

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
9808-00-71	WISC 2015235	1

PROJECT ID: 9808-00-71
WITH: N/A

COUNTY: FOREST

25

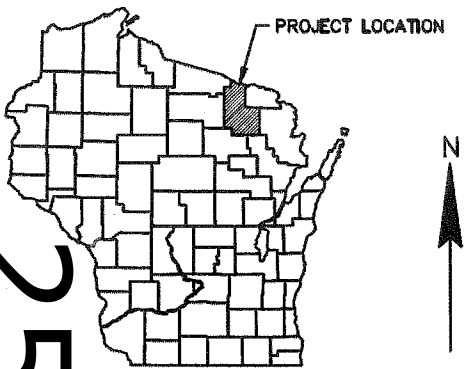
ORDER OF SHEETS

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

TOTAL SHEETS = 42

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
PLAN OF PROPOSED IMPROVEMENT
STH 70 - CTH A
FISHEL ROAD; FH59 FR2193
TOWN ROAD
FOREST COUNTY

STATE PROJECT NUMBER
9808-00-71



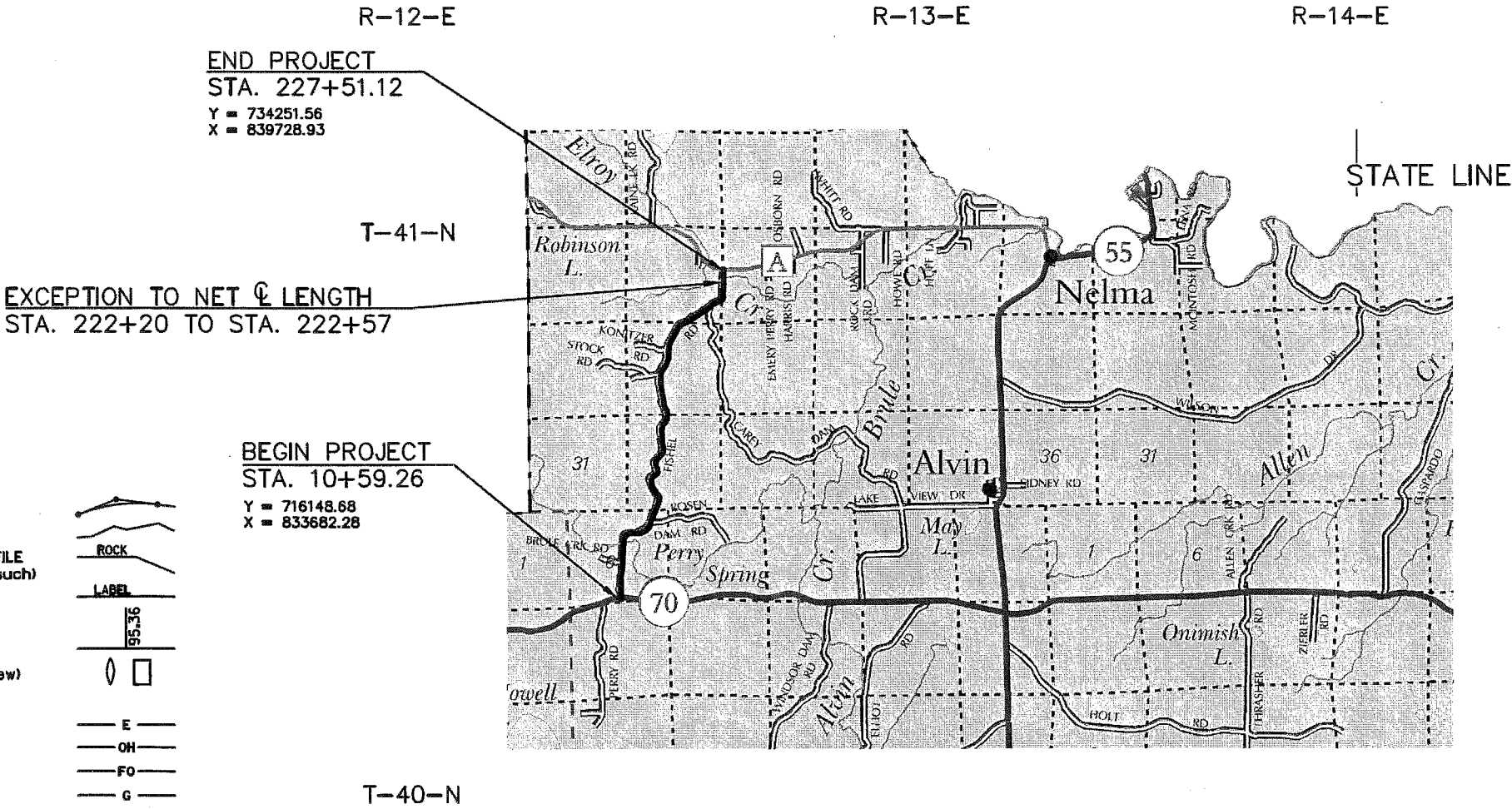
DESIGN DESIGNATION

A.A.D.T. 2015	=	105
A.A.D.T. 2035	=	115
D.H.V. 2035	=	16
D.D.	=	50/50
T.	=	6.6%
DESIGN SPEED	=	25 mph
ESALS	=	14,600

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



LAYOUT
SCALE 0 1 ML

TOTAL NET LENGTH OF CENTERLINE = 4.101 ML

"COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), FOREST COUNTY."

ACCEPTED FOR THE TOWN OF ALVIN
DATE: 1-23-15
SIGNATURE: [Signature]
ORIGINAL PLANS PREPARED BY:
Robert E. Lee & Associates, Inc.
ENGINEERING, SURVEYING, ENVIRONMENTAL SERVICES
1250 CENTENNIAL CENTRE BOULEVARD
ROBART, WI 54155
PHONE: (920) 662-9641
FAX: (920) 662-9141
INTERNET: www.releinc.com
WISCONSIN PROFESSIONAL ENGINEER
RYAN H. TRZINSKI
E-42371
GREEN BAY, WI
1-21-15
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION
PREPARED BY
Surveyor: Robert E. Lee and Associates Inc.
Designer: Robert E. Lee and Associates Inc.
Management Consultant: Cedar Corporation
APPROVED FOR THE DEPARTMENT
DATE: 1-30-2015
SIGNATURE: [Signature]
(Management Consultant Signature)



TO OBTAIN LOCATION OF PARTICIPANTS
UNDERGROUND FACILITIES BEFORE YOU
DIG IN WISCONSIN

WIS. STATUTE 182.0175 (1974)
REQUIRES MIN. OF 3 WORK DAYS
NOTICE BEFORE YOU EXCAVATE.

UTILITIES

FRONTIER COMMUNICATIONS
WARREN INMAN
2689 NORTH CLERMONT STREET
ANTIGO, WI 54409
715-847-1504
warren.e.inman@ftr.com

WE ENERGIES
DAVE NEGRO
800 INDUSTRIAL PARK DRIVE
IRON MOUNTAIN, MI 49801
906-779-2422
david.negro@we-energies.com

CONTACTS

TOWN OF ALVIN
TOWN CHAIR PERSON
FLORENCE KOSTKA
8047 RIVER BANK LANE
ALVIN, WI 54542
(715) 545-4063
jjc@nnex.net

ROBERT E. LEE & ASSOCIATES, INC.
MARK SCHUSTER
1250 CENTENNIAL CENTRE BOULEVARD
HOBART, WI. 54155
(920) 662-9641
mschuster@releeinc.com

DNR-NORTH CENTRAL DISTRICT
JON SIMONSEN
107 SUTLIFF AVENUE
RHINELANDER, WI 54501
(715) 365-8916
Jonathan.Simonsen@wisconsin.gov

U.S.D.A. FOREST SERVICE
NICOLET NATIONAL FOREST
LAONA RANGER DISTRICT
DISTRICT RANGER
JEFF SEEFELDT
4978 U.S. HWY. 8 WEST
LAONA, WISCONSIN 54511
(715) 674-4481
jseefeldt@fs.fed.us

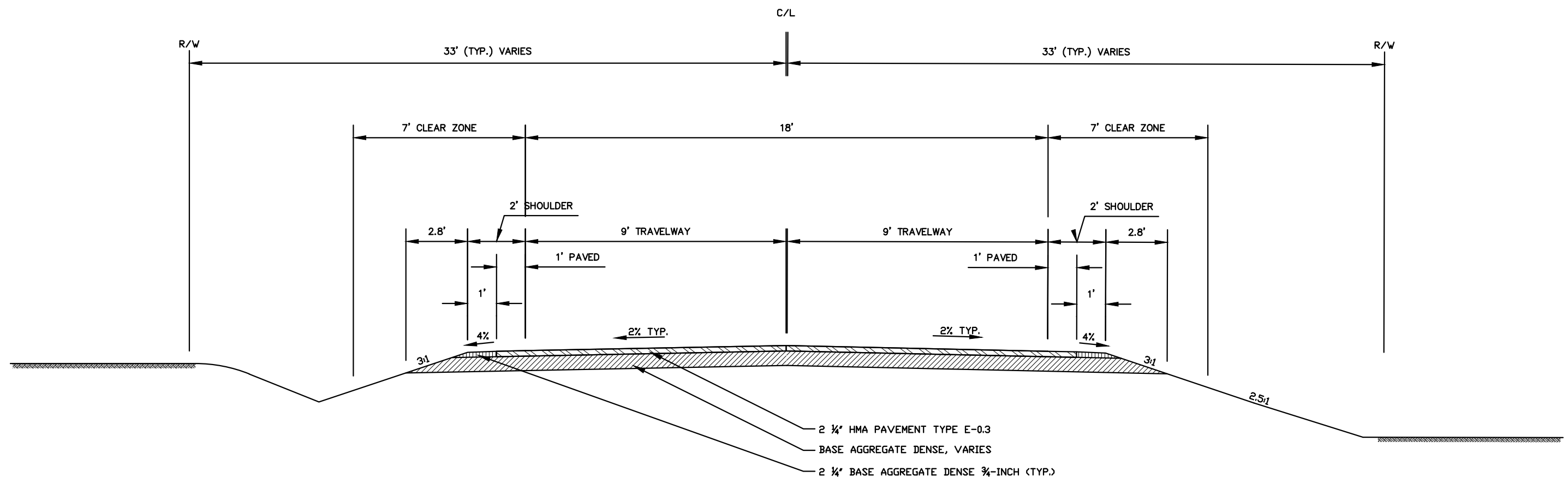
FOREST COUNTY
HIGHWAY COMMISSIONER
JOHN RODGERS
5350 COUNTY ROAD W
CRANDON, WI 54520
(920) 619-2961
jrogers@co.forest.wi.us

GENERAL NOTES

- 1. WHEN THE QUANTITY OF THE ITEMS OF BASE AGGREGATE OR HMA PAVEMENT IS MEASURED FOR PAYMENT BY THE TON, THE DEPTH OR THICKNESS OF THE LAYER SHOWN ON THE PLAN IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIALS AS DIRECTED BY THE ENGINEER.
- 2. NO TREES OR SHRUBS ARE TO BE REMOVED WITHOUT THE PRIOR APPROVAL OF THE ENGINEER OR TOWN OF ALVIN.
- 3. ALL SIDE ROADS, COMMERCIAL AND PRIVATE ENTRANCES SHALL BE MATCHED IN KIND WITH A SAWED JOINT.
- 4. THE EXACT SIZE AND LOCATION FOR PRIVATE AND COMMERCIAL ENTRANCES SHALL BE DETERMINED BY THE ENGINEER.
- 5. THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
- 6. CONSTRUCTION LIMITS FOR ALL SIDE ROADS, COMMERCIAL AND PRIVATE ENTRANCES SHALL BE DETERMINED BY THE ENGINEER.
- 7. EROSION CONTROL FEATURES AS SHOWN IN THE PLANS ARE AT SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE CONTRACTOR EROSION CONTROL IMPLEMENTATION PLAN AND APPROVED BY THE ENGINEER IN THE FIELD.
- 8. THE 2 ¼ HMA PAVEMENT TYPE E-0.3 SHALL BE CONSTRUCTED IN ONE LIFT, WITH ASPHALTIC MATERIAL PG 58-34
- 9. ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO NAVD88
- 10. TACK COAT SHALL BE APPLIED AT 0.050 TO 0.070 GALLONS PER SQUARE YARD AND SHALL BE PLACED BETWEEN EACH LIFT OF ASPHALTIC PAVEMENT. THE ENGINEER MAY ADJUST THE APPLICATION RATE BASED ON SURFACE CONDITIONS. LIMIT APPLICATION EACH DAY TO THE AREA THE CONTRACTOR EXPECTS TO PAVE DURING THE DAY.

STANDARD ABBREVIATIONS

GR	GRAVEL	WM	WATERMAIN	VPC	VERTICAL POINT OF CURVATURE	R/W	RIGHT OF WAY
BIT	BITUMINOUS	HYD	HYDRANT	VPI	VERTICAL POINT OF INTERSECTION	T/C	TOP OF CURB
ASPH	ASPHALT PAVEMENT	WV	WATER VALVE	VPT	VERTICAL POINT OF TANGENCY	F/L	FLOW LINE
CONC	CONCRETE	SAN	SANITARY SEWER	PC	POINT OF CURVATURE	C/L	CENTERLINE
SW	SIDEWALK	MH	MANHOLE	PI	POINT OF INTERSECTION	P/L	PROPERTY LINE
BLDG	BUILDING	ST	STORM SEWER	PT	POINT OF TANGENCY	R/L	REFERENCE LINE
HSE	HOUSE	CB	CATCH BASIN	R	RADIUS	INV	INVERT
PED	PEDESTAL	TELE	TELEPHONE	EX	EXISTING	CMP	CORRUGATED METAL PIPE
PP	POWER POLE	ELEC	ELECTRIC	PR	PROPOSED	RCP	REINFORCED CONCRETE PIPE
LP	LIGHT POLE	TV	TELEVISION	EOR	END OF RADIUS	CULV	CULVERT
BM	BENCH MARK	STA	STATION	B-B	BACK TO BACK (OF CURB)	PE	PERSONAL ENTRANCE
CE	COMMERCIAL ENTRANCE	FE	FIELD ENTRANCE				



TYPICAL EXISTING SECTION

FISHEL ROAD (FOREST 2193)
 STA. 10+59.26 TO STA. 227+51.12
 EXCEPTION TO NET C LENGTH
 STA. 222+20 TO STA. 222+57

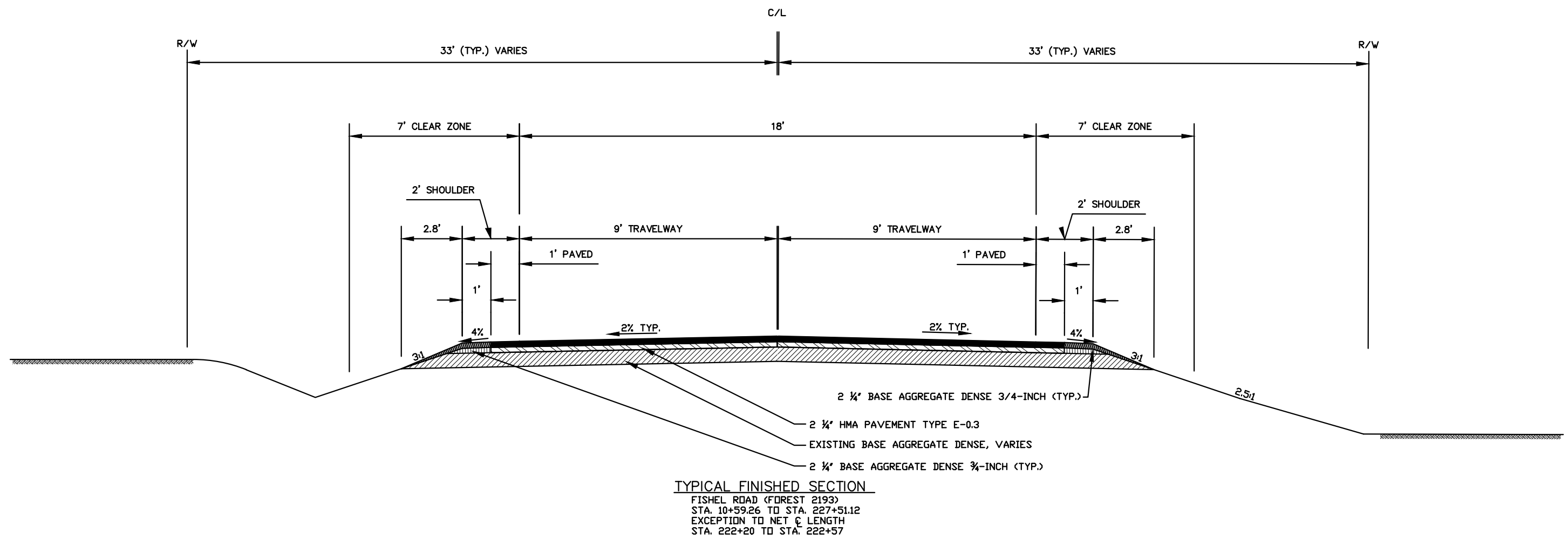
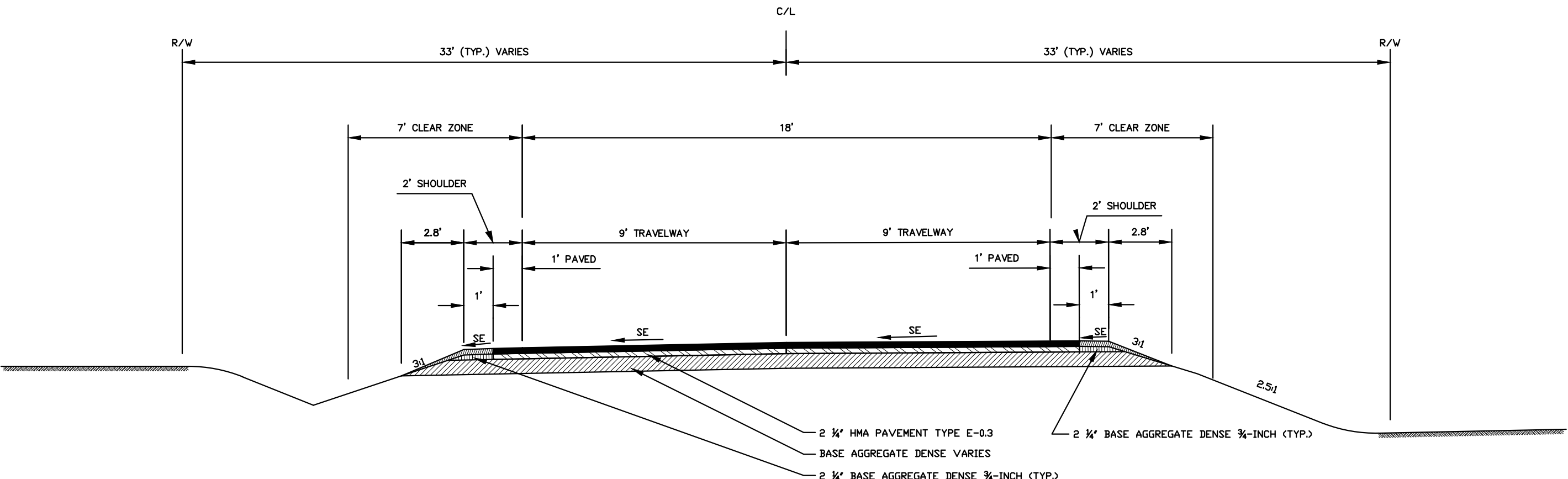


TABLE 1
FULL SUPERELEVATION START AND END LOCATIONS

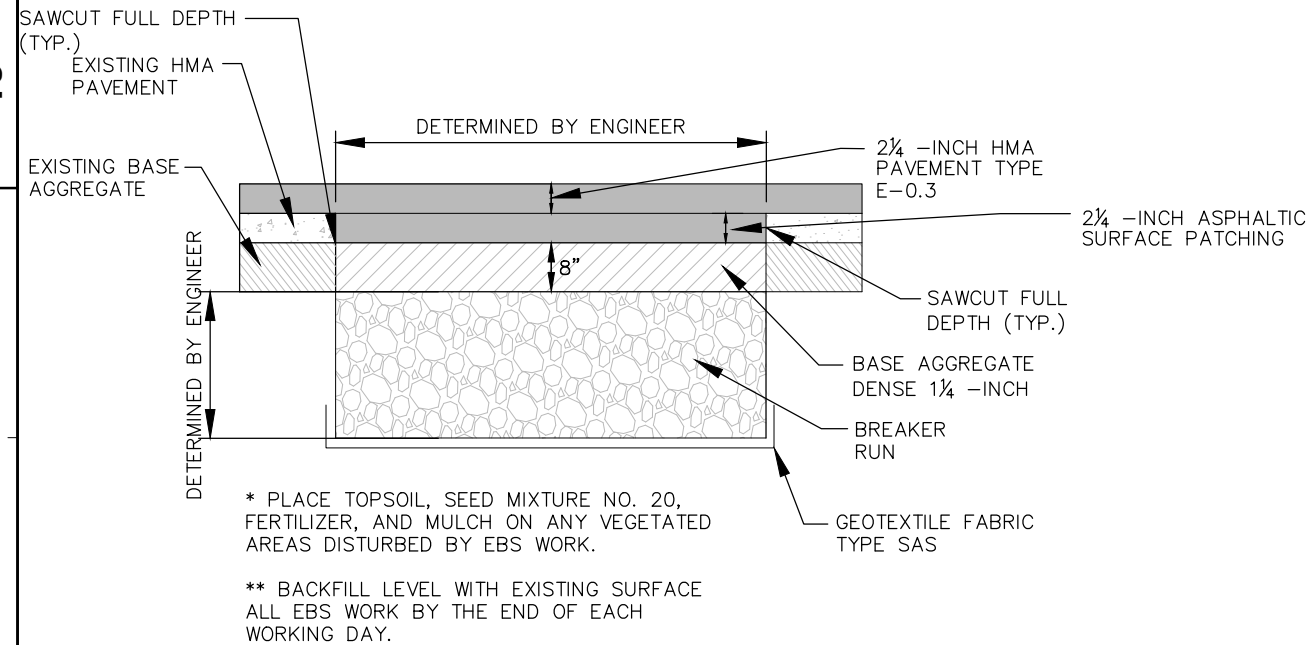
BEGIN FULL SE	STA	14+28	END FULL SE	STA	47+18	BEGIN FULL SE	STA	79+20	END FULL SE	STA	102+53	BEGIN FULL SE	STA	127+17	END FULL SE	STA	148+23	BEGIN FULL SE	STA	182+68	END FULL SE	STA	201+70
END FULL SE	STA	15+31	BEGIN FULL SE	STA	50+06	END FULL SE	STA	79+54	BEGIN FULL SE	STA	103+39	END FULL SE	STA	128+47	BEGIN FULL SE	STA	152+17	END FULL SE	STA	183+68	BEGIN FULL SE	STA	205+46
BEGIN FULL SE	STA	17+47	END FULL SE	STA	50+85	BEGIN FULL SE	STA	79+97	END FULL SE	STA	104+76	BEGIN FULL SE	STA	130+38	END FULL SE	STA	154+70	BEGIN FULL SE	STA	184+14	END FULL SE	STA	206+03
END FULL SE	STA	19+40	BEGIN FULL SE	STA	52+81	END FULL SE	STA	82+19	BEGIN FULL SE	STA	106+25	END FULL SE	STA	131+96	BEGIN FULL SE	STA	157+00	END FULL SE	STA	185+29	BEGIN FULL SE	STA	206+48
BEGIN FULL SE	STA	20+74	END FULL SE	STA	54+03	BEGIN FULL SE	STA	87+49	END FULL SE	STA	107+40	BEGIN FULL SE	STA	135+74	END FULL SE	STA	158+98	BEGIN FULL SE	STA	187+38	END FULL SE	STA	208+31
END FULL SE	STA	21+12	BEGIN FULL SE	STA	59+73	END FULL SE	STA	89+49	BEGIN FULL SE	STA	109+24	END FULL SE	STA	136+97	BEGIN FULL SE	STA	160+08	END FULL SE	STA	188+41	BEGIN FULL SE	STA	210+24
BEGIN FULL SE	STA	21+56	END FULL SE	STA	60+90	BEGIN FULL SE	STA	90+15	END FULL SE	STA	110+16	BEGIN FULL SE	STA	138+19	END FULL SE	STA	161+92	BEGIN FULL SE	STA	188+86	END FULL SE	STA	211+83
END FULL SE	STA	22+97	BEGIN FULL SE	STA	64+35	END FULL SE	STA	91+39	BEGIN FULL SE	STA	111+99	END FULL SE	STA	140+03	BEGIN FULL SE	STA	166+83	END FULL SE	STA	189+89			
BEGIN FULL SE	STA	25+51	END FULL SE	STA	65+56	BEGIN FULL SE	STA	93+29	END FULL SE	STA	113+50	BEGIN FULL SE	STA	140+35	END FULL SE	STA	168+77	BEGIN FULL SE	STA	191+72			
END FULL SE	STA	27+20	BEGIN FULL SE	STA	66+54	END FULL SE	STA	94+30	BEGIN FULL SE	STA	118+17	END FULL SE	STA	143+24	BEGIN FULL SE	STA	171+63	END FULL SE	STA	192+74			
BEGIN FULL SE	STA	44+60	END FULL SE	STA	67+06	BEGIN FULL SE	STA	94+85	END FULL SE	STA	119+42	BEGIN FULL SE	STA	143+56	END FULL SE	STA	172+85	BEGIN FULL SE	STA	194+44			
END FULL SE	STA	45+54	BEGIN FULL SE	STA	68+10	END FULL SE	STA	96+38	BEGIN FULL SE	STA	119+87	END FULL SE	STA	143+96	BEGIN FULL SE	STA	174+20	END FULL SE	STA	195+88			
BEGIN FULL SE	STA	46+05	END FULL SE	STA	70+60	BEGIN FULL SE	STA	97+99	END FULL SE	STA	120+43	BEGIN FULL SE	STA	144+29	END FULL SE	STA	175+25	BEGIN FULL SE	STA	197+29			
END FULL SE	STA	46+13	BEGIN FULL SE	STA	77+61	END FULL SE	STA	99+80	BEGIN FULL SE	STA	121+46	END FULL SE	STA	146+08	BEGIN FULL SE	STA	180+10	END FULL SE	STA	198+67			
BEGIN FULL SE	STA	46+63	END FULL SE	STA	78+62	BEGIN FULL SE	STA	101+37	END FULL SE	STA	123+46	BEGIN FULL SE	STA	147+82	END FULL SE	STA	181+56	BEGIN FULL SE	STA	200+78			



