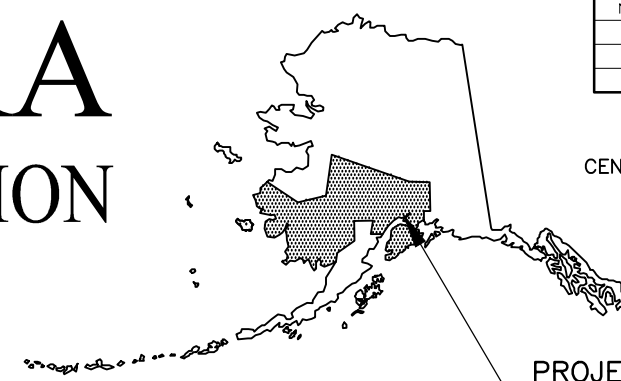


NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0001630/CFHWY00453	2024	A01	A05
			ROUTE ID	2381095X000	MILEPOINT	4.450 - 4.750	
			LATITUDE	61.614600	LONGITUDE	149.254722	



PROJECT LOCATION  
 DOT&PF M&O STATION: PALMER  
 MAT SU BOROUGH O&M

PROJECT SUMMARY		
ROADWAY	WIDTH	LENGTH
BOGARD ROAD MP 4.45-4.75	36 FT	0.3 MILES
ENGSTROM ROAD MP 0.00-0.10	24 FT	0.1 MILES
GREEN FOREST DRIVE MP 0.95-1.15	20 FT	0.2 MILES

DESIGN DESIGNATIONS			
	BOGARD ROAD	ENGSTROM ROAD	GREEN FOREST DRIVE
FUNCTIONAL CLASS	URBAN ARTERIAL	URBAN COLLECTOR	URBAN LOCAL RD
AADT (EXISTING YEAR)	8,247	3,766	1,235
AADT (DESIGN YEAR)	10,708	4,969	1,662
DESIGN SPEED (V) (MPH)	50	35	25
DHV (EXISTING YEAR)	10.90%	10.90%	10.90%
DHV (DESIGN YEAR)	10.90%	10.90%	10.90%
T-PERCENT COMMERCIAL TRUCKS (%)	6.77%	6.77%	6.77%
D-DIRECTIONAL DISTRIBUTION (%)	50%	50%	50%

# STATE OF ALASKA

## DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

### PROPOSED HIGHWAY PROJECT

# HSIP: BOGARD ROAD AT ENGSTROM ROAD/ GREEN FOREST DRIVE INTERSECTION

## IMPROVEMENTS PROJECT NO. 0001(630)/CFHWY00453

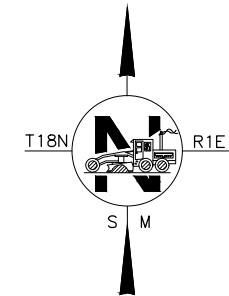
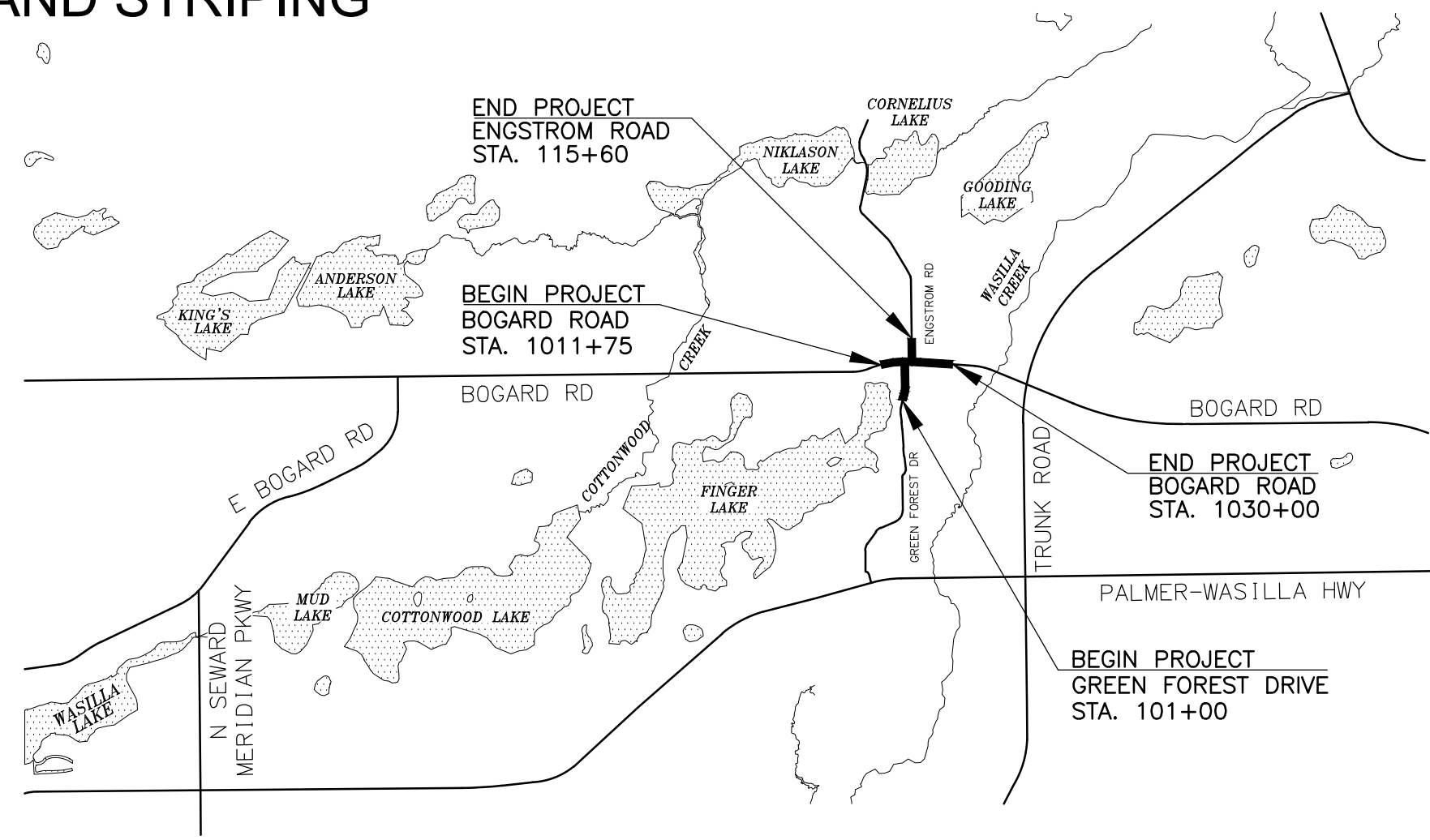
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 CHECKED BY  
 DRAFTED BY

SCALE  
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DATE  
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**PRELIMINARY**  
**MARCH 2023**

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES  
 4111 AVIATION AVENUE, ANCHORAGE, AK 99502  
 (907)269-0590

APPROVED:

REGIONAL PRECONSTRUCTION ENGINEER	DATE
CONCUR:	
REGIONAL CONSTRUCTION ENGINEER	DATE

ZOK  
 DESIGNED BY: KRV  
 CHECKED BY: PGH  
 DRAFTED BY:  
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 DATE: 3/15/2023  
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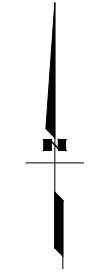
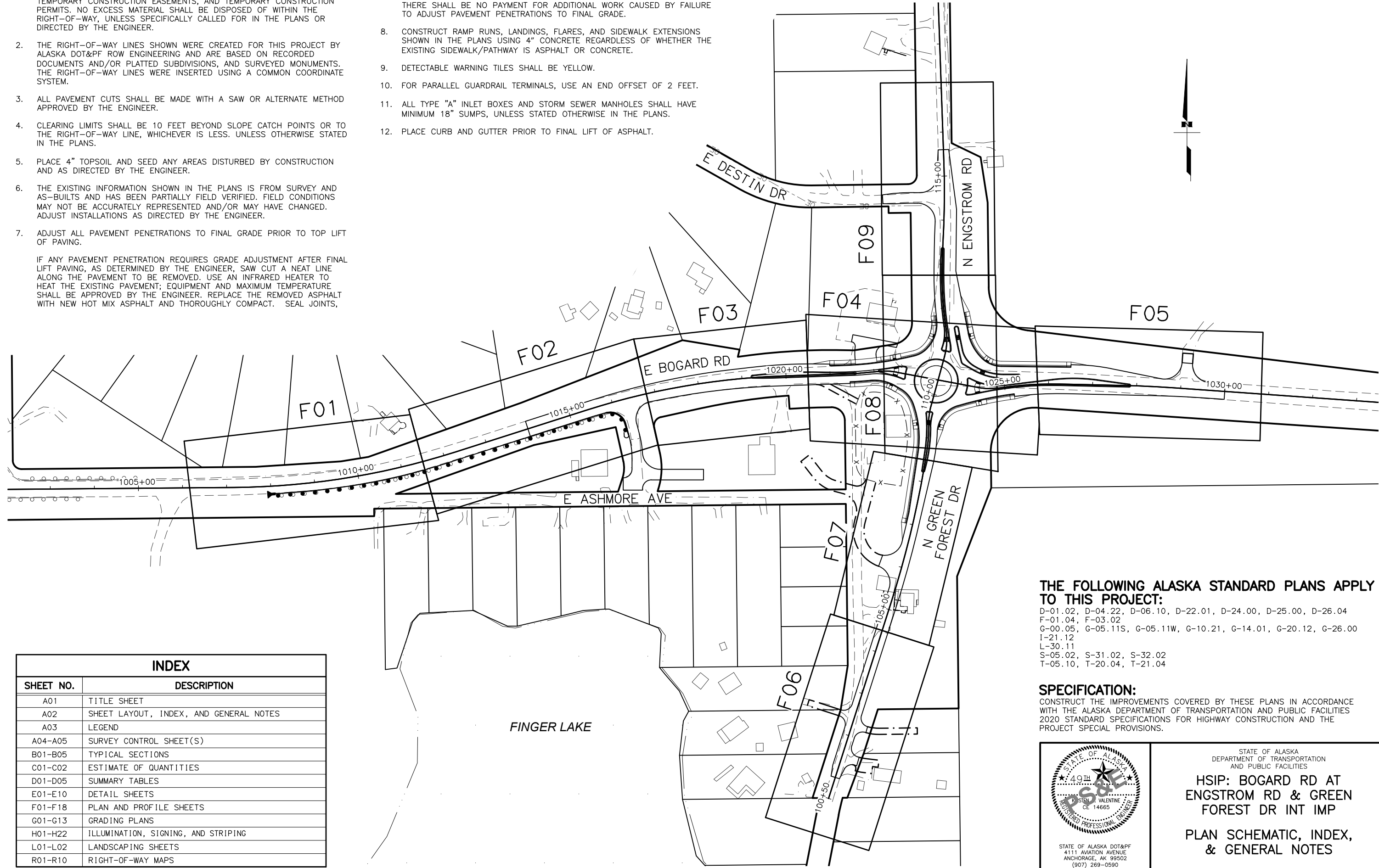
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	001630/CFHWY00453	2024	A02	A05

**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 RIGHT-OF-WAY LINES SHOWN WERE CREATED FOR THIS PROJECT BY ALASKA DOT&PF ROW ENGINEERING AND ARE BASED ON RECORDED DOCUMENTS AND/OR PLATTED SUBDIVISIONS, AND SURVEYED MONUMENTS. THE RIGHT-OF-WAY LINES WERE INSERTED USING A COMMON COORDINATE SYSTEM.
- ALL PAVEMENT CUTS SHALL BE MADE WITH A SAW OR ALTERNATE METHOD APPROVED BY THE ENGINEER.
- CLEARING LIMITS SHALL BE 10 FEET BEYOND SLOPE CATCH POINTS OR TO THE RIGHT-OF-WAY LINE, WHICHEVER IS LESS. UNLESS OTHERWISE STATED IN THE PLANS.
- PLACE 4" TOPSOIL AND SEED ANY AREAS DISTURBED BY CONSTRUCTION AND AS DIRECTED BY THE ENGINEER.
- THE EXISTING INFORMATION SHOWN IN THE PLANS IS FROM SURVEY AND 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 CENTERED ON JOINT, 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 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.
  - DETECTABLE WARNING TILES SHALL BE YELLOW.
  - FOR PARALLEL GUARDRAIL TERMINALS, USE AN END OFFSET OF 2 FEET.
  - ALL TYPE "A" INLET BOXES AND STORM SEWER MANHOLES SHALL HAVE MINIMUM 18" SUMPS, UNLESS STATED OTHERWISE IN THE PLANS.
  - PLACE CURB AND GUTTER PRIOR TO FINAL LIFT OF ASPHALT.



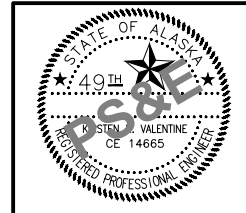
**THE FOLLOWING ALASKA STANDARD PLANS APPLY TO THIS PROJECT:**

- D-01.02, D-04.22, D-06.10, D-22.01, D-24.00, D-25.00, D-26.04
- F-01.04, F-03.02
- G-00.05, G-05.11S, G-05.11W, G-10.21, G-14.01, G-20.12, G-26.00
- I-21.12
- L-30.11
- S-05.02, S-31.02, S-32.02
- T-05.10, T-20.04, T-21.04

**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.

INDEX	
SHEET NO.	DESCRIPTION
A01	TITLE SHEET
A02	SHEET LAYOUT, INDEX, AND GENERAL NOTES
A03	LEGEND
A04-A05	SURVEY CONTROL SHEET(S)
B01-B05	TYPICAL SECTIONS
C01-C02	ESTIMATE OF QUANTITIES
D01-D05	SUMMARY TABLES
E01-E10	DETAIL SHEETS
F01-F18	PLAN AND PROFILE SHEETS
G01-G13	GRADING PLANS
H01-H22	ILLUMINATION, SIGNING, AND STRIPING
L01-L02	LANDSCAPING SHEETS
R01-R10	RIGHT-OF-WAY MAPS



STATE OF ALASKA DOT&PF  
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STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES

**HSIP: BOGARD RD AT  
 ENGSTROM RD & GREEN  
 FOREST DR INT IMP**

**PLAN SCHEMATIC, INDEX,  
 & GENERAL NOTES**



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 CHECKED BY: KRV  
 DRAFTED BY: KRV  
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 TIME: 12:30 PM

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	001630/CFHWY00453	2024	A03	A05

### ROADWAY

	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		
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		
MISCELLANEOUS CONCRETE		
MISCELLANEOUS WALL		

### UTILITIES

	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		
NATURAL GAS METER		
OIL OR GASOLINE PIPELINE		
TANKS (ABOVE GROUND, UNDERGROUND)		
ELECTRIC		
UTILITY POLE, POLE WITH LUMINAIRE		
UTILITY POLE WITH TRANSFORMER		
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		

### TRAFFIC

	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		
SIGNAL CONDUIT		
LIGHTING CONDUIT		
SIGNAL & LIGHTING CONDUIT		
INTERCONNECT		
SIGN POST		
DELINEATOR		

### PAVEMENT MARKINGS

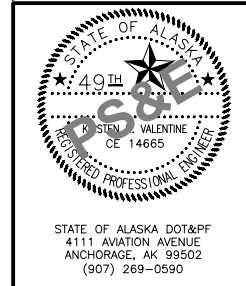
	PROPOSED
TRAFFIC PROJECT CENTERLINE	
8" & 4" WHITE SOLID STRIPE	
4" WHITE SKIP STRIPE	
BROKEN LANE LINE	
4" WHITE LANE ADD/DROP SKIP	
EXIT LANE ADDS, MERGE/TAPER LANE DROPS	
WEAVE POINTS	
8" WHITE LANE ADD/DROP SKIP	
EXIT LANE ADDS, MERGE/TAPER LANE DROPS	
WEAVE POINTS	
4" WHITE LANE EXTENSION SKIP	
TURN POCKET AND BIKE LANE EXTENSION	
8" WHITE LANE EXTENSION SKIP	
TURN POCKET AND BIKE LANE EXTENSION	
8" WHITE INTERSECTION GUIDE SKIP	
INTERSECTION TURNING GUIDE	
24" WHITE ROUNDABOUT ENTRANCE LINE	
ROUNDABOUT ENTRANCE YIELD LINE	
8" & 4" YELLOW SOLID STRIPE	
4" YELLOW SKIP STRIPE	
BROKEN LANE LINE	
STRIPING CHANGE STATION MARKER	
2' CROSSWALK OR STOPBAR	
GAP LADDER CROSSWALK LAYOUT	
2" WIDE RUNGS WITH 2" SPACES	
ALIGNED TO AVOID TIRE PATHS	
LADDER CROSSWALK LAYOUT	
2" WIDE RUNGS WITH 2" SPACES	
ALIGNED TO AVOID TIRE PATHS	
TYPICAL PAINTED MEDIAN	

### RIGHT-OF-WAY

	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		

### TOPOGRAPHY

	EXISTING	PROPOSED
LAKE OR POND, WETLANDS		
TREE (CONIFER/DECIDUOUS)		
TREELINE (EDGE OF VEGETATION)		
PLANTER		
BUILDING OR FOUNDATION		
CONTOUR, MAJOR OR MINOR		
DRAINAGE FLOW		
CREEK (CENTERLINE)		
RIVER (EDGE OF WATER)		



STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES

**HSIP: BOGARD RD AT  
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 FOREST DR INT IMP**

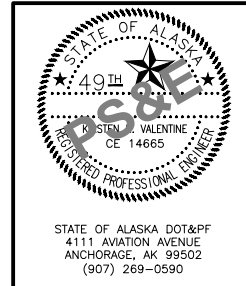
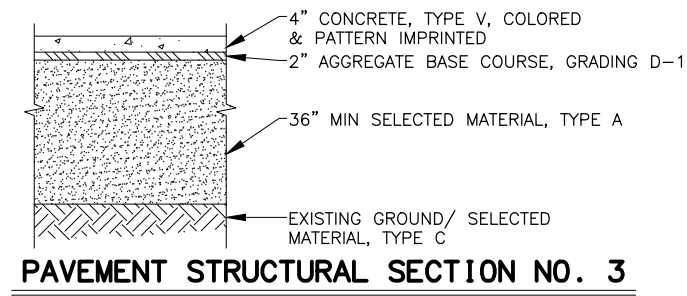
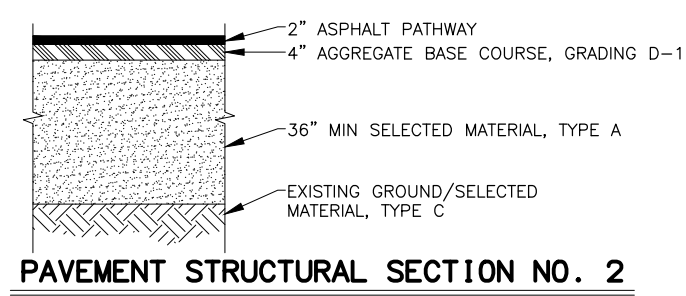
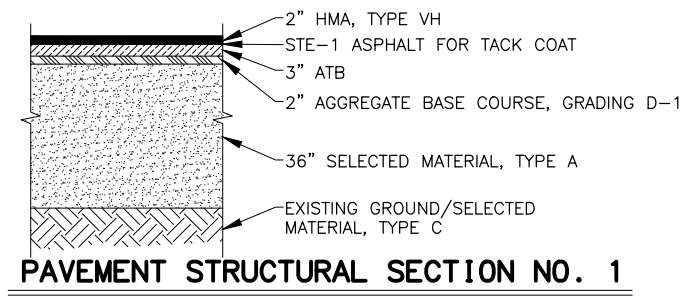
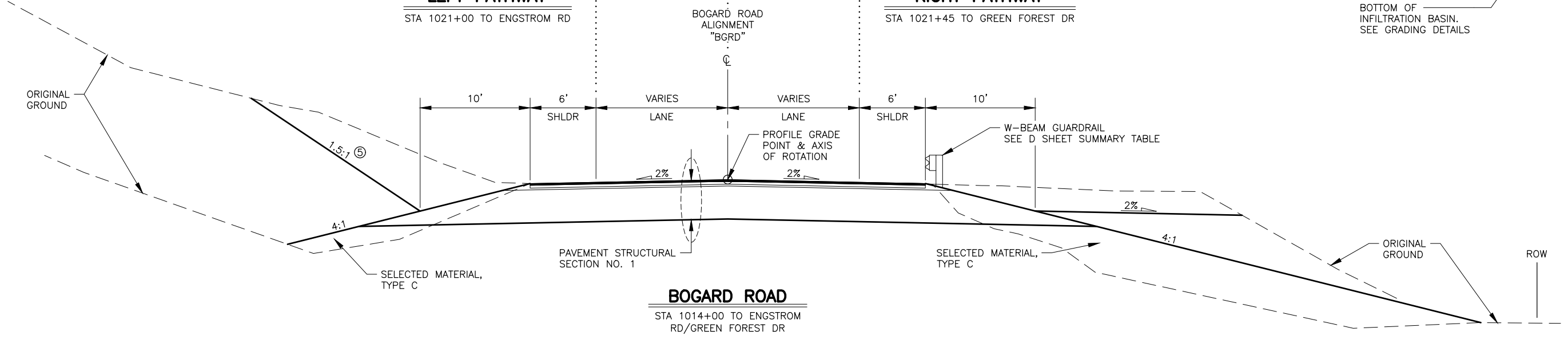
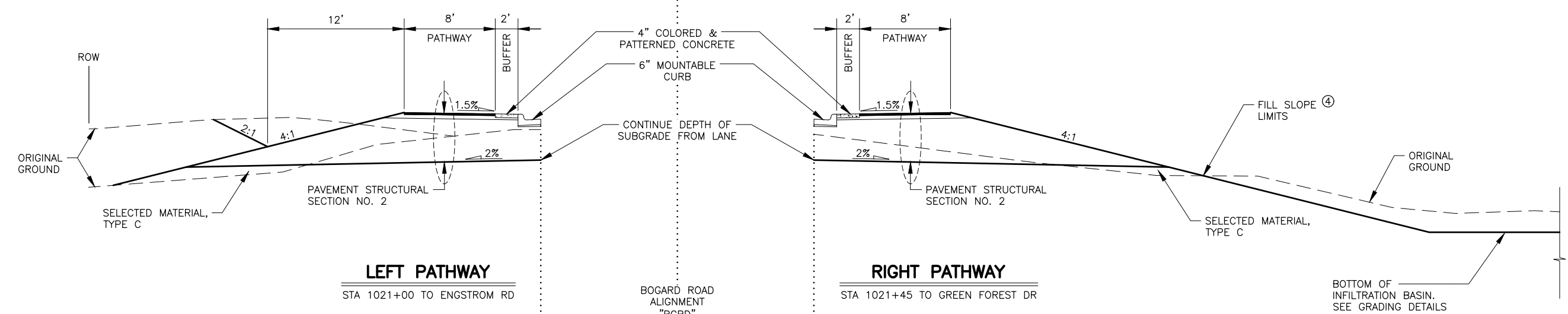
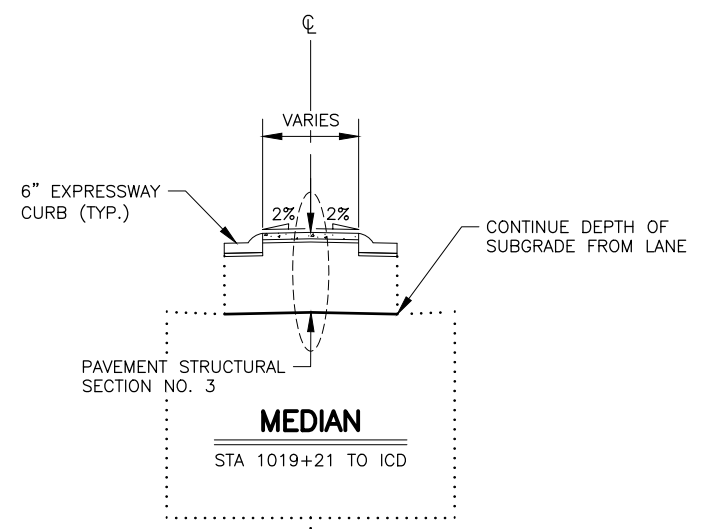
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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	001630/CFHWY00453	2024	B01	B05

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**NOTES**

- WHERE CURB, BACKING CURB, CONCRETE MEDIAN, CONCRETE BUFFER, CONCRETE SIDEWALK OR CURB RAMPS ARE PRESENT, PLACE 2" OF AGGREGATE BASE COURSE, GRADING D-1 FOR LEVELING, OR AS DIRECTED BY THE ENGINEER.
- WHERE NO CURB IS ADJACENT TO THE PAVEMENT EDGE, SHOULDER THE PAVEMENT EDGE WITH AGGREGATE BASE COURSE, GRADING D-1 AS DIRECTED BY THE ENGINEER AND WITHIN 48 HOURS OF PAVING.
- APPLY STE-1 TACK COAT TO CURB EDGES, SAW CUT EDGES, AND BETWEEN LIFTS OF PAVEMENT AND ATB.
- NORMAL FILL SECTION. CONTINUE 4:1 FILL/EXCAVATION TO ELEVATION 350' WHERE ADJACENT TO INFILTRATION BASIN. REFER TO INFILTRATION BASIN GRADING DETAILS.
- 2:1 BACK SLOPE EXCEPTION FROM STA. 1011+75 TO STA. 1012+70 LT & FROM STA. 1013+60 TO STA. 1014+50 LT.
- SEE G SHEETS FOR FLUSH MEDIAN DETAILS. SEE E SHEETS FOR PEDESTRIAN REFUGE DETAILS.



STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
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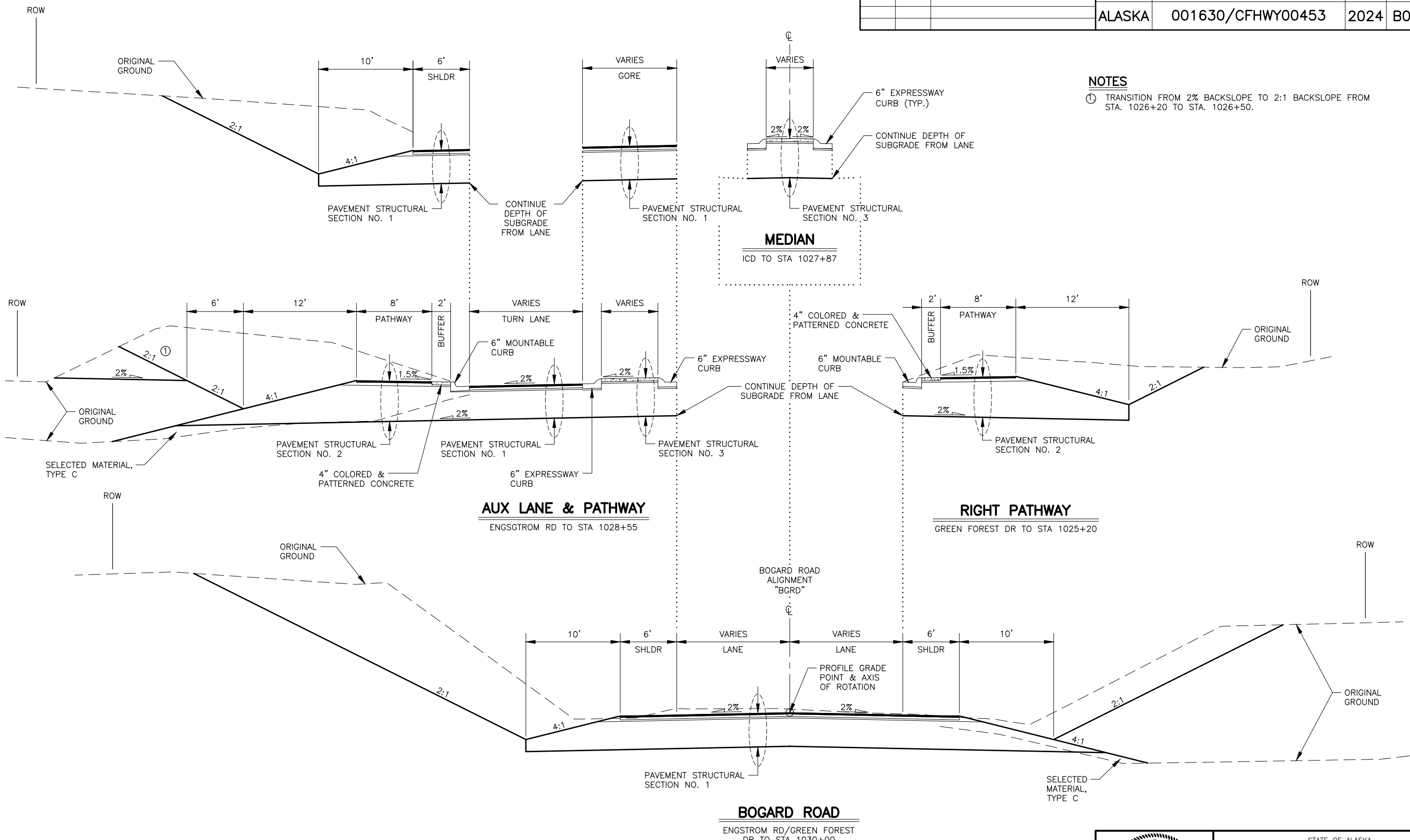
**HSIP: BOGARD RD AT  
 ENGSTROM RD & GREEN  
 FOREST DR INT IMP**

TYPICAL SECTIONS

STATE OF ALASKA DOT&PF  
 4111 AVIATION AVENUE  
 ANCHORAGE, AK 99502  
 (907) 269-0590

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	001630/CFHWY00453	2024	B02	B05

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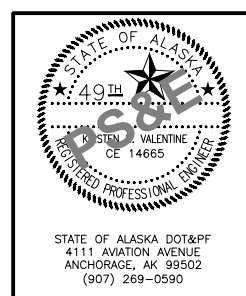


**NOTES**  
 ① TRANSITION FROM 2% BACKSLOPE TO 2:1 BACKSLOPE FROM STA. 1026+20 TO STA. 1026+50.

**AUX LANE & PATHWAY**  
 ENGSTROM RD TO STA 1028+55

**RIGHT PATHWAY**  
 GREEN FOREST DR TO STA 1025+20

**BOGARD ROAD**  
 ENGSTROM RD/GREEN FOREST DR TO STA 1030+00



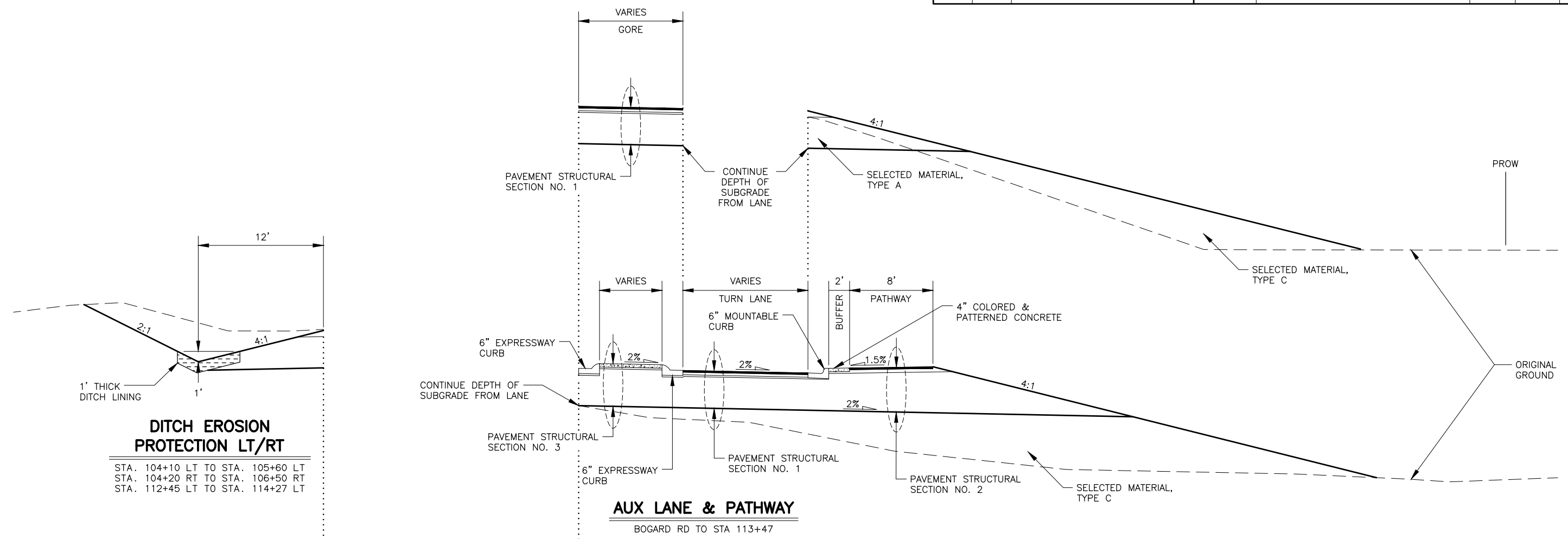
STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
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**HSIP: BOGARD RD AT  
 ENGSTROM RD & GREEN  
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 TYPICAL SECTIONS

STATE OF ALASKA DOT&PF  
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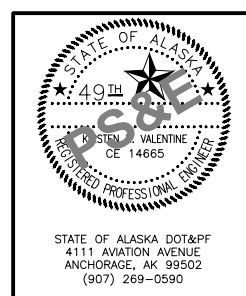
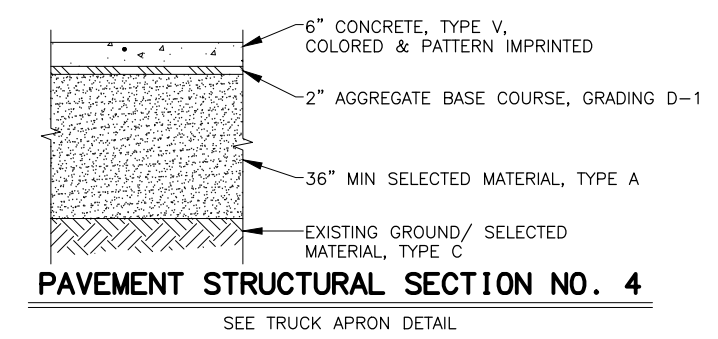
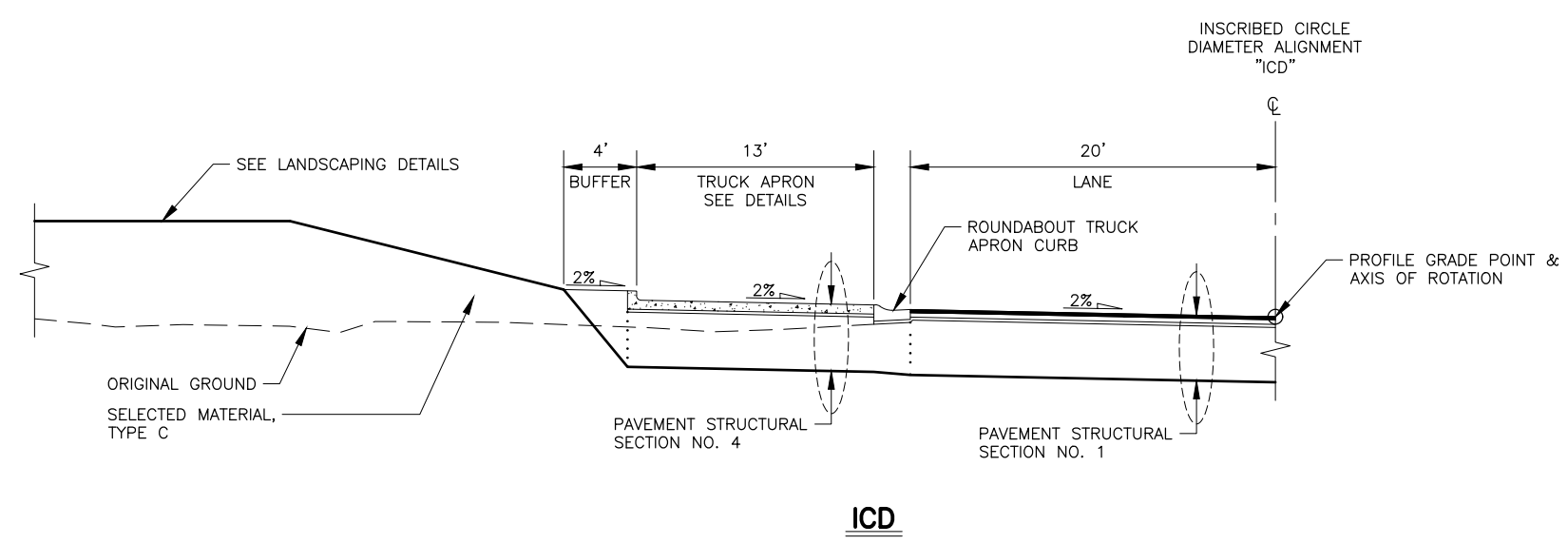
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SEE GREEN FOREST DRIVE AND ENGSTROM ROAD TYPICAL SECTIONS B03

SEE GREEN FOREST DRIVE AND ENGSTROM ROAD TYPICAL SECTIONS B03



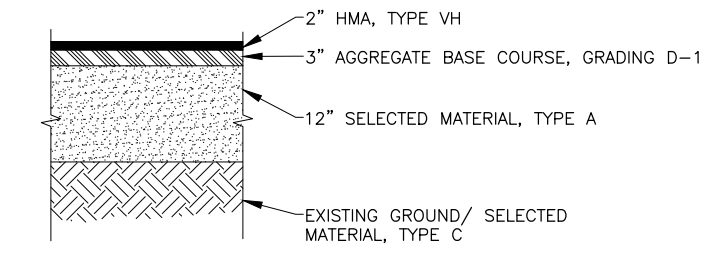
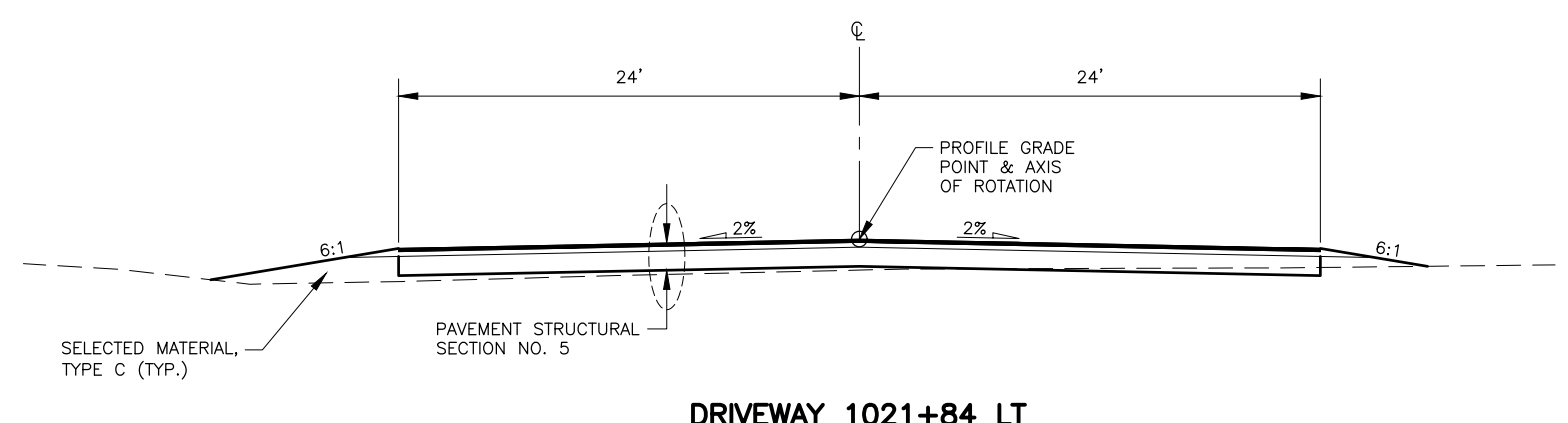
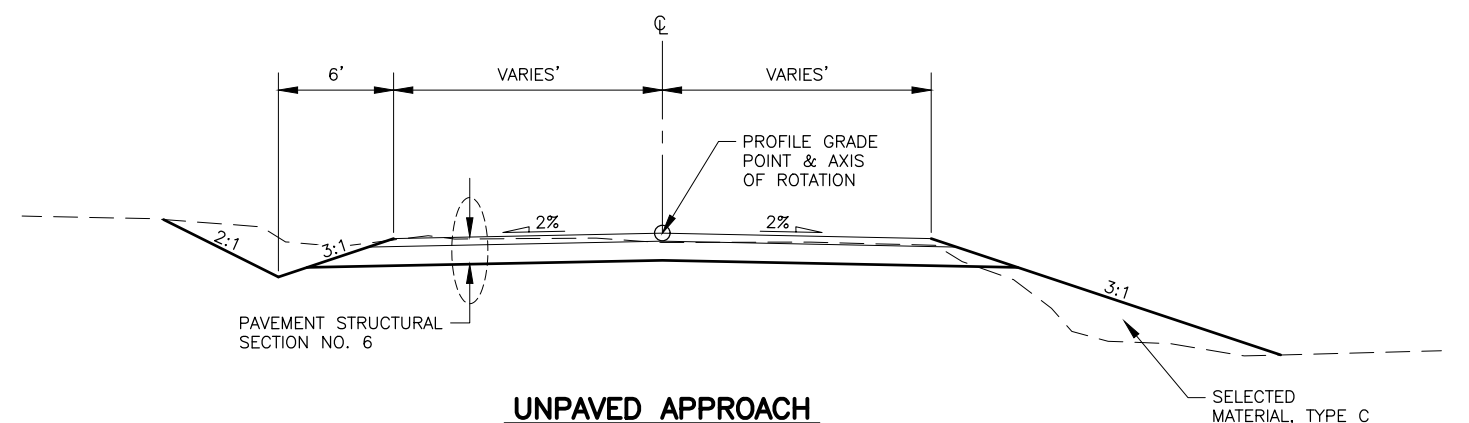
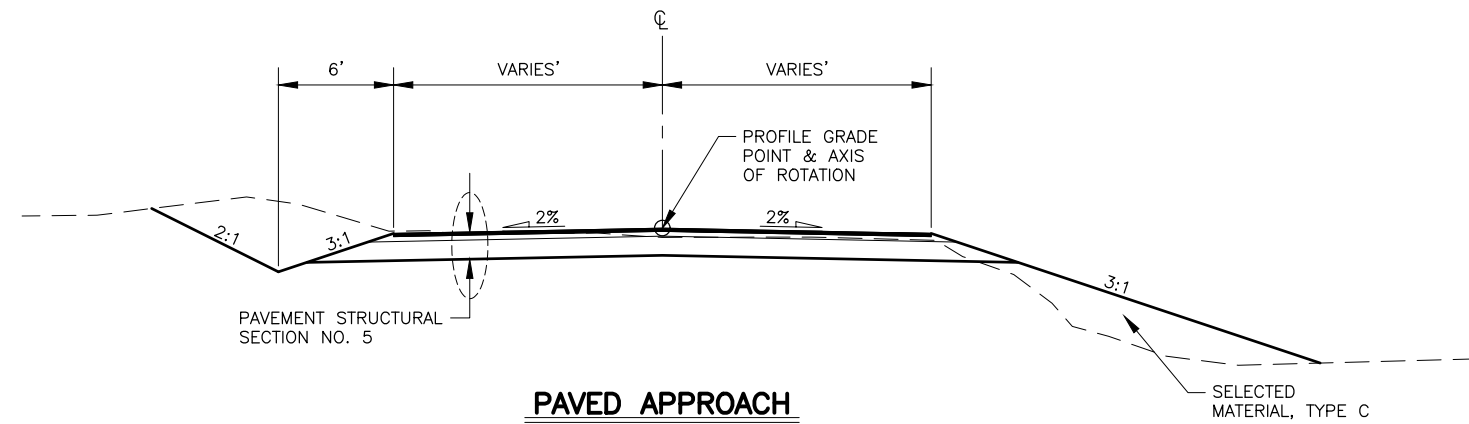
STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
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**HSIP: BOGARD RD AT  
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 FOREST DR INT IMP**

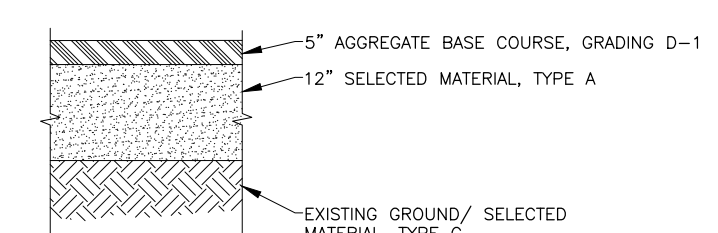
TYPICAL SECTIONS

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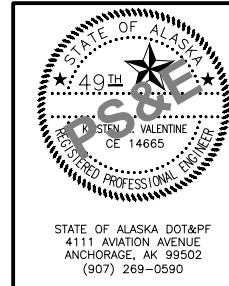
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**PAVEMENT STRUCTURAL SECTION NO. 5**



**PAVEMENT STRUCTURAL SECTION NO. 6**



STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
**HSIP: BOGARD RD AT  
 ENGSTROM RD & GREEN  
 FOREST DR INT IMP**

TYPICAL SECTIONS

STATE OF ALASKA DOT&PF  
 4111 AVIATION AVENUE  
 ANCHORAGE, AK 99502  
 (907) 269-0590

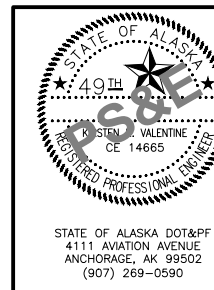
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### ESTIMATE OF QUANTITIES

ITEM NO.	ITEM DESCRIPTION	PAY UNIT	TOTAL QUANTITY
201.0003.0000	CLEARING AND GRUBBING	ACRE	11
202.0001.0000	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LS	ALL REQ'D
202.0002.0000	REMOVAL OF PAVEMENT	SY	12,200
202.0004.0000	REMOVAL OF CULVERT PIPE	LF	145
202.2012.0000	GROUND WATER WELL DECOMMISSIONING	EA	2
202.2022.0000	REMOVAL OF FENCE	LF	1,100
202.2025.0000	REMOVAL OF SEPTIC SYSTEM	LS	ALL REQ'D
203.0003.0000	UNCLASSIFIED EXCAVATION	CY	75,000
203.0006.0000	BORROW	TON	51,300
203.0009.0000	OBLITERATION OF ROADWAY	SY	1,300
203.2013.0000	CONTAMINATED MATERIAL TESTING, HANDLING & DISPOSAL	CS	ALL REQ'D
205.0004.0000	POROUS BACKFILL MATERIAL	CY	780
301.0001.00D1	AGGREGATE BASE COURSE, GRADING D-1	TON	3,600
306.0001.0000	ATB	TON	3,400
306.0002.6440	ASPHALT BINDER, GRADE PG 64-40 E	TON	200
306.2002.0000	ASPHALT MATERIAL PRICE ADJUSTMENT	CS	ALL REQ'D
402.0001.STE1	STE-1 ASPHALT FOR TACK COAT	TON	4.3
408.2001.00VH	HMA, TYPE VH	TON	1,850
408.2004.6440	ASPHALT BINDER, GRADE PG 64-40 E	TON	100
408.2014.0000	JOINT ADHESIVE	LF	3,060
408.2022.0000	COMBINED PRICE ADJUSTMENT	CS	ALL REQ'D
603.2032.0018	CORRUGATED HDPE PIPE 18 INCH	LF	177.8
603.2032.0024	CORRUGATED HDPE PIPE 24 INCH	LF	1,474
603.2033.0018	END SECTION FOR CORRUGATED HDPE PIPE 18 INCH	EA	10
604.0001.0001	STORM SEWER MANHOLE TYPE I	EA	18
604.0005.000A	INLET TYPE A	EA	4
605.2008.0012	PERFORATED CORRUGATED HDPE PIPE 12 INCH	LF	78.1
606.0001.0000	W-BEAM GUARDRAIL	LF	875
606.0006.0000	REMOVING AND DISPOSING OF GUARDRAIL	LF	800
606.0009.0000	SHORT RADIUS GUADRAIL	EA	1
606.0013.0000	PARALLEL GUARDRAIL	EA	1
607.0003.0000	CHAIN LINK FENCE	LF	574
607.0005.0000	DRIVE GATE DOUBLE SWING GATES	EA	2
608.0006.0000	CURB RAMP	EA	20
608.2002.0000	ASPHALT PATHWAY	TON	150
608.2013.E004	CONCRETE, TYPE V, 4 INCHES THICK, COLORED AND PATTERN IMPRINTED, BUFFER AND MEDIANS	SY	1,220
608.2013.E006	CONCRETE, TYPE V, 6 INCHES THICK, COLORED AND PATTERN IMPRINTED, TRUCK APRON	SY	380
609.0002.0001	CURB AND GUTTER, TYPE 1	LF	4,099
610.0002.0000	DITCH LINING	TON	580
615.0001.0000	STANDARD SIGN	SF	510.58
615.0005.0000	DELINEATOR, FLEXIBLE	EA	28
618.0002.0000	SEEDING	LB	580
618.0003.0000	WATER FOR SEEDING	MGAL	405
619.2002.0000	TURF REINFORCEMENT MAT	SY	2,650

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	001630/CFHWY00453	2024	C01	C02



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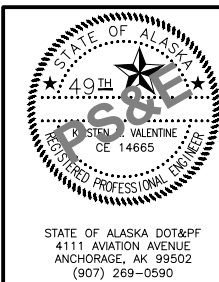
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ESTIMATE OF QUANTITIES			
ITEM NO.	ITEM DESCRIPTION	PAY UNIT	TOTAL QUANTITY
620.0001.0000	TOPSOIL	SY	40,800
639.2000.0000	APPROACH	EA	11
640.0001.0000	MOBILIZATION AND DEMOBILIZATION	LS	ALL REQ'D
641.0001.0000	EROSION, SEDIMENT, AND POLLUTION CONTROL ADMINISTRATION	LS	ALL REQ'D
641.0005.0000	TEMPORARY EROSION, SEDIMENT, AND POLLUTION CONTROL BY DIRECTIVE	CS	ALL REQ'D
641.0006.0000	WITHHOLDING	CS	ALL REQ'D
641.0007.0000	SWPPP MANAGER	LS	ALL REQ'D
642.0001.0000	CONSTRUCTION SURVEYING	LS	ALL REQ'D
642.0003.0000	THREE PERSON SURVEY PARTY	HR	100
642.2005.0000	CONTRACTOR-FURNISHED COMPUTATIONS	LS	ALL REQ'D
642.2006.0000	CONTRACTOR-FURNISHED ENGINEERING TOOLS	CS	ALL REQ'D
643.0002.0000	TRAFFIC MAINTENANCE	LS	ALL REQ'D
643.0003.0000	PERMANENT CONSTRUCTION SIGNS	LS	ALL REQ'D
643.0023.0000	TRAFFIC PRICE ADJUSTMENT	CS	ALL REQ'D
643.0025.0000	TRAFFIC CONTROL	CS	ALL REQ'D
643.0032.0000	FLAGGING	CS	ALL REQ'D
644.0001.0000	FIELD OFFICE	LS	ALL REQ'D
644.2004.0000	ENGINEERING COMMUNICATIONS	CS	ALL REQ'D
644.2007.0000	VEHICLE (LT/SUV)	EACH	2
645.0001.0000	TRAINING PROGRAM, 1 TRAINEE/APPRENTICE	LH	300
646.0001.0000	CPM SCHEDULING	LS	ALL REQ'D
647.2002.0000	BACKHOE 4WD, 1 CY BUCKET, 75-HP MINIMUM, 15 FT DEPTH	CS	ALL REQ'D
660.0003.0000	HIGHWAY LIGHTING SYSTEM COMPLETE, BOGARD/ENGSTROM/GREEN FOREST	LS	ALL REQ'D
661.0003.0000	LOAD CENTER, TYPE 2	EA	1
670.2000.0000	MMA PAVEMENT MARKINGS	LS	ALL REQ'D
682.2000.0000	VAC-TRUCK POTHOLE	CS	ALL REQ'D

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	001630/CFHWY00453	2024	C02	C02

TABLE OF ESTIMATING FACTORS		
ITEM NO.	ITEM DESCRIPTION	ESTIMATING FACTOR
203.0006.0000	BORROW	140 LB/FT <sup>3</sup>
301.0001.00D1	AGGREGATE BASE COURSE, GRADING D-1	148 LB/FT <sup>3</sup>
306.0001.0000	ATB	151 LB/FT <sup>3</sup>
306.0002.6440	ASPHALT BINDER, GRADE PG 64-40 V	5.3% OF TOTAL WEIGHT OF 306.0001.0000
402.0001.STE1	STE-1 ASPHALT FOR TACK COAT	0.000316 TON/YD <sup>2</sup>
408.2001.00VH	HMA, TYPE VH	151 LB/FT <sup>3</sup>
408.2004.6440	ASPHALT BINDER, GRADE PG 64-40 V	5.3% OF TOTAL WEIGHT OF 408.2001.00VH
608.2002.0000	ASPHALT PATHWAY	150 LB/FT <sup>3</sup>
610.0001.0000	DITCH LINING	110 LB/FT <sup>3</sup>
618.0002.0000	SEEDING	1.5 LB/1000 FT <sup>2</sup>
618.0003.0000	WATER FOR SEEDING	1.5 GAL/FT <sup>2</sup>



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 ESTIMATE OF QUANTITIES



# FOR REVIEW ONLY.

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	001630/CFHWY00453	2024	D00	D05

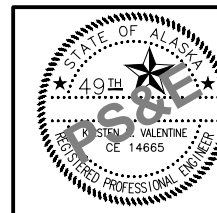
### EARTHWORK SUMMARY

SHEET	STATION		ESTIMATED EXCAVATION					ESTIMATED EMBANKMENT				
			UNCLASSIFIED EXCAVATION	UNCLASSIFIED EXCAVATION MISCELLANEOUS	WASTE EST. @ 30% MAINLINE	UNCLASSIFIED EXCAVATION (USABLE)	SHRUNK UNCL. EX. USABLE AS SELECTED MATERIAL TYPE C	SELECTED MATERIAL, TYPE A MAINLINE	SELECTED MATERIAL, TYPE A MISCELLANEOUS	SELECTED MATERIAL, TYPE C MAINLINE	SELECTED MATERIAL, TYPE C MISCELLANEOUS	TOTAL EMBANKMENT
			(CY)	(CY)	(CY)	(CY)	(CY)	(CY)	(CY)	(CY)	(CY)	(CY)
F02	BOP	1016+80	3,181.5	384.4	954.5	2,227.1	1,893.0	1,646.7	502.3	0.2	887.4	2,149.0
F03	1016+80	1020+50	3,823.9	-	1,147.2	2,676.7	2,275.2	2,344.2	-	250.1	-	2,344.2
F04	1020+50	1025+75	3,228.4	13,555.1	968.5	2,259.9	1,920.9	2,242.4	5,702.6	364.4	4,071.5	7,945.0
F05	1025+75	1030+00	6,271.4	298.5	1,881.4	4,390.0	3,731.5	2,975.6	123.8	3.4	-	3,099.4
F06	101+00	104+50	1,066.1	181.5	319.8	746.3	634.3	1,764.4	267.4	1,022.8	365.8	2,031.8
F07	104+50	108+50	13,859.6	1,916.1	4,157.9	9,701.7	8,246.5	2,189.5	490.2	357.4	99.5	2,679.6
F08	108+50	112+80	15,170.8	-	4,551.2	10,619.5	9,026.6	2,421.6	-	1,830.9	-	2,421.6
F09	112+80	EOP	4,179.3	386.2	1,253.8	2,925.5	2,486.7	1,724.8	165.7	459.3	0.1	1,890.4
TOTAL			74,253		15,234.3	35,546.7	30,214.7	27,017.0		10,684.0		24,561.0
ROUNDED TOTAL			75,000		15,300	35,600	30,300	27,100		9,713		24,600
TOTAL PAY ITEM QUANTITY (ROUNDED)			75,000		(CY)	(CY)	(CY)	21,300		18,400		(CY)
UNIT								(TON)		(TON)		

#### NOTES:

1. WASTE = 0.3 × UNCLASSIFIED EXCAVATION
2. UNCLASSIFIED EXCAVATION (USABLE) = UNCLASSIFIED EXCAVATION - WASTE
3. ESTIMATED SHRUNK COMMON EXCAVATION (USABLE) = 0.85 × UNCLASSIFIED EXCAVATION (USABLE)
4. TOTAL EMBANKMENT = SELECTED MATERIAL, TYPE C + SELECTED MATERIAL, TYPE A

THIS SHEET WILL BE REMOVED FOR ADVERTISEMENT UNLESS THE CONSTRUCTION PROJECT MANAGER REQUIRES IT. IF IT'S REQUIRED, THE SHEET NUMBER WILL BECOME D1.



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**SUMMARY TABLES**

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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	001630/CFHWY00453	2024	D01	D05

CLEARING AND GRUBBING - 201.0003.0000					
SHEET	STATION		OFFSET	AREA (ACRES)	REMARKS
	FROM	TO			
F02	1011+75	1016+80	LT/RT	0.93	
F03	1016+80	1020+50	LT/RT	0.80	CLEAR & GRUB TO ROW
F04/F08	1020+75	1025+50	LT/RT	2.47	CLEAR & GRUB TO ROW
F05	1025+50	1030+00	LT/RT	1.03	CLEAR & GRUB TO ROW
F06	101+00	104+50	LT/RT	1.34	CLEAR & GRUB TO ROW
F07	104+50	108+50	LT/RT	2.32	CLEAR & GRUB TO ROW
F09	112+75	115+60	LT/RT	0.97	CLEAR & GRUB TO ROW
PAY ITEM QUANTITY:				11.0	

REMOVAL OF PAVEMENT - 202.0002.0000				
SHEET	STATION		AREA (SY)	REMARKS
	FROM	TO		
F02	1014+00	1016+80	1,348.0	
F03	1016+80	1020+50	1,505.8	
F04/F08	1020+75	1025+50	3,707.4	
F05	1025+50	1030+00	1,787.4	
F06	101+00	104+50	602.3	
F07	104+50	108+50	464.9	
F08	111+74	112+75	514.8	
F09	112+50	115+60	1,102.2	
PAY ITEM QUANTITY:			12,200	

REMOVAL OF STRUCTURES AND OBSTRUCTIONS - 202.0001.0000			
SHEET	STATION	OFFSET	REMARKS
F03/F07	1022+78	119.6 RT	COMMERCIAL SHOP
F06	105+06	117.7 RT	SHED
F06	105+36	32.6 RT	HOUSE
F06	105+60	24.2 LT	GARAGE

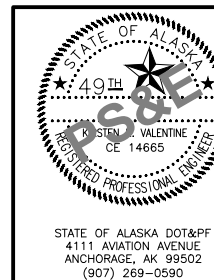
REMOVAL OF CULVERT PIPE - 202.0004.0000				
SHEET	STATION	OFFSET	LENGTH (LF)	REMARKS
F03	1019+60.0	CL	65.0	
F03	1021+56	165.4 RT	35.3	
F08	114+51	22.2 LT	43.8	
PAY ITEM QUANTITY:			88.0	

GROUND WATER WELL DECOMMISSIONING - 202.2012.0000			
SHEET	STATION	OFFSET	REMARKS
F04	1022+00	74.8 RT	NW CORNER OF SHOP
F07	105+41	7.9 LT	BETWEEN HOUSE AND GARAGE

REMOVAL OF FENCE - 202.2022.0000				
SHEET	STATION	OFFSET	LENGTH (LF)	REMARKS
F02	1015+29.9	51.1 RT	194.8	ENCHROACHMENT; REMOVE TO ROW
F03	1020+04.7	50.62 RT	127.2	
F03	1020+32.7	54.2 RT	90.5	
F07	104+55.9	20.60 RT	676.3	
PAY ITEM QUANTITY:			1,100	

REMOVAL OF SEPTIC SYSTEM - 202.2025.0000			
SHEET	STATION	OFFSET	REMARKS
F04/F08	1022+78	119.6 RT	S OF STRUCTURE
F08	105+60	24.2 LT	BACKYARD

OBLITERATION OF ROADWAY - 203.0009.0000						
SHEET	FROM		TO		AREA (SY)	REMARKS
	STATION	OFFSET	STATION	OFFSET		
F03	1021+18	RT	1021+54	RT	411	OLD GREEN FOREST DR EMBANKMENT
F03	1021+52	LT	1021+58	LT	3	FIRE STATION
F03	1022+15	LT	1022+44	LT	29	FIRE STATION
F05	103+16	LT	104+50	LT	16	OLD GREEN FOREST DR EMBANKMENT
F06	104+50	LT	107+24	LT	838	OLD GREEN FOREST DR EMBANKMENT
PAY ITEM QUANTITY:					1,300	



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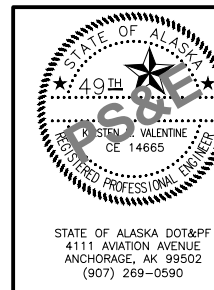
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	001630/CFHWY00453	2024	D02	D05

**PIPE SUMMARY - 603.2032.0018, 603.2032.0024, 603.2033.0018, & 605.2008.0012**

SHEET	PIPE	SIZE (IN)	LENGTH (LF)	INLET				OUTLET				SLOPE (%)	REMARKS
				FROM	ELEVATION	TO	ELEVATION	FROM	ELEVATION	TO	ELEVATION		
F04	P4-1	24	63	S4-1	353.68	S4-2	353.05					HDPE	
F04	P4-2	24	79	S4-3	355.08	S4-2	353.2					HDPE	
F04	P4-3	24	45	S4-2	352.88	STA 1021+76.5	62.0 RT	352.2				HDPE	
F06	P6-3	24	102	S6-1	344.93	STA 104+20	50 RT	344.4				HDPE	
F07	P7-1	24	186	S7-1	346.03	S6-1	345.1					HDPE	
F07	P7-2	24	120	S7-2	346.8	S7-1	346.2					HDPE	
F07	P7-3	24	64	S7-3	347.27	S7-2	346.95					HDPE	
F07	P7-4	12	72	STA. 108+75	115.0 LT	S7-3	347.45					PERFORATED HDPE	
F08	P8-1	18	21	S8-1	356.31	S8-3	356.1					HDPE	
F08	P8-2	18	40	S8-2	356.38	S8-3	356.1					HDPE	
F08	P8-3	24	59	S8-3	355.94	S8-4	355.35					HDPE	
F08	P8-4	24	54	S8-4	355.18	S8-5	354.1					HDPE	
F08	P8-5	24	47	S8-5	353.94	STA 109+55	85.0 LT	353				HDPE	
F08	P8-6	24	51	S8-6	356.36	S8-4	355.35					HDPE	
F08	P8-7	24	50	S8-7	355.1	S8-5	354.1					HDPE	
F08	P8-8	24	53	S8-8	357.6	S8-6	356.55					HDPE	
F08	P8-9	24	48	S8-9	358.48	S8-7	357.75					HDPE	
F08	P8-10	24	63	S8-10	356.51	S8-8	355.25					HDPE	
F08	P8-11	24	33	S8-11	358.98	S8-9	358.65					HDPE	
F08	P8-12	24	38	S8-12	359.53	S8-11	359.15					HDPE	
F08	P8-13	24	33	S8-13	360.03	S8-12	359.7					HDPE	
F08	P8-14	24	29	S8-14	360.49	S8-13	360.2					HDPE	
F08	P8-15	24	153	S8-15	361.23	S8-10	356.65					HDPE	

SHEET	PIPE	SIZE (IN)	LENGTH (LF)	INLET				OUTLET				SLOPE (%)	REMARKS
				STATION	OFFSET	ELEVATION	END SECTION	STATION	OFFSET	ELEVATION	END SECTION		
F03	P3-1	24	65	109+70	413.4 LT	351.2	X	109+53.19	396.4 LT	349.25	X	3.00	HDPE
F05	P5-1	18	42	1028+93	50.0 LT	357.64	X	1029+34	43.0 LT	357.29	X	-0.85	HDPE
F06	P6-1	18	41	101+30	26.0 RT	342.76	X	101+70	26.0 RT	342.56	X	0.50	HDPE
F06	P6-2	18	35.0	102+08	32.5 RT	341.27	X	102+42	39.0 RT	340.75	X	1.50	HDPE
F09	P9-1	24	39.0	114+70	47.0 LT	381.90'	X	114+29	47.0 LT	381.61	X	0.75	HDPE



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			ALASKA	001630/CFHWY00453	2024	D03	D05

**STRUCTURE INSTALLATION SUMMARY - 604.0001.0000 & 604.0005.000A**

SHEET	STRUCTURE	TYPE	STATION	OFFSET	TOP OF CASTING ELEVATION	TYPE OF CASTING	REMARKS
F04	S4-1	I	1021+15	19.2 LT	358.0	CI	HIGH CAPACITY INLET GRATE
F04	S4-2	I	1021+65	18.6 RT	359.0	CI	HIGH CAPACITY INLET GRATE
F04	S4-3	A	1022+25	50.0 LT	358.9	FI	
F06	S6-1	I	104+20	52.0 LT	352.9	MH	
F07	S7-1	I	106+00	110.0 LT	358.5	MH	
F07	S7-2	I	107+25	98.5 LT	352.2	FI	
F07	S7-3	I	107+92	106.0 LT	342.0'	FI	
F08	S8-1	A	109+00	21.0 LT	362.2	CI	HIGH CAPACITY INLET GRATE
F08	S8-2	A	109+00	40.0 RT	359.0	FI	
F08	S8-3	I	109+00	0.0 RT	363.1	MH	
F08	S8-4	I	109+59	0.0 RT	362.7	CI	HIGH CAPACITY INLET GRATE
F08	S8-5	A	109+78	50.0 LT	361.6	CI	HIGH CAPACITY INLET GRATE
F08	S8-6	I	109+80	46.8 RT	363.8	CI	HIGH CAPACITY INLET GRATE
F08	S8-7	I	110+22	73.7 LT	362.1	CI	HIGH CAPACITY INLET GRATE
F08	S8-8	I	110+28	68.3 RT	365.1	CI	HIGH CAPACITY INLET GRATE
F08	S8-9	I	110+76	74.9 RT	365.7	CI	HIGH CAPACITY INLET GRATE
F08	S8-10	I	110+82	54.3 LT	363.5	CI	HIGH CAPACITY INLET GRATE
F08	S8-11	I	111+02	84.1 RT	365.0	CI	HIGH CAPACITY INLET GRATE
F08	S8-12	I	111+20	58.3 RT	365.4	CI	HIGH CAPACITY INLET GRATE
F08	S8-13	A	111+10	27.5 RT	366.1	CI	HIGH CAPACITY INLET GRATE

**CONCRETE, TYPE V, 4 INCHES THICK, COLORED AND PATTERN IMPRINTED - 608.2013.E004**

SHEET	FROM		TO		AREA (SY)	REMARKS
	STATION	OFFSET	STATION	OFFSET		
F03/F04	1019+24.45	CL	1022+70.84	CL	281.5	W BOGARD RAISED/FLUSH MEDIAN ISLAND
F04	1021+00.12	LT	1023+13.26	LT	43.8	NW QUADRANT BUFFER
F04/F07/F08	1021+45.00	RT	107+00.00	LT	86.3	SE QUADRANT BUFFER
F07/F08	108+24.79	CL	109+57.87	CL	79.5	GREEN FOREST RAISED MEDIAN ISLAND
F04/F05/F08	109+45.24	RT	1025+20.00	RT	34.0	SW QUADRANT BUFFER
F04/F08/F09	111+03.90	CL	113+34.05	CL	129.3	ENGSTROM RAISED MEDIAN ISLAND
F04/F05/F08	111+53.36	RT	1025+34.55	LT	124.7	YRTL ISLAND
F04/F05	1024+16.41	CL	1027+83.01	CL	380.6	E BOGARD RAISED BUFFER
F04/F05/F08	111+85.27	RT	1026+49.92	LT	59.6	NE QUADRANT BUFFER
F07 & F03	112+27	RT	1025+35.55	LT	63.5	YRTL AUXILLARY RAISED MEDIAN ISLAND

PAY ITEM QUANTITY: 1,220

**CONCRETE, TYPE V, 6 INCHES THICK, COLORED AND PATTERN IMPRINTED - 608.2013.E006**

SHEET	FROM		TO		AREA (SY)	REMARKS
	STATION	OFFSET	STATION	OFFSET		
F03	1022+95.60	CL	1023+91.40	CL	377	CENTRAL ISLAND TRUCK APRON

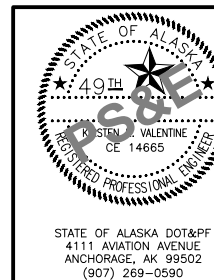
PAY ITEM QUANTITY: 377

**GUARDRAIL SUMMARY - 606.0001.0000, 606.0006.0000, 606.0009.0000, & 606.0013.0000**

SHEET	STATION			W-BEAM GUARDRAIL (LF) 606.0001.0000	REMOVING & DISPOSING OF GUARDRAIL (LF) 606.0006.0000	SHORT RADIUS GUARDRAIL (SRG) 606.0009.0000			PARALLEL GUARDRAIL TERMINAL (EA) 606.0013.0000	GUARDRAIL CASE SEE NOTE 4	REMARKS
	FROM	TO	OFFSET			(EACH)	RADIUS (FT)	CURVE LENGTH (FT)			
F01	1007+94	1016+18	RT	875.0	800.0	1.0	36.0	63.7	1.0	5	

**GUARDRAIL SUMMARY NOTES:**

- INSTALL GUARDRAIL FLEXIBLE DELINEATORS AND GUARDRAIL REFLECTORS PER STANDARD PLAN G-00 ON ALL GUARDRAIL RUNS.
- GUARDRAIL FLEXIBLE DELINEATORS AND GUARDRAIL REFLECTORS ARE TO BE SPACED AS FOLLOWS:
  - 50' ON TANGENTS.
  - 12.5' ON CURVES STARTING 100' BEFORE THE POINT OF CURVATURE (PC) AND 100' AFTER THE POINT OF TANGENCY (PT).
- ALL PARALLEL END TERMINALS SHALL BE 50' IN LENGTH AND HAVE AN END OFFSET OF 2'.
- SEE ALASKA STANDARD PLAN G-10 FOR GUARDRAIL CASES.



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SUMMARY TABLES

STATE OF ALASKA DOT&PF  
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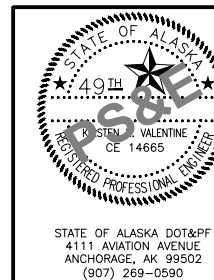
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	001630/CFHWY00453	2024	D04	D05

### CURB AND GUTTER SUMMARY - 609.0002.0001

SHEET	FROM		TO		LENGTH (LF)	REMARKS
	STATION	OFFSET	STATION	OFFSET		
F03/F04	1019+24.5	CL	1021+55.6	CL	470.1	W BOGARD MEDIAN
F04/F08	1021+00.1	LT	111+85.0	LT	304.9	NW QUADRANT
F04/F07/F08	1021+45.0	RT	108+49.9	LT	286.9	SW QUADRANT
F04	1022+12.0	CL	1022+70.8	CL	147.2	W BOGARD MEDIAN
F04	1022+94.6	CL	1023+92.4	CL	301.6	OUTSIDE OF TRUCK APRON
F04	1023+06.6	CL	1023+92.4	CL	232.5	INSIDE OF TRUCK APRON
F07/F08	108+24.8	CL	109+57.9	CL	226.0	GF MEDIAN
F04/F08	109+19.8	RT	1025+20.0	RT	203.1	SE QUADRANT
F08/F09	111+03.9	CL	113+34.1	CL	481.9	ENGSTROM MEDIAN
F04/F08	111+53.4	RT	1025+34.6	LT	430.7	YRTL MEDIAN
F04/F05	1024+16.4	CL	1027+83.0	CL	773.3	E BOGARD MEDIAN
F04/F05/F08	111+85.2	RT	1026+49.9	LT	240.4	NE QUADRANT
F07	111+04.63	1.6 RT	112+50.00	CL	315.38	ENGSTROM MEDIAN
F07	1024+88.83	48.8 LT	111+85.11	41.9 RT	154.94	NE QUADRANT
F07	111+72.77	21.1 LT	111+85.00	20.4 LT	12.56	NW QUADRANT
F08	112+50.00	CL	113+34.05	CL	171.12	ENGSTROM MEDIAN
PAY ITEM QUANTITY:					4,099	

### DITCH LINING - 610.0002.0000

SHEET	FROM		TO		DITCH LINING (TON)	REMARKS
	STATION	OFFSET	STATION	OFFSET		
F03/F07/F08	107+99	LT	109+57	LT	384.9	INFILTRATION BASIN; SEE G SHEETS
F05/F06	104+10	LT	105+60	LT	48.8	GREEN FOREST LT
F05/F06	104+20	RT	106+50	RT	83.3	GREEN FOREST RT
F08/F09	112+45	LT	114+24	LT	62.1	ENGSTROM LT
PAY ITEM QUANTITY:					580	



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			ALASKA	001630/CFHWY00453	2024	D05	D05

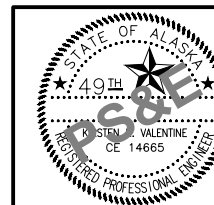
**CURB RAMP SUMMARY - 608.0006.0000**

SHEET	STATION	OFFSET	TYPE	ASP OR DETAIL	ESTIMATED MEASUREMENT (FT)						DETECETABLE WARNING TILE		REMARKS
					I	J	K	L	M	N	RADIUS (FT)	LENGTH (FT)	
F04	1022+43.8	26.5 LT	PARALLEL	ASP	10	6	10	10	10	12	798	6	W BOGARD
F04	1022+44.3	27.9 RT	PARALLEL	ASP	10	12.7	10	6	10	6	93	6.25	W BOGARD
F04	1022+47.6	11.8 LT	PARALLEL	ASP	-	-	-	-	-	-	-	-	W BOGARD
F04	1022+49.1	9.9 RT	PARALLEL	ASP	-	-	-	-	-	-	-	-	W BOGARD
F04	1024+38.4	12.4 LT	PARALLEL	ASP	-	-	-	-	-	-	-	-	E BOGARD
F04	1024+41.5	13.4 RT	PARALLEL	ASP	-	-	-	-	-	-	-	-	E BOGARD
F04	1024+41.8	30.7 LT	PARALLEL	ASP	-	-	-	-	-	-	-	-	E BOGARD
F04	1024+45.7	40.5 LT	PARALLEL	ASP	-	-	-	-	-	-	-	-	E BOGARD
F04	1024+46.5	27.4 RT	PARALLEL	ASP	10	12	10	6	10	6	800	6	E BOGARD
F04	1024+53.5	59.8 LT	PARALLEL	ASP	10	6	10	6	10	8	63	6.4	E BOGARD
F08	109+28.7	21.8 RT	PARALLEL	ASP	10	12	10	6	10	5.5	63	6.4	GREEN FOREST
F08	109+31.0	23.3 LT	PARALLEL	ASP	10	8	10	6	10	6	223	6	GREEN FOREST
F08	109+34.8	5.1 LT	PARALLEL	ASP	-	-	-	-	-	-	-	-	GREEN FOREST
F08	109+34.8	5.6 RT	PARALLEL	ASP	-	-	-	-	-	-	-	-	GREEN FOREST
F08	111+28.9	6.9 LT	PARALLEL	ASP	-	-	-	-	-	-	-	-	ENGSTROM
F08	111+29.7	6.5 RT	PARALLEL	ASP	-	-	-	-	-	-	-	-	ENGSTROM
F08	111+31.9	20.2 RT	PARALLEL	ASP	-	-	-	-	-	-	-	-	ENGSTROM
F08	111+33.3	30.1 RT	PARALLEL	ASP	-	-	-	-	-	-	-	-	ENGSTROM
F08	111+35.7	49.6 RT	PARALLEL	ASP	10	12	10	6	10	5.5	63	6.2	ENGSTROM
F08	111+37.0	27.3 LT	PARALLEL	ASP	10	8	10	6	10	6	223	6.3	ENGSTROM

**APPROACH SUMMARY - 639.2000.0000**

SHEET	STATION	OFFSET	SKEW ANGLE (90° TYP.)	TYPE			WIDTH (FT)	LENGTH (FT)	REMARKS
				PUB.	RES.	COM.			
F10	1016+30.0	RT		X			24	210	E ASHMORE RD
F11	1016+30.0	RT-A		X			24	150	ASHMORE RD
F12	1020+50.0	RT		X			12	130	BASIN ACCESS
F13	1021+84.7	LT				X	48	80	FIRE STATION
F13	1029+11.0	RT				X	24	58.1	DAIRY FARM
F14	101+50.0	RT			X		20	38	RESIDENTIAL
F14	102+25.0	RT			X		14	35	RESIDENTIAL
F15	102+43.0	LT			X		14	34	RESIDENTIAL
F16	106+00.0	LT				X	24	258.8	TEWS/BASIN ACCESS
F17	106+00.0	LT-A				X	24	180	TEWS ACCESS
F18	114+50.0	LT		X			24	140	E DESTIN DR

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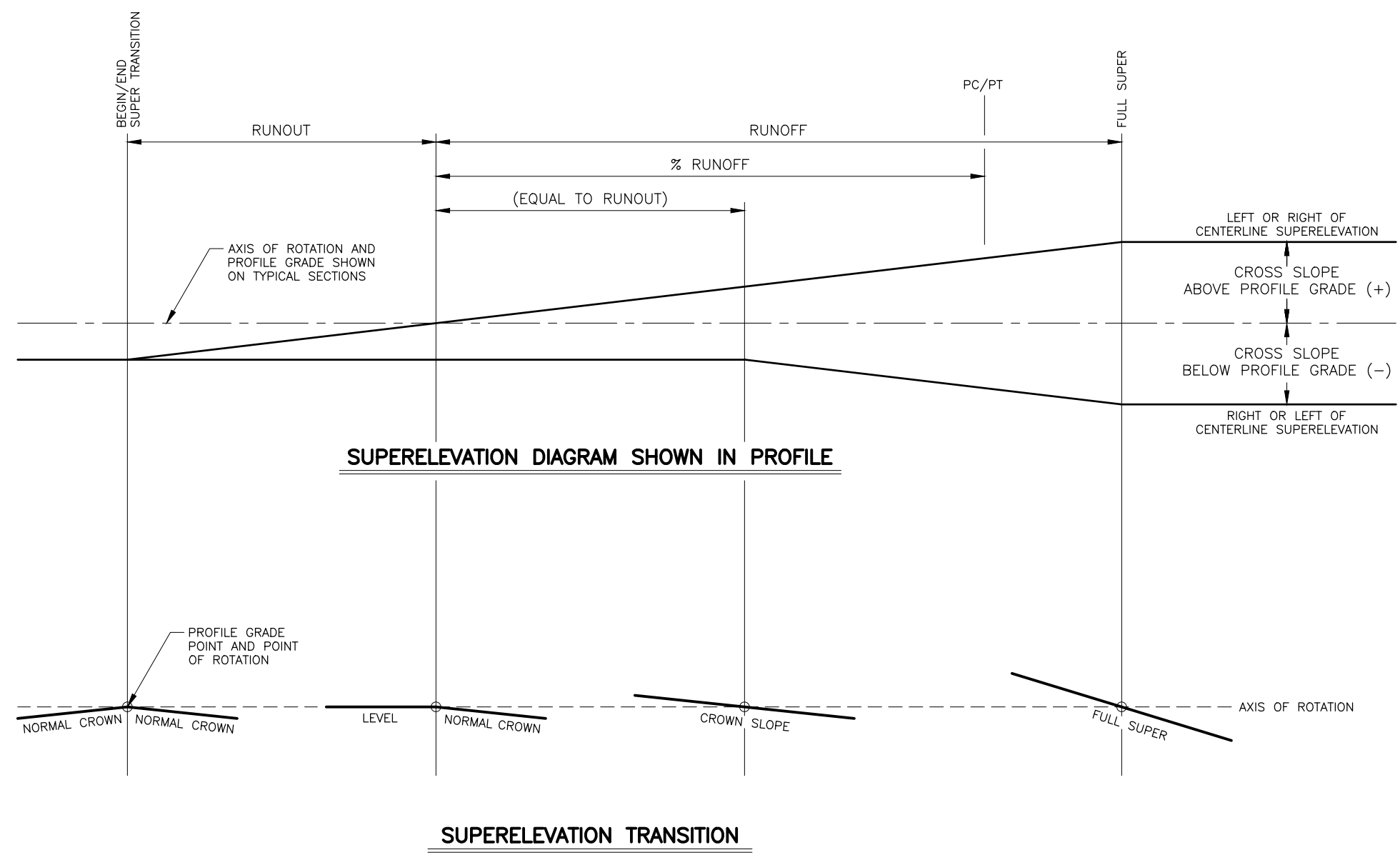


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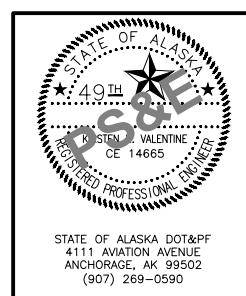
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**SUPERELEVATION NOTES:**

1. REFER TO PLAN AND PROFILE SHEETS FOR SUPERELEVATION VALUES AND SPECIAL CASES.
2. BUILD SUPERELEVATION INTO SUBGRADE AND CARRY THROUGH SHOULDERS.
3. % RUNOFF = PORTION OF RUNOFF ON TANGENT.
4. WIDENING FOR GUARDRAIL OR CURVATURE DOES NOT CHANGE THE LOCATION OF THE AXIS OF ROTATION.



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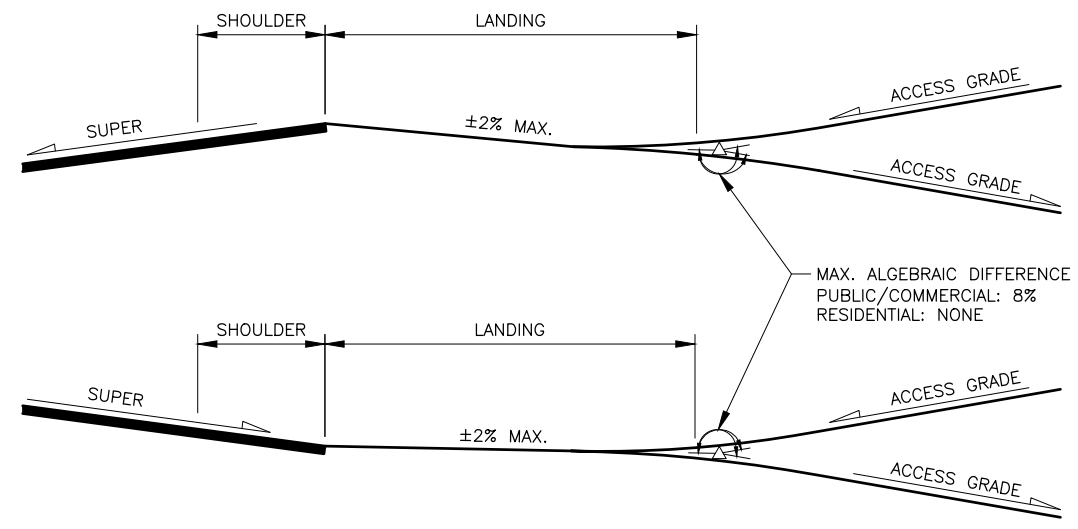
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**SUPERELEVATION  
 TRANSITIONS**

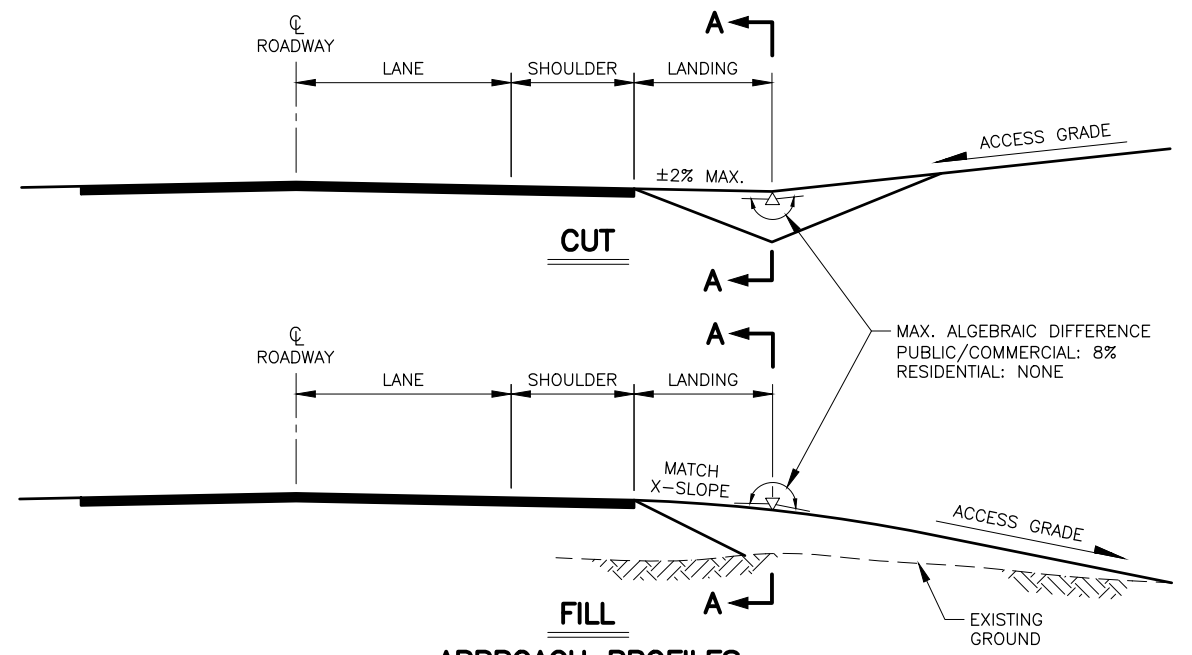
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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
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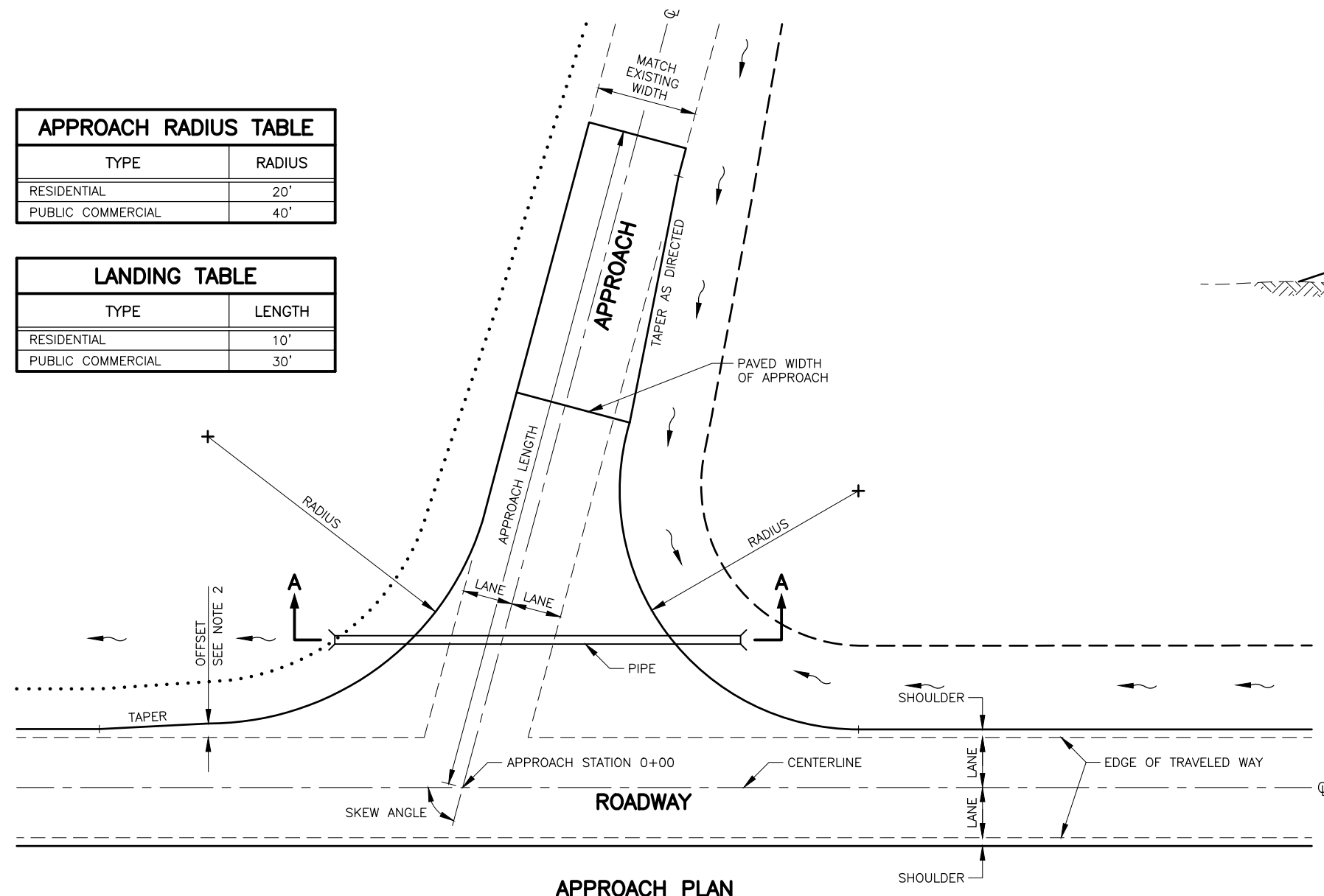
**APPROACH PROFILES ON SUPER ELEVATED ROADWAY**



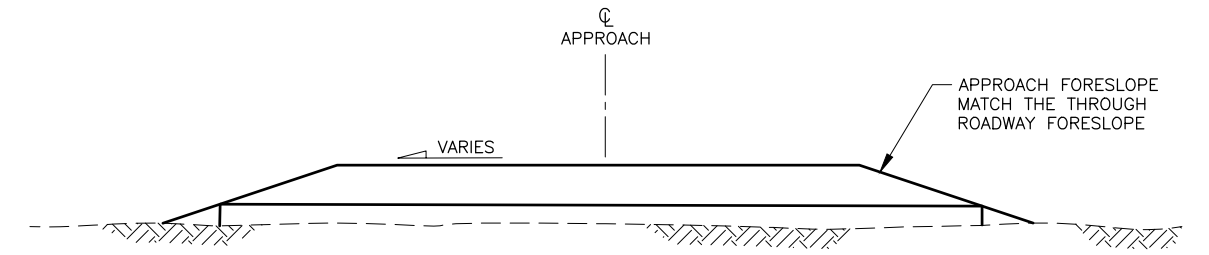
**APPROACH PROFILES**

TYPE	RADIUS
RESIDENTIAL	20'
PUBLIC COMMERCIAL	40'

TYPE	LENGTH
RESIDENTIAL	10'
PUBLIC COMMERCIAL	30'



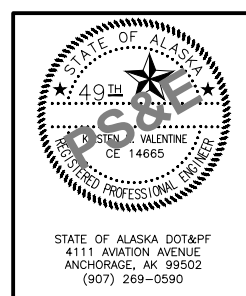
**APPROACH PLAN**



**SECTION A-A  
APPROACH TYPICAL**

**NOTES:**

- SEE APPROACH SUMMARY FOR APPROACH STATION, LENGTH, WIDTH, SKEW ANGLE, AND TYPE.
- THE TAPER OFFSET FROM TRAVELED WAY = ASSIGNED VALUE OR SHOULDER WIDTH WHICHEVER IS LARGER. TAPER WILL BE 10 FEET IN LENGTH FOR EACH FOOT OF OFFSET.
- SEE PUBLIC APPROACH AND DRIVEWAY TYPICAL SECTIONS.
- APPROACH VERTICAL CURVE REQUIREMENTS: CREST - 2½ INCH MAXIMUM IN A 10-FOOT CHORD  
SAG - 2 INCH MAXIMUM IN A 10-FOOT CHORD
- WHERE SIDEWALK IS PRESENT BEGIN DRIVEWAY LANDING AT BACK OF SIDEWALK.
- ACCESS GRADE MAX. 15%



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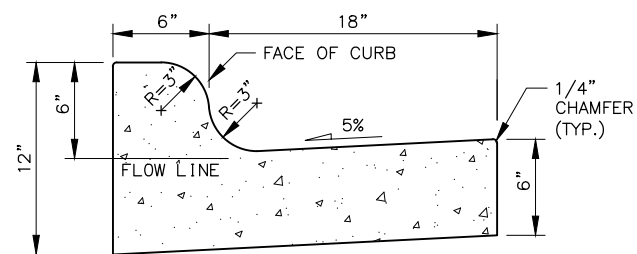
**APPROACH DETAILS**

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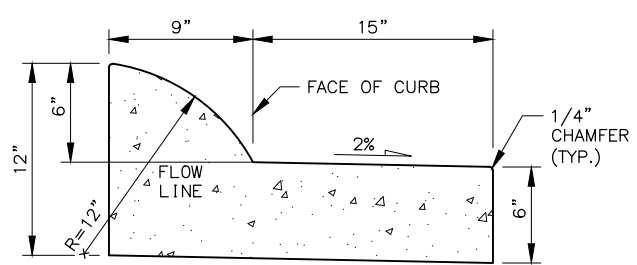


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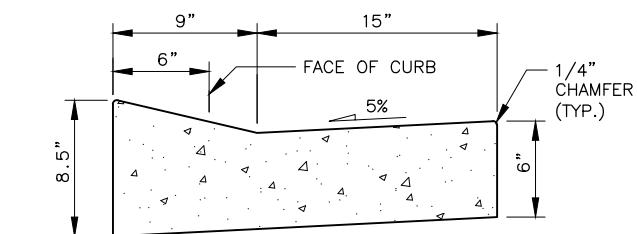
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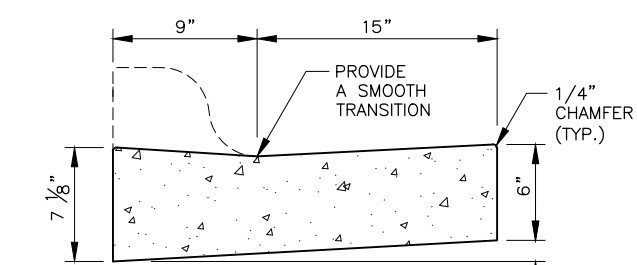
**6" MOUNTABLE CURB & GUTTER**



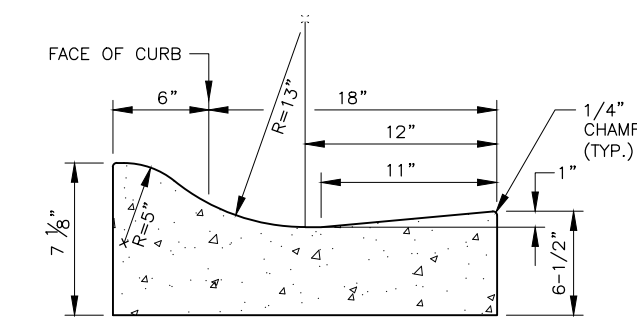
**EXPRESSWAY CURB & GUTTER**



**DEPRESSED CURB & GUTTER (CURB CUT)**



**CURB RAMP CURB & GUTTER**

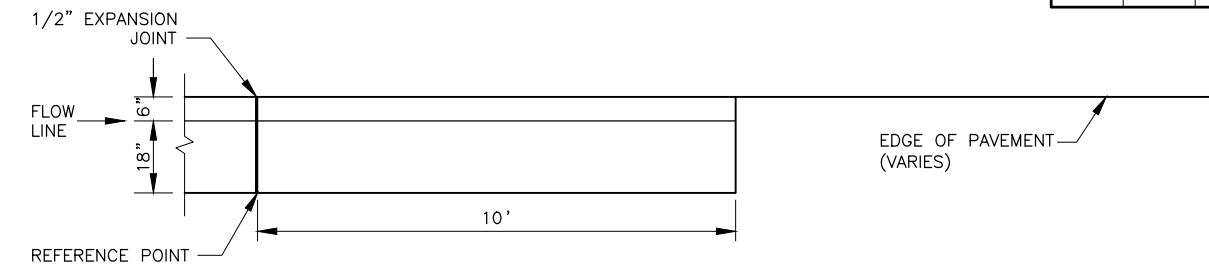


**TRUCK APRON CURB & GUTTER**

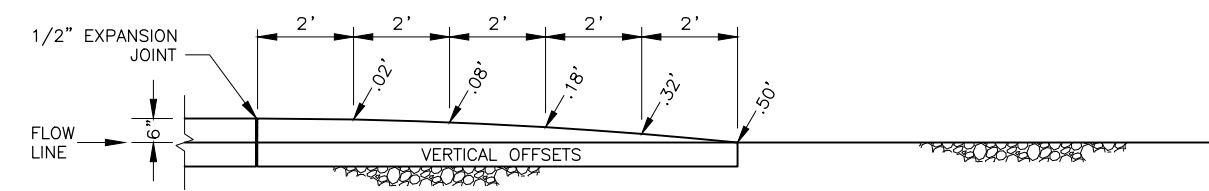
**CURBS**

**CURB NOTE:**

MOUNTABLE, DEPRESSED, ROLLED, AND EXPRESSWAY GUTTER PANS SHALL MATCH THE ROADWAY CROSS SLOPE IN THE HIGH SIDE OF SUPER ELEVATED AREAS.

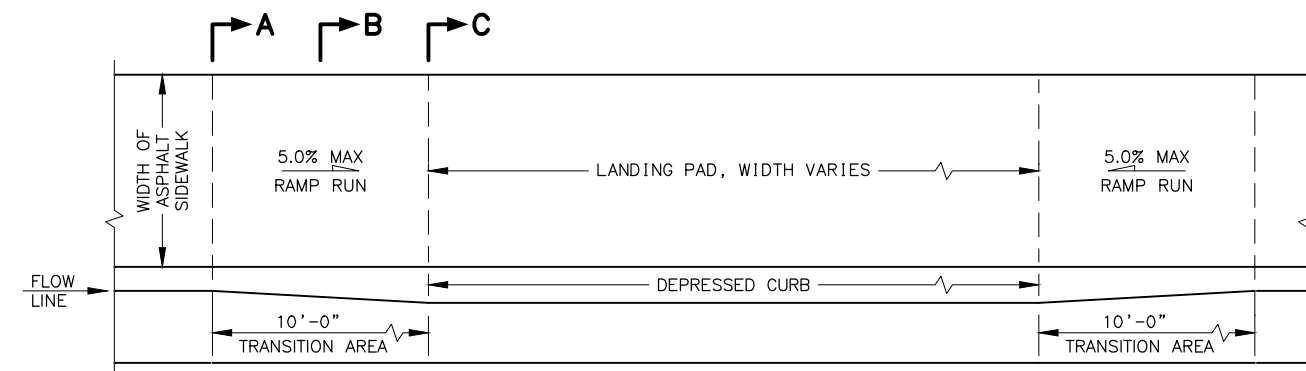


**PLAN**

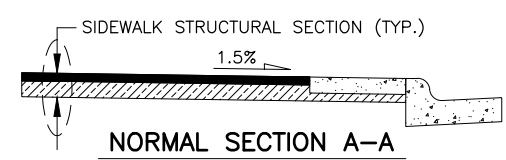


**PROFILE**

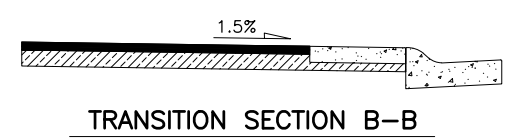
**CURB & GUTTER TERMINATION TRANSITIONS**



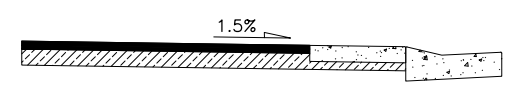
**PLAN**



**NORMAL SECTION A-A**



**TRANSITION SECTION B-B**

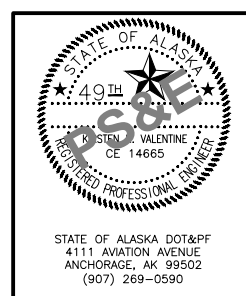


**DEPRESSED SECTION C-C**

**CURB CUT NOTES:**

1. TRANSITION WIDTH IS SHOWN FOR 6 INCH HIGH CURB & GUTTER.
2. WHERE THE SIDEWALK SLOPE MAKES IT NECESSARY TO LENGTHEN A RAMP RUN TO AVOID EXCEEDING THE ALLOWABLE RAMP SLOPE, DO NOT EXCEED A RAMP LENGTH OF 15 FEET. THE SLOPE RESULTING FROM THAT RUN LENGTH IS ACCEPTABLE, EVEN IF IT EXCEEDS THE MAXIMUM SLOPE SHOWN.
3. CONSTRUCT RAMP RUNS AND LANDINGS OF CONCRETE WHEN CONCRETE SIDEWALK IS PRESENT.
4. PROVIDE A BROOMED FINISH ON CONCRETE RAMP RUNS PERPENDICULAR TO THE RAMP SLOPE.
5. SEE B SHEETS FOR SIDEWALK STRUCTURAL SECTION.

