Section No.

TOTAL SHEETS = 114

DESIGN DESIGNATION 1570-00-08

= 8.670

= 9,490

= 23.1

= 61/39

= 24.6%

= 55 MPH

= 2,600,000

(2025)

(2045)

CONVENTIONAL SYMBOLS

AADT

A.A.D.T.

DESIGN SPEED

CORPORATE LIMITS

LIMITED HIGHWAY EASEMENT

PROPOSED OR NEW R/W LINE

EXISTING RIGHT OF WAY

SLOPE INTERCEPT

REFERENCE LINE

EXISTING CULVERT

PROPOSED CULVERT (Box or Pipe)

COMBUSTIBLE FLUIDS

WOODED OR SHRUB AREA

MARSH AREA

PROPERTY LINE

LOTTINE

D.H.V.

D.D.

Miscellaneous Quantities

Standard Detail Drawings

Computer Earthwork Date

Plan and Profile

Cross Sections

OCTOBER 2025 STATE OF WISCONSIN ORDER OF SHEETS **DEPARTMENT OF TRANSPORTATION** Typical Sections and Details Estimate of Quantities

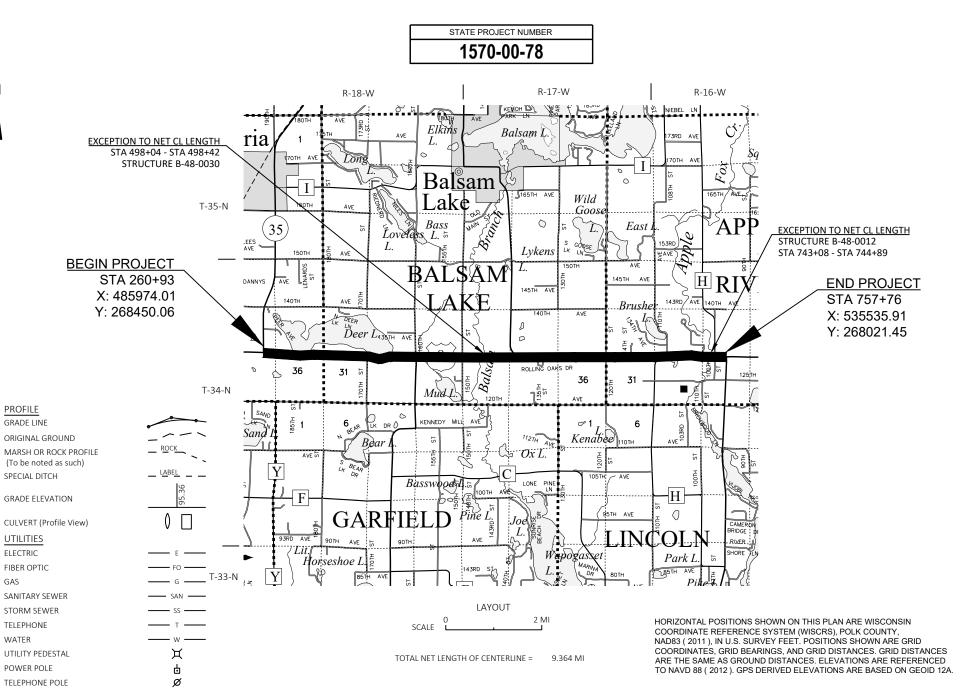
PLAN OF PROPOSED IMPROVEMENT

FEDERAL PROJECT STATE PROJECT CONTRACT PROJECT 1570-00-78 WISC 2026012 1

ST CROIX FALLS - TURTLE LAKE

STH 35 N TO STH 46 S

USH 8 **POLK COUNTY**



STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

PREPARED BY NW REGION Surveyor Designer Project Manage

4/30/2025

FILE NAME: C:\WISDOT\DESIGN\15700008\SHEETSPLAN\010101-TI.DWG 4/29/2025 2:08 PM

BECKLIN, MATTHEW R

GENERAL NOTES

THERE ARE UTILITY FACILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL COORDINATE THEIR CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGERS HOTLINE.

RIGHT OF WAY INFORMATION SHOWN ON THE PLANS IS APPROXIMATE.

RADIUS DIMENSIONS FOR THE CURB AND GUTTER ARE TO THE FLANGE LINE UNLESS OTHERWISE NOTED.

PAVEMENT REMOVAL WILL BE TO THE NEAREST JOINT OR A SAWED EDGE WILL BE REQUIRED AS DIRECTED BY THE ENGINEER.

PIPE AND INLET ELEVATIONS AS SHOWN ON THE PLANS MAY BE ADJUSTED BY THE ENGINEER TO FIT EXISTING FIELD CONDITIONS

THE PROPOSED SHOULDER WIDTH SHOWN IN THE TYPICAL SECTIONS ARE MINIMUM WIDTH. PERPETUATE EXISTING SHOULDERS THAT ARE WIDER THAN WHAT IS SHOWN IN THE TYPICAL SECTIONS.

DO NOT DRIVE OR STORE EQUIPMENT, OR STORE CONSTRUCTION MATERIALS IN ENVIRONMENTALLY SENSITIVE AREAS, WETLANDS OR WATERWAYS.

UTILITIES

CENTURYLINK-COMMUNICATION LINE

KYLE SCHLAMPP 20 S WILSON AVE RICE LAKE, WI 54868

PHONE: 715-475-5029

EMAIL: KYLE.SCHLMAPP@LUMEN.COM

DAIRYLAND POWER COOPERATIVE-ELECTRICITY

MIKE LYDON 320 EAST AVE S LA CROSSE, WI 54601 PHONE: 608-787-1381

EMAIL: MICHAEL.LYDON@DAIRYLANDPOWER.COM

LAKELAND TELECOM INC-COMMUNICATION LINE

MARK MEYER 825 INNOVATION AVE P.O. BOX 40 MILLTOWN, WI 54858

MILLTOWN, WI 54858 PHONE: 715-825-5130

EMAIL: MARKM@LAKELANDTEAM.COM

NORTHWEST COMM.-COMMUNICATION LINE

GREG CARDINAL 116 HARRIMAN AVE N AMERY, WI 54001 PHONE: 715-268-4690

EMAIL: GREGCARDINAL@AMERYTEL.NET

POLK-BURNETT ELECTRIC COOPERATIVE-ELECTRICTY
JESSE SEERING

1001 STATE ROAD 35 CENTURIA, WI 54824 PHONE: 800-421-0283

EMAIL: JSEERING@POLKBURNETT.COM

SPECTRUM-COMMUNICATION LINE

MICKEY BENIK 2016 18 3/4 ST RICE LAKE, WI 54868 PHONE: 715-210-3868

EMAIL: MICKEY.BENIK@CHARTER.COM

BECKLIN, MATTHEW R

DNR CONTACT

WISCONSIN DEPARTMENT OF NATURAL RESOURCES AMY CRONK DNR NORTHERN REGION HEADQUARTERS 810 W. MAPLE STREET SPOONER, WI 54801 PHONE: 715-520-3976

EMAIL: AMY.CRONK@WISCONSIN.GOV



STANDARD ABBREVIATIONS

PLOT NAME :

AGG	AGGREGATE	NC	NORMAL CROWN
ASPH	ASPHALTIC	N.T.S.	NOT TO SCALE
BM	BENCH MARK	PAVT	PAVEMENT
CE	COMMERCIAL ENTRANCE	PE	PRIVATE ENTRANCE
CL OR C/L OR &	CENTER LINE	PVRC	POINT OF VERTICAL REVERSE CURVE
Δ	CENTRAL ANGLE OR DELTA	OOR	QUARTER POINT OF RADIUS
CONC	CONCRETE	R	RADIUS
DWY	DRIVEWAY	RES	RESIDENCE OR RESIDENTIAL
EOR	END POINT OF RADIUS	R/W	RIGHT-OF-WAY
ENT	ENTRANCE	RDWY	ROADWAY
FE	FIELD ENTRANCE	R/L OR R	REFERENCE LINE
F0	FIBER OPTIC	SAN	SANITARY SEWER
INV	INVERT	SS	STORM SEWER
IP	IRON PIPE ON PIN	SE	SUPERELEVATION RATE
L	LENGTH OF CURVE	TYP	TYPICAL
LC	LONG CHORD OF CURVE	VAR	VARIABLE
MOR	MID POINT OF RADIUS	VC	VERTICAL CURVE

PLOT SCALE :

Custom

WISDOT/CADDS SHEET 42

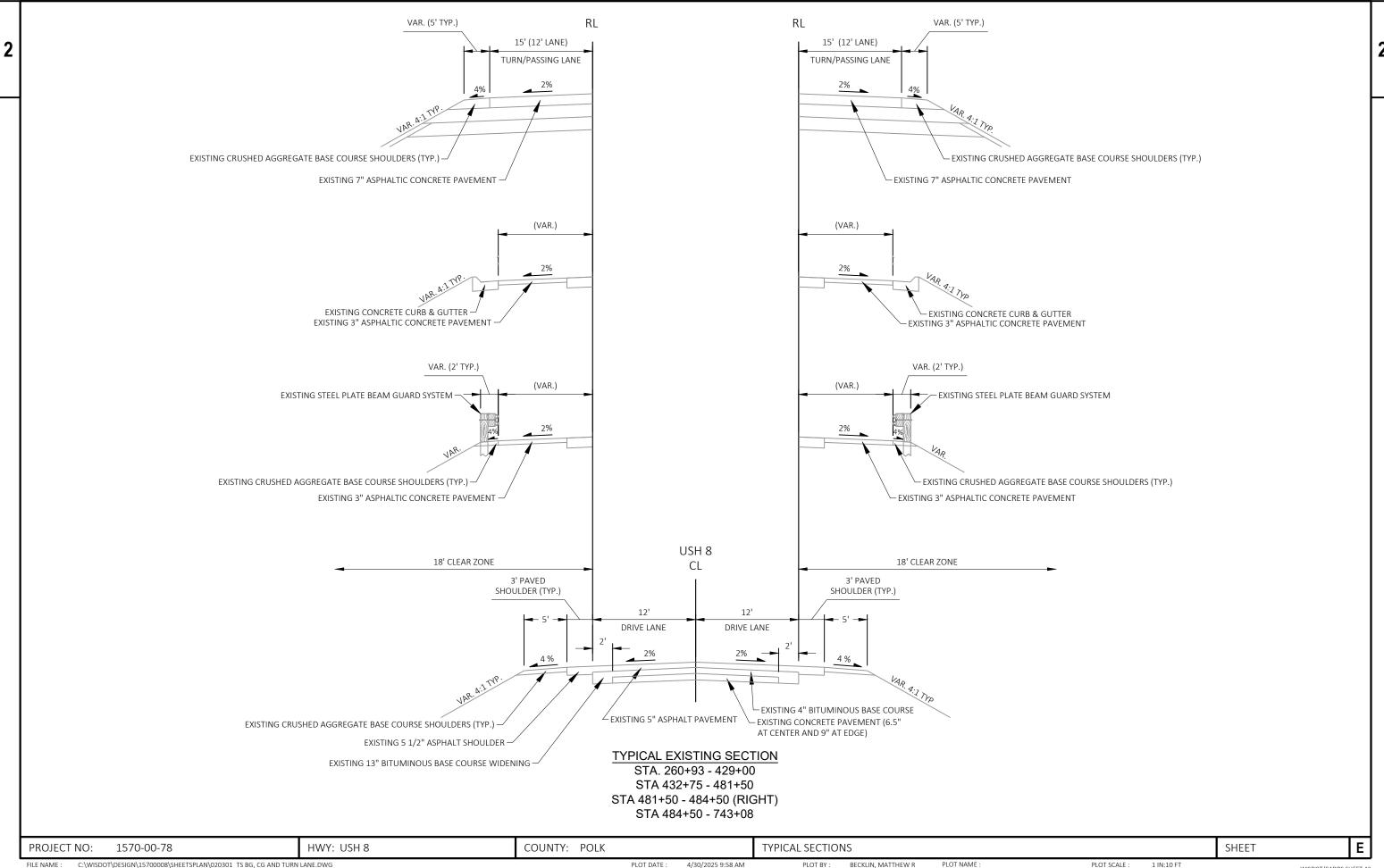
PROJECT NO: 1570-00-78 HWY: USH 8 COUNTY: POLK GENERAL NOTES SHEET **E**

8/7/2025 10:47 AM

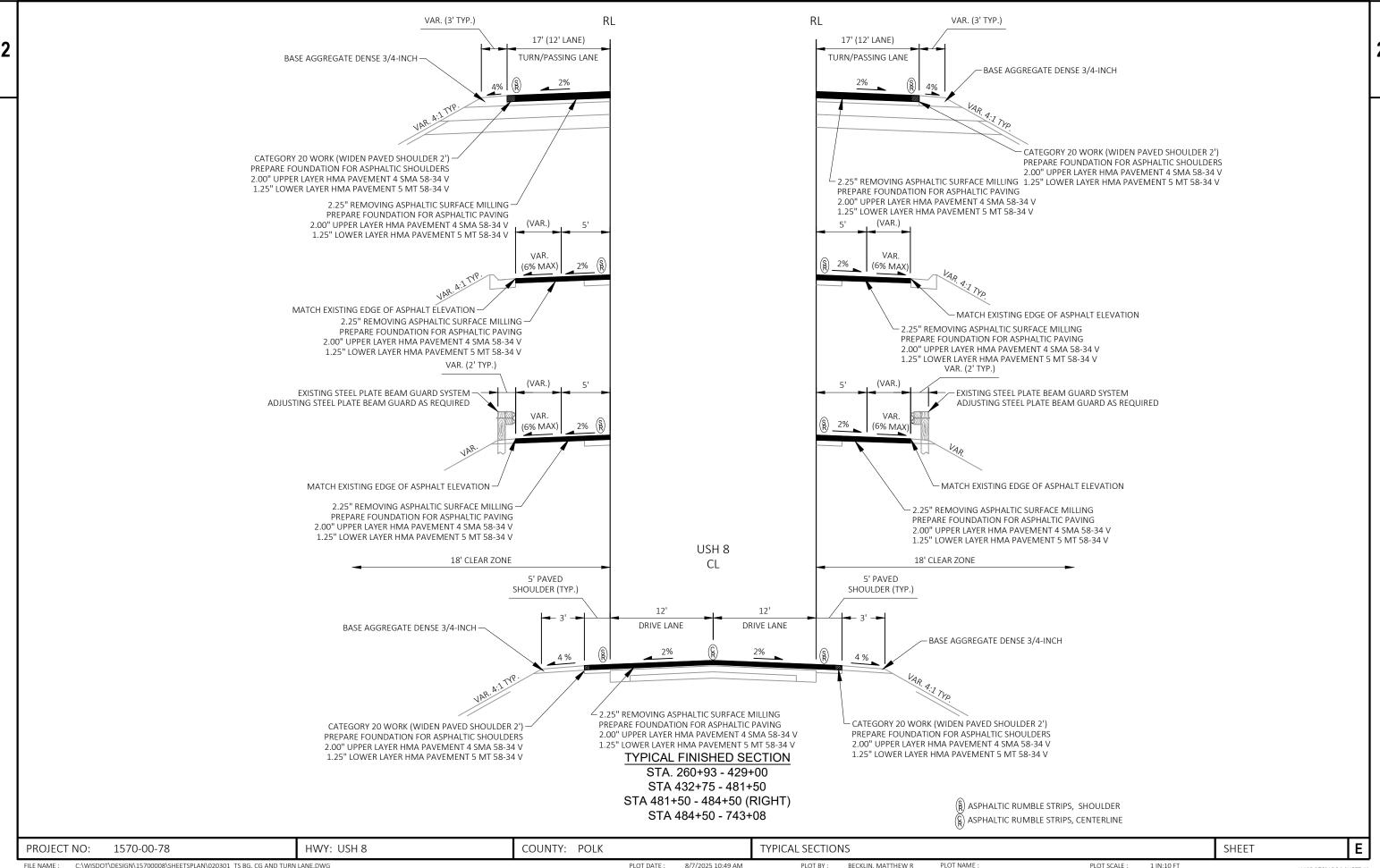
PLOT DATE :

C:\WISDOT\DESIGN\15700008\SHEETSPLAN\020101-GN.DWG LAYOUT NAME - Plan 1 IN 100 FT

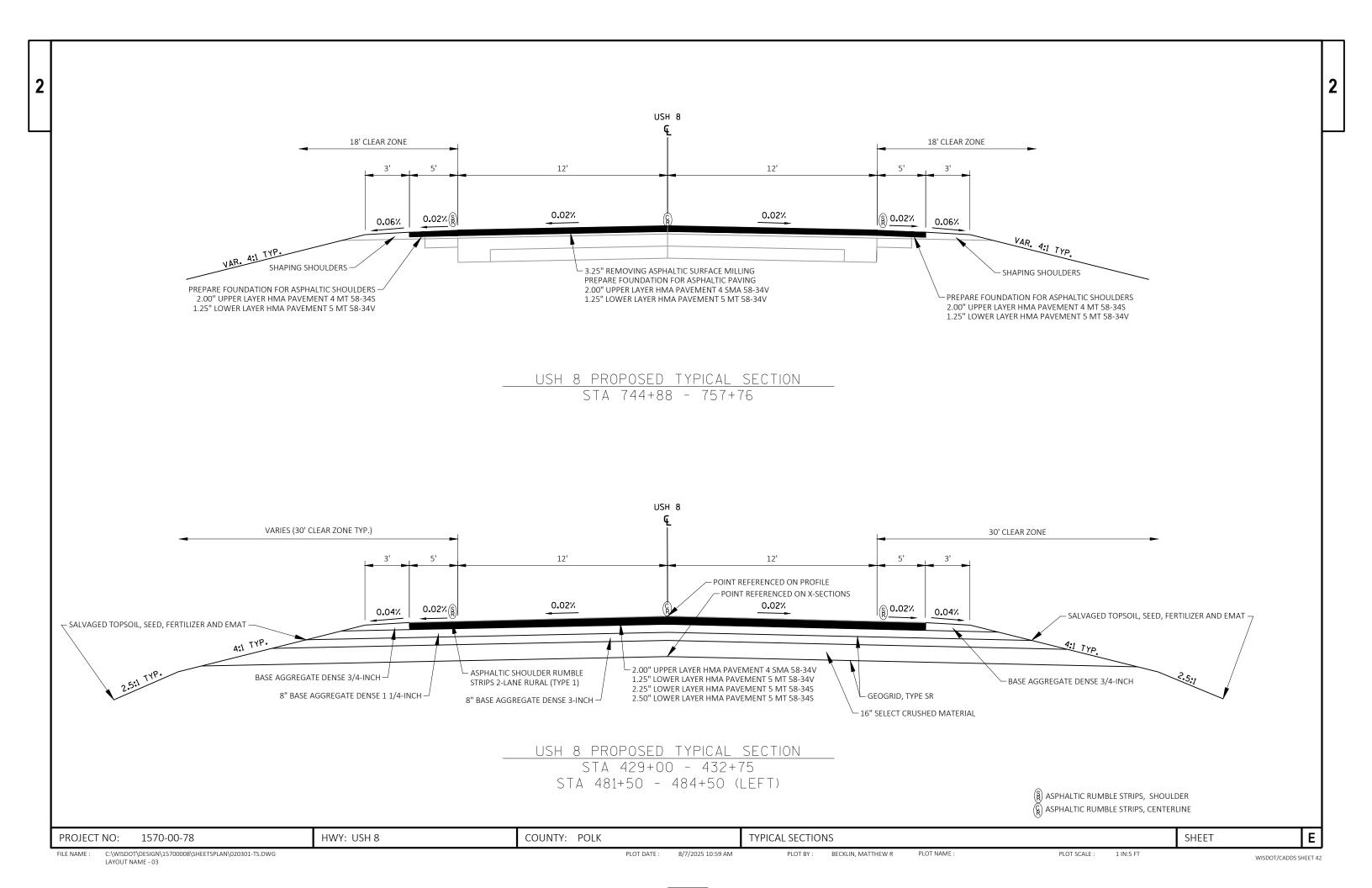
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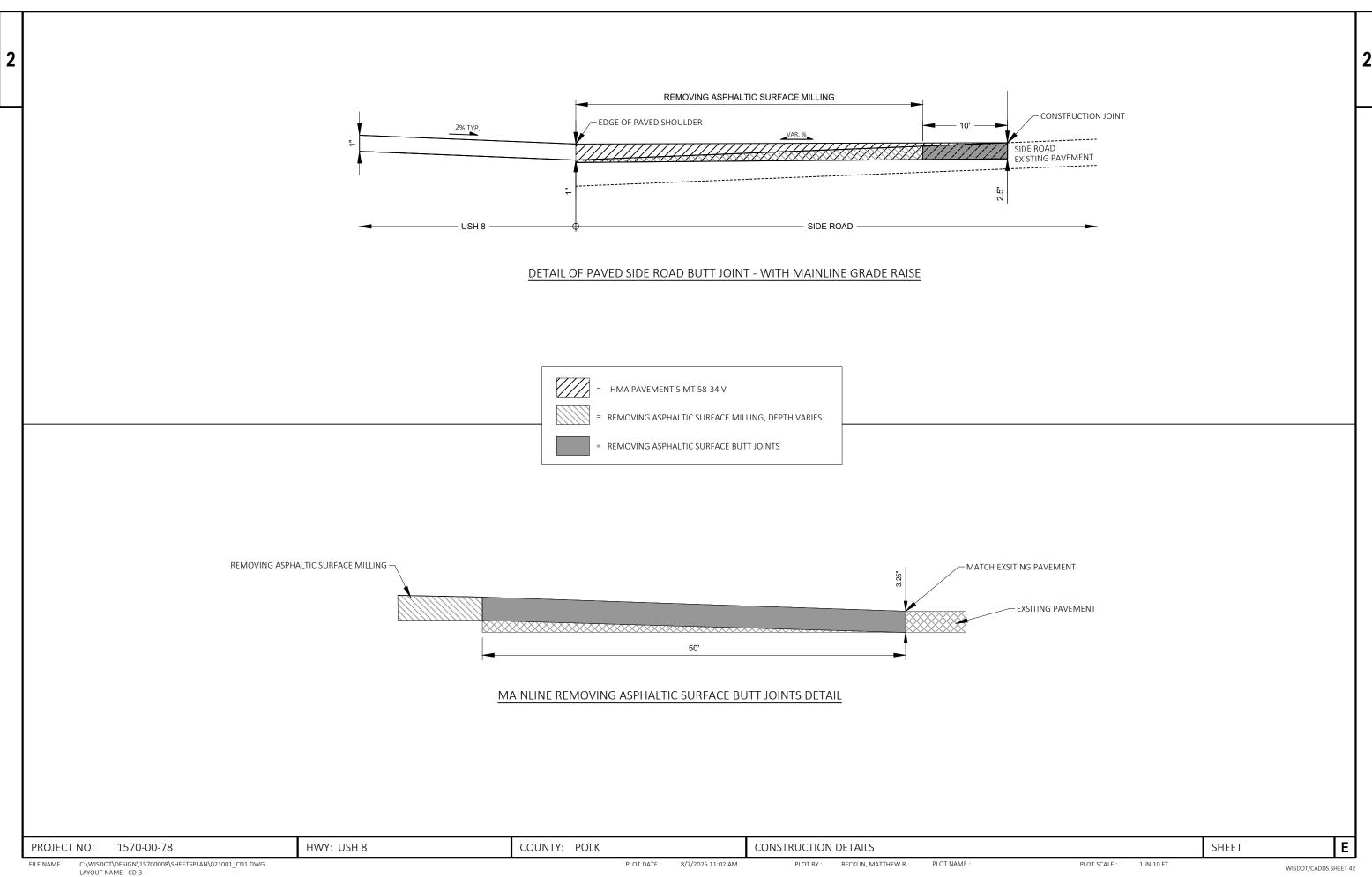


C:\WISDOT\DESIGN\15700008\SHEETSPLAN\020301_TS BG, CG AND TURN LANE.DWG PLOT BY: BECKLIN, MATTHEW R PLOT DATE : PLOT NAME PLOT SCALE : 1 IN:10 FT 4/30/2025 9:58 AM WISDOT/CADDS SHEET 42

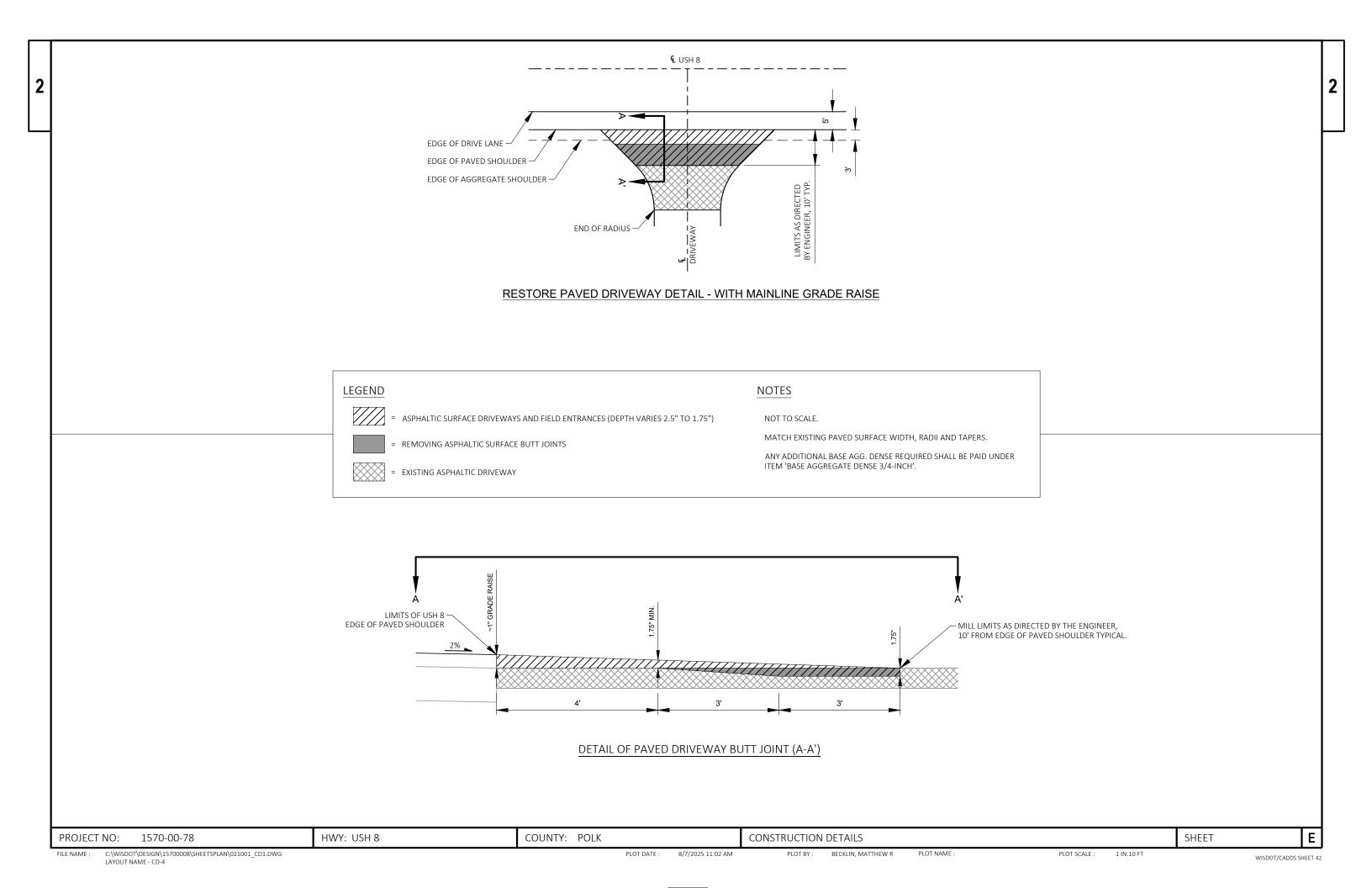


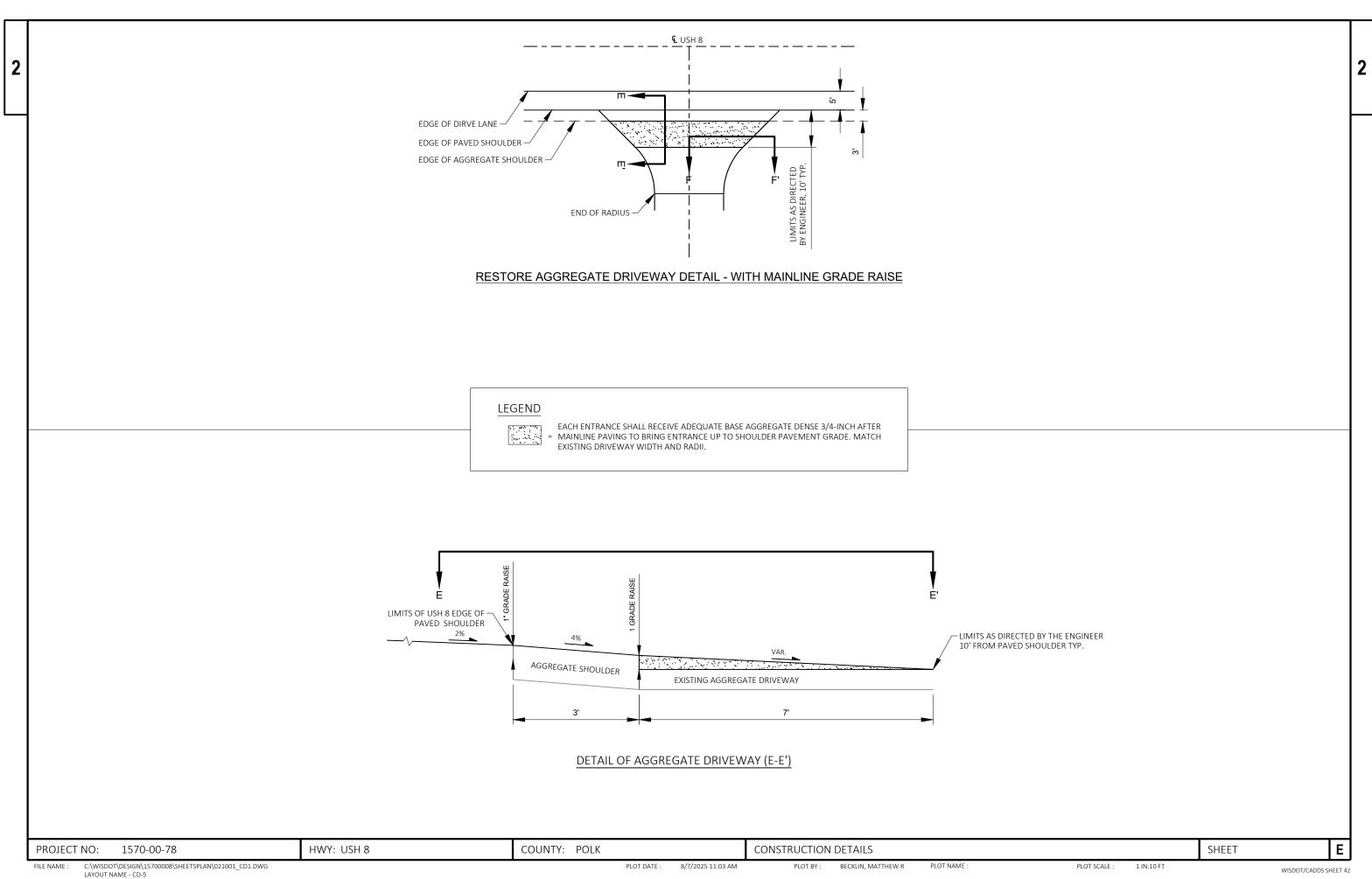
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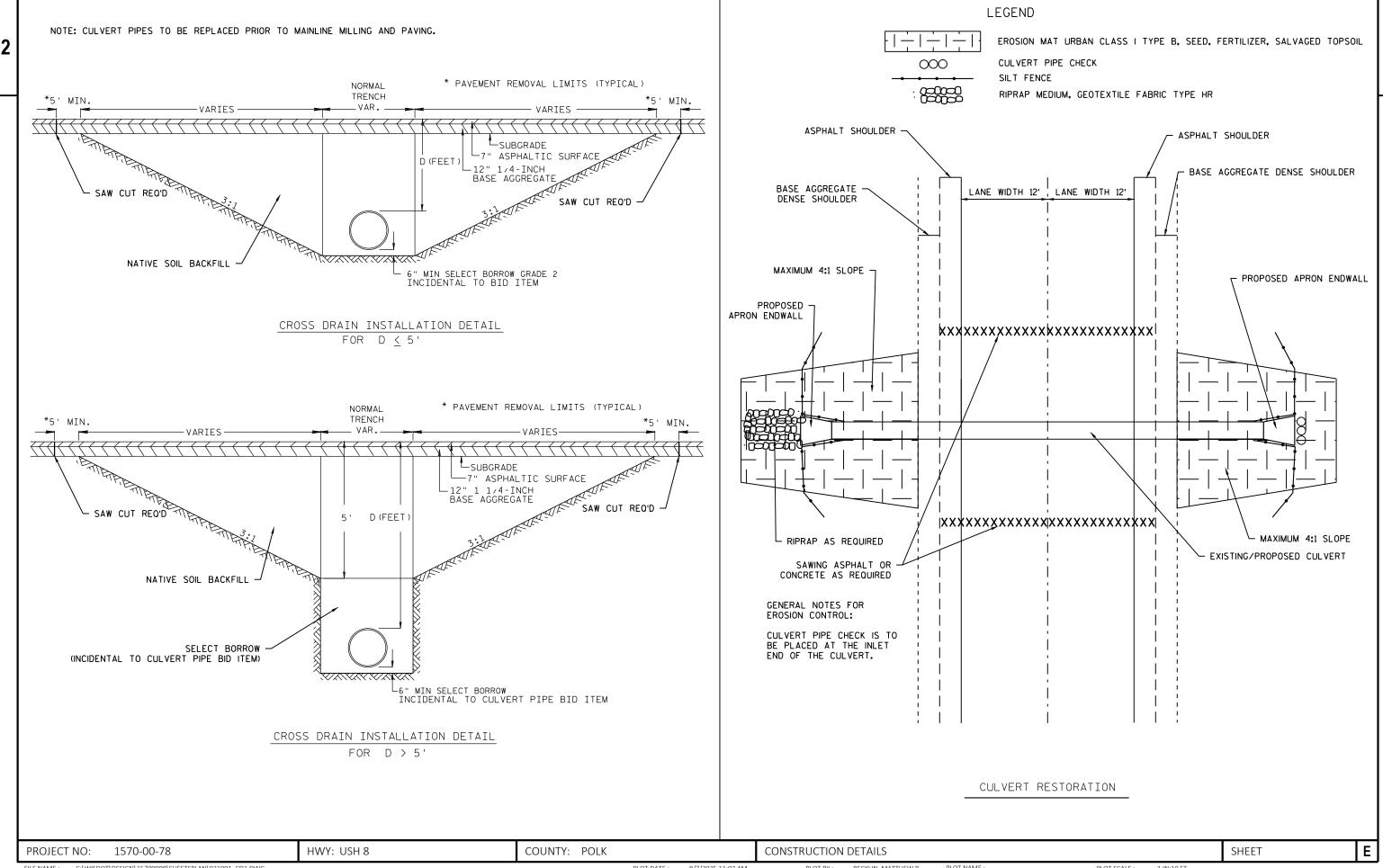




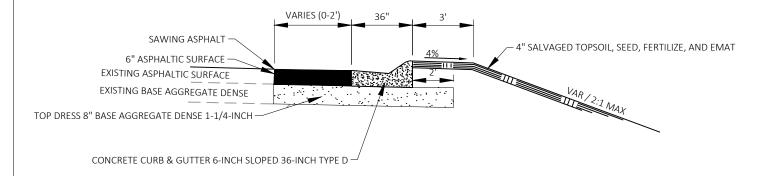
WISDOT/CADDS SHEET 42



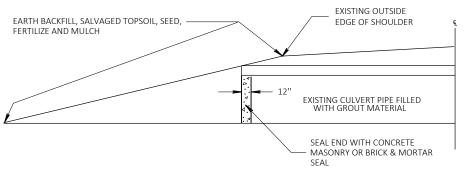




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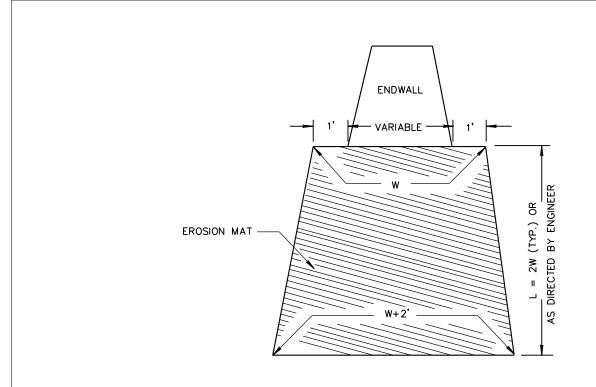
DETAIL OF CURB & GUTTER INSTALLATION



ABANDONING CATTLE PASS, STA 702+51

TYPICAL 1/2 SECTION,

SYMMETRICAL ABOUT &



EROSION MAT TREATMENT AT CULVERTS

Ε PROJECT NO: 1570-00-78 HWY: USH 8 COUNTY: POLK CONSTRUCTION DETAILS SHEET C:\WISDOT\DESIGN\15700008\SHEETSPLAN\021001_CD1.DWG PLOT DATE : PLOT BY: BECKLIN, MATTHEW R PLOT NAME : PLOT SCALE : 1 IN:10 FT FILE NAME : 8/7/2025 11:03 AM WISDOT/CADDS SHEET 42

LAYOUT NAME - CD-8



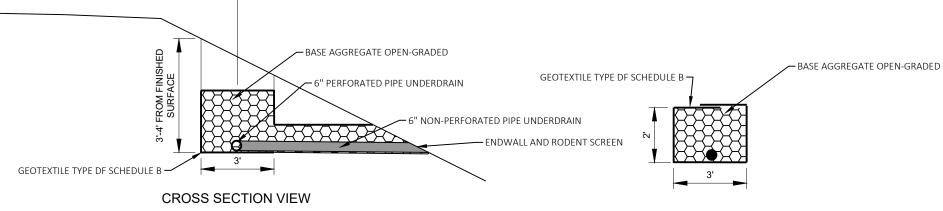
FRENCH DRAIN

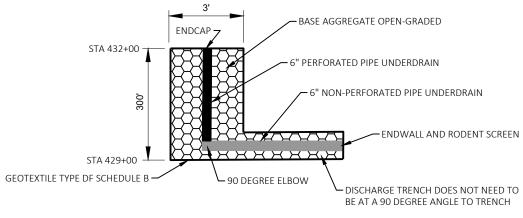
 CL

30'

INSTALL FRENCH DRAIN BETWEEN STA 429+00-432+00 RIGHT.

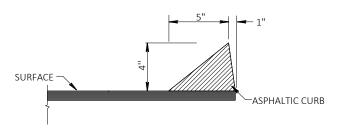
EXCAVATE A TRENCH 3 FEET WIDE AND DEEP ENOUGH TO BE AT OR NEAR THE ORIGINAL MARSH SURFACE ELEVATION (APPROXIMATELY 3-FEET DEPTH). LINE THE TRENCH WITH GEOTEXTILE TYPE DF SCHEDULE B, PLACE 6" PERFORATED UNDERDRAIN AND BACKFILL THE TRENCH WITH BASE AGGREGATE OPEN GRADED. DAYLIGHT THE PIPE UNDERDRAIN ON THE END NEAR THE STREAM (STA 429+00) AND INSTALL ENDWALL AND RODENT SCREEN.