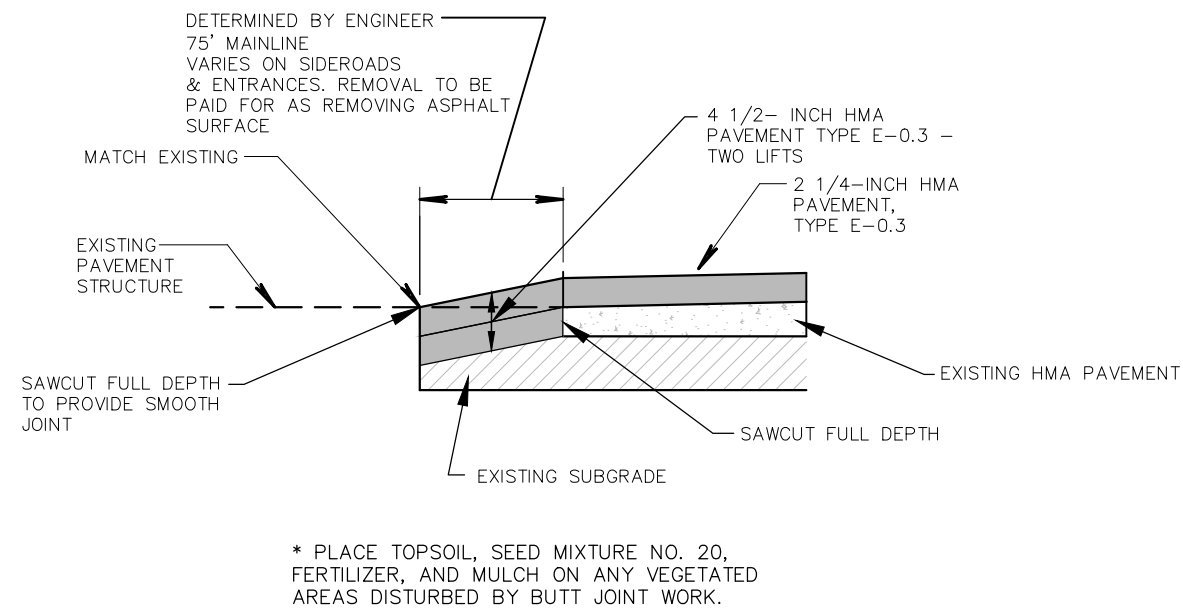
TYPICAL FINISHED SUPER ELEVATION SECTION
FISHEL ROAD (FOREST 2193)
STA. 10+59.26 TO STA. 227+51.12
EXCEPTION TO NET C LENGTH
STA. 222+20 TO STA. 222+57

NOTE: SEE TABLE 1 FOR HORIZONTAL CURVE LOCATIONS

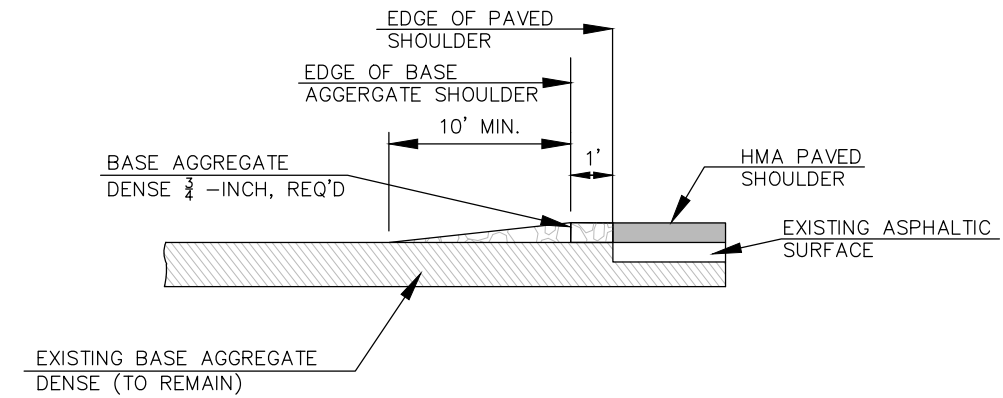
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Plot Date: 08/24/2010 10:42:10 AM
Plot Scale: 1"=40'



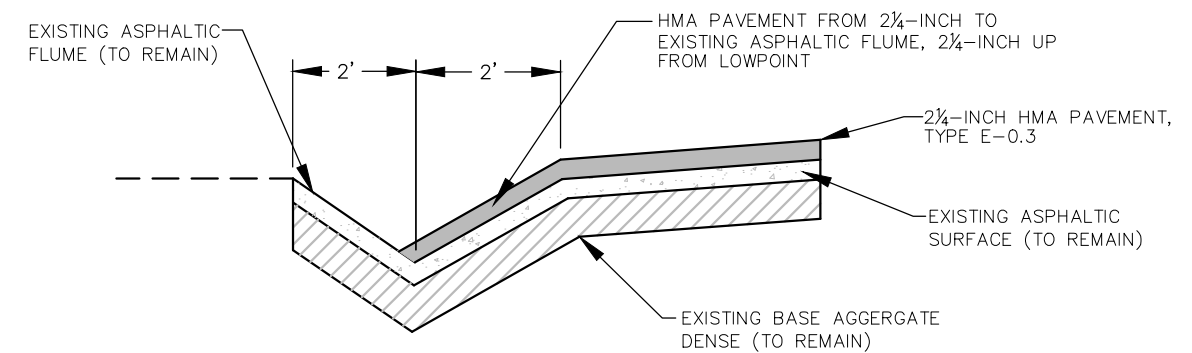
EXCAVATION BELOW SUBGRADE (EBS) DETAIL



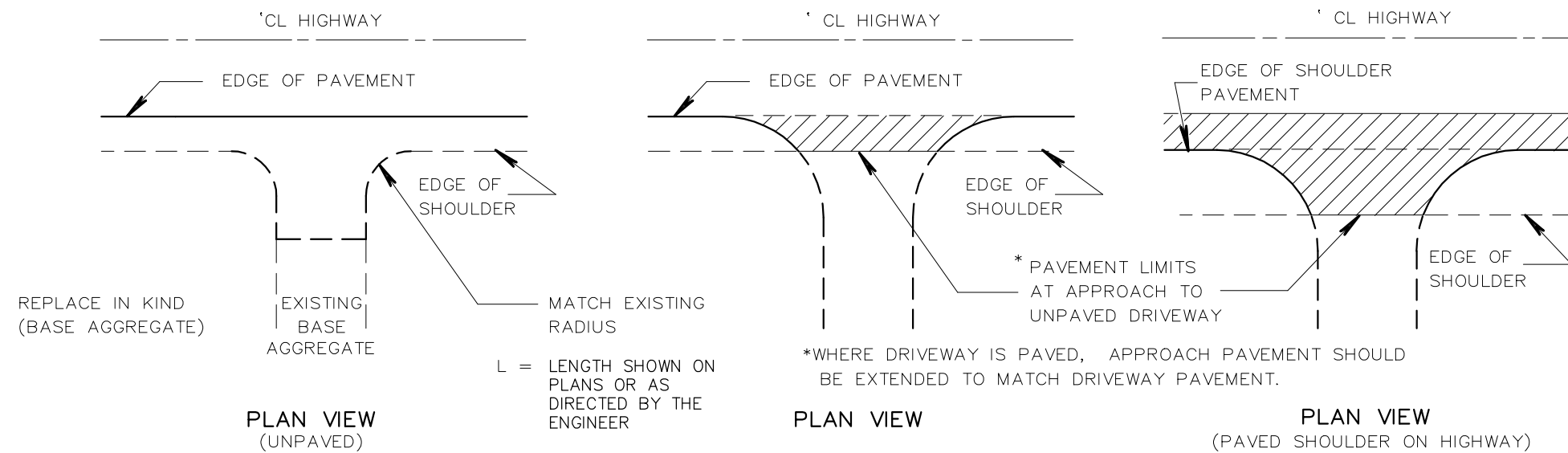
REMOVING ASPHALTIC SURFACE, BUTT JOINT DETAIL - SIDE ROADS & PAVED ENTRANCES



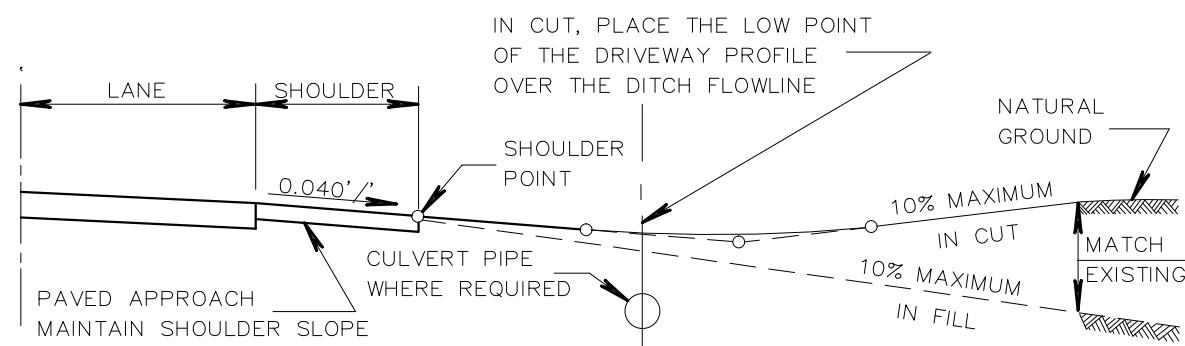
DETAIL FOR BASE AGGREGATE DENSE PRIVATE ENTRANCES & SIDE ROADS



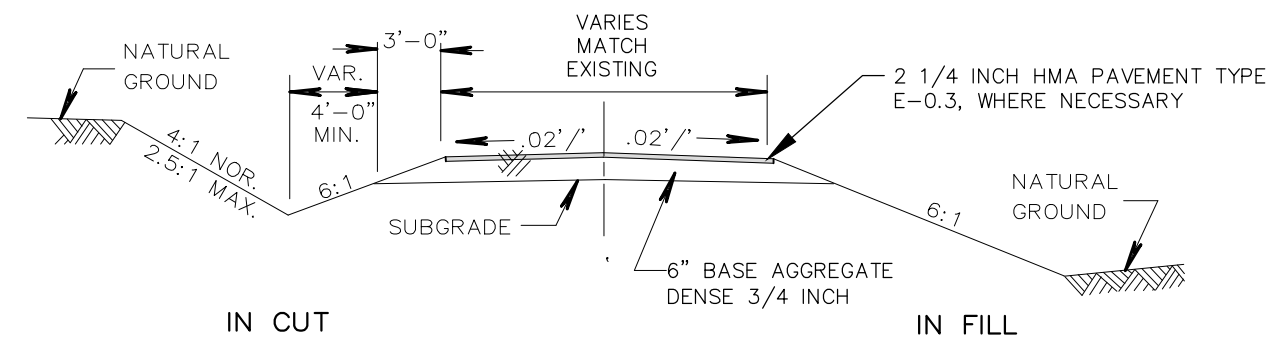
ASPHALTIC FLUME DETAIL

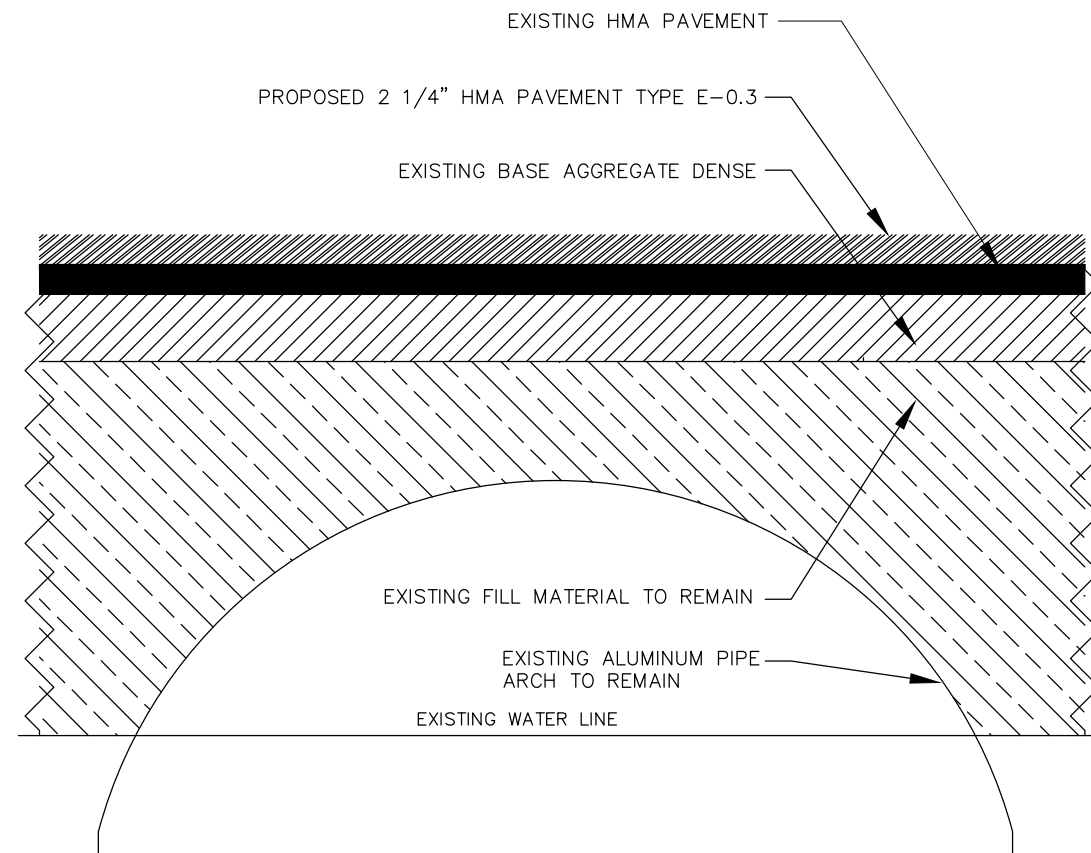


RURAL SIDE ROAD & ENTRANCE DETAIL

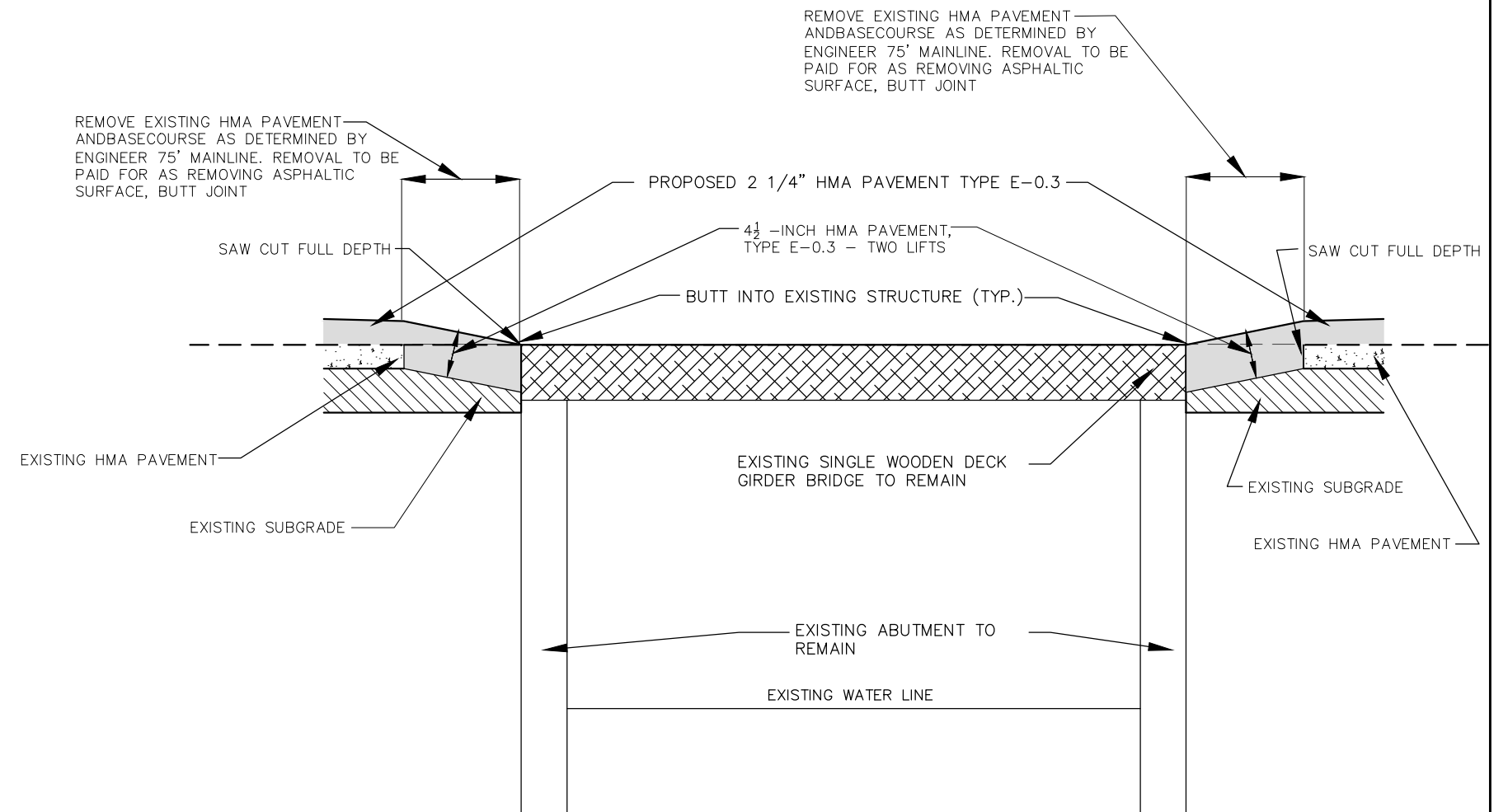


TYPICAL SIDEROAD AND ENTRANCE PROFILES

TYPICAL CROSS SECTION FOR
SIDEROAD AND ENTRANCES



BRULE CREEK STRUCTURE WORK
STA. 40+60 TO STA 40+87



ELVOY CREEK STRUCTURE WORK
STA. 222+20 TO STA 222+57

LINE TABLE		
Line #	Direction	Length
101-102	S81°51'11"E	45.00'
102-103	S1°15'46"W	54.06'
103-100	S84°22'44"W	45.00'

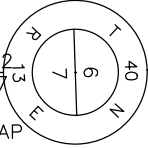
CURVE TABLE					
Curve #	Length	Radius	Delta	CH Bearing	CH Length
PC-100	61.82'	270.50'	13°05'37"	N12°10'04"W	61.68'
100-101	65.00'	270.50'	13°46'05"	N1°15'46"E	64.84'

CONTROL POINT TABLE				
Point #	Northing	Easting	Station	Offset
728	716123.159	833646.939	10+46.43	41.66L
727	716807.899	833641.994	17+50.85	22.50R
2317	717234.230	833626.161	21+76.20	10.30R
726	717632.141	833732.604	25+88.98	17.58R
725	718150.479	833719.470	31+04.29	21.03L
1017	718323.202	833648.204	32+71.59	100.58L

PI STA = 22+26.37
 Y = 717285.57
 X = 833619.15
 DELTA = 11°05'38"
 D = 6°17'34"
 T = 88.42
 L = 176.29
 R = 910.50
 PC STA = 21+37.95
 PT STA = 23+14.24
 SE 3.1%

PI STA = 31+62.80
 Y = 718208.28
 X = 833741.30
 DELTA = 2°35'33"
 D = 1°00'00"
 T = 129.65
 L = 259.25
 R = 5729.58
 PC STA = 30+33.16
 PT STA = 32+92.40
 SE NC