**VEHICULAR CURB CUT DETAILS**

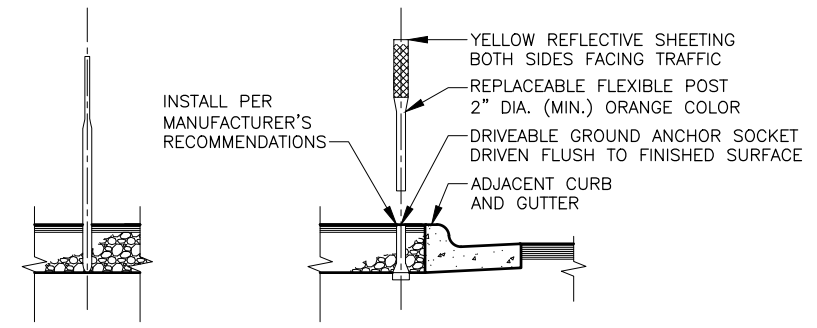


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**VEHICULAR CURB CUT DETAILS  
 CURB & GUTTER DETAILS**

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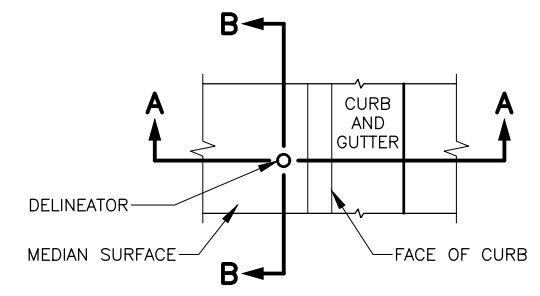


**SECTION B-B**

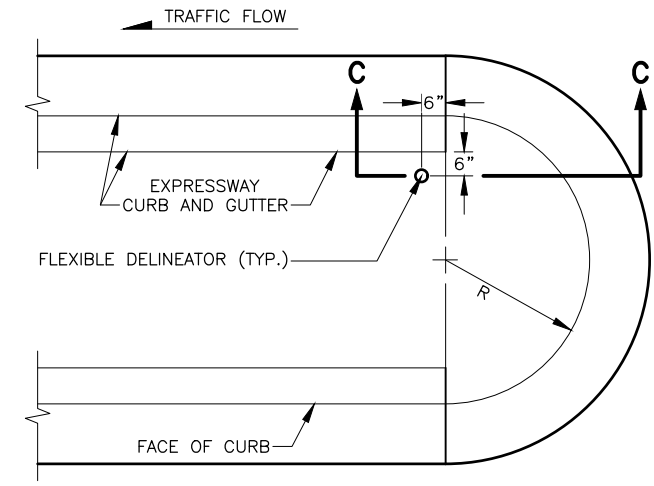
**SECTION A-A**

**DELINEATOR NOTE:**

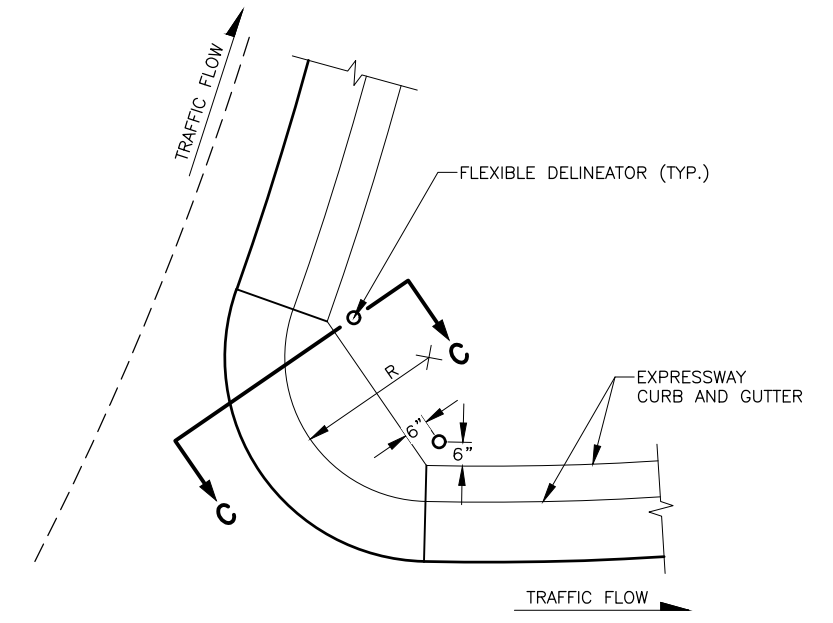
- CENTER POINT OF THE DELINEATOR SHALL BE 6 INCHES FROM THE BACK OF CURB.



**FLEXIBLE DELINEATOR**



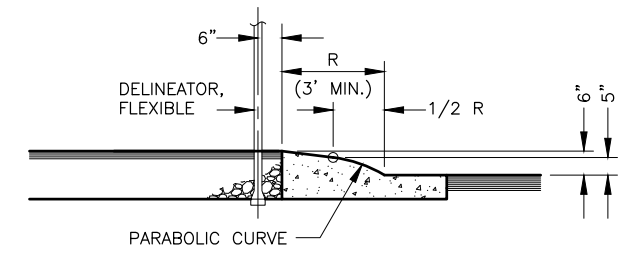
**PLAN**  
NORMAL  
MEDIAN NOSE



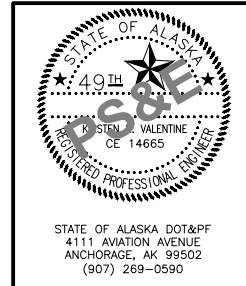
**PLAN**  
ROUNDABOUT  
MEDIAN NOSE

**MEDIAN NOTES:**

- MEDIAN NOSE SHALL BE PAINTED WITH YELLOW REFLECTORIZED PAINT. SHAPING AND PAINTING WILL BE SUBSIDIARY.
- INSTALL DELINEATOR 6 INCHES FROM TOP BACK OF CURB FOR ONCOMING TRAFFIC SIDE.



**SECTION C-C**  
**MEDIAN NOSE DETAIL**



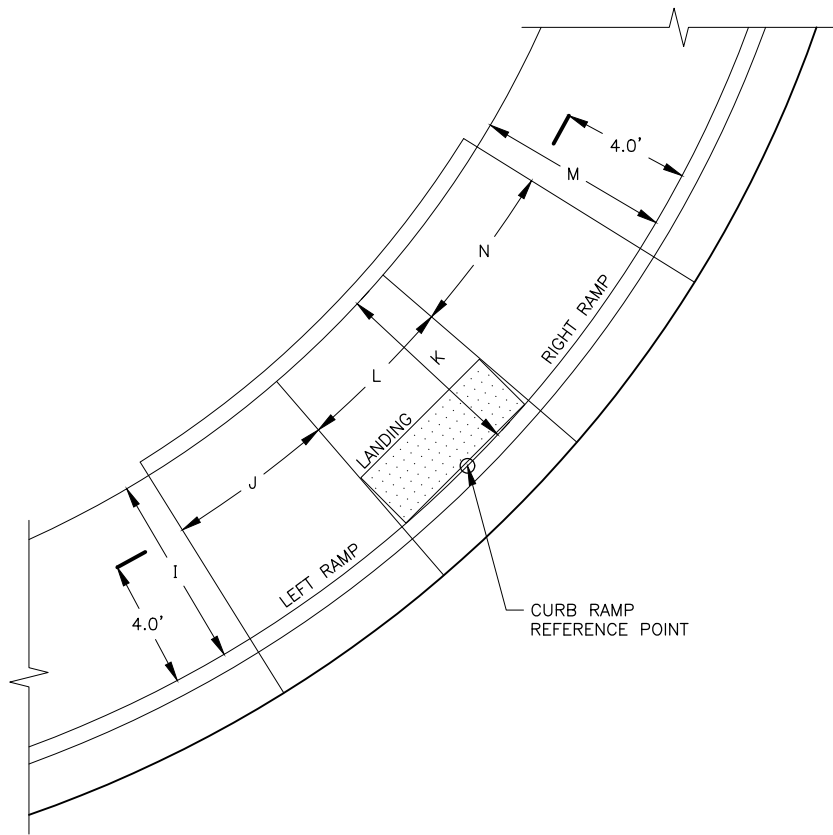
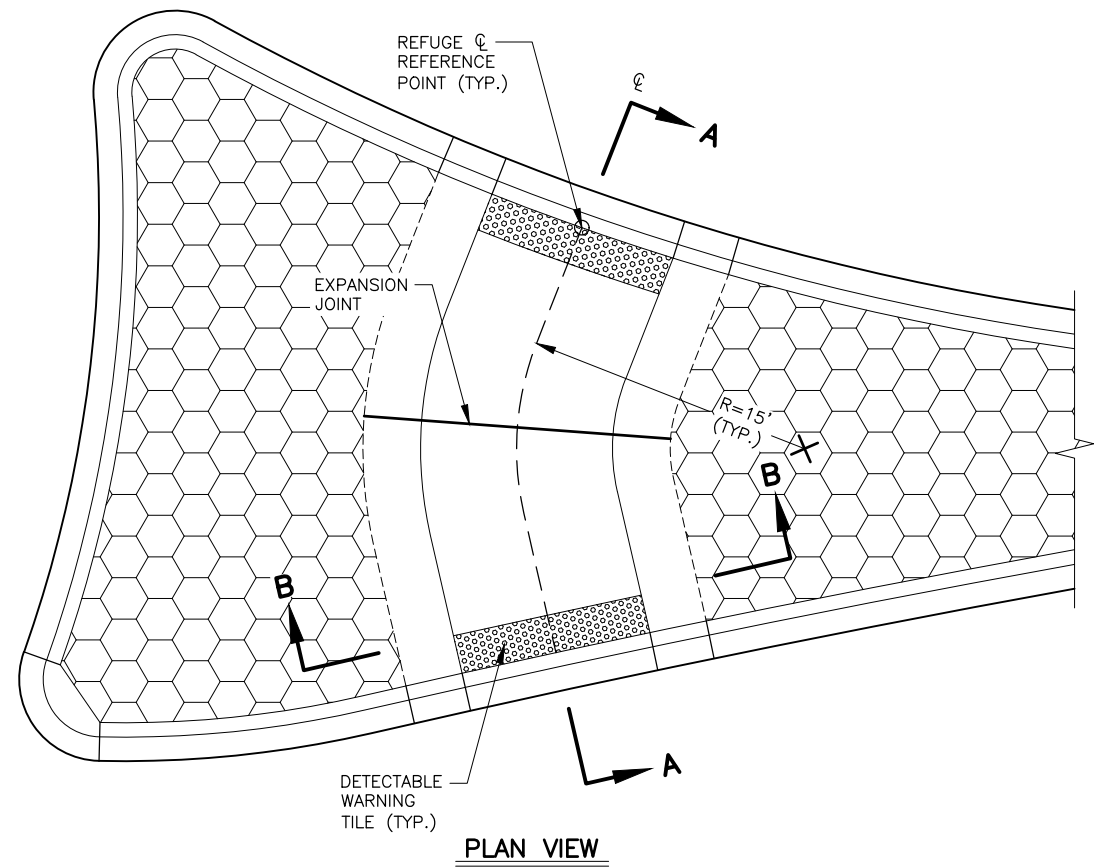
STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES

**HSIP: BOGARD RD AT  
ENGSTROM RD & GREEN  
FOREST DR INT IMP**

**FLEXIBLE DELINEATOR &  
MEDIAN NOSE DETAILS**

ZDK  
 DESIGNED BY  
 CHECKED BY  
 DRAFTED BY  
 SCALE  
 1"=2'3/5"  
 TIME  
 12:32 PM  
 DATE  
 3/15/2023  
 DRAWING LOCATION  
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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	001630/CFHWY00453	2024	E05	E06



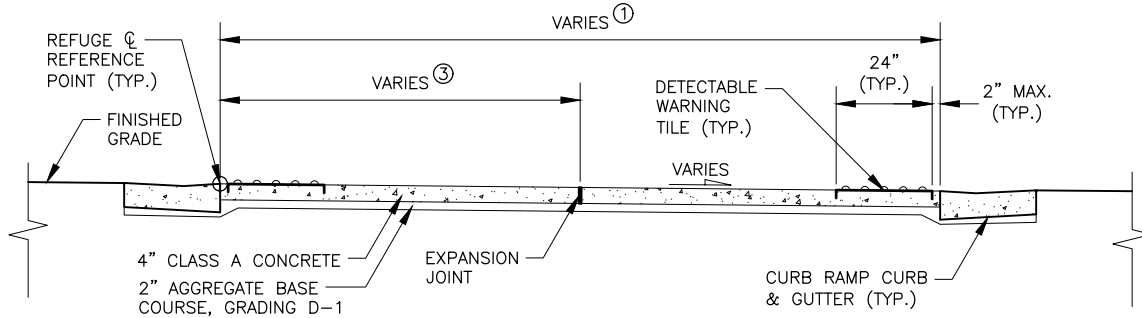
**PEDESTRIAN REFUGE NOTES:**

- CENTERLINE LENGTH OF PEDESTRIAN REFUGE VARIES. SEE D SHEET TABLES FOR REFERENCE POINT LOCATIONS. WHERE REFUGE CENTERLINE CHANGES DIRECTIONS BETWEEN ADJACENT CROSS WALKS USE A 15 FOOT RADIUS AS SHOWN ON THE PLANS.
- CONSTRUCT PEDESTRIAN REFUGES ENTIRELY OF CLASS "A" CONCRETE. DO NOT COLOR OR PATTERN THE CONCRETE. PROVIDE A COURSE BROOMED FINISH RUNNING PERPENDICULAR TO THE REFUGE CENTERLINE.
- INSTALL EXPANSION JOINTS AT THE OUTER GRADE BREAK BETWEEN THE COLORED & PATTERNED CONCRETE MEDIAN AND THE REFUGE. WHEN THE REFUGE CENTERLINE LENGTH IS GREATER THAN 20 FEET, INSTALL AN EXPANSION JOINT AT THE MID POINT OF THE REFUGE AS SHOWN ON THE PLANS. INSTALL EXPANSION JOINTS AND DUMMY JOINTS PER THE SPECIFICATIONS.
- PEDESTRIAN REFUGE CROSS SLOPE IS TO BE PITCHED TOWARD THE DOWN HILL DIRECTION OF THE ADJACENT LANES. REFUGE CROSS SLOPE IS NOT TO EXCEED 2% GRADE EXCEPT AT THE ENGSTROM RD REFUGE. CONSTRUCT ENGSTROM RD REFUGE CROSS SLOPE AS FLAT AS THE CONDITIONS WILL ALLOW FOR.
- REFUGE CENTERLINE SLOPE VARIES AND IS DICTATED BY THE ADJACENT LANE AND CURB LINE GRADING. DO NOT EXCEED 5% LONGITUDINAL SLOPE ALONG THE REFUGE CENTERLINE.

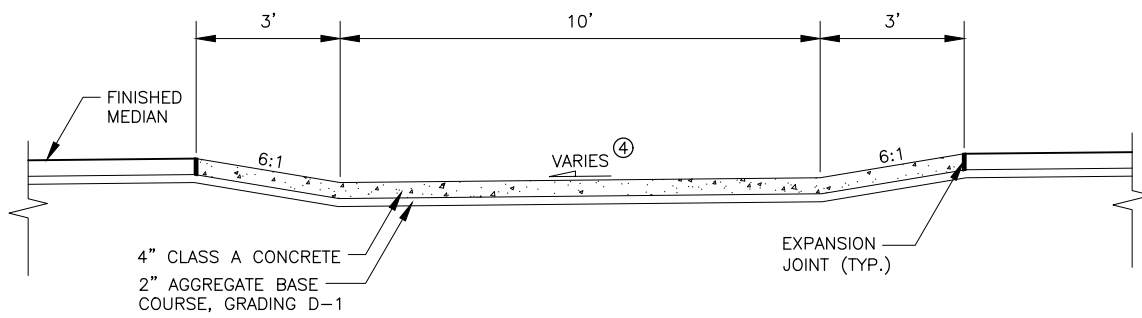
**PARALLEL CURB RAMP NOTES:**

- CURB RAMP DIMENSIONS ARE INCLUDED IN THE D SHEET TABLES AND CORRESPOND TO THE CENTRAL REGION CURB RAMP INSPECTION FORM NOTATION. DIMENSIONS INCLUDED IN THE TABLE ARE FOR REFERENCE AS DESIGNED IN THE PLANS. ADJUST DIMENSIONS AS NECESSARY IN THE FIELD TO COMPLY WITH THE CENTRAL REGION INSPECTION FORM OR AS DIRECTED BY THE ENGINEER.
- SEE D SHEET TABLES FOR CURB RAMP REFERENCE POINT LOCATIONS.
- INSTALL PARALLEL CURB RAMPS PER STANDARD PLAN I-21.12.
- CONSTRUCT CURB RAMPS AND DETECTABLE WARNING TILES IN ACCORDANCE WITH THE REQUIREMENTS FOR THE AMERICANS WITH DISABILITIES ACT (ADA), THE PLANS, AND THE SPECIFICATIONS.

**PARALLEL CURB RAMP**

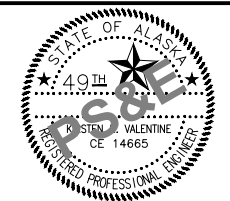


**SECTION A-A**



**SECTION B-B**

**PEDESTRIAN REFUGE**

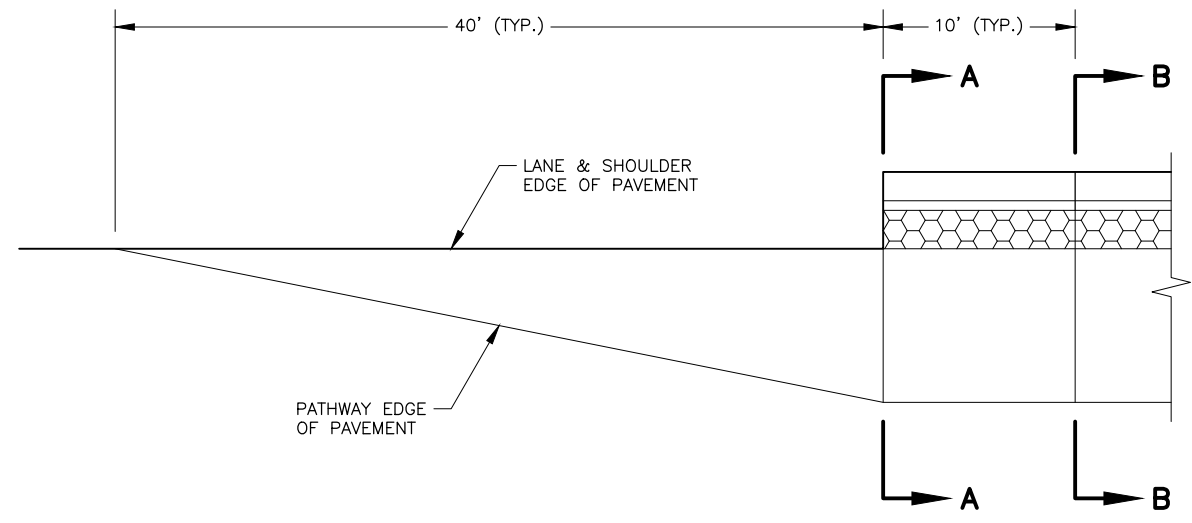


STATE OF ALASKA  
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 FOREST DR INT IMP**  
**PEDESTRIAN REFUGE &  
 CURB RAMP DETAILS**

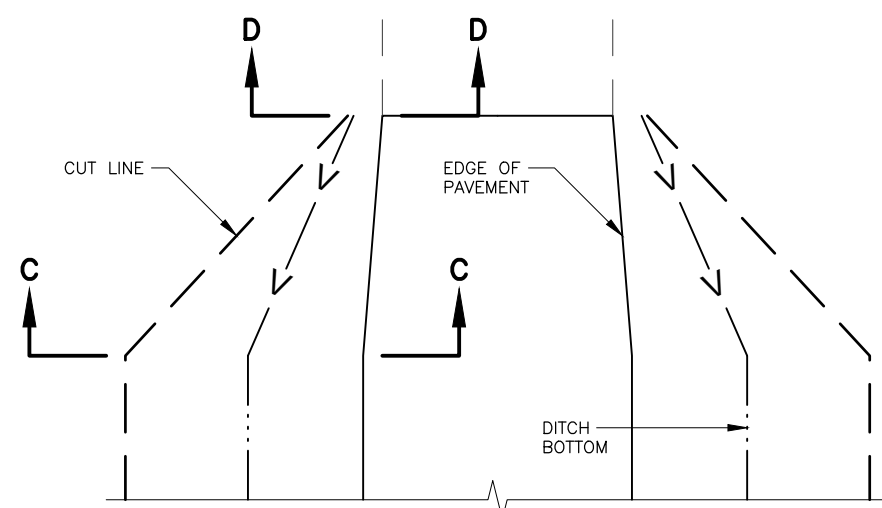
STATE OF ALASKA DOT&PF  
 4111 AVIATION AVENUE  
 ANCHORAGE, AK 99502  
 (907) 269-0590

ZDK  
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 CHECKED BY: ZDK  
 DRAFTED BY: ZDK  
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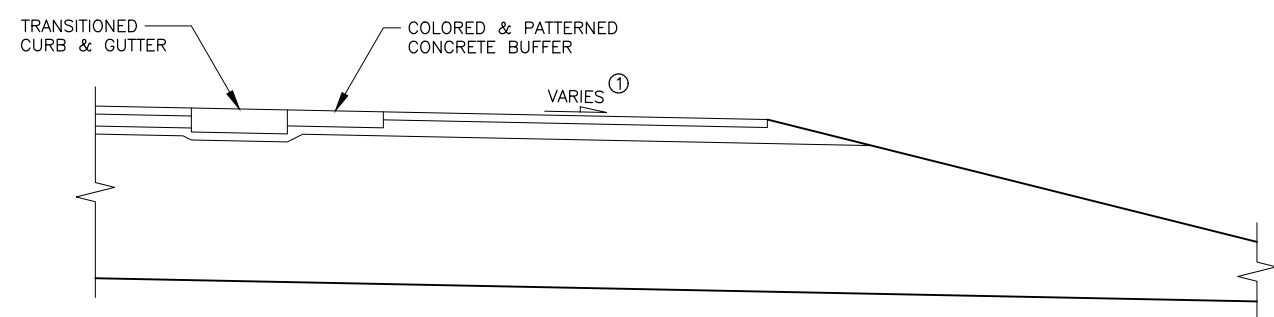
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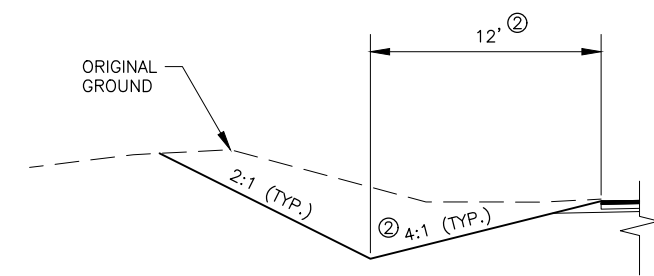
PLAN VIEW



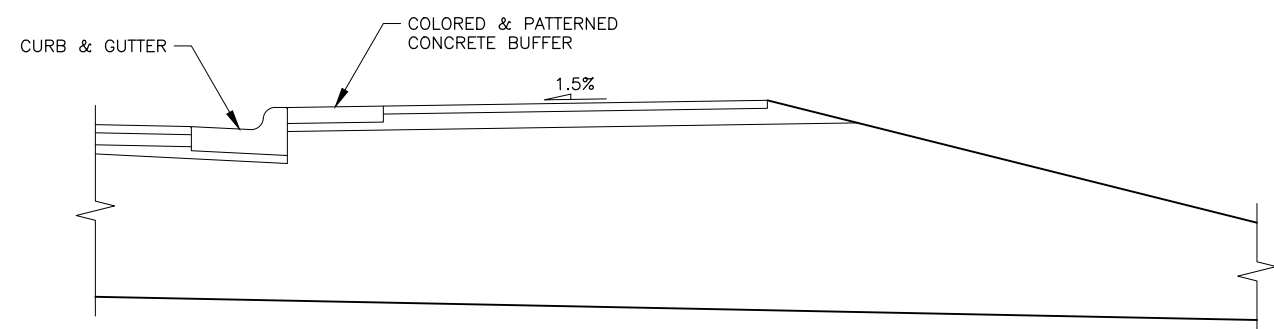
PLAN VIEW



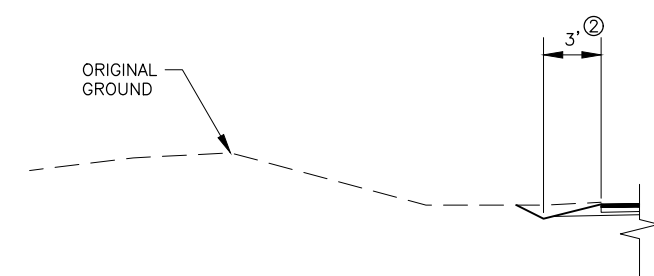
SECTION A-A



SECTION C-C



SECTION B-B



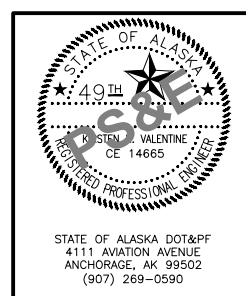
SECTION D-D

PATHWAY TRANSITION

DITCH TRANSITION

NOTES:

- SECTION A-A: MATCH ADJACENT LANE CROSS SLOPE IN SUPERELEVATED AREAS. MAINTAIN A CROSS SLOPE OF TWO PERCENT MAX AND POSITIVE DRAINAGE AT ALL OTHER LOCATIONS.
  - DITCH TRANSITION DETAILS APPLY TO THE TERMINATIONS OF BOTH GREEN FOREST DR., ENGSTROM DR., & DESTIN DR. ADJUST DITCH DEPTH AT TERMINATION (SECTION D-D) TO BEST FIT EXISTING FIELD CONDITIONS. FLATTEN FORESLOPES AS NECESSARY AND AS DIRECT BY THE ENGINEER.
- USE 6' WIDTH FOR SECTION C-C, 3' WIDTH FOR SECTION D-D, AND 3:1 FORESLOPE AT DESTIN DR. DITCH TRANSITIONS.



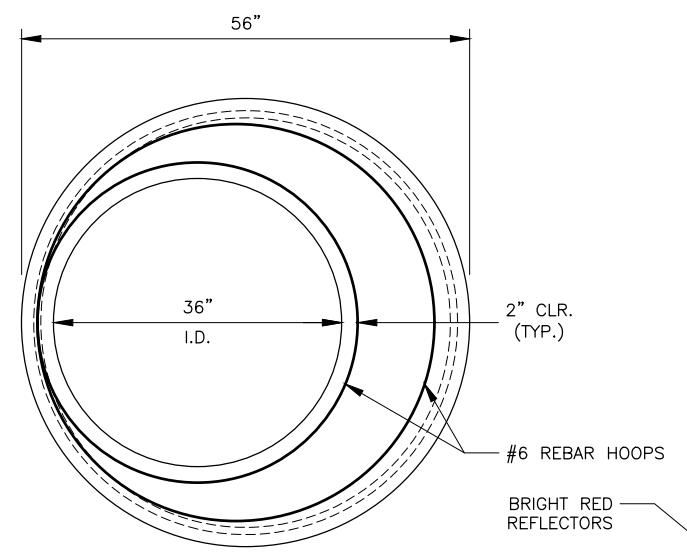
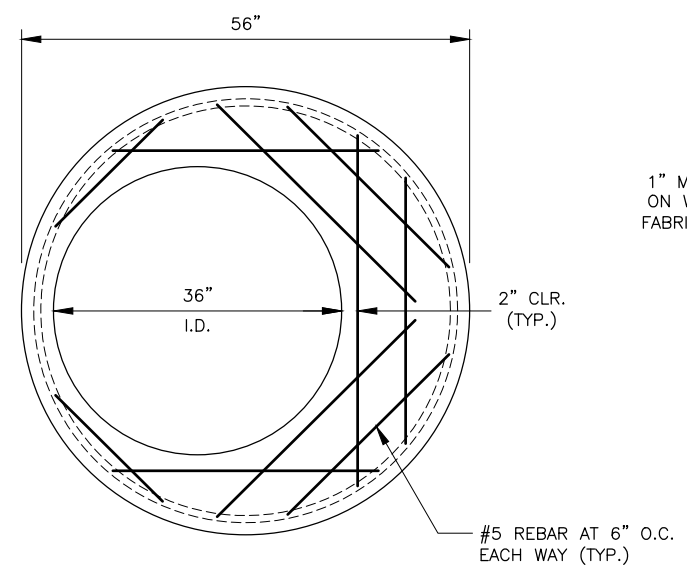
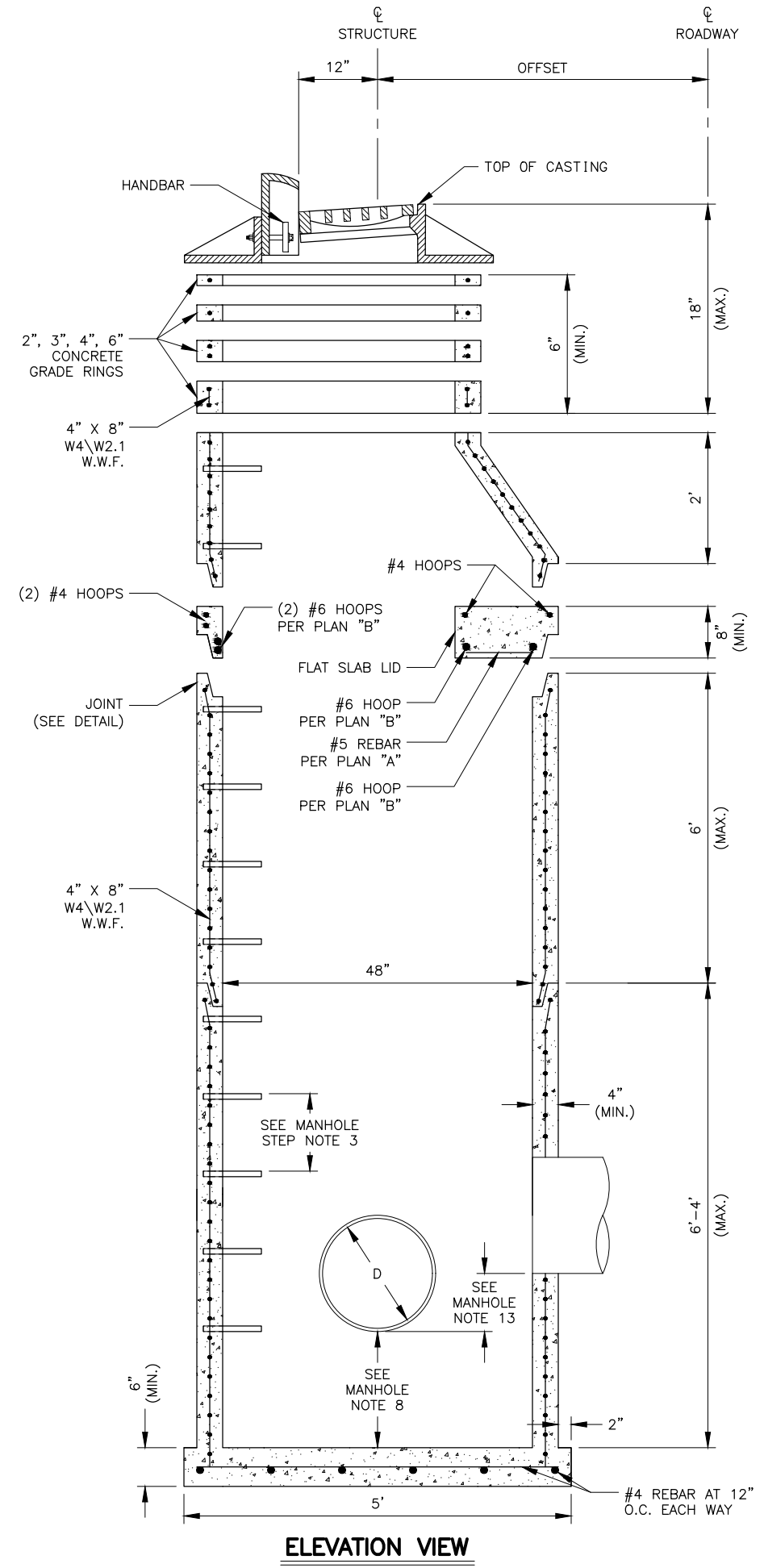
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 AND PUBLIC FACILITIES

**HSIP: BOGARD RD AT  
 ENGSTROM RD & GREEN  
 FOREST DR INT IMP**

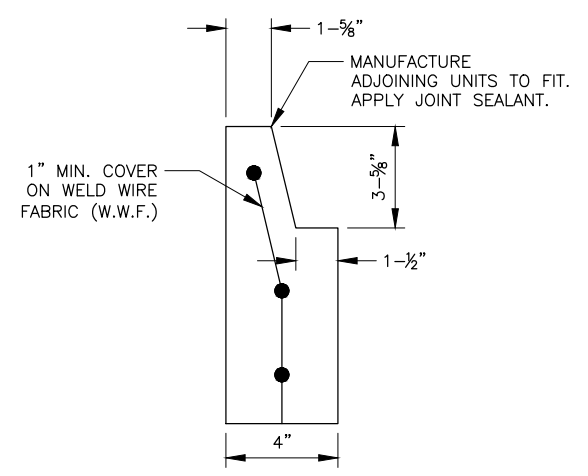
**PATHWAY & DITCH  
 TRANSITION DETAILS**

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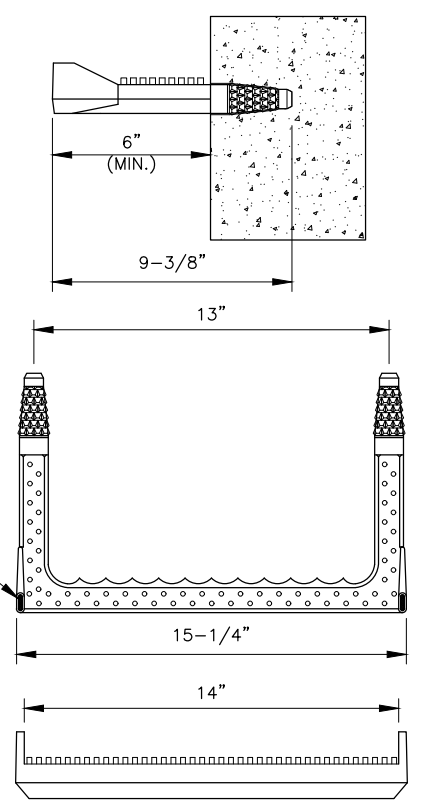
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 DATE: 3/15/2023 12:32 PM  
 SCALE: 1" = 1'  
 DESIGNED BY: KRY  
 CHECKED BY: KRY  
 DRAFTED BY: CRODT



- PLAN "B" NOTES:**
- SEE ELEVATION VIEW FOR LOCATIONS OF #4 HOOPS.
  - #6 REBAR HOOPS ARE LOCATED ABOVE #5 REBAR AND WITHIN 3" OF BASE.

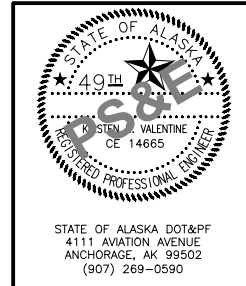


- JOINT DETAIL NOTES:**
- DIMENSIONS ARE NOMINAL.



- MANHOLE STEP NOTES:**
- MANHOLE STEPS SHALL BE INJECTION MOLDED, POLYPROPYLENE COVERED GRADE 60 STEEL, TIGHTLY IMBEDDED AT LEAST 3" INTO CONCRETE.
  - THE INSTALLED STEPS SHALL RESIST A PULLOUT FORCE OF 1500 LB.
  - STEPS SHALL BE PLACED 12" O.C. ON AN UNOBSTRUCTED SIDE OF THE STRUCTURE, 24" MAX. FROM TOP OF CASTING AND 18" FROM MANHOLE BASE.

- MANHOLE NOTES:**
- THESE DRAWINGS ARE FOR PRECAST REINFORCED CONCRETE FOR HIGHWAY USE.
  - MAXIMUM KNOCKOUT SIZE FOR PIPES IS 32". MINIMUM DISTANCE BETWEEN KNOCKOUTS IS 4".
  - 24" AND LARGER AND PIPES < 90° APART, NEED 8" VERTICAL CLEARANCE.
  - USE CONCRETE WITH A MINIMUM 4000 PSI 28 DAY COMPRESSIVE STRENGTH AND 6% ± 1.5% AIR ENTRAINMENT. MAXIMUM WATER/CEMENT RATIO IS 0.45.
  - MINIMUM STEEL REQUIRED FOR BARREL AS PER AASHTO M199 SHALL BE EMBEDDED IN BASE SO THAT THE FIRST BARREL SECTION IS CONNECTED TO THE BASE BY CONTINUOUS STEEL.
  - MINIMUM COVER ON REINFORCING STEEL IS 1".
  - FORM ALL BLOCKOUTS.
  - ALL STORM DRAIN MANHOLES AND INLETS SHALL HAVE 18" MINIMUM SUMPS. MANHOLES WITH PETROLEUM SEPARATORS SHALL HAVE 24" MINIMUM SUMPS. UNLESS SHOWN OTHERWISE ON THE PLANS.
  - A FLAT LID WITH A SMALLER OPENING MAY ALSO BE USED IF CALLED FOR. THIS REQUIRES ADDITIONAL #5 REBAR REINFORCEMENT AT THE SAME SPACING AS SHOWN IN PLAN "A". ALSO, ADJUST HOOP DIAMETERS AROUND THE OPENING TO PROVIDE THE SAME COVER.
  - MANHOLES PLACED ALONG CURB LINE SHALL HAVE STEPS ALIGNED UNDER THE CURB INLET.
  - PLACE MANHOLE BASE ON 6" MIN. COMPACTED AGGREGATE BASE COURSE.
  - EXTEND PIPE A MINIMUM OF 2" INTO MANHOLE.
  - MINIMUM DROP BETWEEN PIPES IS 1.5".
  - PIPE LENGTH AND INVERT, AND SLOPE ARE MEASURED FROM CENTER OF MANHOLE.



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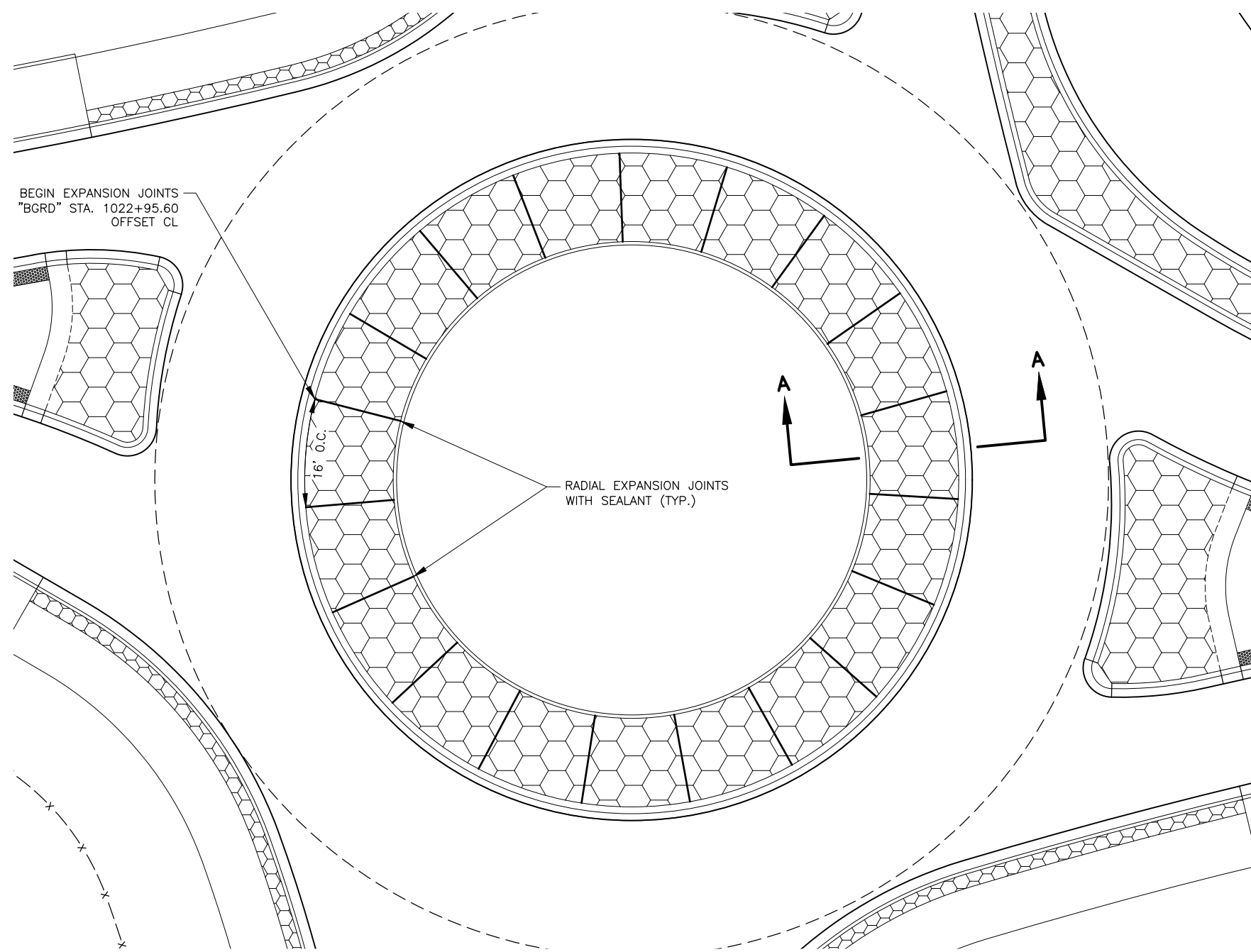
**STORM SEWER MANHOLE,  
 TYPE I DETAILS**

DESIGNED BY: ZDK  
 CHECKED BY: KRV  
 DRAFTED BY: ZDK

SCALE: 1" = 1.10'  
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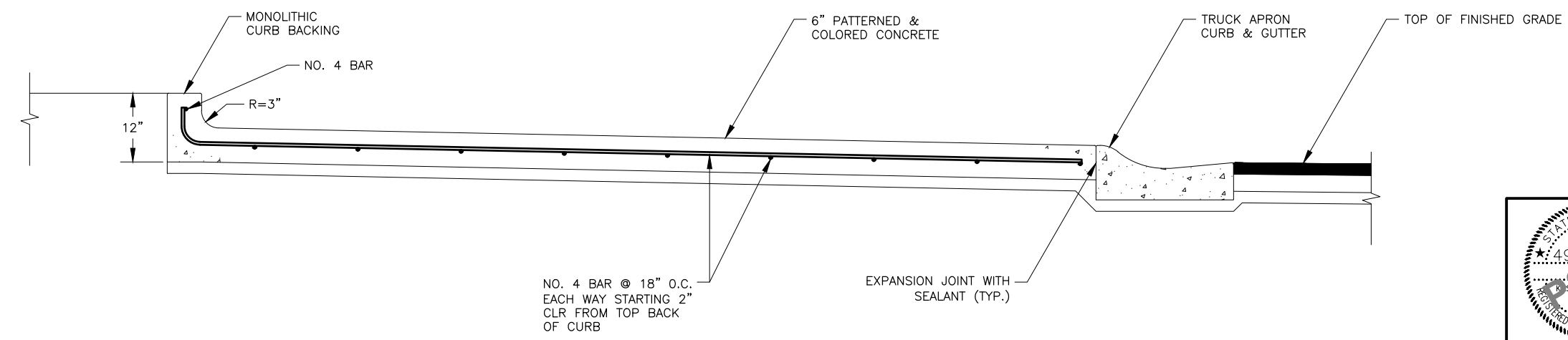
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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
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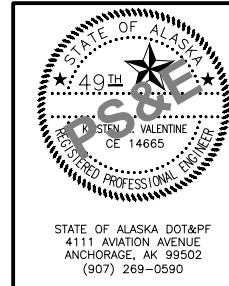


**TRUCK APRON NOTES:**

1. EPOXY-COATED ASTM A706, GRADE 60 REINFORCING STEEL, F<sub>y</sub> = 60,000 PSI.
2. PLACE REINFORCEMENT 2" CLEAR FROM SURFACE OF CONCRETE.
3. CHAMFER ALL EXPOSED CONCRETE CORNERS 1/4".
4. PLACE EXPANSION JOINTS AS SHOWN ON THE PLANS AND SEAL EXPANSION JOINTS PER THE SPECIFICATIONS.
5. SEE B SHEETS FOR ROADWAY AND TRUCK APRON STRUCTURAL SECTIONS.



**SECTION A-A**

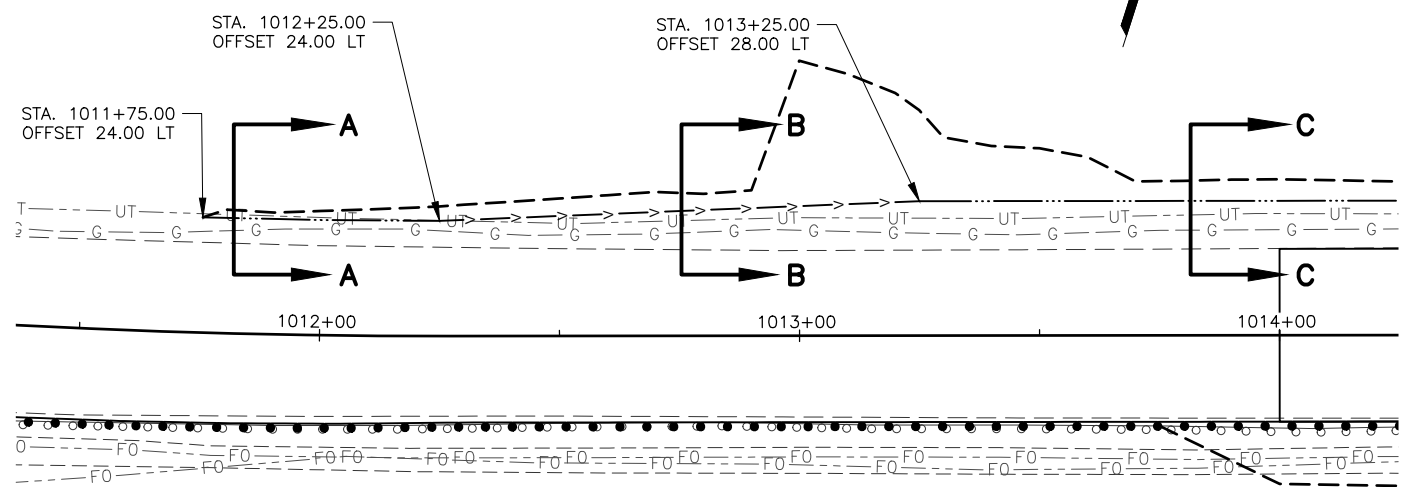


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**HSIP: BOGARD RD AT  
 ENGSTROM RD & GREEN  
 FOREST DR INT IMP**

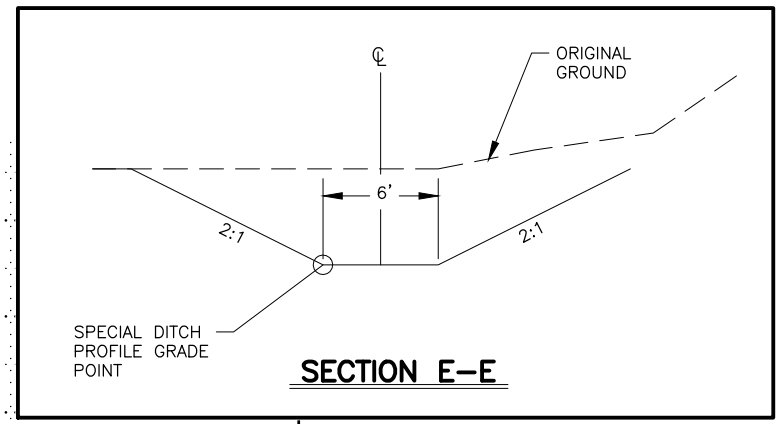
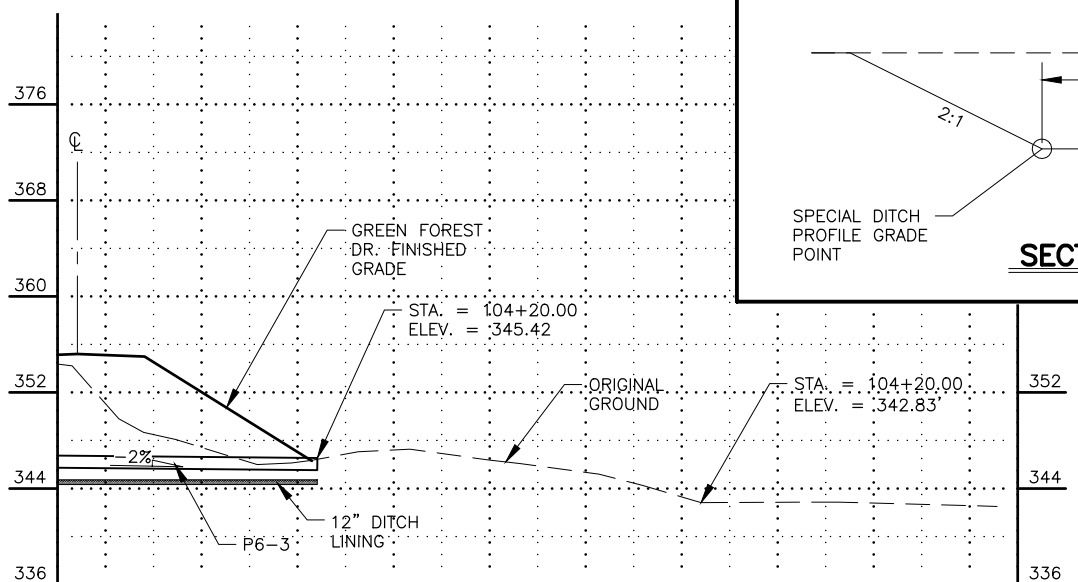
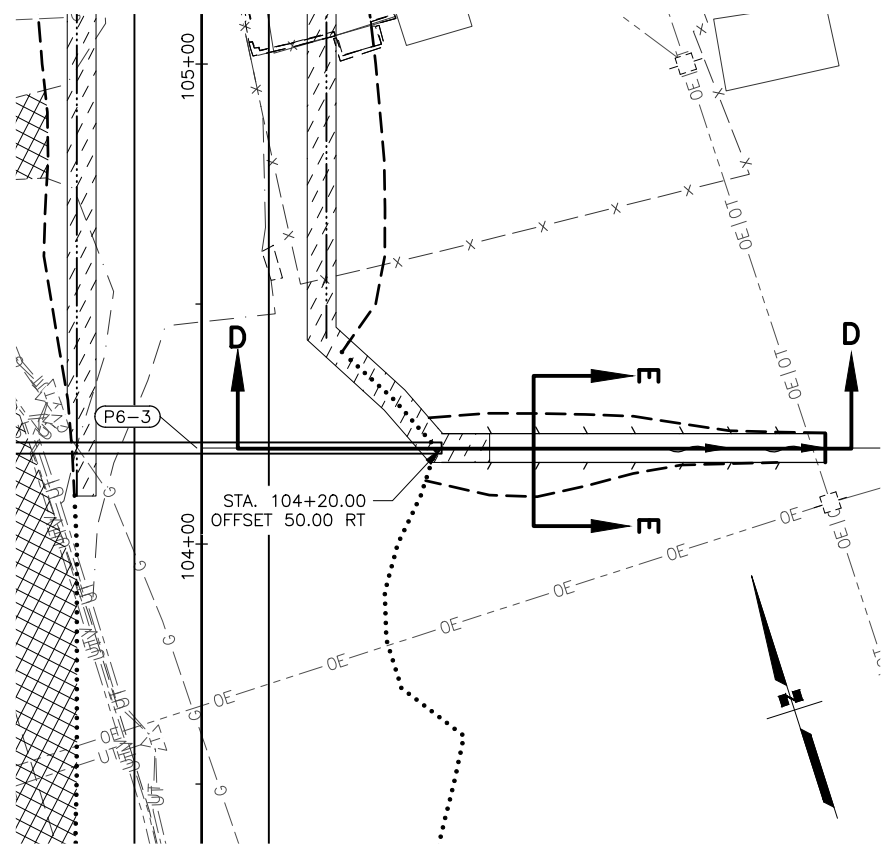
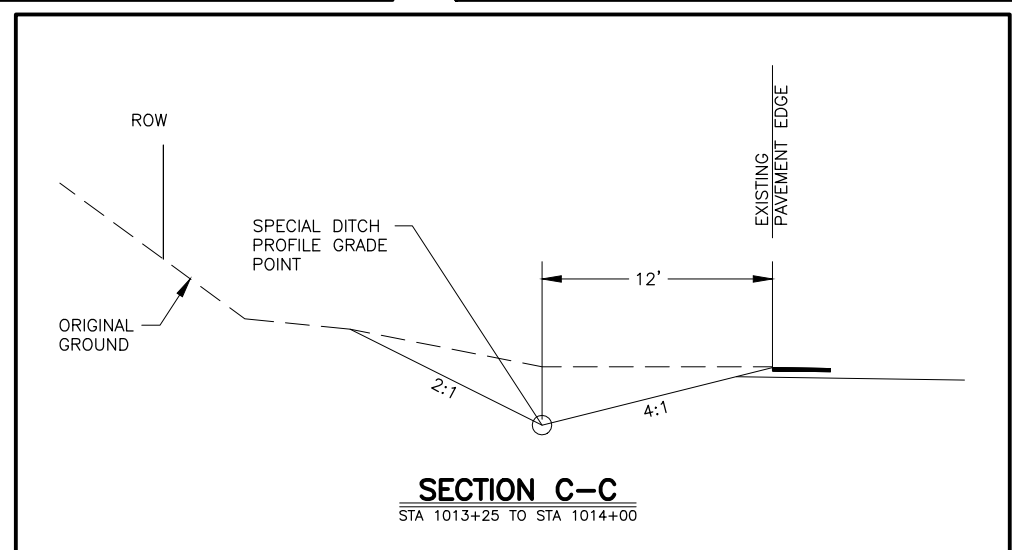
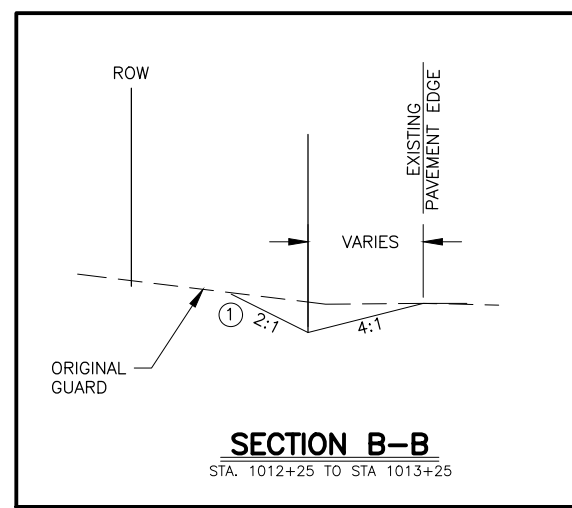
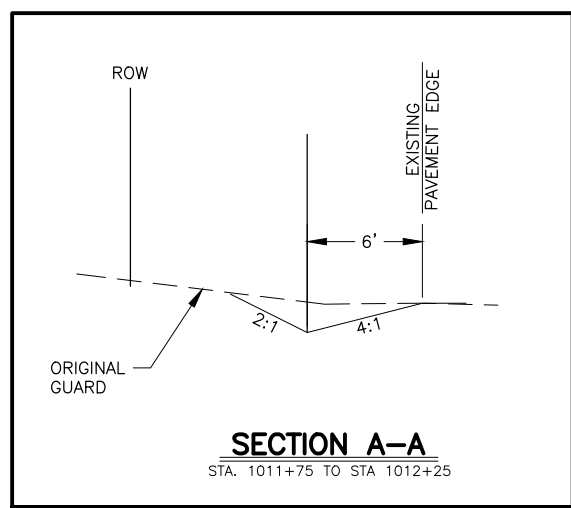
**TRUCK APRON  
 EXPANSION JOINTS AND  
 REINFORCEMENT DETAILS**

ZDK  
 KRV  
 PGH  
 DESIGNED BY  
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 SCALE  
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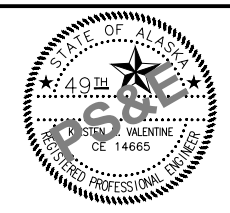


**NOTES**

- 1.5:1 BACKSLOPE EXCEPTION FROM STA. 1012+70 TO STA. 1013+60.



SHEET NO.	TOTAL SHEETS
E09	E10
STATE	YEAR
ALASKA	2024
PROJECT DESIGNATION	
0001630/ CFHWY00453	
NO.	REVISION
DATE	
NO.	REVISION
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DATE	



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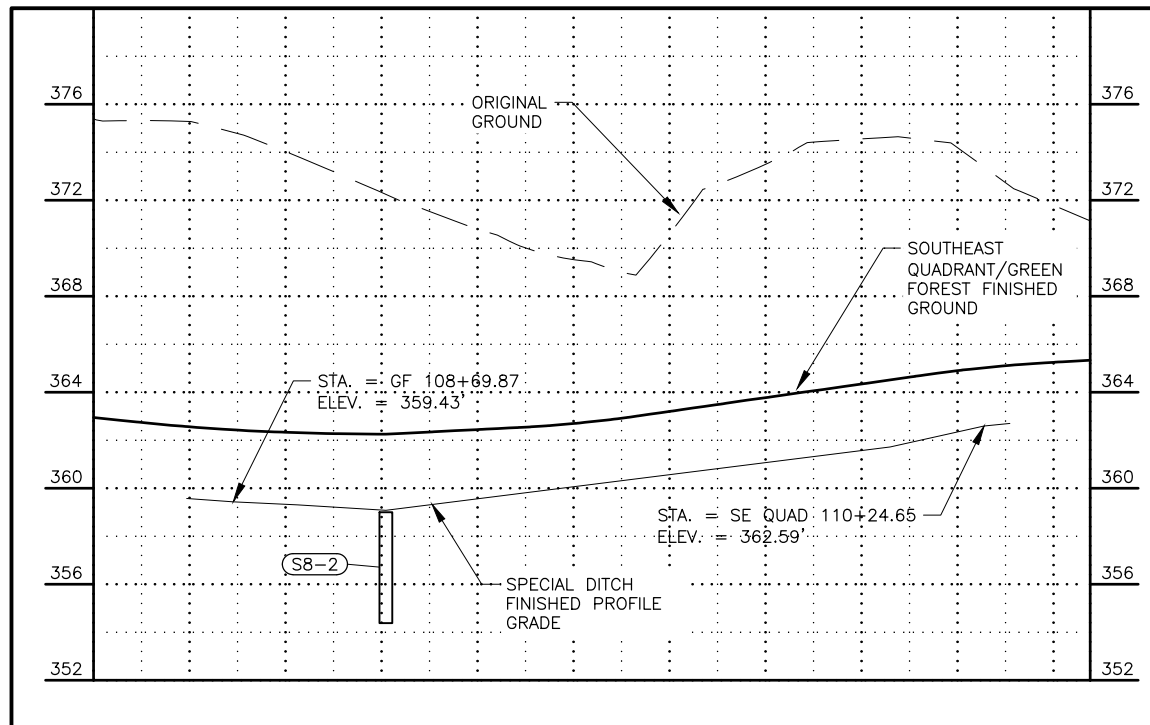
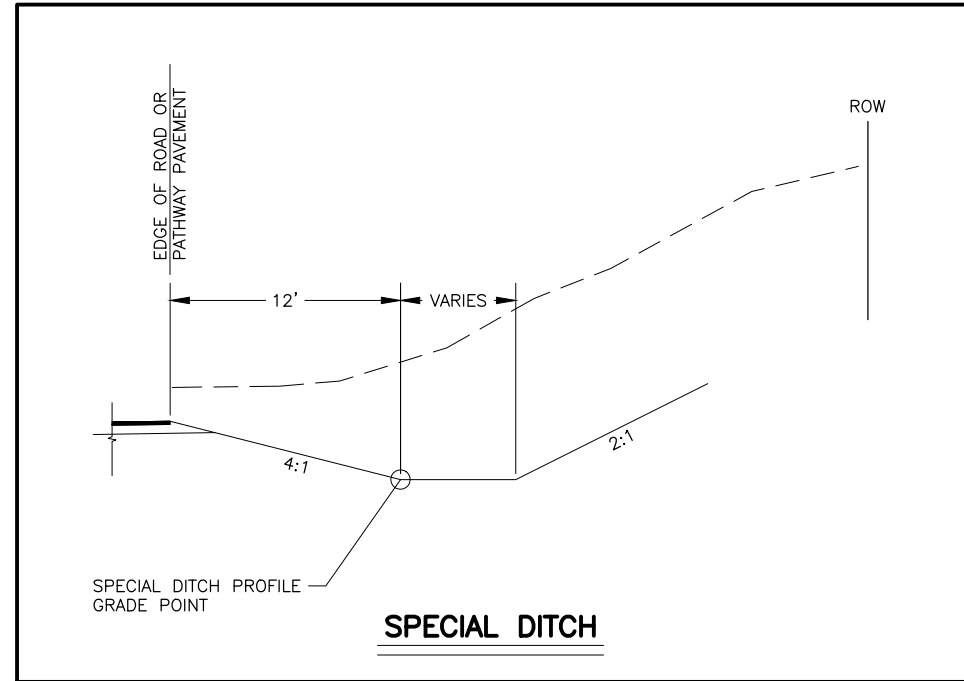
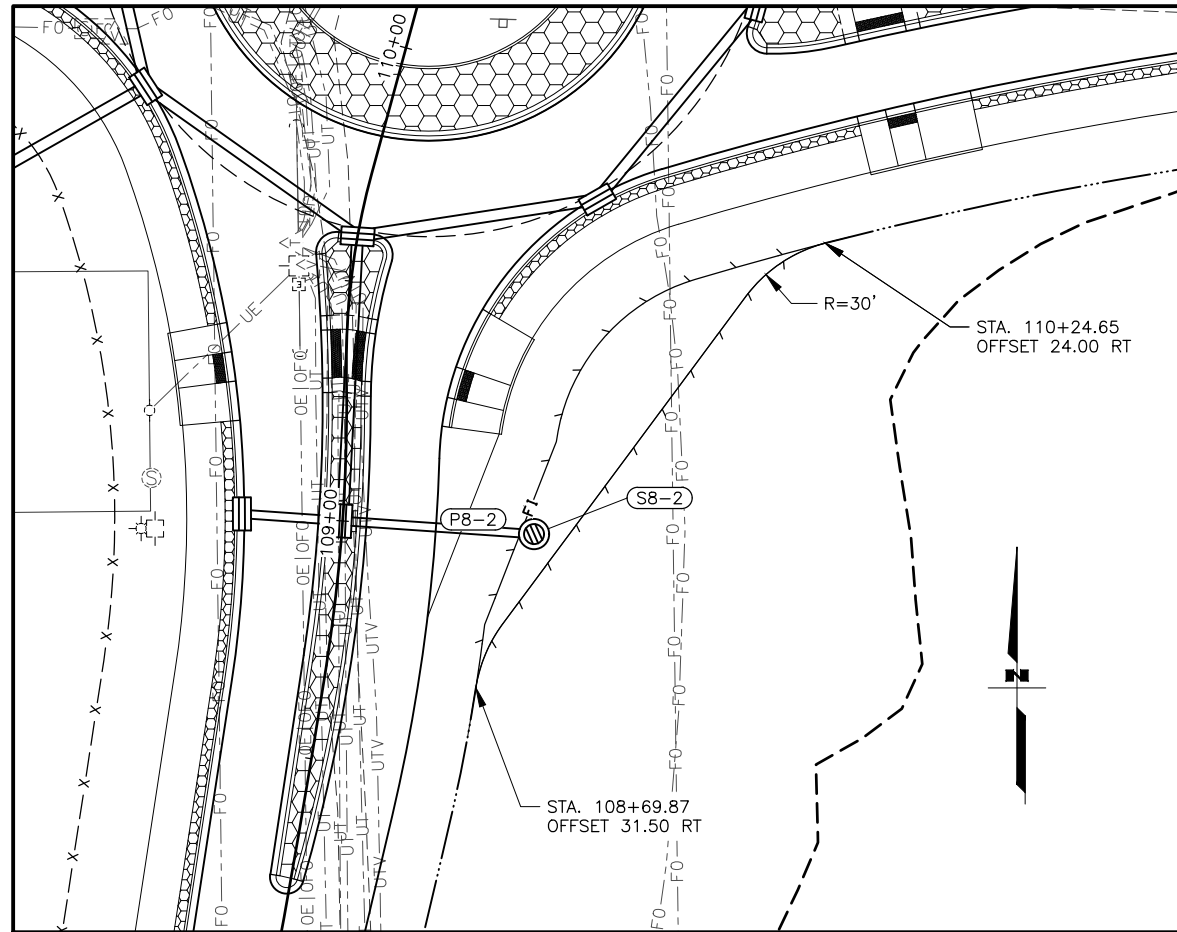
STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
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 ENGSTRM RD & GREEN  
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**SPECIAL DITCH  
 DETAILS**

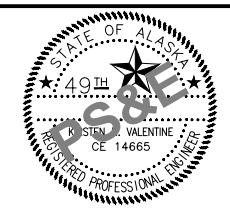
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0001630/ CFHWY00453	
NO.	REVISION
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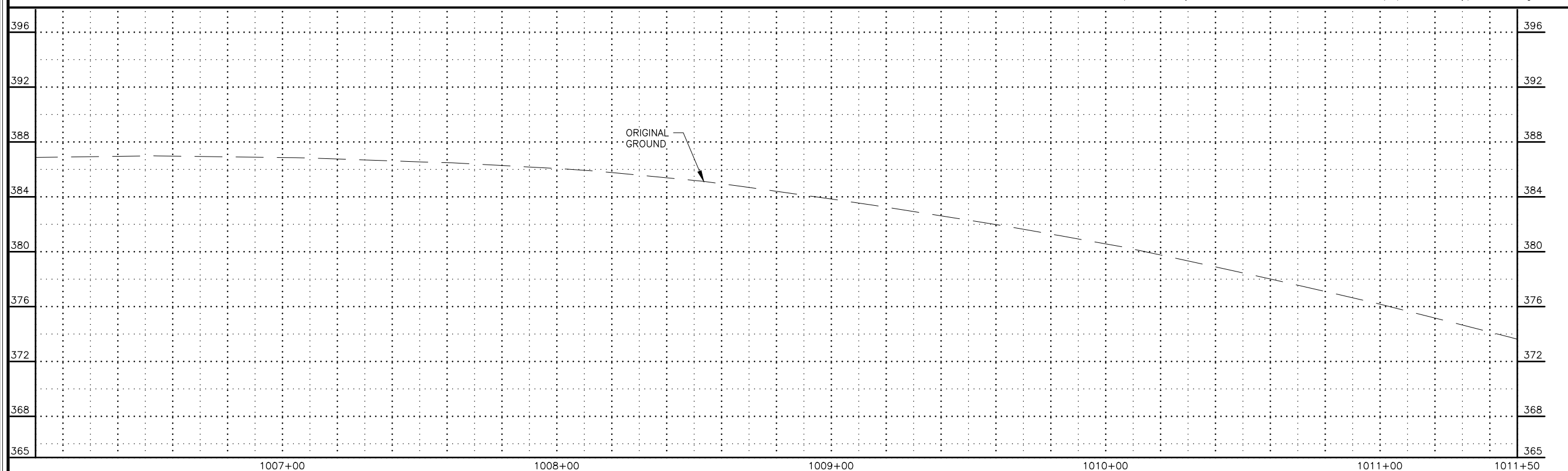
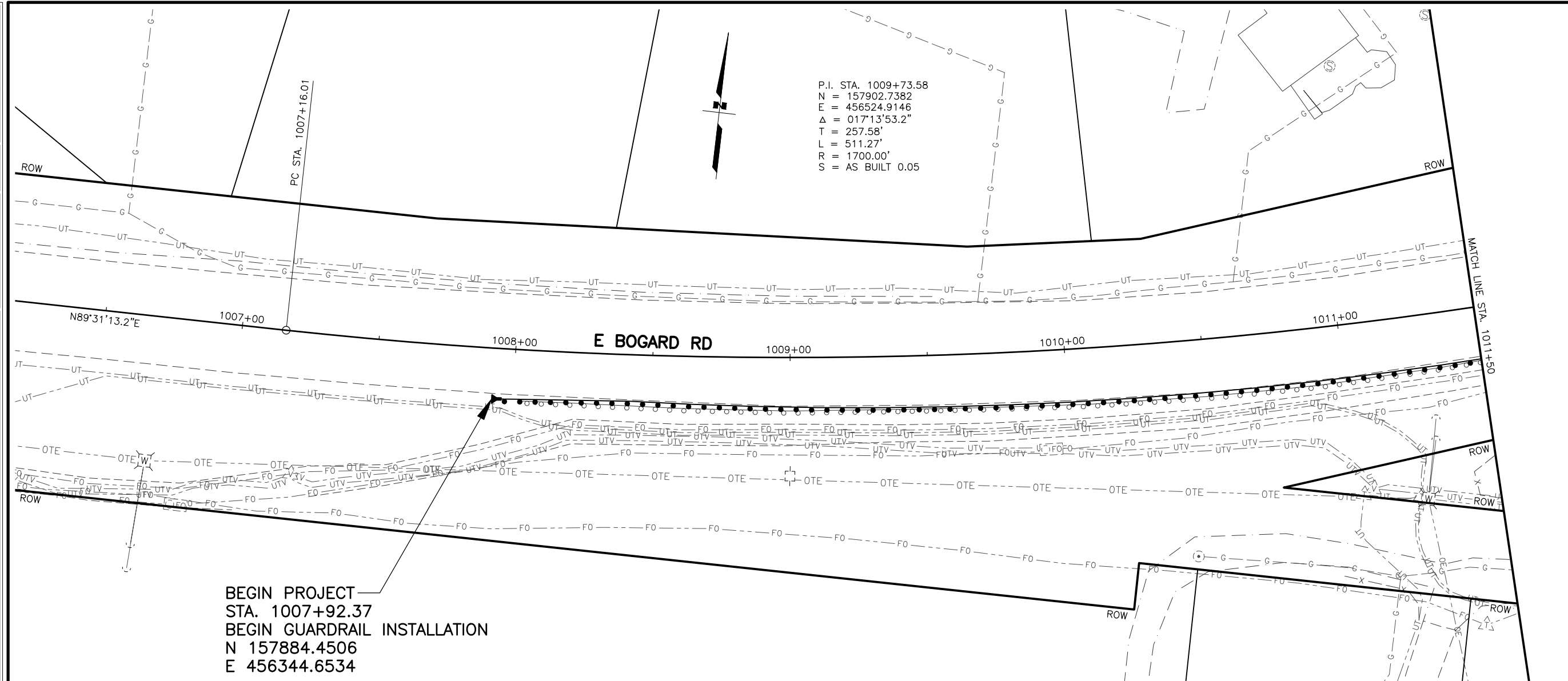
STATE OF ALASKA  
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**SPECIAL DITCH  
DETAILS**



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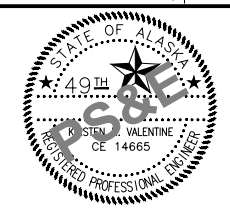
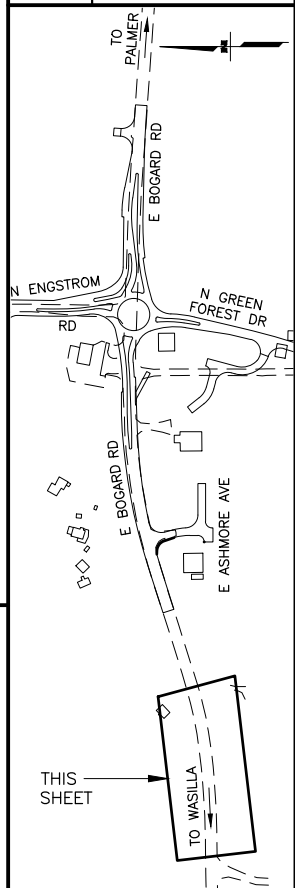
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SHEET NO.	TOTAL SHEETS
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STATE	YEAR
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PROJECT DESIGNATION  
**0001630/  
 CFHWY00453**

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STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
**HSIP: BOGARD RD AT  
 ENGSTROM RD & GREEN  
 FOREST DR INT IMP  
 PLAN AND PROFILE  
 BOP TO  
 STA. 1011+50**

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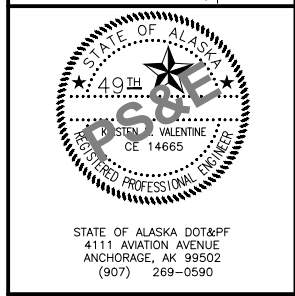
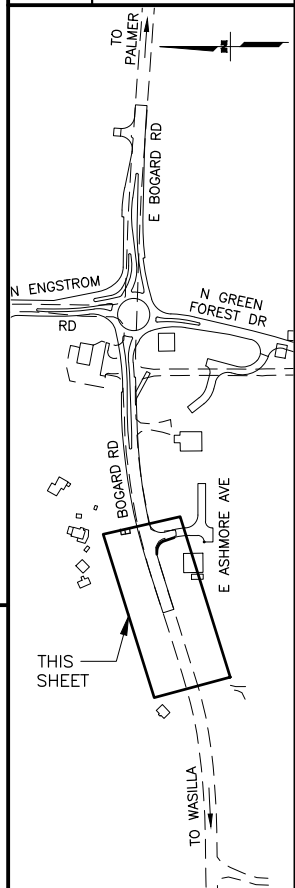
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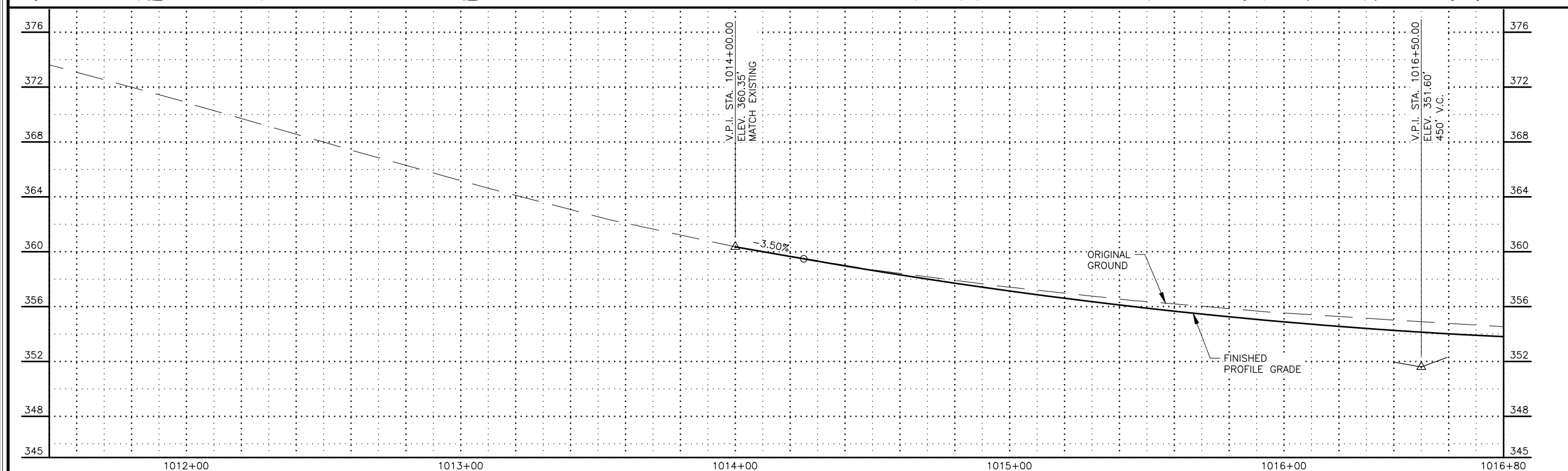
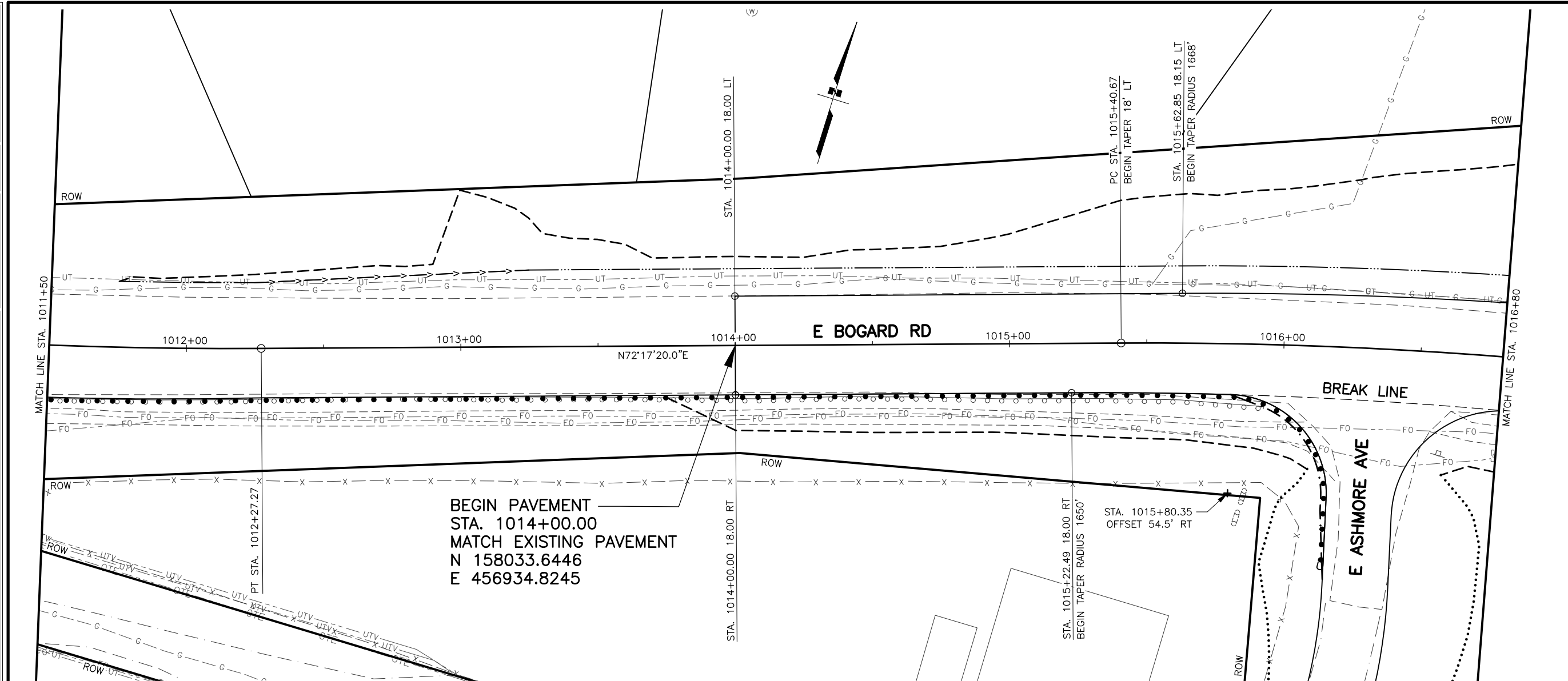
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ALASKA	2024

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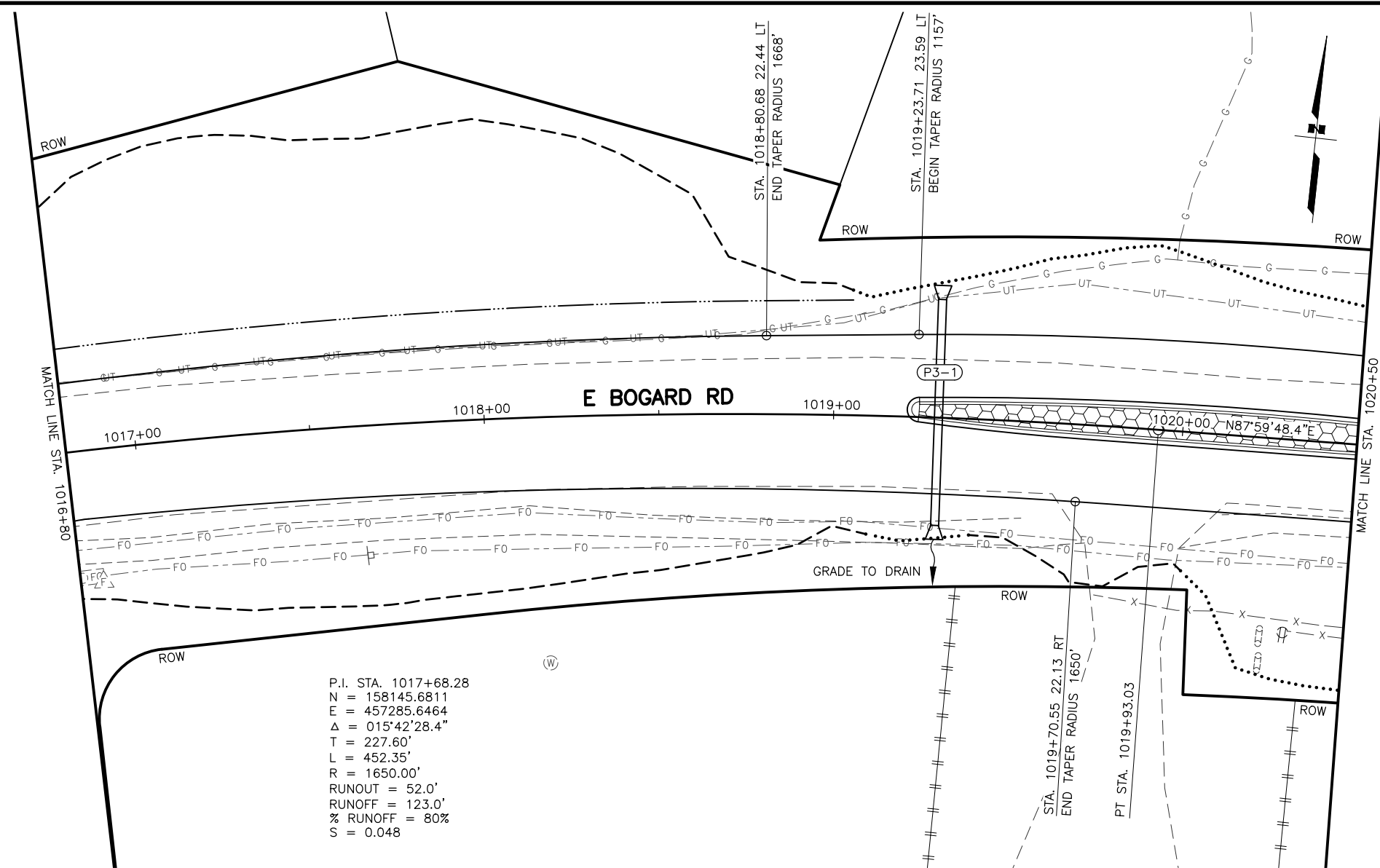
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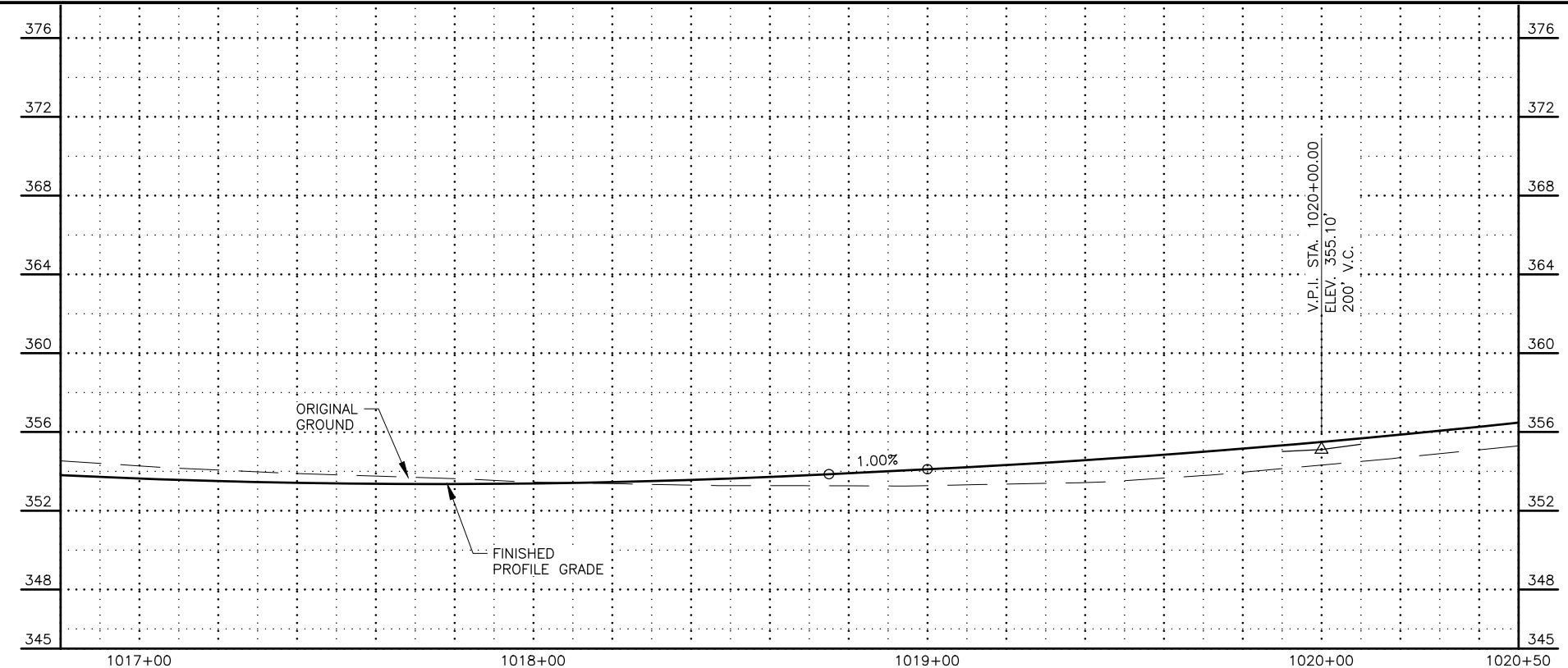
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 FOREST DR INT IMP  
 PLAN AND PROFILE  
 STA. 1011+50 TO  
 STA. 1016+80**



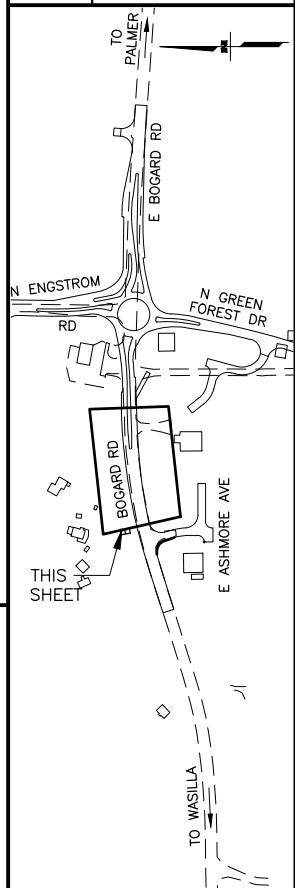
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 DESIGNED BY  
 CHECKED BY  
 DRAFTED BY  
 SCALE  
 1" = 20'  
 DATE  
 TIME  
 3/15/2023 12:33 PM  
 DRAWING LOCATION  
 W:\PROJECTS\HSIP BOGARD\_ENGSTROM\_RA - CFHWY00453\CIV3D\PLANSET\00453\_F\_PNP.DWG



P.I. STA. 1017+68.28  
 N = 158145.6811  
 E = 457285.6464  
 $\Delta = 015^{\circ}42'28.4''$   
 T = 227.60'  
 L = 452.35'  
 R = 1650.00'  
 RUNOUT = 52.0'  
 RUNOFF = 123.0'  
 % RUNOFF = 80%  
 S = 0.048



SHEET NO.	TOTAL SHEETS
F03	F18
STATE	YEAR
ALASKA	2024
PROJECT DESIGNATION	
0001630/ CFHWY00453	
NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	

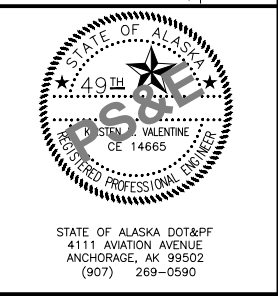
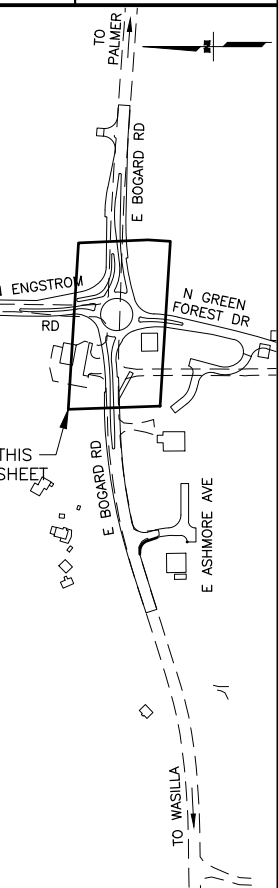


STATE OF ALASKA DOT&PF  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 ANCHORAGE, AK 99502  
 (907) 269-0590

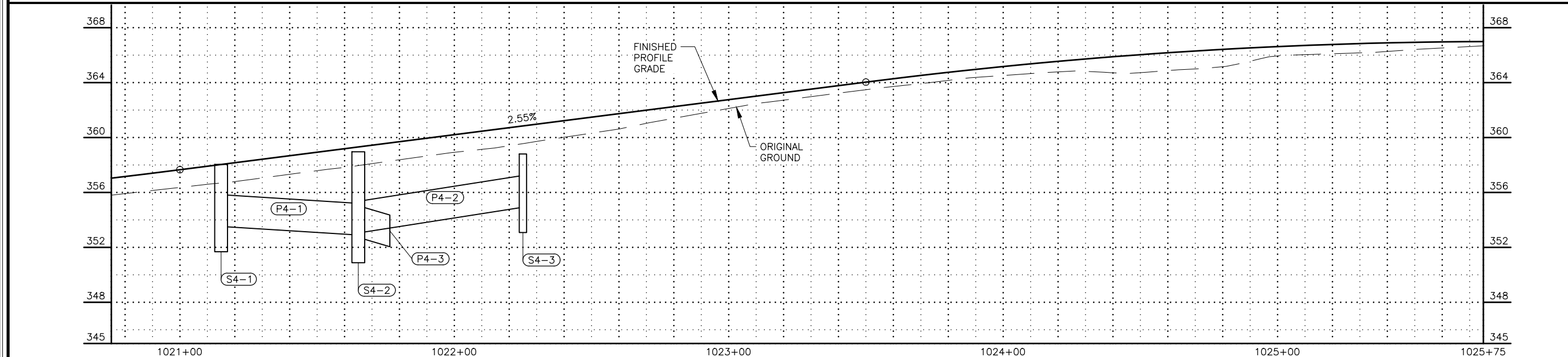
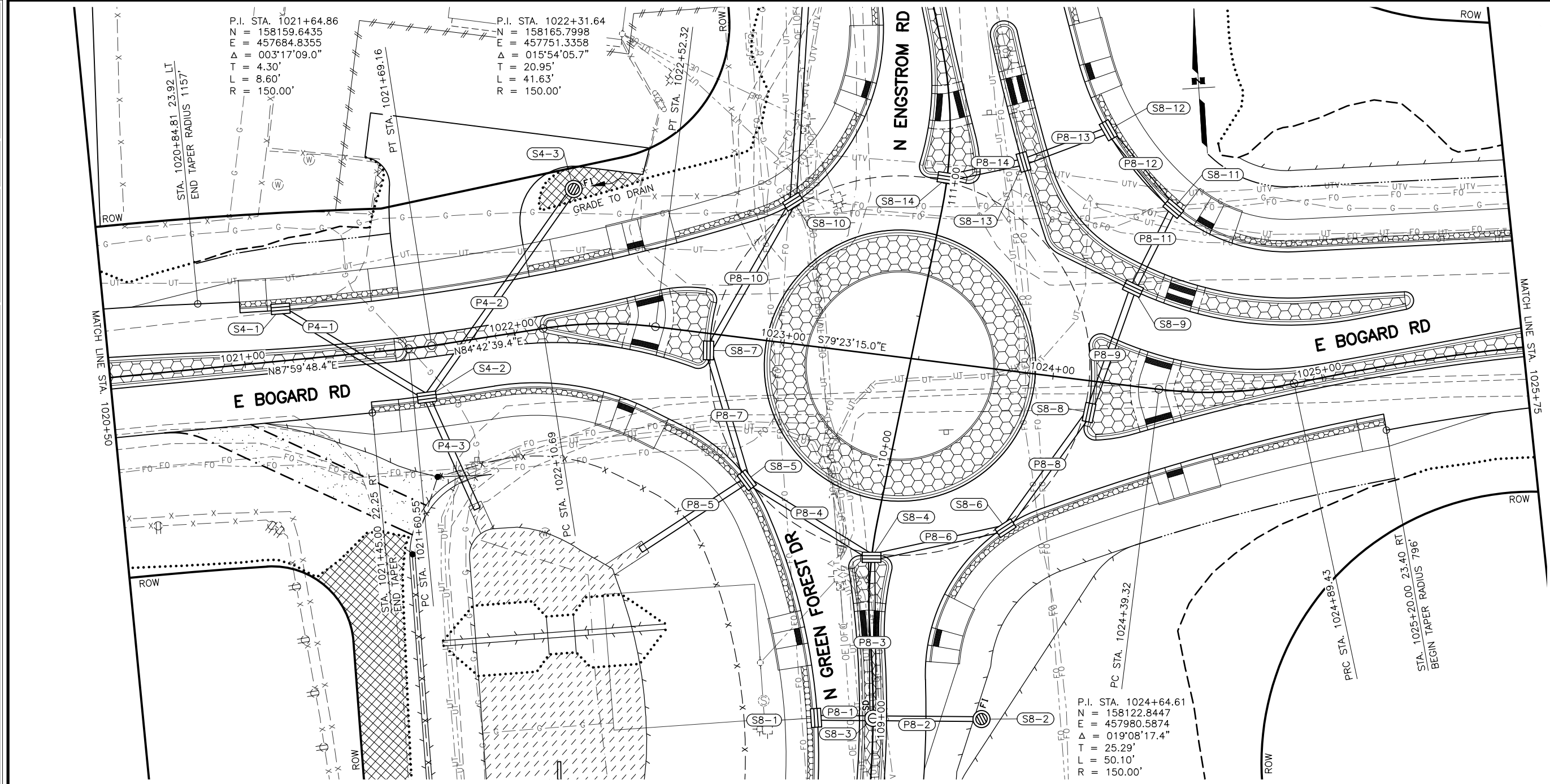
STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 HSIP: BOGARD RD AT  
 ENGSTROM RD & GREEN  
 FOREST DR INT IMP  
 PLAN AND PROFILE  
 STA. 1016+80 TO  
 STA. 1020+50

ZDK  
 DESIGNED BY: KRV  
 CHECKED BY: PGH  
 DRAFTED BY: PGH  
 SCALE: 1" = 20'  
 DATE: 3/15/2023 12:33 PM  
 TIME:  
 DRAWING LOCATION: W:\PROJECTS\HSP BOGARD\_ENGSTROM\_RA - CFHWY00453\PLANSET\00453\_F\_PNP.DWG

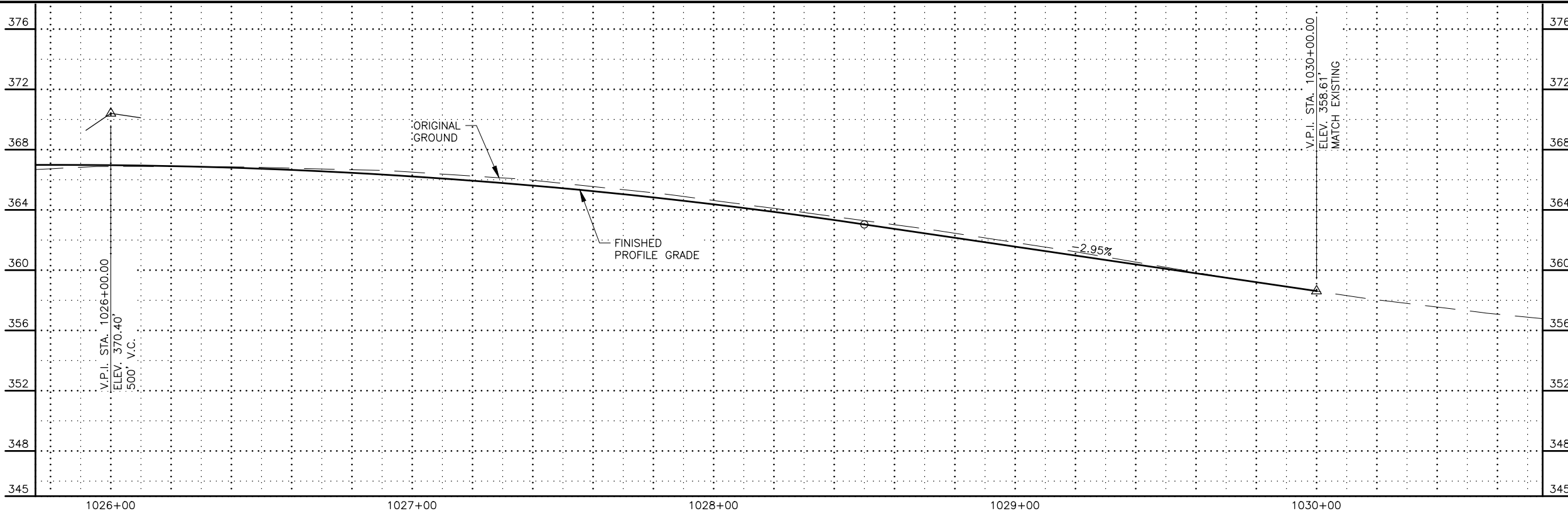
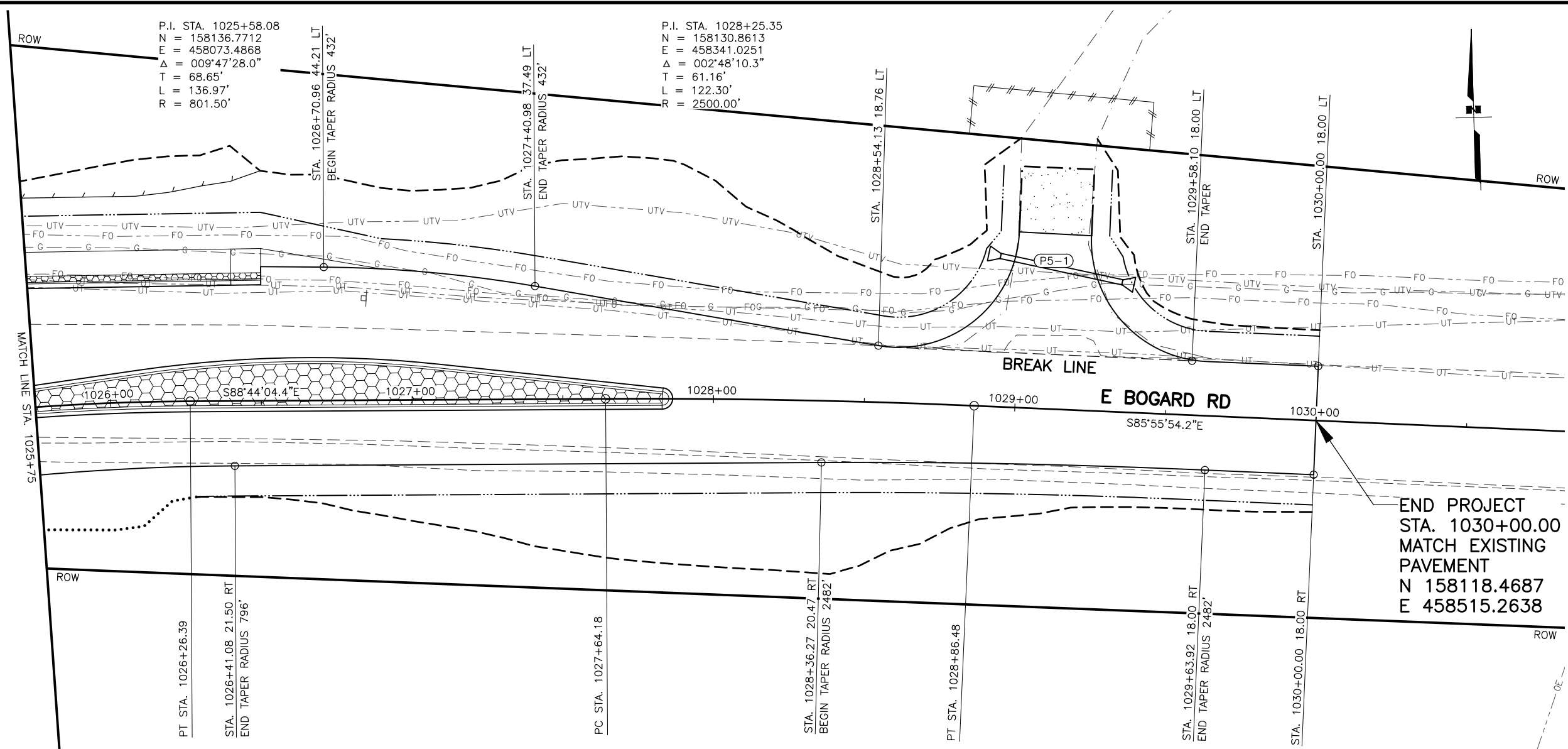
SHEET NO.	TOTAL SHEETS
F04	F18
STATE	YEAR
ALASKA	2024
PROJECT DESIGNATION	
0001630/ CFHWY00453	
NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	



STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 HSP: BOGARD RD AT  
 ENGSTROM RD & GREEN  
 FOREST DR INT IMP  
 PLAN AND PROFILE  
 STA. 1020+50 TO  
 STA. 1025+75



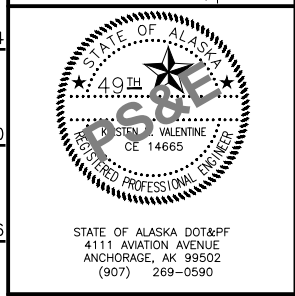
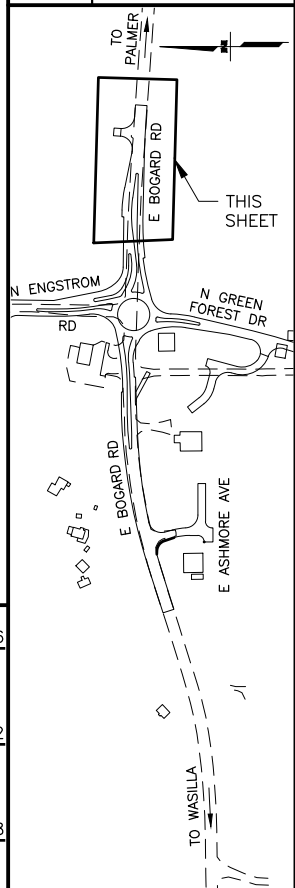
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 DATE: 3/15/2023 12:34 PM  
 TIME: 12:34 PM  
 SCALE: 1" = 20'  
 DESIGNED BY: ZDK  
 CHECKED BY: KRV  
 DRAFTED BY: PGH



SHEET NO.	TOTAL SHEETS
F05	F18
STATE	YEAR
ALASKA	2024

PROJECT DESIGNATION  
**0001630/  
 CFHWY00453**

NO.	REVISION

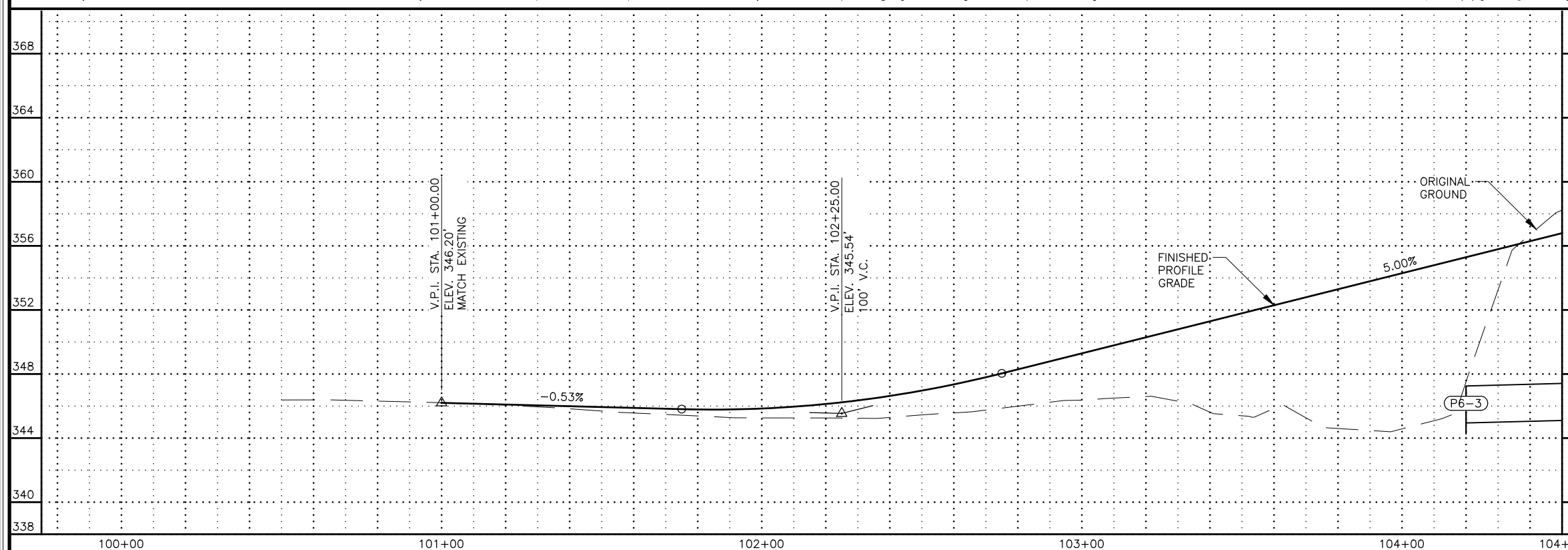
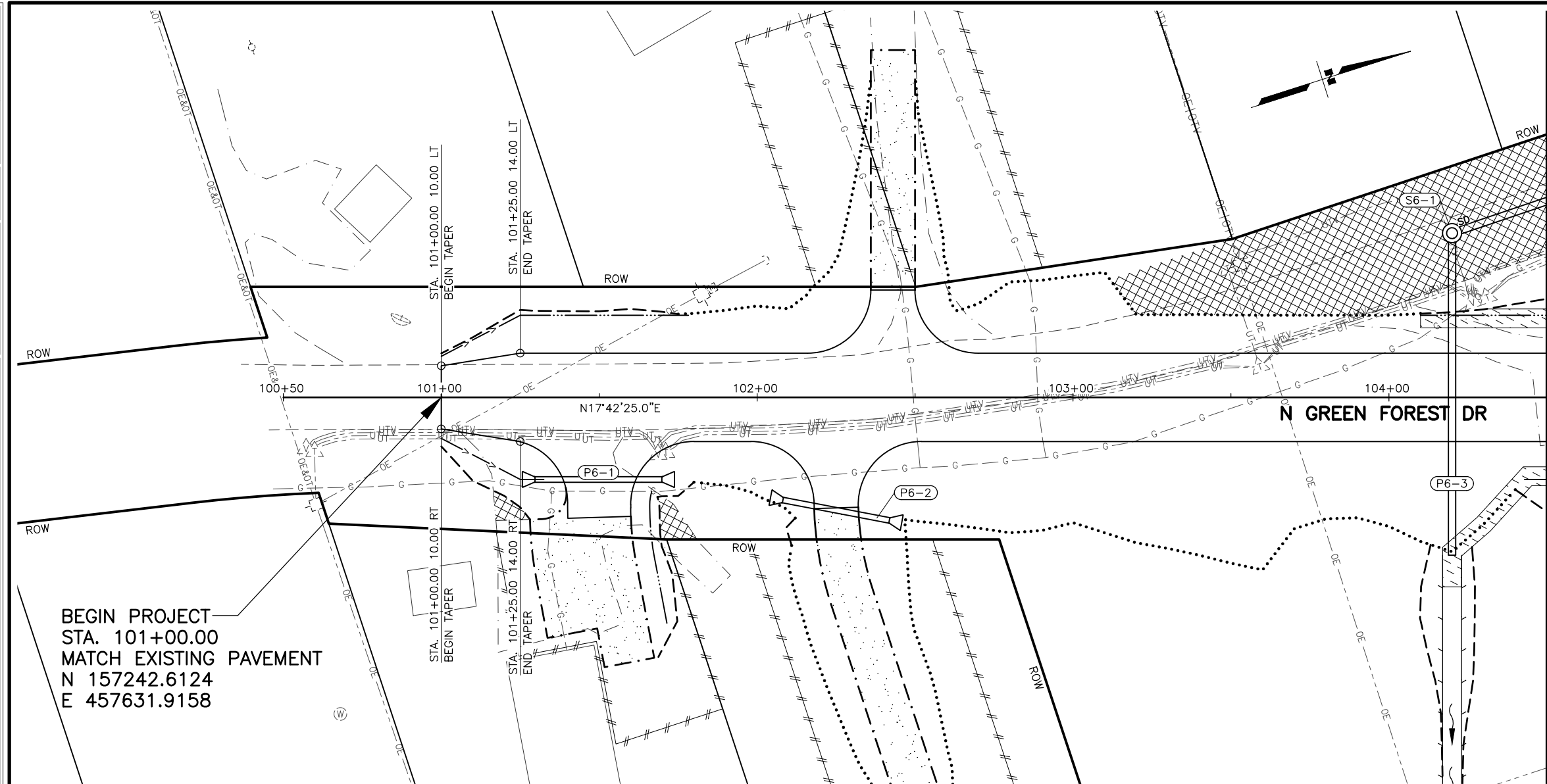


STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 HSIP: BOGARD RD AT  
 ENGSTROM RD & GREEN  
 FOREST DR INT IMP  
**PLAN AND PROFILE  
 STA. 1025+75 TO  
 EOP**

DESIGNED BY: ZDK  
 CHECKED BY: KRV  
 DRAFTED BY: PGH

DATE: 3/15/2023 12:34 PM  
 SCALE: 1" = 20'

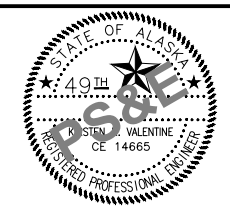
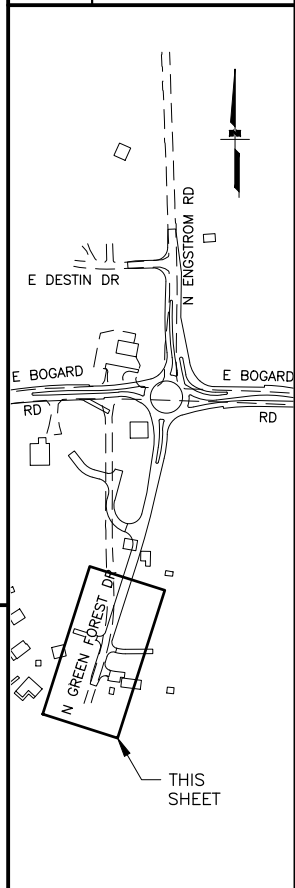
DRAWING LOCATION: W:\PROJECTS\HSIP\BOGARD\_ENGSTROM\_RA - CFHWY00453\CIV3D\PLANSET\00453\_F\_PNP.DWG



SHEET NO.	TOTAL SHEETS
F06	F18
STATE	YEAR
ALASKA	2024

PROJECT DESIGNATION  
**0001630/  
 CFHWY00453**

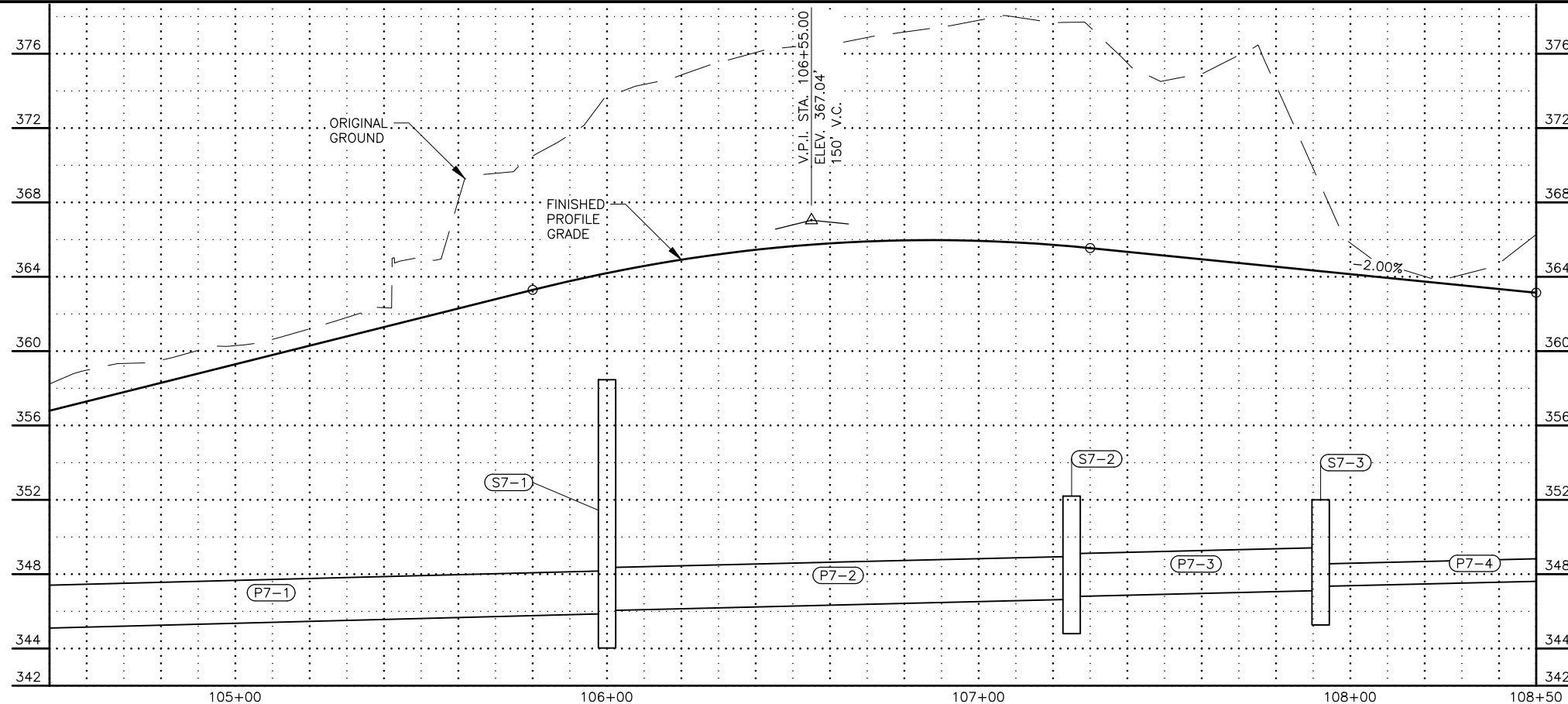
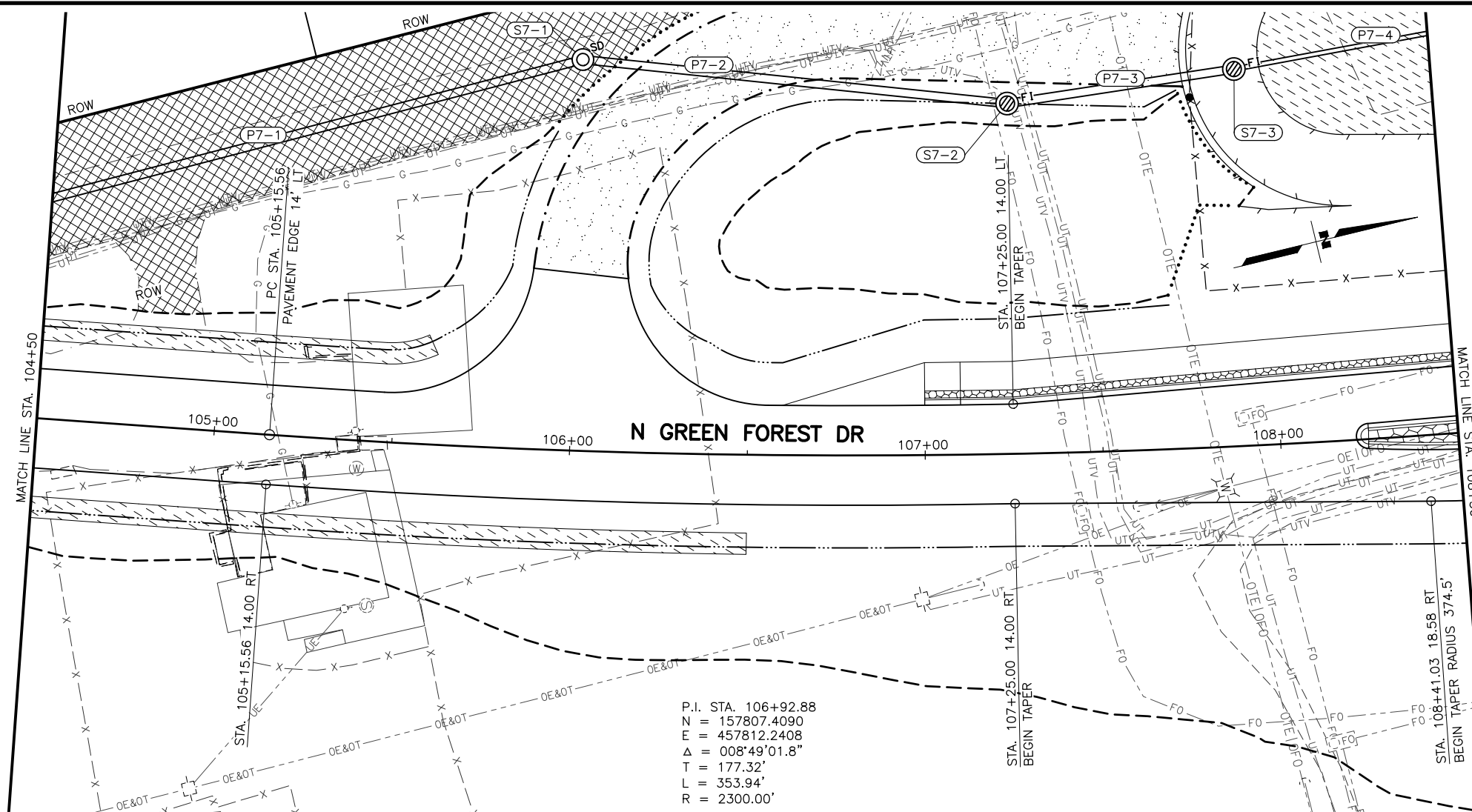
NO.	REVISION



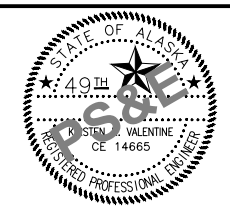
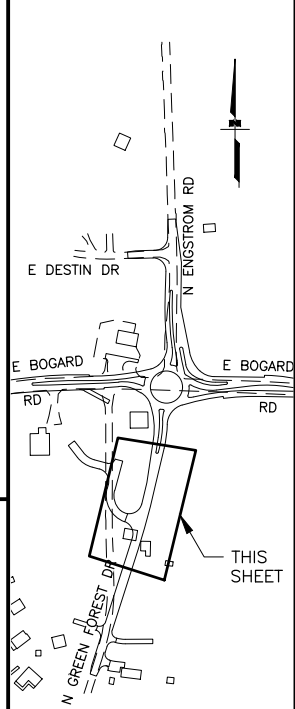
STATE OF ALASKA DOT&PF  
 411 AVIATION AVENUE  
 ANCHORAGE, AK 99502  
 (907) 269-0590

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
**HSIP: BOGARD RD AT  
 ENGSTROM RD & GREEN  
 FOREST DR INT IMP  
 PLAN AND PROFILE  
 BOP TO  
 STA. 104+75**

ZDK DESIGNED BY: KRV CHECKED BY: PGH DRAFTED BY: PGP  
 DATE: 3/15/2023 TIME: 12:34 PM SCALE: 1" = 20'  
 DRAWING LOCATION: W:\PROJECTS\HSIP BOGARD\_ENGSTROM\_RA - CFHWY00453\CIV3D\PLANSET\00453\_F\_PNP.DWG



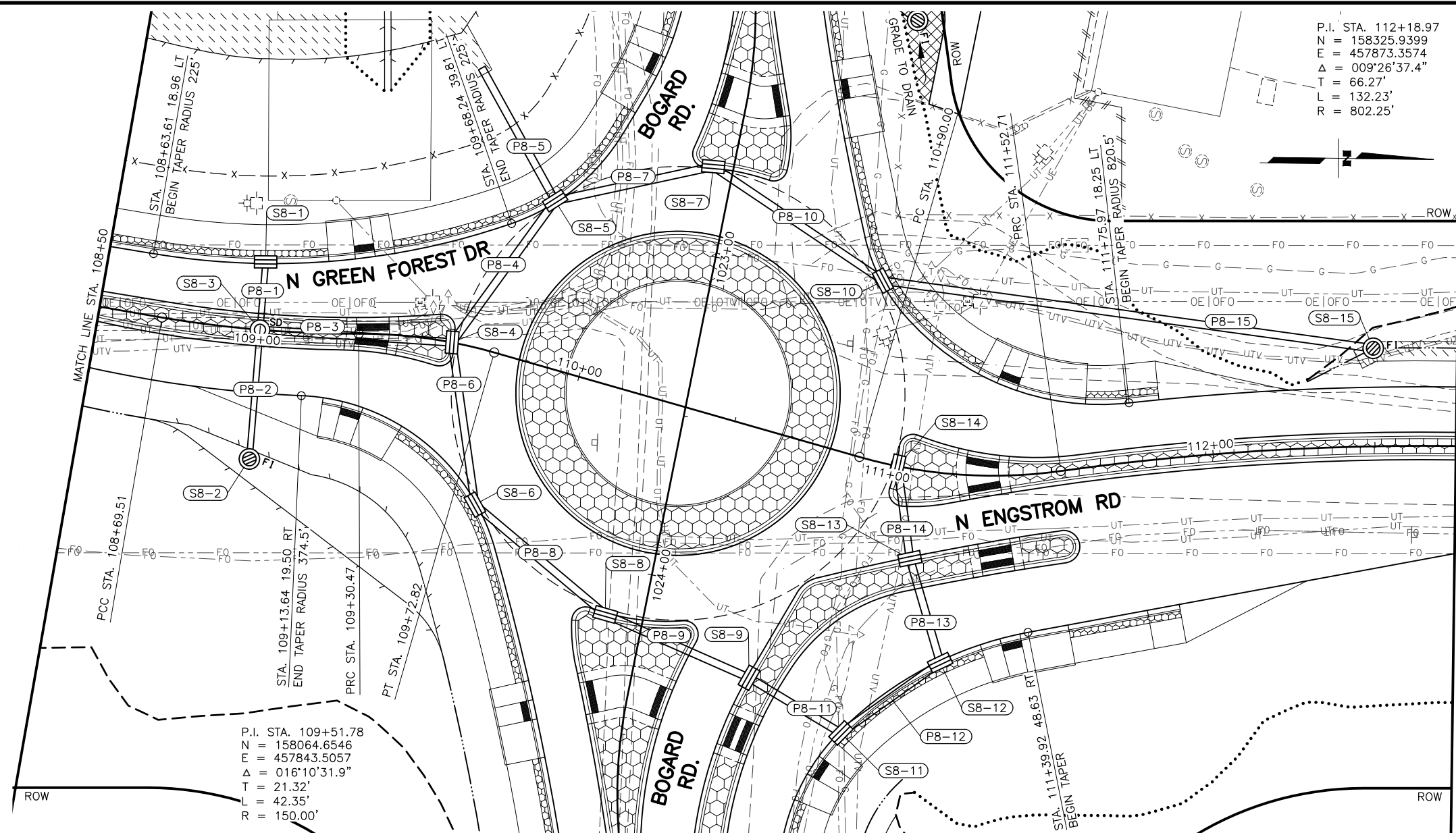
SHEET NO.	TOTAL SHEETS
F07	F18
STATE	YEAR
ALASKA	2024
PROJECT DESIGNATION	
0001630/ CFHWY00453	
NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	



STATE OF ALASKA DOT&PF  
 4111 AVIATION AVENUE  
 ANCHORAGE, AK 99502  
 (907) 269-0590

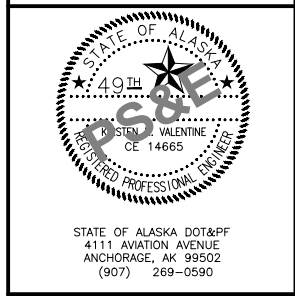
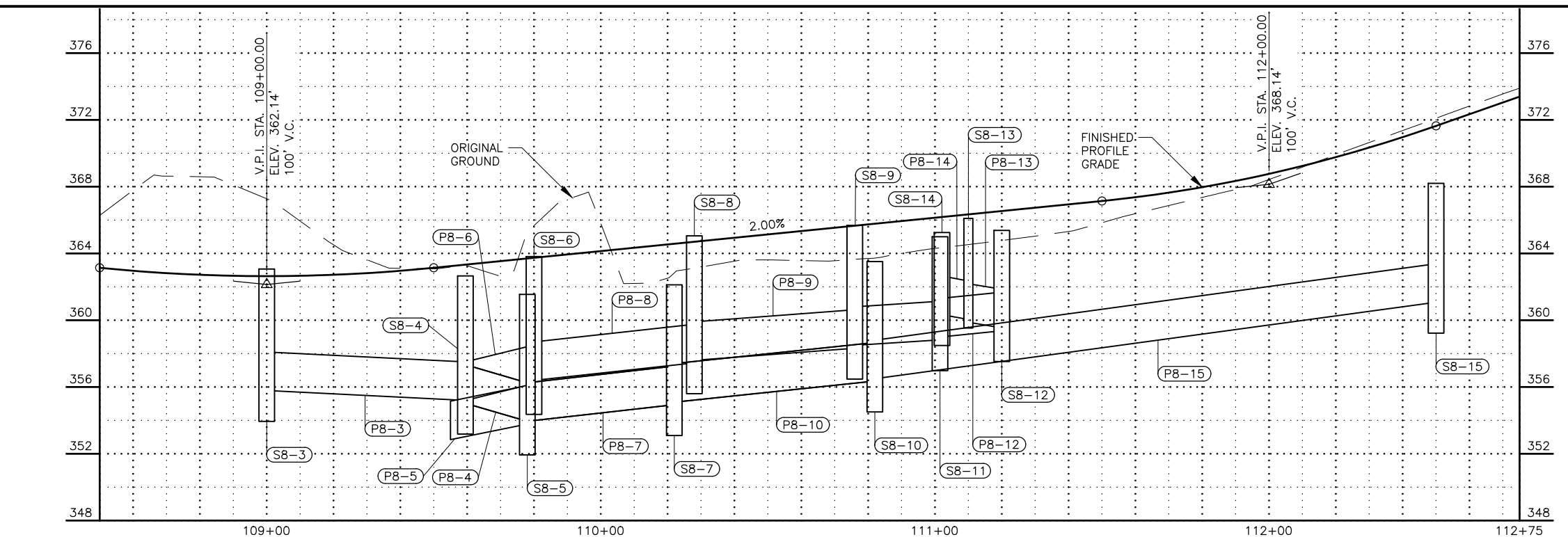
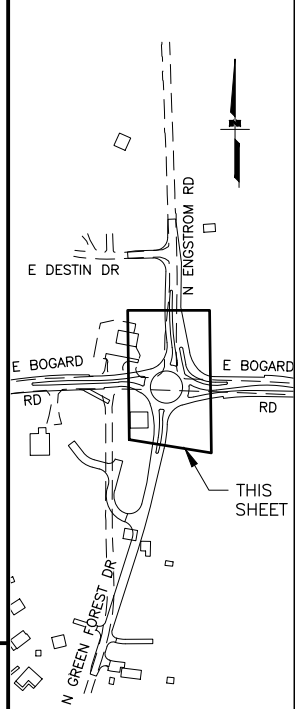
STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 HSIP: BOGARD RD AT  
 ENGSTROM RD & GREEN  
 FOREST DR INT IMP  
 PLAN AND PROFILE  
 STA 104+75 TO  
 STA 108+75

ZOK  
 DESIGNED BY: KRV  
 CHECKED BY: KRV  
 DRAFTED BY: PGH  
 SCALE: 1" = 20'  
 DATE: 3/15/2023 12:34 PM  
 TIME: 12:34 PM  
 DRAWING LOCATION: W:\PROJECTS\HSP\BOGARD\_ENGSTROM\_RA - CFHWY00453\PLANSET\00453\_F\_PNP.DWG



P.I. STA. 112+18.97  
 N = 158325.9399  
 E = 457873.3574  
 Δ = 009°26'37.4"  
 T = 66.27'  
 L = 132.23'  
 R = 802.25'

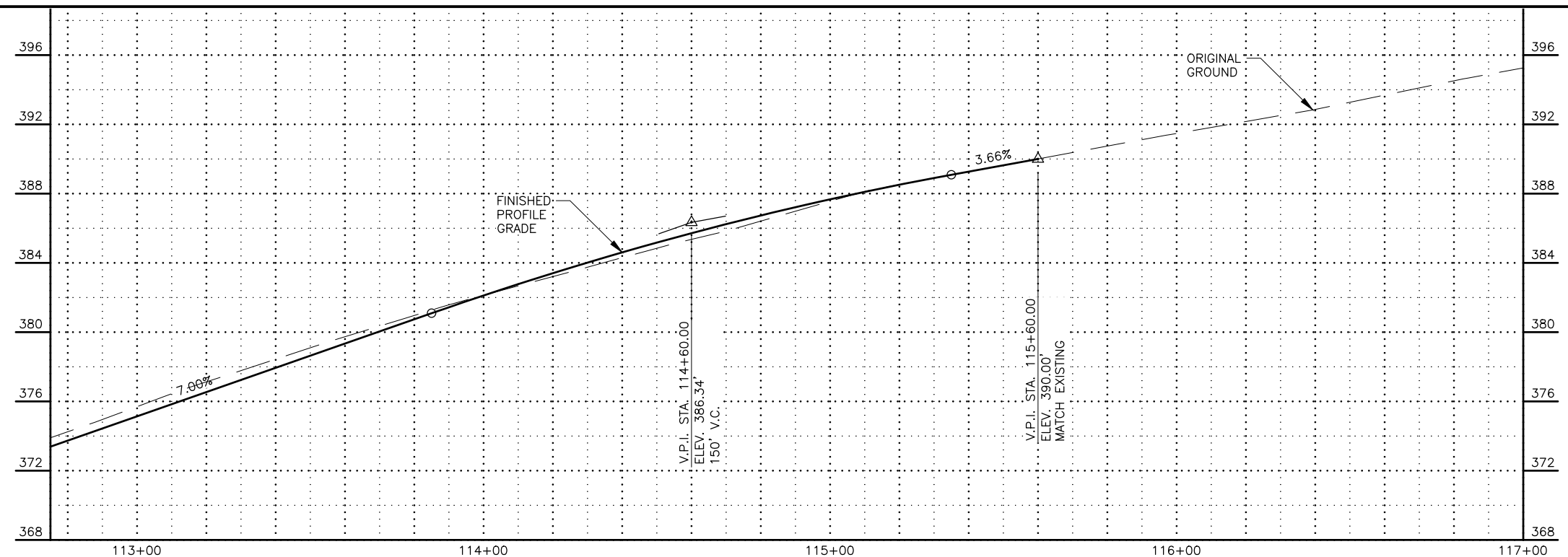
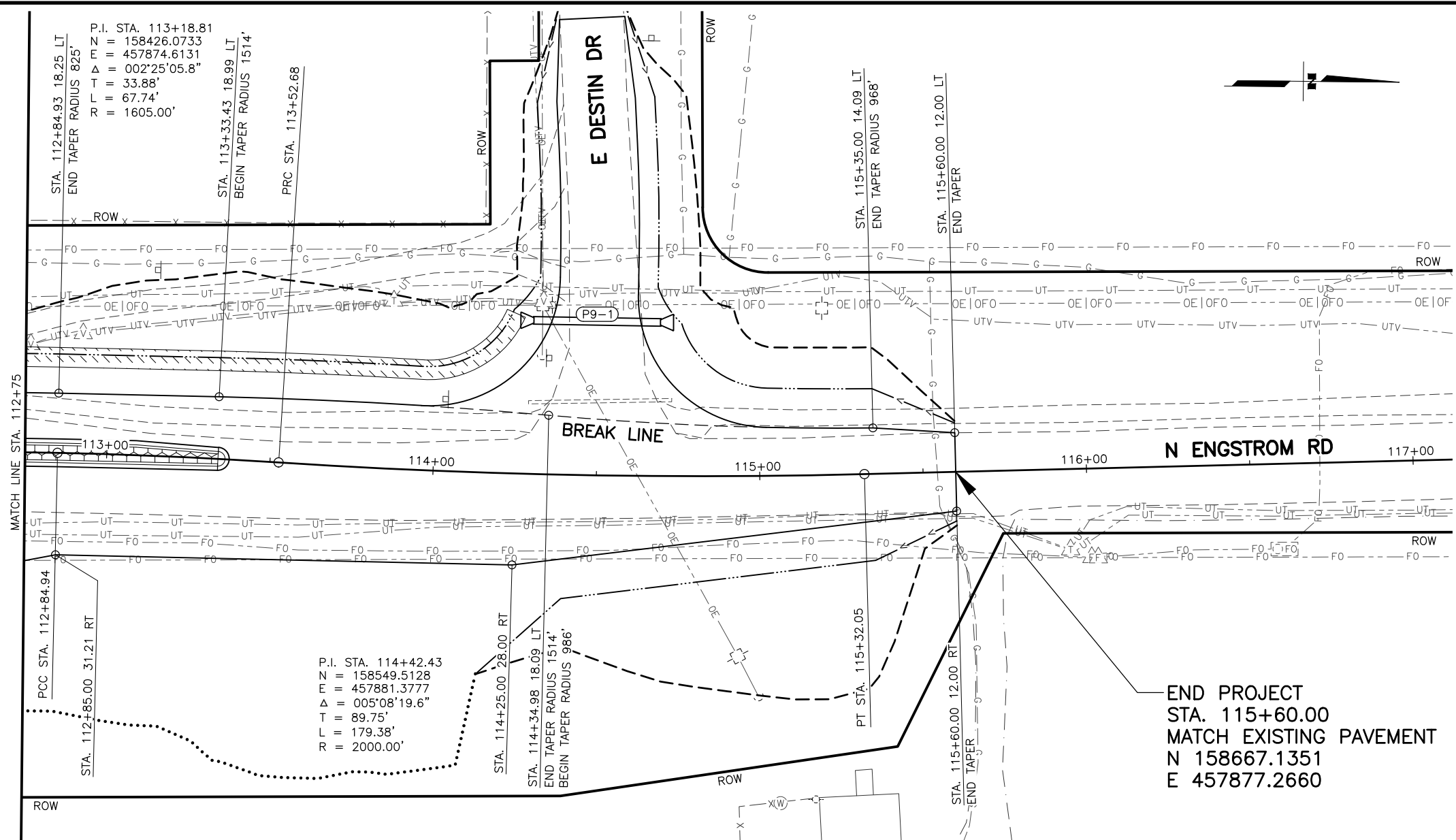
SHEET NO.	TOTAL SHEETS
F08	F18
STATE	YEAR
ALASKA	2024
PROJECT DESIGNATION	
0001630/ CFHWY00453	
NO.	REVISION
NO.	REVISION
NO.	REVISION
NO.	REVISION



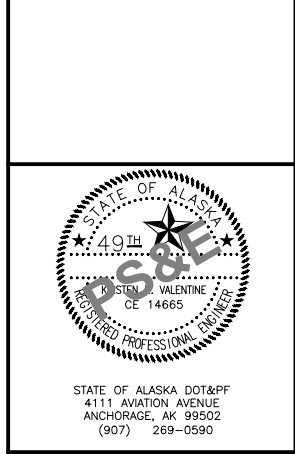
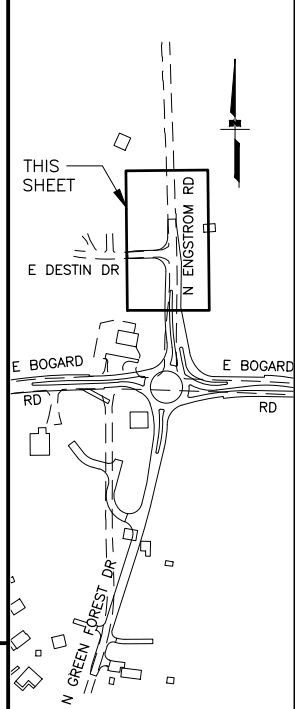
STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 HSP: BOGARD RD AT  
 ENGSTROM RD & GREEN  
 FOREST DR INT IMP  
 PLAN AND PROFILE  
 STA 108+50 TO  
 STA 112+75



ZDK  
 DESIGNED BY: KRV  
 CHECKED BY: PGH  
 DRAFTED BY: PGH  
 SCALE: 1" = 20'  
 DATE: 3/15/2023 12:34 PM  
 TIME: 12:34 PM  
 DRAWING LOCATION: W:\PROJECTS\HSIP BOGARD ENGSTROM RA - CFHWY00453\CIV3D\PLANSET\00453\_F\_PNP.DWG



SHEET NO.	TOTAL SHEETS
F09	F18
STATE	YEAR
ALASKA	2024
PROJECT DESIGNATION	
0001630/ CFHWY00453	
NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	



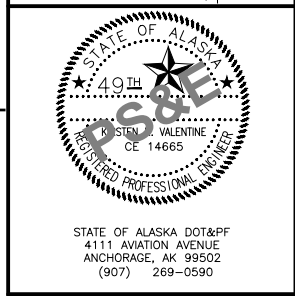
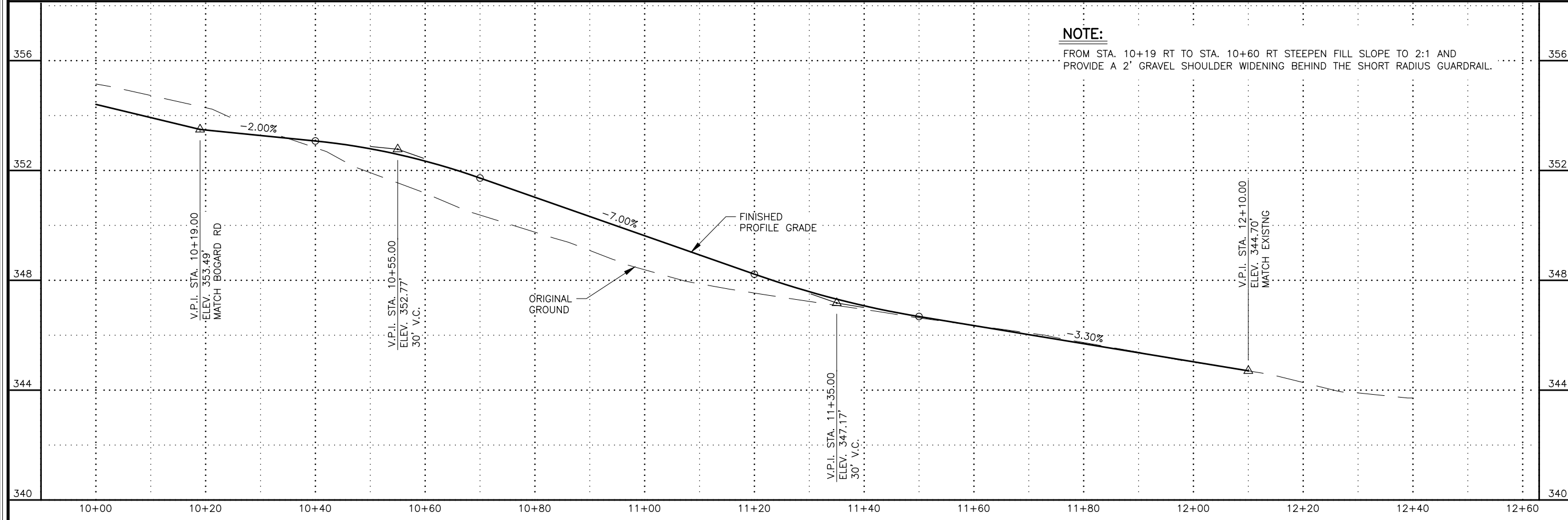
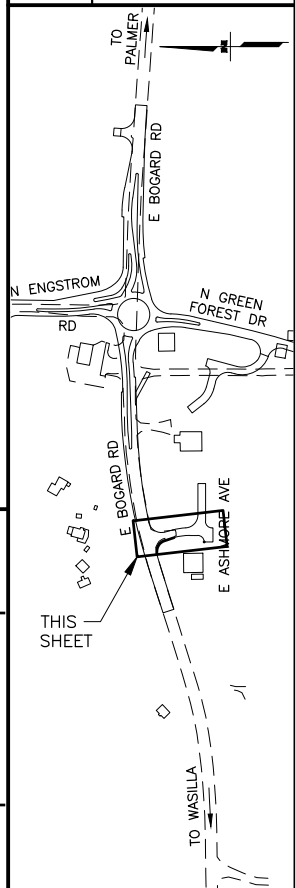
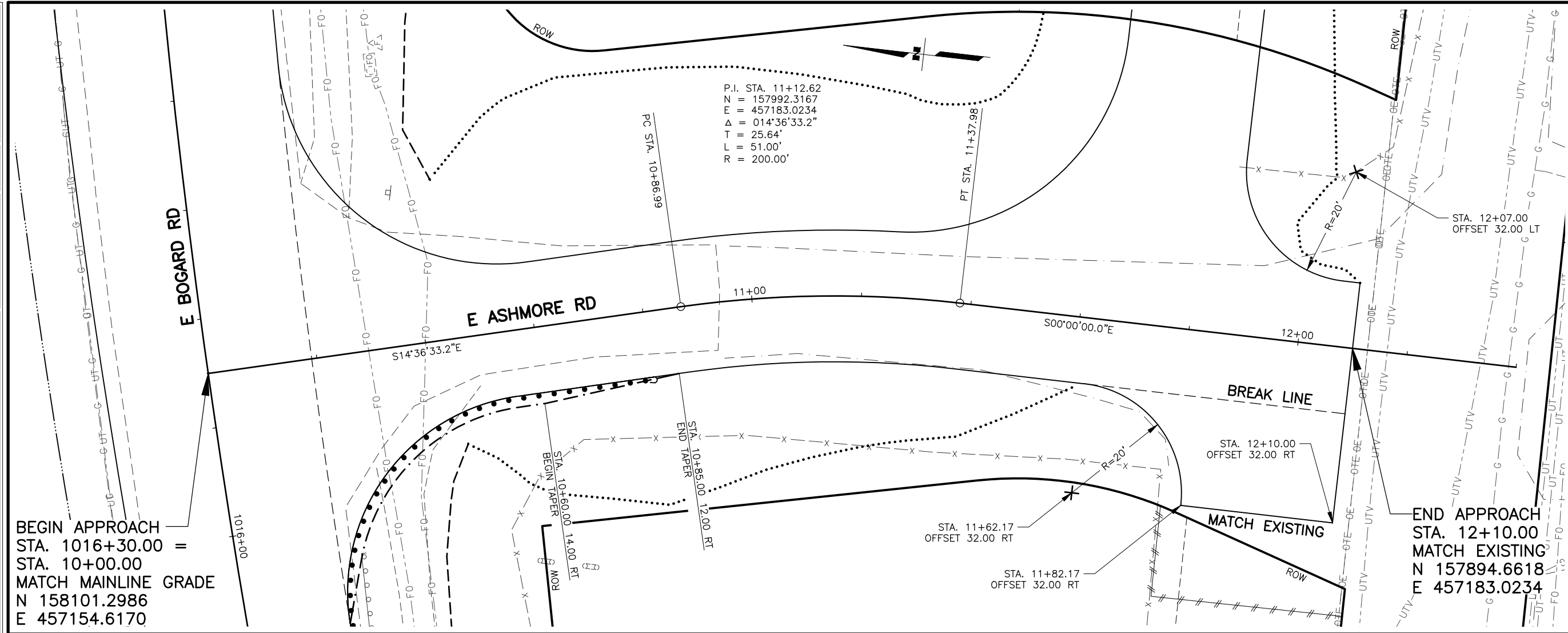
STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 HSIP: BOGARD RD AT  
 ENGSTROM RD & GREEN  
 FOREST DR INT IMP  
 PLAN AND PROFILE  
 STA 112+75 TO  
 EOP

ZOK DESIGNED BY: KRV CHECKED BY: PGH DRAFTED BY: PGP  
 DATE: 3/15/2023 TIME: 12:34 PM SCALE: 1" = 10'  
 DRAWING LOCATION: W:\PROJECTS\HSIP\BOGARD\_ENGSTROM\_RA - CFHWY00453\CIV3D\PLANSET\00453\_F\_PNP\_APPROACH.DWG

SHEET NO.	TOTAL SHEETS
F10	F18
STATE	YEAR
ALASKA	2024

PROJECT DESIGNATION  
**0001630/  
 CFHWY00453**

NO.	REVISION

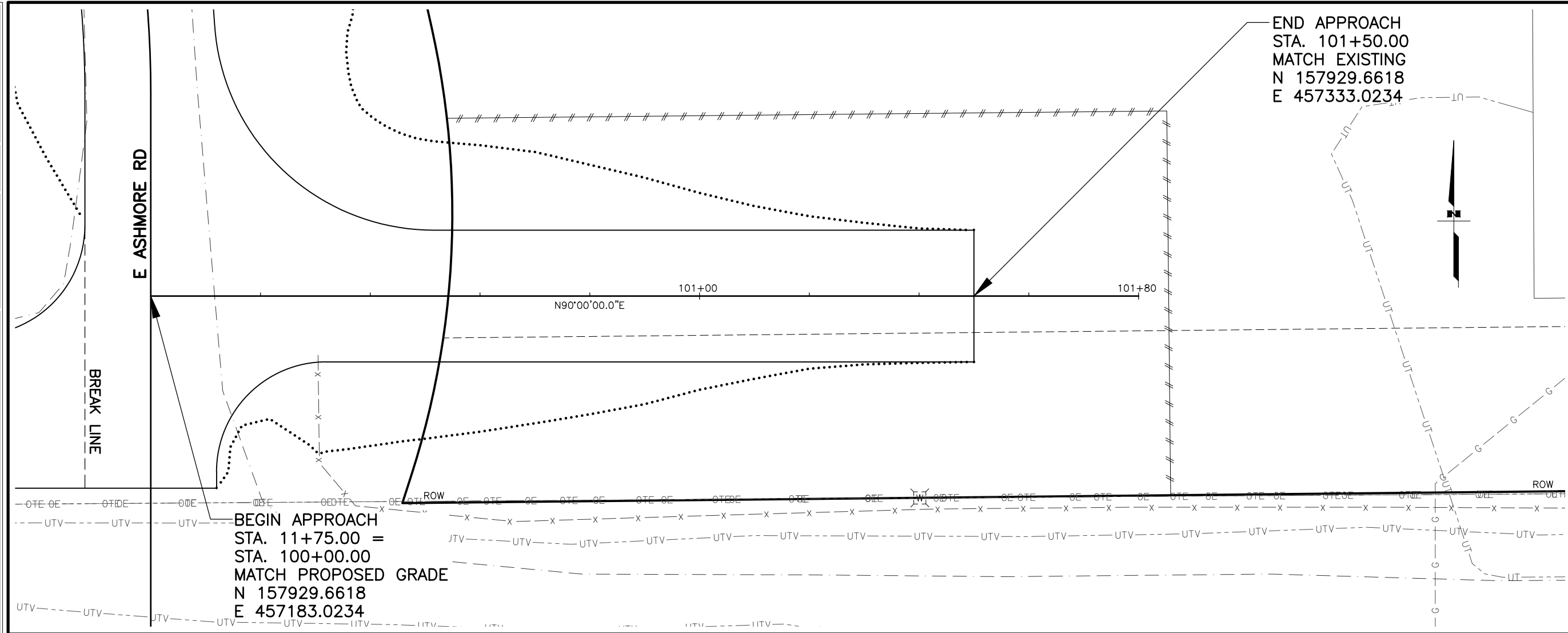


STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
**HSIP: BOGARD RD AT  
 ENGSTROM RD & GREEN  
 FOREST DR INT IMP**  
**PLAN AND PROFILE  
 DRIVEWAY  
 STA. 1016+30 RT**

DESIGNED BY: ZDK  
 CHECKED BY: KRV  
 DRAFTED BY: PGH

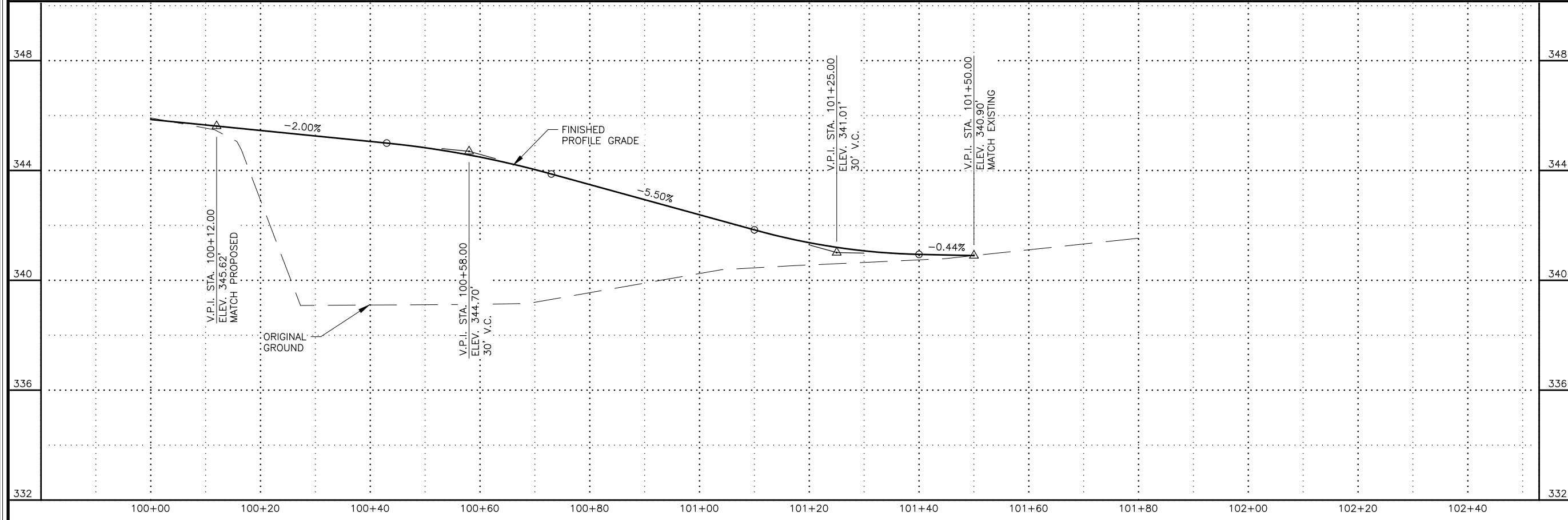
DATE: 3/15/2023 12:34 PM  
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 SCALE: 1" = 10'

DRAWING LOCATION: W:\PROJECTS\HSP BOGARD ENGSTROM RA - CFHWY00453\PLANSET\00453\_F\_PNP\_APPROACH.DWG

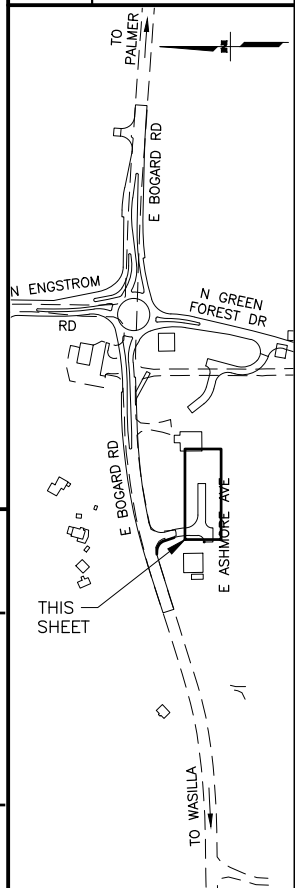


END APPROACH  
 STA. 101+50.00  
 MATCH EXISTING  
 N 157929.6618  
 E 457333.0234

BEGIN APPROACH  
 STA. 11+75.00 =  
 STA. 100+00.00  
 MATCH PROPOSED GRADE  
 N 157929.6618  
 E 457183.0234



SHEET NO.	TOTAL SHEETS
F11	F18
STATE	YEAR
ALASKA	2024
PROJECT DESIGNATION	
0001630/ CFHWY00453	
NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	



STATE OF ALASKA DOT&PF  
 411 AVIATION AVENUE  
 ANCHORAGE, AK 99502  
 (907) 269-0590

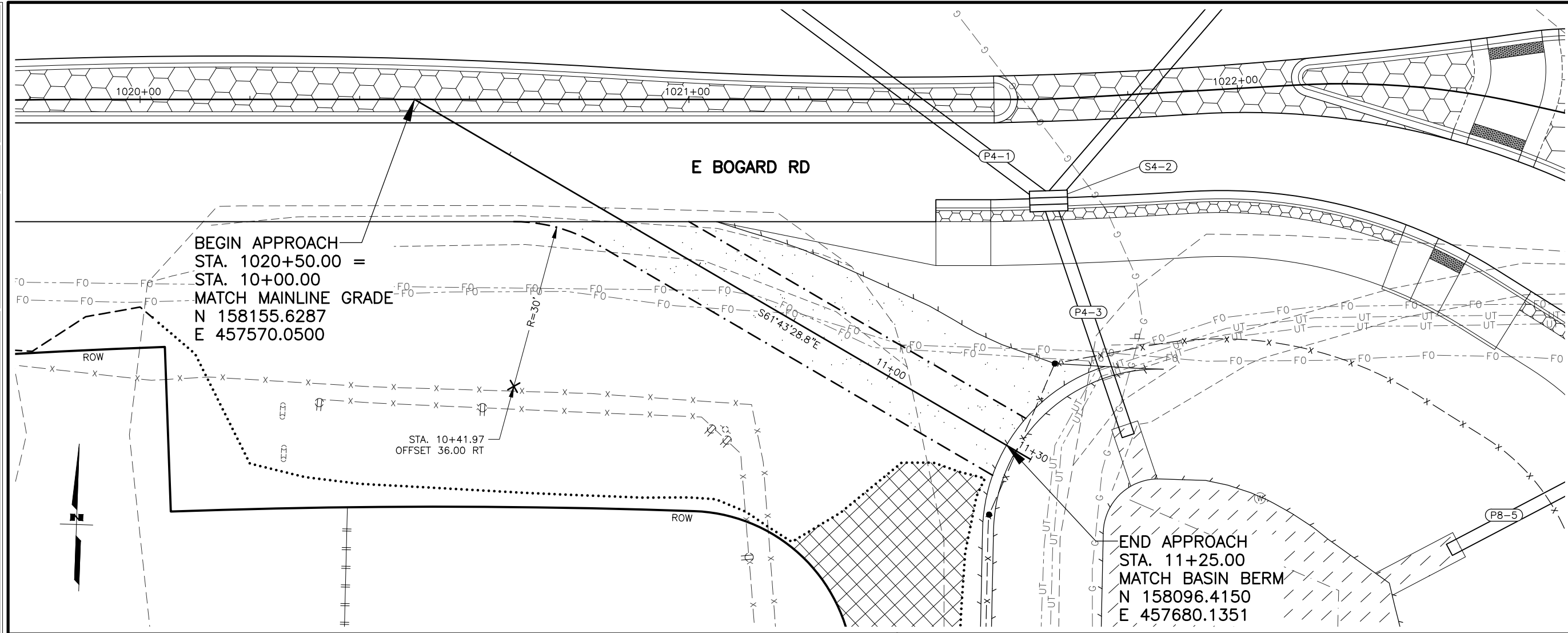
STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 HSP: BOGARD RD AT  
 ENGSTROM RD & GREEN  
 FOREST DR INT IMP  
 PLAN AND PROFILE  
 DRIVEWAY  
 STA. 1016+30 RT A

DESIGNED BY: ZDK  
 CHECKED BY: KRV  
 DRAFTED BY: ZDK  
 SCALE: 1" = 10'  
 DATE: 3/15/2023 12:35 PM  
 TIME:  
 DRAWING LOCATION: W:\PROJECTS\HSIP BOGARD\_ENGSTROM\_RA - CFHWY00453\PLANSET\00453\_F\_PNP\_APPROACH.DWG

SHEET NO.	TOTAL SHEETS
F12	F18
STATE	YEAR
ALASKA	2024

PROJECT DESIGNATION  
**0001630/  
 CFHWY00453**

NO.	REVISION

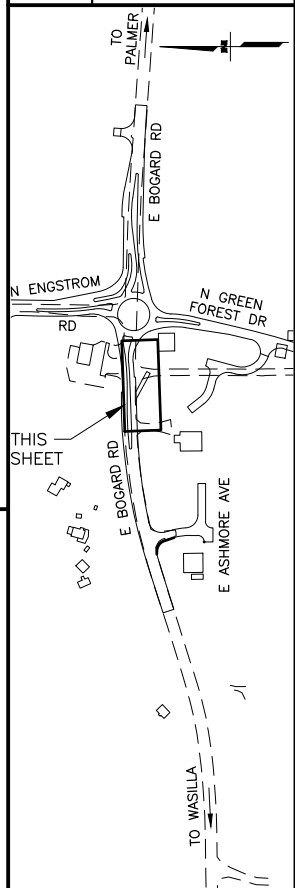
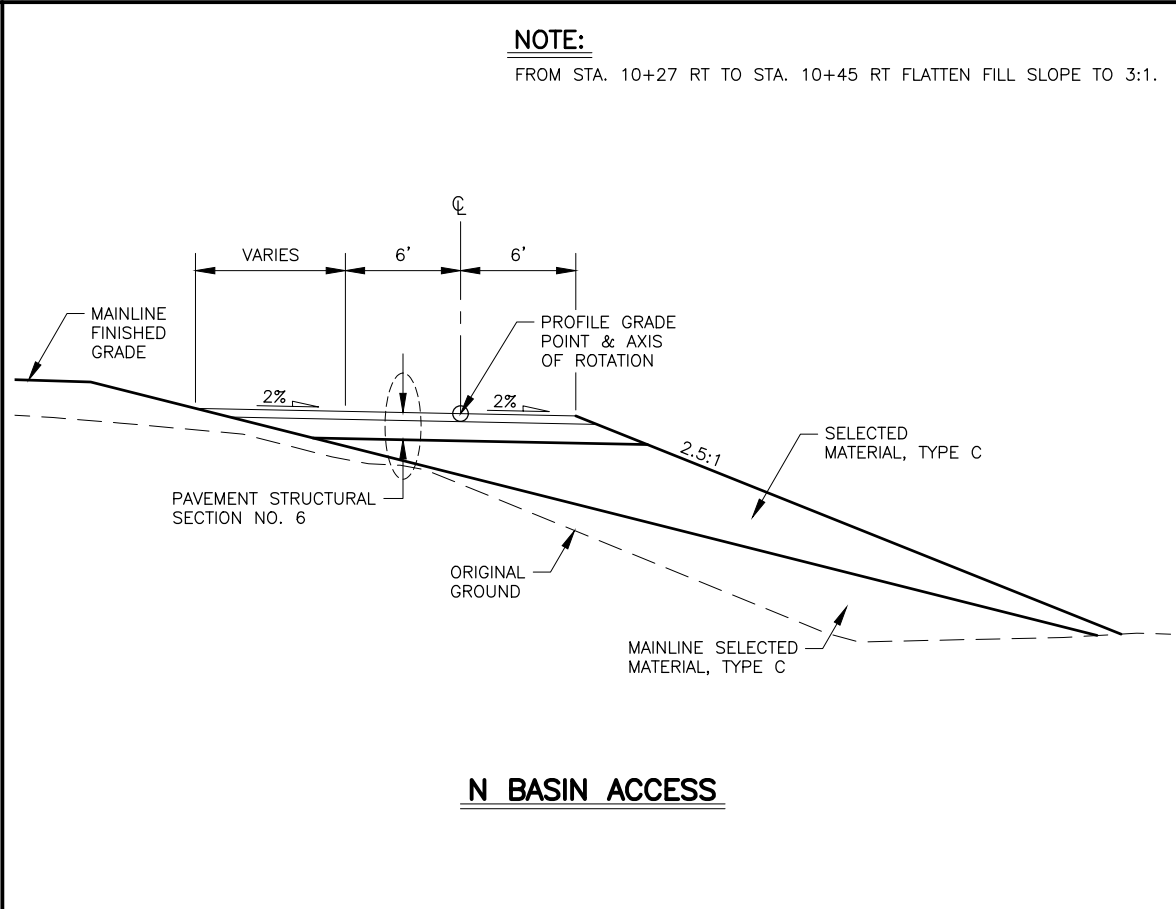
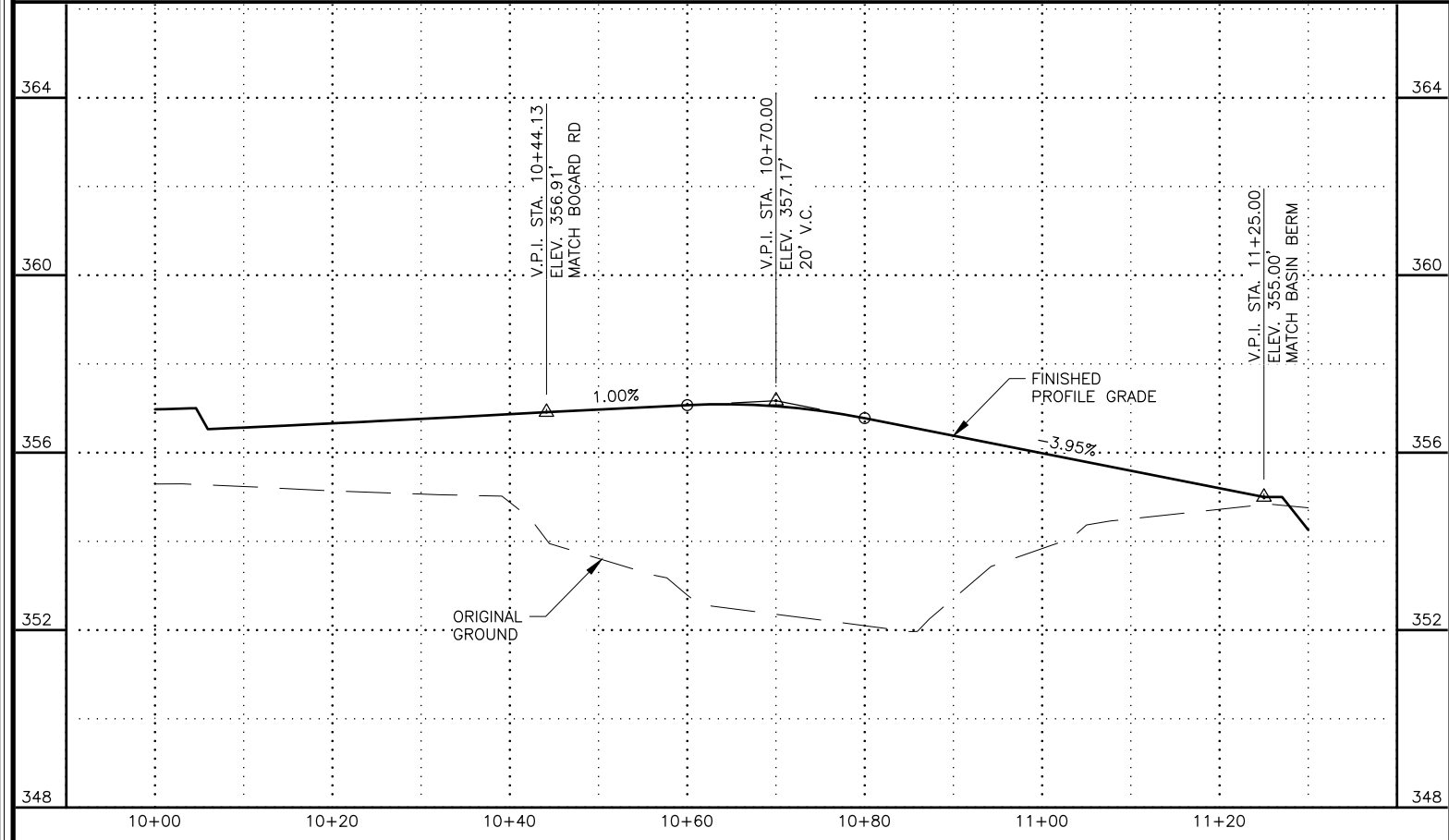


**BEGIN APPROACH**  
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 STA. 10+00.00  
**MATCH MAINLINE GRADE**  
 N 158155.6287  
 E 457570.0500

**END APPROACH**  
 STA. 11+25.00  
**MATCH BASIN BERM**  
 N 158096.4150  
 E 457680.1351

STA. 10+41.97  
 OFFSET 36.00 RT

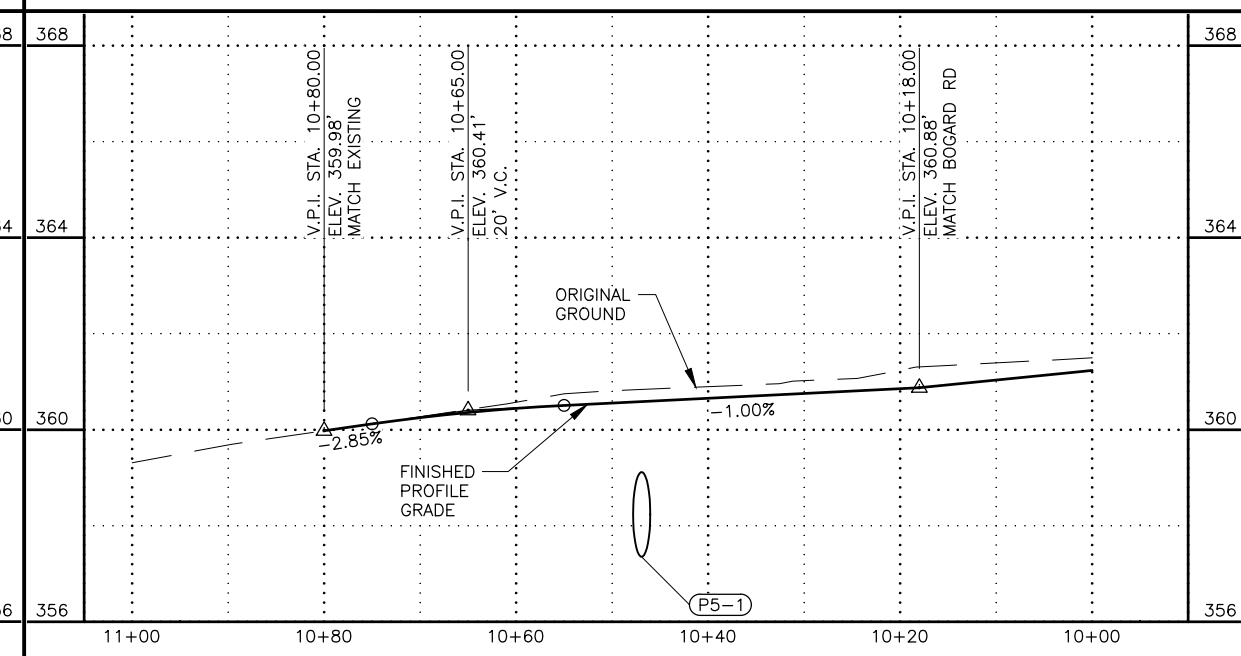
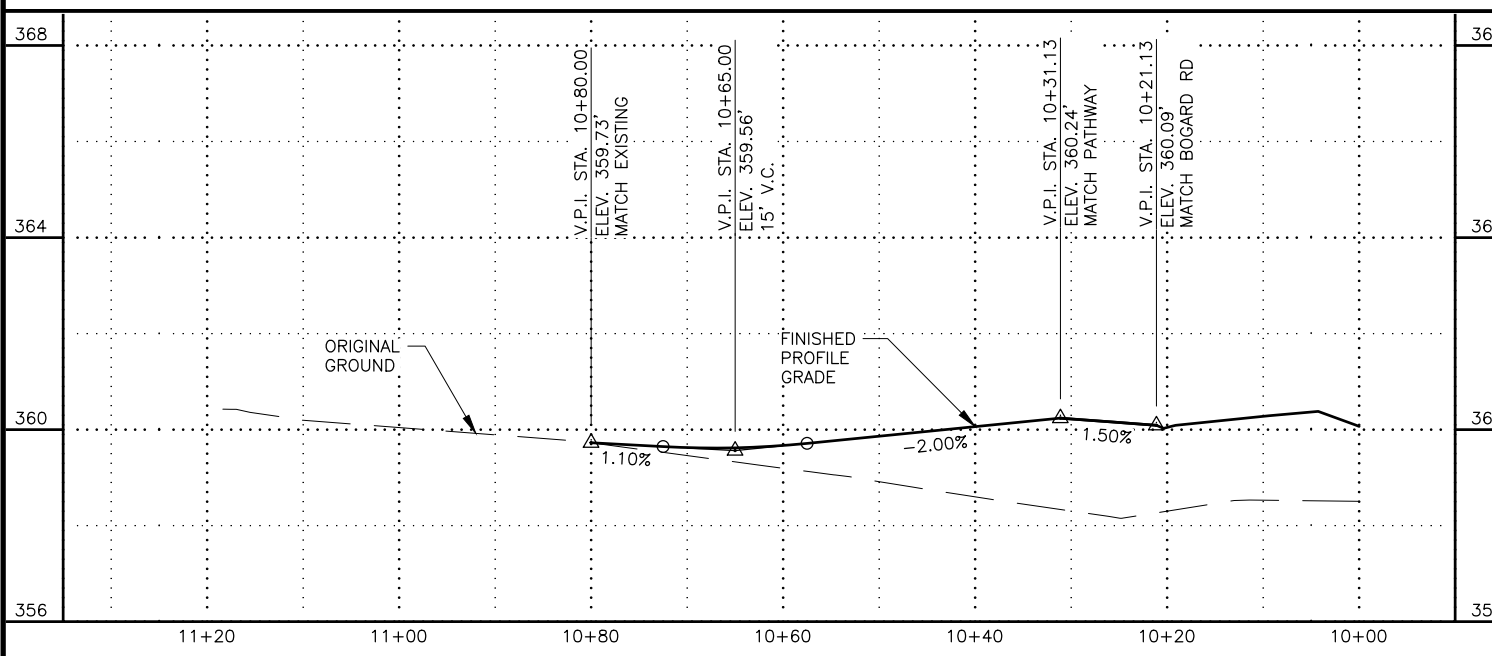
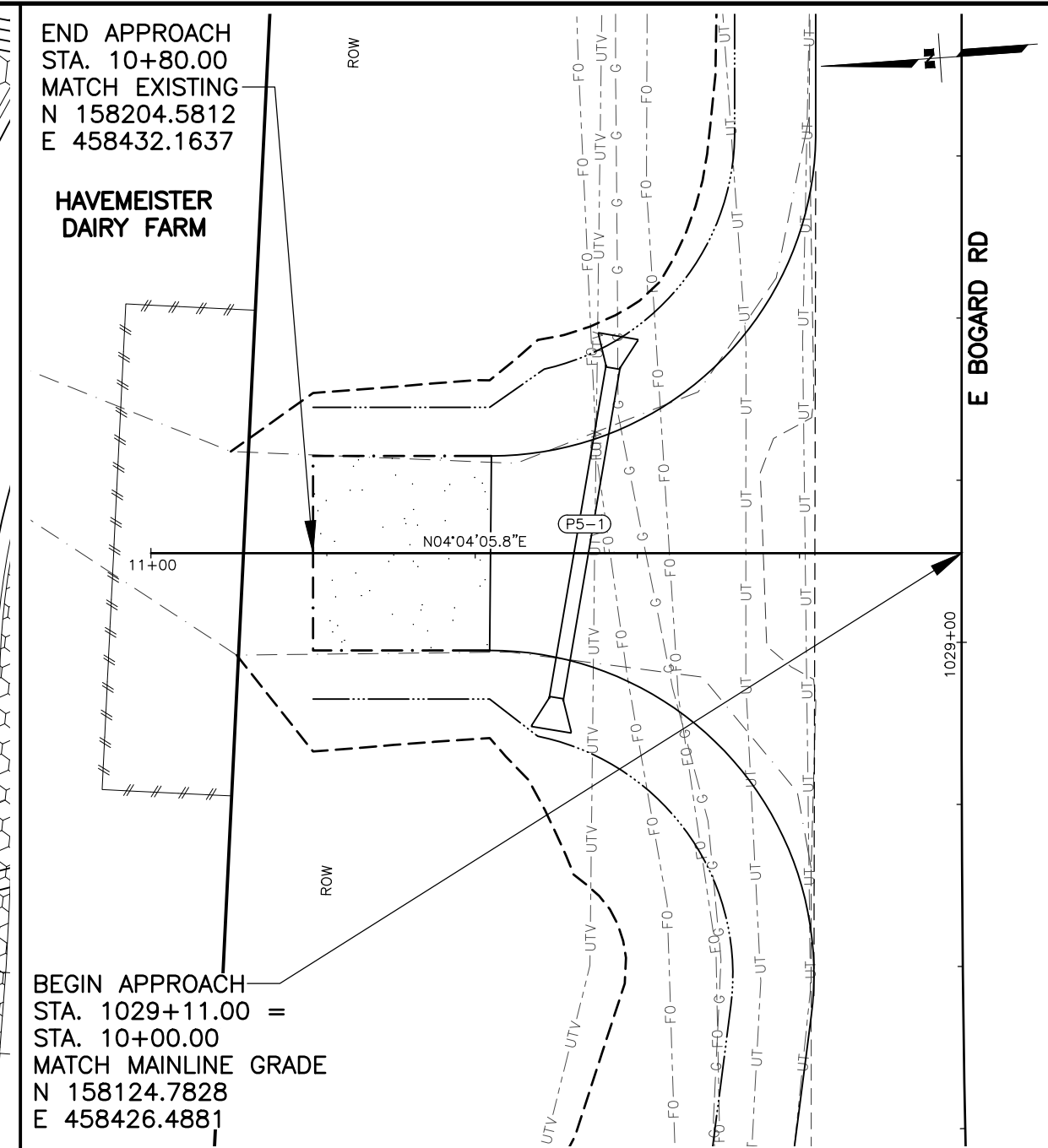
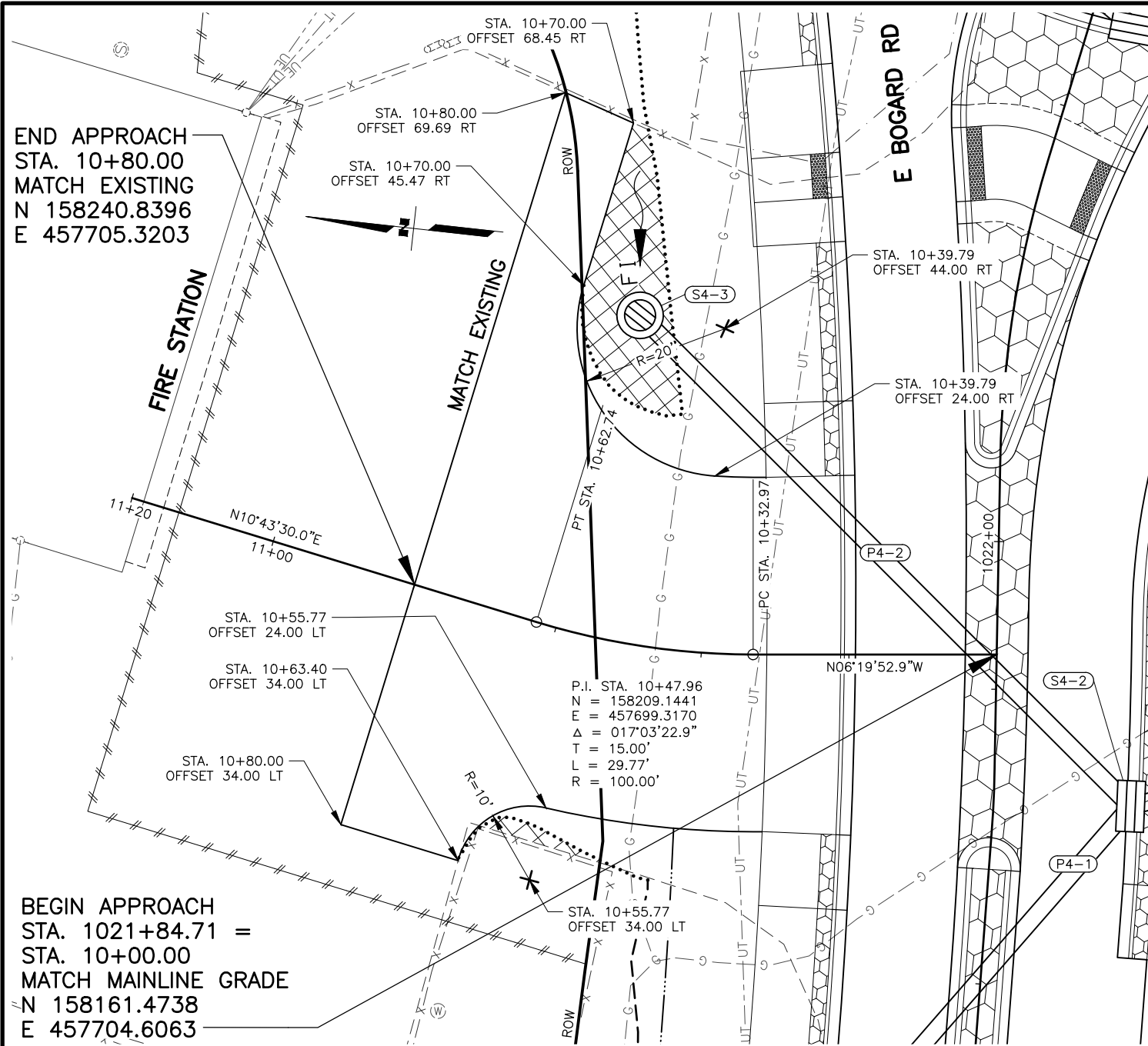
**NOTE:**  
 FROM STA. 10+27 RT TO STA. 10+45 RT FLATTEN FILL SLOPE TO 3:1.



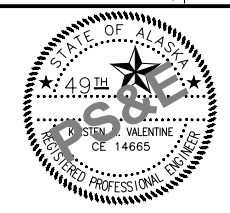
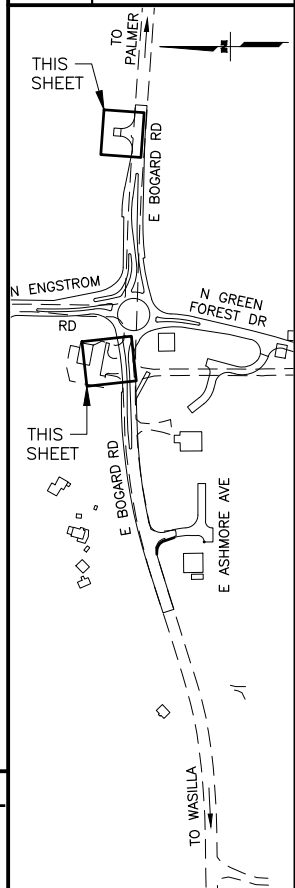
STATE OF ALASKA DOT&PF  
 411 AVIATION AVENUE  
 ANCHORAGE, AK 99502  
 (907) 269-0590

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
**HSIP: BOGARD RD AT  
 ENGSTROM RD & GREEN  
 FOREST DR INT IMP**  
**PLAN AND PROFILE  
 N BASIN ACCESS  
 STA. 1020+50 RT**

ZDK  
 DESIGNED BY: KRV  
 CHECKED BY: PGH  
 DRAFTED BY: PGH  
 SCALE: 1" = 10'  
 DATE: 3/15/2023 12:35 PM  
 TIME: 12:35 PM  
 DRAWING LOCATION: W:\PROJECTS\HSP BOGARD ENGSTROM RA - CFHWY00453\PLANSET\00453\_F\_PNP\_APPROACH.DWG



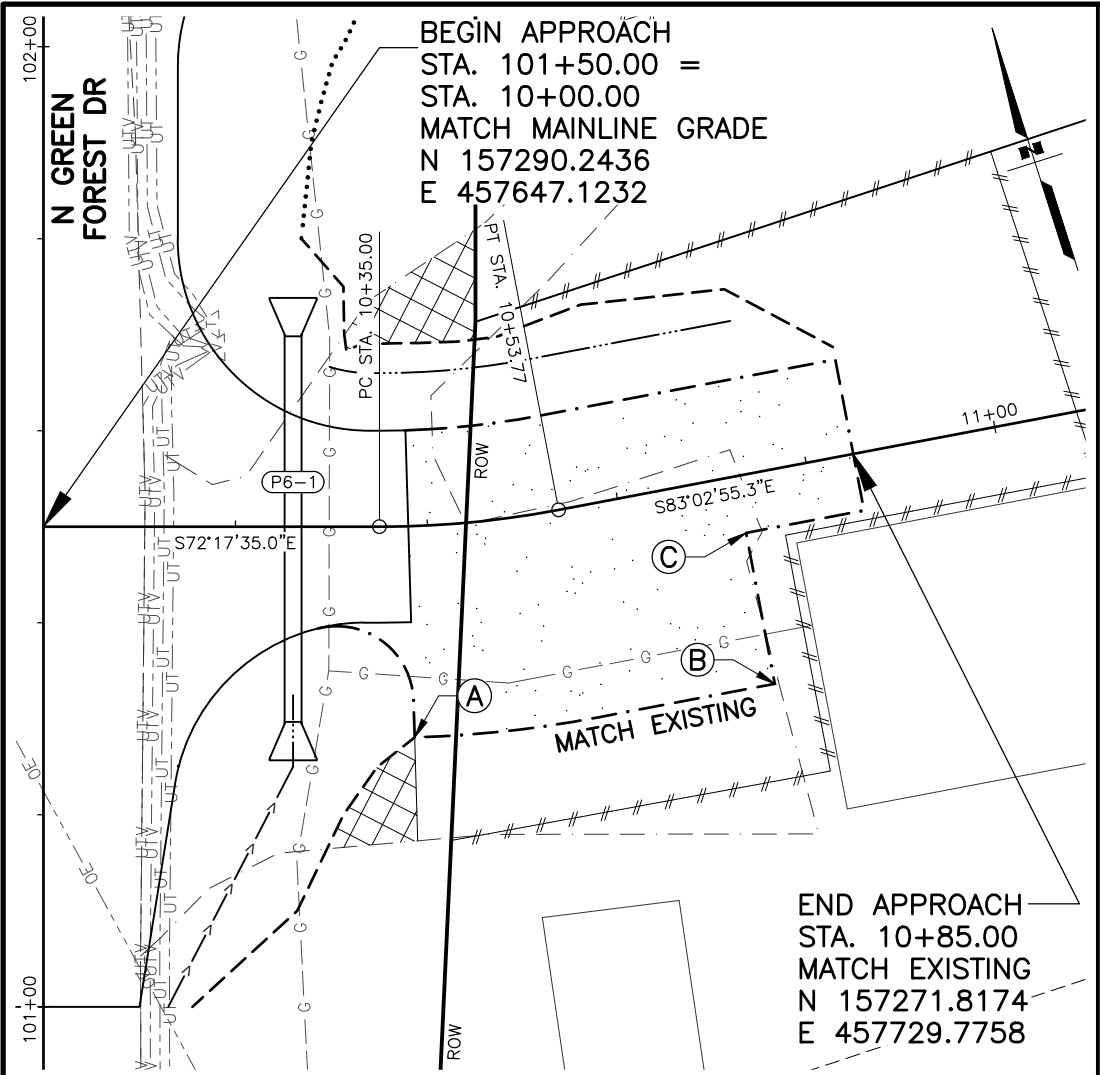
SHEET NO.	TOTAL SHEETS
F13	F18
STATE	YEAR
ALASKA	2024
PROJECT DESIGNATION	
0001630/ CFHWY00453	
NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	



STATE OF ALASKA DOT&PF  
 411 AVIATION AVENUE  
 ANCHORAGE, AK 99502  
 (907) 269-0590

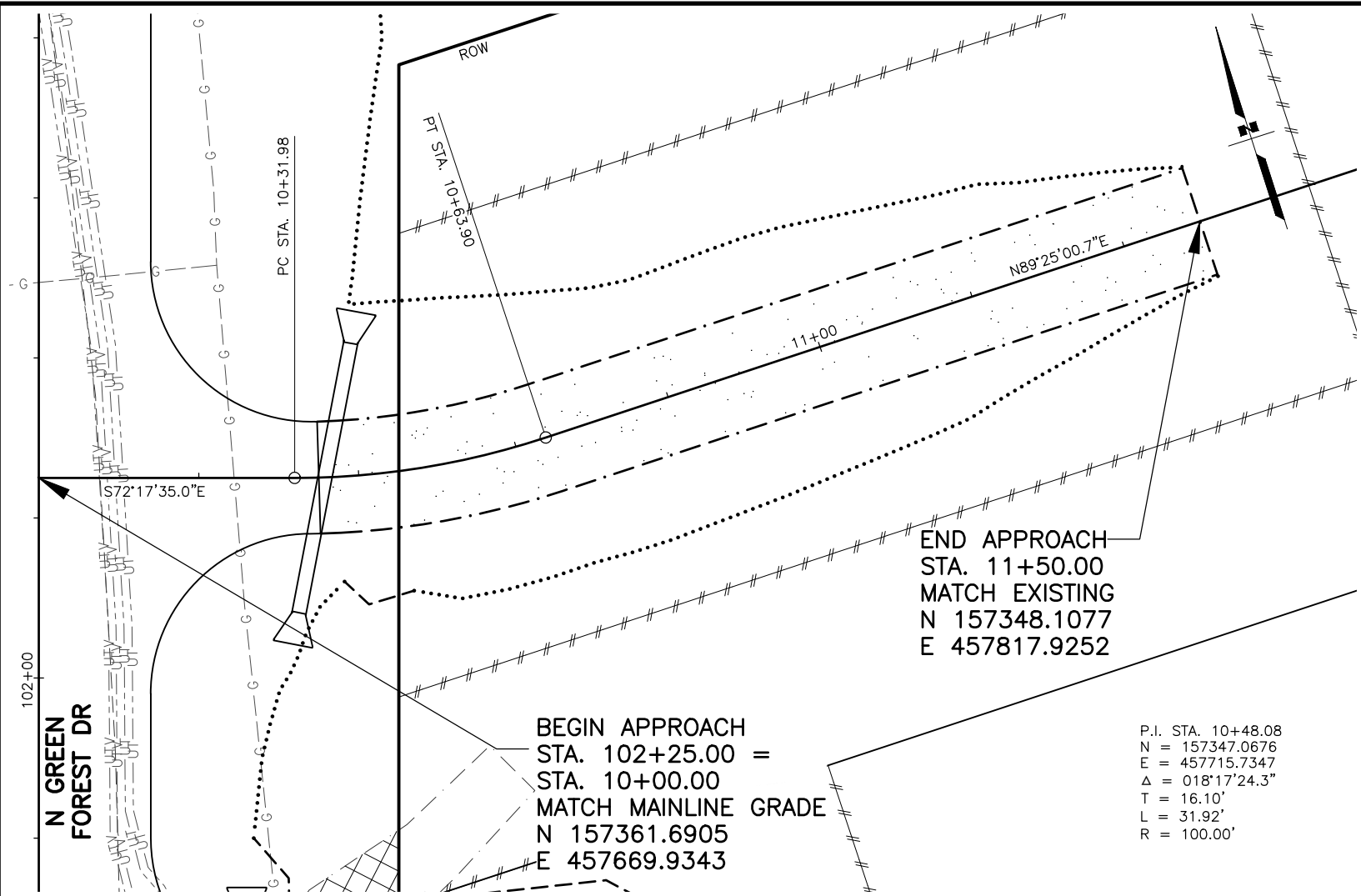
STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
**HSP: BOGARD RD AT  
 ENGSTROM RD & GREEN  
 FOREST DR INT IMP**  
 PLAN AND PROFILE  
 DRIVEWAY STA 1021+85 LT  
 DRIVEWAY STA 1029+11 LT

DRAWING LOCATION: W:\PROJECTS\VISIP BOGARD\_ENGSTROM\_RA - CFHWY00453\PLANSET\00453\_F\_PNP\_APPROACH.DWG  
 DATE: 3/15/2023 12:35 PM  
 SCALE: 1" = 10'  
 DESIGNED BY: ZDK  
 CHECKED BY: KRV  
 DRAFTED BY: PGH



BEGIN APPROACH  
 STA. 101+50.00 =  
 STA. 10+00.00  
 MATCH MAINLINE GRADE  
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 E 457647.1232

END APPROACH  
 STA. 10+85.00  
 MATCH EXISTING  
 N 157271.8174  
 E 457729.7758

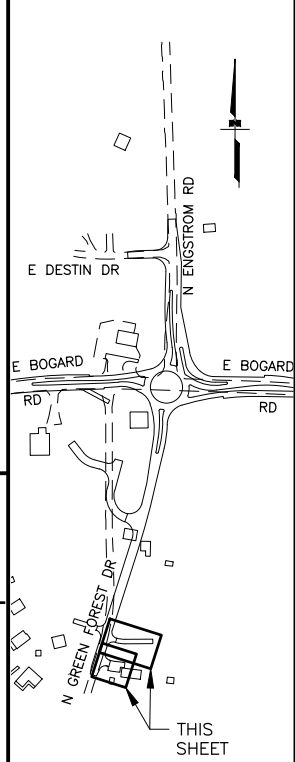


BEGIN APPROACH  
 STA. 102+25.00 =  
 STA. 10+00.00  
 MATCH MAINLINE GRADE  
 N 157361.6905  
 E 457669.9343

END APPROACH  
 STA. 11+50.00  
 MATCH EXISTING  
 N 157348.1077  
 E 457817.9252

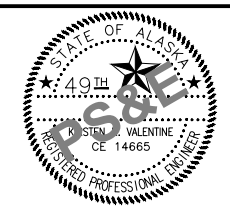
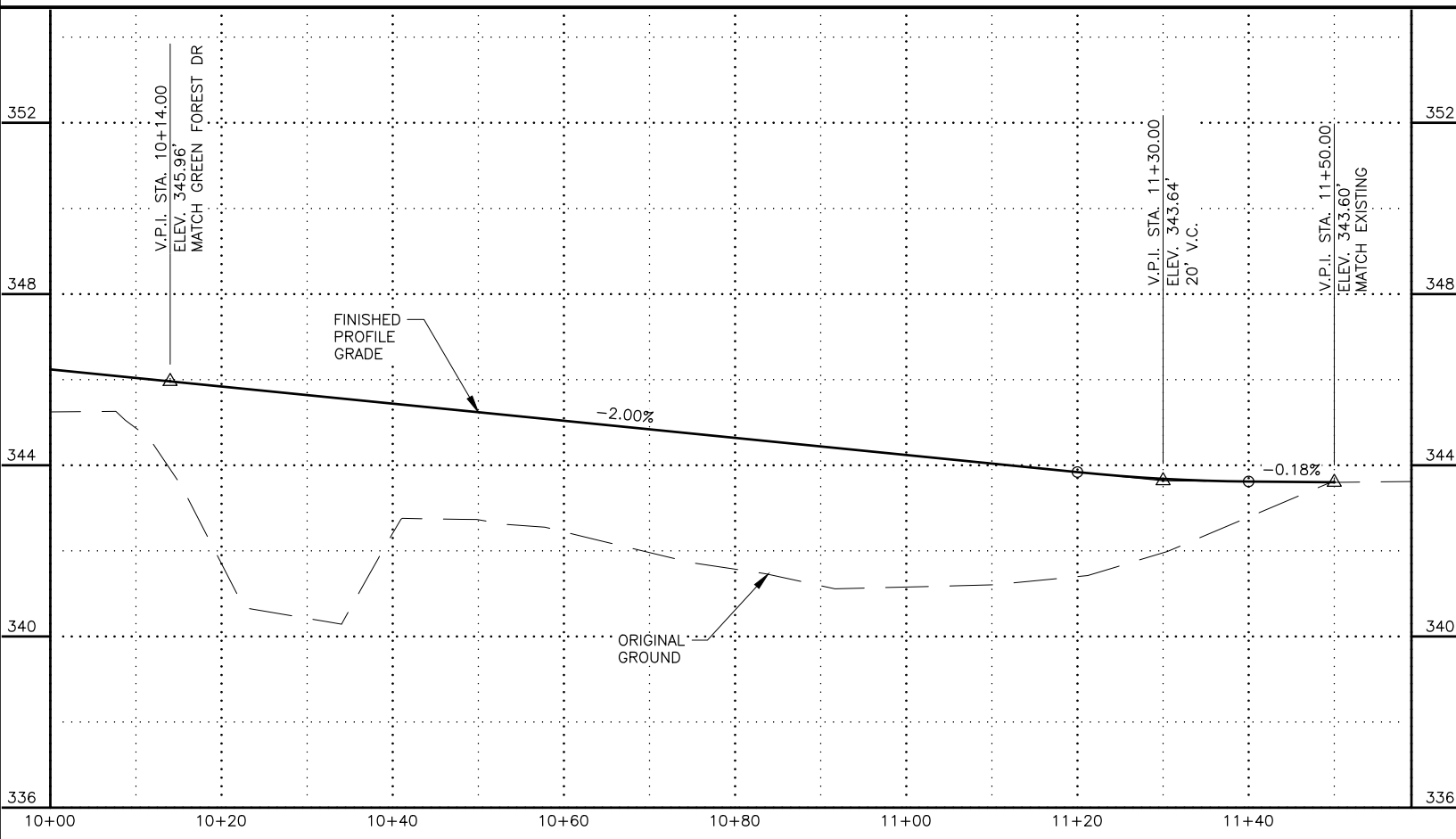
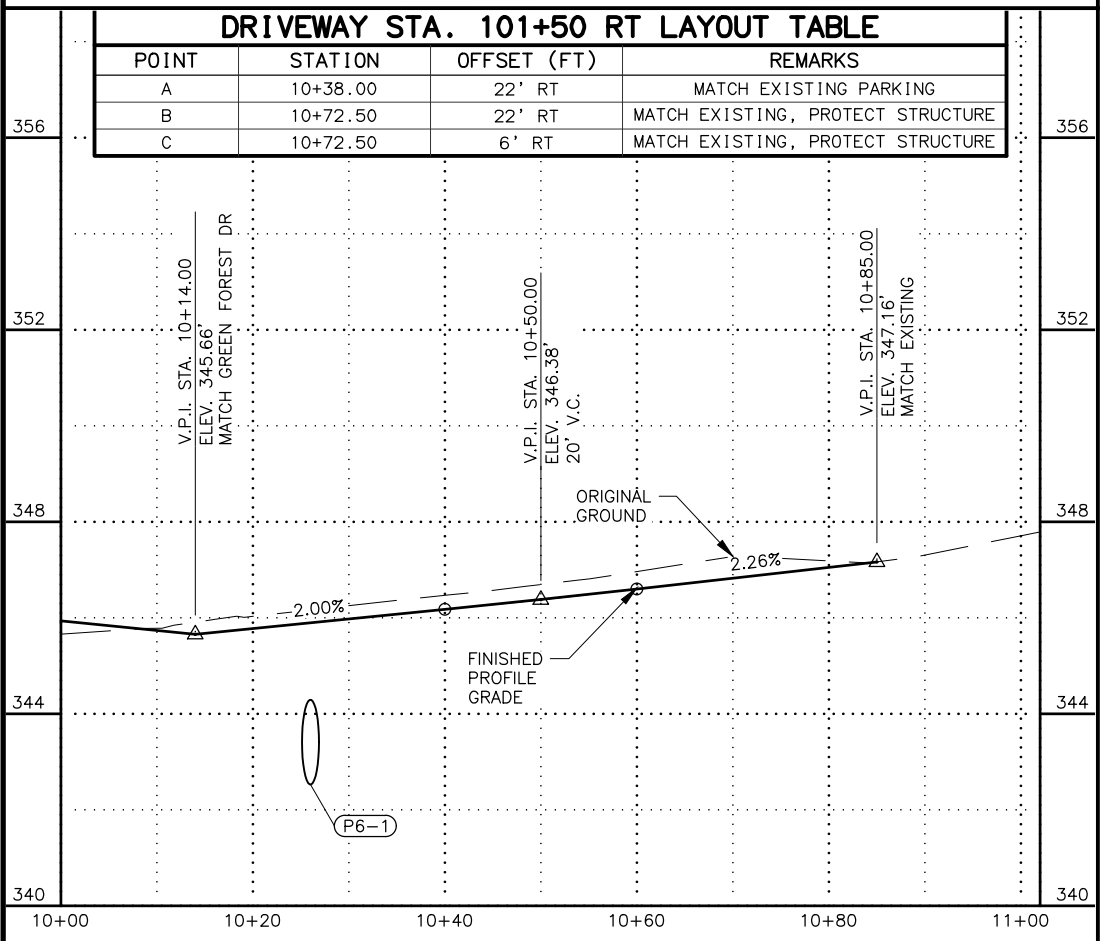
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 N = 157347.0676  
 E = 457715.7347  
 Δ = 018°17'24.3"  
 T = 16.10'  
 L = 31.92'  
 R = 100.00'

SHEET NO.	TOTAL SHEETS
F14	F18
STATE	YEAR
ALASKA	2024
PROJECT DESIGNATION	
0001630/ CFHWY00453	
NO.	REVISION
NO.	REVISION
NO.	REVISION



**DRIVEWAY STA. 101+50 RT LAYOUT TABLE**

POINT	STATION	OFFSET (FT)	REMARKS
A	10+38.00	22' RT	MATCH EXISTING PARKING
B	10+72.50	22' RT	MATCH EXISTING, PROTECT STRUCTURE
C	10+72.50	6' RT	MATCH EXISTING, PROTECT STRUCTURE