PLAN VIEW

FRENCH DRAIN
STA 429+00-432+00

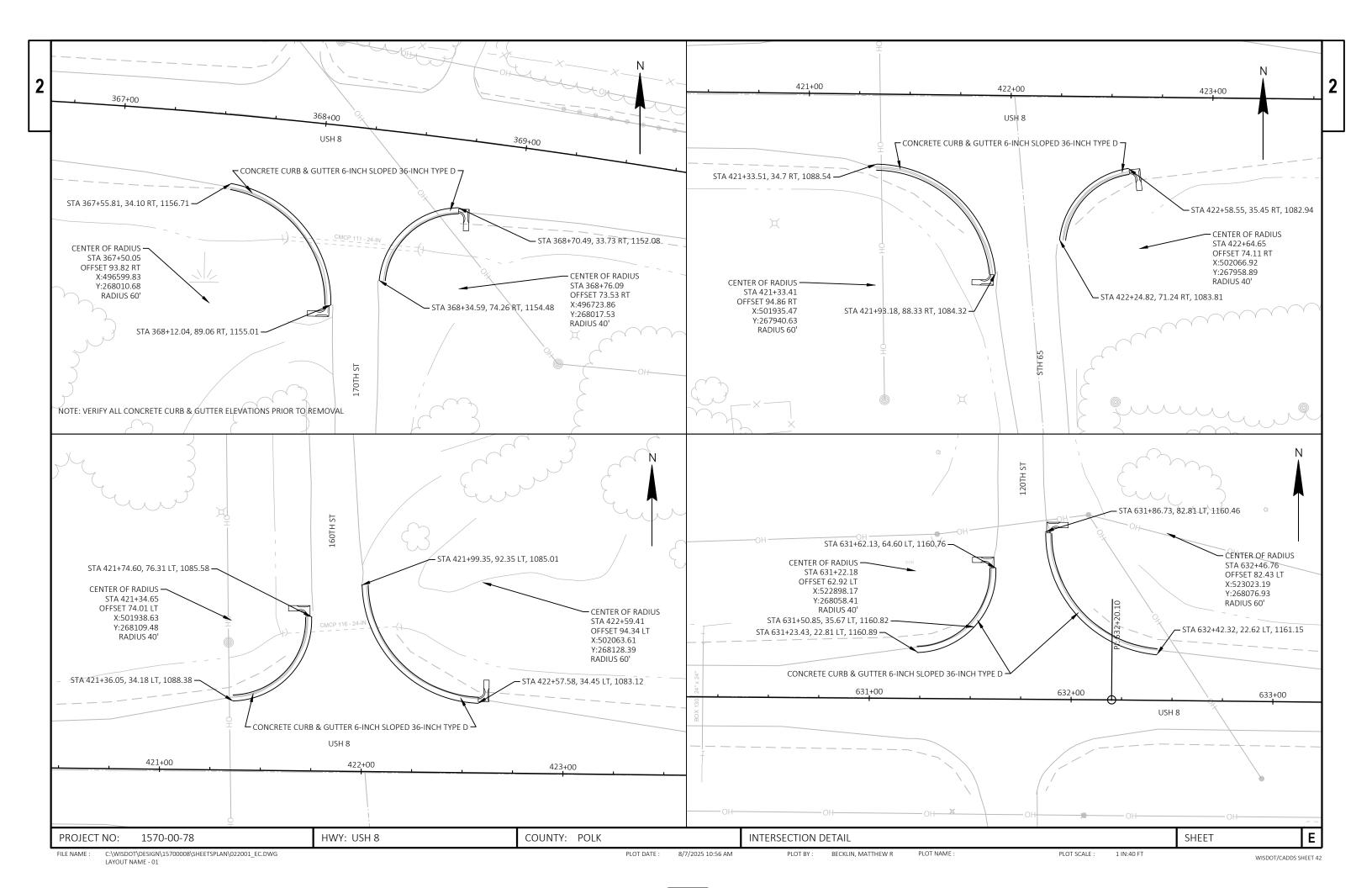


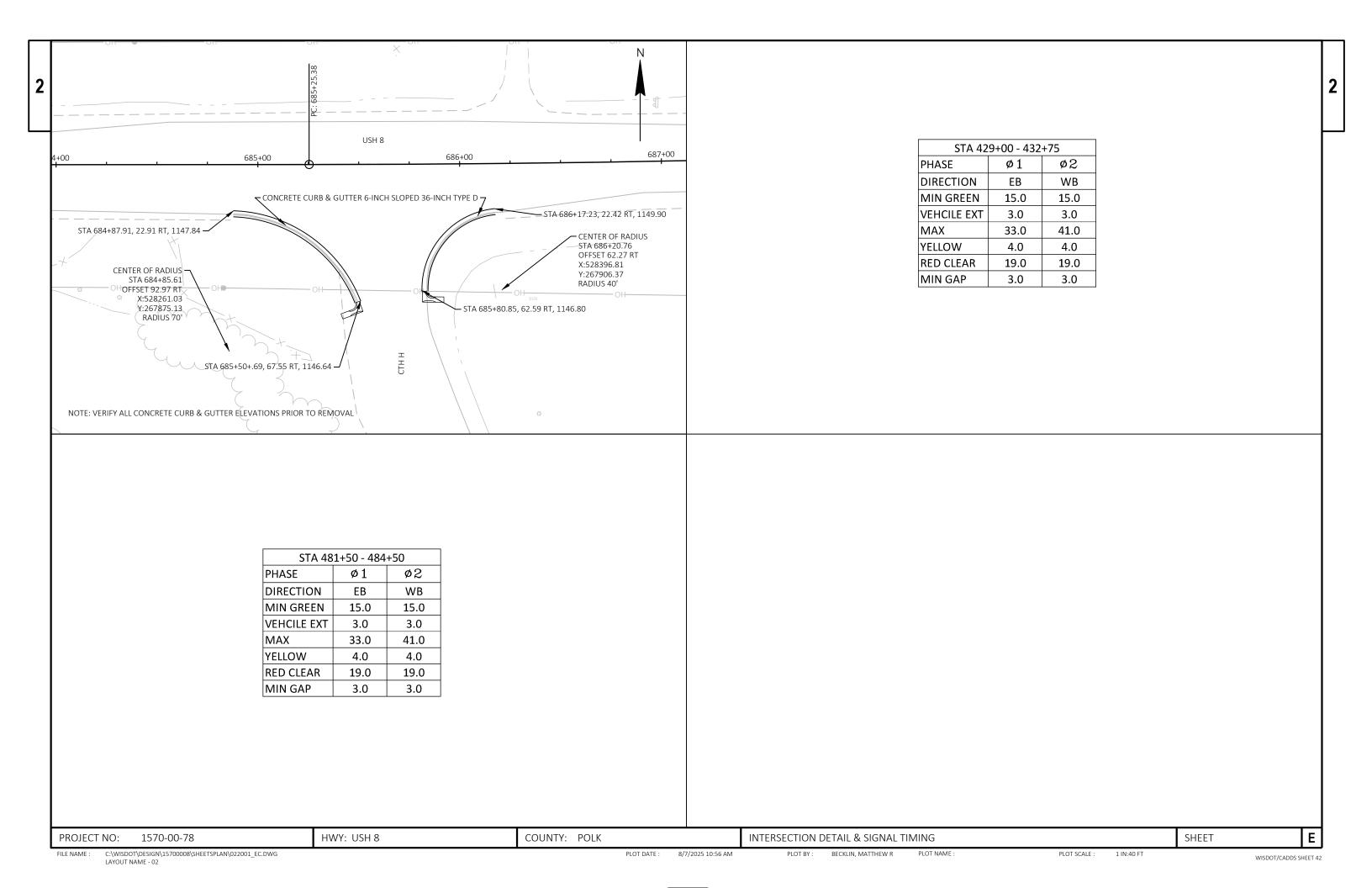
ASPHALTIC CURB DETAIL

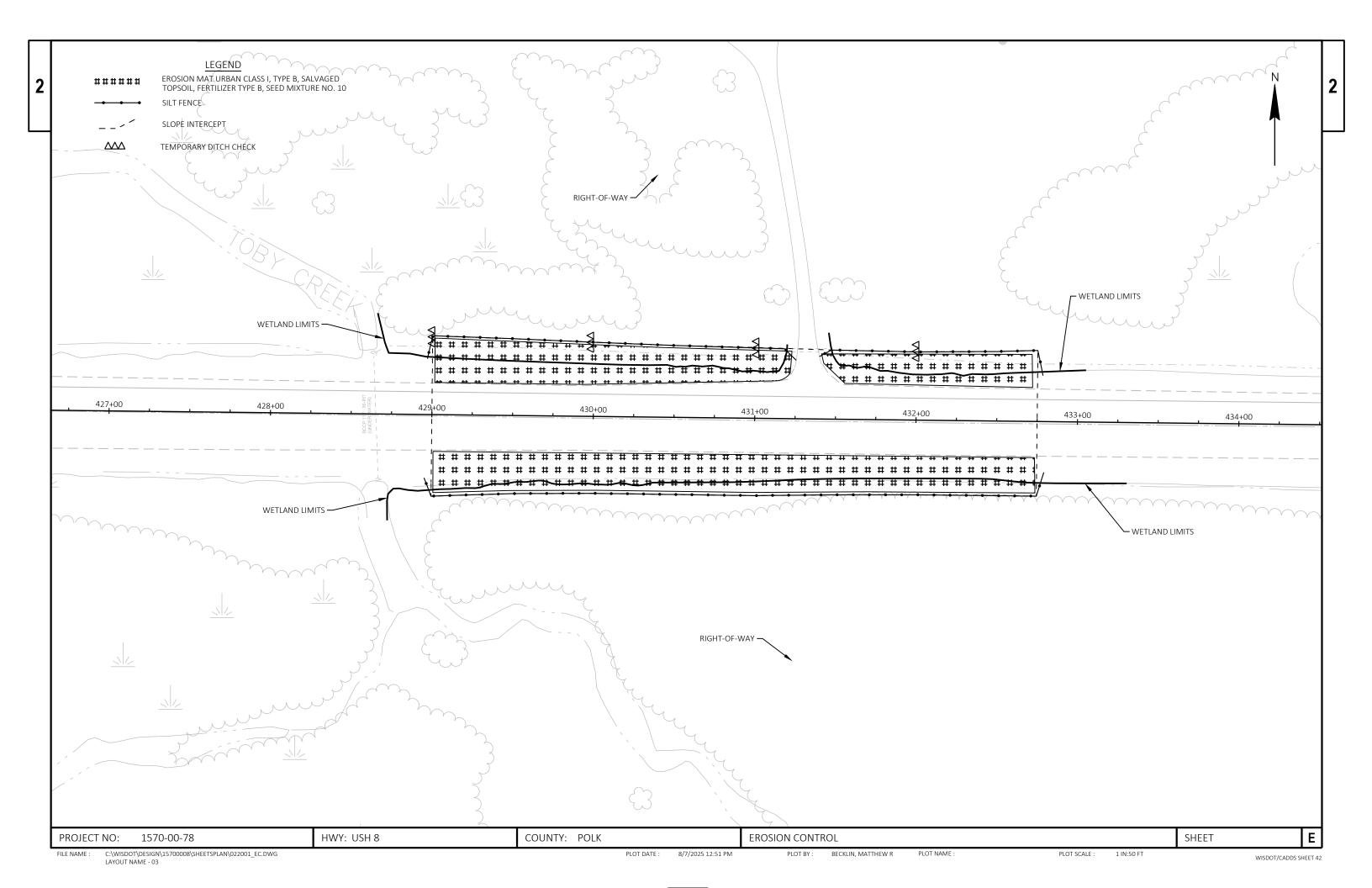
PROJECT NO: 1570-00-78 HWY: USH 8 COUNTY: POLK CONSTRUCTION DETAILS SHEET **E**

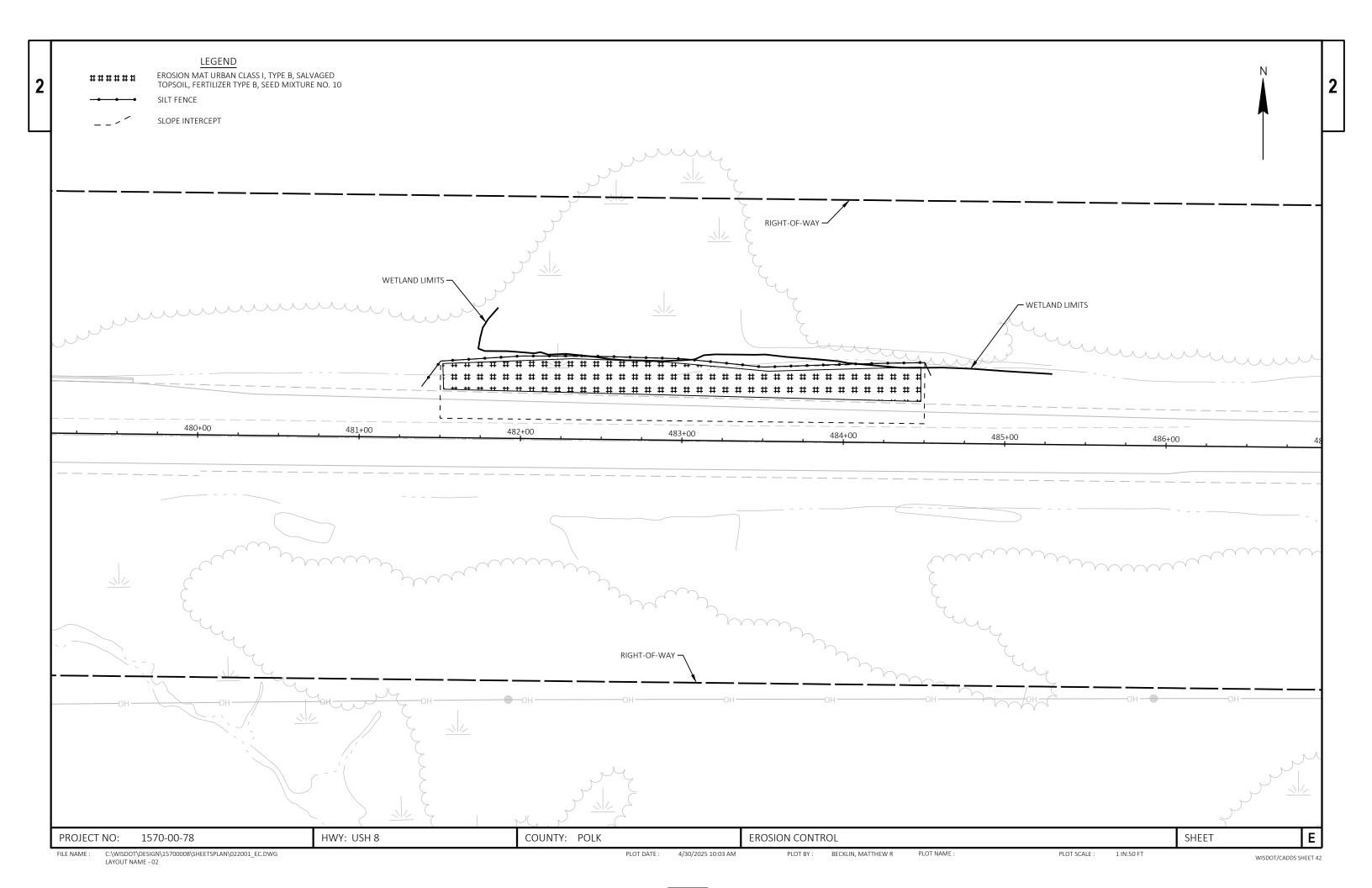
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PLOT DATE : 8/7/2025 11:03 AM PLOT BY : BECKLIN, MATTHEW R PLOT NAME : PLOT SCALE : ########## WISDOT/CADDS SHEET 42

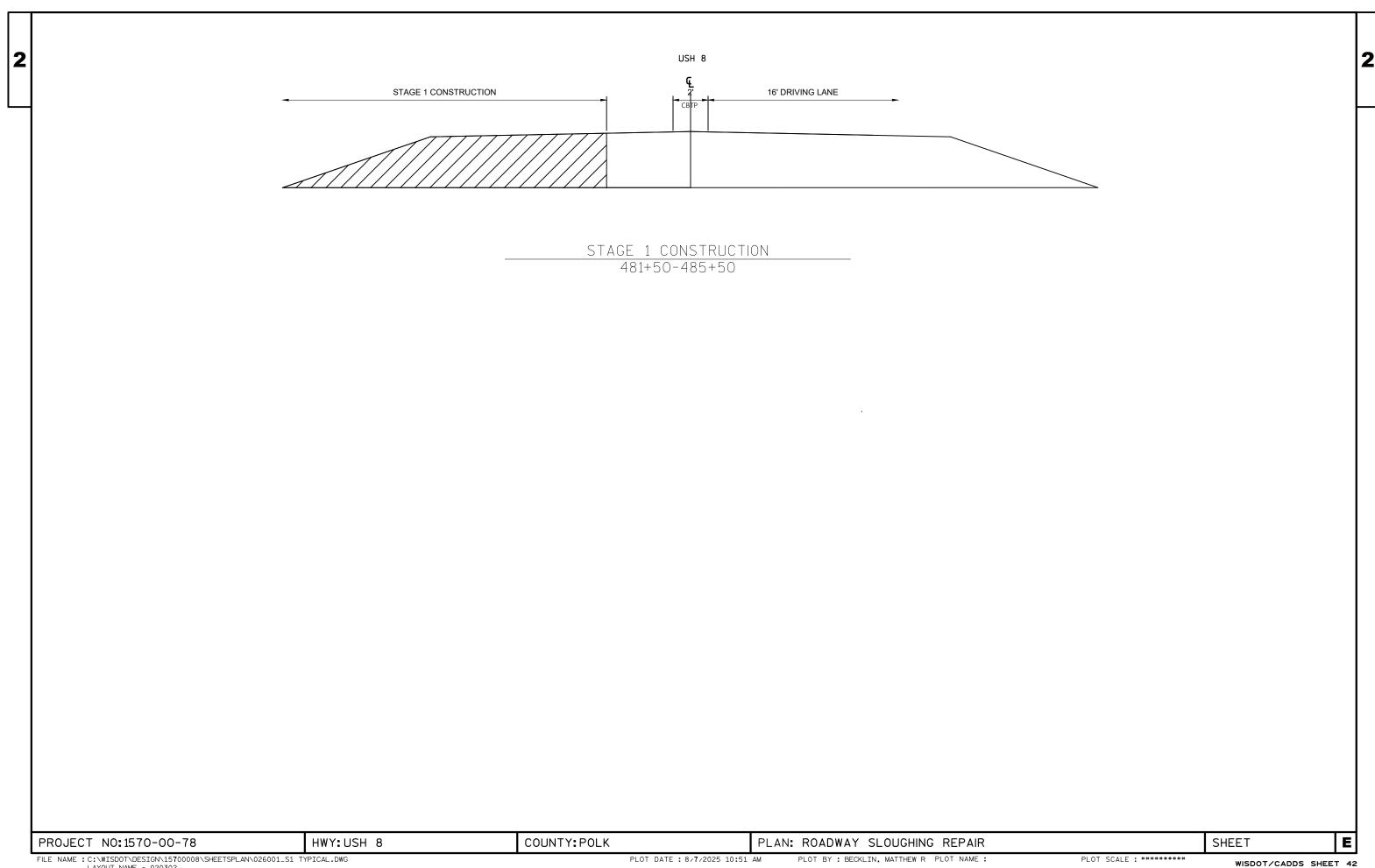


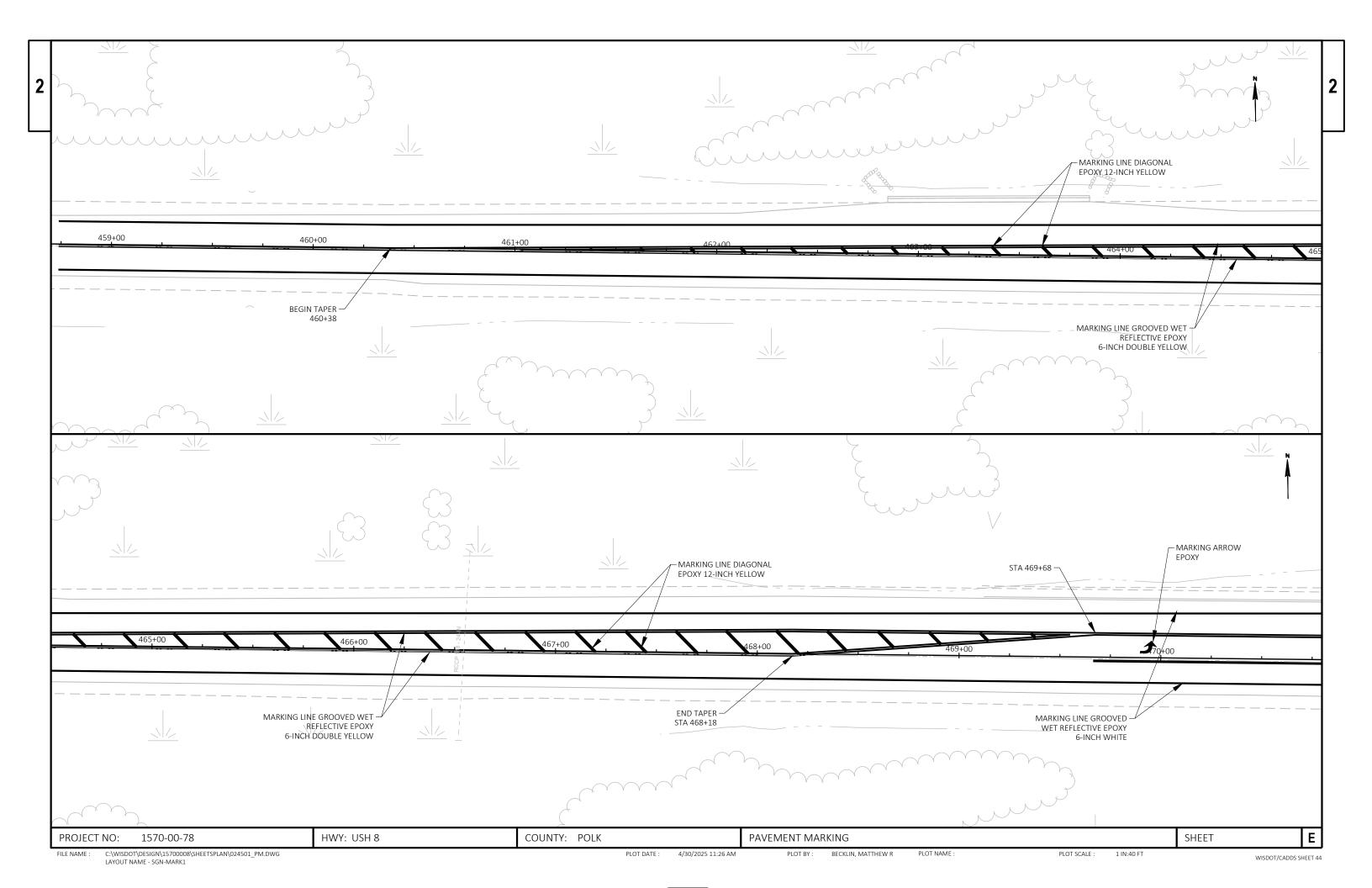


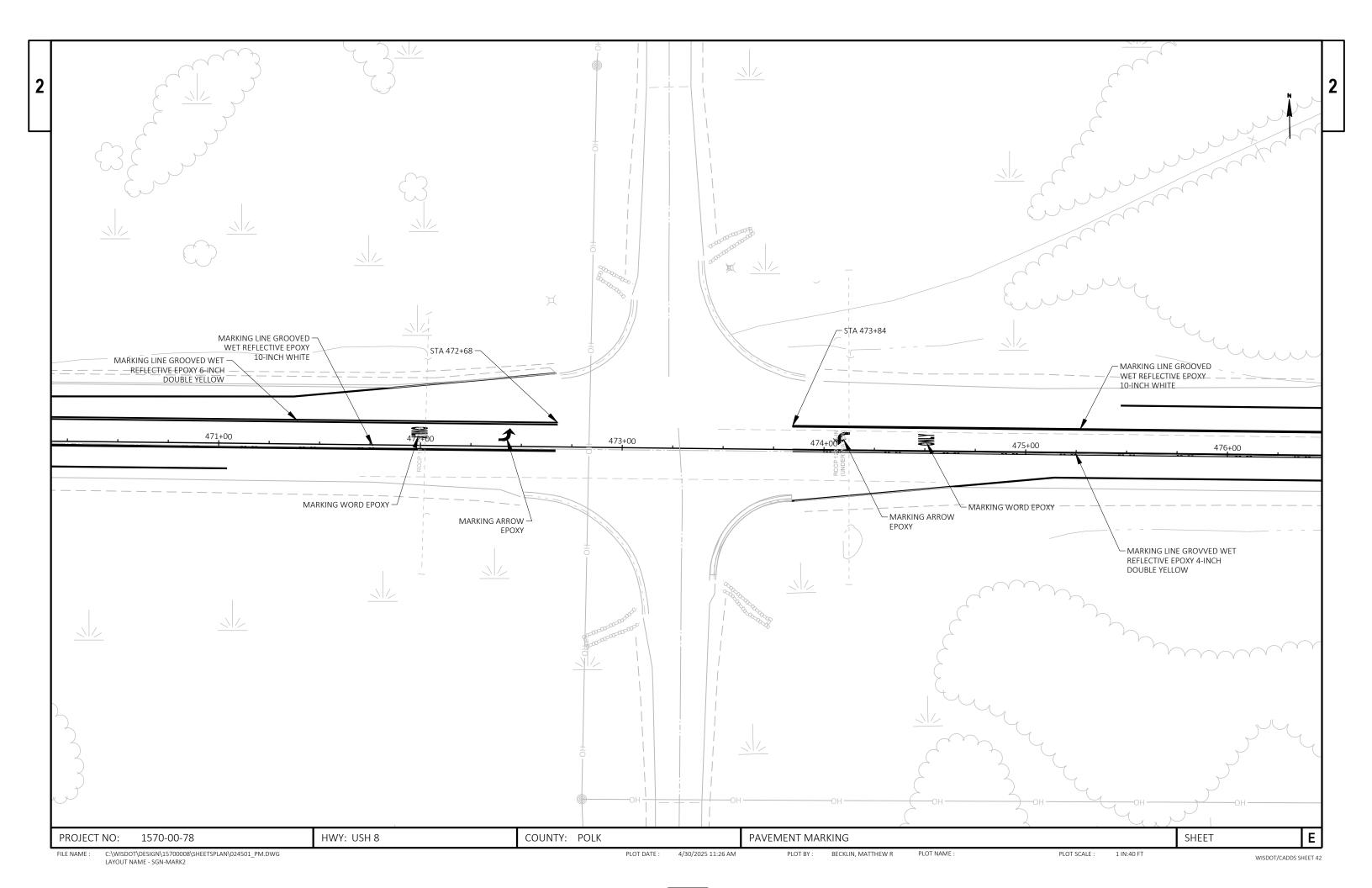


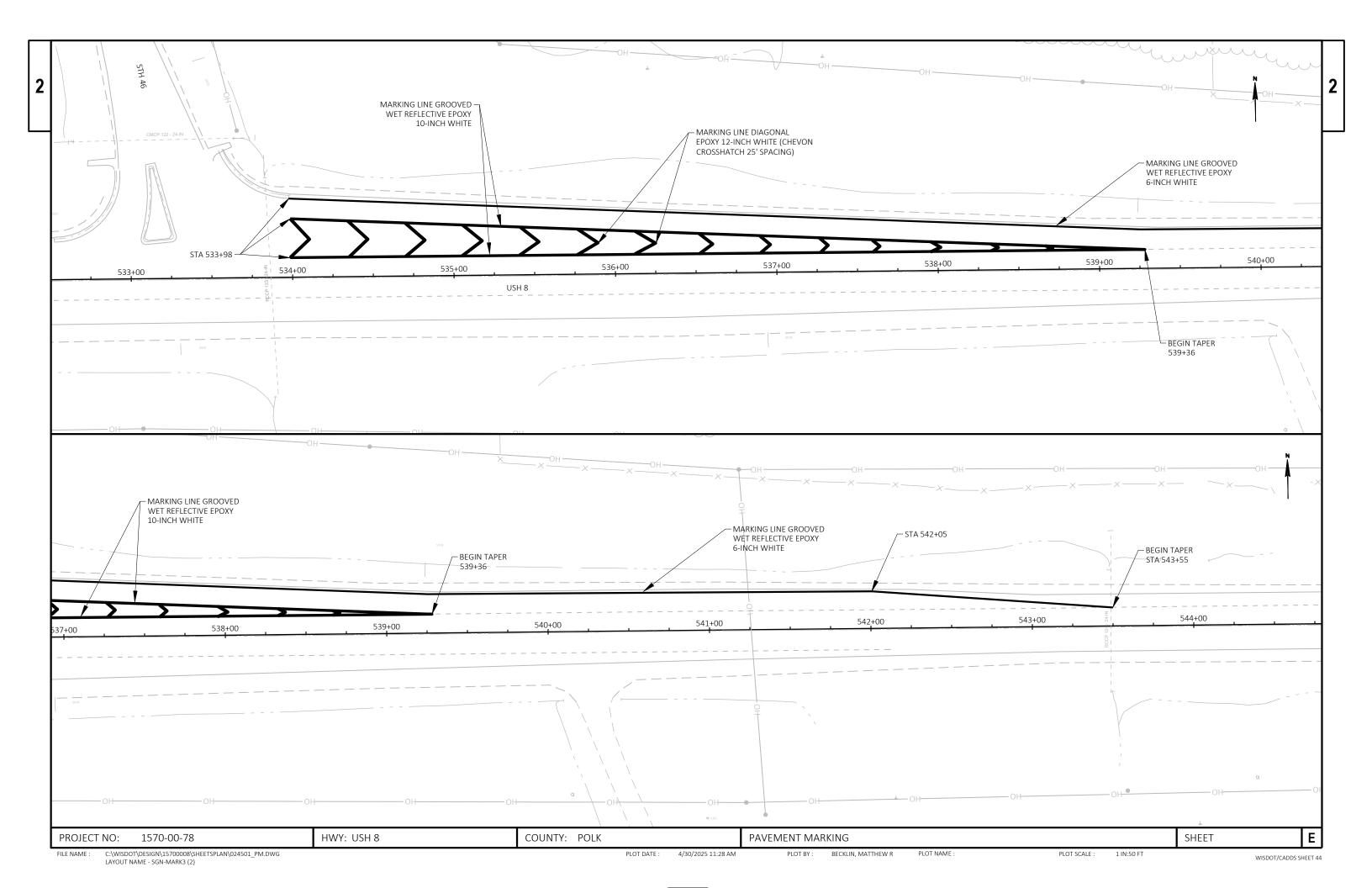


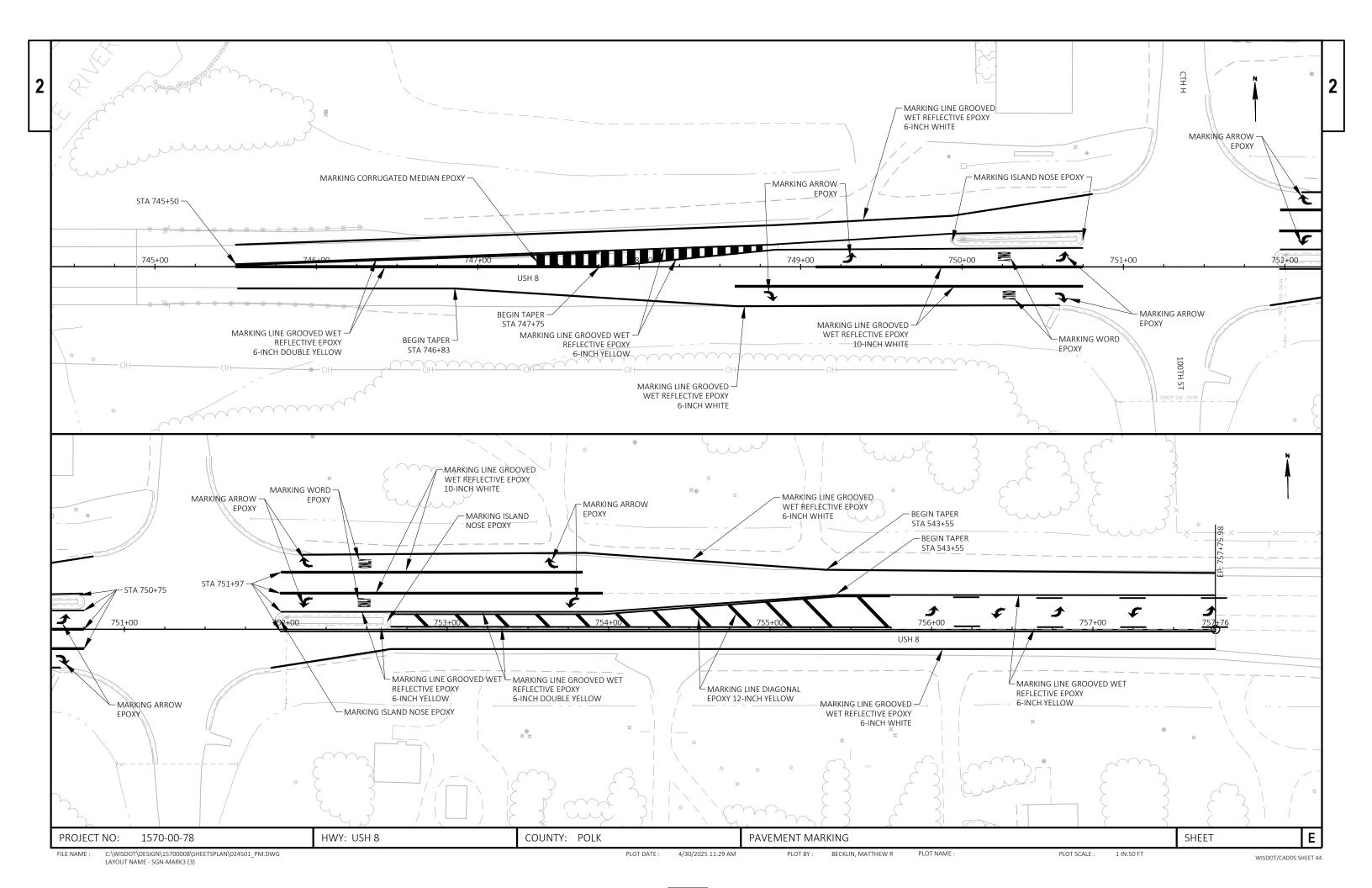
USH 8 16' DRIVING LANE STAGE 1 CONSTRUCTION STAGE 1 CONSTRUCTION STA 429+00-432+75 USH 8 STAGE 2 CONSTRUCTION 16' DRIVING LANE STAGE 2 CONSTRUCTION 429+00-432+75 PROJECT NO:1570-00-78 HWY:USH 8 COUNTY: POLK SHEET PLAN: ROADWAY SLOUGHING REPAIR

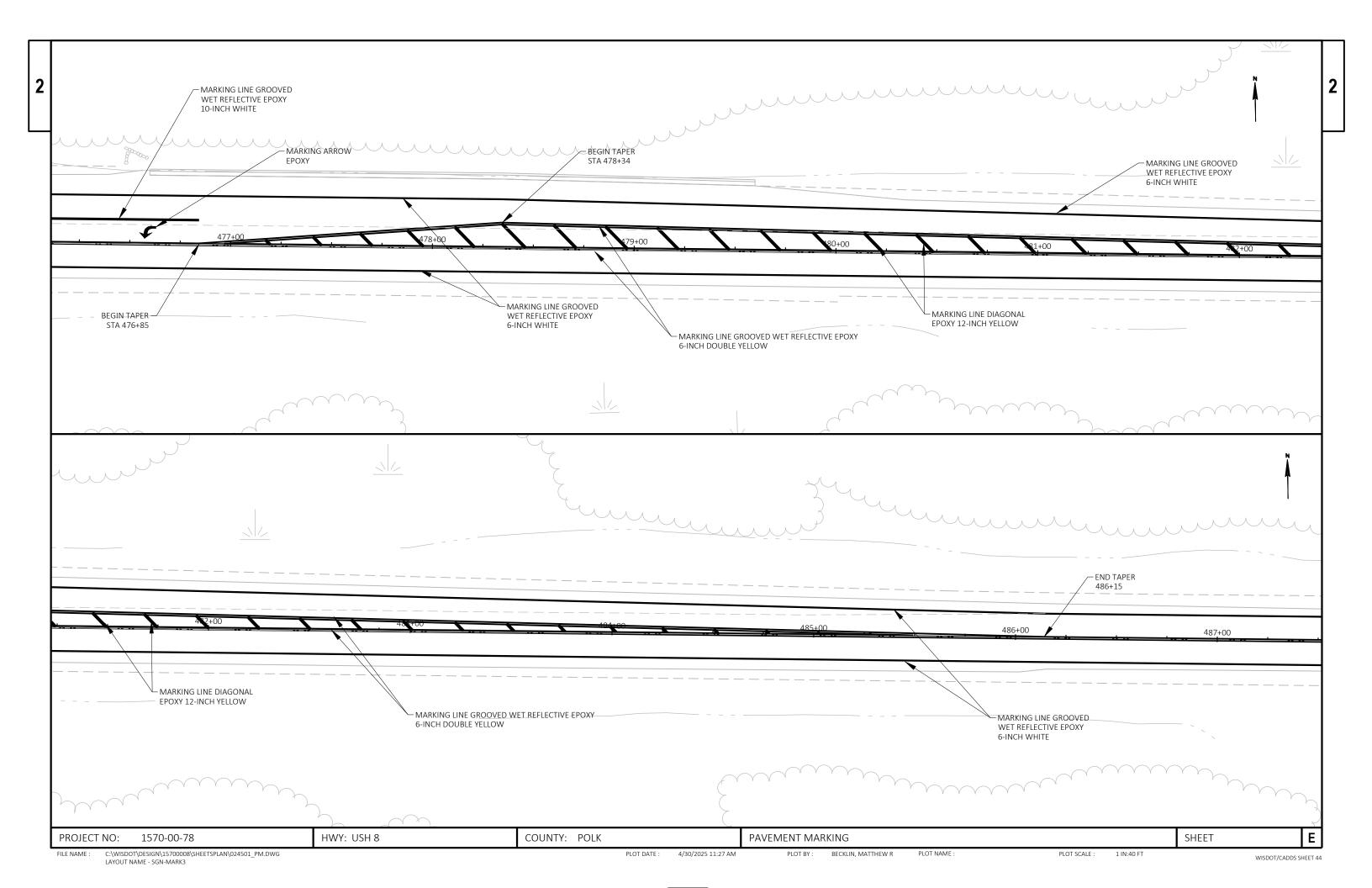












3

0002 201.0105 Clearing STA 2.000 2.000 0004 201.0205 Grubbing STA 2.000 2.000						1570-00-78	
0004 20 10 1000 Schalbring STA 2 000 2 000 0005 20 10 10 Removing Gamete Payerent SY 1 147 000 1 147 000 0007 2 20 10 10 Removing Gamete Payerent SY 2 27 000 2 20 100 0007 2 20 10 10 Removing Appliance Surface Milling SY 2 27 000 2 20 100 0014 2 20 10 10 Removing Appliance Surface Milling SY 2 27 000 2 20 100 0014 2 20 10 10 Removing Gaudetin L 1 1000 1 1000 0015 2 20 10 10 Removing Gaudetin EACH 1 000 1 000 0016 2 20 10 10 Prispan Foundation for Appliance Prispance EACH 1 000 1 000 0017 2 10 10 10 Prispan Foundation for Appliance Prispance EACH 1 000 1 000 0018 2 20 10 10 Prispan Foundation for Appliance Prispance EACH 1 000 1 000 0018 2 20 10 10 Prispan Foundation for Appliance Prispance EACH 1 000 1 000 <th>Line</th> <th>Item</th> <th>Item Description</th> <th>Unit</th> <th>Total</th> <th>Qty</th> <th></th>	Line	Item	Item Description	Unit	Total	Qty	
2000 200.001000 Remaining Former Player Eduktems EAOL 1.000 200.0010 200.0015 Remaining Concess Playerment SY 1.475.000 1.1000 200.0017 200.0015 Remaining Concess Playerment SY 2.075.000 200.000 200.0016 Remaining Concess Playerment SY 2.075.000 200.000 200.0017 About 100 Remaining Concess Playerment SY 2.075.000 200.000 200.0018 About 100 Remaining Concess Playerment SY 2.075.000 200.000 200.002 200.0018 Remaining Concess Playerment SY A.075.000 200.000 200.002 200.0018 Remaining Concess Playerment STA 400.000 200.000 200.002 200.0018 Description For Analysis of State Playerment Concess Playerment Technical Playerment Technica	0002	201.0105	Clearing	STA	2.000	2.000	
2008 (2000 00 20 20 10 10 20 20 10 10 20 20 10 10 20 20 10 10 20 20 10 10 10 20 20 10 10 10 10 10 10 10 10 10 10 10 10 10	0004	201.0205	Grubbing	STA	2.000	2.000	
2010 12 20.40 11 16 Removing Apphalise Surface Bull Joints SY 2.287 2000 2.287 2000 2011 2 20.01 50 Removing Apphalise Surface Bulling SY 2.277 2000 697 000 2011 2 20.01 50 Removing Quarted Surface Management EM 5.000 80.000 2011 2 20.01 50 Removing Quarted scapptan) 01. Culvert Endwalds EM 5.000 97.000 2011 2 20.10 50 Removing Quarted scapptan) 01. Culvert Endwalds EACH 1.000 1.000 2012 2 21.10 60 Pripase Functions for Apphalise Soulders 57A 700.000 760.000 2012 3 21.00 60 Pripase Functions for Apphalise Soulders TON 1.000 760.000 2013 3 30.00 10 Base Aggregate Dense 24-Inch TON 1.700 1.900.000 2013 3 30.00 10 Base Aggregate Dense 34-Inch TON 720.000 720.000 2013 4 30.00 10 Base Aggregate Dense 34-Inch TON 720.000 720.000 2014 5 30.00 10 Base Aggregate Dense 34-Inch </td <td>0006</td> <td>203.0100</td> <td>Removing Small Pipe Culverts</td> <td>EACH</td> <td>1.000</td> <td>1.000</td> <td></td>	0006	203.0100	Removing Small Pipe Culverts	EACH	1.000	1.000	
01012 20.10120 Removing/ Carly Add Catuerr LF 697.000 01016 20.40168 Removing/ Cardy Add Catuerr LF 180.000 190.000 01018 20.90185 Removing Cardy Add Catuerr LF 180.000 190.000 01018 20.90180 Exception of Cardy Card	8000	204.0100	Removing Concrete Pavement	SY	1,417.000	1,417.000	
2011 01 20 20 10 10 20 20 10 10 20 20 10 10 20 20 10 10 20 20 10 10 20 20 10 10 20 20 10 10 20 20 10 10 20 20 10 10 20 20 20 10 10 20 20 20 20 20 20 20 20 20 20 20 20 20	0010	204.0115	Removing Asphaltic Surface Butt Joints	SY	2,287.000	2,287.000	
2001 00 20 2	0012	204.0120	Removing Asphaltic Surface Milling	SY	207,731.000	207,731.000	
2017 10 20 0.00 10 20 0.00 10 10 10 10 10 10 10 10 10 10 10 10 1	0014	204.0150	Removing Curb & Gutter	LF	697.000	697.000	
1920 20, 20, 100 100 Exercation Common CY 2,85,000 2,985,000 2,985,000 2,985,000 1922 211,040 100 Prepair Foundation for Asphaltic Paving (project) 01, 1670-00-78 EACH 1,000 1,000 760,000 760,000 1930 201,000 100 Branch Aggregate Dennes 3,45-lach 1,000 1,988,	0016	204.0165	Removing Guardrail	LF	180.000	180.000	
1000 20 50 10 00 Examinion Common CY 2,855 000 2,855 000 22 11 10 00 Prepare Foundation for Asphallic Paving (project) 01.1570-00-78 EACH 1,000 76,000 102 21 11 00 00 Prepare Foundation for Asphallic Shoulders STA 78,000 76,000 102 30 00 00 00 Base Aggregate Durses 34-Hinch TON 1,000 72,000 103 00 00 00 00 00 00 00 00 00 00 00 00 0	018	204.9060.S	Removing (item description) 01. Culvert Endwalls	EACH	9.000	9.000	
221 10 1010 Piegane Foundation for Asphalke Pawing (project) 01.1570-00-78 EACH 1.000 1.000 21 10 300 Piegane Foundation for Asphalke Pawing (project) 01.1570-00-78 EACH 1.000 1.988.000 28 30 501 Piegane Foundation for Asphalke Pawing (project) 01.1570-00-78 EACH 1.000 1.988.000 30 50 102 Base Aggregate Dense 31 1-4-Inch TON 1.750.000 1.570.000 30 50 103 Base Aggregate Dense 31 1-4-Inch TON 7.200.000 30 50 500 Shaping Shoulders STA 980.000 990.000 30 50 103 Base Aggregate Dense 31-Inch TON 200.000 990.000 30 50 500 Shaping Shoulders STA 980.000 990.000 30 50 500 Shaping Shoulders TON 0.200.000 200.000 30 50 500 Shaping Shoulders Tack Card 30 50 500 Shaping Shoulders TAC Card 40 50 50 Tack Card TAC Card 40 50 50 Tack Card Tack Card 40 50 50 Tack Card Tack Card 40 50 50 Shaping Shoulders EACH 1.000 1.000 40 50 50 Shaping Shoulders				CY	2,985.000	2,985.000	
121 4 1 0 0 0 1 Propose Foundation for Asphalic Shoulders STA 0 0 0 1.000 2 1 3 1 0 0 0 1 Finishing Roadway (project) of 11 1 75 00-78 EACH 1 0.00 1.000 028 0 3 0 5 1 0 10 8 as Aggregate Derses 34 Huch TON 1,870 0.00 1.570 0.00 032 0 3 0 5 1 0 10 8 as Aggregate Derses 34 Huch TON 1,870 0.00 720 0.00 032 0 3 0 5 1 0 10 8 as Aggregate Derses 3 Huch TON 1,870 0.00 296 0.00 036 1 3 10 0 1 10 8 as Aggregate Derses 3 Huch TON 1,850 0.00 296 0.00 036 3 1 0 1 1 10 8 as Aggregate Open-Graded TON 1,850 0.00 1,855 0.00 040 4 55,000 5 8 As Aggregate Open-Graded TON 1,850 0.00 1,855 0.00 040 4 56,000 5 8 Hukh Percent Within Limits [PWL] Test Stip Volumetrics EACH 1.00 1,000 040 4 60,010 5 8 Hukh Percent Within Limits [PWL] Test Stip Volumetrics EACH 1.00 1,000 040 4 60,010 5 8 Hukh Percent Within Limits [PWL] Test Stip Openity EACH 1.00 1,000 040 4 60,010 5 8 Hukh Percent Within Limits [PWL] Test Stip Openity EACH 1.00 1,000 040 4 60,010 5 8 Hukh Percent Within Limits [PWL] Test Stip Openity EACH 1.00 1,000 040 4 60,010 5 8 Hukh Percent Within Limits [PWL] Test Stip Openity EACH 1.00 1,4970.0	022	211.0101	Prepare Foundation for Asphaltic Paving (project) 01. 1570-00-78	EACH	1.000		
235 235,0100 Finishing Roadway (project) of 1577-00-78 EACH 1,000 1,000 305 305,0120 Base Aggregate Dense 31-41-nch TON 1,870,000 1,870,000 305 305,0120 Base Aggregate Dense 31-41-nch TON 720,000 720,000 304 305,0500 Shaping Shoulders STA 966,000 960,000 308 311,0110 Base Aggregate Dense 11-41-nch TON 200,000 200,000 308 312,0110 Base Aggregate Open-Graded TON 1,655,000 455,600 402 480,0105.5 Tak-Cord TAK-Cord AL 254,000 1,000 402 480,0115.5 HAM Porterort Within Limits (PWL) Test Strip Obmetity EACH 1,000 1,000 406 480,0125.5 HAM Powermer Test Strip Density EACH 1,000 1,000 406 480,0125.5 HAM Powermer Test Strip Density EACH 1,000 1,000 406 480,0200 Incentive Density HAM Pawermer Test Strip Density EACH 1,000							
28.2 30.5.0.110 Base Aggregate Dense 34-Inch TON 1,850.000 1,850.000 30.2 30.5.0130 Base Aggregate Dense 31-Inch TON 1,750.000 1,750.000 30.2 30.5.0130 Base Aggregate Dense 31-Inch TON 7,200.00 200.000 30.6 31.0.0110 Base Aggregate Open-Creded TON 1,250.000 1,855.000 30.6 31.0.0110 Slock Control Material TON 1,655.000 1,855.000 40.0.10.5 HAA Parcent Within Limits (PWL) Test Ship Volumetrics EACH 1,000 1,000 404 460.01.5 HAA Parcent Within Limits (PWL) Test Ship Density EACH 1,000 1,000 404 460.01.5 HAA Parcent Within Limits (PWL) Test Ship Density EACH 1,000 1,000 406 460.01.5 HAA Parcent Within Limits (PWL) Test Ship Volumetrics EACH 1,000 1,000 406 460.01.5 HAA Parcent Within Limits (PWL) Test Ship Volumetrics EACH 1,000 1,000 406 460.01.0 HAA Parcent Within Limits (PWL) Test Ship Vo			·				
303 305 0712 Base Aggregate Denses 114-Inch TON 1.570,000 1.750,000 303 305 0700 Base Aggregate Denses 3-Inch TON 2.00,000 200,000 304 305 0500 Shapping Shoulders TA 986,000 200,000 308 310 0110 Base Aggregate Open-Graded TON 1,655,000 265,400,000 402 450,000 5 Tack Coal GA 265,400,000 265,400,000 402 450,010 5 TAMA Percent Within Limits (PWL) Test Strip Volumetrics EACH 1,000 1,000 404 480,011 5 HMA Percent Within Limits (PWL) Test Strip Dunsity EACH 1,000 1,000 404 480,011 5 HMA Percent Test Strip Density EACH 1,000 1,000 404 480,011 5 HMA Percent Test Strip Vollmetrics EACH 1,000 1,000 505 480,000 5 Hall Strip Strip WL HMA Percent DOL 14,870,000 1,470,000 505 480,200 7 Hall Strip Strip WL HMA Percent DOL 14,000 1,46							
332 335.01.01 Rase Aggregate Dense S-Inch TON 720.000 720.000 343 305.01.01 Shaping Shoulders STA 980.00 390.010 338 310.01.01 Select Caushed Material TON 2,000 200.000 450.08.05 Tark Coart GAL 26,540.000 26,540.000 26,540.000 404 480.011.05 HMA Percentl Within Limits (PWL) Test Stirp Volumetrics EACH 1,000 1,000 404 480.011.05 HMA Percentl Within Limits (PWL) Test Stirp Volumetrics EACH 1,000 1,000 404 480.011.05 HMA Percentl Within Limits (PWL) Test Stirp Volumetrics EACH 1,000 1,000 406 480.011.05 HMA Percentl Within Limits (PWL) Test Stirp Volumetrics EACH 1,000 1,000 505 480.2001 Incentive Density HMA Percentl Test Stirp Volumetrics EACH 1,000 1,000 505 480.2001 Incentive Density HMA Percentl Test Stirp Volumetrics EACH 1,000 1,410,000 506 480.2001 Incentive Air S							
334 30.5.050 Shapping Shoulders STA 960.00 980.00 33 310.011 Saez Agregate Open-Graded TON 200.00 20.000 038 312.0110 Saez Agregate Open-Graded TON 1.655.000 1.655.000 042 480.0105.5 Tack Coath GAL 25.000 28.540.000 044 480.0115.5 MAN Percent Within Limits (PWL) Test Strip Volumetrics EACH 1.000 1.000 046 480.0115.5 MAN Percent Within Limits (PWL) Test Strip Density EACH 1.000 1.000 046 480.0105.5 MAN Percent Test Strip Density EACH 1.000 1.000 050 480.2001 Incentive Density PML MAN Pervenent DOL 14,470.000 1.000 050 480.2007 Incentive Density PML MAN Pervenent Longitudinal Joints DOL 44,800.000 48,600.00 054 480.2007 Incentive Density PML MAN Pervenent Longitudinal Joints DOL 44,800.00 48,600.00 058 480.2007 Incentive Aurity Voids HMA Pervenent Longitudinal Joints <td></td> <td></td> <td>= = =</td> <td></td> <td></td> <td></td> <td></td>			= = =				
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603.8125 Concrete Barrier Temporary Precast Installed LF 2,150.000 2,150.000	098	603.8125	Concrete Barrier Temporary Precast Installed	LF	2,150.000	2,150.000	