X=833603.752
 Y=716146.267
 IRON PIPE
 W/ BRASS CAP



US GOVERNMENT
 002-00071-0000

WAYNE L. HABECK
 002-00077-0000

BRULE SPRING CORP
 002-00076-0000

Dean Bliertzer
 002-00073-0000

US GOVERNMENT
 002-00072-0000

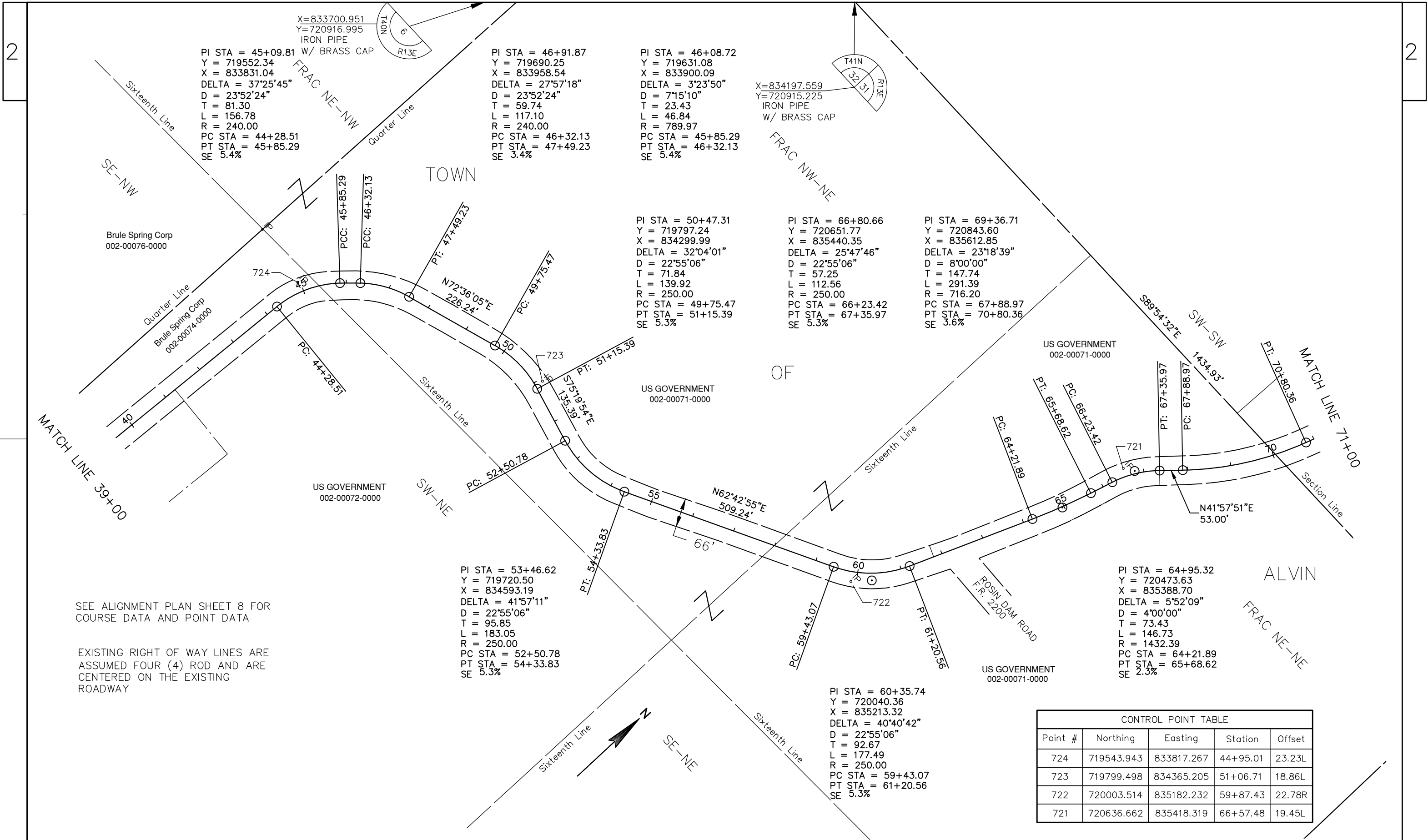
PI STA = 14+81.84
 Y = 716548.92
 X = 833546.69
 DELTA = 34°22'12"
 D = 21°10'53"
 T = 83.66
 L = 162.26
 R = 270.50
 PC STA = 13+98.18
 PT STA = 15+60.45
 SE 5.2%

PI STA = 18+45.21
 Y = 716903.67
 X = 833646.11
 DELTA = 24°15'30"
 D = 10°14'26"
 T = 120.24
 L = 236.88
 R = 559.50
 PC STA = 17+24.97
 PT STA = 19+61.85
 SE 3.9%

PI STA = 20+93.20
 Y = 717152.43
 X = 833608.47
 DELTA = 13°11'21"
 D = 14°40'21"
 T = 45.14
 L = 89.89
 R = 390.50
 PC STA = 20+48.06
 PT STA = 21+37.95
 SE 4.5%

PI STA = 26+35.90
 Y = 717680.40
 X = 833729.99
 DELTA = 14°27'09"
 D = 7°00'00"
 T = 103.78
 L = 206.46
 R = 818.51
 PC STA = 25+32.12
 PT STA = 27+38.58
 SE 3.3%

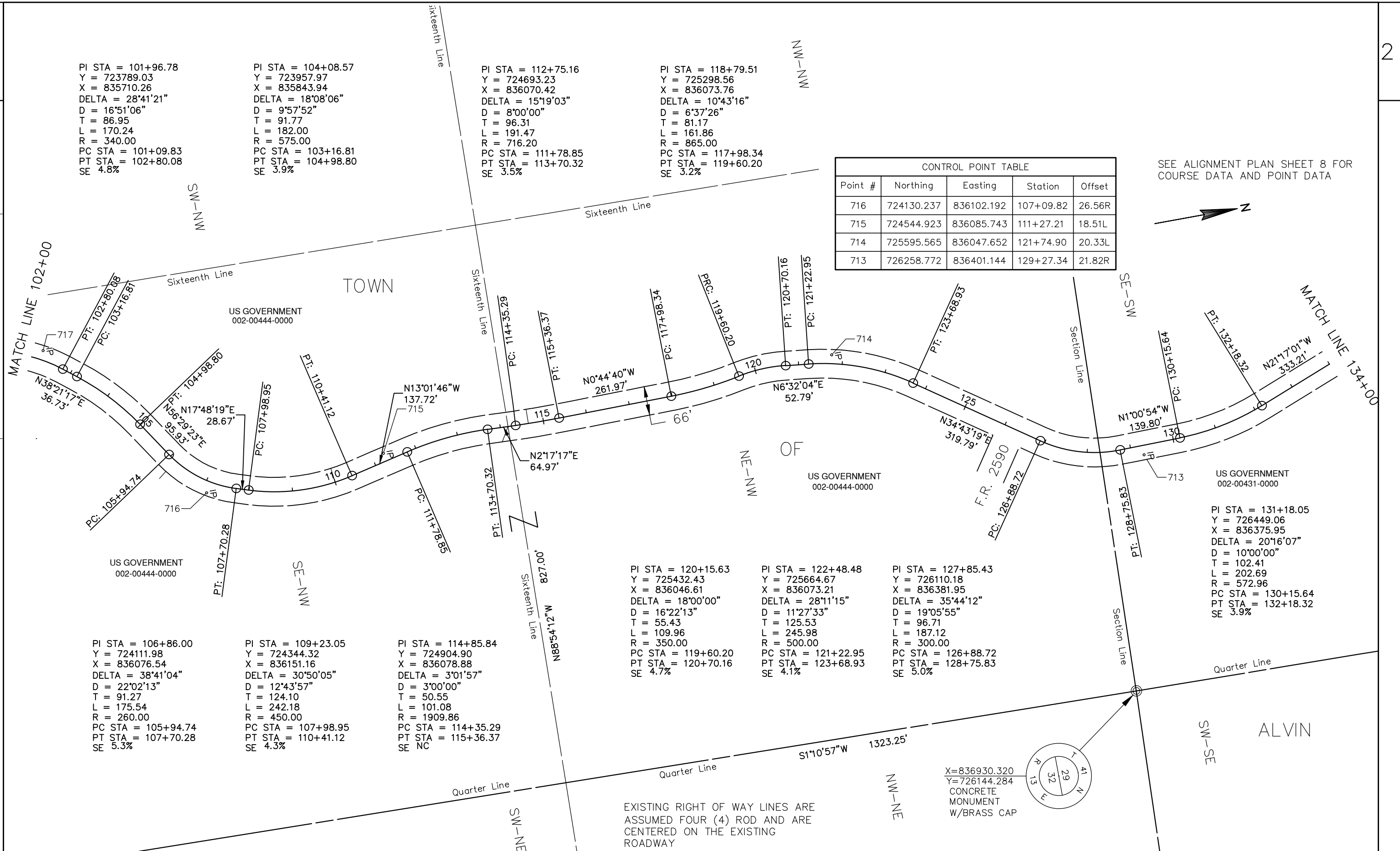
EXISTING RIGHT OF WAY LINES ARE
 ASSUMED FOUR (4) ROD AND ARE
 CENTERED ON THE EXISTING
 ROADWAY

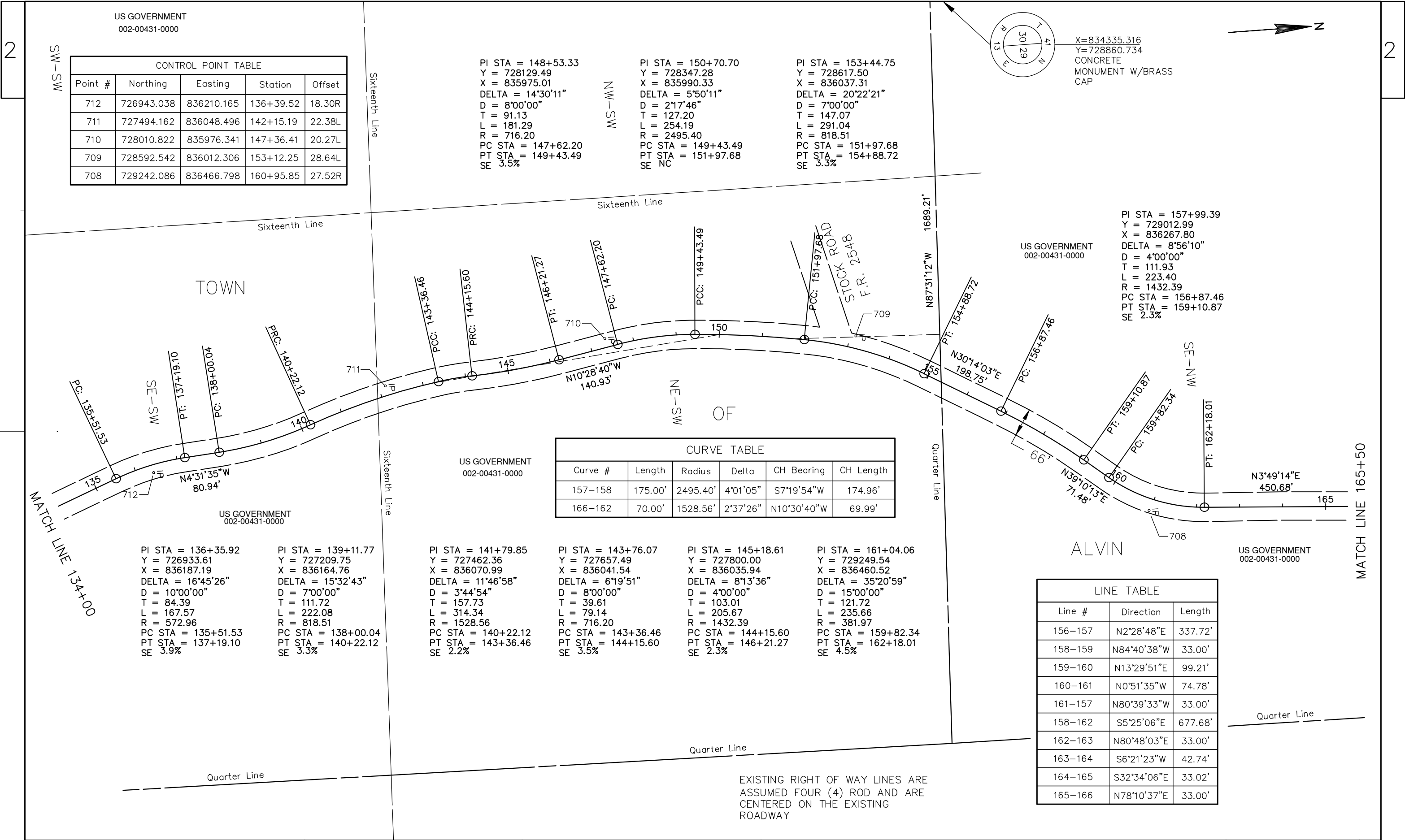


SEE ALIGNMENT PLAN SHEET 8 FOR
COURSE DATA AND POINT DATA

EXISTING RIGHT OF WAY LINES ARE
ASSUMED FOUR (4) ROD AND ARE
CENTERED ON THE EXISTING
ROADWAY

CONTROL POINT TABLE				
Point #	Northing	Easting	Station	Offset
724	719543.943	833817.267	44+95.01	23.23L
723	719799.498	834365.205	51+06.71	18.86L
722	720003.514	835182.232	59+87.43	22.78R
721	720636.662	835418.319	66+57.48	19.45L





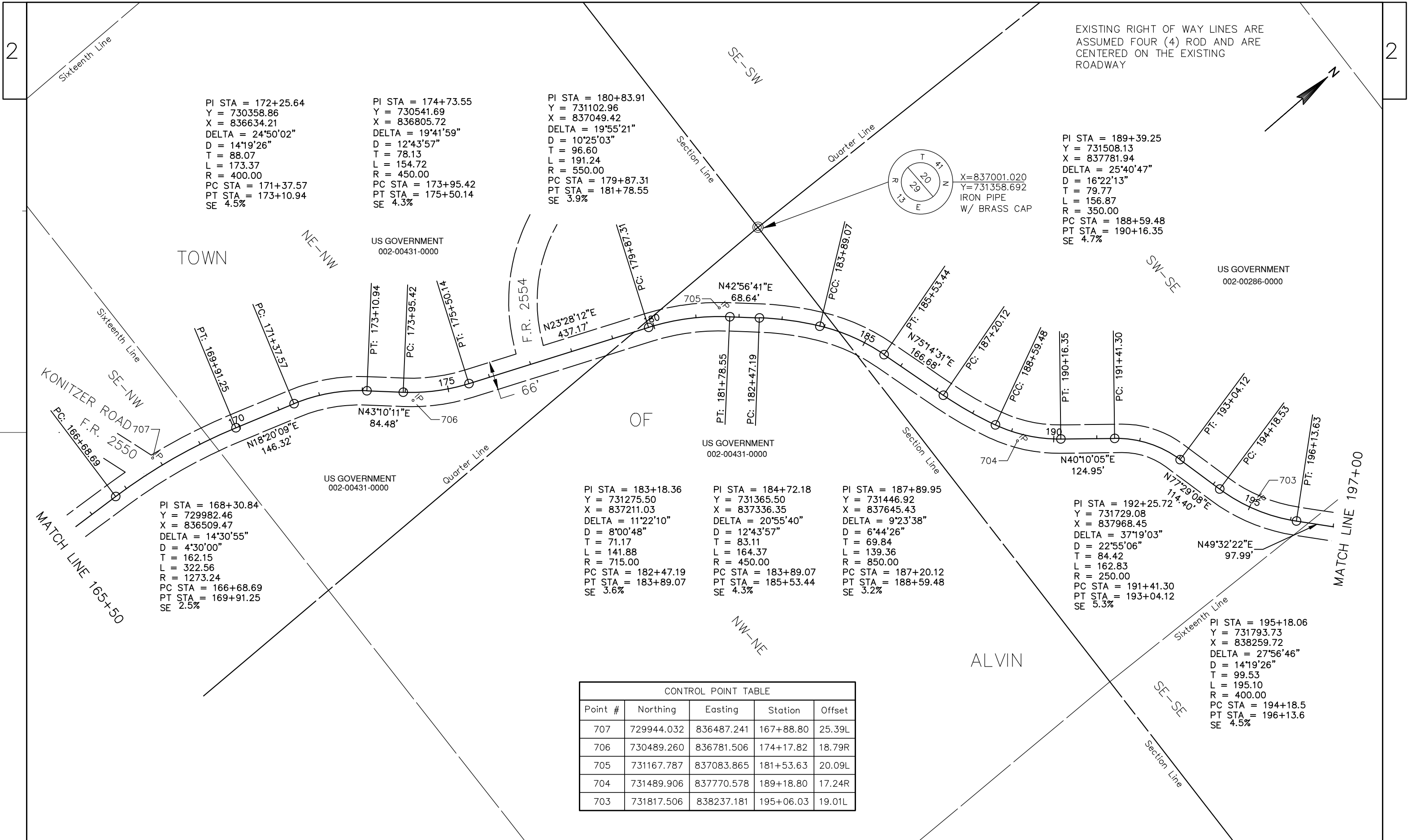
CONTROL POINT TABLE				
Point #	Northing	Easting	Station	Offset
712	726943.038	836210.165	136+39.52	18.30R
711	727494.162	836048.496	142+15.19	22.38L
710	728010.822	835976.341	147+36.41	20.27L
709	728592.542	836012.306	153+12.25	28.64L
708	729242.086	836466.798	160+95.85	27.52R

PI STA = 148+53.33 Y = 728129.49 X = 835975.01 DELTA = 14°30'11" D = 8°00'00" T = 91.13 L = 181.29 R = 716.20 PC STA = 147+62.20 PT STA = 149+43.49 SE 3.5%	PI STA = 150+70.70 Y = 728347.28 X = 835990.33 DELTA = 5°50'11" D = 2°17'46" T = 127.20 L = 254.19 R = 2495.40 PC STA = 149+43.49 PT STA = 151+97.68 SE NC	PI STA = 153+44.75 Y = 728617.50 X = 836037.31 DELTA = 20°22'21" D = 7°00'00" T = 147.07 L = 291.04 R = 818.51 PC STA = 151+97.68 PT STA = 154+88.72 SE 3.3%
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PI STA = 157+99.39 Y = 729012.99 X = 836267.80 DELTA = 8°56'10" D = 4°00'00" T = 111.93 L = 223.40 R = 1432.39 PC STA = 156+87.46 PT STA = 159+10.87 SE 2.3%
--

CURVE TABLE					
Curve #	Length	Radius	Delta	CH Bearing	CH Length
157-158	175.00'	2495.40'	4°01'05"	S7°19'54"W	174.96'
166-162	70.00'	1528.56'	2°37'26"	N10°30'40"W	69.99'

LINE TABLE		
Line #	Direction	Length
156-157	N2°28'48"E	337.72'
158-159	N84°40'38"W	33.00'
159-160	N13°29'51"E	99.21'
160-161	N0°51'35"W	74.78'
161-157	N80°39'33"W	33.00'
158-162	S5°25'06"E	677.68'
162-163	N80°48'03"E	33.00'
163-164	S6°21'23"W	42.74'
164-165	S32°34'06"E	33.02'
165-166	N78°10'37"E	33.00'



PI STA = 172+25.64
Y = 730358.86
X = 836634.21
DELTA = 24°50'02"
D = 14°19'26"
T = 88.07
L = 173.37
R = 400.00
PC STA = 171+37.57
PT STA = 173+10.94
SE 4.5%

PI STA = 174+73.55
Y = 730541.69
X = 836805.72
DELTA = 19°41'59"
D = 12°43'57"
T = 78.13
L = 154.72
R = 450.00
PC STA = 173+95.42
PT STA = 175+50.14
SE 4.3%

PI STA = 180+83.91
Y = 731102.96
X = 837049.42
DELTA = 19°55'21"
D = 10°25'03"
T = 96.60
L = 191.24
R = 550.00
PC STA = 179+87.31
PT STA = 181+78.55
SE 3.9%

EXISTING RIGHT OF WAY LINES ARE
ASSUMED FOUR (4) ROD AND ARE
CENTERED ON THE EXISTING
ROADWAY

PI STA = 189+39.25
Y = 731508.13
X = 837781.94
DELTA = 25°40'47"
D = 16°22'13"
T = 79.77
L = 156.87
R = 350.00
PC STA = 188+59.48
PT STA = 190+16.35
SE 4.7%

PI STA = 168+30.84
Y = 729982.46
X = 836509.47
DELTA = 14°30'55"
D = 4°30'00"
T = 162.15
L = 322.56
R = 1273.24
PC STA = 166+68.69
PT STA = 169+91.25
SE 2.5%

PI STA = 183+18.36
Y = 731275.50
X = 837211.03
DELTA = 11°22'10"
D = 8°00'48"
T = 71.17
L = 141.88
R = 715.00
PC STA = 182+47.19
PT STA = 183+89.07
SE 3.6%

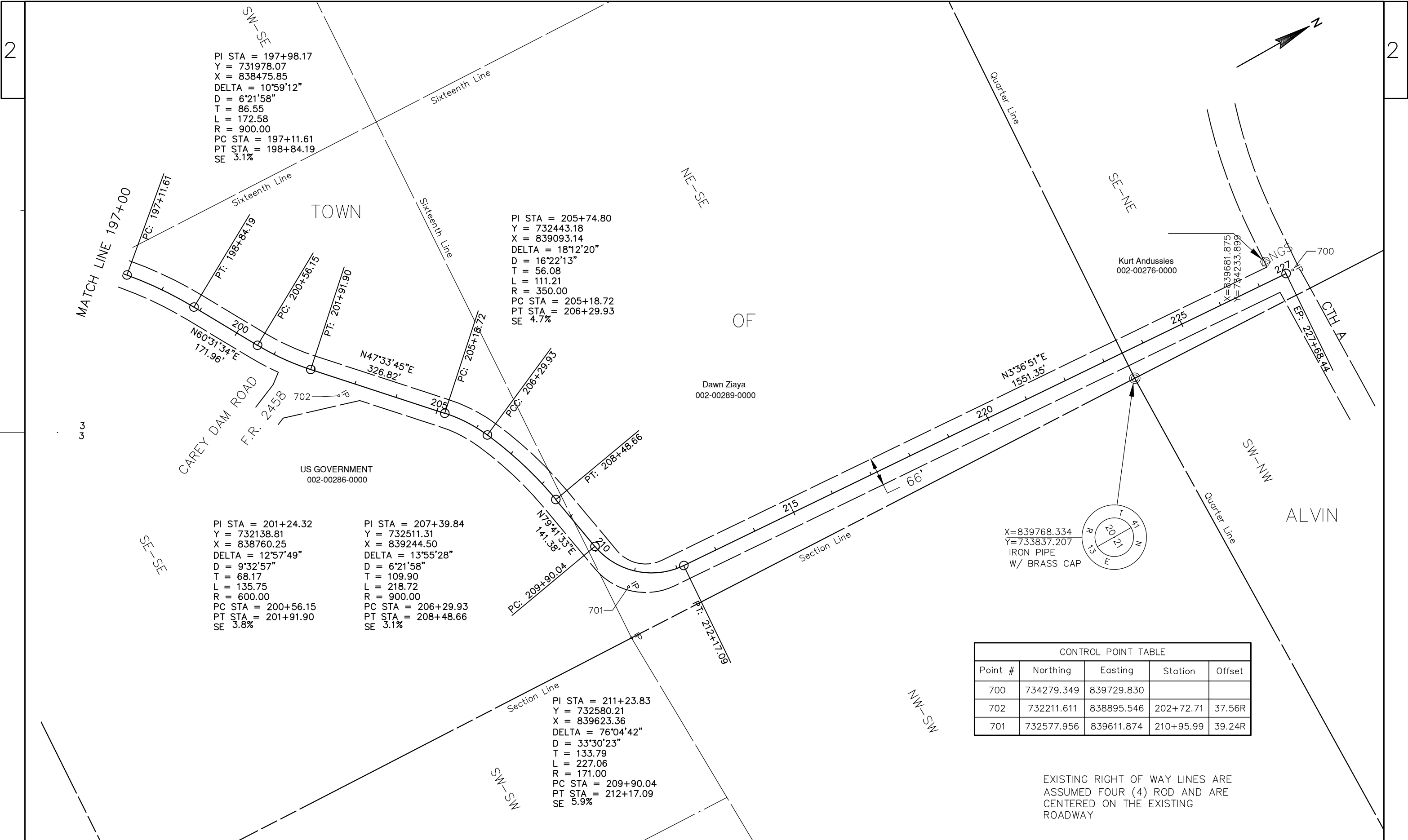
PI STA = 184+72.18
Y = 731365.50
X = 837336.35
DELTA = 20°55'40"
D = 12°43'57"
T = 83.11
L = 164.37
R = 450.00
PC STA = 183+89.07
PT STA = 185+53.44
SE 4.3%

PI STA = 187+89.95
Y = 731446.92
X = 837645.43
DELTA = 9°23'38"
D = 6°44'26"
T = 69.84
L = 139.36
R = 850.00
PC STA = 187+20.12
PT STA = 188+59.48
SE 3.2%

PI STA = 192+25.72
Y = 731729.08
X = 837968.45
DELTA = 37°19'03"
D = 22°55'06"
T = 84.42
L = 162.83
R = 250.00
PC STA = 191+41.30
PT STA = 193+04.12
SE 5.3%

PI STA = 195+18.06
Y = 731793.73
X = 838259.72
DELTA = 27°56'46"
D = 14°19'26"
T = 99.53
L = 195.10
R = 400.00
PC STA = 194+18.5
PT STA = 196+13.6
SE 4.5%

CONTROL POINT TABLE				
Point #	Northing	Easting	Station	Offset
707	729944.032	836487.241	167+88.80	25.39L
706	730489.260	836781.506	174+17.82	18.79R
705	731167.787	837083.865	181+53.63	20.09L
704	731489.906	837770.578	189+18.80	17.24R
703	731817.506	838237.181	195+06.03	19.01L



PI STA = 197+98.17
Y = 731978.07
X = 838475.85
DELTA = 10°59'12"
D = 6°21'58"
T = 86.55
L = 172.58
R = 900.00
PC STA = 197+11.61
PT STA = 198+84.19
SE 3.1%