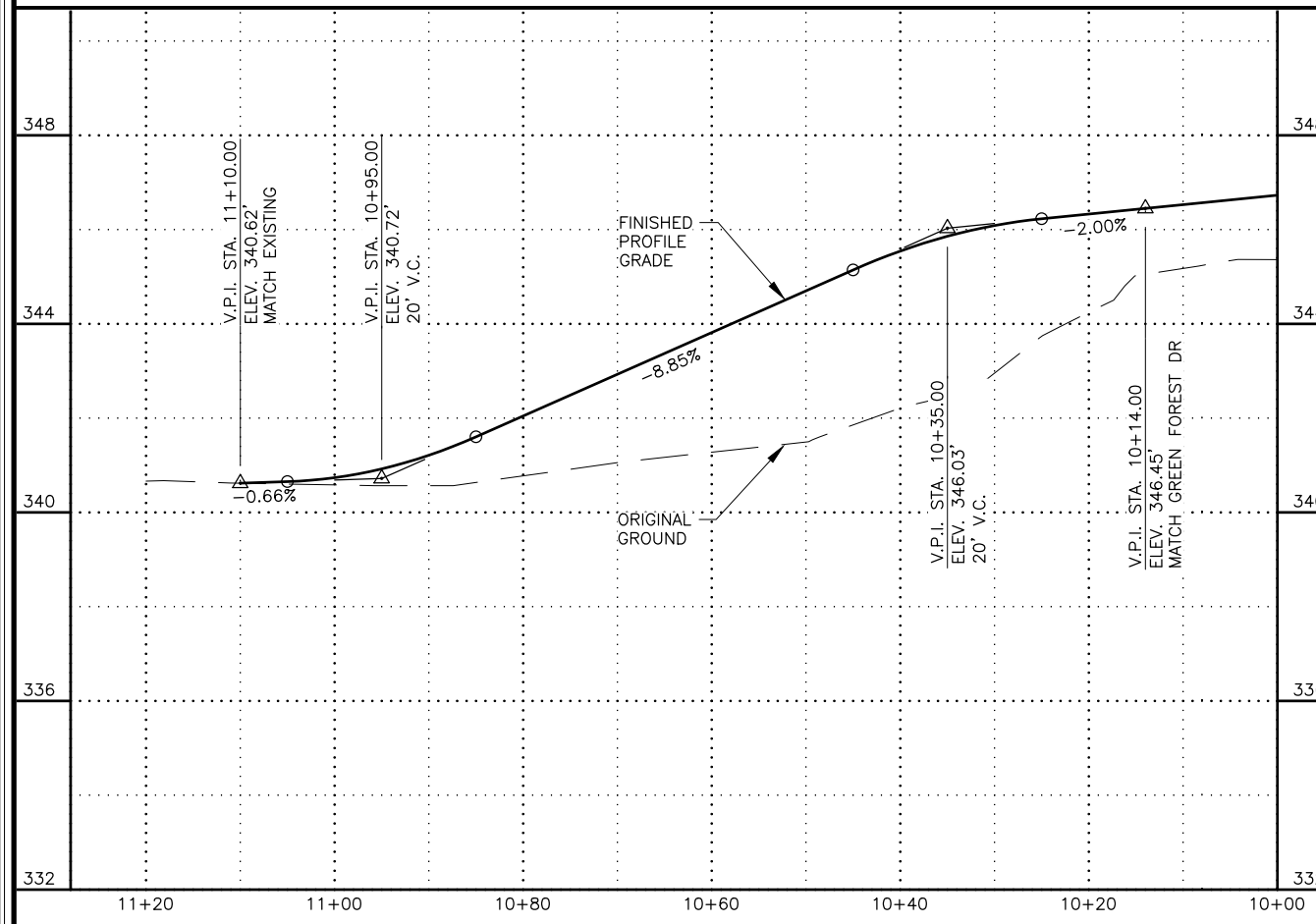
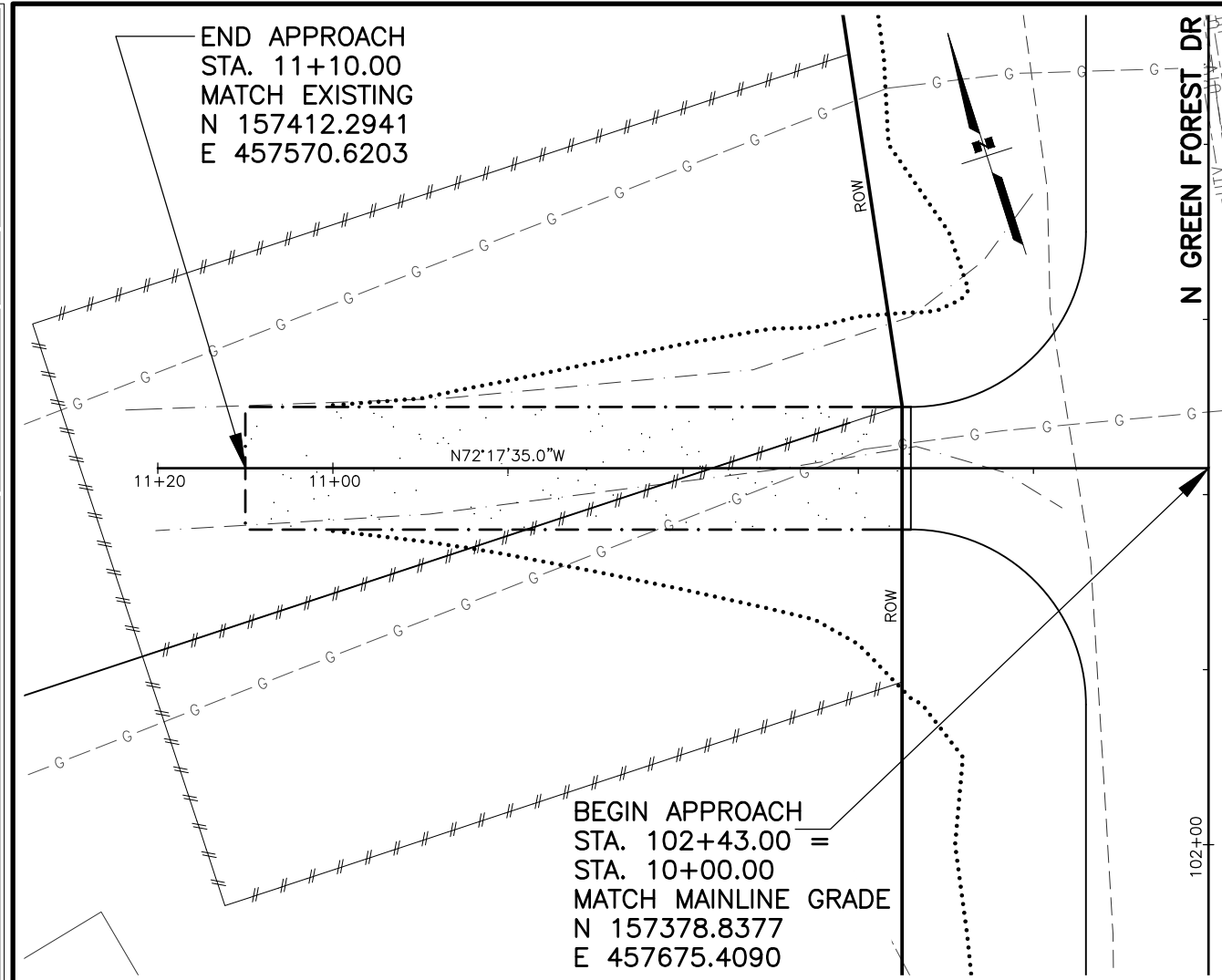
STATE OF ALASKA DOT&PF  
 411 AVIATION AVENUE  
 ANCHORAGE, AK 99502  
 (907) 269-0590

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 HSIP: BOGARD RD AT  
 ENGSTROM RD & GREEN  
 FOREST DR INT IMP  
 PLAN AND PROFILE  
 DRIVEWAY STA 101+50 RT  
 DRIVEWAY STA 102+25 RT

DESIGNED BY: ZDK  
 CHECKED BY: KRV  
 DRAFTED BY: PGH

DATE: 3/15/2023 12:35 PM  
 TIME: 12:35 PM  
 SCALE: 1" = 10'

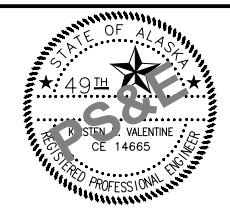
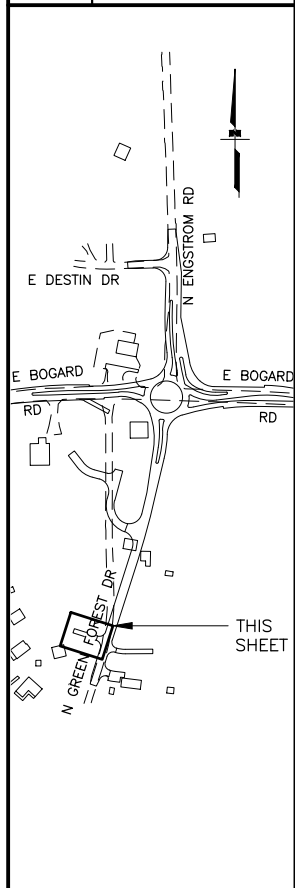
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SHEET NO.	TOTAL SHEETS
F15	F18
STATE	YEAR
ALASKA	2024

PROJECT DESIGNATION  
**0001630/  
 CFHWY00453**

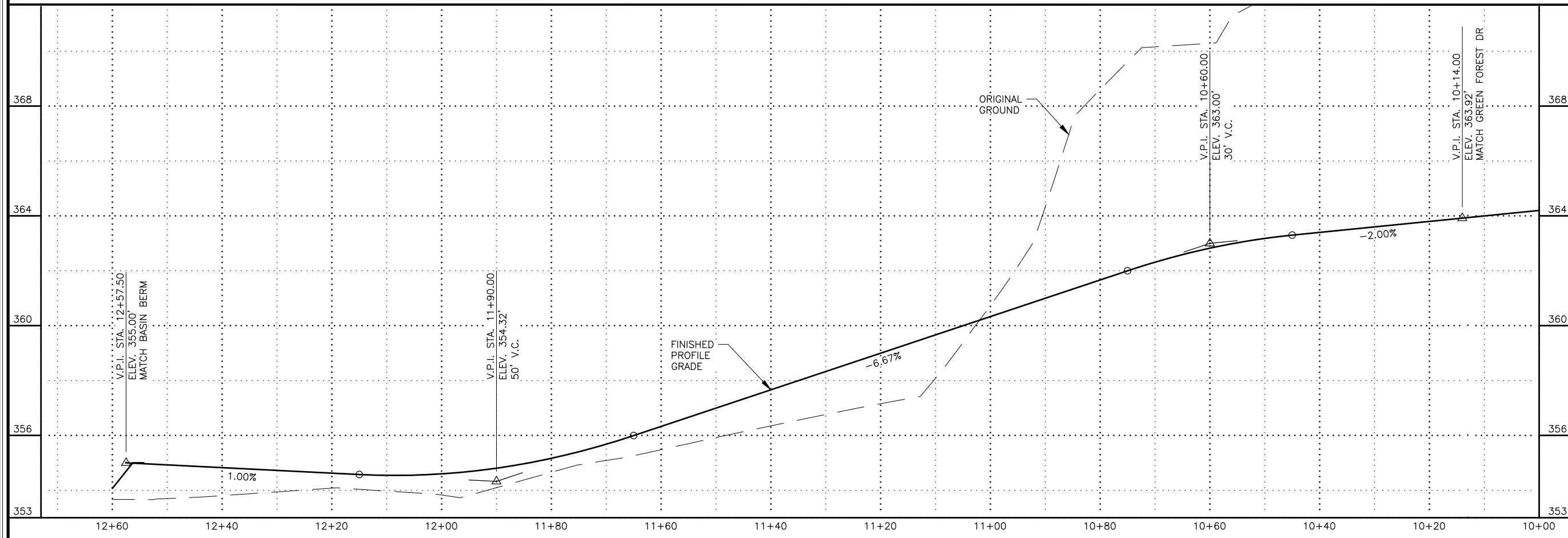
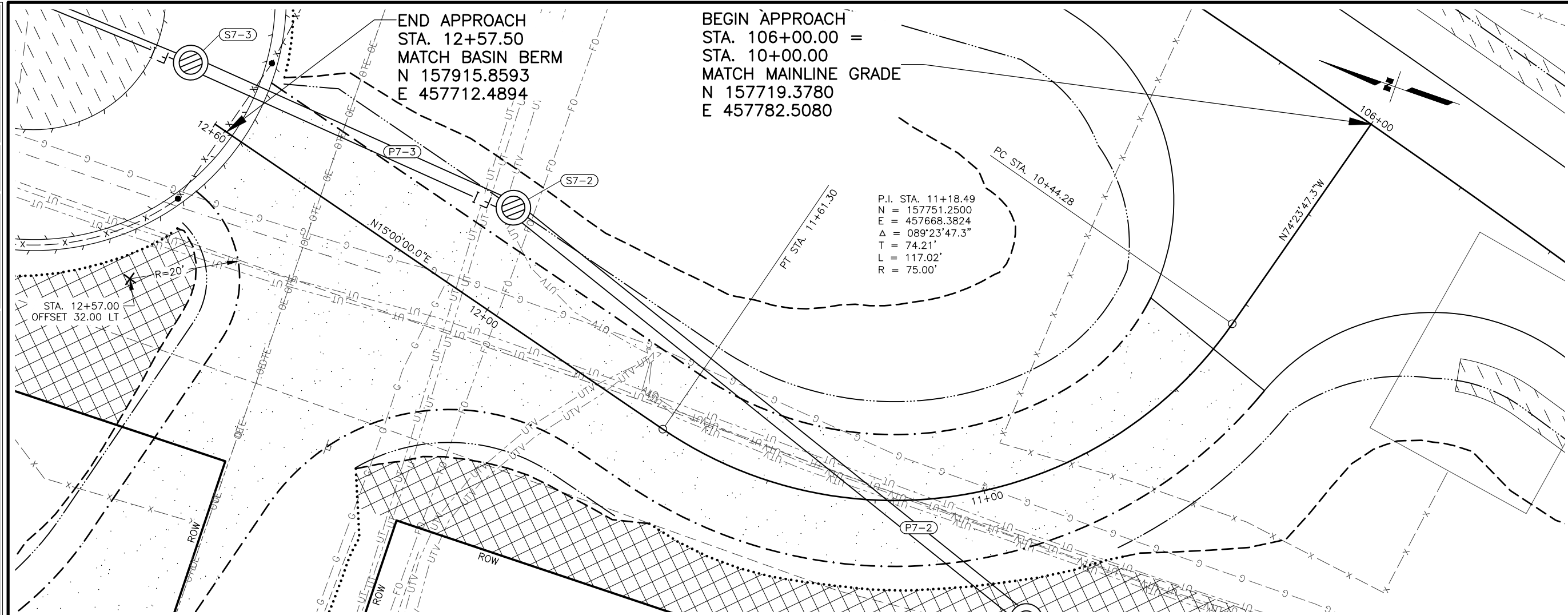
NO.	REVISION



STATE OF ALASKA DOT&PF  
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STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
**HSIP: BOGARD RD AT  
 ENGSTROM RD & GREEN  
 FOREST DR INT IMP**  
 PLAN AND PROFILE  
 DRIVEWAY STA 102+45 LT

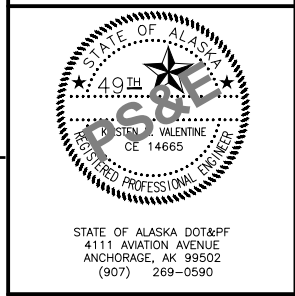
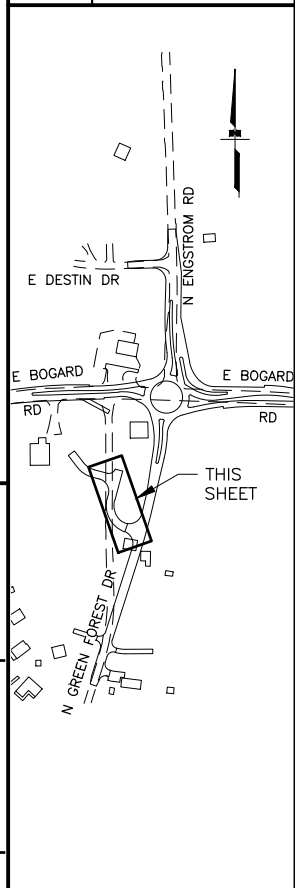
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 TIME: 12:35 PM  
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 DESIGNED BY: ZDK  
 CHECKED BY: KRV  
 DRAFTED BY: ZDK



SHEET NO.	TOTAL SHEETS
F16	F18
STATE	YEAR
ALASKA	2024

PROJECT DESIGNATION  
**0001630/  
 CFHWY00453**

NO.	REVISION



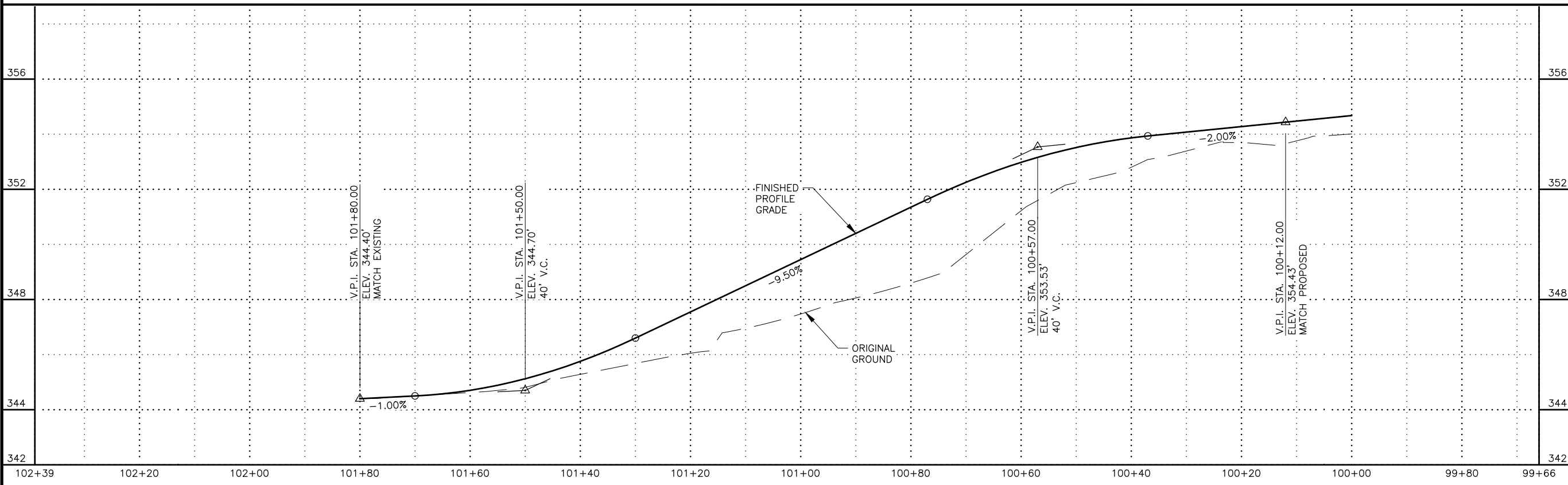
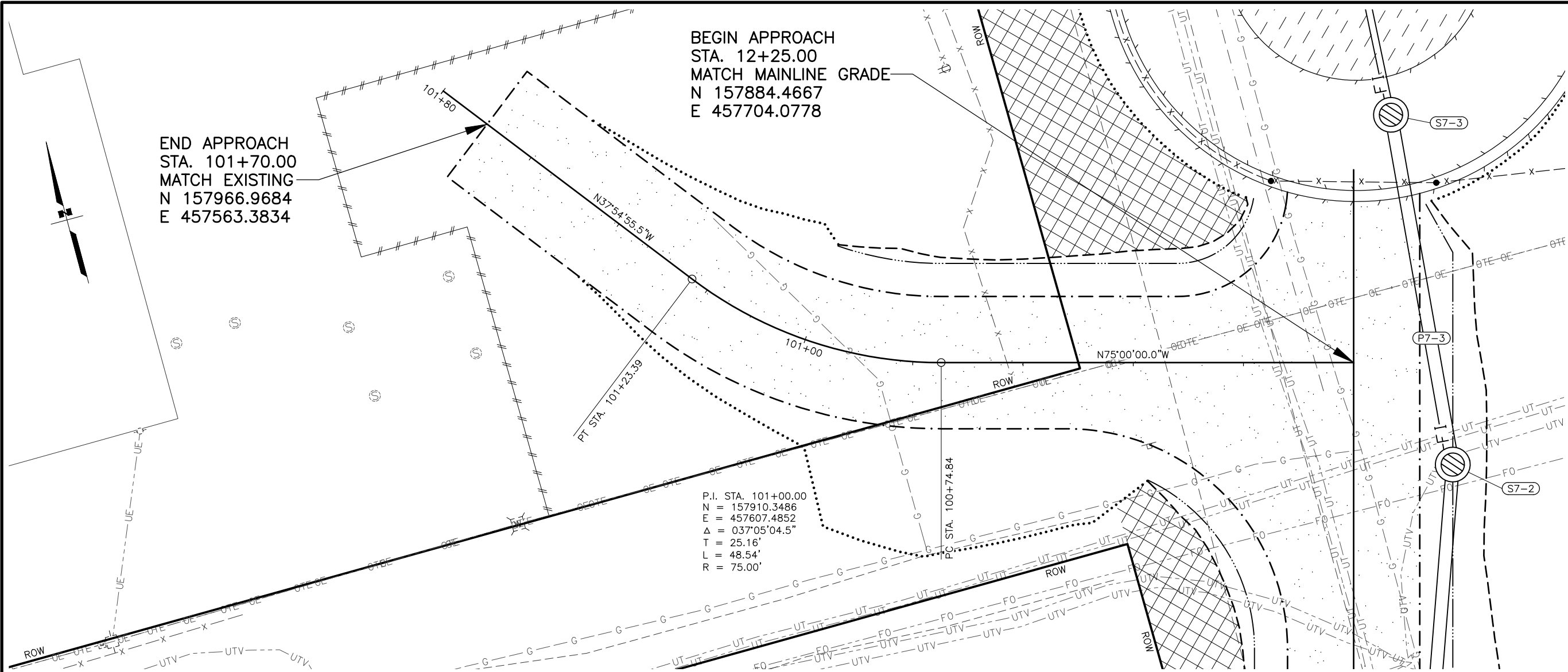
STATE OF ALASKA  
 DOT&PF  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES

HSIP: BOGARD RD AT  
 ENGSTROM RD & GREEN  
 FOREST DR INT IMP

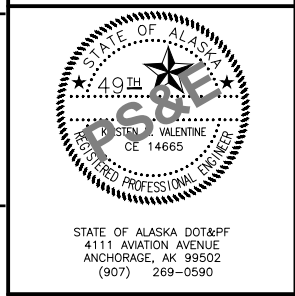
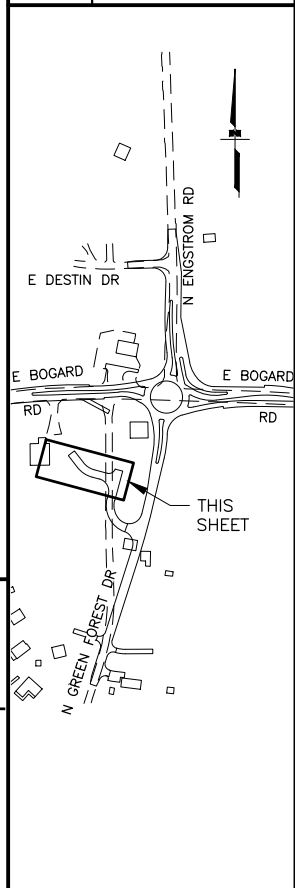
PLAN AND PROFILE  
 DRIVEWAY STA 106+00 LT



DESIGNED BY: ZDK  
 CHECKED BY: KRV  
 DRAFTED BY: ZDK  
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 TIME: 12:35 PM  
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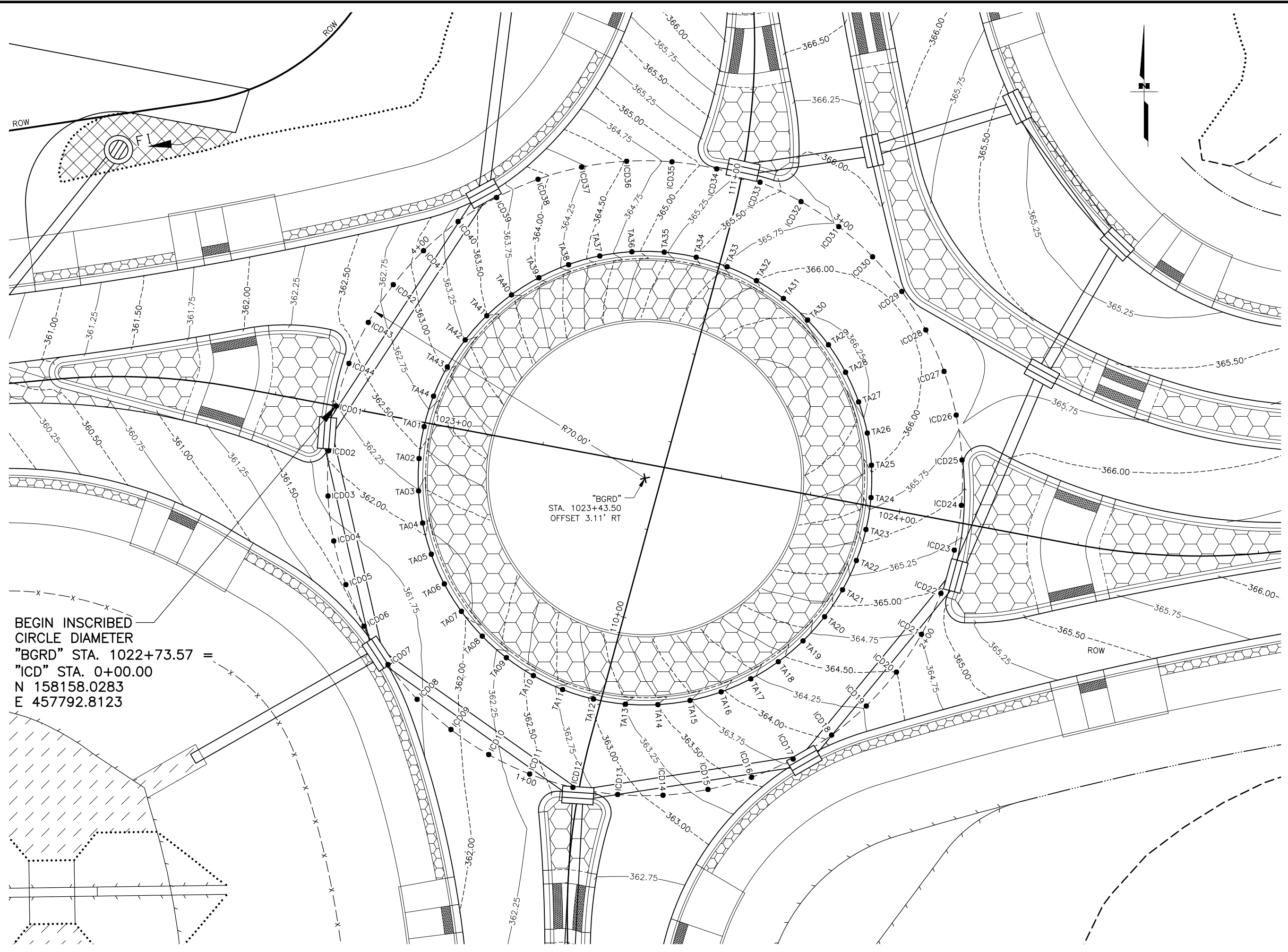
SHEET NO.	TOTAL SHEETS
F17	F18
STATE	YEAR
ALASKA	2024
PROJECT DESIGNATION	
0001630/ CFHWY00453	
NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	



STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 HSP: BOGARD RD AT  
 ENGSTROM RD & GREEN  
 FOREST DR INT IMP  
 PLAN AND PROFILE  
 DRIVEWAY  
 STA 106+00 LT A

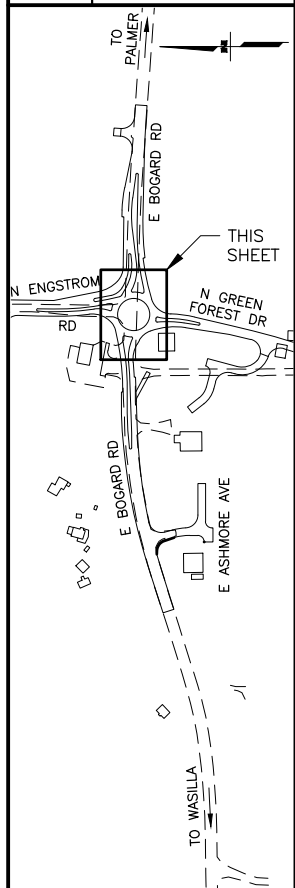


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 DRAWING LOCATION: W:\PROJECTS\HSP BOGARD\_ENGSTRM\_RA - CFHWY00453\PLANSET\00453\_G01\_IDC & TRUCK APRON.DWG



BEGIN INSCRIBED  
 CIRCLE DIAMETER  
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 "ICD" STA. 0+00.00  
 N 158158.0283  
 E 457792.8123

SHEET NO.	TOTAL SHEETS
G01	G13
STATE	YEAR
ALASKA	2024
PROJECT DESIGNATION	
0001630/ CFHWY00453	
NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	

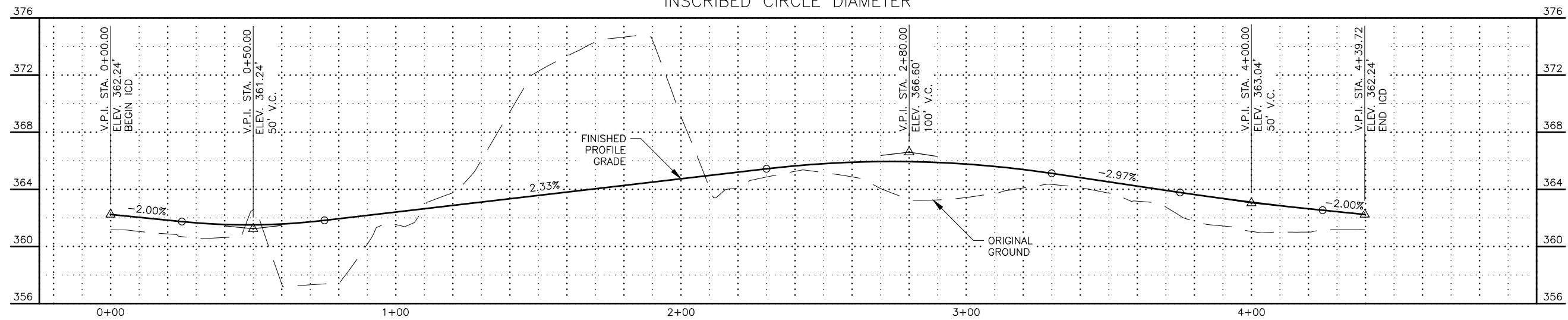


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STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 HSP: BOGARD RD AT  
 ENGSTRM RD & GREEN  
 FOREST DR INT IMP  
 ROUNDABOUT  
 IDC & TRUCK APRON  
 GRADING PLAN

ZDK DESIGNED BY: KRV CHECKED BY: ZDK DRAFTED BY: ZDK  
 SCALE: 1" = 20'  
 DATE: 3/15/2023 12:36 PM  
 TIME: 12:36 PM  
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INSCRIBED CIRCLE DIAMETER



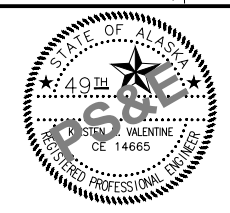
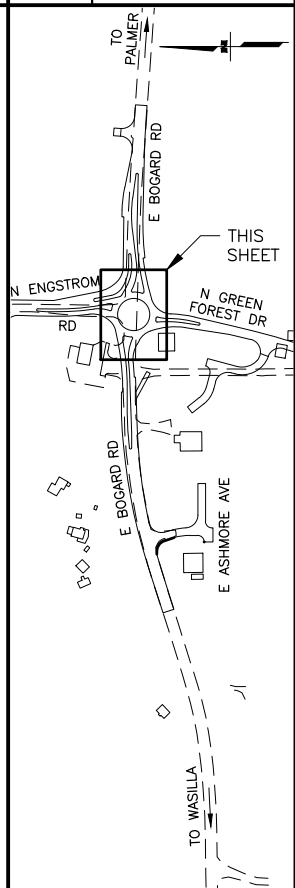
SHEET NO.	TOTAL SHEETS
G02	G13
STATE	YEAR
ALASKA	2024
PROJECT DESIGNATION	
0001630/ CFHWY00453	
NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	

INSCRIBED CIRCLE DIAMETER GRADING POINTS

POINT	ALIGNMENT	STATION	OFFSET (FT)	ELEVATION (FT)	REMARKS
ICD01	"ICD"	0+00.00	CL	362.24	
ICD02	"ICD"	0+10.00	CL	362.04	
ICD03	"ICD"	0+20.00	CL	361.84	
ICD04	"ICD"	0+30.00	CL	361.65	
ICD05	"ICD"	0+40.00	CL	361.54	
ICD06	"ICD"	0+50.00	CL	361.51	
ICD07	"ICD"	0+60.00	CL	361.58	
ICD08	"ICD"	0+70.00	CL	361.72	
ICD09	"ICD"	0+80.00	CL	361.94	
ICD10	"ICD"	0+90.00	CL	362.17	
ICD11	"ICD"	1+00.00	CL	362.41	
ICD12	"ICD"	1+10.00	CL	362.64	
ICD13	"ICD"	1+20.00	CL	362.87	
ICD14	"ICD"	1+30.00	CL	363.11	
ICD15	"ICD"	1+40.00	CL	363.34	
ICD16	"ICD"	1+50.00	CL	363.57	
ICD17	"ICD"	1+60.00	CL	363.80	
ICD18	"ICD"	1+70.00	CL	364.04	
ICD19	"ICD"	1+80.00	CL	364.27	
ICD20	"ICD"	1+90.00	CL	364.50	
ICD21	"ICD"	2+00.00	CL	364.74	
ICD22	"ICD"	2+10.00	CL	364.97	
ICD23	"ICD"	2+20.00	CL	365.20	
ICD24	"ICD"	2+30.00	CL	365.44	
ICD25	"ICD"	2+40.00	CL	365.64	
ICD26	"ICD"	2+50.00	CL	365.80	
ICD27	"ICD"	2+60.00	CL	365.90	
ICD28	"ICD"	2+70.00	CL	365.94	
ICD29	"ICD"	2+80.00	CL	365.94	
ICD30	"ICD"	2+90.00	CL	365.88	
ICD31	"ICD"	3+00.00	CL	365.77	
ICD32	"ICD"	3+10.00	CL	365.60	
ICD33	"ICD"	3+20.00	CL	365.39	
ICD34	"ICD"	3+30.00	CL	365.12	
ICD35	"ICD"	3+40.00	CL	364.82	
ICD36	"ICD"	3+50.00	CL	364.52	
ICD37	"ICD"	3+60.00	CL	364.22	
ICD38	"ICD"	3+70.00	CL	363.93	
ICD39	"ICD"	3+80.00	CL	363.63	
ICD40	"ICD"	3+90.00	CL	363.36	
ICD41	"ICD"	4+00.00	CL	363.10	
ICD42	"ICD"	4+10.00	CL	362.86	
ICD43	"ICD"	4+20.00	CL	362.64	
ICD44	"ICD"	4+30.00	CL	362.44	

TRUCK APRON GRADING POINTS

POINT	ALIGNMENT	STATION	OFFSET (FT)	ELEVATION (FT)	REMARKS
TA01	"ICD"	0+00.00	20.0' LT	362.64	
TA02	"ICD"	0+10.00	20.0' LT	362.44	
TA03	"ICD"	0+20.00	20.0' LT	362.24	
TA04	"ICD"	0+30.00	20.0' LT	362.05	
TA05	"ICD"	0+40.00	20.0' LT	361.94	
TA06	"ICD"	0+50.00	20.0' LT	361.91	
TA07	"ICD"	0+60.00	20.0' LT	361.97	
TA08	"ICD"	0+70.00	20.0' LT	362.12	
TA09	"ICD"	0+80.00	20.0' LT	362.34	
TA10	"ICD"	0+90.00	20.0' LT	362.57	
TA11	"ICD"	1+00.00	20.0' LT	362.81	
TA12	"ICD"	1+10.00	20.0' LT	363.04	
TA13	"ICD"	1+20.00	20.0' LT	363.27	
TA14	"ICD"	1+30.00	20.0' LT	363.51	
TA15	"ICD"	1+40.00	20.0' LT	363.74	
TA16	"ICD"	1+50.00	20.0' LT	363.97	
TA17	"ICD"	1+60.00	20.0' LT	364.20	
TA18	"ICD"	1+70.00	20.0' LT	364.44	
TA19	"ICD"	1+80.00	20.0' LT	364.67	
TA20	"ICD"	1+90.00	20.0' LT	364.90	
TA21	"ICD"	2+00.00	20.0' LT	365.14	
TA22	"ICD"	2+10.00	20.0' LT	365.37	
TA23	"ICD"	2+20.00	20.0' LT	365.60	
TA24	"ICD"	2+30.00	20.0' LT	365.84	
TA25	"ICD"	2+40.00	20.0' LT	366.04	
TA26	"ICD"	2+50.00	20.0' LT	366.20	
TA27	"ICD"	2+60.00	20.0' LT	366.30	
TA28	"ICD"	2+70.00	20.0' LT	366.34	
TA29	"ICD"	2+80.00	20.0' LT	366.34	
TA30	"ICD"	2+90.00	20.0' LT	366.28	
TA31	"ICD"	3+00.00	20.0' LT	366.17	
TA32	"ICD"	3+10.00	20.0' LT	366.00	
TA33	"ICD"	3+20.00	20.0' LT	365.79	
TA34	"ICD"	3+30.00	20.0' LT	365.52	
TA35	"ICD"	3+40.00	20.0' LT	365.22	
TA36	"ICD"	3+50.00	20.0' LT	364.92	
TA37	"ICD"	3+60.00	20.0' LT	364.62	
TA38	"ICD"	3+70.00	20.0' LT	364.33	
TA39	"ICD"	3+80.00	20.0' LT	364.03	
TA40	"ICD"	3+90.00	20.0' LT	363.76	
TA41	"ICD"	4+00.00	20.0' LT	363.50	
TA42	"ICD"	4+10.00	20.0' LT	363.26	
TA43	"ICD"	4+20.00	20.0' LT	363.04	
TA44	"ICD"	4+30.00	20.0' LT	362.84	



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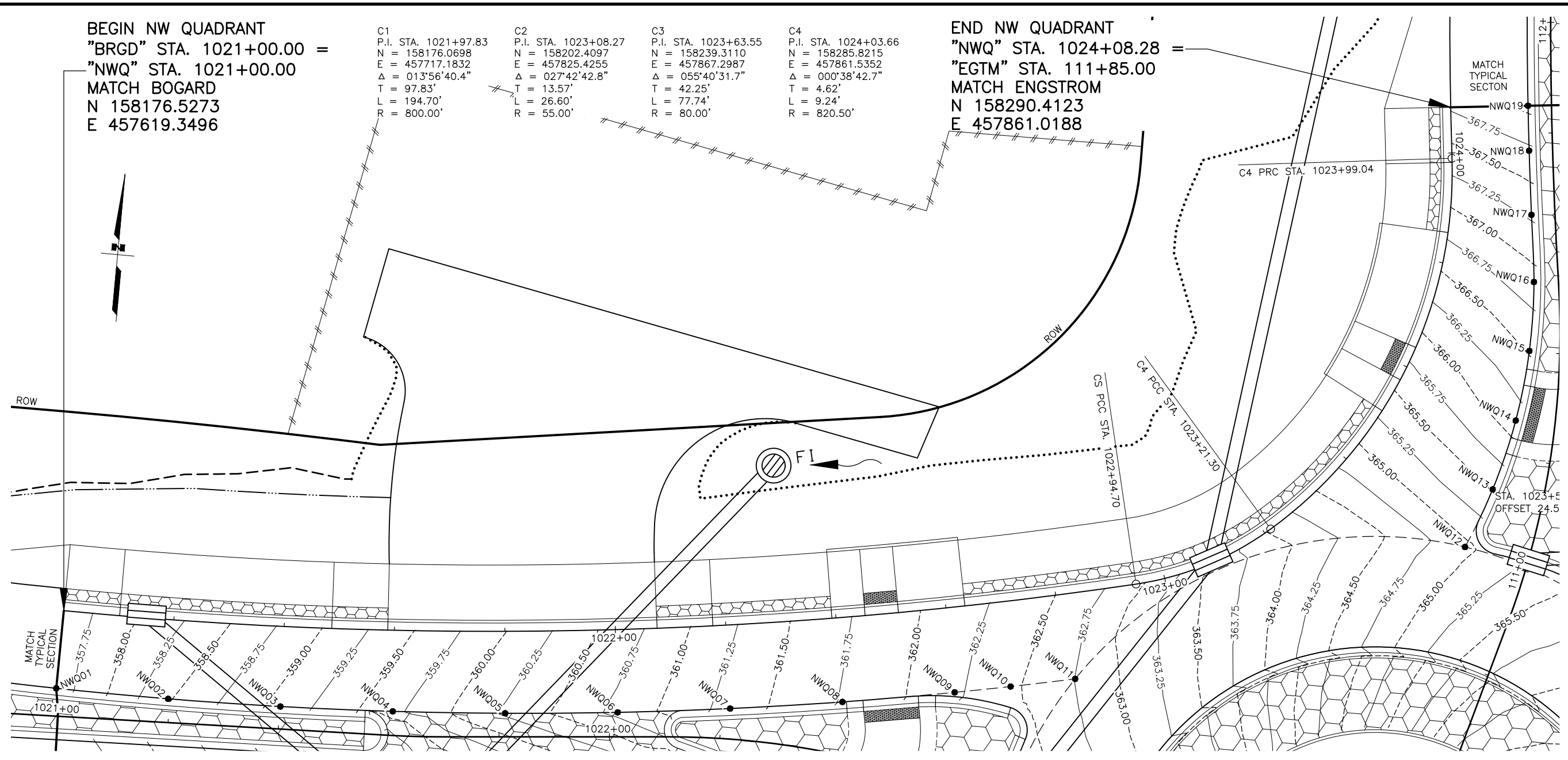
STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 HSP: BOGARD RD AT  
 ENGSTROM RD & GREEN  
 FOREST DR INT IMP  
 ROUNDABOUT  
 ICD & TRUCK APRON  
 GRADING PLAN

ZDK DESIGNED BY: KRV CHECKED BY: ZDK DRAFTED BY: ZDK  
 SCALE: 1"=10'/20'  
 DATE: 3/15/2023 12:36 PM  
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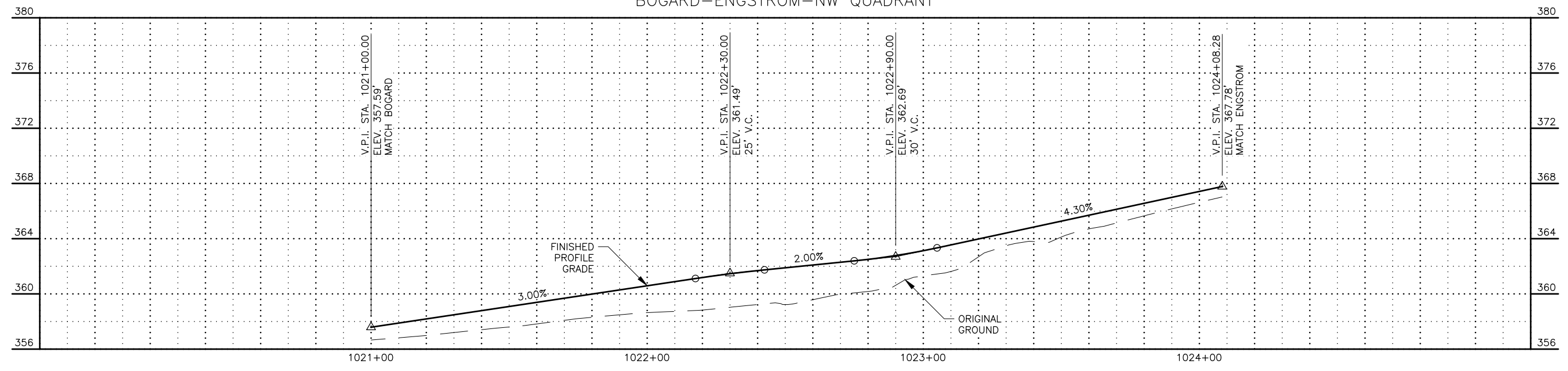
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 "BRGD" STA. 1021+00.00 =  
 "NWQ" STA. 1021+00.00  
 MATCH BOGARD  
 N 158176.5273  
 E 457619.3496

C1 P.I. STA. 1021+97.83 N = 158176.0698 E = 457717.1832 Δ = 013°56'40.4" T = 97.83' L = 194.70' R = 800.00'	C2 P.I. STA. 1023+08.27 N = 158202.4097 E = 457825.4255 Δ = 027°42'42.8" T = 13.57' L = 26.60' R = 55.00'	C3 P.I. STA. 1023+63.55 N = 158239.3110 E = 457867.2987 Δ = 055°40'31.7" T = 42.25' L = 77.74' R = 80.00'	C4 P.I. STA. 1024+03.66 N = 158285.8215 E = 457861.5352 Δ = 000°38'42.7" T = 4.62' L = 9.24' R = 820.50'
--	--	--	---

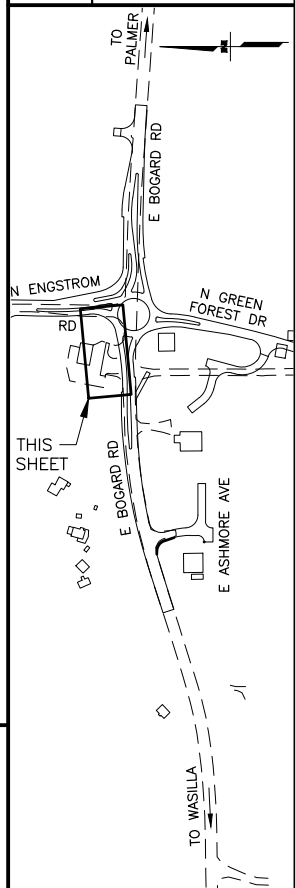
END NW QUADRANT  
 "NWQ" STA. 1024+08.28 =  
 "EGTM" STA. 111+85.00  
 MATCH ENGSTROM  
 N 158290.4123  
 E 457861.0188



BOGARD-ENGSTROM-NW QUADRANT



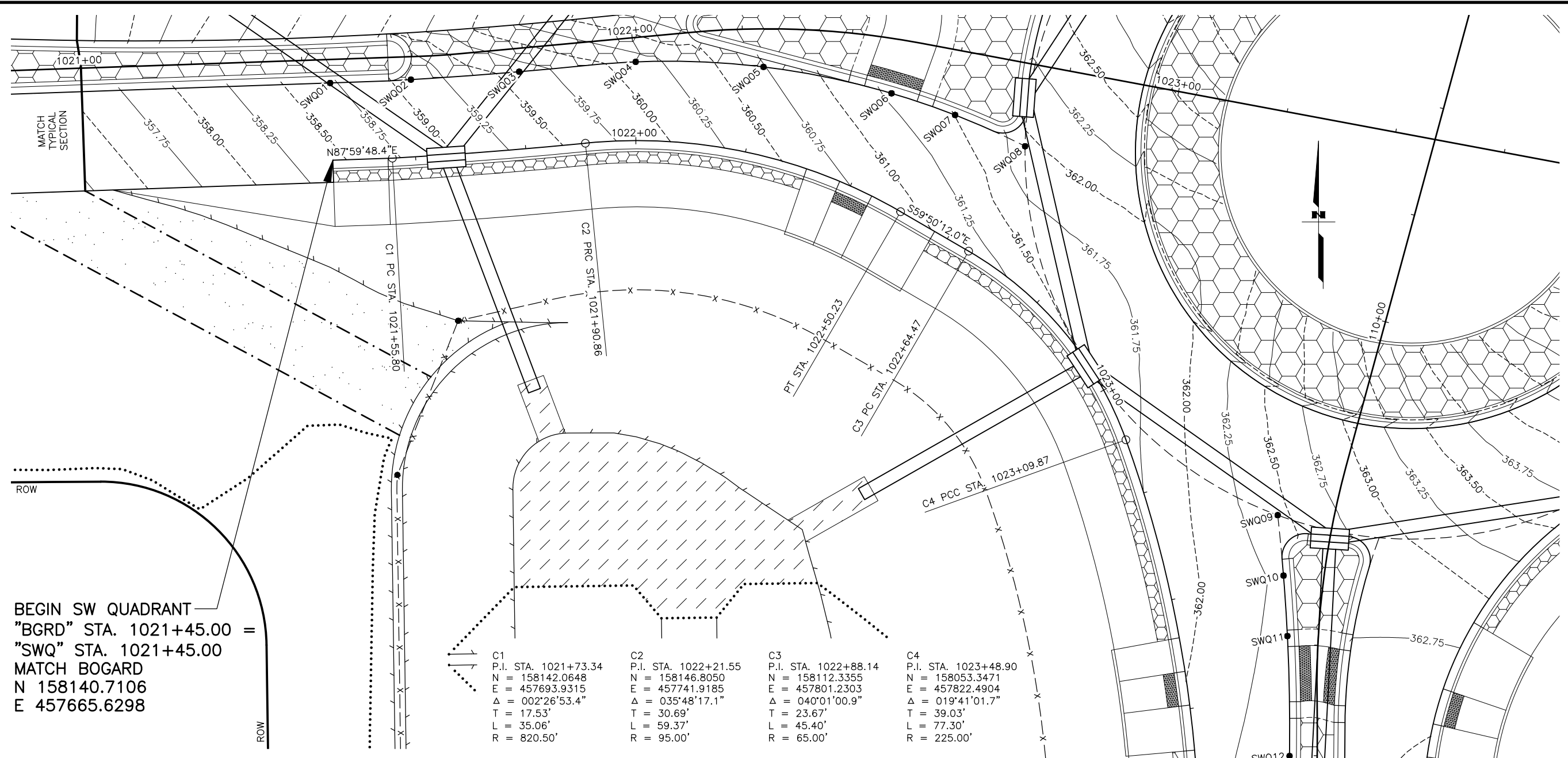
SHEET NO.	TOTAL SHEETS
G03	G13
STATE	YEAR
ALASKA	2024
PROJECT DESIGNATION	
0001630/ CFHWY00453	
NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	



STATE OF ALASKA DOT&PF  
 4111 AVIATION AVENUE  
 ANCHORAGE, AK 99502  
 (907) 269-0590

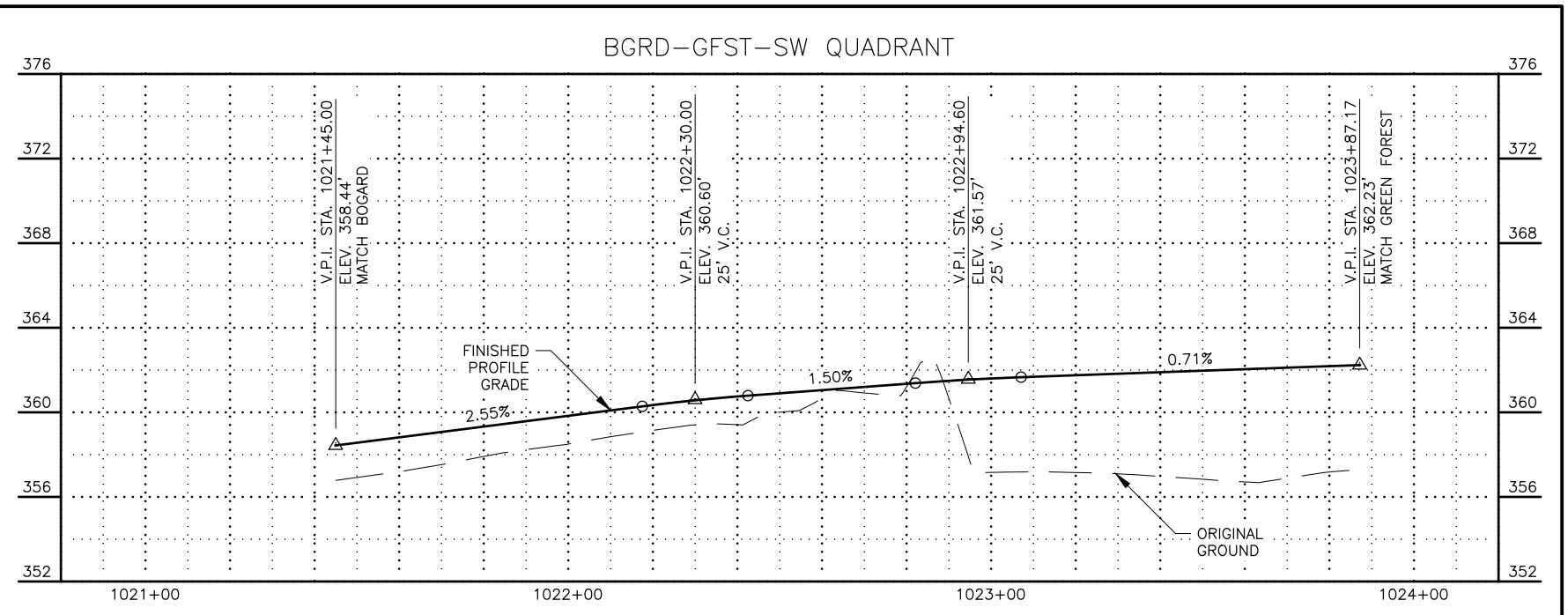
STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 HSP: BOGARD RD AT  
 ENGSTROM RD & GREEN  
 FOREST DR INT IMP  
 NORTHWEST QUADRANT  
 GRADING PLAN

ZDK DESIGNED BY: KRV CHECKED BY: ZDK DRAFTED BY: ZDK  
 SCALE: 1"=10'/20'  
 DATE: 3/15/2023 TIME: 12:36 PM  
 DRAWING LOCATION: W:\PROJECTS\HSIP\_BOGARD\_ENGSTROM\_RA - CFHWY00453\PLANSET\00453\_603\_QUADRANTS.DWG



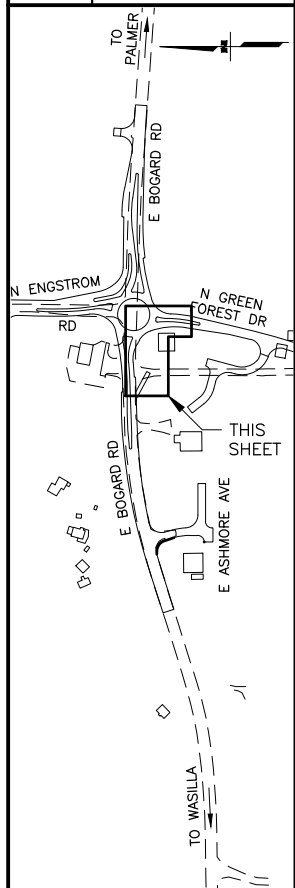
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 "BGRD" STA. 1021+45.00 =  
 "SWQ" STA. 1021+45.00  
 MATCH BOGARD  
 N 158140.7106  
 E 457665.6298

C1	C2	C3	C4
P.I. STA. 1021+73.34	P.I. STA. 1022+21.55	P.I. STA. 1022+88.14	P.I. STA. 1023+48.90
N = 158142.0648	N = 158146.8050	N = 158112.3355	N = 158053.3471
E = 457693.9315	E = 457741.9185	E = 457801.2303	E = 457822.4904
Δ = 002°26'53.4"	Δ = 035°48'17.1"	Δ = 040°01'00.9"	Δ = 019°41'01.7"
T = 17.53'	T = 30.69'	T = 23.67'	T = 39.03'
L = 35.06'	L = 59.37'	L = 45.40'	L = 77.30'
R = 820.50'	R = 95.00'	R = 65.00'	R = 225.00'



END SW QUADRANT  
 "SWQ" STA. 1023+87.17 =  
 "GFST" STA. 109+00.00  
 MATCH GREEN FOREST  
 N 158014.3135  
 E 457822.5830

SHEET NO.	TOTAL SHEETS
G04	G13
STATE	YEAR
ALASKA	2024
PROJECT DESIGNATION	
0001630/ CFHWY00453	
NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	

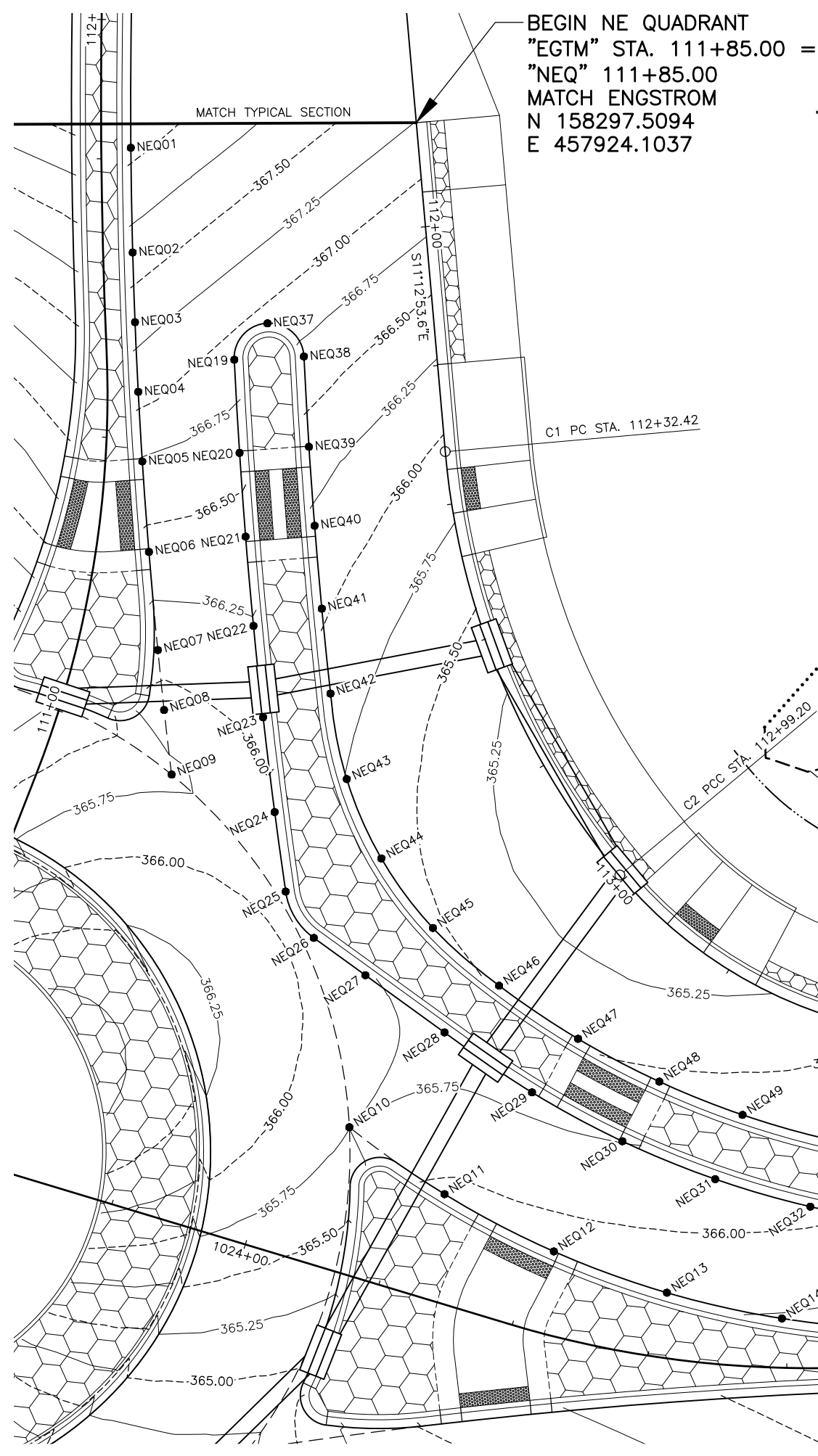


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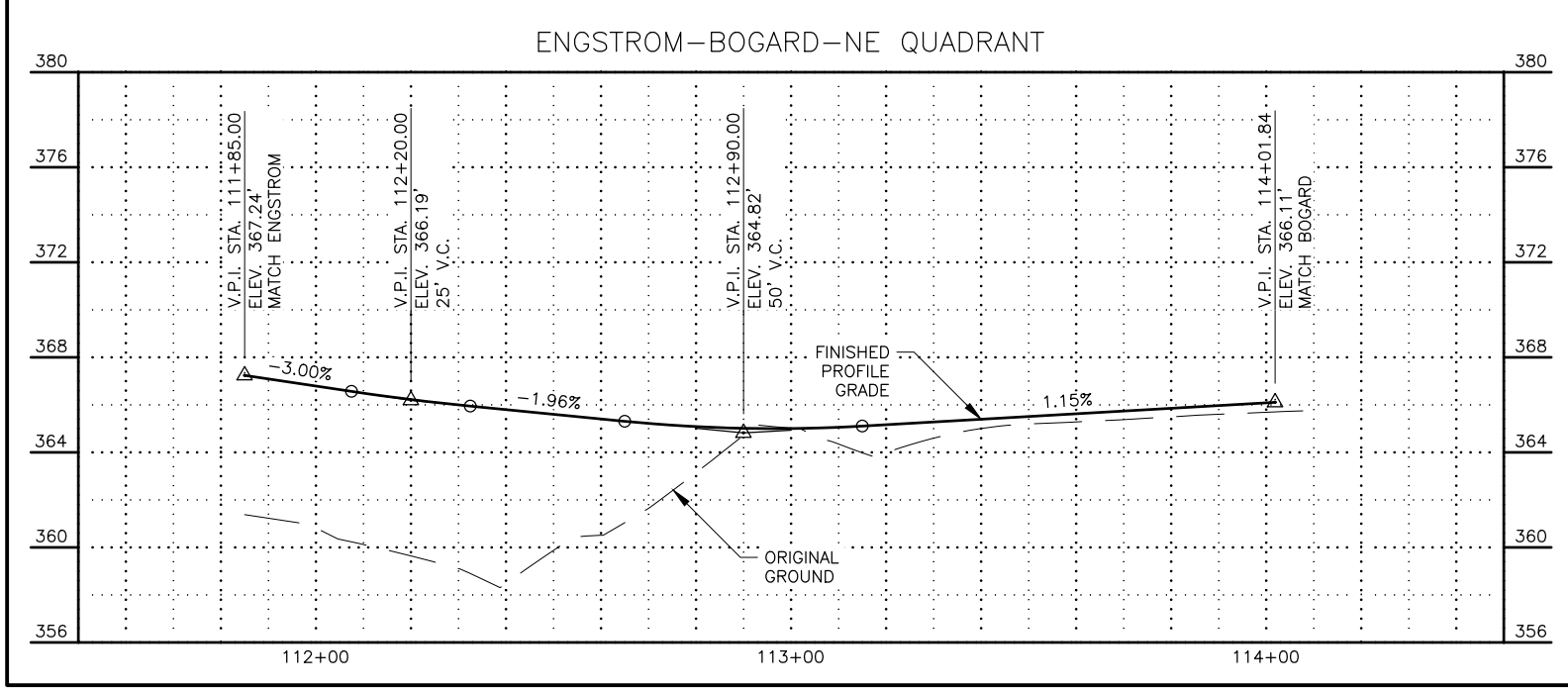
STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 HSIP: BOGARD RD AT  
 ENGSTROM RD & GREEN  
 FOREST DR INT IMP  
 SOUTHWEST QUADRANT  
 GRADING PLAN

ZDK DESIGNED BY: KRV CHECKED BY: ZDK DRAFTED BY: ZDK  
 DATE: 3/15/2023 12:36 PM SCALE: 1"=10'/20'  
 DRAWING LOCATION: W:\PROJECTS\HSIP\_BOGARD\_ENGSTROM\_RA - CFHWY00453\PLANSET\00453\_603\_QUADRANTS.DWG

ENGSTROM-BOGARD-NE QUADRANT



BEGIN NE QUADRANT  
 "EGTM" STA. 111+85.00 =  
 "NEQ" 111+85.00  
 MATCH ENGSTROM  
 N 158297.5094  
 E 457924.1037

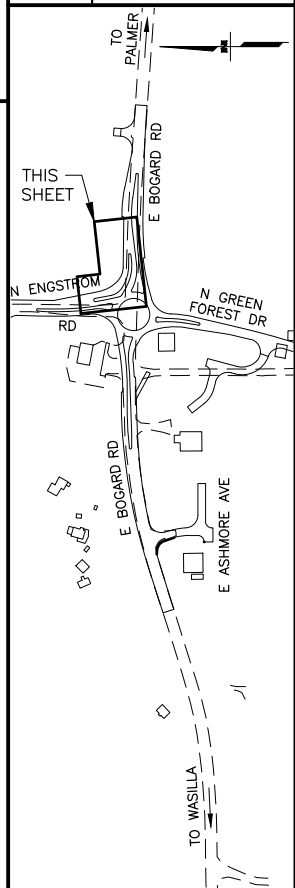


**C1**  
 P.I. STA. 112+66.87  
 N = 158217.2016  
 E = 457940.0268  
 $\Delta = 034^{\circ}47'04.1''$   
 T = 34.46'  
 L = 66.78'  
 R = 110.00'

**C2**  
 P.I. STA. 113+25.03  
 N = 158175.3230  
 E = 457983.3924  
 $\Delta = 043^{\circ}20'41.3''$   
 T = 25.83'  
 L = 49.17'  
 R = 65.00'

END NE QUADRANT  
 "NEQ" STA. 114+01.92 =  
 "BGD" STA. 1025+50.00  
 MATCH BOGARD  
 N 158174.4144  
 E 458062.7662

SHEET NO.	TOTAL SHEETS
G05	G13
STATE	YEAR
ALASKA	2024
PROJECT DESIGNATION	
0001630/ CFHWY00453	
NO.	REVISION
NO.	REVISION
NO.	REVISION
NO.	REVISION

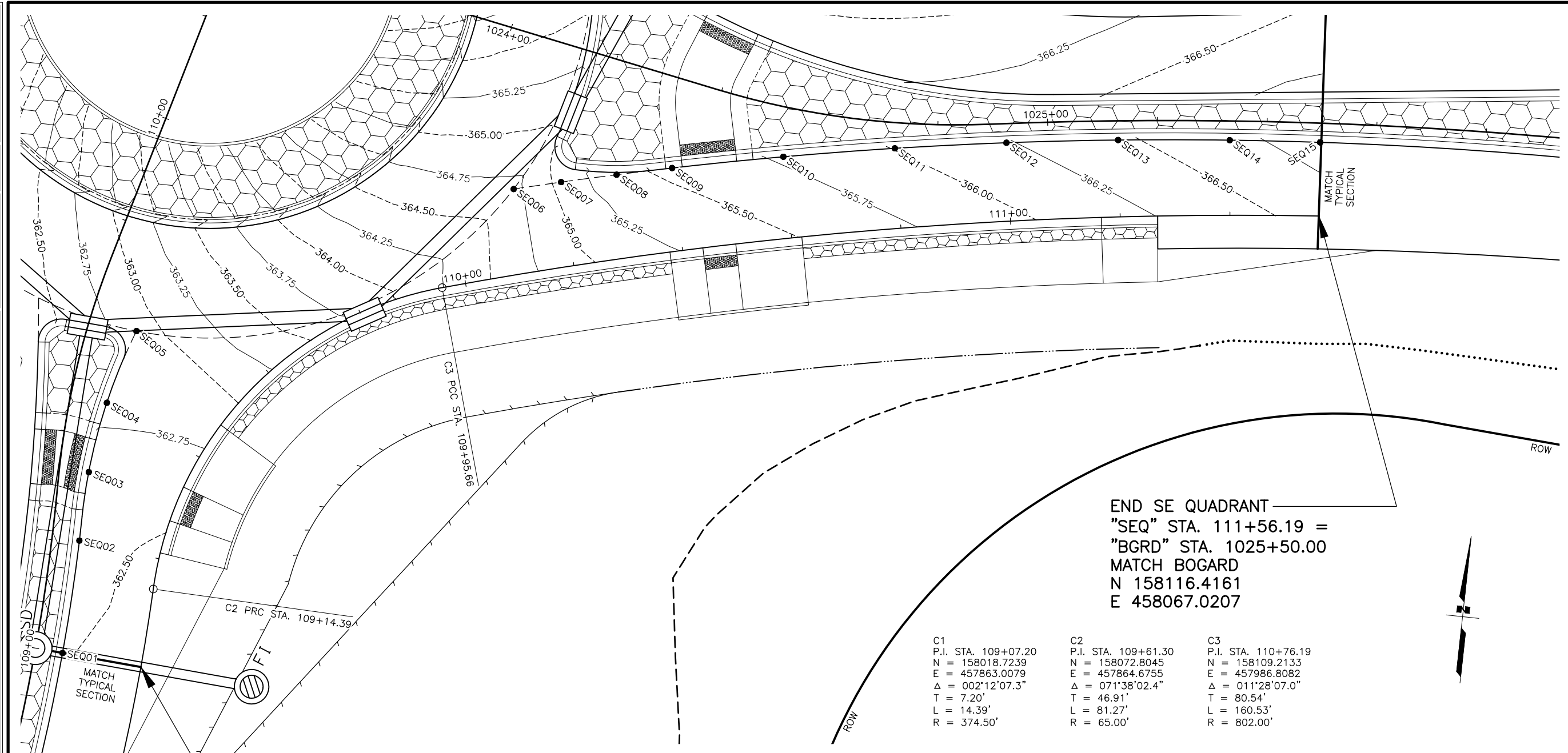


STATE OF ALASKA DOT&PF  
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STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 HSIP: BOGARD RD AT  
 ENGSTROM RD & GREEN  
 FOREST DR INT IMP  
 NORTHEAST QUADRANT  
 GRADING PLAN



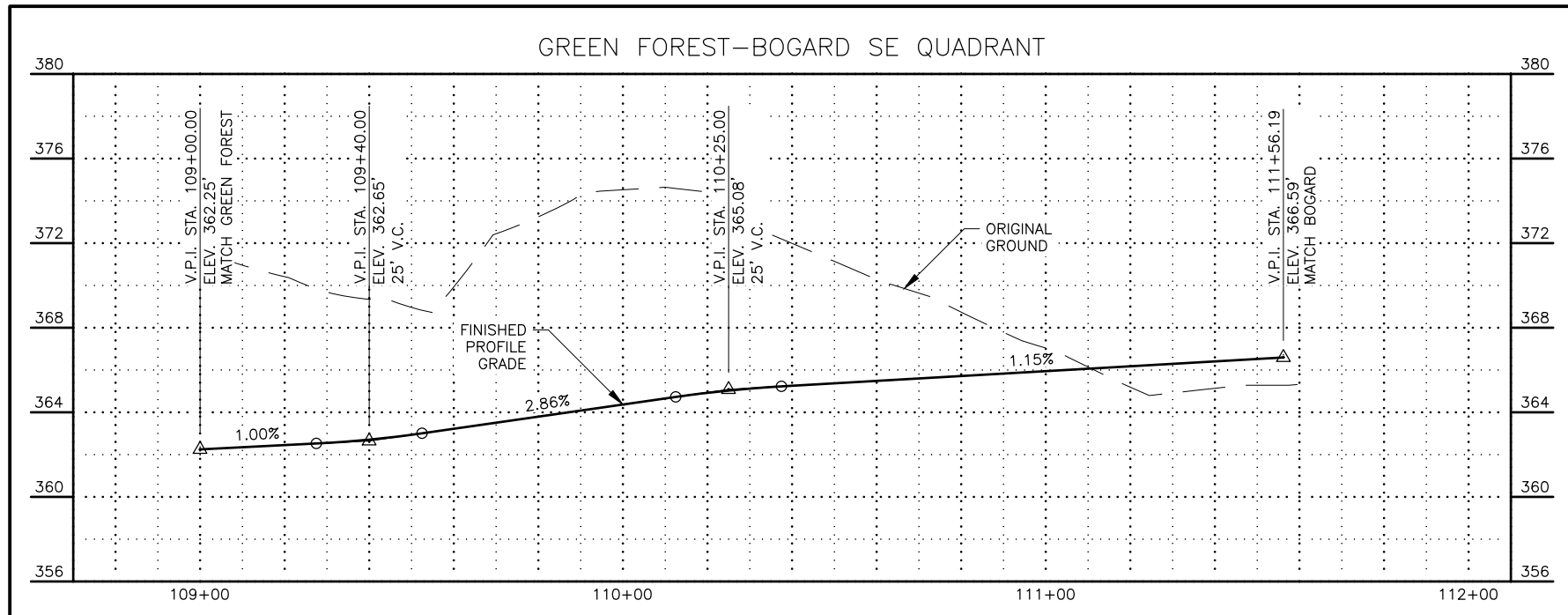
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 SCALE: 1"=10/20'  
 TIME: 12:36 PM  
 DESIGNED BY: ZDK  
 CHECKED BY: KRV  
 DRAFTED BY: ZDK



END SE QUADRANT  
 "SEQ" STA. 111+56.19 =  
 "BGRD" STA. 1025+50.00  
 MATCH BOGARD  
 N 158116.4161  
 E 458067.0207

C1	C2	C3
P.I. STA. 109+07.20	P.I. STA. 109+61.30	P.I. STA. 110+76.19
N = 158018.7239	N = 158072.8045	N = 158109.2133
E = 457863.0079	E = 457864.6755	E = 457986.8082
Δ = 002°12'07.3"	Δ = 071°38'02.4"	Δ = 011°28'07.0"
T = 7.20'	T = 46.91'	T = 80.54'
L = 14.39'	L = 81.27'	L = 160.53'
R = 374.50'	R = 65.00'	R = 802.00'

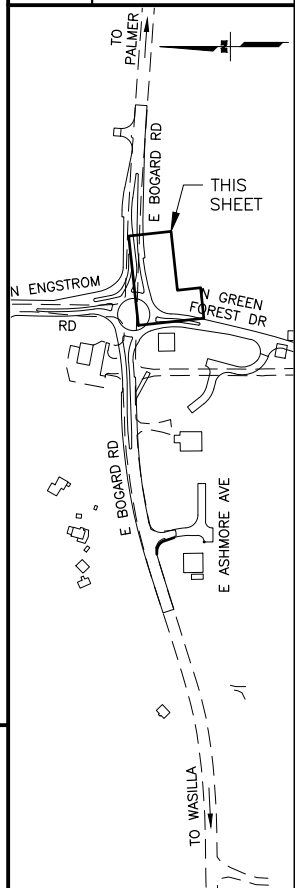
BEGIN SE QUADRANT  
 "GFST" STA. 109+00.00 =  
 "SEQ" STA. 109+00.00  
 MATCH GREEN FOREST  
 N 158011.5438  
 E 457862.5098



SHEET NO.	TOTAL SHEETS
G06	G13
STATE	YEAR
ALASKA	2024

PROJECT DESIGNATION  
**0001630/  
 CFHWY00453**

NO.	REVISION



STATE OF ALASKA DOT&PF  
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STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
**HSIP: BOGARD RD AT  
 ENGSTROM RD & GREEN  
 FOREST DR INT IMP**  
**SOUTHEAST QUADRANT  
 GRADING PLAN**



DRAWING LOCATION: W:\PROJECTS\HSIP BOGARD ENGSTROM RA - CFHWY00453\CIV3D\PLANSET\00453\_003\_QUADRANTS.DWG  
 DESIGNED BY: ZDK  
 CHECKED BY: KRV  
 DRAFTED BY: ZDK  
 SCALE: 1" = 10'  
 TIME: 3/15/2023 12:36 PM  
 DATE:

### NW QUADRANT GRADING POINTS

POINT	ALIGNMENT	STATION	OFFSET (FT)	ELEVATION (FT)	REMARKS
NWQ01	"NWQ"	1021+00.00	14.13' RT	357.62	MATCH BOGARD
NWQ02	"NWQ"	1021+20.00	14.32' RT	358.48	
NWQ03	"NWQ"	1021+40.00	14.50' RT	359.08	
NWQ04	"NWQ"	1021+60.00	14.67' RT	359.68	
NWQ05	"NWQ"	1021+80.00	14.83' RT	360.29	
NWQ06	"NWQ"	1022+00.00	14.98' RT	360.82	
NWQ07	"NWQ"	1022+20.00	15.12' RT	361.34	
NWQ08	"NWQ"	1022+40.00	15.25' RT	361.77	
NWQ09	"NWQ"	1022+60.00	15.37' RT	362.21	LANE BREAK LINE
NWQ10	"NWQ"	1022+70.00	15.42' RT	362.45	LANE BREAK LINE
NWQ11	"NWQ"	1022+81.55	15.48' RT	362.76	MATCH INSCRIBED CIRCLE DIA. "ICD"
NWQ12	"NWQ"	1023+41.39	26.71' RT	364.94	MATCH INSCRIBED CIRCLE DIA. "ICD"
NWQ13	"NWQ"	1023+50.00	24.54' RT	365.52	
NWQ14	"NWQ"	1023+60.00	21.97' RT	366.14	
NWQ15	"NWQ"	1023+70.00	19.40' RT	366.52	
NWQ16	"NWQ"	1023+80.00	16.88' RT	366.90	
NWQ17	"NWQ"	1023+90.00	14.67' RT	367.29	
NWQ18	"NWQ"	1024+00.00	14.00' RT	367.70	
NWQ19	"NWQ"	1024+08.28	14.00' RT	368.06	MATCH ENGSTROM

### SW QUADRANT GRADING POINTS

POINT	ALIGNMENT	STATION	OFFSET (FT)	ELEVATION (FT)	REMARKS
SWQ01	"SWQ"	1021+45.00	14.00' LT	358.72	MATCH BOGARD
SWQ02	"SWQ"	1021+60.00	14.00' LT	359.10	
SWQ03	"SWQ"	1021+80.00	14.00' LT	359.61	
SWQ04	"SWQ"	1022+00.00	14.28' LT	360.12	
SWQ05	"SWQ"	1022+20.00	15.76' LT	360.74	
SWQ06	"SWQ"	1022+40.00	18.37' LT	361.30	
SWQ07	"SWQ"	1022+50.00	20.10' LT	361.50	
SWQ08	"SWQ"	1022+63.75	21.57' LT	361.94	MATCH INSCRIBED CIRCLE DIA. "ICD"
SWQ09	"SWQ"	1023+30.06	22.22' LT	362.44	MATCH INSCRIBED CIRCLE DIA. "ICD"
SWQ10	"SWQ"	1023+40.00	20.70' LT	362.31	
SWQ11	"SWQ"	1023+50.00	19.33' LT	362.35	
SWQ12	"SWQ"	1023+70.00	17.04' LT	362.45	
SWQ13	"SWQ"	1023+87.17	15.56' LT	362.54	MATCH GREEN FOREST

### SE QUADRANT GRADING POINTS

POINT	ALIGNMENT	STATION	OFFSET (FT)	ELEVATION (FT)	REMARKS
SEQ01	"SEQ"	109+00.00	14.50' LT	362.54	MATCH GREEN FOREST
SEQ02	"SEQ"	109+20.00	14.86' LT	362.60	
SEQ03	"SEQ"	109+30.00	16.95' LT	362.65	
SEQ04	"SEQ"	109+40.00	19.56' LT	362.81	
SEQ05	"SEQ"	109+50.42	22.68' LT	362.88	MATCH INSCRIBED CIRCLE DIA. "ICD"
SEQ06	"SEQ"	110+11.42	15.50' LT	364.68	MATCH INSCRIBED CIRCLE DIA. "ICD"
SEQ07	"SEQ"	110+20.00	15.90' LT	365.08	LANE BREAK LINE
SEQ08	"SEQ"	110+30.00	15.27' LT	365.43	LANE BREAK LINE
SEQ09	"SEQ"	110+40.00	15.14' LT	365.56	
SEQ10	"SEQ"	110+60.00	14.87' LT	365.78	
SEQ11	"SEQ"	110+80.00	14.60' LT	366.01	
SEQ12	"SEQ"	111+00.00	14.31' LT	366.23	
SEQ13	"SEQ"	111+20.00	14.01' LT	366.46	
SEQ14	"SEQ"	111+40.00	13.69' LT	366.68	
SEQ15	"SEQ"	111+56.19	13.43' LT	366.86	MATCH BOGARD

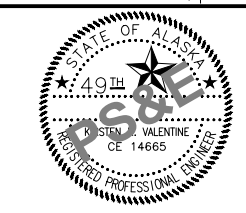
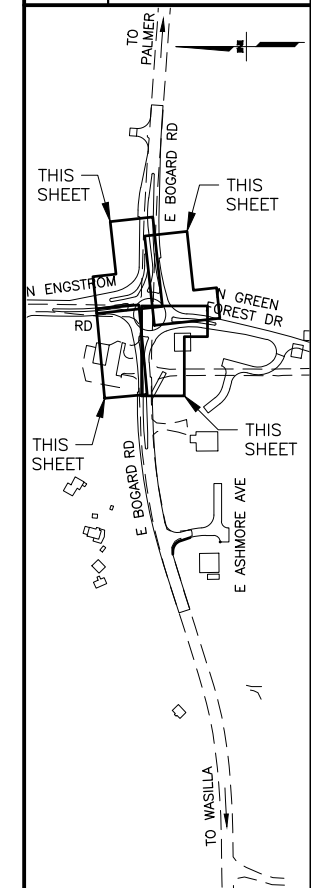
### NE QUADRANT GRADING POINTS

POINT	ALIGNMENT	STATION	OFFSET (FT)	ELEVATION (FT)	REMARKS
NEQ01	"NEQ"	111+85.00	41.12' RT	368.06	MATCH ENGSTROM
NEQ02	"NEQ"	112+00.00	42.17' RT	367.64	
NEQ03	"NEQ"	112+10.00	42.71' RT	367.35	
NEQ04	"NEQ"	112+20.00	43.13' RT	367.09	
NEQ05	"NEQ"	112+30.00	43.42' RT	366.73	
NEQ06	"NEQ"	112+40.00	43.98' RT	366.40	
NEQ07	"NEQ"	112+50.00	45.57' RT	366.09	LANE BREAK LINE
NEQ08	"NEQ"	112+56.00	47.04' RT	365.89	LANE BREAK LINE
NEQ09	"NEQ"	112+62.34	49.03' RT	365.70	MATCH INSCRIBED CIRCLE DIA. "ICD"
NEQ10	"NEQ"	113+00.82	53.05' RT	365.76	MATCH INSCRIBED CIRCLE DIA. "ICD"
NEQ11	"NEQ"	113+10.00	50.26' RT	366.06	
NEQ12	"NEQ"	113+20.00	47.61' RT	366.12	
NEQ13	"NEQ"	113+30.00	45.38' RT	366.19	
NEQ14	"NEQ"	113+40.00	43.61' RT	366.27	
NEQ15	"NEQ"	113+50.00	42.37' RT	366.36	
NEQ16	"NEQ"	113+60.00	41.22' RT	366.45	
NEQ17	"NEQ"	113+80.00	38.64' RT	366.63	
NEQ18	"NEQ"	114+01.92	35.80' RT	366.80	MATCH BOGARD
NEQ19	"NEQ"	112+16.62	28.99' RT	366.89	
NEQ20	"NEQ"	112+30.00	29.42' RT	366.59	
NEQ21	"NEQ"	112+40.00	29.94' RT	366.40	
NEQ22	"NEQ"	112+50.00	31.41' RT	366.23	
NEQ23	"NEQ"	112+60.00	33.88' RT	366.09	
NEQ24	"NEQ"	112+70.00	37.44' RT	365.97	
NEQ25	"NEQ"	112+78.04	41.15' RT	365.93	
NEQ26	"NEQ"	112+83.70	41.02' RT	365.88	
NEQ27	"NEQ"	112+90.00	37.79' RT	365.77	
NEQ28	"NEQ"	113+00.00	33.82' RT	365.68	
NEQ29	"NEQ"	113+10.00	31.00' RT	365.68	
NEQ30	"NEQ"	113+20.00	29.98' RT	365.74	
NEQ31	"NEQ"	113+30.00	27.67' RT	365.83	
NEQ32	"NEQ"	113+40.00	27.05' RT	365.94	
NEQ33	"NEQ"	113+50.00	27.10' RT	366.05	
NEQ34	"NEQ"	113+60.00	26.83' RT	366.16	
NEQ35	"NEQ"	113+80.00	24.38' RT	366.34	
NEQ36	"NEQ"	113+88.08	23.22' RT	366.41	
NEQ37	"NEQ"	112+11.83	23.80' RT	366.92	MEDIAN NOSE
NEQ38	"NEQ"	112+17.02	19.00' RT	366.68	
NEQ39	"NEQ"	112+30.00	19.42' RT	366.39	
NEQ40	"NEQ"	112+40.00	19.91' RT	366.20	
NEQ41	"NEQ"	112+50.00	21.29' RT	366.03	
NEQ42	"NEQ"	112+60.00	23.62' RT	365.88	
NEQ43	"NEQ"	112+70.00	26.06' RT	365.74	
NEQ44	"NEQ"	112+80.00	26.85' RT	365.62	
NEQ45	"NEQ"	112+90.00	25.96' RT	365.53	
NEQ46	"NEQ"	113+00.00	23.51' RT	365.48	
NEQ47	"NEQ"	113+10.00	20.86' RT	365.48	
NEQ48	"NEQ"	113+20.00	18.91' RT	365.54	
NEQ49	"NEQ"	113+30.00	17.64' RT	365.63	
NEQ50	"NEQ"	113+40.00	17.05' RT	365.74	
NEQ51	"NEQ"	113+50.00	17.10' RT	365.85	
NEQ52	"NEQ"	113+60.00	17.02' RT	365.96	
NEQ53	"NEQ"	113+80.00	16.83' RT	366.19	
NEQ54	"NEQ"	113+87.59	16.76' RT	366.28	
NEQ55	"NEQ"	113+90.86	19.76' RT	366.38	MEDIAN NOSE

SHEET NO.	TOTAL SHEETS
G07	G13
STATE	YEAR
ALASKA	2024

PROJECT DESIGNATION  
**0001630/  
 CFHWY00453**

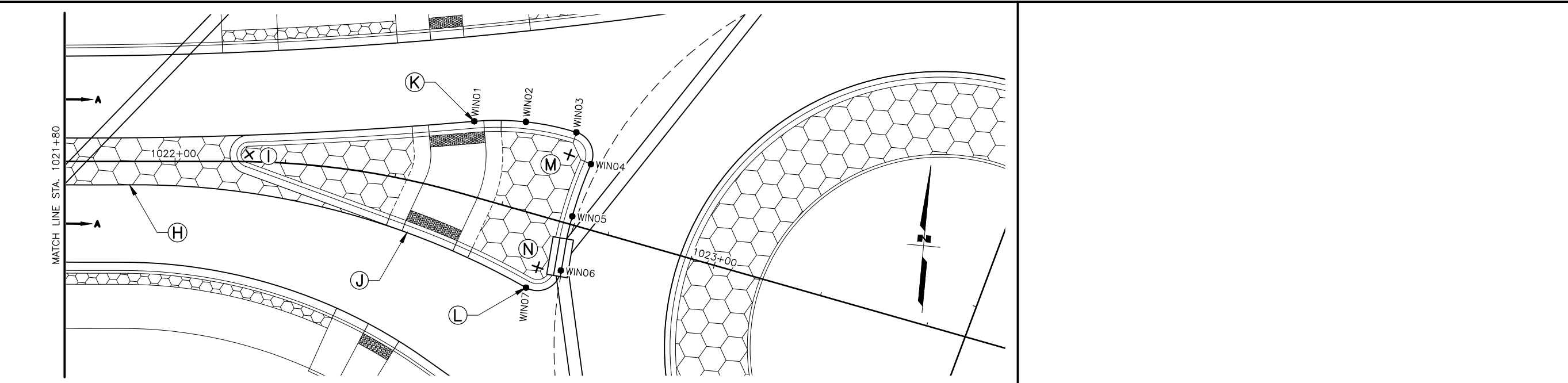
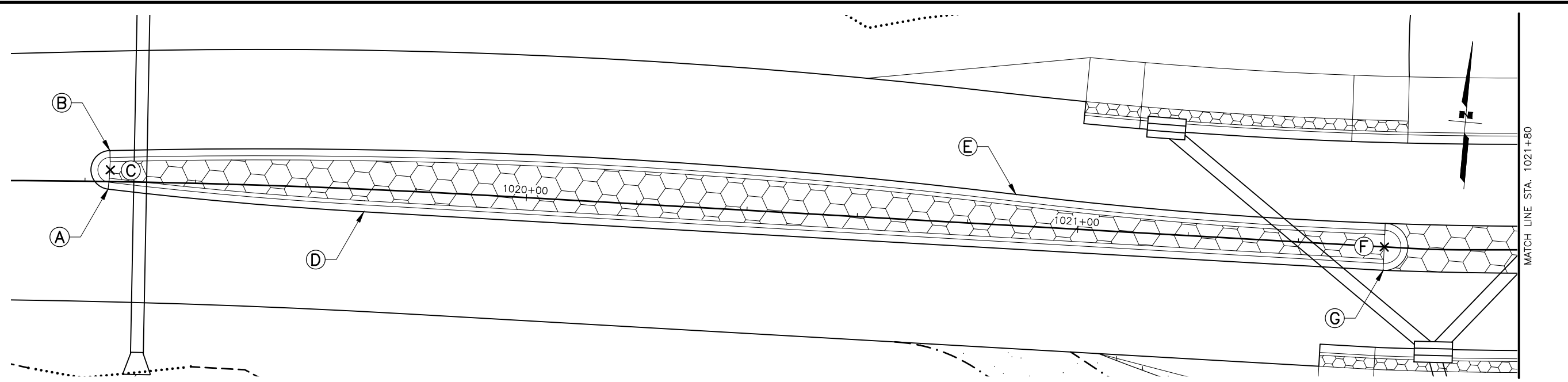
NO.	REVISION



STATE OF ALASKA DOT&PF  
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 ANCHORAGE, AK 99502  
 (907) 269-0590

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
**HSIP: BOGARD RD AT  
 ENGSTROM RD & GREEN  
 FOREST DR INT IMP**  
 NW, SW, NE, & SE  
 QUADRANT GRADING  
 POINTS SUMMARY

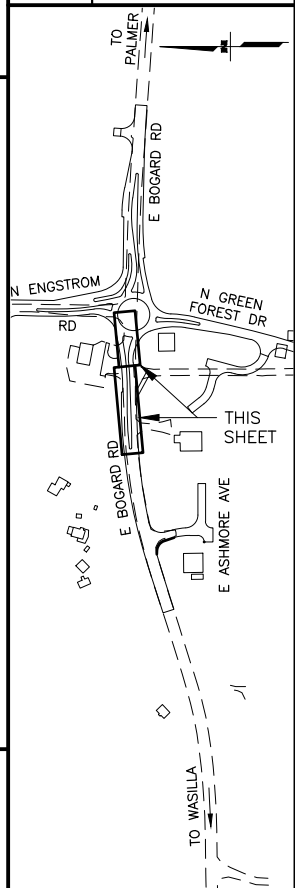
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SHEET NO.	TOTAL SHEETS
G08	G13
STATE	YEAR
ALASKA	2024

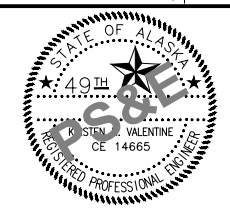
PROJECT DESIGNATION  
**0001630/  
 CFHWY00453**

NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	



POINT	ALIGNMENT	STATION	OFFSET (FT)	REMARKS
A	"BGRD"	1019+24.19	1.38' RT	BEGIN 752' RADIUS
B	"BGRD"	1019+24.42	5.60' LT	BEGIN 1,139' RADIUS
C	"BGRD"	1019+24.56	2.10' LT	BULL NOSE RADIUS = 3.5'
D	"BGRD"	1019+70.69	4.10' RT	END 752' RADIUS
E	"BGRD"	1020+88.45	5.66' LT	END 1,139' RADIUS / BEGIN 798' RADIUS
F	"BGRD"	1021+55.61	CL	BULL NOSE RADIUS = 4.25'
G	"BGRD"	1021+55.66	4.25' RT	BEGIN 806.5' RADIUS
H	"BGRD"	1021+91.75	4.22' RT	END 806.5' RADIUS / BEGIN 143' RADIUS
I	"BGRD"	1022+13.43	1.29' LT	BULL NOSE RADIUS = 3.5'
J	"BGRD"	1022+44.37	9.35' RT	END FLUSH MEDIAN
K	"BGRD"	1022+51.17	13.18' LT	END 798' RADIUS
L	"BGRD"	1022+68.32	13.22' RT	END 143' RADIUS
M	"BGRD"	1022+69.28	12.07' LT	BULL NOSE RADIUS = 4.25'
N	"BGRD"	1022+69.32	9.09' RT	BULL NOSE RADIUS = 4.25'

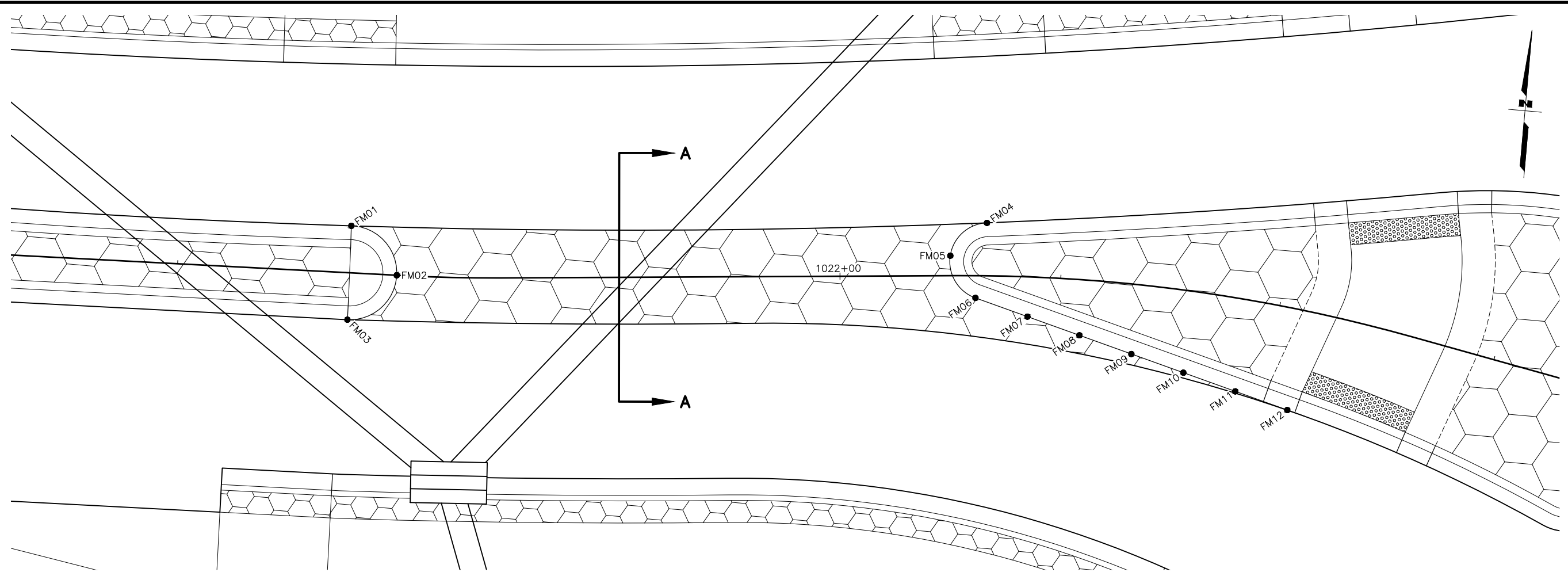
POINT	ALIGNMENT	STATION	OFFSET (FT)	ELEVATION (FT)	REMARKS
WINO1	"BGRD"	1022+51.17	13.18' LT	362.11	BEGIN 48' RADIUS
WINO2	"BGRD"	1022+60.08	15.64' LT	362.24	
WINO3	"BGRD"	1022+69.39	16.32' LT	362.48	END 48' RADIUS
WINO4	"BGRD"	1022+73.50	11.51' LT	362.44	BEGIN 75' RADIUS
WINO5	"BGRD"	1022+72.84	1.50' LT	362.26	
WINO6	"BGRD"	1022+73.54	8.51' RT	362.08	END 75' RADIUS
WINO7	"BGRD"	1022+68.32	13.22' RT	361.68	



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 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
**HSP: BOGARD RD AT  
 ENGSTROM RD & GREEN  
 FOREST DR INT IMP**  
 WEST SPLITTER ISLAND  
 LAYOUT & GRADING

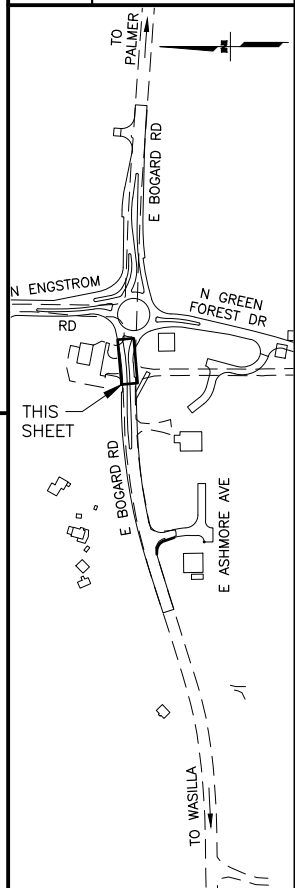
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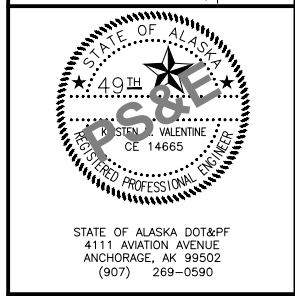
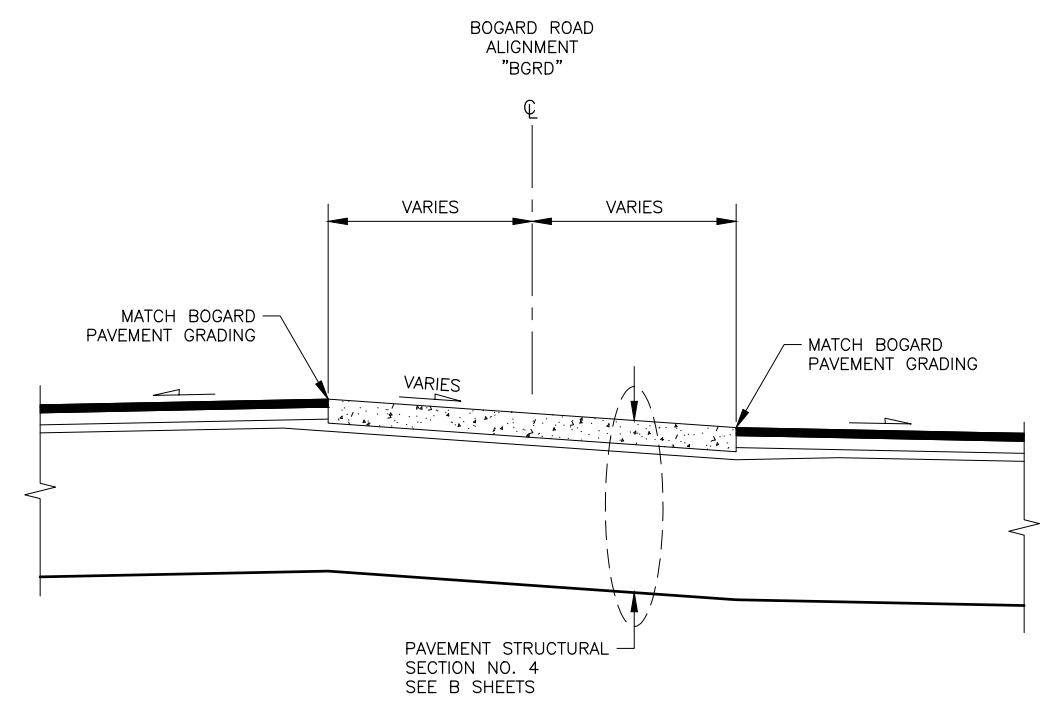
SHEET NO.	TOTAL SHEETS
G09	G13
STATE	YEAR
ALASKA	2024

PROJECT DESIGNATION  
**0001630/  
 CFHWY00453**

NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	



WEST ISLAND FLUSH MEDIAN GRADING POINTS					
POINT	ALIGNMENT	STATION	OFFSET (FT)	ELEVATION (FT)	REMARKS
FM01	"BGRD"	1021+55.52	4.25' LT	359.54	
FM02	"BGRD"	1021+59.86	CL	359.19	
FM03	"BGRD"	1021+55.61	4.25' RT	358.99	
FM04	"BGRD"	1022+13.25	4.78' LT	361.12	
FM05	"BGRD"	1022+10.00	1.81' LT	360.89	
FM06	"BGRD"	1022+12.28	2.02' RT	360.53	
FM07	"BGRD"	1022+17.11	3.60' RT	360.63	
FM08	"BGRD"	1022+22.34	5.04' RT	360.73	
FM09	"BGRD"	1022+27.07	6.31' RT	360.84	
FM10	"BGRD"	1022+32.18	7.42' RT	360.95	
FM11	"BGRD"	1022+37.36	8.36' RT	361.07	
FM12	"BGRD"	1022+42.61	9.13' RT	361.17	



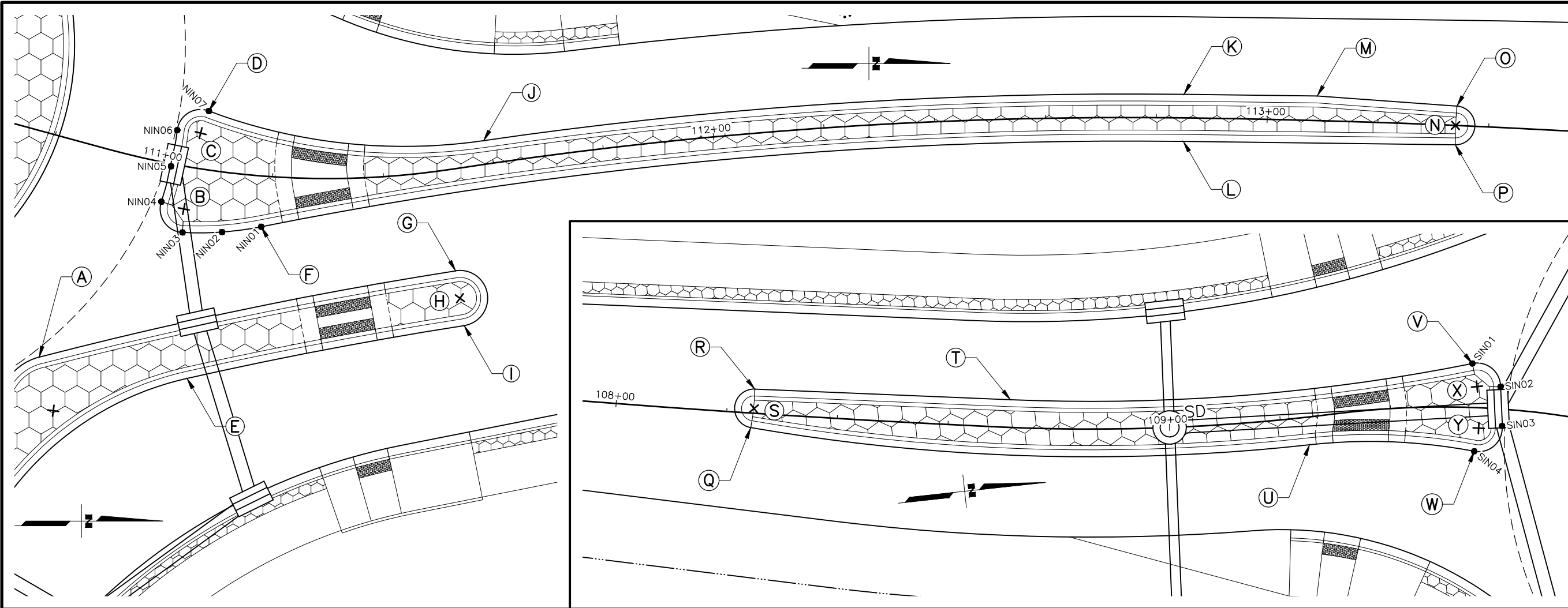
STATE OF ALASKA DOT&PF  
 411 AVIATION AVENUE  
 ANCHORAGE, AK 99502  
 (907) 269-0590

