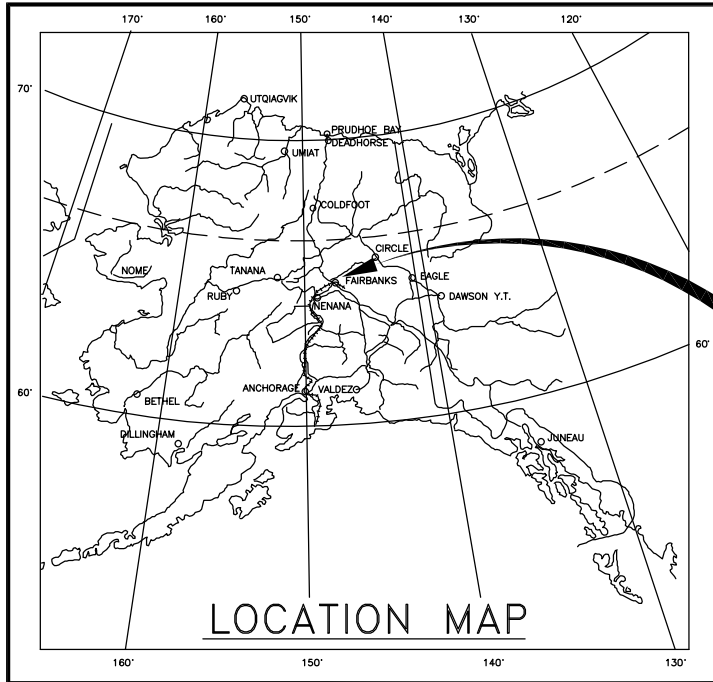


NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	A1	A2
			CDS ROUTE: 175500	MILEPOINT: 0	TO	8.16	
			CDS ROUTE: 175510	MILEPOINT: 0	TO	4.65	

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
&  
PUBLIC FACILITIES

PROPOSED HIGHWAY PROJECT  
PENDING/NFHWY00570  
CHENA RIDGE AND CHENA PUMP RESURFACING  
PAVING, BRIDGE, AND GUARDRAILS



PROJECT LOCATION

INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
A1	TITLE SHEET
A2	LEGEND & SHEET LAYOUT INDEX
B1-B2	TYPICAL SECTIONS
C1	ESTIMATE OF QUANTITIES & GENERAL NOTES
D1-D8	SUMMARIES
E1	MISCELLANEOUS DETAILS
N1-N6	BRIDGE PLANS
Q1	EROSION SEDIMENT CONTROL PLAN
T1	TRAFFIC CONTROL PLANS (and/or DEVICES)
V1-V25	STANDARD PLANS

THE FOLLOWING STANDARD PLANS APPLY TO THIS PROJECT:  
G-00.05, G-05.11S, G-05.11W, G-10.20, G-14.01, G-20.12,  
G-26.00, G-32.02  
S-00.12, S-01.02, S-05.02, 20.11, S-23.00, S-30.05, S-31.02

PROJECT SUMMARY	
WIDTH OF PAVEMENT	32-82 FEET
LENGTH OF PROJECT	12.81 MILES



JOHN NETARDUS, P.E., PROJECT MANAGER  
PATRICK WOOLERY, DESIGNER

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
&  
PUBLIC FACILITIES  
APPROVED BY:

\_\_\_\_\_  
DATE \_\_\_\_\_

Sarah E. Schacher, P.E.  
Preconstruction Engineer, Northern Region  
ACCEPTED FOR CONSTRUCTION:

\_\_\_\_\_  
DATE \_\_\_\_\_

Joseph P. Kemp, P.E.  
Acting Regional Director, Northern Region

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	A2	A2

PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200  
 H:\Projects\Fbks\_NF\NFHWY00570\_Chenia\_Ridge\_and\_Pump\_Resurfacing\6\_Design\5\_Civil\_3D\3\_Drawings\00570\_TITLE\_LEGEND-HWYS\_Legend & Abbreviations.Fri, Aug/05/22 03:35pm

	RECOVERED	SET
BLM MONUMENT		
GLO MONUMENT		
USC&GS MONUMENT		
PRIMARY MONUMENT		
CENTERLINE MONUMENT IN CASING		
PRIMARY R.O.W. MONUMENT		
BEARING OBJECT		
MISCELLANEOUS MONUMENT		
LINE OF SIGHT MONUMENT		
CONCRETE R.O.W. MONUMENT		
BENCHMARK		
REBAR AND CAP		
REBAR		
IRON PIPE		
PK NAIL		
SPIKE		
HUB AND TACK		
CONSTRUCTION CENTERLINE		
MISCELLANEOUS CENTERLINE		
STATION EQUATION		
PROJECT RIGHT-OF-WAY LINE		
EXISTING RIGHT-OF-WAY LINE		
EXISTING PROPERTY LINE		
CONTROLLED ACCESS LINE		
UTILITY EASEMENT LINE		
TEMPORARY EASEMENT LINE (TCP OR TCE)		
ACCESS OR SECTION LINE EASEMENT		
PROPOSED CUT SLOPE LIMIT		
PROPOSED FILL SLOPE LIMIT		
SECTION LINE		
1/4 SECTION LINE		
1/16 SECTION LINE		
TOWNSHIP & RANGE LINE		

	EXISTING	PROPOSED
SANITARY SEWER (FLOW DIRECTION →)		
FUEL LINE		
GAS LINE		
WATER LINE		
METER, VALVE, FIRE HYDRANT		
EXISTING STORM DRAIN (FLOW DIRECTION →)		
PROPOSED STORM DRAIN		
FIBER OPTIC LINE		
DIRECT BURIAL TELEPHONE CABLE		
DIRECT BURIAL ELECTRIC CABLE		
ELECTRIC LINE (OVERHEAD)		
POWER POLE LINE		
JOINT USE POWER & TELEPHONE		
TELEPHONE POLE LINE		
POLE ANCHOR		
STUB POLE (POWER OR TELEPHONE)		
TELEPHONE DUCT		
TELEPHONE PEDESTAL		
BURIED CABLE MARKER		
PIPELINE MARKER OR VALVE		
CATCH BASIN OR DROP INLET		
MANHOLE		
SANITARY SEWER CLEAN OUT		

	EXISTING	PROPOSED
ROADWAY/PAVEMENT EDGE		
FENCE		
CURB AND GUTTER		
DETECTABLE WARNINGS		
GUARDRAIL		
CULVERT PIPE		
SIGN		
MAILBOX		
RAILROAD TRACKS		
RAILROAD DEVICES		
TREE LINE		
WATER BOUNDARY		
ORDINARY HIGH WATER LINE		
FLOW CENTERLINE		
FLOW DIRECTION		
WETLANDS		
EXISTING BUILDINGS		
POST OR BOLLARD		
WELL OR MONITORING WELL		
SEPTIC PIPE		
FUEL TANK FILL PIPE/VENT		
SATELLITE DISH		
TEST HOLE		
CONIFER TREE		
DECIDUOUS TREE		
GRAVE		
THERMOSIPHON		
PARKING METER		
VEHICLE PLUG-IN		
DELINEATOR/GUIDE MARKER		

	EXISTING	PROPOSED
JUNCTION BOX, TYPE IA		
JUNCTION BOX, TYPE II		
JUNCTION BOX, TYPE III		
SIGNAL FACE, VEHICULAR		
SIGNAL FACE, BACKPLATE		
SIGNAL FACE, LEFT TURN, BACKPLATE		
SIGNAL FACE, PEDESTRIAN		
LOOP DETECTOR		
VIDEO DETECTOR		
RADAR DETECTOR		
OPTICOM DETECTOR		
PEDESTRIAN PUSH BUTTON		
SIGNAL POST W/O MAST ARM		
SIGNAL POLE W/MAST ARM		
SIGNAL CONTROLLER		
LOAD CENTER		
LUMINAIRE		
RIGID METAL CONDUIT		

- H = HOUSE
- G = GARAGE
- M = MERCHANT/STORE
- B = BARN
- S = SHED
- P = PRIVY
- SS = SERVICE STATION
- W = WAREHOUSE

**ABBREVIATIONS:**

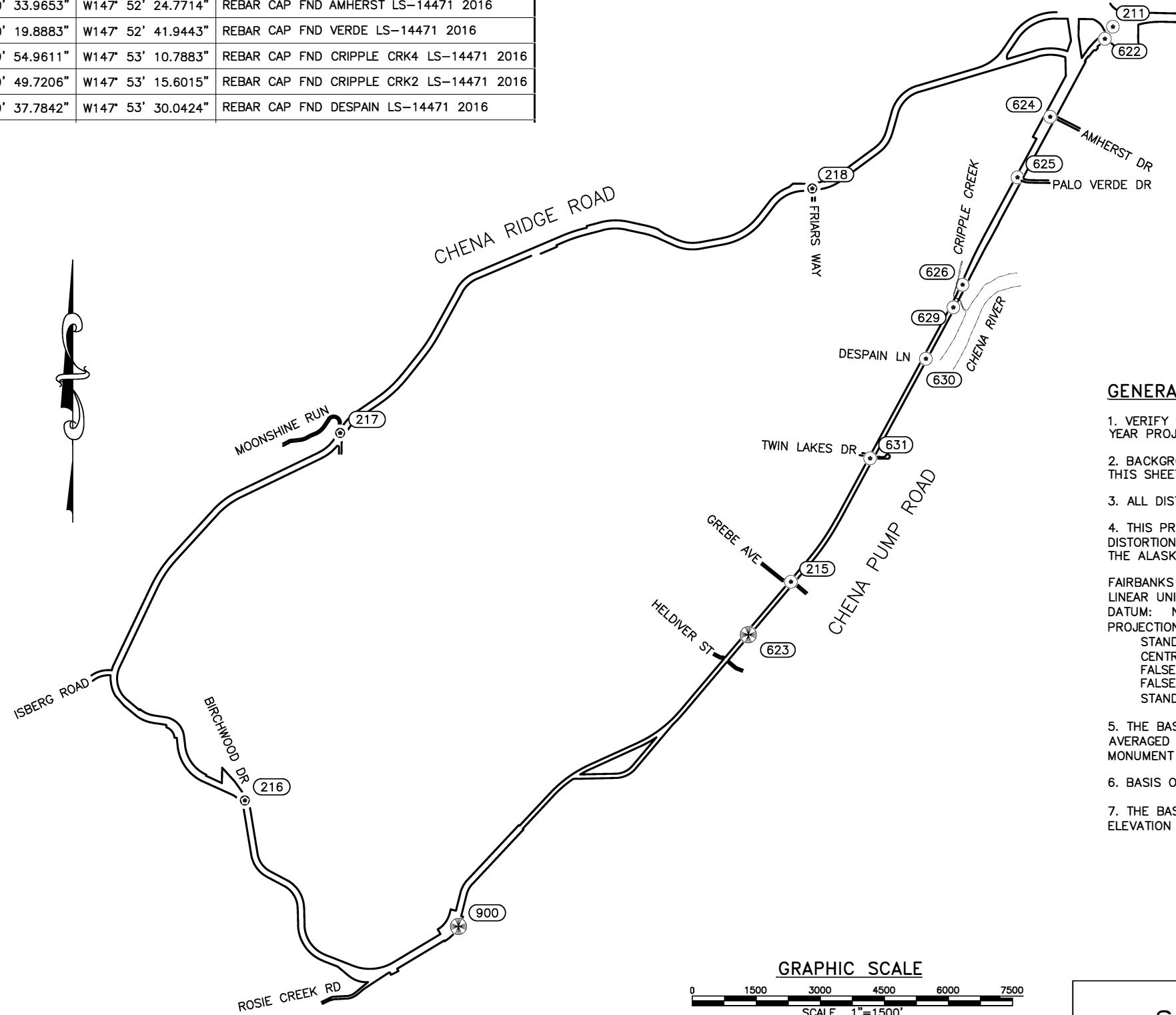
APPROX	APPROXIMATELY	SQ. FT.	SQUARE FOOT
C	CENTERLINE	STA	STATION
CY	CUBIC YARD	T	TANGENT
E	EAST, EASTING	TCE	TEMPORARY CONSTRUCTION EASEMENT
ELE, ELEV	ELEVATION	TS	TUBE STEEL
FT.	FOOT, FEET	TYP	TYPICAL
H	HORIZONTAL	V	VERTICAL
HW/D	HEADWATER TO DIAMETER RATIO	VPC	VERTICAL POINT OF CURVATURE
IE	INVERT ELEVATION	VPI	VERTICAL POINT OF INTERSECTION
IN, "	INCH, INCHES	VPT	VERTICAL POINT OF TANGENCY
L	LENGTH OF CURVE	W	WEST
L.C.L	LEFT OF CENTERLINE	WWR	WELDED WIRE REINFORCEMENT
LT	LEFT	Ø	DIAMETER
LVC	LENGTH OF VERTICAL CURVE		
MAX	MAXIMUM		
MIN	MINIMUM		
N	NORTH, NORTHING		
NO.	NUMBER		
NTS	NOT TO SCALE		
O.C.	ON CENTER		
PC	POINT OF CURVATURE		
POT	POINT ON TANGENT		
PST	PERFORATED STEEL TUBE		
PT	POINT OF TANGENCY		
PVI	POINT OF VERTICAL INTERSECTION		
R	RADIUS		
R.C.L	RIGHT OF CENTERLINE		
RT	RIGHT		
S	SOUTH		

**LEGEND AND ABBREVIATIONS**



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO	TOTAL SHEETS
			ALASKA	0645(015)/NFHWY00570	2023	A3	A3

CONTROL MONUMENTS						
POINT NO.	NORTHING	EASTING	ELEVATION	LATITUDE	LONGITUDE	DESCRIPTION
211	200550.32	655094.22	478.32	N64° 50' 54.9281"	W147° 51' 51.5070"	REBAR CAP FND 11 PLS 14471 2016
215	187555.34	647555.06	432.32	N64° 48' 45.9314"	W147° 54' 41.2081"	REBAR CAP FND GREBE LS-14471 2016
216	182435.06	634768.93	952.16	N64° 47' 53.5201"	W147° 59' 34.5122"	REBAR CAP SET BRCHWD 14471-S 2021
217	191039.60	636999.40	1131.93	N64° 49' 18.5569"	W147° 58' 46.3122"	REBAR CAP SET MOONSHINE 14471-S 2021
218	196762.20	648054.41	823.63	N64° 50' 16.6074"	W147° 54' 32.9541"	REBAR CAP SET FRIARS 14471-S 2021
622	200267.61	654905.96	455.56	N64° 50' 52.1188"	W147° 51' 55.7644"	REBAR CAP FND GUMP LS-14471 2016
623	186316.11	646556.64	431.39	N64° 48' 33.5844"	W147° 55' 03.8208"	PRIM MON FND PUMP2.8 LS-14471 2016
624	198441.81	653624.47	458.11	N64° 50' 33.9653"	W147° 52' 24.7714"	REBAR CAP FND AMHERST LS-14471 2016
625	197022.67	652860.52	454.03	N64° 50' 19.8883"	W147° 52' 41.9443"	REBAR CAP FND VERDE LS-14471 2016
626	194508.85	651574.93	435.90	N64° 49' 54.9611"	W147° 53' 10.7883"	REBAR CAP FND CRIPPLE CRK4 LS-14471 2016
629	193979.57	651358.69	436.71	N64° 49' 49.7206"	W147° 53' 15.6015"	REBAR CAP FND CRIPPLE CRK2 LS-14471 2016
630	192776.30	650715.59	436.34	N64° 49' 37.7842"	W147° 53' 30.0424"	REBAR CAP FND DESPAIN LS-14471 2016



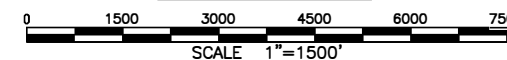
**GENERAL NOTES**

1. VERIFY HORIZONTAL AND VERTICAL CONTROL PRIOR TO USE. ON MULTI YEAR PROJECTS, VERIFY ALL CONTROL ON A SEASONAL BASIS.
2. BACKGROUND MAPPING IS SHOWN FOR ORIENTATION PURPOSES ONLY. THIS SHEET DOES NOT PURPORT TO DEPICT RIGHT OF WAY.
3. ALL DISTANCES SHOWN ARE GROUND DISTANCES, IN U.S. SURVEY FEET.
4. THIS PROJECT IS LOCATED ENTIRELY WITHIN THE FAIRBANKS LOW DISTORTION PROJECTION (LDP), A LOW DISTORTION PROJECTION CREATED BY THE ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES.  
  
FAIRBANKS LDP DEFINITION:  
LINEAR UNIT: U.S. SURVEY FOOT (SFT)  
DATUM: NAD83(2011)  
PROJECTION: LAMBERT CONFORMAL CONIC, (SINGLE PARALLEL)  
STANDARD PARALLEL AND GRID ORIGIN: 64°51'00"N  
CENTRAL MERIDIAN (GRID ORIGIN): 146°56'00"W  
FALSE NORTHING: 200,000 SFT  
FALSE EASTING: 800,000 SFT  
STANDARD PARALLEL SCALE: 1.00003 (EXACT)
5. THE BASIS OF COORDINATES IS THE NAD83(2011)(EPOCH:2010.0000) OPUS AVERAGED POSITION OF RECOVERED CONTROL POINT 900 "ROSIE" A PRIMARY MONUMENT STAMPED "ROSIE LS 11649 2017"
6. BASIS OF BEARING IS FAIRBANKS LDP.
7. THE BASIS OF ELEVATION IS THE OPUS AVERAGED GEOID12A (NAVD88) ELEVATION OF 573.50 FT AT POINT 900 "ROSIE".

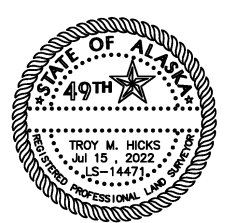
**LEGEND**

- ⊕ PRIMARY MONUMENT FOUND
- REBAR AND CAP FOUND

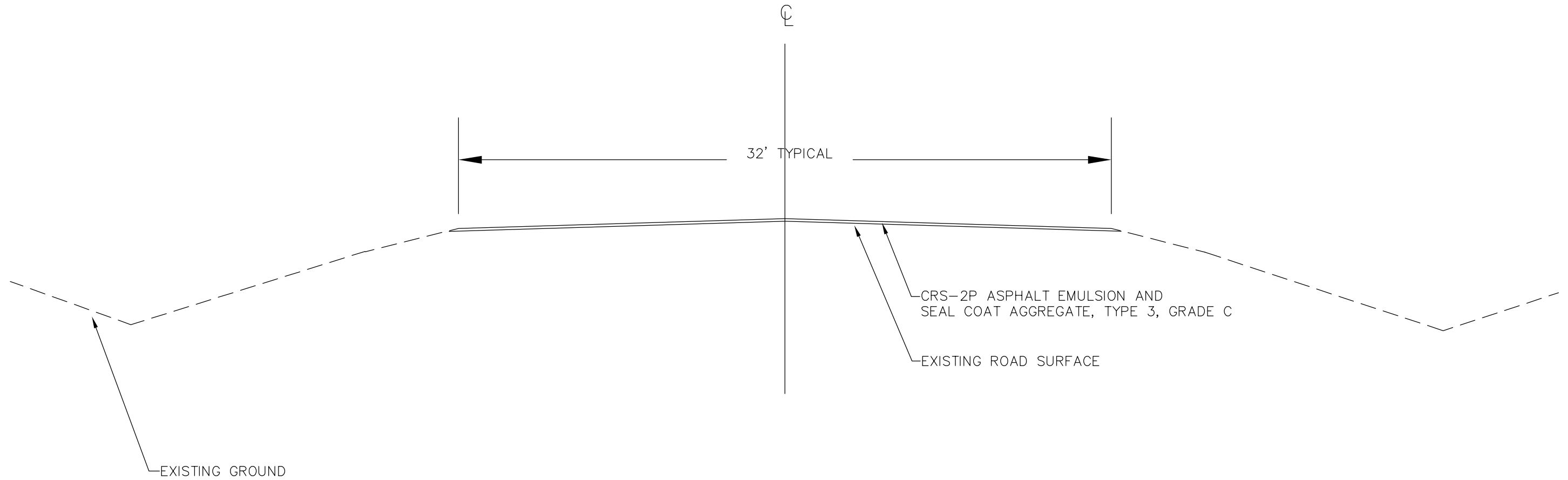
**GRAPHIC SCALE**



**SURVEY CONTROL**



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	B1	B2



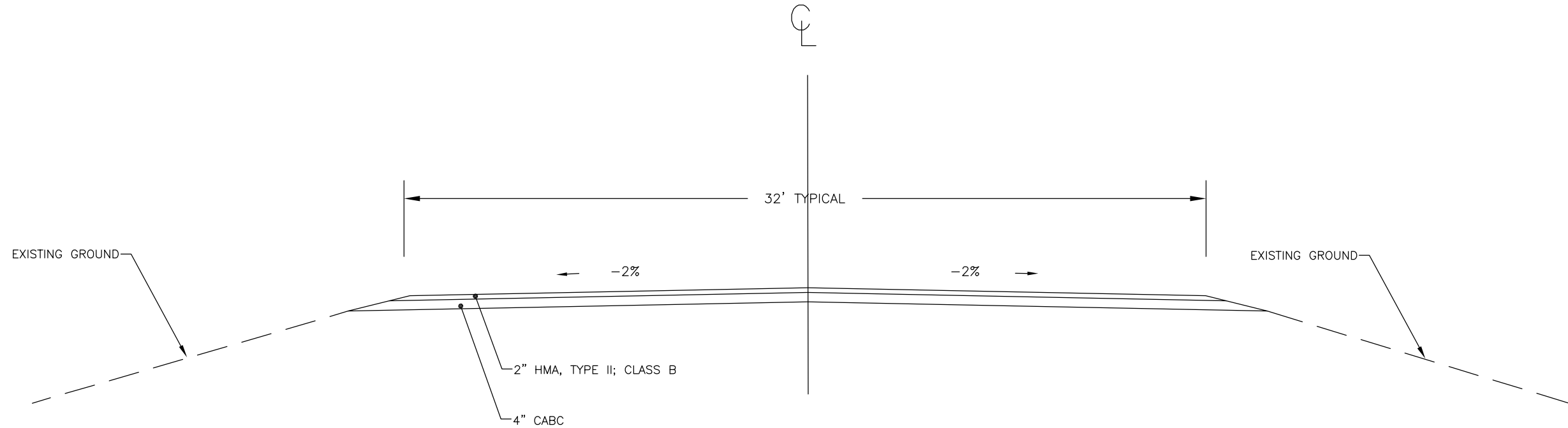
PROPOSED TYPICAL SECTION – SEAL COAT  
 CHENA RIDGE ROAD AND CHENA PUMP ROAD  
 10+40 TO 46+00, 84+00 TO 626+30, 639+30 TO 680+91

TYPICAL SECTION 1



PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200  
 H:\Projects\Fbs\_NF\NFHWY00570 Chena Ridge and Pump Resurfacing\6 Design\5 Civil\3D\3 Drawings\00570\_B-TYPICAL SECTIONS 1 OF 2.Fri. Aug/05/22 03:35pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	B2	B2



FROM STATION 46+00 TO STATION 84+00, RECLAIM ASPHALT, AND PAVE TO MATCH EXISTING ROADWAY  
 USE THIS SECTION  
 THIS WORK TO BE PERFORMED AT LEAST 2 WEEKS PRIOR TO SURFACE SEAL ACTIVITIES IN THIS AREA

PROPOSED TYPICAL SECTION – REPAVED AREAS  
 CHENA RIDGE ROAD AND CHENA PUMP ROAD  
 46+00 TO 84+00

TYPICAL SECTION 2 OF 2



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	C1	C1

### ESTIMATE OF QUANTITIES

PAY ITEM	DESCRIPTION	UNIT	QUANTITY
201.0001.0000	CLEARING	ACRE	.24
203.0003.0000	UNCLASSIFIED EXCAVATION	CY	3300
203.0006.000A	BORROW, TYPE A	TON	14,334
301.0001.00D1	AGGREGATE BASE COURSE, GRADING D-1	TON	1440
401.0001.002B	HMA, TYPE II, CLASS B	TON	3800
401.0004.5228	ASPHALT BINDER, GRADE 52-28	TON	213
401.0013.0000	JOB MIX DESIGN	EACH	1
401.0016.0000	CRACK REPAIR	LF	83,648
401.0016.000b	CRACK REPAIR	CSUM	ALL REQ'D
401.0018.0000	REPAIR UNSTABLE PAVEMENT	SY	712
401.0018.000b	REPAIR UNSTABLE PAVEMENT	CSUM	ALL REQ'D
404.0001.0000	CRS-2P ASPHALT FOR SEAL COAT	TON	536
404.0002.003C	SEAL COAT AGGREGATE TYPE 3, GRADE C	TON	15,460
500.0000.0000	MISC. BRIDGE WORK	LS	ALL REQ'D
606.0001.0000	W-BEAM GUARDRAIL	LF	11650
606.0006.0000	REMOVE AND DISPOSE OF GUARDRAIL	LF	11650
606.0013.0000	PARALLEL GUARDRAIL TERMINAL	EACH	34
615.0001.0000	STANDARD SIGN	SF	1074
615.0006.0000	SALVAGE SIGN	EACH	139
640.0001.0000	MOBILIZATION AND DEMOBILIZATION	LS	ALL REQ'D
642.0001.0000	CONSTRUCTION SURVEYING	LS	ALL REQ'D
643.0002.0000	TRAFFIC MAINTENANCE	LS	ALL REQ'D
643.0025.0000	TRAFFIC CONTROL	CSUM	ALL REQ'D
643.2005.0000	PUBLIC INFORMATION PROGRAM	LS	ALL REQ'D
644.0001.0000	FIELD OFFICE	LS	ALL REQ'D
644.0006.0000	VEHICLE	LS	ALL REQ'D
670.0001.0000	PAINTED TRAFFIC MARKINGS	LF	270,100

### ESTIMATING FACTORS

ITEM NO.	DESCRIPTION	VALUE
301.0001.00D1	AGGREGATE BASE COURSE, GRADING D-1	2 TON/CY
301.0003.00E1	AGGREGATE SURFACE COURSE, GRADING E-1	2 TON/CY

**GENERAL NOTES:**

1. ALL CONSTRUCTION ACTIVITIES SHALL OCCUR WITHIN THE EXISTING ROW.
2. CRACK SEALING AND POTHOLE REPAIR IS TO BE COMPLETED AT LEAST 2 WEEKS PRIOR TO SURFACE SEALING.
3. MILL AND PAVE CHENA RIDGE ROAD FROM STATION 46+00 TO 84+00, CORRECT SUPERELEVATIONS ACCORDING TO SUMMARY TABLE ON SHEET D1
4. NO WORK IS TO BE PERFORMED BETWEEN STATIONS 626+30 AND 639+30, WHICH WILL BE ADDRESSED BY A DIFFERENT PROJECT.
5. PRIOR TO BEGINNING CONSTRUCTION, CONTRACTOR WILL MAKE A RECORD OF EXISTING STRIPING AND REPLACE IN KIND AFTER APPLYING SURFACE SEAL COAT
6. SAW CUT ALL MATCH LINES WHERE NEW CONSTRUCTION ABUTS EXISTING ASPHALT, APPLY STE-1 ASPHALT FOR TACK COAT ON THE VERTICAL FACE OF ALL SAW CUTS PRIOR TO PAVING. SAW CUTTING WILL NOT BE MEASURED BY OR PAID FOR DIRECTLY, BUT IS SUBSIDIARY TO OTHER HOT MIX ASPHALT PAY ITEMS.
7. MECHANIZED LAND VEGETATION CLEARING AND GRUBBING IS PROHIBITED DURING THE MIGRATORY BIRD NESTING SEASON (MAY 1 - JULY 15).
8. VERIFY UTILITY LOCATIONS PRIOR TO BEGINNING ANY GROUND DISTURBING WORK, LOCATE ALL EXISTING UTILITIES WITHIN THE PROJECT BOUNDARIES. PROTECT UTILITIES FROM CONSTRUCTION DAMAGE FOR THE DURATION OF THE PROJECT.
9. ALL UNUSABLE WASTE MATERIAL IS TO BE DISPOSED OF OUTSIDE THE PROJECT LIMITS. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING WASTE DISPOSAL SITES AT AREAS APPROVED BY THE ENGINEER.

PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200  
 H:\Projects\Fbks\_NF\NFHWY00570 Chena Ridge and Pump\_Resurfacing\6 Design\5 Civil\_3D\3 Drawings\00570\_TITLE\_LEGEND-ESTIMATE OF QUANTITIES.Fri\_Aug/05/22\_03:33pm

ESTIMATE OF QUANTITIES

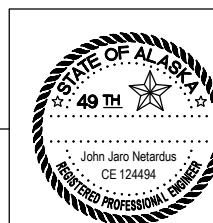


STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	PENDING/NFHWHY00570	2023	D1	D8

606.0006 – REMOVING AND DISPOSING OF GUARDRAIL	
DESCRIPTION	TOTAL (LINEAR FOOT)
EXISTING GUARDRAIL FOR CHENA RIDGE ROAD	13216.5
EXISTING GUARDRAIL FOR CHENA PUMP ROAD	450

606 – GUARDRAIL SUMMARY							
BEGIN STATION	END STATION	LT	RT	606.0001.0000 W-BEAM GUARDRAIL (LINEAR FOOT)	606.0013.0000 PARALLEL GUARDRAIL TERMINAL (EA.)	G-10.20 CASE TYPE & G-05.11S TYPE 1 INSTALLATION	REMARKS
14+78	18+45	X		267	(2)	N/A	NO ACTION
56+73	85+29	X		2912.5	1	CASE 1	
118+45	125+56		X	712.5	2	CASE 1	
138+15	140+75		X	277	0	N/A	NO ACTION
158+79	170+09		X	1130	2	CASE 1	
309+10	322+34	X		1355	1	CASE 4	
323+79	331+43	X		767	2	CASE 1	
332+20	337+06	X		480	2	CASE 2	
337+00	347+82	X		1100	1	CASE 2	
348+73	352+53	X		412.5	1	CASE 1	
402+87	409+32		X	545	2	N/A	NO ACTION
409+26	413+50		X	324	2	N/A	NO ACTION
414+00	418+15		X	425	2	CASE 2	
420+00	424+25		X	437.5	2	CASE 2	
420+28	425+65	X		512.5	2	CASE 1	
424+93	447+65		X	2375	1	CASE 1	
444+95	448+14	X		320	1	CASE 1	
617+37	619+98		X	250	2	CASE 1	SEE BRIDGE DETAIL SHEETS
618+16	620+23	X		200	2	CASE 1	SEE BRIDGE DETAIL SHEETS
PAY ITEM TOTALS				13666.5	28		

GUARDRAIL SUMMARY



PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709, (907)451-2200  
 H:\Projects\Fbs\_NFHWY00570 Chena Ridge and Pump Resurfacing 6 Design\5 Civil\3D\3 Drawings\00570\_GUARDRAIL SUMMARY-GUARDRAIL SUMMARY.Fri, Aug/05/22 03:38pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	D2	D8

### SIGNING SUMMARY

LOC. NO.	STATION	LOCATION		ASDS CODE	LEGEND	SIZE H X V (INCHES)	BRACING/FRAMING		AREA (SQ.FT.)	MTG. HGT. (FT.)	DIR.	POST			REMARKS
		LT.	RT.				BRACED	FRAMED				TYPE	SIZE (INCHES)	NO.	
						X			####						
1	23+70	X		D3-100	Kentshire Dr	30 X 8	X		1.67		E	PST	2.5	1	4C/3C LETTERING
				D3-100	Kentshire Dr	30 X 8	X		1.67		W				
				R1-1	STOP	30 X 30	X		6.25		S				
2	26+50		X	R2-1	SPEED LIMIT 45	24 X 30	X		5.00		3	PST	2.5	1	
3	29+10		X	R2-5A	REDUCED SPEED AHEAD	36 X 36	X		9.00		E	PST	2.5	1	
4	29+20		X	OM1-1		18 X 18	X		2.25		E	PST	2.5	1	OBJECT MARKER TYPE 1
			X	W12-1		48 X 24			8.00						double ended arrow
5	41+00		X	W2-2L		36 X 36	X		9.00		E	PST	2.5	1	
				S3-1	SCHOOL BUS STOP AHEAD	36 X 36	X		9.00						
				W7-3A	NEXT 3 MILES	24 X 18	X		3.00						
6	44+29	X		D3-100	Knightsbridge Rd	30 X 8	X		1.67		E	PST	2.5	1	
				D3-100	Knightsbridge Rd	30 X 8	X		1.67		W				
				R1-1	STOP	30 X 30	X		6.25		S				
7	44+31		X	D3-100	Crestmont Dr	30 X 8	X		1.67		E	PST	2.5	1	
				D3-100	Crestmont Dr	30 X 8	X		1.67		W				
				R1-1	STOP	30 X 30	X		6.25		N				
8	47+20		X	CW1-4L		36 X 36	X		9.00		E	PST	2.5	1	
				W13-1	45 MPH	24 X 24									
9	62+45		X		1	X	X		####		E	PST	2.5	1	
10	72+56	X		CW1-4L		36 X 36	X		9.00						
				W13-1	45 MPH	24 X 24	X		4.00						
11	75+27		X	D3-100	Chena Ridge Rd	32 X 8	X		1.78		N	PST	2.5	1	
				D3-100	Chena Ridge Rd	32 X 8	X		1.78		S				
				D3-100	Yak Rd	30 X 8	X		1.67		E				
				D3-100	Yak Rd	30 X 8	X		1.67		W				
				R1-1	STOP	30 X 30	X		6.25		N				
12	76+76	X		CW1-4R		36 X 36	X		9.00		W	PST	2.5	1	
				W13-1	45 MPH	24 X 24	X		4.00		W				
13	78+34	X		D14-100	ADOPT A HIGHWAY	30 X 24	X		5.00		W	PST	2.5	1	
				D14-100	ALASKA FUEL DISTRIBUTORS	30 X 12	X		2.50						
14	85+14	X		D3-100	Friar's Way	30 X 8	X		1.67		E	PST	2.5	1	
				D3-100	Friar's Way	30 X 8	X		1.67		W				
				R1-1	STOP	30 X 30	X		6.25		S				
15	85+92		X	S3-1	SCHOOL BUS STOP AHEAD	30 X 30	X		6.25		E	PST	2.5	1	

### SIGNING SUMMARY

LOC. NO.	STATION	LOCATION		ASDS CODE	LEGEND	SIZE H X V (INCHES)	BRACING/FRAMING		AREA (SQ.FT.)	MTG. HGT. (FT.)	DIR.	POST			REMARKS
		LT.	RT.				BRACED	FRAMED				TYPE	SIZE (INCHES)	NO.	
						X			####						
16	89+94		X	D3-100	Ridgecrest Dr	30 X 8	X		1.67		E	PST	2.5	1	4C/3C LETTERING
				D3-100	Kentshire Dr	30 X 8	X		1.67		W				
				R1-1	STOP	30 X 30	X		6.25		N				
17	90+87		X	W7-1		30 X 30	X		6.25		3	PST	2.5	1	Hill Symbol
18	92+68		X	S3-1	SCHOOL BUS STOP AHEAD	36 X 36	X		9.00		E	PST	2.5	1	
19	99+36		X	CW1-4R		36 X 36			9.00		E	PST	2.5	1	
				W13-1	50 MPH	24 X 24			4.00						
20	107+25	X		D3-100	Alaska Range Ln	34 X 8	X		1.89		E	PST	2.5	1	
				D3-100	Alaska Range Ln	34 X 8	X		1.89		W				
				R1-1	STOP	30 X 30	X		6.25		S				
21	126+21		X	D3-100	Guinivere Pl	30 X 8	X		1.67		E	PST	2.5	1	
				D3-100	Guinivere Pl	30 X 8	X		1.67		W				
				R1-1	STOP	30 X 30	X		6.25		S				
22	128+79		X	W11-8		36 X 36	X		9.00		E	PST	2.5	1	FIRE STATION (TRUCK)
23	12+26	X		W7-102	HIDDEN DRIVEWAY	36 X 36	X		9.00		E	PST	2.5	1	
				W13-1	45 MPH	24 X 24			4.00						
24	134+23		X	D14-100	ADOPT A HIGHWAY	30 X 24	X		5.00		W	PST	2.5	1	
				D14-100	ALASKA FUEL DISTRIBUTORS	30 X 12	X		2.50						
25	139+88	X		W11-8		36 X 36	X		9.00		W	PST	2.5	1	FIRE STATION (TRUCK)
				W11-8A	FIRE STATION	24 X 24	X		4.00						
26	140+14	X		W7-102	HiddenDriveway	30 X 30	X		6.25		N	PST	2.5	1	
				W13-1	45 mph	24 X 8	X		1.33		S				
27	141+35	X		W?	Caution Emergency Vehicles Ahead	30 X 30	X		6.25		W	PST	2.5	1	
				W13-1	45 MPH	24 X 24	X		4.00		W				
28	149+37	X		D3-100	Chena Hills Dr	30 X 8	X		1.67		N	PST	2.5	1	
				D3-100	Chena Hills Dr	30 X 8	X		1.67		S				
				R1-1	STOP	30 X 30	X		6.25		W				
29	149+80	X		R2-1	SPEED LIMIT 55	24 X 30	X		5.00		E	PST	2.5	1	
30	156+11	X		R2-1	SPEED LIMIT 55	24 X 30	X		5.00		E	PST	2.5	1	

#### NOTES:

1. ADD THE SIGNING NOTES HERE.
2. THE EXAMPLE SUMMARY ABOVE SHOWS A FEW UNIQUE SITUATIONS. TO FACILITATE FORMATTING, CELLS FROM THIS SUMMARY CAN BE COPIED AND MODIFIED.
3. THE BORDER COLORS ARE 1(RED) FOR ROW AND COLUMN LINES, 174 FOR THE TITLE AND OUTER BORDERS

#### POST TYPE LEGEND:

PST = PERFORATED STEEL TUBE  
 TS = TUBE STEEL (SQUARE STRUCTURAL STEEL TUBING)  
 W\_X\_ = WIDE FLANGE

SIGN SUMMARY 1





NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	D3	D8

### SIGNING SUMMARY

LOC. NO.	STATION	LOCATION		ASDS CODE	LEGEND	SIZE (INCHES)			BRACING/FRAMING		AREA (SQ.FT.)	MTG. HGT. (FT.)	DIR.	POST			REMARKS
		LT.	RT.			H	X	V	BRACED	FRAMED				TYPE	SIZE (INCHES)	NO.	
						X					####						
31	156+71	X		D3-100	Chena Ridge Rd	30	X	8	X		1.67		E	PST	2.5	1	4C/3C LETTERING
				D3-100	Chena Ridge Rd	30	X	8	X		1.67		W				
				D3-100	Canterbury Dr	30	X	8	X		1.67		E				
				D3-100	Canterbury Dr	30	X	8	X		1.67		W				
				R1-1	STOP	30	X	30	X		6.25		S				
32	170+81		X	W1-2L		30	X	30	X		6.25		3	PST	2.5	1	
				W13-1	45 MPH	24	X	8	X		1.33		W				
33	179+92	X		W1-2R		30	X	30	X		6.25		E	PST	2.5	1	
				W13-1	45 MPH	24	X	8	X		1.33		W				
34	187+76	X		D3-100	Chena Ridge Rd	30	X	8	X		1.67		E	PST	2.5	1	4C/3C LETTERING
				D3-100	Chena Ridge Rd	30	X	8	X		1.67		W				double ended arrow
				D3-100	Ridgepointe Dr	30	X	8	X		1.67		E				
				D3-100	Ridgepointe Dr	30	X	8	X		1.67		W				
				R1-1	STOP	30	X	30	X		6.25		S				
35	197+65	X		D3-100	Ellesmere Dr	30	X	8	X		1.67		E	PST	2.5	1	
				D3-100	Ellesmere Dr	30	X	8	X		1.67		W				
				R1-1	STOP	30	X	30	X		6.25		S				
36	203+74		X	S3-1	SCHOOL BUS STOP AHEAD	30	X	30	X		6.25		E	PST	2.5	1	
					NEXT 3 MILES	20	X	8	X		1.11		W				
37	204+00		X	W7-1		36	X	36	X		9.00		E	PST	2.5	1	
38	209+87		X	?	4	X	X				####		E	PST	2.5	1	
39	212+73		X	CW1-4L		30	X	30	X		6.25		E	PST	2.5	1	
40	221+95		X	D3-100	Chena Ridge Rd	32	X	8	X		1.78		N	PST	2.5	1	
				D3-100	Chena Ridge Rd	32	X	8	X		1.78		S				
				D3-100	Moonshine Run	30	X	8	X		1.67		E				
				D3-100	Moonshine Run	30	X	8	X		1.67		W				
				R1-1	STOP	30	X	30	X		6.25		N				
41	223+82	X		D3-100	Chena Ridge Rd	32	X	8	X		1.78		N	PST	2.5	1	
				D3-100	Chena Ridge Rd	32	X	8	X		1.78		S				
				D3-100	Ridge Pointe Dr	30	X	8	X		1.67		E				
				D3-100	Ridge Pointe Dr	30	X	8	X		1.67		W				
				R1-1	STOP	30	X	30	X		6.25		N				
42	230+47		X	S3-1	SCHOOL BUS STOP AHEAD	30	X	8	X		1.67		E	PST	2.5	1	
43	230+50	X		CW1-4L		30	X	30	X		6.25		E	PST	2.5	1	
44	246+16			D3-100	Starship Ln	30	X	8	X		1.67		E	PST	2.5	1	
				D3-100	Starship Ln	30	X	8	X		1.67		W				
				R1-1	STOP	30	X	30	X		6.25		N				

### SIGNING SUMMARY

LOC. NO.	STATION	LOCATION		ASDS CODE	LEGEND	SIZE (INCHES)			BRACING/FRAMING		AREA (SQ.FT.)	MTG. HGT. (FT.)	DIR.	POST			REMARKS
		LT.	RT.			H	X	V	BRACED	FRAMED				TYPE	SIZE (INCHES)	NO.	
						X					####						
45	221+95	X		D3-100	Chena Ridge Rd	32	X	8	X		1.78		N	PST	2.5	1	
				D3-100	Chena Ridge Rd	32	X	8	X		1.78		S				
				D3-100	Snowflake Ln	30	X	8	X		1.67		E				
				D3-100	Snowflake Ln	30	X	8	X		1.67		W				
				R1-1	STOP	30	X	30	X		6.25		N				
46	273+49		X	D3-100	Basin St	30	X	8	X		1.67		E	PST	2.5	1	
				D3-100	Basin St	30	X	8	X		1.67		W				
				R1-1	STOP	30	X	30	X		6.25		S				
47	295+88		X	W2-2R		30	X	30			6.25		E	PST	2.5	1	
				W16-8	Isberg Rd	24	X	8			1.33		E				
48	297+15		X	W1-2L		30	X	30	X		6.25		E	PST	2.5	1	
				W13-1	45 MPH	20	X	20	X		2.78		E				
49	301+97	X		W12-1		30	X	15	X		3.13		W	PST	2.5	1	
				OM1-1	Guinivere Pl	24	X	24	X		4.00		W				
50	302+03		X	W1-2L		30	X	30	X		6.25		E	PST	2.5	1	FIRE STATION (TRUCK)
				W13-1	45 MPH	24	X	8			1.33		E				
51	307+45		X	W1-2L		30	X	30	X		6.25		E	PST	2.5	1	
				W13-1	45 MPH	24	X	8			1.33		E				
52	310+22	X		W2-2L		30	X	30	X		6.25		W	PST	2.5	1	
				?	ISBERG RD	30	X	12	X		2.50						
53	311+10	X		W1-2R		30	X	30	X		6.25		W	PST	2.5	1	FIRE STATION (TRUCK)
				W13-1	45 MPH	30	X	12	X		2.50						
54	317+56	X		W1-8	RIGHT SINGLE CHEVRON	24	X	24	X		4.00		N	PST	2.5	1	
55	318+35		X	W1-2R		30	X	30	X		6.25		W	PST	2.5	1	
					30 MPH	30	X	12	X		2.50		W				
56	318+80	X		W1-2R		30	X	30	X		6.25		N	PST	2.5	1	
				W13-1	45 MPH	30	X	8	X		1.67		N				
57	318+93		X	W7-1		30	X	30	X		6.25		W				
58	318+40	X		W1-8	RIGHT SINGLE CHEVRON	24	X	24	X		4.00		E	PST	2.5	1	
				W1-8	RIGHT SINGLE CHEVRON	24	X	24	X		4.00		W	PST	2.5	1	
59	322+19	X		W1-8	RIGHT SINGLE CHEVRON	24	X	24	X		4.00		E	PST	2.5	1	
				W1-8	RIGHT SINGLE CHEVRON	24	X	24	X		4.00		W	PST	2.5	1	
60	322+90	X		W1-8	RIGHT SINGLE CHEVRON	24	X	24	X		4.00		E	PST	2.5	1	
				W1-8	RIGHT SINGLE CHEVRON	24	X	24	X		4.00		W	PST	2.5	1	

**POST TYPE LEGEND:**

PST = PERFORATED STEEL TUBE  
 TS = TUBE STEEL (SQUARE STRUCTURAL STEEL TUBING)  
 W\_X\_ = WIDE FLANGE

SIGN SUMMARY 2



PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200  
 H:\Projects\Fbks\_NF\NFHWY00570 Chena Ridge and Pump Resurfacing\6 Design\5 Civil\_3D\3 Drawings\00570\_SIGN\_SUMMARY-SIGNING\_SUM (2) File\_Aug/05/22 03:22:40pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	D4	D8

**SIGNING SUMMARY**

LOC. NO.	STATION	LOCATION		ASDS CODE	LEGEND	SIZE H X V (INCHES)	BRACING/FRAMING		AREA (SQ.FT.)	MTG. HGT. (FT.)	DIR.	POST			REMARKS
		LT.	RT.				BRACED	FRAMED				TYPE	SIZE (INCHES)	NO.	
						X			####						
61	323+72	X		W1-8	RIGHT SINGLE CHEVRON	24 X 24	X		4.00		E	PST	2.5	1	
		X		W1-8	RIGHT SINGLE CHEVRON	24 X 24	X		4.00		W	PST	2.5	1	
62	324+25	X		W1-8	RIGHT SINGLE CHEVRON	24 X 24	X		4.00		E	PST	2.5	1	
		X		W1-8	RIGHT SINGLE CHEVRON	24 X 24	X		4.00		W	PST	2.5	1	
63	325+10	X		S3-1	SCHOOL BUS STOP AHEAD	36 X 36	X		9.00		E	PST	2.5	1	
64	325+24	X		W1-8	RIGHT SINGLE CHEVRON	24 X 24	X		4.00		E	PST	2.5	1	
		X		W1-8	RIGHT SINGLE CHEVRON	24 X 24	X		4.00		W	PST	2.5	1	
65	325+70		X	W1-2L		36 X 36	X		9.00		E	PST	2.5	1	
			X	W13-1	50 MPH	24 X 24	X		4.00		E	PST	2.5	1	
66	327+28	X		W1-2L		36 X 36	X		9.00		E	PST	2.5	1	
		X		W13-1	30 MPH	24 X 24	X		4.00		E	PST	2.5	1	
67	337+16	X		D3-100	Chetana Dr	30 X 8	X		1.67		E	PST	2.5	1	
				D3-100	Chetana Dr	30 X 8	X		1.67						
				R1-1	STOP	36 X 36	X		9.00						
68	338+23		X	D3-100	Chena Ridge Rd	30 X 8	X		1.67		E	PST	2.5	1	
				D3-100	Chena Ridge Rd	30 X 8	X		1.67		W				
				D3-100	Taroka Dr	30 X 8	X		1.67		S				
				D3-100	Taroka Dr	30 X 8	X		1.67						
				R1-1	STOP	36 X 36	X		9.00						
69	338+57	X		W1-2R		36 X 36	X		9.00		E	PST	2.5	1	
				W13-1	50 MPH	24 X 24	X		4.00		W				
70	343+21		X	W1-2R		36 X 36	X		9.00		E	PST	2.5	1	
				W13-1	35 MPH	24 X 24	X		4.00						
71	346+45	X		W1-8	LEFT SINGLE CHEVRON	24 X 24	X		4.00		E	PST	2.5	1	
72	348+05	X		W1-8	LEFT SINGLE CHEVRON	24 X 24	X		4.00		E	PST	2.5	1	
73	348+27	X		D3-100	Birchwood Dr	32 X 8	X		1.78		N	PST	2.5	1	
				D3-100	Birchwood Dr	32 X 8	X		1.78		S				
				R1-1	STOP	30 X 30	X		6.25		N				
74	348+75	X		W1-8	LEFT SINGLE CHEVRON	24 X 24	X		4.00		W	PST	2.5	1	
75	349+20	X		W1-8	RIGHT SINGLE CHEVRON	24 X 24	X		4.00		W	PST	2.5	1	
76	349+84	X		W1-8	RIGHT SINGLE CHEVRON	24 X 24	X		4.00		E	PST	2.5	1	
77	353+74	X		W1-2L		36 X 36	X		9.00		S				
				W13-1	35 MPH	24 X 24	X		4.00		E	PST	2.5	1	

**SIGNING SUMMARY**

LOC. NO.	STATION	LOCATION		ASDS CODE	LEGEND	SIZE H X V (INCHES)	BRACING/FRAMING		AREA (SQ.FT.)	MTG. HGT. (FT.)	DIR.	POST			REMARKS
		LT.	RT.				BRACED	FRAMED				TYPE	SIZE (INCHES)	NO.	
						X			####						
78	359+00		X	W1-4L		36 X 36	X		9.00		N	PST	2.5	1	4C/3C LETTERING
				W13-1	40 MPH	24 X 24	X		4.00		N				
79	362+72		X	D3-100	Chena Ridge Rd	30 X 8	X		1.67		E	PST	2.5	1	
				D3-100	Chena Ridge Rd	30 X 8	X		1.67		W				
				D3-100	Reeburgh Dr	30 X 8	X		1.67		S				
				D3-100	Reeburgh Dr	30 X 8	X		1.67						
				R1-1	STOP	36 X 36	X		9.00						
80	363+48		X		7				####		E	PST	2.5	1	
81	375+40		X	D3-100	Chena Ridge Rd	30 X 8	X		1.67		E	PST	2.5	1	
				D3-100	Chena Ridge Rd	30 X 8	X		1.67		W				
				D3-100	Fox Den Dr	30 X 8	X		1.67		S				
				D3-100	Fox Den Dr	30 X 8	X		1.67						
				R1-1	STOP	36 X 36	X		9.00						
82	380+38	X		W1-4L		36 X 36	X		9.00		E	PST	2.5	1	
				W13-1	40 MPH	24 X 24	X		4.00		W				
83	380+86		X	W1-2L		36 X 36	X		9.00		E	PST	2.5	1	
				W13-1	45 MPH	24 X 24	X		4.00		W				
84	381+56	X		D3-100	Chena Ridge Rd	30 X 8	X		1.67		E	PST	2.5	1	
				D3-100	Chena Ridge Rd	30 X 8	X		1.67		W				
				D3-100	Edby Rd	30 X 8	X		1.67		S				
				D3-100	Edby Rd	30 X 8	X		1.67						
				R1-1	STOP	36 X 36	X		9.00						
85	393+91	X		W1-2R		36 X 36	X		9.00						
				W13-1	45 MPH	24 X 24	X		4.00						
86	394+13	X		D3-100	Chena Ridge Rd	30 X 8	X		1.67		E	PST	2.5	1	FIRE STATION (TRUCK)
				D3-100	Chena Ridge Rd	30 X 8	X		1.67		W				
				D3-100	Anella Rd	30 X 8	X		1.67		S				
				D3-100	Anella Rd	30 X 8	X		1.67						
				R1-1	STOP	36 X 36	X		9.00						
87	395+01		X	D3-100	Deniki Ln	30 X 8	X		1.67		W	PST	2.5	1	
				D3-100	Deniki Ln	30 X 8	X		1.67		W				
				R1-1	STOP	36 X 36	X		9.00						
88	397+07		X	W16-8	Rosie Creek Rd	30 X 8	X		1.67		N	PST	2.5	1	
				W2-2R		36 X 36	X		9.00		S				
				R1-1	STOP	30 X 30	X		6.25		W				
89	398+33		X	W1-2L		36 X 36	X		9.00		E	PST	2.5	1	

**POST TYPE LEGEND:**

PST = PERFORATED STEEL TUBE  
 TS = TUBE STEEL (SQUARE STRUCTURAL STEEL TUBING)  
 W\_X\_ = WIDE FLANGE

SIGN SUMMARY 3



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	D5	D8

### SIGNING SUMMARY

LOC. NO.	STATION	LOCATION		ASDS CODE	LEGEND	SIZE		BRACING/FRAMING		AREA (SQ.FT.)	MTG. HGT. (FT.)	DIR.	POST			REMARKS
		LT.	RT.			H	X	V	BRACED				FRAMED	TYPE	SIZE (INCHES)	
						X				####						
90	323+72		X	D3-100	Chena Ridge Rd	30	X	8	X	1.67		E	PST	2.5	1	NO ACTION
				D3-100	Chena Ridge Rd	30	X	8	X	1.67		W				NO ACTION
				D3-100	Taroka Dr	30	X	8	X	1.67		S				NO ACTION
				D3-100	Taroka Dr	30	X	8	X	1.67		N				NO ACTION
				R1-1	STOP	36	X	36	X	9.00						NO ACTION
91	411+11	X		W1-2		36	X	36	X	9.00		E	PST	2.5	1	
92	412+64	X		S3-1	SCHOOL BUS STOP AHEAD	36	X	36	X	9.00		E	PST	2.5	1	
				W7-3A	NEXT 2 MILES	24	X	24	X	4.00		W	PST	2.5	1	
93	421+64		X	W1-2L		36	X	36	X	9.00		E	PST	2.5	1	
			X	W13-1	45 MPH	24	X	24	X	4.00		E	PST	2.5	1	
94	422+95		X	W7-1		36	X	36	X	9.00		E	PST	2.5	1	
95	430+40	X		W1-2R		36	X	36	X	9.00		E	PST	2.5	1	
				W13-1	45 MPH	30	X	8	X	1.67						
96	432+51		X	RM-120		24	X	24	X	4.00		E	PST	2.5	1	
				D9-308	1500 FT	24	X	6	X	1.00		W				
97	433+15		X	W1-2R		36	X	36	X	9.00		S				
				W13-1	40 MPH	30	X	8	X	1.67						
98		X		W1-2L		36	X	36	X	9.00						
				W13-1	40 MPH	30	X	8	X	1.67						
99	446+69		X	R8-3A	NO PARKING	24	X	24	X	4.00		E	PST	2.5	1	
100	448+03		X	R1-1	STOP	36	X	36	X	9.00		E	PST	2.5	1	
101	453+14		X	R1-1	STOP	36	X	36	X	9.00						
102	453+47		X	D11-1	BIKE ROUTE	30	X	24	X	5.00		E	PST	2.5	1	
				R5-3	NO MOTOR VEHICLES	18	X	24	X	3.00						
103	458+59		X	R8-3A	NO PARKING	24	X	24	X	4.00		E	PST	2.5	1	
104	348+27		X	D3-100	Chena Pump Rd	32	X	8	X	1.78		N	PST	2.5	1	NO ACTION
				D3-100	Chena Pump Rd	32	X	8	X	1.78		S				NO ACTION
				D3-100	Ludecker Rd	32	X	8	X	1.78		E				NO ACTION
				D3-100	Ludecker Rd	32	X	8	X	1.78		W				NO ACTION
				R1-1	STOP	36	X	36	X	9.00		N				NO ACTION
105	469+26	X		D3-100	Raven Lake Rd	32	X	8	X	1.78		E	PST	2.5	1	
				D3-100	Raven Lake Rd	32	X	8	X	1.78		W				
				R1-1	STOP	36	X	36	X	9.00		N				
106	493+84		X	D14-100	ADOPT A HIGHWAY	24	X	24	X	4.00		W	PST	2.5	1	NO ACTION
107	496+85		X	D3-100	Ludecker Rd	32	X	8	X	1.78		E				NO ACTION
				D3-100	Ludecker Rd	32	X	8	X	1.78		W				NO ACTION
				R1-1	STOP	36	X	36	X	9.00		N				NO ACTION

### SIGNING SUMMARY

LOC. NO.	STATION	LOCATION		ASDS CODE	LEGEND	SIZE		BRACING/FRAMING		AREA (SQ.FT.)	MTG. HGT. (FT.)	DIR.	POST			REMARKS
		LT.	RT.			H	X	V	BRACED				FRAMED	TYPE	SIZE (INCHES)	
						X				####						
108	503+73		X	D3-100	Tall Spruce Rd	32	X	8	X	1.78		E				NO ACTION
				D3-100	Tall Spruce Rd	32	X	8	X	1.78		W				NO ACTION
				R1-1	STOP	36	X	36	X	9.00		N				NO ACTION
109	507+83		X	D3-100	Chena Pump Rd	30	X	8	X	1.67		E	PST	2.5	1	NO ACTION
				D3-100	Chena Pump Rd	30	X	8	X	1.67		W				NO ACTION
				D3-100	Chena Point Ave	30	X	8	X	1.67		S				NO ACTION
				D3-100	Chena Point Ave	30	X	8	X	1.67		N				NO ACTION
				R1-1	STOP	36	X	36	X	9.00						NO ACTION
110	510+47		X	R3-7R	RIGHT LANE MUST TURN RIGHT	30	X	30	X	6.25		E	PST	2.5	1	NO ACTION
111	511+49		X	W2-2R		36	X	36	X	9.00		E	PST	2.5	1	NO ACTION
				W16-8	CHENA POINT AVE	30	X	8	X	1.67		W				NO ACTION
112	518+44		X	D3-100	Chena Pump Rd	30	X	8	X	1.67		E	PST	2.5	1	NO ACTION
				D3-100	Chena Pump Rd	30	X	8	X	1.67		W				NO ACTION
				D3-100	Heldiver St	30	X	8	X	1.67		S				NO ACTION
				D3-100	Heldiver St	30	X	8	X	1.67		N				NO ACTION
				R1-1	STOP	36	X	36	X	9.00						NO ACTION
113	541+84	X		D3-100	Grebe Dr	26	X	8	X	1.44		E	PST	2.5	1	
				D3-100	Grebe Dr	26	X	8	X	1.44		W				
				R1-1	STOP	36	X	36	X	9.00						
114	542+47		X	D3-100	Chena Pump Rd	30	X	8	X	1.67		E	PST	2.5	1	NO ACTION
				D3-100	Chena Pump Rd	30	X	8	X	1.67		W				NO ACTION
				D3-100	Grebe Dr	26	X	8	X	1.44		S				NO ACTION
				D3-100	Grebe Dr	26	X	8	X	1.44		N				NO ACTION
				R1-1	STOP	36	X	36	X	9.00						NO ACTION
115	550+06		X	D14-100	ADOPT A HIGHWAY	24	X	24	X	4.00		E	PST	2.5	1	NO ACTION
116	551+26		X	R2-5A	REDUCED SPEED AHEAD	30	X	36	X	7.50		W	PST	2.5	1	NO ACTION
117	555+75		X	R2-1	SPEED LIMIT 45 MPH	30	X	36	X	7.50		W				NO ACTION
118	556+23	X		R2-1	SPEED LIMIT 55 MPH	30	X	8	X	1.67		S				
119	558+08	X		D3-100	Chena Pump Rd	30	X	8	X	1.67		E	PST	2.5	1	
				D3-100	Chena Pump Rd	30	X	8	X	1.67		W				
				D3-100	Mid Chena Dr	30	X	8	X	1.67		S				
				D3-100	Mid Chena Dr	30	X	8	X	1.67						
				R1-1	STOP	36	X	36	X	9.00						
120	558+92		X	D3-100	Chena Pump Rd	30	X	8	X	1.67		E	PST	2.5	1	NO ACTION
				D3-100	Chena Pump Rd	30	X	8	X	1.67		W				NO ACTION
				D3-100	Shanks Mare Rd	30	X	8	X	1.67		S				NO ACTION
				D3-100	Shanks Mare Rd	30	X	8	X	1.67						NO ACTION
				R1-1	STOP	36	X	36	X	9.00						NO ACTION

