

ORDER OF SHEETS

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

TOTAL SHEETS = 68

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

MCKINLEY - RICE LAKE

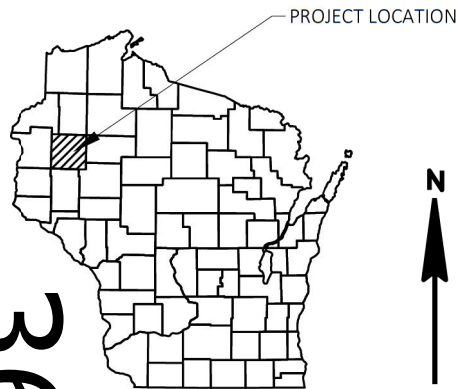
STH 25 TO WEST AVENUE

STH 48

BARRON COUNTY

STATE PROJECT NUMBER
8120-07-70

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
8120-07-70	WISC 2022411	1



36

DESIGN DESIGNATION 8120-07-01

A.A.D.T.	2023	=	4980
A.A.D.T.	2043	=	5890
D.H.V.		=	883
D.D.		=	59/41
T.		=	5.9%
DESIGN SPEED		=	55 MPH
ESALS		=	1,900,000

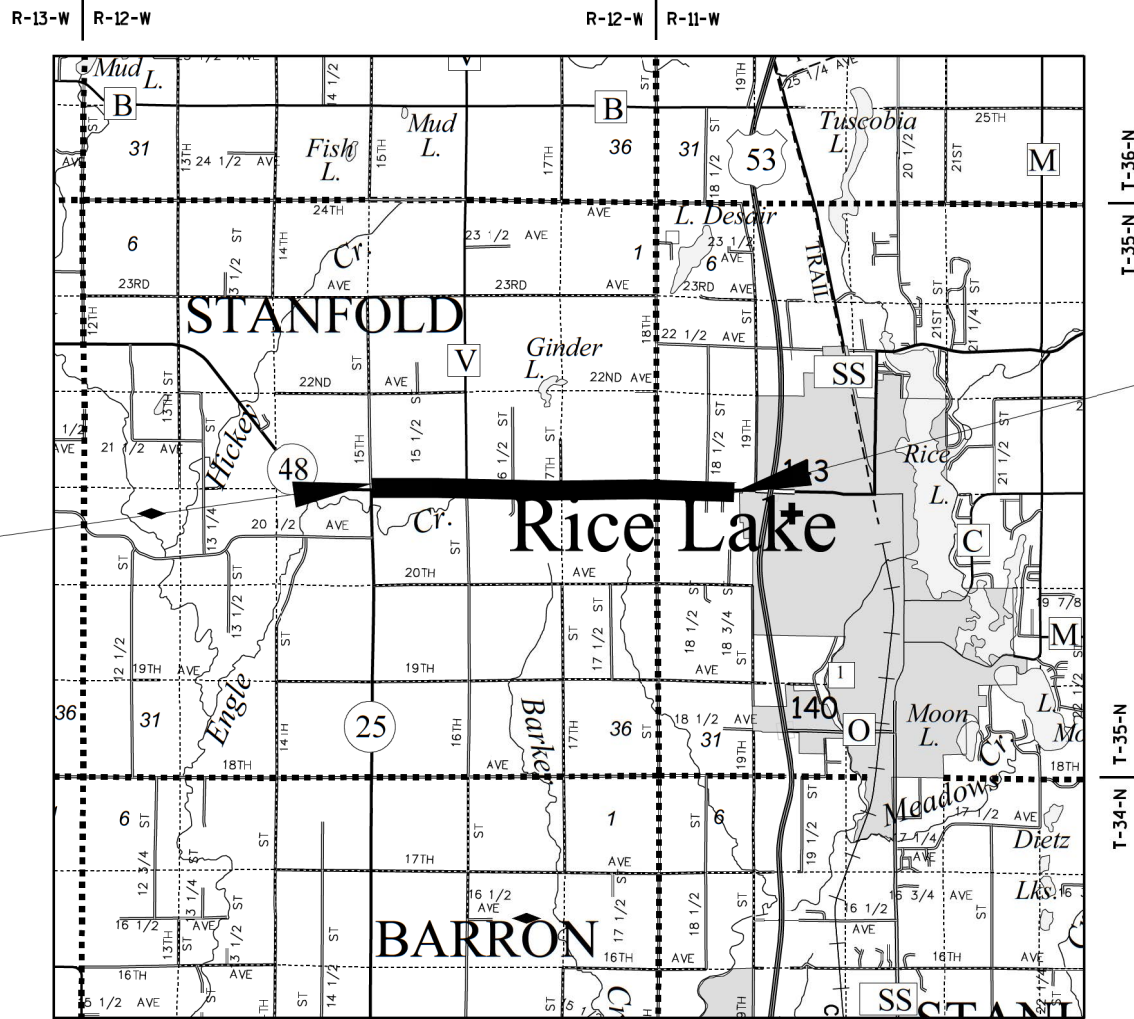
CONVENTIONAL SYMBOLS

PLAN

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

PROFILE

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



BEGIN PROJECT
STA 486+82
X:306,883.98
Y:137,188.62

END PROJECT
STA 684+24
X:326,621.17
Y:137,147.89



TOTAL NET LENGTH OF CENTERLINE = 3.85

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), BARRON COUNTY NAD83 (1991), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES. ELEVATIONS ARE REFERENCED TO NAVD 88 (1991). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 12A.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	NW REGION
Designer	MATTHEW BECKLIN, PE
Project Manager	BETH CUNNINGHAM, PE
Regional Examiner	NW REGION
Regional Supervisor	TYLER RONGSTAD, PE

APPROVED FOR THE DEPARTMENT

Tyler Rongstad

DATE: _____ (Signature)

LIST OF STANDARD ABBREVIATIONS

ABUT.	ABUTMENT
AGG.	AGGREGATE
APPROX.	APPROXIMATE
A.E.W	APRON ENDWALL
ASPH.	ASPHALTIC
A.D.T.	AVERAGE DAILY TRAFFIC
AZ.	AZIMUTH
BK.	BACK
BEG.	BEGIN
B.M.	BENCH MARK
C/L	CENTER LINE
CONC.	CONCRETE
CONST.	CONSTRUCTION
CO.	COUNTY
C.T.H.	COUNTY TRUNK HIGHWAY
X-SEC.	CROSS SECTION
CR.	CRUSHED
CFS.	CUBIC FEET/SECOND
C.Y., CU. YD.	CUBIC YARD
CULV.	CULVERT
C.P.	CULVERT PIPE
D.O.T.	DEPARTMENT OF TRANSPORTATION
D.H.V.	DESIGN HOUR VOLUME
DIA.	DIAMETER
D.	DIRECTIONAL DISTRIBUTION
DISCH. OR DIS.	DISCHARGE
EA.	EACH
ELECT.	ELECTRIC
EL. OR ELEV.	ELEVATION
EMB.	EMBANKMENT
E.B.S.	EXCAVATION BELOW SUBGRADE
EXIST.	EXISTING
FERT.	FERTILIZE
F.E.	FIELD ENTRANCE
FIN.	FINISHED
FT.	FOOT
F.L.	FLOW LINE
GA.	GAUGE
HORIZ.	HORIZONTAL
CWT.	HUNDREDWEIGHT
INL.	INLET
LT.	LEFT
L.H.F.	LEFT-HAND FORWARD
LIN.	LINEAR
LIN. FT.	LINEAR FOOT
L.S.	LUMP SUM
MAX.	MAXIMUM
MI.	MILE
MISC.	MISCELLANEOUS
N.E.	NORTH EAST
N.W.	NORTH WEST
PAV'T	PAVEMENT
P.C.	POINT OF CURVATURE
P.I.	POINT OF INTERSECTION
P.T.	POINT OF TANGENCY
P.O.T.	POINT OF TANGENT
LB.	POUND
P.E.	PRIVATE ENTRANCE
PROJ.	PROJECT
R.	RANGE
REQ'D	REQUIRED
RT.	RIGHT
R.H.F.	RIGHT-HAND FORWARD
R/W	RIGHT OF WAY
RD.	ROAD
SHR.	SHRINKAGE
SL.	SLOPE
STD.	STANDARD
S.D.D.	STANDARD DETAIL DRAWING
S.T.H.	STATE TRUNK HIGHWAY
STA.	STATION
S.P.P.A.	STRUCTURAL PLATE PIPE ARCH
STRUCT.	STRUCTURE
SURF.	SURFACE
TEL.	TELEPHONE
TN.	TOWN
T.	TRUCKS (PERCENT OF)
UNCL.	UNCLASSIFIED
U.G.	UNDERGROUND
V.	VELOCITY
V.C.	VERTICAL CURVE

UTILITIES

COMMUNICATION LINE CHARTER COMMUNICATIONS JAMEY OLDEEN 2304 S MAIN ST RICE LAKE, WI 54868 715-719-0561 715-651-7488 (MOBILE) JAMEY.OLDEEN@CHARTER.COM	CENTURYLINK KYLE SCHLAMPP 20 S WILSON AVE RICE LAKE, WI 54868 715-234-5573 715-292-0082 (MOBILE) KYLE.SCHLAMPP@CENTURYLINK.COM
MOSAIC TELECOM DENNIS RUSSETT 401 S 1ST ST P.O. BOX 664 CAMERON, WI 54822 715-458-5378 CTCDENNIS@MOSAICTELECOM.COM	ASTREA ANDREW HEIGL 105 KENT ST P.O. BOX 105 IRON MOUNTAIN, MI 49801 906-221-7536 ANDY.HEIGL@PACKERLANDBROADBAND.COM
ELECTRICITY - DISTRIBUTION BARRON ELECTRIC COOPERATIVE JEFFREY NELSON 1434 N. STH 25 BARRON, WI 54812 715-537-3171 715-418-1167 (MOBILE) JNELSON@BARRONELECTRIC.COM	
GAS/PETROLEUM WE ENERGIES STEVEN CHAVERS 104 W SOUTH STREET RICE LAKE, WI 54864 715-234-9605 715-213-4327 STVEVEN.CHAVERS@WE-ENERGIES.COM	

GENERAL NOTES

HORIZONTAL CONTROL POINTS AND ANY OTHER SURVEY INFORMATION WILL BE PROVIDED BY NORTHWEST REGIONAL TECHNICAL SERVICES UPON REQUEST.

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

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

DISTRIBUTED AREAS WITHIN THE RIGHT OF WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, SHALL BE SALVAGED TOPSOIL, FERTILIZED, SEEDED AND MULCHED OR EMATTED AS DIRECTED BY THE ENGINEER.

PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL CONTACT THE COUNTY SURVEYOR REGARDING MONUMENT AND PROPERTY CORNER PRESERVATION.

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

IT IS THE CONTRACTORS RESPONSIBILITY TO CALL DIGGERS HOTLINE PRIOR TO BEGINNING WORK OPERATIONS AND TO CONFIRM ALL UTILITY LOCATIONS.

EROSION CONTROL FEATURES AS SHOWN ON THE PLANS ARE SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

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

TYPICAL FINISHED SECTIONS SHOW THE GENERAL ROADWAY FEATURES THROUGHOUT THE PROJECT. SLOPES AND DISTANCES MAY VARY WITHIN THE STATION LIMITS.



BARRON COUNTY HIGHWAY DEPARTMENT

MARK SERVI, HIGHWAY COMMISSIONER
BARRON COUNTY HIGHWAY DEPARTMENT
260 N 7TH ST
BARRON, WI 54812
(715) 637 - 3755

WISCONSIN DNR - LIAISON

DEPARTMENT OF NATURAL RESOURCES
SPOONER - DNR SERVICE CENTER
810 W MAPLE ST
SPOONER, WI 54801
ATTN: AMY CRONK
(715) 635 - 4229
AMY.CRONK@WISCONSIN.GOV

PROJECT NO: 8120-07-70

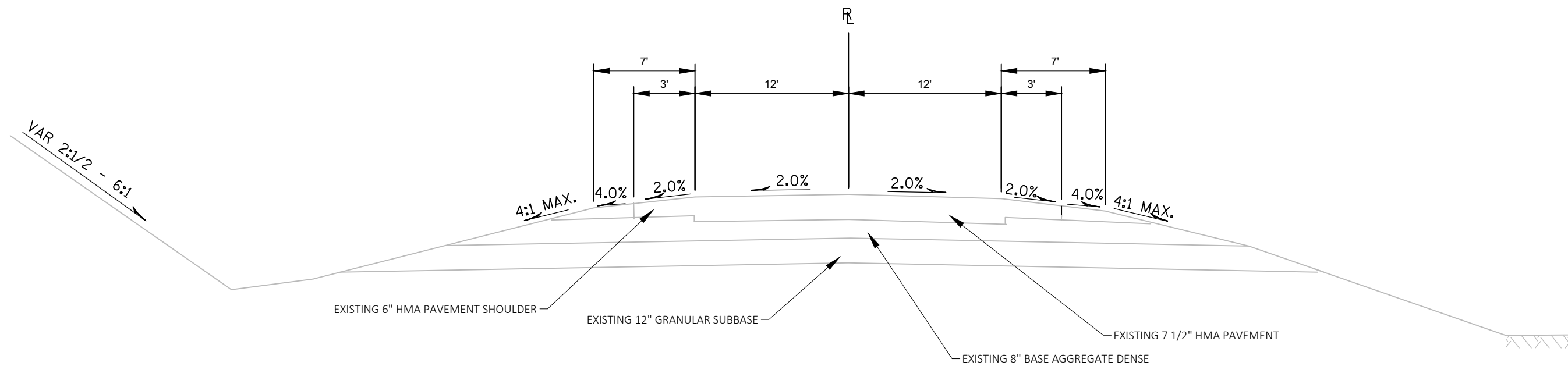
HWY: STH 48

COUNTY: BARRON

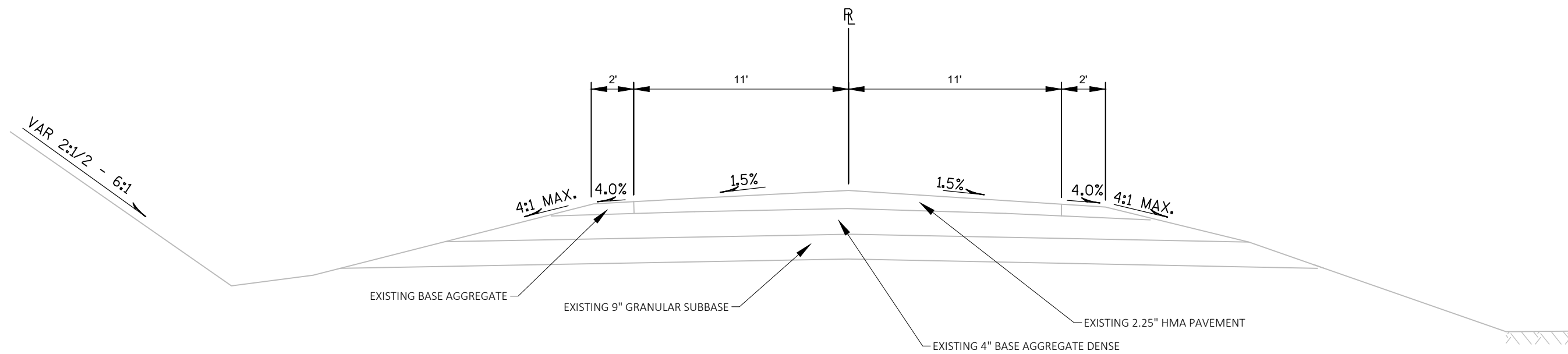
GENERAL NOTES

SHEET

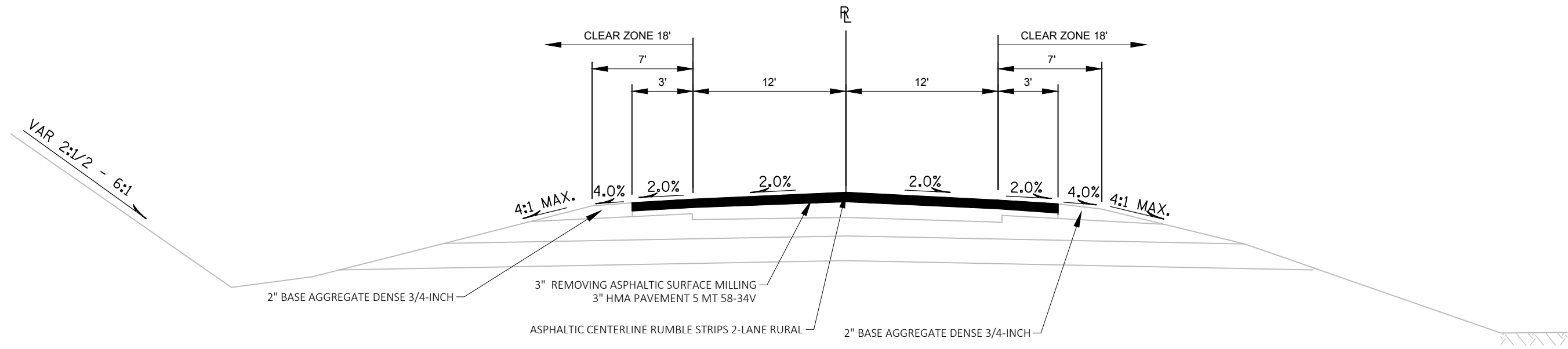
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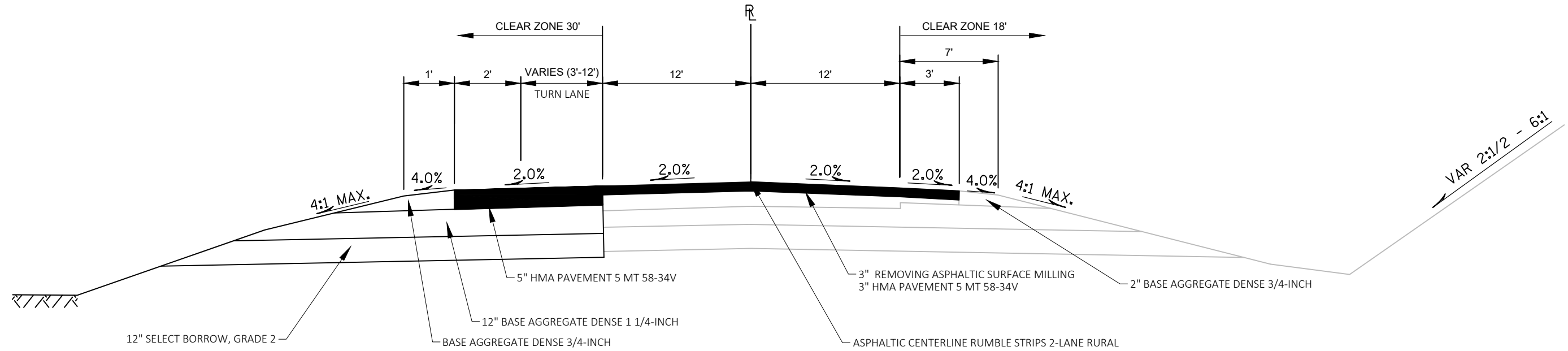
EXISTING STH 48 TYPICAL SECTION
 STA 486+82-684+24



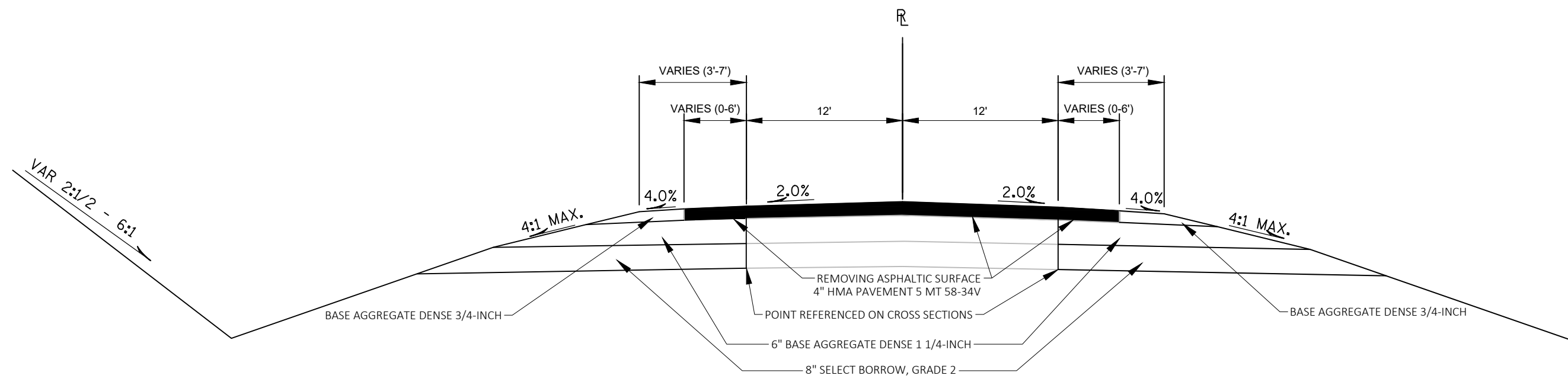
EXISTING CTH V TYPICAL SECTION
 STA 0+11-1+43



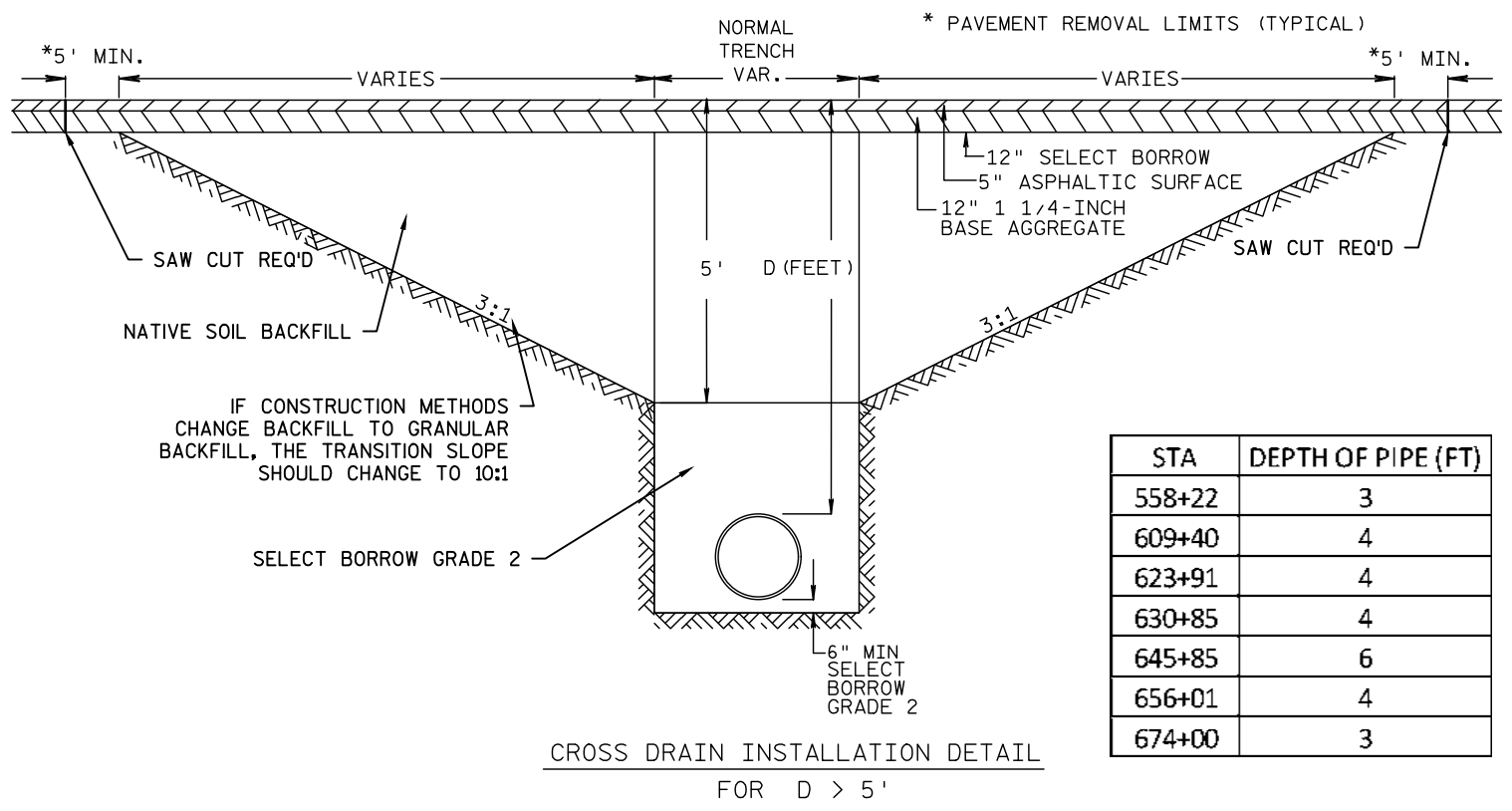
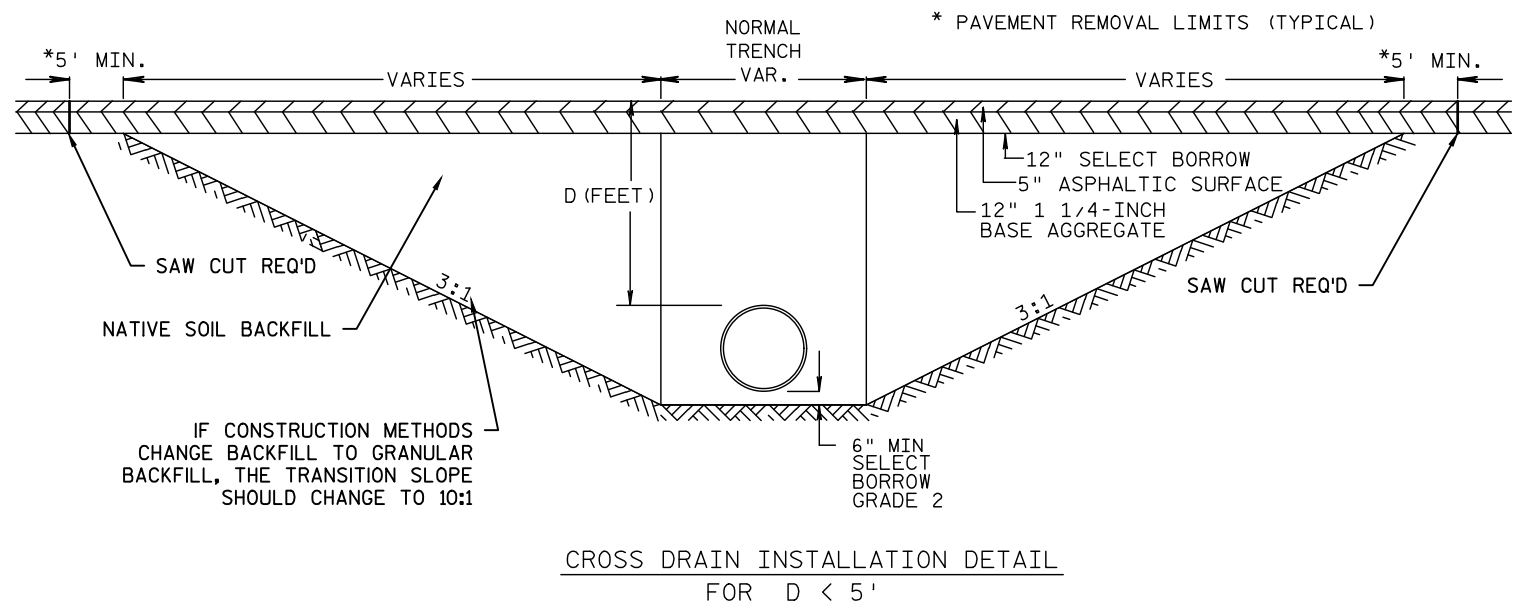
FINISHED STH 48 TYPICAL SECTION
 STA 486+82-531+25
 STA 537+33-684+24



FINISHED STH 48 TYPICAL SECTION
 STA 531+25-537+33



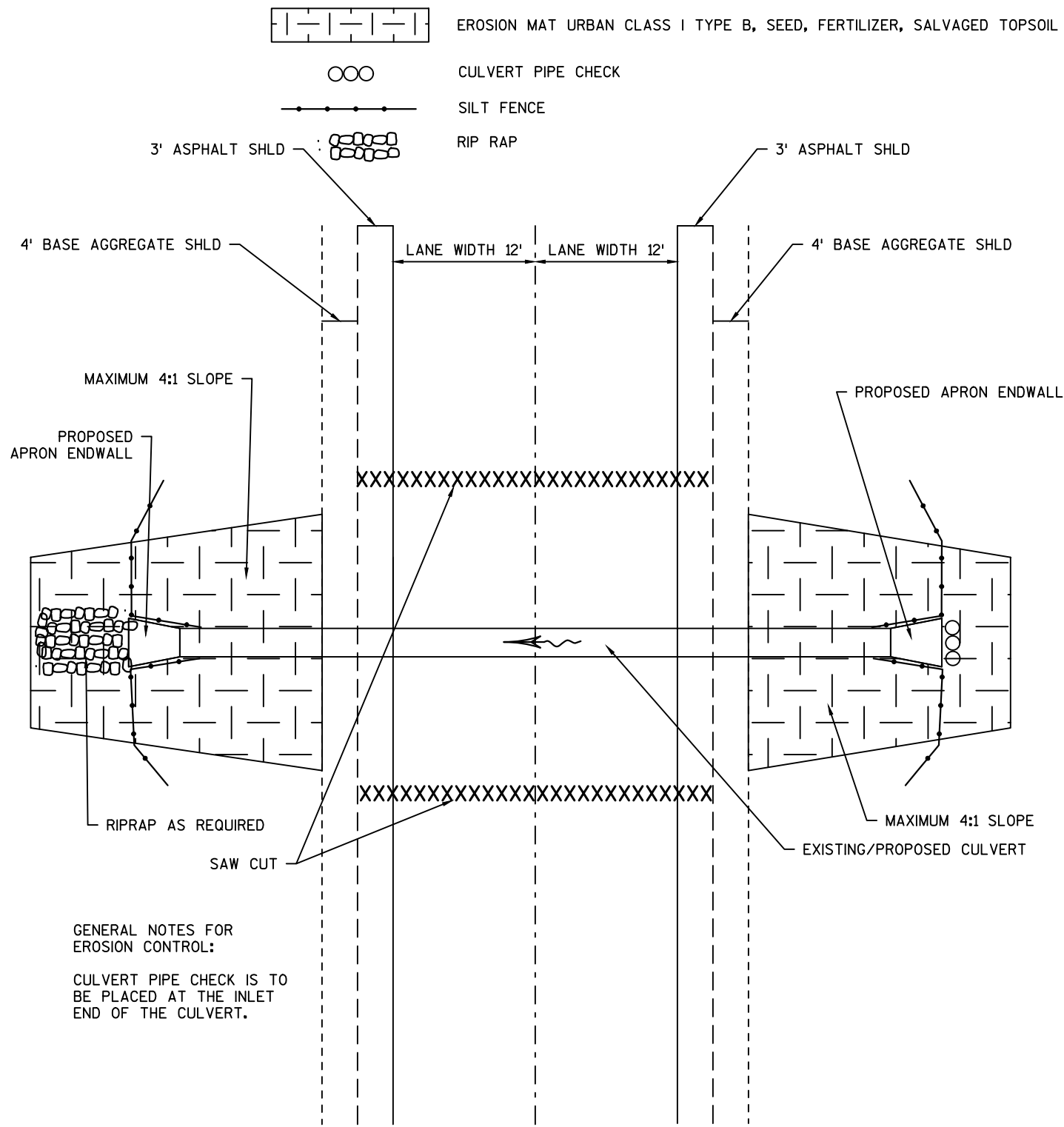
FINISHED TYPICAL SECTION CTH V
STA 0+11-1+43



STA	DEPTH OF PIPE (FT)
558+22	3
609+40	4
623+91	4
630+85	4
645+85	6
656+01	4
674+00	3

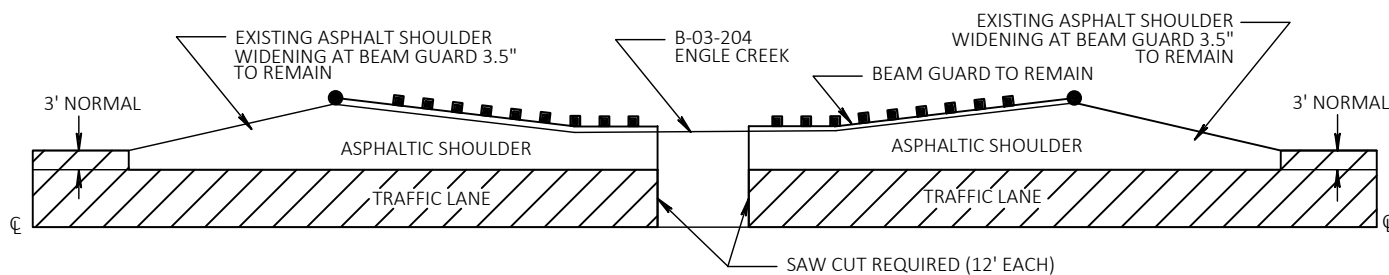
NOTES: PERFORM PIPE INSTALLATION BEFORE MILLING AND PAVING

LEGEND



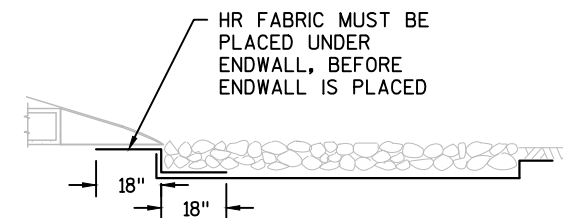
GENERAL NOTES FOR EROSION CONTROL:
CULVERT PIPE CHECK IS TO BE PLACED AT THE INLET END OF THE CULVERT.

 3" REMOVING ASPHALTIC SURFACE MILLING
3" HMA PAVEMENT 5 MT 58-34V

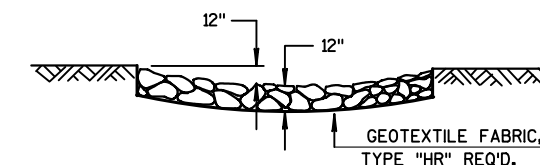
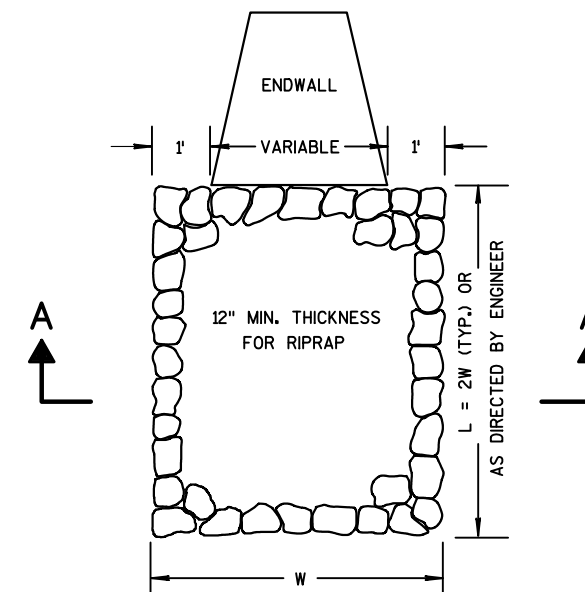


DETAIL FOR BRIDGE AT ENGLE CREEK
STA 560+10-565+66

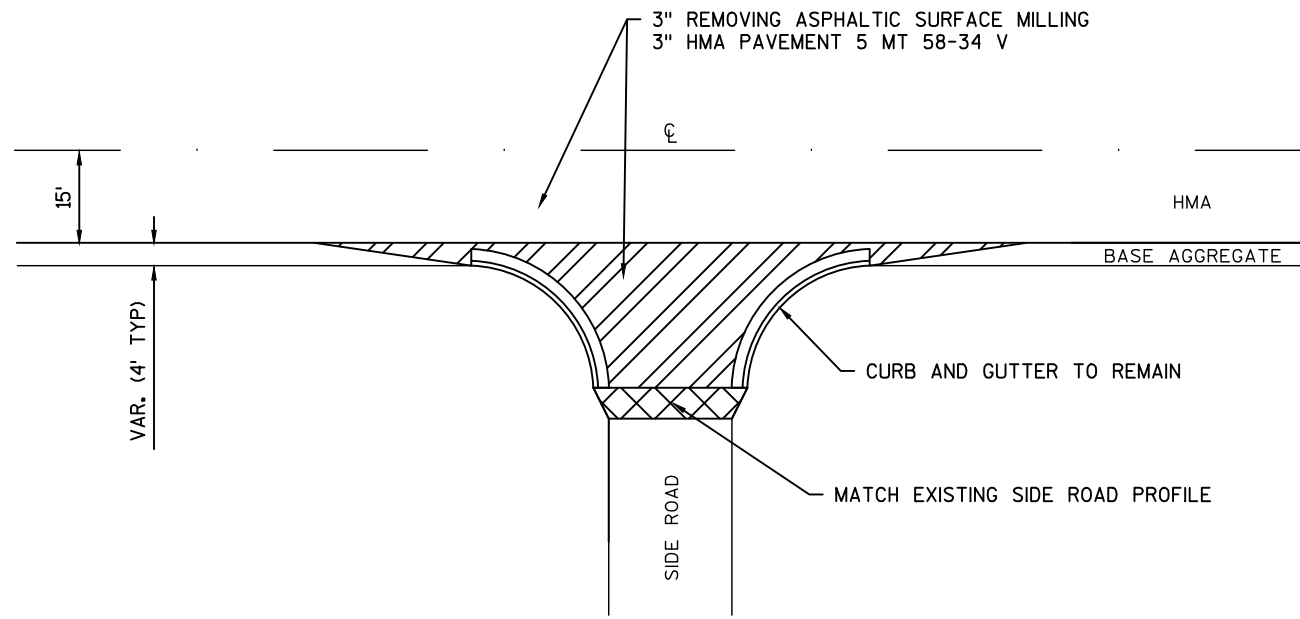
HR FABRIC MAY BE INSTALLED AS TWO SEPARATE PIECES, OVERLAPPING AS SHOWN. EXTRA QUANTITY FOR OVERLAP IS INCIDENTAL TO THE CONTRACT.



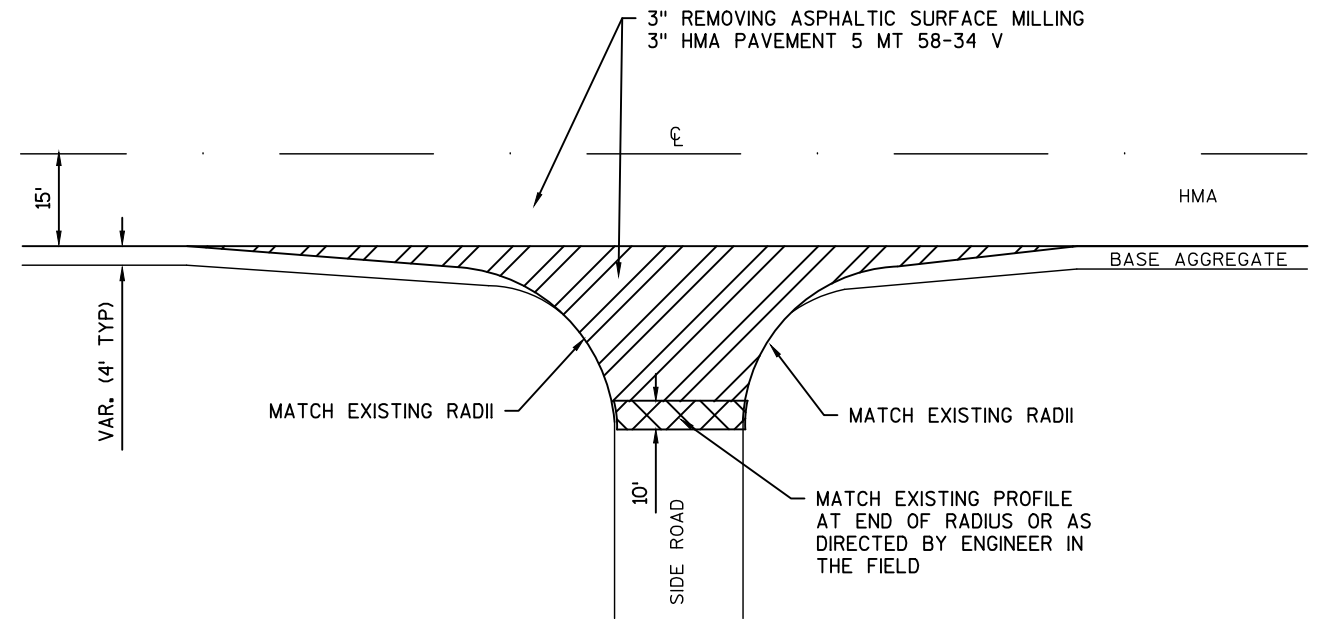
HR FABRIC INSTALLATION



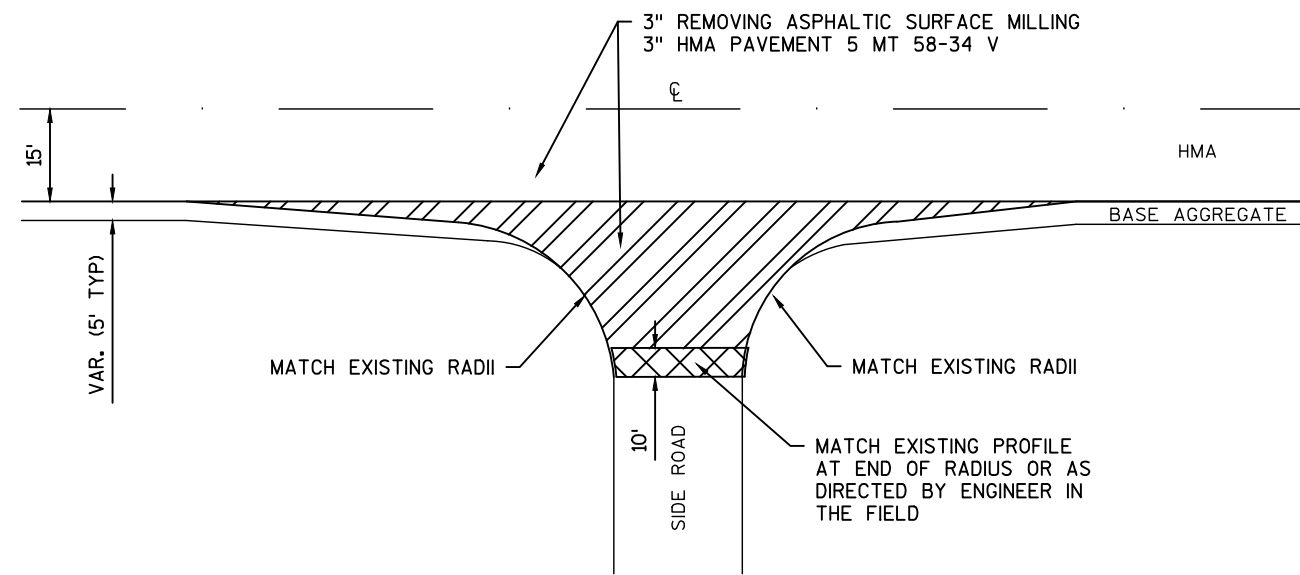
SECTION A-A
RIPRAP TREATMENT AT CULVERTS



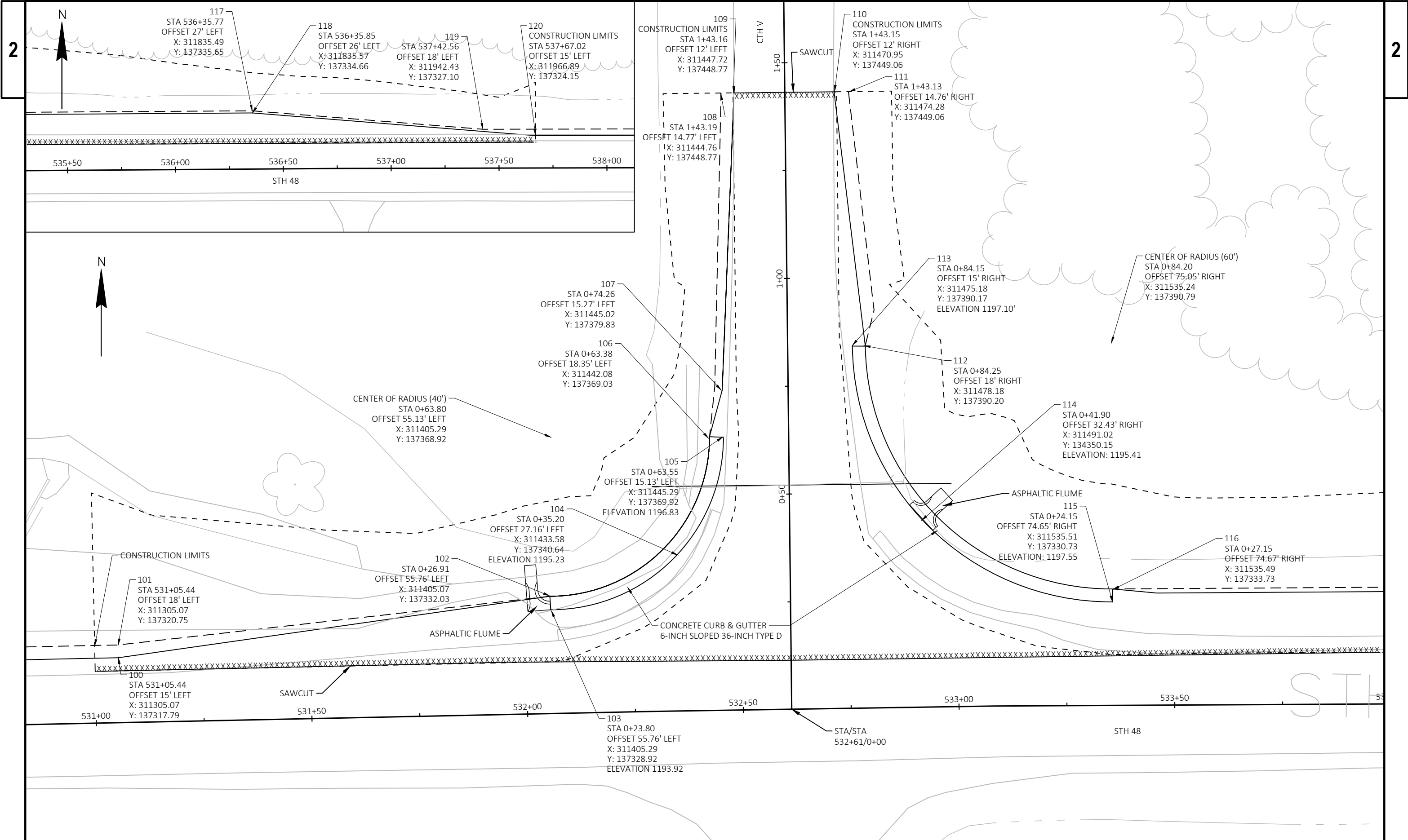
PAVING DETAIL
SIDEROADS WITH EXISTING CURB & GUTTER