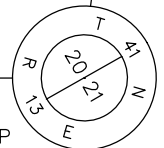
PI STA = 205+74.80
Y = 732443.18
X = 839093.14
DELTA = 18°12'20"
D = 16°22'13"
T = 56.08
L = 111.21
R = 350.00
PC STA = 205+18.72
PT STA = 206+29.93
SE 4.7%

PI STA = 201+24.32
Y = 732138.81
X = 838760.25
DELTA = 12°57'49"
D = 9°32'57"
T = 68.17
L = 135.75
R = 600.00
PC STA = 200+56.15
PT STA = 201+91.90
SE 3.8%

PI STA = 207+39.84
Y = 732511.31
X = 839244.50
DELTA = 13°55'28"
D = 6°21'58"
T = 109.90
L = 218.72
R = 900.00
PC STA = 206+29.93
PT STA = 208+48.66
SE 3.1%

PI STA = 211+23.83
Y = 732580.21
X = 839623.36
DELTA = 76°04'42"
D = 33°30'23"
T = 133.79
L = 227.06
R = 171.00
PC STA = 209+90.04
PT STA = 212+17.09
SE 5.9%

X=839768.334
Y=733837.207
IRON PIPE
W/ BRASS CAP



CONTROL POINT TABLE				
Point #	Northing	Easting	Station	Offset
700	734279.349	839729.830		
702	732211.611	838895.546	202+72.71	37.56R
701	732577.956	839611.874	210+95.99	39.24R

EXISTING RIGHT OF WAY LINES ARE
ASSUMED FOUR (4) ROD AND ARE
CENTERED ON THE EXISTING
ROADWAY

SHEET AL2 (STATION 39+00–71+00)

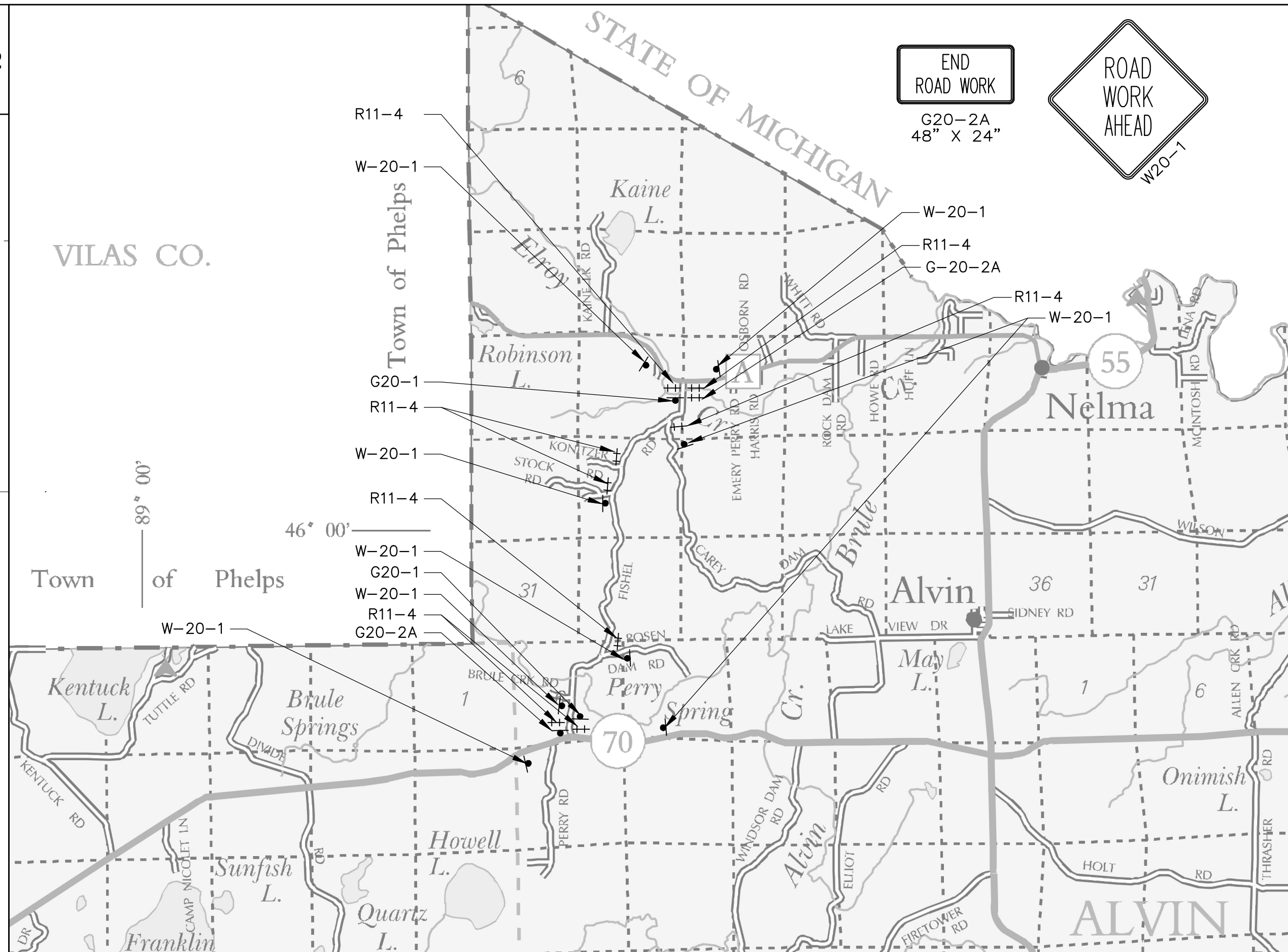
CURVE TABLE					
Curve #	Length	Radius	Delta	CH Bearing	CH Length
104–105	205.45’	716.20’	16°26’10”	S32°51’50”W	204.75’
107–108	132.82’	295.00’	25°47’46”	S29°03’57”W	131.70’
118–119	95.43’	1178.92’	4°38’16”	N16°36’43”E	95.40’
124–105	11.03’	716.20’	0°52’56”	N41°31’23”E	11.03’

LINE TABLE		
Line #	Direction	Length
105–106	N48°55’05”W	32.91’
106–107	S52°40’12”W	64.65’
108–109	S16°10’04”W	23.42’
109–110	S25°51’16”W	98.51’
110–111	S21°26’34”W	196.70’
111–112	S6°49’47”W	124.35’
112–113	S67°57’47”E	27.38’
113–114	N22°02’13”E	120.00’
114–115	S67°57’47”E	39.83’
115–116	N44°00’10”E	53.91’
116–117	N22°02’04”E	75.13’
117–118	N2°38’17”W	56.40’
119–120	N14°17’35”E	32.00’
120–121	N39°30’30”E	87.91’
121–122	N3°44’13”W	39.01’
122–123	N48°02’09”W	34.04’
123–124	N41°57’51”E	53.00’

CURVE TABLE					
Curve #	Length	Radius	Delta	CH Bearing	CH Length
132–133	29.71’	1909.86’	0°53’29”	N1°50’33”E	29.71’
137–138	200.29’	749.20’	15°19’03”	S5°22’14”E	199.70’
142–143	201.05’	450.00’	25°35’56”	S5°00’21”W	199.38’
144–145	155.28’	260.00’	34°13’08”	S34°54’53”W	152.98’
146–147	188.13’	315.00’	34°13’08”	N34°54’53”E	185.34’
148–149	271.77’	505.00’	30°50’05”	N2°23’16”E	268.51’
151–152	106.03’	683.20’	8°53’32”	N8°35’00”W	105.93’

SHEET AL4 (STATION 102+00–134+00)

LINE TABLE		
Line #	Direction	Length
131–132	N2°17’17”E	17.25’
133–134	N88°36’12”W	33.00’
134–135	S32°09’46”W	33.67’
135–136	S23°26’07”E	39.17’
136–137	S2°17’17”W	29.68’
138–139	S13°01’46”E	53.85’
139–140	S10°43’12”W	54.63’
140–141	S28°45’35”E	74.73’
141–142	N82°12’23”E	33.00’
143–144	S17°48’19”W	28.67’
145–146	S37°58’33”E	55.00’
147–148	N17°48’19”E	28.67’
149–150	N13°01’46”W	58.88’
150–151	N28°37’12”W	81.86’
152–153	N35°03’38”E	35.73’
153–154	N0°37’22”E	56.12’
154–155	N45°26’17”W	29.73’
155–131	N59°03’18”W	37.61’



END
ROAD WORK
G20-2A
48" X 24"



ROAD CLOSED
TO
THRU TRAFFIC
R11-4
60" X 30"

ROAD WORK
NEXT 4 MILES
G20-1
60" X 24"

NOTES:

1. DURING EBS OPERATIONS DROP OFFS OR OPEN TRENCHES SHALL BE MARKED WITH DRUMS
2. DURING PAVING OPERATIONS UTILIZE TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)
3. STANDARD DETAIL DRAWINGS SHALL BE USED TO AID IN SIGN PLACEMENT.
4. W8-20 & W8-20P SIGNS SHALL BE USED DURING THE PAVING PROCESS WHEN A CENTERLINE LIP IS CREATED.



LEGEND

- † — † TYPE III BARACADE WITH/
WITHOUT SIGN
- — • TRAFFIC CONTROL DRUMS
- ⌋ SIGN MOUNTED ON POST

PROJECT NO:9808-00-71

HWY:FISHEL ROAD

COUNTY:FOREST

PLAN: TRAFFIC CONTROL PLAN

SHEET

E

DATE 22APR15		E S T I M A T E O F Q U A N T I T I E S			
LINE				9808-00-71	
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0010	204.0115	Removing Asphaltic Surface Butt Joints	SY	890.000	890.000
0020	205.0100	Excavation Common	CY	140.000	140.000
0030	213.0100	Finishing Roadway (project) 01. 9808-00-71	EACH	1.000	1.000
0040	305.0110	Base Aggregate Dense 3/4-Inch	TON	1,250.000	1,250.000
0050	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	350.000	350.000
0060	311.0115	Breaker Run	CY	90.000	90.000
0070	455.0110	Asphaltic Material PG58-34	TON	365.000	365.000
0080	455.0605	Tack Coat	GAL	2,450.000	2,450.000
0090	460.1100	HMA Pavement Type E-0.3	TON	6,040.000	6,040.000
0100	460.2000	Incentive Density HMA Pavement	DOL	3,870.000	3,870.000
0110	460.4000	HMA Cold Weather Paving	TON	1,510.000	1,510.000
0120	465.0110	Asphaltic Surface Patching	TON	40.000	40.000
0130	616.0700.S	Fence Safety	LF	2,100.000	2,100.000
0140	619.1000	Mobilization	EACH	1.000	1.000
0150	624.0100	Water	MGAL	16.000	16.000
0160	625.0105	Topsoil	CY	100.000	100.000
0170	627.0200	Mulching	SY	650.000	650.000
0180	628.1504	Silt Fence	LF	800.000	800.000
0190	628.1520	Silt Fence Maintenance	LF	800.000	800.000
0200	628.1905	Mobilizations Erosion Control	EACH	1.000	1.000
0210	628.1910	Mobilizations Emergency Erosion Control	EACH	1.000	1.000
0220	628.2002	Erosion Mat Class I Type A	SY	250.000	250.000
0230	629.0210	Fertilizer Type B	CWT	1.000	1.000
0240	630.0120	Seeding Mixture No. 20	LB	21.000	21.000
0250	633.0100	Delineator Posts Steel	EACH	26.000	26.000
0260	633.0500	Delineator Reflectors	EACH	78.000	78.000
0270	642.5001	Field Office Type B	EACH	1.000	1.000
0280	643.0100	Traffic Control (project) 01. 9808-00-71	EACH	1.000	1.000
0290	643.0300	Traffic Control Drums	DAY	350.000	350.000
0300	643.0420	Traffic Control Barricades Type III	DAY	520.000	520.000
0310	643.0705	Traffic Control Warning Lights Type A	DAY	1,000.000	1,000.000
0320	643.0715	Traffic Control Warning Lights Type C	DAY	350.000	350.000
0330	643.0900	Traffic Control Signs	DAY	760.000	760.000
0340	645.0140	Geotextile Fabric Type SAS	SY	250.000	250.000
0350	646.0103	Pavement Marking Paint 4-Inch	LF	45,910.000	45,910.000
0360	650.8000	Construction Staking Resurfacing Reference	LF	21,655.000	21,655.000
0370	650.9910	Construction Staking Supplemental Control (project) 01. 9808-00-71	LS	1.000	1.000
0380	690.0150	Sawing Asphalt	LF	300.000	300.000
0390	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	300.000	300.000
0400	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	600.000	600.000

3

REMOVING ASPHALTIC SURFACE, BUTT JOINTS

EARTHWORK SUMMARY

BASE AGGREGATE

204.0115 REMOVING ASPHALTIC SURFACE, BUTT JOINT			205.0100 EXCAVATION COMMON		645.0140 GEOTEXTILE FABRIC TYPE SAS	
STATION	LOCATION	SY	CATEGORY	LOCATION	CY	SY
10+59.26 - 11+34.26	Fishel Road	167	0010	FISHEL ROAD 10+50-227+51		
300+50. - 301+00.	Rosen Dam Road	111		EBS (UNDISTRIBUTED)	140	250
221+28. - 222+03.	Fishel Road	167		PROJECT TOTAL	140	250
222+60. - 223+35.	Fishel Road	167	*NON-BID ITEM 1) EBS IS NOT CONSIDERED USABLE FILL MATERIAL.			
226+76.12 - 227+51.12	Fishel Road	233				
UNDISTRIBUTED	Fishel Road	46				
TOTAL		890				

305.0110 BASE AGGREGATE DENSE 3/4-INCH		305.0120 BASE AGGREGATE DENSE 1 1/4-INCH		311.0115 BREAKER RUN	624.0100 WATER
STATION	LOCATION	TON	TON	CY	MGAL
10+59.26 - 227+51.12	Fishel	910	0	0	9.1
DRIVEWAYS & SIDEROADS		250	0	0	2.5
UNDISTRIBUTED		90	350*	90*	4.4
TOTAL		1,250	350	90	16.0
* IN EBS AREA					

3

213.0100 FINISHING ROADWAY (9808-00-71)		619.1000 MOBILIZATION	642.5001 FIELD OFFICE TYPE B (9808-00-71)	643.0100 TRAFFIC CONTROL (9808-00-71)
LOCATION	EACH	EACH	EACH	EACH
FISHEL ROAD	1	1	1	1
PROJECT TOTAL		1	1	1

ASPHALT

455.0110 ASPHALTIC MATERIAL PG58-34		455.0605 TACK COAT	460.1100 HMA PAVEMENT TYPE E-0.3	465.0110 ASPHALTIC SURFACE PATCHING	REMARKS
STATION	LOCATION	TON	GAL	TON	TON
10+59.26 - 227+51.12	Fishel	358	2,410	5,970	0
Sideroads & Driveways		3	16	40	0
UNDISTRIBUTED		4	24	30	40*
TOTAL		365	2,450	6,040	40
* IN EBS AREA					

FENCE SAFETY

616.0700.S FENCE SAFETY LF	
STATION	LOCATION
123+00. - 128+00.	FISHEL ROAD
175+00. - 179+00.	FISHEL ROAD
TOTAL	

FINISHING ITEMS

625.0105 TOPSOIL		627.0200 MULCHING	628.2002 EROSION MAT CLASS I TYPE A	629.0210 FERTILIZER TYPE B	630.0120 SEEDING MIXTURE NO. 20
STATION	LOCATION	CY	SY	SY	CWT
10+59.26-227+49.29	Fishel Road	90	600	200.0	0.5
UNDISTRIBUTED		10	50	50.0	0.5
PROJECT TOTAL		100	650	250	1

EROSION CONTROL ITEMS

628.1504 SILT FENCE		628.1520 SILT FENCE MAINTENANCE	628.1905 MOBILIZATIONS EROSION CONTROL	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL
STATION	LOCATION	OFFSET	LF	LF
10+59.26-227+49.29	Fishel Road			
40+20-41+60	Fishel Road	LT/RT	300	300
221+00-225+00	Fishel Road	LT/RT	300	300
UNDISTRIBUTED			200	200
Subtotal			800	800
PROJECT TOTAL			800	800

3

PERMANENT SIGNING

ROAD	DIREC- TION	SIDE OF ROAD	LOCATION	SIGN MESSAGE	633.0100	633.0500	REMARKS
					DELINEATOR POSTS STEEL EACH	DELINEATOR REFLECTORS EACH	
FISHEL ROAD NB	NB	EAST	52+50 - 55+50	OBJECT MARKER	5	15	WHITE REFLECTORS
FISHEL ROAD SB	SB	WEST	61+00 - 69+00	OBJECT MARKER	11	33	WHITE REFLECTORS
FISHEL ROAD NB	NB	EAST	94+00 - 97+00	OBJECT MARKER	5	15	WHITE REFLECTORS
FISHEL ROAD NB	NB	EAST	126+75 - 129+50	OBJECT MARKER	5	15	WHITE REFLECTORS
TOTAL					26	78	

PAVEMENT MARKING

			646.0103			
			PAVEMENT MARKING PAINT 4-INCH			
			WHITE YELLOW			
STATION		LOCATION	OFFSET	LF	LF	REMARKS
10+59.26 - 227+51.12		Fishel Road	Centerline	-	43,380	DOUBLE YELLOW
37+61 - 43+85		Fishel Road	LT/RT	1250	-	LANE LINES
219+20 - 225+57		Fishel Road	LT/RT	1280	-	LANE LINES
TOTAL				45,910		

SAWING PAVEMENT

		690.0150	
		SAWING	
		ASPHALT	
LOCATION	STATION	LF	REMARKS
FISHEL ROAD	10+59.26 - 227+51.12	120	PROJECT TERMINI
FISHEL ROAD	10+59.26 - 227+51.12	20	SIDE ROADS
FISHEL ROAD	10+59.26 - 227+51.12	160*	UNDISTRIBUTED
PROJECT TOTAL		300	

* IN EBS AREA

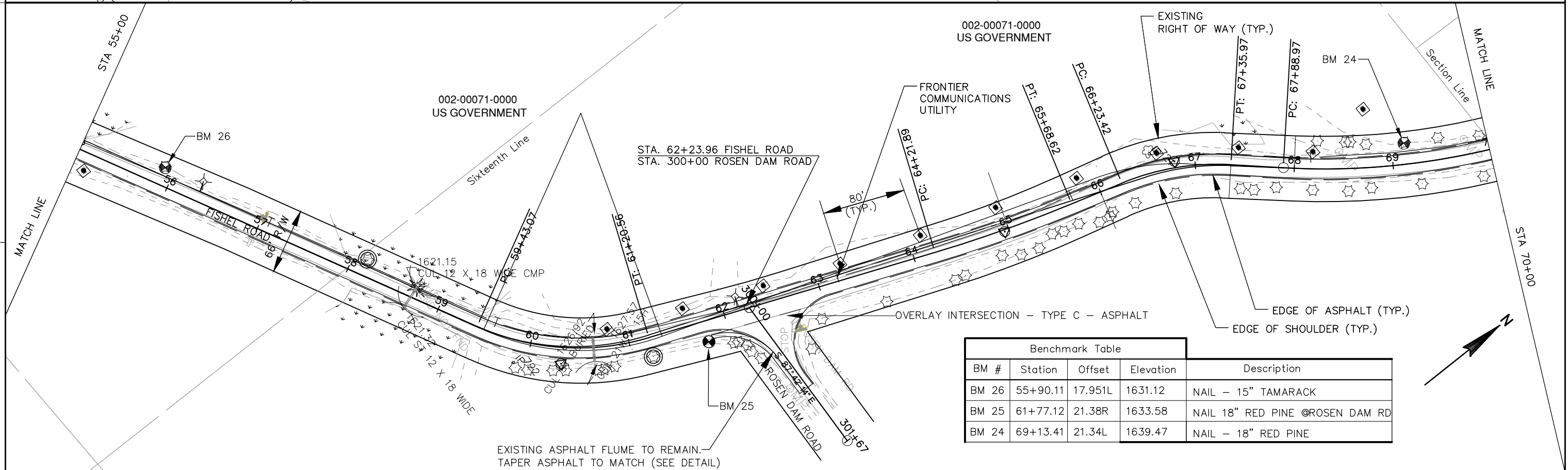
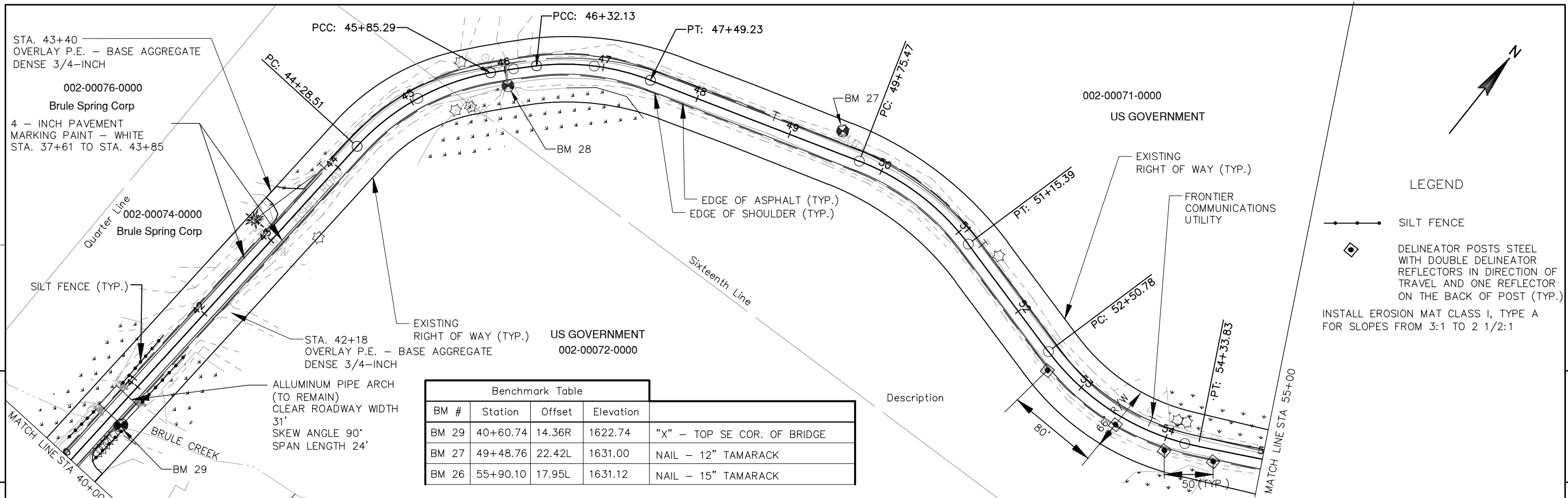
TRAFFIC CONTROL