#### POST TYPE LEGEND:

- PST = PERFORATED STEEL TUBE
- TS = TUBE STEEL (SQUARE STRUCTURAL STEEL TUBING)
- W\_X\_ = WIDE FLANGE

SIGN SUMMARY 4



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	D6	D8

SIGNING SUMMARY

LOC. NO.	STATION	LOCATION		ASDS CODE	LEGEND	SIZE		BRACING/FRAMING		AREA (SQ.FT.)	MTG. HGT. (FT.)	DIR.	POST			REMARKS
		LT.	RT.			H	V	BRACED	FRAMED				TYPE	SIZE (INCHES)	NO.	
										####						
121	563+29		X	D3-100	Chena Pump Rd	30	X	8	X	1.67		E	PST	2.5	1	NO ACTION
				D3-100	Chena Pump Rd	30	X	8	X	1.67		W				NO ACTION
				D3-100	Hidden Dr	30	X	8	X	1.67		S				NO ACTION
				D3-100	Hidden Dr	30	X	8	X	1.67		N				NO ACTION
				R1-1	STOP	36	X	36	X	9.00						NO ACTION
122	566+93		X	D3-100	Chena Pump Rd	30	X	8	X	1.67		E	PST	2.5	1	NO ACTION
				D3-100	Chena Pump Rd	30	X	8	X	1.67		W				NO ACTION
				D3-100	River Song Ct	30	X	8	X	1.67		S				NO ACTION
				D3-100	River Song Ct	30	X	8	X	1.67						NO ACTION
				R1-1	STOP	36	X	36	X	9.00						NO ACTION
123	570+69		X	D3-100	Chena Pump Rd	30	X	8	X	1.67		E	PST	2.5	1	NO ACTION
				D3-100	Chena Pump Rd	30	X	8	X	1.67		W				NO ACTION
				D3-100	Cheyenne Ct	30	X	8	X	1.67		S				NO ACTION
				D3-100	Cheyenne Ct	30	X	8	X	1.67		N				NO ACTION
				R1-1	STOP	36	X	36	X	9.00						NO ACTION
124	573+30		X	D3-100	Chena Pump Rd	30	X	8	X	1.67		E	PST	2.5	1	NO ACTION
				D3-100	Chena Pump Rd	30	X	8	X	1.67		W				NO ACTION
				D3-100	Sea Way	24	X	8	X	1.33		S				NO ACTION
				D3-100	Sea Way	24	X	8	X	1.33		N				NO ACTION
				R1-1	STOP	36	X	36	X	9.00						NO ACTION
125	576+38	X		D3-100	Twin Lakes Dr	30	X	8	X	1.67		E	PST	2.5	1	
				D3-100	Twin Lakes Dr	30	X	8	X	1.67		W				
				R1-1	STOP	36	X	36	X	9.00		N				
126	585+57		X	W2-2R		36	X	36	X	9.00		W				NO ACTION
				W16-8	Roland Rd	30	X	8	X	1.67		W				NO ACTION
127	588+41	X		D3-100	Chena Pump Rd	30	X	8	X	1.67		N	PST	2.5	1	
				D3-100	Chena Pump Rd	30	X	8	X	1.67		S				
				D3-100	Roland Rd	26	X	8	X	1.44		E				
				D3-100	Roland Rd	26	X	8	X	1.44		W				
				R1-1	STOP	36	X	36	X	9.00		N				
128	591+02	X		R3-7R	RIGHT LANE MUST TURN RIGHT	30	X	30	X	6.25		E	PST	2.5	1	
129	593+92	X		W2-2R		36	X	36	X	9.00		E	PST	2.5	1	
				W16-8	ROLAND RD	30	X	8	X	1.67						
130	596+09	X		D3-100	Chena Pump Rd	32	X	8	X	1.78		N	PST	2.5	1	
				D3-100	Chena Pump Rd	32	X	8	X	1.78		S				
				D3-100	Linda Ln	26	X	8	X	1.44		E				
				D3-100	Linda Ln	26	X	8	X	1.44		W				
				R1-1	STOP	36	X	36	X	9.00		N				
131	603+57	X		D3-100	Despain Ln	30	X	8	X	1.67		E	PST	2.5	1	
				D3-100	Despain Ln	30	X	8	X	1.67		W				
				R1-1	STOP	36	X	36	X	9.00		N				
132	615+97	X		D14-100	ADOPT A HIGHWAY	24	X	24	X	4.00		W	PST	2.5	1	

SIGNING SUMMARY

LOC. NO.	STATION	LOCATION		ASDS CODE	LEGEND	SIZE		BRACING/FRAMING		AREA (SQ.FT.)	MTG. HGT. (FT.)	DIR.	POST			REMARKS
		LT.	RT.			H	V	BRACED	FRAMED				TYPE	SIZE (INCHES)	NO.	
										####						
133	618+20		X	W5-1	ROAD NARROWS	36	X	36	X	9.00		E				NO ACTION
134	619+52	X		D?	CRIPPLE CREEK	24	X	24	X	4.00						
135	620+30	X		W5-1	ROAD NARROWS	36	X	36	X	9.00		W				
136	621+65		X	D11-1	BIKE ROUTE	30	X	24	X	5.00		W	PST	2.5	1	NO ACTION
				R5-3	NO MOTOR VEHICLES	24	X	24	X	4.00		W				NO ACTION
137	624+06		X	D11-1	BIKE ROUTE	30	X	24	X	5.00		W	PST	2.5	1	NO ACTION
				R5-3	NO MOTOR VEHICLES	24	X	24	X	4.00		W				NO ACTION
138	622+83	X		W11-21		36	X	36	X	9.00		E	PST	2.5	1	
139	623+81		X	R1-1	STOP	36	X	36	X	9.00		E	PST	2.5	1	NO ACTION
140	625+38	X		R2-1	SPEED LIMIT 45	30	X	36	X	7.50		E	PST	2.5	1	
141	625+54		X	D9-230	TRANSFER STATION	24	X	36	X	6.00		W	PST	2.5	1	NO ACTION
142	626+84		X	D14-100	ADOPT A HIGHWAY	30	X	24	X	5.00		S				NO ACTION
					THE PUMP HOUSE RESTAURANT	30	X	12	X	2.50						NO ACTION
143	630+06	X		M1-7	PUMP HOUSE	24	X	24	X	4.00		W	PST	2.5	1	
				RL100		18	X	18	X	2.25		W				
144	633+75		X	D11-1	BIKE ROUTE	30	X	24	X	5.00		E	PST	2.5	1	NO ACTION
				R5-3	NO MOTOR VEHICLES	18	X	24	X	3.00						NO ACTION
145	633+94	X		D3-100	Chena Pump Rd	30	X	8	X	1.67		N	PST	2.5	1	NO ACTION
				D3-100	Chena Pump Rd	30	X	8	X	1.67		S				NO ACTION
				D3-100	Old Chena Ridge Rd	30	X	8	X	1.67		E				NO ACTION
				D3-100	Old Chena Ridge Rd	30	X	8	X	1.67		W				NO ACTION
				R1-1	STOP	36	X	36	X	9.00		N				NO ACTION
146	634+85		X	D3-100	Chena Pump Rd	30	X	8	X	1.67		N	PST	2.5	1	NO ACTION
				D3-100	Chena Pump Rd	30	X	8	X	1.67		S				NO ACTION
				D3-100	Chena Small Tracts Rd	30	X	8	X	1.67		E				NO ACTION
				D3-100	Chena Small Tracts Rd	30	X	8	X	1.67		W				NO ACTION
				R1-1	STOP	36	X	36	X	9.00		S				NO ACTION
147	636+37	X		R3-7R	RIGHT LANE MUST TURN RIGHT	30	X	30	X	6.25		E	PST	2.5	1	
148	636+82		X	D11-1	BIKE ROUTE	30	X	24	X	5.00		E	PST	2.5	1	NO ACTION
				R5-3	NO MOTOR VEHICLES	18	X	24	X	3.00						NO ACTION
149	639+19	X		D9-230	TRANSFER STATION	24	X	36	X	6.00		W	PST	2.5	1	
150	639+78		X	R3-9CP	BEGIN	30	X	12	X	2.50		W			1	NO ACTION
				R3-9B		24	X	35	X	5.83		W				NO ACTION

POST TYPE LEGEND:

PST = PERFORATED STEEL TUBE  
 TS = TUBE STEEL (SQUARE STRUCTURAL STEEL TUBING)  
 W\_X\_ = WIDE FLANGE

SIGN SUMMARY 5



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	D7	D8

### SIGNING SUMMARY

LOC. NO.	STATION	LOCATION		ASDS CODE	LEGEND	SIZE H X V (INCHES)	BRACING/FRAMING		AREA (SQ.FT.)	MTG. HGT. (FT.)	DIR.	POST			REMARKS
		LT.	RT.				BRACED	FRAMED				TYPE	SIZE (INCHES)	NO.	
						X			####						
151	640+23	X		D3-1	Chena Small Tracts Rd	40 X 18	X		5.00		E	PST	2.5	1	
152	640+23		X	R2-1	SPEED LIMIT 50	30 X 36	X		7.50		W	PST	2.5	1	NO ACTION
153	644+89		X	D3-1	Palo Verde Ave	36 X 18	X		4.50		S	PST	2.5	1	NO ACTION
154	647+91	X		W4-2R		36 X 36	X		9.00		W	PST	2.5	1	
155	649+90		X	D11-1	BIKE ROUTE	30 X 24	X		5.00		W	PST	2.5	1	NO ACTION
				R5-3	NO MOTOR VEHICLES	24 X 24	X		4.00		W				NO ACTION
156	651+18		X	D3-100	Chena Pump Rd	30 X 8	X		1.67		N	PST	2.5	1	NO ACTION
				D3-100	Chena Pump Rd	30 X 8	X		1.67		S				NO ACTION
				D3-100	Palo Verde Ave	30 X 8	X		1.67		E				NO ACTION
				D3-100	Palo Verde Ave	30 X 8	X		1.67		W				NO ACTION
				R1-1	STOP	36 X 36	X		9.00		S				NO ACTION
157	651+60		X	D11-1	BIKE ROUTE	30 X 24	X		5.00		W	PST	2.5	1	NO ACTION
				R5-3	NO MOTOR VEHICLES	24 X 24	X		4.00		W				NO ACTION
158	654+88	X		W9-1R	RIGHT LANE ENDS	36 X 36	X		9.00		E	PST	2.5	1	
159	655+26	X		D3-1	PALO VERDE AVE WOODRIVER SCHOOL	48 X 36	X		12.00		E	PST	2.5	1	
160	661+61		X	D3-1	AMHERST DR	36 X 24	X		6.00		W	PST	2.5	1	NO ACTION
161	666+49	X		D11-1	BIKE ROUTE	30 X 24	X		5.00		W	PST	2.5	1	NO ACTION
				R5-1	NO MOTOR VEHICLES	24 X 24	X		4.00		W				NO ACTION
162	666+50	X		R2-1	SPEED LIMIT 45	30 X 36	X		7.50		W	PST	2.5	1	
163	667+71		X	R3-9CP	BEGIN	30 X 12	X		2.50		N	PST	2.5	1	NO ACTION
				R3-9B	Chena Pump Rd	24 X 35	X		5.83		S				NO ACTION
164	668+30		X	D11-1	BIKE ROUTE	30 X 24	X		5.00		W	PST	2.5	1	NO ACTION
				R5-3	NO MOTOR VEHICLES	24 X 24	X		4.00		W				NO ACTION
165	668+88		X	R2-1	SPEED LIMIT 45	30 X 36	X		7.50		E	PST	2.5	1	NO ACTION
166	669+69	X		W2-2R		36 X 36	X		9.00		E	PST	2.5	1	
				W16-8	ROLAND RD	30 X 8	X		1.67						
167	670+52		X	D3-1	Nebula Way	32 X 8	X		1.78		N	PST	2.5	1	NO ACTION
168	672+62	X		D3-1	AMHERST DR	36 X 8	X		2.00		S				
169	677+02		X	D11-1	BIKE ROUTE	30 X 24	X		5.00		W	PST	2.5	1	NO ACTION
				R5-3	NO MOTOR VEHICLES	24 X 24	X		4.00		W				NO ACTION
170	678+10	X		R4-7		24 X 30	X		5.00		W	PST	2.5	1	ON MEDIAN ISLAND
				OM1-1		18 X 18	X		2.25		W				

#### POST TYPE LEGEND:

PST = PERFORATED STEEL TUBE  
 TS = TUBE STEEL (SQUARE STRUCTURAL STEEL TUBING)  
 W\_X\_ = WIDE FLANGE

### SIGNING SUMMARY

LOC. NO.	STATION	LOCATION		ASDS CODE	LEGEND	SIZE H X V (INCHES)	BRACING/FRAMING		AREA (SQ.FT.)	MTG. HGT. (FT.)	DIR.	POST			REMARKS
		LT.	RT.				BRACED	FRAMED				TYPE	SIZE (INCHES)	NO.	
						X			####						
171	677+98		X	D3-100	Chena Pump Rd	30 X 8	X		1.67		N	PST	2.5	1	NO ACTION
				D3-100	Chena Pump Rd	30 X 8	X		1.67		S				NO ACTION
				D3-100	Nebula Way	26 X 8	X		1.44		E				NO ACTION
				D3-100	Nebula Way	26 X 8	X		1.44		W				NO ACTION
				R1-1	STOP	36 X 36	X		9.00		S				NO ACTION
172	678+40	X		W6-1		36 X 36	X		9.00		W	PST	2.5	1	
173	680+50		X	D11-1	BIKE ROUTE	30 X 24	X		5.00		W	PST	2.5	1	NO ACTION
174	680+87	X		D14-100	ADOPT A HIGHWAY	30 X 24	X		5.00		E		2.5	1	ON LIGHT POST
					THE PUMP HOUSE RESTAURANT	12 X 24	X		2.00		E				
				R12-102	75% MAXIMUM AXLE LOAD	42 X 48	X		14.00		E				
175	680+60	X		W6-1		36 X 36	X		9.00		E	PST	2.5	1	

#### NOTES:

1. MOUNTING HEIGHTS ARE PER STANDARD PLAN S-5.02 UNLESS OTHERWISE NOTED.
2. DETERMINE POST LENGTHS IN THE FIELD. DO NOT EXTEND POSTS ABOVE TOP OF SIGN.
3. INSTALL PST SIGHT POSTS WITH SLEEVE TYPE SOIL EMBEDMENT. EMBED PST IN SLEEVE 12" TO 24" PER STANDARD PLAN S-30.05. ATTACH THE SIGN POST TO THE SLEEVE USING GALVANIZED 3/8" BOLT, NUT, SPLIT LOCK WASHER AND TWO FLAT WASHERS.
4. 1/2" X 1 1/2" ALUMINUM ALLOY 6061-T6 BAR MAY ALSO BE USED TO FABRICATE SIGN BRACES AS SHOWN ON STANDARD PLANS S-01.02.
5. ATTACH ALL SIGN POSTS TO THEIR SUPPORTS WITH 3/8" BOLTS, EXCEPT ATTACH UNFRAMED SIGNS TO PST POSTS WITH ALUMINUM DRIVE RIVETS. INCLUDE SPLIT LOCK WASHERS WHEN BOLTS ARE USED.
6. ALL FASTENER HARDWARE SHALL MEET THE REQUIREMENTS OF THE "FASTENER SPECIFICATION TABLE" UNDER SECTION 730-2.07 OF THE SSHC
7. MAINTAIN EXISTING SIGNS UNTIL NEW SIGNS ARE INSTALLED. DO NOT LEAVE DUPLICATE OR CONFLICTING SIGNING UP AT ANY TIME.
8. ALL SIGNS NOTED FOR REMOVAL AND REINSTALLATION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE IF THEY ARE DAMAGED DURING THE RELOCATION EFFORT.
9. LOCATE AND PROTECT ALL NEW AND EXISTING UNDERGROUND UTILITIES, INCLUDING BUT NOT LIMITED TO: PIPELINES, INTERCONNECT CABLES, SIGNAL SYSTEMS, LIGHTING SYSTEMS, STORM AND SANITARY SEWERS, WATER SYSTEMS, AND TELEPHONE AND ELECTRICAL CABLES, PRIOR TO INSTALLING SIGN POSTS. NO ALL EXISTING UTILITIES MAY BE SHOWN ON THE PLANS.
10. CLEARING, AS DIRECTED BY THE ENGINEER, MAY BE REQUIRED TO ENSURE ADEQUATE VISIBILITY OF THE SIGNS. THIS WORK IS SUBSIDIARY TO PAY ITEM 615.0001.0000

SIGN SUMMARY 6



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	D8	D8

SUPERELEVATION SUMMARY											
CURVE PI	RADIUS (FT)	BEGIN TRANSITION	TRANSITION LENGTH (FT)	CURVE PC	BEGIN FULL SUPERELEVATION	SUPERELEVATION RATE (%)	END FULL SUPERELEVATION	CURVE PT	TRANSITION LENGTH (FT)	END TRANSITION	REMARKS
54+13	818.51	48+35	215	49+99.21	50+50	6	57+75	58+20.70	215	59+90	
65+58	763.94	61+45	210	63+05.66	63+55	6	67+60	68+06.86	215	69+75	
81+85	954.93	77+65	210	79+26.96	79+75	6	83+95	84+40.86	215	86+10	

**NOTES:**

- ALL CONSTRUCTION ACTIVITIES SHALL OCCUR WITHIN THE EXISTING ROW.
- RECONSTRUCTION OF CHENA RIDGE ROAD FROM STATION 46+00 TO 84+00 IS TO BE COMPLETED AT LEAST 2 WEEKS PRIOR TO SURFACE SEALING.
- USE TYPICAL SECTION ON PAGE B2
- SAW CUT ALL MATCH LINES WHERE NEW CONSTRUCTION ABUTS EXISTING ASPHALT, APPLY STE-1 ASPHALT FOR TACK COAT ON THE VERTICAL FACE OF ALL SAW CUTS PRIOR TO PAVING. SAW CUTTING WILL NOT BE MEASURED BY OR PAID FOR DIRECTLY, BUT IS SUBSIDIARY TO OTHER HOT MIX ASPHALT PAY ITEMS.
- MECHANIZED LAND VEGETATION CLEARING AND GRUBBING IS PROHIBITED DURING THE MIGRATORY BIRD NESTING SEASON (MAY 1 – JULY 15).
- CONTRACTOR WILL VERIFY UTILITY LOCATIONS PRIOR TO BEGINNING ANY GROUND DISTURBING WORK, LOCATE ALL EXISTING UTILITIES WITHIN THE PROJECT BOUNDARIES. PROTECT UTILITIES FROM CONSTRUCTION DAMAGE FOR THE DURATION OF THE PROJECT.
- ALL UNUSABLE WASTE MATERIAL IS TO BE DISPOSED OF OUTSIDE THE PROJECT LIMITS. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING WASTE DISPOSAL SITES AT AREAS APPROVED BY THE ENGINEER.

SUPERELEVATION SUMMARY



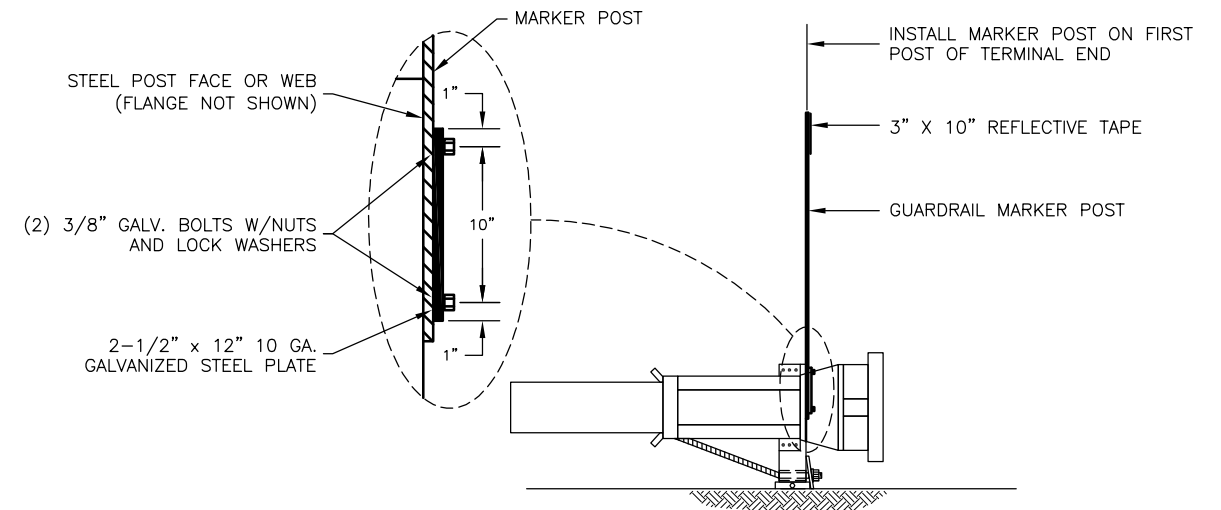
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	PENDING/NFH00570	2023	E1	E1

**GUARDRAIL SUMMARY NOTES:**

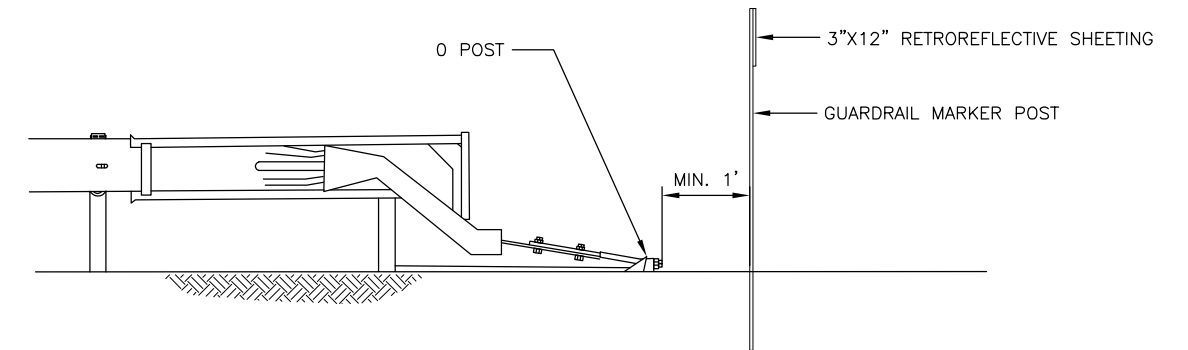
1. GUARDRAIL LENGTHS AND LOCATIONS ARE APPROXIMATE AND MAY BE ADJUSTED IN THE FIELD BY THE ENGINEER.
2. GUARDRAIL POST LENGTH SHALL BE DETERMINED IN ACCORDANCE WITH STANDARD PLAN G-10.20, SHEET 1 OF 1. ALL WORK AND MATERIALS REQUIRED TO INSTALL GUARDRAIL POSTS ARE SUBSIDIARY TO THE 606 PAY ITEMS.
3. IN ADDITION TO THE GUARDRAIL REFLECTORS, INSTALL GUARDRAIL FLEXIBLE DELINEATORS AS SHOWN ON STANDARD PLAN G-00.05, SHEET 5 OF 5.
4. USE AGGREGATE BASE COURSE, GRADING D-1, FROM THE FRONT FACE OF THE POST TO THE HINGE POINT BEHIND THE POST; COMPACT AND GRADE TO MATCH THE TOP SURFACE AND CROSS-SLOPE OF SHOULDER UNLESS OTHERWISE STATED BY CASE TYPE IN STANDARD PLAN G-10.20.
5. 606.0013 PARALLEL GUARDRAIL TERMINAL = 50'.
6. END ANCHORS = 12.5' (INCLUDED AS PART OF THE 606.0001 PAY ITEM)

**GUARDRAIL MARKER NOTES:**

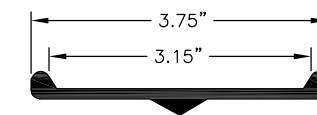
7. GUARDRAIL MARKER POSTS SHALL BE YELLOW AND AT LEAST 78" LONG. POSTS SHALL MEET THE REQUIREMENTS OF SUBSECTION 730-2.05 FLEXIBLE DELINEATOR POSTS.
8. RETROREFLECTIVE SHEETING SHALL MEET ASTM D4956 REQUIREMENTS FOR TYPE VIII, IX, OR XI. COLOR OF RETROREFLECTIVE SHEETING SHALL MATCH COLOR OF ADJACENT EDGE LINE STRIPE. PLACE RETROREFLECTIVE SHEETING ON SIDE OF MARKER POST FACING TRAFFIC IN ADJACENT LANE.
9. FOR SOFT STOP PARALLEL END TREATMENTS PLACE CENTER OF MARKER POST IN LINE WITH TRAFFIC SIDE OF O POST. DRIVE GUARDRAIL MARKER POST 18" INTO GROUND.
10. FOR ALL OTHER END TREATMENTS, DRILL ALL BOLT HOLES. COAT HOLES WITH ZINC RICH PAINT. FLAME CUTTING SHALL NOT BE PERMITTED.
11. ALL WORK AND MATERIAL REQUIRED TO INSTALL GUARDRAIL MARKER POSTS IS SUBSIDIARY TO 606 PAY ITEMS.



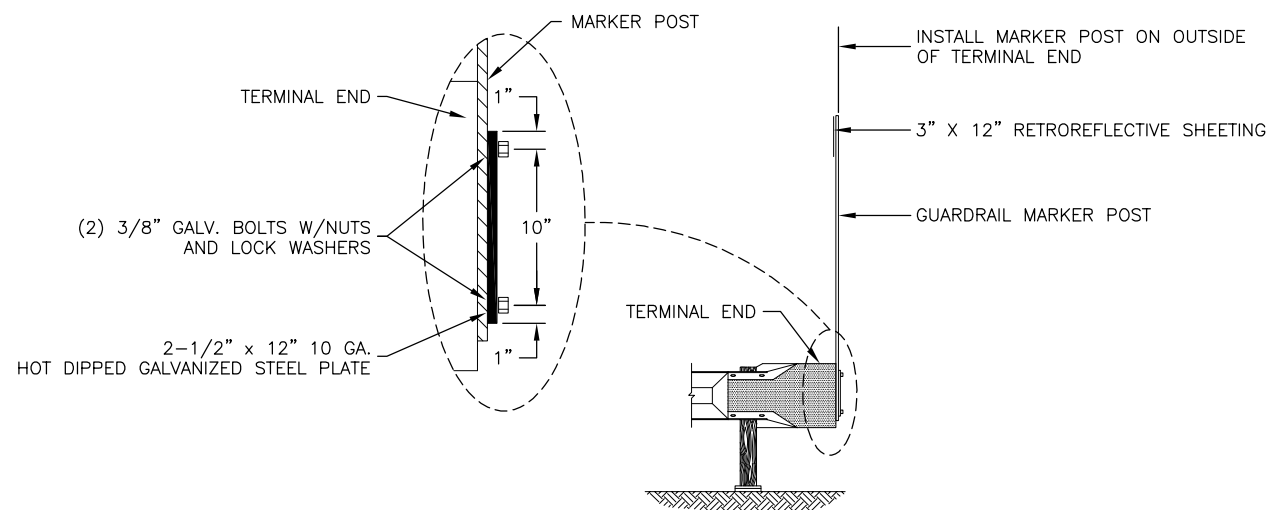
**GUARDRAIL MARKER POST ATTACHMENT DETAIL**  
PARALLEL GUARDRAIL TERMINALS



**GUARDRAIL MARKER POST INSTALLATION DETAIL**  
SOFT STOP PARALLEL GUARDRAIL TERMINAL



**POST DETAIL**  
CROSS-SECTIONAL VIEW



**GUARDRAIL MARKER POST ATTACHMENT DETAIL**  
DOWNSTREAM END ANCHOR

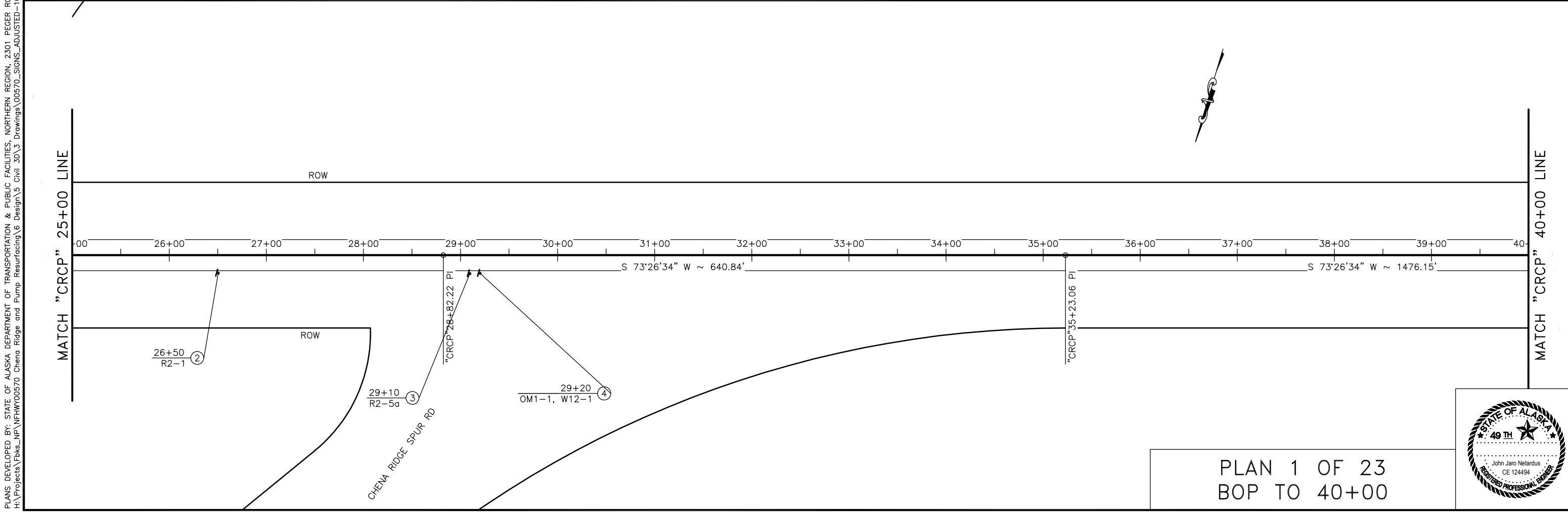
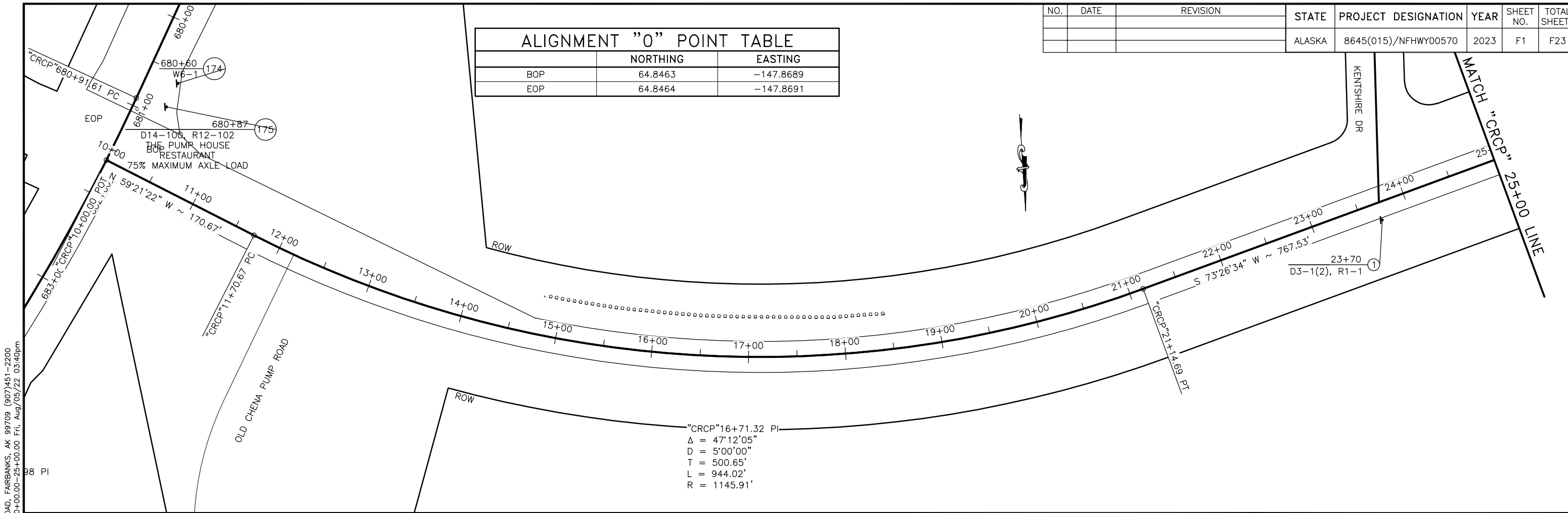
**GUARDRAIL DETAILS  
AND NOTES**



PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709, (907)451-2200  
H:\Projects\Fbs\_NF\NFHW00570 Chena Ridge and Pump Resurfacing 6 Design\5 Civil\3D\3 Drawings\00570\_GUARDRAIL SUMMARY-GUARDRAIL DETAILS Tue, Aug/02/22 04:04pm

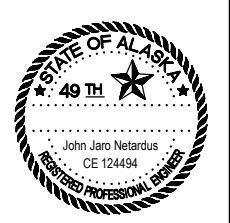
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	F1	F23

ALIGNMENT "0" POINT TABLE		
	NORTHING	EASTING
BOP	64.8463	-147.8689
EOP	64.8464	-147.8691



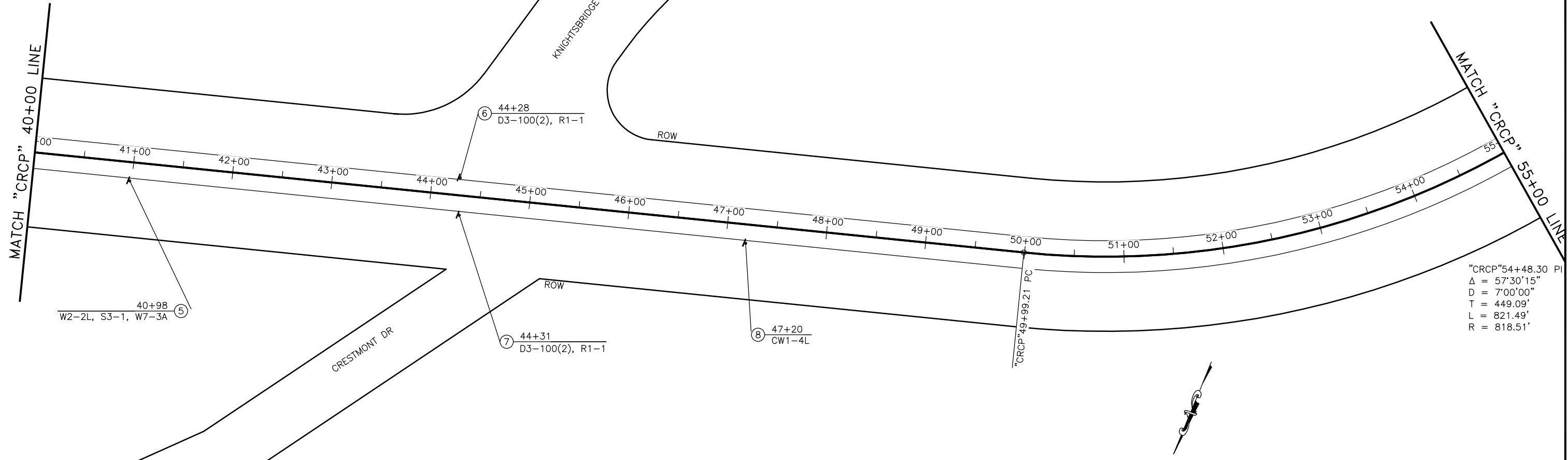
PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200  
 H:\Projects\Fbks\_NF\NFHWY00570 Chena Ridge and Pump Resurfacing\6 Design\5 Civil 3D\3 Drawings\00570\_SIGNS\_ADJUSTED-10+00.00-25+00.00 Fri, Aug/05/22 03:40pm

PLAN 1 OF 23  
 BOP TO 40+00

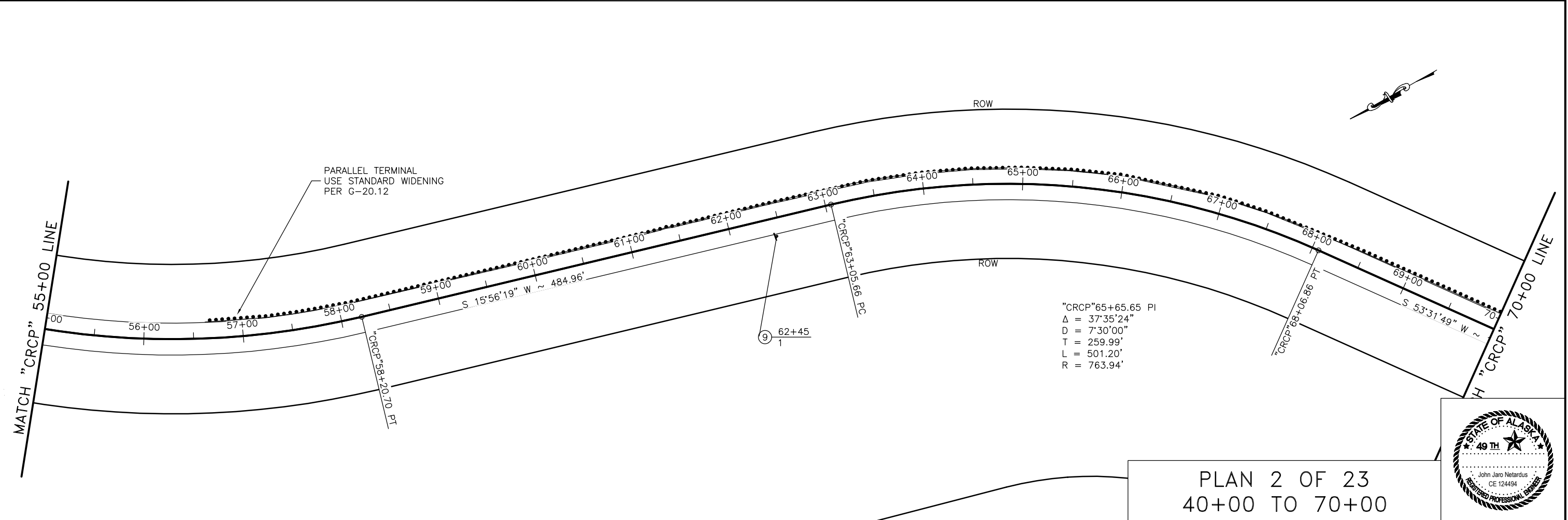




NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	F2	F23



"CRCP"54+48.30 PI  
 $\Delta = 57^{\circ}30'15''$   
 $D = 7^{\circ}00'00''$   
 $T = 449.09'$   
 $L = 821.49'$   
 $R = 818.51'$



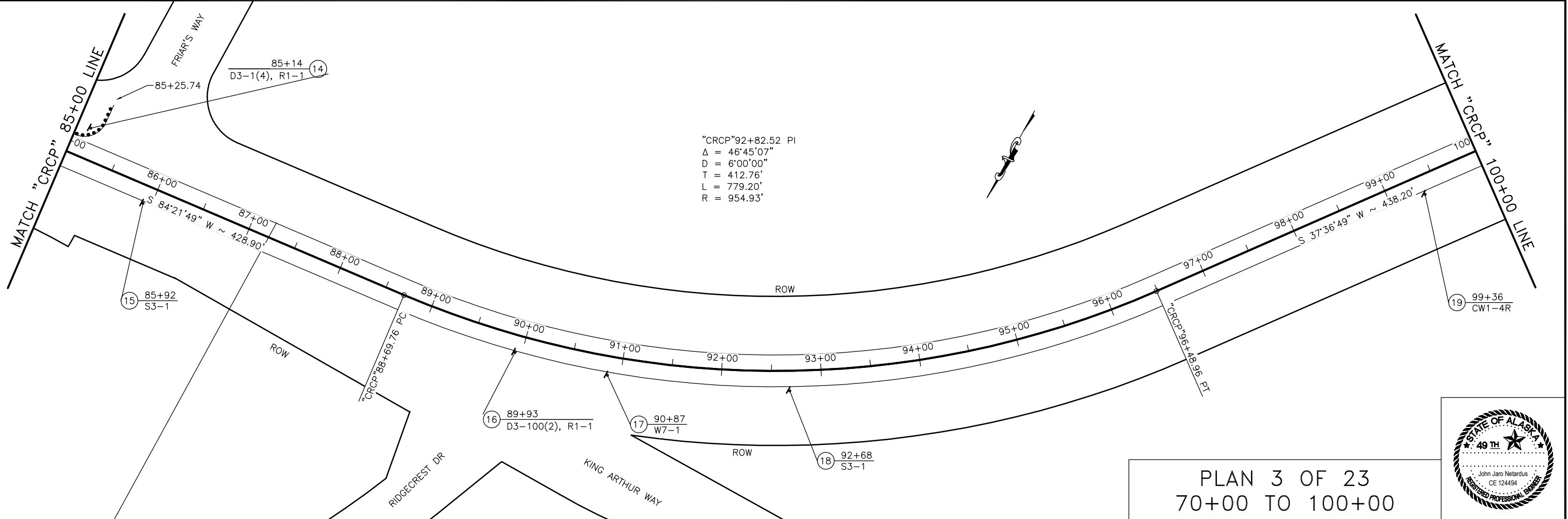
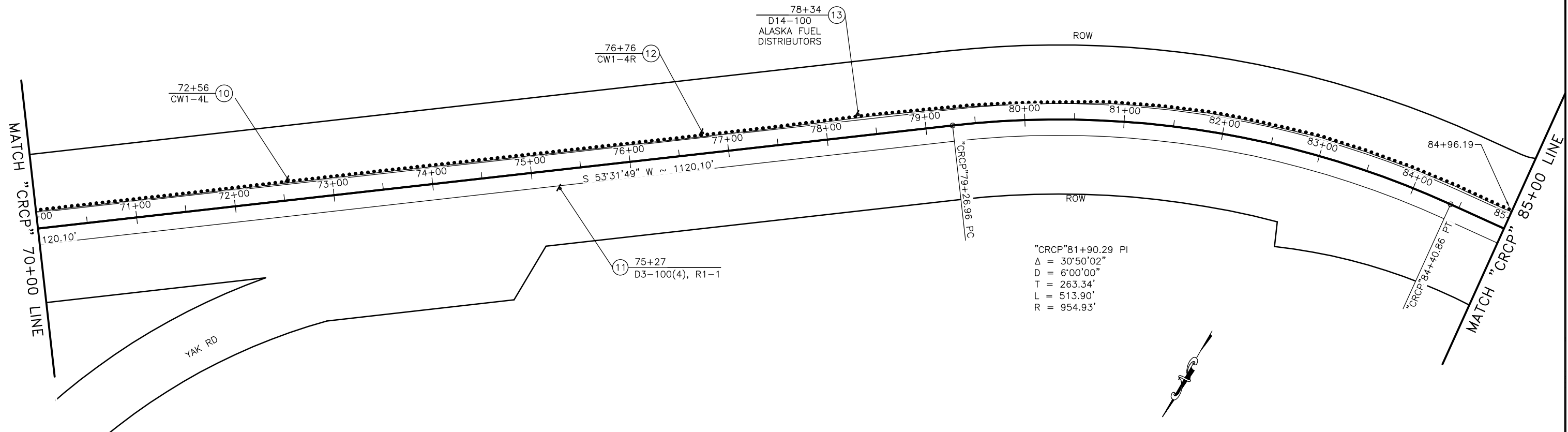
"CRCP"65+65.65 PI  
 $\Delta = 37^{\circ}35'24''$   
 $D = 7^{\circ}30'00''$   
 $T = 259.99'$   
 $L = 501.20'$   
 $R = 763.94'$

PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200  
 H:\Projects\Fbks\_NF\NFHWY00570 Chena Ridge and Pump Resurfacing\6 Design\5 Civil 3D\3 Drawings\00570\_SIGNS\_ADJUSTED-40+00.00-55+00.00 Fri, Aug/05/22 04:36pm

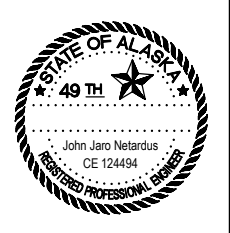
PLAN 2 OF 23  
 40+00 TO 70+00



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	F3	F23

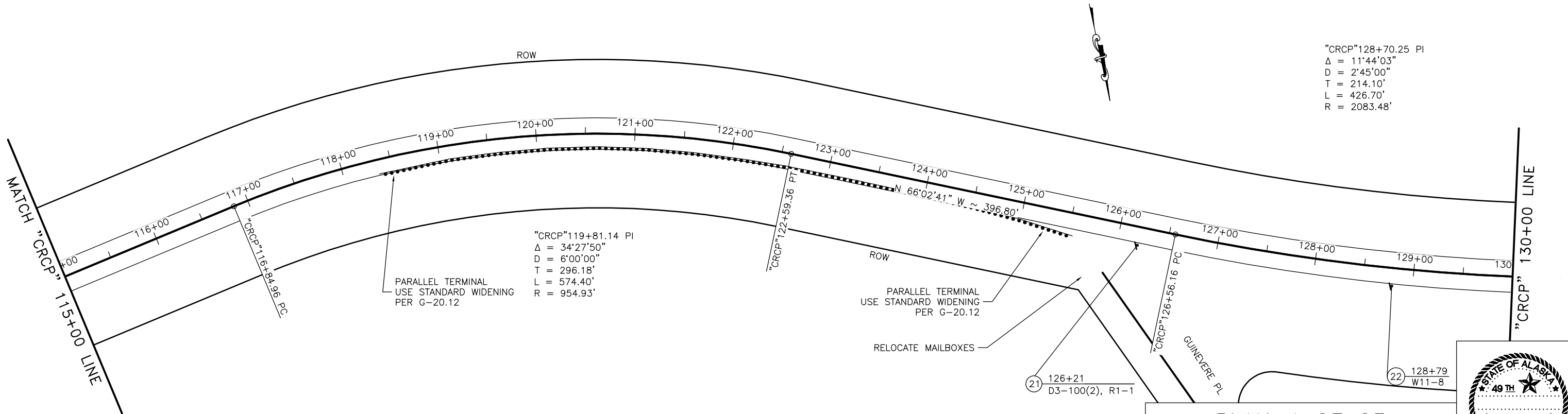
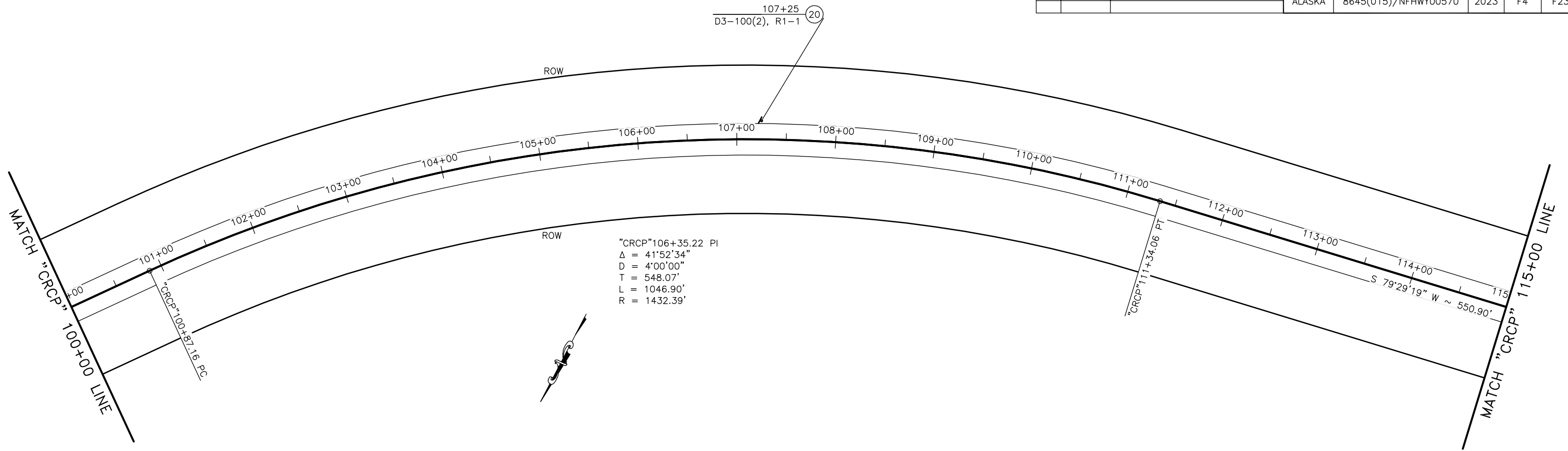


PLAN 3 OF 23  
70+00 TO 100+00



PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200  
H:\Projects\Fbks\_NF\NFHWY00570 Chena Ridge and Pump\_Resurfacing\6 Design\5 Civil\_3D\3 Drawings\00570\_SIGNS\_ADJUSTED-70+00.00-85+00.00 Fri, Aug/05/22 04:01:pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	F4	F23



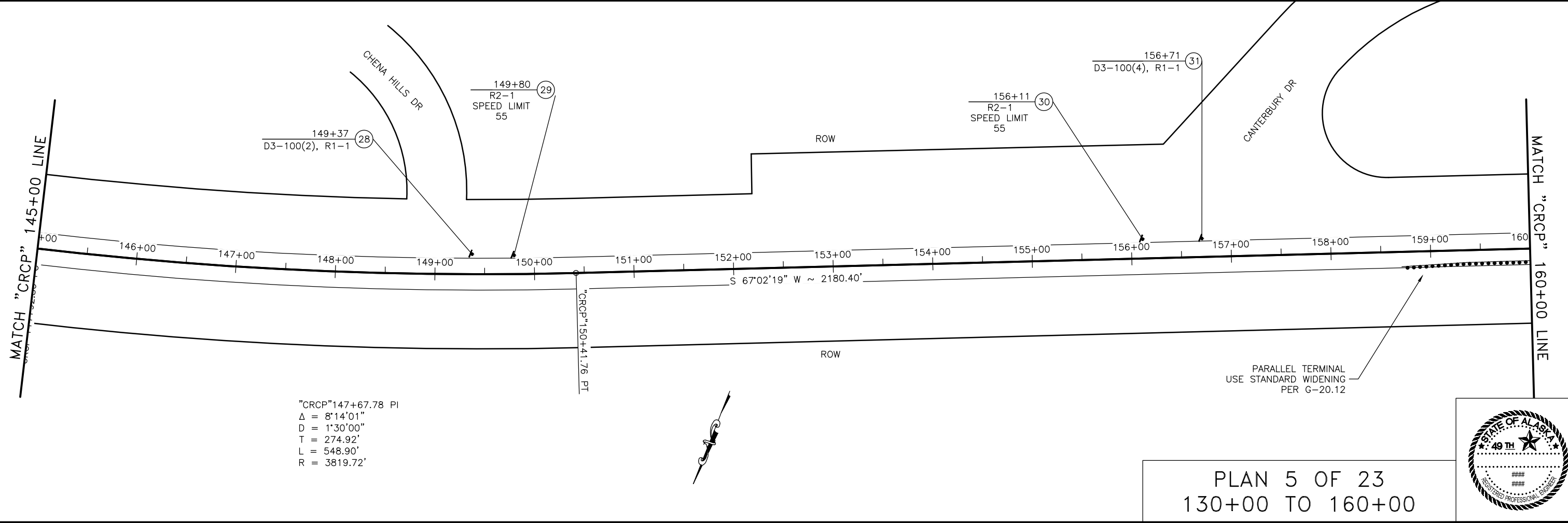
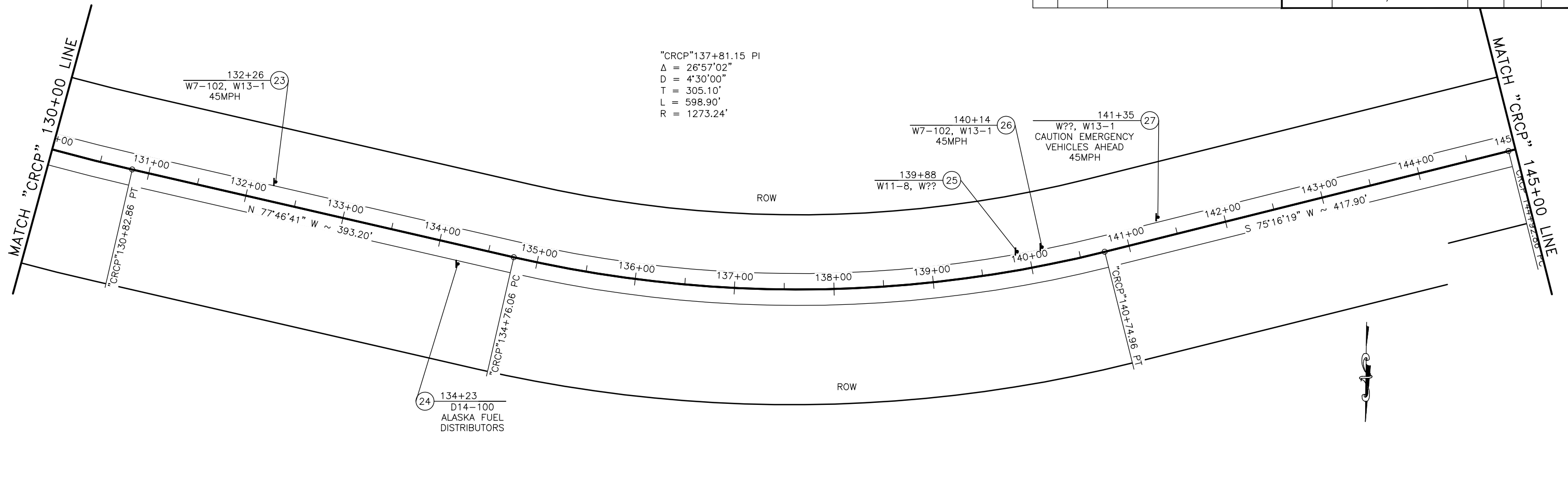
PLAN 4 OF 23  
100+00 TO 130+00



PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200  
H:\Projects\Fbks\_NF\NFHWY00570 Chena Ridge and Pump Resurfacing\6 Design\5 Civil\_3D\3 Drawings\00570\_SIGNS\_ADJUSTED-100+00.00-115+00.00-Fri\_Aug/05/22\_03:41pm



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	PENDING/NFHWY00570	2023	F5	F23

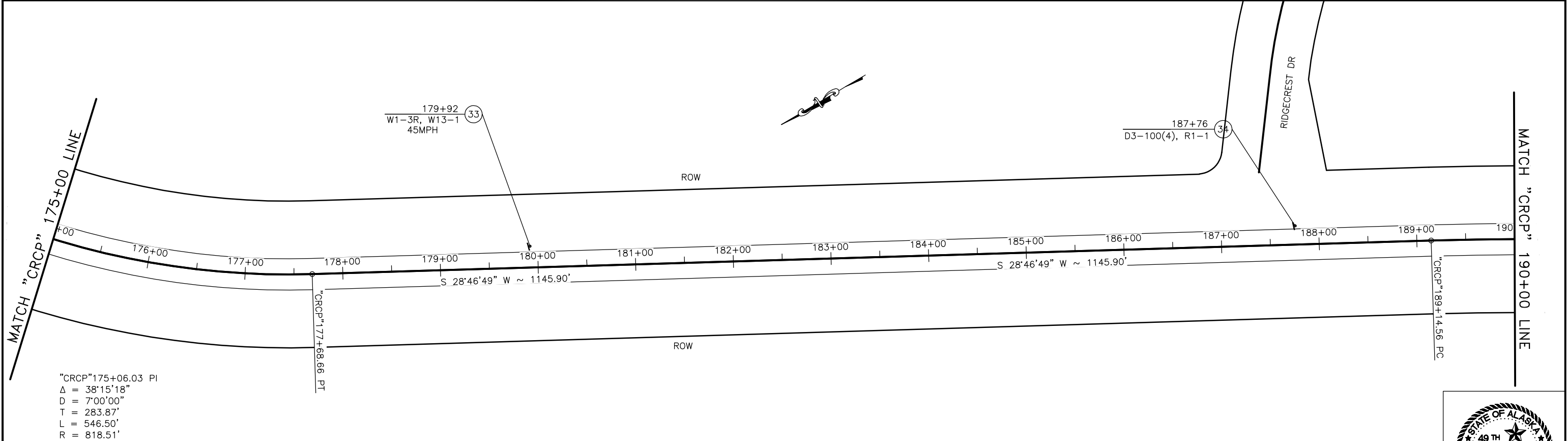
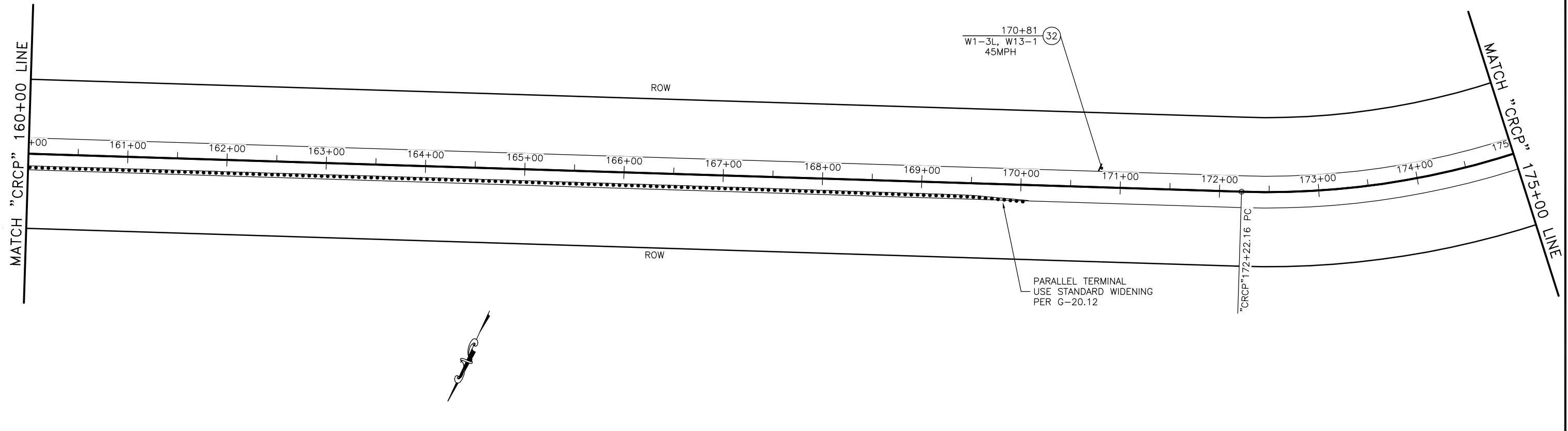


PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200  
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PLAN 5 OF 23  
 130+00 TO 160+00

