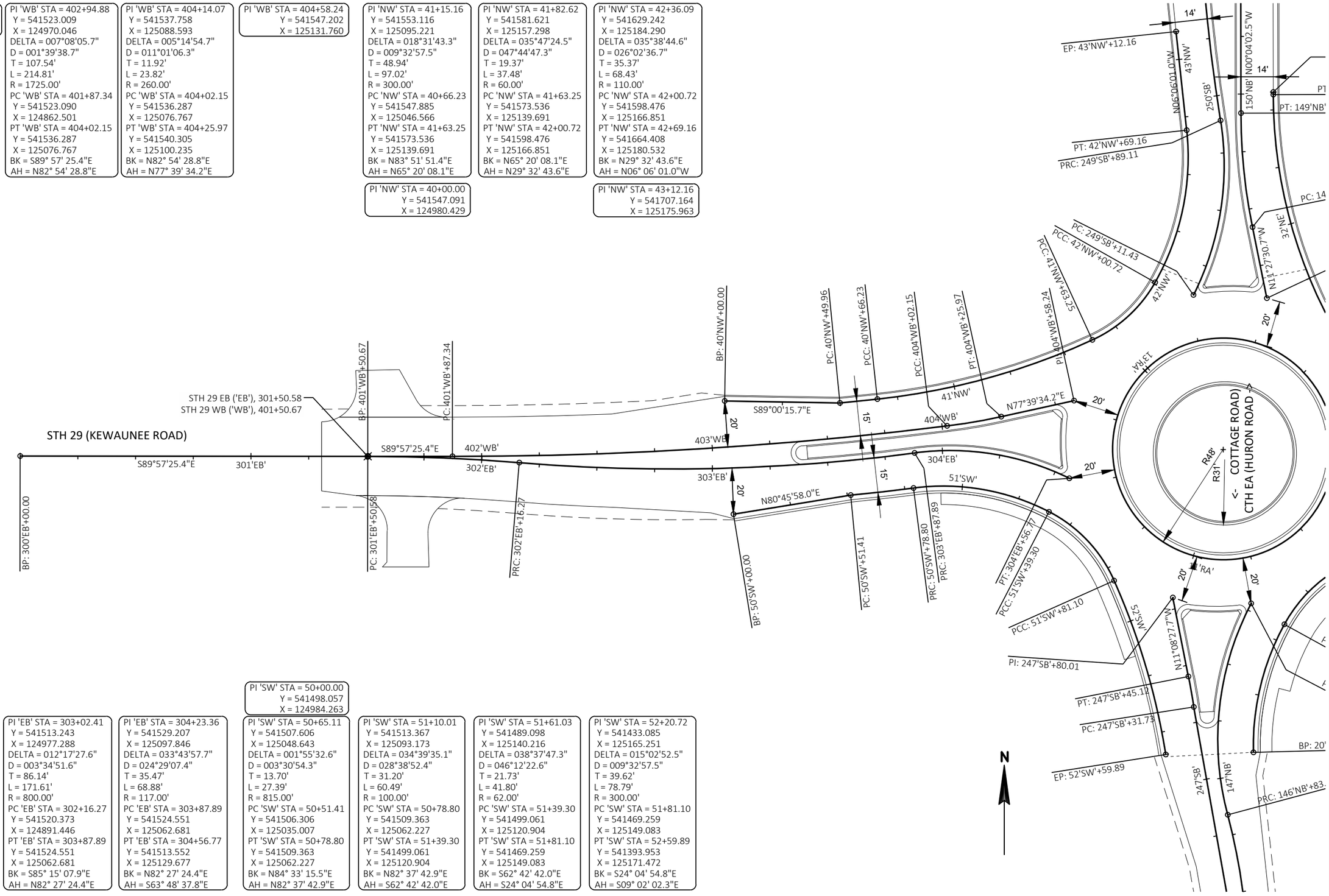
PI 'NW' STA = 41+82.62
Y = 541581.621
X = 125157.298
DELTA = 035°47'24.5"
D = 047°44'47.3"
T = 19.37'
L = 37.48'
R = 60.00'
PC 'NW' STA = 41+63.25
Y = 541573.536
X = 125139.691
PT 'NW' STA = 42+00.72
Y = 541598.476
X = 125166.851
BK = N65° 20' 08.1"E
AH = N29° 32' 43.6"E

PI 'NW' STA = 42+36.09
Y = 541629.242
X = 125184.290
DELTA = 035°38'44.6"
D = 026°02'36.7"
T = 35.37'
L = 68.43'
R = 110.00'
PC 'NW' STA = 42+00.72
Y = 541598.476
X = 125166.851
PT 'NW' STA = 42+69.16
Y = 541664.408
X = 125180.532
BK = N29° 32' 43.6"E
AH = N06° 06' 01.0"W

PI 'NW' STA = 43+12.16
Y = 541707.164
X = 125175.963

ROUNDABOUT
TRUCK APRON
CENTER 48' RADIUS
Y = 541526.306
X = 125196.470

ROUNDABOUT
CENTER ISLAND
CURB & GUTTER
CENTER 31' RADIUS
PI 'RA' STA = 11+28.28
-46.00 LEFT
Y = 541524.405
X = 125197.092



PI 'EB' STA = 300+00.00
Y = 541523.230
X = 124675.251

PI 'EB' STA = 301+83.44
Y = 541523.093
X = 124858.694
DELTA = 004°42'17.5"
D = 003°34'51.6"
T = 32.86'
L = 65.69'
R = 800.00'
PC 'EB' STA = 301+50.58
Y = 541523.117
X = 124825.829
PT 'EB' STA = 302+16.27
Y = 541520.373
X = 124891.446
BK = S89° 57' 25.4"E
AH = S85° 15' 07.9"E

PI 'EB' STA = 303+02.41
Y = 541513.243
X = 124977.288
DELTA = 012°17'27.6"
D = 003°34'51.6"
T = 86.14'
L = 171.61'
R = 800.00'
PC 'EB' STA = 302+16.27
Y = 541520.373
X = 124891.446
PT 'EB' STA = 303+87.89
Y = 541524.551
X = 125062.681
BK = S85° 15' 07.9"E
AH = N82° 27' 24.4"E

PI 'EB' STA = 304+23.36
Y = 541529.207
X = 125097.846
DELTA = 033°43'57.7"
D = 024°29'07.4"
T = 35.47'
L = 68.88'
R = 117.00'
PC 'EB' STA = 303+87.89
Y = 541524.551
X = 125062.681
PT 'EB' STA = 304+56.77
Y = 541513.552
X = 125129.677
BK = N82° 27' 24.4"E
AH = S63° 48' 37.8"E

PI 'SW' STA = 50+00.00
Y = 541498.057
X = 124984.263

PI 'SW' STA = 50+65.11
Y = 541507.606
X = 125048.643
DELTA = 001°55'32.6"
D = 003°30'54.3"
T = 13.70'
L = 27.39'
R = 815.00'
PC 'SW' STA = 50+51.41
Y = 541506.306
X = 125035.007
PT 'SW' STA = 50+78.80
Y = 541509.363
X = 125062.227
BK = N84° 33' 15.5"E
AH = N82° 37' 42.9"E

PI 'SW' STA = 51+10.01
Y = 541513.367
X = 125093.173
DELTA = 034°39'35.1"
D = 028°38'52.4"
T = 31.20'
L = 60.49'
R = 100.00'
PC 'SW' STA = 50+78.80
Y = 541509.363
X = 125062.227
PT 'SW' STA = 51+39.30
Y = 541499.061
X = 125120.904
BK = N82° 37' 42.9"E
AH = S62° 42' 42.0"E

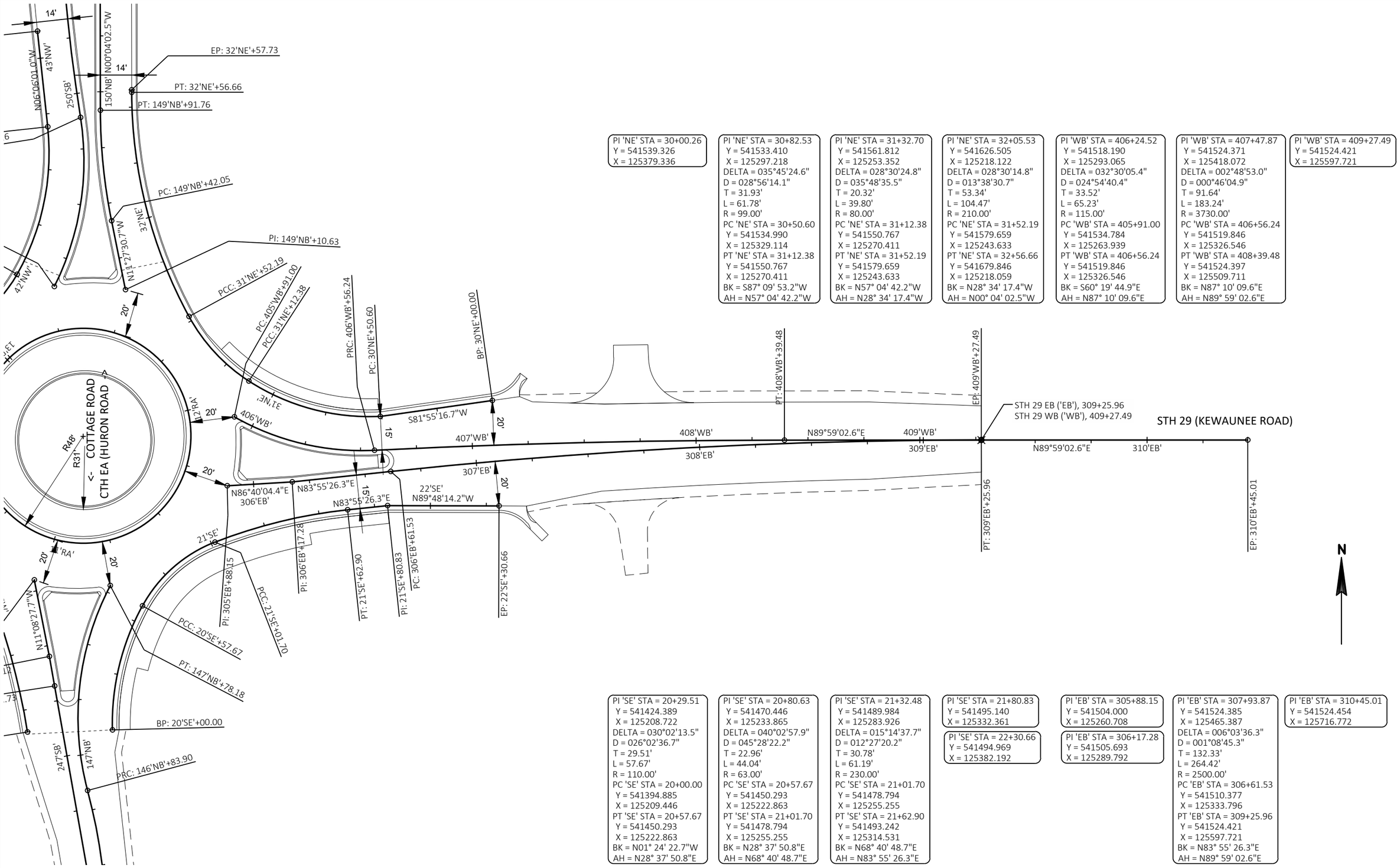
PI 'SW' STA = 51+61.03
Y = 541489.098
X = 125140.216
DELTA = 038°37'47.3"
D = 046°12'22.6"
T = 21.73'
L = 41.80'
R = 62.00'
PC 'SW' STA = 51+39.30
Y = 541499.061
X = 125120.904
PT 'SW' STA = 51+81.10
Y = 541469.259
X = 125149.083
BK = S62° 42' 42.0"E
AH = S24° 04' 54.8"E

PI 'SW' STA = 52+20.72
Y = 541433.085
X = 125165.251
DELTA = 015°02'52.5"
D = 009°32'57.5"
T = 39.62'
L = 78.79'
R = 300.00'
PC 'SW' STA = 51+81.10
Y = 541469.259
X = 125149.083
PT 'SW' STA = 52+59.89
Y = 541393.953
X = 125171.472
BK = S24° 04' 54.8"E
AH = S09° 02' 02.3"E

PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	ALIGNMENT DETAIL	SHEET 67	E

FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-027200_AD.DWG
LAYOUT NAME - 451607-027201-ad
PLOT DATE : 9/24/2018 2:15 PM
PLOT BY : OMNNI ASSOCIATES - ANDREW WESTBROOK
PLOT SCALE : ##########

2



PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	ALIGNMENT DETAIL	SHEET 68	E

FILE NAME : F:\TR\OBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-027200_AD.DWG
LAYOUT NAME - 451607-027202-ad
PLOT DATE : 9/24/2018 2:15 PM
PLOT BY : OMNNI ASSOCIATES - ANDREW WESTBROOK
PLOT SCALE : ##########
WISDOT/CADDS SHEET 42

2

PI 'SB' STA = 245+72.66
Y = 541257.349
X = 125206.482

PI 'SB' STA = 245+99.71
Y = 541284.399
X = 125206.667
DELTA = 010°26'23.0"
D = 011°27'33.0"
T = 22.84'
L = 45.55'
R = 250.00'
PC 'SB' STA = 245+76.87
Y = 541261.560
X = 125206.511
PT 'SB' STA = 246+22.42
Y = 541306.887
X = 125202.682
BK = N00° 23' 28.9"E
AH = N10° 02' 54.1"W

PI 'SB' STA = 247+38.42
Y = 541421.132
X = 125182.588
DELTA = 002°21'35.0"
D = 008°48'53.0"
T = 6.69'
L = 13.39'
R = 325.00'
PC 'SB' STA = 247+31.73
Y = 541414.517
X = 125183.610
PT 'SB' STA = 247+45.12
Y = 541427.700
X = 125181.295
BK = N08° 46' 52.8"W
AH = N11° 08' 27.8"W

PI 'SB' STA = 247+80.01
Y = 541461.935
X = 125174.553

CENTER OF ROUNDABOUT
Y = 541526.306
X = 125196.470

'RA' STA = 10+00.00
= STA 13+01.59
Y = 541560.247
X = 125162.529

PI 'SB' STA = 249+51.57
Y = 541628.942
X = 125201.467
DELTA = 035°36'17.2"
D = 022°55'05.9"
T = 40.14'
L = 77.68'
R = 125.00'
PC 'SB' STA = 249+11.43
Y = 541593.055
X = 125183.489
PT 'SB' STA = 249+89.11
Y = 541668.588
X = 125195.192
BK = N26° 36' 34.9"E
AH = N08° 59' 42.3"W

PI 'SB' STA = 250+77.02
Y = 541755.412
X = 125181.448
DELTA = 012°32'28.5"
D = 003°34'51.6"
T = 87.91'
L = 175.11'
R = 800.00'
PC 'SB' STA = 249+89.11
Y = 541668.588
X = 125195.192
PT 'SB' STA = 251+64.22
Y = 541843.150
X = 125186.885
BK = N08° 59' 42.3"W
AH = N03° 32' 46.3"E

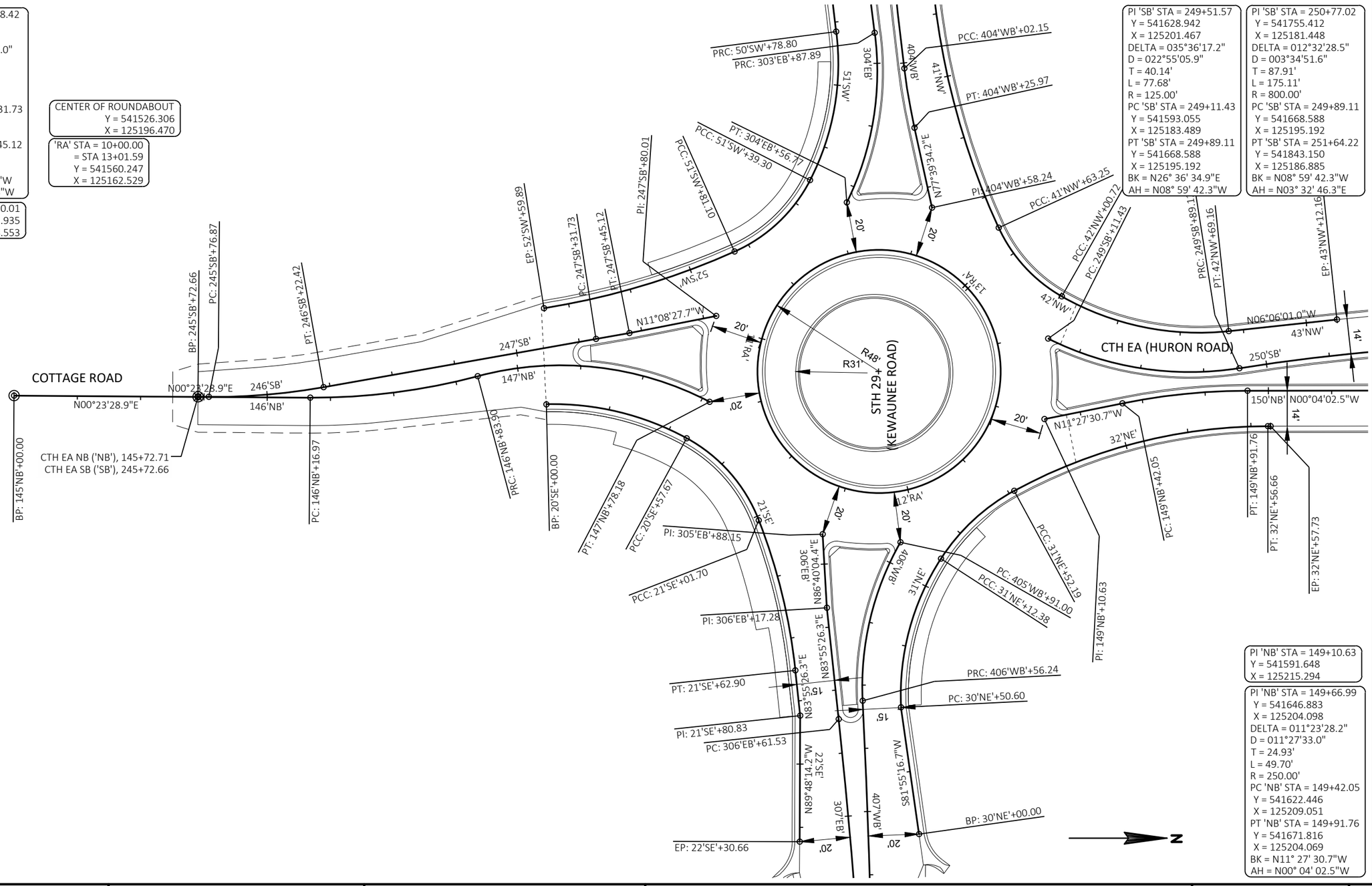
PI 'NB' STA = 145+00.00
Y = 541184.646
X = 125205.985

PI 'NB' STA = 146+50.64
Y = 541335.279
X = 125207.014
DELTA = 015°20'15.4"
D = 011°27'33.0"
T = 33.66'
L = 66.92'
R = 250.00'
PC 'NB' STA = 146+16.97
Y = 541301.617
X = 125206.784
PT 'NB' STA = 146+83.90
Y = 541367.803
X = 125198.332
BK = N00° 23' 28.9"E
AH = N14° 56' 46.5"W

PI 'NB' STA = 147+33.33
Y = 541415.563
X = 125185.583
DELTA = 042°32'04.7"
D = 022°33'26.6"
T = 49.43'
L = 94.28'
R = 127.00'
PC 'NB' STA = 146+83.90
Y = 541367.803
X = 125198.332
PT 'NB' STA = 147+78.18
Y = 541459.374
X = 125208.476
BK = N14° 56' 46.5"W
AH = N27° 35' 18.3"E

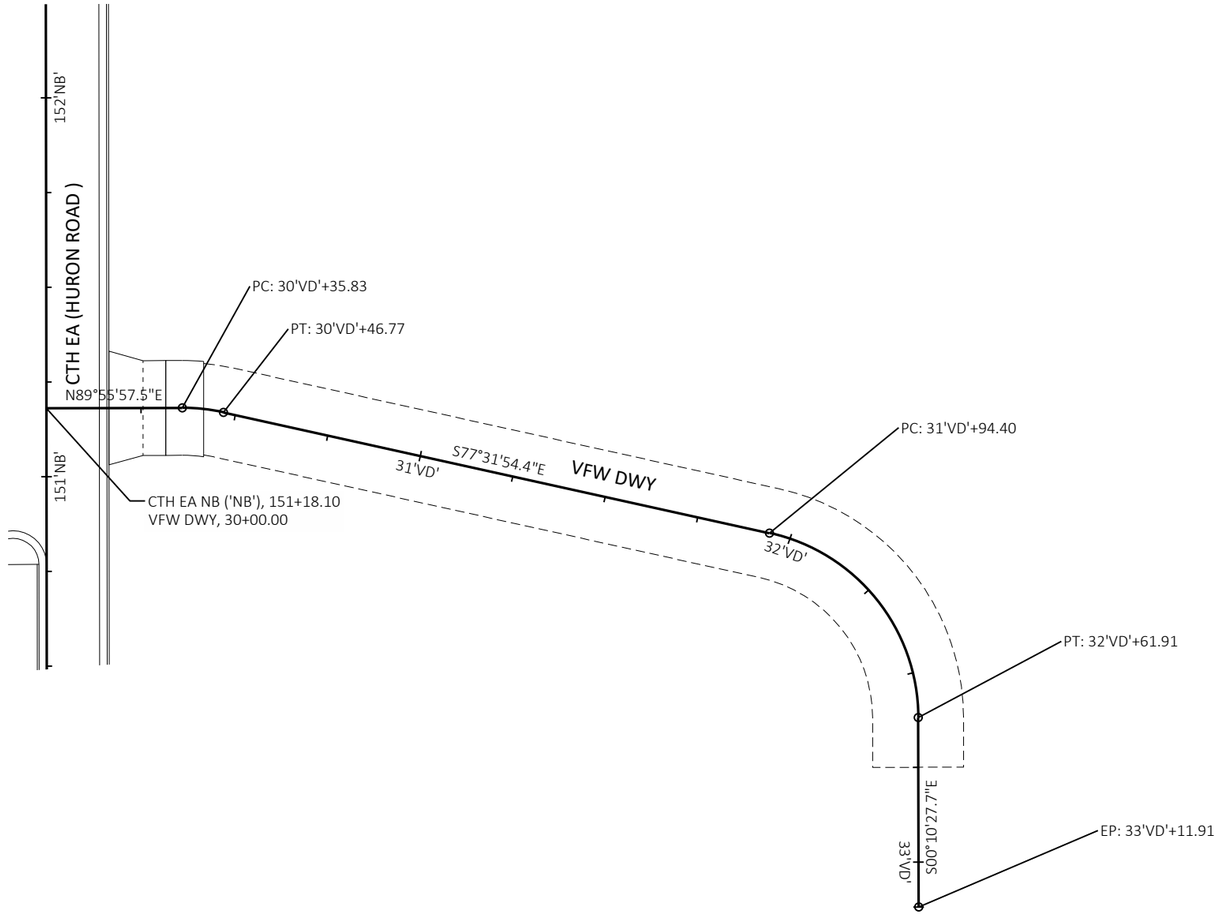
PI 'NB' STA = 149+10.63
Y = 541591.648
X = 125215.294

PI 'NB' STA = 149+66.99
Y = 541646.883
X = 125204.098
DELTA = 011°23'28.2"
D = 011°27'33.0"
T = 24.93'
L = 49.70'
R = 250.00'
PC 'NB' STA = 149+42.05
Y = 541622.446
X = 125209.051
PT 'NB' STA = 149+91.76
Y = 541671.816
X = 125204.069
BK = N11° 27' 30.7"W
AH = N00° 04' 02.5"W



PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	ALIGNMENT DETAIL	SHEET 69	E

2

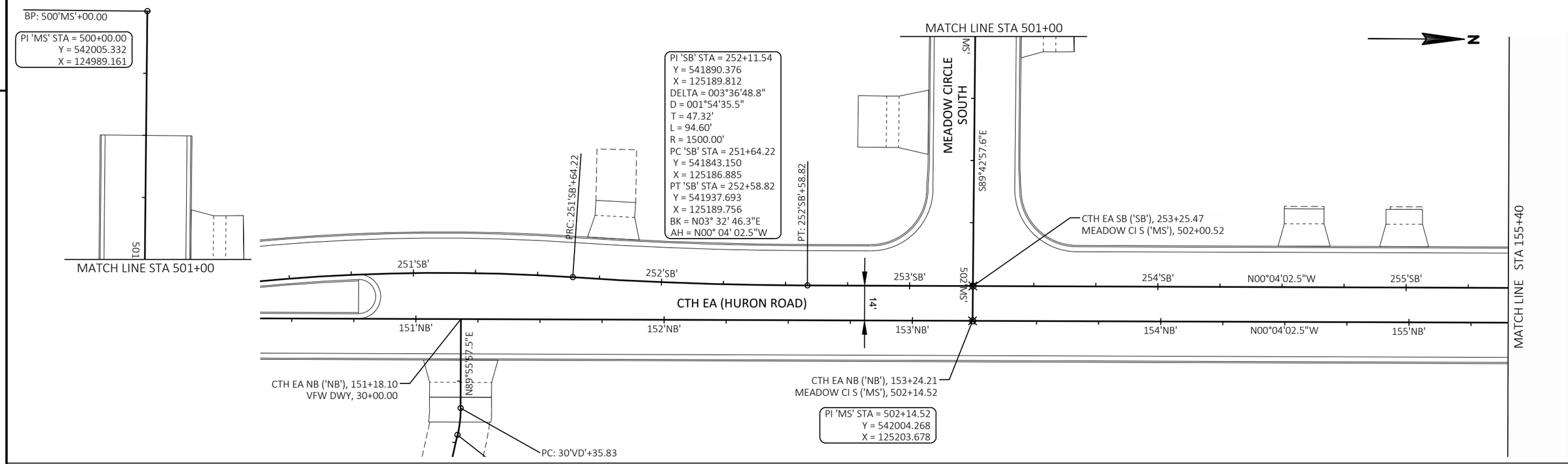


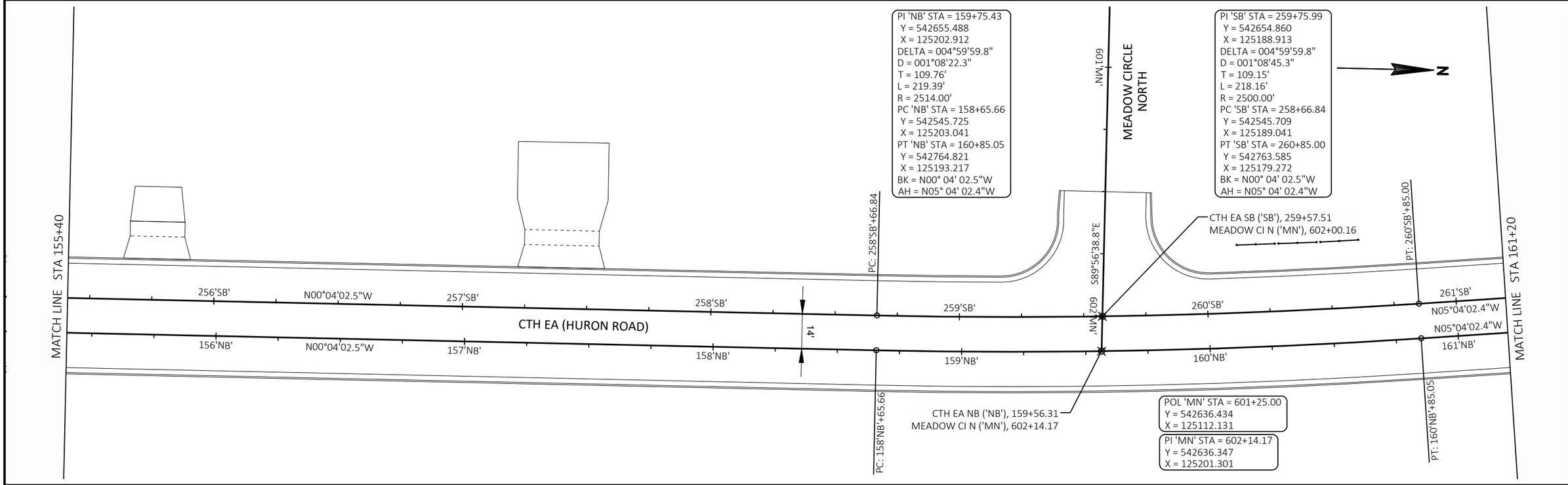
PI 'VD' STA = 30+41.32
Y = 541798.208
X = 125245.244
DELTA = 012°32'08.1"
D = 057°17'44.8"
T = 5.49'
L = 10.94'
R = 50.00'
PC 'VD' STA = 30+35.83
Y = 541798.201
X = 125239.753
PT 'VD' STA = 30+46.77
Y = 541797.022
X = 125250.606
BK = N89° 55' 57.5"E
AH = S77° 31' 54.4"E

PI 'VD' STA = 32+34.43
Y = 541756.507
X = 125433.839
DELTA = 077°21'26.7"
D = 057°17'44.8"
T = 40.03'
L = 67.51'
R = 50.00'
PC 'VD' STA = 31+94.40
Y = 541765.149
X = 125394.756
PT 'VD' STA = 32+61.91
Y = 541716.480
X = 125433.961
BK = S77° 31' 54.4"E
AH = S00° 10' 27.7"E

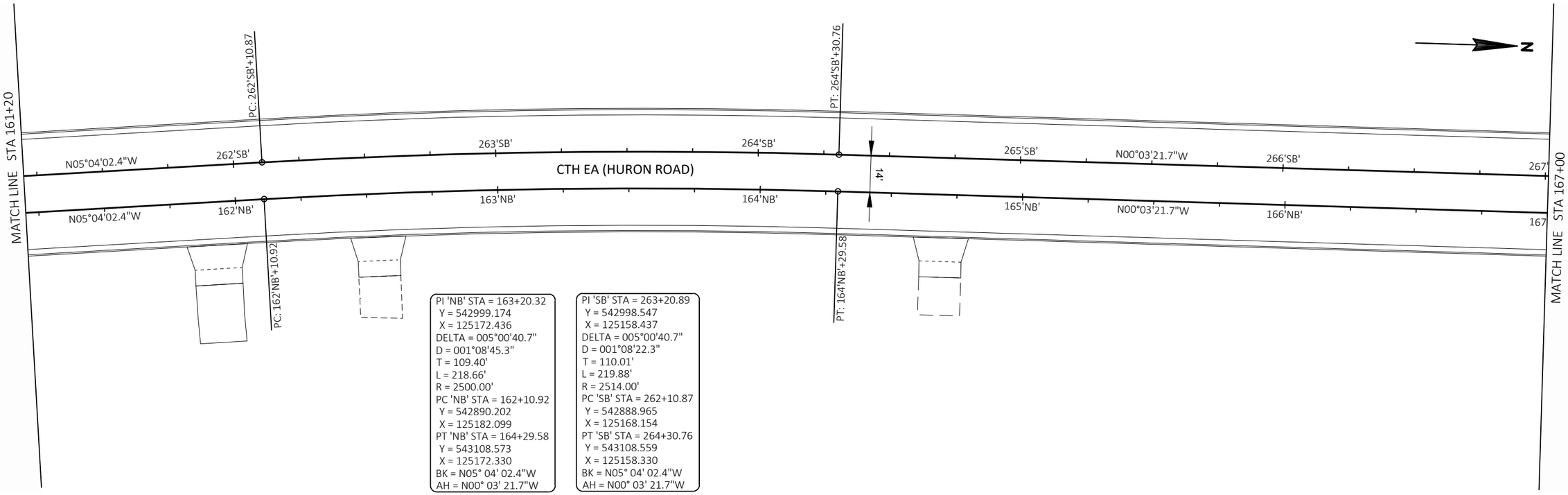
N

PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	ALIGNMENT DETAIL	SHEET 70	E



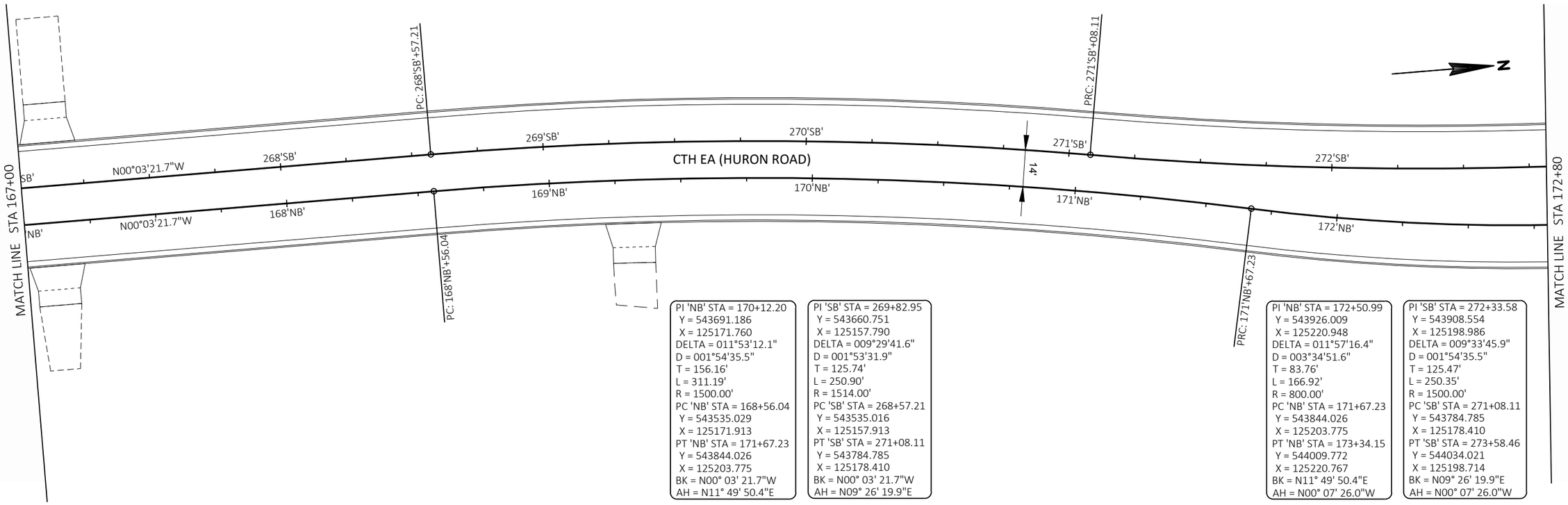


PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	ALIGNMENT DETAIL	SHEET 71	E



PI 'NB' STA = 163+20.32
Y = 542999.174
X = 125172.436
DELTA = 005°00'40.7"
D = 001°08'45.3"
T = 109.40'
L = 218.66'
R = 2500.00'
PC 'NB' STA = 162+10.92
Y = 542890.202
X = 125182.099
PT 'NB' STA = 164+29.58
Y = 543108.573
X = 125172.330
BK = N05° 04' 02.4"W
AH = N00° 03' 21.7"W

PI 'SB' STA = 263+20.89
Y = 542998.547
X = 125158.437
DELTA = 005°00'40.7"
D = 001°08'22.3"
T = 110.01'
L = 219.88'
R = 2514.00'
PC 'SB' STA = 262+10.87
Y = 542888.965
X = 125168.154
PT 'SB' STA = 264+30.76
Y = 543108.559
X = 125158.330
BK = N05° 04' 02.4"W
AH = N00° 03' 21.7"W



PI 'NB' STA = 170+12.20
Y = 543691.186
X = 125171.760
DELTA = 011°53'12.1"
D = 001°54'35.5"
T = 156.16'
L = 311.19'
R = 1500.00'
PC 'NB' STA = 168+56.04
Y = 543535.029
X = 125171.913
PT 'NB' STA = 171+67.23
Y = 543844.026
X = 125203.775
BK = N00° 03' 21.7"W
AH = N11° 49' 50.4"E

PI 'SB' STA = 269+82.95
Y = 543660.751
X = 125157.790
DELTA = 009°29'41.6"
D = 001°53'31.9"
T = 125.74'
L = 250.90'
R = 1514.00'
PC 'SB' STA = 268+57.21
Y = 543535.016
X = 125157.913
PT 'SB' STA = 271+08.11
Y = 543784.785
X = 125178.410
BK = N00° 03' 21.7"W
AH = N09° 26' 19.9"E

PI 'NB' STA = 172+50.99
Y = 543926.009
X = 125220.948
DELTA = 011°57'16.4"
D = 003°34'51.6"
T = 83.76'
L = 166.92'
R = 800.00'
PC 'NB' STA = 171+67.23
Y = 543844.026
X = 125203.775
PT 'NB' STA = 173+34.15
Y = 544009.772
X = 125220.767
BK = N11° 49' 50.4"E
AH = N00° 07' 26.0"W

PI 'SB' STA = 272+33.58
Y = 543908.554
X = 125198.986
DELTA = 009°33'45.9"
D = 001°54'35.5"
T = 125.47'
L = 250.35'
R = 1500.00'
PC 'SB' STA = 271+08.11
Y = 543784.785
X = 125178.410
PT 'SB' STA = 273+58.46
Y = 544034.021
X = 125198.714
BK = N09° 26' 19.9"E
AH = N00° 07' 26.0"W

PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	ALIGNMENT DETAIL	SHEET 72	E

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POL 'WW' STA = 702+25.00
Y = 544192.644
X = 125118.205

PI 'WW' STA = 703+05.17
Y = 544192.400
X = 125198.372

PI 'SB' STA = 277+15.18
Y = 544390.739
X = 125197.943

N

PT: 273'SB'+58.46

S89°49'31.6"E

703'WW'

PI: 277'SB'+15.18

CTH EA SB ('SB'), 275+16.84
WILLOW RD W ('WW'), 703+05.17

MATCH LINE STA 172+80

273'SB' 274'SB' N00°07'26.0"W 275'SB' 276'SB' 277'SB' N02°01'27.1"E 278'SB'

173'NB' 174'NB' N00°07'26.0"W 175'NB' 176'NB' 177'NB' N02°16'05.5"W 178'NB'

MATCH LINE STA 178+60

PT: 173'NB'+34.15

CTH EA NB ('NB'), 175+16.71
WILLOW RD W ('WW'), 703+27.17
WILLOW RD E ('WE'), 800+00.00

PI: 176'NB'+60.02

PI 'NB' STA = 176+60.02
Y = 544335.638
X = 125220.062

PI: 800'WE'+59.71

801'WE'

PI 'NB' STA = 172+50.99
Y = 543926.009
X = 125220.948
DELTA = 011°57'16.4"
D = 003°34'51.6"
T = 83.76'
L = 166.92'
R = 800.00'
PC 'NB' STA = 171+67.23
Y = 543844.026
X = 125203.775
PT 'NB' STA = 173+34.15
Y = 544009.772
X = 125220.767
BK = N11° 49' 50.4"E
AH = N00° 07' 26.0"W

PI 'SB' STA = 272+33.58
Y = 543908.554
X = 125198.986
DELTA = 009°33'45.9"
D = 001°54'35.5"
T = 125.47'
L = 250.35'
R = 1500.00'
PC 'SB' STA = 271+08.11
Y = 543784.785
X = 125178.410
PT 'SB' STA = 273+58.46
Y = 544034.021
X = 125198.714
BK = N09° 26' 19.9"E
AH = N00° 07' 26.0"W

PI: 801'WE'+69.29

802'WE'

PI 'WE' STA = 800+00.00
Y = 544192.333
X = 125220.372

PI 'WE' STA = 800+59.71
Y = 544192.151
X = 125280.081

PI 'WE' STA = 801+69.29
Y = 544193.202
X = 125389.661

PI 'SB' STA = 280+19.22
Y = 544694.583
X = 125208.682

N

EP: 280'SB'+19.22

MATCH LINE STA 178+60

279'SB' N02°01'27.1"E 280'SB'

N02°16'05.5"W 179'NB' N00°07'26.0"W 180'NB' N00°07'26.0"W 181'NB'

CTH EA NB ('NB'), 180+19.18
CTH EA SB ('SB'), 280+19.22

PI: 179'NB'+43.42

PI 'NB' STA = 179+43.42
Y = 544618.823
X = 125208.846

PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	ALIGNMENT DETAIL	SHEET 73	E

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Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	15.000	15.000
0004	201.0120	Clearing	ID	10.000	10.000
0006	201.0205	Grubbing	STA	15.000	15.000
0008	201.0220	Grubbing	ID	10.000	10.000
0010	203.0100	Removing Small Pipe Culverts	EACH	22.000	22.000
0012	203.0500.S	Removing Old Structure Over Waterway (station) 01. Sta 160+19	LS	1.000	1.000
0014	204.0100	Removing Pavement	SY	1,651.000	1,651.000
0016	204.0150	Removing Curb & Gutter	LF	421.000	421.000
0018	204.0155	Removing Concrete Sidewalk	SY	25.000	25.000
0020	204.0170	Removing Fence	LF	70.000	70.000
0022	204.0185	Removing Masonry	CY	4.000	4.000
0024	204.0220	Removing Inlets	EACH	2.000	2.000
0026	204.0245	Removing Storm Sewer (size) 01. 12-Inch	LF	40.000	40.000
0028	204.9060.S	Removing (item description) 01. Endwall	EACH	1.000	1.000
0030	205.0100	Excavation Common	CY	23,950.000	23,950.000
0032	206.2000	Excavation for Structures Culverts (structure) 01. C-5-154	LS	1.000	1.000
0034	209.2100	Backfill Granular Grade 2	CY	30.000	30.000
0036	210.2500	Backfill Structure Type B	TON	830.000	830.000
0038	213.0100	Finishing Roadway (project) 01. 4516-07-71	EACH	1.000	1.000
0040	305.0110	Base Aggregate Dense 3/4-Inch	TON	270.000	270.000
0042	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	11,000.000	11,000.000
0044	310.0110	Base Aggregate Open-Graded	TON	8.000	8.000
0046	311.0110	Breaker Run	TON	27,297.000	27,297.000
0048	405.0100	Coloring Concrete WisDOT Red	CY	219.000	219.000
0050	415.0080	Concrete Pavement 8-Inch	SY	260.000	260.000
0052	416.0160	Concrete Driveway 6-Inch	SY	665.000	665.000
0054	416.0512	Concrete Truck Apron 12-Inch	SY	370.000	370.000
0056	416.1010	Concrete Surface Drains	CY	4.500	4.500
0058	504.0100	Concrete Masonry Culverts	CY	145.000	145.000
0060	505.0400	Bar Steel Reinforcement HS Structures	LB	17,880.000	17,880.000
0062	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	3,060.000	3,060.000
0064	513.7011	Railing Steel Type C2 01. C-5-154	LF	34.000	34.000
0066	513.8011	Railing Steel Pedestrian Type C2	LF	32.000	32.000
0068	516.0500	Rubberized Membrane Waterproofing	SY	20.000	20.000
0070	520.8000	Concrete Collars for Pipe	EACH	1.000	1.000
0072	521.1012	Apron Endwalls for Culvert Pipe Steel 12-Inch	EACH	2.000	2.000
0074	521.1018	Apron Endwalls for Culvert Pipe Steel 18-Inch	EACH	8.000	8.000
0076	521.1024	Apron Endwalls for Culvert Pipe Steel 24-Inch	EACH	2.000	2.000

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Line	Item	Item Description	Unit	Total	Qty
0078	521.3112	Culvert Pipe Corrugated Steel 12-Inch	LF	34.000	34.000
0080	521.3118	Culvert Pipe Corrugated Steel 18-Inch	LF	144.000	144.000
0082	521.3124	Culvert Pipe Corrugated Steel 24-Inch	LF	36.000	36.000
0084	521.6121	Culvert Pipe Corrugated Steel Aluminum Coated 21-Inch	LF	20.000	20.000
0086	522.1012	Apron Endwalls for Culvert Pipe Reinforced Concrete 12-Inch	EACH	5.000	5.000
0088	522.1018	Apron Endwalls for Culvert Pipe Reinforced Concrete 18-Inch	EACH	3.000	3.000
0090	522.1021	Apron Endwalls for Culvert Pipe Reinforced Concrete 21-Inch	EACH	1.000	1.000
0092	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	1.000	1.000
0094	522.2429	Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-IV 29x45-Inch	LF	188.000	188.000
0096	522.2434	Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-IV 34x53-Inch	LF	32.000	32.000
0098	522.2629	Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 29x45-Inch	EACH	4.000	4.000
0100	522.2634	Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 34x53-Inch	EACH	2.000	2.000
0102	601.0405	Concrete Curb & Gutter 18-Inch Type A	LF	189.000	189.000
0104	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	7,992.000	7,992.000
0106	601.0553	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type D	LF	623.000	623.000
0108	601.0580	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type R	LF	289.000	289.000
0110	601.0600	Concrete Curb Pedestrian	LF	120.000	120.000
0112	602.0405	Concrete Sidewalk 4-Inch	SF	23,050.000	23,050.000
0114	602.0415	Concrete Sidewalk 6-Inch	SF	536.000	536.000
0116	602.0515	Curb Ramp Detectable Warning Field Natural Patina	SF	272.000	272.000
0118	606.0200	Riprap Medium	CY	146.000	146.000
0120	608.0312	Storm Sewer Pipe Reinforced Concrete Class III 12-Inch	LF	710.000	710.000
0122	608.0318	Storm Sewer Pipe Reinforced Concrete Class III 18-Inch	LF	470.000	470.000
0124	608.0321	Storm Sewer Pipe Reinforced Concrete Class III 21-Inch	LF	100.000	100.000
0126	608.0324	Storm Sewer Pipe Reinforced Concrete Class III 24-Inch	LF	952.000	952.000
0128	608.0412	Storm Sewer Pipe Reinforced Concrete Class IV 12-Inch	LF	947.000	947.000
0130	608.0415	Storm Sewer Pipe Reinforced Concrete Class IV 15-Inch	LF	124.000	124.000

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Line	Item	Item Description	Unit	Total	Qty
0132	608.0418	Storm Sewer Pipe Reinforced Concrete Class IV 18-Inch	LF	259.000	259.000
0134	611.0530	Manhole Covers Type J	EACH	16.000	16.000
0136	611.0545	Manhole Covers Type L	EACH	2.000	2.000
0138	611.0612	Inlet Covers Type C	EACH	5.000	5.000
0140	611.0615	Inlet Covers Type F	EACH	3.000	3.000
0142	611.0624	Inlet Covers Type H	EACH	39.000	39.000
0144	611.0639	Inlet Covers Type H-S	EACH	7.000	7.000
0146	611.0642	Inlet Covers Type MS	EACH	3.000	3.000
0148	611.0652	Inlet Covers Type T	EACH	2.000	2.000
0150	611.1004	Catch Basins 4-FT Diameter	EACH	7.000	7.000
0152	611.1005	Catch Basins 5-FT Diameter	EACH	1.000	1.000
0154	611.1230	Catch Basins 2x3-FT	EACH	17.000	17.000
0156	611.2004	Manholes 4-FT Diameter	EACH	16.000	16.000
0158	611.3003	Inlets 3-FT Diameter	EACH	5.000	5.000
0160	611.3004	Inlets 4-FT Diameter	EACH	1.000	1.000
0162	611.3230	Inlets 2x3-FT	EACH	22.000	22.000
0164	611.3253	Inlets 2.5x3-FT	EACH	1.000	1.000
0166	611.3901	Inlets Median 1 Grate	EACH	3.000	3.000
0168	611.8110	Adjusting Manhole Covers	EACH	1.000	1.000
0170	612.0106	Pipe Underdrain 6-Inch	LF	112.000	112.000
0172	612.0902.S	Insulation Board Polystyrene (inch) 01. 2-Inch	SY	42.000	42.000
0174	618.0100	Maintenance And Repair of Haul Roads (project) 01. 4516-07-71	EACH	1.000	1.000
0176	619.1000	Mobilization	EACH	1.000	1.000
0178	620.0300	Concrete Median Sloped Nose	SF	797.000	797.000
0180	624.0100	Water	MGAL	59.000	59.000
0182	625.0500	Salvaged Topsoil	SY	33,690.000	33,690.000
0184	627.0200	Mulching	SY	16,260.000	16,260.000
0186	628.1504	Silt Fence	LF	1,300.000	1,300.000
0188	628.1520	Silt Fence Maintenance	LF	1,300.000	1,300.000
0190	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0192	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0194	628.2004	Erosion Mat Class I Type B	SY	3,780.000	3,780.000
0196	628.2006	Erosion Mat Urban Class I Type A	SY	10,250.000	10,250.000
0198	628.2008	Erosion Mat Urban Class I Type B	SY	1,440.000	1,440.000
0200	628.2027	Erosion Mat Class II Type C	SY	1,960.000	1,960.000
0202	628.7005	Inlet Protection Type A	EACH	61.000	61.000
0204	628.7015	Inlet Protection Type C	EACH	43.000	43.000
0206	628.7020	Inlet Protection Type D	EACH	18.000	18.000

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Line	Item	Item Description	Unit	Total	Qty
0208	628.7504	Temporary Ditch Checks	LF	300.000	300.000
0210	628.7555	Culvert Pipe Checks	EACH	60.000	60.000
0212	628.7570	Rock Bags	EACH	50.000	50.000
0214	629.0210	Fertilizer Type B	CWT	21.200	21.200
0216	630.0110	Seeding Mixture No. 10	LB	194.000	194.000
0218	630.0130	Seeding Mixture No. 30	LB	205.000	205.000
0220	630.0140	Seeding Mixture No. 40	LB	121.000	121.000
0222	630.0200	Seeding Temporary	LB	455.000	455.000
0224	632.0101	Trees (species) (size) (root) 01. Apple Serviceberry B&B 6-FT	EACH	3.000	3.000
0226	632.0201	Shrubs (species) (size) (root) 01. Kallay's Compact Juniper CG 5 Gal	EACH	28.000	28.000
0228	632.9101	Landscape Planting Surveillance and Care Cycles	EACH	5.000	5.000
0230	633.5200	Markers Culvert End	EACH	4.000	4.000
0232	642.5401	Field Office Type D	EACH	1.000	1.000
0234	643.0300	Traffic Control Drums	DAY	1,430.000	1,430.000
0236	643.0420	Traffic Control Barricades Type III	DAY	5,413.000	5,413.000
0238	643.0705	Traffic Control Warning Lights Type A	DAY	8,386.000	8,386.000
0240	643.0900	Traffic Control Signs	DAY	3,582.000	3,582.000
0242	643.5000	Traffic Control	EACH	1.000	1.000
0244	645.0105	Geotextile Type C	SY	303.000	303.000
0246	645.0111	Geotextile Type DF Schedule A	SY	62.000	62.000
0248	645.0120	Geotextile Type HR	SY	304.000	304.000
0250	646.1020	Marking Line Epoxy 4-Inch	LF	11,170.000	11,170.000
0252	646.3020	Marking Line Epoxy 8-Inch	LF	205.000	205.000
0254	646.5020	Marking Arrow Epoxy	EACH	18.000	18.000
0256	646.6120	Marking Stop Line Epoxy 18-Inch	LF	82.000	82.000
0258	646.6320	Marking Dotted Extension Epoxy 18-Inch	LF	142.000	142.000
0260	646.7120	Marking Diagonal Epoxy 12-Inch	LF	135.000	135.000
0262	646.7420	Marking Crosswalk Epoxy Transverse Line 6-Inch	LF	320.000	320.000
0264	646.8220	Marking Island Nose Epoxy	EACH	8.000	8.000
0266	646.9000	Marking Removal Line 4-Inch	LF	995.000	995.000
0268	650.4000	Construction Staking Storm Sewer	EACH	85.000	85.000
0270	650.4500	Construction Staking Subgrade	LF	8,594.000	8,594.000
0272	650.5000	Construction Staking Base	LF	8,594.000	8,594.000
0274	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	9,458.000	9,458.000
0276	650.6000	Construction Staking Pipe Culverts	EACH	9.000	9.000
0278	650.6500	Construction Staking Structure Layout (structure) 01. C-05-154	LS	1.000	1.000
0280	650.7000	Construction Staking Concrete Pavement	LF	301.000	301.000

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Line	Item	Item Description	Unit	Total	Qty
0282	650.8500	Construction Staking Electrical Installations (project) 01. 4516-07-71	LS	1.000	1.000
0284	650.9000	Construction Staking Curb Ramps	EACH	12.000	12.000
0286	650.9910	Construction Staking Supplemental Control (project) 01. 4516-07-71	LS	1.000	1.000
0288	650.9920	Construction Staking Slope Stakes	LF	8,594.000	8,594.000
0290	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	810.000	810.000
0292	653.0164	Pull Boxes Non-Conductive 24x42-Inch	EACH	8.000	8.000
0294	654.0105	Concrete Bases Type 5	EACH	8.000	8.000
0296	654.0220	Concrete Control Cabinet Bases Type 10	EACH	1.000	1.000
0298	655.0610	Electrical Wire Lighting 12 AWG	LF	1,200.000	1,200.000
0300	655.0615	Electrical Wire Lighting 10 AWG	LF	3,890.000	3,890.000
0302	656.0200	Electrical Service Meter Breaker Pedestal (location) 01. STH 29 & CTH EA	LS	1.000	1.000
0304	657.0255	Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	EACH	8.000	8.000
0306	657.0322	Poles Type 5-Aluminum	EACH	8.000	8.000
0308	657.0710	Luminaire Arms Truss Type 4 1/2-Inch Clamp 12-FT	EACH	8.000	8.000
0310	659.1115	Luminaires Utility LED A	EACH	8.000	8.000
0312	690.0150	Sawing Asphalt	LF	312.000	312.000
0314	690.0250	Sawing Concrete	LF	141.000	141.000
0316	715.0415	Incentive Strength Concrete Pavement	DOL	500.000	500.000
0318	715.0502	Incentive Strength Concrete Structures	DOL	870.000	870.000
0320	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	2,000.000	2,000.000
0322	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	1,320.000	1,320.000
0324	SPV.0035	Special 01. Planting Mixture	CY	100.000	100.000
0326	SPV.0060	Special 03. Inlets 2x2.5-FT Special	EACH	1.000	1.000
0328	SPV.0060	Special 04. Inlets 4-FT Diameter Special	EACH	1.000	1.000
0330	SPV.0060	Special 05. Mini-Storm Sewer Cleanouts	EACH	3.000	3.000
0332	SPV.0060	Special 06. Tracer Wire and Tracer Wire Access Box	EACH	4.000	4.000
0334	SPV.0085	Special 01. Low Maintenance Seed Mix	LB	2.000	2.000
0336	SPV.0090	Special 01. Concrete Curb and Gutter 24-Inch Type D	LF	245.000	245.000
0338	SPV.0090	Special 03. Mini-Storm Lateral 4-Inch	LF	44.000	44.000
0340	SPV.0090	Special 04. Mini-Storm Trunk 6-Inch	LF	205.000	205.000
0342	SPV.0105	Special 01. Underground Detention System	LS	1.000	1.000
0344	SPV.0105	Special 02. Temporary Water Diversion	LS	1.000	1.000
0346	SPV.0120	Special 01. Water For Seeded Areas	MGAL	756.000	756.000
0348	SPV.0180	Special 01. Shredded Hardwood Bark Mulch	SY	200.000	200.000

CLEARING AND GRUBBING

STATION	OFFSET FT	DIR	ROADWAY	201.0105 CLEARING STA	201.0120 CLEARING ID	201.0205 GRUBBING STA	201.0220 GRUBBING ID
PROJECT 4516-07-71							
CATEGORY 0010							
147+00 - 148+00	-	R/L	CTH EA	1	---	1	---
149+00 - 159+00	-	R/L	CTH EA	10	---	10	---
159+15	54	LT	CTH EA	---	10	---	10
161+00 - 162+00	-	LT	CTH EA	1	---	1	---
167+00 - 169+00	-	R/L	CTH EA	2	---	2	---
303+00 - 304+00	-	RT	STH 29	1	---	1	---
			PROJECT TOTALS	15	10	15	10

REMOVING PAVEMENT

STATION	DIR	LOCATION	204.0100 REMOVING PAVEMENT SY
PROJECT 4516-07-71			
CATEGORY 0010			
301+30 - 309+25		STH 29	1,400
157+37	LT	CTH EA	113
500+93	LT	MEADOW CI SOUTH	60
501+35	RT	MEADOW CI SOUTH	79
		PROJECT TOTAL	1,651

REMOVING CURB AND GUTTER

LOCATION	DIR	204.0150 REMOVING CURB AND GUTTER LF
PROJECT 4516-07-71		
CATEGORY 0010		
CTH EA/RAB	RT	87
CTH EA/RAB	LT	60
MEADOW CI NORTH	RT	20
MEADOW CI NORTH	LT	18
MEADOW CI SOUTH	RT	118
MEADOW SI SOUTH	LT	118
	PROJECT TOTAL	421

REMOVING SMALL PIPE CULVERTS

STATION	DIR	LOCATION	203.0100 REMOVING SMALL PIPE CULVERTS EA	COMMENT
PROJECT 4516-07-71				
CATEGORY 0010				
11+25	R/L	RAB	1	48' / 18" CMP
150+00	RT	CTH EA	1	42' / 15" CPP
151+80	LT	CTH EA	1	22' / 18" CMP
153+25	LT	CTH EA	1	50' / 15" CMP
154+60	LT	CTH EA	1	27' / 15" CMP
154+95	LT	CTH EA	1	21' / 15" CMP
155+75	LT	CTH EA	1	31' / 15" CMP
157+40	LT	CTH EA	1	40' / 15" CMP
159+57	LT	CTH EA	1	55' / 15" CMP
161+50	LT	CTH EA	1	30' / 36" CMP
161+90	RT	CTH EA	1	33' / 18" CMP
162+50	RT	CTH EA	1	33' / 18" CMP
164+70	RT	CTH EA	1	25' / 15" CMP
167+10	LT	CTH EA	1	25' / 42" CMP
167+10	RT	CTH EA	1	25' / 15" CMP
168+05	RT	CTH EA	1	10' / 18" CMP
169+30	RT	CTH EA	1	21' / 15" CMP
170+75	R/L	CTH EA	1	44' / 30" RCP
301+55	LT	STH 29	1	33' / 18" CMP
301+70	RT	STH 29	1	41' / 18" CMP
307+65	RT	STH 29	1	36' / 18" CMP
307+75	LT	STH 29	1	33' / 12" CMP
		PROJECT TOTAL	22	

REMOVING CONCRETE SIDEWALK

STA	DIR	R/L	204.0155 REMOVING CONCRETE SIDEWALK SY
PROJECT 4516-07-71			
CATEGORY 0010			
157+18	LT	CTH EA	1
168+04	RT	CTH EA	1
178+15	LT	CTH EA	23
		PROJECT TOTAL	25

REMOVING MASONRY

STA	DIR	R/L	204.0185 REMOVING MASONRY CY
PROJECT 4516-07-71			
CATEGORY 0010			
155+60	LT	CTH EA	2
157+20	LT	CTH EA	1
157+60	LT	CTH EA	1
		PROJECT TOTAL	4

REMOVING FENCE

STA	DIR	R/L	204.0170 REMOVING FENCE LF
PROJECT 4516-07-71			
CATEGORY 0010			
154+81	LT	CTH EA	10
161+85	LT	CTH EA	60
		PROJECT TOTAL	70

REMOVING INLETS AND STORM SEWER

STA	OFFSET	R/L	204.0220 REMOVING INLETS EA	204.0245.01 REMOVING STORM SEWER 12-INCH LF	209.2100 BACKFILL GRANULAR GRADE 2 CY
PROJECT 4516-07-71					
CATEGORY 0010					
177+95	25' LT	CTH EA	1	40	30
177+95	14' RT	CTH EA	1		
		PROJECT TOTAL	2	40	30

REMOVING ENDWALL

STA	DIR	R/L	204.9060.S.01 REMOVING ENDWALL EA	COMMENT
PROJECT 4516-07-71				
CATEGORY 0010				
177+26	LT	CTH EA	1	12"
		PROJECT TOTAL	1	

3

3

EARTHWORK SUMMARY

ROADWAY	STATION TO STATION	205.0100 COMMON EXCAVATION		SALVAGED/ UNUSABLE PAVEMENT MATERIAL	AVAILABLE MATERIAL	UNEXPANDED FILL	EXPANDED FILL	MASS ORDINATE +/-	WASTE	208.0100 BORROW	COMMENT
		CUT (1)	EBS (2)				FACTOR **1.20**				
COTTAGE RD NB	145+73 - 147+75	327	0	0	327	123	147	179	179	0	
COTTAGE RD SB	247+25 - 247+75	26	0	0	26	91	109	-83	0	0	USE WASTE FROM COTTAGE RD NB
CTH EA NB	149+25 - 179+50	13,801	0	0	13,801	6,014	7,216	6,585	6,585	0	
CTH EA SB	249+25 - 250+00	169	0	0	169	71	86	83	83	0	
MEADOW CIRCLE S	500+50 - 501+50	451	0	0	451	0	0	451	451	0	
ROUNDABOUT	10+35 - 13+02	991	0	73	918	755	906	12	12	0	
STH 29 EB E LEG	306+00 - 309+26	1,734	0	106	1,629	157	188	1,440	1,440	0	
STH 29 EB W LEG	301+31 - 304+50	1,407	0	129	1,278	332	398	880	880	0	
STH 29 WB E LEG	406+00 - 40650	176	0	17	159	66	79	80	80	0	
STH 29 WB W LEG	404+00 - 404+50	119	0	2	117	108	130	-13	0	0	USE WASTE FROM STH 29 EB W LEG
WILLOW RD E	800+50 - 801+75	388	0	0	388	29	34	354	354	0	
VFW DWY	30+30 - 32+75	10	0	0	10	241	289	-279	0	0	USE WASTE FROM CTH EA
DITCH OUTFALL	10+00 - 10+67	50	0	0	50	0	0	50	50	0	
UNDISTRIBUTED		0	4,300	0	0	0	0	0	0	0	ASSUME 1' EBS IN 50% OF PAVEMENT AREA
CATEGORY 0010 SUBTOTAL		19,650	4,300	326	19,324	7,987	9,584	9,740	10,115	0	
GRAND TOTAL		23,950		326	19,324	7,987	9,584	9,740	10,115	0	

NOTES:
(1) SALAVAGED / UNUSABLE MATERIAL INCLUDED IN CUT
(2) EBS BACKFILLED WITH BREAKER RUN. SEE BASE COURSE TABLE

BASE COURSE

STATION TO STATION	DIR	LOCATION	305.0110 BASE AGGREGATE DENSE 3-4/INCH TON	305.0120* BASE AGGREGATE DENSE 1 1/4-INCH TON	311.0011 BREAKER RUN TON	624.0100 WATER MGAL	COMMENT
PROJECT 4516-07-71							
145+73 - 147+58	R/L	CTH EA	10	290	560	2	
149+31 - 153+23	R/L	CTH EA	0	800	1,520	5	
153+23 - 159+55	R/L	CTH EA	0	1250	2,390	8	
159+55 - 175+15	R/L	CTH EA	0	3200	6,090	19	
175+15 - 179+50	R/L	CTH EA	0	970	1,840	6	
301+35 - 304+38	R/L	STH 29	90	720	1,450	5	
306+10 - 309+15	R/L	STH 29	110	750	1,520	5	
500+50 - 501+86	R/L	MEADOW CI SOUTH	0	220	420	1	
601+00 - 601+85	R/L	MEADOW CI NORTH	0	60	110	0	
702+37 - 702+88	R/L	WILLOW RD WEST	0	100	190	1	
800+17 - 801+75	R/L	WILLOW RD EAST	60	320	660	2	
10+00 - 13+01	R/L	STH 29/CTH EA RAB	0	920	1,750	6	
UNDISTRIBUTED			0	0	8,600	0	ASSUME 1' EBS OVER 50% OF PAVEMENT AREA
		PROJECT TOTALS	270	9,600*	27,100	59	

* ADDITIONAL QUANTITIES SHOWN IN DRIVEWAY TABLE AND SIDEWALK TABLE

CONCRETE SIDEWALK

STATION TO STATION	DIR	LOCATION	305.0120* BASE AGGREGATE DENSE 1 1/4-INCH TON	602.0405 CONCRETE SIDEWALK 4-INCH SF	602.0415 CONCRETE SIDEWALK 6-INCH SF	405.0100** COLORING CONCRETE WISDOT RED CY	602.0515 CURB RAMP DETECTABLE WARNING FIELD NATURAL PATINA SF
PROJECT 4516-07-71							
CATEGORY 0010							
145+78 - 147+75	R/L	CTH EA	20	590	0	5	40
149+10 - 153+25	R/L	CTH EA	120	3757	241	16	92
153+25 - 159+55	R/L	CTH EA	100	2942	114	0	24
159+55 - 175+15	R/L	CTH EA	340	10128	118	0	24
175+15 - 179+50	R/L	CTH EA	120	3989	63	0	12
301+35 - 304+55	R/L	STH 29	20	945	0	10	40
305+90 - 309+15	R/L	STH 29	20	699	0	7	40
		PROJECT TOTALS	740*	23,050	536	38**	272

*ADDITIONAL QUANTITY SHOWN IN BASE AGGREGATE TABLE AND DRIVEWAY TABLE
**ADDITIONAL QUANTITY SHOWN IN CONCRETE PAVEMENT TABLE

DRIVEWAYS

STATION	DIR	LOCATION	305.0120* BASE AGGREGATE DENSE 1 1/4-INCH TON	416.0160 CONCRETE DRIVEWAY 6-INCH SY
PROJECT 4516-07-71				
CATEGORY 0010				
151+18	RT	CTH EA	240	44
151+80	LT	CTH EA	23	29
154+55	LT	CTH EA	11	29
154+95	LT	CTH EA	10	27
155+75	LT	CTH EA	25	39
157+35	LT	CTH EA	67	191
161+90	RT	CTH EA	27	33
162+50	RT	CTH EA	20	29
164+70	RT	CTH EA	19	29
167+10	LT	CTH EA	31	29
167+10	RT	CTH EA	23	29
169+30	RT	CTH EA	20	29
301+65	LT	STH 29	21	0
301+65	RT	STH 29	25	0
307+70	LT	STH 29	23	---
307+70	RT	STH 29	19	0
500+95	LT	MEADOW CI SOUTH	21	59
501+35	RT	MEADOW CI SOUTH	24	69
801+50	LT	WILLOW RD	12	0
		PROJECT TOTALS	660*	665

*ADDITIONAL QUANTITY SHOWN IN BASE AGGREGATE TABLE AND CONCRETE SIDEWALK TABLE

CONCRETE SURFACE DRAIN

STATION	DIR	LOCATION	416.1010 CONCRETE SURFACE DRAIN CY
PROJECT 4516-07-71			
CATEGORY 0010			
307+10	RT	STH 29	1.5
307+10	LT	STH 29	1.0
800+50	RT	WILLOW RD	1.5
800+50	LT	WILLOW RD	0.5
		PROJECT TOTAL	4.5

CONCRETE MEDIAN SLOPED NOSE

STATION	DIR	LOCATION	620.0300 CONCRETE MEDIAN SLOPED NOSE SF
PROJECT 4516-07-71			
CATEGORY 0010			
147+28	LT	CTH EA	59
147+63	LT	CTH EA	27
147+72	LT	CTH EA	12
149+18	LT	CTH EA	27
149+20	LT	CTH EA	12
150+80	LT	CTH EA	125
173+17	LT	CTH EA	156
174+68	LT	CTH EA	60
175+63	LT	CTH EA	60
178+45	LT	CTH EA	60
303+61	LT	STH 29	60
304+42	LT	STH 29	27
304+52	LT	STH 29	12
305+96	LT	STH 29	27
305+97	LT	STH 29	12
306+57	LT	STH 29	60
		PROJECT TOTAL	797

CONCRETE PAVEMENT

LOCATION	405.0100* COLORING CONCRETE WISDOT RED CY	415.0080 CONCRETE PAVEMENT 8-INCH SY	416.0512 CONCRETE TRUCK APRON 12-INCH SY	715.0415 INCENTIVE STRENGTH CONCRETE PAVEMENT DOL
PROJECT 4516-07-71				
CATEGORY 0010				
SW QUAD RAB	14	65	0	---
SE QUAD RAB	34	155	0	---
NW QUAD RAB	9	40	0	---
RAB	123	0	370	---
PROJECT TOTALS	181*	260	370	500

*ADDITIONAL QUANTITY SHOWN IN CONCRETE SIDEWALK TABLE.

RAILING STEEL PEDESTRIAN TYPE C2 SIDEWALK

STATION	DIR	LOCATION	513.8011.01 RAILING STEEL PEDESTRIAN TYPE C2 SIDEWALK LF
PROJECT 4516-07-71			
CATEGORY 0010			
160+12 - 160+28	LT	SW QUAD C-05-0154	16
160+46 - 160+62	LT	NW QUAD C-05-0155	16
		PROJECT TOTALS	32

CONCRETE CURB AND GUTTER

STATION TO STATION	DIR	LOCATION	601.0600 CONCRETE CURB PEDESTRIAN LF	601.0405 CONCRETE CURB AND GUTTER 18-INCH TYPE A LF	601.0411 CONCRETE CURB AND GUTTER 30-INCH TYPE D LF	601.0553 CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE D LF	601.0580 CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE R LF	SPV.0090.01 CONCRETE CURB AND GUTTER 24-INCH TYPE D LF	650.5500 CONSTRUCTION STAKING CURB AND GUTTER LF
PROJECT 4519-07-71									
CATEGORY 0010									
145+78 - 147+60	R/L	CTH EA	31	---	60	83	---	---	174
149+30 - 153+23	R/L	CTH EA	27	---	1,027	---	---	---	1,054
153+23 - 159+55	R/L	CTH EA	---	---	1,180	---	---	---	1,180
159+55 - 175+15	R/L	CTH EA	---	---	3,276	---	---	---	3,276
175+15 - 180+35	R/L	CTH EA	---	---	1,324	---	---	---	1,324
301+35 - 304+38	R/L	STH 29	31	---	321	124	---	---	476
306+09 - 309+15	R/L	STH 29	31	---	94	186	---	---	311
500+50 - 501+86	R/L	MEADOW CI SOUTH	---	---	72	---	---	223	295
601+00 - 601+85	R/L	MEADOW CI NORTH	---	---	73	---	---	22	95
702+37 - 702+88	R/L	WILLOW RD WEST	---	---	139	---	---	---	139
800+17 - 802+08	R/L	WILLOW RD EAST	---	---	104	---	---	---	104
10+00 - 13+01	R/L	STH 29/CTH EA RAB	---	189	322	230	289	---	1,030
		PROJECT TOTALS	120	189	7,992	623	289	245	9,458

CULVERTS

STATION	DIRECTION	ROADWAY	521.1012 APRON ENDWALLS FOR CULVERT PIPE STEEL 12-INCH EA	521.1018 APRON ENDWALLS FOR CULVERT PIPE STEEL 18-INCH EA	521.1024 APRON ENDWALLS FOR CULVERT PIPE STEEL 24-INCH EA	521.3112 CULVERT PIPE CORRUGATED STEEL 12-INCH LF	521.3118 CULVERT PIPE CORRUGATED STEEL 18-INCH LF	521.3124 CULVERT PIPE CORRUGATED STEEL 24-INCH LF	522.2429 CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-IV 29X45-INCH LF	522.2434 CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-IV 34X53-INCH LF	522.2629 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL 29X45-INCH EA	522.2634 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL 34X53-INCH EA	633.5200 MARKERS CULVERT END EA	650.6000 CONSTRUCTION STAKING PIPE CULVERTS EA	INCIDENTAL JOINT TIES
PROJECT 4516-07-71															
CATEGORY 0010															
31+44	R/L	VFW DWY	2	---	---	34	---	---	---	---	---	---	---	1	---
167+10	LT	CTH EA	---	---	---	---	---	---	---	32	---	2	---	1	12
169+30	RT	CTH EA	---	2	---	---	28	---	---	---	---	---	---	1	---
170+75	R/L	CTH EA	---	---	---	---	---	---	188	---	4	---	4	2	24
301+55	LT	STH 29	---	2	---	---	40	---	---	---	---	---	---	1	---
301+69	RT	STH 29	---	2	---	---	50	---	---	---	---	---	---	1	---
307+69	RT	STH 29	---	---	2	---	---	36	---	---	---	---	---	1	---
307+73	LT	STH 29	---	2	---	---	26	---	---	---	---	---	---	1	---
		PROJECT TOTALS	2	8	2	34	144	36	188	32	4	2	4	9	

NOTE: MINIMUM THICKNESS FOR CULVERT PIPE CORRUGATED STEEL SHALL BE 0.064 INCHES

3

STORM SEWER PIPE

FROM	-	TO	520.8000	608.0312	608.0318	608.0321	608.0324	608.0412	608.0415	608.0418	521.6121	INCIDENTAL
				STORM SEWER PIPE REINFORCED CONCRETE								
			CONCRETE COLLARS FOR PIPE	CLASS III 12-INCH	CLASS III 18-INCH	CLASS III 21-INCH	CLASS III 24-INCH	CLASS IV 12-INCH	CLASS IV 15-INCH	CLASS IV 18-INCH	CULVERT PIPE CORRUGATED STEEL ALUMINUM COATED 21-INCH	JOINT TIES
			EA	LF	LF	LF	LF	LF	LF	LF	LF	
PROJECT 4516-07-71												
CATEGORY 0010												
10D	-	10C	---	---	---	---	---	23	---	---	---	---
10C	-	10B	---	---	---	---	---	42	---	---	---	---
10B	-	10A	---	---	---	---	---	---	---	19	---	---
10A	-	10	---	---	---	---	---	---	---	16	---	---
15	-	10	---	---	50	---	---	---	---	---	---	6
10	-	20C	---	---	88	---	---	---	---	---	---	---
20C	-	20B	---	---	---	---	---	---	---	22	---	---
20B	-	20A	---	---	---	---	---	---	---	25	---	---
20A	-	20D	---	---	---	---	---	---	---	29	---	---
20D	-	20	---	---	---	---	---	---	---	107	---	6
25	-	20C	---	29	---	---	---	---	---	---	---	6
30B	-	30A	---	---	---	---	---	7	---	---	---	---
30A	-	30	---	---	---	---	---	38	---	---	---	6
105	-	100	---	28	---	---	---	---	---	---	---	6
180	-	175	---	---	---	---	47	---	---	---	---	---
175	-	170	---	---	---	---	49	---	---	---	---	---
170	-	160	---	---	---	---	206	---	---	---	---	---
160	-	150	---	---	---	---	192	---	---	---	---	---
150	-	140	---	---	---	---	176	---	---	---	---	---
140	-	130	---	---	---	---	160	---	---	---	---	---
130	-	120	---	---	---	---	92	---	---	---	---	---
120	-	110	---	---	---	---	30	---	---	---	---	6
180F	-	180E	---	---	---	---	---	10	---	---	---	---
180E	-	180	---	---	---	---	---	101	---	---	---	---
180D	-	180C	---	---	22	---	---	---	---	---	---	6
180C	-	180B	---	---	---	---	---	---	---	18		---
180B	-	180A	---	---	---	---	---	---	---	5	---	---
180A	-	180	---	---	---	---	---	---	---	18	---	---
170D	-	170C	---	---	---	---	---	17	---	---	---	---
170C	-	170B	---	---	---	---	---	15	---	---	---	---
170B	-	170A	---	---	---	---	---	17	---	---	---	---
170A	-	170	---	---	---	---	---	7	---	---	---	---
170F	-	170E	---	60	---	---	---	---	---	---	---	---
170E	-	170	---	14	---	---	---	---	---	---	`	---
160D	-	160C	---	---	---	---	---	---	36	---	---	---
160C	-	160B	---	---	---	---	---	---	36	---	---	---
160B	-	160A	---	---	---	---	---	---	45	---	---	---
160A	-	160	---	---	---	---	---	---	7	---	---	---
150C	-	150B	---	24	---	---	---	---	---	---	---	---
PAGE SUBTOTALS			0	155	160	0	952	277	124	259	0	42

NOTE: MINIMUM THICKNESS FOR CULVERT PIPE CORRUGATED STEEL SHALL BE 0.064 INCHES

3

STORM SEWER PIPE - CONTINUED

FROM	-	TO	520.8000	608.0312	608.0318	608.0321	608.0324	608.0412	608.0415	608.0418	521.6121	INCIDENTAL
				STORM SEWER PIPE REINFORCED CONCRETE								
			CONCRETE COLLARS FOR PIPE	CLASS III 12-INCH	CLASS III 18-INCH	CLASS III 21-INCH	CLASS III 24-INCH	CLASS IV 12-INCH	CLASS IV 15-INCH	CLASS IV 18-INCH	CULVERT PIPE CORRUGATED STEEL ALUMINUM COATED 21-INCH	JOINT TIES
			EA	LF	LF	LF	LF	LF	LF	LF	LF	
PROJECT 4516-07-71												
CATEGORY 0010												
150B	-	150A	---	---	---	---	---	45	---	---	---	---
150A	-	150	---	---	---	---	---	7	---	---	---	---
140C	-	140B	---	25	---	---	---	---	---	---	---	---
140B	-	140A	---	---	---	---	---	45	---	---	---	---
140A	-	140	---	---	---	---	---	7	---	---	---	---
130A	-	130	---	---	---	---	---	74	---	---	---	---
120C	-	120B	---	---	---	---	---	25	---	---	---	---
120B	-	120A	---	---	---	---	---	45	---	---	---	---
120A	-	120	---	---	---	---	---	8	---	---	---	---
120D	-	120A	---	---	---	---	---	25	---	---	---	---
230	-	225	---	87	---	---	---	---	---	---	---	---
225	-	220	---	217	---	---	---	---	---	---	---	---
220	-	210	---	---	310	---	---	---	---	---	---	---
210	-	206	---	---	---	90	---	---	---	---	---	---
206	-	DET	---	---	---	---	---	---	---	---	10	---
DET	-	204	---	---	---	---	---	---	---	---	10	---
204	-	200	---	---	---	10	---	---	---	---	---	2
230B	-	230A	---	---	---	---	---	45	---	---	---	---
230A	-	230	---	---	---	---	---	7	---	---	---	---
220D	-	220A	---	---	---	---	---	25	---	---	---	---
220C	-	220B	---	---	---	---	---	25	---	---	---	---
220B	-	220A	---	---	---	---	---	45	---	---	---	---
220A	-	220	---	---	---	---	---	7	---	---	---	---
210C	-	210B	---	---	---	---	---	30	---	---	---	---
210B	-	210A	---	---	---	---	---	45	---	---	---	---
210A	-	210	---		---	---	---	8	---	---	---	---
210D	-	210A	---	---	---	---	---	30	---	---	---	---
252	-	251	---	64	---	---	---	---	---	---	---	---
251	-	250	---	38	---	---	---	---	---	---	---	6
240D	-	240C	---	---	---	---	---	18	---	---	---	---
240C	-	240B	---	---	---	---	---	18	---	---	---	---
240B	-	240A	---	---	---	---	---	17	---	---	---	---
240A	-	240.0	---	---	---	---	---	24	---	---	---	6
305.0	-	310.0	---	14	---	---	---	---	---	---	---	---
310.0	-	EXIST SS	1	100	---	---	---	---	---	---	---	---
300D	-	300C	---	---	---	---	---	19	---	---	---	---
300C	-	300B	---	---	---	---	---	7	---	---	---	---
300B	-	300A	---	---	---	---	---	19	---	---	---	---
300A	-	300.0	---	10	---	---	---	---	---	---	---	---
PAGE SUBTOTALS			1	555	310	100	0	670	0	0	20	14
PROJECT TOTALS			1	710	470	100	952	947	124	259	20	56

NOTE: MINIMUM THICKNESS FOR CULVERT PIPE CORRUGATED STEEL SHALL BE 0.064 INCHES

3

STORM SEWER APRON ENDWALLS

STRUCT	STATION	OFFSET	ROADWAY	522.1012	522.1018	522.1021	522.1024	650.4000*
				APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE				CONSTR. STAKING STORM SEWER
				12-INCH EACH	18-INCH EACH	21-INCH EACH	24-INCH EACH	EACH
PROJECT 4516-07-71								
CATEGORY 0010								
15	303+54.82	38.72' RT	STH 29 EB	---	1	---	---	1
20	306+61.90	40.30' RT	STH 29 EB	---	1	---	---	1
25	247+59.62	48.38' LT	CTH EA SB	1	---	---	---	1
30	306+73.13	31.34' RT	STH 29 EB	1	---	---	---	1
100	260+20.32	37.94' LT	CTH EA SB	1	---	---	---	1
110	159+26.99	35.33' RT	CTH EA NB	---	---	---	1	1
180D	249+73.25	38.76' LT	CTH EA SB	---	1	---	---	1
200	261+97.29	45.57' LT	CTH EA SB	---	---	1	---	1
240	273+21.46	39.78' LT	CTH EA SB	1	---	---	---	1
250	161+72.64	46.19' RT	CTH EA NB	1	---	---	---	1
			PROJECT TOTALS	5	3	1	1	10*

*ADDITIONAL QUANITITY SHOWN IN STORM SEWER STRUCTURES TABLE.

ADJUSTING COVERS

STATION	OFFSET	LOCATION	611.8110 ADJUSTING MANHOLE COVERS EA	COMMENTS
PROJECT 4516-07-71				
CATEGORY 0010				
177+97	39.4' LT	CTH EA NB	1	EXIST RIM: 754.89 / PROP RIM: 754.69
		PROJECT TOTAL	1	

UNDERGROUND DETENTION SYSTEM

STATION	DIR	ROADWAY	611.0545 MANHOLE COVERS TYPE L EACH	SPV.0105.01 UNDERGROUND DETENTION SYSTEM EACH
PROJECT 4516-07-71				
CATEGORY 0010				
262+65	LT	CTH EA	2	1
		PROJECT TOTALS	2	1

STORM SEWER STRUCTURES

STRUCT	ROADWAY	611.0530 MANHOLE COVERS TYPE J EACH	611.0612 INLET COVERS TYPE C EACH	611.0624 INLET COVERS TYPE H EACH	611.0639 INLET COVERS TYPE H-S EACH	611.0615 INLET COVERS TYPE F EACH	611.0642 INLET COVERS TYPE MS EACH	611.0652 INLET COVERS TYPE T EACH	611.1004 CATCH BASINS 4-FT DIAMETER EACH	611.1005 CATCH BASINS 5-FT DIAMETER EACH	611.1230 CATCH BASINS 2X3-FT EACH	611.3003 INLETS 3-FT DIAMETER EACH	611.3004 INLETS 4-FT DIAMETER EACH	SPV.0060.03 INLETS 2x2.5-FT SPECIAL EACH	SPV.0060.04 INLETS 4-FT DIAMETER SPECIAL EACH	611.3230 INLETS 2x3-FT EACH	611.3253 INLETS 2.5x3-FT EACH	611.3901 INLETS MEDIAN 1 GRATE EACH	611.2004 MANHOLES 4-FT DIAMETER EACH	650.4000* CONSTR. STAKING STORM SEWER EACH
PROJECT 4516-07-71																				
CATEGORY 0010																				
10	STH 29 EB	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	1
10A	STH 29 EB	---	---	---	---	1	---	---	---	---	---	---	---	---	---	---	1	---	---	1
10B	STH 29 EB	---	---	---	1	---	---	---	---	---	---	---	1	---	---	---	---	---	---	1
10C	STH 29 WB	---	---	1	---	---	---	---	---	---	---	---	---	---	---	1	---	---	---	1
10D	STH 29 WB	---	---	1	---	---	---	---	---	---	---	---	---	---	---	1	---	---	---	1
20A	CTH EA NB	---	---	---	1	---	---	---	1	---	---	---	---	---	---	---	---	---	---	1
20B	CTH EA SB	---	---	1	---	---	---	---	1	---	---	---	---	---	---	---	---	---	---	1
20C	CTH EA SB	---	---	---	---	1	---	---	---	1	---	---	---	---	---	---	---	---	---	1
20D	CTH EA NB	---	---	---	---	1	---	---	1	---	---	---	---	---	---	---	---	---	---	1
30A	STH 29 EB	---	---	1	---	---	---	---	---	---	---	---	---	---	---	1	---	---	---	1
30B	STH 29 WB	---	---	1	---	---	---	---	---	---	---	---	---	---	---	1	---	---	---	1
105	CTH EA SB	---	---	1	---	---	---	---	1	---	---	---	---	---	---	---	---	---	---	1
120	CTH EA NB	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	1
120A	CTH EA NB	---	---	---	1	---	---	---	---	---	1	---	---	---	---	---	---	---	---	1
120B	CTH EA SB	---	---	---	1	---	---	---	---	---	1	---	---	---	---	---	---	---	---	1
120C	CTH EA SB	---	---	1	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---	1
120D	CTH EA NB	---	---	1	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---	1
130	CTH EA NB	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	1
130A	CTH EA SB	---	1	---	---	---	---	---	---	---	---	1	---	---	---	---	---	---	---	1
140	CTH EA NB	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	1
140A	CTH EA NB	---	---	1	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---	1
140B	CTH EA SB	---	---	1	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---	1
140C	CTH EA SB	---	1	---	---	---	---	---	---	---	---	1	---	---	---	---	---	---	---	1
150	CTH EA NB	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	1
150A	CTH EA NB	---	---	1	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---	1
150B	CTH EA SB	---	---	1	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---	1
150C	CTH EA SB	---	1	---	---	---	---	---	---	---	---	1	---	---	---	---	---	---	---	1
160	CTH EA NB	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	1
160A	CTH EA NB	---	---	1	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---	1
160B	CTH EA SB	---	---	1	---	---	---	---	1	---	---	---	---	---	---	---	---	---	---	1
160C	MEADOW	---	---	---	1	---	---	---	1	---	---	---	---	---	---	---	---	---	---	1
160D	MEADOW	---	---	1	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---	1
170	CTH EA NB	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	1
170A	CTH EA NB	---	---	1	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---	1
170B	CTH EA NB	---	---	1	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---	1
170C	CTH EA SB	---	---	1	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---	1
170D	CTH EA SB	---	---	1	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---	1
170E	CTH EA NB	---	1	---	---	---	---	---	---	---	---	1	---	---	---	---	---	---	---	1
170F	CTH EA NB	---	1	---	---	---	---	---	---	---	---	1	---	---	---	---	---	---	---	1
175	CTH EA NB	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	1
PAGE SUBTOTALS		8	5	19	5	3	0	0	6	1	14	5	1	0	0	4	1	0	8	40

STORM SEWER STRUCTURES - CONTINUED

STRUCT	ROADWAY	611.0530 MANHOLE COVERS TYPE J EACH	611.0612 INLET COVERS TYPE C EACH	611.0624 INLET COVERS TYPE H EACH	611.0639 INLET COVERS TYPE H-S EACH	611.0615 INLET COVERS TYPE F EACH	611.0642 INLET COVERS TYPE MS EACH	611.0652 INLET COVERS TYPE T EACH	611.1004 CATCH BASINS 4-FT DIAMETER EACH	611.1005 CATCH BASINS 5-FT DIAMETER EACH	611.1230 CATCH BASINS 2X3-FT EACH	611.3003 INLETS 3-FT DIAMETER EACH	611.3004 INLETS 4-FT DIAMETER EACH	SPV.0060.03 INLETS 2x2.5-FT SPECIAL EACH	SPV.0060.04 INLETS 4-FT DIAMETER SPECIAL EACH	611.3230 INLETS 2x3-FT EACH	611.3253 INLETS 2.5x3-FT EACH	611.3901 INLETS MEDIAN 1 GRATE EACH	611.2004 MANHOLES 4-FT DIAMETER EACH	650.4000* CONSTR. STAKING STORM SEWER EACH
PROJECT 4516-07-71																				
CATEGORY 0010																				
180	CTH EA NB	---	---	1	---	---	---	---	1	---	---	---	---	---	---	---	---	---	---	1
180A	CTH EA NB	---	---	1	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---	1
180B	CTH EA SB	---	---	1	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---	1
180C	CTH EA SB	---	---	1	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---	1
180E	RAB	---	---	---	---	---	---	1	---	---	---	---	---	---	1	---	---	---	---	1
180F	RAB	---	---	---	---	---	---	1	---	---	---	---	---	1	---	---	---	---	---	1
204	CTH EA SB	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	1
206	CTH EA SB	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	1
210	CTH EA SB	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	1
210A	CTH EA SB	---	---	1	---	---	---	---	---	---	---	---	---	---	---	1	---	---	---	1
210B	CTH EA NB	---	---	1	---	---	---	---	---	---	---	---	---	---	---	1	---	---	---	1
210C	CTH EA NB	---	---	---	1	---	---	---	---	---	---	---	---	---	---	1	---	---	---	1
210D	CTH EA SB	---	---	---	1	---	---	---	---	---	---	---	---	---	---	1	---	---	---	1
220	CTH EA SB	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	1
220A	CTH EA SB	---	---	1	---	---	---	---	---	---	---	---	---	---	---	1	---	---	---	1
220B	CTH EA NB	---	---	1	---	---	---	---	---	---	---	---	---	---	---	1	---	---	---	1
220C	CTH EA NB	---	---	1	---	---	---	---	---	---	---	---	---	---	---	1	---	---	---	1
220D	CTH EA SB	---	---	1	---	---	---	---	---	---	---	---	---	---	---	1	---	---	---	1
225	CTH EA SB	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	1
230	CTH EA SB	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	1
230A	CTH EA SB	---	---	1	---	---	---	---	---	---	---	---	---	---	---	1	---	---	---	1
230B	CTH EA NB	---	---	1	---	---	---	---	---	---	---	---	---	---	---	1	---	---	---	1
240A	CTH EA SB	---	---	1	---	---	---	---	---	---	---	---	---	---	---	1	---	---	---	1
240B	CTH EA SB	---	---	1	---	---	---	---	---	---	---	---	---	---	---	1	---	---	---	1
240C	CTH EA NB	---	---	1	---	---	---	---	---	---	---	---	---	---	---	1	---	---	---	1
240D	CTH EA NB	---	---	1	---	---	---	---	---	---	---	---	---	---	---	1	---	---	---	1
251	CTH EA NB	---	---	---	---	---	1	---	---	---	---	---	---	---	---	---	---	1	---	1
252	CTH EA NB	---	---	---	---	---	1	---	---	---	---	---	---	---	---	---	---	1	---	1
300	CTH EA SB	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	1
300A	CTH EA SB	---	---	1	---	---	---	---	---	---	---	---	---	---	---	1	---	---	---	1
300B	CTH EA SB	---	---	1	---	---	---	---	---	---	---	---	---	---	---	1	---	---	---	1
300C	CTH EA NB	---	---	1	---	---	---	---	---	---	---	---	---	---	---	1	---	---	---	1
300D	CTH EA NB	---	---	1	---	---	---	---	---	---	---	---	---	---	---	1	---	---	---	1
305	CTH EA SB	---	---	---	---	---	1	---	---	---	---	---	---	---	---	---	---	1	---	1
310	CTH EA SB	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	1
PAGE SUBTOTALS		8	0	20	2	0	3	2	1	0	3	0	0	1	1	18	0	3	8	35
PROJECT TOTALS		16	5	39	7	3	3	2	7	1	17	5	1	1	1	22	1	3	16	75*

*ADDITIONAL QUANTITY SHOWN IN STORM SEWER APRON ENDWALLS TABLE

LANDSCAPING ITEMS

STATION TO STATION	DIR	LOCATION	625.0500 SALVAGED TOPSOIL SY	627.0200 MULCHING SY	628.2004 EROSION MAT CLASS I TYPE B SY	628.2006 EROSION MAT URBAN CLASS I TYPE A SY	628.2008 EROSION MAT URBAN CLASS I TYPE B SY	628.2027 EROSION MAT CLASS II TYPE C SY	629.0210 FERTILIZER TYPE B CWT	630.0110 SEEDING MIXTURE NO. 10 LB	630.0130 SEEDING MIXTURE NO. 30 LB	630.0140 SEEDING MIXTURE NO. 40 LB	630.0200 SEEDING TEMPORARY LB	SPV.0120.01 WATER FOR SEEDED AREAS MGAL
PROJECT 4516-07-71														
CATEGORY 0010														
145+72 - 147+00	R/L	CTH EA	340	230	110	0	0	0	0.2	0	7	0	5	8
150+50 - 153+23	R/L	CTH EA	1,210	470	0	740	0	0	0.8	3	8	10	16	27
153+23 - 159+55	R/L	CTH EA	2,940	730	20	1,690	500	0	1.9	7	19	24	40	66
159+55 - 175+15	R/L	CTH EA	13,770	6,580	1,260	3,710	650	1,570	8.7	103	53	43	186	308
175+15 - 179+50	R/L	CTH EA	2,410	1,450	450	510	0	0	1.5	14	24	0	33	54
301+35 - 304+00	R/L	STH 29	1,770	1,290	380	100	0	0	1.1	9	19	0	24	40
306+50 - 309+15	R/L	STH 29	1,650	1,040	420	190	0	0	1.0	7	15	5	22	37
10+00 - 13+01	R/L	RAB	2,490	1,220	380	890	0	0	1.6	11	20	10	34	56
30+30 32+75	R/L	VFW DWY	460	0	0	460	0	0	0.3	0	0	8	6	10
UNDISTRIBUTED			6,650	3,250	760	1,960	290	390	4.2	40	40	20	90	150
		PROJECT TOTALS	33,690	16,260	3,780	10,250	1,440	1,960	21.2	194	205	121	455	756

INSULATION BOARD POLYSTYRENE

LOCATION	612.0902.S01 2-INCH SY	COMMENTS
PROJECT 4516-07-71		
CATEGORY 0010		
CTH EA NB STA 164+20, WATERMAIN / STORM SEWER XING	7	TWO LAYERS (4" TOTAL THICKNESS)
CTH EA SB STA 270+33, WATERMAIN / STORM SEWER XING	7	TWO LAYERS (4" TOTAL THICKNESS)
CTH EA SB STA 270+75, WATERMAIN / CULVERT XING	28	TWO LAYERS (4" TOTAL THICKNESS)
PROJECT TOTAL	42	

RAB CENTER ISLAND LANDSCAPING

LOCATION	SPV.0035.01 PLANTING MIXTURE CY	632.0101.01 TREES APPLE SERVICEBERRY B&B 6-FT EA	632.0201.01 SHRUBS KALLAY'S COMPACT JUNIPER CG 5 GAL EA	632.9101 LANDSCAPE PLANTING SURVEILLANCE AND CARE CYCLES EA	SPV.0085.01 LOW MAINTENANCE SEED MIX LB	SPV.0180.01 SHREDDED HARDWOOD BARK MULCH SY
PROJECT 4516-07-71						
CATEGORY 0010						
RAB	100	3	28	5	2	200
PROJECT TOTALS	100	3	28	5	2	200

EROSION CONTROL

STATION TO STATION	DIR	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.1905 MOBILIZATION EROSION CONTROL EA	628.1910 MOBILIZATION EMERGENCY EROSION CONTROL EA	628.7005 INLET PROTECTION TYPE A EACH	628.7015 INLET PROTECTION TYPE C EACH	628.7020 INLET PROTECTION TYPE D EACH	628.7504 TEMPORARY DITCH CHECKS LF	628.7555 CULVERT PIPE CHECKS EACH	628.7570 ROCK BAGS EACH	606.0200 RIPRAP MEDIUM CY	645.0120 GEOTEXTILE TYPE HR SY
PROJECT 4516-07-71														
CATEGORY 0010														
145+78 - 147+00	R/L	CTH EA	---	---	---	---	---	---	---	---	---	---	---	0
150+50 - 153+23	R/L	CTH EA	150	150	---	---	9	6	1	---	---	---	---	0
153+23 - 159+55	R/L	CTH EA	600	600	---	---	12	7	2	---	---	---	7	16
159+55 - 175+15	R/L	CTH EA	290	290	---	---	17	14	2	180	32	---	84	184
175+15 - 180+35	R/L	CTH EA	---	---	---	---	5	5	4	20	---	---	---	0
301+35 - 304+00	R/L	STH 29	---	---	---	---	---	---	---	10	7	---	---	0
306+50 - 309+15	R/L	STH 29	---	---	---	---	2	2	---	20	5	---	---	0
10+00 - 13+01	R/L	RAB	---	---	---	---	14	7	7	10	3	---	13	29
30+30 - 32+75	R/L	VFW DWY	---	---	---	---	---	---	---	---	1	---	---	---
UNDISTRIBUTED			260	260	2	2	2	2	2	60	12	50	25	53
		PROJECT TOTALS	1,300	1,300	2	2	61	43	18	300	60	50	129	282

3

MARKING

STATION TO STATION	LOCATION	646.9000 REMOVAL LINE 4-INCH LF	646.1020 LINE EPOXY 4-INCH (YELLOW) LF	646.1020 LINE EPOXY 4-INCH (WHITE) LF	646.3020 LINE EPOXY 8-INCH (WHITE) LF	646.5020 ARROW EPOXY (TYPE 2) (WHITE) EA	646.6120 STOP LINE EPOXY 18-INCH (WHITE) LF	646.6320 DOTTED EXTENSION EPOXY 18-INCH (WHITE) LF	646.7120 DIAGONAL EPOXY 12-INCH (YELLOW) LF	646.7420 CROSSWALK EPOXY TRANSVERSE LINE 6-INCH (WHITE) LF	646.8220 ISLAND NOSE EPOXY (YELLOW) LF
PROJECT 4516-07-71											
CATEGORY 0010											
145+73 - 147+50	CTH EA NB	---	544	277	---	---	---	---	30	---	1
150+75 - 151+50	CTH EA NB	---	181	---	---	---	---	---	---	---	1
151+50 - 163+50	CTH EA NB	---	3,000	---	---	8	---	---	---	---	---
163+50 - 175+50	CTH EA NB	---	2,401	---	102	8	---	---	---	---	2
175+50 - 180+19	CTH EA NB	140	577	---	103	2	---	---	25	---	2
296+50 - 304+00	STH 29 EB	730	1,650	506	---	---	---	---	40	---	1
306+25 - 314+26	STH 29 EB	125	1,495	539	---	---	---	---	40	---	1
500+50 - 501+75	MEADOW CI SOUTH	---	---	---	---	---	17	---	---	76	---
601+50 - 601+75	MEADOW CI NORTH	---	---	---	---	---	17	---	---	77	---
702+37 - 702+80	WILLOW RD WEST	---	---	---	---	---	20	---	---	100	---
800+25 - 801+75	WILLOW RD EAST	---	---	---	---	---	28	---	---	---	---
10+00 - 13+01	STH 29/CTH EA RAB	---	---	---	---	---	---	142	---	67	---
	PROJECT TOTALS	995	11,170		205	18	82	142	135	320	8

UNDERDRAIN

STATION	STRUCTURE	ROADWAY	310.0110 BASE AGGREGATE OPEN GRADED TON	612.0106 PIPE UNDERDRAIN 6-INCH LF	645.0111 GEOTEXTILE FABRIC TYPE DF SCHEDULE A SY
PROJECT 4516-07-71					
CATEGORY 0010					
304+07	10B	STH 29 EB	0.6	8	4
247+68	20C	CTH EA SB	1.2	16	9
12+15	180F	RAB	0.6	8	4
12+25	180E	RAB	0.6	8	4
501+62	160C	S MEADOW	0.6	8	4
158+75	120D	CTH EA NB	0.6	8	4
258+76	120C	CTH EA SB	0.6	8	4
259+01	120B	CTH EA SB	0.6	8	4
159+00	120A	CTH EA NB	0.6	8	4
264+26	210A	CTH EA SB	0.6	8	4
164+25	210B	CTH EA NB	0.6	8	4
164+50	210C	CTH EA NB	0.6	8	4
264+51	210D	CTH EA SB	0.6	8	4
		PROJECT TOTALS	8	112	62

SAWING

STATION	DIR	ROADWAY	690.0150 SAWING ASPAHLT LF	690.0250 SAWING CONCRETE LF
PROJECT 4516-07-71				
CATEGORY 0010				
155+75	LT	CTH EA NB	19	---
157+40	LT	CTH EA NB	---	40
161+92	RT	CTH EA NB	18	---
178+31	LT	CTH EA NB	---	6
179+50	R/L	CTH EA NB	38	5
301+31	R/L	STH 29 EB	30	16
301+54	LT	STH 29 EB	19	---
301+68	RT	STH 29 EB	20	---
307+72	LT	STH 29 EB	15	---
309+25	R/L	STH 29 EB	30	16
500+50	R/L	MEADOW SOUTH	33	4
500+93	LT	MEADOW SOUTH	---	24
501+34	RT	MEADOW SOUTH	---	21
601+50	R/L	MEADOW NORTH	33	4
702+38	R/L	WILLOW WEST	37	5
801+75	R/L	WILLOW EAST	20	---
		PROJECT TOTALS	312	141

TRAFFIC CONTROL

LOCATION	APPROX. SERVICE DAYS	643.0300 TRAFFIC CONTROL DRUMS NO IN SERVICE	643.0300 DAYS	643.0420 TRAFFIC CONTROL BARRICADES TYPE III NO IN SERVICE	643.0420 DAYS	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A NO IN SERVICE	643.0705 DAYS	643.0900 TRAFFIC CONTROL SIGNS NO IN SERVICE	643.0900 DAYS
PROJECT 4516-07-71									
CATEGORY 0010									
COTTAGE RD	112	0	0	2	224	4	448	3	336
STH 29 (OPEN CONDITION)	57	0	0	2	114	4	228	5	285
STH 29 (CLOSED CONDITION)	55	0	0	13	715	18	990	7	385
MEADOW CIRCLE SOUTH	112	0	0	3	336	6	672	3	336
MEADOW CIRCLE NORTH	112	0	0	3	336	6	672	3	336
WILLOW RD	112	0	0	5	560	10	1,120	7	784
CTH EA	112	0	0	14	1,568	18	2,016	5	560
UNDISTRIBUTED	112	0	0	10	1,120	20	2,240	5	560
UNDISTRIBUTED (STH 29 CLOSED)	55	26	1,430	8	440	0	0	0	0
		PROJECT TOTALS	1,430		5,413		8,386		3,582

NOTE: PCMS TO BE INSTALLED 7 DAYS IN ADVANCE OF CONSTRUCTION AND 7 DAYS IN ADVANCE OF ROAD CLOSURES.

TRAFFIC CONTROL PROJECT

LOCATION	643.5000 EACH
PROJECT 4516-07-71	
CATEGORY 0010	
4516-07-71	1
PROJECT TOTALS	1

CONSTRUCTION STAKING

STATION		TO STATION	ROADWAY	650.4500 SUBGRADE LF	650.5000 BASE LF	650.6500 STRUCTURE LAYOUT EA	650.7000 CONCRETE PAVEMENT LF	650.8200 ELECTRICAL INSTALLATIONS 4516-07-71 LS	650.9000 CURB RAMPS EA	650.9910 SUPPLEMENTAL CONTROL LS	650.9920 SLOPE STAKES LF
PROJECT 4516-07-71											
CATEGORY 0010						CATEGORY 0020	CATEGORY 0010				
145+78	-	147+78	CTH EA NB	200	200	---	---	---	---	1	200
149+10	-	153+23	CTH EA NB	413	413	---	---	---	3	---	413
153+23	-	159+56	CTH EA NB	633	633	---	---	---	2	---	633
159+56	-	175+15	CTH EA NB	1,559	1,559	1	---	---	2	---	1,559
175+15	-	179+50	CTH EA NB	435	435	---	---	---	1	---	435
301+30	-	304+57	STH 29 EB	327	327	---	---	---	---	---	327
305+88	-	309+26	STH 29 EB	338	338	---	---	---	--	---	338
245+77	-	247+80	CTH EA SB	203	203	---	---	---	---	---	203
249+11	-	279+50	CTH EA SB	3,039	3,039	---	---	---	---	---	3,039
401+31	-	404+58	STH 29 WB	327	327	---	---	---	---	---	327
405+91	-	409+27	STH 29 WB	336	336	---	---	---	---	---	336
500+50	-	501+50	MEADOW CI SOUTH	100	100	---	---	---	---	---	100
702+37	-	702+50	WILLOW RD WEST	13	13	---	---	---	---	---	13
800+50	-	801+75	WILLOW RD EAST	125	125	---	---	---	---	---	125
10+00	-	13+01	STH 29/CTH EA RAB	301	301	---	301	1	4	---	301
30+30	-	32+75	VFW DWY	245	245	---	---	---	---	---	245
			PROJECT TOTALS	8,594	8,594	1	301	1	12	1	8,594

NOTE: CONSTRUCTION STAKING STORM SEWER LOCATED IN STORM SEWER TABLE AND PIPE CULVERTS IN CULVERT TABLE.
CONSTRUCTION STAKING CURB AND GUTTER LOCATED IN CURB AND GUTTER TABLE.

3

Conduit Rigid Nonmetallic Schedule 40		
LOCATION		652.0225
29 & EA		2-Inch
FROM	TO	LF
CB1	PB1	10
CB1	PB1	10
PB1	LB1	10
PB1	PB2	70
PB2	LB2	30
PB2	PB3	70
PB3	LB3	20
PB3	PB4	60
PB4	LB4	40
PB4	PB5	110
PB5	LB5	10
PB5	PB6	40
PB6	LB6	30
PB6	PB7	110
PB7	LB7	10
PB7	PB8	60
PB8	LB8	10
PB8	PB1	110
	TOTAL	810

Concrete Bases		
		654.0220
	654.0105	Control
	Type 5	Cabinet
		NER Type 10
LOCATION	EACH	EACH
29 & EA	8	1

Electric Service	
	656.0200
	Meter Breaker Pedestal
LOCATION	LS
29 & EA	1

Electrical Wire Lighting					
			10AWG	12AWG	
LOCATION					655.0610
29 & EA			655.0615	655.0610	Equipment
			Ungrounded	Ungrounded	Grounding
(240 VOLT SYSTEM)			Conductor	Conductor	Conductor
			(see Circuit Color)	(Black)/(Red)	(Green)
Circuit	FROM	TO	LF	LF	LF
A	CB1	LB1	100		
(Black)	LB1	Luminaires		100	50
	LB1	LB2	300		
	LB2	Luminaires		100	50
B	CB1	LB3	440		
(Red)	LB3	Luminaires		100	50
	LB3	LB4	320		
	LB4	Luminaires		100	50
C	CB1	LB6	760		
(Blue)	LB6	Luminaires		100	50
	LB6	LB5	240		
	LB5	Luminaires		100	50
D	CB1	LB8	340		
(Brown)	LB8	Luminaires		100	50
	LB8	LB7	240		
	LB7	Luminaires		100	50
		SUB-TOTALS	2,740	800	400
		TOTAL	2,740	1,200	

ADDITIONAL 10AWG ELECTRICAL QTY IN ELECTRICAL WIRE LIGHTING 10AWG TABLE

Electrical Wire Lighting 10AWG		
LOCATION		655.0615
29 & EA		Equipment
		Grounding
(240 VOLT SYSTEM)		Conductor
		(Green)
FROM	TO	LF
CB1	LB1	50
LB1	LB2	150
LB2	LB3	160
LB3	LB4	160
LB4	LB5	200
LB5	LB6	120
LB6	LB7	190
LB7	LB8	120
LB8	CB1	170
	TOTAL	1,150

ADDITIONAL QTY IN ELECTRICAL WIRE LIGHTING TABLE

Pull Boxes, Non-Conductive	
	653.0164
	24x42-Inch
LOCATION	EACH
29 & EA	8

Lighting Summary				
	657.0255	657.0322	657.0710	659.1115
	Transformer Bases	Poles	Luminaire Arms	Luminaires
	Breakaway	Type 5	Truss Type	Utility
	11 1/2-Inch	(Aluminum)	4 1/2-Inch Clamp	LED-A
	Bolt Circle		12-FT	
LOCATION	EACH	EACH	EACH	EACH
29 & EA	8	8	8	8

ALL ITEMS ON THIS PAGE ARE CATEGORY 0010

3

3

MINI-STORM SEWER

STATION	ROADWAY	SPV.0090.03 MINI-STORM LATERAL 4-INCH LF	SPV.0090.04 MINI-STORM TRUNK 6-INCH LF	SPV.0060.05 MINI-STORM SEWER CLEANOUTS EA	SPV.0060.06 TRACER WIRE AND TRACER WIRE ACCESS BOX EA	COMMENT
PROJECT 4516-07-71						
CATEGORY 0030						
152+21 - 152+80, LT	CTH EA NB	---	65	1	---	TO SS 160B
152+23, LT	CTH EA NB	8	---	---	1	TO MINI STORM TRUNK
155+46 - 156+48, LT	CTH EA NB	---	105	1	---	TO SS 140B
155+50, LT	CTH EA NB	12	---	---	1	TO MINI STORM TRUNK
156+33, LT	CTH EA NB	12	---	---	1	TO MINI STORM TRUNK
156+48 - 156+78, LT	CTH EA NB	---	35	1	---	TO SS 140B
156+76, LT	CTH EA NB	12	---	---	1	TO MINI STORM TRUNK
	PROJECT TOTALS	44	205	3	4	

TEMPORARY WATER DIVERSION

STRUCTURE	ROADWAY	SPV.0105.02 EA
PROJECT 4516-07-71		
CATEGORY 0010		
C-5-154	CTH EA	1
	PROJECT TOTAL	1

3

WORK BY OTHERS

ASPHALTIC ITEMS

STATION TO STATION	DIR	LOCATION	** TACK COAT GAL	** HMA PAVEMENT 3 MT 58-28 S TON	** HMA PAVEMENT 4 MT 58-28 S TON	** HMA PAVEMENT 4 MT 58-28 H TON
PROJECT 4516-07-71						
145+73 - 147+10	R/L	CTH EA	53	63	51	0
147+10 - 147+58	R/L	CTH EA	29	51	0	20
149+30 - 153+23	R/L	CTH EA	199	239	191	0
153+23 - 159+55	R/L	CTH EA	354	424	339	0
159+55 - 175+15	R/L	CTH EA	871	1,044	835	0
175+15 - 179+50	R/L	CTH EA	226	270	216	0
301+35 - 304+38	R/L	STH 29	213	378	0	144
306+10 - 309+15	R/L	STH 29	220	390	0	149
500+50 - 501+86	R/L	MEADOW CI SOUTH	64	76	61	0
601+00 - 601+87	R/L	MEADOW CI NORTH	19	23	19	0
702+37 - 702+88	R/L	WILLOW RD WEST	32	39	31	0
800+17 - 802+08	R/L	WILLOW RD EAST	74	88	71	0
10+00 - 13+01	R/L	STH 29/CTH EA RAB	227	403	0	154
		PROJECT TOTALS	2,581	3,490	1,813	466

**FOR INFORMATION ONLY: WORK BY OTHERS.

DRIVEWAYS

STATION	DIR	LOCATION	** ASPHALTIC SURFACE DRIVEWAY & FIELD ENTRANCES TON
PROJECT 4516-07-71			
151+18	RT	CTH EA	5
155+75	LT	CTH EA	5
161+90	RT	CTH EA	8
301+65	LT	STH 29	10
301+65	RT	STH 29	12
307+70	LT	STH 29	11
		PROJECT TOTALS	52**

**FOR INFORMATION ONLY: WORK BY OTHERS

TRAFFIC CONTROL

LOCATION	** TRAFFIC CONTROL SIGNS PCMS NO IN SERVICE	DAYS
PROJECT 4516-07-71		
COTTAGE RD	0	0
STH 29 (OPEN CONDITION)	0	0
STH 29 (CLOSED CONDITION)	2	28
MEADOW CIRCLE SOUTH	0	0
MEADOW CIRCLE NORTH	0	0
WILLOW RD	0	0
CTH EA	2	35
UNDISTRIBUTED	0	0
UNDISTRIBUTED (STH 29 CLOSED)	0	0
PROJECT TOTALS		63**

NOTE: PCMS TO BE INSTALLED 7 DAYS IN ADVANCE OF CONSTRUCTION AND 7 DAYS IN ADVANCE OF ROAD CLOSURES.

