

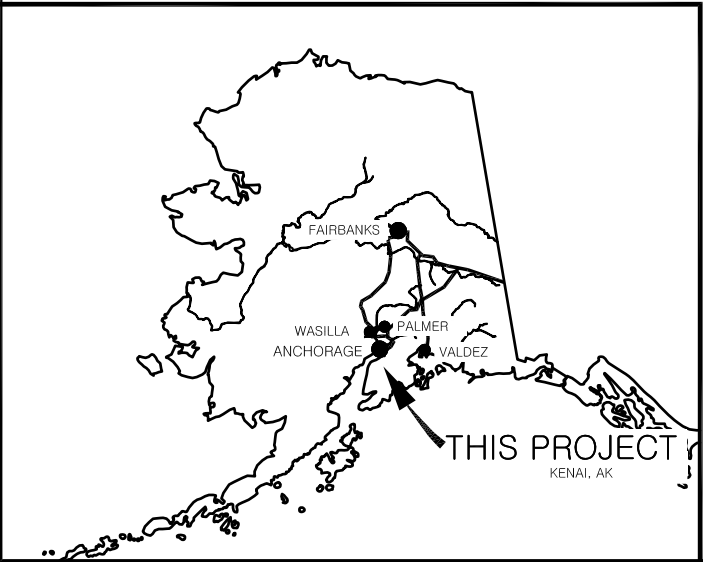
STATE OF ALASKA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF PARKS
AND
OUTDOOR RECREATION

KENAI BRIDGE ACCESS ROAD
PATHWAY

PROJECT NO.
CFHWY00689

In Cooperation with the Department of Transportation and
Public Facilities

Vicinity Map



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SPECIFICATION:
CONSTRUCT THE IMPROVEMENTS COVERED BY THESE PLANS IN ACCORDANCE WITH THE ALASKA DEPARTMENT OF
TRANSPORTATION AND PUBLIC FACILITIES 2020 STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION AND THE
PROJECT SPECIAL PROVISIONS.

The following Division of Parks & Outdoor Rec. standard drawings apply to this project: N/A
The following State of Alaska DOT&PF STANDARD PLANS apply to this project: C-04.12, C-05.20, D-01.02, D-04.22, D-06.10, I-20.20, I-21.12, L-23.03, S-00.12, S-05.02, S-30.05, S-31.02, S-32.02, T-20.04, T-21.04

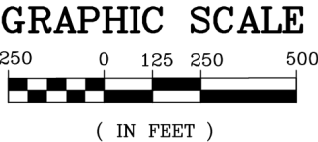
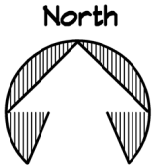
Plans developed by:
STATE OF ALASKA
Department of Natural Resources
Division of Parks & Outdoor Recreation
550 W 7th Ave. Suite 1340, Anchorage, AK 99501
Recommended:

Rys Miranda, P.E. _____ Date _____
Chief, Design and Construction

Approved: _____ Date _____
Director, Alaska State Parks

GENERAL NOTES:

- ALL CONSTRUCTION SHALL BE CONTAINED WITHIN THE RIGHT-OF-WAY, TEMPORARY CONSTRUCTION EASEMENTS, AND TEMPORARY CONSTRUCTION PERMITS. NO EXCESS MATERIAL SHALL BE DISPOSED OF WITHIN THE RIGHT-OF-WAY, UNLESS SPECIFICALLY CALLED FOR IN THE PLANS OR DIRECTED BY THE ENGINEER.
- THE ROW LINES SHOWN WERE DRAWN BY PTS, INC. AND ARE BASED ON SUBDIVISION PLATS AND RECORDED MONUMENTS SURVEYED BY JULY IN 2022. THE ROW LINES WERE INSERTED USING A COMMON COORDINATE SYSTEM.
- ALL PAVEMENT CUTS SHALL BE MADE WITH A SAW OR ALTERNATE METHOD APPROVED BY THE ENGINEER.
- PLACE 4" TOPSOIL AND SEED ON ANY AREAS DISTURBED BY CONSTRUCTION AND AS DIRECTED BY THE ENGINEER.
- THE EXISTING INFORMATION SHOWN IN THE PLANS IS FROM AS-BUILTS AND HAS BEEN PARTIALLY FIELD VERIFIED. FIELD CONDITIONS MAY NOT BE ACCURATELY REPRESENTED AND/OR MAY HAVE CHANGED. ADJUST INSTALLATIONS AS DIRECTED BY THE ENGINEER.
- ADJUST ALL PAVEMENT PENETRATIONS TO FINAL GRADE PRIOR TO TOP LIFT OF PAVING.
IF ANY PAVEMENT PENETRATION REQUIRES GRADE ADJUSTMENT AFTER FINAL LIFT PAVING, AS DETERMINED BY THE ENGINEER, SAW CUT A NEAT LINE ALONG THE PAVEMENT TO BE REMOVED. USE AN INFRARED HEATER TO HEAT THE EXISTING PAVEMENT. EQUIPMENT AND MAXIMUM TEMPERATURE SHALL BE APPROVED BY THE ENGINEER. REPLACE THE REMOVED ASPHALT WITH NEW HOT MIX ASPHALT AND THOROUGHLY COMPACT. SEAL JOINTS AT LEAST 12 INCHES WIDE USING ASPHALT SYSTEMS GSB-88 OR APPROVED EQUAL, WHILE THE HOT MIX ASPHALT IS CLEAN, FREE OF MOISTURE AND PRIOR TO STRIPING.THERE SHALL BE NO PAYMENT FOR ADDITIONAL WORK CAUSED BY FAILURE TO ADJUST PAVEMENT PENETRATIONS PRIOR TO FINAL GRADE.
- CONSTRUCT RAMP RUNS, LANDINGS, FLARES, AND SIDEWALK EXTENSIONS SHOWN IN THE PLANS USING 4" CONCRETE REGARDLESS OF WHETHER THE EXISTING SIDEWALK/PATHWAY IS ASPHALT OR CONCRETE.
- CONSTRUCT CURB RAMPS TO AVOID IMPACTING SIGNAL POLE FOUNDATIONS. DO NOT COVER SIGNAL POLE FOUNDATION BOLTS AND BASE PLATES WITH TOPSOIL.
- ON STANDARD PLAN S-05.02 CHANGE THE MINIMUM CLEARANCE TO THE BOTTOM OF SIGN OVERHANGING A BICYCLE OR PEDESTRIAN FACILITY TO 8'-0".
- MINIMUM OFFSET FROM SIGN POST TO EDGE OF SIDEWALK OR PATHWAY SHALL BE 1'6".



ABBREVIATIONS:	
AADT = AVERAGE ANNUAL DAILY TRAFFIC	MAX = MAXIMUM
A.A. = ALGEBRAIC DIFFERENCE	MH = MAN-HOLE
ADA = AMERICANS WITH DISABILITIES ACT	MIN = MINIMUM
AMATS = ANCHORAGE METROPOLITAN AREA TRANSPORTATION SOLUTIONS	MMA = METHYL METHACRYALTE
DOT&PF = ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES	MFH = MILES PER HOUR
APX./APPROX = APPROXIMATE	N = NORTH/NORTHING
AVE = AVENUE	N.T.S. = NOT TO SCALE
BLVD = BOULEVARD	N/A = NOT APPLICABLE
BM = BENCHMARK	OG = ORIGINAL GROUND (ELEV.)
BOP = BEGINNING OF PROJECT	PC = POINT OF CURVATURE
CB = CATCH BASIN	PCC = PORTLAND CEMENT CONCRETE
C/L, C = CENTERLINE	PI = POINT OF INTERSECTION
CS = CONTINGENT SUM	PL = PROPERTY LINE
CY = CUBIC YARD	PP = POWER POLE
D = DASH, DISTANCE	PT = POINT OF TANGENCY
DIA = DIAMETER	PC = POINT OF CURVATURE
DR = DRIVE	R = RADIUS (LENGTH)
DW = DETECTABLE WARNING	REQ'D = REQUIRED
E = EAST/EASTING	RD = ROAD
ELEC = ELECTRICAL	RP = RADIUS POINT
ELEV. = ELEVATION	RT = RIGHT
EOG = EDGE OF GRAVEL	RCW = RIGHT-OF-WAY
EOP = END OF PROJECT	S = SCUTH
EOP = EDGE OF PAVEMENT	SD = STORM DRAIN
EOS = EDGE OF SHOULDER	SE = SLOPE EASEMENT
ESMT = EASEMENT	SF = SQUARE FEET
FG - FINAL/FINISHED GRADE	SHLDR = SHOULDER
FL = FLOW LINE	SI = STREET INTERSECTION
FOC = FACE OF CURB	ST = STREET
FT = FEET	STA = STATION
F&I = FURNISH & INSTALL	T = TANGENT (LENGTH)
GB = GRADE BREAK	TBC = TOP BACK OF CURB
GS = GRAVITY SEWER	TBM = TEMPORARY BENCHMARK
GV = GATE VALVE	TCP = TEMPORARY CONSTRUCTION PERMIT
HWY = HIGHWAY	TELE = TELEPHONE
IOW = IN ACCORDANCE WITH	TL = TRANSITION LENGTH
INV = INVERT	TYP = TYPICAL
LF = LINEAR FOOT (FEET)	V.C. = VERTICAL CURVE
LOC = LIP OF CURB	V.P.C. = VERTICAL POINT OF CURVATURE
LT = LEFT	V.P.I. = VERTICAL POINT OF INTERSECTION
LS = LUMP SUM	V.P.T. = VERTICAL POINT OF TANGENCY
	W = WEST, WHITE

STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES

PLANS DEVELOPED BY: DIVISION OF PARKS AND OUTDOOR RECREATION

550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 - 907.269.8731

KENAI BRIDGE ACCESS ROAD

PATHWAY

PROJECT No. CFHWY00689

ABBREVIATIONS, SHEET LAYOUT AND GENERAL NOTES



PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: APRIL 2025

SHEET

A2

OF XX SHEETS

	EXISTING	PROPOSED
EDGE OF PAVEMENT		
LIMIT OF CUT SLOPE & FILL SLOPE		
GRAVEL EDGE		
SIDEWALK AND PATH/TRAIL		
CONCRETE CURB & GUTTER		
CONCRETE CURB CUT		
PARALLEL CURB RAMP		
PERPENDICULAR CURB RAMP		
UNIDIRECTIONAL CURB RAMP & MID-BLOCK CURB RAMP		
DETECTABLE WARNING TILE		
BRIDGE		
TUNNEL		
GUARDRAIL		
END & PARALLEL END SECTIONS		
ROADWAY OBLITERATION		
FENCE		
STONE FENCE		
NOISE BARRIER		
RETAINING WALL		
HEADWALL & WINGWALL		
BOTTOM OF DITCH		
SPECIAL DITCH		
FLAT BOTTOM DITCH		
BERM		
RIPRAP		
BOULDER OR BOULDERS		
PRIVATE SIGN, MAILBOX		
POST, BOLLARD		

	EXISTING	PROPOSED
STORM DRAIN		
STORM DRAIN MANHOLE, CLEANOUT		
CURB INLET CATCH BASIN		
FIELD INLET CATCH BASIN		
PIPE CULVERT WITH END SECTION		
SANITARY SEWER		
SANITARY SEWER MANHOLE, CLEANOUT		
SEPTIC VENT, SEWER SERVICE CONNECTION		
WATER		
FIRE HYDRANT, VALVE OR RISER		
WELL, WATER SERVICE CONNECTION		
NATURAL GAS		
OIL OR GASOLINE PIPELINE		
TANKS (ABOVE GROUND, UNDERGROUND)		
ELECTRIC		
UTILITY POLE, POLE WITH LUMINAIRE		
GUY POLE, GUY WIRE ANCHOR		
TRANSMISSION TOWER (WOOD, STEEL)		
ELECTRIC PEDESTAL, TRANSFORMER		
ELECTRIC MANHOLE, METER		
ELECTRIC OUTLET, LANDSCAPE LIGHT		
TELEPHONE		
TELEPHONE MANHOLE, PEDESTAL		
FIBER OPTIC		
FIBER OPTIC MANHOLE		
CABLE TV		
CABLE TV PEDESTAL, SATELLITE DISH		
UNDERGROUND DUCT, UTILIDOR (ELECTRIC, TELEPHONE, FIBER OPTIC)		
VENT		

	EXISTING	PROPOSED
LOAD CENTER		
STATE TRAFFIC, MOA TRAFFIC, & BEACON CONTROLLER		
ARROW INDICATES DOOR LOCATION		
TYPE 1A, II, III, IV JUNCTION BOX		
FIBER OPTIC VAULT		
ELECTROLIER		
HIGHTOWER		
SIGNAL POLE WITH MASTARM		
PEDESTRIAN PUSH BUTTON & SIGNAL		
VEHICULAR SIGNAL		
VEHICULAR SIGNAL LEFT & RIGHT		
OPTICAL, CAMERA, RADAR, AND GPS DETECTOR		
LOOP DETECTOR		
COMMUNICATION ANTENNA		
MASTARM BEACON		
RURAL & SCHOOL ZONE BEACON		
LOOP DETECTOR CONDUIT		
SIGNAL CONDUIT		
LIGHTING CONDUIT		
SIGNAL & LIGHTING CONDUIT		
CONDUIT BORING		
CONDUIT SIZE IN INCHES		
INTERCONNECT		
SIGN POST		

	RECOVERED	SET THIS PROJECT
FEDERAL GOV'T SURVEY MONUMENT		
GOV'T CONTROL STATION		
PRIMARY MONUMENT (BRASS/AL CAP)		
MISC SECONDARY CORNER		
PRIMARY CENTERLINE MONUMENT		
SECONDARY CENTERLINE MONUMENT		
RANDOM CONTROL MONUMENT		
PRIMARY GPS CONTROL POINT		
HORIZONTAL CONTROL POINT		
SECONDARY CONTROL POINT		
VERTICAL BENCHMARK		
TEMPORARY BENCHMARK		
TOWNSHIP AND RANGE LINES		
SECTION LINE		
1/4 SECTION LINE		
1/16 SECTION LINE		
CORPORATE or CITY LIMITS		
EXISTING RIGHT-OF-WAY		
RIGHT-OF-WAY OR EASEMENT REQUIRED		
PROJECT RIGHT-OF-WAY LINE		
EXISTING RIGHT-OF-WAY EASEMENT		
EXISTING PROPERTY LINE		
CONTROLLED ACCESS LINE		
EXISTING UTILITY EASEMENT		
PROPOSED UTILITY EASEMENT		
EXISTING CENTERLINE		
RAILROAD CENTERLINE		
TEMPORARY CONSTRUCTION EASEMENT		
TEMPORARY CONSTRUCTION PERMIT		

	EXISTING
LAKE OR POND, WETLANDS	
TREE (CONIFER/DECIDUOUS)	
TREELINE (EDGE OF VEGETATION)	
PLANTER	
BUILDING OR FOUNDATION	

	EXISTING	PROPOSED
CONTOUR, MAJOR OR MINOR		
DRAINAGE FLOW		
CREEK (CENTERLINE)		
RIVER (EDGE OF WATER)		

PAVEMENT MARKINGS

	PROPOSED
TRAFFIC PROJECT CENTERLINE	
8" & 4" WHITE SOLID STRIPE	
4" WHITE SKIP STRIPE	
10' STRIPES AND 30' SPACES	
8" WHITE LANE GUIDE SKIP	
LANE CONTINUATION OR TURN SKIP	
1' STRIPES AND 3' SPACES	
8" & 4" YELLOW SOLID STRIPE	
4" YELLOW SKIP STRIPE	
10' STRIPES AND 30' SPACES	
STRIPING CHANGE STATION INTERVAL	
2' CROSSWALK OR STOPBAR	
LADDER CROSSWALK LAYOUT	
2' WIDE RUNGS WITH 2' SPACES	
ALIGNED TO AVOID TIRE PATHS	
TYPICAL PAINTED MEDIAN	



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KENAI BRIDGE ACCESS ROAD

PATHWAY

PROJECT No. CFHWY00689

ABBREVIATIONS, SHEET

LAYOUT, AND GENERAL NOTES

ALASKA STATE PARKS

PREPARED: RCS

DRAWN: D&C

REVIEWED: D&C

DATE: APRIL 2025

SHEET

A3

OF XX SHEETS

SURVEY CONTROL TO BE COMPLETED BY
AKDOT&PF SURVEY SECTION PRIOR TO
ADVERTISEMENT

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KENAI BRIDGE ACCESS ROAD
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SURVEY CONTROL

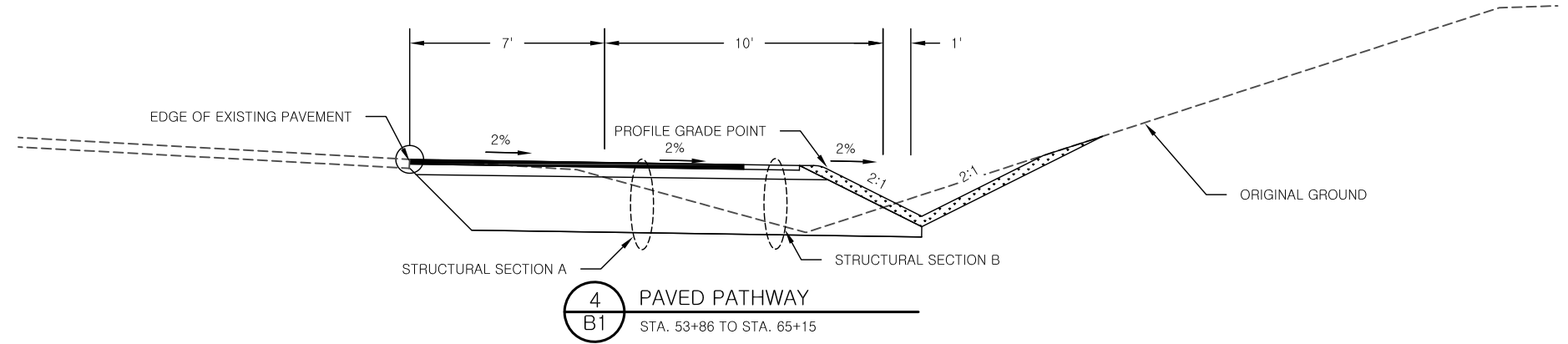
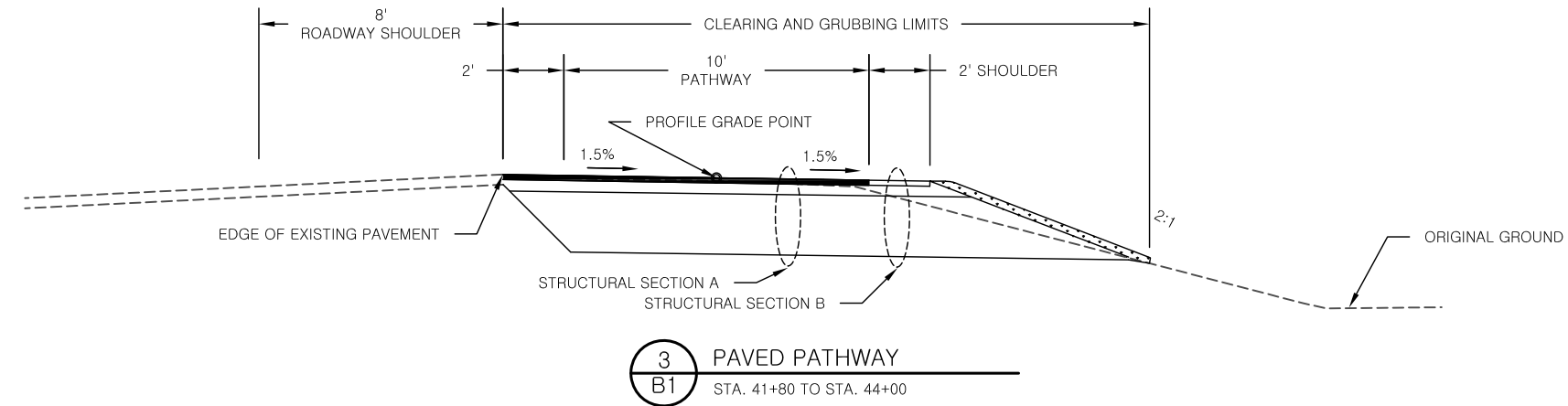
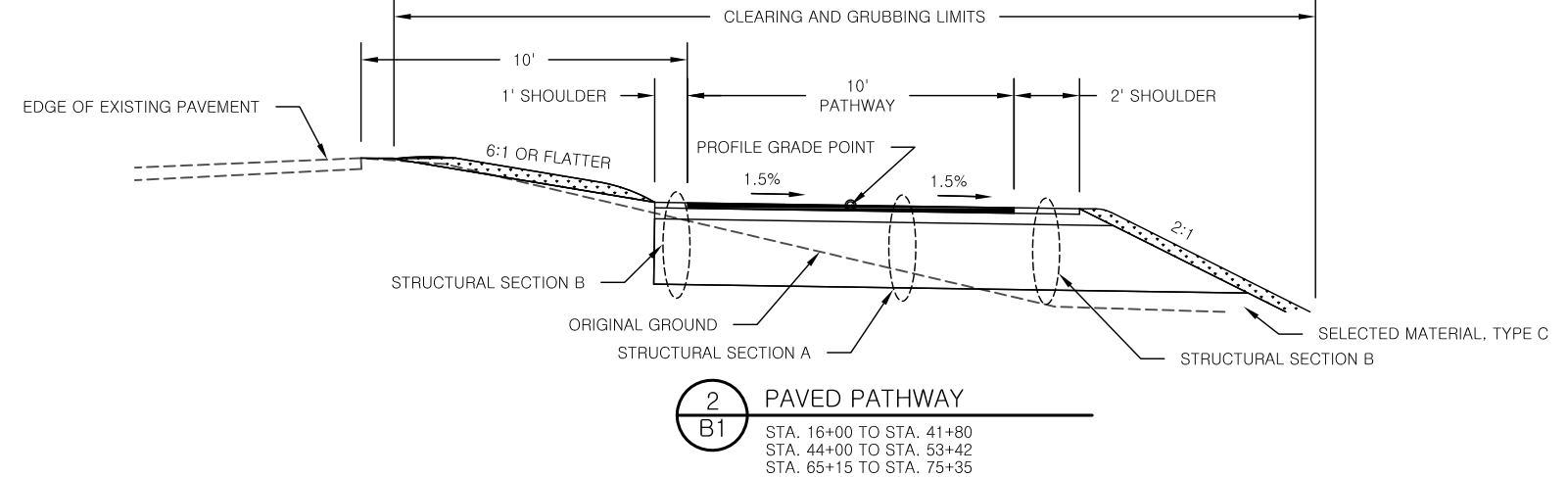
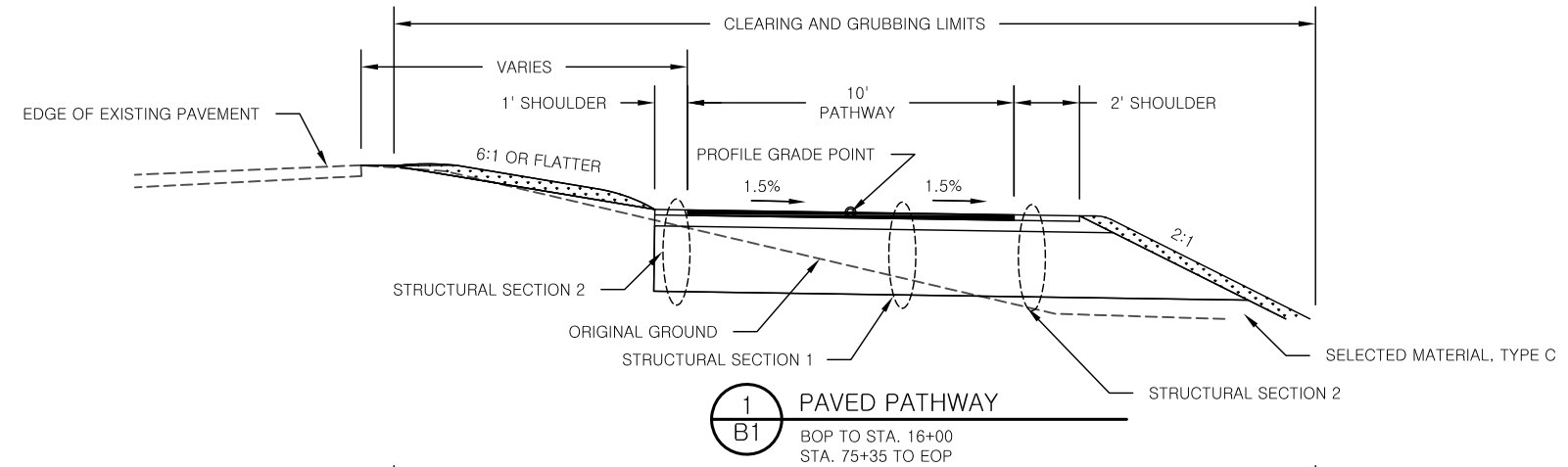


PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: APRIL 2025

SHEET

A3

OF XX SHEETS



STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
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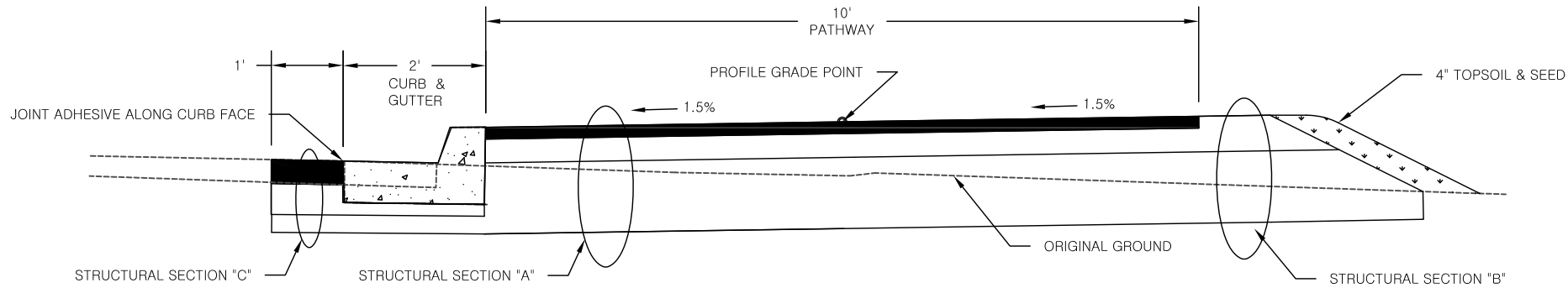
TYPICAL SECTIONS AND STRUCTURAL SECTIONS

KENAI BRIDGE ACCESS ROAD
PATHWAY
PROJECT No. CFHWY00689

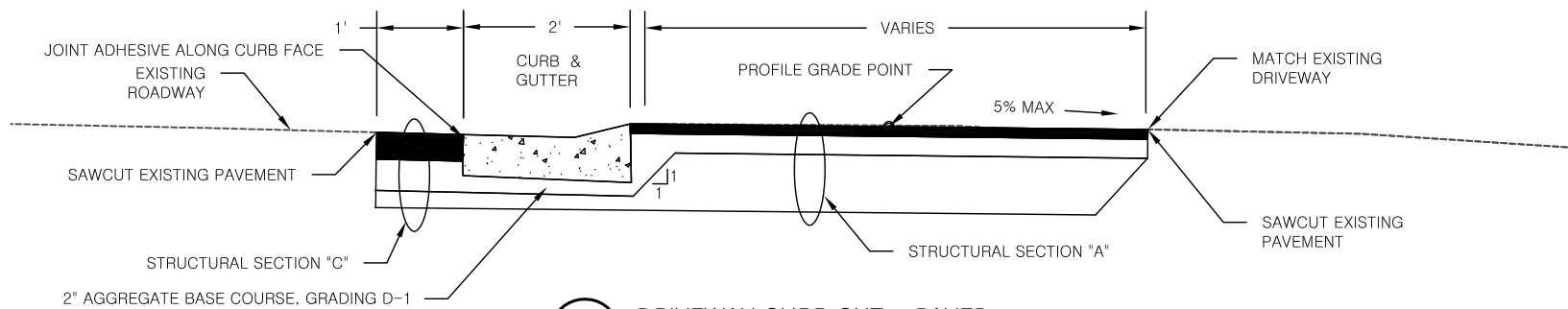


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REVIEWED: D&C
DATE: APRIL 2025

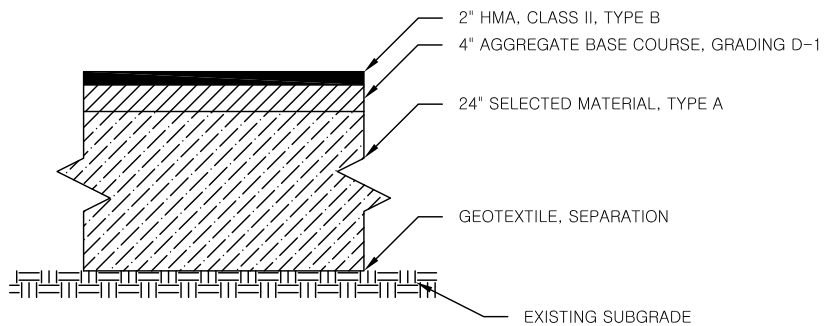
SHEET
B1
OF XX SHEETS



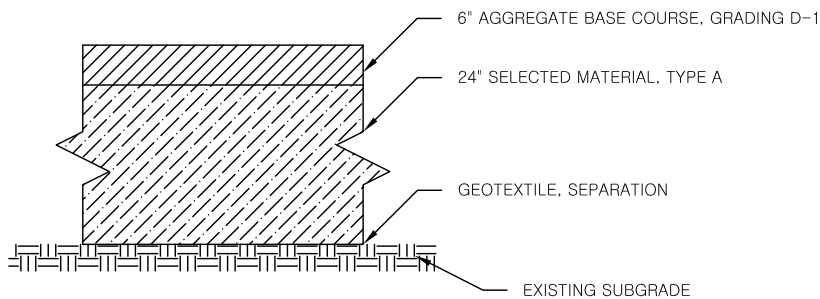
1 CURB AND GUTTER WITH PATHWAY
B2 STA. 29+71.95 TO 29+87 CL
STA. 36+05 TO 36+50 CL



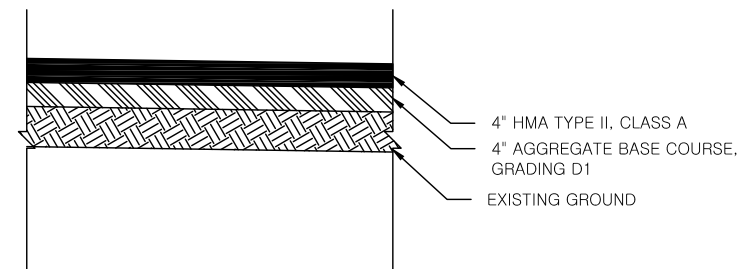
2 DRIVEWAY CURB CUT - PAVED
B2 STA. 33+66 TO 35+97.94



3 STRUCTURAL SECTION "A"
B2 DETAIL



4 STRUCTURAL SECTION "B"
B2 DETAIL



5 STRUCTURAL SECTION "C"
B2 DETAIL - ROADWAY



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KENAI BRIDGE ACCESS ROAD
PATHWAY
PROJECT No. CFHWY00689

TYPICAL SECTIONS AND STRUCTURAL
SECTIONS



PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: APRIL 2025

SHEET

B2

OF XX SHEETS

ESTIMATE OF QUANTITIES			
ITEM NO.	ITEM DESCRIPTION	PAY UNIT	TOTAL QUANTITY
201.0003.0000	CLEARING AND GRUBBING	ACRE	3.75
202.0001.0000	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	L.S.	ALL REQ'D
202.0002.0000	REMOVAL OF PAVEMENT	S.Y.	250
202.0004.0000	REMOVAL OF CULVERT PIPE	L.F.	386
202.0009.0000	REMOVAL OF CURB AND GUTTER	L.F.	82
203.0003.0000	UNCLASSIFIED EXCAVATION	C.Y.	6300
203.0006.000A	BORROW, TYPE A	TON	15350
301.0001.00D1	AGGREGATE BASE COURSE, GRADING D-1	TON	2115
603.0001.0024	CSP 24 INCH	L.F.	345
603.0003.0024	END SECTION FOR CSP 24 INCH	EACH	14
608.2002.0000	ASPHALT PATHWAY	TON	1000
609.0002.0001	CURB AND GUTTER, TYPE 1	L.F.	357
615.0001.0000	STANDARD SIGN	S.F.	33.00
615.0006.0000	SALVAGE SIGN	EACH	2
618.0002.0000	SEEDING	LB	80
620.0001.0000	TOPSOIL	S.Y.	9000
630.0001.0003	GEOTEXTILE, SEPARATION, CLASS 3	S.Y.	17500
639.2000.0000	APPROACH	EACH	12

ESTIMATE OF QUANTITIES			
ITEM NO.	ITEM DESCRIPTION	PAY UNIT	TOTAL QUANTITY
640.0001.0000	MOBILIZATION AND DEMOBILIZATION	L.S.	ALL REQ'D
640.0004.0000	WORKER MEALS AND LODGING, OR PER DIEM	L.S.	ALL REQ'D
641.0001.0000	EROSION, SEDIMENT, AND POLLUTION CONTROL ADMINISTRATION	L.S.	ALL REQ'D
641.0002.0000	TEMPORARY EROSION, SEDIMENT, AND POLLUTION CONTROL	C.S.	ALL REQ'D
641.0006.0000	WITHHOLDING	C.S.	ALL REQ'D
641.0007.0000	SWPPP MANAGER	L.S.	ALL REQ'D
642.0001.0000	CONSTRUCTION SURVEYING	L.S.	ALL REQ'D
642.0003.0000	THREE PERSON SURVEY PARTY	HOUR	25
643.0002.0000	TRAFFIC MAINTENANCE	L.S.	ALL REQ'D
643.0003.0000	PERMANENT CONSTRUCTION SIGNS	L.S.	ALL REQ'D
643.0023.0000	TRAFFIC PRICE ADJUSTMENT	C.S.	ALL REQ'D
643.0025.0000	TRAFFIC CONTROL	C.S.	ALL REQ'D
643.0032.0000	FLAGGING	C.S.	ALL REQ'D
644.0001.0000	FIELD OFFICE	L.S.	ALL REQ'D
644.2004.0000	ENGINEERING COMMUNICATIONS	C.S.	ALL REQ'D
646.0001.0000	CPM SCHEDULING	L.S.	ALL REQ'D
647.2002.0000	BACKHOE, 4WD, 1 CY BUCKET, 75-HP MINIMUM, 15 FT DEPTH	C.S.	ALL REQ'D
670.2008.0000	MMA PAVEMENT MARKINGS, TRANSVERSE AND GORE INLAID	L.S.	ALL REQ'D
682.2000.0000	VAC-TRUCK POTHOLE	C.S.	ALL REQ'D

ESTIMATING FACTORS		
ITEM NO.	ITEM DESCRIPTION	ESTIMATING FACTOR
203.0006.0000	BORROW, TYPE A	144 LB/C.F.
301.0001.00D1	AGGREGATE BASE COURSE, GRADING D-1	144 LB/C.F.
608.2002.0000	ASPHALT PATHWAY	151 LB/C.F.



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PATHWAY
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ESTIMATE OF QUANTITIES



PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: APRIL 2025

SHEET

C1
OF XX SHEETS

ITEM NO. 202.0002.0000 REMOVAL OF PAVEMENT							
SHEET	FROM		TO		AREA (S.F.)	AREA (S.Y.)	REMARKS
	STATION	OFFSET	STATION	OFFSET			
F2	15+60	CL	16+67	CL	2011	224	DRIVEWAY
F2	17+68	CL	18+50	CL	1805	201	DRIVEWAY
F2	20+00	CL	20+34	CL	125	14	DRIVEWAY
F2	21+46	CL	21+78	CL	116	13	DRIVEWAY
F3	25+83	CL	26+44	CL	990	110	DRIVEWAY
F6	43+53	CL	44+10	CL	539	60	DRIVEWAY
F6	45+41	CL	45+96	CL	224	25	DRIVEWAY
F8	53+19	CL	54+01	CL	1568	175	DRIVEWAY
F10	65+09	CL	65+35	CL	92	11	DRIVEWAY
F10	67+80	CL	68+70	CL	1933	215	TERN AVE.
F11	74+74	CL	74+51	CL	1012	113	BUSINESS ENTRANCE
F12	75+95	CL	76+65	CL	952	106	BUSINESS ENTRANCE
F12	74+08	9' L	77+63	9' L	1304	145	BRIDGE ACCESS ROAD
					TOTAL	1412	

ITEM NO. 639.2000.0000 APPROACH							
SHEET	FROM		TO			QUANTITY	REMARKS
	STATION	OFFSET	STATION	OFFSET			
F2	15+60	CL	16+67	CL		1	DRIVEWAY
F2	17+68	CL	18+50	CL		1	DRIVEWAY
F2	20+00	CL	20+34	CL		1	DRIVEWAY
F2	21+46	CL	21+78	CL		1	DRIVEWAY
F3	25+83	CL	26+44	CL		1	DRIVEWAY
F6	43+53	CL	44+10	CL		1	DRIVEWAY
F6	45+41	CL	45+96	CL		1	DRIVEWAY
F8	53+19	CL	54+01	CL		1	DRIVEWAY
F10	65+09	CL	65+35	CL		1	DRIVEWAY
F10	67+80	CL	68+70	CL		1	TERN AVE.
F11	74+74	CL	74+51	CL		1	BUSINESS ENTRANCE
F12	75+95	CL	76+65	CL		1	BUSINESS ENTRANCE
F12	74+08	9' L	77+63	9' L		1	BRIDGE ACCESS ROAD
					TOTAL	12	

ITEM NO. 603.0003.0024 CSP 24 INCH						
SHEET	FROM		TO		LENGTH (L.F.)	REMARKS
	STATION	OFFSET	STATION	OFFSET		
F8	27+18	L	27+18	R	17	CULVERT ENDS
				TOTAL	17	

ITEM NO. 202.0009.0000 REMOVAL OF CURB AND GUTTER						
SHEET	FROM		TO		LENGTH (L.F.)	REMARKS
	STATION	OFFSET	STATION	OFFSET		
F12	76+81	9' L	77+63	9' L	82	BRIDGE ACCESS ROAD
				TOTAL	327	

ITEM NO. 202.0004.0000 REMOVAL OF CULVERT PIPE				
SHEET				
	STATION	CULVERT SIZE	QUANTITY (L.F.)	REMARKS
F2	32+85	18"	56	
F2	33+67	18"	30	
F2	33+67	18"	31	
F3	33+67	24"	69	
F6	33+67	24"	54	
F8	33+67	24"	50	
F10	33+67	18"	35	
F10	33+67	24"	61	
		TOTAL	386	

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KENAI BRIDGE ACCESS ROAD
PATHWAY
PROJECT No. CFHWY00689

SUMMARY TABLE



PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: APRIL 2025

SHEET

D1

OF XX SHEETS

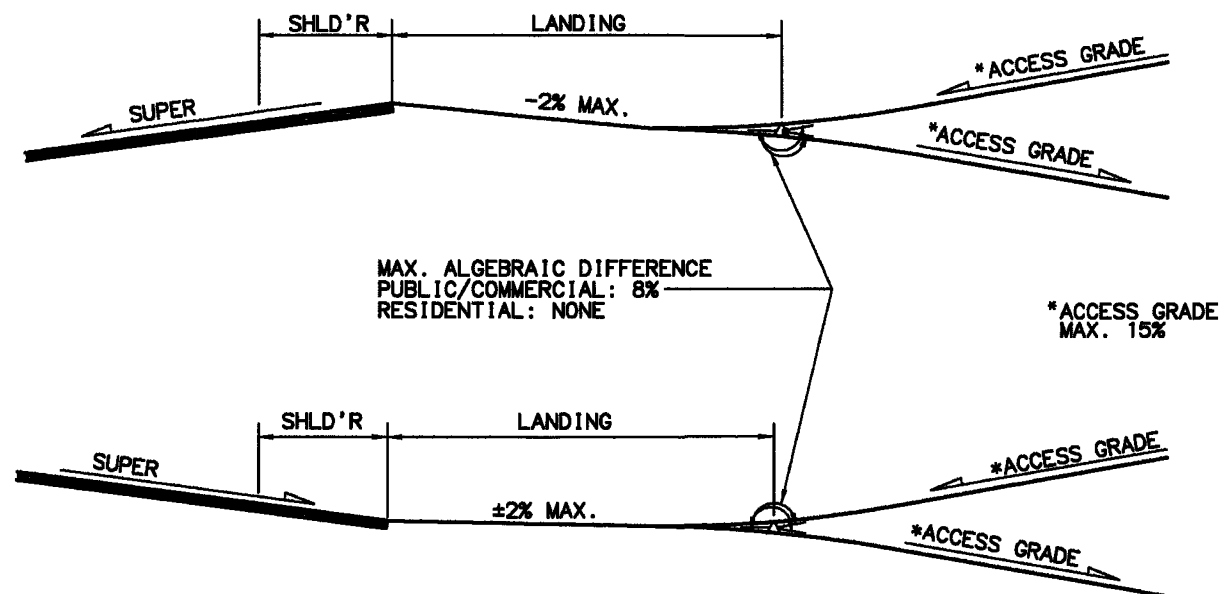


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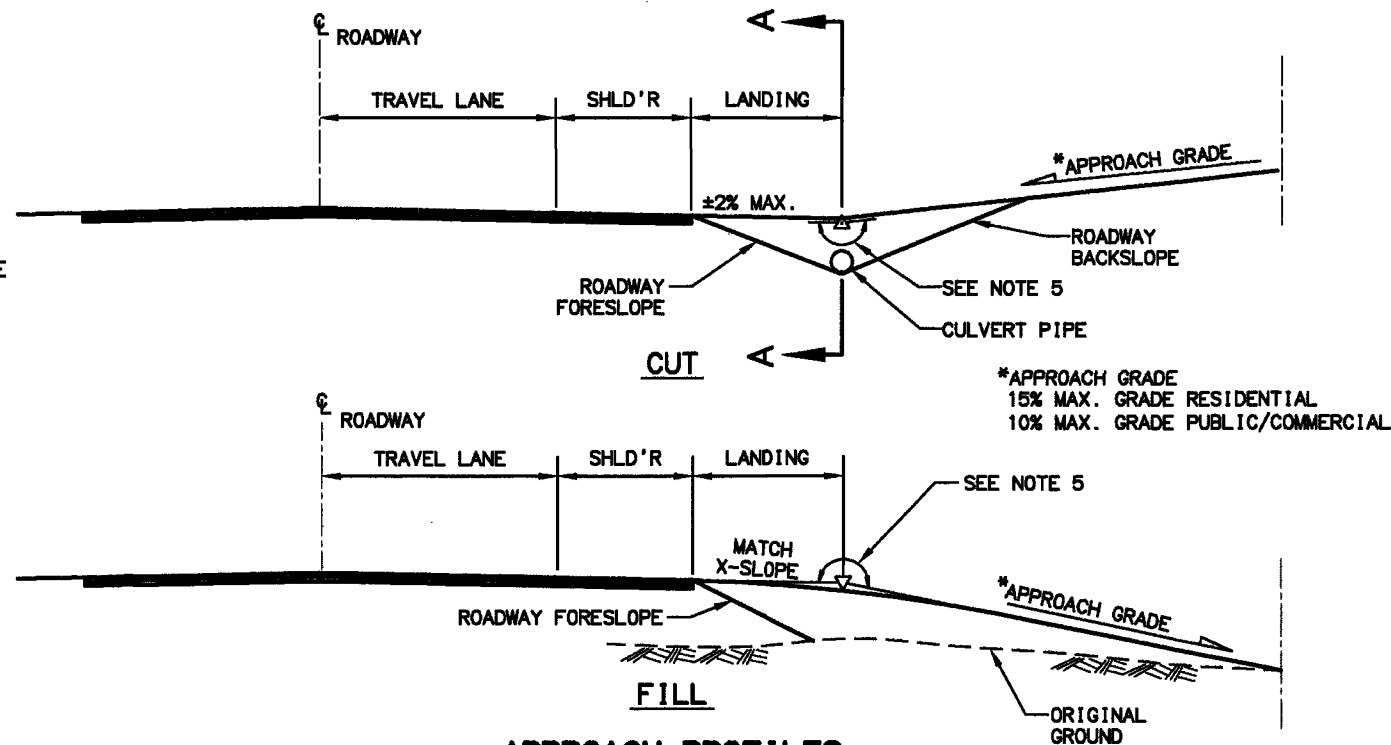
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E1