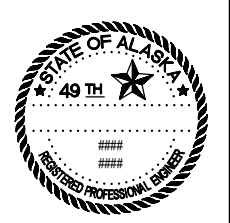


NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	F6	F23



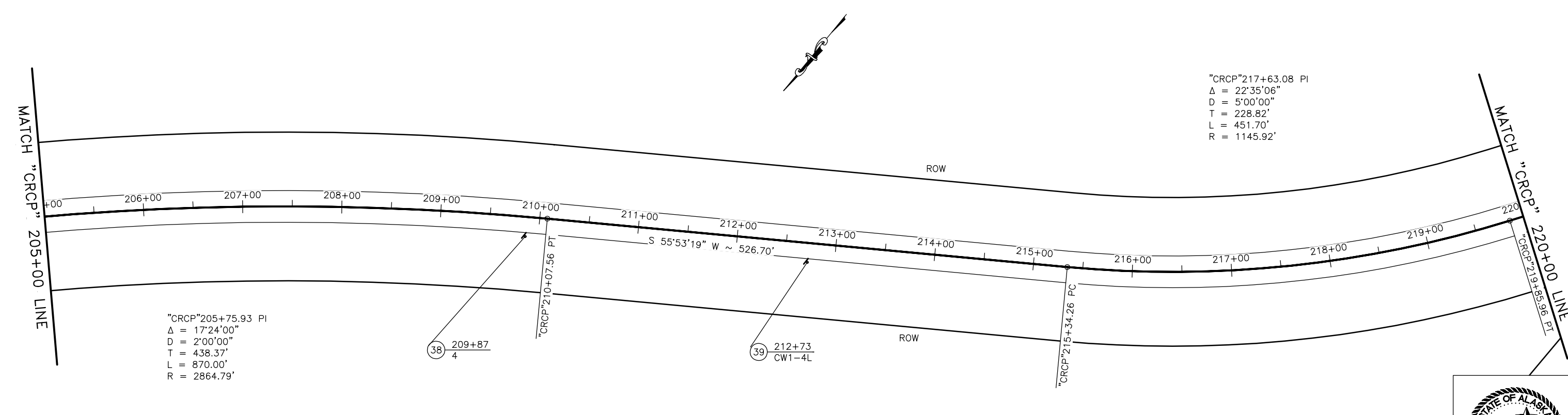
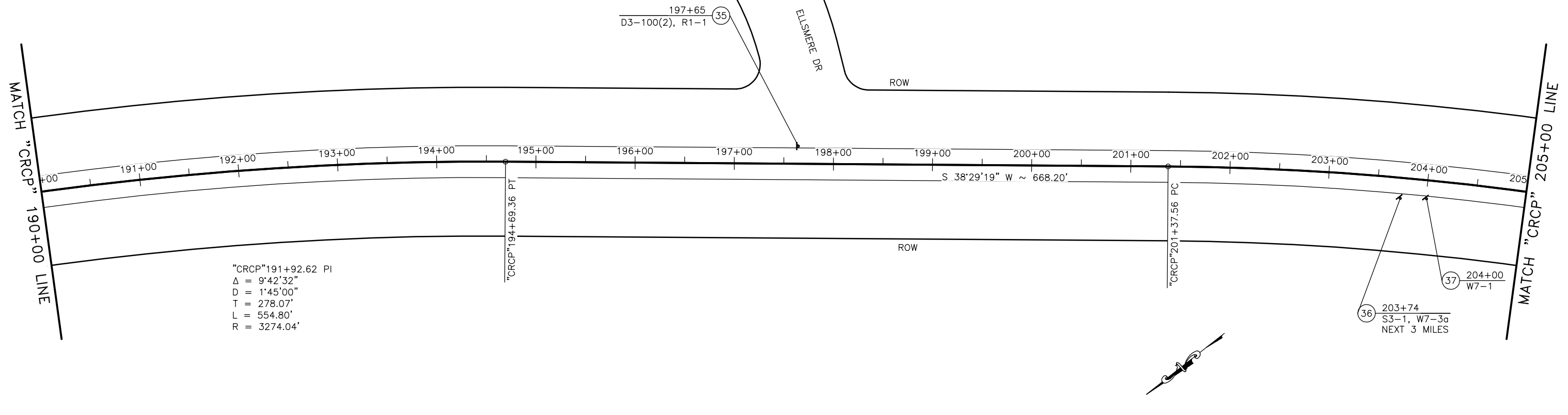
"CRCP"175+06.03 PI  
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 $D = 7'00'00''$   
 $T = 283.87'$   
 $L = 546.50'$   
 $R = 818.51'$

PLAN 6 OF 23  
 160+00 TO 190+00



PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200  
 H:\Projects\Fbks\_NF\NFHWY00570 Chena Ridge and Pump Resurfacing\6 Design\5 Civil 3D\3 Drawings\00570\_SIGNS\_ADJUSTED-160+00.00-175+00.00 Fri, Aug/05/22 03:42pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
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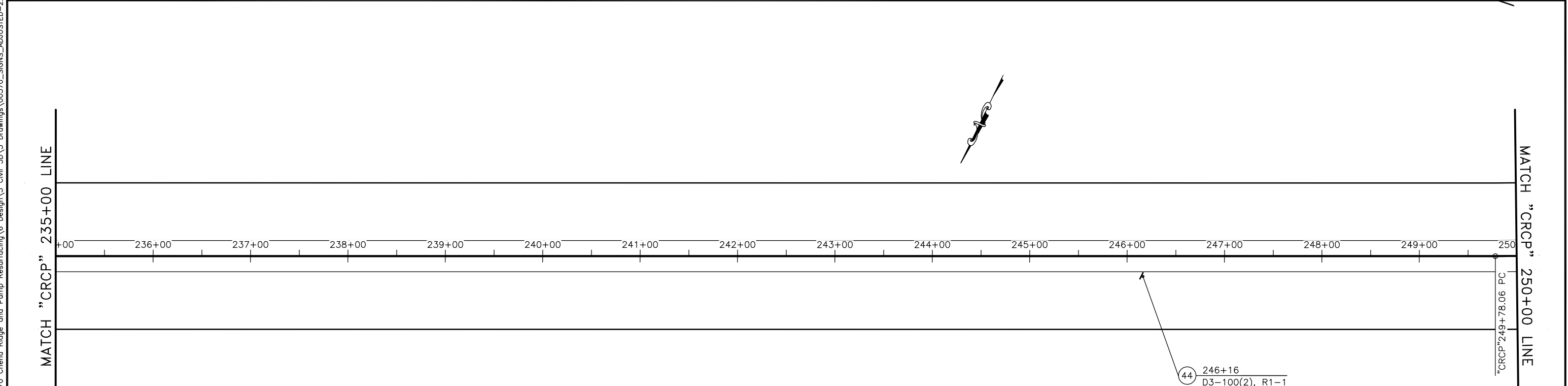
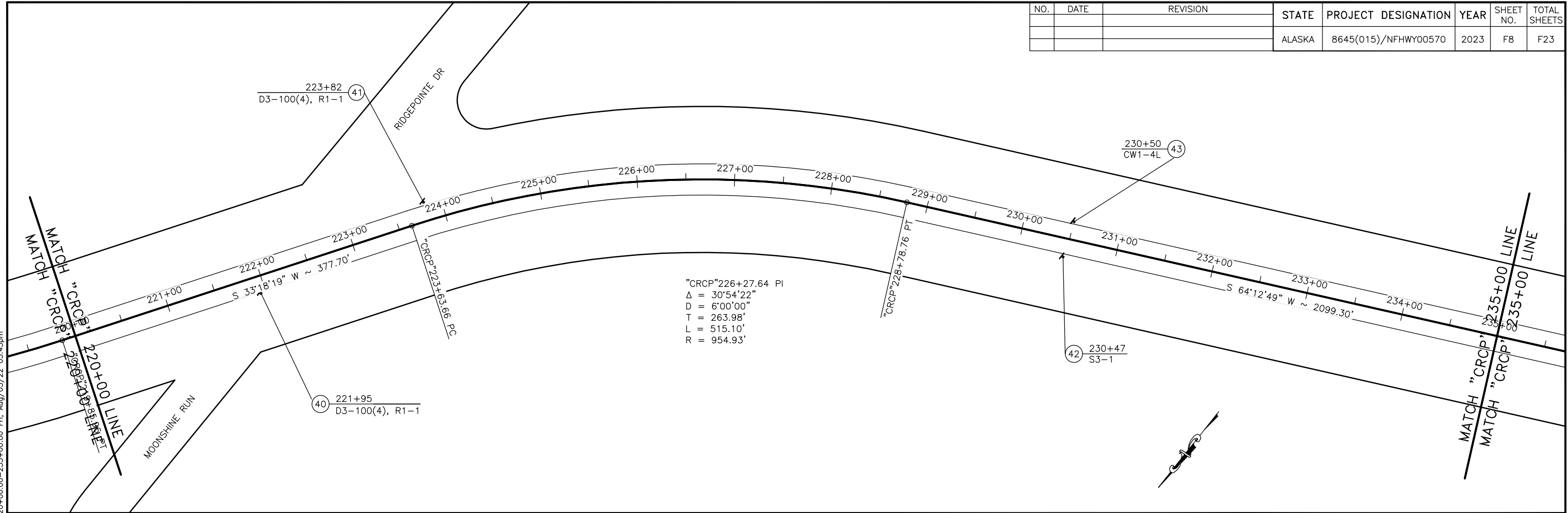


PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200  
 H:\Projects\Fbks\_NF\NFHWY00570 Chena Ridge and Pump Resurfacing\6 Design\5 Civil 3D\3 Drawings\00570\_SIGNS\_ADJUSTED-190+00.00-205+00.00 Fri, Aug/05/22 03:43pm

PLAN 7 OF 23  
 190+00 TO 220+00



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	F8	F23



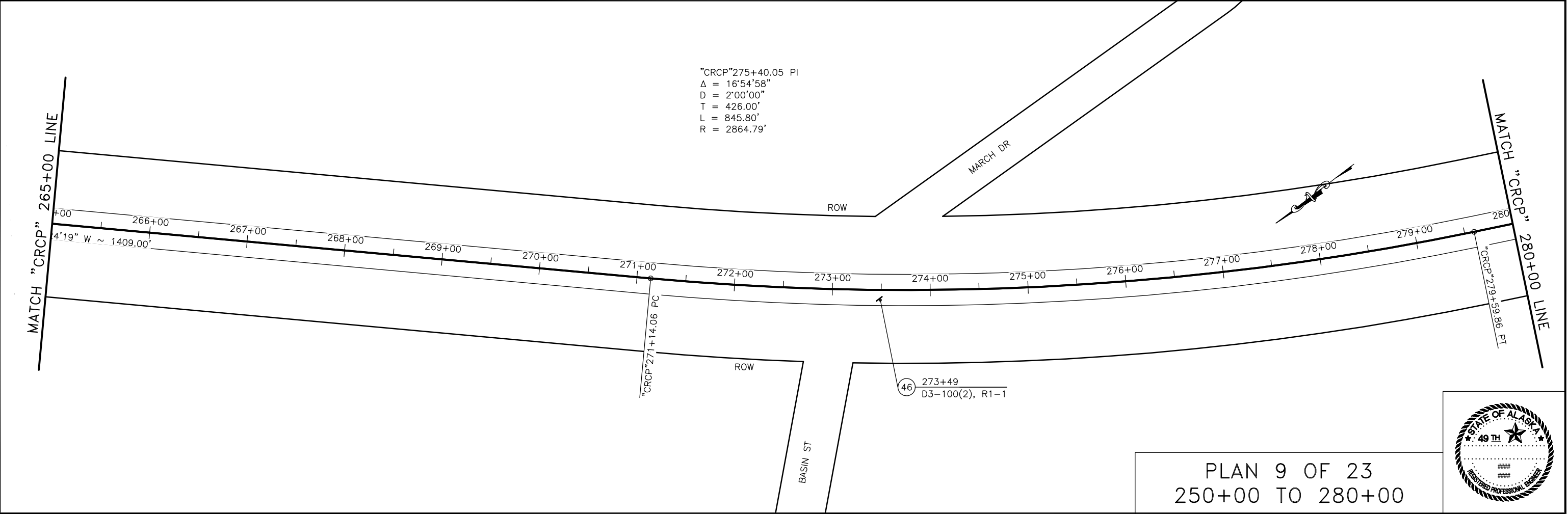
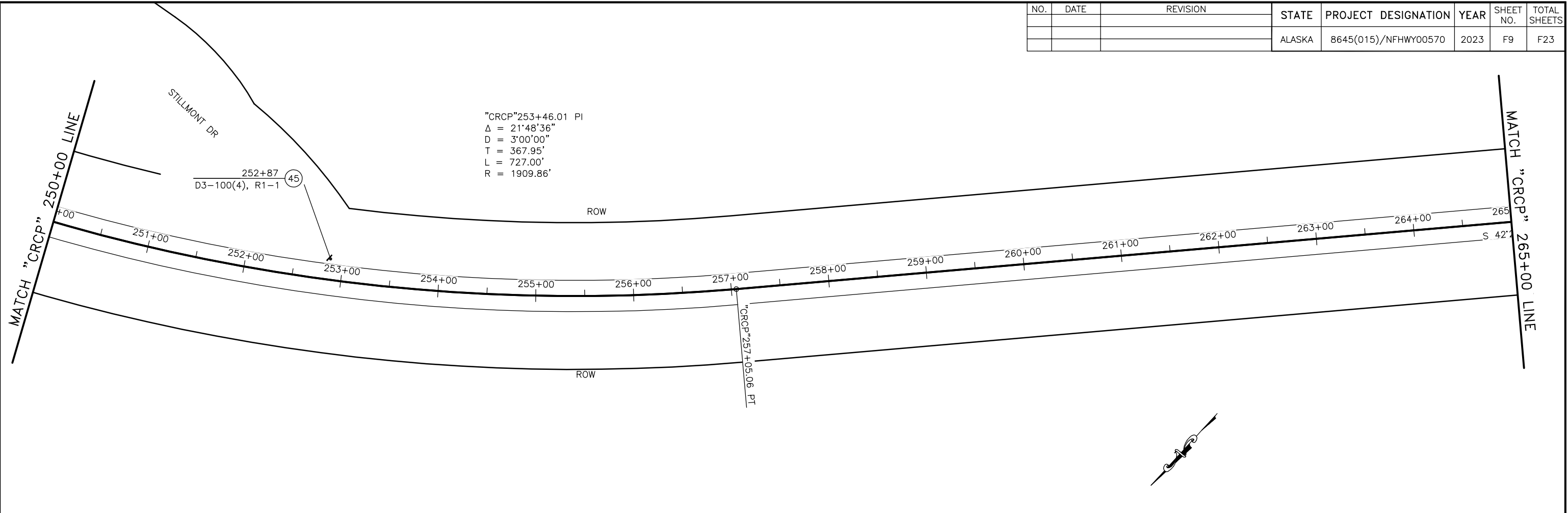
PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200  
 H:\Projects\Fbks\_NF\NFHWY00570 Chena Ridge and Pump Resurfacing\6 Design\5 Civil 3D\3 Drawings\00570\_SIGNS\_ADJUSTED-220+00.00-235+00.00 Fri, Aug/05/22 03:43pm

PLAN 8 OF 23  
 220+00 TO 250+00





NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	F9	F23

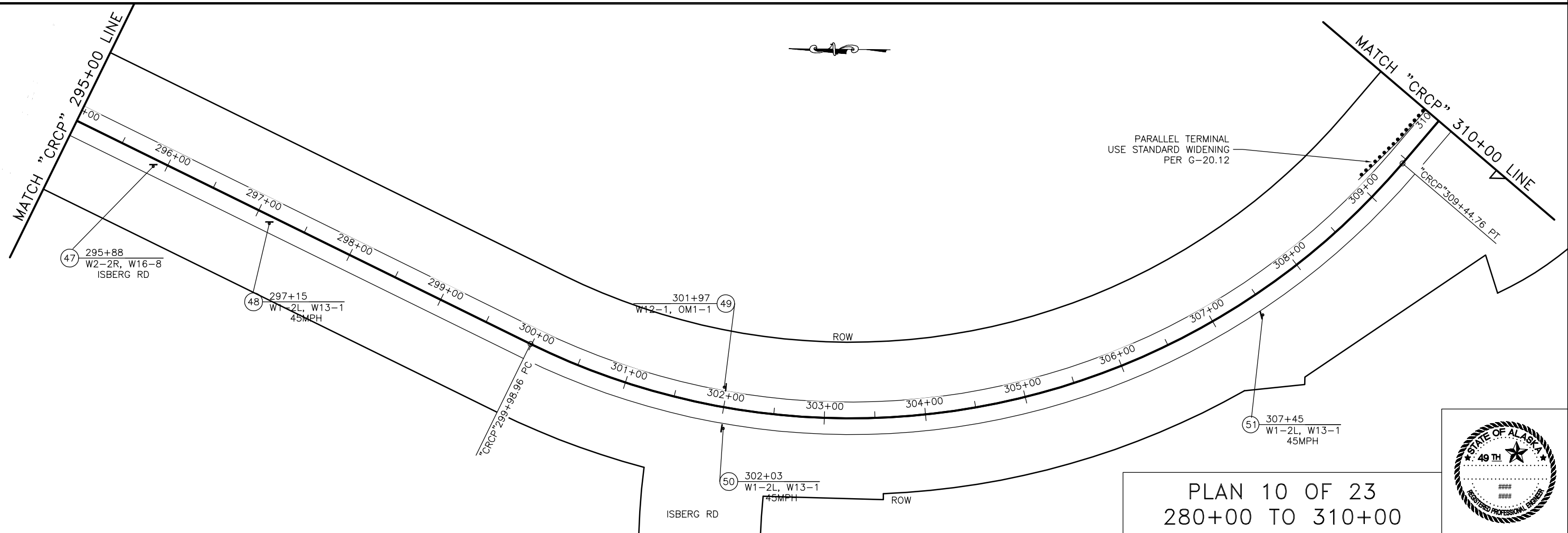
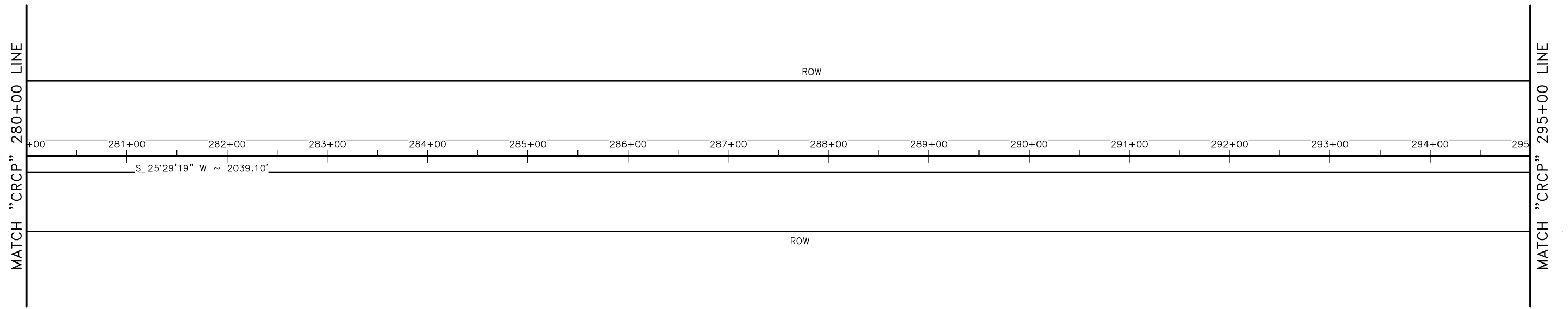


PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200  
 H:\Projects\Fbks\_NF\NFHWY00570 Chena Ridge and Pump Resurfacing\6 Design\5 Civil\_3D\3 Drawings\00570\_SIGNS\_ADJUSTED-250+00.00-265+00.00 Fri, Aug/05/22 03:44pm

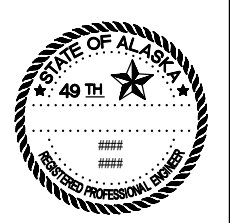
PLAN 9 OF 23  
 250+00 TO 280+00



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	F10	F23

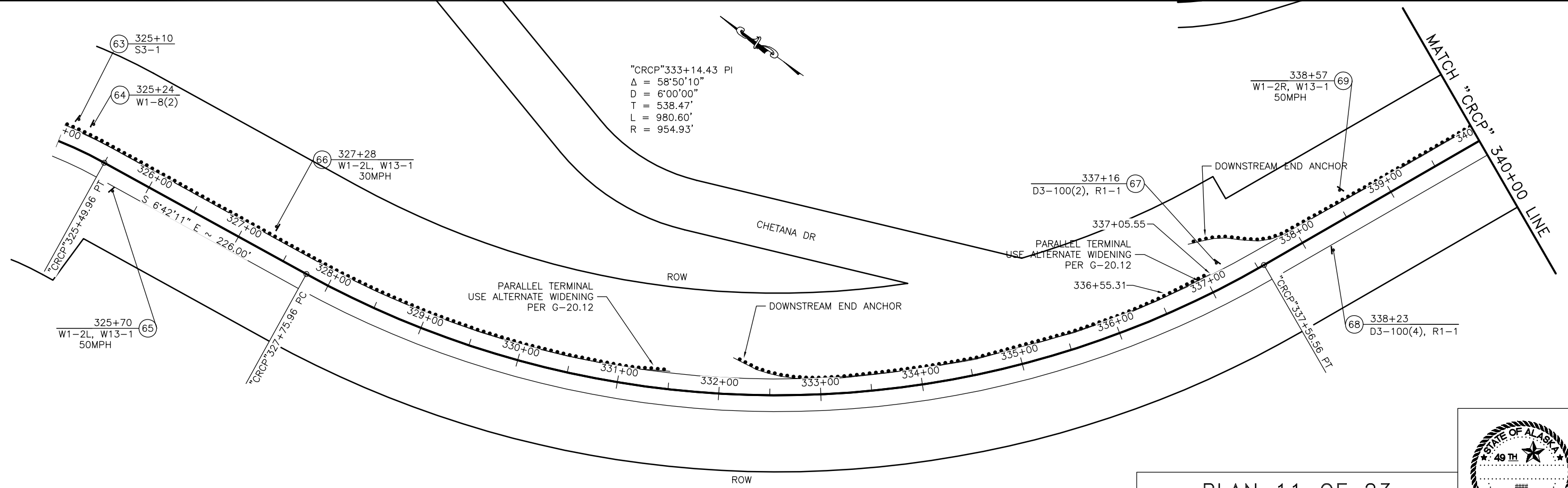
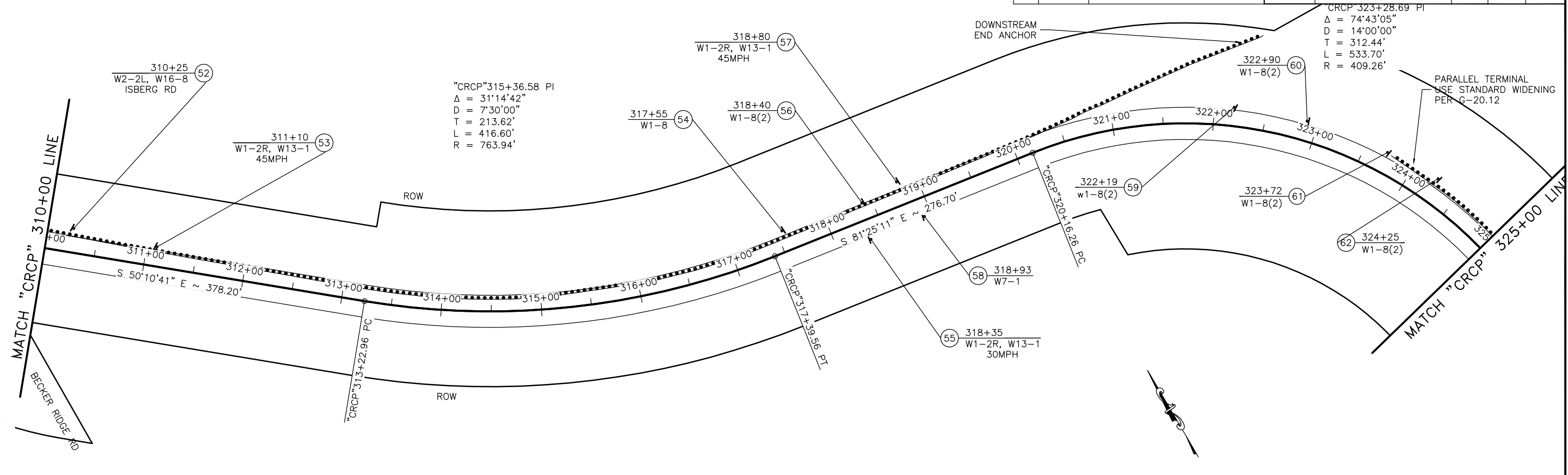


PLAN 10 OF 23  
280+00 TO 310+00



PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200  
 H:\Projects\Fbks\_NF\NFHWY00570 Chena Ridge and Pump Resurfacing\6 Design\5 Civil 3D\3 Drawings\00570\_SIGNS\_ADJUSTED-280+00.00-295+00.00 Fri, Aug/05/22 03:46pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
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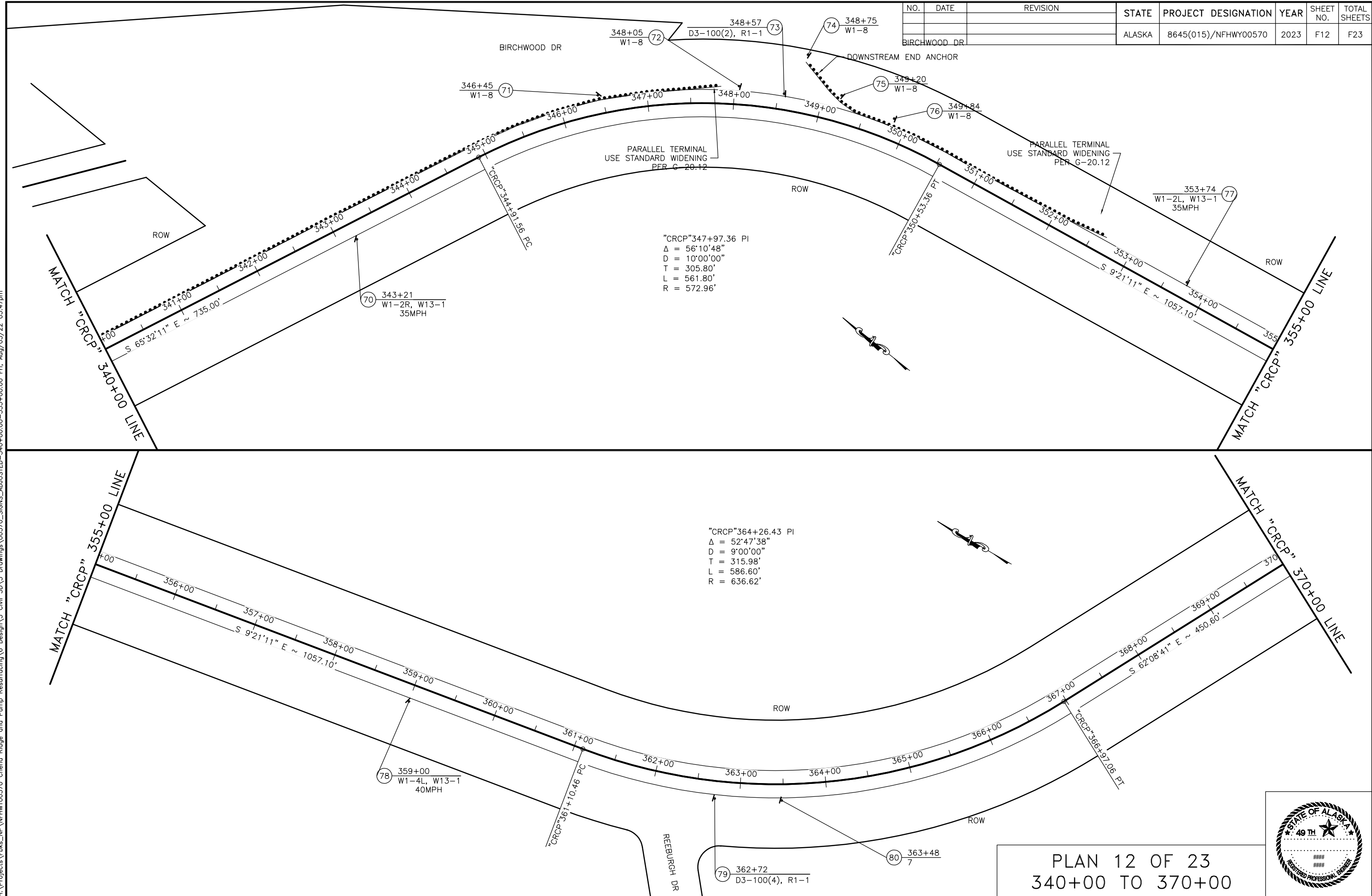


PLAN 11 OF 23  
310+00 to 340+00



PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200  
H:\Projects\Fbks\_NF\NFHWY00570 Chena Ridge and Pump\_Resurfacing\6 Design\5 Civil\_3D\3 Drawings\00570\_SIGNS\_ADJUSTED-310+00.00-325+00.00 Fri\_Aug/05/22 03:46pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	F12	F23



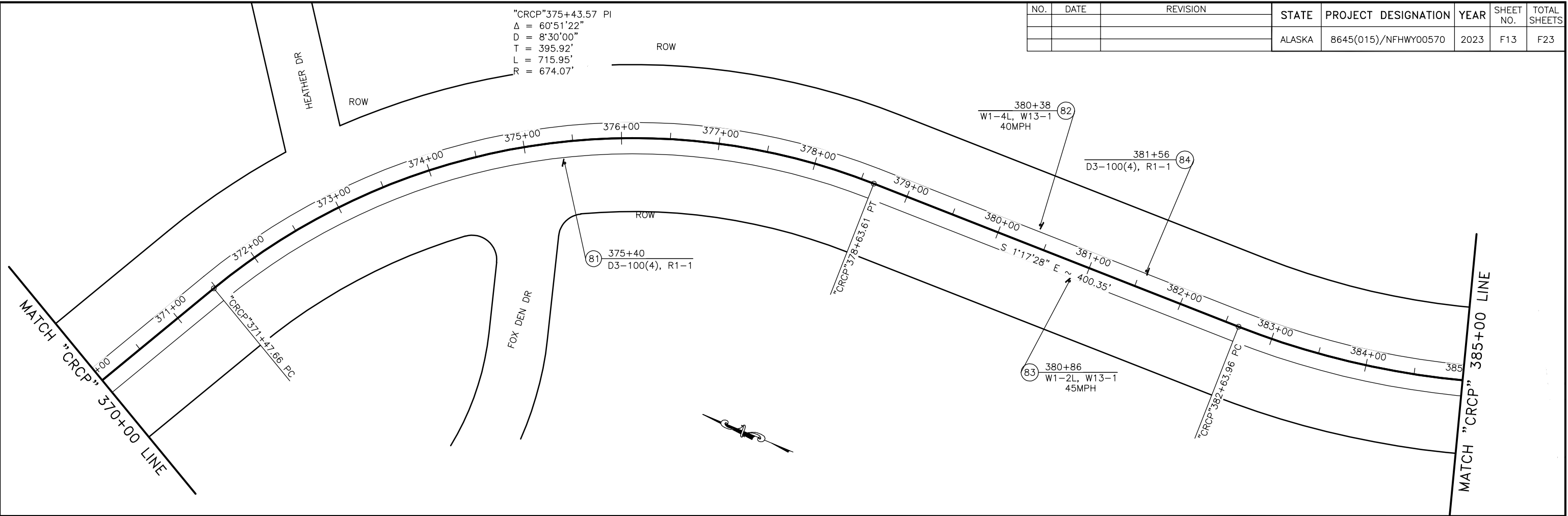
PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200  
 H:\Projects\Fbks\_NF\NFHWY00570 Chena Ridge and Pump\_Resurfacing\6 Design\5 Civil 3D\3 Drawings\00570\_SIGNS\_ADJUSTED-340+00.00-355+00.00 Fri, Aug/05/22 03:47pm

PLAN 12 OF 23  
 340+00 TO 370+00

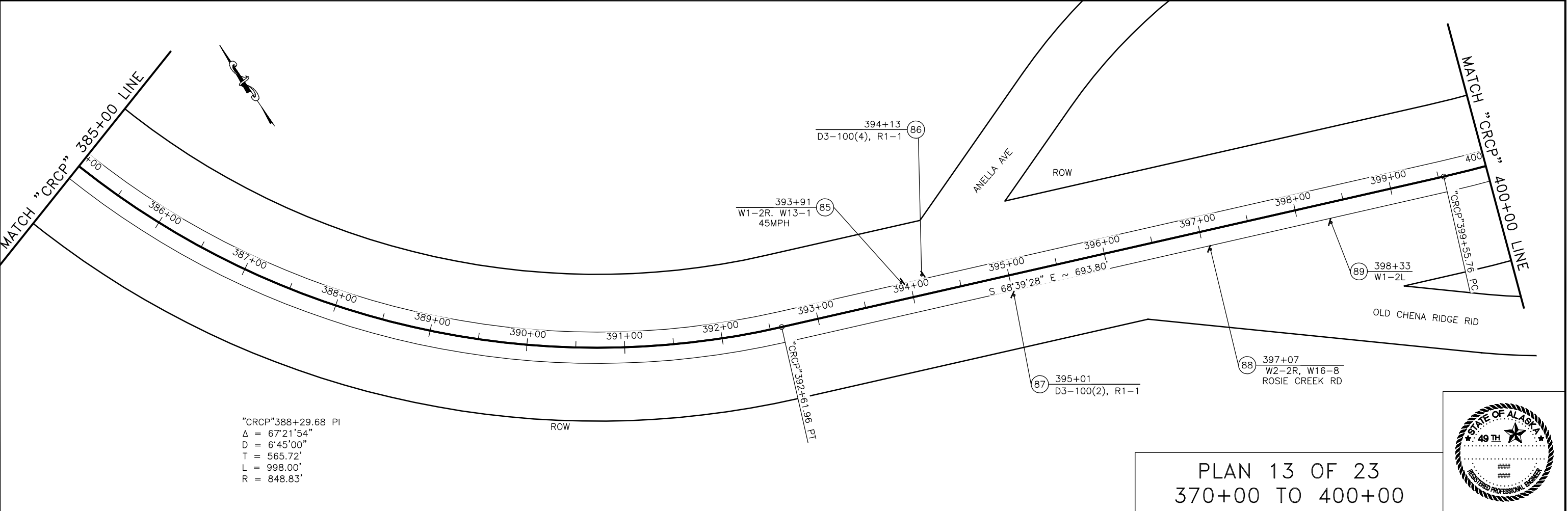


NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	F13	F23

"CRCP"375+43.57 PI  
 $\Delta = 60^{\circ}51'22"$   
 $D = 8^{\circ}30'00"$   
 $T = 395.92'$   
 $L = 715.95'$   
 $R = 674.07'$



"CRCP"388+29.68 PI  
 $\Delta = 67^{\circ}21'54"$   
 $D = 6^{\circ}45'00"$   
 $T = 565.72'$   
 $L = 998.00'$   
 $R = 848.83'$

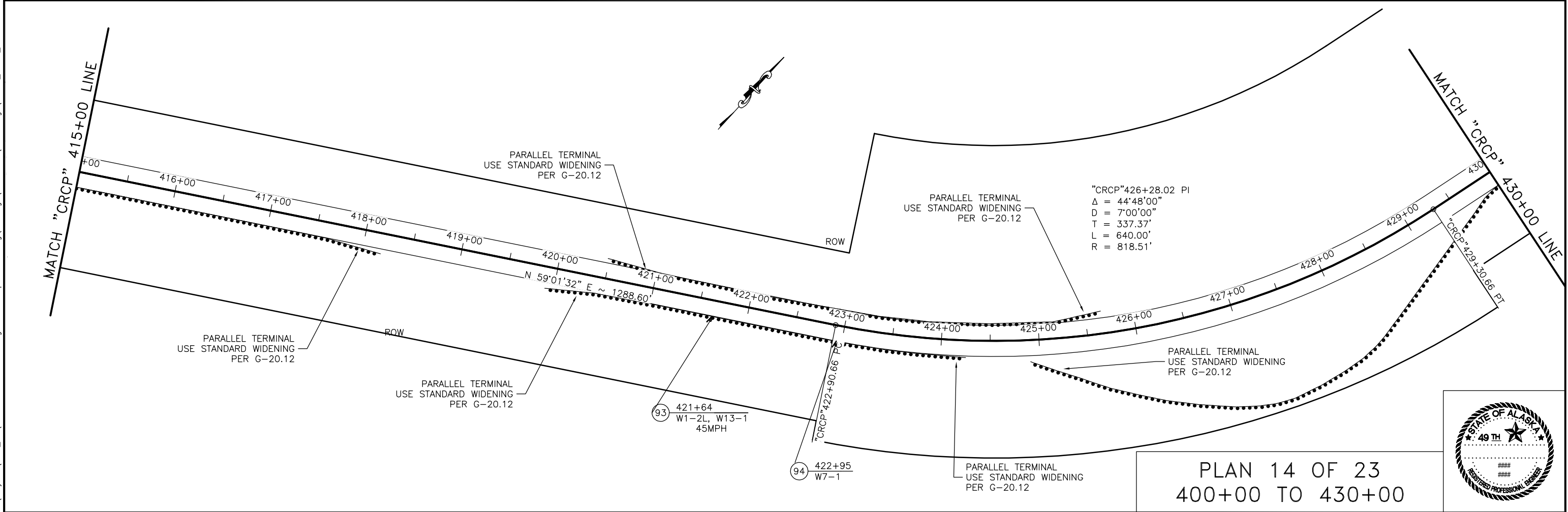
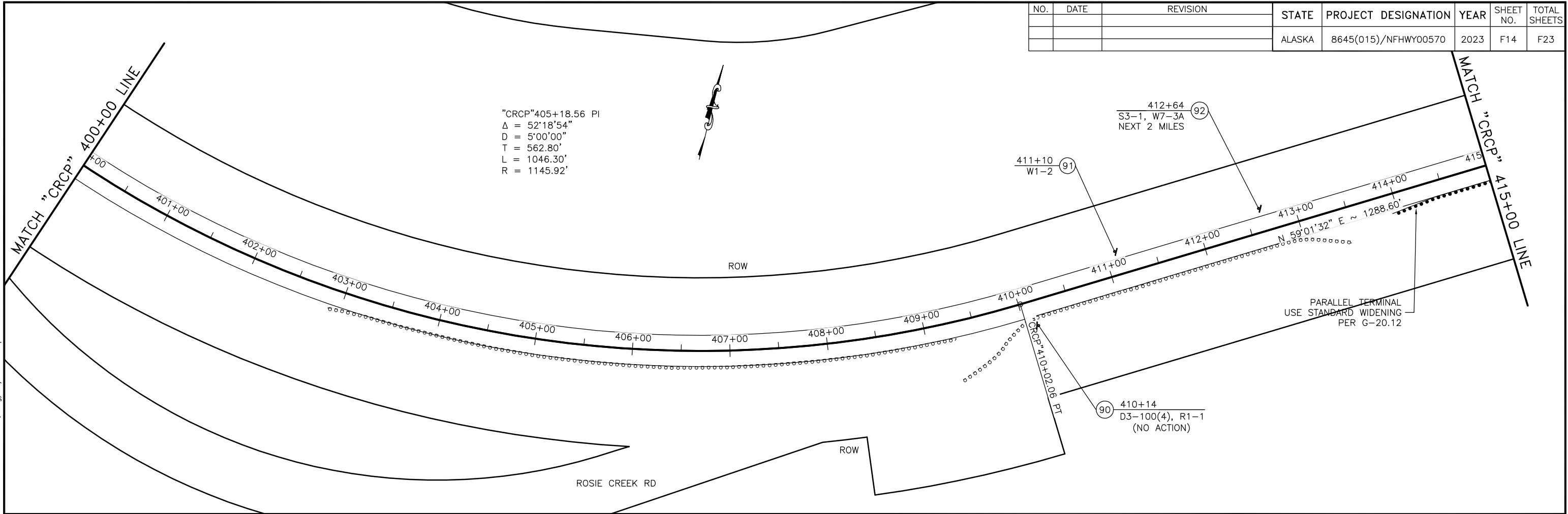


PLAN 13 OF 23  
 370+00 TO 400+00

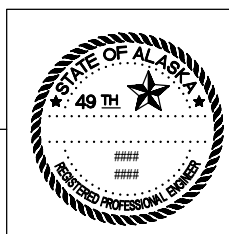


PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200  
 H:\Projects\Fbks\_NF\FHWY00570 Chena Ridge and Pump Resurfacing\6 Design\5 Civil 3D\3 Drawings\00570\_SIGNS\_ADJUSTED-370+00.00-385+00.00 Fri, Aug/05/22 03:48pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	F14	F23

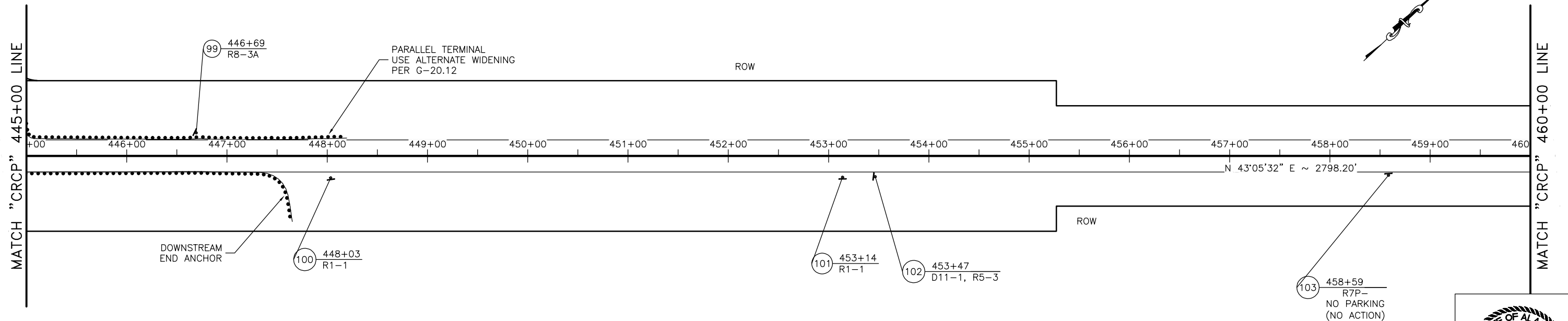
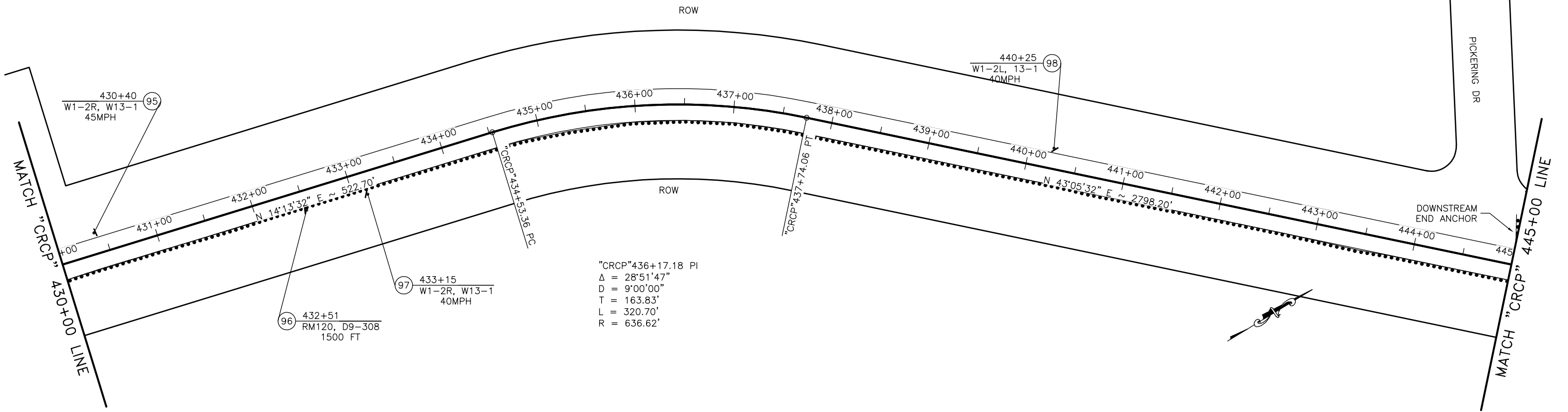


PLAN 14 OF 23  
400+00 TO 430+00



PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200  
 H:\Projects\Fbks\_NF\FHWY00570 Chena Ridge and Pump\_Resurfacing\6 Design\5 Civil\_3D\3 Drawings\00570\_SIGNS\_ADJUSTED-400+00.00-415+00.00 Fri, Aug/05/22 03:48pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	F15	F23

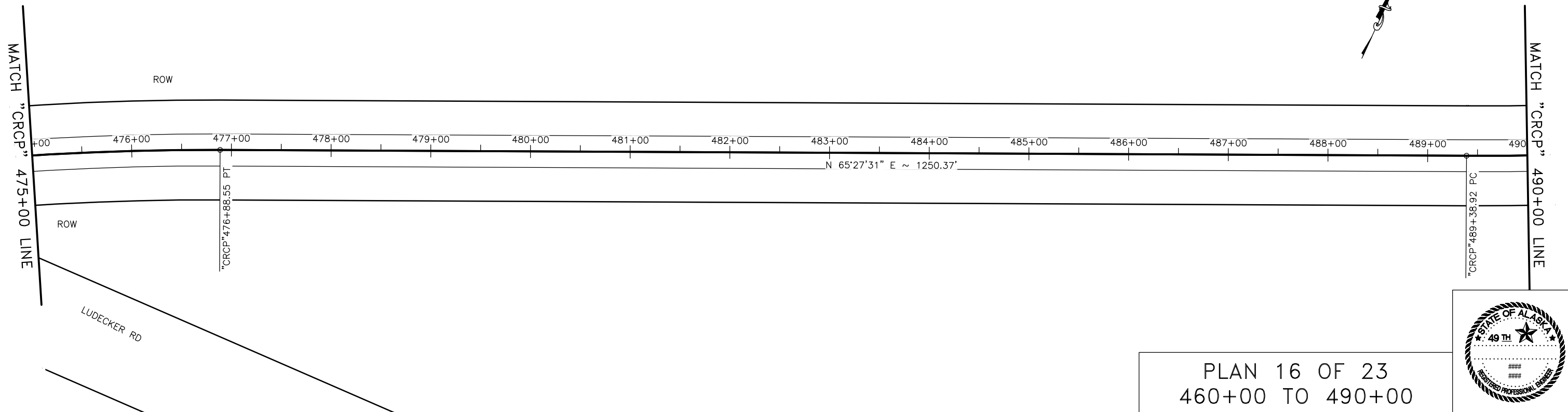
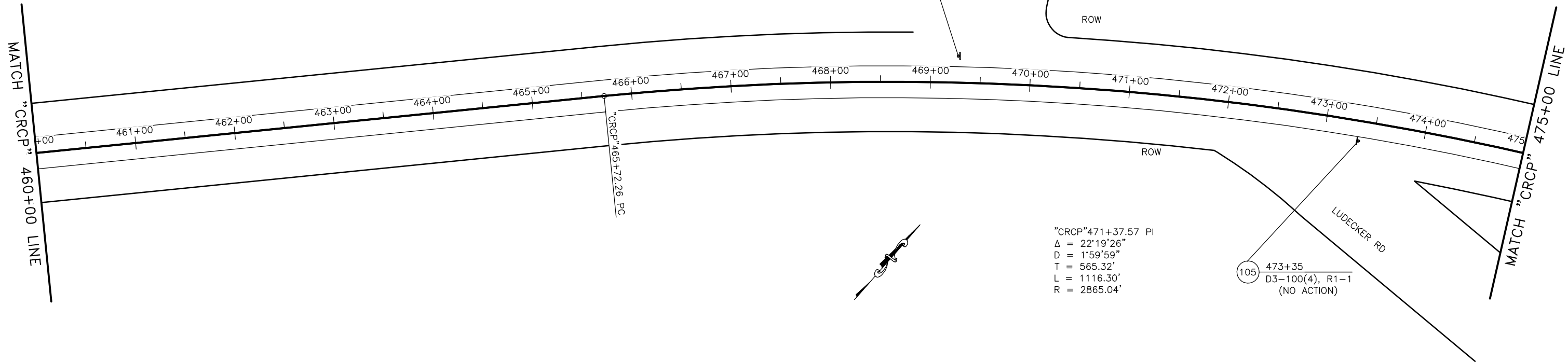


PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200  
 H:\Projects\Fbks\_NF\NFHWY00570 Chena Ridge and Pump Resurfacing\6 Design\5 Civil\_3D\3 Drawings\00570\_SIGNS\_ADJUSTED-430+00.00-445+00.00 Fri, Aug/05/22 03:49pm

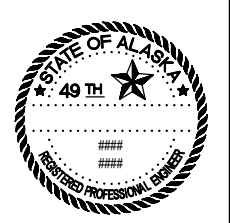
PLAN 15 OF 23  
 430+00 TO 460+00



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	F16	F23



PLAN 16 OF 23  
460+00 TO 490+00

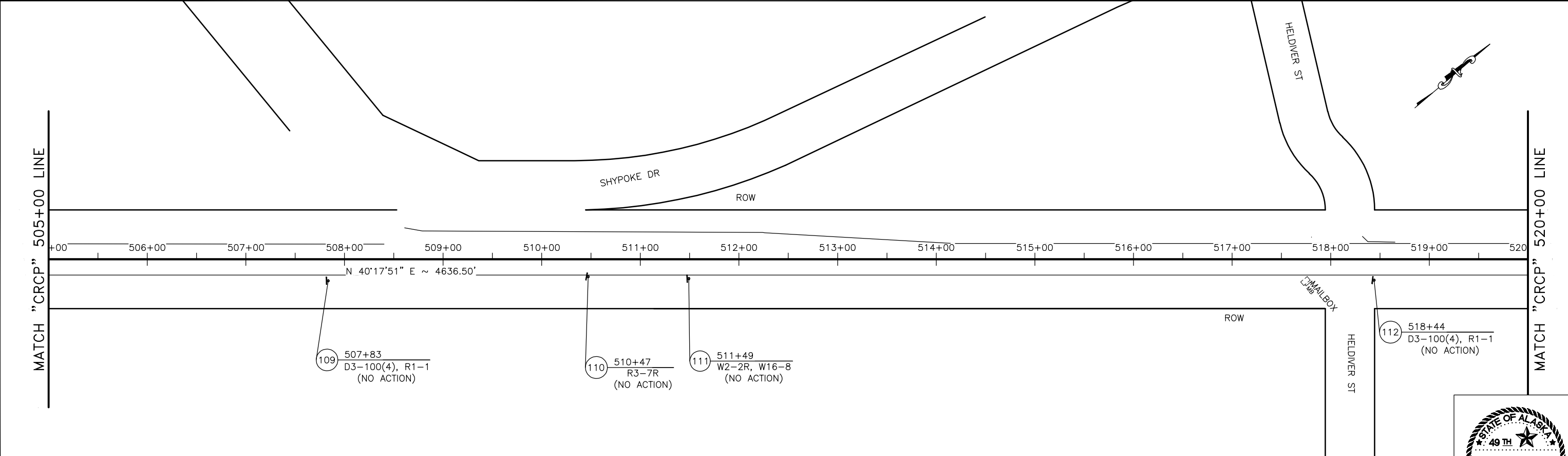
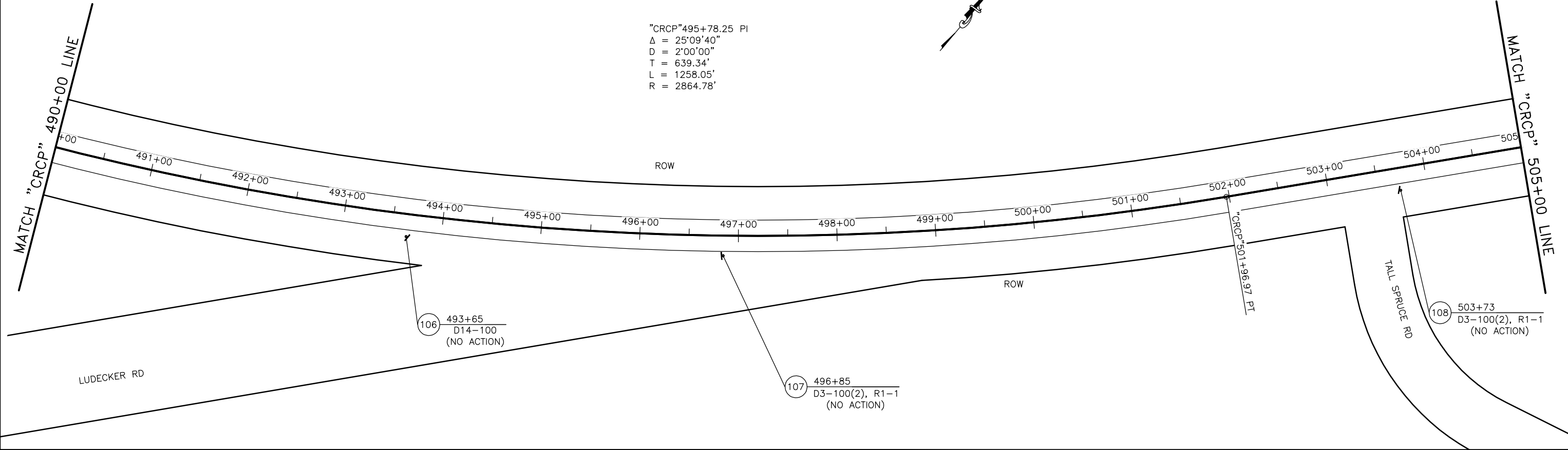


PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200  
H:\Projects\Fbks\_NF\NFHWY00570 Chena Ridge and Pump Resurfacing\6 Design\5 Civil 3D\3 Drawings\00570\_SIGNS\_ADJUSTED-460+00.00-475+00.00 Fri, Aug/05/22 03:49pm

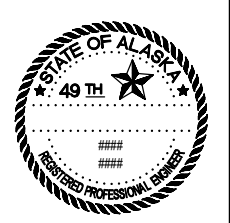


NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	F17	F23

"CRCP" 495+78.25 PI  
 $\Delta = 25^{\circ}09'40''$   
 $D = 2'00'00''$   
 $T = 639.34'$   
 $L = 1258.05'$   
 $R = 2864.78'$

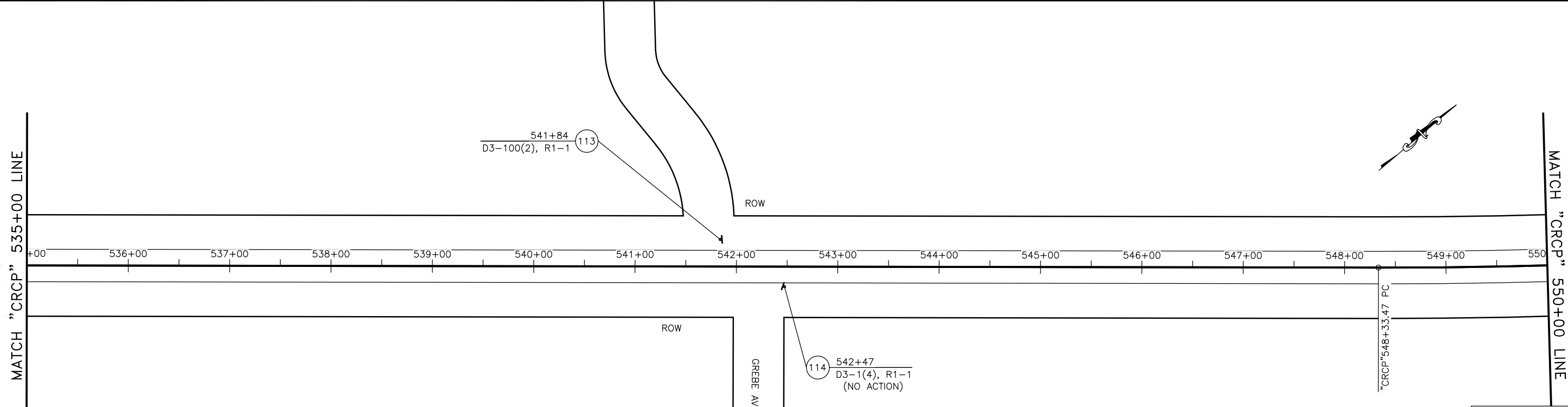
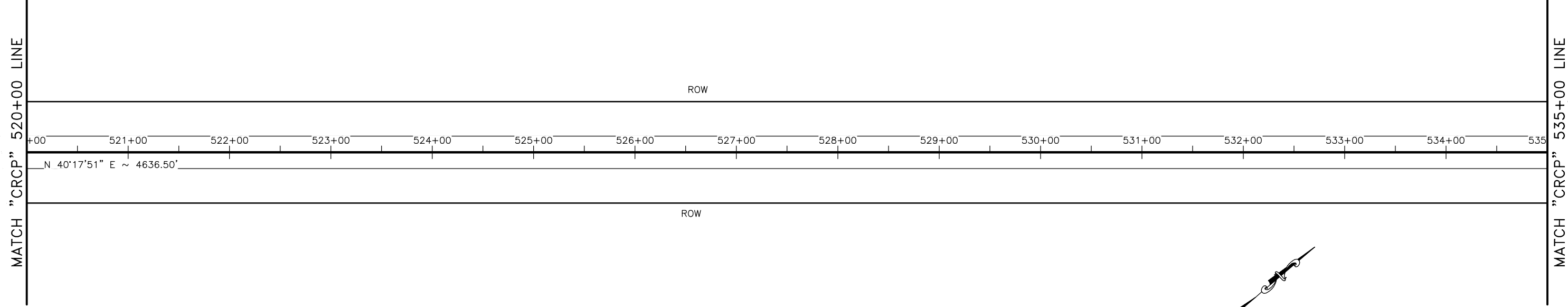


PLAN 17 OF 23  
 490+00 TO 520+00



PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200  
 H:\Projects\Fbks\_NF\FHWY00570 Chena Ridge and Pump Resurfacing\6 Design\5 Civil\_3D\3 Drawings\00570\_SIGNS\_ADJUSTED-490+00.00-505+00.00 Fri, Aug/05/22 03:50pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	F18	F23



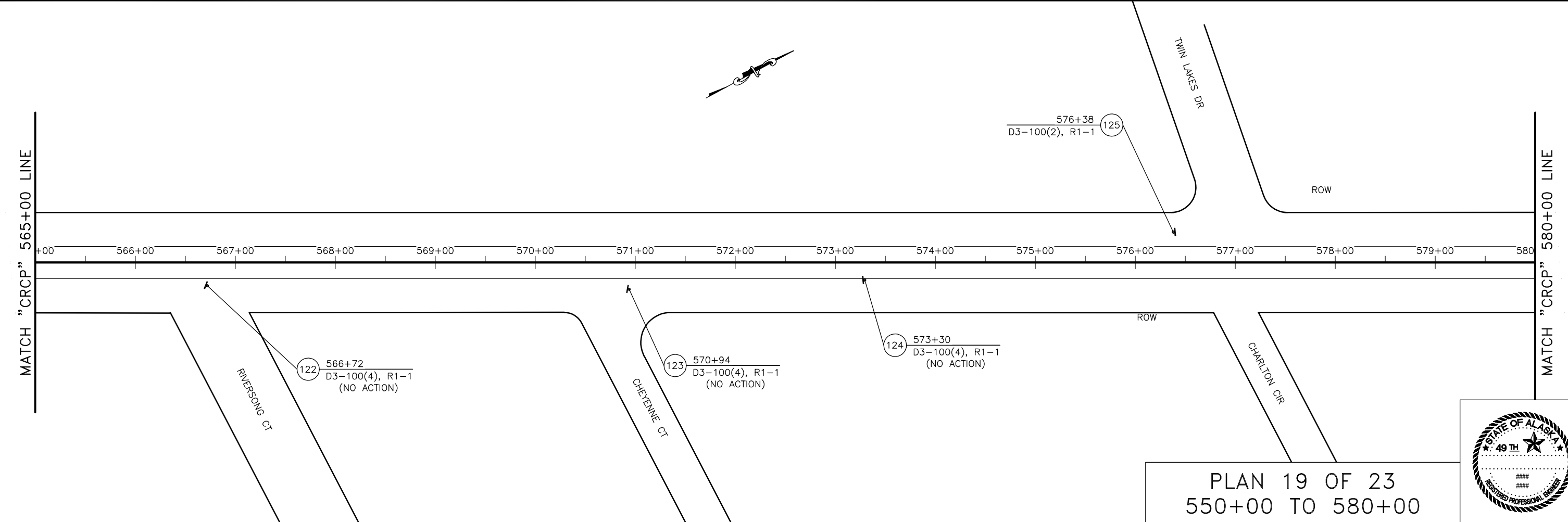
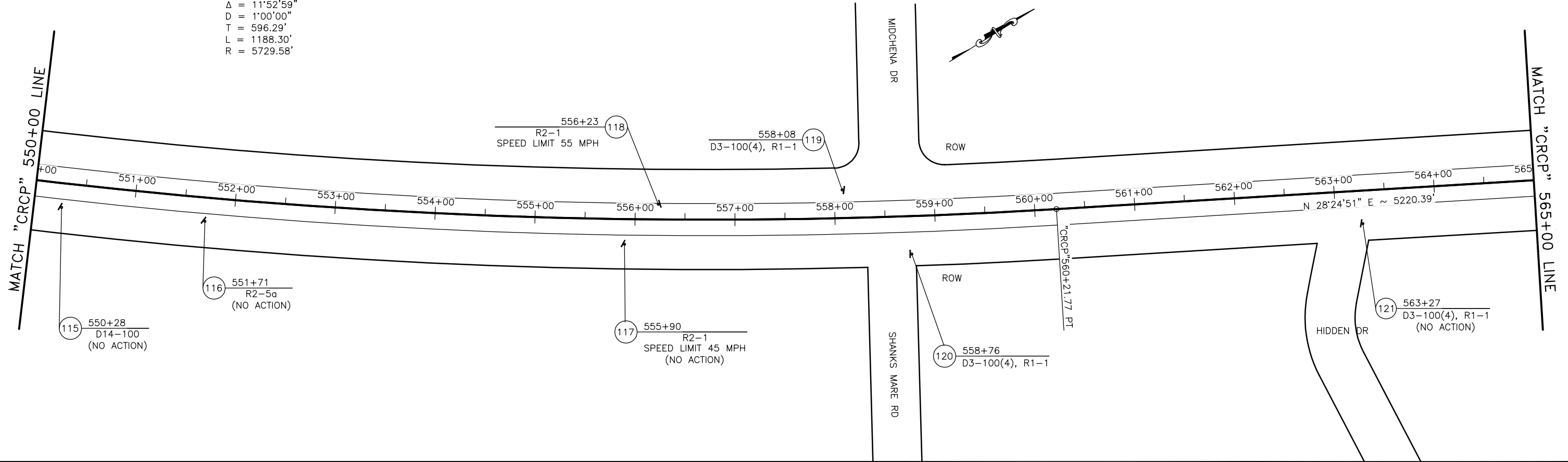
PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200  
 H:\Projects\Fbks\_NF\NFHWY00570 Chena Ridge and Pump Resurfacing\6 Design\5 Civil 3D\3 Drawings\00570\_SIGNS\_ADJUSTED-520+00.00-535+00.00 Fri, Aug/05/22 03:51pm