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 AND PUBLIC FACILITIES

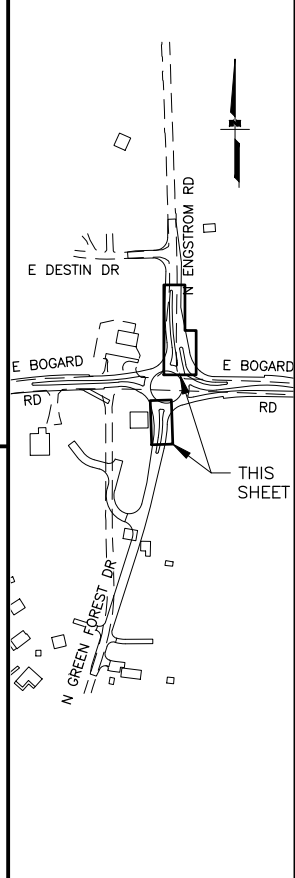
**HSIP: BOGARD RD AT  
 ENGSTROM RD & GREEN  
 FOREST DR INT IMP**

WEST SPLITTER ISLAND  
 FLUSH MEDIAN GRADING

ZDK DESIGNED BY: KRV CHECKED BY: ZDK DRAFTED BY: ZDK  
 SCALE: 1"=10'/20'  
 DATE: 3/15/2023 TIME: 12:37 PM  
 DRAWING LOCATION: W:\PROJECTS\HSIP\_BOGARD\_ENGSTROM\_RA - CFHWY00453\CIV3D\PLANSET\00453\_008\_SPLITTER\_ISLANDS.DWG



SHEET NO.	TOTAL SHEETS
G10	G13
STATE	YEAR
ALASKA	2024
PROJECT DESIGNATION	
0001630/ CFHWY00453	
NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	



POINT	ALIGNMENT	STATION	OFFSET (FT)	REMARKS
A	"EGTM"	110+87.74	39.47' RT	BEGIN 784' RADIUS
B	"EGTM"	111+05.11	7.62' RT	BULL NOSE RADIUS = 4.25'
C	"EGTM"	111+05.91	6.38' LT	BULL NOSE RADIUS = 4.25'
D	"EGTM"	111+06.81	10.54' LT	BEGIN 100' RADIUS
E	"EGTM"	111+09.60	37.78' RT	BEGIN 774' RADIUS
F	"EGTM"	111+18.62	9.15' RT	BEGIN 798' RADIUS
G	"EGTM"	111+50.58	18.27' RT	END 784' RADIUS
H	"EGTM"	111+50.65	23.27' RT	BULL NOSE RADIUS = 5'
I	"EGTM"	111+50.73	28.27' RT	END 774' RADIUS
J	"EGTM"	111+58.85	4.25' LT	END 100' RADIUS / BEGIN 806.5' RADIUS
K	"EGTM"	112+84.93	4.25' LT	END 806.5' RADIUS
L	"EGTM"	112+84.93	4.25' RT	END 798' RADIUS
M	"EGTM"	113+08.93	4.43' LT	
N	"EGTM"	113+34.00	CL	BULL NOSE RADIUS = 3.5'
O	"EGTM"	113+34.11	3.50' LT	
P	"EGTM"	113+34.11	3.50' RT	

POINT	ALIGNMENT	STATION	OFFSET (FT)	REMARKS
Q	"GFST"	108+24.52	2.61' RT	BEGIN 360' RADIUS
R	"GFST"	108+24.80	4.37' LT	
S	"GFST"	108+24.89	0.87' LT	BULL NOSE RADIUS = 3.5'
T	"GFST"	108+71.07	5.00' LT	BEGIN 350' RADIUS
U	"GFST"	109+24.76	5.00' RT	END 360' RADIUS / BEGIN 100' RADIUS
V	"GFST"	109+54.51	7.93' LT	END 350' RADIUS
W	"GFST"	109+55.44	7.88' RT	END 100' RADIUS
X	"GFST"	109+55.46	3.80' LT	BULL NOSE RADIUS = 4.25'
Y	"GFST"	109+56.08	3.68' RT	BULL NOSE RADIUS = 4.25'

POINT	ALIGNMENT	STATION	OFFSET (FT)	ELEVATION (FT)	REMARKS
NIN01	"EGTM"	111+18.62	9.15' RT	366.26	BEGIN 57' RADIUS
NIN02	"EGTM"	111+12.11	10.78' RT	366.11	
NIN03	"EGTM"	111+05.55	11.85' RT	365.97	END 57' RADIUS
NIN04	"EGTM"	111+01.10	7.05' RT	365.42	BEGIN 70' RADIUS
NIN05	"EGTM"	111+01.59	0.45' RT	365.28	
NIN06	"EGTM"	111+01.48	6.17' LT	365.14	END 70' RADIUS
NIN07	"EGTM"	111+06.81	10.54' LT	365.21	

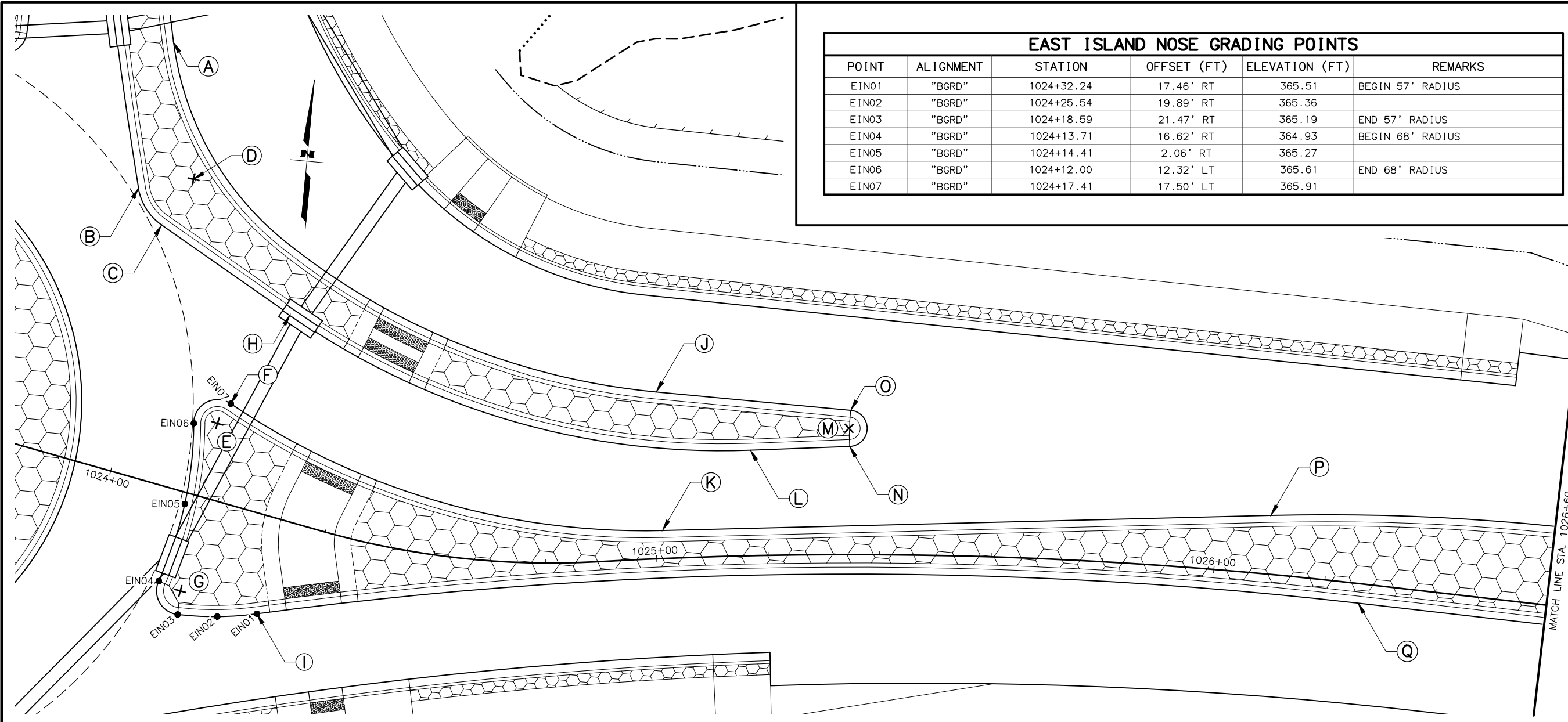
POINT	ALIGNMENT	STATION	OFFSET (FT)	ELEVATION (FT)	REMARKS
SIN01	"GFST"	109+54.51	7.93' LT	362.34	
SIN02	"GFST"	109+59.60	3.99' LT	362.55	BEGIN 70' RADIUS
SIN03	"GFST"	109+60.38	3.04' RT	362.73	END 70' RADIUS
SIN04	"GFST"	109+55.44	7.88' RT	362.85	



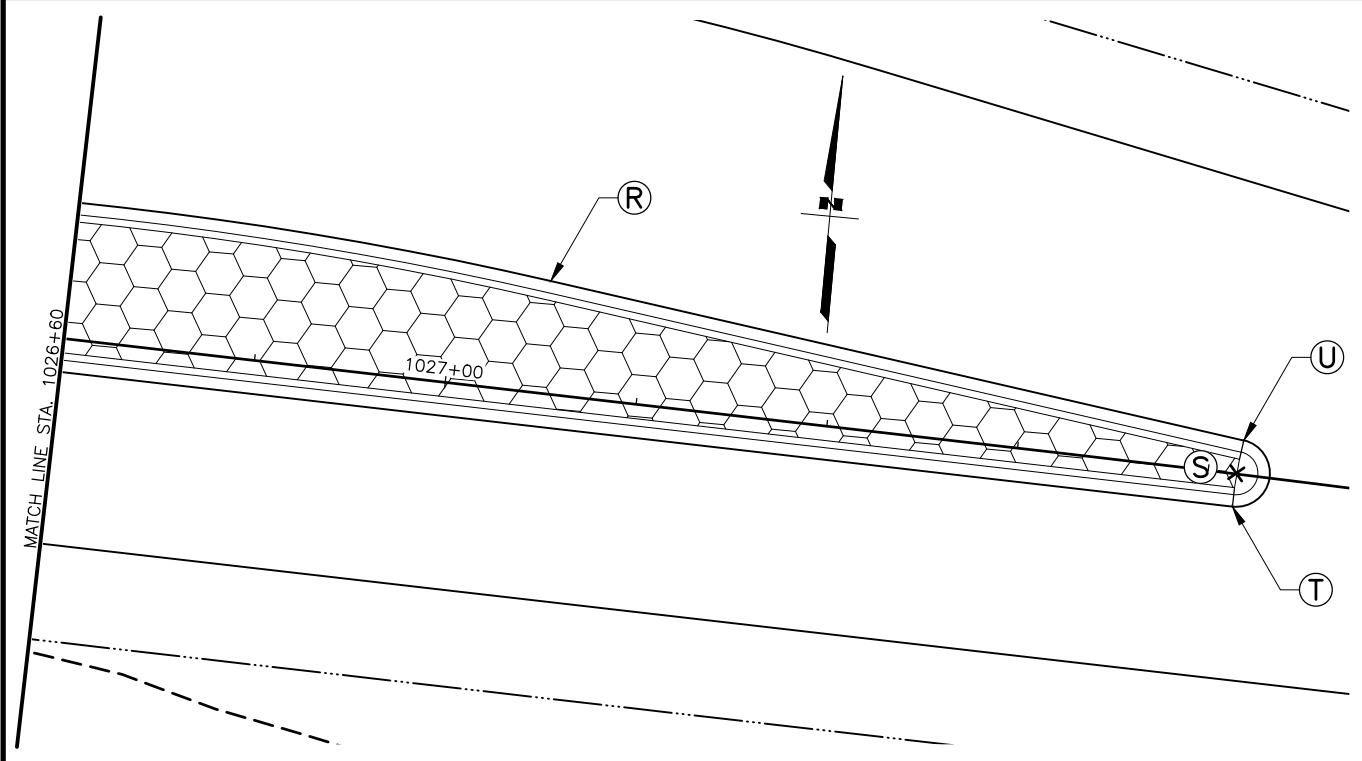
STATE OF ALASKA DOT&PF  
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STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 HSIP: BOGARD RD AT  
 ENGSTROM RD & GREEN  
 FOREST DR INT IMP  
 NORTH & SOUTH  
 SPLITTER ISLAND  
 LAYOUT & GRADING

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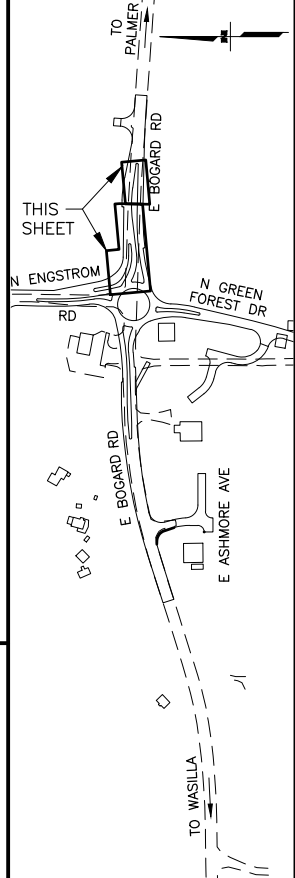


EAST ISLAND NOSE GRADING POINTS					
POINT	ALIGNMENT	STATION	OFFSET (FT)	ELEVATION (FT)	REMARKS
E1N01	"BGRD"	1024+32.24	17.46' RT	365.51	BEGIN 57' RADIUS
E1N02	"BGRD"	1024+25.54	19.89' RT	365.36	
E1N03	"BGRD"	1024+18.59	21.47' RT	365.19	END 57' RADIUS
E1N04	"BGRD"	1024+13.71	16.62' RT	364.93	BEGIN 68' RADIUS
E1N05	"BGRD"	1024+14.41	2.06' RT	365.27	
E1N06	"BGRD"	1024+12.00	12.32' LT	365.61	END 68' RADIUS
E1N07	"BGRD"	1024+17.41	17.50' LT	365.91	



EAST ISLAND LAYOUT TABLE				
POINT	ALIGNMENT	STATION	OFFSET (FT)	REMARKS
A	"BGRD"	1023+89.76	77.08' LT	BEGIN 125' RADIUS
B	"BGRD"	1023+90.89	50.18' LT	
C	"BGRD"	1023+96.68	44.98' LT	BEGIN 135' RADIUS
D	"BGRD"	1023+99.95	54.43' LT	RADIUS = 10'
E	"BGRD"	1024+16.08	13.47' LT	BULL NOSE RADIUS = 4.25'
F	"BGRD"	1024+17.41	17.50' LT	BEGIN 132' RADIUS
G	"BGRD"	1024+17.91	17.28' RT	BULL NOSE RADIUS = 4.25'
H	"BGRD"	1024+23.26	35.77' LT	
I	"BGRD"	1024+32.24	17.46' RT	BEGIN 798' RADIUS
J	"BGRD"	1025+01.16	29.90' LT	END 125' RADIUS
K	"BGRD"	1025+01.23	5.00' LT	END 132' RADIUS
L	"BGRD"	1025+17.23	18.92' LT	END 135' RADIUS
M	"BGRD"	1025+34.50	22.65' LT	BULL NOSE RADIUS = 3.25'
N	"BGRD"	1025+34.62	19.40' LT	
O	"BGRD"	1025+34.79	25.89' LT	
P	"BGRD"	1026+09.29	10.54' LT	BEGIN 402' RADIUS
Q	"BGRD"	1026+26.39	3.50' RT	END 798' RADIUS
R	"BGRD"	1027+09.72	11.74' LT	END 402' RADIUS
S	"BGRD"	1027+82.93	0.10' LT	BULL NOSE RADIUS = 3.5'
T	"BGRD"	1027+82.95	3.43' RT	
U	"BGRD"	1027+83.29	3.55' LT	

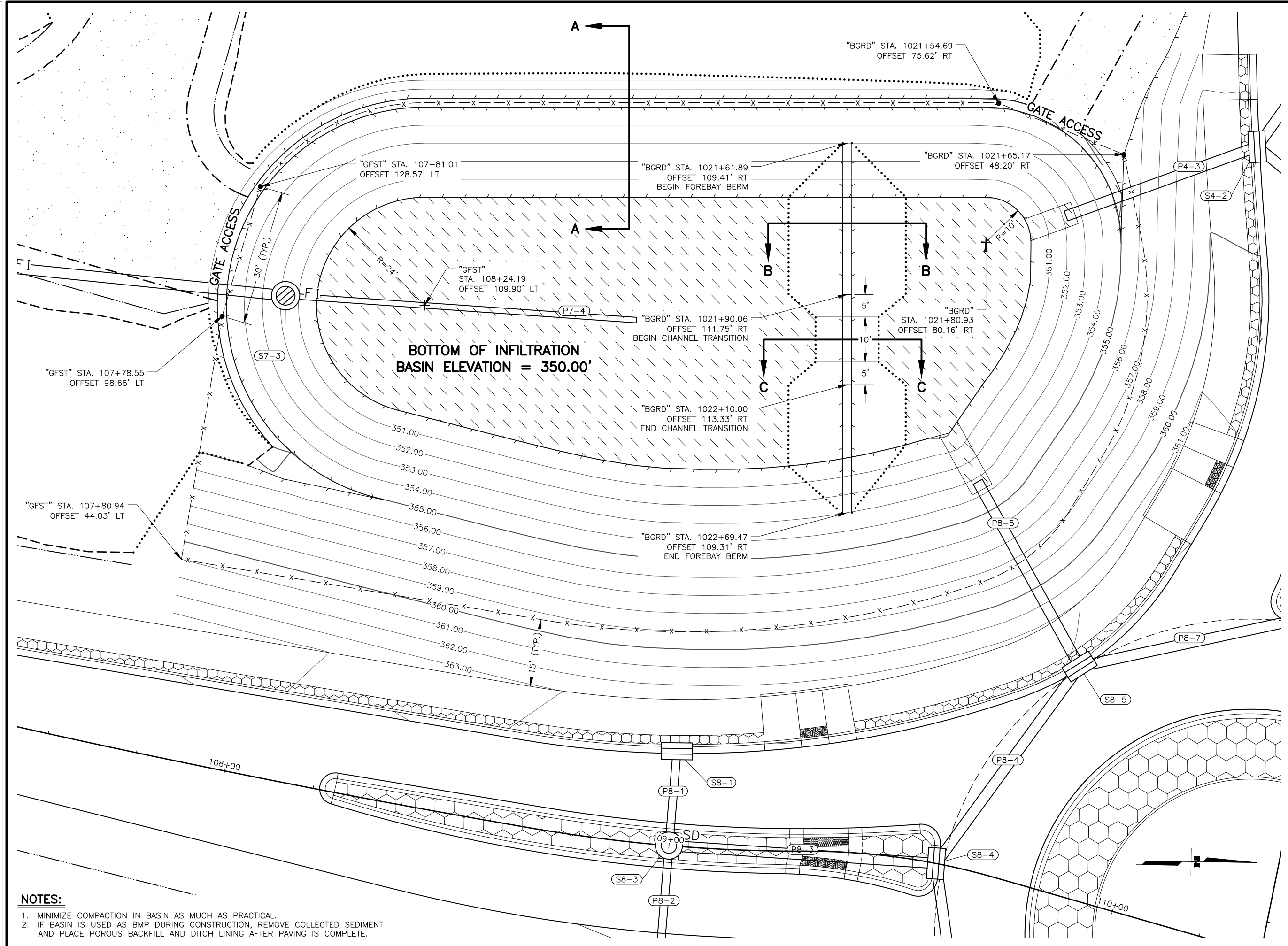
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NO.	REVISION
DATE	
NO.	REVISION
DATE	
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DATE	



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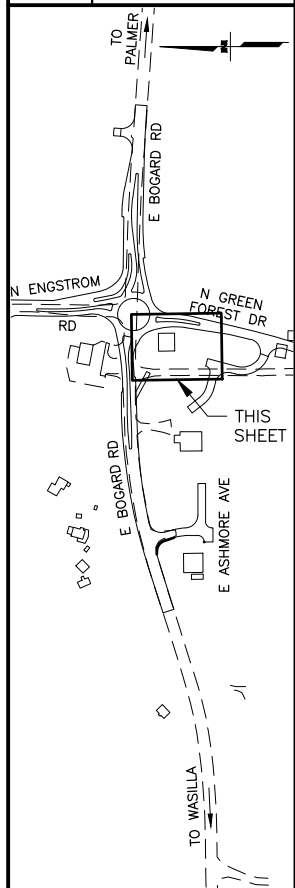
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 FOREST DR INT IMP  
 EAST SPLITTER ISLAND  
 LAYOUT & GRADING

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 SCALE: 1" = 10'  
 DESIGNED BY: ZDK  
 CHECKED BY: KRV  
 DRAFTED BY: ZDK



- NOTES:**
1. MINIMIZE COMPACTION IN BASIN AS MUCH AS PRACTICAL.
  2. IF BASIN IS USED AS BMP DURING CONSTRUCTION, REMOVE COLLECTED SEDIMENT AND PLACE POROUS BACKFILL AND DITCH LINING AFTER PAVING IS COMPLETE.

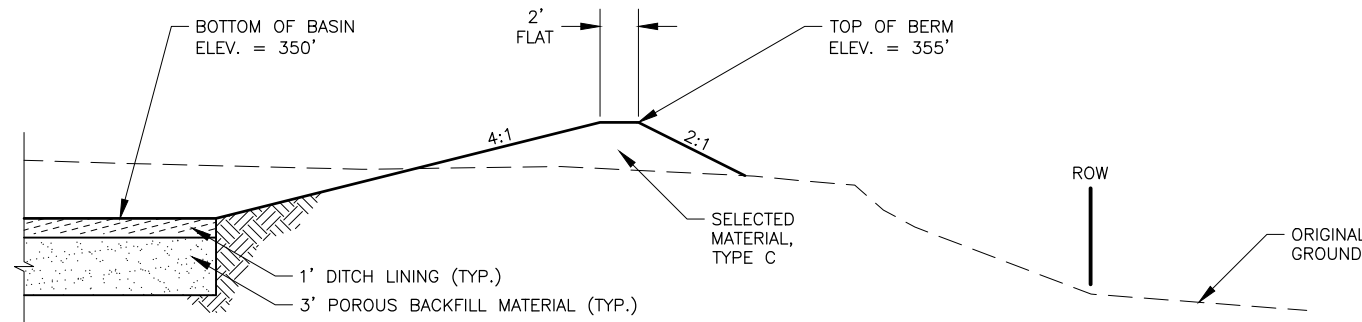
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DATE	
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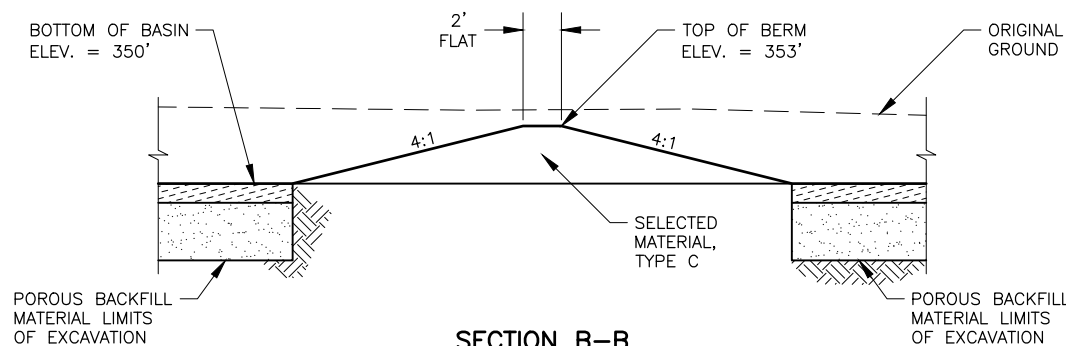
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STATE OF ALASKA  
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 AND PUBLIC FACILITIES  
 HSP: BOGARD RD AT  
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 DRAINAGE  
 INFILTRATION BASIN  
 GRADING PLAN

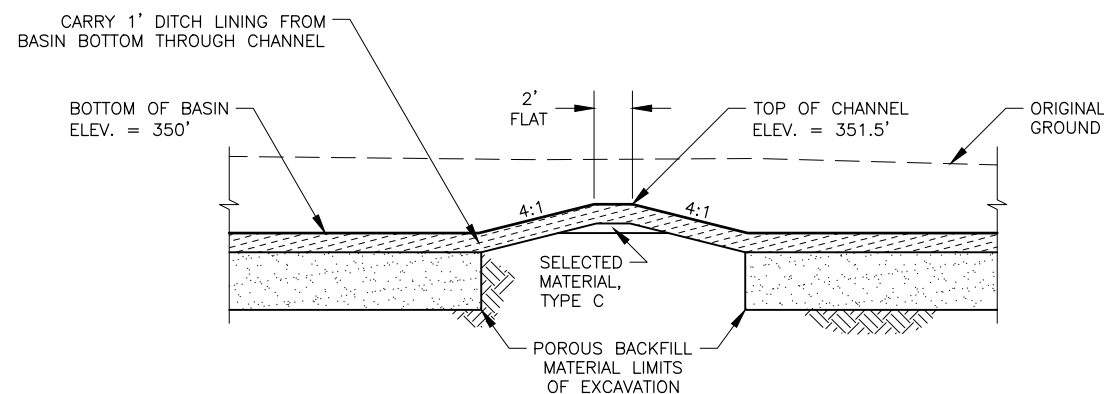
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**SECTION A-A**

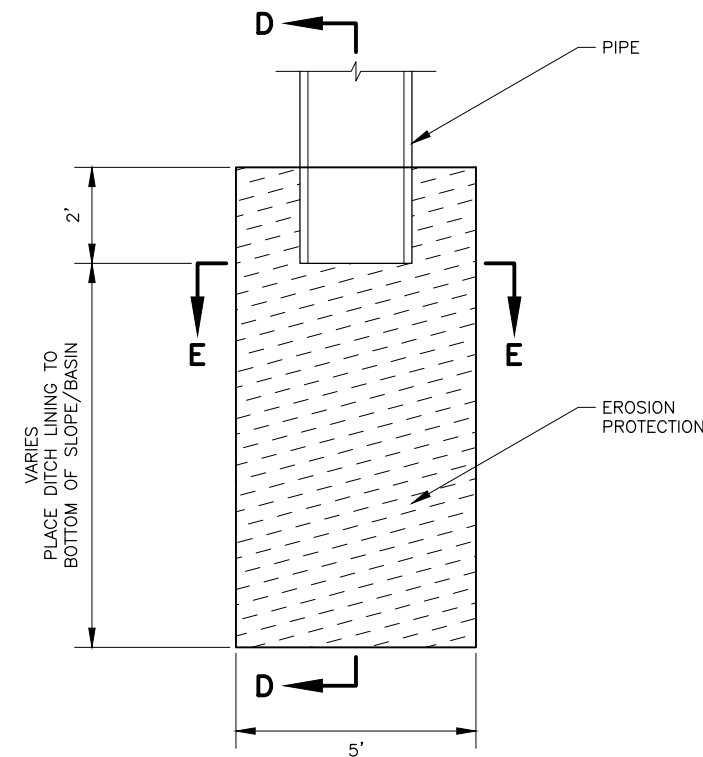


**SECTION B-B**

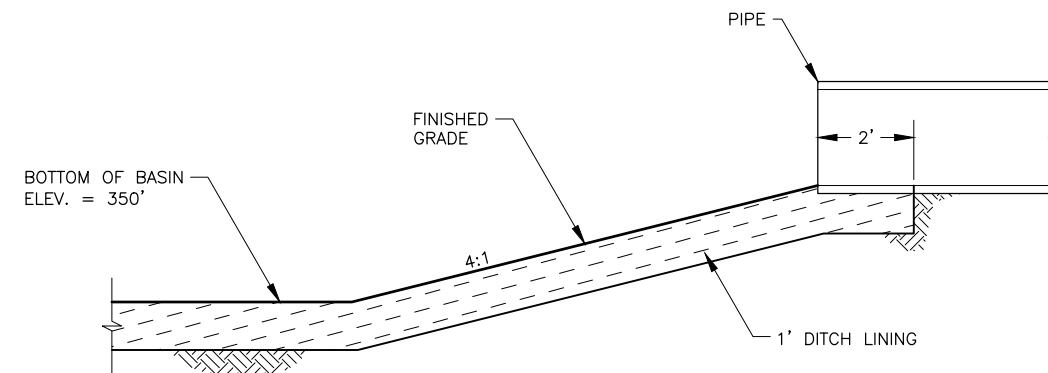


**SECTION C-C**

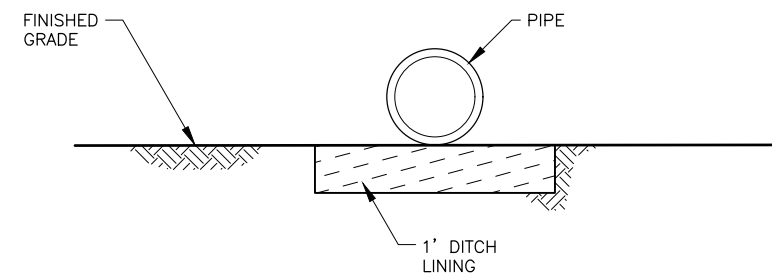
**INFILTRATION BASIN  
AND FOREBAY BERM DETAILS**



**PLAN**



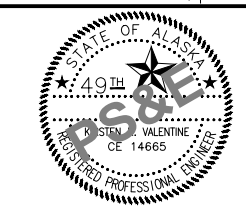
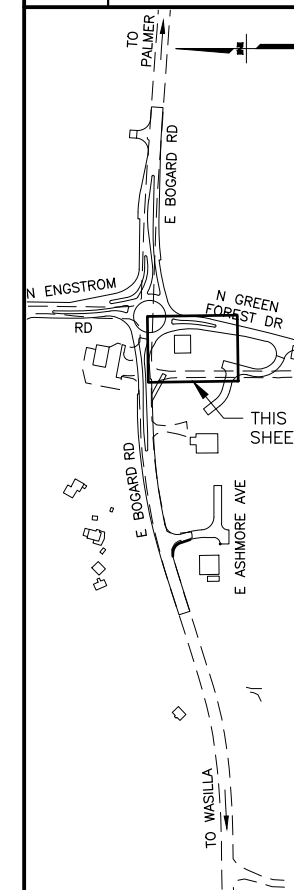
**SECTION D-D**



**SECTION E-E**

**INFILTRATION BASIN  
PIPE OUTFALL EROSION PROTECTION**

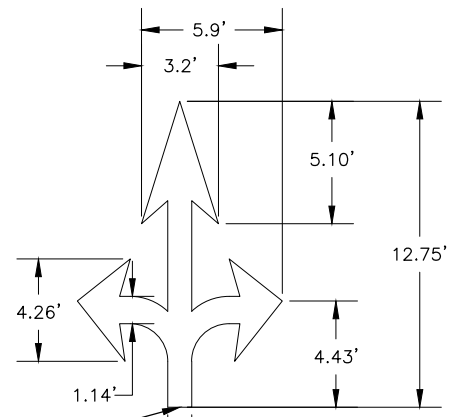
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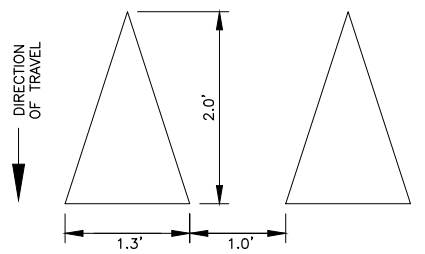
STATE OF ALASKA DOT&PF  
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STATE OF ALASKA  
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HSIP: BOGARD RD AT  
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FOREST DR INT IMP  
DRAINAGE  
INFILTRATION BASIN  
GRADING DETAILS

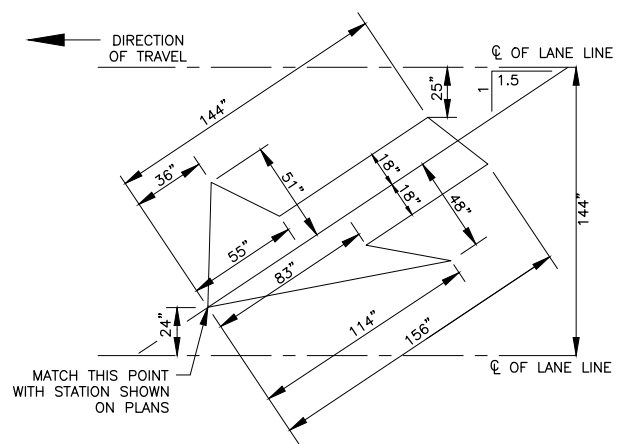
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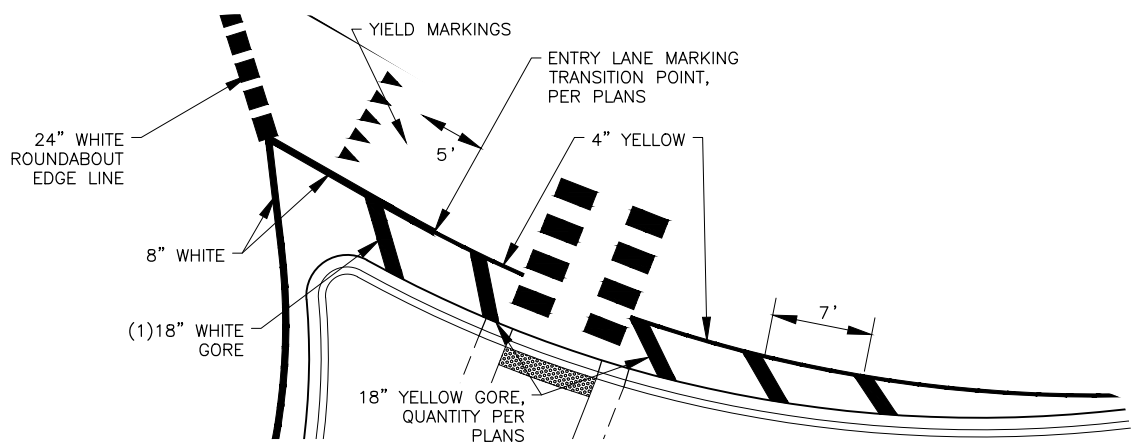
**LEFT/THRU/RIGHT ARROW DETAIL**



**YIELD PAVEMENT MARKINGS DETAIL**



**LANE DROP ARROW DETAIL**



**ROUNDABOT ENTRY LANE MARKING DETAIL**

**SIGNING & STRIPING NOTES:**

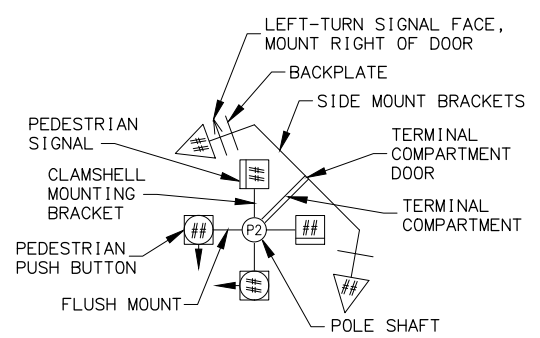
- ALL STATION LOCATIONS FOR SIGN INSTALLATION ARE APPROXIMATE. INSTALL SIGNS AT LOCATIONS AS DIRECTED BY THE ENGINEER.
- USE THE FOLLOWING DEFINITIONS TO DECIPHER THE ABBREVIATED SIGN POST TYPES IN THE SIGN SUMMARY SHEETS.
  - A. PT MEANS A PERFORATED STEEL TUBE.
  - B. T MEANS A SQUARE STEEL TUBE.
  - C. P MEANS A ROUND STEEL PIPE.
  - D. W MEANS A WIDE FLANGE BEAM.
  - E. 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.
- FOR SIGNS SUPPORTED BY MULTIPLE POSTS, FABRICATE THE POSTS WITH THEIR TOPS LEVEL WITH ONE ANOTHER.
- FOR PERFORATED STEEL TUBE SIGNPOSTS, INSTALL THE CONCRETE FOUNDATION OPTION SHOWN ON ALASKA STANDARD PLAN S-30. TRIM EACH PT POST TO LIMIT THE LENGTH INSERTED INTO THE FOUNDATION TO 12 INCHES.
- FABRICATE GUIDE SIGNS ACCORDING TO THE SHOP DRAWINGS INCLUDED IN THE APPENDICES OF PART 4, CONTRACT PROVISIONS AND SPECIAL PROVISIONS. TRIM THE CORNERS OF ALL SIGNS TO THE RADIUS SHOWN ON EACH SHOP DRAWING.
- 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.
- FOR SIGNS SUPPORTED BY MULTIPLE TUBES OR PIPES, LOCATE THE OUTER POSTS ON MAXIMUM SIX FEET CENTERS. INSTALL ADJACENT WIDE FLANGE POSTS ON MINIMUM EIGHT FEET CENTERS.
- 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. LONGITUDINAL, TRANSVERSE AND SYMBOL MARKINGS SHALL BE INLAID AND GORE STRIPES SHALL BE SURFACE APPLIED AS SPECIFIED IN SECTION 670 OF THE SPECIFICATIONS.
- 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.
- WHERE NEW STRIPING IS TO EXTEND BEYOND PAVING LIMITS, REMOVE EXISTING STRIPING IN ACCORDANCE WITH SUBSECTION 670-3.04 TO THE EXTENT OF STRIPING LIMITS.

**ABBREVIATIONS**

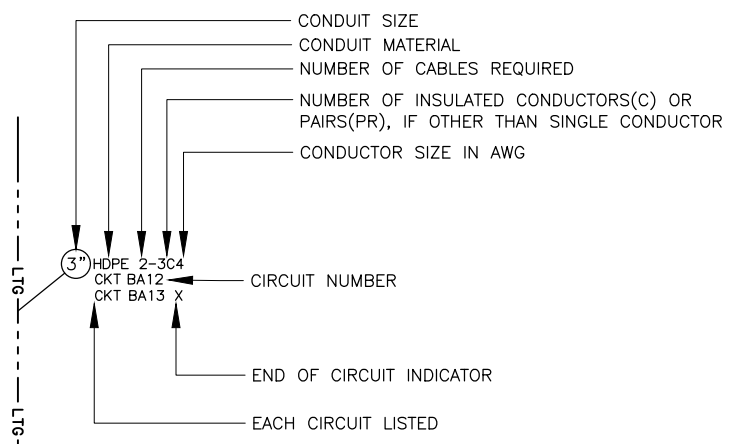
AWG	AMERICAN WIRE GAUGE	NB	NORTH BOUND
CAM	CAMERA	OMNI	OMNI DIRECTIONAL ANTENNA
EB	EAST BOUND	P#	TRAFFIC SIGNAL POLE #
GND	GROUND	PE	PHOTOELECTRIC CELL
HDPE	HIGH DENSITY POLYETHYLENE CONDUIT	PED B ##	PEDESTRIAN PUSH BUTTON #
HEAD	VEHICULAR SIGNAL HEAD	PED1	PEDESTRIAN SIGNAL HEAD
SIG	SIGNAL	PRE #	PREEMPTION #
I/C	INTERCONNECT	PRE CON #	PREEMPTION CONFIRMATION LIGHT #
INTX	INTERSECTION	RAD	RADAR
INTX L	INTERSECTION LIGHTING	RMC	RIGID METAL CONDUIT
LC	LOAD CENTER	SB	SOUTH BOUND
LFNC	LIQUIDTIGHT FLEXIBLE NONMETALLIC CONDUIT	TC	TRAFFIC CONTROLLER
LTG	LIGHTING	WB	WEST BOUND
MUTCD	MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES	YAG1	DIRECTIONAL ANTENNA

**FOUNDATIONS NOTES:**

- STATION & C.L. REFERENCE ARE TO THE CENTER OF THE STRUCTURE, EXCEPT ON LOOPS WHICH ARE TO THE CENTER OF THE TRAILING EDGE OF THE LOOP (EDGE NEAREST INTERSECTION).
- LOCATE J-BOXES SO THAT THEY ARE LOCATED OUT OF THE PATHWAY, SIDEWALK, CURB RAMPS, AND DRAINAGE COLLECTION AREAS.
- INSTALL LOAD CENTER AND TRAFFIC CONTROLLER FOUNDATIONS WITHIN 1-DEGREE OF PLUMB.
- INSTALL ANCHOR BOLTS IN CAST FOUNDATIONS TO BE WITHIN 1:48 OF PLUMB.



**POLE SHAFT LEGEND**



**CIRCUIT LABELING LEGEND**

**CALL BEFORE YOU DIG!**

CONTRACTOR SHALL CALL A MINIMUM OF 3 DAYS IN ADVANCE OF CONSTRUCTION

ALASKA DIGLINE...907-278-3121 OR 800-478-3121

CALL OR GO TO WWW.AKONECALL.COM/STATEWIDE.HTM FOR MEMBER LIST OF WHO WILL BE NOTIFIED



STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

**HSIP: BOGARD ROAD AT ENGSTROM ROAD AND GREEN FOREST DRIVE INTERSECTION IMPROVEMENTS**

**TRAFFIC LEGEND & NOTES**

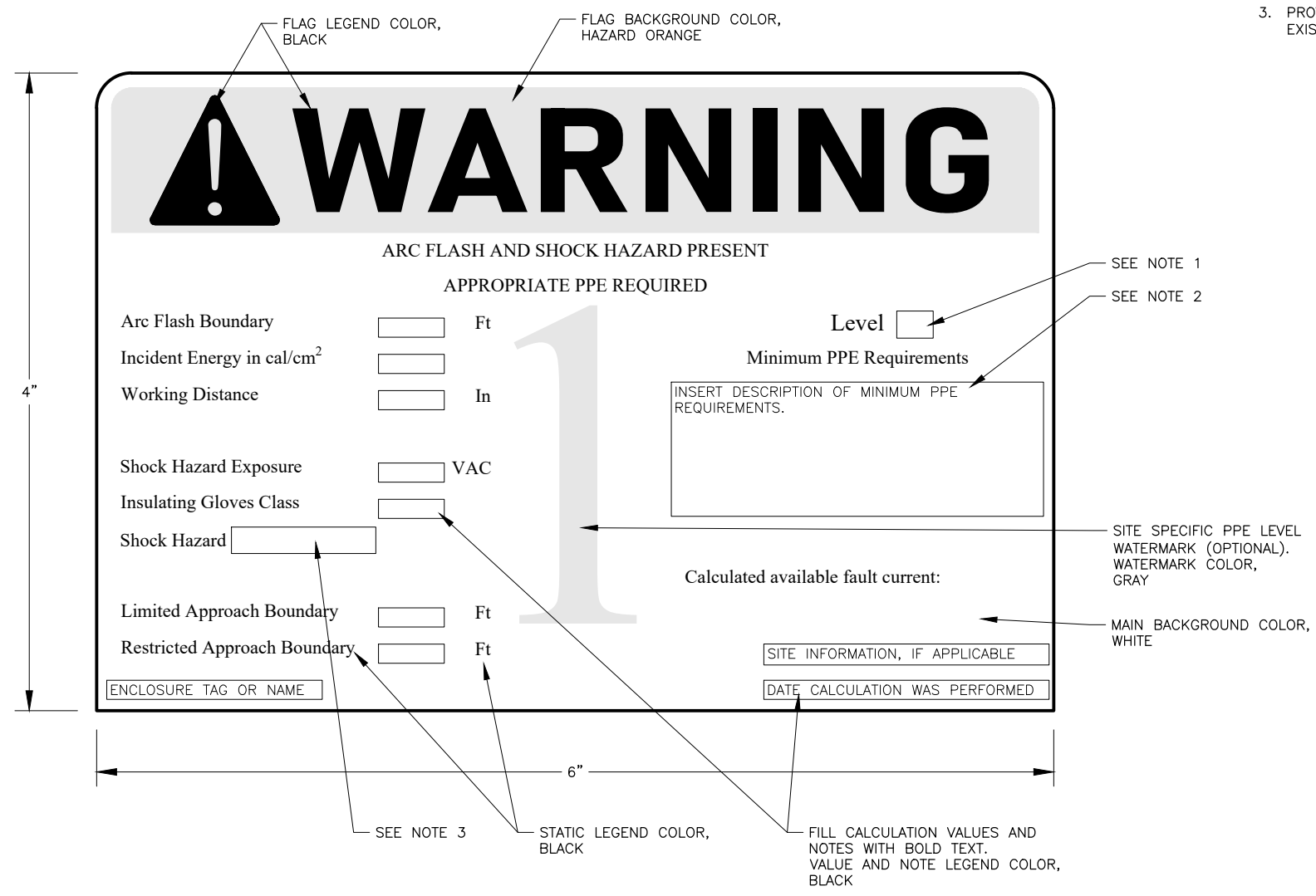


NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0001630 / CFHWY00435	2022	H2	H22

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 DESIGNED BY: ZJH  
 CHECKED BY: RDR  
 DRAFTED BY: MF  
 DATE: 3/15/2023 12:38 PM  
 SCALE:

**NOTES:**

1. APPLICABLE STATE OF ALASKA DOT&PF ELECTRICAL EQUIPMENT MUST BE LABELED WITH DOT&PF-DEFINED SITE-SPECIFIC PPE LEVELS, AS DEFINED IN NFPA 70E 130.5(H)(3)(c). THE LEVELS ARE: LEVEL 1 (0 TO 4 CAL/CM<sup>2</sup>), 2 (4.1 TO 8.0 CAL/CM<sup>2</sup>), 3 (8.1 TO 25.0 CAL/CM<sup>2</sup>), 4 (25.1 TO 39.9 CAL/CM<sup>2</sup>), OR WP (WORK PROHIBITED, FOR EQUIPMENT IN WHICH THE CALCULATED ARC FLASH INCIDENT ENERGY IS  $\geq$  40 CAL/CM<sup>2</sup>).
2. MINIMUM PPE REQUIREMENTS FOR EACH PPE LEVEL DESCRIBED IN NOTE 1 ARE THE SAME REQUIREMENTS AS DESCRIBED IN NFPA 70E TABLE 130.7(C)(15)(c). THESE PPE REQUIREMENTS ARE TO BE USED AS THE SITE-SPECIFIC PPE LEVELS.
3. PROVIDE DESCRIPTION OF EQUIPMENT CONFIGURATIONS IN WHICH A HAZARD EXISTS. FOR EXAMPLE "WHEN COVER REMOVED."



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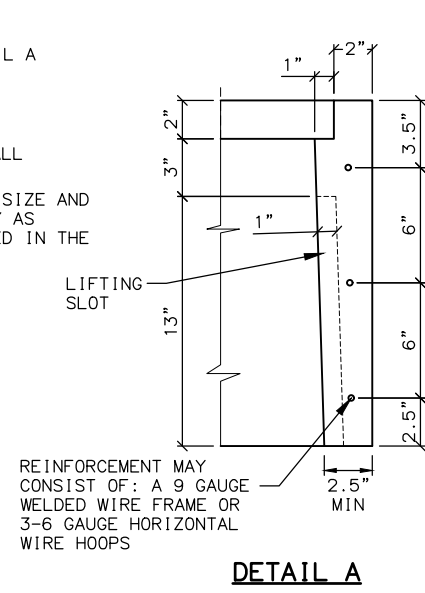
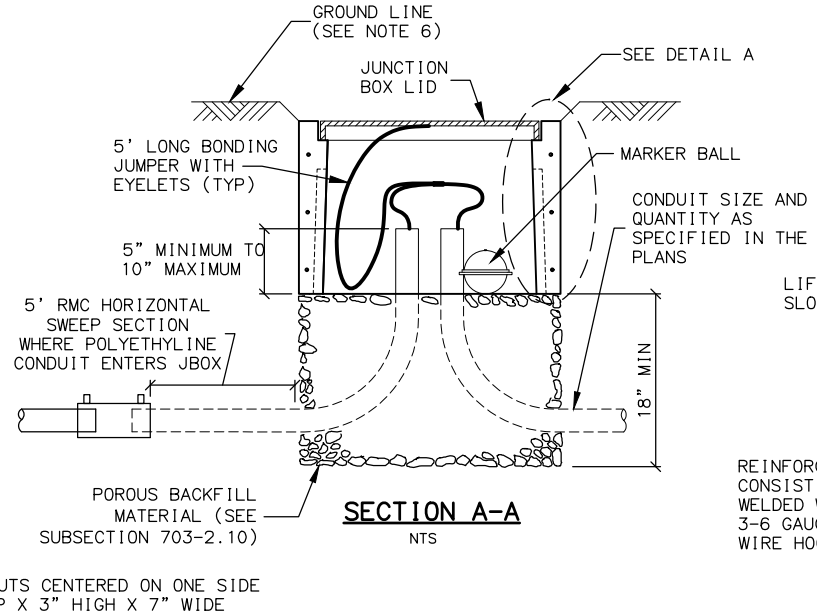
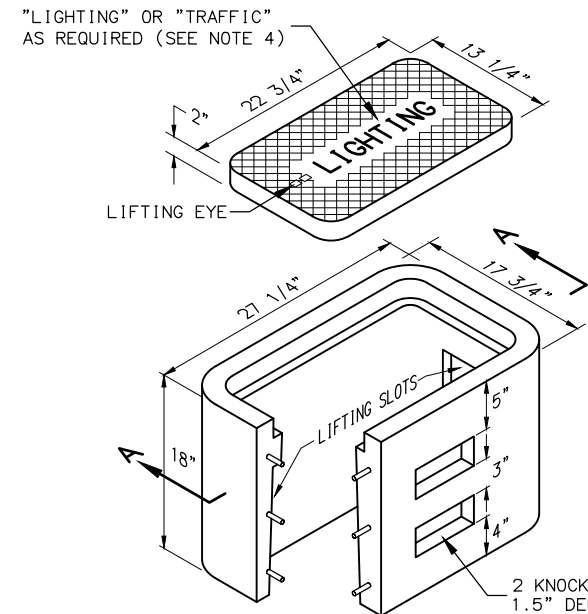
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STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES

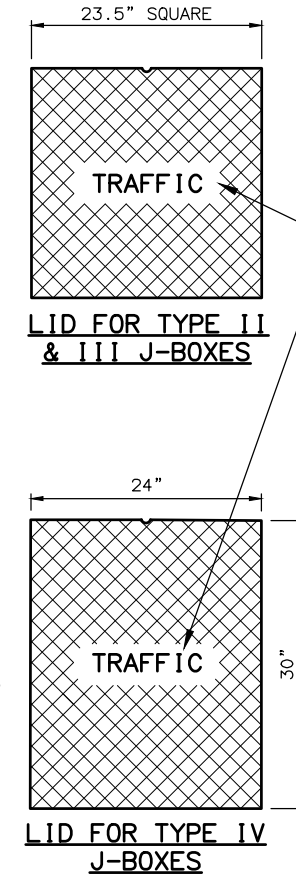
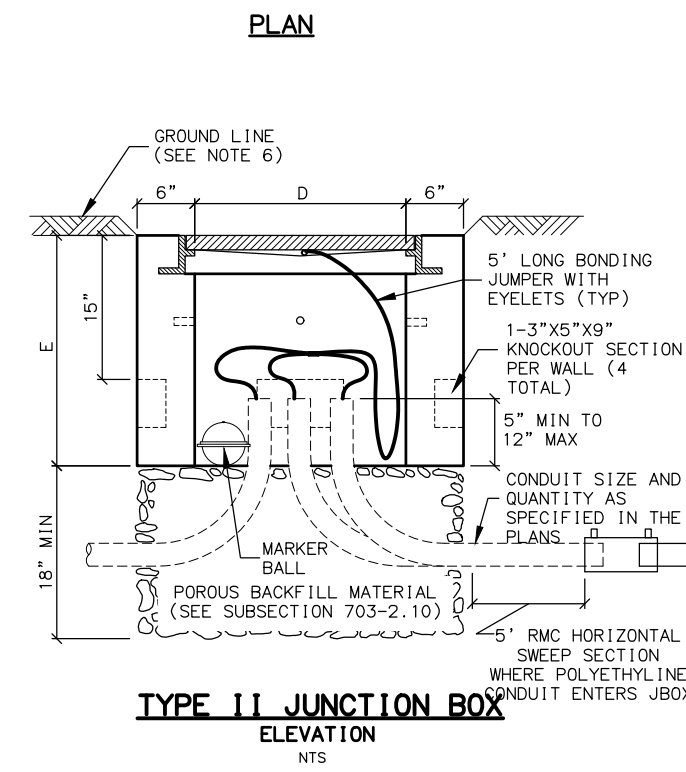
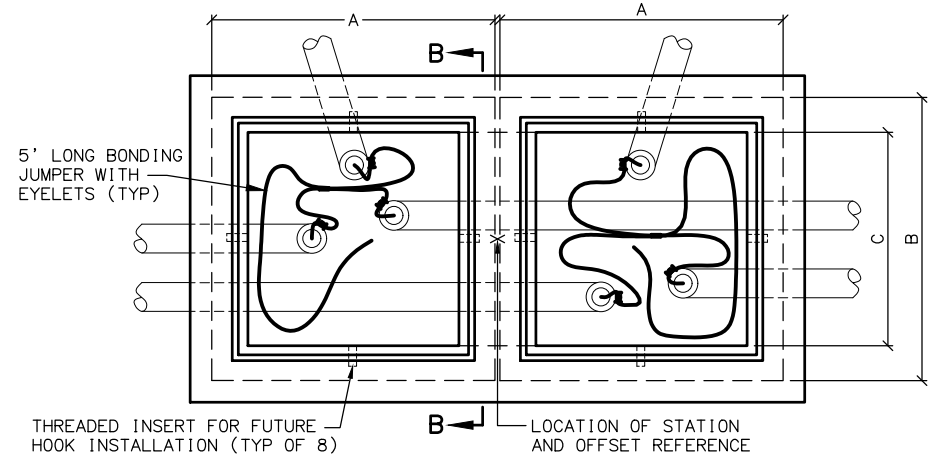
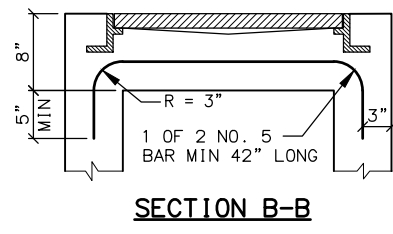
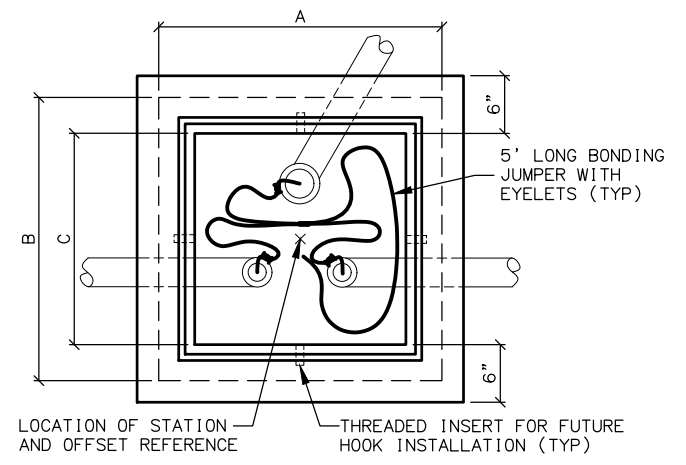
**HSIP: BOGARD ROAD AT  
ENGSTROM ROAD AND GREEN  
FOREST DRIVE INTERSECTION  
IMPROVEMENTS  
ARC FLASH SHOCK HAZARD  
LABELING**

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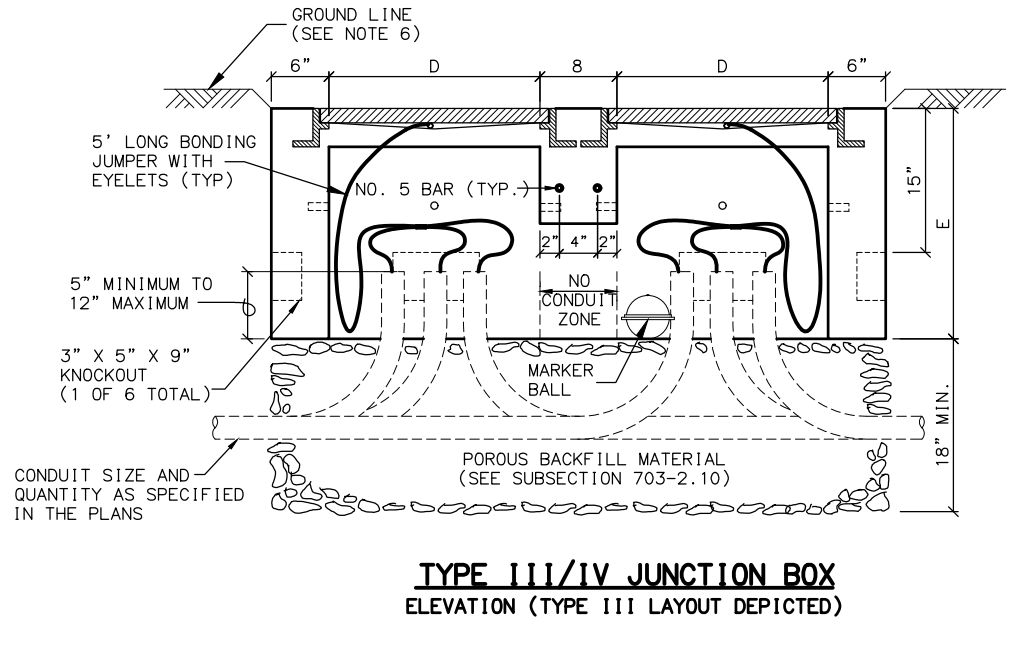
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0001630 / CFHWY00435	2022	H3	H22



**TYPE IA JUNCTION BOX**



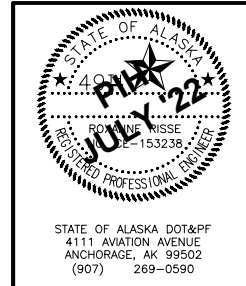
"LIGHTING" OR "TRAFFIC" AS REQUIRED (SEE NOTE 4)



**NOTES:**

1. AVOID INSTALLING TYPE IA JUNCTION BOXES IN DRIVEWAYS OR IN LOCATIONS SUBJECT TO USE BY HEAVY TRUCKS. INSTALL JUNCTION BOXES ONLY AT THE LATERAL LOCATIONS ALLOWED IN SUBSECTION 660-3.04.
2. FURNISH TYPE II, III AND IV JUNCTION BOXES WITH CAST IRON FRAMES AND LIDS THAT WEIGH A MINIMUM OF 210 POUNDS AND ARE RATED FOR HEAVY TRAFFIC LOADS IN COMPLIANCE WITH AASHTO M306. FURNISH TYPE IA JUNCTION BOXES WITH CAST IRON LIDS THAT WEIGH A MINIMUM OF 50 POUNDS.
3. CONSTRUCT JUNCTION BOXES ACCORDING TO SECTION 501 USING CLASS A CONCRETE. REINFORCE TYPE IA JUNCTION BOXES AS SHOWN. SYNTHETIC STRUCTURAL FIBER-REINFORCED CONCRETE THAT MEETS ASTM C 1116 AND CONTAINS FIBER IN PROPORTIONS AS RECOMMENDED BY THE FIBER MANUFACTURER MAY BE ADDED FOR STRENGTH.
4. FOR JUNCTION BOXES THAT CONTAIN ILLUMINATION CONDUCTORS EXCLUSIVELY, FURNISH LIDS WITH THE WORD "LIGHTING" INSCRIBED INTO THEM. FOR OTHER JUNCTION BOXES, FURNISH LIDS WITH THE WORD "TRAFFIC" INSCRIBED INTO THEM.
5. UNDER JUNCTION BOXES, INSTALL POROUS BACKFILL MATERIAL CONFORMING TO SUBSECTION 703-2.10.
6. SET THE TOPS OF JUNCTION BOXES WITH THE FOLLOWING DIMENSIONS BELOW THE FINISHED SURROUNDING SURFACE:  
 1" IN PAVED MEDIANS AND ADJACENT TO PEDESTRIAN FACILITIES  
 1/4" IN PEDESTRIAN FACILITIES  
 2" IN ALL OTHER AREAS
7. BOND JUNCTION BOX LIDS TO THE SYSTEM OF EQUIPMENT GROUNDING CONDUCTORS ACCORDING TO SUBSECTION 660-3.06. ATTACH BONDING JUMPERS TO THE JUNCTION BOX LIDS WITH BRASS OR STAINLESS STEEL HARDWARE.
8. INSTALL LOOP DETECTOR TAILS THROUGH ONE OF THE KNOCKOUTS OF TYPE IA JUNCTION BOXES. AFTER SETTING THE BOXES TO GRADE, INSTALL GROUT IN THE GAPS THAT REMAIN IN THE KNOCKOUT.
9. INSTALL A 1/2" THICK PREFORMED BITUMINOUS JOINT MATERIAL AROUND JUNCTION BOXES INSTALLED IN PORTLAND CEMENT CONCRETE WALKWAYS.
10. INSTALL AN ELECTRONIC MARKER BALL IN ALL JUNCTION BOXES PER SUBSECTION 660-3.04.
11. PRIOR TO INSTALLATION MARK ALL JUNCTION BOX LOCATIONS WITH A WIRE STAFF VINYL FLAG. THE FLAG SHALL BE RED IN COLOR AND MINIMUM 4-INCHES TALL BY 5-INCHES WIDE. THE WIRE STAFF SHALL BE 21-INCHES IN LENGTH AND CONSTRUCTED OF MINIMUM 15.5 GAUGE STEEL.
12. WHERE MODIFIED TYPE II JUNCTION BOXES ARE REQUIRED FOR DETECTOR LOOP TAIL INSTALLATIONS, ADD ONE(1) ADDITIONAL 5" DEEP X 3" HIGH X 18" WIDE KNOCKOUT 8" BELOW TOP OF JUNCTION BOX.

J-BOX TYPE	DIMENSIONS				
	A (MAX.)	B (MAX.)	C (MIN.)	D (MIN.)	E (MIN.)
II	29 1/2"	29 1/2"	22"	22"	24"
III	29 1/2"	29 1/2"	22"	22"	24"
IV	30"	36"	30"	24"	30"



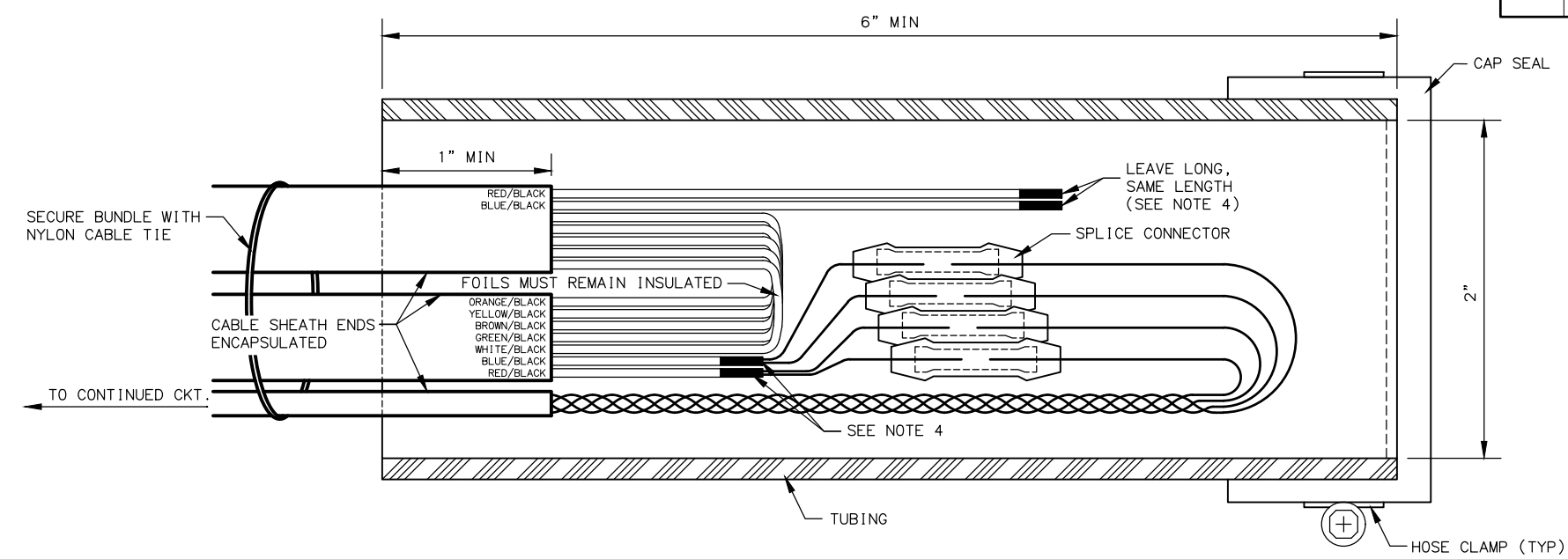
STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES

**HSIP: BOGARD ROAD AT  
 ENGSTROM ROAD AND GREEN  
 FOREST DRIVE INTERSECTION  
 IMPROVEMENTS**

**JUNCTION BOX DETAILS**

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0001630 / CFHWY00435	2022	H4	H22

DESIGNED BY: ZJH  
 CHECKED BY: RDR  
 DRAFTED BY: MF  
 SCALE: \_\_\_\_\_  
 TIME: 12:38 PM  
 DATE: 3/15/2023  
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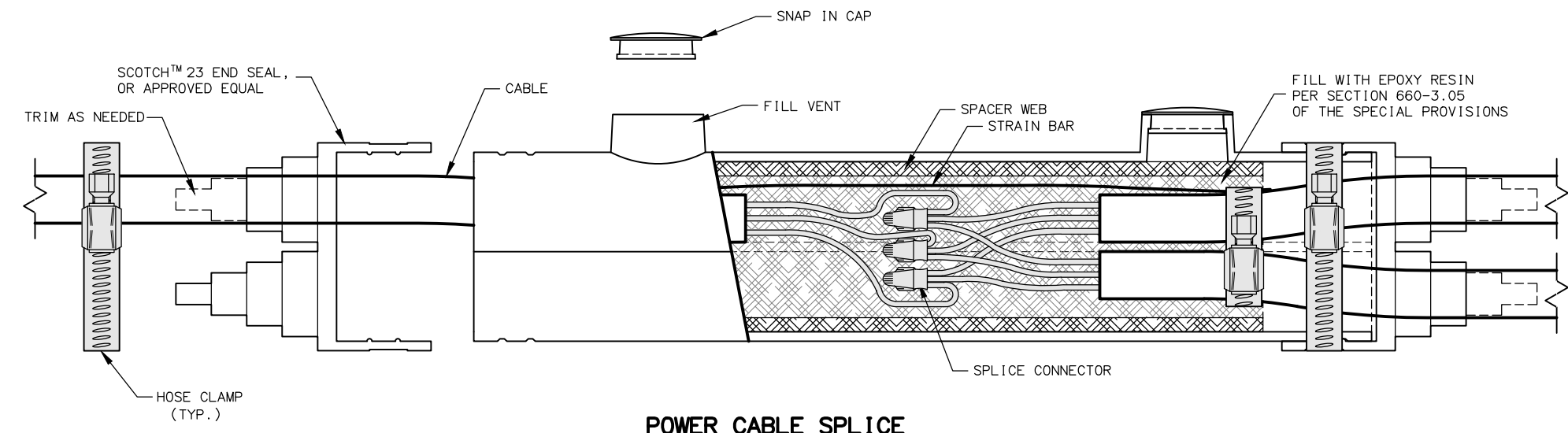
**LOOP LEAD-IN SPLICE**

**NOTES:**

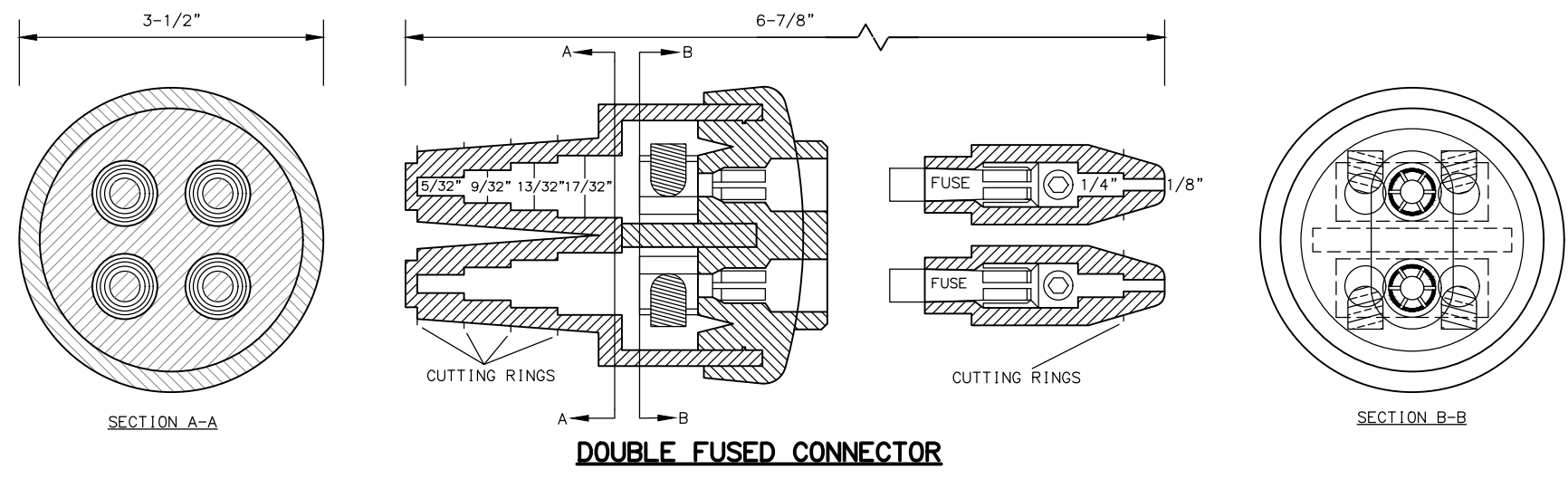
- LOOP LEAD-IN SPLICE**
1. FABRICATE LOOP LEAD-IN SPLICE IN THE FIELD AS SHOWN.
  2. CAP SEAL ONE END AND COMPLETELY FILL OPEN END WITH RE-ENTERABLE ENCAPSULATION COMPOUND TO EDGE OF TUBING.
  3. LEAVE A MINIMUM OF 1/2" CLEARANCE BETWEEN THE ENCLOSURE AND THE SPLICE AT BOTH ENDS OF THE TUBING.
  4. EXPOSE FOIL AND DRAIN WIRES, SEAL WITH HEAT SHRINK TUBING (TYP).
  5. INSTALL SPLICE CONNECTORS ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
- POWER CABLE SPLICE**
6. SECURE CABLE/CONNECTOR BUNDLE WITH HOSE CLAMPS AS SHOWN.

**MATERIAL PROPERTIES**

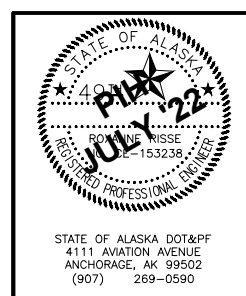
LOOP LEAD-IN SPLICE	
TUBING	PER SECTION 660-3.05
CAP SEAL	FERNCO QWIK CAP #QC-102, OR APPROVED EQUAL
HOSE CLAMP	STAINLESS STEEL
SPLICE CONNECTOR	ML56-16, OR APPROVED EQUAL
COMPOUND	RE-ENTERABLE ENCAPSULATION
POWER CABLE SPLICE	
SPLICE KIT	3M MODEL 78R, OR APPROVED EQUAL
SPLICE CONNECTOR	SCOTCHLOCK G, R, OR Y SPRING CONNECTOR, OR APPROVED EQUAL
HOSE CLAMP	(4)- STAINLESS STEEL
EPOXY RESIN	PER SECTION 660-3.05
DOUBLE FUSED CONNECTOR	
DOUBLE FUSED CONNECTOR	SEC-1791-DF-1, OR APPROVED EQUAL
FUSES	(2) - COMPATIBLE 5-AMP TIME DELAY TYPE FOR LED FIXTURE OR 10-AMP FAST ACTING FOR ALL OTHER FIXTURES



**POWER CABLE SPLICE**



**DOUBLE FUSED CONNECTOR**



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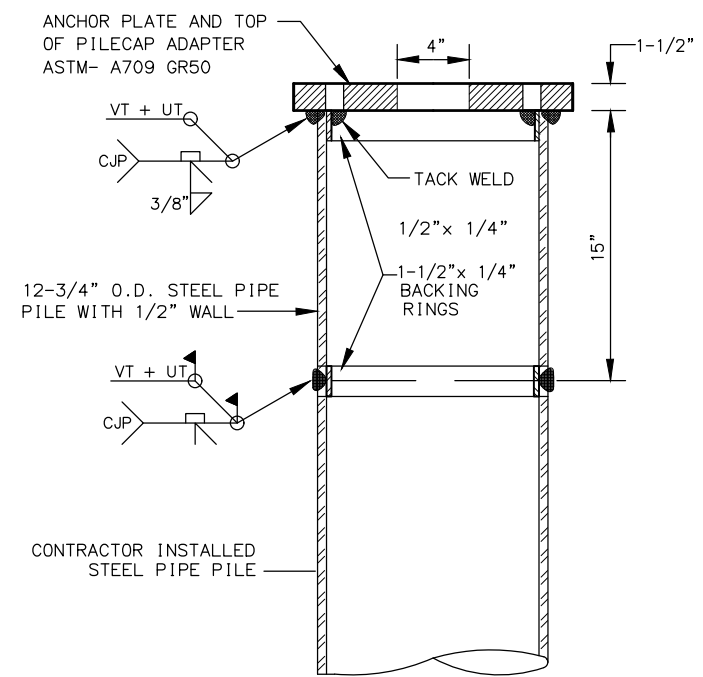
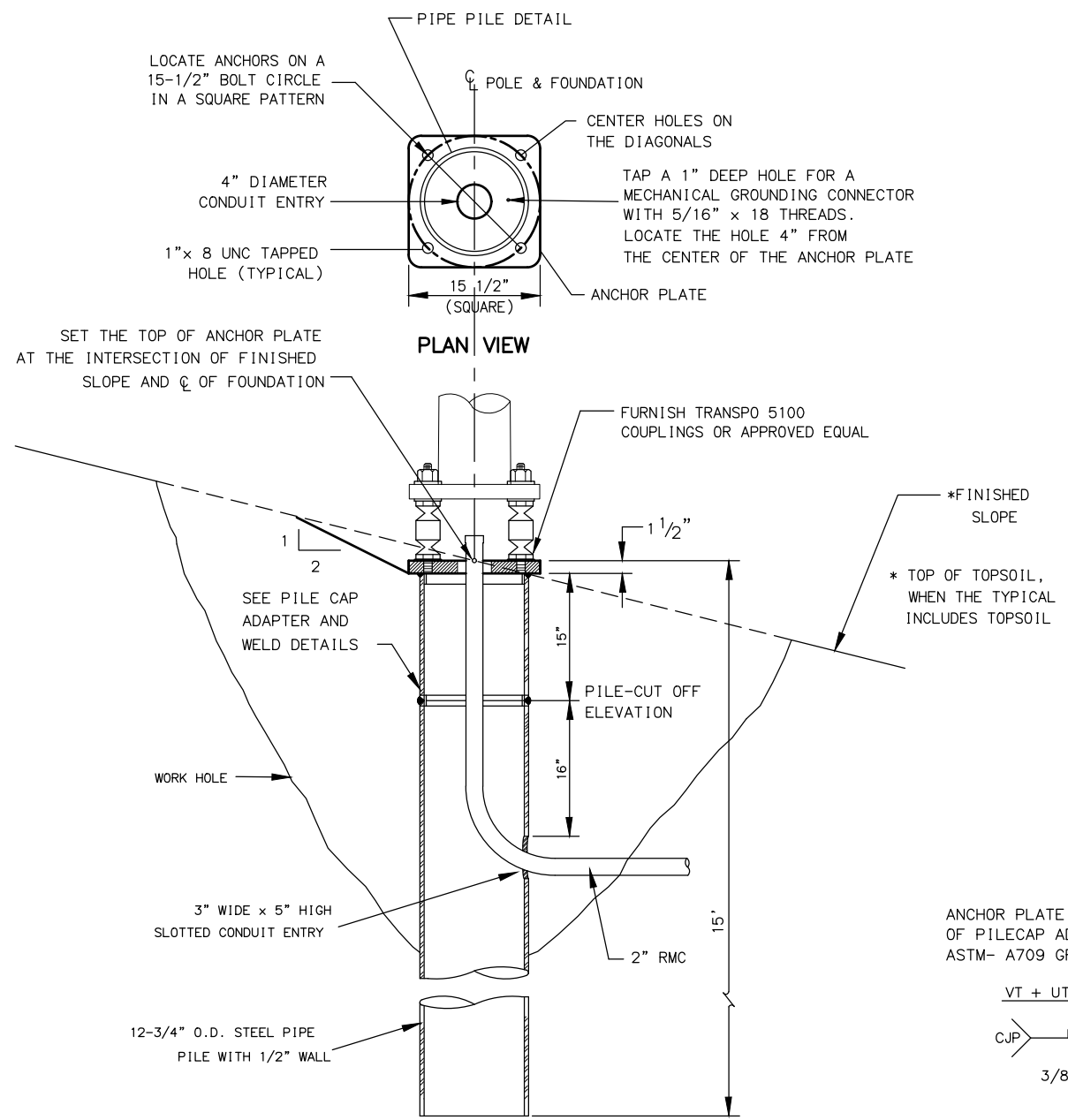
**HSIP: BOGARD ROAD AT  
 ENGSTROM ROAD AND GREEN  
 FOREST DRIVE INTERSECTION  
 IMPROVEMENTS**

**SPLICE DETAILS**

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 (907) 269-0590

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0001630 / CFHWY00435	2022	H5	H22

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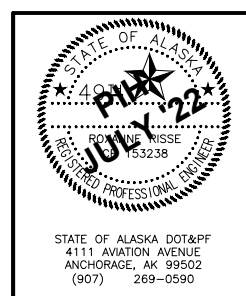
**DESIGN NOTES:**

- DESIGN STANDARD: 2001 STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRE AND TRAFFIC SIGNALS WITH 2006 INTERIM.
- DESIGN LOADS: 5-KIPS AXIAL, 7.5-KIPS SHEAR, 40-KIP-FT MOMENT.
- GALVANIZATION OF PILE IS NOT REQUIRED. UNLESS THE GROUND WATER TABLE IS FOUND TO BE, ABOVE 5 FEET, THEN GALVANIZE PILE ACCORDING TO SECTION 505.
- CHARPY TEST FOR ELECTROLIER POLE PILE FOUNDATIONS ARE NOT REQUIRED.

MATERIAL REQUIREMENTS		
STRUCTURAL STEEL PLATE	ASTM A709 GRADE 50	Fy = 50 ksi
STEEL PIPE PILE	ASTM A709, GRADE 50 T3 API 5L GRADE X 42	Fy = 50 ksi Fy = 42 ksi

**NOTES:**

- FURNISH STEEL PIPE PILES THAT CONFORM TO THE MATERIAL REQUIREMENTS AND SECTION 660, 715 AND 740 OF THE SPECIFICATIONS. NO SPLICES ARE ALLOWED BELOW THE PILECAP ADAPTER.
- DRIVE PILES OPEN ENDED. COMPLETE PILE WORK ACCORDING TO SECTIONS 505, 660 AND 715 OF THE SPECIFICATIONS. REMOVE AND REINSTALL PILES OUT OF PLUMB MORE THAN 1:40.
- FRESH HEAD THE TOP OF PILES IN A LEVEL PLANE AND CUT THE CONDUIT ENTRANCE HOLE AFTER DRIVING THE PILE. NOTE; ONLY MECHANICAL OR PLASMA CUTTER MEANS ARE PERMITTED. OXY-FUEL CUTTING IS PROHIBITED.
- FURNISH ONLY SHOP FABRICATED PILECAP ADAPTERS. INCLUDE STAMPED ENGINEERING CALCULATIONS, DRAWINGS, MILL CERTIFICATIONS AND WELDING PLANS FOR PILECAP ADAPTERS AND THE PILECAP ADAPTER TO PILE WELD. WELDING SHALL CONFORM TO THE REQUIREMENTS OF THE LATEST EDITION OF THE AWS D1.1, STRUCTURAL WELDING CODE-STEEL AND THE SPECIFICATIONS.
- WAIT AT LEAST 3 DAYS AFTER BACKFILLING THE WORK HOLE BEFORE ERECTING THE LUMINAIRE POLE.
- TERMINATE CONDUIT(S) 3" ABOVE THE TOP OF THE ANCHOR PLATE. INSTALL A GROUNDING BUSHING ON THE END OF THE RIGID METAL CONDUIT AND ESTABLISH A BOND WITH THE ANCHOR PLATE.



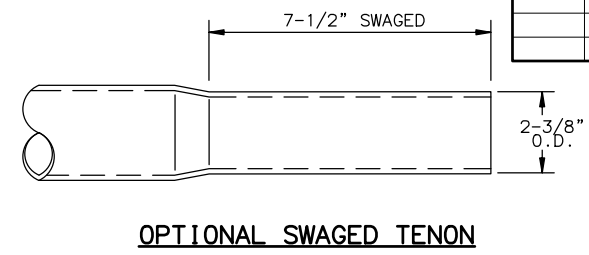
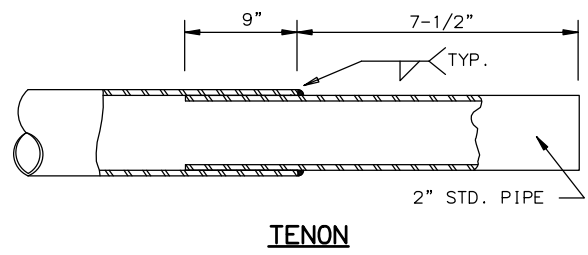
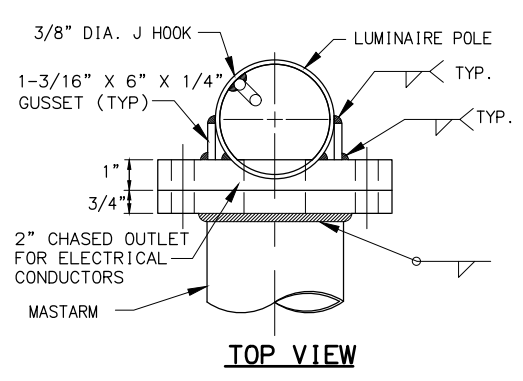
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**PIPE PILE FOUNDATION DETAILS**

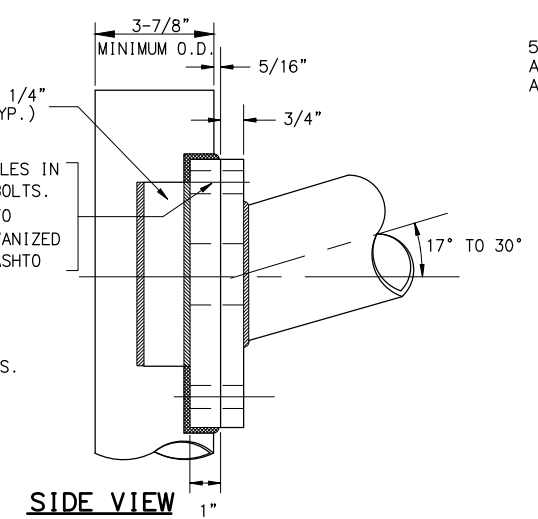
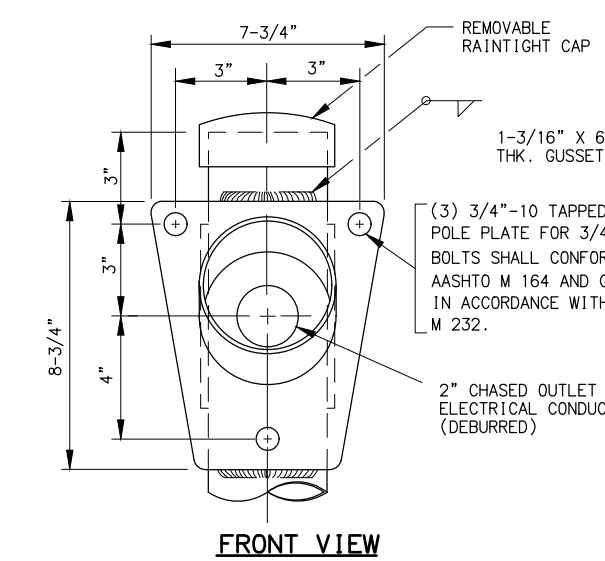
STATE OF ALASKA DOT&PF  
4111 AVIATION AVENUE  
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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0001630 / CFHWY00435	2022	H6	H22

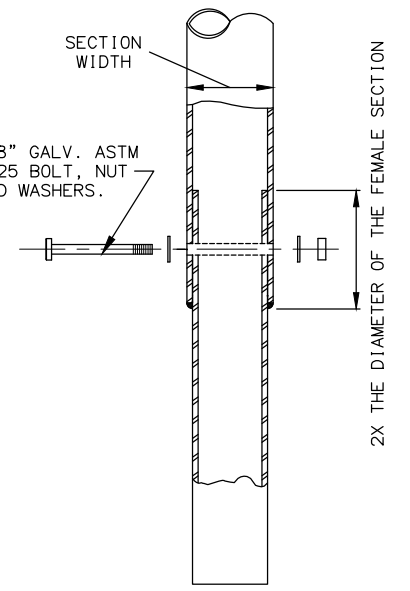


**END OF MASTARM DETAIL**

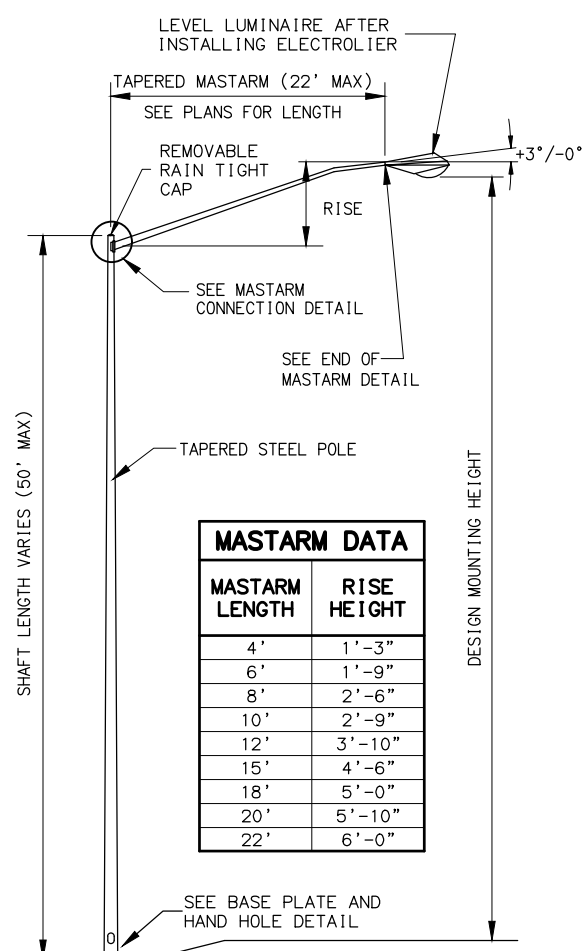
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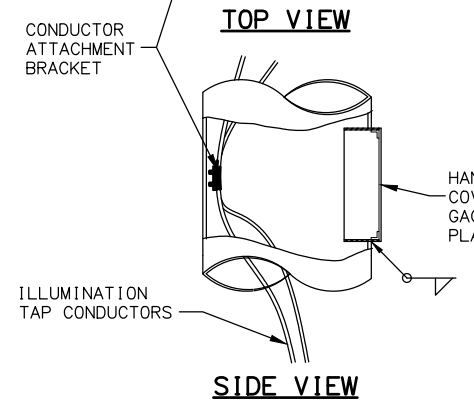
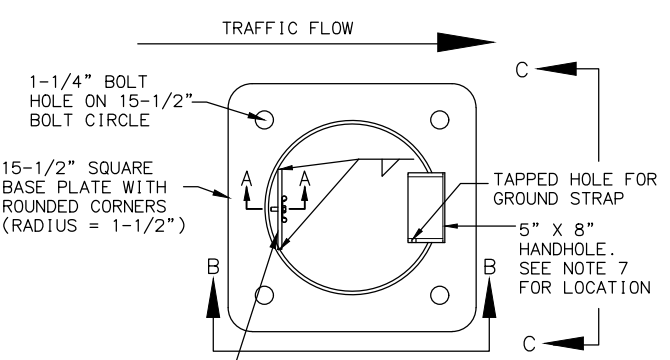
**MASTARM CONNECTION DETAIL**



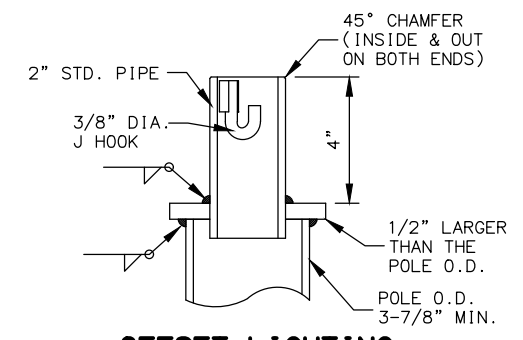
**POLE CONNECTION DETAIL**



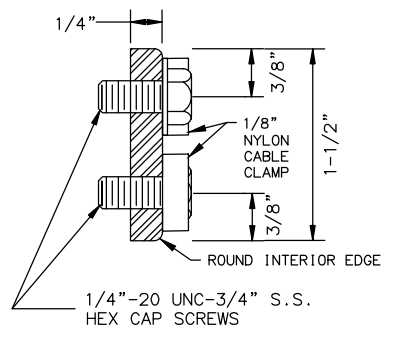
MASTARM DATA	
MASTARM LENGTH	RISE HEIGHT
4'	1'-3"
6'	1'-9"
8'	2'-6"
10'	2'-9"
12'	3'-10"
15'	4'-6"
18'	5'-0"
20'	5'-10"
22'	6'-0"



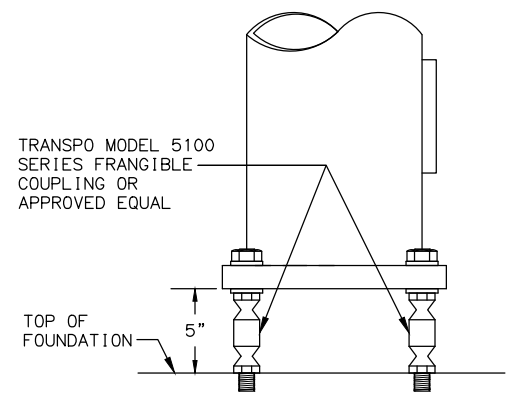
**BASE PLATE AND HAND HOLE DETAIL**



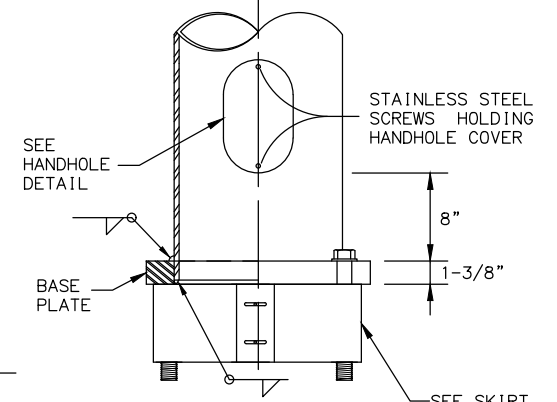
**OFFSET LIGHTING STANDARD POLE TOP DETAIL**  
(CUTAWAY FOR CLARITY)



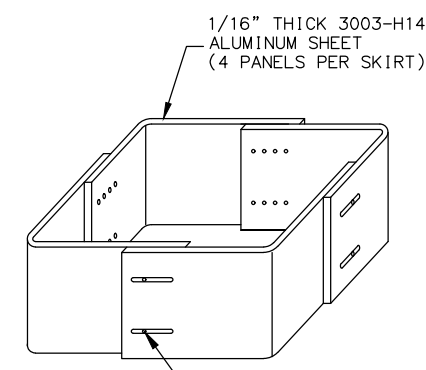
**SECTION A-A**



**VIEW B-B**



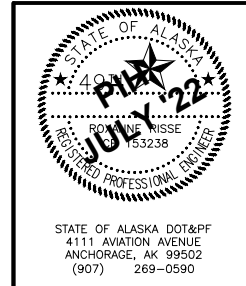
**VIEW C-C**



ASSEMBLE SKIRT WITH EIGHT NO. 10 X 3/8" STAINLESS STEEL SHEET METAL SCREWS

**SKIRT DETAIL**

- NOTES:**
- DESIGN AND FABRICATE ALL SHAFTS TO SUPPORT A MASTARM 22 FEET LONG WITH LUMINAIRE. ASSUME EACH LUMINAIRE WEIGHS 55 POUNDS AND HAS AN EFFECTIVE PROJECTED AREA OF 1.2 SQUARE FEET. WITH THIS DEAD LOAD, LIMIT THE ANGULAR ROTATION TO THE POLE TOP 1°40'0" MAXIMUM.
  - WELD SIZE TO BE DETERMINED BY THE MANUFACTURER.
  - MOUNTING HEIGHT, IF SPECIFIED IN THE PLANS, REFERS TO THE HEIGHT OF LUMINAIRE ABOVE THE ROADWAY. ADJUST EACH POLE'S SHAFT LENGTH TO MAINTAIN THIS DIFFERENCE IN ELEVATION WHENEVER SLOPE AND/OR OFFSET VARIES.
  - MINIMUM OUTSIDE DIAMETER AT THE TOP OF POLE EQUALS 3-7/8". POLE DIAMETER SHALL TAPER UNIFORMLY FROM THE TOP OF THE POLE TO THE BASE PLATE, WITH A MAXIMUM TAPER RATE OF 0.14" PER FOOT.
  - APPLY AN ANTI-SEIZING COMPOUND TO ALL THREADED SURFACES, INCLUDING THOSE IN THE ANCHOR PLATE AND ON THE COUPLINGS.
  - MASTARM RISE MAY VARY ±6" FROM THE VALUES LISTED IN THE TABLE.
  - LOCATE THE HANDHOLE AT 90 DEGREES TO THE MASTARM ON THE SIDE OF POLE DOWNSTREAM FROM TRAFFIC FLOW.
  - FURNISH ALL POLES WITH A J-HOOK TO SUPPORT THE ILLUMINATION TAP CONDUCTORS. FURNISH ALL MASTARM POLES WITH A REMOVABLE RAIN TIGHT CAP.
  - MOUNT LIGHTING STANDARDS UPON TRANSPO MODEL NO. 5100 FRANGIBLE COUPLINGS AND TRANSPO TYPE B FEMALE ANCHORS, OR APPROVED EQUAL.
  - INSTALL ALL COMPONENTS OF THE BREAKAWAY SUPPORT SYSTEM IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
  - FABRICATE THE SKIRT FROM FOUR PIECES OF 1/16" THICK 3003 H-14 ALUMINUM SHEET. BEND EACH PLATE TO PROVIDE CORNERS WITH A 3/4" RADIUS. ASSEMBLE THE SKIRT WITH #10 X 3/8" SELF TAPPING STAINLESS SCREWS OR POP RIVETS. THE ASSEMBLED SKIRT MEASURES ABOUT 12-3/4" SQUARE.
  - A JUNCTION BOX IS REQUIRED AT EACH NEW ELECTROLIER. INSTALL THE JUNCTION BOX IMMEDIATELY BEHIND THE FOUNDATION APPROXIMATELY 7' FROM POLE UNLESS OTHERWISE SPECIFIED IN THE PLANS.