PAVING DETAIL
UNPAVED SIDEROAD



PAVING DETAIL
SIDEROADS WITH PAVED SURFACE WITHOUT CURB & GUTTER

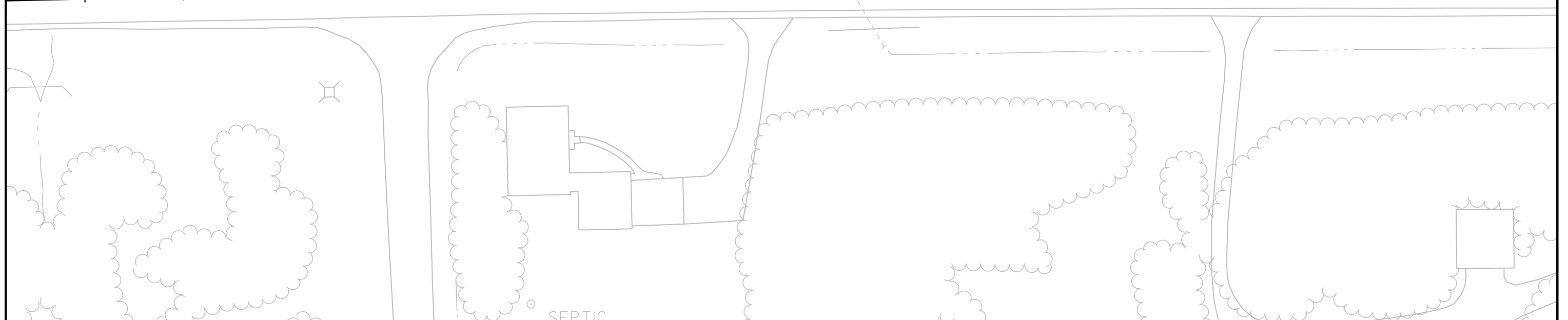
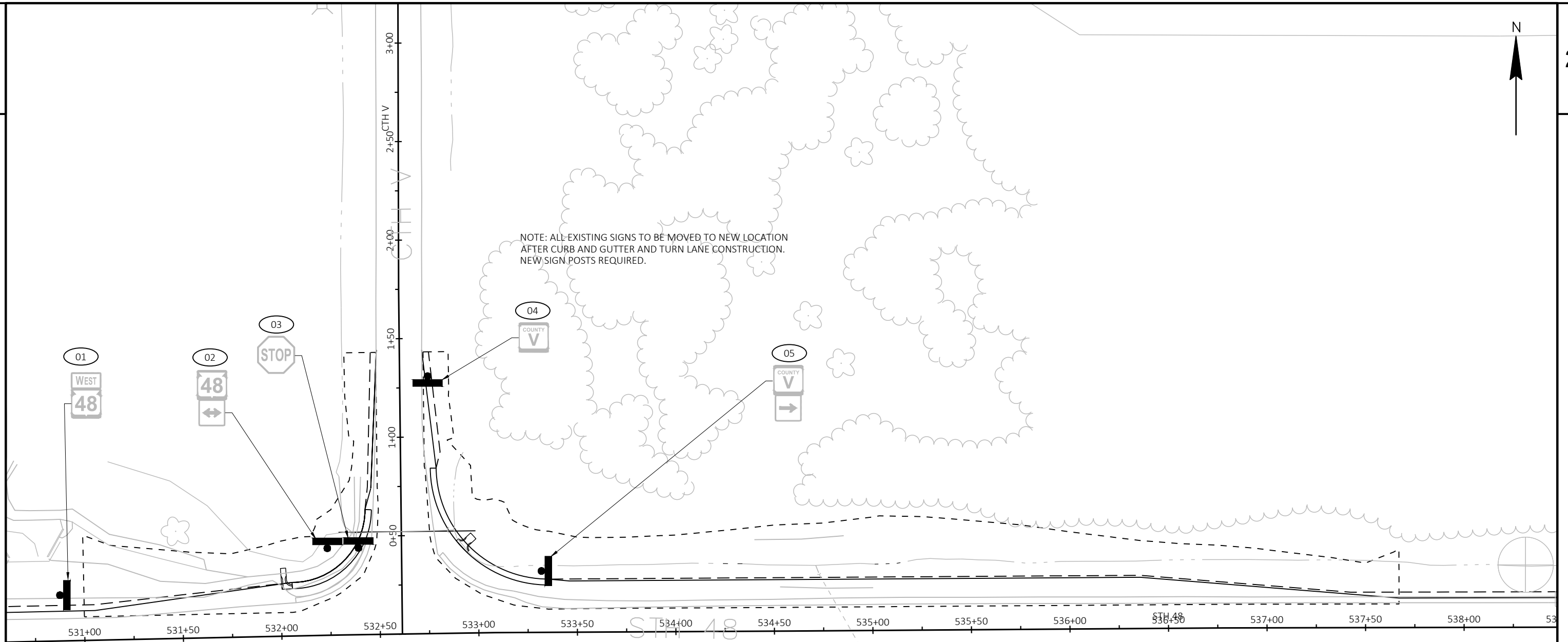


PROJECT NO: 8120-07-70	HWY: STH 48	COUNTY: BARRON	INTERSECTION DETAIL - CTH V INTERSECTION	SHEET E
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FILE NAME : C:\WISDOT\DESIGN\81200701\SHEETS\PLAN\021101_ID.DWG PLOT DATE : 7/28/2021 2:28 PM PLOT BY : BECKLIN, MATTHEW R PLOT NAME : PLOT SCALE : 1 IN:20 FT WISDOT/CADD SHEET 42



NOTE: ALL EXISTING SIGNS TO BE MOVED TO NEW LOCATION AFTER CURB AND GUTTER AND TURN LANE CONSTRUCTION. NEW SIGN POSTS REQUIRED.

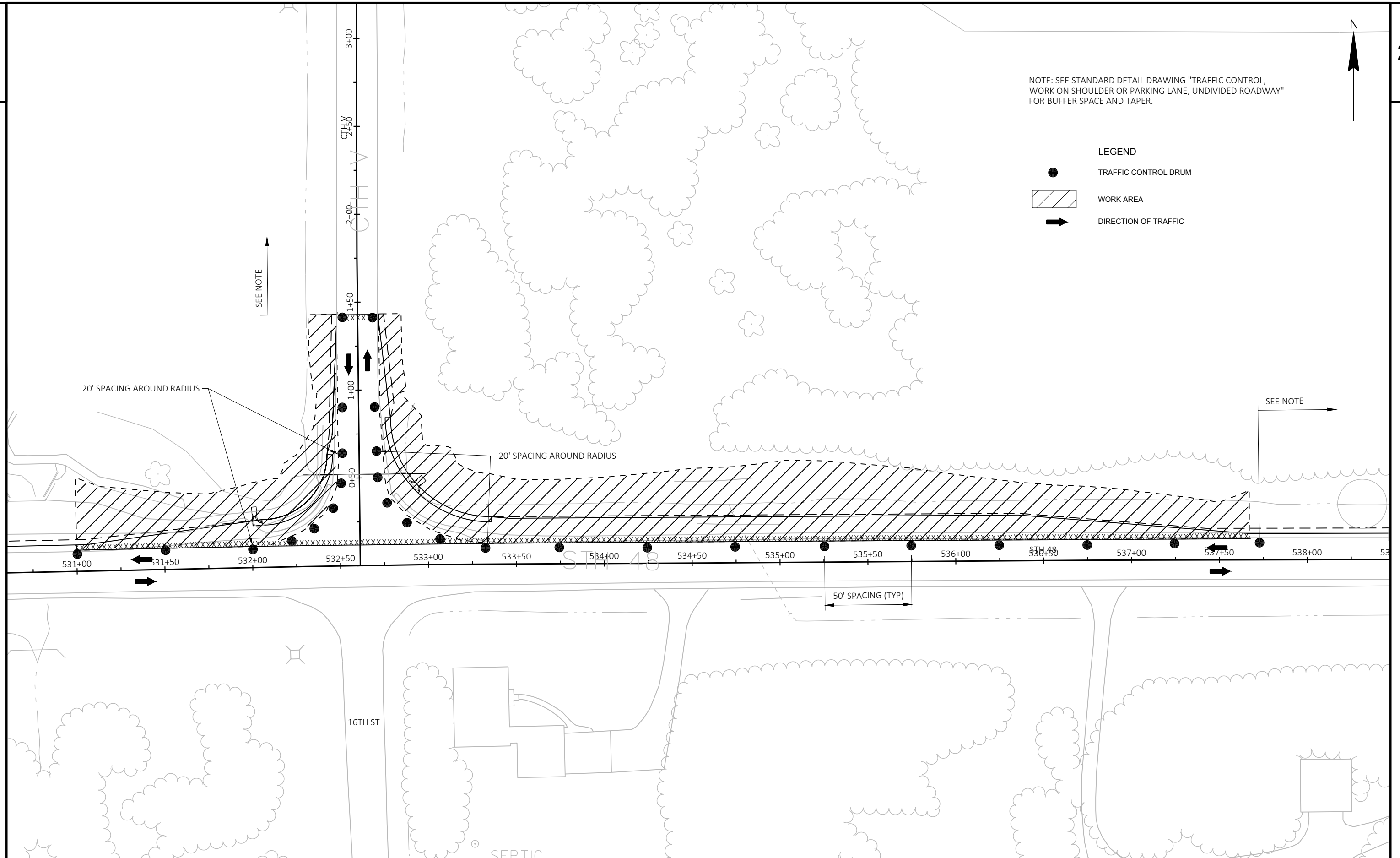


PROJECT NO: 8120-07-70	HWY: STH 48	COUNTY: BARRON	PERMANENT SIGNING - CTH V INTERSECTION	SHEET	E
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NOTE: SEE STANDARD DETAIL DRAWING "TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY" FOR BUFFER SPACE AND TAPER.

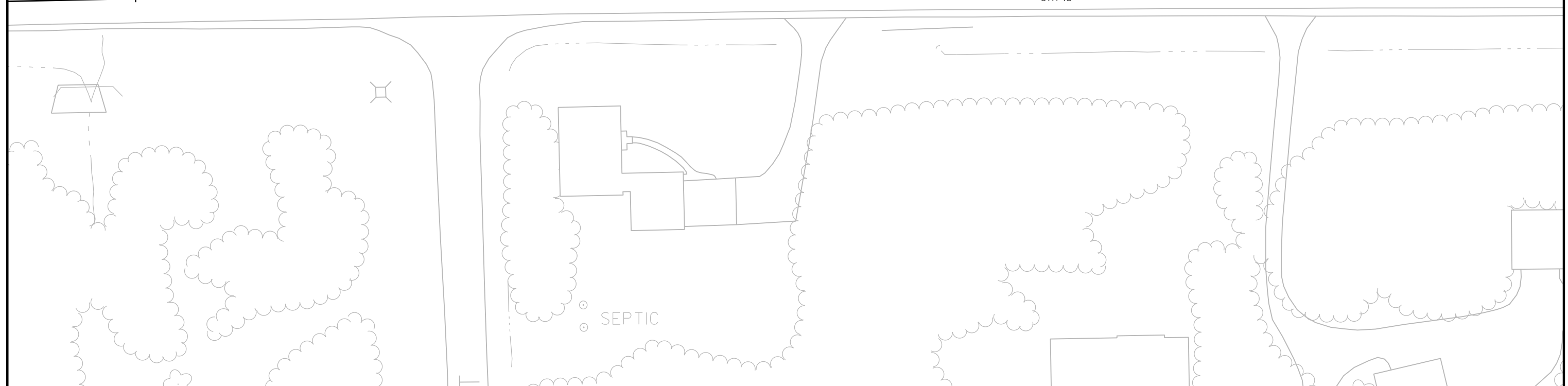
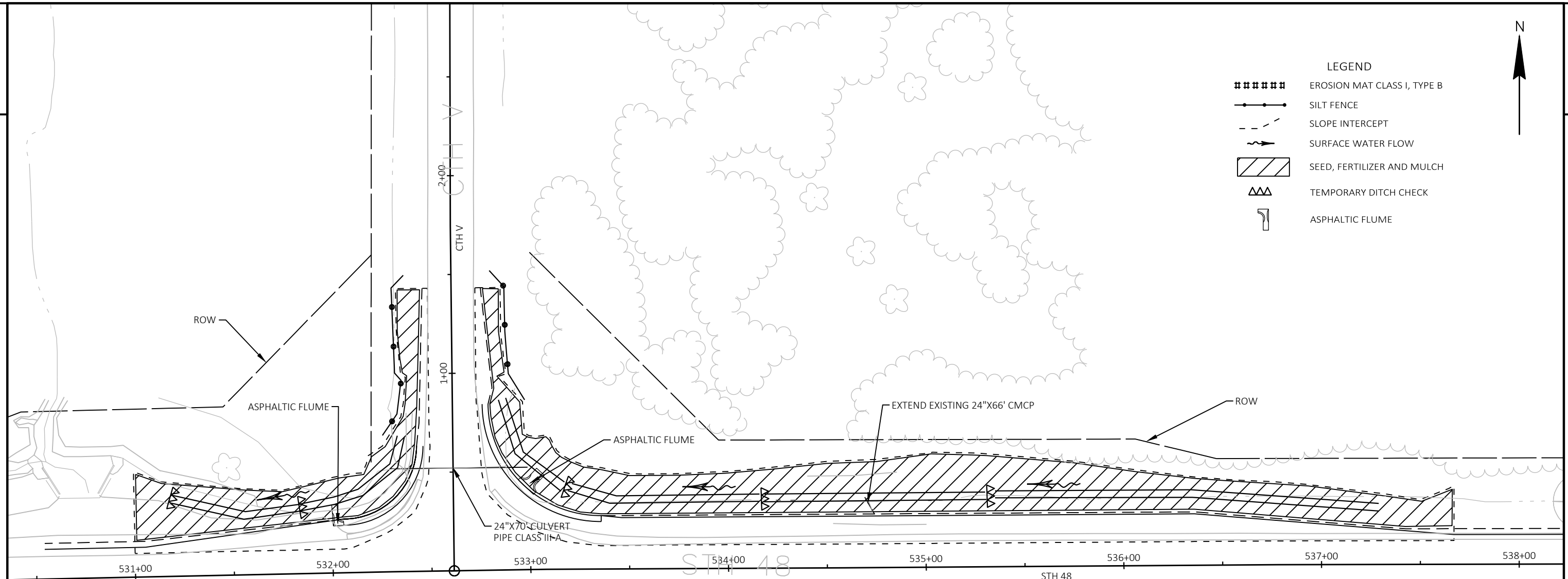
LEGEND

- TRAFFIC CONTROL DRUM
- ▨ WORK AREA
- ➔ DIRECTION OF TRAFFIC





- LEGEND**
- ##### EROSION MAT CLASS I, TYPE B
 - SILT FENCE
 - - - SLOPE INTERCEPT
 - ~> SURFACE WATER FLOW
 - ▨ SEED, FERTILIZER AND MULCH
 - △△△ TEMPORARY DITCH CHECK
 - ┌ ASPHALTIC FLUME



PROJECT NO: 8120-07-70	HWY: STH 48	COUNTY: BARRON	EROSION CONTROL - CTH V INTERSECTION	SHEET	E
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Estimate Of Quantities

8120-07-70

Line	Item	Item Description	Unit	Total	Qty
0002	203.0100	Removing Small Pipe Culverts	EACH	8.000	8.000
0004	204.0110	Removing Asphaltic Surface	SY	1,705.000	1,705.000
0006	204.0120	Removing Asphaltic Surface Milling	SY	67,093.000	67,093.000
0008	204.0150	Removing Curb & Gutter	LF	106.000	106.000
0010	205.0100	Excavation Common	CY	1,110.000	1,110.000
0012	208.1100	Select Borrow	CY	930.000	930.000
0014	208.1500.S	Temporary Lane Shift During Culvert Work	EACH	8.000	8.000
0016	211.0100	Prepare Foundation for Asphaltic Paving (project) 01. 8120-07-70	LS	1.000	1.000
0018	213.0100	Finishing Roadway (project) 01. 8120-07-70	EACH	1.000	1.000
0020	305.0110	Base Aggregate Dense 3/4-Inch	TON	3,152.000	3,152.000
0022	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	1,683.000	1,683.000
0024	455.0605	Tack Coat	GAL	9,805.000	9,805.000
0026	460.0105.S	HMA Percent Within Limits (PWL) Test Strip Volumetrics	EACH	1.000	1.000
0028	460.0110.S	HMA Percent Within Limits (PWL) Test Strip Density	EACH	2.000	2.000
0030	460.6645	HMA Pavement 5 MT 58-34 V	TON	11,652.000	11,652.000
0032	460.9000.S	Material Transfer Vehicle (project) 01. 8120-07-70	EACH	1.000	1.000
0034	465.0105	Asphaltic Surface	TON	670.000	670.000
0036	465.0315	Asphaltic Flumes	SY	14.000	14.000
0038	465.0475	Asphalt Centerline Rumble Strips 2-Lane Rural	LF	19,678.000	19,678.000
0040	520.3330	Culvert Pipe Class III-A 30-Inch	LF	276.000	276.000
0042	520.3336	Culvert Pipe Class III-A 36-Inch	LF	134.000	134.000
0044	521.1024	Apron Endwalls for Culvert Pipe Steel 24-Inch	EACH	1.000	1.000
0046	521.1030	Apron Endwalls for Culvert Pipe Steel 30-Inch	EACH	8.000	8.000
0048	521.1036	Apron Endwalls for Culvert Pipe Steel 36-Inch	EACH	4.000	4.000
0050	521.1042	Apron Endwalls for Culvert Pipe Steel 42-Inch	EACH	2.000	2.000
0052	521.3124	Culvert Pipe Corrugated Steel 24-Inch	LF	10.000	10.000
0054	521.3142	Culvert Pipe Corrugated Steel 42-Inch	LF	72.000	72.000
0056	601.0557	Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type D	LF	151.000	151.000
0058	606.0200	Riprap Medium	CY	17.000	17.000
0060	618.0100	Maintenance And Repair of Haul Roads (project) 01. 8120-07-70	EACH	1.000	1.000
0062	619.1000	Mobilization	EACH	1.000	1.000
0064	624.0100	Water	MGAL	16.000	16.000
0066	625.0500	Salvaged Topsoil	SY	3,990.000	3,990.000
0068	627.0200	Mulching	SY	1,940.000	1,940.000
0070	628.1504	Silt Fence	LF	927.000	927.000
0072	628.1520	Silt Fence Maintenance	LF	927.000	927.000
0074	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0076	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0078	628.2004	Erosion Mat Class I Type B	SY	1,100.000	1,100.000
0080	628.2008	Erosion Mat Urban Class I Type B	SY	2,050.000	2,050.000
0082	628.7504	Temporary Ditch Checks	LF	60.000	60.000
0084	628.7555	Culvert Pipe Checks	EACH	39.000	39.000
0086	629.0210	Fertilizer Type B	CWT	2.500	2.500
0088	630.0110	Seeding Mixture No. 10	LB	78.000	78.000
0090	630.0500	Seed Water	MGAL	71.000	71.000
0092	633.5200	Markers Culvert End	EACH	24.000	24.000
0094	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	5.000	5.000
0096	638.2102	Moving Signs Type II	EACH	8.000	8.000
0098	642.5201	Field Office Type C	EACH	1.000	1.000

Estimate Of Quantities

8120-07-70

Line	Item	Item Description	Unit	Total	Qty
0100	643.0300	Traffic Control Drums	DAY	1,300.000	1,300.000
0102	643.0900	Traffic Control Signs	DAY	2,400.000	2,400.000
0104	643.5000	Traffic Control	EACH	1.000	1.000
0106	645.0120	Geotextile Type HR	SY	74.000	74.000
0108	646.1020	Marking Line Epoxy 4-Inch	LF	23,905.000	23,905.000
0110	646.1040	Marking Line Grooved Wet Ref Epoxy 4-Inch	LF	39,356.000	39,356.000
0112	646.3040	Marking Line Grooved Wet Ref Epoxy 8-Inch	LF	300.000	300.000
0114	646.6120	Marking Stop Line Epoxy 18-Inch	LF	30.000	30.000
0116	649.0105	Temporary Marking Line Paint 4-Inch	LF	47,010.000	47,010.000
0118	649.0120	Temporary Marking Line Epoxy 4-Inch	LF	23,505.000	23,505.000
0120	650.4500	Construction Staking Subgrade	LF	670.000	670.000
0122	650.5000	Construction Staking Base	LF	670.000	670.000
0124	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	151.000	151.000
0126	650.6000	Construction Staking Pipe Culverts	EACH	8.000	8.000
0128	650.8000	Construction Staking Resurfacing Reference	LF	19,678.000	19,678.000
0130	650.9910	Construction Staking Supplemental Control (project) 01. 8120-07-70	LS	1.000	1.000
0132	650.9920	Construction Staking Slope Stakes	LF	670.000	670.000
0134	690.0150	Sawing Asphalt	LF	1,171.000	1,171.000
0136	740.0440	Incentive IRI Ride	DOL	15,910.000	15,910.000
0138	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	800.000	800.000
0140	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	630.000	630.000
0142	SPV.0055	Special 01. Incentive Density PWL HMA Pavement	DOL	7,320.000	7,320.000
0144	SPV.0055	Special 02. Incentive Air Voids HMA Pavement	DOL	11,480.000	11,480.000
0146	SPV.0055	Special 03. Incentive Density HMA Pavement Longitudinal Joints	DOL	7,900.000	7,900.000
0148	SPV.0060	Special 01. Abandon Cattle Pass	EACH	1.000	1.000
0150	SPV.0090	Special 01. Concrete Curb & Gutter Cure and Seal Treatment	LF	151.000	151.000

REMOVING SMALL PIPE CULVERTS

REMOVING ASPHALTIC SURFACE

203. 0100				
CATEGORY	STATION	LOCATION	EACH	REMARKS
0010	558+22	STH 48	1	26"X68' CMCP
0010	609+40	STH 48	1	30"X74' CMCP
0010	623+91	STH 48	1	36"X72' CMCP
0010	630+85	STH 48	1	30"X86' CMCP
0010	645+85	STH 48	1	30"X84' CMCP
0010	656+01	STH 48	1	24"X70' CMCP
0010	674+00	STH 48	1	24"X76' CMCP
0010	0+52	CTH V	1	24"X50' CMCP
TOTAL 0010			<u>8</u>	

204. 0110			
CATEGORY	STATION	LOCATION	SY
0010	558+22	STH 48	150
0010	609+40	STH 48	175
0010	623+91	STH 48	190
0010	630+85	STH 48	205
0010	645+87	STH 48	150
0010	656+00	STH 48	160
0010	673+99	STH 48	145
0010	0+52	CTH V	530
TOTAL 0010			<u>1705</u>

REMOVING ASPHALTIC SURFACE MILLING

204. 0120					
CATEGORY	STATION TO	STATION	LOCATION	SY	REMARKS
0010	486+82	- 683+60	STH 48	65807	MAINLINE
0010				1286	INTERSECTIONS
TOTAL 0010				<u>67093</u>	

REMOVING CURB & GUTTER

EXCAVATION COMMON

204. 0150					
CATEGORY	STATION TO	STATION	LOCATION	LF	REMARKS
0010	532+07	- 532+46	STH 48	52	CTH V INTERSECTION
0010	532+80	- 533+26	STH 48	54	CTH V INTERSECTION
TOTAL 0010				<u>106</u>	

205. 0100				
CATEGORY	STATION TO	STATION	LOCATION	CY
0010	531+00	- 537+67	STH 48	845
0010	0+11	- 1+43	CTH V	265
TOTAL 0010				<u>1110</u>

SELECT BORROW

208. 1100					
CATEGORY	STATION TO	STATION	LOCATION	CY	REMARKS
0010	531+00	- 537+67	STH 48	450	TURN LANE
0010	558+22		STH 48	60	CULVERT
0010	609+40		STH 48	70	CULVERT
0010	623+91		STH 48	80	CULVERT
0010	630+85		STH 48	80	CULVERT
0010	645+87		STH 48	60	CULVERT
0010	656+00		STH 48	70	CULVERT
0010	673+99		STH 48	60	CULVERT
TOTAL 0010				<u>930</u>	

TEMPORARY LANE SHIFT DURING CULVERT WORK

BASE AGGREGATE DENSE 1 1/4-INCH

208. 1500. S			
CATEGORY	STATION	LOCATION	EACH
0010	515+62	STH 48	1
0010	558+22	STH 48	1
0010	609+40	STH 48	1
0010	623+91	STH 48	1
0010	630+85	STH 48	1
0010	645+87	STH 48	1
0010	656+00	STH 48	1
0010	673+99	STH 48	1
TOTAL 0010			<u>8</u>

BASE AGGREGATE DENSE 3/4-INCH

305. 0110						
CATEGORY	STATION TO	STATION	LOCATION	TON	REMARKS	
0010	486+82	- 683+60	STH 48	1550	SHOULDERS	
0010	486+82	- 683+60	STH 48	1550	SHOULDERS	
0010	0+64	- 1+43	CTH V	42	TURN LANE SHOULDERS	
0010	0+64	- 1+43	CTH V	10	TURN LANE SHOULDERS	
TOTAL 0010				<u>3152</u>		

305. 0120					
CATEGORY	STATION TO	STATION	LOCATION	TON	REMARKS
0010	531+00	- 537+67	STH 48	703	
0010	0+11	- 1+43	CTH V	50	
0010	0+52		CTH V	105	CULVERT
0010	558+22		STH 48	105	CULVERT
0010	609+40		STH 48	120	CULVERT
0010	623+91		STH 48	140	CULVERT
0010	630+85		STH 48	140	CULVERT
0010	645+87		STH 48	105	CULVERT
0010	656+00		STH 48	110	CULVERT
0010	673+99		STH 48	105	CULVERT
TOTAL 0010				<u>1683</u>	

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HMA PERCENT WITHIN LIMITS (PWL) TEST STRIP VOLUMETRICS

ASPHALTIC SURFACE

TACK COAT

CATEGORY	STATION TO	STATION	LOCATION	455. 0605 GAL	REMARKS
0010	486+82 -	683+60	STH 48	4606	LOWER
0010	486+82 -	683+60	STH 48	4606	UPPER
0010	531+00 -	537+67	STH 48	130	TURN LANE
0010	0+11 -	1+43	CTH V	36	
0010				165	CULVERTS
0010				262	INTERSECTIONS
TOTAL 0010				9805	

CATEGORY	STATION TO	STATION	LOCATION	460. 0105. S EACH	REMARKS
0010	486+82 -	683+60	STH 48	1	UPPER LAYER
TOTAL 0010				1	

CATEGORY	STATION TO	STATION	LOCATION	465. 0105 TON	REMARKS
0010	486+82 -	683+60	STH 48	200	WEDGING
0010	558+22 -		STH 48	60	
0010	609+40 -		STH 48	70	
0010	623+91 -		STH 48	75	
0010	630+85 -		STH 48	80	
0010	645+87 -		STH 48	60	
0010	656+00 -		STH 48	65	
0010	673+99 -		STH 48	60	
TOTAL 0010				670	

HMA PERCENT WITHIN LIMITS (PWL) TEST STRIP DENSITY

CATEGORY	STATION TO	STATION	LOCATION	460. 0110. S EACH	REMARKS
0010	486+82 -	683+60	STH 48	1	LOWER LAYER
0010	486+82 -	683+60	STH 48	1	UPPER LAYER
TOTAL 0010				2	

HMA PAVEMENT 5 MT 58-34 V

CATEGORY	STATION TO	STATION	LOCATION	460. 6645 TON	REMARKS
0010	486+82 -	683+60	STH 48	5528	LOWER
0010	486+82 -	683+60	STH 48	5528	UPPER
0010	0+11 -	1+43	CTH V	120	
0010	531+00 -	537+67	STH 48	260	TURN LANE
0010				216	INTERSECTIONS
TOTAL 0010				11652	

MATERIAL TRANSFER VEHICLE

CATEGORY	STATION TO	STATION	LOCATION	460. 9000. S EACH
0010	486+82 -	683+60	STH 48	1
TOTAL 0010				1

ASPHALTIC FLUMES

CATEGORY	STATION	LOCATION	465. 0315 SY	REMARKS
0010	532+05	STH 48	5	C&G RADIUS
0010	532+92	STH 48	9	C&G RADIUS
TOTAL 0010			14	

THE FOLLOWING ACCEPTANCE CRITERIA ARE APPLICABLE FOR THIS PROJECT:

LOCATION	STATION	MIXTURE USE	UNDERLYING SURFACE	BID ITEM	TON	THICKNESS	QUALITY MANAGEMENT PROGRAM TO BE USED FOR:	
							MIXTURE ACCEPTANCE	DENSITY ACCEPTANCE
DRIVING LANES	486+82 - 683+60	UPPER LAYER	5 MT 58-34 V	5 MT 58-34 V	4,410	1.5"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT SPV.0055.02	INCENTIVE DENSITY PWL HMA PAVEMENT SPV.0055.01
DRIVING LANES	486+82 - 683+60	LOWER LAYER	MILLED EXISTING HMA SURFACE	5 MT 58-34 V	4,410	1.5"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT SPV.0055.02	ACCEPTANCE BY ORDINARY COMPACTION
SHOULDER, SIDEROADS AND TURN LANES	117+43 - 15+81	UPPER LAYER	5 MT 58-34 V	5 MT 58-34 V	1,416	1.5"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT SPV.0055.02	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR DENSITY
SHOULDER, SIDEROADS AND TURN LANES	117+43 - 15+81	LOWER LAYER	MILLED EXISTING HMA SURFACE/ BASE AGGREGATE	5 MT 58-34 V	1,416	1.5"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT SPV.0055.02	ACCEPTANCE BY ORDINARY COMPACTION
HMA PAVING FOUNDATION	VARIOUS	LEVELING AND WEDGING	VARIES	ASPHALTIC SURFACE	200	VARIES	QMP AS PER STANDARD SPECIFICATIONS 465	ACCEPTANCE BY ORDINARY COMPACTION
PATCHING FOR REMOVALS	VARIOUS	REMOVALS	BASE AGGREGATE	ASPHALTIC SURFACE	470	VARIES	QMP AS PER STANDARD SPECIFICATIONS 465	ACCEPTANCE BY ORDINARY COMPACTION

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ASPHALT CENTER LINE RUMBLE STRIPS 2-LANE RURAL

CATEGORY	STATION TO	STATION	LOCATION	465.0475 LF
0010	486+82 -	683+60	STH 48	19678
TOTAL 0010				<u>19678</u>

CULVERT PIPE CLASS III-A 30-INCH

CATEGORY	STATION	LOCATION	520.3330 LF
0010	558+22	STH 48	54
0010	645+87	STH 48	77
0010	656+00	STH 48	69
0010	673+99	STH 48	76
TOTAL 0010			<u>276</u>

CULVERT PIPE CLASS III-A 36-INCH

CATEGORY	STATION	LOCATION	520.3336 LF
0010	609+40	STH 48	62
0010	630+85	STH 48	72
TOTAL 0010			<u>134</u>

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APRON ENDWALLS FOR CULVERT PIPE STEEL 24-INCH

CATEGORY	STATION	LOCATION	521.1024 EACH
0010	534+89	STH 48	1
TOTAL 0010			<u>1</u>

APRON ENDWALLS FOR CULVERT PIPE STEEL 30-INCH

CATEGORY	STATION	LOCATION	521.1030 EACH
0010	558+22	STH 48	2
0010	645+87	STH 48	2
0010	656+00	STH 48	2
0010	673+99	STH 48	2
TOTAL 0010			<u>8</u>

APRON ENDWALLS FOR CULVERT PIPE STEEL 36-INCH

CATEGORY	STATION	LOCATION	521.0136 EACH
0010	609+40	STH 48	2
0010	630+85	STH 48	2
TOTAL 0010			<u>4</u>

APRON ENDWALLS FOR CULVERT PIPE STEEL 42-INCH

CATEGORY	STATION	LOCATION	521.1042 EACH
0010	623+91	STH 48	2
TOTAL 0010			<u>2</u>

CULVERT PIPE CORRUGATED STEEL 24-INCH
MINIMUM THICKNESS 0.064"

CATEGORY	STATION	LOCATION	521.3124 LF	REMARKS
0010	534+89	STH 48	10	EXTENSION
TOTAL 0010			<u>10</u>	

CULVERT PIPE CORRUGATED STEEL 42-INCH
MINIMUM THICKNESS 0.109"

CATEGORY	STATION	LOCATION	521.3142 LF
0010	623+91	STH 48	72
TOTAL 0010			<u>72</u>

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RI PRAP MEDIUM

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

601.0557					
CATEGORY	STATION TO	STATION	LOCATION	LF	REMARKS
0010	532+06	- 532+44	STH 48	60	NW RADIUS
0010	532+78	- 533+36	STH 48	91	NE RADIUS
TOTAL 0010				<u>151</u>	

606.0200					
CATEGORY	STATION	LOCATION	CY	REMARKS	
0010	496+58	STH 48	2	APPROXIMATE SIZE 5' x 10'	
0010	491+56	STH 48	3	APPROXIMATE SIZE 6' x 12'	
0010	511+96	STH 48	2	APPROXIMATE SIZE 5' x 10'	
0010	609+40	STH 48	3	APPROXIMATE SIZE 6' x 12'	
0010	623+91	STH 48	4	APPROXIMATE SIZE 7' x 13'	
0010	630+85	STH 48	3	APPROXIMATE SIZE 6' x 12'	
TOTAL 0010			<u>17</u>		

WATER

624.0100					
CATEGORY	STATION TO	STATION	LOCATION	MGAL	REMARKS
0010	531+00	- 537+67	STH 48	16	CTH V TURN LANE
TOTAL 0010				<u>16</u>	

SALVAGED TOPSOIL

625.0500				
CATEGORY	STATION TO	STATION	LOCATION	SY
0010	531+00	- 532+50	USH 8	550
0010	532+74	- 537+57	USH 8	1390
0010	558+22		STH 48	200
0010	609+40		STH 48	300
0010	623+91		STH 48	350
0010	630+85		STH 48	400
0010	645+85		STH 48	400
0010	656+01		STH 48	200
0010	674+00		STH 48	200
TOTAL 0010				<u>3990</u>

MULCHING

627.0200					
CATEGORY	STATION TO	STATION	LOCATION	SY	
0010	531+00	- 532+50	USH 8	550	
0010	532+74	- 537+57	USH 8	1390	
TOTAL 0010				<u>1940</u>	

SILT FENCE

628.1504					
CATEGORY	STATION TO	STATION	LOCATION	LF	REMARKS
0010	0+69	- 1+50	CTH V	81	LT
0010	0+86	- 1+52	CTH V	66	RT
0010	558+22		STH 48	100	LT/RT
0010	609+40		STH 48	100	LT/RT
0010	623+91		STH 48	120	LT/RT
0010	630+85		STH 48	130	LT/RT
0010	645+85		STH 48	130	LT/RT
0010	656+01		STH 48	100	LT/RT
0010	674+00		STH 48	100	LT/RT
TOTAL 0010				<u>927</u>	

SILT FENCE MAINTENANCE

628.1520					
CATEGORY	STATION TO	STATION	LOCATION	LF	REMARKS
0010	0+69	- 1+50	CTH V	81	LT
0010	0+86	- 1+52	CTH V	66	RT
0010	558+22		STH 48	100	LT/RT
0010	609+40		STH 48	100	LT/RT
0010	623+91		STH 48	120	LT/RT
0010	630+85		STH 48	130	LT/RT
0010	645+85		STH 48	130	LT/RT
0010	656+01		STH 48	100	LT/RT
0010	674+00		STH 48	100	LT/RT
TOTAL 0010				<u>927</u>	

MOBILIZATIONS EROSION CONTROL

628.1905					
CATEGORY	STATION TO	STATION	LOCATION	EACH	
0010	486+82	- 683+60	STH 48	2	
TOTAL 0010				<u>2</u>	

MOBILIZATIONS EMERGENCY EROSION CONTROL

628.1910					
CATEGORY	STATION TO	STATION	LOCATION	EACH	
0010	486+82	- 683+60	STH 48	2	
TOTAL 0010				<u>2</u>	

EROSION MAT CLASS I TYPE B

628.2004					
CATEGORY	STATION TO	STATION	LOCATION	SY	
0010	531+21	- 532+36	STH 48/CTH V	250	
0010	532+85	- 537+30	STH 48/CTH V	850	
TOTAL 0010				<u>1100</u>	

EROSION MAT URBAN CLASS I TYPE B

CATEGORY	STATION	LOCATION	628. 2008 SY
0010	558+22	STH 48	200
0010	609+40	STH 48	300
0010	623+91	STH 48	350
0010	630+85	STH 48	400
0010	645+85	STH 48	400
0010	656+01	STH 48	200
0010	674+00	STH 48	200
TOTAL 0010			2050

FERTILIZER TYPE B

CATEGORY	STATION TO	STATION	LOCATION	629. 0210 CWT
0010	531+00 -	532+50	STH 48	0. 3
0010	532+75	537+67	STH 48	0. 8
0010	558+22		STH 48	0. 15
0010	609+40		STH 48	0. 20
0010	623+91		STH 48	0. 22
0010	630+85		STH 48	0. 25
0010	645+85		STH 48	0. 25
0010	656+01		STH 48	0. 15
0010	674+00		STH 48	0. 15
TOTAL 0010				2. 5

MARKERS CULVERT END

CATEGORY	STATION	LOCATION	633. 5200 EACH
0010	491+56	STH 48	2
0010	496+58	STH 48	2
0010	511+96	STH 48	2
0010	534+89	STH 48	2
0010	558+22	STH 48	2
0010	609+40	STH 48	2
0010	623+91	STH 48	2
0010	630+86	STH 48	2
0010	645+87	STH 48	2
0010	656+00	STH 48	2
0010	673+99	STH 48	2
0010		CTH V	2
TOTAL 0010			24

TEMPORARY DITCH CHECKS

CATEGORY	STATION	LOCATION	628. 7504 LF
0010	531+85	STH 48	15
0010	533+15	STH 48	15
0010	534+25	STH 48	15
0010	535+30	STH 48	15
TOTAL 0010			60

SEEDING MIXTURE NO. 10

CATEGORY	STATION TO	STATION	LOCATION	630. 0110 LB
0010	531+00 -	532+50	STH 48	12
0010	532+75	537+67	STH 48	35
0010	558+22		STH 48	3
0010	609+40		STH 48	4
0010	623+91		STH 48	6
0010	630+85		STH 48	6
0010	645+85		STH 48	6
0010	656+01		STH 48	3
0010	674+00		STH 48	3
TOTAL 0010				78

POSTS WOOD 4X6-1NCH X 16-FT

CATEGORY	STATION	SIGN	LOCATION	634. 0616 EACH	SIGN NUMBER
0010	530+80	MB3-4	STH 48	1	01
0010	532+25	M1-6	STH 48	1	02
0010	532+25	R1-1	STH 48	1	03
0010	532+80	M1-5A	STH 48	1	04
0010	533+25	M1-5A	STH 48	1	05
TOTAL 0010				5	

CULVERT PIPE CHECKS

CATEGORY	STATION	LOCATION	628. 7555 EACH
0010	558+22	STH 48	4
0010	609+40	STH 48	6
0010	623+91	STH 48	8
0010	630+85	STH 48	6
0010	645+87	STH 48	4
0010	656+00	STH 48	4
0010	673+99	STH 48	4
0010	0+52	CTH V	3
TOTAL 0010			39

SEED WATER

CATEGORY	STATION TO	STATION	LOCATION	630. 0500 MGAL
0010	531+00 -	532+50	STH 48/CTH V	10
0010	532+75	537+67	STH 48/CTH V	24
0010	558+22		STH 48	4
0010	609+40		STH 48	5
0010	623+91		STH 48	6
0010	630+85		STH 48	7
0010	645+85		STH 48	7
0010	656+01		STH 48	4
0010	674+00		STH 48	4
TOTAL 0010				71

MOVING SIGNS TYPE II

CATEGORY	STATION	SIGN	LOCATION	638. 2102 EACH	SIGN NUMBER
0010	530+80	MB3-4	STH 48	1	01
0010	530+80	M1-6	STH 48	1	01
0010	532+25	M1-6	STH 48	1	02
0010	532+25	MB6-4	STH 48	1	02
0010	532+25	R1-1	STH 48	1	03
0010	532+80	M1-5A	STH 48	1	04
0010	533+25	M1-5A	STH 48	1	05
0010	533+25	MB6-1	STH 48	1	05
TOTAL 0010				8	

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FIELD OFFICE TYPE C

CATEGORY	LOCATION	642.5201 EACH
0010	STH 48	1
TOTAL 0010		<u>1</u>

TRAFFIC CONTROL DRUMS

CATEGORY	LOCATION	643.0300 DAY	REMARKS
0010	STH 48	1000	CTH V TURN LANE
0010	STH 48	300	CULVERT WORK
TOTAL 0010		<u>1300</u>	

TRAFFIC CONTROL SIGNS

CATEGORY	STATION TO	STATION	LOCATION	643.0900 DAY	REMARKS
0010	486+82 -	683+60	STH 48	700	ADVANCE WARNING (10 SIGNS/70 DAYS)
0010	486+82 -	683+60	STH 48	1700	SIDE ROADS (12 ROADS/2 SIGNS/ 70 DAYS)
TOTAL 0010				<u>2400</u>	

GEOTEXTILE TYPE HR

CATEGORY	STATION	LOCATION	645.0120 SY	REMARKS
0010	496+58	STH 48	10	APPROXIMATE SIZE 5' x 10'
0010	491+56	STH 48	13	APPROXIMATE SIZE 6' x 12'
0010	511+96	STH 48	10	APPROXIMATE SIZE 5' x 10'
0010	609+40	STH 48	13	APPROXIMATE SIZE 6' x 12'
0010	623+91	STH 48	15	APPROXIMATE SIZE 7' x 13'
0010	630+85	STH 48	13	APPROXIMATE SIZE 6' x 12'
TOTAL 0010			<u>74</u>	

TRAFFIC CONTROL

CATEGORY	LOCATION	643.5000 EACH
0010	STH 48	1
TOTAL 0010		<u>1</u>

MARKING LINE EPOXY 4-INCH

CATEGORY	STATION TO	STATION	LOCATION	646.1020 LF	REMARKS
0010	486+82 -	683+60	STH 48	23505	CENTERLINE
0010	0+23 -	1+45	CTH V	250	EDGE LINE
0010	0+23 -	1+45	CTH V	150	CENTERLINE
TOTAL 0010				<u>23905</u>	

MARKING LINE GROOVED WET REF EPOXY 4-INCH

CATEGORY	STATION TO	STATION	LOCATION	646.1040 LF	REMARKS
0010	486+82 -	683+60	STH 48	19678	EDGE LINE
0010	486+82 -	683+60	STH 48	19678	EDGE LINE
TOTAL 0010				<u>39356</u>	

MARKING LINE GROOVED WET REF EPOXY 8-INCH

CATEGORY	STATION TO	STATION	LOCATION	646.3040 LF
0010	533+36 -	536+36	STH 48	300
TOTAL 0010				<u>300</u>

MARKING STOP LINE EPOXY 18-INCH

CATEGORY	STATION	LOCATION	646.6120 LF
0010	0+28	CTH V	30
TOTAL 0010			<u>30</u>

TEMPORARY MARKING LINE PAINT 4-INCH

CATEGORY	STATION TO	STATION	LOCATION	649.0105 LF	REMARKS
0010	486+82 -	683+60	STH 48	23505	MILL
0010	486+82 -	683+60	STH 48	23505	OVERLAY
TOTAL 0010				<u>47010</u>	

TEMPORARY MARKING LINE EPOXY 4-INCH

CATEGORY	STATION TO	STATION	LOCATION	649.0120 LF	REMARKS
0010	486+82 -	683+60	STH 48	23505	BEFORE RUMBLE STRIPS
TOTAL 0010				<u>23505</u>	