**FOR INFORMATION ONLY: WORK BY OTHERS.

PERMANENT SIGNS

SIGN NO.	STA.	FACE DIRECTION	LOCATION	SIGN CODE	W X H	** SIGNS TYPE II REFLECTIVE H S.F.	** POSTS WOOD 4x6x16 EACH	REMARKS
PROJECT 4516-07-71								
100	150+85 RT	NB	CTH EA NB	R3-9B	24"X36"	6.00	1	
101	151+85 RT	NB	CTH EA NB	R2-1	24"X30"	5.00	1	
102	153+03 LT	EB	CTH EA NB	R1-1	30"X30"	5.18	1	
103	158+70 LT	SB	CTH EA NB	R2-1	24"X30"	5.00	1	
104	159+37 LT	EB	CTH EA NB	R1-1	30"X30"	5.18	1	
104A	161+00 RT	NB	CTH EA NB	R3-9B	24"X36"	6.00	1	
104B	161+00 LT	SB	CTH EA NB	R3-9B	24"X36"	6.00	1	
105	164+00 RT	NB	CTH EA NB	R2-1	24"X30"	5.00	1	
105A	273+00 LT	SB	CTH EA NB	R3-9B	24"X36"	6.00	1	
106	173+25 LT	NB	CTH EA NB	R4-7	24"X30"	5.00	1	
107	174+00 LT	SB	CTH EA NB	R2-1	24"X30"	5.00	1	
108	174+66 LT	SB	CTH EA NB	R4-7	24"X30"	5.00	1	
109	174+92 LT	EB	CTH EA NB	R1-1	30"X30"	5.18	1	
110	175+51 RT	WB	CTH EA NB	R1-1	30"X30"	5.18	1	
111	175+67 LT	NB	CTH EA NB	R4-7	24"X30"	5.00	1	
112	176+80 RT	NB	CTH EA NB	R2-1	24"X30"	5.00	1	
113	178+41 LT	SB	CTH EA NB	R4-7	24"X30"	5.00	1	
			PROJECT TOTALS			89.72**	17.00**	

**FOR INFORMATION ONLY: WORK BY OTHERS.

REMOVING SIGNS

SIGN NO.	STA	DIRECTION	LOCATION	** REMOVING SIGNS TYPE II EACH	** REMOVING SMALL SIGN SUPPORTS EACH
PROJECT 4516-07-71					
R101	151+17	RT	CTH EA NB	1	1
R102	153+03	LT	CTH EA NB	1	1
R103	153+00	RT	CTH EA NB	1	1
R104	159+34	LT	CTH EA NB	1	1
R105	160+30	RT	CTH EA NB	1	1
R106	160+28	LT	CTH EA NB	1	1
R107	160+44	LT	CTH EA NB	1	1
R108	160+40	RT	CTH EA NB	1	1
R109	167+65	LT	CTH EA NB	1	1
R110	173+72	LT	CTH EA NB	1	1
R111	174+94	LT	CTH EA NB	1	1
R112	175+39	RT	CTH EA NB	1	1
R113	176+72	RT	CTH EA NB	1	1
			PROJECT TOTALS	13**	13**

**FOR INFORMATION ONLY: WORK BY OTHERS.

WORK BY OTHERS

ERECTION & REMOVAL OF PERMANENT SIGNING, TYPE II

SIGN NO.	LOCATION	SIGN CODE	W X H	** 637.2210 SIGNS TYPE II REFLECTIVE TYPE H S.F.	** 637.2230 SIGNS TYPE II REFLECTIVE TYPE F S.F.	** 634.0614 POSTS WOOD 4x6x14 EACH	** 634.0616 POSTS WOOD 4x6x16 EACH	** 634.0618 POSTS WOOD 4x6x18 EACH	REMARKS
1	STH 29, W. OF CTH EA	J1-1	24" X 39"	6.50	---	---	1	---	SEE PLAN SHEET
2	"	W2-6	30" X 30"	---	6.25	---	---	1	
3	"	W13-1	18" X 18"	---	2.25	---	---	---	15 MPH, MOUNT BELOW SIGN 2
4	"	J13-1	24" X 45"	7.50	---	---	1	---	SEE PLAN SHEET
5	"	W3-2	36" X 36"	---	9.00	---	1	---	
6	"	R4-7	24" X 30"	5.00	---	1	---	---	
7	"	R1-2	36" X 31"	3.88	---	---	---	1	
8	"	R6-2R	24" X 30"	5.00	---	---	---	---	MOUNT BELOW SIGN 7
9	"	R1-2	36" X 31"	3.88	---	---	---	1	
10	"	R1-54	24" X 15"	2.50	---	---	---	---	MOUNT BELOW SIGN 9
11	"	W1-1L	36" X 36"	---	9.00	---	---	1	
12	"	W13-1	18" X 18"	---	2.25	---	---	---	20 MPH, MOUNT BELOW SIGN 11
13	"	R2-1	24" X 30"	5.00	---	1	---	---	35 MPH
14	"	J4-1	24" X 36"	6.00	---	---	1	---	SEE PLAN SHEET
15	"	D1-1	36" X 24"	6.00	---	1	---	---	SEE SIGN DETAILS
16	CENTER ISLAND	R6-1R	54" X 18"	6.75	---	---	2	---	
17	"	R6-4B	60" X 24"	10.00	---	---	---	---	MOUNT BELOW SIGN 16
18	COTTAGE RD	D1-1	78" X 15"	8.13	---	2	---	---	SEE SIGN DETAILS
19	"	R4-7	24" X 30"	5.00	---	1	---	---	
20	"	R1-2	36" X 31"	3.88	---	---	---	1	
21	"	R6-2R	24" X 30"	5.00	---	---	---	---	MOUNT BELOW SIGN 20
22	"	R1-2	36" X 31"	3.88	---	---	---	1	
23	"	R1-54	24" X 15"	2.50	---	---	---	---	MOUNT BELOW SIGN 22
24	CENTER ISLAND	R6-1R	54" X 18"	6.75	---	---	2	---	
25	"	R6-4B	60" X 24"	10.00	---	---	---	---	MOUNT BELOW SIGN 24
26	"	R6-1R	54" X 18"	6.75	---	---	2	---	
27	"	R6-4B	60" X 24"	10.00	---	---	---	---	MOUNT BELOW SIGN 26
28	CTH EA	R1-2	36" X 31"	3.88	---	---	---	1	
29	"	R1-54	24" X 15"	2.50	---	---	---	---	MOUNT BELOW SIGN 28
30	"	R1-2	36" X 31"	3.88	---	---	---	1	
31	"	R6-2R	24" X 30"	5.00	---	---	---	---	MOUNT BELOW SIGN 30
32	"	D1-1	72" X 30"	15.00	---	2	---	---	SEE SIGN DETAILS
33	CENTER ISLAND	R6-1R	54" X 18"	6.75	---	---	2	---	
34	"	R6-4B	60" X 24"	10.00	---	---	---	---	MOUNT BELOW SIGN 33
	PAGE SUBTOTALS			176.91	28.75	8	12	8	

**FOR INFORMATION ONLY: WORK BY OTHERS.

ALL ITEMS ON THIS PAGE ARE CATEGORY 0010

WORK BY OTHERS

ERECTION & REMOVAL OF PERMANENT SIGNING, TYPE II

SIGN NO.	LOCATION	SIGN CODE	W X H	** 637.2210 SIGNS TYPE II REFLECTIVE TYPE H S.F.	** 637.2230 SIGNS TYPE II REFLECTIVE TYPE F S.F.	** 634.0614 POSTS WOOD 4x6x14 EACH	** 634.0616 POSTS WOOD 4x6x16 EACH	** 634.0618 POSTS WOOD 4x6x18 EACH	REMARKS
35	STH 29, E. OF CTH EA	R1-2	36" X 31"	3.88	---	---	---	1	
36	"	R1-54	24" X 15"	2.50	---	---	---	---	MOUNT BELOW SIGN 35
37	"	R1-2	36" X 31"	3.88	---	---	---	1	
38	"	R6-2R	24" X 30"	5.00	---	---	---	---	MOUNT BELOW SIGN 37
39	"	R4-7	24" X 30"	5.00	---	1	---	---	
40	"	W3-2	36" X 36"	---	9.00	---	1	---	
41	"	J13-1	24" X 45"	7.50	---	---	1	---	SEE PLAN SHEET
42	"	W2-6	30" X 30"	---	6.25	---	---	1	
43	"	W13-1	18" X 18"	---	2.25	---	---	---	15 MPH, MOUNT BELOW SIGN 42
44	"	J1-1	24" X 39"	6.50	---	---	1	---	SEE PLAN SHEET
45	"	D1-1	36" X 24"	6.00	---	1	---	---	SEE SIGN DETAILS
46	"	J4-1	24" X 36"	6.00	---	---	1	---	SEE PLAN SHEET
47	"	R2-1	24" X 30"	5.00	---	1	---	---	35 MPH
48	COTTAGE RD	W2-6	30" X 30"	---	6.25	---	---	1	
49	"	W13-1	18" X 18"	---	2.25	---	---	---	15 MPH, MOUNT BELOW SIGN 48
50	CTH EA	R4-7	24" X 30"	5.00	---	1	---	---	
51	"	W3-2	36" X 36"	---	9.00	---	1	---	
52	"	J13-1	24" X 45"	7.50	---	---	1	---	SEE PLAN SHEET
53	"	W2-6	30" X 30"	---	6.25	---	---	1	
54	"	W13-1	18" X 18"	---	2.25	---	---	---	15 MPH, MOUNT BELOW SIGN 53
55	"	J1-1	24" X 39"	6.50	---	---	1	---	SEE PLAN SHEET
	PAGE SUBTOTALS			70.26	43.50	4	7	5	
	PROJECT TOTALS			**247.17**	**72.25**	**12**	**19**	**13**	

**FOR INFORMATION ONLY: WORK BY OTHERS.

ALL ITEMS ON THIS PAGE ARE CATEGORY 0010

WORK BY OTHERS

REMOVAL OF PERMANENT SIGNING, TYPE II

SIGN NO.	LOCATION	SIGN CODE	** 638.2602 REMOVING SIGNS TYPE II EACH	** 638.3000 REMOVING SMALL SIGN SUPPORTS EACH
70	STH 29, W. OF CTH EA	W1-1L	1	1
71	"	W13-1	---	---
72	"	W1-1L	1	1
73	"	W13-1	---	---
74	CTH EA	R1-1	1	1
75	COTTAGE RD	R1-1	1	1
76	STH 29, E. OF CTH EA	W14-3	1	1
77	"	R2-1	1	1
	TOTALS		**6**	**6**

**FOR INFORMATION ONLY: WORK BY OTHERS.

ALL ITEMS ON THIS PAGE ARE CATEGORY 0010

2818280

VOL 1 PAGE 191

PROJECT NUMBER 4516-07-71 - 4.01
SHEET SHEET 2 OF 2
AMENDMENT NO:___

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

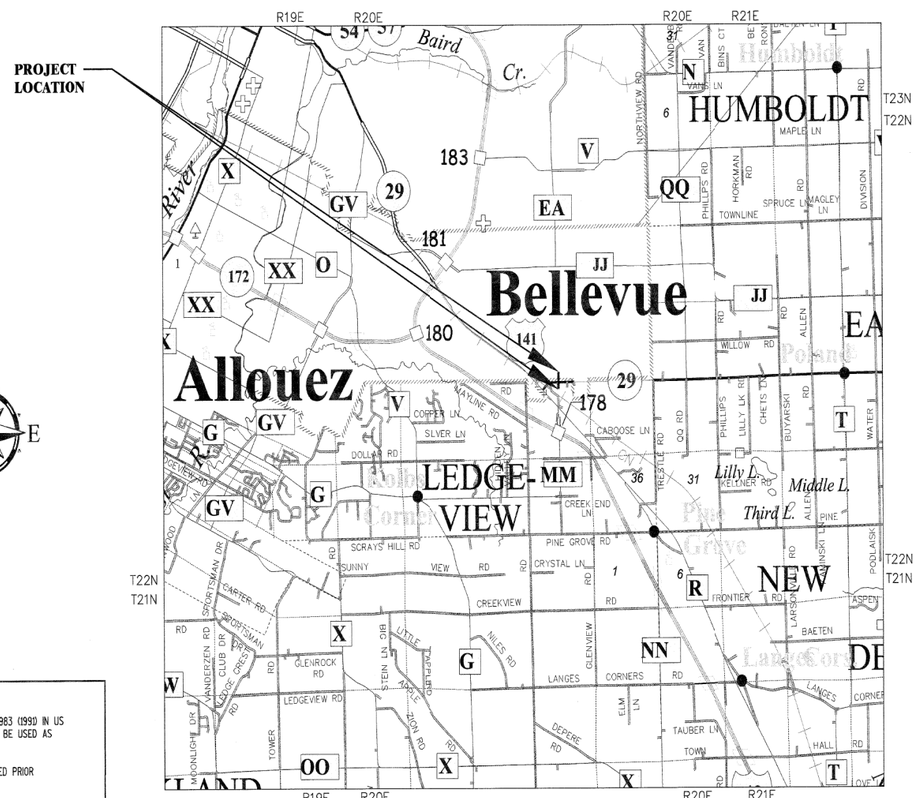
TRANSPORTATION PROJECT PLAT TITLE SHEET

4516-07-71

VILLAGE OF BELLEVUE, S. HURON ROAD
STH 29 TO WILLOW ROAD
CTH EA
BROWN COUNTY







LAYOUT
SCALE 0 1 MI.

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN REFERENCE SYSTEM COORDINATES (WISCRS) BROWN COUNTY, NAD 1983 (1991) IN US SURVEY FEET, VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES, GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 MONUMENTS (TYPICALLY 1-INCH BY 24-INCH IRON PIPE) AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

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

PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. EXCLUDING RIGHT-OF-WAY BOUNDARIES, THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

DIMENSIONS FOR THE NEW RIGHT-OF-WAY IS MEASURED ALONG AND PERPENDICULAR TO THE NEW REFERENCE LINES.

A TEMPORARY LIMITED EASEMENT (TLE) IS A RIGHT FOR CONSTRUCTION PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON AND THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM NECESSARY OR DESIRABLE. ALL TLE'S EXPIRE AT THE COMPLETION OF THE PROJECT FOR WHICH THIS INSTRUMENT IS GIVEN.

A PERMANENT LIMITED EASEMENT (PLE) IS A RIGHT FOR CONSTRUCTION AND MAINTENANCE PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE THE NECESSARY EQUIPMENT THEREON AND THE RIGHT OF INGRESS AND EGRESS AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM NECESSARY OR DESIRABLE, BUT WITHOUT PREJUDICE TO THE OWNERS RIGHT TO MAKE OR CONSTRUCT IMPROVEMENTS ON SAID LANDS OR TO FLATTEN THE SLOPES, PROVIDING SAID ACTIVITIES WILL NOT IMPAIR OR OTHERWISE ADVERSELY AFFECT THE HIGHWAY FACILITIES.

CONVENTIONAL SYMBOLS

SECTION LINE
QUARTER LINE
SIXTEENTH LINE
NEW REFERENCE LINE
NEW R/W LINE
EXISTING R/W LINE
PROPERTY LINE
LOT, TIE & OTHER MINOR LINES
CORPORATE LIMITS
UNDERGROUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC)
FEE ACQUISITION AREA (HATCHING VARIES BY OWNER)
TEMPORARY LIMITED EASEMENT AREA
EASEMENT AREA (HIGHWAY, PERMANENT LIMITED, OR RESTRICTED DEVELOPMENT)
TRANSMISSION STRUCTURES
BUILDING
NATIONAL GEODETIC SURVEY MONUMENT
SIXTEENTH CORNER MONUMENT
R/W POINT
PLE POINT
TLE POINT
UTILITY EASEMENT

SECTION
CORNER
NOTATION FOR COMBUSTABLE FLUIDS
NOTATION FOR HIGH VOLTAGE TRANSMISSION LINES
ELECTRIC POLE
TELEPHONE POLE
PEDESTAL (LABEL TYPE) (TV, TEL, ELEC, ETC.)
BRIDGE

R/W MONUMENT
NON-MONUMENTED R/W POINT
FOUND IRON PIN
VALVE (GAS, WATER, ETC.)
SIGN
OFF-PREMISE SIGN

	COMPENSABLE	NON-COMPENSABLE
ELECTRIC POLE		
TELEPHONE POLE		
PEDESTAL (LABEL TYPE) (TV, TEL, ELEC, ETC.)		

ACCESS CONTROLLED BY ACQUISITION
NO ACCESS (BY STATUTORY AUTHORITY)
ACCESS RESTRICTED (BY PREVIOUS PROJECT OR CONTROL)

PARCEL NUMBER 25
UTILITY NUMBER 40

CONVENTIONAL ABBREVIATIONS

ACCESS RIGHTS	AR	POINT OF COMPOUND CURVE	PCC
ACRES	AC	POINT OF INTERSECTION	PI
AHEAD	AH	PROPERTY LINE	PL
ALUMINUM	ALUM	RECORDED AS	(100')
AND OTHERS	ET AL	REFERENCE LINE	R/L
BACK	BK	REMAINING	REM
BLOCK	BLK	RIGHT	RT
CENTERLINE	C/L	RIGHT OF WAY	R/W
CERTIFIED SURVEY MAP	CSM	SECTION	SEC
CONCRETE	CONC	SEPTIC VENT	SEPV
COUNTY	CO	SQUARE FEET	SF
COUNTY TRUNK HIGHWAY	CTH	STATE TRUNK HIGHWAY	STH
DISTANCE	DIST	STATION	STA
CORNER	COR	SUBDIVISION	SUBD
DOCUMENT NUMBER	DOC	TANGENT	TAN
EASEMENT	EASE	TELEPHONE PEDESTAL	TP
EXISTING	EX	TEMPORARY LIMITED EASEMENT	TLE
GAS VALVE	GV	TRANSPORTATION PROJECT PLAT	TPP
GRID NORTH	GN	UNITED STATES HIGHWAY	USH
HIGHWAY EASEMENT	HE	VOLUME	V
IDENTIFICATION	ID		
LAND CONTRACT	LC		
LEFT	LT		
MONUMENT	MON		
NATIONAL GEODETIC SURVEY	NGS		
NUMBER	NO		
OUTLOT	OL		
PAGE	P		
POINT OF TANGENCY	PT		
PERMANENT LIMITED EASEMENT	PLE		
POINT OF BEGINNING	POB		
POINT OF CURVATURE	PC		

CURVE DATA

LONG CHORD	LC
LONG CHORD BEARING	LCB
RADIUS	R
DEGREE OF CURVE	D
CENTRAL ANGLE OR DELTA	Δ
LENGTH OF CURVE	L
TANGENT	T
DIRECTION AHEAD	DA
DIRECTION BACK	DB

CONVENTIONAL UTILITY SYMBOLS

WATER —W—
GAS —G—
TELEPHONE —T—
OVERHEAD TRANSMISSION LINES —OH—
ELECTRIC —E—
CABLE TELEVISION —TV—
FIBER OPTIC —FO—
SANITARY SEWER —SAN—
STORM SEWER —SS—

FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\RW\TPP_1.DWG
APPRAISAL PLAT DATE : _____

PLOT DATE : 3/16/2018 7:33 AM PLOT BY : OMNNI ASSOCIATES, INC. - MARK FUERST

---------- ---------- 4.---

TRANSPORTATION PROJECT PLAT NO: 4516-07-71 - 4.01

THAT PART OF THE LOTS 1 & 2, BROWN COUNTY CERTIFIED SURVEY MAP VOLUME 30, PAGES 31-32, LOCATED IN THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER AND THAT PART OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER, TOWN OF LEDGEVIEW, THAT PART OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER, VILLAGE OF BELLEVUE, SECTION 26, THAT PART OF LOT 1, BROWN COUNTY CERTIFIED SURVEY MAP VOLUME 27, PAGES 177-178, LOTS 3 & 4, BROWN COUNTY CERTIFIED SURVEY MAP VOLUME 29, PAGES 211-212, LOT 2, BROWN COUNTY CERTIFIED SURVEY MAP VOLUME 31, PAGES 158-160, LOTS 8, 9 & 10, DEPREY'S PLACE, LOCATED IN AND ALSO BEING A PART OF THE SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER, AND THAT PART OF THE SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 23, TOWN OF BELLEVUE, ALL IN T23N, 21E, BROWN COUNTY, WISCONSIN

RELOCATION ORDER CTH EA BROWN COUNTY

STH 29 TO WILLOW ROAD

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, BROWN COUNTY DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE NAMED PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 83.07 AND 83.08, WISCONSIN STATUTES, BROWN COUNTY HEREBY ORDERS THAT:

1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE COUNTY FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF BROWN COUNTY, PURSUANT TO THE PROVISIONS OF SECTION 83.07 AND 83.08, WISCONSIN STATUTES.

GN / W / E / S

SCALE, FEET
0 100 200

REGISTER'S OFFICE
Brown Co., Wis
Received for record the 16th day of March AD 2018
at 1:23 o'clock P M. and recorded in Vol 1 of Transportation on page 190-191 Plats
Register of deeds Cheryl Bedker

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 4516-07-71 - 4.01
SHEET 1 OF 2
AMENDMENT NO:___

ROAD NAME	BASIS OF EXISTING R/W	DATE
SOUTH HURON RD	DE PREY'S PLACE	1977
	27 CSM 177-178	1992
	29 CSM 211-212	1993
	31 CSM 158-160	1994
STH 29	WISDOT R/W PROJECT *4125.01-21	1993
	31 CSM 158-160	1994
COTTAGE ROAD	30 CSM 31-32	1993
	ZEITLER P.O.S.	9-1-1999
MEADOW CIRCLE	DE PREY'S PLACE	1977
	27 CSM 177-178	1982
	29 CSM 211-212	1993

NEW R/W COURSE TABLE

FROM-TO	BEARING	DISTANCE
117-116	S00°03'35"E	10.00'
116-115	N89°55'46"E	152.33'
115-114	S35°13'26"E	144.17'
114-113	S14°27'09"E	85.93'
112-111	N43°35'58"E	57.17'
113-110	N78°27'29"E	102.50'
110-109	N89°53'44"E	65.34'
109-108	N83°19'39"E	129.50'
118-119	N68°27'22"E	87.42'
119-120	N80°10'38"E	94.37'
120-121	N15°33'54"E	70.02'
11-11	N31°53'20"W	37.02'
11-86	N00°04'03"W	207.99'
86-10	N10°14'43"W	54.92'
10-83	N00°04'03"W	760.88'
83-105	N27°49'15"E	57.84'
105-9	SEE C-2 DATA	
9-215	N05°04'02"W	88.11'
215-163	N89°54'08"W	26.39'
47-46	N47°00'44"W	31.27'
46-90	N04°06'46"W	72.72'
90-89	N51°21'49"E	26.62'
89-28	N05°04'02"W	112.75'

LINE BEARING AND DISTANCE TABLE

LINE	BEARING	DISTANCE
L1	N89°29'59"W	283.95'
L2	S00°03'25"E	52.83'
L3	N89°29'59"W	253.44'
L4	N00°30'01"E	47.68'
L5	S00°03'47"E	87.53'
L6	S70°50'13"W	85.76'
L7	S89°55'46"W	112.65'
L8	S00°00'57"W	176.63'
L9	S89°59'03"E	15.00'
L10	S00°00'57"W	64.68'
L11	N89°55'47"E	53.73'
L12	N00°04'13"W	63.01'
L13	S70°58'35"E	47.59'
L14	S89°56'13"W	59.75'
L15	N89°31'37"W	59.75'
L16	S00°03'42"E	174.71'
L17	S89°37'12"E	11.58'

C-1 DATA
R = 12.00'
L = 18.77'
LC = 16.92'
LCB = S44°54'56"W

C-2 DATA
R = 2574.00'
L = 138.27'
LC = 138.26'
LCB = N03°31'42"W

PLE COURSE TABLE

FROM-TO	BEARING	DISTANCE
152-155	S00°03'47"E	10.00'
155-154	S89°55'57"W	8.00'
154-153	N00°03'47"W	10.00'
153-152	N89°55'57"E	8.00'
173-174	S89°55'57"W	8.10'
174-175	N00°03'47"W	10.00'
175-176	N89°55'57"E	8.10'
176-173	S00°03'47"E	10.00'
151-150	S89°55'57"W	8.12'
150-149	N00°03'47"W	10.00'
148-148	N89°55'57"E	8.12'
148-151	S00°03'47"E	10.00'
28-221	S05°04'02"E	213.10'
221-220	N89°37'13"W	79.86'
220-219	N05°04'02"W	213.10'
219-28	S89°37'12"E	79.86'

TPP NOTES:

1. PLE NEEDED IN THIS TPP ARE FOR DRAINAGE FACILITIES AND ARE SHOWN SHADED.
2. TLE AREAS ARE NEEDED FOR DRIVEWAY CONSTRUCTION AND SLOPING.
3. S. HURON ROAD ALIGNMENT STARTING AT STATION 150+00.00 IS THE NORTHBOUND CONSTRUCTION REFERENCE LINE.

CURVE A

PI	159+75.43
Y	542655.488
X	125202.912
△	= 05°00'00"
D	= 02°16'45"
R	= 2514.00'
L	= 219.39'
T	= 109.76'
LC	= 219.32'
LCB	= N02°34'02"W

UTILITY INTEREST REQUIRED

UTILITY	OWNERS	INTEREST REQUIRES
100	CENTURY LINK	RELEASE OF RIGHTS
101	VILLAGE OF BELLEVUE	RELEASE OF RIGHTS

EASEMENT TABLE

Owner	Easement	Parcels
100	1 ROD EASEMENT CENTURYLINK F/K/A GENERAL TELEPHONE COMPANY V. 888, PG 626, DOC # 709501	2
100	RIGHT-OF-WAY AUTHORIZATION CENTURYLINK F/K/A GENERAL TELEPHONE COMPANY V. 813, PG 669, DOC # 577292	1
100	10' EASEMENT CENTURYLINK F/K/A GENERAL TELEPHONE COMPANY V. 888, PG 622, DOC # 709503	6
100	6' EASEMENT CENTURYLINK F/K/A GENERAL TELEPHONE COMPANY J.2717, L.18, DOC # 904822	9
101	6' EASEMENT BELLEVUE SANITARY DISTRICT J.2014, L.16, DOC # 885037	9,10,11

SCHEDULE OF LANDS AND INTEREST

OWNERS NAMES ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO TRANSFER OF LAND INTERESTS TO THE COUNTY

PARCEL NO.	OWNER	INTEREST REQUIRED	AREA ACRES REQUIRED NEW	EXISTING	TOTAL	TLE AREA	PLE AREA
1	DARRELL HENNINGER & TAMMY HENNINGER	FEE	0.25 AC	---	0.25 AC	---	---
2	CLIFFORD HOLL & CAMILLA HOLL	FEE	0.12 AC	---	0.12 AC	---	---
3	RAYMOND L. FORSTROM & JODI L. FORSTROM	FEE	0.03 AC	---	0.03 AC	---	---
4	MARVIN E. LUND & BONNIE L. LUND	TLE	---	---	---	0.01 AC	---
6	MARK E. LEISTIKOW	FEE TLE	0.12 AC	---	0.12 AC	0.04 AC	---
7	VETERANS OF FOREIGN WARS, WINECKI POST #9677	FEE TLE	0.42 AC	---	0.42 AC	0.21 AC	---
8	DONNA M. KRINES	TLE	---	---	---	0.03 AC	---
9	RANDALL S. HEIM & CYNTHIA M. HEIM 1/2 INTEREST SURVIVORSHIP MARITIAL PROPERTY & THOMAS J. DORN & TRACY J. DORN 1/2 INTEREST AS TENANTS IN COMMON	TLE PLE	---	---	---	0.04 AC	80 SQ FT
10	DEPREY AND ASSOCIATES LLC	FEE TLE	0.20 AC	---	0.20 AC	0.01 AC	---
11	EDWARD G. COLE & SHERRI L. COLE	TLE	---	---	---	0.02 AC	---
12	STEVEN C. DERENNE & BARBARA J. DERENNE	TLE	---	---	---	0.03 AC	---
13	STEPHEN J. KRUMPOS & DEBRA A. KRUMPOS	TLE PLE	---	---	---	0.05 AC	81 SQ FT
14	GERALD R. METZLER & CAROL J. METZLER	TLE PLE	---	---	---	306 SQ FT	81 SQ FT
15	CURT T. BEAUCHAINE & RENEE A. BEAUCHAINE	FEE TLE PLE	0.04 AC	---	0.04 AC	0.05 AC	0.04 AC

TLE STATION & OFFSET TABLE

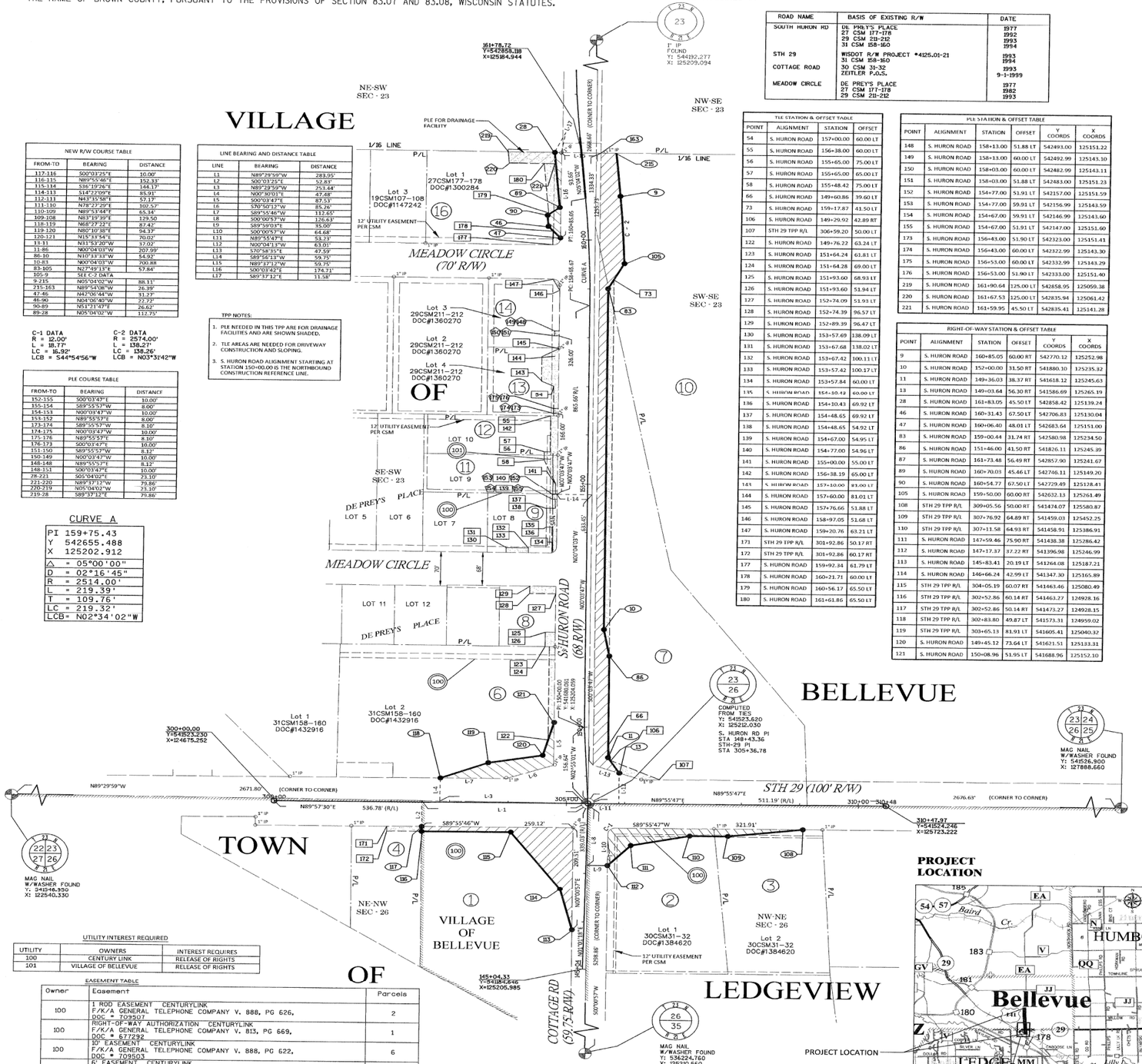
POINT	ALIGNMENT	STATION	OFFSET
54	S. HURON ROAD	157+00.00	60.00 LT
55	S. HURON ROAD	156+38.00	60.00 LT
56	S. HURON ROAD	155+65.00	75.00 LT
57	S. HURON ROAD	155+65.00	65.00 LT
58	S. HURON ROAD	155+48.42	75.00 LT
66	S. HURON ROAD	149+60.86	39.60 LT
73	S. HURON ROAD	159+17.87	41.50 LT
106	S. HURON ROAD	149+29.92	42.89 RT
107	STH 29 TPP R/L	306+59.20	50.00 LT
122	S. HURON ROAD	149+76.22	63.24 LT
123	S. HURON ROAD	151+64.24	63.81 LT
124	S. HURON ROAD	151+64.28	69.00 LT
125	S. HURON ROAD	151+93.60	68.93 LT
126	S. HURON ROAD	151+93.60	51.94 LT
127	S. HURON ROAD	152+74.09	51.93 LT
128	S. HURON ROAD	152+74.39	96.57 LT
129	S. HURON ROAD	152+89.39	96.47 LT
130	S. HURON ROAD	153+57.69	138.09 LT
131	S. HURON ROAD	153+67.68	138.02 LT
132	S. HURON ROAD	153+67.42	100.11 LT
133	S. HURON ROAD	153+57.42	100.17 LT
134	S. HURON ROAD	153+57.84	60.00 LT
135	S. HURON ROAD	154+10.42	60.00 LT
136	S. HURON ROAD	154+10.43	69.92 LT
137	S. HURON ROAD	154+48.65	69.92 LT
138	S. HURON ROAD	154+48.65	54.92 LT
139	S. HURON ROAD	154+67.00	54.95 LT
140	S. HURON ROAD	154+77.00	54.96 LT
141	S. HURON ROAD	155+00.00	55.00 LT
142	S. HURON ROAD	156+38.19	65.00 LT
143	S. HURON ROAD	157+10.00	83.00 LT
144	S. HURON ROAD	157+60.00	81.01 LT
145	S. HURON ROAD	157+76.66	51.88 LT
146	S. HURON ROAD	158+97.05	51.68 LT
147	S. HURON ROAD	159+20.76	63.21 LT
171	STH 29 TPP R/L	301+92.86	50.17 RT
172	STH 29 TPP R/L	301+92.86	60.17 RT
177	S. HURON ROAD	159+92.34	61.79 LT
178	S. HURON ROAD	160+21.71	60.00 LT
179	S. HURON ROAD	160+56.17	65.50 LT
180	S. HURON ROAD	161+61.86	65.50 LT

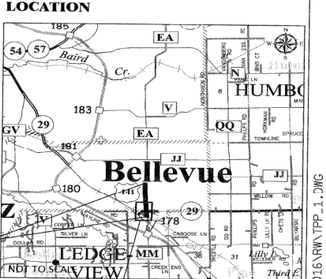
PLE STATION & OFFSET TABLE

POINT	ALIGNMENT	STATION	OFFSET	Y COORDS	X COORDS
148	S. HURON ROAD	158+13.00	51.88 LT	542493.00	125151.22
149	S. HURON ROAD	158+13.00	60.00 LT	542492.99	125143.10
150	S. HURON ROAD	158+03.00	60.00 LT	542482.99	125143.11
151	S. HURON ROAD	158+03.00	51.88 LT	542483.00	125151.23
152	S. HURON ROAD	154+77.00	51.91 LT	542157.00	125151.59
153	S. HURON ROAD	154+77.00	59.91 LT	542156.99	125143.59
154	S. HURON ROAD	154+67.00	59.91 LT	542146.99	125143.60
155	S. HURON ROAD	154+67.00	51.91 LT	542147.00	125151.60
173	S. HURON ROAD	156+43.00	51.90 LT	542323.00	125151.43
174	S. HURON ROAD	156+43.00	60.00 LT	542322.99	125143.30
175	S. HURON ROAD	156+53.00	60.00 LT	542332.99	125143.29
176	S. HURON ROAD	156+53.00	51.90 LT	542333.00	125151.40
219	S. HURON ROAD	161+90.64	125.00 LT	542858.95	125059.38
220	S. HURON ROAD	161+67.53	125.00 LT	542835.94	125061.42
221	S. HURON ROAD	161+59.95	45.50 LT	542835.41	125141.28

RIGHT-OF-WAY STATION & OFFSET TABLE

POINT	ALIGNMENT	STATION	OFFSET	Y COORDS	X COORDS
9	S. HURON ROAD	160+85.05	60.00 RT	542770.12	125252.98
10	S. HURON ROAD	152+00.00	31.50 RT	541880.10	125235.32
11	S. HURON ROAD	149+36.03	38.37 RT	541618.12	125245.63
13	S. HURON ROAD	149+03.64	56.30 RT	541586.69	125265.19
28	S. HURON ROAD	161+83.05	45.50 LT	542858.42	125139.24
46	S. HURON ROAD	160+31.43	67.50 LT	542706.83	125130.04
47	S. HURON ROAD	160+06.40	48.01 LT	542683.64	125151.00
83	S. HURON ROAD	159+00.44	31.74 RT	542580.98	125234.50
86	S. HURON ROAD	151+46.00	41.50 RT	541826.11	125245.39
87	S. HURON ROAD	161+73.48	56.49 RT	542857.90	125241.67
89	S. HURON ROAD	160+70.03	45.46 LT	542746.11	125149.20
90	S. HURON ROAD	160+54.77	67.50 LT	542729.49	125128.41
105	S. HURON ROAD	159+50.00	60.00 RT	542632.13	125261.49
108	STH 29 TPP R/L	309+05.56	50.00 RT	541474.07	125580.87
109	STH 29 TPP R/L	307+76.92	64.89 RT	541459.03	125452.25
110	STH 29 TPP R/L	307+11.58	64.93 RT	541458.91	125386.91
111	S. HURON ROAD	147+59.46	75.90 RT	541438.38	125286.42
112	S. HURON ROAD	147+17.37	37.22 RT	541396.98	125246.99
113	S. HURON ROAD	145+83.41	20.19 LT	541264.08	125187.21
114	S. HURON ROAD	146+66.24	42.99 LT	541347.30	125165.89
115	STH 29 TPP R/L	304+05.19	60.07 RT	541463.46	125080.49
116	STH 29 TPP R/L	302+52.86	60.14 RT	541463.27	124928.16
117	STH 29 TPP R/L	302+52.86	50.14 RT	541473.27	124928.15
118	STH 29 TPP R/L	302+83.80	49.87 LT	541573.31	124959.02
119	STH 29 TPP R/L	303+65.13	81.93 LT	541605.41	125040.32
120	S. HURON ROAD	149+45.12	73.64 LT	541621.51	125133.31
121	S. HURON ROAD	150+08.96	51.95 LT	541688.96	125152.10





OMNI ASSOCIATES
ONE SYSTEMS DRIVE
APPLETON, WI 54914-1654
PHONE (920) 735-6900
FAX (920) 830-6100

I, DAVID A. YURK, REGISTERED LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE COUNTY, I HAVE AND MAPPED THIS SURVEYED TRANSPORTATION PROJECT PLAT AND THAT SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

WISCONSIN DAVID A. YURK S-2648 OSHKOSH, WI PROFESSIONAL LAND SURVEYOR

(SIGNATURE) David A. Yurk DATE 3-16-2018
(PRINTED NAME) DAVID A. YURK
(REGISTRATION NO.) S-2648

THIS PLAT AND RELOCATION ORDER IS APPROVED FOR THE COUNTY OF BROWN

(SIGNATURE) Paul Fontecchio DATE 3/16/18
(PRINTED NAME) Paul Fontecchio

PLOT DATE : 3/16/2018 7:32 AM PLOT BY : OMNI ASSOCIATES, INC. - MARK FUERST
FILE NAME : F:\TRJOBS\E2167A15\CIVIL 3D 2016\RW\TPP_1.DWG
APPRAISAL PLAT DATE : ---

TRANSPORTATION PROJECT PLAT NO: 4516-07-71 - 4.02

THAT PART OF THE NORTHWEST QUARTER OF THE SOUTHEAST QUARTER, THAT PART OF THE NORTHEAST QUARTER OF THE SOUTHWEST QUARTER AND THAT PART OF THE SOUTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 23, T23N, R21E, VILLAGE OF BELLEVUE, BROWN COUNTY, WISCONSIN

RELOCATION ORDER CTH EA BROWN COUNTY
STH 29 TO WILLOW ROAD

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, BROWN COUNTY DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE NAMED PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 83.07 AND 83.08, WISCONSIN STATUTES, BROWN COUNTY HEREBY ORDERS THAT:
1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE COUNTY FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF BROWN COUNTY, PURSUANT TO THE PROVISIONS OF SECTION 83.07 AND 83.08, WISCONSIN STATUTES.

GN
W E
S

SCALE, FEET
0 100 200

REFER TO THE TITLE SHEET, RECORDED AS SHEET 2 OF 2, IN DOCUMENT NO. 2818280 FOR ADDITIONAL INFORMATION.

REGISTER'S OFFICE
Brown Co., Wis.
Received for record this 21st day of May A.D. 2018
at 12:42 o'clock P.M. and recorded in Vol. 1 of Transportation Plat Plat on page 152
Sandra L. Juranek
Register of Deeds

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 4516-07-71 - 4.02
AMENDMENT NO:...

VILLAGE

OF

BELLEVUE

CTH EA (100' R/W)

WILLOW ROAD (80' R/W)

S. HURON ROAD (66' R/W)

MEADOW CIRCLE (70' R/W)

SE-NW SEC - 23
SW-NE SEC - 23
NE-SW SEC - 23
NW-SE SEC - 23
SE-SW SEC - 23
SW-SE SEC - 23

MAG NAIL FOUND Y: 544204.513 X: 125136.536

LOT 1 CSM 111-117 DOCUMENT NO. 2820982

MAG NAIL FOUND Y: 546867.670 X: 125206.160

R/W INTERSECT WITH ℄ LINE STA: 175+16.63 Y: 544192.235 X: 125218.178

MAG NAIL W/WASHER FOUND Y: 544179.830 X: 127908.370

1" IP FOUND Y: 544192.277 X: 125209.094 STA: 175+16.80 9.08' LT

R/W INTERSECTS WITH ℄ LINE STA: 171+97.65 Y: 543873.391 X: 125209.444

N89°44'23"W 2692.59' (CORNER TO CORNER) ℄ LINE

S89°44'09"E 2699.30' (CORNER TO CORNER) ℄ LINE

N00°03'47"W 1320.47' (CORNER TO CORNER)

N00°03'29"W 1320.47' (CORNER TO CORNER)

N00°03'29"W 2605.66' (CORNER TO CORNER)

N00°03'22"W 2605.66' (CORNER TO CORNER)

N00°03'47"W 1320.47' (CORNER TO CORNER)

N00°03'47"W 1320.47' (CORNER TO CORNER)

C - 1
R = 2590.00'
L = 144.08'
LC = 144.06'
LCB = N03°28'25"W

C - 2
R = 1580.00'
L = 283.31'
LC = 282.93'
LCB = S05°04'51"W

C - 3
R = 1440.00'
L = 150.94'
LC = 150.88'
LCB = N08°49'40"E

BEARING DISTANCE TABLE

LINE	BEARING	DISTANCE
L1	N89°44'23"W	57.75'
L2	S00°03'49"E	40.09'
L3	S89°44'09"E	206.20'
L4	N00°15'51"E	24.75'
L5	N89°44'09"W	146.38'
L6	N00°03'29"W	10.00'
L7	S00°15'51"W	24.75'
L8	N89°44'09"W	189.56'
L9	S06°12'41"W	75.49'
L10	N05°04'02"W	32.21'
L11	S89°54'08"E	8.25'

Point Table

POINT	NORTHING	EASTING	DESCRIPTION
2	544166.576	125415.175	R/W
3	544157.121	125297.065	R/W
4	544136.389	125273.976	R/W
5	544009.890	125275.767	R/W
21	543534.951	125091.913	R/W
22	543306.745	125092.331	R/W
23	542882.253	125092.451	R/W
26	542858.718	125094.538	R/W
27	543026.051	125083.722	R/W
163	542857.934	125218.812	R/W
165	542858.331	125252.829	R/W
187	542986.236	125218.670	R/W
188	543831.725	125262.501	R/W
190	543682.637	125239.347	R/W
191	543535.075	125218.069	R/W
193	543816.766	125116.969	R/W
195	543979.076	125135.182	R/W
203	544152.451	125151.392	R/W
208	544216.076	125415.403	R/W
210	544226.279	125371.358	R/W
211	544226.751	125269.014	R/W
215	542857.889	125245.200	R/W

LINE TABLE

FROM-TO	DIRECTION	LENGTH
165-26	N89°37'12"W	58.29'
26-23	N05°04'02"W	23.63'
211-210	S89°44'09"E	102.35'
210-208	S76°57'26"E	45.21'
163-215	S89°54'08"E	26.39'
215-187	N11°40'43"W	131.06'
187-163	S00°03'47"E	128.30
191-190	N08°12'19"E	149.09'
190-188	SEE CURVE 3	---
188-5	N04°15'30"E	178.66'
5-4	N00°48'47"W	126.51'
4-3	N55°43'49"E	27.94'
3-2	N83°01'20"E	118.99'

CURVE A

PI	163+20.32
Y	542999.174
X	125172.437
Δ	= 05°00'41"
D	= 02°17'31"
R	= 2500.00'
L	= 218.66'
T	= 109.40'
LC	= 218.59'
LCB	= N02°33'42"W

CURVE B

PI	170+12.20
Y	543691.186
X	125171.760
Δ	= 11°53'12"
D	= 03°49'11"
R	= 1500.00'
L	= 311.19'
T	= 156.16'
LC	= 310.64'
LCB	= N05°53'14"E

CURVE C

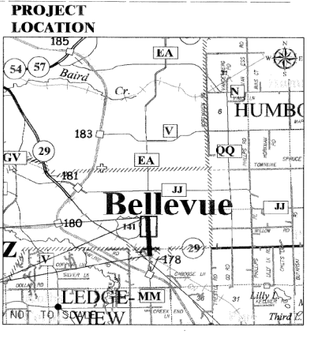
PI	172+51.00
Y	543926.009
X	125220.948
Δ	= 11°57'16"
D	= 07°09'43"
R	= 800.00'
L	= 166.92'
T	= 83.76'
LC	= 166.61'
LCB	= N05°51'12"E

Lot 3 19CSM107-108 DOC#1147242

Lot 1 27CSM177-178 DOC#1300284

ROAD NAME	BASIS OF EXISTING R/W	DATE
SOUTH HURON RD	BROWN COUNTY PROJECT *61-EA-8 58 CSM 111-117 66 FEET PER STATUTE	2011 2012
WILLOW RD	BROWN COUNTY PROJECT *61-EA-8 58 CSM 111-117	2011 2012

PROJECT LOCATION



SCHEDULE OF LANDS AND INTEREST

"OWNERS" NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO TRANSFER OF LAND INTERESTS TO THE COUNTY

PARCEL NO.	OWNER	INTEREST REQUIRED	AREA ACRES REQUIRED NEW	EXISTING	TOTAL	TLE AREA	PLE AREA
17	THE TRUSTEE OF THE DE GREEF IRREVOCABLE FAMILY TRUST DATED JUNE 2, 2016	FEE TLE	2.05 AC	---	2.05 AC	0.07 AC	---
18	FRANCIS J. KITSLAAR	FEE TLE	211 SQ FT	---	211 SQ FT	0.09 AC	---
19	COTTAGE ROAD DEVELOPMENT, LLC	FEE	0.03 AC	---	0.03 AC	---	---

OMNNI ASSOCIATES
ONE SYSTEMS DRIVE
APPLETON, WI 54914-1654
PHONE (920) 735-6900
FAX (920) 830-6100

I, DAVID A. YURK, REGISTERED LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE COUNTY, I HAVE AND MAPPED THIS SURVEYED TRANSPORTATION PROJECT PLAT AND THAT SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

WISCONSIN DAVID A. YURK S-2648 OSHKOSH, WI PROFESSIONAL LAND SURVEYOR

(SIGNATURE) David A. Yurk DATE 3-20-2018
(PRINTED NAME) DAVID A. YURK
(REGISTRATION NO.) S-2648

THIS PLAT AND RELOCATION ORDER IS APPROVED FOR THE COUNTY OF BROWN

(SIGNATURE) Paul Fontecchio DATE 3/21/18
(PRINTED NAME) Paul Fontecchio

PLOT DATE : 3/21/2018 11:57 AM PLOT BY : OMNNI ASSOCIATES, INC. - DAVE A. YURK
FILE NAME : F:\TR\JOBS\2167A15\CIVIL 3D 2016\RW_TPP_1.DWG
APPRAISAL PLAT DATE :

vol 1 pg 152

2818722

4

4

LEGEND:
X REMOVE TREE(S)
XXXX SAWCUT

BEGIN PROJECT
STA 145+72.71
X: 125,206.482
Y: 541,257.349

COTTAGE ROAD

EXIST R/W

PROP R/W

V. OF BELLEVUE (SANITARY)

BROWN COUNTY (WATER)

WI PUBLIC SERVICE (GAS)

CENTURY LINK (COMM - T)

NET LEC (COMM - T)

WETLANDS (TYP)

SLOPE INTERCEPT (TYP)

SPECIAL DITCH (TYP)

REMOVE EXISTING PIPE 18-IN CMP

WI PUBLIC SERVICE (ELECTRIC - OH)

DARRELL HENNINGER & TAMMY HENNINGER

CLIFFORD HOLL & CAMILLA HOLL

STH 29 (KEWAUNEE RD)

CTH EA (HURON ROAD)

BP: 145'NB'+00.00

PC: 145'SB'+76.87

PI: 146'SB'+22.42

PC: 146'NB'+16.97

PRC: 146'NB'+83.69

PC: 247'SB'+31.73

PT: 247'SB'+45.12

PI: 247'SB'+80.01

PI: 149'NB'+10.83

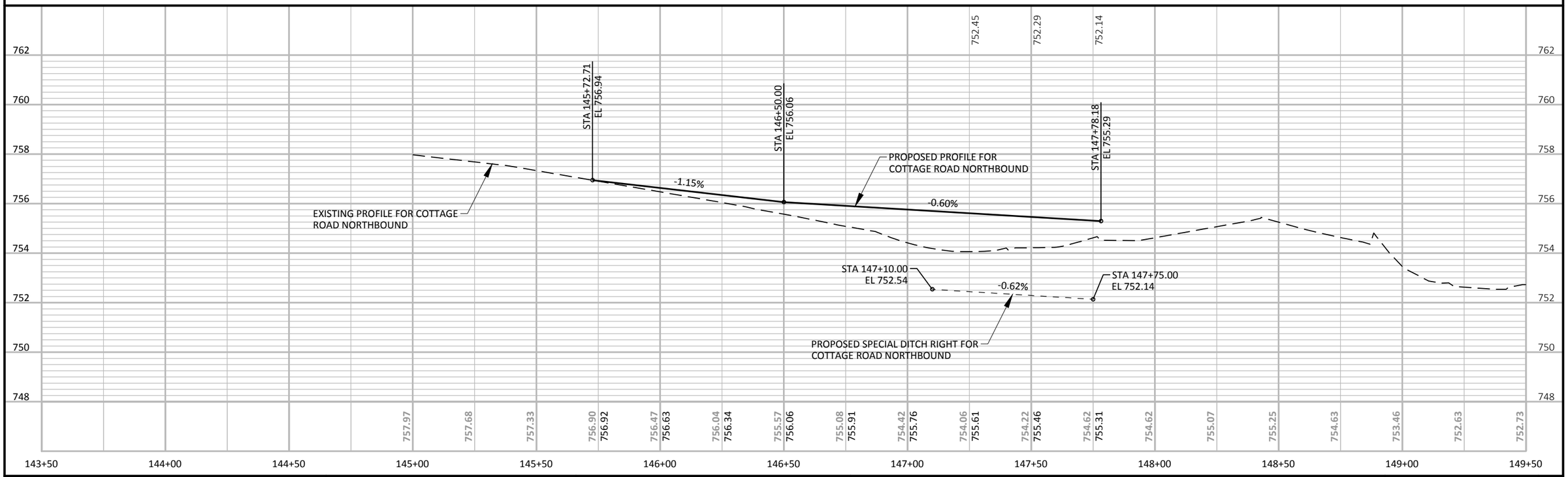
PC: 149'NB'+42.00

PI: 305'EB'+88.15

PT: 147'NB'+78.

P/L

Z

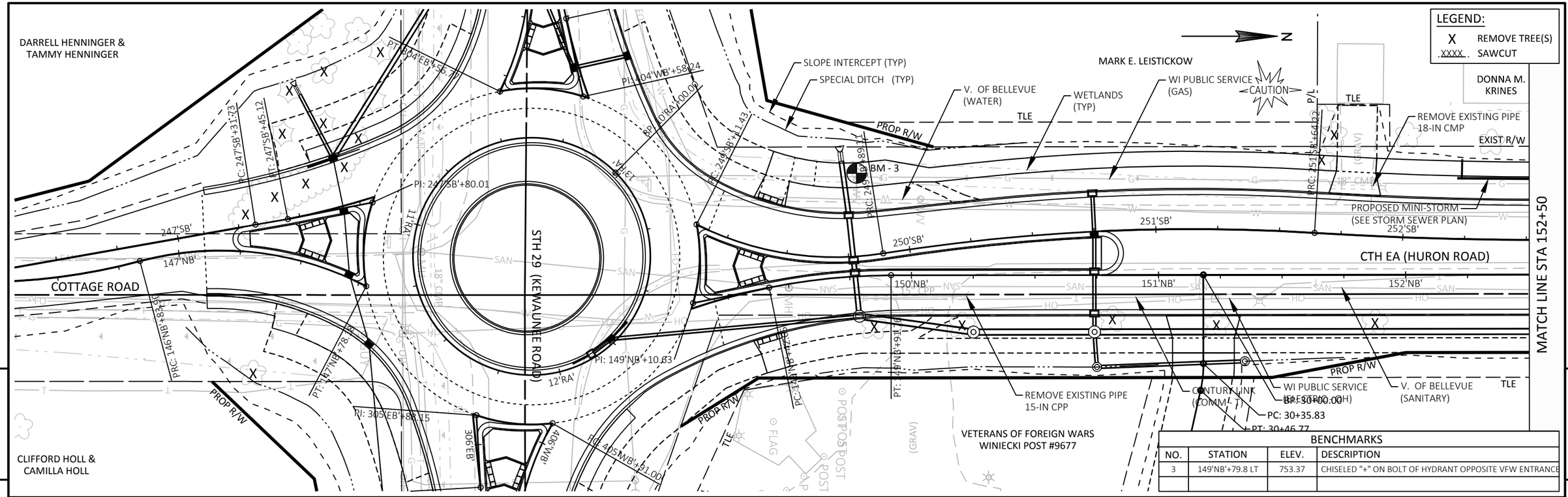


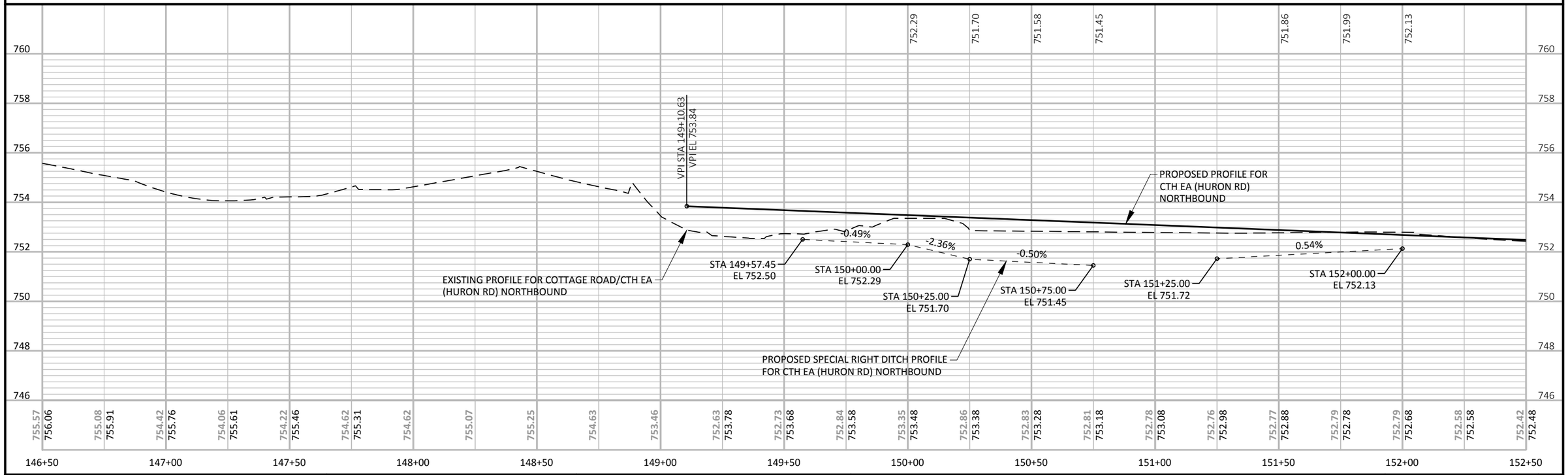
PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	PLAN AND PROFILE: COTTAGE ROAD	SHEET --

FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-050100-PP.DWG
LAYOUT NAME - 451607-050101-pp

PLOT DATE : 9/28/2018 11:15 AM PLOT BY : OMNNI ASSOCIATES - ANDREW WESTBROOK PLOT SCALE : ##########

WISDOT/CADDS SHEET 44

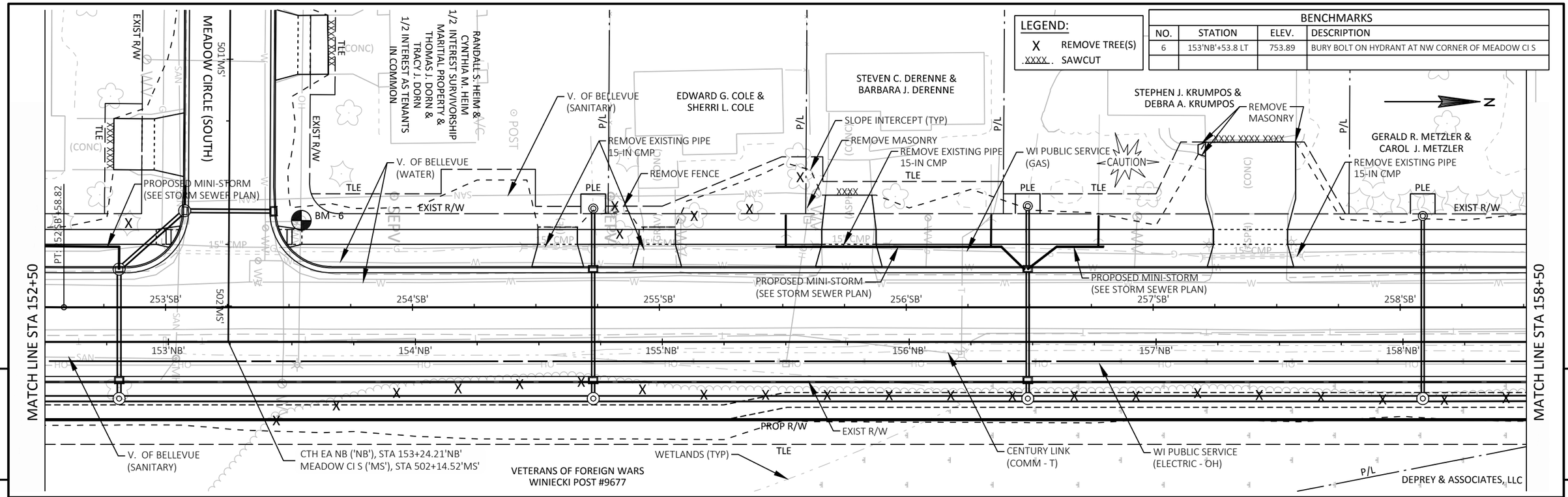


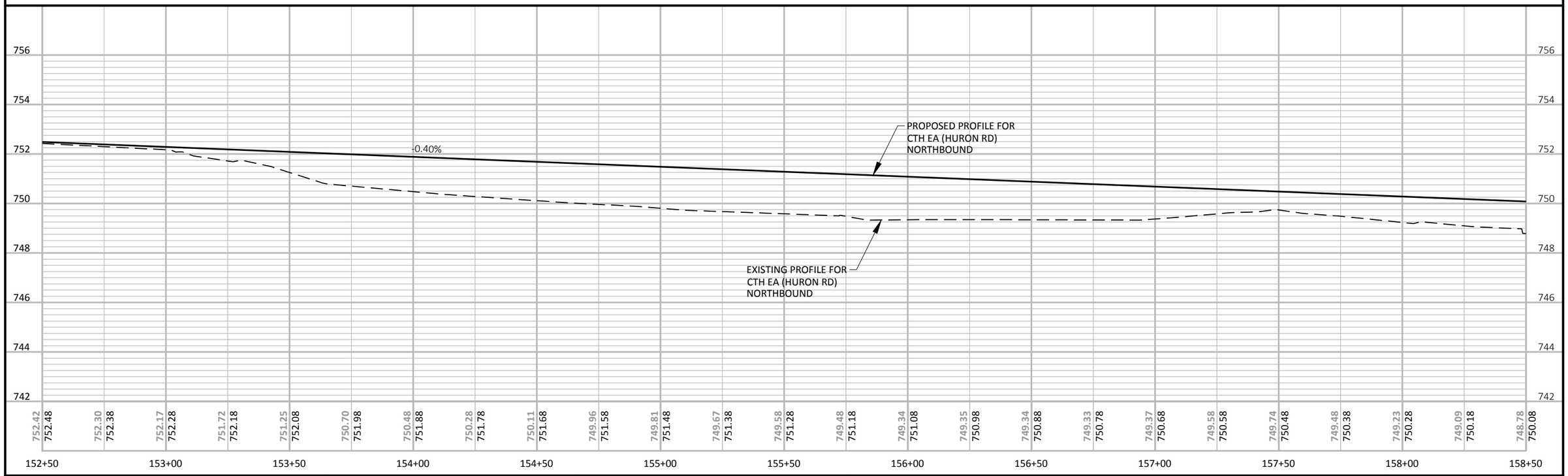


PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	PLAN AND PROFILE: CTH EA (HURON ROAD)	SHEET 101

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LAYOUT NAME - 451607-050103-pp

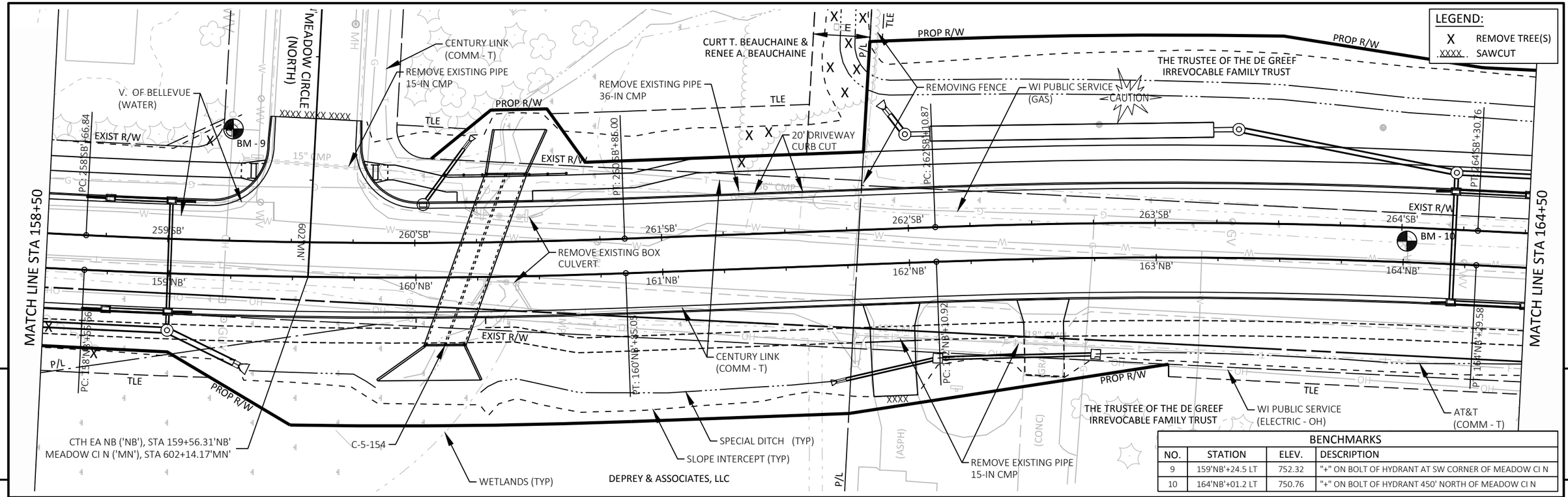
PLOT DATE : 9/28/2018 11:15 AM PLOT BY : OMNNI ASSOCIATES - ANDREW WESTBROOK PLOT SCALE : ##########



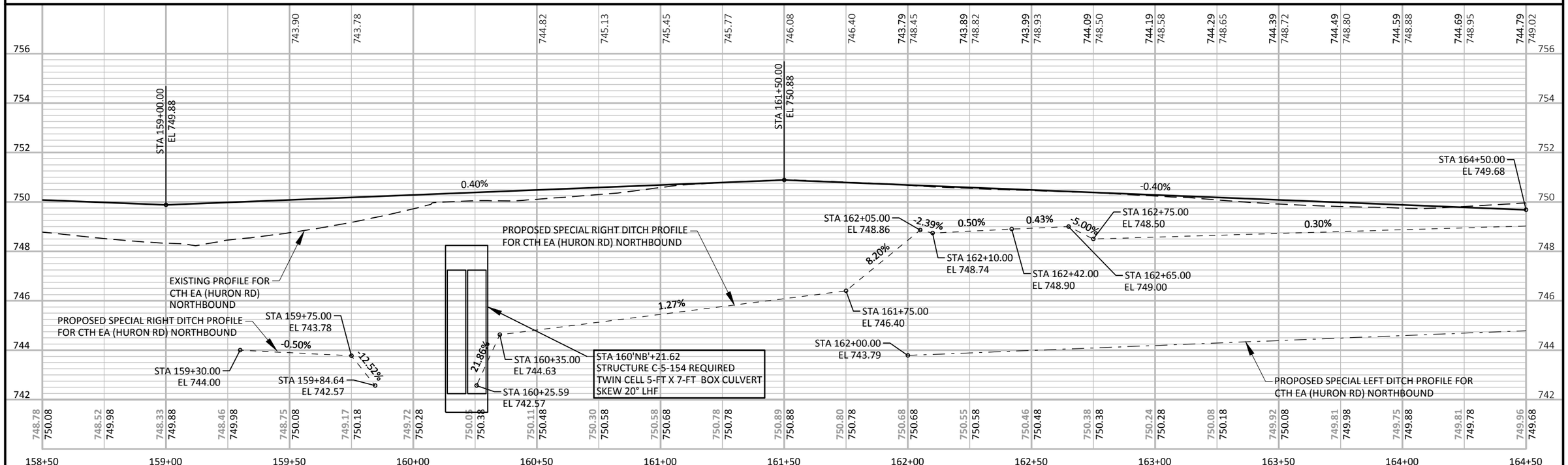


PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	PLAN AND PROFILE: CTH EA (HURON ROAD)	SHEET 102

FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-050100-PP.DWG
LAYOUT NAME - 451607-050104-pp
PLOT DATE : 9/28/2018 11:16 AM
PLOT BY : OMNNI ASSOCIATES - ANDREW WESTBROOK
PLOT SCALE : ##########



BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
9	159'NB'+24.5 LT	752.32	"+" ON BOLT OF HYDRANT AT SW CORNER OF MEADOW CI N
10	164'NB'+01.2 LT	750.76	"+" ON BOLT OF HYDRANT 450' NORTH OF MEADOW CI N



PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	PLAN AND PROFILE: CTH EA (HURON ROAD)	SHEET 103

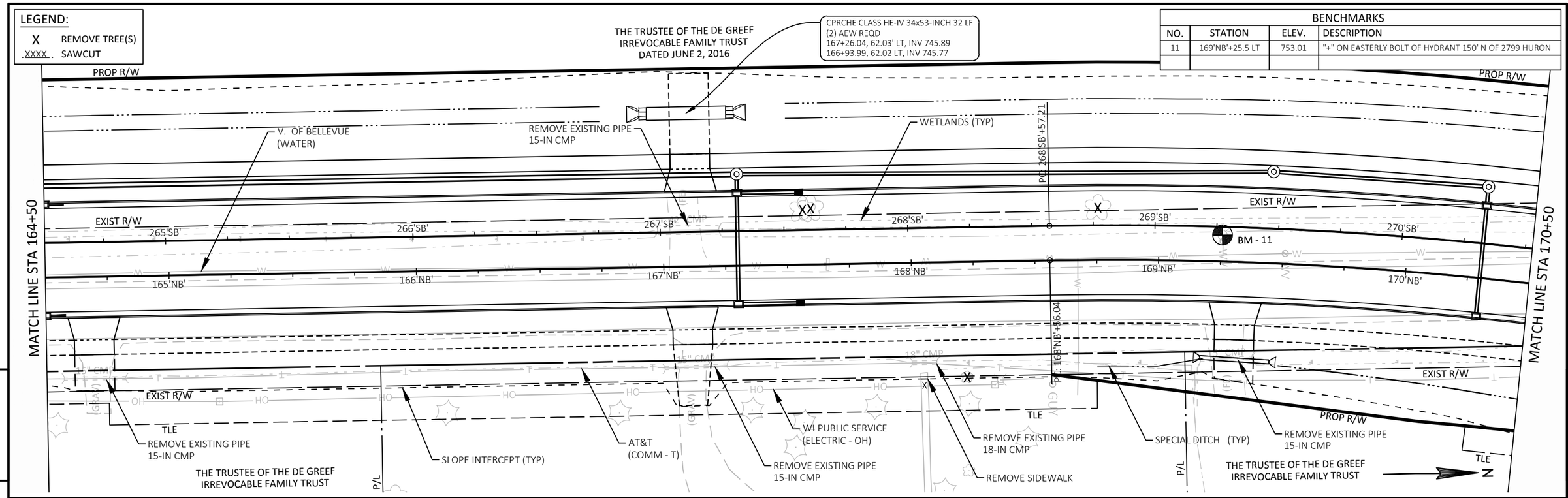
FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-050100-PP.DWG
LAYOUT NAME - 451607-050105-pp
PLOT DATE : 9/28/2018 11:16 AM
PLOT BY : OMNNI ASSOCIATES - ANDREW WESTBROOK
PLOT SCALE : ##########

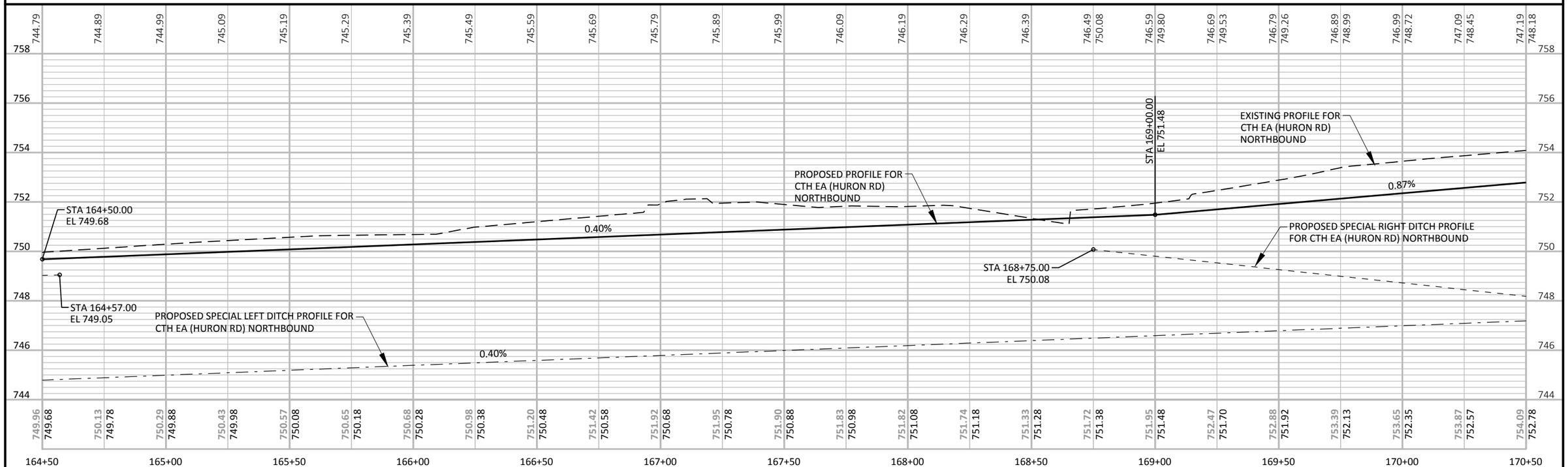
LEGEND:

X REMOVE TREE(S)

XXXX SAWCUT

BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
11	169'NB'+25.5 LT	753.01	"+" ON EASTERLY BOLT OF HYDRANT 150' N OF 2799 HURON



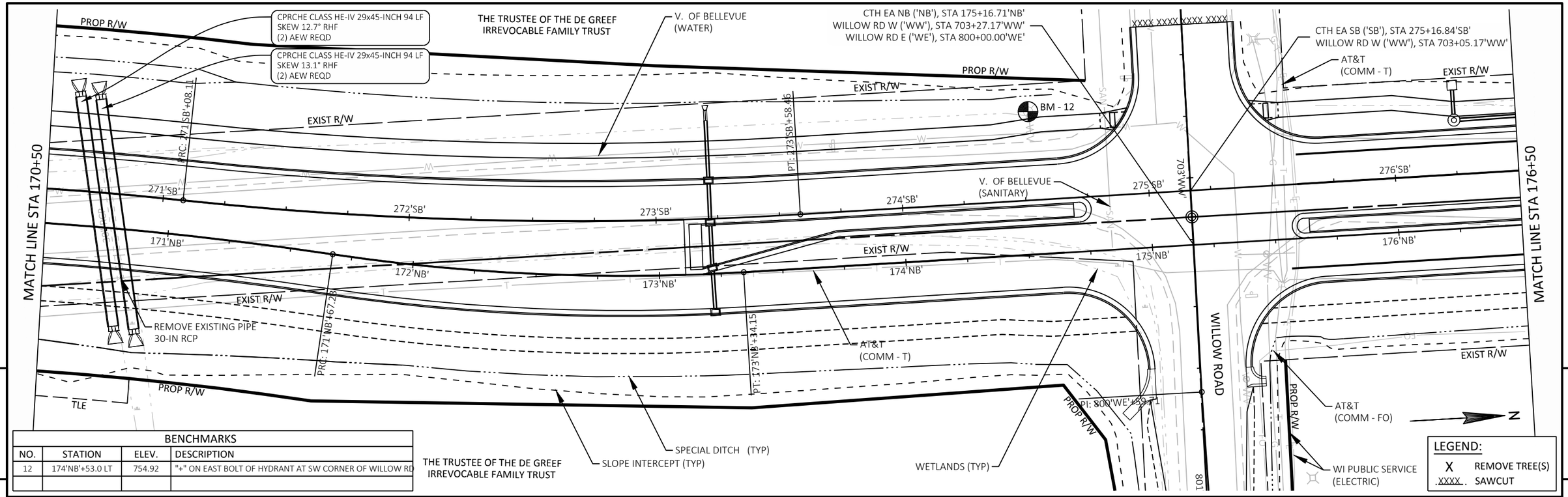


PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	PLAN AND PROFILE: CTH EA (HURON ROAD)	SHEET --

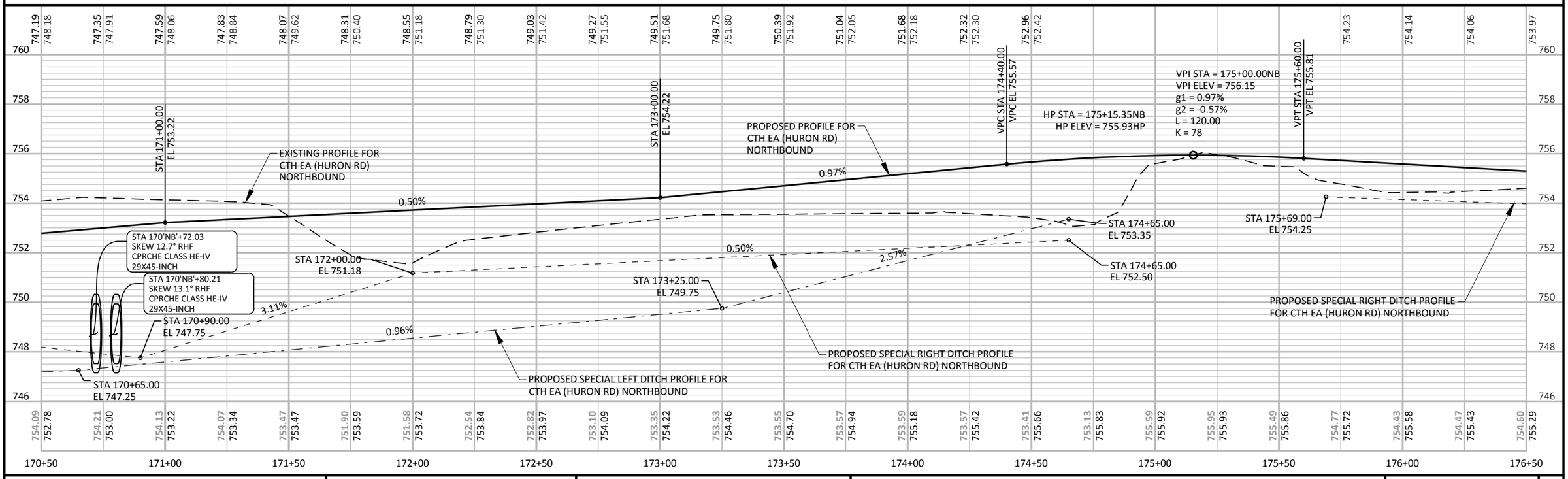
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LAYOUT NAME - 451607-050106-pp

PLOT DATE : 9/28/2018 11:16 AM PLOT BY : OMNNI ASSOCIATES - ANDREW WESTBROOK PLOT SCALE : ##########

WISDOT/CADDS SHEET 44



BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
12	174'NB'+53.0 LT	754.92	"+" ON EAST BOLT OF HYDRANT AT SW CORNER OF WILLOW RD



PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	PLAN AND PROFILE: CTH EA (HURON ROAD)	SHEET 105

MOSKI CORPORATION

COTTAGE ROAD
DEVELOPMENT, LLC

MATCH LINE STA 176+50

EXIST R/W

REMOVE STORM SEWER

ADJUST MANHOLE

REMOVE INLET

PI: 177'SB'+15.18

(CONC)

XX

277'SB'

278'SB'

279'SB'

280'SB'

177'NB'

178'NB'

179'NB'

180'NB'

181'NB'

182'NB'

PI: 176'NB'+60.02

PI: 179'NB'+43.42

EP: 280'SB'+19.22

EP: 182'NB'+16.06

XXXX XXXX

END PROJECT
STA 179+50.00

WI PUBLIC SERVICE
(GAS)

CAUTION

AT&T
(COMM - FO)

AT&T
(COMM - T)

AT&T
(COMM - FO)

SPECIAL DITCH (TYP)

SLOPE INTERCEPT (TYP)

BM - 13

N

LEGEND:

X REMOVE TREE(S)

XXXX SAWCUT

BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
13	180'NB'+87.1 RT	752.12	CHISELED BOX ON ENDWALL IN EAST DITCH

753.97 753.88 753.80 753.71 753.63 753.54

760 758 756 754 752 750 748 746

-0.57%

-0.34%

PROPOSED PROFILE FOR
CTH EA (HURON RD)
NORTHBOUND

STA 179+50.00
EL 753.57

STA 177+75.00
EL 753.54

PROPOSED SPECIAL RIGHT DITCH PROFILE
FOR CTH EA (HURON RD) NORTHBOUND

EXISTING PROFILE FOR
CTH EA (HURON RD)
NORTHBOUND

754.60 755.29 754.72 755.15 754.67 755.00 754.61 754.86 754.51 754.72 754.40 754.57 754.39 754.43 754.22 754.29 754.08 754.14 753.93 754.00 753.79 753.86 753.66 753.71 753.57 753.57 753.47 753.36 753.25 753.13 753.01 752.89 752.84 752.95 753.05 753.16

176+50 177+00 177+50 178+00 178+50 179+00 179+50 180+00 180+50 181+00 181+50 182+00 182+50

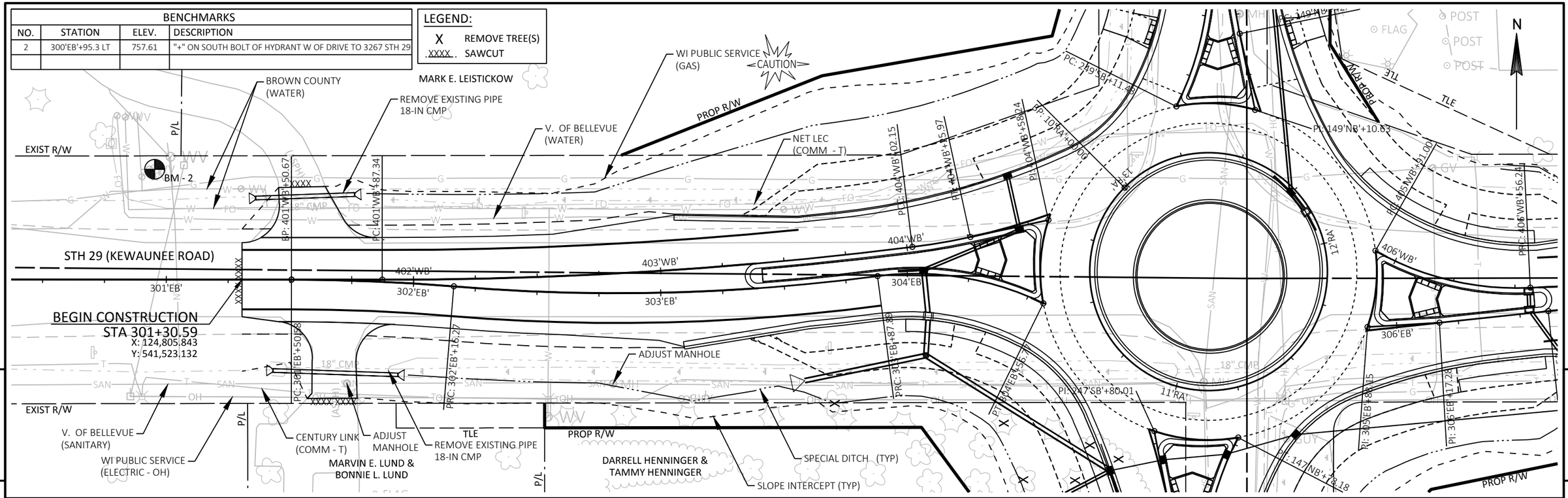
PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	PLAN AND PROFILE: CTH EA (HURON ROAD)	SHEET --

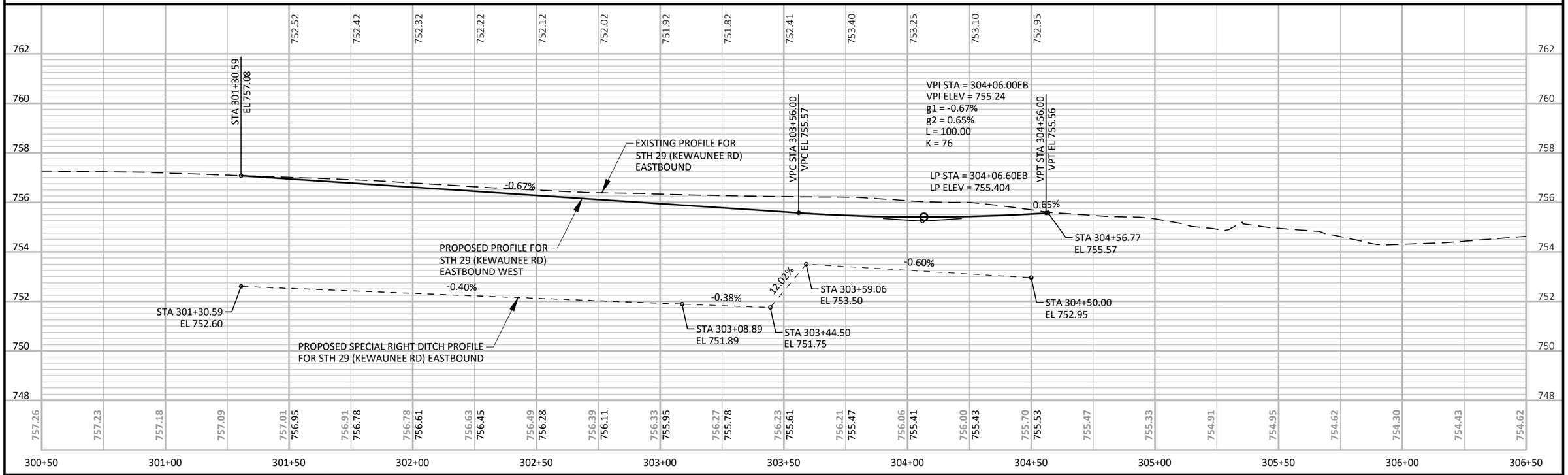
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LAYOUT NAME - 451607-050108-pp
PLOT DATE : 9/28/2018 11:16 AM
PLOT BY : OMNNI ASSOCIATES - ANDREW WESTBROOK
PLOT SCALE : ##########
WISDOT/CADDS SHEET 44

BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
2	300'EB'+95.3 LT	757.61	"+" ON SOUTH BOLT OF HYDRANT W OF DRIVE TO 3267 STH 29

LEGEND:
X REMOVE TREE(S)
XXXX SAWCUT

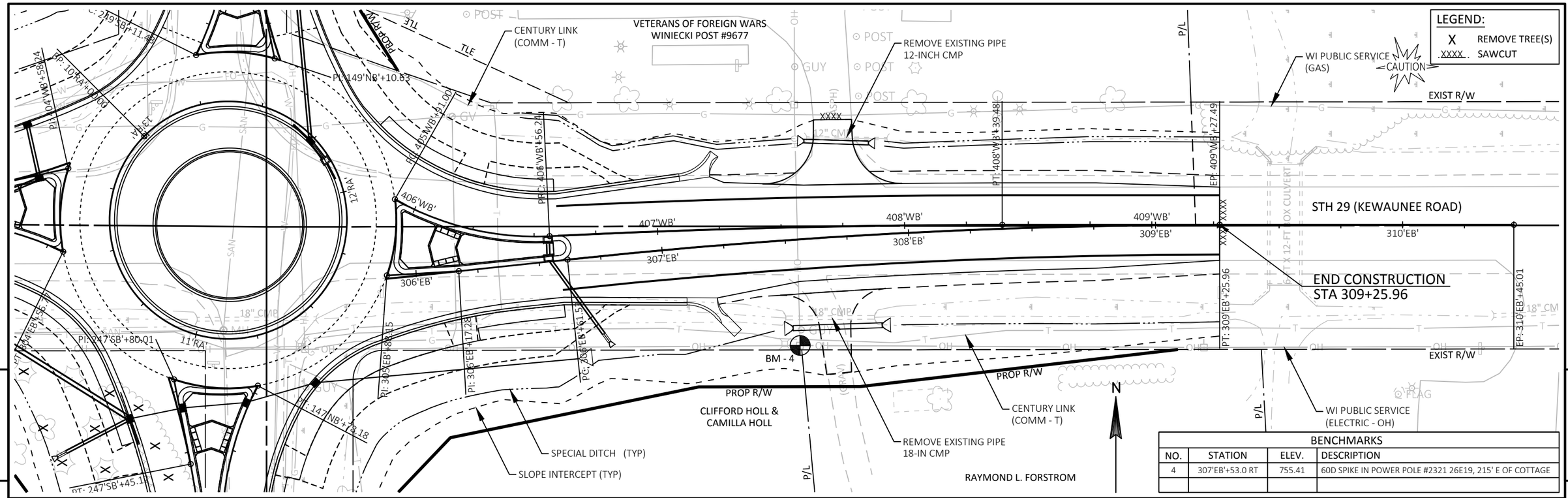
MARK E. LEISTICKOW



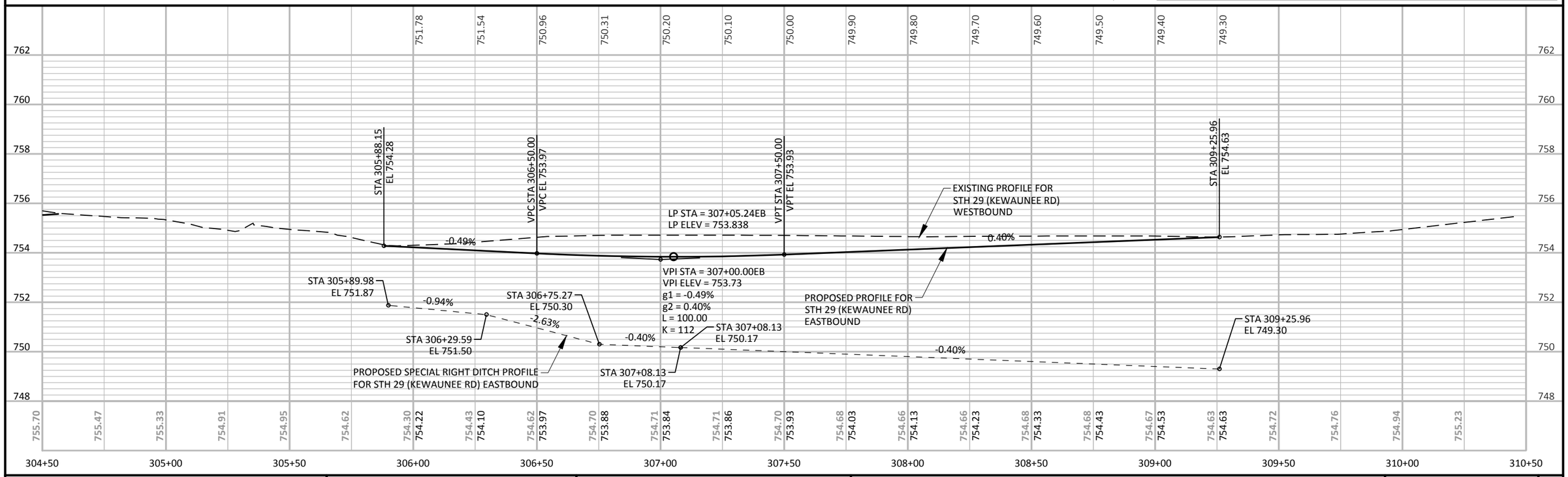


PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	PLAN AND PROFILE: STH 29 (KEWAUNEE ROAD)	SHEET --

FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-050100-PP.DWG
LAYOUT NAME - 451607-050111-pp
PLOT DATE : 9/28/2018 11:16 AM
PLOT BY : OMNNI ASSOCIATES - ANDREW WESTBROOK
PLOT SCALE : ##########

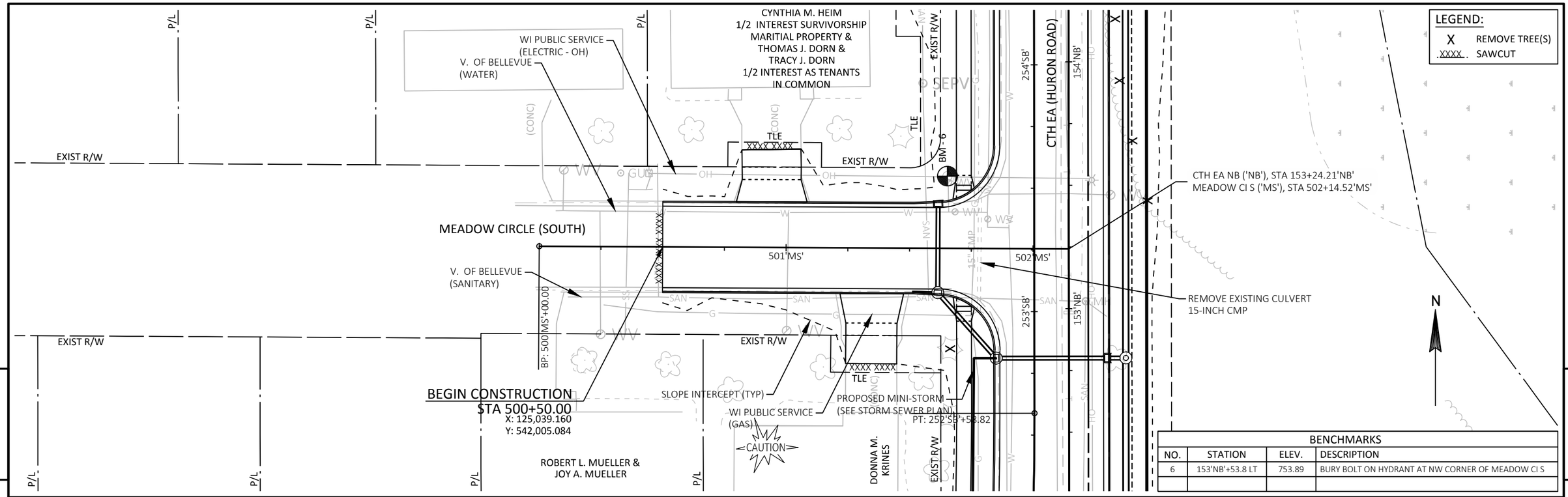


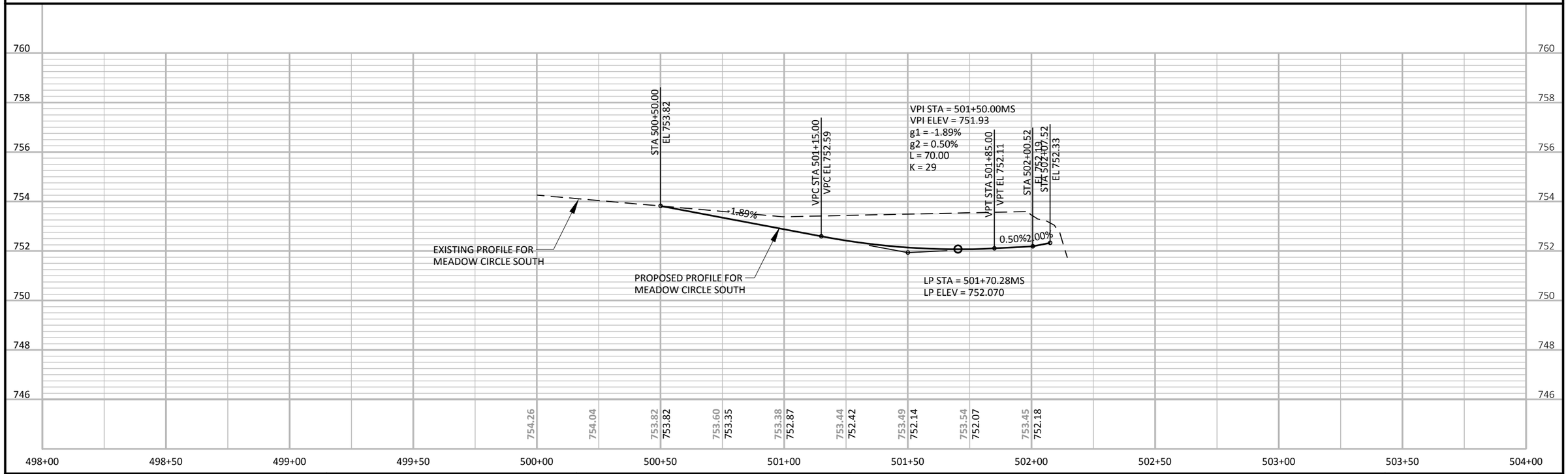
BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
4	307'EB'+53.0 RT	755.41	60D SPIKE IN POWER POLE #2321 26E19, 215' E OF COTTAGE



PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	PLAN AND PROFILE: STH 29 (KEWAUNEE ROAD)	SHEET 108

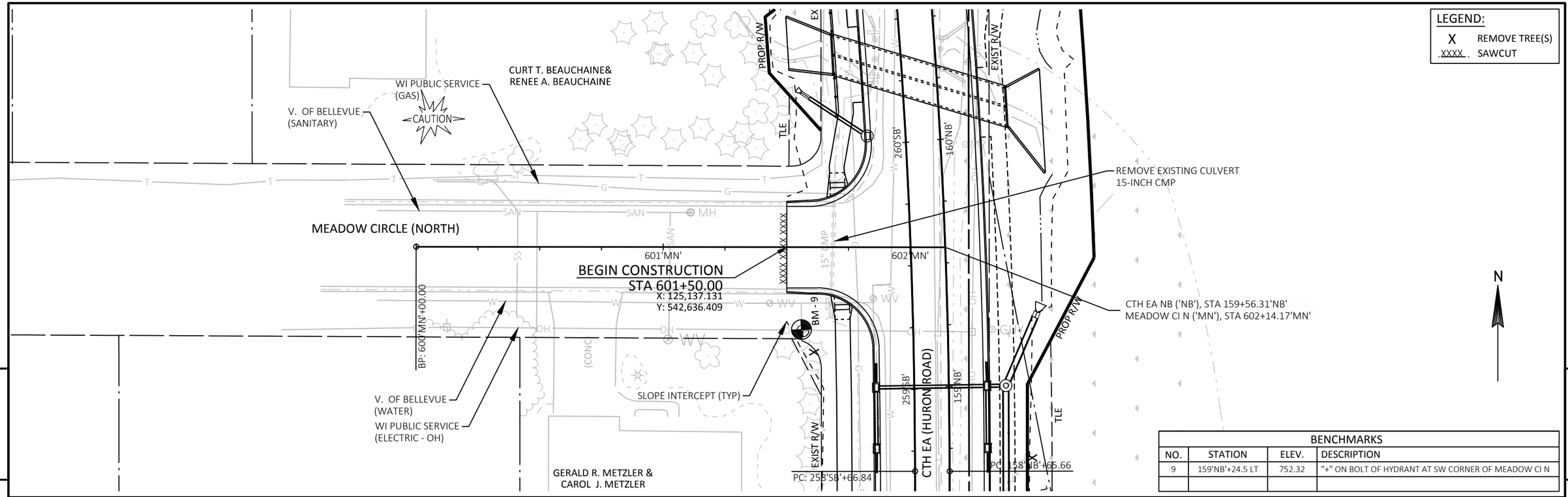
FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-050100-PP.DWG
LAYOUT NAME - 451607-050115-pp
PLOT DATE : 9/28/2018 11:17 AM
PLOT BY : OMNNI ASSOCIATES - ANDREW WESTBROOK
PLOT SCALE : ##########
WISDOT/CADDS SHEET 44

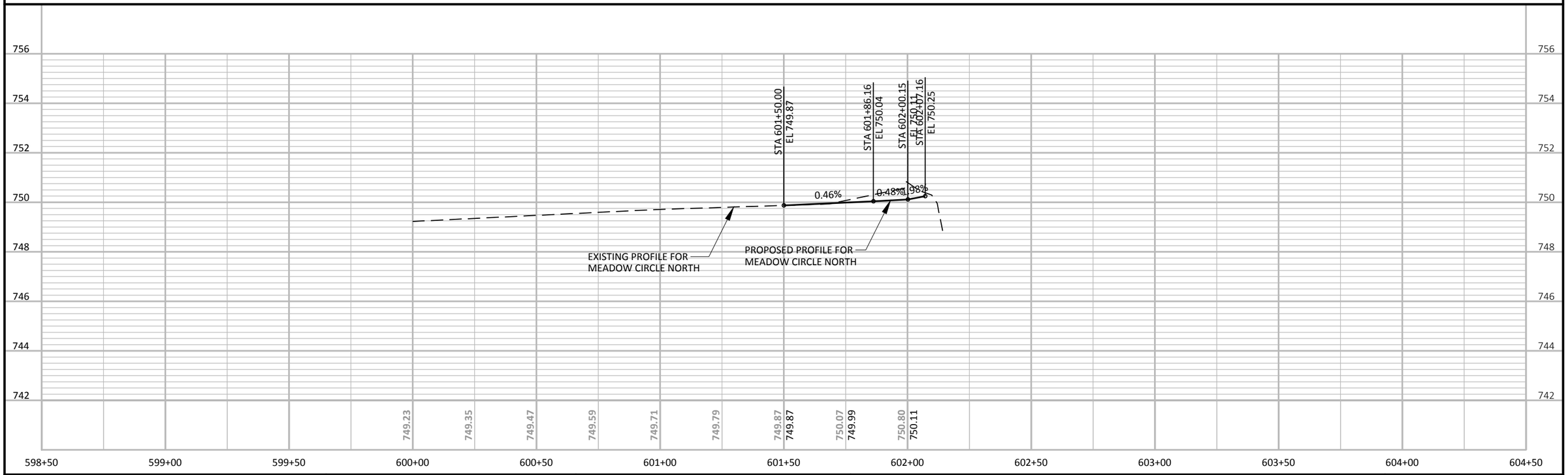




PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	PLAN AND PROFILE: MEADOW CIRCLE (SOUTH)	SHEET 109

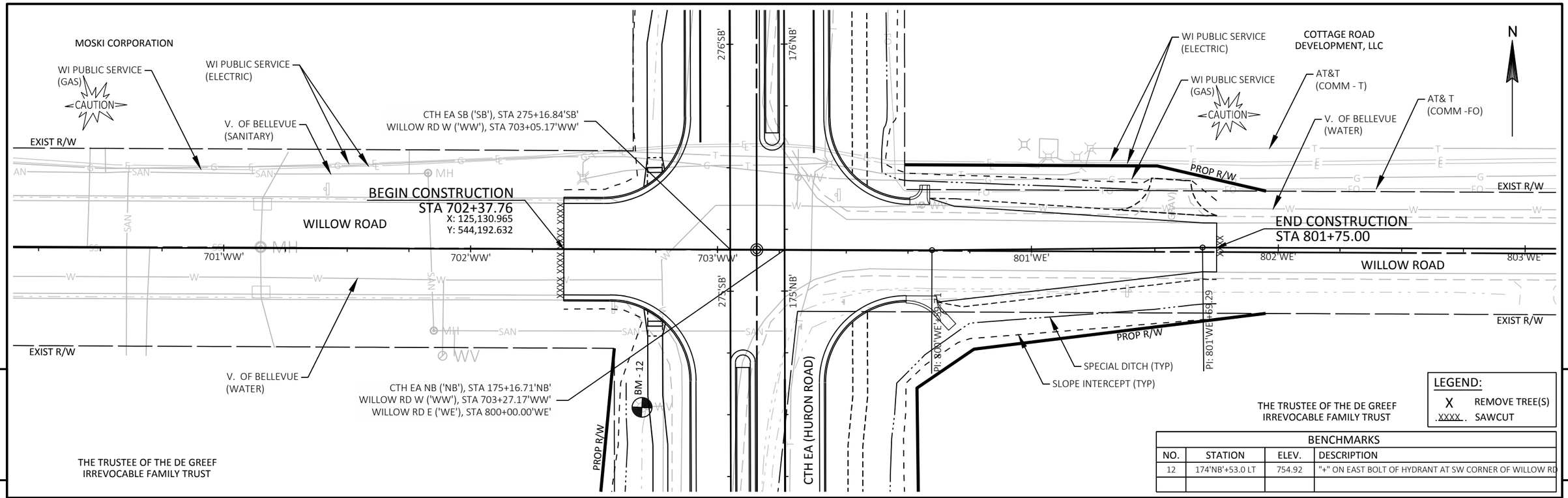
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LAYOUT NAME - 451607-050121-pp
PLOT DATE : 9/28/2018 11:17 AM
PLOT BY : OMNNI ASSOCIATES - ANDREW WESTBROOK
PLOT SCALE : ##########
WISDOT/CADDS SHEET 44





PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	PLAN AND PROFILE: MEADOW CIRCLE	SHEET 110

FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-050100-PP.DWG
LAYOUT NAME - 451607-050125-pp
PLOT DATE : 9/28/2018 11:17 AM
PLOT BY : OMNNI ASSOCIATES - ANDREW WESTBROOK
PLOT SCALE : ##########

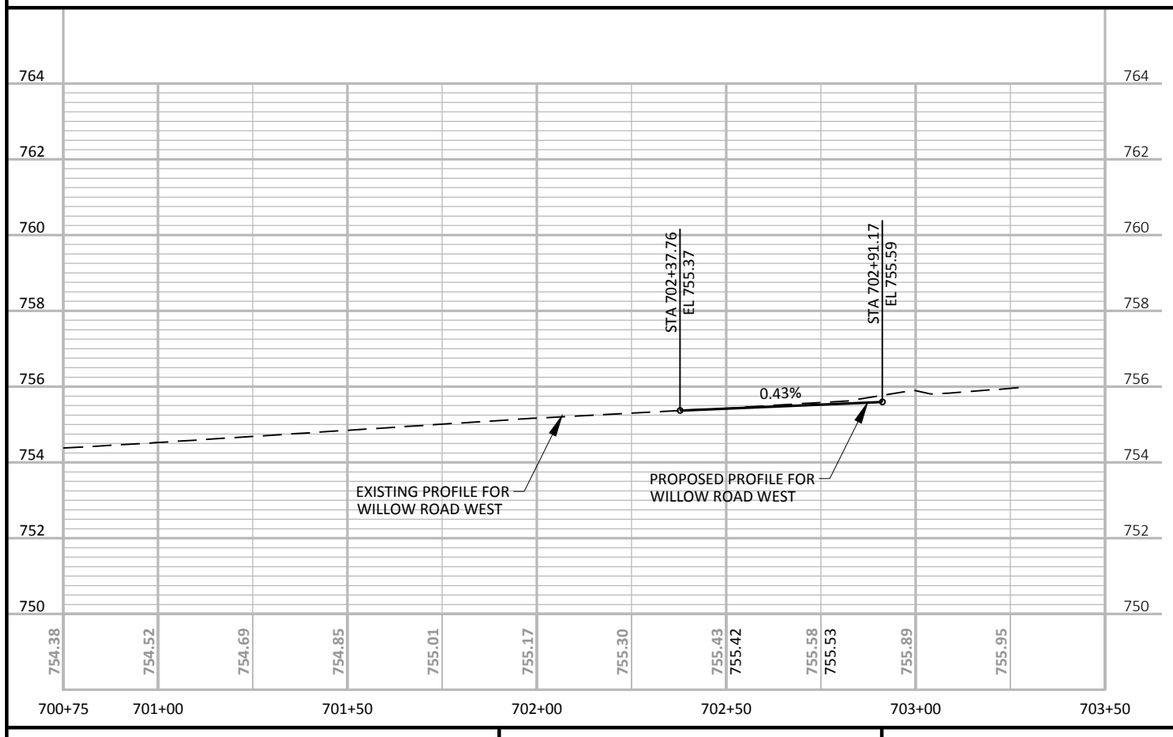


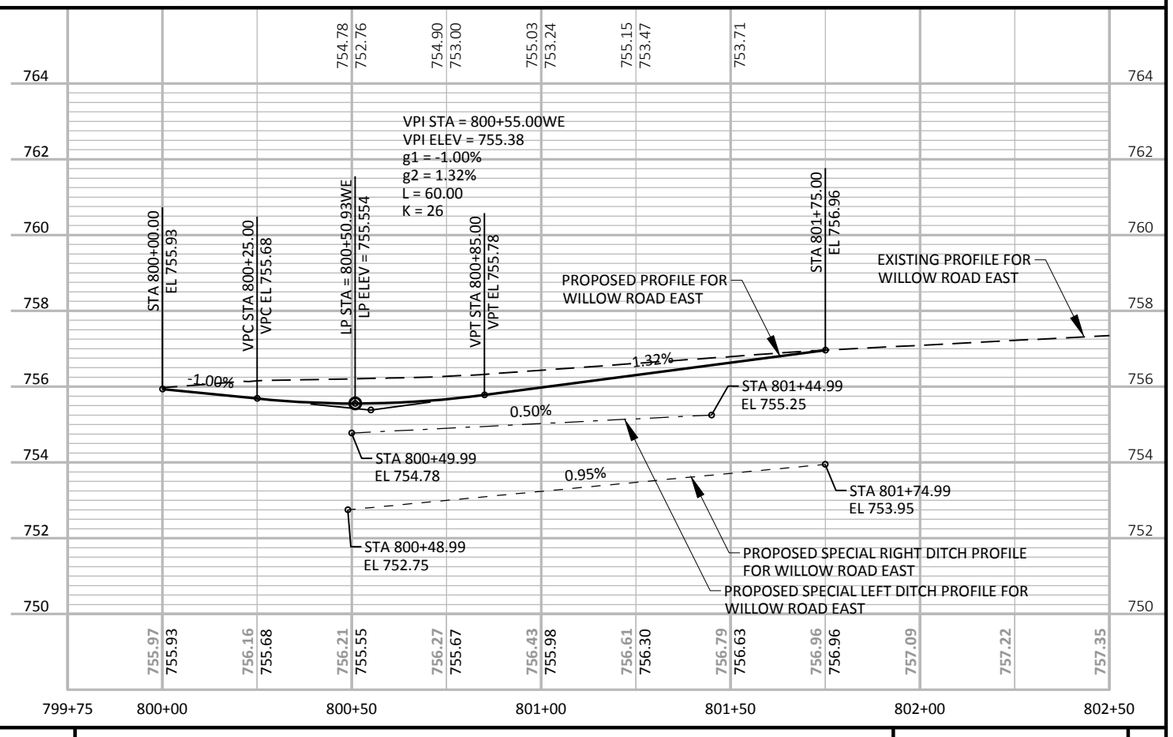
LEGEND:

X	REMOVE TREE(S)
.XXXX.	SAWCUT

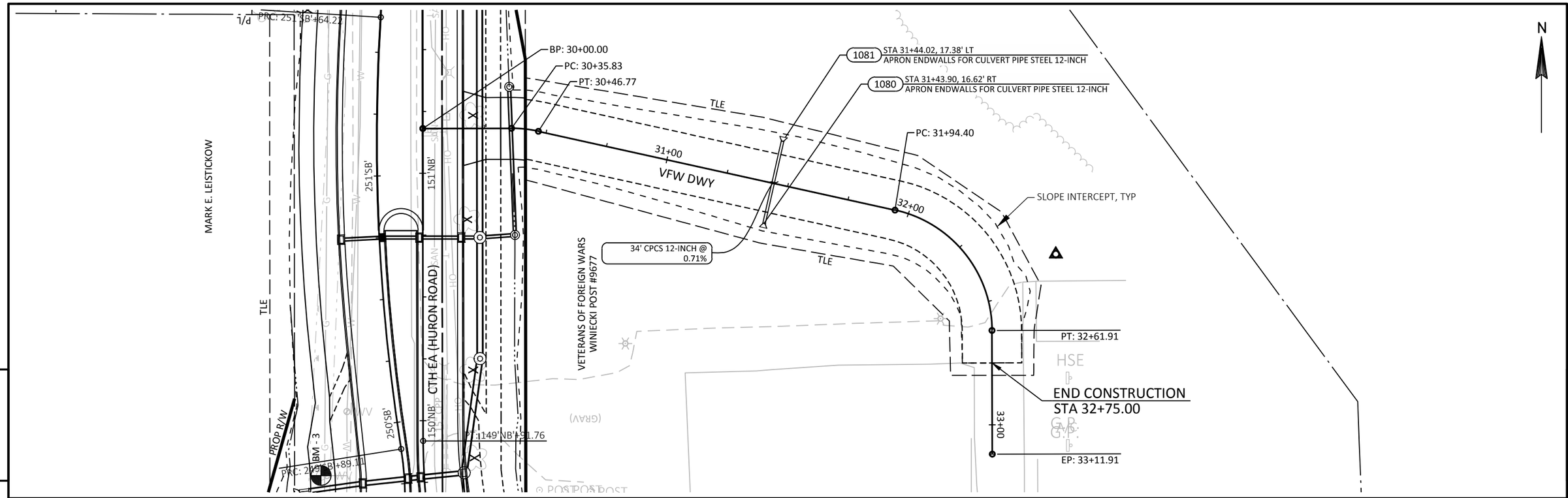
BENCHMARKS

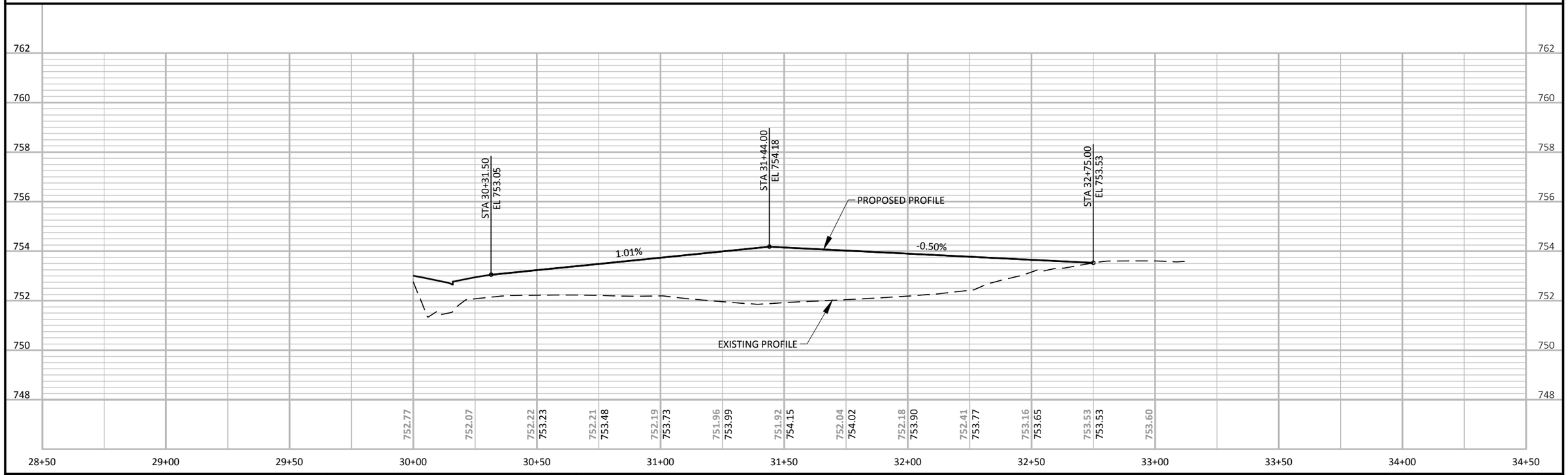
NO.	STATION	ELEV.	DESCRIPTION
12	174'NB'+53.0 LT	754.92	"+" ON EAST BOLT OF HYDRANT AT SW CORNER OF WILLOW RD





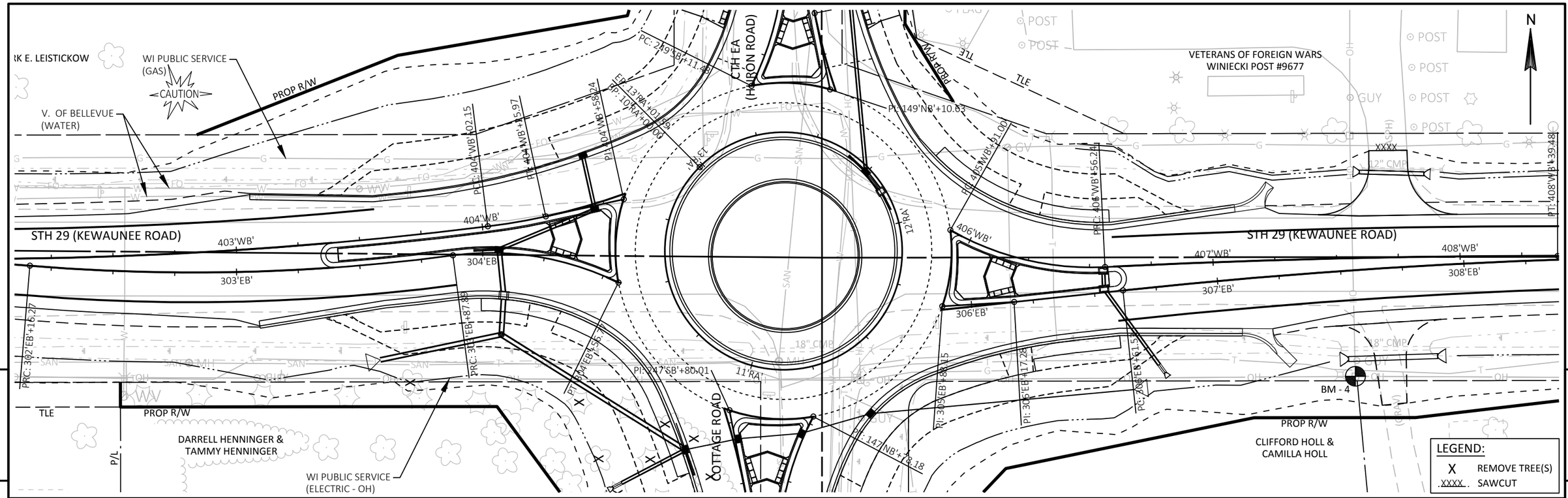
PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	PLAN AND PROFILE: WILLOW ROAD	SHEET 111