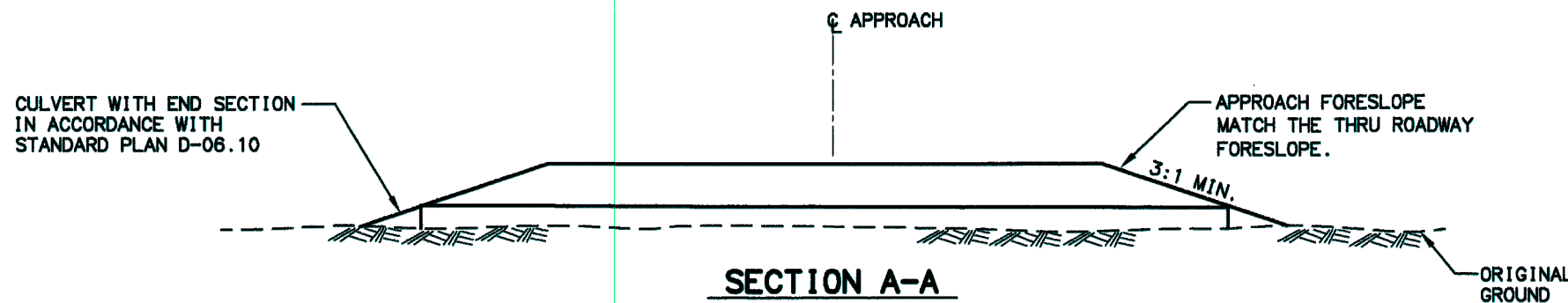
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APPROACH PROFILES ON SUPER
 ELEVATED ROADWAY



APPROACH PROFILES



SECTION A-A
 APPROACH TYPICAL

NOTES:

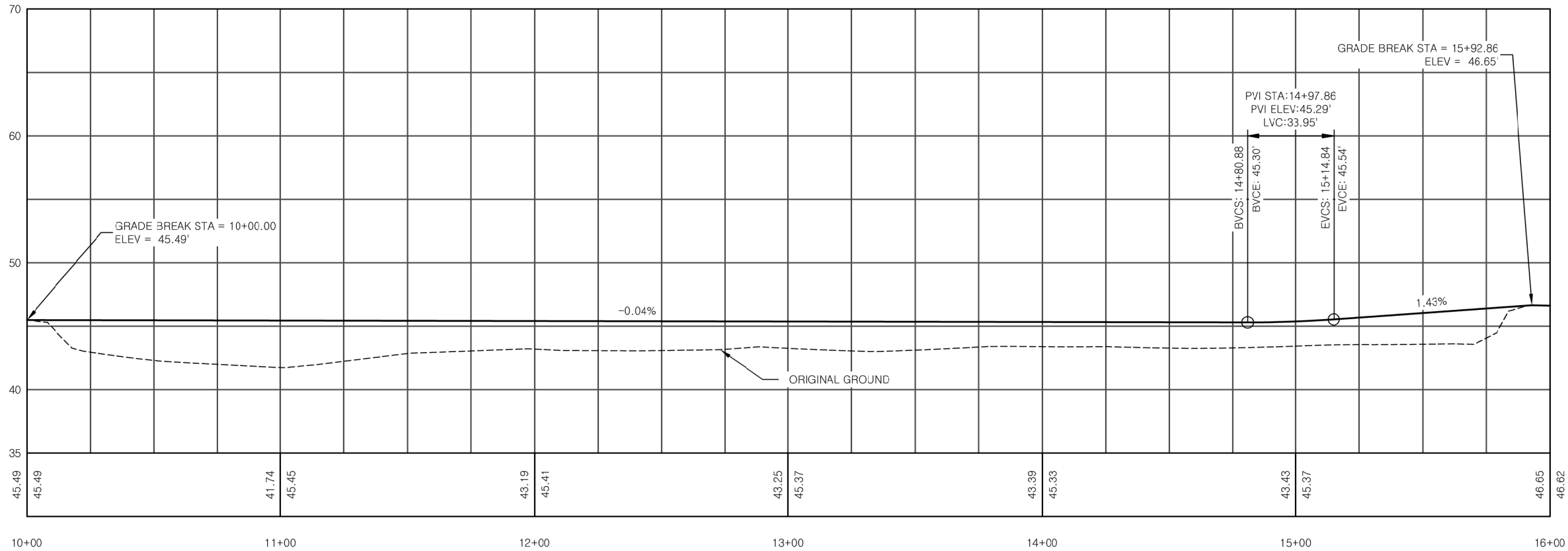
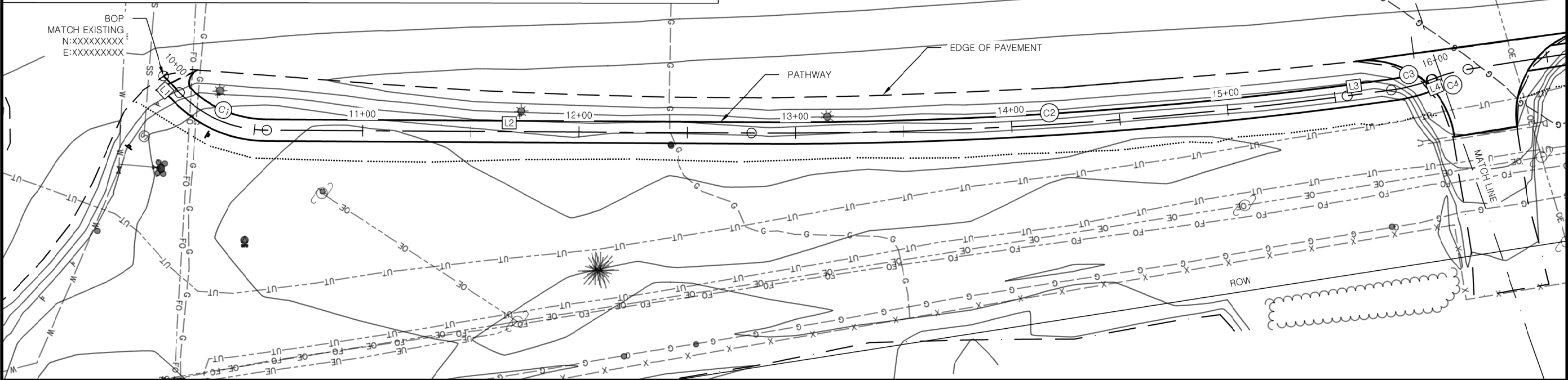
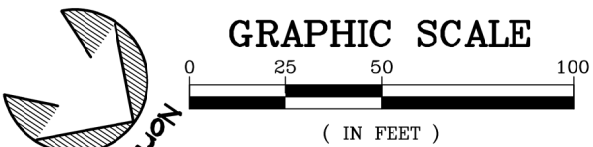
1. SEE APPROACH SUMMARY (D7 & D8) FOR APPROACH STATION, LENGTH, WIDTH, SKEW ANGLE, LANDING LENGTH AND TYPE.
2. SEE PIPE SUMMARY (D4 & D5) FOR CULVERT PIPE SIZE, LENGTH, AND PLACEMENT.
3. THE PAVED PORTION OF THE APPROACH STRUCTURAL SECTION SHALL BE CONSTRUCTED OF THE SAME MATERIAL AS THE ROADWAY STRUCTURAL SECTION UNLESS A SEPARATE TYPICAL SECTION IS INCLUDED IN THE PLANS COVERING APPROACHES.
4. PAVE TO THE END OF THE RADIUS RETURN UNLESS OTHERWISE INDICATED IN THE PLANS.
5. MAXIMUM ALGEBRAIC DIFFERENCE FOR A PUBLIC/COMMERCIAL APPROACH IS 8%.
6. SEE APPROACH PLAN & PROFILE "F" SHEETS FOR APPROACH VERTICAL CURVE REQUIREMENTS. APPROACH VERTICAL CURVE REQUIREMENTS IF MINIMUM NOT SPECIFIED: CREST - 2 1/2" MAXIMUM IN A 10-FOOT CHORD. SAG - 2" MAXIMUM IN A 10-FOOT CHORD.





HORIZONTAL LINE DATA		
LINE #	LENGTH	DIRECTION
L1	10.59'	N12° 04' 17.42"E
L2	224.02'	N34° 03' 06.31"W
L3	20.66'	N41° 51' 55.24"W
L4	0.46'	N56° 24' 10.49"W

HORIZONTAL CURVE DATA					
CURVE #	PC STA	PT STA	RADIUS	LENGTH	DELTA
C1	10+10.59	10+55.67	56.00'	45.08'	46.1233°
C2	12+79.68	15+55.65	2023.65'	275.97'	7.8136°
C3	15+76.31	15+95.34	75.00'	19.03'	14.5376°
C4	15+95.80	16+13.05	75.00'	17.25'	13.1755°



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550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 - 907.269.8731

KENAI BRIDGE ACCESS ROAD
PATHWAY
PROJECT No. CFHWY00689

PLAN AND PROFILE
STA. 10+00 TO STA. 16+00



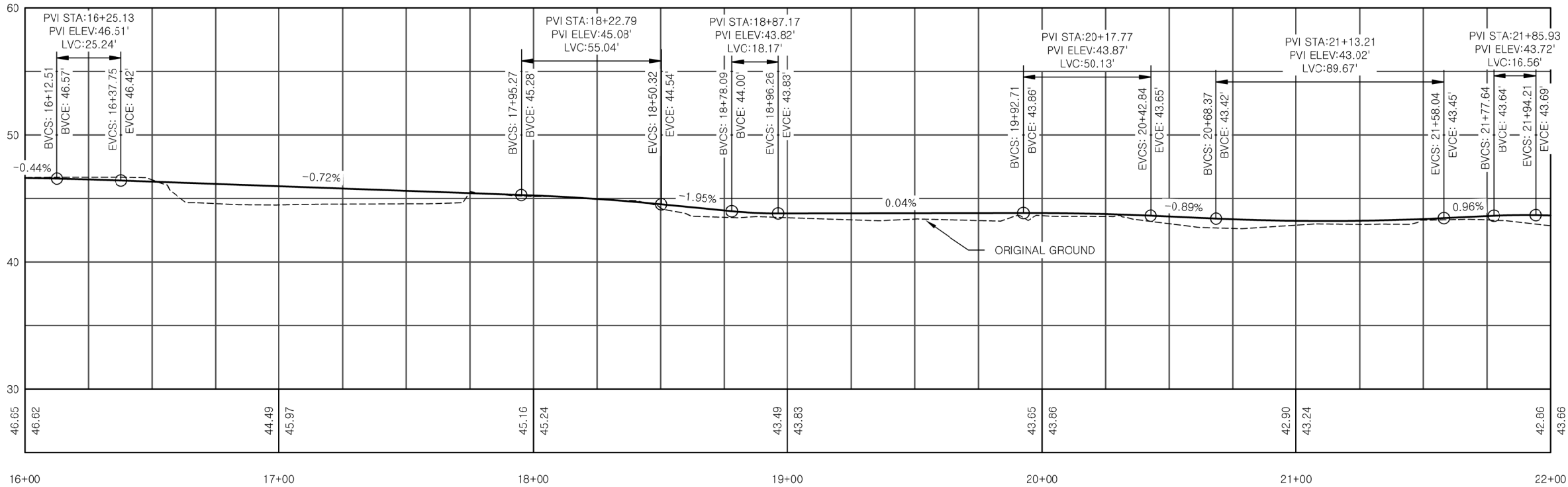
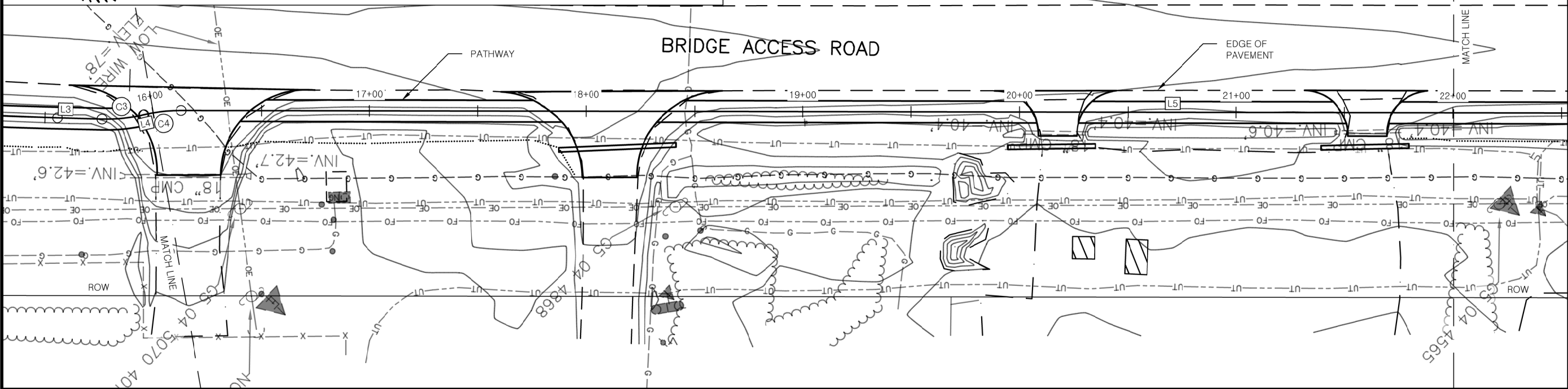
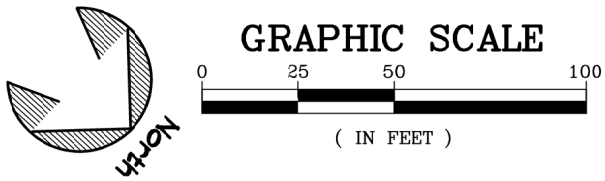
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SHEET
F1
OF XX SHEETS



HORIZONTAL LINE DATA		
LINE #	LENGTH	DIRECTION
L3	20.66'	N41° 51' 55.24"W
L4	0.46'	N56° 24' 10.49"W
L5	915.35'	N43° 13' 38.86"W

HORIZONTAL CURVE DATA						
CURVE #	PC STA	PT STA	RADIUS	LENGTH	DELTA	
C3	15+76.31	15+95.34	75.00'	19.03'	14.5376°	
C4	15+95.80	16+13.05	75.00'	17.25'	13.1755°	



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SHEET
F2
OF XX SHEETS

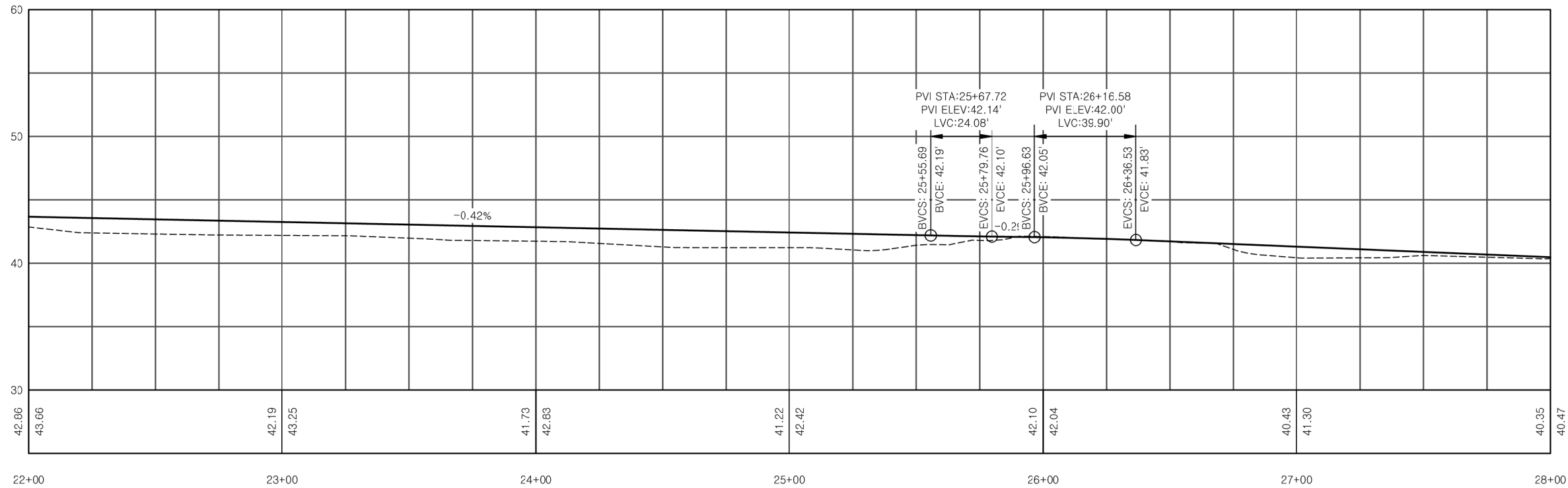
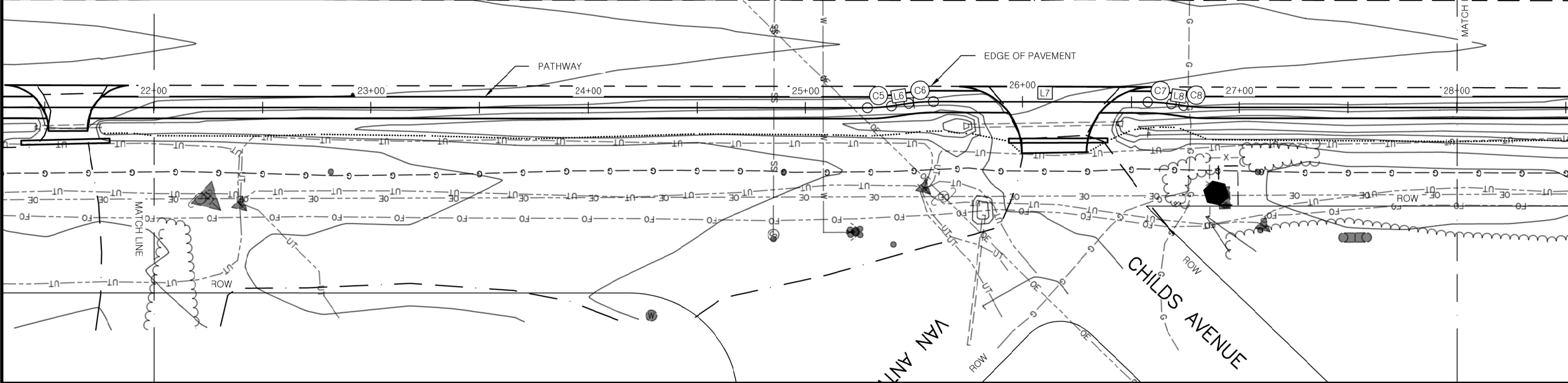
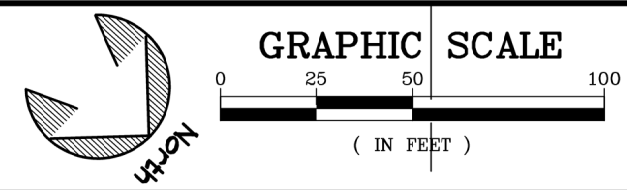
KENAI BRIDGE ACCESS ROAD
PATHWAY
PROJECT No. CFHWY00689

PLAN AND PROFILE
STA. 16+00 TO STA. 22+00



HORIZONTAL LINE DATA		
LINE #	LENGTH	DIRECTION
L6	8.08'	N51° 46' 44.97"W
L7	98.73'	N43° 07' 10.15"W
L8	5.63'	N34° 50' 04.87"W

HORIZONTAL CURVE DATA						
CURVE #	PC STA	PT STA	RADIUS	LENGTH	DELTA	
C5	25+26.40	25+39.59	75.00'	11.19	8.5517°	
C6	25+47.67	25+59.01	75.00'	11.34	8.6597°	
C7	26+57.74	26+68.59	75.00'	10.84	8.2848°	
C8	26+74.22	26+85.21	75.00'	10.99	8.3957°	



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KENAI BRIDGE ACCESS ROAD
PATHWAY
PROJECT No. CFHWY00689

PLAN AND PROFILE
STA. 22+00 TO STA. 28+00

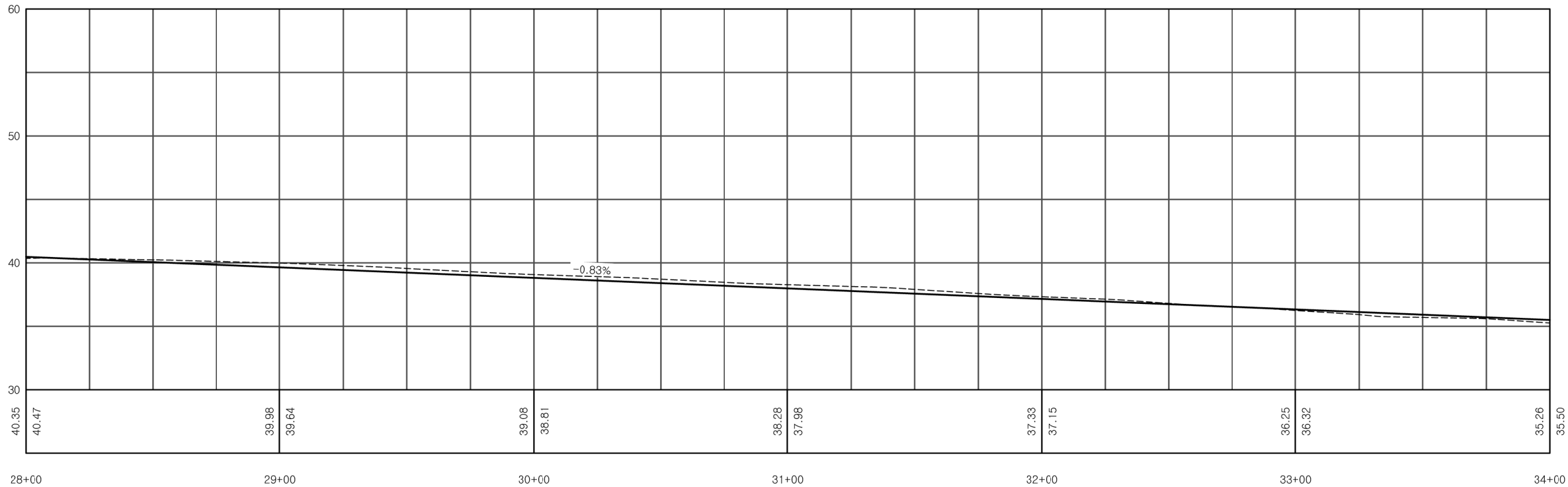
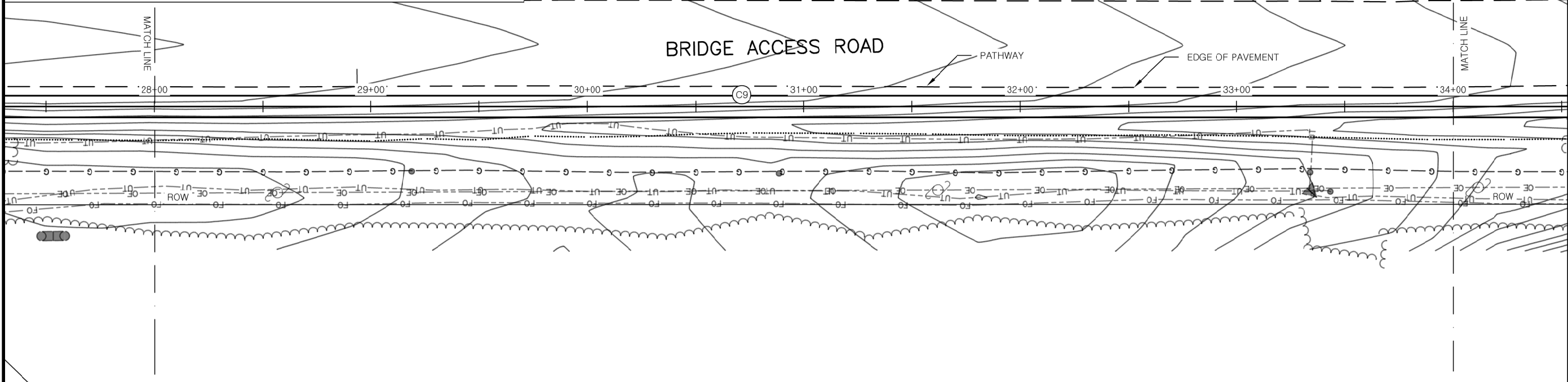
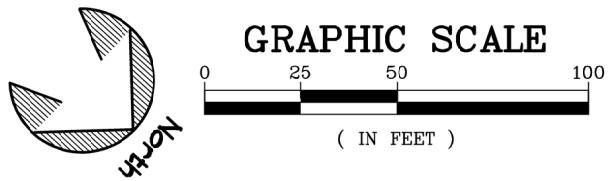


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SHEET
F3
OF XX SHEETS



HORIZONTAL CURVE DATA					
CURVE #	PC STA	PT STA	RADIUS	LENGTH	DELTA
C9	26+85.21	34+57.61	73716609.14'	772.40'	0.0006°



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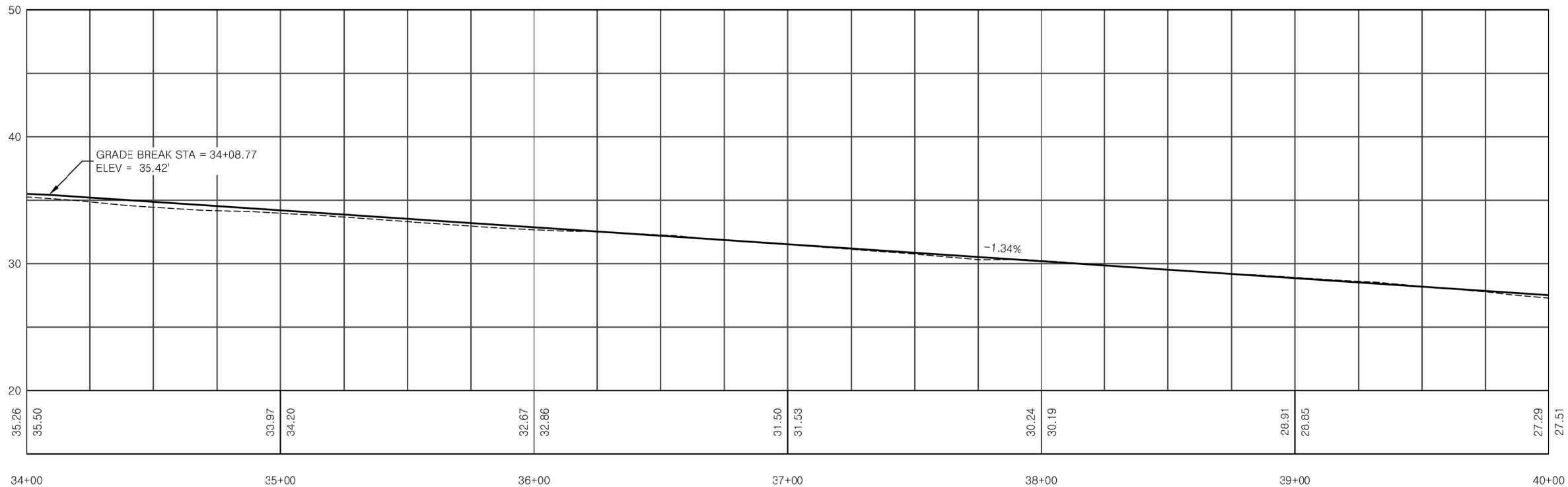
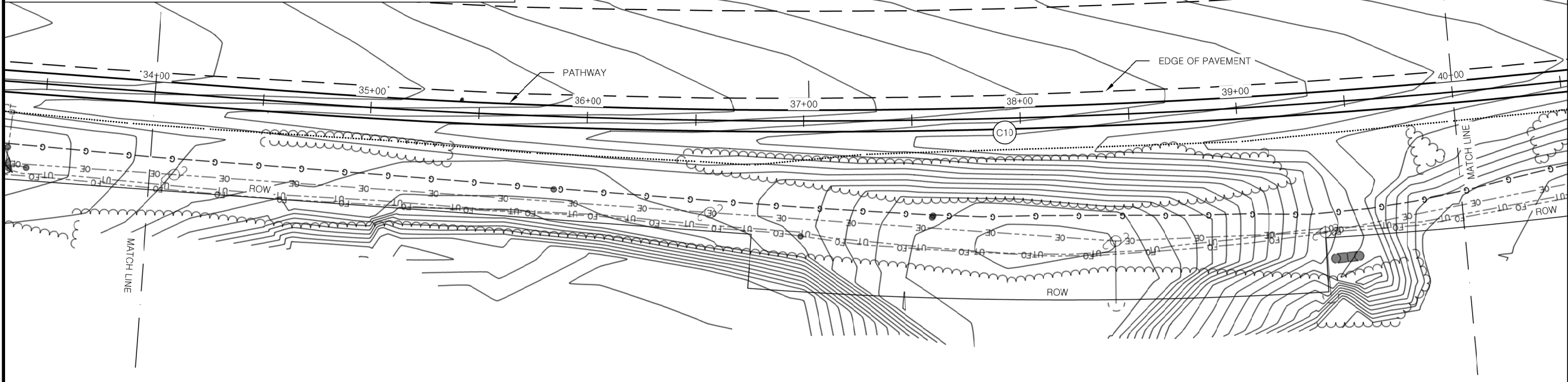
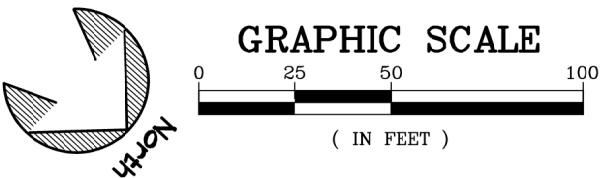
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F4
OF XX SHEETS

KENAI BRIDGE ACCESS ROAD
PATHWAY
PROJECT No. CFHWY00689

PLAN AND PROFILE
STA. 28+00 TO STA. 34+00



HORIZONTAL CURVE DATA					
CURVE #	PC STA	PT STA	RADIUS	LENGTH	DELTA
C10	34+57.61	41+27.85	3300.00'	670.24'	11.6369°



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KENAI BRIDGE ACCESS ROAD
PATHWAY
PROJECT No. CFHWY00689

PLAN AND PROFILE
STA. 34+00 TO STA. 40+00



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DRAWN: D&C
REVIEWED: D&C
DATE: APRIL 2025

SHEET

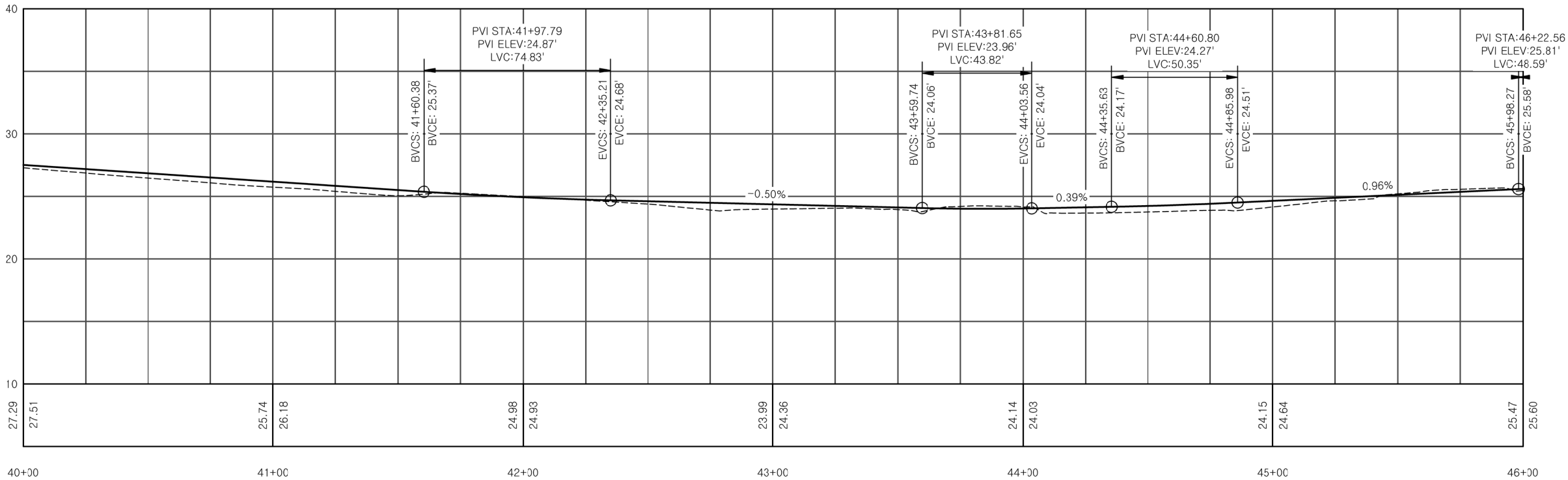
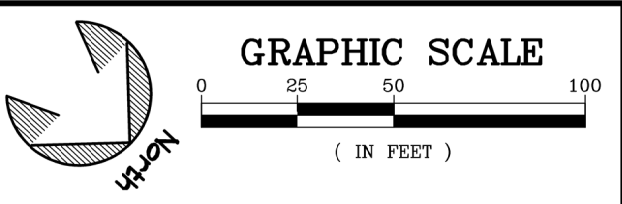
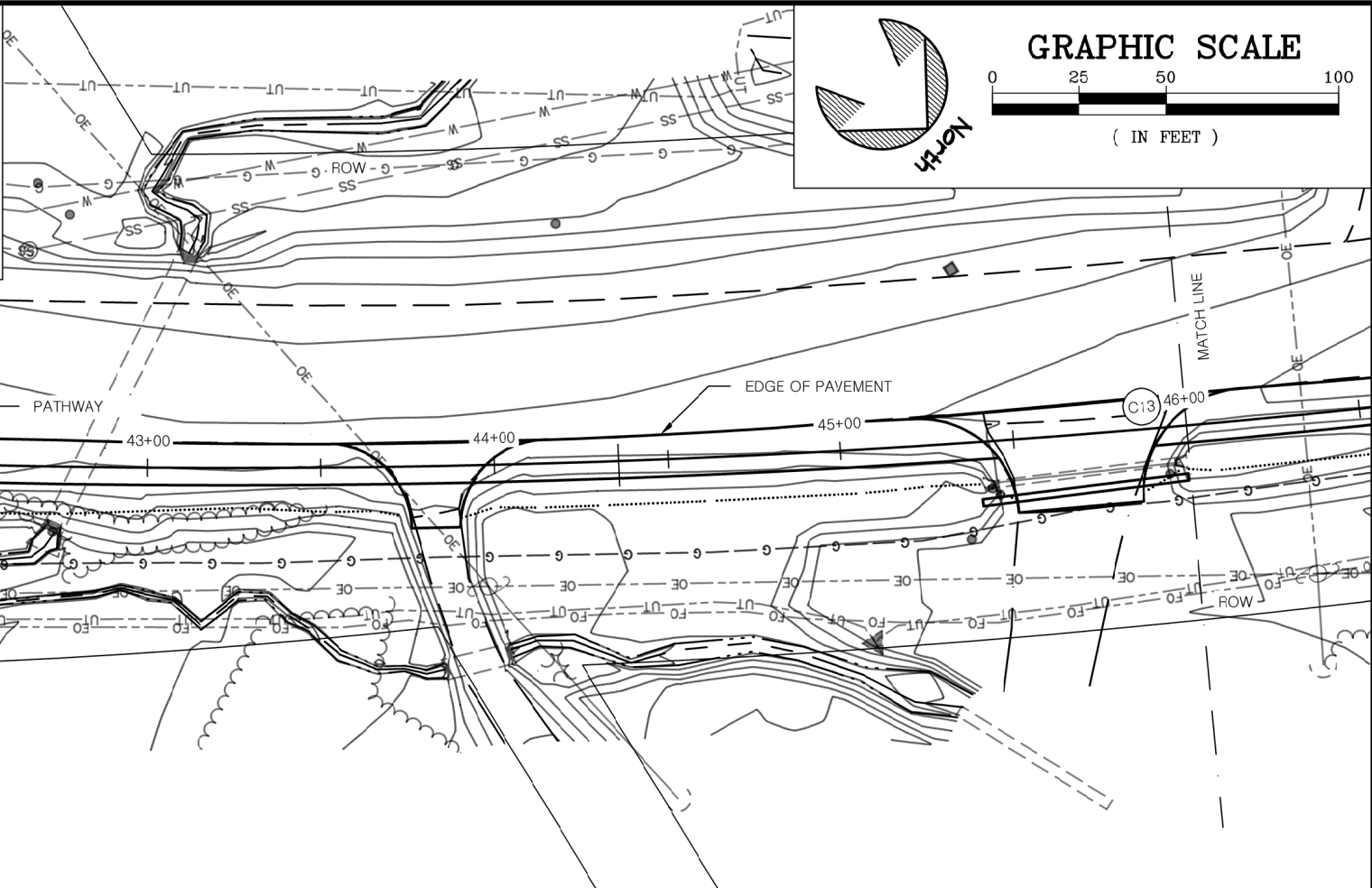
F5

OF XX SHEETS



HORIZONTAL LINE DATA		
LINE #	LENGTH	DIRECTION
L9	17.91'	N54° 52' 00.13"W
L10	14.82'	N62° 24' 53.68"W
L11	3.40'	N55° 20' 51.84"W

HORIZONTAL CURVE DATA						
CURVE #	PC STA	PT STA	RADIUS	LENGTH	DELTA	
C11	41+45.77	41+55.65	75.00'	9.88'	7.5482°	
C12	41+70.47	41+79.72	75.00'	9.25'	7.0672°	
C13	41+83.11	49+92.04	3100.00'	808.93'	14.9511°	



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SHEET
F6
OF XX SHEETS

KENAI BRIDGE ACCESS ROAD
PATHWAY
PROJECT No. CFHWY00689

PLAN AND PROFILE
STA. 40+00 TO STA. 46+00

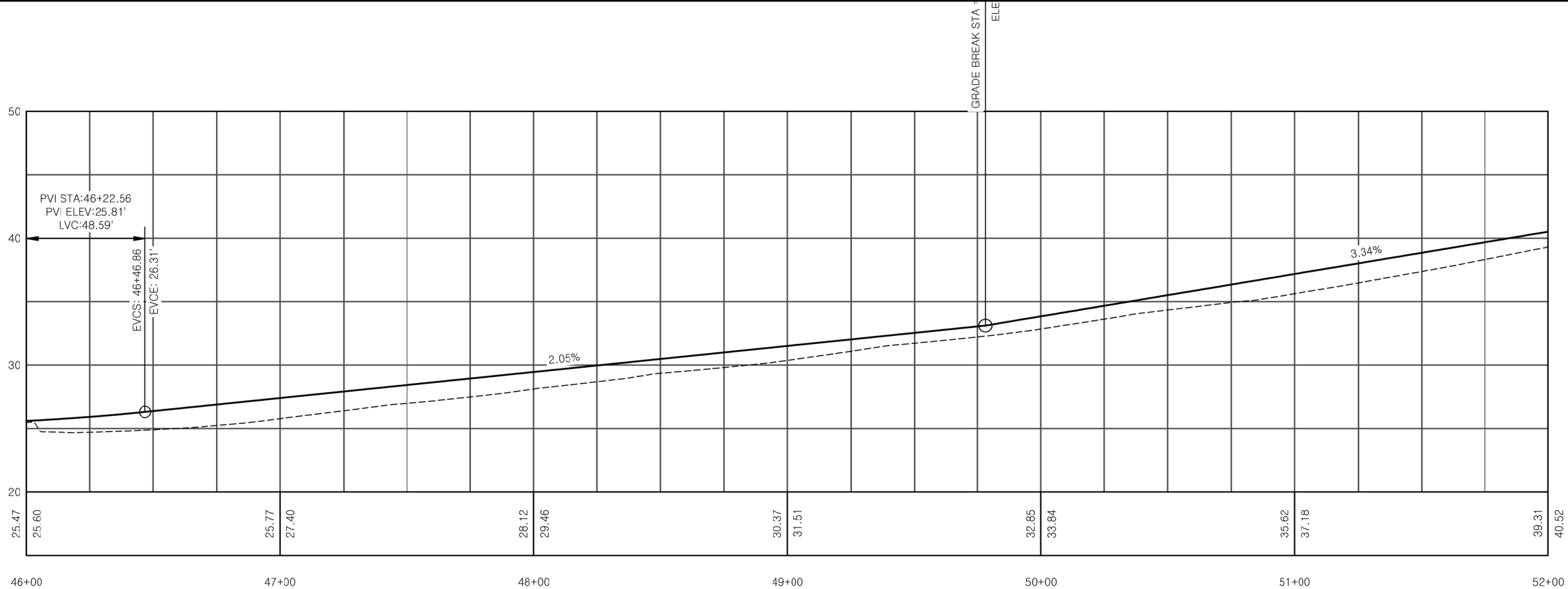
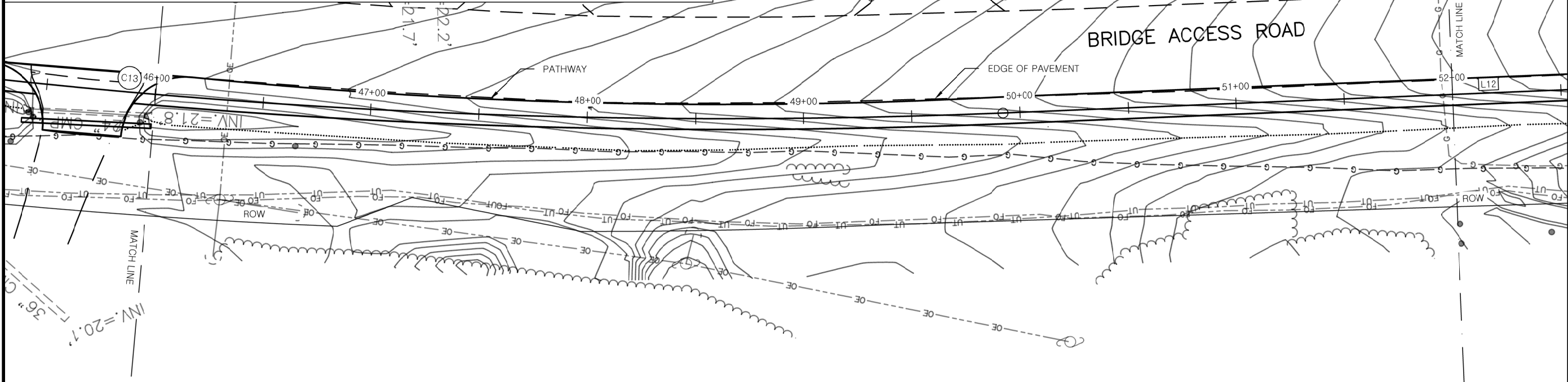
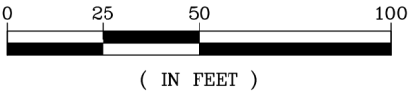