PLAN 18 OF 23  
 520+00 TO 550+00



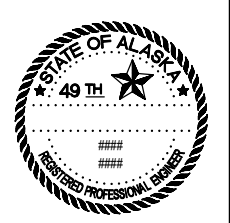
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	F19	F23

"CRCP" 554+29.76 PI  
 $\Delta = 11'52'59"$   
 $D = 1'00'00"$   
 $T = 596.29'$   
 $L = 1188.30'$   
 $R = 5729.58'$



PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200  
 H:\Projects\Fbks\_NF\FHWY00570 Chena Ridge and Pump Resurfacing\6 Design\5 Civil 3D\3 Drawings\00570\_SIGNS\_ADJUSTED-550+00.00-565+00.00 Fri\_Aug/05/22 03:52.pptm

PLAN 19 OF 23  
 550+00 TO 580+00



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	F20	F23

MATCH "CRCP" 580+00 LINE

MATCH "CRCP" 595+00 LINE

+00 581+00 582+00 583+00 584+00 585+00 586+00 587+00 588+00 589+00 590+00 591+00 592+00 593+00 594+00 595

N 28°24'51" E ~ 5220.39'

ROW

ROW

ROLAND RD

588+41  
D3-100(4), R1-1

128 591+02  
R3-7R  
(NO ACTION)

593+92 129  
W2-2R, W16-8  
ROLAND RD  
(NO ACTION)

126 585+70  
W2-2R, W16-8  
ROLAND RD  
(NO ACTION)



MATCH "CRCP" 595+00 LINE

MATCH "CRCP" 610+00 LINE

+00 596+00 597+00 598+00 599+00 600+00 601+00 602+00 603+00 604+00 605+00 606+00 607+00 608+00 609+00 610

N 28°24'51" E ~ 5220.39'

N 28°24'51" E ~ 5220.39'

ROW

ROW

DESPAIN LN

596+09 130  
D3-100(4), R1-1

LINDA LN

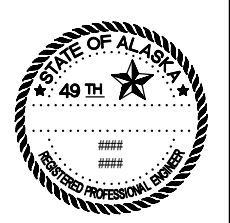
603+57 131  
D3-100(2), R1-1

DESPAIN LN



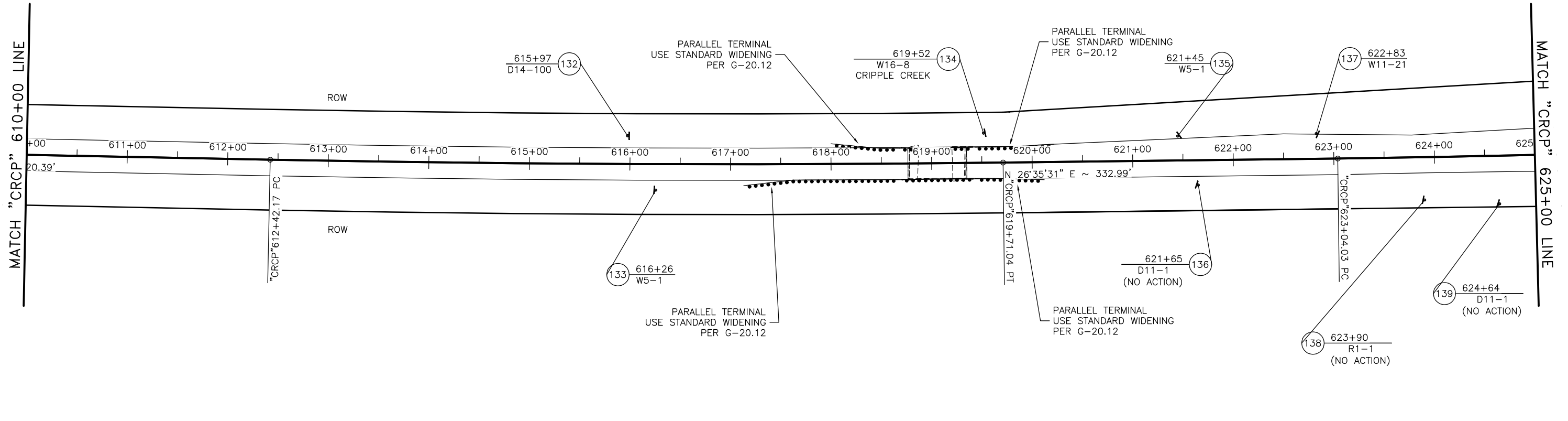
PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200  
H:\Projects\Fbks\_NF\NFHWY00570 Chena Ridge and Pump Resurfacing\6 Design\5 Civil\_3D\3 Drawings\00570\_SIGNS\_ADJUSTED-580+00.00-595+00.00 Fri, Aug/05/22 03:54pm

PLAN 20 OF 23  
580+00 TO 610+00



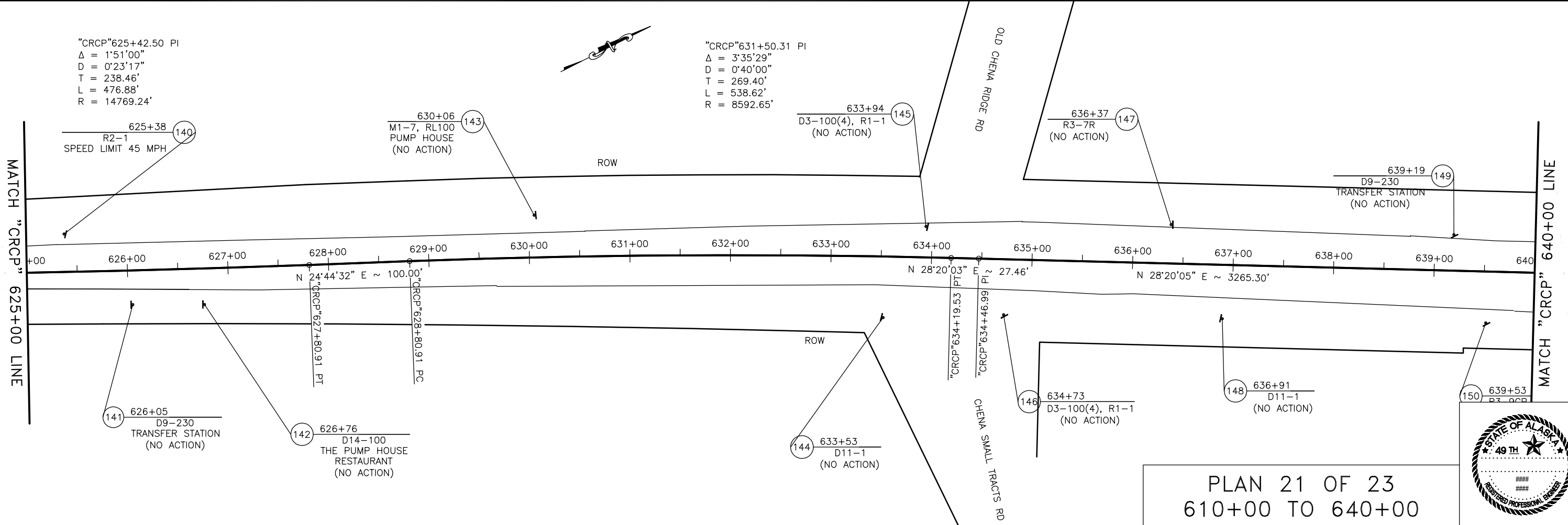
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	F21	F23

"CRCP"616+06.64 PI  
 $\Delta = 1'49'20"$   
 $D = 0'15'00"$   
 $T = 364.47'$   
 $L = 728.87'$   
 $R = 22918.31'$



"CRCP"625+42.50 PI  
 $\Delta = 1'51'00"$   
 $D = 0'23'17"$   
 $T = 238.46'$   
 $L = 476.88'$   
 $R = 14769.24'$

"CRCP"631+50.31 PI  
 $\Delta = 3'35'29"$   
 $D = 0'40'00"$   
 $T = 269.40'$   
 $L = 538.62'$   
 $R = 8592.65'$

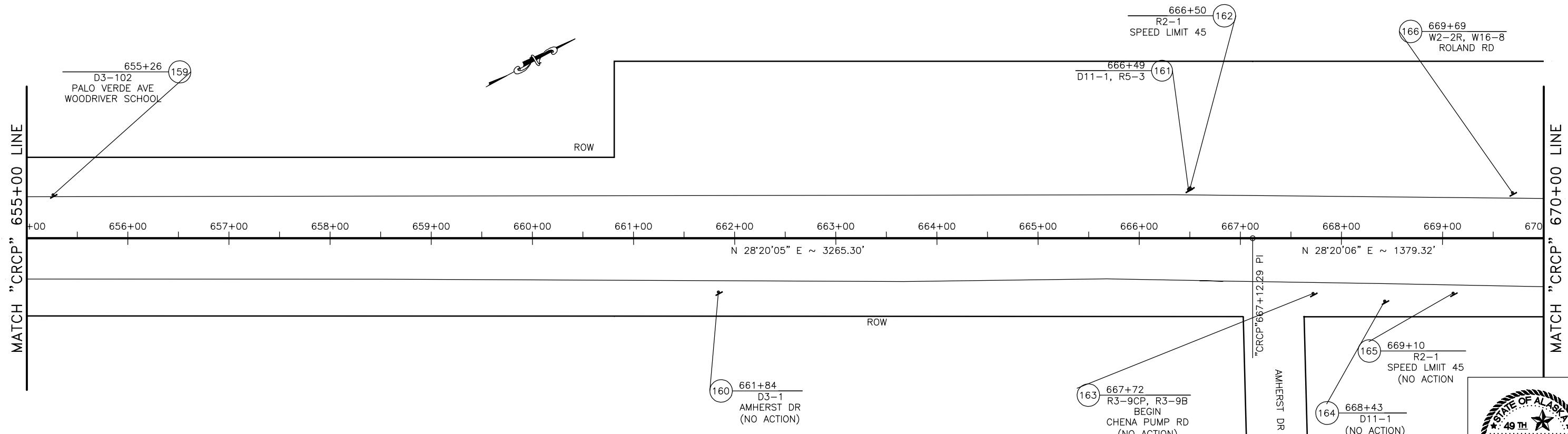
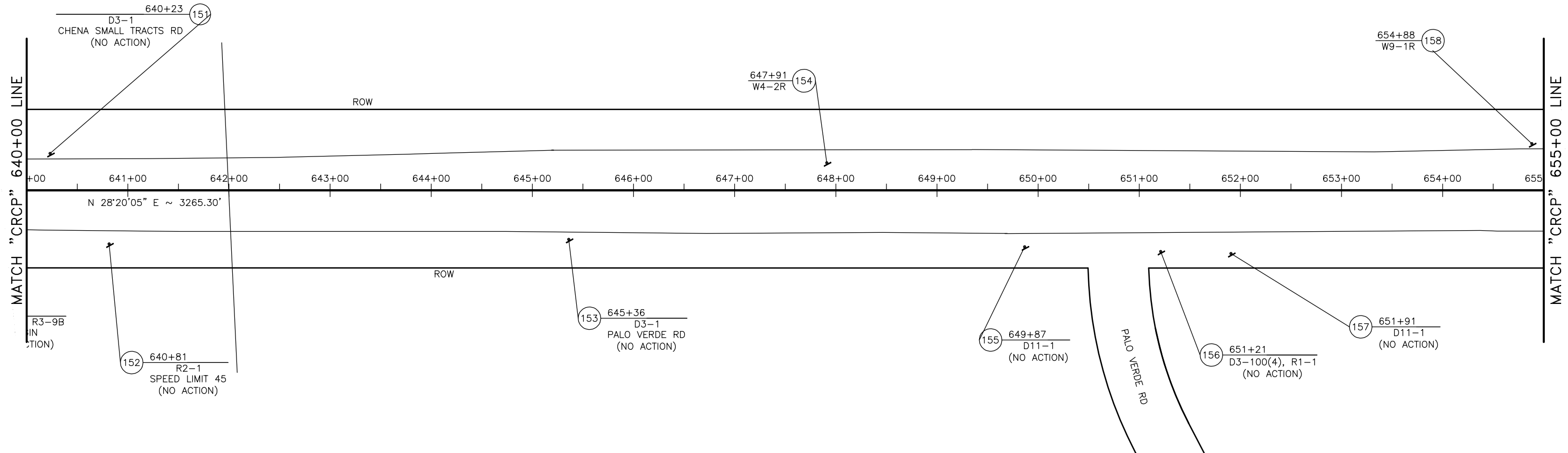


PLAN 21 OF 23  
 610+00 TO 640+00



PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200  
 H:\Projects\Fbks\_NF\NFHWY00570 Chena Ridge and Pump Resurfacing\6 Design\5 Civil 3D\3 Drawings\00570\_SIGNS\_ADJUSTED-610+00.00-625+00.00 Fri, Aug/05/22 03:55pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	F22	F23

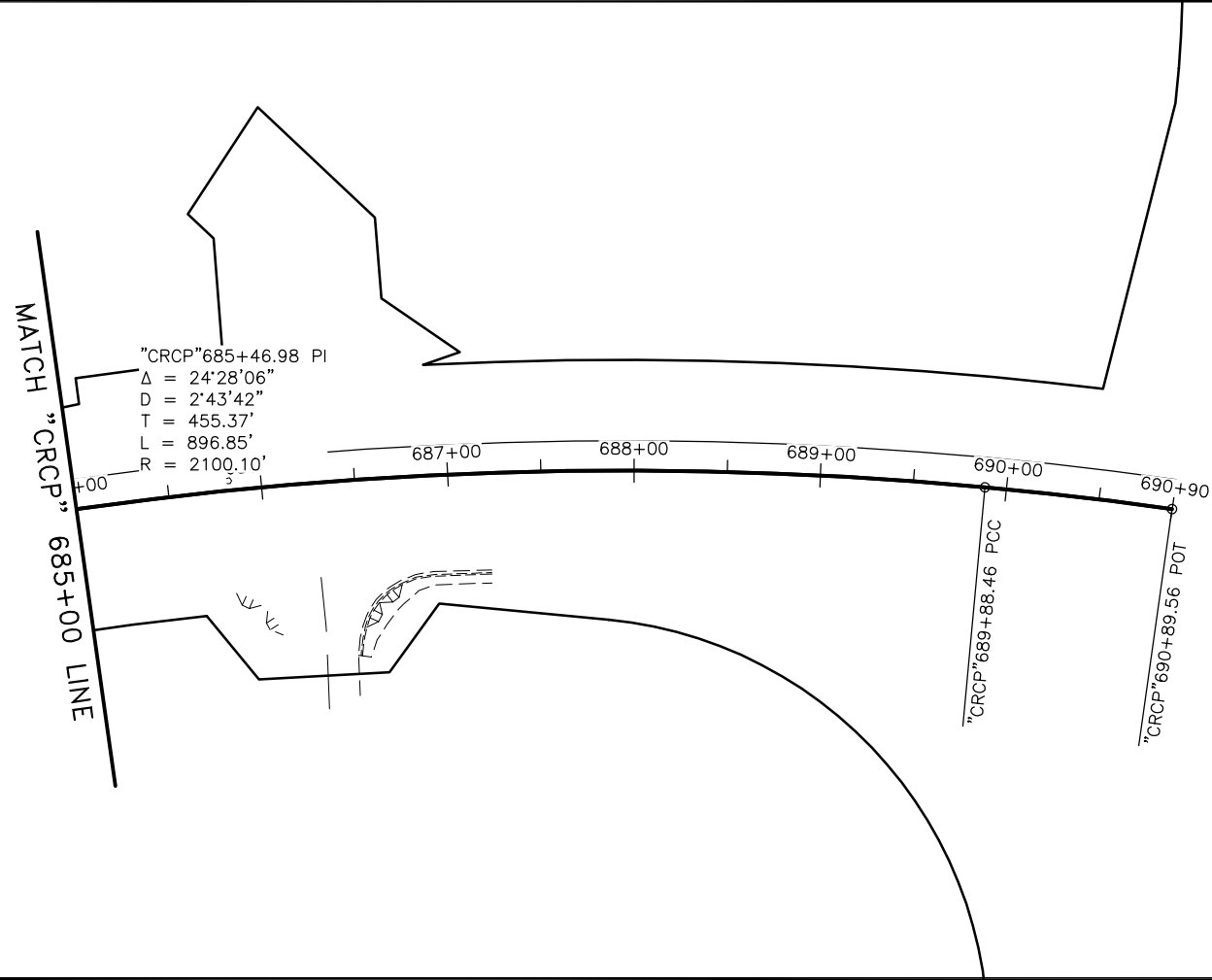
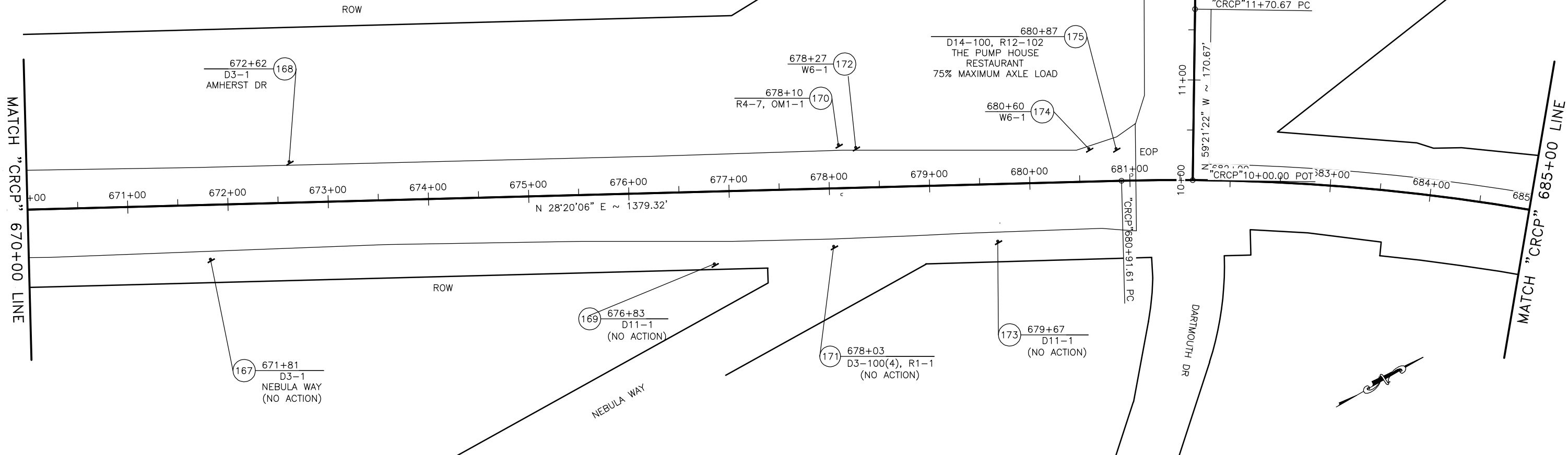


PLAN 22 OF 23  
640+00 TO 670+00



PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200  
H:\Projects\Fbks\_NFHWY00570 Chena Ridge and Pump Resurfacing\6 Design\5 Civil 3D\3 Drawings\00570\_SIGNS\_ADJUSTED-640+00.00-655+00.00 Fri, Aug/05/22 03:55pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	F23	F23

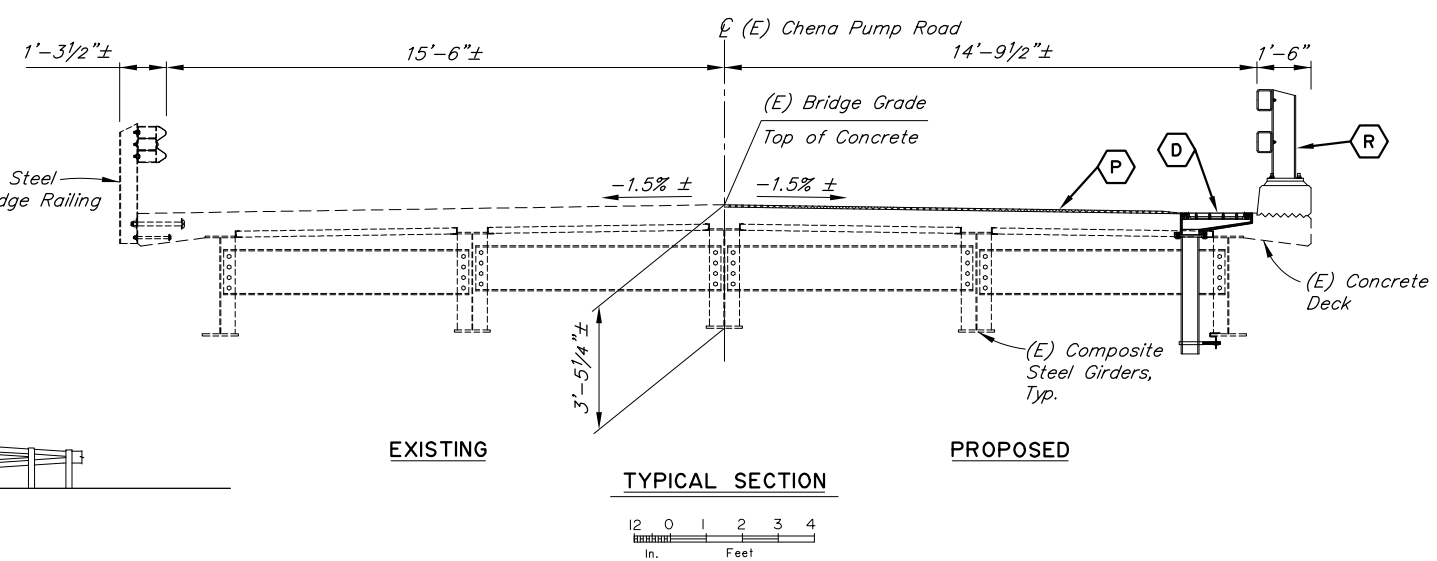
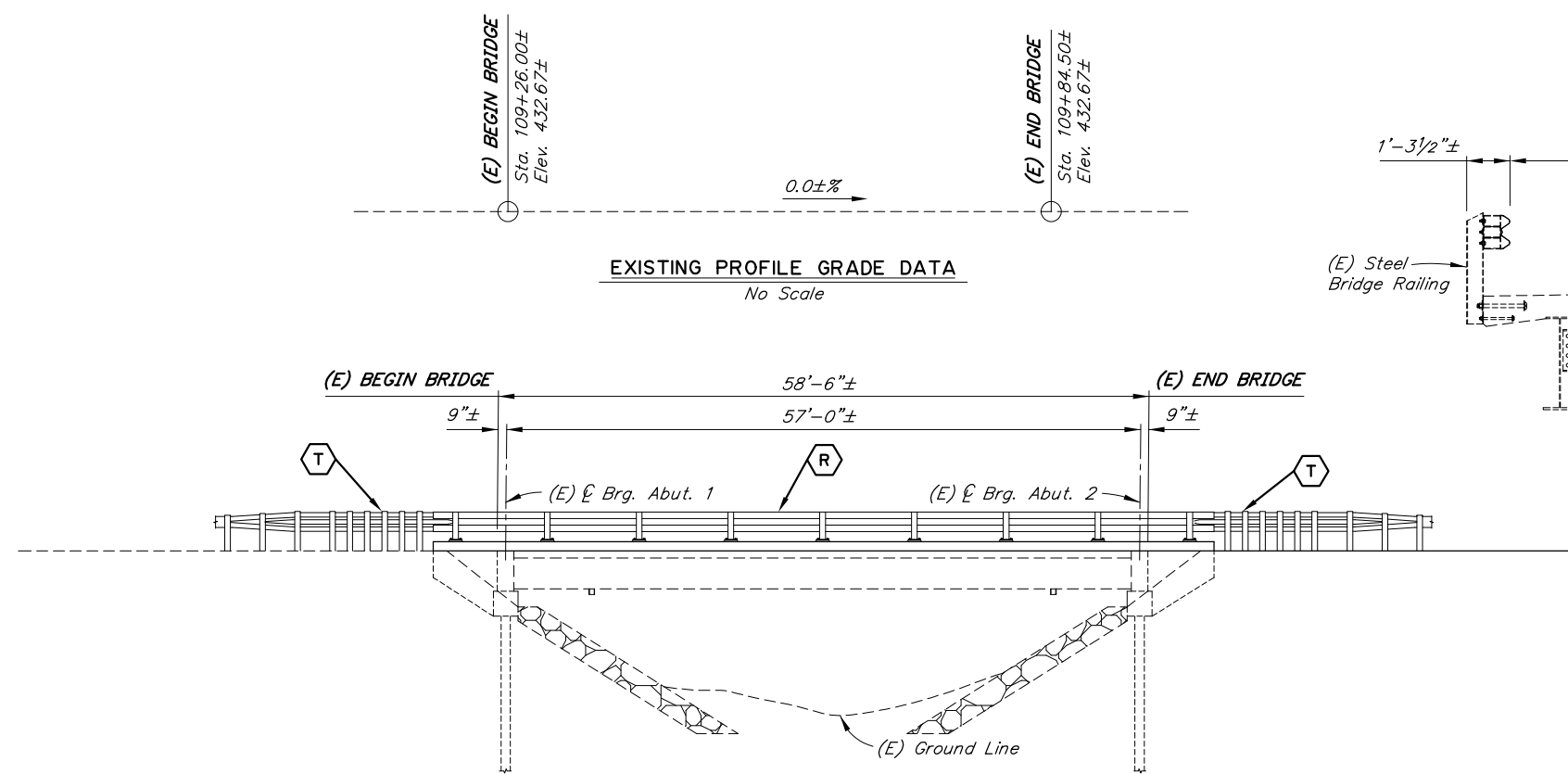


PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200  
 H:\Projects\Fbks\_NF\NFHWY00570 Chena Ridge and Pump Resurfacing\6 Design\5 Civil 3D\3 Drawings\00570\_SIGNS\_ADJUSTED-670+00.00-685+00.00 Fri, Aug/05/22 03:57pm

PLAN 23 OF 23  
670+00 TO EOP



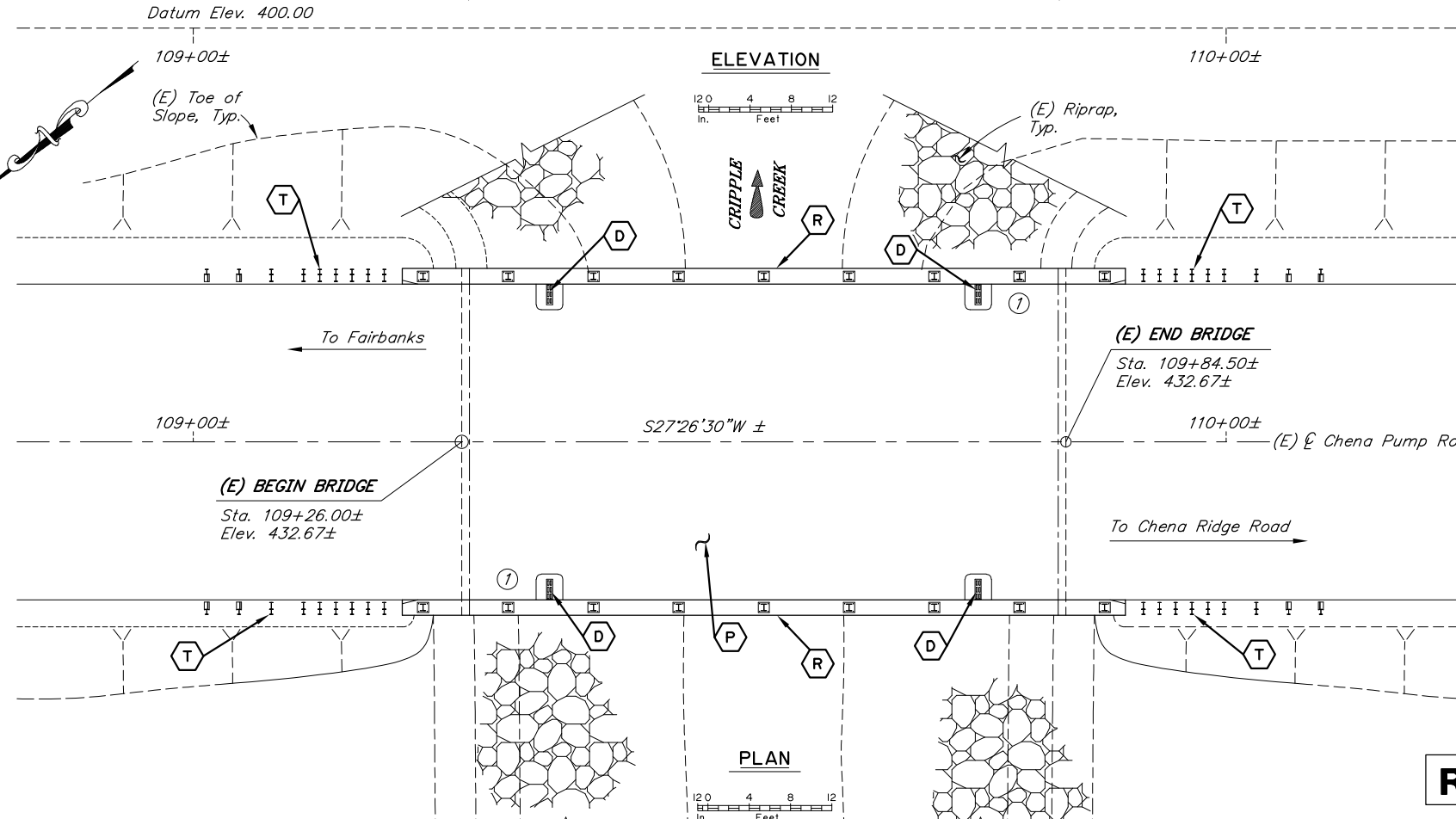
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	pending/NFHwy00570	2022	N1	N6



BRIDGE DRAWING INDEX	
TITLE	DWG. NO.
GENERAL LAYOUT	1
GENERAL NOTES	2
DECK DETAILS	3
DECK DRAIN DETAILS	4
STEEL BRIDGE RAILING, 2-TUBE	5
MASH BRIDGE RAIL THREE BEAM TRANSITION	6

LEGEND	
(D)	Install Deck Drain Scuppers.
(P)	Install 3/4" Polyester Concrete.
(R)	Remove existing Railing Install Steel Bridge Railing, 2-Tube
(T)	Install Thrie Beam Transition

**NOTES:**  
 (E) = Existing  
 - - - - = Existing  
 ——— = Proposed  
 For project stations and elevations see roadway sheets.  
 (1) Approximate location of Bridge Number Plate.  
 Existing stations, elevations and dimensions are based on 1967 as-built plans, and those plans may not show existing dimensions and conditions. Where dimensions of the proposed work depend on the existing bridge dimensions, field-verify the controlling dimensions and adjust proposed dimensions of the work to fit existing conditions.




**PRELIMINARY PLAN**

**REHABILITATION**

DESIGNED BY: Duane Davis	CHECKED: Nick Murray	LAYOUT BY: Duane Davis	CHECKED BY: Nick Murray
DRAWN BY: Sam Solie	CHECKED: Duane Davis	SPECIFICATIONS BY: Duane Davis	P S & E COMPARED: Nick Murray
QUANTITIES BY: Duane Davis	CHECKED: Nick Murray	APPROVAL RECOMMENDED BY:	Rich Pratt

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 BRIDGE SECTION  
 3132 Channel Drive  
 Juneau, Alaska 99801  
 907-465-2975

**CRIPPLE CREEK BRIDGE**  
 CHENA PUMP ROAD  
 GENERAL LAYOUT

  
 BRIDGE NO. 1008  
 DWG. NO. 1

R:\cadd\1008\1008 Refab 2022-GENERAL Tue, Jul/12/22 02:36pm



STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	pending/NFHWO0570	2022	N2	N6

**GENERAL NOTES**

DESIGN:..... AASHTO LRFD Bridge Design Specifications, 2020 Edition, with latest interim specifications.  
 Seismic design per AASHTO Guide Specifications for LRFD Seismic Bridge Design, 2011 with latest interim revisions.

REINFORCEMENT:..... ASTM A706, Grade 60, Fy = 60,000 psi  
 Space reinforcement evenly unless otherwise noted.

CONCRETE:..... Class A Concrete unless otherwise noted, f'c = 4000 psi

STRUCTURAL STEEL:..... ASTM A709, Grade 36T3, Fy = 36,000 psi  
 Galvanize structural steel in accordance with AASHTO M111 unless shown otherwise.

BRIDGE BASIS OF ESTIMATE						
ITEM NO.	ITEM	PAY UNIT	ESTIMATING UNIT	SUBST.	SUPERST.	TOTAL QUANTITY
504.0001.0000	Structural Steel, Drains	LS	EA	---	4	4
507.2000.0000	Steel Bridge Railing Replacement, 2-Tube	LF	LF	---	140	140
510.0001.0000	Removal Concrete Bridge Deck	SF	SF	---	1,730	1,730
510.2001.0000	Bridge Deck Repairs	CS	CS	---	All Req'd	All Req'd
525.2001.0000	Polyester Concrete Overlay	LS	SY	---	193	193
606.0016.0000	Transition Rail	EA	EA	---	4	4

Item numbers are for reference only. Quantities shown are not necessarily the pay quantities nor the total quantity of the particular item.

**ABBREVIATIONS:**

- |         |                              |           |  |        |                                  |
|---------|------------------------------|-----------|--|--------|----------------------------------|
| ℄       | = centerline                 | e.f.      | = each face  | min.   | = minimum                        |
| pl      | = plate                      | e.w.      | = each way   | MSE    | = mechanically stabilized earth  |
| &       | = and                        | Ext.      | = exterior   | n.f.   | = near face                      |
| @       | = at                         | F         | = fixed  | No.    | = number                         |
| ∅       | = diameter                   | f.f.      | = front/air face                                     | o.c.   | = on center                      |
| ±       | = approximate                | f'c       | = specified concrete compressive strength            | O.H.W. | = ordinary high water            |
| Abut.   | = abutment                   | f'ci      | = specified concrete compressive strength at release | pcf    | = pounds per cubic foot          |
| Approx. | = approximate                | Ft.       | = feet   | psf    | = pounds per square foot         |
| b.f.    | = back/dirt face             | Galv.     | = galvanize  | psi    | = pounds per square inch         |
| bot.    | = bottom                     | H.S.      | = high strength                                      | R      | = radius                         |
| Br.     | = bridge                     | Hwy.      | = highway  | R.O.W. | = right of way                   |
| btwn.   | = between                    | ID        | = internal diameter                                  | RT.    | = right                          |
| Brg.    | = bearings                   | Int.      | = interior   | Rd.    | = road                           |
| C.G.    | = center of gravity          | Jt.       | = joint  | spcs.  | = space, spaces                  |
| C.I.P.  | = cast in place              | K         | = kips   | Sta.   | = station                        |
| CJP     | = complete joint penetration | ksf       | = 1000 pounds per square foot                        | SF     | = square feet                    |
| Clr.    | = clear, clearance           | LBS or lb | = pounds   | SY     | = square yard                    |
| CMP     | = corrugated metal pipe      | LF        | = linear foot  | Std.   | = standard                       |
| CY      | = cubic yard                 | LS        | = lump sum   | Symm.  | = symmetric                      |
| D.H.W.  | = design high water          | L.T.      | = left   | Typ.   | = typical                        |
| Dia.    | = diameter                   | max.      | = maximum  | UT     | = ultrasonic testing             |
| Dwg.    | = drawing                    |           |  | V.P.C. | = point of vertical curve        |
| E       | = expansion                  |           |  | V.P.I. | = point of vertical intersection |
| (E)     | = existing                   |           |  | V.P.T. | = point of vertical tangent      |
| EA      | = each                       |           |  | w/     | = with                           |
| Elev.   | = elevation                  |           |  |        |                                  |

**PRELIMINARY PLAN**

DESIGNED BY: Duane Davis	CHECKED: Nick Murray
DRAWN BY: Sam Sollie	CHECKED: Duane Davis
QUANTITIES BY: Duane Davis	CHECKED: Nick Murray

**REHABILITATION**

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 BRIDGE SECTION  
 3132 Channel Drive  
 Juneau, Alaska 99801  
 907-465-2975

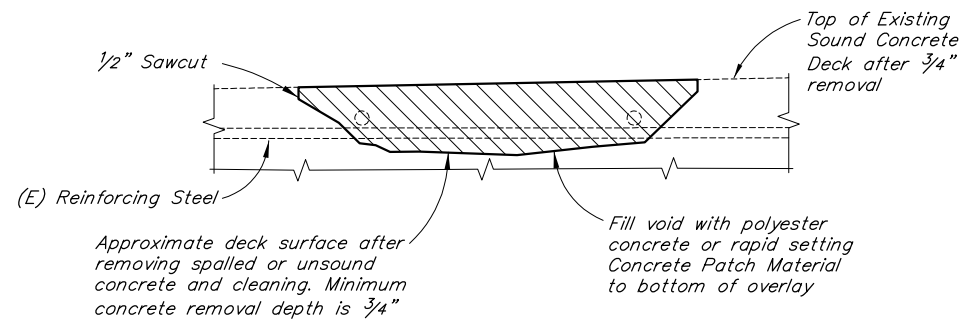
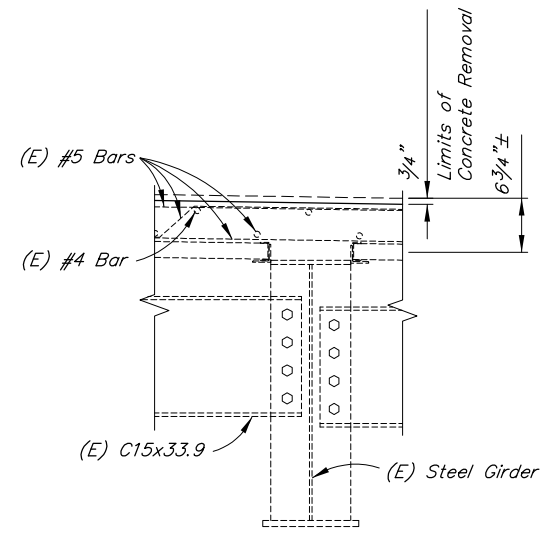
**CRIPPLE CREEK BRIDGE**  
 CHENA PUMP ROAD  
**GENERAL NOTES**



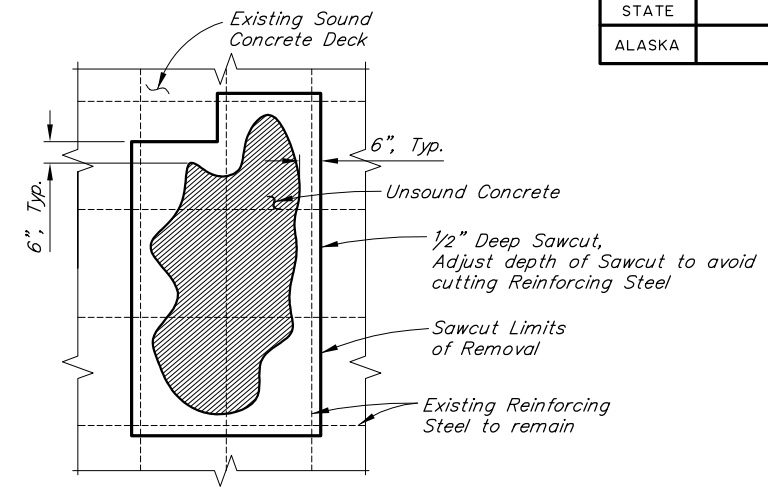
BRIDGE NO. 1008  
 DWG. NO. 2

R:\cda\1008\1008 ReTab 2022-NOTES Tue, Jul/12/22 02:37pm

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	pending/NFHWY00570	2022	N3	N6

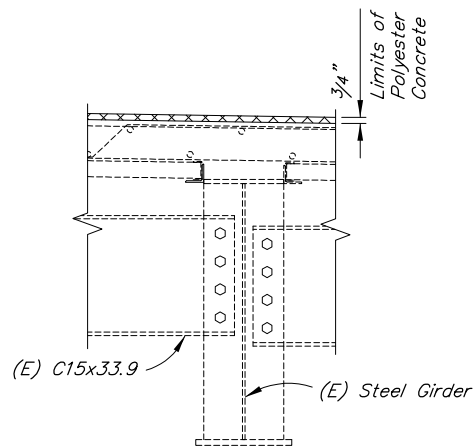
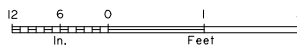


**CONCRETE REPAIR DETAIL**  
No Scale

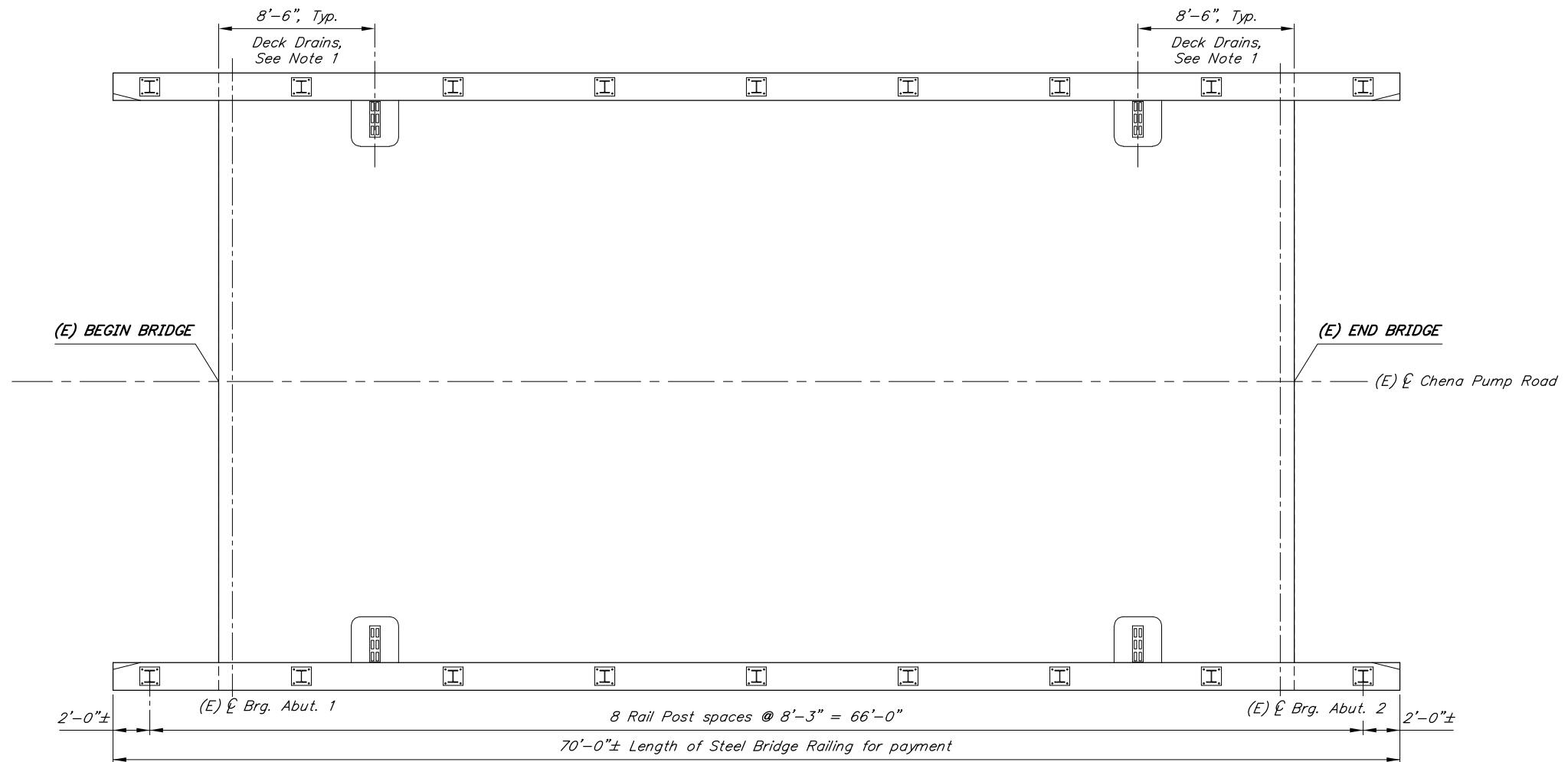


**CONCRETE REPAIR**  
No Scale

**EXISTING DECK SECTION**



**PROPOSED DECK SECTION**



**RAILING LAYOUT**



**NOTES:**

- (E) = Existing
- = Existing
- = Proposed

1. Engineer may adjust location of deck drains to minimize cutting Reinforcing Steel
2. Verify controlling field dimensions before ordering or fabricating any material.

**PRELIMINARY PLAN**

DESIGNED BY: Duane Davis	CHECKED: Nick Murray
DRAWN BY: Sam Sollie	CHECKED: Duane Davis
QUANTITIES BY: Duane Davis	CHECKED: Nick Murray

**REHABILITATION**

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES  
BRIDGE SECTION  
3132 Channel Drive  
Juneau, Alaska 99801  
907-465-2975

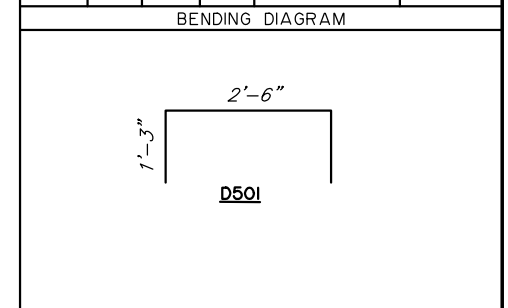
**CRIPPLE CREEK BRIDGE**  
CHENA PUMP ROAD  
**DECK DETAILS**



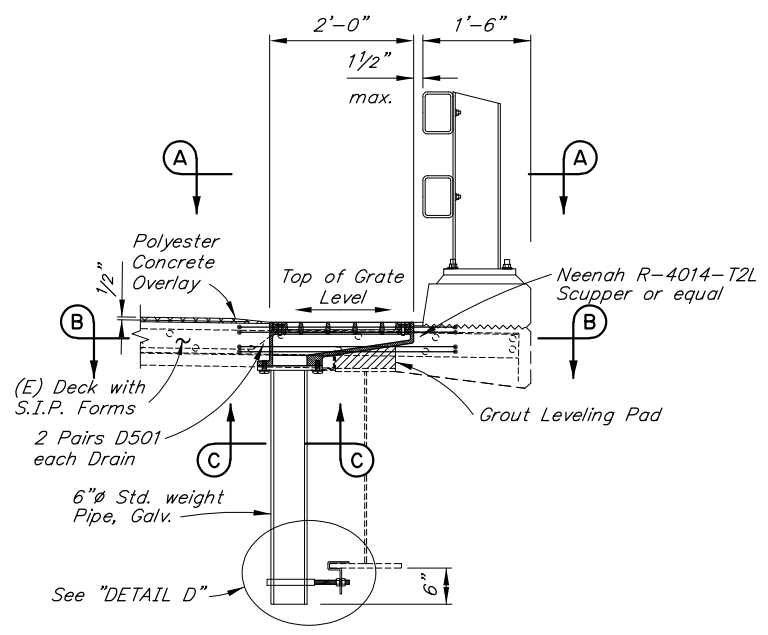
BRIDGE NO. 1008  
DWG. NO. 3

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	pending/NFHWY00570	2022	N4	N6

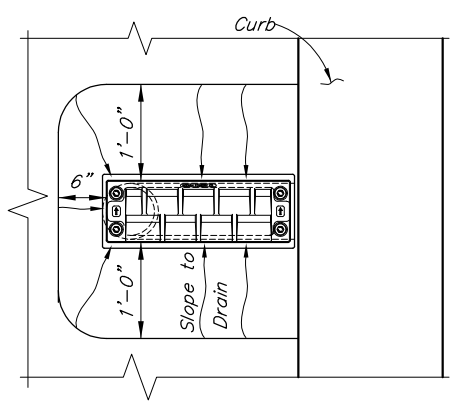
REINFORCING STEEL - DECK					
MARK	NOTE	SIZE	NO.	LENGTH	TYPE
D501	E	5	16	5'-0"	BENT



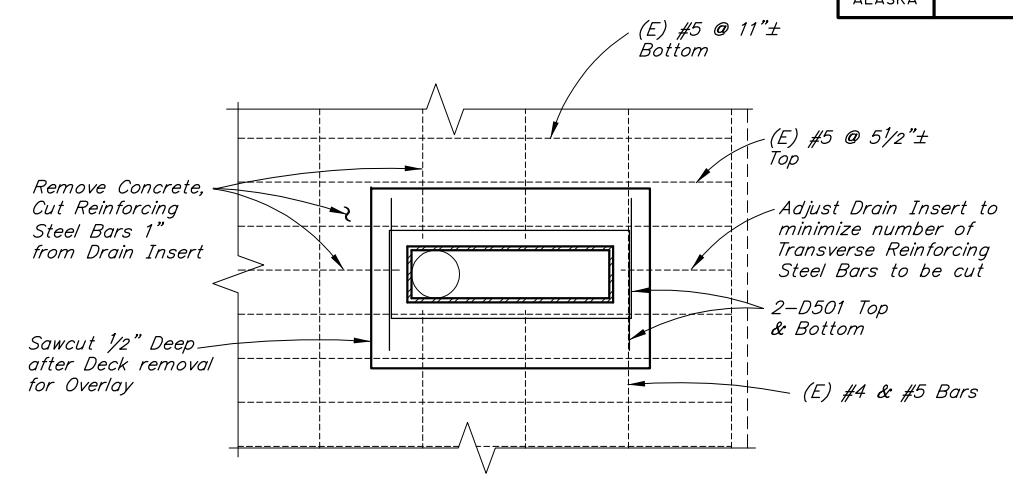
E - Epoxy-Coated



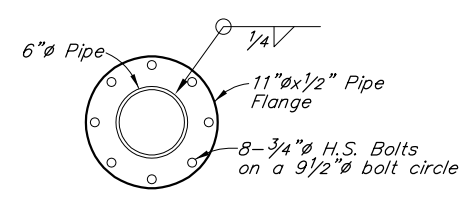
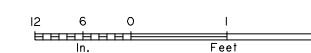
DECK DRAIN



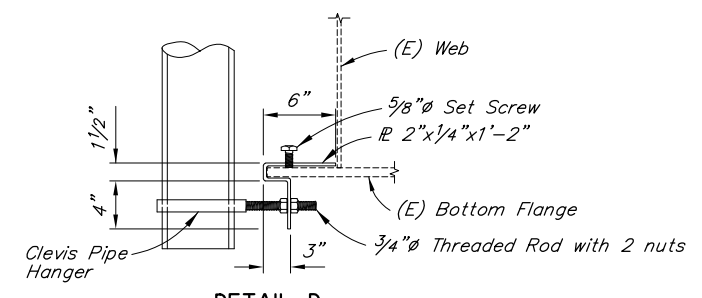
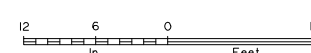
VIEW A-A



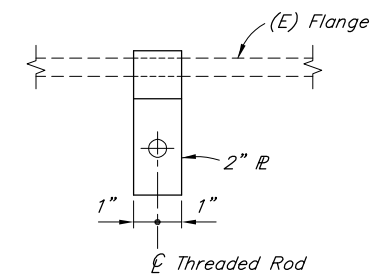
SECTION B-B



SECTION C-C



DETAIL D



SECTION E-E



**NOTES:**  
 (E) = Existing  
 - - - - = Existing  
 ——— = Proposed

Verify controlling field dimensions before ordering or fabricating any material.

**PRELIMINARY PLAN**

DESIGNED BY: Duane Davis	CHECKED: Nick Murray
DRAWN BY: Sam Sollie	CHECKED: Duane Davis
QUANTITIES BY: Duane Davis	CHECKED: Nick Murray

**REHABILITATION**

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 BRIDGE SECTION  
 3132 Channel Drive  
 Juneau, Alaska 99801  
 907-465-2975

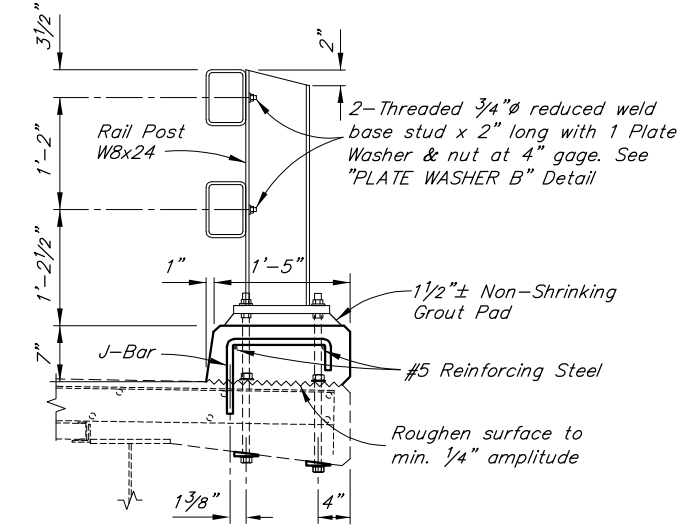
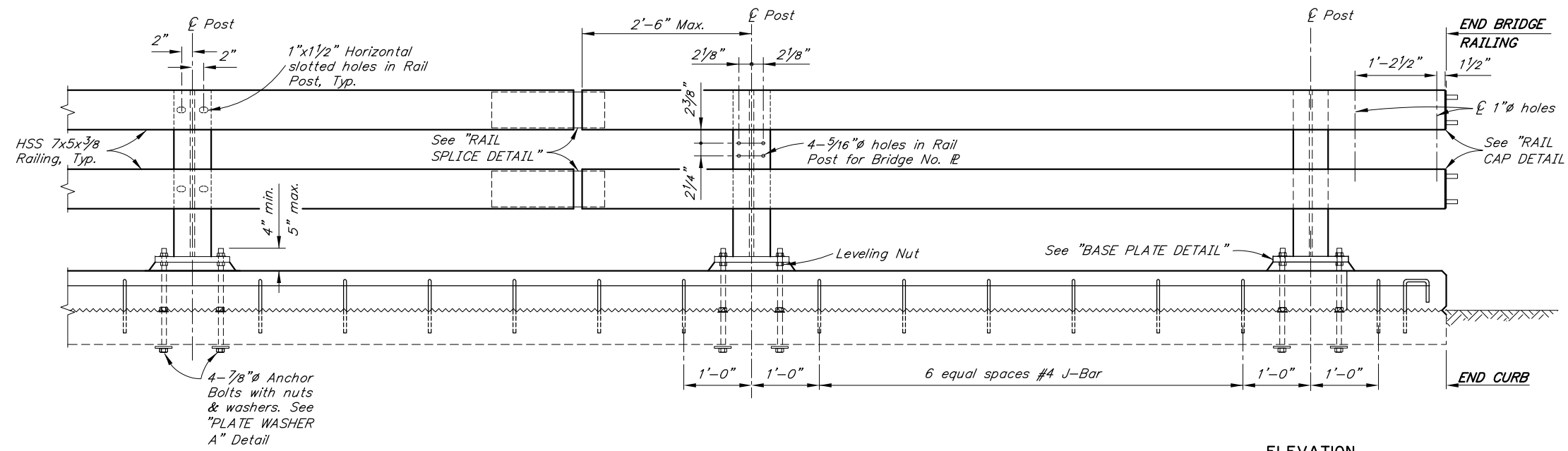
**CRIPPLE CREEK BRIDGE**  
 CHENA PUMP ROAD  
**DECK DRAIN DETAILS**



BRIDGE NO. 1008  
 DWG. NO. 4

R:\cda\1008\1008 Rehab 2022-DRAIN Tue, Jul/12/22 02:37pm

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	pending/NFHWY00570	2022	N5	N6

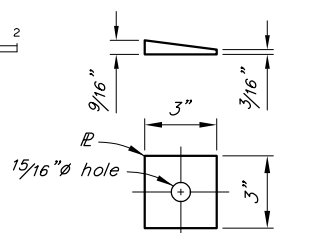
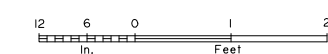
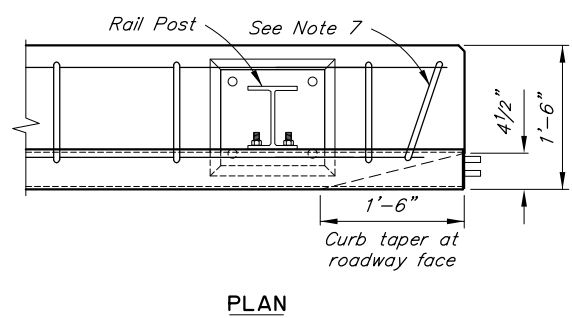
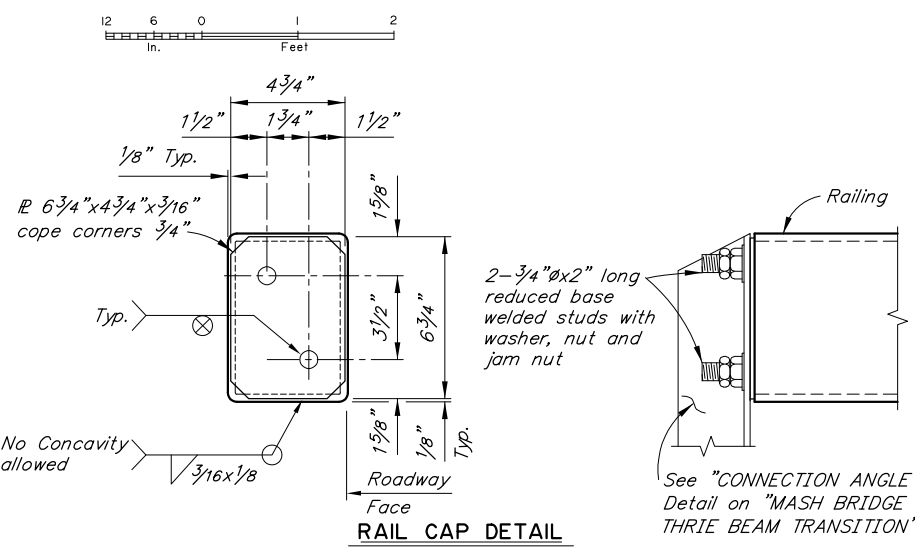
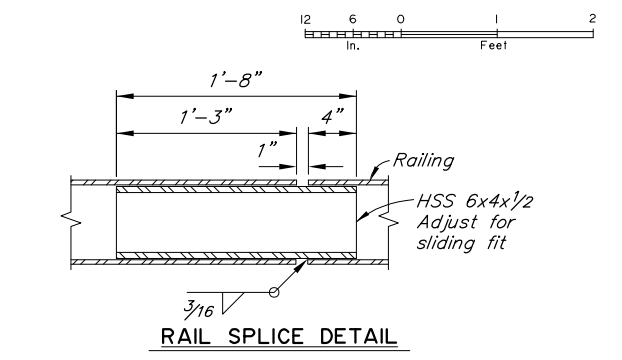


TYPICAL POST ELEVATION

EXPANSION JOINT

ELEVATION

TYPICAL SECTION



RAIL SPLICE DETAIL

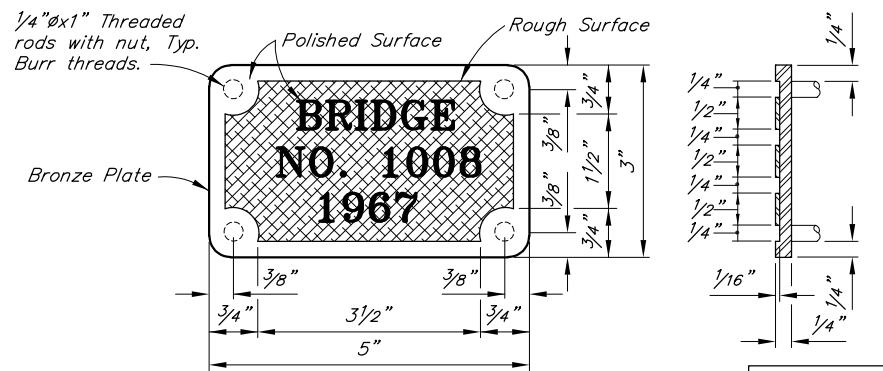
RAIL CAP DETAIL

PLAN

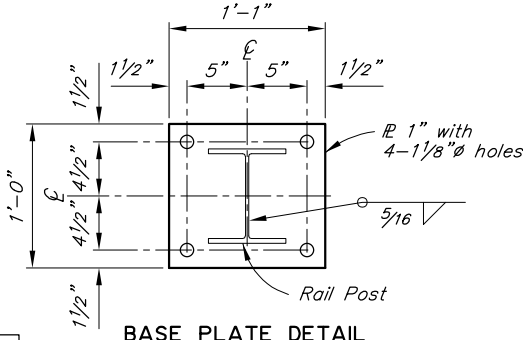
END POST DETAIL

J-BAR

PLATE WASHER B



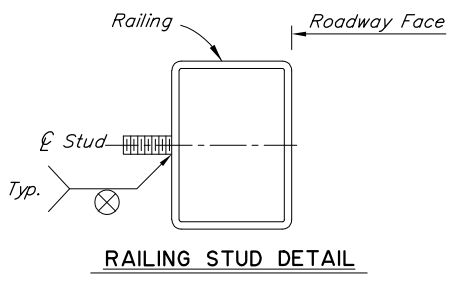
**PRELIMINARY PLAN**



BASE PLATE DETAIL

**NOTES:**

1. Remove existing bridge number plates. Install bridge number plates onto new steel bridge railing posts. Use studs and nuts that conform to UNS C65100 or UNS C65500. Braze 1/4" threaded rod to back of plate with nut - 4 required. Use tamper proof nuts.
2. Locate bridge number plates on right hand side of approaching traffic near each end as shown on "GENERAL LAYOUT" Dwg. (2 total).
3. Provide railing expansion joints at 50'-0" maximum intervals. Railing shall be continuous over 2 posts minimum. Railing expansion joints are required in rail panels that span bridge expansion joints.
4. See "DECK DETAILS" Dwg. for rail post spacing.
5. Install bridge rail posts plumb.
6. Core and bond anchor bolts through the existing deck and existing rail hardware. Drill and bond J-Bars 4" into the existing deck. Adjust J-Bar spacing to avoid existing reinforcing and existing rail hardware.
7. Adjust reinforcing to accommodate curb taper.
8. Contractor shall verify all controlling field dimensions before ordering or fabricating any material.
9. Use grout with a minimum 24-hour f'c of 3,000 psi in single placement.