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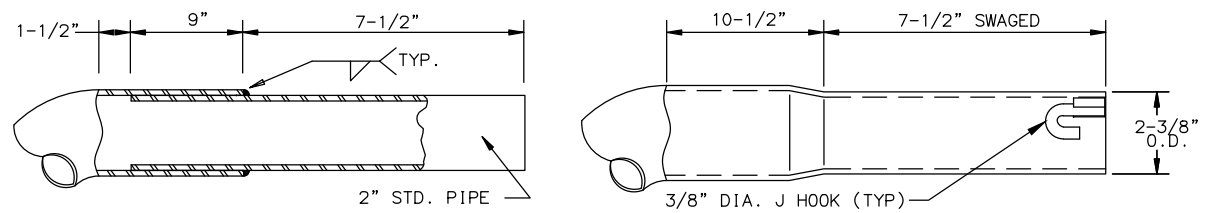
**LIGHTING STANDARD 1 DETAILS**

STATE OF ALASKA DOT&PF  
4111 AVIATION AVENUE  
ANCHORAGE, AK 99502  
(907) 269-0590

DRAWING LOCATION: W:\PROJECTS\HSIP\BOGARD\_ENGSTROM\_RA - CFHWY00435\CIV3D\PLANSET\H SHEETS\12-LIGHTING\_STANDARD-1.DWG  
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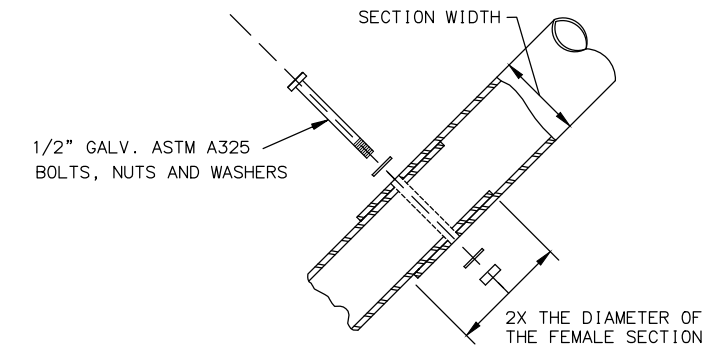
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 SCALE: AS SHOWN  
 DESIGNED BY: ZJH  
 CHECKED BY: RDR  
 DRAFTED BY: MF

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0001630 / CFHWY00435	2022	H7	H22

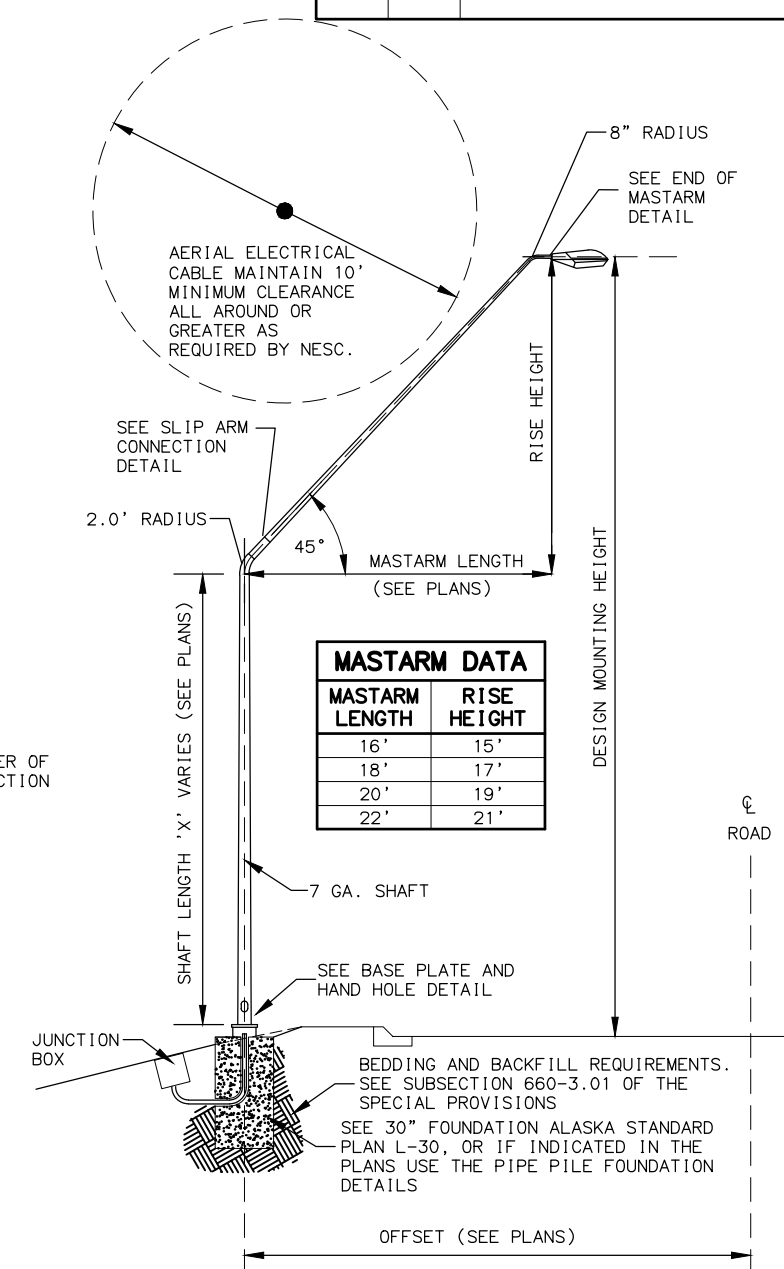


**TENON**  
**END OF MASTARM DETAIL**  
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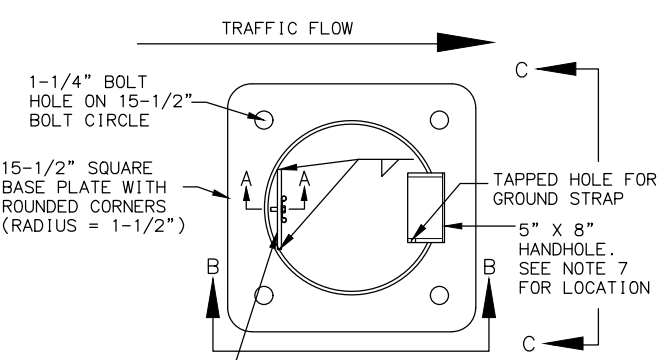
**OPTIONAL SWAGED TENON**



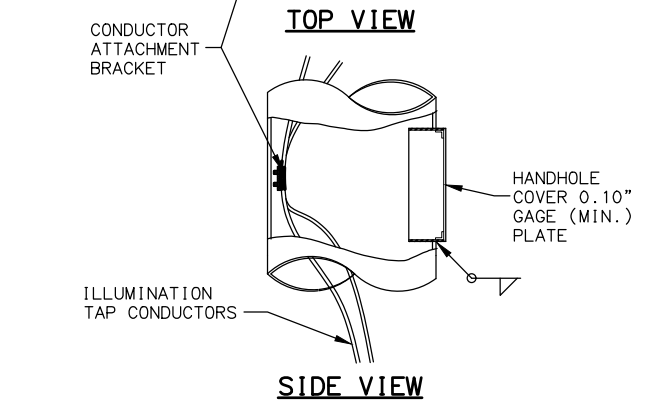
**SLIP CONNECTION DETAIL**



**45° ELECTROLIER ELEVATION**

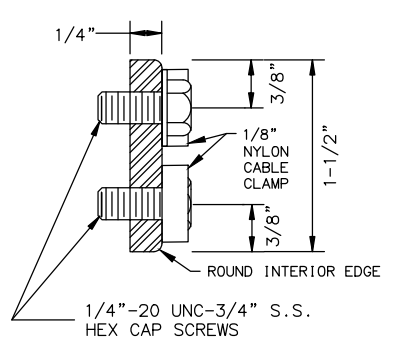


**TOP VIEW**

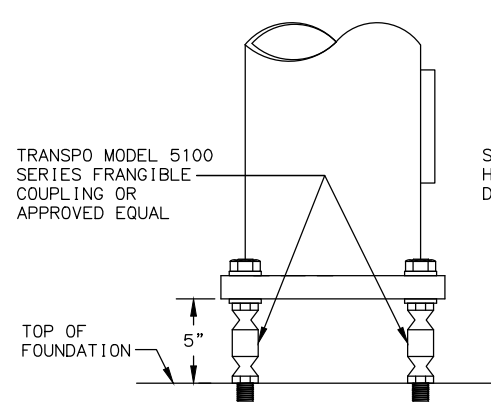


**SIDE VIEW**

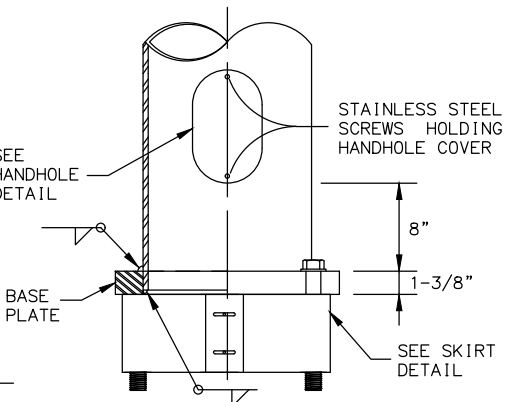
**BASE PLATE AND HAND HOLE DETAIL**



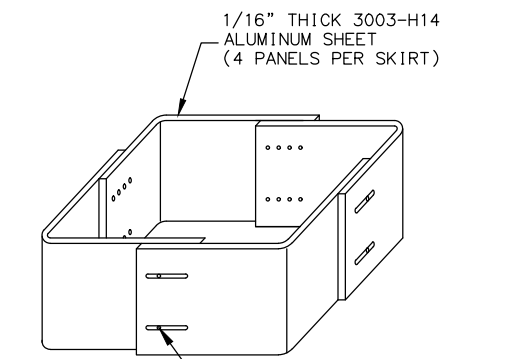
**SECTION A-A**



**VIEW B-B**

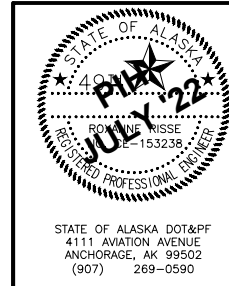


**VIEW C-C**



**SKIRT DETAIL**

- NOTES:**
- DESIGN AND FABRICATE ALL SHAFTS TO SUPPORT A MASTARM 22 FEET LONG WITH LUMINAIRE. ASSUME EACH LUMINAIRE WEIGHS 55 POUNDS AND HAS AN EFFECTIVE PROJECTED AREA OF 1.2 SQUARE FEET. WITH THIS DEAD LOAD, LIMIT THE ANGULAR ROTATION TO THE POLE TOP 1°40'0" MAXIMUM.
  - WELD SIZE TO BE DETERMINED BY THE MANUFACTURER.
  - MOUNTING HEIGHT, IF SPECIFIED IN THE PLANS, REFERS TO THE HEIGHT OF LUMINAIRE ABOVE THE ROADWAY. ADJUST EACH POLE'S SHAFT LENGTH TO MAINTAIN THIS DIFFERENCE IN ELEVATION WHENEVER SLOPE AND/OR OFFSET VARIES.
  - MINIMUM OUTSIDE DIAMETER AT THE TOP OF POLE EQUALS 2-3/8". POLE DIAMETER SHALL TAPER UNIFORMLY FROM THE TOP OF THE POLE TO THE BASE PLATE, WITH A MAXIMUM TAPER RATE OF 0.14" PER FOOT.
  - APPLY AN ANTI-SEIZING COMPOUND TO ALL THREADED SURFACES, INCLUDING THOSE IN THE ANCHOR PLATE AND ON THE COUPLINGS.
  - MASTARM RISE MAY VARY ±6" FROM THE VALUES LISTED IN THE TABLE.
  - LOCATE THE HANDHOLE AT 90 DEGREES TO THE MASTARM ON THE SIDE OF POLE DOWNSTREAM FROM TRAFFIC FLOW.
  - FURNISH ALL POLES WITH A J-HOOK TO SUPPORT THE ILLUMINATION TAP CONDUCTORS. FURNISH ALL MASTARM POLES WITH A REMOVABLE RAIN TIGHT CAP.
  - MOUNT LIGHTING STANDARDS UPON TRANSPO MODEL NO. 5100 FRANGIBLE COUPLINGS AND TRANSPO TYPE B FEMALE ANCHORS, OR APPROVED EQUAL.
  - INSTALL ALL COMPONENTS OF THE BREAKAWAY SUPPORT SYSTEM IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
  - FABRICATE THE SKIRT FROM FOUR PIECES OF 1/16" THICK 3003 H-14 ALUMINUM SHEET. BEND EACH PLATE TO PROVIDE CORNERS WITH A 3/4" RADIUS. ASSEMBLE THE SKIRT WITH #10 X 3/8" SELF TAPPING STAINLESS SCREWS OR POP RIVETS. THE ASSEMBLED SKIRT MEASURES ABOUT 12-3/4" SQUARE.
  - A JUNCTION BOX IS REQUIRED AT EACH NEW ELECTROLIER. INSTALL THE JUNCTION BOX IMMEDIATELY BEHIND THE FOUNDATION APPROXIMATELY 7' FROM POLE UNLESS OTHERWISE SPECIFIED IN THE PLANS.



STATE OF ALASKA  
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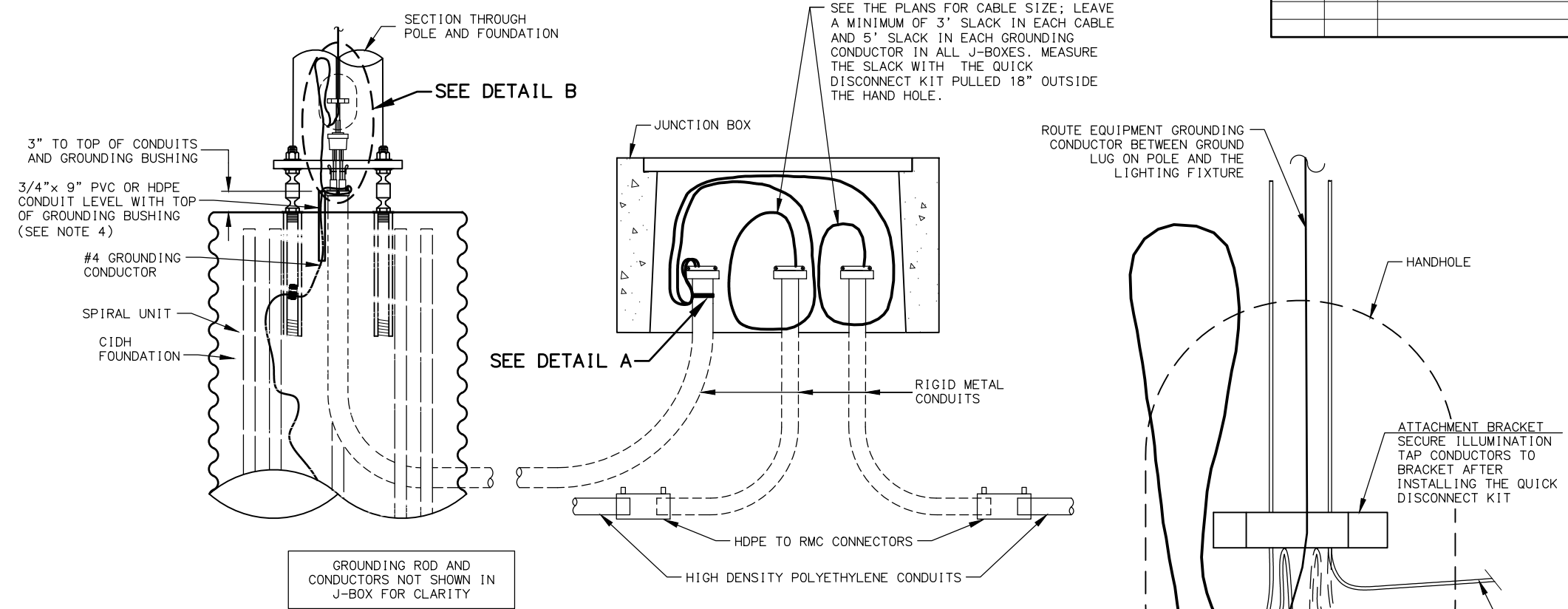
**HSIP: BOGARD ROAD AT  
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IMPROVEMENTS**

**LIGHTING STANDARD 3 DETAILS**

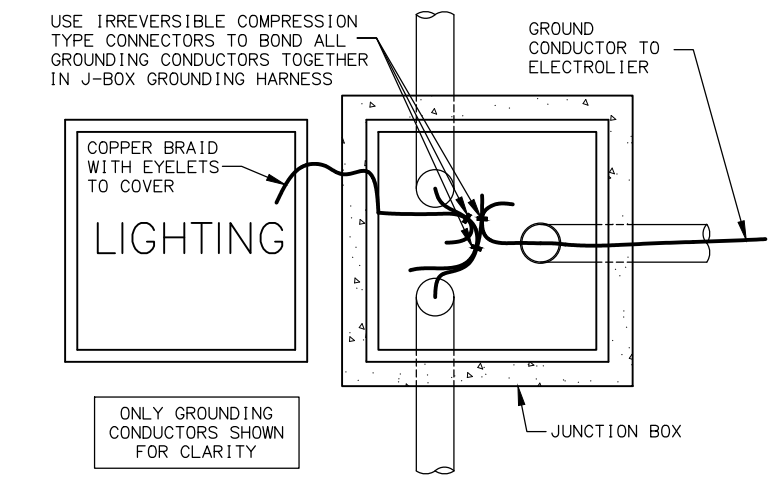
STATE OF ALASKA DOT&PF  
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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0001630 / CFHWY00435	2022	H8	H22

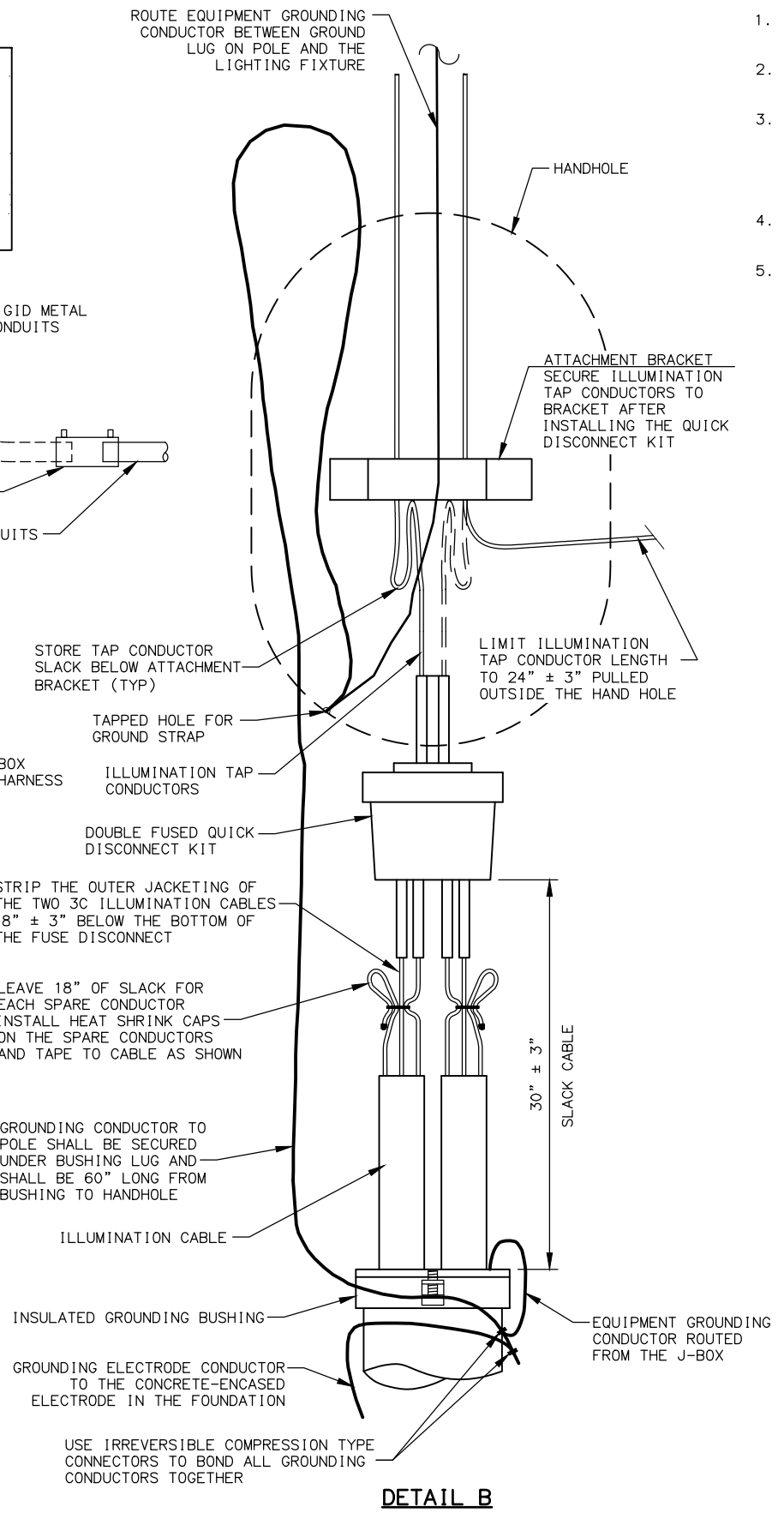
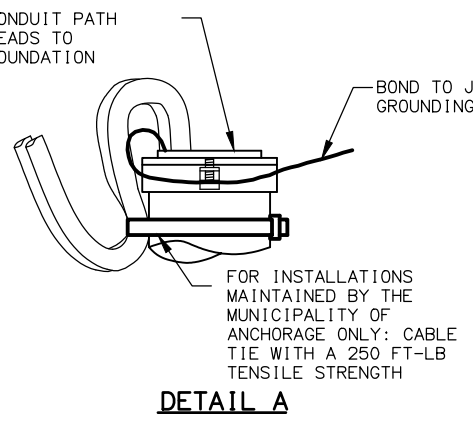
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 CHECKED BY: RDR  
 DRAFTED BY: MF  
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 DATE: 3/15/2023 12:38 PM



**LIGHTING SYSTEM POLE AND J-BOX WIRING DETAILS**



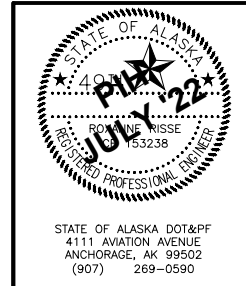
**GROUNDING CONDUCTOR BONDING CONNECTIONS**



**DETAIL B**

**NOTES:**

1. APPLICATION FOR SLIP BASE IS THE SAME EXCEPT FOR BONDING. SEE SUBSECTION 660-3.06 FOR BONDING.
2. LABEL ALL CABLES AND CONDUCTORS IN POLE BASE AND J-BOX. SEE SUBSECTION 660-3.05.
3. MAKE ALL GROUNDING AND BONDING WIRE #8 AWG, EXCEPT IN THOSE CONDUITS THAT CONTAIN CIRCUIT CONDUCTORS LARGER THAN #8 AWG. IN THIS CASE USE WIRE EQUAL IN SIZE TO THE LARGEST CONDUCTOR. THE GROUNDING ELECTRODE CONDUCTOR TO THE CONCRETE-ENCASED ELECTRODE IN THE FOUNDATION SHALL BE #4 AWG.
4. USE LISTED IRREVERSIBLE COMPRESSION TYPE CONNECTORS SIZED FOR EACH APPLICATION AND INSTALLED PER MANUFACTURERS SPECIFICATIONS.
5. PROTECT GROUND WIRE WITH 3/4" PVC OR HDPE CONDUIT TO 6" BELOW TOP OF FOUNDATION FILLED WITH SILICONE SEALANT.

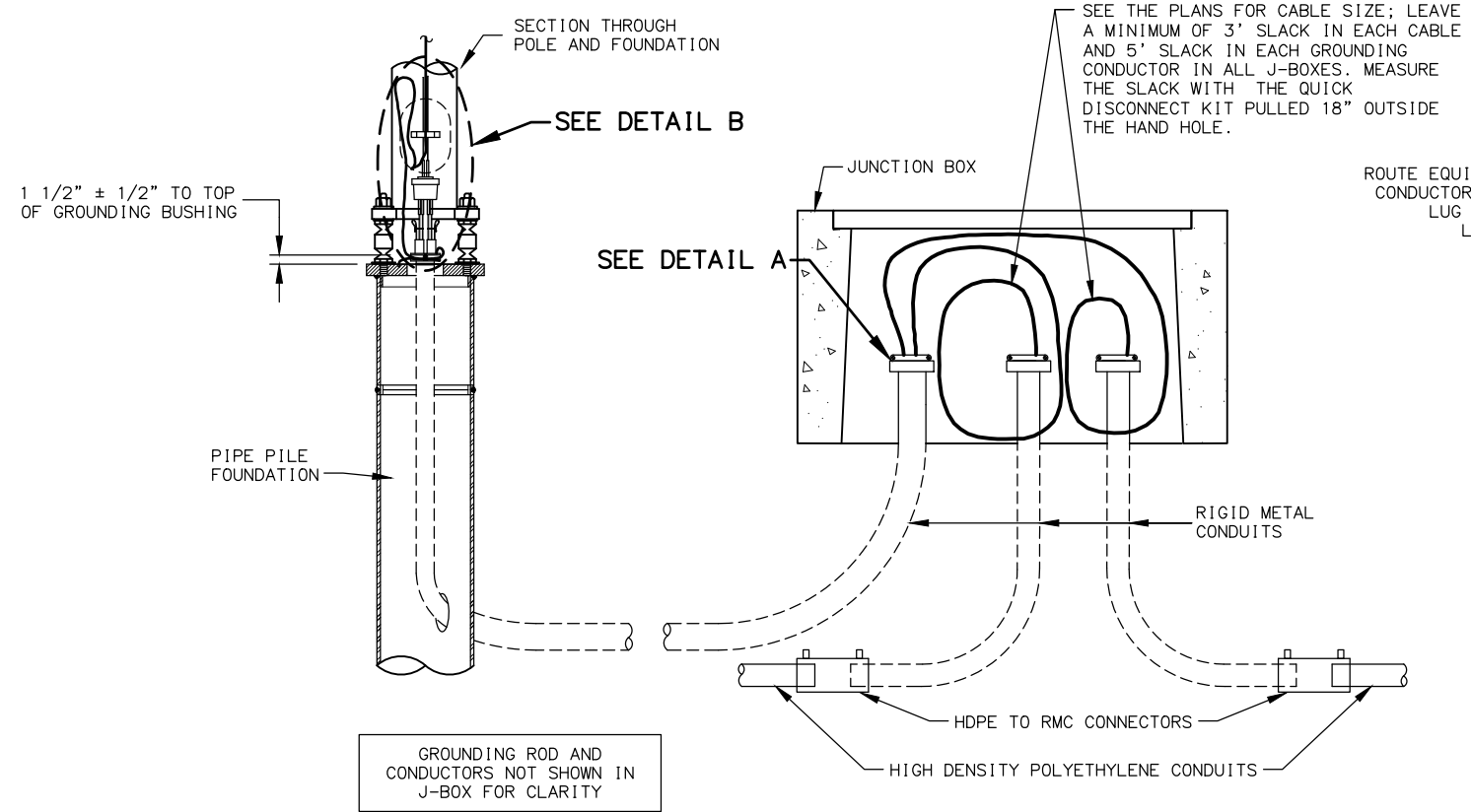


STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES

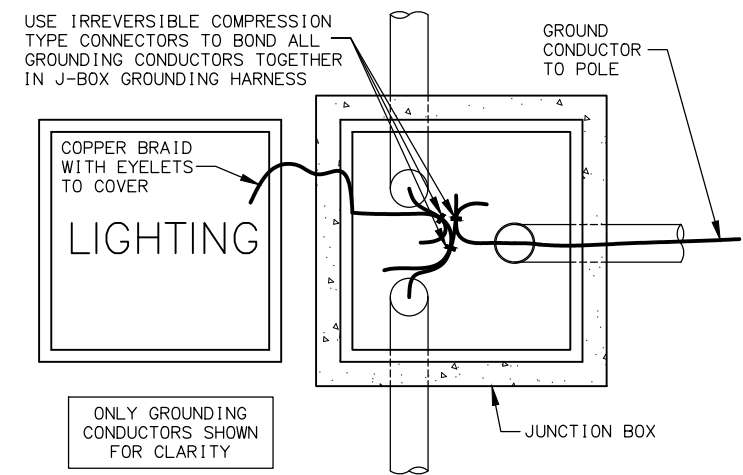
**HSIP: BOGARD ROAD AT  
 ENGSTROM ROAD AND GREEN  
 FOREST DRIVE INTERSECTION  
 IMPROVEMENTS  
 CIDH WIRING AND GROUNDING  
 DETAILS**

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0001630 / CFHWY00435	2022	H9	H22

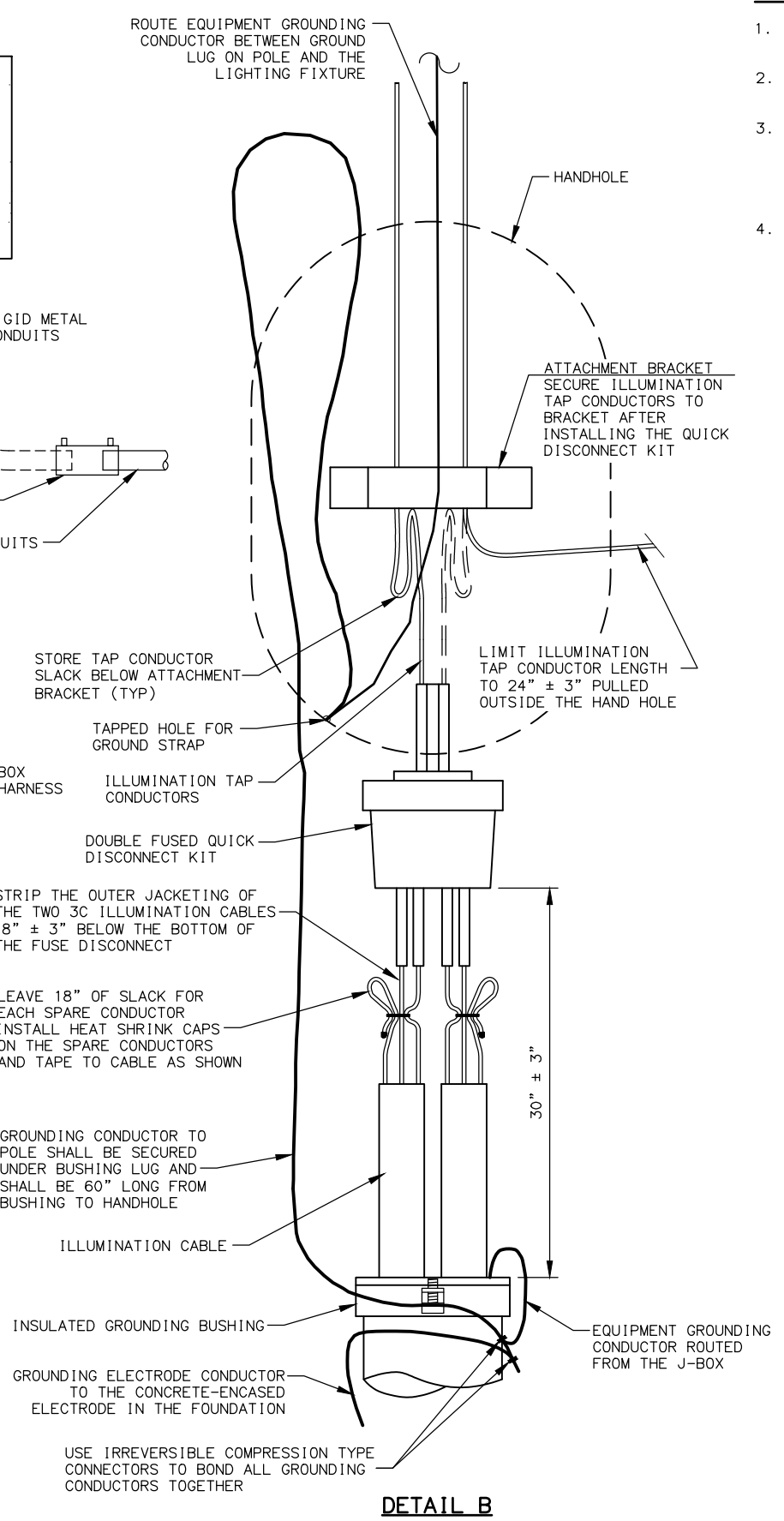
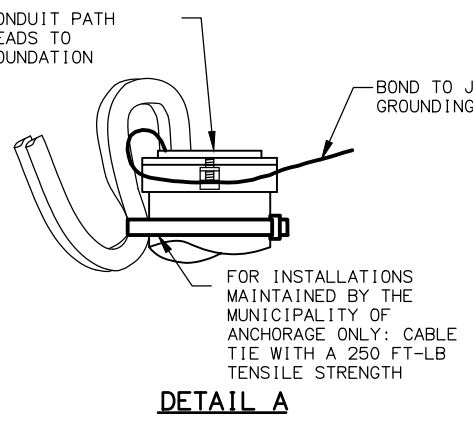
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 DESIGNED BY: ZJH  
 CHECKED BY: RDR  
 DRAFTED BY: MF  
 SCALE: 1" = 1'-0"  
 DATE: 3/15/2023 12:38 PM



**LIGHTING SYSTEM POLE AND J-BOX WIRING DETAILS**

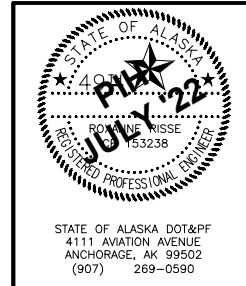


**GROUNDING CONDUCTOR BONDING CONNECTIONS**



**NOTES:**

1. APPLICATION FOR SLIP BASE IS THE SAME EXCEPT FOR BONDING. SEE SUBSECTION 660-3.06 FOR BONDING.
2. LABEL ALL CABLES AND CONDUCTORS IN POLE BASE AND J-BOX. SEE SUBSECTION 660-3.05.
3. MAKE ALL GROUNDING AND BONDING WIRE #8 AWG, EXCEPT IN THOSE CONDUITS THAT CONTAIN CIRCUIT CONDUCTORS LARGER THAN #8 AWG. IN THIS CASE USE WIRE EQUAL IN SIZE TO THE LARGEST CONDUCTOR. THE GROUNDING ELECTRODE CONDUCTOR TO THE CONCRETE-ENCASED ELECTRODE IN THE FOUNDATION SHALL BE #4 AWG.
4. USE LISTED IRREVERSIBLE COMPRESSION TYPE CONNECTORS SIZED FOR EACH APPLICATION AND INSTALLED PER MANUFACTURERS SPECIFICATIONS.



STATE OF ALASKA  
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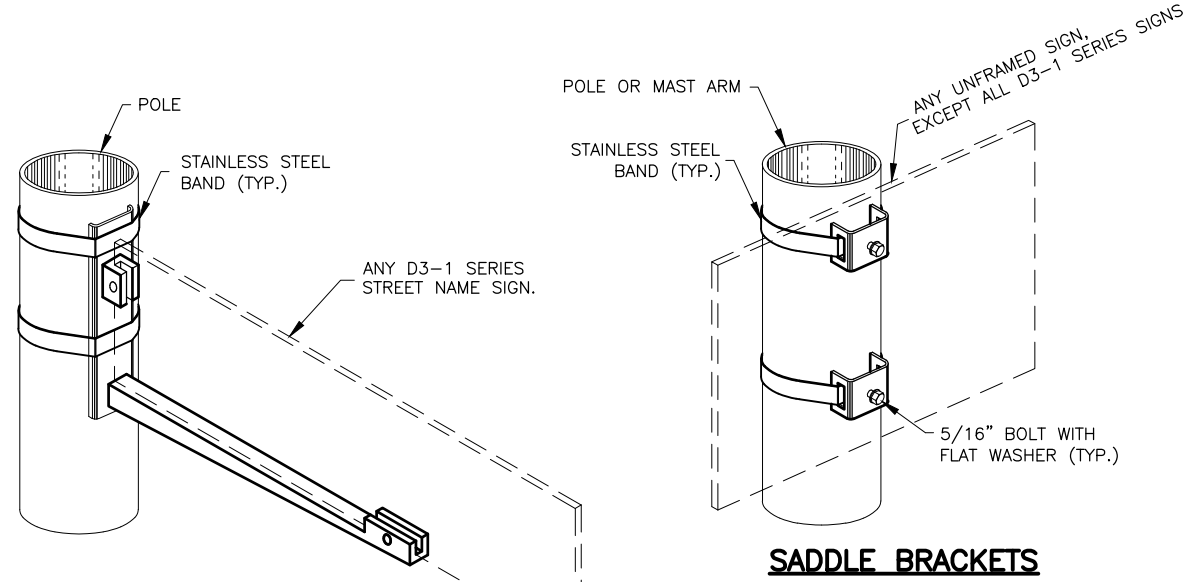
**HSIP: BOGARD ROAD AT  
 ENGSTROM ROAD AND GREEN  
 FOREST DRIVE INTERSECTION  
 IMPROVEMENTS  
 PIPE PILE WIRING AND  
 GROUNDING DETAILS**

STATE OF ALASKA DOT&PF  
 4111 AVIATION AVENUE  
 ANCHORAGE, AK 99502  
 (907) 269-0590



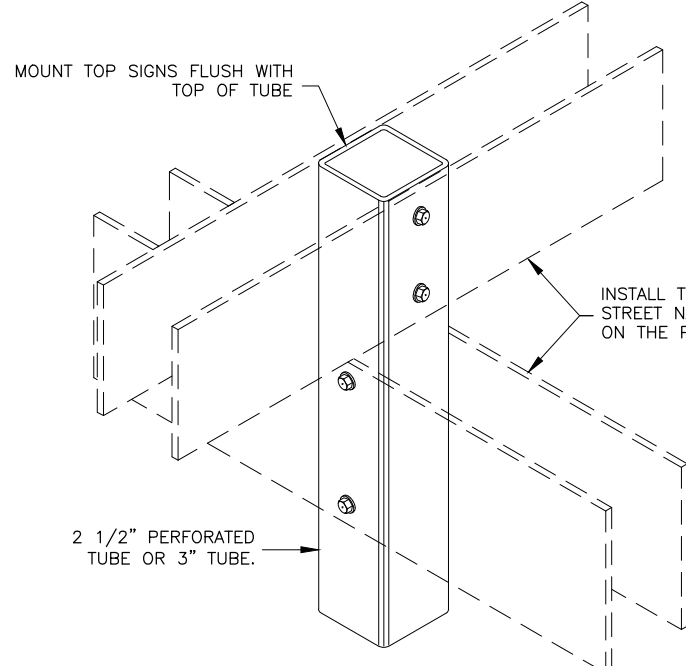
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0001630 / CFHWY00435	2022	H10	H22

DRAWING LOCATION: W:\PROJECTS\HSIP BOGARD ENGSTROM RA - CFHWY00435\CIV3D\PLANSET\H SHEETS\26-SIGN\_ATTACHMENT.DWG  
 DESIGNED BY: ZJH  
 CHECKED BY: RDR  
 DRAFTED BY: MF  
 SCALE: \_\_\_\_\_  
 DATE: 3/15/2023 12:38 PM  
 TIME: \_\_\_\_\_



**SADDLE BRACKETS**

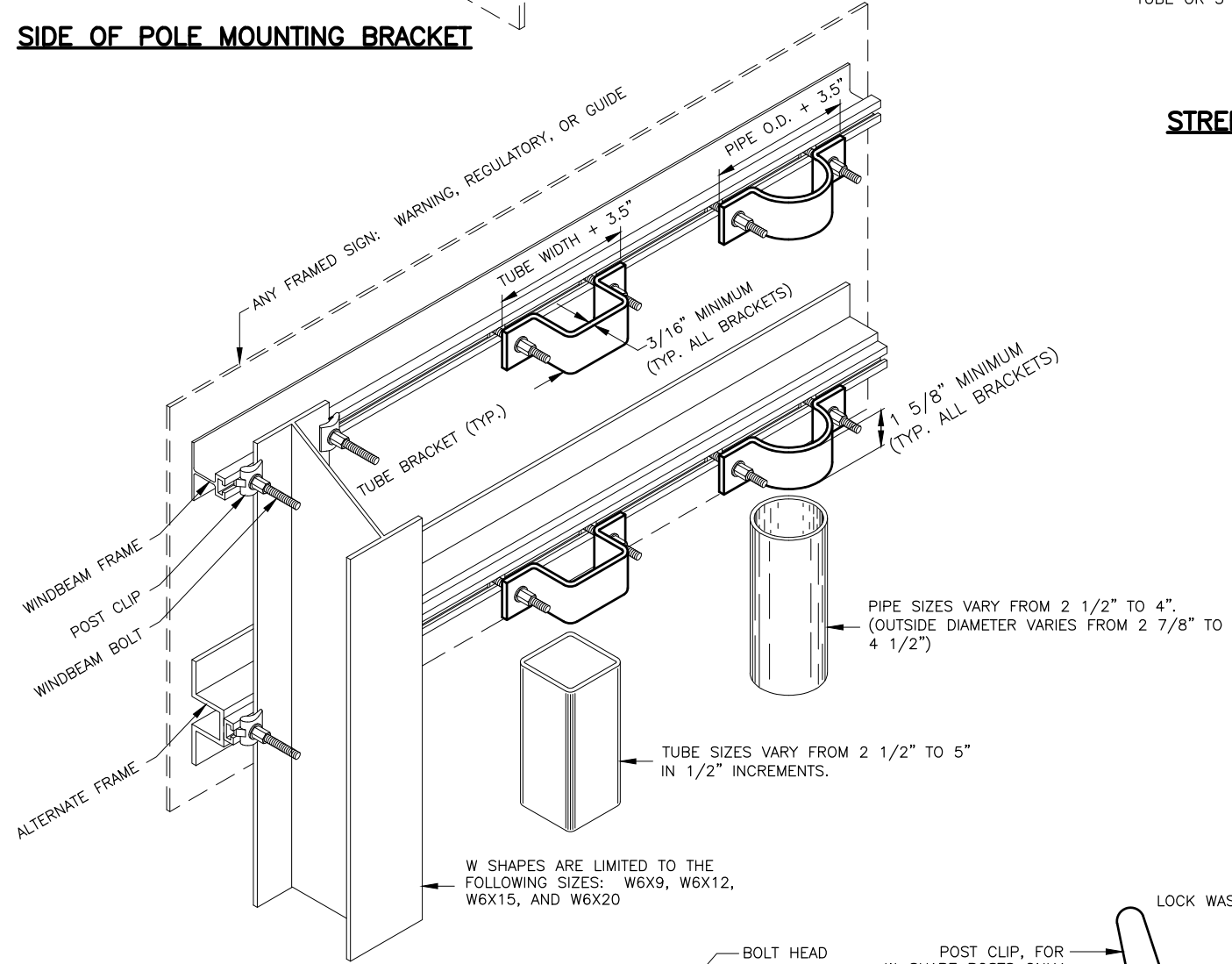
**SIDE OF POLE MOUNTING BRACKET**



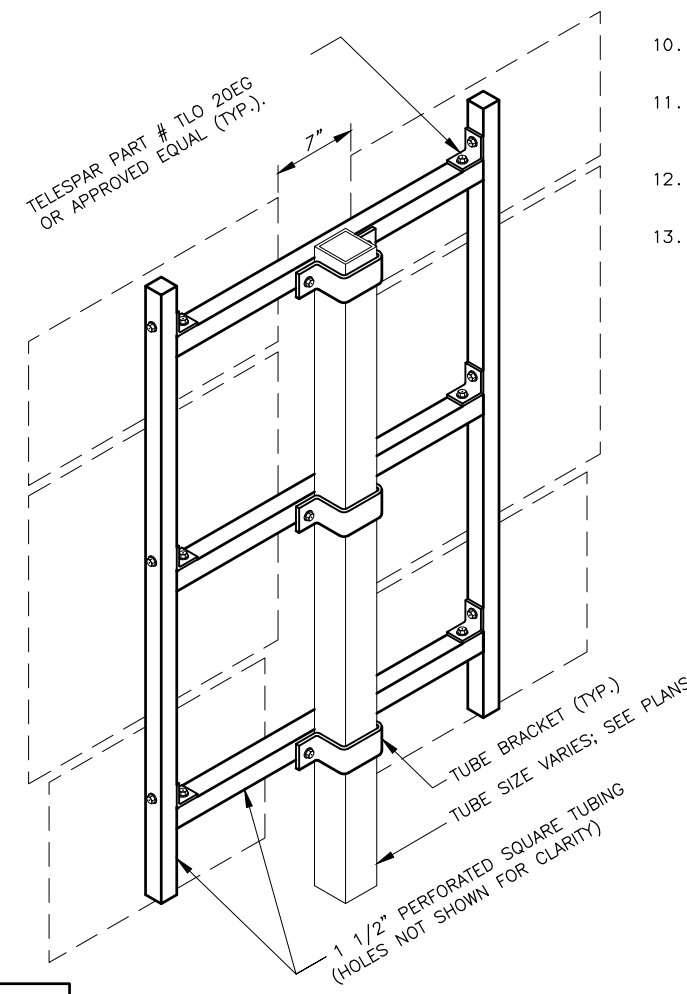
**STREET NAME SIGN INSTALLATION**

**NOTES:**

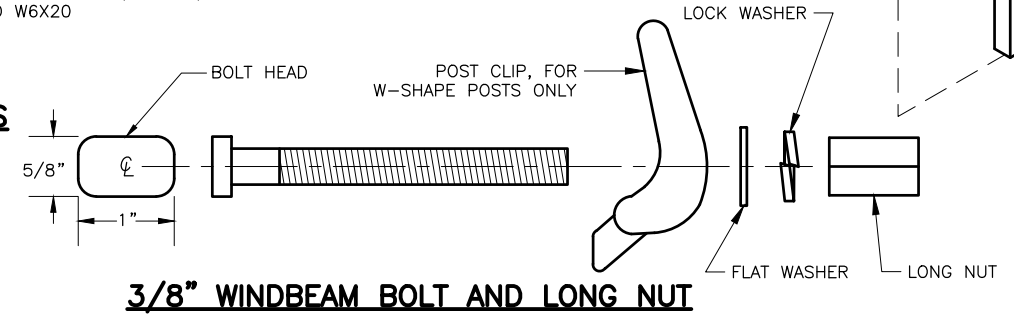
- EXCEPT FOR POLES AND MAST ARMS, ONLY USE TUBES TO SUPPORT SIGNS MOUNTED ON ONE POST.
- ATTACH SIGNS, FRAMED AND UNFRAMED TO THEIR SUPPORTS WITH ZINC PLATED 3/8" BOLTS, EXCEPT ATTACH UNFRAMED SIGNS TO PERFORATED TUBES WITH ACCESSORY DRIVE RIVETS AND TO SADDLES WITH 5/16" BOLTS.
- BOLT UNFRAMED SIGNS DIRECTLY TO TUBES IN TWO LOCATIONS, NEAR TOP AND NEAR BOTTOM OF MATING SURFACE. ATTACH THEM TO POLES AND MAST ARMS WITH TWO SADDLES.
- ATTACH BRACKETS TO POLES AND MAST ARMS WITH DOUBLE WRAPS OF 3/4" WIDE BY 0.020" THICK STAINLESS STEEL BANDING MATERIAL. TIGHTEN EACH BAND UNTIL IT STOPS MOVING THROUGH THE BUCKLE.
- ATTACH FRAMED SIGNS TO POSTS WHEREVER THE FRAMES CROSS THE POSTS. AT EACH CROSSING, ATTACH THE SIGN USING TWO POST CLIPS ON W-SHAPE POSTS, A U-SHAPED BRACKET ON PIPES, AND A BRACKET WITH SQUARE CORNERS ON TUBES.
- THE TUBE BRACKETS USED ON EVEN INCH SIZE TUBES MAY ALSO BE USED ON TUBES 1/2" SMALLER IN SIZE.
- ONLY USE THE SPECIAL WINDBEAM BOLTS TO ATTACH SIGNS FRAMED WITH THE WINDBEAM FRAMING MATERIAL.
- ATTACH FRAMED SIGNS TO POLES AND MAST ARMS USING POLE PLATES INSTALLED ACCORDING TO ALASKA STANDARD PLAN S-23.
- FOR ROUTE MARKER TREES, CUT PERFORATED TUBES TO ENSURE TIGHT FITTING JOINTS. ASSEMBLE THE PIECES WITH ACCESSORY ELL-SHAPED ANGLE BRACKETS.
- INSTALL THE TOP EDGE OF SIGNS 1" ABOVE THE TOPS OF POSTS, EXCEPT FOR THE D3-1 STREET NAME SIGNS.
- INSTALL THE TOP EDGE OF SIGNS 3" BELOW THE TOP OF POST, WHENEVER THEY ARE MOUNTED BELOW SIGNS SECURED BY POST TOP MOUNTING BRACKETS.
- THE BRACKET DETAILS SHOWN INDICATE GENERAL DESIGNS ONLY. DESIGNS MAY VARY BY MANUFACTURER.
- INSTALL WEATHER TIGHT CAPS ON ALL PIPE AND TUBE POSTS, EXCEPT PERFORATED TUBING.



**FRAMED SIGN ATTACHMENT BRACKETS**

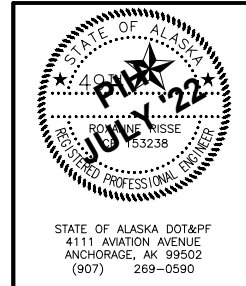


**ROUTE MARKER TREE**



**3/8" WINDBEAM BOLT AND LONG NUT**

FASTENERS	ALUMINUM	STEEL	STAINLESS STEEL
BOLTS	ASTM F468 2024-T4	ASTM A307	ASTM F593
NUTS	ASTM F467 2024-T4	ASTM A563	ASTM F594
WASHERS	ANSI B18.22.1	ASTM F844	ANSI B18.22.1
POST CLIPS	ASTM B179 356-T6	N/A	N/A



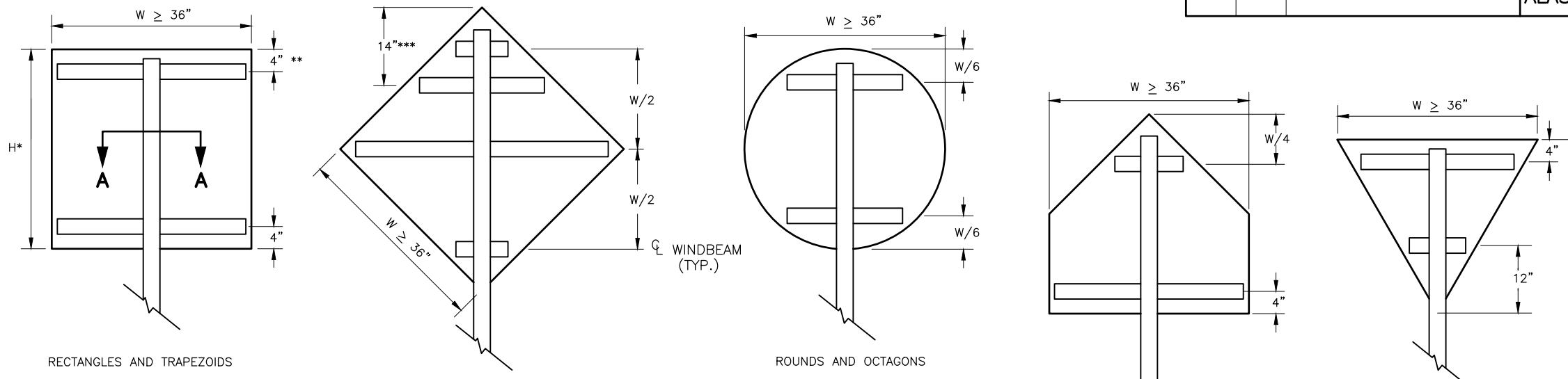
STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

**HSIP: BOGARD ROAD AT ENGSTROM ROAD AND GREEN FOREST DRIVE INTERSECTION IMPROVEMENTS**

**SIGN ATTACHMENT DETAILS**

STATE OF ALASKA DOT&PF  
4111 AVIATION AVENUE  
ANCHORAGE, AK 99502  
(907) 269-0590

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0001630 / CFHWY00435	2022	H11	H22



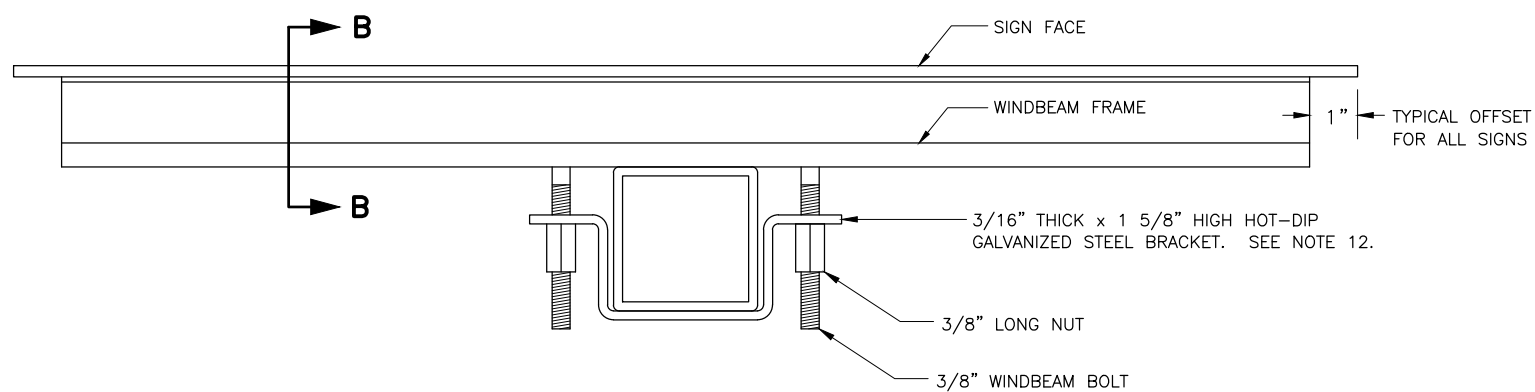
**WINDBEAM LOCATIONS FOR EACH SIGN SHAPE**

ELEVATION VIEW

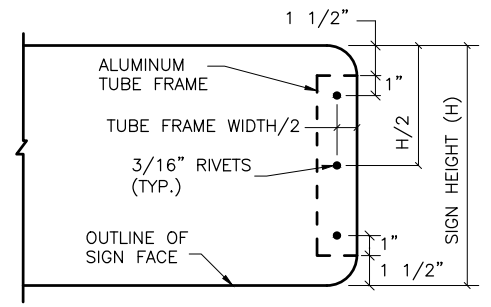
RECTANGLES AND TRAPEZOIDS  
 \* WHEN H > 42 INCHES, INSTALL A 3RD WINDBEAM CENTERED ON THE SIGN.  
 \*\* FOR S5-1 SIGNS MOUNTED ON FLASHING BEACON POSTS, USE A 10" OFFSET. OTHERWISE, USE 4".

\*\*\* FOR WARNING SIGNS MOUNTED ON FLASHING BEACON POSTS, USE THE 14" OFFSET. OTHERWISE, USE W/2.

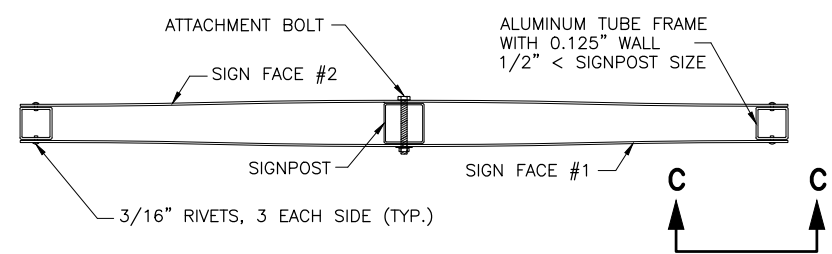
- NOTES:**
- EXCEPT FOR POLES AND MAST ARMS, ONLY USE SQUARE STEEL TUBES TO SUPPORT SIGNS MOUNTED ON SINGLE POSTS.
  - INSTALL WINDBEAM OR ZEE SHAPED FRAMING MEMBERS ON DIAMOND SHAPED SIGNS 36 INCHES AND LONGER ON A SIDE AND ON OTHER SIGNS 36 INCHES WIDE AND WIDER.
  - IN HIGH WIND AREAS, THE PLANS MAY REQUIRE SIGNS SMALLER THAN THOSE LISTED IN NOTE 2 BE FRAMED AS SHOWN HERE IN.
  - THIS DRAWING DEPICTS THE WINDBEAM FRAMING AND ATTACHMENT SYSTEM. ATTACH SIGNS FRAMED WITH ZEE SHAPED FRAMING ACCORDING TO REGIONAL DRAWING "SIGN ATTACHMENT DETAILS", USING "U" SHAPED BRACKETS AND TWO BOLTS WITH NUTS.
  - THE ENGINEER MAY APPROVE OTHER FRAMING MEMBERS. SUBMIT DOCUMENTS THAT DETAIL THE FRAME'S CROSS SECTION AND STRENGTH, AND METHOD OF ATTACHING THE FRAME TO A POST.
  - USE FRAMING MEMBERS MADE FROM ALUMINUM ALLOY 6061-T6.
  - EACH FRAMING MEMBER SHALL BE ONE CONTINUOUS PIECE.
  - ATTACH FRAMING MEMBERS TO THE SIGN PANELS WITH RIVETS OR AN ENGINEER APPROVED, DOUBLE SIDED, HIGH STRENGTH, ADHESIVE TAPE.
  - WITH THE ADHESIVE TAPE, INSTALL TWO RIVETS IN BOTH ENDS OF EACH FRAMING MEMBER, AND ATTACH THE FRAMING MEMBERS TO THE SIGN PANELS ACCORDING TO THE TAPE MANUFACTURER'S WRITTEN INSTRUCTIONS, INCLUDING:  
 A. THE CLEANING AND HANDLING OF THE SIGN PANELS AND FRAMING MEMBERS.  
 B. THE APPLICATION OF THE ADHESIVE TAPE.
  - WHEN RIVETS ARE USED TO ATTACH FRAMING MEMBERS, INSTALL 2 RIVETS IN EACH END AND THE BALANCE ON 8" MAXIMUM CENTERS.
  - USE 3/16" DIAMETER RIVETS CONFORMING TO ALUMINUM ALLOY 6061-T6 FOR COLD DRIVEN RIVETS, OR ALUMINUM ALLOY 6061-T43 FOR HOT DRIVEN RIVETS.
  - THE BRACKETS USED ON EVEN INCH SIZE TUBES MAY ALSO BE USED ON TUBES 1/2" SMALLER IN SIZE.



**SECTION A - A TYPICAL SIGN ATTACHMENT DETAILS AT EACH WINDBEAM**

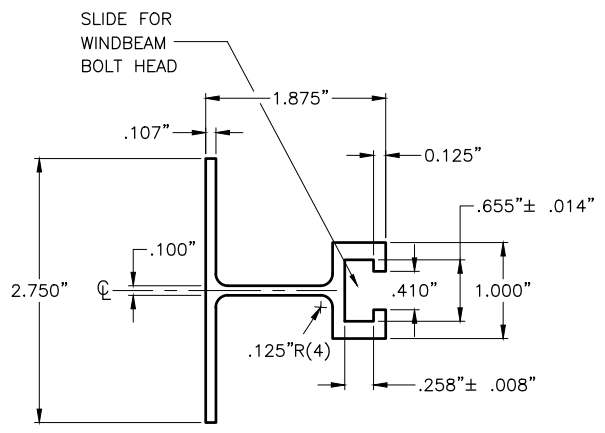


**VIEW C - C**

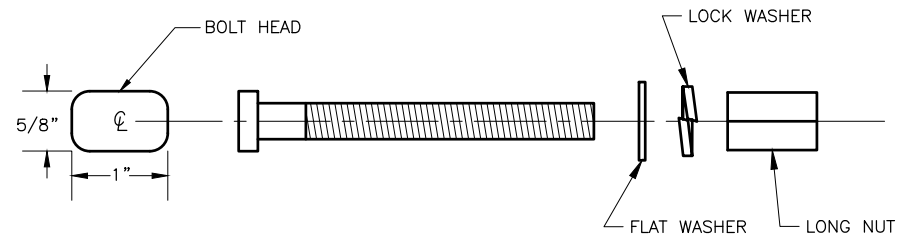


**D3-1 STREET NAME SIGN FRAMING DETAIL**

PLAN VIEW



**SECTION B - B WINDBEAM CROSS SECTION**



**3/8" WINDBEAM BOLT AND LONG NUT**



STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES

**HSIP: BOGARD ROAD AT  
 ENGSTROM ROAD AND GREEN  
 FOREST DRIVE INTERSECTION  
 IMPROVEMENTS**

**LIGHT SIGN FRAMING DETAILS**

STATE OF ALASKA DOT&PF  
 4111 AVIATION AVENUE  
 ANCHORAGE, AK 99502  
 (907) 269-0590

DRAWING LOCATION: W:\PROJECTS\HSIP BOGARD ENGSTROM RA - CFHWY00435\CIV3D\PLANSET\H SHEETS\27-LIGHT\_SIGN\_FRAMING.DWG  
 DESIGNED BY: ZJH  
 CHECKED BY: RDR  
 DRAFTED BY: MF  
 SCALE: AS SHOWN  
 DATE: 3/15/2023 12:38 PM  
 TIME: 12:38 PM

DESIGNED BY: ZJH  
 CHECKED BY: RDR  
 DRAFTED BY: MF  
 SCALE: 1"=40'  
 TIME: 12:39 PM  
 DATE: 3/15/2023  
 PROJECT: HSIP BOGARD, ENGSTROM, RA - CFHWY00453, CIV3D, TRAFFIC, 00453 - LIGHTING.DWG

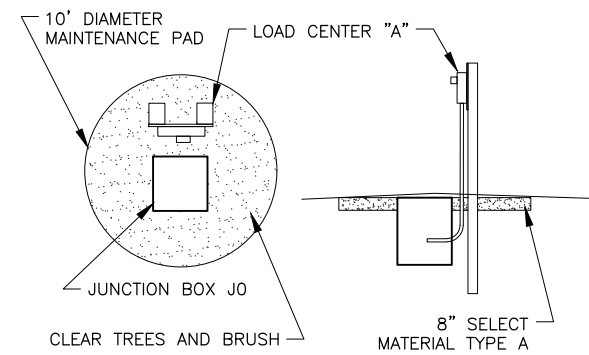
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0001630 / CFHWY00435	2022	H12	H22

### ELECTROLIER SCHEDULE (660.0003.0000)

POLE NO.	STATION	OFFSET	LUMINAIRE	POLE TYPE	MOUNTING HEIGHT (FT)	SHAFT LENGTH (FT)	MASTARM LENGTH (FT)	MAINTAINING AGENCY	REMARKS
E1	1020+38.5	34.2' RT	ROADWAY I	MASTARM - LIGHTING STANDARD 1	40	38	10	MSB	
E2	1022+01.3	33.7' RT	ROADWAY I	MASTARM - LIGHTING STANDARD 1	40	38	10	MSB	
E3	1022+69.5	49.6' LT	INTERSECTION	MASTARM - LIGHTING STANDARD 1	40	38	10	MSB	
E4	1022+97.1	79.9' RT	INTERSECTION	MASTARM - LIGHTING STANDARD 1	40	38	10	MSB	
E5	1023+08.7	123.1' LT	ROADWAY I	MASTARM - LIGHTING STANDARD 1	40	38	10	MSB	CAUTION: PROXIMITY TO NEW GAS LINE
E6	1023+76.4	136.6' RT	ROADWAY I	MASTARM - LIGHTING STANDARD 1	40	38	10	MSB	
E7	1024+27.2	49.1' RT	INTERSECTION	MASTARM - LIGHTING STANDARD 1	40	38	10	MSB	
E8	1024+21.4	88.7' LT	INTERSECTION	MASTARM - LIGHTING STANDARD 1	40	38	10	MSB	
E9	1024+98.7	56.4' LT	INTERSECTION	MASTARM - LIGHTING STANDARD 1	40	38	10	MSB	
E10	1026+64.4	33.5' RT	ROADWAY I	MASTARM - LIGHTING STANDARD 1	40	38	10	MSB	
E11	113+95.8	35.7' LT	ROADWAY II	MASTARM - LIGHTING STANDARD 1	40	38	10	MSB	

### JUNCTION BOX SCHEDULE (660.0003.0000)

POLE NO.	STATION	OFFSET	SALVAGE	NEW	ADJUST	TYPE	REMARKS
J0	1025+18.9	72.2' LT		X		II	
J1	1020+38.4	38.0' RT		X		1A	
J2	1022+00.5	37.4' RT		X		1A	
J3	1022+68.0	53.0' LT		X		1A	
J3A	1022+18.5	30.8' LT		X		1A	
J4	1022+93.9	81.9' RT		X		1A	
J4A	1023+17.4	144.1' RT		X		1A	
J5	1023+05.0	122.5' LT		X		1A	
J6	1023+80.2	136.3' RT		X		1A	
J7	1024+29.0	52.6' RT		X		1A	
J7A	1024+90.7	30.3' RT		X		1A	
J8	1024+24.0	91.5' LT		X		1A	
J8A	1023+90.7	143.7' LT		X		1A	
J9	1024+99.2	60.1' LT		X		1A	
J10	1026+64.5	36.9' RT		X		1A	
J11	113+96.2	39.5' LT		X		1A	



**LOAD CENTER MAINTENANCE PAD**

### ARC FLASH AND SHOCK HAZARD RESULTS - LC "A" MAIN BREAKERS ENCLOSURE

ARC FLASH BOUNDARY	3.8
INCIDENT ENERGY IN CAL/CM <sup>2</sup>	5.5
WORKING DISTANCE	18 INCHES
SHOCK HAZARD EXPOSURE	240 VAC
INSULATING GLOVES CLASS	00
SHOCK HAZARD	WHEN COVER REMOVED
LIMITED APPROACH BOUNDARY	3.5 FT
RESTRICTED APPROACH BOUNDARY	1.0 FT
CALCULATED DATE	6/16/2022

### SUMMARY OF PROPOSED LOAD CENTER "A" (661.0003.0000)

LOAD CENTER TYPE:	TYPE 2 (STATE OF ALASKA OWNED)								
MAINTAINED BY:	MATANUSKA SUSITANA BOROUGH (MSB)								
SERVING UTILITY:	MATANUSKA ELECTRIC ASSOCIATION (MEA)								
SERVICE CONDUIT TYPE:	RMC & PVC								
<b>LOCATION DATA (STA. 1025+19.5 - 78.5' LT)</b>									
LOAD CENTER:	NE BOGARD RD & ENGSTROM RD / GREEN FOREST DR								
POWER SOURCE:	NEW MEA TRANSFORMER - ASSUME @ ENGSTROM RD. STA 111+48.5 - 80.3' RT								
PHOTOELECTRIC CONTROL:	AT LOAD CENTER								
SERVICE VOLTAGE:	120/240VAC, 1 PHASE, 3 WIRE WITH GROUND								
PROVIDE METER SOCKET	YES								
MAIN BREAKER, PANEL A	240 VOLT, 2 POLE, 100 AMP								
AIC RATING, PANEL A:	10 kAIC @ 240V								
PANEL A - 120/240 VAC									
POLE	AMP TRIP	DESCRIPTION	POLE KVA	Aφ	Bφ	POLE KVA	DESCRIPTION	AMP TRIP	POLE
1	20/2	NW QUADRANT LIGHTING * (E3, E5, E11)	0.2	0.4		0.2	NE QUADRANT LIGHTING * (E8, E9)	20/2	2
3			0.2		0.4	0.2			4
5	20/2	SW QUADRANT LIGHTING * (E1, E2, E4)	0.3	0.6		0.3	SE QUADRANT LIGHTING * (E6, E7, E10)	20/2	6
7			0.3		0.6	0.3			8
9	20/2	SPARE *	0.0	0.1		0.1	PHOTOCELL	15/2	10
11			0.0		0.1	0.1			12
13	-	SPACE	0.0	0.0		0.0	SPACE	-	14
15	-	SPACE	0.0		0.0	0.0	SPACE	-	16
17	-	SPACE	0.0	0.0		0.0	SPACE	-	18
* CIRCUIT THROUGH CONTACTOR				1.1	1.1	PANEL A TOTAL KVA		2.2	
						PANEL A AMPS @ 240 VAC		9.2	

### SHORT CIRCUIT CALCULATION - LC "A"

240V, POWER FACTOR = 0.90, SERVICE LATERAL CONSISTS OF ONE ALUMINUM CONDUCTOR PER PHASE IN RMC & PVC.

TRANSFORMER RATING	25 kVA MAXIMUM
VOLTAGE	120/240 VAC SECONDARY
TRANSFORMER IMPEDANCE	1.2% MINIMUM
TRANSFORMER LET-THRU SHORT CIRCUIT CURRENT (INFINITE BUS)	14,468 A
LENGTH TO FAULT	25FT MINIMUM
SERVICE CONDUCTOR SIZE	1/0 AWG AL MAXIMUM
SERVICE CONDUIT	RMC & PVC
CALCULATED AVAILABLE FAULT CURRENT AT LC "A"	7,156 A
DATE CALCULATED	6/16/2022

### LUMINAIRE PERFORMANCE CRITERIA

LUMINAIRE LIGHT LOSS FACTOR	0.85	
LIGHTING CALCULATION METHOD	RP-8-2014	
<b>INTERSECTION ILLUMINANCE CRITERIA</b>		
BOGARD RD & ENGSTROM RD / GREEN FOREST DR		
AVERAGE MAINTAINED ILLUMINATION (fc)	2.1	
AVERAGE UNIFORMITY RATIO (AVG/MIN)	3.1	
<b>ROADWAY LUMINANCE CRITERIA</b>		
	BOGARD RD	ENGSTROM RD
AVERAGE LUMINANCE (cd/m <sup>2</sup> )	1.0	0.8
MINIMUM ROADWAY LUMINANCE (cd/m <sup>2</sup> )	0.4	0.3
AVERAGE UNIFORMITY RATIO (AVG/MIN)	2.4	2.4
MAX UNIFORMITY RATIO (MAX/MIN)	5.0	5.0
MAX VEILING LUMINANCE RATIO (LV-MAX/AVG)	0.3	0.3

### LUMINAIRE STANDARDS

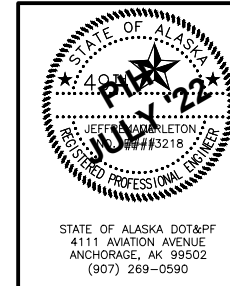
	ROADWAY I	ROADWAY II	INTERSECTION
MANUFACTURER AND MODEL (OR APPROVED EQUAL)	CURRENT ERL2 - GEN 5		
WATTAGE (MAXIMUM)	160	114	160
VOLTAGE	240	240	240
PE CONTROL	ANSI C136.41 7 PIN RECEPTACLE		
PE SENSOR	SHORTING CAP ONLY		
MOUNTING	HORIZONTAL		
HOUSING ENTRY TYPE	TOOLLESS		
FIXTURE COLOR	GRAY		
IES DISTRIBUTION TYPE	TYPE III	TYPE III	TYPE IV
POWER FACTOR	≥0.90		
UL LISTED	YES		
CCI	3000K		
CRI	MINIMUM 70		

**LIGHTING NOTES:**

- INSTALL ALL ELECTROLIERS WITH MASTARMS PERPENDICULAR TO ROADWAY

**LOAD CENTER NOTES:**

- INSTALL A MAINTENANCE PAD FOR LOAD CENTER "A" AS SHOWN. MAINTENANCE PAD IS SUBSIDIARY TO 661.0003.0000.

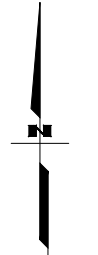
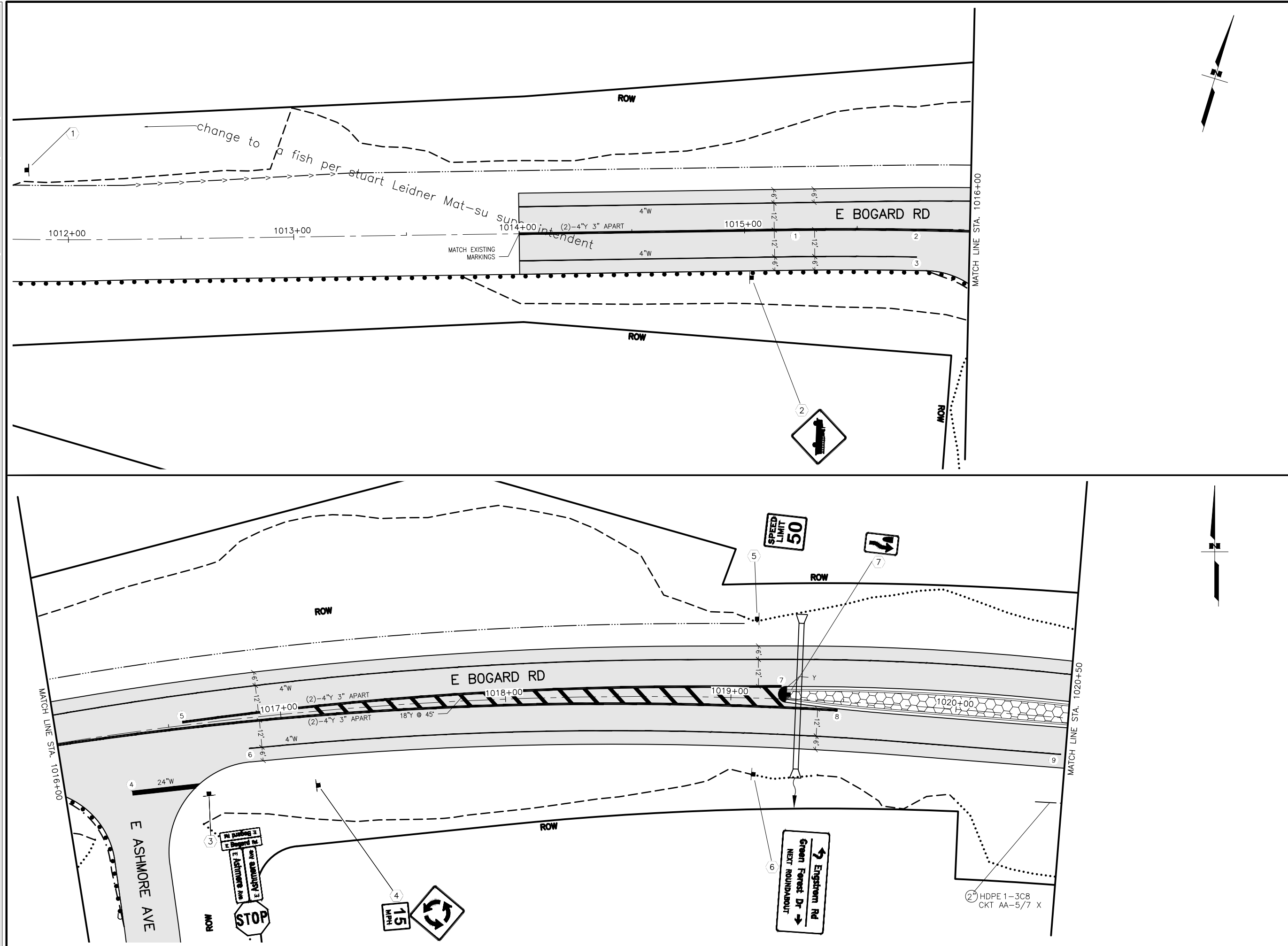


STATE OF ALASKA  
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**HSIP: BOGARD ROAD AT  
 ENGSTROM ROAD AND GREEN  
 FOREST DRIVE INTERSECTION  
 IMPROVEMENTS**  
**HIGHWAY LIGHTING SCHEDULE**

DESIGNED BY: ZJH  
 CHECKED BY: ROR  
 DRAFTED BY: MF

DATE: 3/15/2023 12:39 PM  
 TIME: 12:39 PM  
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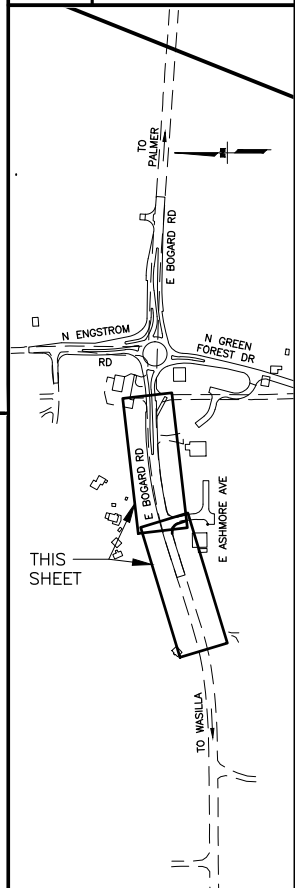
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SHEET NO.	TOTAL SHEETS
H13	H22
STATE	YEAR
ALASKA	2022

PROJECT DESIGNATION  
**0001630/  
 CFHWY00435**

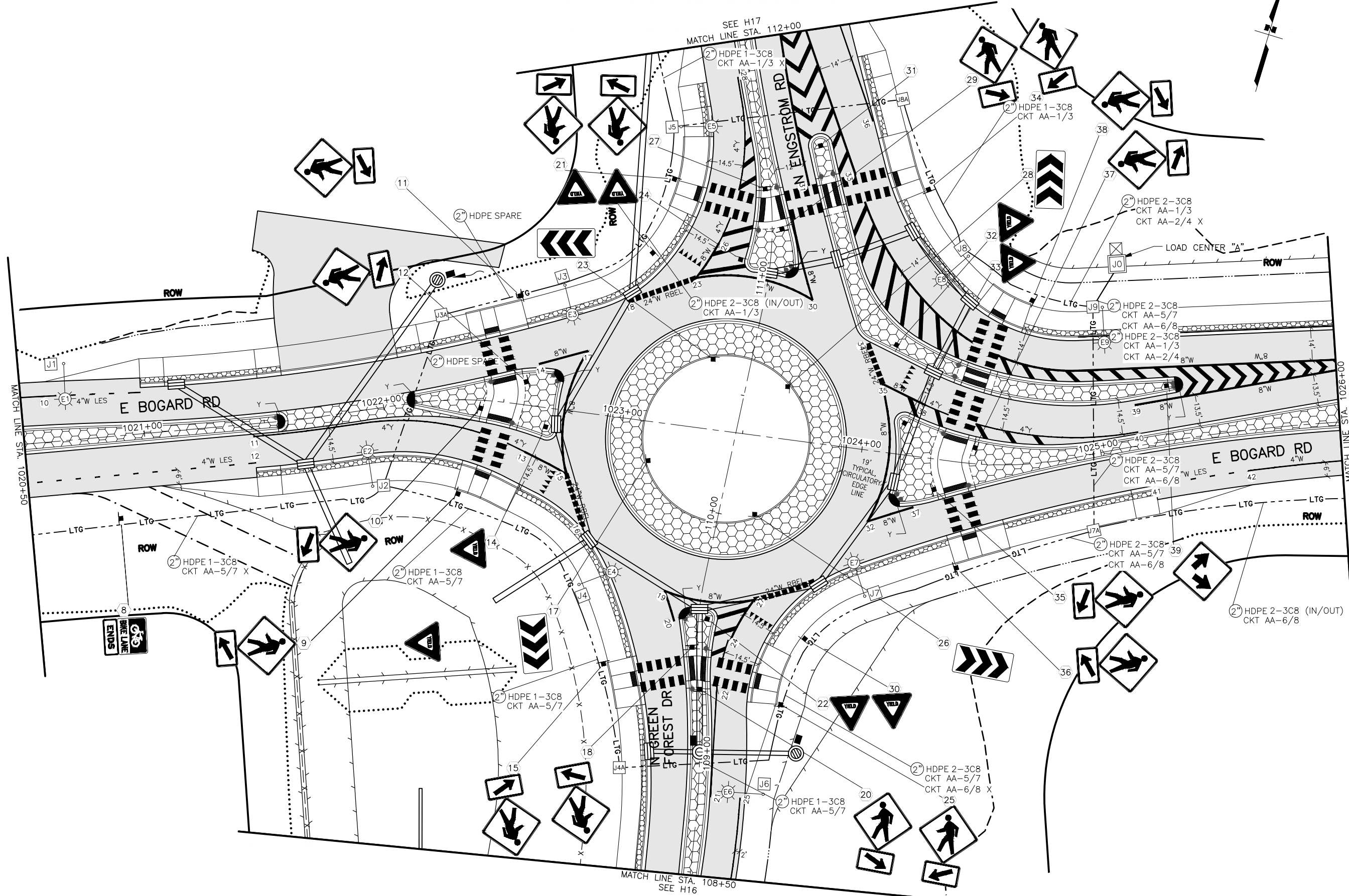
NO.	REVISION



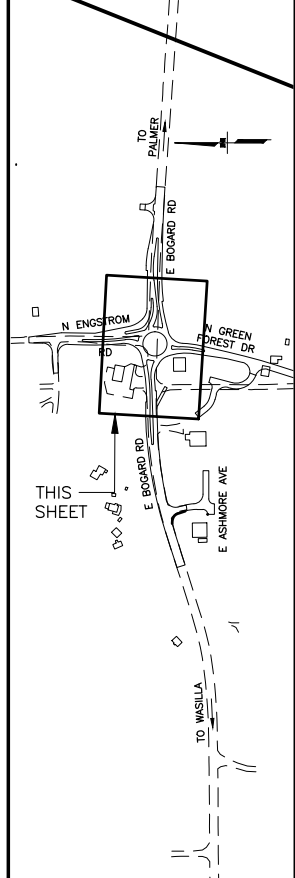
STATE OF ALASKA DOT&PF  
 411 AVIATION AVENUE  
 ANCHORAGE, AK 99502  
 (907) 269-0590

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
**HSIP: BOGARD ROAD AT  
 ENGSTROM ROAD AND  
 GREEN FOREST DRIVE  
 INTERSECTION IMPROVEMENTS**  
**SIGNING, STRIPING, &  
 ILLUMINATION  
 BOP TO 1021+00**

DESIGNED BY: ZJH  
 CHECKED BY: ROR  
 DRAFTED BY: MF  
 DATE: 3/15/2023 12:40 PM  
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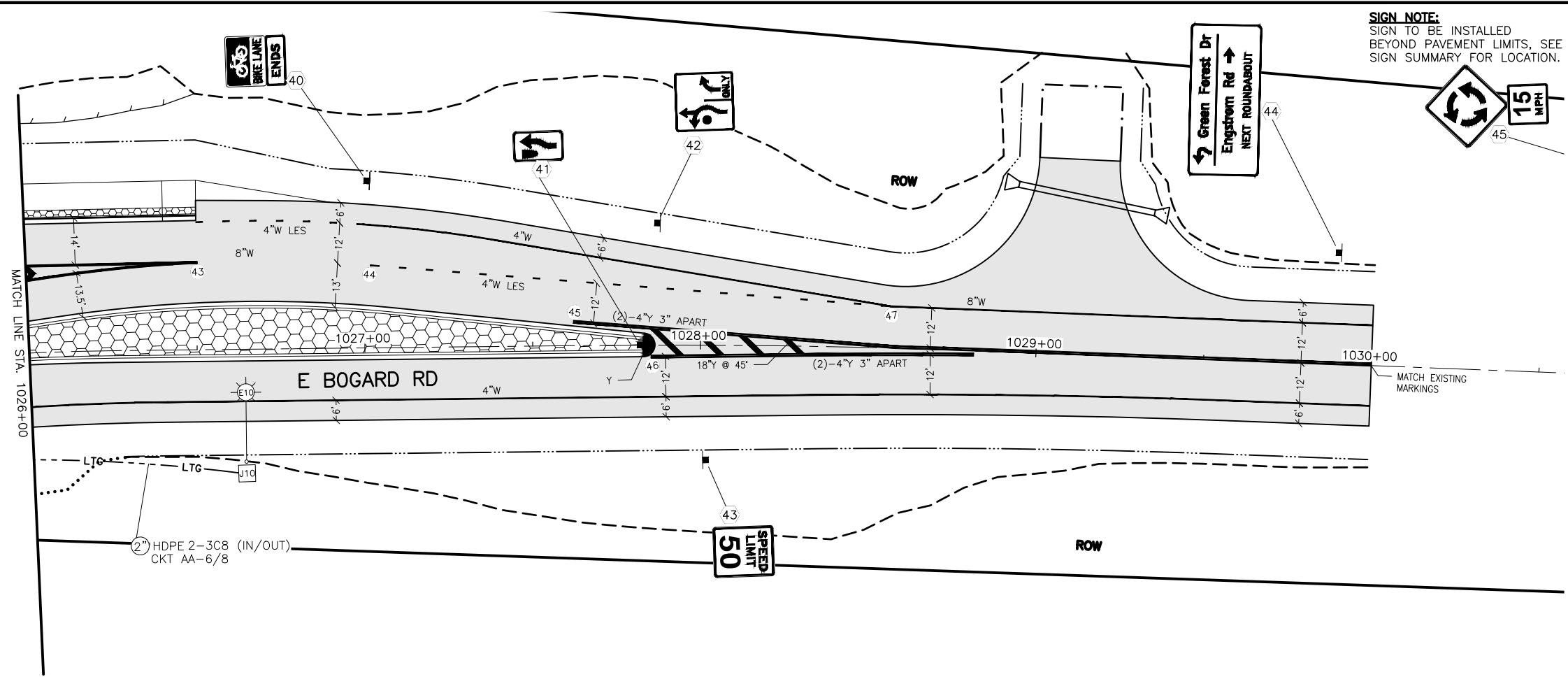
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H14	H22
STATE	YEAR
ALASKA	2022
PROJECT DESIGNATION	
0001630/ CFHWY00435	
NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	



STATE OF ALASKA DOT&PF  
 411 AVIATION AVENUE  
 ANCHORAGE, AK 99502  
 (907) 269-0590

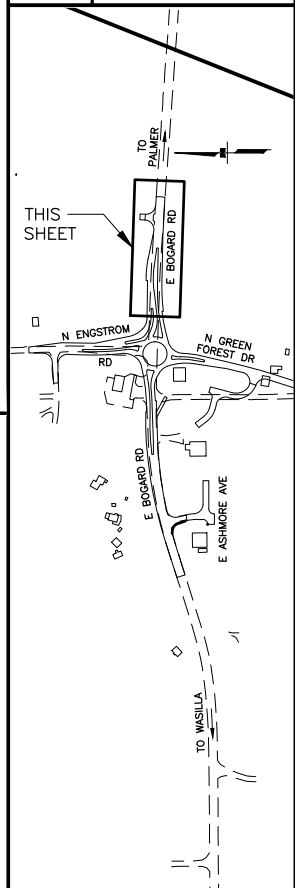
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 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 HSIP: BOGARD ROAD AT  
 ENGSTROM ROAD AND  
 GREEN FOREST DRIVE  
 INTERSECTION IMPROVEMENTS  
**SIGNING, STRIPING, &  
 ILLUMINATION  
 ROUNDABOUT**

DRAWING LOCATION: W:\PROJECTS\HSIP BOGARD\_ENGSTROM\_RA - CFHWY00453\CIV3D\TRAFFIC\00453 - PLANS.DWG  
 DATE: 3/15/2023 12:40 PM  
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 DESIGNED BY: ZJH  
 CHECKED BY: ROR  
 DRAFTED BY: MF



**SIGN NOTE:**  
 SIGN TO BE INSTALLED  
 BEYOND PAVEMENT LIMITS, SEE  
 SIGN SUMMARY FOR LOCATION.

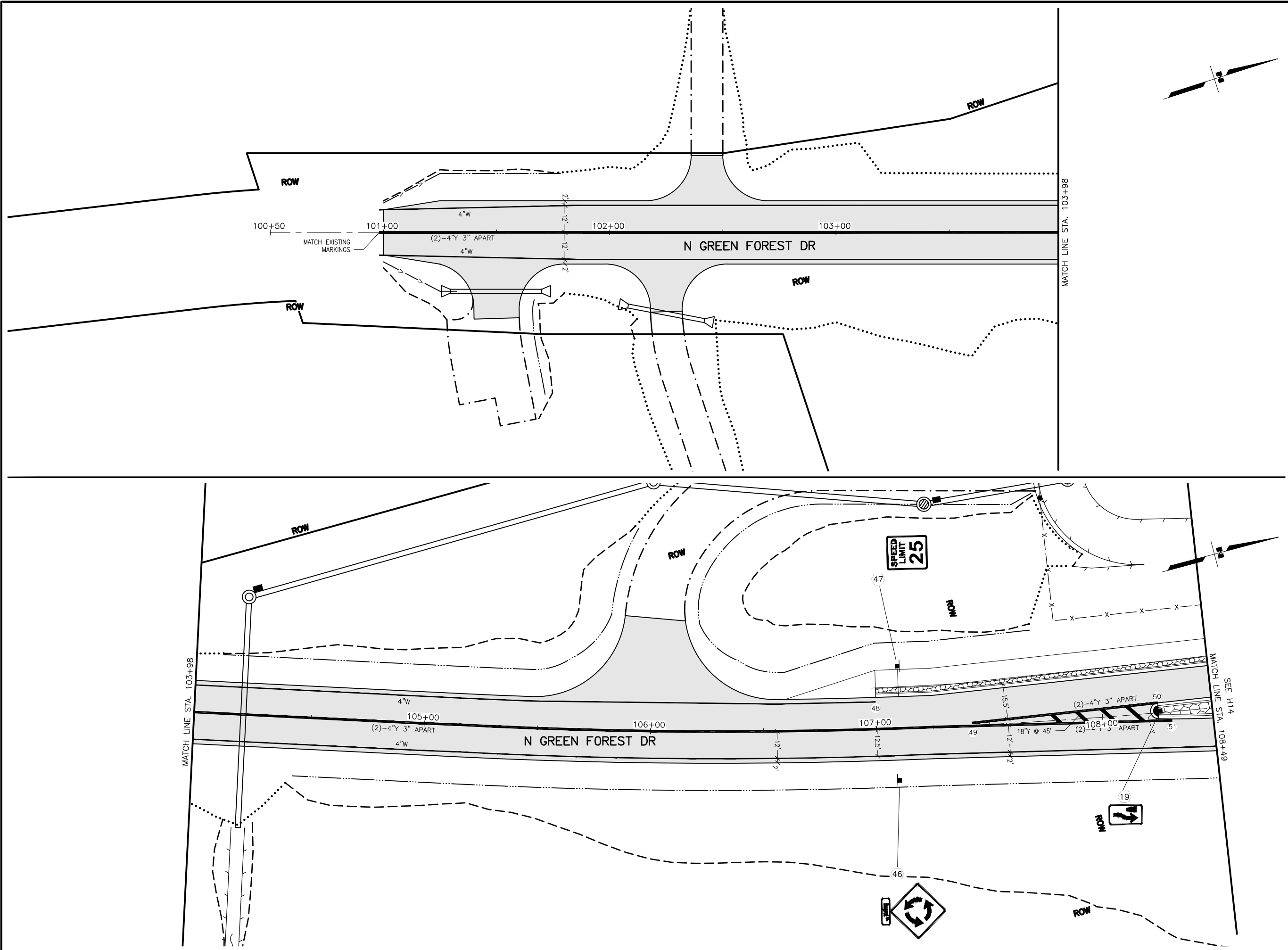
SHEET NO.	TOTAL SHEETS
H15	H22
STATE	YEAR
ALASKA	2022
PROJECT DESIGNATION	
0001630/ CFHWY00435	
NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	



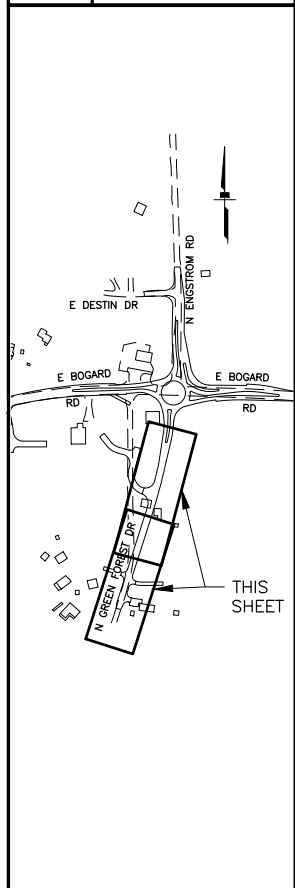
STATE OF ALASKA DOT&PF  
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STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 HSIP: BOGARD ROAD AT  
 ENGSTROM ROAD AND  
 GREEN FOREST DRIVE  
 INTERSECTION IMPROVEMENTS  
**SIGNING, STRIPING, &  
 ILLUMINATION**  
 1025+50 TO EOP

DESIGNED BY: ZJH  
 CHECKED BY: ROR  
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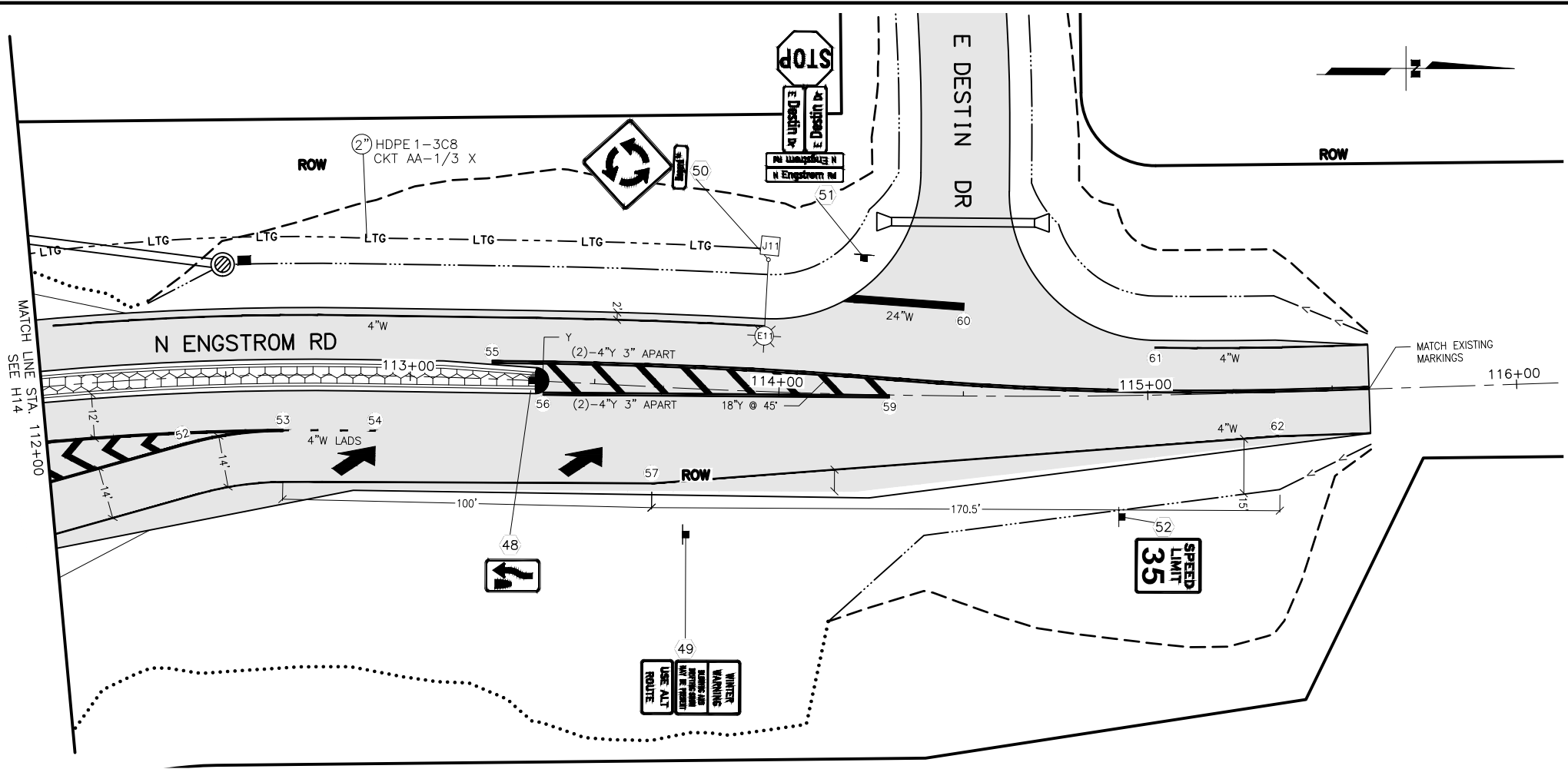


SHEET NO.	TOTAL SHEETS
H16	H22
STATE	YEAR
ALASKA	2022
PROJECT DESIGNATION	
0001630/ CFHWY00435	
NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	

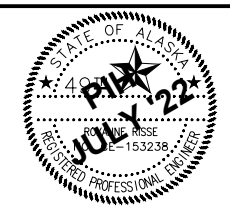
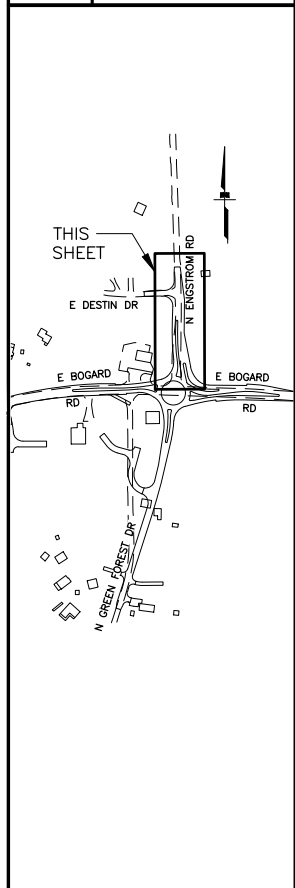


STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 HSIP: BOGARD ROAD AT  
 ENGSTROM ROAD AND  
 GREEN FOREST DRIVE  
 INTERSECTION IMPROVEMENTS  
 SIGNING, STRIPING, &  
 ILLUMINATION  
 BOP TO 108+50

DRAWING LOCATION: W:\PROJECTS\HSIP BOGARD\_ENGSTROM\_RA - CFHWY00453\CIV3D\TRAFFIC\00453 - PLANS.DWG  
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 CHECKED BY: ROR  
 DRAFTED BY: MF



SHEET NO.	TOTAL SHEETS
H17	H22
STATE	YEAR
ALASKA	2022
PROJECT DESIGNATION	
0001630/ CFHWY00435	
NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	



STATE OF ALASKA DOT&PF  
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STATE OF ALASKA  
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**SIGNING, STRIPING, &  
 ILLUMINATION**  
 112+00 TO EOP

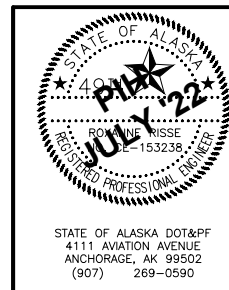


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 DATE: 3/15/2023  
 TIME: 12:40 PM

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0001630 / CFHWY00435	2022	H18	H22

SIGN SUMMARY (615.0001.0000)													
SIGN	SHEET NO.	STATION	CL REF	TYPE	LEGEND	WIDTH (IN)	HEIGHT (IN)	AREA (SQ FT)	SIGN FACES	POST NO., SIZE, & TYPE	FRAMED	MAINTAINING AGENCY	REMARKS
1A	H13	1011+81.2	LT	D7-102L		162"	36"	40.5	E	2-W6X12	N	DOT&PF	MINIMUM 4 FEET VERTICAL BACKSLOPE CLEARANCE. 7 FEET BEAM SPACING.
1B	H13	1011+81.2	LT	D7-100P		96"	24"	16.0	E	2-W6X12	N	DOT&PF	MINIMUM 4 FEET VERTICAL BACKSLOPE CLEARANCE. 7 FEET BEAM SPACING.
2	H13	1015+02.8	RT	W11-8		30"	30"	6.25	W	1-3"T	N	DOT&PF	
3A	H13	1016+64.2	RT	D3-1		36"	8"	2.0	N/S	1-3"T	Y	DOT&PF	INSTALL TWO SIGNS BACK TO BACK
3B	H13	1016+64.2	RT	D3-1		48"	12"	4.0	E/W	1-3"T	Y	DOT&PF	INSTALL TWO SIGNS BACK TO BACK
3C	H13	1016+64.2	RT	R1-1		36"	36"	9.0	S	1-3"T	Y	DOT&PF	
4A	H13	1017+13.7	RT	W2-6		30"	30"	6.25	W	1-3"T	N	DOT&PF	INSTALL SIGN WITH A 13' OFFSET FROM EDGE OF PAVEMENT
4B	H13	1017+13.7	RT	W13-1		18"	18"	2.25	W	1-3"T	N	DOT&PF	INSTALL SIGN WITH A 13' OFFSET FROM EDGE OF PAVEMENT
5	H13	1019+10.6	LT	R2-1		24"	30"	5.0	E	1-3"T	N	DOT&PF	
6	H13	1019+10.9	RT	D3-2		90"	42"	26.25	W	2-3"T	Y	DOT&PF	
7	H13	1019+25.4	LT	R4-7c		18"	30"	3.75	W	1-3"T	N	MSB	
8A	H14	1020+87.1	RT	R3-17		24"	18"	3.0	W	1-3"T	N	MSB	
8B	H14	1020+87.1	RT	R3-17bP		24"	8"	1.33	W	1-3"T	N	MSB	
9A	H14	1022+30.3	RT	W11-2		30"	30"	6.25	W	1-3"T	N	MSB	
9B	H14	1022+30.3	RT	W16-7PL		24"	12"	2.0	W	1-3"T	N	MSB	
10A	H14	1022+40.6	RT	W11-2		30"	30"	6.25	W	1-3"T	N	MSB	
10B	H14	1022+40.6	RT	W16-7PR		24"	12"	2.0	W	1-3"T	N	MSB	
11A	H14	1022+51.3	LT	W11-2		30"	30"	6.25	E	1-3"T	N	MSB	
11B	H14	1022+51.3	LT	W16-7PL		24"	12"	2.0	E	1-3"T	N	MSB	
12A	H14	1022+58.2	LT	W11-2		30"	30"	6.25	E	1-3"T	N	MSB	

FLEXIBLE DELINEATORY SUMMARY (615.0005.0000)			
SIGN	STATION	OFFSET	REMARKS
D1	1019+24.9	1.0' LT	
D2	1021+55.0	1.7' LT	
D3	1022+13.1	0.3' LT	
D4	1022+44.1	7.9' LT	
D5	1022+54.6	8.0' RT	
D6	1022+69.1	13.8' LT	
D7	1022+70.9	11.6' LT	
D8	1023+36.4	79.3' RT	
D9	1023+38.2	76.9' RT	
D10	1023+43.2	107.8' RT	
D11	1023+52.9	208.0' RT	
D12	1023+46.6	90.4' RT	
D13	1023+45.4	84.6' LT	
D14	1023+50.6	103.3' LT	
D15	1023+59.1	69.7' LT	
D16	1023+60.9	71.5' LT	
D17	1023+68.4	110.1' LT	
D18	1023+73.0	111.9' LT	
D19	1024+16.7	16.5' RT	
D20	1024+18.6	18.4' RT	
D21	1024+32.6	10.9' LT	
D22	1024+34.2	35.0' LT	
D23	1024+45.4	9.1' RT	
D24	1024+35.1	39.9' LT	
D25	1025+34.0	23.4' LT	
D26	1025+34.0	21.9' LT	
D27	1027+82.5	1.1' LT	
D28	1023+01.8	293.0' LT	



STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
**HSIP: BOGARD ROAD AT  
 ENGSTROM ROAD AND GREEN  
 FOREST DRIVE INTERSECTION  
 IMPROVEMENTS**  
**SIGN & DELINEATOR SUMMARY**

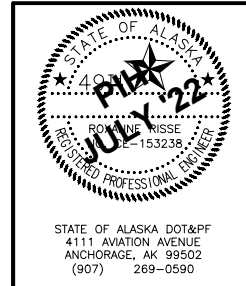
STATE OF ALASKA DOT&PF  
 4111 AVIATION AVENUE  
 ANCHORAGE, AK 99502  
 (907) 269-0590

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0001630 / CFHWY00435	2022	H19	H22

**SIGN SUMMARY (615.0001.0000)**

SIGN	SHEET NO.	STATION	CL REF	TYPE	LEGEND	WIDTH (IN)	HEIGHT (IN)	AREA (SQ FT)	SIGN FACES	POST NO., SIZE, & TYPE	FRAMED	MAINTAINING AGENCY	REMARKS
12B	H14	1022+58.2	LT	W16-7PR		24"	12"	2.0	E	1-3"T	N	MSB	
14	H14	1022+68.5	RT	R1-2		36"	36"	9.0	W	1-3"T	Y	MSB	
15A	H14	1023+05.3	RT	W11-2		30"	30"	6.25	N	1-3"T	N	MSB	
15B	H14	1023+05.3	RT	W16-7PL		24"	12"	2.0	N	1-3"T	N	MSB	
16	H14	1023+03.2	LT	R1-2		36"	36"	9.0	N	1-3"T	Y	MSB	
17	H14	1023+12.6	RT	R6-4A		48"	24"	8.0	W	1-3"T	Y	MSB	48" MOUNTING HEIGHT FROM BOTTOM OF PANEL TO TRUCK APRON
18A	H14	1023+40.8	RT	W11-2		30"	30"	6.25	N	1-3"T	N	MSB	
18B	H14	1023+40.8	RT	W16-7PR		24"	12"	2.0	N	1-3"T	N	MSB	
19	H14	108+25.6	LT	R4-7c		18"	30"	3.75	S	1-3"T	N	MSB	
20A	H14	1023+46.2	RT	W11-2		30"	30"	6.25	S	1-3"T	N	MSB	
20B	H14	1023+46.2	RT	W16-7PR		24"	12"	2.0	S	1-3"T	N	MSB	
21A	H14	1023+08.2	LT	W11-2		30"	30"	6.25	N	1-3"T	N	MSB	
21B	H14	1023+08.2	LT	W16-7PL		24"	12"	2.0	N	1-3"T	N	MSB	
22	H14	1023+45.5	RT	R1-2		36"	36"	9.0	S	1-3"T	Y	MSB	
23	H14	1023+33.8	LT	R6-4A		48"	24"	8.0	N	1-3"T	Y	MSB	48" MOUNTING HEIGHT FROM BOTTOM OF PANEL TO TRUCK APRON
24	H14	1023+39.7	LT	R1-2		36"	36"	9.0	N	1-3"T	Y	MSB	
25A	H14	1023+80.4	RT	W11-2		30"	30"	6.25	S	1-3"T	N	MSB	
25B	H14	1023+80.4	RT	W16-7PL		24"	12"	2.0	S	1-3"T	N	MSB	
26	H14	1023+59.4	RT	R6-4A		48"	24"	8.0	S	1-3"T	Y	MSB	48" MOUNTING HEIGHT FROM BOTTOM OF PANEL TO TRUCK APRON
27A	H14	1023+45.9	LT	W11-2		30"	30"	6.25	N	1-3"T	N	MSB	