HORIZONTAL LINE DATA		
LINE #	LENGTH	DIRECTION
L12	449.70'	N70° 17' 55.65"W

HORIZONTAL CURVE DATA					
CURVE #	PC STA	PT STA	RADIUS	LENGTH	DELTA
C13	41+83.11	49+92.04	3100.00'	808.93'	14.9511°



GRAPHIC SCALE



STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
PLANS DEVELOPED BY: DIVISION OF PARKS AND OUTDOOR RECREATION
550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 - 907.269.8731



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SHEET

F7

OF XX SHEETS

KENAI BRIDGE ACCESS ROAD
PATHWAY
PROJECT No. CFHWY00689

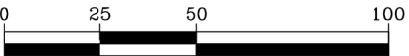
PLAN AND PROFILE
STA. 46+00 TO STA. 52+00



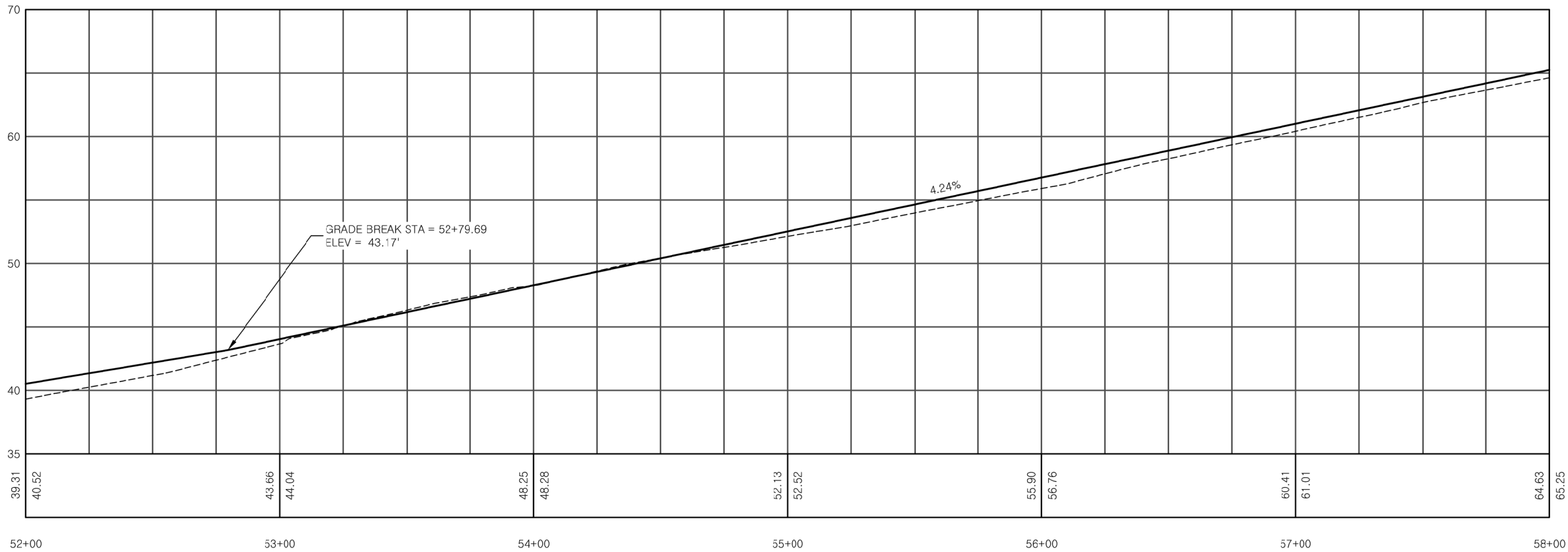
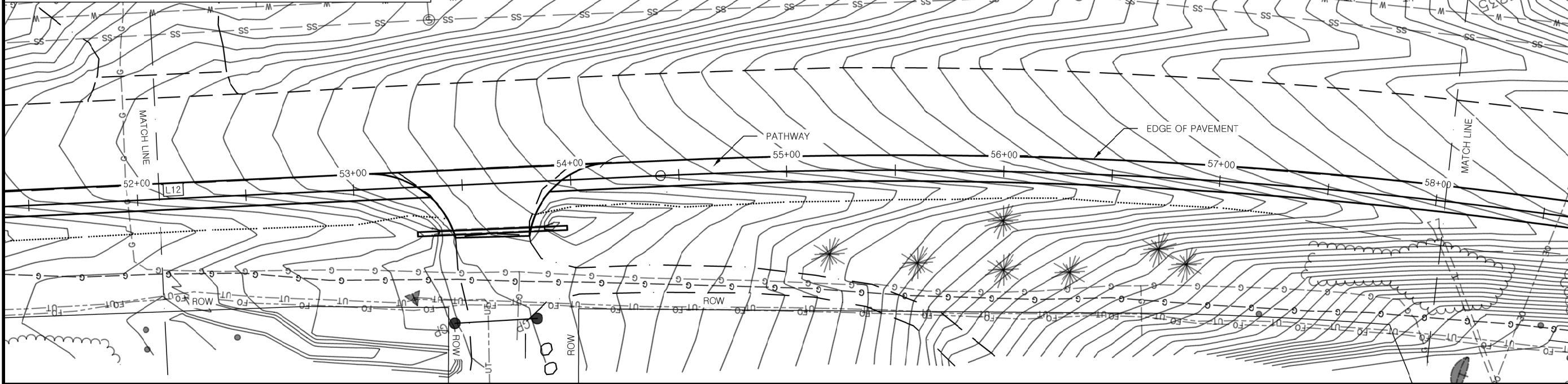
HORIZONTAL LINE DATA		
LINE #	LENGTH	DIRECTION
L12	449.70'	N70° 17' 55.65"W



GRAPHIC SCALE



(IN FEET)



STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
PLANS DEVELOPED BY: DIVISION OF PARKS AND OUTDOOR RECREATION
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KENAI BRIDGE ACCESS ROAD
PATHWAY
PROJECT No. CFHWY00689

PLAN AND PROFILE
STA. 52+00 TO STA. 58+00



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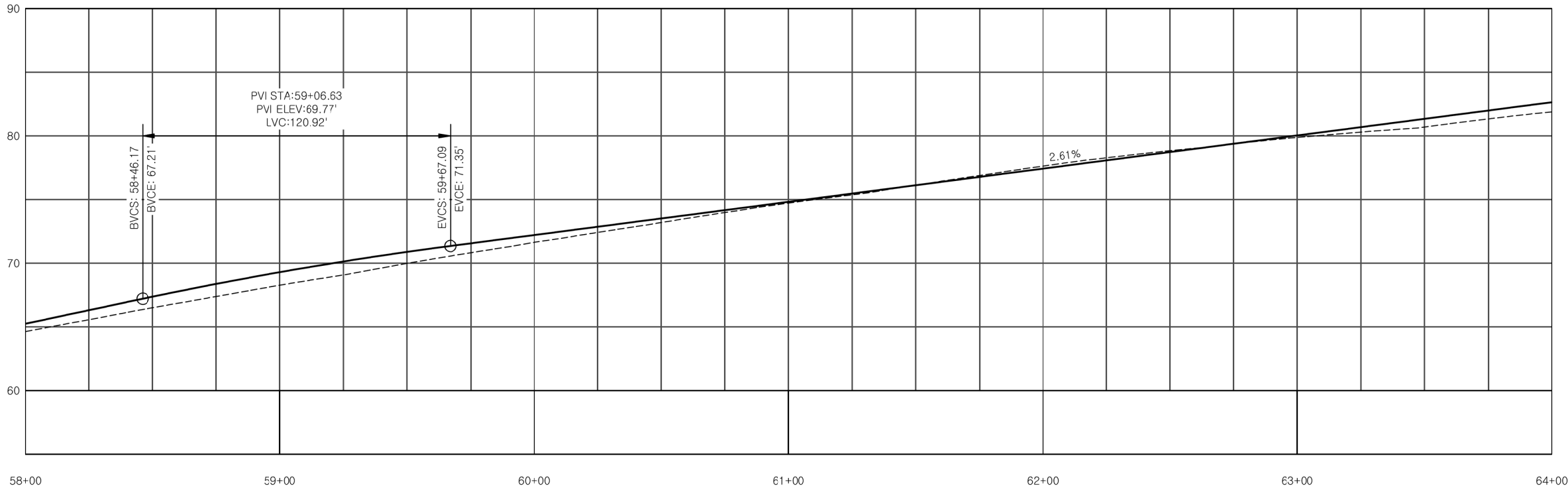
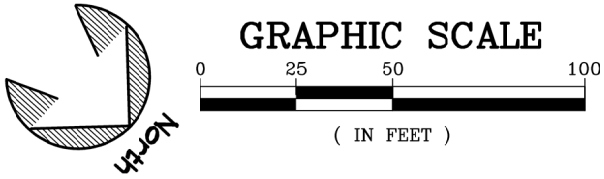
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F8

OF XX SHEETS



HORIZONTAL CURVE DATA					
CURVE #	PC STA	PT STA	RADIUS	LENGTH	DELTA
C14	54+41.74	65+03.36	2271.00'	1061.61'	26.7838°



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KENAI BRIDGE ACCESS ROAD
PATHWAY
PROJECT No. CFHWY00689

PLAN AND PROFILE
STA. 58+00 TO STA. 64+00



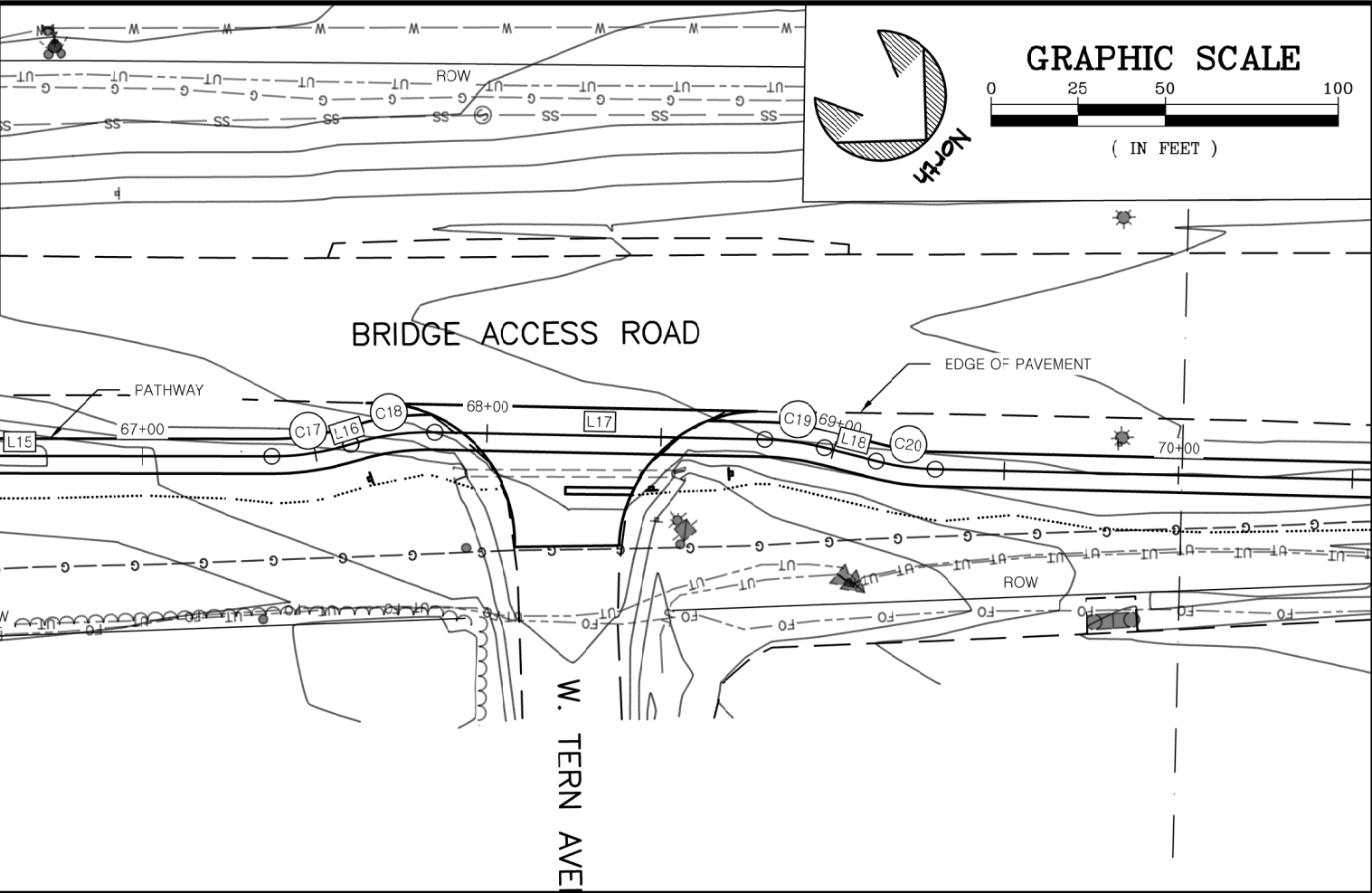
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SHEET
F9
OF XX SHEETS



HORIZONTAL LINE DATA		
LINE #	LENGTH	DIRECTION
L13	29.19'	N43° 30' 54.14"W
L14	30.94'	N30° 20' 10.37"W
L15	144.98'	N39° 12' 29.38"W
L16	0.12'	N56° 45' 17.87"W
L17	95.12'	N38° 02' 57.32"W
L18	15.35'	N24° 47' 00.95"W

HORIZONTAL CURVE DATA						
CURVE #	PC STA	PT STA	RADIUS	LENGTH	DELTA	
C15	65+32.54	65+49.79	75.00'	17.25	13.1788°	
C16	65+80.74	65+92.35	75.00'	11.61	8.8719°	
C17	67+37.33	67+60.30	75.00'	22.97	17.5468°	
C18	67+60.42	67+84.91	75.00'	24.49	18.7057°	
C19	68+80.03	68+97.40	75.00'	17.36	13.2657°	
C20	69+12.75	69+29.90	75.00'	17.15	13.1028°	



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KENAI BRIDGE ACCESS ROAD
PATHWAY
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PLAN AND PROFILE
STA. 64+00 TO STA. 70+00

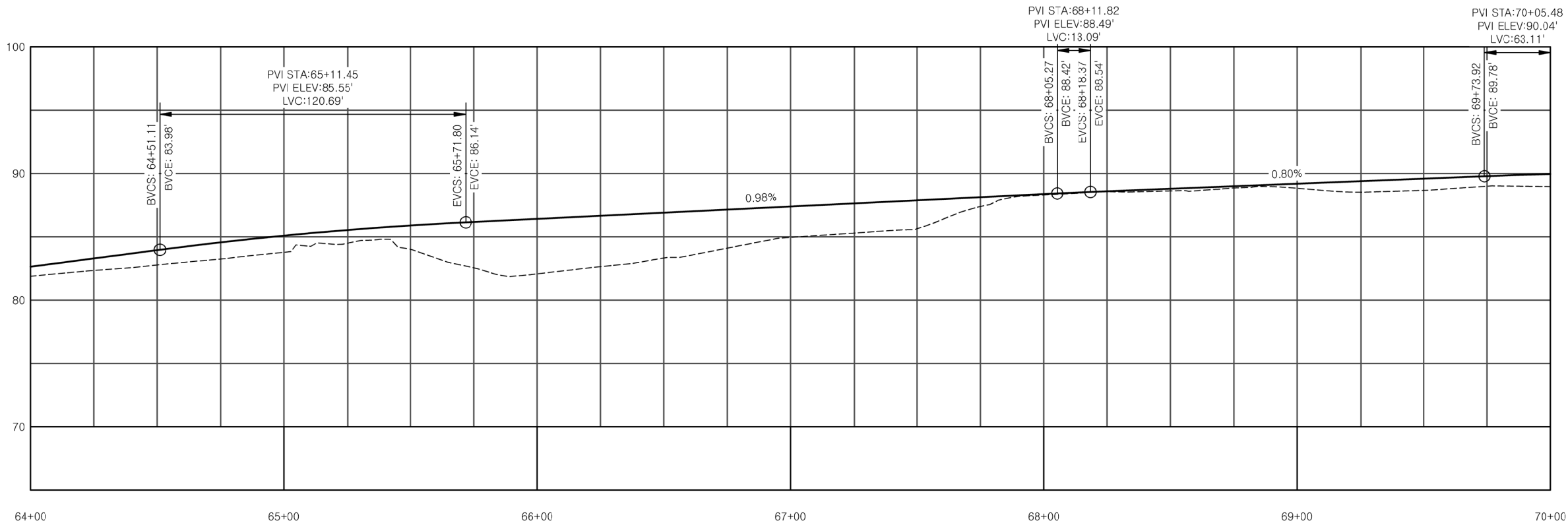


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SHEET

F10

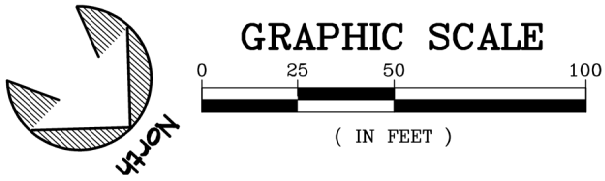
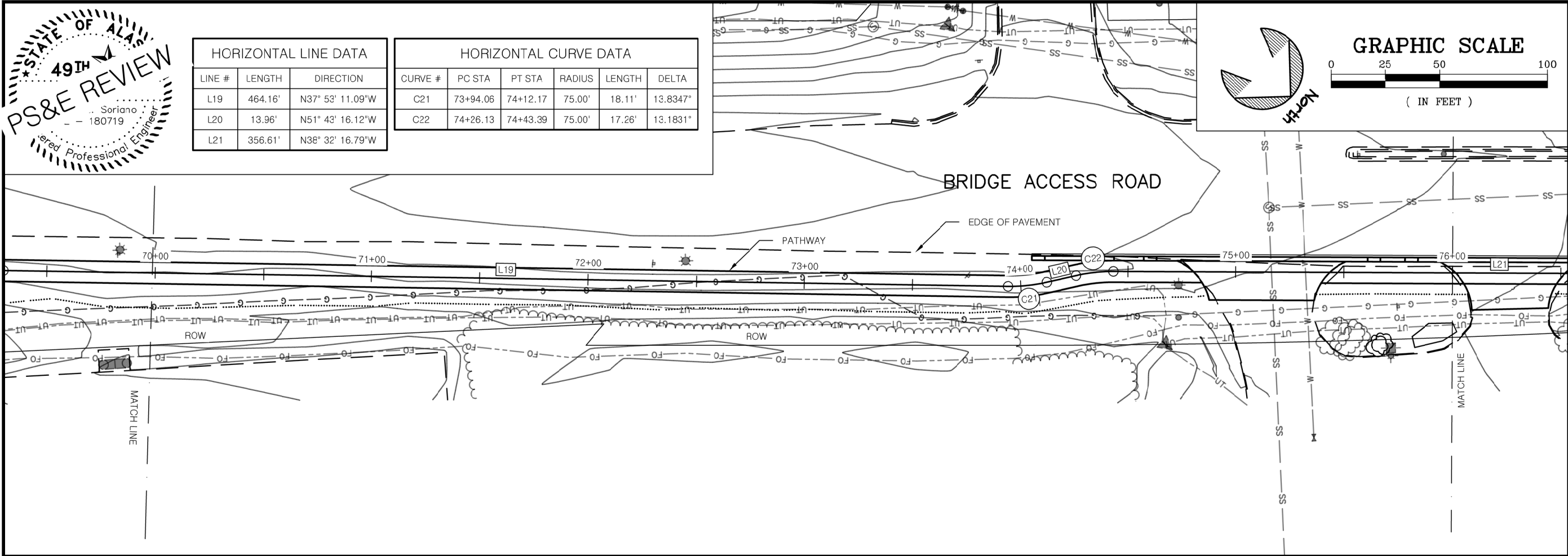
OF XX SHEETS





HORIZONTAL LINE DATA		
LINE #	LENGTH	DIRECTION
L19	464.16'	N37° 53' 11.09"W
L20	13.96'	N51° 43' 16.12"W
L21	356.61'	N38° 32' 16.79"W

HORIZONTAL CURVE DATA						
CURVE #	PC STA	PT STA	RADIUS	LENGTH	DELTA	
C21	73+94.06	74+12.17	75.00'	18.11'	13.8347°	
C22	74+26.13	74+43.39	75.00'	17.26'	13.1831°	



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KENAI BRIDGE ACCESS ROAD
PATHWAY
PROJECT No. CFHWY00689

PLAN AND PROFILE
STA. 70+00 TO STA. 76+00

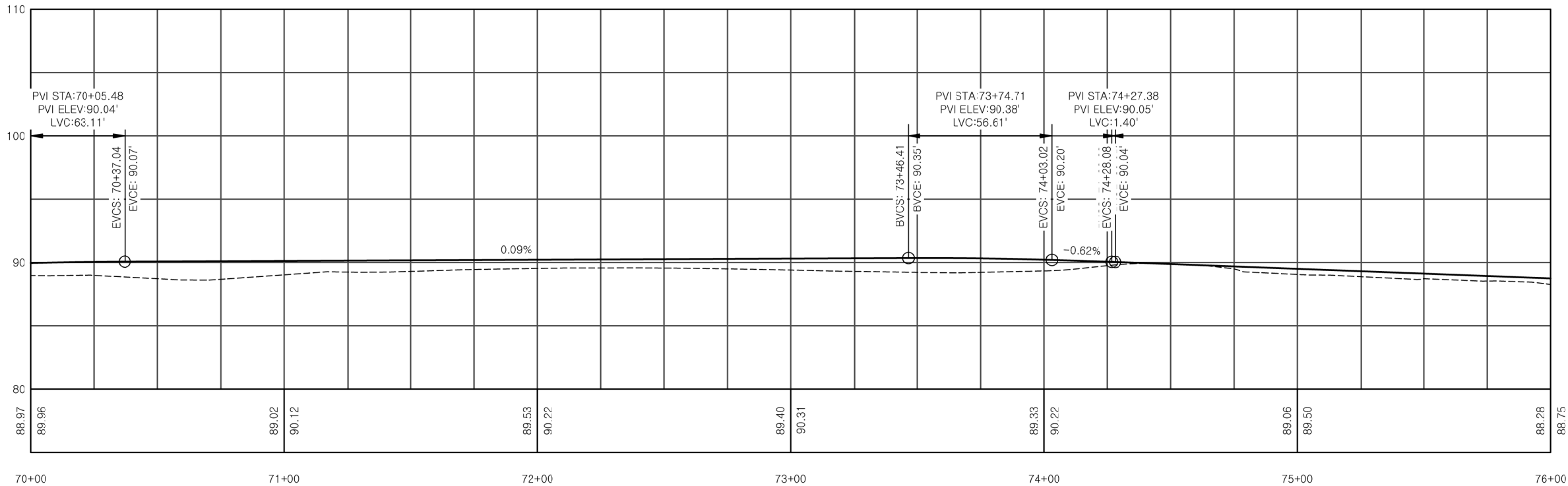


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SHEET

F11

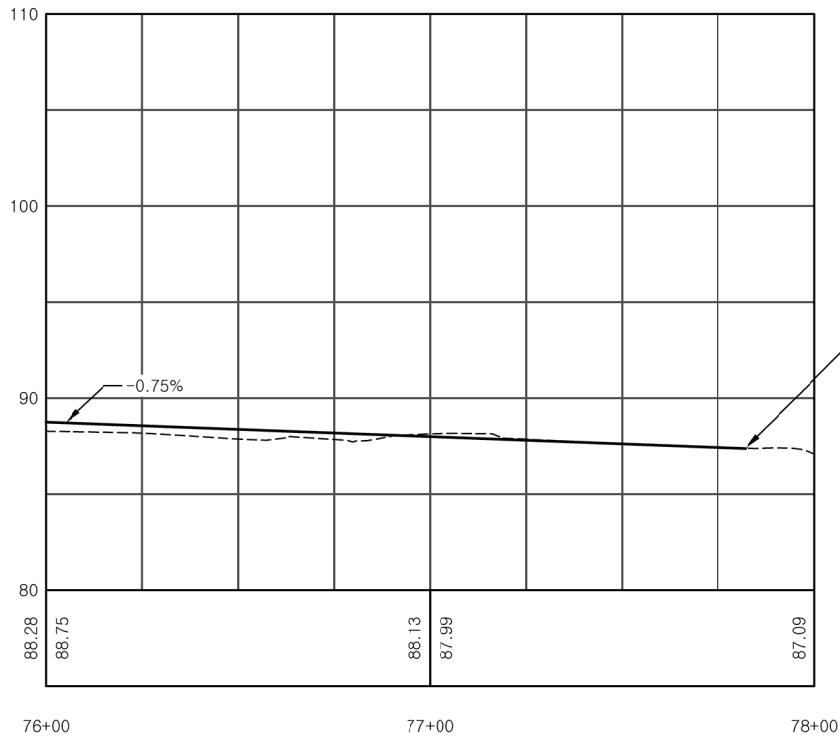
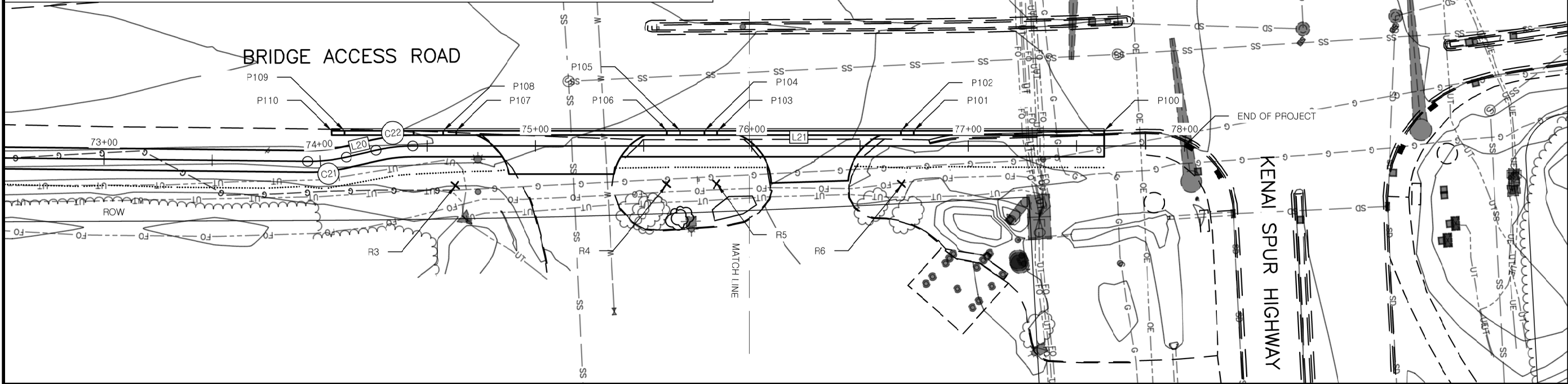
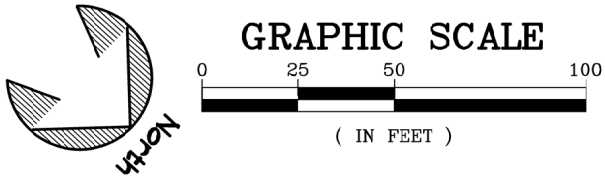
OF XX SHEETS





HORIZONTAL LINE DATA		
LINE #	LENGTH	DIRECTION
L20	13.96'	N51° 43' 16.12"W
L21	356.61'	N38° 32' 16.79"W

HORIZONTAL CURVE DATA						
CURVE #	PC STA	PT STA	RADIUS	LENGTH	DELTA	
C21	73+94.06	74+12.17	75.00'	18.11'	13.8347°	
C22	74+26.13	74+43.39	75.00'	17.26'	13.1831°	



GRADE BREAK STA = 77+82.10
ELEV = 87.37'

RADIUS POINT TABLE				
POINT #	NORTHING	EASTING	RADIUS	DESCRIPTION
R3	101130.28	104786.44	25'	DW RADIUS
R4	101063.41	104839.55	25'	DW RADIUS
R5	101045.34	104854.09	25'	DW RADIUS
R6	100969.11	104915.24	25'	DW RADIUS

COORDINATE POINT TABLE				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
100	101187.09	104707.97	86.94	LOC. END CURB, MATCH EXISTING
101	101118.90	104763.53	87.67	LOC. END CURB TRANSITION
102	101114.20	104767.27	87.75	LOC. BEGIN CURB TRANSITION
103	101047.94	104820.09	88.49	LOC. END CURB TRANSITION
104	101043.25	104823.82	88.55	LOC. BEGIN CURB TRANSITION
105	101034.41	104830.86	88.64	LOC. FULL CURB
106	101029.72	104834.60	88.69	LOC. BEGIN TRANSITION
107	100953.54	104895.28	89.67	LOC. END CURB TRANSITION
108	100948.84	104899.02	89.76	LOC. BEGIN TRANSITION
109	100913.21	104927.40	90.26	LOC. END TRANSITION
110	100908.53	104931.13	90.32	LOC. CURB START. BEGIN TRANSITION

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KENAI BRIDGE ACCESS ROAD
PATHWAY
PROJECT No. CFHWY00689

PLAN AND PROFILE
STA. 76+00 TO STA. 78+00

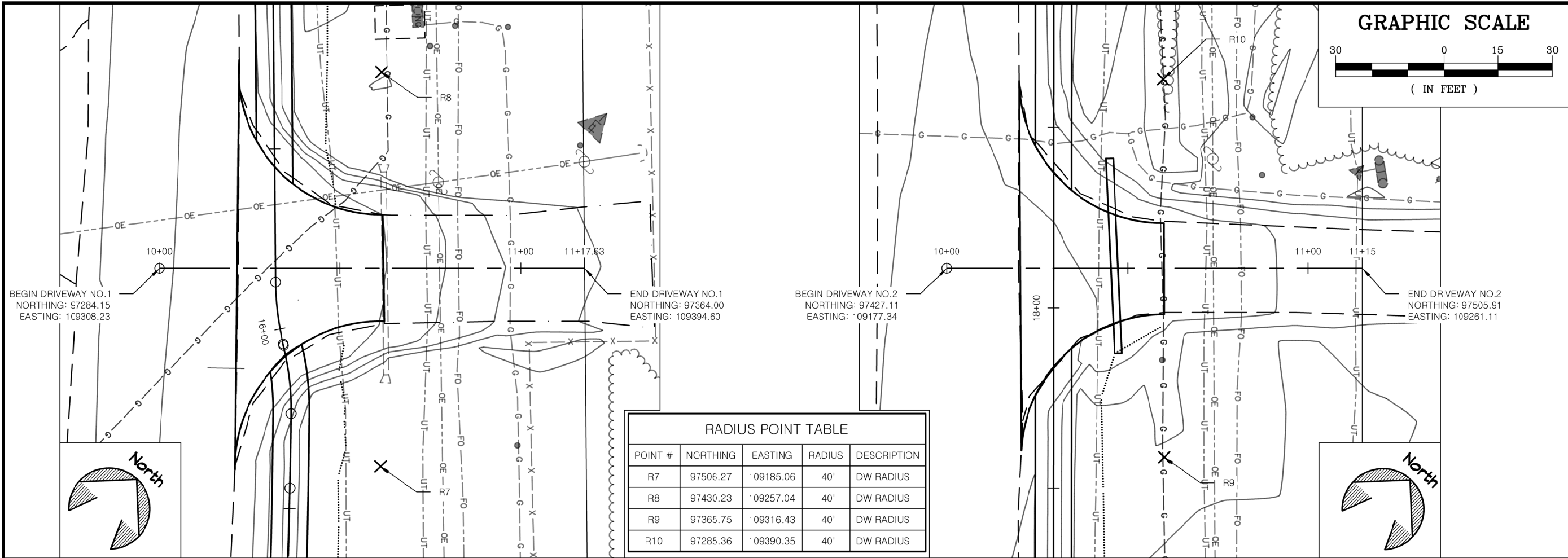


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SHEET

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PLAN AND PROFILE
DRIVEWAY NO.1 AND NO.2

KENAI BRIDGE ACCESS ROAD
PATHWAY
PROJECT No. CFHWY00689



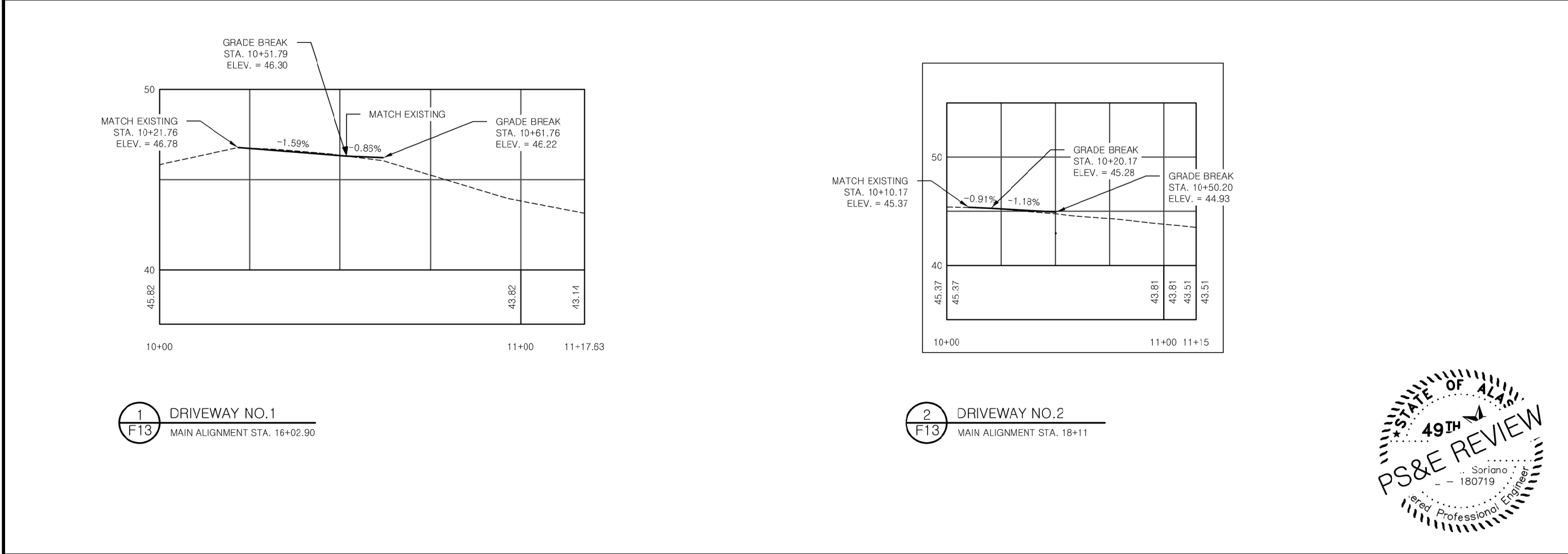
ALASKA STATE PARKS

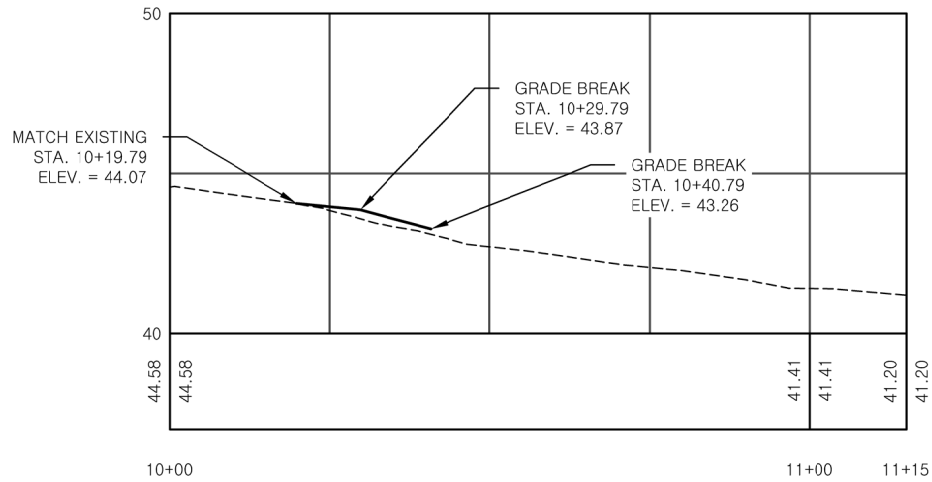
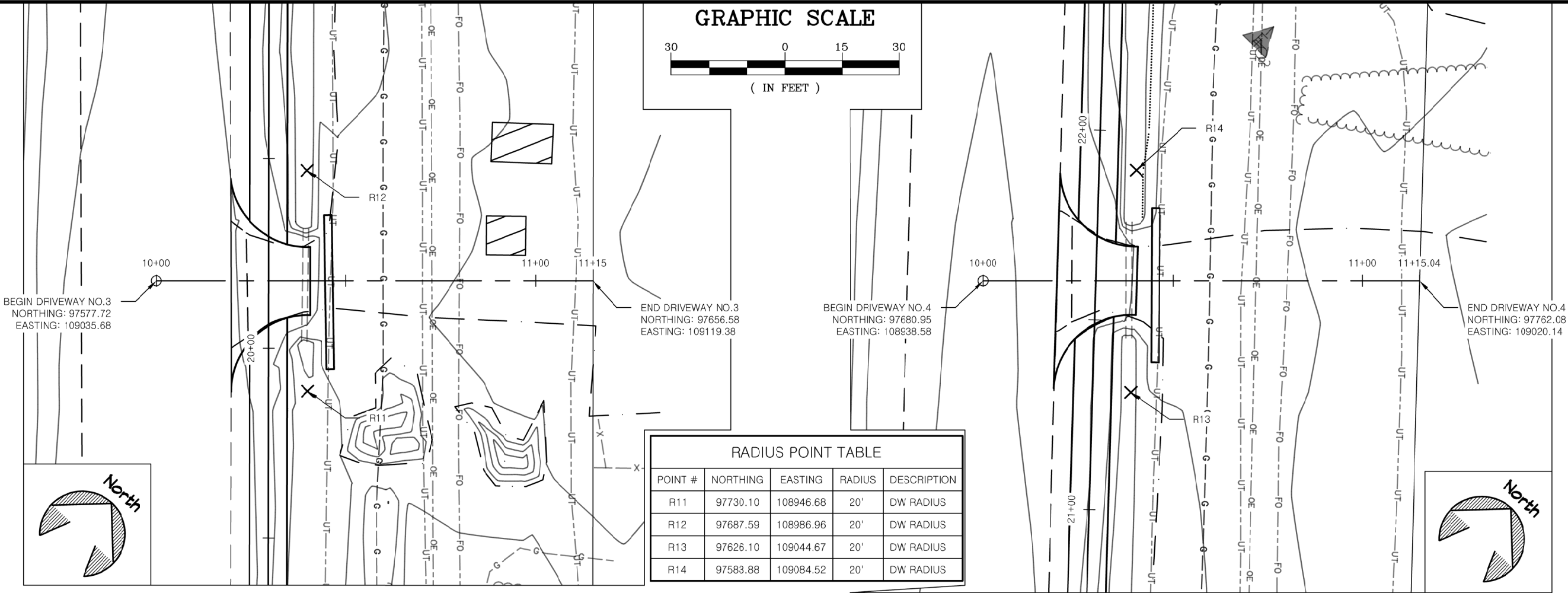
PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: APRIL 2025

SHEET

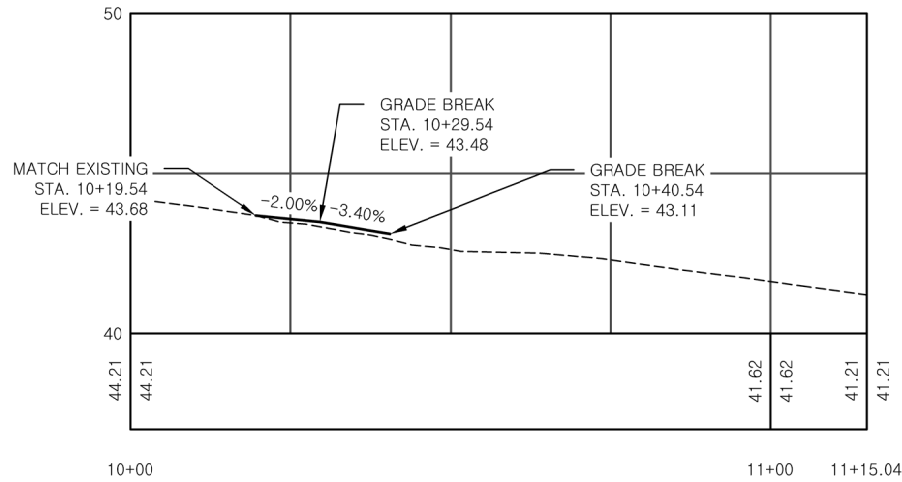
F13

OF SHEETS





1 DRIVEWAY NO.3
F14 MAIN ALIGNMENT STA. 20+18



2 DRIVEWAY NO.4
F14 MAIN ALIGNMENT STA. 21+60

STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
PLANS DEVELOPED BY: DIVISION OF PARKS AND OUTDOOR RECREATION
550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 - 907.269.8731

KENAI BRIDGE ACCESS ROAD
PATHWAY
PROJECT No. CFHWY00689

PLAN AND PROFILE
DRIVEWAY NO.3 AND NO.4

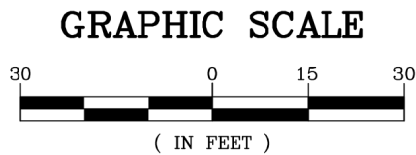
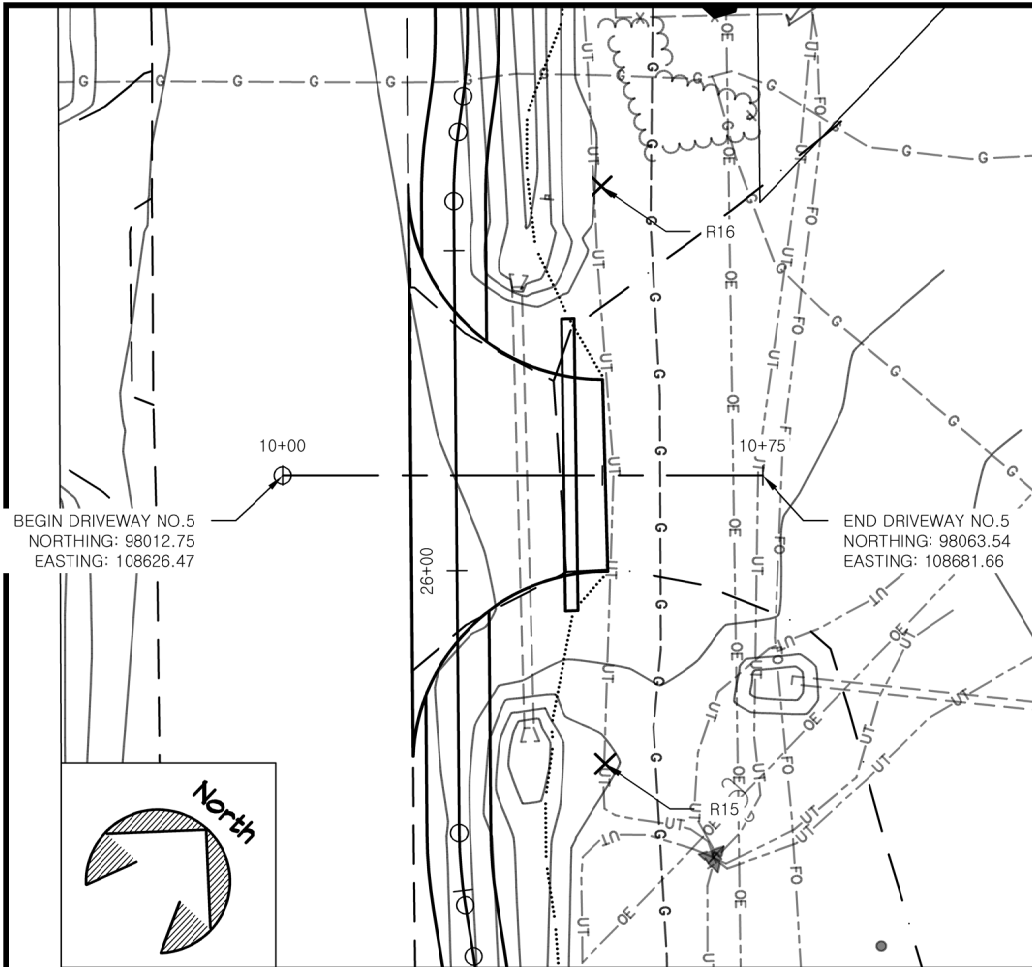


PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: APRIL 2025

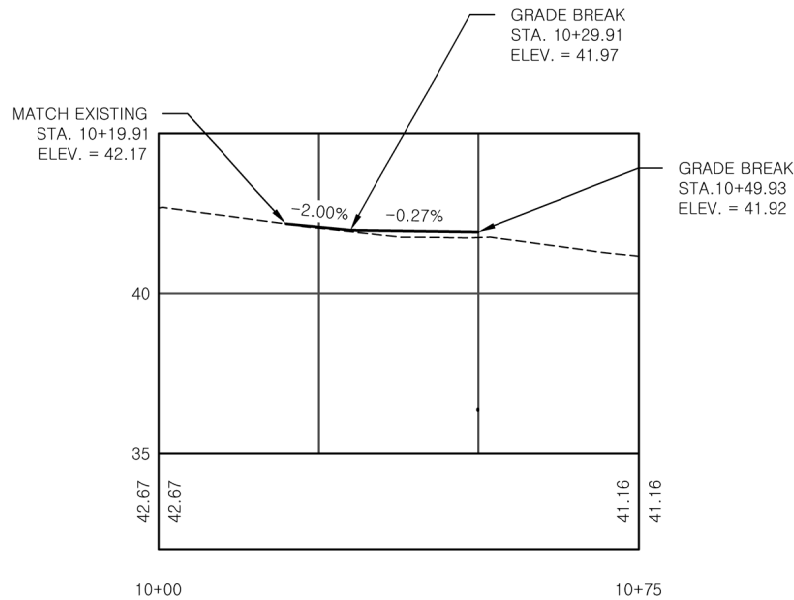
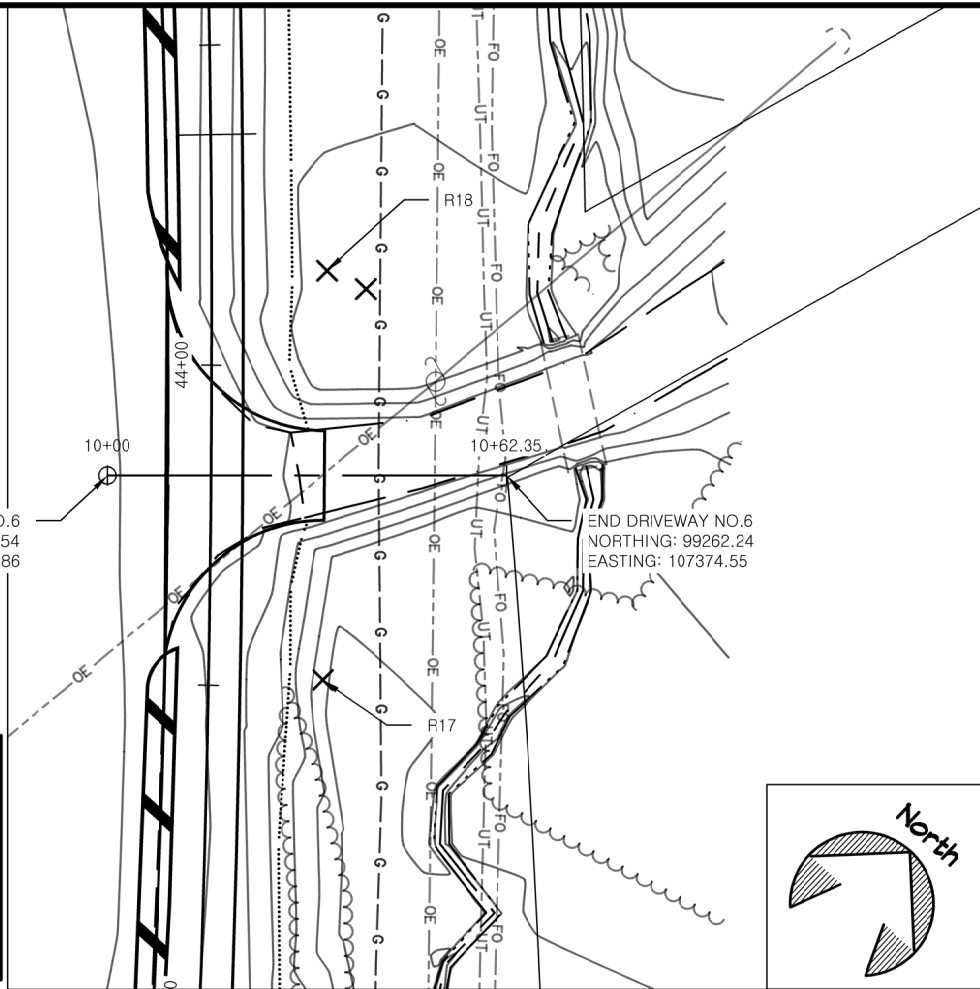
SHEET

F14

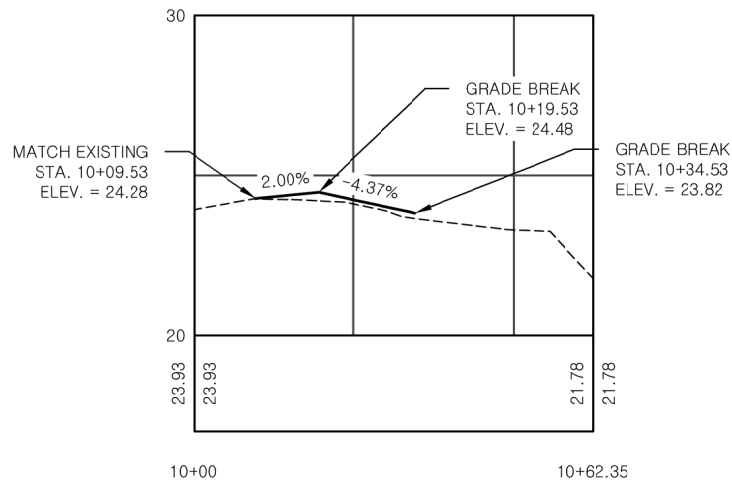
OF SHEETS



RADIUS POINT TABLE				
POINT #	NORTHING	EASTING	RADIUS	DESCRIPTION
R15	99254.33	107332.75	30'	DW RADIUS
R16	99221.28	107387.47	30'	DW RADIUS
R17	98079.75	108632.55	25'	DW RADIUS
R18	98013.76	108694.10	25'	DW RADIUS



1
F15 DRIVEWAY NO.5
MAIN ALIGNMENT STA. 26+15



2
F15 DRIVEWAY NO.6
MAIN ALIGNMENT STA. 42+82



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KENAI BRIDGE ACCESS ROAD
PATHWAY
PROJECT No. CFHWY00689

PLAN AND PROFILE
DRIVEWAY NO.5 AND NO.6

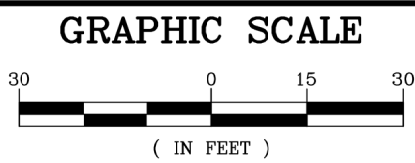
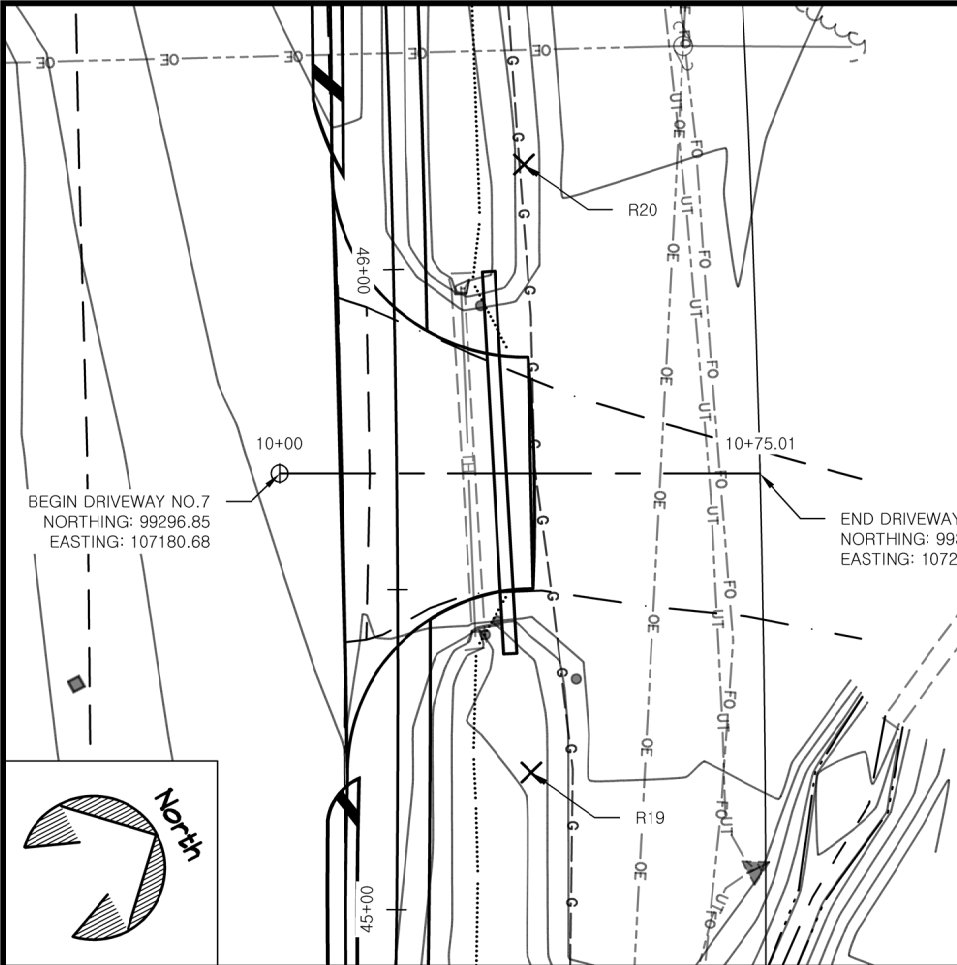


PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: APRIL 2025

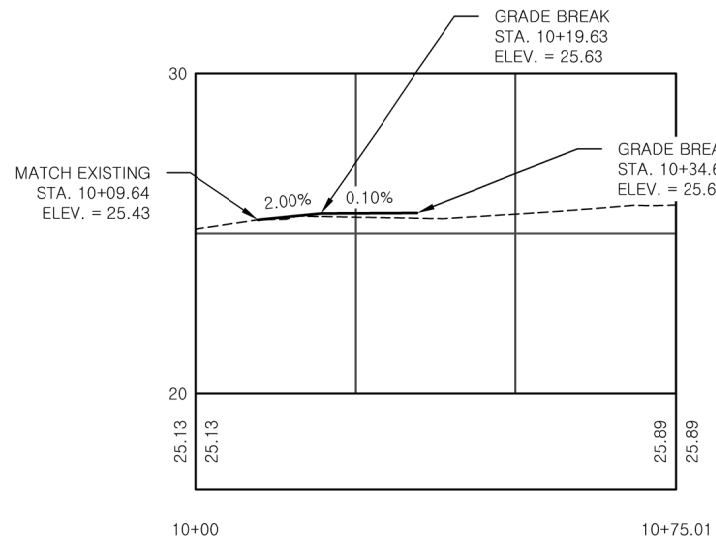
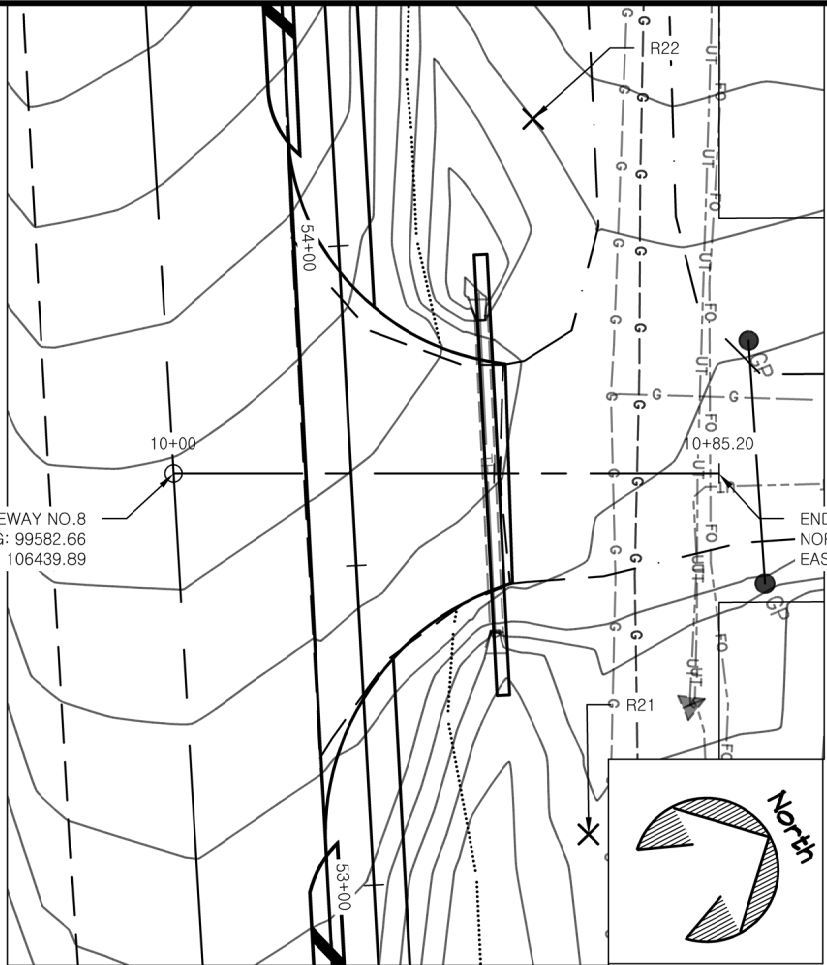
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F15

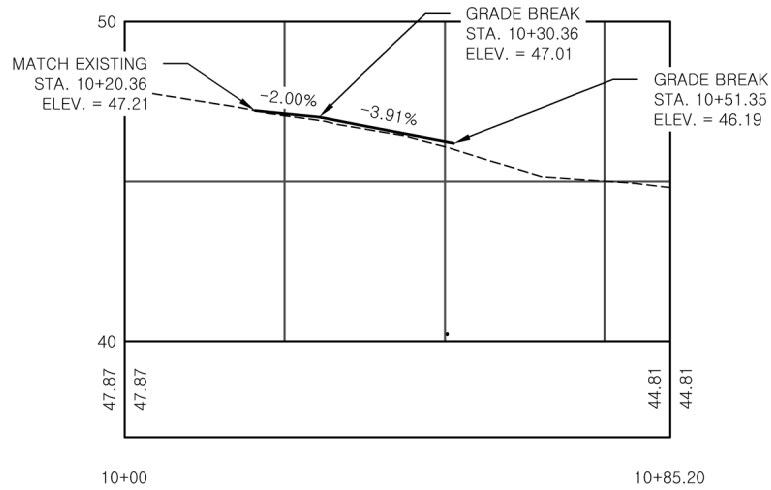
OF SHEETS



RADIUS POINT TABLE				
POINT #	NORTHING	EASTING	RADIUS	DESCRIPTION
R19	99655.98	106410.67	30'	DW RADIUS
R20	99620.48	106517.03	30'	DW RADIUS
R21	99353.30	107156.13	40'	DW RADIUS
R22	99309.45	107240.42	40'	DW RADIUS



1 DRIVEWAY NO. 7
F16 MAIN ALIGNMENT STA. 45+67



2 DRIVEWAY NO. 8
F16 MAIN ALIGNMENT STA. 53+64



STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
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550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 - 907.269.8731

KENAI BRIDGE ACCESS ROAD
PATHWAY
PROJECT No. CFHWY00689

PLAN AND PROFILE
DRIVEWAY NO. 3 AND NO. 4

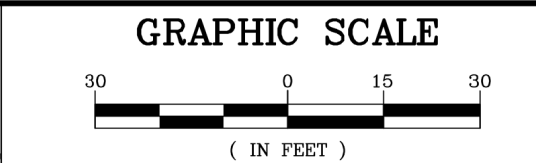
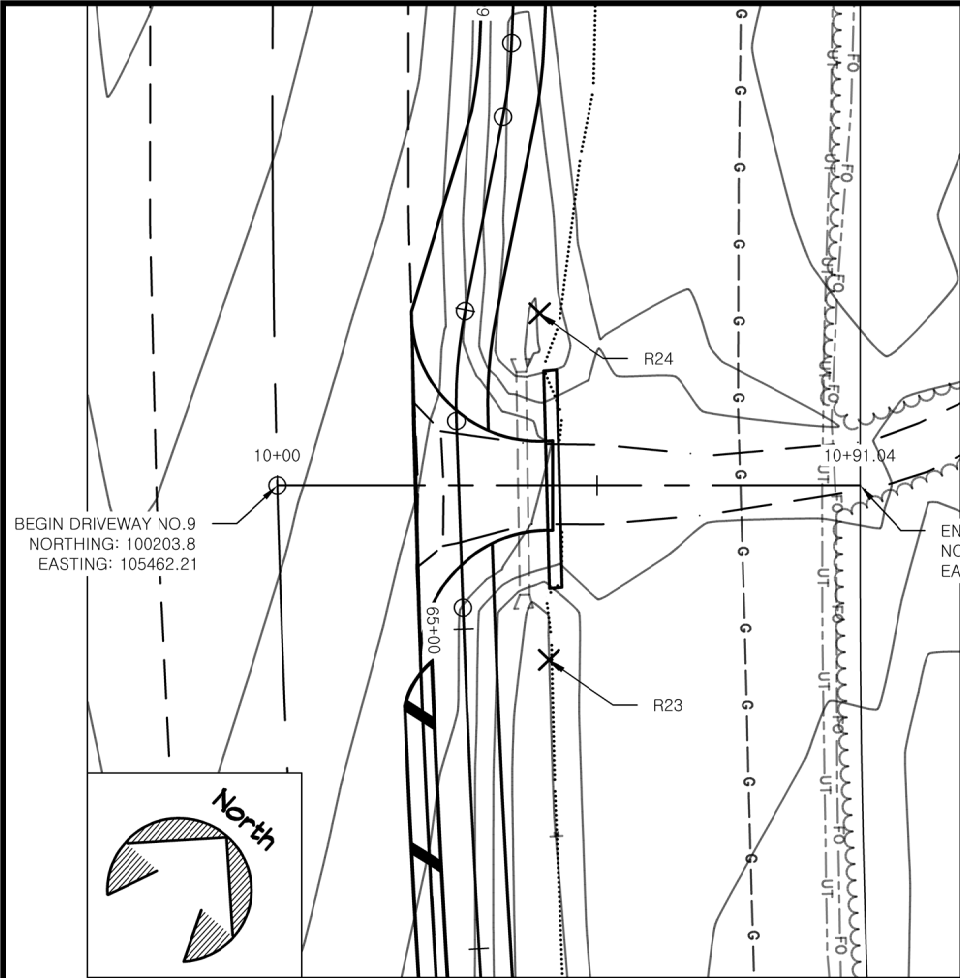


PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: APRIL 2025

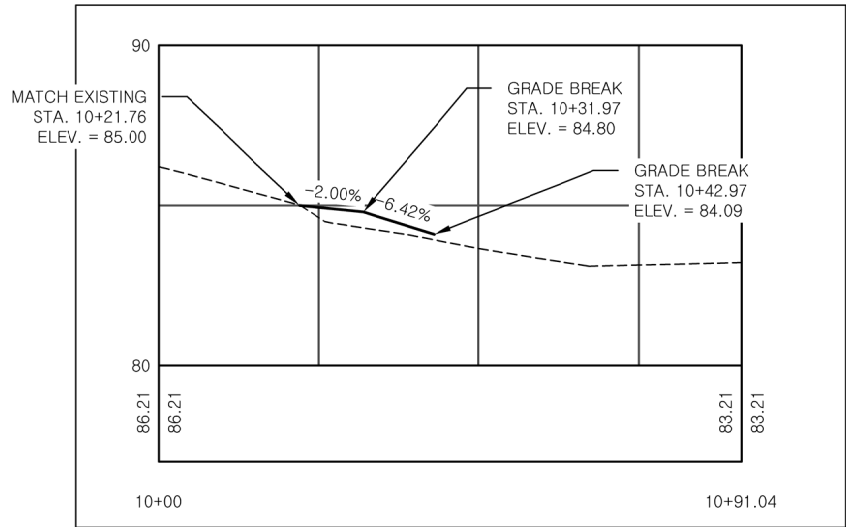
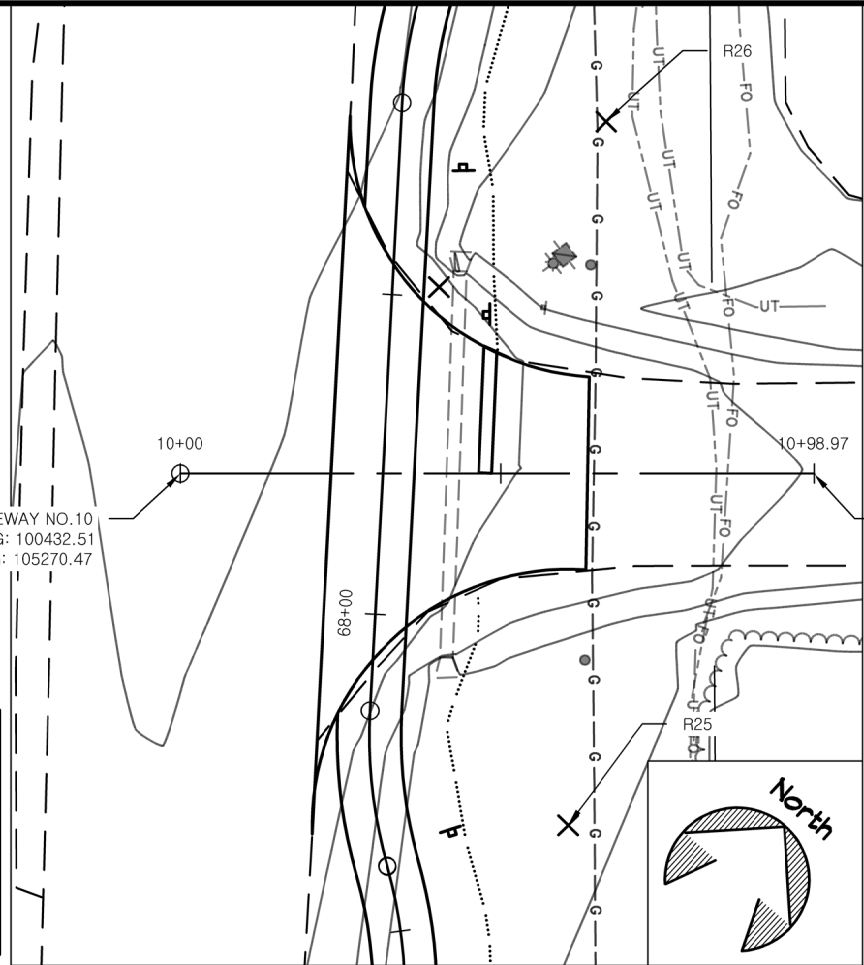
SHEET

F16

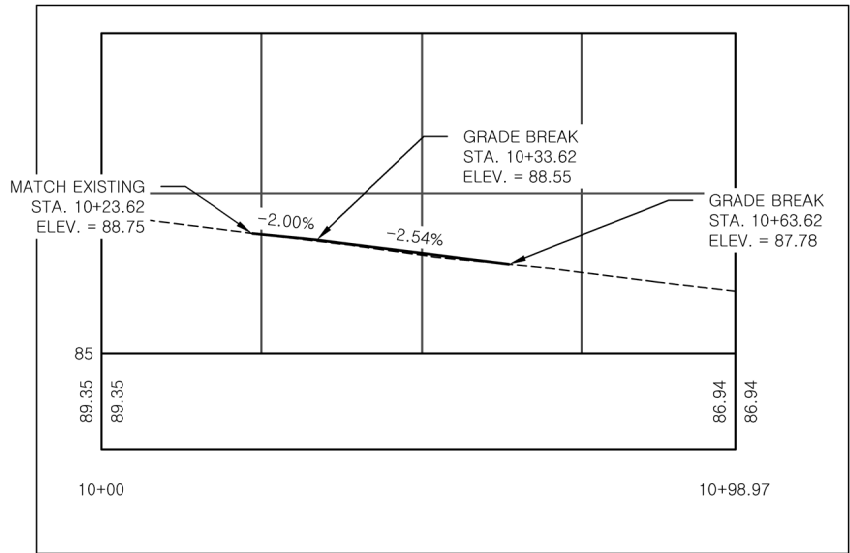
OF SHEETS



RADIUS POINT TABLE				
POINT #	NORTHING	EASTING	RADIUS	DESCRIPTION
R23	100517.68	105284.44	20'	DW RADIUS
R24	100430.92	105352.25	20'	DW RADIUS
R25	100251.08	105475.07	40'	DW RADIUS
R26	100211.59	105511.94	40'	DW RADIUS



1 DRIVEWAY NO.9
F17 MAIN ALIGNMENT STA. 65+22



2 DRIVEWAY NO.10
F17 MAIN ALIGNMENT STA. 38+22



STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
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KENAI BRIDGE ACCESS ROAD
PATHWAY
PROJECT No. CFHWY00689

PLAN AND PROFILE
DRIVEWAY NO.9 AND NO.10



PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: APRIL 2025

SHEET
F17
OF SHEETS

SIGNING & STRIPING NOTES:

- ALL STATION LOCATIONS FOR SIGN INSTALLATION ARE APPROXIMATE. INSTALL SIGNS AT LOCATIONS AS DIRECTED BY THE ENGINEER.
- USE THE FOLLOWING DEFINITIONS TO DECIPHER THE ABBREVIATED SIGN POST TYPES IN THE SIGN SUMMARY SHEETS.
 - PST MEANS A PERFORATED STEEL TUBE.
 - T MEANS A SQUARE STEEL TUBE.
 - P MEANS A ROUND STEEL PIPE.
 - W MEANS A WIDE FLANGE BEAM.
 - POPL MEANS A POLE PLATE INSTALLED PER ITS ALASKA STANDARD PLAN S-23.
- FABRICATE ALL SIGNS FROM 0.125" THICK ALUMINUM SHEETING, UNLESS STATED ELSEWHERE, WITH TYPE IX REFLECTIVE SHEETING.
- FOR PERFORATED STEEL TUBE SIGNPOSTS, INSTALL THE CONCRETE FOUNDATION OPTION SHOWN ON STANDARD PLAN S-30. TRIM EACH PT POST TO LIMIT THE LENGTH INSERTED INTO THE FOUNDATION TO 12 INCHES.
- ERECT NEW SIGNS BEFORE REMOVAL OF EXISTING SIGNS WITH SIMILAR MESSAGE. NOTIFY THE ENGINEER A MINIMUM OF 14 DAYS PRIOR TO BEGINNING SIGN REMOVAL AND SALVAGE OR DISPOSAL ACTIVITIES.
- SELECTIVE AND HAND CLEARING SHALL BE PERFORMED AT THE DISCRETION OF THE ENGINEER, IN ACCORDANCE WITH SECTION 201, UPSTREAM OF ALL SIGN INSTALLATION LOCATIONS TO ACHIEVE MINIMUM SIGN VISIBILITY REQUIREMENTS. IF NOT INCLUDED AS A SEPARATE ITEM, THIS WORK SHALL BE SUBSIDIARY TO THE SIGN INSTALLATION ITEMS AND WORK.
- FOR ALL FINAL PAVEMENT MARKINGS USE METHYLMETHACRYLATE MATERIALS. ALL STRIPING AND MARKINGS SHALL BE INLAID AND 125 MILS.
- DIMENSIONS REFER TO THE CENTER OF STRIPE AND THE EDGE OF PAVEMENT OR FACE OF CURB WHEN PRESENT.
- IF THE NEW AND EXISTING PAVEMENT MARKINGS ARE NOT ALIGNED AT MATCH LINE, TRANSITION BETWEEN THE TWO USING A 100:1 TAPER ON THE NEW PAVEMENT.



UNCURBED INTERSECTION NOTES: (IN PRIORITY ORDER)

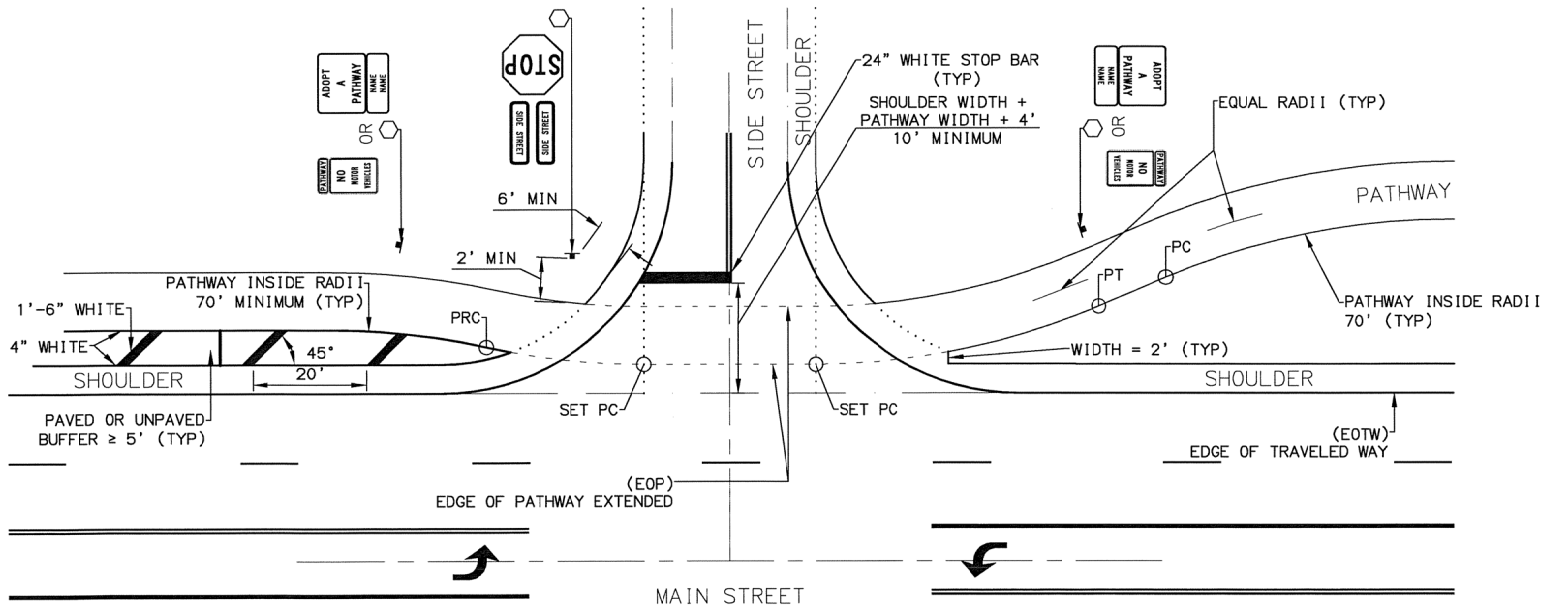
SIGNING:

- LOCATE STOP SIGN SO IT IS VISIBLE TO APPROACHING TRAFFIC AND NEAR THE STOP BAR.
- PROVIDE 2' OF CLEARANCE BETWEEN EDGE OF STOP SIGN PANEL AND EDGE OF PATHWAY OR SIDEWALK.
- PROVIDE 6' OF CLEARANCE BETWEEN EDGE OF STOP SIGN PANEL AND EDGE OF SIDE STREET.
- PLACE PATHWAY REGULATORY SIGNS AT COLLECTOR OR ARTERIAL ROADWAY JUNCTIONS, TYPICALLY GREATER THAN 1000 VEHICLES A DAY, OR SIDE STREETS CONNECTING THROUGH TRAFFIC TO OTHER COLLECTORS OR ARTERIALS.
- "NO MOTOR VEHICLES" SIGNS ARE NOT REQUIRED WITHIN THE MUNICIPALITY OF ANCHORAGE.
- SEE PLANS FOR PATHWAY SIGNING REQUIRED AT SIDE STREETS.

STRIPING:

- STOP BARS ARE NOT REQUIRED WHEN NO PATHWAY OR SIDEWALK IS PRESENT. SEE PLANS.
- LOCATE STOP BAR 4' MINIMUM BEHIND THE WIDTH OF PATHWAY.
- BREAK CENTERLINE STRIPING WITHIN INTERSECTIONS WHICH HAVE DEDICATED TURN LANES.
- CONTINUE CENTERLINE STRIPING THROUGH INTERSECTIONS WITH CENTER TWO-WAY-LEFT-TURN-ONLY LANES OR WHEN THERE ARE NO LEFT TURN LANES.
- CONTINUE LANE "SKIP" STRIPING THROUGH INTERSECTIONS.
- DELETE OUTERMOST EDGE OF TRAVELED WAY STRIPING AT INTERSECTIONS OR WRAP EOTW STRIPING TO SIDE STREET EOTW.
- MATCH SIDE STREET STRIPING IF STRIPING IS PRESENT.

SIGN SUMMARY TABLE														
SHEET	POST NO.	STATION	OFFSET	TYPE	LEGEND	SIZE (IN)		AREA (S.F.)	SIGN FACES	POST: NO., SIZE & TYPE	FRAMED?		SALVAGE SIGN (EACH)	REMARKS
						WIDTH	HEIGHT				YES	NO		
H1	1	10+12	25 RT	R1-1		24	24	6.25	N	1" - 2.5" PST		X		
H1	2	10+30	10 LT	D11-1-SP		30	30	6.25	E	1" - 2.5" PST		X		
H1	3	67+63	10 RT	D1W11-SP		30	30	6.25	W	1" - 2.5" PST		X		
H1	4	68+47	25 RT	R1-1		30	30	6.25	E	1" - 2.5" PST		X		
H1	5	68+78	10 LT	D11-1-SP		24	24	6.25	S	1" - 2.5" PST		X		
							TOTAL:	31.25				TOTAL:	1	



TYPICAL UNCURBED RETURN WITH PATHWAY

STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
PLANS DEVELOPED BY: DIVISION OF PARKS AND OUTDOOR RECREATION
550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 - 907.269.8731

KENAI BRIDGE ACCESS ROAD
PATHWAY
PROJECT No. CFHWY00689

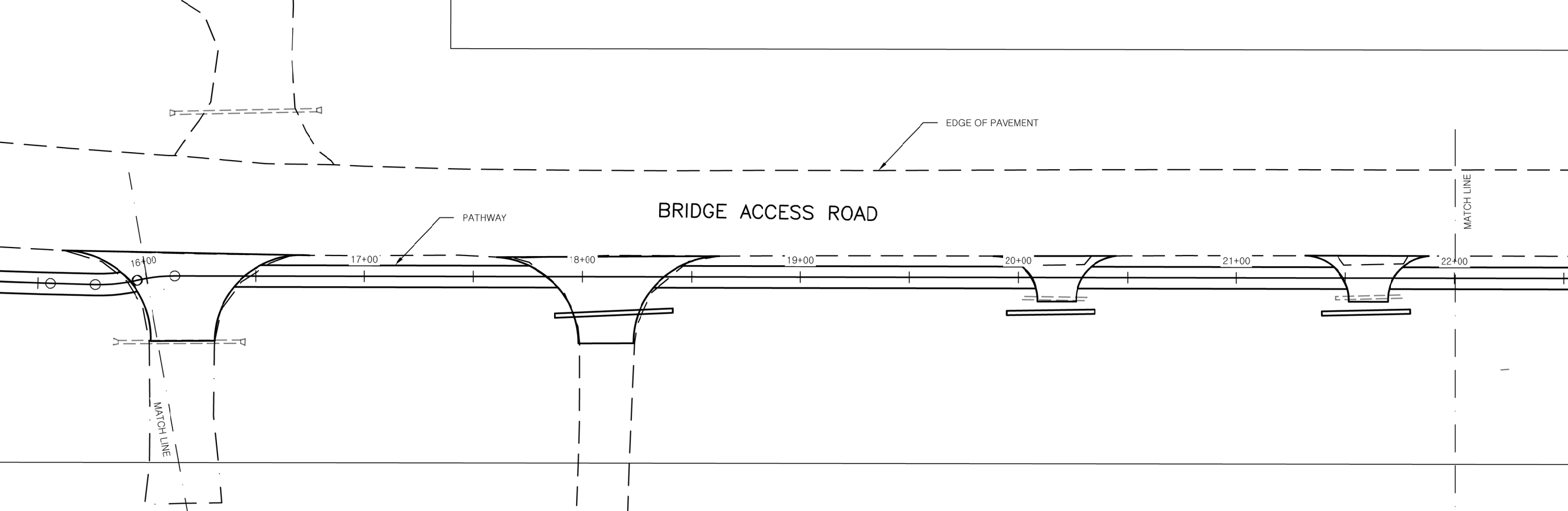
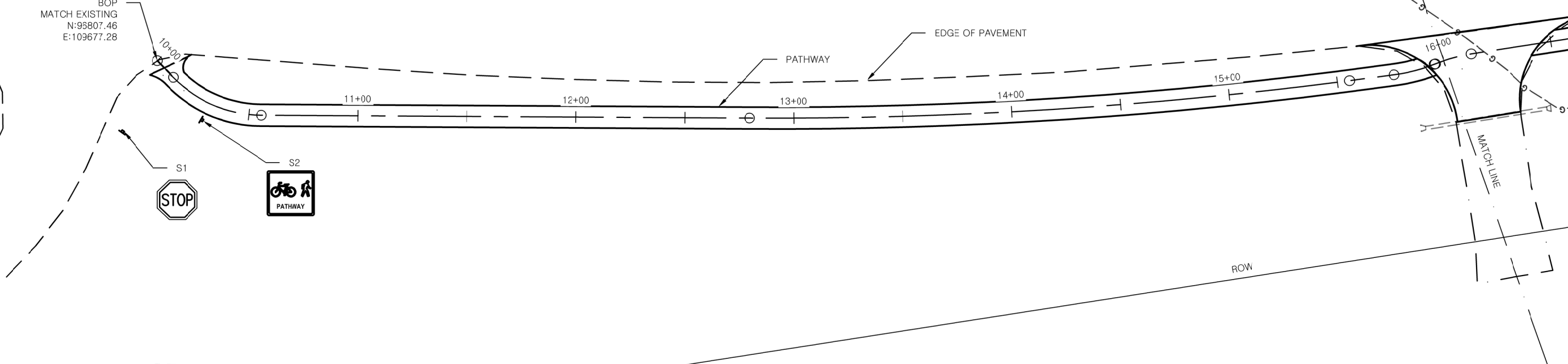
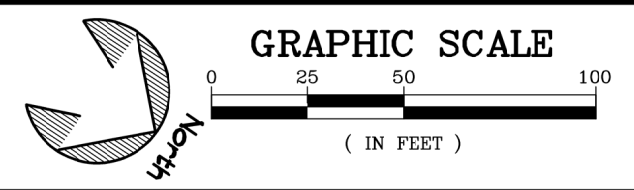
SIGN SUMMARY AND NOTES



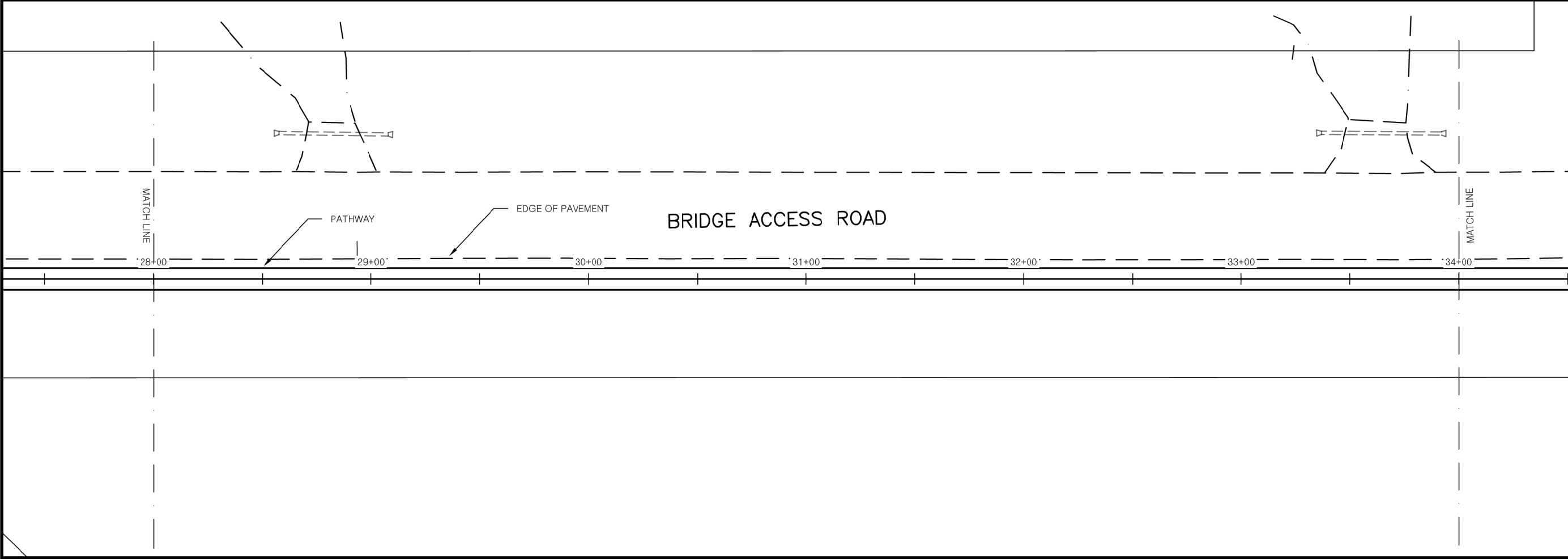
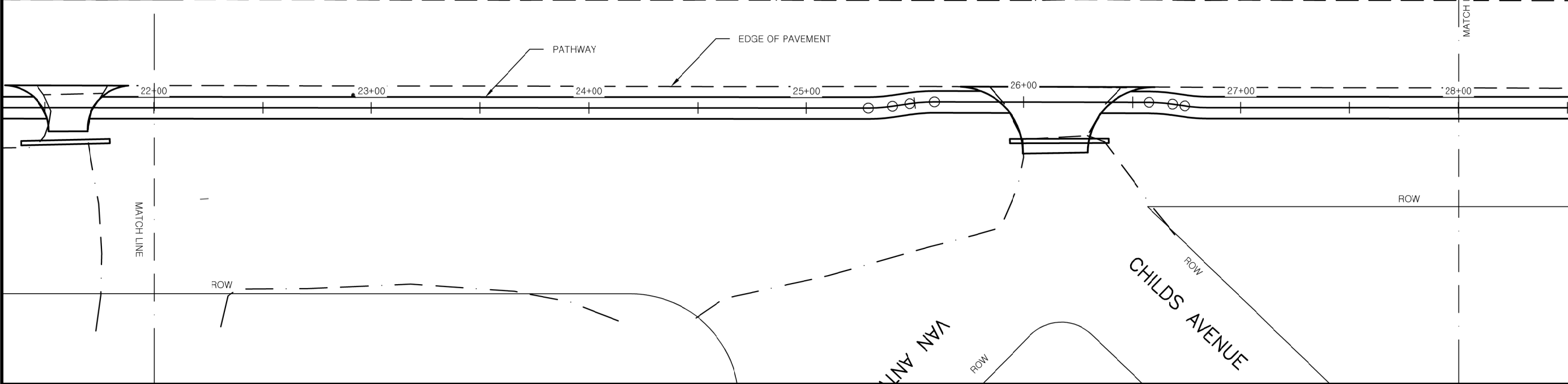
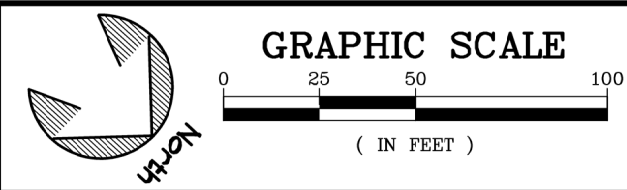
PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: APRIL 2025