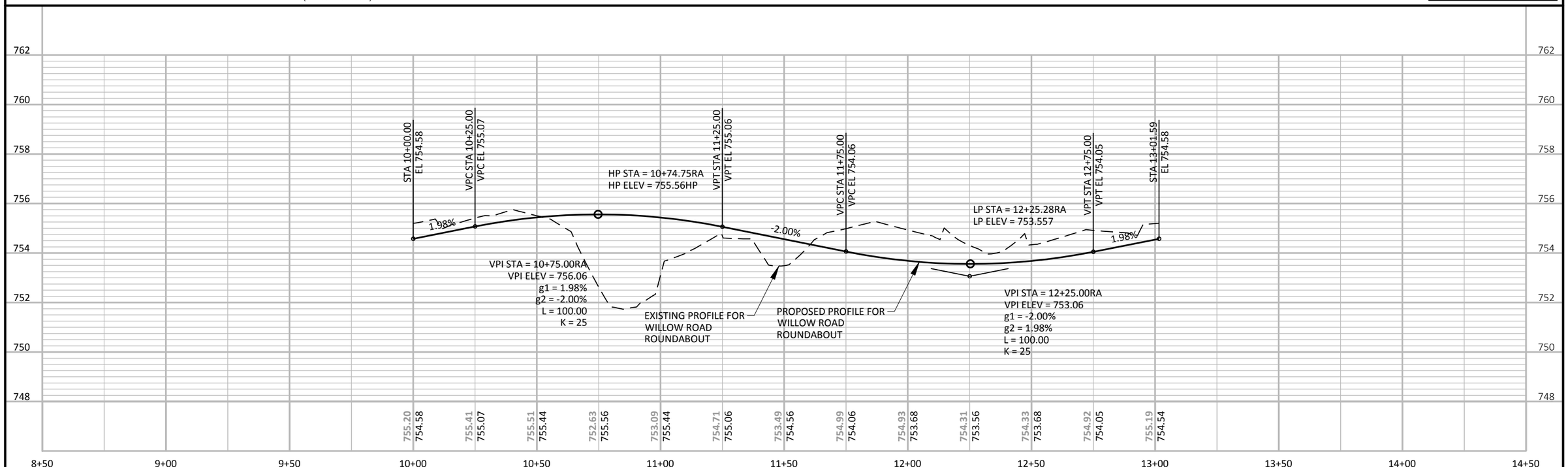




PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	PLAN AND PROFILE: MEADOW CIRCLE (SOUTH)	SHEET 112

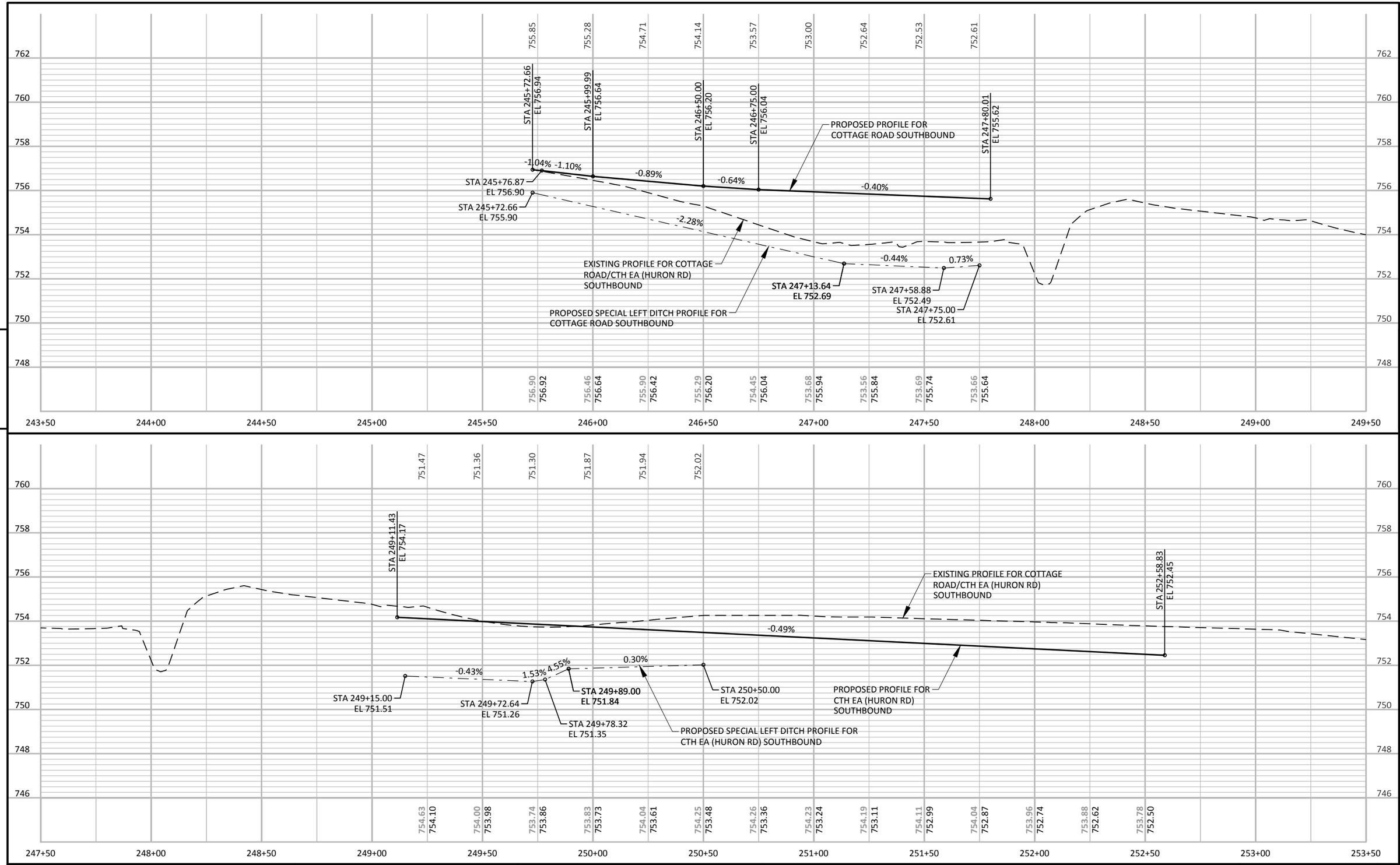
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LAYOUT NAME - 451607-050141-pp
PLOT DATE : 9/28/2018 11:17 AM
PLOT BY : OMNNI ASSOCIATES - ANDREW WESTBROOK
PLOT SCALE : ##########
WISDOT/CADDS SHEET 44





PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	PLAN AND PROFILE: CTH EA & STH 29 ROUNDABOUT	SHEET 113

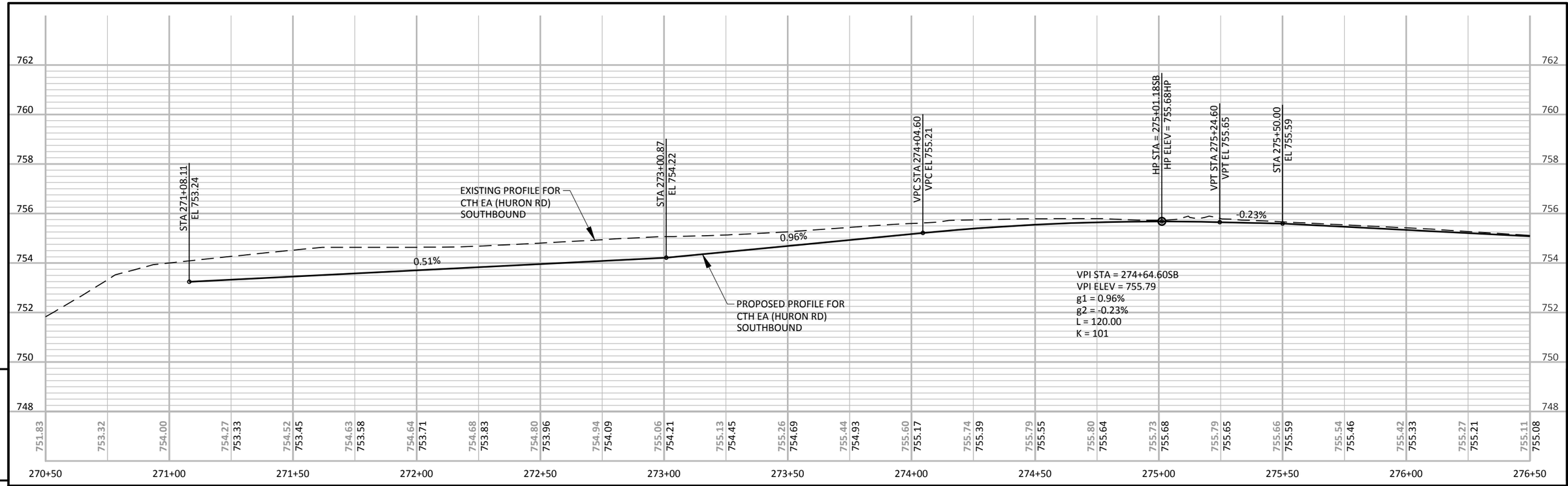
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LAYOUT NAME - 451607-050151-pp
PLOT DATE : 9/28/2018 11:17 AM
PLOT BY : OMNNI ASSOCIATES - ANDREW WESTBROOK
PLOT SCALE : ##########
WISDOT/CADDS SHEET 44



PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	PROFILE: CTH EA (HURON ROAD) SOUTHBOUND	SHEET

FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-050100-PP.DWG
LAYOUT NAME - 451607-050301-pr

PLOT DATE : 9/25/2018 12:32 PM PLOT BY : OMNNI ASSOCIATES - ANDREW WESTBROOK PLOT SCALE : ##########

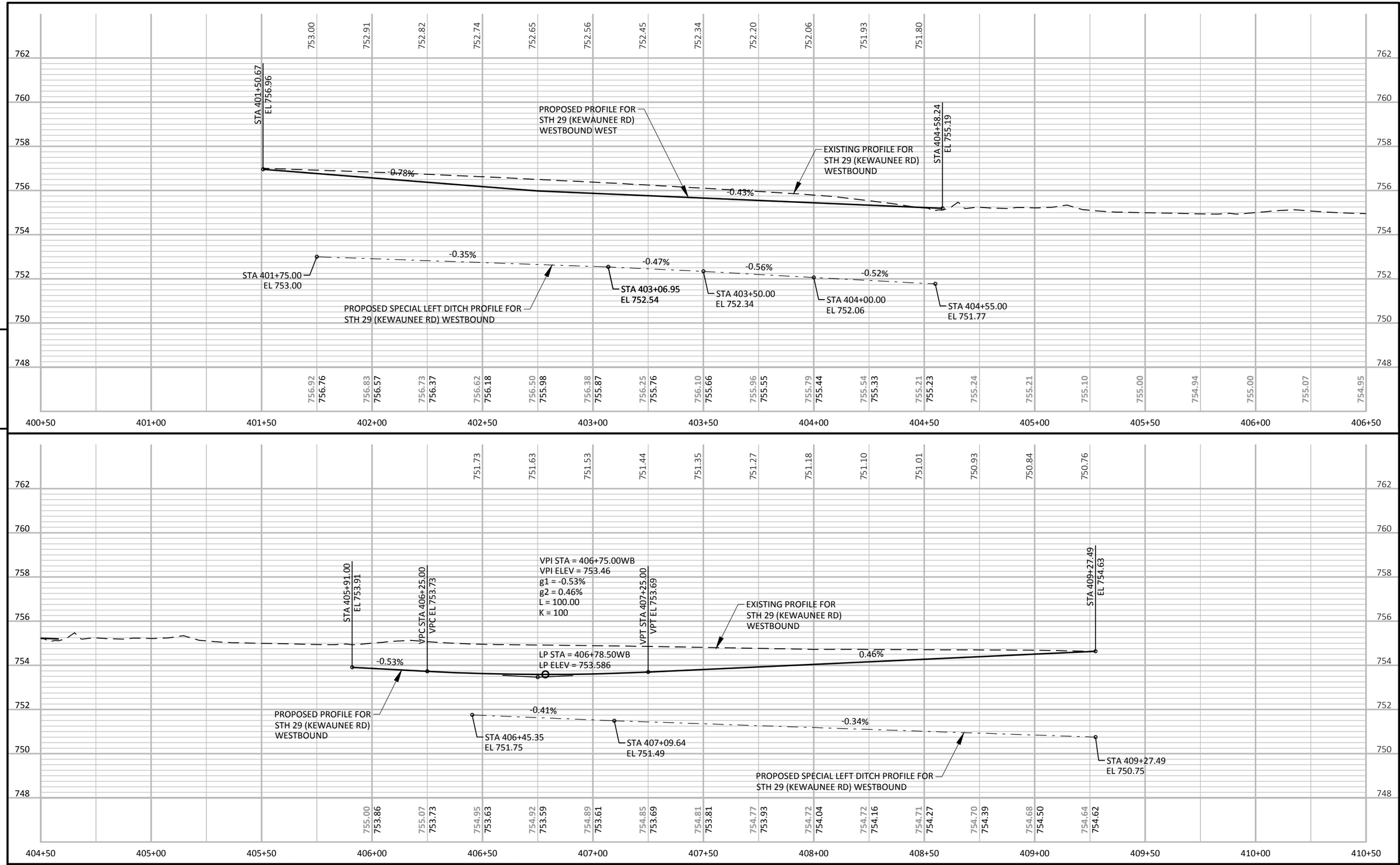


PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	PROFILE: CTH EA (HURON ROAD) SOUTHBOUND	SHEET

FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-050100-PP.DWG
LAYOUT NAME - 451607-050311-pr

PLOT DATE : 9/25/2018 12:33 PM PLOT BY : OMNNI ASSOCIATES - ANDREW WESTBROOK PLOT SCALE : ##########

WISDOT/CADDS SHEET 44



PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	PROFILE: STH 29 (KEWAUNEE ROAD) WESTBOUND	SHEET

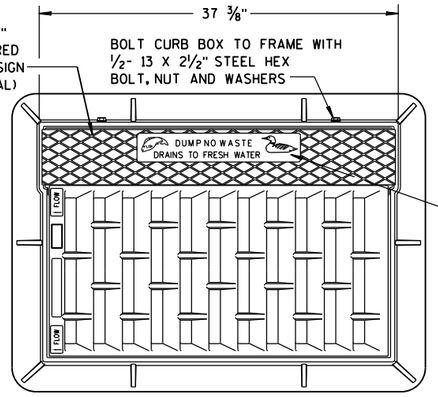
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LAYOUT NAME - 451607-050321-pr

PLOT DATE : 9/25/2018 12:33 PM PLOT BY : OMNNI ASSOCIATES - ANDREW WESTBROOK PLOT SCALE : ##########

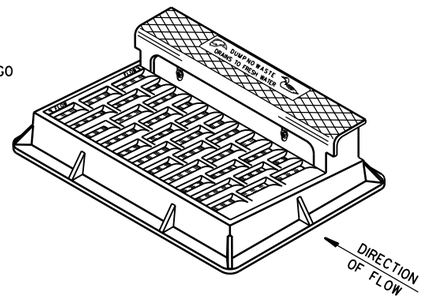
Standard Detail Drawing List

08A05-19A	INLET COVERS TYPE A, H, A-S, H-S & Z
08A05-19B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08A05-19C	INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S
08A05-19D	INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M
08A08-02	CATCH BASINS 3-FT, 4-FT, 5-FT AND 6-FT DIAMETER
08A09-02	CATCH BASINS 2X3-FT AND 2.5X3-FT
08B09-02	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER
08C06-02	INLETS 3-FT AND 4-FT DIAMETER
08C07-02	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08C08-02	INLETS MEDIAN 1 AND 2 GRATE
08D01-20A	CONCRETE CURB & GUTTER
08D01-20B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08D05-19A	CURB RAMPS TYPES 1 AND 1-A
08D05-19B	CURB RAMPS TYPES 2 AND 3
08D05-19C	CURB RAMPS TYPES 4A AND 4A1
08D05-19D	CURB RAMPS TYPE 4B AND 4B1
08D05-19E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D05-19F	CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS
08D05-19G	CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES
08D19-02	DRIVEWAY AND SIDEWALK RAMPS TYPE Z
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
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
09B02-10	CONDUIT
09B16-01	PULL BOX NON-CONDUCTIVE
09C02-07	CONCRETE BASES, TYPES 1, 2, 5, & 6
09C03-04	TRANSFORMER/PEDESTAL BASES
09E01-14D	POLE MOUNTINGS FOR LIGHTING UNITS, TYPE 5 (30 FEET)
09E01-14G	HARDWARE DETAILS FOR POLE MOUNTINGS
09E03-05	NON-FREEWAY LIGHTING UNIT POLE WIRING
10A01-03	ELECTRICAL HANDHOLE WIRING
11B02-02	CONCRETE MEDIAN NOSE
12A03-10	NAME PLATE (STRUCTURES)
13C01-19	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C04-17	URBAN NON-DOWELED CONCRETE PAVEMENT
13C18-06E	CONCRETE PAVEMENT JOINTING AND STEEL REINFORCEMENT IN ROUNDABOUTS
14A02-01	TREE PLANTING DETAIL
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C02-06A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C03-04	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C07-14B	PAVEMENT MARKING WORDS
15C07-14C	PAVEMENT MARKING ARROWS
15C08-18A	LONGITUDINAL MARKING (MAINLINE)
15C08-18B	PAVEMENT MARKING (TURN LANES)
15C11-07B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C18-04	MEDIAN ISLAND MARKING
15C27-02B	PAVEMENT MARKING (ISLANDS)
15C33-03	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS

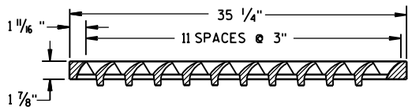
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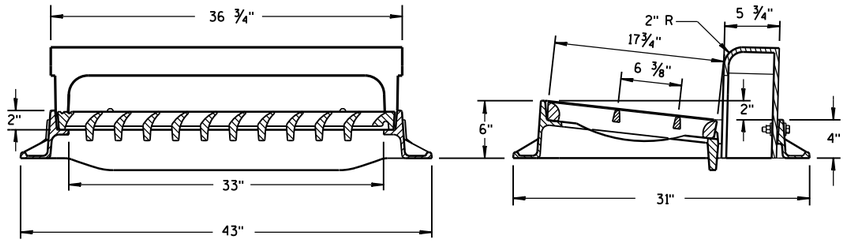


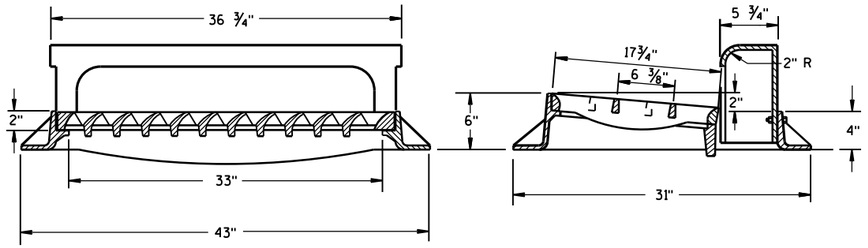
NOTE:
GRATE IS REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

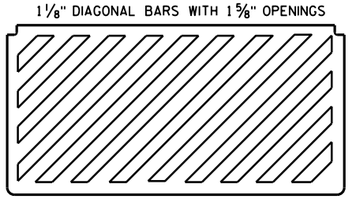






TYPE "H"

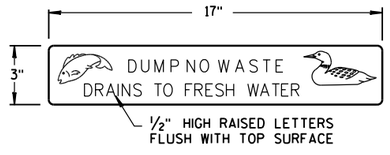
NOTE: EITHER CASTING IS ACCEPTABLE



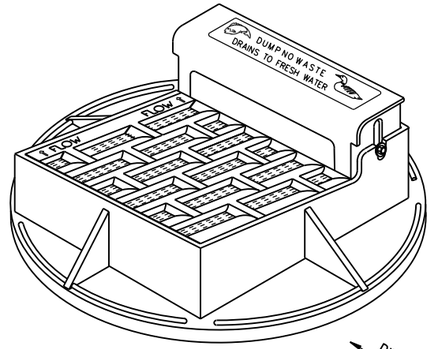
SPECIAL GRATE FOR TYPE "H" COVER

(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"

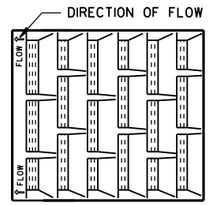
NOTE:
GRATE IS REVERSIBLE.

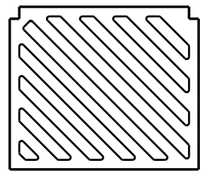
GENERAL NOTES

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.

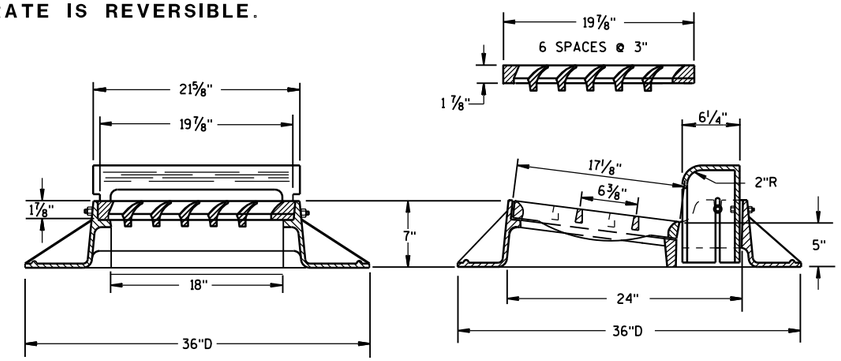




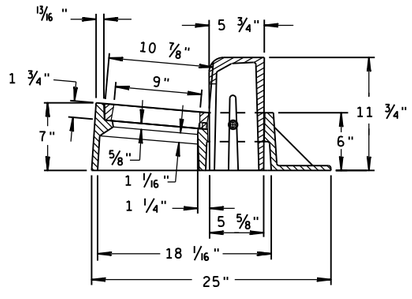
SPECIAL GRATE FOR TYPE "A" COVER

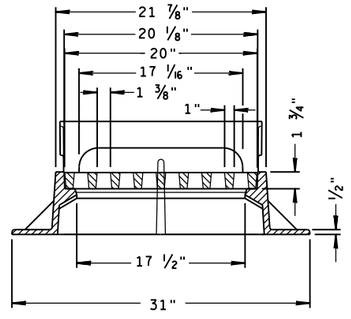
(MEASURES 19 3/4" X 17" X 1 7/8")

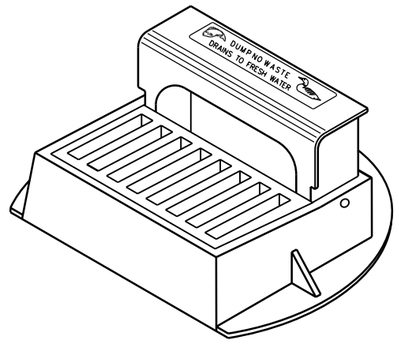
(NOTED AS TYPE A-S ON DRAINAGE TABLE)



TYPE "A"







TYPE "Z"

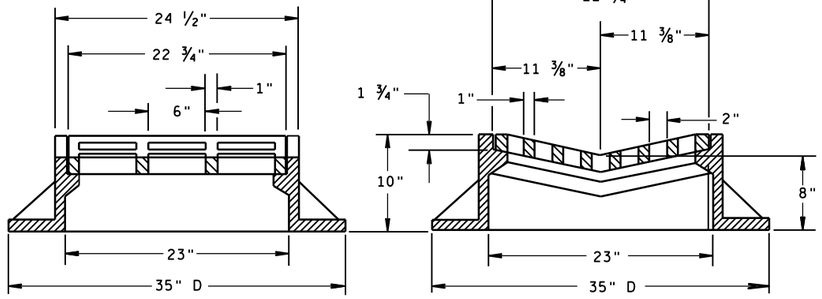
INLET COVERS
TYPE A, H, A-S, H-S & Z

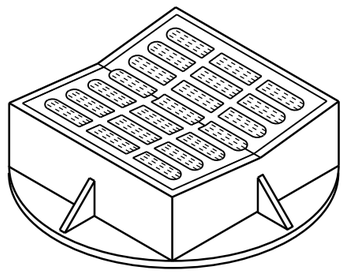
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

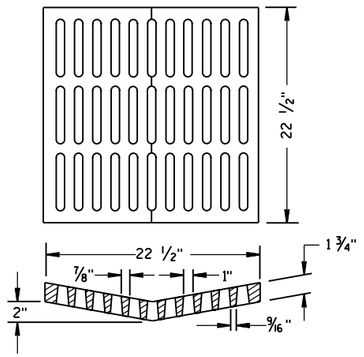
6

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



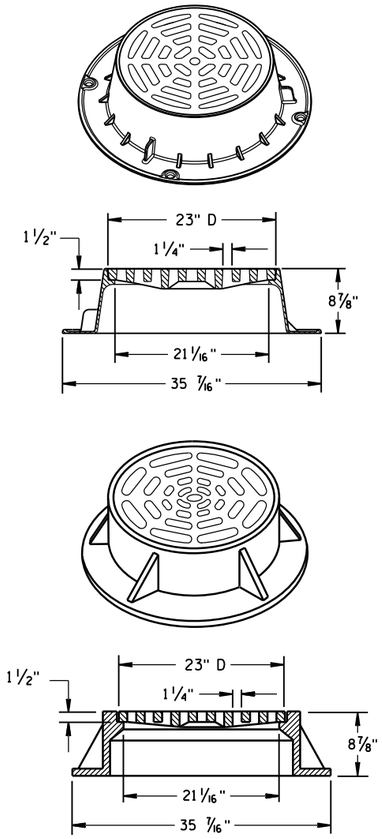


TYPE "B"



ALTERNATIVE GRATE FOR TYPE "B" COVER

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS POSSIBLE.
NOTED AS TYPE B-A ON THE DRAINAGE TABLE



TYPE "C"

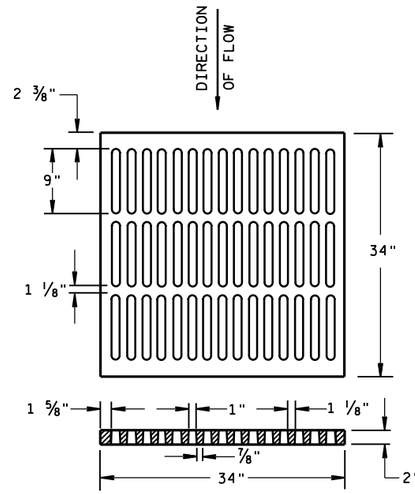
NOTE: EITHER CASTING IS ACCEPTABLE

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.

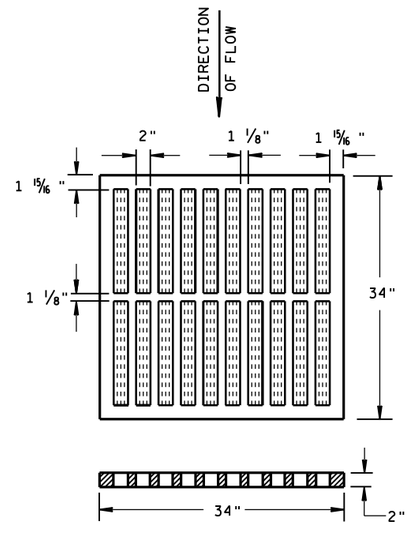
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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



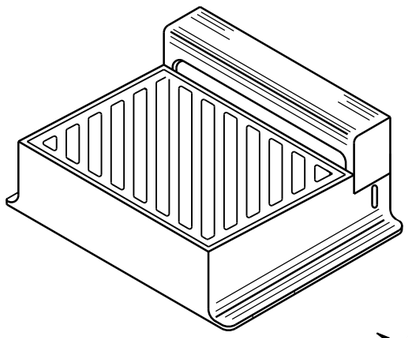
ALTERNATIVE TYPE "MS"

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS PERMITTED
NOTED AS TYPE MS-A ON THE DRAINAGE TABLE

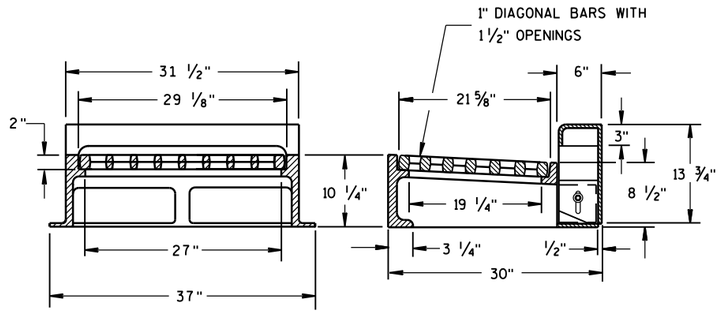


TYPE "MS"

USE ON FREEWAYS AND EXPRESSWAYS
NOTED AS TYPE MS ON DRAINAGE TABLE



DIAGONAL SLOTS, SHALL BE ORIENTED TO THE DIRECTION OF FLOW AS ILLUSTRATED. GRATES ARE MANUFACTURED TO BE REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

TYPE "WM"

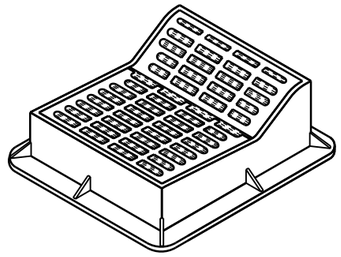
INLET COVERS
TYPE B, B-A, C, MS, MS-A, & WM

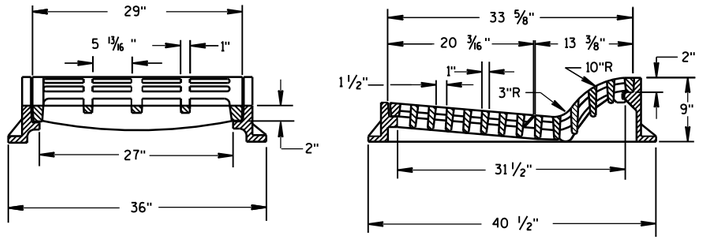
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

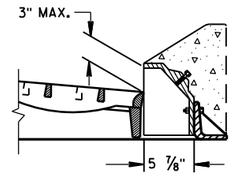
S.D.D. 8 A 5-19b





TYPE "F"

USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.



ALTERNATIVE CURB BOX FOR TYPE "HM" COVER

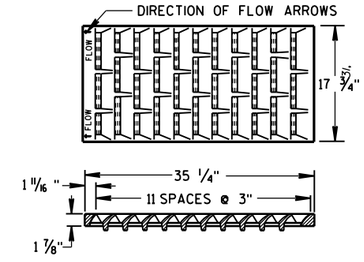
USE WITH TYPES G & J CONCRETE CURB & GUTTER, 30 INCH
NOTED AS TYPE HM-GJ ON DRAINAGE TABLE

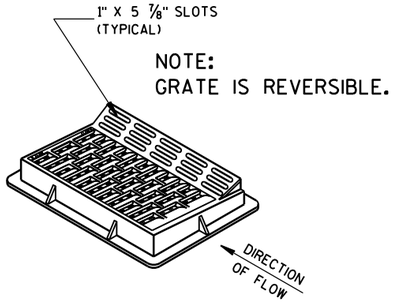
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM-GJ" COVER
NOTED AS TYPE HM-GJ-S ON DRAINAGE TABLE

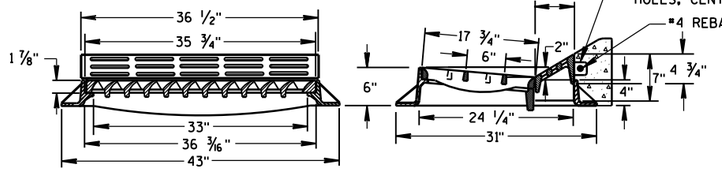
GENERAL NOTES

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



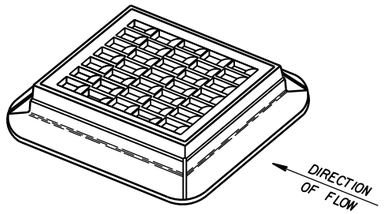


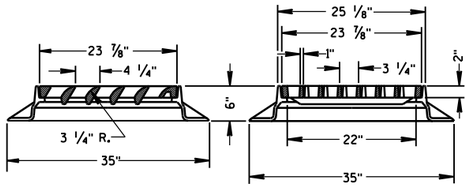


TYPE "HM"

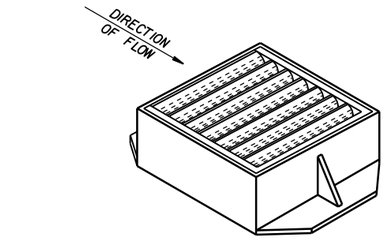
USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.

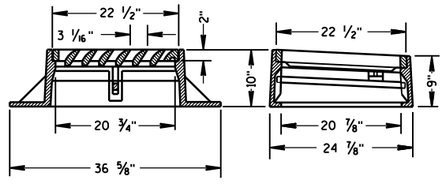
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM" COVER
NOTED AS TYPE HM-S ON DRAINAGE TABLE



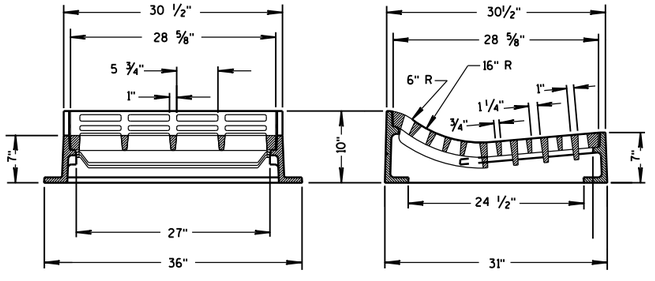


TYPE "S"



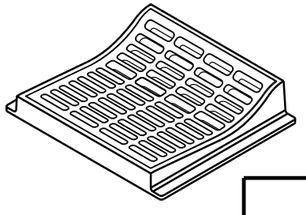


TYPE "V"



TYPE "T"

USE WITH TYPES R & T CONCRETE CURB & GUTTER, 36 INCH.



INLET COVERS
TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

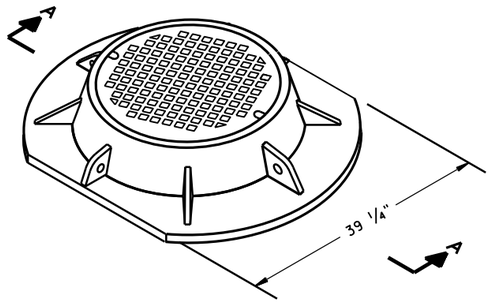
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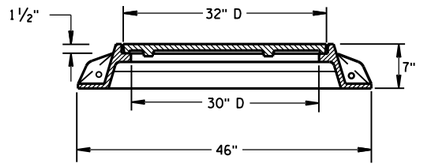
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S.D.D. 8 A 5-19c

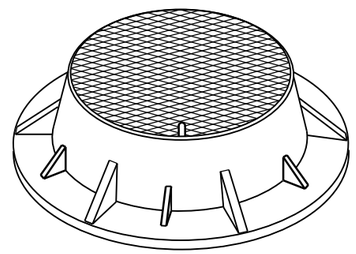
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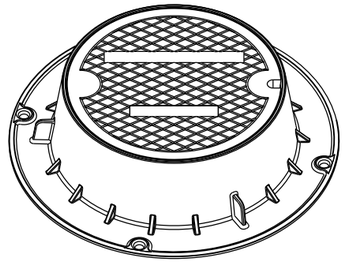
S.D.D. 8 A 5-19c

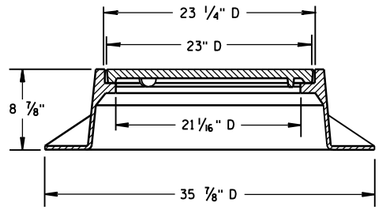


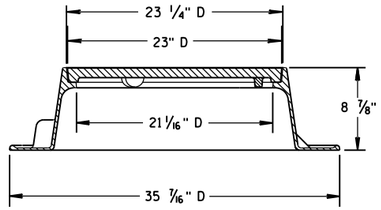


SECTION A-A
TYPE "K"









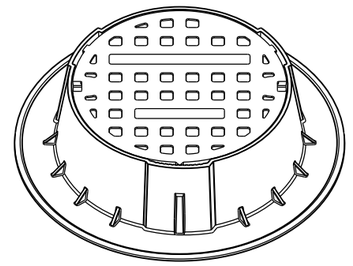
TYPE "J"
NOTE: EITHER CASTING IS ACCEPTABLE

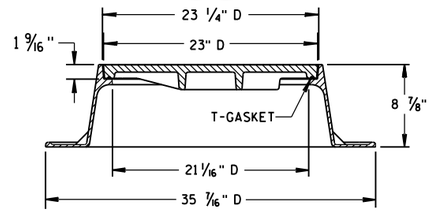
GENERAL NOTES

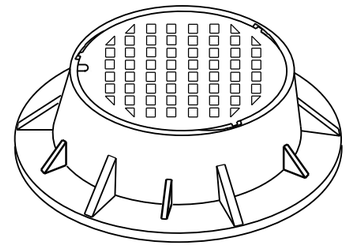
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

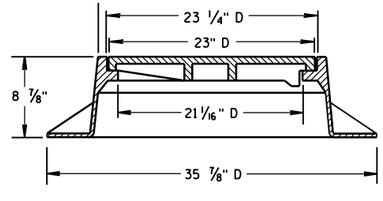
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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

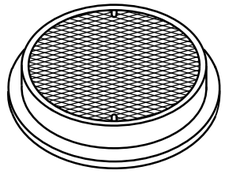


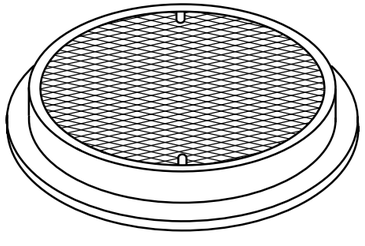


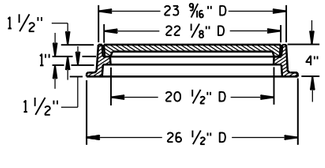




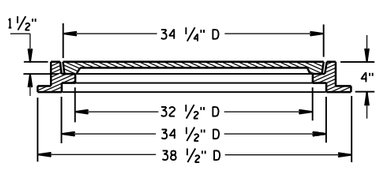
TYPE "J" SPECIAL
TYPE "B" NON-ROCKING SELF-SEAL LID
(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)
NOTE: EITHER CASTING IS ACCEPTABLE



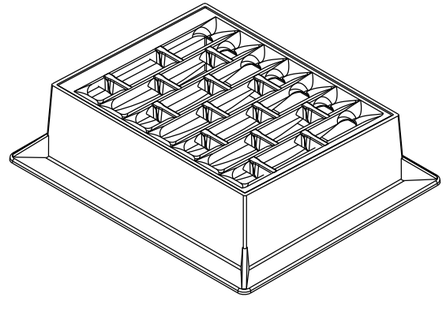


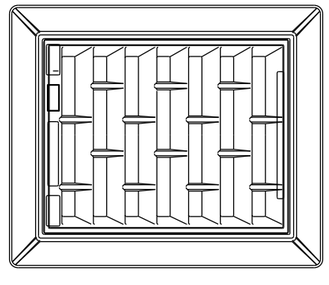


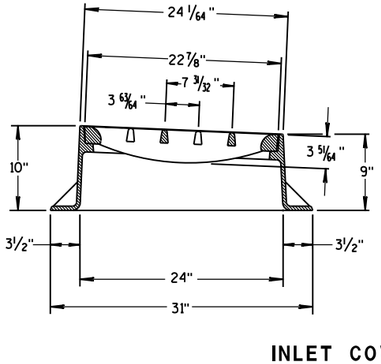
TYPE "L"

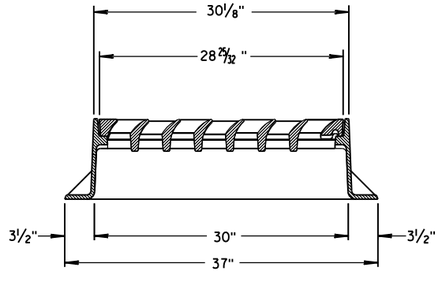


TYPE "M"









INLET COVER TYPE "BW"

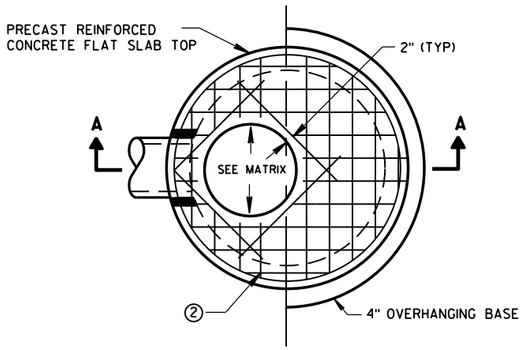
INLET COVER TYPE BW
MANHOLE COVERS, TYPE K, J, J-S, L & M

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

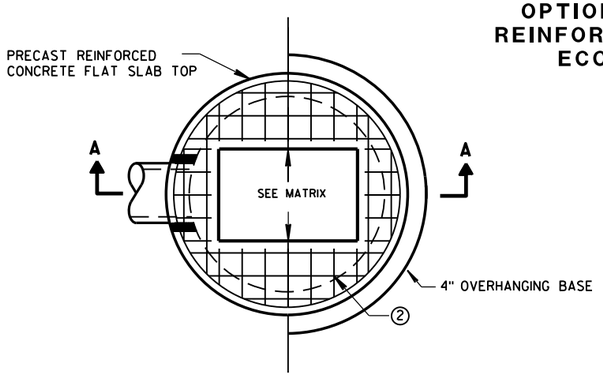
APPROVED
11/27/2013
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

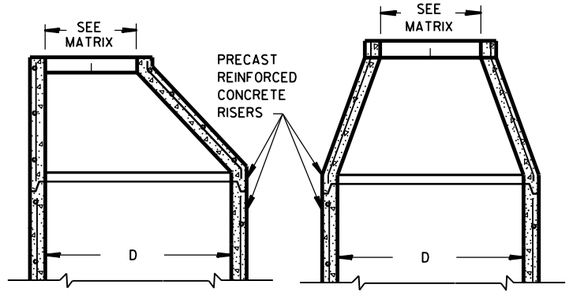
S.D.D. 8 A 5-19d



PLAN VIEW CIRCULAR OPENING

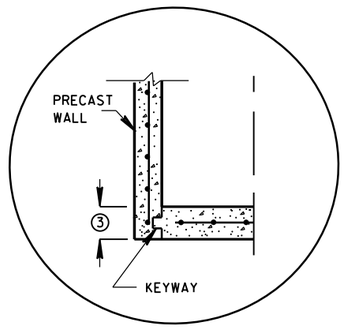


PLAN VIEW RECTANGULAR OPENING



OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

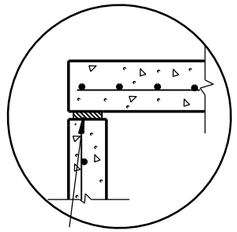
OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP



PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION

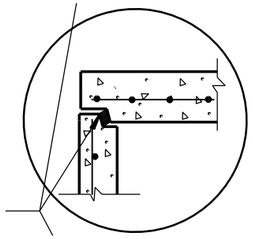
SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"

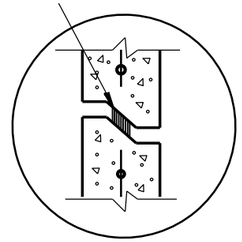


TOP WITH PLAIN END JOINT

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

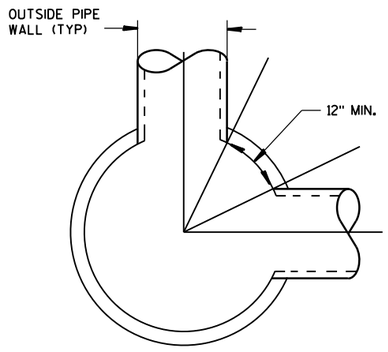


TOP WITH TONGUE AND GROOVE JOINT

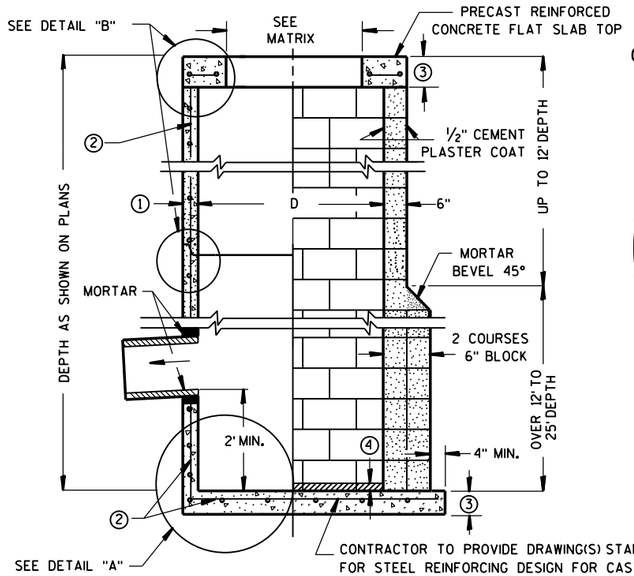


RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"



DETAIL "C"



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

SECTION A-A

PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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

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 CATCH BASIN 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 FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

PRECAST REINFORCED CONCRETE CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED CONCRETE FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES.

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 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.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199.

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

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

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 AND 7 INCHES FOR 6-FT DIAMETER PRECAST CATCH BASINS.

② FOR PRECAST CATCH BASINS 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".

④ 1" CONCRETE KEY POURED AFTER INSTALLATION. 2' SUMP MEASURED FROM TOP OF KEY.

CATCH BASIN COVER OPENING MATRIX

CATCH BASIN SIZE	INLET COVER TYPE	ALL A'S	ALL B'S	BW	C	F	ALL H'S	S	T	V	WM	Z
	OPENING SIZE (FT)											
3-FT	2X2	X	X					X		X		
	2 DIA.				X							X
4-FT-6-FT	2X2	X	X					X		X		
	2X2.5			X				X	X	X	X	
	2 DIA.				X							X
	2X3						X					
	2.5X3					X						

PIPE MATRIX

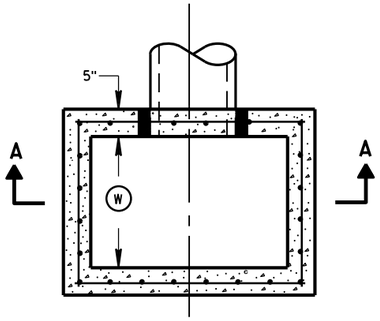
CATCH BASIN SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18
5-FT	36	24
6-FT	42	30

CATCH BASINS 3-FT, 4-FT, 5-FT AND 6-FT DIAMETER

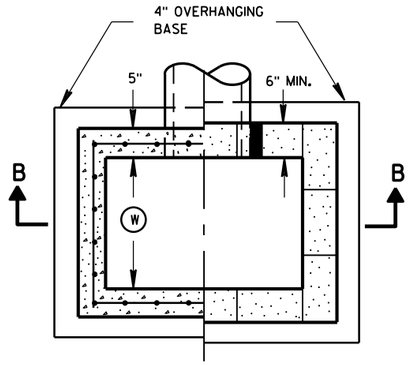
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2016 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS UNIT SUPERVISOR
FHWA

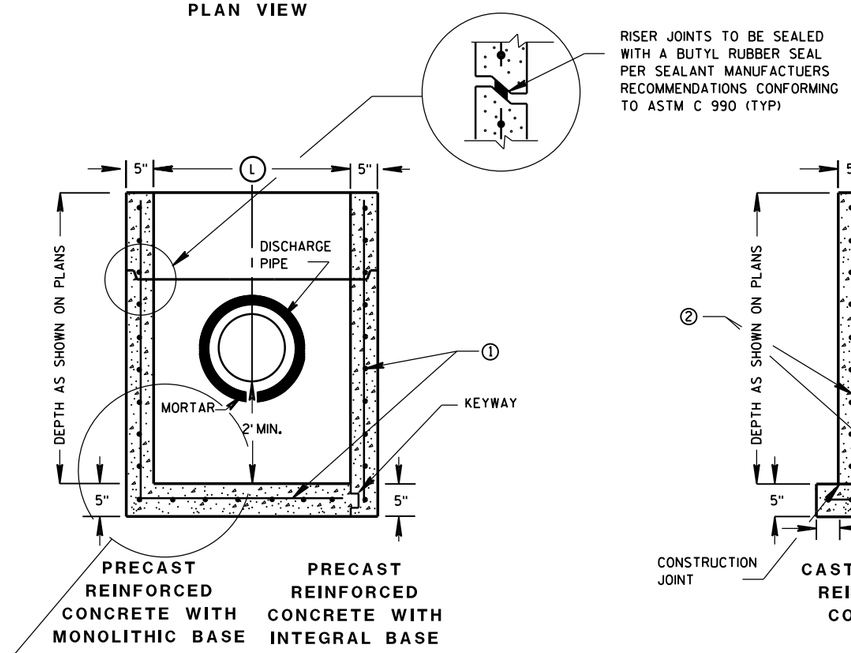
S.D.D. 8 A 8-2



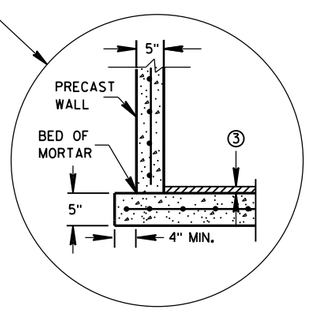
PLAN VIEW



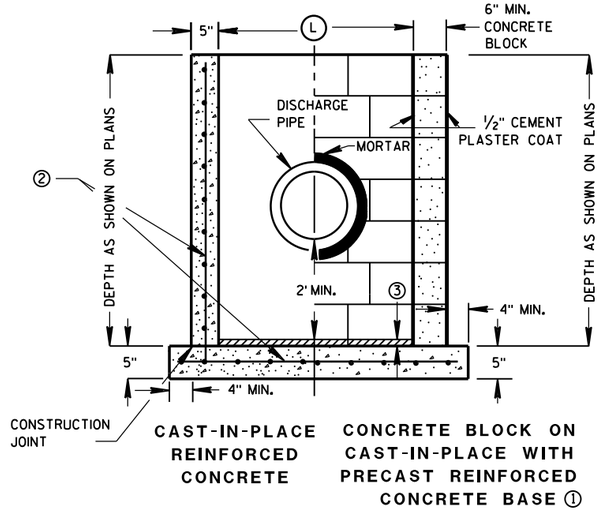
PLAN VIEW



SECTION A-A



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION



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.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST CATCH BASIN 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 PRECAST CATCH BASIN UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATES 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 FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

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

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

4" OVERHANGING BASES ARE REQUIRED FOR CAST-IN-PLACE REINFORCED CONCRETE AND 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 INSIDE PIPE DIAMETER DETERMINED BY 3" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

① FOR PRECAST CATCH BASINS 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.

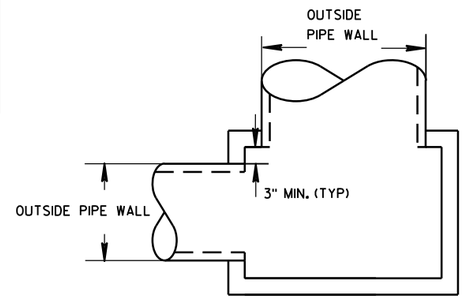
③ 1" CONCRETE KEY POURED AFTER INSTALLATION. 2' SUMP MEASURED FROM TOP OF KEY.

CATCH BASIN COVER MATRIX

CATCH BASIN SIZE		INLET COVER TYPE	F	ALL H'S
	WIDTH (W) (FT)	LENGTH (L) (FT)		
2X3-FT	2	3		X
2.5X3-FT	2.5	3	X	

PIPE MATRIX

CATCH BASIN SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	WIDTH (IN)	LENGTH (IN)
2X3-FT	12	24
2.5X3-FT	18	24



DETAIL "A"

CATCH BASINS 2X3-FT AND 2.5X3-FT

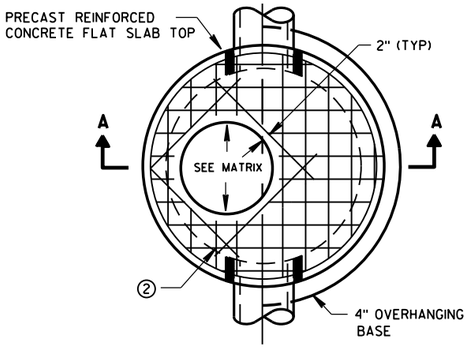
CATCH BASINS 2X3-FT AND 2.5X3-FT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

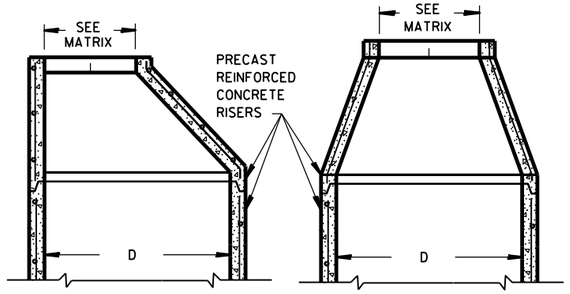
APPROVED
Sept., 2016 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS UNIT SUPERVISOR
FHWA

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S.D.D. 8 A 9-2

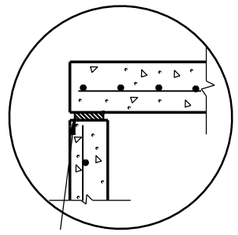


PLAN VIEW CIRCULAR OPENING

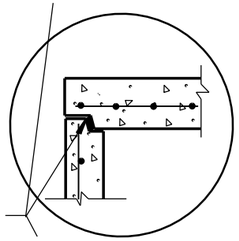


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

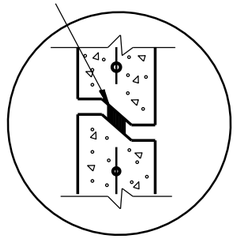


TOP WITH PLAIN END JOINT



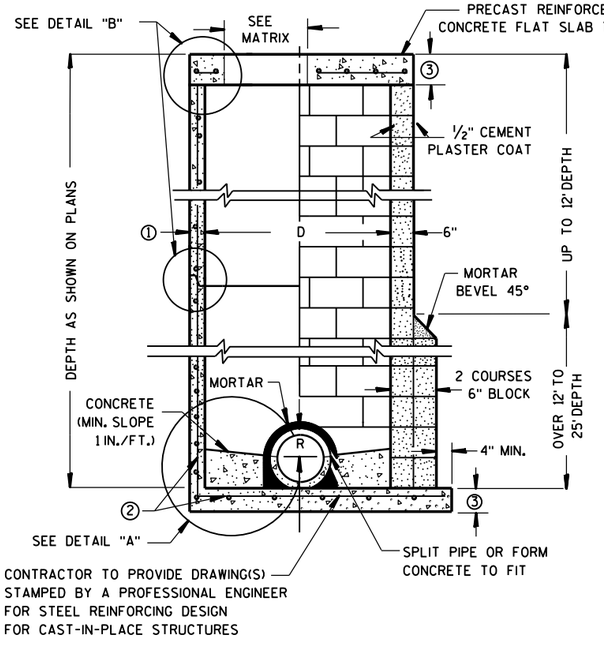
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C990 (TYP)

TOP WITH TONGUE AND GROOVE JOINT



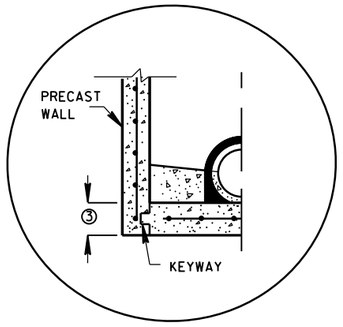
RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

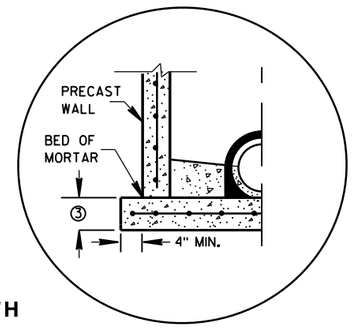


PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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

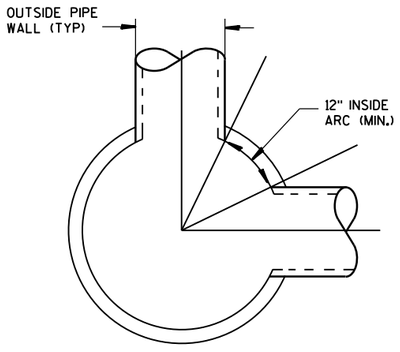


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



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.

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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 FOUNDATION 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.

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

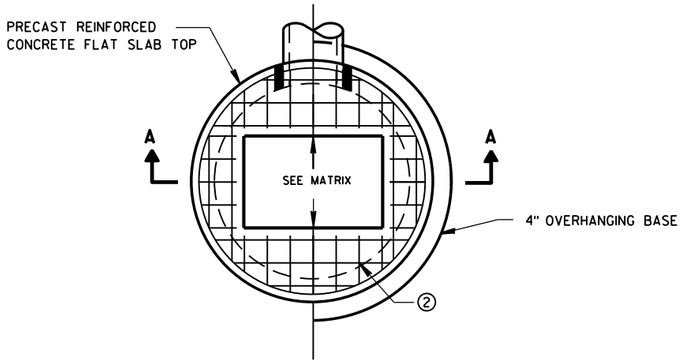
APPROVED

Sept., 2016
DATE

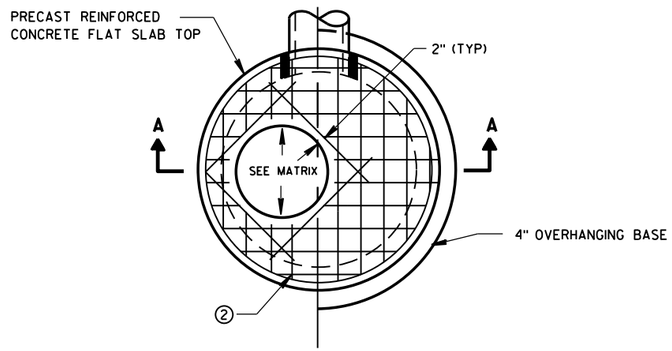
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERV

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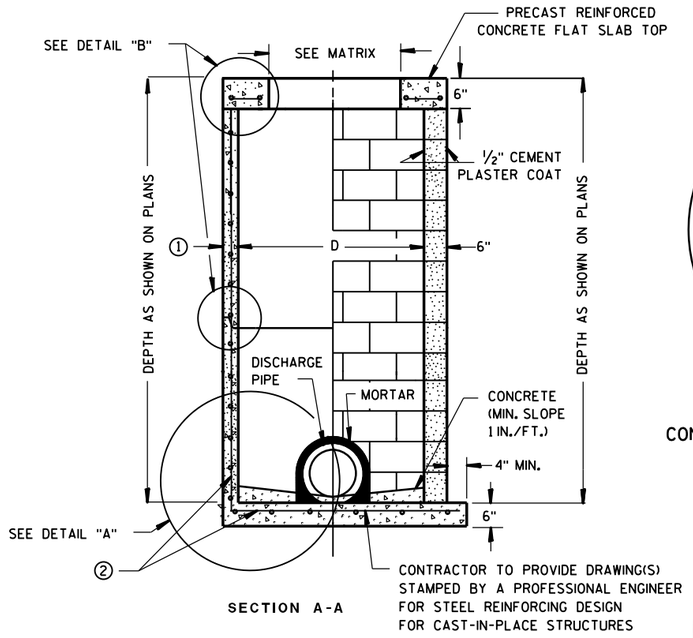
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PLAN VIEW RECTANGULAR OPENING



PLAN VIEW CIRCULAR OPENING

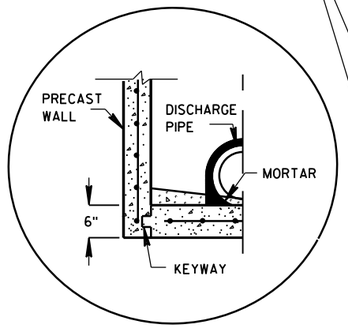


SECTION A-A

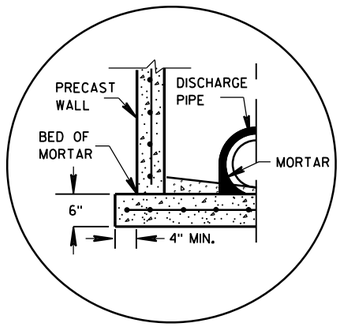
PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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

CIRCULAR INLETS W/ FLAT TOP

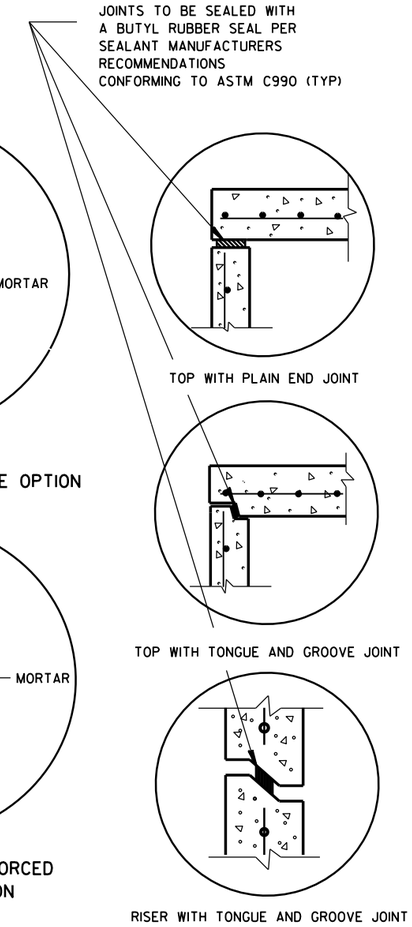


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "B"

GENERAL NOTES

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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 FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

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

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199.

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

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.

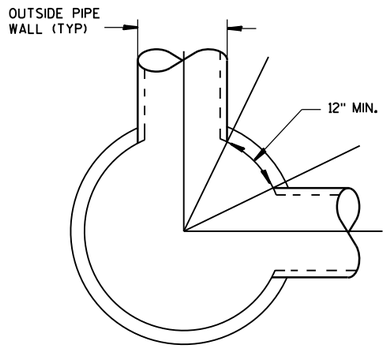
FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

① MINIMUM WALL THICKNESS SHALL BE 4-IN FOR 3-FT DIAMETER AND 5-IN FOR 4-FT DIAMETER PRECAST INLETS.

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

INLET COVER OPENING MATRIX

	INLET COVER TYPE	ALL A'S	ALL B'S	BW	C	F	ALL H'S	S	T	V	WM	Z
INLET SIZE	OPENING SIZE (FT)											
3-FT	2 DIA.				X							X
	2X2	X	X					X		X		
4-FT	2 DIA.				X							X
	2X2	X	X					X		X		
	2X2.5			X				X	X	X	X	
	2X3						X					
	2.5X3					X						



DETAIL "C"

PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18

INLETS 3-FT AND 4-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

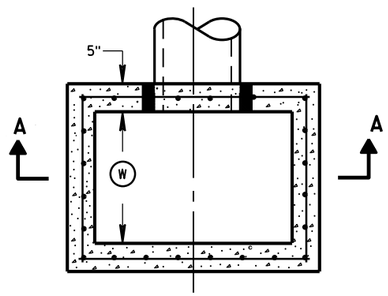
APPROVED
Sept., 2016 — /S/ Rodney Taylor
DATE — ROADWAY STANDARDS | UNIT SUPERVI ENT
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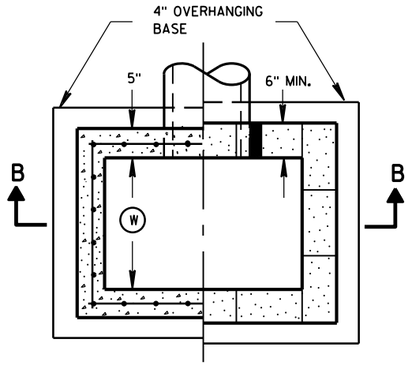
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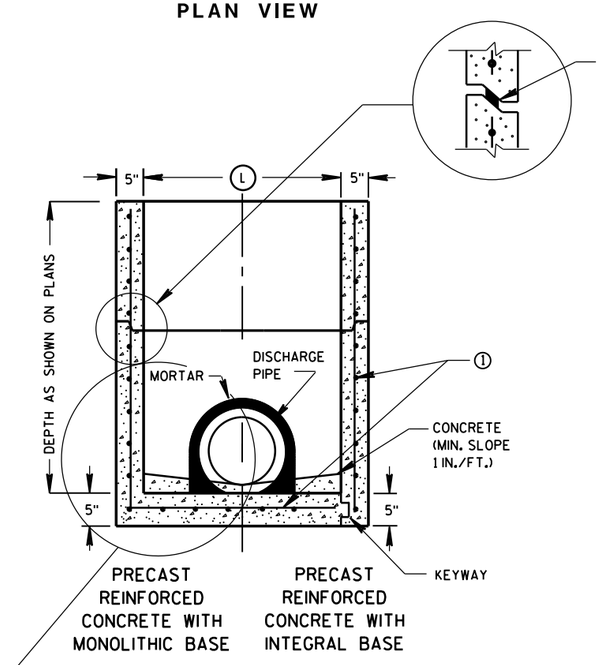
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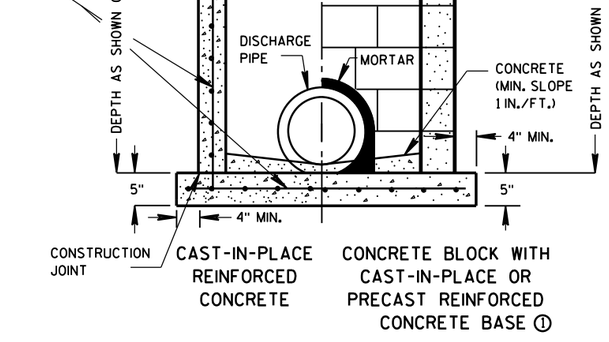
PLAN VIEW



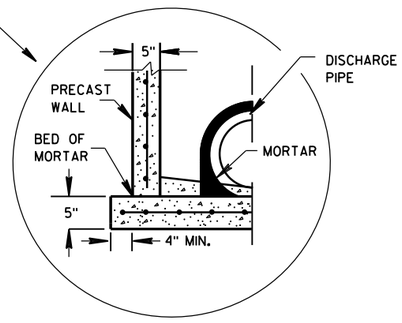
PLAN VIEW



SECTION A-A



SECTION B-B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

GENERAL NOTES

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

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

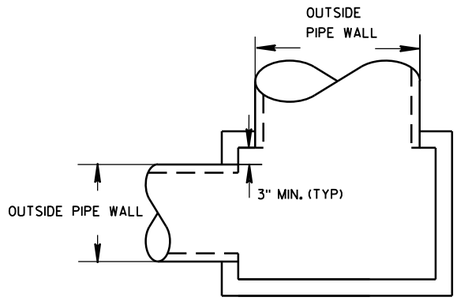
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

INLET SIZE		INLET COVER TYPE	ALL A'S	ALL B'S	BW	F	ALL H'S	S	T	V	WM
	WIDTH (W) (FT)	LENGTH (L) (FT)									
2X2-FT	2	2	X	X				X		X	
2X2.5-FT	2	2.5			X			X	X	X	X
2X3-FT	2	3					X				
2.5X3-FT	2.5	3				X					

PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER	
	WIDTH (IN)	LENGTH (IN)
2X2-FT	12	12
2X2.5-FT	12	18
2X3-FT	12	24
2.5X3-FT	18	24



DETAIL "A"

INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2016
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS D IT
UNIT SUPERVIS
FHWA

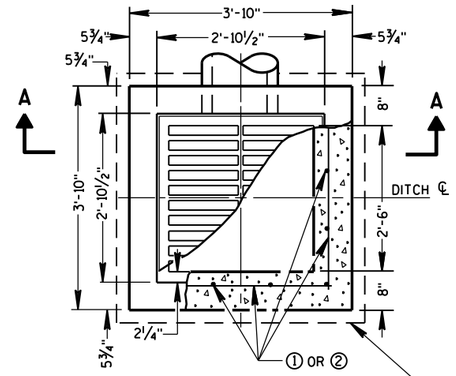
INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

6

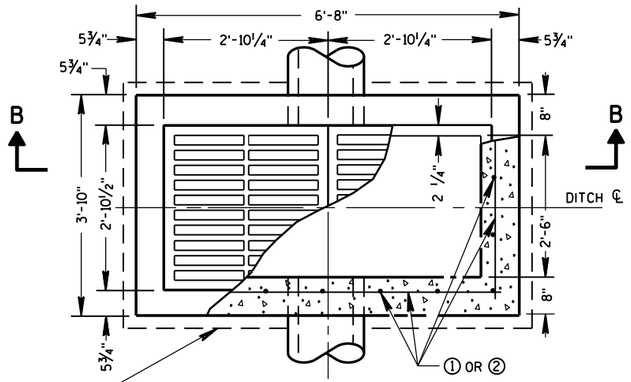
S.D.D. 8 C 7-2

6

S.D.D. 8 C 7-2

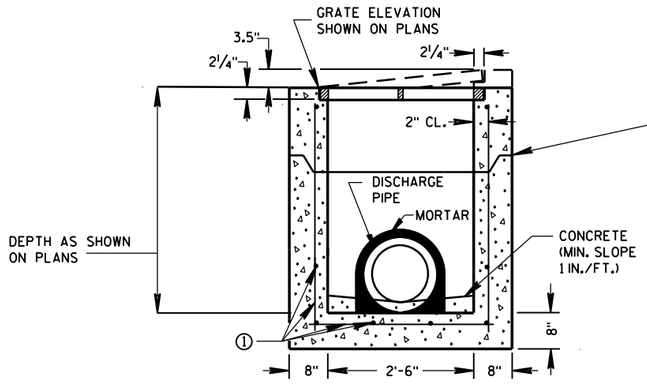


PLAN VIEW

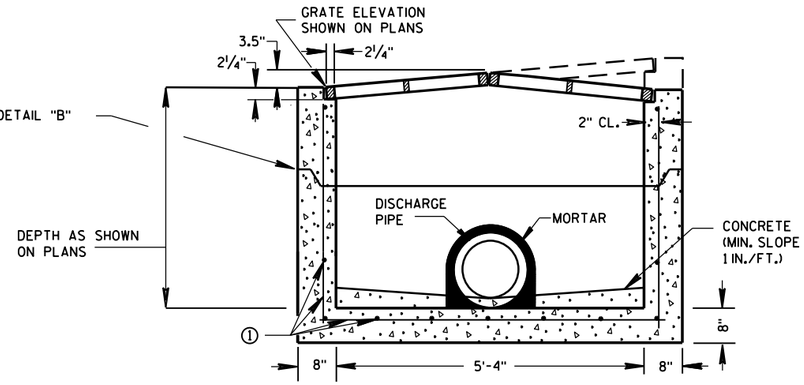


PLAN VIEW

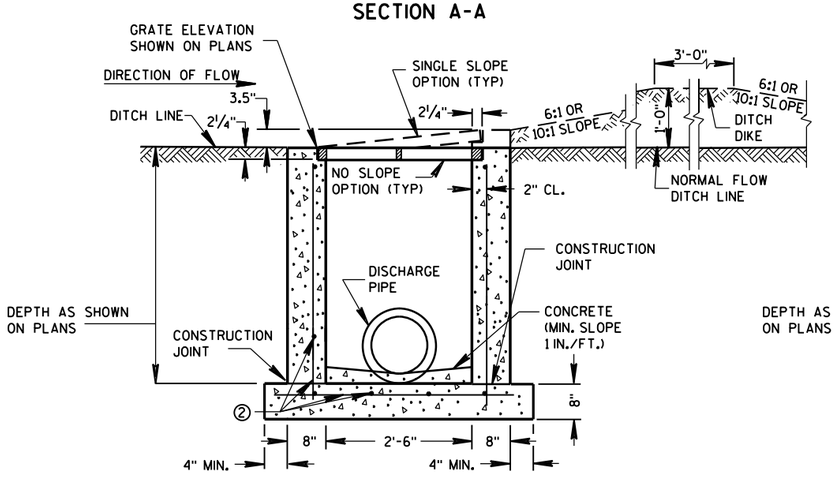
4" OVERHANGING BASE ON REINFORCED CAST-IN-PLACE CONCRETE INLETS



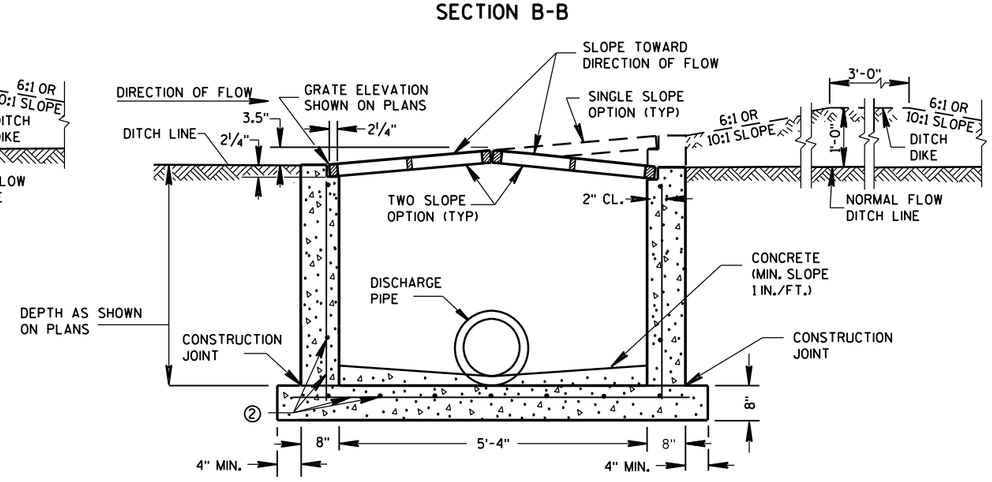
PRECAST REINFORCED CONCRETE SECTION A-A



PRECAST REINFORCED CONCRETE SECTION B-B



REINFORCED CAST-IN-PLACE CONCRETE SECTION A-A



REINFORCED CAST-IN-PLACE CONCRETE SECTION B-B

INLETS MEDIAN 1 GRATE

INLETS MEDIAN 2 GRATE

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 INLET UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLETS WHICH MAY INCLUDE PRECAST REINFORCED CONCRETE INLETS, SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL MEDIAN INLETS ARE DESIGNATED ON THE PLANS AS "INLETS, 1G-MS", ETC. THE FIRST NUMBER AND LETTER DESIGNATE THE TYPE OF STRUCTURE, AND THE FOLLOWING LETTERS DESIGNATE 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 FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

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

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

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

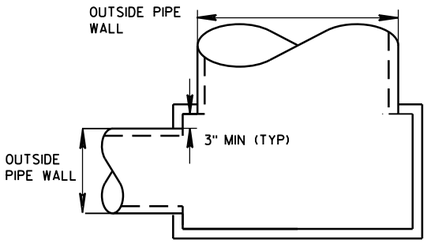
MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

① FOR PRECAST INLETS 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.

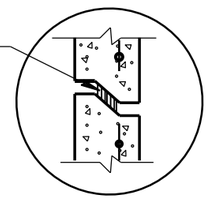
PIPE MATRIX

	MAXIMUM INSIDE PIPE DIAMETER	
INLET SIZE	WIDTH (IN)	LENGTH (IN)
1 GRATE	18	18
2 GRATE	18	42



DETAIL "A"

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



DETAIL "B"

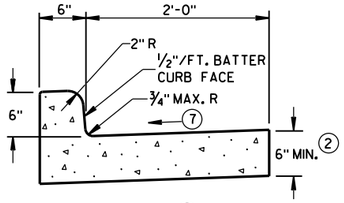
INLETS MEDIAN 1 AND 2 GRATE

STATE OF WISCONSIN
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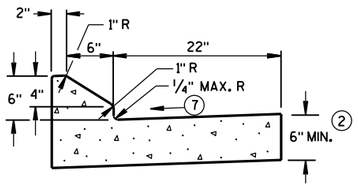
APPROVED
Sept., 2016 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS UNIT SUPERVI ENT
FHWA

S.D.D. 8 C 8-2

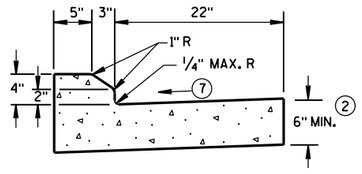
S.D.D. 8 C 8-2



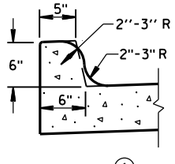
TYPES A (1) & D



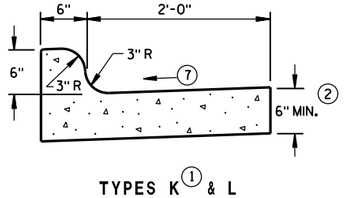
6" SLOPED CURB TYPES G (1) & J



4" SLOPED CURB TYPES G (1) & J

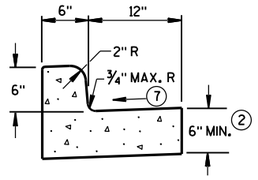


TYPES K (1) & L
(OPTIONAL CURB SHAPE)



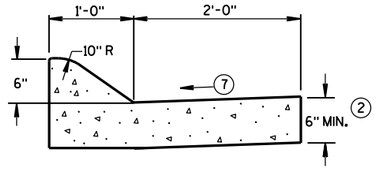
TYPES K (1) & L

CONCRETE CURB & GUTTER 30"

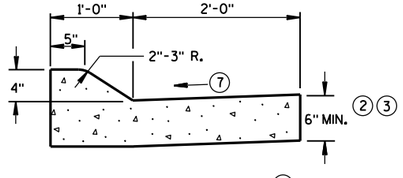


TYPES A (1) & D

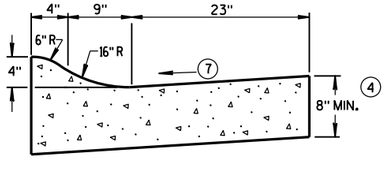
CONCRETE CURB & GUTTER 18"



6" SLOPED CURB TYPES A (1) & D

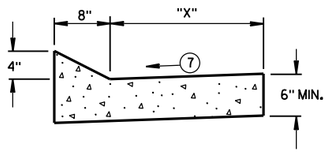


4" SLOPED CURB TYPES A (1) & D



4" SLOPED CURB TYPES R (1) & T (5)

CONCRETE CURB & GUTTER 36"



TYPES TBT & TBTT (1)

CONCRETE CURB & GUTTER

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

GENERAL NOTES

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

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

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

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

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

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

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

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

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

(5) THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

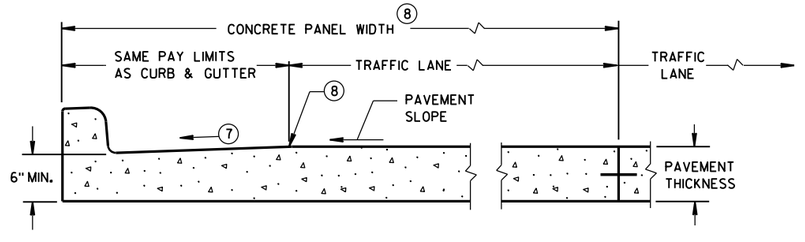
(6) WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.

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

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

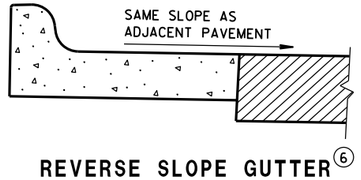
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

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



PARTIAL SECTION OF PAVEMENT *
WITH INTEGRAL CURB & GUTTER

* BIKE LANE IS NOT SHOWN.



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

CONCRETE CURB & GUTTER

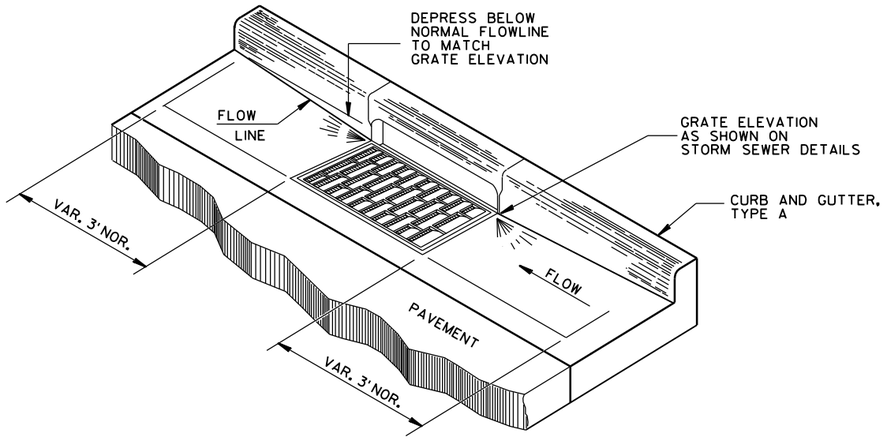
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO...

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S.D.D. 8 D 1-20a

6

S.D.D. 8 D 1-20a



DETAIL OF CURB AND GUTTER AT INLETS

(TYPE H INLET COVER SHOWN)

GENERAL NOTES

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

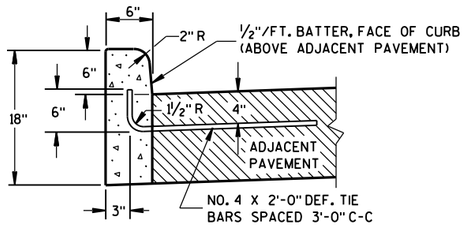
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

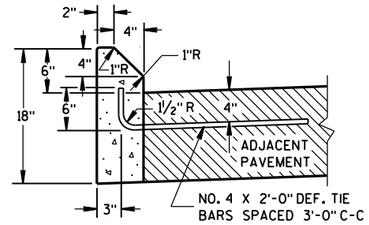
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBTT.

(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.

(9) REFER TO SDD 8D18 AND SDD 8D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.

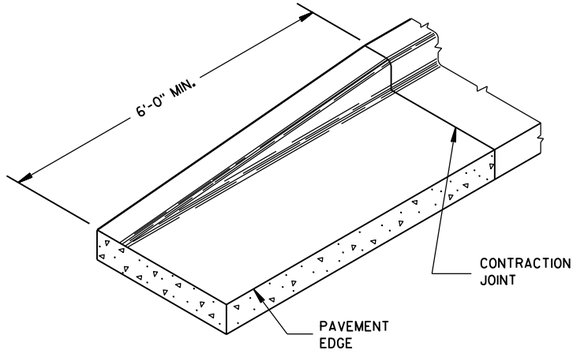


TYPES A(1) & D

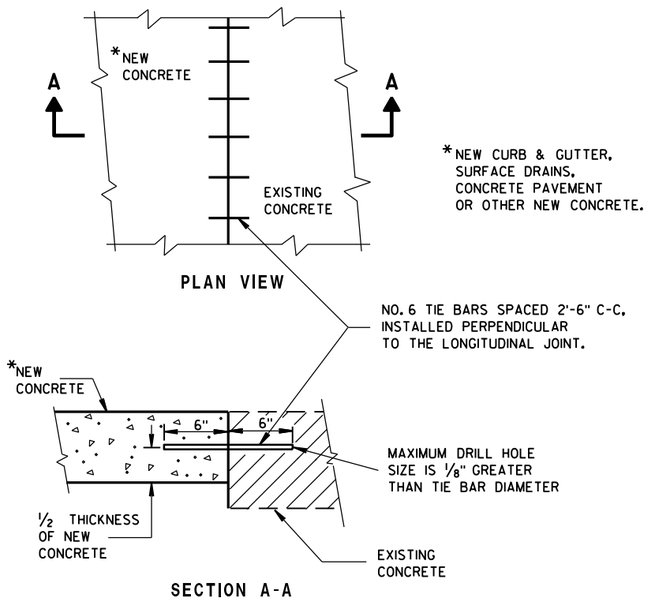


TYPES G(1) & J

CONCRETE CURB



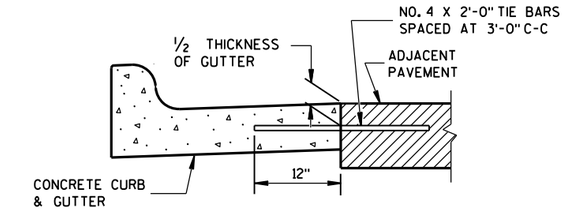
END SECTION CURB & GUTTER



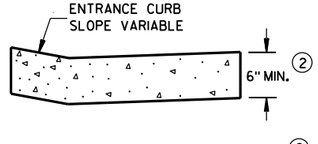
PLAN VIEW

SECTION A-A

TIE BARS DRILLED INTO EXISTING PAVEMENT



TYPICAL TIE BAR LOCATION (1)



DRIVEWAY ENTRANCE CURB (9)

(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

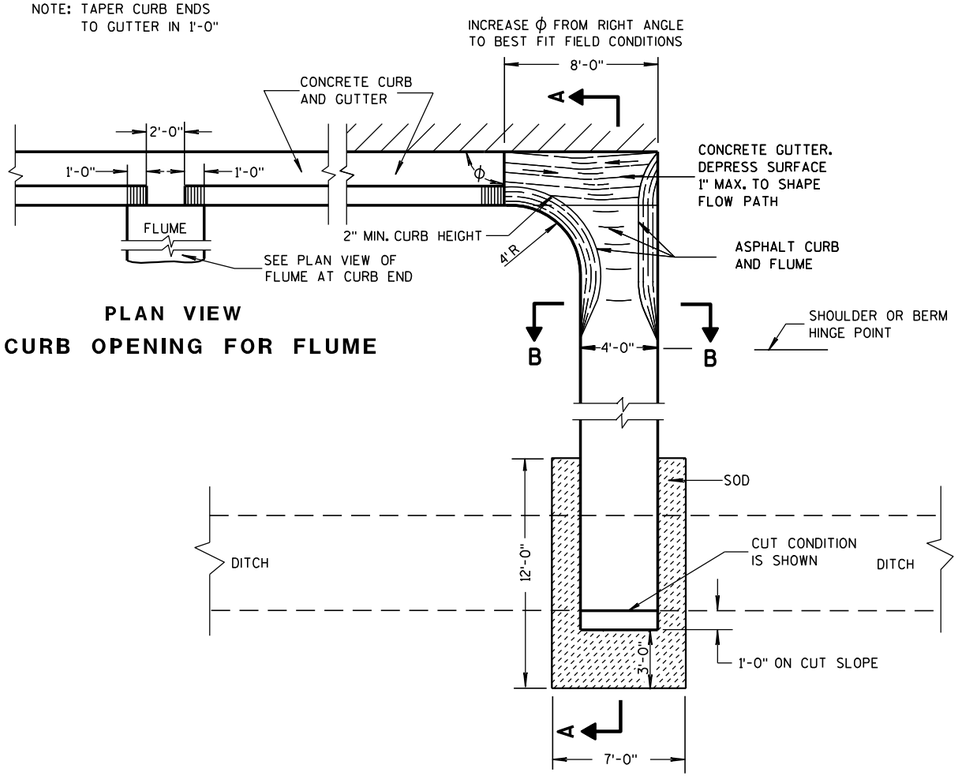
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

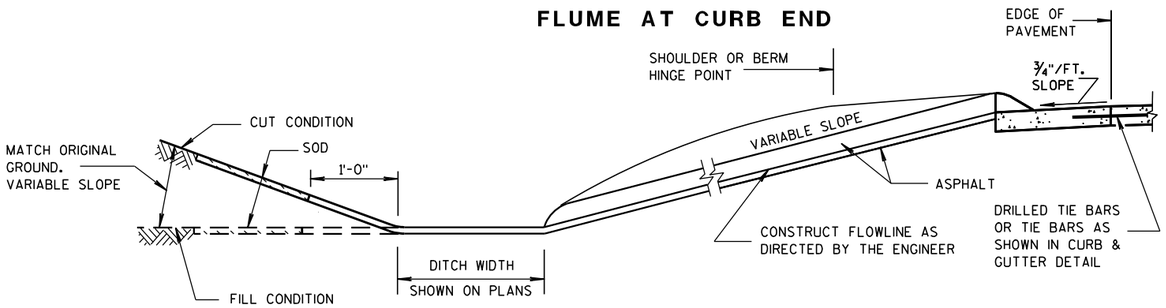
S.D.D. 8 D 1-20b

ASPHALTIC FLUME

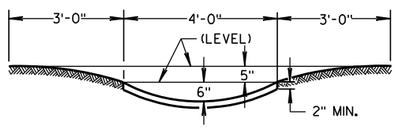


PLAN VIEW
CURB OPENING FOR FLUME

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.

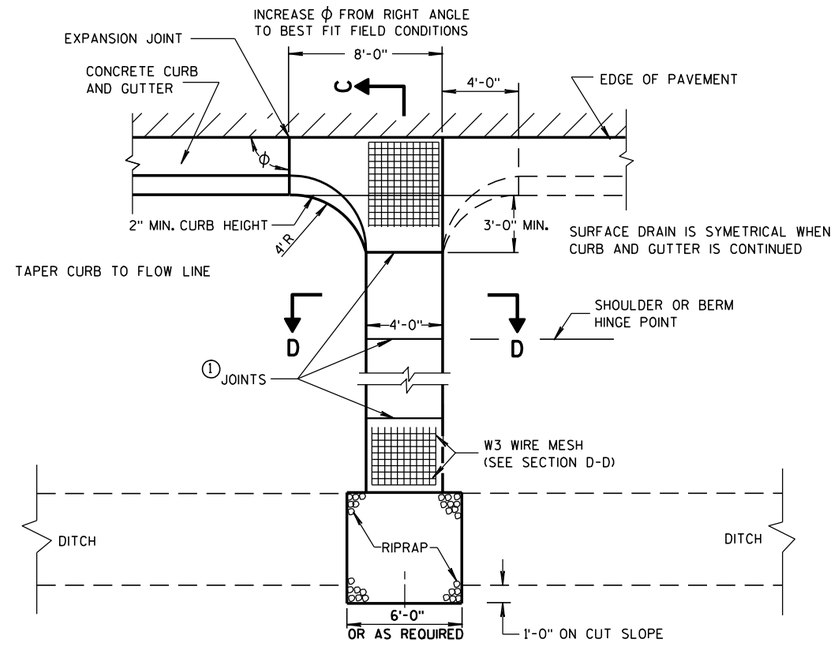
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

① JOINTS SHALL BE ⅛ TO ¼ INCH WIDE BY 1½ INCHES DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.

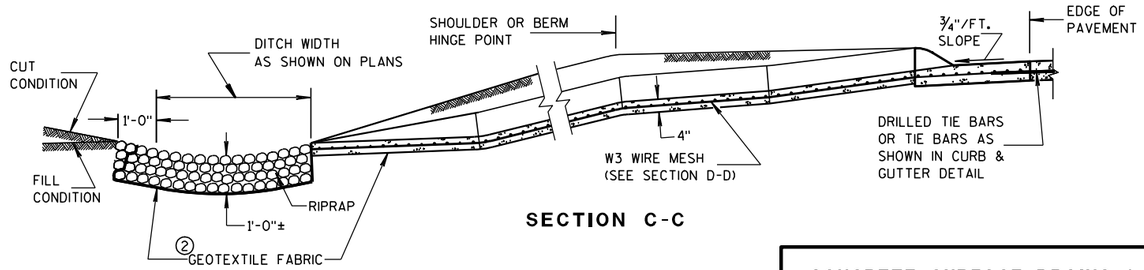
② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.

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

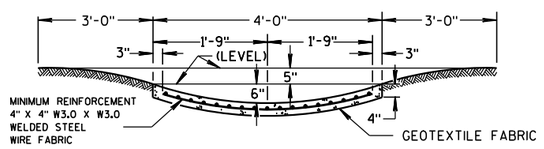
③ CONCRETE SURFACE DRAIN



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

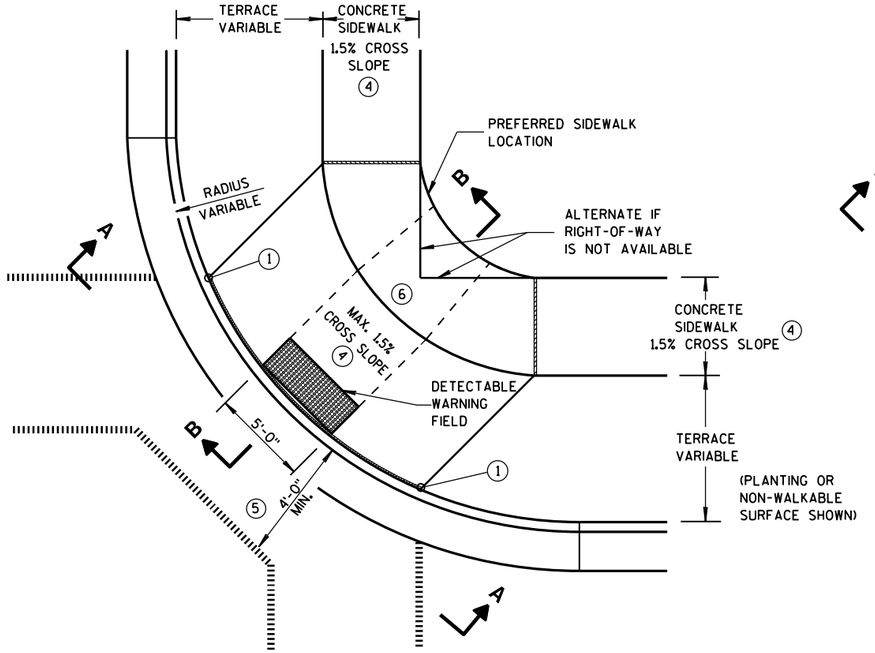
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S.D.D. 8 D 4-5

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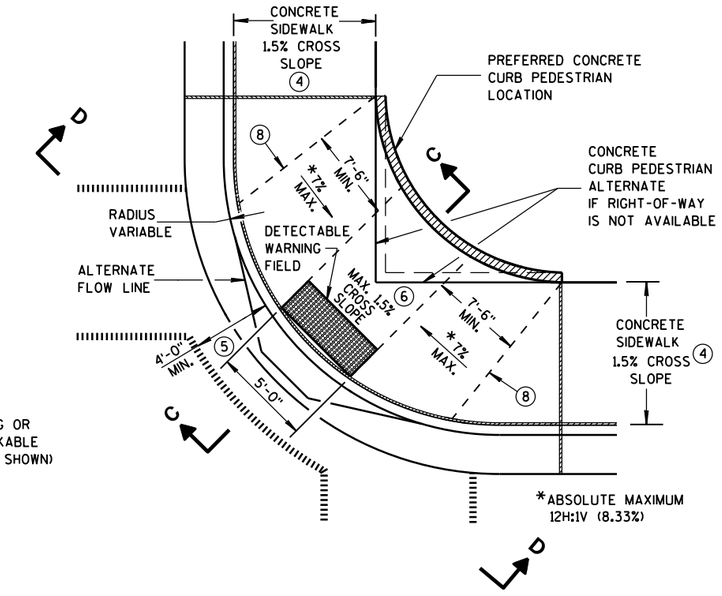
S.D.D. 8 D 4-5



PLAN VIEW

TYPE 1 RAMP

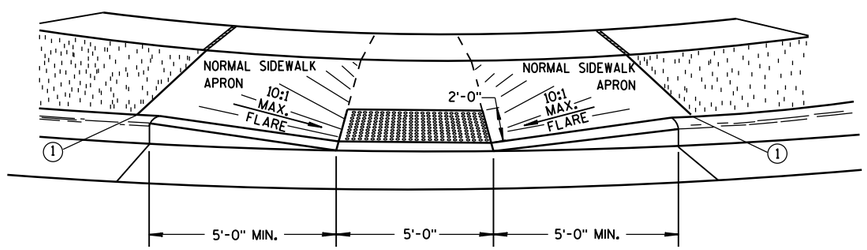
(CENTER OF CORNER RADIUS)



PLAN VIEW

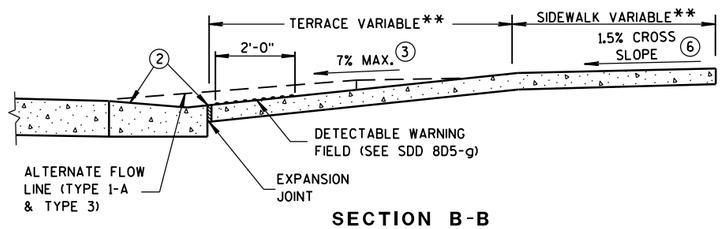
TYPE 1-A RAMP

(NO TERRACE)

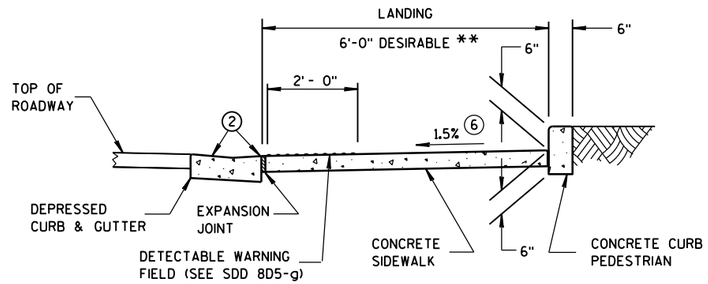


VIEW A-A

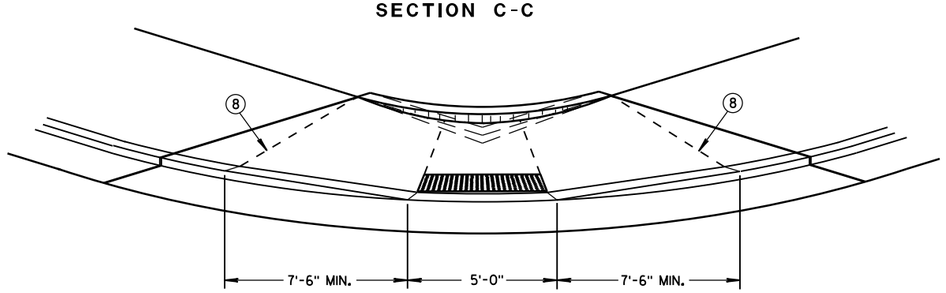
** WIDTH SHOWN ELSEWHERE IN THE PLANS



SECTION B-B



SECTION C-C



VIEW D-D

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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.

WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE RAMP.

TYPE 1 RAMPS SHALL HAVE A NORMAL SIDEWALK APRON AND CURB ON BOTH SIDES OF RAMP.

DETECTABLE WARNING FIELD SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS "CURB RAMP DETECTABLE WARNING FIELD". THE CONCRETE PEDESTRIAN CURB, IF NEEDED, SHALL BE MEASURED AND PAID BY THE LINEAL FOOT AS "CONCRETE CURB PEDESTRIAN". CONCRETE SIDEWALK IN THE CURB RAMP AREA SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS CONCRETE SIDEWALK, INCLUDING THE AREA UNDER THE DETECTABLE WARNING FIELD.

SELECT CURB RAMP DETECTABLE WARNING FIELD MATERIALS AND DEVICES FROM THE DEPARTMENT'S APPROVED MATERIALS LIST. THE COLOR OF THE DETECTABLE WARNING FIELD IS SPECIFIED ELSEWHERE AND IS INCIDENTAL TO THE BID ITEM OF "CURB RAMP DETECTABLE WARNING FIELD".

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP.

(1) THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(5) PROVIDE A LEVEL LANDING IN THE STREET AND GUTTER AREA. (2% MAXIMUM SLOPE IN ANY DIRECTION). WHEN THE GUTTER SLOPE EXCEEDS 2%, CONSTRUCT THE LEVEL LANDING IN THE STREET AREA.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

LEGEND

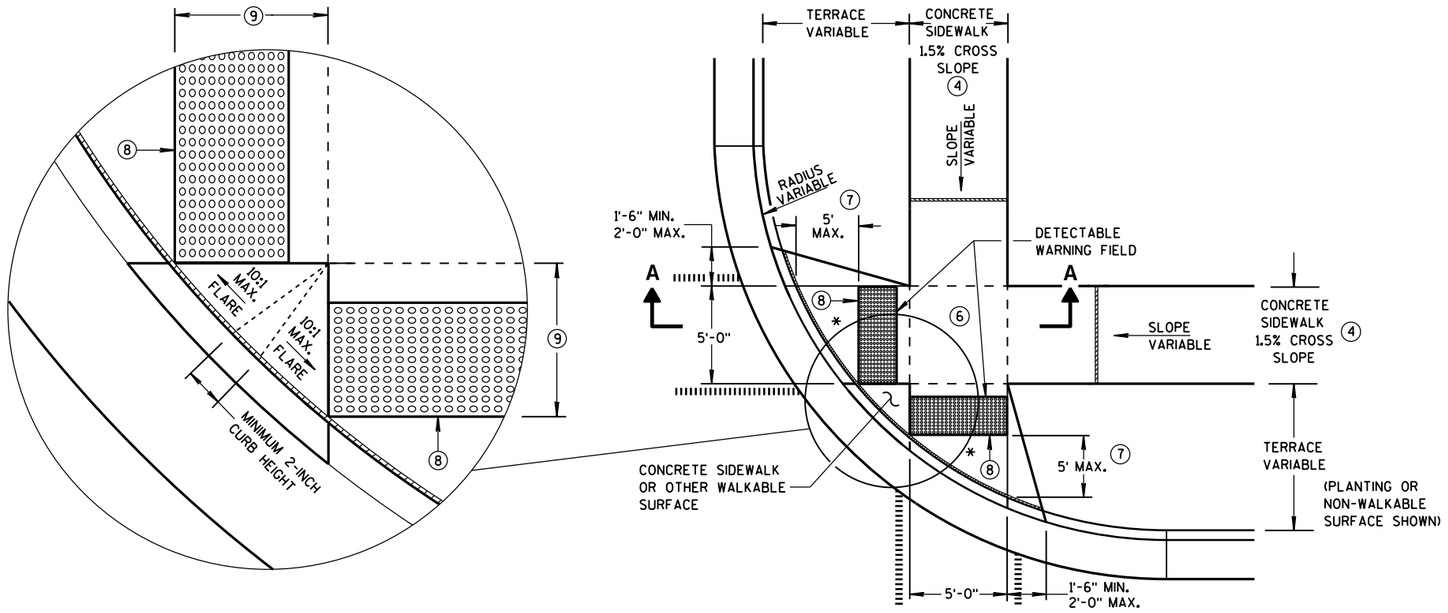
- 1/2" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT

CURB RAMPS TYPES 1 AND 1-A

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

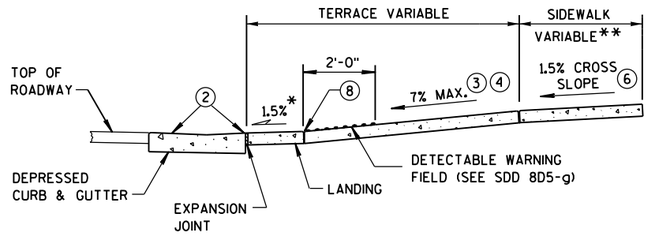
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S.D.D. 8 D 5-19a



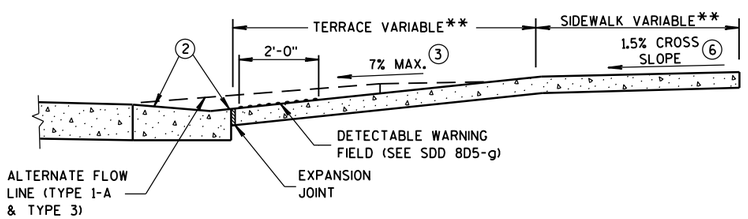
PLAN VIEW
TYPE 2 RAMP
(ON LINE WITH SIDEWALK)

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

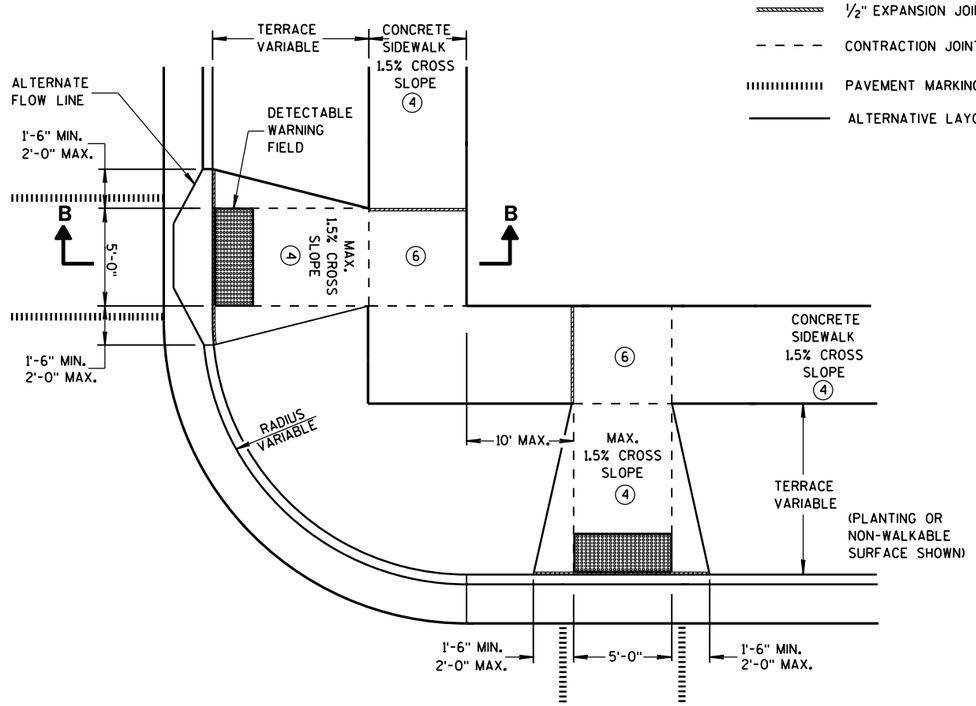


SECTION A-A

** WIDTH SHOWN ELSEWHERE IN THE PLANS



SECTION B-B



PLAN VIEW
TYPE 3 RAMP
(OUTSIDE OF CROSSWALK AREA)

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.

(7) WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

(9) WHEN THIS DISTANCE IS LESS THAN 6'-0", IT MAY BE DIFFICULT TO ACHIEVE A 7% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.

LEGEND

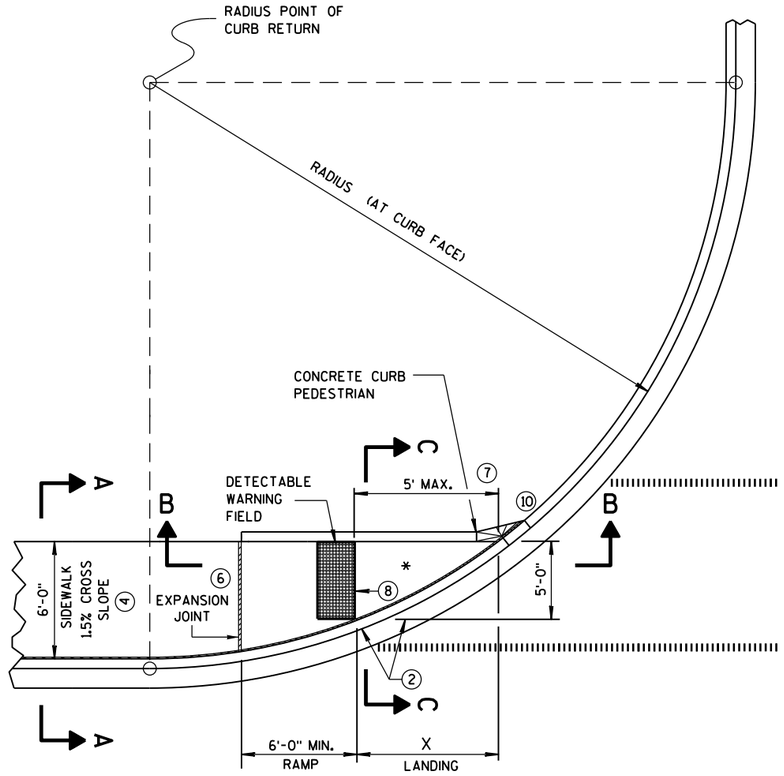
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT

CURB RAMPS TYPES 2 AND 3

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6

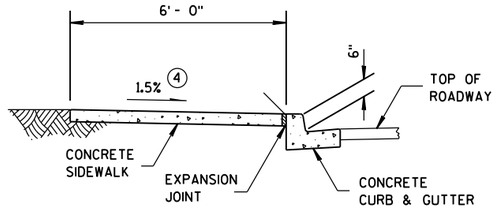
S.D.D. 8 D 5-19b



CURB RAMP TYPE 4A
PLAN VIEW

RADIUS (AT CURB FACE)	X
10 FEET	4'-7"
15 FEET	6'-5½"

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A-A FOR TYPE 4A

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

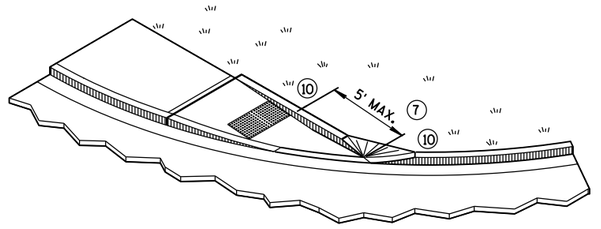
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.

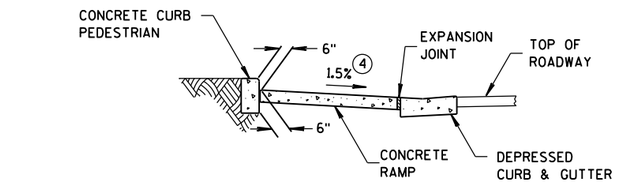
(7) WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

(10) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

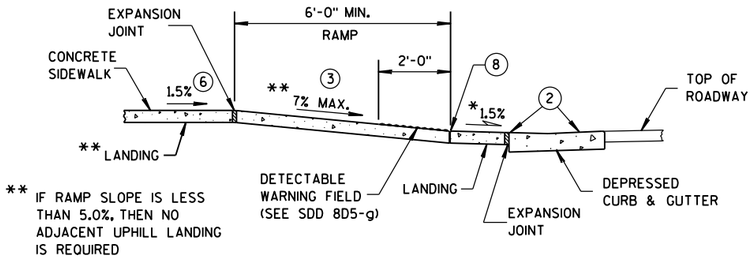


ISOMETRIC VIEW FOR TYPE 4A



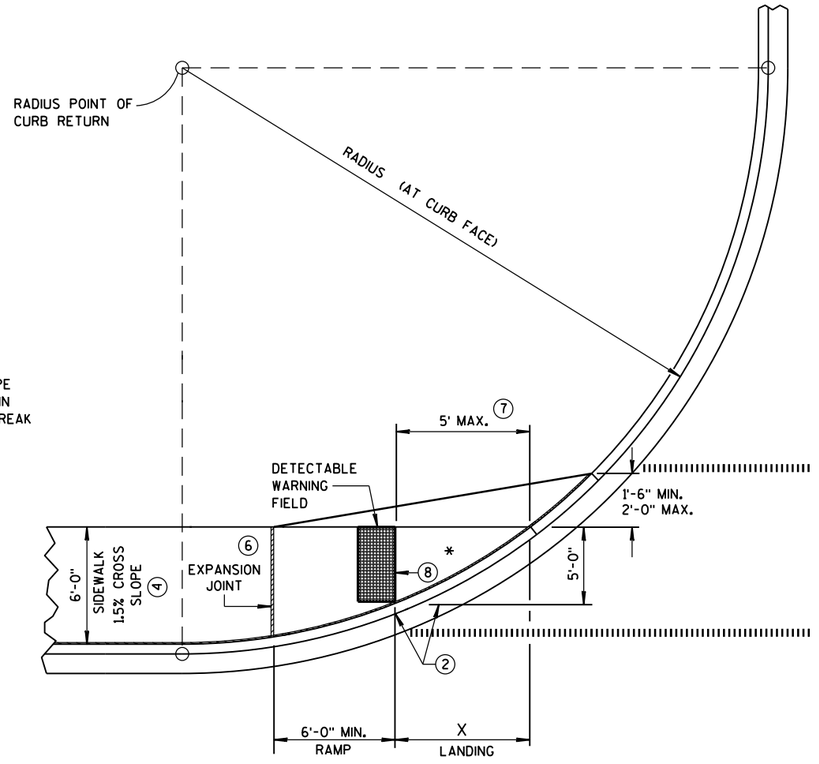
SECTION C-C FOR TYPE 4A

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

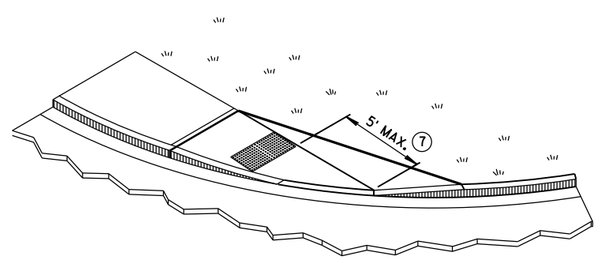


** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

SECTION B-B FOR TYPE 4A



CURB RAMP TYPE 4A1
PLAN VIEW



ISOMETRIC VIEW FOR TYPE 4A1

LEGEND

½" EXPANSION JOINT-SIDEWALK

CONTRACTION JOINT FIELD LOCATED

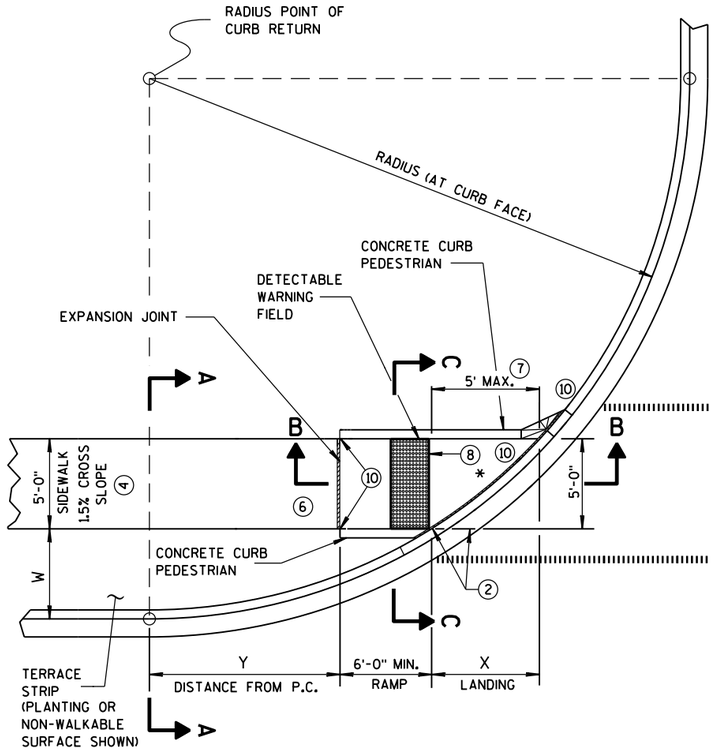
PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPES 4A AND 4A1

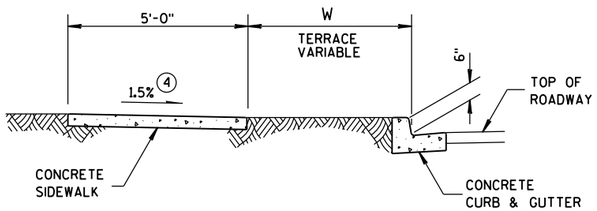
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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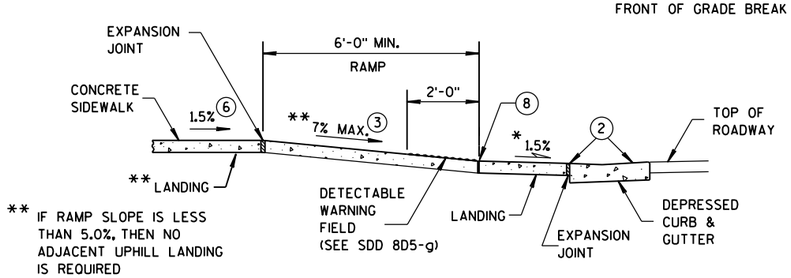
S.D.D. 8 D 5-19c



CURB RAMP TYPE 4B
PLAN VIEW



SECTION A-A FOR TYPE 4B



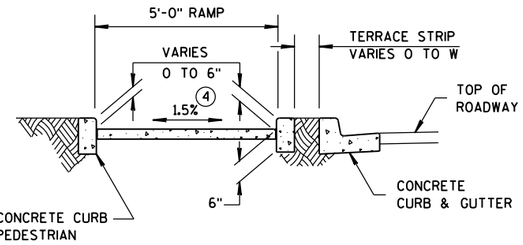
** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

SECTION B-B FOR TYPE 4B

RADIUS (AT CURB FACE)	W = 3'-0"		W = 4'-0"		W = 5'-0"		W = 6'-0"		W = 7'-0"		W = 8'-0"		W = 9'-0"		W = 10'-0"	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
10 FEET	2'-10¼"	0'-5"	2'-1"	1'-4½"	1'-5"	2'-1"	0'-10"	2'-7½"	0'-3¼"	3'-0¼"						
15 FEET	4'-6¾"	2'-1¾"	3'-9"	3'-5¼"	3'-1¼"	4'-6"	2'-6¾"	5'-4½"	2'-1"	6'-1"	1'-8"	6'-8½"	1'-3¼"	7'-2½"	0'-10¾"	7'-7¼"
20 FEET	5'-9¾"	3'-6½"	4'-11½"	5'-1¾"	4'-3¼"	6'-5½"	3'-8¾"	7'-7"	3'-3"	8'-6½"	2'-10"	9'-4½"	2'-5½"	10'-1¼"	2'-1¼"	10'-9"
30 FEET			6'-9¼"	7'-11¼"	6'-0¼"	9'-8"	5'-5"	11'-1¾"	4'-10¾"	12'-5¾"	4'-5½"	13'-7¾"	4'-0¾"	14'-8½"	3'-8½"	15'-8¼"
40 FEET									6'-1¾"	15'-8½"	5'-8"	17'-2"	5'-3"	18'-5¾"	4'-10¾"	19'-8¼"
50 FEET															5'-10¼"	23'-2"

INTERMEDIATE RADII CAN BE INTERPOLATED
DIMENSION "Y" IS CALCULATED BASED ON 6'-0" RAMP LENGTH
DIMENSION "X" IS CALCULATED BASED ON 5'-0" SIDEWALK WIDTH



SECTION C-C FOR TYPE 4B

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

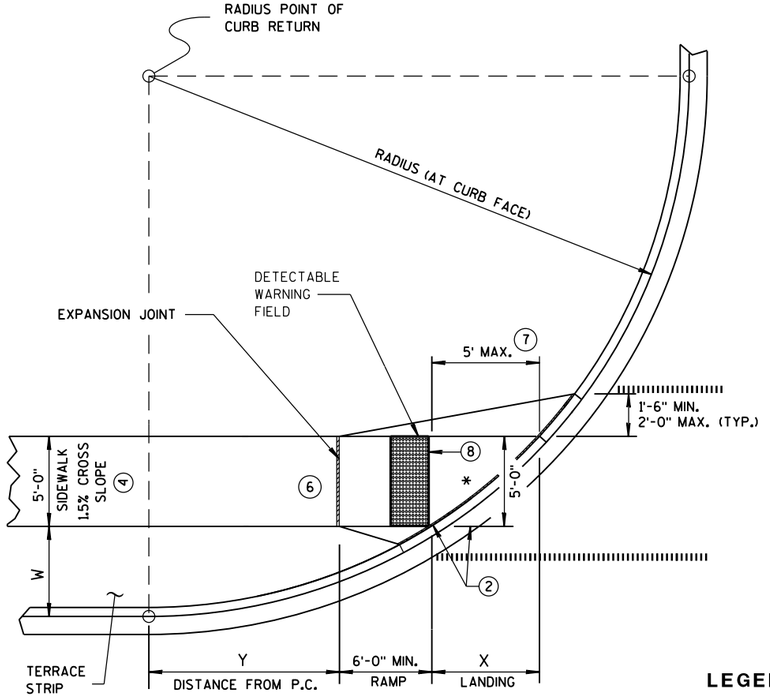
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.