DRAWING LOCATION: W:\PROJECTS\HSIP BOGARD\_ENGSTROM\_RA - CFHWY00435\CIV3D\TRAFFIC\00453 - SIGNING.DWG  
 DESIGNED BY: ZJH  
 CHECKED BY: RDR  
 DRAFTED BY: MF  
 SCALE: AS SHOWN  
 DATE: 3/15/2023 12:40 PM  
 TIME: 12:40 PM



STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
  
**HSIP: BOGARD ROAD AT  
 ENGSTROM ROAD AND GREEN  
 FOREST DRIVE INTERSECTION  
 IMPROVEMENTS**  
  
**SIGN SUMMARY**

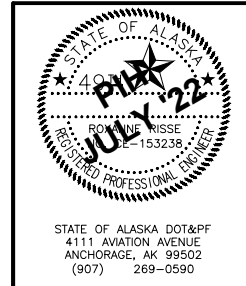
STATE OF ALASKA DOT&PF  
 4111 AVIATION AVENUE  
 ANCHORAGE, AK 99502  
 (907) 269-0590

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0001630 / CFHWY00435	2022	H20	H22

**SIGN SUMMARY (615.0001.0000)**

SIGN	SHEET NO.	STATION	CL REF	TYPE	LEGEND	WIDTH (IN)	HEIGHT (IN)	AREA (SQ FT)	SIGN FACES	POST NO., SIZE, & TYPE	FRAMED	MAINTAINING AGENCY	REMARKS
27B	H14	1023+45.9	LT	W16-7PR		24"	12"	2.0	N	1-3"T	N	MSB	
28	H14	1023+66.0	LT	R6-4A		48"	24"	8.0	E	1-3"T	Y	MSB	48" MOUNTING HEIGHT FROM BOTTOM OF PANEL TO TRUCK APRON
29A	H14	1023+55.1	LT	W11-2		30"	30"	6.25	S	1-3"T	N	MSB	
29B	H14	1023+55.1	LT	W16-7PR		24"	12"	2.0	S	1-3"T	N	MSB	
30	H14	1023+86.7	RT	R1-2		36"	36"	9.0	S	1-3"T	Y	MSB	
31	H14	1023+66.4	LT	W4-2		30"	30"	6.25	S	1-3"T	N	MSB	
32	H14	1024+08.5	LT	R1-2		36"	36"	9.0	SE	1-3"T	Y	MSB	
33	H14	1024+16.1	LT	R1-2		36"	36"	9.0	SE	1-3"T	Y	MSB	
34A	H14	1024+13.3	LT	W11-2		30"	30"	6.25	S	1-3"T	N	MSB	
34B	H14	1024+13.3	LT	W16-7PL		24"	12"	2.0	S	1-3"T	N	MSB	
35A	H14	1024+31.8	RT	W11-2		30"	30"	6.25	W	1-3"T	N	MSB	
35B	H14	1024+31.8	RT	W16-7PR		24"	12"	2.0	W	1-3"T	N	MSB	
36A	H14	1024+43.9	RT	W11-2		30"	30"	6.25	W	1-3"T	N	MSB	
36B	H14	1024+43.9	RT	W16-7PL		24"	12"	2.0	W	1-3"T	N	MSB	
37A	H14	1024+46.8	LT	W11-2		30"	30"	6.25	E	1-3"T	N	MSB	
37B	H14	1024+46.8	LT	W16-7PR		24"	12"	2.0	E	1-3"T	N	MSB	
38A	H14	1024+81.0	LT	W11-2		30"	30"	6.25	E	1-3"T	N	MSB	
38B	H14	1024+81.0	LT	W16-7PL		24"	12"	2.0	E	1-3"T	N	MSB	
39	H14	1025+31.1	LT	W12-1		30"	30"	6.25	E	1-3"T	N	MSB	
40A	H15	1027+01.0	LT	R3-17		24"	18"	3.0	E	1-3"T	N	MSB	INSTALL SIGN 3' O.C. INSIDE OF DITCH LINE

DRAWING LOCATION: W:\PROJECTS\HSIP BOGARD\_ENGSTROM\_RA - CFHWY00435\CIV3D\TRAFFIC\00453 - SIGNING.DWG  
 DATE: 3/15/2023 12:40 PM  
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 DESIGNED BY:   
 CHECKED BY:   
 DRAFTED BY:   
 ZJH  
 RDR  
 MF



STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
  
**HSIP: BOGARD ROAD AT  
 ENGSTROM ROAD AND GREEN  
 FOREST DRIVE INTERSECTION  
 IMPROVEMENTS**  
  
**SIGN SUMMARY**

STATE OF ALASKA DOT&PF  
 4111 AVIATION AVENUE  
 ANCHORAGE, AK 99502  
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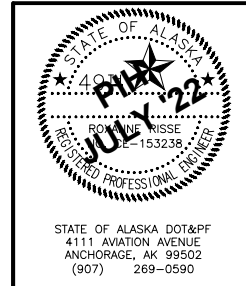
**SIGN SUMMARY (615.0001.0000)**

SIGN	SHEET NO.	STATION	CL REF	TYPE	LEGEND	WIDTH (IN)	HEIGHT (IN)	AREA (SQ FT)	SIGN FACES	POST NO., SIZE, & TYPE	FRAMED	MAINTAINING AGENCY	REMARKS
40B	H15	1027+01.0	LT	R3-17bP		24"	8"	1.33	E	1-3"T	N	MSB	INSTALL SIGN 3' O.C. INSIDE OF DITCH LINE
41	H15	1027+82.0	LT	R4-7c		18"	30"	3.75	E	1-3"T	N	MSB	
42	H15	1027+87.2	LT	R3-8SL/R		36"	36"	9.0	E	1-3"T	Y	MSB	INSTALL SIGN 3' O.C. INSIDE OF DITCH LINE
43	H15	1028+01.6	RT	R2-1		24"	30"	5.0	W	1-3"T	N	DOT&PF	INSTALL SIGN WITH A 13' OFFSET FROM EDGE OF PAVEMENT
44	H15	1029+89.1	LT	D3-2		90"	42"	26.25	E	2-3"T	Y	DOT&PF	INSTALL NEAR-SIDE SIGN POST FOUNDATION 3' O.C. OUTSIDE OF DITCH LINE
45A	H15	1031+89.9	LT	W2-6		30"	30"	6.25	E	1-3"T	N	DOT&PF	
45B	H15	1031+89.9	LT	W13-1		18"	18"	2.25	E	1-3"T	N	DOT&PF	
46A	H16	107+09.3	RT	W2-6		30"	30"	6.25	S	1-3"T	N	MSB	INSTALL SIGN WITH 9' OFFSET FROM EDGE OF PAVEMENT
46B	H16	107+09.3	RT	W16-8		24"	8"	1.33	S	1-3"T	N	MSB	INSTALL SIGN WITH 9' OFFSET FROM EDGE OF PAVEMENT
47	H16	107+10.1	LT	R2-1		24"	30"	5.0	N	1-3"T	N	MSB	
48	H17	113+33.0	RT	R4-7c		18"	30"	3.75	N	1-3"T	N	MSB	
49A	H17	113+76.5	RT	W14-106 (CUSTOM)		30"	36"	7.5	S	1-3"T	Y	MSB	
49B	H17	113+76.5	RT	W14-200 (CUSTOM)		30"	18"	3.75	S	1-3"T	Y	MSB	
50A	H17	113+95.8	LT	W2-6		30"	30"	6.25	N	1-3"T	N	MSB	ELECTROLIER POPL
50B	H17	113+95.8	LT	W16-8		24"	8"	1.33	N	1-3"T	N	MSB	ELECTROLIER POPL
51A	H17	114+22.2	LT	D3-1		42"	30"	8.75	E/W	1-3"T	Y	MSB	INSTALL TWO SIGNS BACK TO BACK
51B	H17	114+22.2	LT	D3-1		36"	12"	3.0	N/S	1-3"T	Y	MSB	INSTALL TWO SIGNS BACK TO BACK
51C	H17	114+22.2	LT	R1-1		30"	30"	6.25	W	1-3"T	N	MSB	
52	H17	114+92.5	RT	R2-1		24"	30"	5.0	S	1-3"T	N	MSB	INSTALL SIGN WITH A 15' OFFSET FROM EDGE OF PAVEMENT

**SIGN SALVAGE SUMMARY (615.0001.0000)**

SIGN	STATION	CL REF	TYPE	MAINTAINING AGENCY	REMARKS
S1A	1013+56.2	LT	D7-1	DOT&PF	LEGEND: MAT-SU AREA HEADQUARTERS ALASKA STATE PARKS
S1B	1013+56.2	LT	D7-102	DOT&PF	LEGEND: FINGER LAKE STATE REC SITE
S1C	1013+56.2	LT	RM-020	DOT&PF	
S2A	1014+97.0	RT	W2-7R SPECIAL	DOT&PF	
S2B	1014+97.0	RT	W13-1	DOT&PF	
S3A	1016+58.6	RT	R1-1	MSB	
S3B	1016+58.6	RT	D3-1	MSB	LEGEND: E ASHMORE AVE
S4	1017+65.1	RT	W11-8	DOT&PF	
S5A	1021+79.1	RT	D3-1	MSB	LEGEND: N GREEN FOREST DR
S5B	1021+79.1	RT	R1-1	MSB	
S6A	1023+18.0	LT	D3-1	MSB	LEGEND: N ENGSTROM RD
S6B	1023+18.0	LT	R1-1	MSB	
S7	1023+63.2	RT	W1-7	DOT&PF	
S8	1026+84.2	LT	W11-8	DOT&PF	
S9A	1030+26.7	LT	W2-7R SPECIAL	DOT&PF	
S9B	1030+26.7	LT	W13-1	DOT&PF	
S10	1021+34.4	RT	R2-1	MSB	LEGEND: 25 MPH
S11A	1023+41.6	LT	R2-1	MSB	LEGEND: 35 MPH
S11B	1023+41.6	LT	OTHER	MSB	LEGEND: WHEN SNOW IS BLOWING USE ALTERNATE ROUTE DESTIN DR
S12	1022+71.1	LT	W3-1	MSB	
S13A	1022+52.9	LT	D3-1	MSB	LEGEND: E DESTIN DR
S13B	1022+52.9	LT	R1-1	MSB	

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 CHECKED BY: RDR  
 DRAFTED BY: MF  
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 DATE: 3/15/2023 12:40 PM  
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STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
  
**HSIP: BOGARD ROAD AT  
 ENGSTROM ROAD AND GREEN  
 FOREST DRIVE INTERSECTION  
 IMPROVEMENTS  
 SIGN & SIGN SALVAGE  
 SUMMARY**

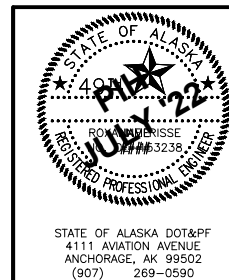
STATE OF ALASKA DOT&PF  
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 ANCHORAGE, AK 99502  
 (907) 269-0590

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 CHECKED BY: RDR  
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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0001630 / CFHWY00435	2022	H22	H22

PAVEMENT MARKING LAYOUT TABLE			
NAME	STATION	OFFSET	REMARKS
1	1015+22.4	0.0' RT	C.L. DEVIATES FROM ALIGNMENT
2	1015+76.2	0.4' RT	BEGIN R=1668FT
3	1015+76.4	12.4' RT	END 4IN W
4	1016+30.0	25.8' RT	STOP BAR CORNER
5	1016+56.3	1.4' LT	BEGIN PAINTED MEDIAN
6	1016+84.4	13.5' RT	BEGIN 4IN W
7	1019+22.2	5.5' LT	END DOUBLE YELLOW
8	1019+47.4	3.9' RT	END DOUBLE YELLOW
9	1020+45.0	16.2' RT	END 4IN W. BEGIN 4IN W LES
10	1020+59.9	19.1' LT	END 4IN W. BEGIN 4IN W LES
11	1021+45.0	5.2' RT	BEGIN 4IN Y
12	1021+45.0	16.2' RT	END 4IN W LES
13	1022+61.3	19.3' RT	END 4IN Y. BEGIN 8IN W.
14	1022+62.5	17.5' LT	BEGIN 8IN W
15	1022+79.5	26.1' RT	8IN W INTERSECTION. BEGIN 24IN W RBEL
16	1022+89.4	46.9' RT	END 24IN RBEL
17	1022+81.8	25.6' LT	8IN W INTERSECTION
18	1022+95.8	48.3' LT	BEGIN 24IN W RBEL
19	1023+26.4	68.9' RT	8IN W INTERSECTION
20	1023+32.0	80.8' RT	BEGIN 8IN W
21	1023+56.5	151.3' RT	BEGIN 4IN Y, TANGENT
22	1023+53.2	105.5' RT	END 4IN Y, TANGENT
23	1023+22.3	61.5' LT	8IN W INTERSECTION. END 24IN W RBEL
24	1023+55.3	85.6' RT	END 8IN W. BEGIN 4IN Y.
25	1023+68.7	150.0' RT	END 4IN W
26	1023+29.9	77.1' LT	END 8IN W. BEGIN 4IN Y.
27	1023+63.8	67.7' RT	8IN W INTERSECTION. BEGIN 24IN W RBEL
28	1023+28.6	146.4' LT	END 4IN Y
29	1023+87.5	56.7' RT	END 24IN RBEL
30	1023+71.5	58.8' LT	8IN W INTERSECTION
31	1023+63.9	105.7' LT	BEGIN 4IN W.
32	1024+06.2	29.3' RT	8IN W INTERSECTION
33	1023+82.4	112.8' LT	BEGIN 4IN W TANGENT
34	1023+96.6	43.8' LT	END 24IN RBEL
35	1024+05.0	28.0' LT	8IN W INTERSECTION. BEGIN 24IN W RBEL
36	1023+86.6	135.6' LT	BEGIN 4IN W.
37	1024+24.2	20.9' RT	ROUNDBABOUT TABLE
38	1024+23.6	21.2' LT	END 8IN W. BEGIN 4IN Y.
39	1025+17.2	16.9' LT	BEGIN 8IN W
40	1025+16.6	5.6' LT	END 4IN Y

PAVEMENT MARKING LAYOUT TABLE			
NAME	STATION	OFFSET	REMARKS
41	1025+20.0	17.3' RT	BEGIN 4IN W LES
42	1025+61.0	16.6' RT	END 4IN W LES. BEGIN 4IN W
43	1026+50.3	26.0' LT	END PAINTED GORE. 8 IN W INTERSECTION
44	1027+01.8	24.5' LT	END 8INW. BEGIN 4INW LES
45	1027+62.1	7.1' LT	BEGIN DOUBLE YELLOW
46	1027+85.2	3.4' RT	BEGIN 4IN W
47	1028+56.1	12.4' LT	4IN W INTERSECTION WITH 4IN W LES
48	106+99.8	12.0' LT	END 4IN W.
49	107+42.4	0.3' RT	BEGIN PAINTED MEDIAN
50	108+24.8	4.4' LT	END DOUBLE YELLOW
51	108+30.4	3.8' RT	END DOUBLE YELLOW
52	112+38.1	18.0' RT	END TANGENT. BEGIN 100' RADIUS.
53	112+65.3	15.0' RT	4IN W INTERSECTION. BEGIN 4IN W LADS
54	112+90.8	14.9' RT	END 4IN W LADS
55	113+21.9	4.5' LT	BEGIN DOUBLE YELLOW. R=1455FT
56	113+36.0	3.4' RT	BEGIN DOUBLE YELLOW
57	113+66.8	26.1' RT	BEGIN LANE DROP TAPER
58	113+95.5	17.7' LT	END 4IN W
59	114+30.0	0.3' RT	BEGIN DOUBLE YELLOW
60	114+49.8	23.1' LT	STOP BAR CORNER
61			END 4IN W
62			END LANE DROP TAPER



STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
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**HSIP: BOGARD ROAD AT  
 ENGSTROM ROAD AND GREEN  
 FOREST DRIVE INTERSECTION  
 IMPROVEMENTS  
 PAVEMENT MARKING  
 LAYOUT SUMMARY**

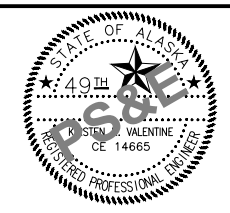
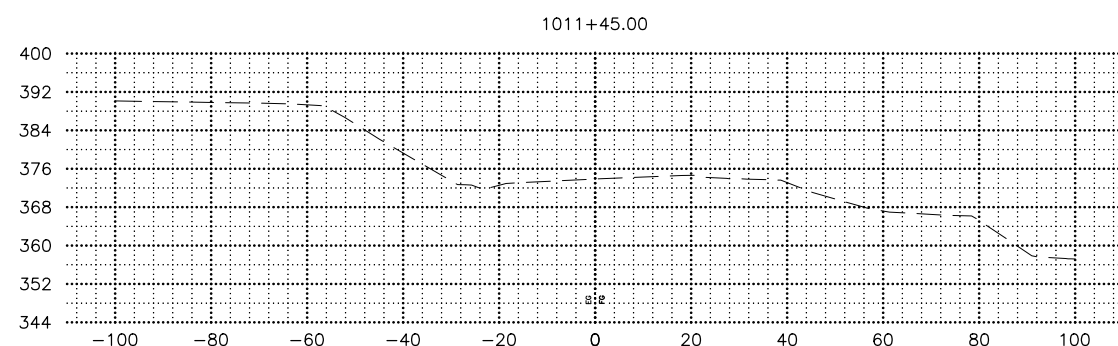
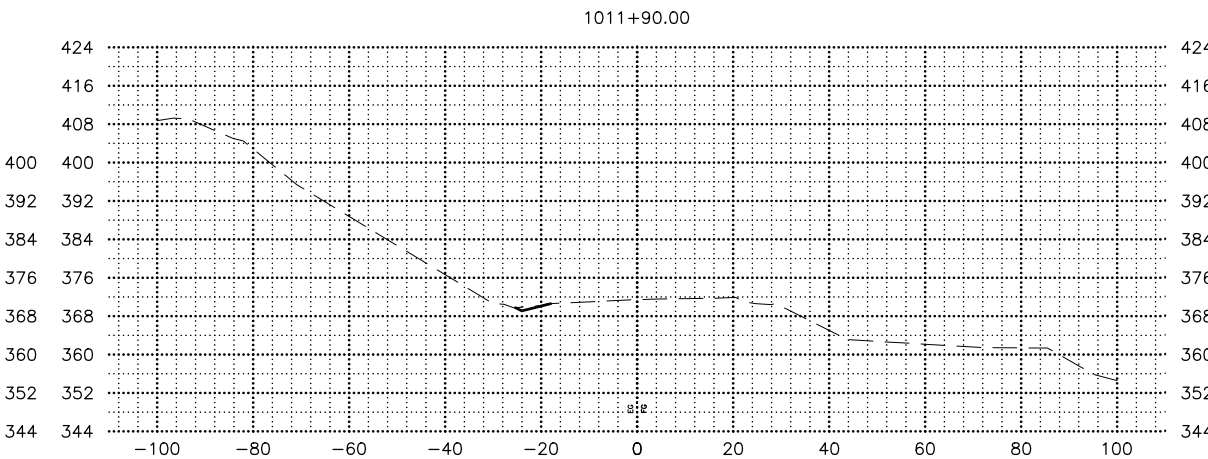
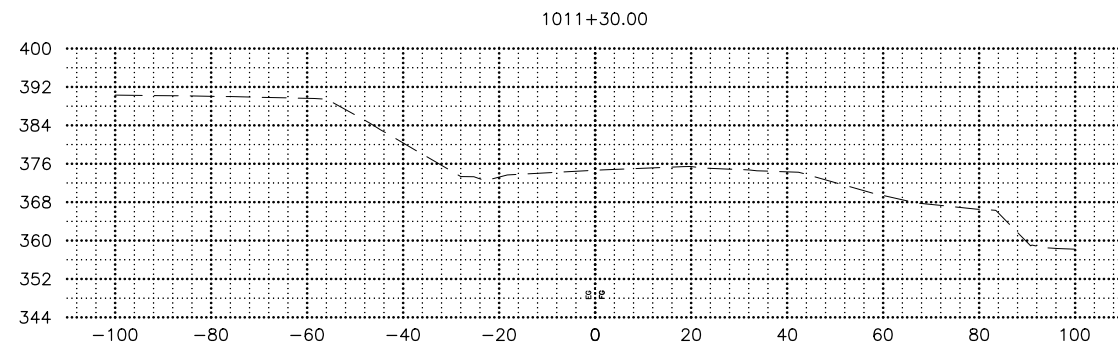
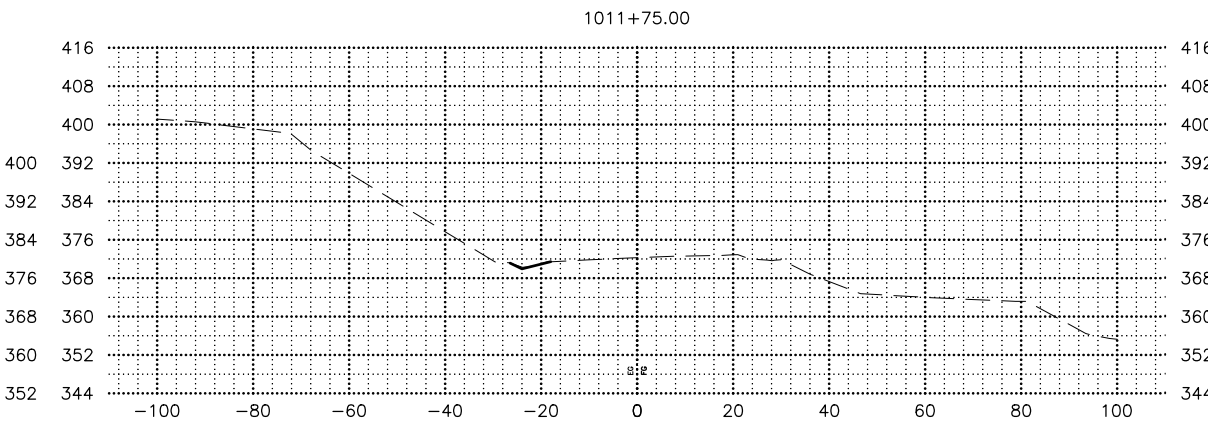
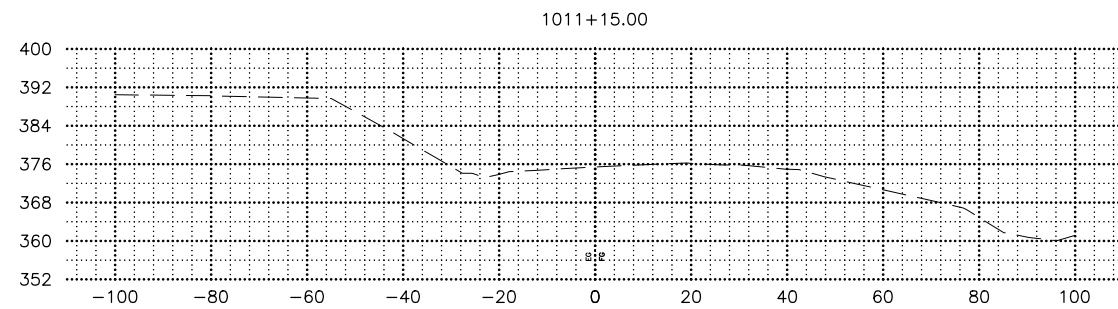
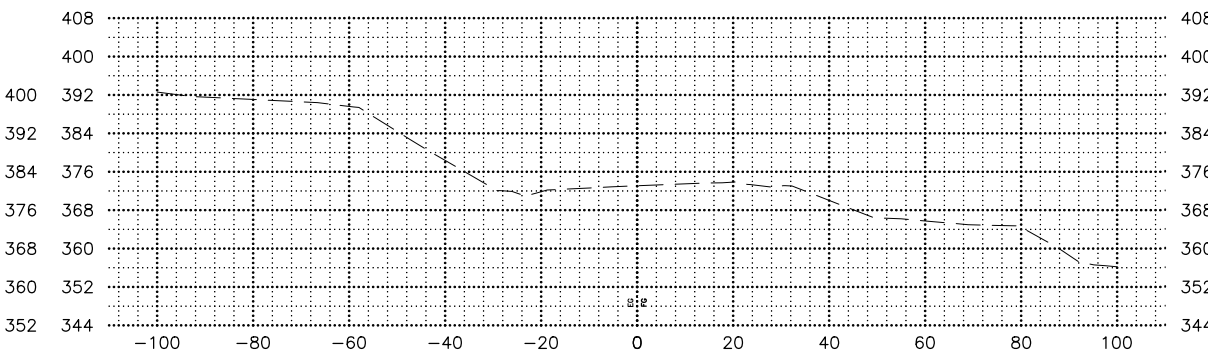
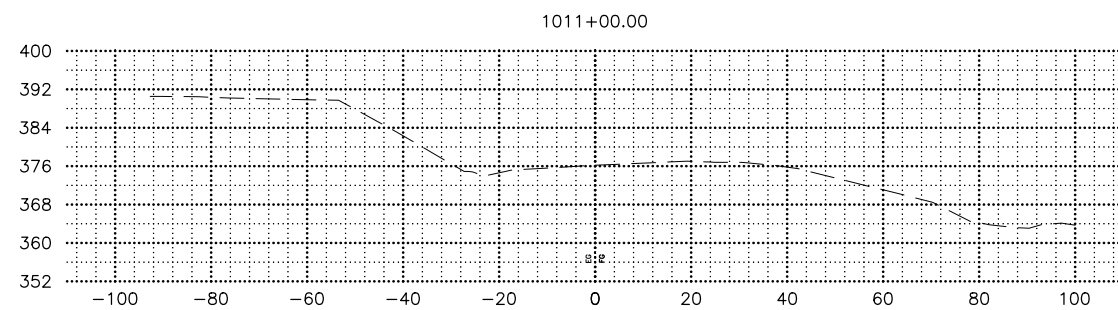
STATE OF ALASKA DOT&PF  
 4111 AVIATION AVENUE  
 ANCHORAGE, AK 99502  
 (907) 269-0590

DESIGNED BY: ZDK  
 CHECKED BY: KRV  
 DRAFTED BY: PGH

DATE: 3/15/2023 12:41 PM  
 TIME: 12:41 PM  
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STATE	YEAR
ALASKA	2024
PROJECT DESIGNATION	
0001630/ CFHWY00453	
NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	



STATE OF ALASKA DOT&PF  
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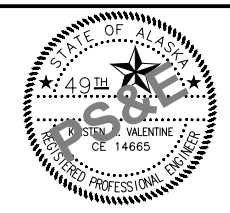
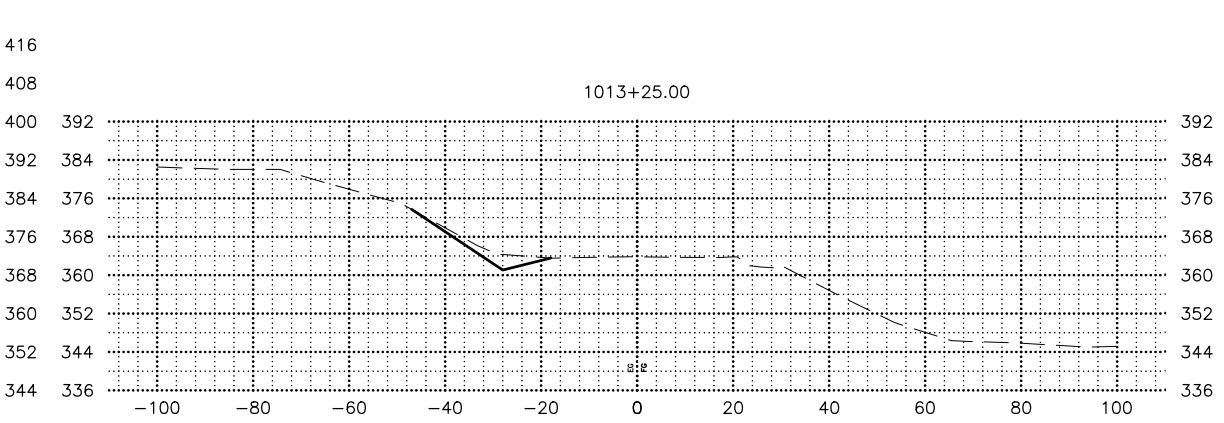
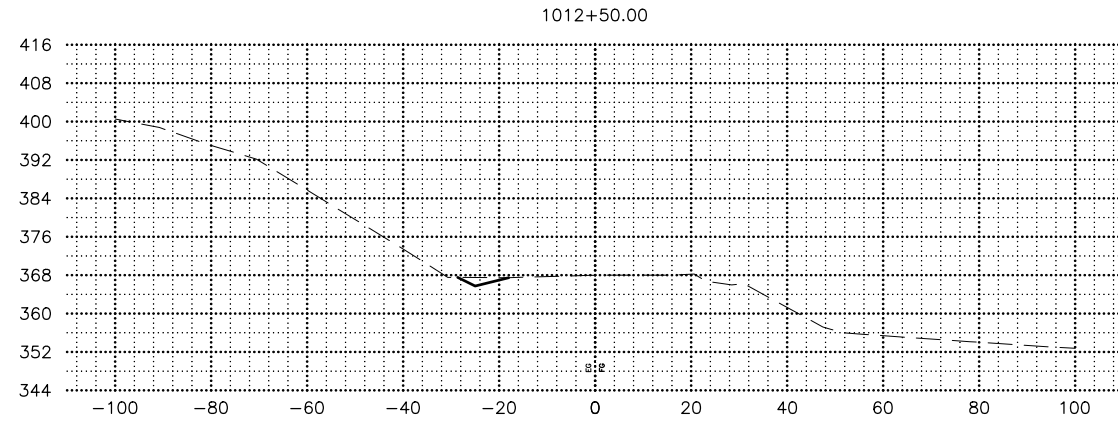
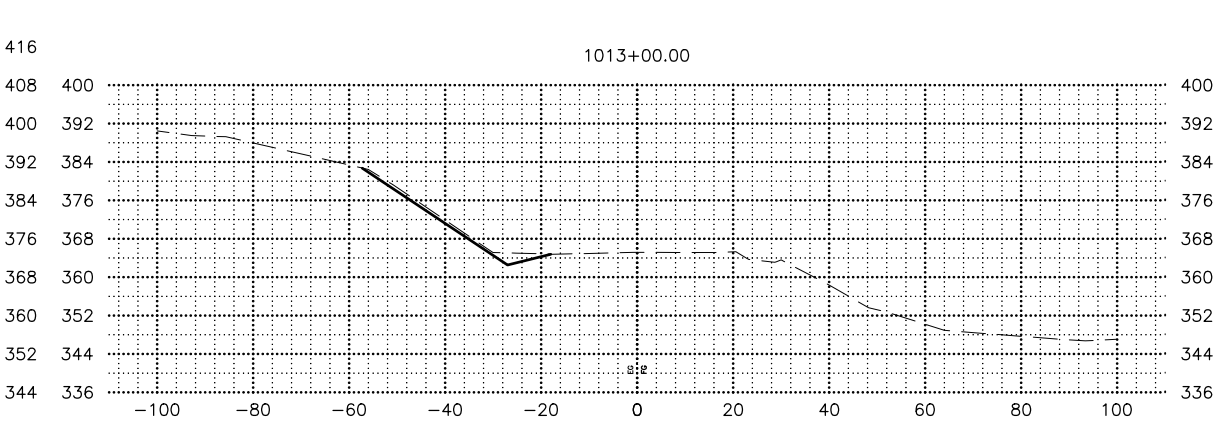
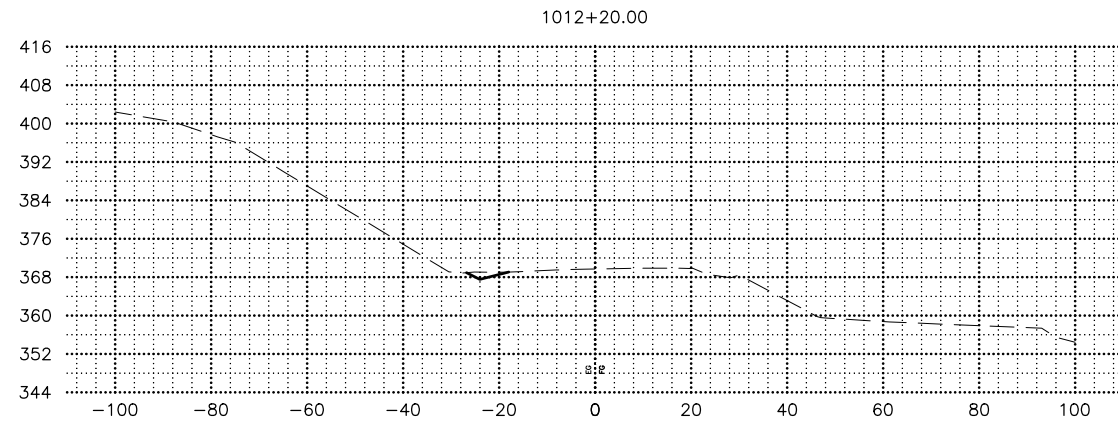
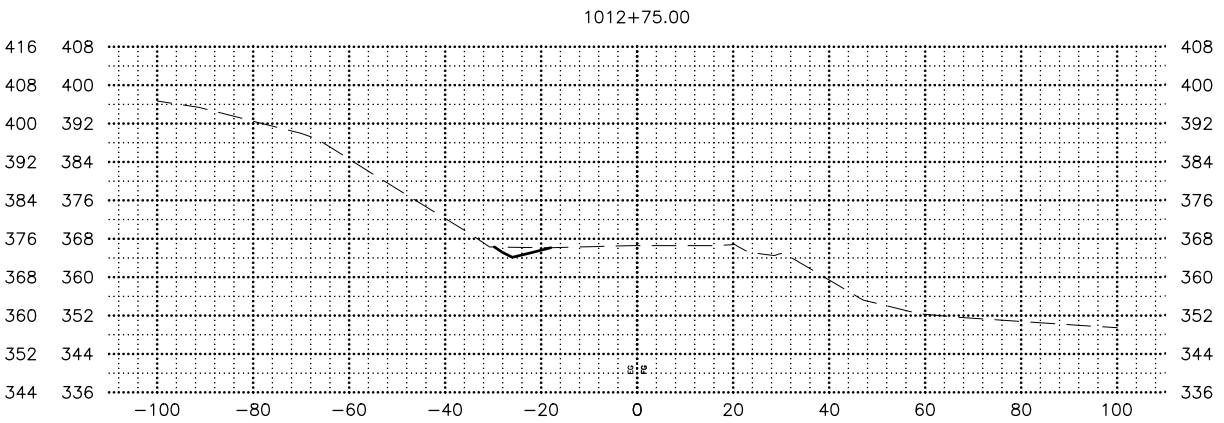
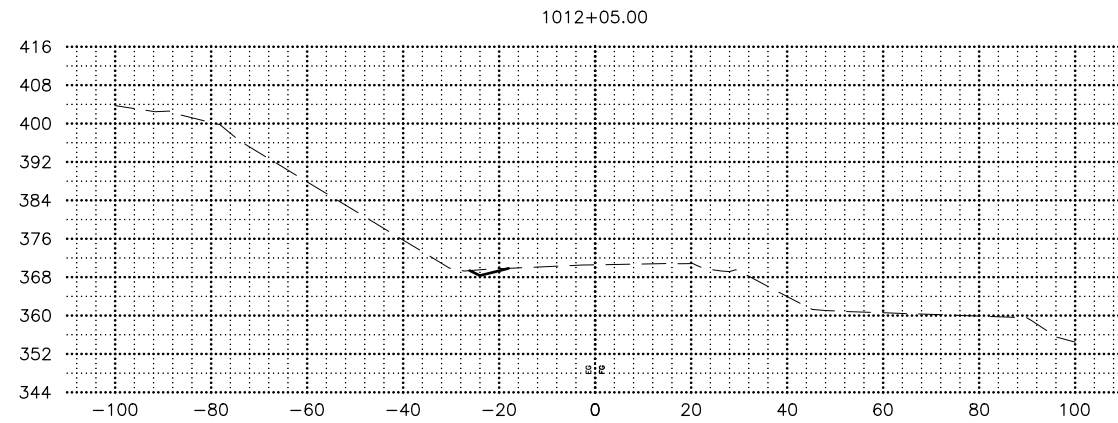
STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 HSIP: BOGARD RD AT  
 ENGSTROM RD & GREEN  
 FOREST DR INT IMP  
**BOGARD ROAD  
 CROSS SECTIONS**

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 CHECKED BY: KRV  
 DRAFTED BY: PGH  
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 PROJECT NO.: 0001630/CFHWY00453

SHEET NO.	TOTAL SHEETS
X02	X23
STATE	YEAR
ALASKA	2024

PROJECT DESIGNATION  
**0001630/  
 CFHWY00453**

NO.	REVISION



STATE OF ALASKA DOT&PF  
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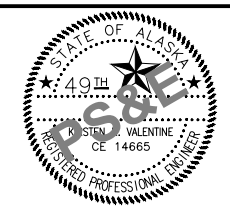
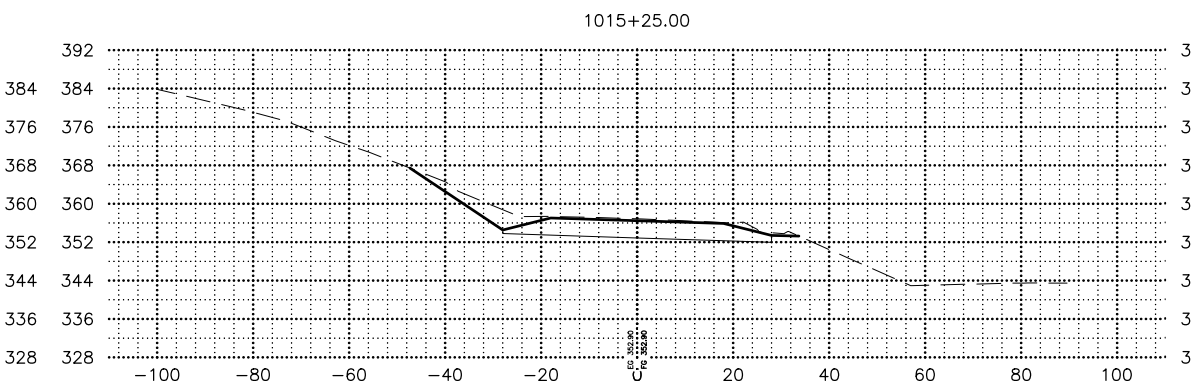
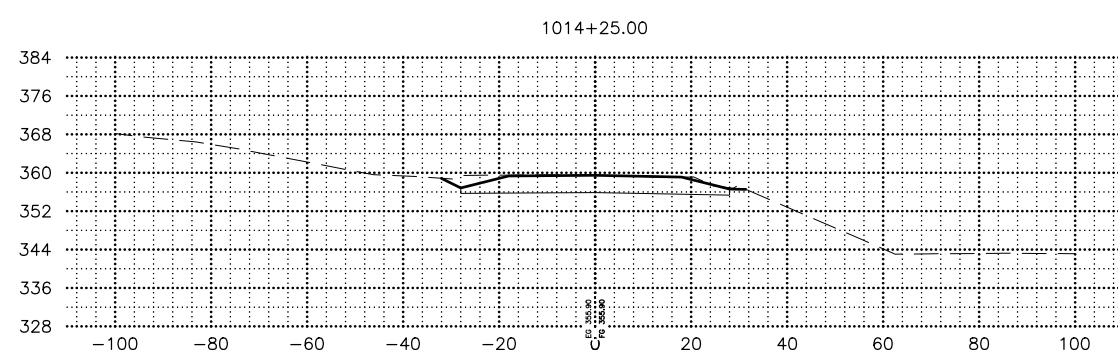
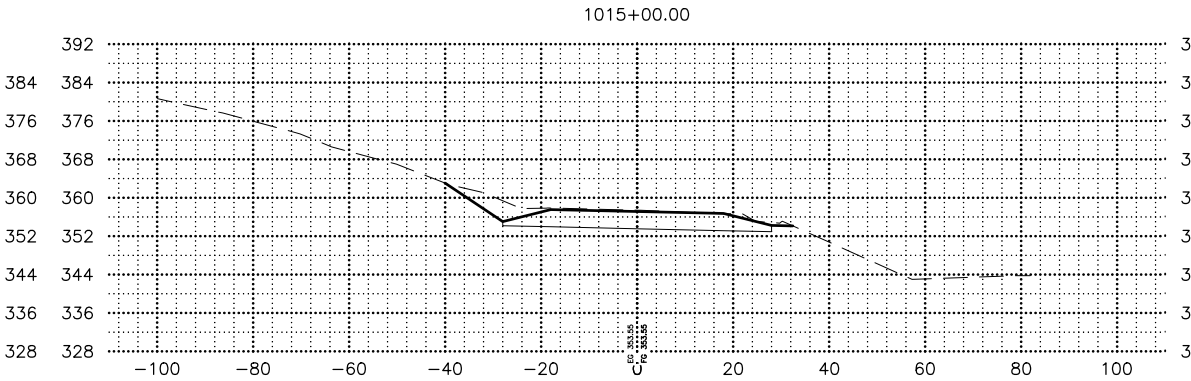
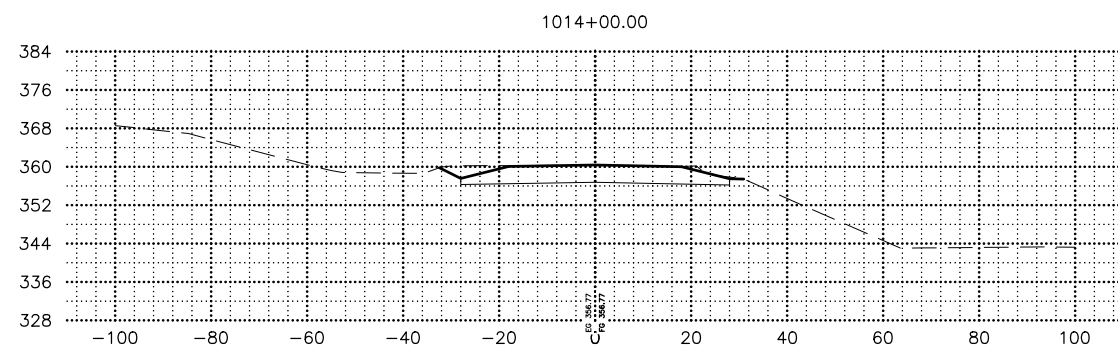
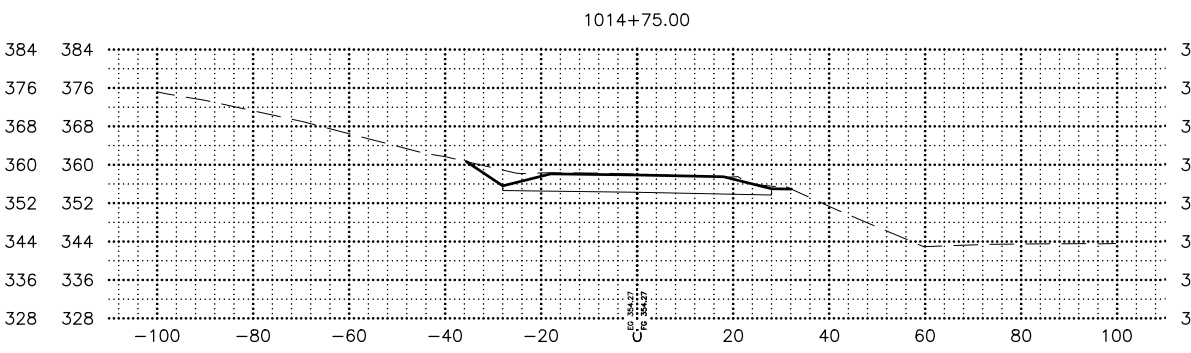
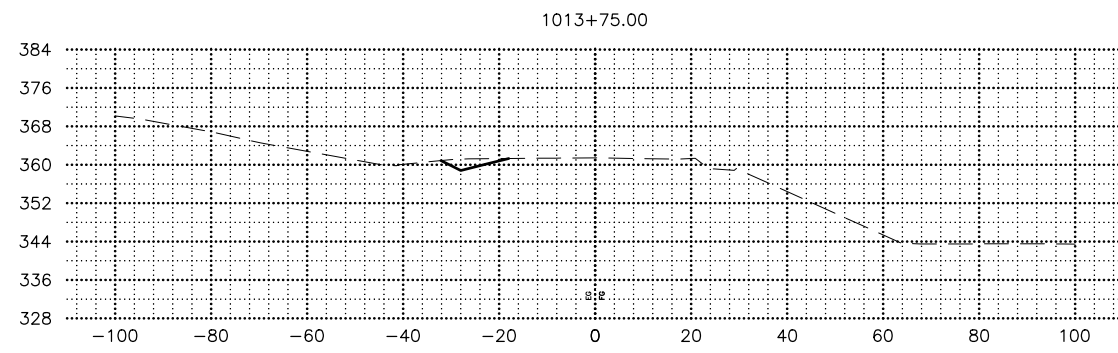
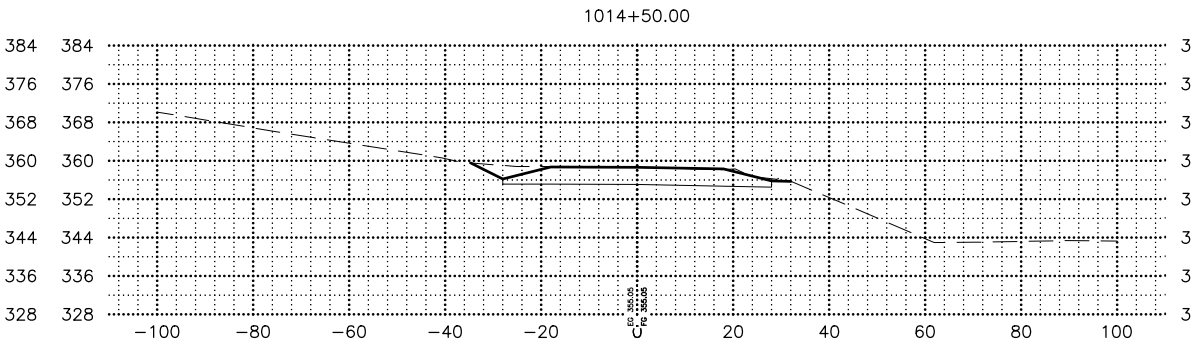
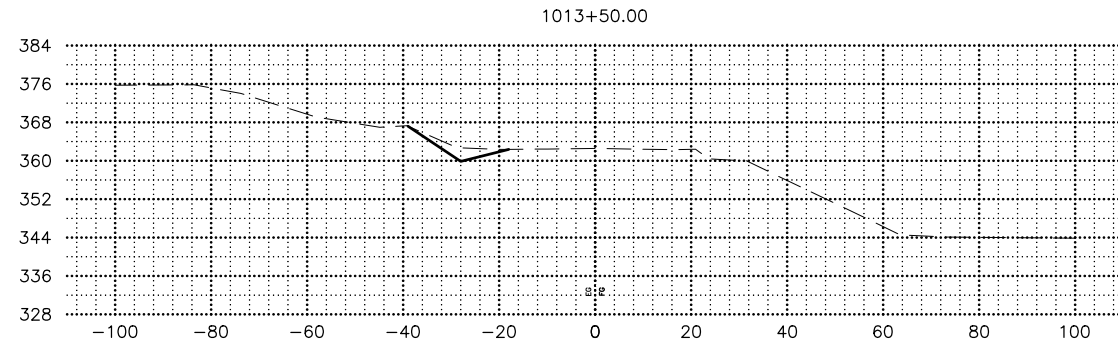
STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 HSIP: BOGARD RD AT  
 ENGSTROM RD & GREEN  
 FOREST DR INT IMP  
**BOGARD ROAD  
 CROSS SECTIONS**

DESIGNED BY: ZDK  
 CHECKED BY: KRV  
 DRAFTED BY: PGH

DATE: 3/15/2023 12:41 PM  
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SHEET NO.	TOTAL SHEETS
X03	X23
STATE	YEAR
ALASKA	2024
PROJECT DESIGNATION	
0001630/ CFHWY00453	
NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	

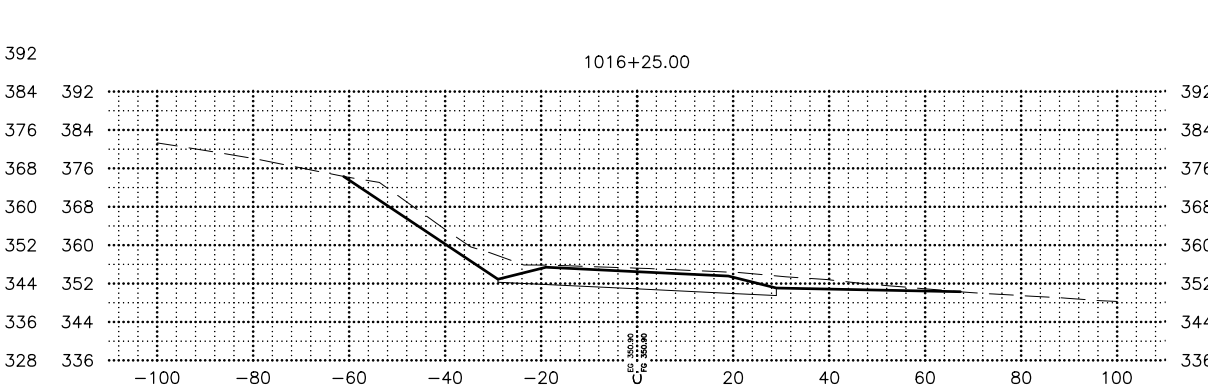
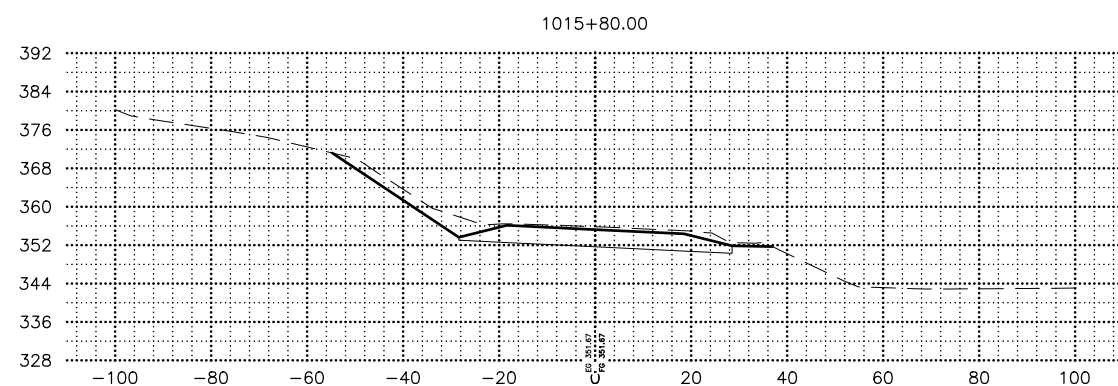
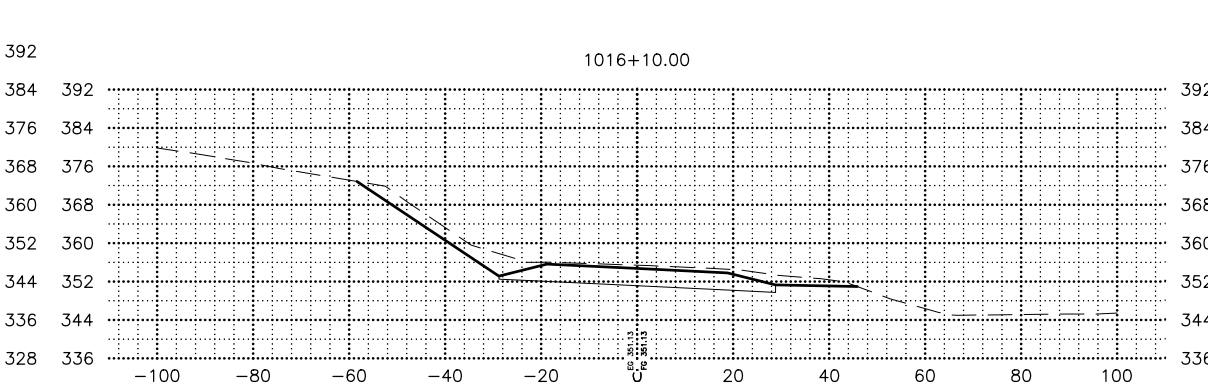
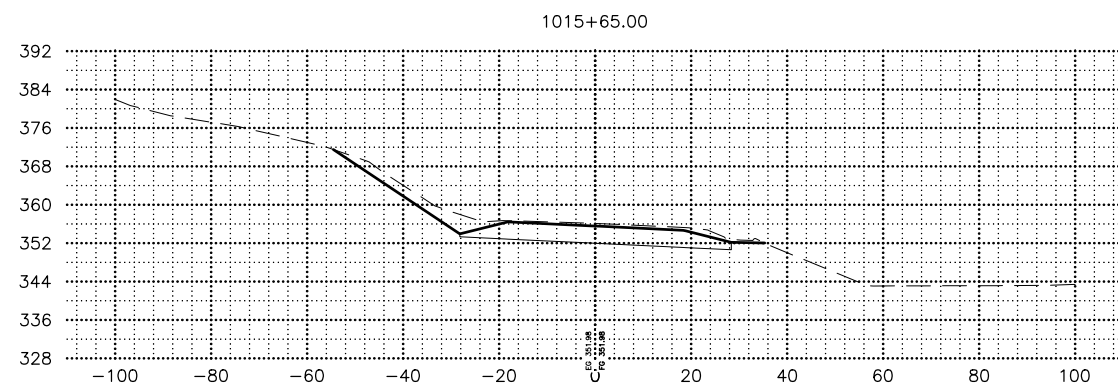
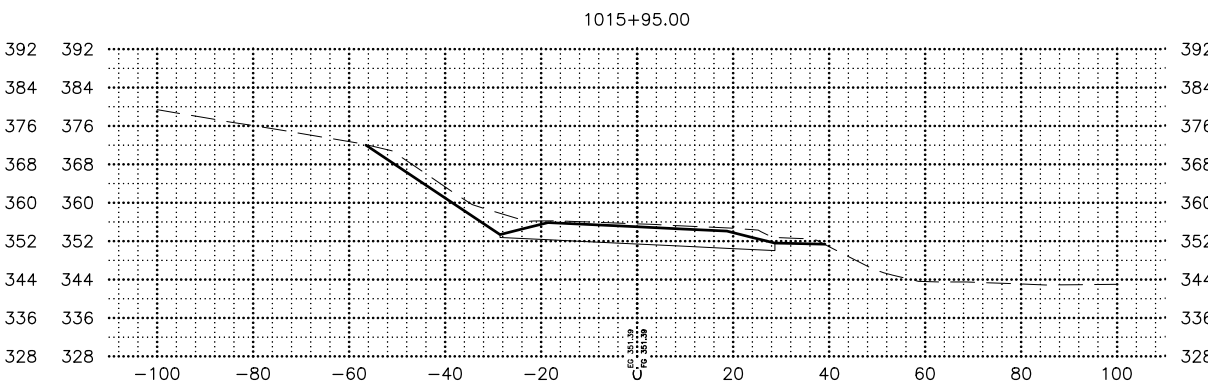
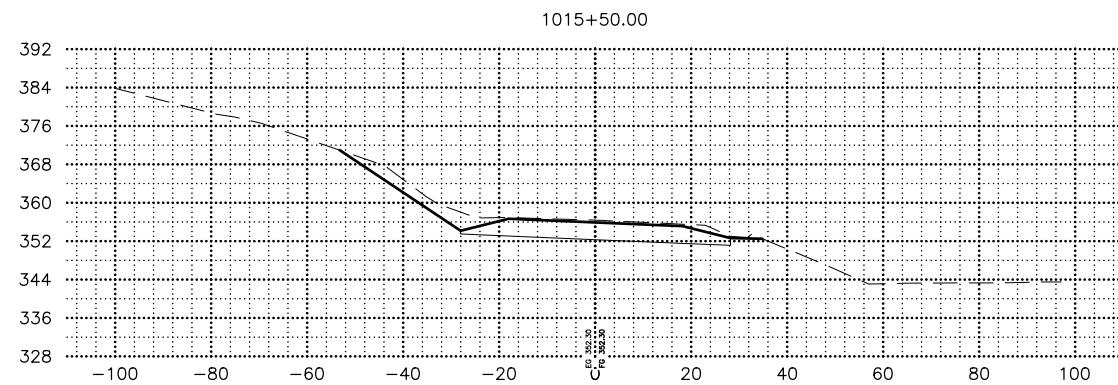


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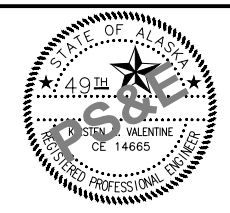
STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 HSIP: BOGARD RD AT  
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 FOREST DR INT IMP  
**BOGARD ROAD  
 CROSS SECTIONS**



DRAWING LOCATION: W:\PROJECTS\HSIP\BOGARD\_ENGSTROM\_RA - CFHWY00453\CIV3D\X-SECTION\00453\_X-SECTIONS.DWG  
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 DESIGNED BY: ZDK  
 CHECKED BY: KRV  
 DRAFTED BY: PGH



SHEET NO.	TOTAL SHEETS
X04	X23
STATE	YEAR
ALASKA	2024
PROJECT DESIGNATION	
0001630/ CFHWY00453	
NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	



STATE OF ALASKA DOT&PF  
 411 AVIATION AVENUE  
 ANCHORAGE, AK 99502  
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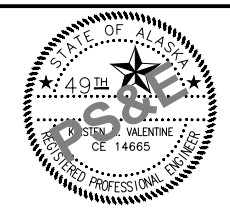
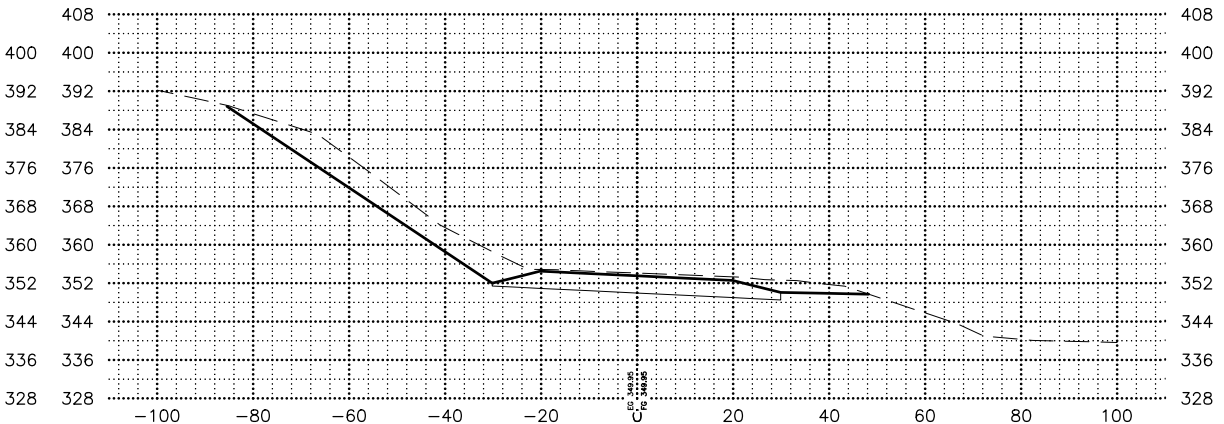
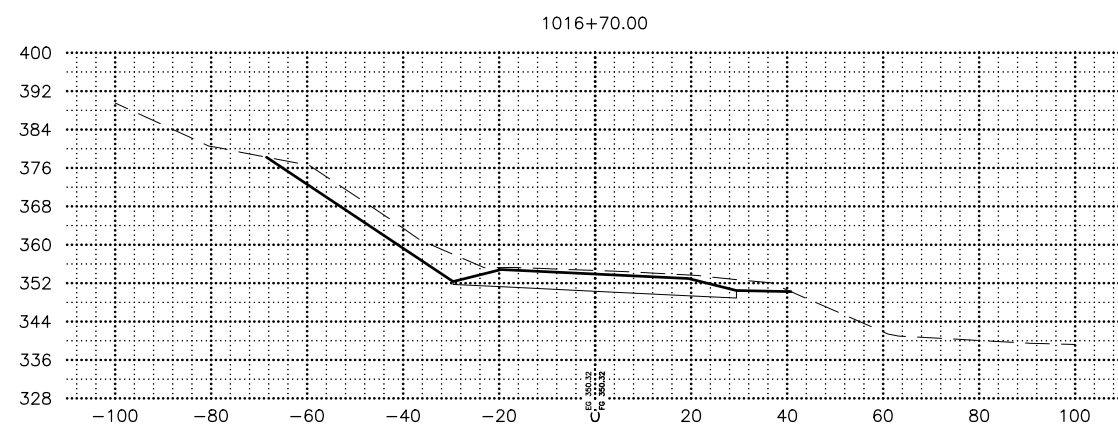
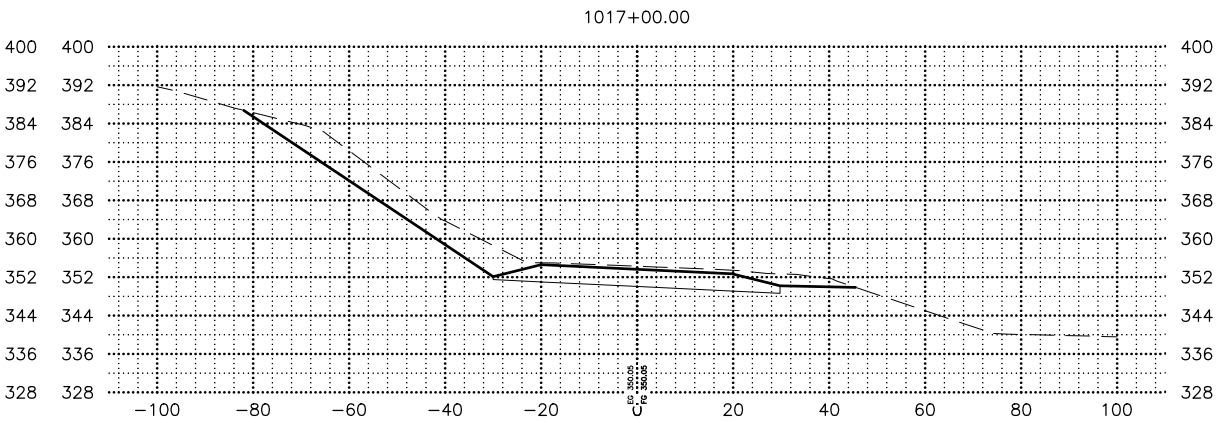
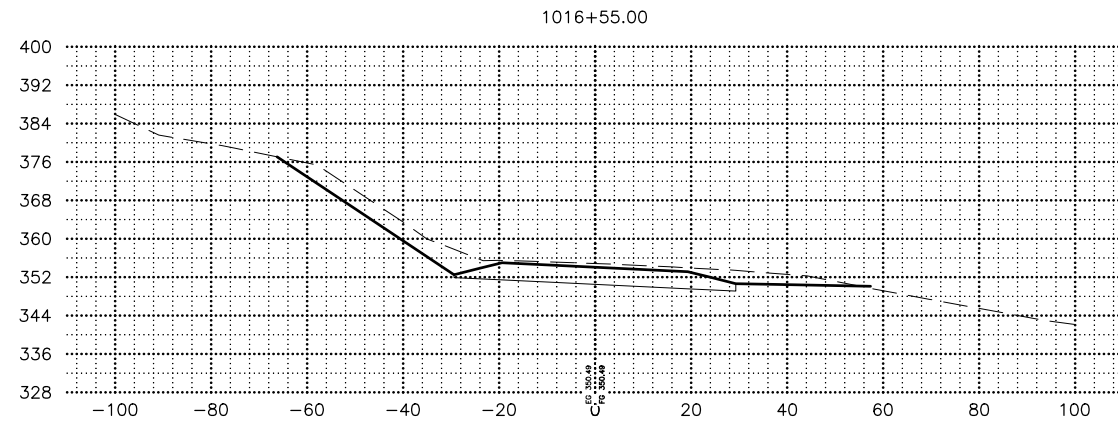
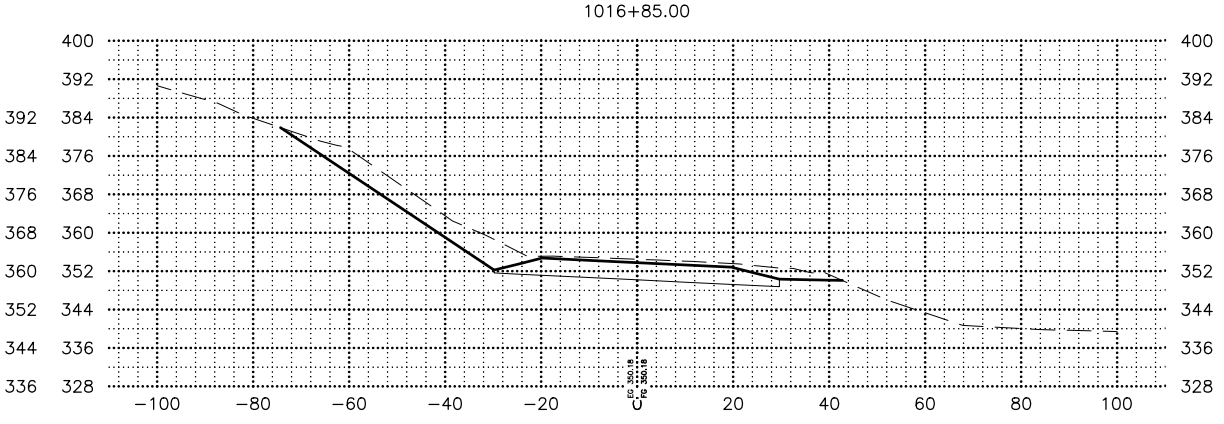
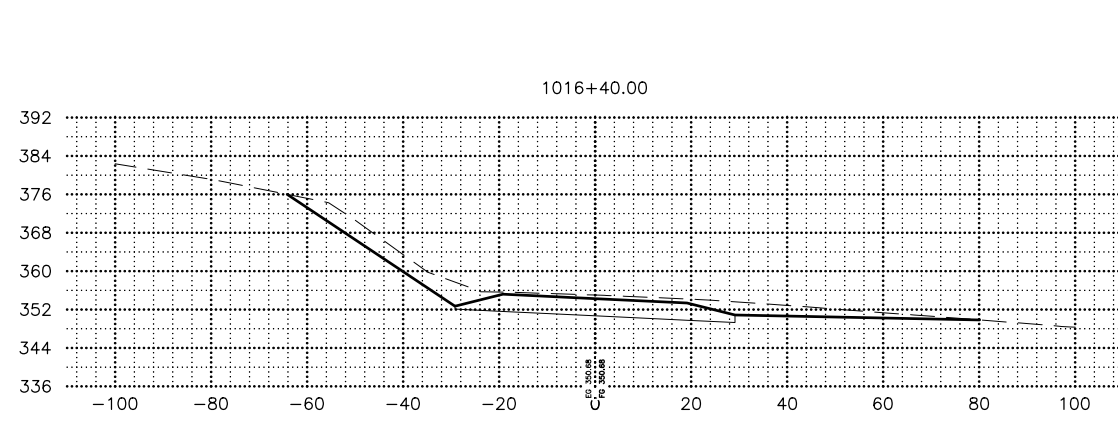
STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 HSIP: BOGARD RD AT  
 ENGSTROM RD & GREEN  
 FOREST DR INT IMP  
**BOGARD ROAD  
 CROSS SECTIONS**

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 CHECKED BY: KRV  
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SHEET NO.	TOTAL SHEETS
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STATE	YEAR
ALASKA	2024

PROJECT DESIGNATION  
**0001630/  
 CFHWY00453**

NO.	REVISION

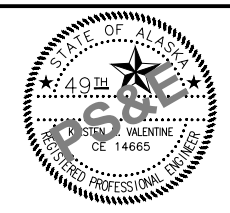
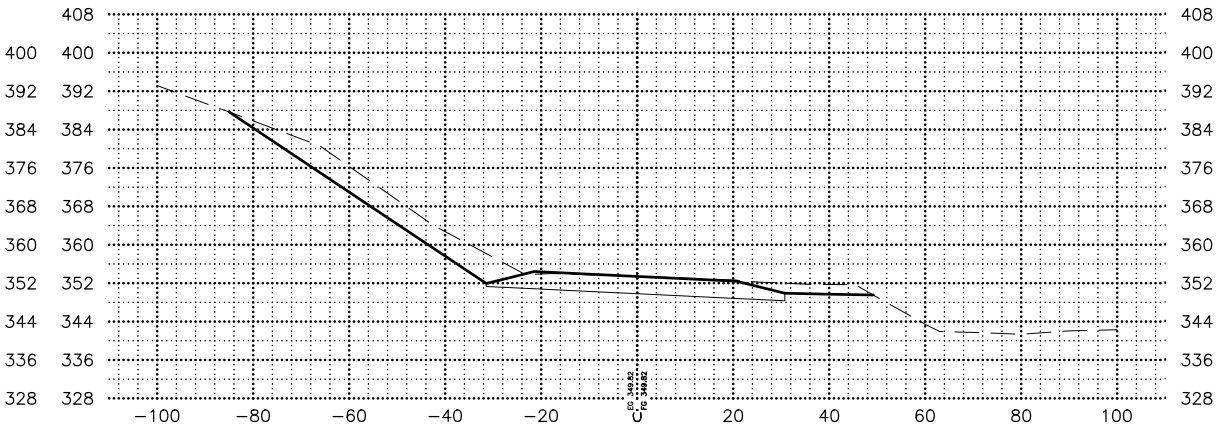
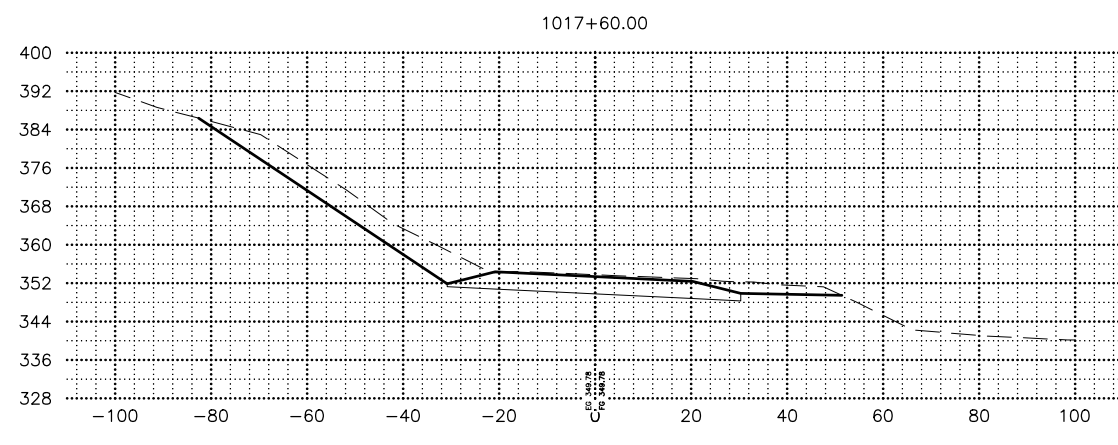
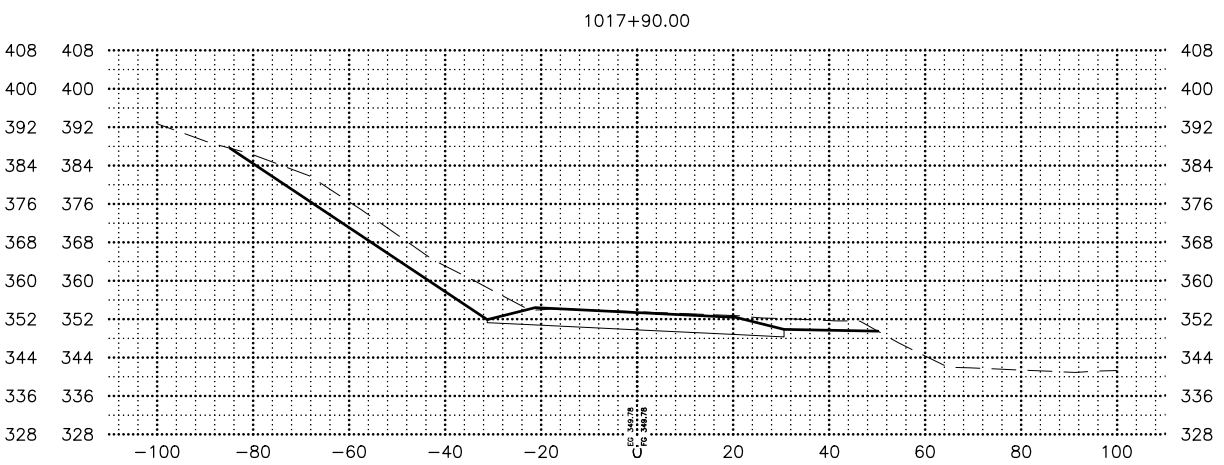
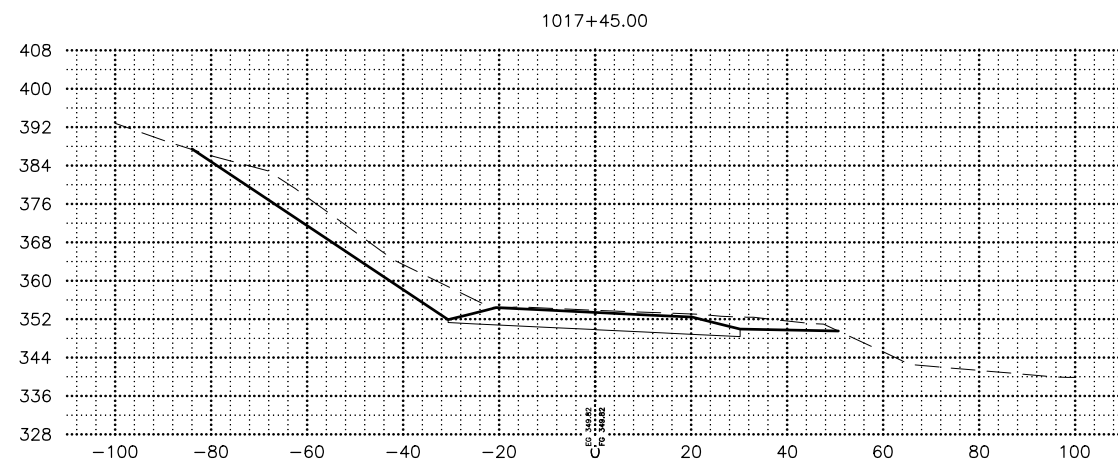
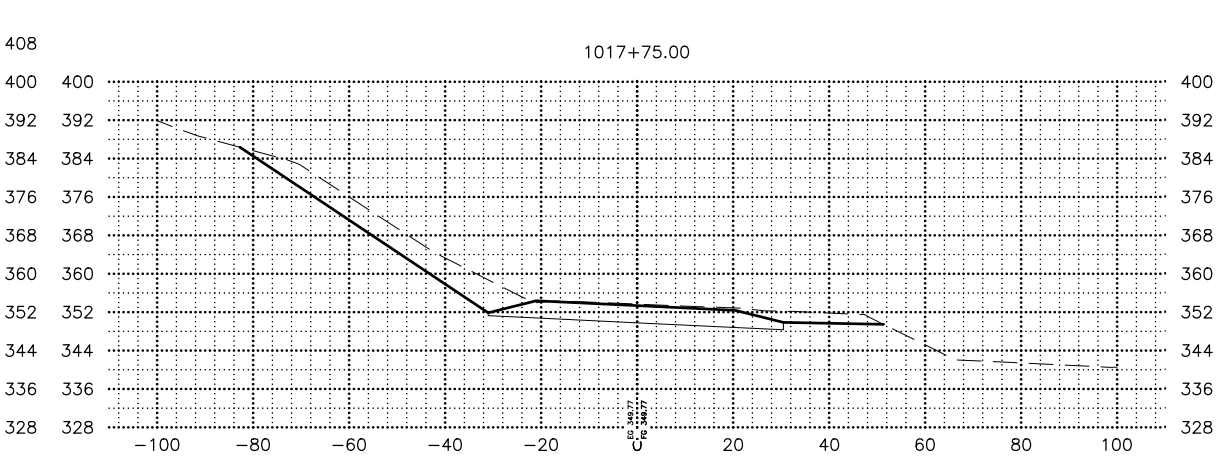
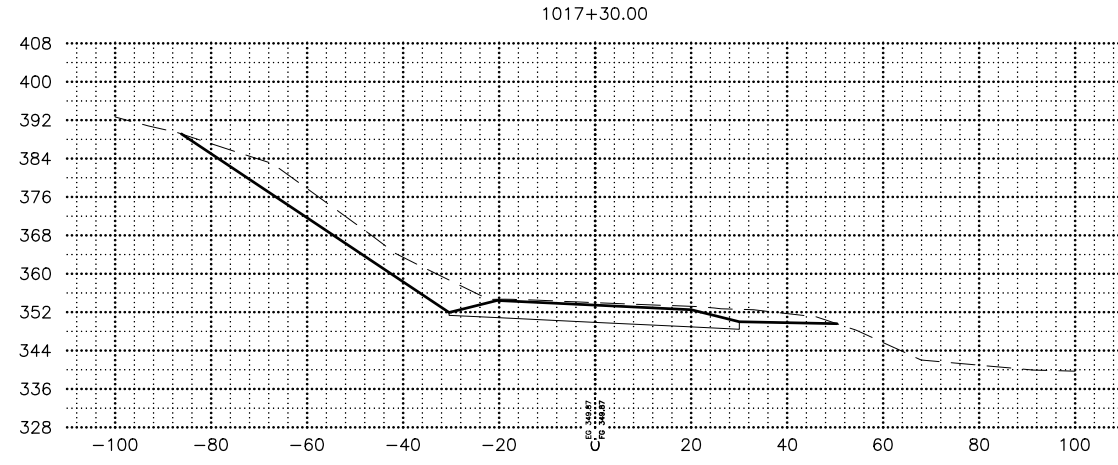


STATE OF ALASKA DOT&PF  
 4111 AVIATION AVENUE  
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 (907) 269-0590

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
**HSIP: BOGARD RD AT  
 ENGSTROM RD & GREEN  
 FOREST DR INT IMP**  
**BOGARD ROAD  
 CROSS SECTIONS**

DRAWING LOCATION: W:\PROJECTS\HSIP BOGARD\_ENGSTROM\_RA - CFHWY00453\_SECTION\CIV3D\CIV3D\X-SECTION\00453\_X-SECTIONS.DWG  
 DESIGNED BY: ZDK  
 CHECKED BY: KRV  
 DRAFTED BY: PGH  
 DATE: 3/15/2023 12:41 PM  
 SCALE: 1" = 20'  
 TIME:

SHEET NO.	TOTAL SHEETS
X06	X23
STATE	YEAR
ALASKA	2024
PROJECT DESIGNATION	
0001630/ CFHWY00453	
NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	

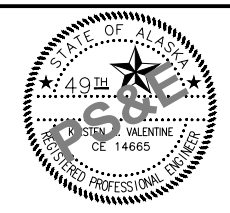
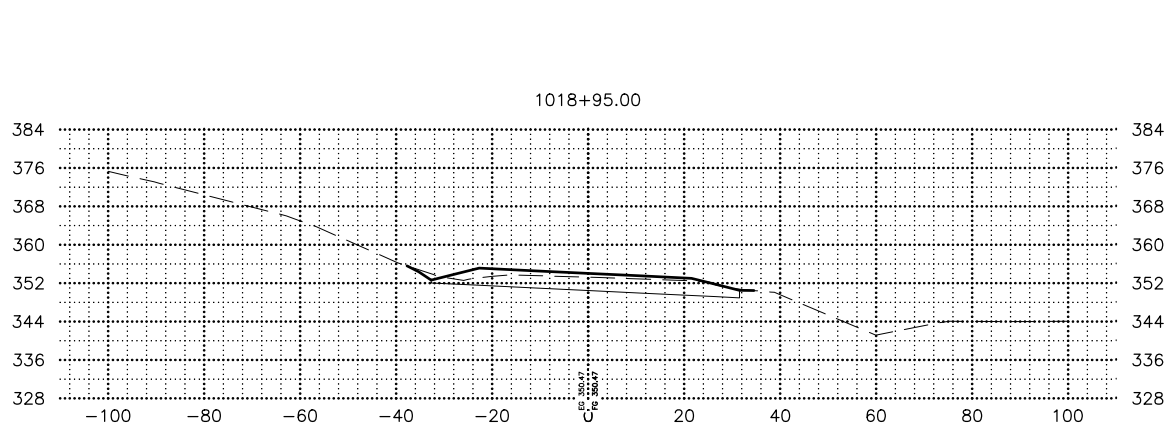
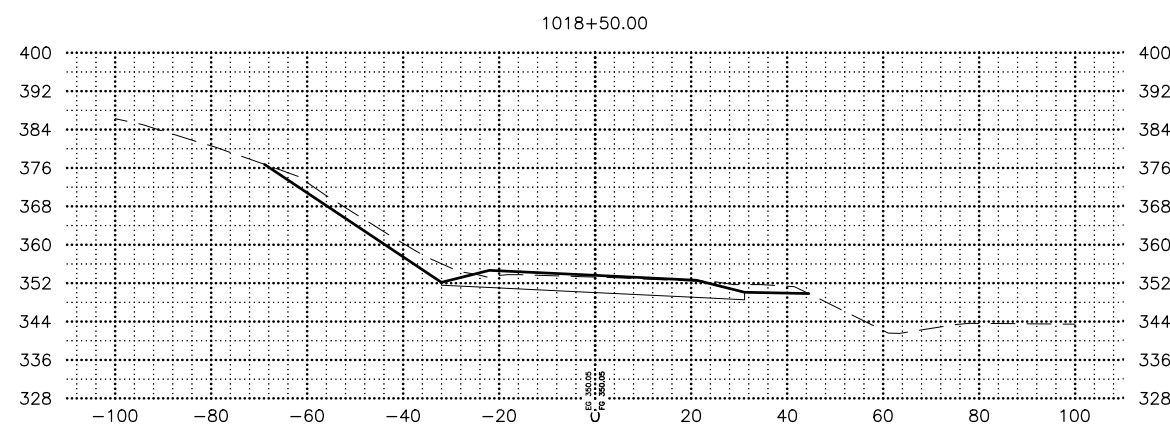
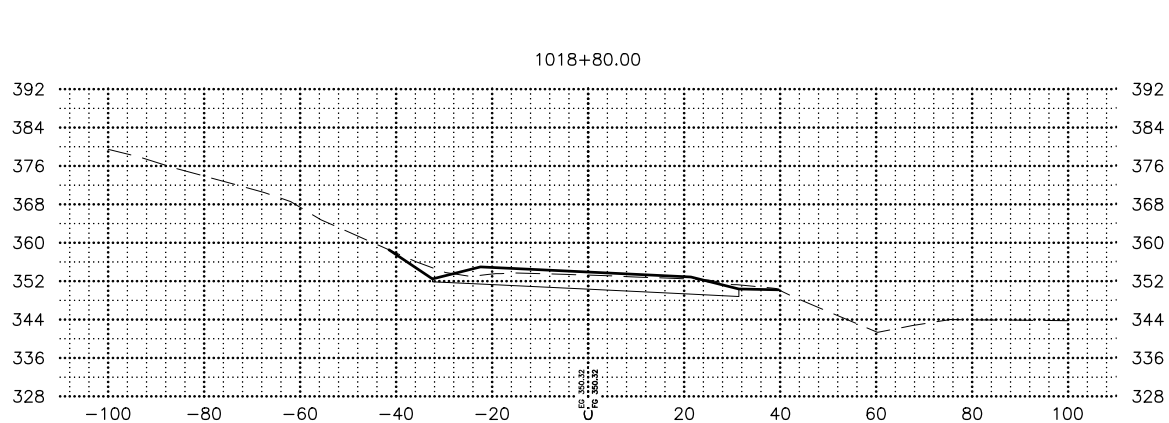
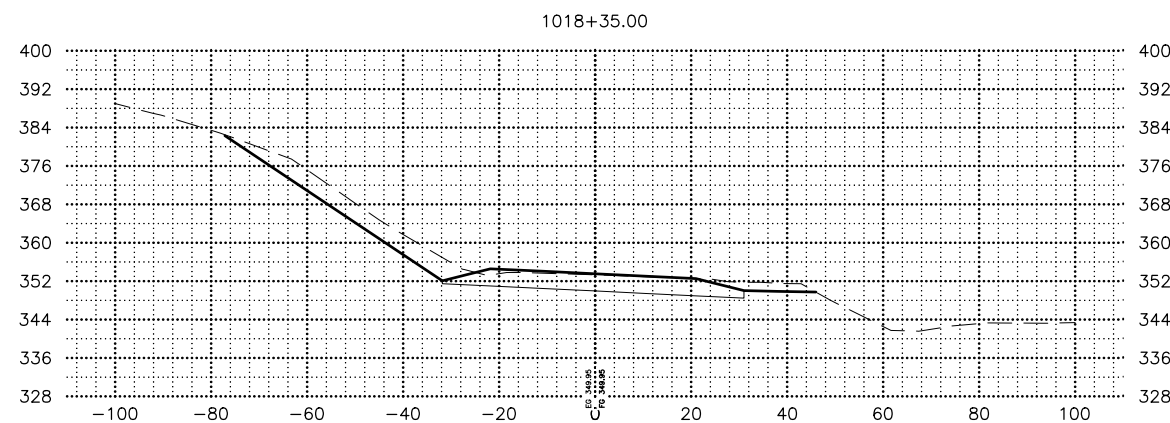
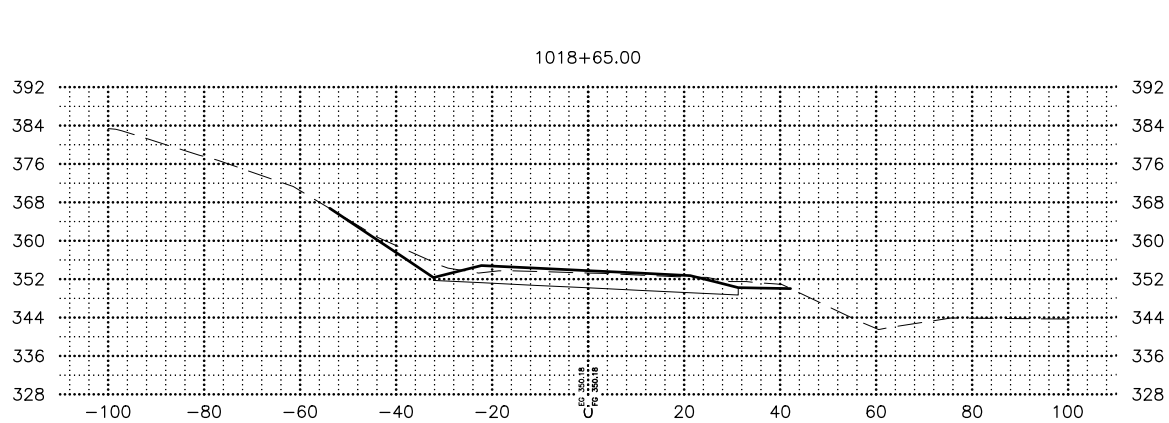
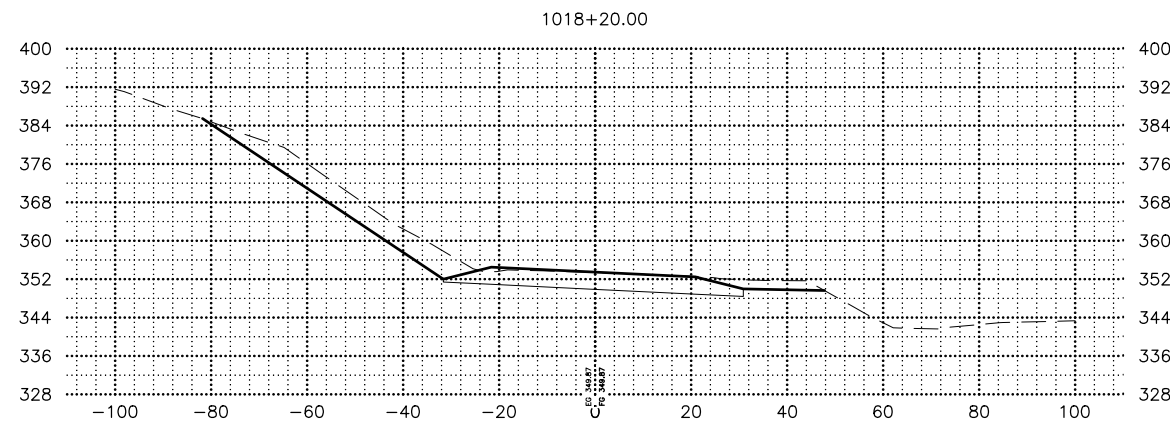


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STATE OF ALASKA  
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 AND PUBLIC FACILITIES  
 HSIP: BOGARD RD AT  
 ENGSTROM RD & GREEN  
 FOREST DR INT IMP  
**BOGARD ROAD  
 CROSS SECTIONS**

DRAWING LOCATION: W:\PROJECTS\HSIP BOGARD\_ENGSTROM\_RA - CFHWY00453\CIV3D\CIV3D\X-SECTION\00453\_X-SECTIONS.DWG  
 DATE: 3/15/2023 12:41 PM  
 TIME: 12:41 PM  
 SCALE: 1" = 20'  
 DESIGNED BY: ZDK  
 CHECKED BY: KRV  
 DRAFTED BY: PGH

SHEET NO.	TOTAL SHEETS
X07	X23
STATE	YEAR
ALASKA	2024
PROJECT DESIGNATION	
0001630/ CFHWY00453	
NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	

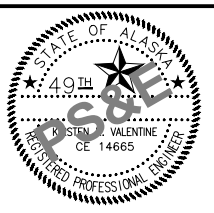
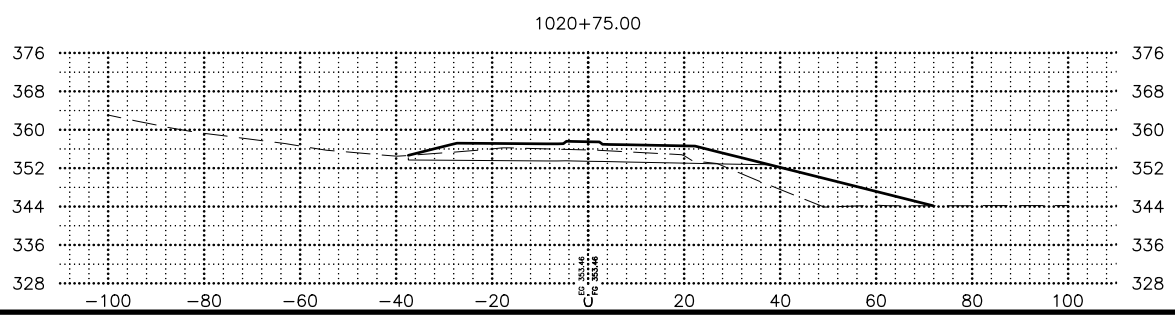
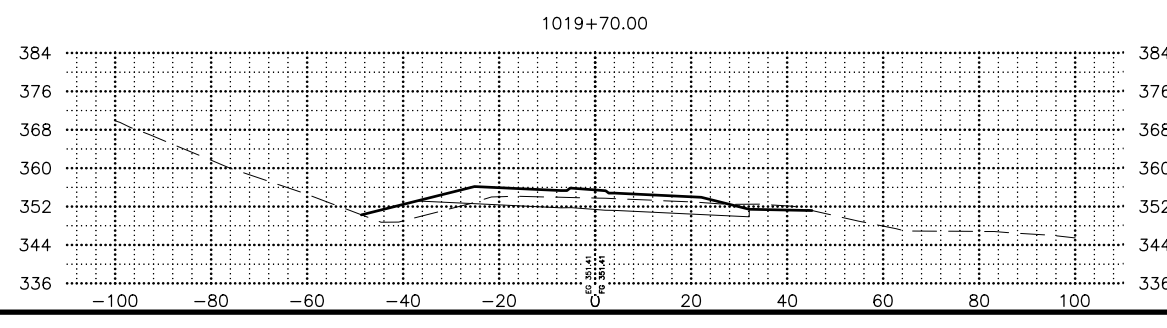
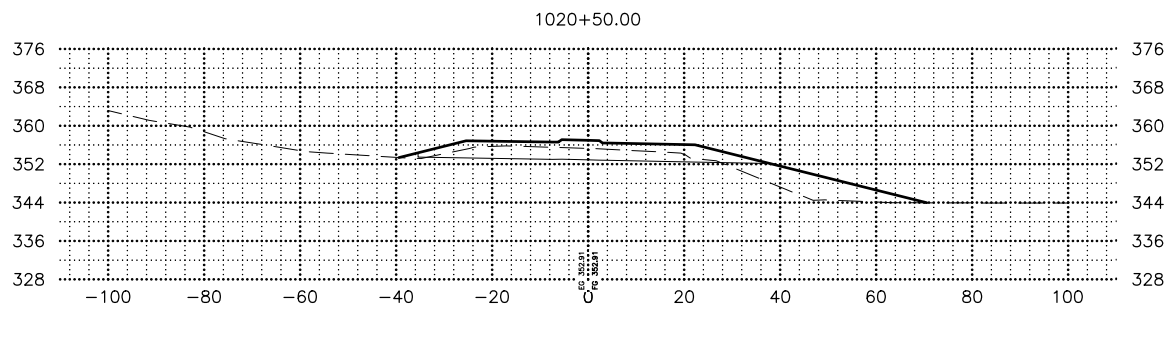
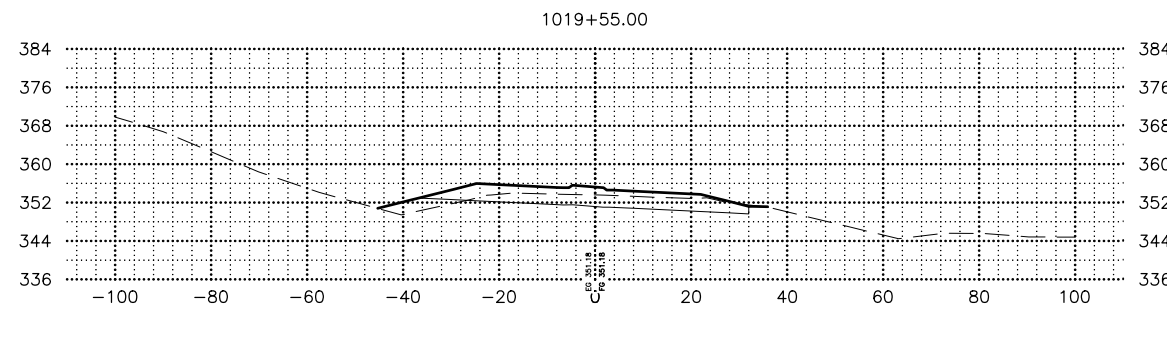
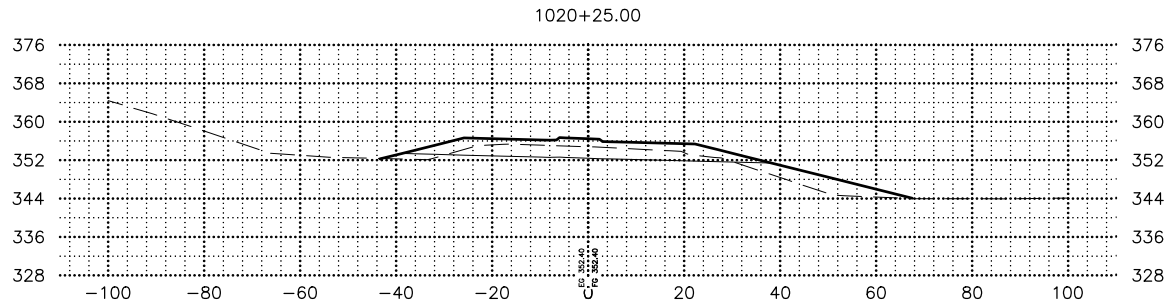
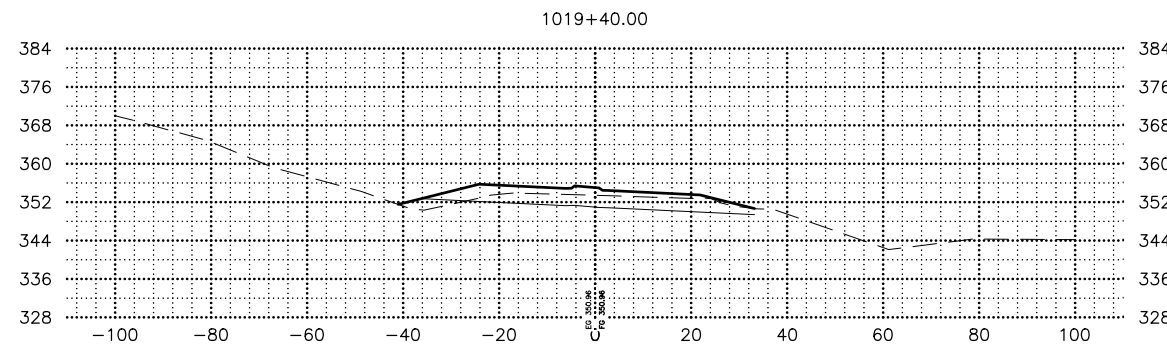
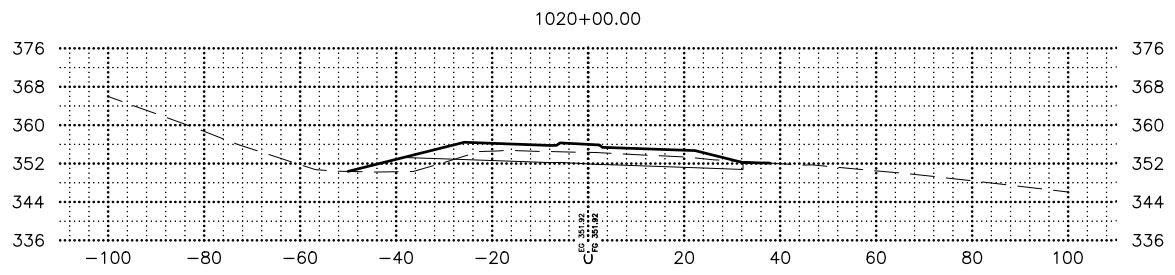
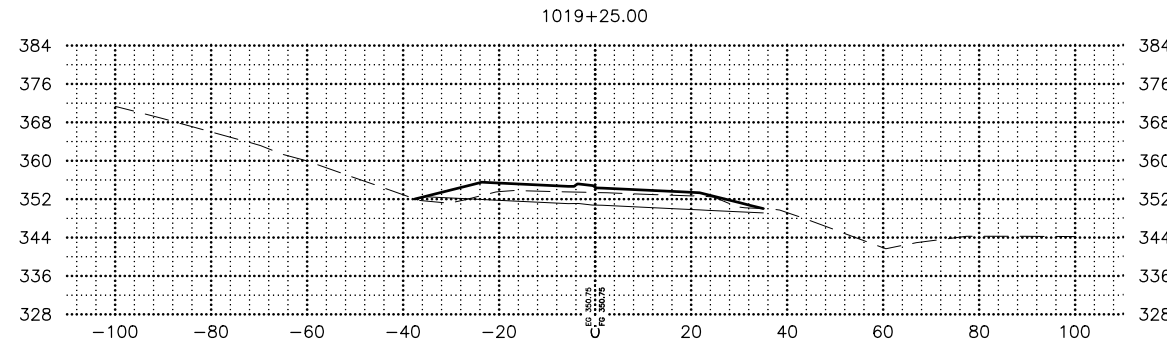
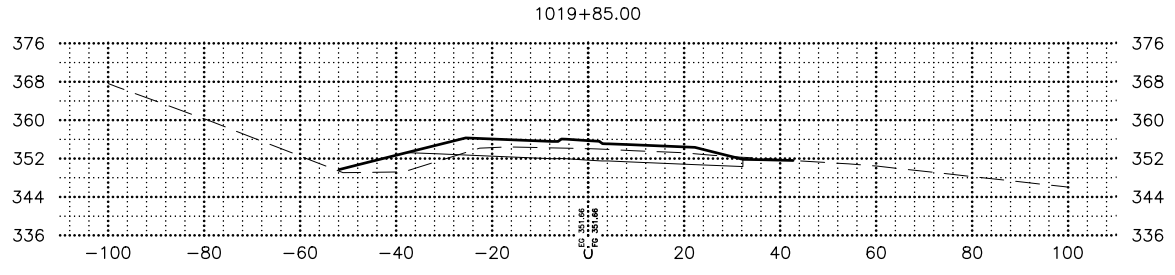
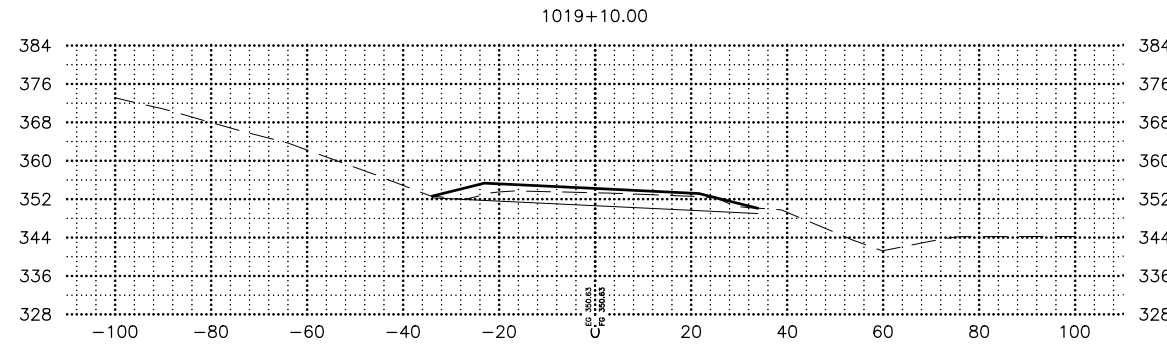