SHEET

H1
OF XX SHEETS



STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES PLANS DEVELOPED BY: DIVISION OF PARKS AND OUTDOOR RECREATION 550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 - 907.269.8731	
KENAI BRIDGE ACCESS ROAD PATHWAY PROJECT No. CFHWY00689	
SIGNING AND STRIPING STA. 10+00 TO STA. 22+00	
PREPARED: RCS DRAWN: D&C REVIEWED: D&C DATE: APRIL 2025	
SHEET H2 OF XX SHEETS	



STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
PLANS DEVELOPED BY: DIVISION OF PARKS AND OUTDOOR RECREATION
550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 - 907.269.8731

KENAI BRIDGE ACCESS ROAD
PATHWAY
PROJECT No. CFHWY00689

SIGNING AND STRIPING
STA. 22+00 TO STA. 34+00

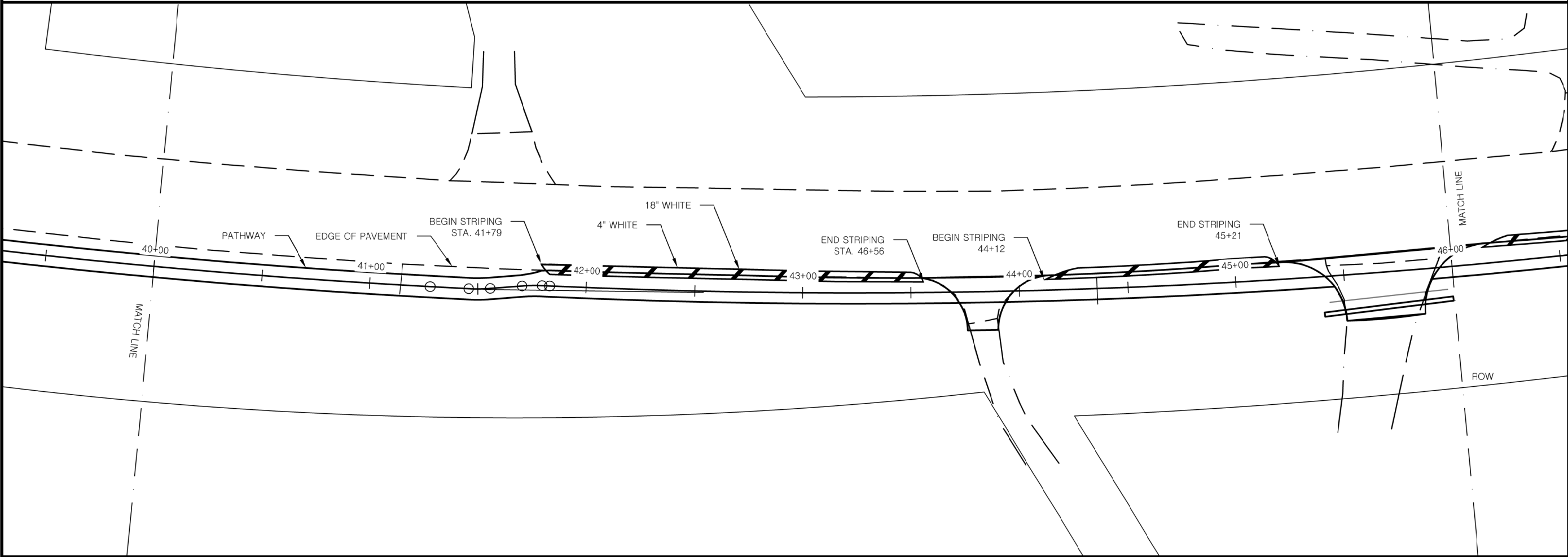
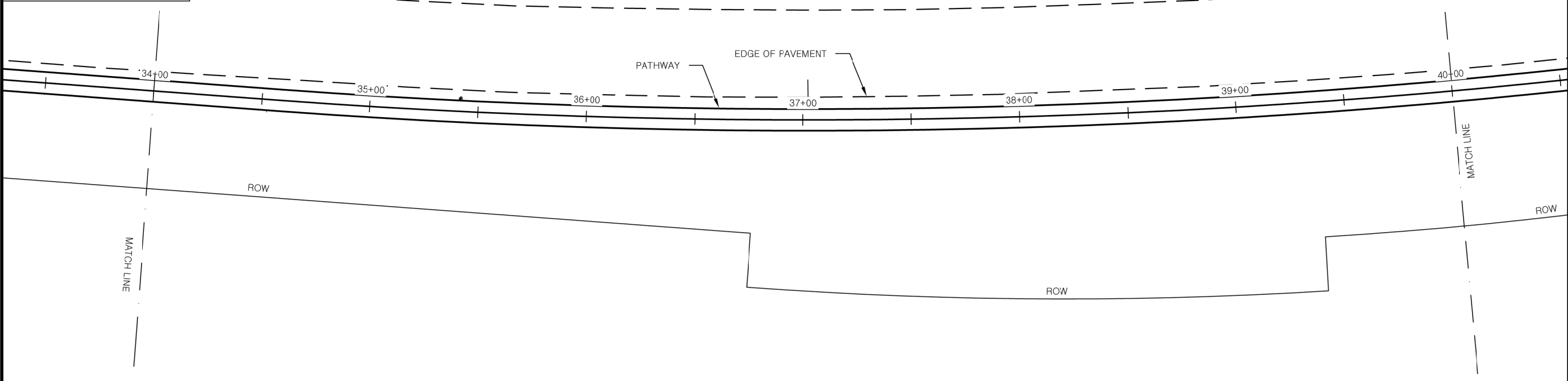
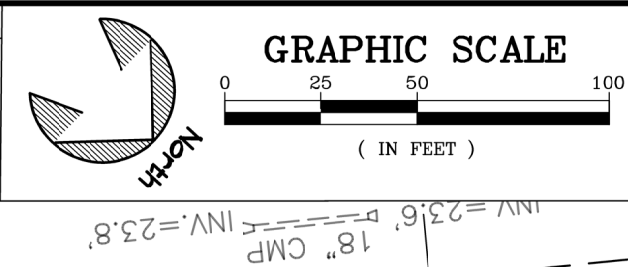
ALASKA STATE PARKS

PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: APRIL 2025

SHEET

H3

OF XX SHEETS



STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
PLANS DEVELOPED BY: DIVISION OF PARKS AND OUTDOOR RECREATION
550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 - 907.269.8731

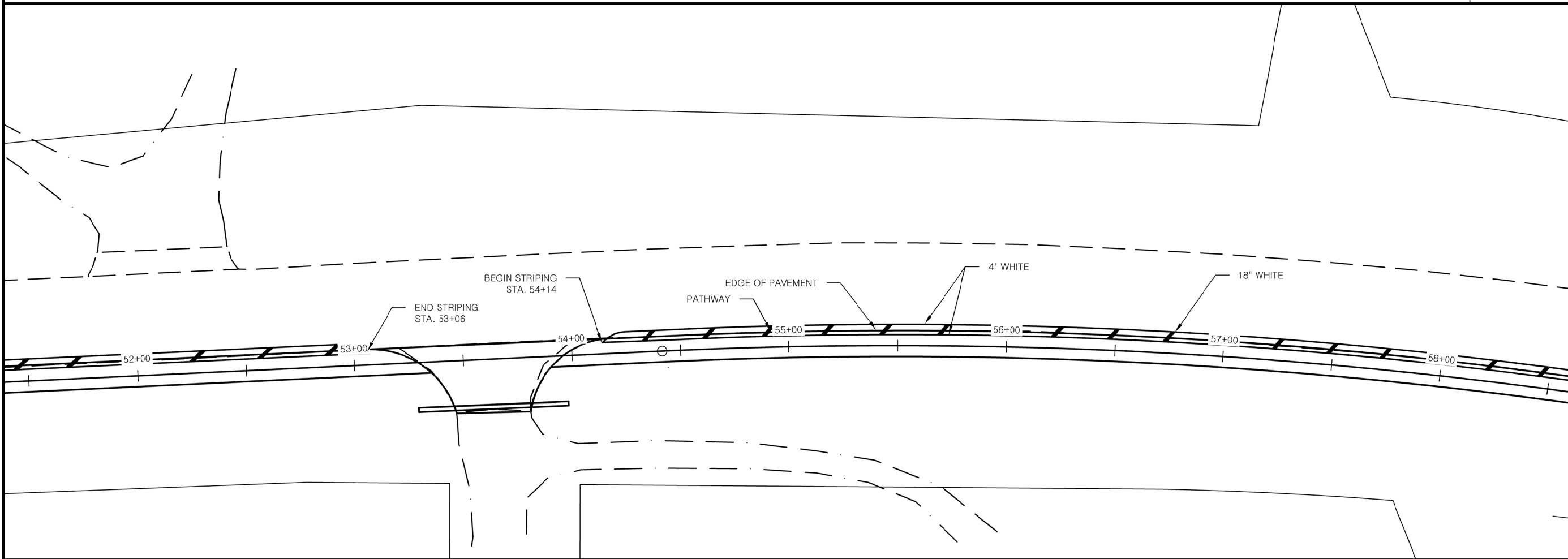
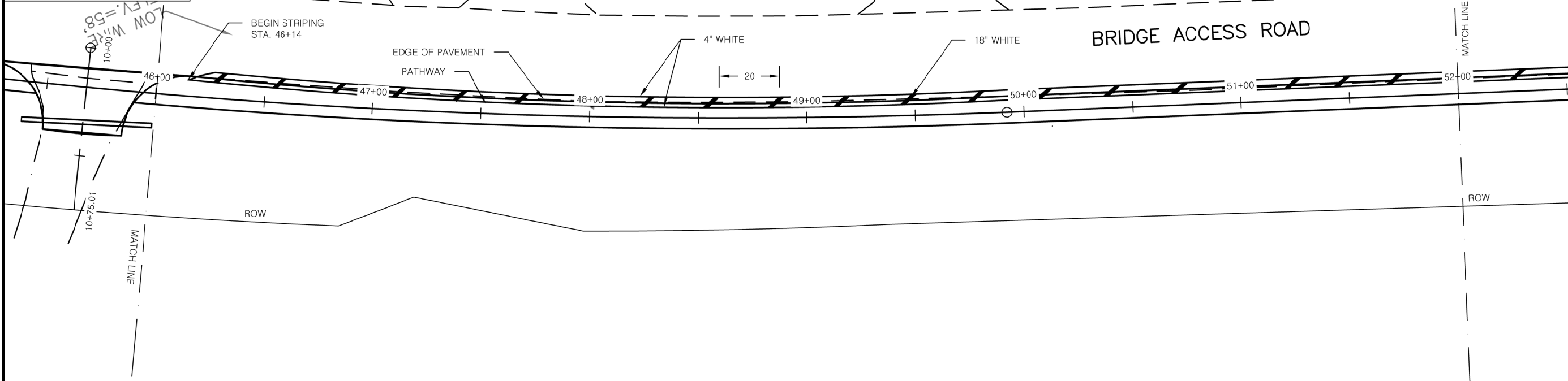
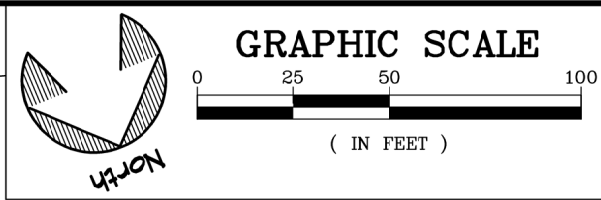


PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: APRIL 2025

SHEET
H4
OF XX SHEETS

KENAI BRIDGE ACCESS ROAD
PATHWAY
PROJECT No. CFHWY00689

SIGNING AND STRIPING
STA. 34+00 TO STA. 46+00



STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
PLANS DEVELOPED BY: DIVISION OF PARKS AND OUTDOOR RECREATION
550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 - 907.269.8731

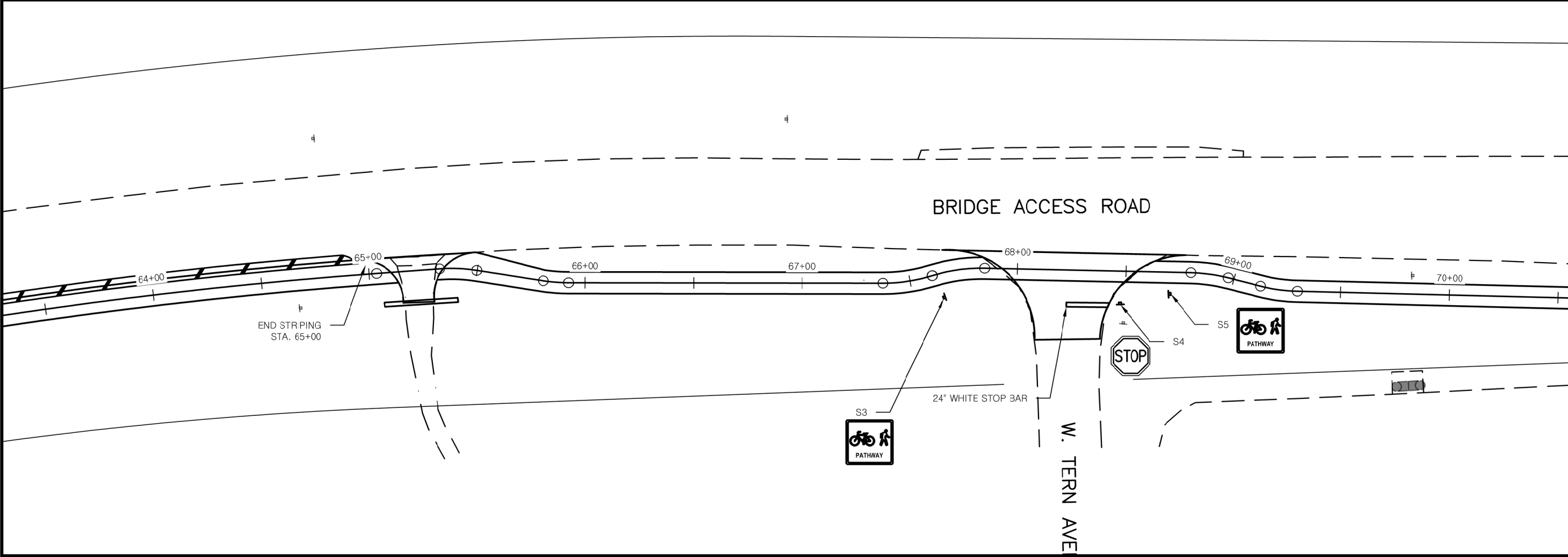
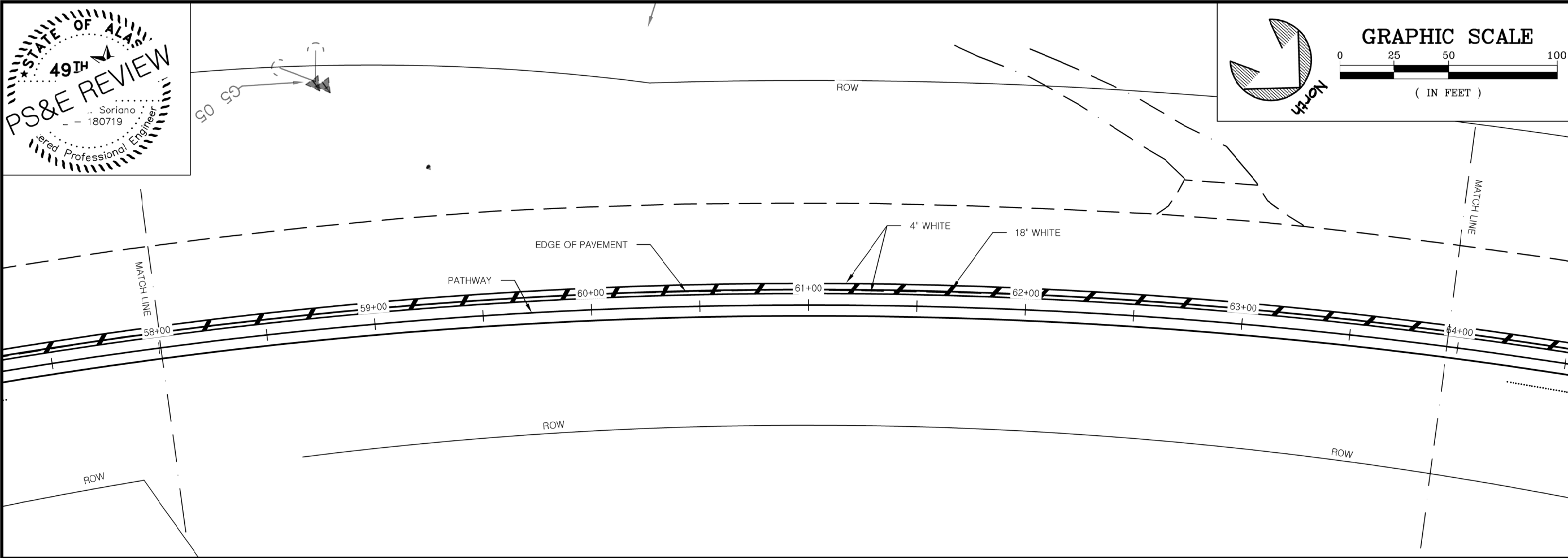
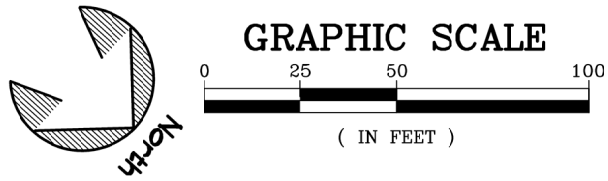
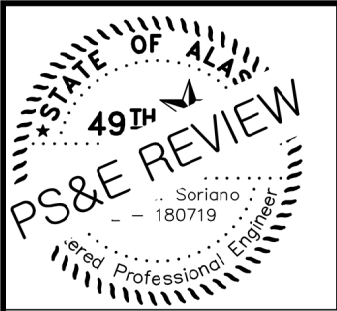
KENAI BRIDGE ACCESS ROAD
PATHWAY
PROJECT No. CFHWY00689

PLAN AND PROFILE
STA. 46+00 TO STA. 58+00



PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: APRIL 2025

SHEET
H5
OF XX SHEETS



STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
PLANS DEVELOPED BY: DIVISION OF PARKS AND OUTDOOR RECREATION
550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 - 907.269.8731

KENAI BRIDGE ACCESS ROAD
PATHWAY
PROJECT No. CFHWY00689

PLAN AND PROFILE
STA. 58+00 TO STA. 70+00

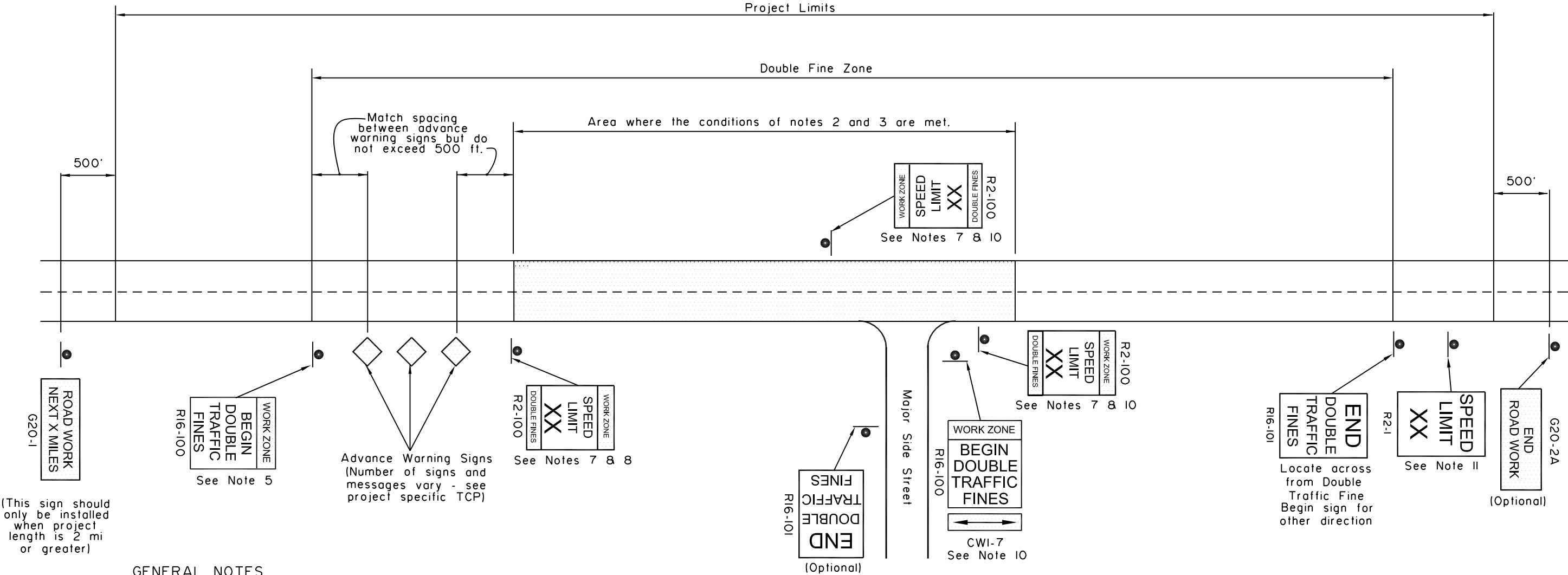


PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: APRIL 2025

SHEET

H6

OF XX SHEETS



GENERAL NOTES

1. Signs are shown for one direction only (with one exception). Signs for the other direction mirror those shown.

2. Double fine signs shall be used only where one or more of the following conditions exist:

a. Active work areas (where road workers and/or machines are presently working on or adjacent to a road)

b. Detours on new temporary roads built for that purpose (this does not include detours on existing streets)

c. Sections of paved roads where pavement has been removed.

d. Roads being paved where unmatched asphalt lifts result in a vertical lip between lanes.

3. Double fine signs shall be confined to the areas where the above conditions exist, with the following exceptions:

a. If the project is 2 miles or shorter in length, the entire project may be posted for double fines when the above conditions exist on any part of the project.

b. When the above conditions exist at multiple locations separated by less than 2 miles, the locations and the intervening segments may be posted as a single double fine zone.

4. Double fine signs shall be removed or covered when work activity ceases for more than two days and conditions b, c, or d of note 2 are not met.

5. The R16-100 "BEGIN" sign may be used in place of the first advance warning sign. However, when this is done, the appropriate advance warning sign must be reinstalled when the double fine sign is taken down or covered.

6. When a double fine zone is longer than 2 miles, work zone speed limit signs shall be posted at spacings not greater than 2 miles within the double fine zone.

7. "Work zone speed limit signs", as used here, refer either to 1) R2-100 signs or 2) standard R2-1 regulatory speed limit signs with CW20-102 "DOUBLE FINES" plates mounted below.

8. The limit shown on work zone speed limit signs shall be either the existing limit before construction or, if a work zone speed limit order has been approved in accordance with ADOT&PF Procedure 05.05.020 PDR, a reduced limit.

9. All existing regulatory speed limit signs within double fine zones shall either be replaced with R2-100 signs or supplemented with CW20-102 plates.

10. Signs shall be installed at major intersections within the double fine zone to warn entering drivers of double fines. This may be done with a R16-100 sign with a CWI-7 arrow panel on the side street or with two work zone speed limit signs on the main street on either side of the intersection. Use of R16-100 signs on side streets eliminates the need for "Road Work Ahead" signs on those streets. If the speed limit has been reduced, the two work zone speed limit signs are mandatory.

11. At the end of each double fine zone, install an R2-1 sign showing the speed limit for the road beyond the double fine zone.
- | REVISIONS | | |
|-----------|------------------------|-----|
| Date | Description | By |
| 6/11/99 | Revised Notes | KJS |
| 2/28/03 | Rev. Notes & Sign No's | KJS |
| | | |
| | | |
| | | |

State of Alaska
Department of Transportation
& Public Facilities

LOCATION OF
DOUBLE TRAFFIC
FINE SIGNS

APPROVED

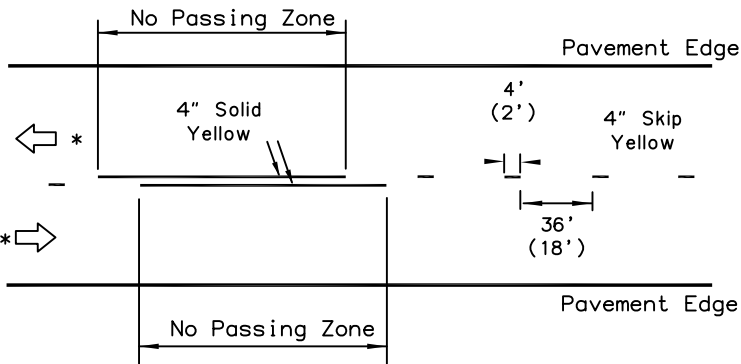
49th

3/31/99

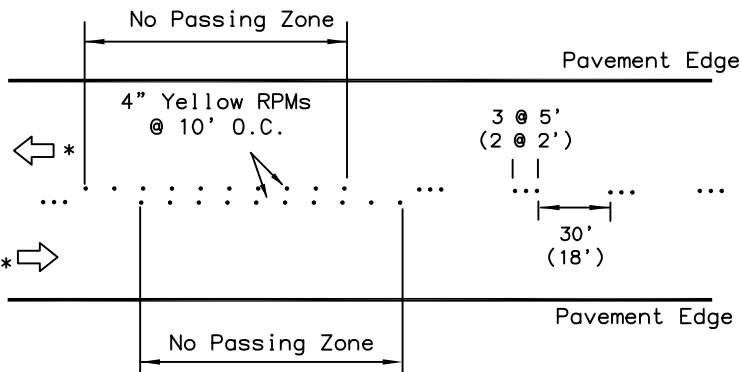
Date
- C-04.12

GENERAL NOTES:

- Final pavement markings conforming to Part 3 of the Alaska Traffic Manual should be installed before paved roads are open to public travel. If that is not practical, install interim pavement markings as shown on this drawing. Maintain interim pavement markings until final pavement markings are installed.
- No interim pavement markings are required:
 - on projects that will not have permanent markings when finished.
 - in work zones that are open to public travel for no more than one work shift during daytime or for no more than one hour at night.
 - where DO NOT PASS and PASS WITH CARE signs are installed on two lane roads as shown in Detail C, no pavement markings are required:
 - for 3 days if seasonal ADT is above 2000, or
 - for 1 month if seasonal ADT is below 2000.
- Interim pavement markings should not be in place longer than 14 calendar days before being replaced with permanent markings conforming to Part 3 of the Alaska Traffic Manual unless the Engineer provides written approval.
- Where R4-1 DO NOT PASS signs are used, install at the beginning of no passing zones and at no more than 1500' spacings within no passing zones.
- Install high level warning devices on all DO NOT PASS and PASS WITH CARE signs.
- Offset temporary markings 8"-12" from the future location of permanent markings if applied on the same lift of pavement.
- Dimensions in parenthesis apply to curves with a radius of 1000 feet or less or where posted speed limit is 30 mph or less.



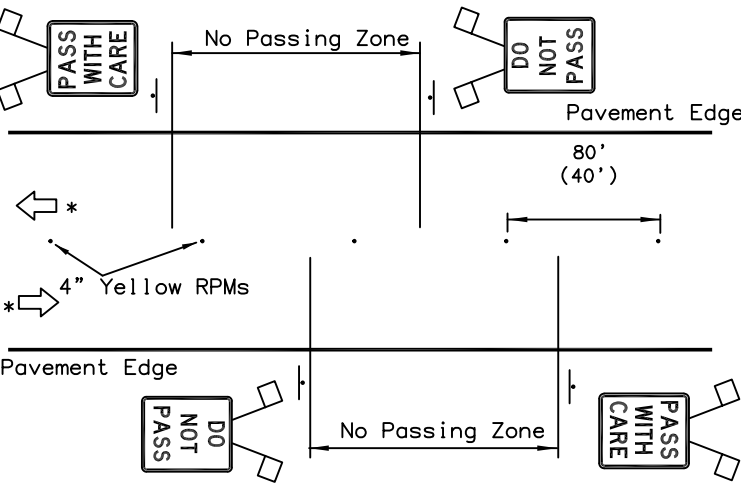
Striping



Temporary Raised Pavement Markers

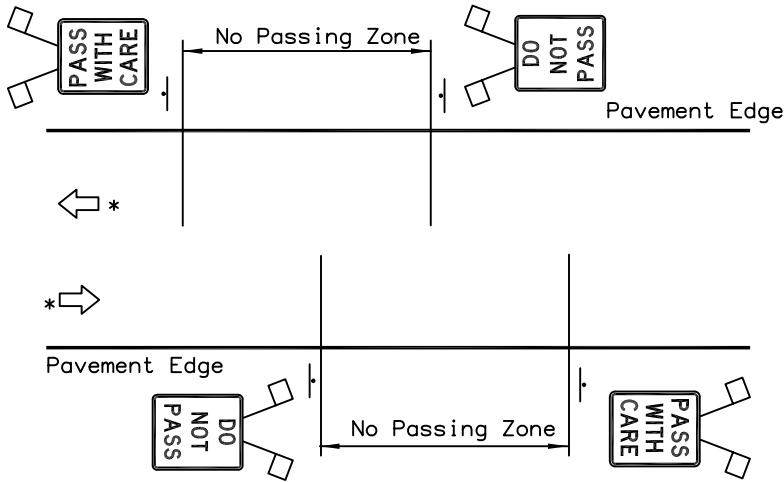
DETAIL A

Two-lane road: No Passing Zones indicated with pavement markings.



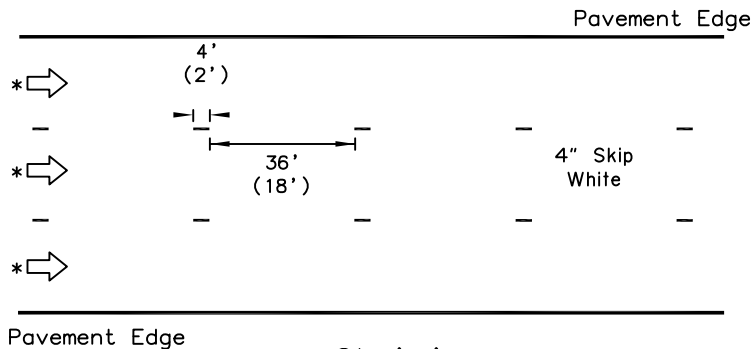
DETAIL B

Two-lane road: No Passing Zones indicated by signs only. Raised pavement markers for centerline delineation.

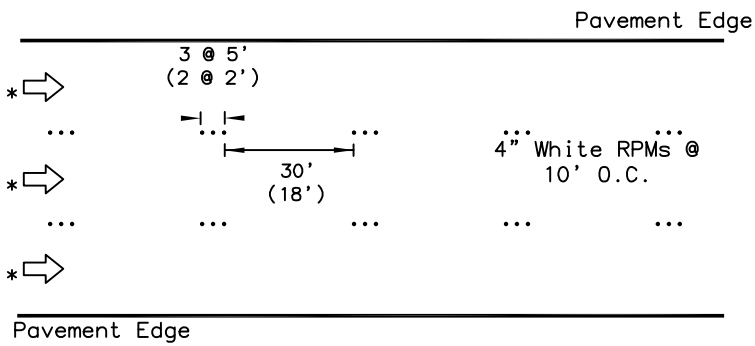


DETAIL C

Two-lane road: No Passing Zones indicated by signs only (see Note 2c). No centerline delineation.



Striping



Temporary Raised Pavement Markers

DETAIL D

Multilane one-way road: Lane dividing lines

* Direction of Travel

State of Alaska DOT&PF
ALASKA STANDARD PLAN
INTERIM
PAVEMENT MARKINGS

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

Adoption Date: 02/08/2019

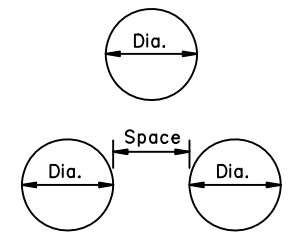
Last Code and Stds. Review
By: Date:

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

GENERAL NOTES:

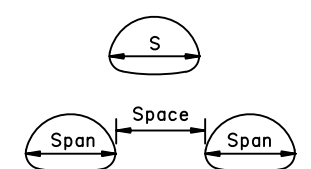
- Sidefill shall be placed and compacted with care under haunches of pipe and shall be brought up evenly and simultaneously on both sides of pipe to 1 foot above the top of the full length of the pipe.
- Alternate installation methods may only be used when specified or approved by the Engineer.

D = Nominal Pipe Diameter



MULTIPLE INSTALLATIONS	
Dia.	Minimum Space Between Pipes
0" - 42"	24"
48" & Over	1/2 Dia. of pipe or 3', whichever is less.

S = Nominal Pipe Arch Span



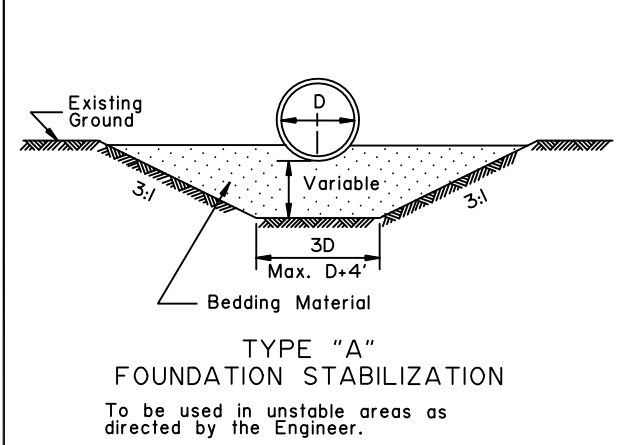
MULTIPLE INSTALLATIONS	
Dia.	Minimum Space Between Pipes
0" - 42"	24"
48" & Over	1/2 Span of pipe arch or 3', whichever is less.

State of Alaska DOT&PF
ALASKA STANDARD PLAN
CULVERT PIPE & ARCH
INSTALLATION DETAILS

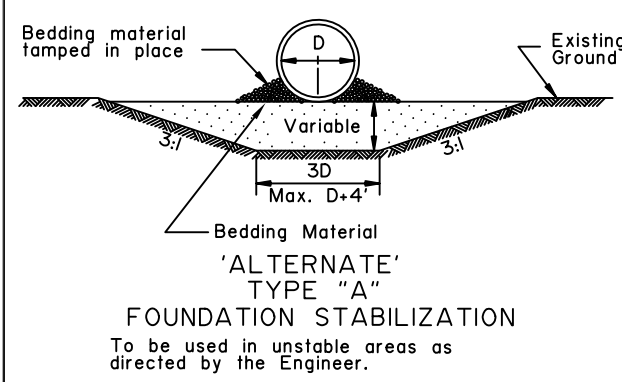
Adopted as an Alaska
Standard Plan by: *Kenneth J. Fisher*
Kenneth J. Fisher, P.E.
Chief Engineer

Adoption Date: 02/08/2019

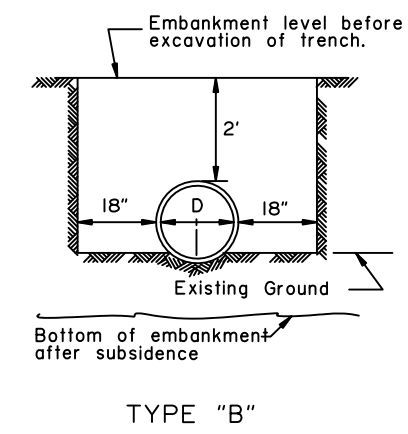
Last Code and Stds. Review
By: Date:
Next Code and Standards Review date: 02/08/2029



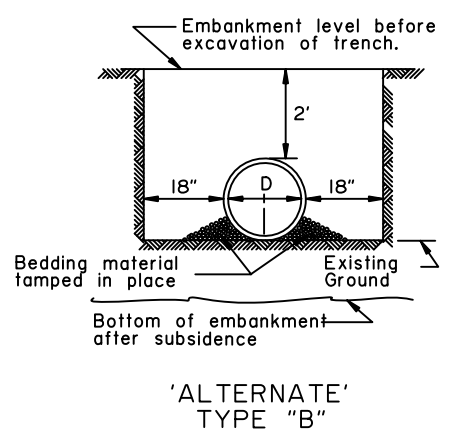
TYPE "A"
FOUNDATION STABILIZATION
To be used in unstable areas as
directed by the Engineer.



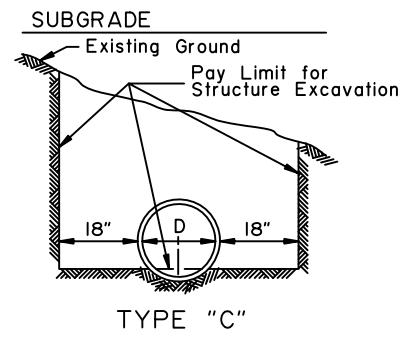
'ALTERNATE'
TYPE "A"
FOUNDATION STABILIZATION
To be used in unstable areas as
directed by the Engineer.



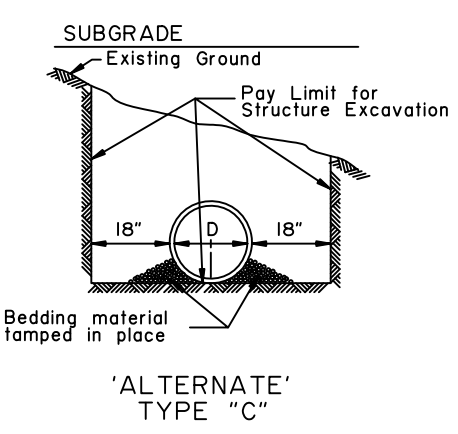
TYPE "B"



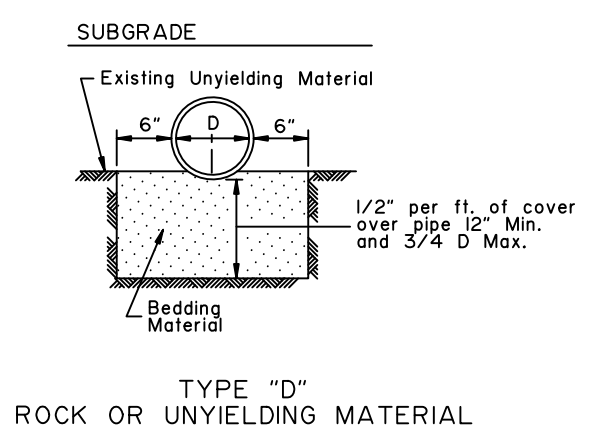
'ALTERNATE'
TYPE "B"



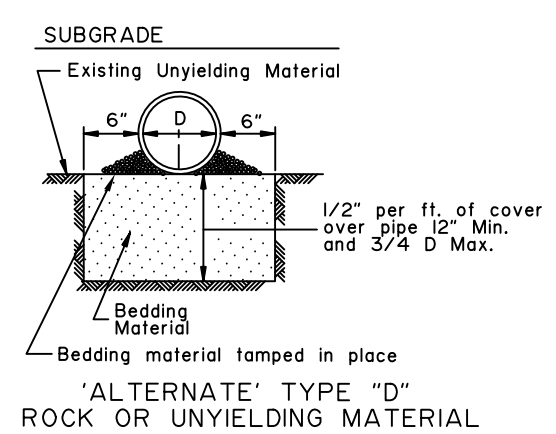
TYPE "C"



'ALTERNATE'
TYPE "C"

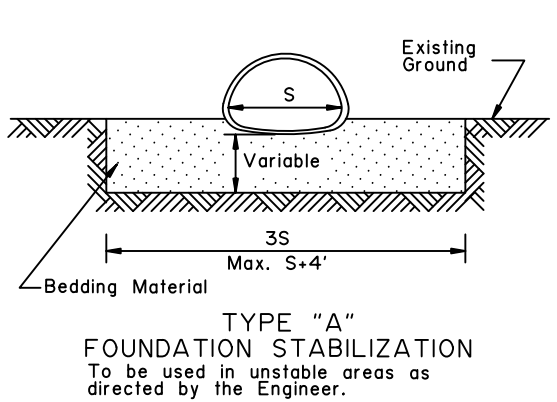


TYPE "D"
ROCK OR UNYIELDING MATERIAL

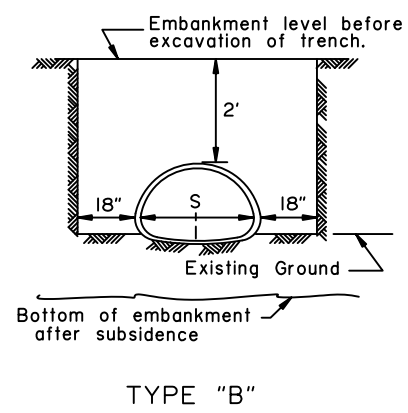


'ALTERNATE' TYPE "D"
ROCK OR UNYIELDING MATERIAL

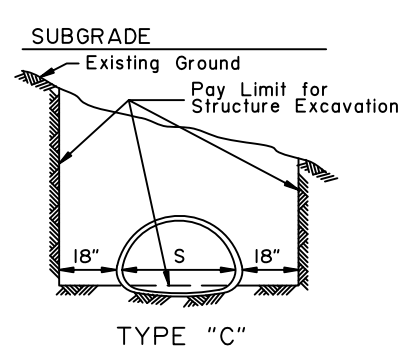
CULVERT PIPE



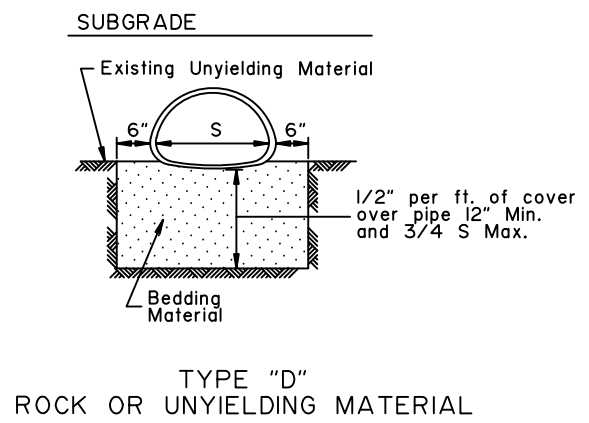
TYPE "A"
FOUNDATION STABILIZATION
To be used in unstable areas as
directed by the Engineer.