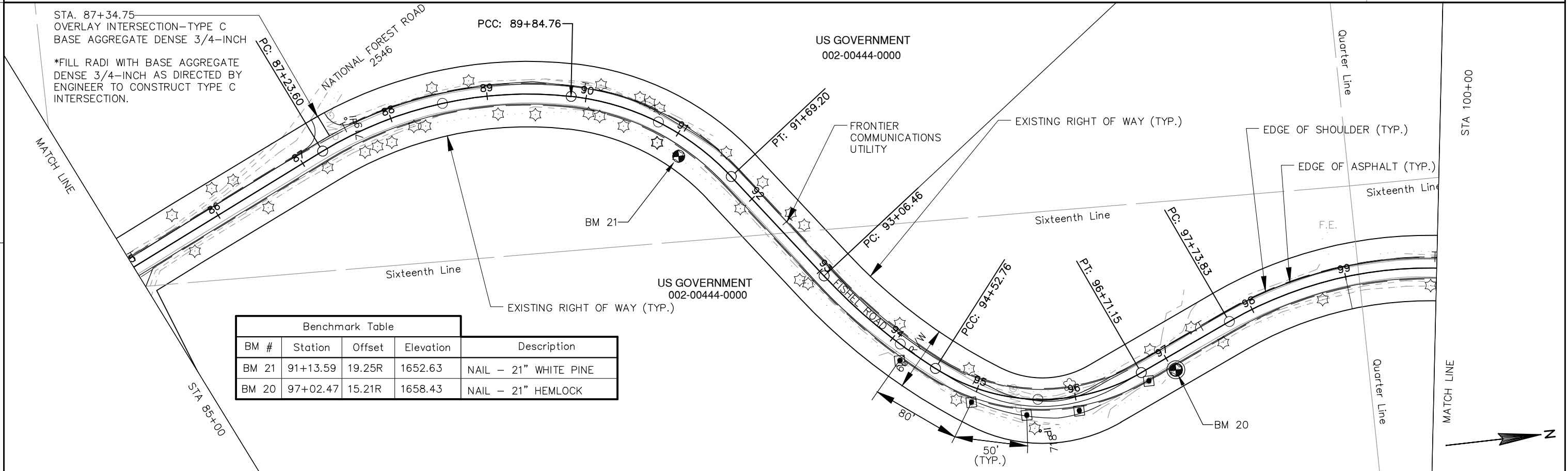
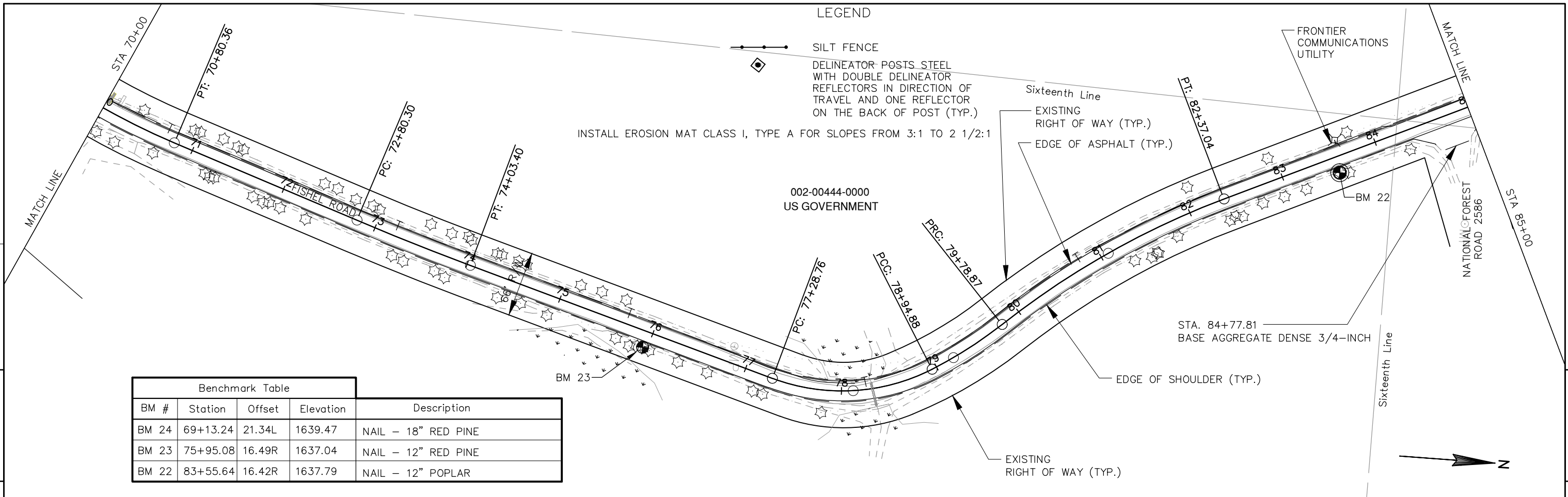
LOCATION	CALENDAR DAYS	643.0300	643.0420	643.0705	643.0715	643.0900
		TRAFFIC CONTROL DRUMS	TRAFFIC CONTROL BARRICADES TYPE III	TRAFFIC CONTROL WARNING LIGHTS TYPE A	TRAFFIC CONTROL WARNING LIGHTS TYPE C	TRAFFIC CONTROL SIGNS
Fishel Road	29	300	464	928	290	696
Undistributed		50	56	72	60	64
TOTAL		350	520	1000	350	760

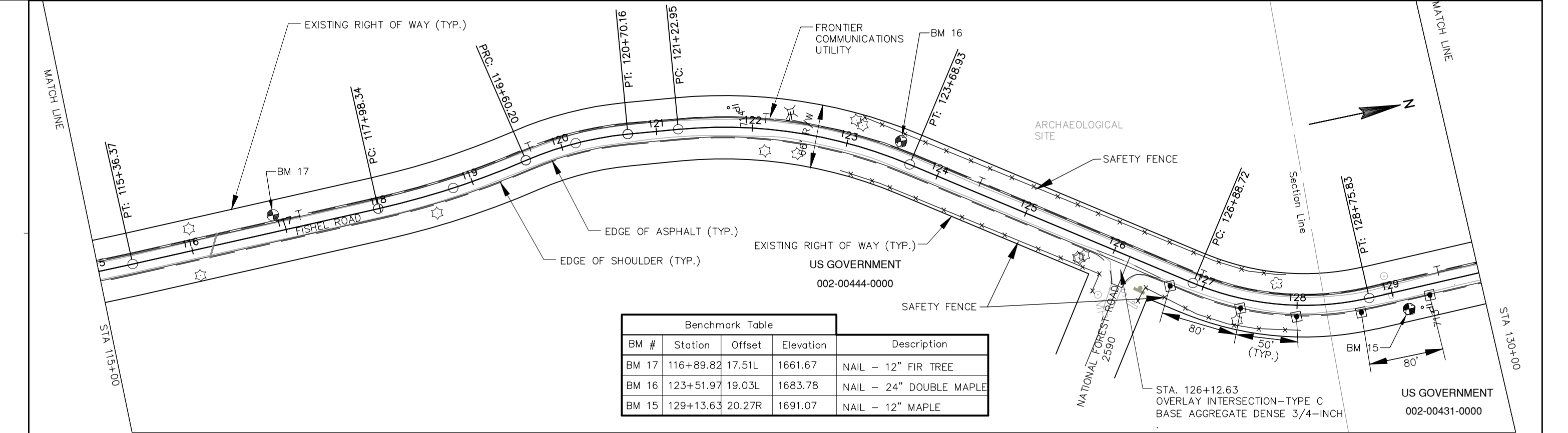
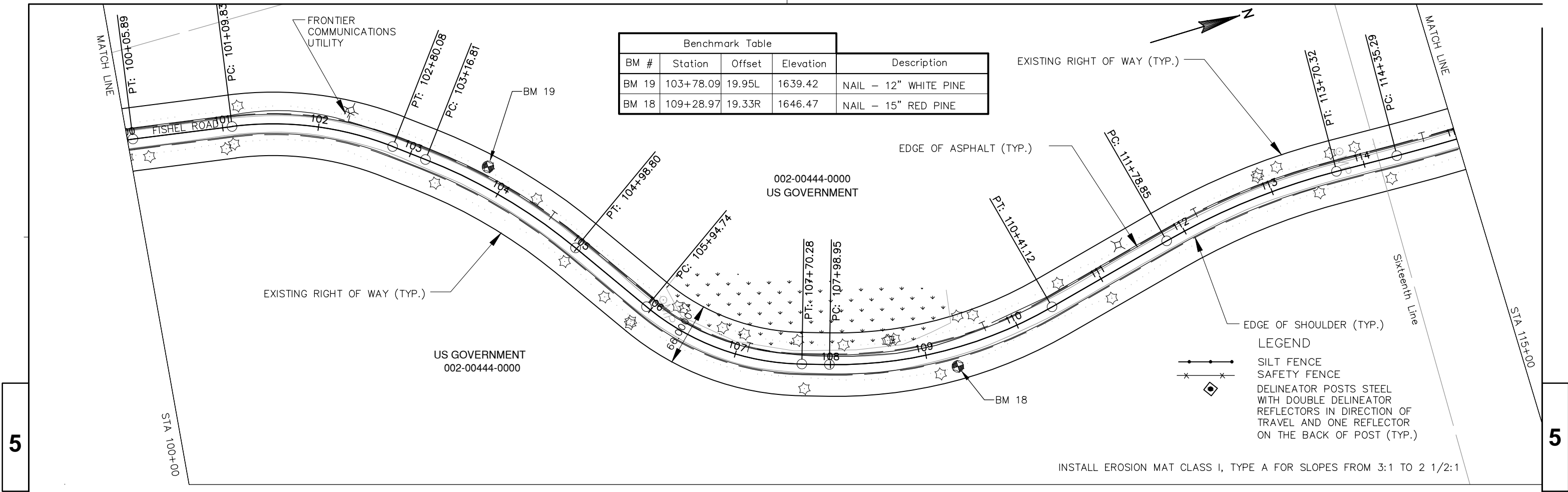
CONSTRUCTION STAKING

LOCATION	STATION	LF	650.8000	650.9910
			CONSTRUCTION STAKING RESURFACING REFERENCE	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT)
FISHEL ROAD	10+59.26 - 227+51.12	21,655		9808-00-71 LS 1
PROJECT TOTAL			21,655	1

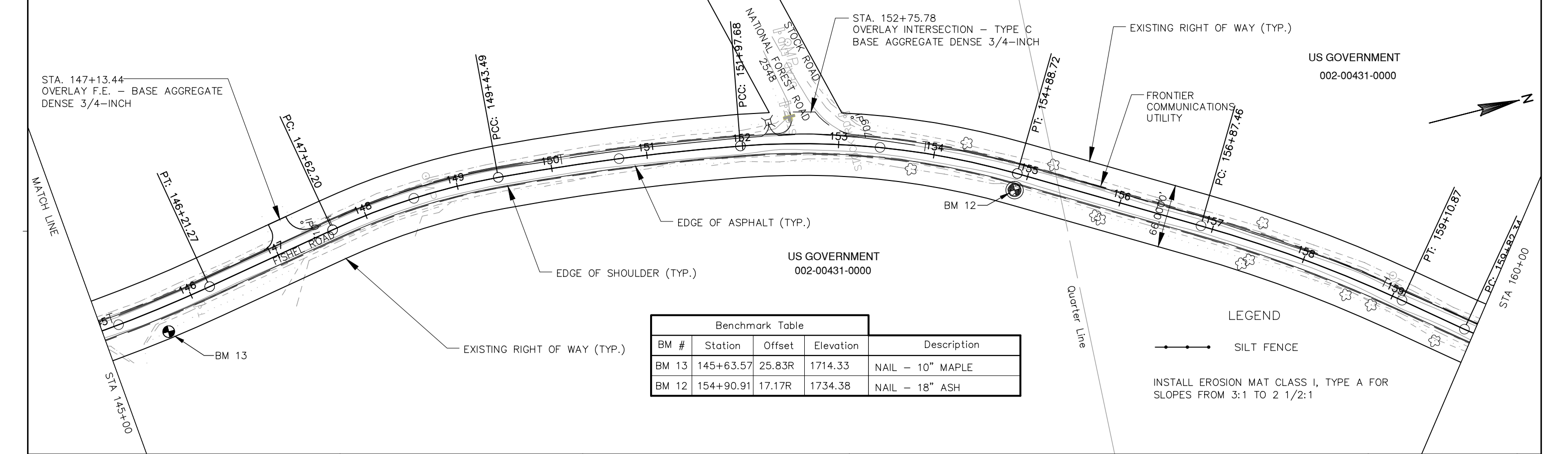
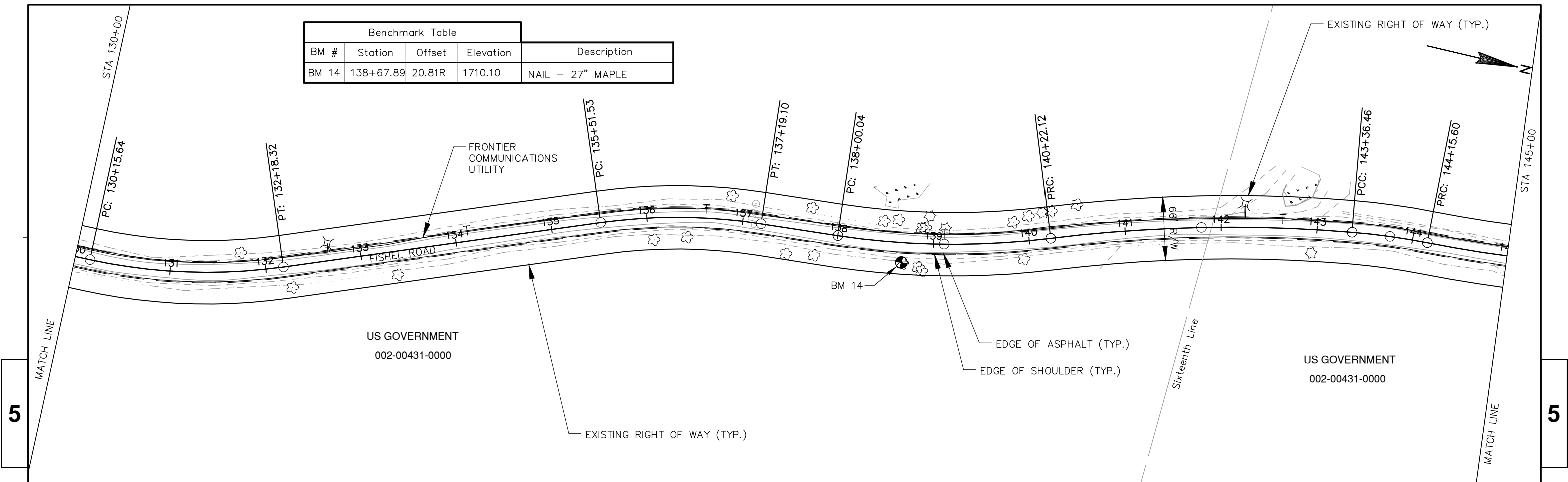
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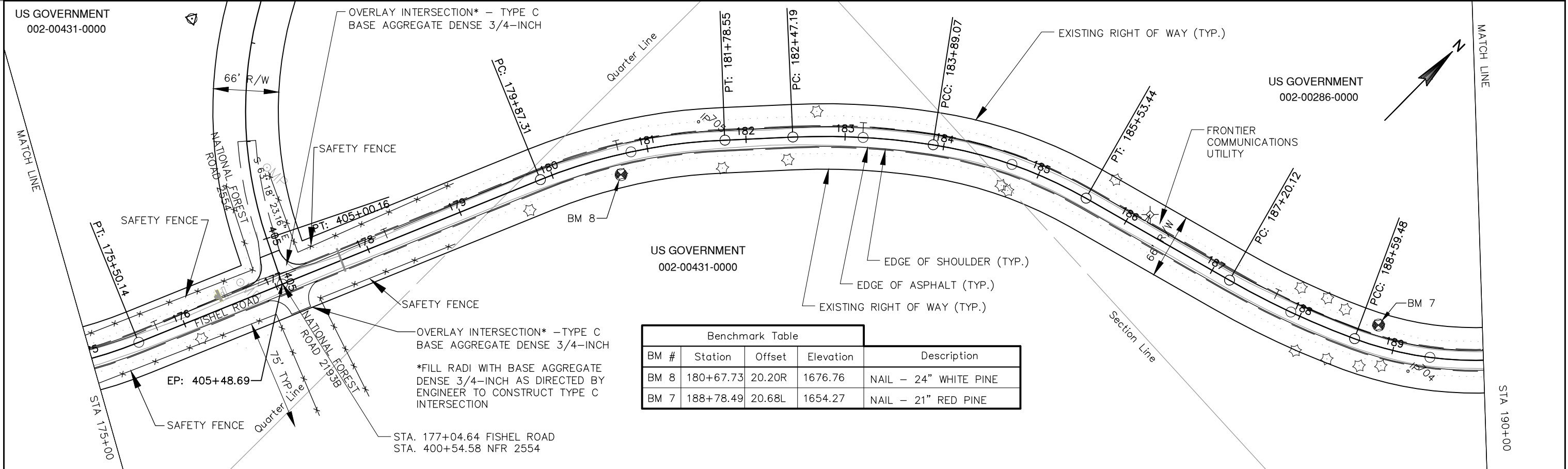
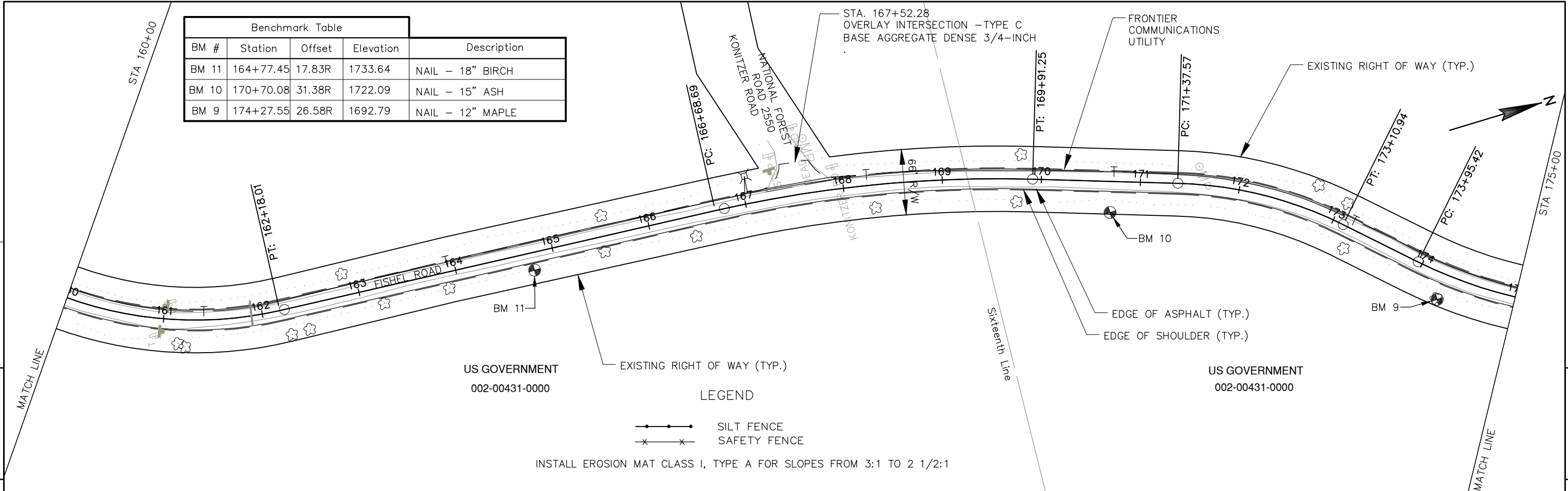
Benchmark Table				
BM #	Station	Offset	Elevation	Description
BM 14	138+67.89	20.81R	1710.10	NAIL - 27" MAPLE



Benchmark Table				
BM #	Station	Offset	Elevation	Description
BM 13	145+63.57	25.83R	1714.33	NAIL - 10" MAPLE
BM 12	154+90.91	17.17R	1734.38	NAIL - 18" ASH

LEGEND
 SILT FENCE
 INSTALL EROSION MAT CLASS I, TYPE A FOR SLOPES FROM 3:1 TO 2 1/2:1

Benchmark Table				
BM #	Station	Offset	Elevation	Description
BM 11	164+77.45	17.83R	1733.64	NAIL - 18" BIRCH
BM 10	170+70.08	31.38R	1722.09	NAIL - 15" ASH
BM 9	174+27.55	26.58R	1692.79	NAIL - 12" MAPLE



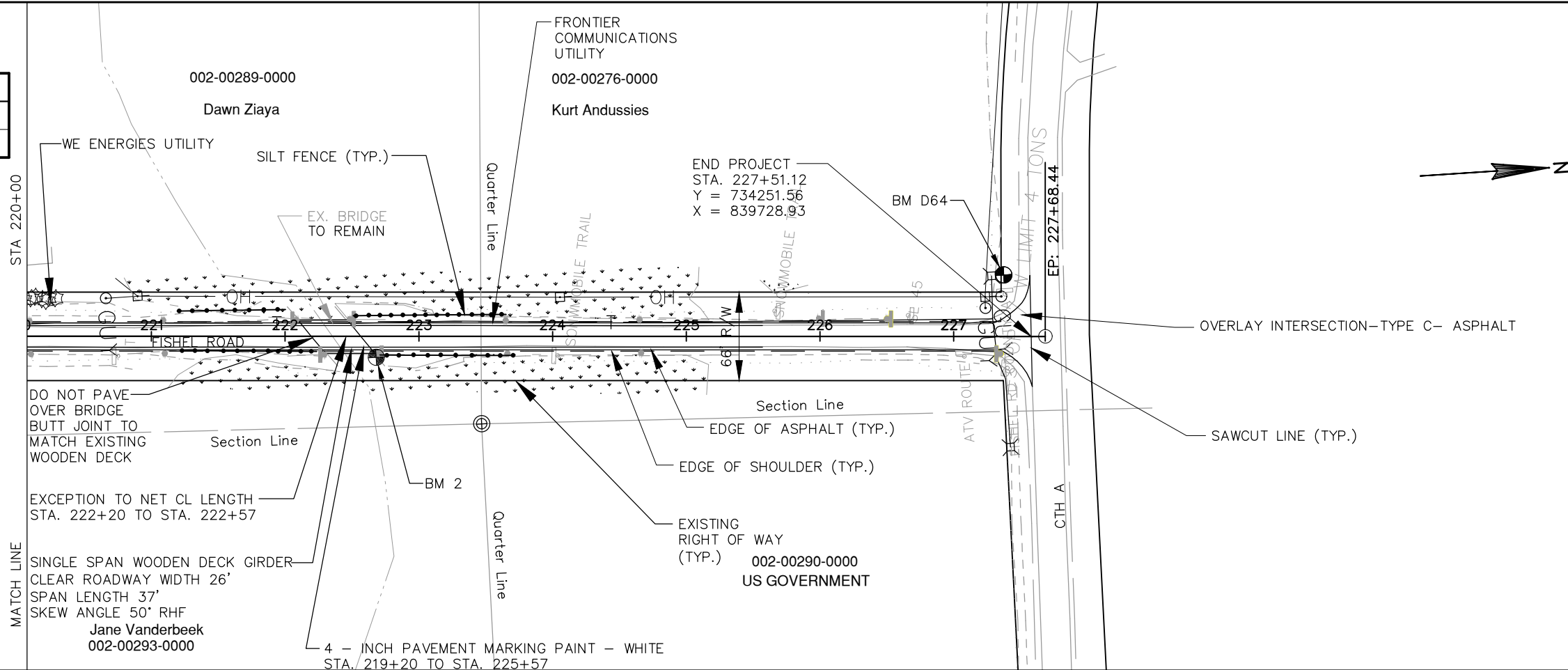
Benchmark Table				
BM #	Station	Offset	Elevation	Description
BM 8	180+67.73	20.20R	1676.76	NAIL - 24" WHITE PINE
BM 7	188+78.49	20.68L	1654.27	NAIL - 21" RED PINE

Benchmark Table				Description
BM #	Station	Offset	Elevation	
BM 2	222+61.15	15.74R	1585.65	RR SPIKE NE WINGWALL
BM D64	227+30.49	45.90L	1592.72	NGS MON# D64

—●—●—●— SILT FENCE

INSTALL EROSION MAT CLASS I, TYPE A
FOR SLOPES FROM 3:1 TO 2 1/2:1

LEGEND



5

5

Standard Detail Drawing List

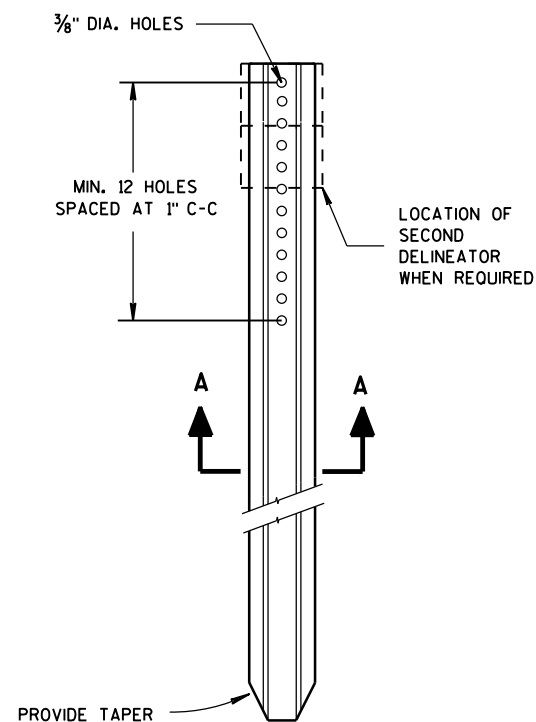
08E09-06	SILT FENCE
09A01-13A	AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND D AND TEE INTERSECTION BYPASS LANE
15A02-08	DELINEATOR POST, DELINEATOR, AND DELINEATOR BRACKET WITH REFLECTIVE SHEETING
15C02-05A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-05B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C03-02	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C06-07	SIGNING & MARKING FOR TWO LANE BRIDGES
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C08-16B	PAVEMENT MARKING (INTERSECTIONS)
15C12-04	TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)
15C19-02A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY



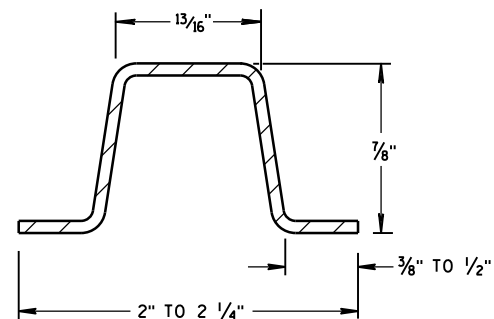
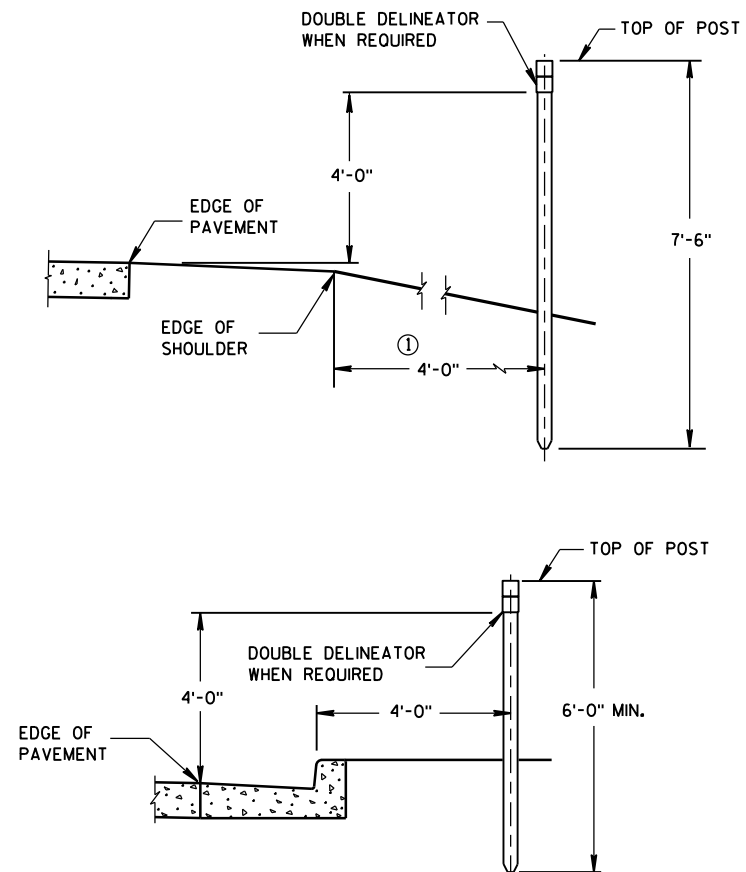
- ① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- ② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- ③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1½" X 1½" 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.