CONSTRUCTION STAKING SUBGRADE

CATEGORY	STATION TO	STATION	LOCATION	650.4500 LF
0010	531+00 -	532+06	STH 48	106
0010	533+35 -	537+67	STH 48	432
0010	0+11 -	1+43	CTH V	132
TOTAL 0010				<u>670</u>

CONSTRUCTION STAKING BASE

CATEGORY	STATION TO	STATION	LOCATION	650.5000 LF
0010	531+00 -	532+06	STH 48	106
0010	533+35 -	537+67	STH 48	432
0010	0+11 -	1+43	CTH V	132
TOTAL 0010				<u>670</u>

CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER

CATEGORY	STATION TO	STATION	LOCATION	650.5500 LF	REMARKS
0010	532+06 -	532+44	STH 48	60	NW RADIUS
0010	532+78 -	533+36	STH 48	91	NE RADIUS
TOTAL 0010				<u>151</u>	

CONSTRUCTION STAKING PIPE CULVERTS

CATEGORY	STATION	LOCATION	650.6000 EACH
0010	558+22	STH 48	1
0010	609+40	STH 48	1
0010	623+91	STH 48	1
0010	630+85	STH 48	1
0010	645+87	STH 48	1
0010	656+00	STH 48	1
0010	673+99	STH 48	1
0010	0+52	CTH V	1
TOTAL 0010			<u>8</u>

CONSTRUCTION STAKING RESURFACING REFERENCE

CATEGORY	STATION TO	STATION	LOCATION	650.8000 LF
0010	486+82 -	683+60	STH 48	19678
TOTAL 0010				<u>19678</u>

CONSTRUCTION STAKING SLOPE STAKES

CATEGORY	STATION TO	STATION	LOCATION	650.9920 LF
0010	531+00 -	532+06	STH 48	106
0010	533+35 -	537+67	STH 48	432
0010	0+11 -	1+43	CTH V	132
TOTAL 0010				<u>670</u>

SAWING ASPHALT

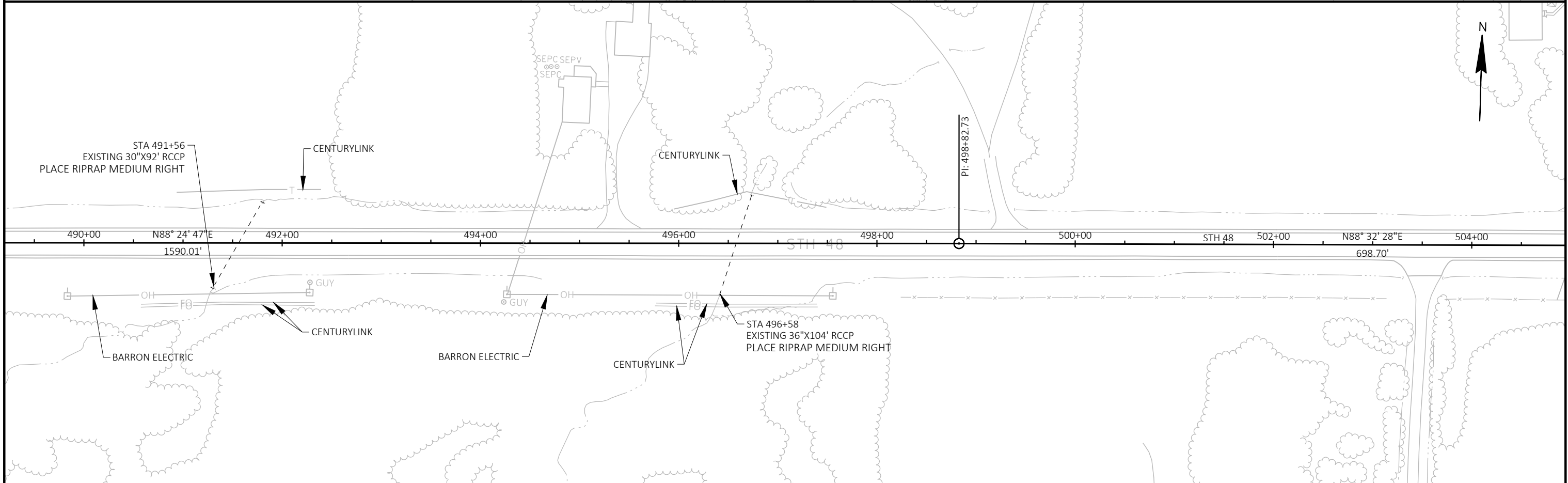
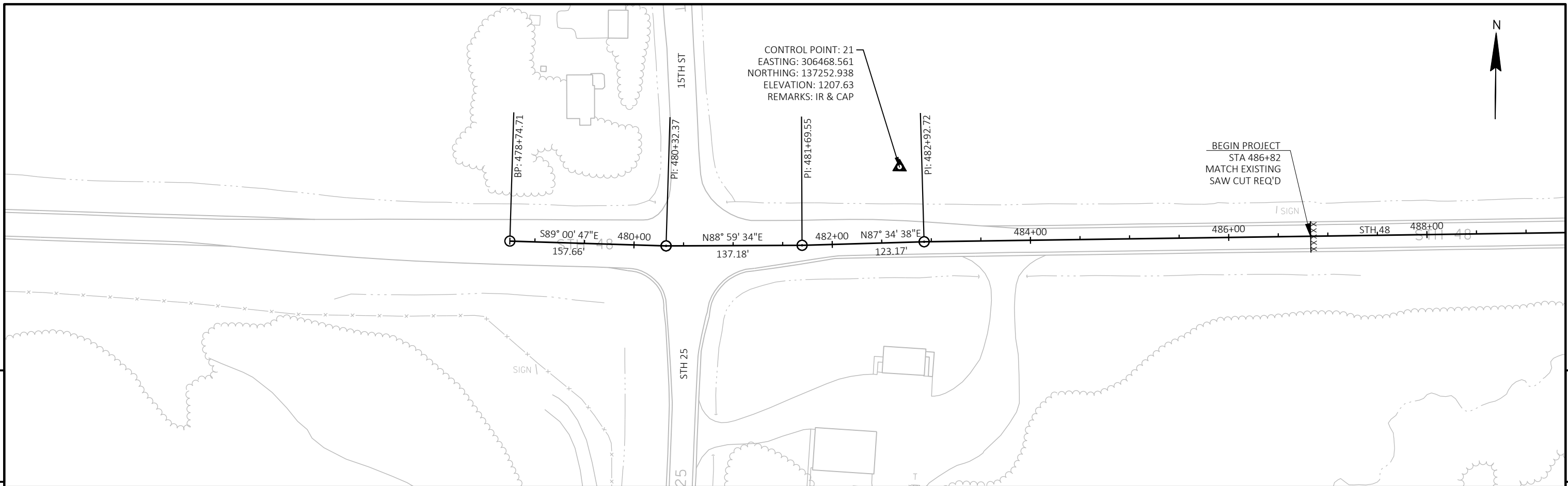
CATEGORY	STATION TO	STATION	LOCATION	690.0150 LF	REMARKS
0010	486+82		STH 48	30	BEGIN PROJECT
0010	531+00 -	537+67	STH 48	667	CTH V TURN LANE
0010	558+22		STH 48	60	CULVERT
0010	609+40		STH 48	60	CULVERT
0010	623+91		STH 48	60	CULVERT
0010	630+85		STH 48	60	CULVERT
0010	645+87		STH 48	60	CULVERT
0010	656+00		STH 48	60	CULVERT
0010	673+99		STH 48	60	CULVERT
0010	683+60		STH 48	30	END PROJECT
0010	1+43		CTH V	24	CTH V
TOTAL 0010				<u>1171</u>	

SPECIAL 01. ABANDON CATTLE PASS

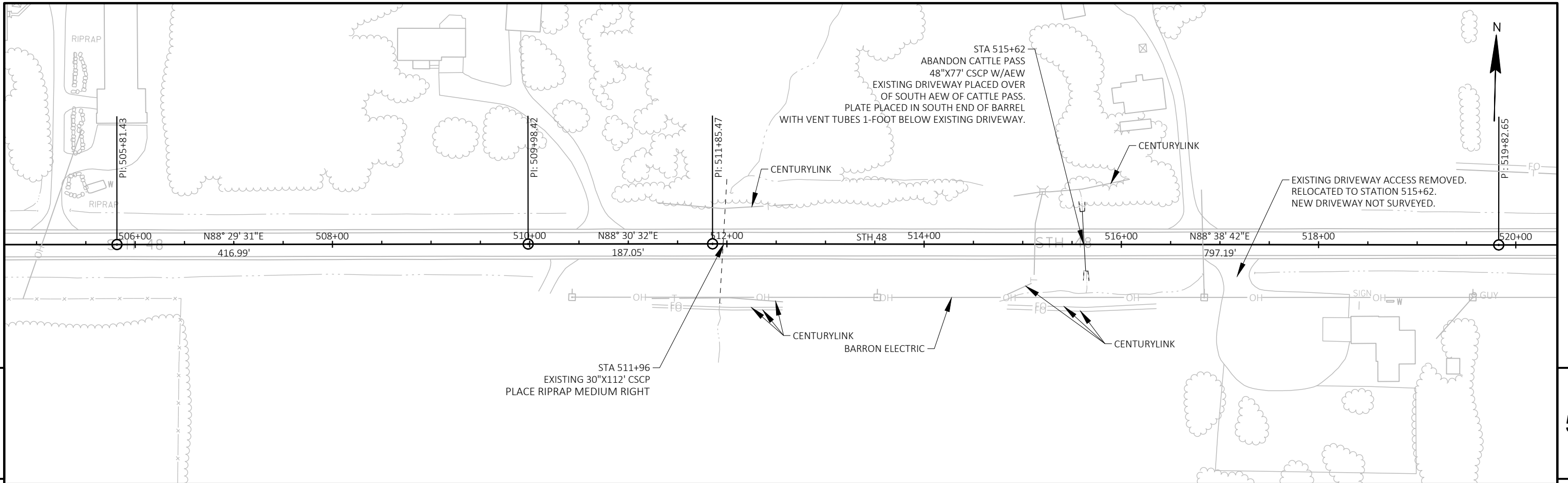
CATEGORY	STATION	LOCATION	SPV. 0060.01 EACH
0010	515+62	STH 48	1
TOTAL 0010			<u>1</u>

SPECIAL 01. CONCRETE CURB AND GUTTER CURE AND SEAL TREATMENT

CATEGORY	STATION TO	STATION	LOCATION	SPV. 0090.01 LF	REMARKS
0010	532+06 -	532+44	STH 48	60	NW RADIUS
0010	532+78 -	533+36	STH 48	91	NE RADIUS
TOTAL 0010				<u>151</u>	

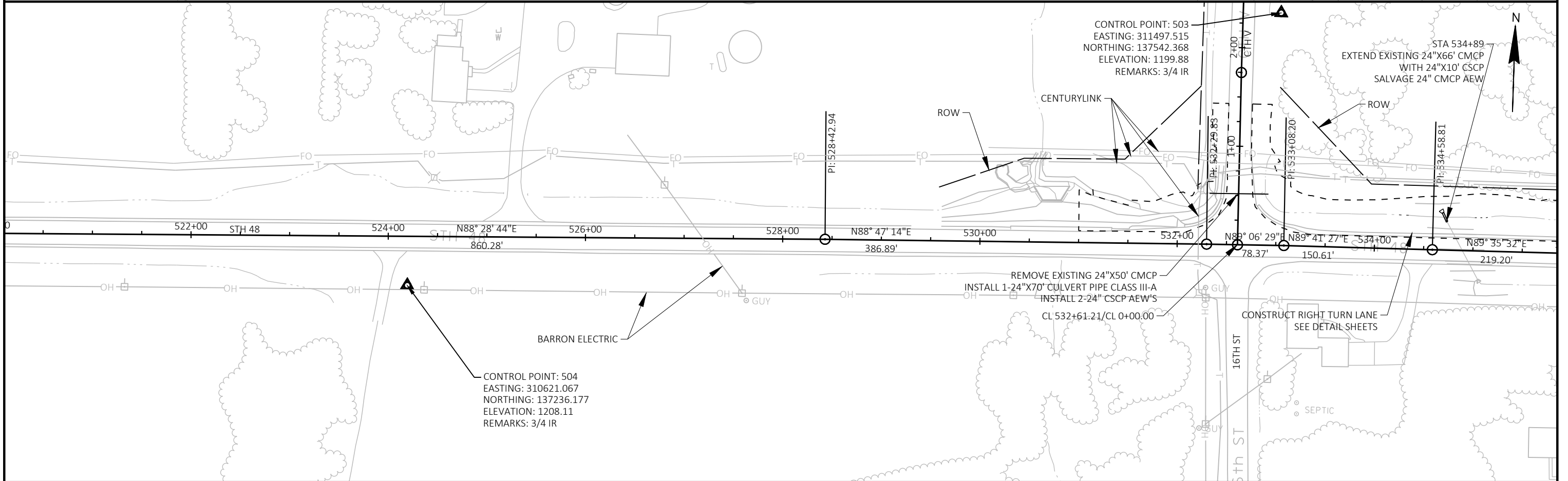


PROJECT NO: 8120-07-70	HWY: STH 48	COUNTY: BARRON	PLAN	SHEET	E
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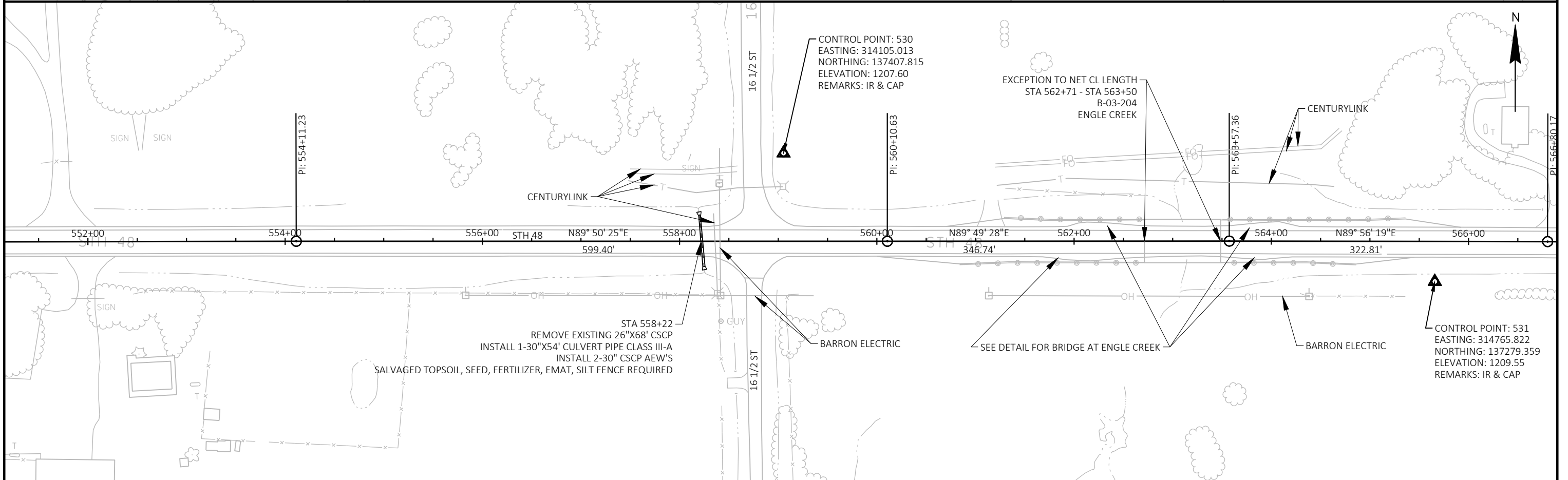
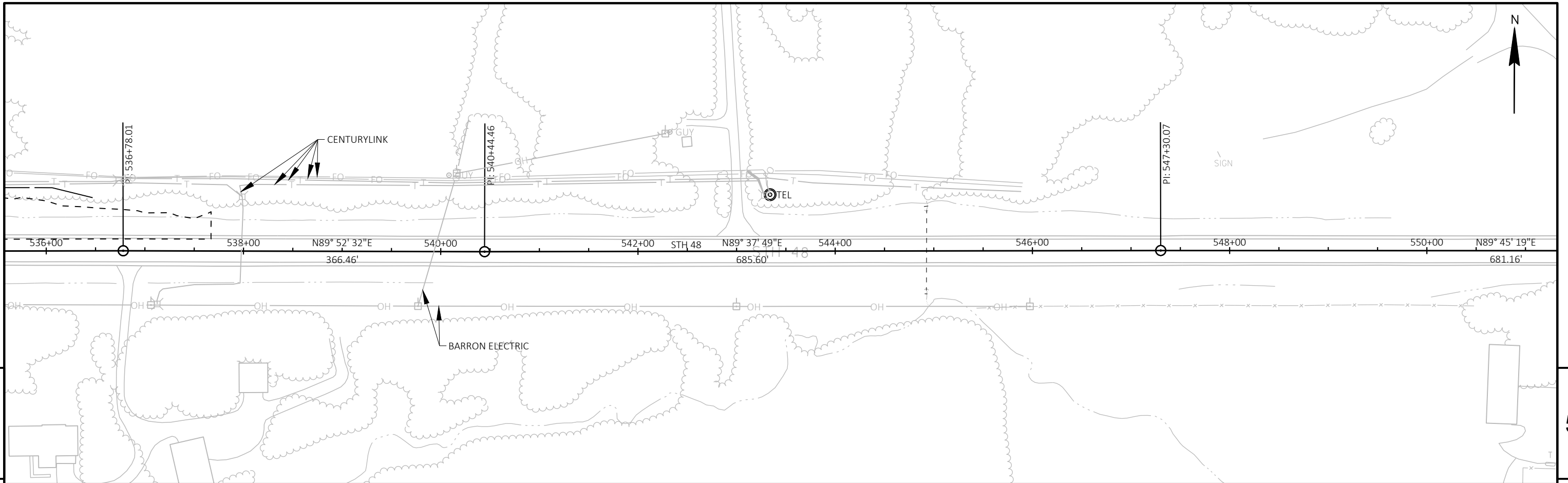


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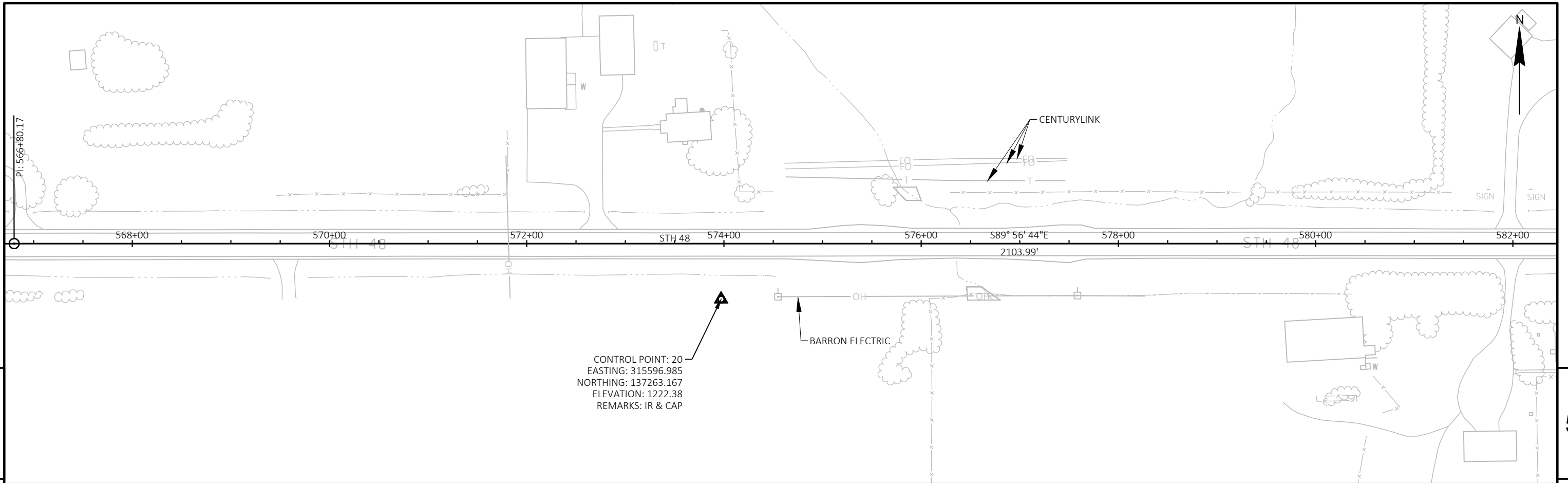
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PROJECT NO: 8120-07-70	HWY: STH 48	COUNTY: BARRON	PLAN	SHEET	E
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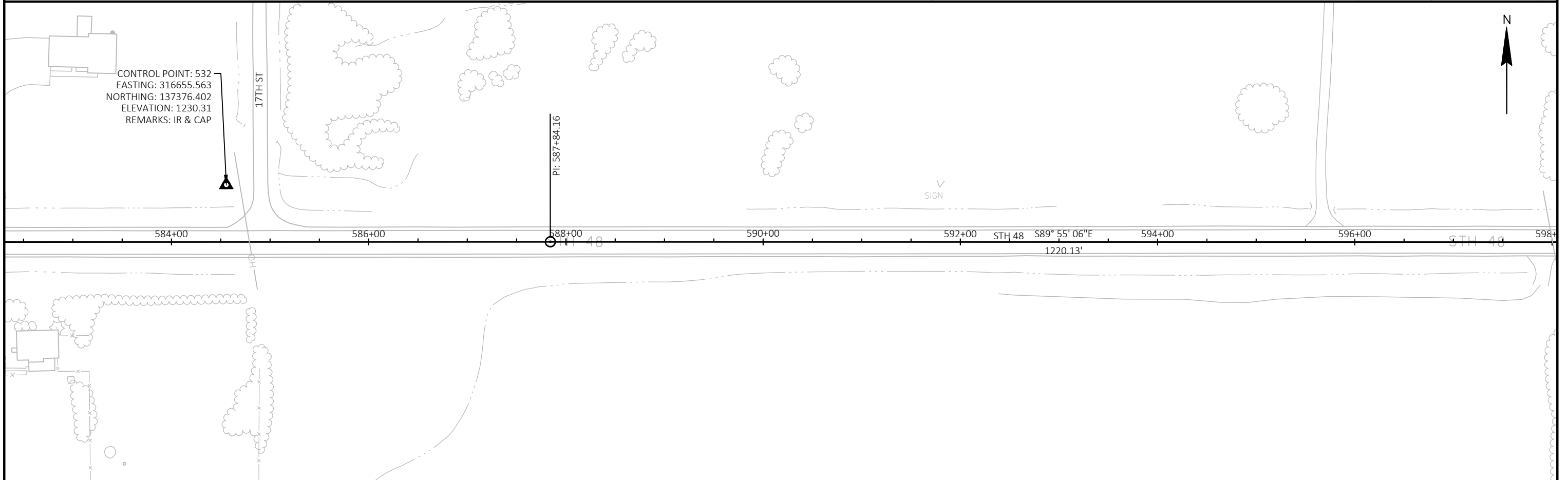


PROJECT NO: 8120-07-70	HWY: STH 48	COUNTY: BARRON	PLAN	SHEET	E
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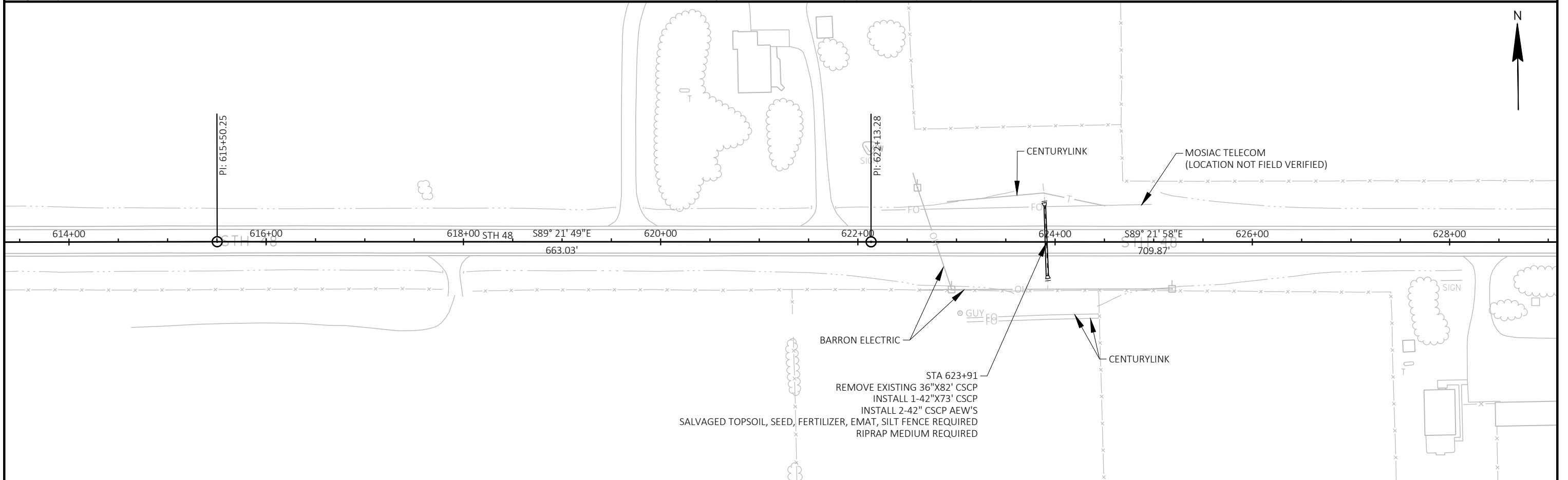
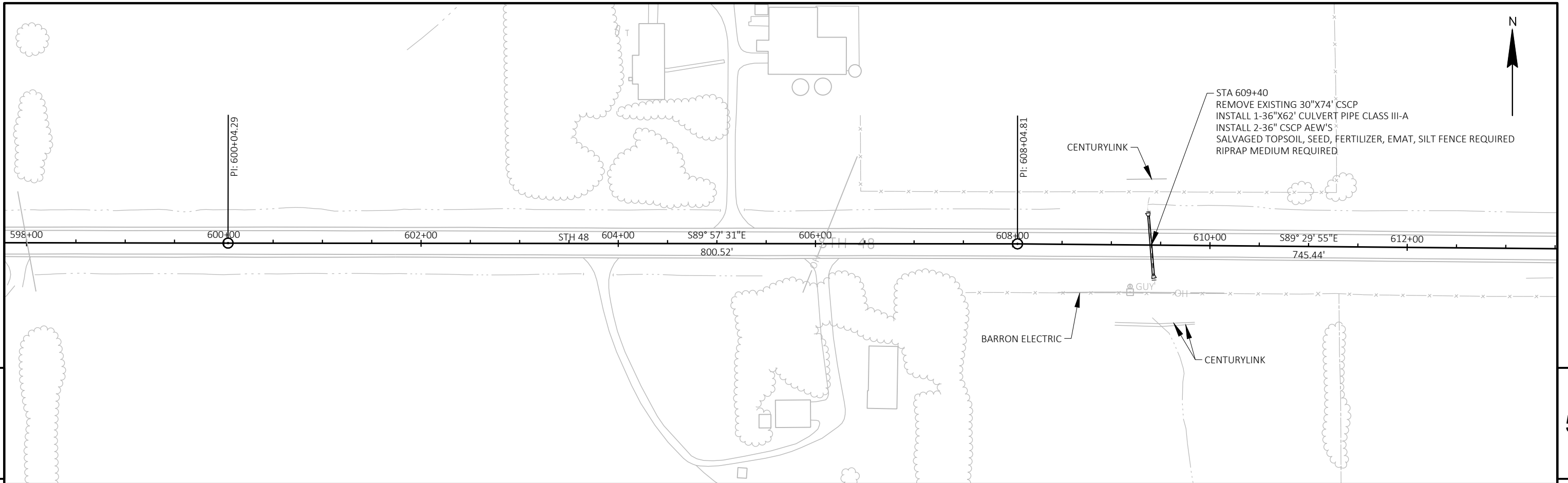


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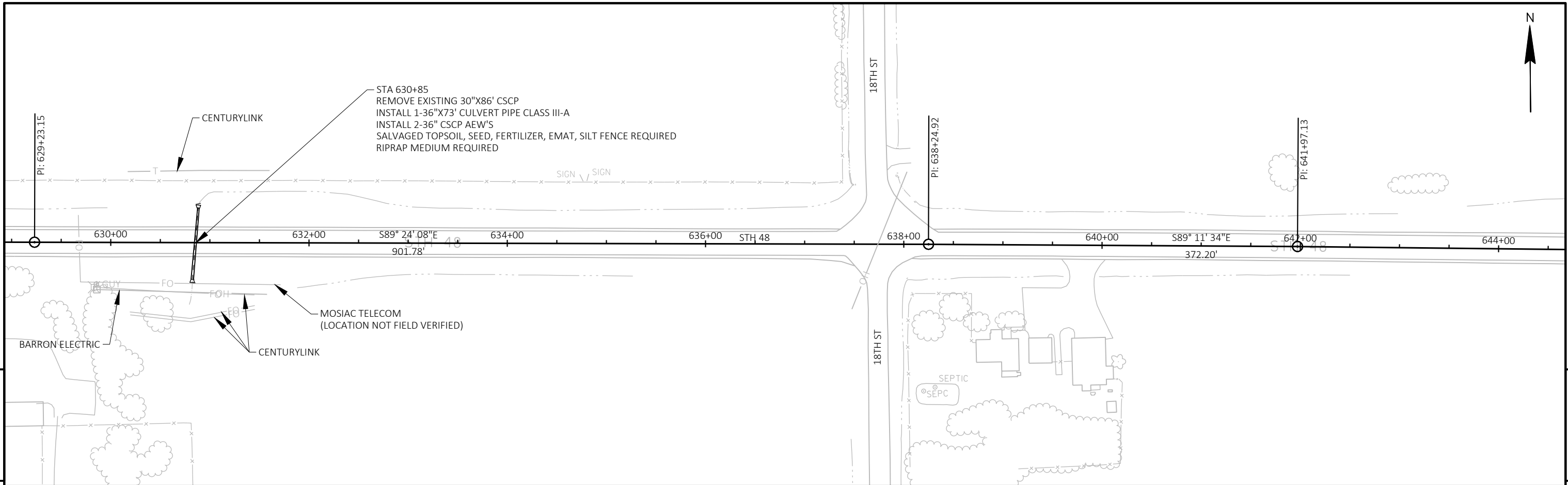
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PROJECT NO: 8120-07-70	HWY: STH 48	COUNTY: BARRON	PLAN	SHEET	E
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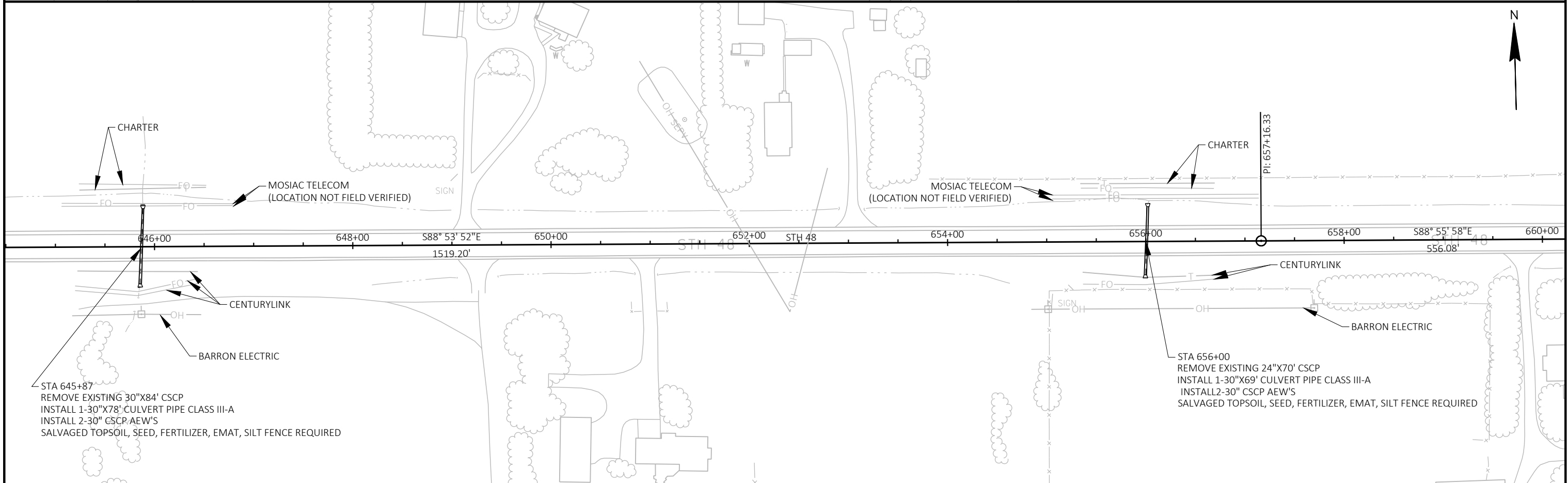


PROJECT NO: 8120-07-70	HWY: STH 48	COUNTY: BARRON	PLAN	SHEET	E
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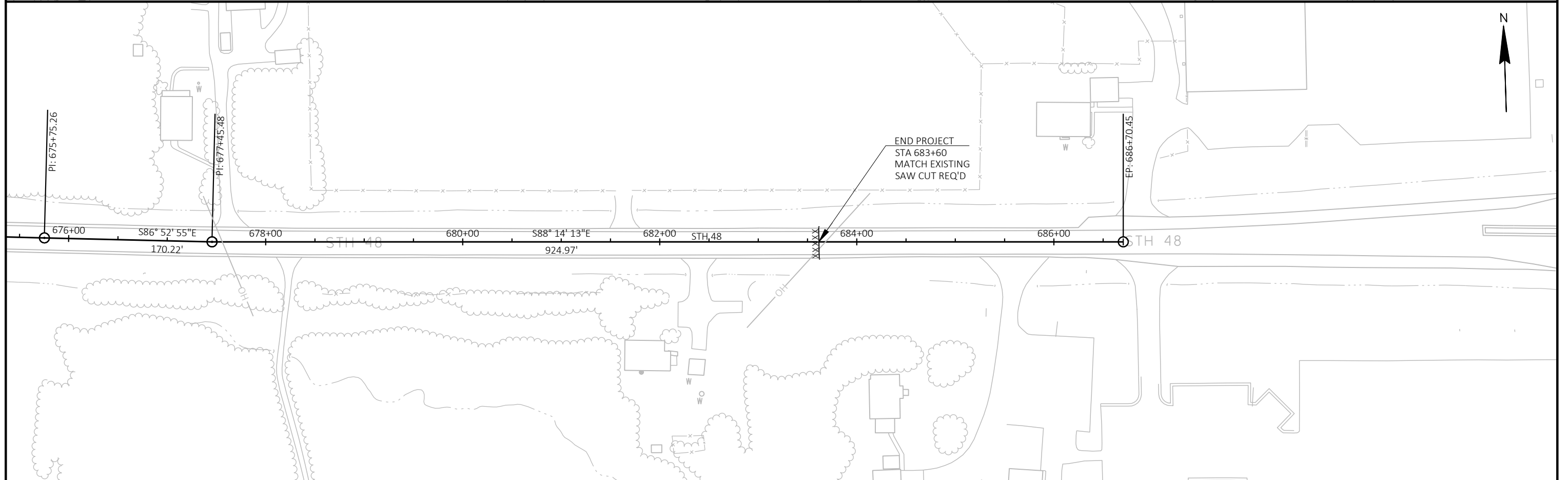
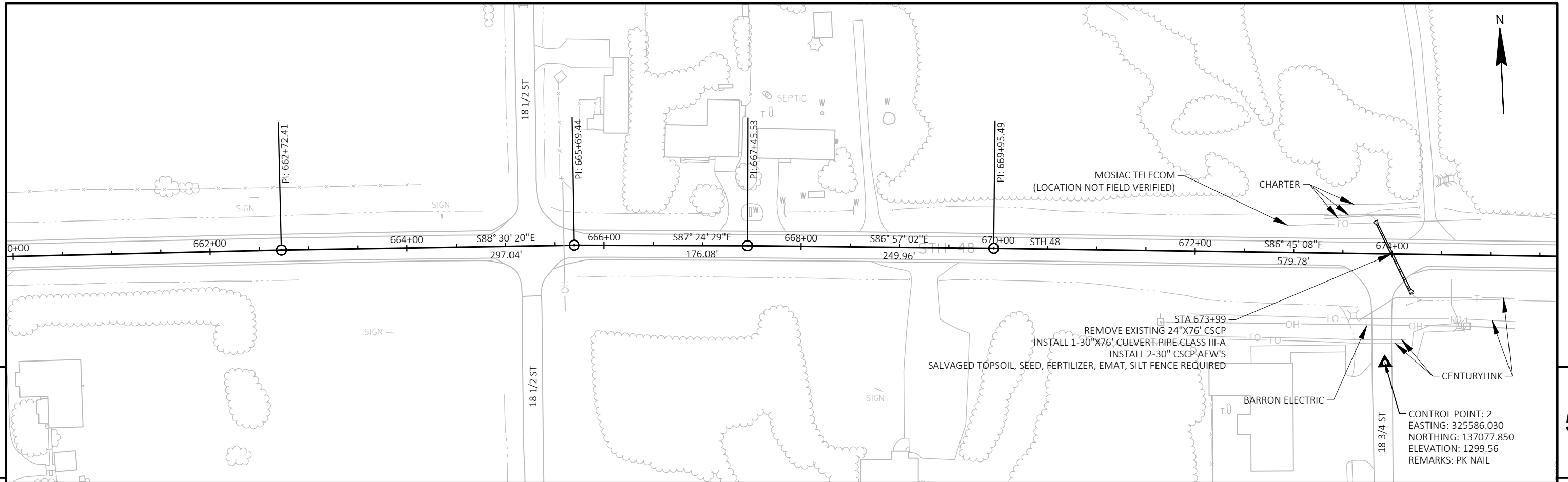


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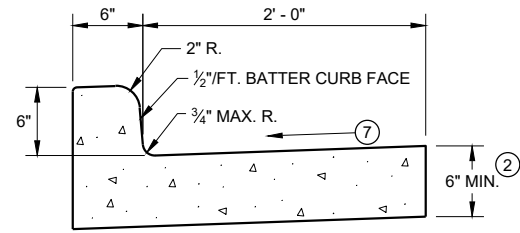
PROJECT NO: 8120-07-70	HWY: STH 48	COUNTY: BARRON	PLAN	SHEET	E
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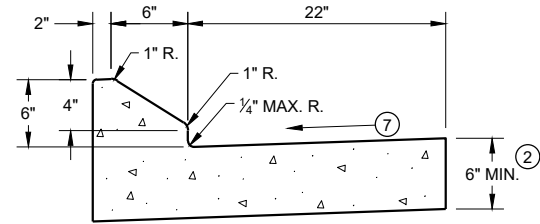
PROJECT NO: 8120-07-70	HWY: STH 48	COUNTY: BARRON	PLAN	SHEET	E
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Standard Detail Drawing List

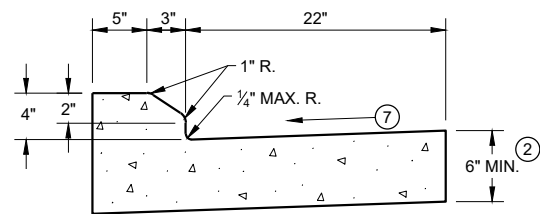
08D01-22A	CONCRETE CURB & GUTTER
08D01-22B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D04-06	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E15-01	CULVERT PIPE CHECK
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
09A01-13A	AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND D AND TEE INTERSECTION BYPASS LANE
13A11-03A	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
13A11-03B	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
13C19-03	HMA LONGITUDINAL JOINTS
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15C02-08B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M. P. H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C08-20A	LONGITUDINAL MARKING (MAINLINE)
15C08-20C	PAVEMENT MARKING (TURN LANES)
15C11-09B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-08	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C19-06A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C33-04	STOP LINE AND CROSSWALK PAVEMENT MARKING
15C35-04A	PAVEMENT MARKING (INTERSECTIONS)
15D28-04	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D39-02	TRAFFIC CONTROL, DROP-OFF SIGNING
15D44-02	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES
15D45-03	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH LOOSE GRAVEL
15D48-01	TRAFFIC CONTROL, LANE SHIFT IN FLAGGING OPERATION
15D51-01	TRAFFIC CONTROL, MOBILE OPERATIONS ON AN UNDIVIDED ROADWAY



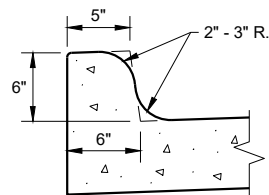
TYPES A^① & D



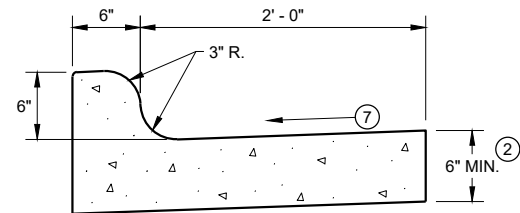
6" SLOPED CURB TYPES G^① & J



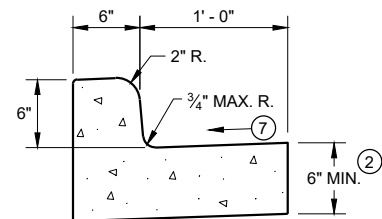
4" SLOPED CURB TYPES G^① & J



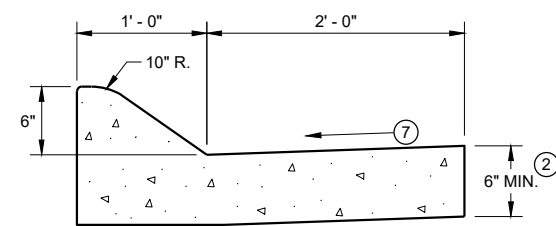
TYPES K^① & L
(OPTIONAL CURB SHAPE)



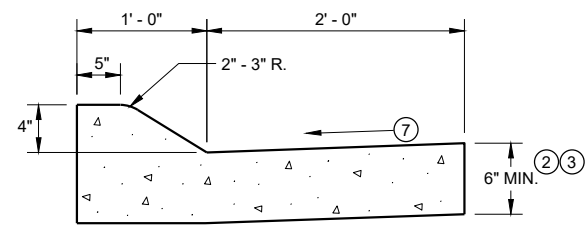
TYPES K^① & L
CONCRETE CURB AND GUTTER 30"



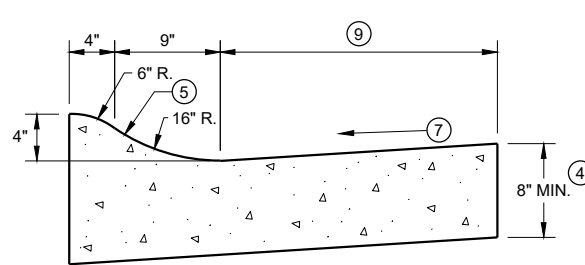
TYPES A^① & D
CONCRETE CURB AND GUTTER 18"



6" SLOPED CURB TYPES A^① & D

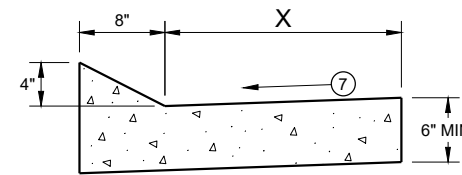


4" SLOPED CURB TYPES A^① & D
CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R^① & T

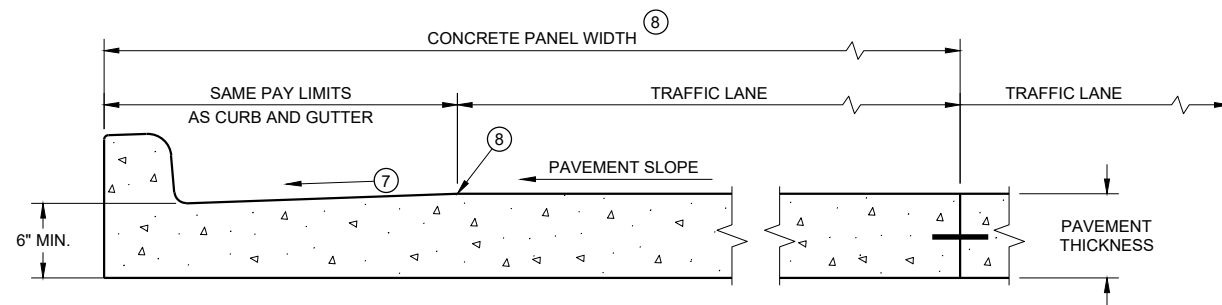
TBT & TBTT	X
30"	22"
36"	28"



TYPES TBT & TBTT^①
CONCRETE CURB AND GUTTER

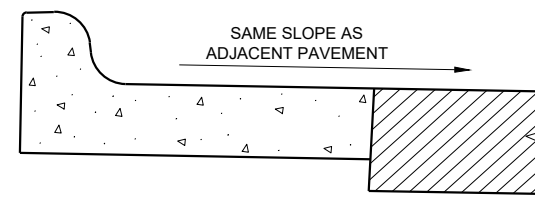
PAVEMENT THICKNESS
AND MAXIMUM CONCRETE
PANEL WIDTH TABLE

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



PARTIAL SECTION OF PAVEMENT *
WITH INTEGRAL CURB AND GUTTER

* BIKE LANE IS NOT SHOWN



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

GENERAL NOTES

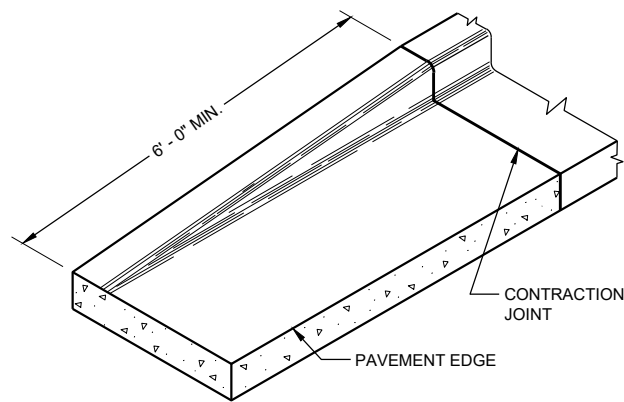
DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

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

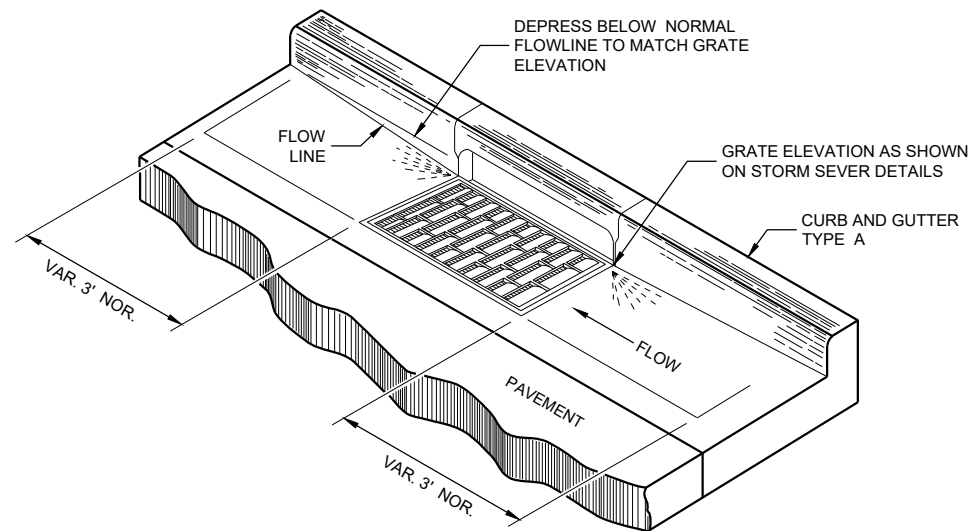
INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

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

- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.
- ④ THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑤ UNLESS OTHERWISE NOTED, FOR STAKING PURPOSES THE FACE OF CURB IS 6" FROM THE BACK OF CURB.
- ⑥ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.
- ⑦ USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.
- ⑧ INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.
- ⑨ CONCRETE CURB AND GUTTER 4-INCH SLOPED 30-INCH TYPE "R" AND "T" = 17 INCHES
CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE "R" AND "T" = 23 INCHES



END SECTION CURB AND GUTTER



DETAIL OF CURB AND GUTTER AT INLETS
(TYPICAL H INLET COVER SHOWN)

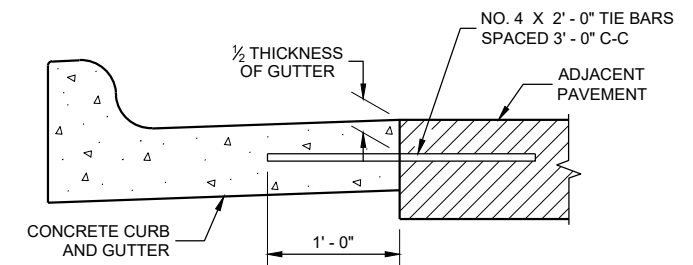
GENERAL NOTES

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

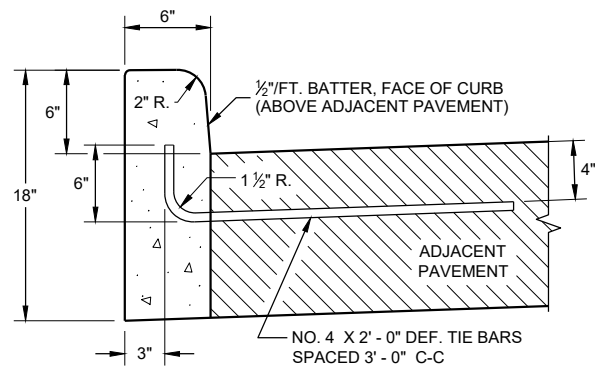
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

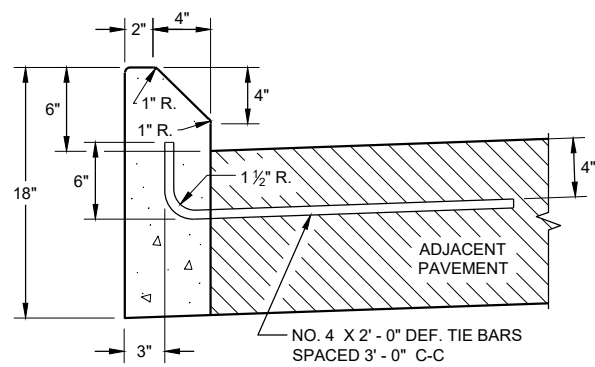
- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑨ REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.