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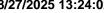
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Line	Item	Item Description	Unit	Total	Qty	
0100	603.8500	Anchoring Concrete Barrier Temporary Precast	LF	800.000	800.000	
0102	606.0300	Riprap Heavy	CY	25.000	25.000	
0104	612.0106	Pipe Underdrain 6-Inch	LF	300.000	300.000	
0106	612.0206	Pipe Underdrain Unperforated 6-Inch	LF	15.000	15.000	
0108	612.0806	Apron Endwalls for Underdrain Reinforced Concrete 6-Inch	EACH	1.000	1.000	
0110	614.0400	Adjusting Steel Plate Beam Guard	LF	425.000	425.000	
0112	618.0100	Maintenance and Repair of Haul Roads (project) 01. 1570-00-78	EACH	1.000	1.000	
0114	619.1000	Mobilization	EACH	1.000	1.000	
0116	624.0100	Water	MGAL	24.000	24.000	
0118	625.0500	Salvaged Topsoil	SY	3,880.000	3,880.000	
0120	628.1504	Silt Fence	LF	1,400.000	1,400.000	
0122	628.1520	Silt Fence Maintenance	LF	1,400.000	1,400.000	
0124	628.1905	Mobilizations Erosion Control	EACH	4.000	4.000	
0126	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000	
0128	628.2004	Erosion Mat Class I Type B	SY	934.000	934.000	
0130	628.2008	Erosion Mat Urban Class I Type B	SY	3,512.000	3,512.000	
0132	628.7504	Temporary Ditch Checks	LF	40.000	40.000	
0134	628.7555	Culvert Pipe Checks	EACH	25.000	25.000	
0136	629.0210	Fertilizer Type B	CWT	5.000	5.000	
0138	630.0110	Seeding Mixture No. 10	LB	94.000	94.000	
0140	630.0500	Seed Water	MGAL	323.000	323.000	
0142	633.5200	Markers Culvert End	EACH	57.000	57.000	
0144	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	2.000	2.000	
0146	637.2230	Signs Type II Reflective F	SF	18.000	18.000	
0148	642.5001	Field Office Type B	EACH	1.000	1.000	
0150	643.0300	Traffic Control Drums	DAY	6,700.000	6,700.000	
0152	643.0420	Traffic Control Barricades Type III	DAY	288.000	288.000	
0154	643.0705	Traffic Control Warning Lights Type A	DAY	500.000	500.000	
0156	643.0715	Traffic Control Warning Lights Type C	DAY	820.000	820.000	
0158		Connected Arrow Board	DAY	50.000	50.000	
0160	643.0900	Traffic Control Signs	DAY	6,340.000	6,340.000	
0162	643.3165	Temporary Marking Line Paint 6-Inch	LF	231,587.000	231,587.000	
0164	643.3805	Temporary Marking Stop Line Paint 18-Inch	LF	60.000	60.000	
0166	643.5000	Traffic Control	EACH	1.000	1.000	
0168	645.0112	Geotextile Type DF Schedule B	SY SY	360.000 50.000	360.000	
0170 0172	645.0120	Geotextile Type HR Geotextile Type SR		3,690.000	50.000	
		Marking Line Grooved Wet Ref Epoxy 6-Inch	SY		3,690.000	
0174 0176	646.2040 646.4040	Marking Line Grooved Wet Ref Epoxy 6-inch	LF LF	176,906.000 3,205.000	176,906.000 3,205.000	
0178	646.5020	Marking Arrow Epoxy Marking Arrow Epoxy	EACH	17.000	17.000	
0178	646.5120	Marking Word Epoxy	EACH	6.000	6.000	
0180	646.6120	Marking Stop Line Epoxy 18-Inch	LF	92.000	92.000	
0184	646.7120	Marking Diagonal Epoxy 12-Inch	LF	1,172.000	1,172.000	
0186	646.8020	Marking Corrugated Median Epoxy	SF	967.000	967.000	
0188	646.8120	Marking Curb Epoxy Marking Curb Epoxy	LF	110.000	110.000	
0190	646.8220	Marking Curb Epoxy Marking Island Nose Epoxy	EACH	4.000	4.000	
0190	646.9000	Marking Removal Line 4-Inch	LF	5,100.000	5,100.000	
0192	646.9200	Marking Removal Line Wide	LF	120.000	120.000	
0194	650.4500	Construction Staking Subgrade	LF	675.000	675.000	
0190	030.4300	Construction Staking Subgrade	LI	075.000	075.000	

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Page **Estimate Of Quantities**

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Line	Item	Item Description	Unit	Total	Qty
0198	650.5000	Construction Staking Base	LF	2,025.000	2,025.000
0200	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	697.000	697.000
0202	650.6000	Construction Staking Pipe Culverts	EACH	1.000	1.000
0204	650.8000	Construction Staking Resurfacing Reference	LF	49,670.000	49,670.000
0206	650.9911	Construction Staking Supplemental Control (project) 01. 1570-00-78	EACH	1.000	1.000
0208	650.9920	Construction Staking Slope Stakes	LF	675.000	675.000
0210	661.0101	Temporary Traffic Signals for Bridges (structure) 01. Roadway Sloughing	EACH	2.000	2.000
0212	690.0150	Sawing Asphalt	LF	1,035.000	1,035.000
0214	690.0250	Sawing Concrete	LF	495.000	495.000
0216	740.0440	Incentive IRI Ride	DOL	42,240.000	42,240.000
0218	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	2,400.000	2,400.000
0220	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	2,000.000	2,000.000
0222	SPV.0060	Special 01. Ditch Cleaning	EACH	1.000	1.000
0224	SPV.0060	Special 02. Abandon Cattle Pass	EACH	1.000	1.000
0226	SPV.0090	Special 01. UV GRP CIPP 24-Inch	LF	602.000	602.000



3

CLEARING & GRUBBING

201.0105 201.0205 CLEARING GRUBBING STATION TO STATION CATEGORY LOCATION STA STA REMARKS 0010 357+16 - 357+16 LT REMOVE PINE TREE LT 0010 431+00 432+00 TOTAL 0010

> 204.0120 REMOVING ASPHALTIC

SURFACE MILLING

					SUNFACE WILLING	1
CATEGORY	STATION	TO	STATION	LOCATION	SY	REMARKS
0010	260+93	-	366+41	MAINLINE	40,645	
0010	366+41	-	369+95	INTERSECTION 170TH ST/DEER LAKE CIR	2,301	
0010	369+95	-	418+43	MAINLINE	23,192	
0010	418+43	-	424+96	INTERSECTION 160TH ST	4,353	
0010	424+96	-	471+74	MAINLINE	17,182	
0010	471+74	-	474+77	INTERSECTION 150TH ST	2,462	
0010	474+77	-	498+05	MAINLINE	9,684	
0010	498+04	-	498+42	BALSAM BRANCH RIVER BRIDGE		
0010	498+42	-	531+82	MAINLINE	15,259	
0010	531+82	-	539+37	INTERSECTION STH 46	5,496	
0010	539+37	-	630+55	MAINLINE	37,138	
0010	630+55	-	633+38	INTERSECTION 120TH ST	1,664	
0010	633+38	-	683+86	MAINLINE	16,933	
0010	683+86	-	688+05	INTERSECTION CTH H	2,135	
0010	688+05	-	697+89	MAINLINE	3,248	
0010	697+89	-	700+36	INTERSECTION 110TH ST	1,082	
0010	700+36	-	736+60	MAINLINE	13,537	
0010	736+60	-	738+02	INTERSECTION 101ST ST	771	
0010	738+02	-	742+97	MAINLINE	2,173	
0010	743+08	-	744+89	APPLE RIVER BRIDGE		
0010	744+89	-	757+76	MAINLINE	8,476	3.25" MILL DEPTH
				TOTAL 0010	207,731	

204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS

CATEGORY	STATION TO	STATION	LOCATION	SY	REMARKS
0010	260+93 -	261+43	MAINLINE	326	BEGIN PROJECT
0010	287+81 -	287+81	LT	33	186TH ST
0010	306+45 -	306+45	LT	34	182ND ST
0010	321+94 -	321+94	LT	36	PINEWOOD RD
0010	341+17 -	341+17	LT	38	176TH ST
0010	367+86 -	367+86	LT	35	133RD AVE
0010	368+23 -	368+23	RT	30	170TH ST
0010	395+48 -	395+48	LT	28	165TH ST
0010	421+88 -	421+88	LT	31	160TH ST
0010	422+08 -	422+08	RT	37	STH 65
0010	473+22 -	473+22	LT	33	150TH ST N
0010	473+29 -	473+29	RT	33	150TH ST S
0010	497+54 -	498+04	MAINLINE	220	B-48-0030
0010	498+41 -	498+91	MAINLINE	220	B-48-0030
0010	533+02 -	533+02	STH 46 RT TURN LANE	19	STH 46
0010	533+31 -	533+31	STH 46 LT TURN LANE/STH 46 NB	44	STH 46
0010	563+19 -	563+19	RT	33	133RD AVE
0010	631+69 -	631+69	RT	34	120TH ST S
0010	631+76 -	631+76	LT	30	120TH ST N
0010	659+31 -	659+31	LT	34	114TH ST
0010	685+66 -	685+66	RT	42	CTH H
0010	698+86 -	698+86	LT	31	110TH ST
0010	737+46 -	737+46	LT	31	101ST ST
0010	742+47 -	742+97	MAINLINE	220	B-48-0012
0010	751+34 -	751+34	RT	32	100TH ST
0010	751+37 -	751+37	LT	33	CTH H
0010			PROJECT WIDE	570	20 DRIVEWAYS
			TOTAL 0010	2,287	

PROJECT NO: 1570-00-78 HWY: USH 8 COUNTY: POLK MISCELLANEOUS QUANTITIES SHEET: **E**

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DENSE 3/4-INCH DENSE 1 1/4-INCH SHOULDERS STATION TO STATION LOCATION CATEGORY TON TON

REMARKS PROJECT WIDE 1,500 0010 260+93 - 757+76 996 UNDISTRIBUTED 0010 - 345+64 CULVERT CROSSING 9 130 CULVERT REPLACEMENT 345+64 100 0010 PROJECT WIDE 300 75 DRIVEWAYS, CURB & GUTTER 1,809 TOTAL 0010 230

305.0110

BASE AGGREGATE

305.0120

BASE AGGREGATE

305.0500

SHAPING

465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES

CATEGORY LOCATION REMARKS TON 0010 PROJECT WIDE 20 DRIVEWAYS TOTAL 0010

460.0105.S 460.0110.S 460.0115.S 460.0120.S HMA PERCENT HMA PERCENT HMA HMA PAVEMENT WITHIN LIMITS WITHIN LIMITS PAVEMENT (PWL) TEST STRIP (PWL) TEST STRIP TEST STRIP TEST STRIP VOLUMETRICS VOLUMETRICS DENSITY DENSITY STATION TO STATION LOCATION EACH REMARKS CATEGORY EACH EACH EACH 260+93 - 757+76 PROJECT WIDE 1 1 HMA PAVEMENT 5 MT 58-34 V 0010 - 757+76 PROJECT WIDE HMA PAVEMENT 4 SMA 58-34 V 0010 260+93 TOTAL 0010

> 455.0605 460.6645 460.8644 465.0105 465.0560 HMA HMA **ASPHALTIC** PAVEMENT 4 ASPHALTIC RUMBLE STRIPS, PAVEMENT 5 TACK COAT MT 58-34 V SMA 58-34 V SURFACE CENTERLINE STATION TO STATION CATEGORY LOCATION GAL TON REMARKS TON TON LF 0010 260+93 - 366+41 4,918 2868 5162 8,522 MAINLINE 0010 345+64 - 345+64 CULVERT CROSSING 75 43 CULVERT REPLACEMENT 0010 366+41 - 369+95 INTERSECTION 170TH ST/DEER LAKE CIR 282 295 2,788 369+95 - 418+43 4,190 0010 MAINLINE 1626 2926 532 558 0010 418+43 - 424+96 INTERSECTION 160TH ST 2,062 0010 424+96 - 471+74 1203 4,320 MAINLINE 2165 0010 471+74 - 474+77 INTERSECTION 150TH ST 304 319 474+77 - 498+05 1,164 2,255 0010 MAINLINE 678 1221 BALSAM BRANCH RIVER BRIDGE 0010 498+04 - 498+42 0010 1,832 1923 498+42 - 531+82 MAINLINE 1069 3,215 0010 INTERSECTION STH 46 668 531+82 - 539+37 390 701 0010 539+37 - 630+55 MAINLINE 4,468 2606 4691 9,098 0010 630+55 - 633+38 INTERSECTION 120TH ST 208 218 0010 633+38 - 683+86 MAINLINE 2,032 1186 2134 4,972 0010 683+86 - 688+05 INTERSECTION CTH H 262 275 0010 688+05 - 697+89 MAINLINE 390 228 410 938 0010 697+89 - 700+36 INTERSECTION 110TH ST 134 141 0010 700+36 - 736+60 MAINLINE 1,626 948 1706 3,460 0010 736+60 - 738+02 INTERSECTION 101ST ST 98 102 262 0010 738+02 - 742+97 MAINLINE 153 274 333 0010 743+08 - 744+89 APPLE RIVER BRIDGE 0010 744+89 - 757+76 MAINLINE 1,026 598 1077 0010 PROJECT WIDE LEVELING, WEDGING, C&G 260+93 - 757+76 TOTAL 0010 25,131 15,461 24,390

PROJECT NO: 1570-00-78 COUNTY: POLK HWY: USH 8 MISCELLANEOUS QUANTITIES SHEET: Ε

THE FOLLOWING ACCEPTANCE C	RITERIA ARE APPLI	CABLE FOR THIS PROJECT:						
							QUALITY MANAGEMENT PR	ROGRAM TO BE USED FOR:
LOCATION	STATION	MIXTURE USE	UNDERLYING SURFACE	BID ITEM	TON	THICKNESS	MIXTURE ACCEPTANCE	DENSITY ACCEPTANCE
DRIVING LANES & PASSING							INCENTIVE AIR VOIDS HMA	INCENTIVE DENSITY HMA
LANE	260+93 - 757+76	UPPER LAYER	5 MT 58-34 V	4 SMA 58-34 V	18,707	2.25"	PAVEMENT 460.2010	PAVEMENT 460.2000
DRIVING LANES & PASSING							INCENTIVE AIR VOIDS HMA	ORDINARY COMPACTION
LANE	260+93 - 757+76	LOWER LAYER	MILLED EXISTING HMA SURFACE	5 MT 58-34 V	10,393	1.25"	PAVEMENT 460.2010	(SS 450.3.2.6.2)
								DEPARTMENT ACCEPTANCE
SHOULDER, MEDIAN, AND TURN							INCENTIVE AIR VOIDS HMA	(SS 460.3.3.2) *NOT
LANES	260+93 - 757+76	UPPER LAYER	5 MT 58-34 V	4 SMA 58-34 V	7,761	2.25"	PAVEMENT 460.2010	ELIGIBLE FOR INCENTIVE)
SHOULDER, MEDIAN,			MILLED EXISTING HMA SURFACE/				INCENTIVE AIR VOIDS HMA	ORDINARY COMPACTION
SIDEROADS AND TURN LANES	260+93 - 757+76	LOWER LAYER	BASE AGGREGATE	5 MT 58-34 V	6,902	VARIES	PAVEMENT 460.2010	(SS 450.3.2.6.2)
								ORDINARY COMPACTION
HMA PAVING FOUNDATION	VARIOUS	LEVELING AND WEDGING	VARIES	ASPHALTIC SURFACE	400	VARIES	QMP (SS 460.2.8)	(SS 450.3.2.6.2)
				ASPHALTIC SURFACE				
				DRIVEWAYS AND			QMP AS PER STANDARD	ORDINARY COMPACTION
PAVED DRIVEWAYS	VARIOUS	SINGLE LAYER	MILLED EXISTING HMA SURFACE	FIELD ENTRANCES	120	VARIES	SPECIFICATIONS 465	(SS 450.3.2.6.2)
							QMP AS PER STANDARD	ORDINARY COMPACTION
PATCHING FOR REMOVALS	VARIOUS	REMOVALS	BASE AGGREGATE	ASPHALTIC SURFACE	43	VARIES	SPECIFICATIONS 465	(SS 450.3.2.6.2)

PROJECT NO: HWY: COUNTY: MISCELLANEOUS QUANTITIES SHEET: **E**

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						*	*	*		
					211.0400 PREPARE FOUNDATION FOR ASPHALTIC	455.0605	460.6645 HMA PAVEMENT 5	460.8644 HMA PAVEMENT 4	465.0520 ASPHALTIC RUMBLE STRIPS,	
					SHOULDERS	TACK COAT	MT 58-34 V	SMA 58-34 V	SHOULDER	
CATEGORY	STATION	TO	STATION	LOCATION	STA	GAL	TON	TON	LF	
0020	260+93	-	366+41	MAINLINE	150	207	240	384	21,096	
0020	369+95	-	418+43	MAINLINE	68	101	119	190	9,696	
0020	424+96	-	471+74	MAINLINE	74	106	125	199	9,356	
0020	474+77	-	498+05	MAINLINE	19	33	40	63	4,656	
0020	498+42	-	531+82	MAINLINE	65	95	112	178	6,680	
0020	539+37	-	630+55	MAINLINE	184	254	297	475	18,236	
0020	633+38	-	683+86	MAINLINE	113	159	188	300	10,096	
0020	688+05	-	697+89	MAINLINE	18	33	39	62	1,968	
0020	700+36	-	736+60	MAINLINE	49	74	88	139	7,248	
0020	738+02	-	742+97	MAINLINE	3	14	17	27	990	
0020	745+09	-	757+76	MAINLINE	18	33	39	62	2,534	
				TOTAL 0020	760	1,109	1,304	2,078	92,556	

CURB & GUTTER

						*			*	
					204.0150	205.0100	465.0315	601.0557	690.0150	
					REMOVING			CONCRETE CURB &		
					CURB &	EXCAVATION	ASPHALTIC	GUTTER 6-INCH SLOPED		
					GUTTER	COMMON	FLUMES	36-INCH TYPE D	SAWING ASPHALT	
CATEGORY	STATION	TO	STATION	LOCATION	LF	CY	SY	LF	LF	REMARKS
0010	367+55	-	368+71	RT	136	13	20	136	140	170TH ST. (SOUTH CORNERS)
0010	421+33	-	422+59	RT	135	13	20	135	140	160TH ST. SOUTH CORNERS/STH 65
0010	421+35	-	422+57	LT	146	15	20	146	150	160TH ST. NORTH CORNERS
0010	431+23	-	632+42	LT	145	15	20	145	150	120TH ST. NORTH CORNERS
0010	684+87	-	686+17	RT	135	13	20	135	140	110TH ST. S/CTH H
				TOTAL 0010	697	69	100	697	720	

HWY: USH 8 COUNTY: POLK SHEET: Е PROJECT NO: 1570-00-78 MISCELLANEOUS QUANTITIES

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				203.0100 REMOVING SMALL PIPE	204.9060.S.01 REMOVING (ITEM DESCRIPTION) (01. CULVERT	520.1024 APRON ENDWALLS FOR CULVERT	520.8000 CONCRETE COLLARS	520.8700 CLEANING CULVERT	522.0124 CULVERT PIPE REINFORCED CONCRETE CLASS III 24-	522.0130 CULVERT PIPE REINFORCED CONCRETE CLASS III 30-	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-	522.1030 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 30-	524.0130 CULVERT PIPE SALVAGED 30-	SPV.0060.01 SPECIAL (01. DITCH	SPV.0060.02 SPECIAL (02. ABANDON	SPV.0090.01 SPECIAL (01. UV GRP CIPP	
				CULVERTS	ENDWALLS)	PIPE 24-INCH	FOR PIPE	PIPES	INCH	INCH	INCH	INCH	INCH	CLEANING)	CATTLE PASS)	24-INCH)	
CATEGORY	STATION	EXISTING PIPE SIZE	LOCATION	EACH	EACH	EACH	EACH	EACH	LF	LF	EACH	EACH	LF	EACH	EACH	LF	REMARKS
0010	207.52	2.4 \vcol						4						4			10 WIDE 11 DEED DITCH
0010	287+52	24"X60'	ML		4			1			4			1			10' WIDE, 1' DEEP DITCH
0010	297+25	24"X70"	RT		1			1			1						
0010	300+81	30"X68'	ML					1									
0010	327+00	24"X118'	ML	4				1	E 4		2						DEDI A CE DIDE
0010	345+64	24"X54' 24"X58'	ML	1				1	54								REPLACE PIPE
0010	354+70	24 X58 24"X74'	ML				1	1	4		1					7.4	EVIEND DIDE DICHT
0010	370+52		RT				1		4		1					74	EXTEND PIPE RIGHT
0010	382+31	24"X122'	ML													122	
0010	533+68	24"X136'	ML					4								136	
0010	543+45	24"X80"	ML		1	4		1								0.4	
0010	556+17	24"X94"	LT		1	1										94	
0010	571+66	24"X106'	LT		1	1		4								106	
0010	583+02	36"X148'	ML			4		1								70	EVERNO DIDE DIGUE ADDOMILEET
0010	592+13	24"X70"	LT & RT		2	1	1	4	8		1					70	EXTEND PIPE RIGHT, APRON LEFT
0010	621+13	24"X56'	ML					1									
0010	630+12	24"X52'	ML		2		2	1		16		2	1.6				
0010	681+15	30"X78'	LT & RT		2		2	1	0	16	1	2	16				
0010	692+68	24"X62'	LT & RT		1			1	8		1				4		
0010	702+51	42"X72"X52'	ML		1			1			4				1		
0010	706+27	24"X58'	RT		1			1			1				-		
0010	752+00	24"X52'	ML					1									-
			TOTAL 0010	1	9	3	4	12	74	16	/	2	16	1	1	602	

			BEAM	1GUARD			
			204.0165	465.0310	606.0300	614.0400	645.0120
						ADJUSTING STEEL	
			REMOVING	ASPHALTIC	RIPRAP	PLATE BEAM	GEOTEXTILE
			GUARDRAIL	CURB	HEAVY	GUARD	TYPE HR
CATEGORY	STATION TO STATION	LOCATION	LF	LF	CY	LF	SY
							_
0010	355+61 - 357+41	LT	180				
0010	373+00 - 375+00	LT				200	
0010	378+50 - 382+00	LT		350	25		50
0010	378+25 - 379+50	LT				125	
0010	381+00 - 382+00	LT				100	
		TOTAL 0010	180	350	25	425	50

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SHEET:

MISCELLANEOUS QUANTITIES

COUNTY: POLK

PROJECT NO: 1570-00-78

HWY:

USH 8

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			643.3165	646.2040	646.4040 MARKING LINE	646.6120	646.7120	
			TEMPORARY MARKING LINE PAINT 6-INCH	MARKING LINE GROOVED WET REF EPOXY 6-INCH	GROOVED WET REF EPOXY 10- INCH	MARKING STOP LINE EPOXY 18- INCH	MARKING DIAGONAL EPOXY 12-INCH	
CATEGORY	STATION TO STATION	LOCATION	LF	LF	LF	LF	LF	REMARKS
0010	260+93 - 757+76	PERMANENT EDGELINES		97,368				EDGELINES
0010	260+93 - 757+76	PERMANENT CENTERLINE	79,538	70.500				PERMANENT CENTERLINE BEFORE RUMBLES
0010	260+93 - 757+76	PERMANENT CENTERLINE		79,538				PERMANENT CENTERLINE AFTER RUMBLES
0010	260+93 - 757+76	TEMPORARY CENTERLINE (X2)	149,924					TEMPORARY CENTERLINE
0010	414+95 - 421+86	EB RIGHT TURN LANE, STH 65			700			RIGHT TURN LANE
0010	422+05 - 422+30	STH 65 STOP LINES				25		INTERSECTION STH 65
0010	460+70 - 469+60	INTERSECTION 150TH ST					311	INTERSECTION 150TH ST
0010	477+00 - 485+44	INTERSECTION 150TH ST					311	INTERSECTION 150TH ST
0010	469+55 - 472+55	EB LEFT TURN LANE, 150TH ST.			300			LEFT TURN LANE
0010	473+90 - 476+90	WB LEFT TURN LANE, 150TH ST.			300			LEFT TURN LANE
0010	532+80 - 533+42	STH 46 NORTH STOP LINES				42		INTERSECTION STH 46
0010	533+93 - 539+31	WB RIGHT TURN LANE, STH 46			1,076		383	WHITE CHANNELIZING & CHEVRON CROSSHATCH
0010	539+31 - 542+00	WB RIGHT TURN LANE, STH 46			69			WHITE CHANNELIZING
0010	748+60 - 750+60	EB TURN LANES, 100TH ST./CTH H			400	25		RIGHT AND LEFT TURN LANES
0010	752+70 - 755+35	100TH ST					167	100TH ST
0010	752+71 - 755+35	WB TURN LANES, 100TH ST./CTH H			360			RIGHT AND LEFT TURN LANES
		TOTAL 0010	229,462	176,906	3,205	92	1172	

				646.5020	646.5120	646.8020 MARKING	646.8120	646.8220	
				MARKING ARROW EPOXY	MARKING WORD EPOXY	CORRUGATED MEDIAN EPOXY	MARKING CURB EPOXY	MARKING ISLAND NOSE EPOXY	
CATEGORY	STATION TO S	STATION	LOCATION	EACH	EACH	SF	LF	EACH	REMARKS
0010	469+60 - 4	471+65	EB LEFT TURN LANE, 150TH ST.	2	1				LEFT TURN LANE
0010	473+77 - 4	474+56	WB LEFT TURN LANE, 150TH ST.	2	1				LEFT TURN LANE
0010	532+80 - 5	533+40	STH 46 INTERSECTION				110		STH 46 NORTH INTERSECTION
0010	747+01 - 7	748+86	100TH ST INTERSECTION			967			100TH ST INTERSECTION
0010	748+70 - 7	750+60	WB TURN LANES, CTH H/100th St.	4	2				RIGHT & LEFT TURN LANE
0010	751+92 - 7	752+71	EB TURN LANES, CTH H/100th St.	4	2				RIGHT & LEFT TURN LANE
0010	755+35 - 7	757+78	CENTER TWLTL	5					CENTER LEFT TURN LANE
0010	749+93 - 7	752+65	CTH H/100TH ST INTERSECTION					4	CTH H/100TH ST INTERSECTION
			TOTAL 0010	17	6	967	110	4	

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				465.0125	603.8000	603.8125	603.8500	643.0300	643.0420	643.0705	643.0715	643.0810.S	643.0900	643.3165	643.3805	643.5000	646.9000	646.9200	661.0101.01 TEMPORARY	
CATEGOR	y station 1	o station	LOCATION	ASPHALTIC SURFACE TEMPORARY TON	PRECAST	CONCRETE BARRIER TEMPORARY PRECAST INSTALLED LF	ANCHORING CONCRETE BARRIER TEMPORARY PRECAST LF	TRAFFIC CONTROL DRUMS DAY	TRAFFIC CONTROL BARRICADES TYPE III DAY	TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	TRAFFIC CONTROL WARNING LIGHTS TYPE C DAY	CONNECTED ARROW BOARD DAY	TRAFFIC CONTROL SIGNS DAY		TEMPORARY MARKING STOP LINE PAINT 18-INCH LF	E TRAFFIC CONTROL EACH	MARKING REMOVAL LINE 4- INCH LF	MARKING REMOVAL LINE WIDE LF	TRAFFIC SIGNALS FOR BRIDGES (STRUCTURE) (01. ROADWAY SLOUGHING) EACH	remarks
0010			PROJECT WIDE					5000	250	500	100	50				1				25 DAYS
0010	260+93	- 757+76	PROJECT WIDE TOTAL 0010	0	0	0	0	5,000	250	500	100	50	5500 5,500	0	0	1	0	0	0	129 DAYS
	STAGE 1																			
0030	427+00	- 434+75	USH 8		775	775	400													
0030	427+00	-	USH 8																	
0030		- 428+00	USH 8					350 350			140 140									
0030 0030	433+75	- 435+75 -	USH 8 USH 8					350	14		140									
0030		- 434+75	USH 8						14				280				775			
0030		- 426+00	USH 8											350						DOUBLE YELLOW
0030	435+75	- 439+75	USH 8											400						DOUBLE YELLOW
0030	427+00	- 434+75	USH 8											775						WHITE
0030	120.00	-	USH 8												15					
0030	435+75		USH 8												15		475			EVICTING MAINLINE
0030 0030		427+75435+75	USH 8														175 175			EXISTING MAINLINE EXISTING MAINLINE
0030		- 435+75 - 435+75	USH 8 USH 8														1/3		1	EXISTING WAINLINE
0030		- 435+75	USH 8	120															-	PAVE AGG SHOULDER
	STAGE 2																			
0030		- 434+75	USH 8			775	400													
0030	434+75		USH 8																	
0030	426+00	- 428+00	USH 8					350			140									
0030		- 435+75	USH 8					350			140									
0030	428+00	-	USH 8						14											
0030		- 434+75	USH 8										200				775			
0030 0030		435+75435+75	USH 8 USH 8										280							WHITE EDGE LINE
0030		- 433+75	USH 8																	WHITE EDGE LINE
0030		- 435+75	USH 8	120																PAVE AGG SHOULDER
0030	480+00	- 486+00	USH 8		600	600														
0030		- 480+50	USH 8		500	500		150			80									
0030		- 487+50	USH 8					150			80									
0030	485+50	-	USH 8						10											
0030		- 487+00	USH 8														3,200			
0030		- 486+00	USH 8											600	_					WHITE
0030	479+00		USH 8												15					
0030 0030	487+00 480+00	- - 485+00	USH 8 USH 8												15			120		12" DIAGONAL YELLOW
0030		- 487+00	USH 8										280					120	1	12 DIAGONAL TELLOW
2000		.5,.00	TOTAL 0030	240	1,375	2,150	800	1,700	38	0	720	0	840	2,125	60	0	5,100	120	2	i
			PROJECT TOTAL	240	1375	2150	800	6700	288	500	820	50	6340	2125	60	1	5100	120	2	
															·-	_			-	

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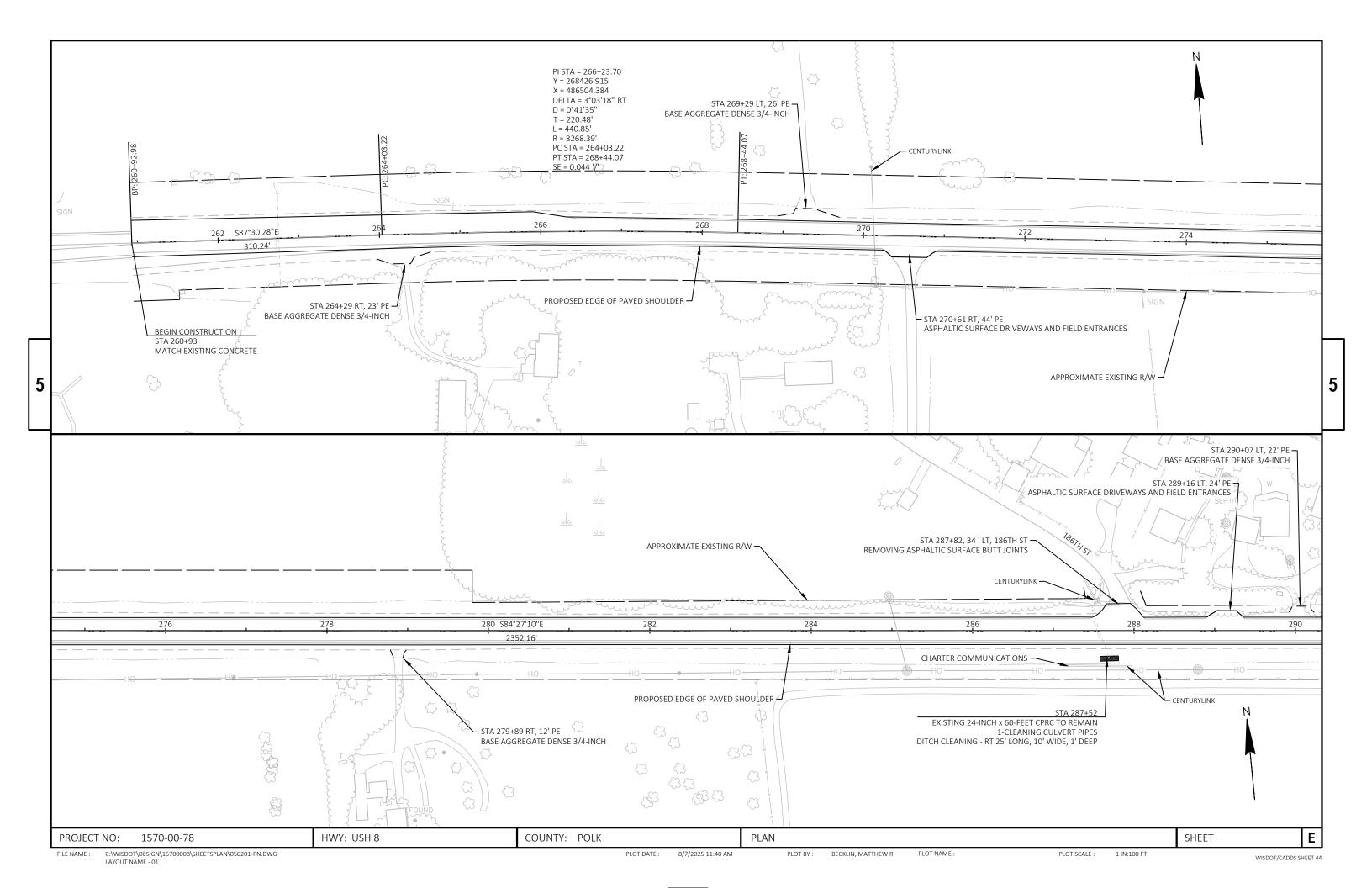
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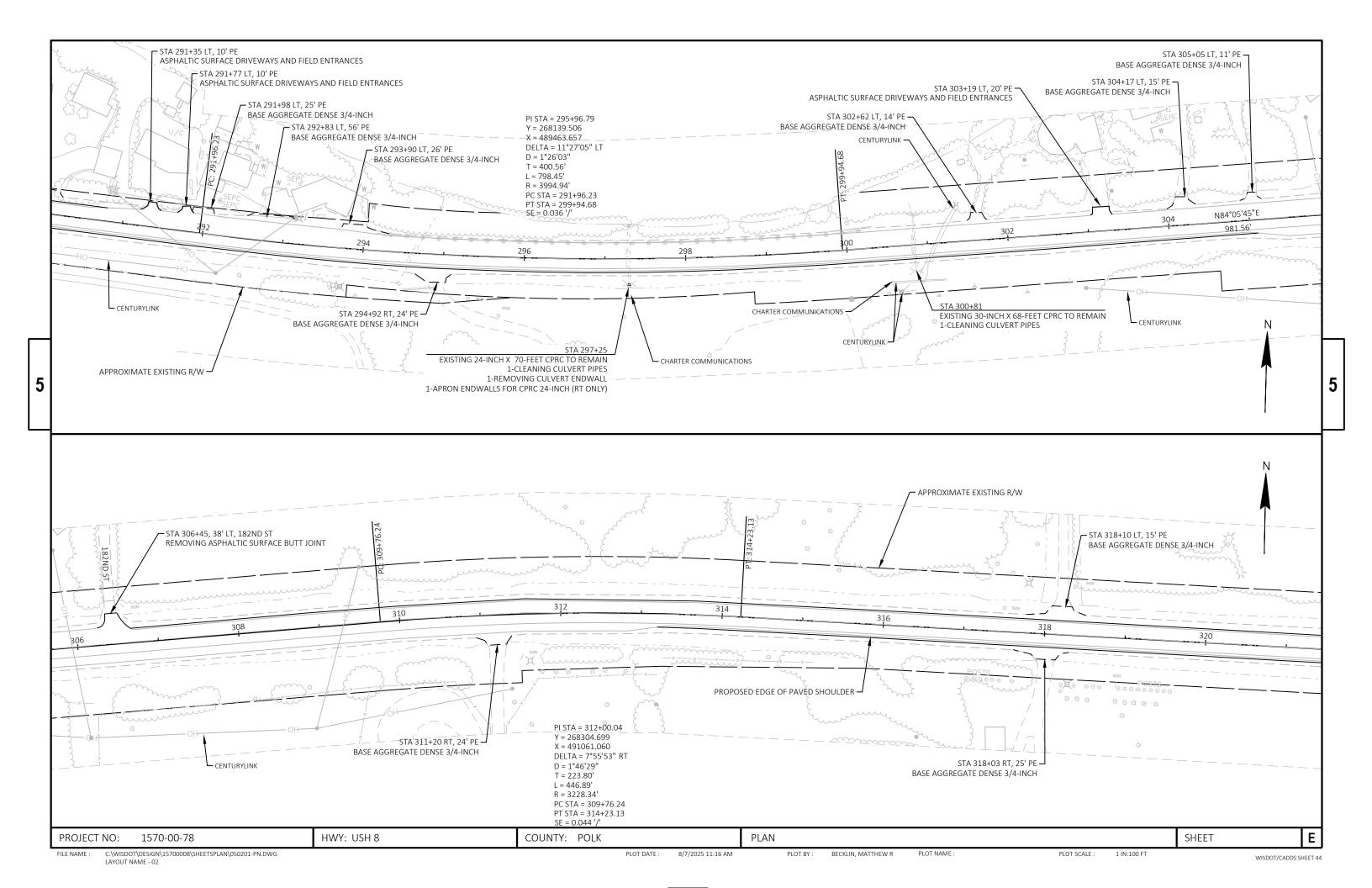
					CONSTRUCTI	ION STAKING		
				650.5500	650.6000	650.8000	650.9911.01	
				CONSTRUCTION		CONSTRUCTION		
				STAKING CURB	CONSTRUCTION	STAKING	CONSTRUCTION STAKING	
*				GUTTER AND	STAKING PIPE	RESURFACING	SUPPLEMENTAL CONTROL	
690.0250				CURB & GUTTER	CULVERTS	REFERENCE	(PROJECT) (01. 1570-00-78)	
SAWING	CATEGORY	STATION TO STATION	LOCATION	LF	EACH	LF	EACH	REMARKS
CONCRETE								
CATEGORY STATION LOCATION LF	0010	260+93 - 757+76	PROJECT WIDE			49,670	1	
	0010	345+64 - 345+64	ML		1			CULVERT REPLACEMENT
0010 345+64 USH 8 <u>60</u>	0010	367+50 - 368+05	RT	136				170TH ST.
TOTAL 0010 60	0010	421+30 - 422+50	RT	135				160TH ST. SOUTH CORNERS
	0010	421+30 - 422+50	LT	146				160TH ST. NORTH CORNERS
	0010	631+20 - 632+45	LT	145				120TH ST. NORTH CORNERS
	0010	684+95 - 686+10	RT	135				110TH ST. SOUTH
			TOTAL 0010	697	1	49,670	1	•

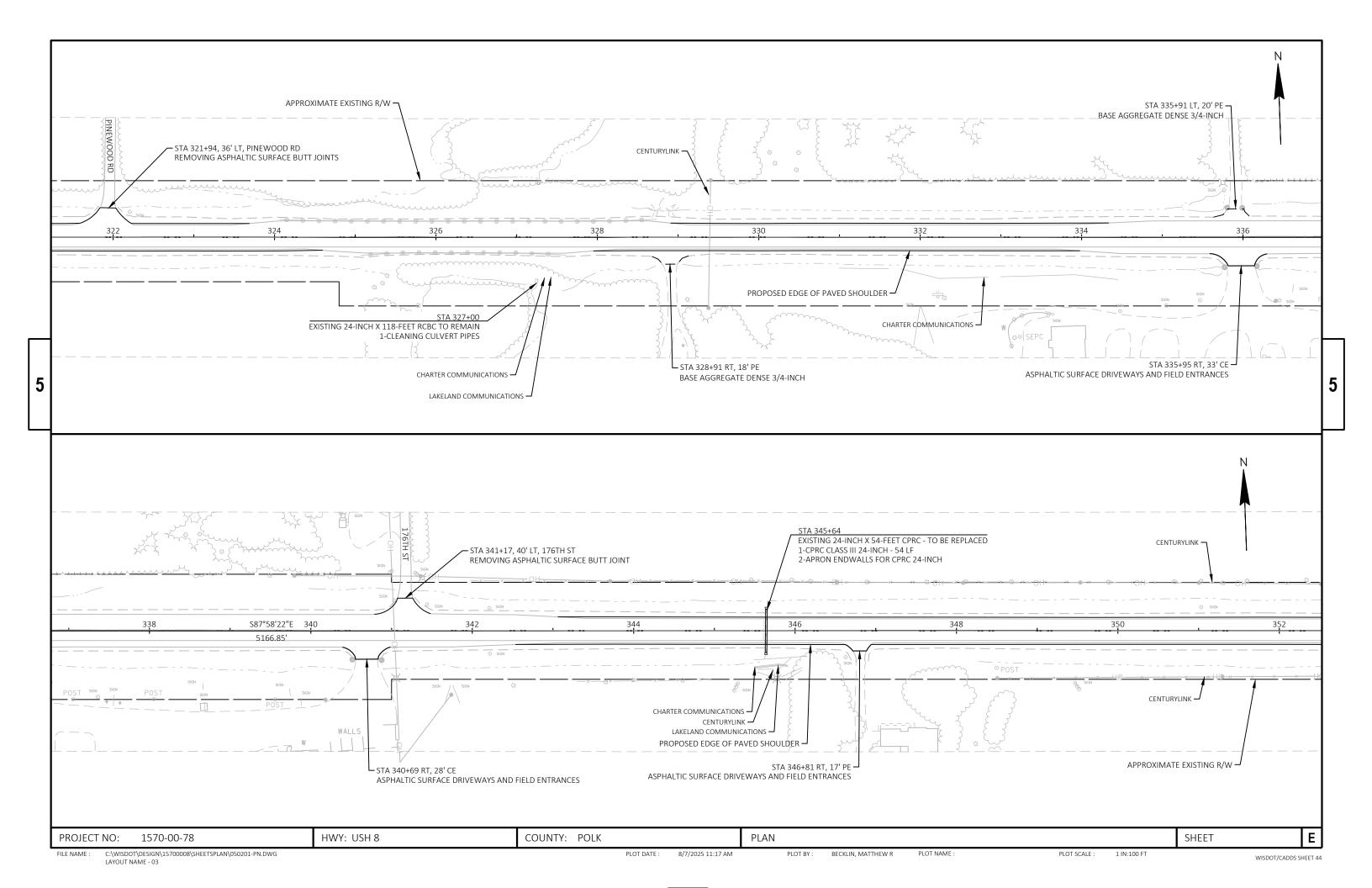
						*	*	*				*	*	*										*	*
					204.0100	205.0100	305.0110	305.0120	305.0130	310.0110	312.0110	455.0605	460.6645	460.8644	612.0106	612.0206	612.0806	624.0100	645.0112	645.0135	650.4500	650.5000	650.9920	690.0150	690.0250
							BASE	BASE	BASE	BASE			HMA	HMA		PIPE	APRON ENDWALLS								
					REMOVING		AGGREGATE	AGGREGATE	AGGREGATE	AGGREGATE	SELECT		PAVEMENT	PAVEMENT	PIPE	UNDERDRAIN	FOR UNDERDRAIN		GEOTEXTILE		CONSTRUCTION		CONSTRUCTION		
					CONCRETE	EXCAVATION	DENSE 3/4-	DENSE 1 1/4-	DENSE 3-	OPEN-	CRUSHED	TACK	5 MT 58-34	4 SMA 58-	UNDERDRAIN	UNPERFORATED	REINFORCED		TYPE DF	GEOTEXTILE	STAKING	CONSTRUCTION	STAKING SLOPE	SAWING	SAWING
					PAVEMENT	COMMON	INCH	INCH	INCH	GRADED	MATERIAL	COAT	V	34 V	6-INCH	6-INCH	CONCRETE 6-INCH	WATER	SCHEDULE B	TYPE SR	SUBGRADE	STAKING BASE	STAKES	ASPHALT	CONCRETE
CATEGO	RY ST	TATION	TO STATION	LOCATION	SY	CY	TON	TON	TON	TON	TON	GAL	TON	TON	LF	LF	EACH	MGAL	SY	SY	LF	LF	LF	LF	LF
0030	42	29+00	- 432+75	USH 8	1,417	2,162	100	990	520	200	1,205	298	476	160	300	15	1	18	360	2,900	375	1,125	375		435
0030	48	81+50	- 484+50	USH 8		754	60	350	200		450	126	202	70				6		790	300	900	300	315	
			TOTA	L 0030	1.417	2.916	160	1,340	720	200	1.655	424	678	230	300	15	1	24	360	3.690	675	2.025	675	315	435