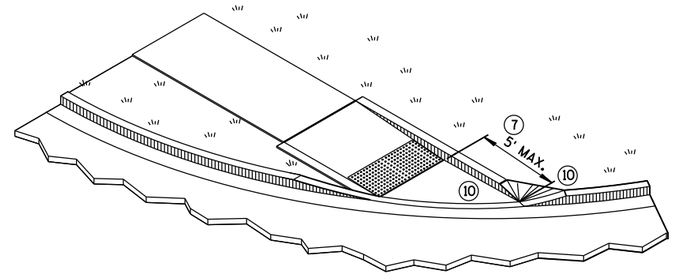
(7) WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

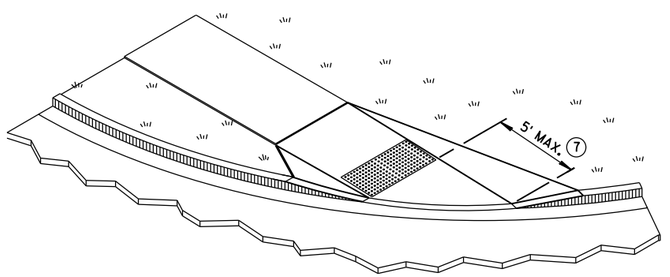
(10) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



CURB RAMP TYPE 4B1
PLAN VIEW



ISOMETRIC VIEW FOR TYPE 4B



ISOMETRIC VIEW FOR TYPE 4B1

LEGEND

½" EXPANSION JOINT-SIDEWALK

CONTRACTION JOINT FIELD LOCATED

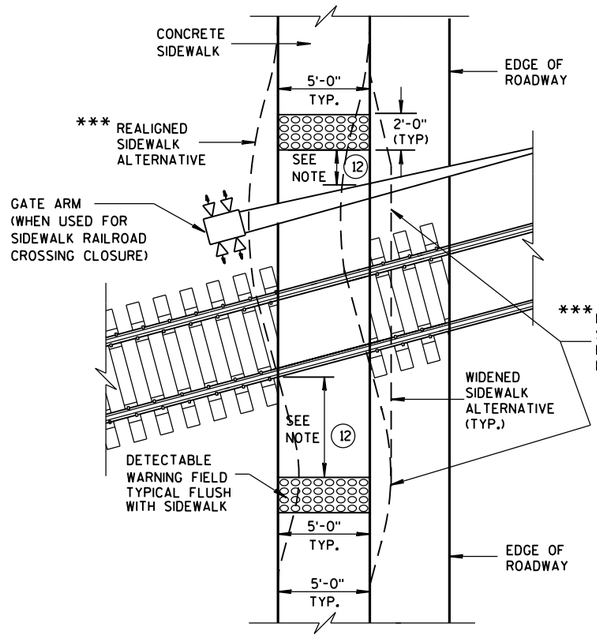
PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS TYPE 4B AND 4B1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

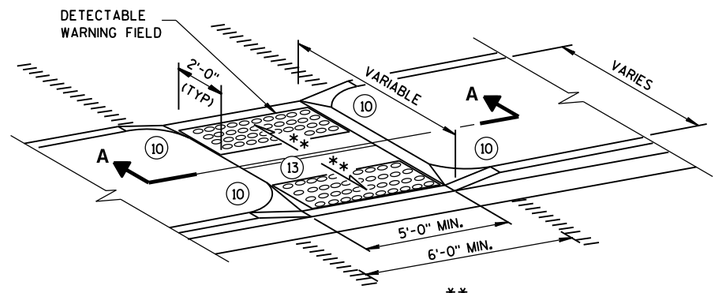
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S.D.D. 8 D 5-19d



TYPE 8
DETECTABLE WARNINGS AT RAILROAD CROSSING

*** DETAILS TO BE DETERMINED BY DESIGNER



** 1% MIN. (PROVIDE DRAINAGE)

MEDIAN ISLAND
NON-ELEVATED PEDESTRIAN CROSSING
TYPE 5

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

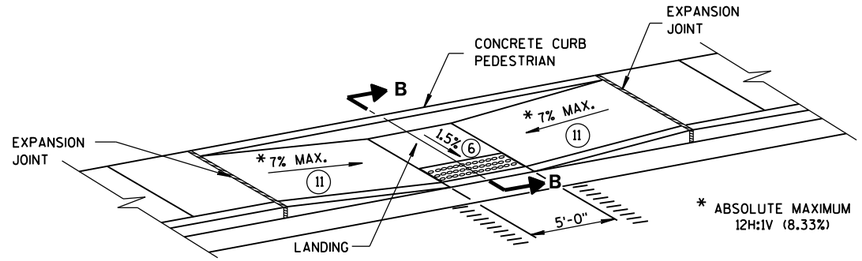
(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.

(10) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

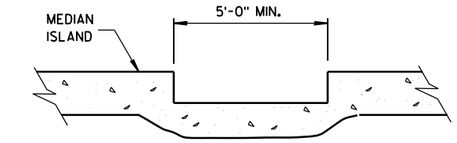
(11) SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.

(12) THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ± 0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD CROSSING SHALL BE 15 FEET FROM THE NEAREST RAIL.

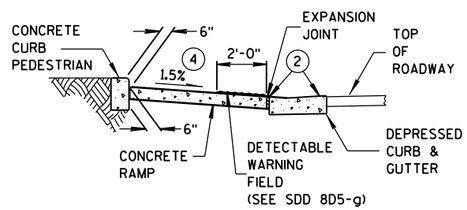
(13) DO NOT INSTALL DETECTABLE WARNING FIELDS AT THE EDGES OF STREET-LEVEL PEDESTRIAN REFUGE ISLANDS IF A MINIMUM 2-FOOT CONCRETE SURFACE WITHOUT DETECTABLE WARNINGS (MEASURED IN THE DIRECTION OF PEDESTRIAN TRAVEL) CANNOT BE ACHIEVED.



MID-BLOCK CROSSING
TYPE 7A

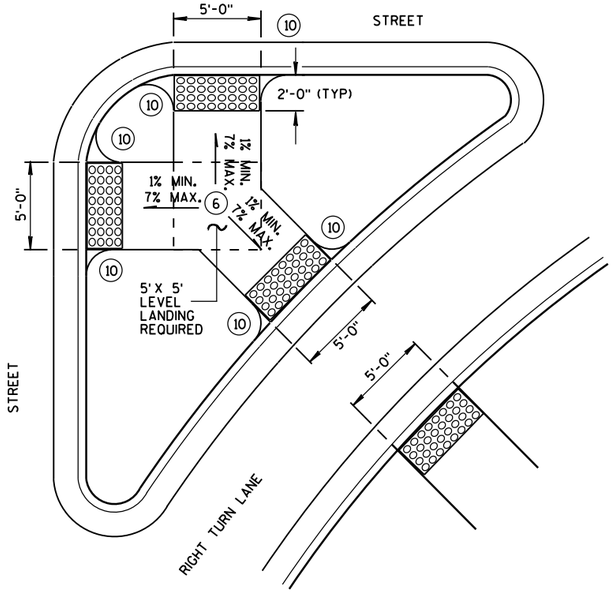


SECTION A-A

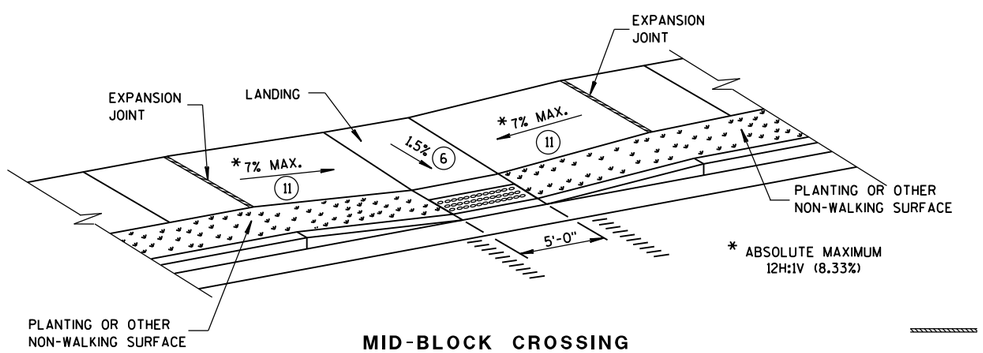


SECTION B-B

REFER TO GENERAL NOTES (2) AND (3) FOR ALL ISLAND CURB RAMPS



TYPE 6
DETECTABLE WARNING AT ISLANDS



MID-BLOCK CROSSING
TYPE 7B

NOTE: THESE PARALLEL AND PARALLEL/PERPENDICULAR CURB RAMPS MAY BE USED AT INTERSECTIONS AND MID BLOCK LOCATIONS.

LEGEND

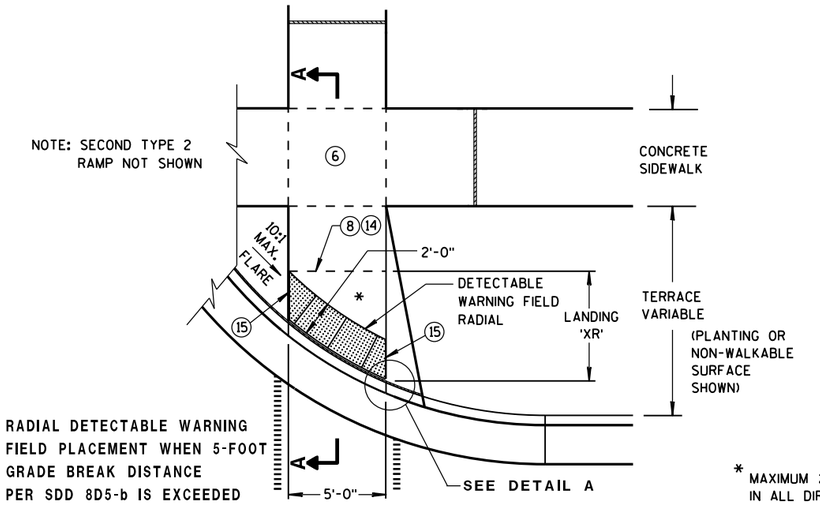
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPES 5, 6, 7A, 7B & 8

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

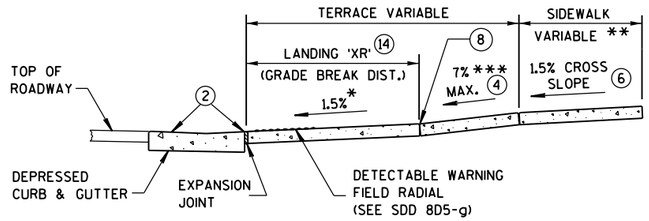
S.D.D. 8 D 5-19e
S.D.D. 8 D 5-19e



TYPE 2 RAMP
PLAN VIEW
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)

(ON LINE WITH SIDEWALK)

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK



** WIDTH SHOWN ELSEWHERE IN THE PLANS

*** ABSOLUTE MAXIMUM 12H:1V (8.33%)

SECTION A-A

LEGEND

- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

DETECTABLE WARNING FIELDS (DWFs) THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

APPLY RADIAL DETECTABLE WARNING PLACEMENT SIMILARLY FOR TYPE 4A AND 4A1 CURB RAMPS AND SIMILARLY FOR TYPE 4B AND 4B1 CURB RAMPS. TYPE 4A AND 4B CURB RAMPS ARE NOT SHOWN.

REFER TO SDD 8D5-g FOR ADDITIONAL RADIAL PLATE REQUIREMENTS.

FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FIELD ARE PROHIBITED.

DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.

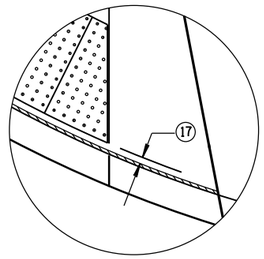
(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

(14) CONSULT ENGINEER IF GRADE BREAK LOCATION (END OF LANDING DIMENSION 'XR') REQUIRES FIELD ADJUSTMENT WHEN ESTABLISHING FINAL RADIAL DETECTABLE WARNING FIELD LOCATION.

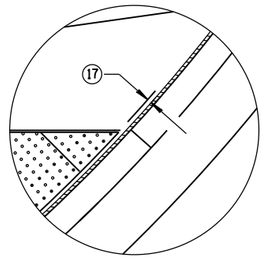
(15) FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN 1/8" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.

(16) USE 1'X 2' RECTANGULAR END PLATE AT END OF TYPE 4A1 RAMP AND PROVIDE MINIMUM 2'-0" DETECTABLE WARNING FIELD COVERAGE (IN DIRECTION OF PEDESTRIAN TRAVEL) ALONG THE ENTIRE CURB RAMP WIDTH.

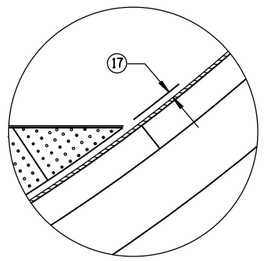
(17) A MAXIMUM 3-INCH CONCRETE BORDER WIDTH IS ALLOWABLE IN FRONT OF RADIAL DETECTABLE WARNING FIELD FOR CONSTRUCTABILITY PURPOSES. CONCRETE BORDER WIDTH MAY VARY UP TO 1 INCH.



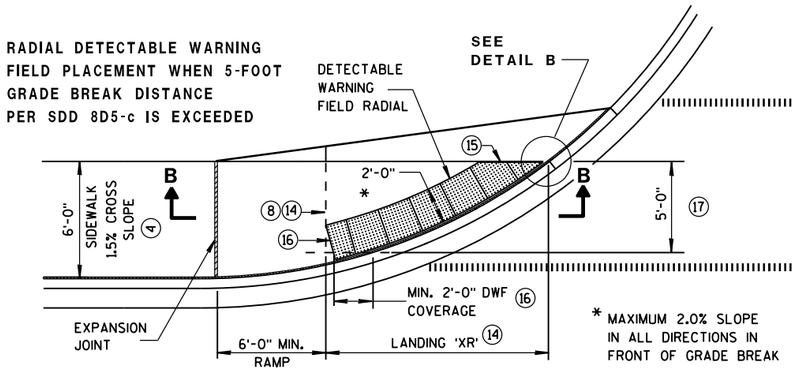
DETAIL A



DETAIL C

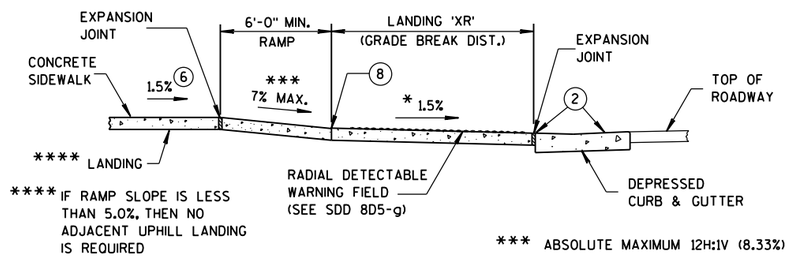


DETAIL B



* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

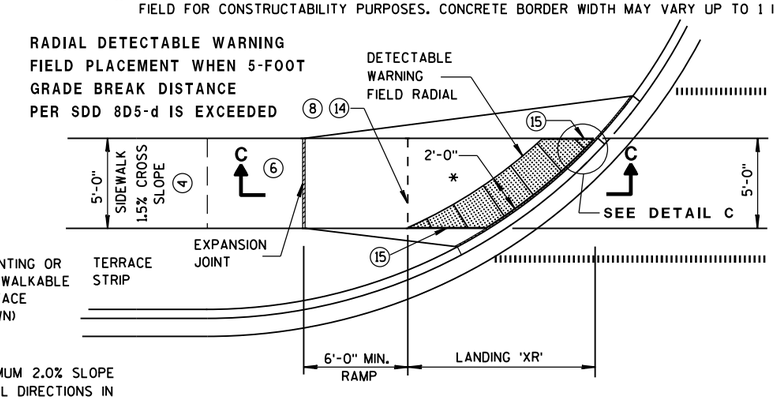
CURB RAMP TYPE 4A1
PLAN VIEW
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)



**** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

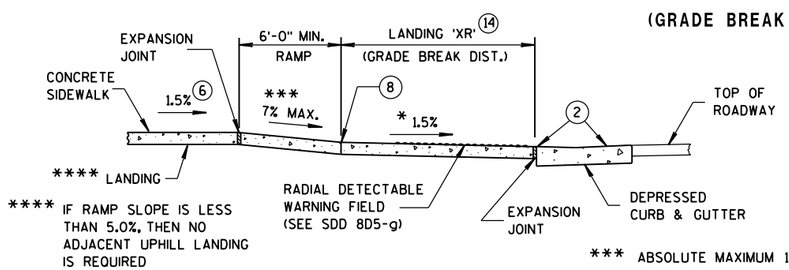
*** ABSOLUTE MAXIMUM 12H:1V (8.33%)

SECTION B-B FOR TYPE 4A1



* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

CURB RAMP TYPE 4B1
PLAN VIEW
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)



**** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

*** ABSOLUTE MAXIMUM 12H:1V (8.33%)

SECTION C-C FOR TYPE 4B1

CURB RAMPS
RADIAL DETECTABLE WARNING FIELD APPLICATIONS

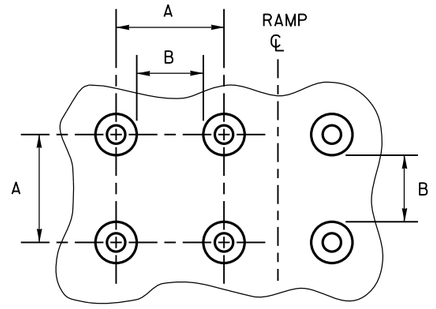
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

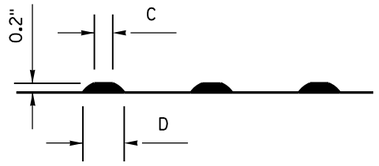
S.D.D. 8 D 5-19f

	MIN.	MAX.
A	1.6"	2.4"
B	0.65"	1.5"
C	*	*
D	0.9"	1.4"

* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.



PLAN VIEW



ELEVATION VIEW

TRUNCATED DOMES

DETECTABLE WARNING PATTERN DETAIL

GENERAL NOTES

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

PLACE ALL DETECTABLE WARNING FIELD SYSTEMS IN ACCORDANCE TO THE MANUFACTURER'S RECOMMENDATION.

FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FIELD ARE PROHIBITED.

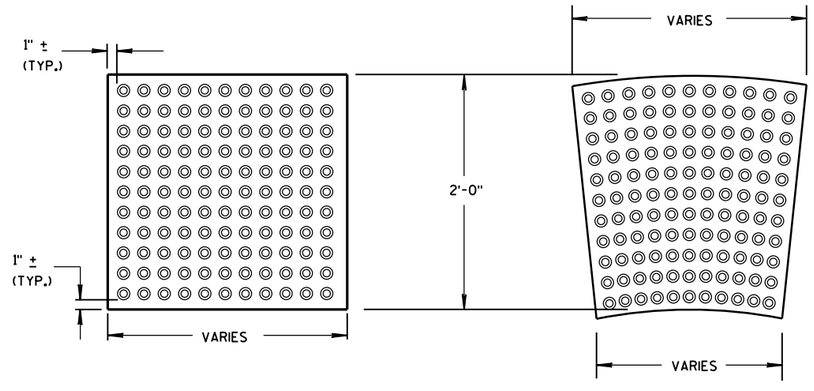
DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

FOR RADIAL DETECTABLE WARNING FIELD APPLICATIONS WHERE STANDARD RADIAL PLATES ARE NOT AVAILABLE AT AN INTERSECTION CURB RADIUS, A COMBINATION OF SQUARE OR RECTANGULAR PLATES AND RADIAL PLATES MAY BE USED TO FORM RADIAL CONFIGURATION. RADIAL WEDGES IN COMBINATION WITH SQUARE PANELS ARE ALSO ACCEPTABLE. FOLLOW MANUFACTURER'S RECOMMENDATIONS.

REFER TO CONTRACT AND STANDARD SPECIFICATIONS FOR FIELD CUTTING REQUIREMENTS.

DO NOT EMBED IN CONCRETE ANY FIELD-CUT PLATES WITH CUT EDGES SHORTER THAN 6 INCHES. CONSULT WITH MANUFACTURER FOR RE-DRILLING AND ANCHORING REQUIREMENTS OF FIELD-CUT PLATES.

⑮ FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN 1/8" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.

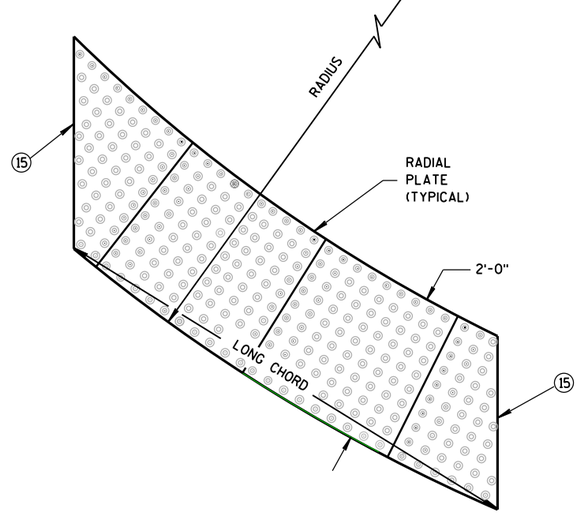


RECTANGULAR PLATES

RADIAL PLATES

DETECTABLE WARNING FIELDS (TYPICAL)

PLAN VIEW



RADIAL DETECTABLE WARNING FIELD ATTRIBUTES

CURB RAMPS
RECTANGULAR AND RADIAL
DETECTABLE WARNING PLATES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

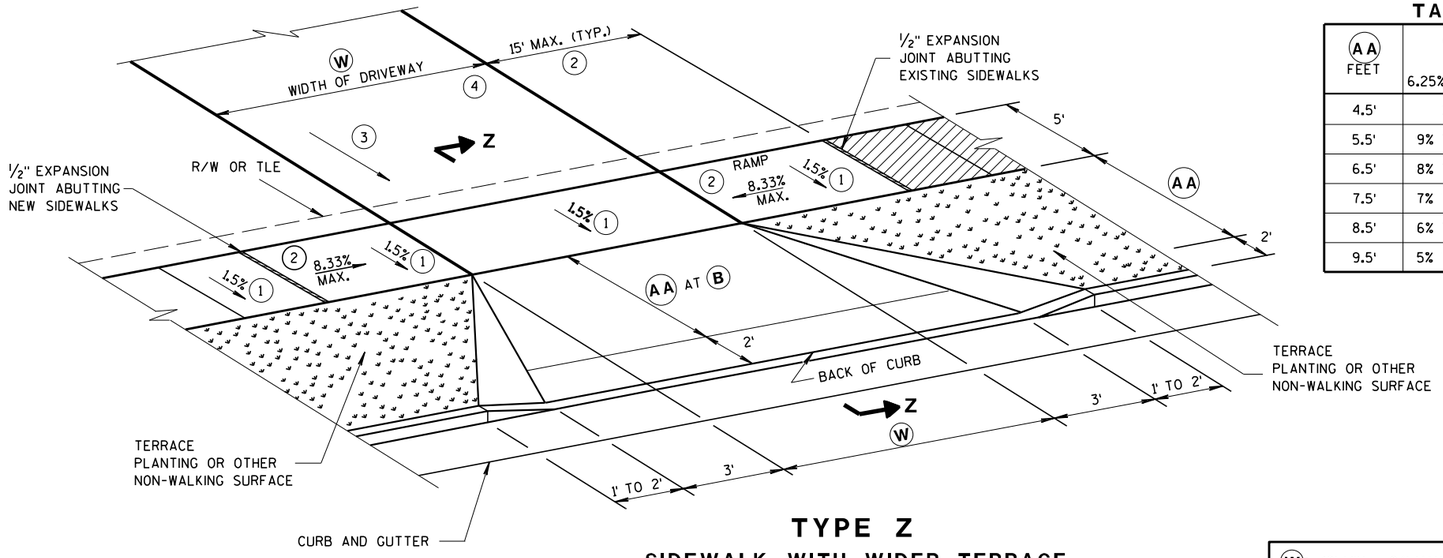
APPROVED
June, 2017 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS UNIT SUPERV
ENT
FHWA

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S.D.D. 8 D 5-19g

6

S.D.D. 8 D 5-19g



TYPE Z

SIDEWALK WITH WIDER TERRACE

TERRACE VARIES 7 TO 12 FEET

TABLE Z

(AA) FEET	(B) % 6.25% GUTTER	(B) % 4% GUTTER
4.5'	11.5%	9% TO 11.5%
5.5'	9% TO 11.5%	8% TO 11.5%
6.5'	8% TO 11.5%	6% TO 11.5%
7.5'	7% TO 11.5%	6% TO 11.5%
8.5'	6% TO 11.5%	5% TO 11.5%
9.5'	5% TO 11.5%	4% TO 11.5%

(W): 12' MIN. - 24' MAX. RESIDENTIAL AND NON-COMMERCIAL (PE & FE)

16' MIN. - 35' MAX. COMMERCIAL (CE)

GENERAL NOTES

PROVIDE CONSTRUCTION JOINTS ALONG THE CENTER OF THE CONCRETE FOR DRIVEWAYS UNDER 20 FEET IN WIDTH AND AT THE THIRD POINTS OVER 20 FEET IN WIDTH.

(W) IS SHOWN ON PLAN AND PROFILE SHEETS.

OFFSETS, ELEVATIONS, AND PERCENT GRADE ARE SHOWN ON THE CROSS SECTIONS.

(1) CONSTRUCTION TOLERANCE OF 0.5% ± FOR SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

(2) THE SIDEWALK RAMP MAXIMUM RUNNING SLOPE SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15 FEET TO AVOID CHASING THE SLOPE INDEFINITELY WHEN CONNECTING TO STEEP GRADES. WHEN APPLYING THE 15 FOOT MAXIMUM LENGTH, THE RUNNING SLOPE OF THE SIDEWALK SHALL BE AS FLAT AS FEASIBLE AND NOT EXCEED THE LONGITUDINAL GRADE OF THE ROADWAY.

(3) DRIVEWAY SLOPES: DESIRABLE MAXIMUM

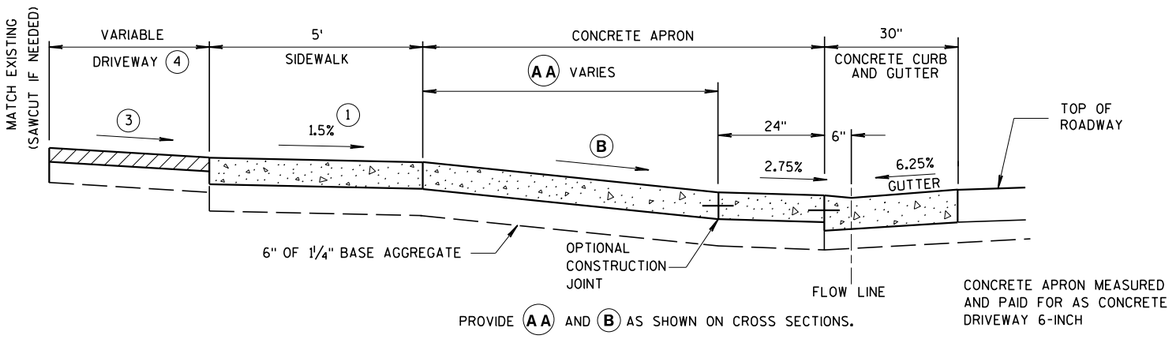
10.5% UP AWAY FROM SIDEWALK (SAG)

8.5% DOWN AWAY FROM SIDEWALK (CREST)

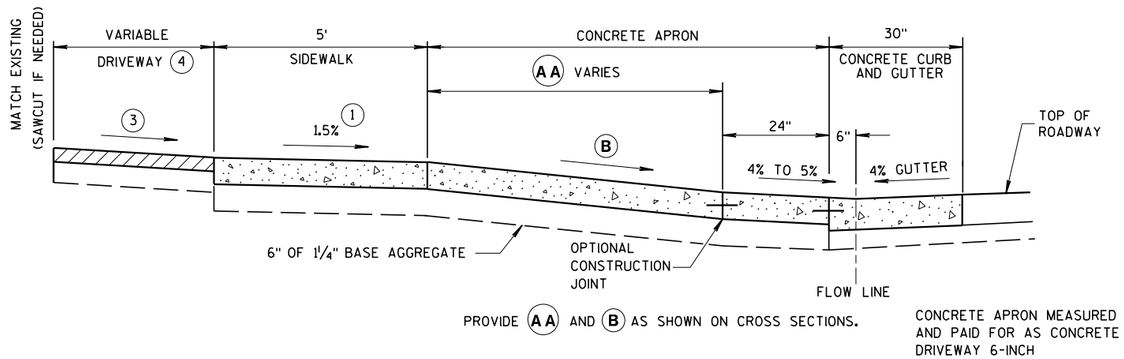
ABSOLUTE MAXIMUM 15% FOR BOTH CREST AND SAG

(4) DRIVEWAY TYPES

- 6-INCH CONCRETE DRIVEWAY PAVEMENT OVER 6-INCH BASE AGGREGATE
- 2-INCH TO 3-INCH ASPHALTIC SURFACE OVER 6-INCH BASE AGGREGATE
- 6-INCH BASE AGGREGATE (MAY BE INCREASED FOR CLAY SUBGRADES)



6.25% GUTTER SLOPE



4% GUTTER SLOPE

NOTE: SIDEWALK MAY BE DEPRESSED IN DRIVEWAY AREAS FOR **B** VALUES NOT SHOWN IN TABLE Z.

SIDEWALK WITHIN THE LIMITS OF THE DRIVEWAY PAID FOR AS CONCRETE DRIVEWAY 6-INCH.

SEPARATE PAYMENT FOR BASE AGGREGATE WILL BE MADE.

SECTION Z-Z

DRIVEWAY DETAIL WITH CONCRETE CURB & GUTTER

(URBAN AND SUBURBAN)

NOT TO SCALE

DRIVEWAY AND SIDEWALK RAMPS TYPE Z

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

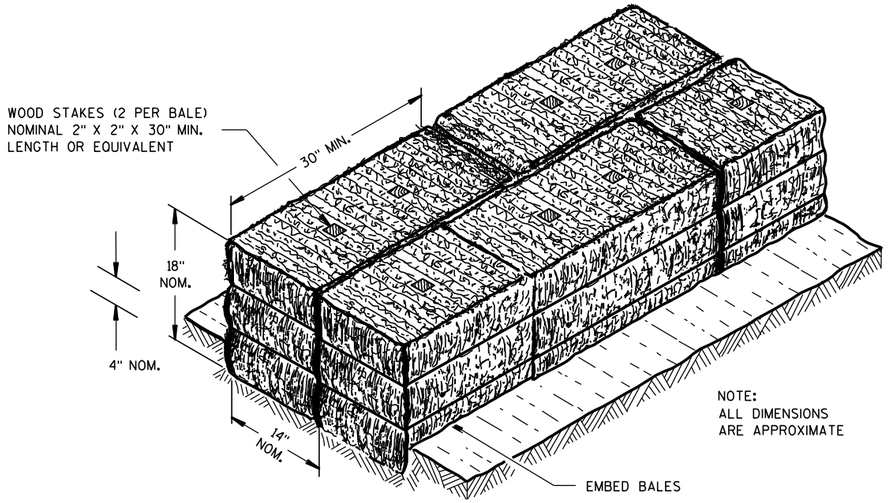
APPROVED
March 2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA

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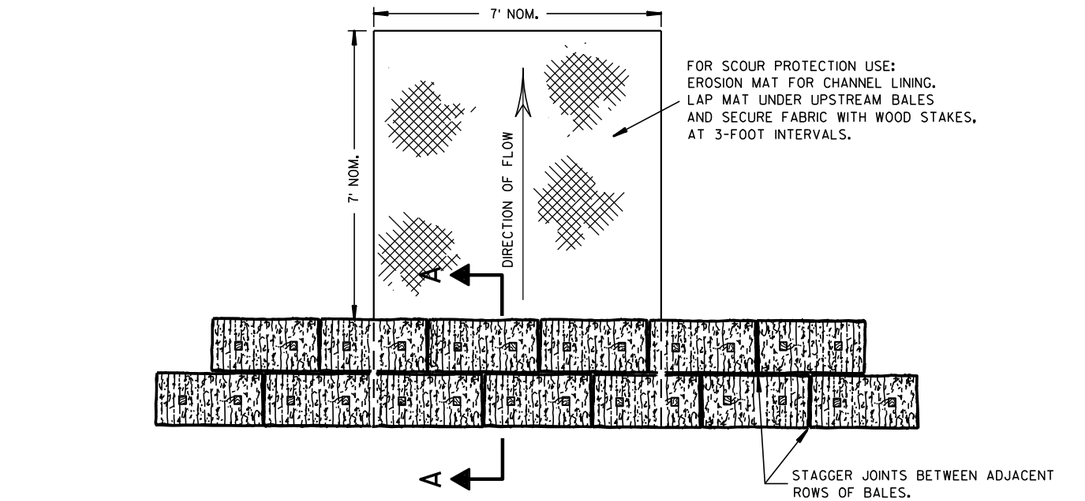
S.D.D. 8 D 19-2

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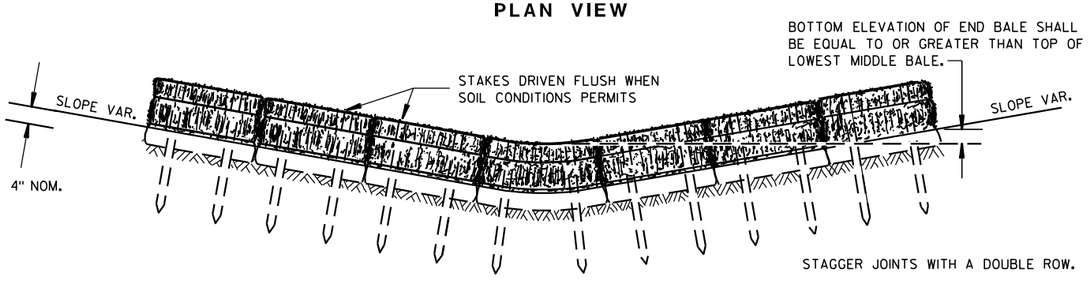
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SECTION A-A



PLAN VIEW



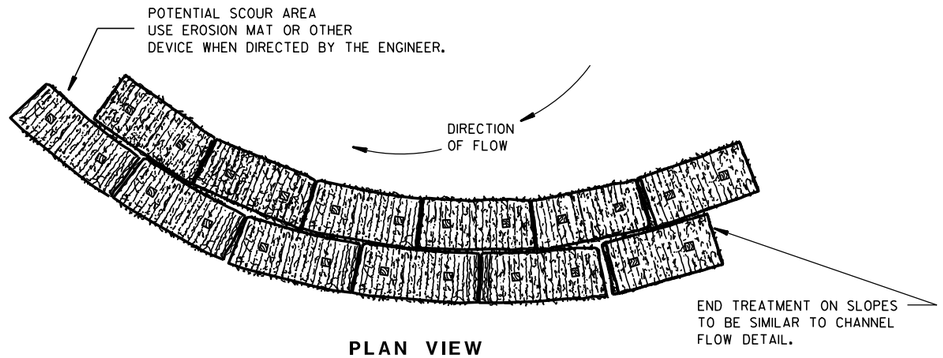
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

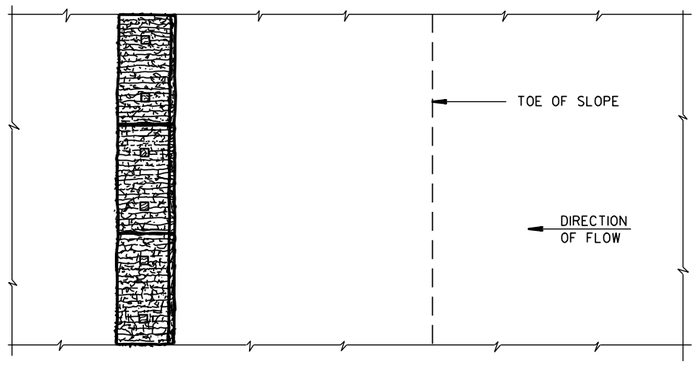
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

(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.

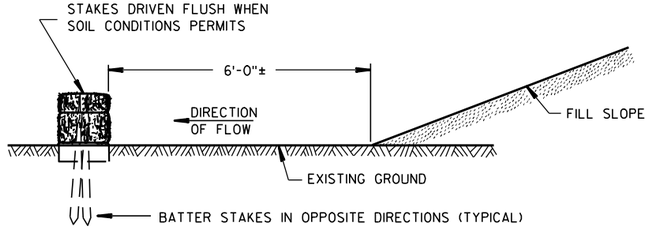


PLAN VIEW

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

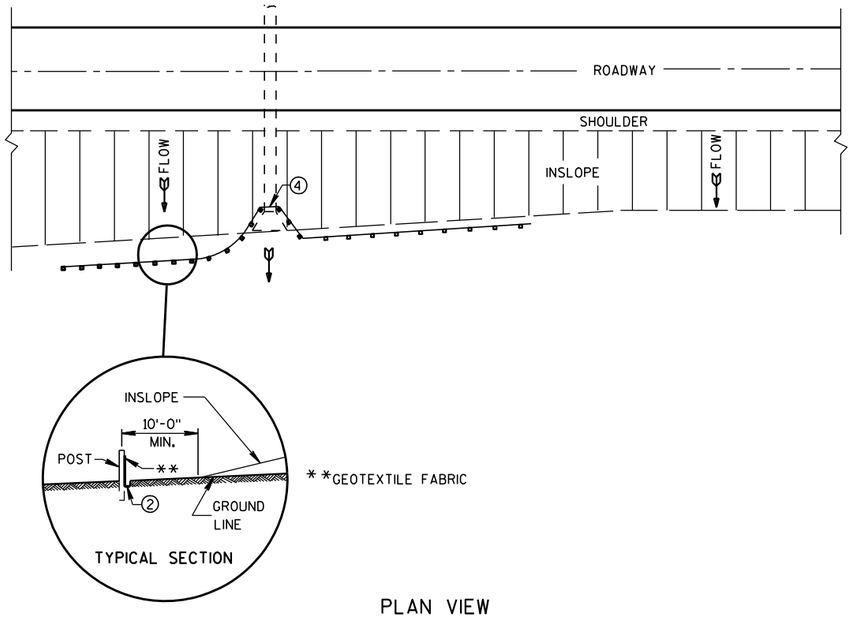
APPROVED
6/04/02 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 E 8-3

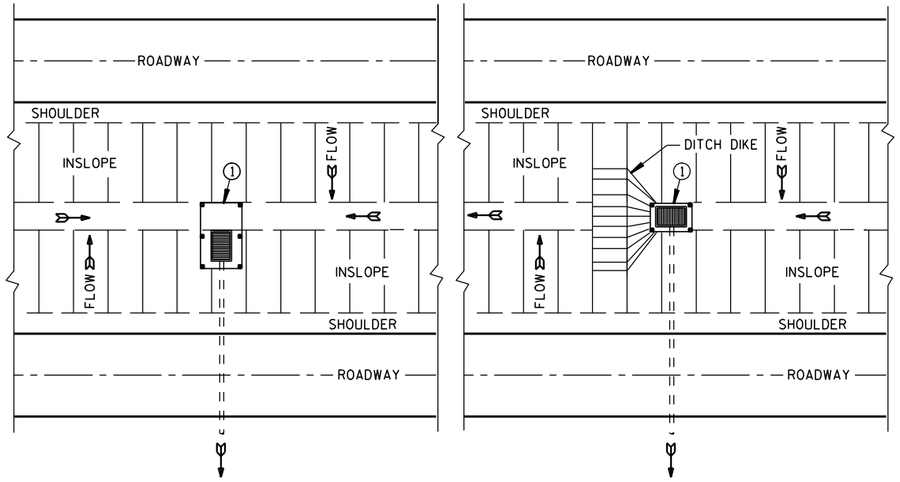
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S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

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

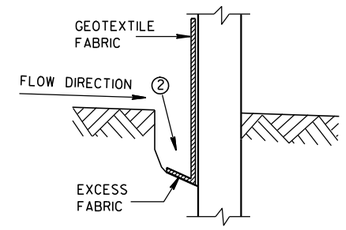
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.

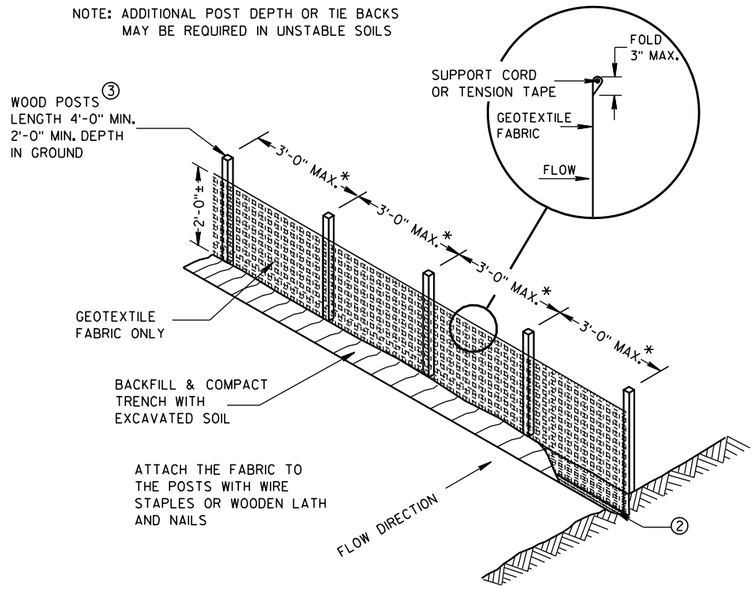
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.

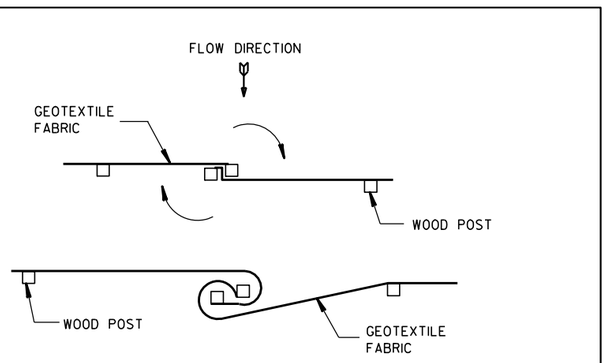
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



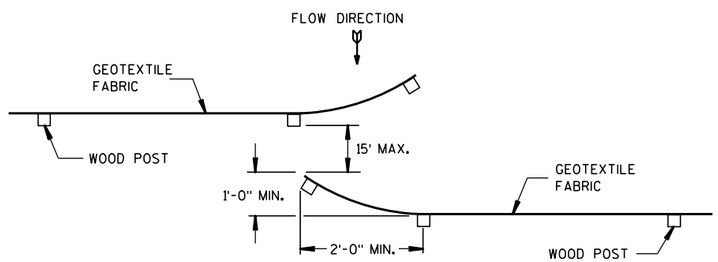
TRENCH DETAIL



SILT FENCE

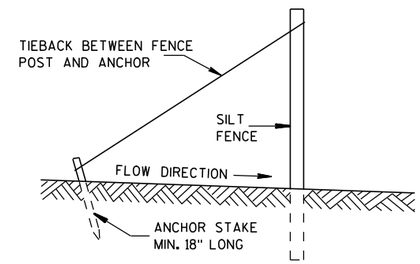


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

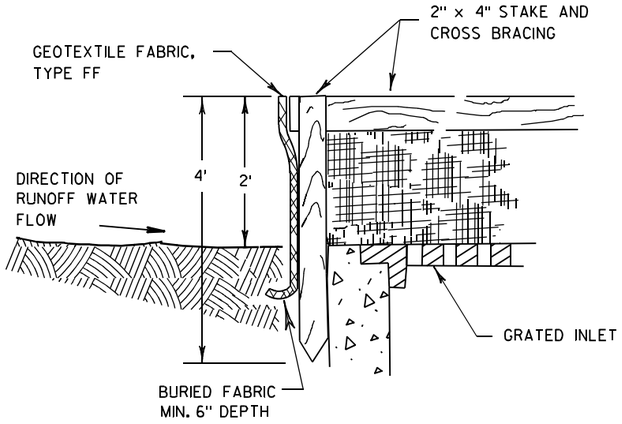
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

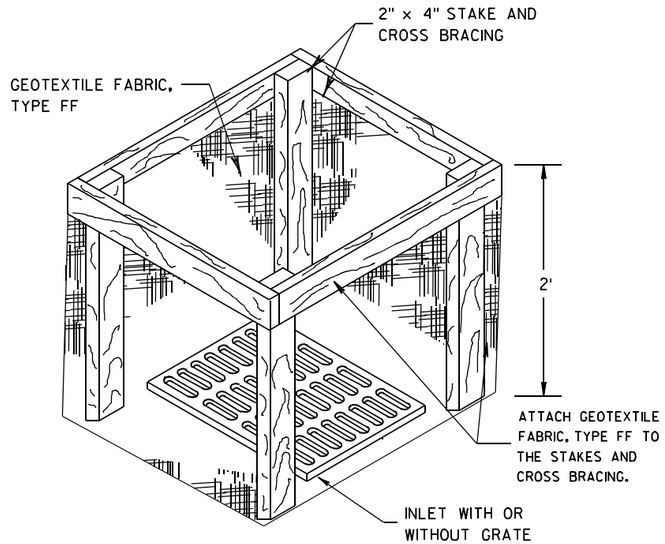
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S.D.D. 8 E 9-6

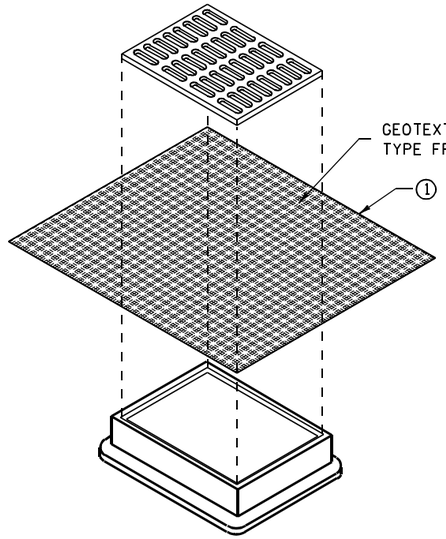
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S.D.D. 8 E 9-6



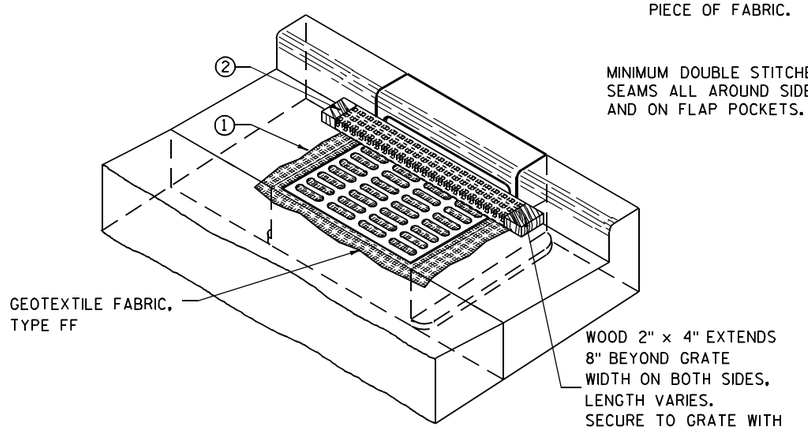


INLET PROTECTION, TYPE A

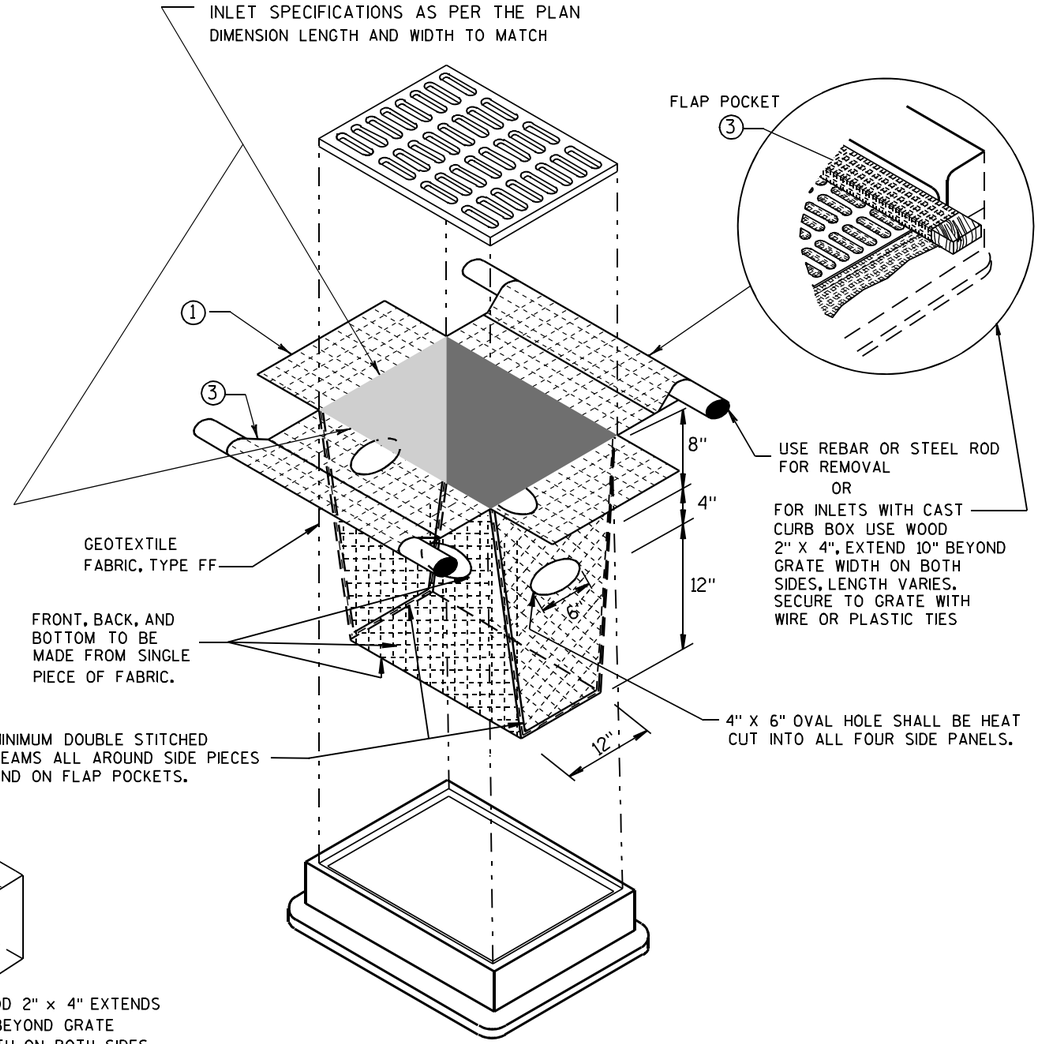


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

(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

METAL APRON ENDWALLS

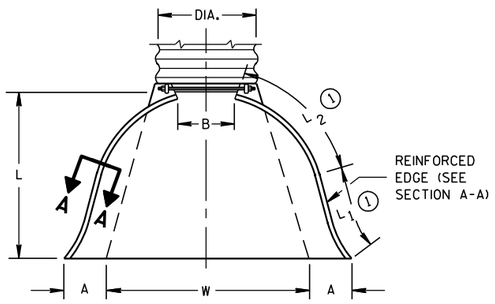
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4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

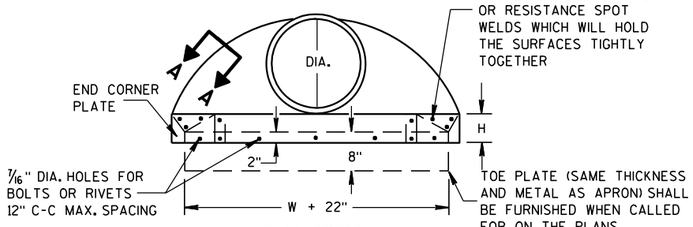
REINFORCED CONCRETE APRON ENDWALLS

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

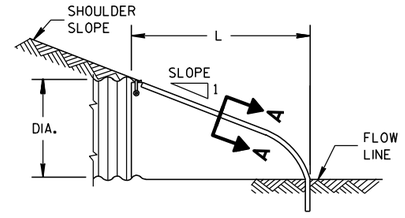
*MINIMUM
**MAXIMUM



PLAN VIEW

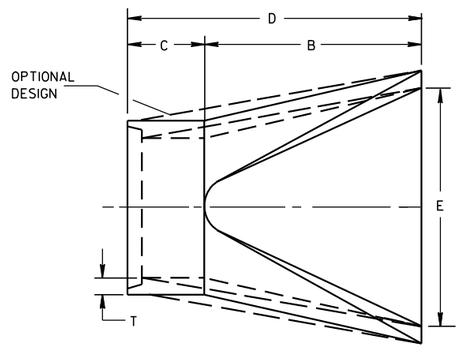


END VIEW

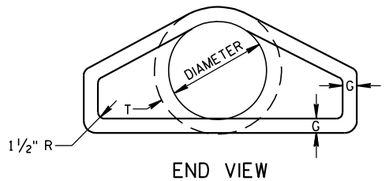


SIDE ELEVATION

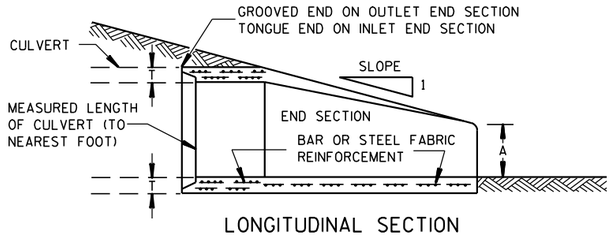
METAL ENDWALLS



PLAN

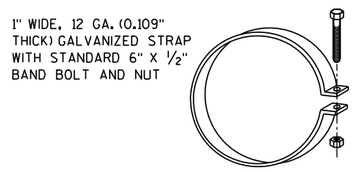


END VIEW



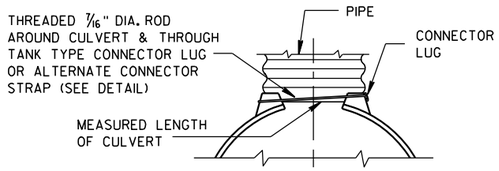
LONGITUDINAL SECTION

CONCRETE ENDWALLS

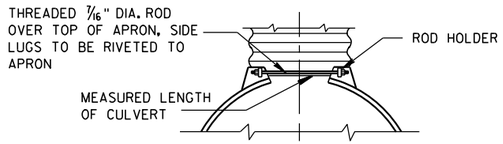


ALTERNATE FOR TYPE 1 CONNECTION

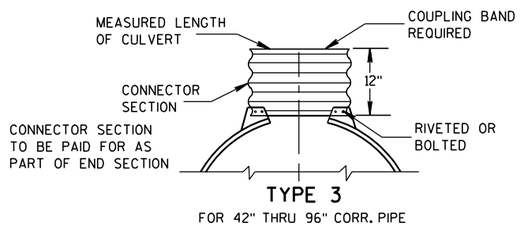
END SECTION CONNECTOR STRAP



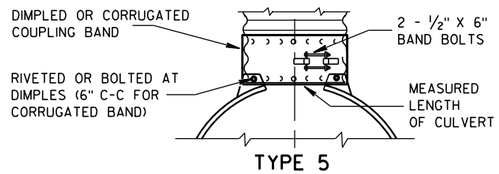
TYPE 1
FOR 12" THRU 24" CORR. PIPE



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

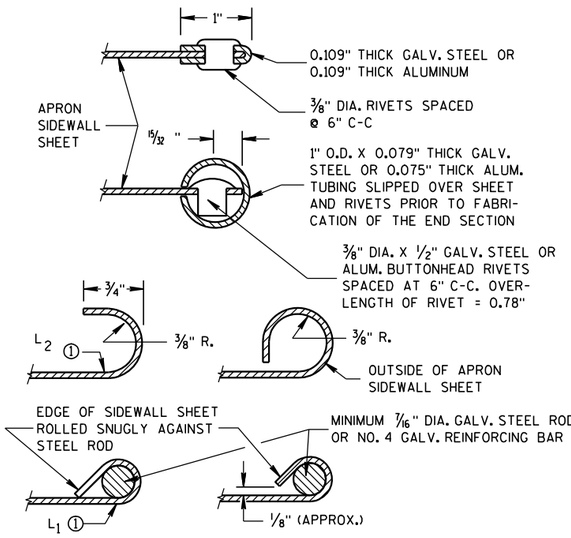
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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.

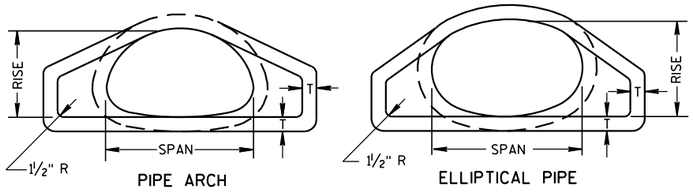
APRON ENDWALLS FOR CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

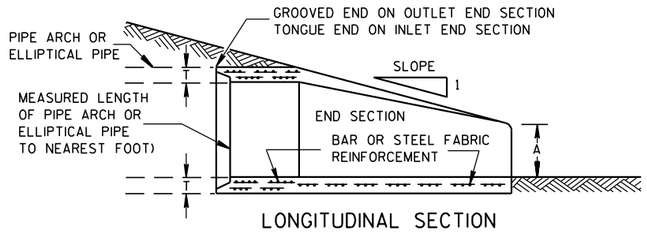
APPROVED
11/30/94 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

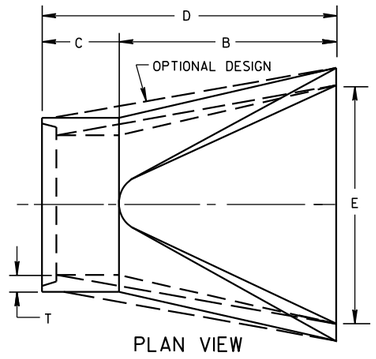
S.D.D. 8 F 1-11



END VIEW

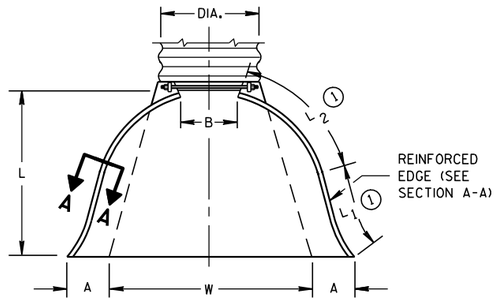


LONGITUDINAL SECTION

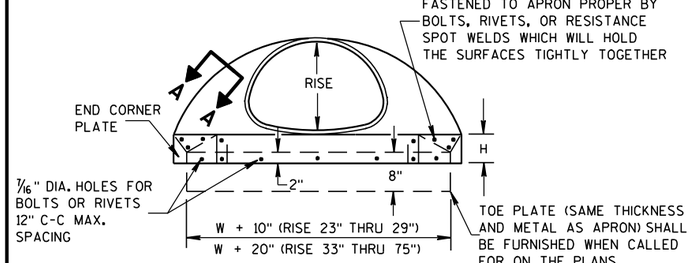


PLAN VIEW

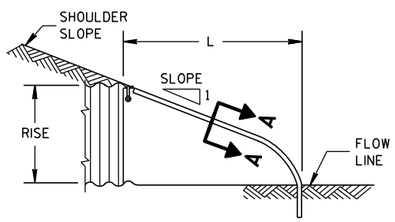
CONCRETE ENDWALLS



PLAN VIEW

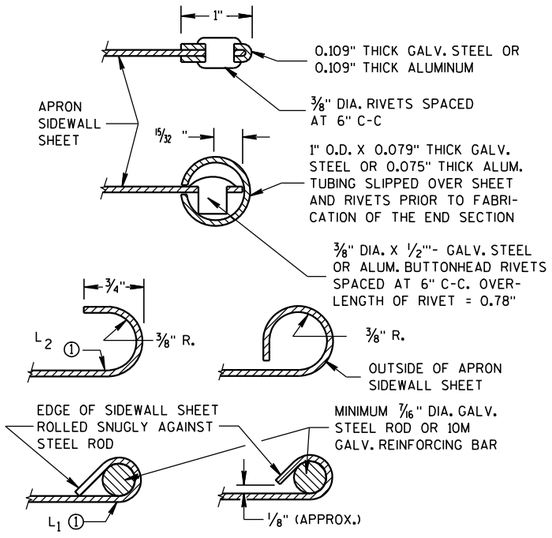


END VIEW



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

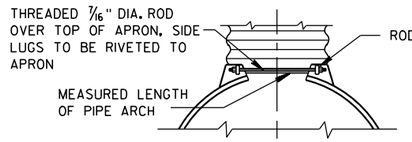
REINFORCED CONCRETE PIPE ARCH

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

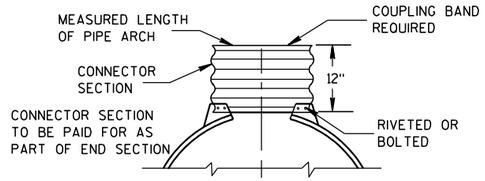
EQUIV. DIA. (Inches)	DIMENSIONS (Inches) ** SPAN	** RISE	T	A	B	C	D	E	APPROX. SLOPE
24	30	19	3¼	8½	39	33	72	48	3 to 1
30	38	24	3¾	9½	54	18	72	60	3 to 1
36	45	29	4½	11⅛	60	24	84	72	2½ to 1
42	53	34	5	15¾	60	36	96	78	2½ to 1
48	60	38	5½	21	60	36	96	84	2½ to 1
54	68	43	6	25½	60	36	96	90	2½ to 1
60	76	48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

**NOMINAL SIZE



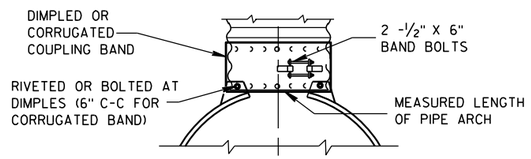
TYPE 2

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

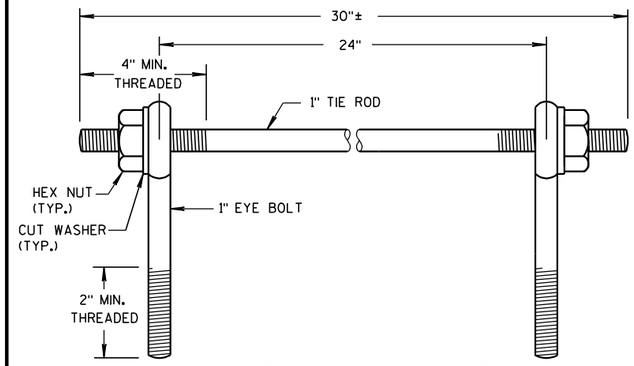
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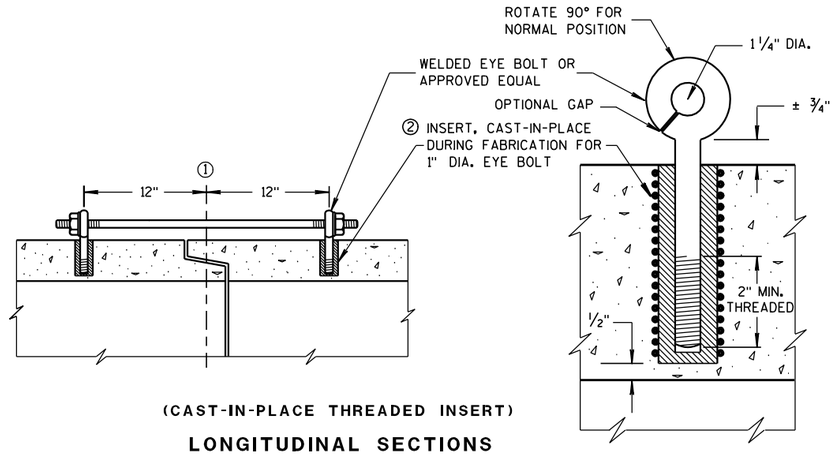
S.D.D. 8 F 2-1

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S.D.D. 8 F 2-1



EYE BOLTS AND TIE ROD



(CAST-IN-PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

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

GENERAL NOTES

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

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

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

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

① ℄ OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.

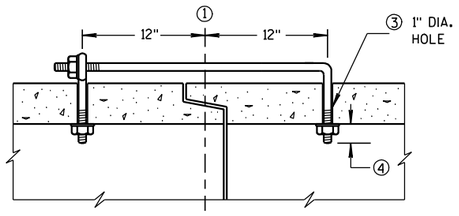
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

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

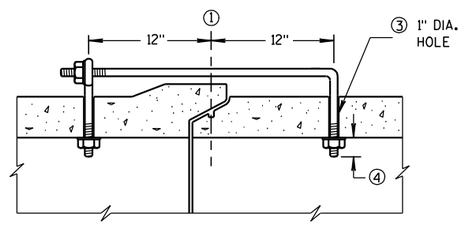
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

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)

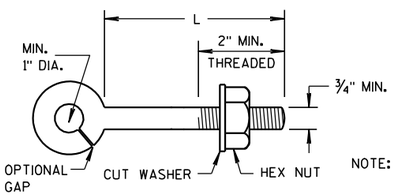


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

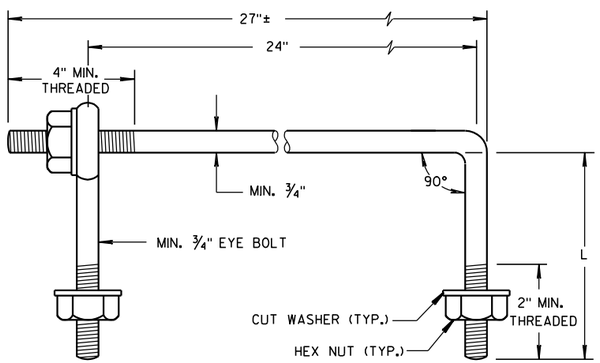
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



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

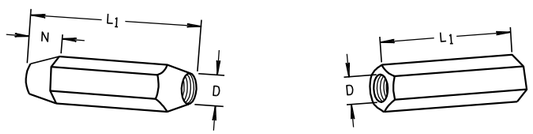
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

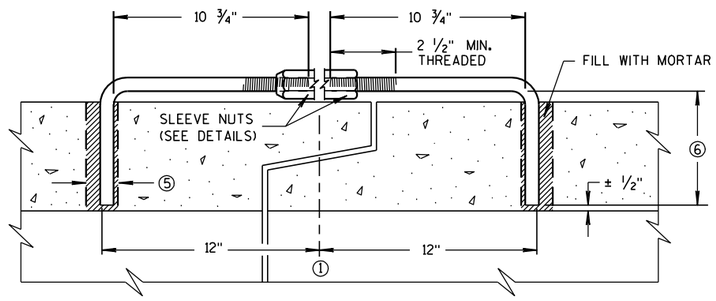
DIMENSIONS SHOWN ARE IN INCHES



TAPERED PLAIN

RIGHT AND LEFT THREADS

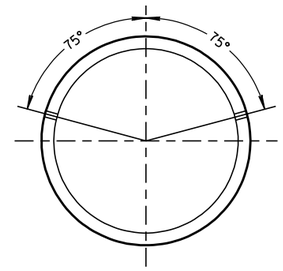
SLEEVE NUTS



LONGITUDINAL SECTION

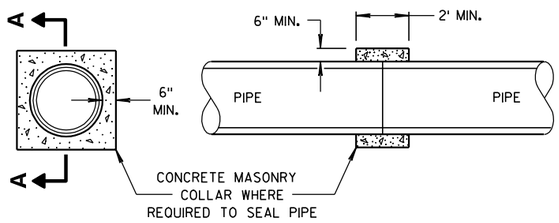
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

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

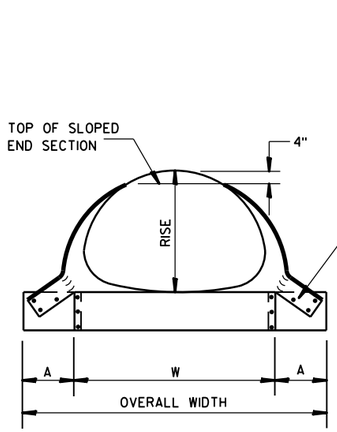
JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

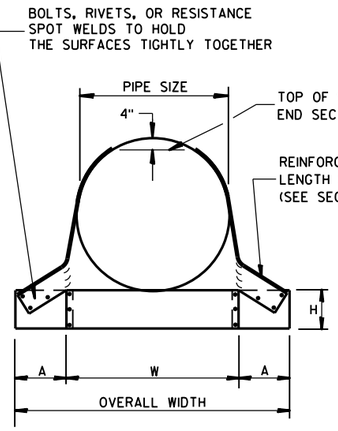
APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
144
FHWA

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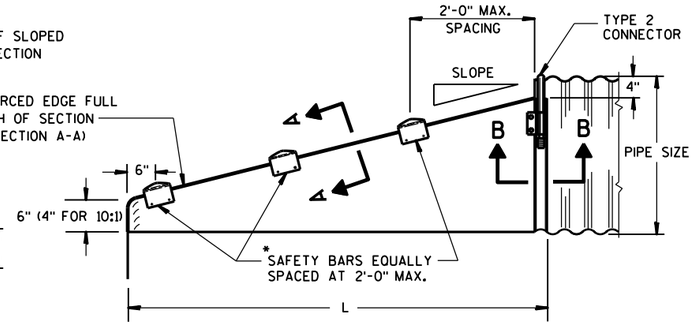
S.D.D. 8 F 4-7



FRONT VIEW



FRONT VIEW



SIDE VIEW

GENERAL NOTES

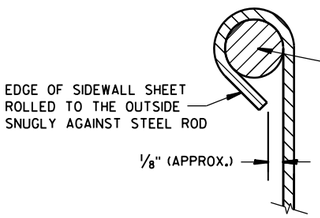
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

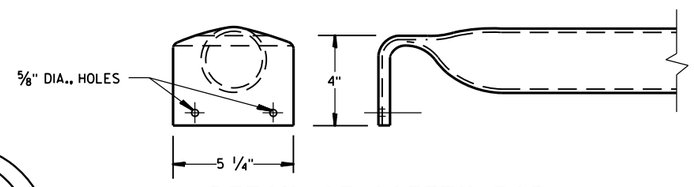
PIPE DIA. (IN.)	MIN. THICK. (Inches)	DIMENSIONS (Inches)				L DIMENSIONS					
		A	H	W	OVERALL WIDTH	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES
15	.064	8	6	21	37	4:1	20	6:1	30	10:1	70
18	.064	8	6	24	40	4:1	32	6:1	48	10:1	100
21	.064	8	6	27	43	4:1	44	6:1	66	10:1	130
24	.064	8	6	30	46	4:1	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.

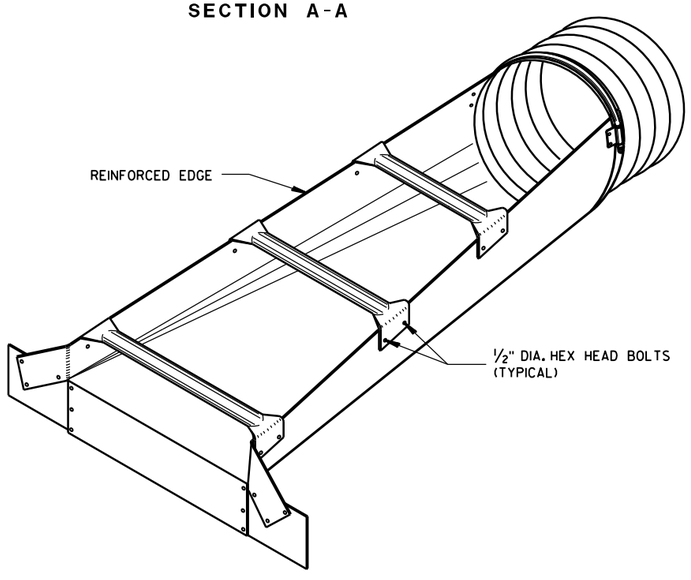


DETAIL OF SAFETY BAR

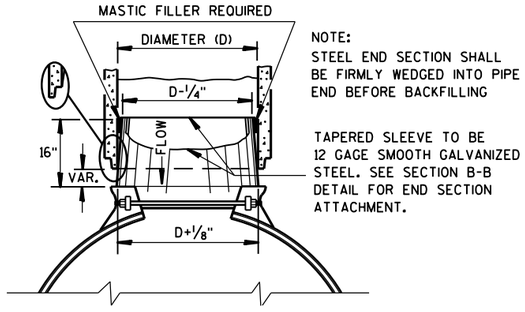
STEEL APRON ENDWALLS FOR PIPE ARCH
SLOPED SIDE DRAINS

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	——	——

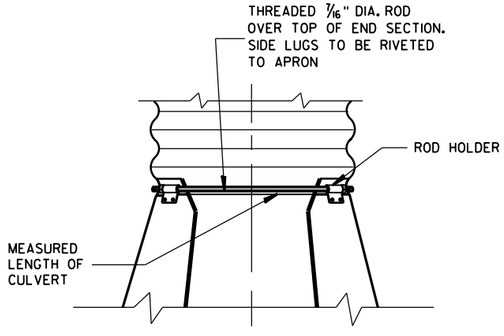
① * MINIMUM THICKNESS OF ALL 10:1 SLOPED SIDE DRAINS IS 0.109".
② ACTUAL SLOPE GREATER THAN 10:1.



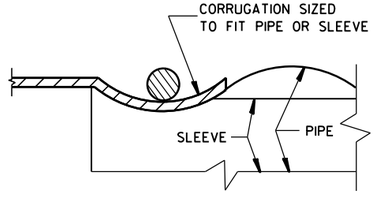
ISOMETRIC VIEW



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

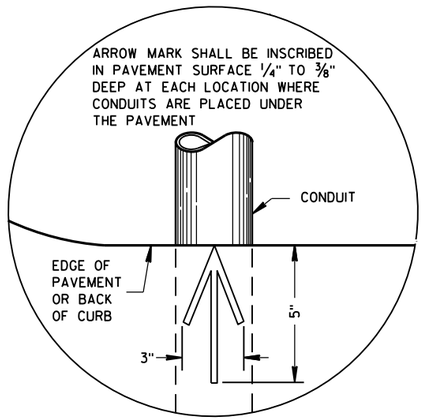
APPROVED
9/14/2012 — DATE
/S/ Jerry H. Zoda — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

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S.D.D. 8 F 7-5

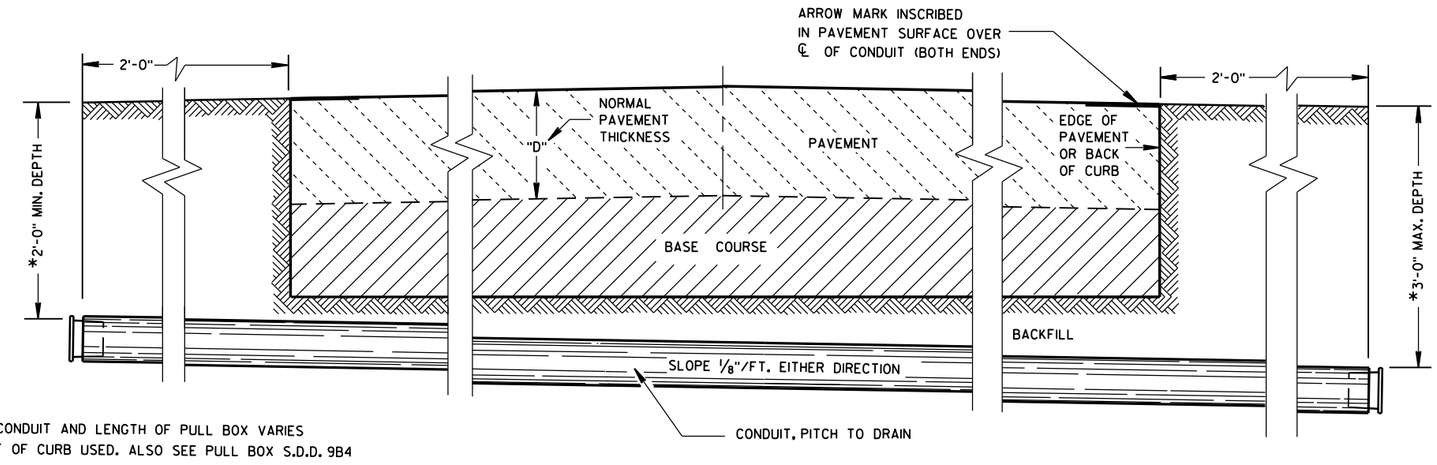
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S.D.D. 8 F 7-5



PLAN VIEW

ARROW MARK



*DEPTH OF CONDUIT AND LENGTH OF PULL BOX VARIES WITH HEIGHT OF CURB USED. ALSO SEE PULL BOX S.D.D. 9B4

SIDE ELEVATION

DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

GENERAL NOTES

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

METALLIC (STANDARD SPECIFICATION 652.2.2) OR NONMETALLIC (STANDARD SPECIFICATION 652.2.3) CONDUIT SHALL BE FURNISHED AND PLACED AS SHOWN.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

THE TRENCH SHALL NOT BE BACKFILLED PRIOR TO INSPECTION OF THE CONDUIT.

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

ALL METALLIC CONDUIT IN WHICH WIRE OR CABLE IS TO BE INSTALLED SHALL BE BUSHED WITH APPROVED THREADED BUSHINGS BEFORE INSTALLATION OF THE WIRE OR CABLE.

ALL METALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT TO BE INSTALLED SHALL BE CAPPED WITH THREADED PROTECTIVE CAPS, AS APPROVED BY THE ENGINEER.

ALL NONMETALLIC CONDUIT SHALL BE CAPPED OR PLUGGED IMMEDIATELY AFTER INSTALLATION AND SHALL REMAIN CAPPED OR PLUGGED UNTIL WIRE/CABLES ARE INSTALLED.

NONMETALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR EMERSION TYPE TANK DESIGNED FOR THE PURPOSE OF BENDING PVC ELECTRICAL CONDUIT.

ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON NONMETALLIC CONDUIT. (SEE NEC 347.5)

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY U.L. LISTED ADAPTER FITTINGS SHALL BE USED.

PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

ALL CONDUIT BEING FURNISHED AND INSTALLED SHALL HAVE THE U.L. LABEL FIRMLY ATTACHED.

CONDUIT RUNS SHALL BE THE SAME SIZE OF CONDUIT FROM ONE END TO THE OTHER (FROM PULL BOX TO PULL BOX-OR-JUNCTION BOX TO JUNCTION BOX-OR-BASE TO BASE, ETC.).

TRACER WIRE SHALL BE INSTALLED AS STATED IN THE STANDARD SPECIFICATION, ITEM 652.3.1.1.

ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, PULL BOX TO BASE AND BASE TO BASE AS SHOWN ON THE PLANS.

CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March, 2017 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

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S.D.D. 9 B 2-10

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

DIMENSION IN INCHES		NON-CONDUCTIVE PULL BOX	
BOX DIAMETER ** (INSIDE)	A	24	24
BOX OVERALL OUTSIDE DIAMETER	B	27	27
BOX LENGTH	C	36	42
FRAME OPENING	D	22 1/2	22 1/2
WEIGHT IN POUNDS *			
COVER		50	50
BOX ONLY		75	85

* THE ACTUAL WEIGHT OF THE COVER OR BOX ONLY MAY VARY NOT TO EXCEED 100 LBS INDIVIDUALLY.

** DIAMETER VARIES FROM TOP TO BOTTOM WITH THE DIAMETER LARGER AT THE BOTTOM TO PREVENT FROST HEAVE

GENERAL NOTES

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

ALL BOXES, FRAMES AND COVERS SHALL BE SUITABLE FOR TIER 15 LOADING AS SPECIFIED IN ANSI/SCTE 77.

PROVIDE AN OPENING FOR TOOL ASSISTED COVER REMOVAL NOT LARGE ENOUGH TO PERMIT PASSAGE OF A SPHERE MORE THAN 1/2" DIAMETER

ENSURE COVER SURFACE IS SKID RESISTANT WITH A COEFFICIENT OF FRICTION OF AT LEAST 0.5 AND VERTICAL SURFACE DICONTINUITIES LESS THAN 1/4".

COVER SHALL BE MAGNETICALLY LOCATABLE.

BOXES AND EXTENSIONS ARE TRIMMABLE FOR CUSTOM LENGTHS. TRIMMED PIECES SHALL MAINTAIN A UNIFORM LENGTH.

ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN 1/4".

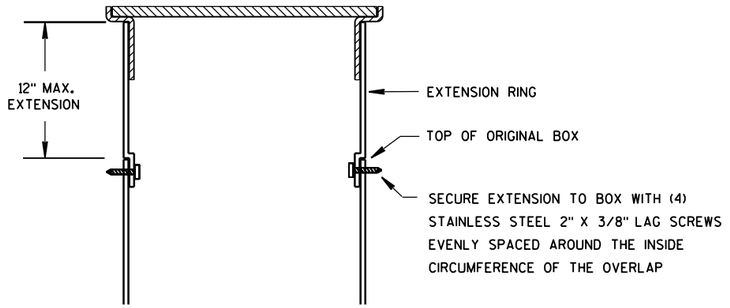
THE CONTRACTOR SHALL NOT INSTALL WIRE IN ANY PULL BOX UNTIL ITS INSTALLATION HAS BEEN INSPECTED AND ACCEPTED BY THE ENGINEER.

ALL METALLIC CONDUIT IN WHICH WIRE AND/OR CABLE IS TO BE INSTALLED, SHALL BE BUSHED BEFORE INSTALLATION OF THE WIRE AND/OR CABLE.

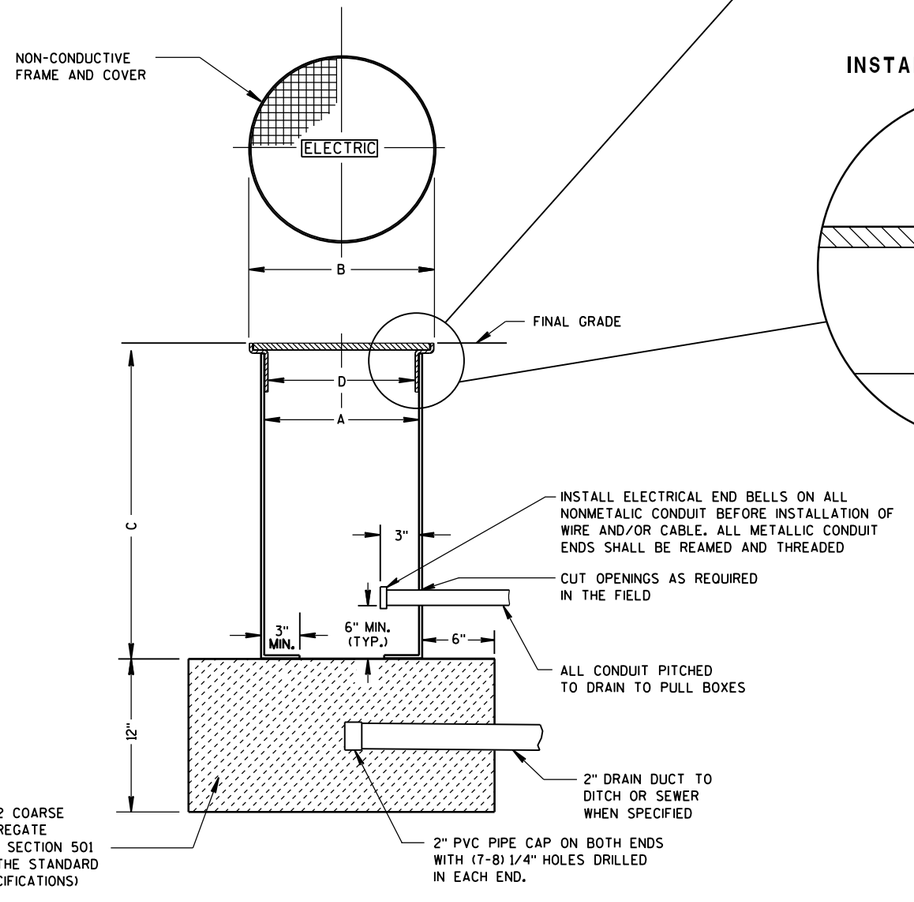
ENTIRE BOX MUST BE CONSTRUCTED OF NON-CONDUCTIVE MATERIALS WITH THE EXCEPTION OF STAINLESS STEEL FASTENERS AND MAGNETIC LOCATABLE DEVICE.

WHEN A PULL BOX IS INSTALLED IN CRUSHED AGGREGATE SHOULDERS, PLACE IT 2-3 INCHES BELOW GRADE AND COVER IT WITH 2-3 INCHES OF CRUSHED AGGREGATE

LABEL ON COVER SHALL READ "ELECTRIC" FOR SIGNAL AND LIGHTING SYSTEMS, "WISDOT ITS" FOR COMMUNICATIONS AND ITS EQUIPMENT SYSTEMS.

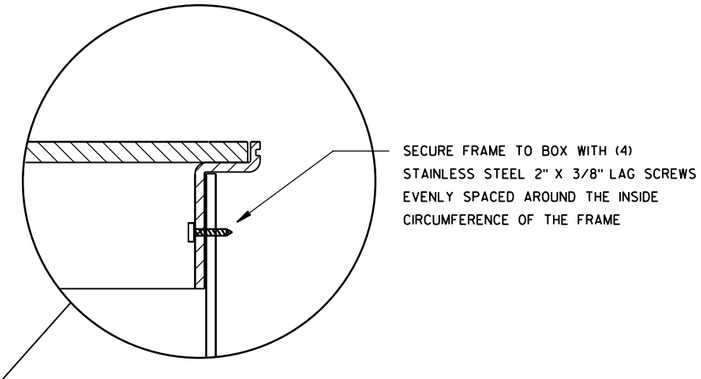


BOX EXTENSION

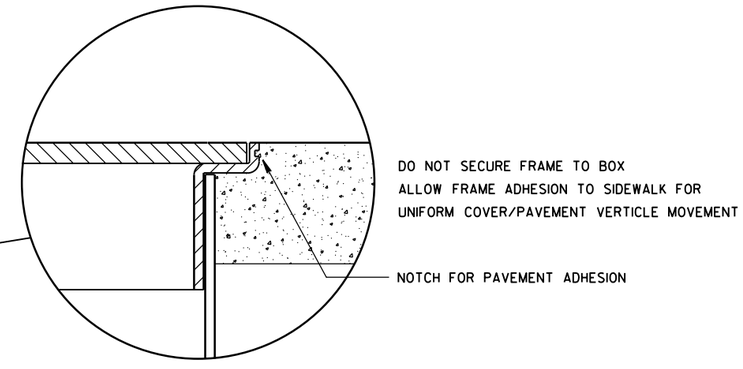


NON-CONDUCTIVE PULL BOX

INSTALLED IN SOD OR CRUSHED AGGREGATE



INSTALLED IN SIDEWALK



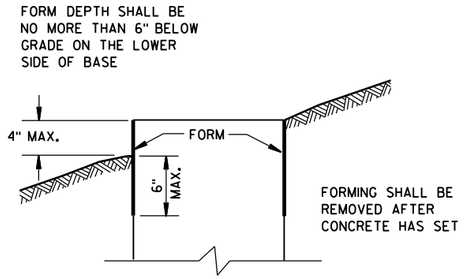
PULL BOX NON-CONDUCTIVE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2017 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

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S.D.D. 9 B 16-1



FORMING DETAIL

QUANTITY REQUIREMENTS	CONCRETE BASE TYPE		
	1	2	5 & 6
APPROX. CUBIC YARDS OF CONCRETE	0.40	0.57	0.40
LBS. OF HOOP BAR STEEL	NONE	23	16
LBS. OF VERTICAL BAR STEEL	NONE	60	18

GENERAL NOTES

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

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN AT THE ENTRANCE OF THE BASE.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 1 INCH. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

GENERAL NOTES (CONTINUED)

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION OF CABLE OR WIRE.

ENDS OF CONDUIT INSTALLED BELOW GRADE FOR FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

A NO. 4 AWG, STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD) FOR TYPE 1, TYPE 2, TYPE 5, AND TYPE 6 BASES.

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE BASE OF THE TYPE 2 AND TYPE 5 BASES THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD. ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 OF THE STANDARD SPECIFICATIONS.

WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4" "L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND END SHALL NOT BE THREADED.

ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TIE WIRES SHALL BE USED.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).

(1) THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN APPROVAL BY THE ENGINEER.

(2) (4) 1" DIA. X 3'-6" ANCHOR RODS.

(3) (4) 1" DIA. X 5'-0" ANCHOR RODS.

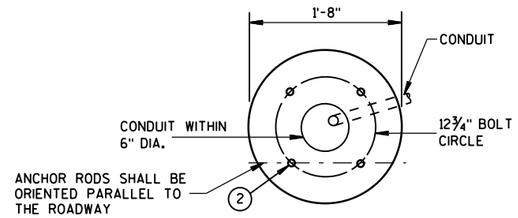
(4) (6) NO. 6 X 6'-8" BAR STEEL REINFORCEMENT.

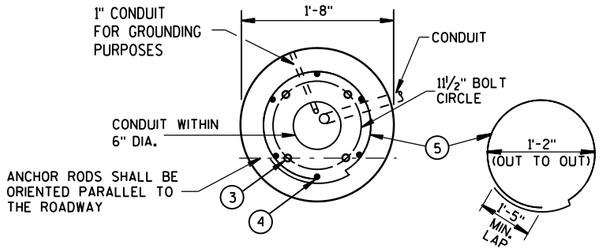
(5) (7) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

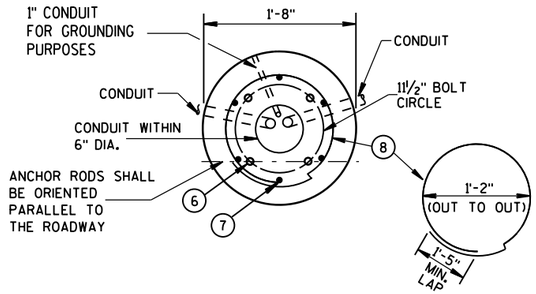
(6) (4) 1" DIA. X 3'-6" ANCHOR RODS.

(7) (6) NO.4 X 4'-8" BAR STEEL REINFORCEMENT.

(8) (5) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

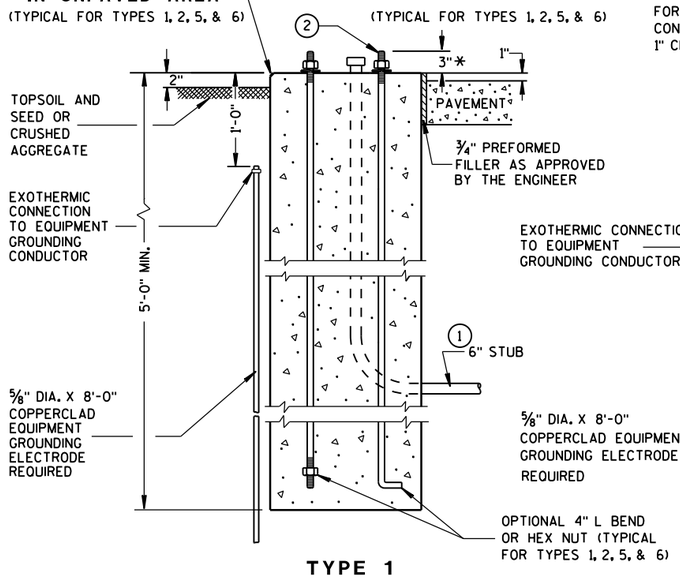




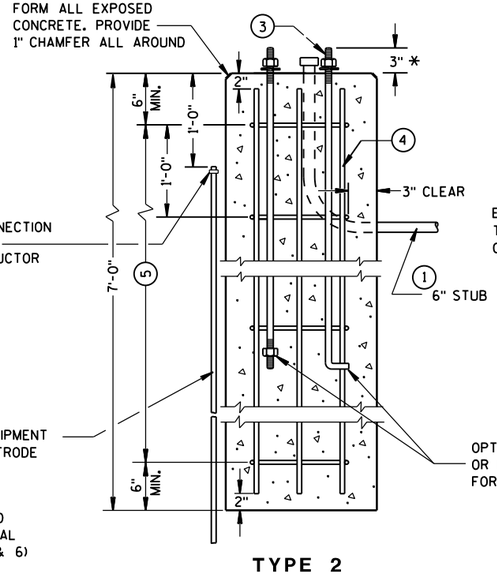


HALF SECTION IN UNPAVED AREA
(TYPICAL FOR TYPES 1, 2, 5, & 6)

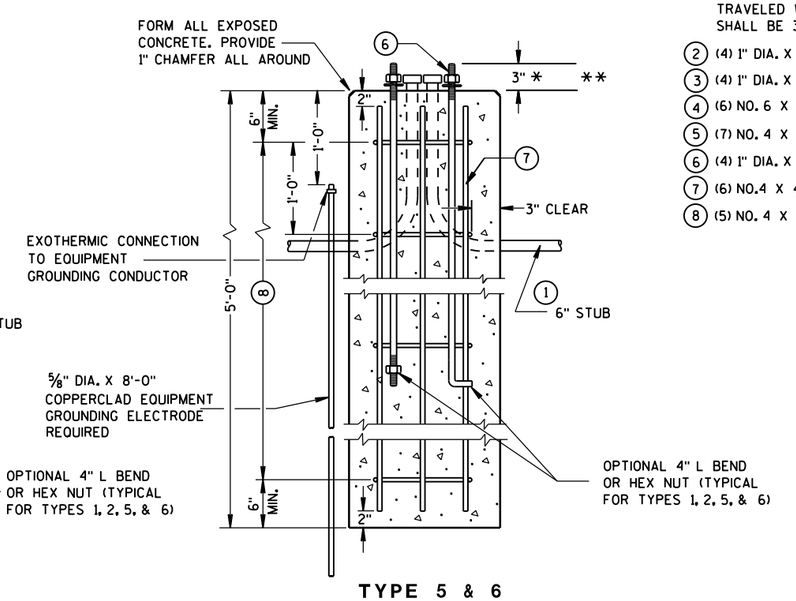
HALF SECTION IN PAVEMENT
(TYPICAL FOR TYPES 1, 2, 5, & 6)



TYPE 1



TYPE 2



TYPE 5 & 6

CONCRETE BASES

* ANY ANCHOR ROD PROJECTION SHORTER THAN 2¾" OR LONGER THAN 3¼" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

** FOR NONBREAKAWAY INSTALLATIONS, 4½" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

CONCRETE BASES, TYPES 1, 2, 5, & 6

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL

FHWA

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S.D.D. 9 C 2-7

GENERAL NOTES

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

FOUR (4) BOLTS SHALL BE FURNISHED WITH EACH TRANSFORMER BASE. BOLTS SHALL BE 1" DIAMETER, 4" IN LENGTH, WITH WASHERS, LOCK WASHERS AND NUTS. BOLTS, NUTS AND WASHERS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 641.2.2 OF THE STANDARD SPECIFICATIONS.

LEVELING SHIMS, IF NEEDED, SHALL BE DESIGNED FOR THE PURPOSE AND USED UNDER CAST BASES WHEN PLUMBING POLES OR STANDARDS DURING INSTALLATION. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE.

SHIM LENGTH SHALL BE LONG ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.

DOUBLE NUTTING IS NOT ACCEPTABLE FOR LEVELING OR MOUNTING PURPOSES.

A NEMA APPROVED, U.L. LISTED, COPPER WITH BRASS OR STAINLESS STEEL SET SCREW, DIRECT BURY RATED, MECHANICAL CONNECTOR (LUG), SIZED TO ACCEPT AWG. #10 TO #4 COPPER STRANDED WIRE SHALL BE FURNISHED AND INSTALLED IN THE PEDESTAL AND TRANSFORMER BASES.

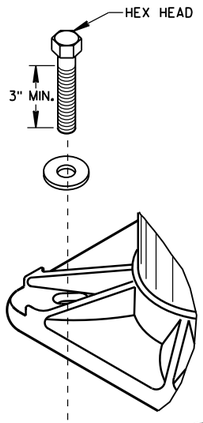
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

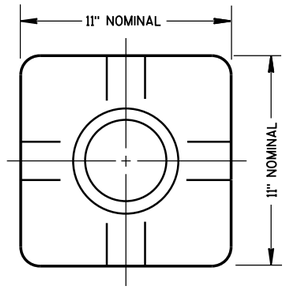
SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

PEDESTAL BASE COLLAR THREADING SHALL BE TAPERED AND IN ACCORDANCE WITH NATIONAL PIPE THREADING DIMENSIONS.

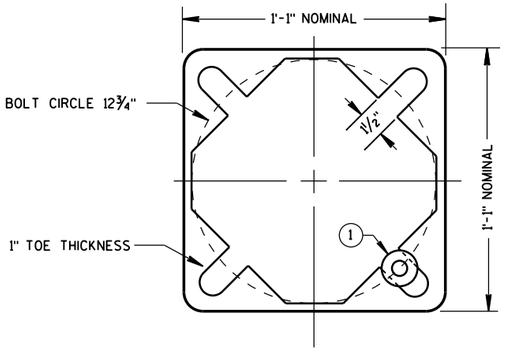
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1 1/2", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

THE ACCESS DOOR SHALL BE OF THE SAME MATERIAL AS THE BASE.

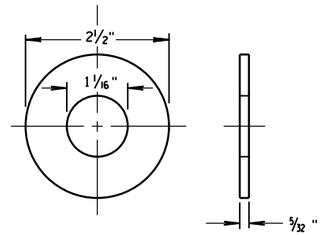




TOP VIEW
(PEDESTAL BASE)

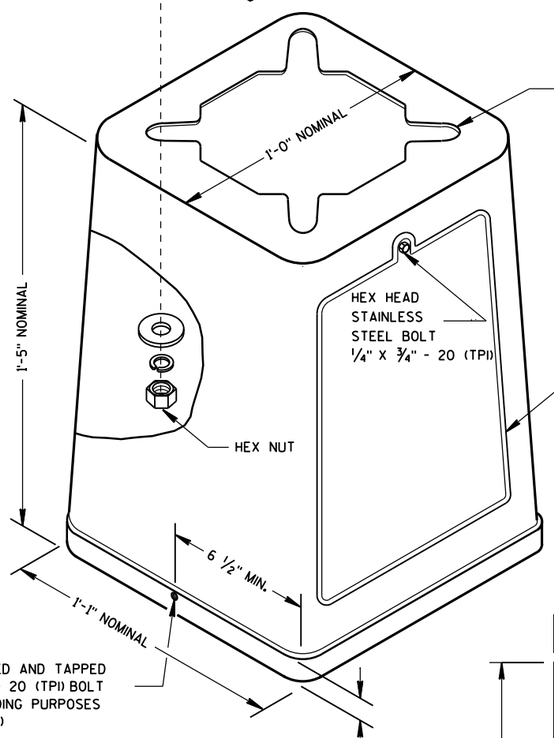


BOTTOM VIEW
(PEDESTAL BASE)

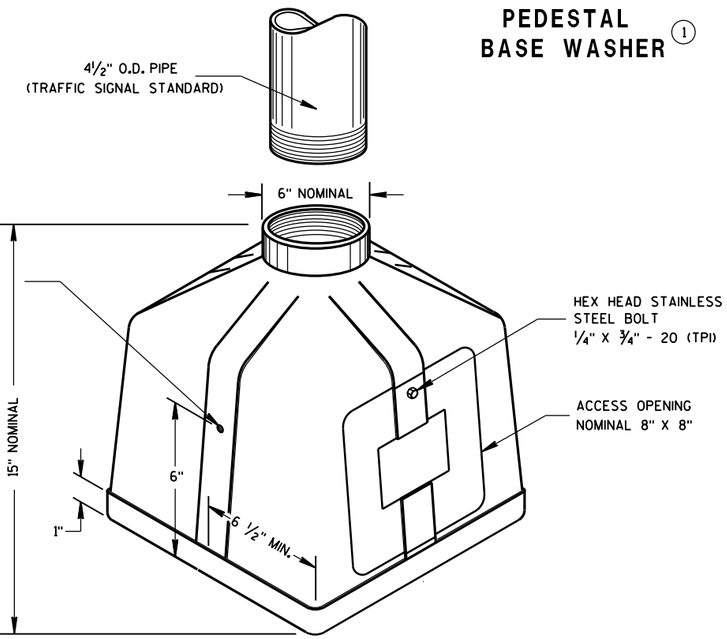


ZINC COATED STEEL WASHER
TO BE PROVIDED BY THE CONTRACTOR

PEDESTAL BASE WASHER (1)

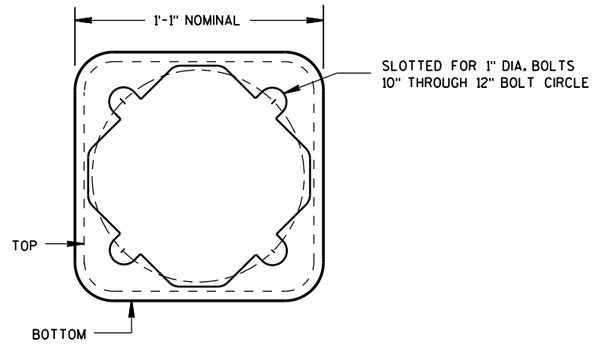


ISOMETRIC VIEW

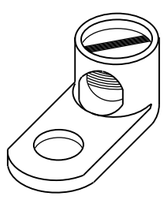


ISOMETRIC VIEW

PEDESTAL BASE



BOTTOM VIEW
(TRANSFORMER BASE)

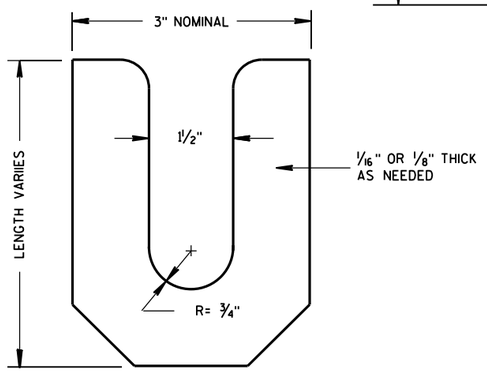


TYPICAL MECHANICAL CONNECTOR LUG

TO BE FURNISHED WITH EACH BASE

TRANSFORMER BASE

INTENDED FOR USE WITH TYPE 2, 3, 4, 5 & 6 POLES



LEVELING SHIM

TRANSFORMER/PEDESTAL BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

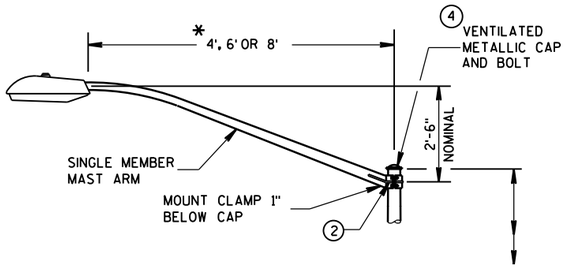
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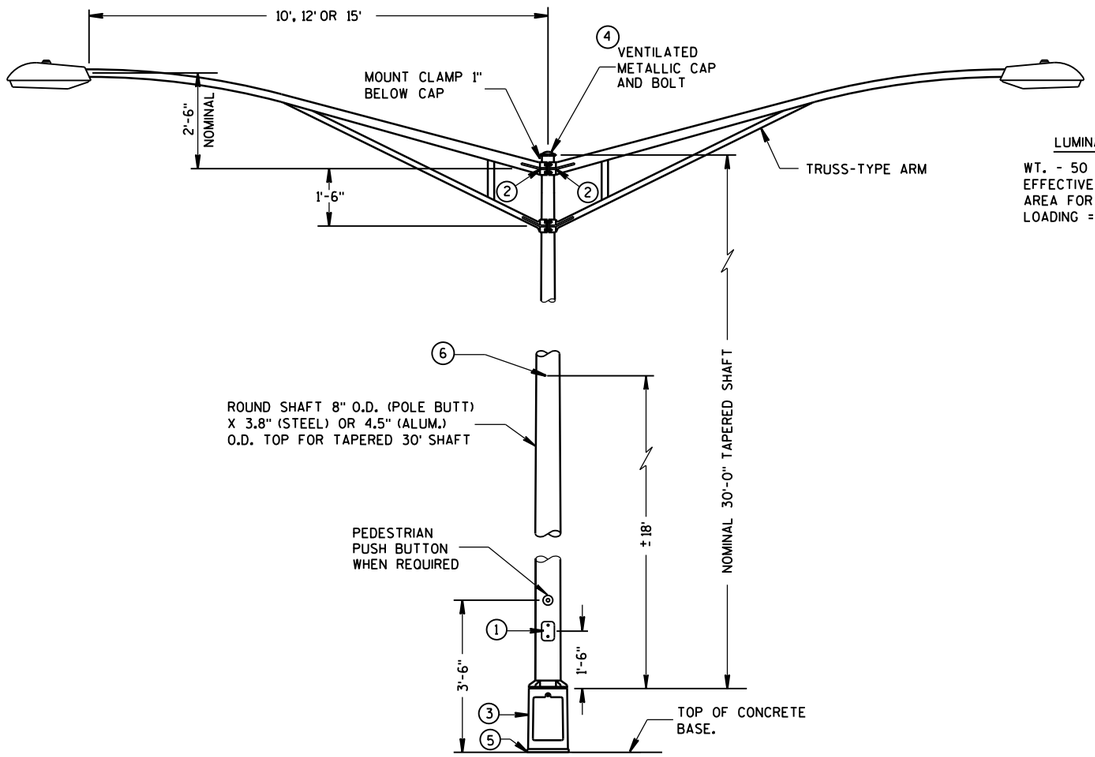
S.D.D. 9 C 3-4

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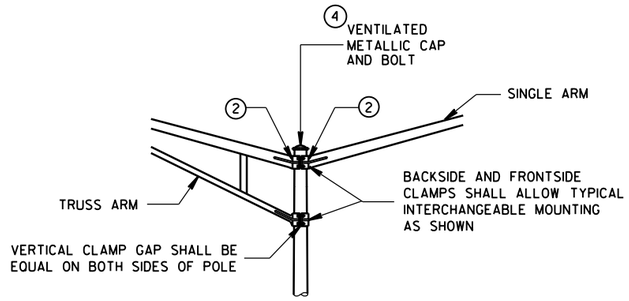
S.D.D. 9 C 3-4

*RISE FOR 4' ARM SHALL BE 2'-0".





TYPE 5 POLE MOUNTING CONFIGURATION
(MAXIMUM LOAD)
LIGHTING ONLY



INTERCHANGEABLE MOUNTING DETAIL

LUMINAIRE

WT. - 50 LBS.
EFFECTIVE PROJECTED
AREA FOR WIND
LOADING = 1.5 SQ. FT.

GENERAL NOTES

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

ALL TYPE 5 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE GALVANIZED STEEL OR ALUMINUM, AS CALLED FOR IN THE CONTRACT.

TYPE 5 ALUMINUM POLES SHALL BE CONSTRUCTED OF 6063-T6 ALUMINUM ALLOY. SLEEVING INSIDE THE POLE IS NOT ACCEPTABLE.

THE TYPE 5 ALUMINUM POLES SHALL HAVE A MINIMUM WALL THICKNESS OF 0.188".

TYPE 5 STEEL POLES SHALL HAVE A MINIMUM WALL THICKNESS OF U.S. STANDARD 11 GAGE (.1196").

THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2⅜ INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

WHEN TRANSFORMER BASES ARE USED, WIRE CONEECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

(1) 4" x 6" REINFORCED HANDHOLE & COVER ASSEMBLY WITH 2 (TWO) ¼" X ¾" - 20 TPI HEX HEAD STAINLESS STEEL BOLTS.

(2) GROMMETS, 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1⅜" HOLE IN POLE SHAFT FOR WIRING.

(3) CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.

(4) FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.

(5) SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND THE TRANSFORMER BASE.

(6) INTERNAL DUMBBELL-TYPE VIBRATION DAMPER.

6

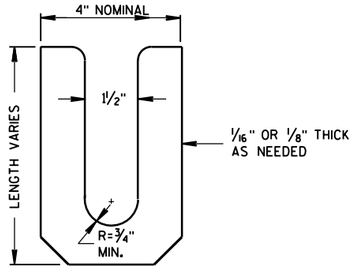
S.D.D. 9 E 1-14d

POLE MONTINGS FOR
LIGHTING UNITS, TYPE 5
(30 FEET)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

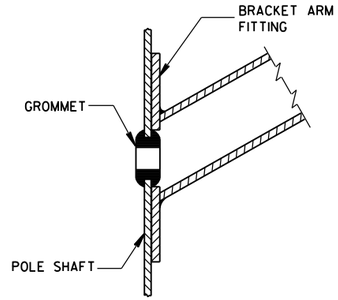
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S.D.D. 9 E 1-14d

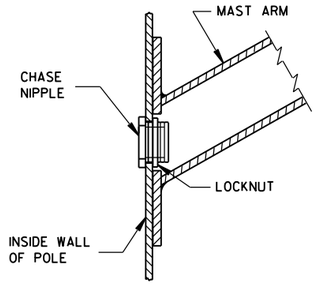


LEVELING SHIM (13)

SHALL BE ALUMINUM



TYPICAL APPLICATION OF GROMMET IN POLE SHAFT



TYPICAL APPLICATION OF CHASE NIPPLE IN POLE SHAFT

GENERAL NOTES

CLAMP BOLT-NUT TIGHTENING TORQUE SHALL BE INDICATED BY INDENT STAMPING (1/2 INCH NUMERALS AND LETTERS) OR WEATHERPROOF PRINTING ON THE INSIDE OF THE CLAMP THAT IS WELDED TO THE ARM MEMBER.