TYPICAL TIE BAR LOCATION ①

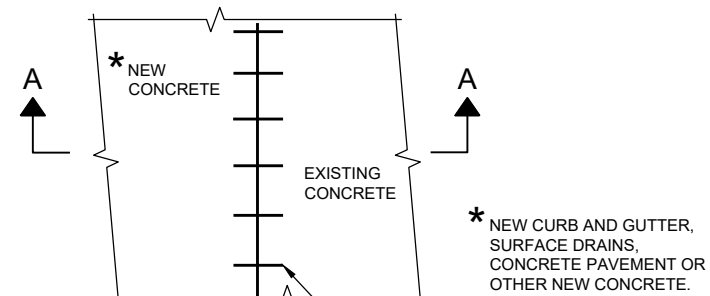


TYPES A ① & D

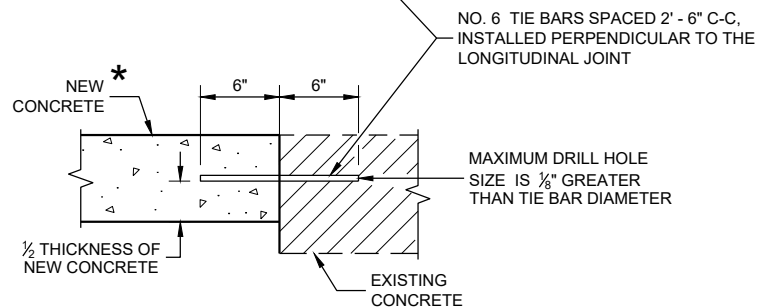


TYPES G ① & J

CONCRETE CURB

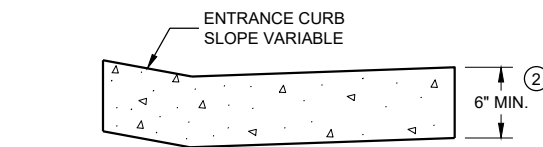


PLAN VIEW



SECTION A - A

TIE BARS DRILLED INTO EXISTING PAVEMENT



DRIVEWAY ENTRANCE CURB ⑨
(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

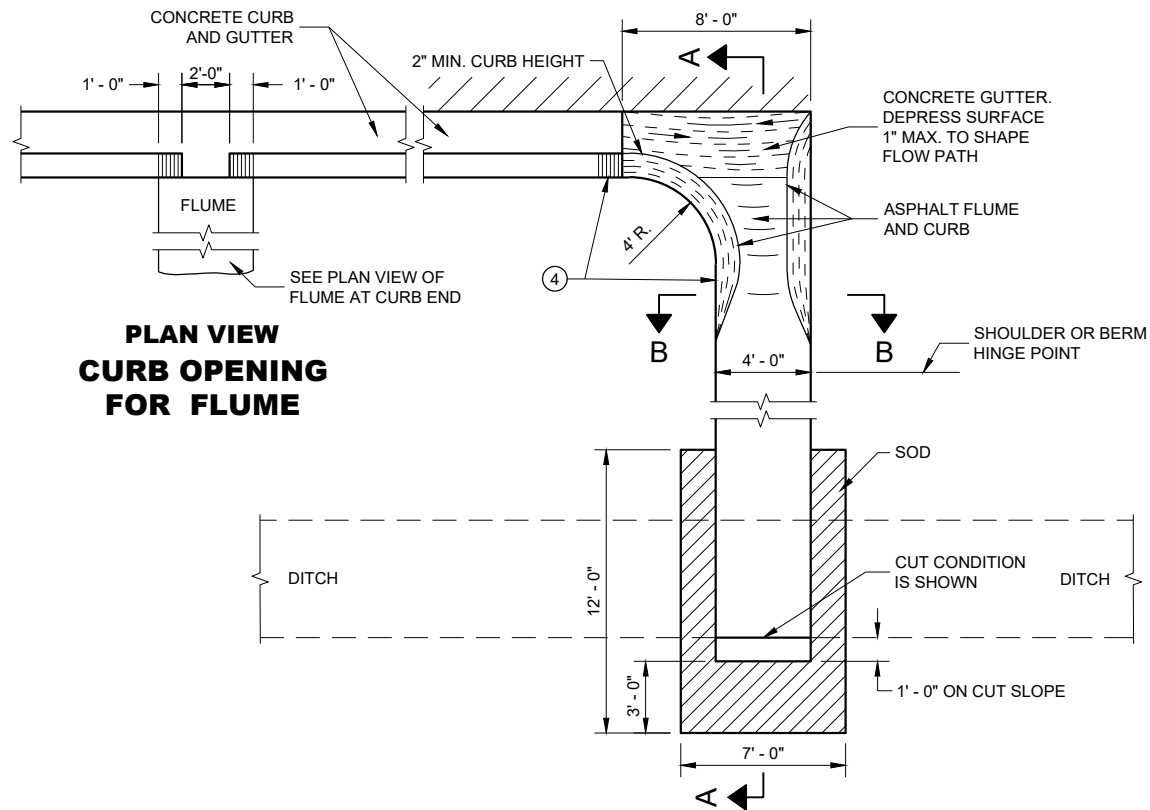
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2021 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
ENGINEER

FHWA

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

ASPHALTIC FLUME



**PLAN VIEW
CURB OPENING
FOR FLUME**

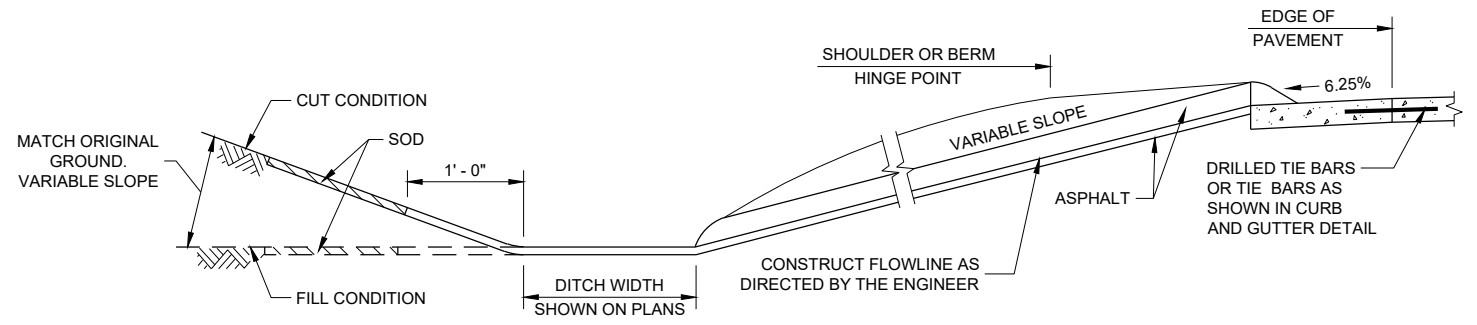
**PLAN VIEW
FLUME AT CURB END**

GENERAL NOTES

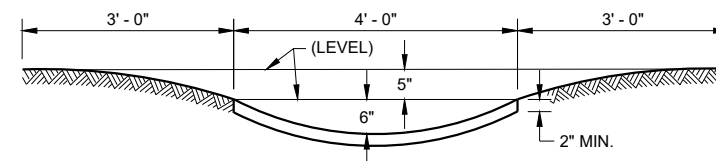
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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

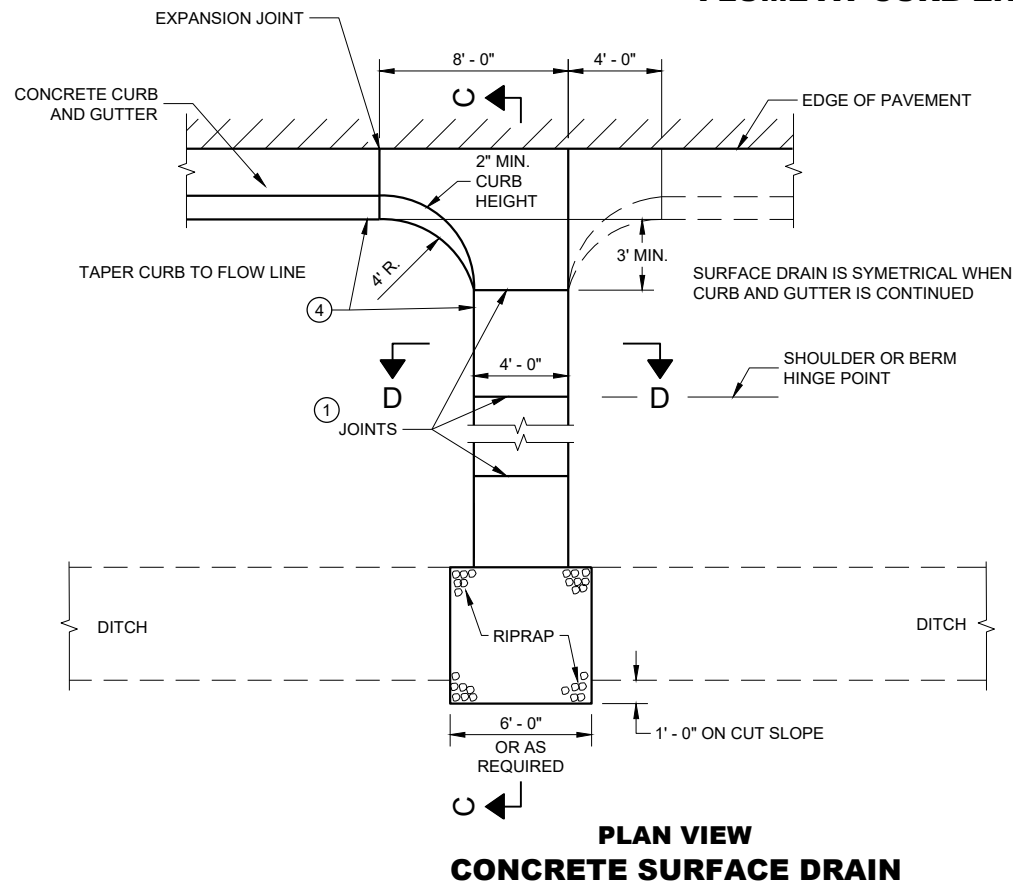
- ① JOINTS SHALL BE 1/8" TO 1/4" WIDE BY 1 1/2" DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.
- ② GEOTEXTILE TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.
- ③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED.
- ④ ANGLE OF FLUME IN RELATION TO BACK OF CURB TO BE CONSTRUCTED PER THE PLAN DETAILS OR AS DIRECTED BY THE ENGINEER. ANGLE OF FLUME MAY BE OTHER THAN 90 DEGREES AS SHOWN.



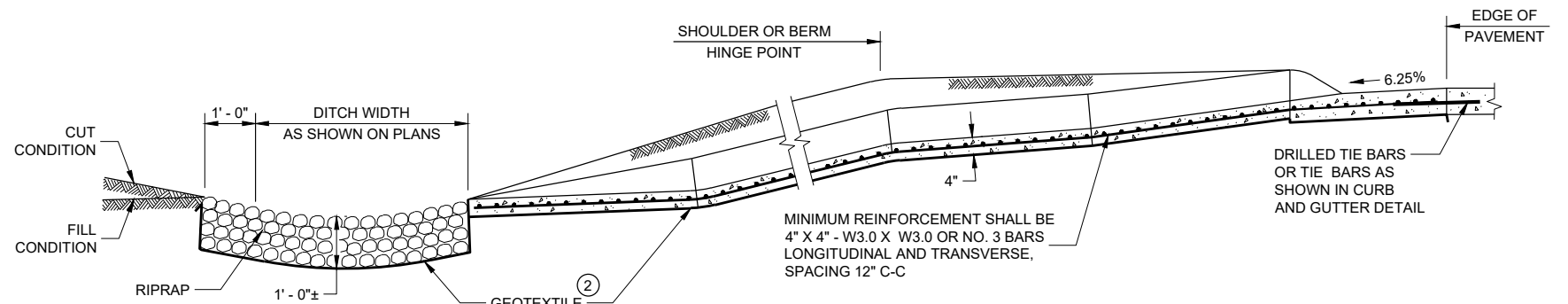
SECTION A - A



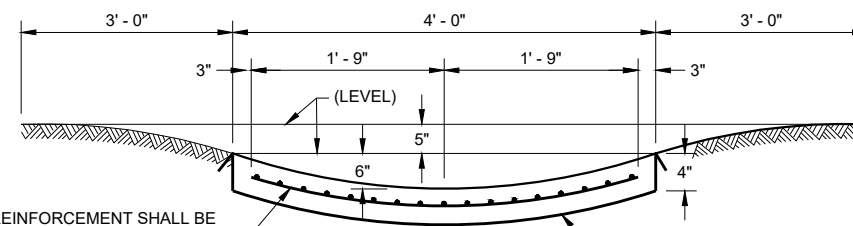
SECTION B - B



**PLAN VIEW
CONCRETE SURFACE DRAIN**



SECTION C - C



SECTION D - D

MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE, SPACING 12" C-C

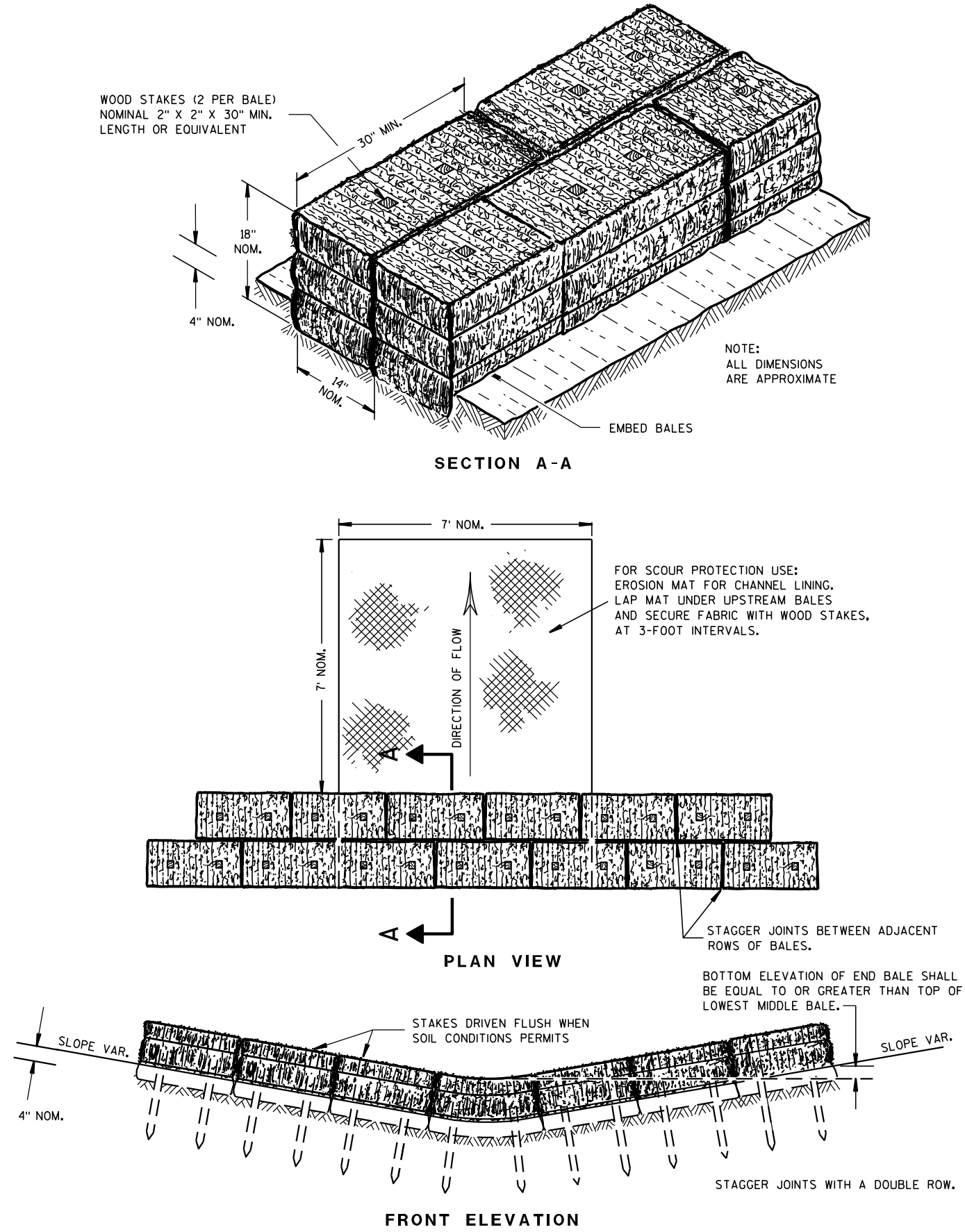
MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE, SPACING 12" C-C

CONCRETE SURFACE DRAINS AND ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2021 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
ENGINEER

FHWA

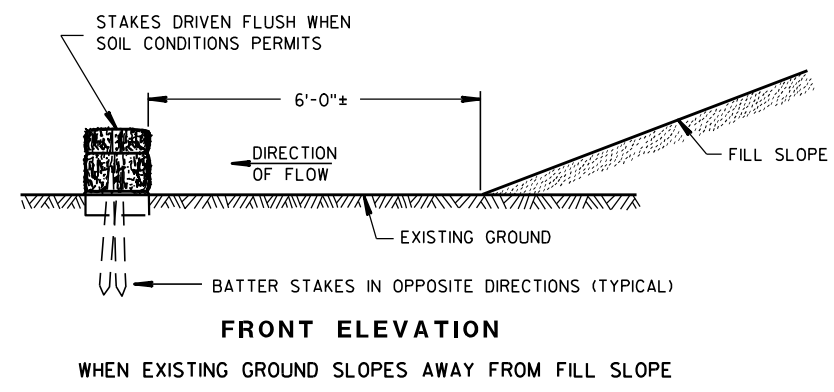
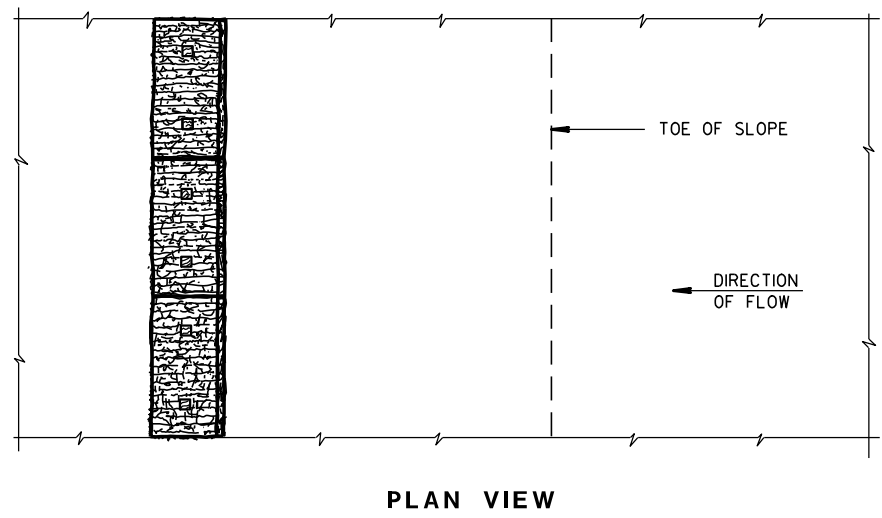
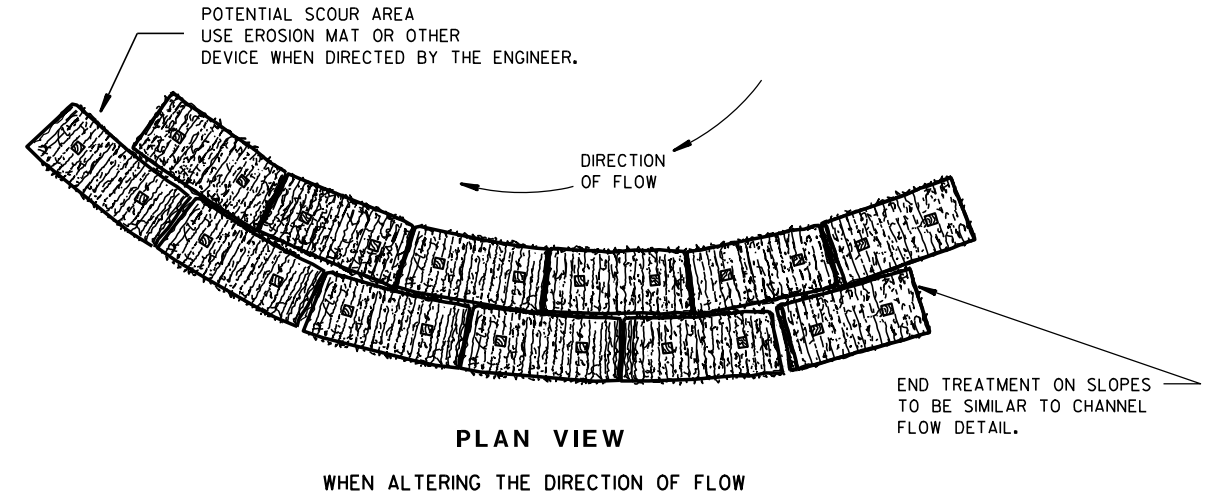


TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

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

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

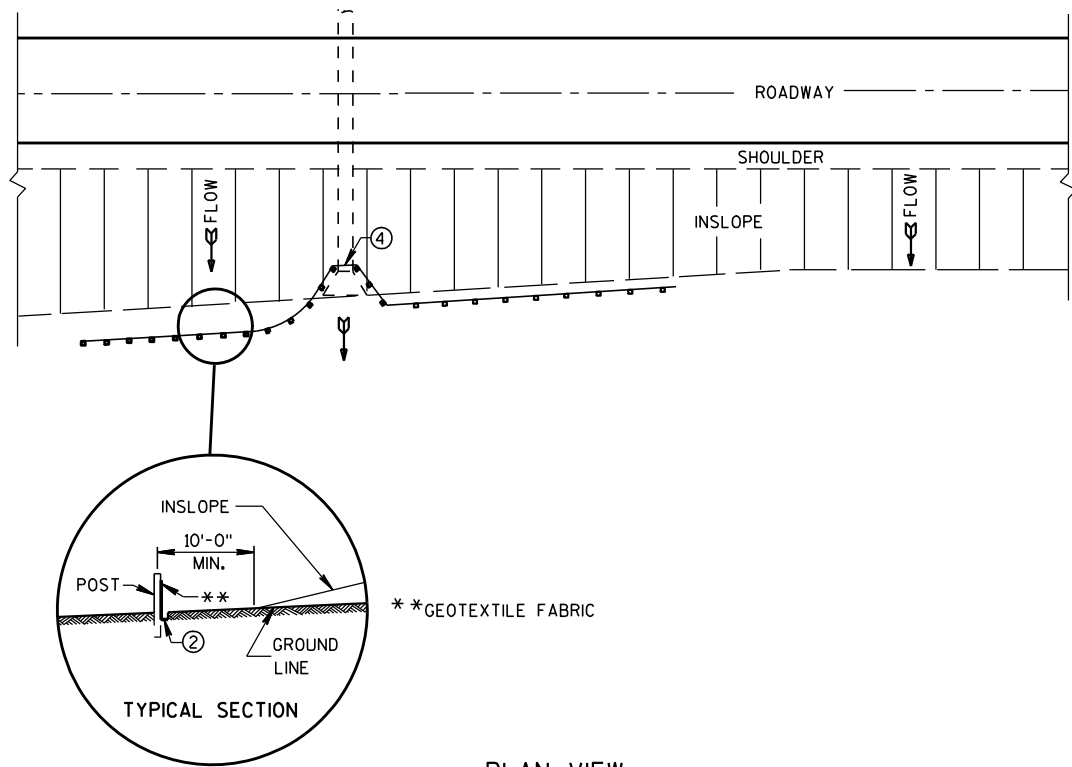


EROSION BALES FOR SHEET FLOW

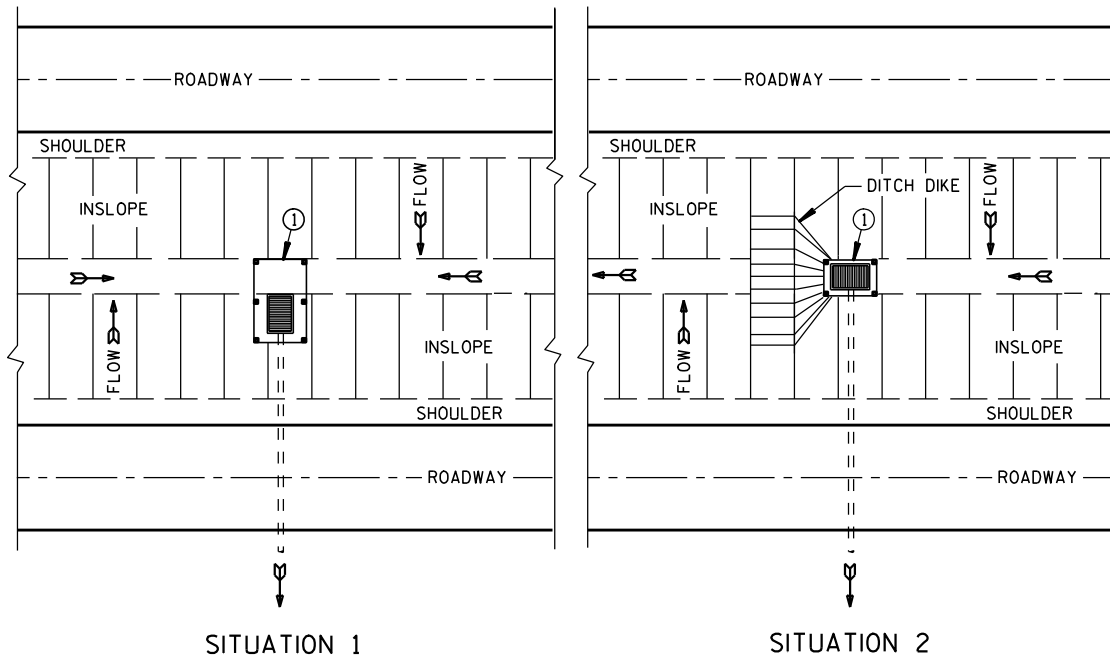
TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE

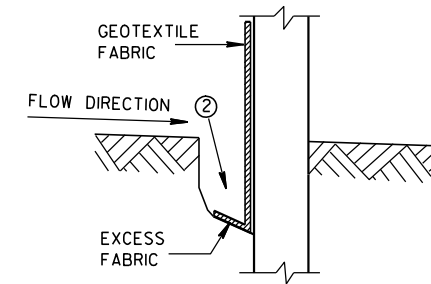


SITUATION 1 SITUATION 2
PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

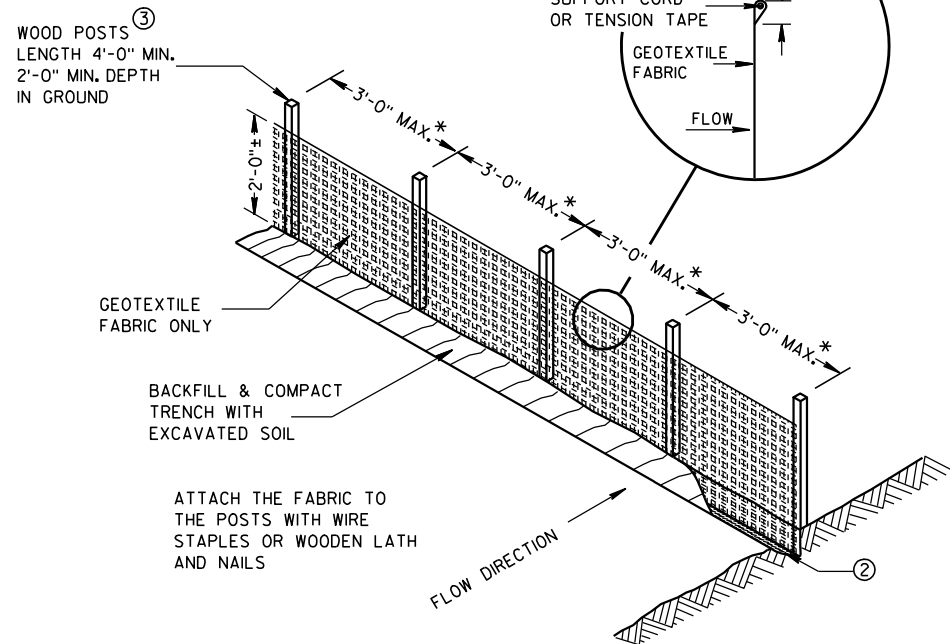
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

- ① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- ② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- ③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1 1/8" X 1 1/8" 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.



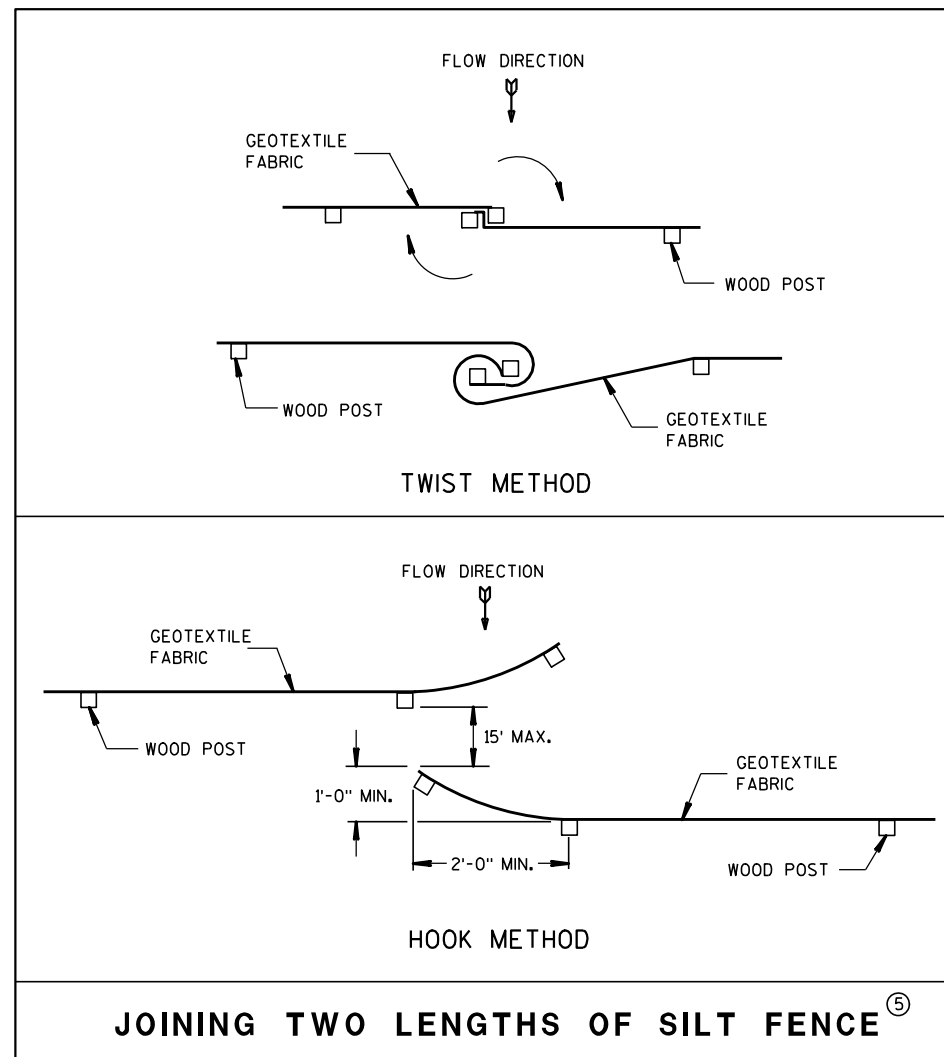
TRENCH DETAIL

NOTE: ADDITIONAL POST DEPTH OR TIE BACKS MAY BE REQUIRED IN UNSTABLE SOILS

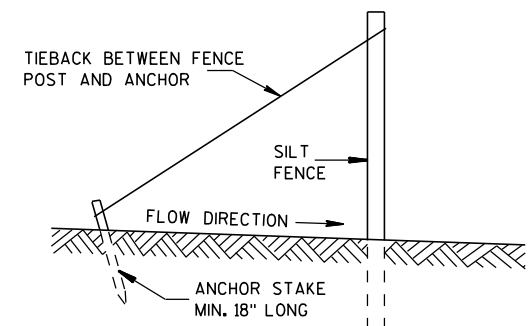


SILT FENCE

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



JOINING TWO LENGTHS OF SILT FENCE ⑤

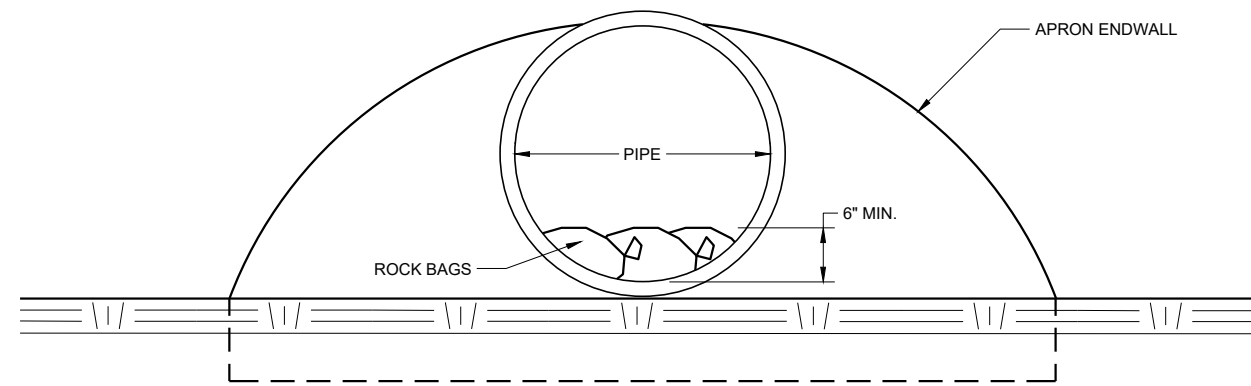


SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

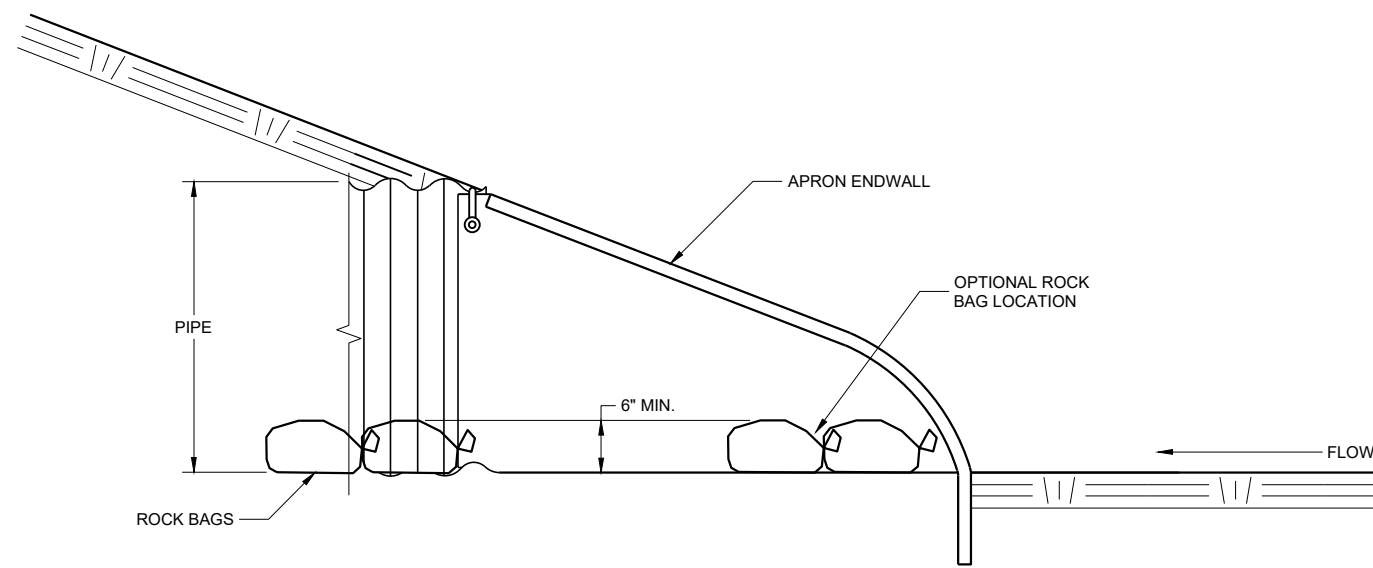
SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



END VIEW



SIDE VIEW

CULVERT PIPE CHECK
(INSTALL ON INLET END ONLY)

CULVERT PIPE CHECK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019 /S/ Daniel Schave
DATE EROSION CONTROL ENGINEER

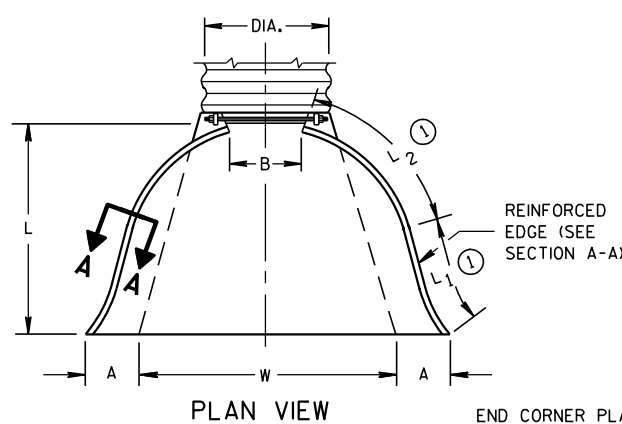
FHWA

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

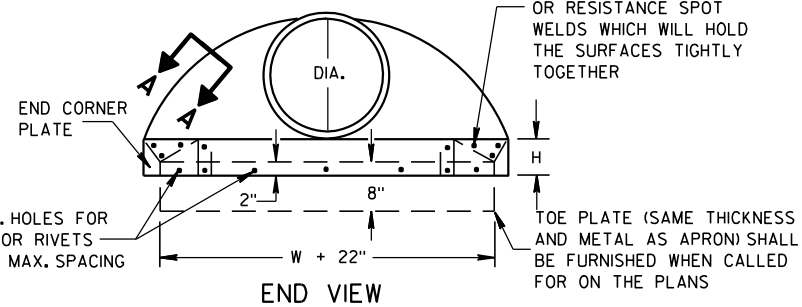
* EXCEPT CENTER PANEL SEE GENERAL NOTES

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

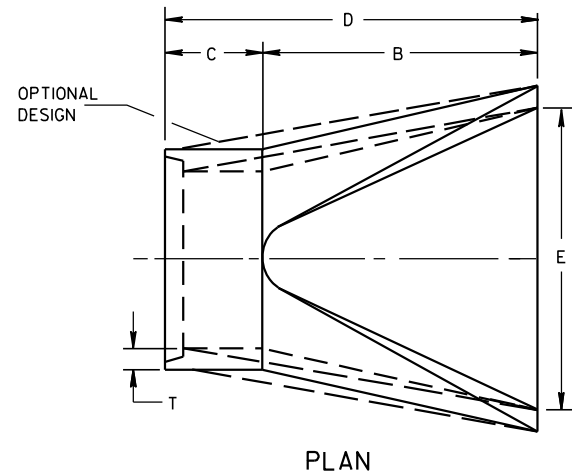
* MINIMUM
** MAXIMUM



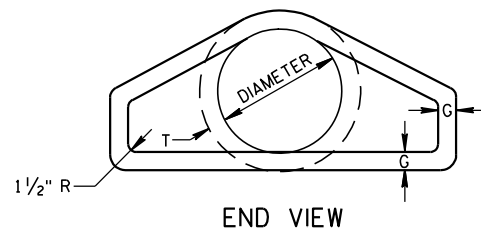
END CORNER PLATES MAY BE FASTENED TO APRON PROPER BY BOLTS, RIVETS, OR RESISTANCE SPOT WELDS WHICH WILL HOLD THE SURFACES TIGHTLY TOGETHER