TYPE "B"



TYPE "C"



TYPE "D"
ROCK OR UNYIELDING MATERIAL

ARCH

GENERAL NOTES:

- All material and workmanship shall be in accordance with the State of Alaska, Standard Specifications for Highway Construction.
- The contractor shall select only pipes that meet specific height of cover criteria shown on the plans or in the special provisions.
- No more than one type of pipe may be used on any single installation or installation grouping.
- All structural plate pipes shall be placed on a pre-shaped foundation conforming to the depth of the bottom plates with clearance for assembling to the adjacent plates allowed.
- See Standard Plan D-01 "Culvert Pipe & Arch Installation Details" for foundation and structural backfill details.
- Minimum cover shall be measured from the top of pipe to the top of rigid pavement or to the bottom of flexible pavement subgrade. In all cases, the minimum cover shall not be less than 12". Minimum cover during construction shall be that required to protect the pipe from damage or deflection.
- These tables have been developed for an HL-93 live load and for compacted soil weighing 120 lbs. per cubic foot or less. If compacted soil cover exceeds 120 lbs. per cubic foot, the contractor shall use the depth of cover shown in the plans for the specific pipe. Where compacted soil cover exceeds 120 lbs. per cubic foot and no specific cover requirements are provided in the plans, the contractor shall determine the required minimum pipe cover in accordance with Section 12 of the 2017 AASHTO "LRFD Bridge Design Specifications".

Minimum & Maximum Cover for 2 2/3" X 1/2" Aluminum Pipe						
Gage		16	14	12	10	8
Thickness		0.060	0.075	0.105	0.135	0.164
Dia. (In)	Min. (In)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)
12	12	100+	100+	100+	100+	100+
15	12	100	100+	100+	100+	100+
18	12	83	100+	100+	100+	100+
21	12	71	89	100+	100+	100+
24	12	62	78	100+	100+	100+
27	12		69	97	100+	100+
30	12		62	87	100+	100+
36	12		51	73	94	100+
42	12			62	80	100+
48	12			54	70	85
54	15			48	62	76
60	15				52	64
66	18					52
72	18					43

Minimum & Maximum Cover for 3" x 1" Aluminum Pipe						
Gage		16	14	12	10	8
Thickness		0.060	0.075	0.105	0.135	0.164
Dia. (In)	Min. (In)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)
30	12	57	72	100+	100+	100+
36	12	47	60	84	100+	100+
42	12	40	51	72	96	100+
48	12	35	44	62	84	99
54	15	31	39	55	74	88
60	15	28	35	50	67	79
66	18	25	32	45	61	72
72	18	23	29	41	56	66
78	21		27	38	51	61
84	21			35	48	56
90	24			33	44	52
96	24			31	41	49
102	24				39	46
108	24				37	43
114	24					39
120	24					36

Minimum & Maximum Cover for 9" X 2 1/2" Aluminum Structural Plate Pipe*			
Thickness		0.125	0.150
Dia. (In)	Min. (In)	Max. (Ft)	Max. (Ft)
84	18	31	
90	18	27	
96	18	27	
102	18	24	
108	18	24	
114	18	21	
120	24	21	
126	24	19	
132	30	19	
138	30	18	
144	30	18	
150	30		22
156	30		22
162	36		20
168	36		20

*5.33 - 3/4" dia. steel bolts per foot.

CORRUGATED CIRCULAR ALUMINUM PIPE

CORRUGATED ALUMINUM PIPE-ARCH

Minimum & Maximum Cover for 2 2/3" X 1/2" Aluminum Pipe-Arch					
				2 Tons/Sf Corner Bearing Pressure	
Span (Ft.-In.)	Rise (Ft.-In.)	Corner Radius (In)	Min. Thickness (In)	Min. Cover (In)	Max. Cover (Ft)
17	13	3 4/8	16 (0.060)	12	13
21	15	4 1/8	16 (0.060)	12	12
24	18	4 7/8	16 (0.060)	12	12
28	20	5 4/8	14 (0.075)	12	12
35	24	6 7/8	14 (0.075)	12	12
42	29	8 2/8	12 (0.105)	12	12
49	33	9 5/8	12 (0.105)	15	12
57	38	11	10 (0.135)	15	12
64	43	12 3/8	10 (0.135)	18	12
71	47	13 6/8	8 (0.164)	18	12

Minimum & Maximum Cover for 3" x 1" Aluminum Pipe-Arch					
				2 Tons/Sf Corner Bearing Pressure	
Span (Ft.-In.)	Rise (Ft.-In.)	Corner Radius (In)	Min. Thickness (In)	Min. Cover (In)	Max. Cover (Ft)
60	46	18 6/8	14 (0.075)	15	20
66	51	20 6/8	14 (0.075)	18	20
73	55	22 7/8	14 (0.075)	21	20
81	59	20 7/8	12 (0.105)	21	16
87	63	22 7/8	12 (0.105)	24	16
95	67	24 3/8	12 (0.105)	24	16
103	71	26 1/8	10 (0.135)	24	16
112	75	27 6/8	8 (0.164)	24	16

Minimum & Maximum Cover for 9" x 2 1/2" Aluminum Multiplate Pipe-Arch*					
Span (Ft.-In.)	Rise (Ft.-In.)	Corner Radius (In)	Min. Thickness (In)	Min. Cover (In)	2 Tons/Sf Corner Bearing Pressure Max. Cover (Ft)
6-7	5-8	31.75	0.125	24	24
6-11	5-9	31.75	0.125	24	24
7-3	5-11	31.75	0.125	24	18
7-9	6-0	31.75	0.125	24	18
8-5	6-3	31.75	0.125	24	16
9-3	6-5	31.75	0.125	24	15
10-3	6-9	31.75	0.125	30	13
10-9	6-10	31.75	0.125	30	13
11-5	7-1	31.75	0.125	30	13
12-7	7-5	31.75	0.125	30	11
12-11	7-6	31.75	0.125	30	11
13-1	8-2	31.75	0.125	30	11
13-11	8-5	31.75	0.125	36	10
14-8	9-8	31.75	0.125	36	9
15-4	10-0	31.75	0.150	36	8
16-1	10-4	31.75	0.150	36	8
16-9	10-8	31.75	0.150	42	7
17-3	11-0	31.75	0.150	42	7
18-0	11-4	31.75	0.175	42	7
18-8	11-8	31.75	0.175	42	7

*5.33 - 3/4" dia. steel bolts per foot.

State of Alaska DOT&PF
ALASKA STANDARD PLAN

PIPE AND ARCH TABLES

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

Adoption Date: 7/17/2020

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

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

GENERAL NOTES

- All material and workmanship shall be in accordance with the State of Alaska, Standard Specifications for Highway Construction.
- The contractor shall select only pipes that meet specific height of cover criteria shown on the plans or in the special provisions.
- No more than one type of pipe may be used on any single installation or installation grouping.
- All structural plate pipes shall be placed on a pre-shaped foundation conforming to the depth of the bottom plates with clearance for assembling to the adjacent plates allowed.
- See Standard Plan D-01 "Culvert Pipe & Arch Installation Details" for foundation and structural backfill details.
- Minimum cover shall be measured from the top of pipe to the top of rigid pavement or to the bottom of flexible pavement subgrade. In all cases, the minimum cover shall not be less than 12". Minimum cover during construction shall be that required to protect the pipe from damage or deflection.
- These tables have been developed for an HL-93 live load and for compacted soil weighing 120 lbs. per cubic foot or less. If compacted soil cover exceeds 120 lbs. per cubic foot, the contractor shall use the depth of cover shown in the plans for the specific pipe. Where compacted soil cover exceeds 120 lbs. per cubic foot and no specific cover requirements are provided in the plans, the contractor shall determine the required minimum pipe cover in accordance with Section 12 of the 2017 AASHTO "LRFD Bridge Design Specifications".

Minimum & Maximum Cover for 2 2/3" x 1/2" Steel Pipe						
Gage		16	14	12	10	8
Thickness		0.060	0.075	0.105	0.135	0.164
Dia. (In)	Min. (In)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)
12	12	100+	100+	100+	100+	100+
15	12	100+	100+	100+	100+	100+
18	12	100+	100+	100+	100+	100+
21	12	100+	100+	100+	100+	100+
24	12	100+	100+	100+	100+	100+
30	12	83	100+	100+	100+	100+
36	12	69	86	100+	100+	100+
42	12	59	74	100+	100+	100+
48	12	51	64	91	100+	100+
54	12		57	80	100+	100+
60	12			72	93	100+
66	12			66	85	100+
72	12				78	95
78	12					84
84	12					73

Minimum & Maximum Cover fo 3" x 1" Steel Pipe						
Gage		16	14	12	10	8
Thickness		0.060	0.075	0.105	0.135	0.164
Dia. (In)	Min. (In)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)
36	12			100+	100+	100+
42	12			100+	100+	100+
48	12		74	100+	100+	100+
54	12	53	66	93	100+	100+
60	12	47	59	83	100+	100+
66	12	43	54	76	98	100+
72	12	39	49	69	89	100+
78	12	36	45	64	82	100+
84	12	33	42	59	77	94
90	12	31	39	55	71	87
96	12	29	37	52	67	82
102	18	27	34	49	63	77
108	18		32	46	59	73
114	18		31	43	56	69
120	18		29	41	53	65
126	18			39	51	62
132	18			37	48	59
138	18			36	46	57
144	18				44	54

Minimum & Maximum Cover for 5" x 1" Steel Pipe						
Gage		16	14	12	10	8
Thickness		0.060	0.075	0.105	0.135	0.164
Dia. (In)	Min. (In)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)
36	12	71	88	100+	100+	100+
42	12	60	76	100+	100+	100+
48	12	53	66	93	100+	100+
54	12	47	59	82	100+	100+
60	12	42	53	74	96	100+
66	12	38	48	67	87	100+
72	12	35	44	62	79	97
78	12	32	40	57	73	90
84	12	30	37	53	68	83
90	12	28	35	49	63	78
96	12	26	33	46	59	73
102	18	24	31	43	56	69
108	18		29	41	53	65
114	18		27	39	50	61
120	18		26	37	47	58
126	18			35	45	55
132	18			33	43	53
138	18			32	41	50
144	18				39	48

Minimum & Maximum Cover for 6" x 2" Steel Multiplate Pipe*							
Gage		12	10	8	7	5	3
Thickness		0.111	0.140	0.170	0.188	0.218	0.249
Dia. (In)	Min. (In)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)
60	12	46	67	87	100	100+	100+
66	12	42	60	79	91	100+	100+
72	12	38	55	73	83	100+	100+
78	12	35	51	67	77	93	100+
84	12	32	47	62	71	86	100+
90	12	30	44	58	67	80	95
96	12	28	41	54	62	75	89
102	18	27	39	51	59	71	84
108	18	25	37	48	55	67	79
114	18	24	35	45	52	63	75
120	18	22	33	43	50	60	71
126	18	21	31	41	47	57	68
132	18	20	30	39	45	54	64
138	18	19	28	37	43	52	62
144	18	18	27	36	41	50	59

*4 - 3/4" dia. steel bolts per foot.

CORRUGATED CIRCULAR STEEL PIPE

CORRUGATED STEEL PIPE-ARCH

Minimum & Maximum Cover for 2 2/3" X 1/2" Steel Pipe-Arch						
2 Tons/Sf Corner Bearing Pressure						
Span (Ft.-In.)	Rise (Ft.-In.)	Corner Radius (In)	Min. Thickness (In)	Min. Cover (In)	Max. Cover (Ft)	
17	13	3 4/8	16 (0.060)	12	11	
21	15	4 1/8	16 (0.060)	12	11	
24	18	4 7/8	16 (0.060)	12	11	
28	20	5 4/8	16 (0.060)	12	11	
35	24	6 7/8	16 (0.060)	12	11	
42	29	8 2/8	16 (0.060)	12	11	
49	33	9 5/8	14 (0.075)	12	11	
57	38	11	12 (0.109)	12	11	
64	43	12 3/8	12 (0.109)	12	11	
71	47	13 6/8	10 (0.138)	12	11	
77	52	15 1/8	10 (0.138)	12	11	
83	57	16 4/8	8 (0.168)	12	11	

Minimum & Maximum Cover for 3" X 1" Steel Pipe-Arch						
2 Tons/Sf Corner Bearing Pressure						
Span (Ft.-In.)	Rise (Ft.-In.)	Corner Radius (In)	Min. Thickness (In)	Min. Cover (In)	Max. Cover (Ft)	
53	41	10 2/8	14 (0.079)	12	10	
60	46	18 6/8	14 (0.079)	15	29	
66	51	20 6/8	14 (0.079)	15	29	
73	55	22 7/8	14 (0.079)	18	18	
81	59	20 7/8	14 (0.079)	18	15	
87	63	22 7/8	14 (0.079)	18	15	
95	67	24 3/8	14 (0.079)	18	15	
103	71	26 1/8	14 (0.079)	18	14	
112	75	27 6/8	14 (0.079)	21	14	
117	79	29 4/8	12 (0.109)	21	14	
128	83	31 2/8	10 (0.138)	24	14	
137	87	33	10 (0.138)	24	14	
142	91	34 6/8	10 (0.138)	24	13	
150	96	36	10 (0.138)	30	13	
157	96	38	10 (0.138)	30	13	
164	105	40	10 (0.138)	30	14	
171	110	41	10 (0.138)	30	13	

Minimum & Maximum Cover for 5" X 1" Steel Pipe-Arch						
2 Tons/Sf Corner Bearing Pressure						
Span (Ft.-In.)	Rise (Ft.-In.)	Corner Radius (In)	Min. Thickness (In)	Min. Cover (In)	Max. Cover (Ft)	
53	41	10 2/8	14 (0.079)	12	10	
60	46	18 6/8	14 (0.079)	15	29	
66	51	20 6/8	14 (0.079)	15	29	
73	55	22 7/8	14 (0.079)	18	18	
81	59	20 7/8	14 (0.079)	18	15	
87	63	22 7/8	14 (0.079)	18	15	
95	67	24 3/8	14 (0.079)	18	15	
103	71	26 1/8	14 (0.079)	18	14	
112	75	27 6/8	14 (0.079)	21	14	
117	79	29 4/8	12 (0.109)	21	14	
128	83	31 2/8	10 (0.138)	24	14	
137	87	33	10 (0.138)	24	14	
142	91	34 6/8	10 (0.138)	24	13	
150	96	36	10 (0.138)	30	13	
157	96	38	10 (0.138)	30	13	
164	105	40	10 (0.138)	30	14	
171	110	41	10 (0.138)	30	13	

Minimum & Maximum Cover for Steel Multiplate Pipe-Arch 6" x 2" *						
2 Tons/Sf Corner Bearing Pressure						
Span (Ft.-In.)	Rise (Ft.-In.)	Corner Radius (In)	Min. Gage (In)	Min. Cover (In)	Max. Cover (Ft)	
6-1	4-7	18	12 (0.111)	12	14	
7-0	5-1	18	12 (0.111)	12	12	
7-11	5-7	18	12 (0.111)	12	10	
8-10	6-1	18	12 (0.111)	18	9	
9-9	6-7	18	12 (0.111)	18	8	
10-11	7-1	18	12 (0.111)	18	6	
11-10	7-7	18	12 (0.111)	18	5	
12-10	8-4	18	12 (0.111)	24	5	
13-3	9-4	31	10 (0.140)	24	11	
14-2	9-10	31	10 (0.140)	24	10	
15-4	10-4	31	10 (0.140)	24	9	
16-3	10-10	31	10 (0.140)	30	8	
17-2	11-4	31	10 (0.140)	30	8	
18-1	11-10	31	10 (0.140)	30	7	
19-3	12-4	31	10 (0.140)	30	7	
19-11	12-10	31	10 (0.140)	30	6	
20-7	13-2	31	10 (0.140)	36	6	

*4 - 3/4" dia. steel bolts per foot.

State of Alaska DOT&PF
ALASKA STANDARD PLAN

PIPE AND ARCH TABLES

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

Adoption Date: 7/17/2020

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

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

GENERAL NOTES

1. All materials and workmanship shall be in accordance with the State of Alaska Standard Specifications for Highway Construction.
2. For foundation and structural backfill details see Standard Plan D-OI "Culvert Pipe & Arch Installation Details".
3. Pipe cover height is measured from top of the pipe to top of rigid pavement, or to the bottom of subgrade for flexible pavement. In all cases the minimum cover shall be no less than 2 ft. Where loads traverse the culvert during construction minimum cover shall be no less than 4 ft.

Maximum Cover for Type S Corrugated Polyethelene Pipe	
Size (in)	Max. Cover (ft)
12	24
15	25
18	24
24	20
30	20
36	18
42	16
48	17

State of Alaska DOT&PF
ALASKA STANDARD PLAN

PIPE AND ARCH TABLES

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

Adoption Date: 7/17/2020

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

GENERAL NOTES

- All material and workmanship shall be in accordance with the State of Alaska, Standard Specifications for Highway Construction.
- The contractor shall select only pipes that meet specific height of cover criteria shown on the plans or in the special provisions.
- No more than one type of pipe may be used on any single installation or installation grouping.
- All structural plate pipes shall be placed on a pre-shaped foundation conforming to the depth of the bottom plates with clearance for assembling to the adjacent plates allowed.
- See Standard Plan D-01 "Culvert Pipe & Arch Installation Details" for foundation and structural backfill details.
- Minimum cover shall be measured from the top of pipe to the top of rigid pavement or to the bottom of flexible pavement subgrade. In all cases, the minimum cover shall not be less than 12". Minimum cover during construction shall be that required to protect the pipe from damage or deflecton.
- These tables have been developed for an HL-93 live load and for compacted soil weighing 120 lbs. per cubic foot or less. If compacted soil cover exceeds 120 lbs. per cubic foot, the contractor shall use the depth of cover shown in the plans for the specific pipe. Where compacted soil cover exceeds 120 lbs. per cubic foot and no specific cover requirements are provided in the plans, the contractor shall determine the required minimum pipe cover in accordance with Section 12 of the 2017 AASHTO "LRFD Bridge Design Specifications".

Minimum & Maximum Cover for Aluminum Spiral Rib Circular Pipe*					
Gage		I6	I4	I2	I0
Thickness		0.064	0.079	0.109	0.138
Dia. (In)	Min. (In)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)
18	12	43	61		
21	12	38	52	84	
24	12	33	45	73	
30	15	26	36	58	
36	18	21	30	49	69
42	21		25	41	59
48	24			36	51
54	24			32	46
60	24			29	41
66	24				37
72	30				34

* $\frac{3}{4}$ x $\frac{3}{4}$ x $7\frac{1}{2}$ in. Corrugations

Minimum & Maximum Cover for Aluminum Spiral Rib Pipe-Arch*						
Gage			I6	I4	I2	I0
Thickness			0.060	0.075	0.105	0.135
Span (Ft.-In.)	Rise (Ft.-In.)	Min. Cover (In)	Max. Cover (Ft)			
20	16	12	16			
23	19	12	15			
27	21	15	13	13		
33	26	18	13	13	13	
40	31	21		13	13	
46	36	24			13	13
53	41	24			13	13
60	46	24			13	13
66	51	24				13

* $\frac{3}{4}$ x $\frac{3}{4}$ x $7\frac{1}{2}$ in. Corrugations

ALUMINUM SPIRAL RIB PIPE

STEEL SPIRAL RIB PIPE

Minimum & Maximum Cover for Steel and Aluminized Steel Spiral Rib Circular Pipe*					
Gage		I6	I4	I2	I0
Thickness		0.064	0.079	0.109	0.138
Dia. (In)	Min. (In)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)
18	12	91			
24	12	68	95	100+	
30	12	54	76	100+	
36	12	45	63	100+	
42	12	38	54	90	
48	12	33	47	79	
54	18	30	42	70	
60	18	27	38	63	92
66	18	24	34	57	83
72	18		31	52	76
78	24		29	48	70
84	24		27	45	65
90	24			42	61
96	24			39	56
102	30			36	50
108	30			32	45

* $\frac{3}{4}$ x $\frac{3}{4}$ x $7\frac{1}{2}$ in. Corrugations.

Minimum & Maximum Cover for Steel Spiral Rib Pipe-Arch*					
2 Tons/Sf Corner Bearing Pressure					
Thickness			0.064	0.079	0.109
Span (Ft.-In.)	Rise (Ft.-In.)	Min. Cover (In)	Max. Cover (Ft)		
20	16	12	13		
23	19	12	13		
27	21	12	11		
33	26	12	11		
40	31	12	11		
46	36	12	11		
53	41	18		11	
60	46	18		19	
66	51	18		19	
73	55	18			18
81	59	18			15
87	63	18			15
95	67	18			15

* $\frac{3}{4}$ x $\frac{3}{4}$ x $7\frac{1}{2}$ in. Corrugations

State of Alaska DOT&PF
ALASKA STANDARD PLAN

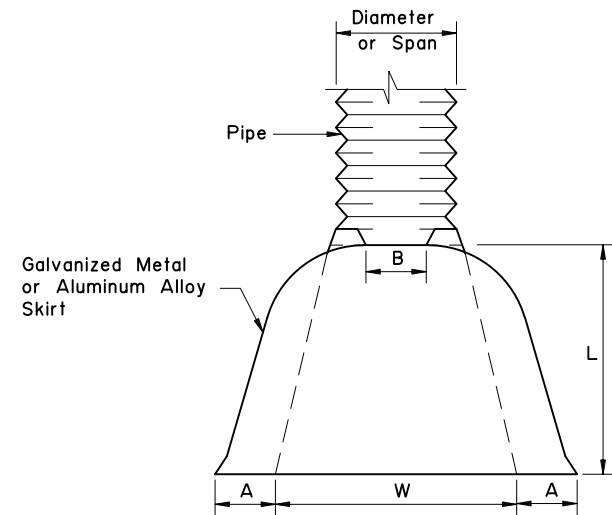
PIPE AND ARCH TABLES

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

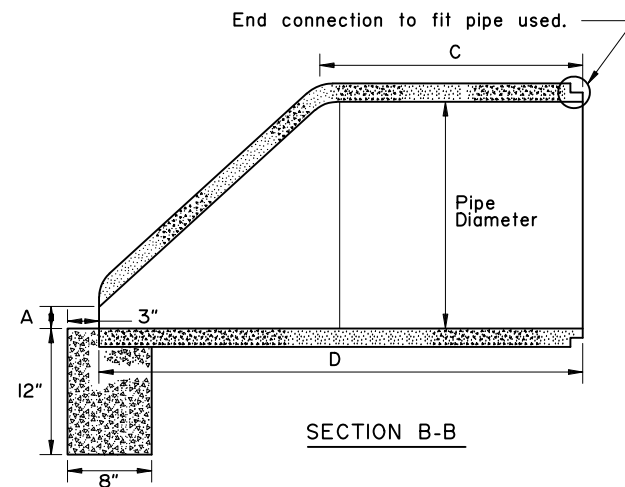
Adoption Date: 7/17/2020

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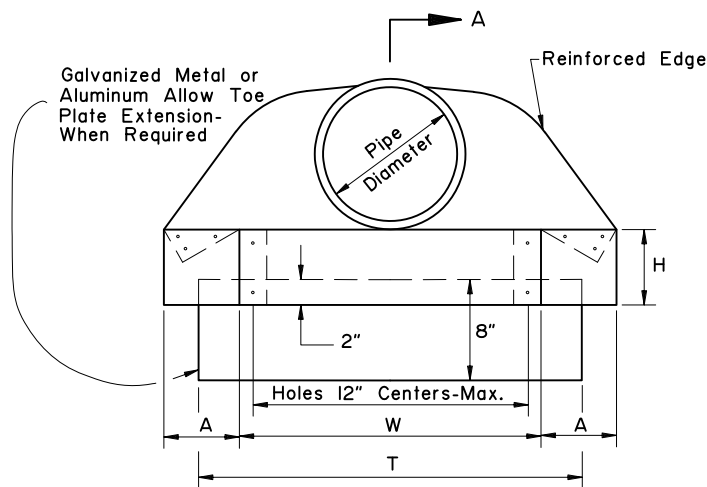
PLAN
ROUND AND PIPE ARCH



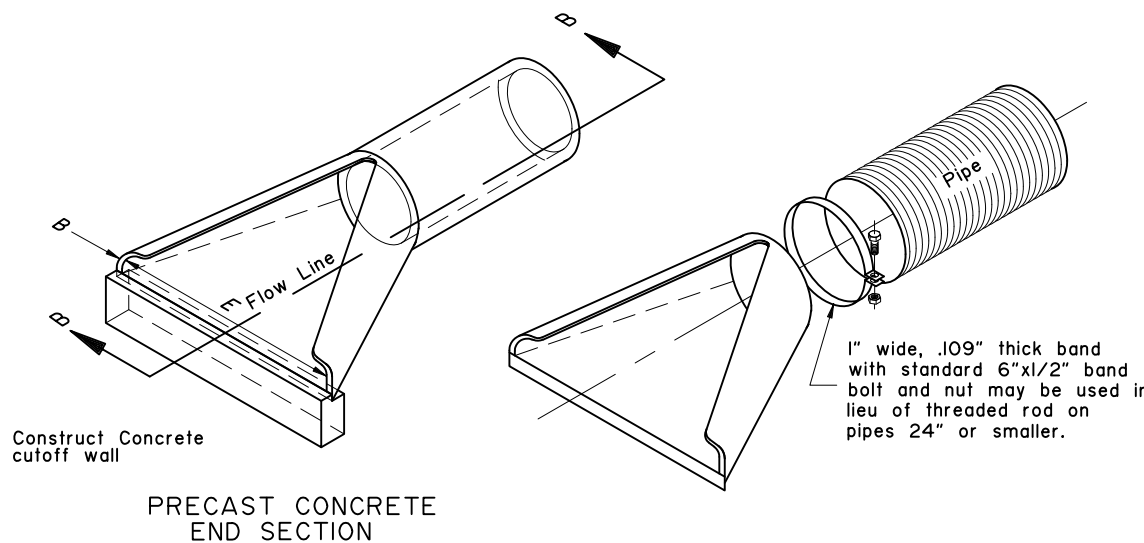
SECTION B-B

MINIMUM DIMENSIONS					
Pipe Diameter	A	B	C	D	E
12"	4"	1 3/4"	24"	46"	24"
18"	9"	2"	25"	50"	36"
24"	9 1/2"	2 1/2"	30"	72"	48"
30"	12"	3"	20"	73"	60"
36"	15"	3 3/8"	35"	97"	72"
42"	21"	3 3/4"	35"	98"	78"
48"	24"	4 1/4"	26"	98"	84"
54"	27"	4 5/8"	33"	99"	82"

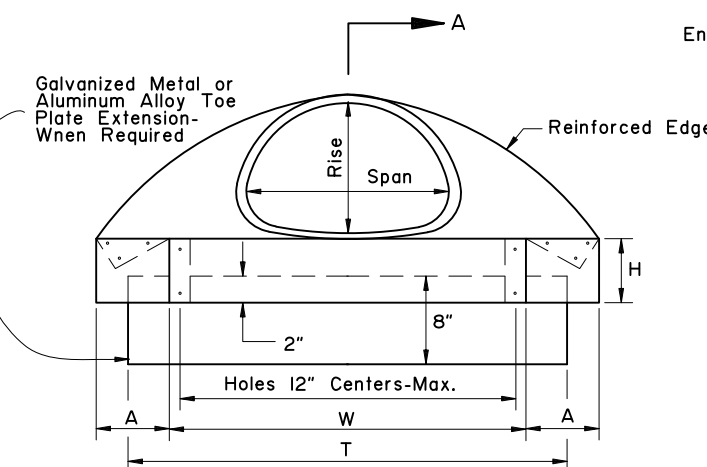
ROUND PIPE										
Pipe Diam. Inches	Thickness For Aluminum	Thk. for Galv. Metal	Dimension Inches						Skirt	Approx. Slope
			1" A Tol.	B Max.	1" H Tol.	1 1/2" L Tol.	2" W Tol.	2" T Tol.		
12"	0.060	0.064	6"	6"	6"	21"	24"	34"	1 Pc.	2 1/2
15"	0.060	0.064	7"	8"	6"	26"	30"	40"	1 Pc.	2 1/2
18"	0.060	0.064	8"	10"	6"	31"	36"	46"	1 Pc.	2 1/2
21"	0.060	0.064	9"	12"	6"	36"	42"	52"	1 Pc.	2 1/2
24"	0.075	0.064	10"	13"	6"	41"	48"	58"	1 Pc.	2 1/2
30"	0.075	0.079	12"	16"	8"	51"	60"	70"	1 Pc.	2 1/2
36"	0.105	0.079	14"	19"	9"	60"	72"	94"	2 Pc.	2 1/2
42"	0.105	0.109	16"	22"	11"	69"	84"	106"	2 Pc.	2 1/2
48"	0.105	0.109	18"	27"	12"	78"	90"	112"	2 Pc.	2 1/4
54"	0.105	0.109	18"	30"	12"	84"	102"	122"	2 Pc.	2 1/4
60"	0.135	0.109	18"	33"	12"	87"	114"	134"	3 Pc.	2 1/4
66"	0.135	0.109	18"	36"	12"	87"	120"	142"	3 Pc.	2 1/4
72"	0.135	0.109	18"	39"	12"	87"	126"	146"	3 Pc.	2 1/4
78"	— —	0.109	18"	42"	12"	87"	132"	152"	3 Pc.	1 1/4
84"	— —	0.109	18"	45"	12"	87"	138"	158"	3 Pc.	1 1/6



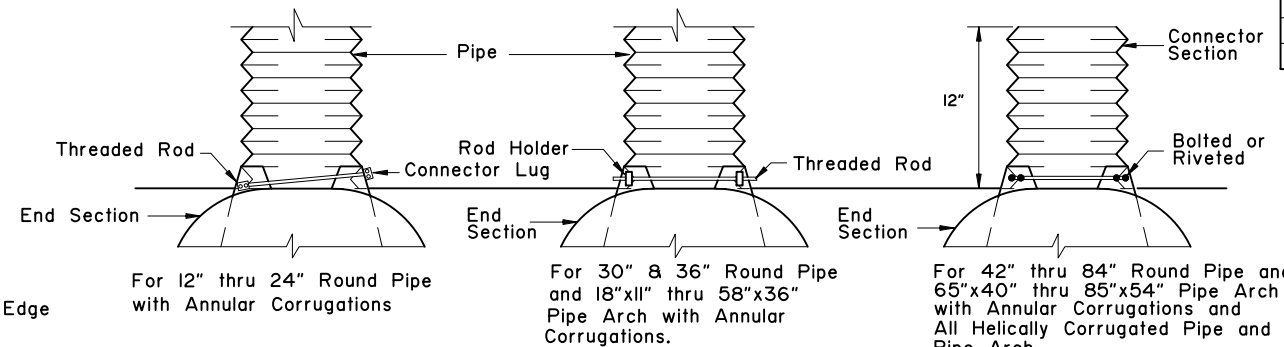
ELEVATION
ROUND PIPE



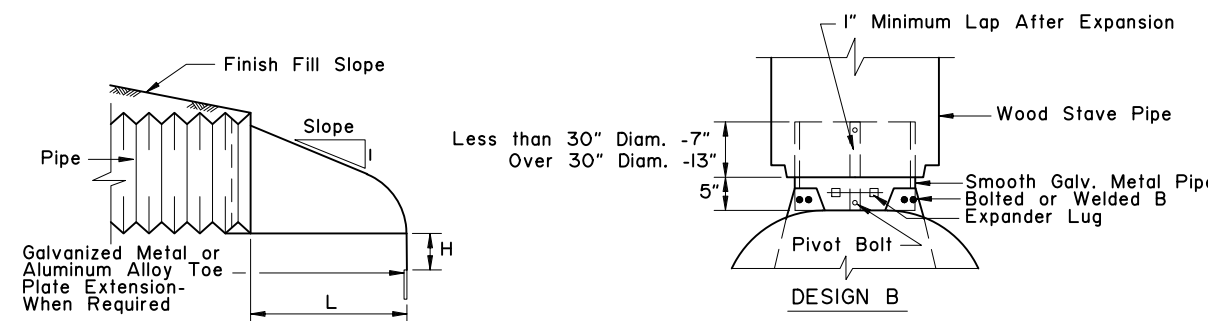
PRECAST CONCRETE
END SECTION



ELEVATION
PIPE ARCH



DESIGN A



METAL END SECTION CONNECTED
TO WOOD STAVE PIPE

PIPE-ARCH											
Pipe-Arch Dimension Inches		Thickness for Aluminum	Thk. for Galv. Metal	Dimension Inches						Skirt	Approx. Slope
				A 1" Tol.	B Max.	H 1" Tol.	L 1 1/2" Tol.	W 2" Tol.	T 2" Tol.		
Span	Rise										
17"	13"	0.060	0.064	7"	9"	6"	19"	30"	40"	1 Pc.	2 1/2
21"	15"	0.060	0.064	7"	10"	6"	23"	36"	46"	1 Pc.	2 1/2
24"	18"	0.060	0.064	8"	12"	6"	28"	42"	52"	1 Pc.	2 1/2
28"	20"	0.075	0.064	9"	14"	6"	32"	48"	58"	1 Pc.	2 1/2
35"	24"	0.075	0.079	10"	16"	6"	39"	60"	70"	1 Pc.	2 1/2
42"	29"	0.105	0.079	12"	18"	8"	46"	75"	85"	1 Pc.	2 1/2
49"	33"	0.105	0.109	13"	21"	9"	53"	85"	103"	2 Pc.	2 1/2
57"	38"	0.105	0.109	18"	26"	12"	63"	90"	114"	2 Pc.	2 1/2
64"	43"	0.105	0.109	18"	30"	12"	70"	102"	130"	2 Pc.	2 1/4
71"	47"	0.135	0.109	18"	33"	12"	77"	114"	144"	3 Pc.	2 1/4
77"	52"	0.135	0.109	18"	36"	12"	84"	120"	158"	3 Pc.	2 1/4
83"	57"	0.135	0.109	18"	39"	12"	90"	126"	170"	3 Pc.	2 1/4

GENERAL NOTES:

1. Toe plate extensions will be required only when provided for on the plans. When required, the toe plate extensions shall be punched with holes to match those in lip of skirt and fastened with 3/8 inch or larger galvanized nuts and bolts and shall be the same gage as the end section.
2. Galvanized Metal or Aluminum Alloy End Sections may be used on Wood Stave and Plastic Pipe.
3. All 3 piece bodies shall have 12 gage sides and 10 gage center panels. Multiple panel bodies shall have lap seams which are to be tightly joined by 3/8" galvanized rivets or bolts.

State of Alaska DOT&PF
ALASKA STANDARD PLAN

CULVERT END SECTIONS

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

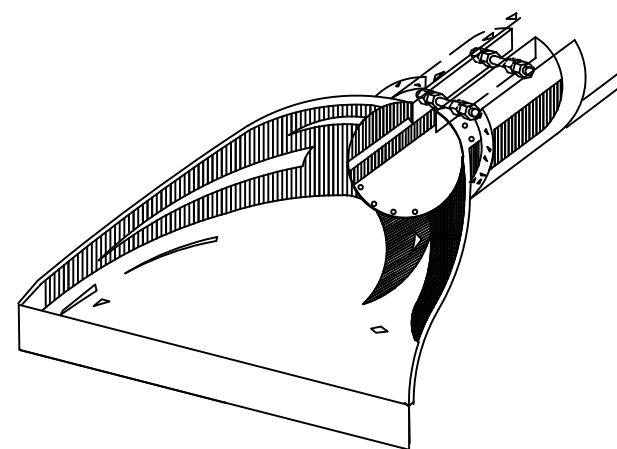
Adoption Date: 02/08/2019

Last Code and Stds. Review
By: Date:

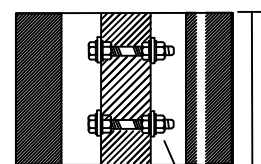
Next Code and Standards Review date: 02/08/2029

GENERAL NOTES

1. See general notes on sheet 1 of 3.
2. See sheet 1 of 3 for metal end section dimensions.
3. Insert bolts, washers and rivets shall be galvanized. Insert thickness is the same as the end section.
4. Use culvert inserts only at inlet.

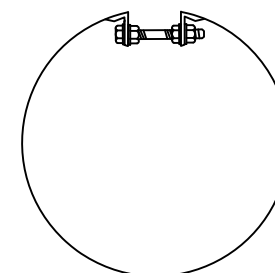


FOR CONNECTING CONCRETE PIPE OR CORRUGATED
POLYETHYLENE PIPE TO METAL END SECTION.



5/8" GALV.BOLTS

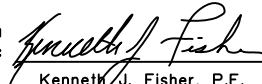
SEE NOTE 2



METAL INSERTS FOR USE WITH CORRUGATED PLASTIC PIPE AND METAL END SECTIONS

State of Alaska DOT&PF
ALASKA STANDARD PLAN

CULVERT END SECTIONS

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

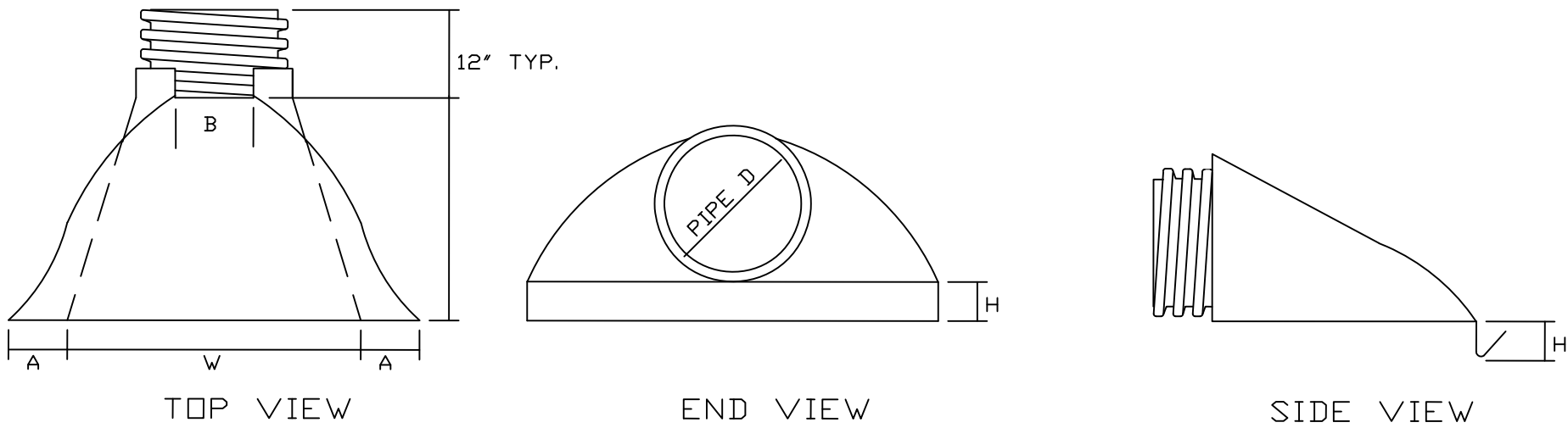
Adoption Date: 02/08/2019

Last Code and Stds. Review
By: Date:

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

GENERAL NOTES

1. Plastic flared end sections may be used with HDPE corrugated culvert pipes where noted in project plans or approved by project engineer.
2. Consult manufacturer's recommendations for proper sizing and coupling devices. Recommended fasteners may include connecting bands or cinch ties. Fittings across dimension B may include threaded rods with wing nuts or bolts and washers. plastic welds may be recommended.
3. Align coupling to accomodate pipe corrugations.
4. Metal components e.g. bolts or washers must be galvanized.
5. Attachment of end section should preserve culvert alignment and not impair pipe function. Use end sections only on culvert inlet.
6. Toe plate extensions will be required only when designated on the plans.
7. End sections will not be used on HDPE culvert pipes larger than 36" unless indicated by project plans or approved by the Engineer.