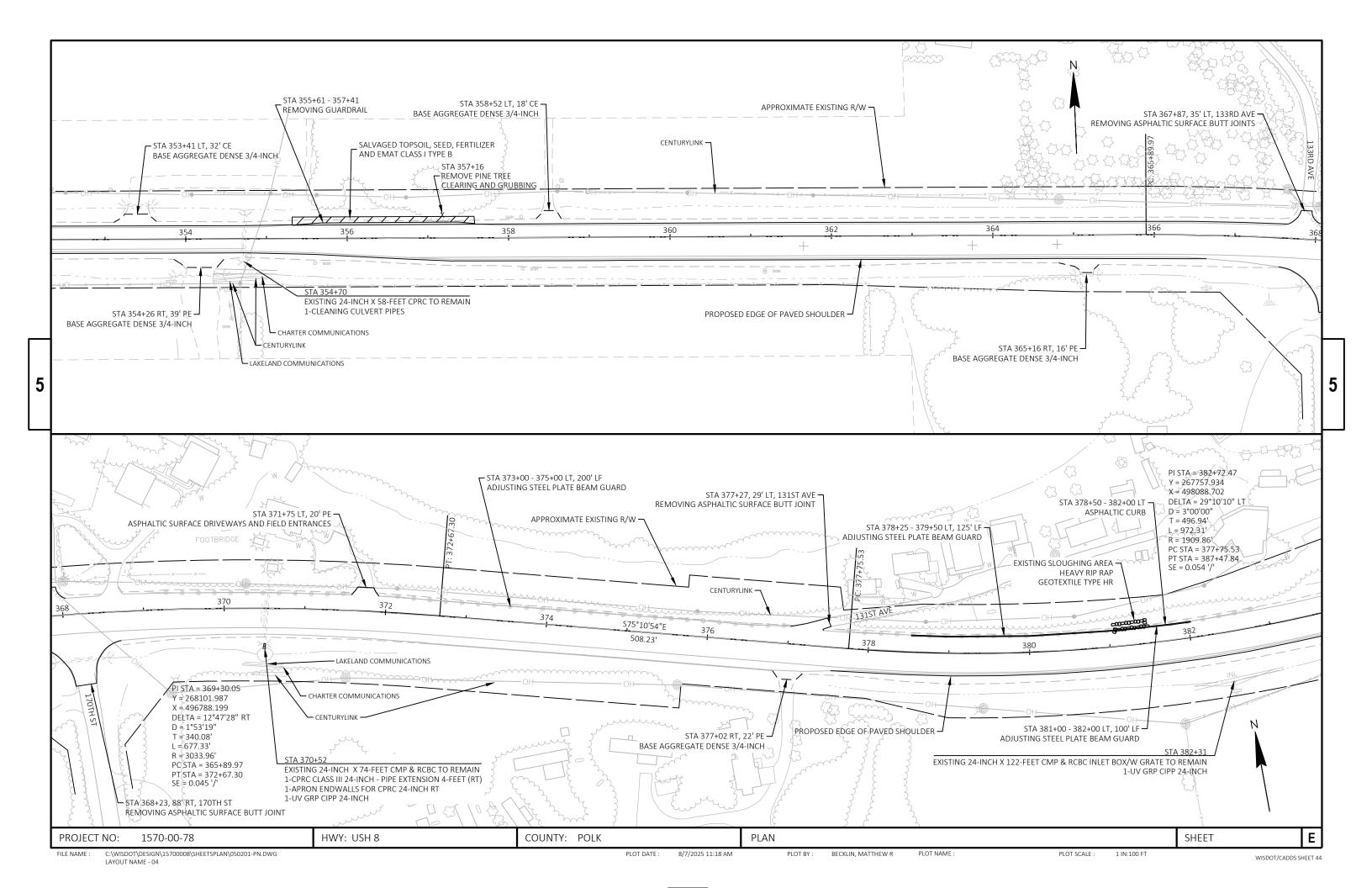
DIVISION	FROM/TO STATION	LOCATION	205.0100 COMMON EXCAVATION (1) CUT (2)	- SALVAGED/UNUSABLE PAVEMENT MATERIAL (4)	AVAILABLE MATERIAL (5)	UNEXPANDED FILL	EXPANDED FILL (13) FACTOR 1.25	MASS ORDINATE +/- (14)	WASTE
DIVISION 1	SIATION	LOCATION	(2)	(4)	(3)	1122	1.23	(17)	WASIE
8-WEST	429+00.00/432+75.00		2,162	334	1,828	1,108	1,385	443	
8-EAST	481+50.00/484+50.00		754	56	698	44	55	643	
DIVISION 1 SUBTOTAL			2,916	390	2,526	1,152	1,440	1,086	1,086
GRAND TOTAL			2,916	390	2,526	1,152	1,440	1,086	1,086
	TOTAL CO	MMON EXC	2,916						