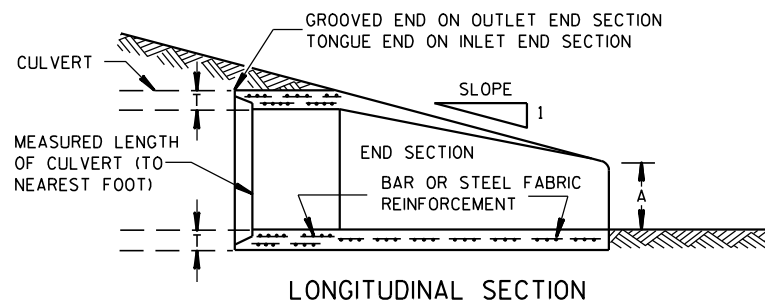
SIDE ELEVATION
METAL ENDWALLS



PLAN

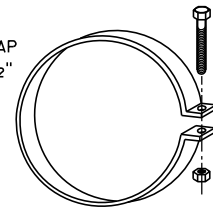


END VIEW

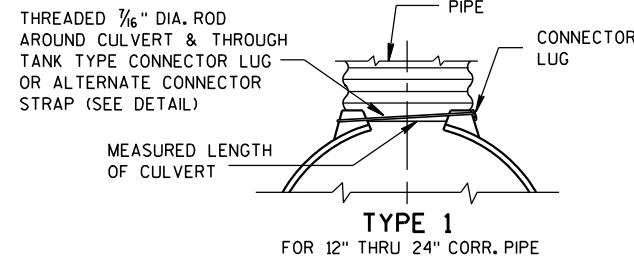


LONGITUDINAL SECTION
CONCRETE ENDWALLS

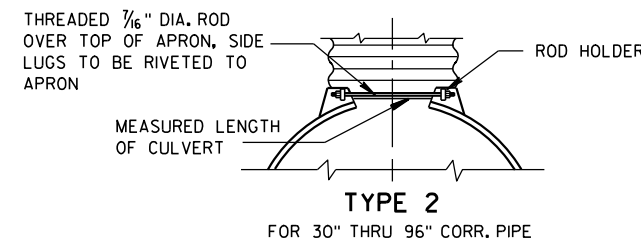
1" WIDE, 12 GA. (0.109" THICK) GALVANIZED STRAP WITH STANDARD 6" X 1/2" BAND BOLT AND NUT



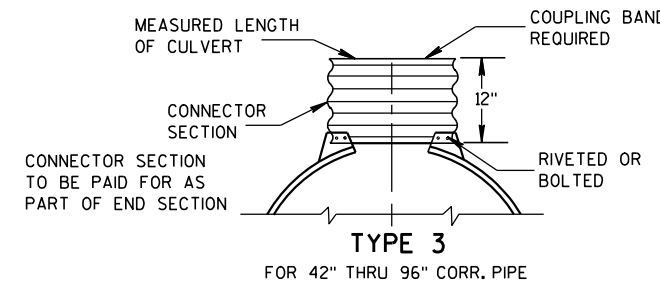
ALTERNATE FOR TYPE 1 CONNECTION
END SECTION CONNECTOR STRAP



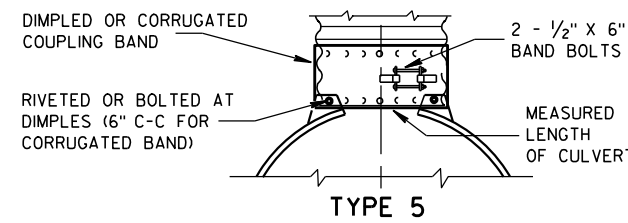
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

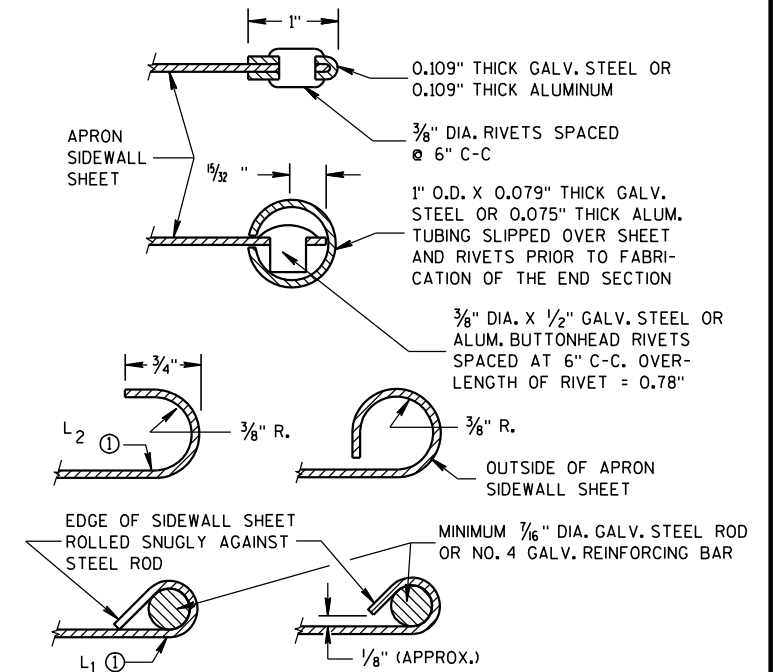
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

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

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

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

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

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

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

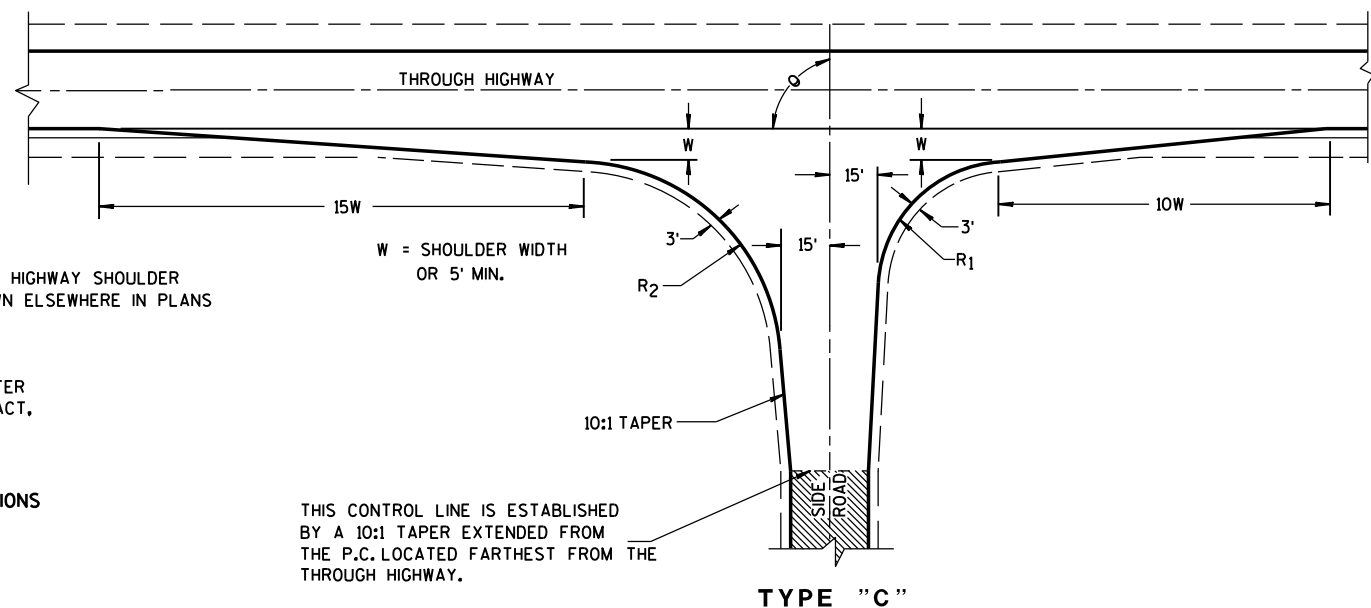
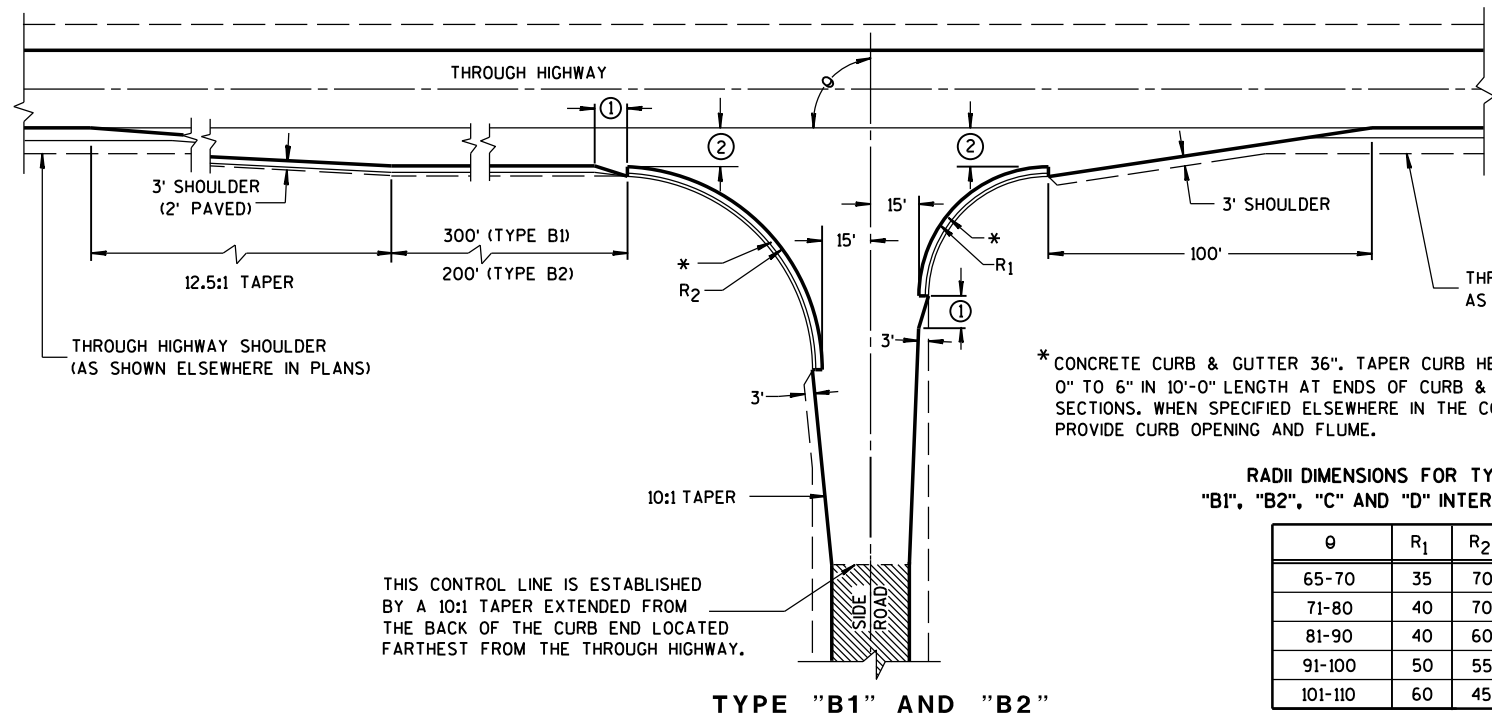
WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

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

APRON ENDWALLS FOR
CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



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

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

GENERAL NOTES

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

SIDE ROAD SURFACING NOTE

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

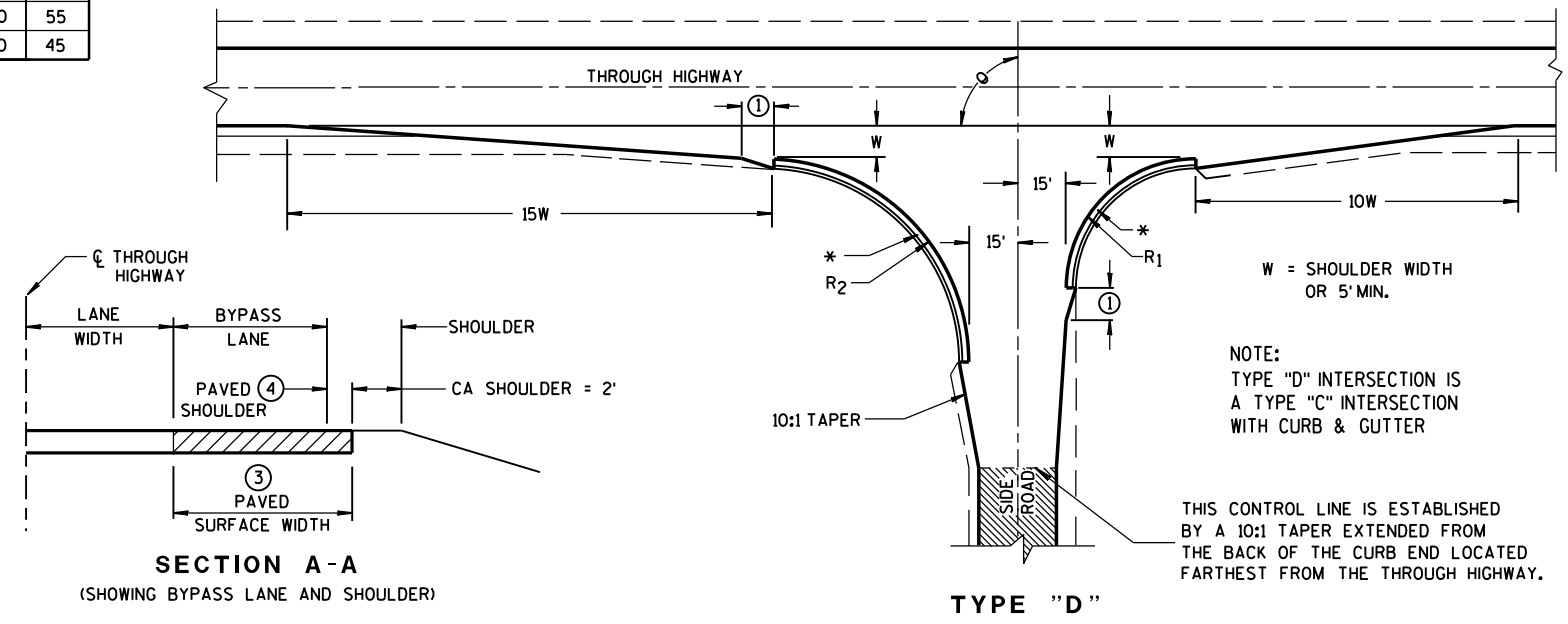
WHEN THE SIDE ROAD IS PRESENTLY PAVED, NEW PAVEMENT SHALL BE PLACED TO THE LIMITS OF DESIGN AS SHOWN AND BEYOND, IF NECESSARY, TO MEET EXISTING PAVEMENT.

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

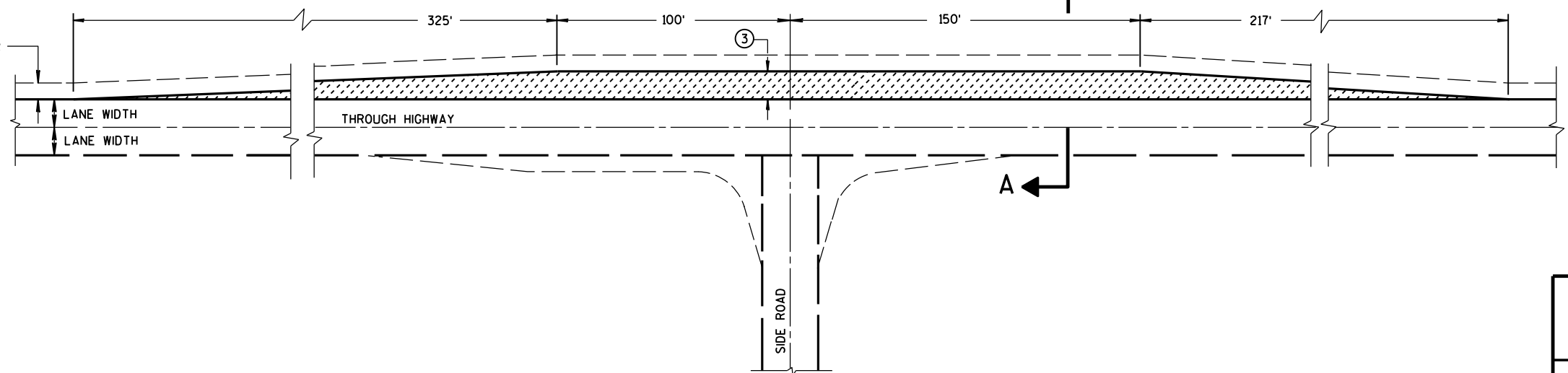
EXISTING PAVED SURFACE

BYPASS LANE

- ① 10-FT TYPICAL.
- ② 12-FT** PLUS ADDITIONAL WIDTH FOR BIKE LANE IF SHOWN ELSEWHERE IN THE PLAN.
- **10-FT MAY BE USED ON TYPE B2 ON RESURFACING PROJECTS IF SPECIFIED IN THE CONTRACT.
- ③ BYPASS LANE PAVED SURFACE WIDTH OUTSIDE OF TRAVEL LANE
-ASPHALT = 12-FT PLUS PAVED SHOULDER WIDTH.
-PC CPNCRETE = 13-FT PLUS PAVED SHOULDER WIDTH.
- ④ BYPASS LANE PAVED SHOULDER WIDTH = THE GREATER OF 1-FT OR THE PAVED SHOULDER WIDTH OF THE THROUGH HIGHWAY.



SECTION A-A (SHOWING BYPASS LANE AND SHOULDER)



TEE INTERSECTION BYPASS LANE DETAIL

AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND "D" AND TEE INTERSECTION BYPASS LANE
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

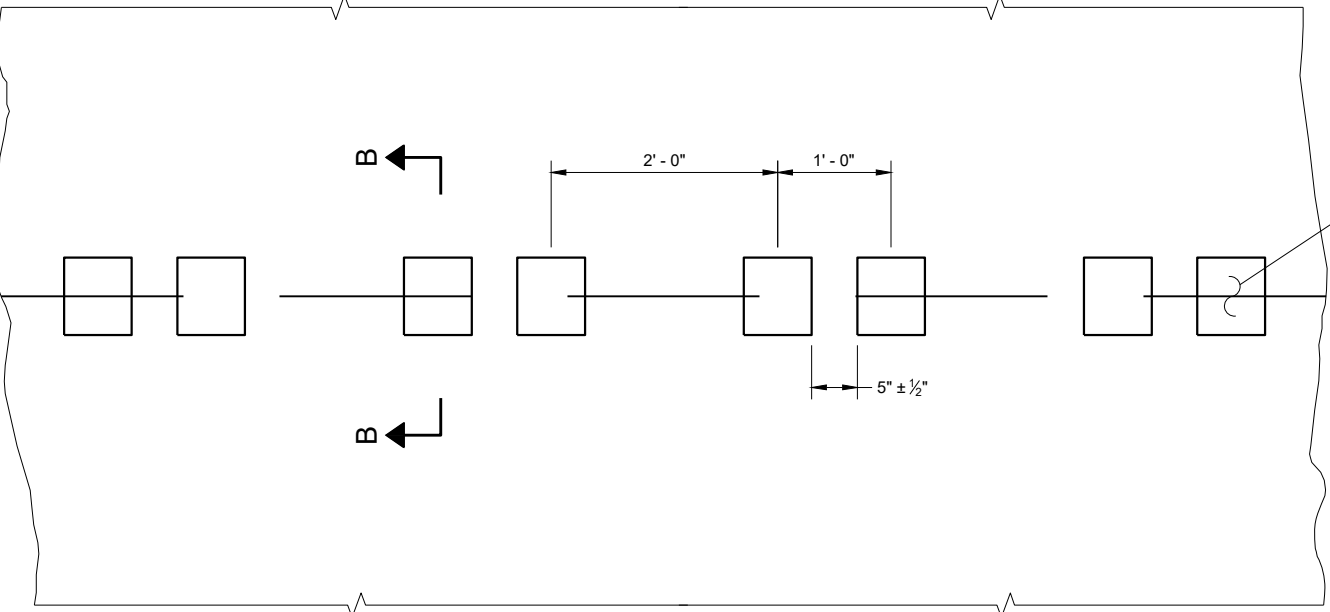
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

DO NOT MILL CENTERLINE GROOVES THROUGH ANY INTERSECTION, MARKED CROSSWALK, NON-MOTORIZED PATH CROSSING, OR SNOWMOBILE CROSSING.

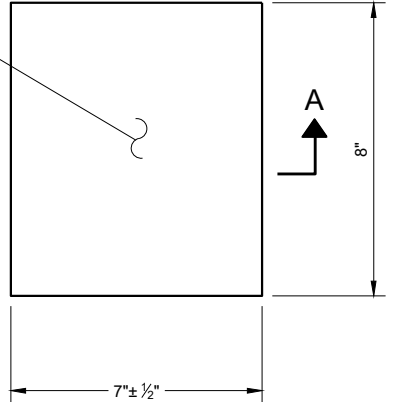
INSTALL PAVEMENT MARKING AFTER THE GROOVES ARE INSTALLED.

SEE SIGNING PLAN FOR SIGN REQUIREMENTS THAT MAY BE NEEDED.

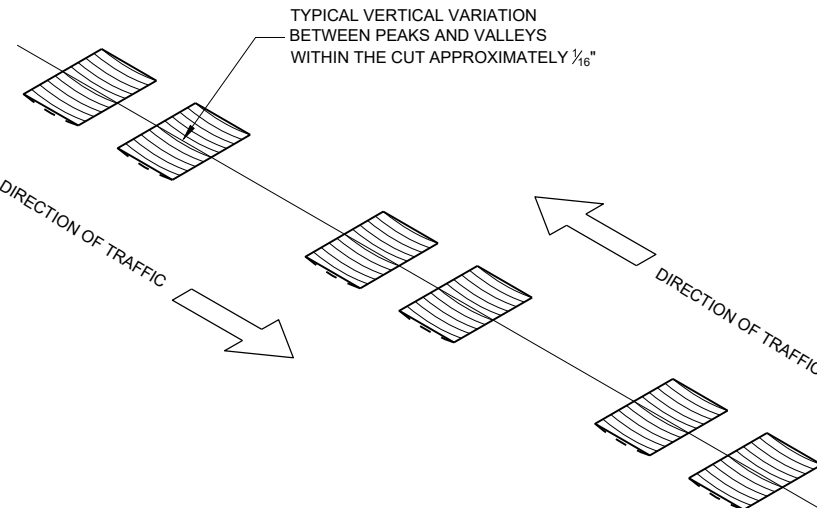
- ① CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS. WHEN DIRECTED BY THE ENGINEER.



**PLAN VIEW
SHOULDER WITH GROOVES**

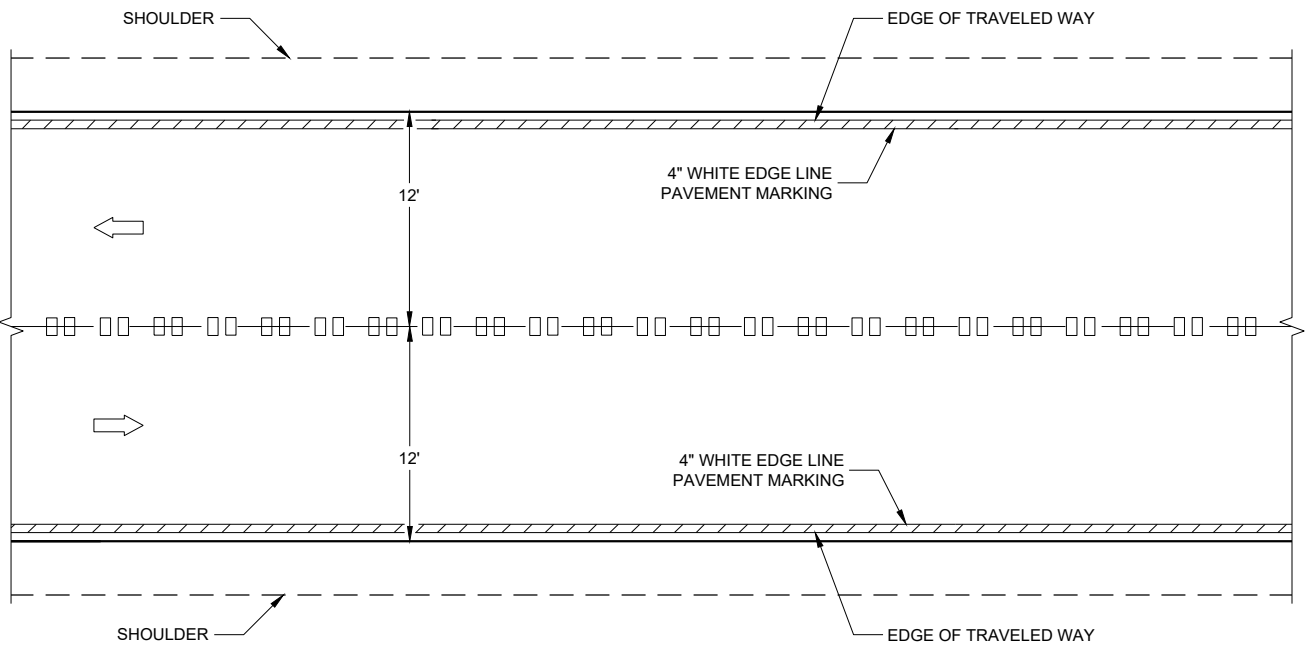


**PLAN VIEW
(SINGLE GROOVE)**

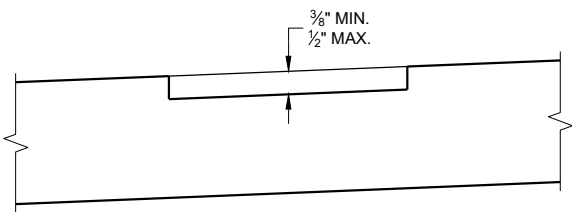


ISOMETRIC

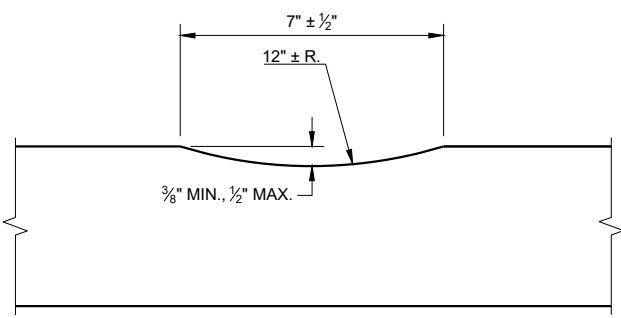
PLACEMENT DETAIL FOR TYPE 1 MILLED RUMBLE STRIP



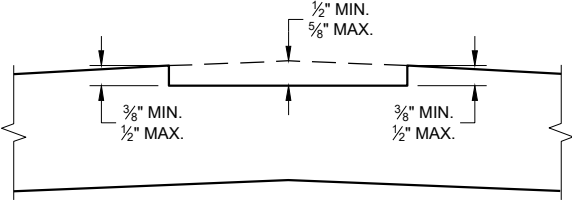
CENTERLINE GROOVES ON TWO-WAY ROADWAYS



**SECTION B - B
SUPERELEVATED ROADWAY**



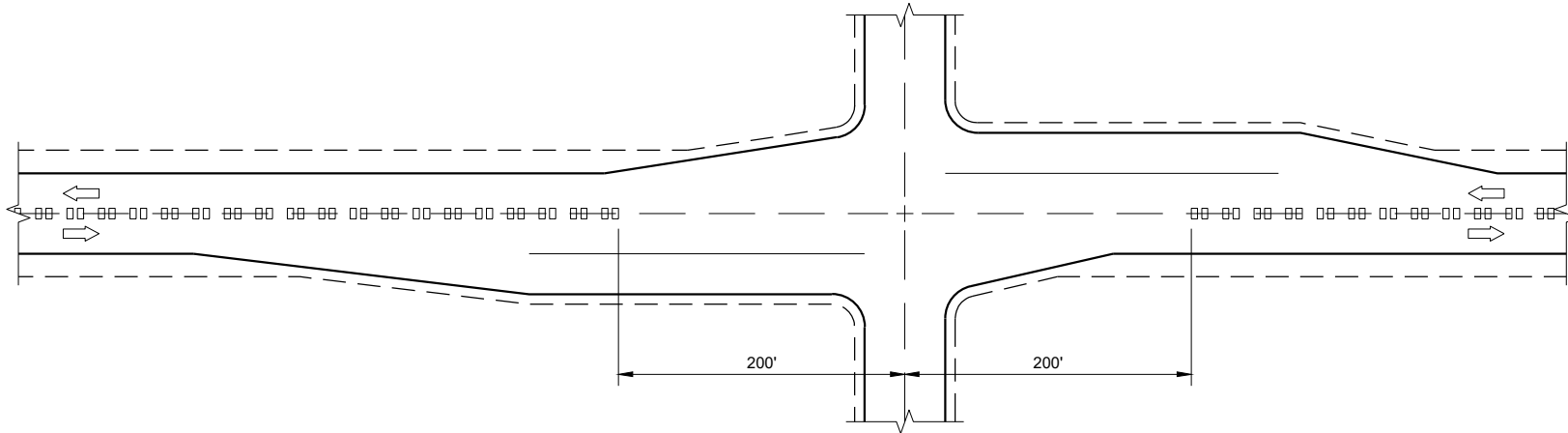
SECTION A - A



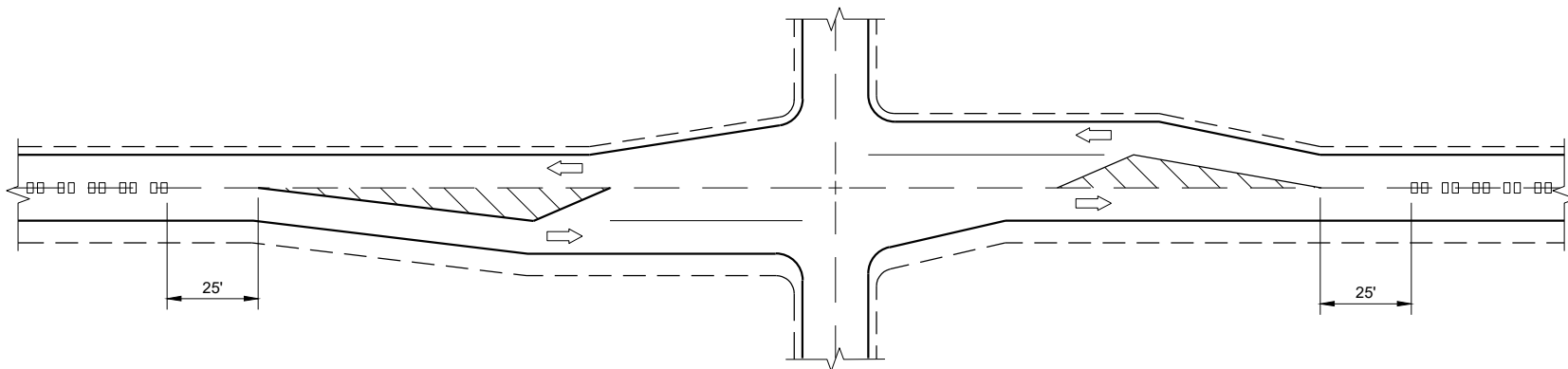
**SECTION B - B
CROWNED ROADWAY**

**2-LANE RURAL
CENTER LINE RUMBLE STRIP,
MILLING**

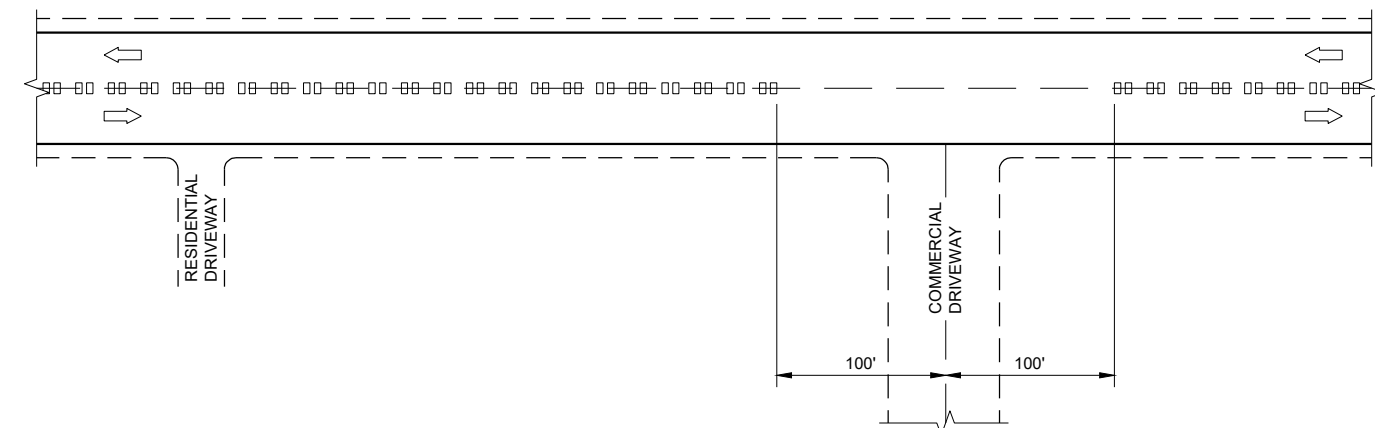
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



CENTERLINE GROOVES AT INTERSECTIONS



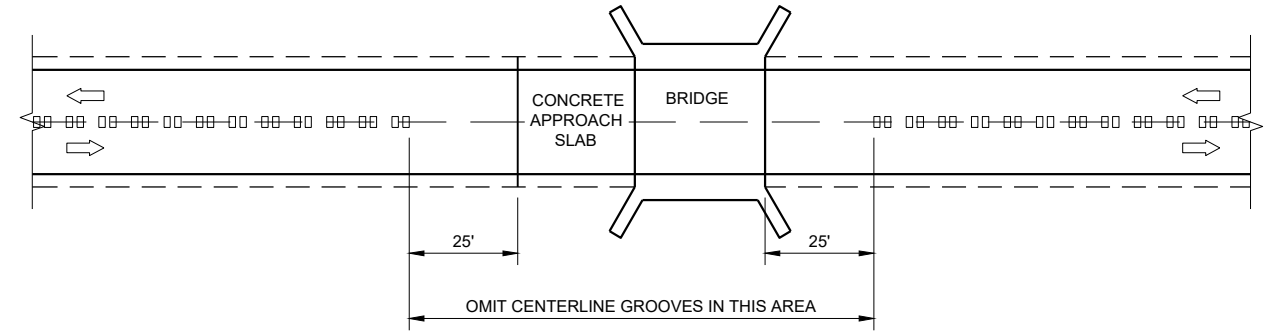
**CENTERLINE GROOVES AT INTERSECTIONS
(WITH LEFT TURN LANES)**



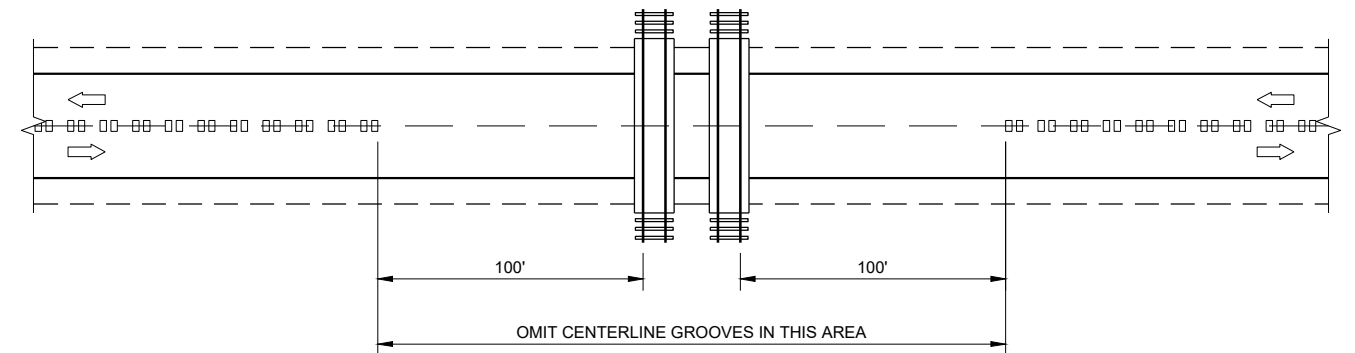
CENTERLINE GROOVES AT DRIVEWAYS^①

GENERAL NOTES

- ① CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS. WHEN DIRECTED BY THE ENGINEER.



CENTERLINE GROOVES AT BRIDGES

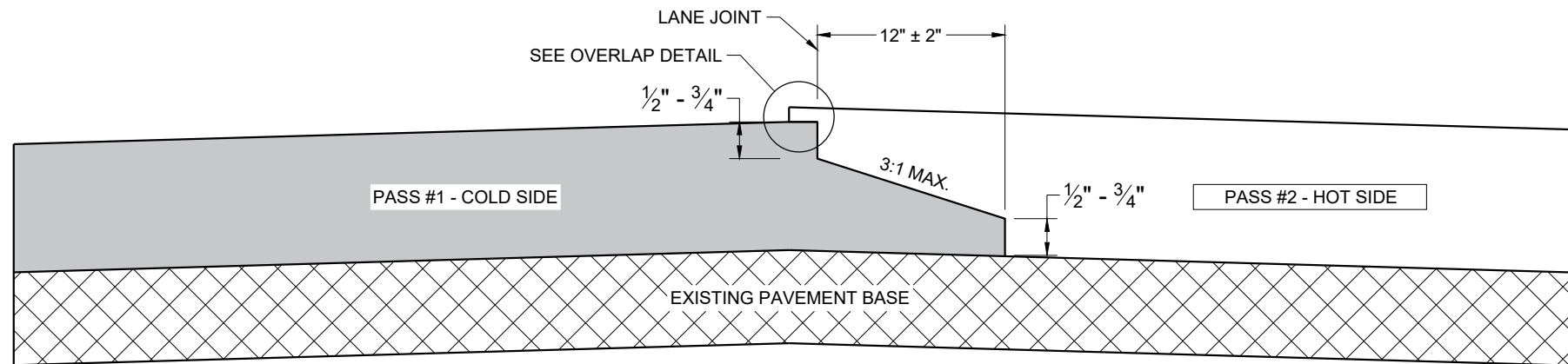


CENTERLINE GROOVES AT RAILROADS

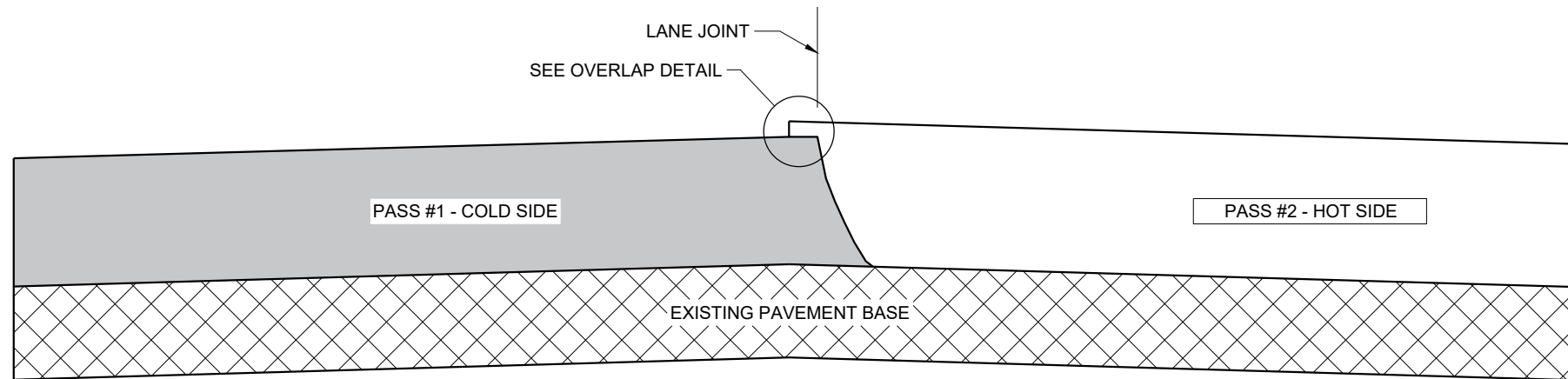
6

6

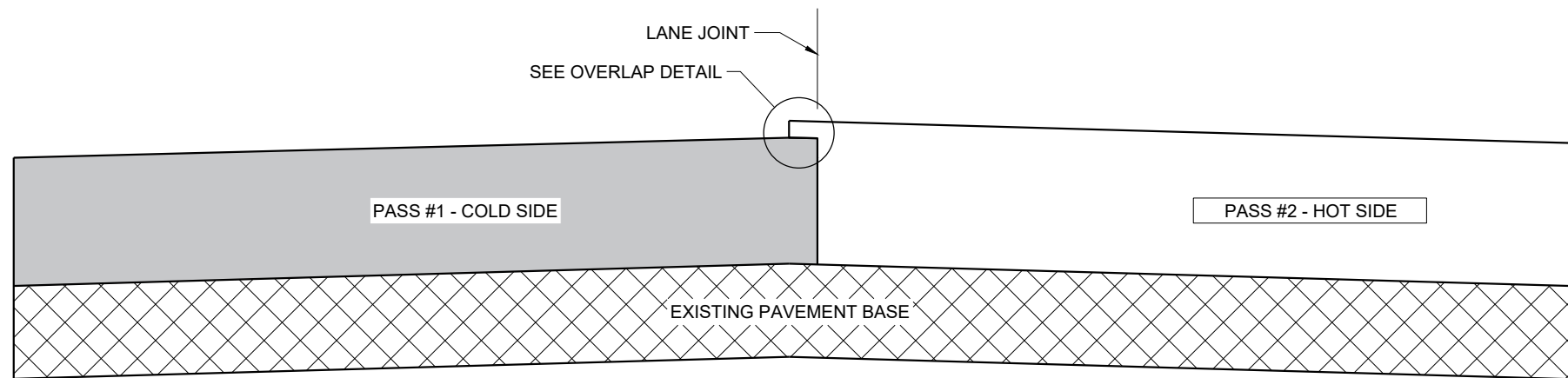
2-LANE RURAL CENTERLINE RUMBLE STRIP, MILLING	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 7/2018 DATE	/S/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	



**TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT**



**TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT**



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

GENERAL NOTES

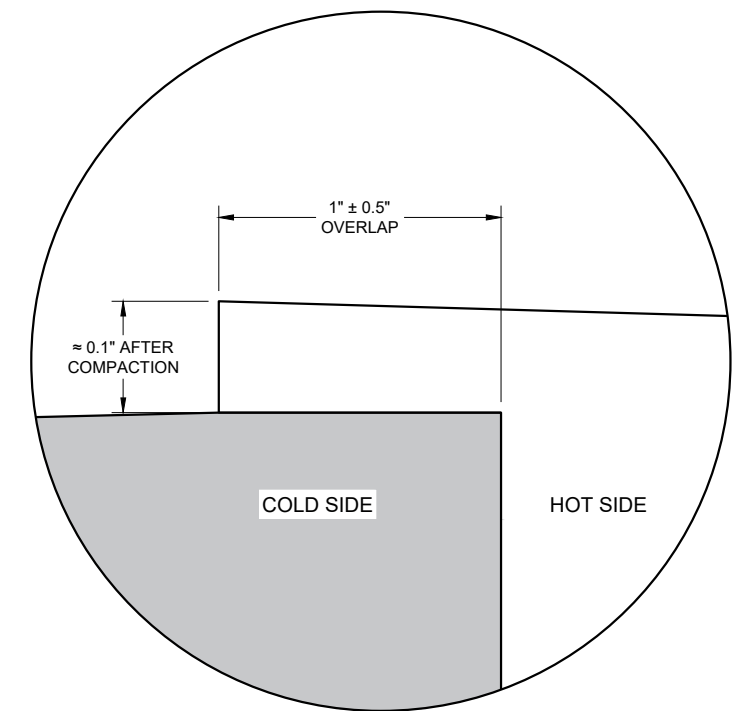
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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

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

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

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



OVERLAP DETAIL (TYPICAL)

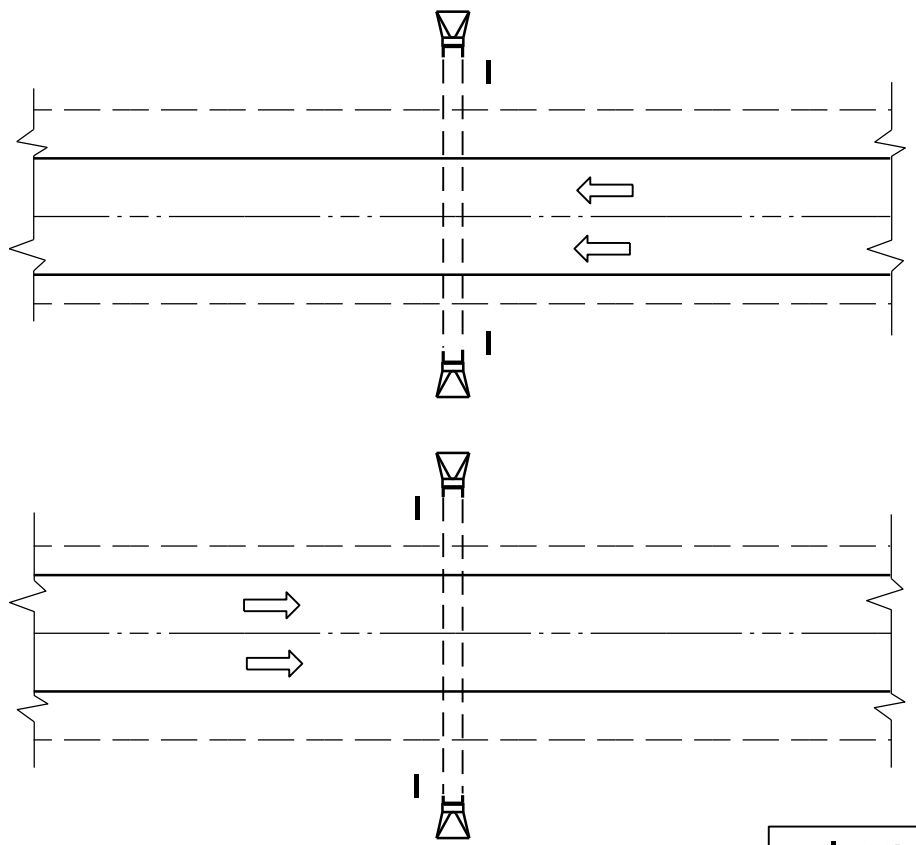
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6