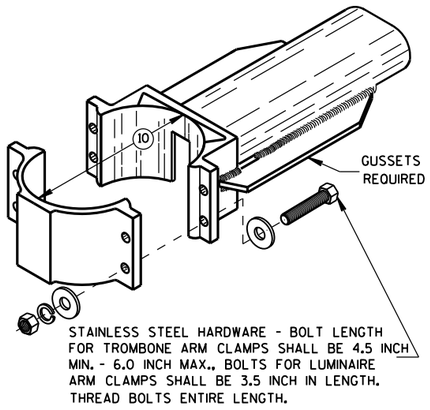
(10) 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP.
6.625" I.D. FOR TROMBONE MAST ARM CLAMP.

(11) INDIVIDUAL BASE PLATE ANCHOR ROD COVERS. (4 REQUIRED)

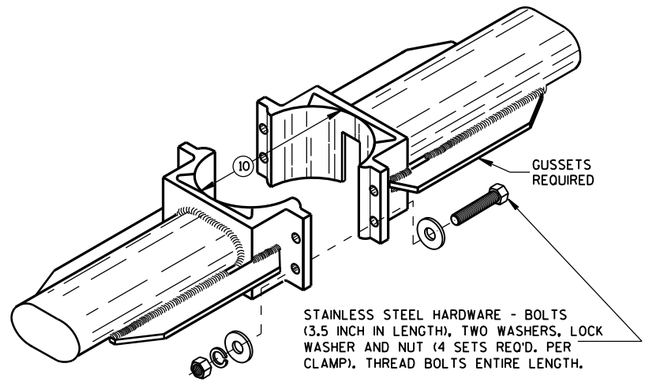
(12) BASE PLATE SLOTTED TO ACCEPT 11" THROUGH 12" BOLT CIRCLE USING 1" DIAMETER ANCHOR RODS.

(13) LEVELING SHIMS, DESIGNED FOR THE PURPOSE, SHALL BE USED WHEN PLUMBING POLES. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE. LEVELING SHIMS SHALL BE USED ONLY BETWEEN THE TOP OF THE CONCRETE BASE AND A METALLIC BASE PLATE.

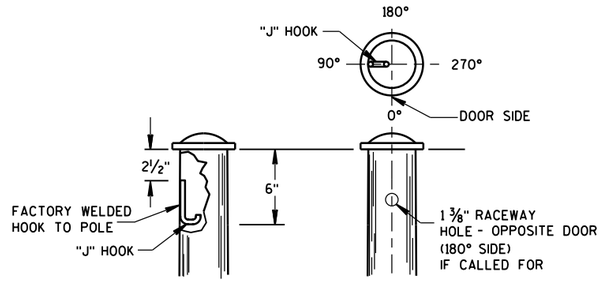
SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



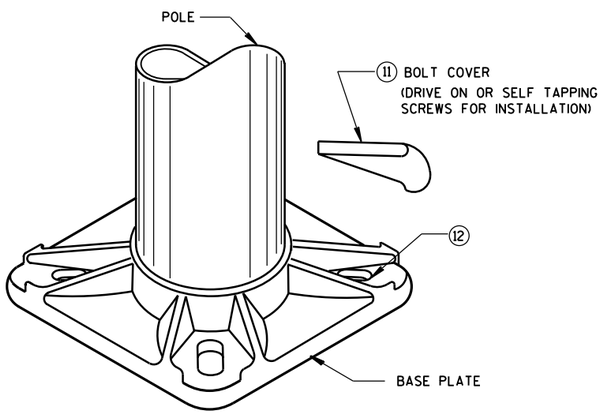
TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP



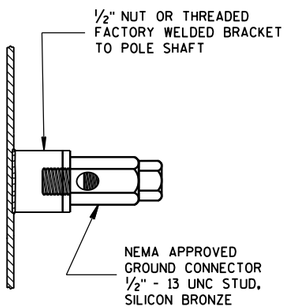
TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS

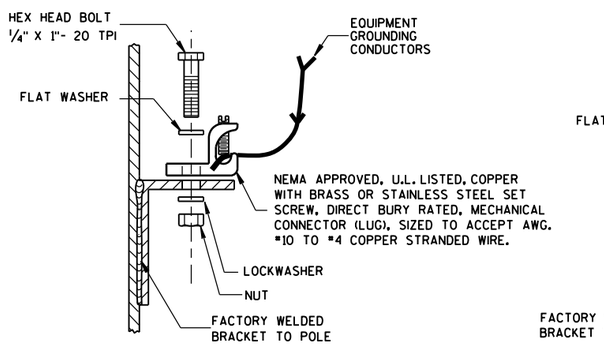


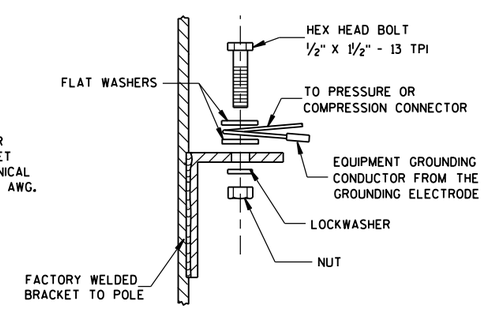
TYPICAL "J" HOOK LOCATION



BASE PLATE







TYPICAL GROUNDING CONNECTIONS

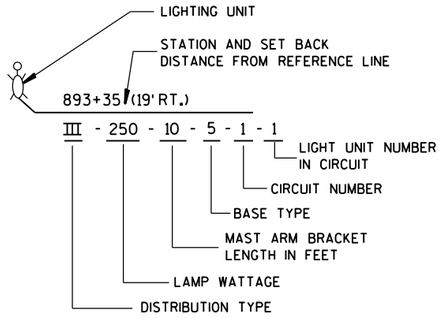
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL

HARDWARE DETAILS FOR POLE MOUNTINGS

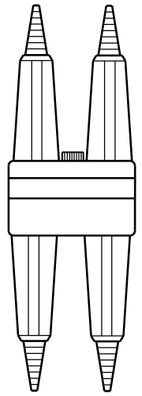
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Feb. 2015 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

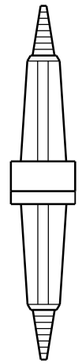
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S.D.D. 9 E 1-14g



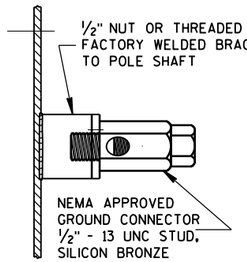
LIGHTING UNIT CODE
(TYPICAL)

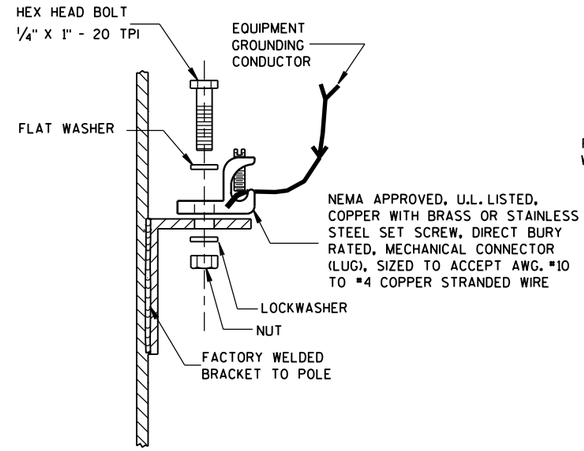


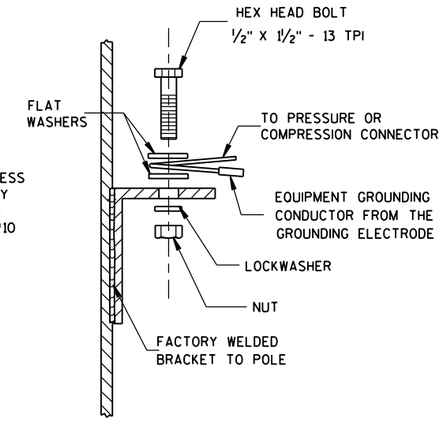
DETAIL "A"
BREAKAWY DOUBLE POLE WITH WATERPROOF INSULATING BOOT



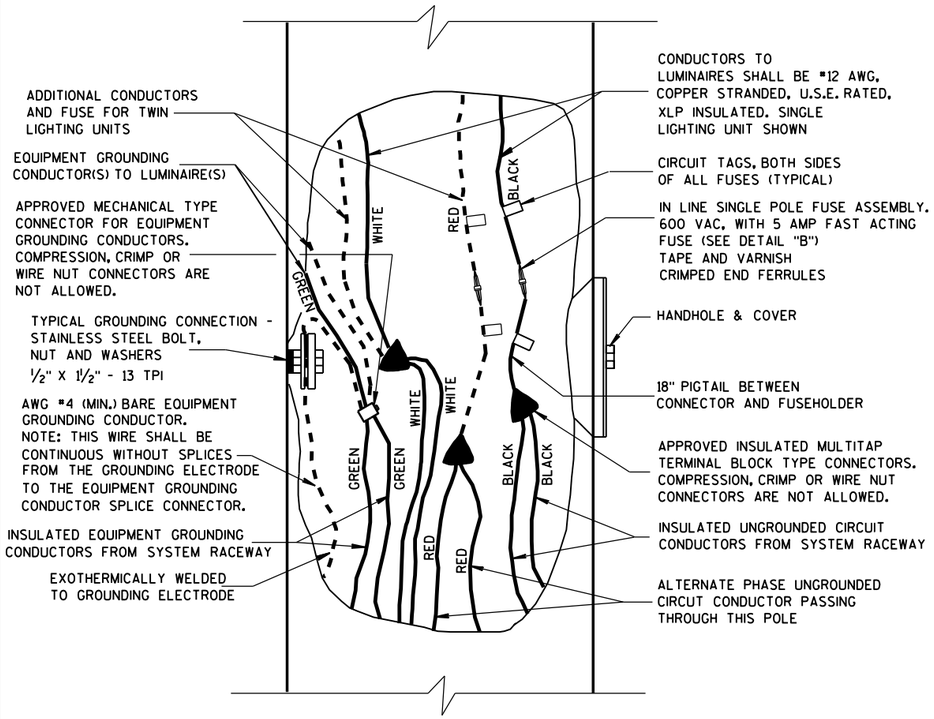
DETAIL "B"
BREAKAWY SINGLE POLE WITH WATERPROOF INSULATING BOOT



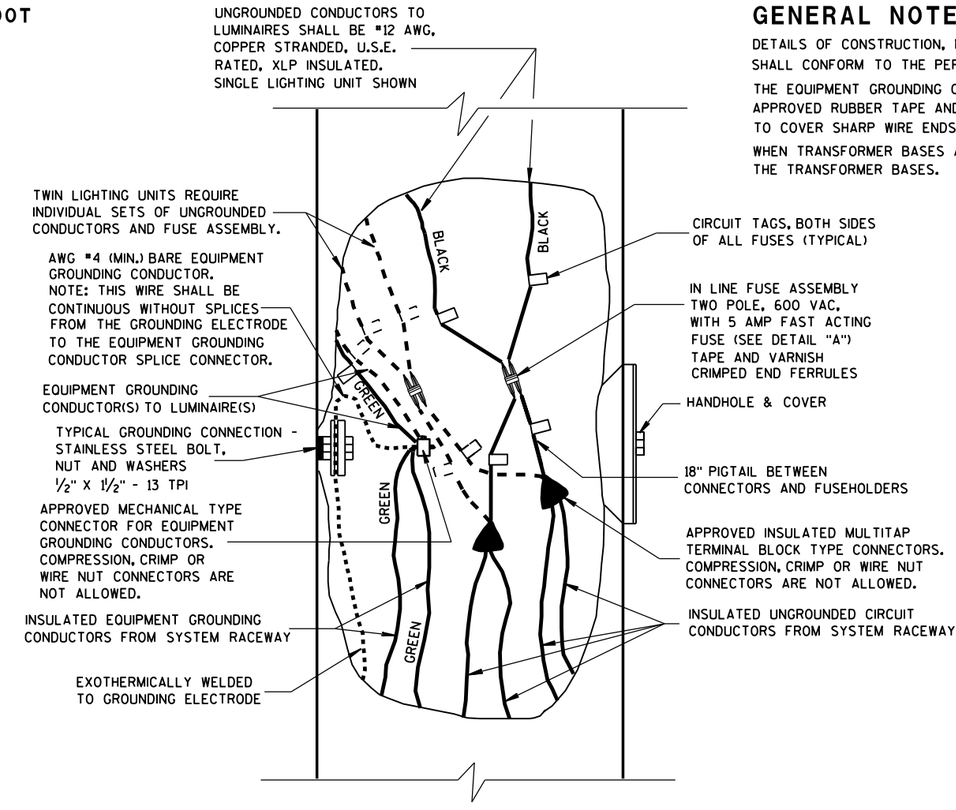




TYPICAL GROUNDING CONNECTIONS
NUT, BOLT, WASHERS AND LOCKWASHERS SHALL BE STAINLESS STEEL



3 WIRE - 120, 240 OR 480 VAC (UNGROUNDED CONDUCTOR) WITH GROUNDED CONDUCTOR AND WITH EQUIPMENT GROUNDING CONDUCTOR



2 WIRE - 240 OR 480 VAC (UNGROUNDED CONDUCTORS) WITH EQUIPMENT GROUNDING CONDUCTOR

GENERAL NOTES

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

THE EQUIPMENT GROUNDING CONNECTOR SHALL BE TAPED WITH 3 WRAPS (MINIMUM) OF APPROVED RUBBER TAPE AND THEN 3 WRAPS (MINIMUM) OF APPROVED VINYL TAPE TO COVER SHARP WIRE ENDS AFTER THE CONNECTION IS COMPLETED.

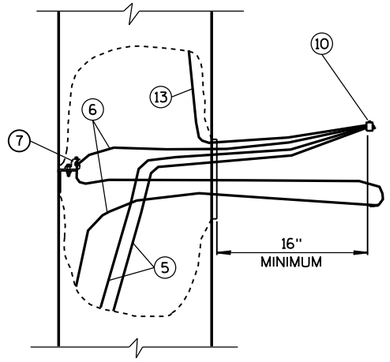
WHEN TRANSFORMER BASES ARE USED, ALL WIRING CONNECTIONS SHALL OCCUR WITHIN THE TRANSFORMER BASES.

NON-FREEWAY LIGHTING UNIT POLE WIRING

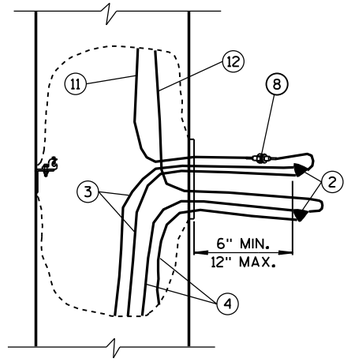
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
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S.D.D. 9 E 3-5

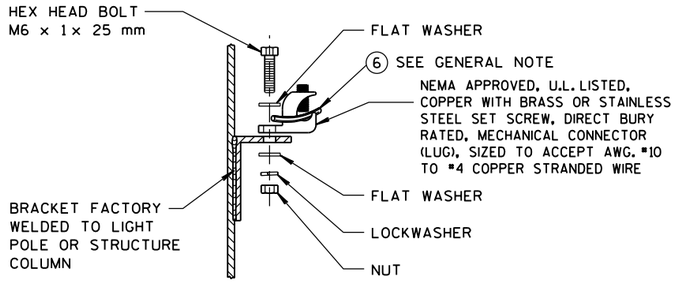


EQUIPMENT GROUNDING CONDUCTOR SLACK



UNGROUNDED CONDUCTOR SLACK (AND GROUNDED NEUTRAL SLACK IN GROUNDED NEUTRAL SYSTEM)

TYPICAL CONDUCTOR SLACK AT HANDHOLES



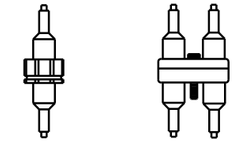
HANDHOLE GROUNDING LUG

(NUT, BOLT, WASHERS, AND LOCK WASHERS SHALL BE STAINLESS STEEL)

CONDUCTOR COLOR CODES

KEY	CONDUCTOR	COLOR
3	UNGROUNDED LINE WIRE	*
4	GROUNDED LINE WIRE	WHITE
5	SYSTEM GROUNDING LINE WIRE	GREEN
6	GROUNDING ELECTRODE CONDUCTOR	BARE
11	UNGROUNDED POLE WIRE	*
12	GROUNDED POLE WIRE	WHITE
13	EQUIPMENT GROUNDING POLE WIRE	GREEN

* FOLLOW COLOR CODING SHOWN IN THE PLANS. WHERE THE PLANS DO NOT SHOW COLOR CODING, USE BLACK FOR SINGLE LUMINAIRE POLES; BLACK AND RED FOR TWIN LUMINAIRE POLES.



1 POLE (1P) 2 POLE (2P)

FUSE ASSEMBLIES

GENERAL NOTES

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

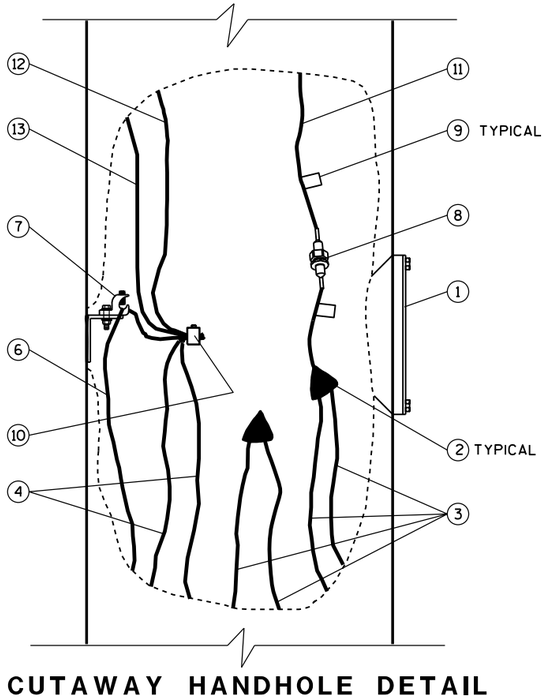
USE THIS DETAIL IN CONJUNCTION WITH THE ELECTRICAL DETAILS FOR THE APPLICATION, WHICH MAY BE A LIGHT POLE, SIGN BRIDGE, ETC.

THE GROUNDING ELECTRODE CONDUCTOR SHALL BE CONTINUOUS WITHOUT SPLICES FROM THE GROUNDING ELECTRODE THROUGH THE HANDHOLE GROUNDING LUG TO THE CONNECTOR.

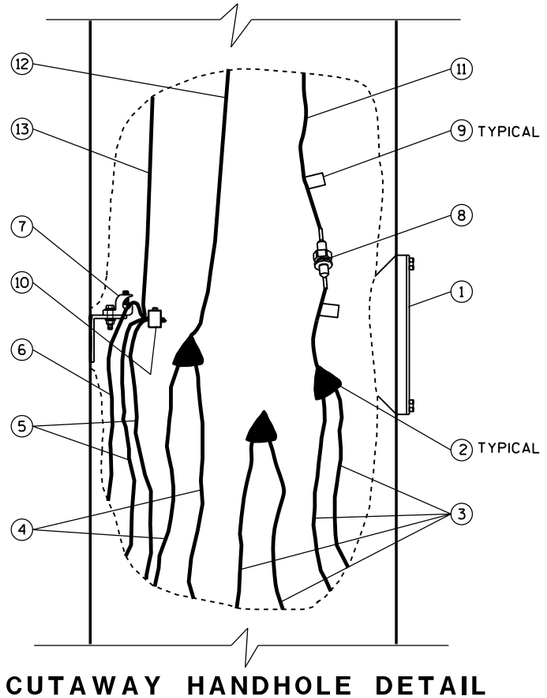
THREE POLE WIRES ARE SHOWN FOR A SINGLE LUMINAIRE LIGHT POLE. THREE ADDITIONAL POLE WIRES REQUIRED FOR TWIN LUMINAIRE LIGHT POLES ARE OMITTED FROM THE DRAWING FOR CLARITY. IN THE TWIN POLE CASE, BUNDLE EACH SET OF THREE WIRES WITH A NYLON CABLE TIE.

IN 3-PHASE SYSTEMS, THERE WILL BE ONE MORE UNGROUNDED LINE WIRE, WHICH IS OMITTED FROM THE DRAWING FOR CLARITY.

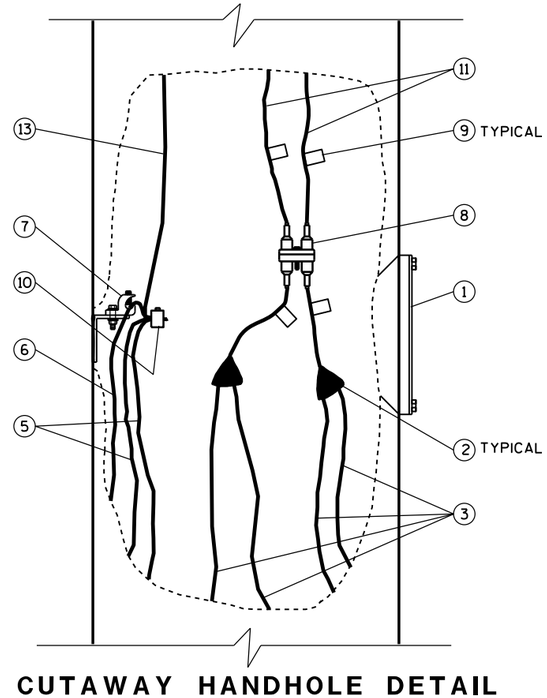
CIRCUIT TAGS SHALL BE INSTALLED ONLY WHERE REQUIRED IN THE SPECIAL PROVISIONS.



CUTAWAY HANDHOLE DETAIL
GROUNDED NEUTRAL SYSTEMS
1-Φ



CUTAWAY HANDHOLE DETAIL
ISOLATED NEUTRAL SYSTEMS
1-Φ SHOWN; 3-Φ WYE SIMILAR
(SEE GENERAL NOTE)



CUTAWAY HANDHOLE DETAIL
PHASE-TO-PHASE SYSTEMS
1-Φ SHOWN; 3-Φ DELTA SIMILAR
(SEE GENERAL NOTE)

NOTE: REQUIRED CONDUCTOR SLACK NOT SHOWN ON "CUTAWAY HAND HOLE" DETAILS FOR DRAWING CLARITY, SEE "TYPICAL CONDUCTOR SLACK AT HANDHOLES" ON THIS SHEET.

1. HANDHOLE AND COVER
2. INSULATED SPLICE
3. UNGROUNDED LINE WIRE
4. GROUNDED LINE WIRE
5. SYSTEM GROUNDING LINE WIRE
6. GROUNDING ELECTRODE CONDUCTOR
7. HANDHOLE GROUNDING LUG
8. FUSE ASSEMBLY, 1P OR 2P AS REQUIRED
9. CIRCUIT TAG (SEE GENERAL NOTE)
10. REVERSIBLE PRESSURE OR COMPRESSION GROUNDING CONNECTOR (NOT INSULATED)
11. UNGROUNDED POLE WIRE
12. GROUNDED POLE WIRE
13. EQUIPMENT GROUNDING POLE WIRE

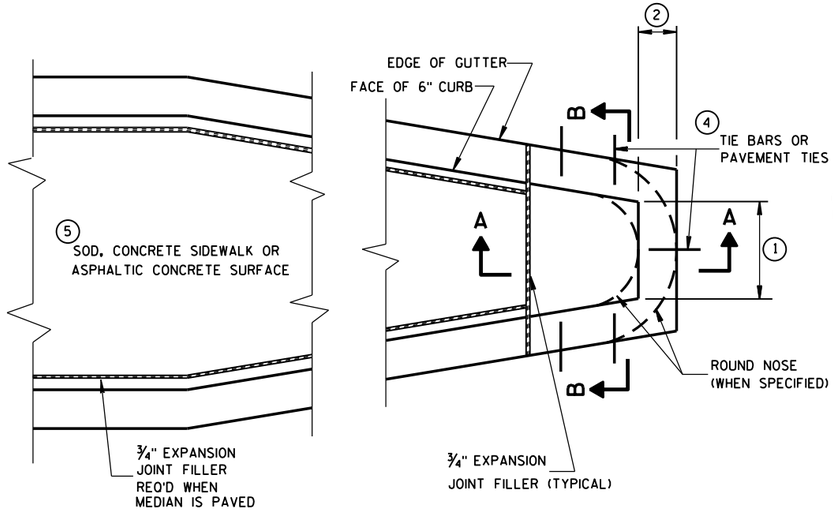
ELECTRICAL HANDHOLE WIRING

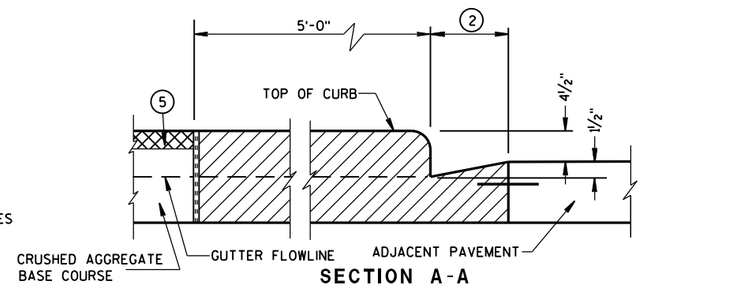
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

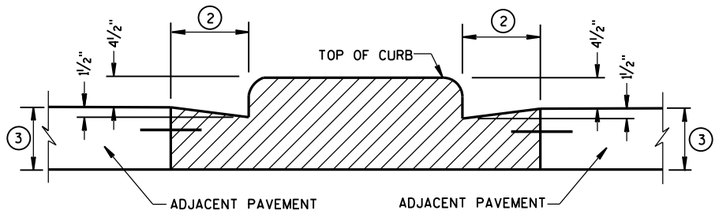
APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
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S.D.D. 10 A 1-3







CONCRETE MEDIAN BLUNT NOSE DETAIL

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) SEE PLAN FOR MEDIAN NOSE WIDTH AND RADIUS (FOR ROUND NOSE ALTERNATE).

(2) WIDTH OF GUTTER TO MATCH EXISTING ADJACENT GUTTER OR AS SPECIFIED ELSEWHERE IN THE PLAN.

(3) DEPTH EQUAL TO ADJACENT PAVEMENT. ADJACENT PAVEMENT STRUCTURE DETAILS ARE SHOWN ON THE PLAN. TYPICAL OPTIONS ARE:

(1) NEW OR EXISTING CONCRETE PAVEMENT.

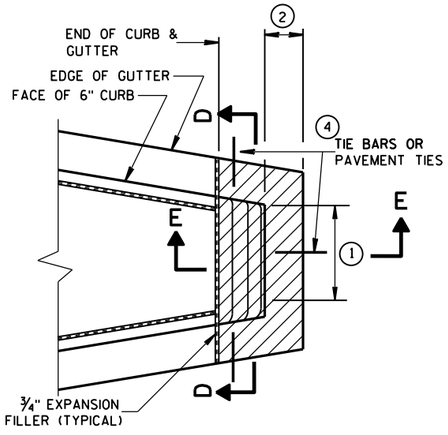
(2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.

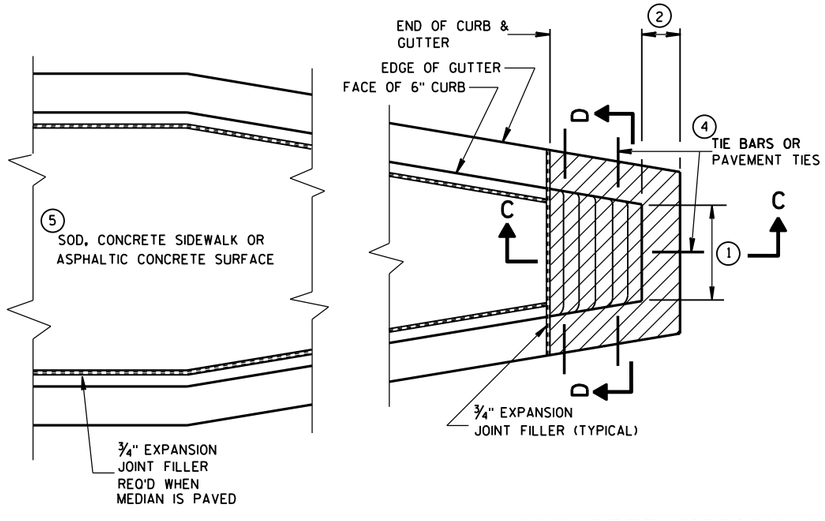
(3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.

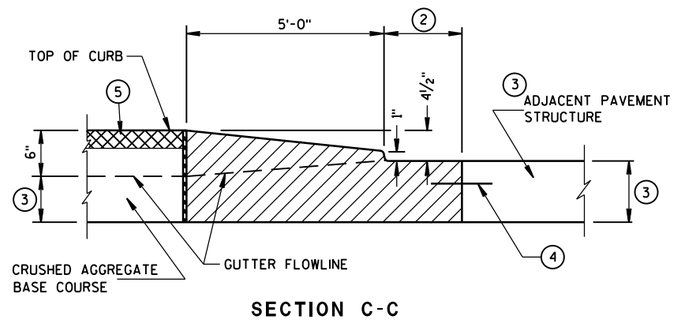
(4) TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C.

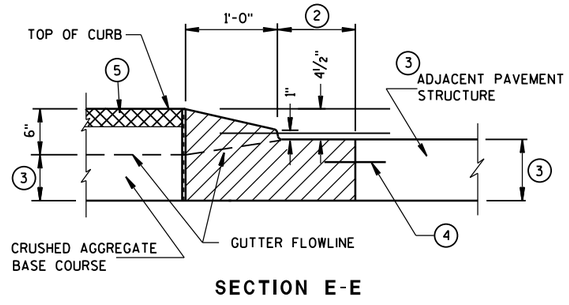
PAVEMENT TIES REQUIRED IN EXISTING CONCRETE BASE COURSE. PAVEMENT TIES SHALL BE NO. 6 X 1'-0" SPACED AT 3'-0" C-C INSTALLED ON A HORIZONTAL SKEW OF 6:1. THE DIRECTION OF SKEW SHALL ALTERNATE AFTER EVERY ONE OR TWO BARS.

(5) SURFACE TYPE AND DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.



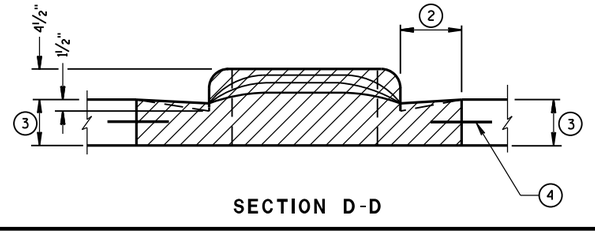






CONCRETE MEDIAN SLOPED NOSE TYPE 2

CONCRETE MEDIAN SLOPED NOSE TYPE 1



CONCRETE MEDIAN NOSE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/8/2006
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS D ENGINEER

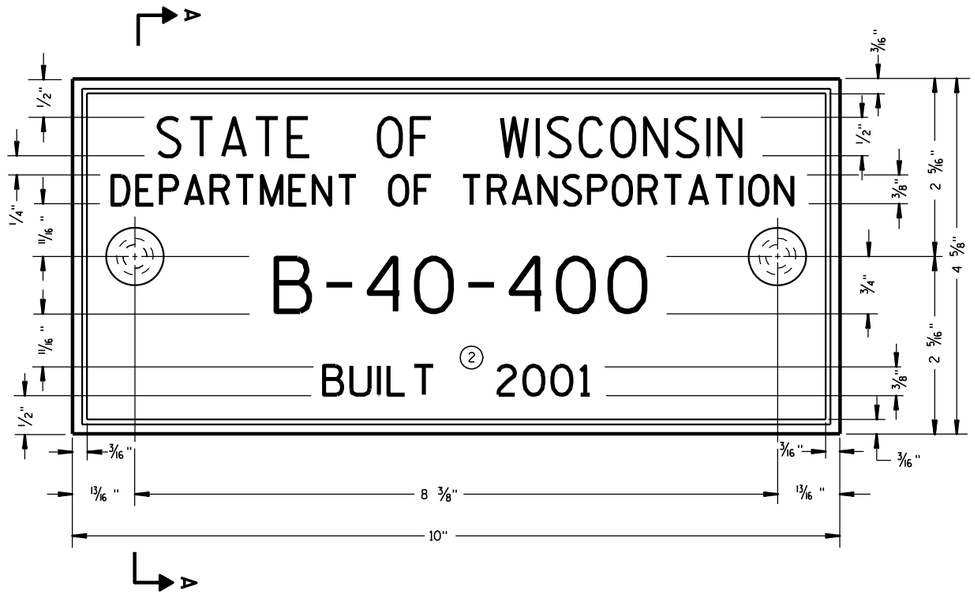
FHWA

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S.D.D. 11 B 2-2

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S.D.D. 11 B 2-2



TYPICAL NAME PLATE
(BRIDGES, CULVERTS, AND RETAINING WALLS)

FOR MULTI-UNIT STRUCTURES
LINE 3 ABOVE SHALL READ

B = BRIDGE
C = CULVERT
R = RETAINING WALL

COUNTY NO.

BRIDGE NO.

UNIT NO. FOR MULTIPLE UNIT BRIDGE

B-40-400-1A

NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

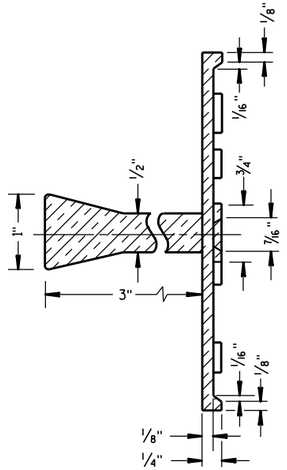
GENERAL NOTES

NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

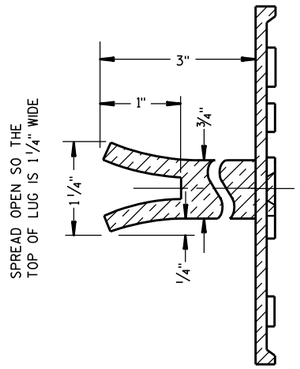
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

(1) EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

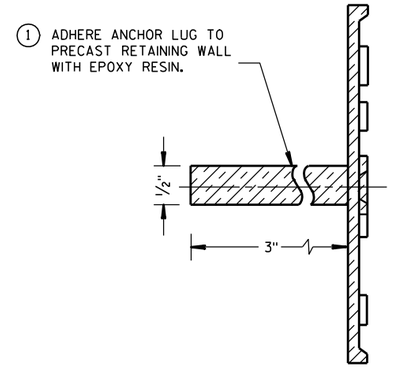
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

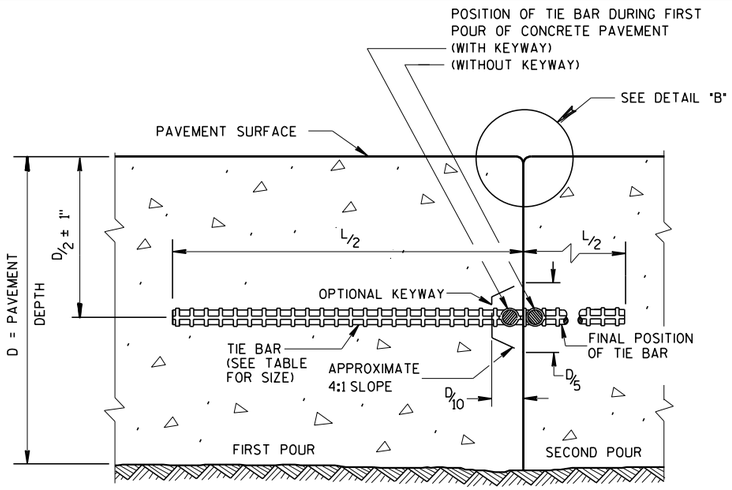
3/26/10 DATE

/S/ Scot Beck -- CHIEF STRUCTURAL DEVELOP ENGINEER

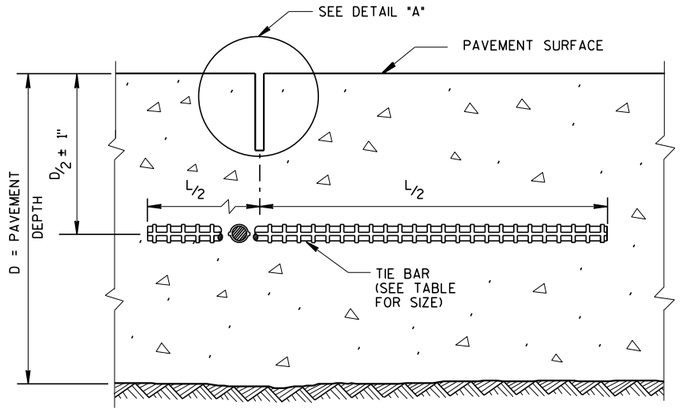
FHWA

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S.D.D. 12 A 3-10



CONSTRUCTION JOINT



SAWED JOINT

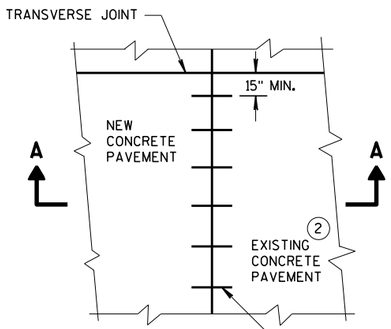
GENERAL NOTES

CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

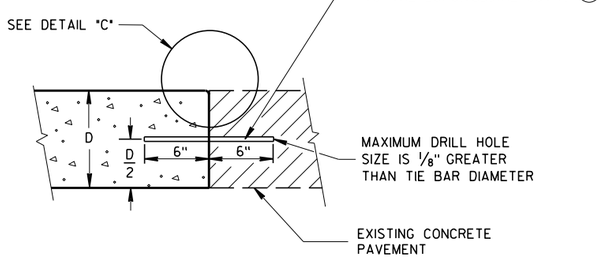
CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

(1) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

(2) PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.

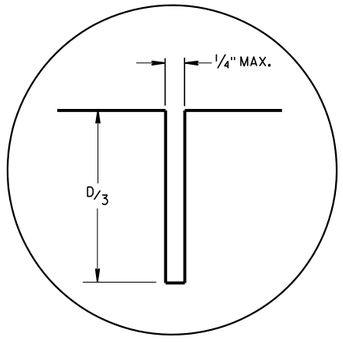


PLAN VIEW

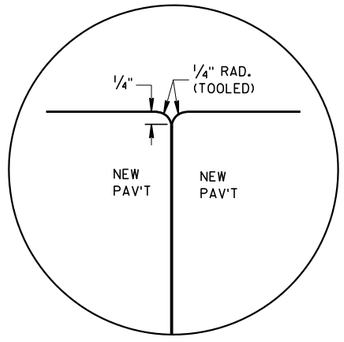


SECTION A-A

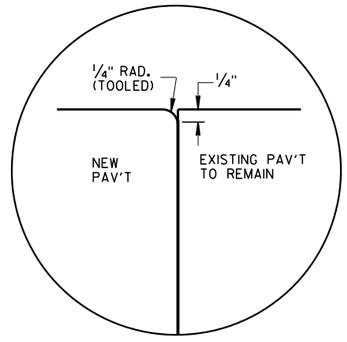
LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT



DETAIL "A"



DETAIL "B"



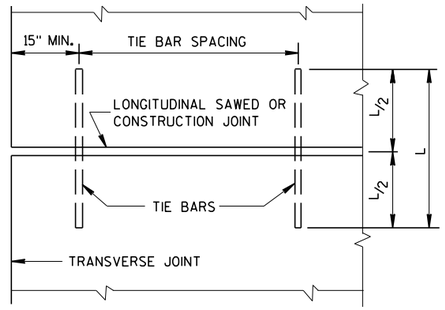
DETAIL "C"

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINUMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.



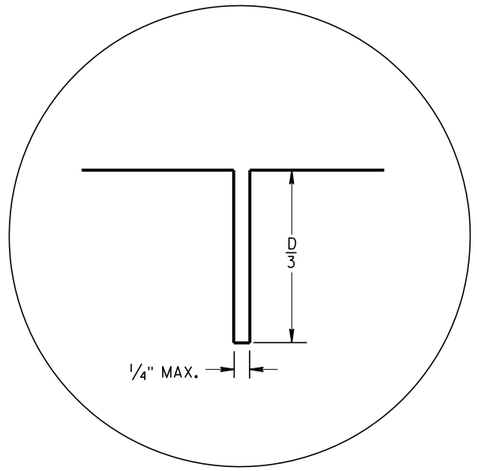
PLAN VIEW
SHOWING LOCATION OF TIE BARS

CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES

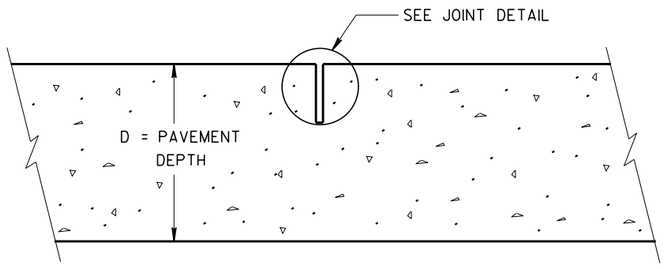
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 — DATE
/S/ Peter Kemp, P.E. — PAVEMENT SUPE
FHWA

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S.D.D. 13 C 1-19



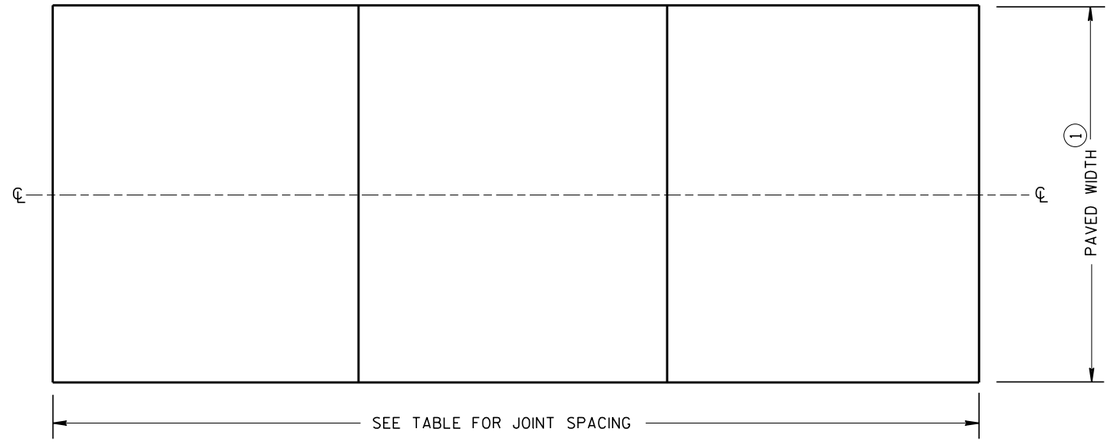
JOINT DETAIL



CONTRACTION JOINT

PAVEMENT DEPTH AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6 1/2"	12'
7", 7 1/2"	14'
8" & ABOVE	15'



CONTRACTION JOINT LOCATIONS

GENERAL NOTES

CONTRACTION JOINTS

CONSTRUCT TRANSVERSE CONTRACTION JOINTS NORMAL TO THE CENTERLINE.

LOCATE AND ORIENT CONTRACTION JOINTS THROUGH INTERSECTIONS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

CONSTRUCTION JOINTS

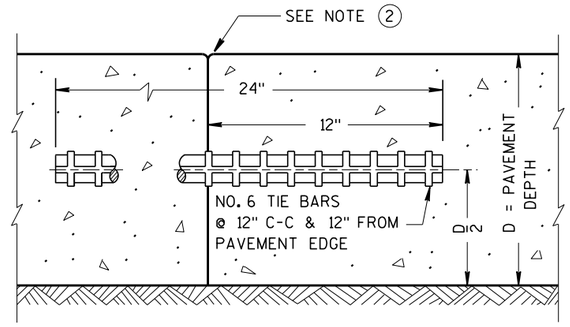
LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO THE CONTRACTION JOINTS.

FORM OR SAW CONSTRUCTION JOINTS.

THE CONTRACTOR MAY INSERT TIE BARS THROUGH THE HEADER BOARD AFTER THE CONCRETE HAS BEEN PLACED.

(1) REFER TO TYPICAL CROSS SECTIONS FOR PAVED WIDTH AND LOCATION OF LONGITUDINAL JOINTS.

(2) PROVIDE A SMOOTH VERTICAL FACE FOR THE ENTIRE DEPTH OF THE PAVEMENT WHEN FORMING CONSTRUCTION JOINTS. PROVIDE A 1/4-INCH RADIUS AT FORMED JOINTS.



TIED TRANSVERSE CONSTRUCTION JOINT

URBAN
NON-DOWELED CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

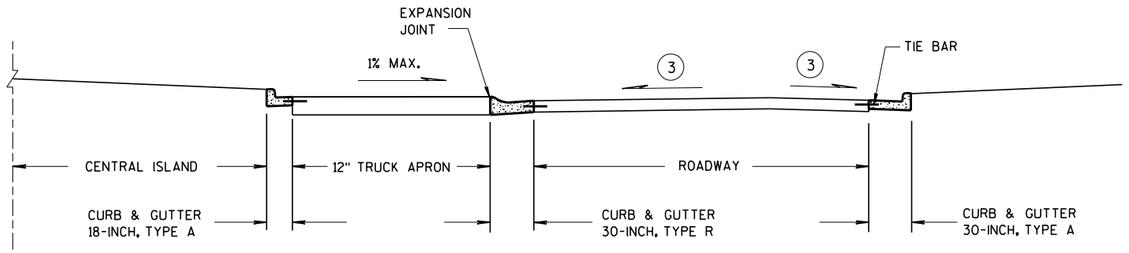
APPROVED
March 2018
DATE

/S/ Peter Kemp P.E.
PAVEMENT SUPI

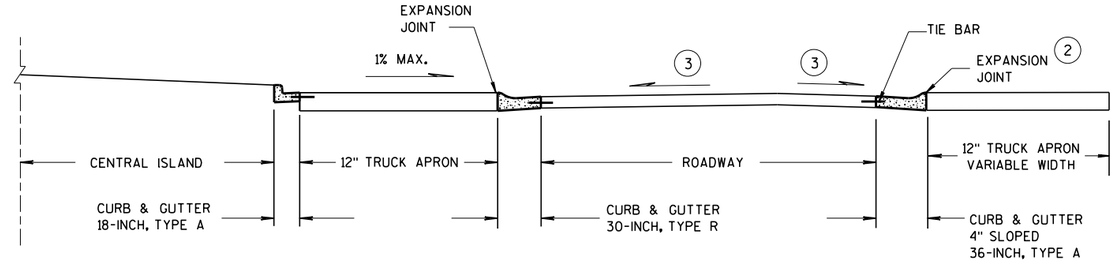
FHWA

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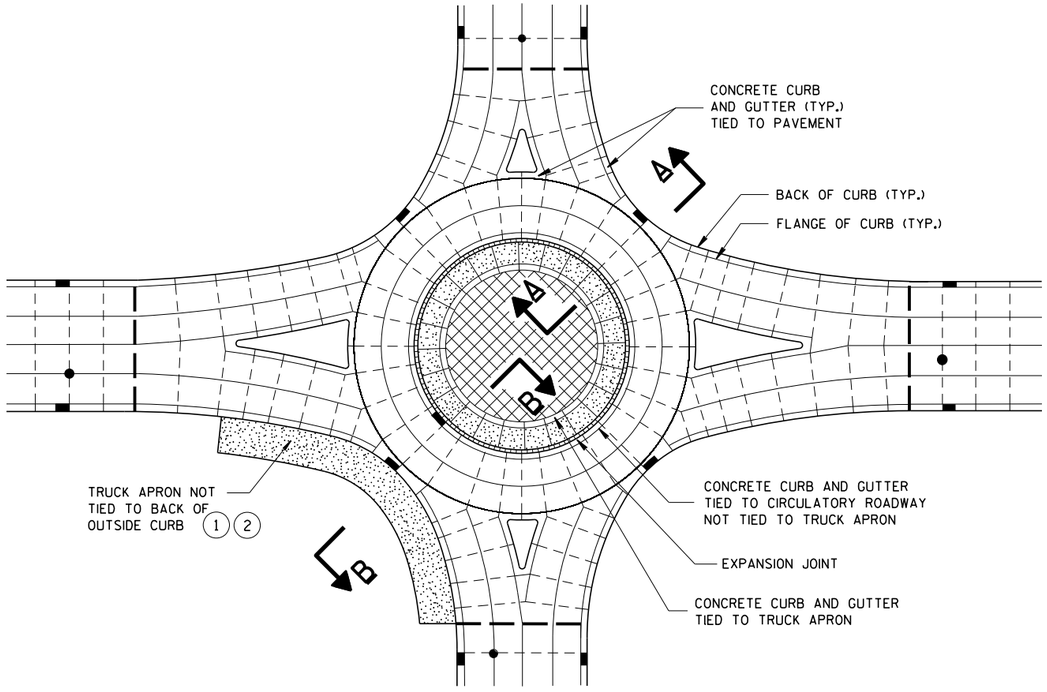
S.D.D. 13 C 4-17



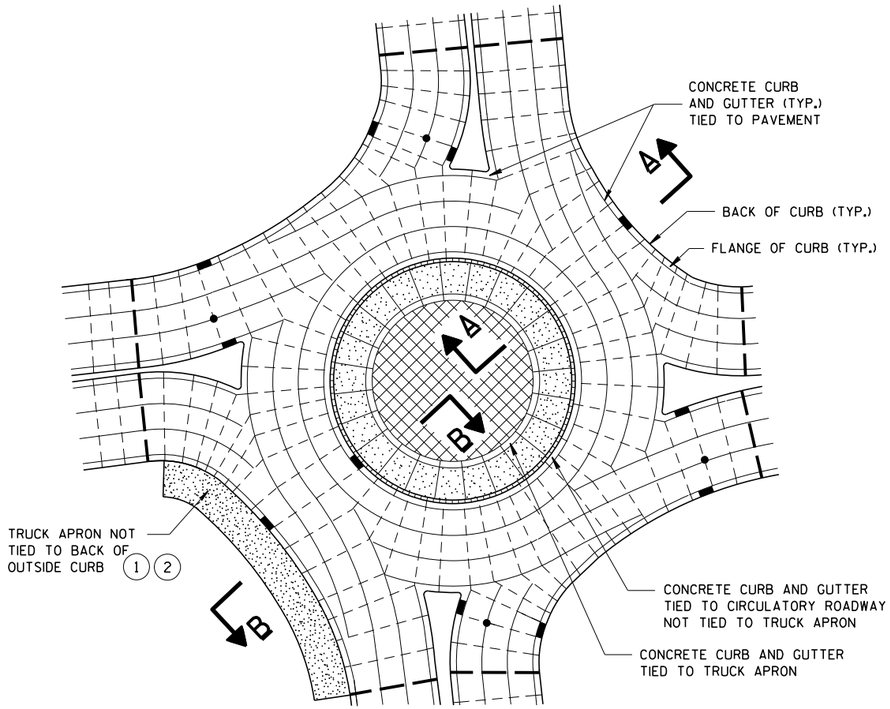
SECTION A-A



SECTION B-B



ISOLATED CIRCLE JOINT LAYOUT FOR ROUNDABOUTS



PINWHEEL JOINT LAYOUT FOR ROUNDABOUTS

GENERAL NOTES

MAXIMUM JOINT SPACING IS IN ACCORDANCE WITH THE TABLE SHOWN ON SDD 13C18 SHEET "a".

USE AN EXPANSION JOINT FILLER MEETING THE REQUIREMENTS OF STANDARD SPECIFICATION 415.

DO NOT DOWEL OR TIE THE TRUCK APRON TRANSVERSE JOINTS.

(1) DESIGNER DETERMINES SIZE AND LOCATION(S) OF TRUCK APRON TO ACCOMMODATE TRACKING OF OVERSIZE/OVERWEIGHT VEHICLES.

(2) TIE THE OUTSIDE TRUCK APRON TO THE BACK SIDE OF CURB ONLY WHEN ENTIRE TRUCK APRON WIDTH IS LESS THAN 3 FEET.

(3) CONFORM TO PLAN CONSTRUCTION DETAILS FOR CIRCULATORY ROADWAY CROSS SLOPE.

LEGEND

- DOWELED JOINT
- TIED JOINT
- EXPANSION JOINT
- POTENTIAL DOWELED EXPANSION JOINT
- TRUCK APRON
- CENTRAL ISLAND
- UTILITY STRUCTURES

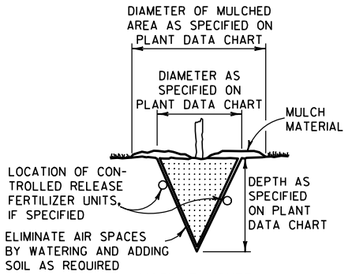
CONCRETE PAVEMENT JOINTING AND STEEL REINFORCEMENT IN ROUNDABOUTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

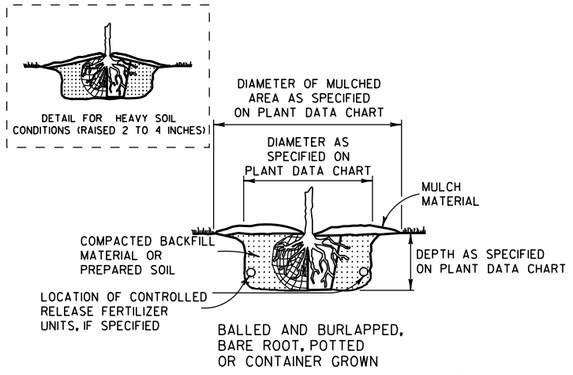
APPROVED
March 2018 — DATE
/S/ Peter Ke — PAVEMENT SUF
FHWA

6

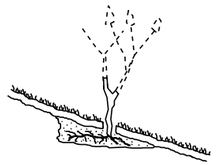
S.D.D. 13 C 18-6e



MACHINE MOVED

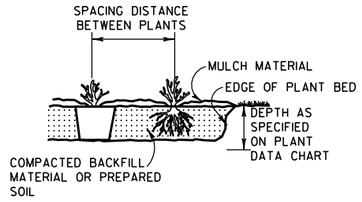


BALLED AND BURLAPPED, BARE ROOT, POTTED OR CONTAINER GROWN



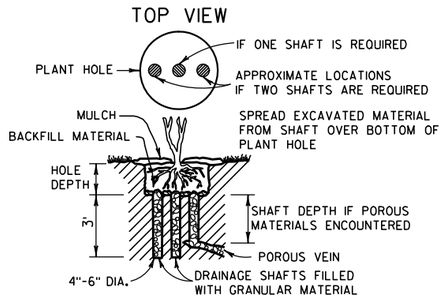
ACCOMMODATE ROOTS (SMOOTH AND STAGHORN SUMAC)

NOTE:
1) ENGINEER SHALL REQUIRE 3 SLITS IN POT TO SPEED DETERIORATION
2) METAL, PLASTIC OR OTHER NONDEGRADABLE POTS SHALL BE REMOVED PRIOR TO PLANTING



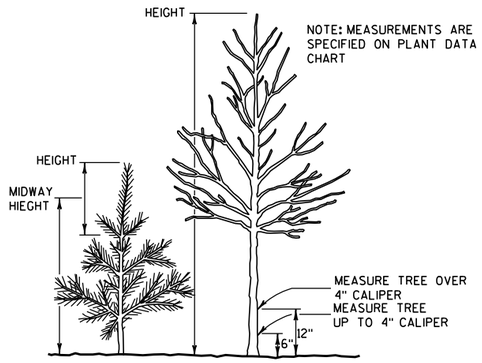
PREPARED BED (BARE ROOT AND POTTED)

PLANTING

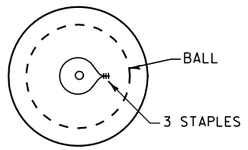


NOTE:
DRAINAGE SHAFT AS SPECIFIED ON PLANT DATA CHART

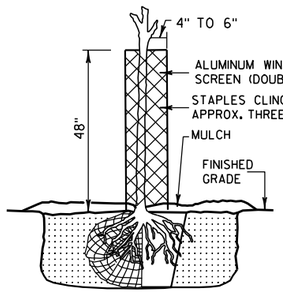
DRAINING



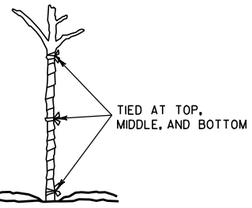
MEASURING



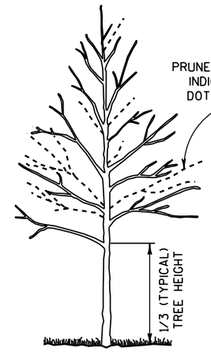
TOP VIEW



RODENT PROTECTION



WRAPPING



TALL DECIDUOUS TREES (ASH, MAPLE, LINDEN, OAK)

SINGLE STEMMED LOW DECIDUOUS TREES (CRABS AND OTHER SINGLE STEM TYPE)

MULTI-STEMMED LOW DECIDUOUS TREES OR LARGE SHRUBS (HAWTHORN, SERVICEBERRY)

NOTE: WHEN PRUNING, PRESERVE CHARACTER AND SHAPE OF TREE. AVOID LEAVING STUBS - REMOVE BRANCH OR TWIG BACK TO THE NEAREST CROTCH
1) PRUNE TO REMOVE DEAD AND BROKEN BRANCHES
2) PRUNE TO REMOVE BRANCHES THAT TOUCH OR ARE TOO CLOSE TO OTHER BRANCHES

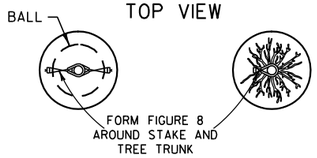


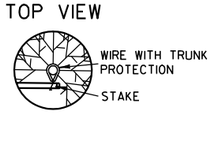
SHRUBS (GRAY DOGWOOD ARROWWOOD VIBURNUM)

SUMAC

TREE TYPE EVERGREENS (PINE, SPRUCE, FIR) EVERGREENS USUALLY ARE NOT PRUNED

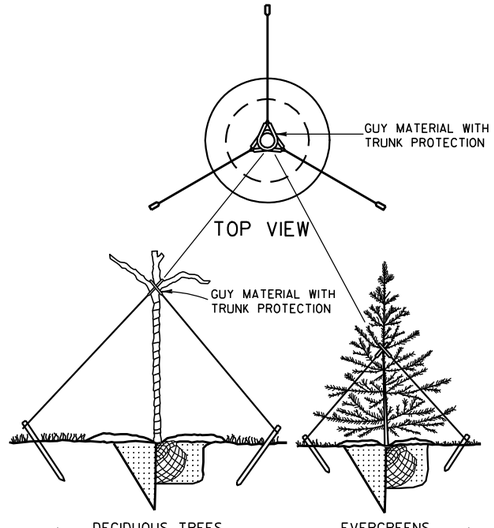
PRUNING



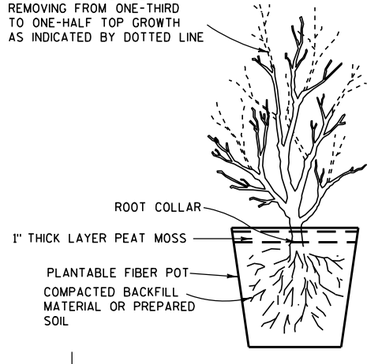


NOTE: BRACING STAKE
1) SHALL BE DRIVEN INTO THE GROUND AS CLOSE TO THE TREE AS POSSIBLE WITHOUT DAMAGING THE BRANCHES.
2) MAY BE DRIVEN AT SUCH AN ANGLE THAT IT DOES NOT PENETRATE THE BALL OR POT.
3) SHALL NOT PROTRUDE ABOVE THE TOP OF THE TREE; AND
4) SHALL HAVE A HOLE NEAR THE TOP TO HOLD THE WIRE IN PLACE.

BRACING



GUYING



POTTING

NOTES

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

BRACING, WRAPPING, GUYING, RODENT PROTECTION, FERTILIZER AND MULCH SHALL BE USED ONLY WHEN SPECIFIED ON THE PLANT DATA CHART (PART OF PLAN) OR SPECIAL PROVISIONS.

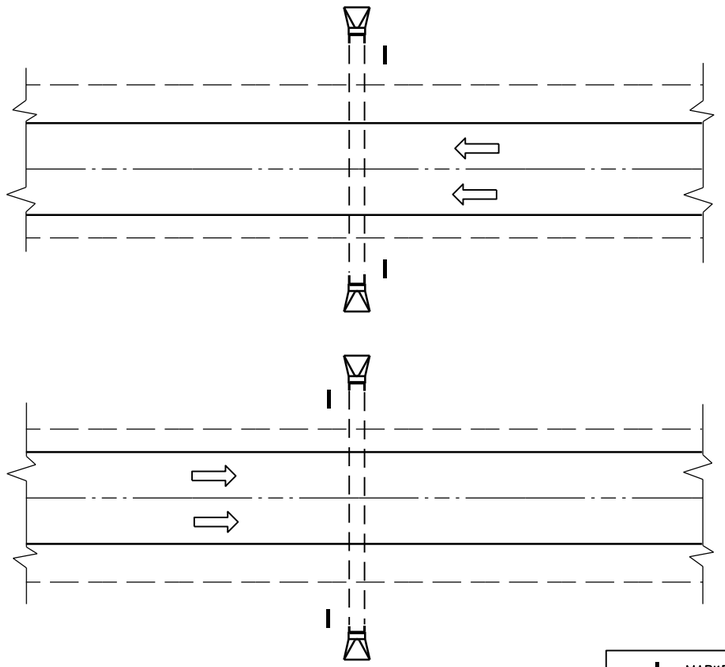
TREE PLANTING DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4/11/94
DATE
/S/ Rory L. Rhinesmith
CHIEF METHODS DEVELOPMENT ENGINEER
FHWA

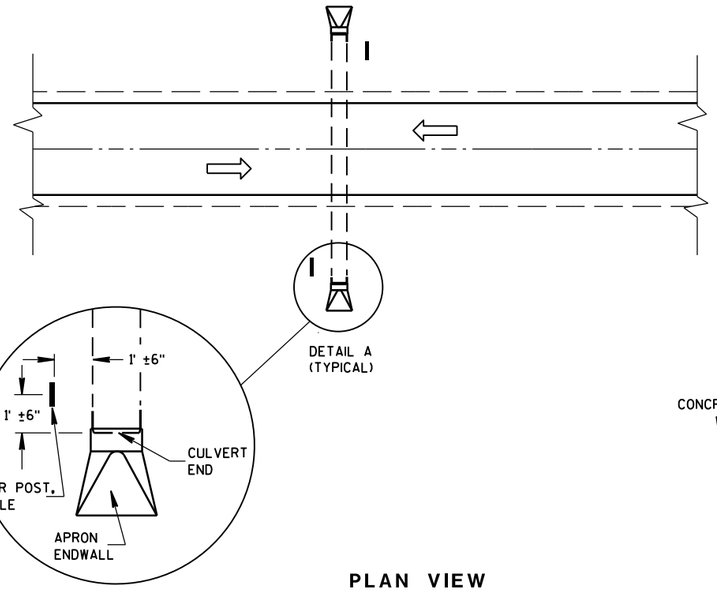
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S.D.D. 14 A 2-1



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

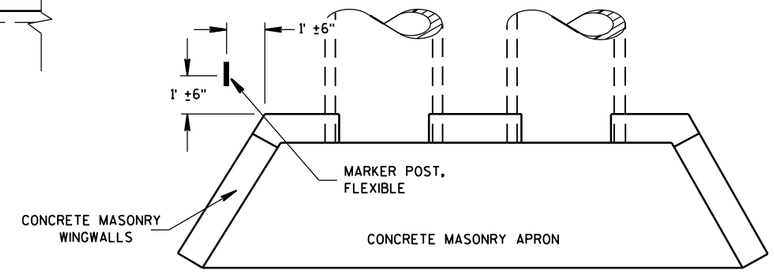
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

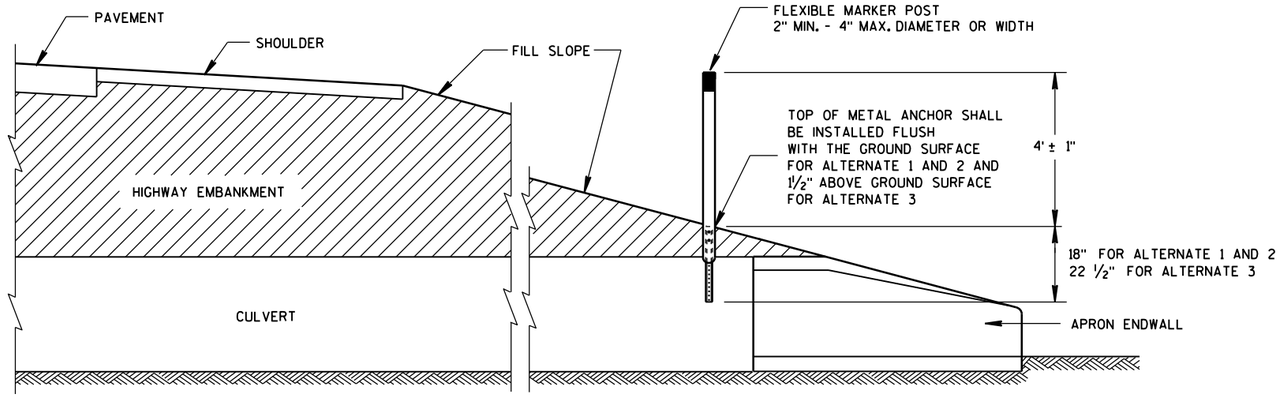
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

FLEXIBLE MARKER POST LOCATION



CROSS SECTION

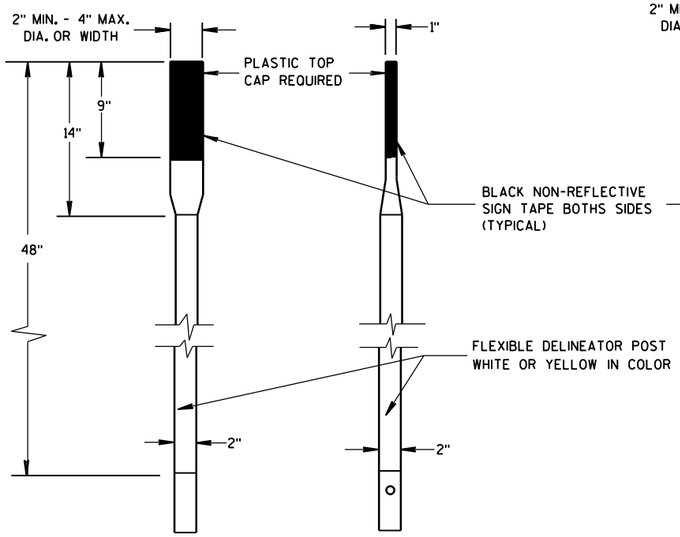
FLEXIBLE MARKER POST

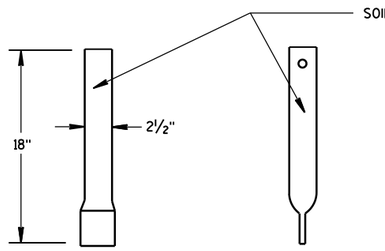
FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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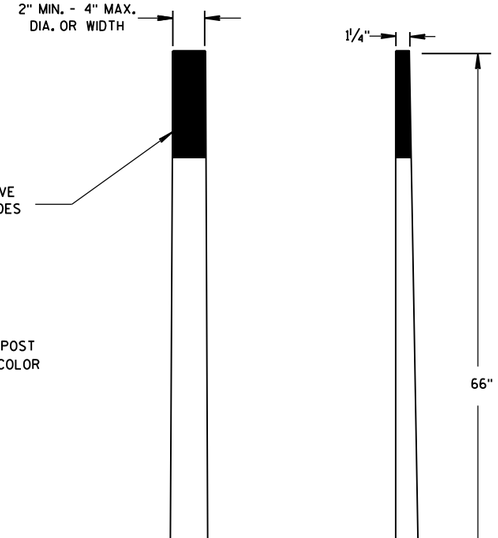
S.D.D. 15 A 3-2a





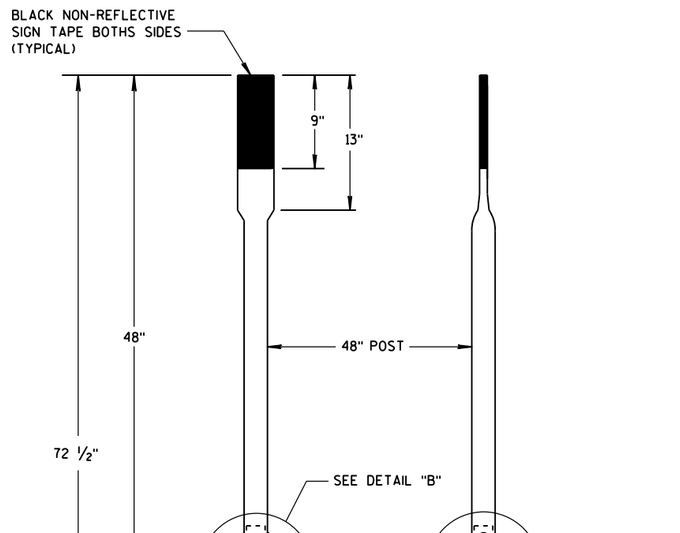
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

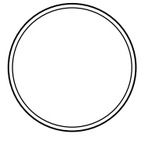
ALTERNATE 2



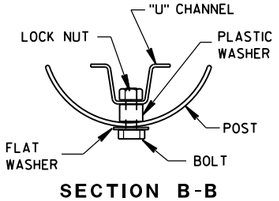
FRONT VIEW SIDE VIEW

ALTERNATE 3

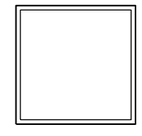
FLEXIBLE MARKER POSTS



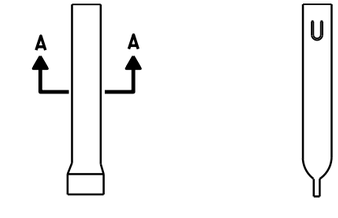
SECTION A-A



SECTION B-B

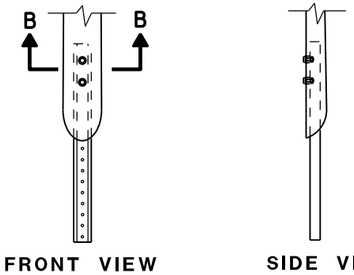


SECTION C-C



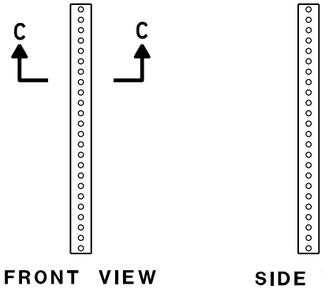
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

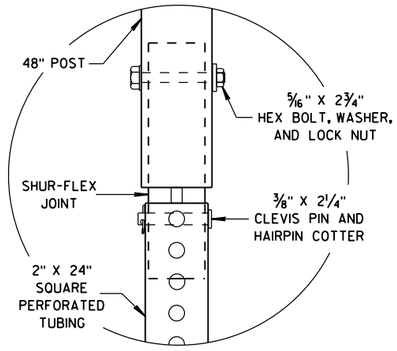
ALTERNATE 2



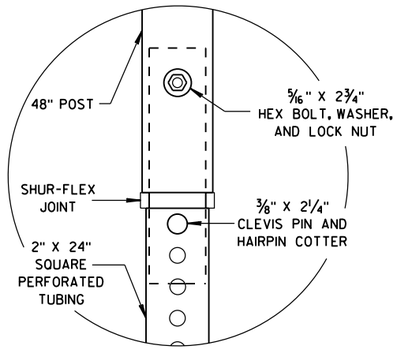
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

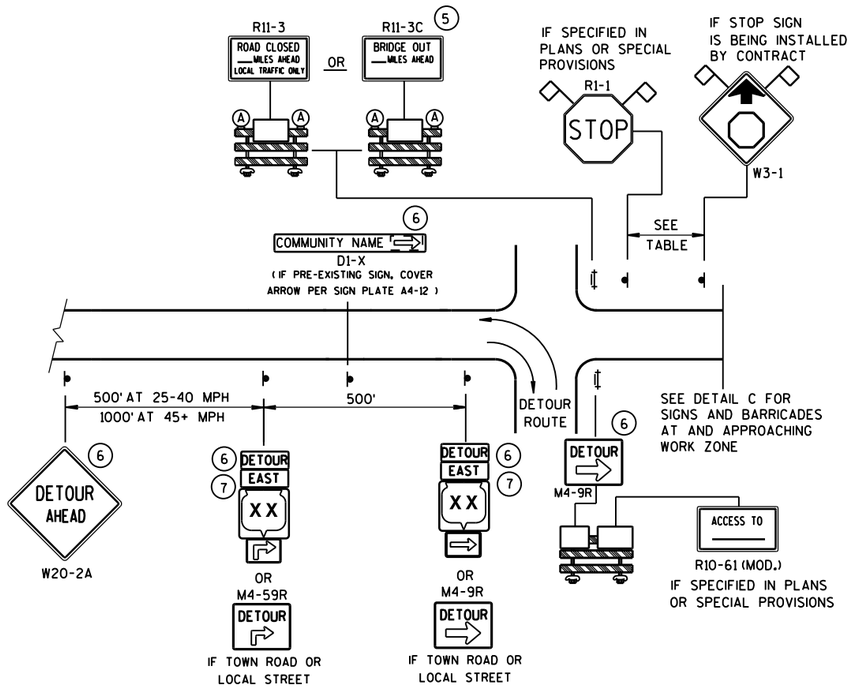
APPROVED
10/1/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6

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

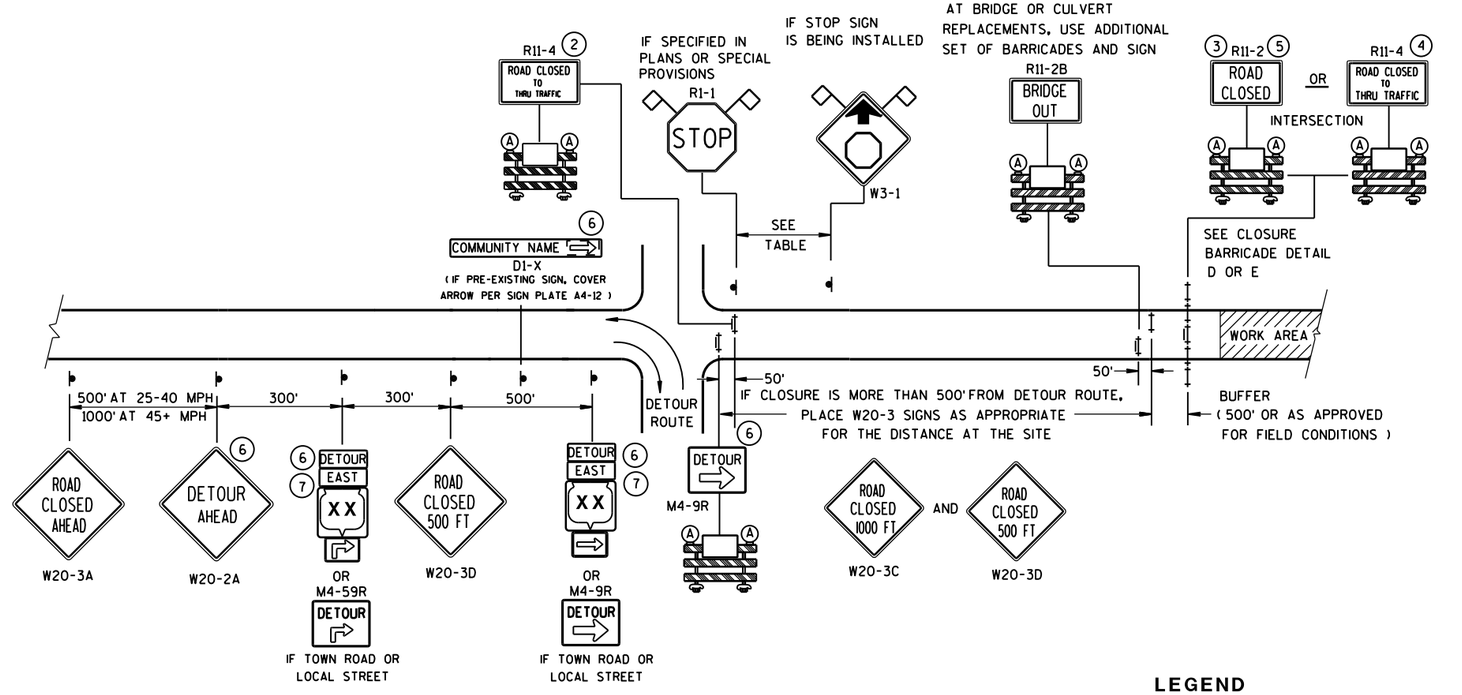
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S.D.D. 15 A 3-2b



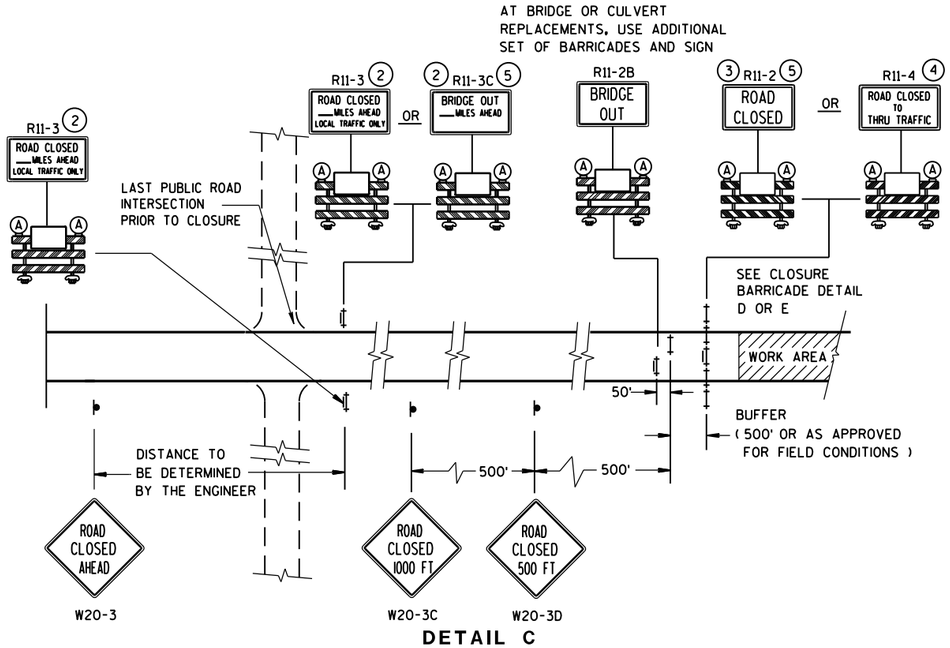
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN 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

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)

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

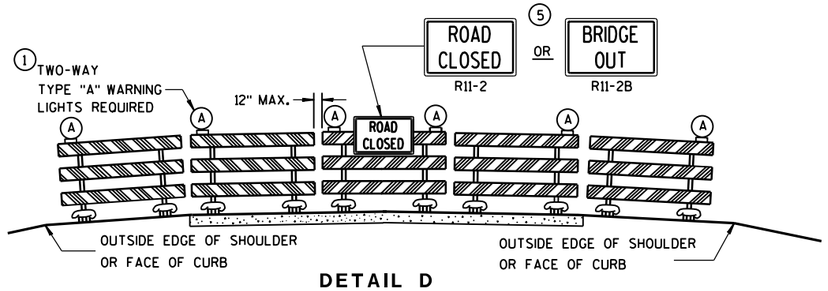
Sept. 2015 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA

6

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

6

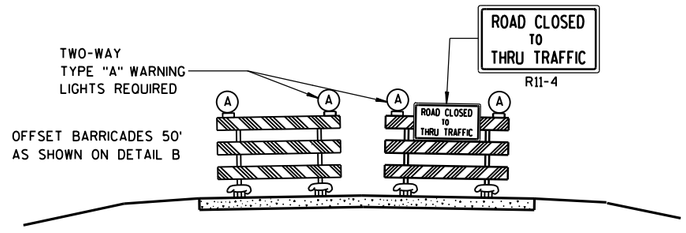
S.D.D. 15 C 2-6a



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.

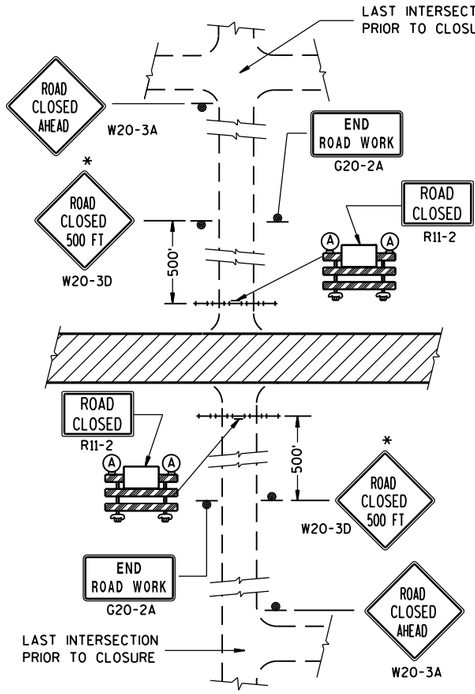
BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

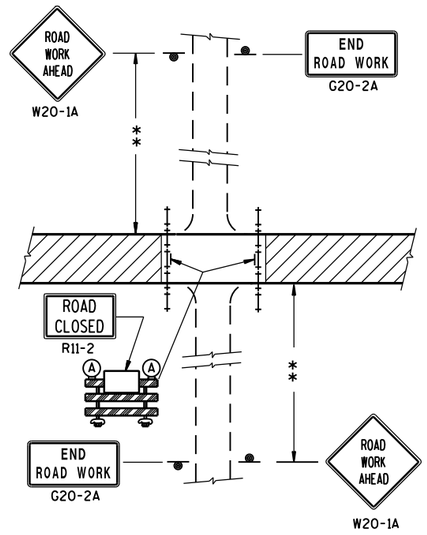
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S.D.D. 15 C 2-6b



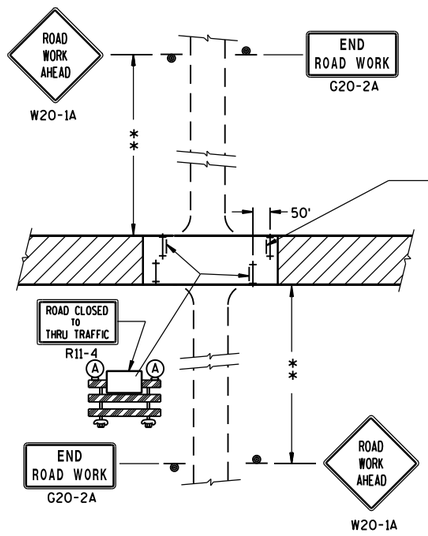
DETAIL 1

(NO ACCESS TO PROJECT)



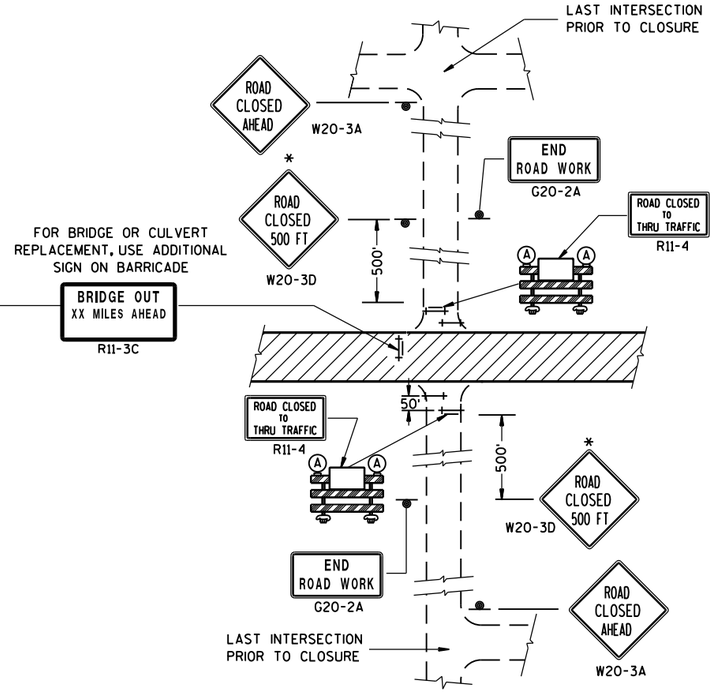
DETAIL 2

(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

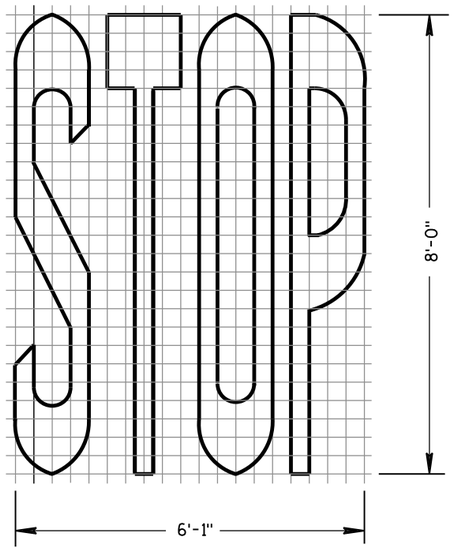
APPROVED
Sept. 2017 — DATE
/S/ Andrew Heidtke — WORK ZONE ENG
FHWA

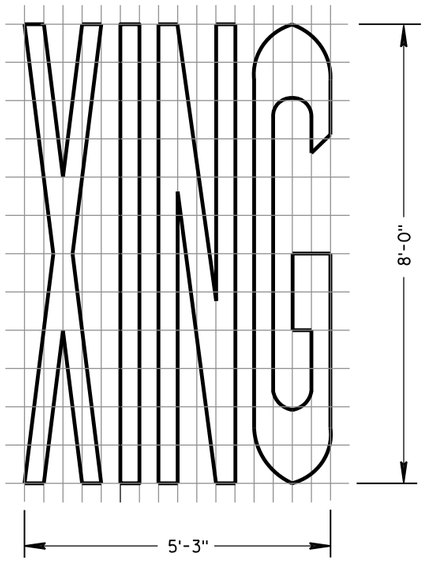
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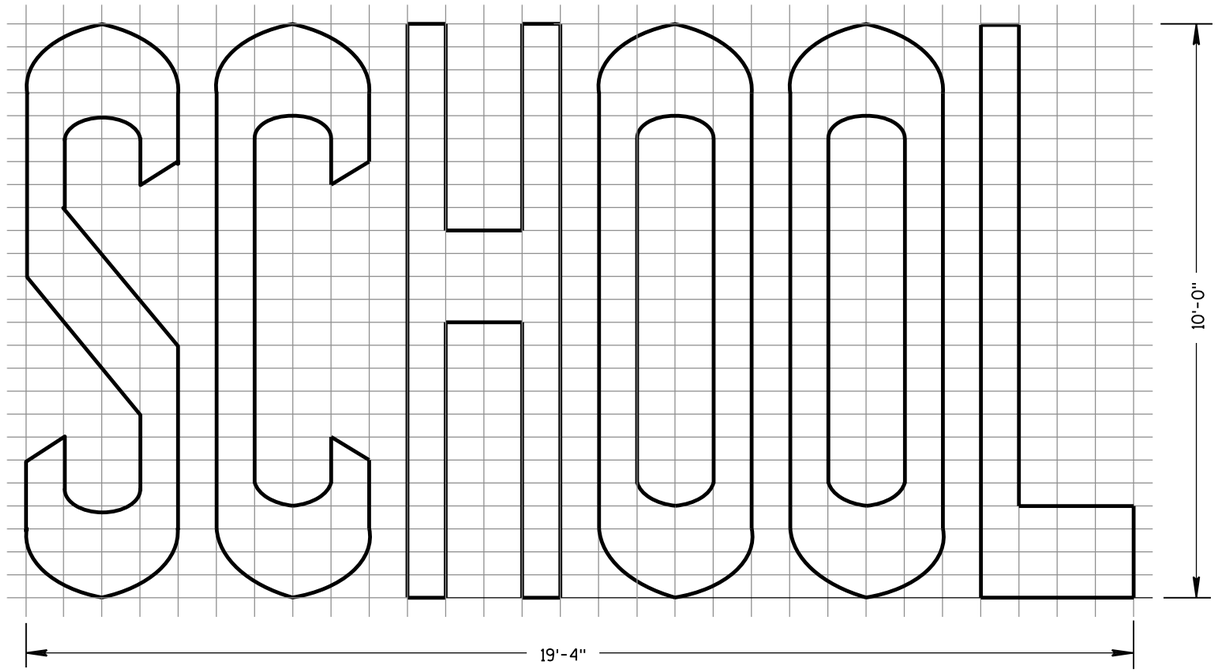
S.D.D. 15 C 3-4

GENERAL NOTES

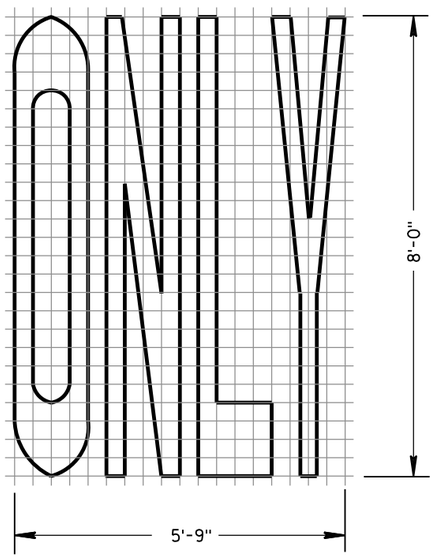
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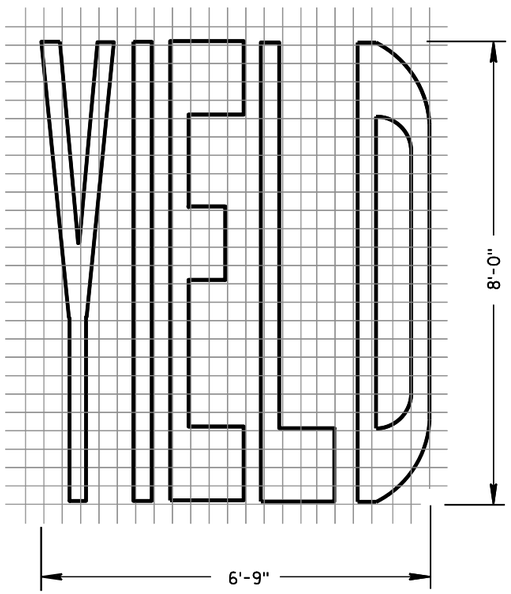


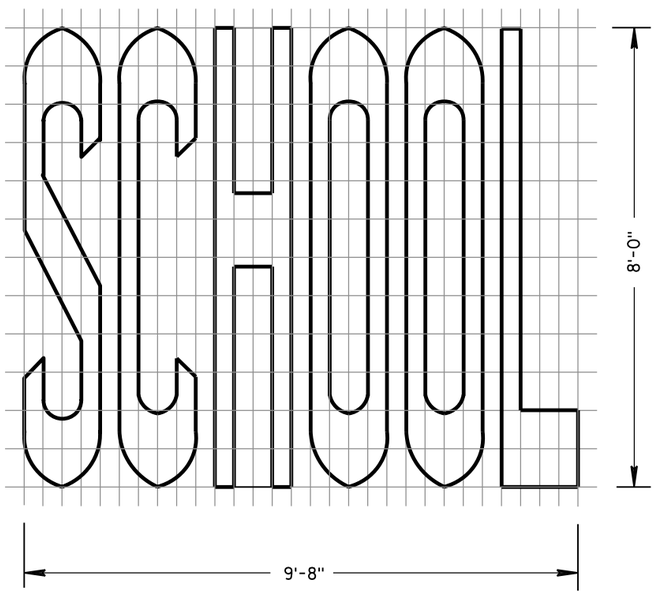




TWO-LANE







SINGLE-LANE

PAVEMENT MARKING WORDS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MARK
EER
FHWA

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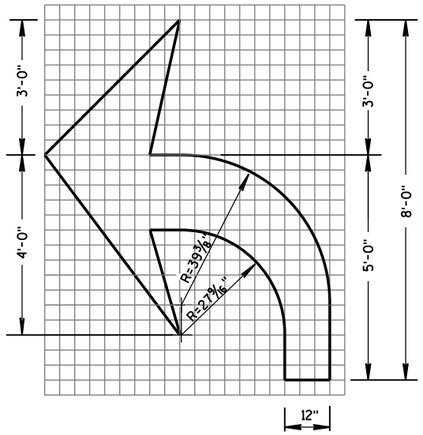
S.D.D. 15 C 7-14b

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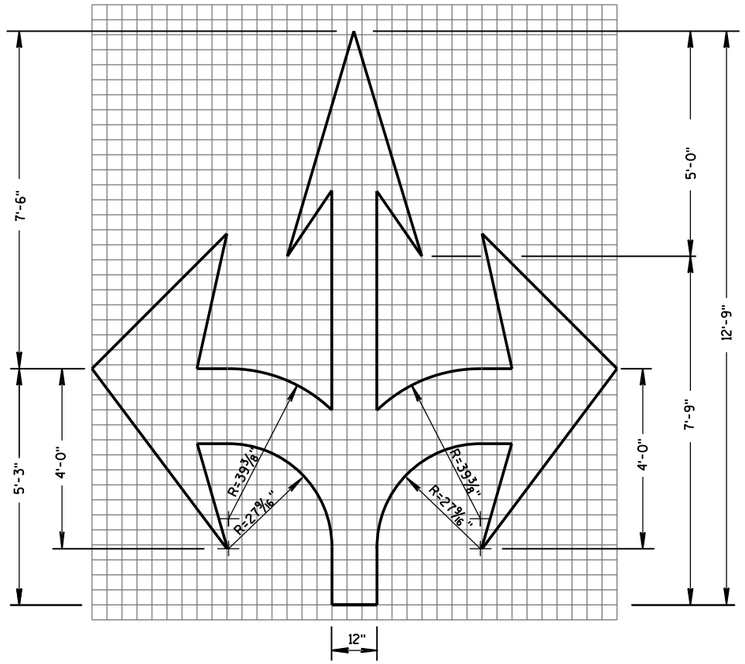
S.D.D. 15 C 7-14b

GENERAL NOTES

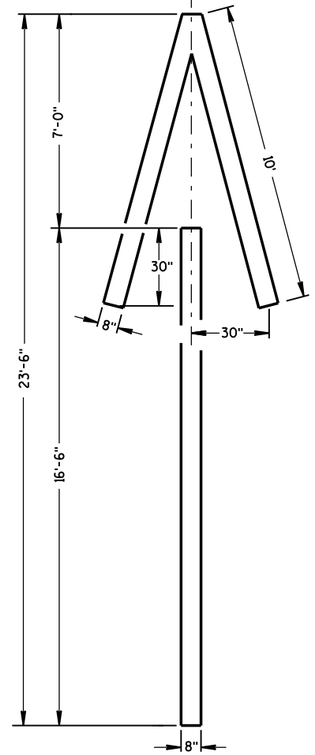
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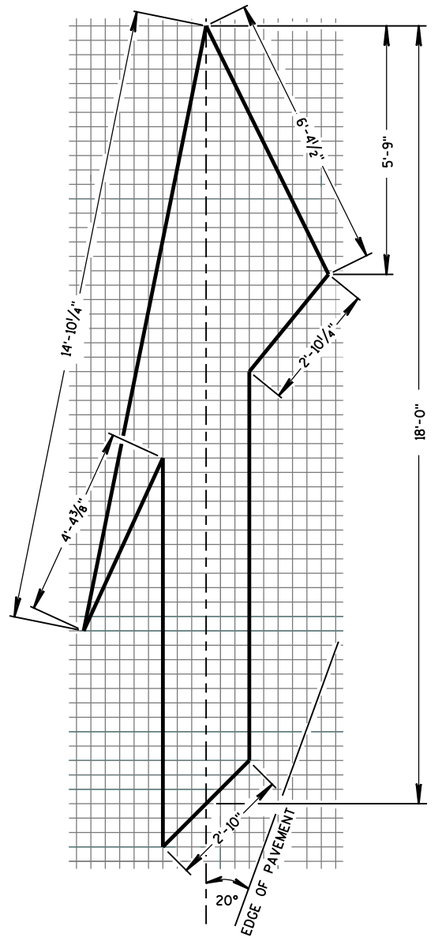
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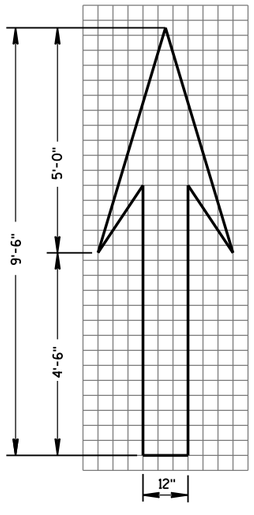
TYPE 6



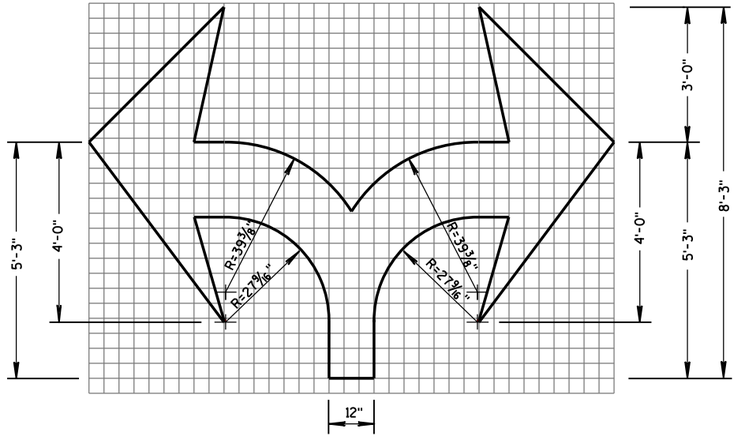
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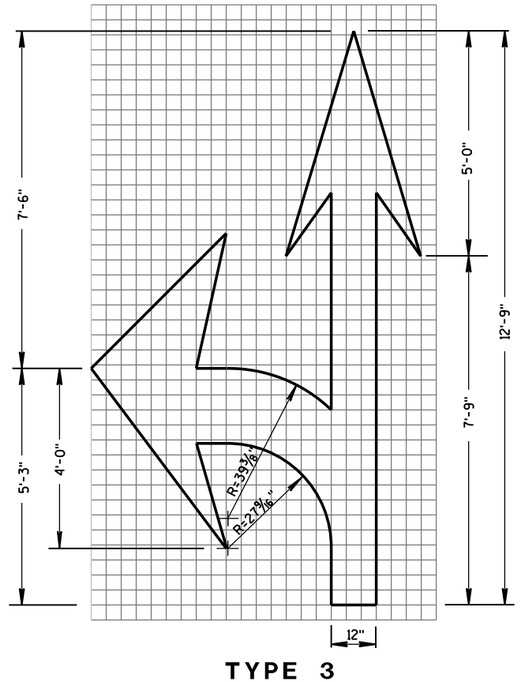
TYPE 5 LANE DROP ARROW



TYPE 1



TYPE 7



TYPE 3

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

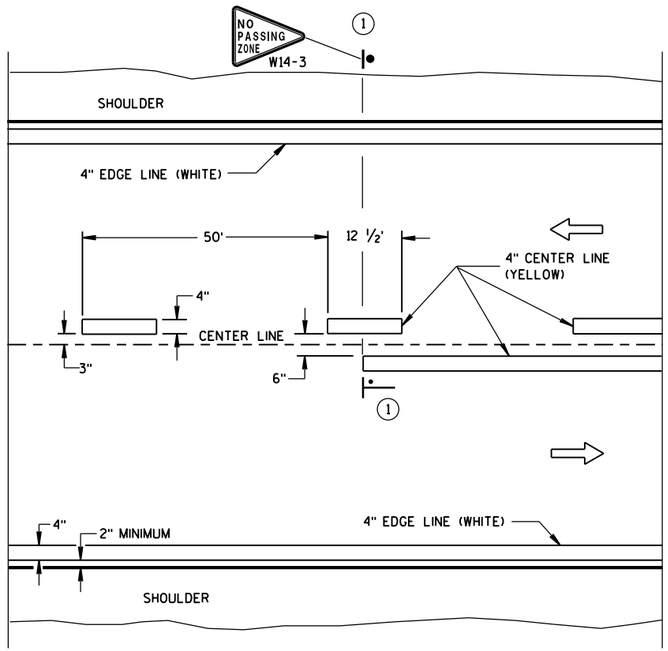
APPROVED
June 2017 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MAR[illegible]NEER
FHWA

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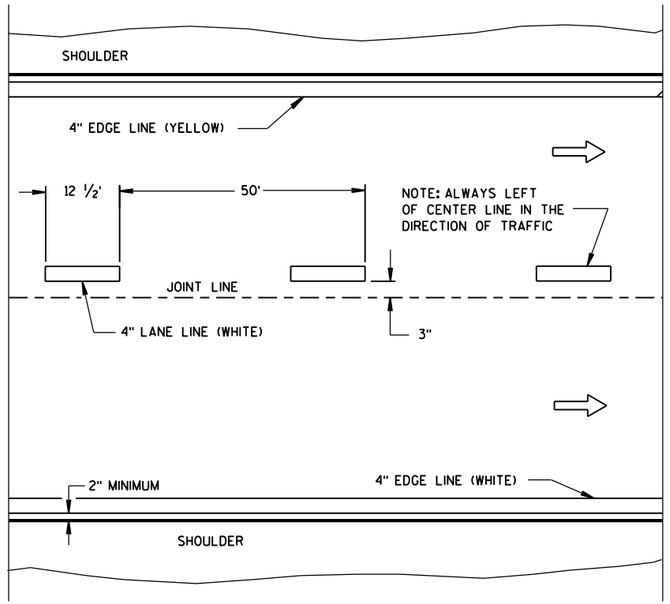
S.D.D. 15 C 7-14c

6

S.D.D. 15 C 7-14c



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

GENERAL NOTES

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

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

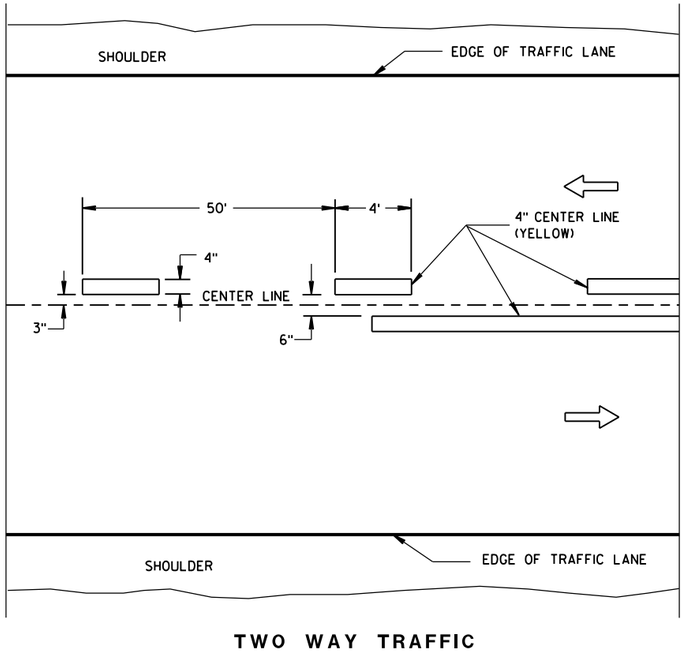
NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

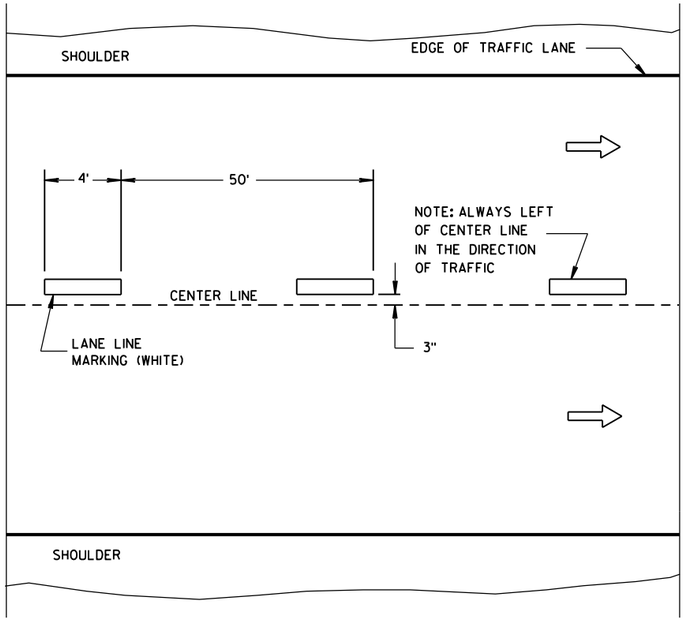
LEGEND

"T" MARKING

POST MOUNTED SIGN



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

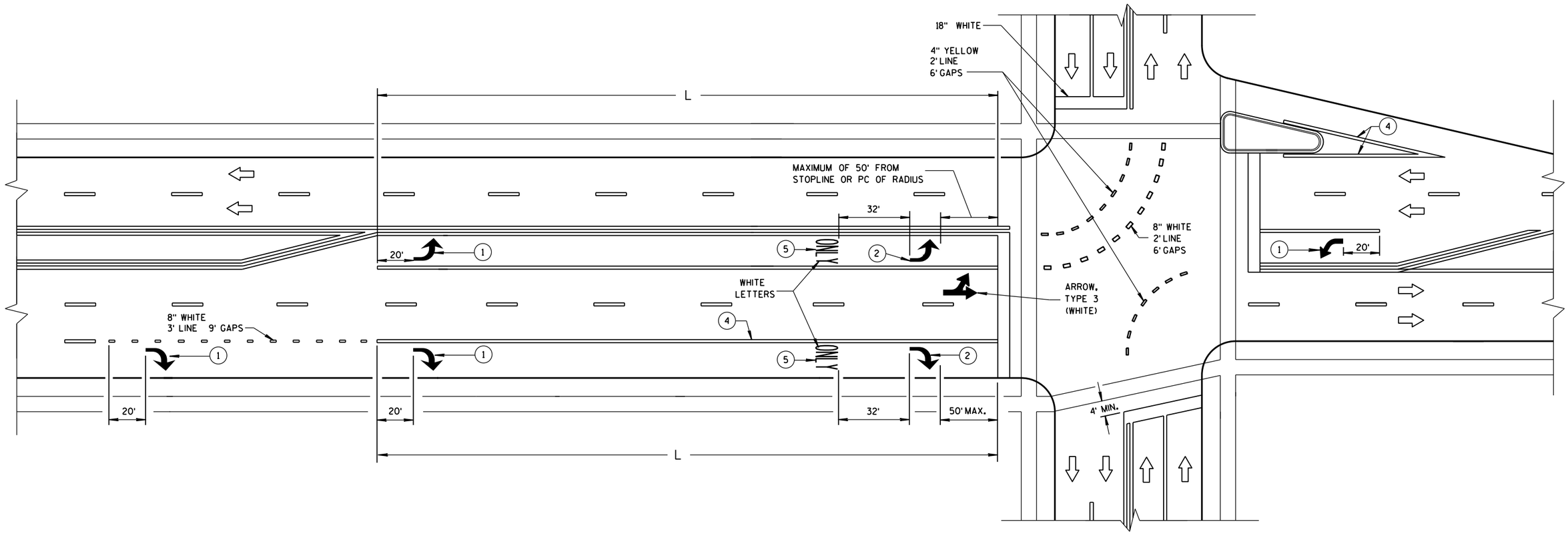
LONGITUDINAL MARKING (MAINLINE)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2017 DATE	/S/ Matthew R. Rauch STATE SIGNING AND MAR[illegible]INEER
FHWA	

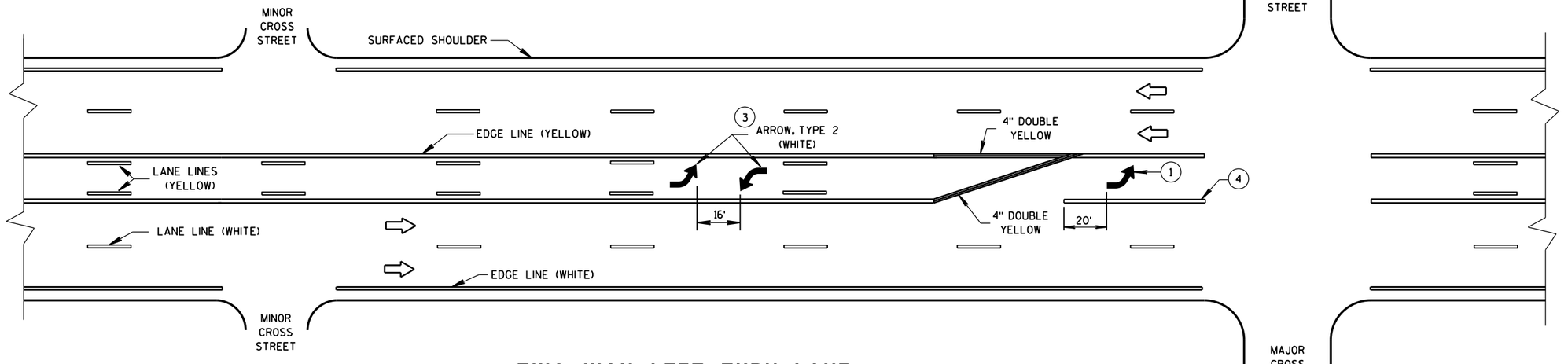
6

S.D.D. 15 C 8-18a

6

S.D.D. 15 C 8-18a





GENERAL NOTES

(1) REQUIRED ARROW, TYPE 2 (WHITE).

(2) REQUIRED ARROW, TYPE 2 (WHITE) WHEN L IS GREATER THAN 78 FEET AND LESS THAN OR EQUAL TO 166 FEET.

(3) A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.

(4) 8" WHITE

(5) REQUIRED WORD ONLY WHEN L IS GREATER THAN 166 FEET.

NOTE:
ARROW SYMBOL (⇨)
SHOWS DIRECTION OF TRAVEL

L = LENGTH OF TURN BAY

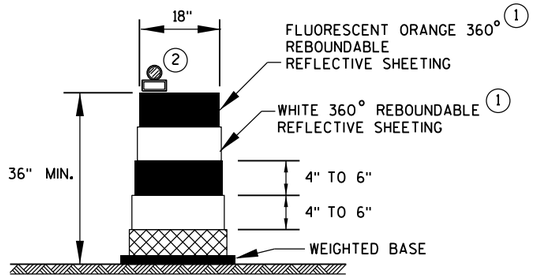
TWO WAY LEFT TURN LANE

PAVEMENT MARKING
(TURN LANES)

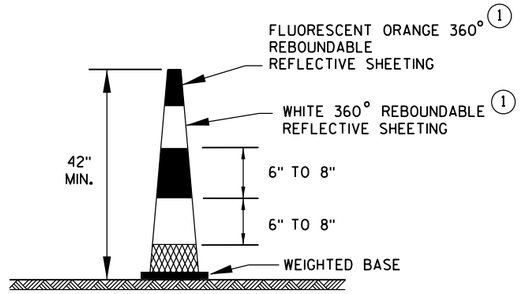
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 15 C 8-18b



DRUM

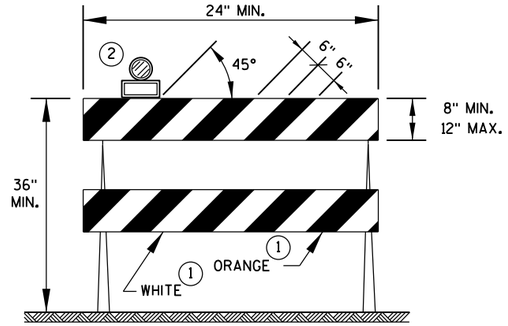


42" CONE

DO NOT USE IN TAPERS
1/2 SPACING OF DRUMS

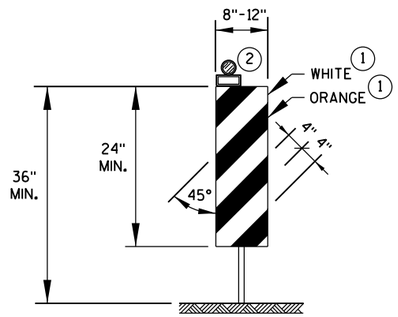
GENERAL NOTES

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



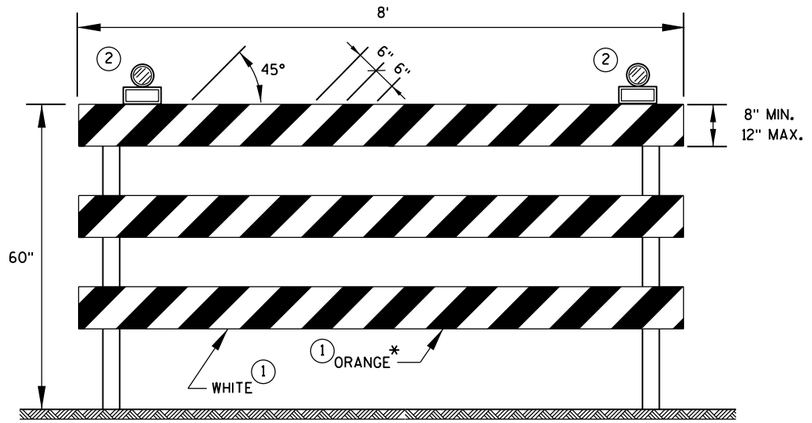
TYPE 2 BARRICADE

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



VERTICAL PANEL

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



TYPE 3 BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION, USE RED SHEETING.

CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

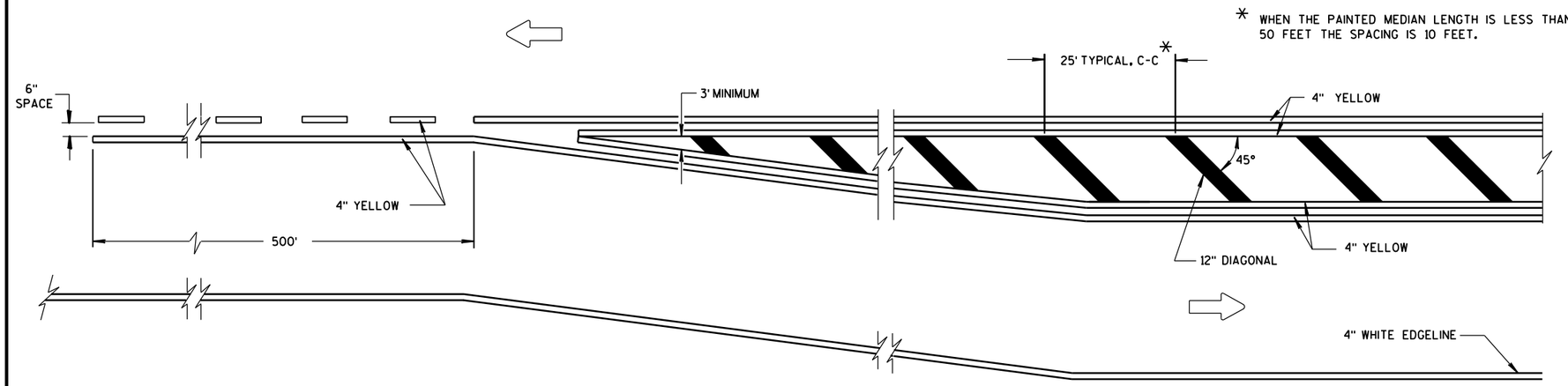
June 2017 — DATE

/S/ Andrew Heidtke — WORK ZONE ENG

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S.D.D. 15 C 11-7b

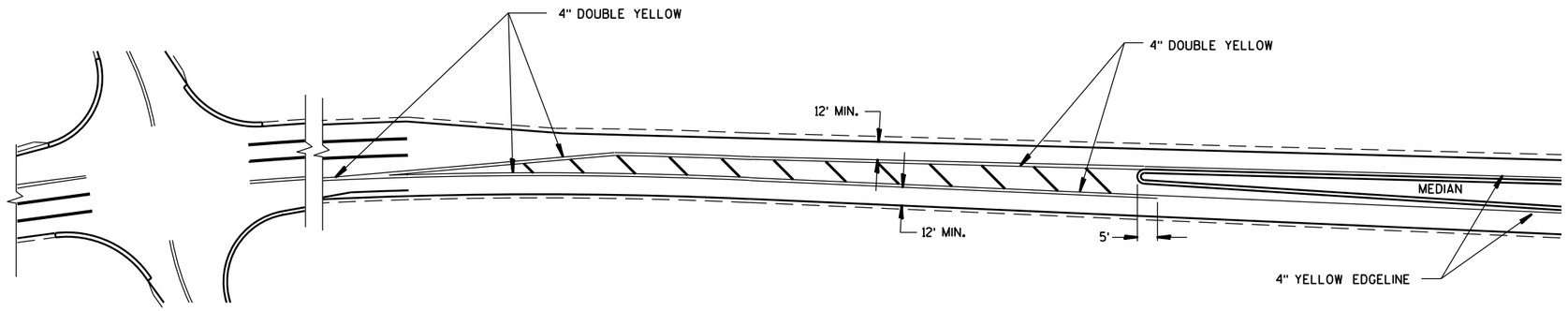


MEDIAN ISLAND DETAIL

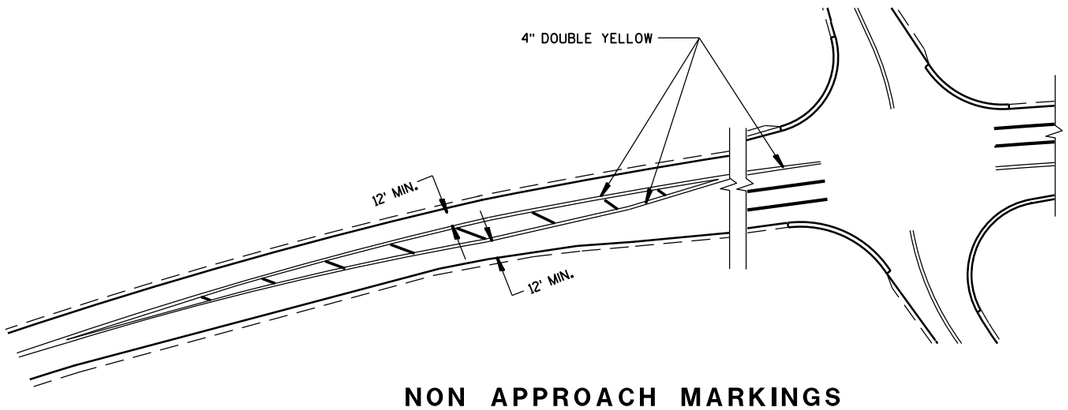
GENERAL NOTE

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

DIRECTION OF TRAVEL



APPROACH MARKINGS FOR OTHER MEDIAN TYPES



NON APPROACH MARKINGS

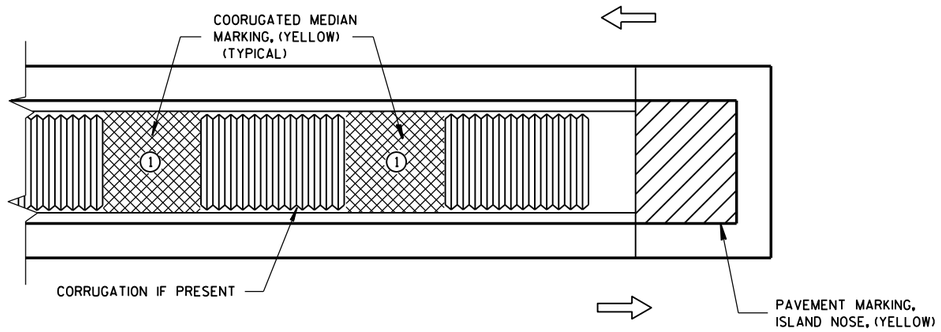
MEDIAN ISLAND MARKING	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2017 DATE FHWA	/S/ Matthew Rauch STATE SIGNING AND MARK 170 EER

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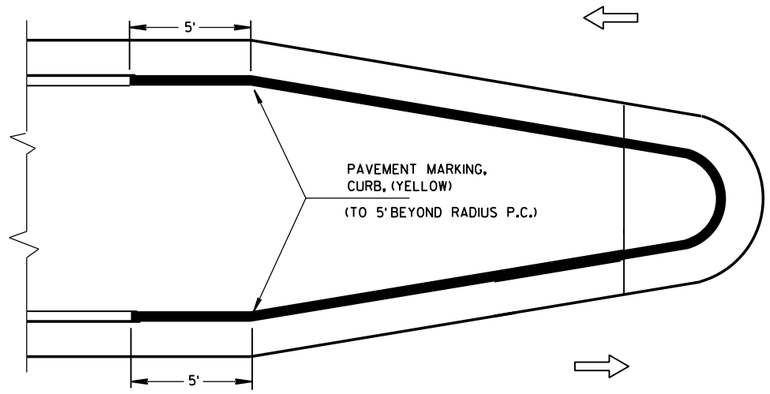
S.D.D. 15 C 18-4

6

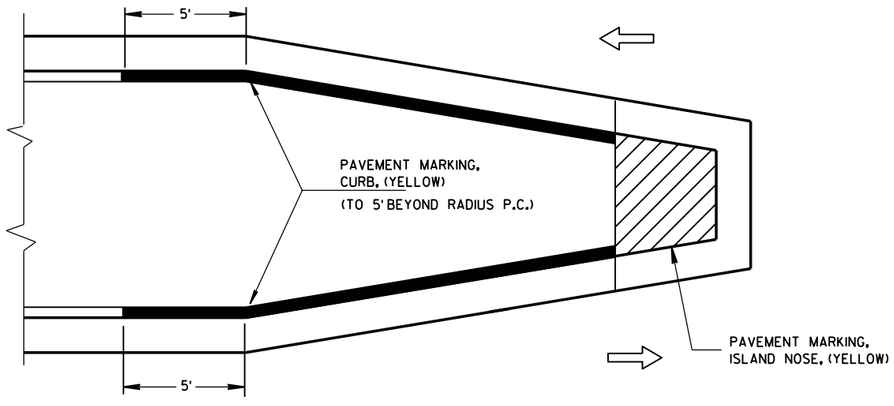
S.D.D. 15 C 18-4



MEDIAN ISLAND WITH SQUARE BLUNT NOSE



MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS

GENERAL NOTES

(1) WHEN CONCRETE CORRUGATED MEDIAN IS CONSTRUCTED TO SEPARATE TRAFFIC OPERATING IN THE OPPOSING DIRECTION YELLOW PAVEMENT MARKING SHALL BE APPLIED TO THE FLAT PORTION OF THE CONCRETE CORRUGATED MEDIAN. THE ITEM OF PAVEMENT MARKING, CONCRETE CORRUGATED MEDIAN, WILL BE MEASURED IN PLACE AND AND ACCEPTED IN ACCORDANCE WITH THE CONTRACT AND PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT.

ISLAND NOSE MARKING

CURB MARKING

CORRUGATED MEDIAN MARKING

DIRECTION OF TRAVEL

PAVEMENT MARKING
(ISLANDS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2017
DATE

/S/ Matthew Rauch
STATE SIGNING AND MARK ENGINEER

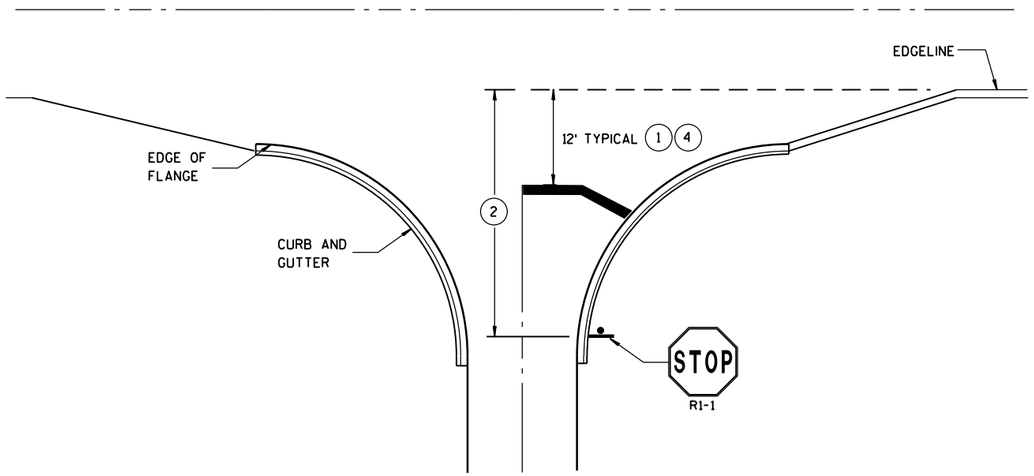
FHWA

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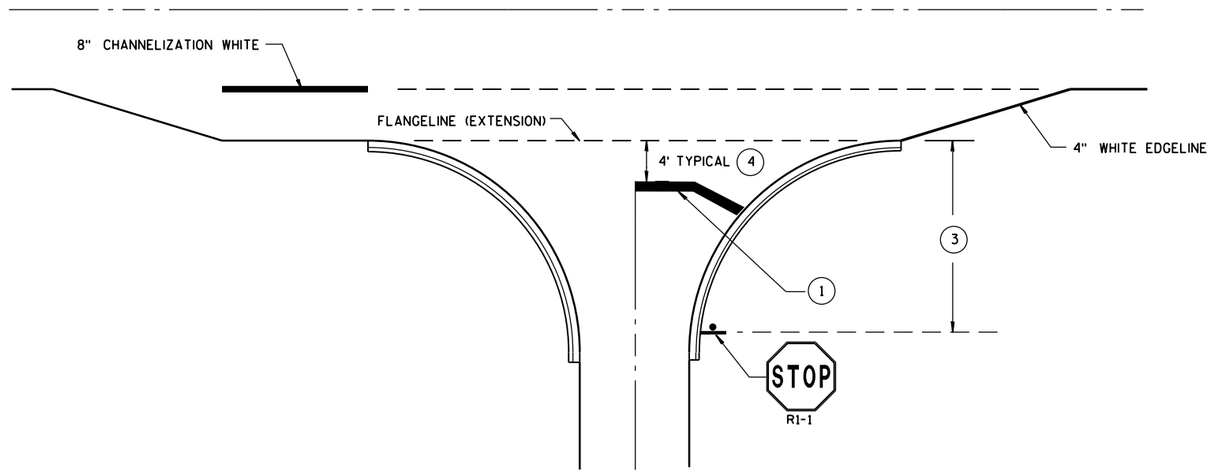
S.D.D. 15 C 27-2b

6

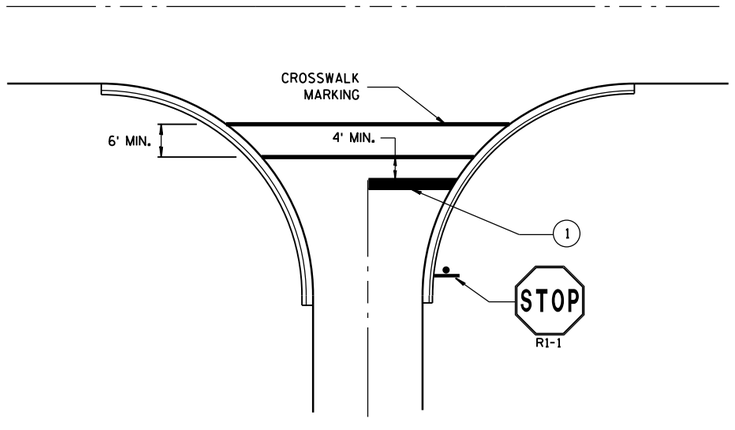
S.D.D. 15 C 27-2b



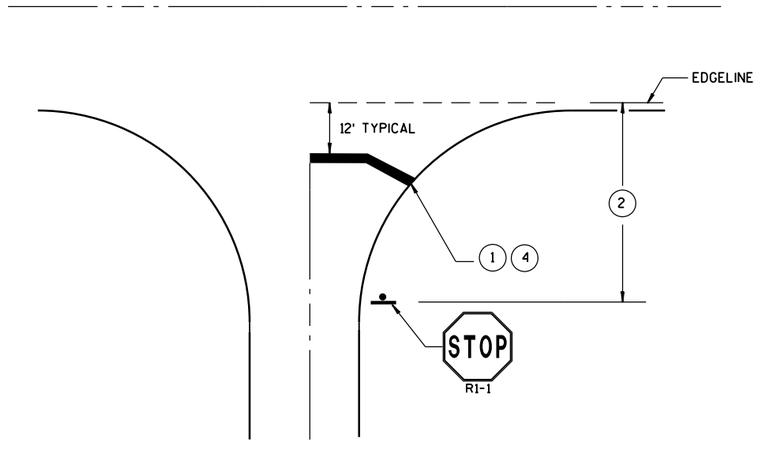
TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER



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

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

(1) 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE 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. (NO CLOSER THAN 4 FEET).

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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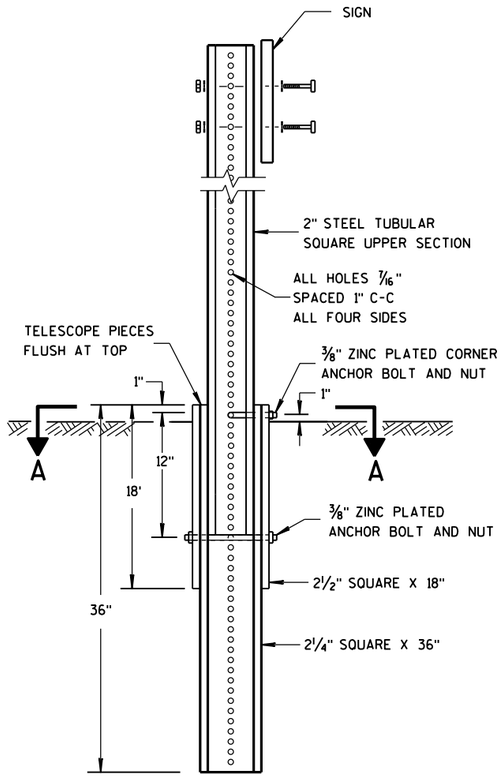
Sept., 2017 — DATE

/S/ Matthew R. Rauch — STATE SIGNING AND MAR[illegible]NEER

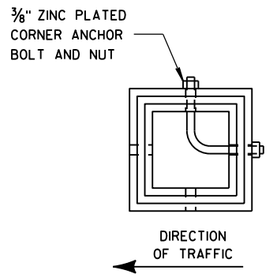
FHWA

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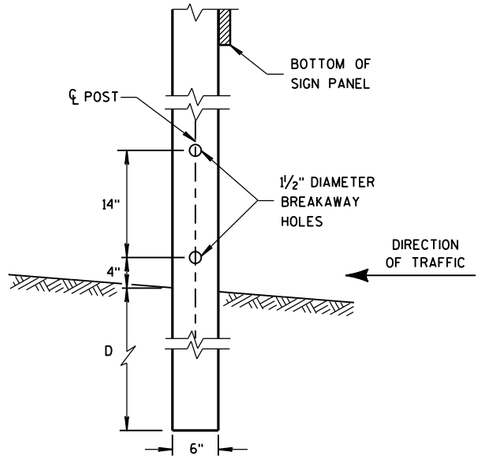
S.D.D. 15 C 33-3



DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



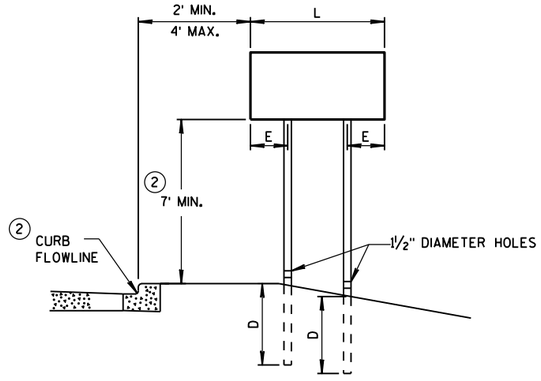
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

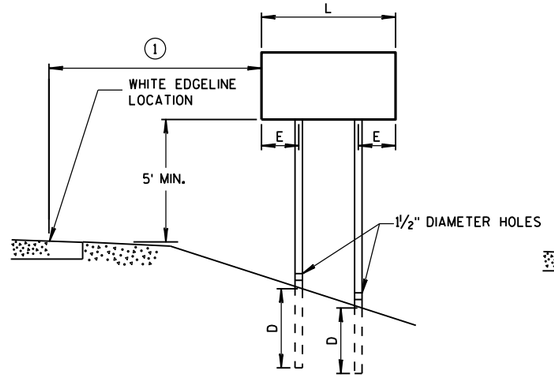
(1) 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

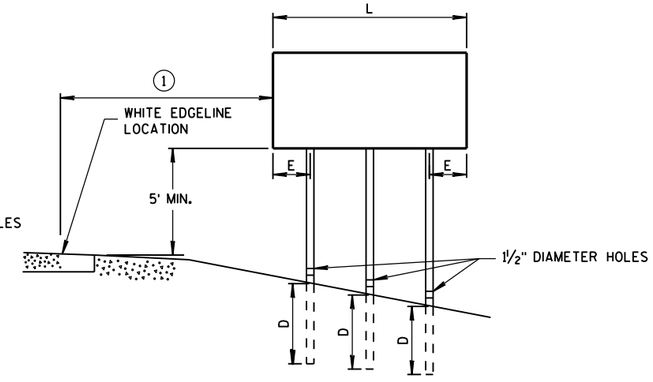
(2) THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.

(3) FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.



URBAN AREA





RURAL AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

TUBULAR STEEL POSTS

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

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

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

WOOD POST EMBEDMENT DEPTH

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

4" X 6" WOOD POST

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

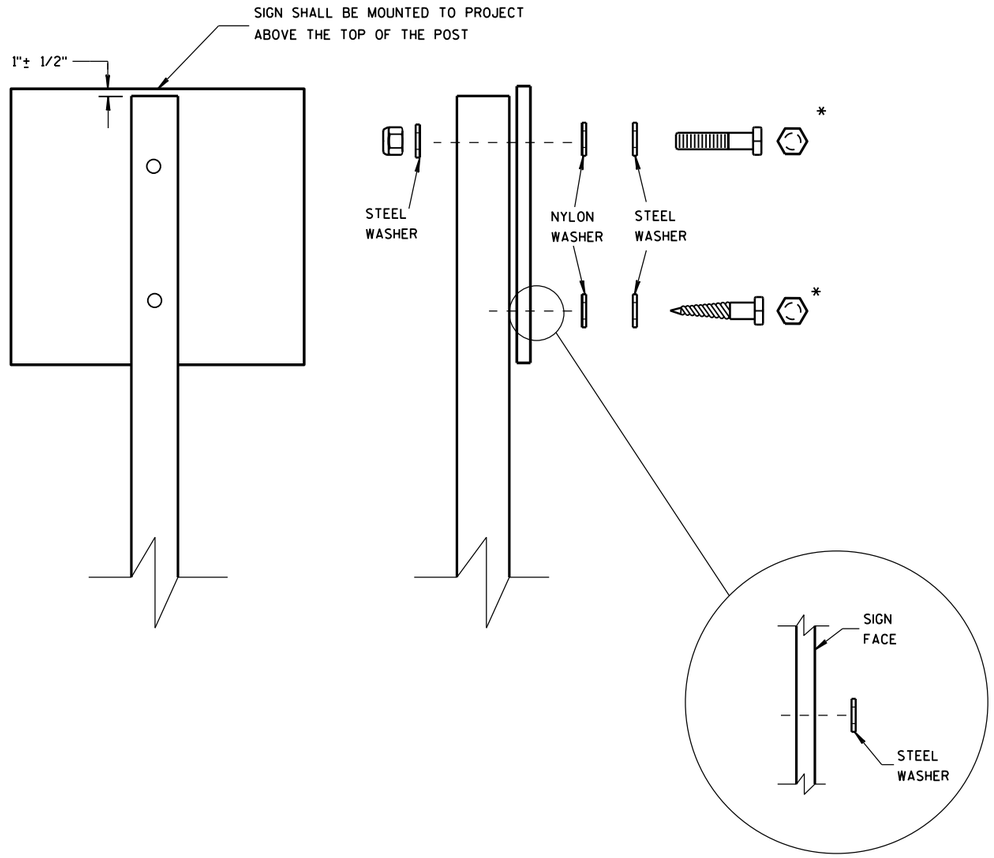
SEE NOTE (3)

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 15 D 38-2a



WASHER PLACEMENT WHEN SIGN HAS OTHER THAN TYPE H OR TYPE F FACE

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

A. HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: A 153, CLASS D, OR SC 3

B. ELECTRO-GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: B 633, TYPE III, SC 3

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

WOOD POSTS (4" x 4" or 4" x 6")

LAG SCREWS - 3/8" X 3"

MACHINE BOLTS - 5/16" X 6-1/2" OR 7" LENGTH W/ NUTS

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" LENGTH W/ NUTS

RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -

1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL

1-1/4" O.D. X 3/8" I.D. X .080 NYLON FOR ALL TYPE H SIGNS

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

6

6

S.D.D. 15 D 38-2b

S.D.D. 15 D 38-2b

ATTACHMENT OF SIGNS TO POSTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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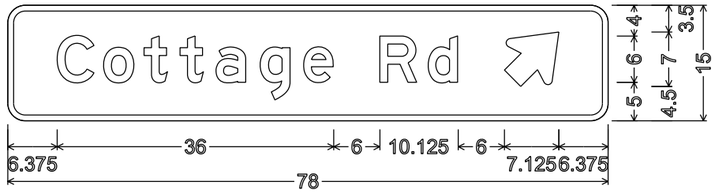
June 2017
DATE

/S/ Andrew Heldtke
WORK ZONE ENG

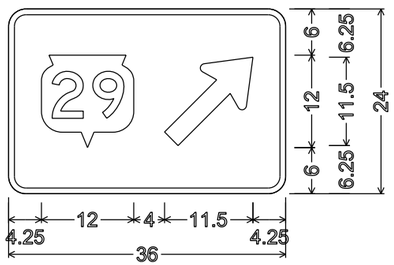
FHWA

NOTES

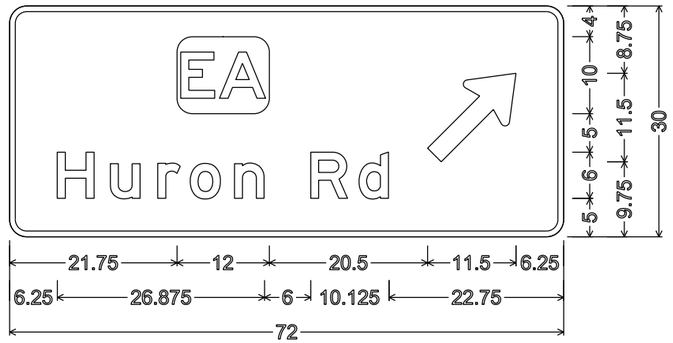
1. All Signs Type II - Type H Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - E



D1-1 ; 2.250" Radius, 0.750" Border



D1-1 ; 2.250" Radius, 0.750" Border



D1-2 ; 2.250" Radius, 0.750" Border

7

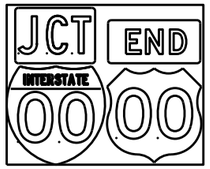
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PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	PERMANENT SIGNING	SHEET NO: 175	E

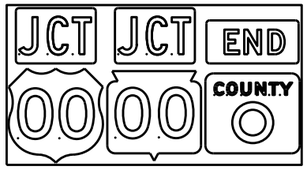
TYPICAL ASSEMBLIES



J1-1



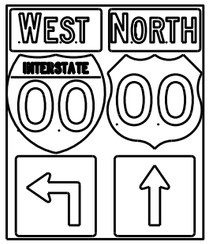
J1-2



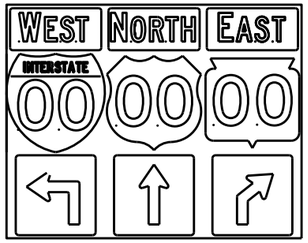
J1-3



J2-1



J2-2

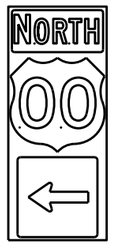


J2-3

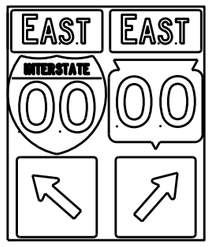


JV

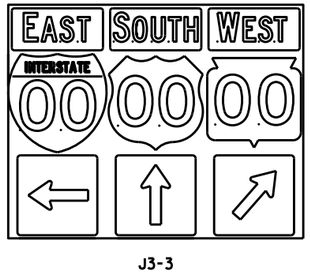
(Typical Vertical J-Assembly
See Note 10 and 11)



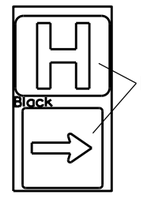
J3-1



J3-2



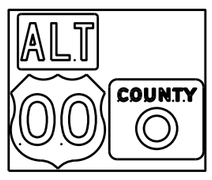
J3-3



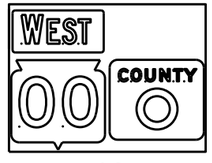
JH-1



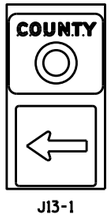
J4-1



J4-2



J4-2



J13-1



J12-1



J32-1



J33-1

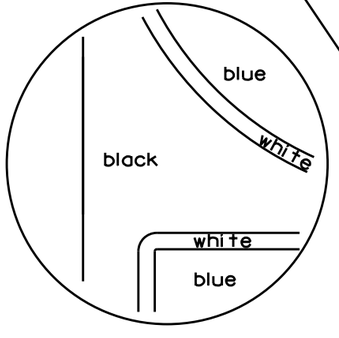


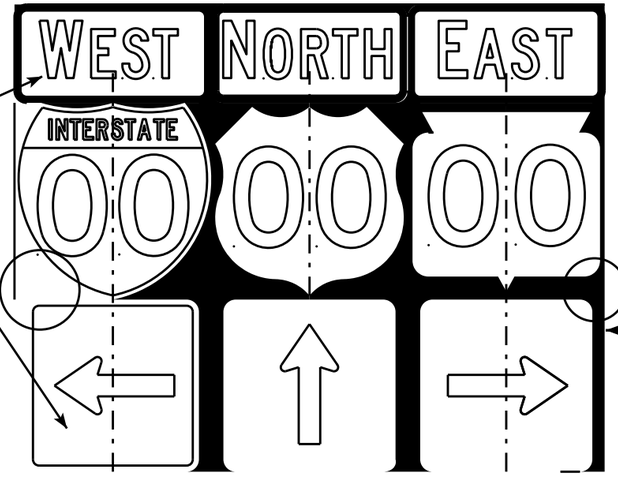
J23-1

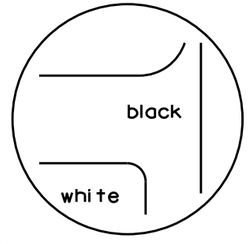


J22-1

blue background
with interstate







black background

NOTES

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

ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

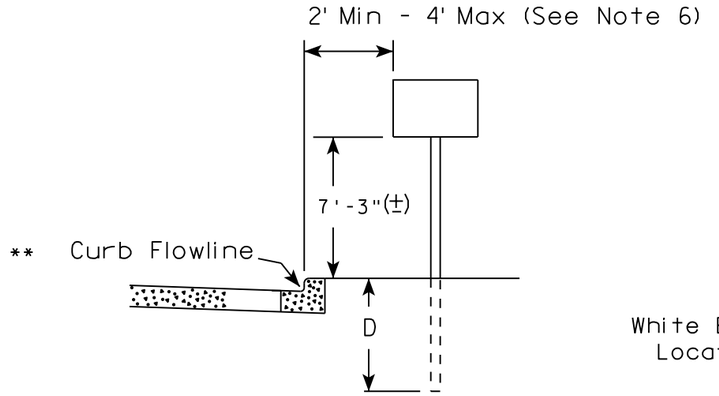
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

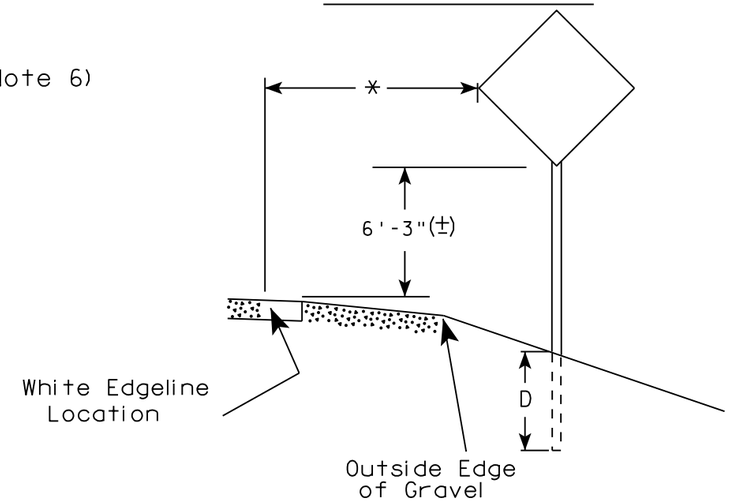
DATE 2/06/14 PL... A2-1S.8

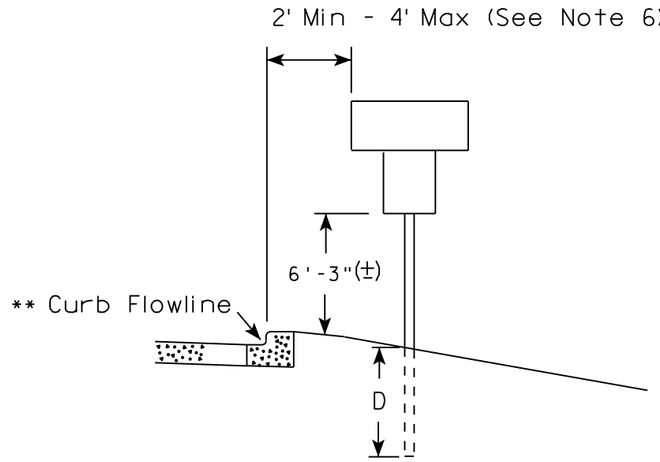
PROJECT NO: | SHEET NO: E

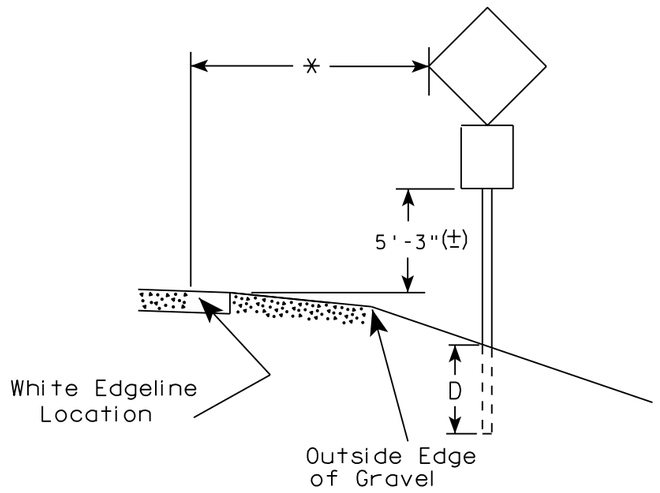
URBAN AREA



RURAL AREA (See Note 2)







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

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

POST EMBEDMENT DEPTH

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

GENERAL NOTES

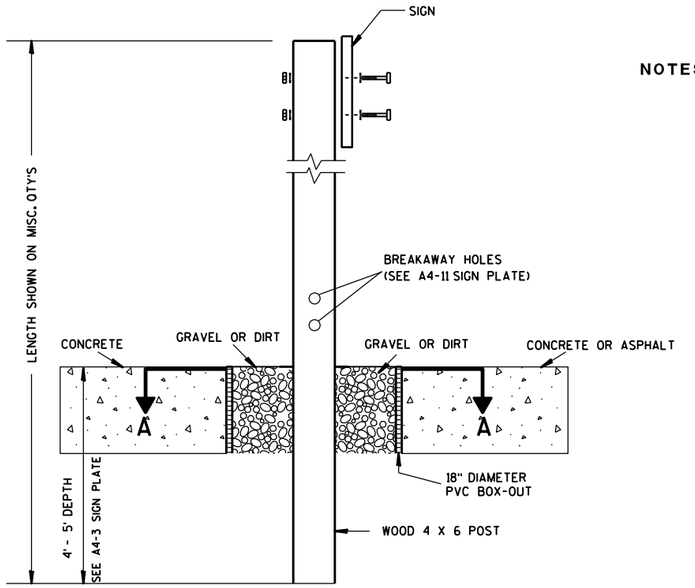
1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. J-Assemblies are considered to be one sign for mounting height.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding signs shall be mounted at a height of 5'-3" (±) or as 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" (±).

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

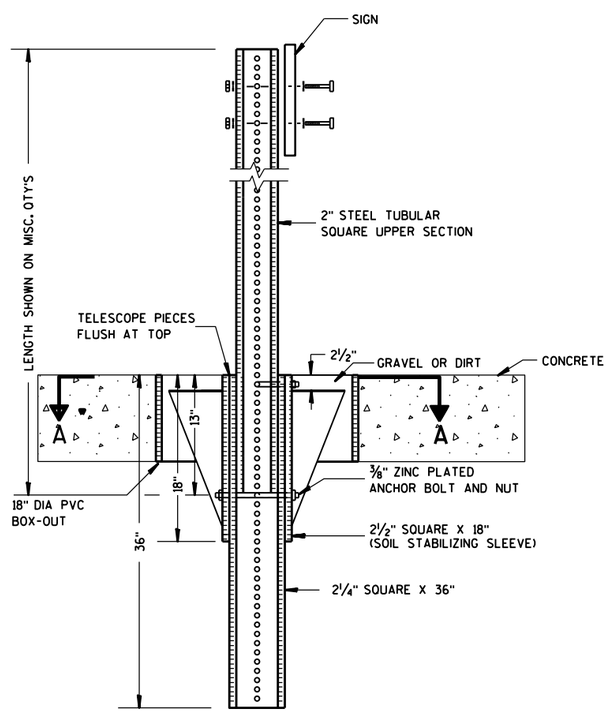
DATE 8/21/17 PLATE NO. A4-3.21



ELEVATION VIEW

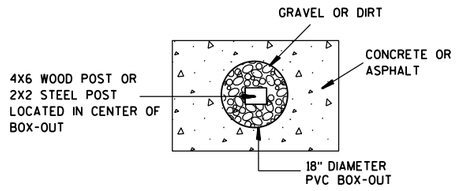
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

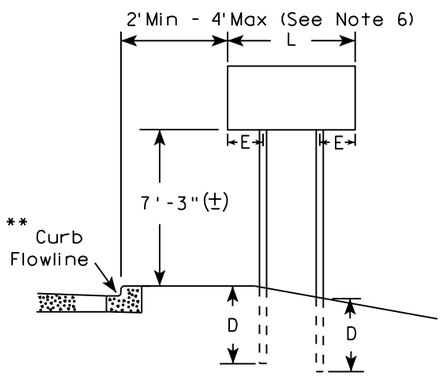
APPROVED Matthew R Rauch
for State Traffic Engineer

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

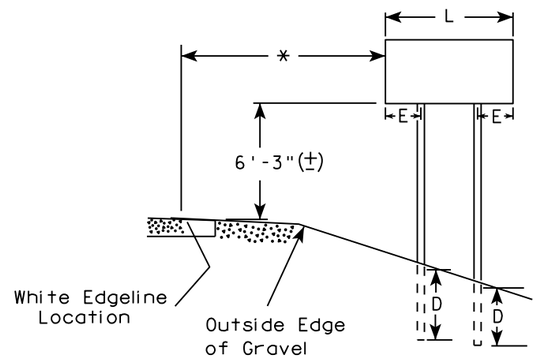
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

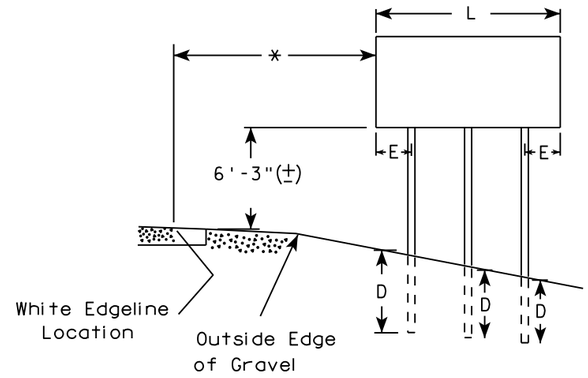
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

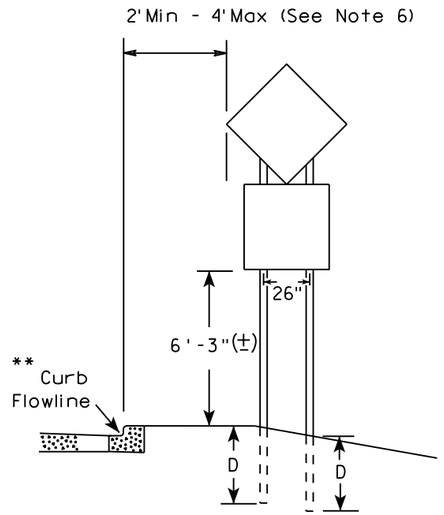
URBAN AREA



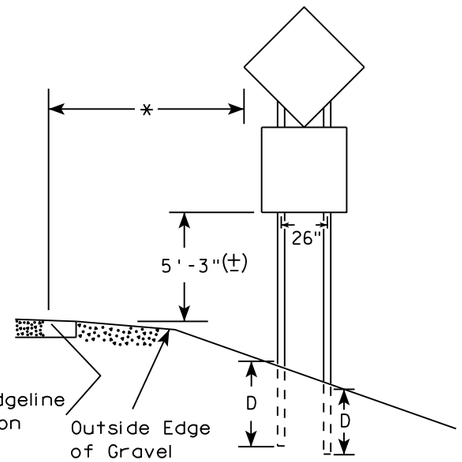
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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

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

GENERAL NOTES

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

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

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

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

POST EMBEDMENT DEPTH

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

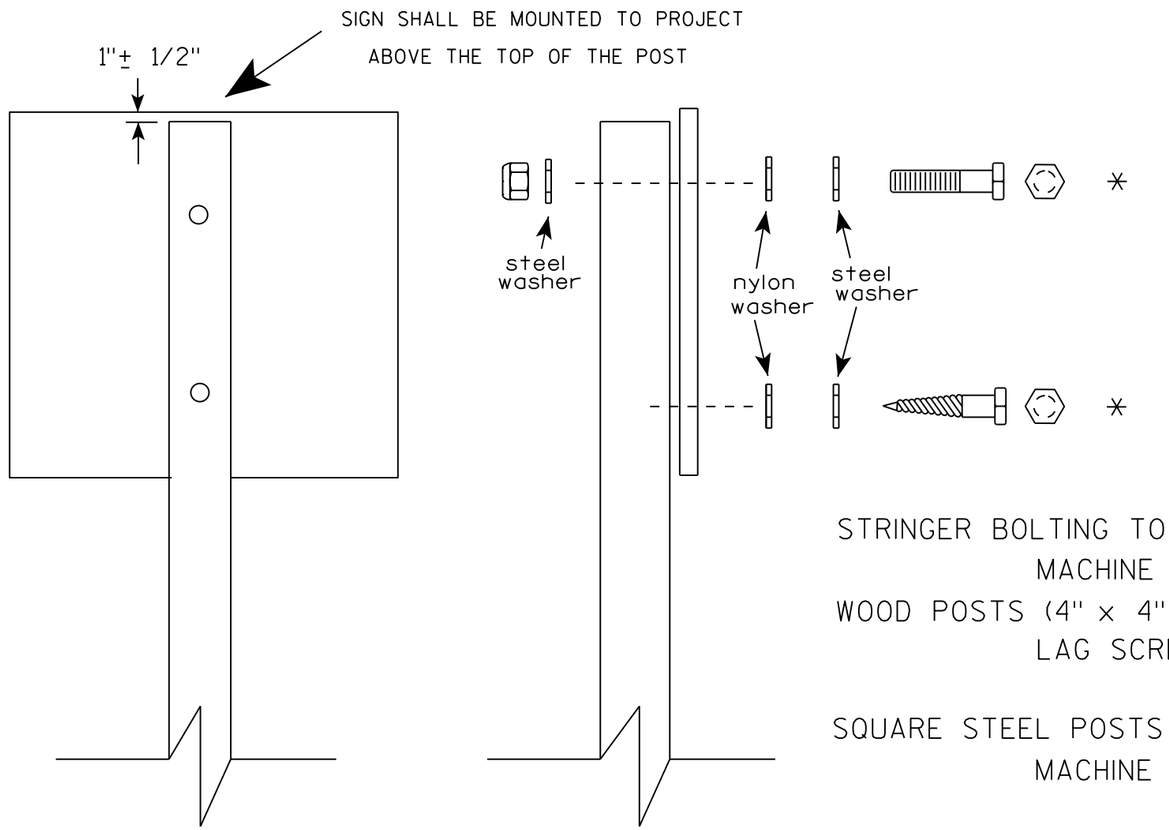
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

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

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



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

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

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

STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)

MACHINE BOLTS - 5/16" X 1-3/4" Length w/ lock nuts

WOOD POSTS (4" x 4" or 4" x 6")

LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)
3/8" X 4" (STRINGERS ON BACK OF SIGN)

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)

RIVETS - 9/32 " (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -

1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON

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

ATTACHMENT OF SIGNS TO POSTS

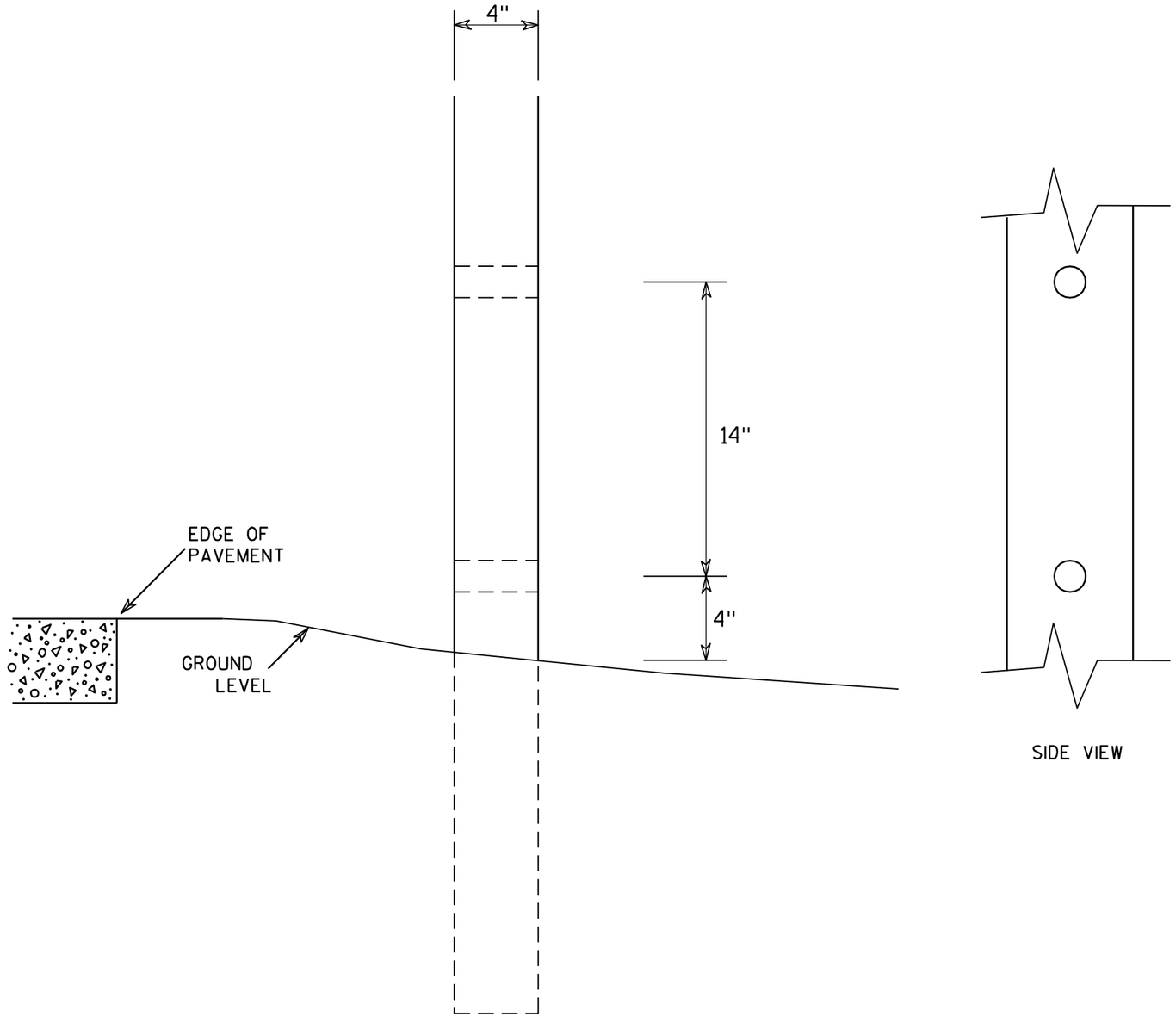
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

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

PROJECT NO: SHEET NO: E

FILE NAME : C:\CADfiles\Projects\tr_stdplate\A48.DGN PLOT DATE : 11-AUG-2016 11:35 PLOT BY : $$ plotuser $$



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.

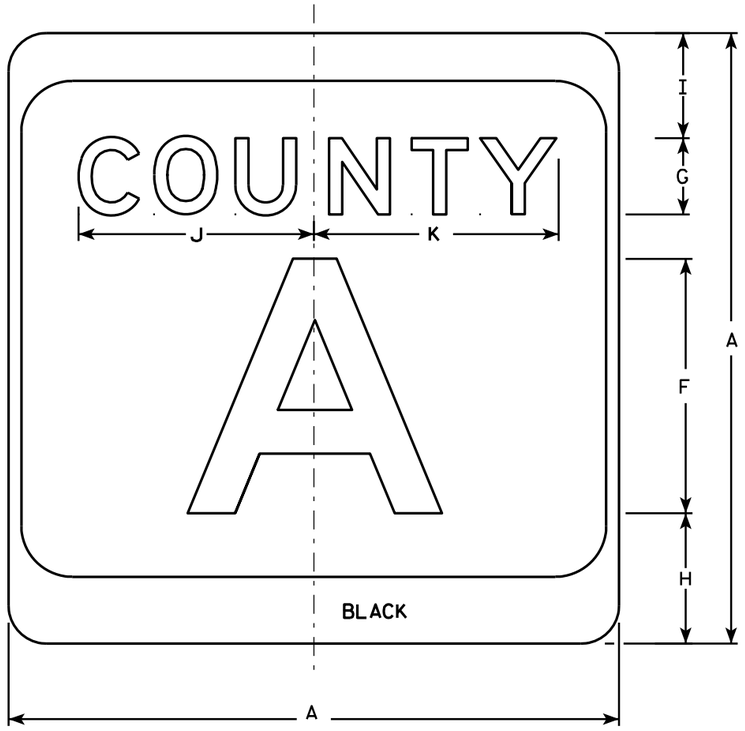
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

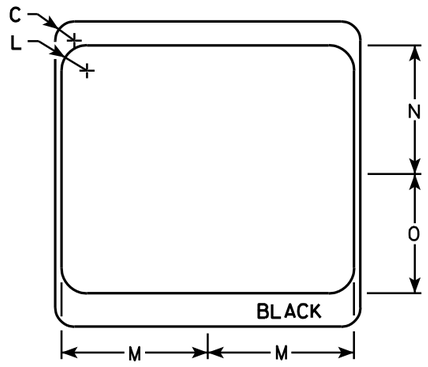
APPROVED Chester J Spang for State Traffic Engineer

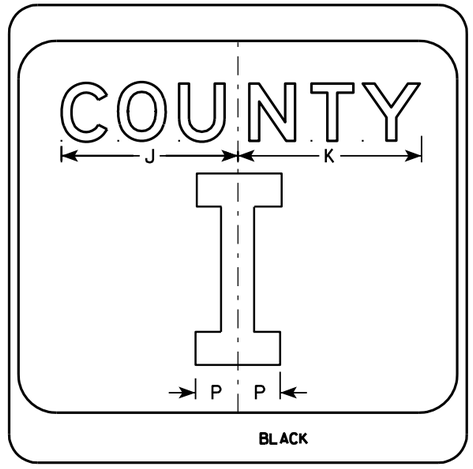
DATE 3/27/97 PLATE NO. A4-11.2

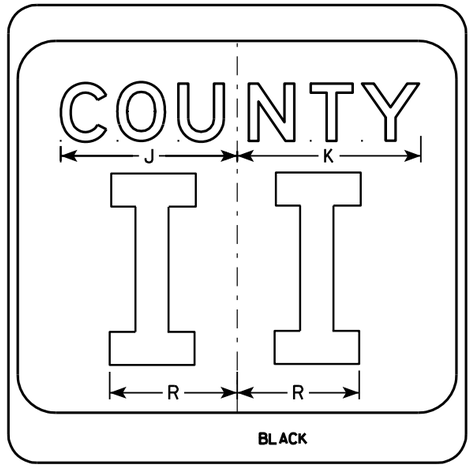
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 181	E



M1-5A







NOTES

1. Sign is Type II - see Note 7 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White & Black - See Note 7
   Message - Black
3. Message Series - see Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Message Series E for 1 letter.
   Message Series D for 2 letters unless message is too big then Series C.
   Message Series C for 3 letters unless message is too big then Series B.
6. Substitute appropriate letters & optically center to achieve proper balance.
7. Permanent Signs
   Background - Type H Reflective
   Detour or temporary Signs
   Background - Reflective

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

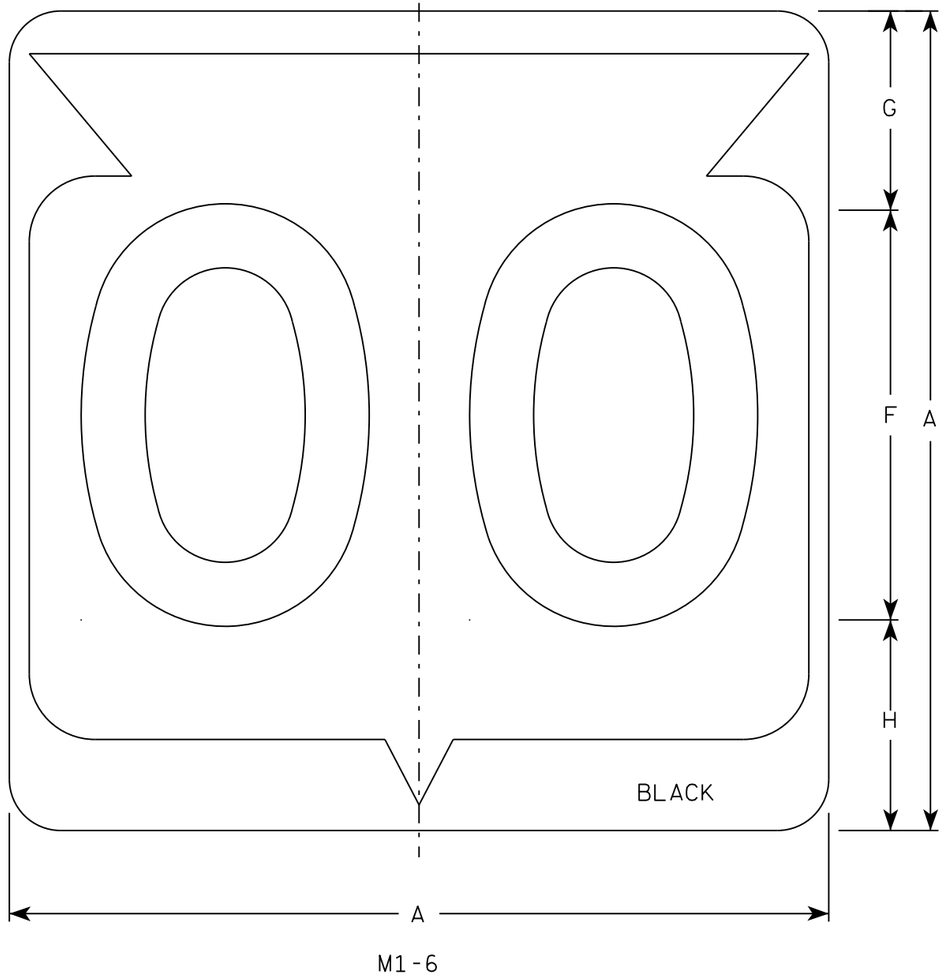
CTH MARKER
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

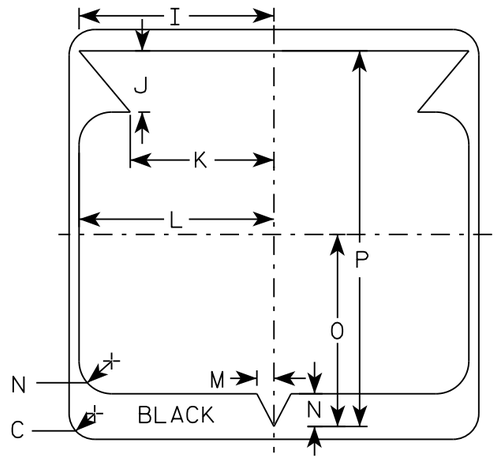
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 182 | E



M1-6

NOTES

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



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

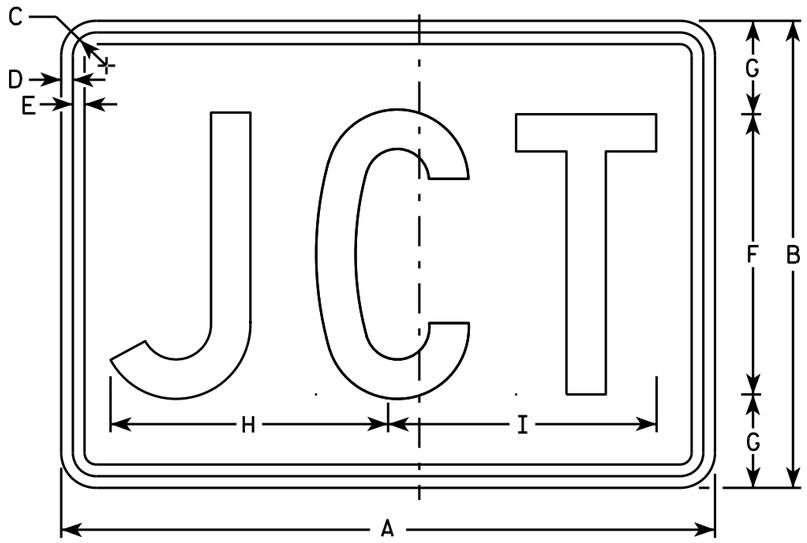
STATE ROUTE MARKER M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

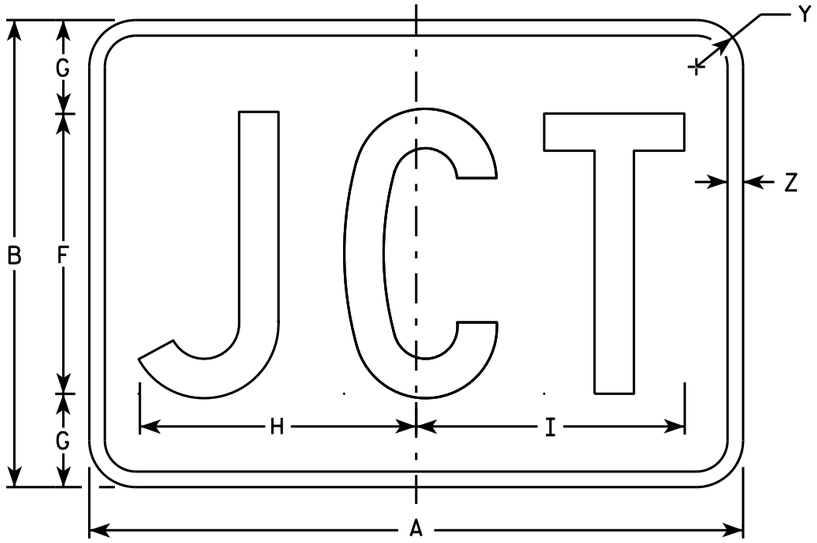
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 3/16/18 PLATE NO. M1-6.10

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 183	E



M2-1
MM2-1
MP2-1



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

NOTES

1. Sign is Type II - Type H
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M2-1 Background - White
   Message - Black
   MB2-1 Background - Blue
   Message - White
   MK2-1 Background - Green
   Message - White
   MM2-1 Background - White
   Message - Green
   MN2-1 Background - Brown
   Message - White
   MP2-1 Background - White
   Message - Blue
   MR2-1 Background - Brown
   Message - Yellow

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

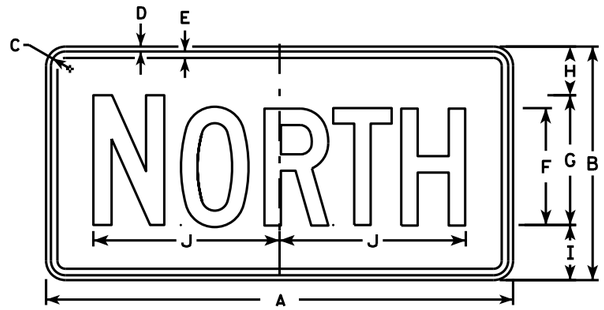
STANDARD SIGN
M2-1

WISCONSIN DEPT OF TRANSPORTATION

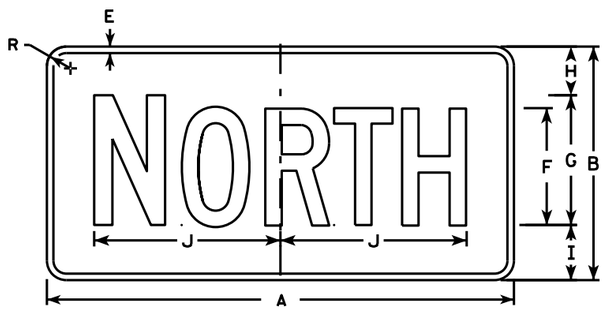
APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO: | HWY: | COUNTY: | SHEET NO. 184 | E



M3-1
MM3-1
MP3-1



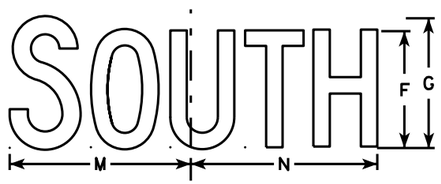
MB3-1
MK3-1
MN3-1



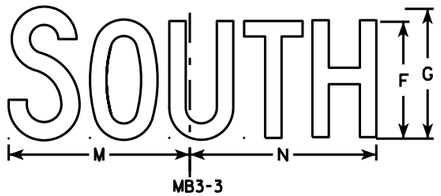
M3-2
MM3-2
MP3-2



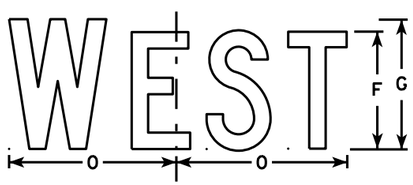
MB3-2
MK3-2
MN3-2



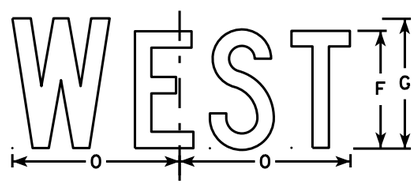
M3-3
MM3-3
MP3-3



MB3-3
MK3-3
MN3-3



M3-4
MM3-4
MP3-4



MB3-4
MK3-4
MN3-4

NOTES

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

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

STANDARD SIGNS
M3-1 thur M3-4
SERIES

WISCONSIN DEPT OF TRANSPORTATION

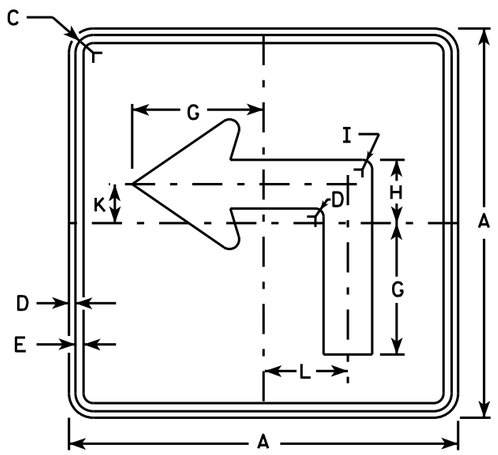
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 10/15/15 PLATE NO. M3-1.14

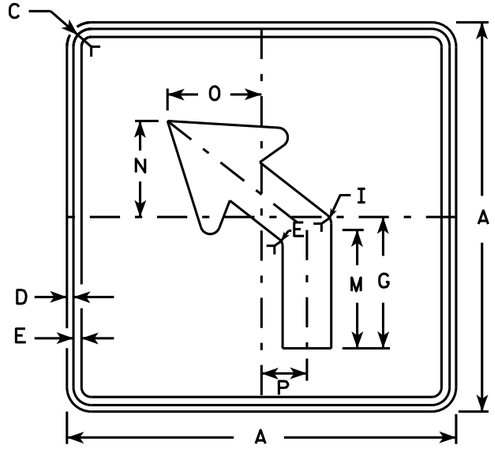
PROJECT NO: | HWY: | COUNTY: | SHEET NO. 185 | E

7

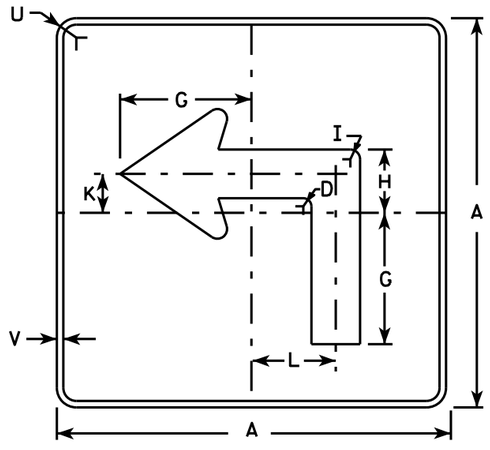
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M31.DGN PLOT DATE : 15-OCT-2015 12:16 PLOT BY : ss...plotuser...ss PLOT NAME : PLOT SCALE : 18.607113:1.000000
WISDOT/CADDS SHEET 42



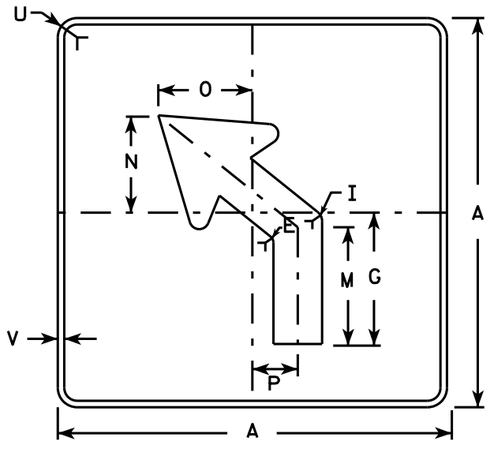
M5-1L
MM5-1L
MO5-1L
MP5-1L



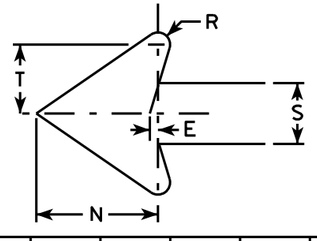
M5-2L
MM5-2L
MO5-2L
MP5-2L



MB5-1L
MK5-1L
MN5-1L
MR5-1L



MB5-2L
MK5-2L
MN5-2L
MR5-2L



NOTES

1. Signs are Type II - Type H reflective except as shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M5-1 and M5-2 Background - White
   Message - Black
   MB5-1 and MB5-2 Background - Blue
   Message - White
   MK5-1 and MK5-2 Background - Green
   Message - White
   MM5-1 and MM5-2 Background - White
   Message - Green
   MN5-1 and MN5-2 Background - Brown
   Message - White
   MO5-1 and MO5-2 Background - Orange - Type F Reflective
   Message - Black
   MP5-1 and MP5-2 Background - White - Type H Reflective
   Message - Blue
   MR5-1 and MR5-2 Background - Brown
   Message - Yellow
5. M5-1R same as M5-1L except arrow points right.
6. M5-2R same as M5-2L except arrow tilts right.

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

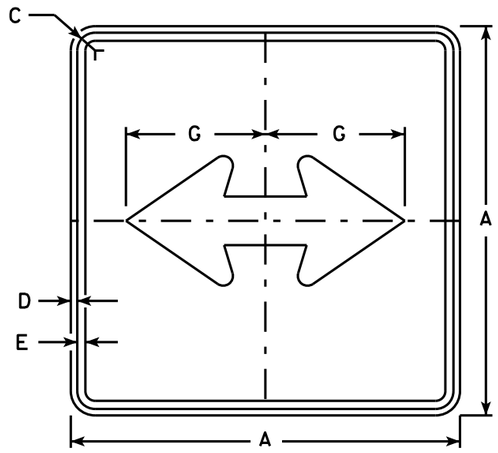
STANDARD SIGN
M5-1 & M5-2

WISCONSIN DEPT OF TRANSPORTATION

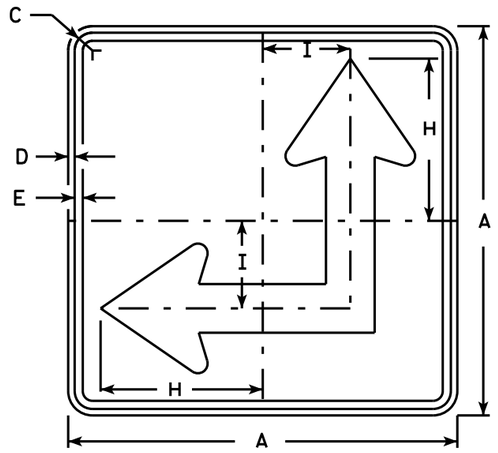
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M5-1.13

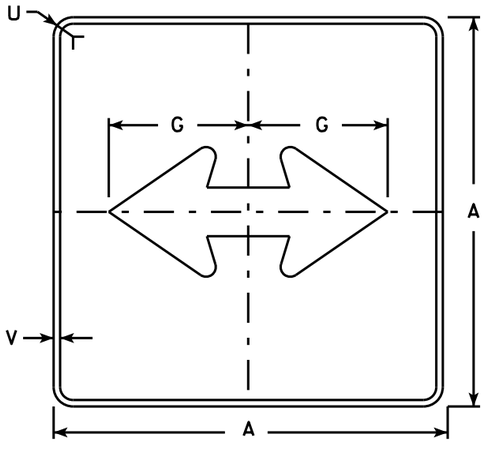
PROJECT NO: | HWY: | COUNTY: | SHEET NO. 186 | E



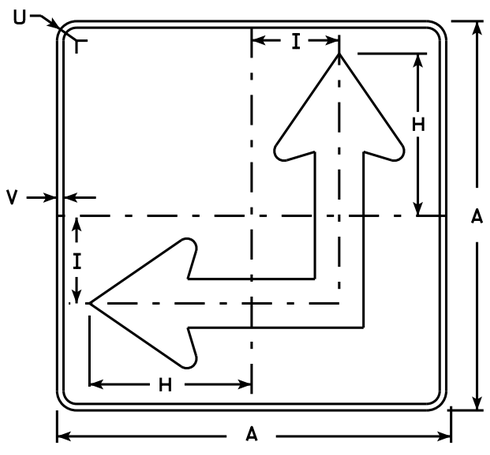
M6-4
MM6-4
MO6-4
MP6-4



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



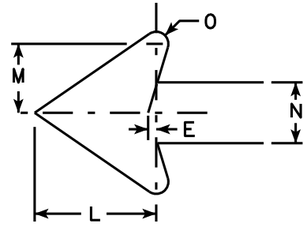
MB6-4
MK6-4
MN6-4
MR6-4



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

NOTES

1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See Note 4
   Message - See Note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-4 and M6-6 Background - White
   Message - Black
   MB6-4 and MB6-6 Background - Blue
   Message - White
   MK6-4 and MK6-6 Background - Green
   Message - White
   MM6-4 and MM6-6 Background - White
   Message - Green
   MN6-4 and MN6-6 Background - Brown
   Message - White
   MO6-4 and MO6-6 Background - Orange - Type F Reflective
   Message - Black
   MP6-4 and MP6-6 Background - White
   Message - Blue
   MR6-4 and MR6-6 Background - Brown
   Message - Yellow
5. M6-6R same as M6-6L except arrow points ahead and right.



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

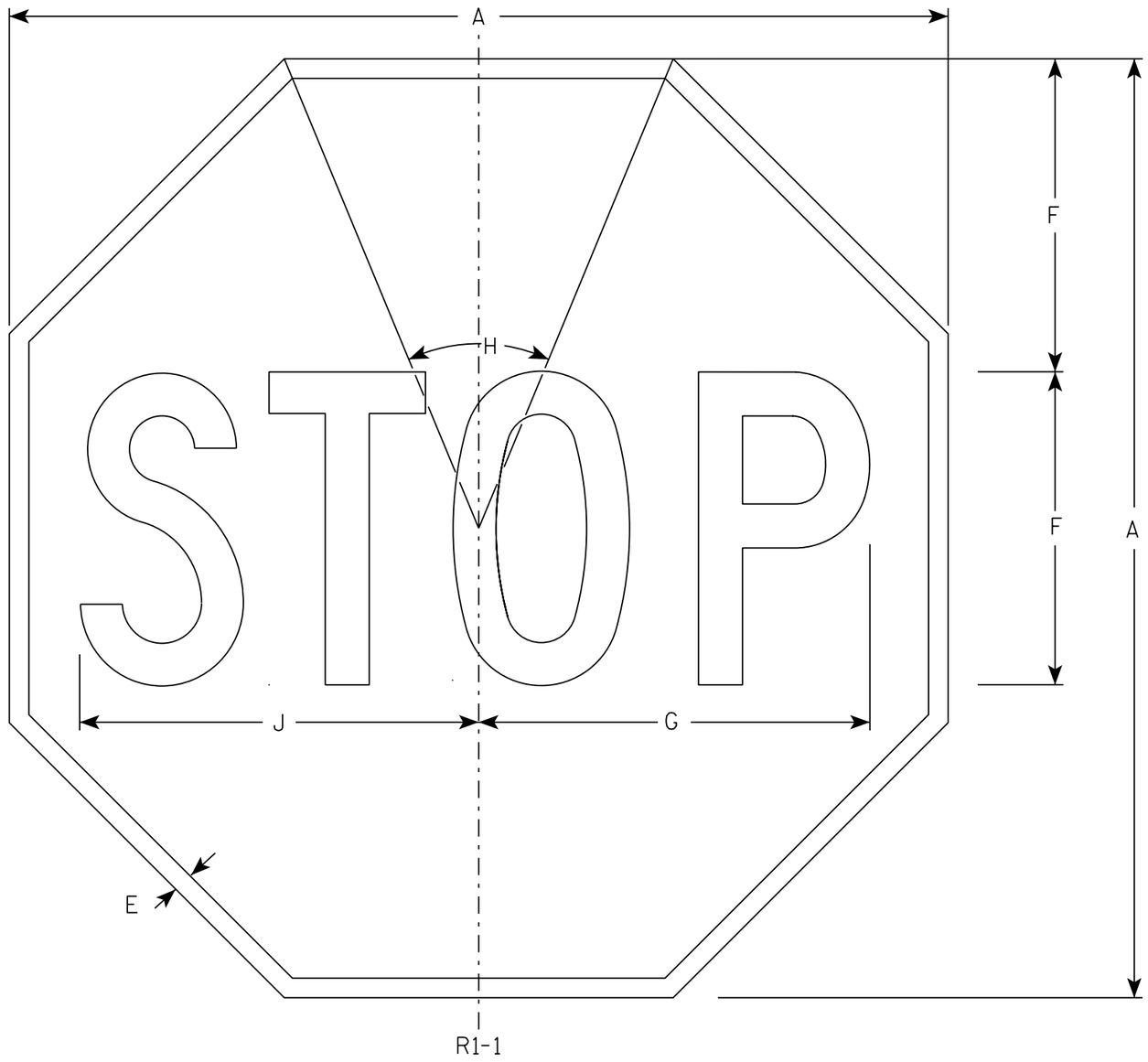
STANDARD SIGN M6-4 & M6-6 SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

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

PROJECT NO: | HWY: | COUNTY: | SHEET NO. 187 | E



NOTES

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

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

STANDARD SIGN

R1-1

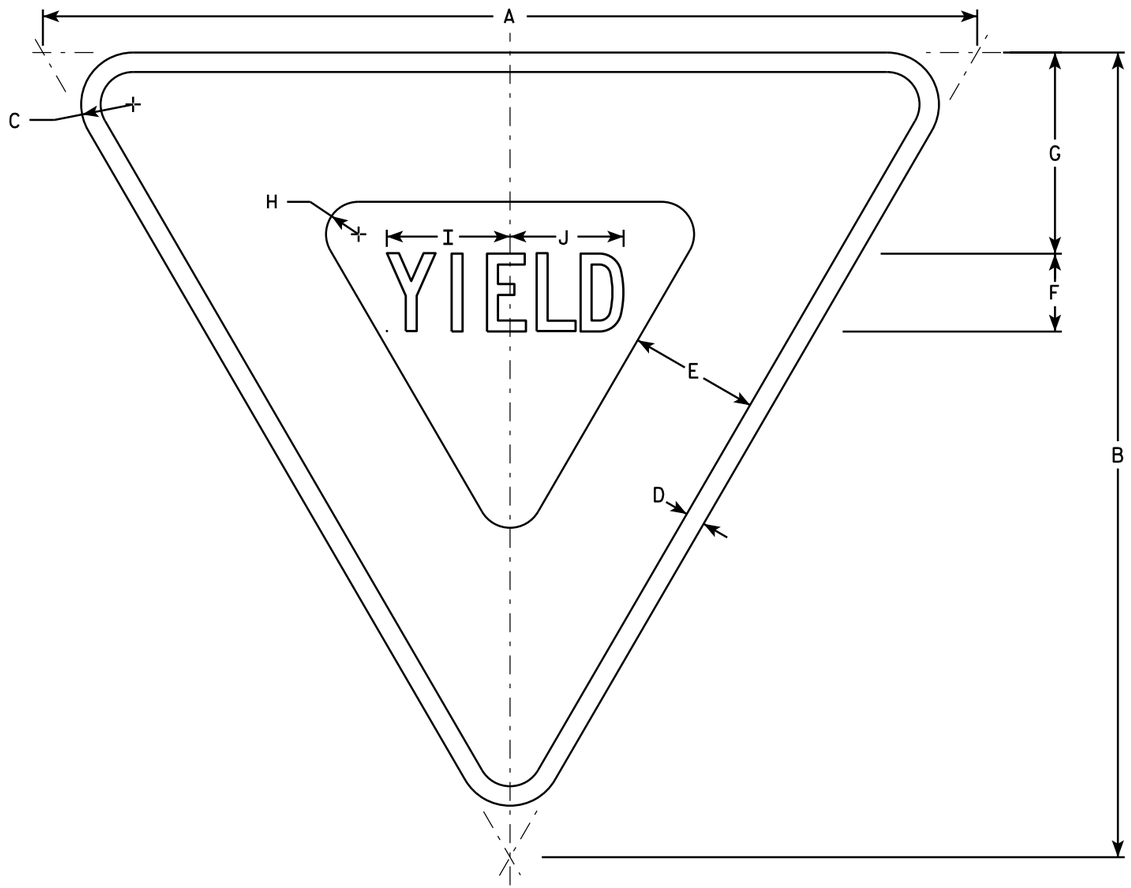
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch

for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 188	E



R1-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. The border strip and word message are reflectorized red.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30	26	1 1/2	5/8	4	2 1/2	6 3/8	7/8	4	3 5/8																	2.71
2S	36	31	2	3/4	5	3	7 3/4	1 1/4	4 3/4	4 3/8																	3.88
2M	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
3	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
4	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
5	60	52	3	1 1/2	8	5	13	2 1/2	7 7/8	7 1/4																	10.83
6																											
7	18	15 1/2	1	3/8	2 1/2	1 1/2	3 7/8	5/8	2 3/8	2 1/4																	0.97

STANDARD SIGN
R1-2

WISCONSIN DEPT OF TRANSPORTATION

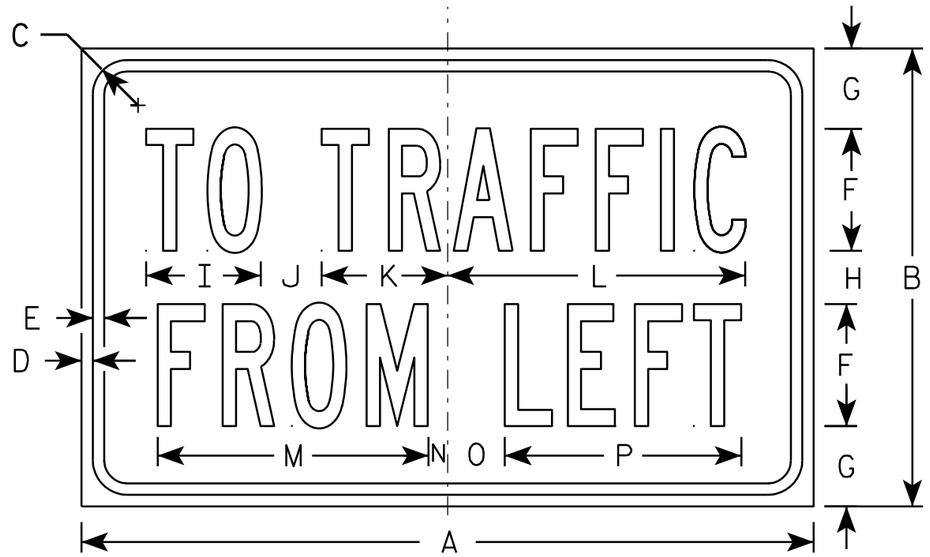
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/13/14 PLATE R1-2.12

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

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\R12.DGN PLOT DATE : 13-OCT-2014 15:12 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 5.837526:1.000000

WISDOT/CADDS SHEET 42



R1-54

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	15	1 1/8	3/8	3/8	4	2 5/8	1 3/4	3 3/4	2	4 1/8	9 3/4	8 7/8	5/8	1 7/8	7 3/4											2.5
2M	24	15	1 1/8	3/8	3/8	4	2 5/8	1 3/4	3 3/4	2	4 1/8	9 3/4	8 7/8	5/8	1 7/8	7 3/4											2.5
3																											
4																											
5																											

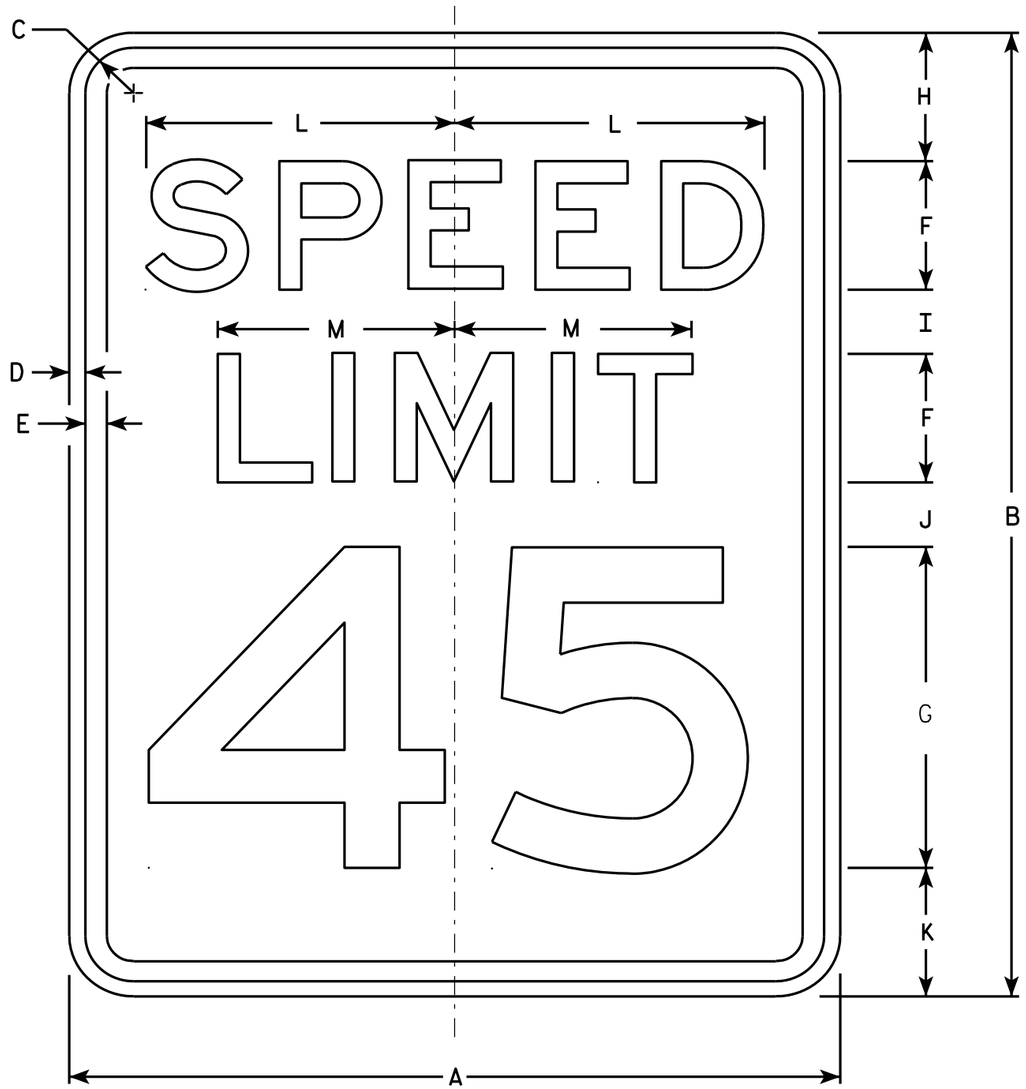
STANDARD SIGN
R1-54

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/03/10 PLATE NO. R1-54.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 190	E



R2-1

NOTES

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

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

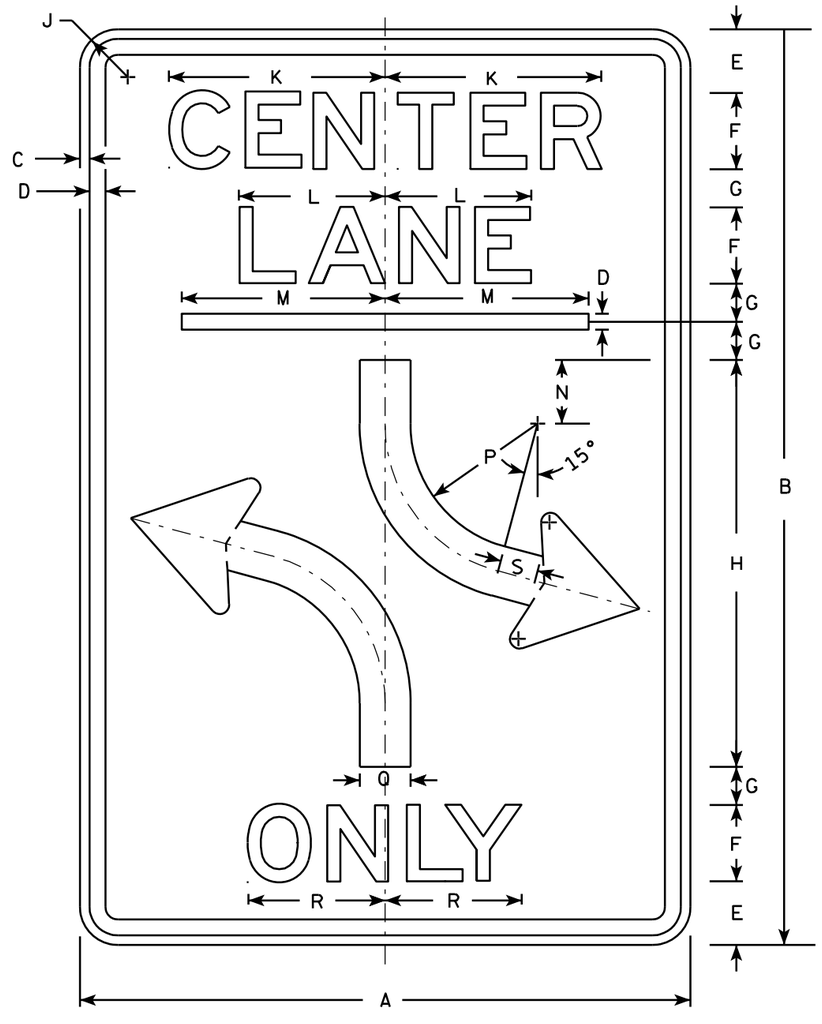
STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

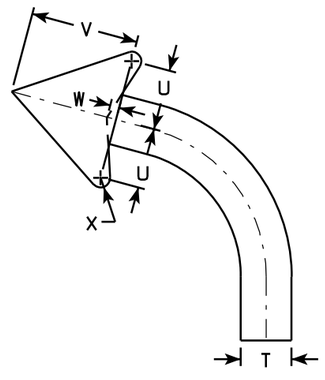
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 191 | E



R3-9B

NOTES

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



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	36	3/8	1/2	2 1/2	3	1 1/2	16		1 1/2	8 1/2	5 3/4	8	2 1/2		6	2	5 1/8	1 1/2		2 3/8	4 3/8	3/8				6.0
2M	24	36	3/8	1/2	2 1/2	3	1 1/2	16		1 1/2	8 1/2	5 3/4	8	2 1/2		6	2	5 1/8	1 1/2		2 3/8	4 3/8	3/8				6.0
3	36	48	5/8	7/8	3 1/2	5	1 1/2	20		2 1/4	14 1/8	9 1/2	12	3		4	3	9 7/8	2		3 1/2	6 1/8	1/2				12.0
4																											
5																											

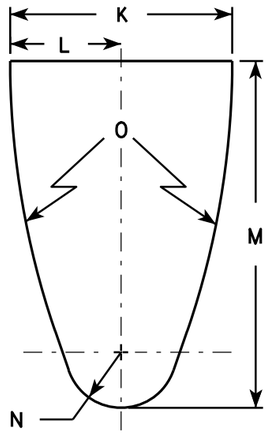
STANDARD SIGN
R3-9B

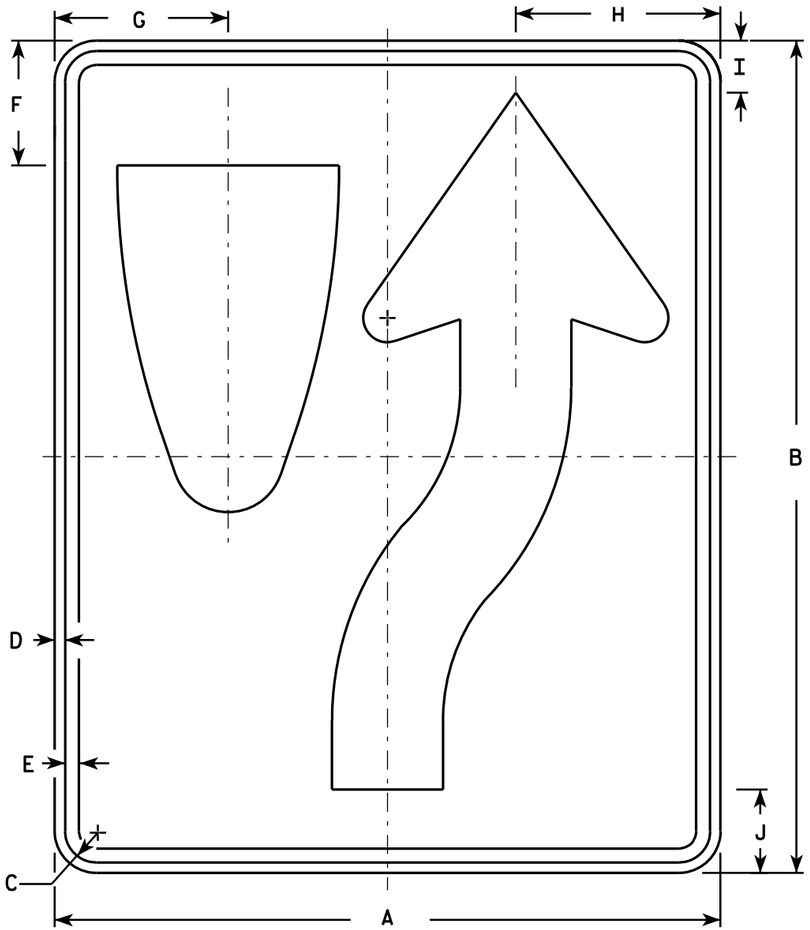
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/24/2011 PLATE NO. R3-9B.5

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 192 | E

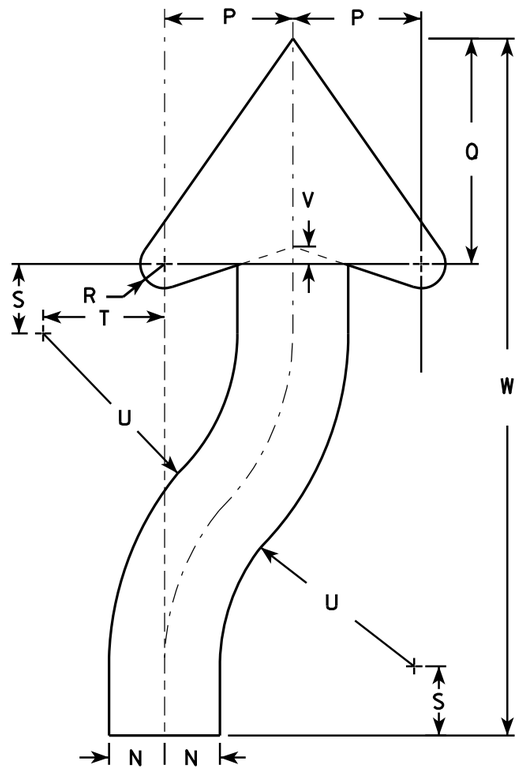




R4-7

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition. material is plywood but borders shall be rounded
2. Color:
   Background - White
   Message - Black
3. Corners may be square or rounded when base as shown. When base material is metal, the corners and borders shall be rounded.
4. R4-8 is the same as R4-7 except Legend is reversed.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3 3/8	4 3/4	5 1/2	1 3/8	2 1/4	6	3	9 3/8	1 1/2	22 1/2	3 1/2	6 1/8	5/8	1 7/8	3 1/4	6 3/4	1/2	20 3/8				3.0
2S	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
2M	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
3	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
4	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
5	48	60	2 1/4	3/4	1	9	12 1/2	14 3/4	3 3/4	6	16	8	25	4	60	9 1/4	16 1/4	1 5/8	5	8 3/4	18	1 1/4	50 1/4				20.0

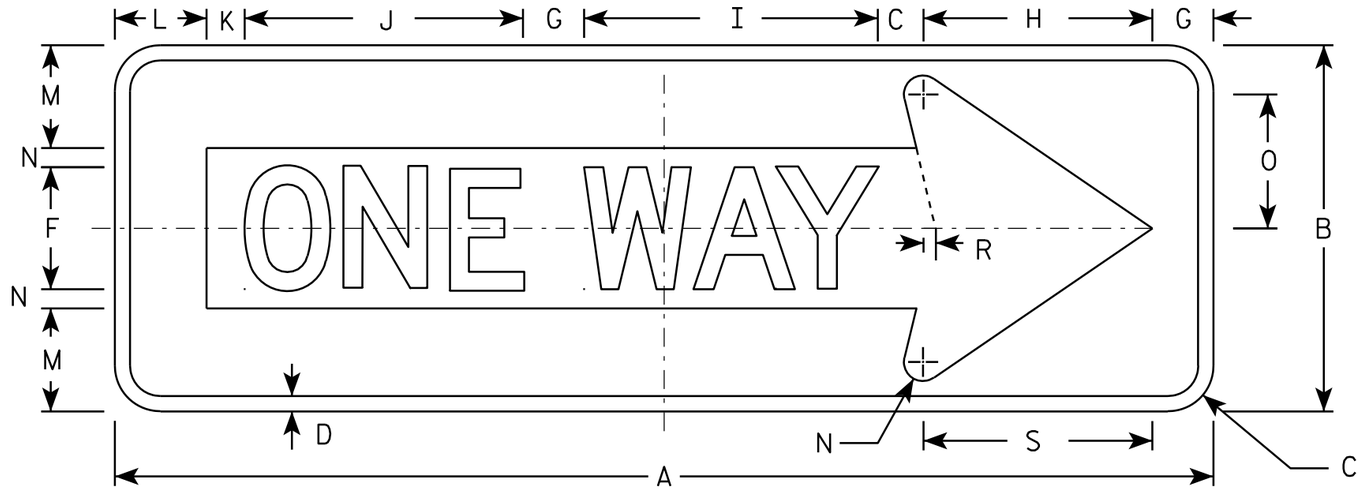
STANDARD SIGN
R4-7 & R4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-7.8

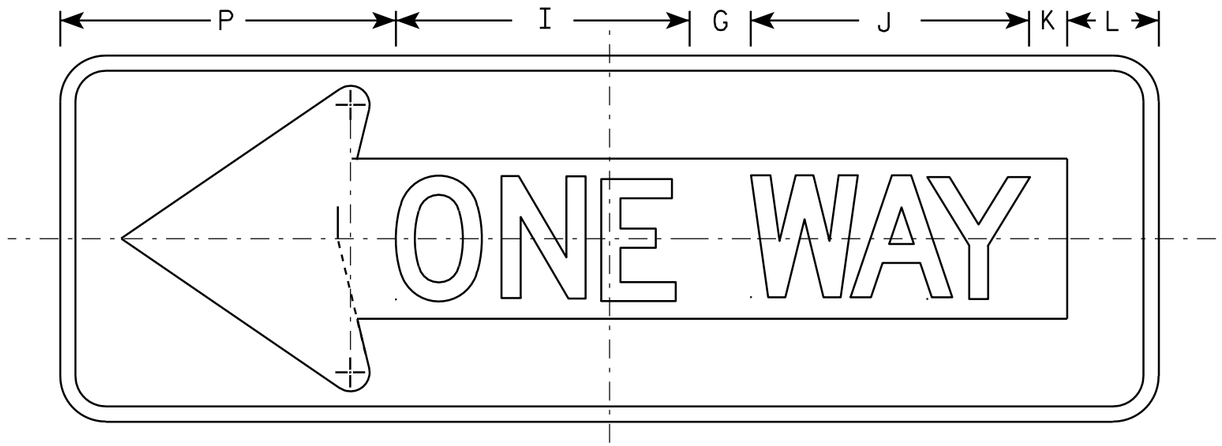
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 193	E



R6-1R

NOTES

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



R6-1L

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	36	12	1 ½	½		4	2	7 ½	9 ⅝	9 ⅛	1 ¼	3	3 ⅜	⅝	4 ⅜	11		⅜	7 ½								3.0
2M	54	18	2 ¼	¾		6	3	11 ¼	14 ½	13 ⅝	1 ⅞	4 ½	5	1	6 ½	16 ½		⅝	11 ¼								6.75
3	54	18	2 ¼	¾		6	3	11 ¼	14 ½	13 ⅝	1 ⅞	4 ½	5	1	6 ½	16 ½		⅝	11 ¼								6.75
4	54	18	2 ¼	¾		6	3	11 ¼	14 ½	13 ⅝	1 ⅞	4 ½	5	1	6 ½	16 ½		⅝	11 ¼								6.75
5																											

STANDARD SIGN
R6-1 L & R

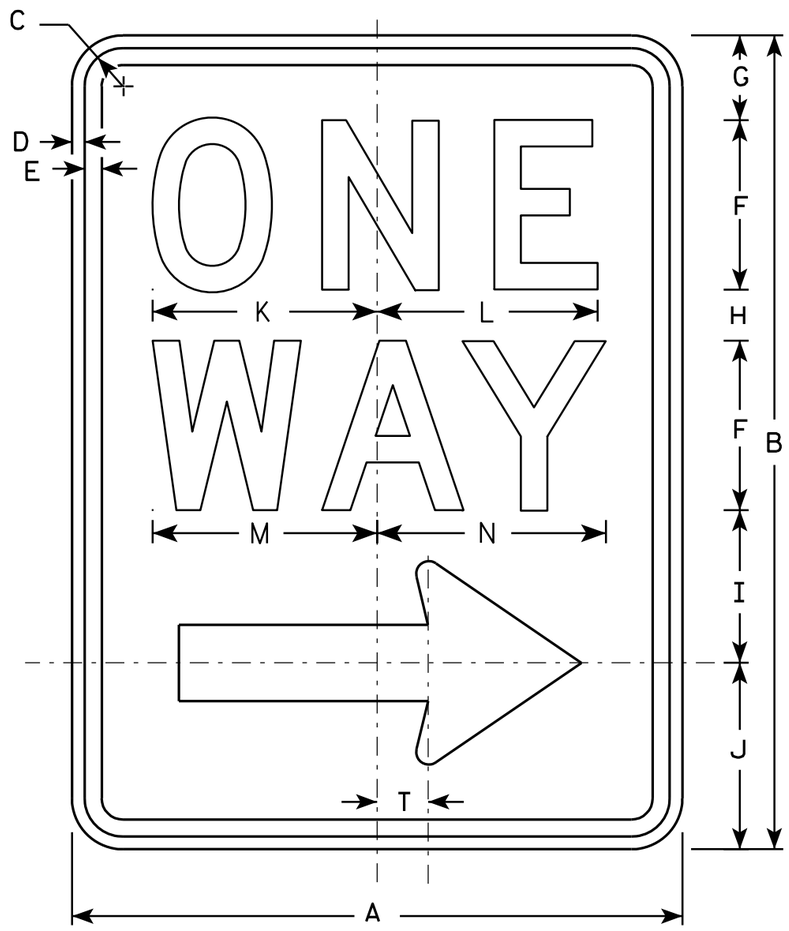
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R6-1.2

PROJECT NO:

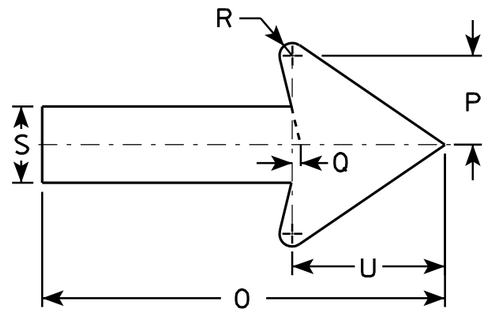
SHEET NO: 194 E



R6-2R

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. R6-2L same as R6-2R except arrow points to the left.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z
1	18	24	1 1/8	3/8	1/2	5	2 1/2	1 1/2	4 1/2	5 1/2	6 5/8	6 1/2	6 5/8	6 3/4	11 7/8	2 5/8	1/4	3/8	2 1/4	1 1/2	4 1/2					
2S	24	30	1 1/8	3/8	1/2	6	3	2 1/2	5 1/2	7	8 1/8	8 1/8	8 1/2	8 5/8	16	3 1/2	3/8	1/2	3	2	6					
2M	30	36	1 3/8	1/2	5/8	8	2 1/2	2 5/8	6 7/8	8	10 1/2	10 1/2	11 1/4	11 1/4	20	4 3/8	1/2	5/8	3 3/4	2 1/2	7 1/2					
3	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
4	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
5																										

STANDARD SIGN
R6-2 R&L

WISCONSIN DEPT OF TRANSPORTATION

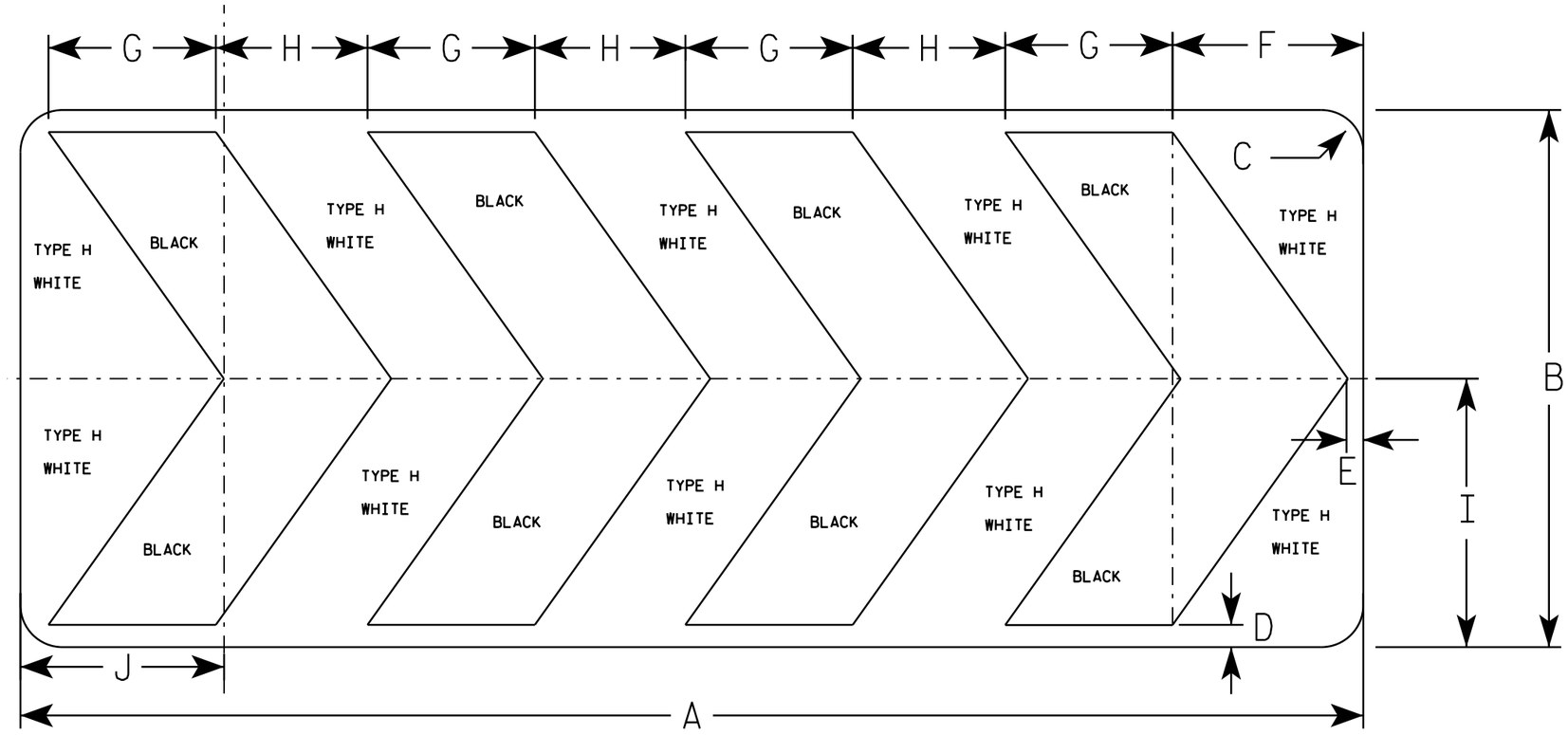
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/2/10 PLATE NO. R6-2.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 195	E

NOTES

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



R6-4B

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	60	24	1 7/8	1	3/4	8 1/2	7 1/2	6 3/4	12	9 1/8																	10.0
2M	60	24	1 7/8	1	3/4	8 1/2	7 1/2	6 3/4	12	9 1/8																	10.0
3																											
4																											
5																											

STANDARD SIGN
R6-4B

WISCONSIN DEPT OF TRANSPORTATION

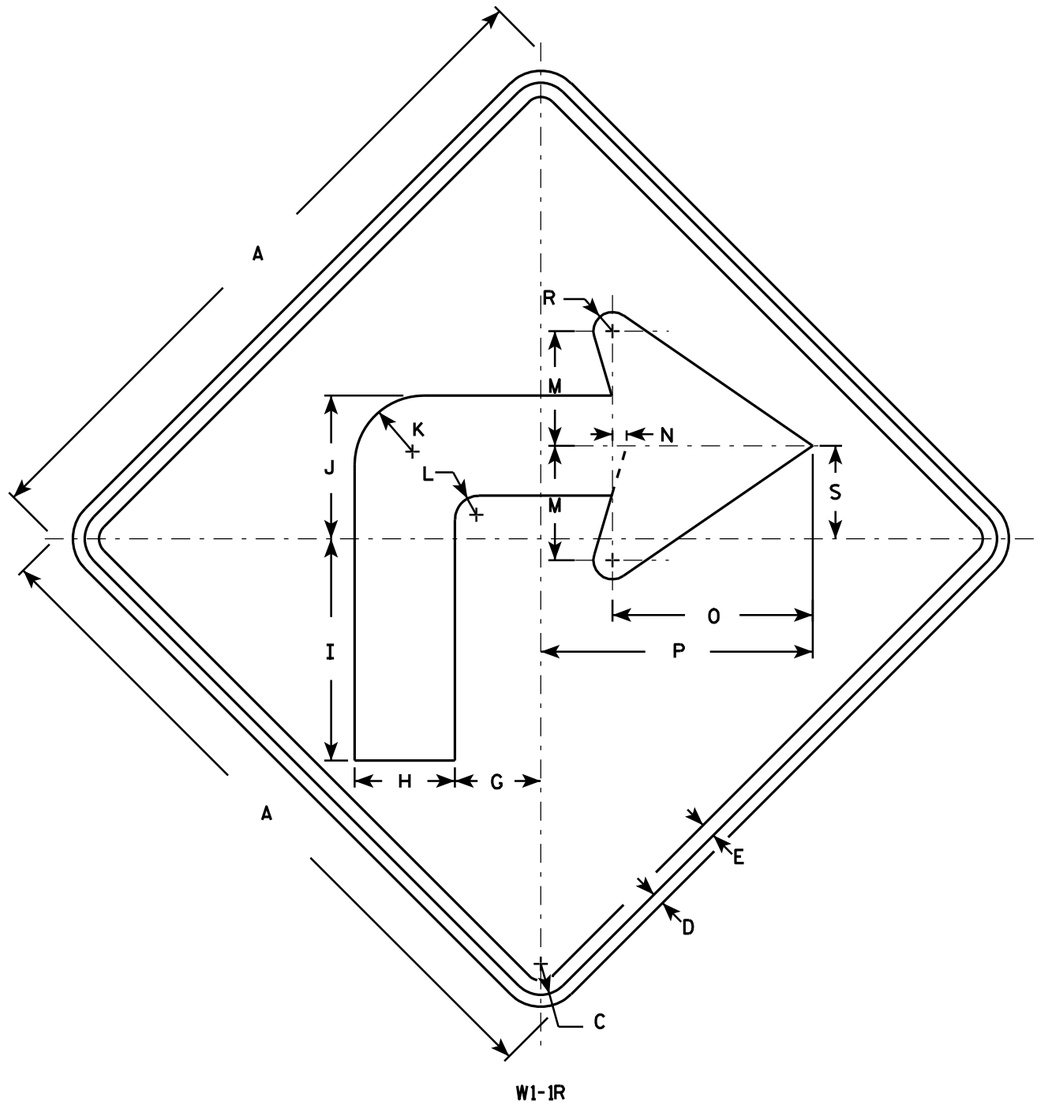
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/21/14 PLATE NO. R6-4.3

PROJECT NO: SHEET NO: E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\R64B.DGN PLOT DATE : 21-AUG-2014 15:01 PLOT BY : mscsja

WISDOT/CADDS SHEET 42



W1-1R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W1-1L is the same as W1-1R except the arrow is reversed along the vertical centerline.