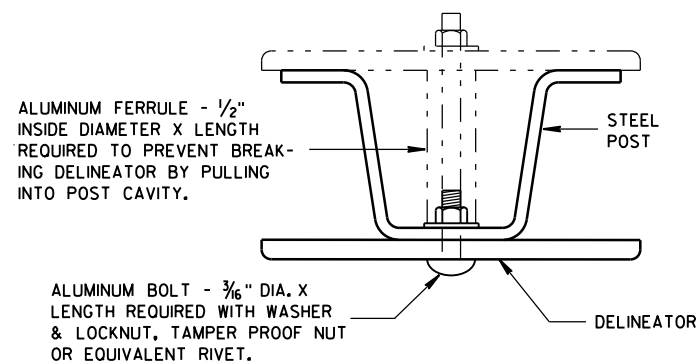
SILT FENCE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 4-29-05 DATE	/S/ <u>Beth Cannestra</u> CHIEF ROADWAY DEVELOPMENT ENGINEER



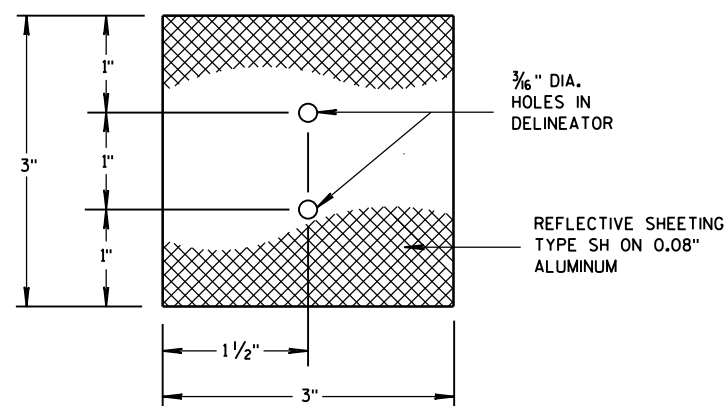
DELINEATOR POST

SECTION A-A
WEIGHT 1.12 LBS PER FT. ± 0.1 LB.

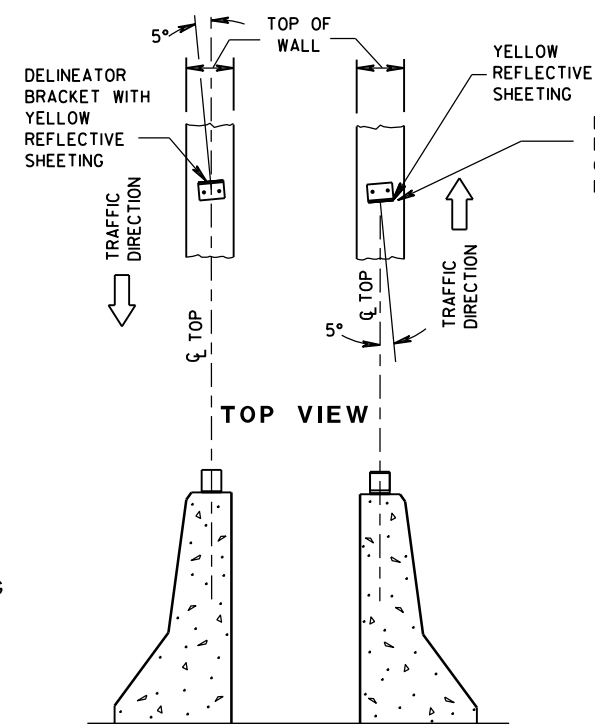
TYPICAL INSTALLATIONS OF DELINEATOR POSTS



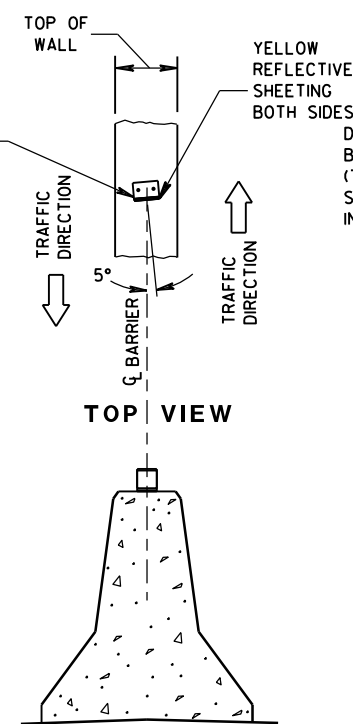
MOUNTING DETAIL FOR DELINEATOR



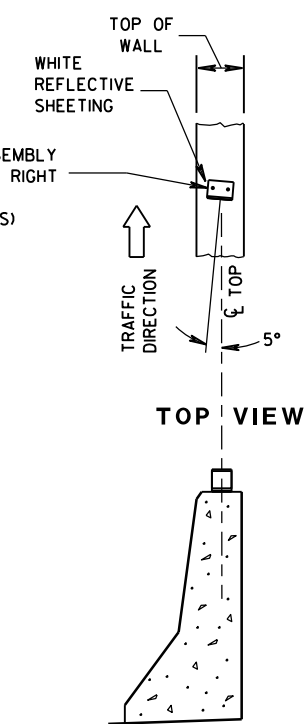
3" x 3" DELINEATOR



DOUBLE BARRIERS IN MEDIAN



MEDIAN BARRIER



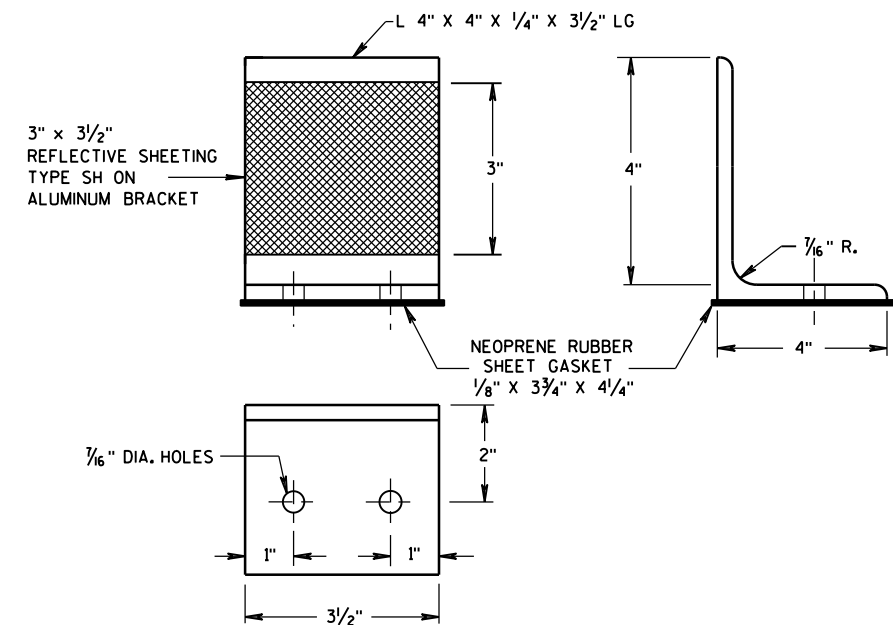
BARRIER LOCATED TO RT. OF TRAFFIC FLOW

LOCATION AND AIMING DETAILS FOR DELINEATOR BRACKETS MOUNTED ON CONCRETE BARRIERS

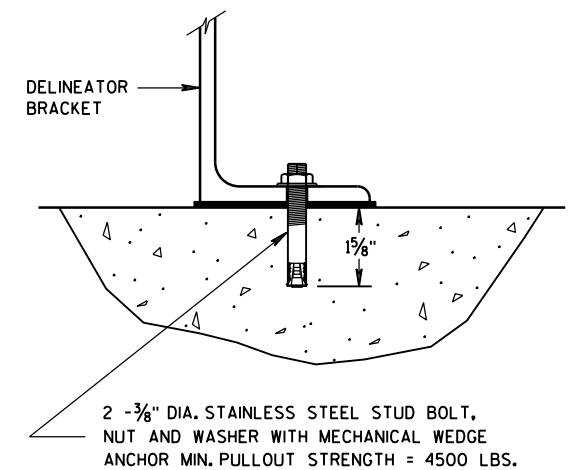
GENERAL NOTES

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

- ① DELINEATORS SHALL BE PLACED AT A CONSTANT DISTANCE FROM THE EDGE OF THE SHOULDER FOR THE LENGTH OF THE INSTALLATION.



DELINEATOR BRACKET



DELINEATOR BRACKET MOUNTING DETAIL

DELINEATOR POST, DELINEATOR, AND DELINEATOR BRACKET WITH REFLECTIVE SHEETING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

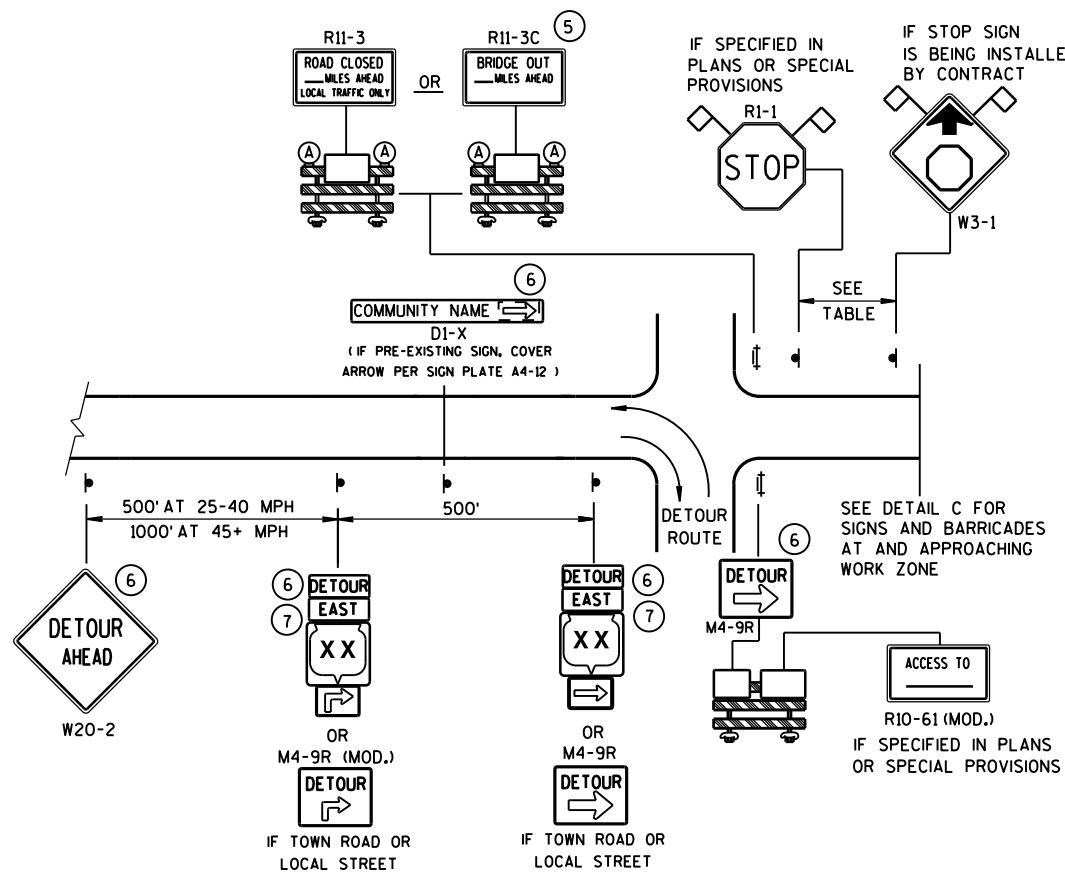
APPROVED

7/2013

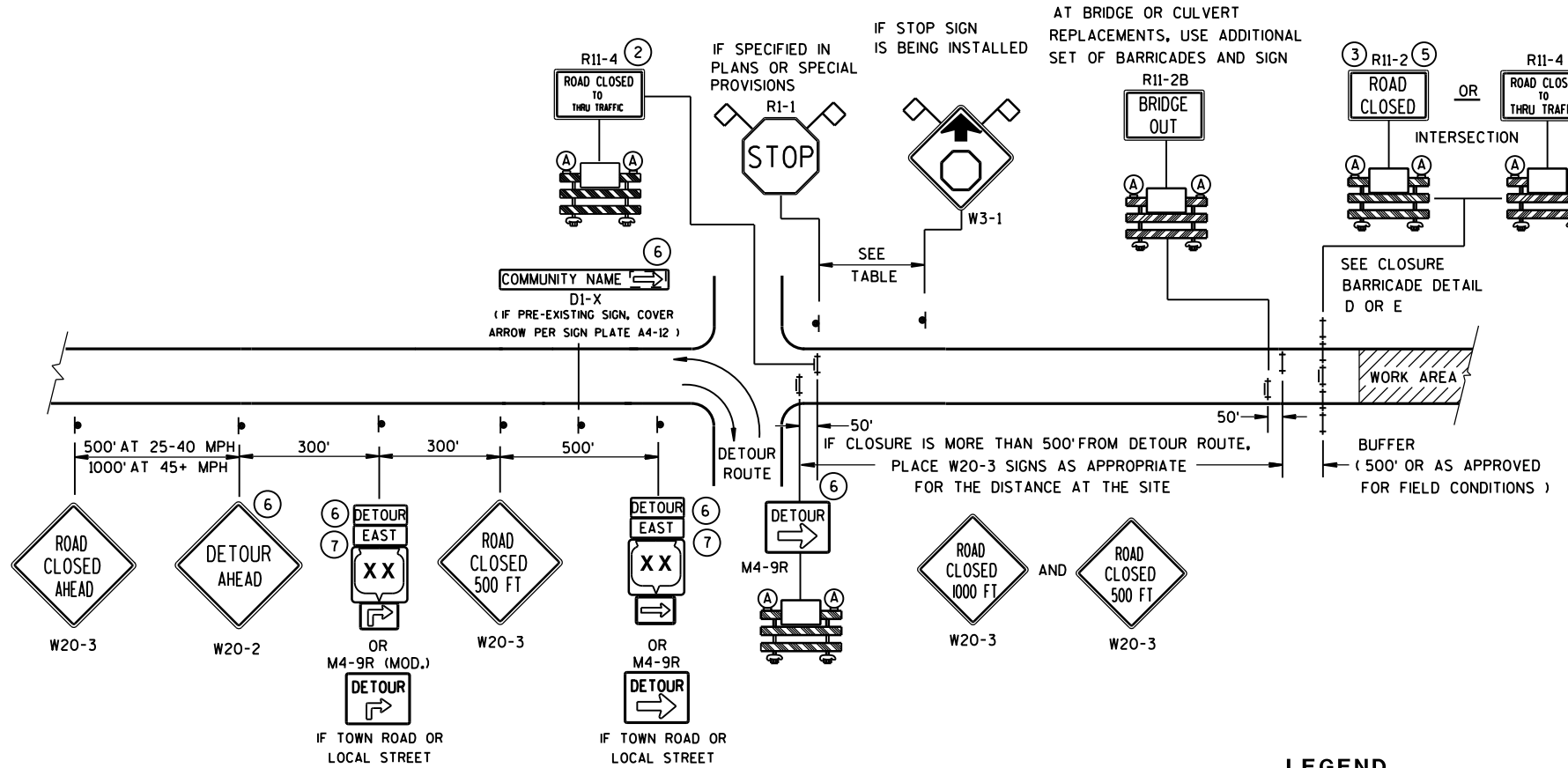
DATE

FHWA

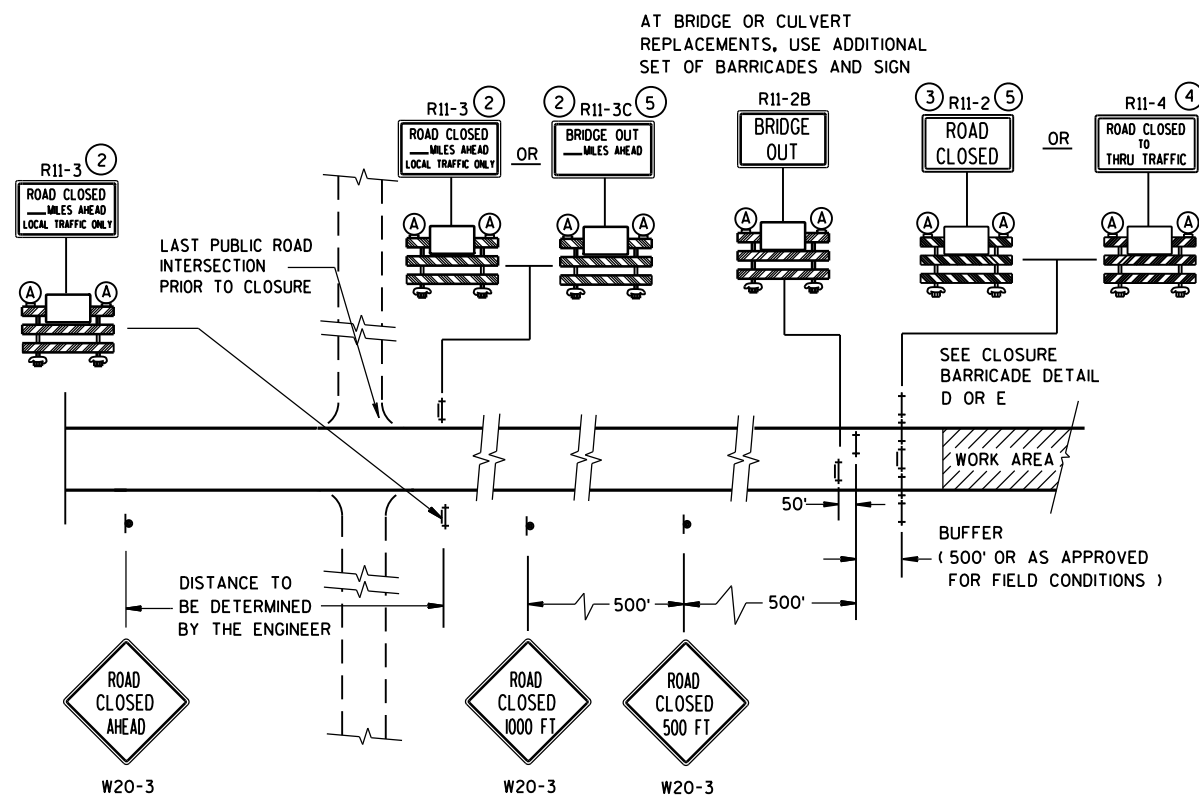
/S/ Travis Feltes
STATE TRAFFIC ENGINEER



DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR
WORK ZONE GREATER THAN 1/2 MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR
WORK ZONE LESS THAN 1/2 MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

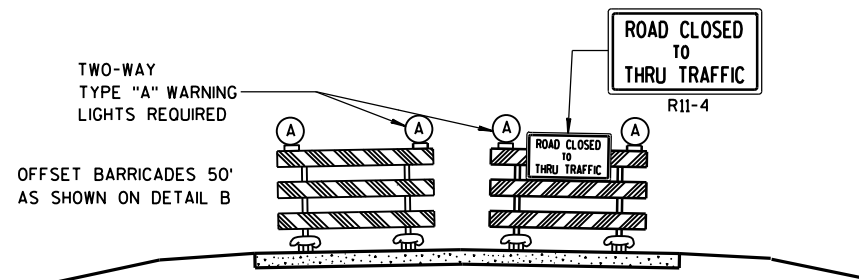
SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
8/2013 DATE	/S/ Travis Feltes STATE TRAFFIC ENGINEER OF DESIGN
FHWA	



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2-SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

R11-2 SHALL BE 48" X 30".

R11-3, R11-4 AND R10-61 SHALL BE 60" X 30".

M4-9 SHALL BE 30" X 24".

M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)

M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)

M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)

M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)

D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

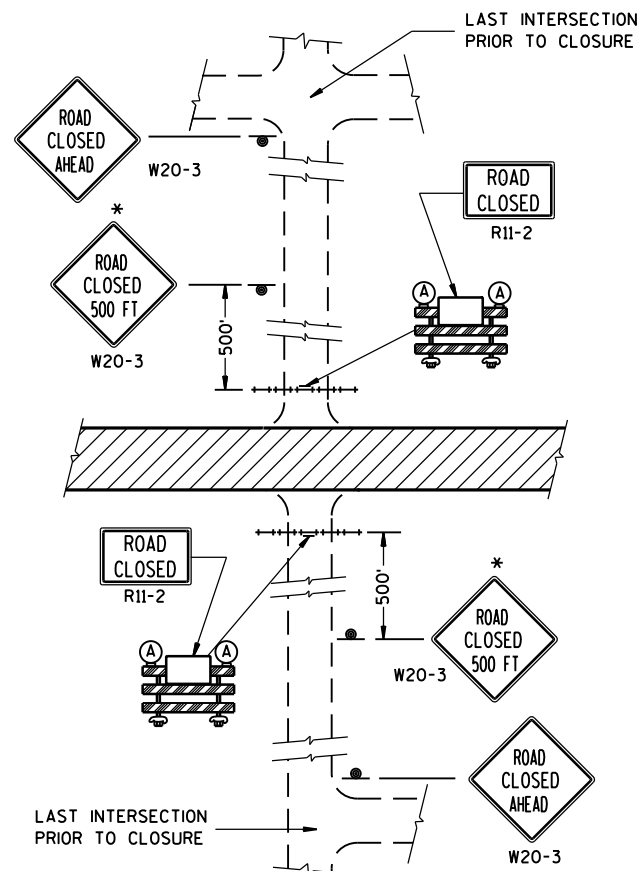
R1-1 SHALL BE 36" X 36".