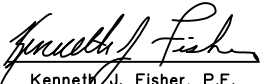


PIPE DIAMETER	DIMENSIONS IN MILLIMETERS				
	A<1"±>	B MAX	H<1"±>	L<1/2"±>	W<2"±>
12" and 15"	6 1/2"	10"	6 1/2"	25"	29"
18"	7 1/2"	15"	6 1/2"	32"	35"
24"	7 1/2"	18"	6 1/2"	36"	45"
30"	10 1/2"	N/A	7"	53"	68"
36"	10 1/2"	N/A	7"	53"	68"

PLASTIC END SECTION FOR CORRUGATED PLASTIC PIPE

State of Alaska DOT&PF
ALASKA STANDARD PLAN

CULVERT END SECTIONS

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

Adoption Date: 02/08/2019

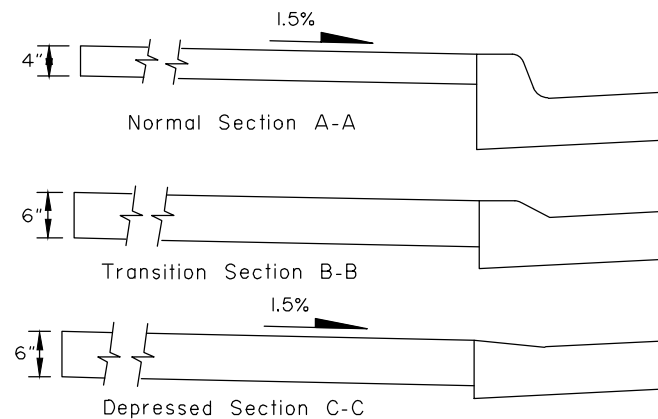
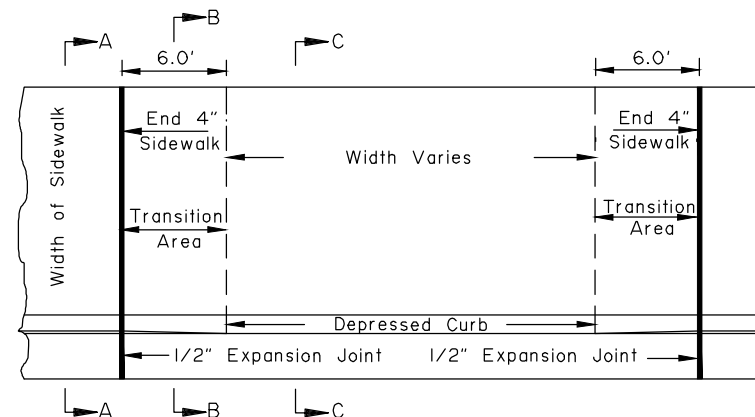
Last Code and Stds. Review
By: Date:

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

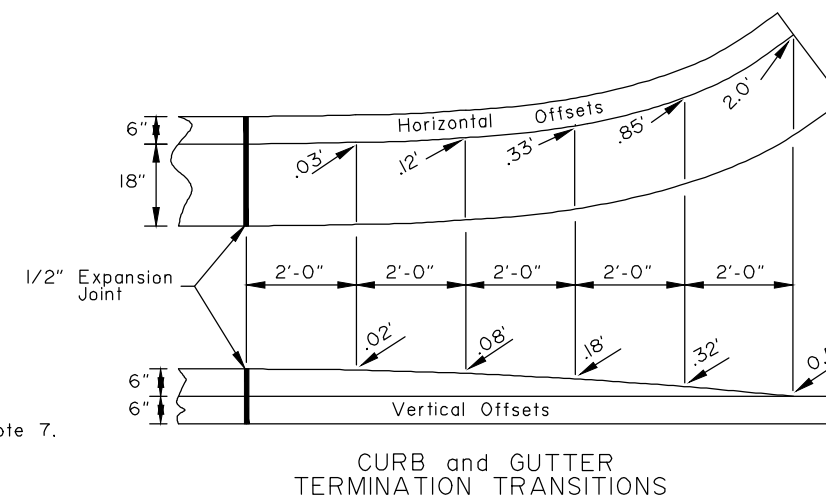
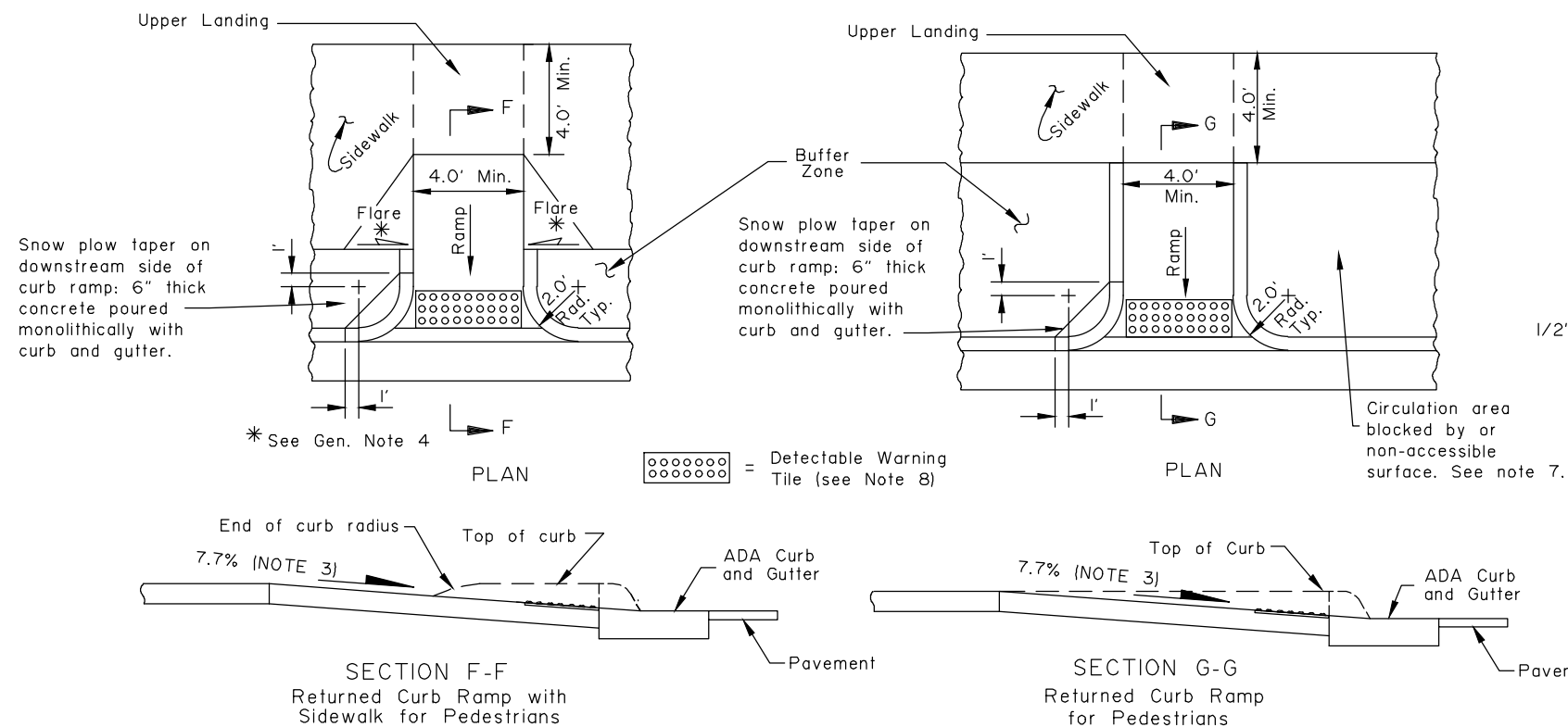
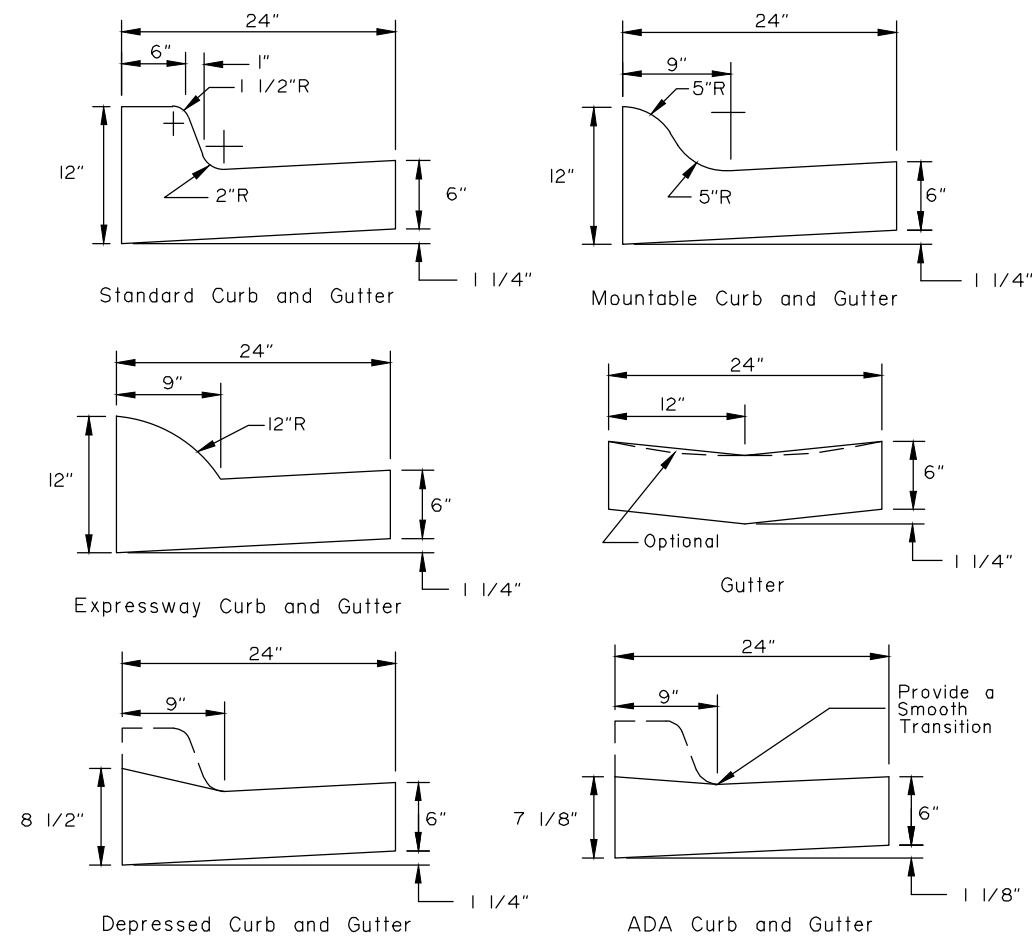
CONSTRUCTION NOTES:

1. Use the type of curb and gutter shown on the plans.
2. Construct ramp runs and landings of concrete, regardless of whether the sidewalk is asphalt or concrete.
3. Construct ramp slopes at a 7.7% nominal grade, or flatter. Ramp slopes may be increased to a maximum of 8.3% when site conditions warrant it. Ramp lengths should be increased to keep grades under the 8.3% maximum, but are not required to exceed 15.0 feet. The resulting ramp grade at a 15.0 foot ramp length is acceptable even if it exceeds 8.3%.
4. Construct flare slopes at 8.3% (measured parallel to the curb line) or flatter, sidewalk cross slopes at 1.5% nominal (1.0% min. and 2.0% max), and ADA Curb and Gutter gutter pan slopes at 4.7% nominal. Construct grade breaks perpendicular to ramp runs.
5. Do not construct flare slopes steeper than 10.0%, sidewalk cross slopes steeper than 2.0% and ADA Curb and Gutter gutter pan slopes steeper than 5.0%. These are the steepest slopes allowed under the 2006 ADA Standards for Transportation Facilities.
6. Provide a coarse broomed finish on ramp runs perpendicular to the ramp slope.
7. When approved by the Engineer, curb returns may be replaced with flares at locations where access to the side of a ramp run is free of poles, utility boxes, other obstructions, or non-accessible surfaces such as a dirt planter strips. See Standard Plan I-22 for flare details.
8. Install 24" wide detectable warning tiles for the full width of the ramp. Provide tiles with truncated domes meeting Section 705.1 of the 2006 ADA Standards for Transportation Facilities. Align truncated dome pattern in the predominant direction of wheelchair travel to permit wheels to roll between domes.
9. Maximum cross slope on upper landings, measured in any direction, is 2.0%. Maximum cross slope on ramps is 2.0% measured perpendicular to the ramp run.

DRIVEWAY CURB CUT DETAILS



CURB and GUTTER DETAILS



CURB and GUTTER TERMINATION TRANSITIONS

Note: Drawing not to scale

State of Alaska DOT&PF
ALASKA STANDARD PLAN

CURB CUT CURB & GUTTER AND CURB RAMP DETAILS

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

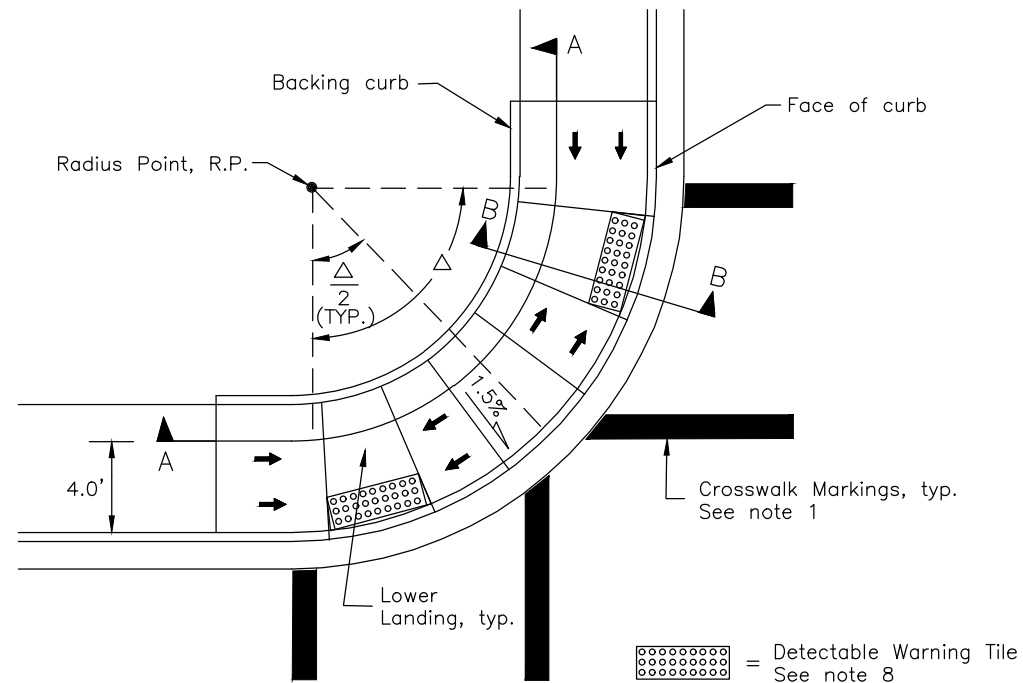
Adoption Date: 7/17/2020

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

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

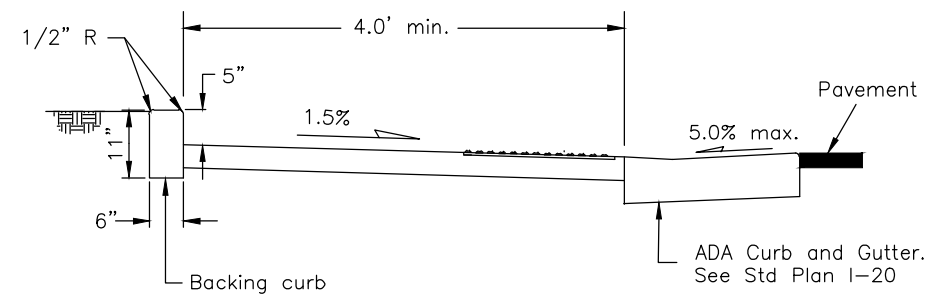
CONSTRUCTION NOTES:

1. See plans for ramp type at specific locations. See striping plans for crosswalk layouts.
2. Construct ramp runs and landings of concrete, regardless of whether the sidewalk is asphalt or concrete.
3. When one parallel curb ramp will serve two directions, use the One Crossing Direction detail and refer to the striping plans for crosswalk layouts.
4. Ramp run lengths are shown for a flat sidewalk grade. For other sidewalk grades, increase or decrease ramp and flare lengths to maintain the slopes shown.
5. Construct ramp slopes at a nominal 7.7% grade, or flatter. Ramp slopes may be increased to a maximum of 8.3% when site conditions warrant it. Ramp lengths should be increased to keep grades under the 8.3% maximum, but are not required to exceed 15.0 feet. The resulting ramp grade at a 15.0 foot ramp length is acceptable even if it exceeds 8.3%.
6. Construct sidewalk cross slopes at 1.5% nominal (1.0% min. and 2.0% max).
7. Provide a coarse broomed finish running perpendicular to the curb on ramp runs and upper landings and parallel to the curb on lower landings.
8. Install 24" detectable warning tiles meeting Section 705.1 of the 2006 ADA Standards for Transportation Facilities for the full width of the ramp.
9. Maximum cross slope on lower landings is 2.0% as measured in any direction. Maximum cross slope on ramps is 2.0% measured perpendicular to the ramp run.
10. Provide 4" minimum thick concrete on ramps and landings.

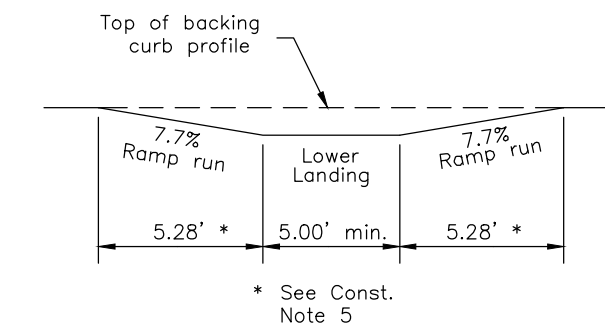


TWO CROSSING DIRECTIONS

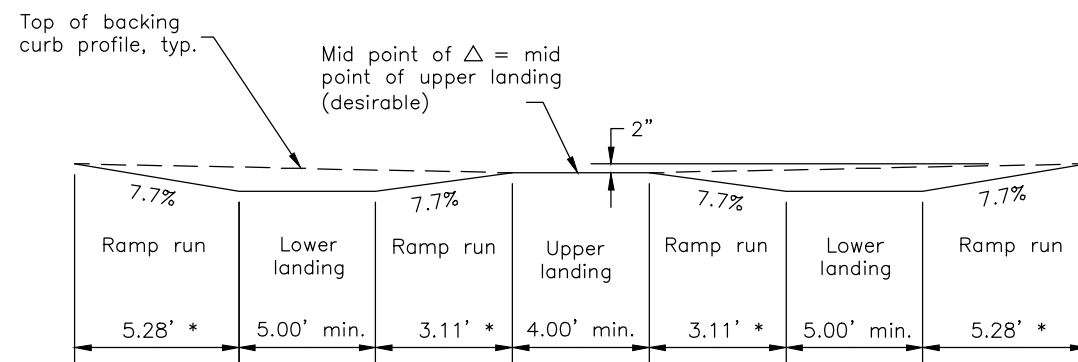
At corner



SECTION B-B

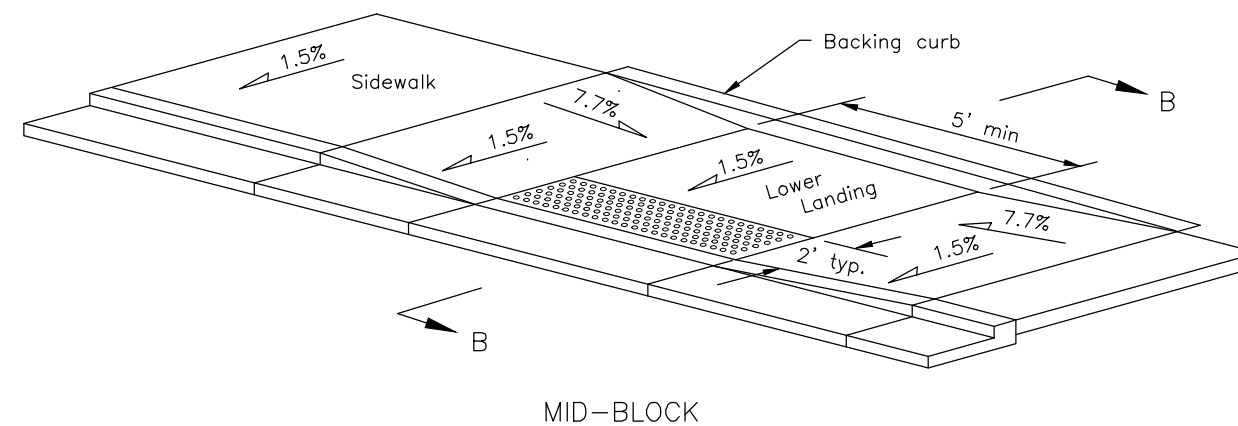


PROFILE C-C



* See Const. Note 5

PROFILE A-A



MID-BLOCK

Note: Drawing not to scale

State of Alaska DOT&PF
ALASKA STANDARD PLAN

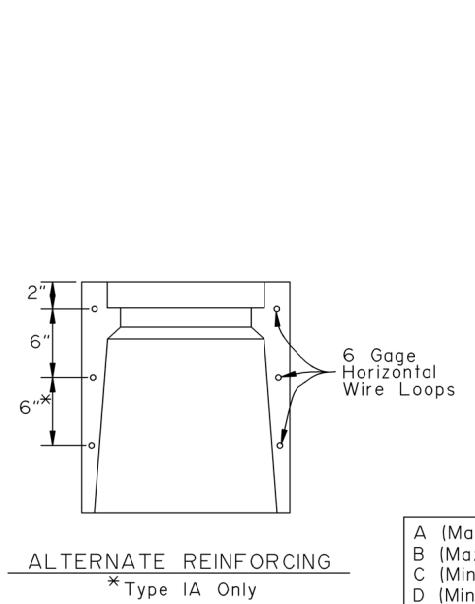
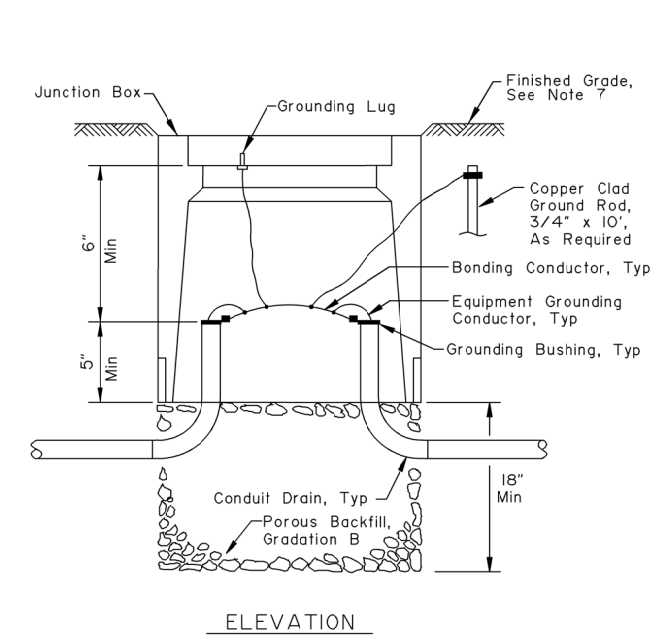
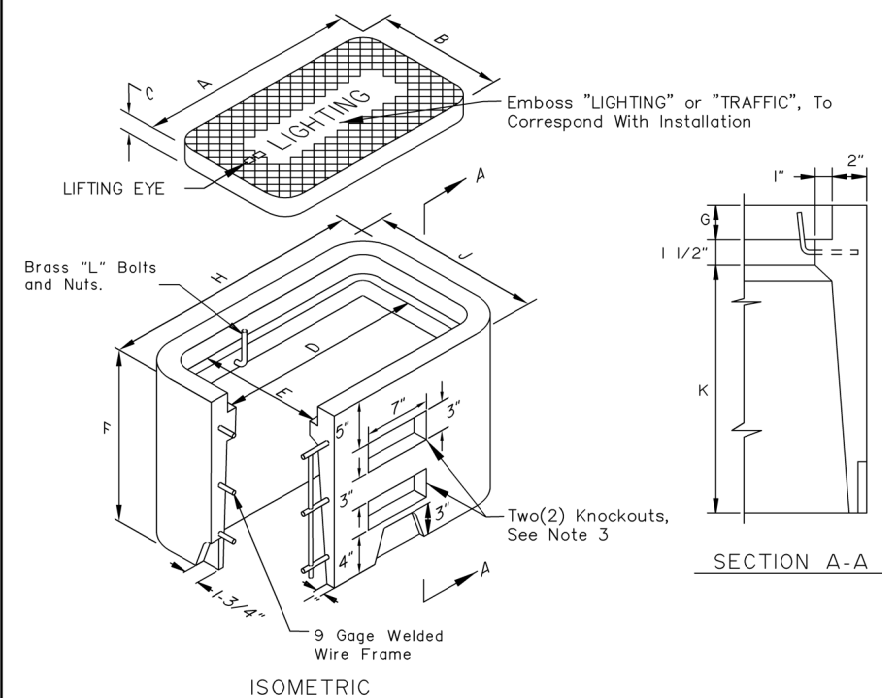
PARALLEL CURB RAMP

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

Adoption Date: 7/17/2020

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

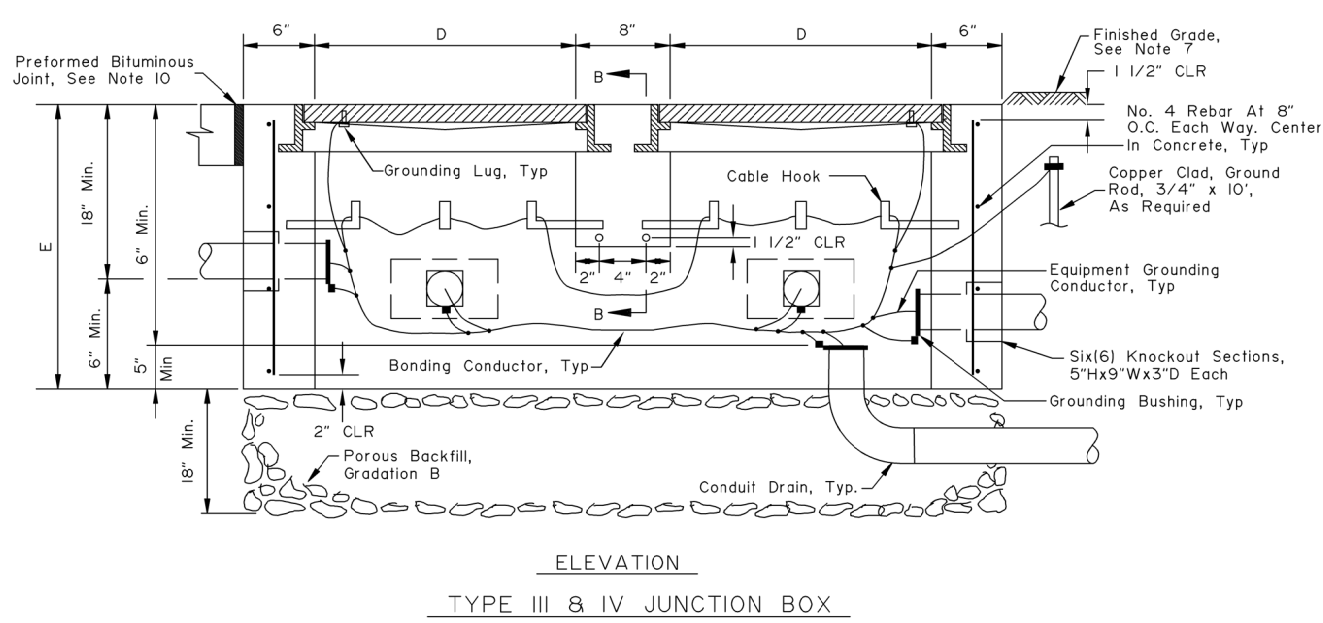
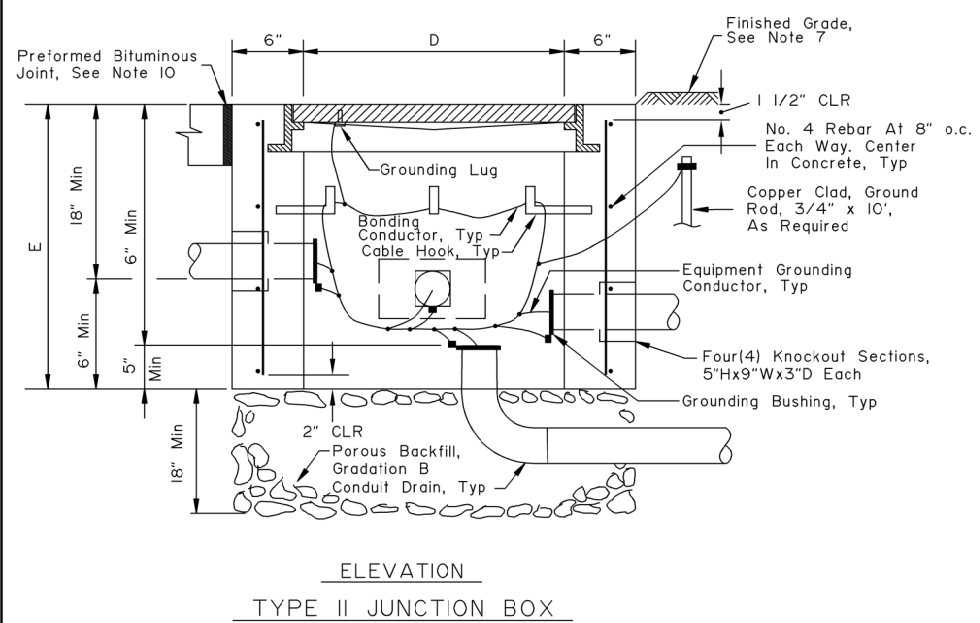
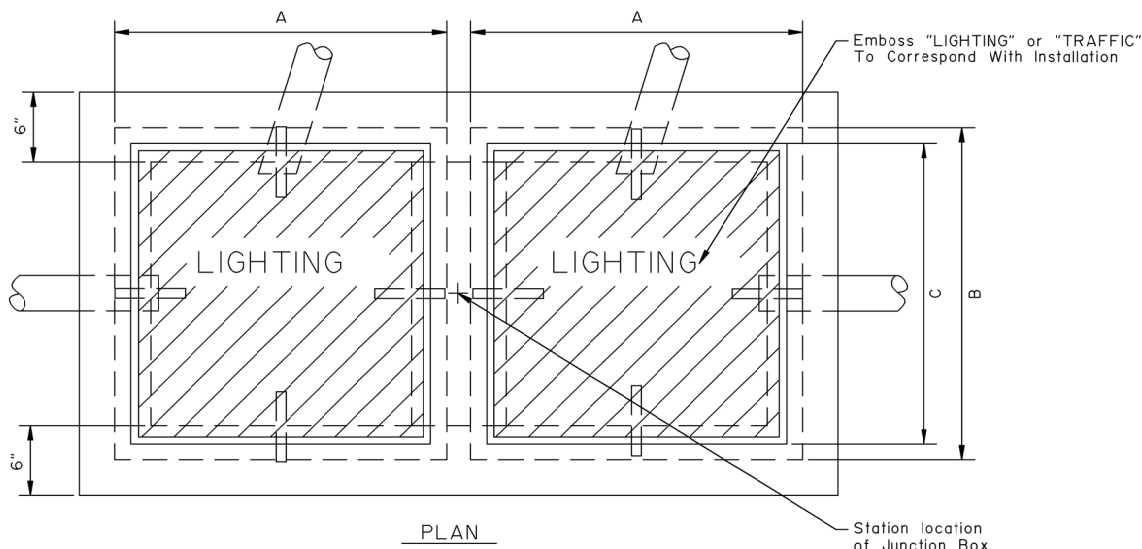
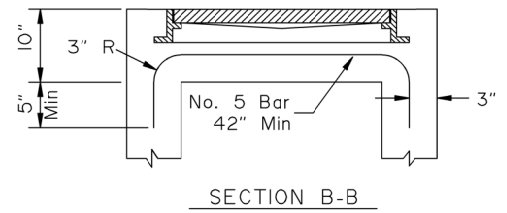
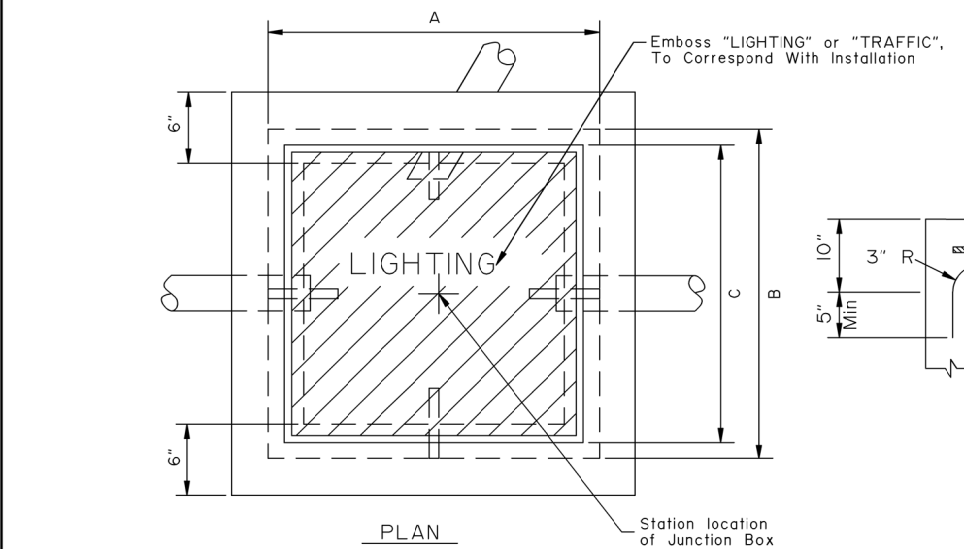
Next Code and Standards Review date: 7/8/2030



DIMENSIONS (IN)		
	TYPE I	TYPE IA
A	15	22 3/4
B	10	13 1/4
C	1 3/4	2
D	13 1/2	21 1/4
E	8 1/2	11 3/4
F	12	18
G	1 3/4	2
H	19 1/2	27 1/4
J	14 1/2	17 3/4
K	8 3/4	14 1/2

DIMENSIONS (IN)			
	TYPE II	TYPE III	TYPE IV
A (Max)	30	30	30
B (Max)	30	30	36
C (Min)	22	22	30
D (Min)	22	22	24
E (Min)	24	24	30

TYPE I & IA JUNCTION BOX



- GENERAL NOTES:
- See the Standard Specifications for Highway Construction (SSHC) for additional requirements.
 - See Section 660-2.01 of the SSHC for concrete and reinforcing steel requirements.
 - Provide knockouts indicated in Type IA junction box when installed for loop detection. Conduit for loop detectors to enter junction box through knockouts.
 - Covers for junction boxes shall be cast iron. Type I and IA shall be secured to junction box with a minimum of two bolts and be rated ANSI/SCTE 77, Tier 8, minimum. Type II, Type III and Type IV cover shall weigh over 100 pounds and be ANSI/SCTE 77, AASHTO H-20 traffic rated.
 - The minimum required bearing capacity for Type I shall be 6,800psf, for Type IA shall be 5,100psf, for Type II shall be 3,500psf, for Type III shall be 2,300psf, and for Type IV shall be 2,000psf.
 - See section 703-2.10 of the SSHC for Porous Backfill material requirements.
 - See section 660-3.04 of the SSHC for top of junction box placement to finished grade requirements.
 - Provide conduits as required, size and quantity indicated in plans.
 - Provide grout around conduits in knockouts and for unused knockouts.
 - Provide a 1/2" thick preformed bituminous joint material around junction boxes installed in concrete walkways.
 - Metal conduits and junction box covers shall be bonded together to be electrically continuous using No. 8 AWG minimum copper bonding conductor. Cover shall be bonded using a finned copper braided bonding jumper.

NOT TO SCALE

State of Alaska DOT&PF
ALASKA STANDARD PLAN

JUNCTION BOXES
FOR ELECTROLIER
& TRAFFIC SIGNALS

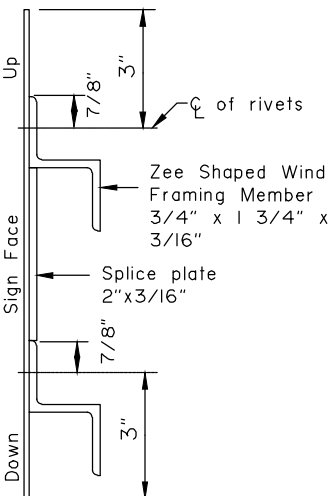
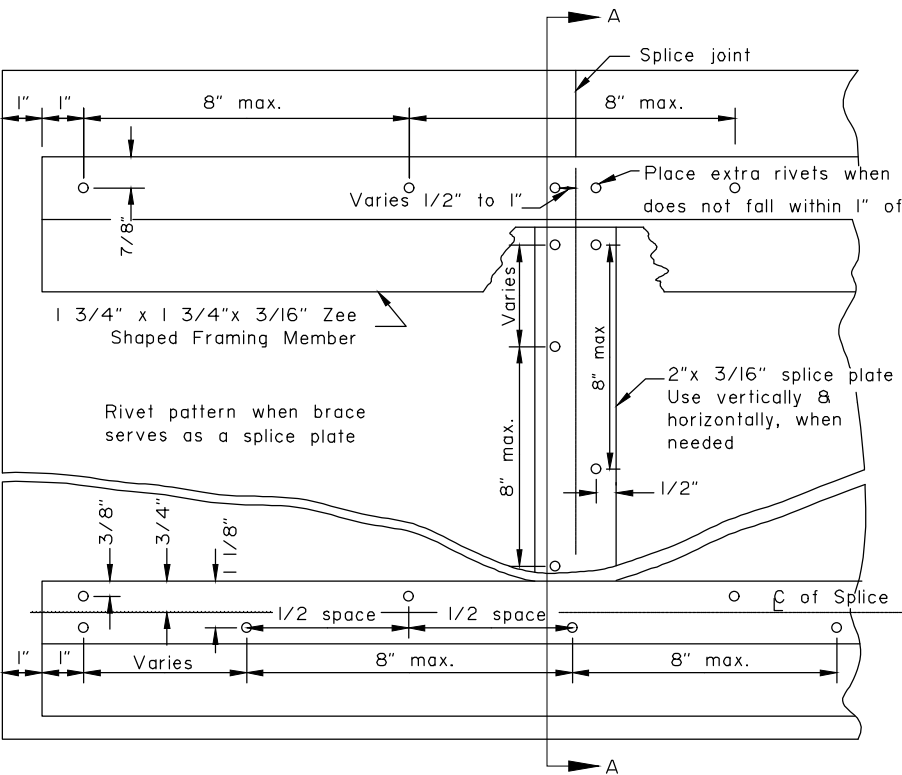
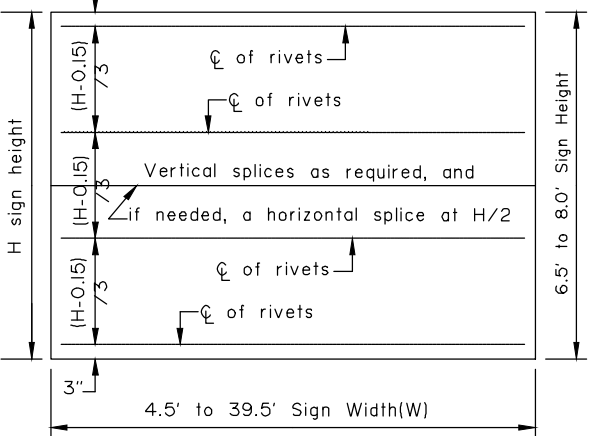
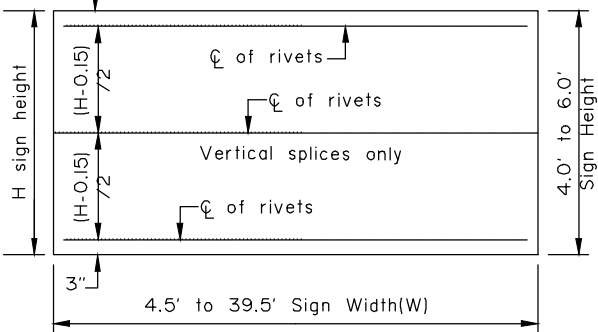
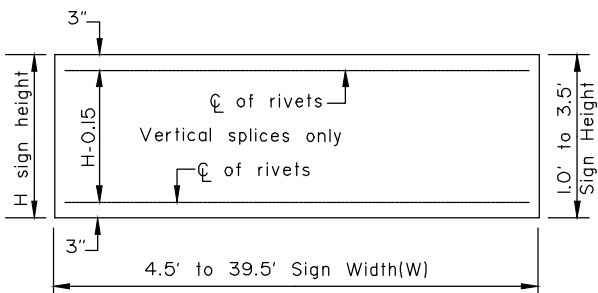
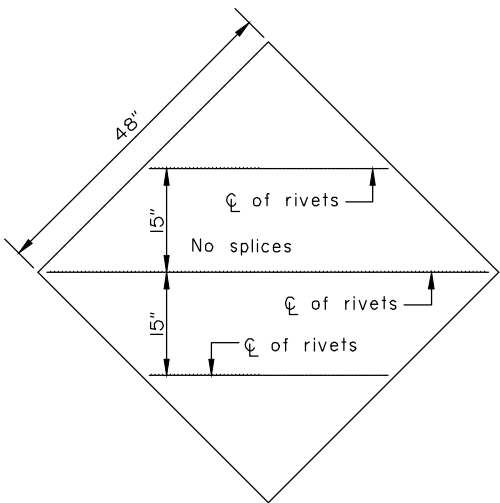
Adopted as an Alaska
Standard Plan by *Carolyn H. Morehouse*
Carolyn Morehouse, P.E.
Chief Engineer

Adoption Date: 09/15/2022

Last Code and Stds. Review
By: CNH Date: 7/15/2020
Next Code and Standards Review date: 7/15/2030

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.



SECTION A-A

RIVET DETAIL FOR ZEE SHAPED WIND FRAMING & SPLICE PLATE

WIND FRAMING LOCATIONS

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

Note: Drawing not to scale

State of Alaska DOT&PF
ALASKA STANDARD PLAN

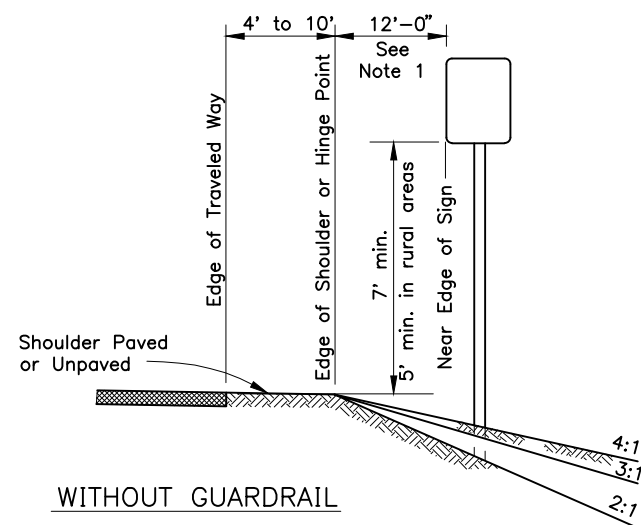
SIGN FRAMING

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

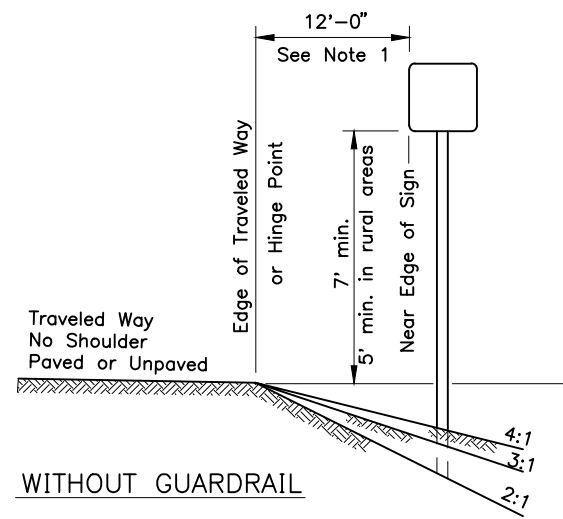
Adoption Date: 7/17/2020

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

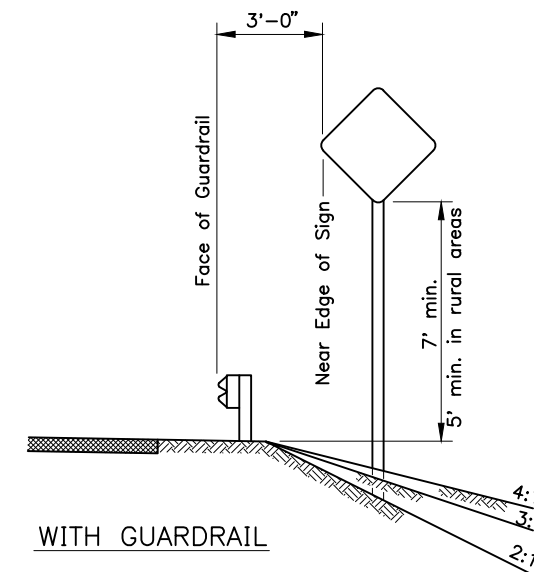
Next Code and Standards Review date: 7/8/2030

WITHOUT GUARDRAIL

SUBGRADES OVER 28', ALL SLOPES

WITHOUT GUARDRAIL

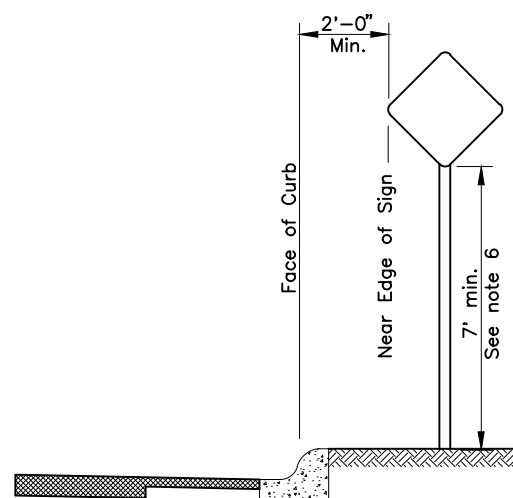
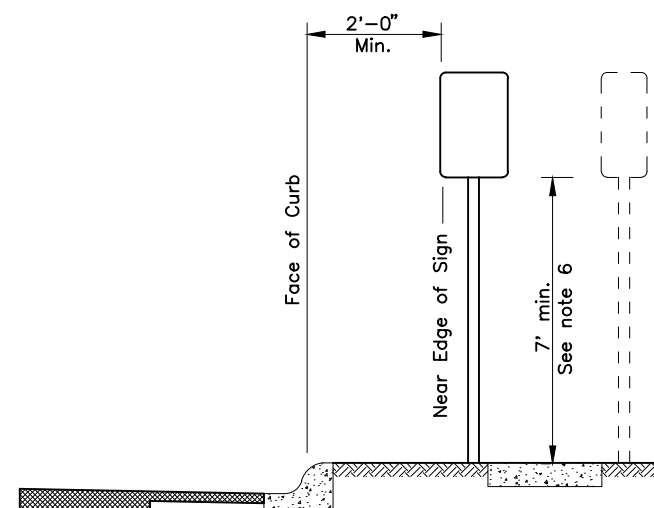
SUBGRADES 24' TO 28', ALL SLOPES

WITH GUARDRAIL

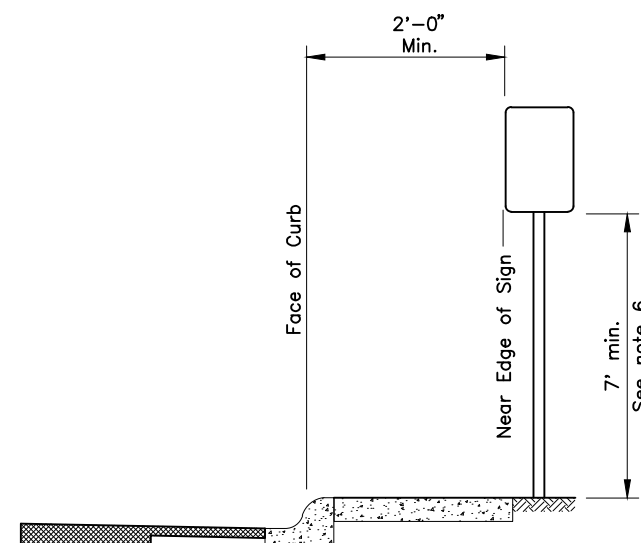
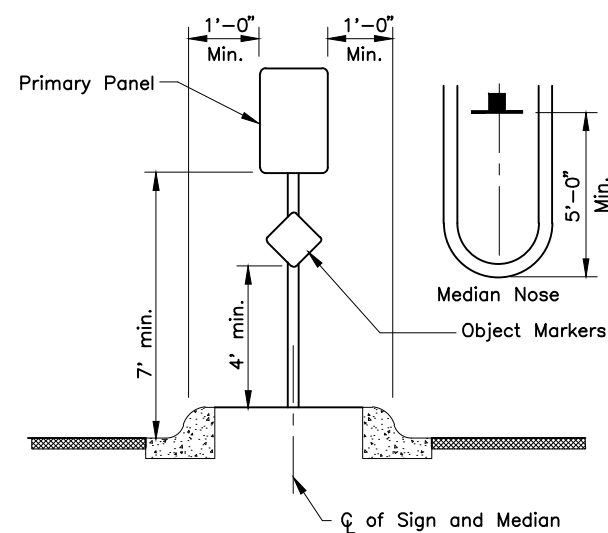
ALL SUBGRADES, ALL SLOPES

GENERAL NOTES

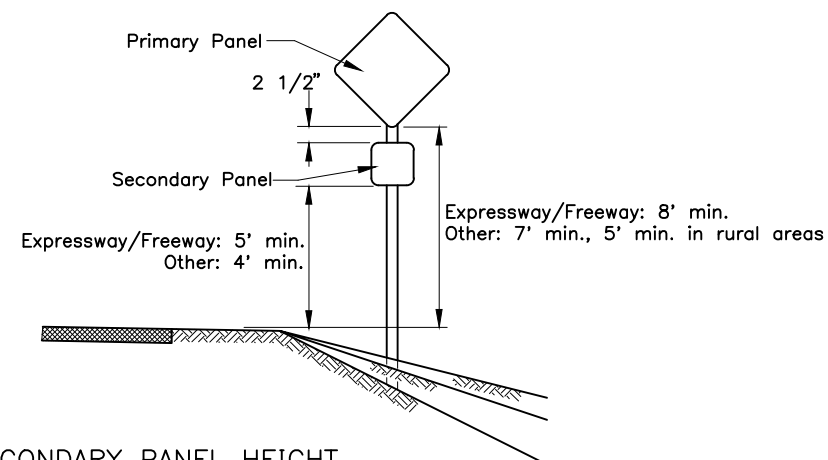
1. Unless shown otherwise on the plans, the standard sign offset is 12'. The minimum is 6' where shoulder width is 6' or greater.
2. Add 6" to mounting height on unpaved roads.
3. If signs extend over bike paths, the minimum vertical clearance is 8' 0".
4. When signs are placed 30' or more from the edge 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 SIDEWALKCURB WITH PARKWAY AND SIDEWALK

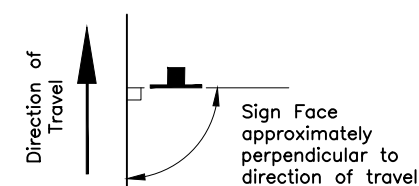
(If R/W width permits, signs should be placed behind sidewalk.)