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

STANDARD SIGN
W1-1

WISCONSIN DEPT OF TRANSPORTATION

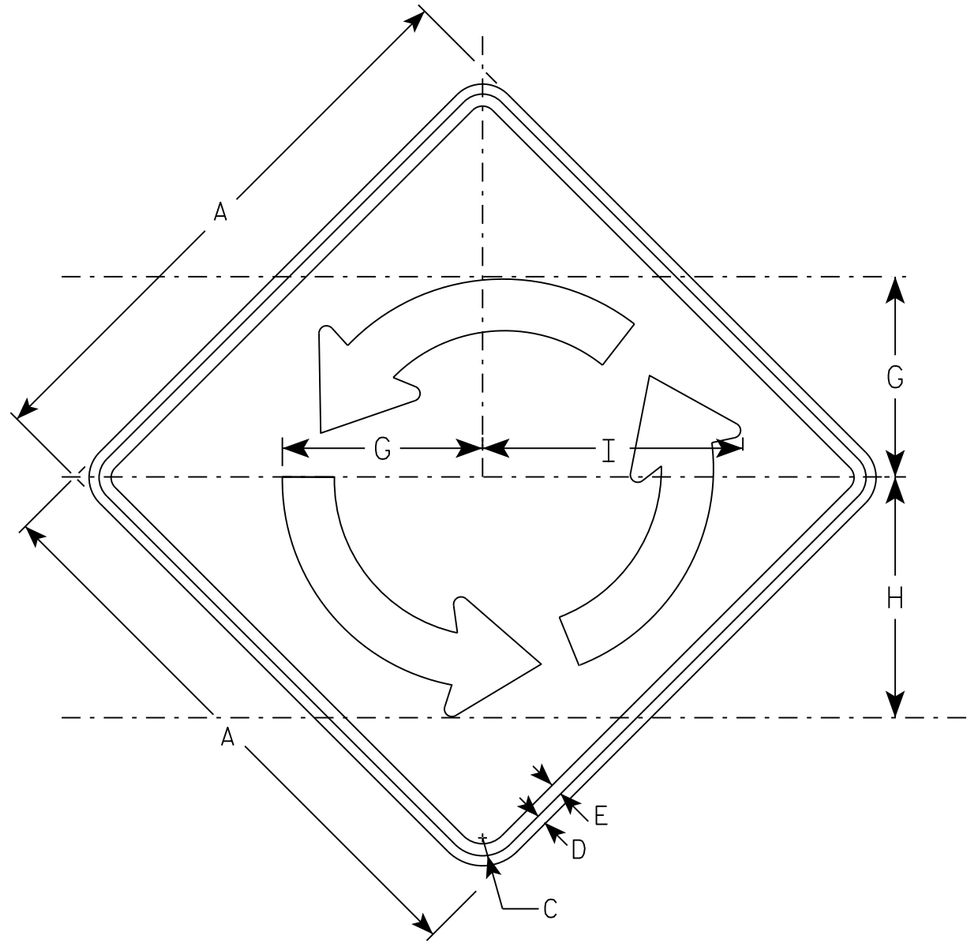
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/15/12 PLATE NO. W1-1.11

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

7

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W11.DGN PLOT DATE : 15-MAY-2012 13:47 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 7.939035:1.000000
WISDOT/CADDS SHEET 42



W2-6

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - YELLOW
   Message - BLACK

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Area sq. ft.
1																									
2S	30		1 3/8	1/2	5/8		10 3/8	12 1/2	13 1/2																6.25
2M	30		1 3/8	1/2	5/8		10 3/8	12 1/2	13 1/2																6.25
3	36		1 5/8	5/8	3/4		12 1/2	15	16 1/4																9.00
4	48		2 1/4	3/4	1		16 5/8	20	16 1/4																16.0
5																									

STANDARD SIGN
W2-6

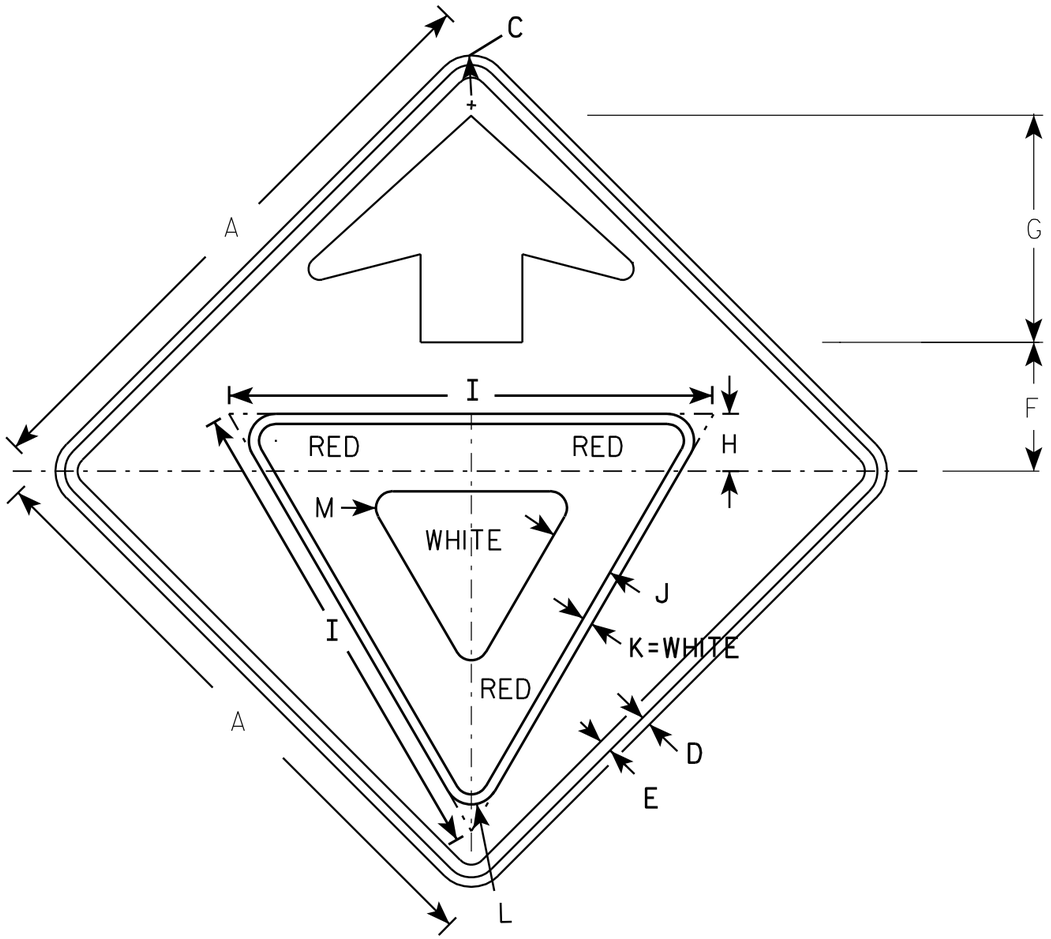
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/15/18 PLATE NO. W2-6.6

PROJECT NO:

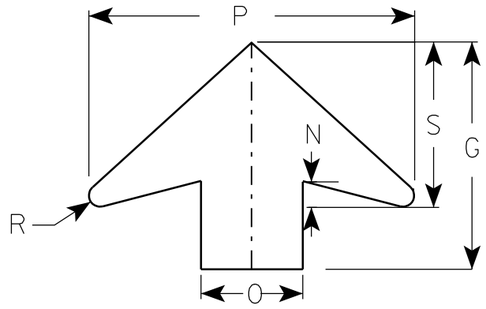
SHEET NO: 198 E



W3-2

NOTES

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



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	6 1/4	11 1/4	3	25	3 3/8	1/2	1 3/8	7/8	1 1/4	5	16		1/2	8								6.25
2S	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 3/8	28	3 3/4	5/8	1 1/2	1	1 5/8	6	19 1/4		5/8	9 3/4								9.0
2M	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 3/8	28	3 3/4	5/8	1 1/2	1	1 5/8	6	19 1/4		5/8	9 3/4								9.0
3	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 3/8	28	3 3/4	5/8	1 1/2	1	1 5/8	6	19 1/4		5/8	9 3/4								9.0
4	48		2 1/4	3/4	1	10	17 7/8	4 1/2	38	5	3/4	2 1/8	1 3/8	2	8	25 5/8		7/8	13								16.0
5	48		2 1/4	3/4	1	10	17 7/8	4 1/2	38	5	3/4	2 1/8	1 3/8	2	8	25 5/8		7/8	13								16.0

STANDARD SIGN
W3-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W3-2..9

PROJECT NO:

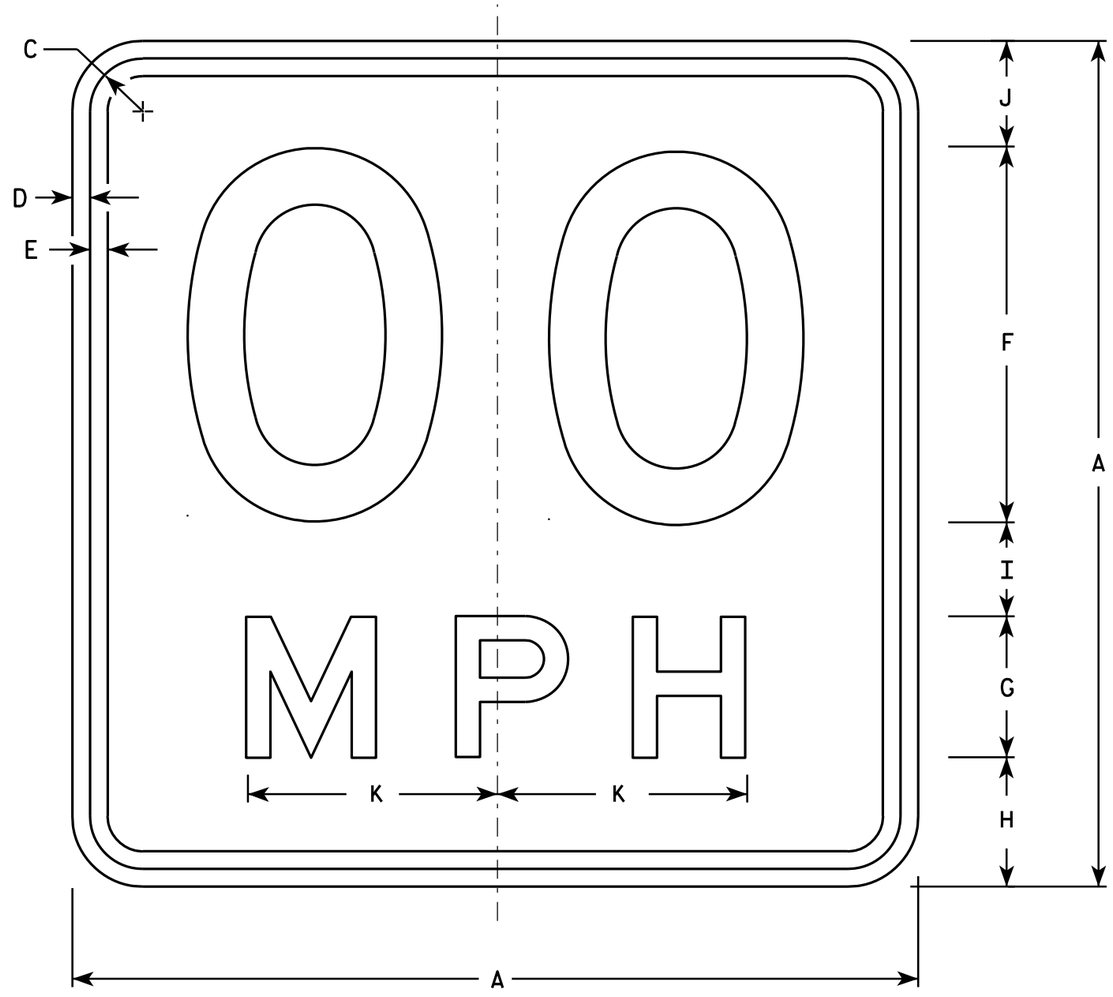
SHEET NO: 199 E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W32.DGN PLOT DATE : 07-JUN-2010 13:03 PLOT BY : ditjph

WISDOT/CADDS SHEET 42

7

7



W13-1

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

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Message Series - See Note 6
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically space about centerline to achieve proper balance.
6. Line 1 is Series D
   Line 2 is Series E

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

STANDARD SIGN
W13-1

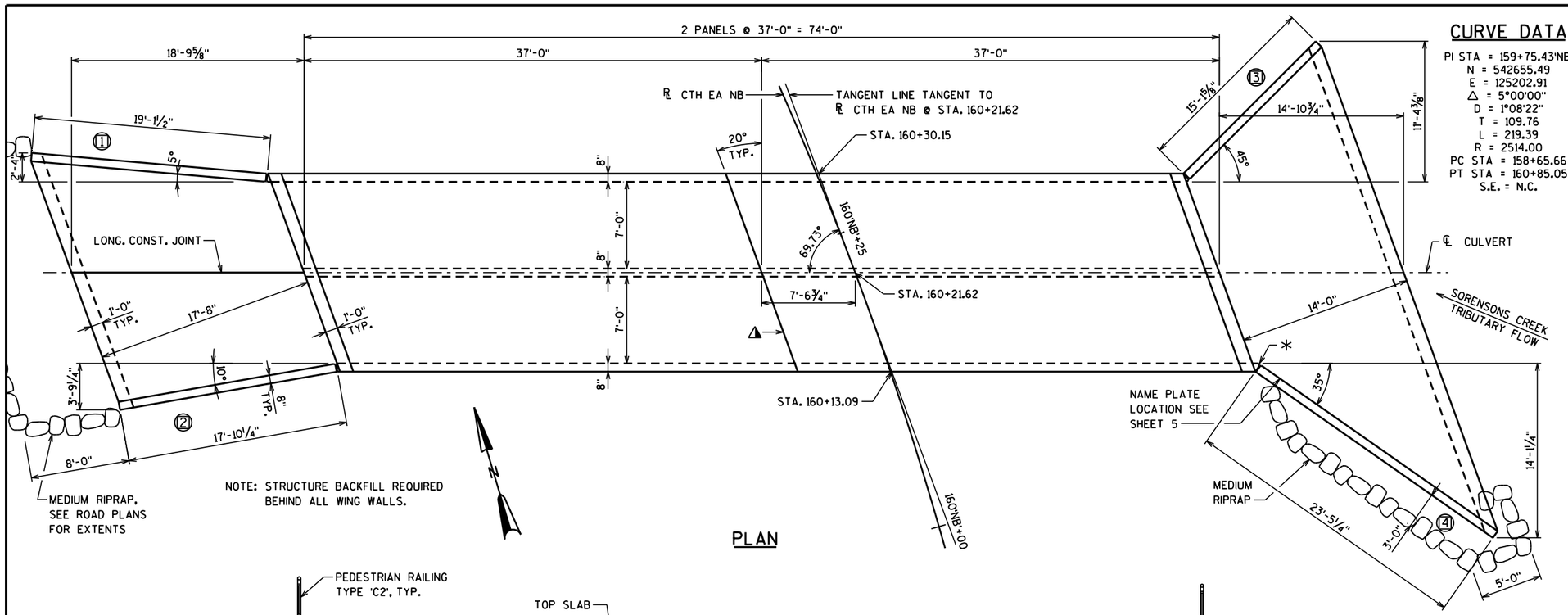
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

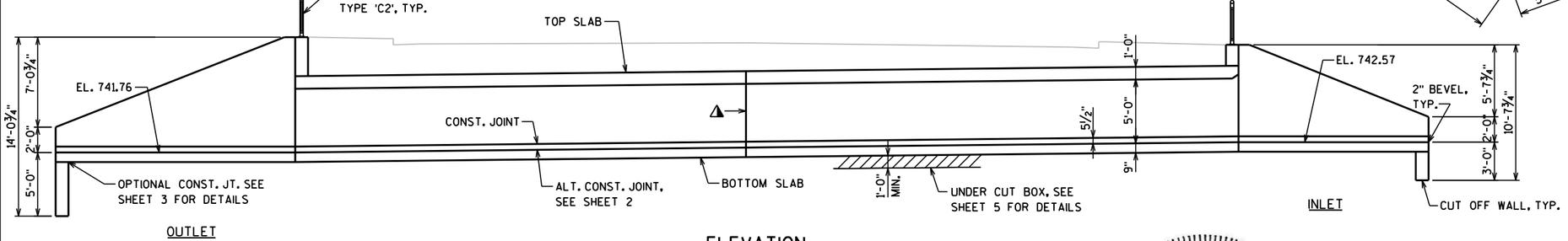
DATE 5/31/12 PLATE NO. W13-1.16

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 200 | E

STATE PROJECT NUMBER
4516-07-71



PLAN



OUTLET

INLET

ELEVATION
(LOOKING NORTH)

CURVE DATA

PI STA = 159+75.43'NB'
N = 542655.49
E = 125202.91
△ = 5°00'00"
D = 1°08'22"
T = 109.76
L = 219.39
R = 2514.00
PC STA = 158+65.66
PT STA = 160+85.05
S.E. = N.C.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE UPPER LIMITS OF THE "EXCAVATION FOR STRUCTURES CULVERTS C-5-154" SHALL BE THE EXISTING GROUND LINE.

WITHIN THE LENGTH OF THE BOX ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL TYPE B TO THE ELEVATION AND SECTION EXISTING PRIOR TO EXCAVATION WITHIN THE LENGTH OF THE CULVERT.

THE CONTRACTOR MAY FURNISH A PRECAST CONCRETE BOX CULVERT IN LIEU OF THE CAST-IN-PLACE BOX CULVERT WITH THE APPROVAL OF THE STRUCTURES DESIGN SECTION. THE PRECAST STRUCTURE SHALL CONFORM TO PRECAST DETAILS IN CHAPTER 36 STANDARDS OF THE CURRENT WISCONSIN DOT BRIDGE MANUAL. PAYMENT FOR THE PRECAST CULVERT SHALL BE BASED ON THE PRICES BID FOR THE ITEMS LISTED IN THE "TOTAL ESTIMATED QUANTITIES". ALL PRECAST BOX SECTIONS SHALL BE PLACED ON A BEDDING OF "STRUCTURE BACKFILL TYPE B" OF 6" MINIMUM DEPTH.

THE CONCRETE IN THE CUTOFF WALLS MAY BE PLACED UNDERWATER IF THE EXCAVATION CANNOT BE DEWATERED.

SOUTH HALF OF DOWNSTREAM APRON BUILT IN SECOND STAGE TO ACCOMMODATE TEMPORARY DIVERSION. SEE ROADWAY PLANS FOR TEMPORARY DIVERSION DETAILS.

TRAFFIC DATA

ADT = 1,200 (2019)
2,300 (2039)
RDS = 40 M.P.H.

TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID ITEMS	UNIT	TOTAL
203.0500.S	REMOVING OLD STRUCTURE OVER WATERWAY STA 160+19	LS	1
206.2000	EXCAVATION FOR STRUCTURES CULVERTS C-5-154	LS	1
210.2500	BACKFILL STRUCTURE TYPE B	TON	830
311.0110	BREAKER RUN	TON	197
504.0100	CONCRETE MASONRY CULVERTS	CY	145
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	17,880
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	3,060
513.8011	RAILING STEEL PEDESTRIAN TYPE C2 C-5-154	LF	34
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	20
606.0200	RIPRAP MEDIUM	CY	17
645.0105	GEOTEXTILE TYPE C	SY	303
645.0120	GEOTEXTILE TYPE HR	SY	22
	NON-BID ITEMS		
	FILLER	SIZE	¾"

NOTES

Ⓧ INDICATES WING NUMBER

✳ SEE CORNER DETAILS SHT. 5, TYP.

△ VERTICAL CONSTRUCTION JOINT (TYP.): 18" RMW UP WALLS & ACROSS TOP SLAB

HYDRAULIC DATA

100 YEAR FREQUENCY

Q_{100} ——— 560 C.F.S.
$Q_{CULVERT}$ ——— 556 C.F.S.
Q_{ROAD} ——— 4 C.F.S.
VELOCITY ——— 8.82 F.P.S.
HIGH WATER ——— EL. 750.15 (100 YEAR)
WATERWAY AREA ——— 63 S.F.
DRAINAGE AREA ——— 1.7 SQ. MILES
OVERTOPPING FREQUENCY = 100 YEAR
SCOUR CRITICAL CODE = 8

2 YEAR FREQUENCY

Q_2 ——— 133 C.F.S.
HIGH WATER ——— EL. 745.99 (2 YEAR)

WISCONSIN
KRISTOFER R. OLSON
E-35236
APPLETON, WI
PROFESSIONAL ENGINEER

1/9/19

DESIGN DATA

LIVE LOAD:

DESIGN LOADING ——— HL-93
INVENTORY RATING FACTOR ——— RF = 1.05
OPERATING RATING FACTOR ——— RF = 1.35
WISCONSIN STANDARD
PERMIT VEHICLE (Wis-SPV) ——— 255 KIPS

EARTH LOAD:

DESIGNED FOR 0 TO 2 FEET OF FILL.

MATERIAL PROPERTIES:

CONCRETE MASONRY GRADE A-FA ——— f'c = 3,500 P.S.I.
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60 ——— fy = 60,000 P.S.I.

LIST OF DRAWINGS

1. LAYOUT
2. BOX DETAILS
3. DOWNSTREAM APRON
4. UPSTREAM APRON
5. DETAILS
6. COMBINATION RAIL TYPE 'C2'
7. SUBSURFACE EXPLORATION

CONSULTANT CONTACT

KRISTOFER OLSON
OMNNI ASSOCIATES, INC.
(920) 735-6900

BRIDGE OFFICE CONTACT

WILLIAM DREHER
(608) 266-8489

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
OMNNI ASSOCIATES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 01/10/19
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE C-5-154

CTH EA OVER SORENSONS CREEK TRIBUTARY

COUNTY	VILLAGE
BROWN	BELLEVUE

DESIGN SPEC.	LOAD
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS	HL-93

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
BRE	KRO	BRE	KRO

GENERAL PLAN

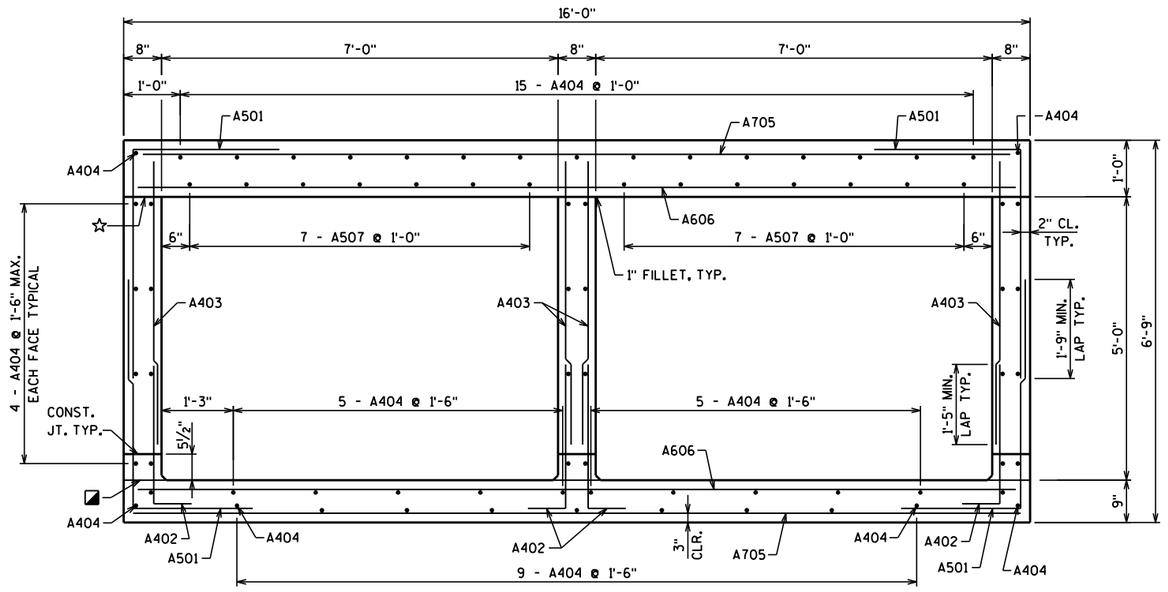
SHEET 1 OF 7

201

8

8

STATE PROJECT NUMBER
4516-07-17



TYPICAL SECTION THRU BOX

BILL OF BARS

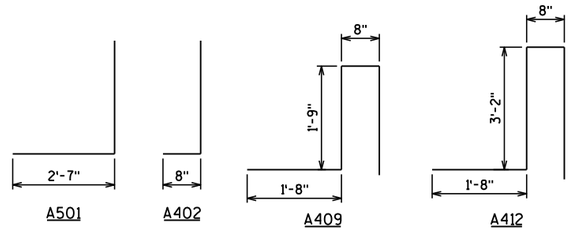
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
A501		296	6'-6"	X	CORNERS
A402		220	3'-2"	X	WALLS - DOWEL VERT.
A403		220	5'-1"		WALLS - VERT.
A404		128	36'-8"		TOP & BOT. SLABS & WALLS
A705		156	16'-6"		TOP & BOT. SLAB TRANS.
A606		148	16'-6"		TOP & BOT. SLAB TRANS.
A507		28	36'-8"		TOP SLAB
A508	X	49	2'-0"		VERT. CONST. JOINT
A409	X	23	5'-10"	X	HEADER STIRRUP VERT. INLET
A410	X	6	16'-6"		HEADER - HORIZONTAL
A511	X	4	16'-6"		HEADER - HORIZONTAL
A412	X	23	8'-10"	X	HEADER STIRRUP VERT. OUTLET

LEGEND

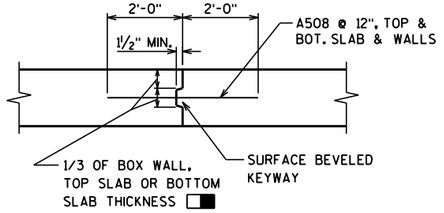
☆ OPTIONAL CONST. JOINT. OMIT 1" FILLET IF OPTIONAL CONST. JOINT IS USED.

◪ ALTERNATE CONST. JOINT. OMIT 1" FILLET IF ALTERNATE CONST. JOINT IS USED.

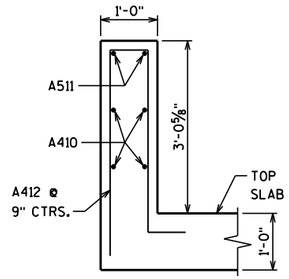
◨ IN LIEU OF CONSTRUCTION JOINTS IN THE BOTTOM SLAB, THE CONTRACTOR MAY USE 2" DEEP SAW CUTS WITHIN 12 HOURS AFTER POURING.



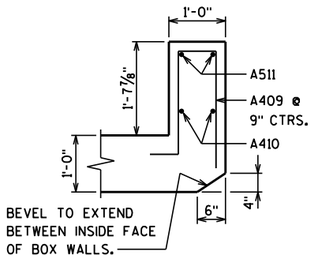
BAR BEND DIAGRAMS



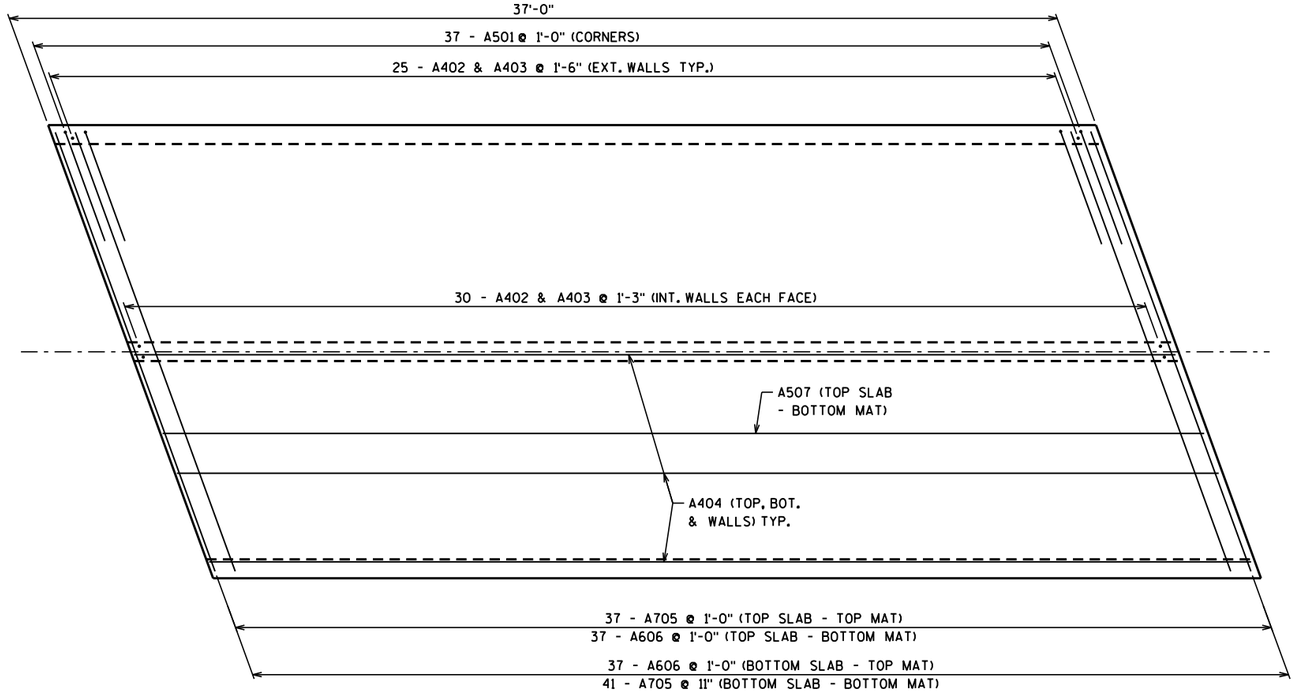
VERTICAL CONSTRUCTION JOINT



SECTION THRU OUTLET HEADER



SECTION THRU INLET HEADER



PLAN VIEW OF PANEL

ONE PANEL SHOWN - TWO REQUIRED.
HEADERS NOT SHOWN FOR CLARITY.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE C-5-154

DRAWN BY BRE | PLANS CK'D. KRO

BOX DETAILS

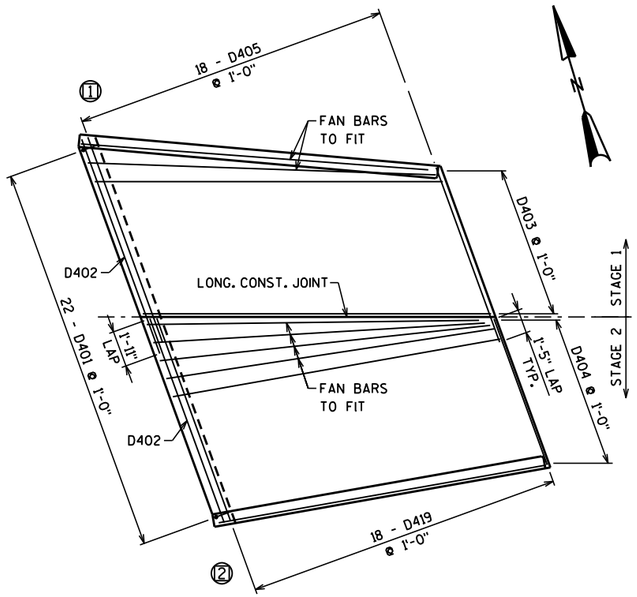
SHEET 2 OF 7

8

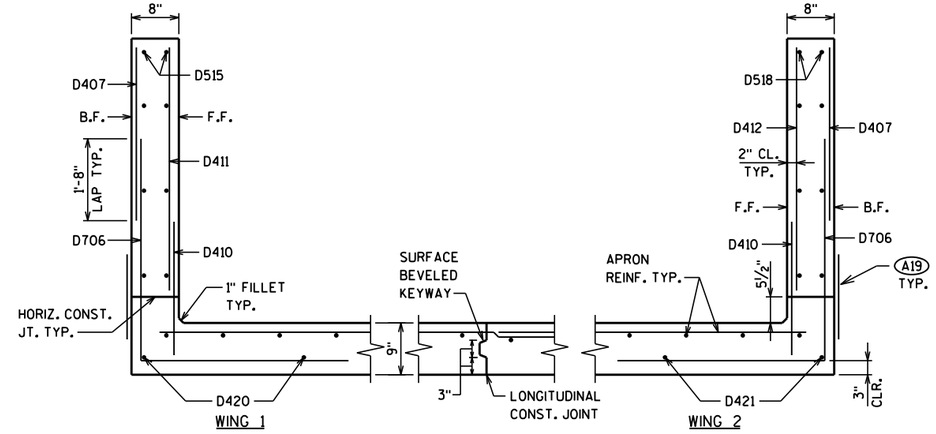
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FILE NAME : F:±TR±JOBS±E2167A15±Sheets±C-05-0154 02 box det.dgn PLOT BY : EpleyB PLOT DATE: 9/4/2018 2:45:39 PM

STATE PROJECT NUMBER
4516-07-17



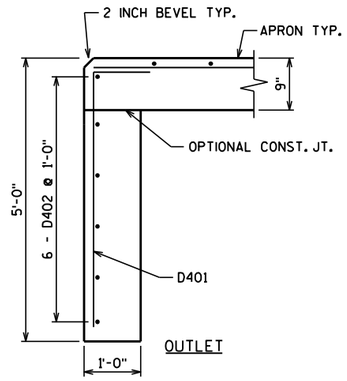
APRON REINFORCING



SECTION THRU WINGS

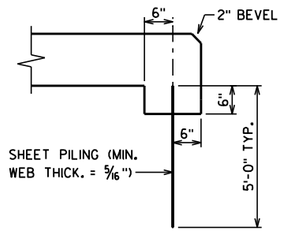
NORMAL TO WING WALLS

(A19) 18" RUBBERIZED MEMBRANE WATERPROOFING. PLACE ALONG HORIZ. CONST. JT. FOR ENTIRE WING LENGTH.



SECTION THRU CUT-OFF WALL

NORMAL TO WALL



ALTERNATE CUT-OFF WALLS

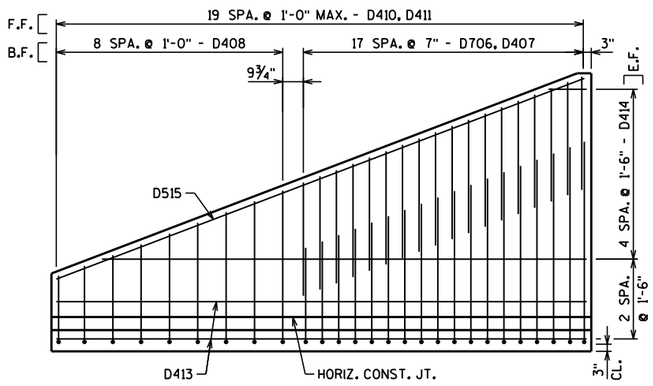
THE ABOVE ALT. MAY BE USED IN LIEU OF THE CAST-IN-PLACE CONC. CUT-OFF WALLS. PAYMENT WILL BE BASED ON THE CONC. CUT-OFF WALLS.

BILL OF BARS

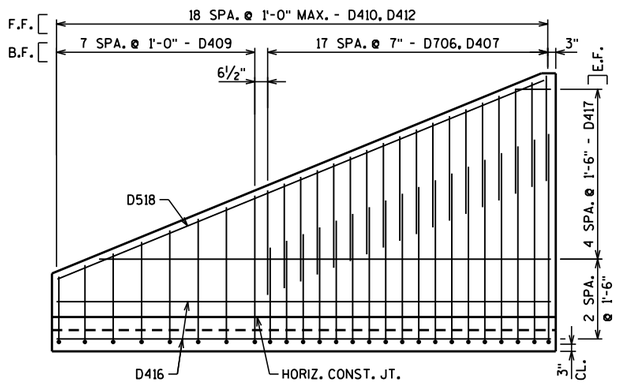
BAR MARK	COAT	NO. REQ'D.	LENGTH	SERIES	BENT	LOCATION
D401		22	5'-6"		X	OUTLET CUTOFF WALL
D402		12	11'-7"			OUTLET CUTOFF WALL
D403		10	18'-5"			OUTLET APRON
D404		12	17'-7"			OUTLET APRON
D405		18	10'-8"	X		OUTLET APRON
D706	X	36	12'-5"	X	X	OUTLET WINGS VERTICAL B.F.
D407	X	36	4'-1"			OUTLET WINGS VERTICAL B.F.
D408	X	9	9'-0"	X	X	OUTLET WING 1 VERTICAL B.F.
D409	X	8	8'-10"	X	X	OUTLET WING 2 VERTICAL B.F.
D410	X	39	2'-3"			OUTLET WINGS VERTICAL F.F.
D411	X	20	5'-4"	X		OUTLET WING 1 VERTICAL F.F.
D412	X	19	5'-3"	X		OUTLET WING 2 VERTICAL F.F.
D413	X	4	18'-8"			OUTLET WING 1 HORIZONTAL
D414	X	10	9'-3"	X		OUTLET WING 1 HORIZONTAL
D515	X	2	19'-8"			OUTLET WING 1 HORIZONTAL, TOP
D416	X	4	17'-5"			OUTLET WING 2 HORIZONTAL
D417	X	10	8'-7"	X		OUTLET WING 2 HORIZONTAL
D518	X	2	18'-7"			OUTLET WING 2 HORIZONTAL, TOP
D419		18	9'-11"	X		OUTLET APRON
D420		2	19'-0"			OUTLET APRON
D421		2	17'-7"			OUTLET APRON

BAR SERIES TABLE

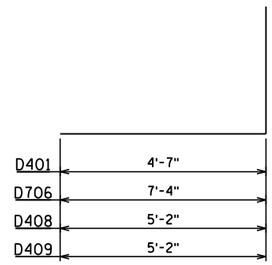
BAR MARK	NO. REQ'D.	LENGTH
D405	1 SERIES OF 18	9'-10" TO 11'-6"
D706	2 SERIES OF 18	10'-6" TO 14'-4"
D408	1 SERIES OF 9	7'-5" TO 10'-7"
D409	1 SERIES OF 8	7'-4" TO 10'-4"
D411	1 SERIES OF 20	1'-10" TO 8'-10"
D412	1 SERIES OF 19	1'-9" TO 8'-9"
D414	2 SERIES OF 5	1'-4" TO 17'-2"
D417	2 SERIES OF 5	1'-3" TO 15'-11"
D419	1 SERIES OF 18	8'-4" TO 11'-6"



WING 1



WING 2



BAR BENDS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE C-5-154

DRAWN BY BRE | PLANS CK'D. KRO

DOWNSTREAM APRON

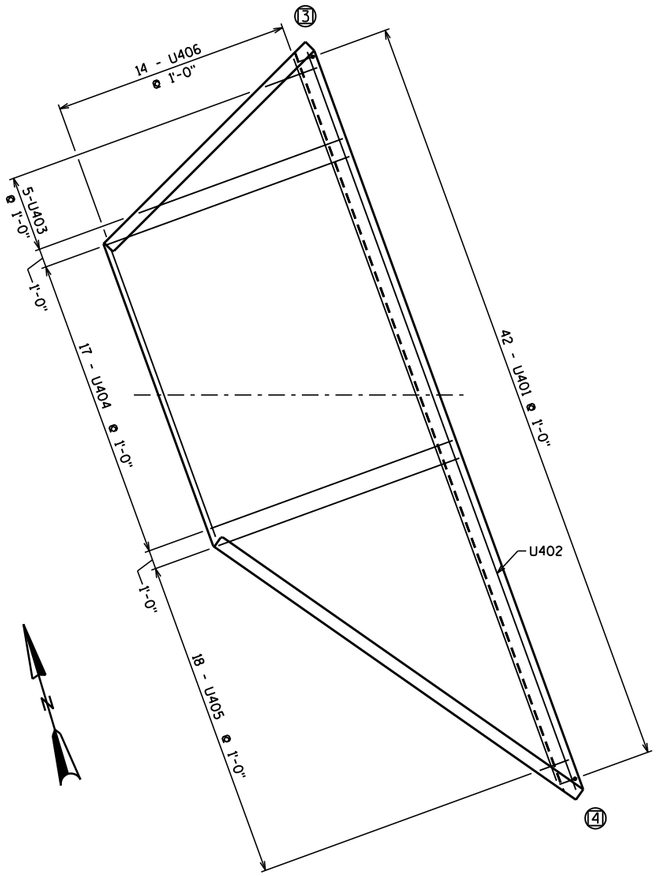
SHEET 3 OF 7

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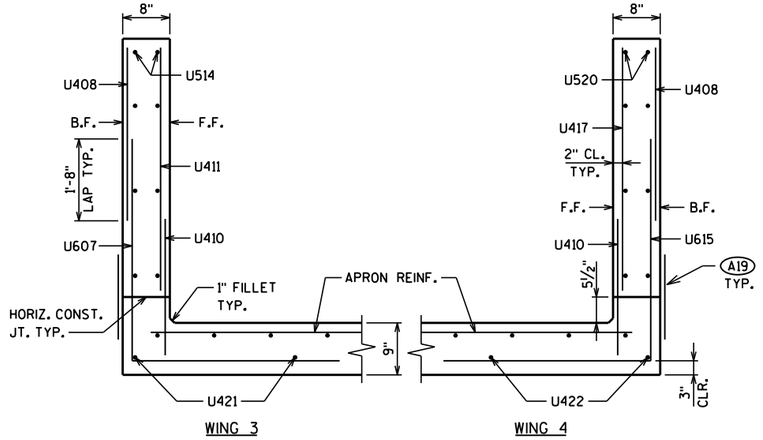
STATE PROJECT NUMBER
4516-07-17



APRON REINFORCING

BILL OF BARS

BAR MARK	COAT	NO. REQ'D.	LENGTH	SERIES	BENT	LOCATION
U401		42	3'-6"		X	INLET CUTOFF WALL
U402		4	41'-7"			INLET CUTOFF WALL
U403		5	7'-2"	X		INLET APRON
U404		17	13'-8"			INLET APRON
U405		18	7'-7"	X		INLET APRON
U406		14	28'-7"	X		INLET APRON
U607	X	9	9'-11"	X	X	INLET WING 3 VERTICAL B.F.
U408	X	22	4'-8"			INLET WINGS VERTICAL B.F.
U409	X	9	9'-0"	X	X	INLET WING 3 VERTICAL B.F.
U410	X	40	2'-3"			INLET WINGS VERTICAL F.F.
U411	X	16	4'-2"	X		INLET WING 3 VERTICAL F.F.
U412	X	4	14'-8"			INLET WING 3 HORIZONTAL
U413	X	8	7'-4"	X		INLET WING 3 HORIZONTAL
U514	X	2	15'-8"			INLET WING 3 HORIZONTAL, TOP
U615	X	13	9'-10"	X	X	INLET WING 4 VERTICAL B.F.
U416	X	14	9'-0"	X	X	INLET WING 4 VERTICAL B.F.
U417	X	24	4'-2"	X		INLET WING 4 VERTICAL F.F.
U418	X	4	23'-0"			INLET WING 4 HORIZONTAL
U419	X	8	11'-4"	X		INLET WING 4 HORIZONTAL
U520	X	2	23'-8"			INLET WING 4 HORIZONTAL, TOP
U421		2	15'-1"			INLET APRON
U422		2	23'-5"			INLET APRON

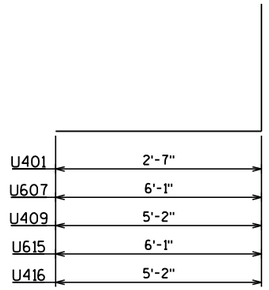


SECTION THRU WINGS

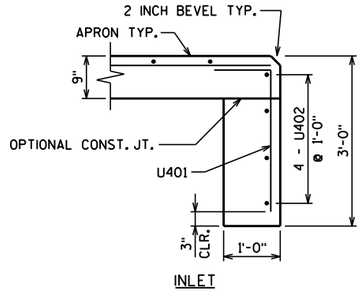
NORMAL TO WING WALLS

BAR SERIES TABLE

BAR MARK	NO. REQ'D.	LENGTH
U403	1 SERIES OF 5	2'-11" TO 11'-5"
U405	1 SERIES OF 18	1'-7" TO 13'-7"
U406	1 SERIES OF 14	16'-4" TO 40'-10"
U607	1 SERIES OF 9	8'-9" TO 11'-1"
U409	1 SERIES OF 9	7'-5" TO 10'-7"
U411	1 SERIES OF 16	1'-4" TO 7'-0"
U413	2 SERIES OF 4	1'-6" TO 13'-2"
U615	1 SERIES OF 13	8'-9" TO 10'-11"
U416	1 SERIES OF 14	7'-5" TO 10'-7"
U417	1 SERIES OF 24	1'-4" TO 7'-0"
U419	2 SERIES OF 4	2'-3" TO 20'-5"

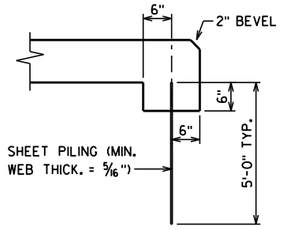


BAR BENDS



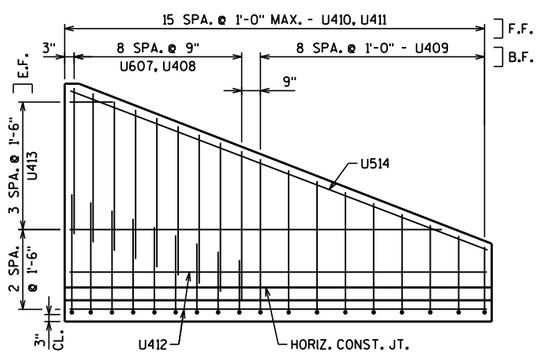
SECTION THRU CUT-OFF WALL

NORMAL TO WALL

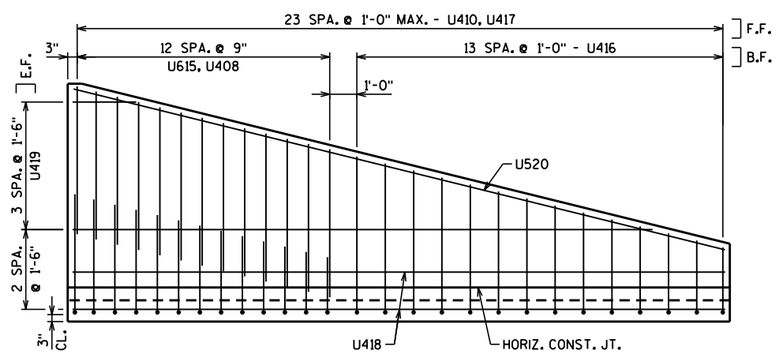


ALTERNATE CUT-OFF WALLS

THE ABOVE ALT. MAY BE USED IN LIEU OF THE CAST-IN-PLACE CONC. CUT-OFF WALLS. PAYMENT WILL BE BASED ON THE CONC. CUT-OFF WALLS.



WING 3



WING 4

LEGEND

(A19) 18" RUBBERIZED MEMBRANE WATERPROOFING. PLACE ALONG HORIZ. CONST. JT. FOR ENTIRE WING LENGTH.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE C-5-154

DRAWN BY BRE | PLANS CK'D. KRO

UPSTREAM APRON

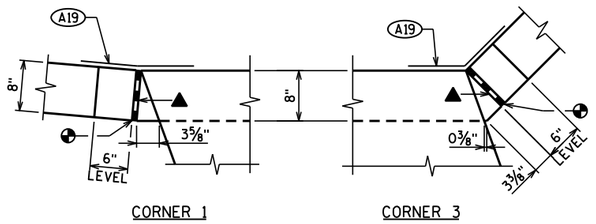
SHEET 4 OF 7

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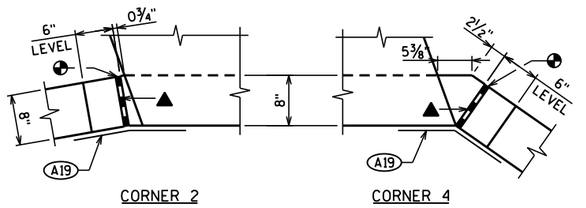
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8

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4516-07-17

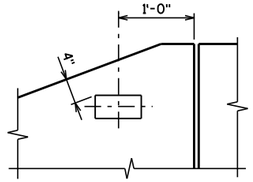


CORNER 1 CORNER 3

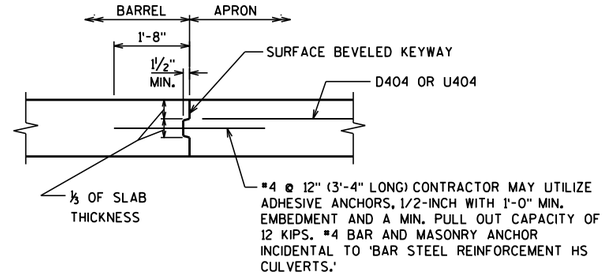


CORNER 2 CORNER 4

CORNER DETAILS



NAME PLATE LOCATION WING 4



OPTIONAL CONSTRUCTION JOINT

2" DEEP SAW CUT WITHIN 12 HOURS AFTER POURING MAY BE USED IN LIEU OF CONST. JT. IN BOTTOM SLAB.

LEGEND

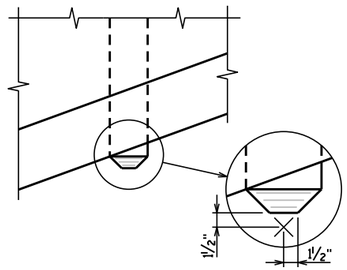
▲ ¾" FILLER TYPICAL. EXTEND FILLER FROM HORIZ. CONST. JT. TO TOP OF WING.

◓ 1" BEVEL TYPICAL

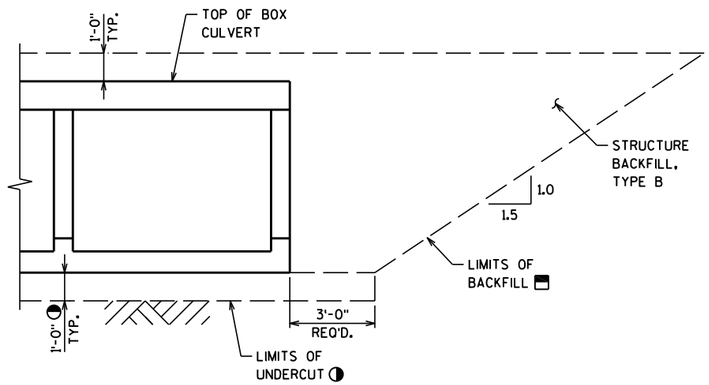
(A19) 18" RUBBERIZED MEMBRANE WATERPROOFING. FROM HORIZ. CONST. JT. TO TOP OF WALL (FLUSH WITH FACE OF CONCRETE)

⬒ BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

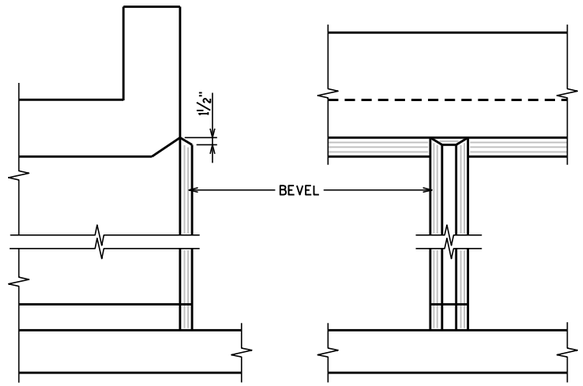
◑ UNDER CUT BOX AND APRONS 6" (INCLUDED IN EXCAVATION FOR STRUCTURES), PLACE GEOTEXTILE FABRIC TYPE 'C', AND BACKFILL WITH STRUCTURE BACKFILL TYPE B. EXTEND 3'-0" BEYOND THE FOOTPRINT OF THE CULVERT.



PLAN



PARTIAL SECTION THRU BOX CULVERT



SECTION ELEVATION

INLET NOSE DETAILS

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE C-5-154

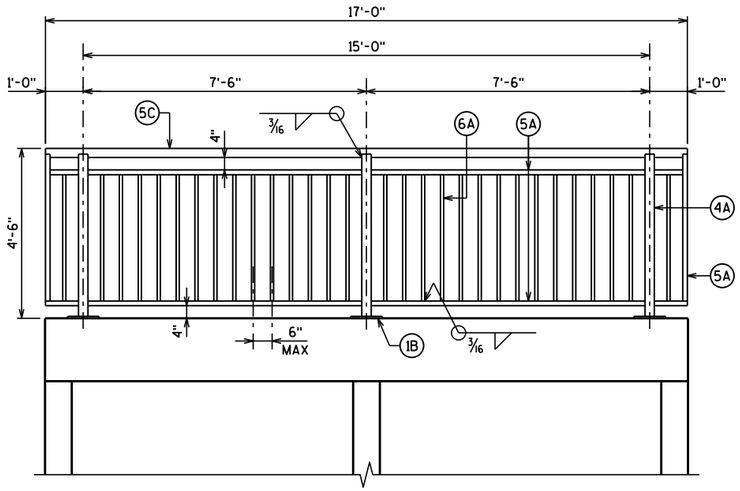
DRAWN BY BRE | PLANS CK'D. KRO

DETAILS

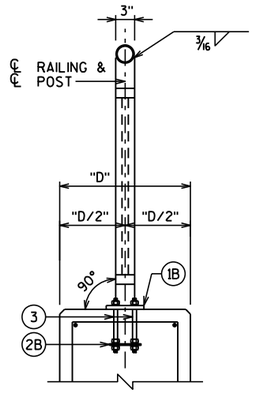
SHEET 5 OF 7

205

STATE PROJECT NUMBER
4516-07-17



ELEVATION OF HEADER RAILING



SECTION THRU RAILING

LEGEND

(1B) PLATE 5/8" X 6" X 10" WITH 3/4" X 1 1/2" SLOTTED HOLES.

(2B) 1/4" X 5" X 9" ANCHOR PLATE WITH 11/16 " ϕ HOLES FOR THR'D. RODS NO. 3.

(3) 5/8" DIA. X 9" LONG, TYPE 316 STAINLESS STEEL THREADED RODS (MIN. TENSILE STRENGTH = 70 KSI) WITH NUT AND WASHERS OF SAME ALLOY GROUP. ALTERNATE RAIL POST ANCHORAGE: CONCRETE ADHESIVE ANCHORS 5/8-INCH. EMBED 7" IN CONCRETE FOR RAIL POSTS. EMBED 5" IN CONCRETE FOR END RAILS. ADHESIVE ANCHORS SHALL CONFORM TO SECTION 502.2.12 OF THE STANDARD SPECIFICATIONS.

(4A) STRUCTURAL TUBING 3" X 3" X 3/16". PLACE VERTICAL. WELD TO NO. 1 & 5.

(5A) STRUCTURAL TUBING 3" X 1 1/2" X 3/16" RAILS. WELD TO NO. 1 & NO. 4. INSIDE OF TUBE TO BE PAINTED AT ALL FIELD ERECTION & EXPANSION JOINTS.

(5C) STRUCTURAL TUBING 2 1/2" ϕ (STANDARD SIZE) (2.875" O.D.). WELD TO NO. 1 & NO. 4. INSIDE OF TUBE TO BE PAINTED AT ALL FIELD ERECTION & EXPANSION JOINTS.

(6A) BAR 1" X 1" PICKETS. WELD TO NO. 5 (SPACE AT 6" MAX. ℄ TO ℄ SPACING). PLACE VERTICAL.

(9A) RECTANGULAR SLEEVE FABRICATED FROM 3/16" PLATES. PROVIDE "SLIDING FIT".

(9B) CIRCULAR SLEEVE FABRICATED FROM STRUCTURAL TUBING 2" ϕ (STANDARD SIZE) (2.375" O.D.)

(10A) RECTANGULAR SLEEVE FABRICATED FROM 3/16" PLATES. (1'-4" @ FIELD ERECTION JTS.) (1'-4" @ STRIP SEAL JTS.)

(10B) CIRCULAR SLEEVE FABRICATED FROM STRUCTURAL TUBING 2" ϕ (STANDARD SIZE) (2.375" O.D.) (1'-4" @ FIELD ERECTION JTS.) (1'-4" @ STRIP SEAL EXP. JTS.)

RAILING NOTES

BID ITEM SHALL BE "RAILING STEEL PEDESTRIAN TYPE C2 C-5-154", WHICH SHALL INCLUDE ALL STEEL ITEMS SHOWN.

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

ALL PLATES, BARS, AND RECTANGULAR SLEEVES SHALL CONFORM TO ASTM A709 GRADE 36. ALL STRUCTURAL TUBING SHALL CONFORM TO ASTM A500 GRADE B.

ANCHORAGES SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF RAILING. SET NORMAL TO GRADE.

CUT BOTTOM OF POST TO MAKE POST VERTICAL IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTION.

STEEL SHIMS SHALL BE PROVIDED & USED UNDER BASE PLATES WHERE REQUIRED FOR ALIGNMENT, AND SHALL BE GALVANIZED.

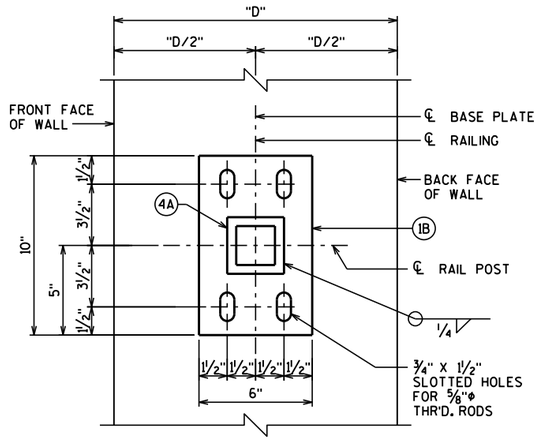
■ CAULK AROUND PERIMETER OF BASE PLATES, NO. 1, AND FILL BOLT SLOT OPENINGS IN SHIMS AND BASE PLATES WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

ALL MATERIAL (EXCEPT NO. 3) SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, THE STEEL RAILING SHALL BE GIVEN A NO. 6 BLAST CLEANING PER SSPC SPECIFICATIONS. PAINT OVER GALVANIZING WITH AN APPROVED TIE COAT AND TOP COAT AS SPECIFIED IN THE CONTRACT DOCUMENTS. THE RAILING SHALL BE PAINTED FEDERAL COLOR NO. 27038, BLACK.

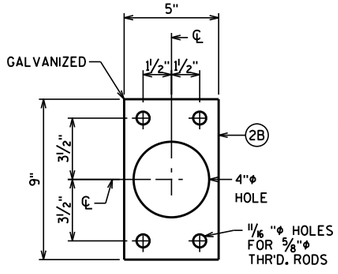
VENT HOLES SHALL BE DRILLED IN POST AND RAIL MEMBERS AS REQUIRED TO FACILITATE GALVANIZING AND DRAINAGE.

RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE 3 OR 4 POSTS.

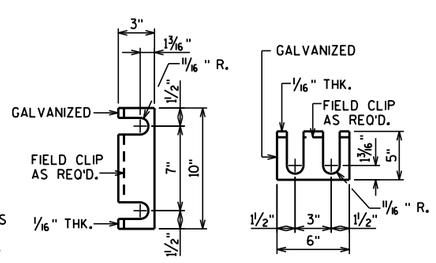
TOUCH-UP PAINTING TO BE DONE AT COMPLETION OF STEEL RAILING INSTALLATION TO THE SATISFACTION OF THE ENGINEER AT NO EXTRA COST.



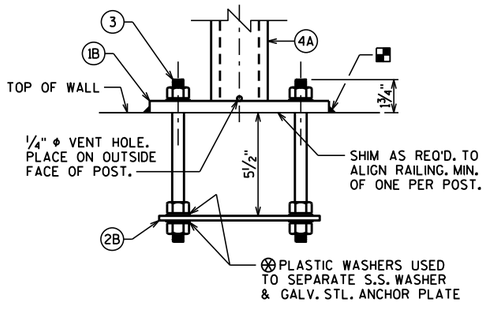
TYPICAL RAIL POST BASE PLATE



ANCHOR PLATE

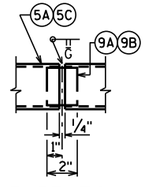


RAIL POST SHIM DETAIL
(2 SETS PER POST)

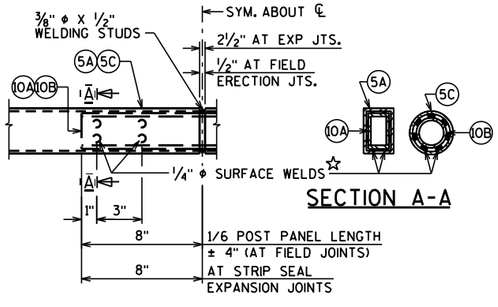


ANCHORAGE FOR RAIL POSTS

NOTE: ANCHOR PLATE NOT REQUIRED WHEN TYPE S ANCHORS ARE USED.



SHOP RAIL
SPLICE DETAIL
(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)



SECTION A-A

FIELD ERECTION JOINT DETAIL

☆ MIN. 5/8" FLAT SURFACE DIA. PUNCHINGS OR STUDS MAY BE USED AS AN ALTERNATE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE C-5-154

DRAWN BY BRE | PLANS CK'D. KRO

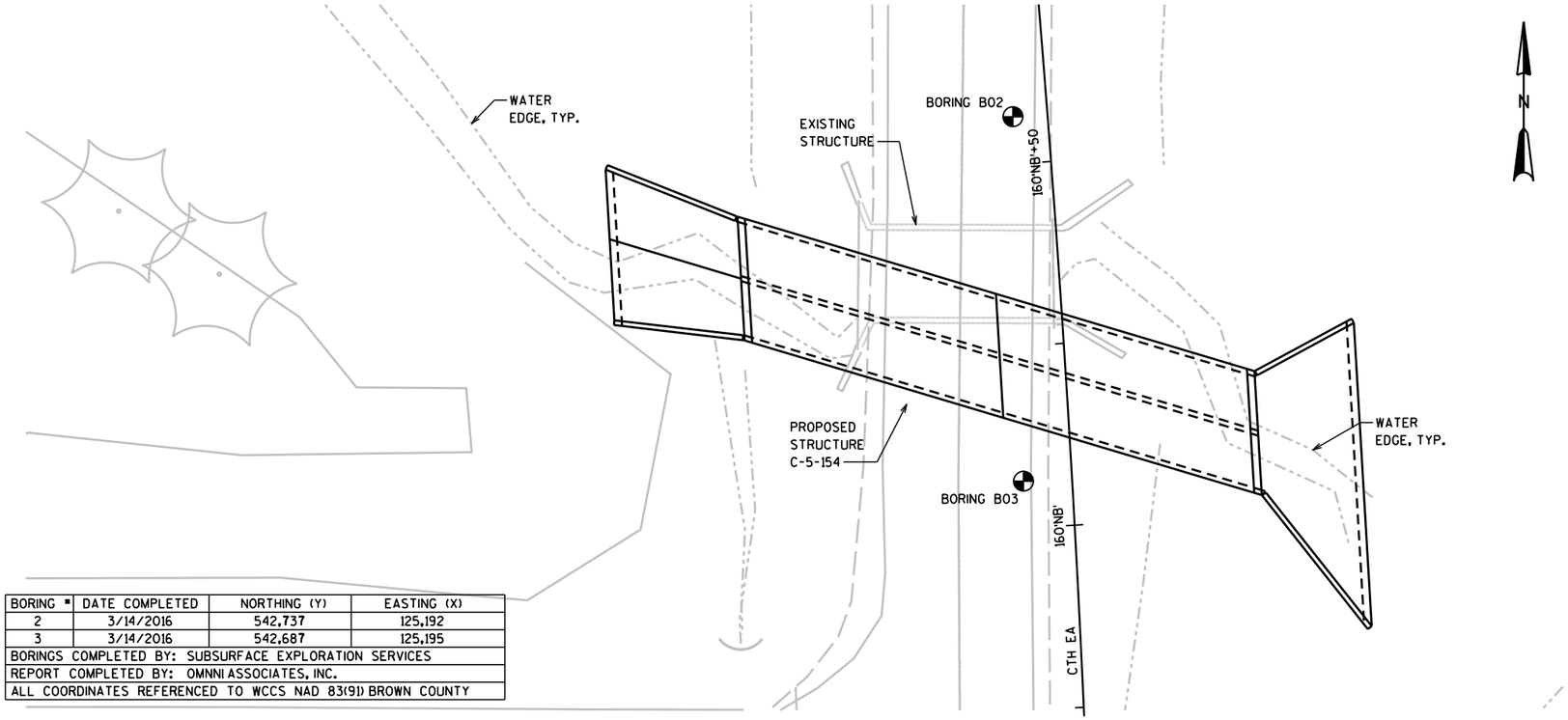
COMBINATION
RAIL TYPE 'C2'

SHEET 6 OF 7

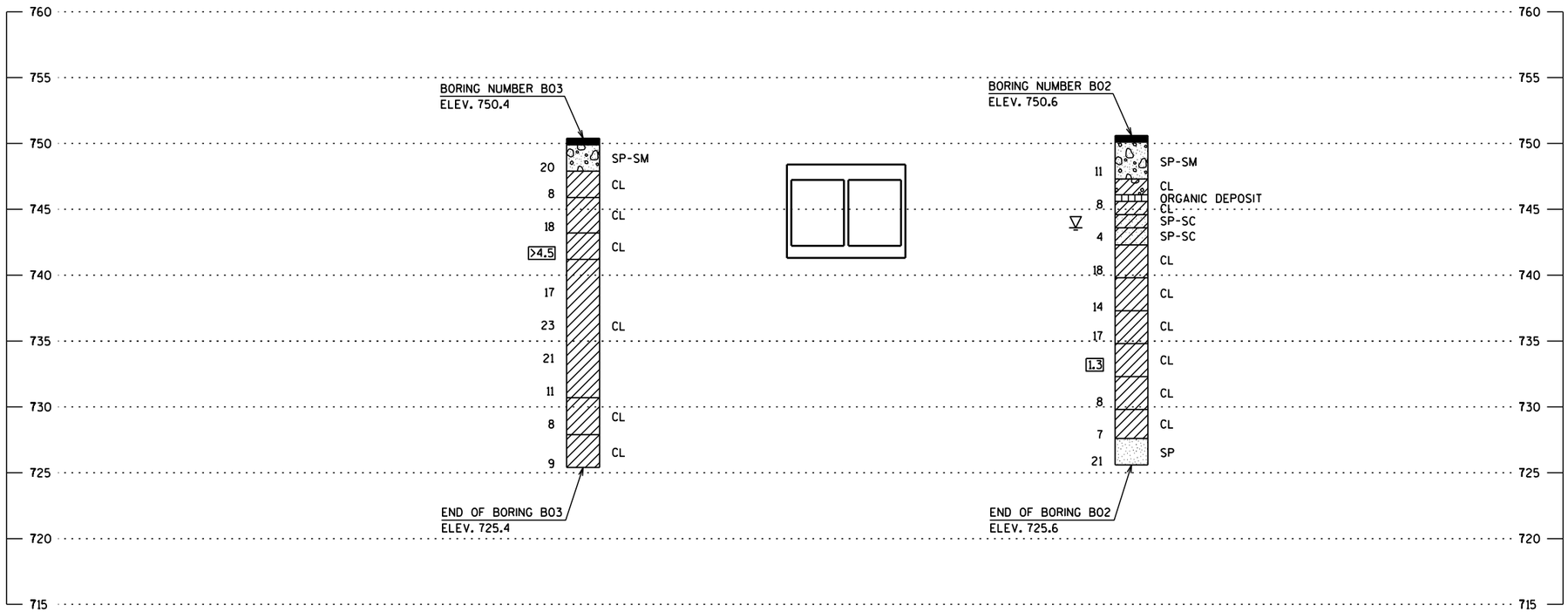
206

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BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
2	3/14/2016	542,737	125,192
3	3/14/2016	542,687	125,195
BORINGS COMPLETED BY: SUBSURFACE EXPLORATION SERVICES			
REPORT COMPLETED BY: OMNNI ASSOCIATES, INC.			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) BROWN COUNTY			



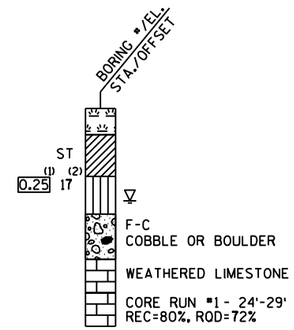
STATE PROJECT NUMBER

4516-07-71

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/ META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- AT TIME OF DRILLING
- END OF DRILLING
- AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE C-5-154

DRAWN BY BRE | PLANS CK'D. KRO

SUBSURFACE EXPLORATION

SHEET 7 OF 7

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FILE NAME : F:±TR±JOBS±E2167A15±Sheets±C-05-0154 07 sub explr.dgn PLOT BY : EpleyB PLOT DATE: 9/4/2018 3:34:00 PM

COTTAGE RD NB EARTHWORK DETAIL

STATION	CROSS SECTION AREA (SF)			UNADJUSTED INCREMENTAL VOL (CY)			CUMULATIVE VOL (CY)		
	CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EXPANDED FILL 1.20	MASS ORDINATE
145+73	51.03	0.00	0.15	0	0	0	0	0	0
146+00	50.92	0.00	1.82	51	0	1	51	1	50
146+50	52.50	0.00	0.21	96	0	2	147	3	143
147+00	30.22	0.00	7.06	77	0	7	223	12	212
147+25	31.28	0.00	39.01	28	0	21	252	37	215
147+50	41.67	0.00	55.21	34	0	44	286	89	196
147+75	47.33	0.00	49.05	41	0	48	327	147	179

COTTAGE RD SB EARTHWORK DETAIL

STATION	CROSS SECTION AREA (SF)			UNADJUSTED INCREMENTAL VOL (CY)			CUMULATIVE VOL (CY)		
	CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EXPANDED FILL 1.20	MASS ORDINATE
247+25	9.24	0.00	29.25	0	0	0	0	0	0
247+50	14.41	0.00	56.23	11	0	40	11	47	-37
247+75	18.86	0.00	54.69	15	0	51	26	109	-83

MEADOW CIRCLE SOUTH EARTHWORK DETAIL

STATION	CROSS SECTION AREA (SF)			UNADJUSTED INCREMENTAL VOL (CY)			CUMULATIVE VOL (CY)		
	CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EXPANDED FILL 1.20	MASS ORDINATE
500+50	78.86	0.00	0.14	0	0	0	0	0	0
501+00	127.92	0.00	0.00	190	0	0	190	0	190
501+35	156.20	0.00	0.00	184	0	0	374	0	374
501+50	122.13	0.00	0.00	77	0	0	451	0	451

WILLOW RD EAST EARTHWORK DETAIL

STATION	CROSS SECTION AREA (SF)			UNADJUSTED INCREMENTAL VOL (CY)			CUMULATIVE VOL (CY)		
	CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EXPANDED FILL 1.20	MASS ORDINATE
800+50	103.82	0.00	29.46	0	0	0	0	0	0
801+00	88.87	0.00	0.00	178	0	27	178	33	146
801+50	71.77	0.00	0.55	149	0	1	327	33	294
801+75	60.56	0.00	1.14	61	0	1	388	34	354

NOTES:

- SALVAGED / UNUSABLE PAVEMENT MATERIAL INLUDED IN CUT AREA.
- AVAILABLE MATERIAL = CUT – SALVAGED MATERIAL.
- MASS ORDINATE = AVAILABLE MATERIAL – EXPANDED FILL.

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STH 29 EB WEST LEG EARTHWORK DETAIL

STATION	CROSS SECTION AREA (SF)			UNADJUSTED INCREMENTAL VOL (CY)			CUMULATIVE VOL (CY)		
	CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EXPANDED FILL 1.20	MASS ORDINATE
301+31	94.35	11.00	1.11	0	0	0	0	0	0
301+50	132.66	11.00	0.20	82	8	0	82	1	73
301+69	175.80	11.00	0.00	109	8	0	190	1	174
302+00	117.55	11.00	3.87	168	13	2	359	3	327
302+50	121.06	11.00	8.08	221	20	11	579	17	514
303+00	128.48	11.00	10.43	231	20	17	811	37	704
303+50	144.18	11.00	72.89	252	20	77	1,063	130	844
304+00	74.79	11.00	51.34	203	20	115	1,266	268	888
304+25	79.57	11.00	57.31	71	10	50	1,337	328	889
304+50	70.49	8.00	68.90	69	9	58	1,407	398	880

STH 29 EB EAST LEG EARTHWORK DETAIL

STATION	CROSS SECTION AREA (SF)			UNADJUSTED INCREMENTAL VOL (CY)			CUMULATIVE VOL (CY)		
	CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EXPANDED FILL 1.20	MASS ORDINATE
306+00	89.65	7.00	34.18	0	0	0	0	0	0
306+25	43.61	0.00	41.34	62	3	35	62	42	17
306+50	52.37	0.00	40.26	44	0	38	106	87	16
307+00	183.55	11.00	18.81	218	10	55	325	153	158
307+50	211.63	11.00	0.97	366	20	18	690	175	482
307+70	270.54	11.00	0.00	179	8	0	869	175	652
308+00	167.97	11.00	0.60	244	12	0	1,113	176	883
308+50	138.94	11.00	1.04	284	20	2	1,397	178	1,145
309+00	111.82	11.00	3.55	232	20	4	1,629	183	1,351
309+26	106.88	11.00	6.53	105	11	5	1,734	188	1,440

VFW DWY EARTHWORK DETAIL

STATION	CROSS SECTION AREA (SF)			UNADJUSTED INCREMENTAL VOL (CY)			CUMULATIVE VOL (CY)		
	CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EXPANDED FILL 1.20	MASS ORDINATE
30+50	0.00	0.00	12.58	0	0	0	0	0	0
31+00	0.00	0.00	29.70	0	0	39	0	47	-47
31+44	0.00	0.00	57.22	0	0	71	0	132	-132
31+50	0.00	0.00	55.06	0	0	12	0	147	-147
32+00	0.00	0.00	36.06	0	0	84	0	248	-248
32+50	3.21	0.00	0.60	3	0	34	3	289	-286
32+75	12.38	0.00	0.00	7	0	0	10	289	-279

NOTES:

- SALVAGED / UNUSABLE PAVEMENT MATERIAL INLUDED IN CUT AREA.
- AVAILABLE MATERIAL = CUT – SALVAGED MATERIAL.
- MASS ORDINATE = AVAILABLE MATERIAL – EXPANDED FILL.

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STH 29 WB WEST LEG EARTHWORK DETAIL

STATION	CROSS SECTION AREA (SF)			UNADJUSTED INCREMENTAL VOL (CY)			CUMULATIVE VOL (CY)		
	CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EXPANDED FILL 1.20	MASS ORDINATE
404+00	73.80	0.00	48.54	0	0	0	0	0	0
404+25	58.86	0.00	55.03	61	0	48	61	58	4
404+50	65.02	4.00	75.69	57	2	61	119	130	-13

STH 29 WB EAST LEG EARTHWORK DETAIL

STATION	CROSS SECTION AREA (SF)			UNADJUSTED INCREMENTAL VOL (CY)			CUMULATIVE VOL (CY)		
	CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EXPANDED FILL 1.20	MASS ORDINATE
406+00	74.14	4.00	43.16	0	0	0	0	0	0
406+25	104.70	11.00	35.53	83	7	36	83	44	32
406+50	97.06	11.00	27.89	93	10	29	176	79	80

ROUNDABOUT EARTHWORK DETAIL

STATION	CROSS SECTION AREA (SF)			UNADJUSTED INCREMENTAL VOL (CY)			CUMULATIVE VOL (CY)		
	CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EXPANDED FILL 1.20	MASS ORDINATE
10+35	171.53	44.60	45.34	0	0	0	0	0	0
10+70	32.10	0.00	147.33	132	29	125	132	150	-47
11+10	40.03	0.00	62.80	53	0	156	185	337	-180
11+45	59.66	0.00	95.09	65	0	102	250	459	-238
11+83	163.52	31.80	33.21	157	22	90	407	568	-212
12+20	117.99	0.00	84.67	193	22	81	600	665	-138
12+62	149.08	0.00	34.22	208	0	92	808	776	-41
13+02	101.48	0.00	114.23	184	0	109	991	906	12

CTH EA SB EARTHWORK DETAIL

STATION	CROSS SECTION AREA (SF)			UNADJUSTED INCREMENTAL VOL (CY)			CUMULATIVE VOL (CY)		
	CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EXPANDED FILL 1.20	MASS ORDINATE
249+25	71.93	0.00	40.31	0	0	0	0	0	0
249+50	61.82	0.00	15.48	62	0	26	62	31	31
249+75	57.42	0.00	26.56	55	0	19	117	54	63
250+00	53.91	0.00	29.96	52	0	26	169	86	83

NOTES:

- SALVAGED / UNUSABLE PAVEMENT MATERIAL INLUDED IN CUT AREA.
- AVAILABLE MATERIAL = CUT – SALVAGED MATERIAL.
- MASS ORDINATE = AVAILABLE MATERIAL – EXPANDED FILL.

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PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	EARTHWORK QUANTITIES	SHEET NO:

FILE NAME: F:\TR\JOBS\E2167A15\Civil 3D 2016\SheetsPlan\451607-090101-ew.ppt | ORIGINATOR: OMNNI ASSOCIATES | ORIG. DATE: | REV. DATE: | PRINT DATE: September 25, 2018

CTH EA NB EARTHWORK DETAIL

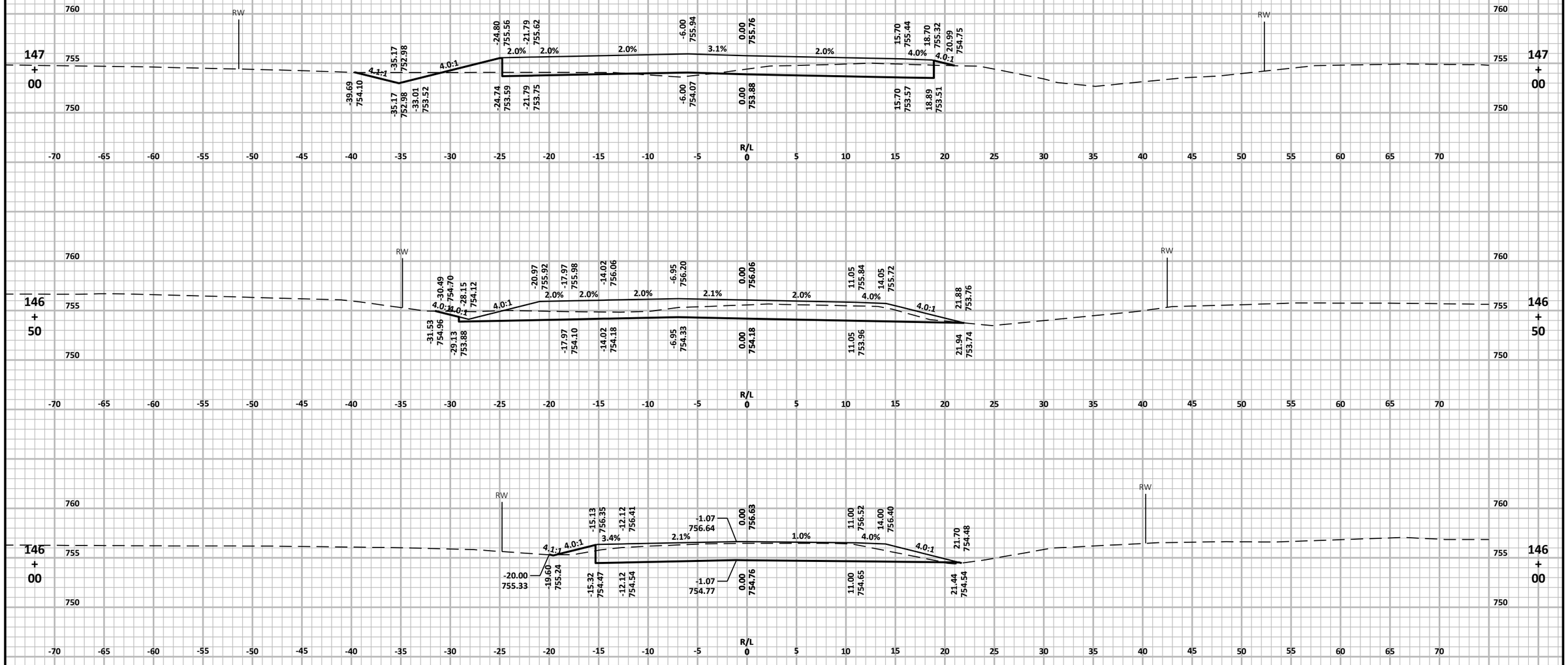
STATION	CROSS SECTION AREA (SF)			UNADJUSTED INCREMENTAL VOL (CY)			CUMULATIVE VOL (CY)		
	CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EXPANDED FILL 1.20	MASS ORDINATE
149+25	34.11	0.00	16.34	0	0	0	0	0	0
149+50	19.51	0.00	11.93	25	0	13	25	16	9
149+75	13.70	0.00	18.16	15	0	14	40	32	8
150+00	29.46	0.00	0.00	20	0	8	60	43	18
150+08	95.73	0.00	47.31	19	0	7	79	51	28
150+50	90.19	0.00	45.87	145	0	72	223	138	85
151+00	107.26	0.00	22.65	183	0	63	406	214	192
151+50	112.99	0.00	17.75	204	0	37	610	259	351
151+80	173.82	0.00	6.22	159	0	13	769	275	495
152+00	121.17	0.00	12.02	109	0	7	879	283	596
152+50	116.44	0.00	15.29	220	0	25	1,099	313	785
153+00	168.99	0.00	7.00	264	0	21	1,363	338	1,025
153+23	215.85	0.00	12.04	166	0	8	1,529	348	1,181
153+50	103.50	0.00	18.97	158	0	15	1,687	366	1,321
154+00	71.32	0.00	73.18	162	0	85	1,849	469	1,380
154+50	84.02	0.00	56.06	144	0	120	1,993	612	1,380
154+58	82.51	0.00	56.34	25	0	17	2,017	632	1,385
154+72	65.83	0.00	89.81	38	0	38	2,056	678	1,378
155+00	76.91	0.00	53.27	74	0	74	2,130	767	1,363
155+50	61.46	0.00	88.22	128	0	131	2,258	924	1,334
155+75	103.21	0.00	47.54	76	0	63	2,334	999	1,335
156+00	66.02	0.00	83.10	78	0	60	2,412	1,072	1,340
156+50	71.79	0.00	87.51	128	0	158	2,540	1,262	1,278
157+00	82.14	0.00	40.37	143	0	118	2,683	1,404	1,279
157+37	177.70	0.00	26.32	178	0	46	2,861	1,459	1,402
157+50	178.38	0.00	30.96	86	0	14	2,946	1,475	1,471
158+00	82.14	0.00	40.99	241	0	67	3,188	1,555	1,633
158+50	75.77	0.00	67.23	146	0	100	3,334	1,675	1,659
159+00	74.37	0.00	84.63	139	0	141	3,473	1,844	1,629
159+50	137.37	0.00	72.26	196	0	145	3,669	2,018	1,651
160+00	97.83	0.00	161.64	218	0	217	3,887	2,278	1,608
160+50	112.82	0.00	181.04	195	0	317	4,082	2,659	1,423
161+00	63.45	0.00	181.41	163	0	336	4,245	3,062	1,183
161+50	54.38	0.00	150.02	109	0	307	4,354	3,430	924
161+90	91.06	0.00	135.35	108	0	211	4,462	3,684	778
162+00	88.55	0.00	125.54	33	0	48	4,495	3,742	753
162+50	125.77	0.00	85.61	198	0	196	4,693	3,976	717
163+00	129.45	0.00	93.87	236	0	166	4,930	4,176	754
163+50	150.20	0.00	61.10	259	0	143	5,189	4,348	841
164+00	160.03	0.00	36.04	287	0	90	5,476	4,456	1,020
164+50	170.39	0.00	19.24	306	0	51	5,782	4,517	1,265
164+70	195.58	0.00	16.88	136	0	13	5,917	4,533	1,384
165+00	146.05	0.00	42.52	190	0	33	6,107	4,573	1,534

CTH EA NB EARTHWORK DETAIL - CONTINUED

STATION	CROSS SECTION AREA (SF)			UNADJUSTED INCREMENTAL VOL (CY)			CUMULATIVE VOL (CY)		
	CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EXPANDED FILL 1.20	MASS ORDINATE
165+50	149.34	0.00	41.05	274	0	77	6,381	4,666	1,715
166+00	150.22	0.00	39.49	277	0	75	6,658	4,755	1,903
166+50	177.71	0.00	36.01	304	0	70	6,962	4,839	2,123
167+00	253.95	0.00	7.83	400	0	41	7,361	4,888	2,474
167+11	264.85	0.00	0.00	106	0	2	7,467	4,890	2,577
167+50	171.06	0.00	38.21	315	0	28	7,782	4,923	2,859
168+00	151.81	0.00	39.70	299	0	72	8,081	5,009	3,072
168+50	141.55	0.00	49.42	272	0	83	8,353	5,108	3,244
169+00	145.10	0.00	33.17	265	0	76	8,618	5,200	3,418
169+32	190.39	0.00	34.69	199	0	40	8,817	5,248	3,568
169+50	156.03	0.00	47.73	115	0	27	8,932	5,281	3,651
170+00	164.34	0.00	75.70	297	0	114	9,229	5,419	3,810
170+50	181.46	0.00	100.79	320	0	163	9,549	5,615	3,934
171+00	147.26	0.00	108.39	304	0	194	9,853	5,847	4,006
171+50	134.73	0.00	88.77	261	0	183	10,115	6,066	4,048
172+00	133.75	0.00	60.73	249	0	138	10,363	6,232	4,131
172+50	150.93	0.00	36.82	264	0	90	10,627	6,341	4,286
173+00	172.04	0.00	20.78	299	0	53	10,926	6,405	4,521
173+50	144.37	0.00	28.49	293	0	46	11,219	6,459	4,759
174+00	103.97	0.00	40.88	230	0	64	11,449	6,536	4,912
174+50	73.15	0.00	79.08	164	0	111	11,613	6,670	4,943
175+00	191.07	0.00	0.00	245	0	73	11,857	6,758	5,100
175+16	320.20	0.00	0.00	151	0	0	12,009	6,758	5,251
175+50	147.76	0.00	2.89	295	0	2	12,303	6,760	5,544
176+00	101.24	0.00	42.43	231	0	42	12,534	6,810	5,724
176+50	91.07	0.00	40.49	178	0	77	12,712	6,902	5,810
177+00	90.78	0.00	47.68	168	0	82	12,880	7,000	5,880
177+50	98.51	0.00	27.32	175	0	69	13,056	7,084	5,972
178+00	116.34	0.00	19.99	199	0	44	13,255	7,136	6,119
178+50	99.31	0.00	12.12	200	0	30	13,454	7,172	6,283
179+00	92.34	0.00	9.40	177	0	20	13,632	7,196	6,436
179+50	90.61	0.00	9.15	169	0	17	13,801	7,216	6,585

NOTES:

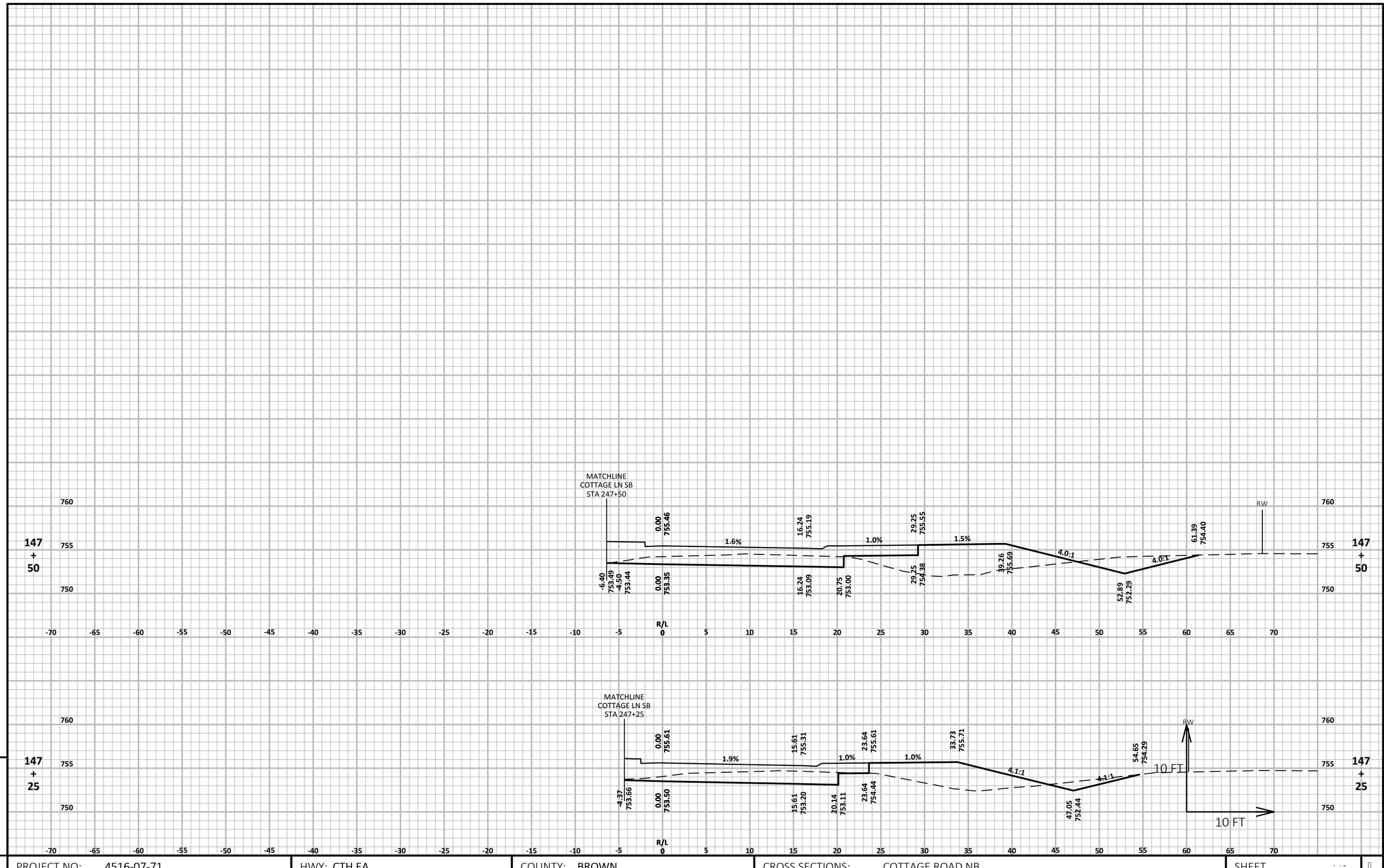
- SALVAGED / UNUSABLE PAVEMENT MATERIAL INLUDED IN CUT AREA.
- AVAILABLE MATERIAL = CUT – SALVAGED MATERIAL.
- MASS ORDINATE = AVAILABLE MATERIAL – EXPANDED FILL.



PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	CROSS SECTIONS: COTTAGE ROAD NB	SHEET 212

FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-090100-XS.DWG
LAYOUT NAME - 451607-090101-xs

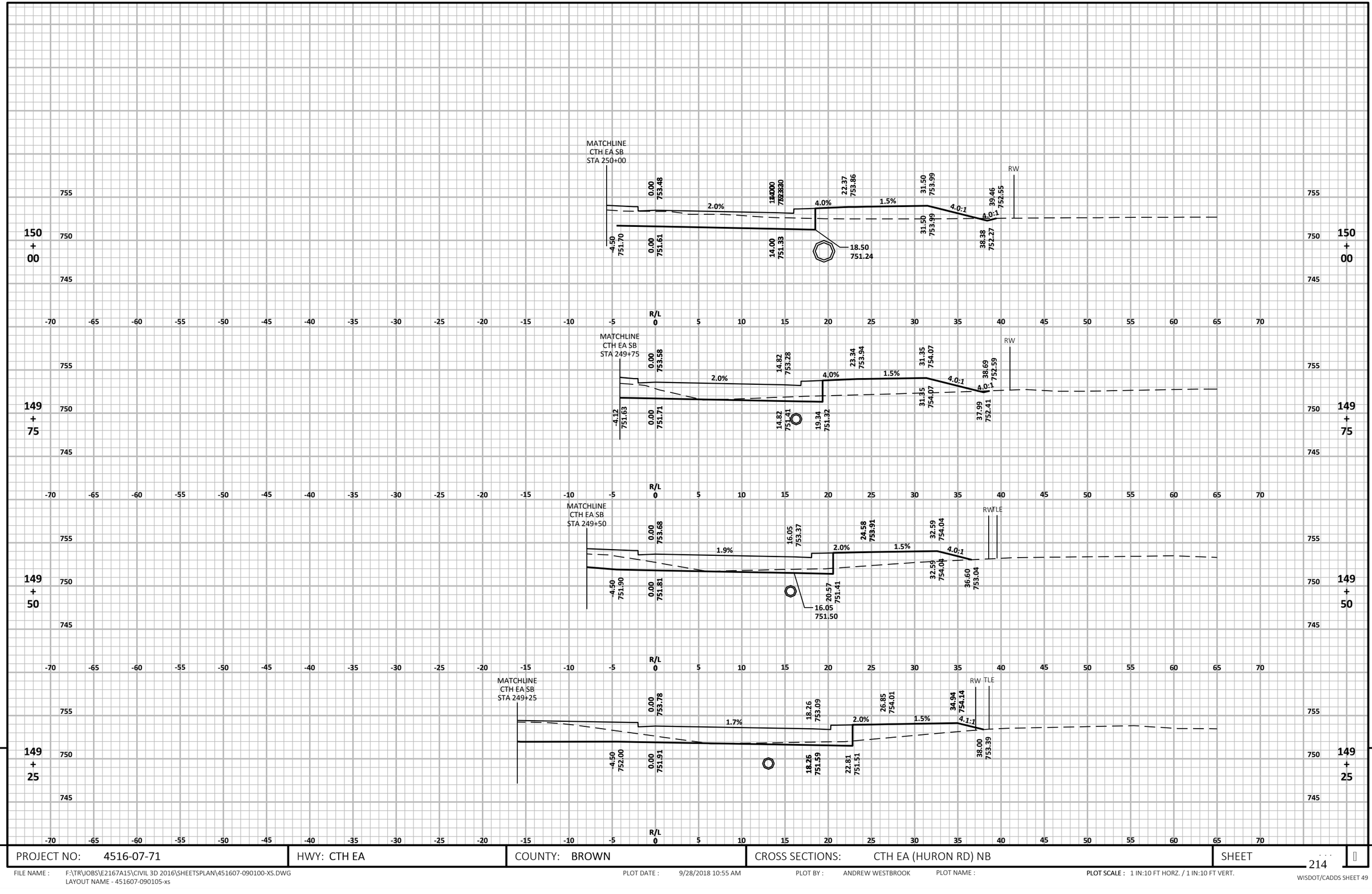
PLOT DATE : 9/28/2018 10:55 AM PLOT BY : ANDREW WESTBROOK PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	CROSS SECTIONS: COTTAGE ROAD NB	SHEET 213

FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-090100-XS.DWG
LAYOUT NAME - 451607-090102-xs

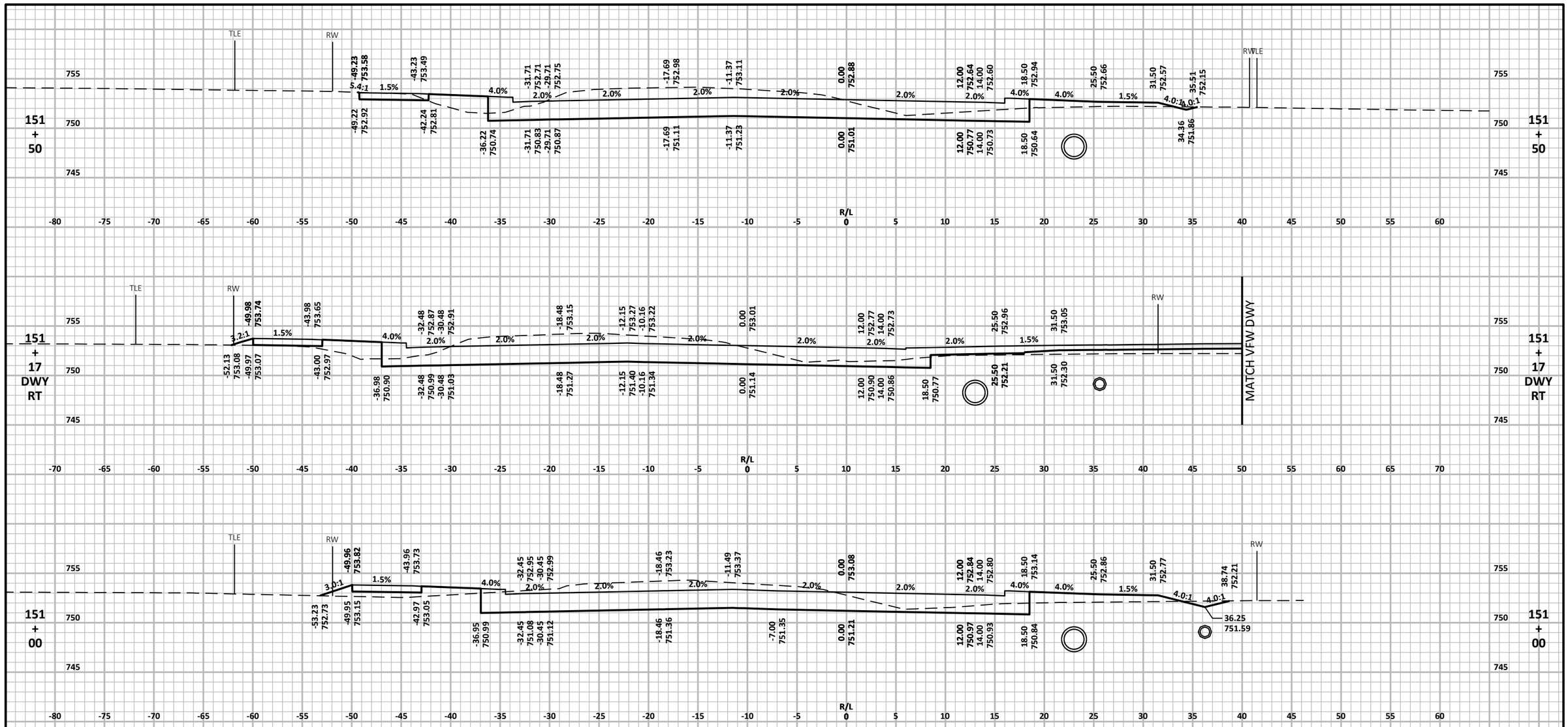
PLOT DATE : 9/28/2018 10:55 AM PLOT BY : ANDREW WESTBROOK PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	CROSS SECTIONS: CTH EA (HURON RD) NB	SHEET 214

FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-090100-XS.DWG
LAYOUT NAME - 451607-090105-xs

PLOT DATE : 9/28/2018 10:55 AM PLOT BY : ANDREW WESTBROOK PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



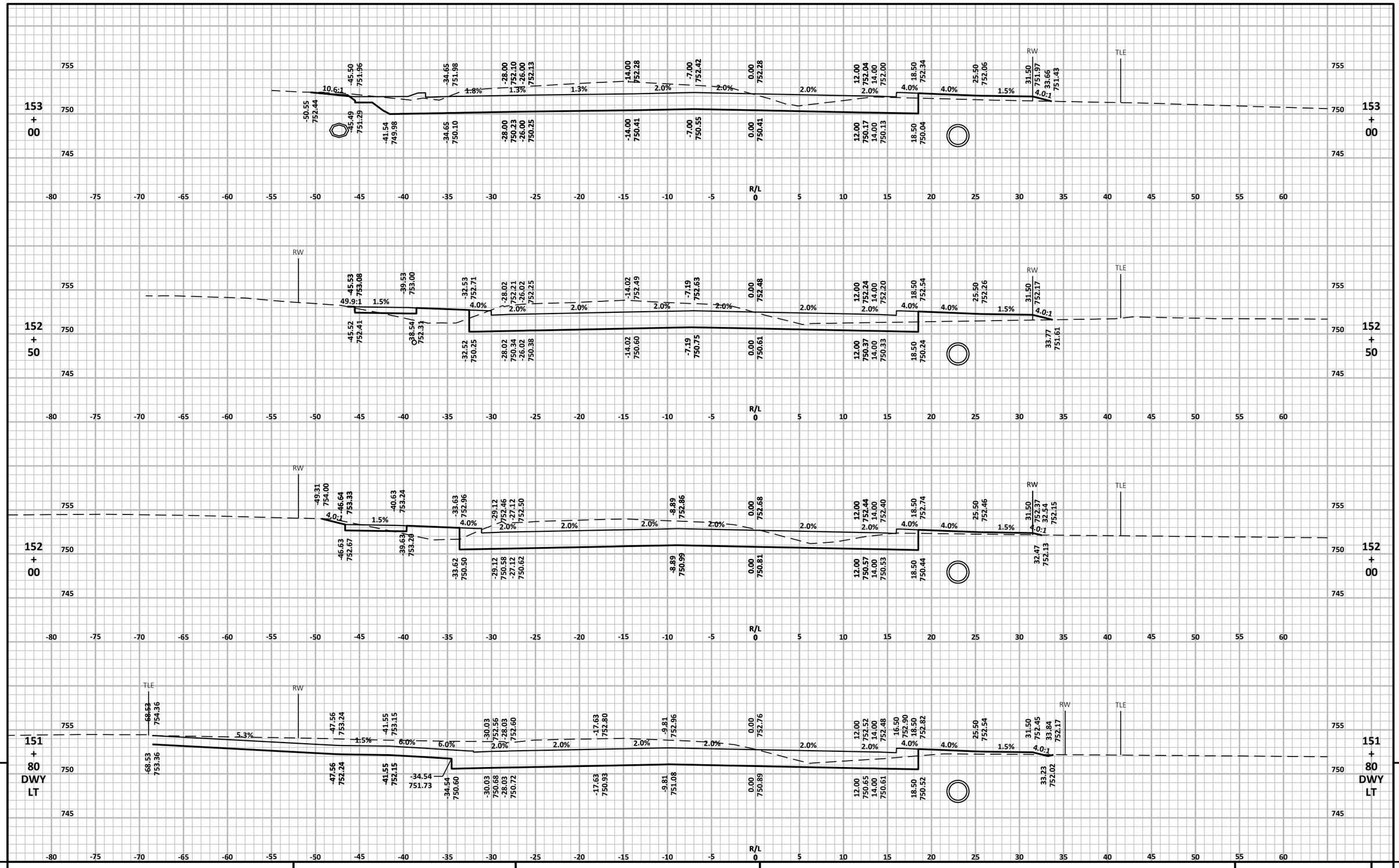
PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	CROSS SECTIONS: CTH EA (HURON RD) NB	SHEET 215

FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-090100-XS.DWG
LAYOUT NAME - 451607-090106-xs

PLOT DATE : 10/22/2018 10:08 AM PLOT BY : CRAIG KNUTH PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

451607-0□0106-□□

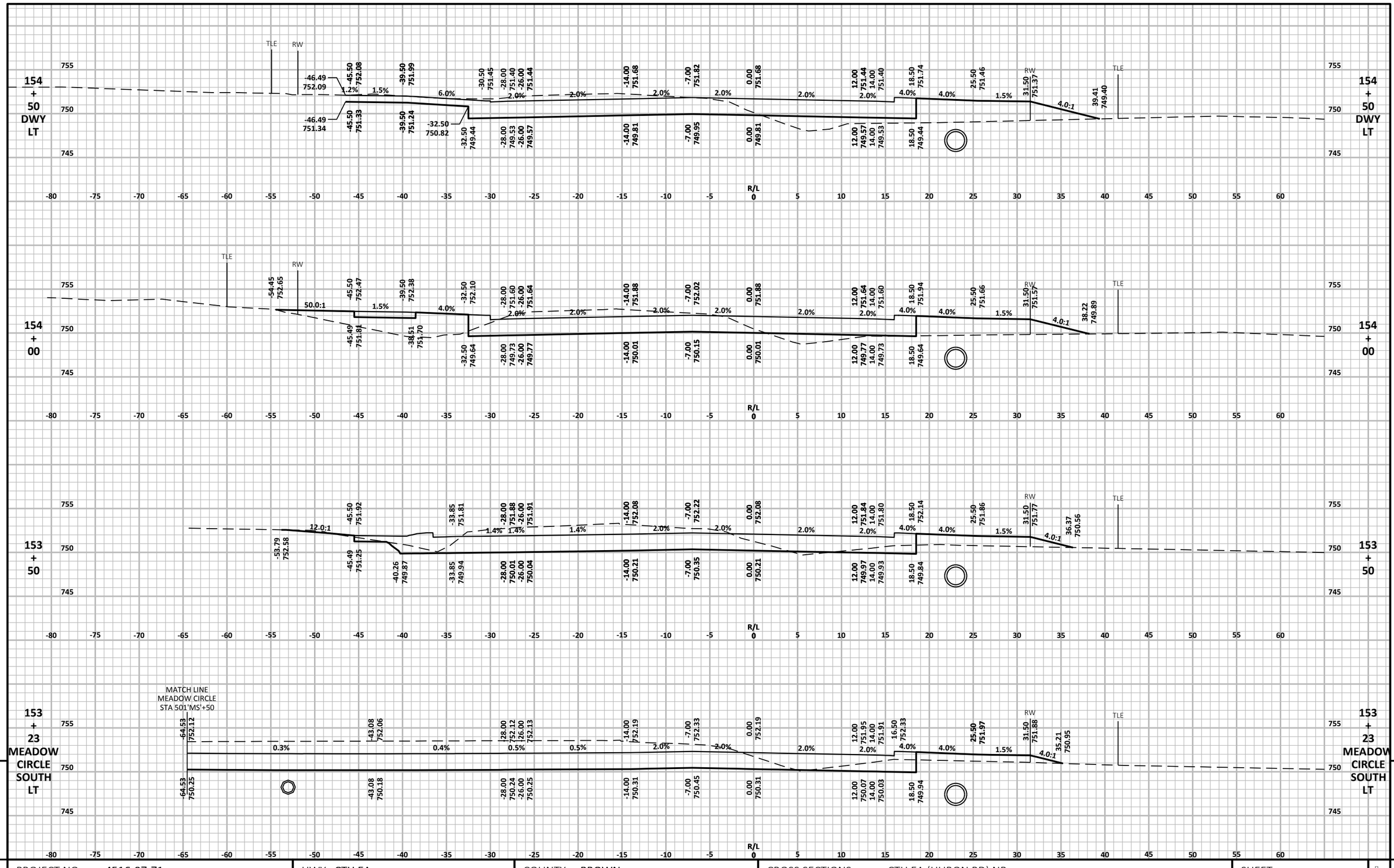
WISDOT/CADDS SHEET 49



PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	CROSS SECTIONS: CTH EA (HURON RD) NB	SHEET 216

FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-090100-XS.DWG
LAYOUT NAME - 451607-090107-xs

PLOT DATE : 9/28/2018 10:56 AM PLOT BY : ANDREW WESTBROOK PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

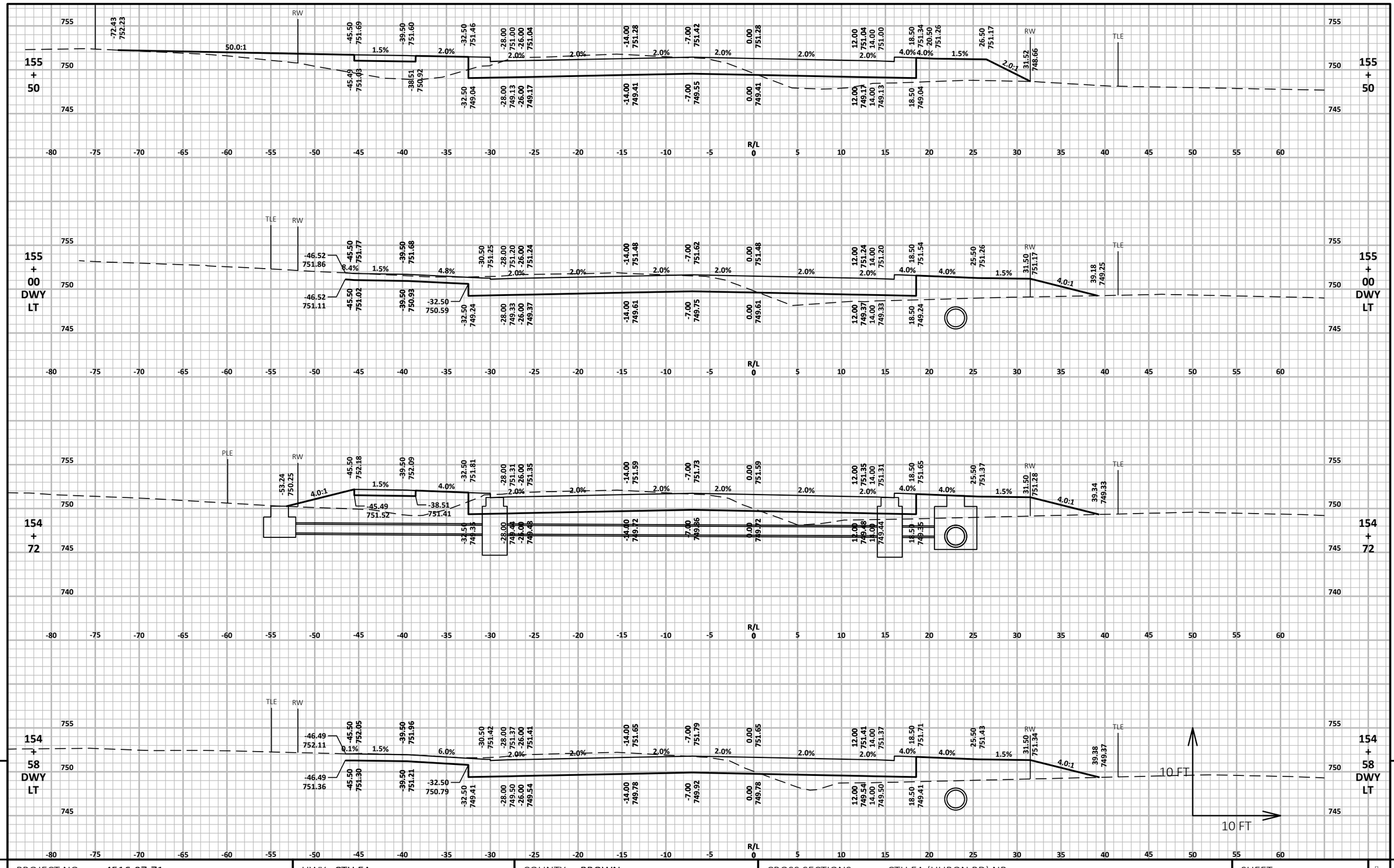


PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	CROSS SECTIONS: CTH EA (HURON RD) NB	SHEET 217

FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-090100-XS.DWG
LAYOUT NAME - 451607-090108-xs

PLOT DATE : 9/28/2018 10:56 AM PLOT BY : ANDREW WESTBROOK PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

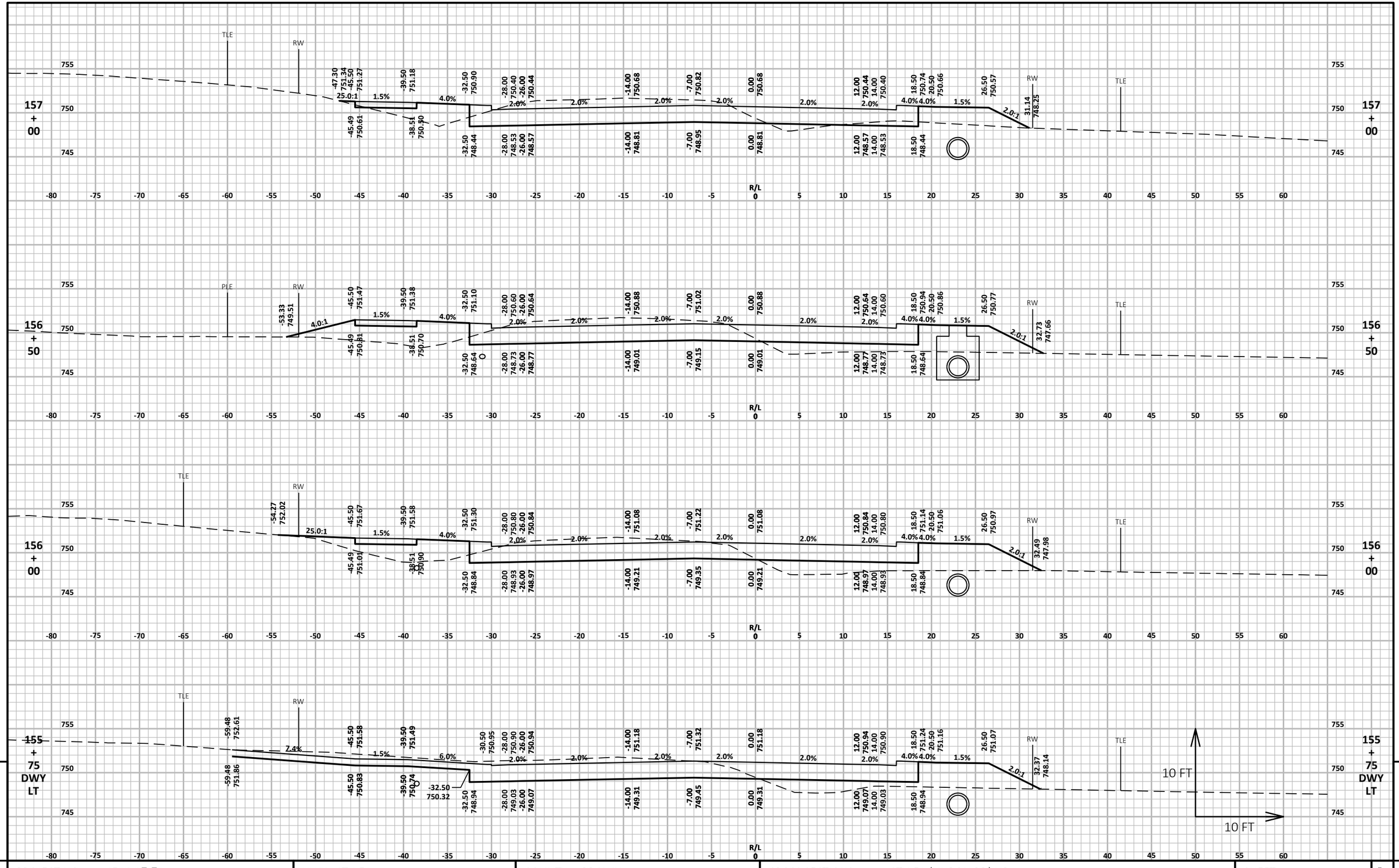


PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	CROSS SECTIONS: CTH EA (HURON RD) NB	SHEET 218

FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-090100-XS.DWG
LAYOUT NAME - 451607-090109-xs

PLOT DATE : 9/28/2018 10:56 AM PLOT BY : ANDREW WESTBROOK PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

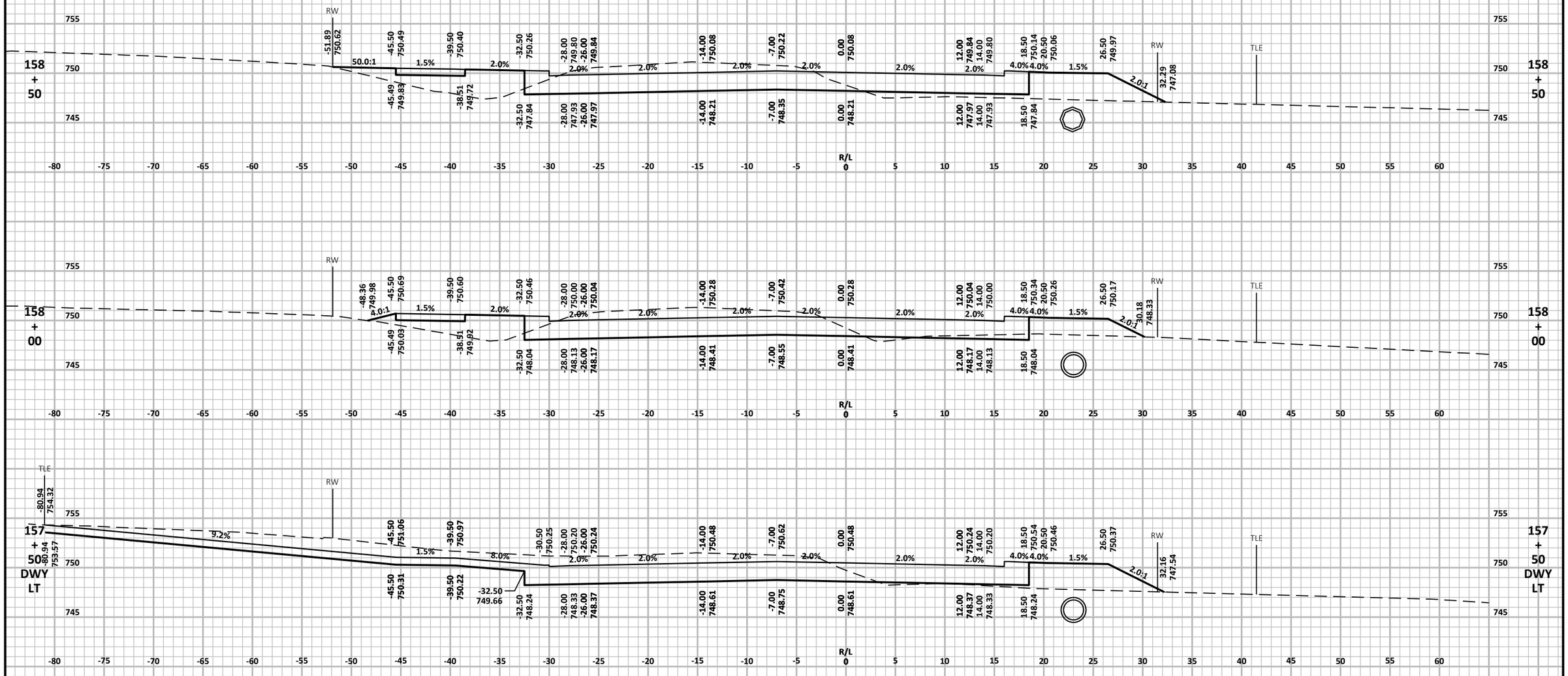


PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	CROSS SECTIONS: CTH EA (HURON RD) NB	SHEET 219

FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-090100-XS.DWG
LAYOUT NAME - 451607-090110-xs

PLOT DATE : 9/28/2018 10:56 AM PLOT BY : ANDREW WESTBROOK PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