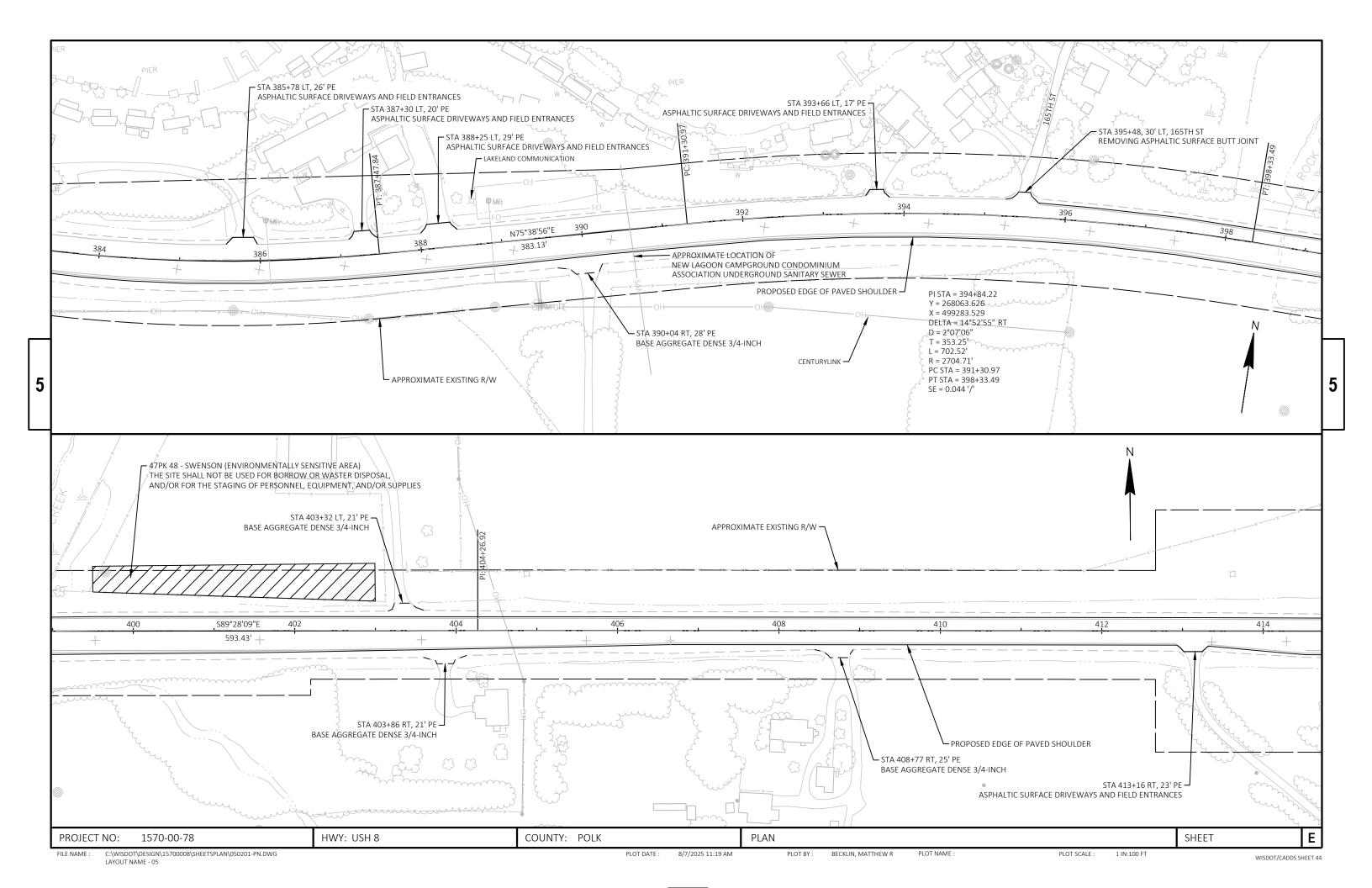
PROJECT NO: HWY: COUNTY: MISCELLANEOUS QUANTITIES SHEET: **E**

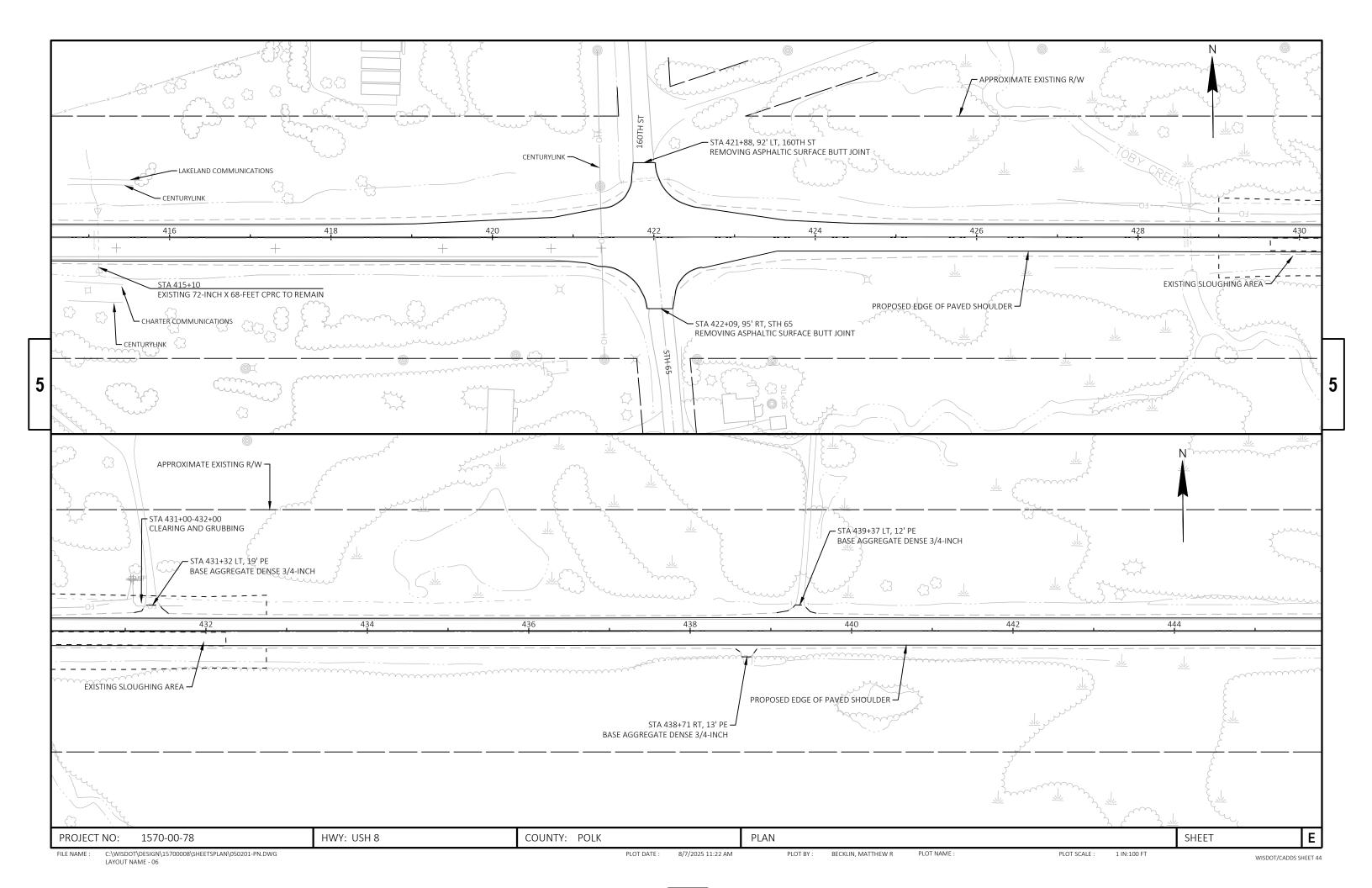


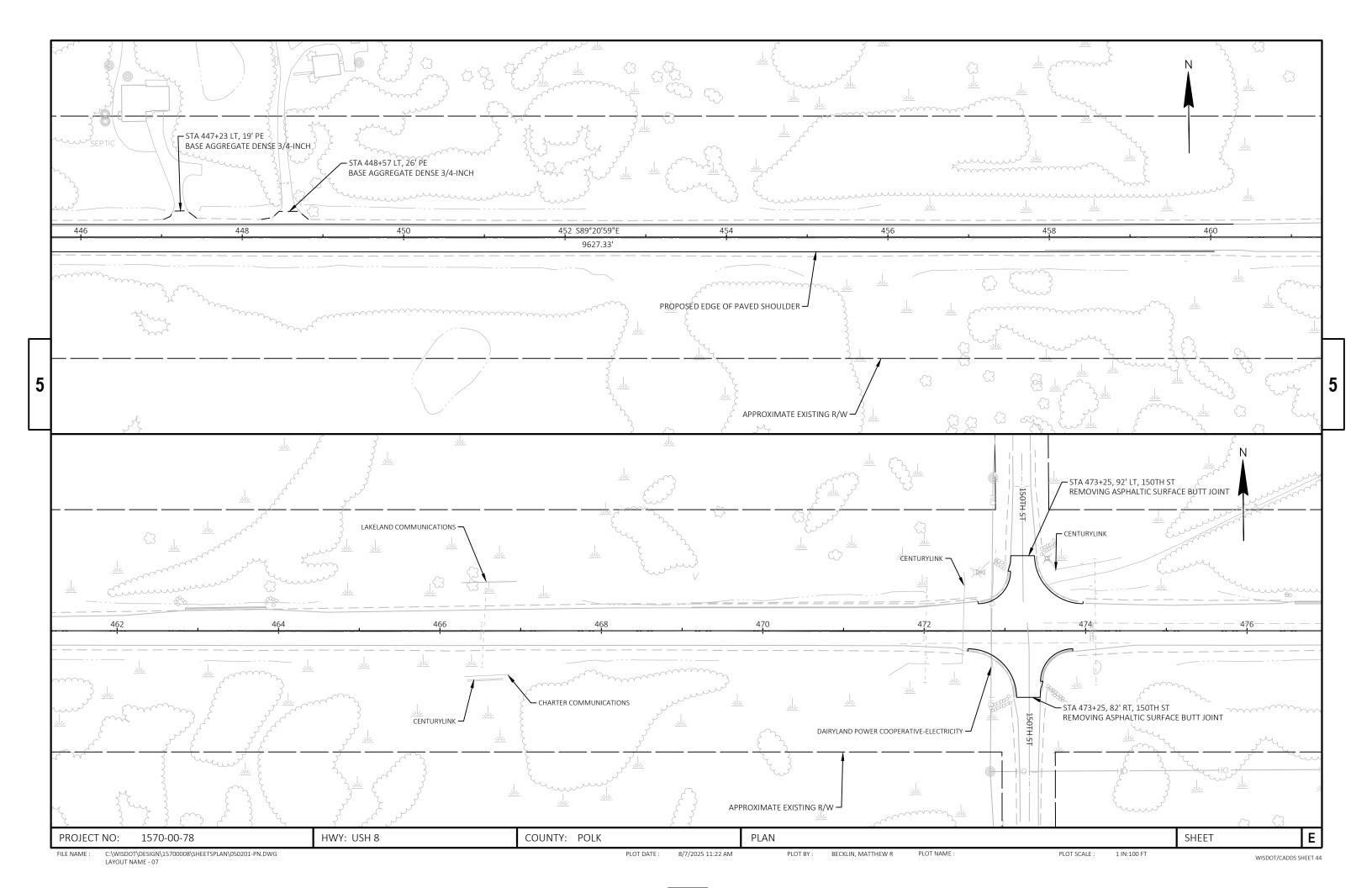


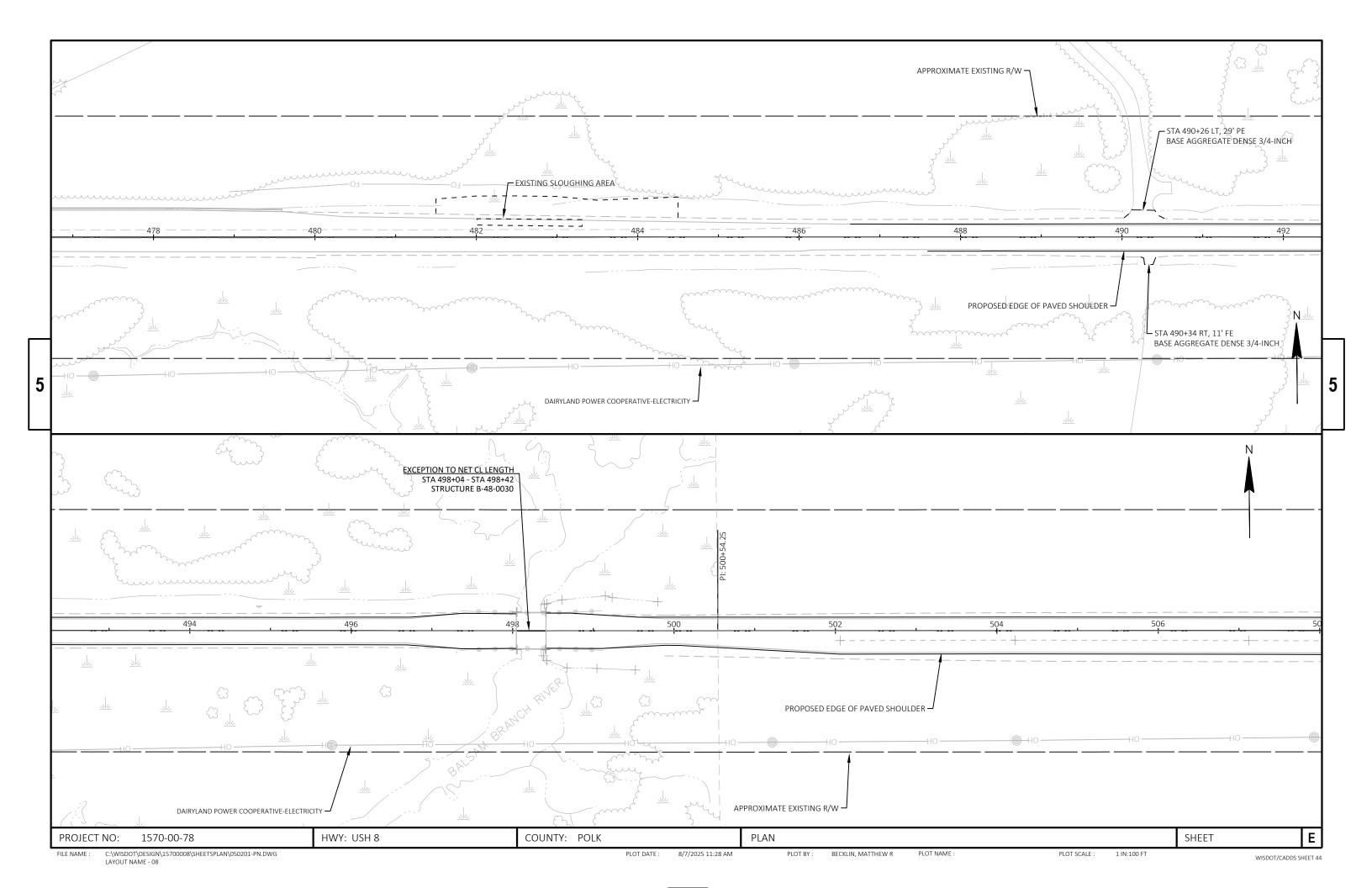


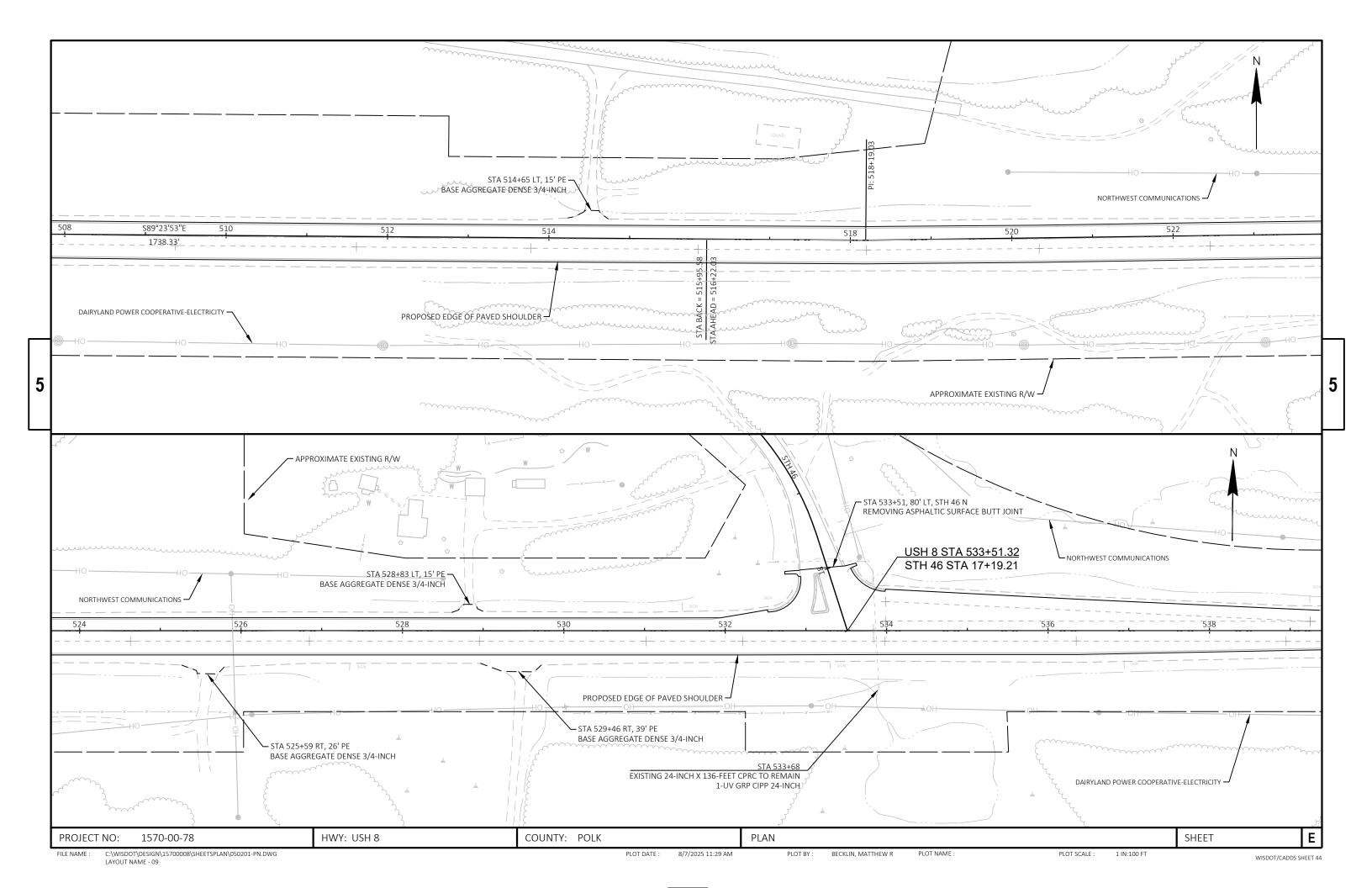


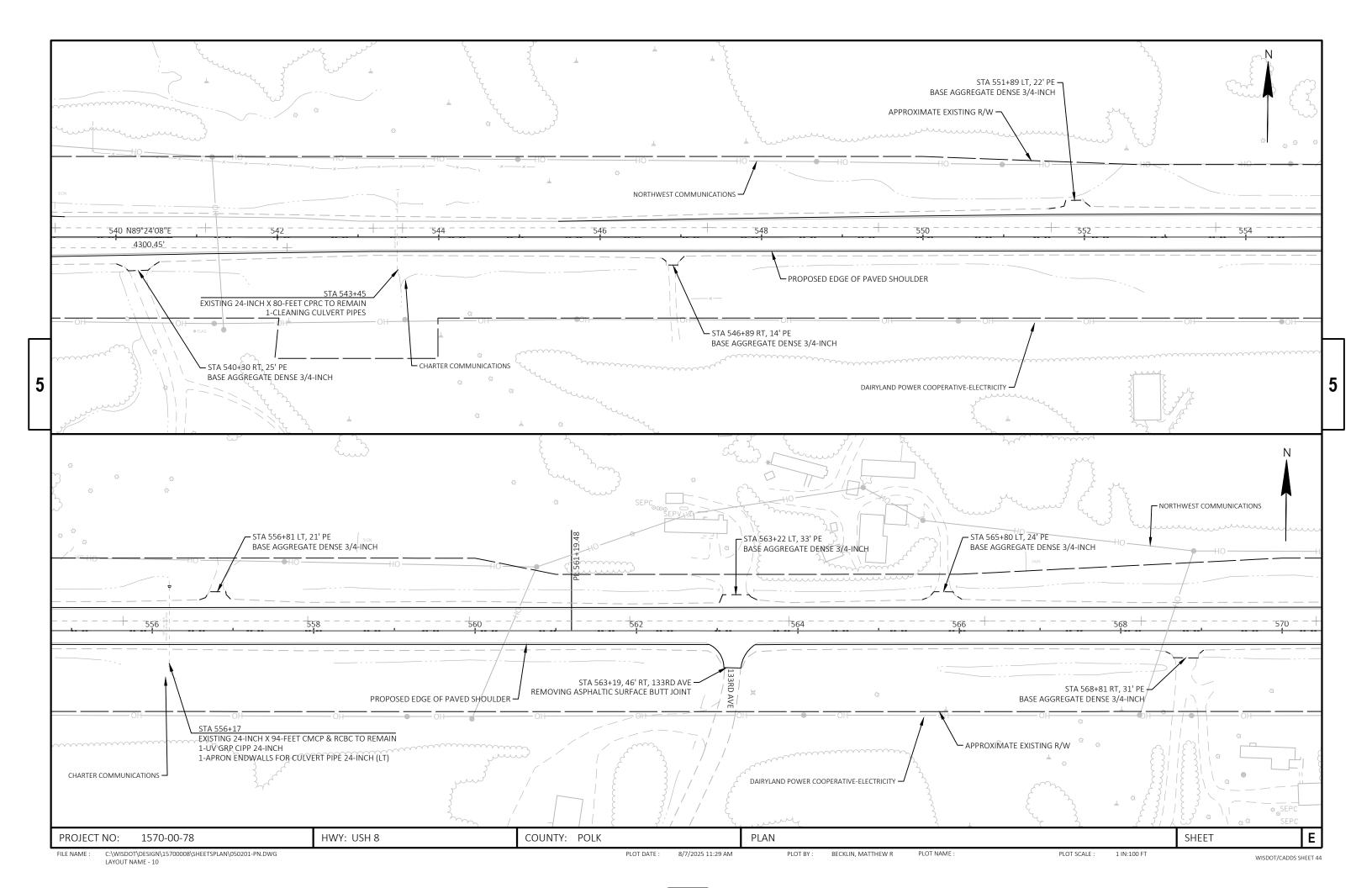


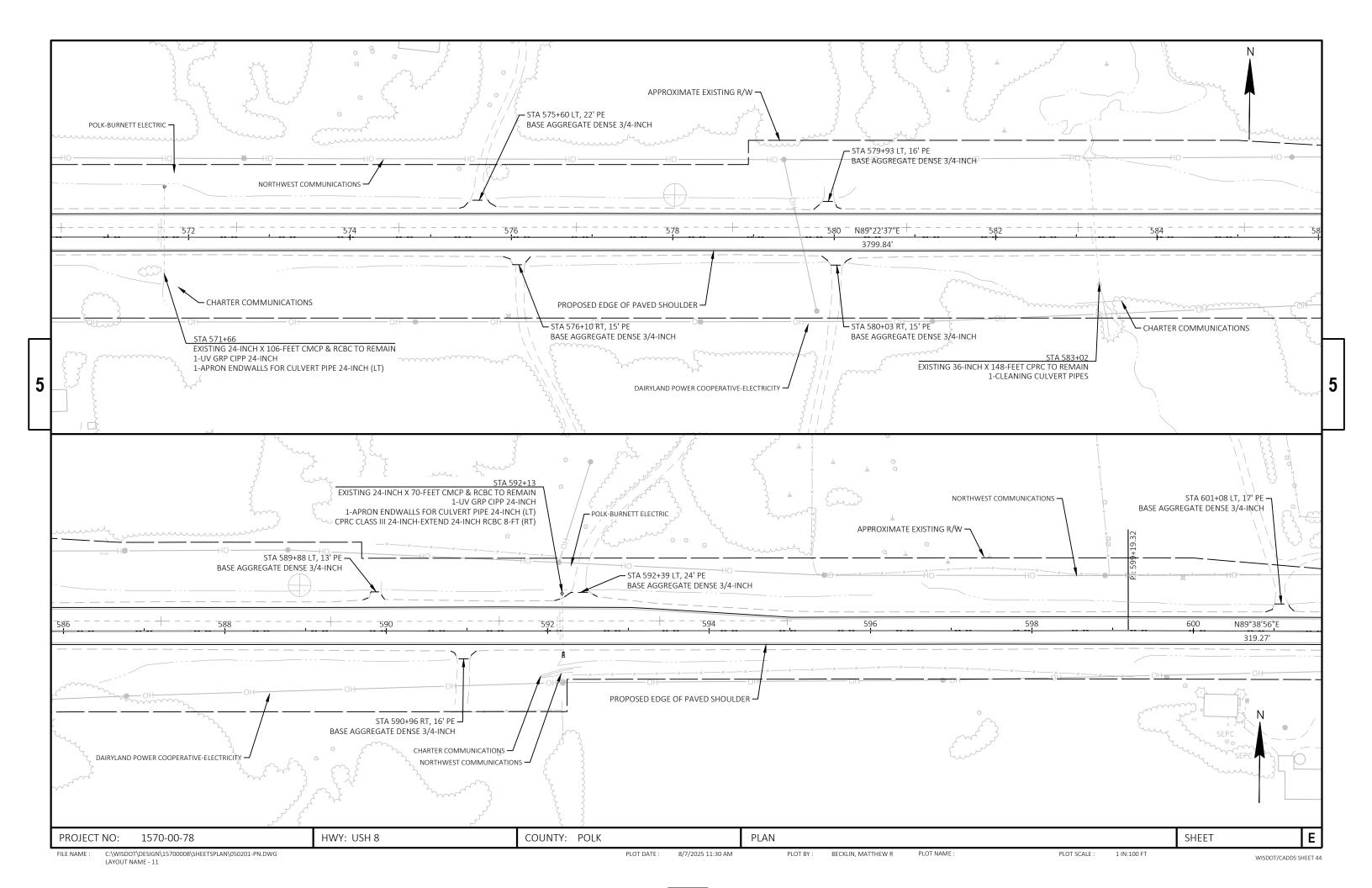


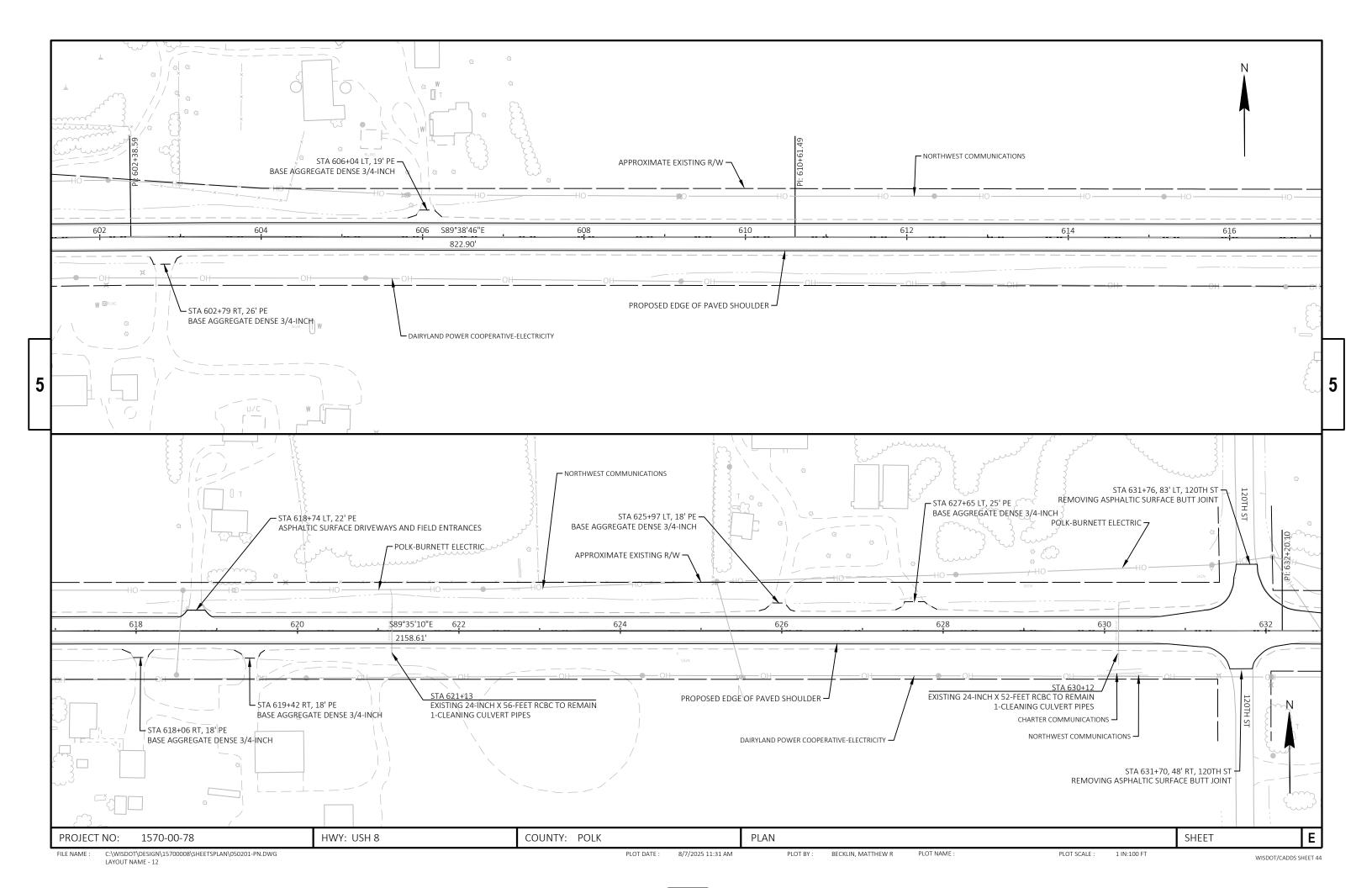


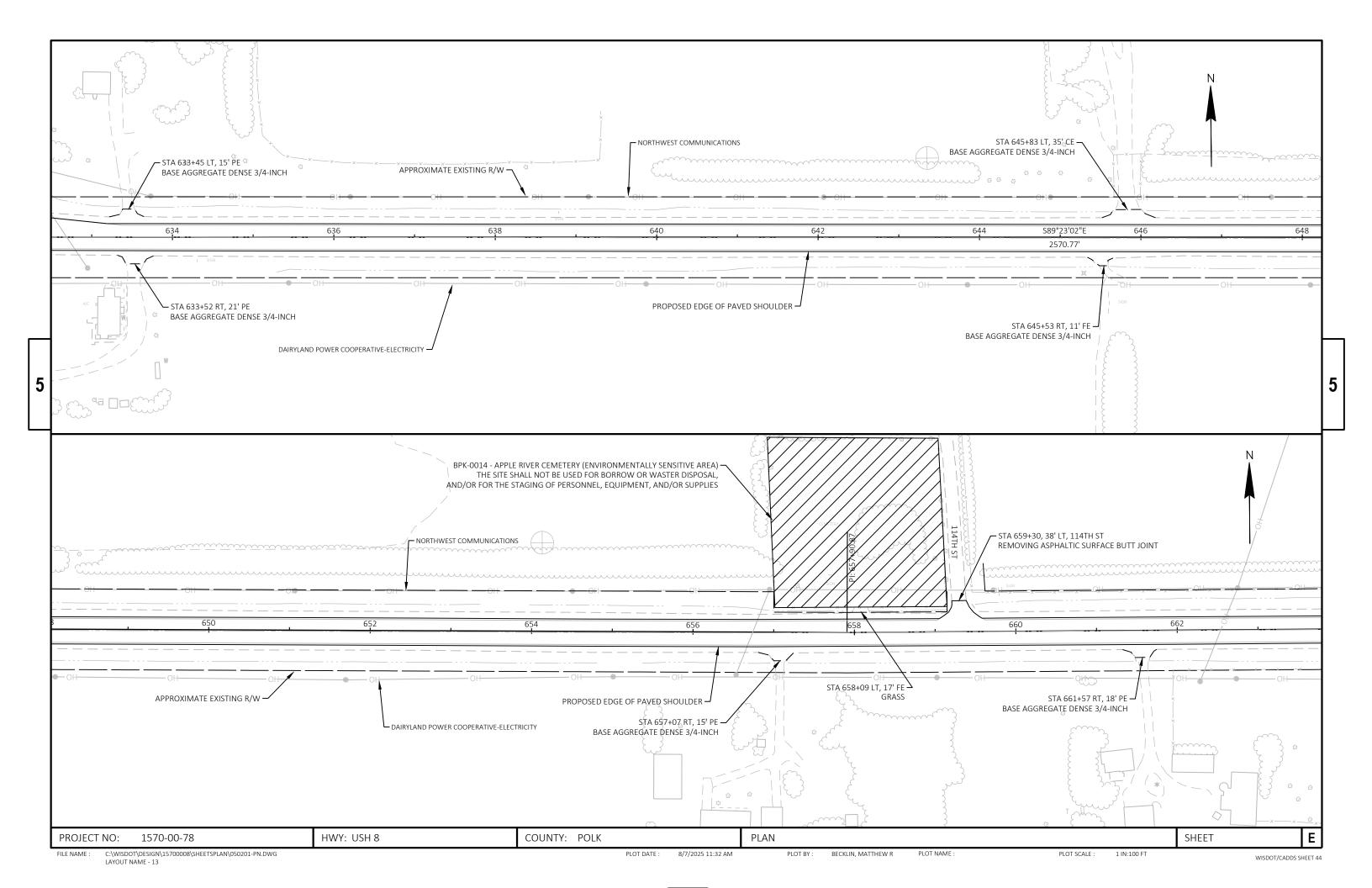


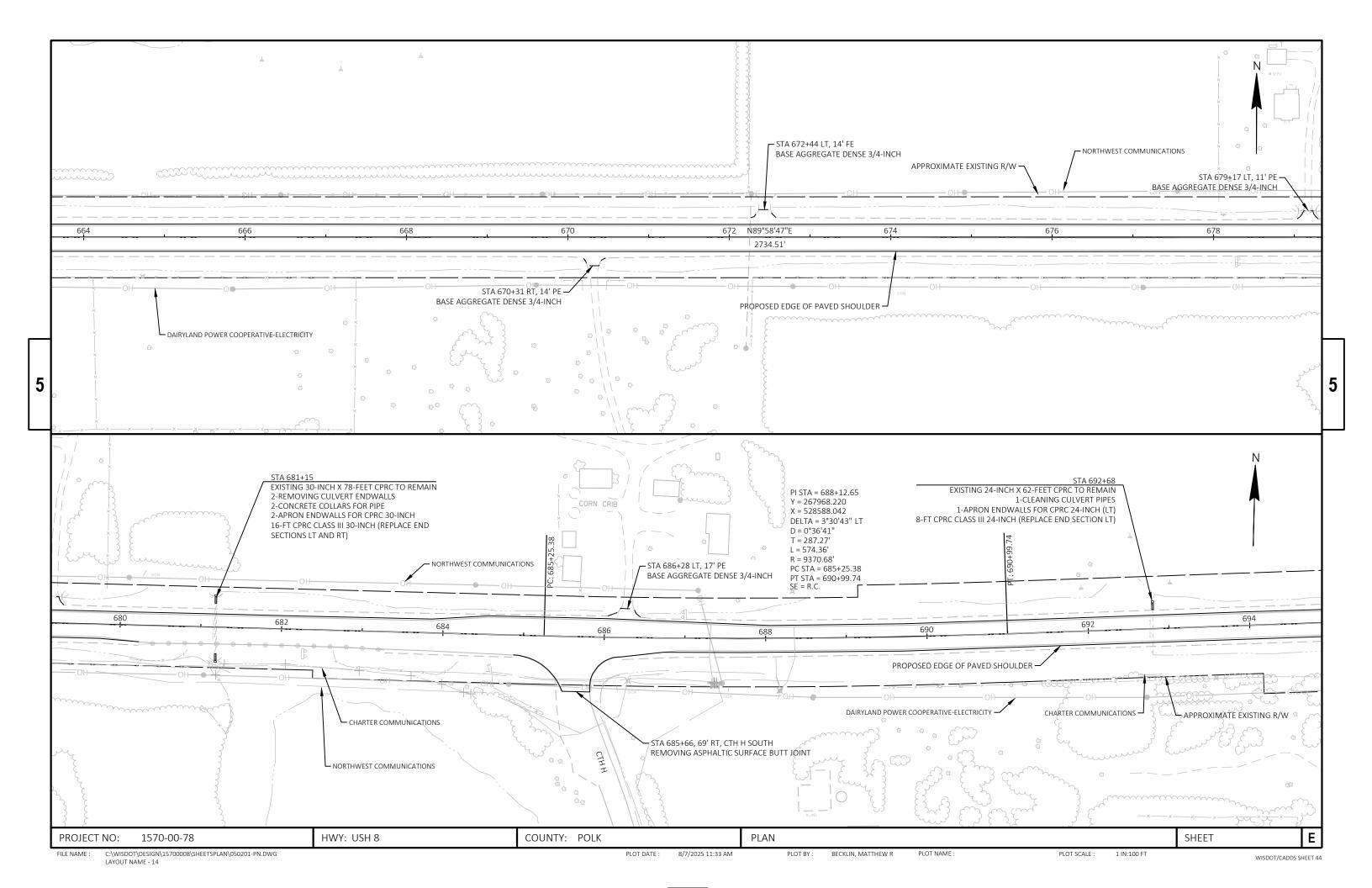


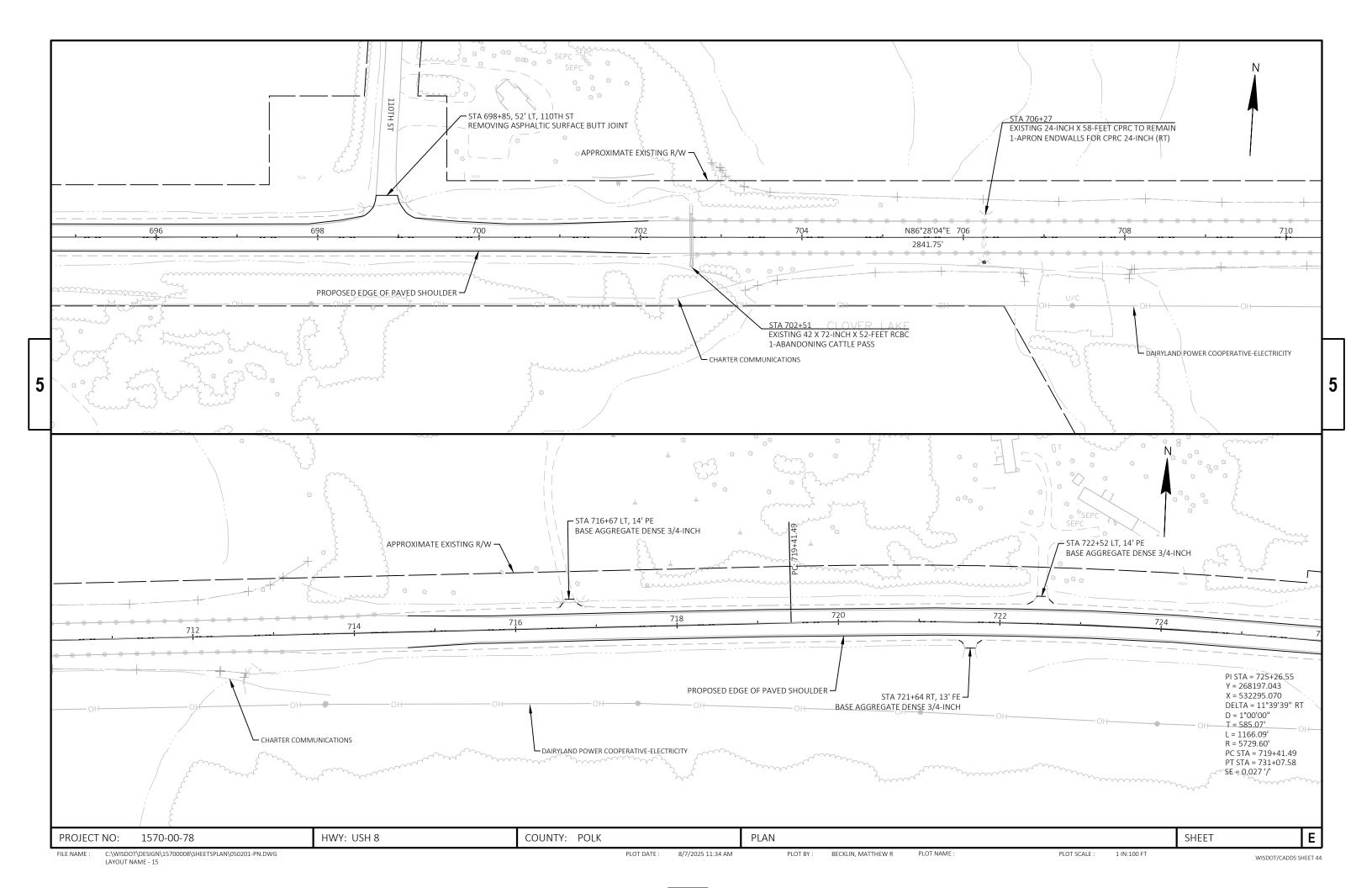


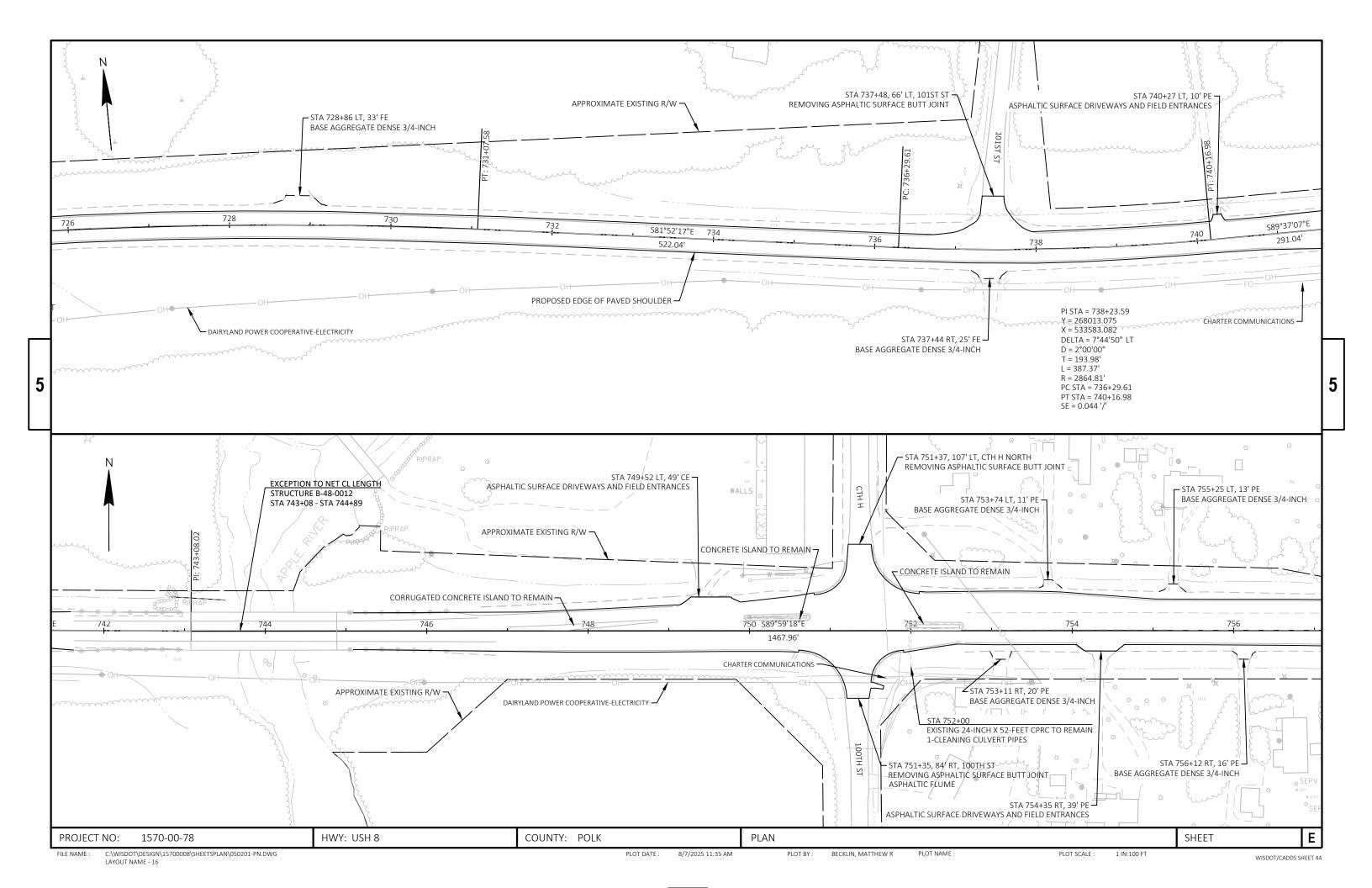


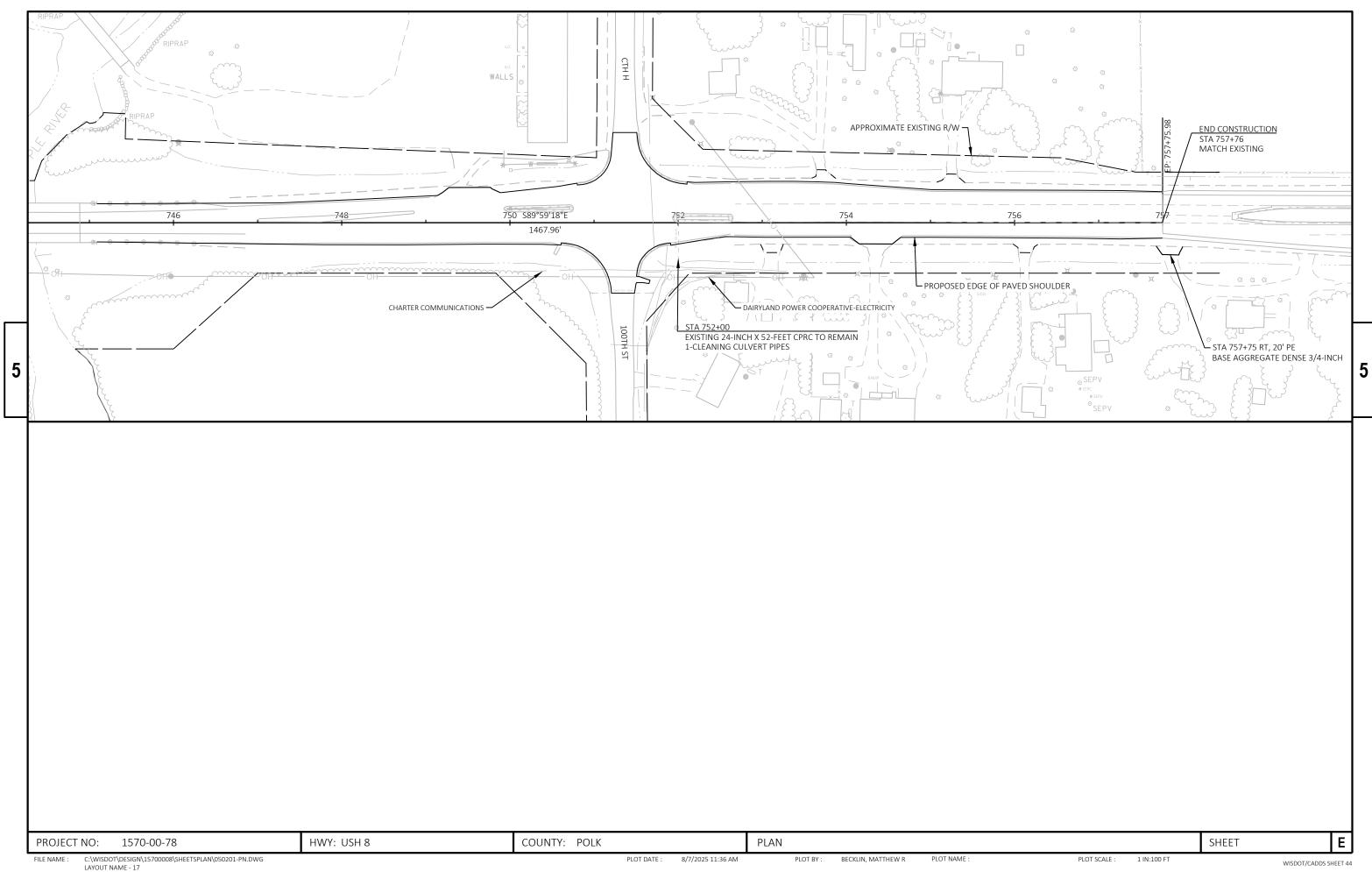






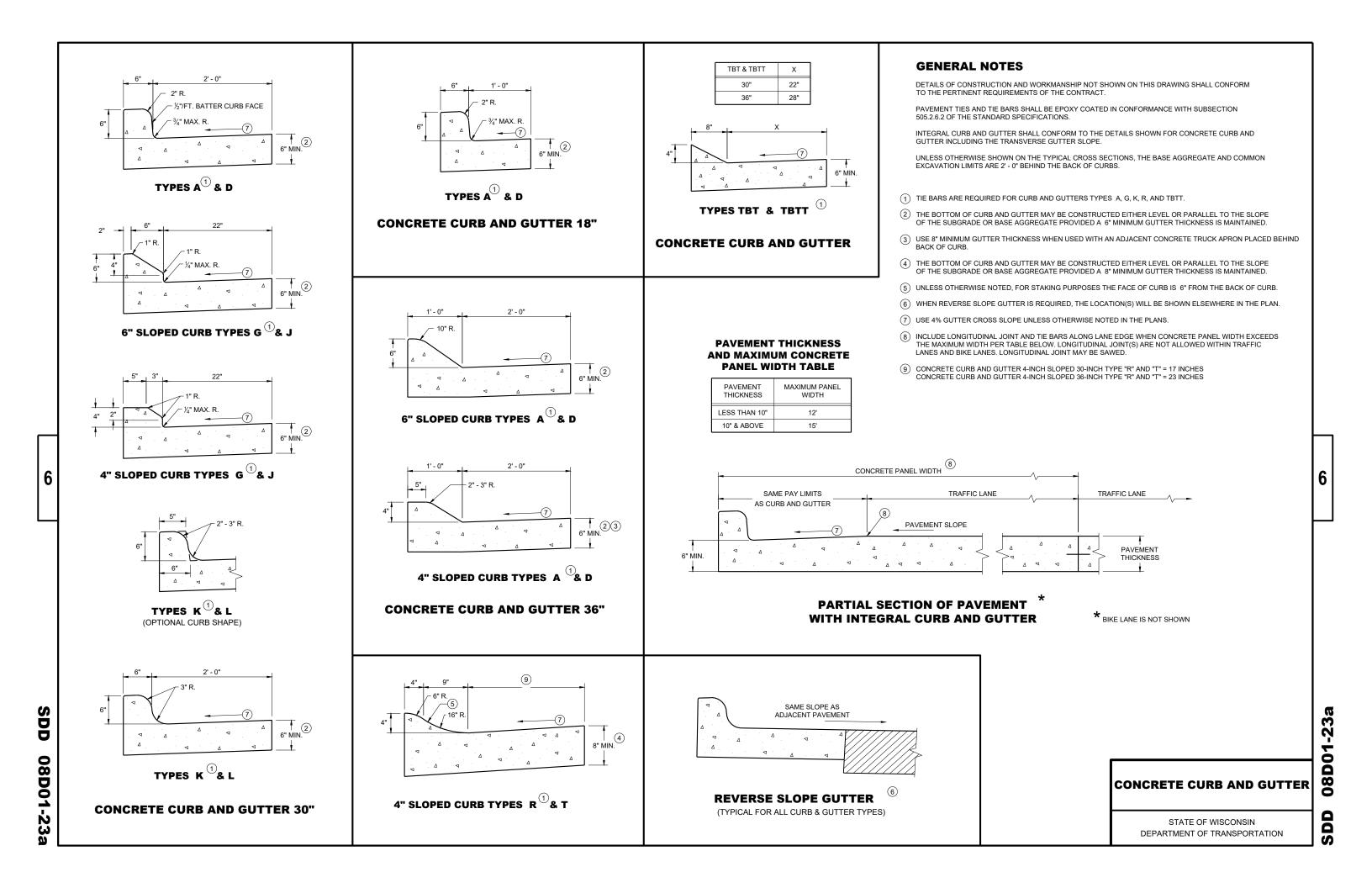


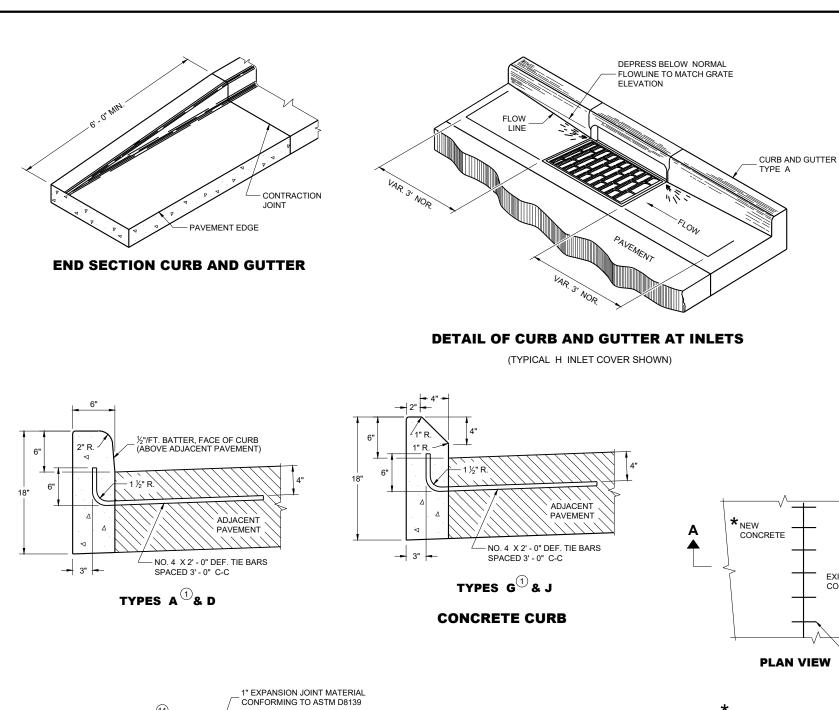


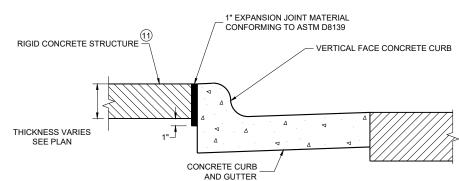


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Standard Detail Drawing List







EXPANSION JOINT DETAIL FOR VERTICAL CURB ABUTTING A RIGID STRUCTURE 119

CONCRETE **EXISTING** CONCRETE * NEW CURB AND GUTTER, SURFACE DRAINS, CONCRETE PAVEMENT OR OTHER NEW CONCRETE. **PLAN VIEW** NO. 6 TIE BARS SPACED 2' - 6" C-C, INSTALLED PERPENDICULAR TO THE CONCRETE MAXIMUM DRILL HOLE SIZE IS 1/8" GREATER THAN TIE BAR DIAMETER 1/2 THICKNESS OF_ NEW CONCRETE **EXISTING**

SECTION A - A

TIE BARS DRILLED
INTO EXISTING PAVEMENT

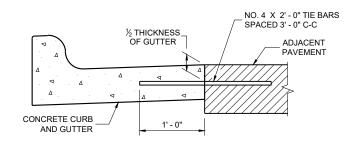
GENERAL NOTES

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

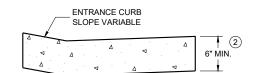
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

- 1) TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- (2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- 10 REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.
- 1 PLACE 1" THICK EXPANSION JOINT MATERIAL BETWEEN VERTICAL FACE CURB TYPES EXTENDING FROM THE TOP OF CURB TO 1 INCH BELOW THE ADJOINING CONCRETE SURFACE. RIGID CONCRETE STRUCTURES INCLUDE RAISED CONCRETE MEDIANS, CONCRETE SAFETY ISLANDS, SPLITTER ISLANDS, OR LOCATIONS IDENTIFIED ON THE PLANS.



TYPICAL TIE BAR LOCATION



DRIVEWAY ENTRANCE CURB

(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

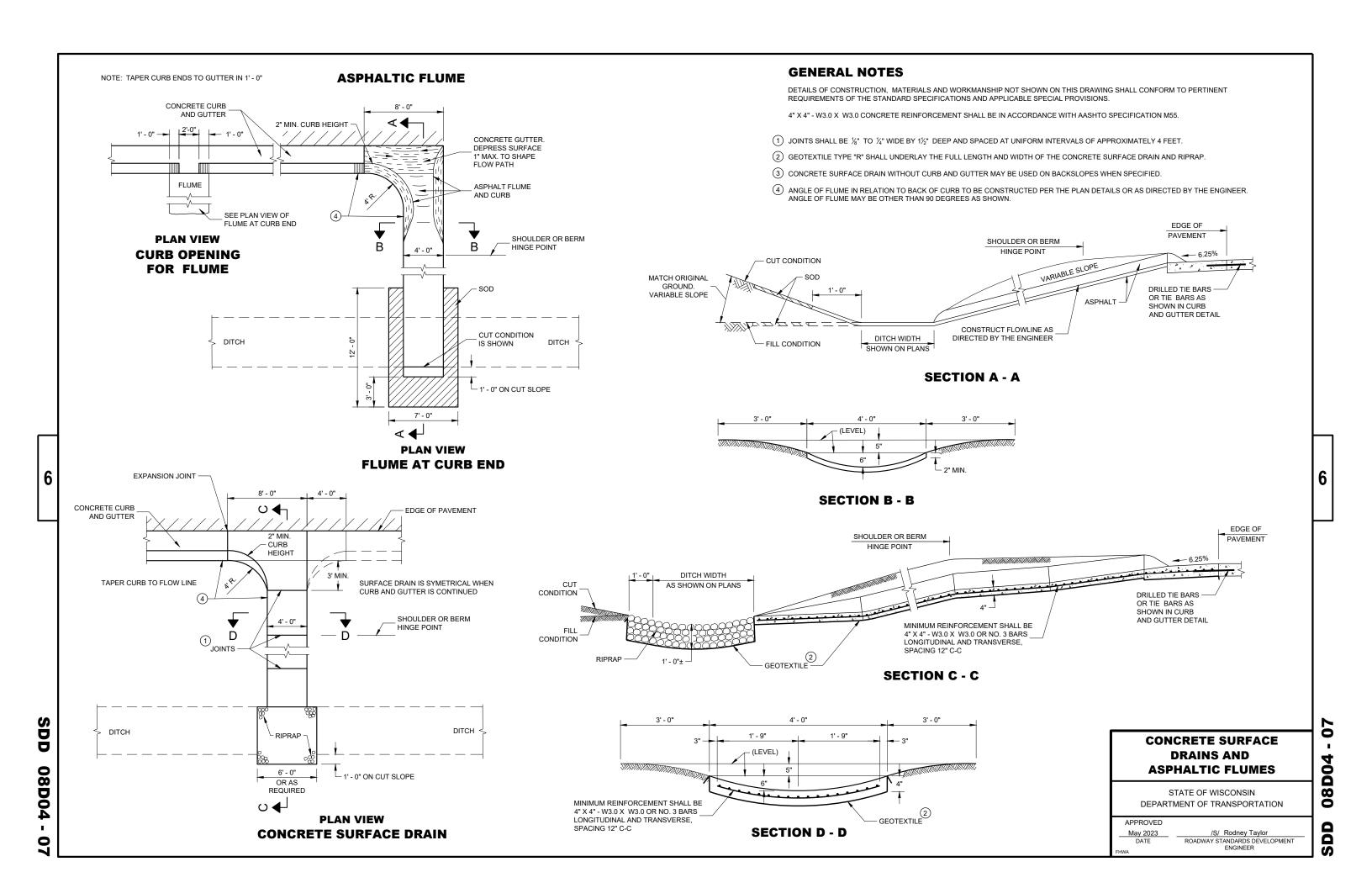
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

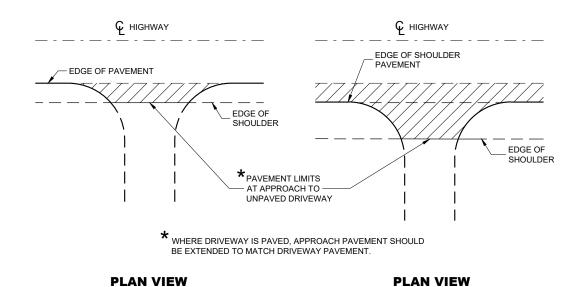
APPROVED

May 2023
DATE
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR

SDD 08D01-23b

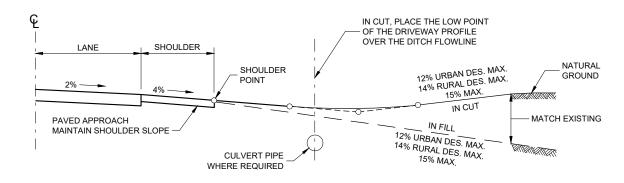
O8D01-2



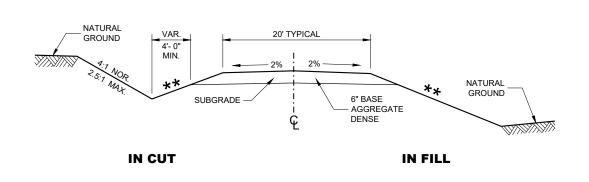


RURAL DRIVEWAY INTERSECTION DETAIL (NO CURB AND GUTTER OR SIDEWALK)

(PAVED SHOULDER ON HIGHWAY)



TYPICAL DRIVEWAY PROFILES

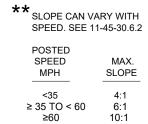


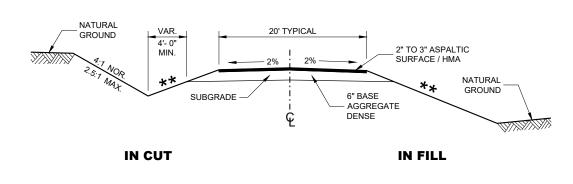
TYPICAL CROSS SECTION FOR

PRIVATE DRIVE OR FIELD ENTRANCE

AGGREGATE SURFACE

(UNPAVED SHOULDER ON HIGHWAY)





TYPICAL CROSS SECTION FOR PRIVATE DRIVE OR FIELD ENTRANCE ASPHALTIC SURFACE

DRIVEWAYS WITHOUT CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

December 2017

DATE

/S/ Rodney Taylor

ROADWAY STANDARDS DEVELOPMENT

UNIT SUPERVISOR

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08D21

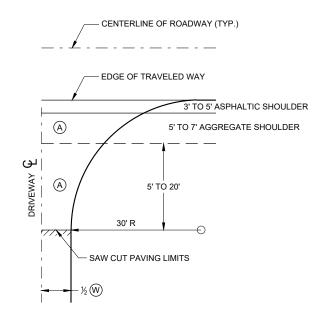
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SDD 08D21 - 01

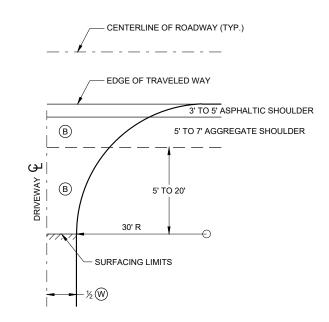
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PARTMENT OF TRANS

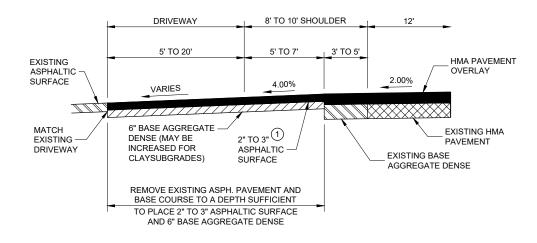


- (A) : PAID FOR AS ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES. (TON)
- ig(Big) : PAID FOR AS BASE AGGREGATE DENSE 1 $1\!\!\!/ _4$ " (TON)
- W): DRIVEWAY WIDTH 16' MIN. 24' MAX.

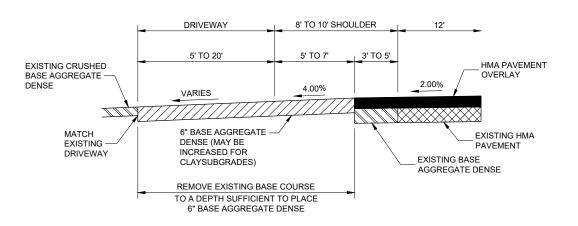


PLAN VIEW HALF SECTION





PROFILE VIEW
RURAL ENTRANCE
WITH ASPHALTIC SURFACE
RESURFACING PROJECTS



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

DRIVEWAYS WITHOUT CURB AND GUTTER RESURFACING PROJECTS RURAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

December 2016
DATE

ROADWAY STANDARDS DEVELOPMENT
ENGINEER

SDD 08D22 - (

TYPICAL APPLICATION OF SILT FENCE

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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.

- \bigcirc 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 11/8" X 11/8" OF OAK OR HICKORY.
- 4) SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
- (5) CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



TRENCH DETAIL



SILT FENCE TIE BACK

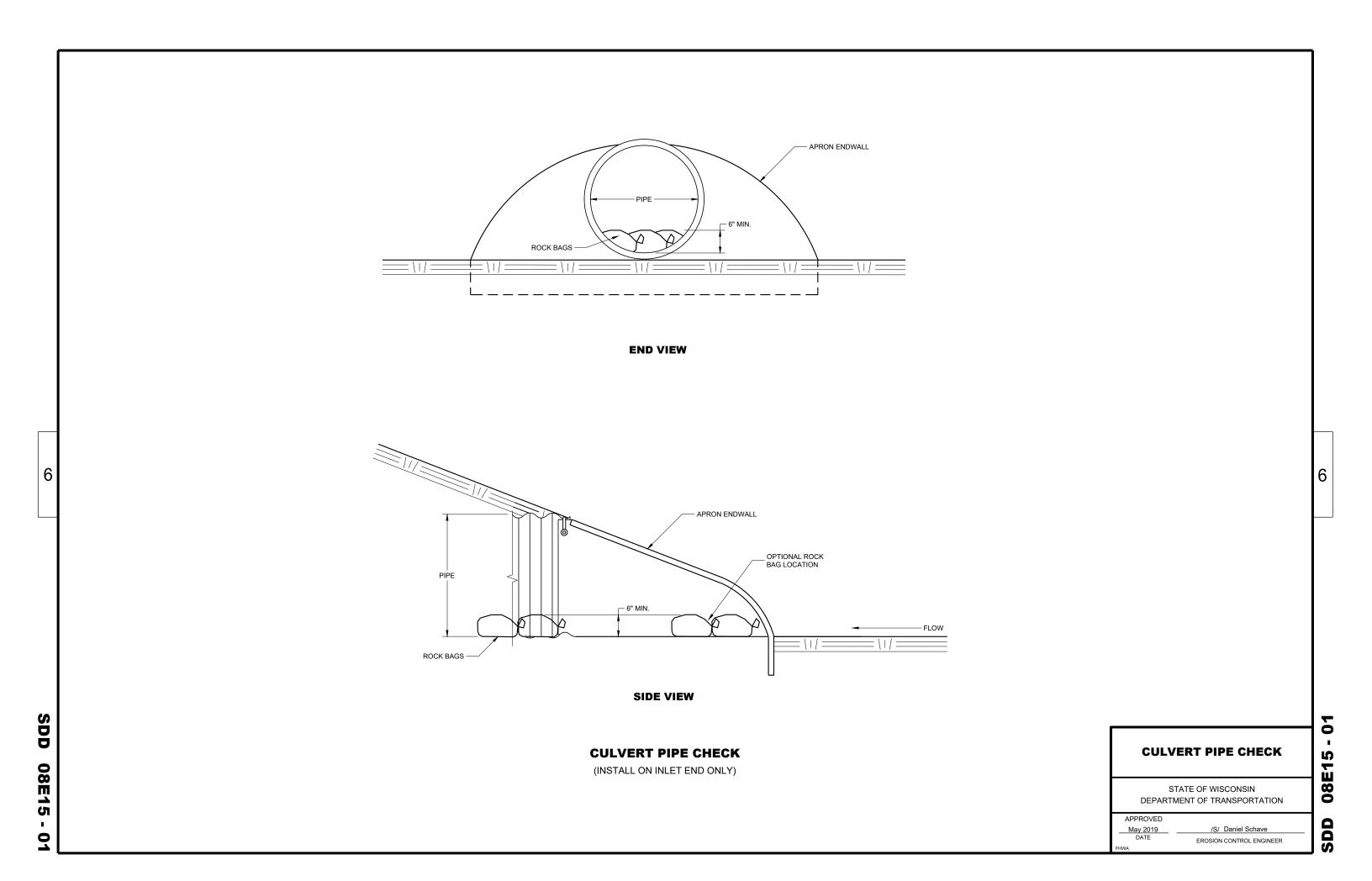
(WHEN REQUIRED BY THE ENGINEER)



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D.D. 8 E 9-6



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END CORNER

1/16" DIA. HOLES FOR

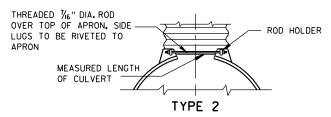
BOLTS OR RIVETS -

12" C-C MAX. SPACING

METAL APRON ENDWALLS												
PIPE	MIN. THICK.				APPROX.							
DIA. (Inches) (IN.) STEEL ALU)			A (±]")	B (MAX.)	H (±]")	L (±1 ½")	L1 (1)	L 2	W (±2")	SLOPE	BODY	
12	.064	.060	6	6	6	21	12	171/2	24	2½+o 1	1Pc.	
15	.064	.060	7	8	6	26	14	213/4	30	21/2+o 1	1 Pc.	
18	.064	.060	8	10	6	31	15	281/4	36	$2\frac{1}{2}$ to 1	1Pc.	
21	.064	.060	9	12	6	36	18	29%	42	$2\frac{1}{2}$ to 1	1Pc.	
24	.064	.075	10	13	6	41	18	371/4	48	2½+o 1	1Pc.	
30	.079	.075	12	16	8	51	18	52 ¹ / ₄	60	21/2+0 1	1Pc.	
36	.079	.105	14	19	9	60	24	59¾	72	2½+o 1	2 Pc.	
42	.109	. 105	16	22	11	69	24	75%	84	21/2+o 1	2 Pc.	
48	.109	.105	18	27	12	78	24	81	90	2 ¹ / ₄ †o 1	3 Pc.	
54	.109	.105	18	30	12	84	30	851/2	102	2 ¹ / ₄ †o 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	11/2+0 1	3 Pc.	
84	.109×	.105×	18	45	12	87	_	_	138	1½+o 1	3 Pc.	
90	.109×	.105×	18	37	12	87	_	_	144	11/2 to 1	3 Pc.	
96	.109×	.105×	18	35	12	87	ı	ı	150	1½+0 1	3 Pc.	

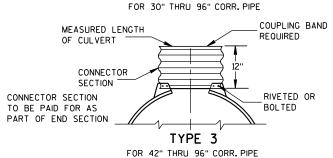
	REINFORCED CONCRETE APRON ENDWALLS PIPF DIMENSIONS (Inches)											
PIPE		APPROX.										
DIA.	T	A	В	С	D	E	G	SLOPE				
12	2	4	24	48 1/8	721/8	24	2	3 to 1				
15	21/4	6	27	46	73	30	21/4	3 to 1				
18	$2\frac{1}{2}$	9	27	46	73	36	21/2	3 to 1				
21	23/4	9	36	371/2	731/2	42	23/4	3 to 1				
24	3	91/2	431/2	30	731/2	48	3	3 to 1				
27	31/4	101/2	$49^{1}/_{2}$	24	731/2	54	31/4	3 to 1				
30	$3\frac{1}{2}$	12	54	193⁄4	731/2	60	31/2	3 to 1				
36	4	15	63	34¾	97¾	72	4	3 to 1				
42	$4\frac{1}{2}$	21	63	35	98	78	41/2	3 to 1				
48	5	24	72	26	98	84	5	3 to 1				
54	51/2		65	**************************************	98 ¹ /4- 100	90	51/2	2% to 1				
60	6	* ** 30-35	60	39	99	96	5	2 to 1				
66	61/2		* ** 72-78	* * * 21-27	99	102	51/2	2 to 1				
72	7	* ** 24-36	78	21	99	108	6	2 to 1				
78	71/2	* ** 24-36	78	21	99	114	61/2	2 to 1				
84	8	36	901/2	21	1111/2	120	61/2	11/2+0 1				
90	81/2	41	871/2	24	1111/2	132	61/2	11/2+0 1				

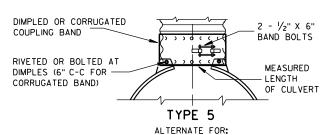
END SECTION CONNECTOR STRAP THREADED 76" DIA. ROD AROUND CULVERT & THROUGH CONNECTOR TANK TYPE CONNECTOR LUG LUG OR ALTERNATE CONNECTOR STRAP (SEE DETAIL) MEASURED LENGTH OF CULVERT



TYPE 1

FOR 12" THRU 24" CORR. PIPE





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

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.

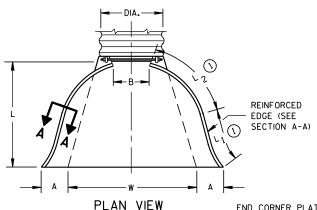
CONNECTION DETAILS

1" WIDE. 12 GA. (0.109" THICK) GALVANIZED STRAP WITH STANDARD 6" X 1/2" BAND BOLT AND NUT ALTERNATE FOR TYPE 1 CONNECTION

*MINIMUM **MAXIMUM

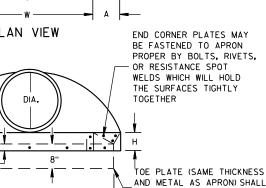
OPTIONAL

DESIGN



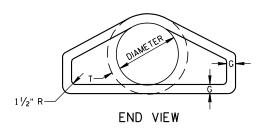
* EXCEPT CENTER PANEL

SEE GENERAL NOTES

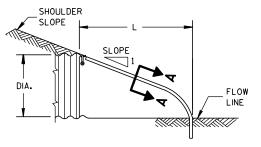


BE FURNISHED WHEN CALLED

FOR ON THE PLANS

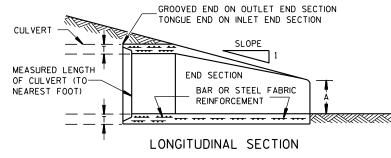


PLAN

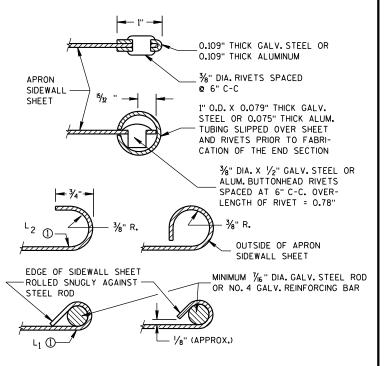


END VIEW





CONCRETE ENDWALLS



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

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.

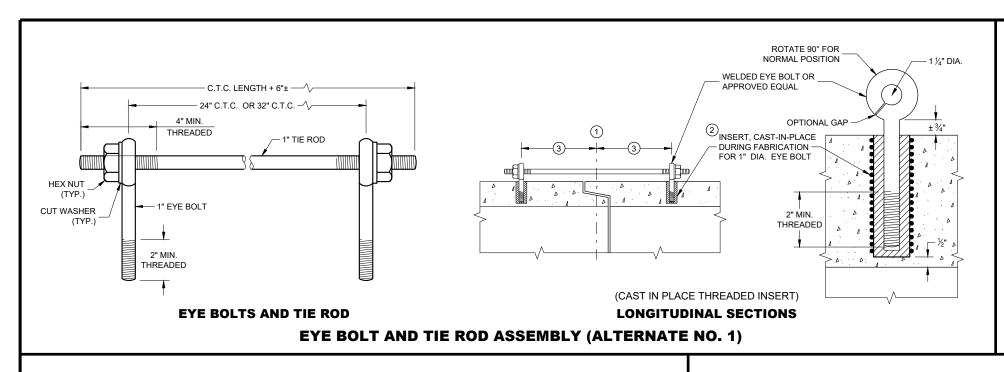
WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

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



STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

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



GENERAL NOTES

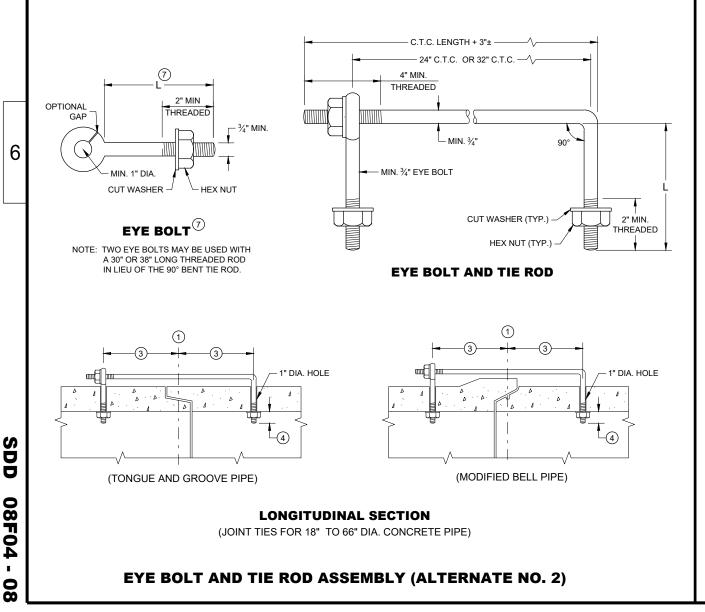
DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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

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

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

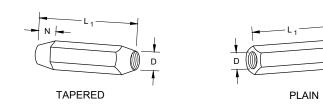
- 1) CENTER LINE OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.
- 2 THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.
- (3) HOLES SHALL BE CAST-IN-PLACE OR DRILLED PER THE APPLICABLE DETAIL, AND EQUAL DISTANCE FROM THE CENTERLINE OF THE JOINT.
- 4 BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.
- 5 OPENING TO BE ROD DIAMETER PLUS 1 INCH.
- ⑥ LENGTH ADEQUATE TO EXTEND TO WITHIN ½ INCH OF THE INNER SURFACE OF THE PIPE.
- (7) EYE BOLT LENGTH DETERMINED BY WALL THICKNESS, BELL THICKNESS AND BOLT PROJECTION INSIDE PIPE.



PIPE DIAMETER TIE ROD DIAMETER D L 1 N 12 - 60 5/6 5/6 5 ½ 66 - 84 3/4 3/4 5 ½

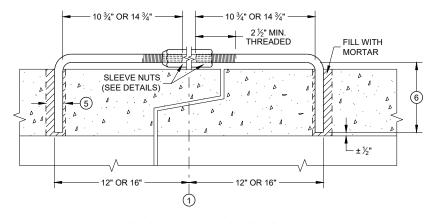
ADJUSTABLE TIE ROD TABLE

DIMENSIONS SHOWN ARE IN INCHES



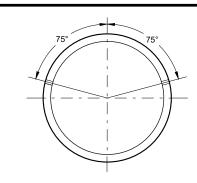
RIGHT AND LEFT THREADS

SLEEVE NUTS



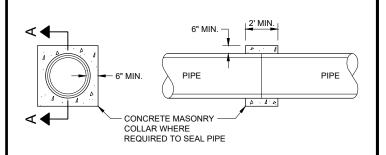
LONGITUDINAL SECTION

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



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

TRANSVERSE SECTION



SECTION A - A

CONCRETE COLLAR DETAIL

JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

 APPROVED
 /S/ Rodney Taylor

 November 2021
 /S/ Rodney Taylor

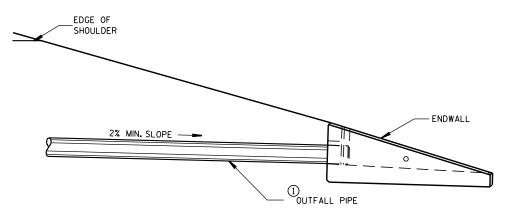
 DATE
 ROADWAY STANDARDS DEVELOPMENT

 ENGINEER
 ENGINEER

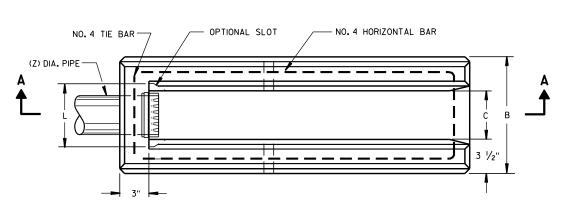
DD 08F04 - 08

HEADWALL IS SIZED AND LOCATED TO CONFORM TO THE

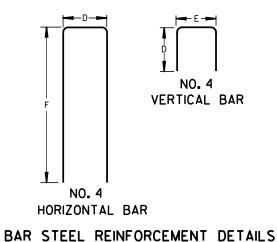
4 INCH DIAMETER PIPE DIMENSIONS (C & J)

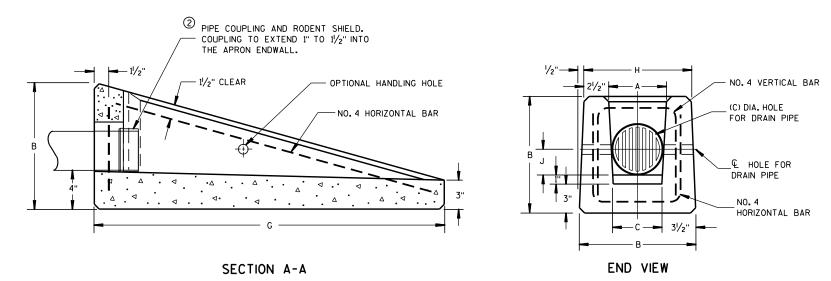


INSTALLATION DETAIL



PLAN VIEW





CONCRETE APRON ENDWALL FOR UNDERDRAIN

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.

ALTERNATIVE DESIGNS WHICH PROVIDE EQUIVALENT CAPACITY AND STRENGTH MAY BE USED WHEN APPROVED BY THE ENGINEER. ENDWALL MAY BE EITHER PRECAST OR CAST-IN-PLACE CONCRETE.

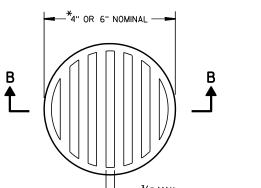
THE UNDERDRAIN PIPE SHALL BE FULLY INSERTED AND SEALED INTO THE ENDWALL WITH CEMENT MORTAR PRIOR TO BACKFILLING AROUND THE STRUCTURE.

THE UPPERMOST POINT OF THE ENDWALL SHALL BE PLACED FLUSH WITH THE ROADWAY SLOPE. ADJACENT EMBANKMENT SLOPES SHALL BE SHAPED TO FIT THE SIDES AND TOE OF THE ENDWALL. EXACT PLACEMENT OF THE OUTFALL PIPE AND ENDWALL SHALL BE DETERMINED BY THE ENGINEER TO MATCH THE ELEVATIONS AND FLOW DIRECTION OF THE ROADSIDE DITCH.

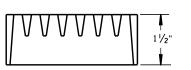
1 THE OUTFALL PIPE UNDERDRAIN AND FITTINGS SHALL CONFORM TO THE REQUIREMENTS OF THE SPECIFICATION FOR POLY (VINYL CHORIDE) (PVC) PLASTIC DRAIN, WASTE AND VENT PIPE AND FITTINGS, ASTM DESIGNATION: D 2665, SCHEDULE 40 PVC OR THE STANDARD SPECIFICATION FOR TYPE PSM POLY (VINYL CHORIDE) (PVC) SEWER PIPE AND FITTINGS, ASTM DESIGNATION: D 3034, TYPE PSM SDR 23.5 PVC SEWER PIPE, ALL JOINTS SHALL BE SOLVENT WELDED.

THE OUTFALL PIPE INCLUDING ALL FITTINGS AND THE RODENT SHIELD SHALL BE MEASURED AND PAID FOR AS PIPE UNDERDRAIN UNPERFORATED.

(2) THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE OUTFALL PIPE. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.



NOTE: ORIENT SHIELD SO SLOTS ARE VERTICAL.



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SECTION B-B

2 RODENT SHIELD

*NOTE: DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING.

REINFORCED CONCRETE APRON ENDWALL FOR PIPE UNDERDRAIN

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/10/98 /S/ Rory L. Rhinesmith

DATE CHIEF ROADWAY DEVELOPMENT ENGINEER

S.D.D. 8 F 6

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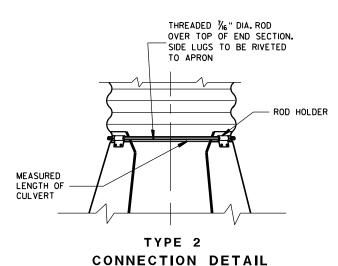
GENERAL NOTES

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.

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

STEEL APRON ENDWALLS FOR PIPE ARCH SLOPED SIDE DRAINS DIMENSIONS (Inches) L DIMENSIONS MIN. THICK (Inches) LENGTI OVERALL LENGTH LENGTH (Inches) SLOPE SLOPE SLOPE (Inches) SPAN RISE INCHES INCHES WIDTH 44 4:1 30 10:1 ② 70 13 .064 * 8 6 27 43 4:1 20 21 15 6:1 30 10:1 70 .064 * 24 8 6 30 46 4:1 32 6:1 48 10:1 100 21 18 .064 * 8 6 50 4:1 40 60 10:1 120 28 6:1 24 20 .079 × 12 9 30 35 24 41 65 4:1 56 6:1 84 10:1 160 .109 * 12 9 48 4:1 76 6:1 114 72 10:1 210 36 42 29 .109 12 55 4:1 92 42 49 33 16 87 6:1 138 57 .109 16 12 63 95 4:1 112 168 48 38 6:1 132 6:1

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



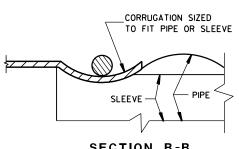
12 GAGE SMOOTH GALVANIZED STEEL. SEE SECTION B-B

DETAIL FOR END SECTION

ATTACHMENT.