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

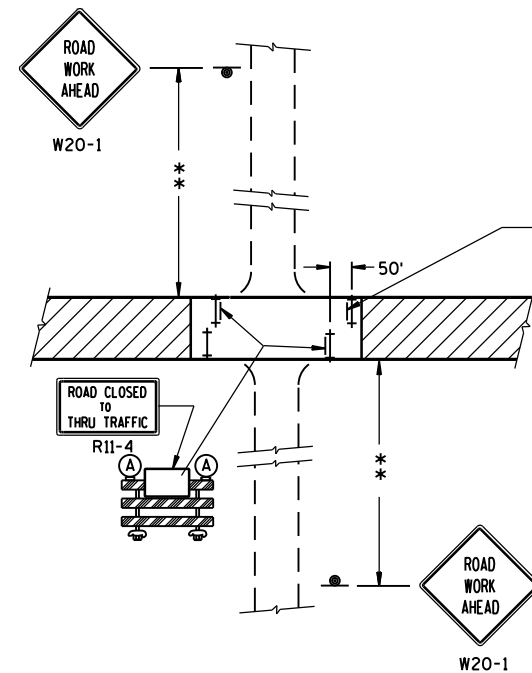
**BARRICADES AND SIGNS
FOR
MAINLINE CLOSURES**

**STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION**

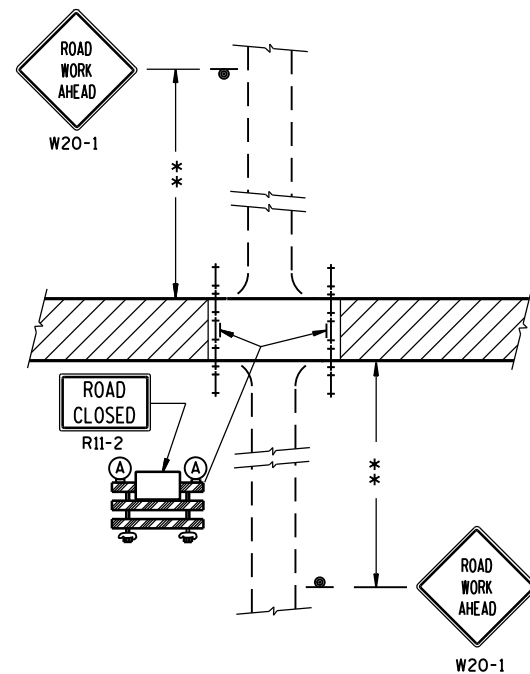
8/2013 /S/ Travis Feltes
DATE STATE TRAFFIC ENGINEER OF DESIGN
FHWA



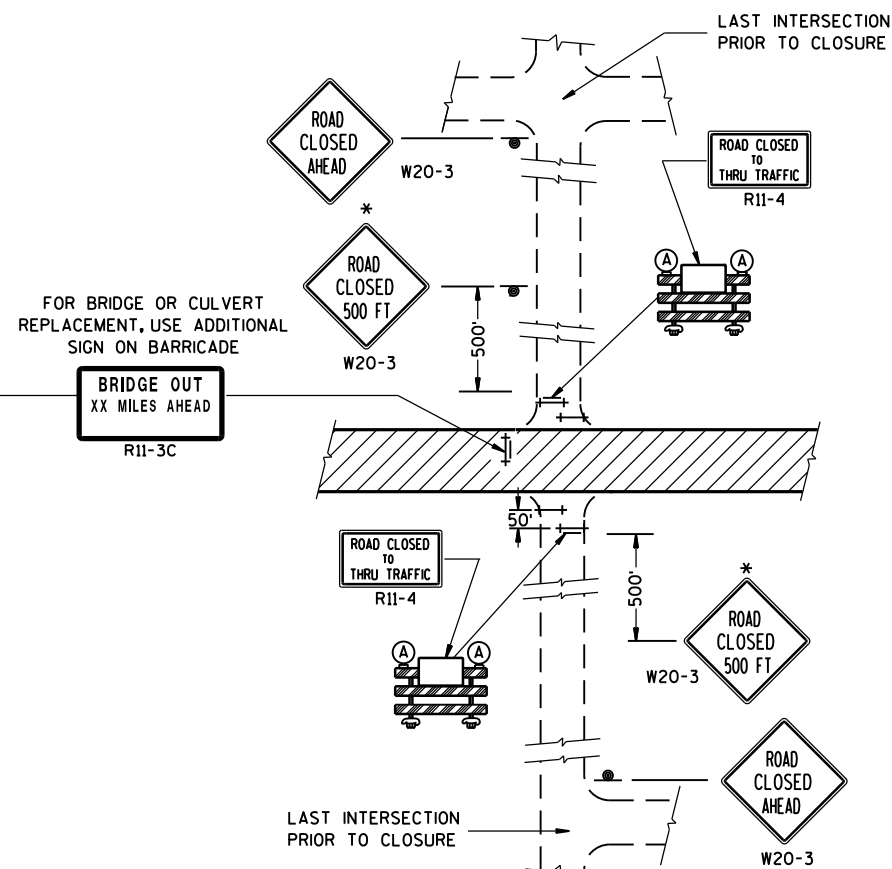
DETAIL 1
(NO ACCESS TO PROJECT)



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



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



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

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

R11-2 SHALL BE 48" X 30".

R11-4 AND R11-3 SHALL BE 60" X 30".

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

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

LEGEND

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

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

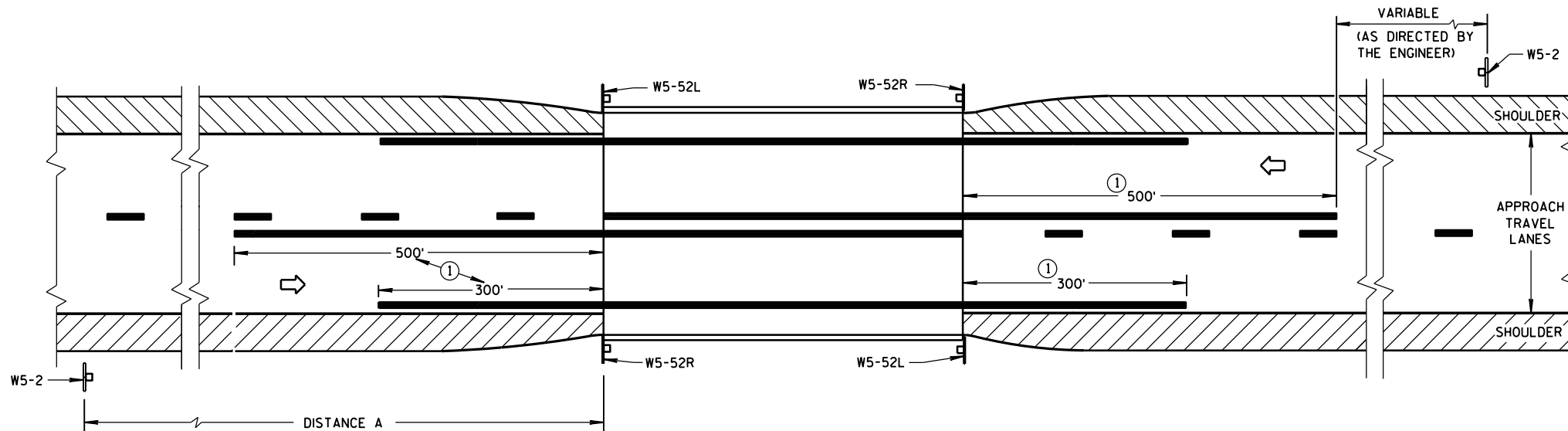
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/2013 /S/ Travis Feltes

DATE STATE TRAFFIC ENGINEER OF DESIGN

FHWA



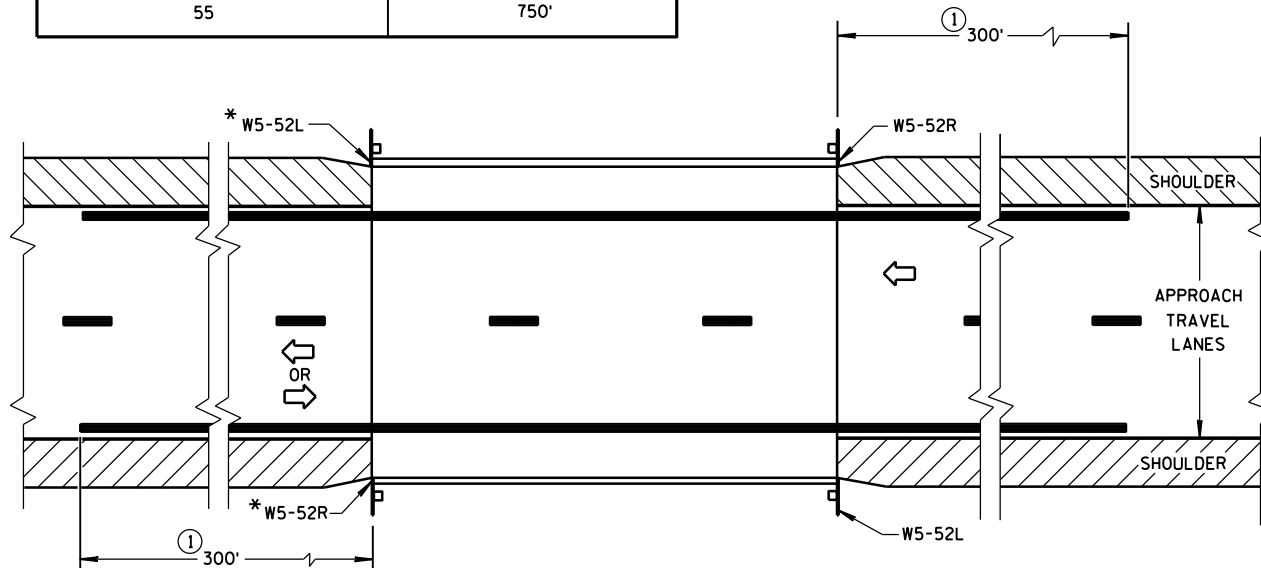
SITUATION 1

WARRANTING CRITERIA:

BRIDGE WIDTH IS AT LEAST 16 FEET BUT LESS THAN 24 FEET

DISTANCE TABLE

POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
25	150'
30	200'
35	250'
40	300'
45	400'
50	550'
55	750'

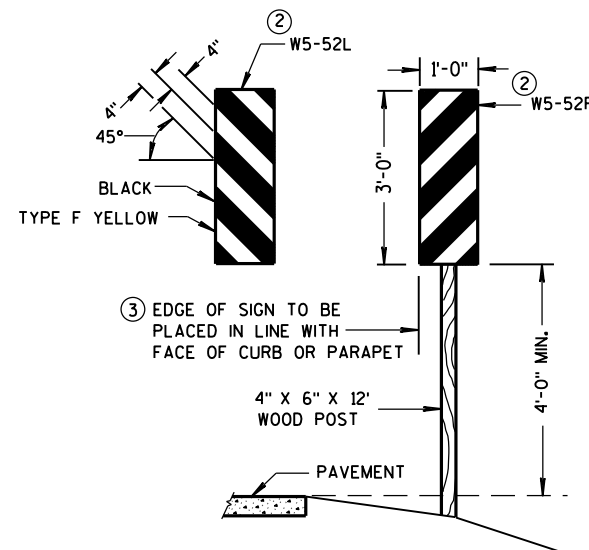


*OMIT ON ONE-WAY TRAVELLED WAYS

SITUATION 2

WARRANTING CRITERIA:

1. BRIDGE WIDTH IS AT LEAST 24 FEET AND
2. BRIDGE IS LESS THAN 6 FEET WIDER (ON EACH SIDE) THAN APPROACH TRAVEL LANES.



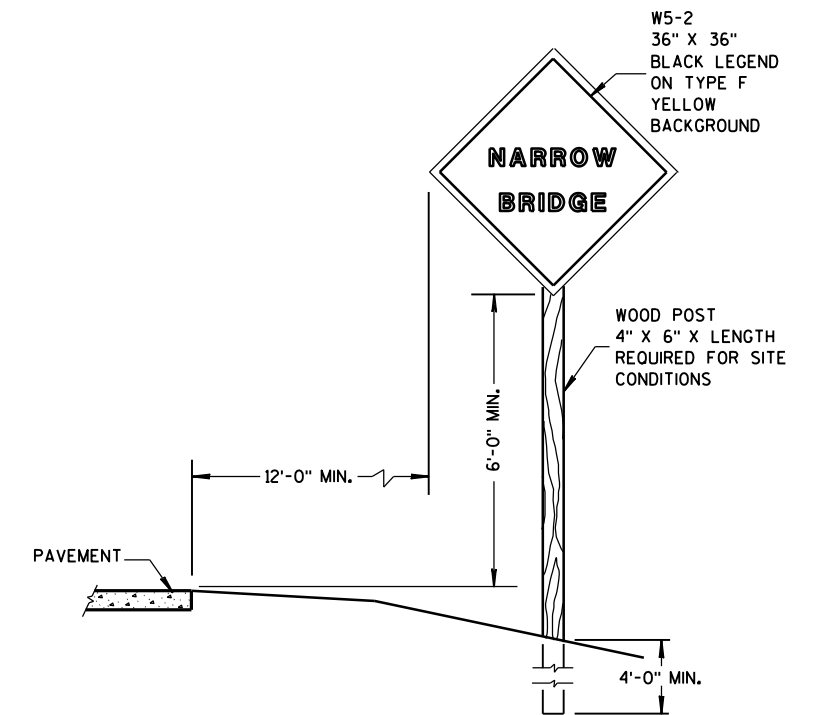
OBJECT MARKER PLACEMENT

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.

PAVEMENT MARKING SHOWN ON THIS DRAWING IS NOT REQUIRED UNLESS OTHERWISE SPECIFIED IN THE CONTRACT. WHEN SPECIFIED, PAVEMENT MARKING SHALL CONFORM TO THIS DRAWING AND OTHER CONTRACT REQUIREMENTS.

- ① MINIMUM DISTANCE UNLESS OTHERWISE SHOWN ON THE PLAN.
- ② FACE OF OBJECT MARKERS W5-52R, AND W5-52L SHALL BE COVERED WITH TYPE F REFLECTIVE SHEETING.
- ③ LOCATE OBJECT MARKER POST(S) BEHIND GUARDRAIL WHEN PRESENT.



SIGN PLACEMENT

SIGNING & MARKING FOR TWO LANE BRIDGES

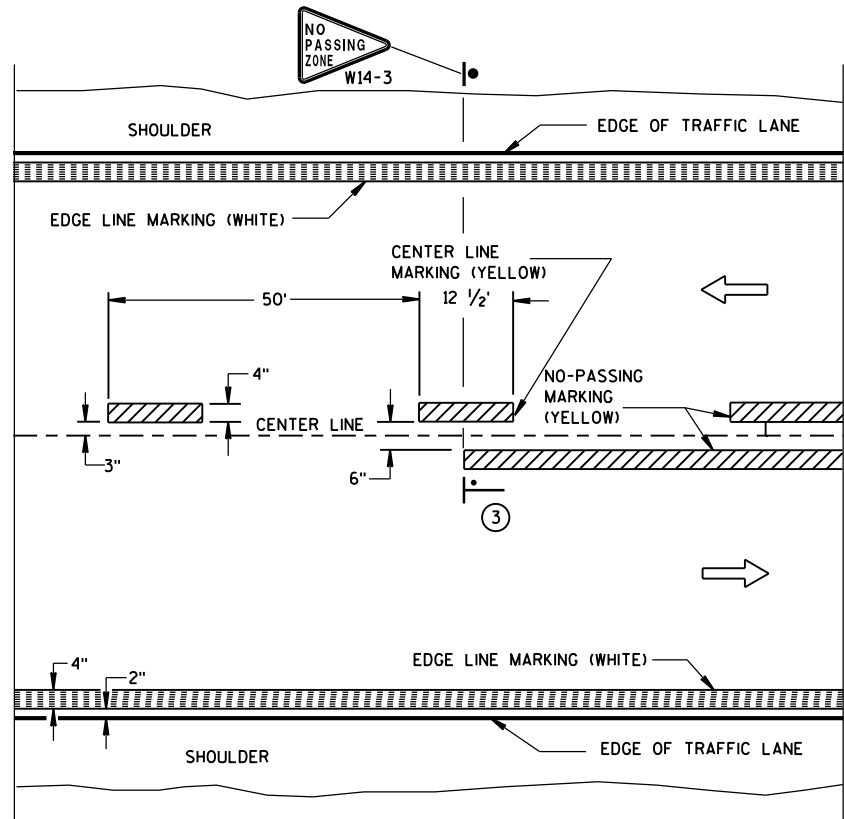
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

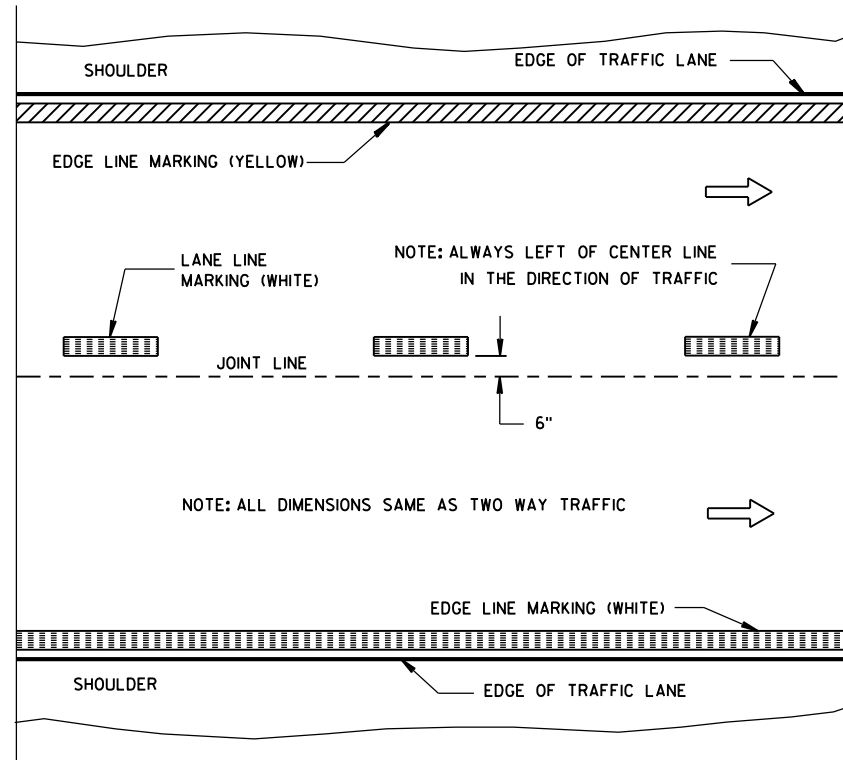
3-2014
DATE

FHWA

/S/ Travis Fettes
STATE TRAFFIC ENGINEER OF DESIGN

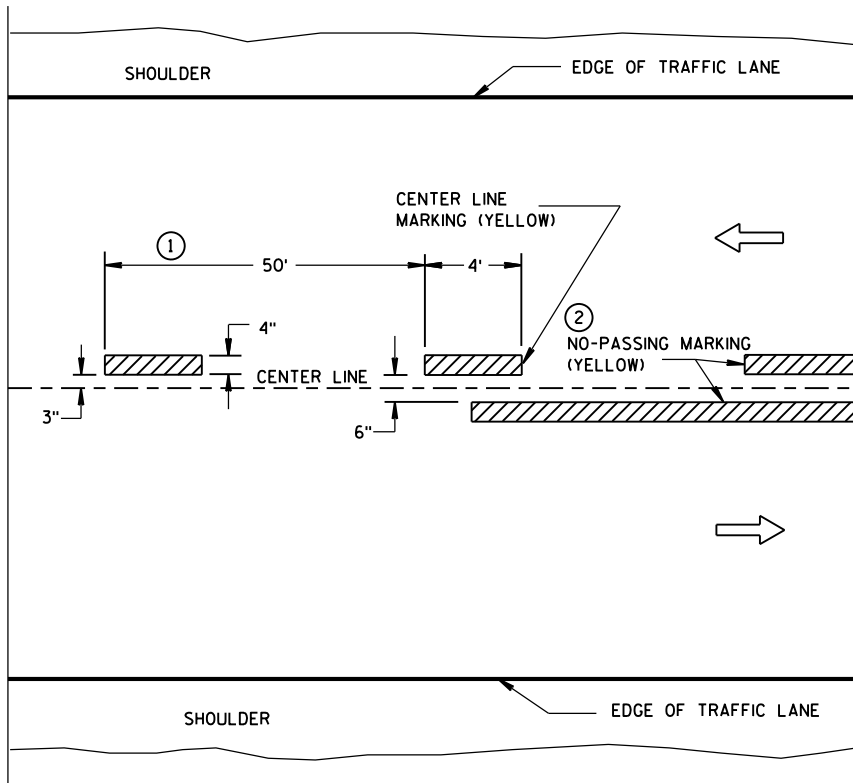


TWO WAY TRAFFIC

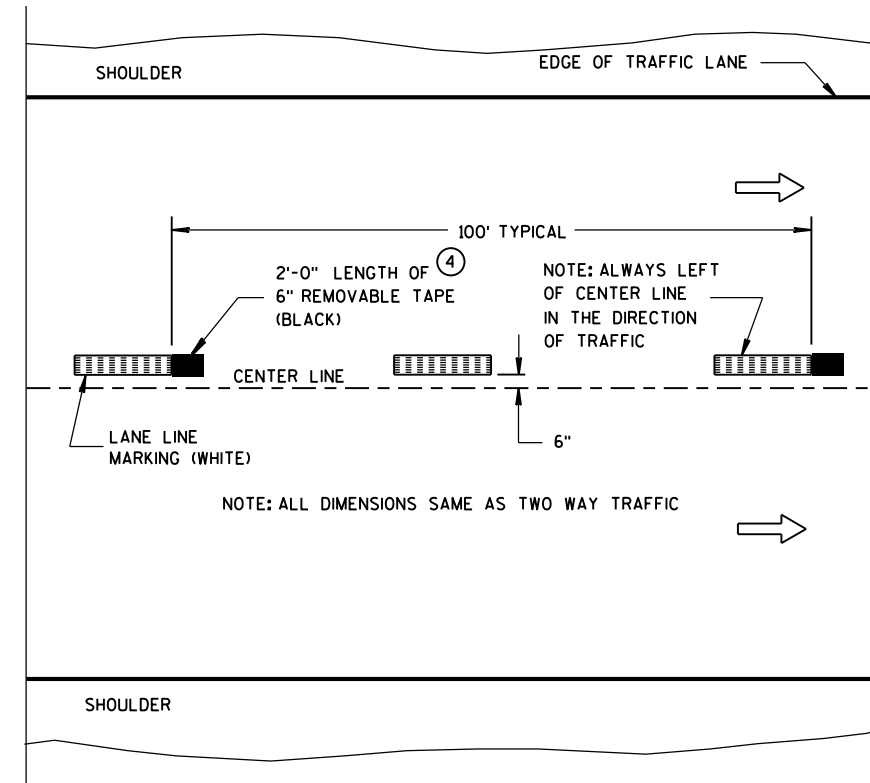


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

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

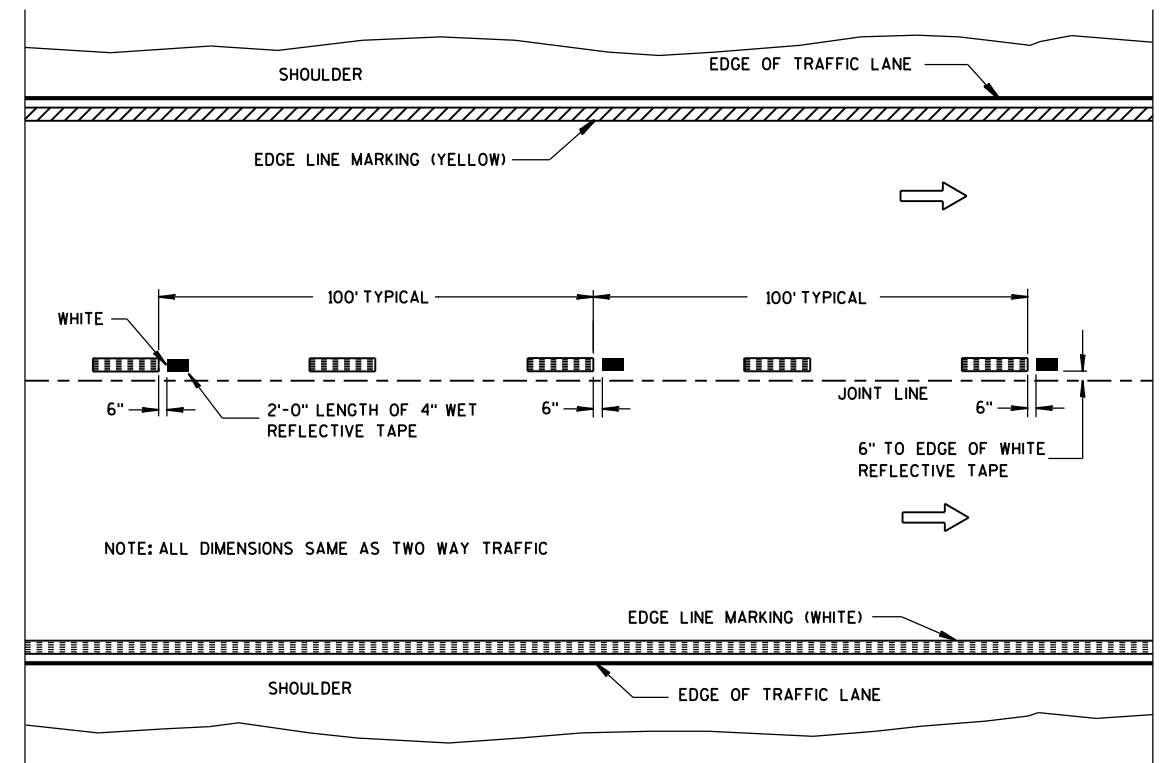
GENERAL NOTES

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

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

NOTE

ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL



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

LEGEND

- "T" MARKING
- POST MOUNTED SIGN

PAVEMENT MARKING
(MAINLINE)