RAILING STUD DETAIL

DESIGNED BY:	Duane Davis	CHECKED:	Nick Murray
DRAWN BY:	Sam Sollie	CHECKED:	Duane Davis
QUANTITIES BY:	Duane Davis	CHECKED:	Nick Murray

**REHABILITATION**

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES  
BRIDGE SECTION  
3132 Channel Drive  
Juneau, Alaska 99801  
907-465-2975

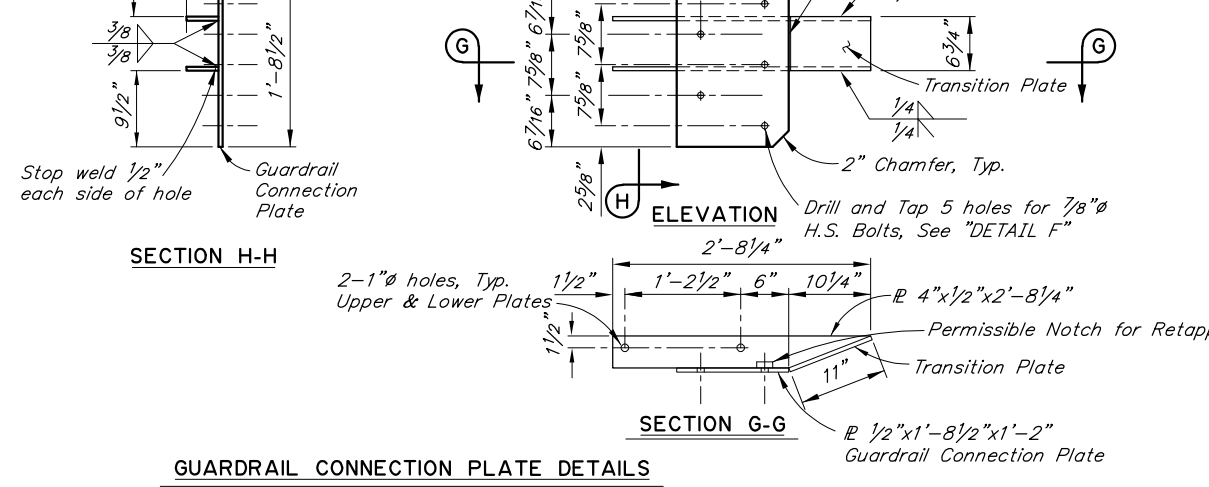
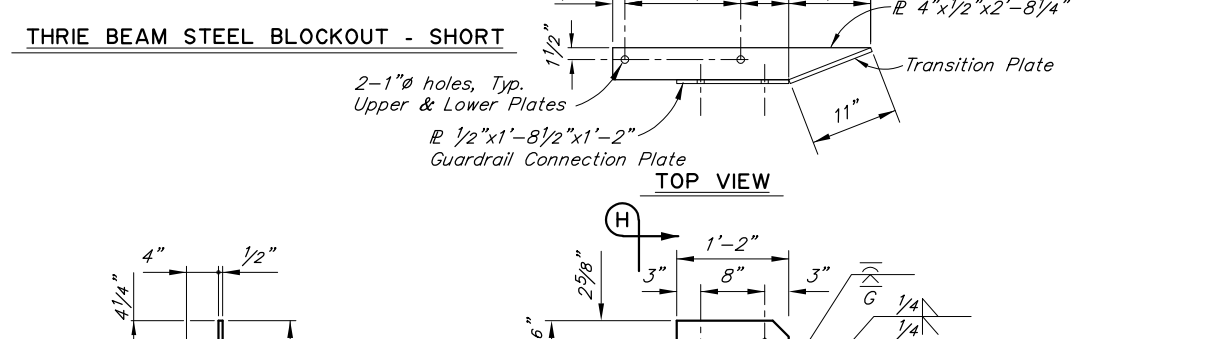
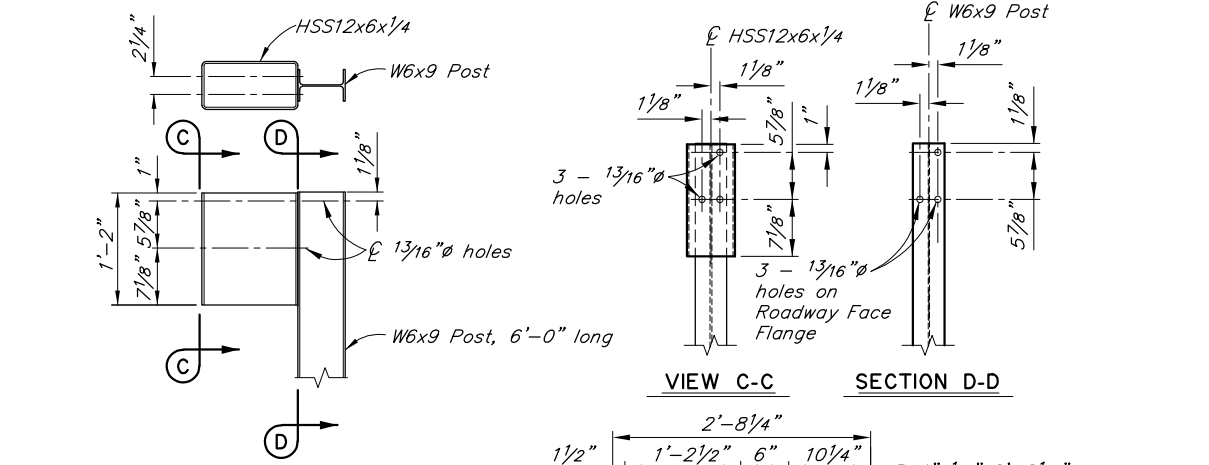
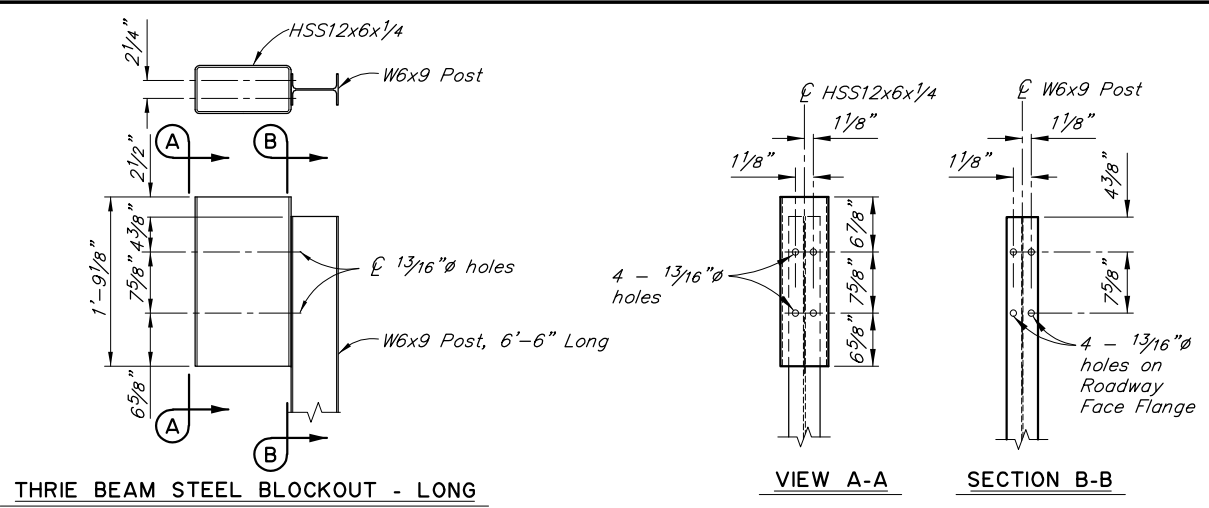
**CRIPPLE CREEK BRIDGE**  
CHENA PUMP ROAD  
**STEEL BRIDGE RAILING, 2-TUBE**



BRIDGE NO. 1008  
DWG. NO. 5

R:\cda\1008\1008 Rehab 2022-RAILING Tue, Jul/12/22 02:37pm

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	pending/NFHWY00570	2022	N6	N6

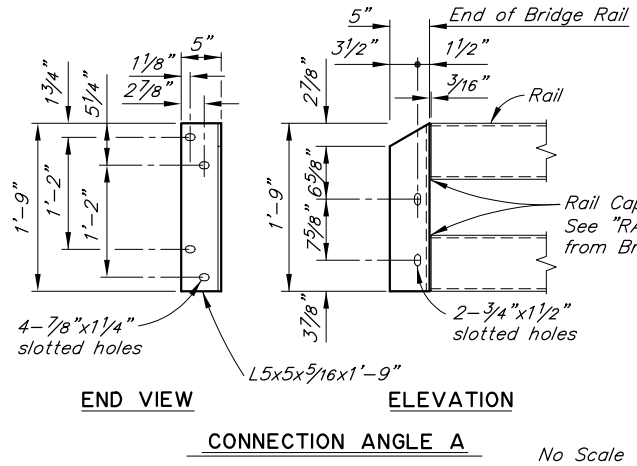
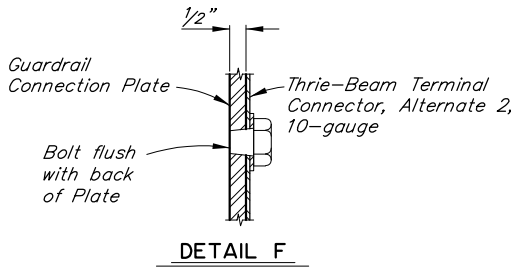
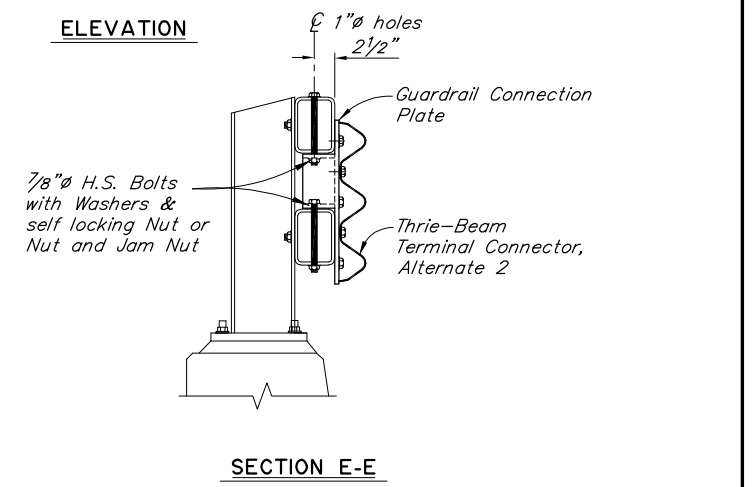
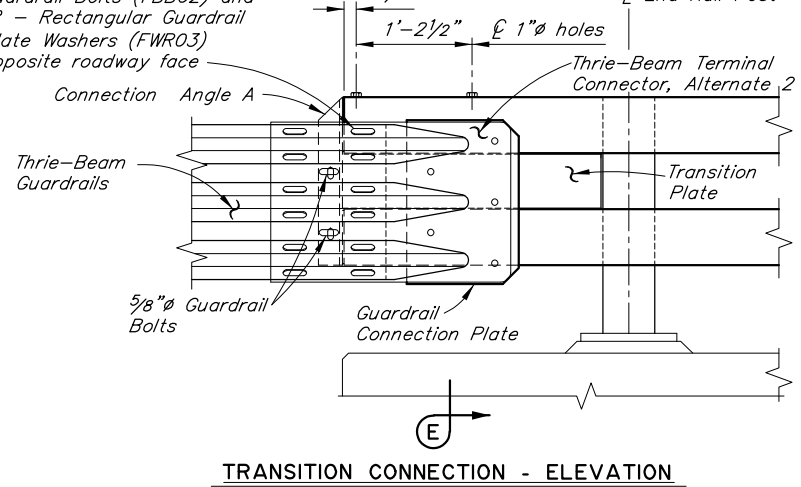
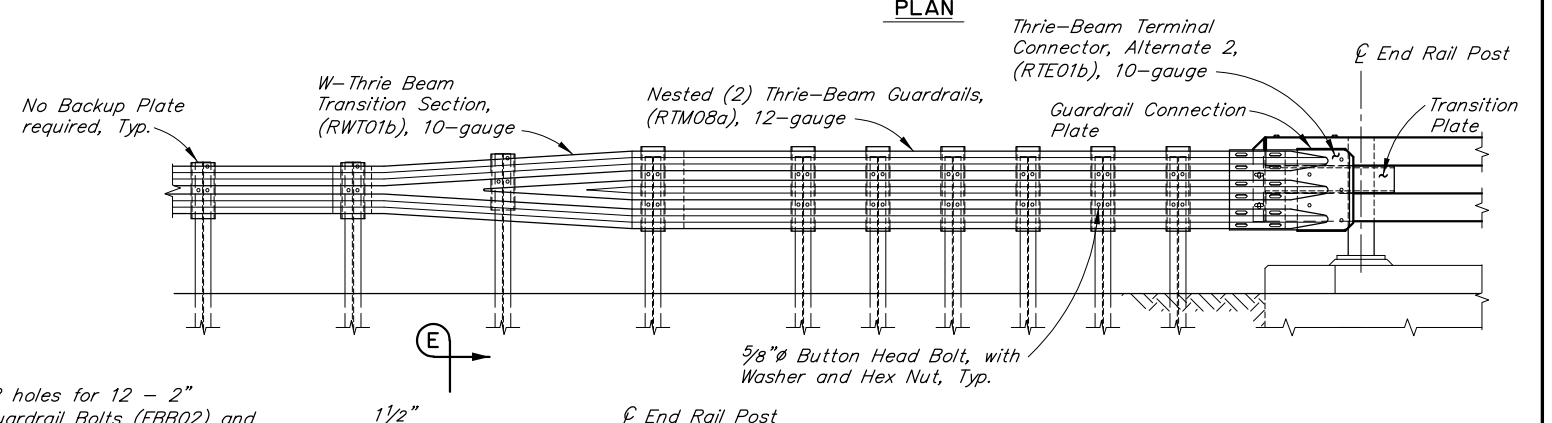
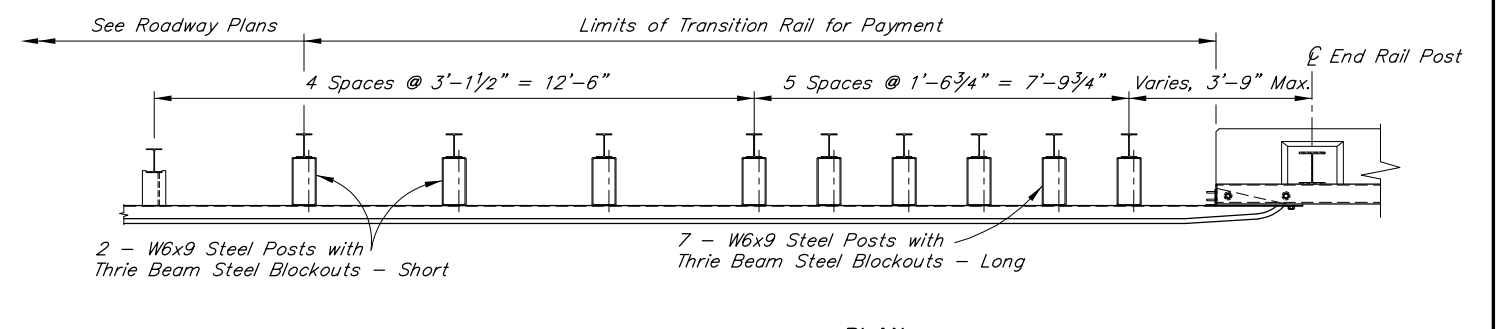


DESIGNED BY:	Duane Davis	CHECKED:	Nick Murray
DRAWN BY:	Sam Sollie	CHECKED:	Duane Davis
QUANTITIES BY:	Duane Davis	CHECKED:	Nick Murray

**REHABILITATION**

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES  
BRIDGE SECTION  
3132 Channel Drive  
Juneau, Alaska 99801  
907-465-2975

**PRELIMINARY PLAN**



- NOTES:**
1. Conform to G-00, G-05, and G-10 of the Standard Plans for all Thrie Beam Transition details not shown.
  2. Thrie Beam Transition part numbers are listed in parentheses () and referenced in the "Task Force 13 Guide to Standardize Roadside Hardware."

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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	Q1	Q1

GENERAL SITE INFORMATION

1. SITE FUNCTION: ROAD
2. AVERAGE ANNUAL PRECIPITATION: 10.53 INCHES (SOURCE: WESTERN REGIONAL CLIMATE CENTER WEBSITE FOR FOR UNIVERSITY EXP STN, AK).
3. 2-YEAR 24-HOUR PRECIPITATION REASSURANCE INTERVAL: 1.09 INCHES (SOURCE: [HTTP://HDSC.NWS.NOAA.GOV/HDSC/PFDS/PFDS\\_MAP\\_AK.HTML](http://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_ak.html)).
4. SEE SHEET A1 FOR GENERAL PROJECT AREA MAP.

PROJECT INFORMATION TABLE	
PROJECT AREA (ACRES)	49.70
PAVEMENT AREA (ACRES)	49.70
PRE-CONSTRUCTION RUNOFF COEFFICIENT	0.96
POST-CONSTRUCTION RUNOFF COEFFICIENT	0.96

ENVIRONMENTAL INFORMATION

1. RECEIVING WATER BODIES: TANANA RIVER, CHENA RIVER, CRIPPLE CREEK
2. IMPAIRED WATER BODIES: NONE
3. TOTAL MAXIMUM DAILY LOAD (TMDL) WATERS: NONE.
4. THREATENED AND ENDANGERED SPECIES: NONE.
5. HISTORIC & CULTURAL RESOURCE PRESENCE: CHENA TOWNSITE ARCHAEOLOGICAL DISTRICT IS WITHIN THE PROJECT AREA. CONSTRUCTION IS LIMITED TO PREVIOUSLY DISTURBED AREAS.
6. FISH & WILDLIFE ESSENTIAL HABITAT: CRIPPLE CREEK, CHENA RIVER, TANANA RIVER
7. WETLANDS: NONE.
8. PERMITS: FNSB FLOODPLAIN PERMIT
9. CONTACT THE PROJECT ENGINEER WITH QUESTIONS/CONCERNS REGARDING ENVIRONMENTAL ISSUES OR PERMIT INFORMATION.

ESCP NOTES:

GENERAL:

1. THIS PROJECT WILL NOT BE REQUIRED TO DEVELOP A SWPPP OR FILE AN NOI. THE PROJECT WILL COMPLY WITH THE CLEAN WATER ACT AND PROTECT WATER QUALITY.
2. TEMPORARY BEST MANAGEMENT PRACTICES (BMPS) THAT ARE REQUIRED WILL BE SUBSIDIARY TO 641.2000.0000 POLLUTION CONTROL
3. MAINTAIN BMPS ON A REGULAR BASIS INCLUDING, BUT NOT LIMITED TO REMOVAL AND DISPOSAL OF SEDIMENT AND REPLACING DAMAGED BMPS OR AS DIRECTED BY THE ENGINEER.

CATCHBASINS AND CULVERTS:

4. PROVIDE TEMPORARY INLET AND OUTLET PROTECTION FOR PROPOSED CULVERTS IN THE AREA OF DISTURBANCE PRIOR TO MAKING OPERATIONAL OR BEGINNING EARTH DISTURBING ACTIVITIES.
5. PERMANENT CULVERT INLET AND OUTLET PROTECTION IS ESTABLISHED VEGETATION.

DITCH PROTECTION AND CONCENTRATED FLOWS:

6. DURING CONSTRUCTION, PROTECT DITCHES TO LIMIT RELEASE OF SEDIMENT. PROVIDE TEMPORARY DITCH PROTECTION IN THE FORM OF VELOCITY CONTROLS OR TEMPORARY NON-ERODIBLE LINING.
7. WHEN POSSIBLE, AVOID CONDITIONS WHICH PROMOTE CONCENTRATED FLOWS. OTHERWISE, INSTALL VELOCITY CONTROL BMPS (I.E. WATTLE CHECK DAMS OR ROCK CHECK DAMS).

PERIMETER CONTROL:

8. VEGETATIVE BUFFER IS THE PREFERRED PERIMETER PROTECTION FOR THIS PROJECT. THERE ARE NO WETLANDS IN THE PROJECT AREA.

HAULING:

9. ENSURE LOADS ARE STABLE OR COVERED SO THAT NO MATERIAL ESCAPEMENT OCCURS DURING HAULING ACTIVITIES.
10. CONSTRUCTION ENTRANCE/EXIT TRACK OUT CAN STILL BE CONSIDERED A DISCHARGE.

STOCKPILE PROTECTION:

11. ALL ERODIBLE STOCKPILES MUST BE PROTECTED BY EROSION AND SEDIMENT CONTROL DEVICES.
12. EROSION AND SEDIMENT CONTROL BMPS MAY HAVE TO BE REMOVED AND RE-INSTALLED EACH SHIFT.

TIMING OF BMP INSTALLATION:

13. INSTALL EROSION AND SEDIMENT CONTROL BMP'S PRIOR TO THE START OF CONSTRUCTION, AS NECESSARY TO MINIMIZE EROSION FROM DISTURBED SURFACES AND CAPTURE SEDIMENT ONSITE.
14. INSTALL TEMPORARY PERIMETER CONTROL BMP'S BEFORE ANY UP-GRADIENT SOIL DISTURBANCE OCCURS.

ESCP








NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	T1	T1

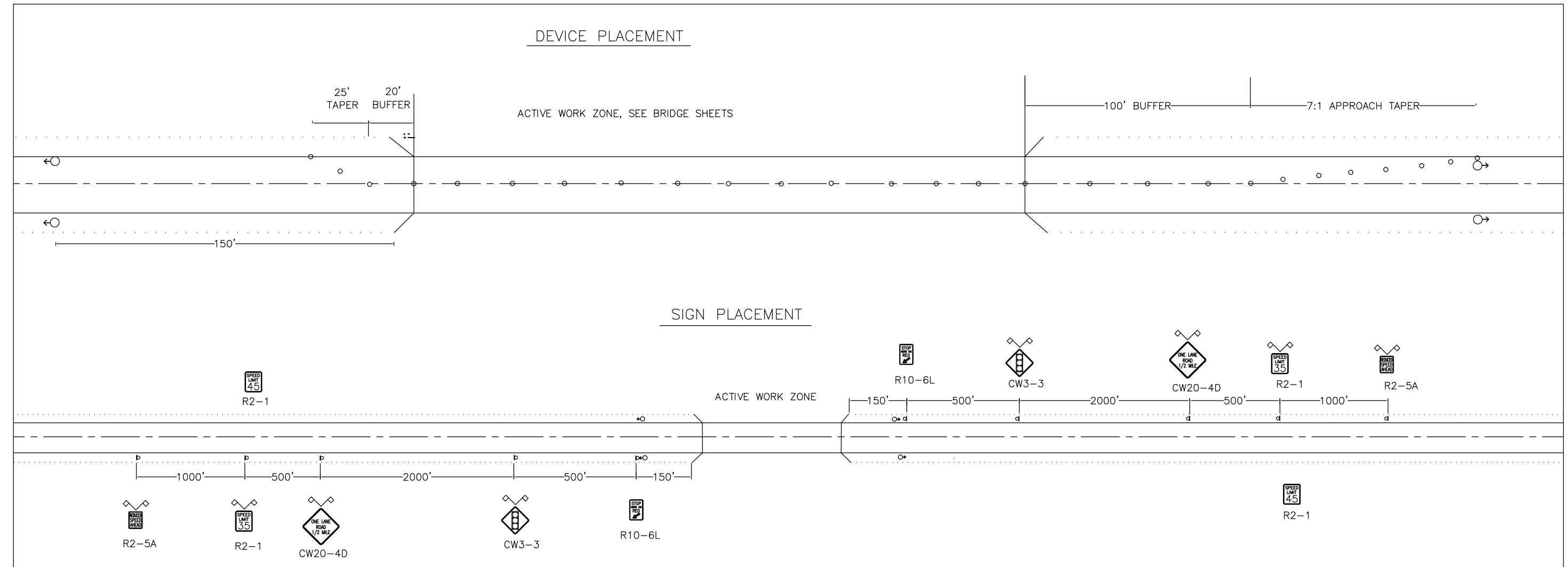
**TRAFFIC CONTROL NOTES:**

**GENERAL:**

- KEEP ONE LANE OPEN TO 2-WAY PILOT CAR TRAFFIC AT ALL TIMES.
- PROVIDE A MINIMUM 10' WIDE LANE FOR TRAFFIC.
- USE WARNING LIGHTS TO MARK BARRICADES, PORTABLE CONCRETE BARRIERS OR ANY OTHER CHANNELING DEVICE AT NIGHT. EQUIP THE FIRST DEVICE IN A LINE OF CHANNELING DEVICES FACING THE DIRECTION OF TRAFFIC WITH A TYPE A FLASHING WARNING LIGHT. EQUIP ALL OTHERS WITH STEADY-BURN WARNING LIGHTS.
- TRAFFIC DRUM SPACINGS IN TAPERS AND TANGENTS SHALL BE APPROVED BY ENGINEER.
- RUN FLARE TO EDGE OF SHOULDER AS SHOWN.
- COMPLETE ALL WORK ON ONE SIDE OF ROAD BEFORE BEGINNING WORK ON THE OTHER SIDE.
- MOUNT CONSTRUCTION SIGNS AT 7' ON 4 X 4 WOOD POST IN ACCORDANCE WITH STANDARD DRAWINGS S-05.01 AND S-30.03 UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- PROVIDE EMERGENCY VEHICLES WITH ACCESS THROUGH THE PROJECT AT ALL TIMES.
- THE ADJACENT PEDESTRIAN BRIDGE IS TO REMAIN OPEN AT ALL TIMES.
- THE SPACING BETWEEN CHANNELIZING DEVICES (WHEN USED) MUST NOT EXCEED A DISTANCE IN FEET EQUAL TO 1.0 TIMES THE SPEED LIMIT IN MPH WHEN USED FOR TAPER CHANNELIZATION, AND A DISTANCE IN FEET EQUAL TO 2.0 TIMES THE SPEED LIMIT IN MPH WHEN USED FOR TANGENT CHANNELIZATION.
- USE WARNING LIGHTS ON CHANNELIZING DEVICES DURING NIGHT WORK AS DEFINED IN SECTION 643-1.02. USE TYPE "C" STEADY BURN WARNING LIGHTS ON ALL TAPER AND TANGENT CHANNELIZATION DEVICES.
- PAYMENT FOR TEMPORARY SIGNAL DEVICES IS SUBSIDIARY TO 643.0002.0000 TRAFFIC MAINTENANCE
- PEDESTRIAN ACCESS OF THE FOOTBRIDGE IS NOT TO BE IMPEDED.

**LEGEND**

-  DRUM
-  CONSTRUCTION SIGN
-  TEMPORARY SIGNAL OR PORTABLE SIGNAL
-  HIGH LEVEL WARNING DEVICE
-  WORK AREA



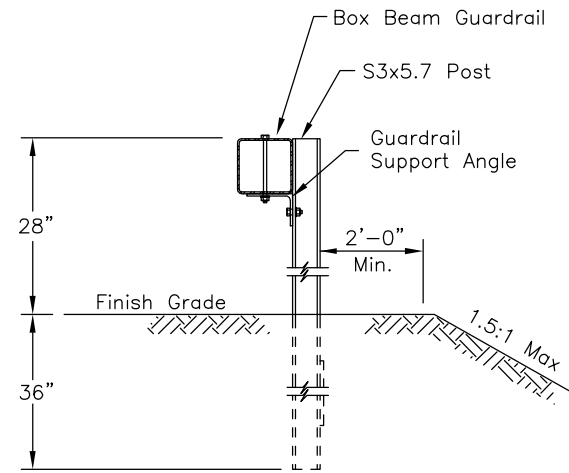
PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200  
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BRIDGE LANE CLOSURE

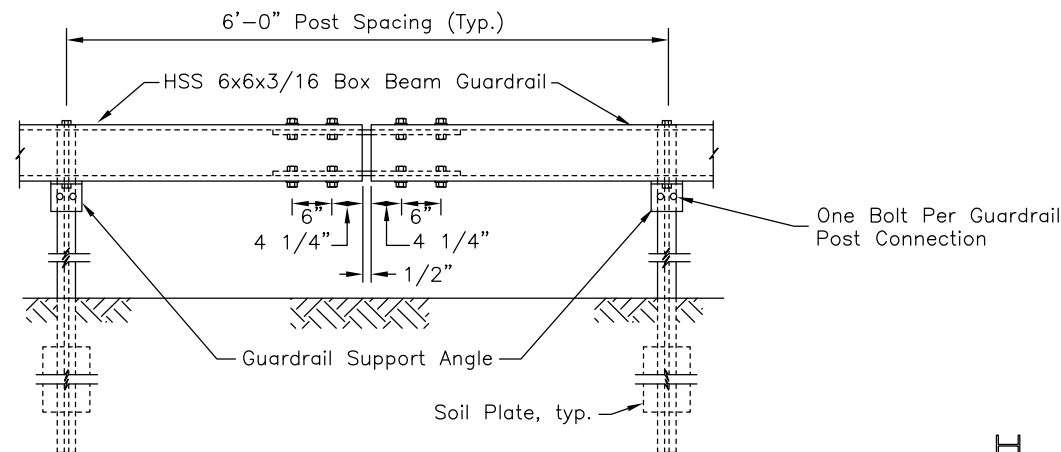


**CONSTRUCTION NOTES:**

1. No fixed objects allowed within 60" of the back of the guardrail post.
2. Shop form guardrail on curves with a radius of less than 717'.
3. Splice plate connections shall meet ASTM F3125, Grade A325 for bolts and A563, Grade A for hex nuts.
4. HSS Steel Tube box beam rail elements shall meet ASTM A500 Grade B.
5. Provide guardrail reflectors conforming to Standard Plan G-00 and Section 606 of the Standard Specifications.
6. Mount guardrail reflectors every 48' on tangents and 24' on curves. Start reflector installation on the first post. Use Type A reflectors unless shown otherwise on the plans.
7. Do not galvanize contact surfaces between the splice plate and the interior HSS tube surface.

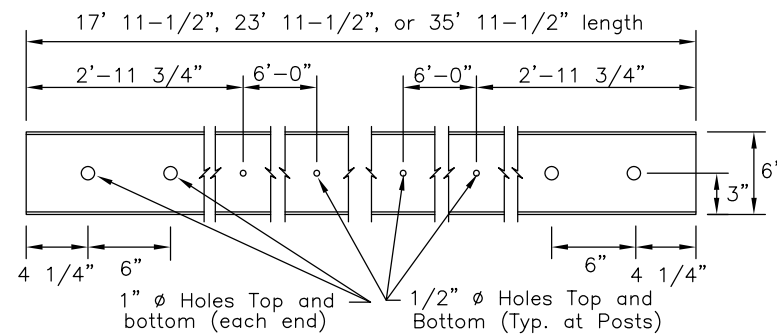


**POST INSTALLATION**

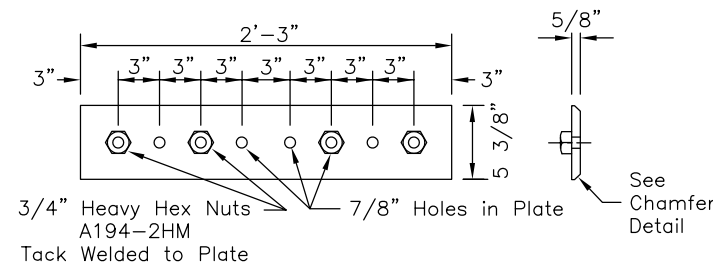


One Bolt Per Guardrail Post Connection

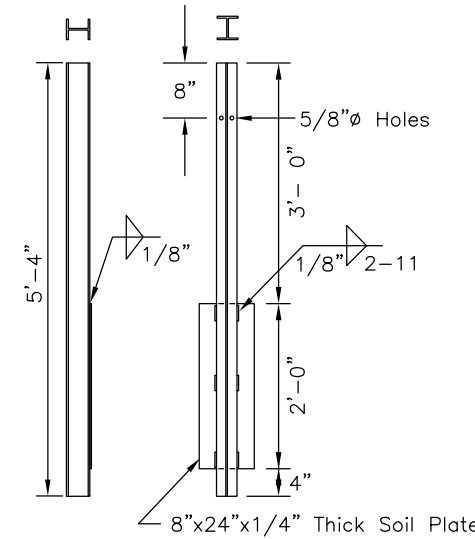
Soil Plate, typ.



**HSS 6x6 x 3/16 BOX BEAM GUARDRAIL**



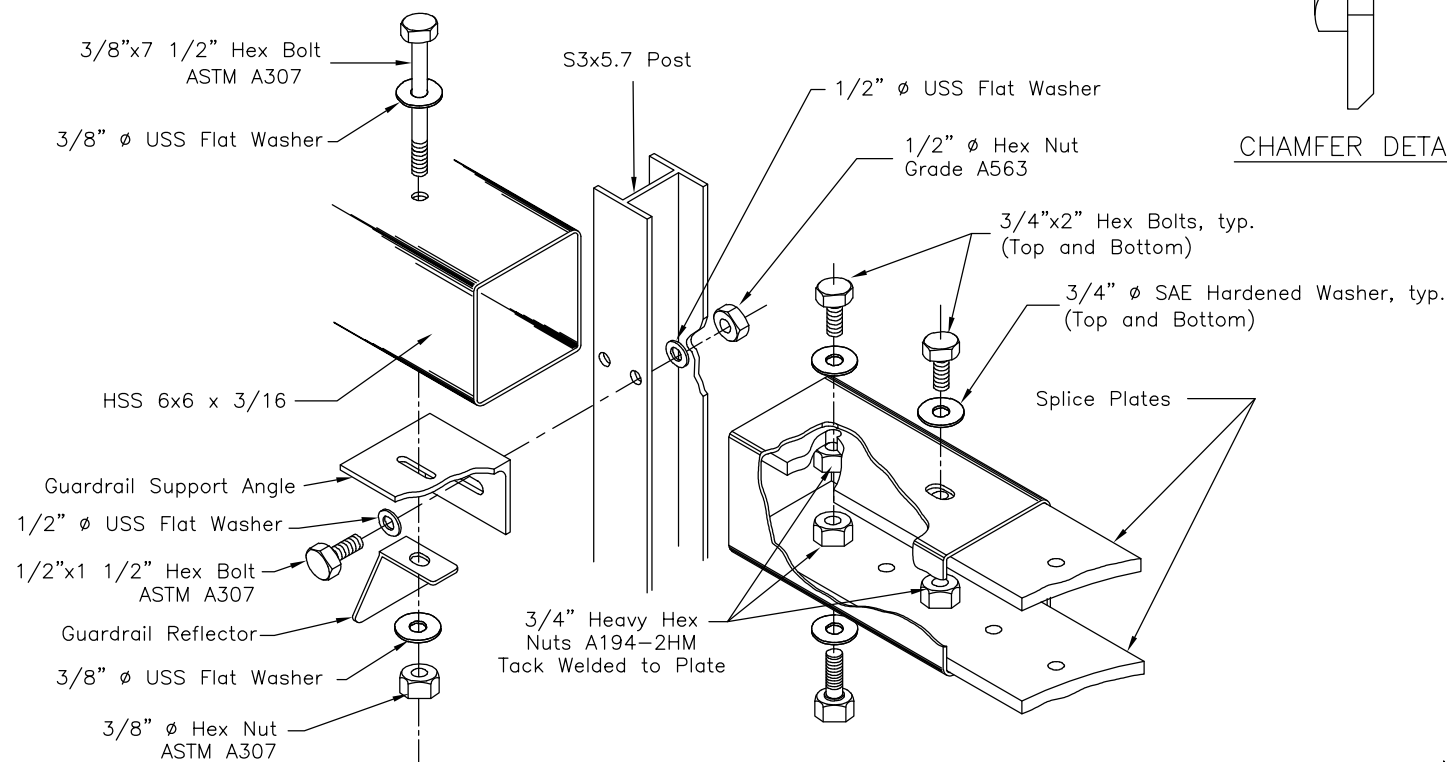
**SPLICE PLATE**



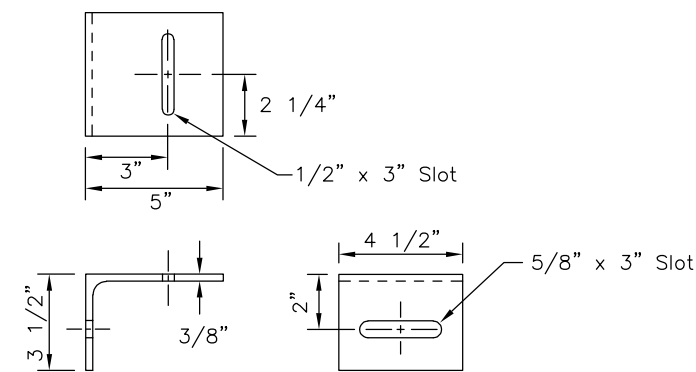
**S3x5.7 BOX BEAM GUARDRAIL POST**

ASTM A992 Post, ASTM A36 Plate

**CHAMFER DETAIL**



**ASSEMBLY DETAIL**



**GUARDRAIL SUPPORT ANGLE**

L 5 x 3.5 x 3/8 - ASTM A36

Note: Drawing not to scale

State of Alaska DOT&PF  
ALASKA STANDARD PLAN

**MASH BOX BEAM  
GUARDRAIL**

Adopted as an Alaska  
Standard Plan by: \_\_\_\_\_

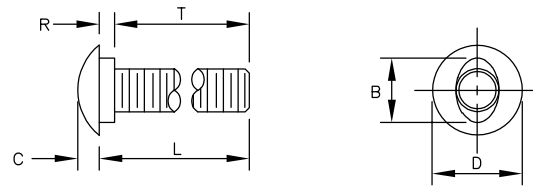
Carolyn Morehouse, P.E.  
Chief Engineer

Adoption Date: 07/30/2021

Last Code and Stds. Review  
By: LRG Date: 07/30/2021

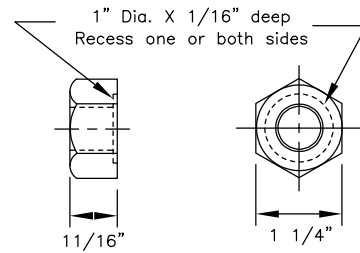
Next Code and Standards Review date: 7/30/2021



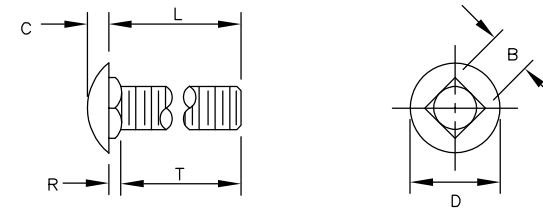


B	C	D	L (Length)	R	T (Thread Length)
15/16"	5/16"	1 5/16" or 1 7/16"	As Required	7/32"	As Required

5/8" BUTTONHEAD BOLT  
(FBB01-05)

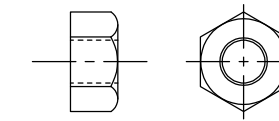


5/8" Dia. RECESSED HEX NUT  
(FBB01-05)



B	C	D	L (Length)	R	T (Thread Length)
5/8"	5/16"	1 5/16"	As Required	3/16"	As Required

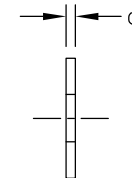
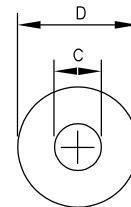
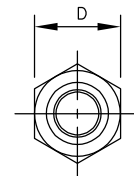
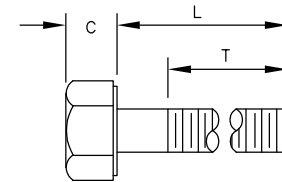
5/8" Dia. CARRIAGE BOLT  
(FBC10-20)



STANDARD HEX NUT

**GENERAL NOTES:**

1. All covered hardware shall comply with the Task Force 13 (TF13) Guide to Standardized Roadside Safety Hardware online publication. Designators given when possible in parentheses.

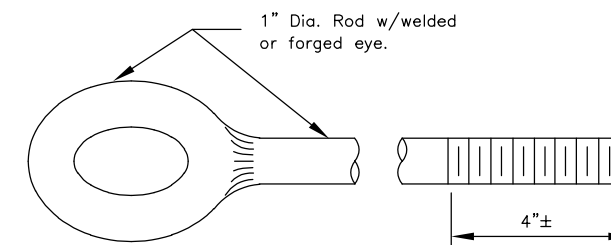


Bolt Size	C	D	L (Length)	T (Thread Length)
5/16"	—	—	1 1/2"	7/8"
5/16"	—	—	1"	1"
3/8"	—	—	7 1/2"	1 1/2"
1/2"	—	—	1 1/2"	1 1/2"
1/2"	—	—	1 1/4"	1 1/4"
5/8" H.S.	5/16"	7/8"	8"	1 1/2"
5/8"-11	—	—	1 1/2"	1 1/2"
3/4"	—	—	1 1/2"	1 1/2"
3/4"	—	—	As Required	2"
3/4" H.S.	15/32"	1 1/4"	2"	1 1/2"

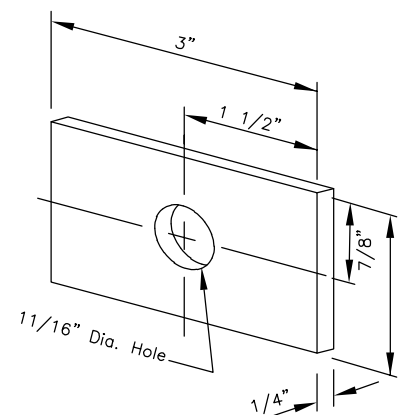
STANDARD HEX BOLTS

For Bolt ø	C	D	G
3/8"	7/16"	1"	5/64"
1/2"	17/32"	1 1/16"	3/32"
1/2" H.S.	17/32"	1 1/16"	3/32"
5/8"	11/16"	1 3/4"	9/64"
3/4"	13/16"	1 15/32"	9/64"
3/4" H.S.	13/16"	2"	5/32"
1"	1 1/16"	2"	9/64"

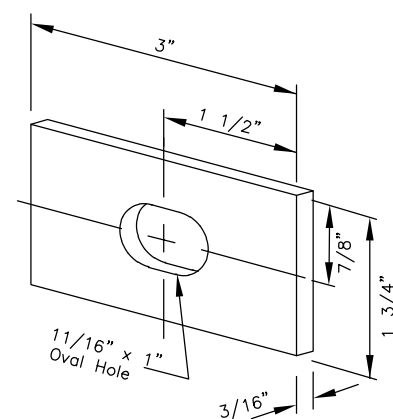
STANDARD STEEL WASHERS



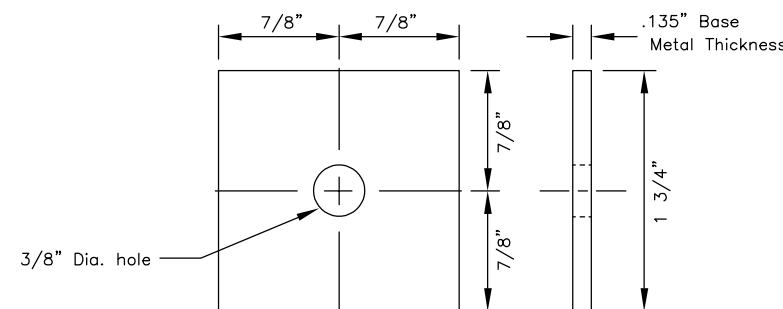
EYE BOLT



FLAT PLATE WASHER



RECTANGULAR POST BOLT WASHER  
(FWR03)



SQUARE STEEL WASHER  
(FWR01)

State of Alaska DOT&PF  
ALASKA STANDARD PLAN  
**STANDARD GUARDRAIL  
HARDWARE  
(NUTS, BOLTS & WASHERS)**

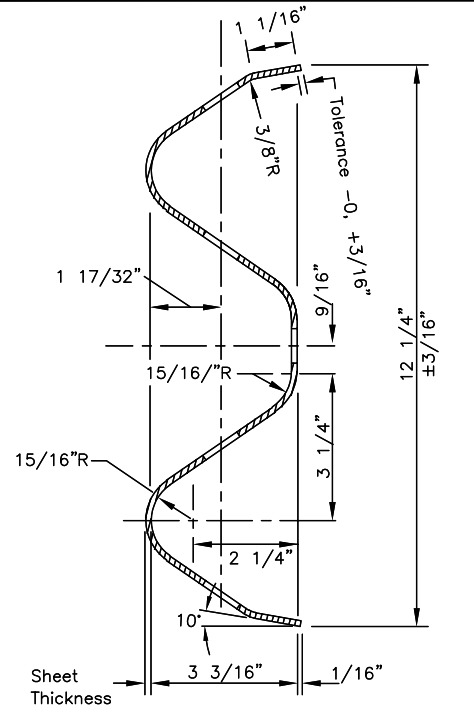
Adopted as an Alaska Standard Plan by: \_\_\_\_\_

Carolyn Morehouse, P.E.  
Chief Engineer

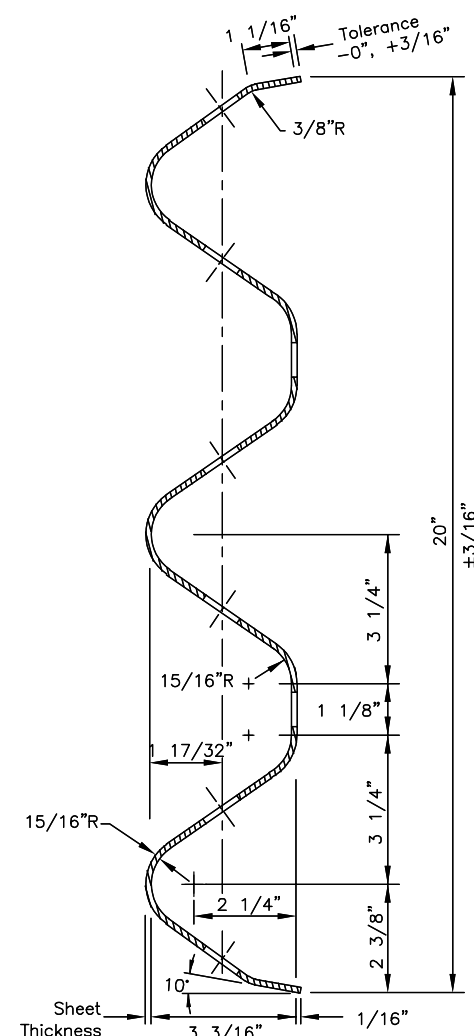
Adoption Date: 7/17/2020

Last Code and Stds. Review  
By: KLK Date: 7/8/2020

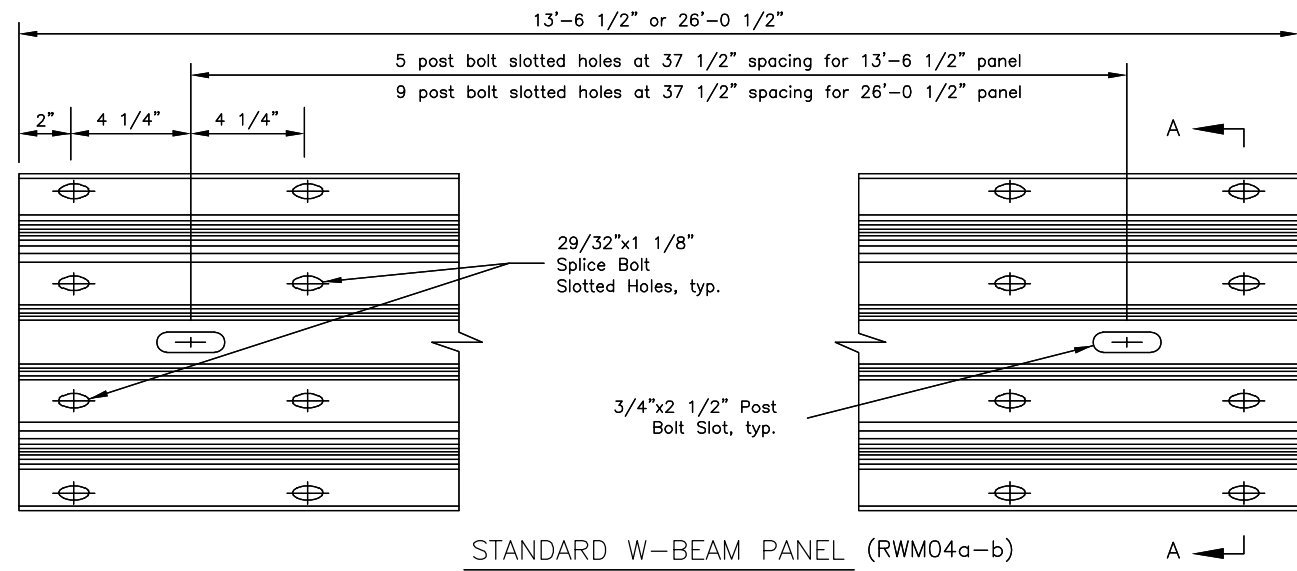
Next Code and Standards Review Date: 7/8/2030



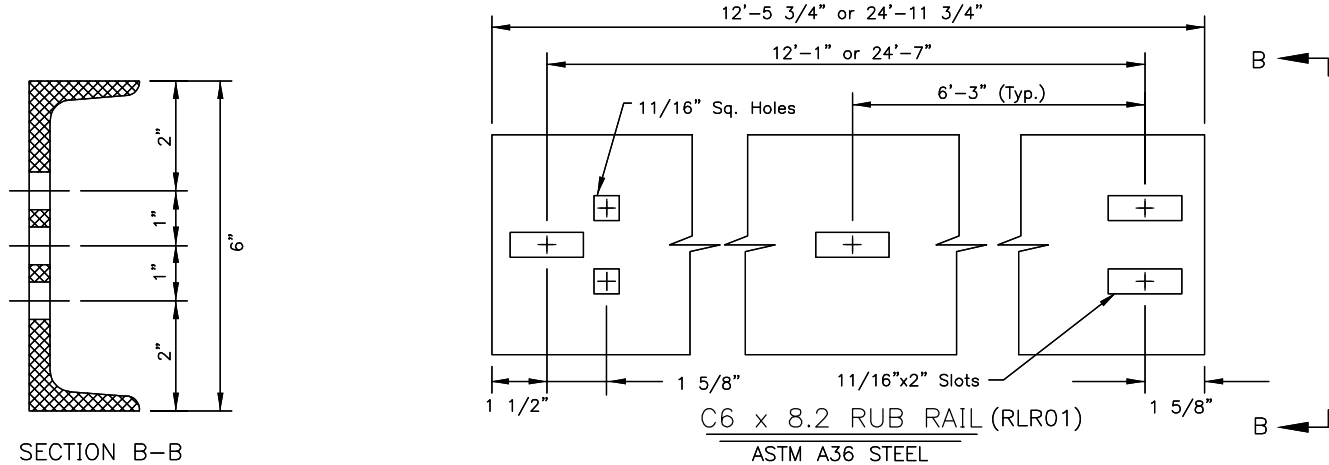
**SECTION A-A**  
(cross section same as RWM02a-b)



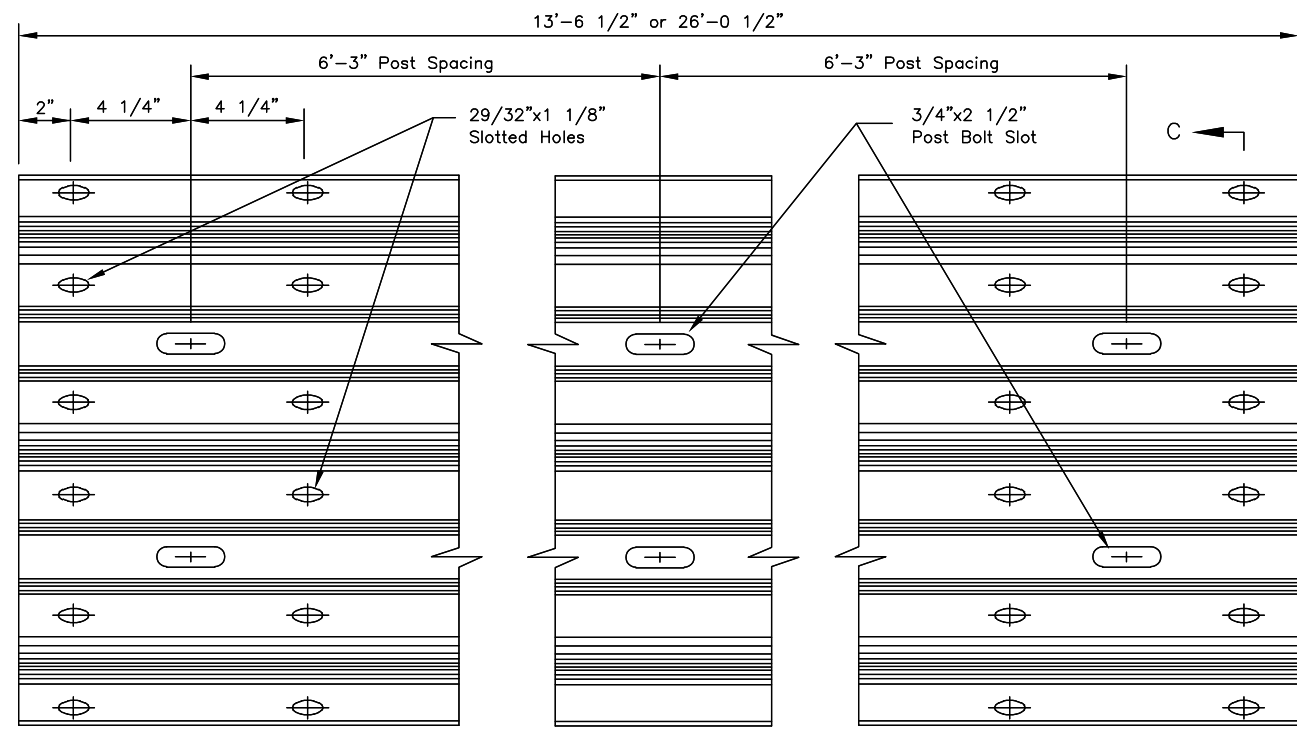
**SECTION C-C**  
(RTM01a-02b)



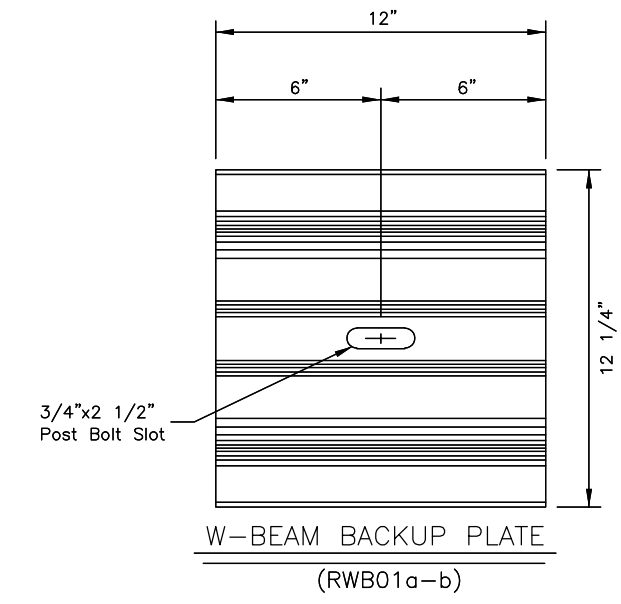
**STANDARD W-BEAM PANEL (RWM04a-b)**



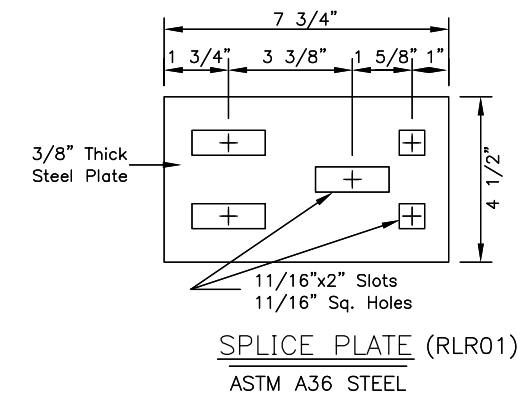
**C6 x 8.2 RUB RAIL (RLR01)**  
ASTM A36 STEEL



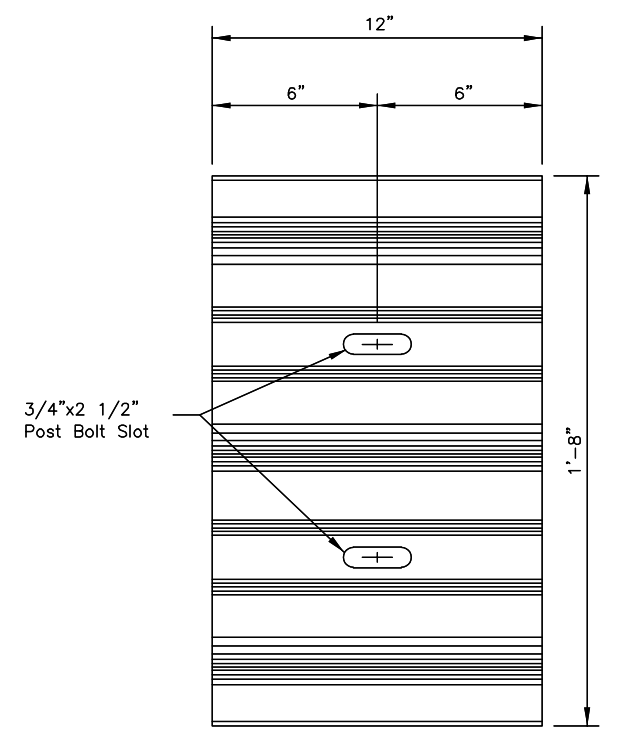
**STANDARD THRIE BEAM PANEL (RTM01a-02b)**



**W-BEAM BACKUP PLATE (RWB01a-b)**



**SPLICE PLATE (RLR01)**  
ASTM A36 STEEL



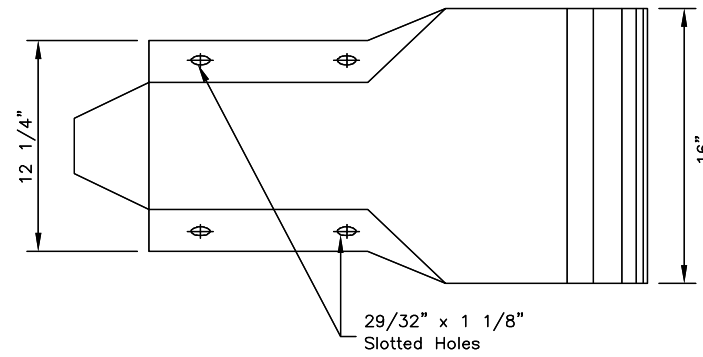
**THRIE BEAM BACKUP PLATE (RTB01a-02b)**

- GENERAL NOTES:**
1. All covered hardware shall comply with the Task Force 13 (TF13) Guide to Standardized Roadside Safety Hardware online publication. Designators given when possible in parentheses.
  2. Install back-up plates between blockouts and w-beam or thrie-beam rail at intermediate (non-splice) posts when steel blockouts are used but not with wood, rubber, plastic, or other approved blockouts.