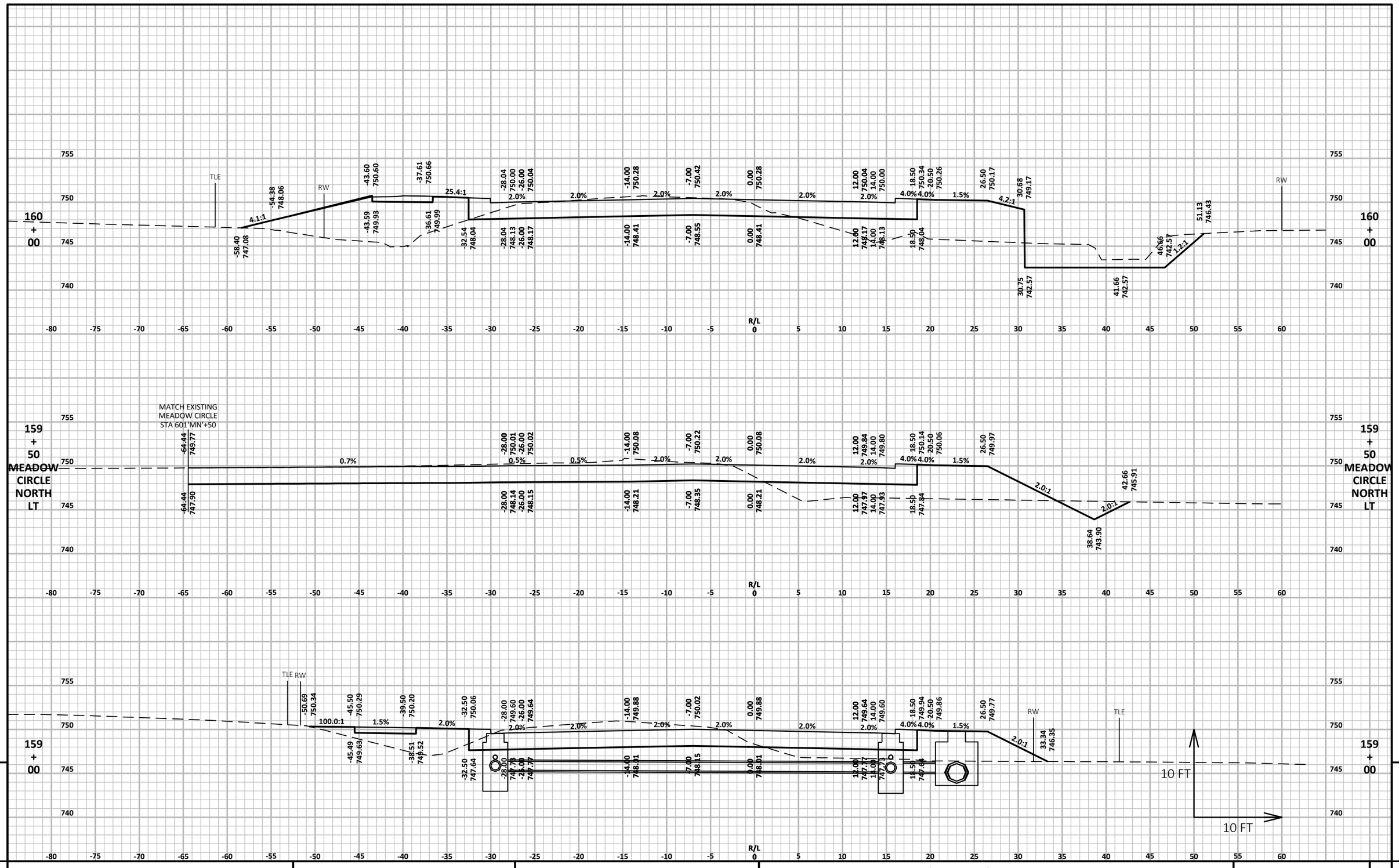


PROJECT NO: 4516-07-71 | HWY: CTH EA | COUNTY: BROWN | CROSS SECTIONS: CTH EA (HURON RD) NB | SHEET 220

FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-090100-XS.DWG
LAYOUT NAME - 451607-090111-xs

PLOT DATE : 9/28/2018 10:56 AM PLOT BY : ANDREW WESTBROOK PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

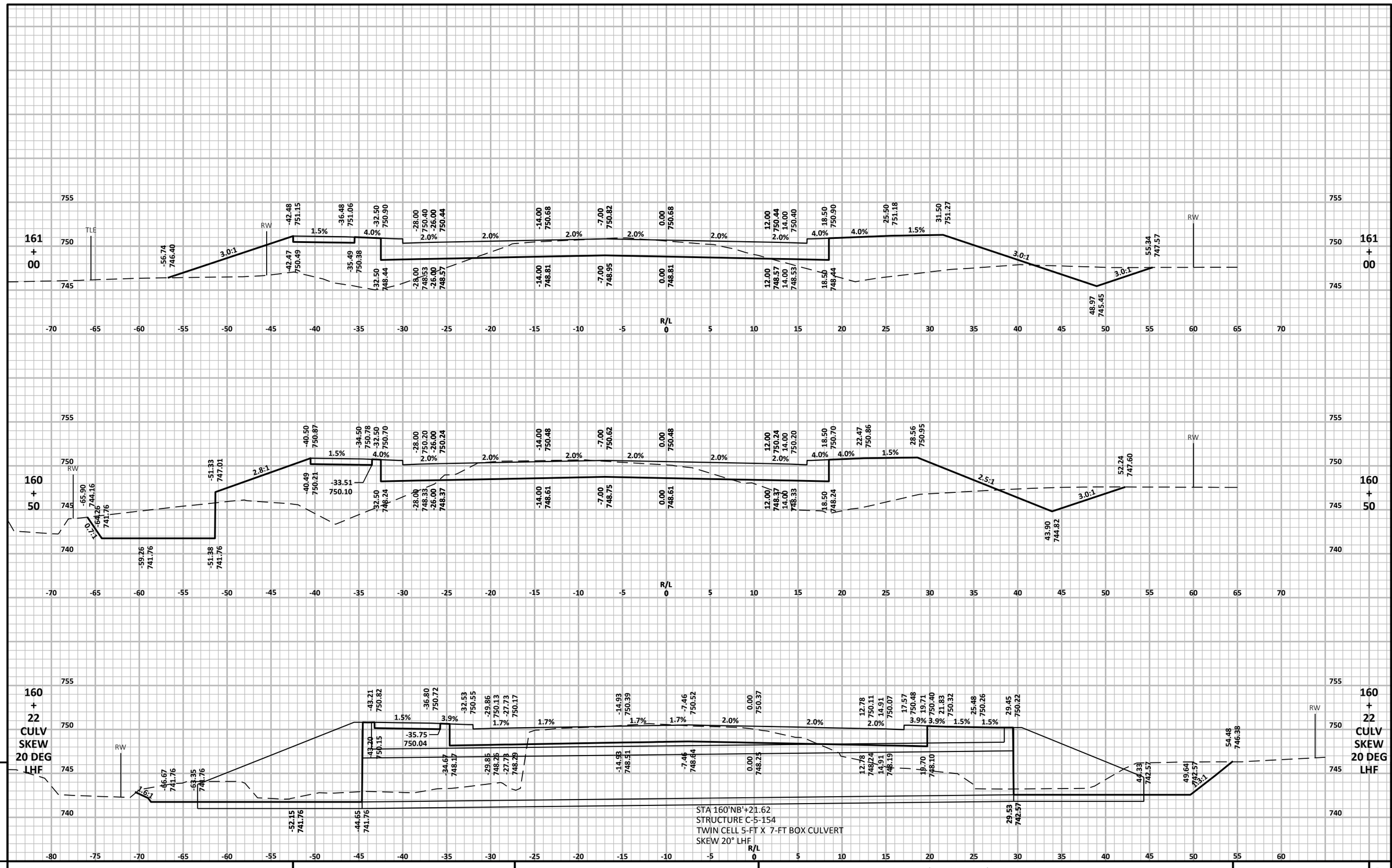


PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	CROSS SECTIONS: CTH EA (HURON RD) NB	SHEET 221

FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-090100-XS.DWG
LAYOUT NAME - 451607-090112-xs

PLOT DATE : 9/28/2018 10:56 AM PLOT BY : ANDREW WESTBROOK PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

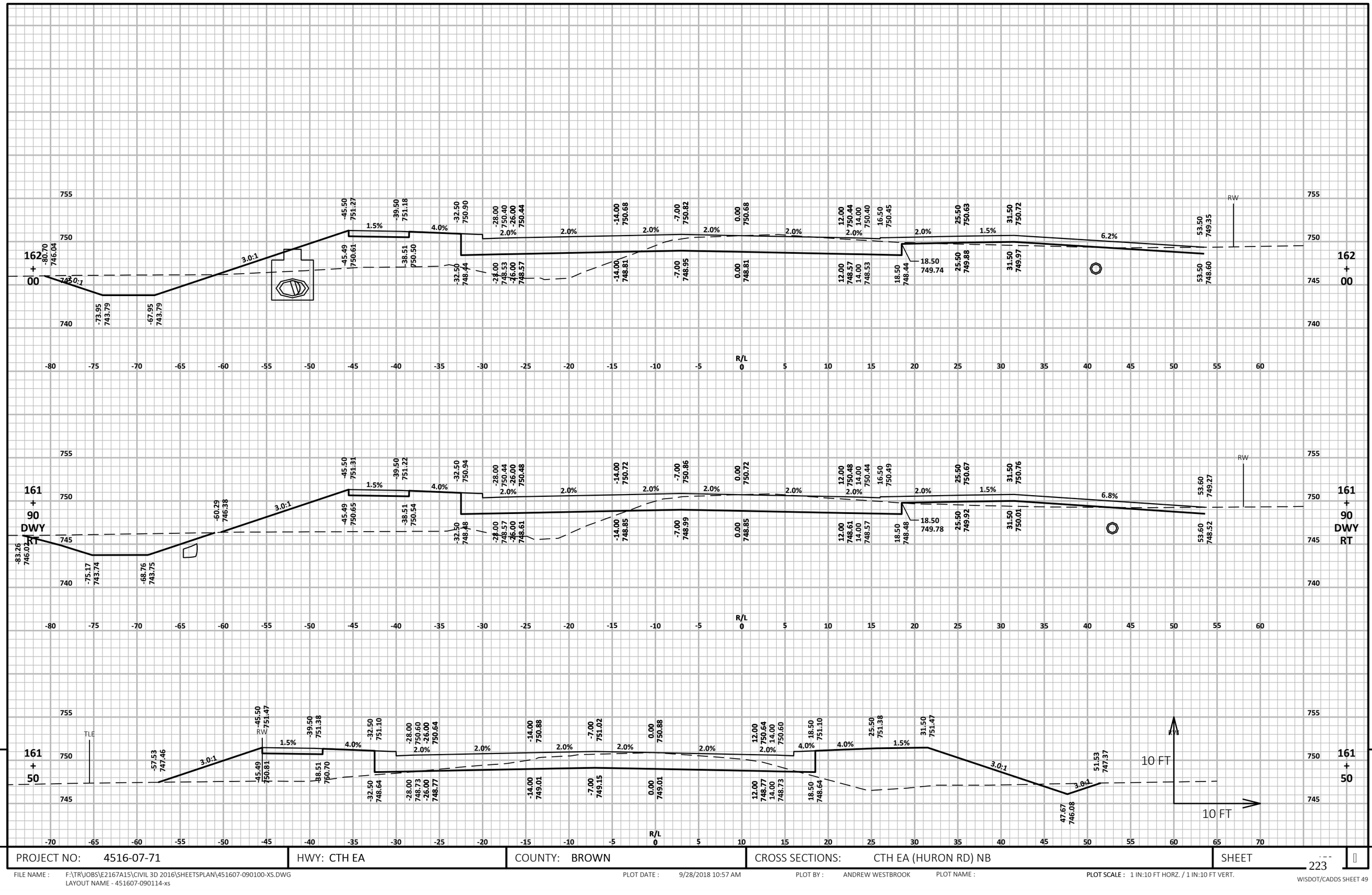


PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	CROSS SECTIONS: CTH EA (HURON RD) NB	SHEET 222

FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-090100-XS.DWG
LAYOUT NAME - 451607-090113-xs

PLOT DATE : 9/28/2018 10:57 AM PLOT BY : ANDREW WESTBROOK PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

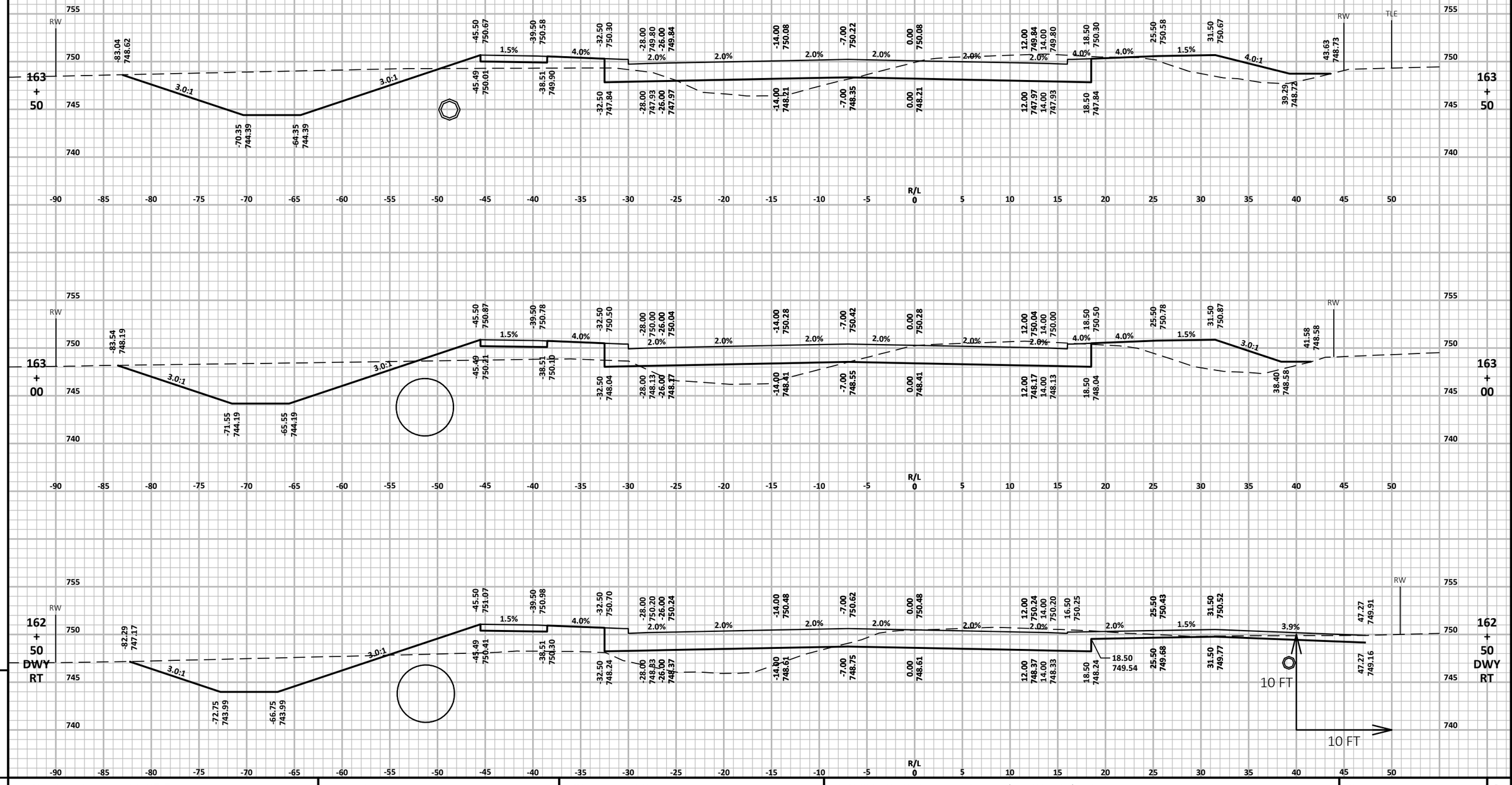


PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	CROSS SECTIONS: CTH EA (HURON RD) NB	SHEET 223

FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-090100-XS.DWG
LAYOUT NAME - 451607-090114-xs

PLOT DATE : 9/28/2018 10:57 AM PLOT BY : ANDREW WESTBROOK PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

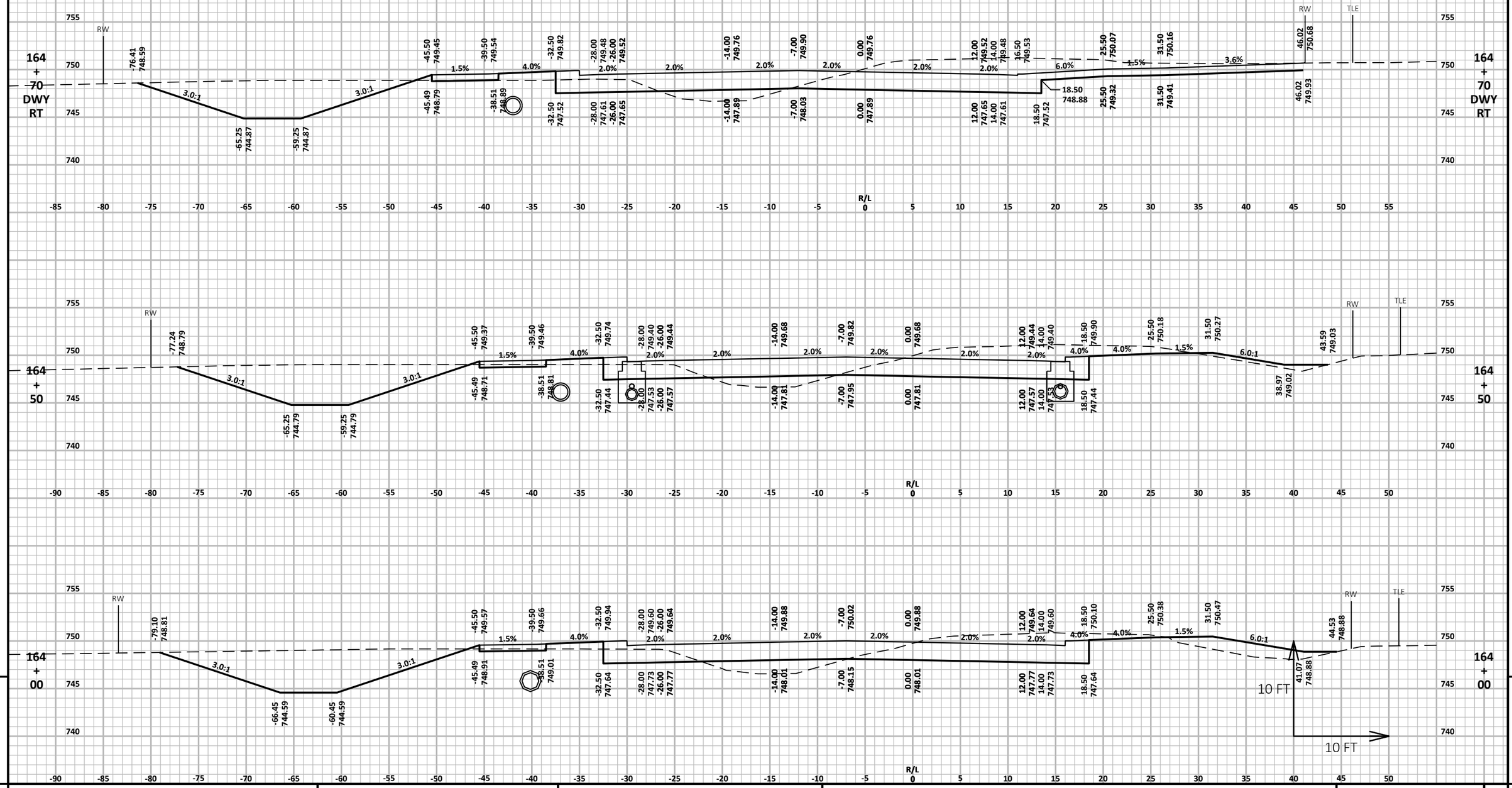
WISDOT/CADDS SHEET 49



PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	CROSS SECTIONS: CTH EA (HURON RD) NB	SHEET 224

FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-090100-XS.DWG
LAYOUT NAME - 451607-090115-xs

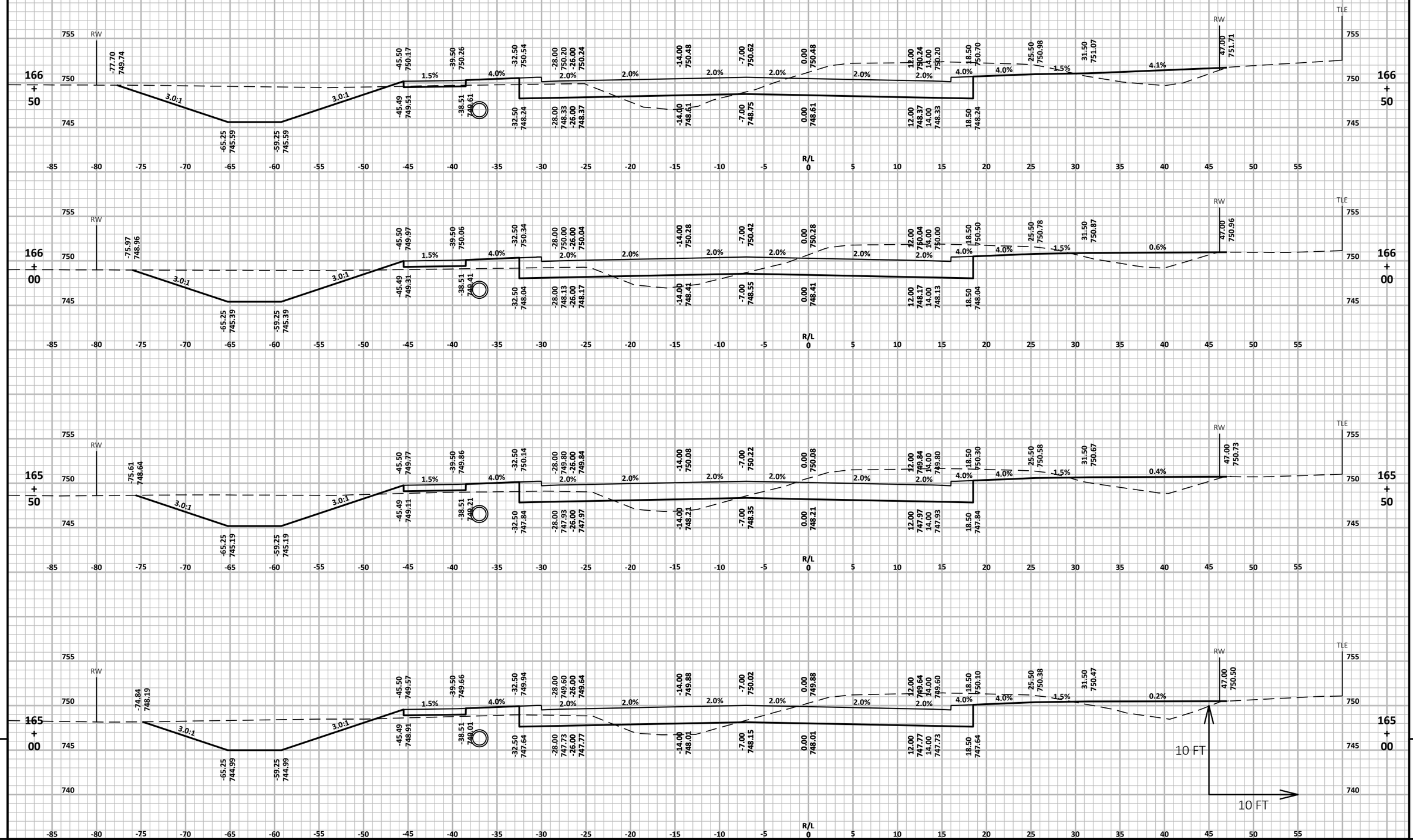
PLOT DATE : 9/28/2018 10:57 AM PLOT BY : ANDREW WESTBROOK PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	CROSS SECTIONS: CTH EA (HURON RD) NB	SHEET 225

FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-090100-XS.DWG
LAYOUT NAME - 451607-090116-xs

PLOT DATE : 9/28/2018 10:57 AM PLOT BY : ANDREW WESTBROOK PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

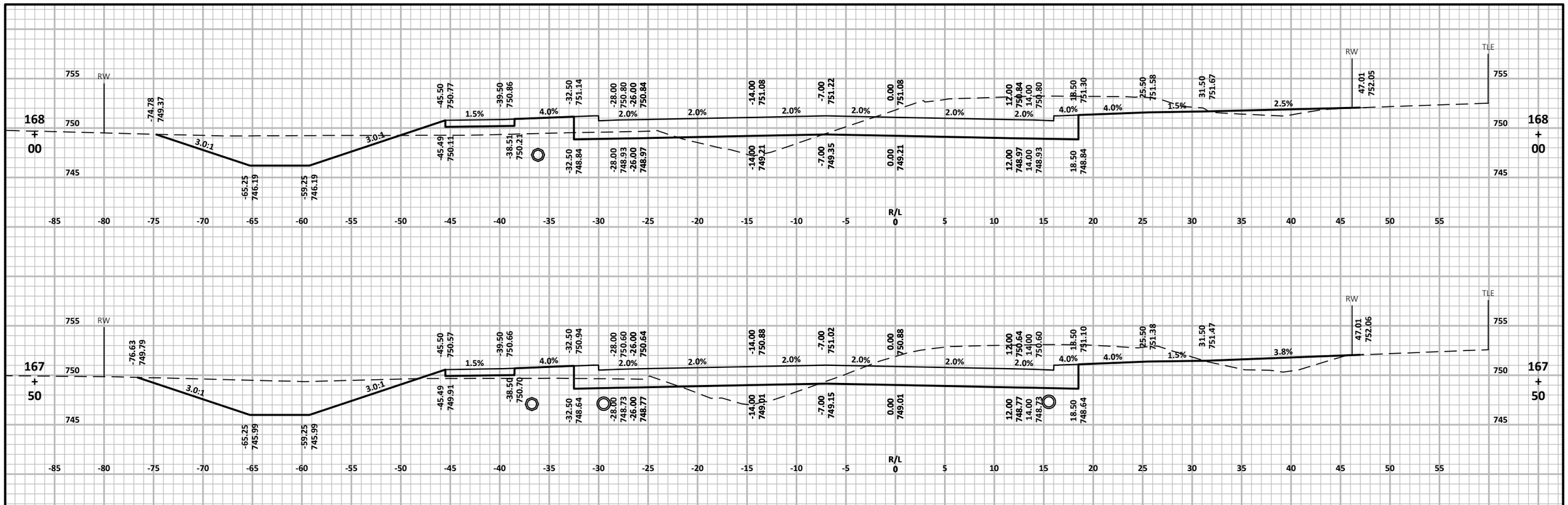


PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	CROSS SECTIONS: CTH EA (HURON RD) NB	SHEET 226

FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-090100-XS.DWG
LAYOUT NAME - 451607-090117-xs

PLOT DATE : 9/28/2018 10:57 AM PLOT BY : ANDREW WESTBROOK PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

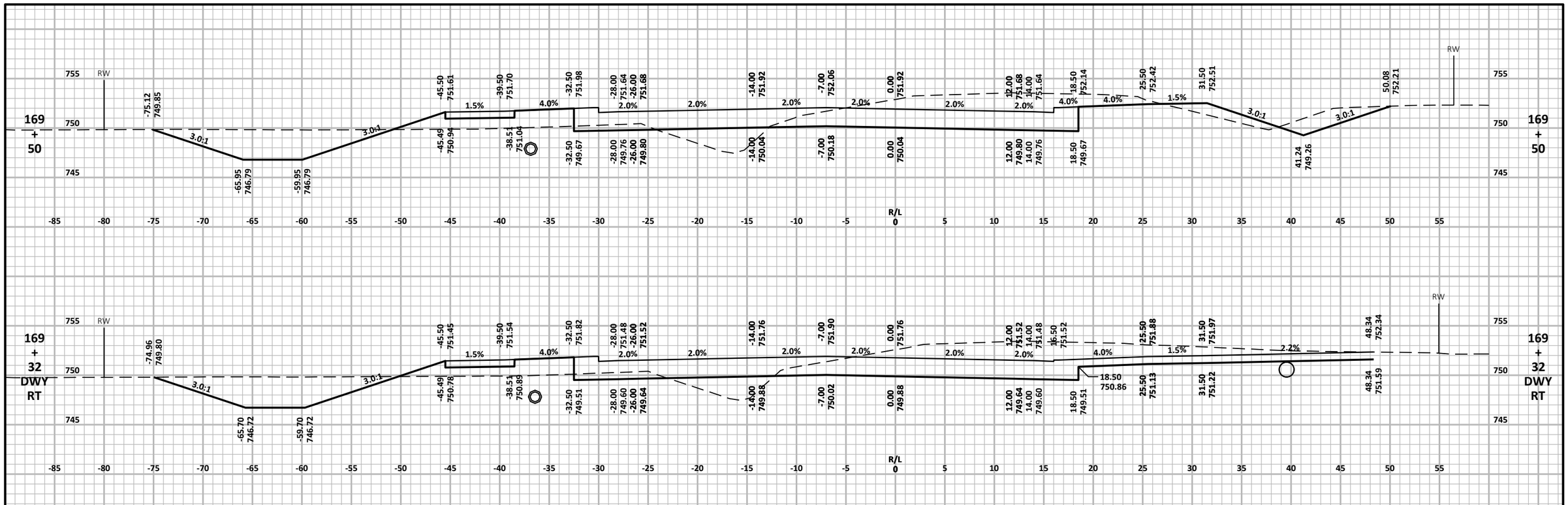


PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	CROSS SECTIONS: CTH EA (HURON RD) NB	SHEET 227

FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-090100-XS.DWG
LAYOUT NAME - 451607-090118-xs

PLOT DATE : 9/28/2018 10:57 AM PLOT BY : ANDREW WESTBROOK PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

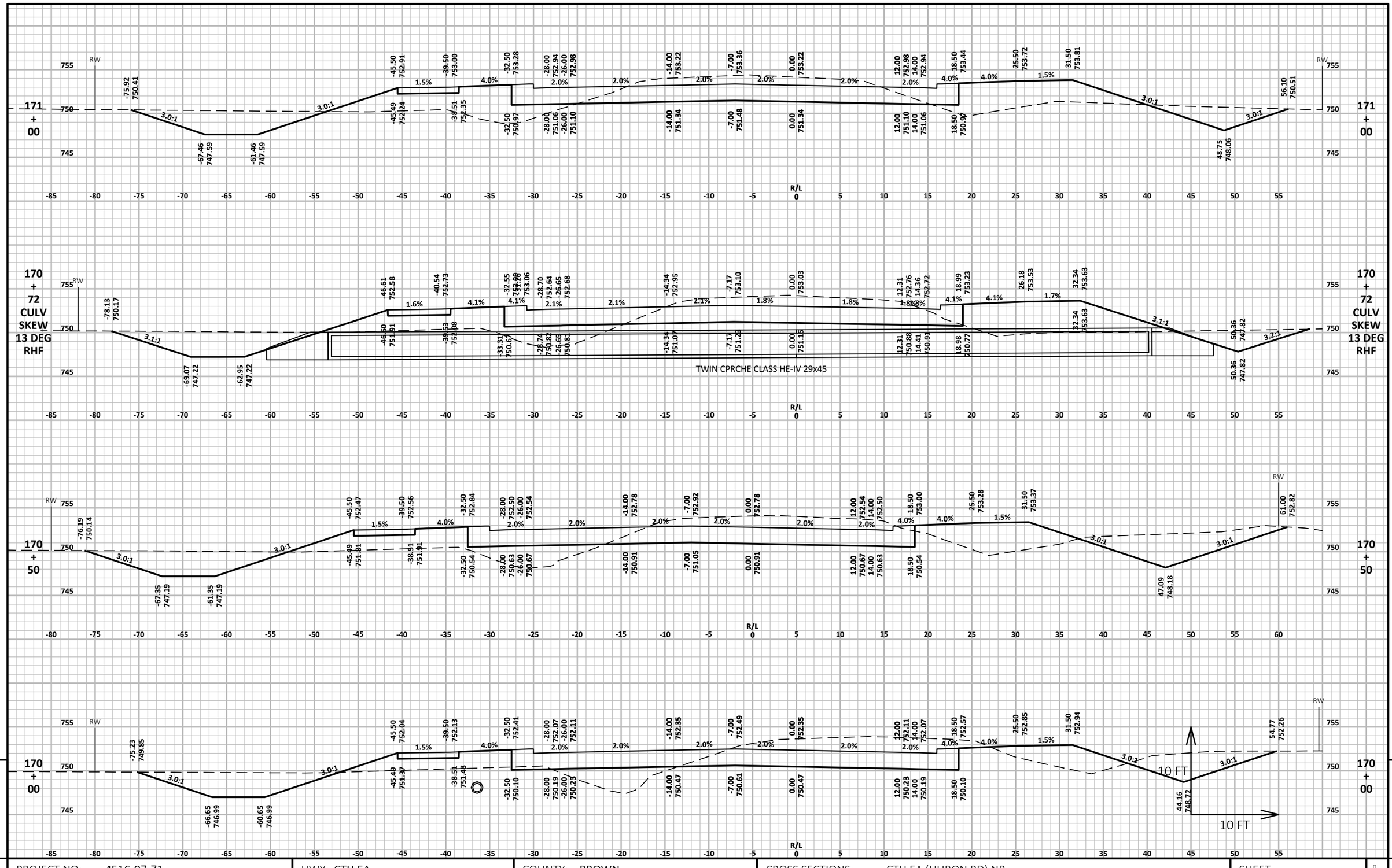


PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	CROSS SECTIONS: CTH EA (HURON RD) NB	SHEET 228

FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-090100-XS.DWG
LAYOUT NAME - 451607-090119-xs

PLOT DATE : 9/28/2018 10:57 AM PLOT BY : ANDREW WESTBROOK PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

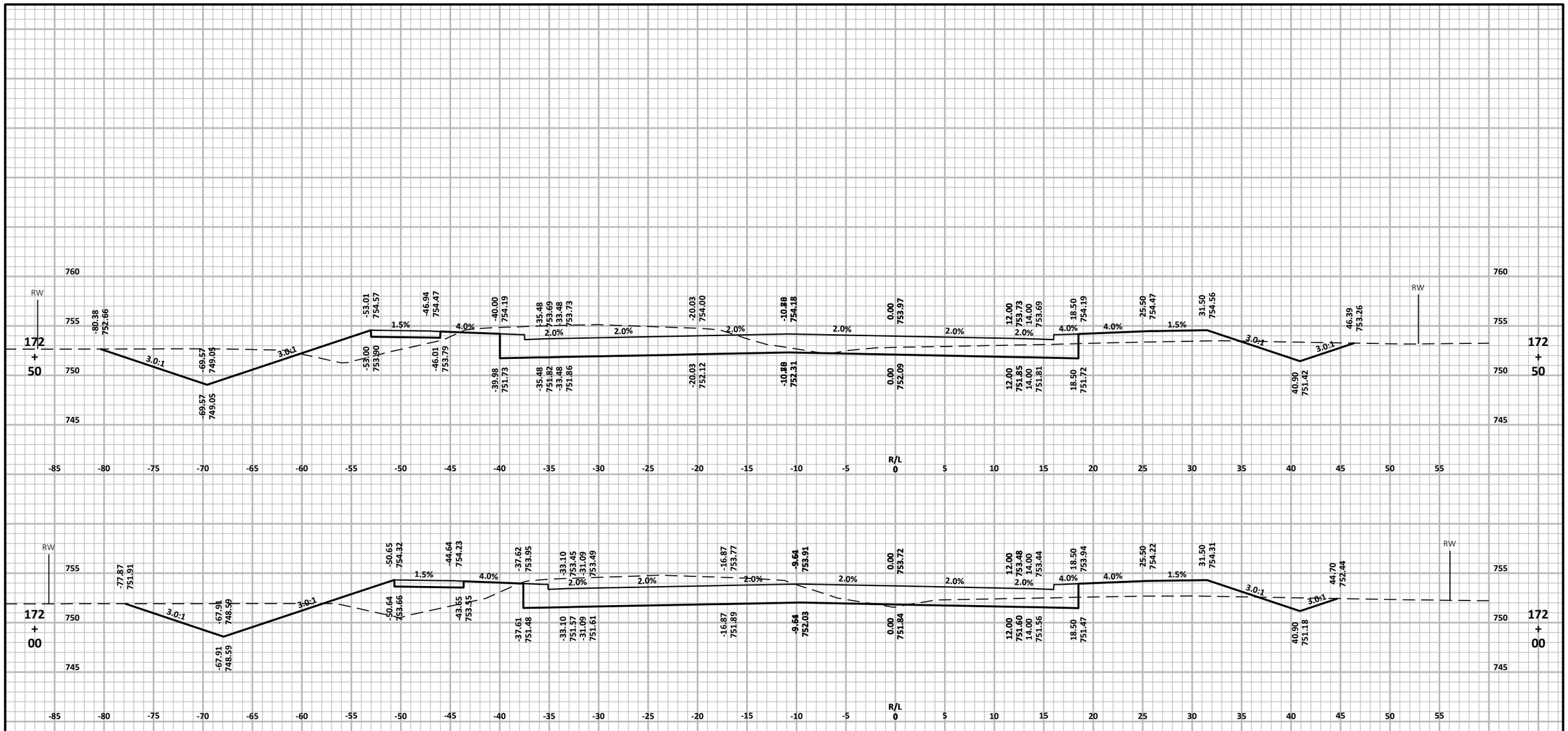


PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	CROSS SECTIONS: CTH EA (HURON RD) NB	SHEET 229

FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-090100-XS.DWG
LAYOUT NAME - 451607-090120-xs

PLOT DATE : 9/28/2018 10:58 AM PLOT BY : ANDREW WESTBROOK PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

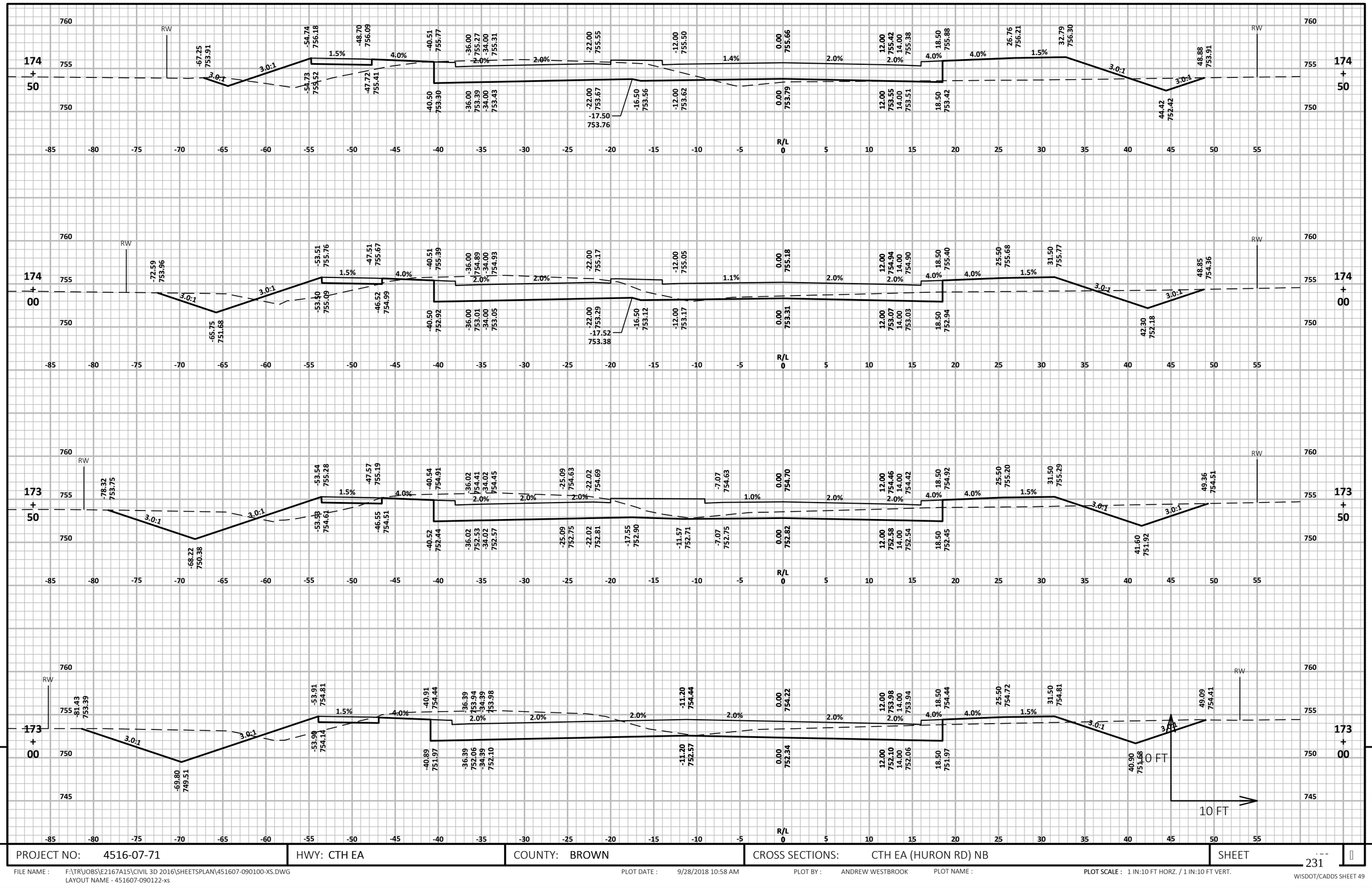


PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	CROSS SECTIONS: CTH EA (HURON RD) NB	SHEET 230

FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-090100-XS.DWG
LAYOUT NAME - 451607-090121-xs

PLOT DATE : 9/28/2018 10:58 AM PLOT BY : ANDREW WESTBROOK PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

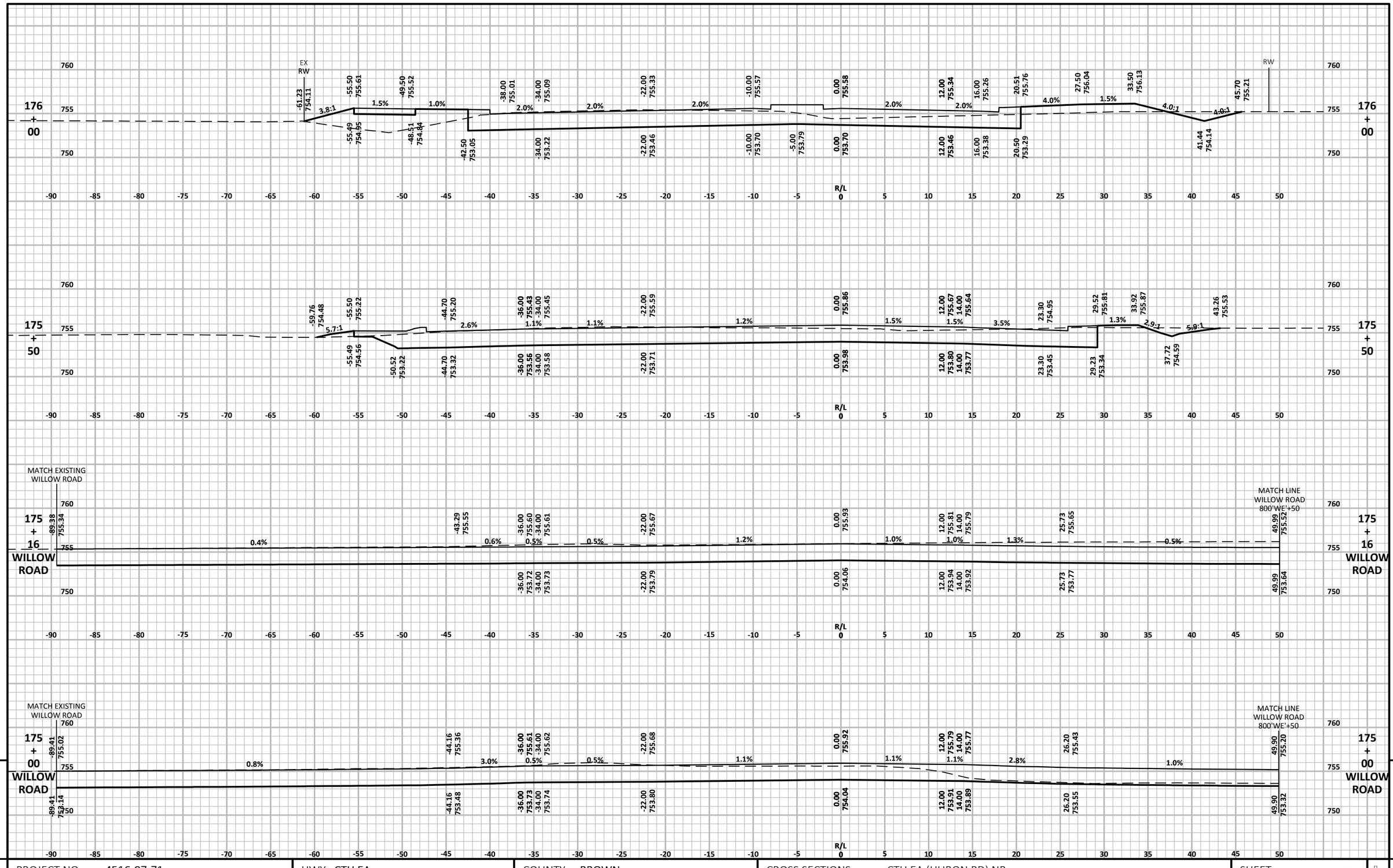
WISDOT/CADDS SHEET 49



PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	CROSS SECTIONS: CTH EA (HURON RD) NB	SHEET 231

FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-090100-XS.DWG
LAYOUT NAME - 451607-090122-xs

PLOT DATE : 9/28/2018 10:58 AM PLOT BY : ANDREW WESTBROOK PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

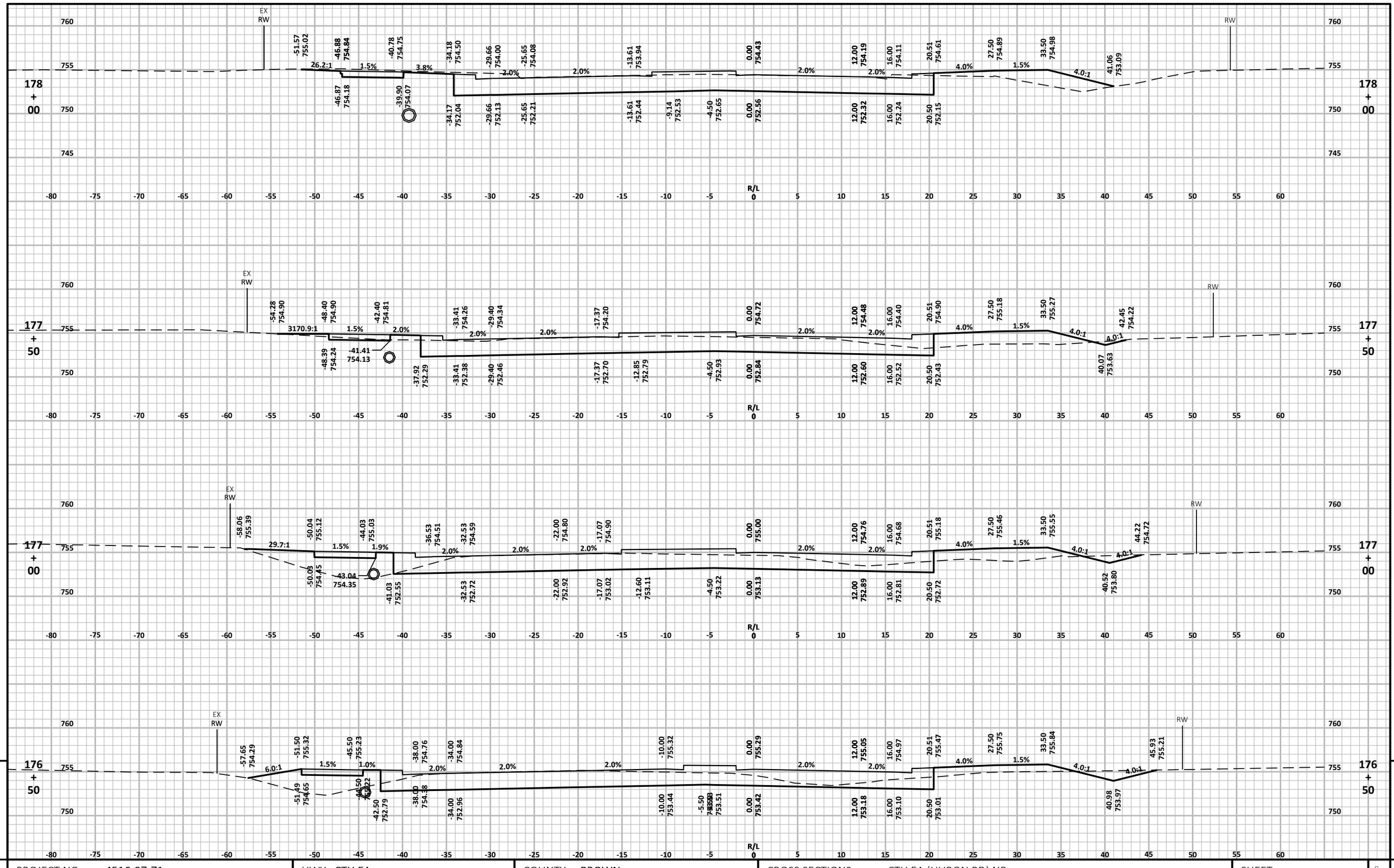


PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	CROSS SECTIONS: CTH EA (HURON RD) NB	SHEET 232

FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-090100-XS.DWG
LAYOUT NAME - 451607-090123-xs

PLOT DATE : 9/28/2018 10:58 AM PLOT BY : ANDREW WESTBROOK PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



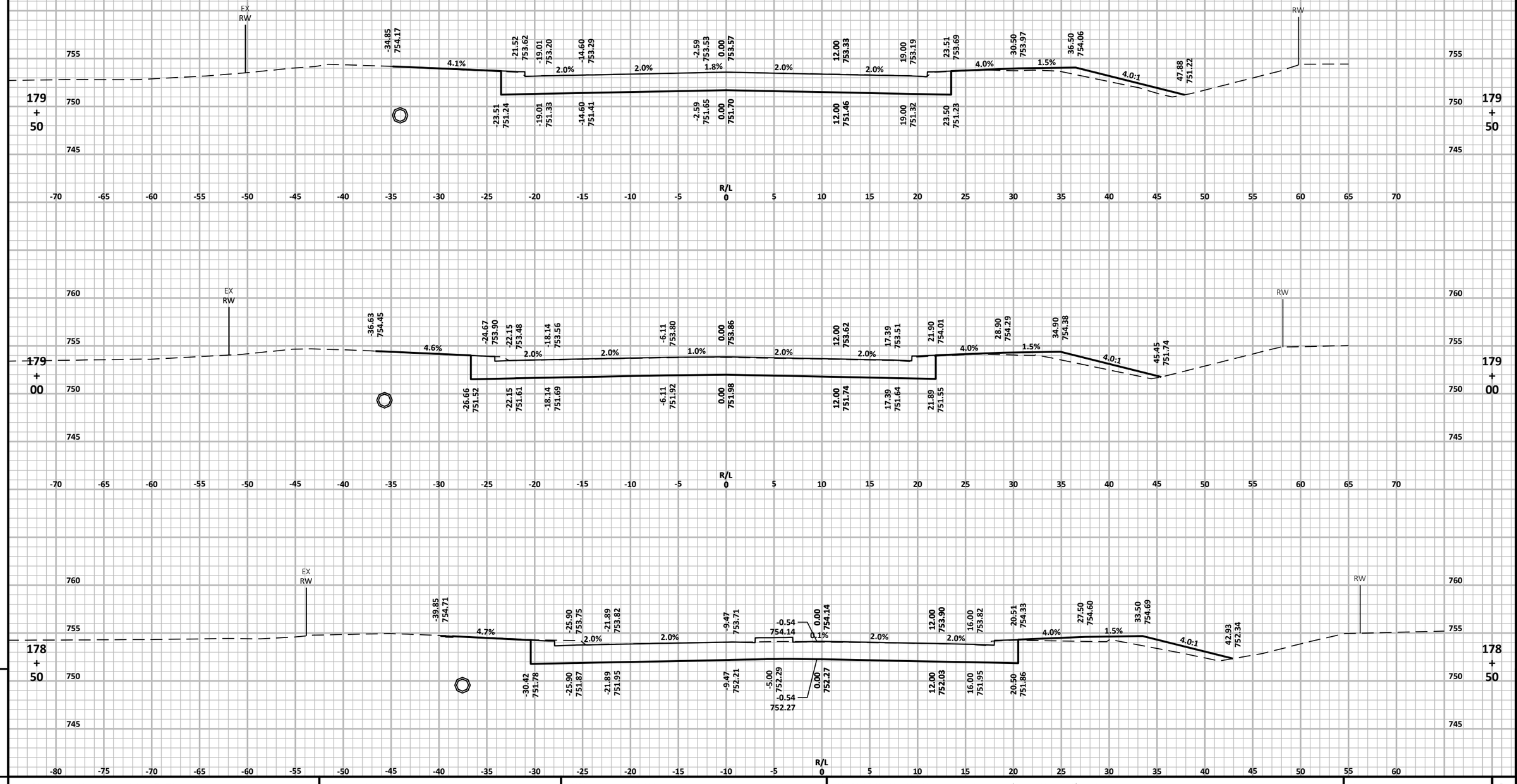
PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	CROSS SECTIONS: CTH EA (HURON RD) NB	SHEET 233

FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-090100-XS.DWG
LAYOUT NAME - 451607-090124-xs

PLOT DATE : 9/28/2018 10:58 AM PLOT BY : ANDREW WESTBROOK PLOT NAME :

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

WISDOT/CADDS SHEET 49

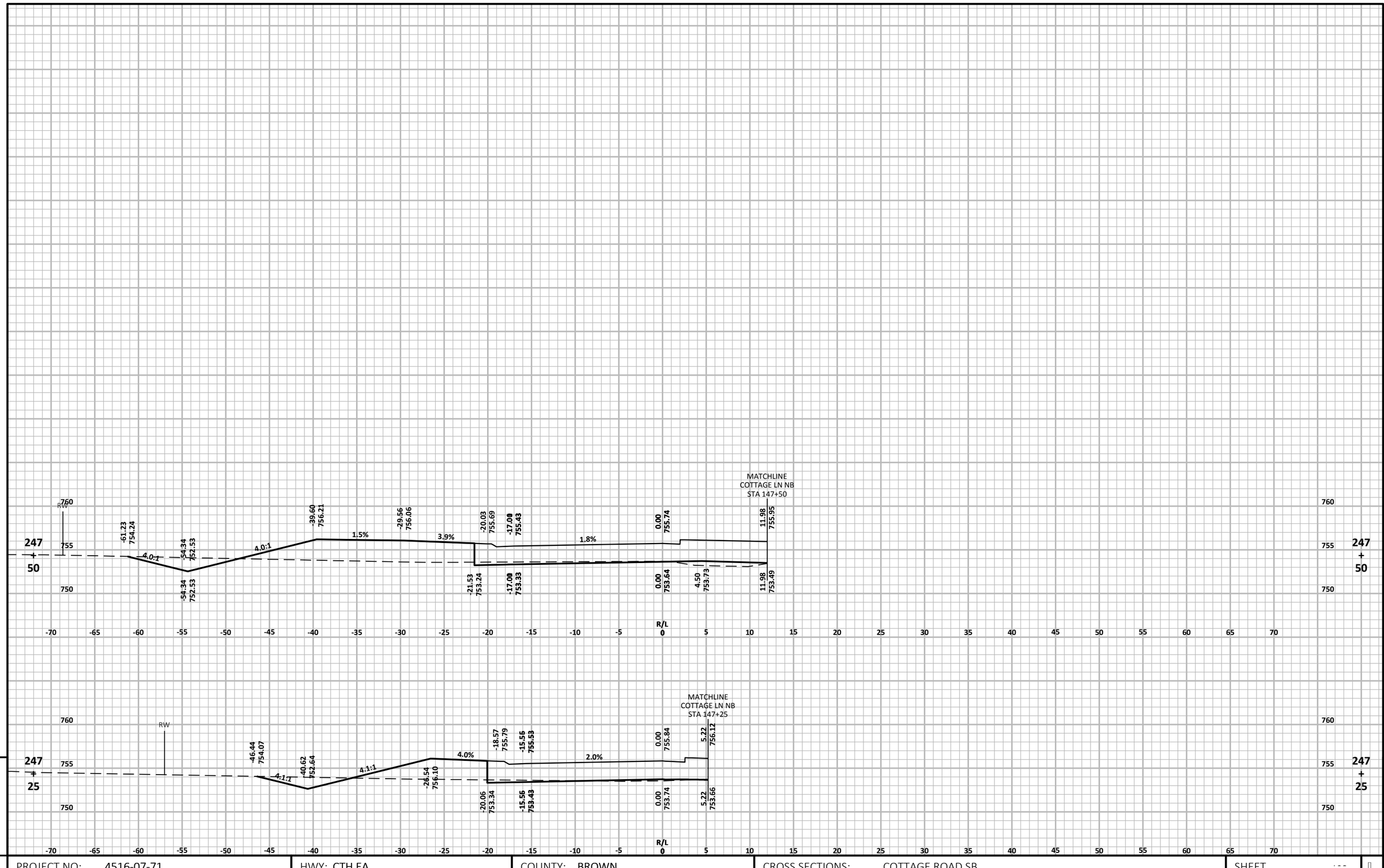


PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	CROSS SECTIONS: CTH EA (HURON RD) NB	SHEET 234

FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-090100-XS.DWG
LAYOUT NAME - 451607-090125-xs

PLOT DATE : 9/28/2018 10:58 AM PLOT BY : ANDREW WESTBROOK PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

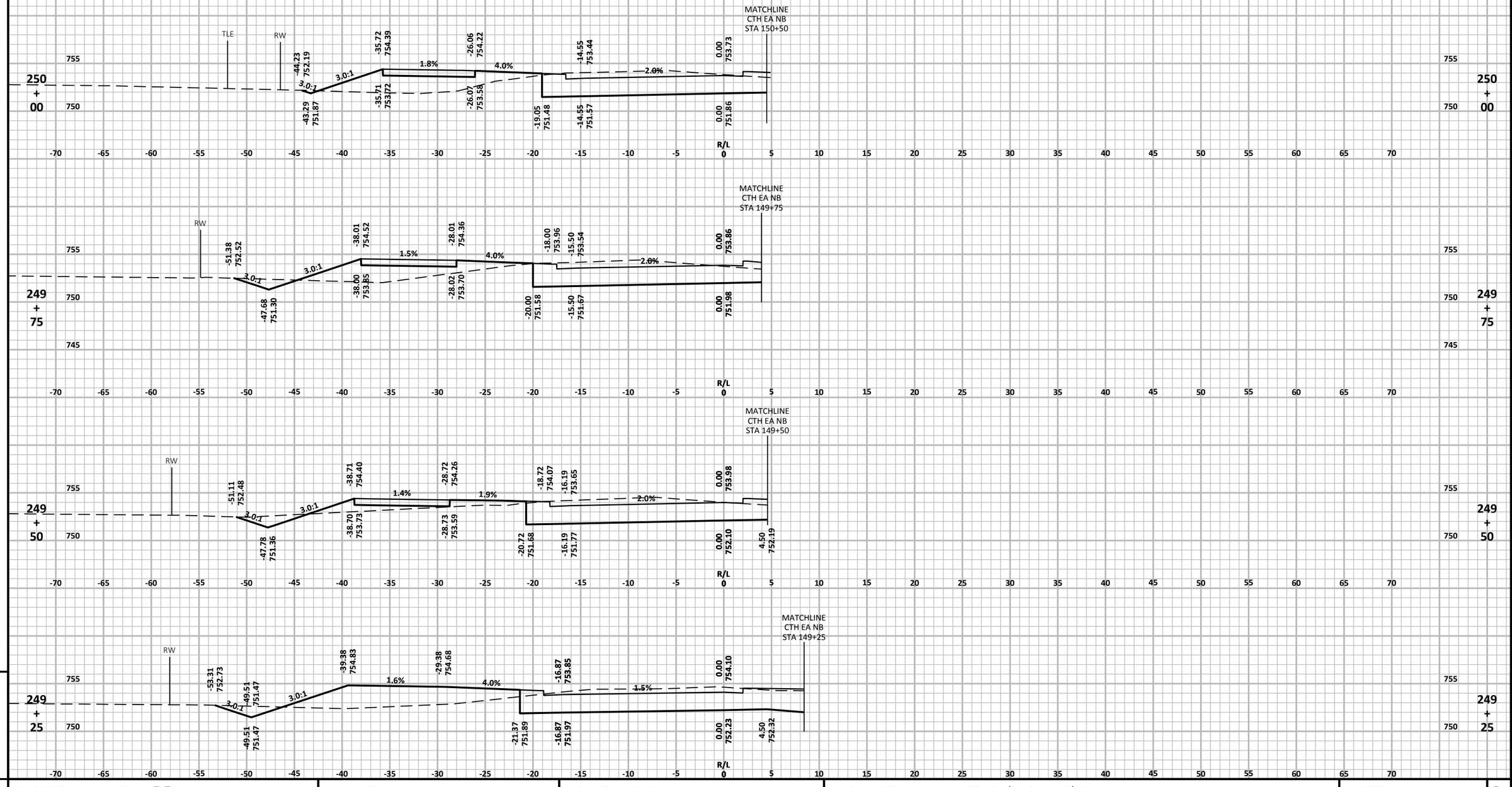
WISDOT/CADDS SHEET 49



PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	CROSS SECTIONS: COTTAGE ROAD SB	SHEET 235

FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-090100-XS.DWG
LAYOUT NAME - 451607-090140-xs

PLOT DATE : 9/28/2018 10:59 AM PLOT BY : ANDREW WESTBROOK PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

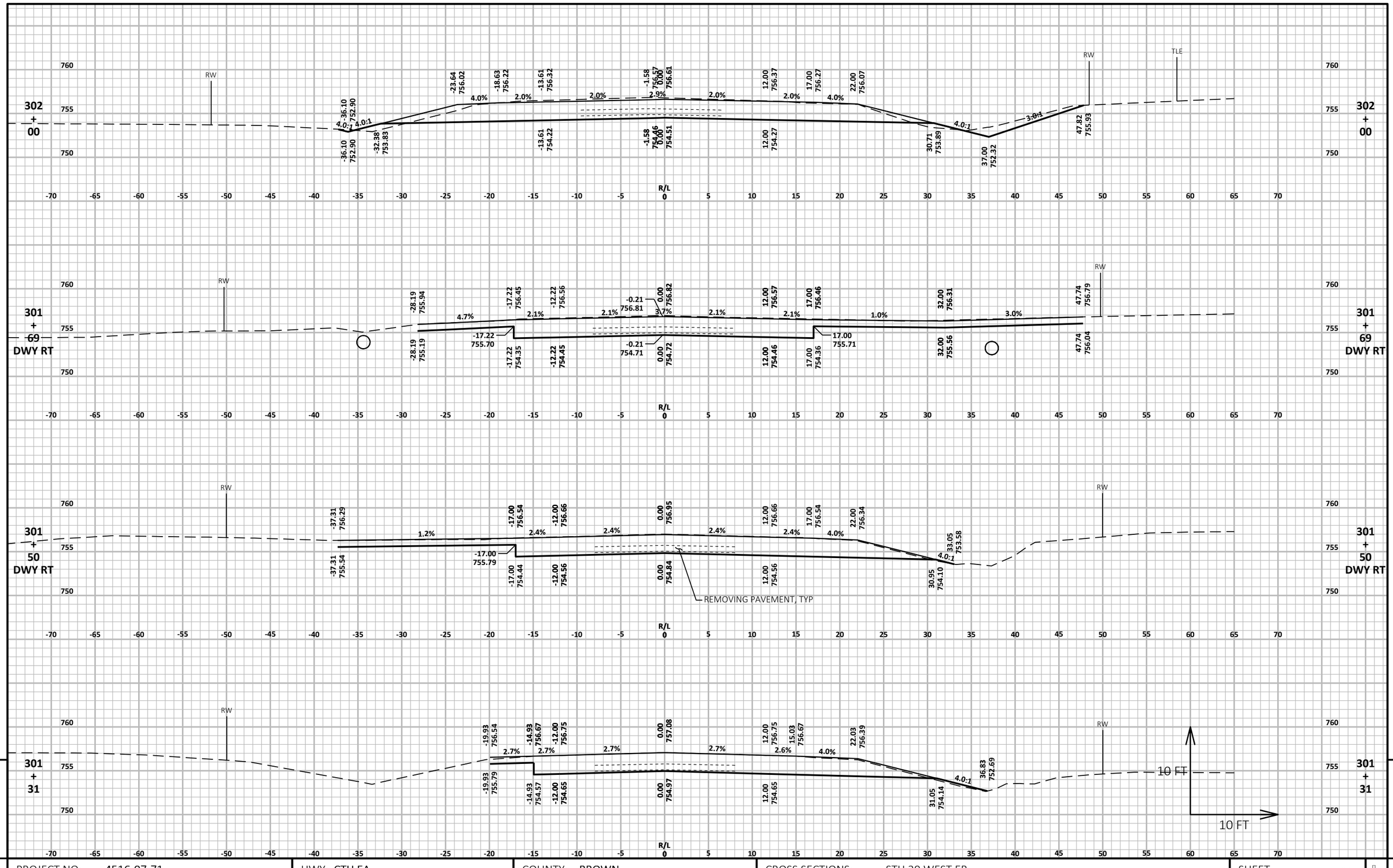


PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	CROSS SECTIONS: CTH EA (HURON RD) SB	SHEET 236

FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-090100-XS.DWG
LAYOUT NAME - 451607-090145-xs

PLOT DATE : 9/28/2018 10:59 AM PLOT BY : ANDREW WESTBROOK PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

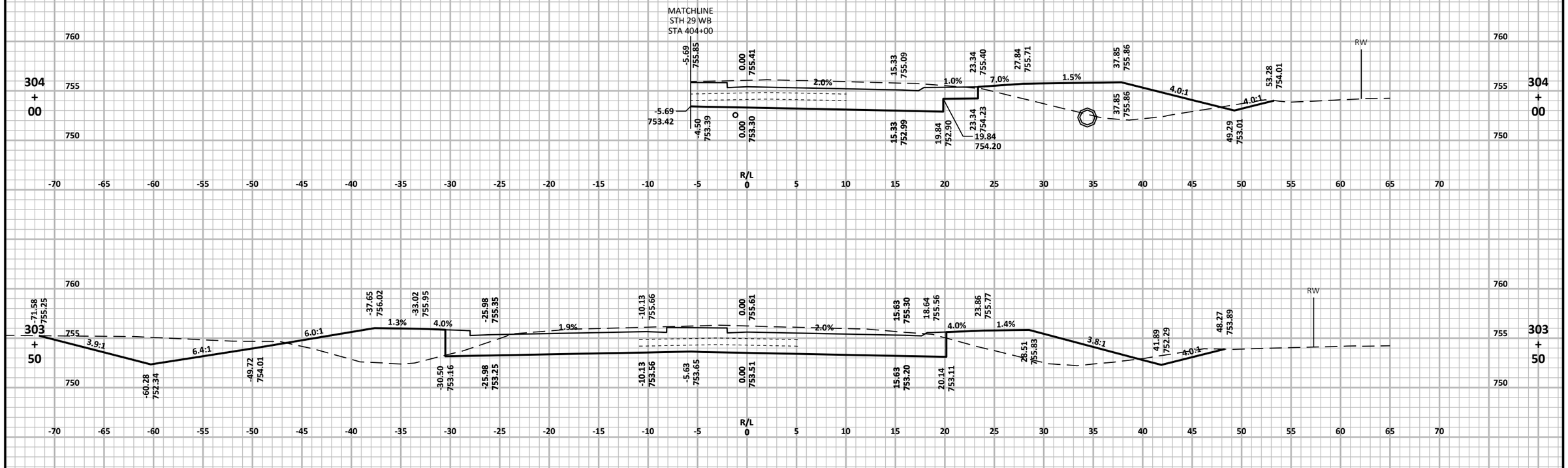


PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	CROSS SECTIONS: STH 29 WEST EB	SHEET 237

FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-090100-XS.DWG
LAYOUT NAME - 451607-090150-xs

PLOT DATE : 9/28/2018 10:59 AM PLOT BY : ANDREW WESTBROOK PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

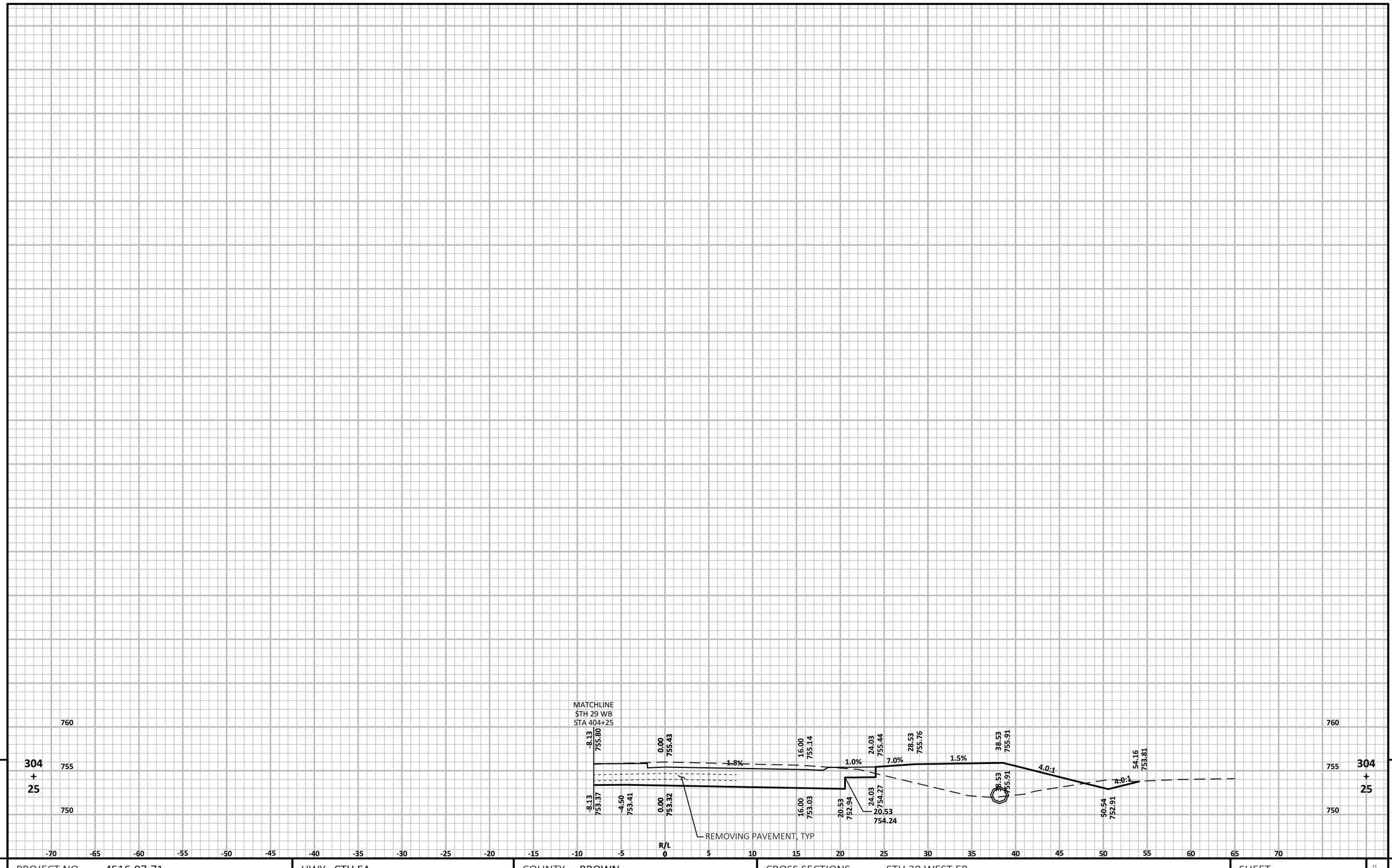


PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	CROSS SECTIONS: STH 29 WEST EB	SHEET 238

FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-090100-XS.DWG
LAYOUT NAME - 451607-090151-xs

PLOT DATE : 9/28/2018 10:59 AM PLOT BY : ANDREW WESTBROOK PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

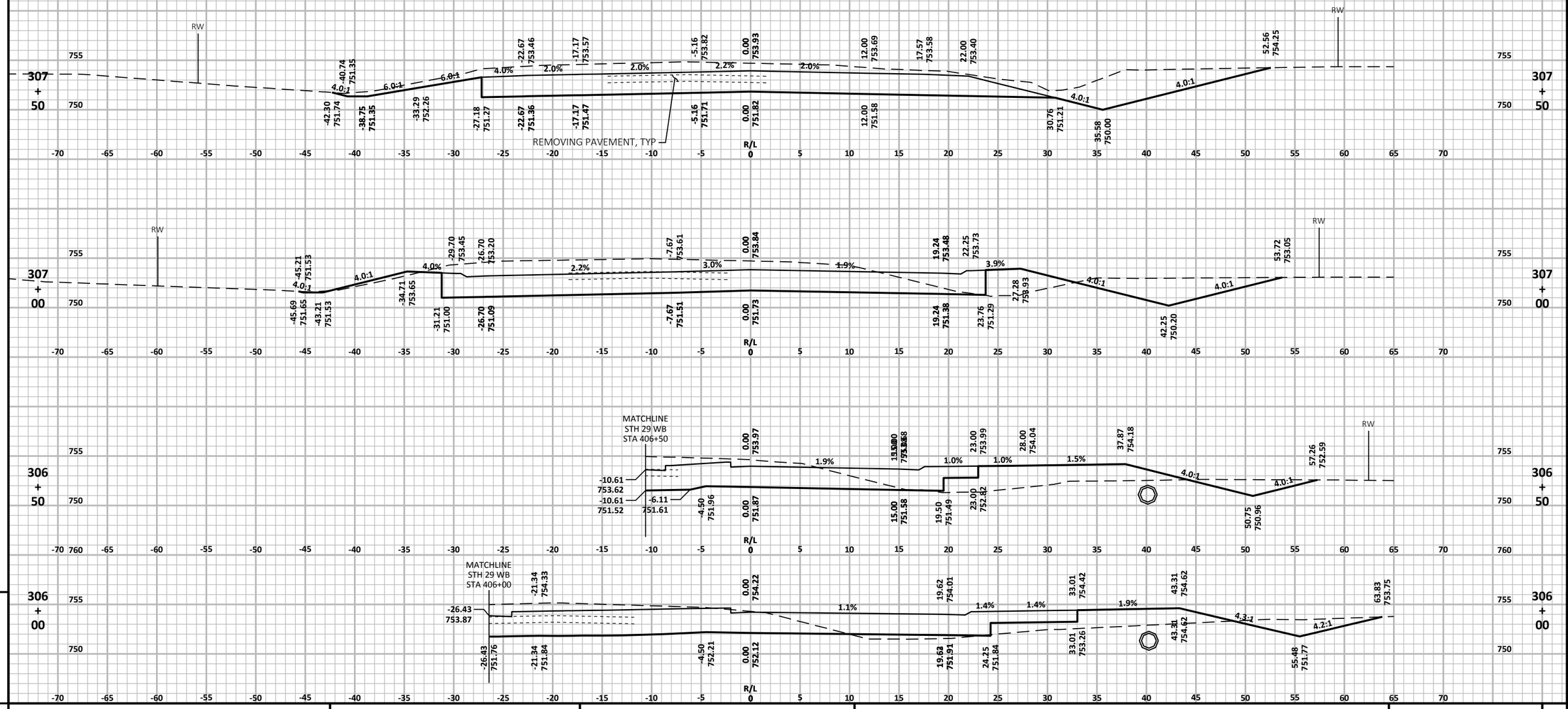
WISDOT/CADDS SHEET 49



PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	CROSS SECTIONS: STH 29 WEST EB	SHEET 239

FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-090100-XS.DWG
LAYOUT NAME - 451607-090152-xs

PLOT DATE : 9/28/2018 10:59 AM PLOT BY : ANDREW WESTBROOK PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

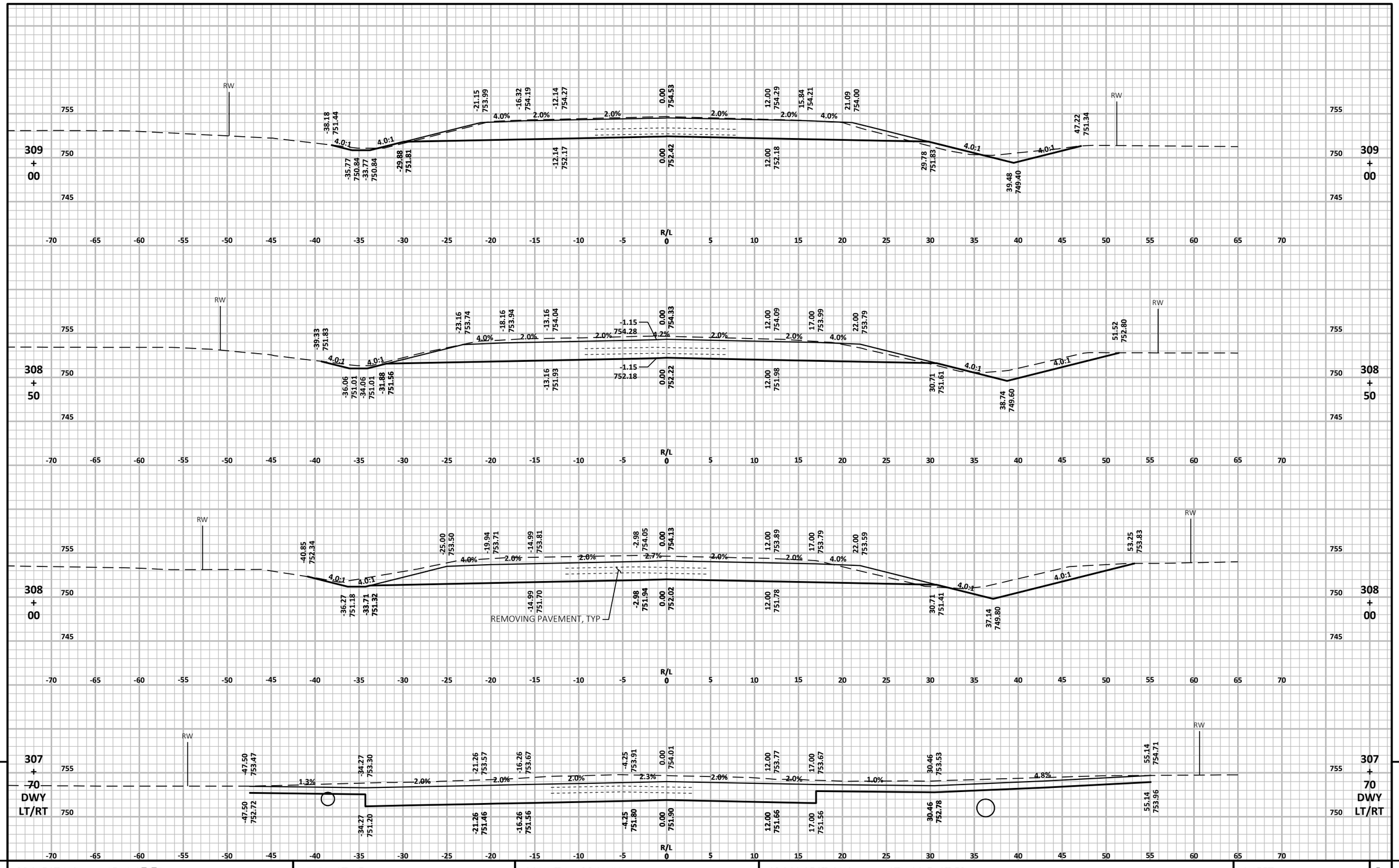


PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	CROSS SECTIONS: STH 29 EAST EB	SHEET 240

FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-090100-XS.DWG
LAYOUT NAME - 451607-090155-xs

PLOT DATE : 9/28/2018 10:59 AM PLOT BY : ANDREW WESTBROOK PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

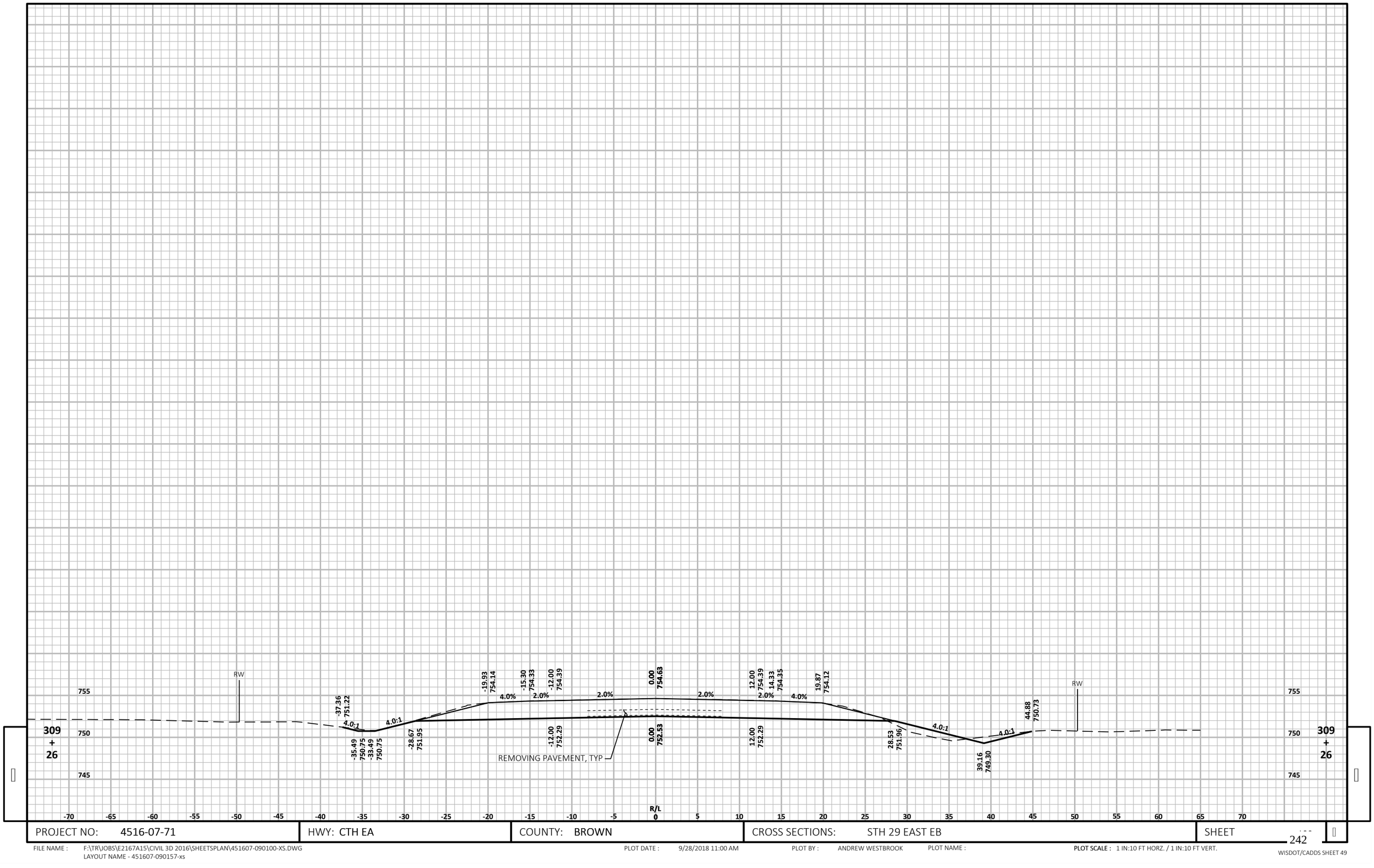


PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	CROSS SECTIONS: STH 29 EAST EB	SHEET 241

FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-090100-XS.DWG
LAYOUT NAME - 451607-090156-xs

PLOT DATE : 9/28/2018 11:00 AM PLOT BY : ANDREW WESTBROOK PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

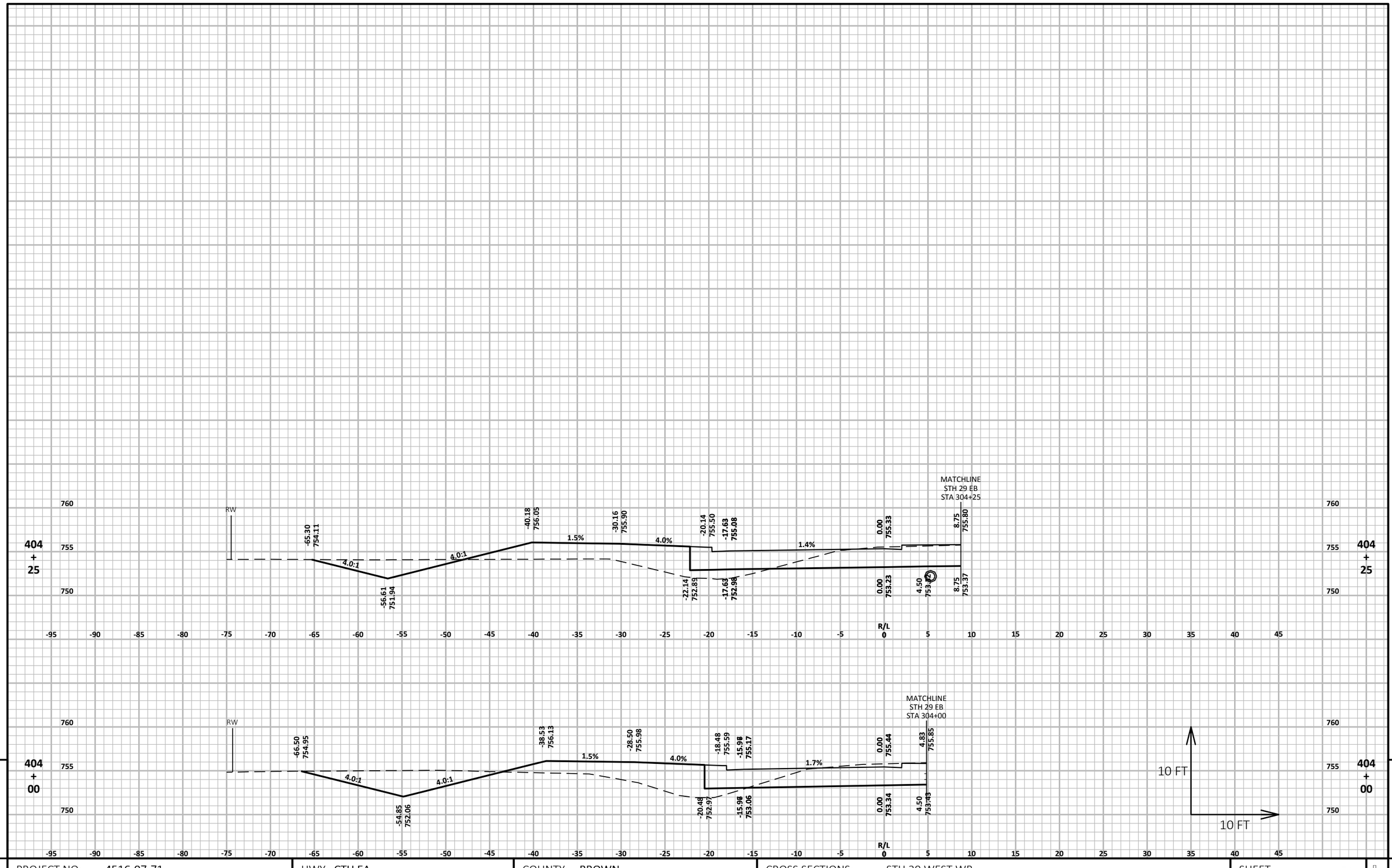
WISDOT/CADDS SHEET 49



PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	CROSS SECTIONS: STH 29 EAST EB	SHEET 242

FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-090100-XS.DWG
LAYOUT NAME - 451607-090157-xs

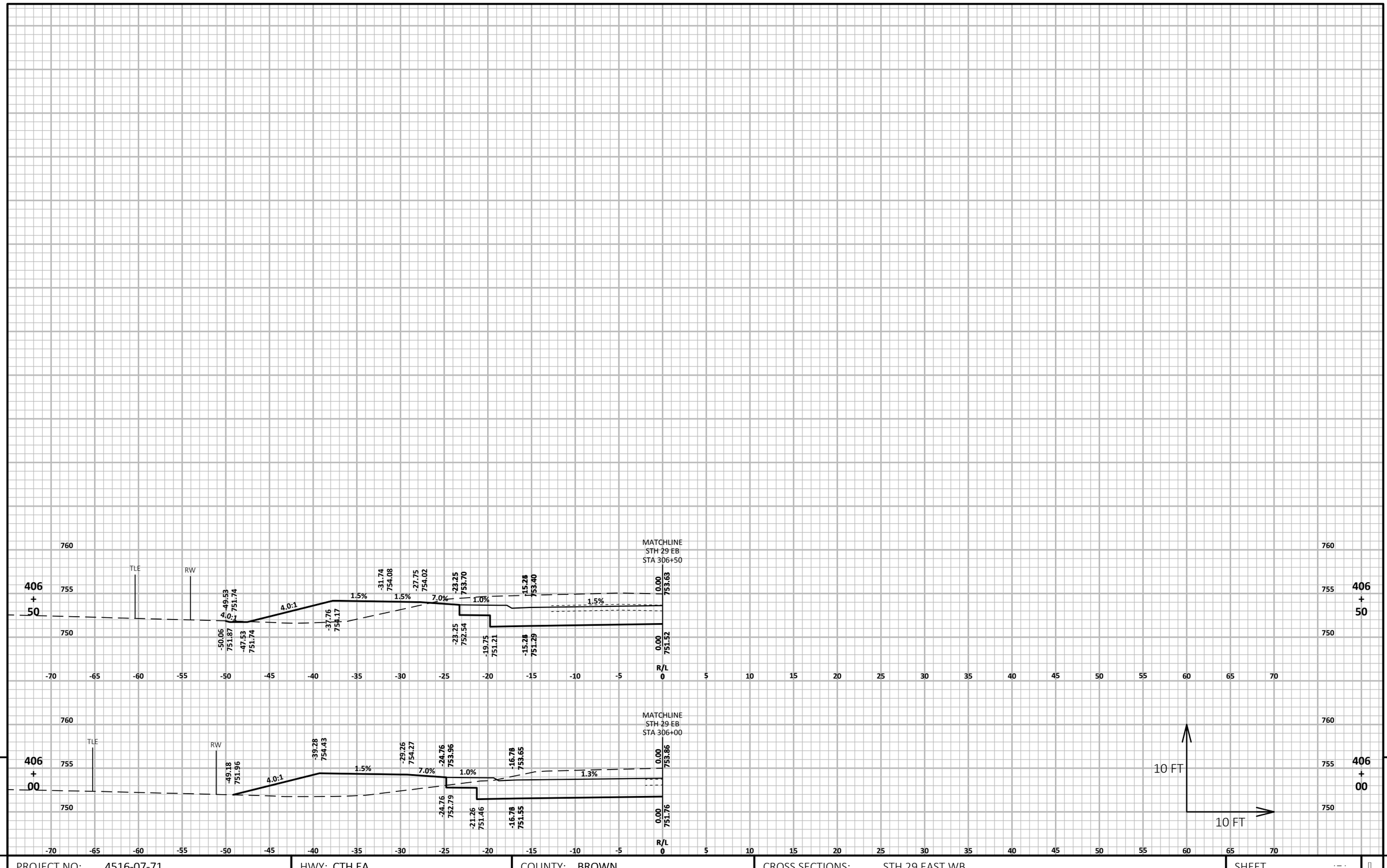
PLOT DATE : 9/28/2018 11:00 AM PLOT BY : ANDREW WESTBROOK PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	CROSS SECTIONS: STH 29 WEST WB	SHEET 243

FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-090100-XS.DWG
LAYOUT NAME - 451607-090160-xs

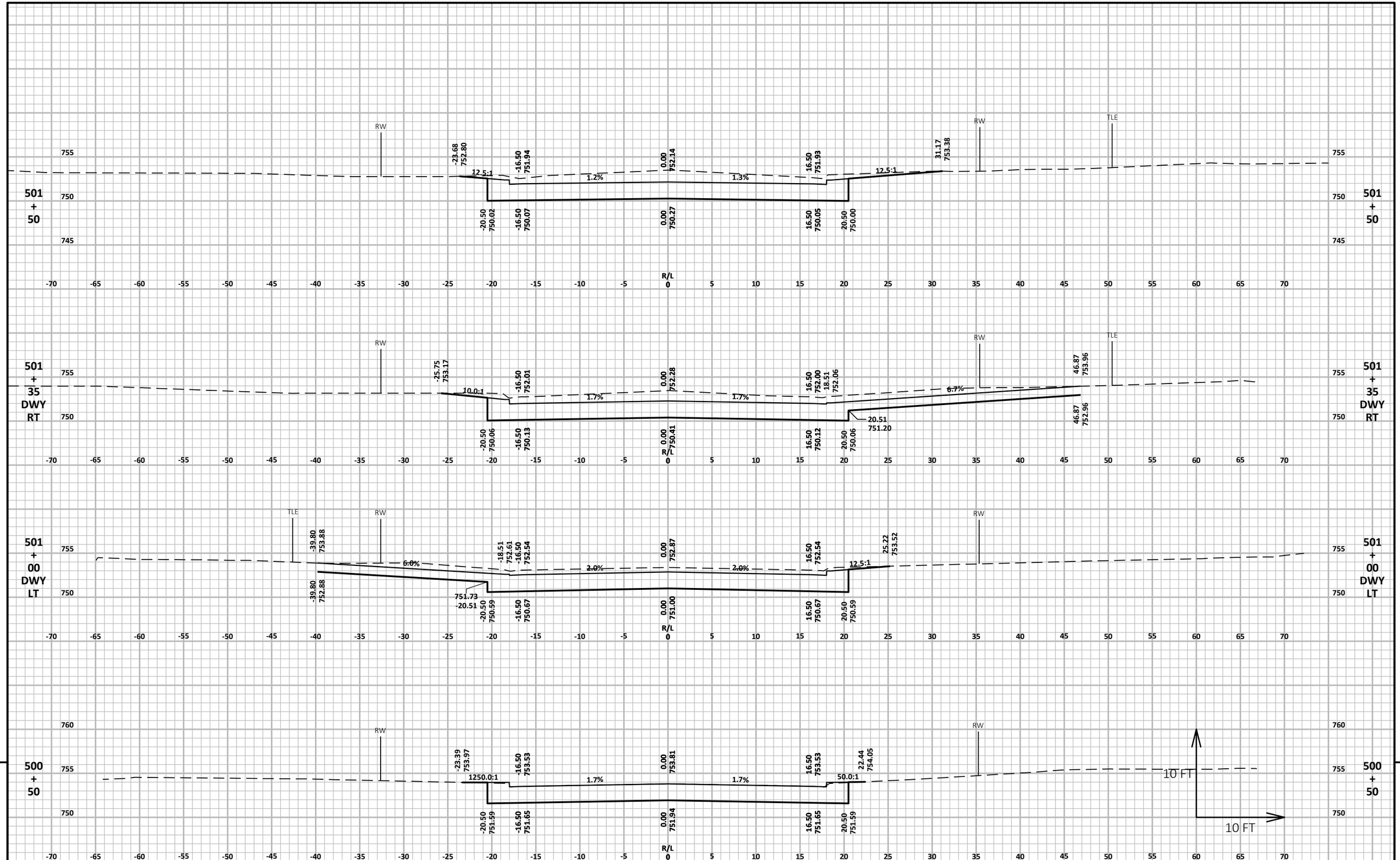
PLOT DATE : 9/28/2018 11:00 AM PLOT BY : ANDREW WESTBROOK PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	CROSS SECTIONS: STH 29 EAST WB	SHEET 244

FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-090100-XS.DWG
LAYOUT NAME - 451607-090165-xs

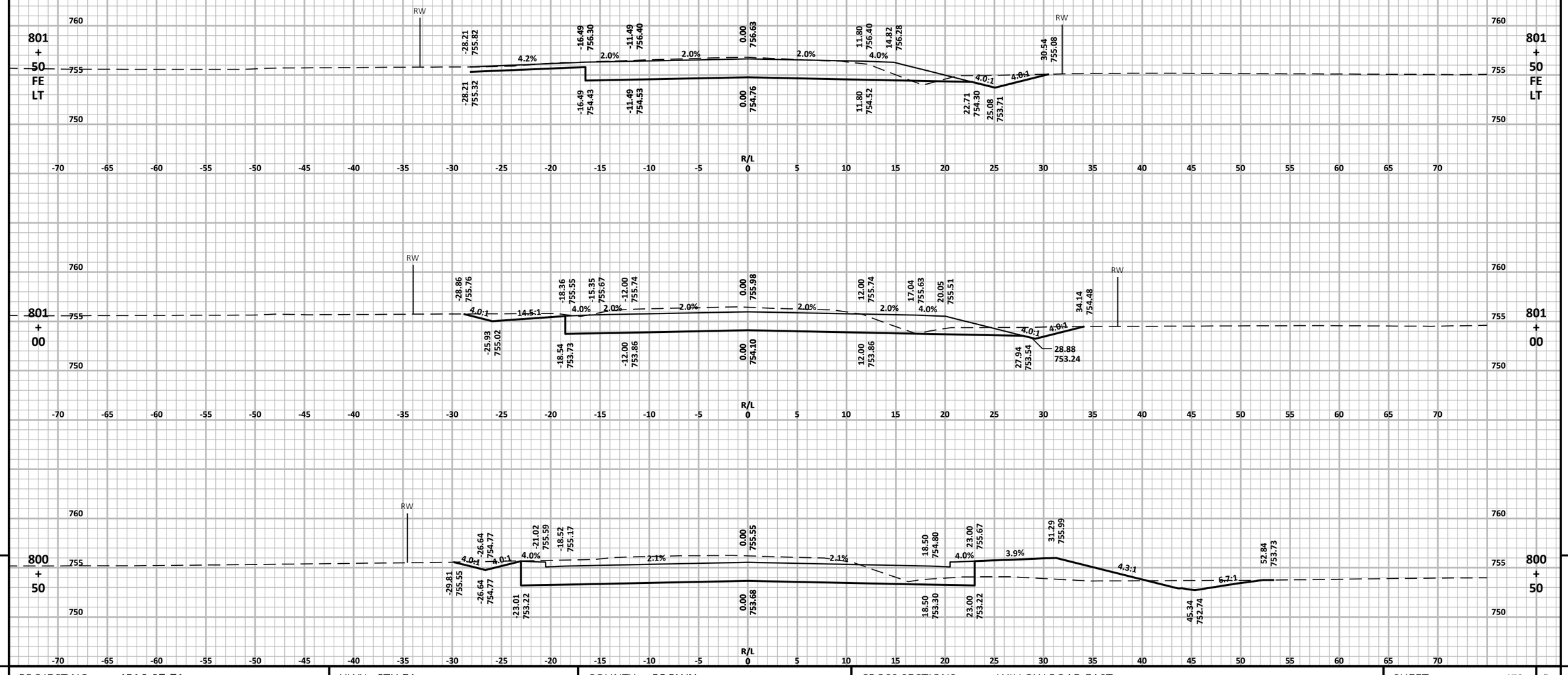
PLOT DATE : 9/28/2018 11:00 AM PLOT BY : ANDREW WESTBROOK PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	CROSS SECTIONS: MEADOW CIRCLE SOUTH	SHEET 245

FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-090100-XS.DWG
LAYOUT NAME - 451607-090170-xs

PLOT DATE : 9/28/2018 11:00 AM PLOT BY : ANDREW WESTBROOK PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	CROSS SECTIONS: WILLOW ROAD EAST	SHEET 246

FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-090100-XS.DWG
LAYOUT NAME - 451607-090185-xs

PLOT DATE : 10/17/2018 2:25 PM

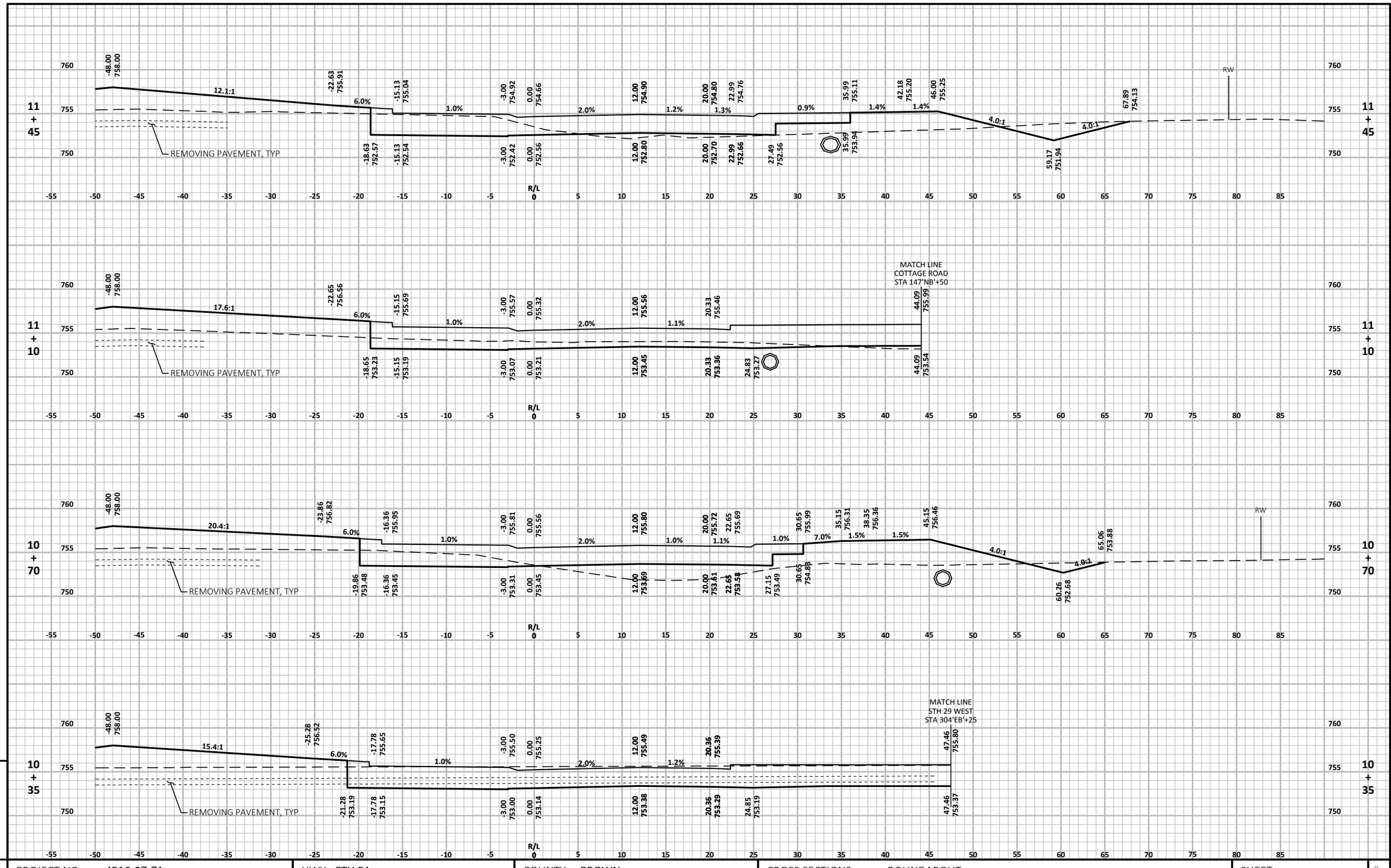
PLOT BY : CRAIG KNUTH

PLOT NAME :

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

451607-0□01□5-□□

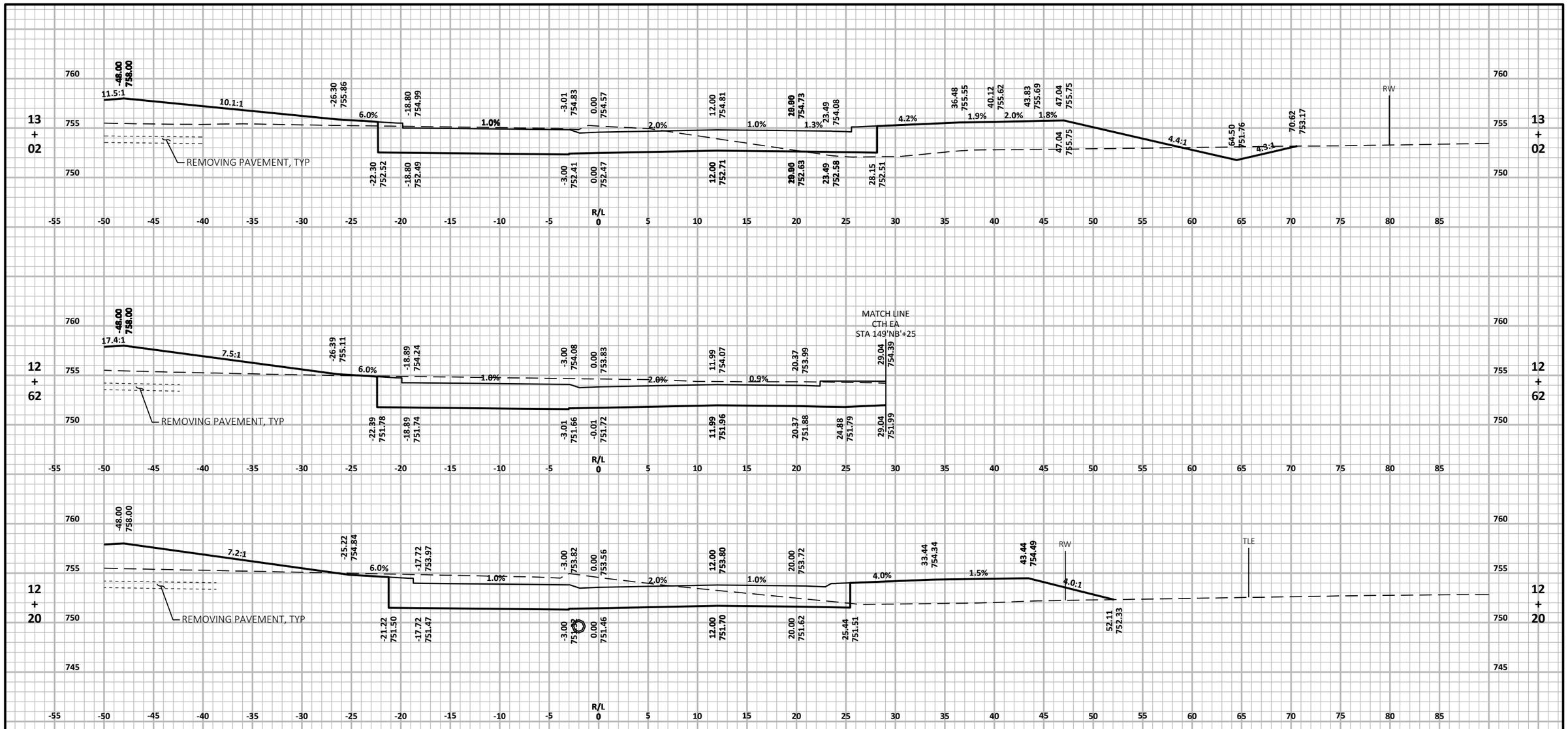
WISDOT/CADDS SHEET 49

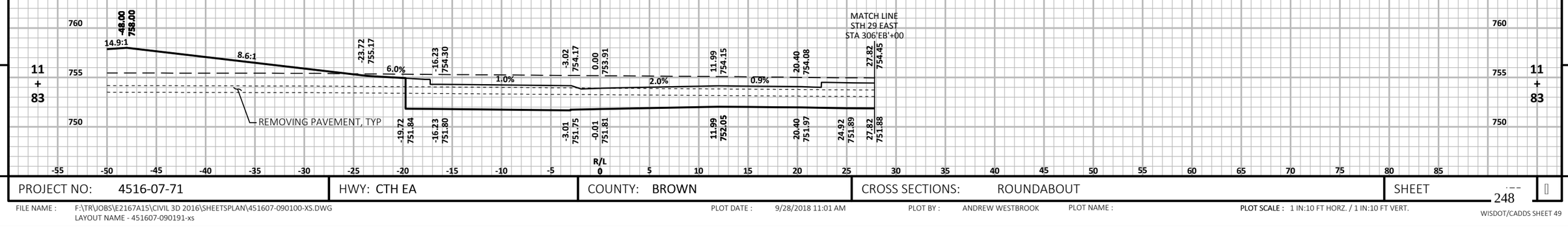


PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	CROSS SECTIONS: ROUNDABOUT	SHEET 247

FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-090100-XS.DWG
LAYOUT NAME - 451607-090190-xs

PLOT DATE : 9/28/2018 11:00 AM PLOT BY : ANDREW WESTBROOK PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

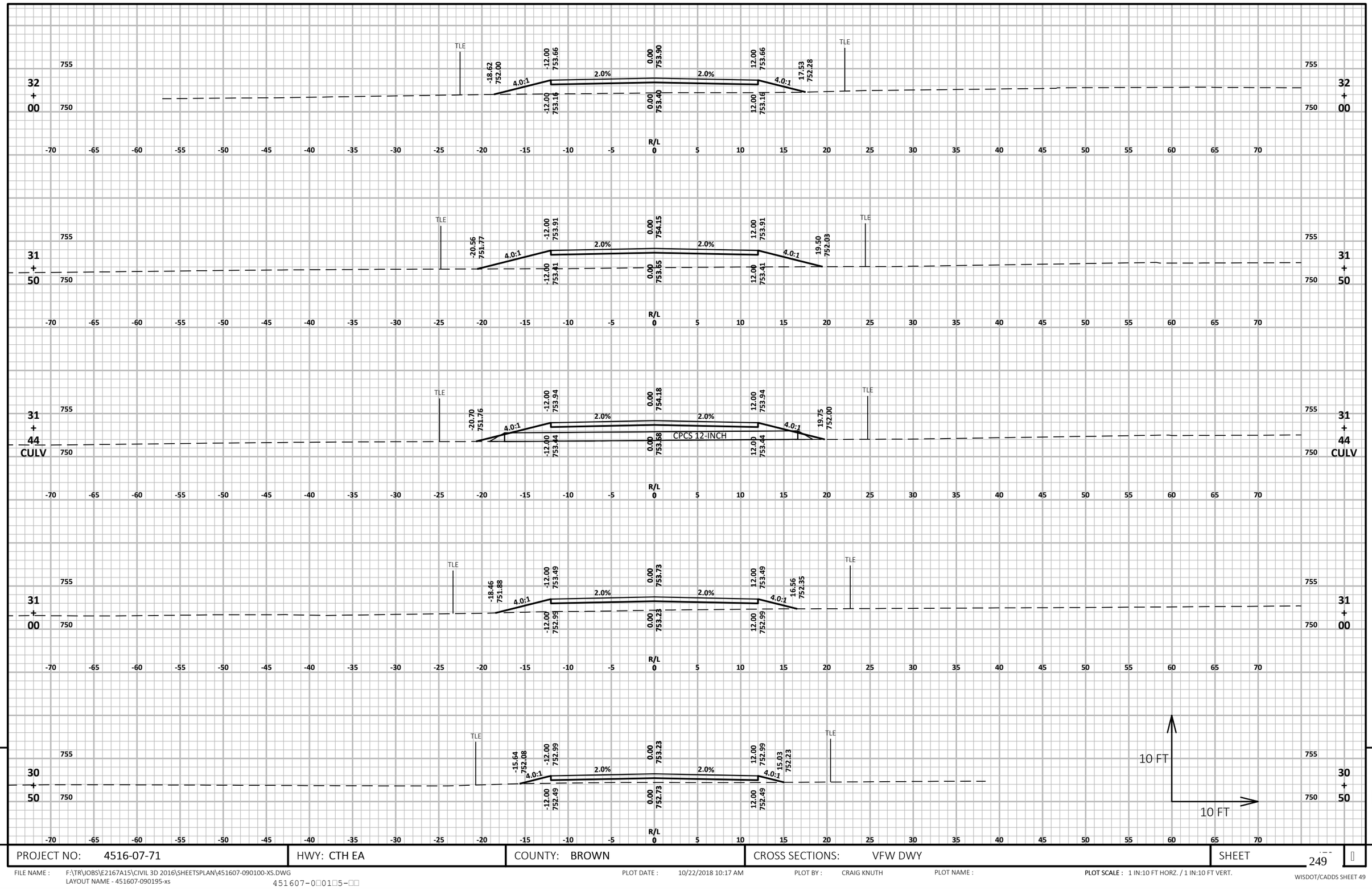




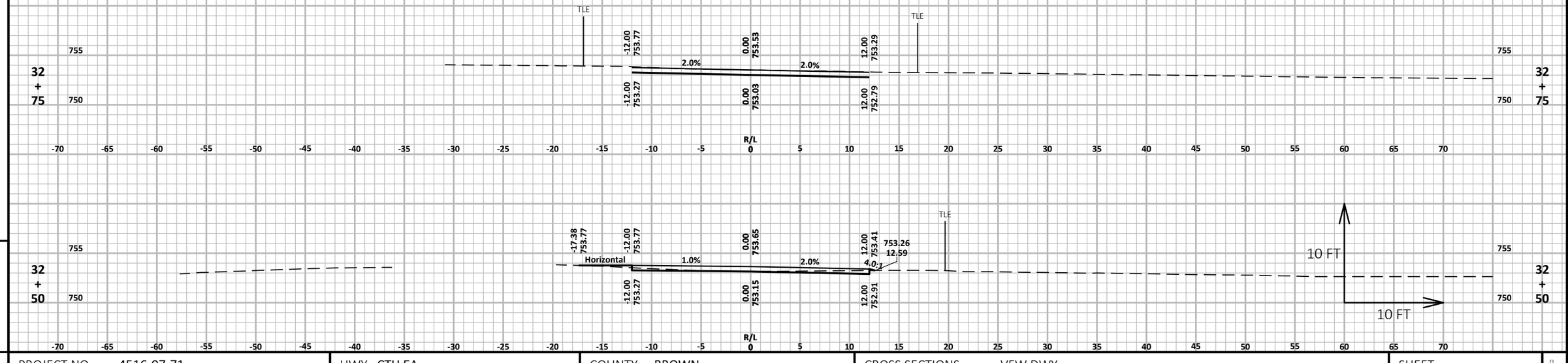
PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	CROSS SECTIONS: ROUNDABOUT	SHEET 248

FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-090100-XS.DWG
LAYOUT NAME - 451607-090191-xs

PLOT DATE : 9/28/2018 11:01 AM PLOT BY : ANDREW WESTBROOK PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	CROSS SECTIONS: VFW DWY	SHEET 249



PROJECT NO: 4516-07-71	HWY: CTH EA	COUNTY: BROWN	CROSS SECTIONS: VFW DWY	SHEET 250

FILE NAME : F:\TR\JOBS\E2167A15\CIVIL 3D 2016\SHEETSPLAN\451607-090100-XS.DWG
LAYOUT NAME - 451607-090196-xs

PLOT DATE : 9/28/2018 11:01 AM PLOT BY : ANDREW WESTBROOK PLOT NAME :

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

Notes

Wisconsin Department of Transportation

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