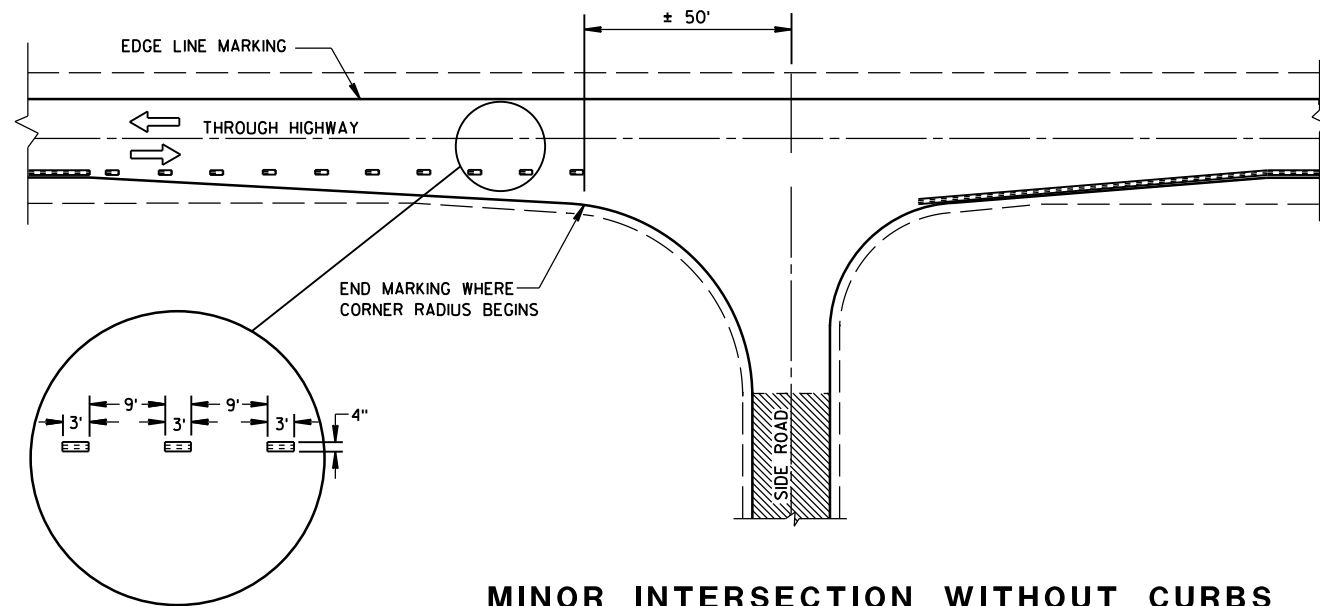
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5-13-2013
DATE

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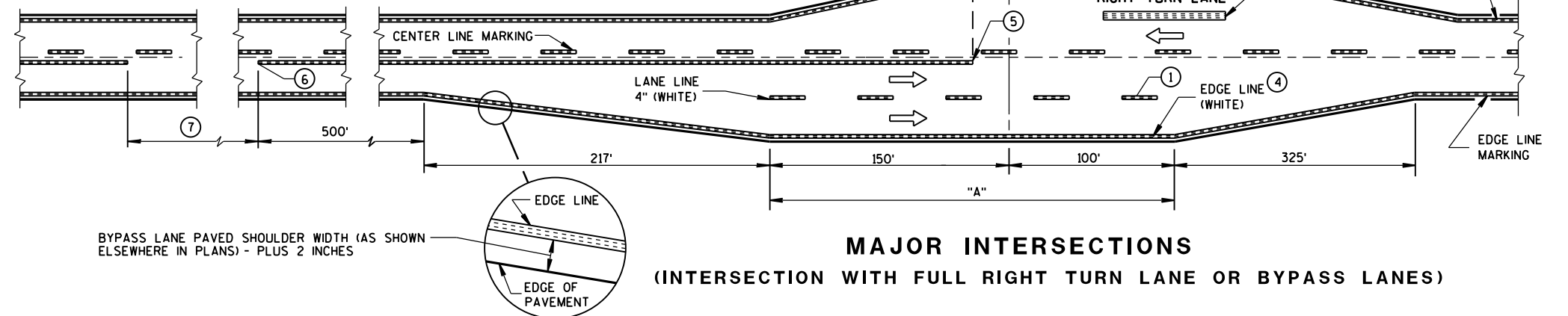
/S/ Travis Feltes
STATE TRAFFIC ENGINEER



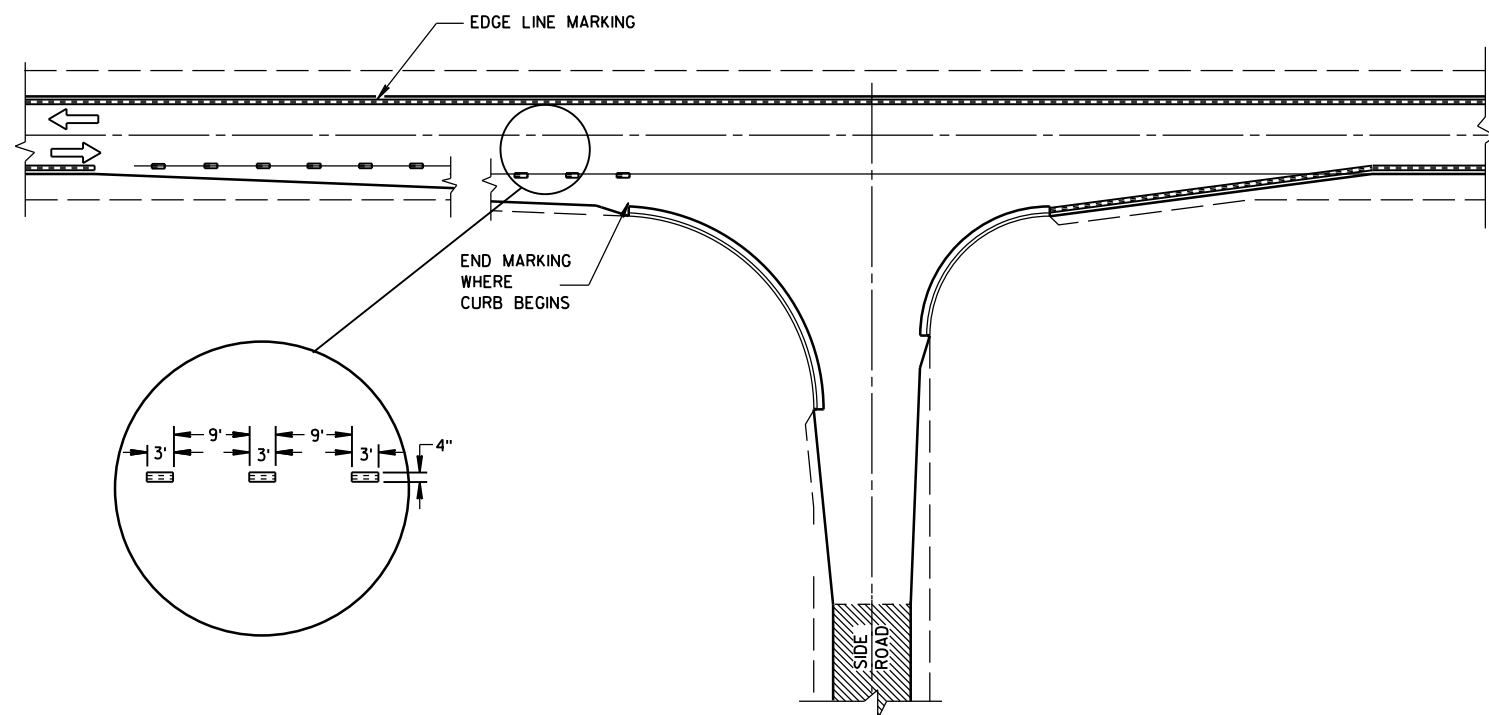
MINOR INTERSECTION WITHOUT CURBS

⑦

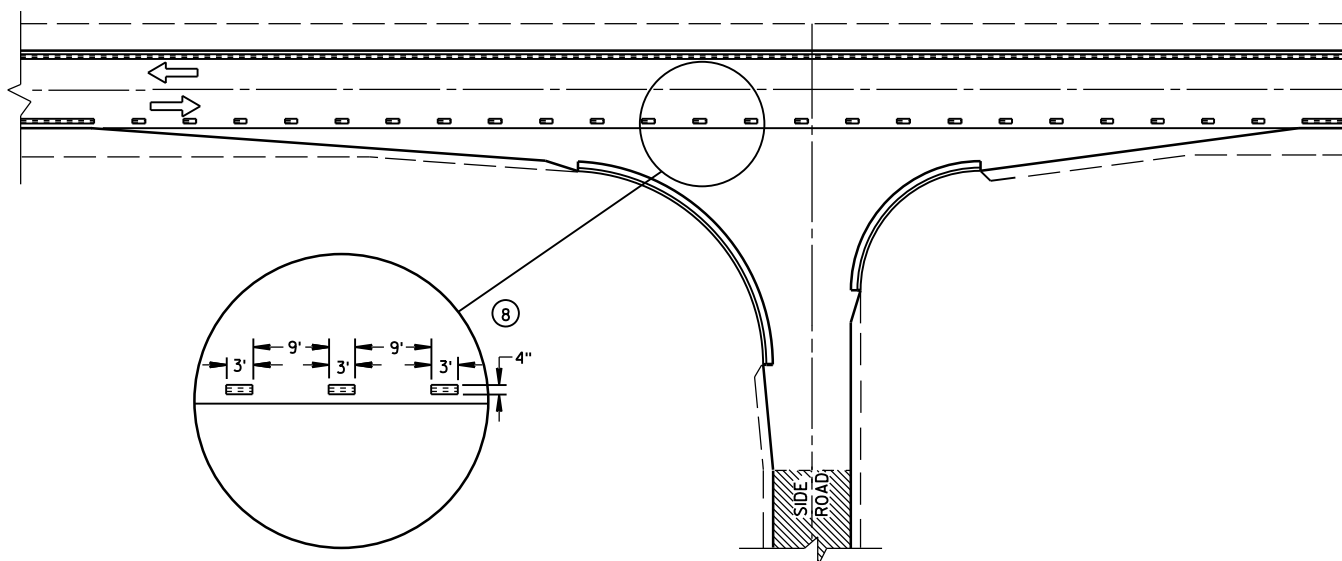
POSTED SPEED (MPH)	MINIMUM DISTANCE BETWEEN ZONES (FEET)
25 - 30	528
35 - 40	528
45 - 50	686
55	792



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



MINOR INTERSECTION WITH CURBS
(TYPICAL MARKING)



MINOR INTERSECTION WITH CURBS
③ (FOR SPECIAL CONDITIONS AS SPECIFIED)





GENERAL NOTES

- EDGE LINES SHALL BE OMITTED THROUGH INTERSECTIONS. EDGE LINES SHALL BE CONTINUED THROUGH DRIVEWAYS.
- ① WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
 - ② WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
 - ③ ALTERNATIVE MARKING SHALL BE PROVIDED WHEN SPECIFIED IN THE CONTRACT. TYPICAL SITUATIONS WHERE THIS MARKING MAY BE REQUIRED ARE WHERE THE INTERSECTION IS ON A SHARP HORIZONTAL CURVE OR CREST VERTICAL CURVE IN AN UNLIGHTED AREA SUCH THAT THE EDGE LINE MAY BE MISLEADING TO THE MOTORIST OR DISAPPEAR FROM SIGHT.
 - ④ THE EDGE LINE IN THE TAPER AREAS OF THE BYPASS LANE AND THE BYPASS LANE SHALL BE LOCATED 1-FOOT FROM EDGE OF PAVEMENT TO THE OUTSIDE EDGE OF EDGE LINE.
 - ⑤ BARRIER LINE ENDS AT SIDE ROAD PAVEMENT/SURFACE EDGE EXTENSION.
 - ⑥ BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.
 - ⑦ IF THE DISTANCE BETWEEN 2 SUCCESSIVE NO-PASSING ZONES IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES, CONNECT THE 2 ZONES.
 - ⑧ 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.
- ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL

PAVEMENT MARKING
(INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

LEGEND

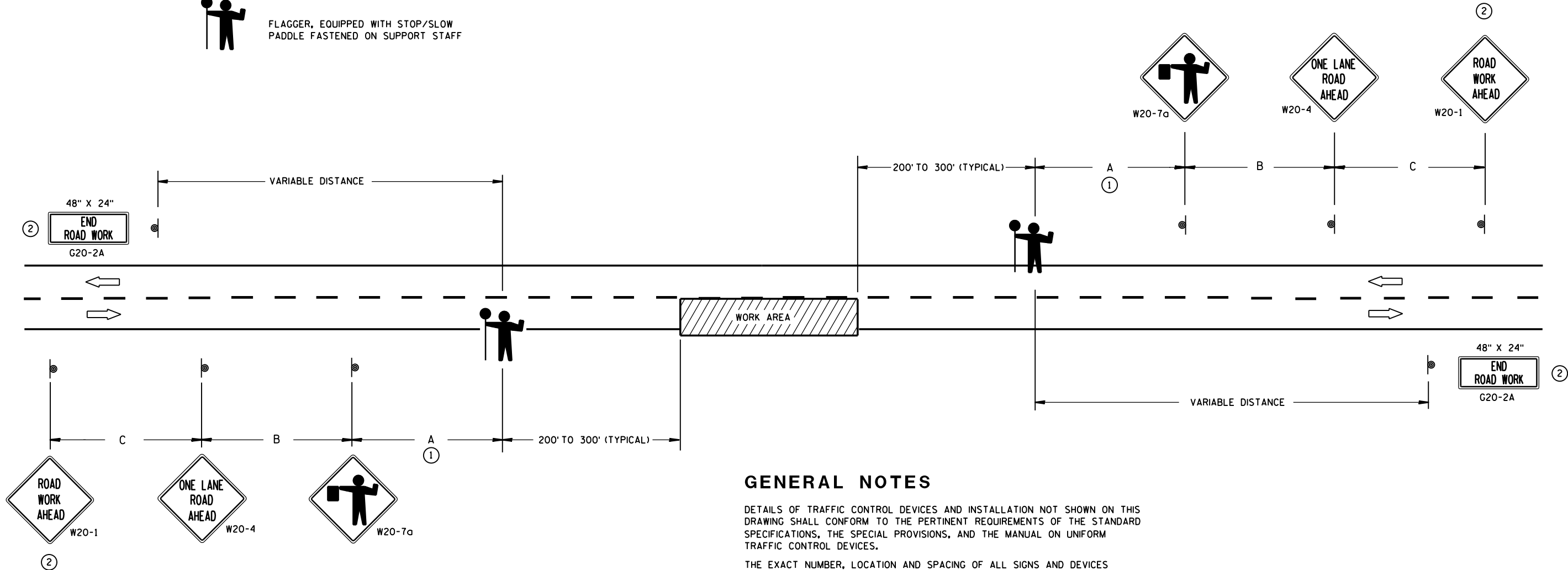
-  SIGN ON PORTABLE OR PERMANENT SUPPORT
-  DIRECTION OF TRAFFIC
-  WORK AREA
-  FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

SIGN SPACING TABLE

SPEED LIMIT	SIGN SPACING A,B,C
25-35 MPH	200'
35-40 MPH	350'
45-55 MPH	500'



USE OF THE "BE PREPARED TO STOP" SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7a AND W20-4 SIGNS. A 500' TYPICAL SPACING SHALL BE PROVIDED BETWEEN THE SIGNS.



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.

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES (AND THE 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.

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, COVER OR REMOVE ALL TEMPORARY TRAFFIC CONTROL SIGNS.

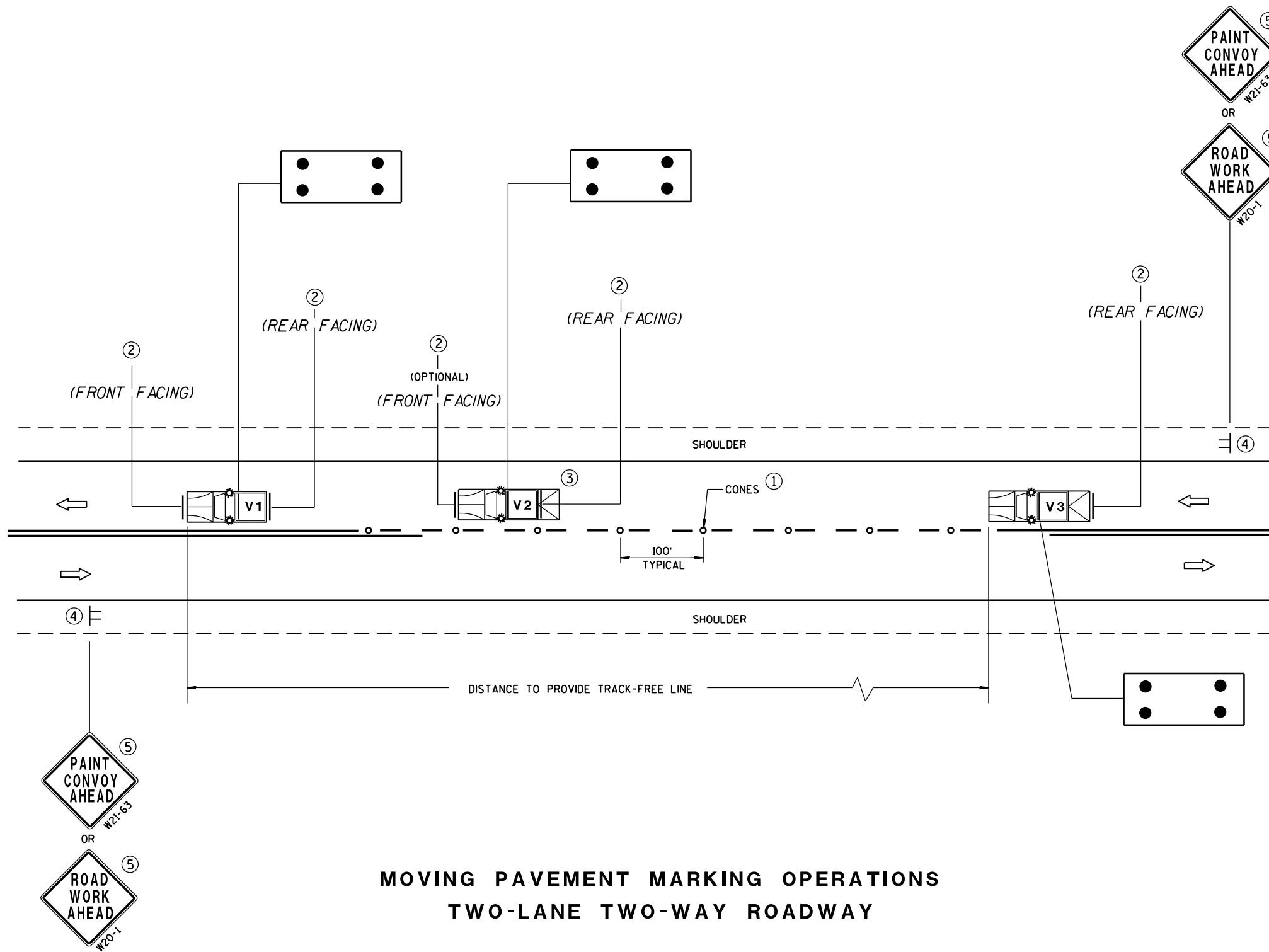
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

- ① FOR A MOVING WORK OPERATION, SIGNING FOR BOTH DIRECTIONS SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3500 FOOT 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.

TRAFFIC CONTROL FOR LANE
CLOSURE (SUITABLE FOR
MOVING OPERATIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013 /S/ Travis Feltes
DATE STATE TRAFFIC ENGINEER OF DESIGN
FHWA



MOVING PAVEMENT MARKING OPERATIONS
TWO-LANE TWO-WAY ROADWAY

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.

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.

IF SPEED LIMIT IS 40 MPH OR LESS STATIONARY SIGNS MAY BE OMITTED IF CONES ARE USED.

ALTERNATE SIGN MESSAGES, SUCH AS "PAINT CREW AHEAD" OR "ROAD PAINTING AHEAD" MAY BE USED.

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 OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

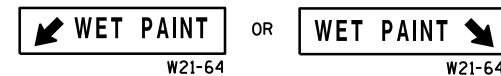
THE WORK AND SHADOW VEHICLES SHOULD PULL OVER PERIODICALLY TO ALLOW TRAFFIC TO PASS.

THIS DRAWING SHALL BE USED FOR CENTERLINE OR EDGELINE MARKING.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR TURN THE STATIONARY WARNING SIGNS AWAY FROM TRAFFIC.

① CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

② USE STANDARD SIGN W21-64 WITH APPROPRIATE ARROW.



③ OPTIONAL TRUCK-MOUNTED ATTENUATOR.

④ SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.

⑤ IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1 OR W21-63 ARE NOT REQUIRED.

LEGEND

V1 LEAD VEHICLE

V2 SHADOW VEHICLE

V3 TRAIL VEHICLE WITH TMA

TMA TRUCK-MOUNTED ATTENUATOR

SIGN ON TEMPORARY SUPPORT

DIRECTION OF TRAFFIC

CONES

FLASHING ARROW PANEL (CAUTION)

MOVING PAVEMENT MARKING
OPERATION
TWO-LANE TWO-WAY ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5/3/2013
DATE

/S/ Travis Feltes
STATE TRAFFIC ENGINEER

FHWA

Notes



Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

<http://www.dot.wisconsin.gov>