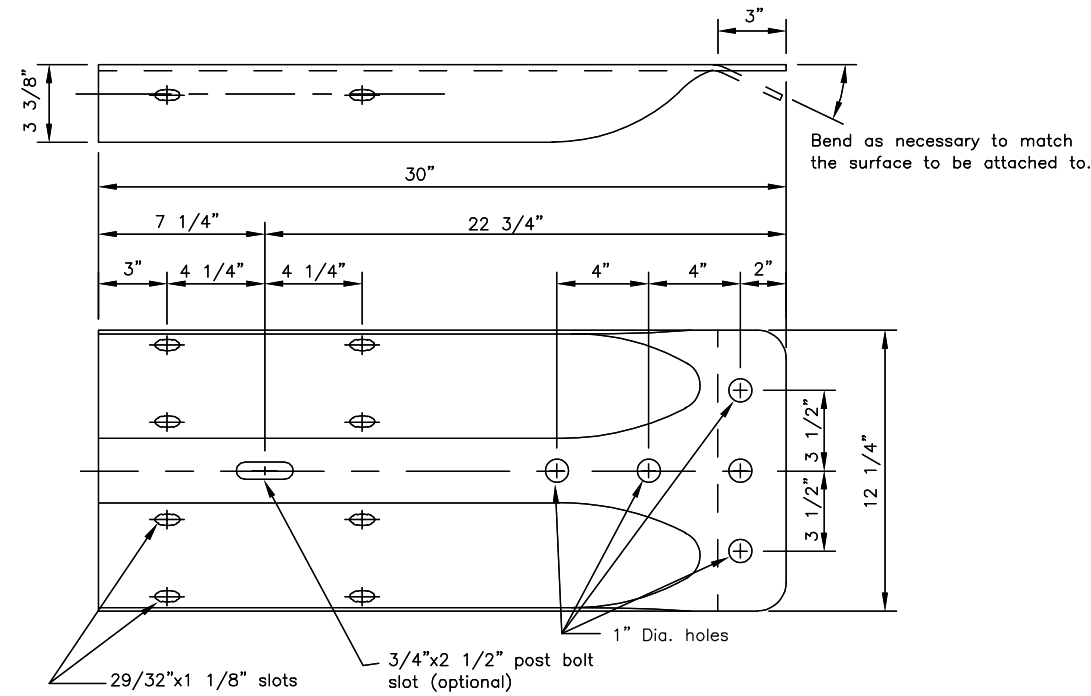
State of Alaska DOT&PF  
ALASKA STANDARD PLAN  
**STANDARD GUARDRAIL  
HARDWARE  
(RAILS AND SPLICES)**  
Adopted as an Alaska  
Standard Plan by: \_\_\_\_\_  
Carolyn Morehouse, P.E.  
Chief Engineer  
Adoption Date: 7/17/2020  
Last Code and Stds. Review  
By: KLK Date: 7/8/2020  
Next Code and Standards Review Date: 7/8/2030

**GENERAL NOTES:**

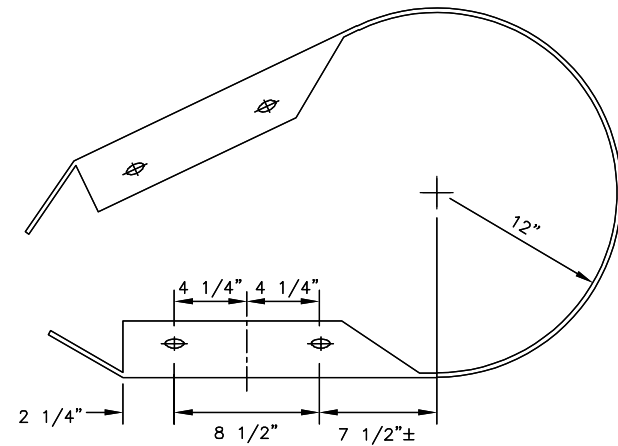
1. W-Beam and Thrie Beam Terminal Connectors shall conform to AASHTO M 180, Class B, Type II.
2. W-Beam end sections shall conform to AASHTO M 180, Class A, Type II.
3. All covered hardware shall comply with the Task Force 13 (TF13) Guide to Standardized Roadside Safety Hardware online publication. Designators given when possible in parentheses.



PROFILE



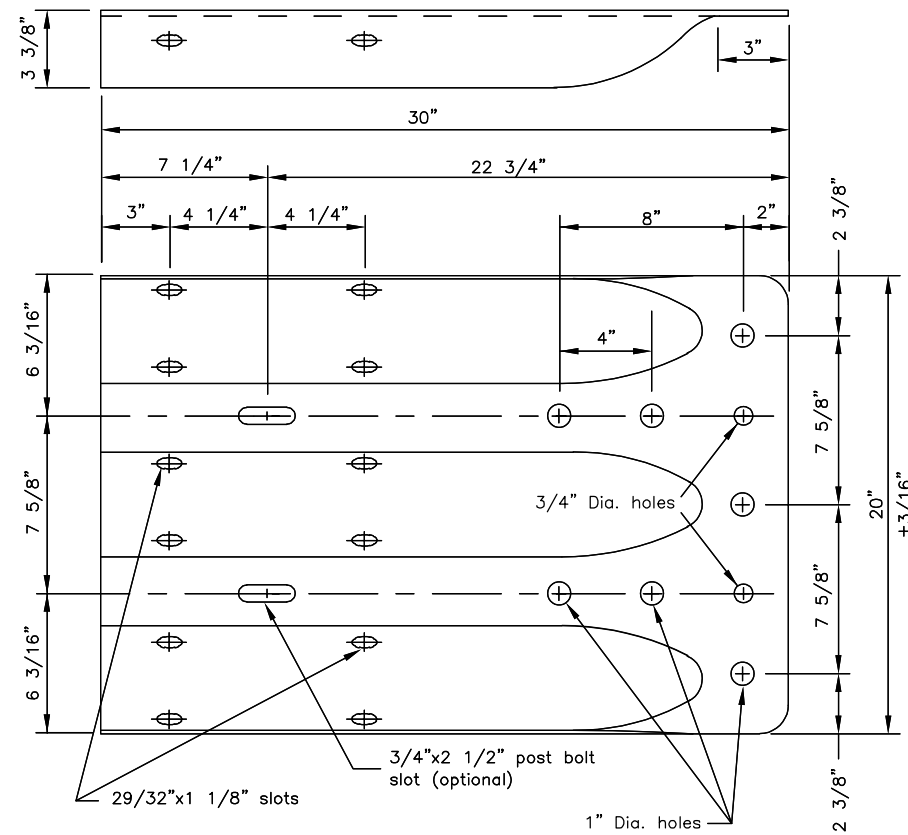
STANDARD W-BEAM TERMINAL CONNECTOR  
(RWE02)



W-BEAM PLAN VIEW

\*Radius to be specified on the plans

STANDARD W-BEAM END SECTION  
(RWE06)



STANDARD THRIE BEAM TERMINAL CONNECTOR  
(RTE01b)

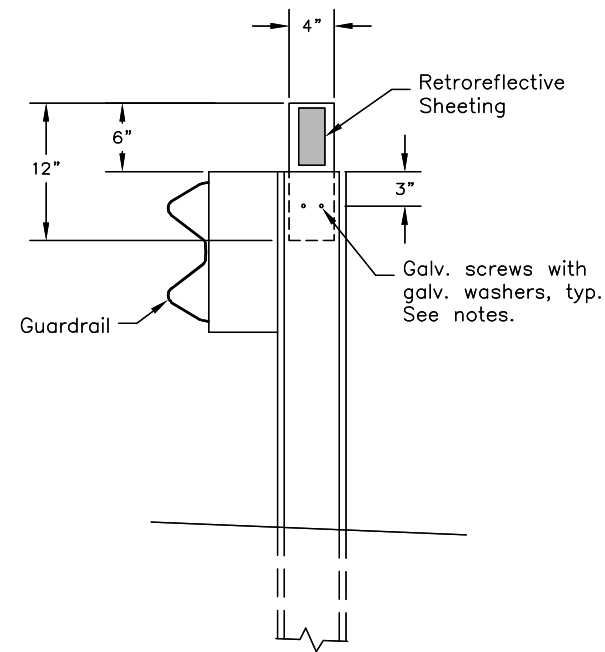
State of Alaska DOT&PF  
ALASKA STANDARD PLAN  
**STANDARD GUARDRAIL  
HARDWARE  
(TERMINAL CONNECTORS)**

Adopted as an Alaska  
Standard Plan by: Carolyn Morehouse, P.E.  
Chief Engineer

Adoption Date: 7/17/2020

Last Code and Stds. Review  
By: KLK Date: 7/8/2020

Next Code and Standards Review Date: 7/8/2030



GUARDRAIL FLEXIBLE DELINEATOR DETAIL

(Steel post shown – similar for wood post)

**CONSTRUCTION NOTES**

1. Install guardrail flexible delineators where shown on the plans.
2. Install guardrail flexible delineators at 50 foot spacing, unless otherwise noted on the plans. Install not less than 2 delineators per guardrail run.
3. Use 3" x 5" white/yellow/red retroreflective sheeting as required per Standard Plan T-05. Install retroreflective sheeting on both sides of delineator on two-way roads.
4. Attach 4" x 12" flexible delineators to the top of new guardrail posts, on the trailing side of the posts relative to the adjacent lane's direction of travel.
5. Use 2 each 1/4" dia. x 1-1/2" long galvanized lag screws for attaching to wood posts and 2 each 1/4" dia. x 3/4" long galvanized self-drilling fasteners for steel posts. Install a galvanized washer between the fastener head and the flexible delineator.

**State of Alaska DOT&PF**  
**ALASKA STANDARD PLAN**

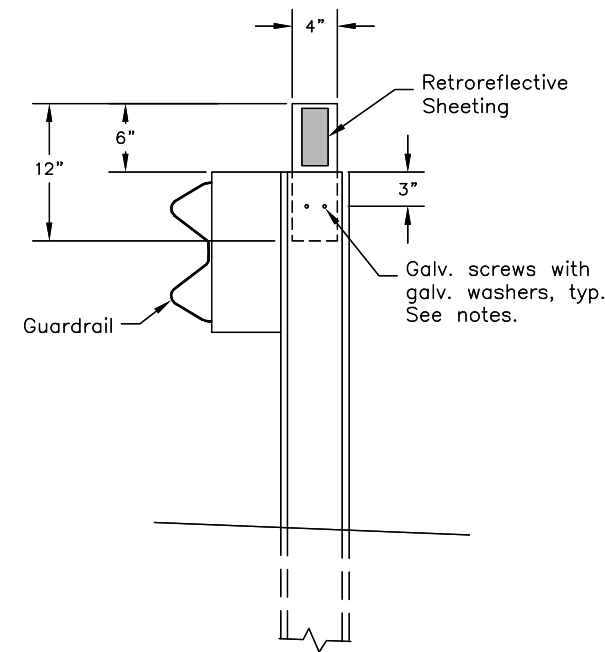
**STANDARD GUARDRAIL**  
**HARDWARE**  
**(FLEXIBLE DELINEATORS)**

Adopted as an Alaska  
Standard Plan by: \_\_\_\_\_  
Carolyn Morehouse, P.E.  
Chief Engineer

Adoption Date: 7/17/2020

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Last Code and Stds. Review  
By: KLK Date: 7/8/2020  
Next Code and Standards Review Date: 7/8/2030



GUARDRAIL FLEXIBLE DELINEATOR DETAIL

(Steel post shown – similar for wood post)

**CONSTRUCTION NOTES**

1. Install guardrail flexible delineators where shown on the plans.
2. Install guardrail flexible delineators at 50 foot spacing, unless otherwise noted on the plans. Install not less than 2 delineators per guardrail run.
3. Use 3" x 5" white/yellow/red retroreflective sheeting as required per Standard Plan T-05. Install retroreflective sheeting on both sides of delineator on two-way roads.
4. Attach 4" x 12" flexible delineators to the top of new guardrail posts, on the trailing side of the posts relative to the adjacent lane's direction of travel.
5. Use 2 each 1/4" dia. x 1-1/2" long galvanized lag screws for attaching to wood posts and 2 each 1/4" dia. x 3/4" long galvanized self-drilling fasteners for steel posts. Install a galvanized washer between the fastener head and the flexible delineator.

**State of Alaska DOT&PF**  
**ALASKA STANDARD PLAN**

**STANDARD GUARDRAIL**  
**HARDWARE**  
**(FLEXIBLE DELINEATORS)**

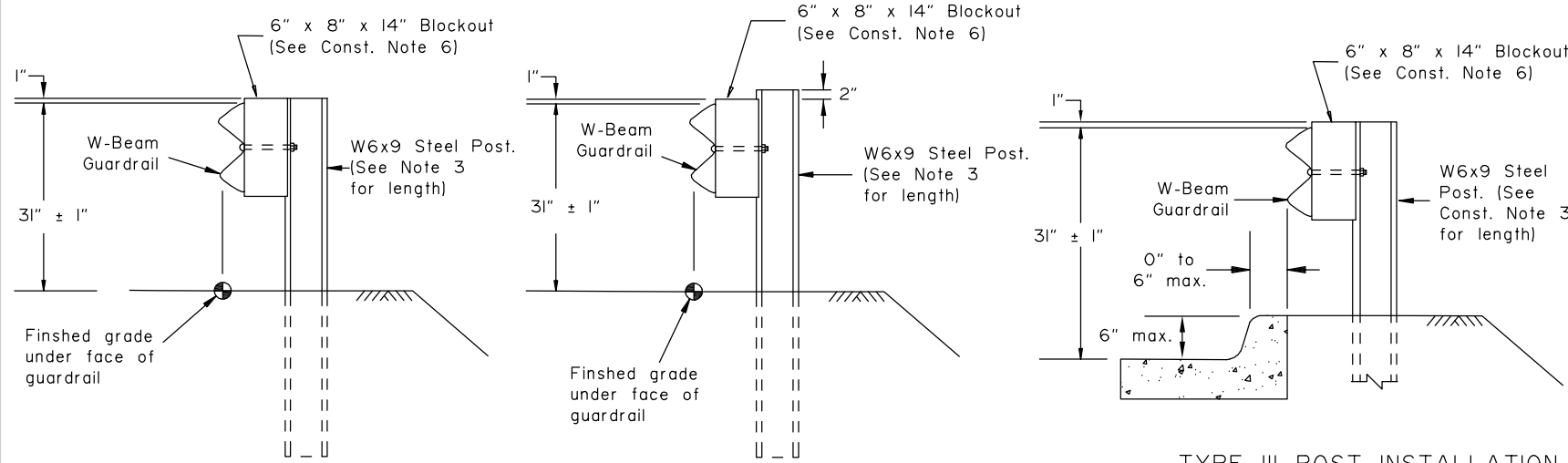
Adopted as an Alaska  
Standard Plan by: \_\_\_\_\_  
Carolyn Morehouse, P.E.  
Chief Engineer

Adoption Date: 7/17/2020

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Last Code and Stds. Review  
By: KLK Date: 7/8/2020  
Next Code and Standards Review Date: 7/8/2030

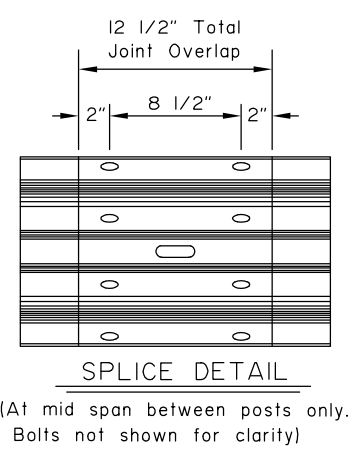
G-00.04



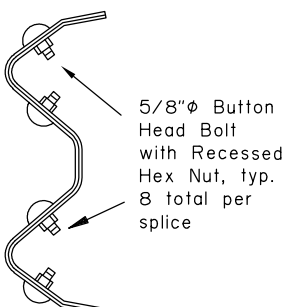
**TYPE I POST INSTALLATION**

**TYPE II POST INSTALLATION**  
(Facilitates raising rail for future overlays.)

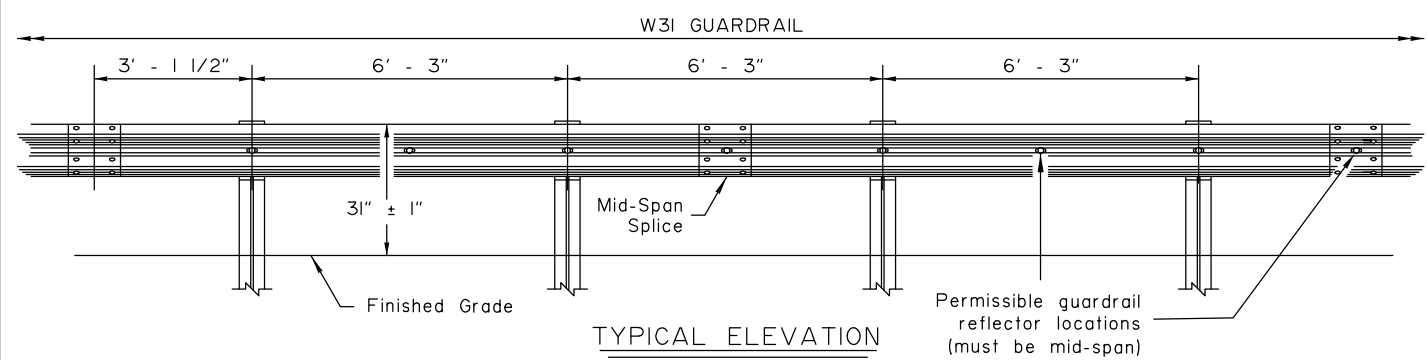
**TYPE III POST INSTALLATION**



**SPLICE DETAIL**



**SPLICE CROSS-SECTION**



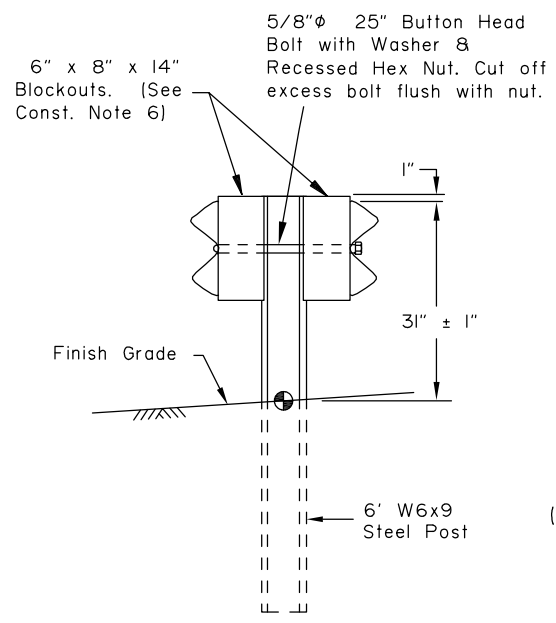
**TYPICAL ELEVATION**

**CONSTRUCTION NOTES:**

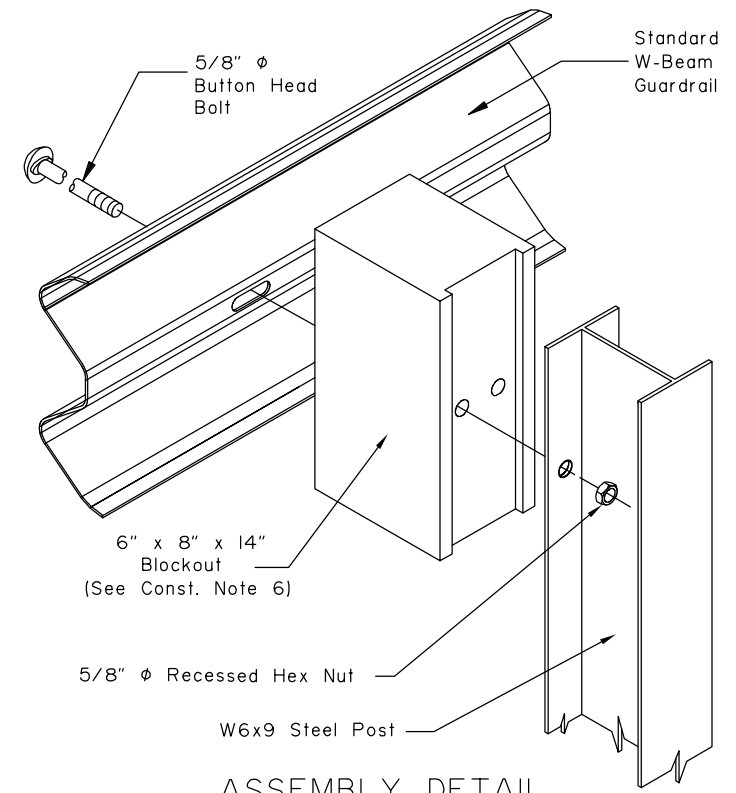
1. Provide hardware compliant with the Task Force 13 (TF13) Guide to Standardized Roadside Safety Hardware.
2. See Standard Plan G-00 for hardware details not shown on this drawing.
3. See Standard Plan G-10 for post lengths corresponding to different combinations of slope and behind-post embankment width.
4. Typical post spacing is 6'-3" center to center.
5. Attach guardrail reflector to guardrail using a 5/8" button head bolt with 5/8" recessed head hex nut and steel washer at location shown in the Typical Elevation. Install reflectors every 25' on tangents and every 12.5' on curves starting 100' before the P.C. and ending 100' after the P.T.
6. Use wood or synthetic blockouts designed, tested, and passed per MASH for use with steel posts. Either bolt hole on the blockout may be used for attachment.
7. Use a 25 linear foot transition to match differing height of existing or new rail elements and end treatments - see Standard Plan G-11.
8. W6x8.5 steel post may be substituted for W6x9 steel post.
9. Install flexible delineators on guardrail posts when called for in the contract. See Standard Plan G-00 for guardrail flexible delineator details.

**DESIGN NOTES:**

1. No fixed objects allowed within 36" of the back side of guardrail post.
2. This barrier is acceptable under MASH Tests 3-10 and 3-11.

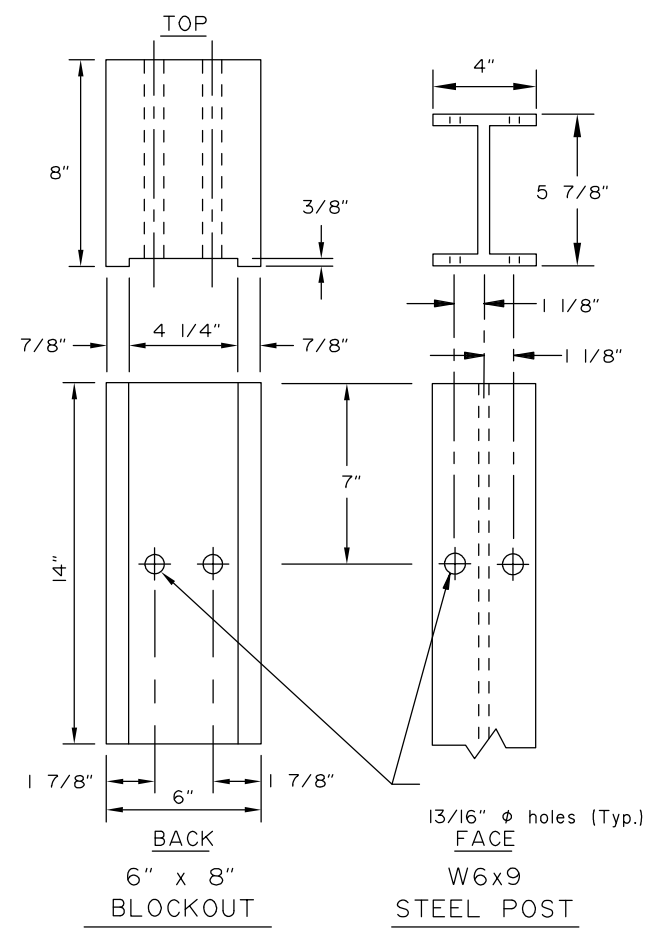


**TYPE IV DOUBLE SIDED INSTALLATION**



**ASSEMBLY DETAIL**

(Type I post shown)



**6" x 8" BLOCKOUT**

**W6x9 STEEL POST**

State of Alaska DOT&PF  
ALASKA STANDARD PLAN  
**STEEL POST W31  
GUARDRAIL**

Adopted as an Alaska Standard Plan by: **Carolyn Morehouse**  
Carolyn Morehouse, P.E.  
Chief Engineer

Adoption Date: 05/15/2019

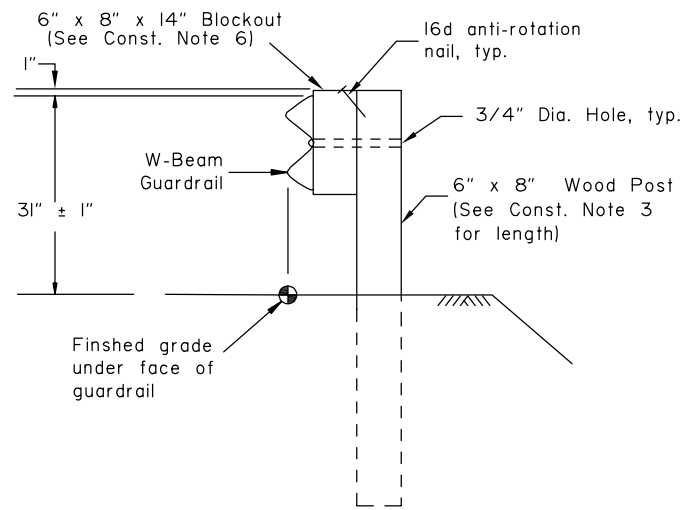
Last Code and Stds. Review  
By: LRG Date: 5/15/2019

Next Code and Standards Review date: 5/15/2029

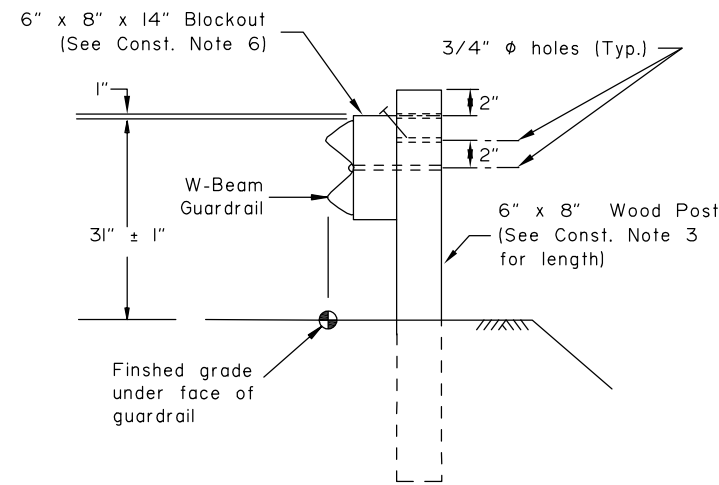
G-05.11S

# G-05.11W

SHEET  
| of |

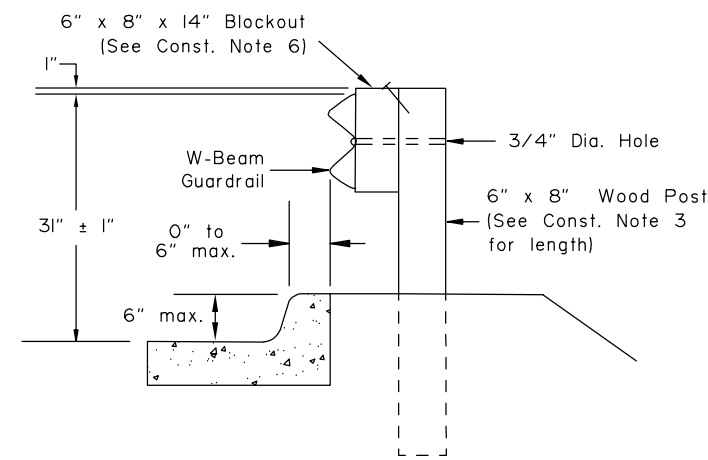


**TYPE I POST INSTALLATION**

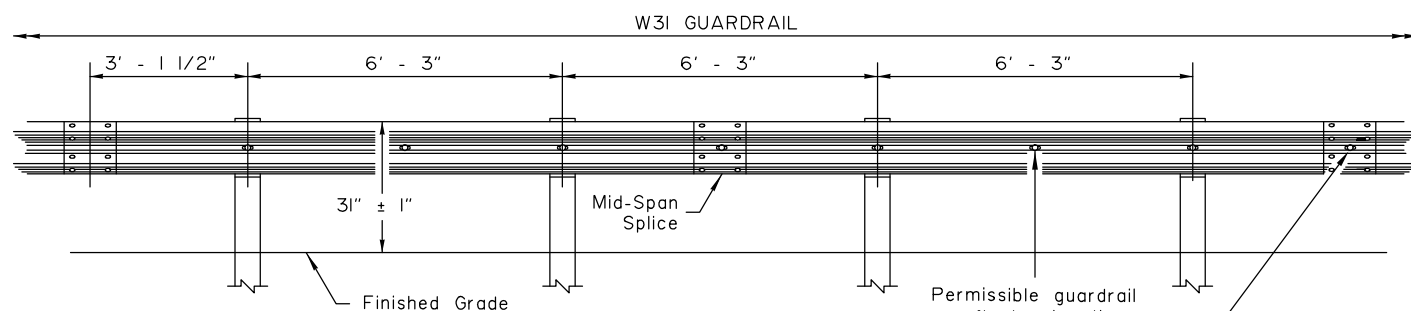


**TYPE II POST INSTALLATION**

(Facilitates raising rail for future overlays.)

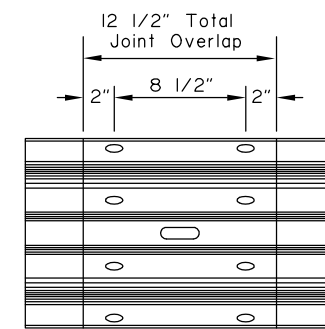


**TYPE III POST INSTALLATION**



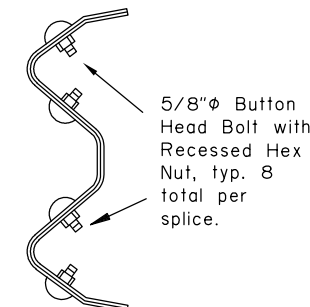
**TYPICAL ELEVATION**

Permissible guardrail reflector locations (must be mid-span)

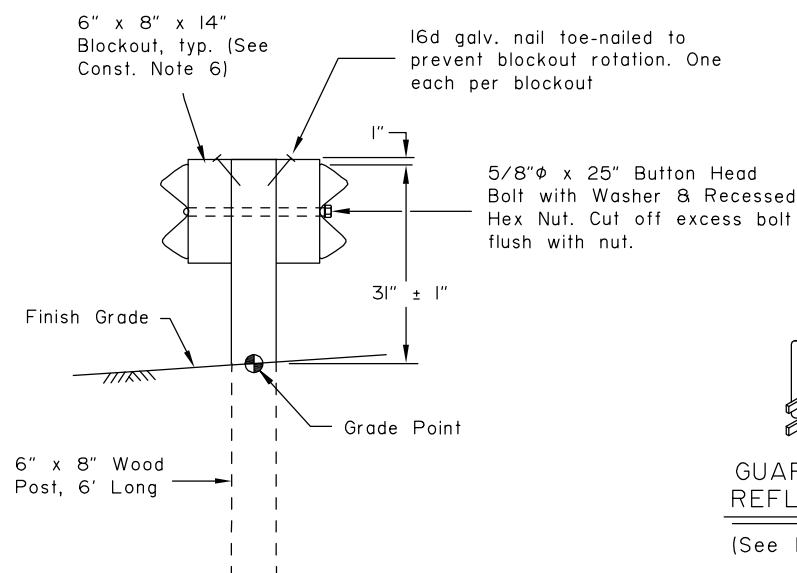


**SPLICE DETAIL**

(At mid-span between posts only. Bolts not shown for clarity.)



**SPLICE CROSS-SECTION**

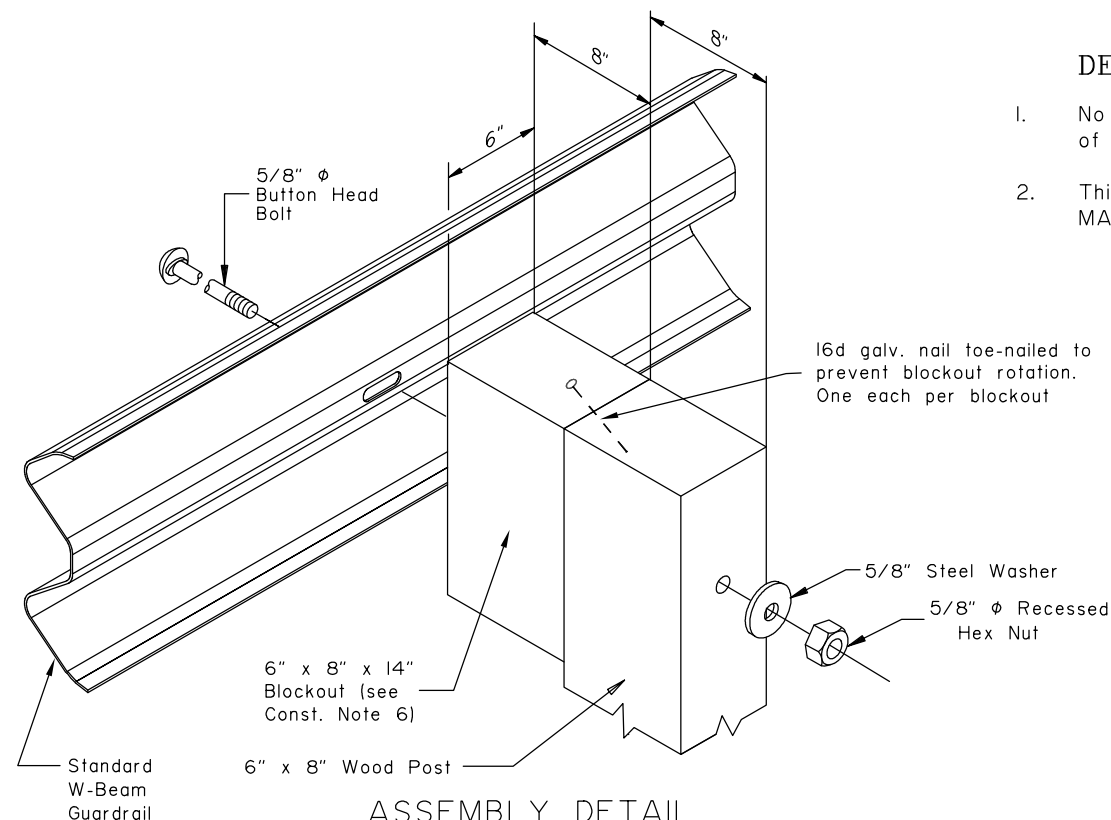


**TYPE IV DOUBLE SIDED INSTALLATION**



**GUARDRAIL REFLECTOR**

(See Note 5)



**ASSEMBLY DETAIL**

(Type I post shown)

**CONSTRUCTION NOTES:**

1. Provide hardware compliant with the Task Force 13 (TF13) Guide to Standardized Roadside Safety Hardware.
2. See Standard Plan G-00 for hardware details.
3. See Standard Plan G-10 for post lengths corresponding to different combinations of slope and behind-post embankment width.
4. Typical post spacing is 6'-3" center to center.
5. Attach guardrail reflector using a 5/8" button head bolt with 5/8" recessed head hex nut and steel washer at the location shown on the Typical Elevation. Install reflectors every 25' on tangents and every 12.5' on curves starting 100' before the P.C. and ending 100' after the P.T.
6. Use wood blockouts designed, tested, and passed per MASH to be used with wood posts.
7. Use 25 linear foot transition panel to match differing height of existing or new rail elements and end treatments. See Standard Plan G-11.
8. Install flexible delineators on guardrail posts when called for in the contract. See Standard Plan G-00 for guardrail flexible delineator details.

**DESIGN NOTES:**

1. No fixed objects allowed within 36" of the back side of guardrail post.
2. This barrier is acceptable under MASH tests 3-10 and 3-11.

State of Alaska DOT&PF  
ALASKA STANDARD PLAN  
**STEEL POST W3  
GUARDRAIL**

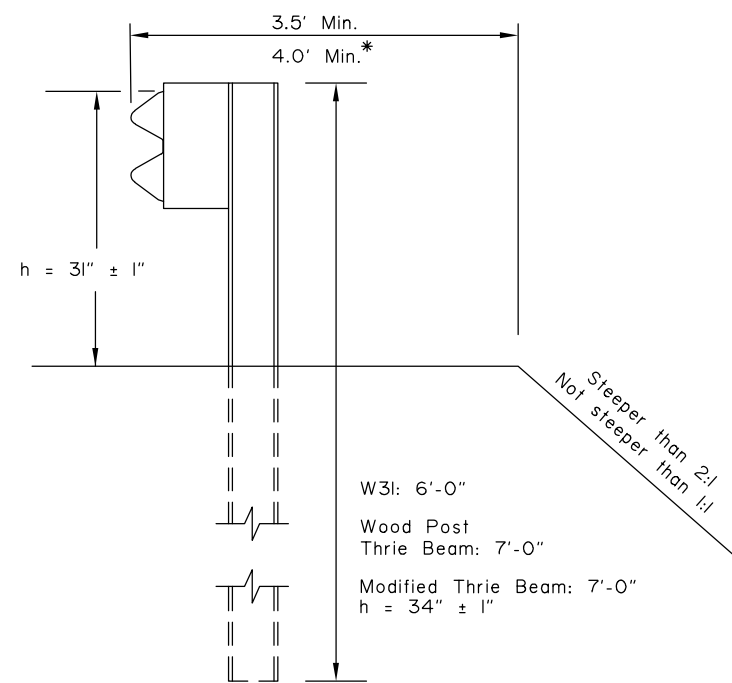
Adopted as an Alaska Standard Plan by: Carolyn Morehouse, P.E.  
Chief Engineer

Adoption Date: 5/15/2019

Last Code and Stds. Review  
By: LRG Date: 5/15/2019

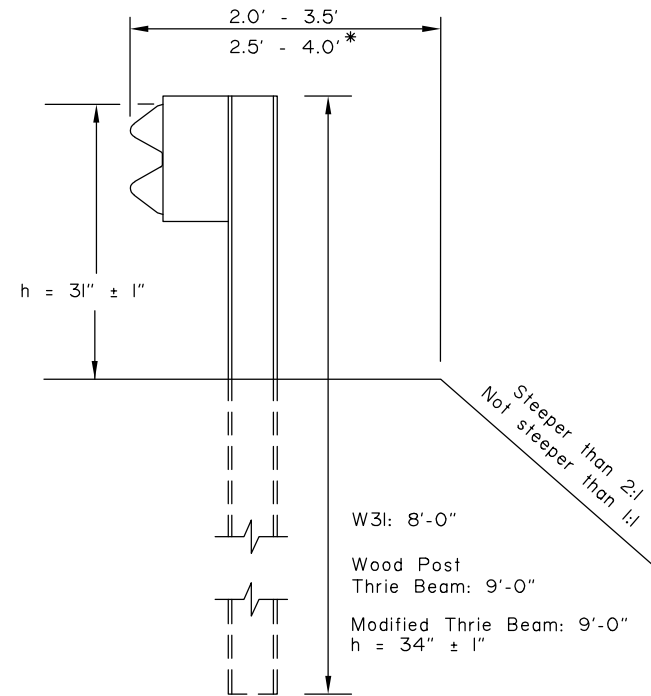
Next Code and Standards Review date: 5/15/2029

G-05.11W



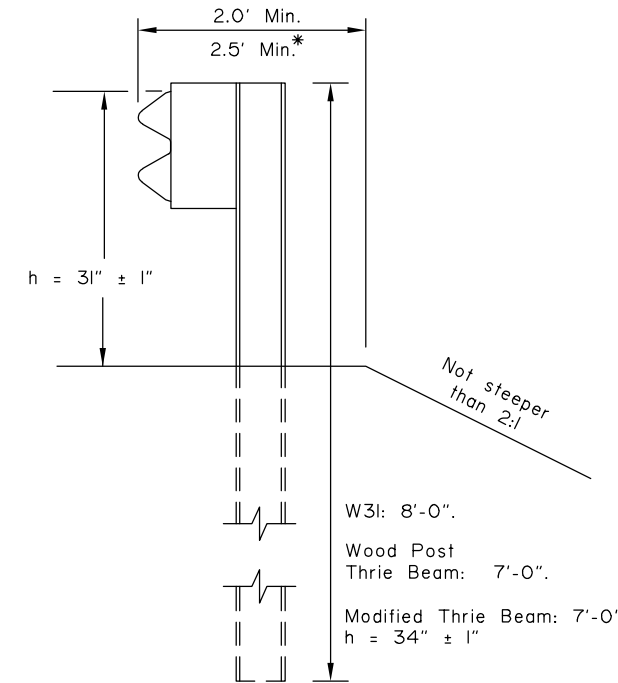
\* with Modified Thrie Beam

CASE 1

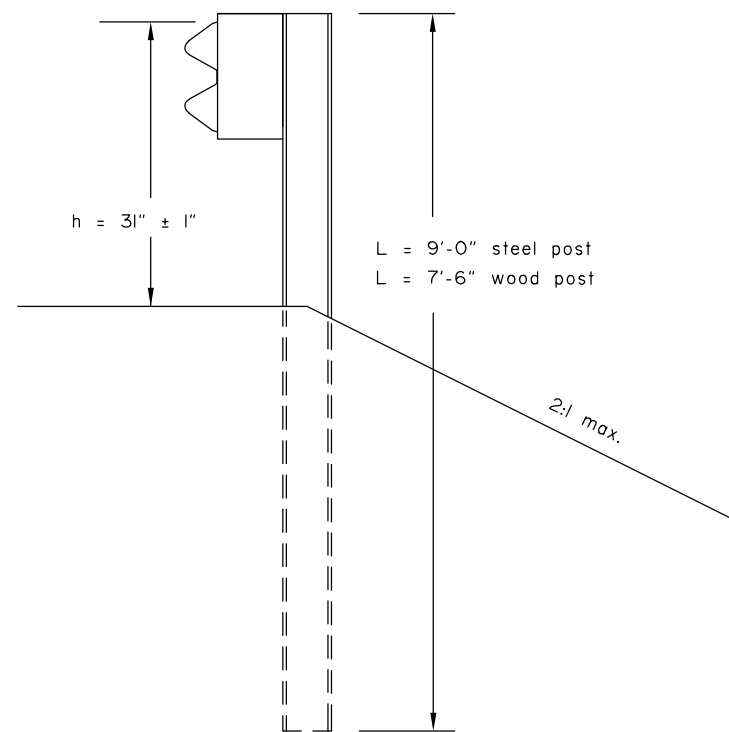


\* with Modified Thrie Beam

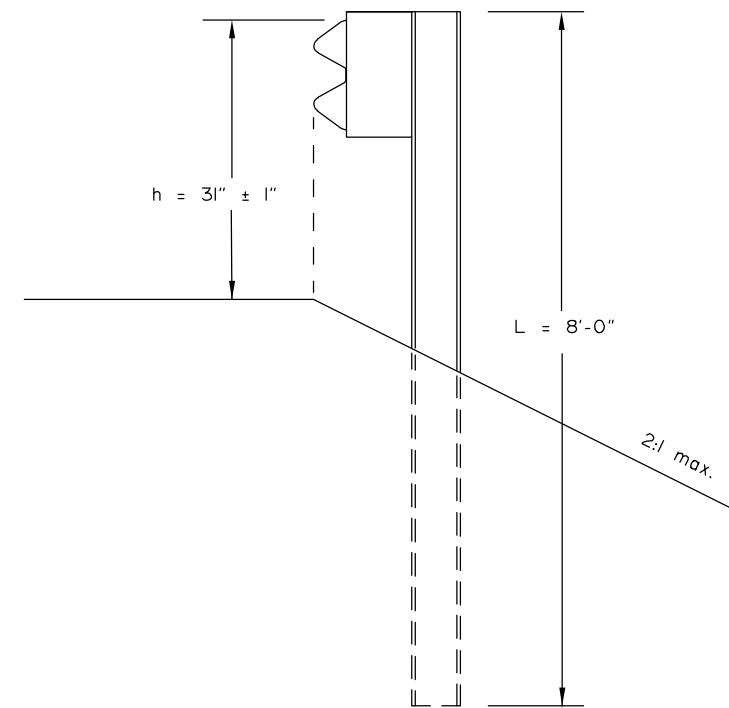
CASE 2



CASE 3



CASE 4  
(See Note 5)



CASE 5  
(See Note 5)

**CONSTRUCTION NOTES:**

1. This drawings is to be used for post length determination only. See Plans for slopes and behind-post embankment widths.
2. To determine post length, identify the case that matches site conditions and read the length corresponding to the pertinent guardrail type.
3. These dimensions apply to both curbed and uncurbed section.
4. Case 1, 2 and 3 are shown with steel posts. Wood posts may be substituted when allowed by specifications. Wood Post Thrie Beam installations must use wood posts only.
5. Case 4 and 5 apply to W31 guardrail only.

**DESIGN NOTES:**

1. No fixed objects allowed within 36" of the back of post for Cases 1, 2 & 3.
2. No fixed objects allowed within 48" of the back of post for Cases 4 & 5.

State of Alaska DOT&PF  
ALASKA STANDARD PLAN  
**GUARDRAIL  
POST INSTALLATION**

Adopted as an Alaska  
Standard Plan by:

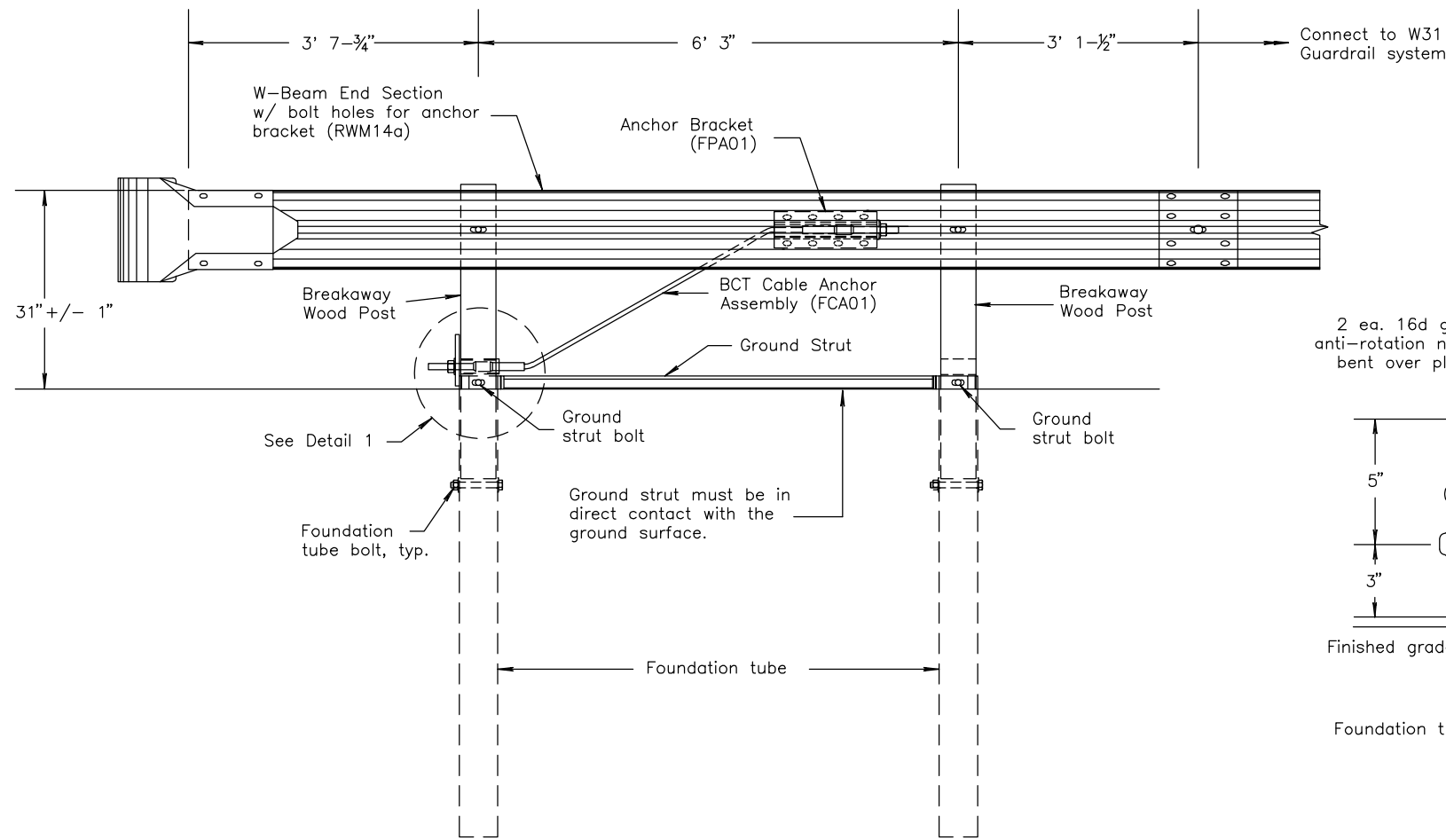
*Kenneth J. Fisher*  
Kenneth J. Fisher, P.E.  
Chief Engineer

Adoption Date: 02/08/2019

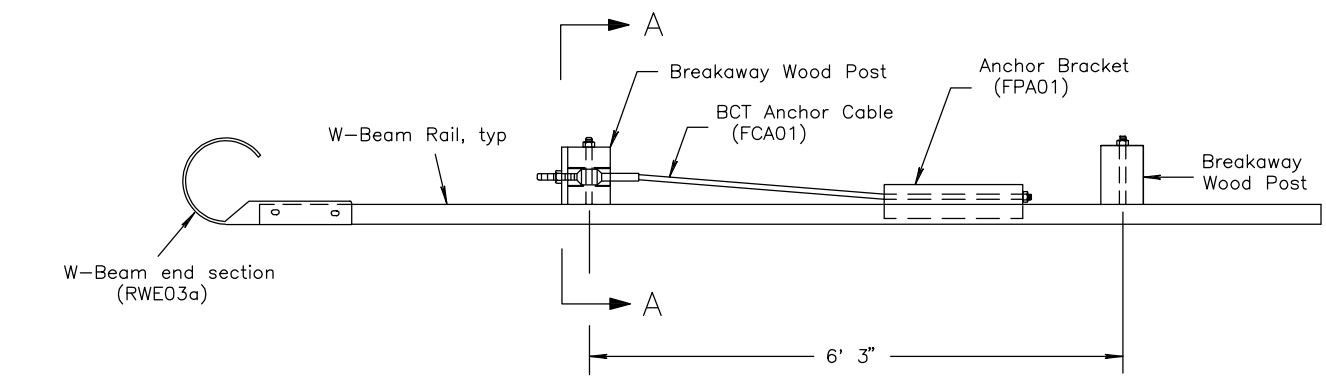
Last Code and Stds. Review  
By: Date:

Next Code and Standards Review date: 02/08/2029

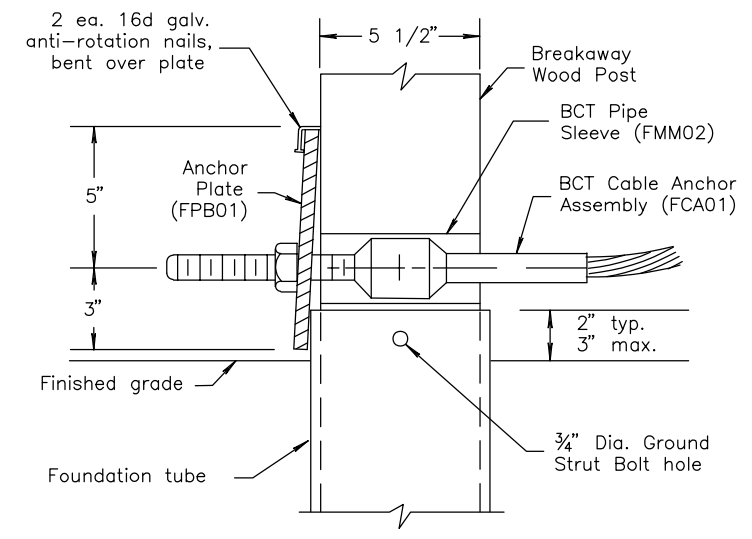




ELEVATION

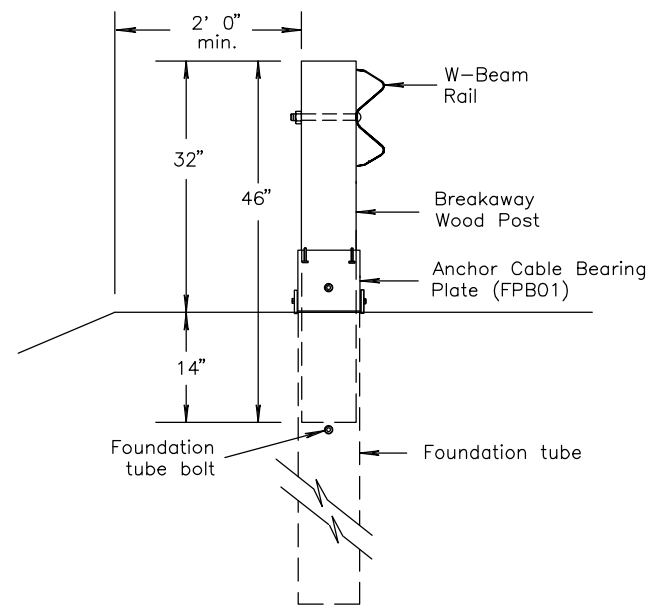


PLAN VIEW



DETAIL 1

(Ground strut not shown for clarity)



SECTION A-A

**CONSTRUCTION NOTES**

1. All covered hardware must comply with Task Force 13 (TF13) Guide to Standardized Roadside Safety Hardware online publication. Designators are given in parenthesis, when possible.
2. End section bolts and nuts have the same material requirements as splice bolts.
3. Foundation tube bolts are are 7/8" diameter ASTM A307 hex head. Foundation tube bolts require an ASTM A563 A nut and two ASTM F844 7/8" diameter flat washers. Install one washer under bolt head and one under nut.
4. Anchor bracket and strut bolts are are 5/8" diameter ASTM A307 hex head. Foundation tube bolts require ASTM A563 A nut and two ASTM F844 7/8" diameter flat washers. Install one washer under bolt head and one under nut.

State of Alaska DOT&PF  
ALASKA STANDARD PLAN

**W31 DOWNSTREAM  
END ANCHOR**

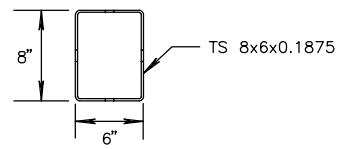
Adopted as an Alaska  
Standard Plan by: \_\_\_\_\_  
Carolyn Morehouse, P.E.  
Chief Engineer

Adoption Date: 7/17/2020

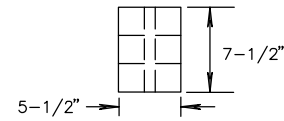
Last Code and Stds. Review  
By: KLK Date: 7/8/2020

Next Code and Standards Review Date: 7/8/2030

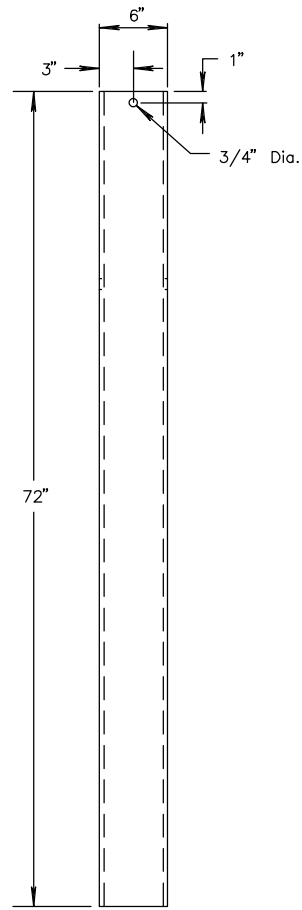
G-14.00



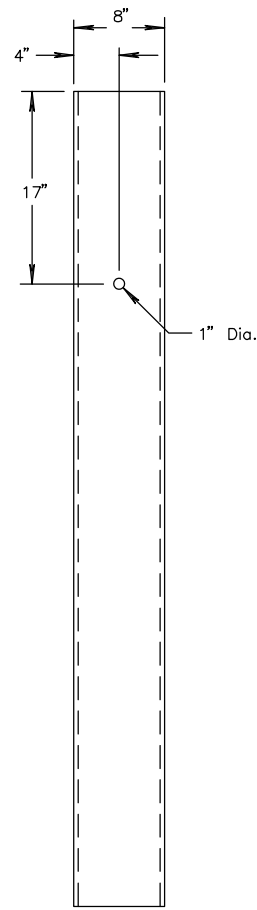
PLAN VIEW



PLAN VIEW

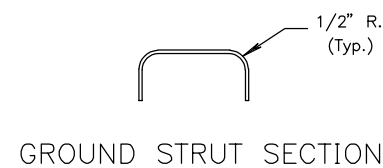


FRONT VIEW

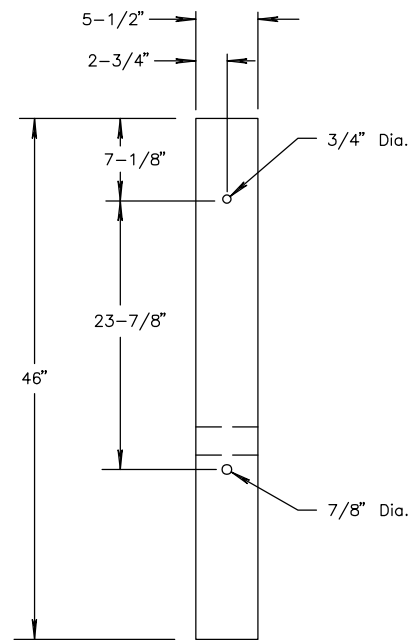


SIDE VIEW

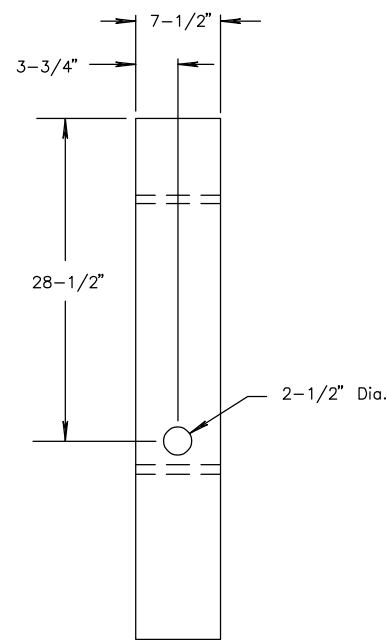
FOUNDATION TUBE



GROUND STRUT SECTION

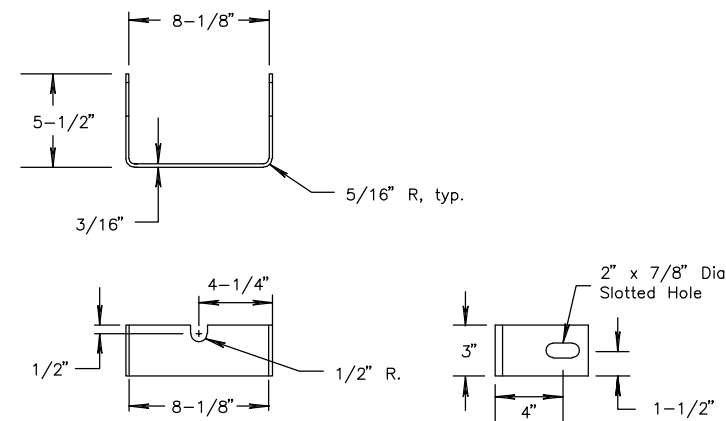


FRONT VIEW

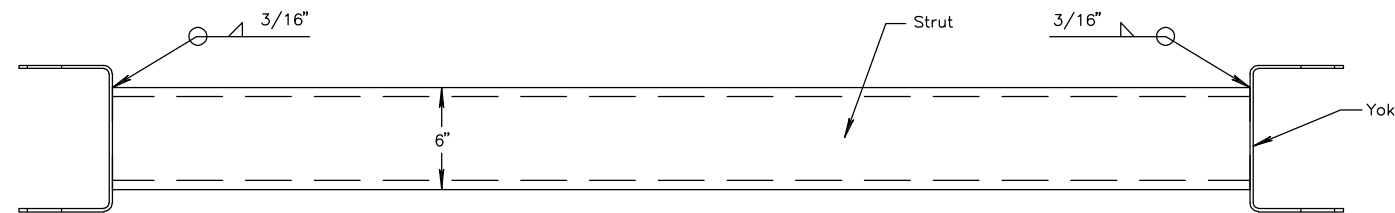


SIDE VIEW

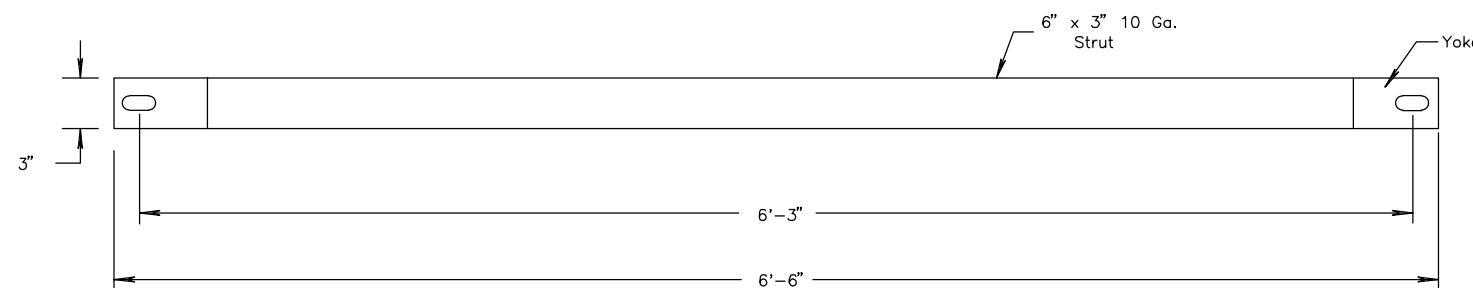
BREAKAWAY WOOD POST



YOKE DETAIL



PLAN VIEW



FRONT VIEW

GROUND STRUT DETAIL

**CONSTRUCTION NOTES**

1. All covered hardware must comply with Task Force 13 (TF13) Guide to Standardized Roadside Safety Hardware online publication. Designators are given in parenthesis, when possible.