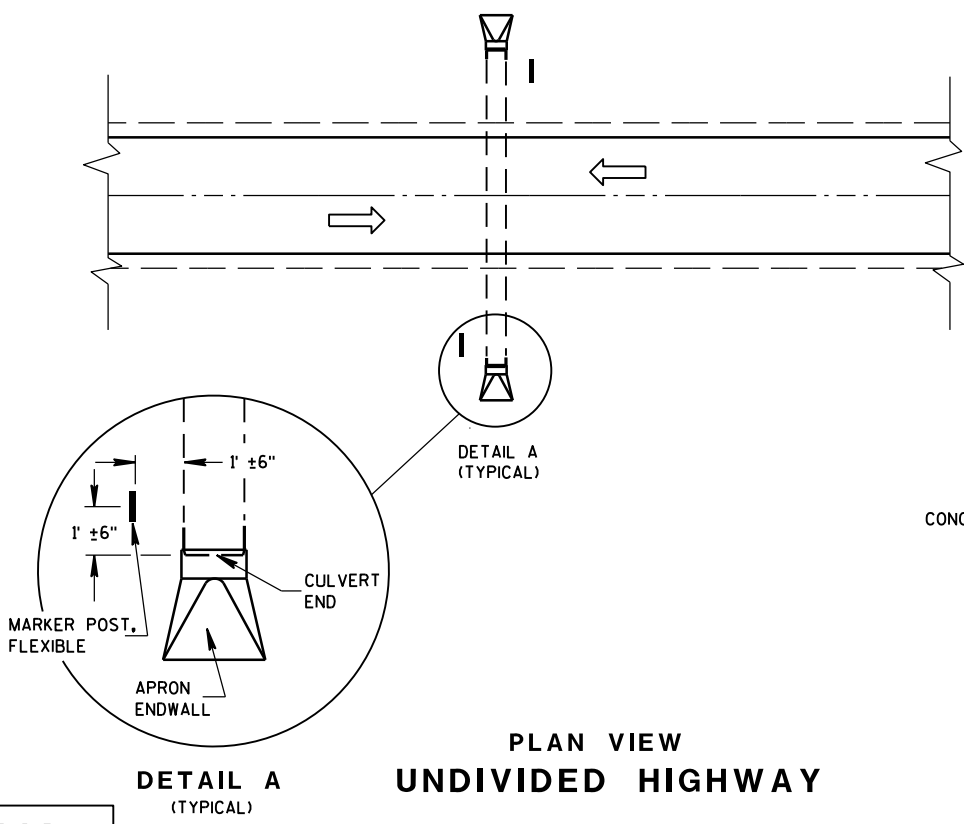
SDD 13C19 - 03

SDD 13C19 - 03

HMA LONGITUDINAL JOINTS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED November 2020 DATE	/S/ Steven Hefel HMA PAVEMENT ENGINEER
FHWA	



PLAN VIEW
DIVIDED HIGHWAY



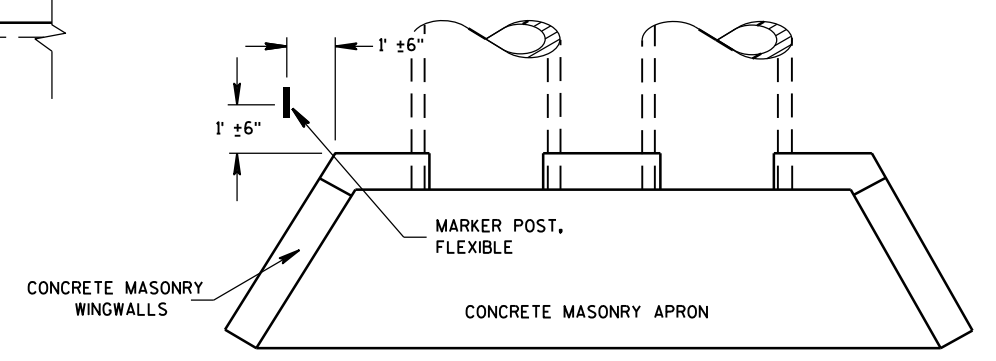
PLAN VIEW
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE
 DIRECTION OF TRAFFIC FLOW

FLEXIBLE MARKER POST LOCATION

GENERAL NOTES

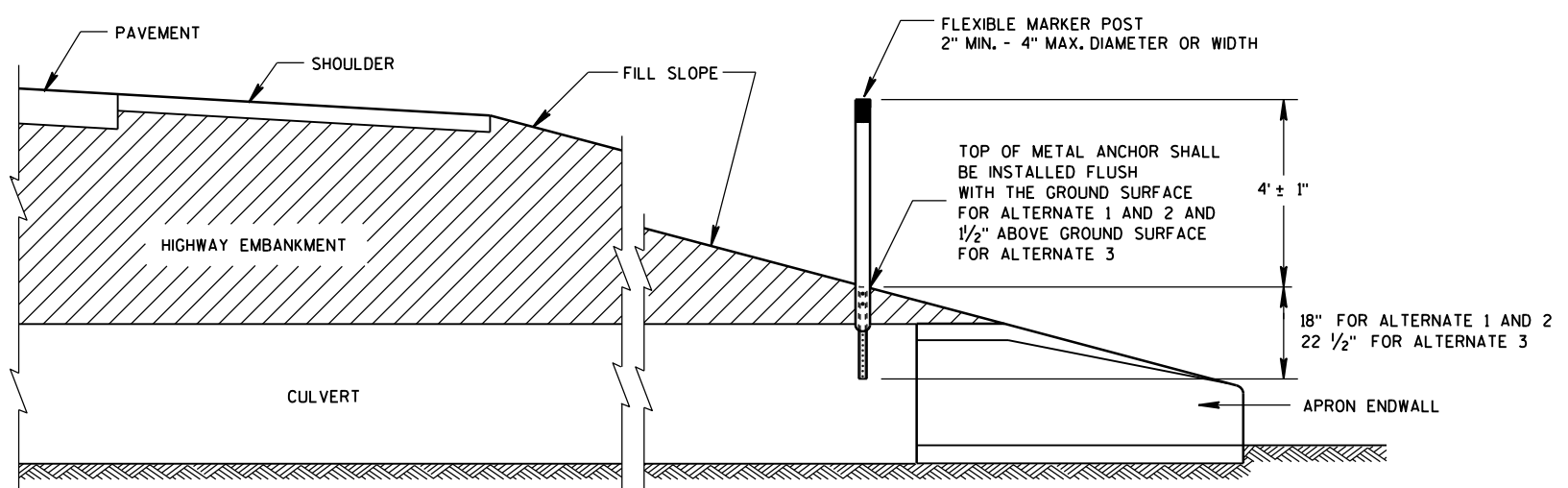
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW
CONCRETE MASONRY ENDWALLS FOR
CULVERT PIPE AND PIPE ARCH

6

6



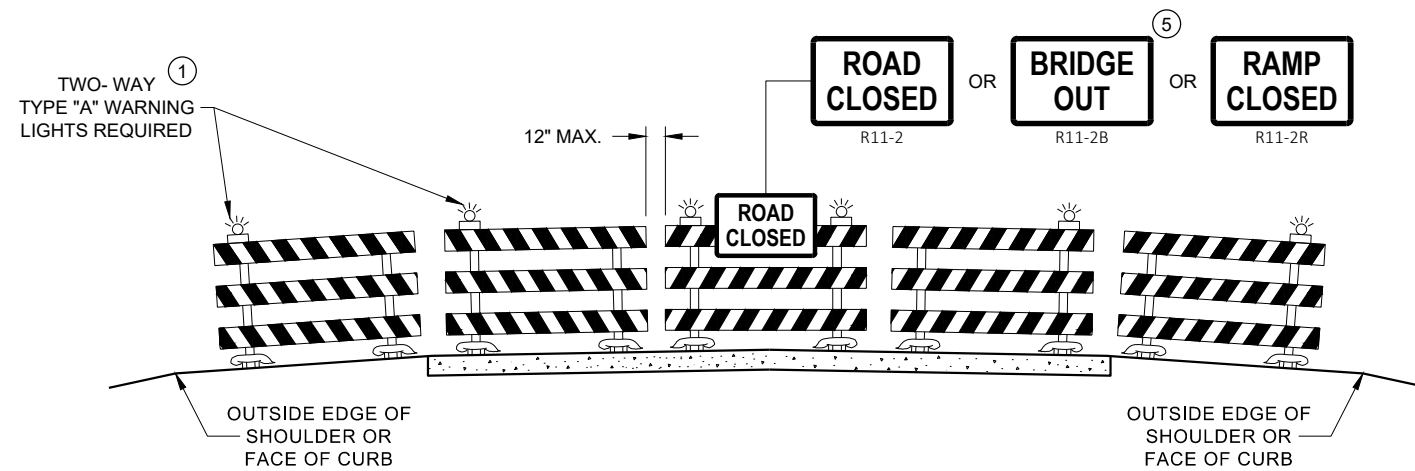
CROSS SECTION
FLEXIBLE MARKER POST

**FLEXIBLE MARKER POST
FOR CULVERT END**

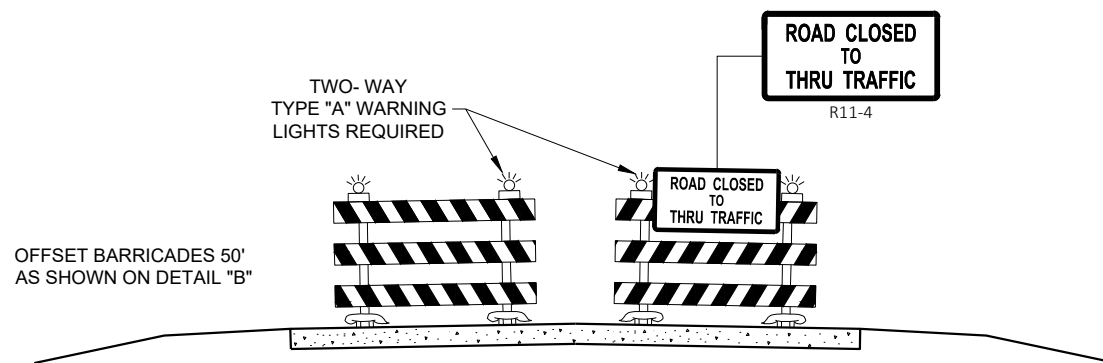
 STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

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

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



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



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

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

- ① TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING).
- ② THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT AN INTERSECTION.
- ③ FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "D".
- ④ FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "E".
- ⑤ FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11 - 2 AND R11 - 3 SIGNS.
- ⑥ INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.
- ⑦ "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

**BARRICADES AND SIGNS
FOR
VARIOUS CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

GENERAL NOTES

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

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




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

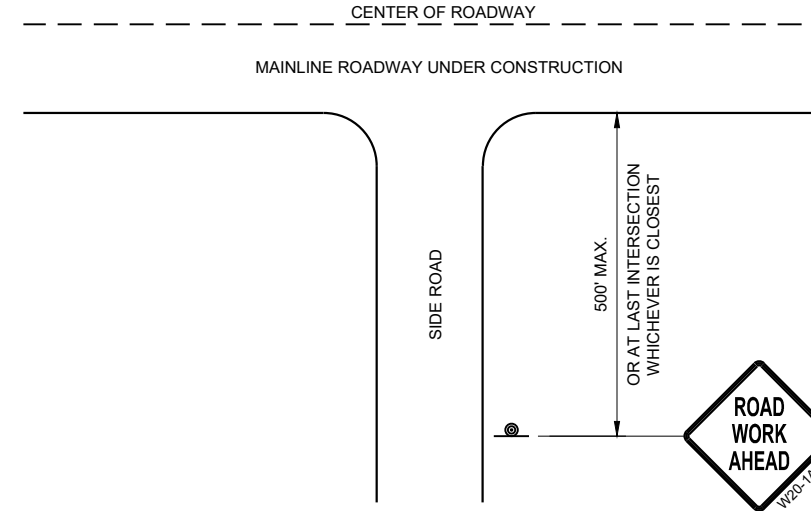
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

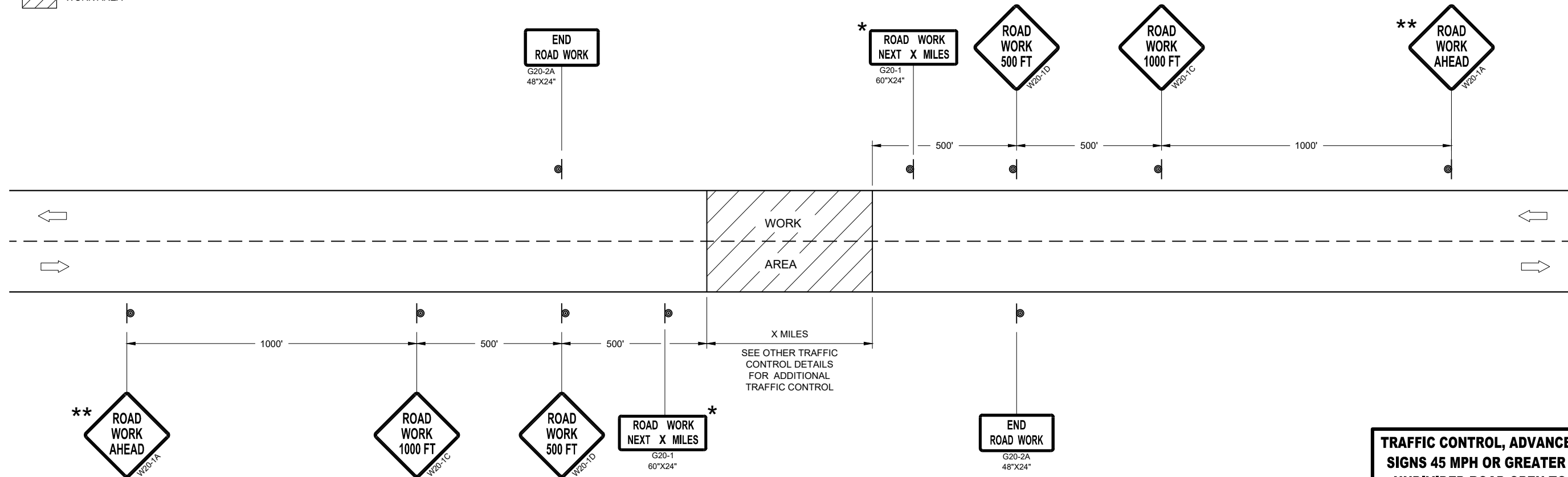
- * OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS
- ** PLACE AN ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.

LEGEND

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



**TYPICAL SIDE ROAD APPROACH
WARNING SIGN DETAIL**



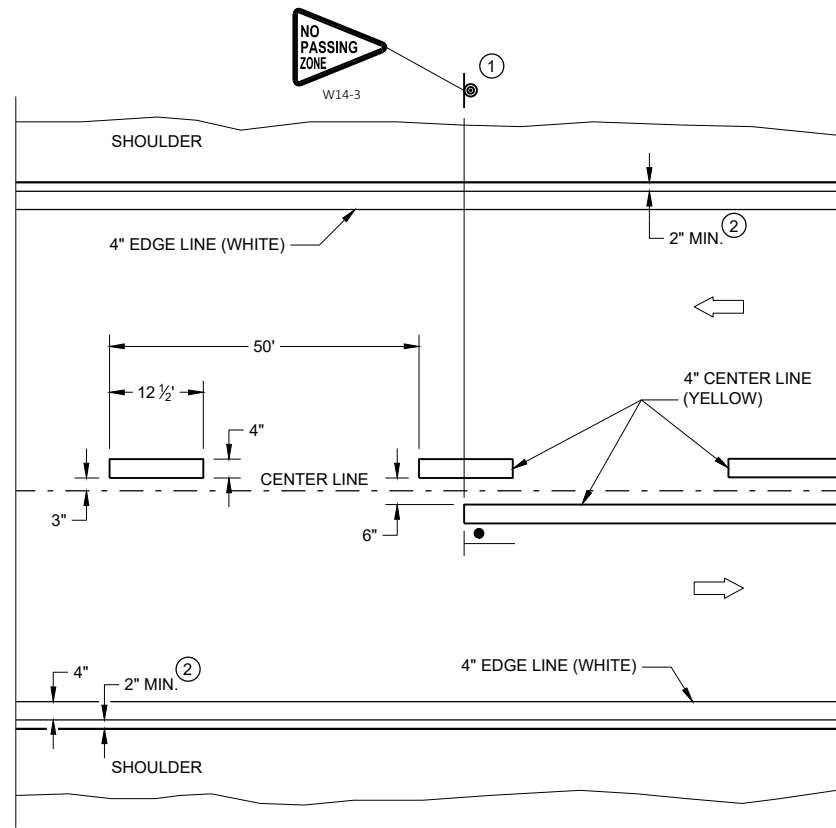
TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER

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

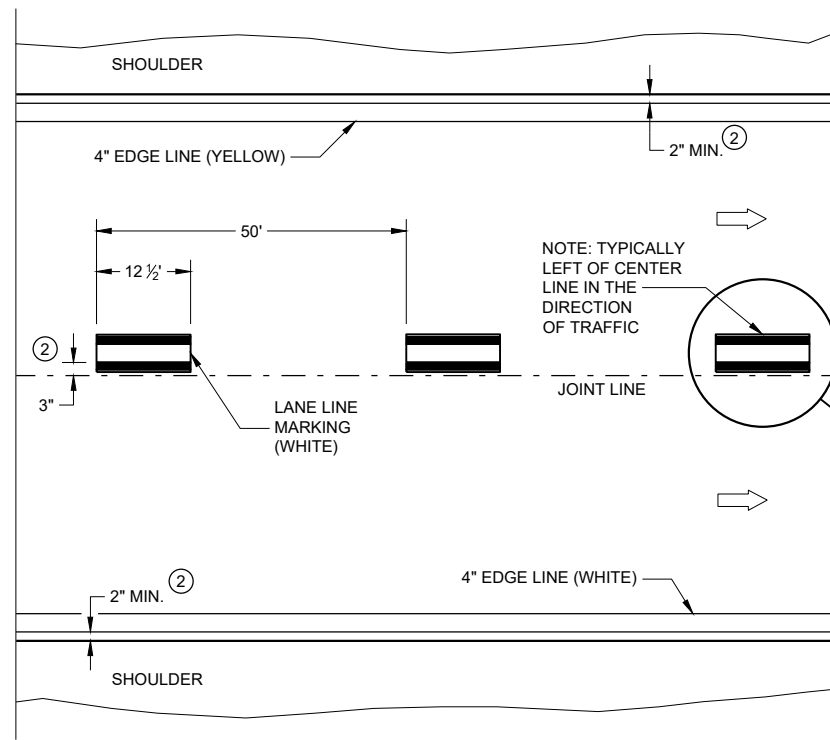
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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DATE _____ WORK ZONE ENGINEER

FHWA

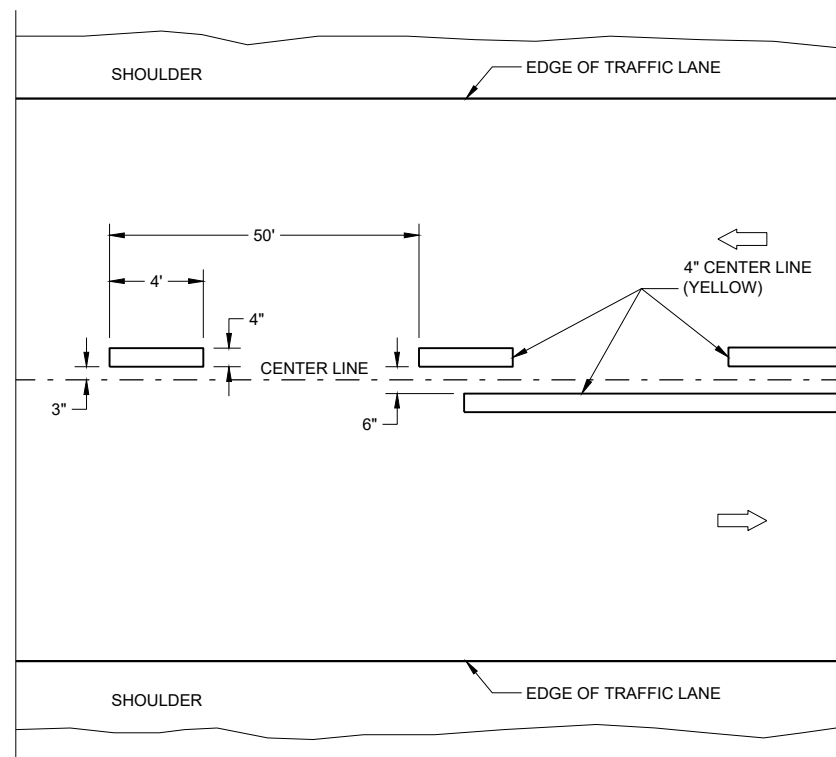


TWO WAY TRAFFIC

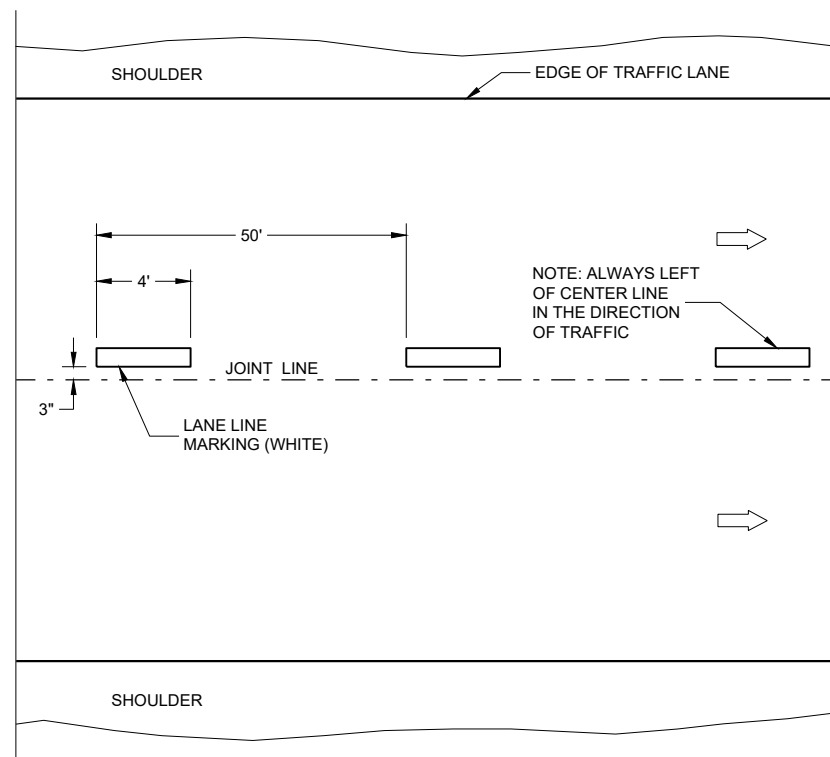


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

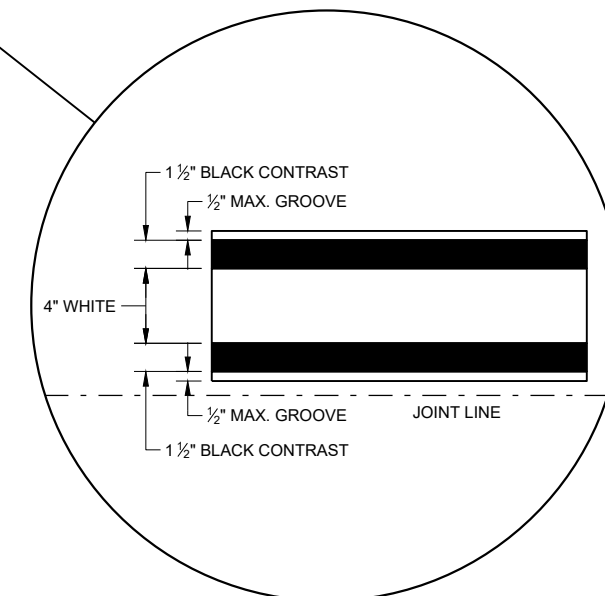
GENERAL NOTES

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

- ① LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING
- ② MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

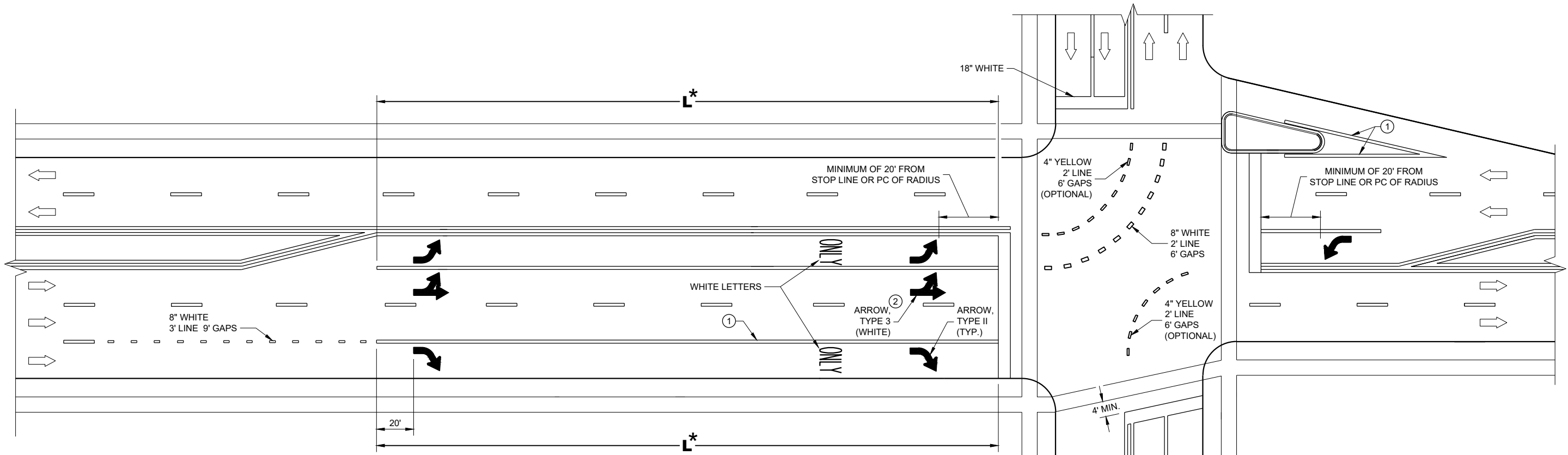
- |• "T" MARKING
- ⊙ SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC



LONGITUDINAL MARKING (MAINLINE)

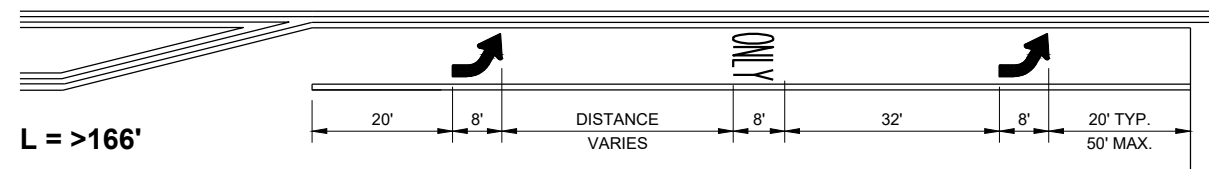
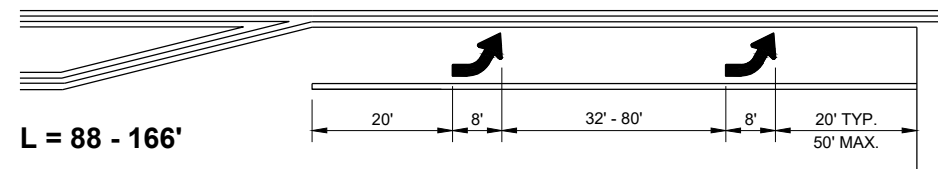
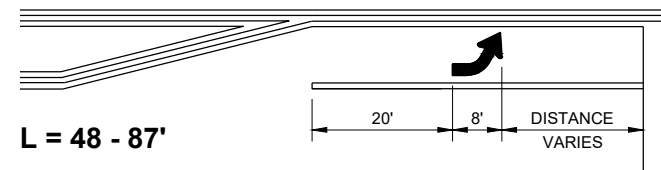
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020 /S/ Matthew Rauch
DATE STATEWIDE SIGNING AND MARKING
ENGINEER



TURN LANE OPTIONS

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



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

GENERAL NOTES

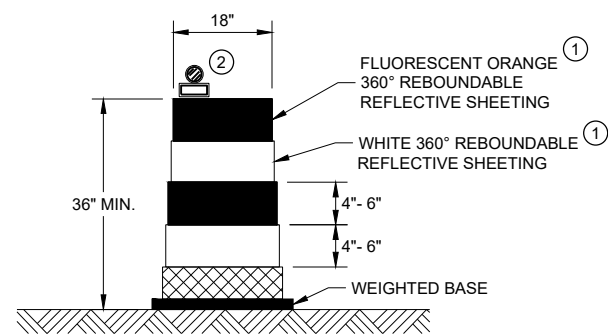
- ① 8" WHITE
- ② QUANTITY AND LOCATION OF TYPE 3 ARROWS ARE THE SAME AS THE TYPE II ARROWS IN THE ADJACENT TURN LANE. FOR TURN LANES WITH A PHYSICAL SEPARATION IN THE SAME DIRECTION OF TRAVEL, THE ARROWS AND "ONLY" MARKING MAY BE ELIMINATED.

➡ DIRECTION OF TRAFFIC

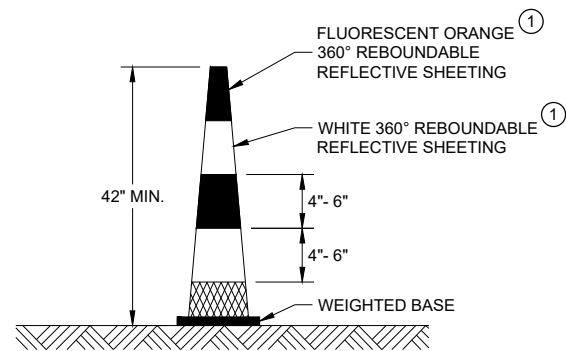
L = LENGTH OF TURN BAY

PAVEMENT MARKING (TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

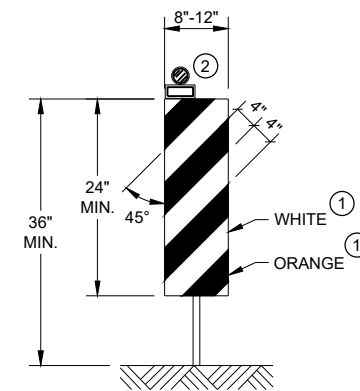


DRUM



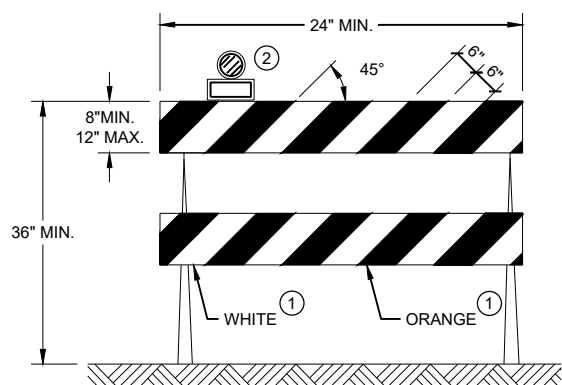
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS



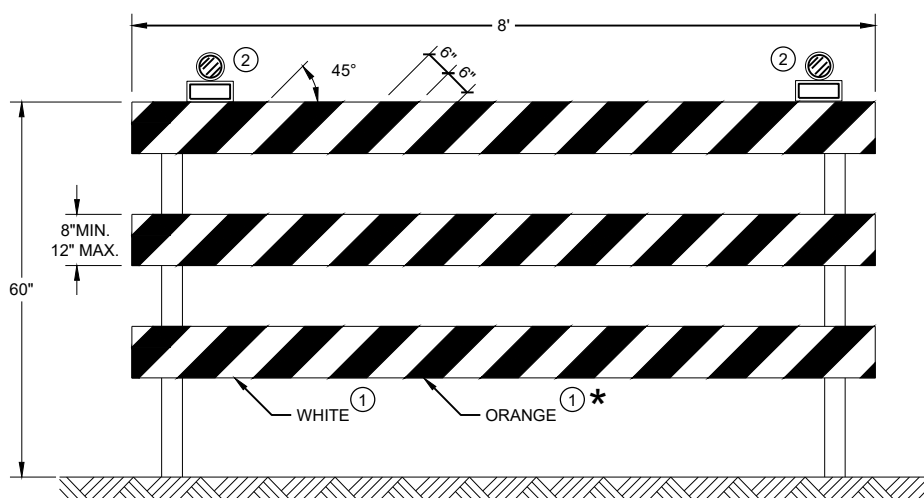
VERTICAL PANEL

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.

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.

**CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2021 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

LEGEND

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

GENERAL NOTES

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

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

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

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

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

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

FLAGGING

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

- ① FOR MOVING WORK OPERATIONS, POST ADDITIONAL W20-7A FLAGGER SIGNS AT APPROXIMATELY 3,500' INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.
- ② SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

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

TEMPORARY PORTABLE RUMBLE STRIPS

UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

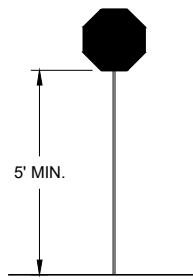
- ③ EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER

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

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

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



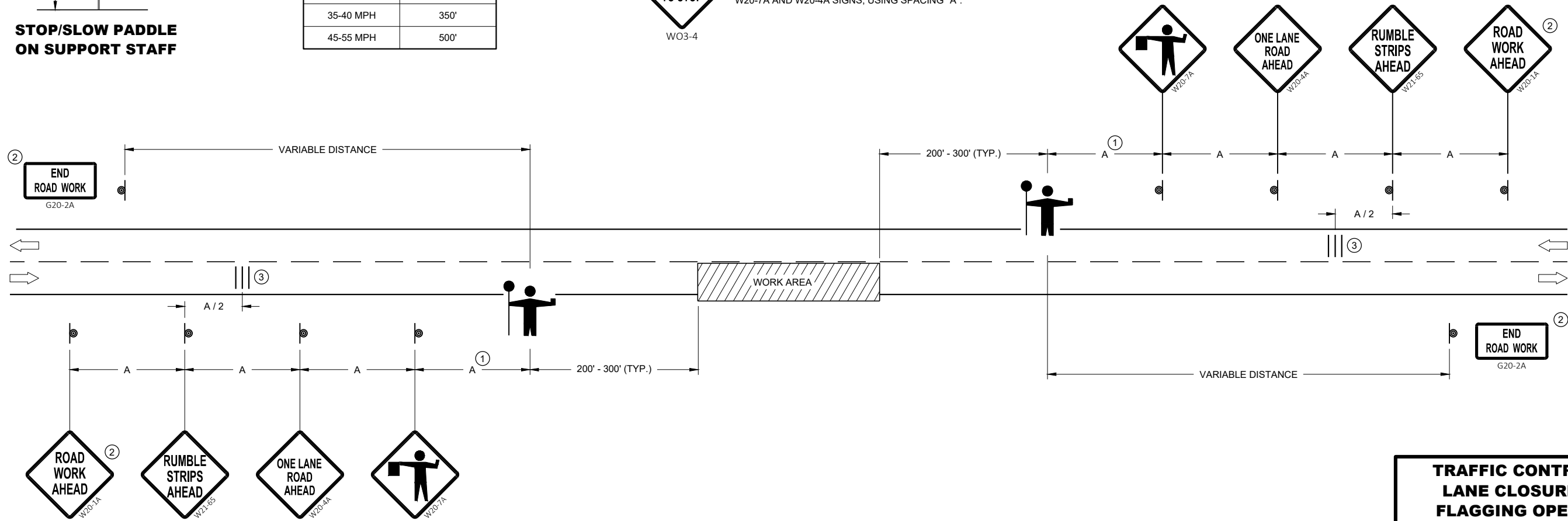
STOP/SLOW PADDLE ON SUPPORT STAFF

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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



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







TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2021 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

FHWA

LEGEND

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

GENERAL NOTES

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

ALL VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL OPERATING IN CAUTION MODE. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

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

DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL AND HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

THE WORK AND SHADOW VEHICLES SHOULD PULL OVER PERIODICALLY TO ALLOW TRAFFIC TO PASS.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR LAY STATIONARY SIGNS AND SUPPORTS FLAT ON THE GRADE WITH UPRIGHTS ORIENTED PARALLEL TO AND DOWNSTREAM FROM TRAFFIC.

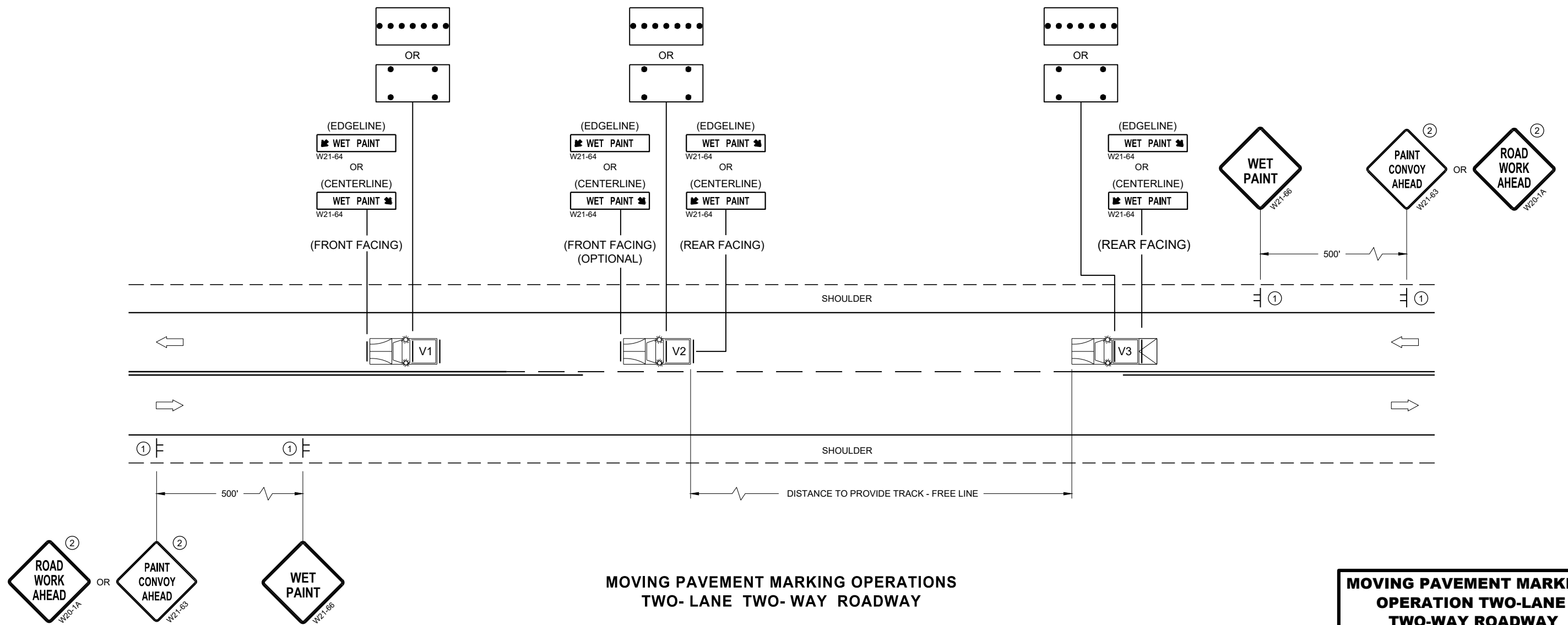
CONES SHOULD BE USED BETWEEN THE MARKING AND SHADOW VEHICLE AT 100 FOOT SPACING. CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

CONES SHALL BE A MINIMUM OF 28" FOR WET PAVEMENT MARKING.

- ① SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.
- ② IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1A OR W21-63 ARE NOT REQUIRED.

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**MOVING PAVEMENT MARKING OPERATIONS
TWO-LANE TWO-WAY ROADWAY**

SDD 15C19 - 06a

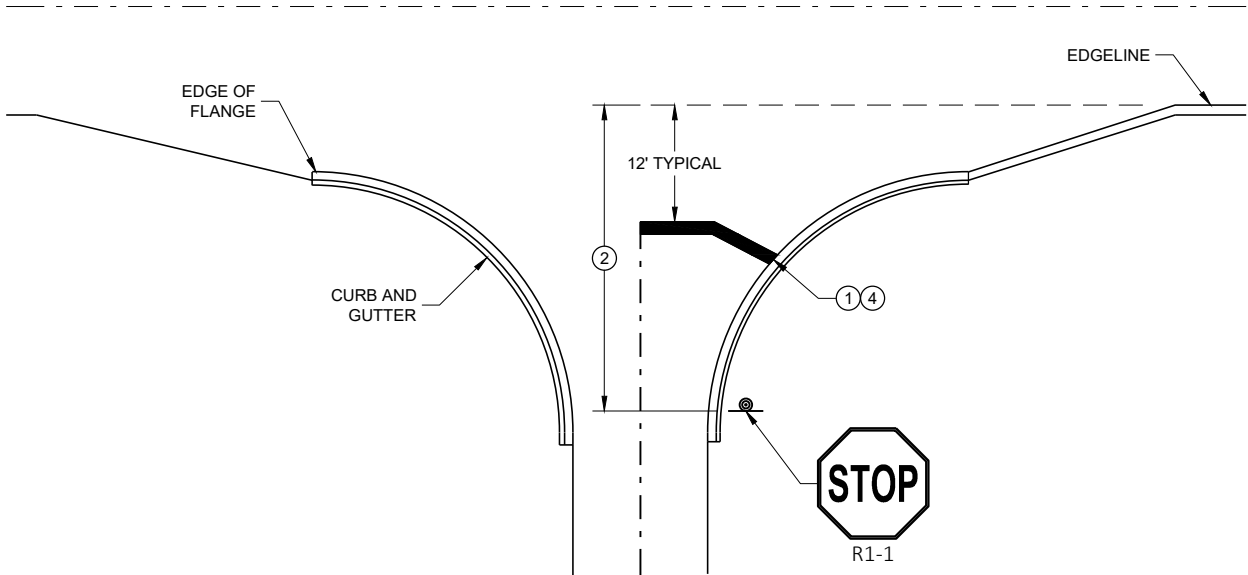
SDD 15C19 - 06a

MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED November 2019 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

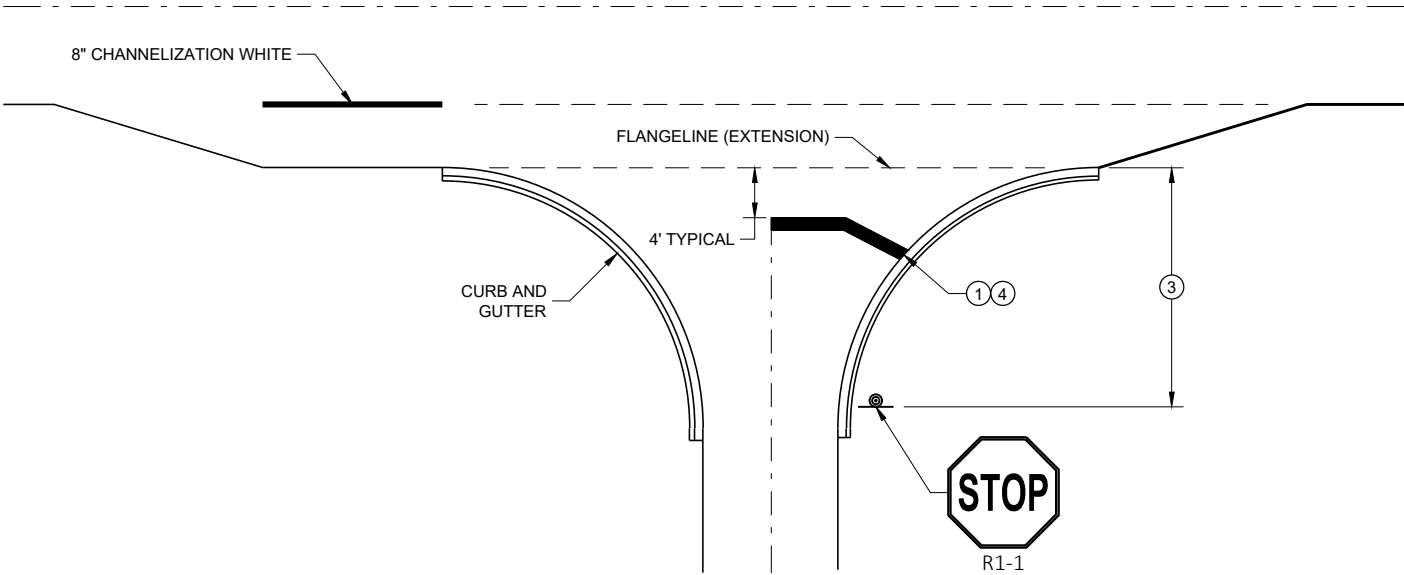
GENERAL NOTES

STOP SIGN SHALL BE PLACED A MINIMUM OF 6 FEET TO A MAXIMUM OF 50 FEET FROM THE EDGELINE LOCATION.