CURB WITH SIDEWALK WITHOUT PARKWAYRAISED MEDIANS

Minimum 4' Width for Signing

SECONDARY PANEL HEIGHT

ALL TWO PANEL MOUNTING

SIGN POSITIONINGState of Alaska DOT&PF
ALASKA STANDARD PLANPOST MOUNTED SIGN
OFFSET AND HEIGHTAdopted as an Alaska
Standard Plan by *Carolyn Morehouse*
Carolyn Morehouse, P.E.
Chief Engineer

Adoption Date: 7/17/2020

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

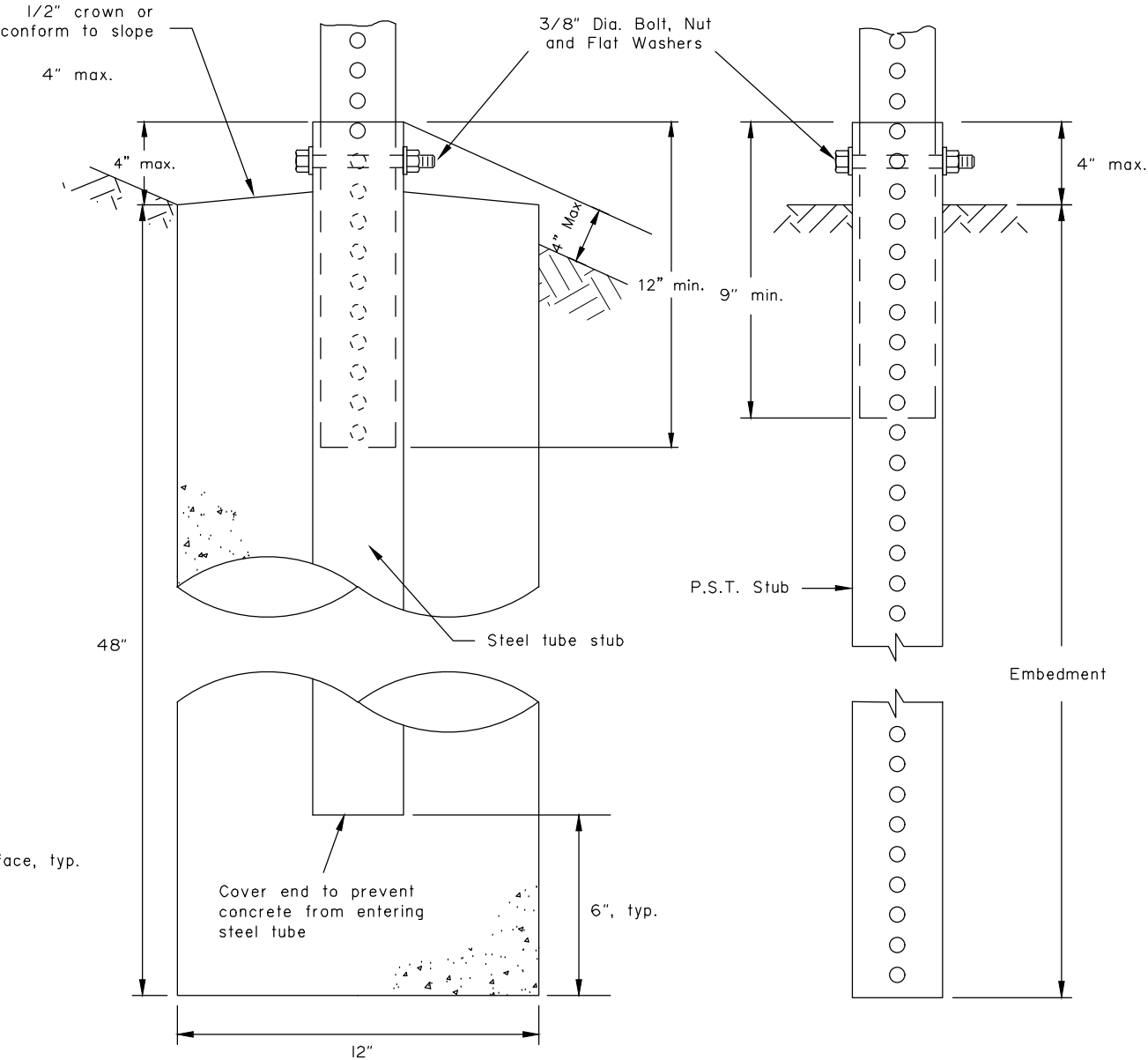
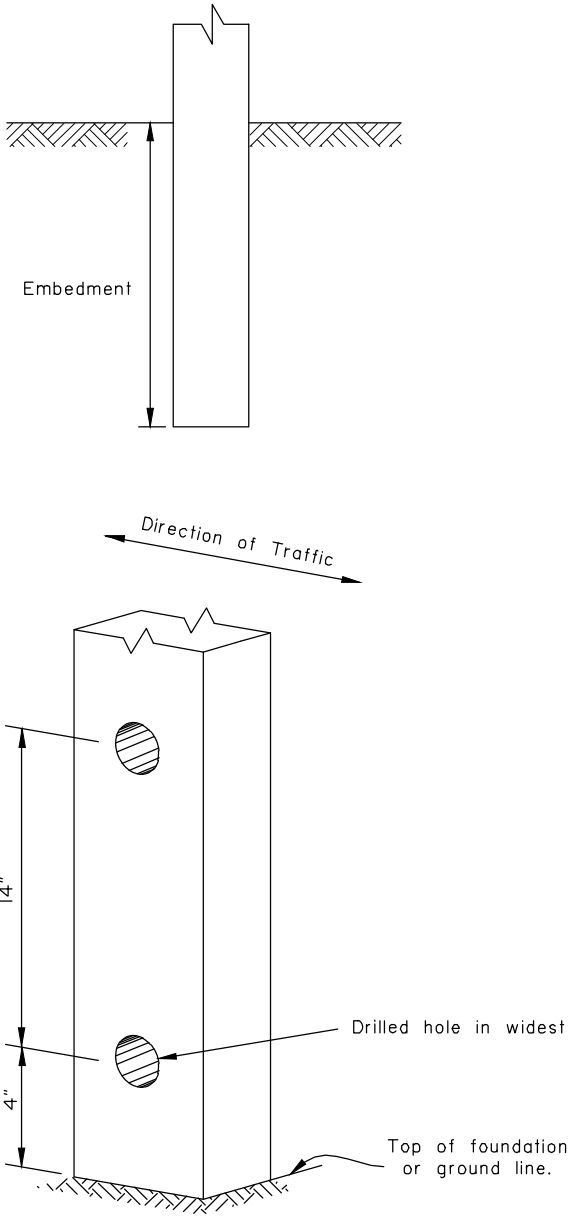
Next Code and Standards Review Date: 7/8/2030

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-I 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-3I for frangible couplings, hinges, and foundations for tube and W-shape sign supports.



SLEEVE TYPE
CONCRETE FOUNDATION

SLEEVE TYPE*
SOIL EMBEDMENT

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

* Embedment depth applies in both strong and weak soil.

WOOD POSTS

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

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

PERFORATED STEEL TUBE (PST) POSTS

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	

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*
Carolyn Morehouse, P.E.
Chief Engineer

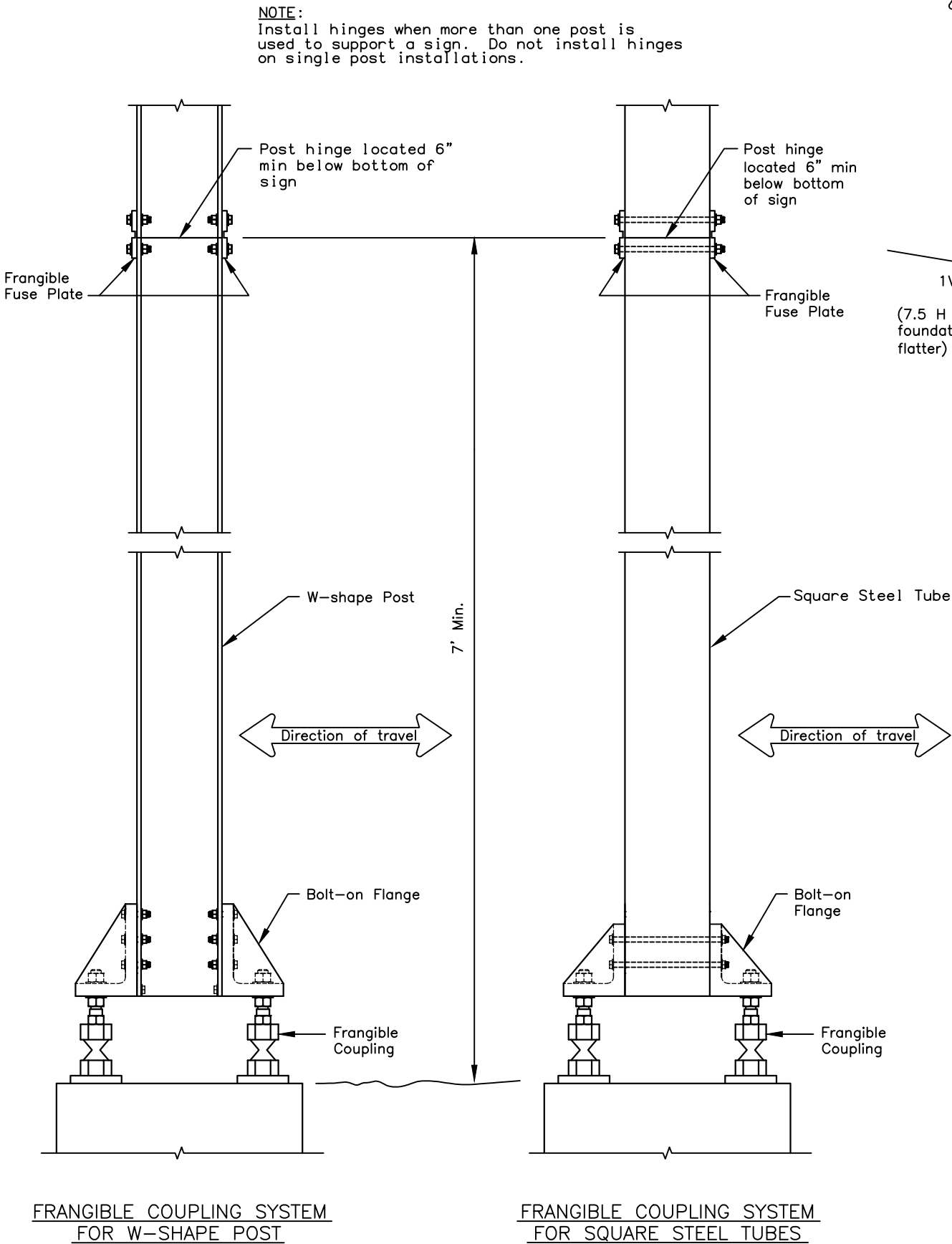
Adoption Date: 7/17/2020

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

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

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.



POST SIZE & TYPE	FOUNDATION *			REINFORCEMENT			
	DIA.	MIN. DEPTH	CY ³ CONC.	VERTICAL BARS	HOOPS		
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"

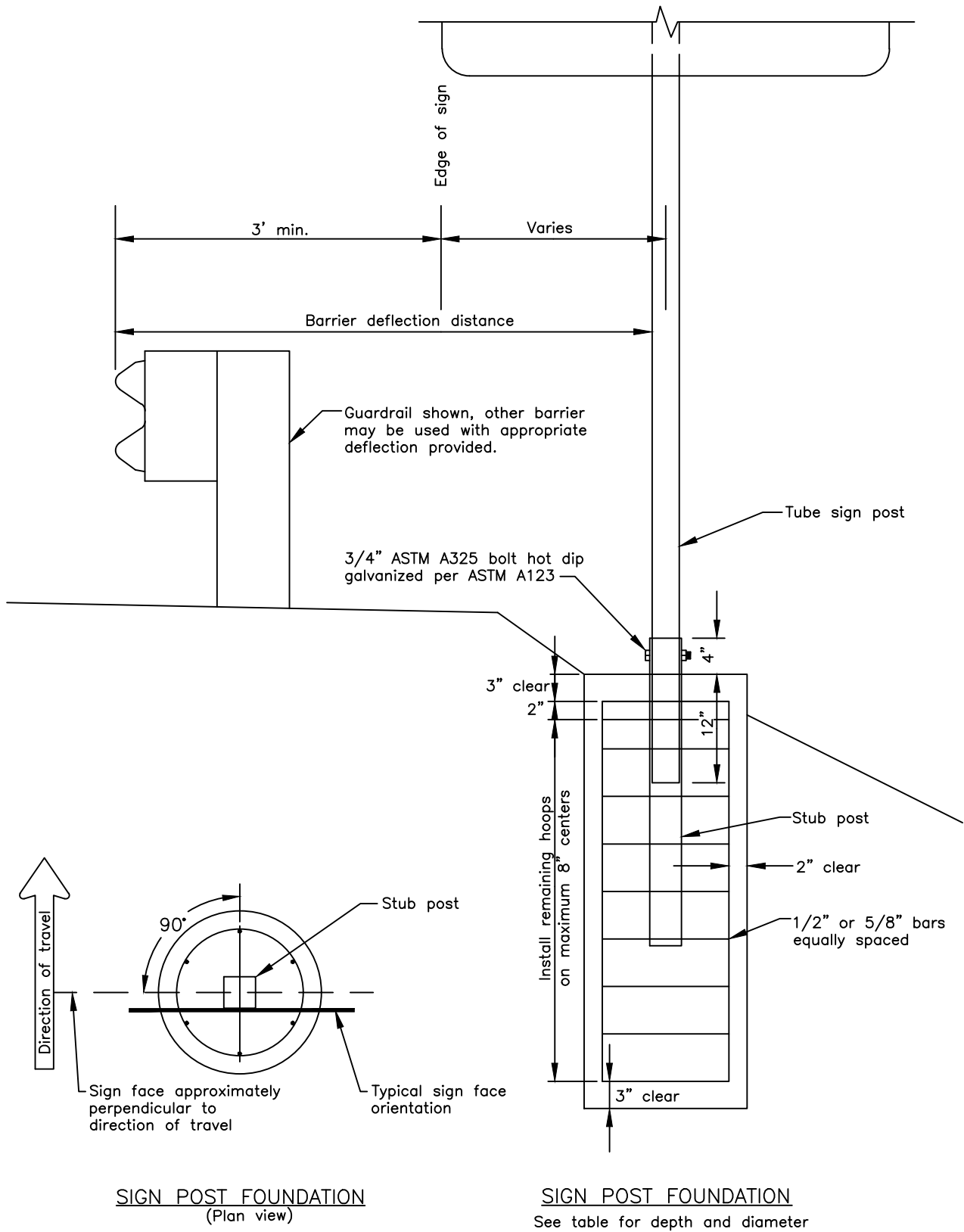
* Foundations sized for use where there are no loose, high moisture, or fine grained soils.

GENERAL NOTES

1. This is a non-crashworthy sign support. It may only be used at locations shielded by a guardrail, barrier, or wall. It may not be used if the sign post is within 20' of the rail and is closer than 75' from the guardrail end post (measured along the rail). For this case use a breakaway sign support. See Standard Plan G-20.
2. Furnish steel tube sign post and stub post that conform to ASTM A500, grade B, and meet ASTM A123 for hot dip galvanizing.
3. Install tubes and stub post with a 0.1875" wall thickness.
4. For Perforated Tubes use Standard Plan S-30.
5. Spiral reinforcing steel may be substituted for hoops in concrete foundation. Spiral option shall consist of No. 3 plain spiral with 6" pitch with three flat turns at the top and one flat turn at the bottom.
6. Use Class A, B or W concrete.

POST SIZE & TYPE	FOUNDATION *			REINFORCEMENT						STUB POST	
	DIA.	MIN. DEPTH	C.Y. CONC.	VERTICAL BARS HOOPS						SLEEVE	
				QTY.	SIZE	LGTH.	SIZE	DIA.	SIZE	LGTH.	
2 1/2" TUBE	1'-0"	4'-6"	0.13	6	#4	4'-0"	#4	8"	3"	3'	
3" TUBE	1'-6"	4'-0"	0.25	7	#5	3'-6"	#4	1'-2"	3 1/2"	3'	
3 1/2" TUBE	1'-6"	4'-6"	0.27	7	#5	4'-0"	#4	1'-2"	4"	3'	
4" TUBE	2'-6"	4'-0"	0.69	8	#8	3'-6"	#4	2'-2"	4 1/2"	3'	
4 1/2" TUBE	2'-6"	4'-6"	0.78	8	#8	4'-0"	#4	2'-2"	5"	3'	

* Foundation sized for use where there are no loose, high moisture, or fine grained soil.



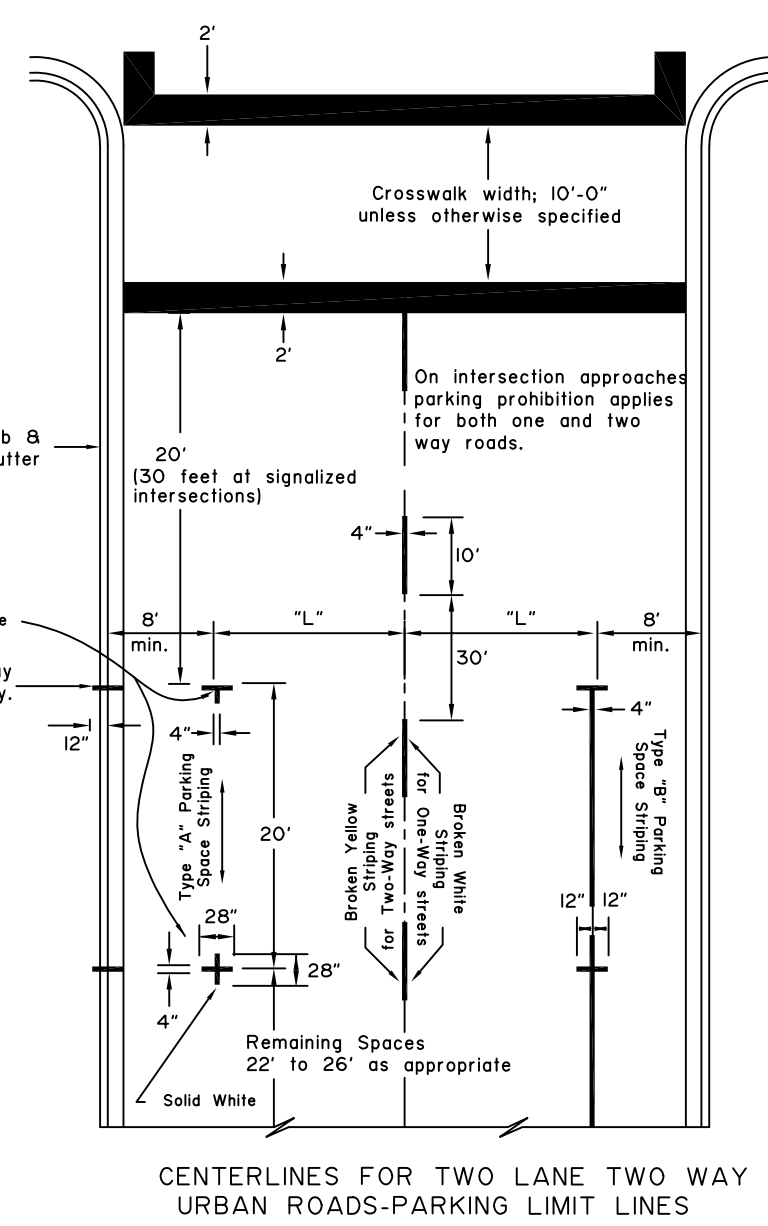
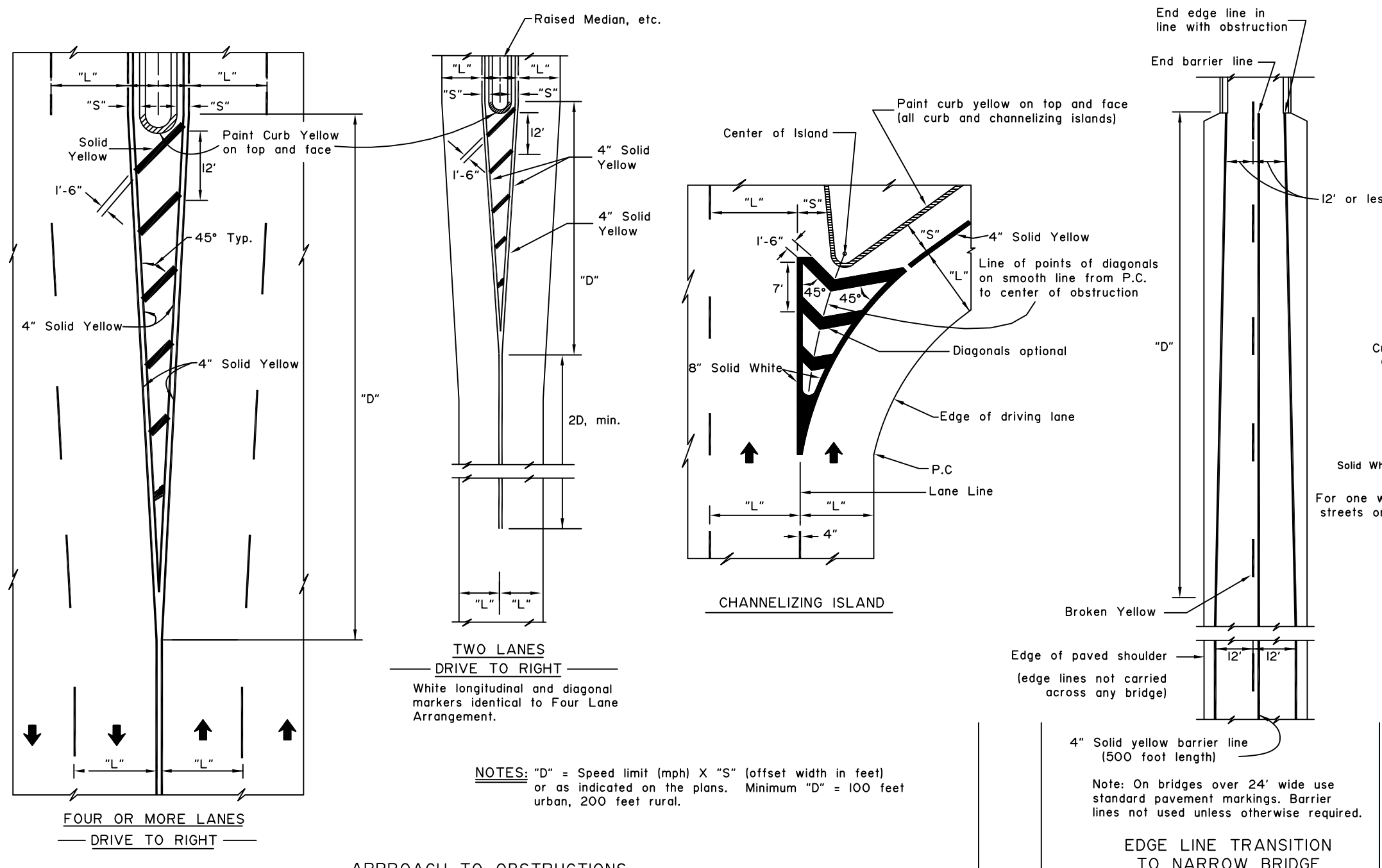
State of Alaska DOT&PF
ALASKA STANDARD PLAN

SIGN POST BASE AND
FOUNDATION BEHIND
BARRIER

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

Adoption Date: 7/17/2020

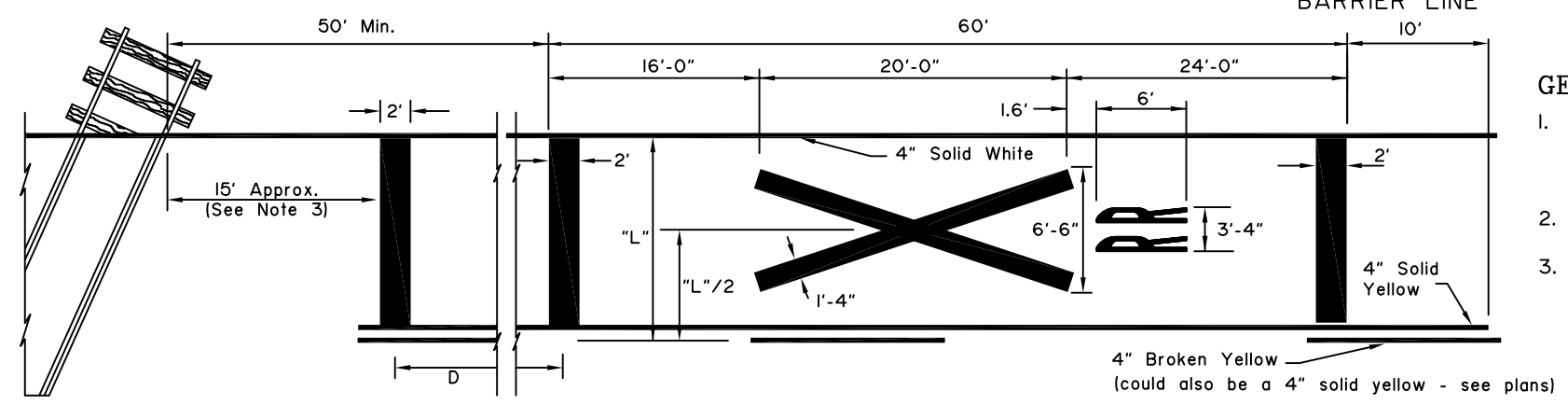
Last Code and Stds. Review
By:KLK Date: 7/8/2020
Next Code and Standards Review Date: 7/8/2030



RAILROAD CROSSING NOTES:

1. All markings solid white unless indicated otherwise.
2. On 4-lane roadways place railroad crossing approach markings in each lane of the approach.
3. Locate Stop Bar 15' from railroad track or 8' from gate, if present.
4. Place edge lines and lane lines on a uni-directional approach in a normal manner except that the lane line(s) shall be solid 4" white in lieu of broken for a distance of (D+60') in advance of the stop bands.

POSTED LIMIT	D
30 M.P.H.	225'
40	350'
50	475'
60	625'



GENERAL NOTES:

1. "S"= offset distance as shown on the plans, otherwise 1 to 2 feet.
2. "L"= driving lane width.
3. See the Alaska Traffic Manual for additional guidance and/or restrictions on the use of traffic control devices.

NOT TO SCALE

State of Alaska DOT&PF
ALASKA STANDARD PLAN
PAVEMENT MAKING
APPLICATIONS

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

Adoption Date: 02/08/2019

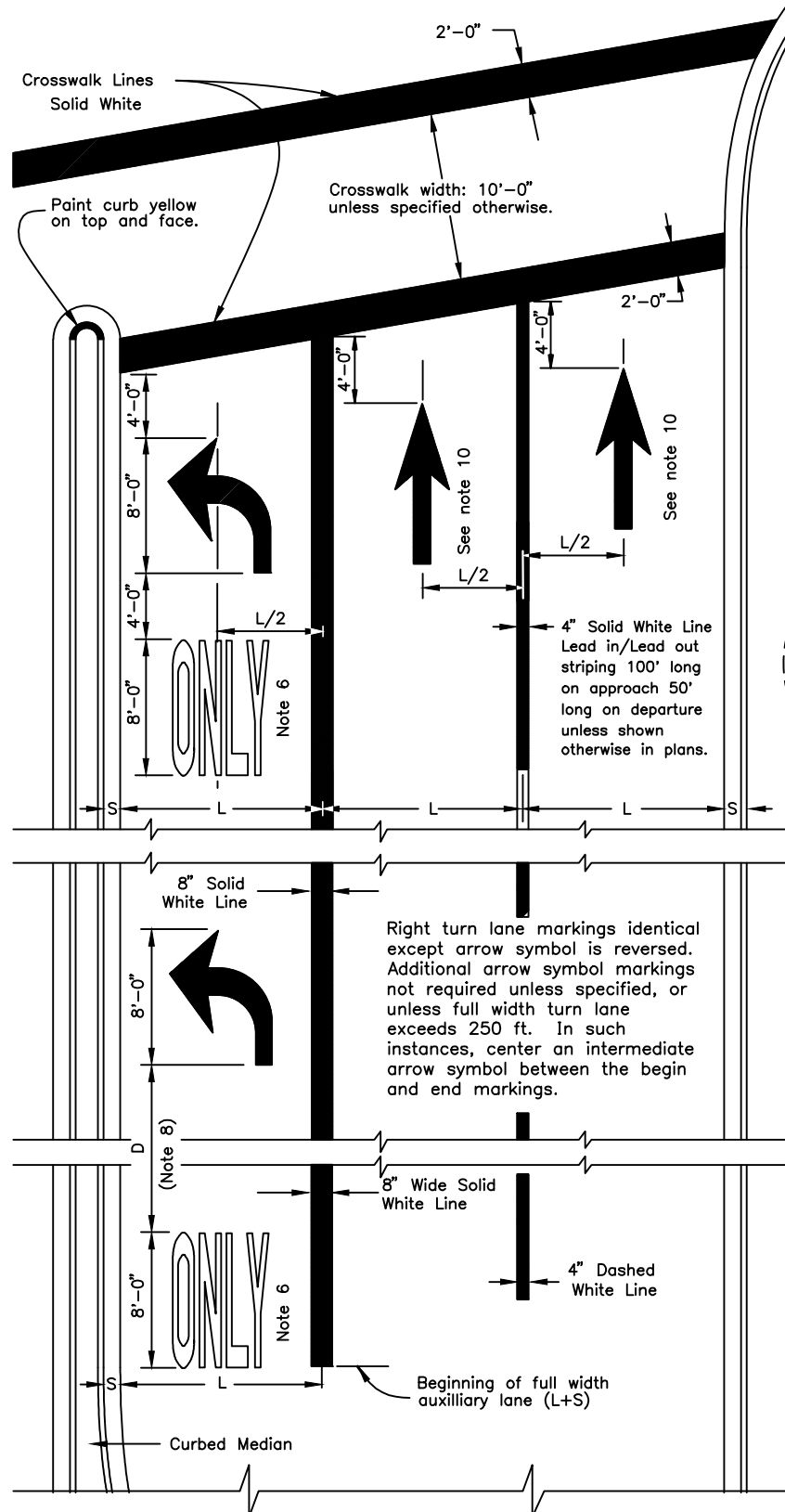
Last Code and Stds. Review
By: Date:

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

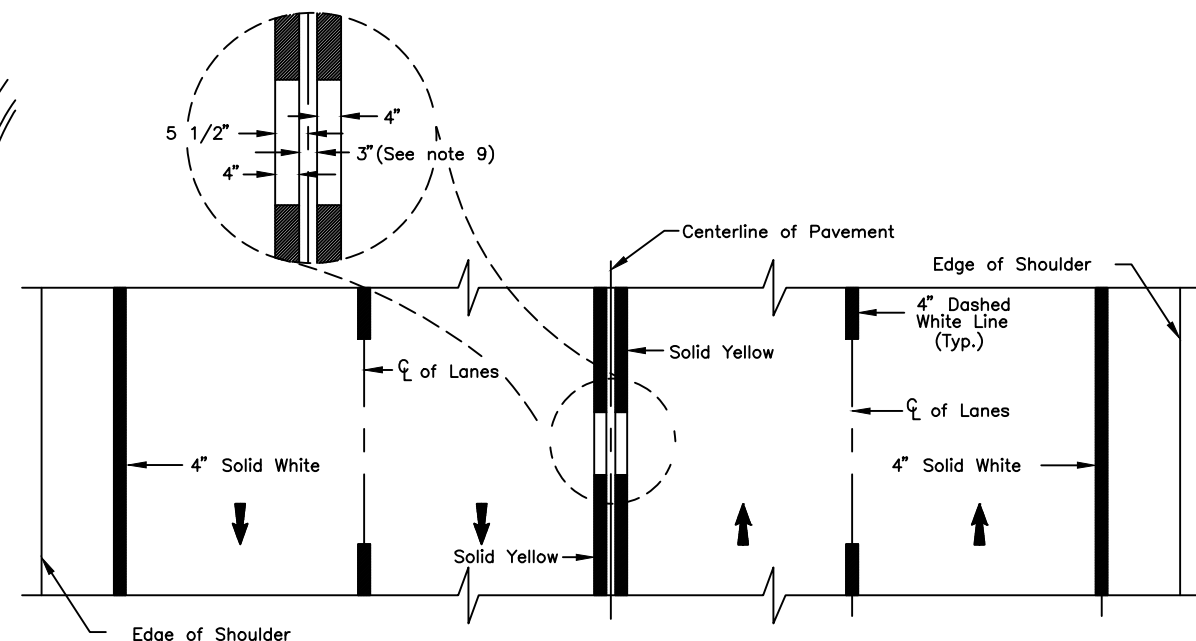
GENERAL NOTES:

1. All markings white unless indicated otherwise.
2. Lengths of stripe and gap for lane and center lines identical.
3. Lane lines for auxiliary lanes are unbroken solid lines.
4. "L" = driving lane width.
5. "S" = shy distance as shown on plans, otherwise 1 to 2 feet.
6. ONLY markings are required where through lanes change to turn lanes. In other cases, apply ONLY markings as indicated on plans.
7. See ALASKA TRAFFIC MANUAL for additional instruction on the use of TRAFFIC CONTROL DEVICES.
8. Adjust distance D between ONLY and Turn Arrow based on SPEED vs. D table. Table may be used for spacing between pairs of TWLT markings.
9. Adjust centerline spacing from 3" up to 5" where recessed pavement markers are required.
10. Arrows and symbols are used for through lanes only when the lane layout deviates from the normal intersection rules, and shall only be used where indicated in the plans.

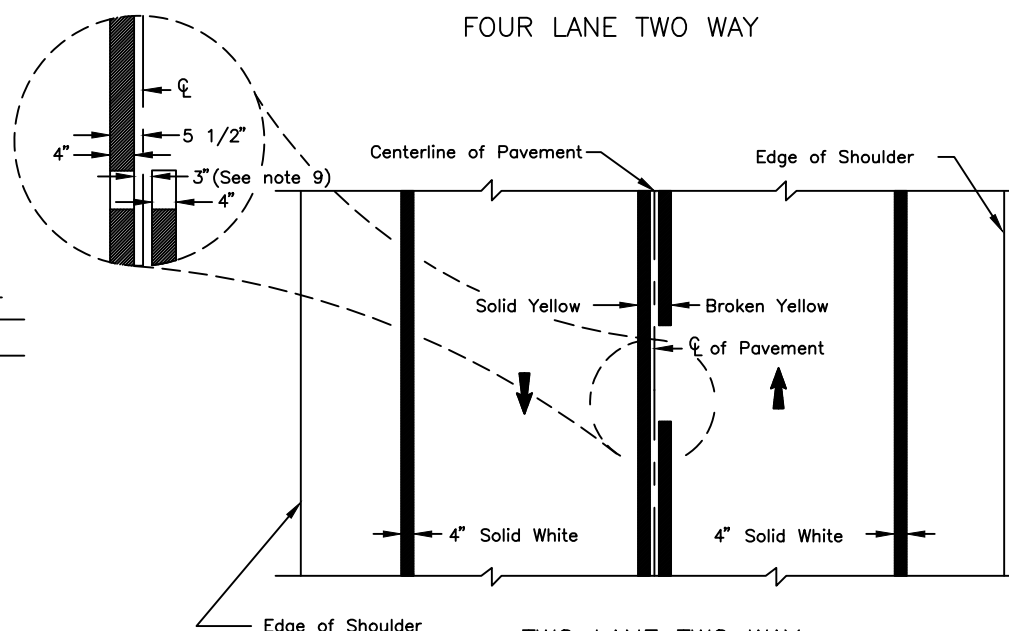
SPEED	D
25 or less	35'
30	45'
35	50'
40	60'
45	65'
50	75'
55 or more	80'



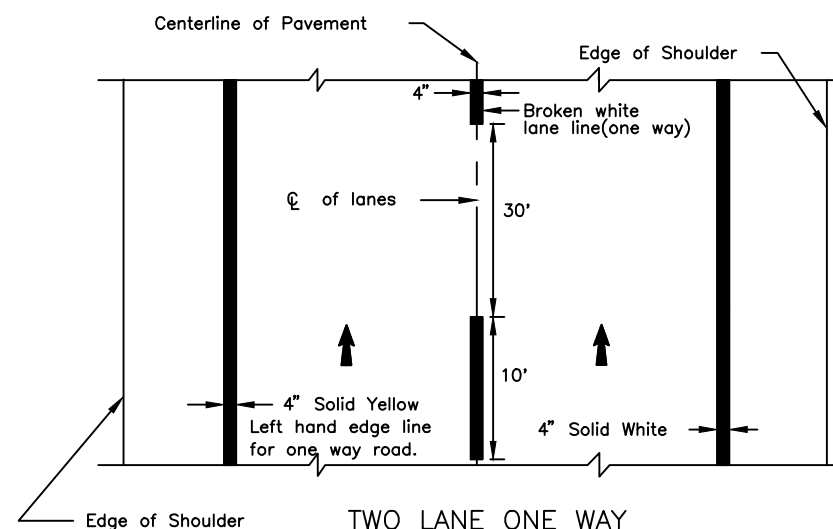
APPROACH TO INTERSECTION



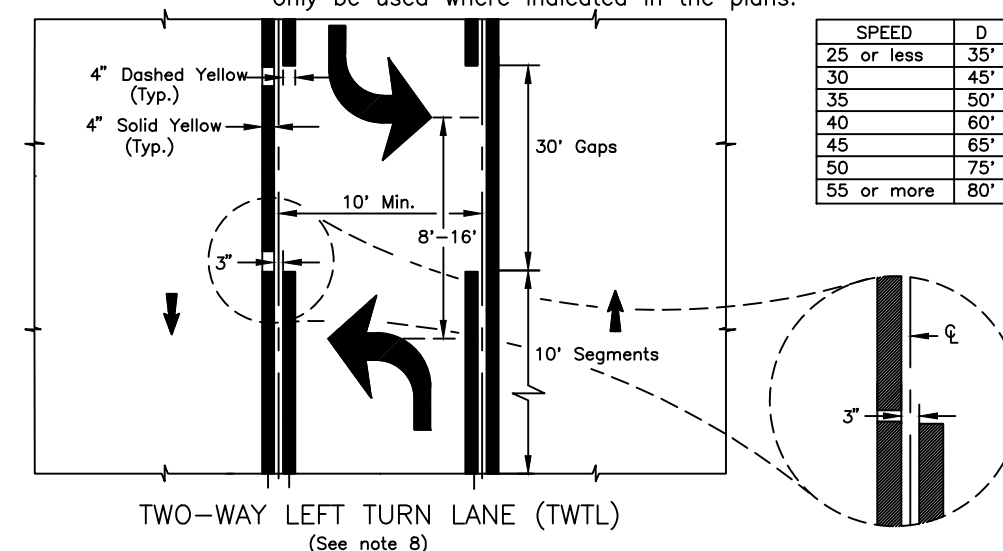
FOUR LANE TWO WAY



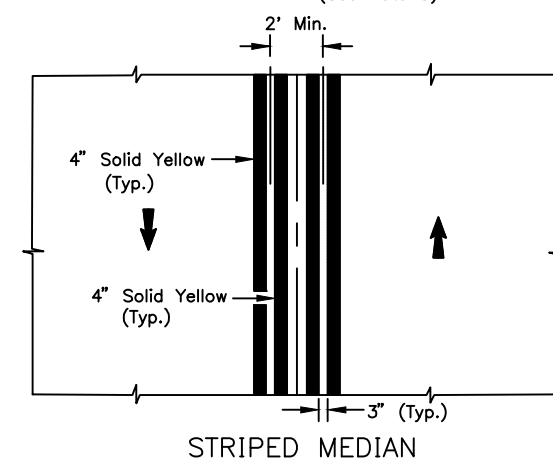
TWO LANE TWO WAY



TWO LANE ONE WAY



TWO-WAY LEFT TURN LANE (TWTL)
(See note 8)



STRIPED MEDIAN

State of Alaska DOT&PF
ALASKA STANDARD PLAN

PAVEMENT MARKING APPLICATIONS

Adopted as an Alaska Standard Plan by: *Carolyn Morehouse*
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