STEEL ADAPTER SLEEVE FOR

CONCRETE PIPE



SECTION B-B

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

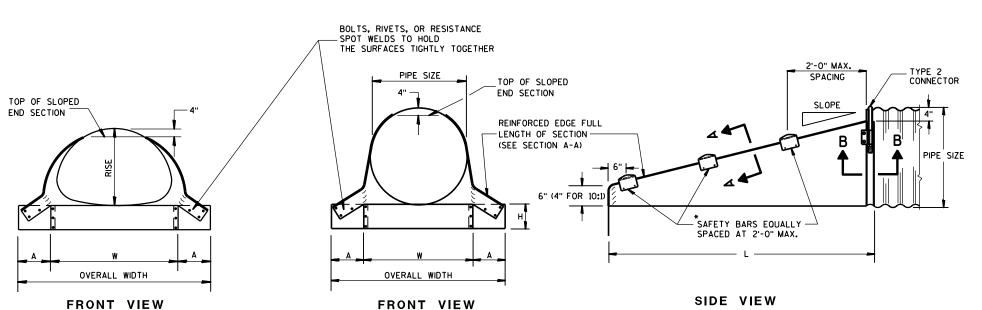
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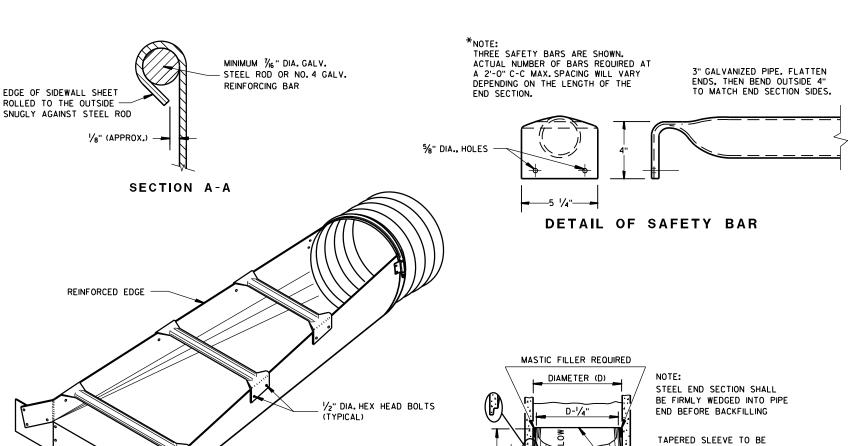
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STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED

9/14/2012 /S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT DATE ENGINEER FHWA





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ISOMETRIC VIEW

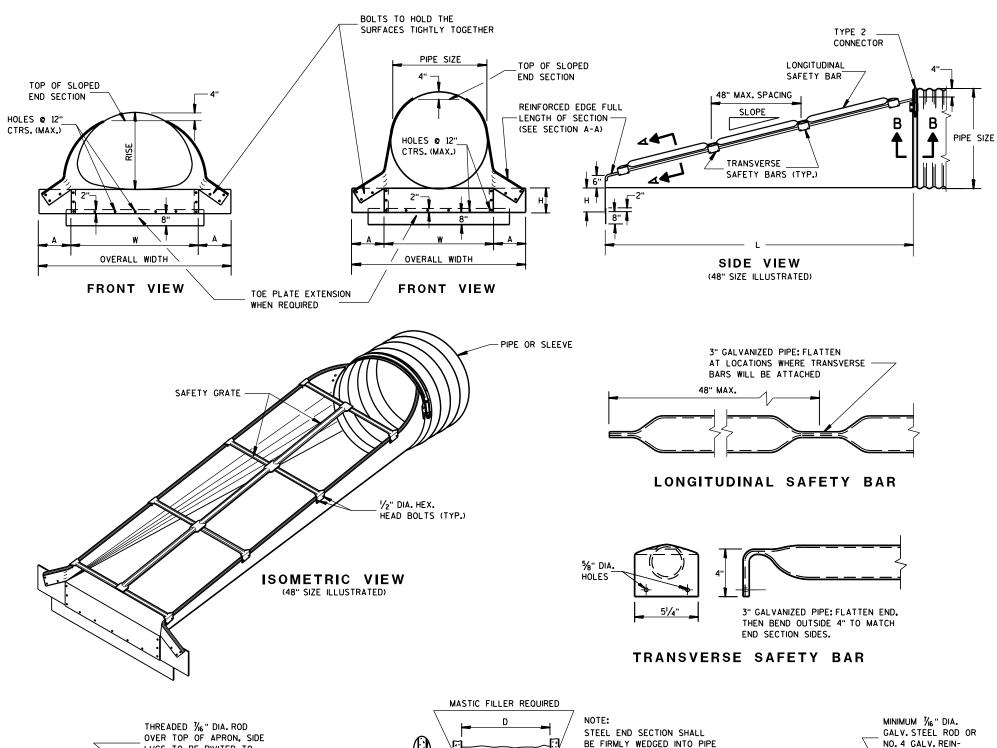


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GENERAL NOTES

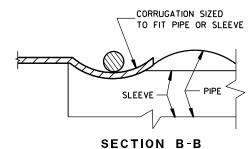
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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

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

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

STEI	STEEL APRON ENDWALLS FOR PIPE ARCH SLOPED CROSS DRAINS												
EQUIV.	INCHES		MIN. THICK.		D	IMENSIO	NS (Inc	:hes)	L DIMENSIONS				
DIA. (IN.)	SPAN	RISE	IN.	GAGE	A	Н	W	OVERALL WIDTH	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES	
30	35	24	.079	14	12	9	41	65	4:1	56	6:1	84	
36	42	29	.109	12	12	9	48	72	4:1	76	6:1	114	
42	49	33	.109	12	16	12	55	87	4:1	92	6:1	138	
48	57	38	.109	12	16	12	63	95	4:1	112	6:1	168	
54	64	43	.109	12	16	12	70	102	4:1	132	6:1	198	
60	71	47	.109	12	16	12	77	109	4:1	148	6:1	222	



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

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED

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

TYPE 2 CONNECTOR DETAIL

ROD

HOLDER

LUGS TO BE RIVITED TO

MEASURED

OF CULVERT

LENGTH

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BE FIRMLY WEDGED INTO PIPE END BEFORE BACKFILLING D-1/4" TAPERED SLEEVE TO BE 12 GAGE SMOOTH GALVANIZED STEEL. SEE SECTION B-B DETAIL FOR END SECTION ATTACHMENT. STEEL ADAPTER SLEEVE FOR

CONCRETE PIPE

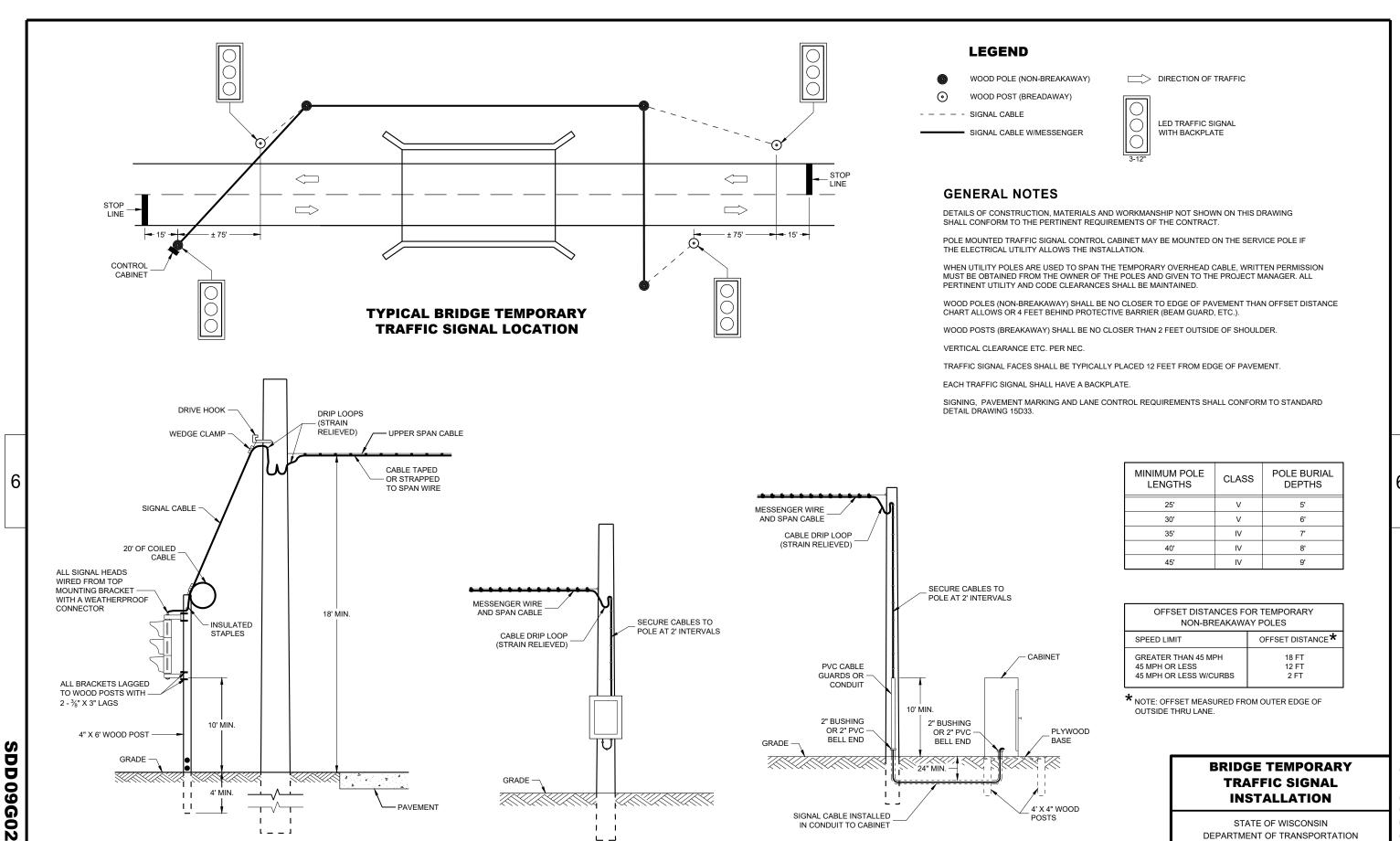
SHEET ROLLED TO THE OUTSIDE SNUGLY AGAINST STEEL ROD

EDGE OF SIDEWALL

1/8" (APPROX.) -

SECTION A-A

FORCING BAR



POLE MOUNT

CABINET INSTALLATION

GRADE

- PAVEMENT

4' MIN.

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TYPICAL DROP TO

TRAFFIC SIGNAL FACE

24" MIN.

GROUND MOUNT

CABINET INSTALLATION

SIGNAL CABLE INSTALLED IN CONDUIT TO CABINET

4' X 4" WOOD

BRIDGE TEMPORARY TRAFFIC SIGNAL **INSTALLATION**

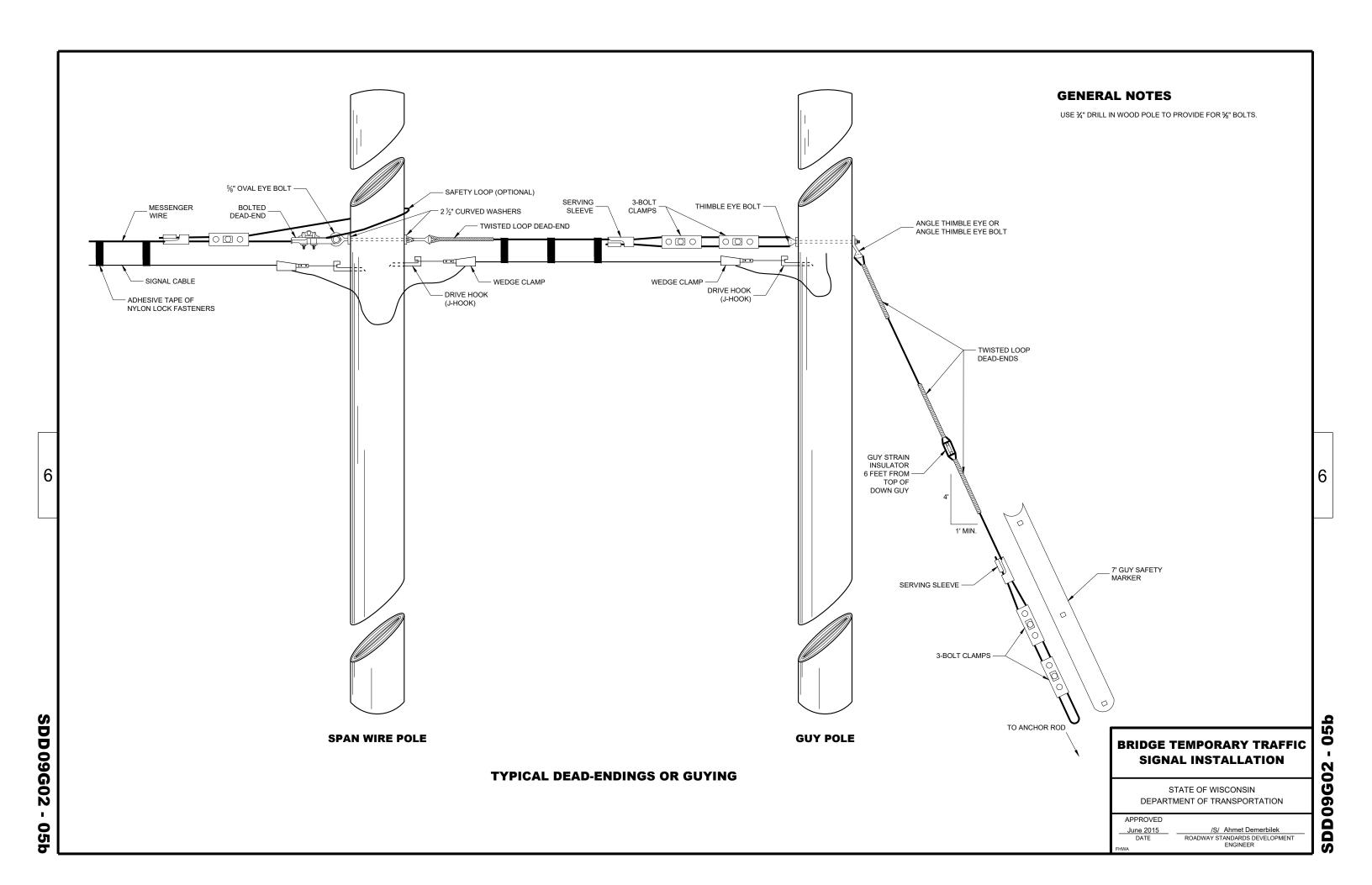
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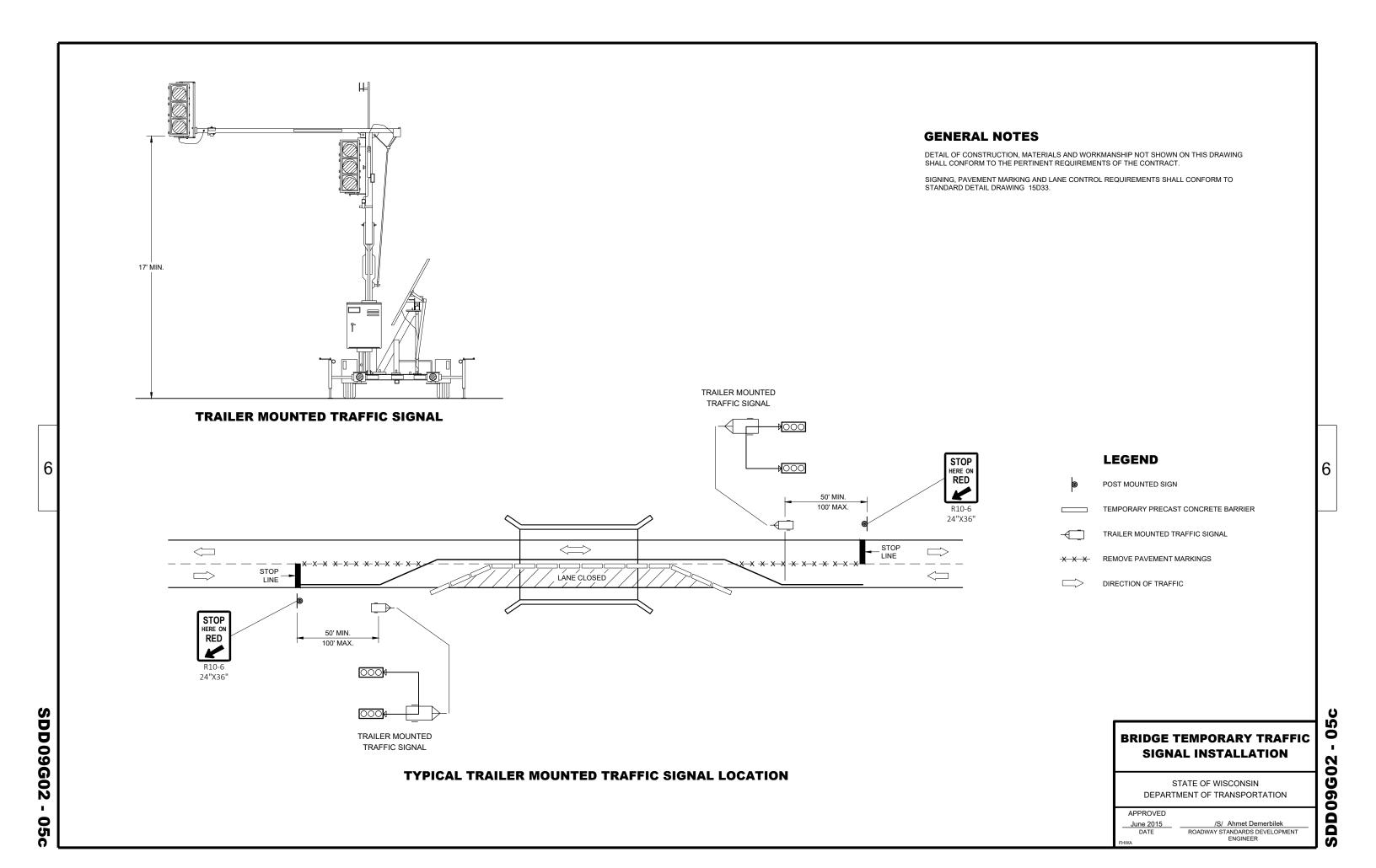
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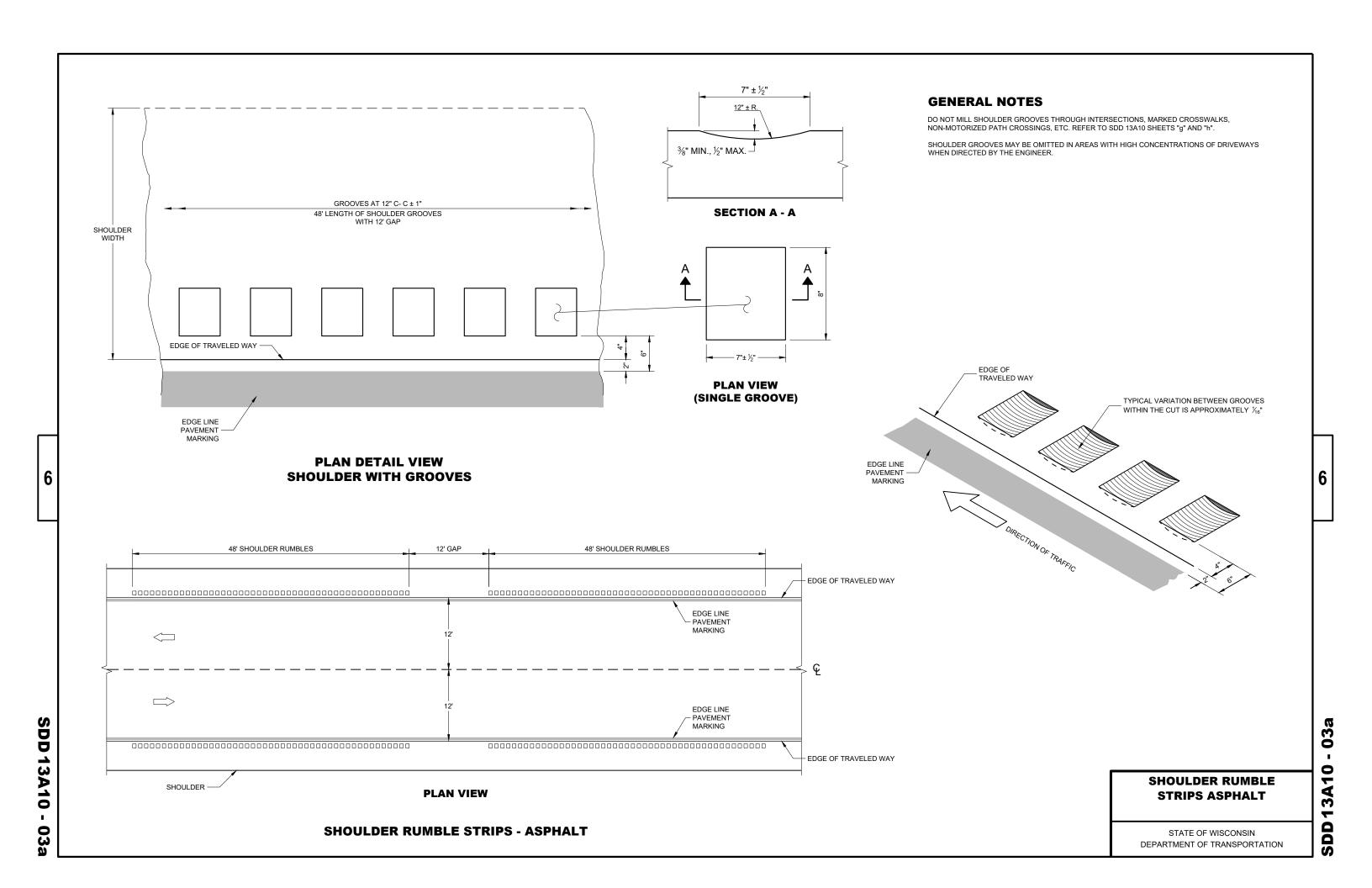
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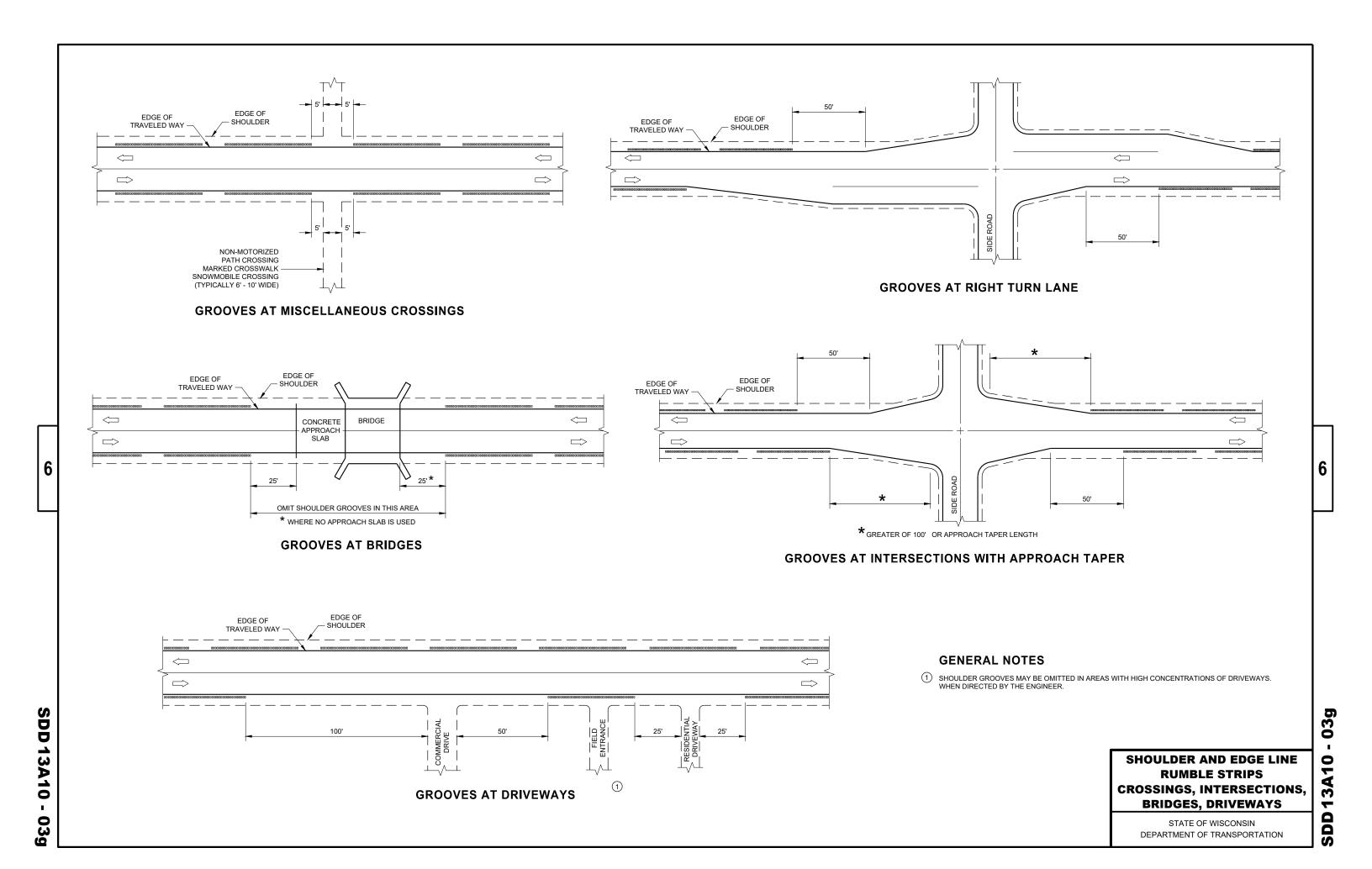
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

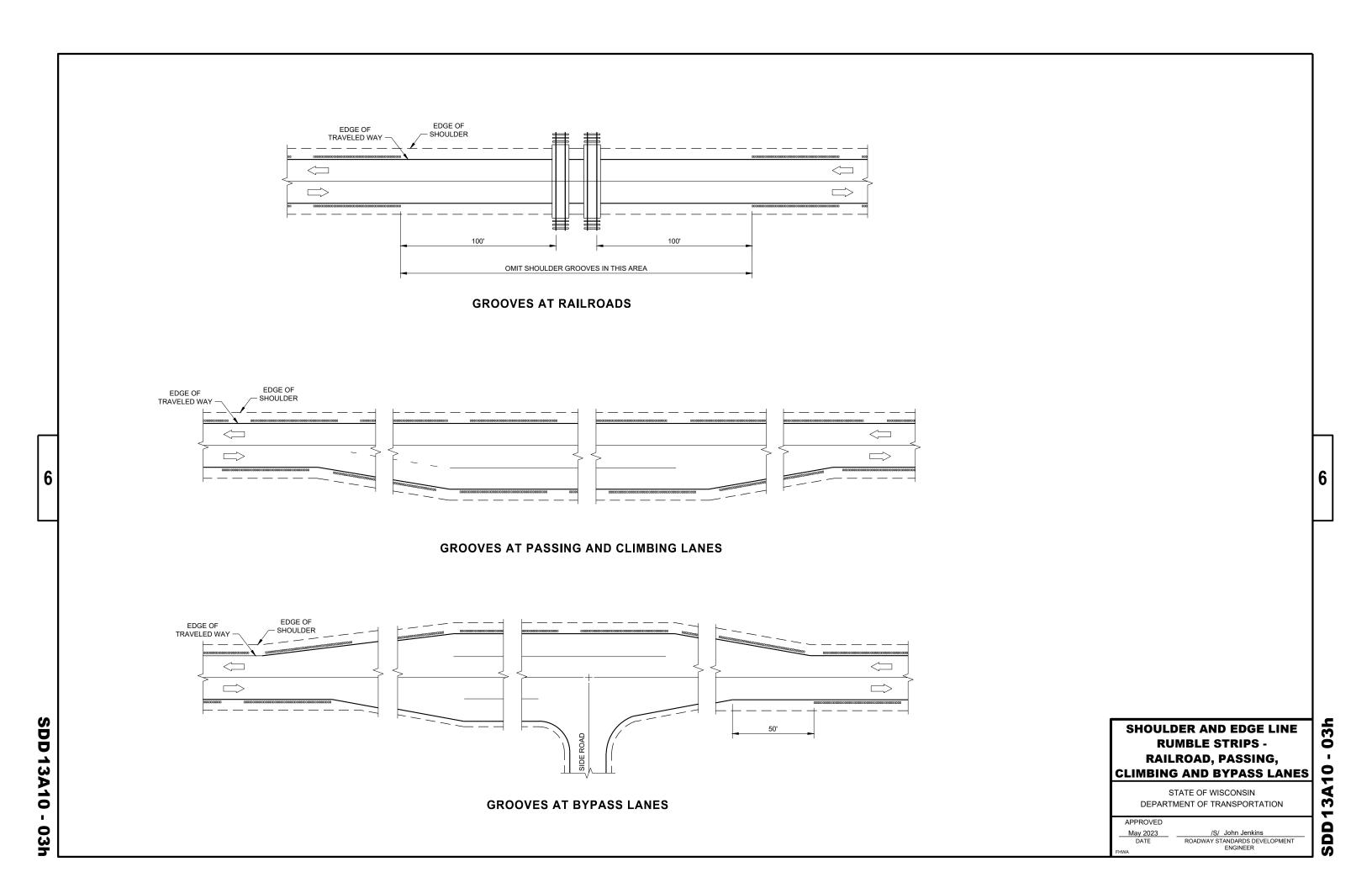
APPROVED March 2018 DATE ROADWAY STANDARDS DEVELOPMENT ENGINEER