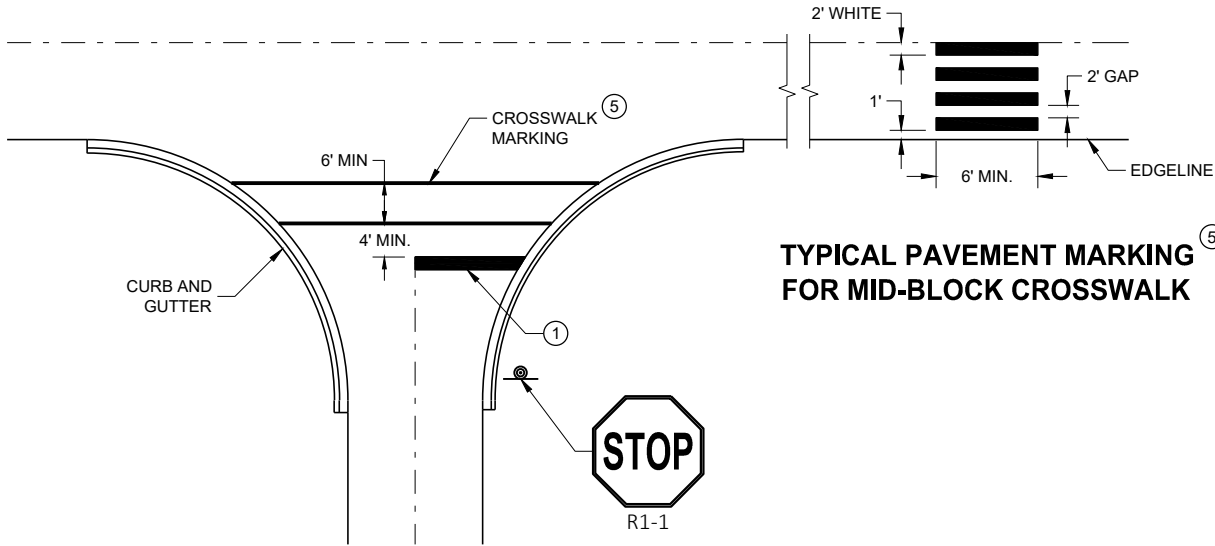
- ① 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
- ② NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
- ③ NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION.
- ④ MOVE CLOSER TO THE EDGE OF TRAVEL LINE AS NEEDED FOR VISIBILITY AND SIGHT LINES (NO CLOSER THAN 4 FEET).
- ⑤ LADDER BAR CROSSWALKS SHOULD ONLY BE USED FOR MID BLOCK CROSSINGS. USE 2 - 6" TRANSVERSE LINES INSTEAD.



TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER

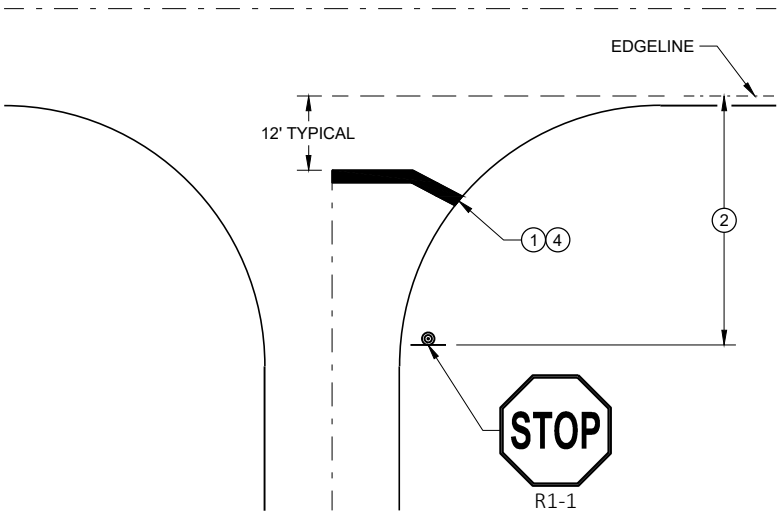


TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING

TYPICAL PAVEMENT MARKING FOR MID-BLOCK CROSSWALK



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019 /S/ Matthew Rauch
DATE STATE SIGNING AND MARKING ENGINEER

FHWA

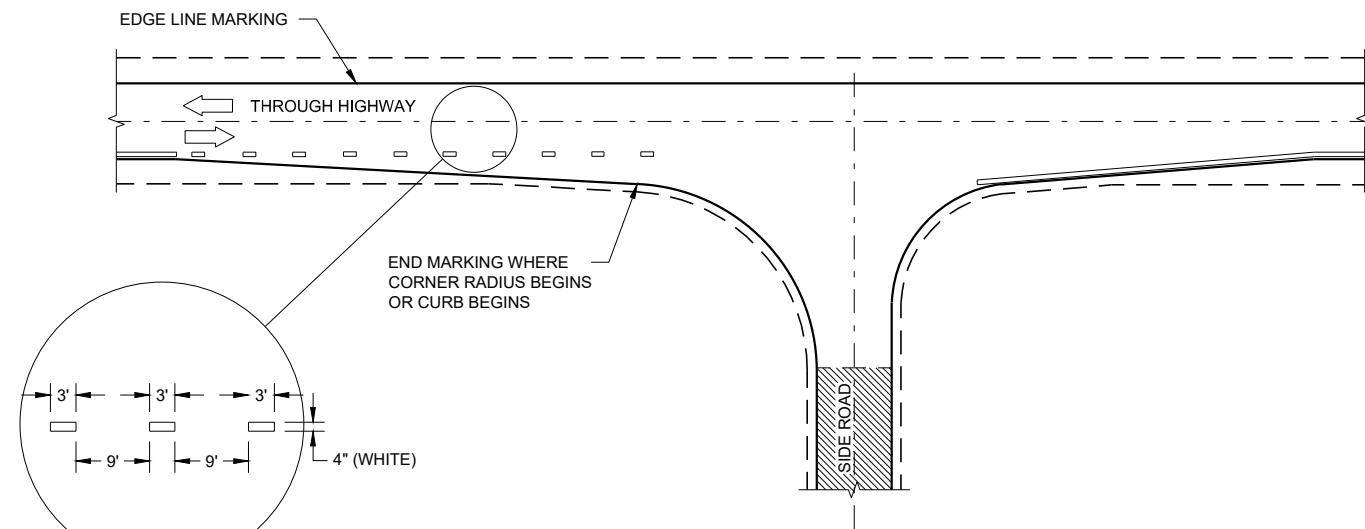
GENERAL NOTES

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

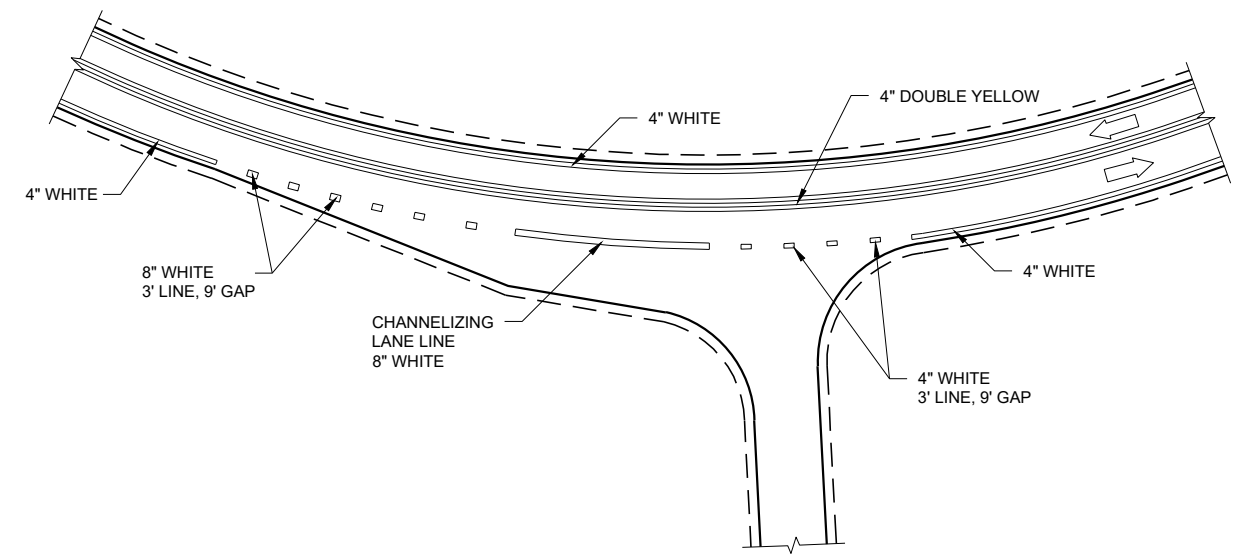
- ① WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
- ② WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
- ③ BARRIER LINE ENDS AT SIDE ROAD PAVEMENT / SURFACE EDGE EXTENSION.
- ④ BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.

LEGEND

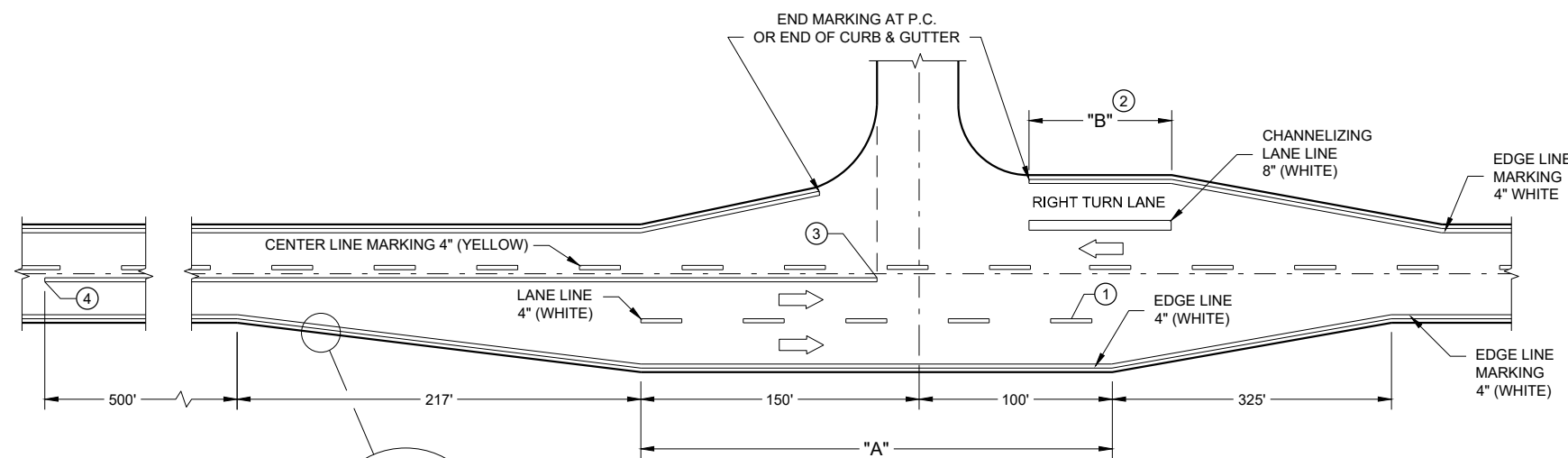
➡ DIRECTION OF TRAVEL



MINOR INTERSECTION



INTERSECTION ON OUTSIDE OF CURVE







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

**PAVEMENT MARKING
(INTERSECTIONS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

LEGEND

-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL DRUM
-  DIRECTION OF TRAFFIC
-  WORK ZONE

GENERAL NOTES

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 THE 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.

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

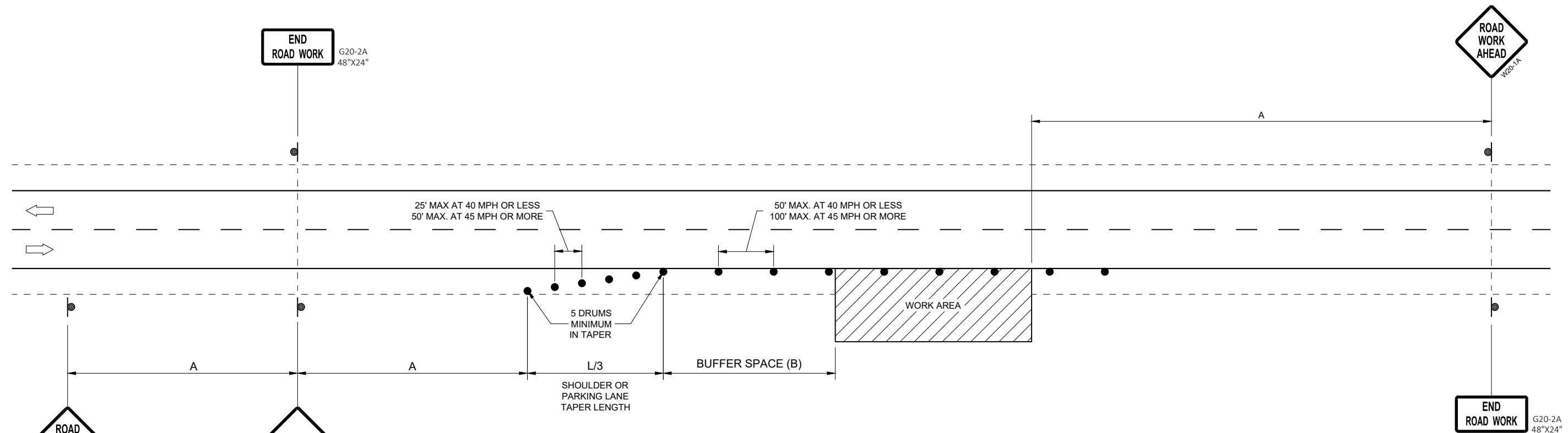
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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

W20-1A AND G20-2A SIGNS ARE NOT REQUIRED IF THE WORK AREA IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT. G20-2A SIGNS MAY ALSO BE OMITTED IF DURATION OF WORK IS LESS THAN 7 CONTINUOUS DAYS AND NIGHTS.

6

6



POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	SHOULDER TAPER L / 3 W, LATERAL OFFSET (FT)						BUFFER SPACE (B) FEET
		3	4	5	6	7	8	
25	200'	10	14	17	21	24	28	55
30	200'	15	20	25	30	35	40	85
35	350'	20	27	34	40	47	54	120
40	350'	26	35	44	53	62	70	170
45	500'	45	59	74	89	104	119	220
50	500'	50	66	83	99	116	132	280
55	500'	54	73	91	109	127	145	335'

SDD 15D28 - 04

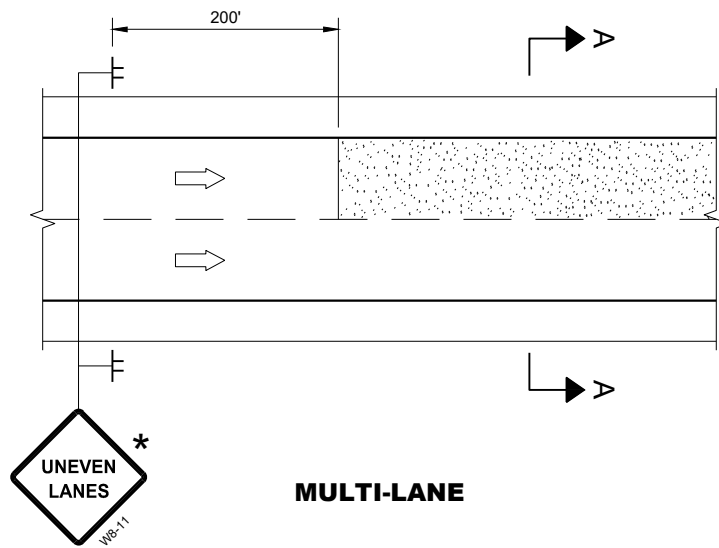
SDD 15D28 - 04

TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY

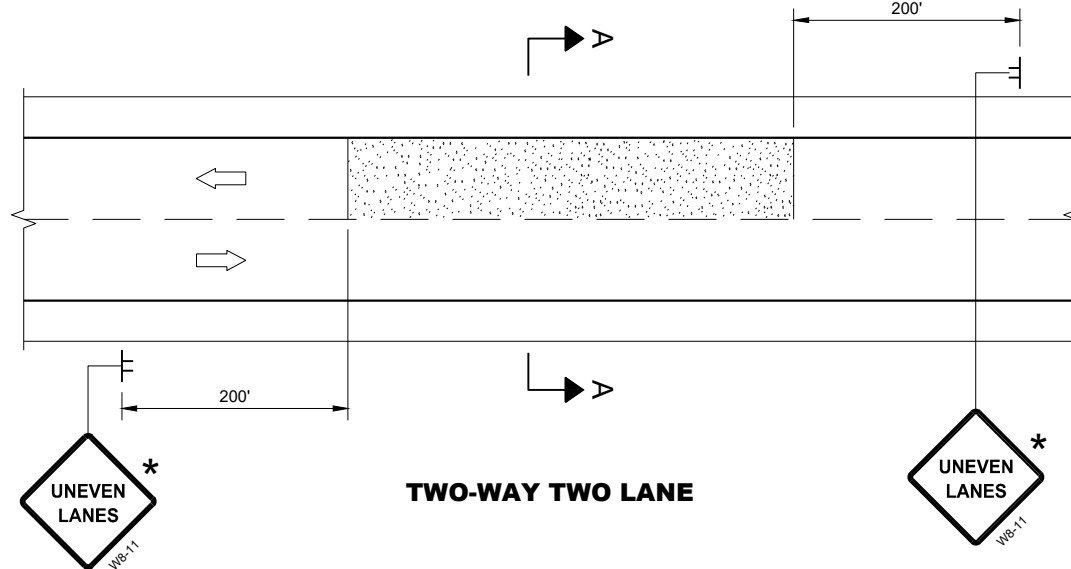
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2020 /S/ Andrew Heidtke
DATE STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER

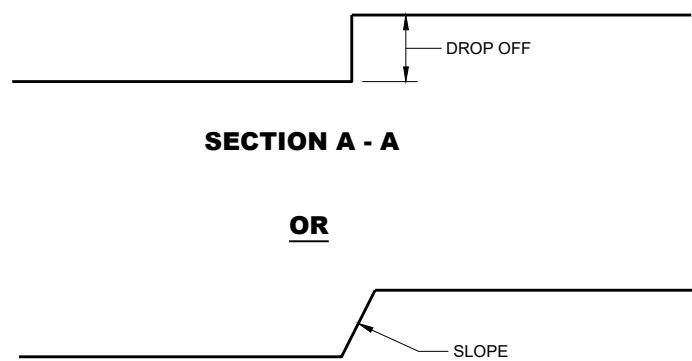
FHWA



MULTI-LANE



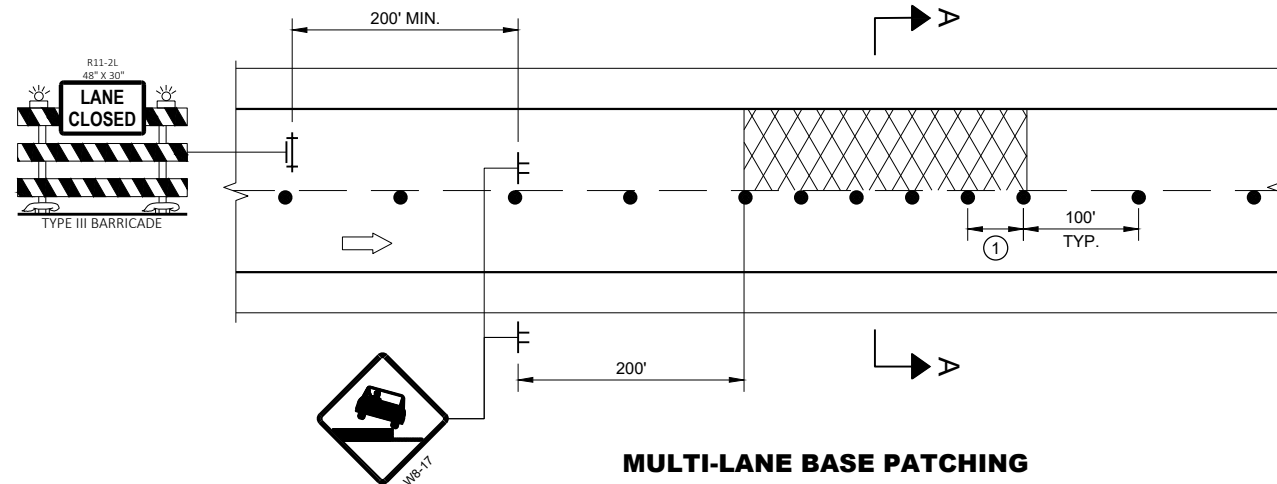
TWO-WAY TWO LANE



SECTION A - A

OR

SECTION A - A



MULTI-LANE BASE PATCHING

ADJACENT LANE DROP-OFFS

GENERAL NOTES

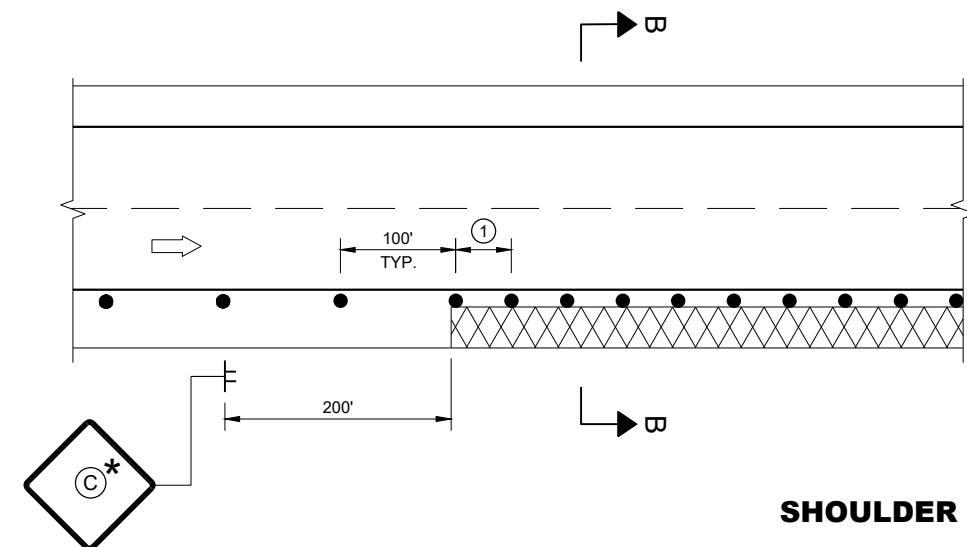
- FOR SPOT LOCATIONS USE ENGINEERING JUDGEMENT WHEN PLACING ADDITIONAL SIGNS.
- ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.
- "WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.
- WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.
- * IF THE DROP-OFF IS CONTINUOUS ALONG THE PROJECT, PLACE ADDITIONAL SIGNS EVERY 1 MILE AND AFTER EVERY ENTRANCE RAMP.
- ① USE CLOSER SPACING WHEN DELINEATING DROP-OFF.

LEGEND

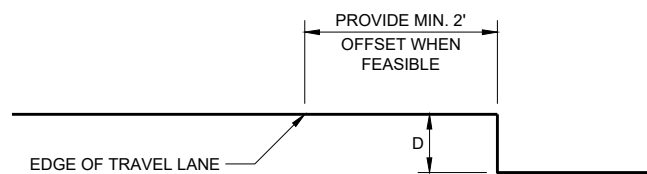
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- WORK AREA WITH DROP-OFF
- MILLED SURFACE

6

6



SHOULDER DROP-OFFS



SECTION B - B

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

SDD 15D39 - 02

SDD 15D39 - 02

**TRAFFIC CONTROL,
DROP-OFF SIGNING**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 /S/ Andrew Heidtke
DATE DATE WORK ZONE ENGINEER

FHWA

GENERAL NOTES

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.

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



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

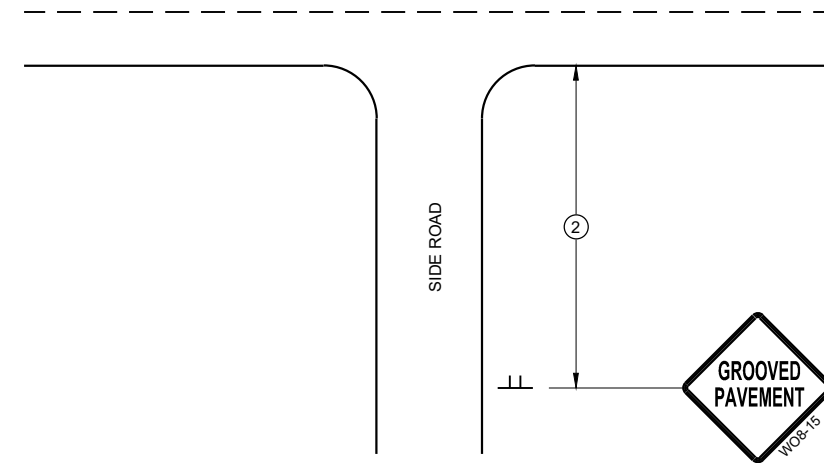
ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE, INCLUDING PRE-EXISTING SIGNS IN THE VICINITY, SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER.

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.

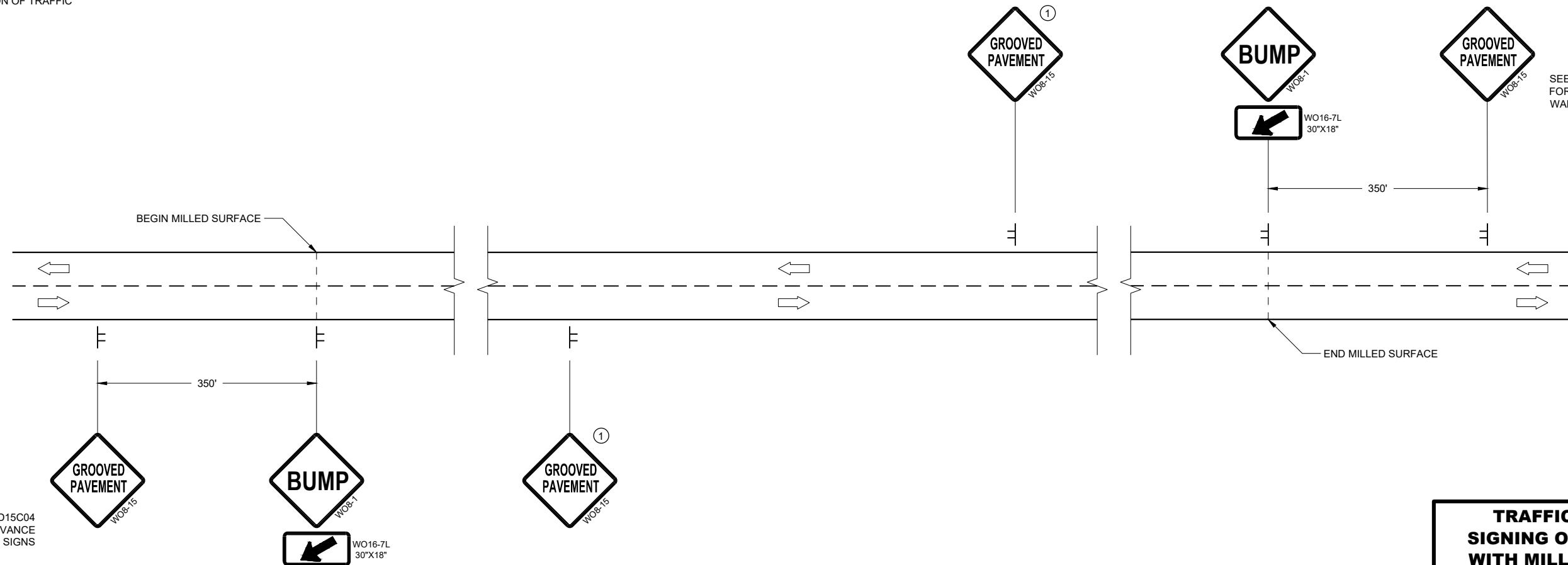
- ① PLACE SIGNS 350' IN ADVANCE OF MILLED SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.
- ② PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.

LEGEND

-  SIGN ON TEMPORARY SUPPORT
-  DIRECTION OF TRAFFIC



TYPICAL SIDE ROAD APPROACH SIGN DETAIL



DETAIL FOR SIGNING ON MILLED SURFACES

TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED February 2020 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

GENERAL NOTES

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.

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

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

ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE, INCLUDING PRE-EXISTING SIGNS IN THE VICINITY, SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER.

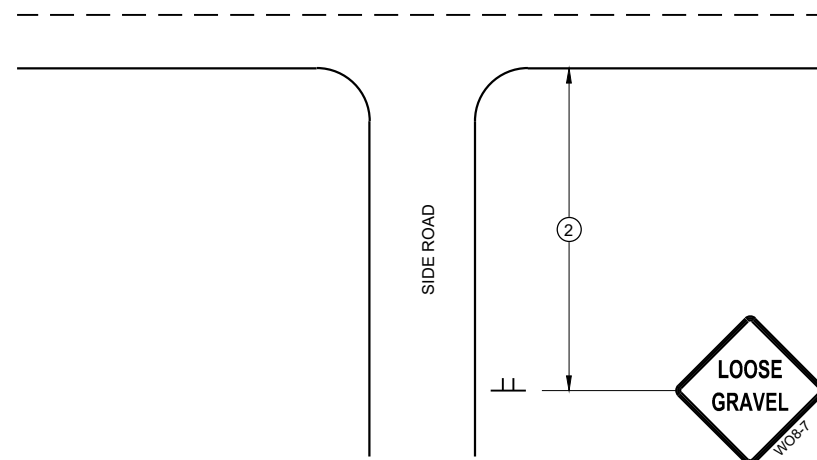
SEE 15C34 FOR ADDITIONAL TRAFFIC CONTROL SIGNING WHEN CENTERLINE PAVEMENT MAKINGS ARE MISSING. 'DO NOT PASS' SIGNS MUST BE INSTALLED ON THE SAME DAY AS MILLING OPERATIONS.

- ① PLACE SIGNS 350' IN ADVANCE OF CHIP SEALED OR LOOSE GRAVEL 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.
- ③ ADD WO8-1 OR WO8-2 SIGN WHEN THE CONDITION IS PRESENT.

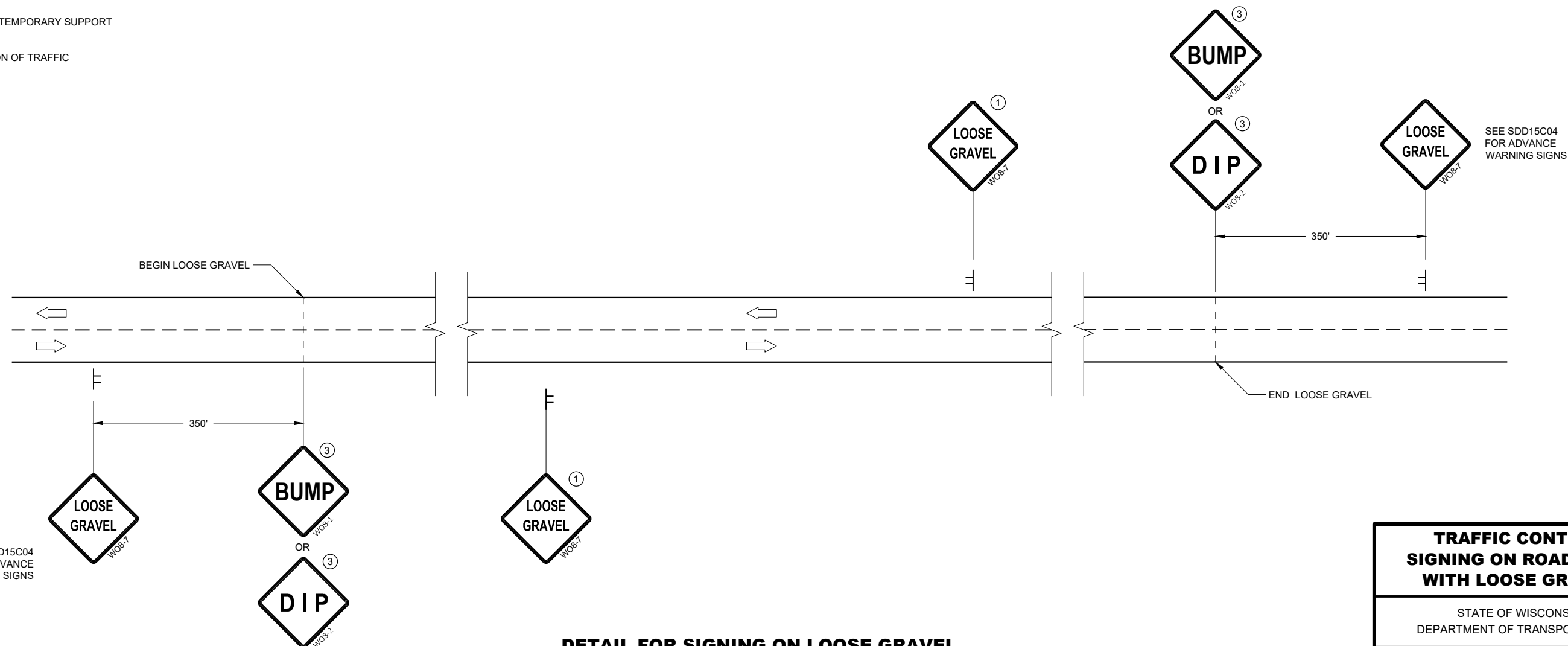
LEGEND

⊥ SIGN ON TEMPORARY SUPPORT

➡ DIRECTION OF TRAFFIC



TYPICAL SIDE ROAD APPROACH SIGN DETAIL

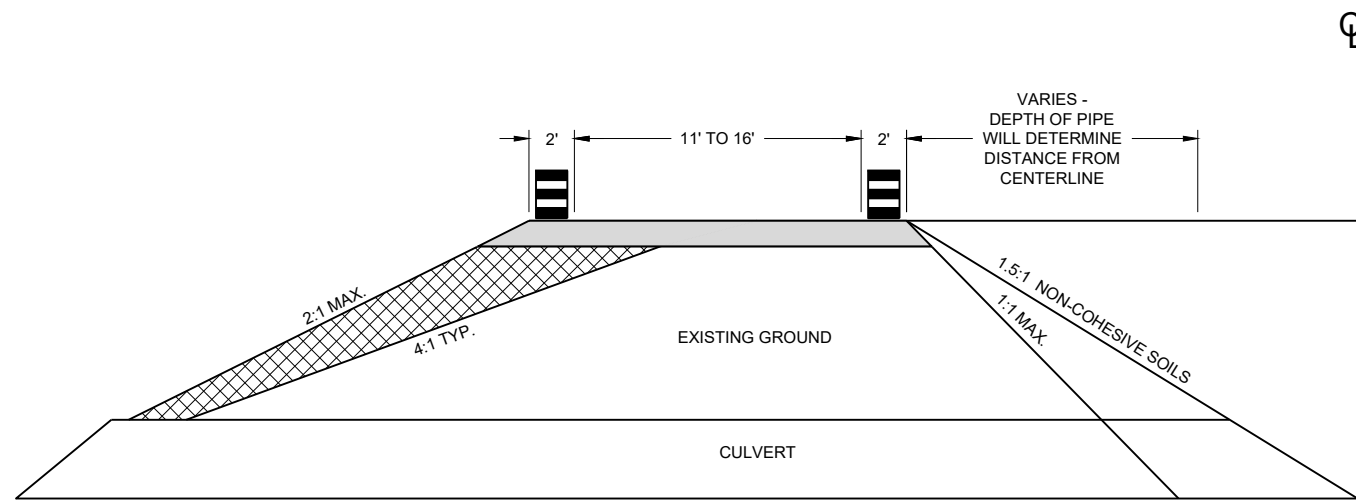


SEE SDD15C04 FOR ADVANCE WARNING SIGNS

SEE SDD15C04 FOR ADVANCE WARNING SIGNS

DETAIL FOR SIGNING ON LOOSE GRAVEL OR CHIP SEALED SURFACES

TRAFFIC CONTROL SIGNING ON ROADWAYS WITH LOOSE GRAVEL	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED February 2021 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	



CROSS SECTION

GENERAL NOTES

USE 1:1 FOR COHESIVE CLAYS AND SILTS, LOAMS, SANDY CLAYS AND ANGULAR GRAVEL SOILS.
 USE 1.5:1 FOR NON-COHESIVE SOILS.

THE TAPER SHOULD EXTEND ACROSS THE SHOULDER UNLESS DOING SO WOULD GREATLY CONFLICT WITH THE WORK OPERATION.






ALL LANE CLOSURE SIGNS SHALL BE REMOVED OR COVERED AND ALL DEVICES REMOVED BEYOND THE SHOULDER WHEN WORK IS NOT IN PROGRESS AND THE LANE IS RESTORED TO A SAFE OPERATING CONDITION.

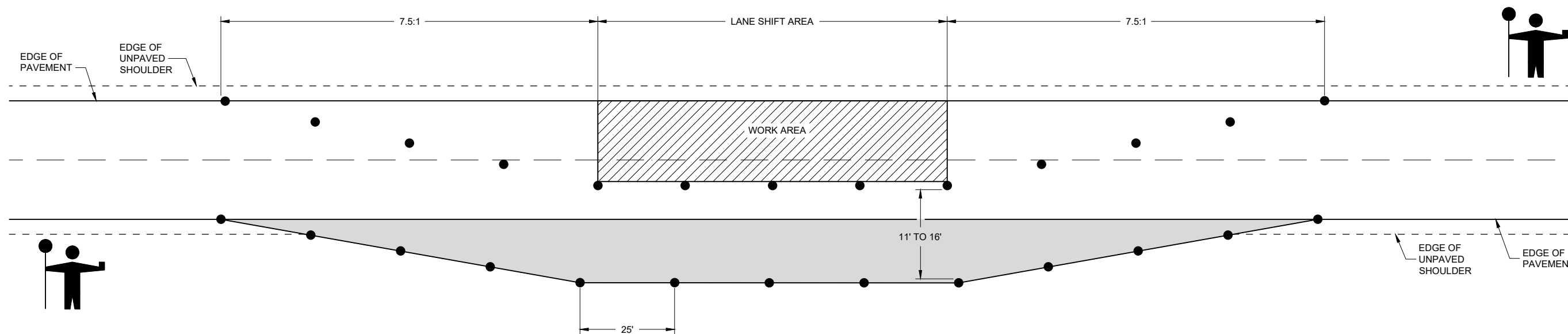
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

USE WITH SDD 15C12 "TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATIONS"

USE WITH SDD 15D45 "SIGNING ON ROADWAYS WITH LOOSE GRAVEL"

LEGEND

-  DRUM WITHOUT WARNING LIGHT
-  6" BASE AGGREGATE DENSE 1 1/2" - INCIDENTAL TO LANE SHIFT ITEM
-  FILL - INCIDENTAL TO LANE SHIFT ITEM
-  WORK AREA
-  FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF



LANE SHIFT IN FLAGGING OPERATION

**TRAFFIC CONTROL,
 TEMPORARY LANE SHIFT
 DURING CULVERT WORK**

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

APPROVED
 February 2021 /S/ Andrew Heidtke
 DATE WORK ZONE ENGINEER

FHWA





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SDD 15D48 - 01

SDD 15D48 - 01

LEGEND

- V1 WORK VEHICLE
- V2 SHADOW VEHICLE
-  TRUCK MOUNTED ATTENUATOR (TMA)
-  FLASHING ARROW PANEL (CAUTION)
-  WORK AREA
-  DIRECTION OF TRAFFIC

POSTED SPEED PRIOR TO WORK STARTING (MPH)	DECISION SIGHT DISTANCE (D)
0 - 25	550'
30	550'
35	700'
40	700'
45	900'
50	900'
55	1200'

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

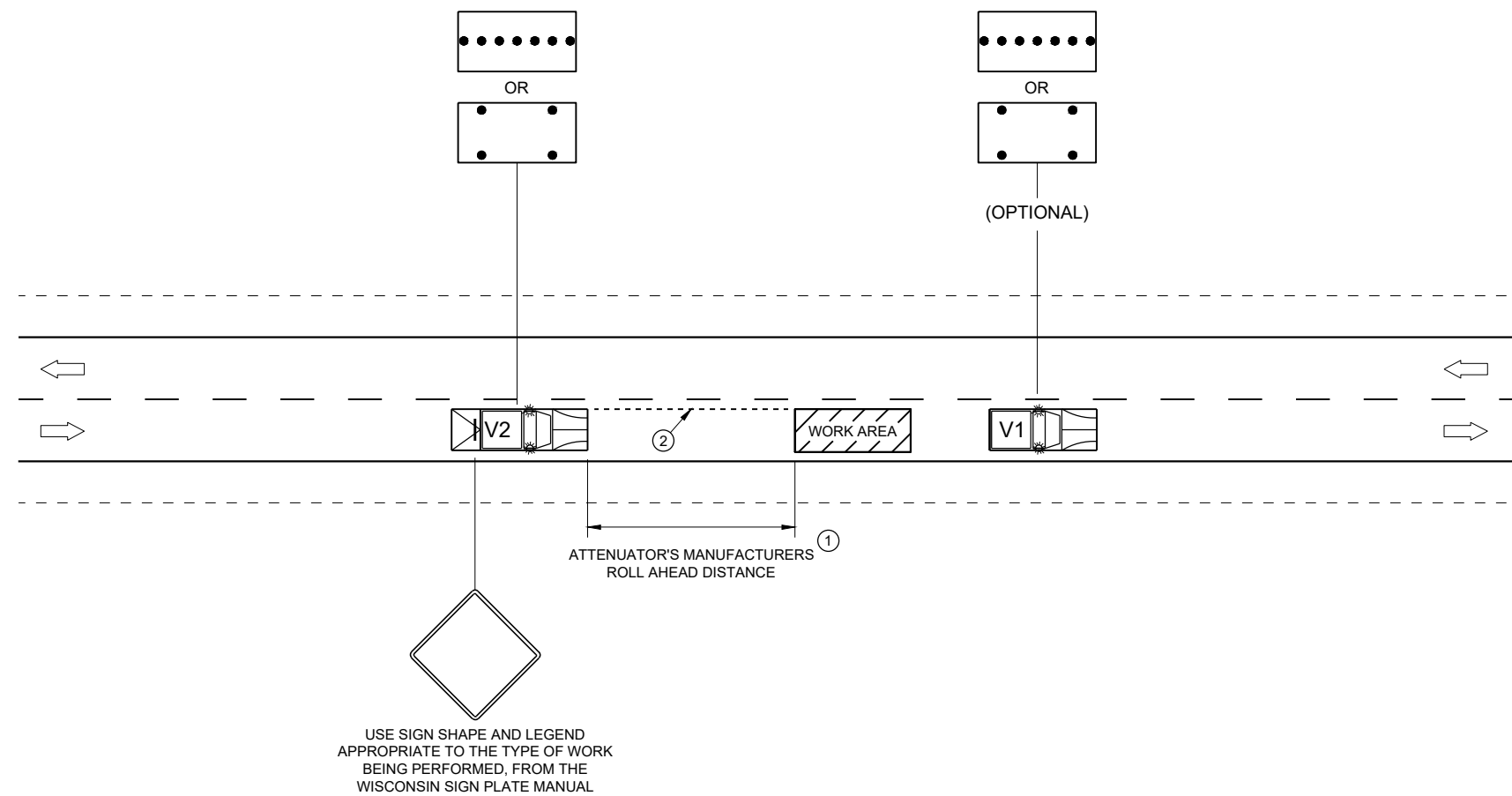
MOBILE IS WORK THAT MOVES CONTINUOUSLY OR MOVES AT LEAST THE DECISION SIGHT DISTANCE EVERY 15 MINUTES.

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 ARROW PANEL.

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

- ① 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.