State of Alaska DOT&PF  
ALASKA STANDARD PLAN

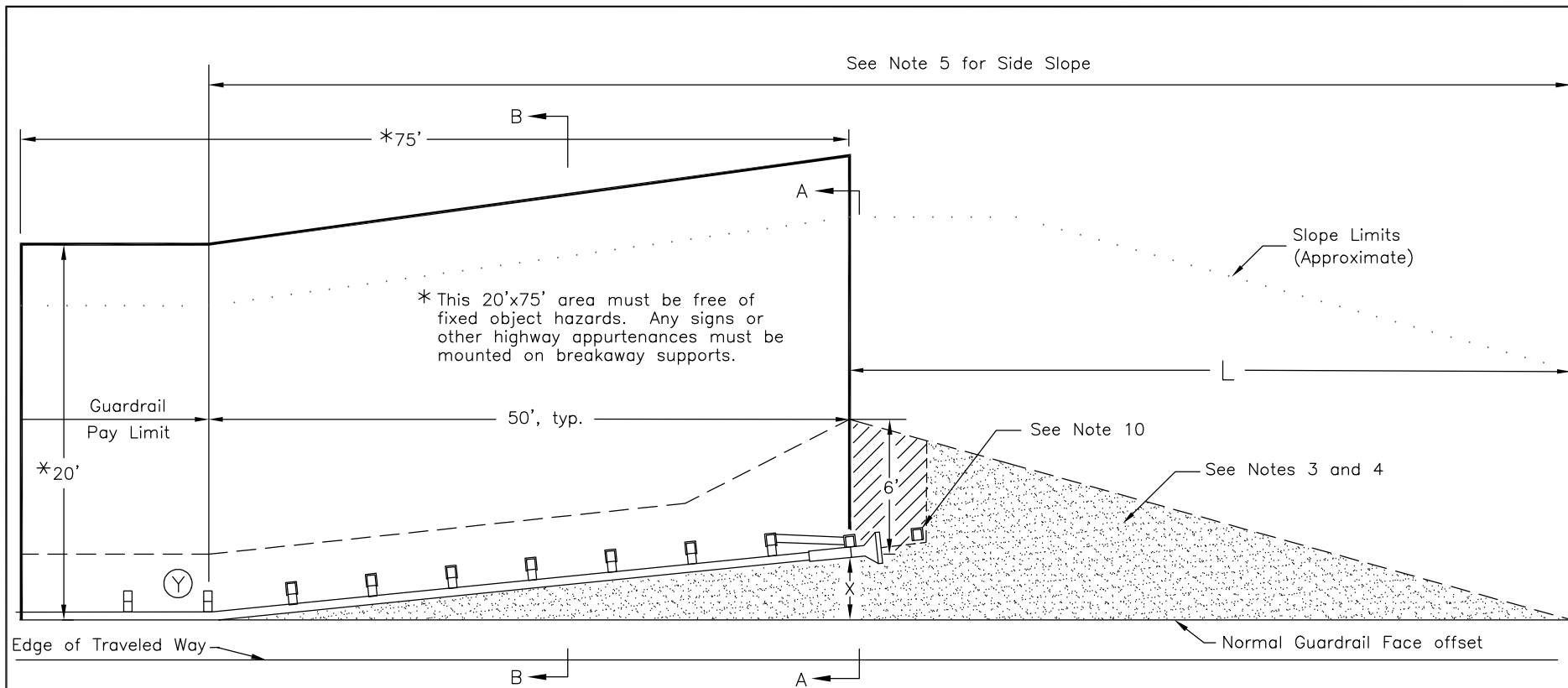
**W31 DOWNSTREAM  
END ANCHOR**

Adopted as an Alaska  
Standard Plan by: Carolyn Morehouse, P.E.  
Chief Engineer

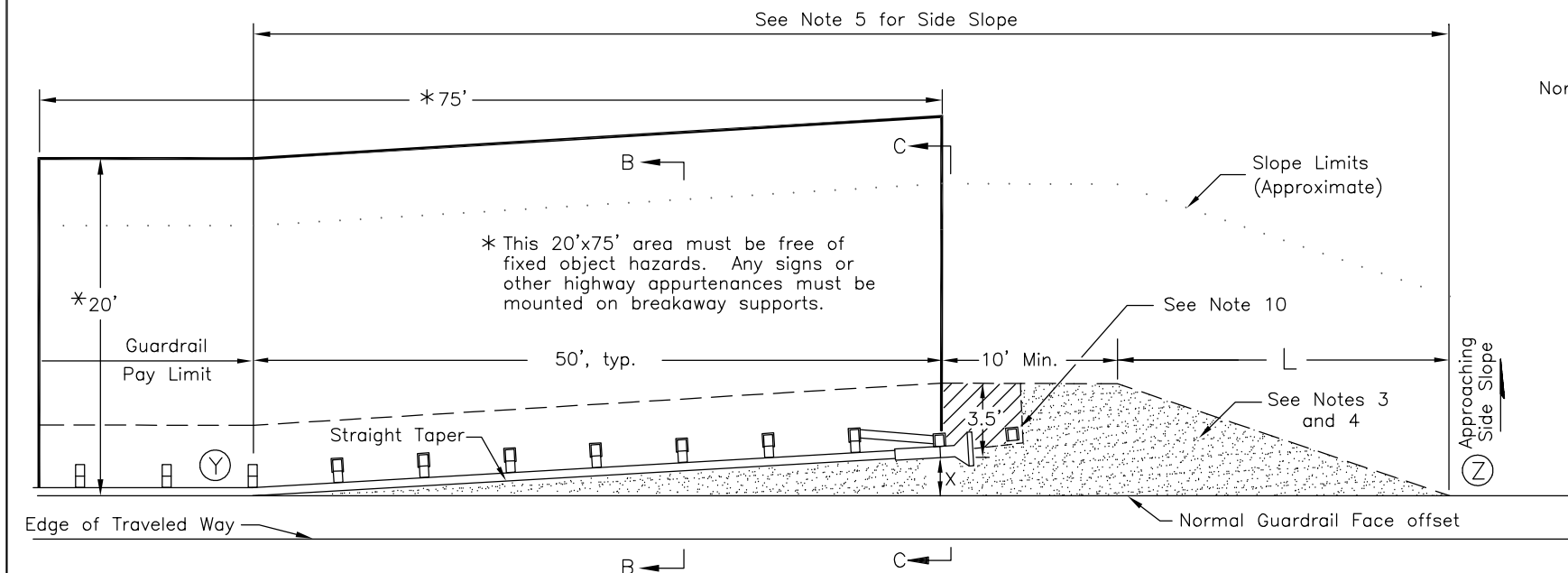
Adoption Date: 7/17/2020

Last Code and Stds. Review  
By: KLK Date: 7/8/2020

Next Code and Standards Review Date: 7/8/2030



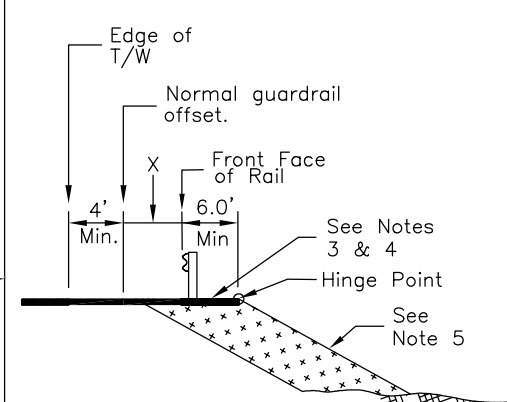
**STANDARD GUARDRAIL TERMINAL WIDENING DETAIL**



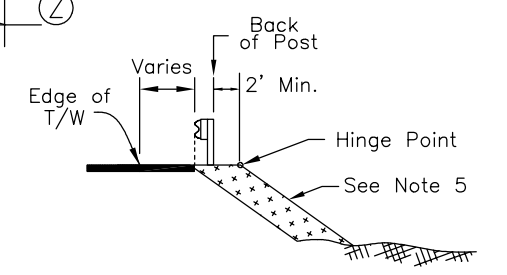
**ALTERNATE GUARDRAIL TERMINAL WIDENING DETAIL**

(USE ONLY WHEN LIMITED RIGHT-OF-WAY OR LIMITING SITE CONDITIONS MAKE THE STANDARD DETAIL INFEASIBLE)

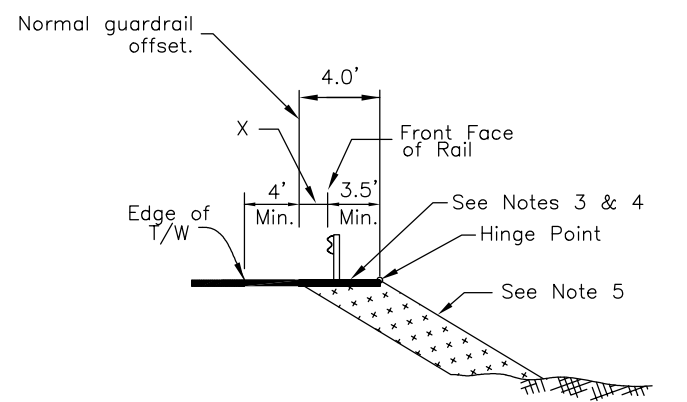
X=End offset. See manufacturer's information for the range of acceptable end offsets for each MASH compliant terminal.



SECTION A-A



SECTION B-B  
(Applies to both details)



SECTION C-C

**GENERAL NOTES**

1. This Std. Dwg. applies to all MASH approved guardrail end terminals (GETs). The alternate detail may only be used with parallel or tangent GETs. The terminal details shown are for illustration only – see manufacturer's drawings for actual post, rail, strut, etc. configuration and layout.
2. Use this Std. Widening Detail for all GETs except when limited right-of-way or limiting site conditions make the use of the Std. Widening Detail infeasible. In that case, the alternate detail is permissible.
3. Construct the shaded areas to match the slope of the adjacent shoulder. The slope may be increased to 10:1 if identified in the plans or when approved by the engineer. Match the slope when the shoulder slopes toward the road as well as away from the road.
4. On paved roads, the shaded areas shall be paved. On gravel roads, surface the shaded areas with the same materials used to surface the travel lanes.
5. From point (Y) to point (Z) make the side slope match the approaching side slope except where it is flatter than 4:1. In that case, the slope may be steepened to 4:1.
6. Attach a flexible marker at the beginning of each GET.
7. The max. allowable height for foundation tubes or other steel components of terminal post breakaway systems is 4" above the surrounding grade.
8. The details on this sheet do not apply to W31 Downstream End Anchors (Std Dwg G-14).
9. The details on this sheet apply to GETs on both the approach and downstream ends on two-way undivided roads and to any downstream MASH compliant GETs.
10. Some MASH GET systems have an additional post/anchor at the approximate location shown. If this post/anchor is present do not pave the diagonally hatched area. If not present, pave the diagonally hatched area also.

Taper Lengths (L) for Common End Offsets (X)		
End Offset	Standard Detail	Alternate Detail
0'	24.0'	13.0'
1'	26.0'	17.0'
1.5'	28.0'	19.0'
2'	30.0'	21.0'
2.5'	32.0'	22.0'
4'	37.0'	28.0'
Interpolate if the end offset falls between table values		

State of Alaska DOT&PF  
ALASKA STANDARD PLAN

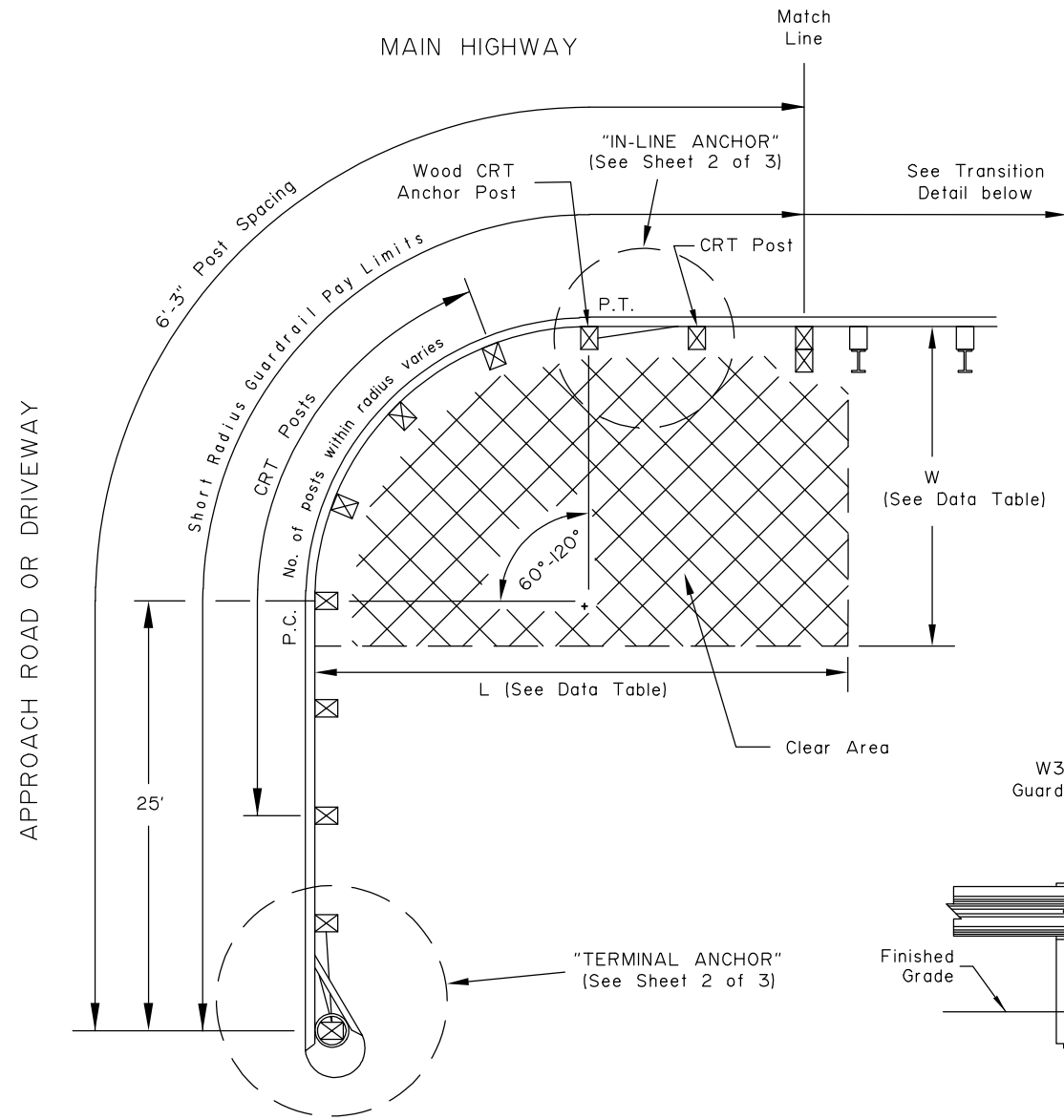
**WIDENING FOR  
GUARDRAIL END TERMINALS**

Adopted as an Alaska Standard Plan by: *Kenneth J. Fisher*  
Kenneth J. Fisher, P.E.  
Chief Engineer

Adoption Date: 02/08/2019

Last Code and Stds. Review  
By: Date:

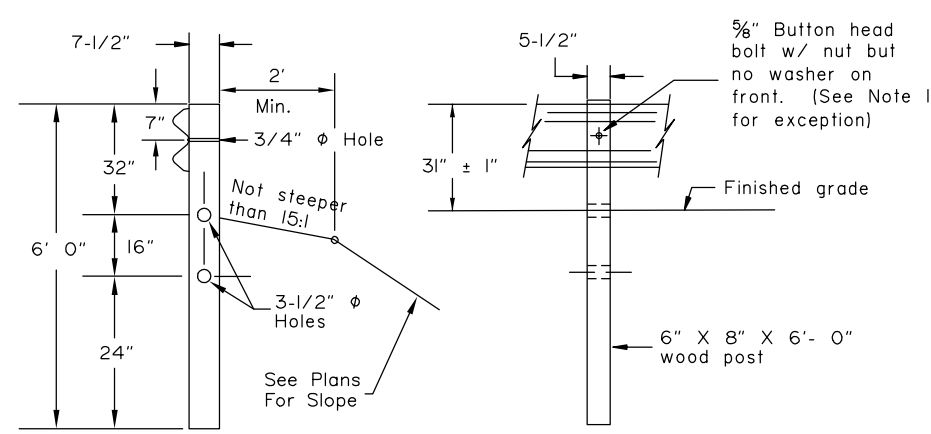
Next Code and Standards Review date: 02/08/2029



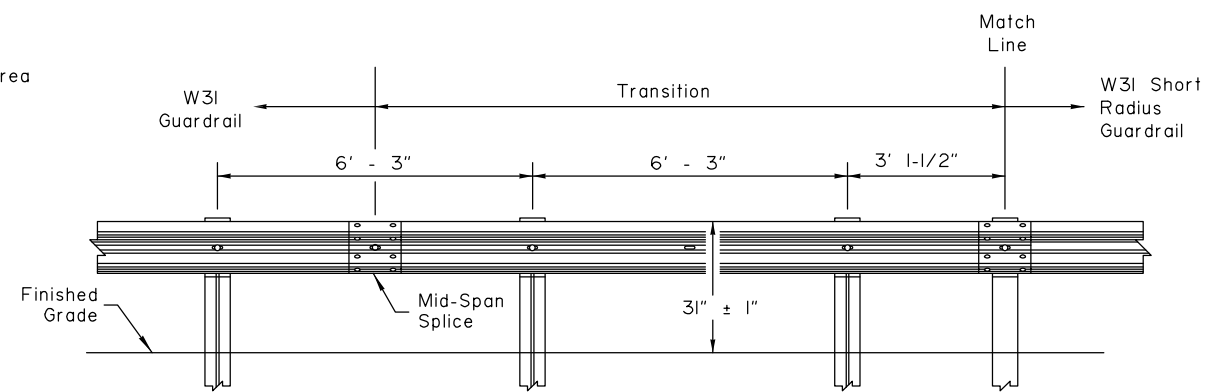
**SHORT RADIUS GUARDRAIL PLAN**

DATA TABLE *					
Curve Radius, Ft. (Rounded)	Curve Length	Number of Rail Sections	Clear Area		** No. of Posts
			Length (L)	Width (W)	
8'	12.50'	1.0	25	15	5
12'	18.75'	1.5	25	15	6
16'	25.00'	2.0	30	15	7
20'	31.25'	2.5	33	15	8
24'	37.50'	3.0	37	20	9
28'	43.75'	3.5	40	20	10
32'	50.00'	4.0	45	20	11
36'	56.25'	4.5	50	20	12

\* The table applies only to 90° approaches or driveways.  
 \* 36 feet is the maximum allowable radius for this system.  
 \*\* Number of CRT posts includes one for the In-Line Anchor.

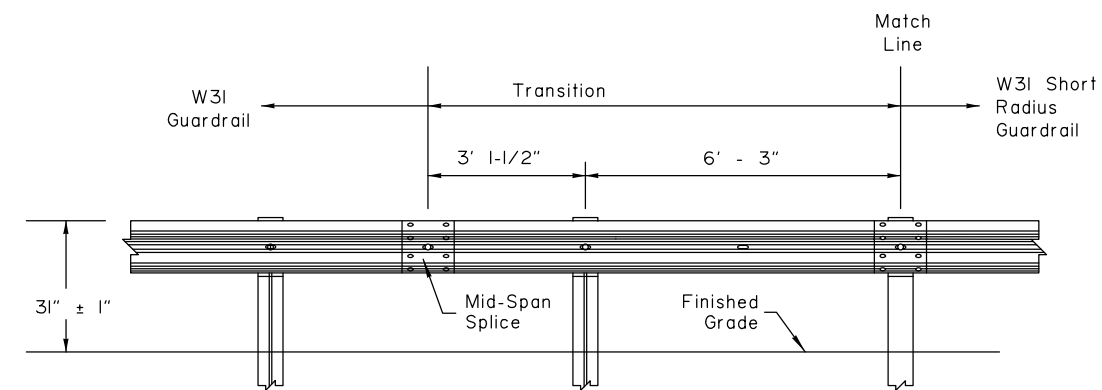


**CONTROLLED RELEASE TERMINAL (CRT) POST**



**TRANSITION TO W31 GUARDRAIL - TYPE I**

(As viewed from Main Highway)  
 (See Construction Note 2)



**TRANSITION TO W31 GUARDRAIL TYPE II**

(As viewed from Main Highway)  
 (See Construction Note 2)

**CONSTRUCTION NOTES:**

1. Do not bolt rail to central post on 8' radius CRT.
2. Steel posts are shown in the transition. Wood post may be substituted when allowed by the Specifications.

**DESIGN NOTES:**

1. Use the W31 short radius guardrail system to shield hazards at the intersection of a main highway with a minor road or driveway. Typical application include interruptions in guardrail runs caused by intersecting roadways
2. The short radius guardrail Terminal Anchor shown is for use on low speed (<45 mph) approach roads or driveways where motorists are required to stop or yield. Do not use this Terminal Anchor for high speed approach roads or driveways when a MASH approved end treatment is required.
3. The Clear Area shall be free of fixed object hazards. Any signs or other highway appurtenances in the clear area must be mounted on MASH compliant breakaway supports.
4. Connections to other guardrail systems (e.g. bridge rails and end treatments) and not provided on this drawing. Other details may be needed for this.
5. Short Radius Guardrail on 60 to 90 degree approaches are allowed provided they are constructed with posts at the P.C. and P.T. and the posts are placed on a uniform 6'-3" spacing.
6. When Short Radius Guardrail transitions to guardrail not at 31" ± 1" top-of-rail height, transition height over a 25 foot length.

State of Alaska DOT&PF  
 ALASKA STANDARD PLAN

**W31 SHORT RADIUS GUARDRAIL**

Adopted as an Alaska Standard Plan by: *Kenneth J. Fisher*  
 Kenneth J. Fisher, P.E.  
 Chief Engineer

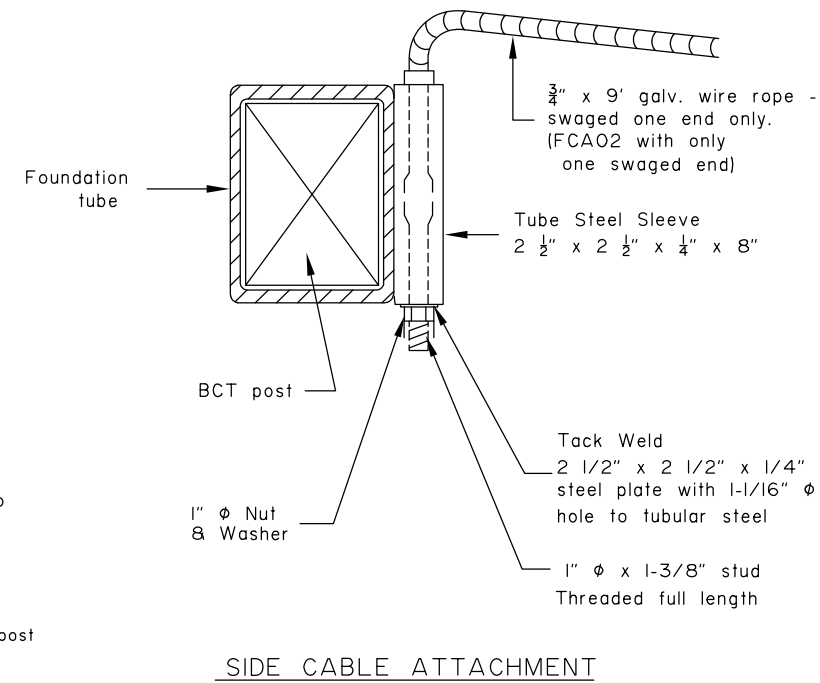
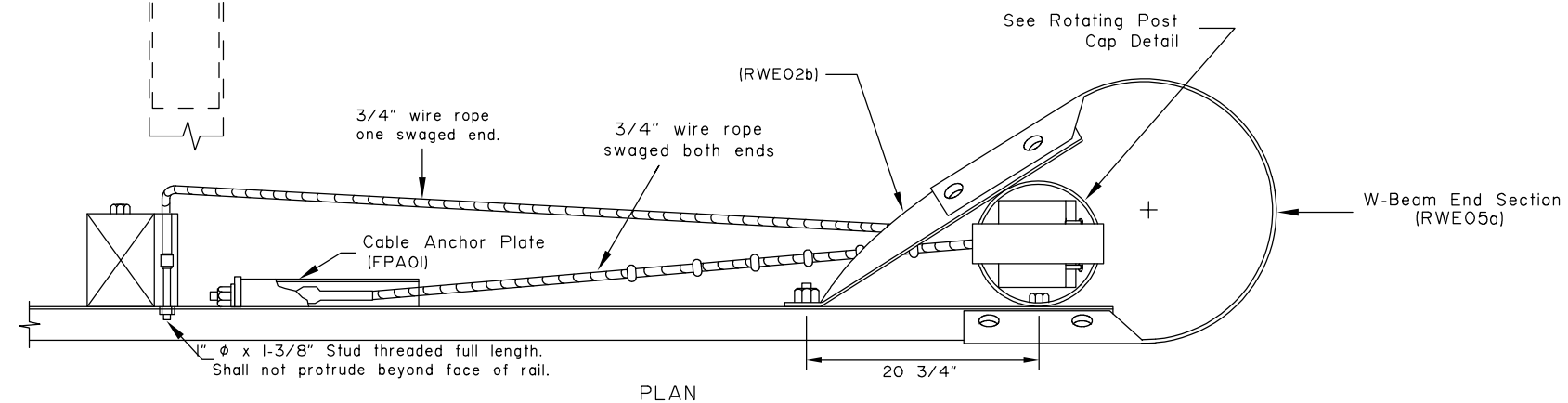
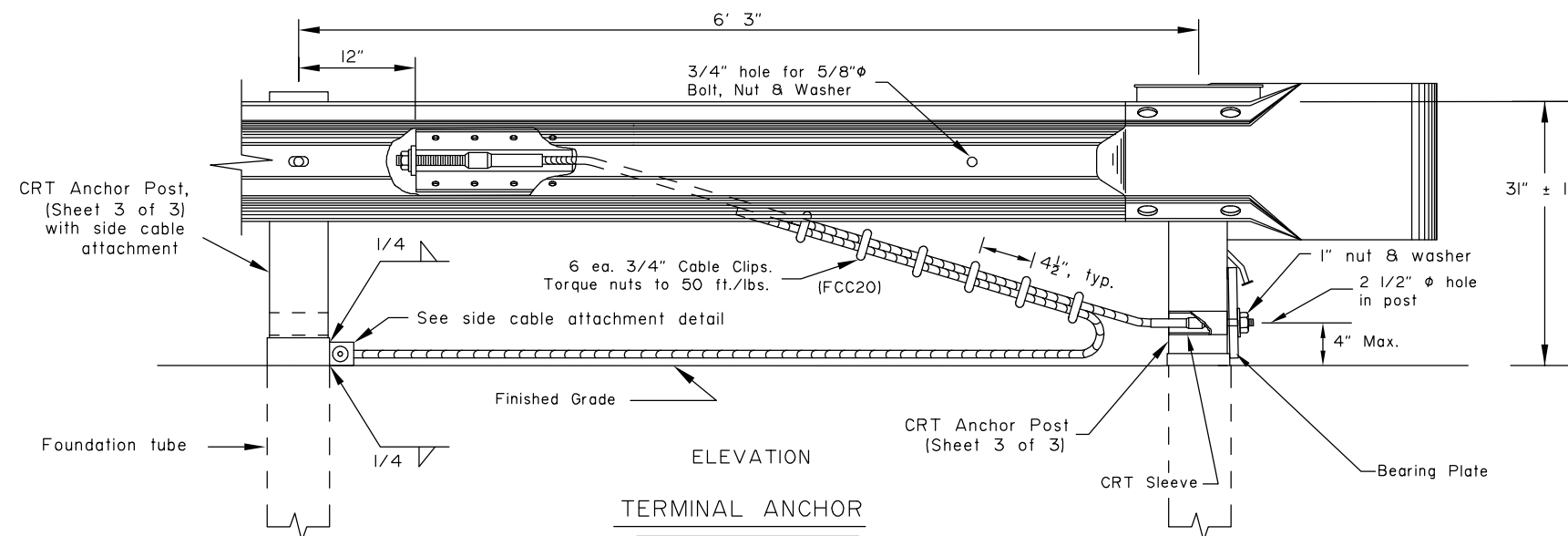
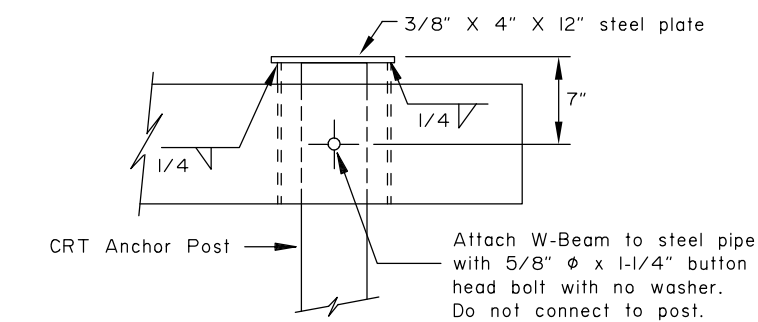
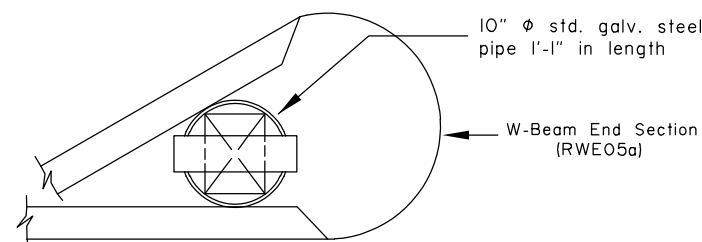
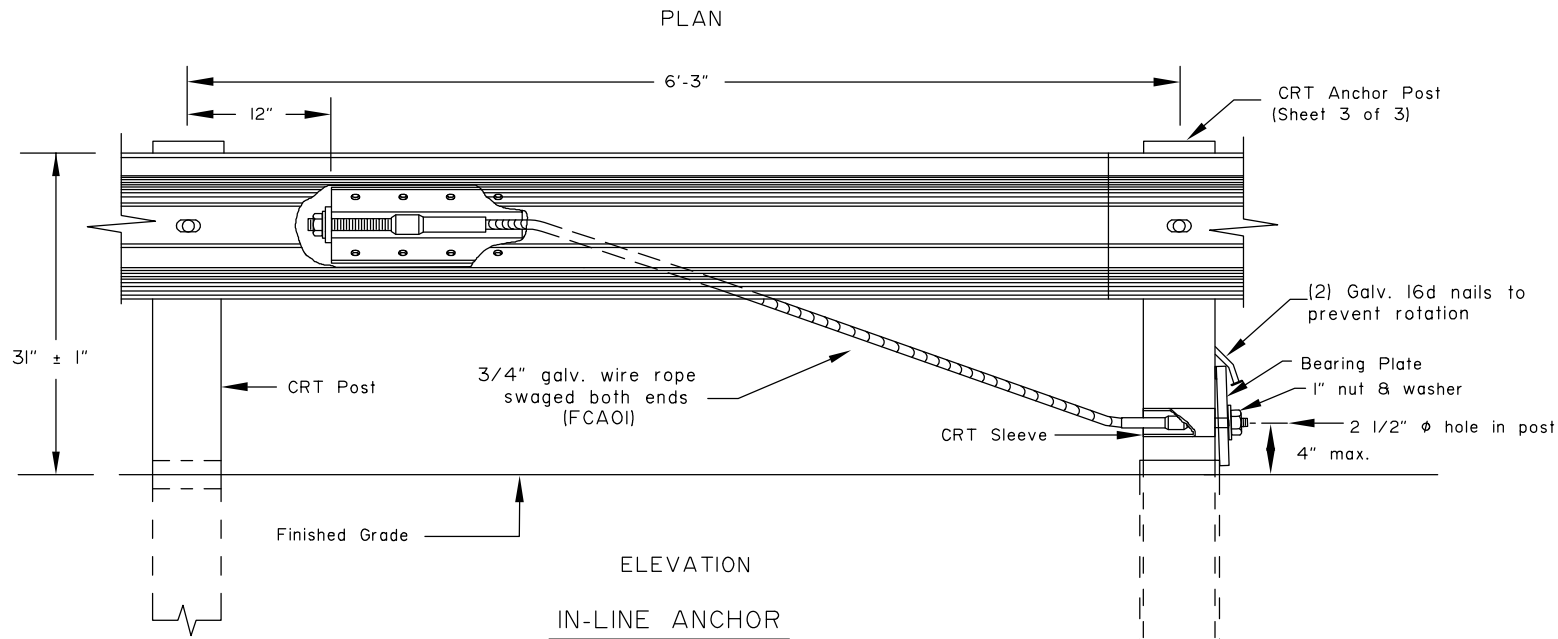
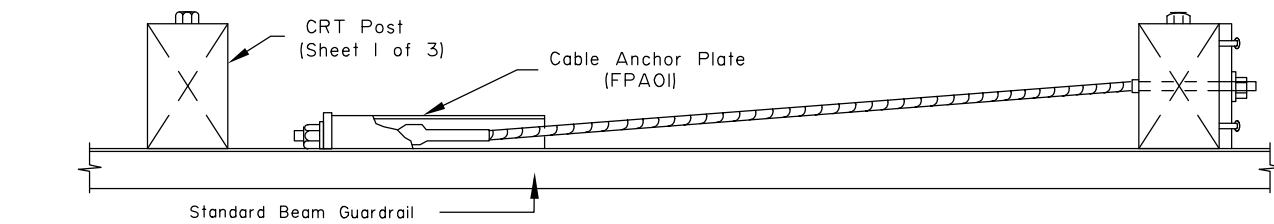
Adoption Date: 02/08/2019

Last Code and Stds. Review By: Date:

Next Code and Standards Review date: 02/08/2029

**CONSTRUCTION NOTES**

1. See Standard Drawings G-00 and G-05 for details not shown here.
2. All covered hardware must comply with the AASHTO/AGC/ARTBA "A Guide to Standardized Highway Barrier Hardware", latest edition. Designators are given in parenthesis, when possible.

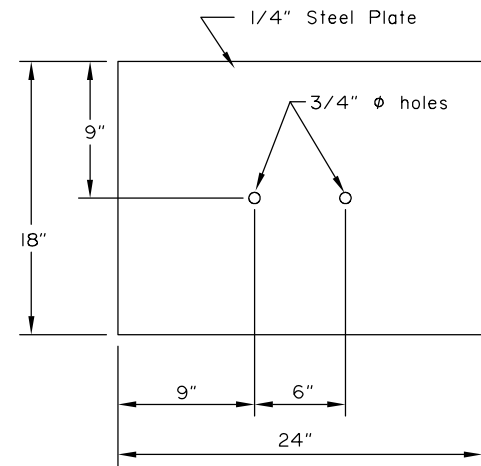


State of Alaska DOT&PF  
ALASKA STANDARD PLAN  
**W31 SHORT RADIUS GUARDRAIL**

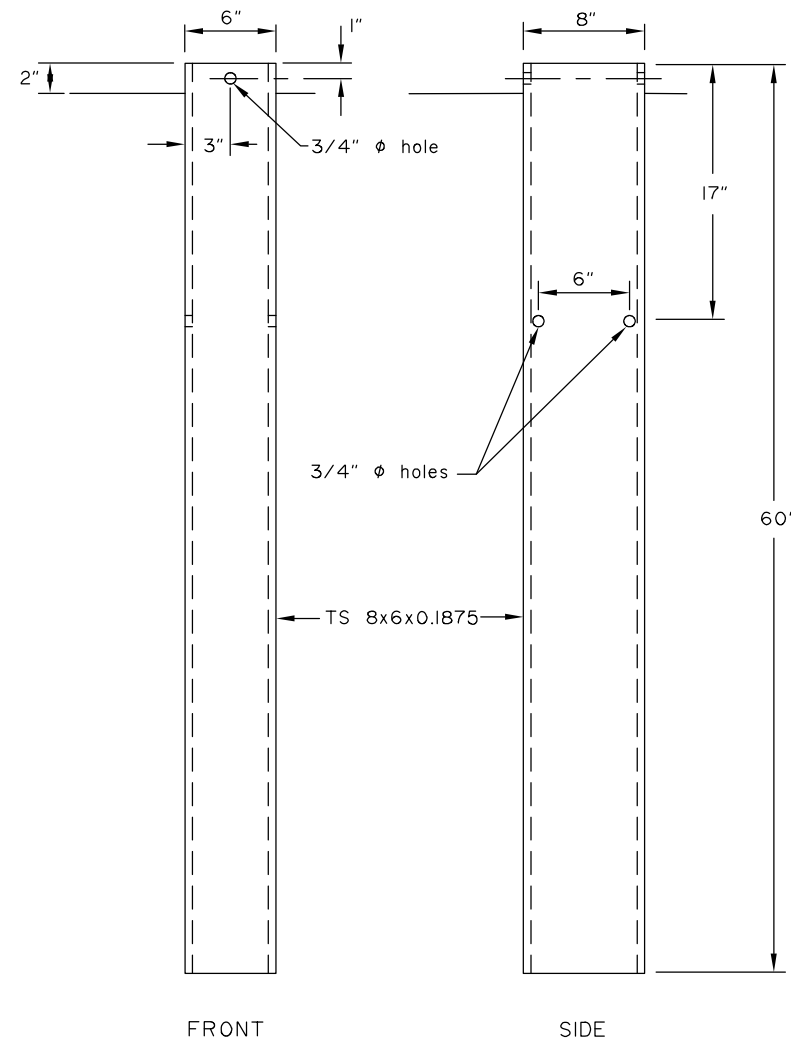
Adopted as an Alaska Standard Plan by: *Kenneth J. Fisher*  
Kenneth J. Fisher, P.E.  
Chief Engineer

Adoption Date: 02/08/2019

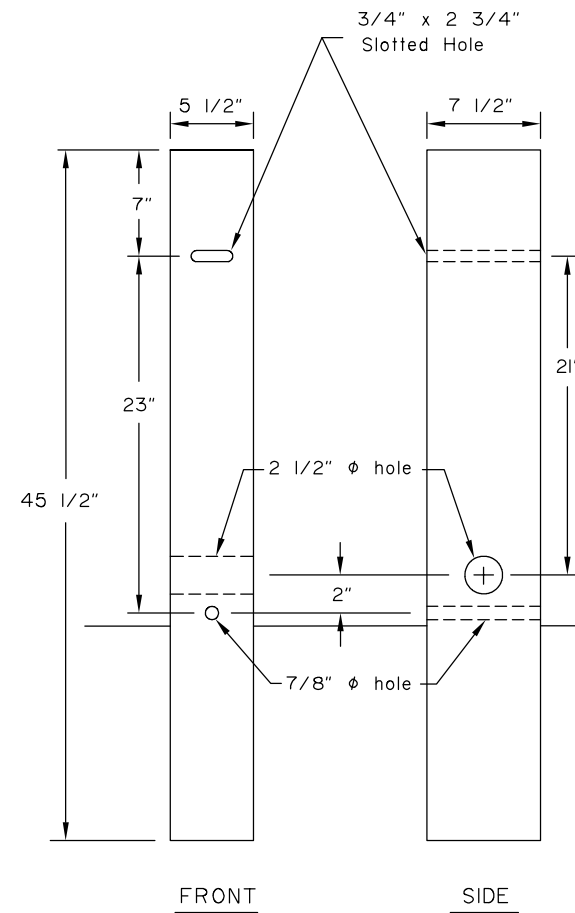
Last Code and Stds. Review By: Date:  
Next Code and Standards Review date: 02/08/2029



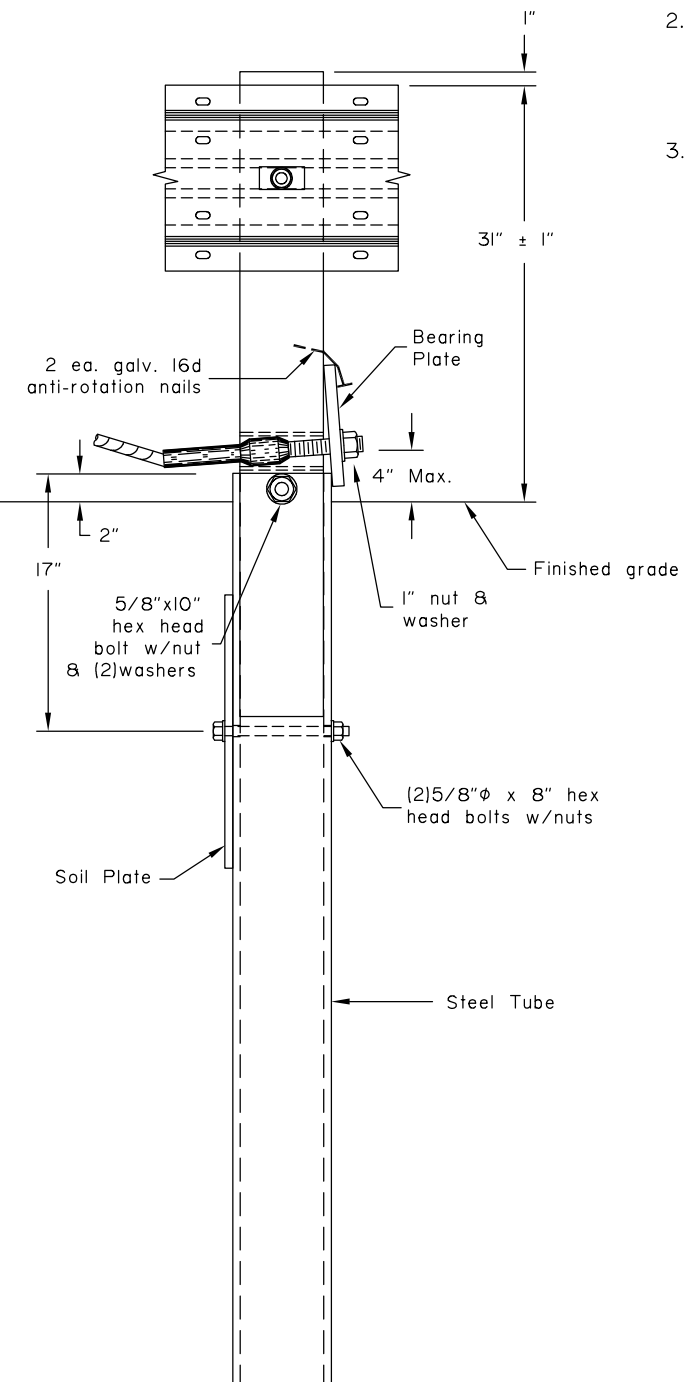
FOUNDATION TUBE SOIL PLATE  
(PLS03)



FOUNDATION TUBE  
(PTE05)



WOOD POST



ASSEMBLY

**GENERAL NOTES:**

1. Hardware details not shown here shall conform to drawings G-05W and G-00.
2. Comply with the AASHTO/AGC/ARTBA "A Guide to Standardized Highway Barrier Hardware", latest edition, for all covered guardrail hardware.
3. Not all bolt and nuts are shown for clarity purposes.

State of Alaska DOT&PF  
ALASKA STANDARD PLAN  
W31 SHORT  
RADIUS GUARDRAIL

Adopted as an Alaska  
Standard Plan by: *Kenneth J. Fisher*  
Kenneth J. Fisher, P.E.  
Chief Engineer

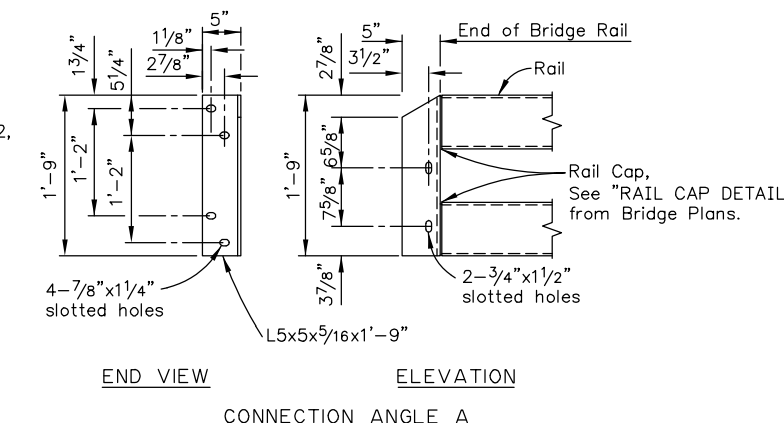
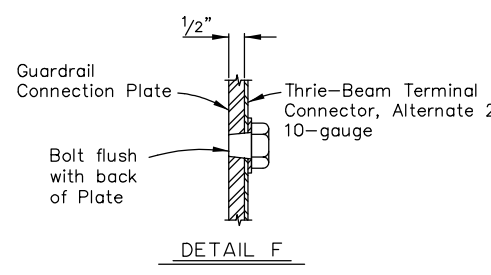
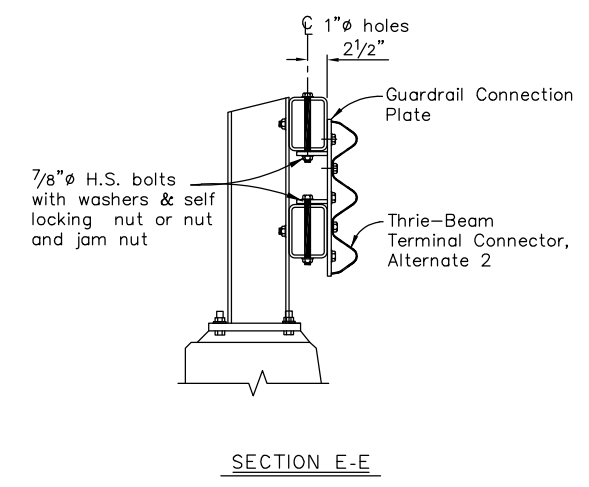
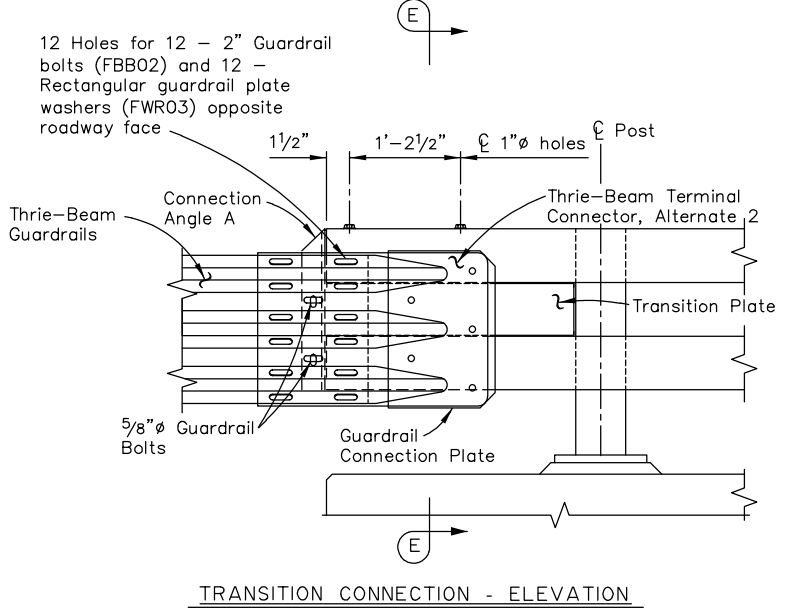
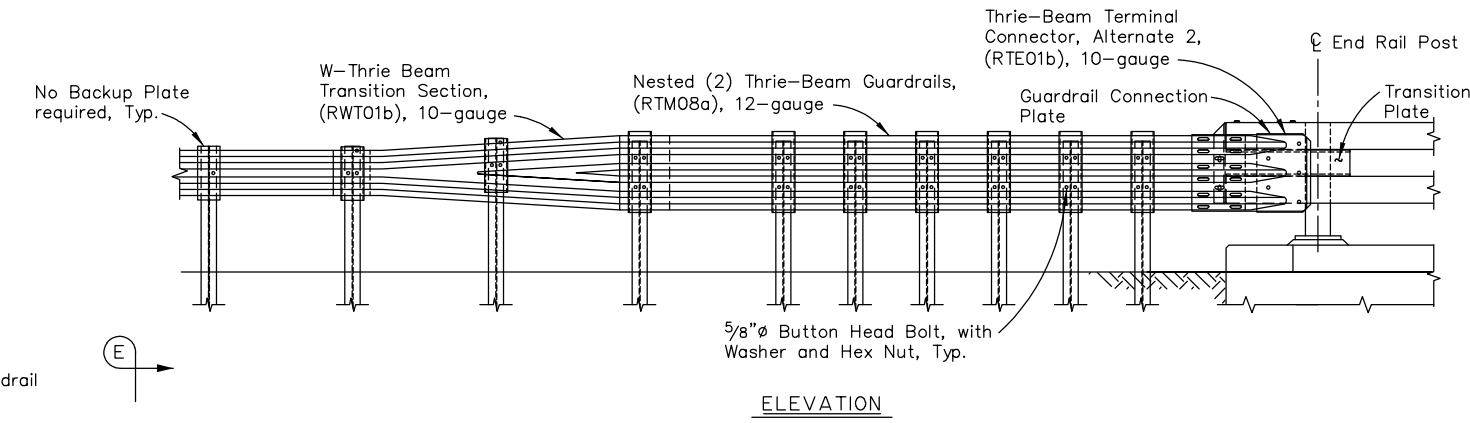
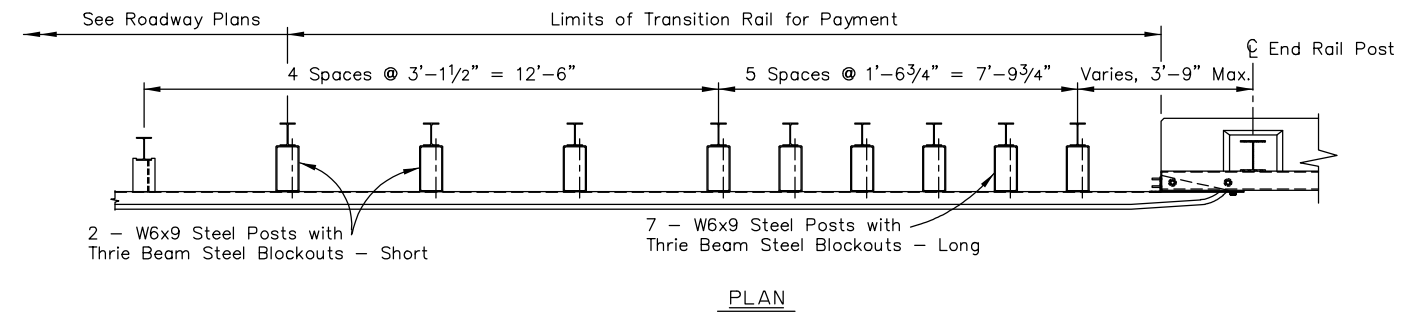
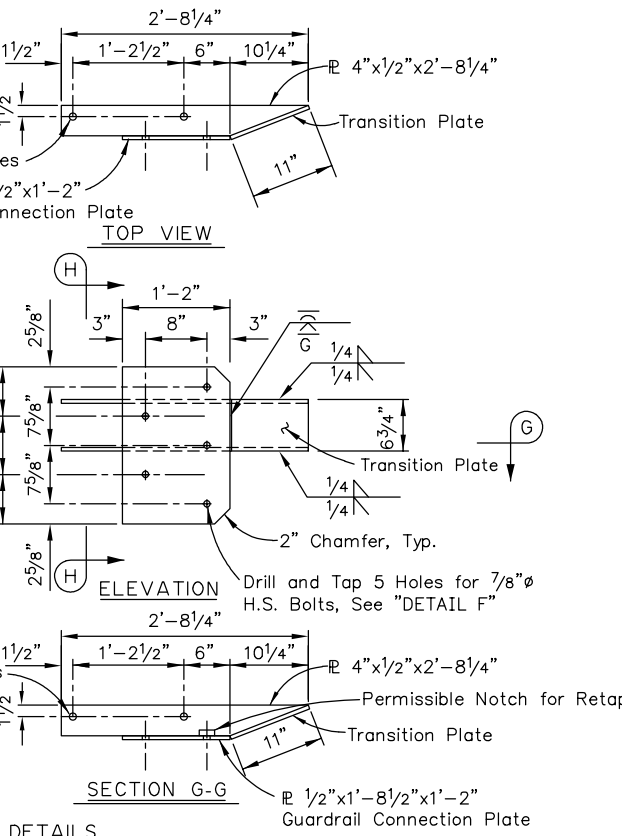
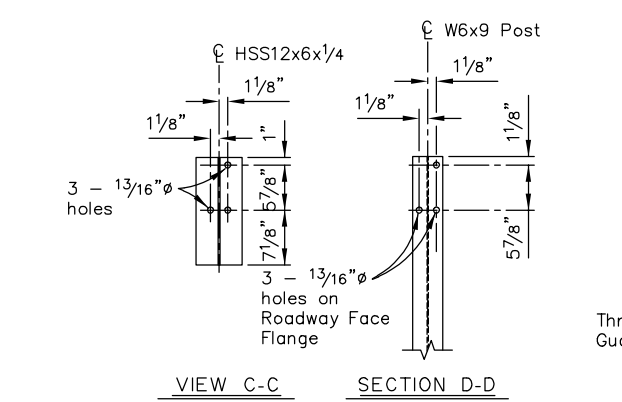
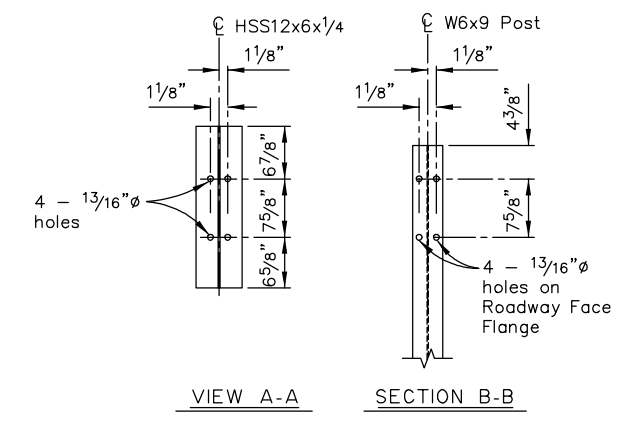
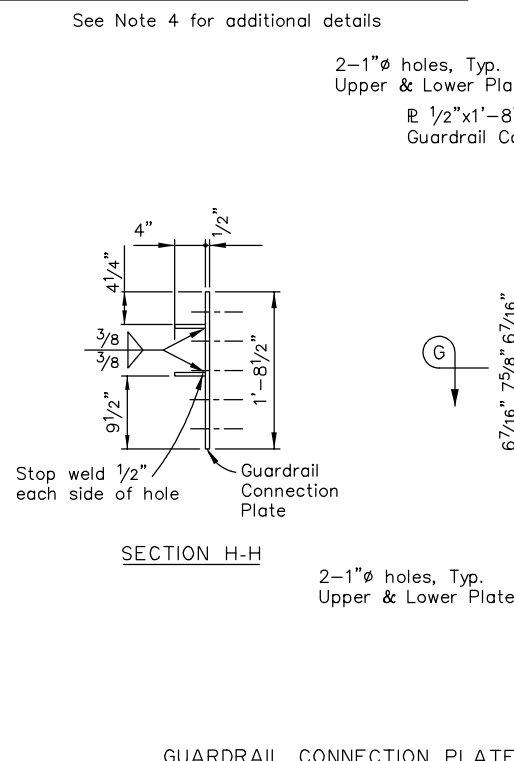
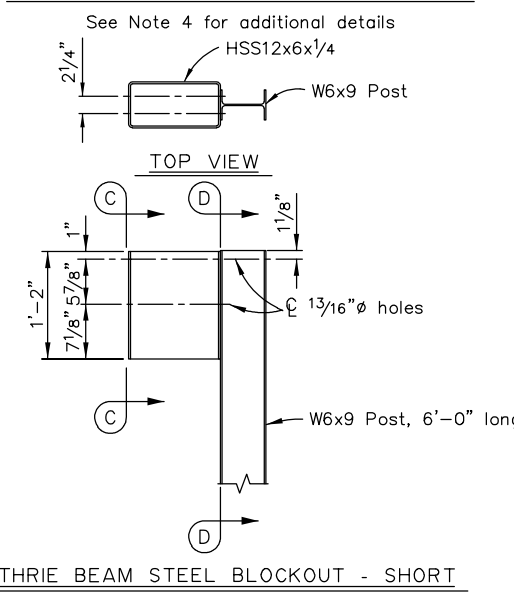
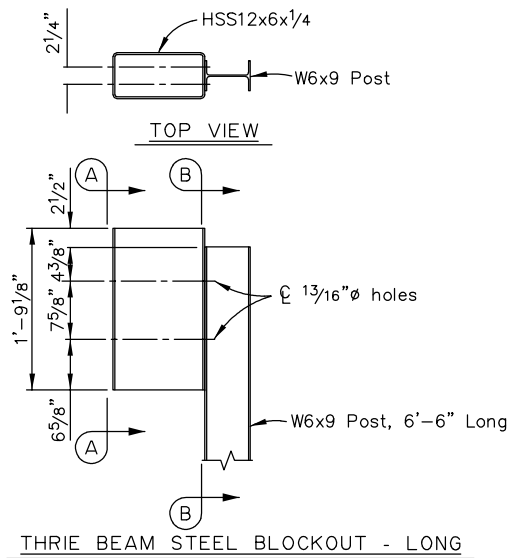
Adoption Date: 02/08/2019

Last Code and Stds. Review  
By: Date:

Next Code and Standards Review date: 02/08/2029

# G-32.02

SHEET  
| of |



- NOTES:**
1. Use AASHTO M 180 for all guardrail, transition rail, and hardware. Use H.S. Bolts conforming to ASTM F3125 Grade A325. All other steel conforms to ASTM A709 Grade 50.
  2. Permissible 3" horizontal slots in Thrie-Beam Guardrails. Adjust guardrail bolts for sliding fit.
  3. Conform to G-00, G-05, and G-10 of the Standard Plans for all Thrie Beam Transition details not shown.
  4. Thrie Beam Transition part numbers are listed in parentheses ( ) and referenced in the "Task Force 13 Guide to Standardize Roadside Hardware."