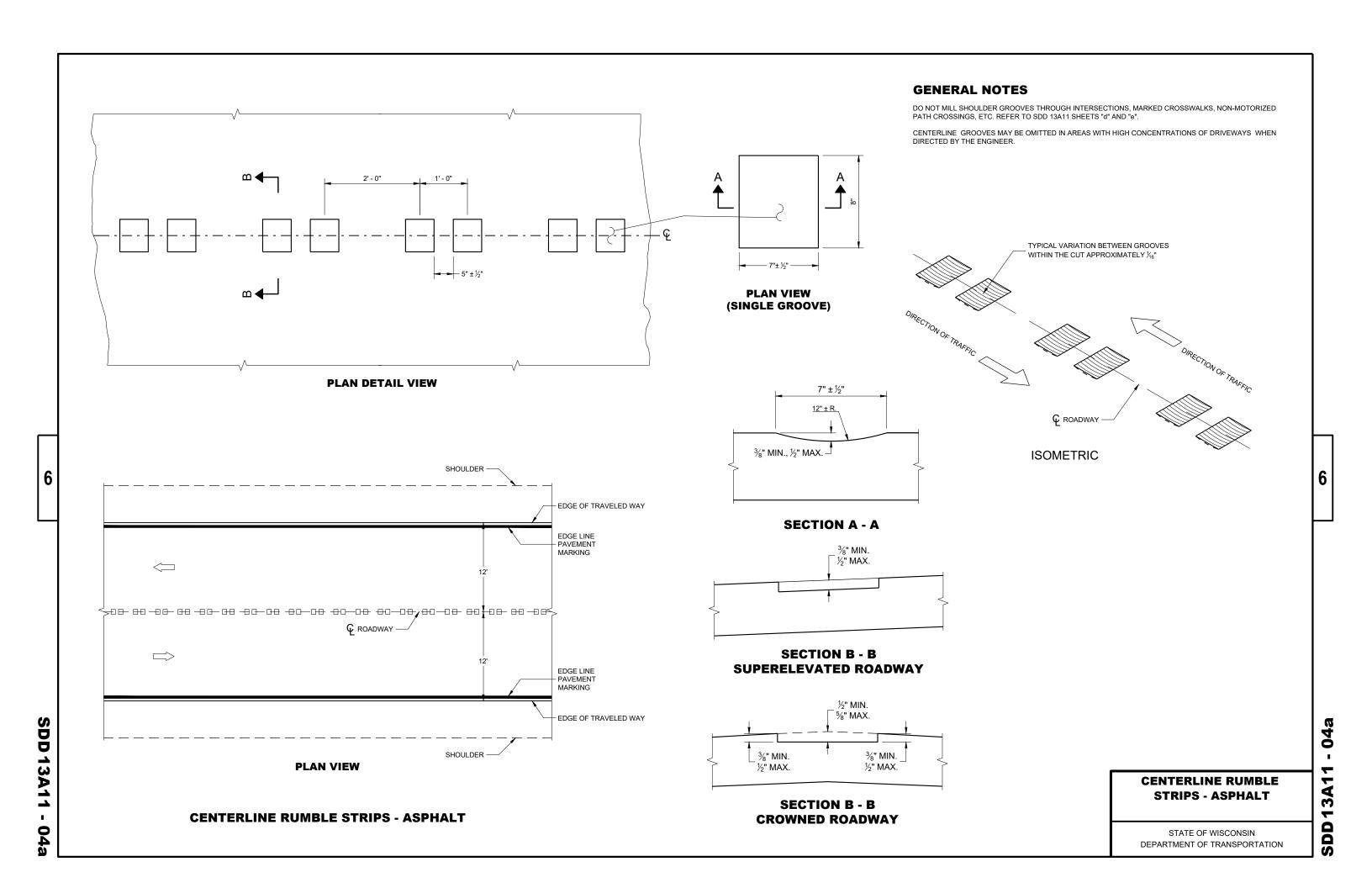


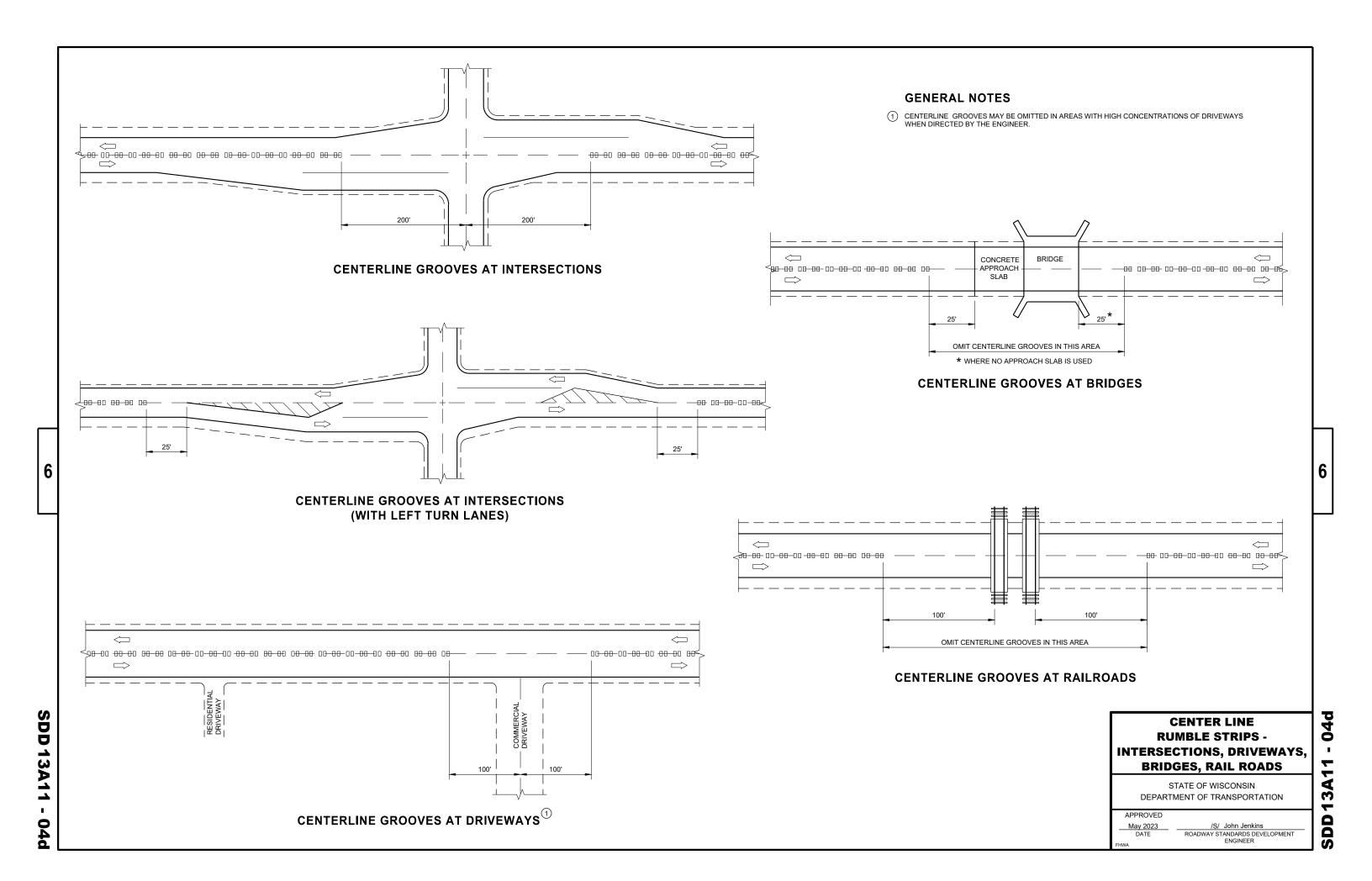


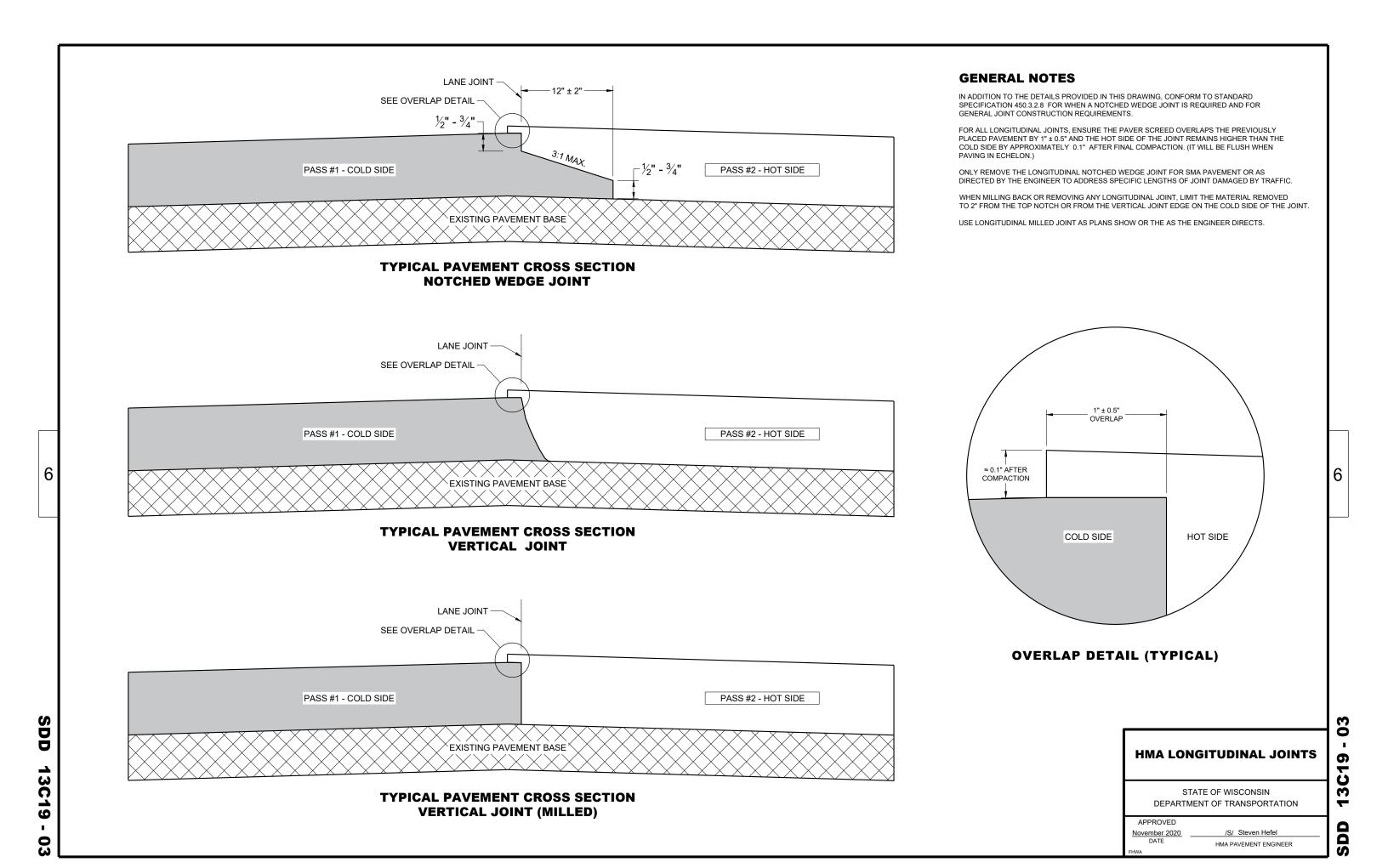


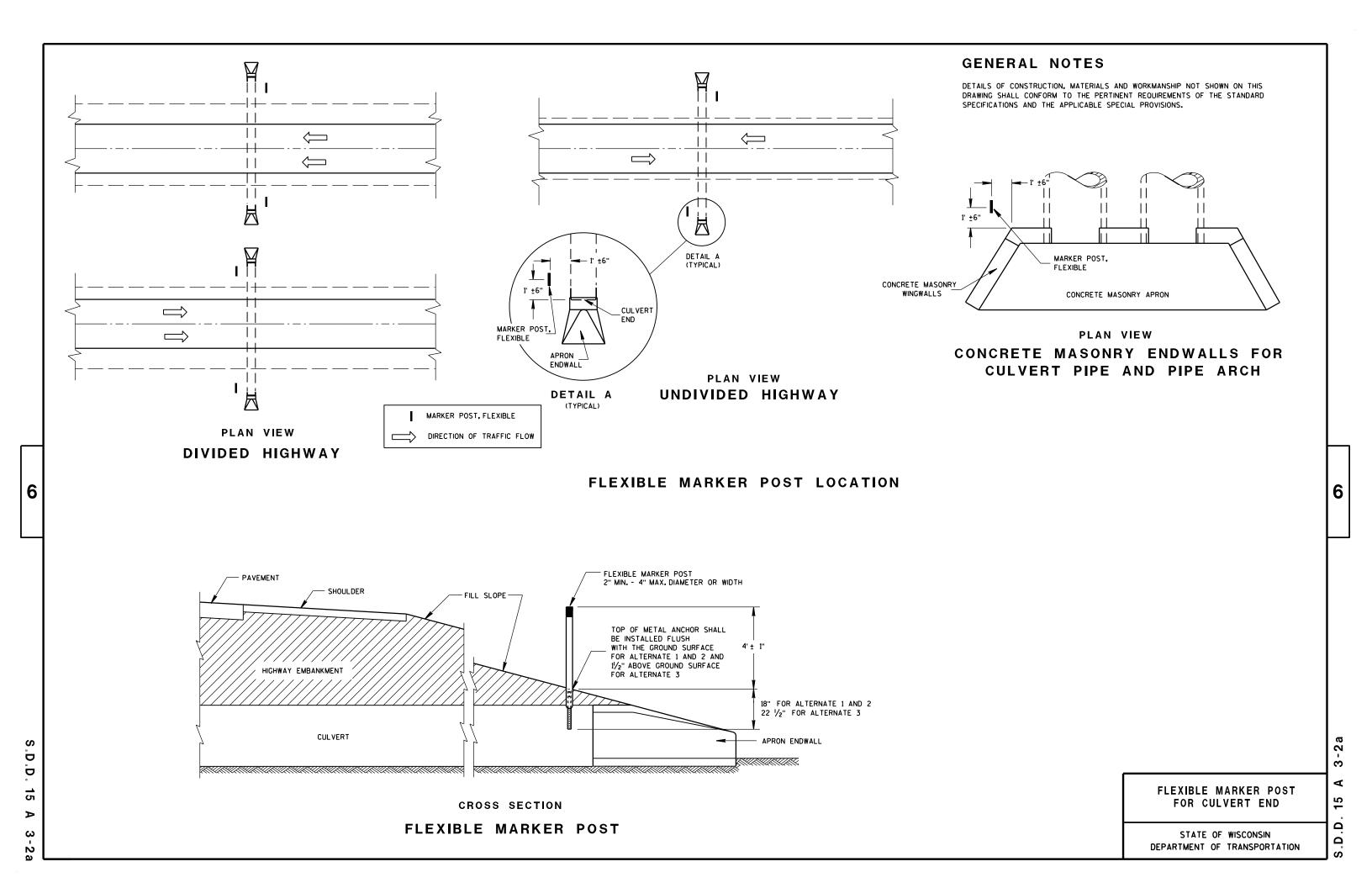


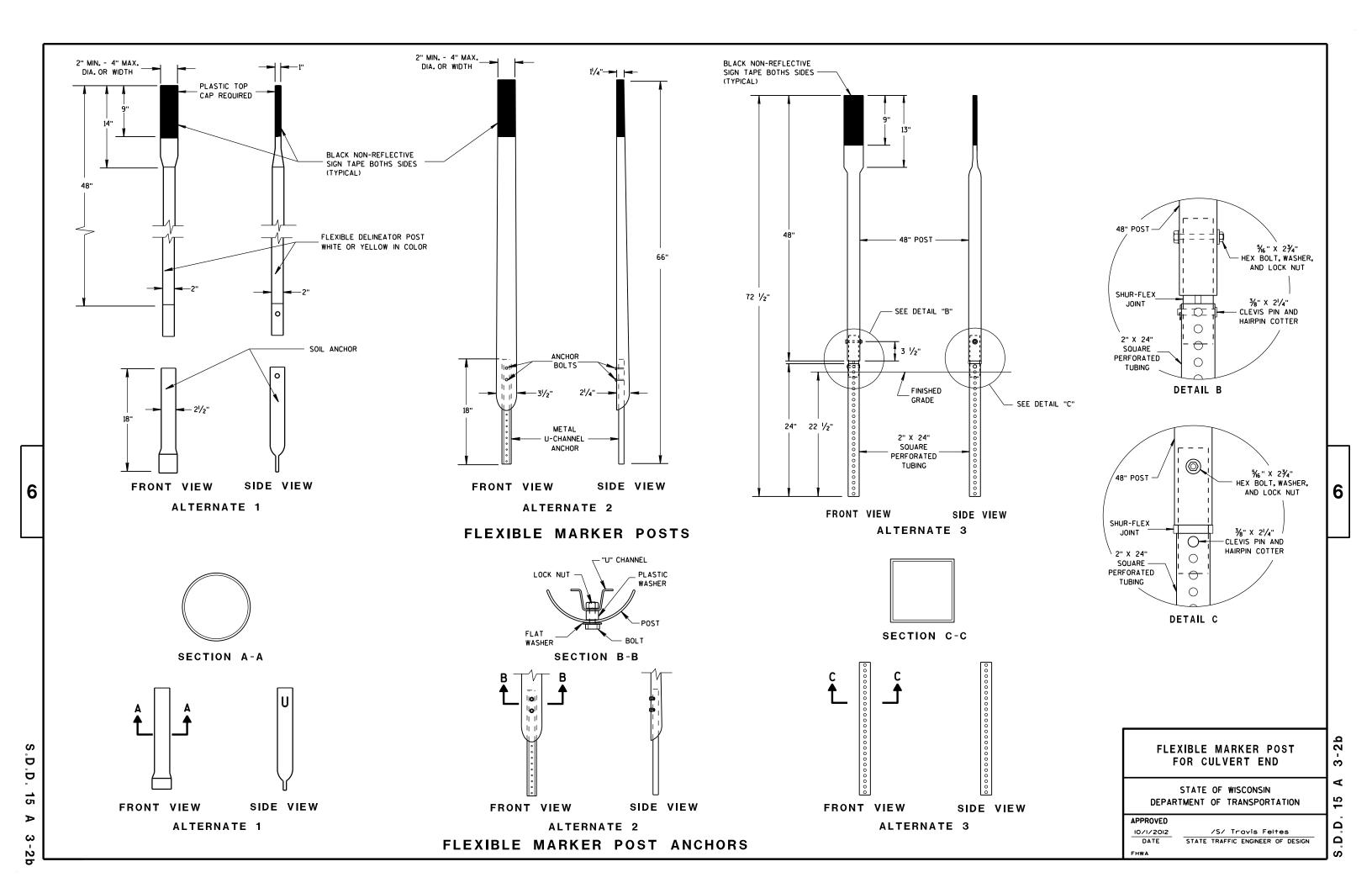


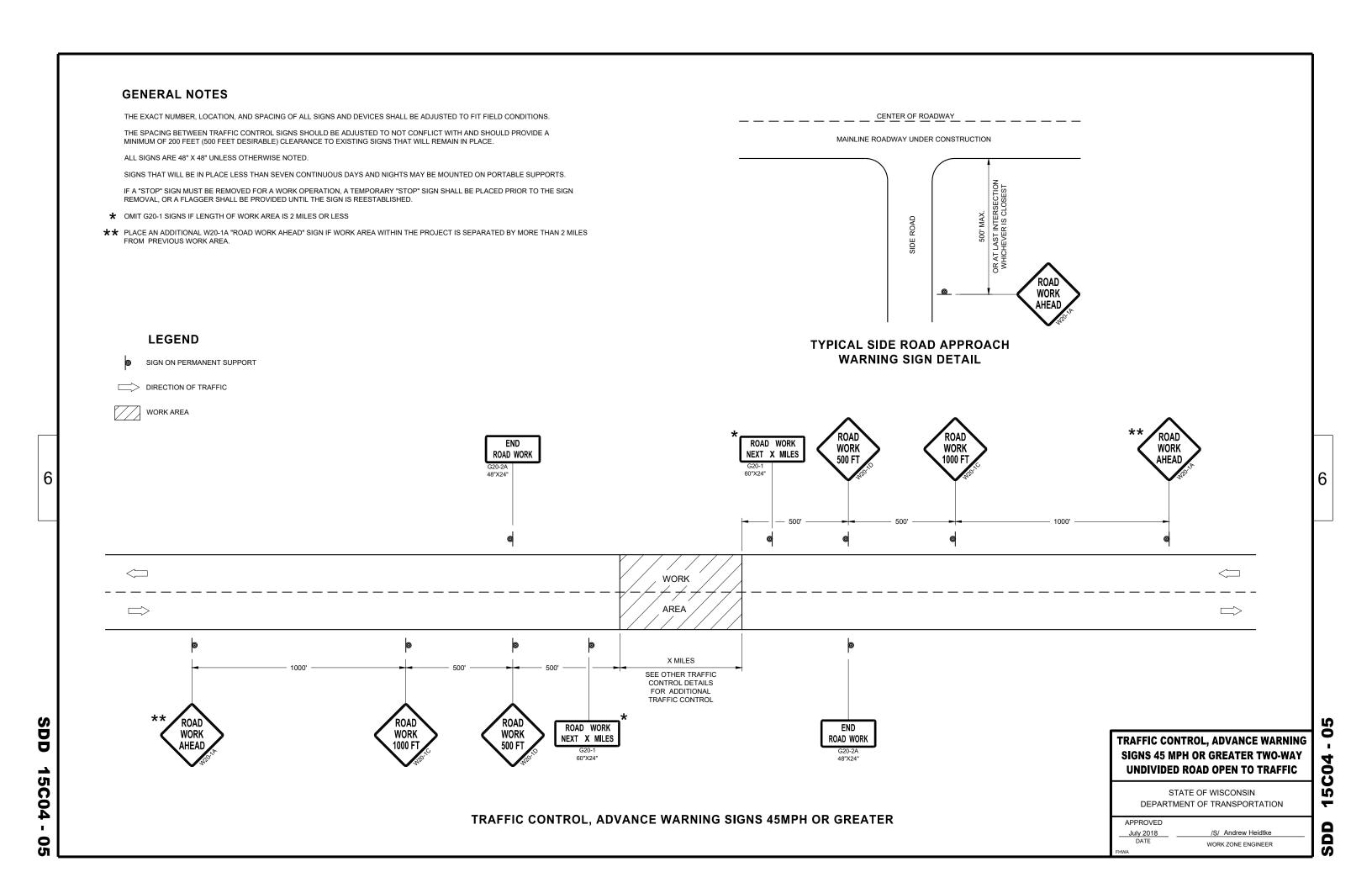


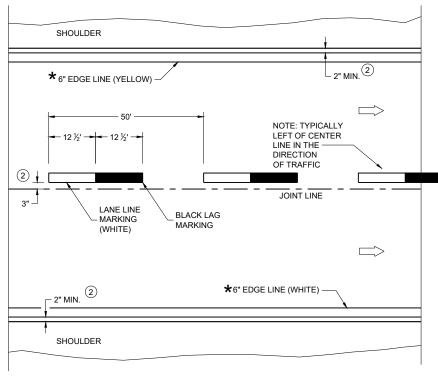












ONE WAY TRAFFIC

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

LEGEND

"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC

PERMANENT LONGITUDINAL **PAVEMENT MARKINGS**

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

May 2023 DATE

Statewide Pavement Marking Engineer

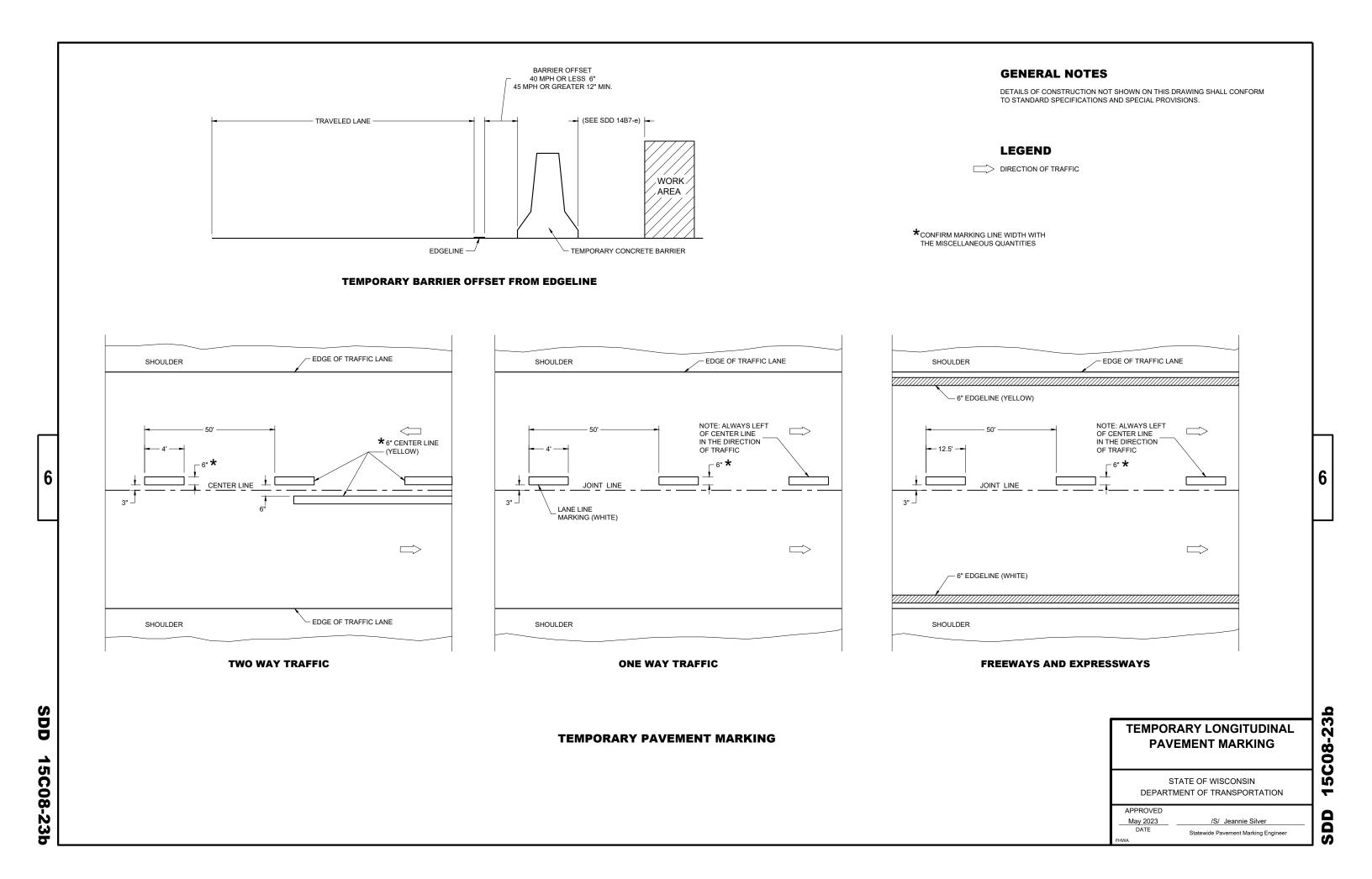
/S/ Jeannie Silver

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

SURFACE MOUNTED BASES SHALL BE FURNISHED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS TO BE COMPATIBLE WITH FLEXIBLE TUBULAR MARKER POSTS TO A SIZE AND SHAPE THAT WILL PROVIDE A STABLE POST

(1) REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.

THE ASPHALTIC ADHESIVE OR BUTYL PAD FURNISHED SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS, UNLESS DIRECTED BY THE ENGINEER TO USE BOLTS.

GENERAL NOTES

FOUNDATION WHEN SECURED TO THE PAVEMENT.

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SDD

- WHITE 360° REBOUNDABLE
REFLECTIVE SHEETING

- FLEXIBLE ORANGE POST

FLUORESCENT ORANGE

The state of the state o

FLEXIBLE TUBULAR

FLEXIBLE TUBULAR MARKER POST

WORK ZONE

2" MAX.

4" MAX.

CHANNELIZING DEVICES FLEXIBLE TUBULAR MARKER POST

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED

/S/ Andrew Heidtke

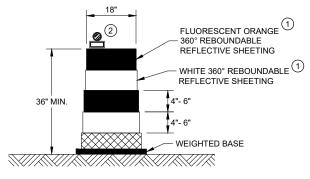
WORK ZONE ENGINEER

November 2022 DATE

SDD 15C11

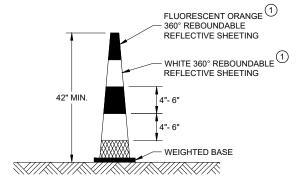
GENERAL NOTES

- (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.



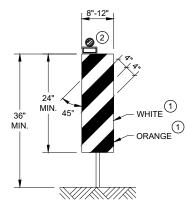
DRUM

BALLAST WIDTHS RANGE FROM 24"-36"



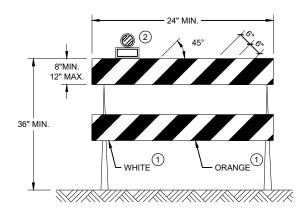
42" CONE

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



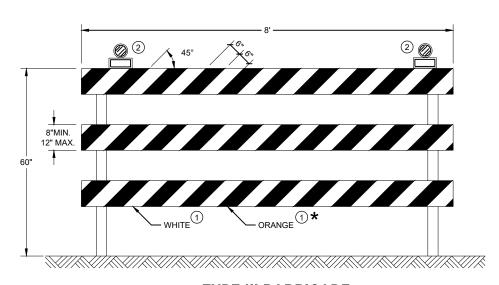
VERTICAL PANEL

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



TYPE II BARRICADE

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



TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION 15C

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

RUMBLE

STRIPS

ROAD

WORK

GENERAL NOTES FLAGGING LEGEND DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT REMOVE TEMPORARY SIGN ON PORTABLE OR PERMANENT SUPPORT UNIFORM TRAFFIC CONTROL DEVICES. PORTABLE RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING. ① FOR MOVING WORK OPERATIONS, POST ADDITIONAL W20-7A FLAGGER SIGNS AT APPROXIMATELY 3,500' INTERVALS IN THE MOVING ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED. TEMPORARY PORTABLE RUMBLE WORK OPERATION OR AS APPROVED BY THE ENGINEER. STRIP ARRAY "WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE. (2) SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA. THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS, DEVICES, AND LOCATION OF ALL FLAGGERS SHALL BE DIRECTION OF TRAFFIC ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER. WHEN THE DISTANCE BETWEEN FLAGGERS EXCEEDS 2 MILES, A PILOT CAR IS REQUIRED. WHEN CURVES REDUCE SIGHT DISTANCE BELOW 400', A PILOT CAR IS REQUIRED. THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP WORK AREA **TEMPORARY PORTABLE RUMBLE STRIPS** WHEN A SIDE ROAD OR RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS. TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED FLAGGER, EQUIPPED WITH STOP/SLOW ③ EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT PADDLE FASTENED ON SUPPORT STAFF THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FROM THE APPROVED PRODUCTS LIST. INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS. PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS. DO NOT INSTALL TEMPORARY PORTABLE RUMBLE STRIPS ON GRAVEL, MILLED SURFACES, OR ASPHALT THAT HAS BEEN PAVED LESS THAN 12 HOURS. SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE 5' MIN BE SPEED LIMIT SPACING "A" USE OF WO3-4 SIGN IS OPTIONAL. WHEN USED, PREPARED THIS SIGN SHALL BE LOCATED BETWEEN THE 25-30 MPH TO STOP W20-7A AND W20-4A SIGNS, USING SPACING "A". 35-40 MPH 350' STOP/SLOW PADDLE ŔUMBLĖ 45-55 MPH 500' WO3-4 WORK **ON SUPPORT STAFF** ROAD STRIPS 1 VARIABLE DISTANCE - 200' - 300' (TYP.) END ROAD WORK |||3 WORK AREA A/2 END ROAD WORK 200' - 300' (TYP.) VARIABLE DISTANCE

TRAFFIC CONTROL FOR LANE CLOSURE WITH **FLAGGING OPERATION**

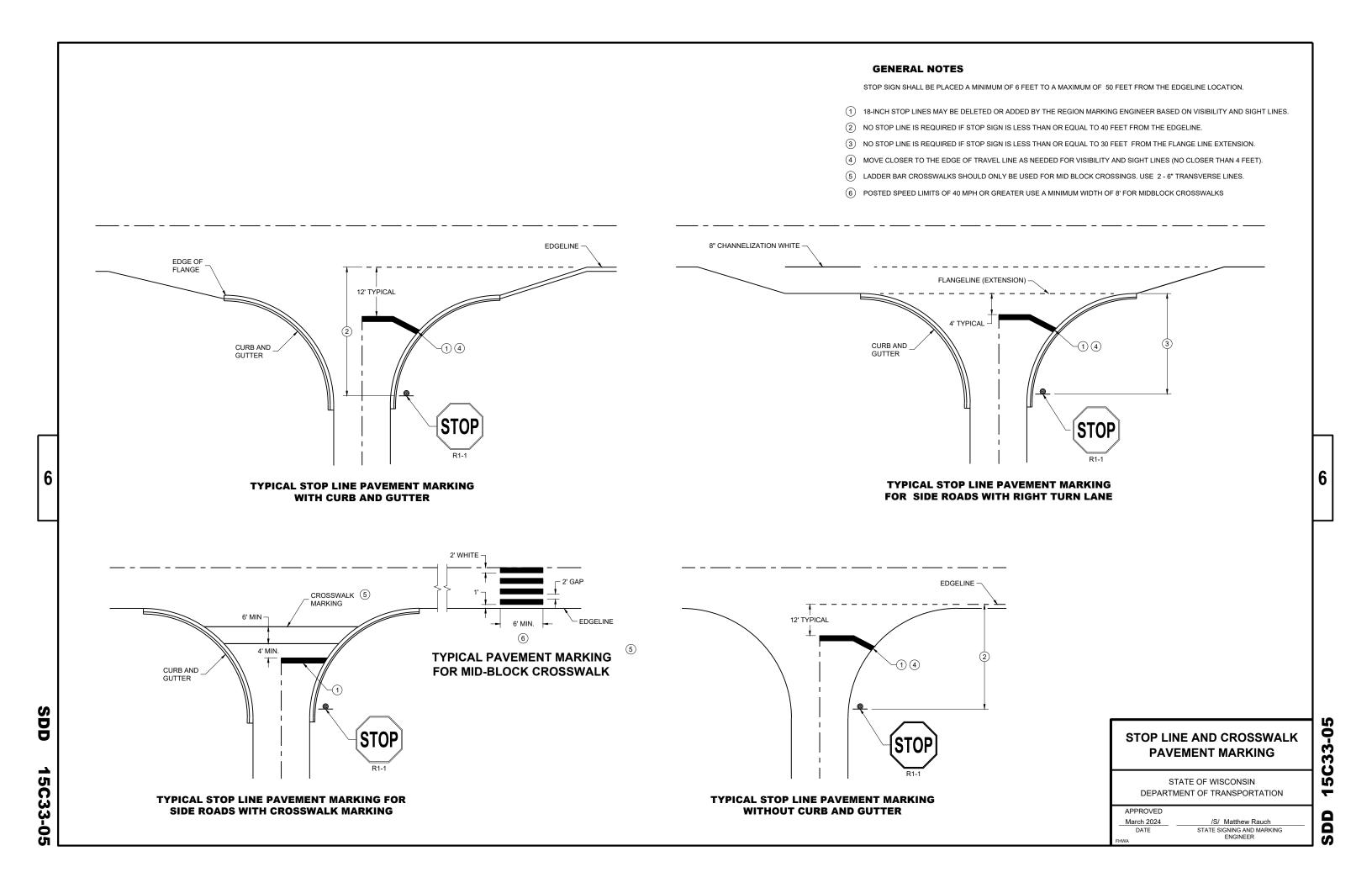
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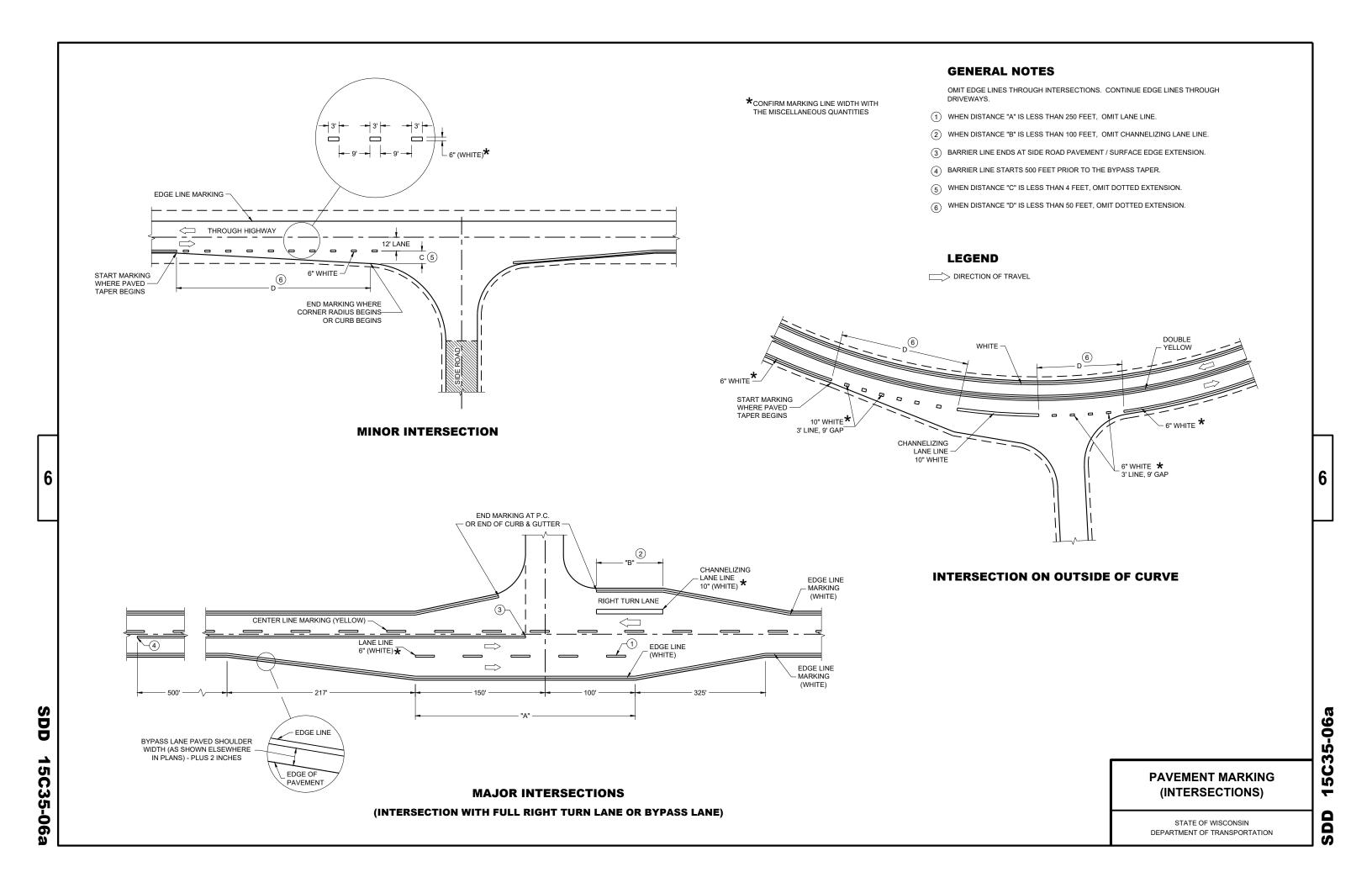
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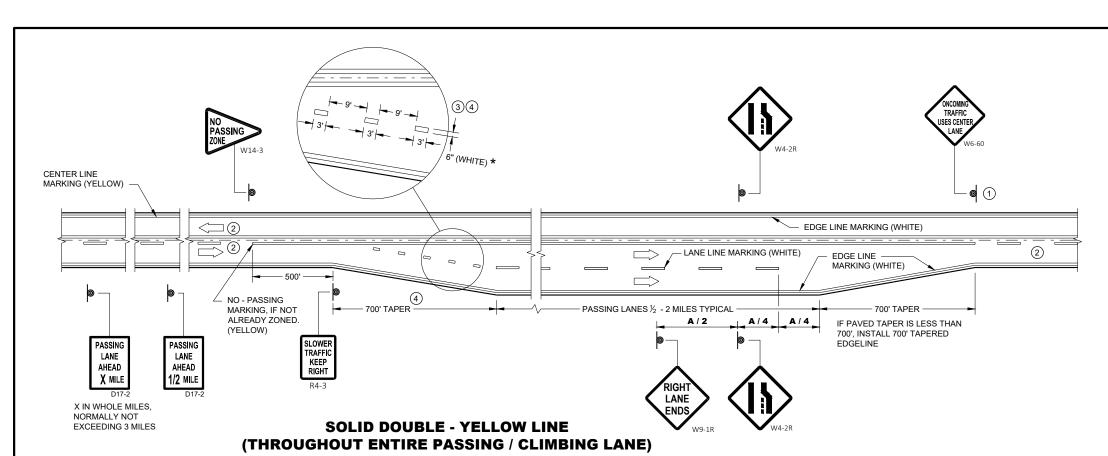
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STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

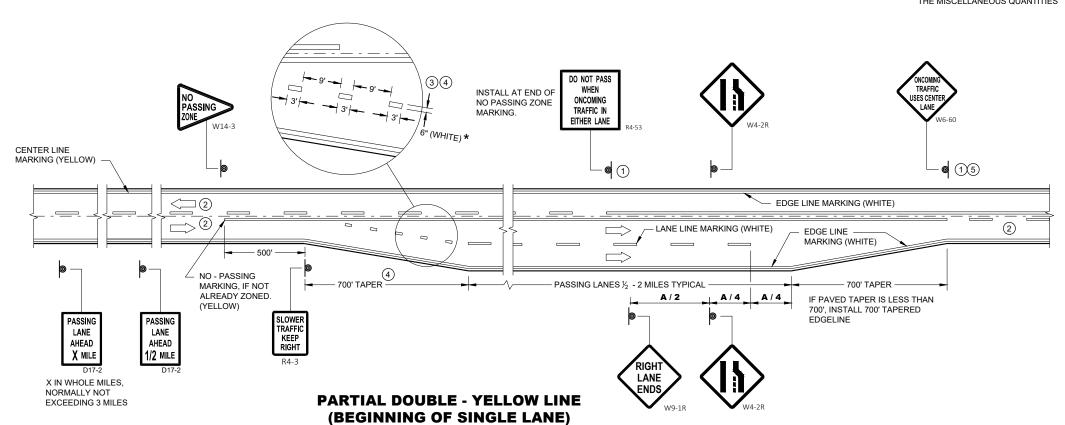
APPROVED	
May 2022	/S/ Andrew Heidtke
DATE	WORK ZONE ENGINEER
FHWA	







* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



6

SDD

15C35-06b

GENERAL NOTES

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

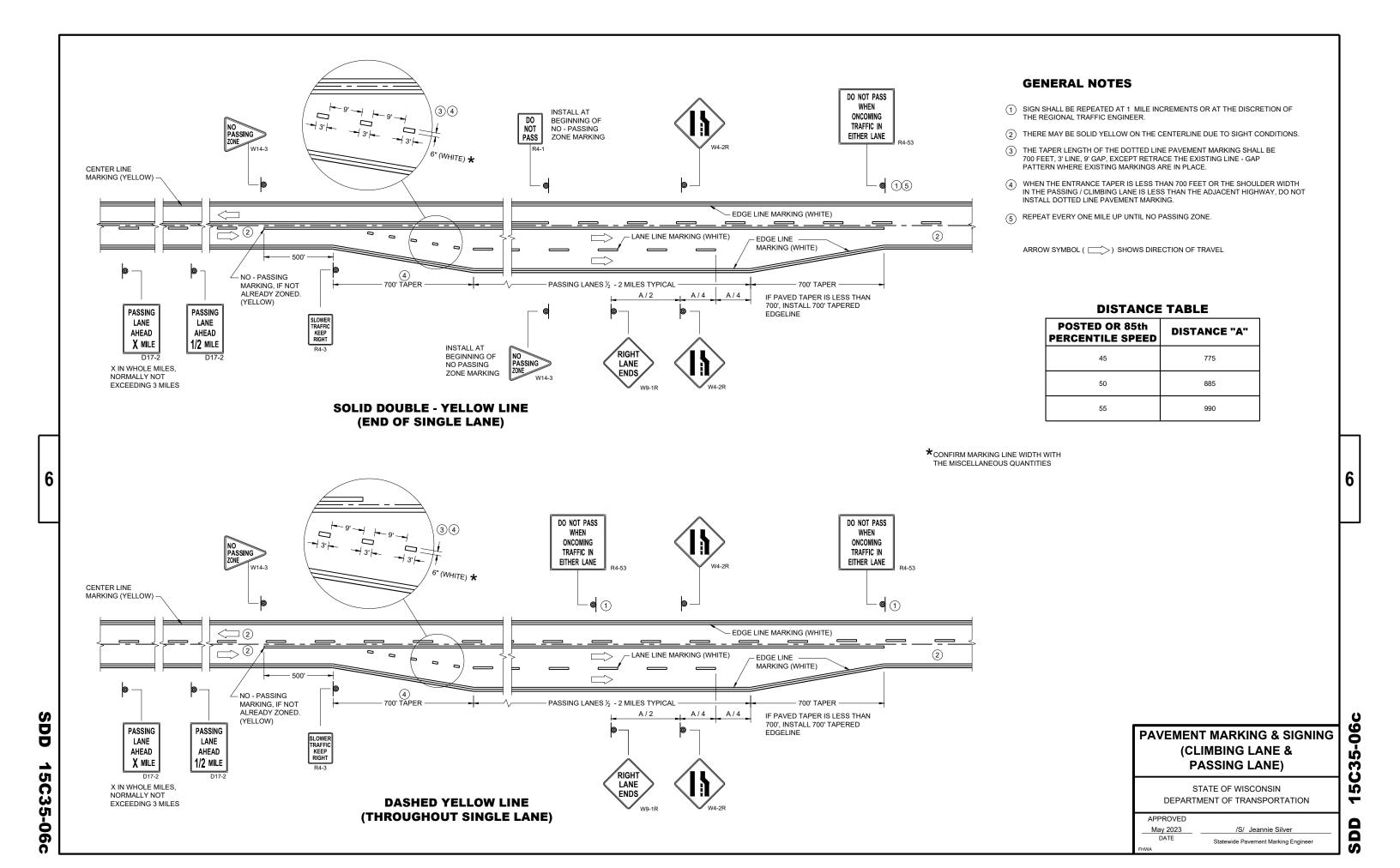
PAVEMENT MARKING & SIGNING (CLIMBING LANE & **PASSING LANE)**

C35-06b

D

SD

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION



SDD

15D20-09

GENERAL NOTES

FOR WORK ON ROADWAYS WITH SPEEDS GREATER THAN 45MPH, USE SDD 15D12.

THIS LANE CLOSURE DETAIL IS TYPICAL FOR CLOSING THE LEFT LANE. FOR A RIGHT LANE CLOSURE, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

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

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON TEMPORARY SUPPORTS.

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

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

W20-1A, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINE IF LANE CLOSURE IS TO BE IN

PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

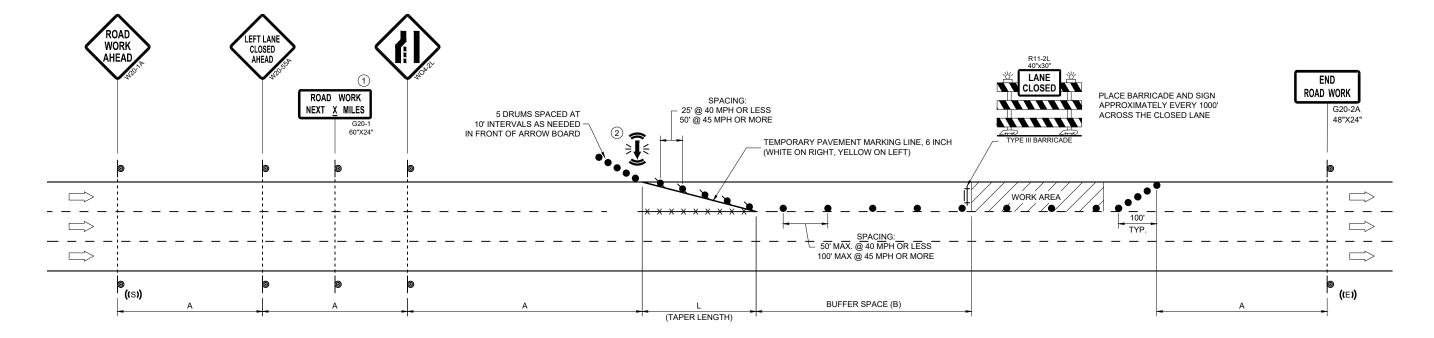
CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROW BOARDS AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF

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

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

- (1) OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.
- WHERE THE SHOULDER OR TERRACE HAS INSUFFICIENT SPACE TO PLACE THE ARROW BOARD AS SHOWN, PLACE THE ARROW BOARD AT THE END OF THE TAPER.



POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	TAPER LENGTH (12 FT. LANE) (L) FEET	BUFFER SPACE (B) FEET
25	200'	125'	55'
30	200'	180'	85'
35	350'	245'	120'
40	350'	320'	170'
45	500'	540'	220'

TRAFFIC CONTROL, SINGLE LANE CLOSURE, DIVIDED **NON-FREEWAY/EXPRESSWAY**

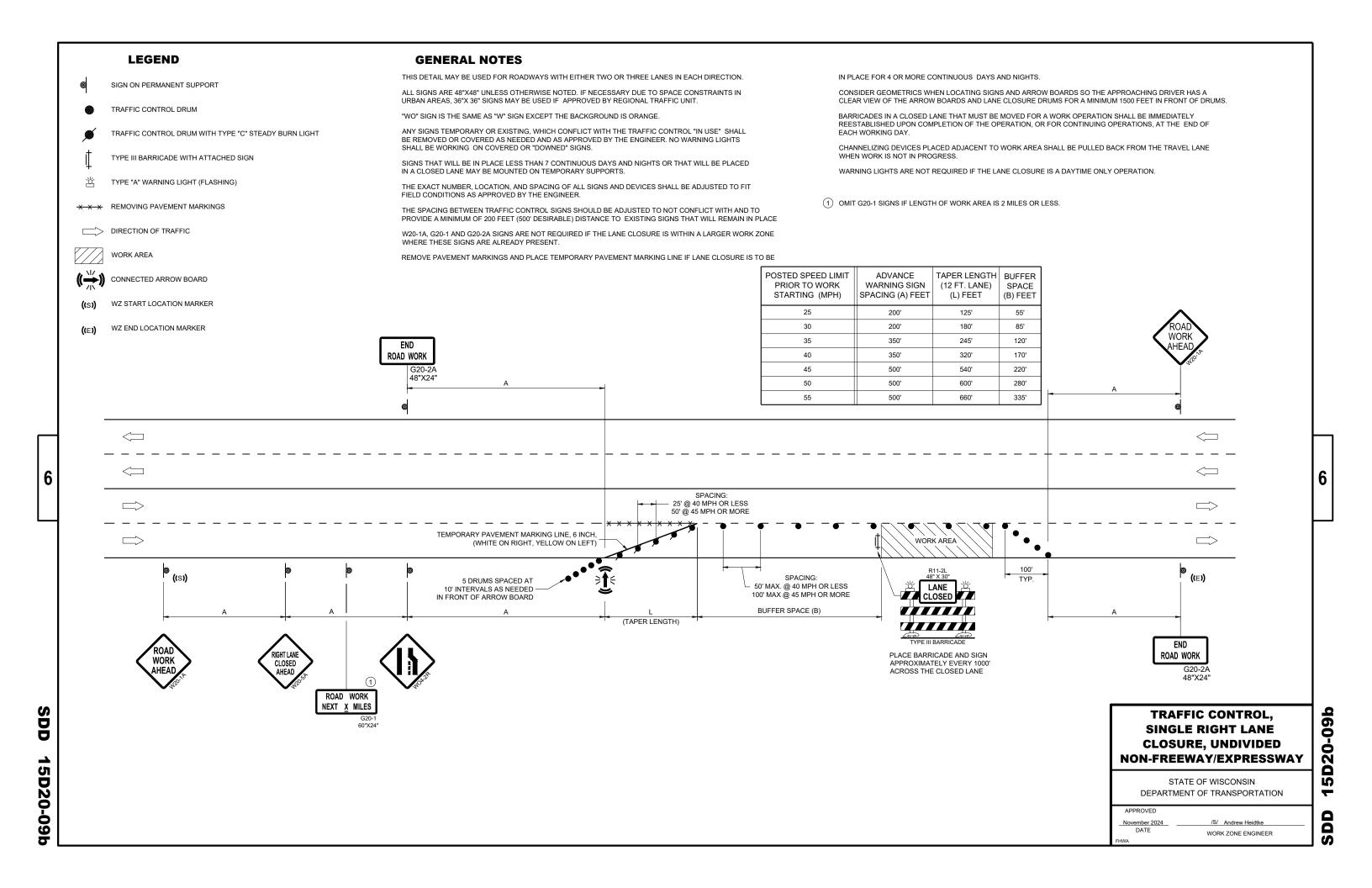
> STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

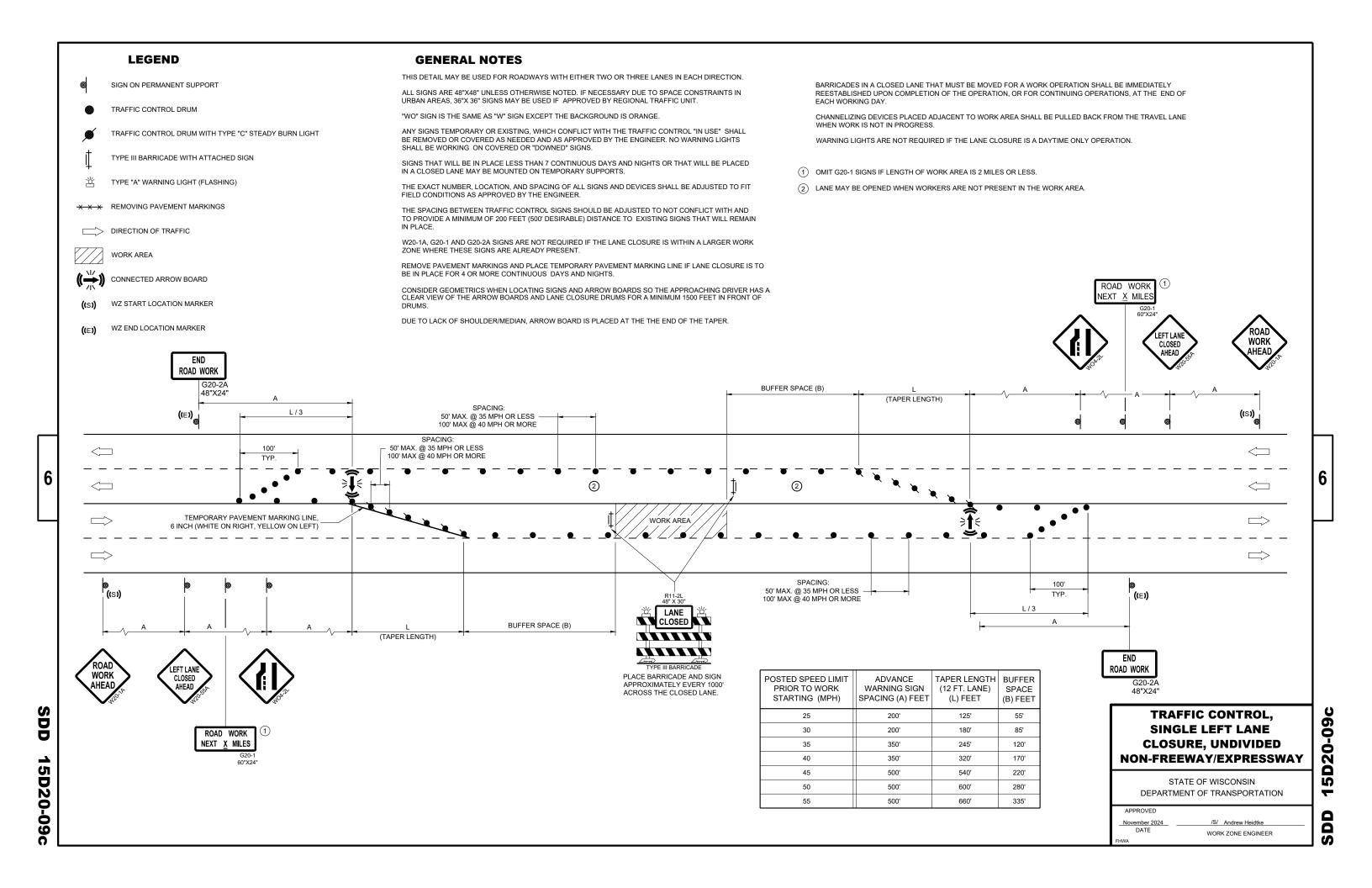
APPROVED November 2024

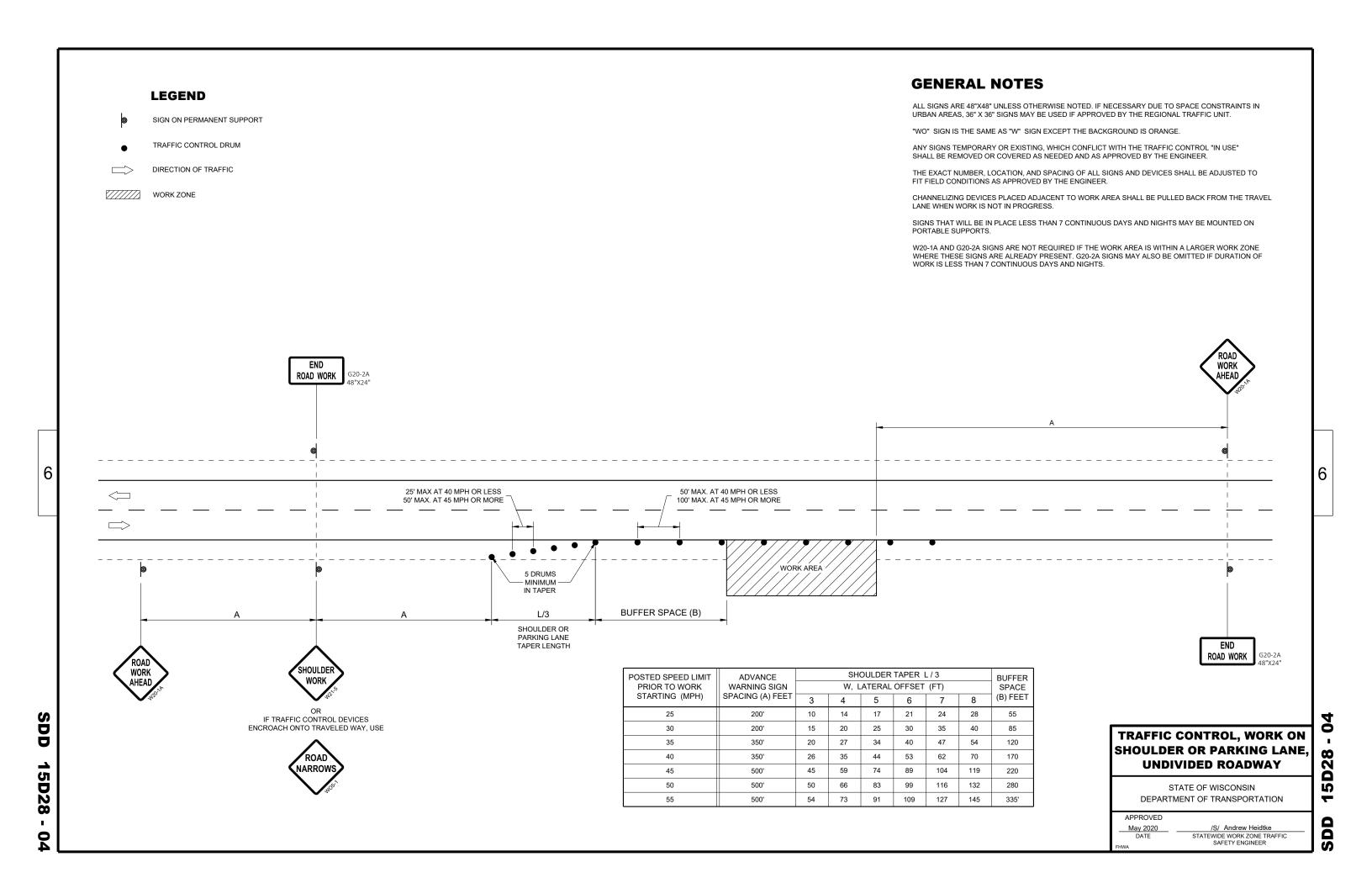
/S/ Andrew Heidtke WORK ZONE ENGINEER

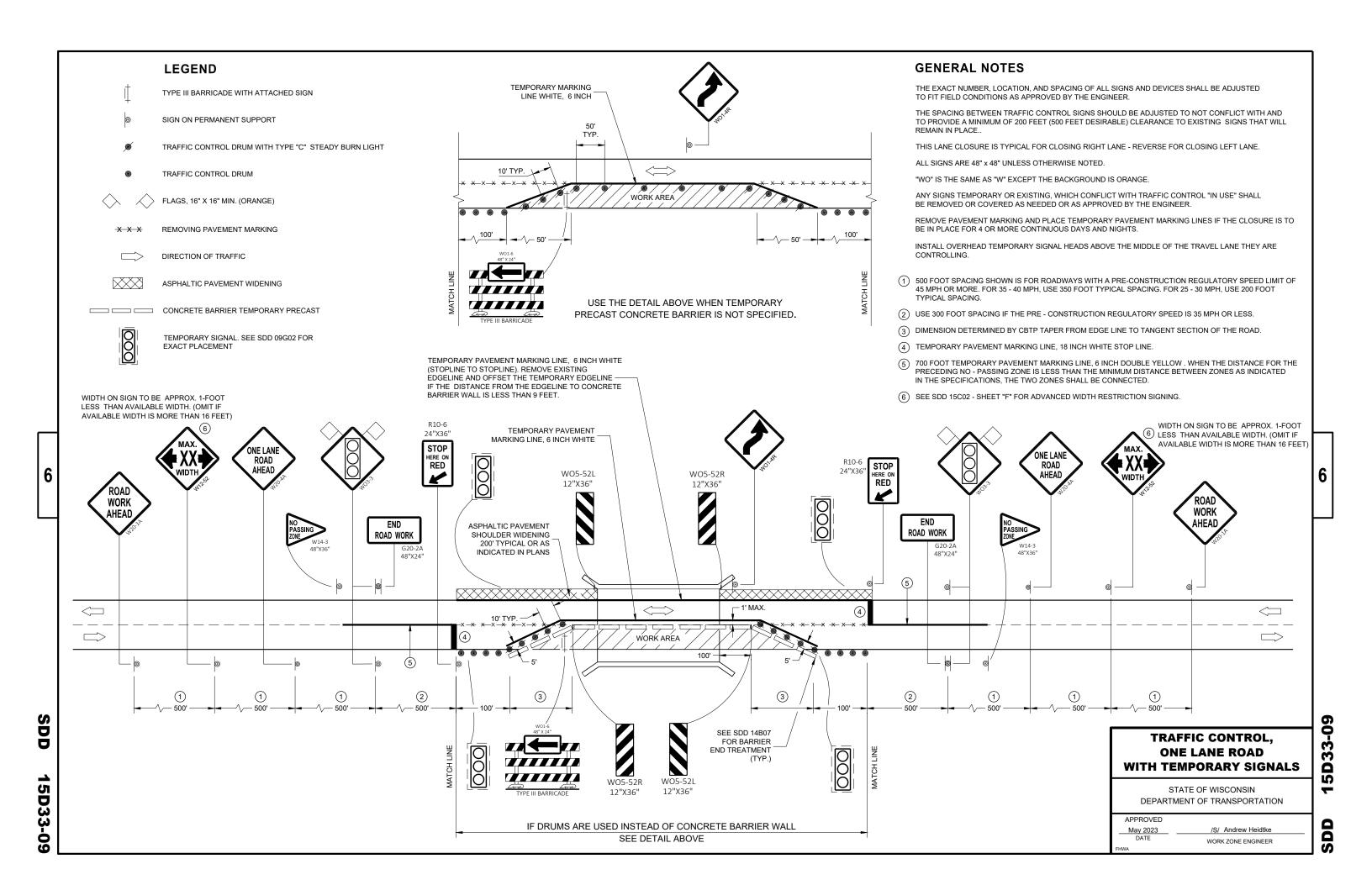
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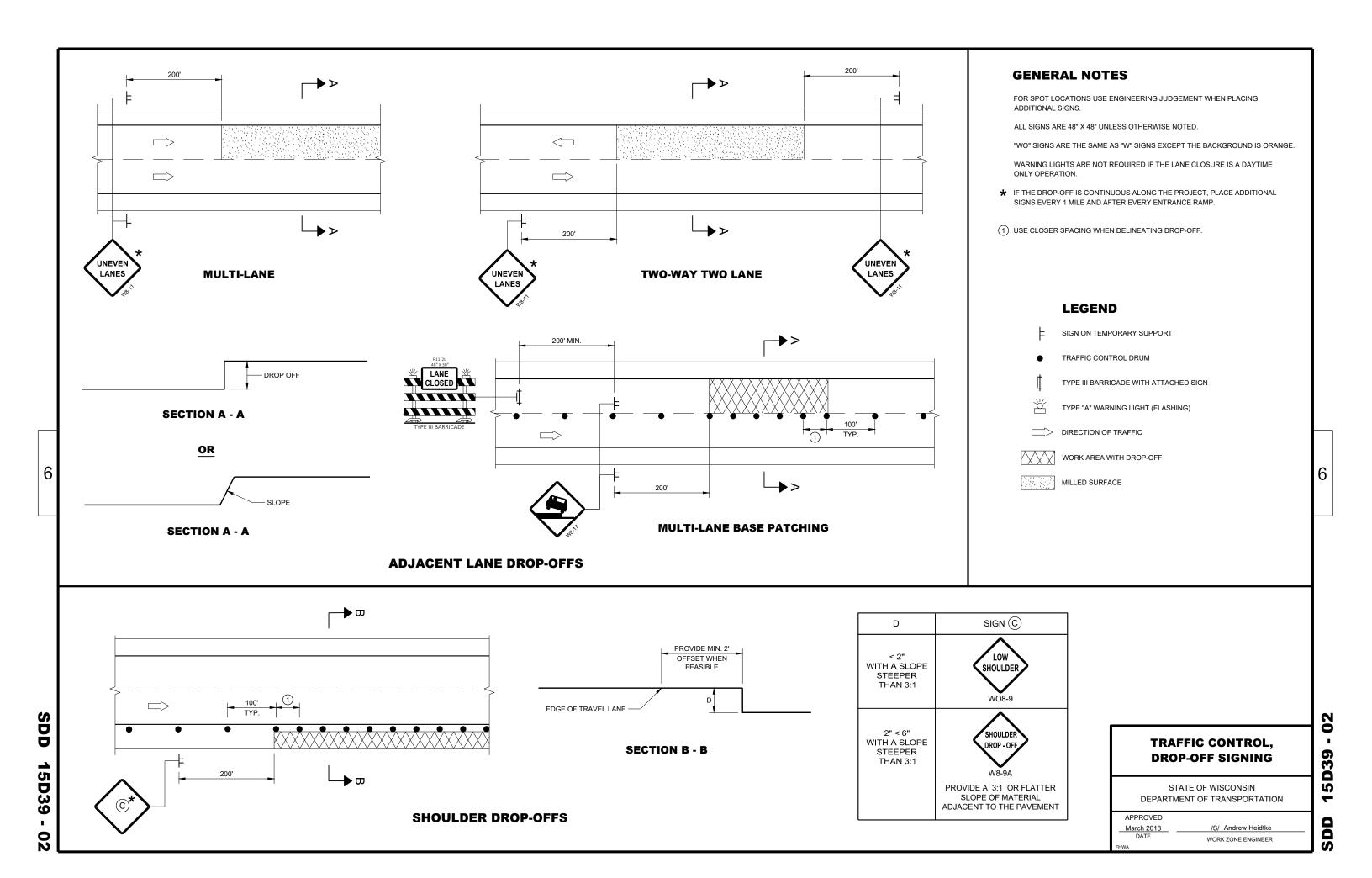
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DRAWING NOT TO SCALE. ALL SIGNS AND POSTS ON THIS SHEET SHALL BE PAID FOR WITH 'TRAFFIC CONTROL SIGNS' BID ITEM. ALL SIDE ROADS WHICH ARE UNDER CONSTRUCTION OF CURB AND GUTTER AND/OR GRADING SHALL BE ADEQUATELY SIGNED.