6

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SDD 15D51 - 01

SDD 15D51 - 01

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2021 /S/ Andrew Heidtke
DATE STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER

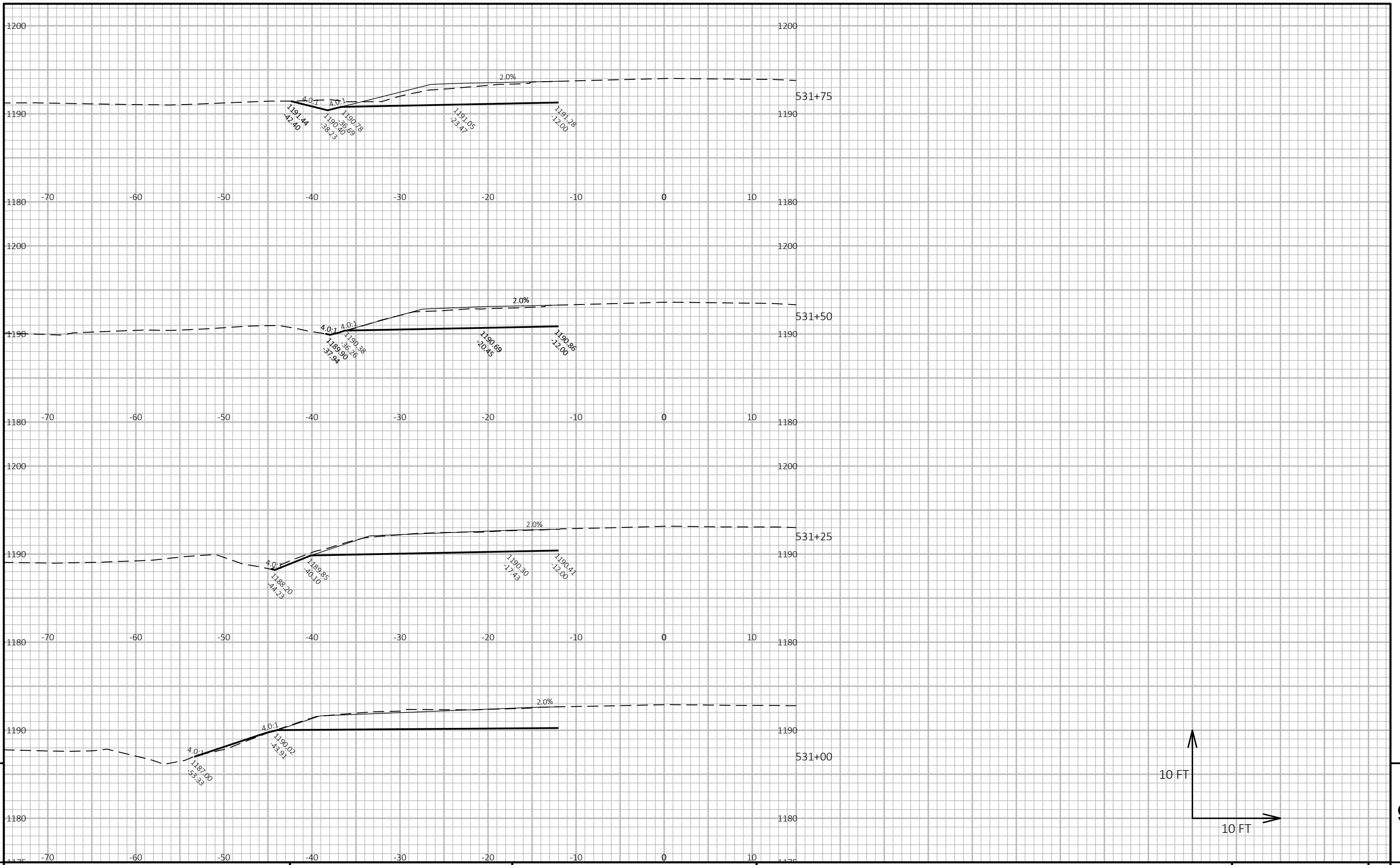
FHWA

STATION	DISTANCE	AREA			INCREMENTAL VOLUME (UNADJUSTED)			AVAILABLE MATERIAL	EXPANDED FILL	MASS ORDINATE (CY) (3)
		CUT (SF)	FILL (SF)	UNUSABLE MATERIAL (SF)	COMMON EXCAVATION (CY)	FILL (CY)	UNUSABLE MATERIAL (CY)	(CY) (1)	(CY) (2)	
					205.0100			1.00	FACTOR 1.33	
STH 48										
531+00.00	-	61.1	1.4	1.3	-	-	-	-	-	-
531+25.00	25	57.8		1.3	55.1	0.6	1.2	55.1	0.8	54.2
531+50.00	25	43.4		1.3	46.9		1.2	46.9		46.9
531+75.00	25	43.7		1.3	40.3		1.2	40.3		40.3
532+00.00	25	62.8		2.1	49.3		1.9	49.3		49.3
533+50.00		42.0	2.5	1.3	-	-	-	-	-	-
533+75.00	25	37.5	2.9	1.3	36.8	2.5	1.2	36.8	3.3	33.5
534+00.00	25	36.6	4.9	1.3	34.3	3.6	1.2	34.3	4.8	29.5
534+25.00	25	39.5	5.0	1.3	35.2	4.5	1.2	35.2	6.0	29.2
534+50.00	25	45.2	3.9	1.3	39.2	4.1	1.2	39.2	5.5	33.8
534+75.00	25	48.4	5.0	1.3	43.3	4.1	1.2	43.3	5.5	37.8
535+00.00	25	50.9	5.0	1.3	45.9	4.6	1.2	45.9	6.2	39.8
535+25.00	25	50.2	3.7	1.3	46.8	4.0	1.2	46.8	5.4	41.4
535+50.00	25	47.0	4.0	1.3	45.0	3.6	1.2	45.0	4.7	40.2
535+75.00	25	51.0	1.5	1.3	45.3	2.5	1.2	45.3	3.4	42.0
536+00.00	25	44.4	0.2	1.3	44.1	0.8	1.2	44.1	1.1	43.1
536+25.00	25	37.3	0.1	1.3	37.8	0.1	1.2	37.8	0.2	37.6
536+50.00	25	37.7		1.3	34.7		1.2	34.7		34.7
536+75.00	25	37.6		1.3	34.9		1.2	34.9		34.9
537+00.00	25	36.4		1.3	34.3		1.2	34.3		34.3
537+25.00	25	39.4		1.3	35.1		1.2	35.1		35.1
537+50.00	25	35.1		1.3	34.5		1.2	34.5		34.5
537+67.00	17	36.6		1.3	22.6		0.8	22.6		22.6
TOTAL		1021.4	40.0	30.7	841.4	35.2	25.6	841.4	46.8	794.5
CTH V										
0+15.00	-	120	2.3	20	-	-	-	-	-	-
0+52.07	37.1	86.6	22.8	9.0	141.8	17.3	12.4	141.8	22.9	118.9
0+75.00	22.9	33.1	4.9	8.0	50.8	11.8	6.8	50.8	15.7	35.1
1+00.00	25.0	27.2	0.1	8.0	27.9	2.3	7.4	27.9	3.1	24.8
1+25.00	25.0	24.8	1.5	8.0	24.1	0.8	7.4	24.1	1.0	23.1
1+43.16	18.2	25.2	1.7	8.0	16.8	1.1	5.4	16.8	1.5	15.4
TOTAL		196.9	31.1	41.0	261.5	33.2	39.3	261.5	44.2	217.3

- 1) AVAILABLE MATERIAL = CUT-SALVAGED/UNUSABLE PAVEMENT MATERIAL
- 2) EXPANDED FILL FACTOR = 1.33
- 3) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE LOCATION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE STAGE. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE LOCATION

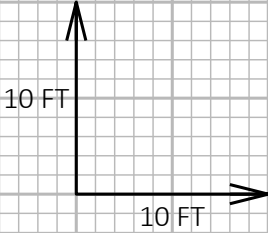
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9

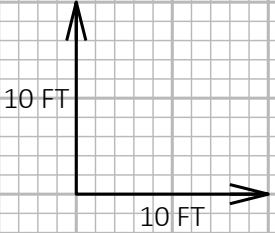
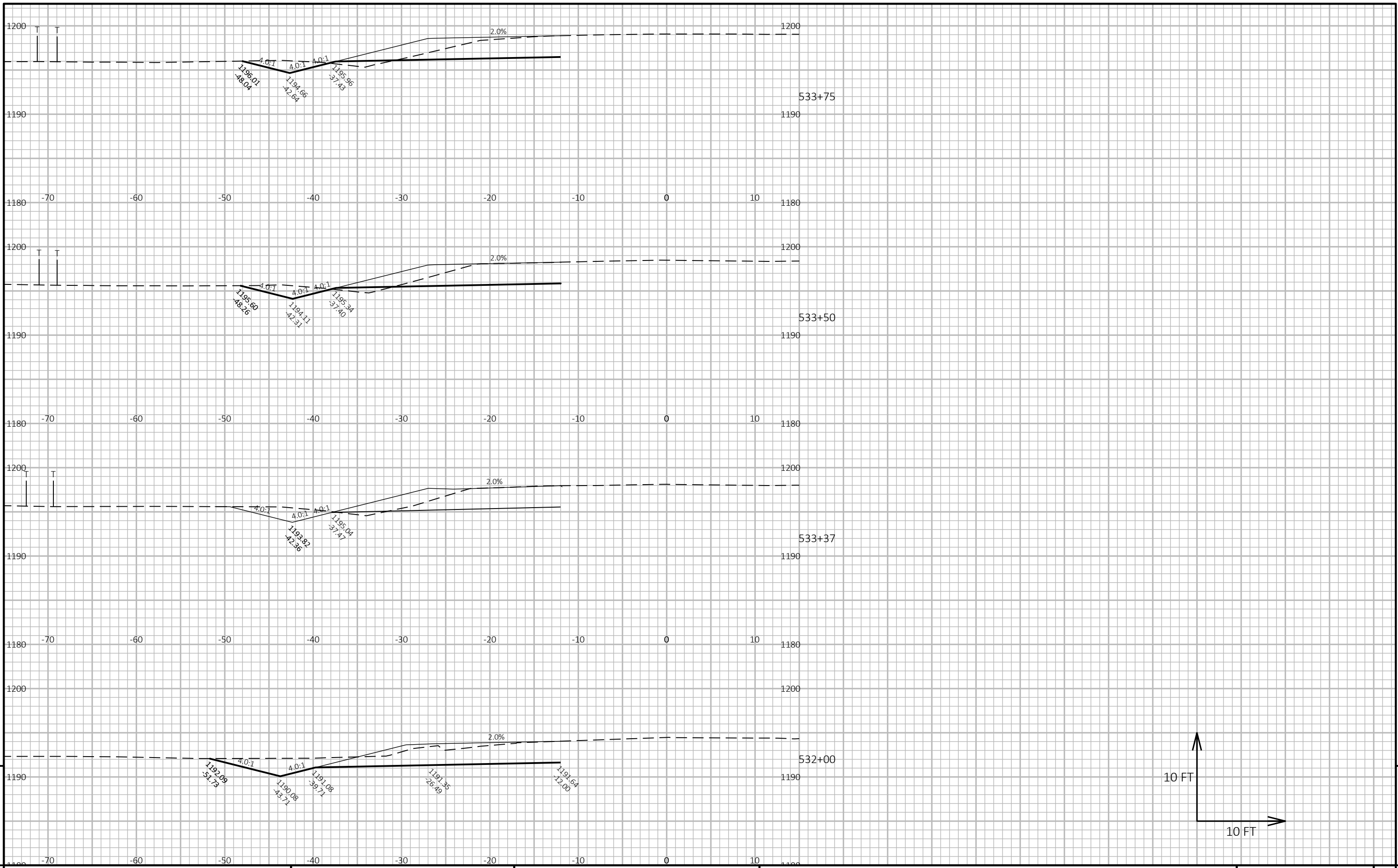
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PROJECT NO: 8120-07-70 HWY: STH 48 COUNTY: BARRON CROSS SECTIONS: CTH V TURN LANE SHEET E

FILE NAME: C:\WISDOT\DESIGN\81200701\SHEETSPLAN\090201_XS.DWG PLOT DATE: 7/28/2021 2:13 PM PLOT BY: BECKLIN, MATTHEW R PLOT NAME: PLOT SCALE: 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 2



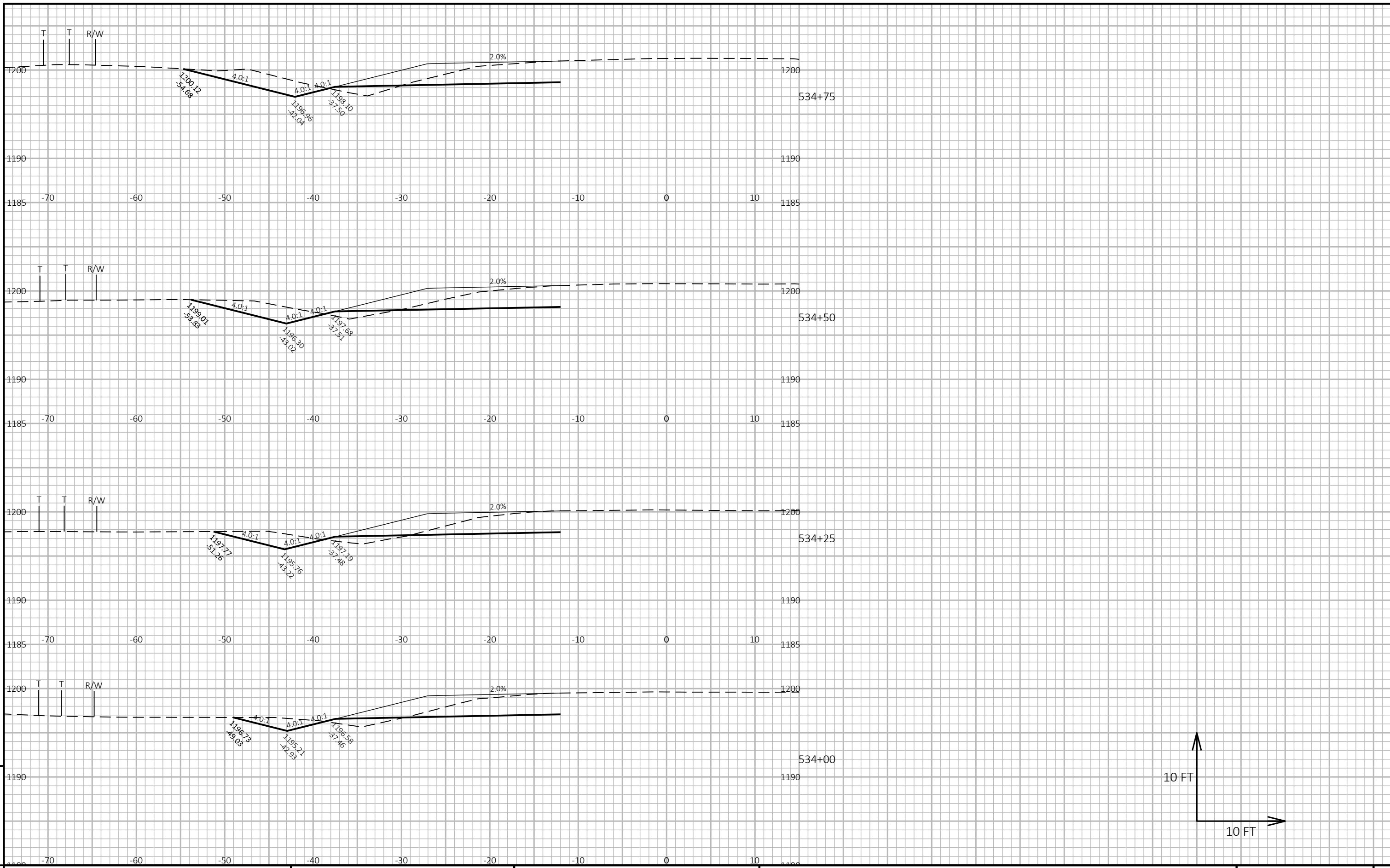
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PROJECT NO: 8120-07-70 HWY: STH 48 COUNTY: BARRON CROSS SECTIONS: CTH V TURN LANE SHEET E

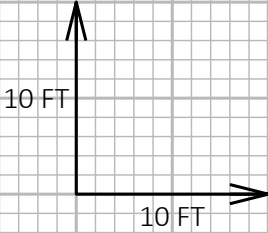
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LAYOUT NAME - 3



9

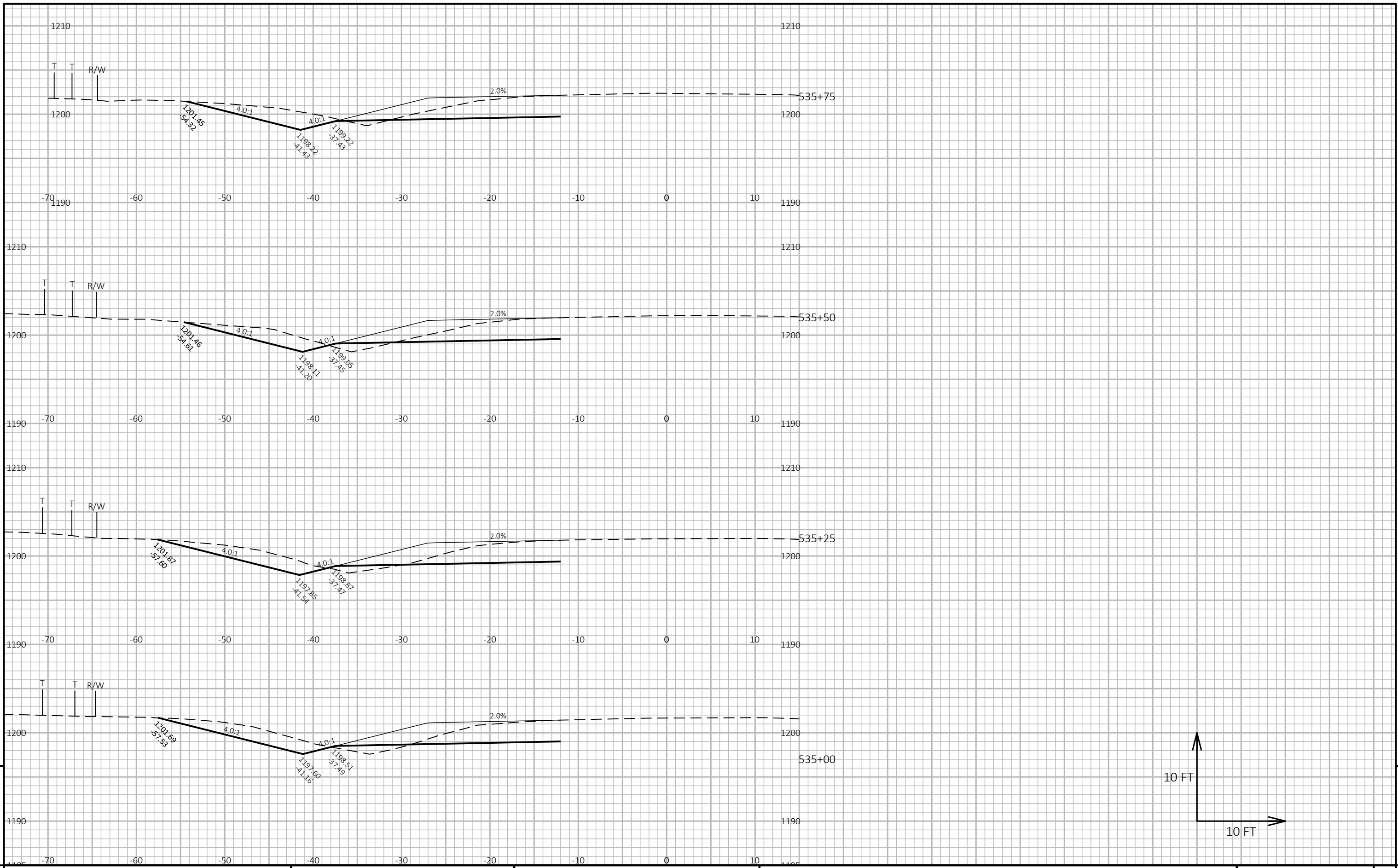
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PROJECT NO: 8120-07-70 HWY: STH 48 COUNTY: BARRON CROSS SECTIONS: CTH V TURN LANE SHEET E

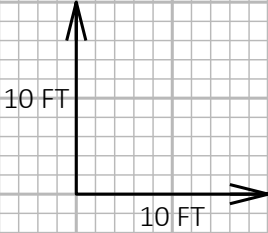
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LAYOUT NAME: - 4



9

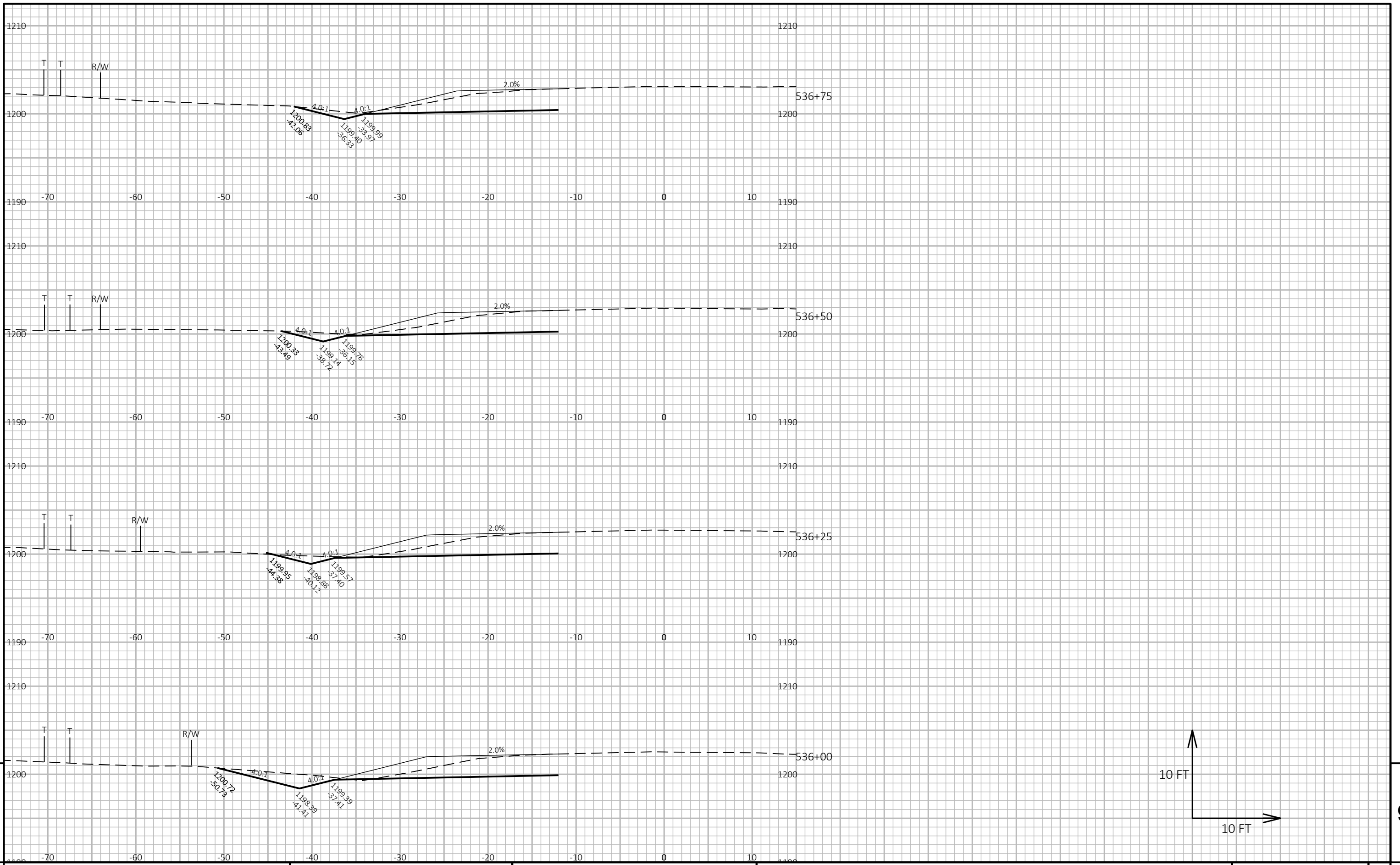
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PROJECT NO: 8120-07-70 HWY: STH 48 COUNTY: BARRON CROSS SECTIONS: CTH V TURN LANE SHEET E

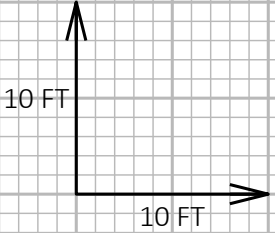
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LAYOUT NAME - 5



9

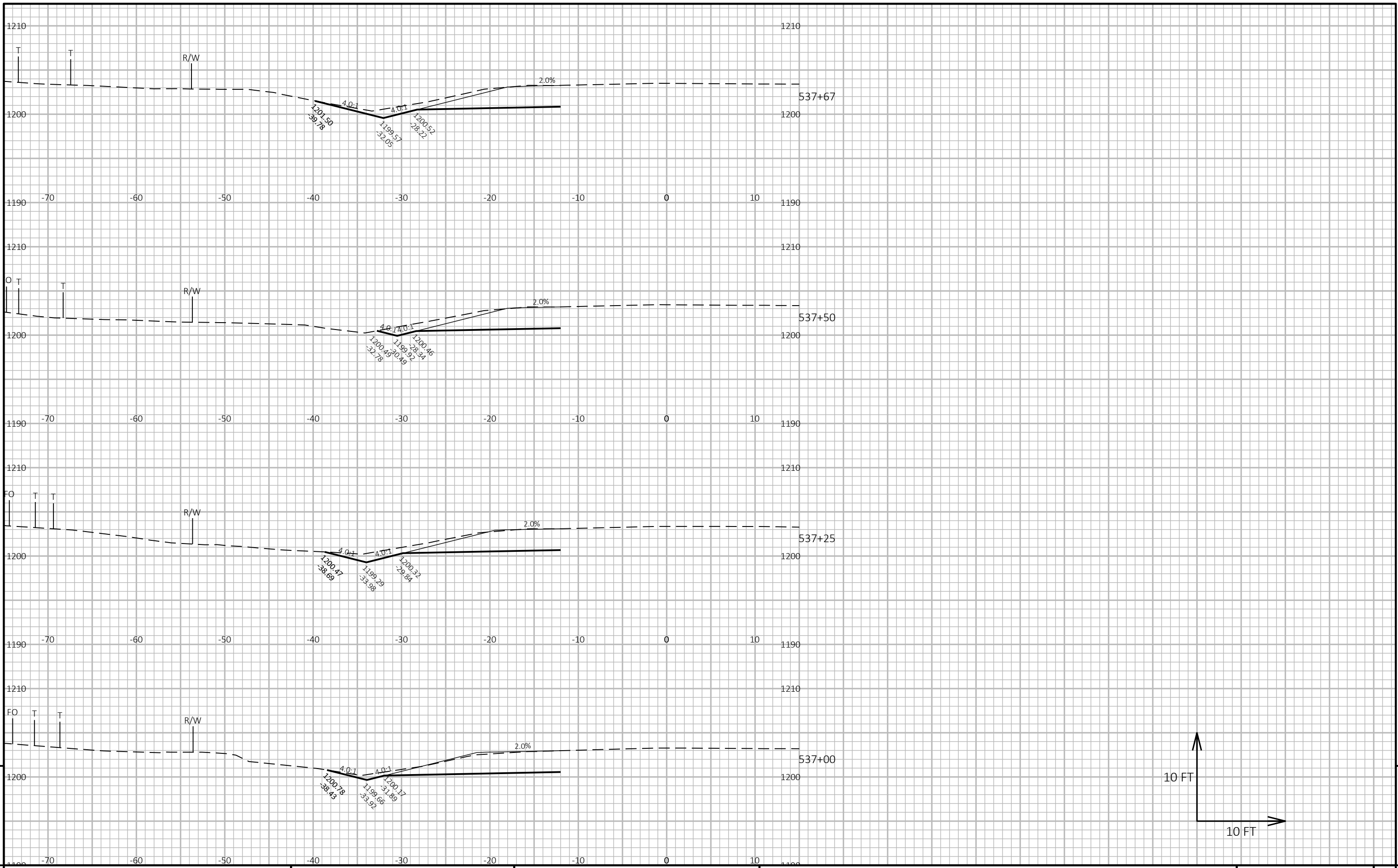
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PROJECT NO: 8120-07-70 HWY: STH 48 COUNTY: BARRON CROSS SECTIONS: CTH V TURN LANE SHEET E

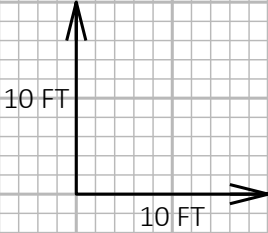
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LAYOUT NAME - 6



9

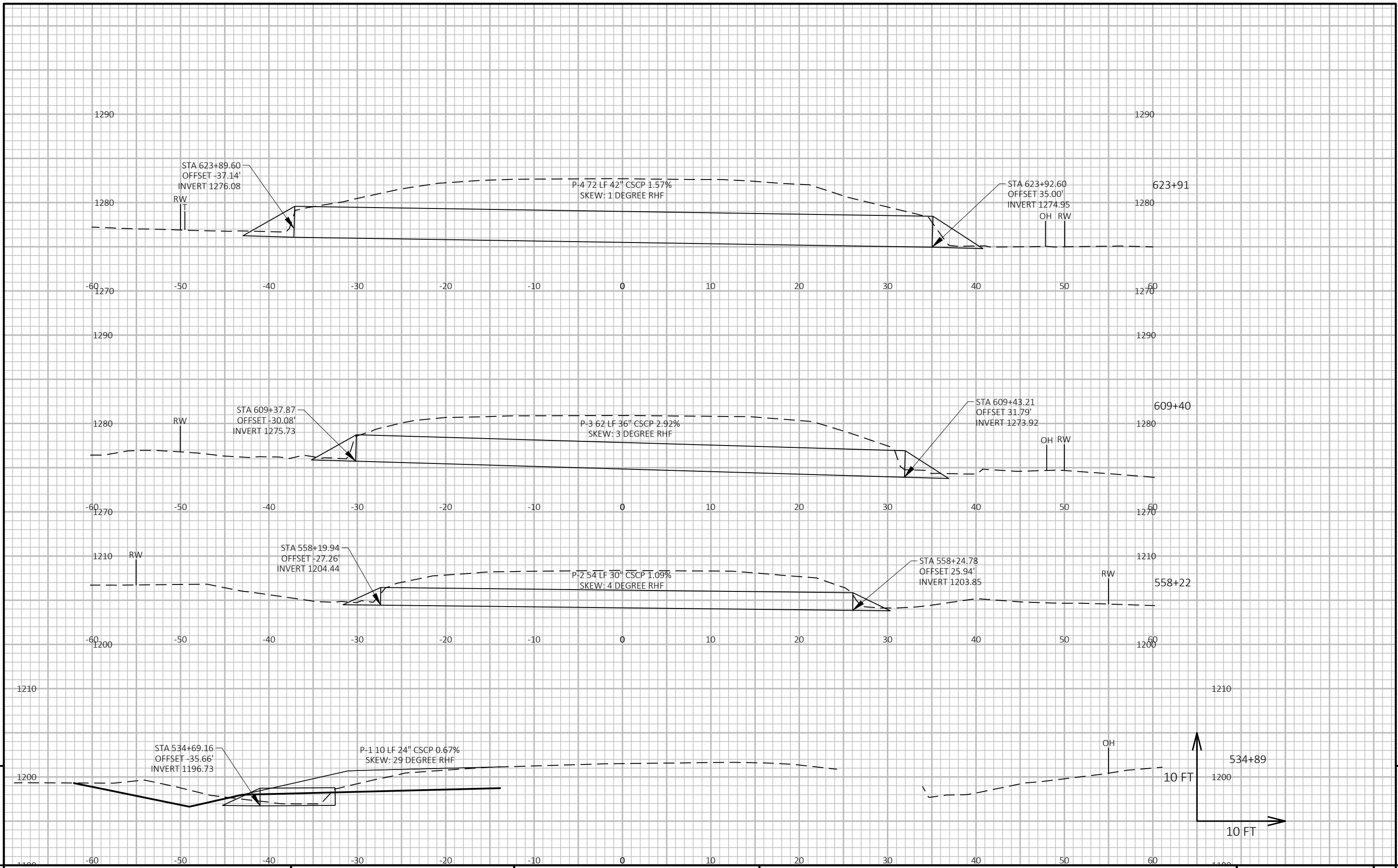
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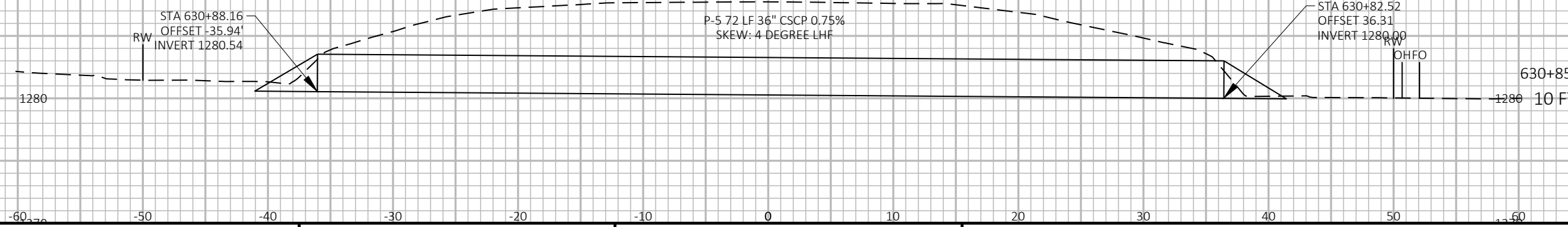
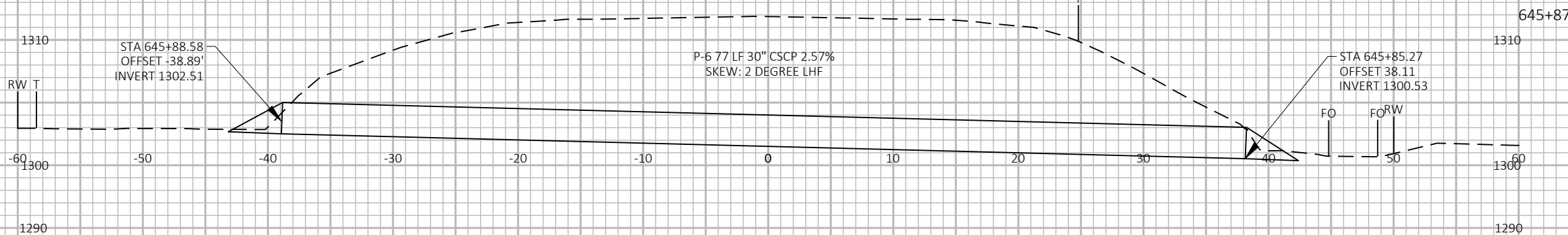
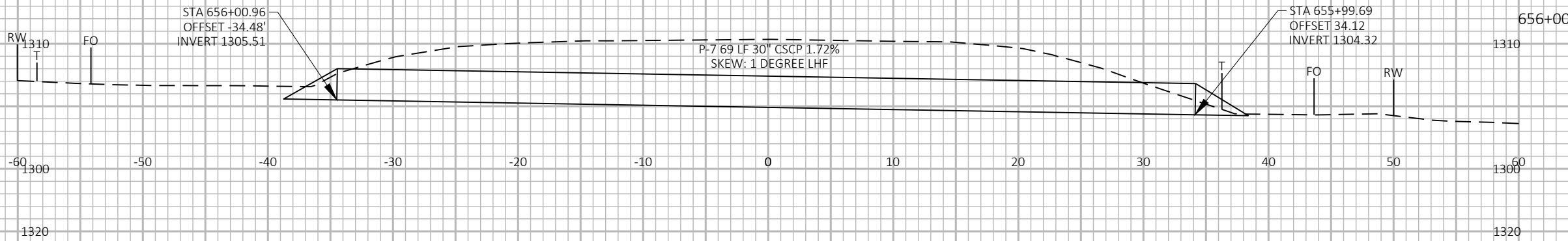
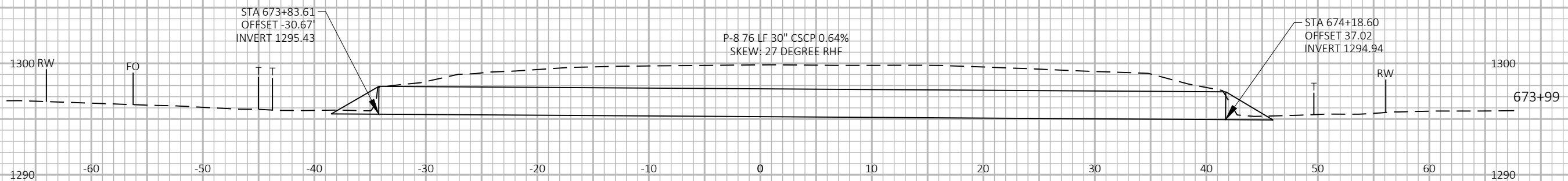
PROJECT NO: 8120-07-70 HWY: STH 48 COUNTY: BARRON CROSS SECTIONS: CTH V TURN LANE SHEET E

FILE NAME: C:\WISDOT\DESIGN\81200701\SHEETS\PLAN\090201_XS.DWG PLOT DATE: 7/28/2021 2:14 PM PLOT BY: BECKLIN, MATTHEW R PLOT NAME: PLOT SCALE: 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

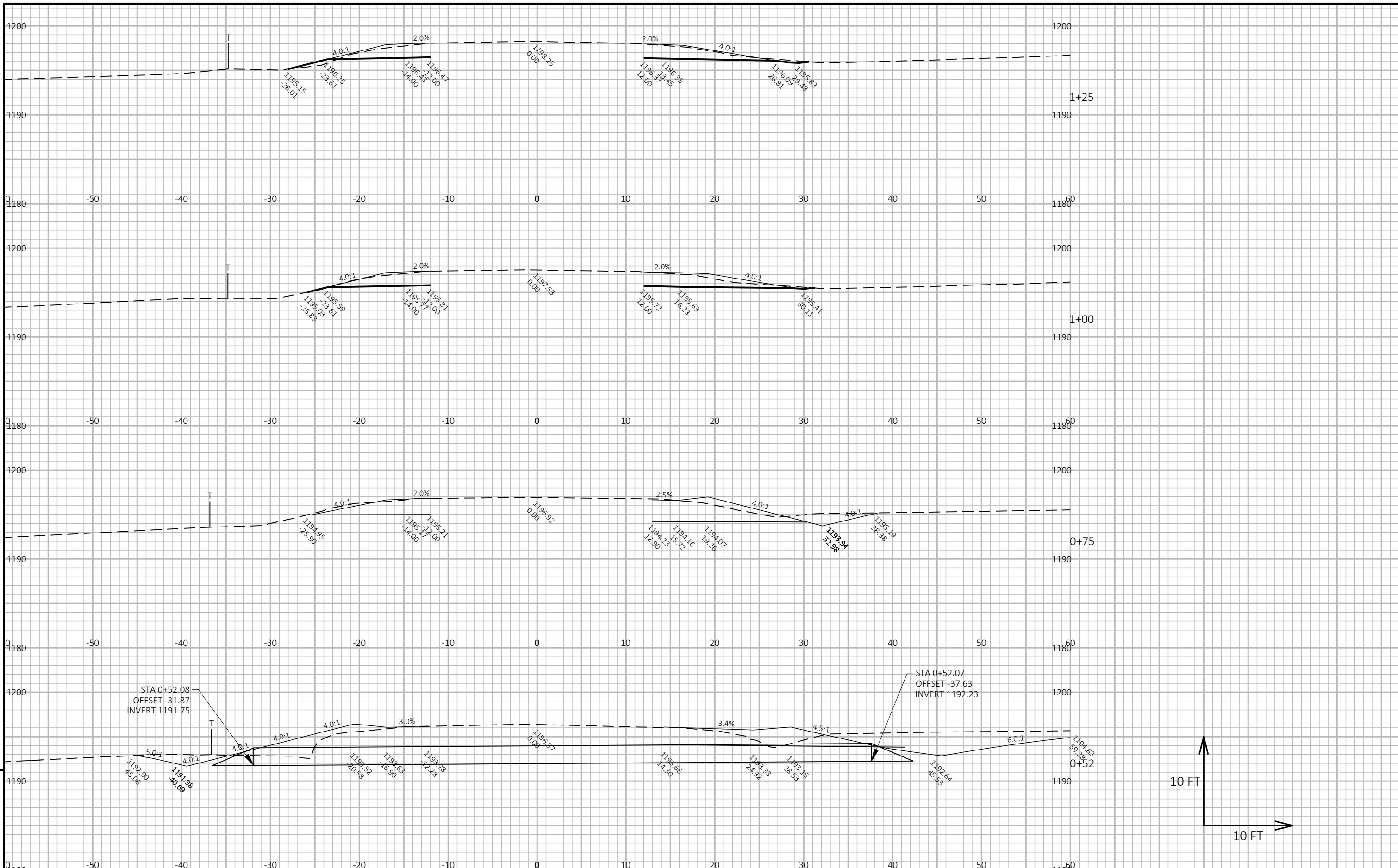
LAYOUT NAME - 7



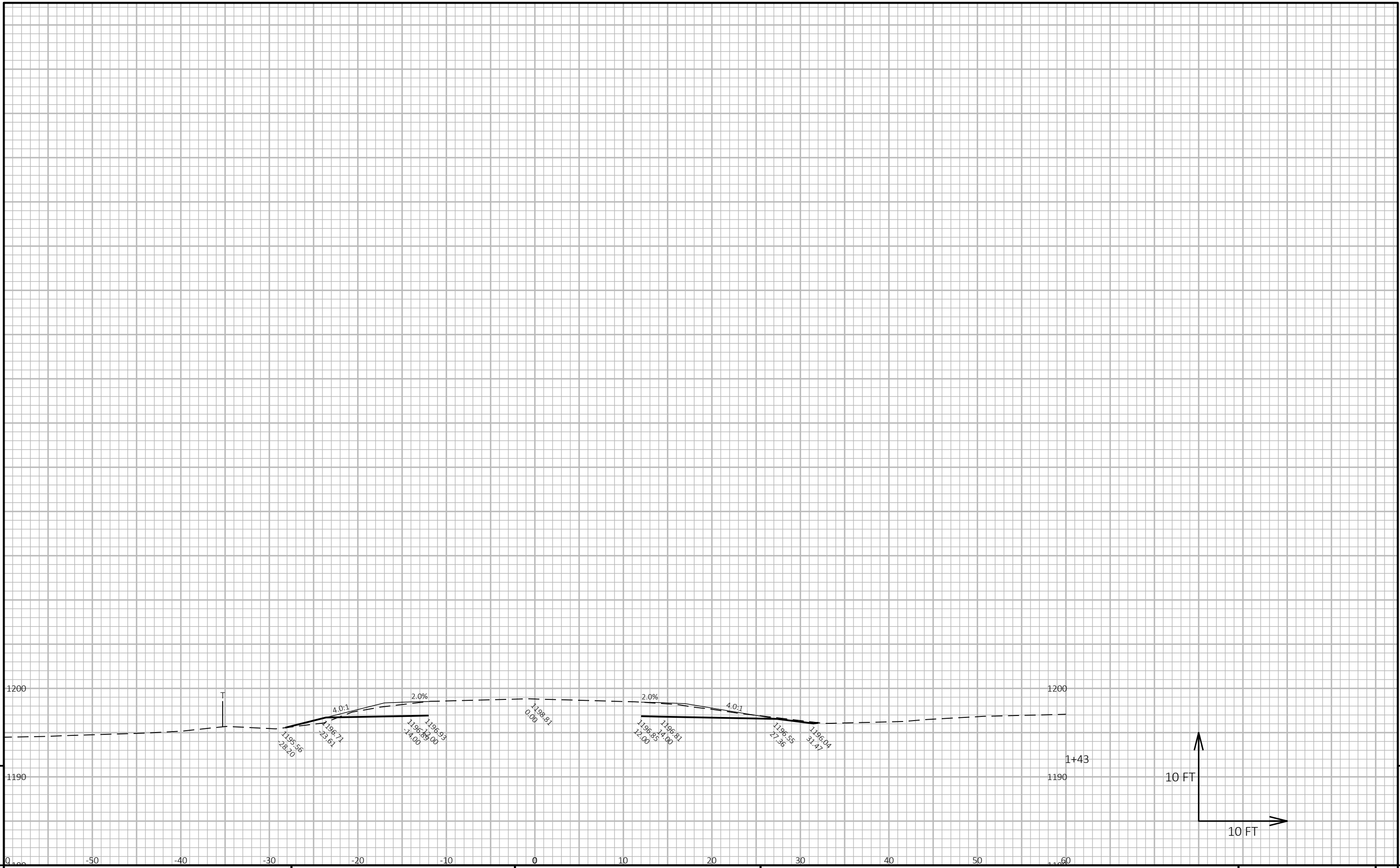
PROJECT NO: 8120-07-70 HWY: STH 48 COUNTY: BARRON CROSS SECTIONS: CULVERT REPLACEMENT SHEET 9



PROJECT NO: 8120-07-70 HWY: STH 48 COUNTY: BARRON CROSS SECTIONS: CULVERT REPLACEMENT SHEET 9

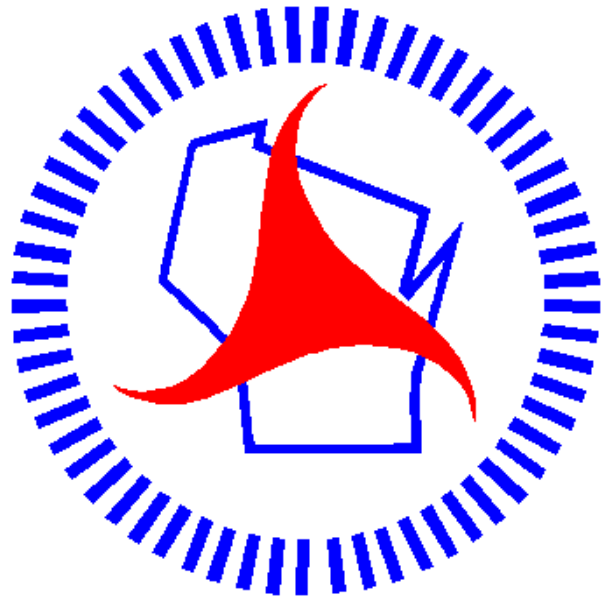


PROJECT NO: 8120-07-70	HWY: STH 48	COUNTY: BARRON	CROSS SECTIONS: CTH V	SHEET	E
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PROJECT NO: 8120-07-70	HWY: STH 48	COUNTY: BARRON	CROSS SECTIONS: CTH V	SHEET
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