State of Alaska DOT&PF  
ALASKA STANDARD PLAN

**MASH BRIDGE RAIL  
THRIE BEAM TRANSITION**

Adopted as an Alaska  
Standard Plan by: Carolyn Morehouse, P.E.  
Chief Engineer

Adoption Date: 07/30/2021

Last Code and Stds. Review  
By: SEM Date: 07/17/2020

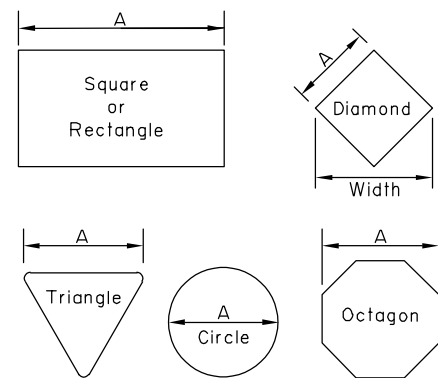
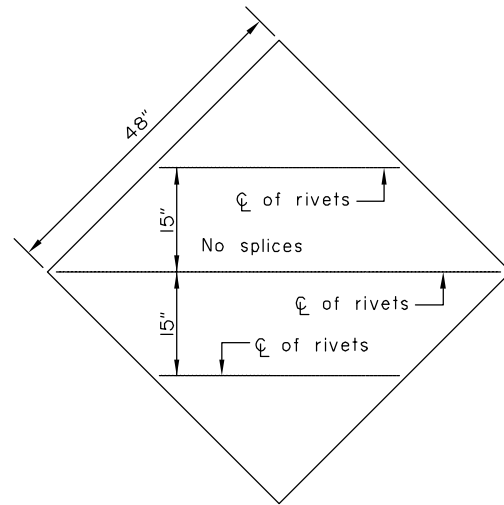
Next Code and Standards Review Date: 07/17/2030

No Scale

G-32.02

GENERAL NOTES

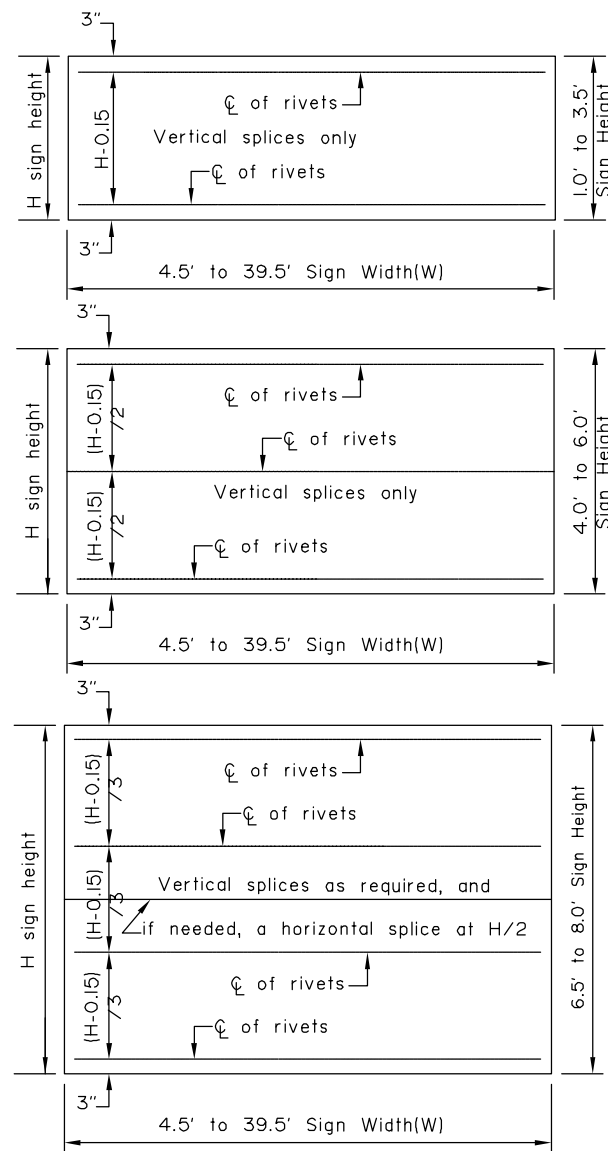
1. See the standard specifications for the aluminum alloys that you may use for sign sheeting and wind framing members.
2. Fabricate all signs from 0.125" thick aluminum sheeting.
3. Sign fabricators may use alternates to the zee shaped framing member with approval of the engineer, if the frame manufacturer certifies their design equals or exceeds the strength of the zee shaped design.
4. Install one piece wind framing members on all signs up to 23.5' wide. Use one splice in each wind frame on all signs wider than 23.5'. Locate splices at least 18" from all posts and panel edges. Stagger splices in adjacent framing members at least 8.0' apart.
5. Attach wind framing members with rivets or with an engineer approved, double sided, high strength, adhesive tape. Clean and handle sheeting and framing members and apply tape in accordance with the tape manufacturer's written instructions. Install two rivets in both ends of each framing member.
6. Use 3/16" diameter rivets conforming to aluminum alloy 6061-T6 for cold driven rivets, or aluminum alloy 6061-T43 for hot driven rivets.
7. Sign fabricators may use sign panels extruded with integral framing with approval of the engineer, if the manufacturer certifies their design equals or exceeds the strength of the 0.125" thick panel with framing attached to it.
8. Frame all signs taller than 8.0' with five wind framing members located (H-0.15)/4 spaces. If needed, make a horizontal splice at the middle wind frame.
9. Do not use round pipes for sign supports.



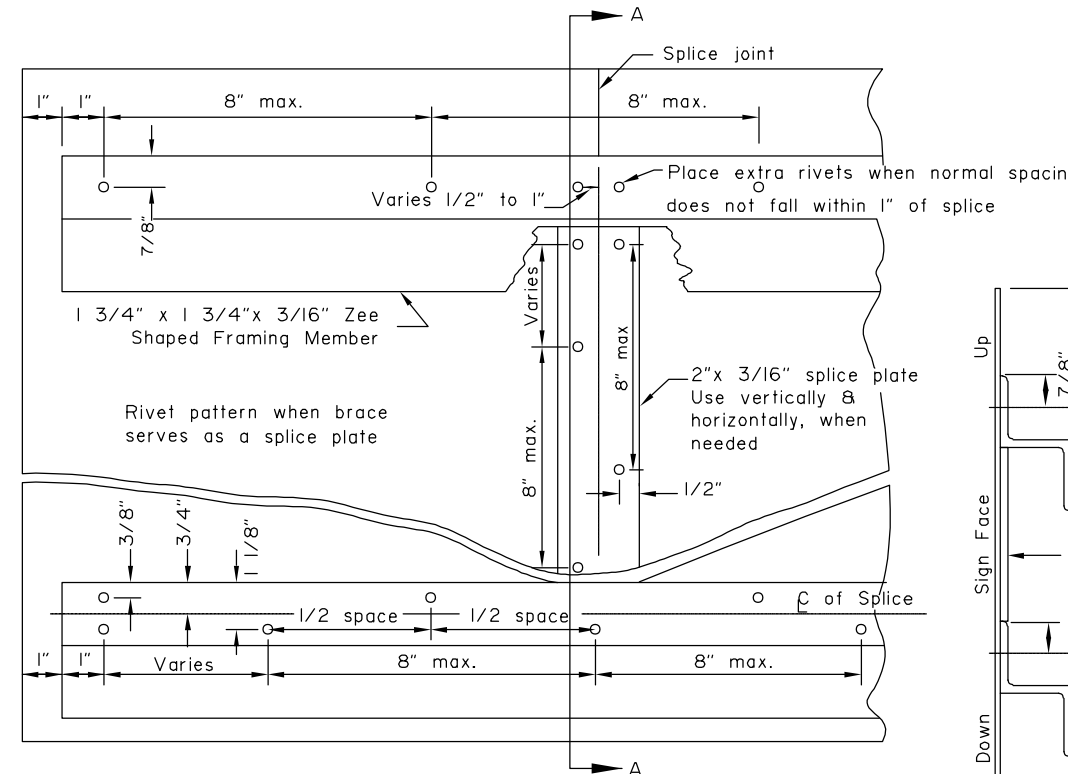
Maximum size unframed signs using 0.125" thick aluminum sheeting.	
Sign Shape	A
Squares, Shields, and Route Markers	48"
Rectangles	48"
Diamonds	48"
Triangles	48"
Rounds and Octagons	48"

Install wind framing on all signs that exceed the dimensions listed.

LIGHT SIGNS

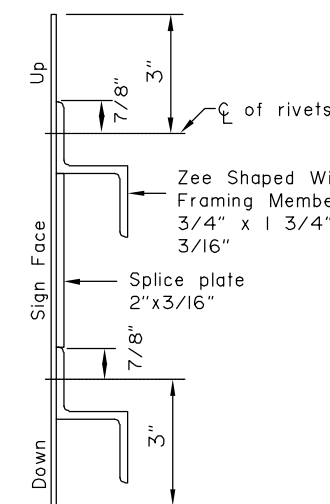


WIND FRAMING LOCATIONS



RIVET DETAIL FOR ZEE SHAPED WIND FRAMING & SPLICE PLATE

Note: Drawing not to scale



SECTION A-A

State of Alaska DOT&PF  
ALASKA STANDARD PLAN

SIGN FRAMING

Adopted as an Alaska Standard Plan by: \_\_\_\_\_

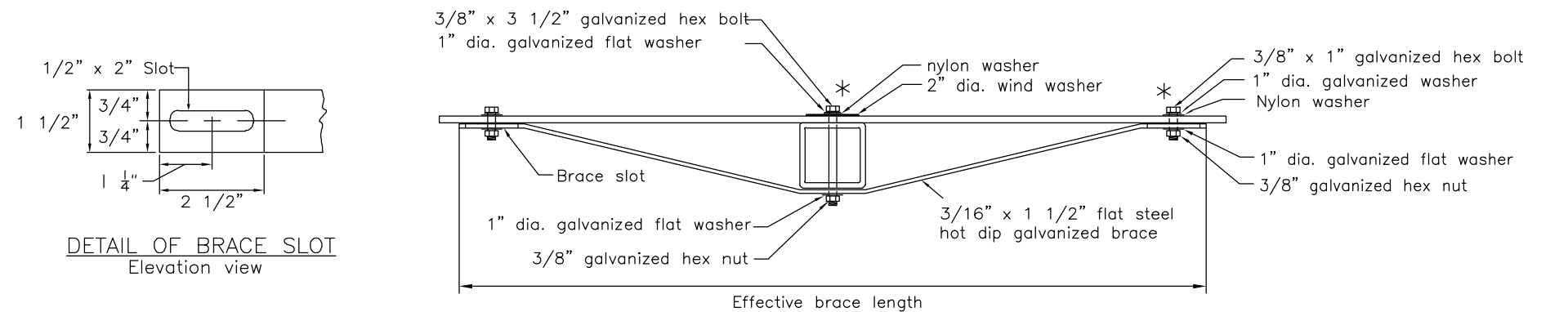
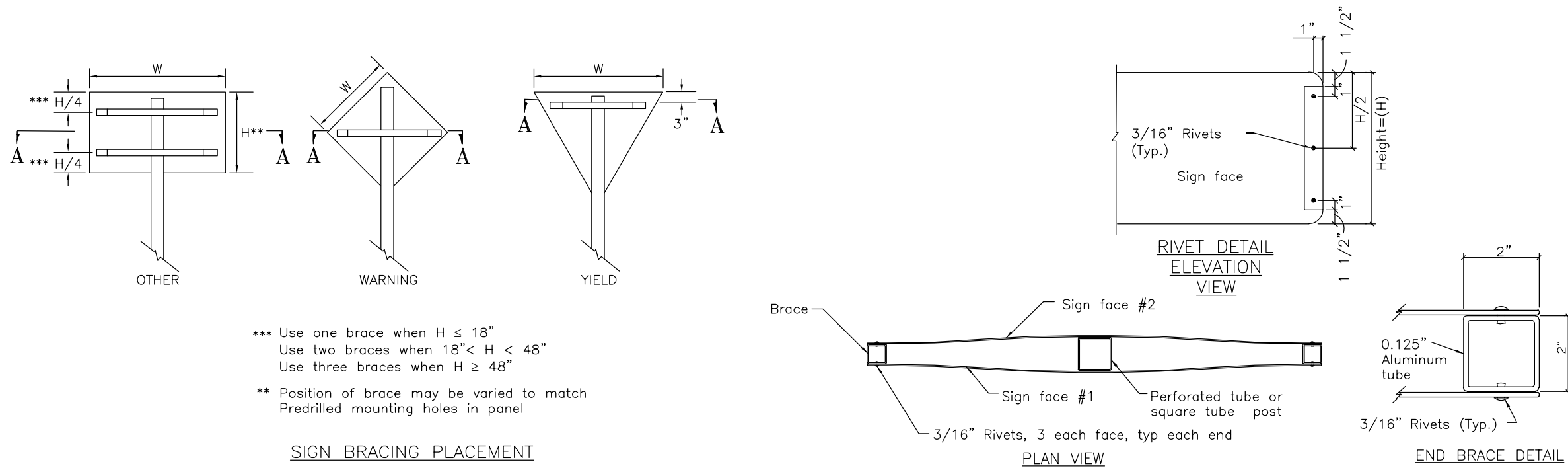
Carolyn Morehouse, P.E.  
Chief Engineer

Adoption Date: 7/17/2020

Last Code and Stds. Review  
By: WTH Date: 7/8/2020

Next Code and Standards Review date: 7/8/2030





\* Adjust location of bracing so that bolts and washers will miss the sign legend

Sign Width(W)	Effective Brace Length		
	Warning	Yield	Other
30"	36"	24"	24"
36"	42"	30"	30"
42"	48"	-	36"
48"	Two posts	36"	42"

< 30" No bracing required and use square tube

Note: Drawing not to scale

State of Alaska DOT&PF  
 ALASKA STANDARD PLAN  
**BRACING FOR SIGNS  
 MOUNTED ON SINGLE POST**

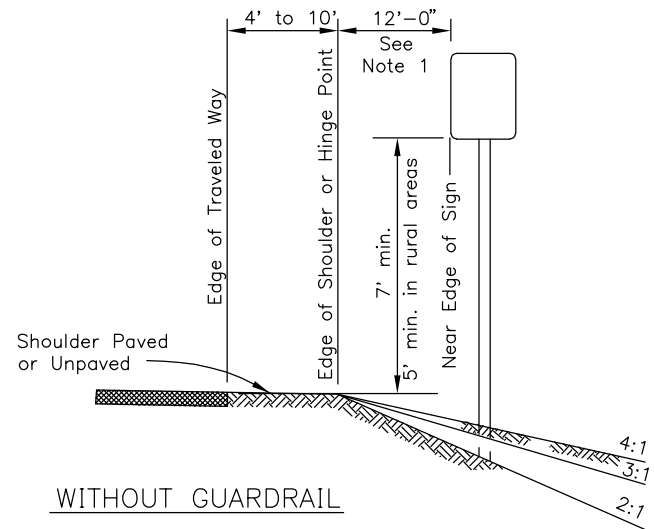
Adopted as an Alaska  
 Standard Plan by: \_\_\_\_\_

Carolyn Morehouse, P.E.  
 Chief Engineer

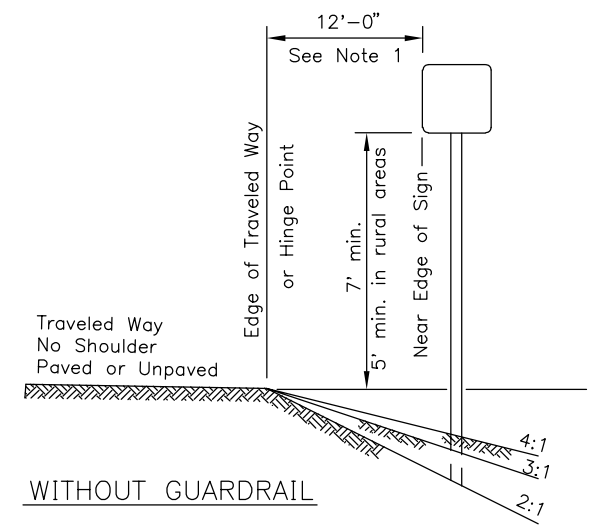
Adoption Date: 7/17/2020

Last Code and Stds. Review  
 By: WTH Date: 7/8/2020

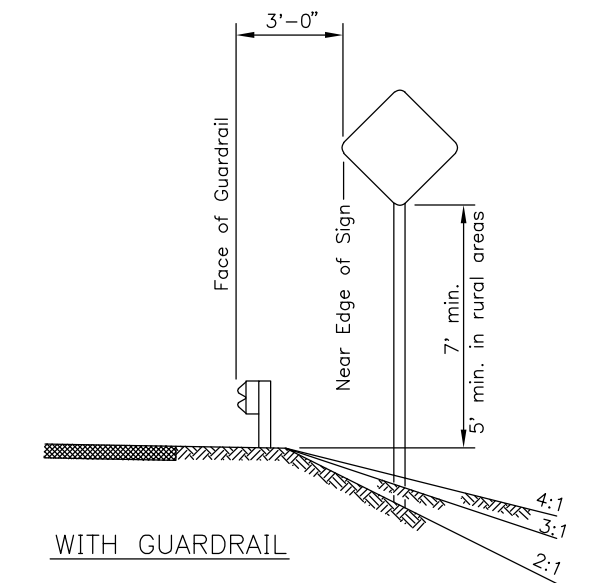
Next Code and Standards Review date: 7/8/2030



WITHOUT GUARDRAIL  
SUBGRADES OVER 28', ALL SLOPES



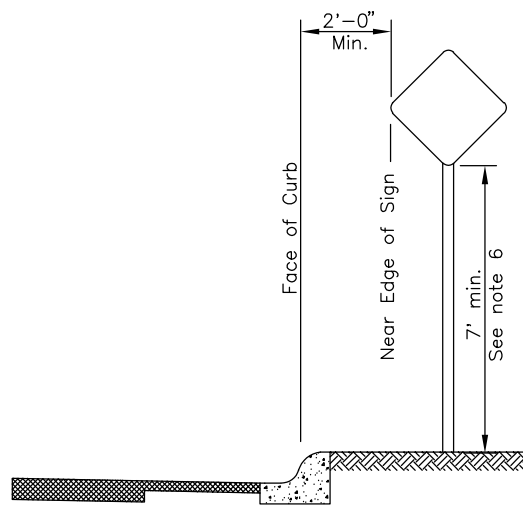
WITHOUT GUARDRAIL  
SUBGRADES 24' TO 28', ALL SLOPES



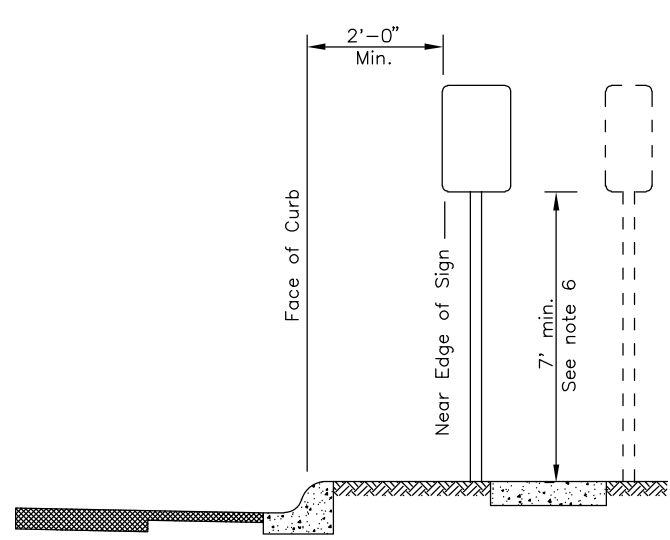
WITH GUARDRAIL  
ALL SUBGRADES, ALL SLOPES

**GENERAL NOTES**

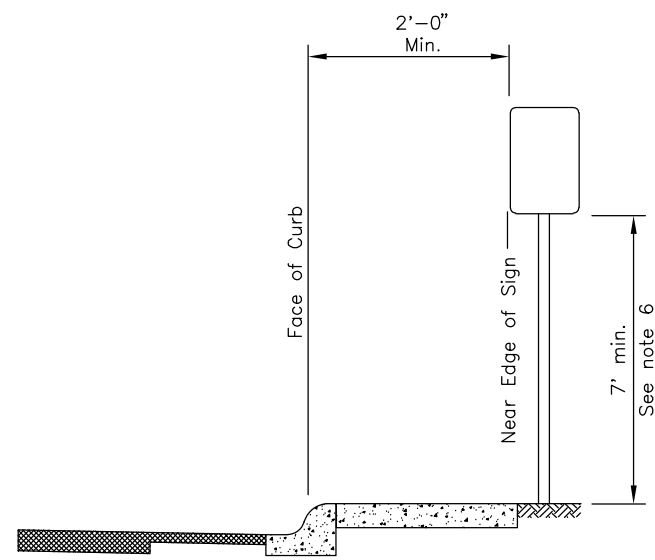
1. Unless shown otherwise on the plans, the standard sign offset is 12'. The minimum is 6' where shoulder width is 6' or greater.
2. Add 6" to mounting height on unpaved roads.
3. If signs extend over bike paths, the minimum vertical clearance is 8' 0".
4. When signs are placed 30' or more from the edge of traveled way, mount them with the bottom of the sign at least 5' above the road surface at the near edge of the road.
5. When multiple hinged sign supports are used, mount hinges at least 7' above the ground.
6. Minimum mounting height is 7'-0" where parking or pedestrian movements are likely to occur, or where signs extend over sidewalks.
7. For construction signs in rural areas, mounting height shall be 7' minimum.



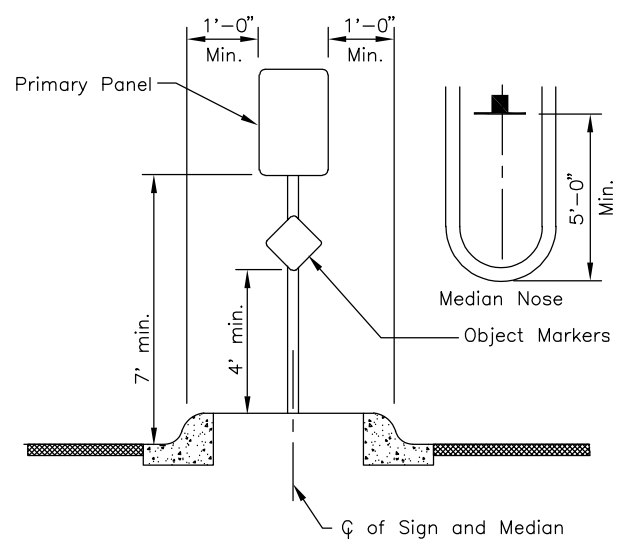
CURB WITHOUT SIDEWALK



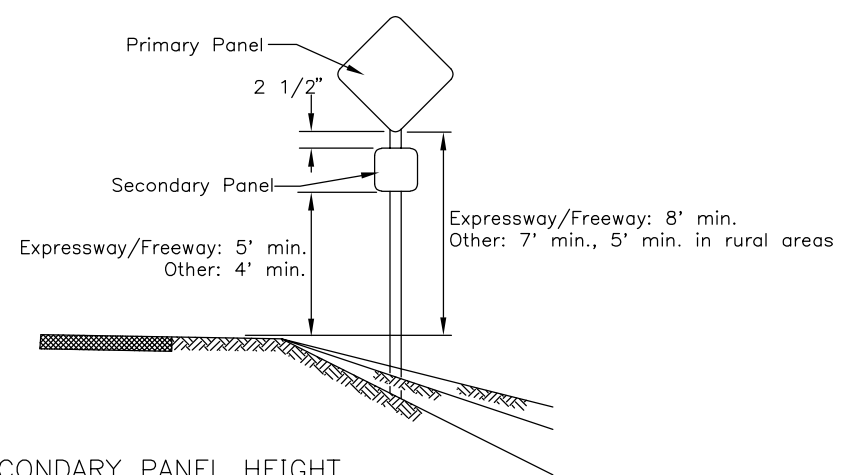
CURB WITH PARKWAY AND SIDEWALK  
(If R/W width permits, signs should be placed behind sidewalk.)



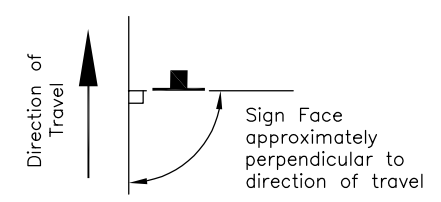
CURB WITH SIDEWALK WITHOUT PARKWAY



RAISED MEDIANS  
Minimum 4' Width for Signing



SECONDARY PANEL HEIGHT  
ALL TWO PANEL MOUNTING



SIGN POSITIONING

State of Alaska DOT&PF  
ALASKA STANDARD PLAN

**POST MOUNTED SIGN  
OFFSET AND HEIGHT**

Adopted as an Alaska  
Standard Plan by: Carolyn Morehouse, P.E.  
Chief Engineer

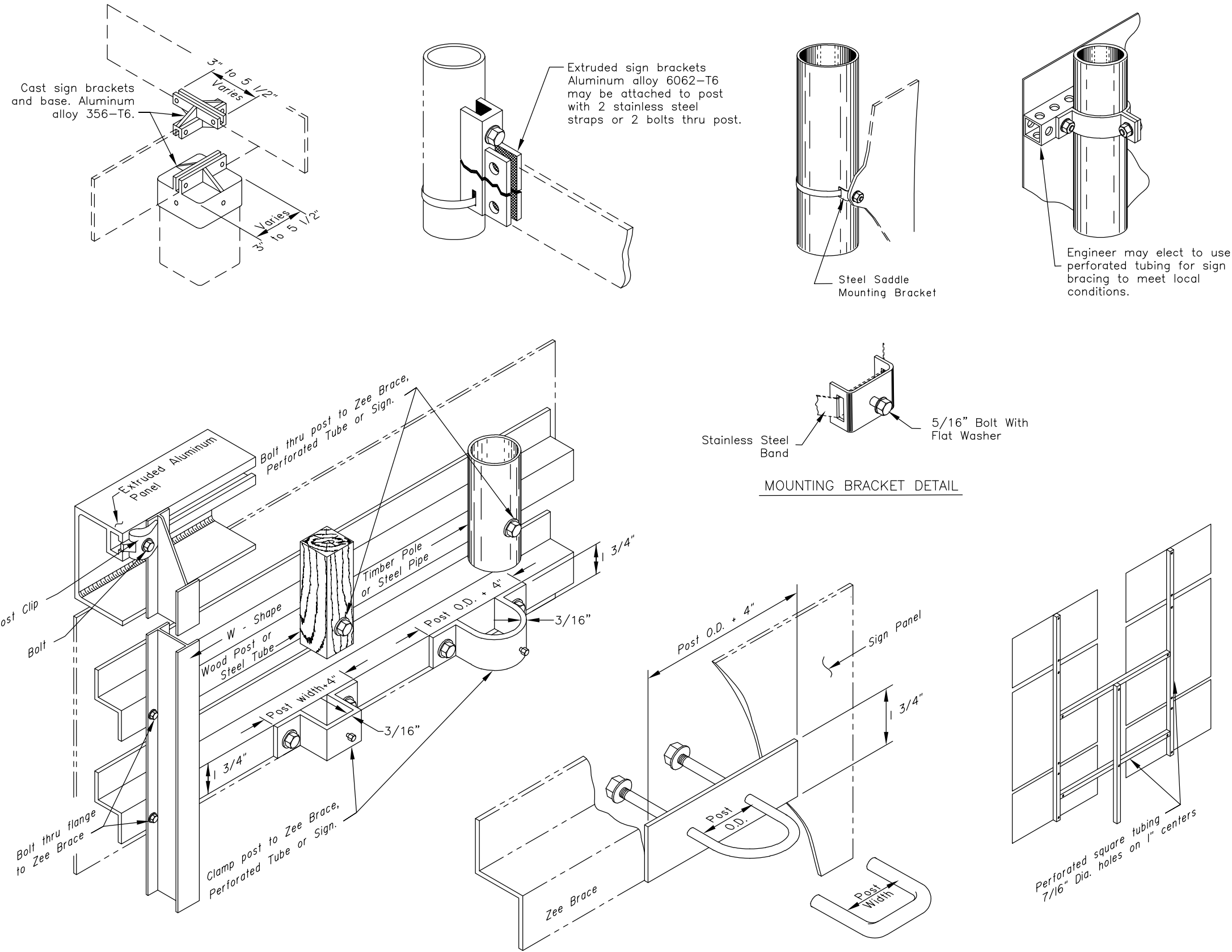
Adoption Date: 7/17/2020

Last Code and Stds. Review  
By: KLK Date: 7/8/2020

Next Code and Standards Review Date: 7/8/2030

# S-20.11

SHEET  
| of |



### CONSTRUCTION NOTES

1. Details shown indicate general design only. Dimensions and design may vary among manufacturers.
2. Install weather tight caps on all pipe and tube post (except perforated tubing).
3. Protect driven sign posts with drive caps during installation.
4. Bolt braces to posts at each point where they cross posts.
5. Install signs with top of post, mounting brackets, etc. with a minimum of 3" below top of sign.
6. Paint all sign mounting fasteners on sign face a color closely matching the sign face.
7. Attach all signs, zees and braces mounted to the posts with 5/16" bolts, nuts and washers.
8. Furnish all aluminum nuts, bolts and washers with anodized finish.

FASTENER SPECIFICATION TABLE (ALL REFERENCES ARE TO ASTM)			
FASTENERS	ALUMINUM	STEEL	STAINLESS STEEL
BOLTS	MACHINE F468 2024-T4 A307	A575 2024-T4 F81	F593
	CARRIAGE "U" F468 2024-T4 A307	A276 TYPE 304	
NUTS	REGULAR F467 6061-T6	A575 2024-T4 F81	F594
	LOCKING F467 2017-T4		
WASHERS			A480
POST CLIP	A356-T6	N/A	N/A

State of Alaska DOT&PF  
ALASKA STANDARD PLAN

**SIGN TO SIGN POST CONNECTION**

Adopted as an Alaska Standard Plan by: \_\_\_\_\_  
Carolyn Morehouse, P.E.  
Chief Engineer

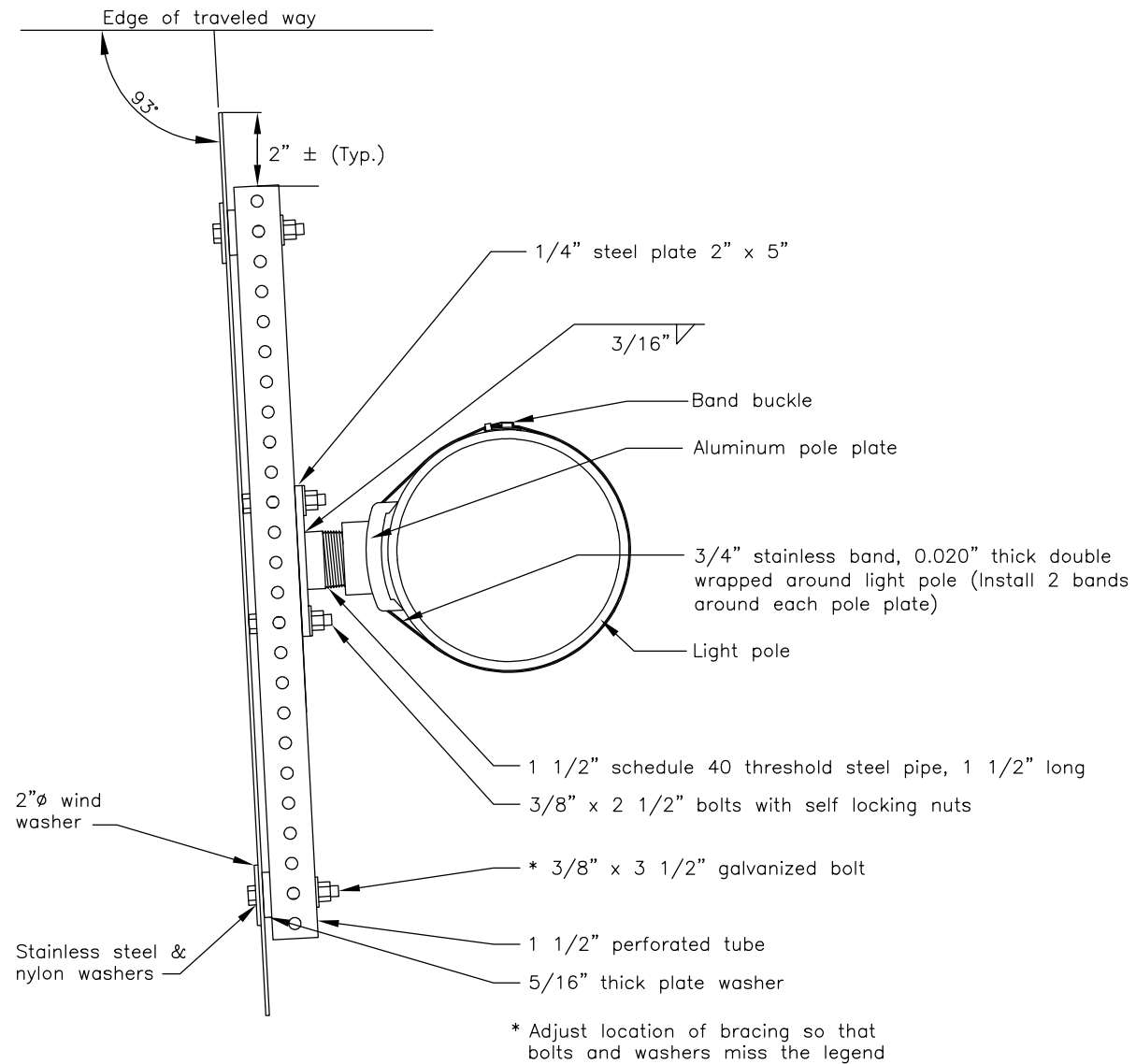
Adoption Date: 07/30/2021

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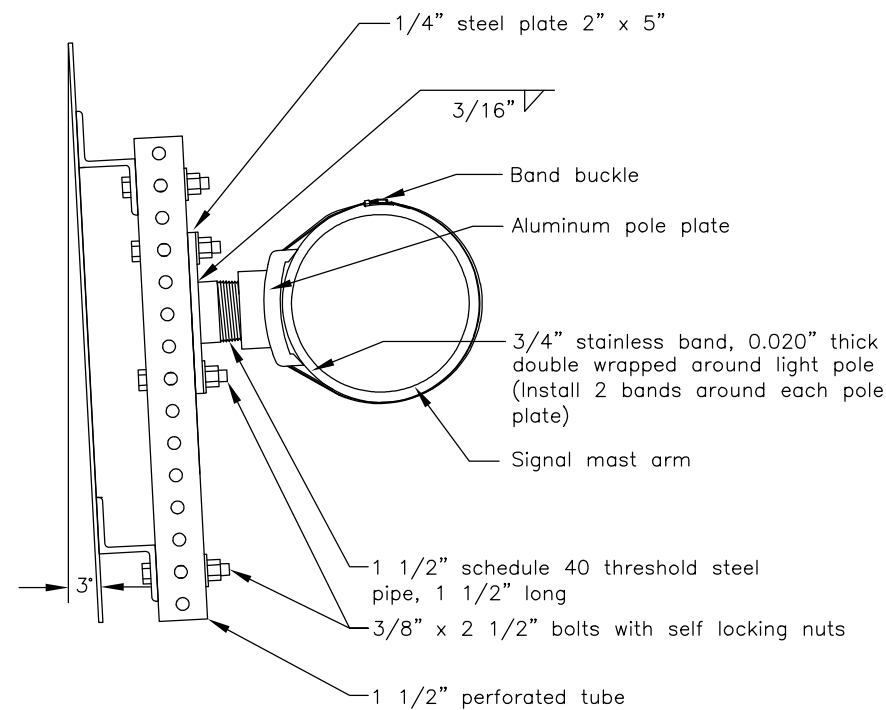
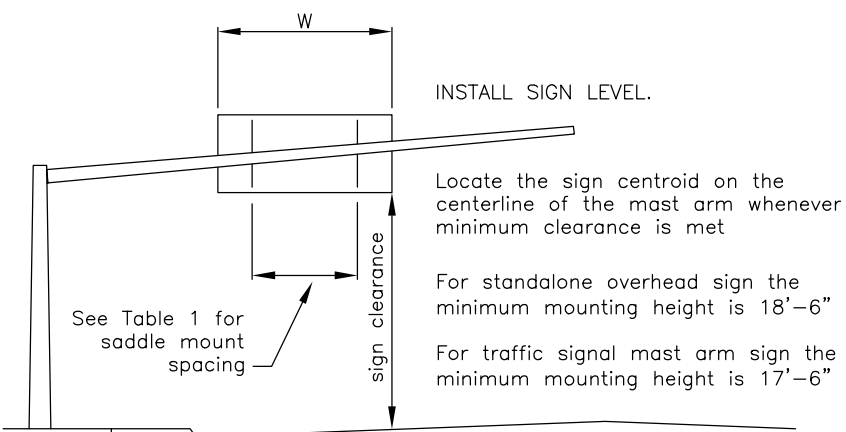
Last Code and Stds. Review  
By: LRG Date: 07/30/2021

Next Code and Standards Review date: 07/30/2031

S-20.11



**ELECTROLIER SIGN MOUNTING**  
(PLAN VIEW)

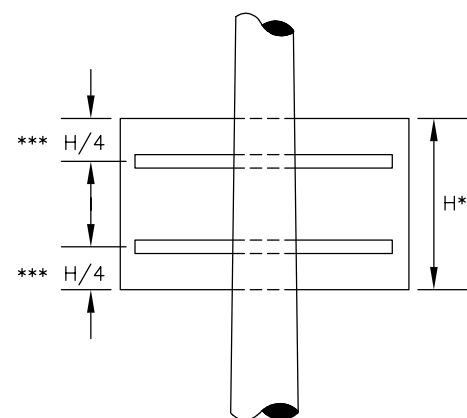


**SIGNAL POLE MAST ARM SIGN MOUNTING**  
(ELEVATION VIEW)

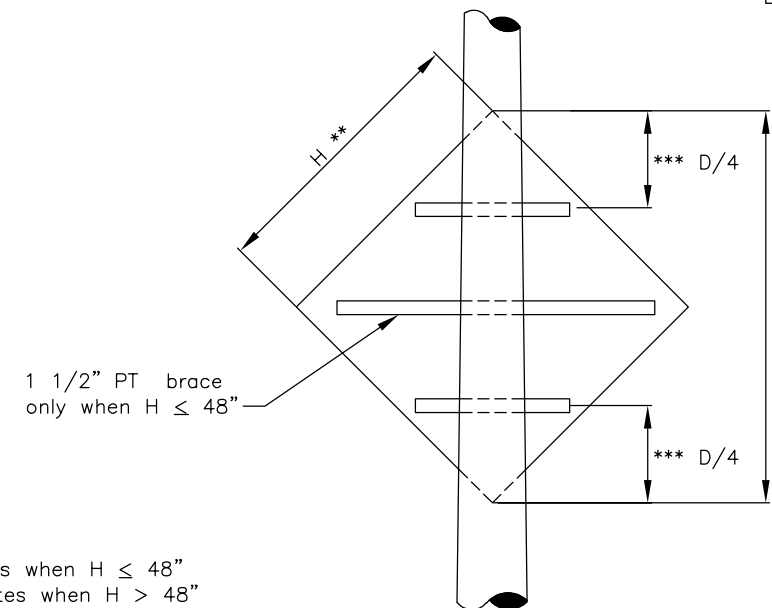
**GENERAL NOTES**

1. Use pole plate assemblies shown here to install signs on tapered mast arms and light poles. Install one pole plate per 10 square feet of sign panel. Use at least two plates for each installation.
  2. Fabricate each pole plate-to-perforated tube adapter (steel plate welded to pipe) using steel plate conforming to ASTM A36 and steel pipe conforming to ASTM A53. Paint these adapters in conformance with section 504 of the Standard Specifications for Highway Construction, latest edition.
  3. Paint the assemblies in accordance with AASHTO standard specification M69.
  4. Attach each pole plate with two bands of 3/4" wide by 0.020" thick stainless steel banding material. Double wrap each band and tighten it until the band stops moving through the buckle.
- Install bolts, nuts and washers conforming to
5. ASTM A325.

TABLE 1 POLE PLATE SPACING				
NO. OF POLE PLATES	OVERHANG	BETWEEN POLE PLATES	OVERHANG	
2	0.2W	1 SPACE AT 0.6W	2	0.2W
3	0.15W	SPACES AT 0.35W	3	0.15W
4	0.125W	SPACES AT 0.25W	1	0.125W
5	0.2W	SPACE AT 0.6W		



- \*\* Use two pole plates when  $H \leq 48"$   
use three pole plates when  $H > 48"$
- \*\*\* When sign panels features predrilled mountings holes, use them to attach the perforated tubes



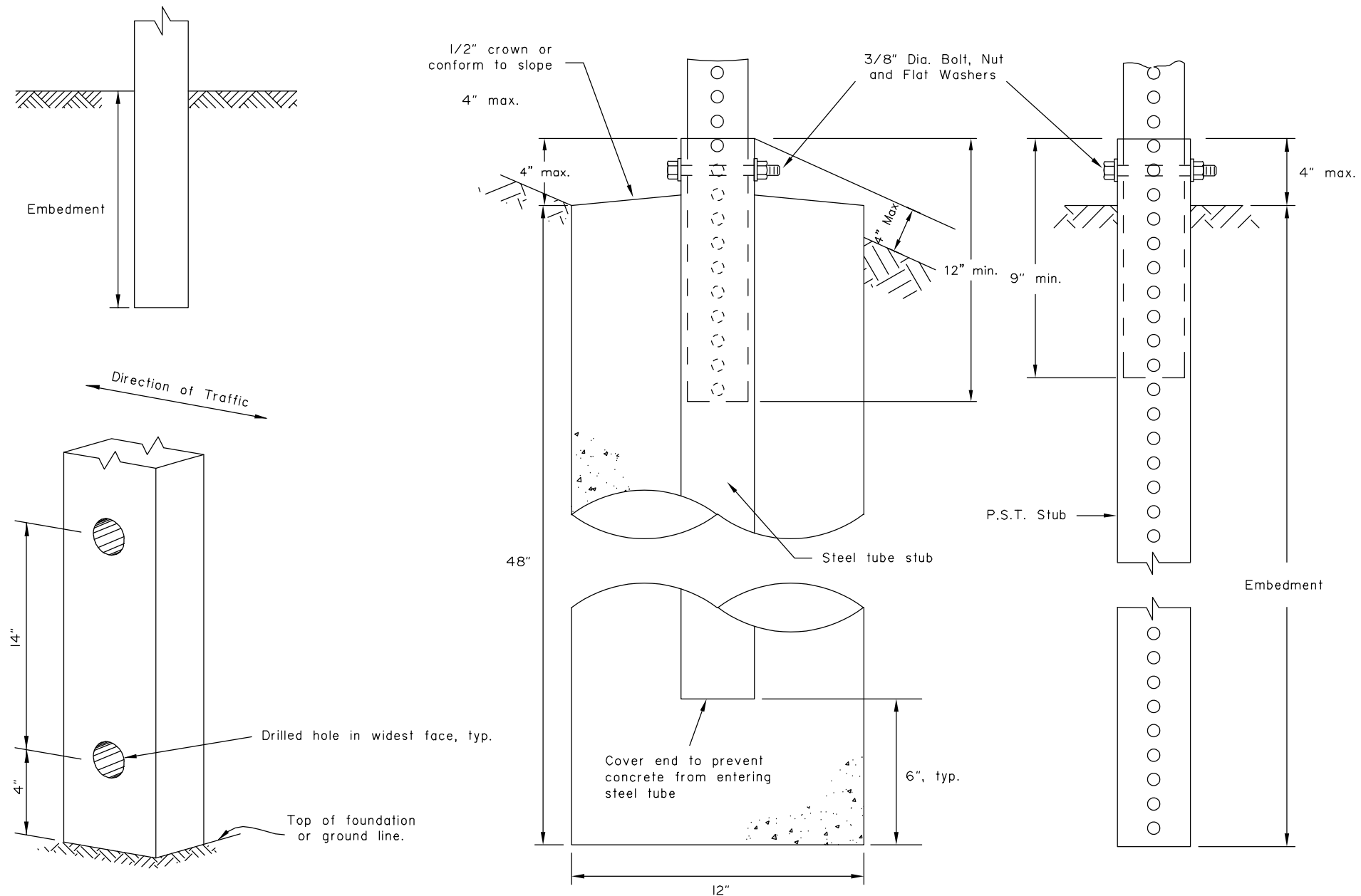
State of Alaska DOT&PF  
ALASKA STANDARD PLAN  
**POLE AND MASTARM  
SIGN MOUNTING**

Adopted as an Alaska Standard Plan by: *Kenneth J. Fisher*  
Kenneth J. Fisher, P.E.  
Chief Engineer

Adoption Date: 02/08/2019

Last Code and Stds. Review  
By: Date:

Next Code and Standards Review date: 02/08/2029



**SLEEVE TYPE  
CONCRETE FOUNDATION**

**SLEEVE TYPE\*  
SOIL EMBEDMENT**

**GENERAL NOTES:**

1. Sign shall be placed symmetrically around posts and refer to Standard Plan S-00 for sign framing details.
2. See plans for type of post, size and embedment type.
3. To maintain crashworthiness, install no more than the number of P.S.T.s or wood posts specified in the tables within 7' of each other.
4. Concrete shall be class B.
5. Do not use the supports on this drawing for multiple support signs if supports are separated by more than 7 feet.
6. Treat all field cuts and field drilled holes in wood posts in accordance with Section 730-2.04 of the Standard Specifications.

**SIGN POST SPACING NOTES:**

1. Install sign support in accordance with the table below, unless otherwise required by plans or specifications.
2. Exceptions:
  - a. Use one post for all E5-1 gore signs, regardless of width.
  - b. Use one 2.5" P.S.T. for all STOP signs, with or without street name signs.
3. Supports placed within 7' of each other must be acceptable for that use. See tables below for the sizes of wood posts and P.S.T.s that may be used within 7'. See Manufacturer's documentation for breakaway couplings and tubes that may be used within 7'.
4. See Standard Plan S-31 for frangible couplings, hinges, and foundations for tube and W-shape sign supports.

WOOD SIGN POSTS			
SIZE	HOLE DIA.	EMBEDMENT*	NO. OF POSTS WITHIN 7 Ft. PATH
4"x4"	NONE	4'-1"	2
4"x6"	1 1/2"	5'-3"	2
6"x6"	1 1/2"	4'-9"	1
6"x8"	3"	4'-9"	1

PERFORATED STEEL TUBES (P.S.T.)		
POST SIZE	Embedment Depth	No. of P.S.T.s permitted within 7 ft path
1 1/2" x 1 1/2"	4'-8"	2
1 3/4" x 1 3/4"	4'-6"	2
2" x 2"	4'-3"	2
2 1/4" x 2 1/4"	5'-0"	1
2 1/2" x 2 1/2"	4'-6"	1

TUBE SIGN POST SPACING								
Sign Width (feet)	No. of Posts	Distance Between Posts	Sign Overhang	Post Type				Notes
				P.S.T.	Wood	Steel Tube	W-Shape	
0.5 to 4.0	1	-	0.5W	X	X	X		See Note 2.
4.5 to 10.0	2	0.6W	0.2W	X	X	X		See Note 3.
10.5 to 11.0	2	6	Varies	X	X	X		See Note 3.
11.5 to 13.0	2	8	Varies				X	
13.5 to 20.0	2	0.6W	0.2W				X	
20.5 to 22.5	3	8	Varies				X	
23.0 to 29.5	3	0.35W	0.15W				X	
30.0 to 31.5	4	8	Varies				X	
32.0 to 40.0	4	0.25W	0.125W				X	

\* Embedment depth applies in both strong and weak soil.

\* Use 3"x3"x3/16" Stub for 2 1/2"x2 1/2" PST Applications.

**WOOD POSTS**

**PERFORATED STEEL TUBE (PST) POSTS**

**TUBE SIGN POST SPACING**

Note: Drawing not to scale

State of Alaska DOT&PF  
ALASKA STANDARD PLAN

**LIGHT SIGN STRUCTURE  
POST EMBEDMENT**

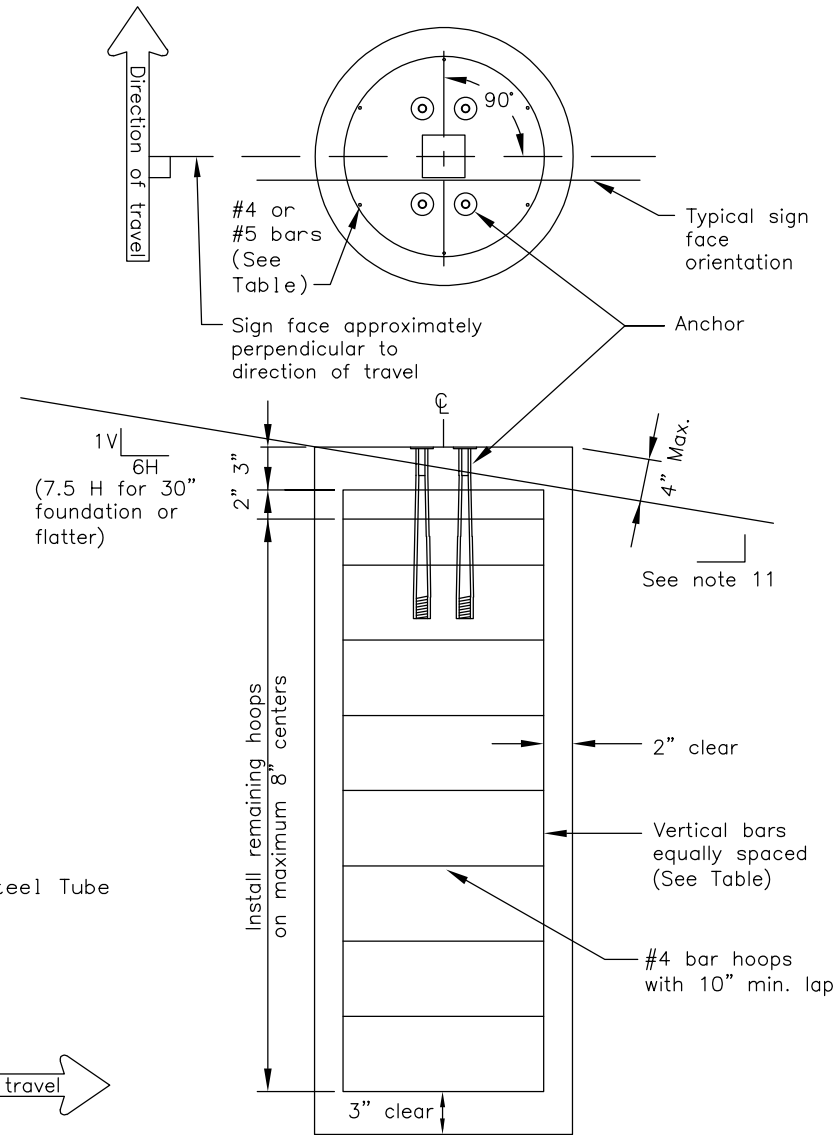
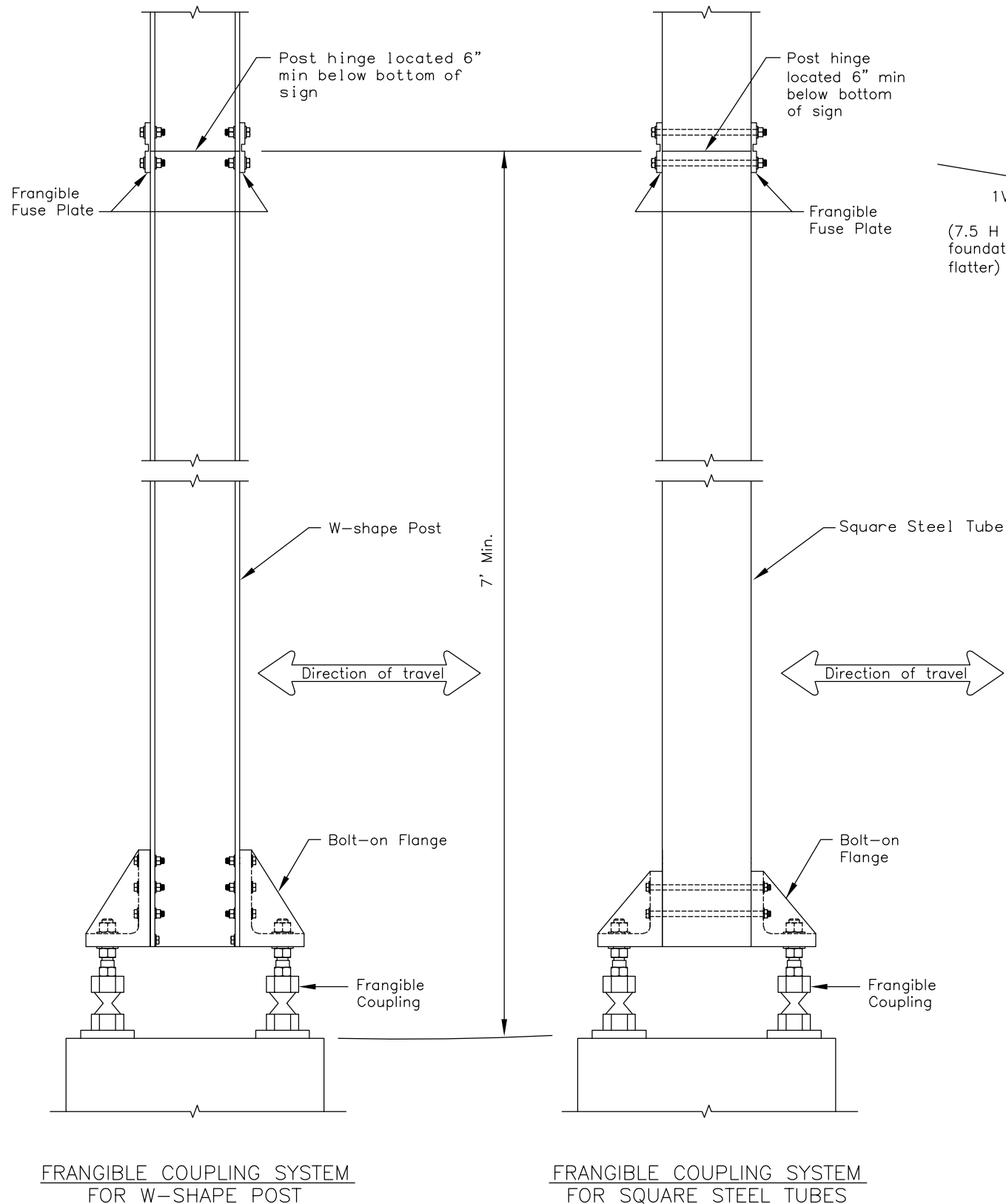
Adopted as an Alaska  
Standard Plan by:   
Carolyn Morehouse, P.E.  
Chief Engineer

Adoption Date: 7/17/2020

Last Code and Stds. Review  
By: WTH Date: 7/8/2020

Next Code and Standards Review date: 7/8/2030

**NOTE:**  
Install hinges when more than one post is used to support a sign. Do not install hinges on single post installations.



**SIGN POST FOUNDATION**  
See Table for depth and diameter

POST SIZE & TYPE	FOUNDATION *			REINFORCEMENT				
	DIA.	MIN. DEPTH	CY <sup>3</sup> CONC.	VERTICAL BARS QTY.	SIZE	LGTH.	HOOPS QTY.	SIZE DIA.
2 1/2" TUBE	1'-6"	6'-0"	0.39	7	#5	5'-6"	10	#4 1'-2"
3" TUBE	1'-6"	6'-0"	0.39	7	#5	5'-6"	10	#4 1'-2"
3 1/2" TUBE	1'-6"	6'-0"	0.39	7	#5	5'-6"	10	#4 1'-2"
4" TUBE	2'-6"	6'-0"	1.09	8	#8	5'-6"	10	#4 2'-2"
4 1/2" TUBE	2'-6"	6'-0"	1.09	8	#8	5'-6"	10	#4 2'-2"
5" TUBE	2'-6"	6'-0"	1.09	8	#8	5'-6"	10	#4 2'-2"
W6 x 9	2'-6"	6'-0"	1.09	8	#8	5'-6"	10	#4 2'-2"
W6 x 12	2'-6"	6'-0"	1.09	8	#8	5'-6"	10	#4 2'-2"
W6 x 15	3'-0"	6'-6"	1.70	8	#11	6'-0"	12	#4 2'-8"
W6 x 30	3'-0"	7'-6"	1.96	8	#11	7'-0"	13	#4 2'-8"

**FOUNDATION TABLE**

\* Foundations sized for use where there are no loose, high moisture, or fine grained soils.

**GENERAL NOTES**

- Furnish sign posts with NCHRP 350 compliant frangible couplings designed to break away safely when struck from any direction. There is no MASH compliant device at this time. See SPDR report for more info.
- Furnish frangible coupling systems with bolt-on flanges.
- Details on this sheet illustrate only the general components of a frangible coupling system, and are not intended to specify a particular product.
- Install frangible fuse plates as specified by the manufacturer and hinged joints when multiple posts are used to support a sign. Do not use round pipes.
- Install the components of the breakaway system, including hinges, in accordance with the written instructions of the system manufacturer.
- Use Class A, B or W concrete conforming to Sections 501 or 550 of the Standard Specifications. Furnish ASTM A615 grade 60 steel bars for concrete reinforcement conforming to AASHTO M31.
- Spiral reinforcing steel may be substituted for hoops in concrete foundation. Spiral option shall consist of #3 plain spiral with 6" pitch with three flat turns at the top and one flat turn at the bottom.
- Install the concrete anchors using a rigid template. Locate the anchors on centers and within tolerances specified by the manufacturer.
- Install the anchors in fresh concrete as recommended by the manufacturer. Adjust the template's final position until it is level. Remove and replace all foundations that need more than 2 shims under any 1 coupling or more than a total of 3 shims under any pair of couplings to plumb the post.
- Drill the holes for attaching brackets before the sign posts are hot dip galvanized. Test fit templates in the holes to ensure the brackets can be installed square to the posts.
- Special grading detail and/or shielding may be required to maintain 4" maximum clear distance.

State of Alaska DOT&PF  
ALASKA STANDARD PLAN  
**SIGN POST BASE AND  
FOUNDATION**

Adopted as an Alaska Standard Plan by: \_\_\_\_\_

Carolyn Morehouse, P.E.  
Chief Engineer

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