ALL SIGNS AND DEVICES SHALL BE IN CONFORMANCE WITH THE WISCONSIN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (WMUTCD). SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISDOT STANDARD SIGN PLATES.

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

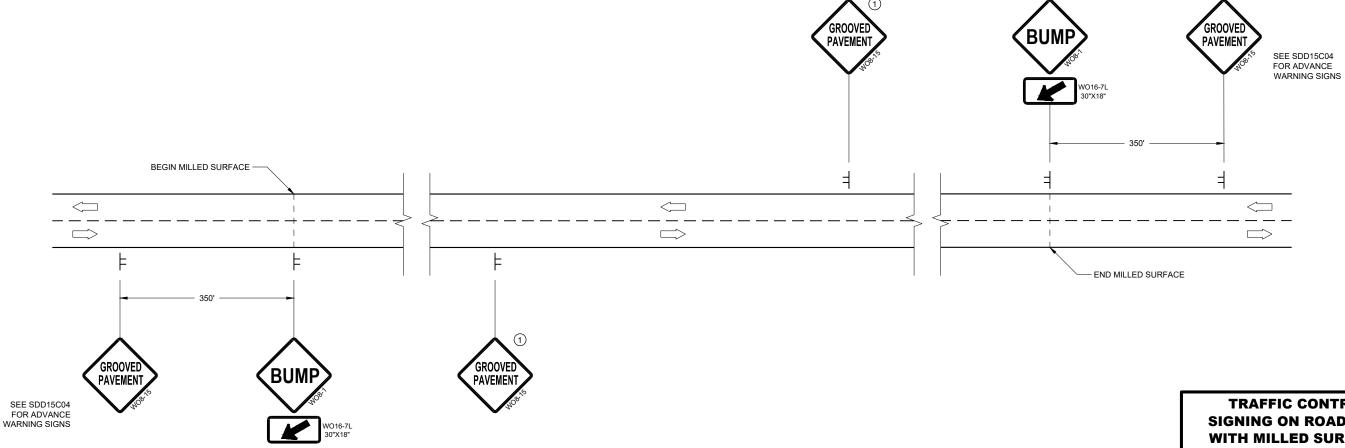
THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE

ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE, INCLUDING PRE-EXISTING SIGNS IN THE VICINITY, SHALL BE COVERED

SEE 15C34 FOR ADDITIONAL TRAFFIC CONTROL SIGNING WHEN CENTERLINE PAVEMENT MAKINGS ARE MISSING. 'DO NOT PASS' SIGNS MUST BE INSTALLED ON THE SAME DAY AS MILLING OPERATIONS.

- (1) PLACE SIGNS 350' IN ADVANCE OF MILLED SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.
- (2) PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.

DIRECTION OF TRAFFIC



DETAIL FOR SIGNING ON MILLED SURFACES

TRAFFIC CONTROL, **SIGNING ON ROADWAYS WITH MILLED SURFACES**

 $\perp \!\!\! \perp$

TYPICAL SIDE ROAD APPROACH SIGN DETAIL

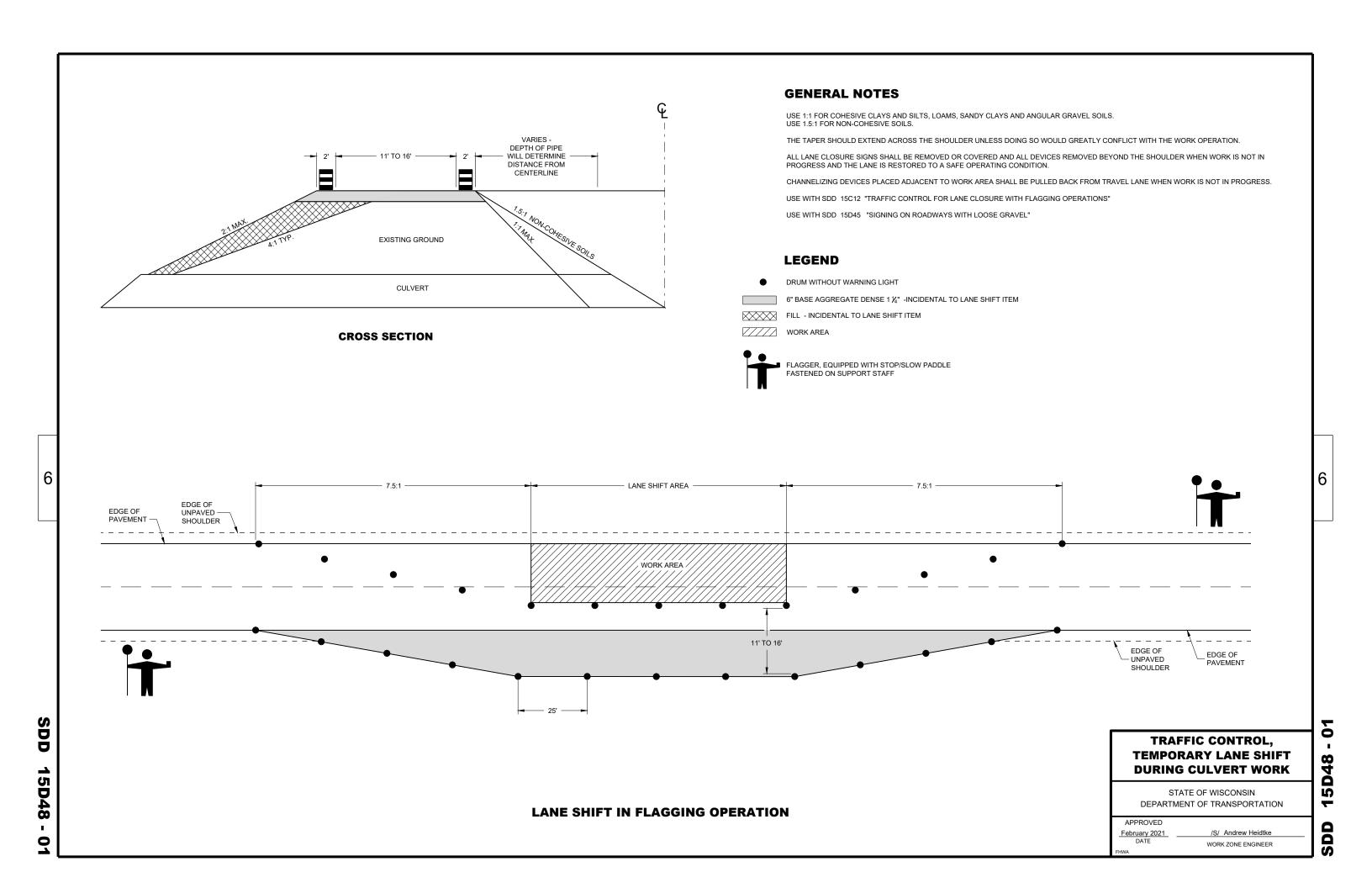
PAVEMENT

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION Ò D

APPROVED February 2020 DATE /S/ Andrew Heidtke WORK ZONE ENGINEER

45

50



STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED

May 2023 DATE /S/ Andrew Heidtke WORK ZONE ENGINEER

15D50-03a

SDD

WORK AREA

50-0

Õ IJ

S

50-0

Õ IJ

/S/ Andrew Heidtke WORK ZONE ENGINEER

May 2023 DATE

V1 WORK VEHICLE

V2 SHADOW VEHICLE

TRUCK MOUNTED ATTENUATOR (TMA)

FLASHING ARROW PANEL (CAUTION)

WORK AREA

DIRECTION OF TRAFFIC

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

MOBILE IS WORK THAT MOVES CONTINUOUSLY OR MOVES AT LEAST THE DECISION

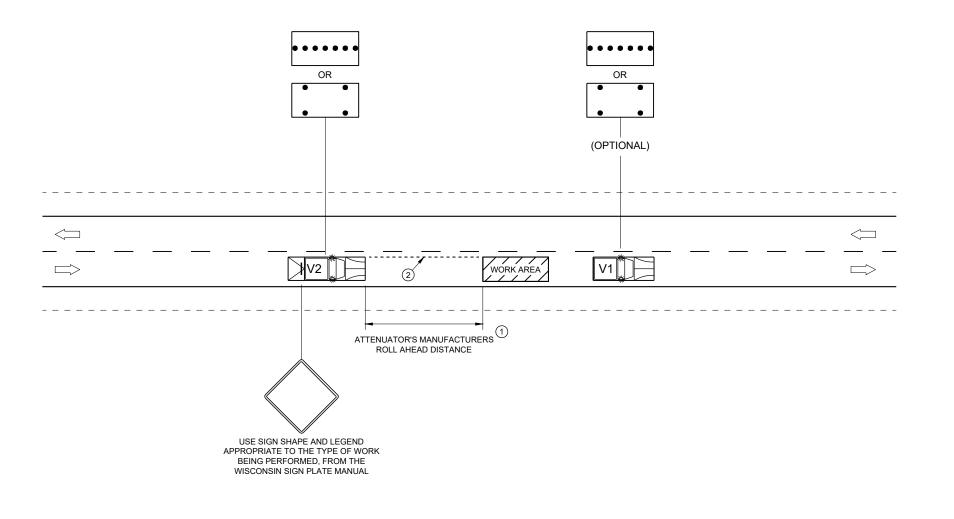
ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

ALL ARROW PANELS SHALL BE REAR FACING, TYPE "B" OR "C", AND DISPLAYING THE FLASHING CAUTION MODE. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE

USE AN ATTENUATOR ON THE REARMOST VEHICLE THAT BLOCKS ALL OR PART OF

DISTANCE BETWEEN VEHICLES MAY INCREASE FROM THE ATTENUATOR'S ROLL AHEAD BASED ON TERRAIN, SIGHT DISTANCE, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

2) ALIGN LEFT SIDE OF SHADOW VEHICLE WITH EDGE OF WORK AREA.



POSTED SPEED PRIOR TO DECISION SIGHT

DISTANCE (D)

550'

700'

700'

900'

900'

1200'

WORK STARTING (MPH)

30

35

40

45

50

55

TRAFFIC CONTROL, **MOBILE OPERATIONS ON AN UNDIVIDED ROADWAY**

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED

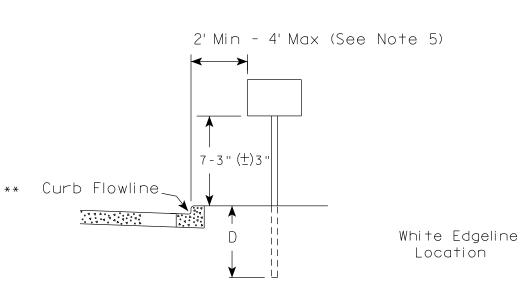
February 2021 DATE

/S/ Andrew Heidtke
STATEWIDE WORK ZONE TRAFFIC
SAFETY ENGINEER

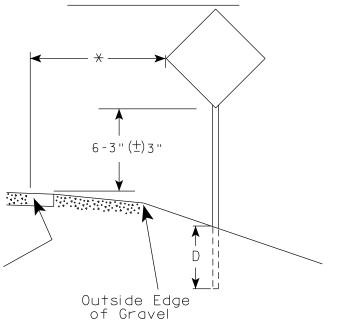
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RURAL AREA (See Note 2)



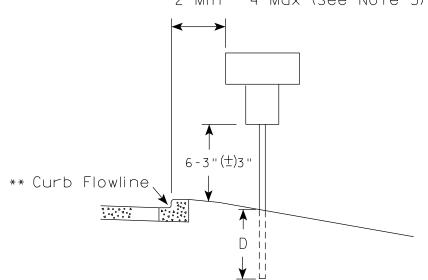
GENERAL NOTES

- 1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
- 2. If signs are mounted on or behind barrier wall, see A4-10 sign plate.

The Double Arrow sign (W12-1D) shall be mounted at a height of 2'-3" (\pm) 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" (\pm) 3".

- 3. For expressways and freeways, mounting height is 7'- 3" (\pm) 3" or 6'-3" (\pm) 3" depending upon existence of a sub-sign.
- 4. Minimum mounting height for signs mounted on traffic signal poles is 5' 3'' ($\frac{+}{-}$) 3''.
- 5. Offset distance shall be consistent with existing signs or consistent throughout length of project.
- 6. Folding signs shall be mounted at a height of 5'-3'' (\pm) 3'' or as directd by the Engineer.

2' Min - 4' Max (See Note 5)



White Edgeline
Location

Outside Edge
of Gravel

POST EMBEDMENT DEPTH

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

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

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

PLOT BY : mscj9h

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R Rawh

For State Traffic Engineer

DATE 12/6/23 PLATE NO. _A4-3.23

Ε

PROJECT NO: HWY: COUNTY: SHEET NO:



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



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

HWY:



PLAN VIEW

COUNTY:

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

For State Traffic Engineer

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

SHEET NO:

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN

PROJECT NO:

PLOT DATE: 27-JAN-2014 09:48

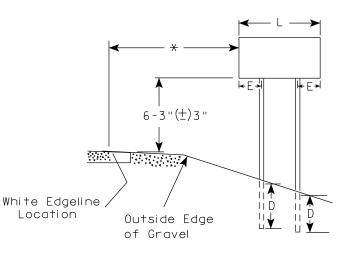
PLOT NAME :

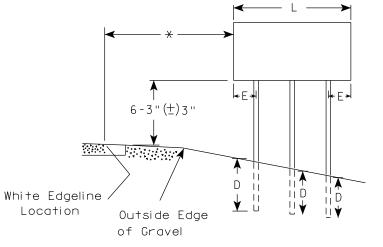
PLOT BY: mscsja

PLOT SCALE: 13.659812:1.000000

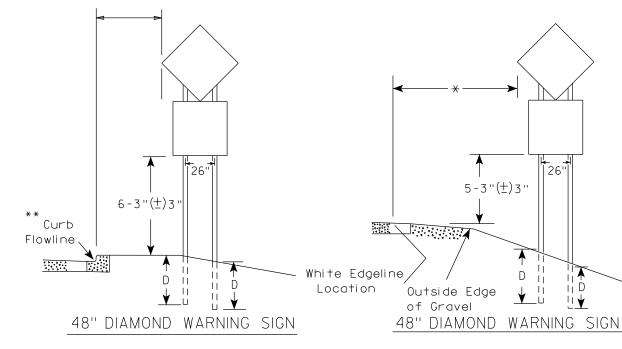
APPROVED

WISDOT/CADDS SHEET 42





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



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

HWY:

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" (±) 3" or 6'-3" (±) 3" depending upon existence of sub-sign.
- 4. The (±) tolerance for mounting height is 3 inches.
- 5. J-Assemblies are considered to be one sign for mounting height.
- 6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
- 7. Folding signs shall be mounted at a height of 5'-3'' (\pm) 3'' or as directed by the engineer.
- 8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±) 3". The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4"-3" (±) 3".
- * 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.
- ** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.
- $\times \times \times$ See A4-3 sign plate for signs 4' or less in width and less than 20 S.F. in area.

POST EMBEDMENT DEPTH

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

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matther R Rauch
For State Traffic Engineer

DATE 12/6/23

PLATE NO. <u>A4-4.16</u>

Ε

CUEET NO.

SHEET NO:

FILE NAME : C:\CAEfiles\Project\tr_stdplate\A44.dgn

PROJECT NO:

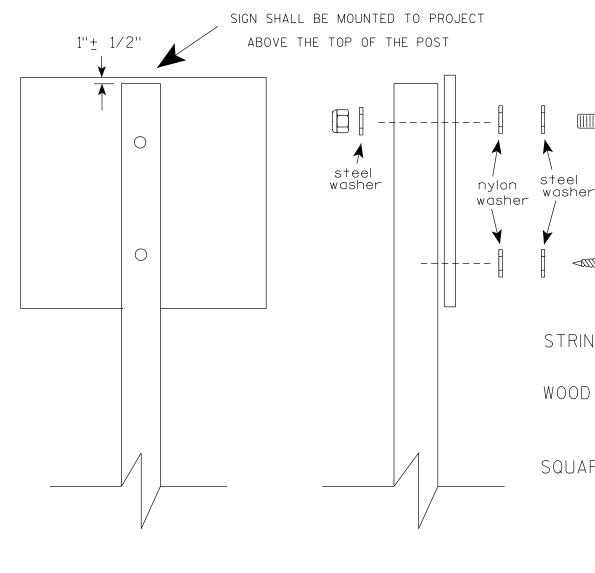
COUNTY:

PLOT DATE: 6-DEC 2023 11:31

PLOT NAME :

PLOT BY : mscj9h

PLOT SCALE: \$\$.....plotscale.....\$\$ WISDOT/CADDS SHEET 42



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

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

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

STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)

MACHINE BOLTS - $\frac{5}{16}$ " X 1-3/4" Length w/ lock nuts

WOOD POSTS $(4'' \times 6'')$

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 - 3/32 " (6605-9-6) BULB-TITE. TRI-FOLD. ALUMINUM BODY/MANDREL O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -

1-1/4" O.D. X $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ " STEEL 1-1/4" O.D. X $\frac{3}{8}$ " I.D. X .080 NYLON

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

ATTACHMENT OF SIGNS TO POSTS

APPROVED

DATE 4/1/2020

PLATE NO. <u>A4-8.9</u>

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A48.DGN

PROJECT NO:

PLOT DATE: 01-APRIL-2020

PLOT BY : dotc4c

WISDOT/CADDS SHEET 42

Ε

WISCONSIN DEPT OF TRANSPORTATION

Matther ≠or State Traffic Engineer

SHEET NO:



PROJECT NO: HWY: COUNTY: SHEET NO: FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A49.DGN PLOT DATE: 05-FEB-2015 17:09 PLOT BY: mscsja PLOT NAME : PLOT SCALE: 13.659812:1.000000

DATE 2/05/15

PLATE NO. <u>A4-9.9</u>

For State Traffic Engineer



BANDING



SINGLE SIGN





WASHER PLACEMENT



HWY:

WASHERS (ALL POSTS) -

1-1/4" O.D. X³/₈" I.D. X¹/₁₆" STEEL 1-1/4" O.D. $\times \frac{3}{8}$ " I.D. \times .080 NYLON FOR ALL TYPE H SIGNS

CHANNEL

GENERAL NOTES

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

"J" ASSEMBLY



STANDARD SIGN SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

SHEET NO:

APPROVED

DATE 6/10/19

PLATE NO. A5-9.4

Ε

State Traffic Engineer

COUNTY:

PLOT NAME :

PLOT SCALE: \$\$.....plotscale.....\$\$ WISDOT/CADDS SHEET 42

PROJECT NO:

31/2"

VIEW FROM TOP

GENERAL NOTES

- 1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WISDOT STANDARD SPECIFICATIONS
- 2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, $\frac{3}{4}$ " WIDTH AND 0.025" THICKNESS
- 3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS.

 SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
- 4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORNALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
- 5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
 - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
 - b. Electro-galvanized in accordance with ASTM Designation: B 633, TYPE III, SC 3
- 6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
- 7. STEEL WASHERS SHALL BE $1^{1}/_{4}$ " O.D. X $3/_{8}$ " I.D. X $1/_{16}$ "
- 8. NYLON WASHERS SHALL BE $1^{1}/_{4}$ " O.D. X $3/_{8}$ " I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

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

BLOCK BANDING DETAIL (V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

APPROVED //

DATE 4/19/2022 PLATE NO. _A5-10.3

ATE 4/19/2022 PLATE NO. _

SHEET NO:

SIGN

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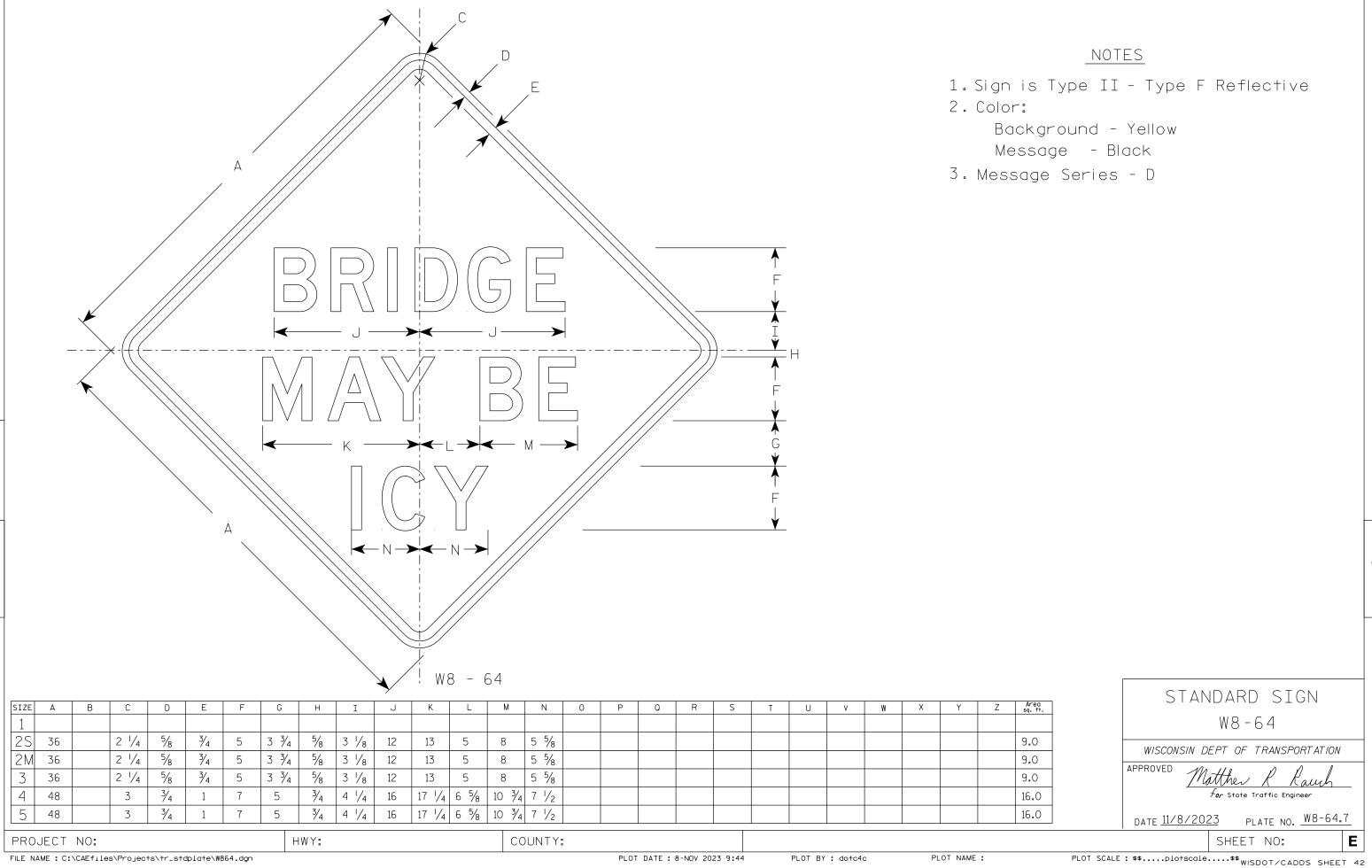
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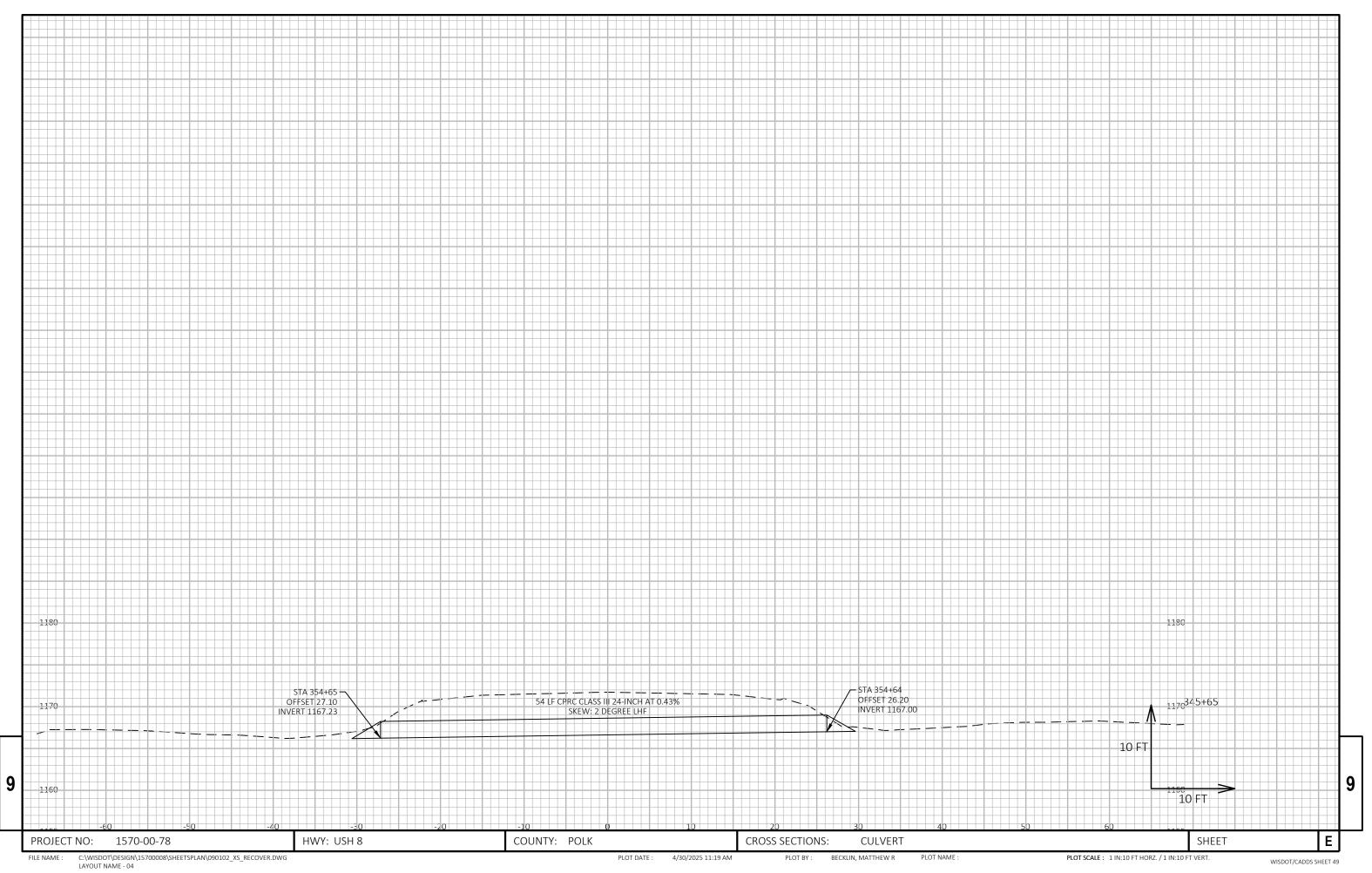
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PLOT BY : dotc4c

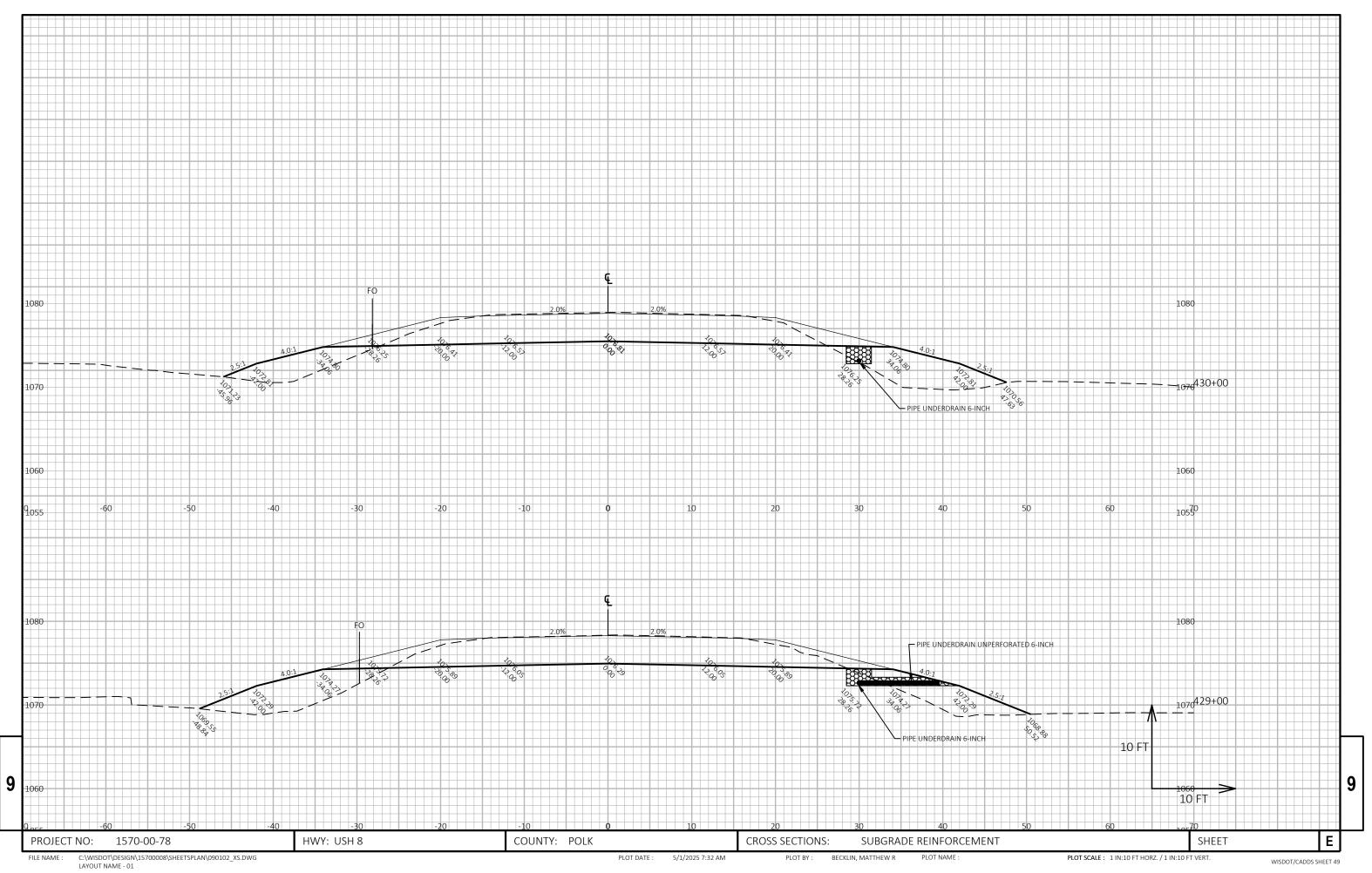
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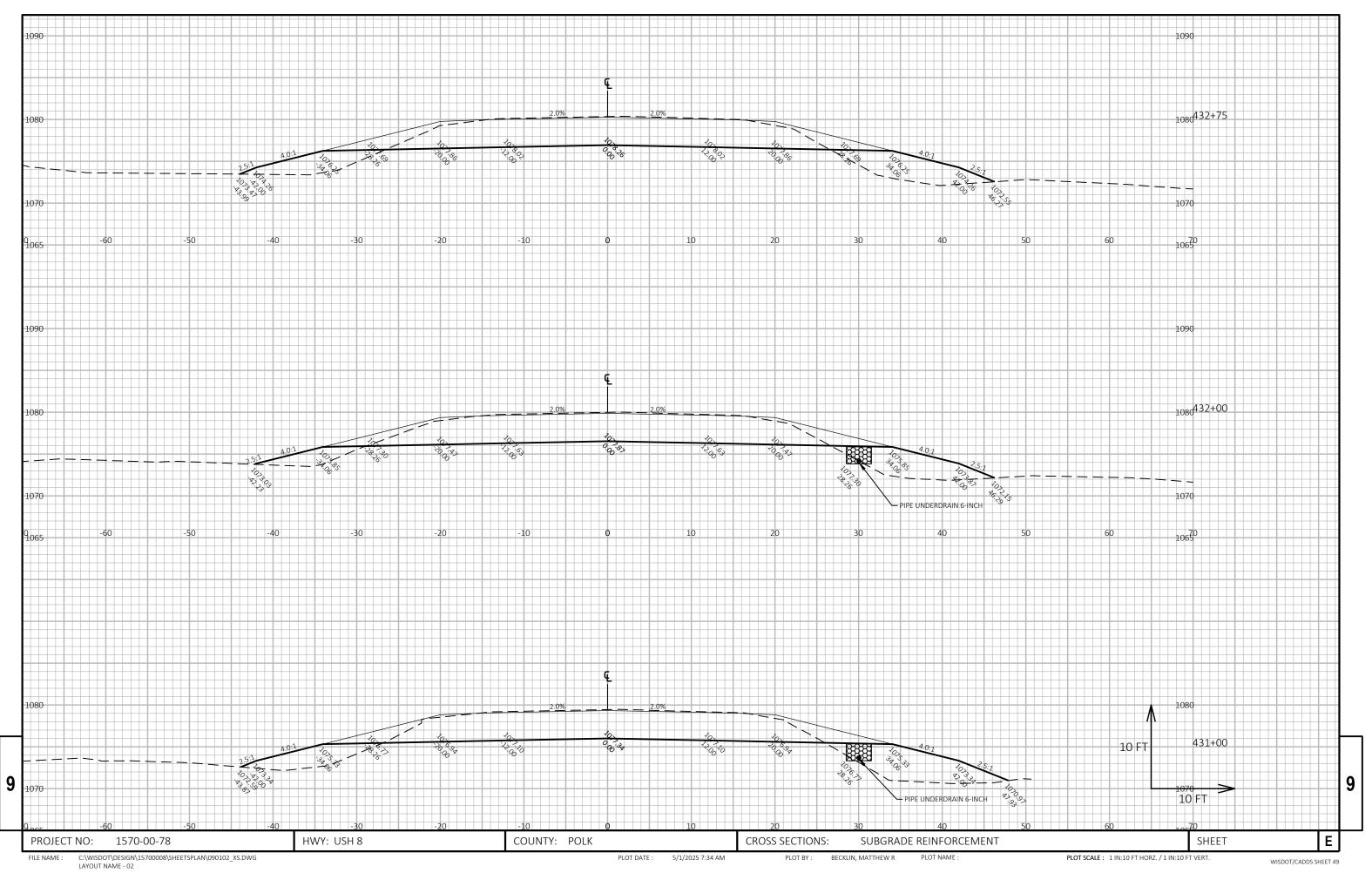
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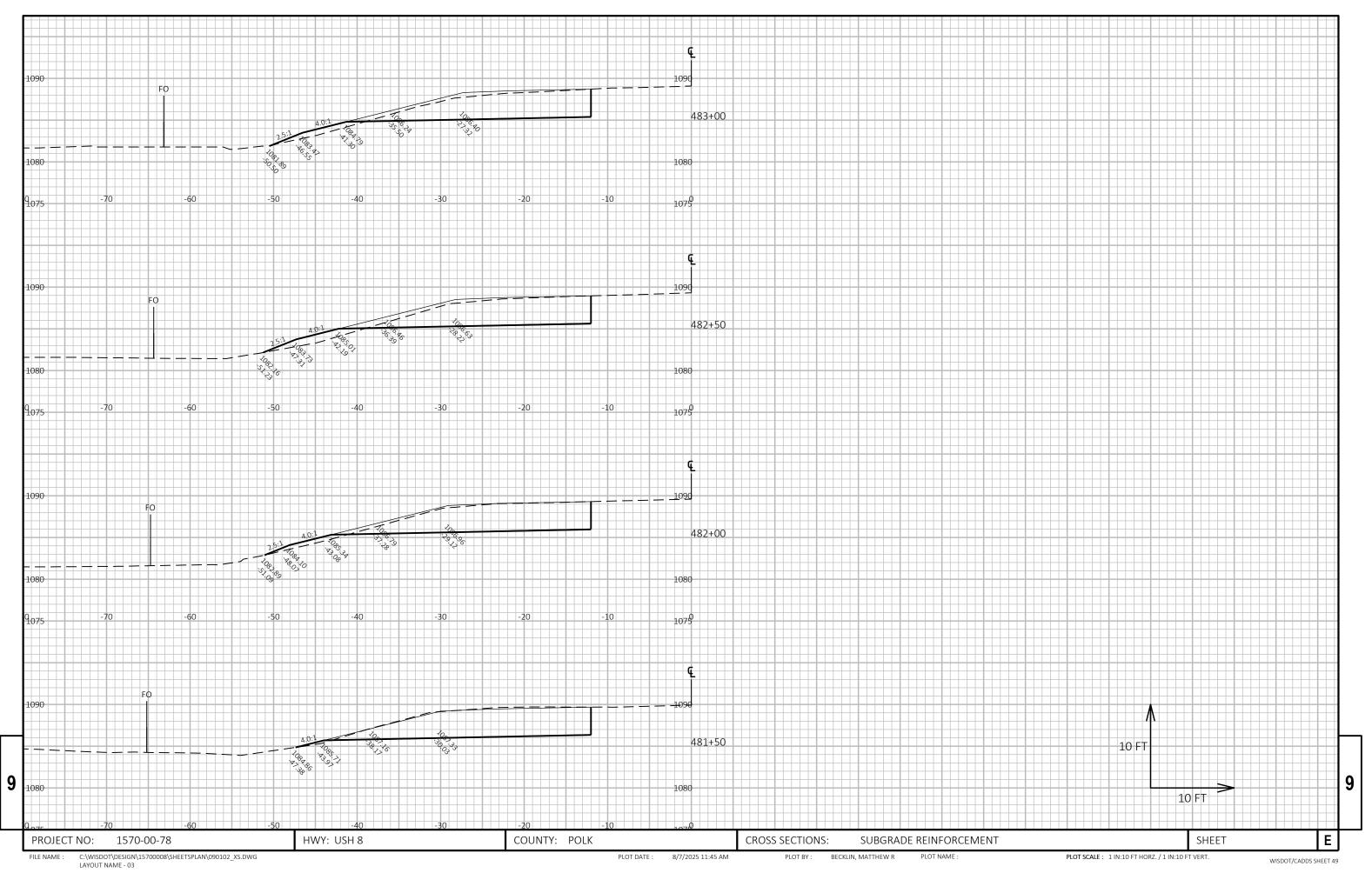


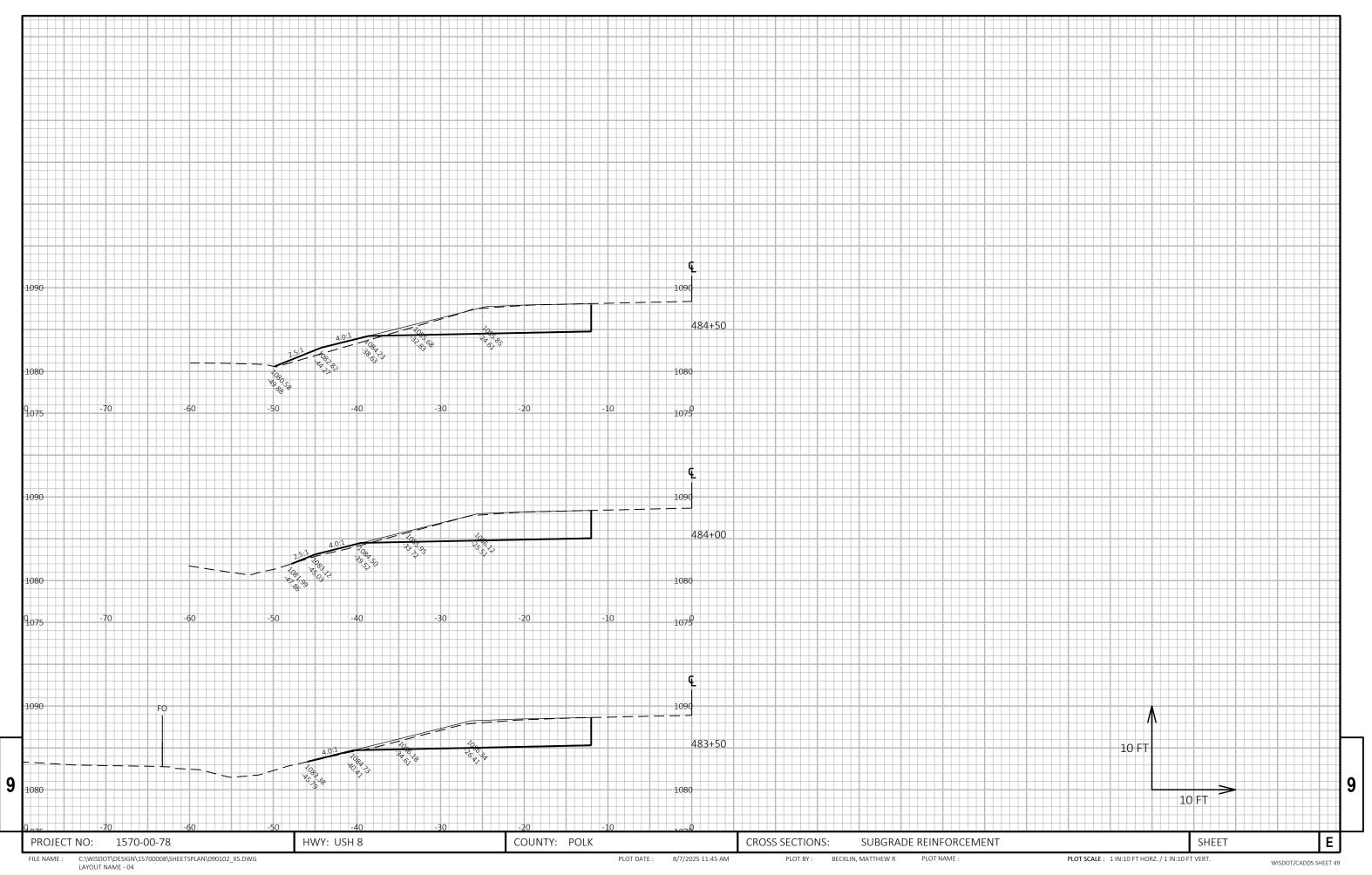


LAYOUT NAME - 04

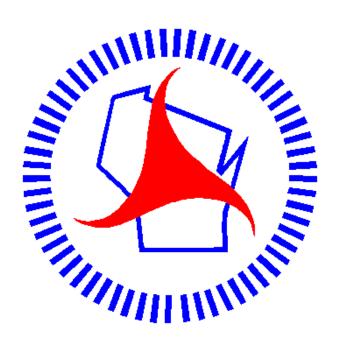








Notes



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