STATE OF ALASKA DOT&PF  
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STATE OF ALASKA  
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 HSIP: BOGARD RD AT  
 ENGSTROM RD & GREEN  
 FOREST DR INT IMP  
**BOGARD ROAD  
 CROSS SECTIONS**

DRAWING LOCATION: W:\PROJECTS\HSIP\BOGARD\_ENGSTROM\_RA - CFHWY00453\_SECTION\CIV3D\CIV3D\X-SECTION\00453\_X-SECTIONS.DWG  
 DATE: 3/15/2023 12:42 PM  
 TIME: 12:42 PM  
 SCALE: 1" = 20'  
 DESIGNED BY: ZDK  
 CHECKED BY: KRV  
 DRAFTED BY: PGH

SHEET NO.	TOTAL SHEETS
X08	X23
STATE	YEAR
ALASKA	2024
PROJECT DESIGNATION	
0001630/ CFHWY00453	
NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	



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 AND PUBLIC FACILITIES  
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**BOGARD ROAD  
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DESIGNED BY: ZDK  
 CHECKED BY: KRV  
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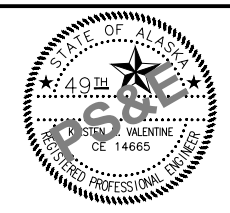
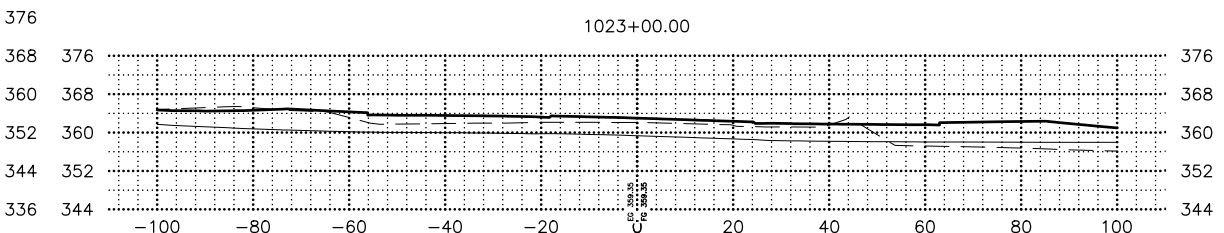
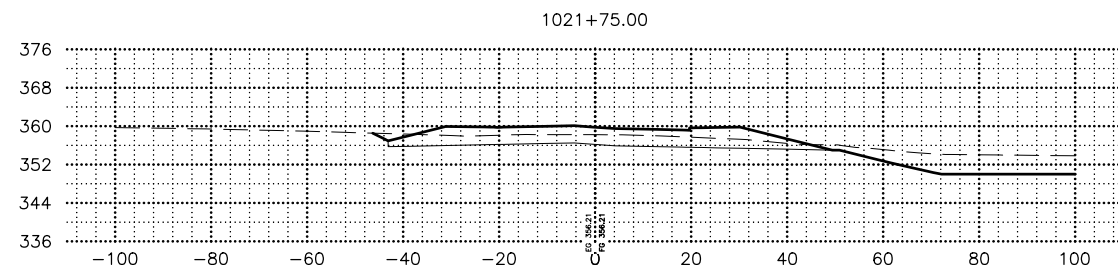
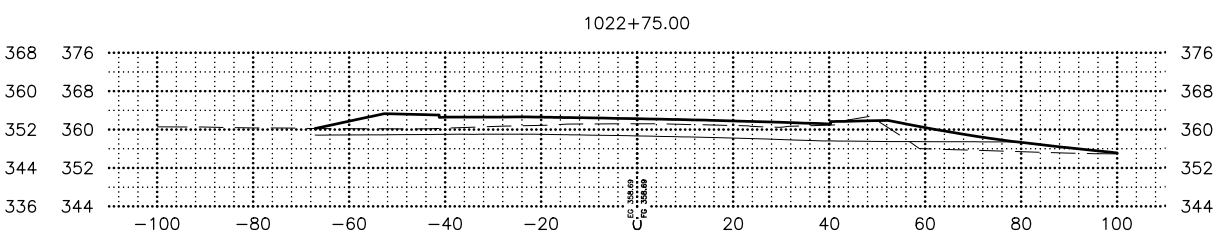
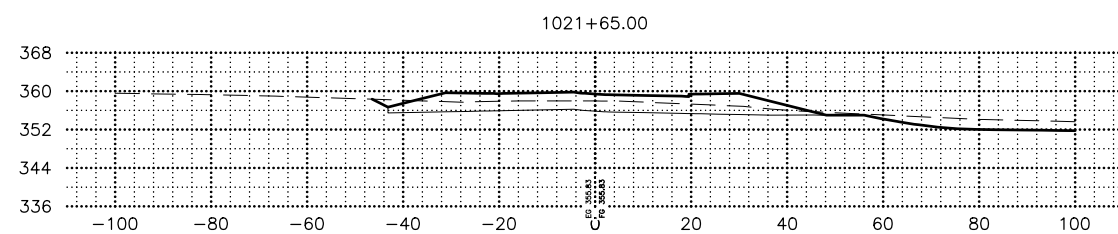
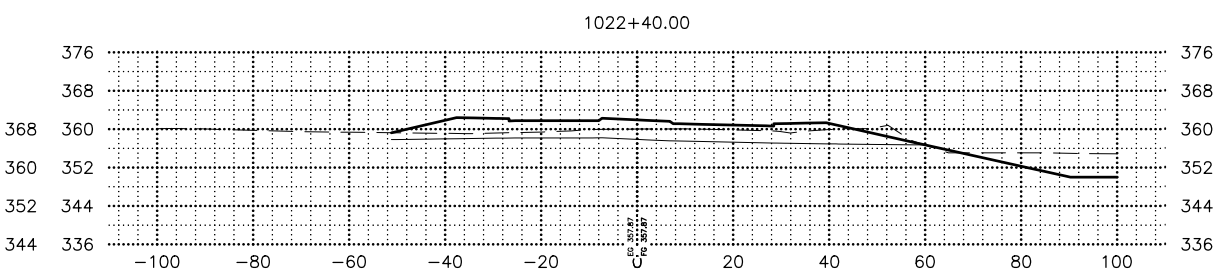
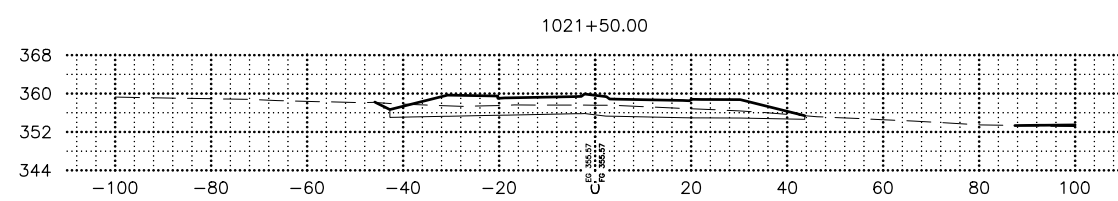
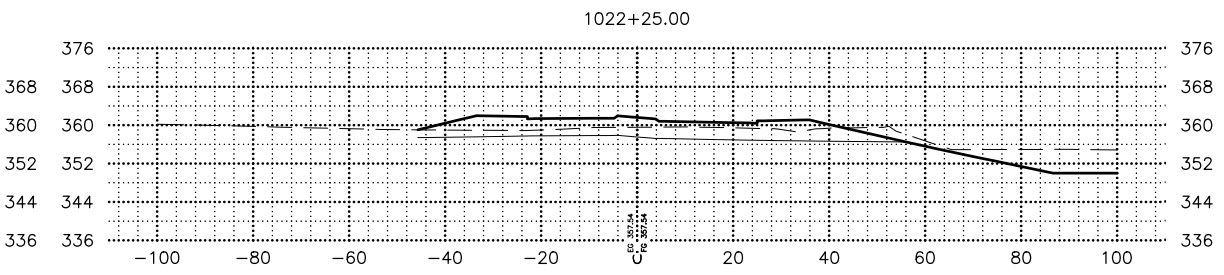
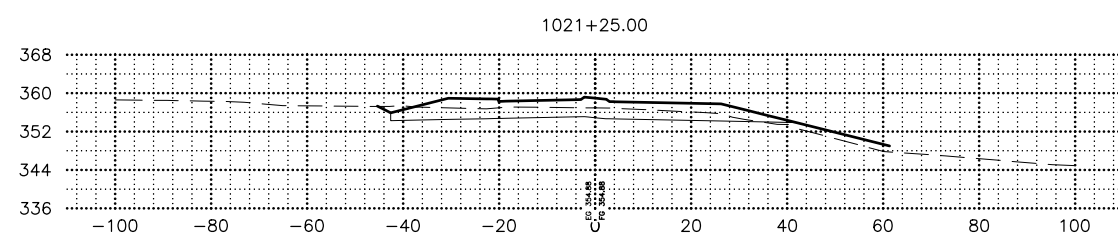
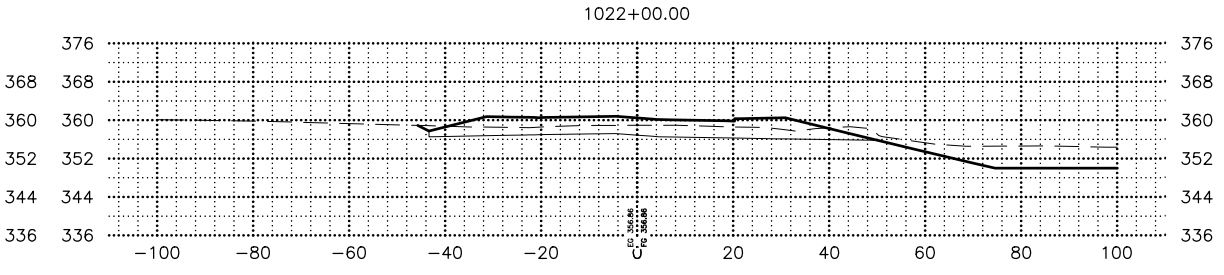
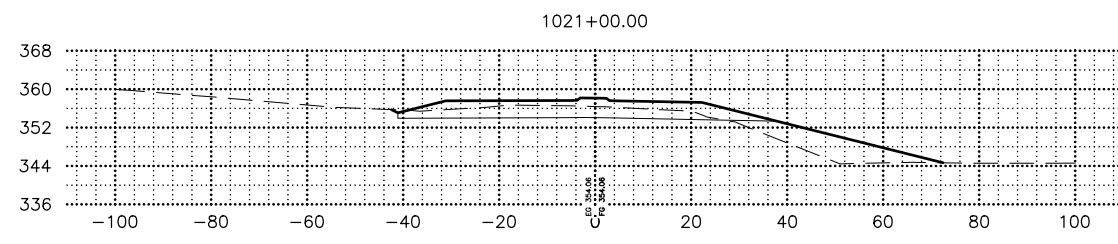
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SHEET NO.	TOTAL SHEETS
X09	X23
STATE	YEAR
ALASKA	2024

PROJECT DESIGNATION  
**0001630/  
 CFHWY00453**

NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	



STATE OF ALASKA DOT&PF  
 4111 AVIATION AVENUE  
 ANCHORAGE, AK 99502  
 (907) 269-0590

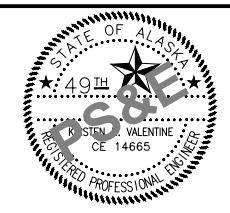
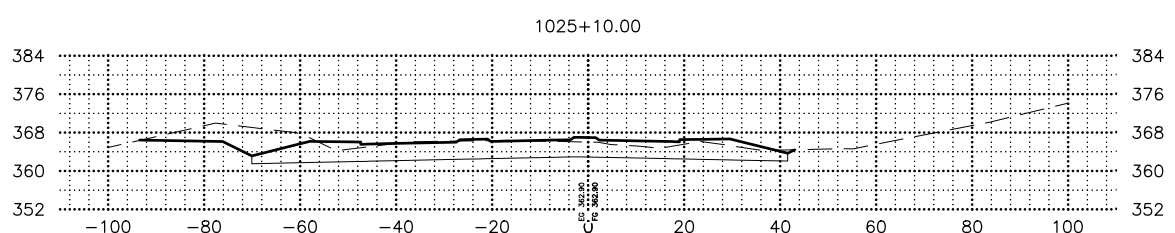
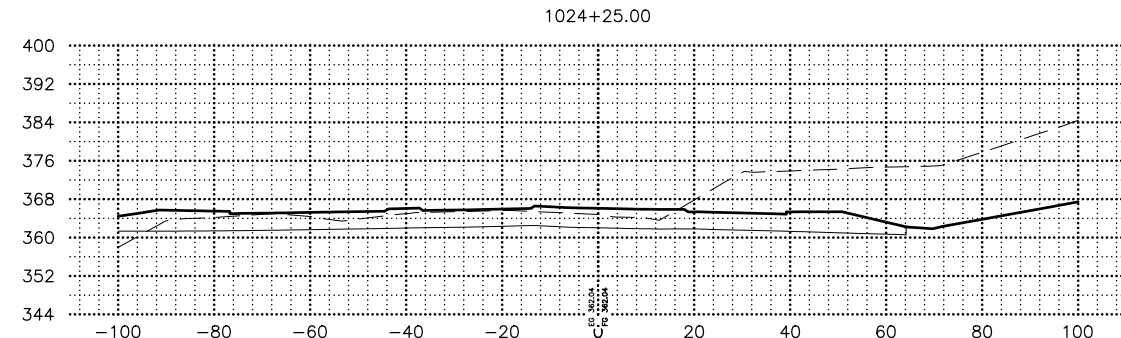
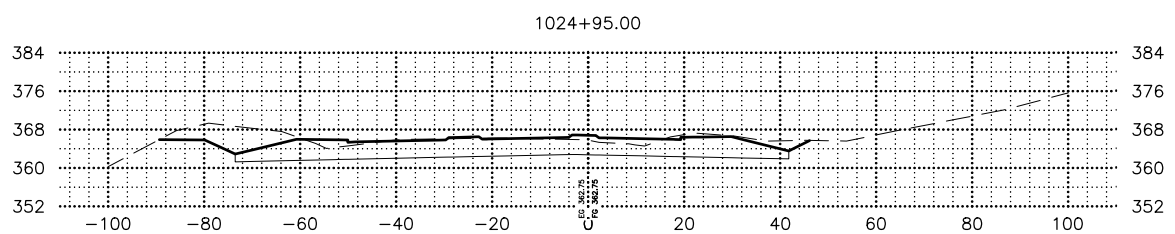
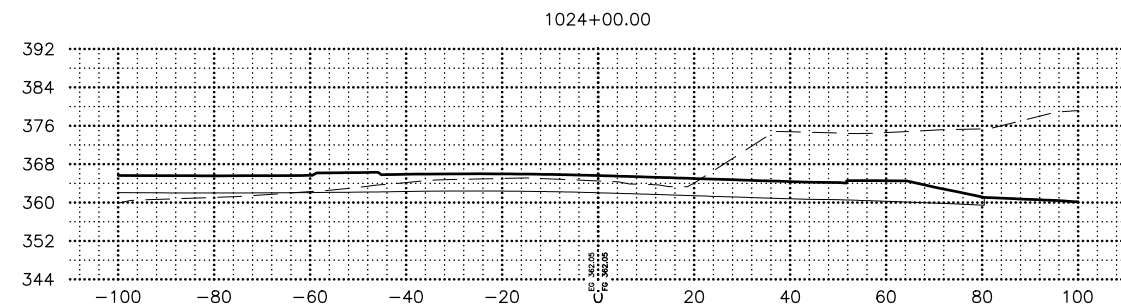
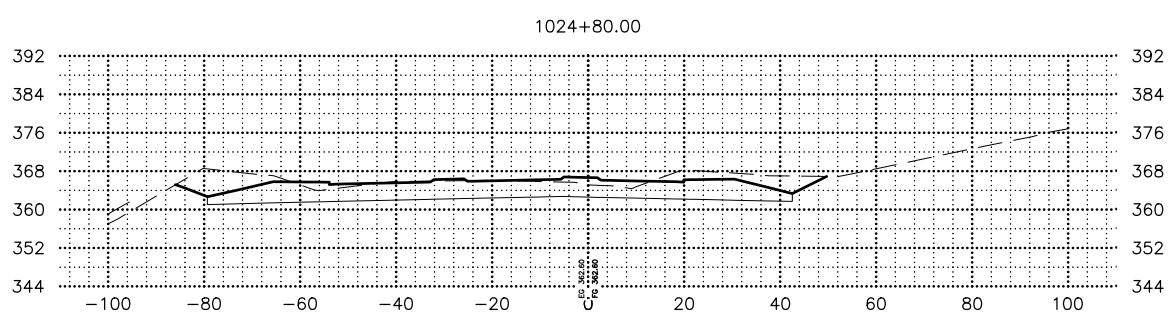
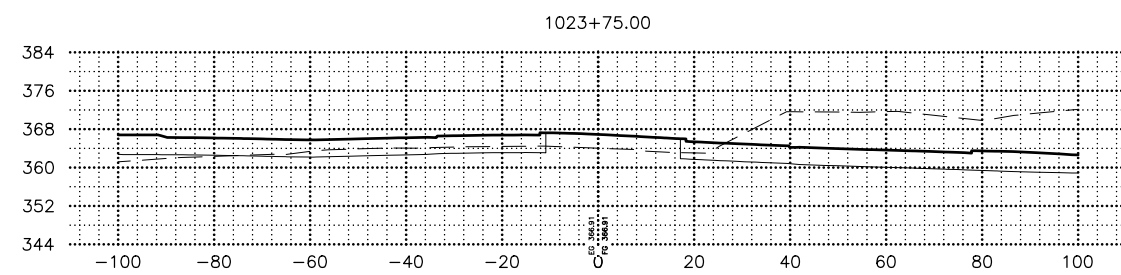
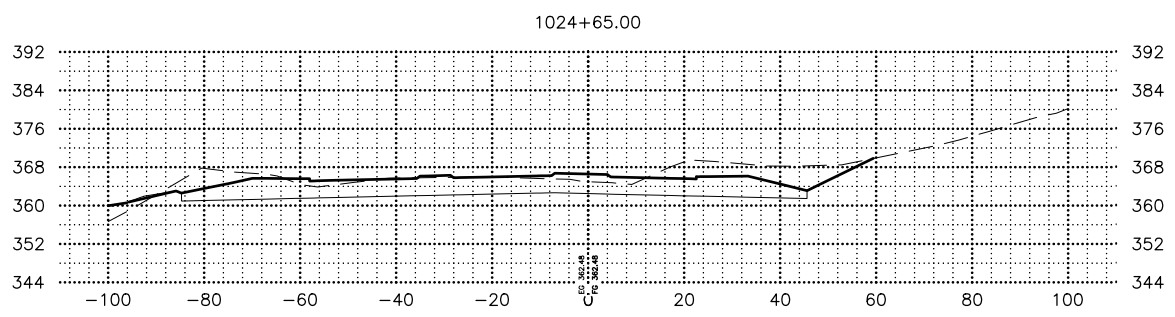
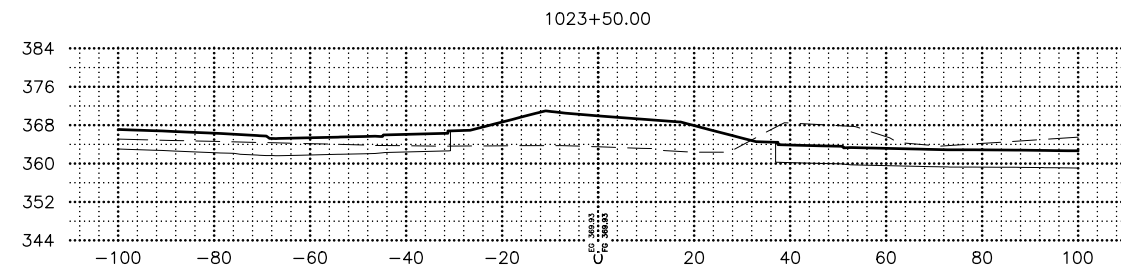
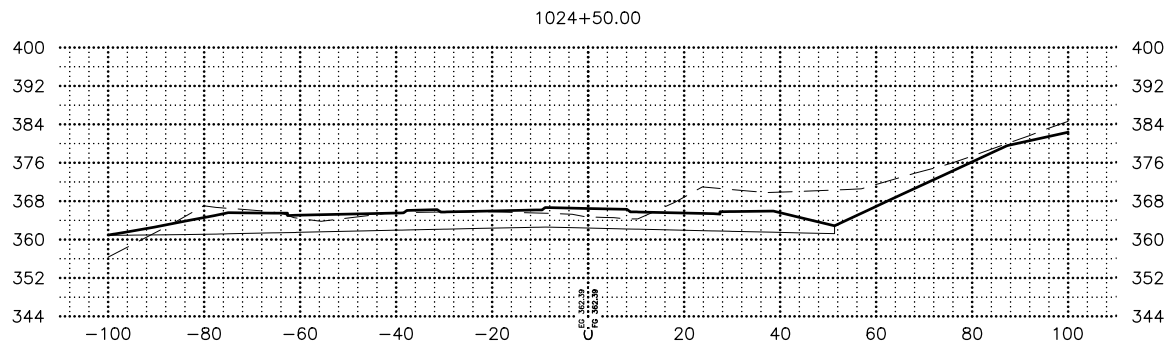
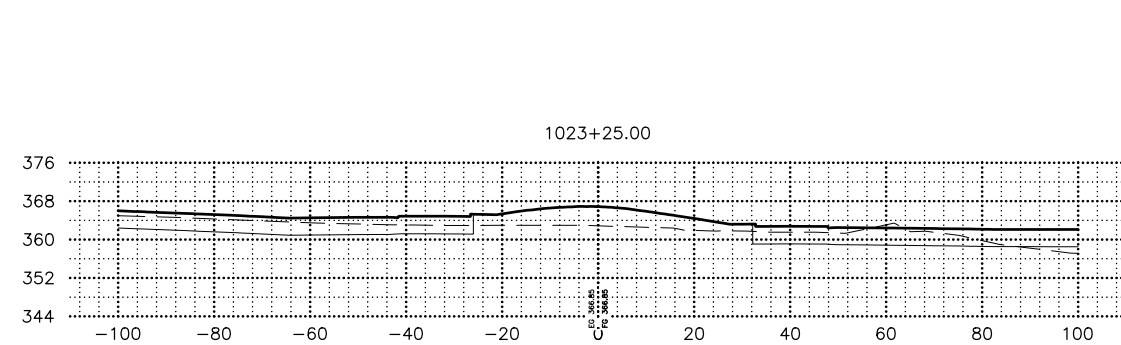
STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
**HSIP: BOGARD RD AT  
 ENGSTROM RD & GREEN  
 FOREST DR INT IMP**  
**BOGARD ROAD  
 CROSS SECTIONS**

DESIGNED BY: ZDK  
 CHECKED BY: KRV  
 DRAFTED BY: PGH

DATE: 3/15/2023 12:42 PM  
 TIME: 12:42 PM  
 SCALE: 1" = 20'

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SHEET NO.	TOTAL SHEETS
X10	X23
STATE	YEAR
ALASKA	2024
PROJECT DESIGNATION	
0001630/ CFHWY00453	
NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	



STATE OF ALASKA DOT&PF  
 411 AVIATION AVENUE  
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STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
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 HSIP: BOGARD RD AT  
 ENGSTROM RD & GREEN  
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**BOGARD ROAD  
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DESIGNED BY: ZDK  
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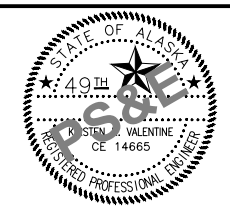
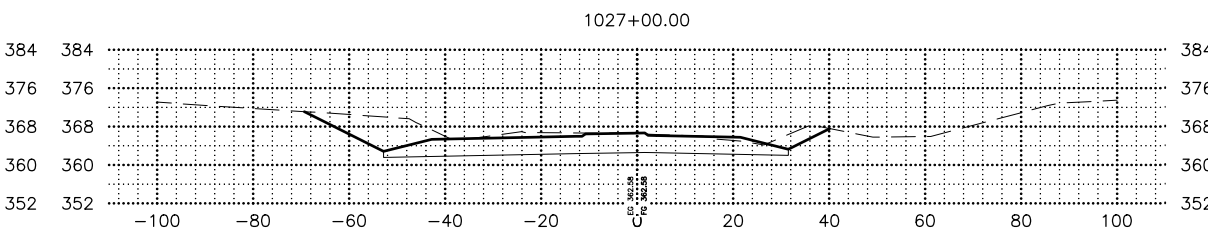
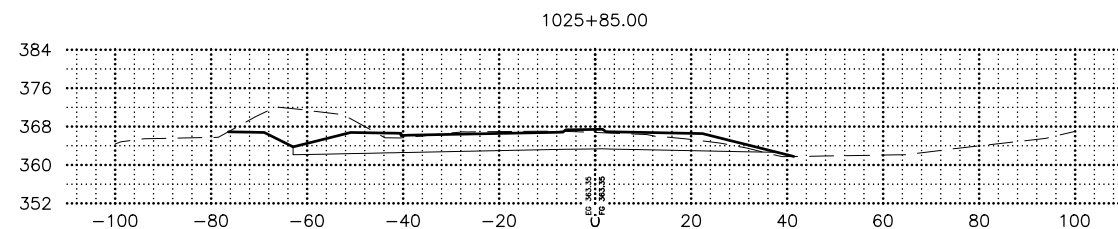
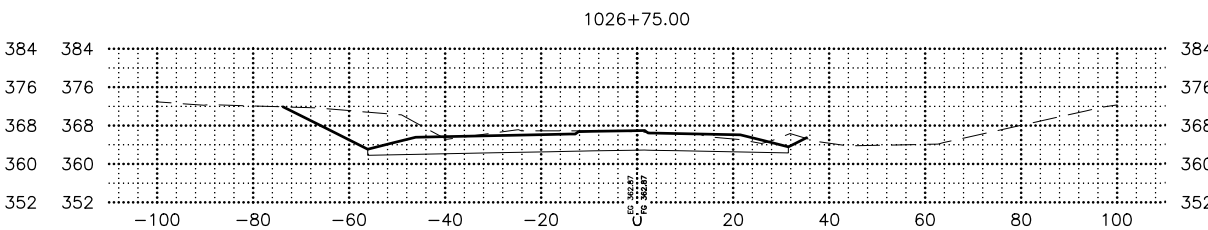
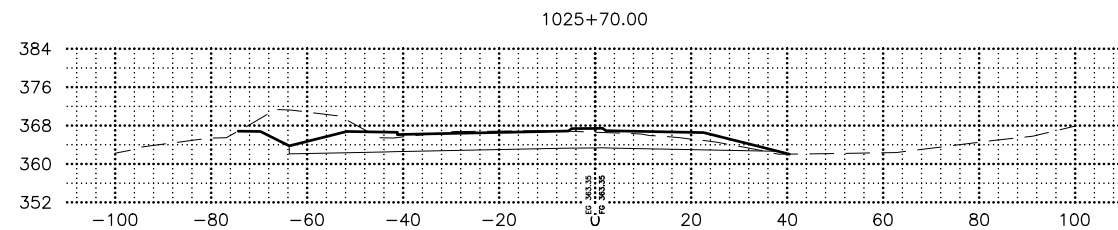
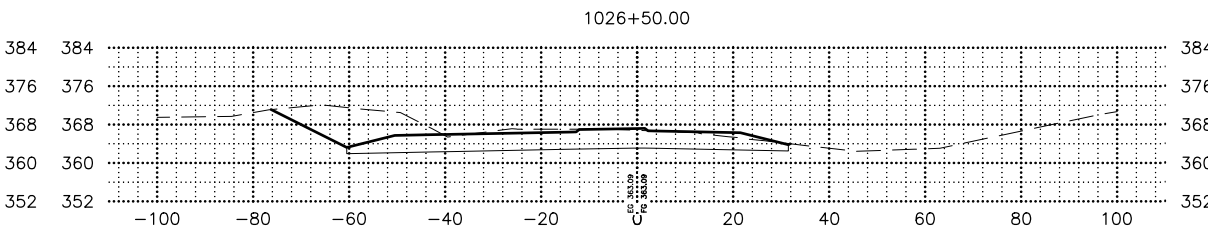
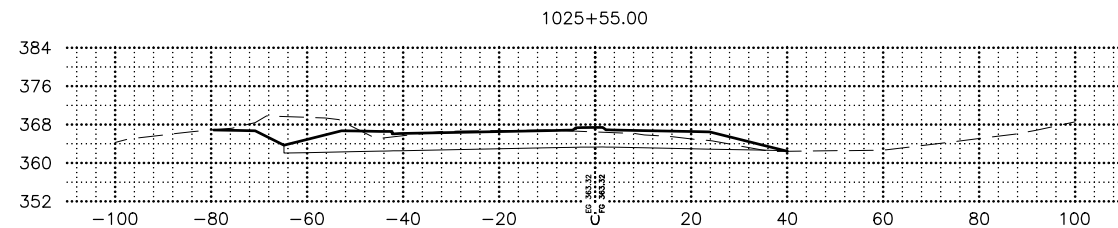
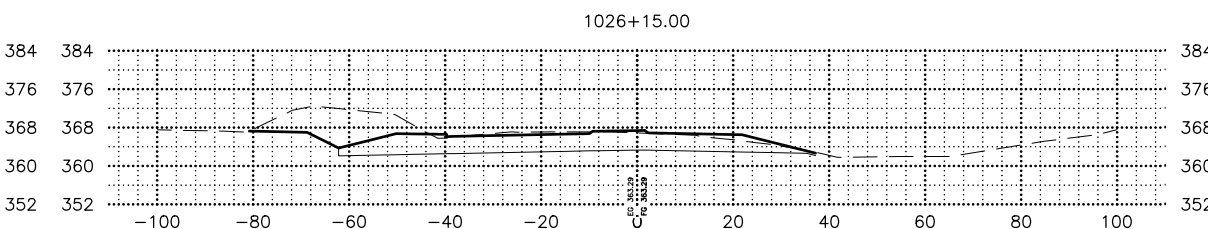
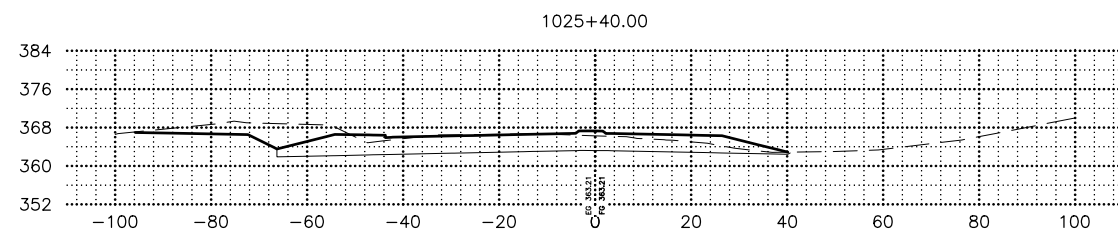
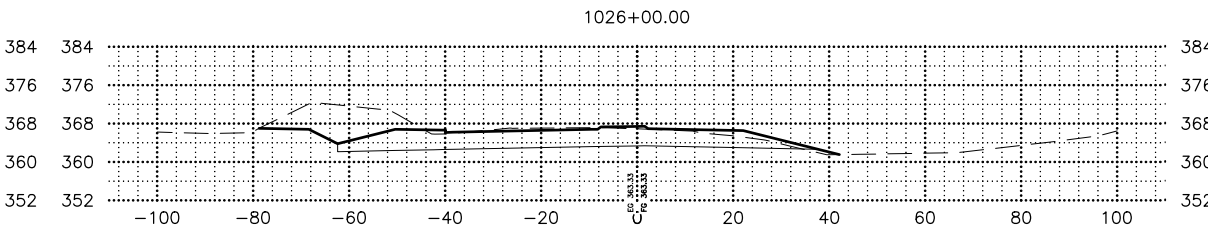
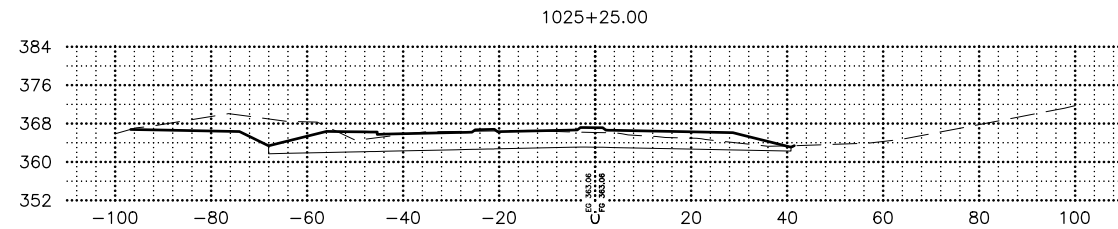
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SHEET NO.	TOTAL SHEETS
X11	X23
STATE	YEAR
ALASKA	2024

PROJECT DESIGNATION  
**0001630/  
 CFHWY00453**

NO.	REVISION



STATE OF ALASKA DOT&PF  
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 ANCHORAGE, AK 99502  
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STATE OF ALASKA  
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**HSIP: BOGARD RD AT  
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**BOGARD ROAD  
 CROSS SECTIONS**



DESIGNED BY: ZDK  
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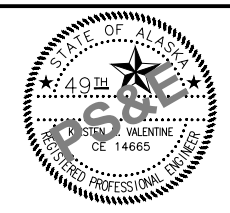
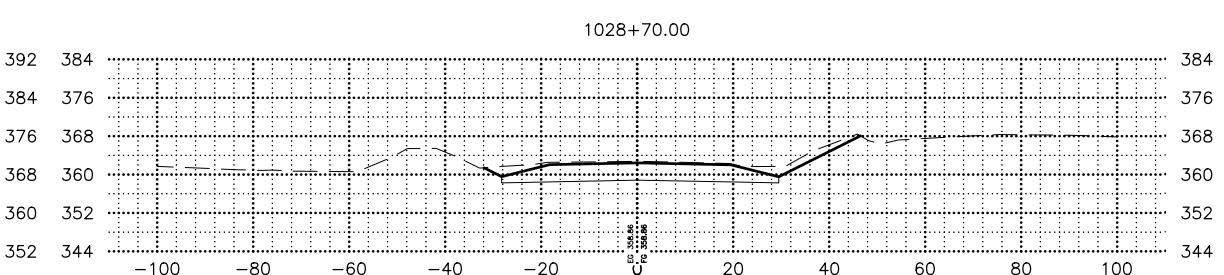
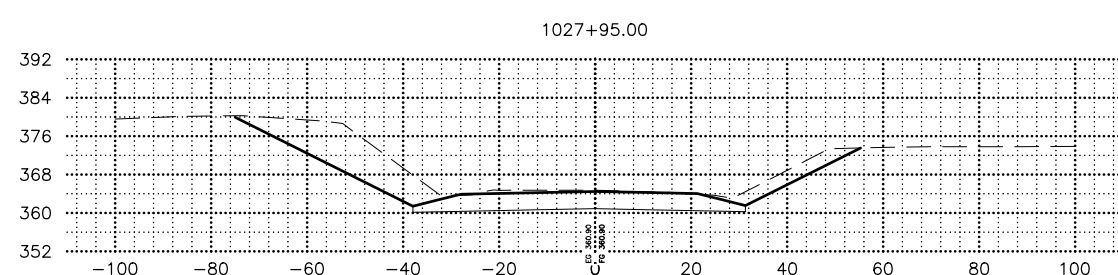
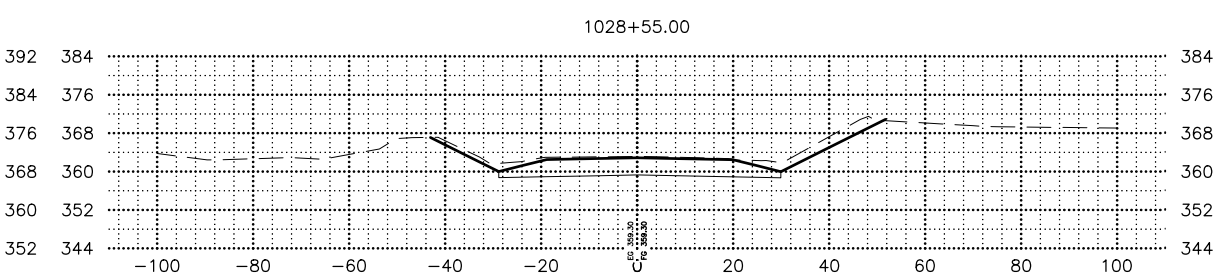
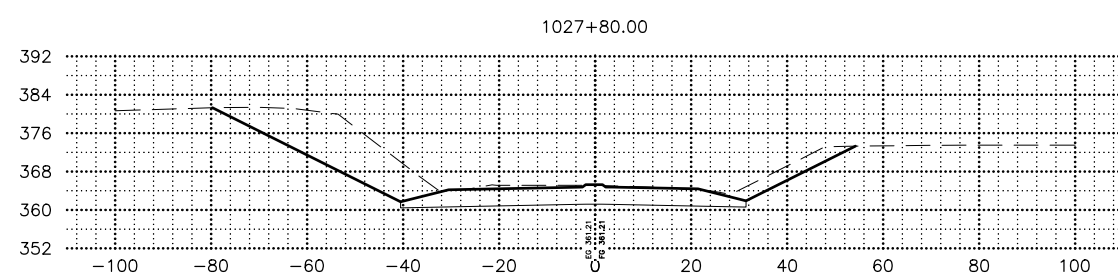
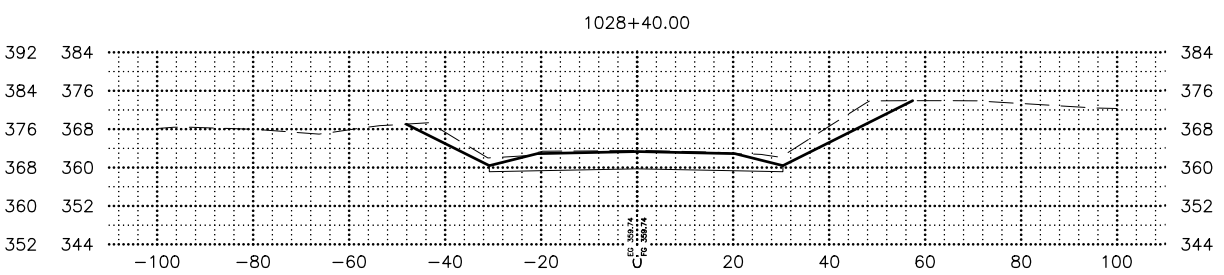
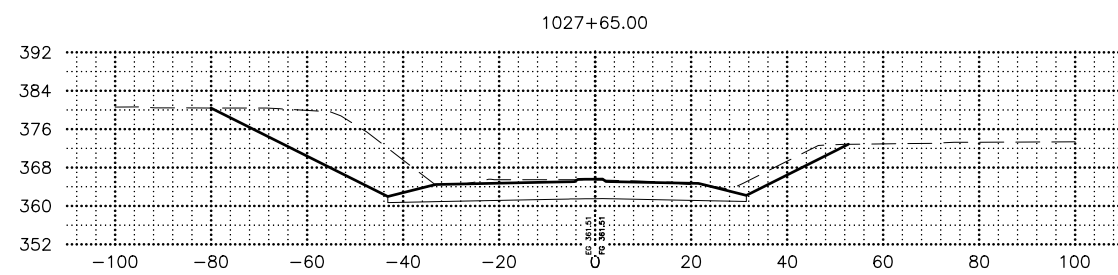
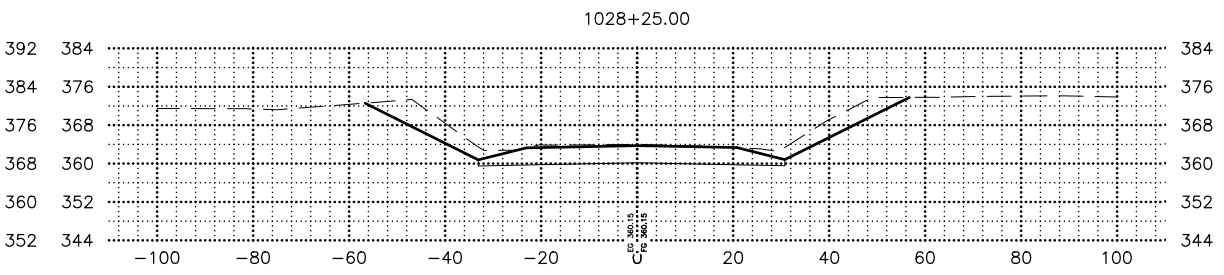
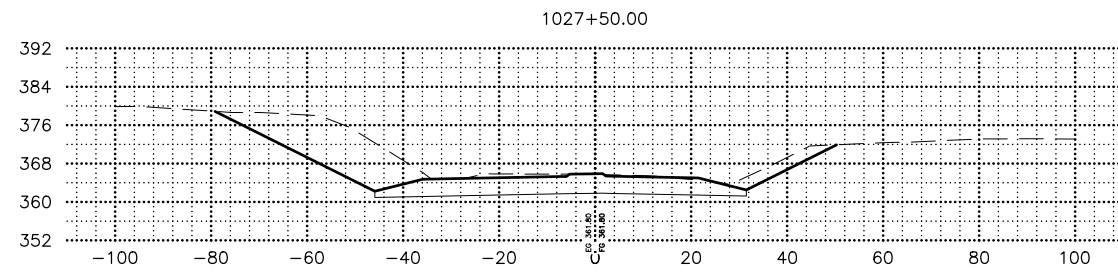
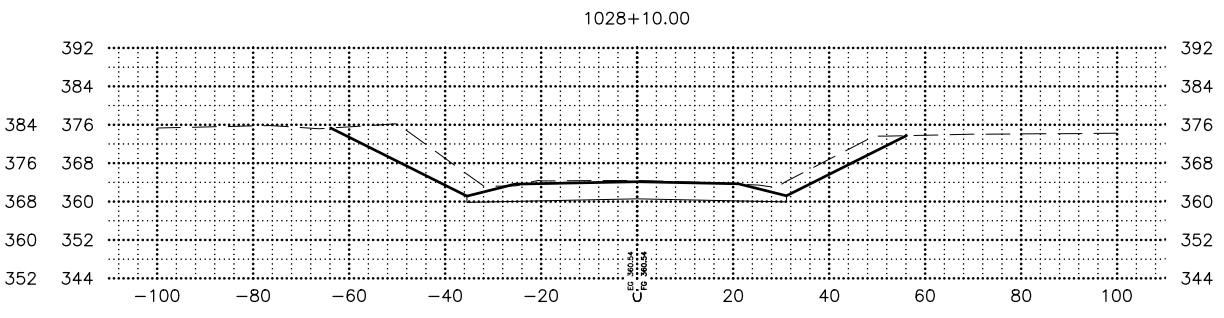
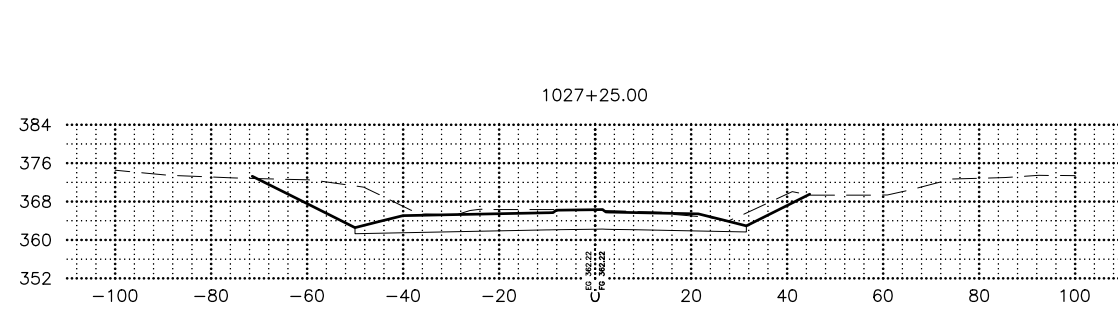
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SHEET NO.	TOTAL SHEETS
X12	X23
STATE	YEAR
ALASKA	2024

PROJECT DESIGNATION  
**0001630/  
 CFHWY00453**

NO.	REVISION



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 HSIP: BOGARD RD AT  
 ENGSTROM RD & GREEN  
 FOREST DR INT IMP  
**BOGARD ROAD  
 CROSS SECTIONS**

DESIGNED BY: ZDK  
 CHECKED BY: KRV  
 DRAFTED BY: PGH

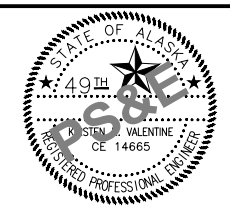
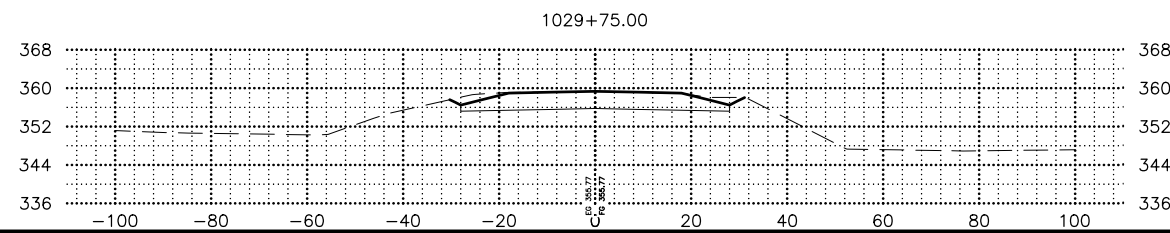
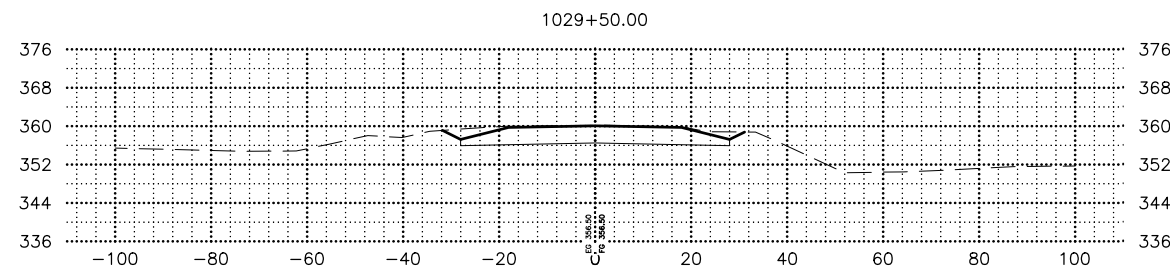
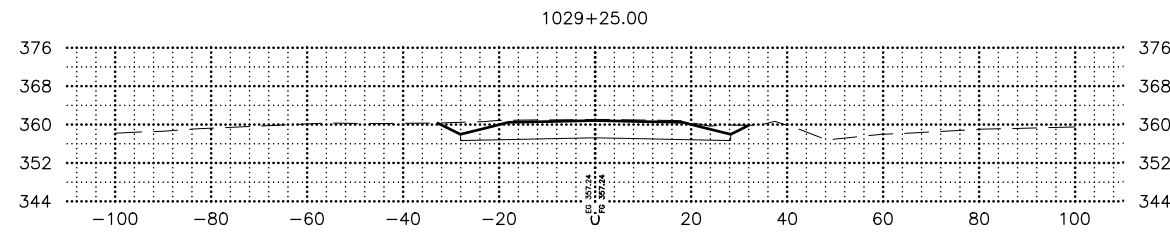
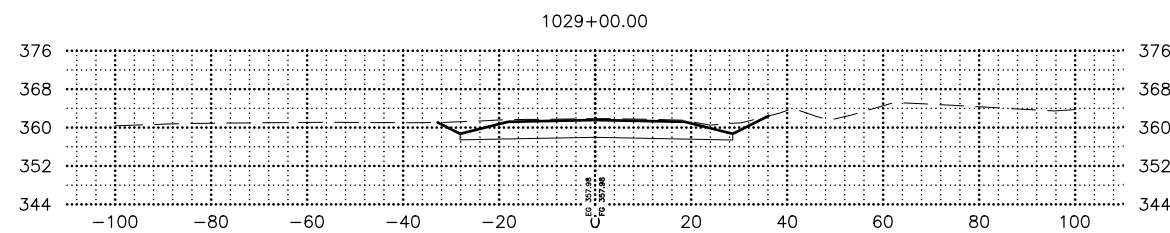
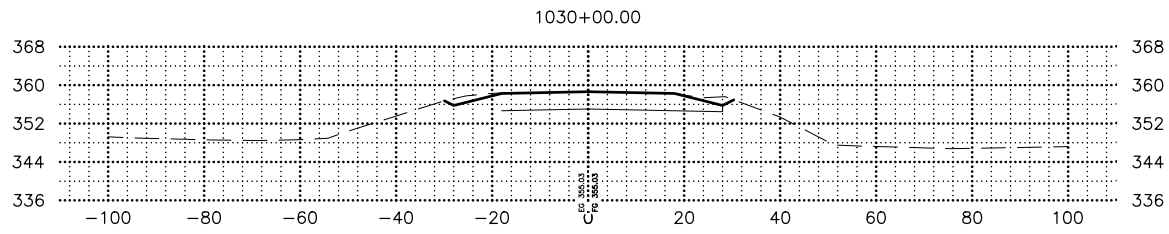
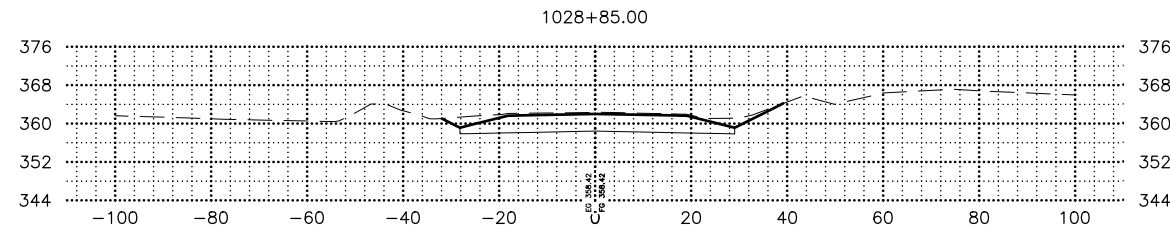
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SHEET NO.	TOTAL SHEETS
X13	X23
STATE	YEAR
ALASKA	2024

PROJECT DESIGNATION  
**0001630/  
 CFHWY00453**

NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	



STATE OF ALASKA DOT&PF  
 411 AVIATION AVENUE  
 ANCHORAGE, AK 99502  
 (907) 269-0590

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 HSIP: BOGARD RD AT  
 ENGSTROM RD & GREEN  
 FOREST DR INT IMP  
**GREEN FOREST DRIVE  
 CROSS SECTIONS**

DESIGNED BY: ZDK  
 CHECKED BY: KRV  
 DRAFTED BY: PGH

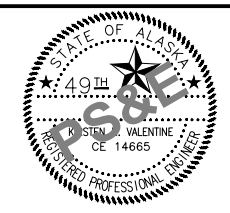
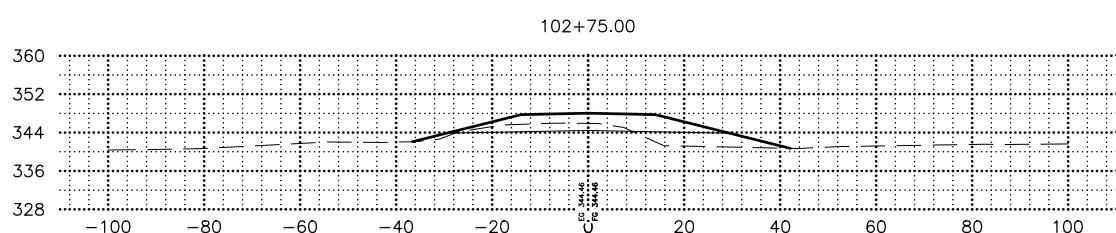
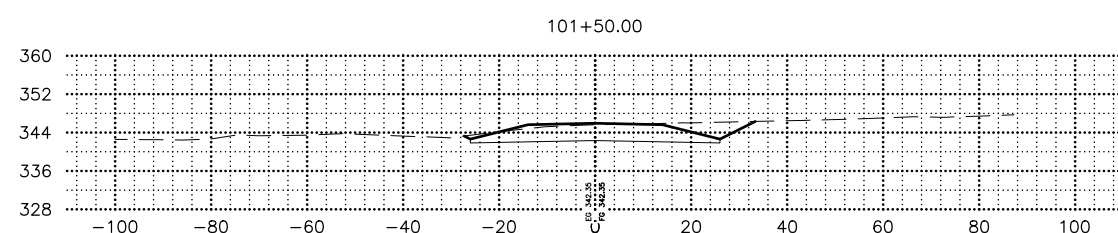
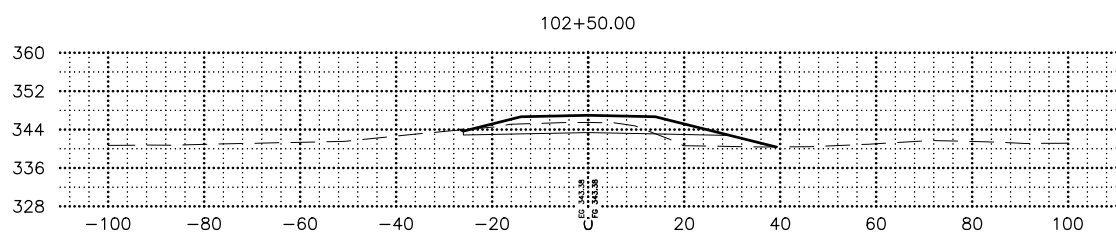
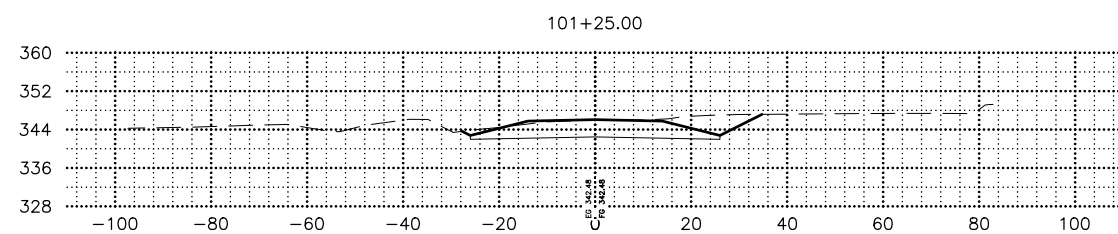
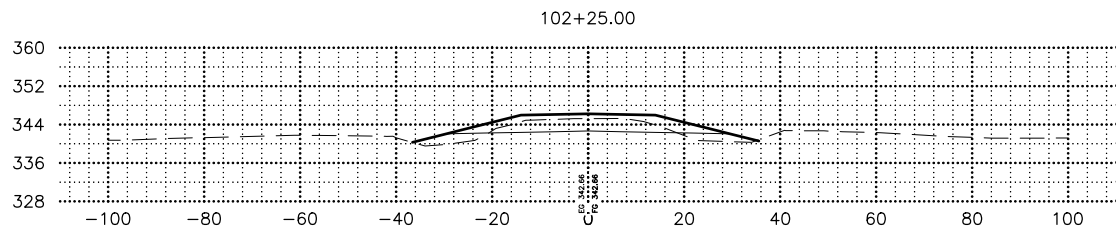
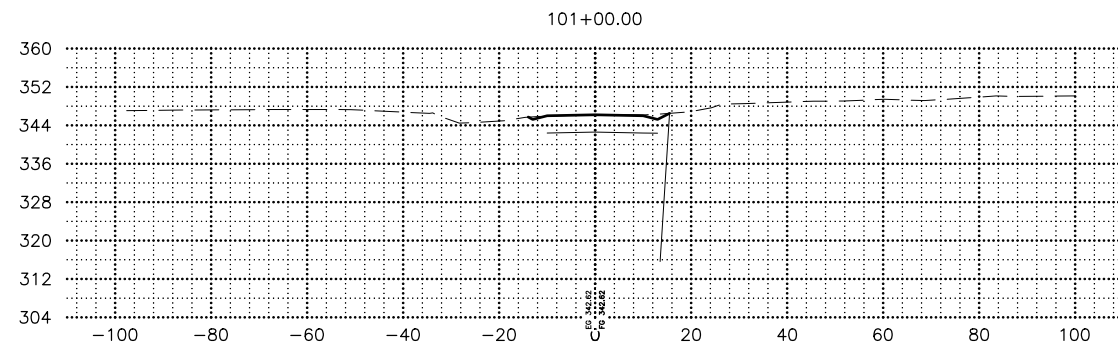
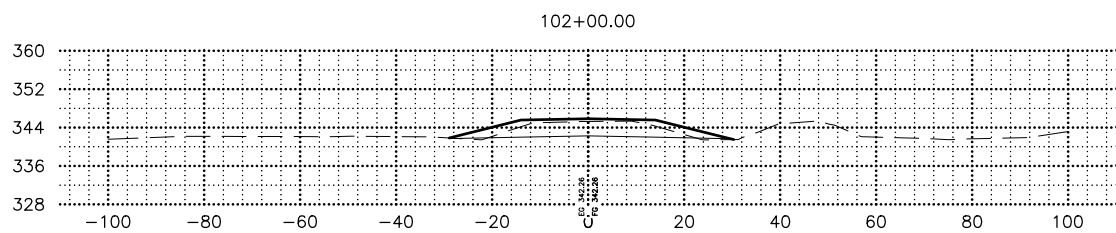
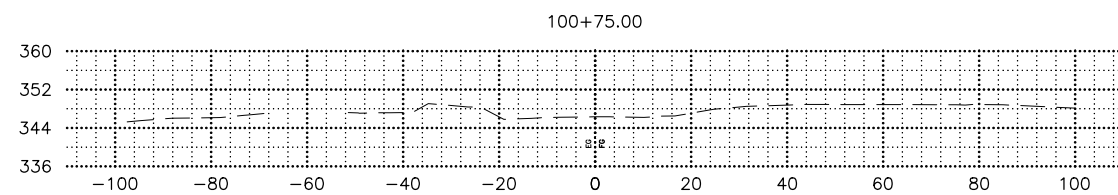
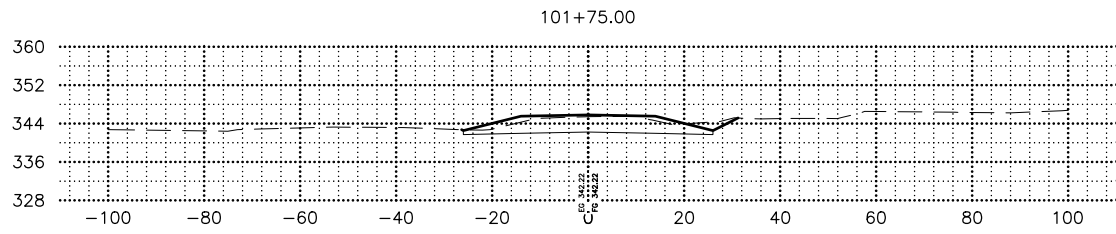
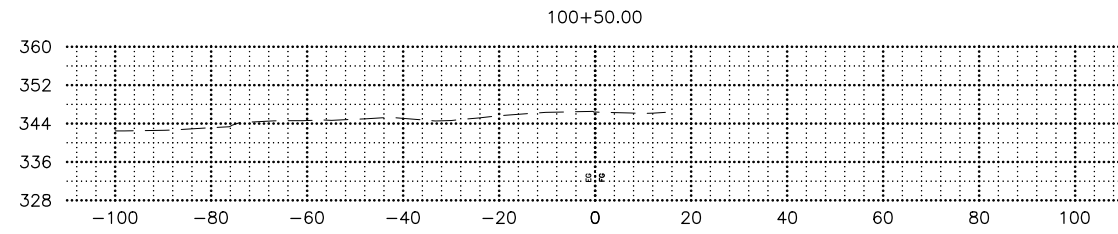
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SHEET NO.	TOTAL SHEETS
X14	X23
STATE	YEAR
ALASKA	2024

PROJECT DESIGNATION  
**0001630/  
 CFHWY00453**

NO.	REVISION



STATE OF ALASKA DOT&PF  
 4111 AVIATION AVENUE  
 ANCHORAGE, AK 99502  
 (907) 269-0590

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
**HSIP: BOGARD RD AT  
 ENGSTROM RD & GREEN  
 FOREST DR INT IMP**  
**GREEN FOREST DRIVE  
 CROSS SECTIONS**

DESIGNED BY: ZDK  
 CHECKED BY: KRV  
 DRAFTED BY: PGH

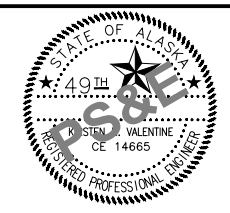
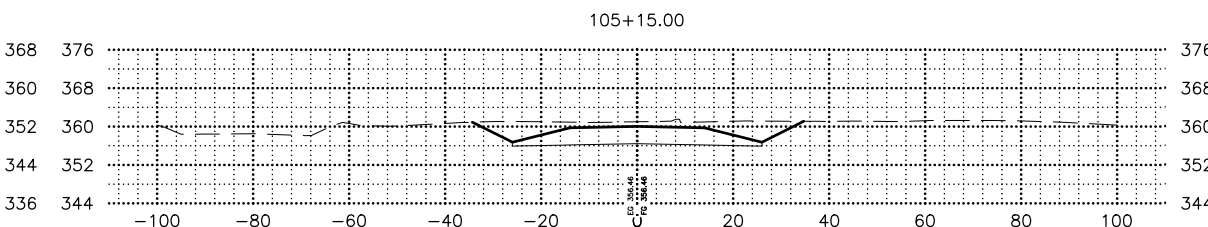
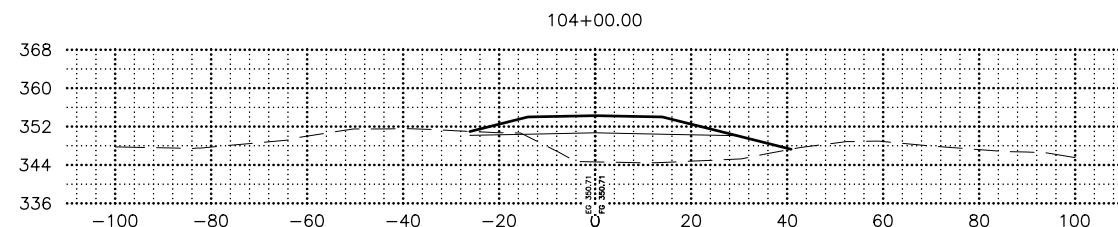
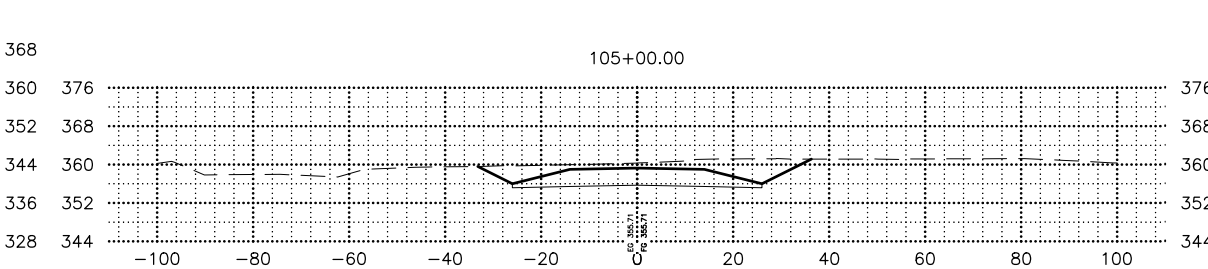
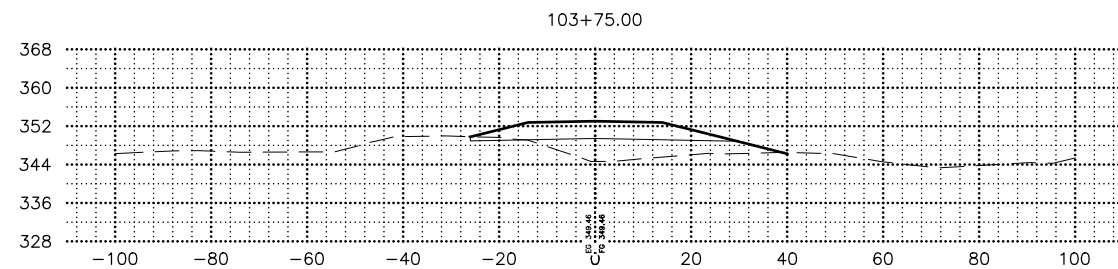
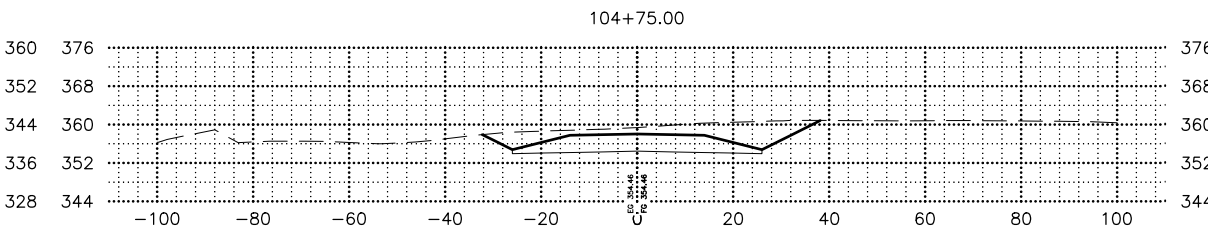
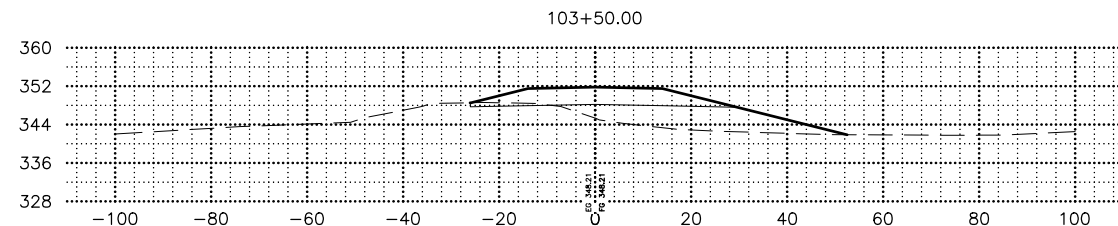
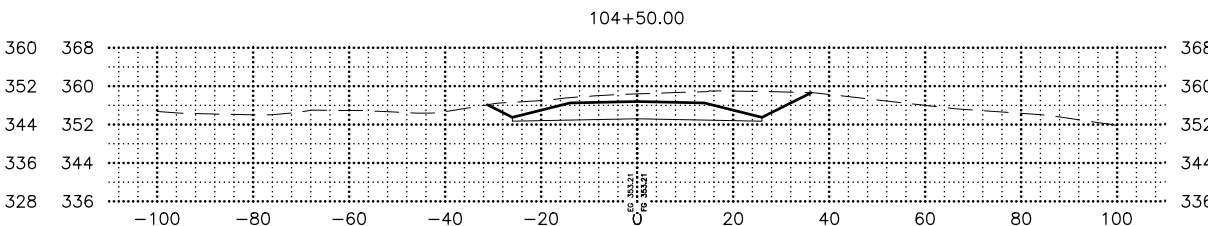
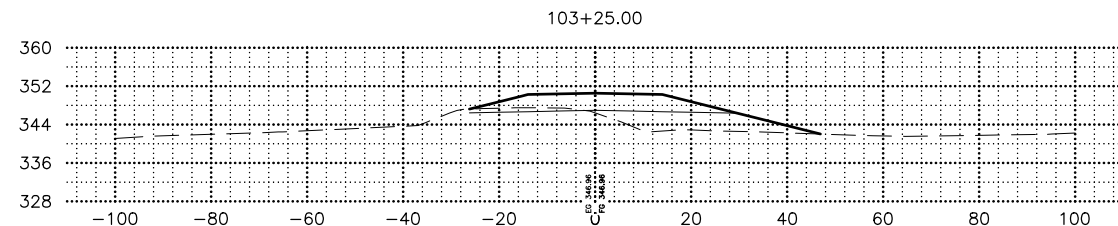
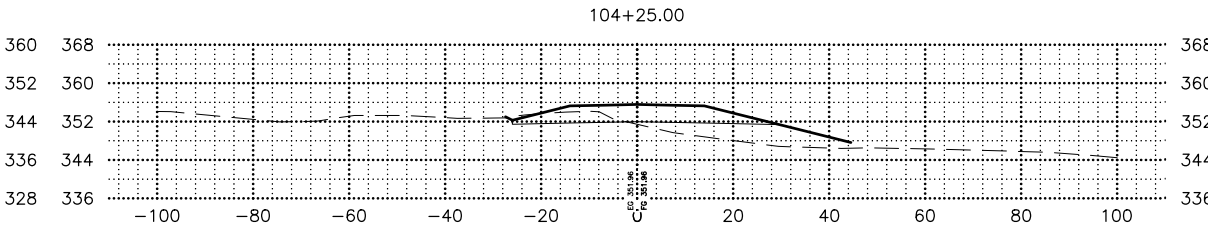
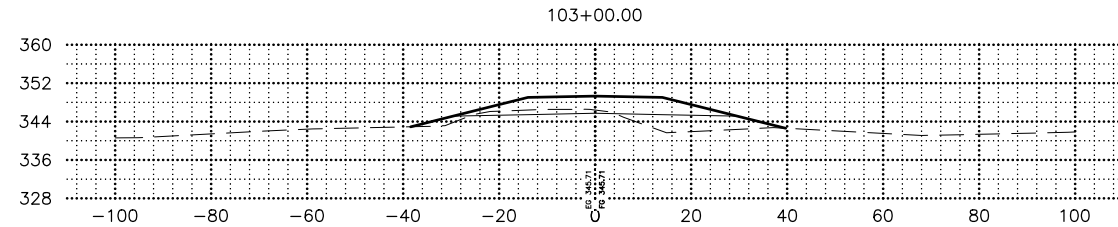
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DRAWING LOCATION: W:\PROJECTS\HSIP\BOGARD\_ENGSTROM\_RA - CFHWY00453\_SECTION\CIV3D\X-SECTION\00453\_X-SECTIONS.DWG

SHEET NO.	TOTAL SHEETS
X15	X23
STATE	YEAR
ALASKA	2024

PROJECT DESIGNATION  
**0001630/  
 CFHWY00453**

NO.	REVISION



STATE OF ALASKA DOT&PF  
 411 AVIATION AVENUE  
 ANCHORAGE, AK 99502  
 (907) 269-0590

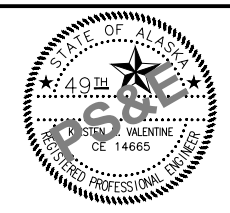
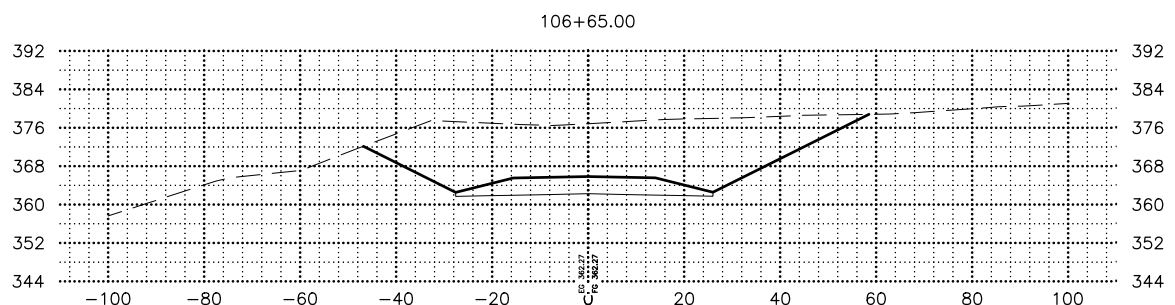
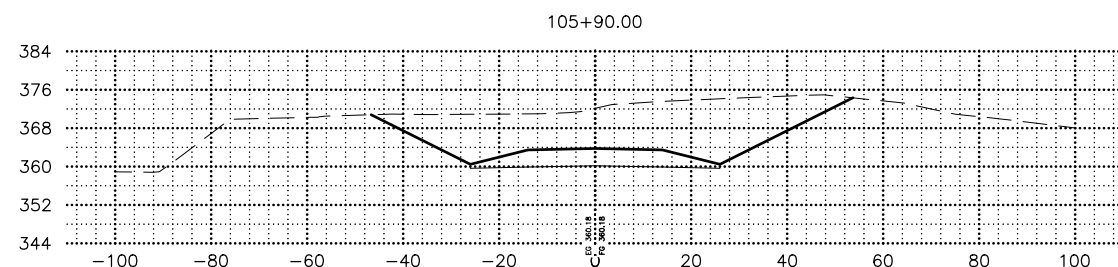
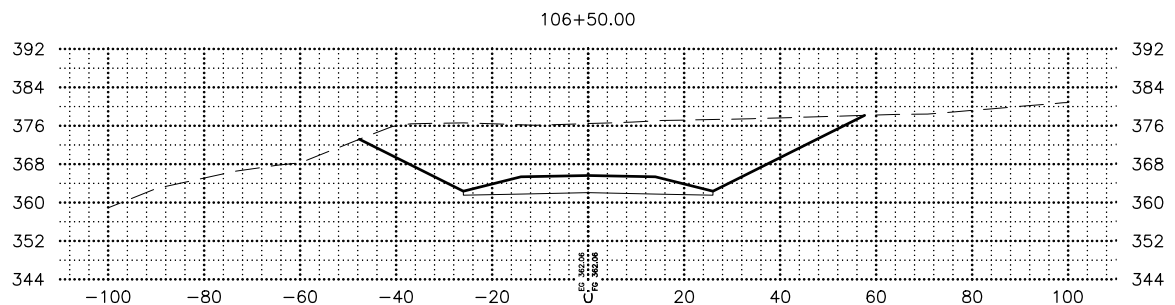
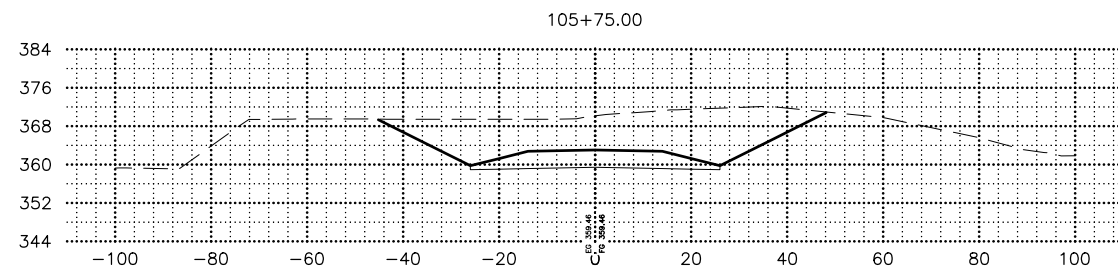
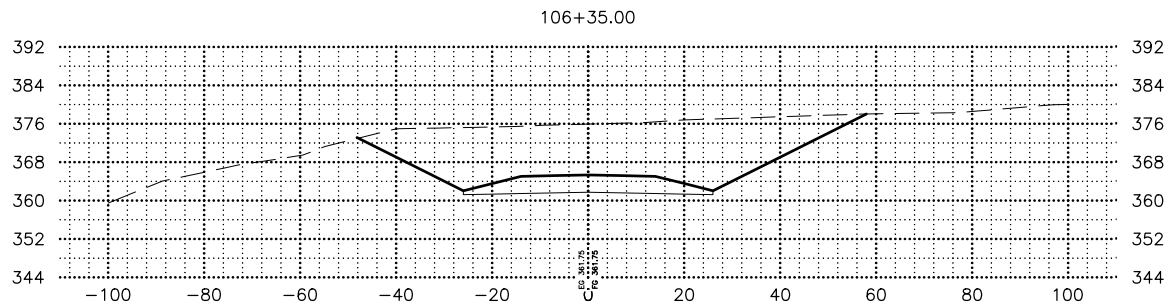
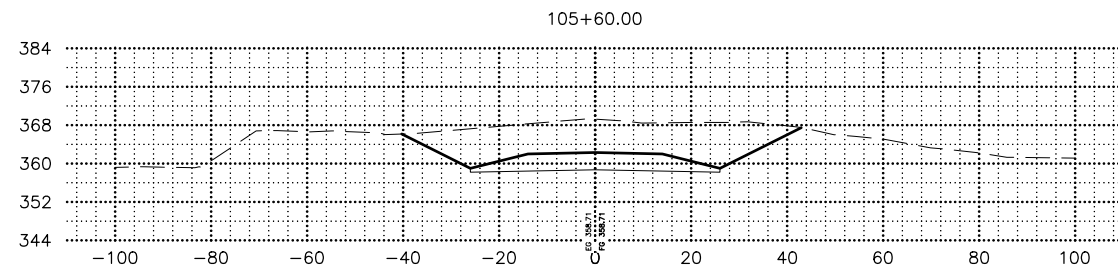
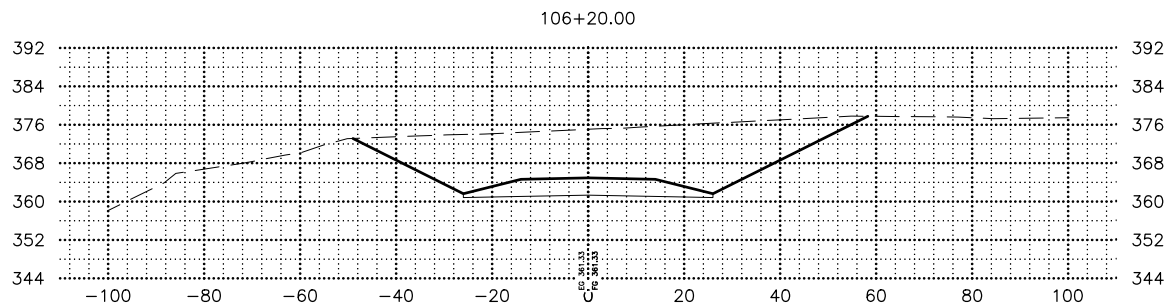
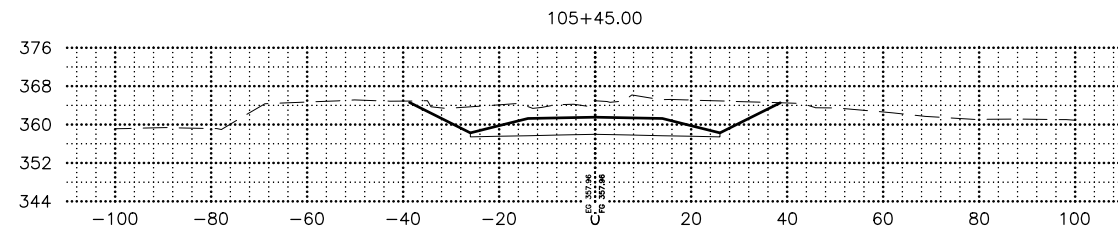
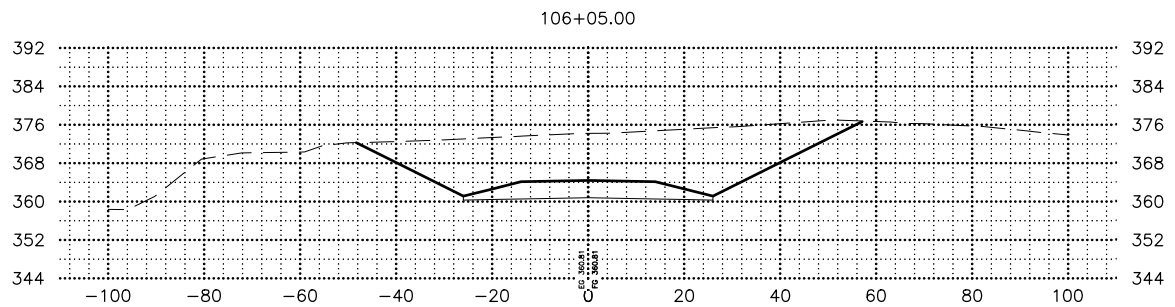
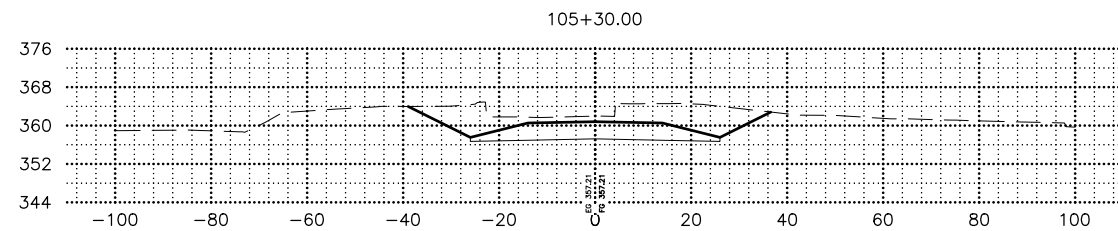
STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 HSIP: BOGARD RD AT  
 ENGSTROM RD & GREEN  
 FOREST DR INT IMP  
**GREEN FOREST DRIVE  
 CROSS SECTIONS**

DESIGNED BY: ZDK  
 CHECKED BY: KRV  
 DRAFTED BY: PGH

DATE: 3/15/2023 12:42 PM  
 TIME: 12:42 PM  
 SCALE: 1" = 20'

DRAWING LOCATION: W:\PROJECTS\HSIP BOGARD ENGSTROM RA - CFHWY00453\SECTION\CIV3D\X-SECTION\00453-X-SECTIONS.DWG

SHEET NO.	TOTAL SHEETS
X16	X23
STATE	YEAR
ALASKA	2024
PROJECT DESIGNATION	
0001630/ CFHWY00453	
NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	



STATE OF ALASKA DOT&PF  
 411 AVIATION AVENUE  
 ANCHORAGE, AK 99502  
 (907) 269-0590

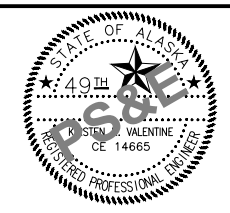
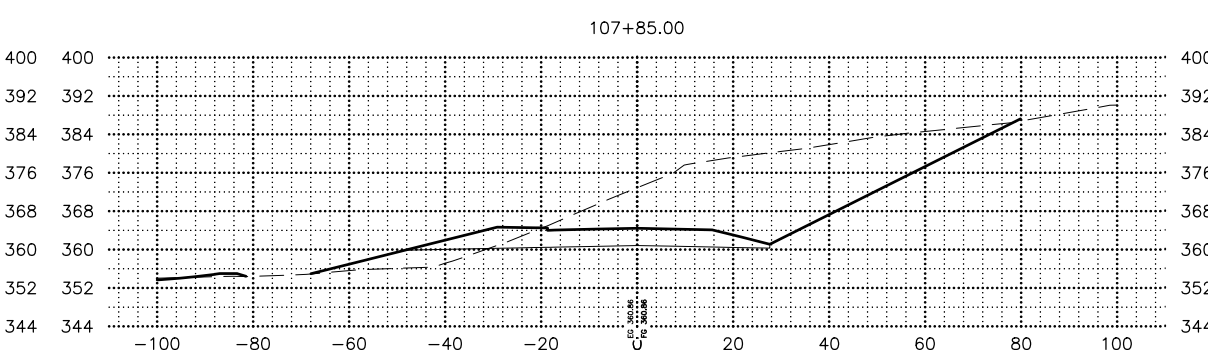
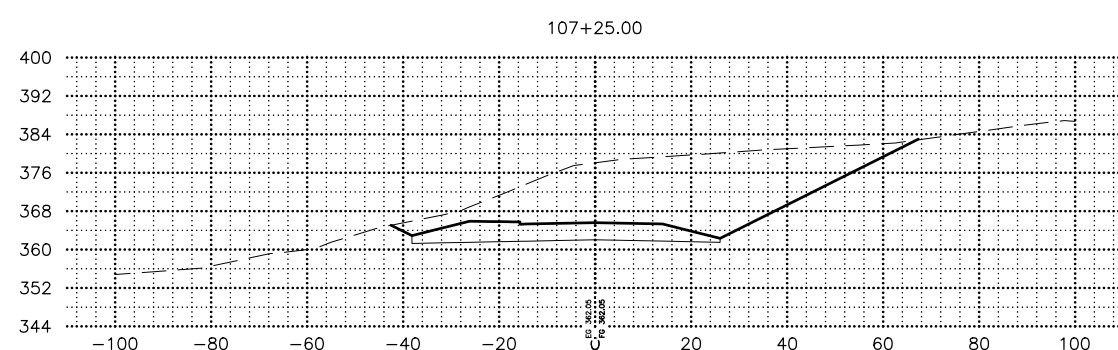
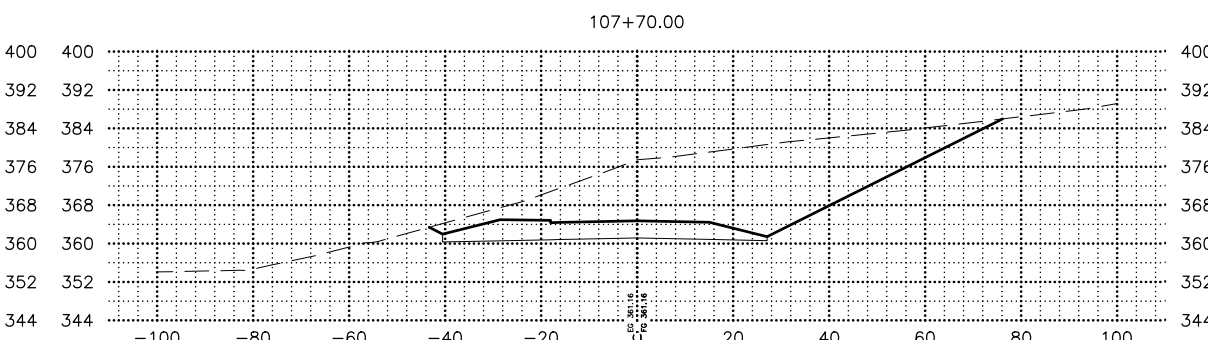
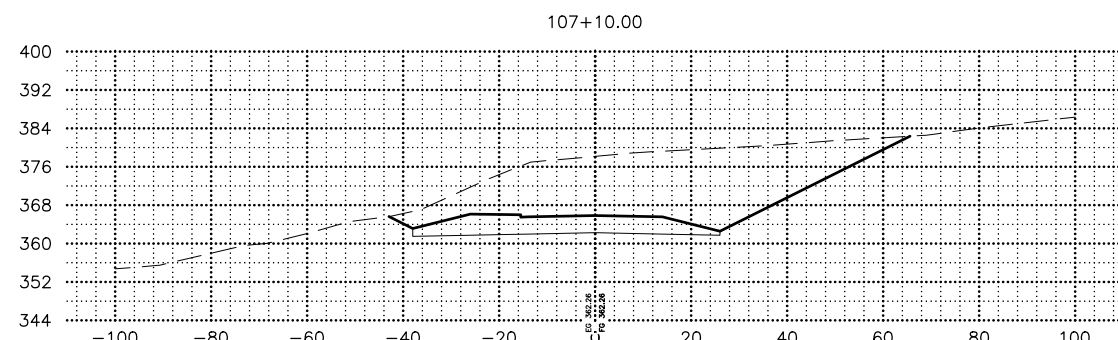
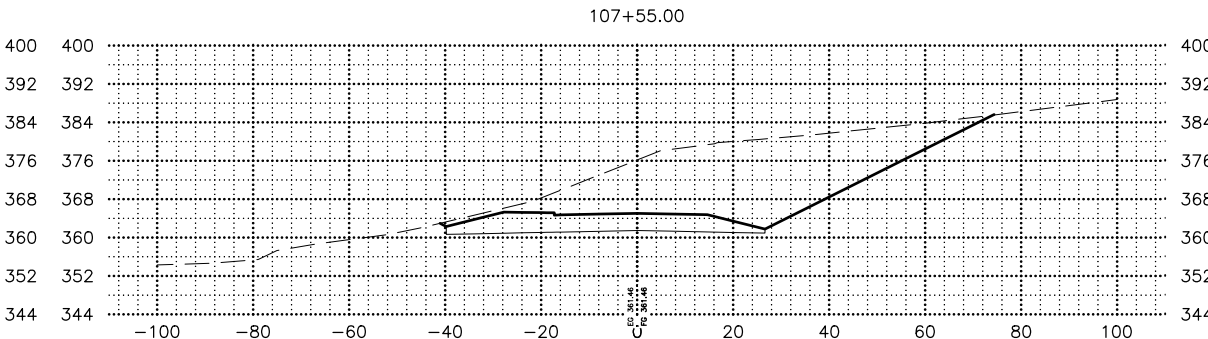
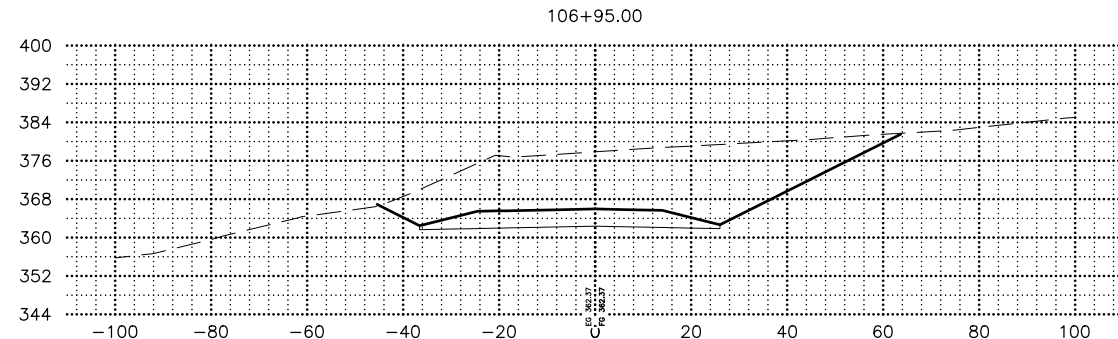
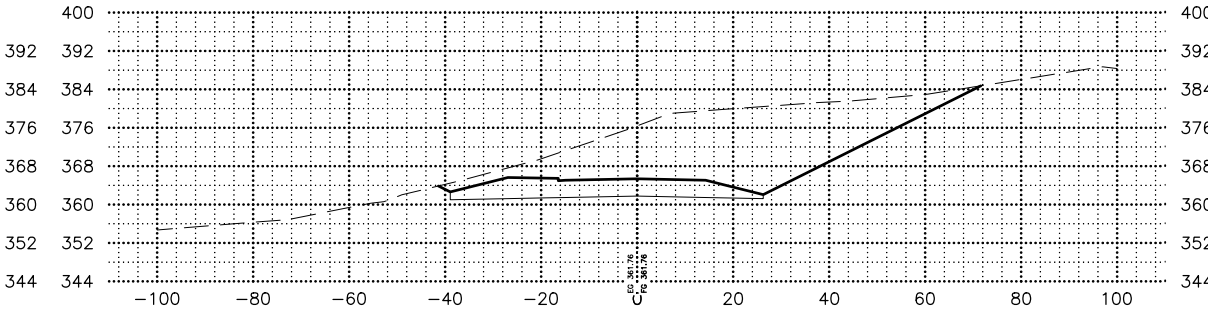
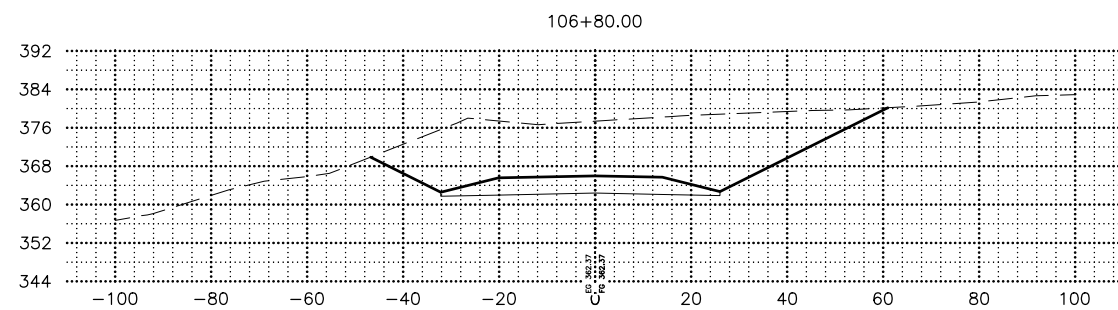
STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 HSIP: BOGARD RD AT  
 ENGSTROM RD & GREEN  
 FOREST DR INT IMP  
**GREEN FOREST DRIVE  
 CROSS SECTIONS**

DESIGNED BY: ZDK  
 CHECKED BY: KRV  
 DRAFTED BY: PGH

DATE: 3/15/2023 12:42 PM  
 TIME: 12:42 PM  
 SCALE: 1" = 20'

DRAWING LOCATION: W:\PROJECTS\HSIP BOGARD ENGSTROM RA - CFHWY00453\SECTION\00453\_X-SECTIONS.DWG

SHEET NO.	TOTAL SHEETS
X17	X23
STATE	YEAR
ALASKA	2024
PROJECT DESIGNATION	
0001630/ CFHWY00453	
NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	



STATE OF ALASKA DOT&PF  
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 ANCHORAGE, AK 99502  
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STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 HSIP: BOGARD RD AT  
 ENGSTROM RD & GREEN  
 FOREST DR INT IMP

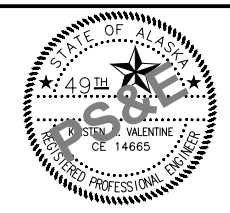
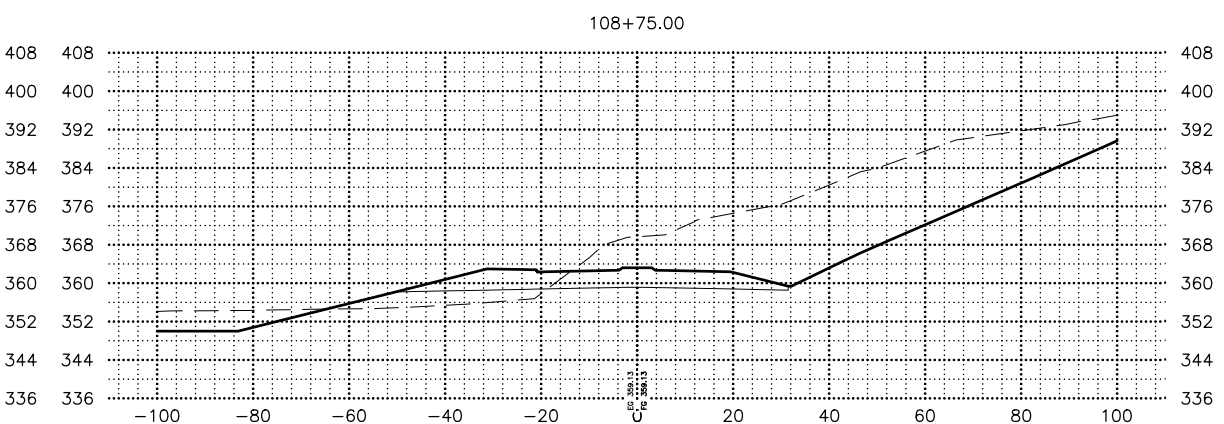
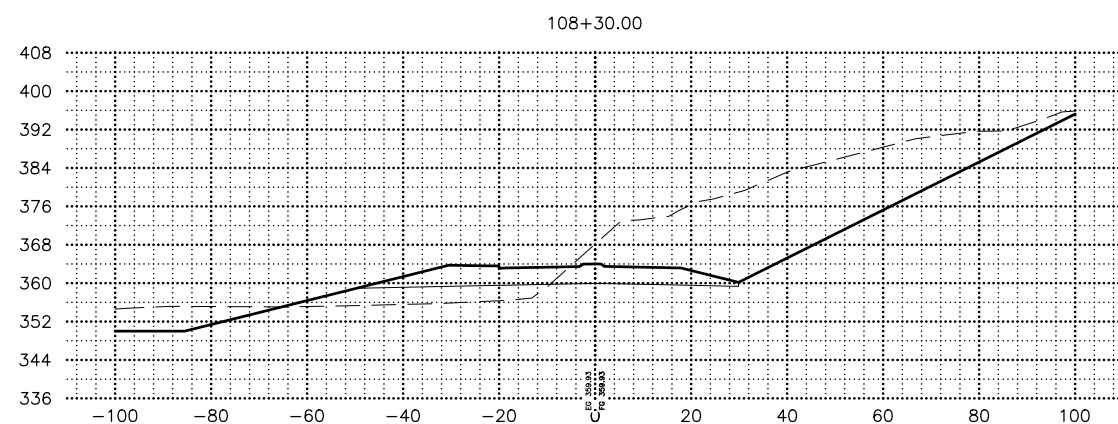
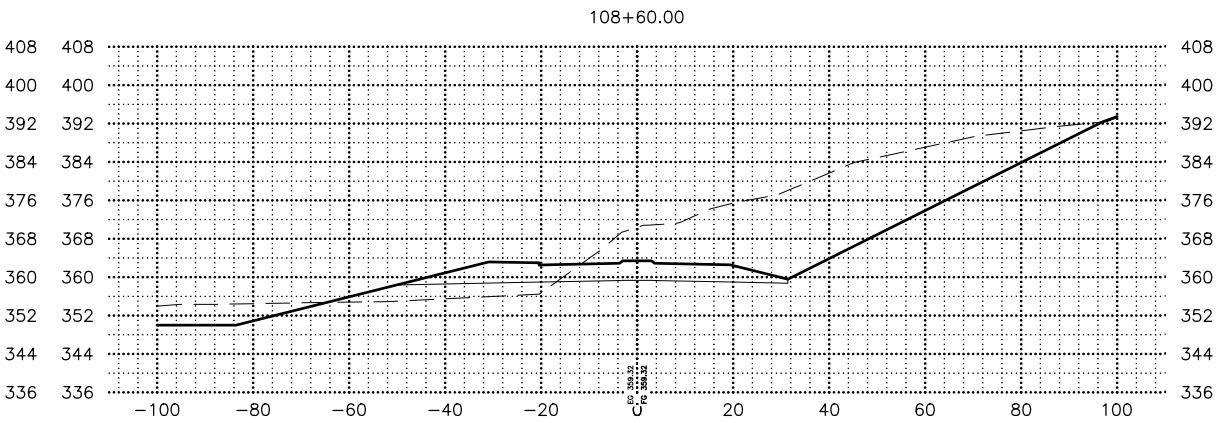
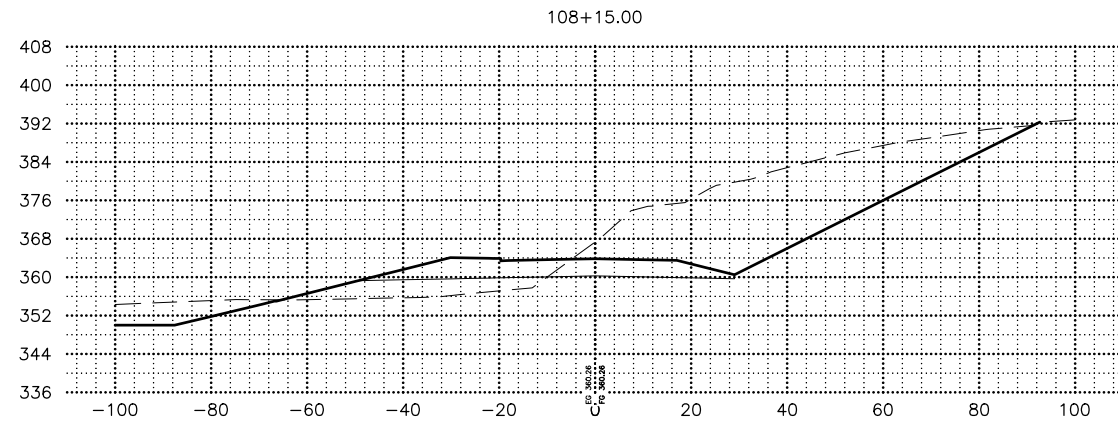
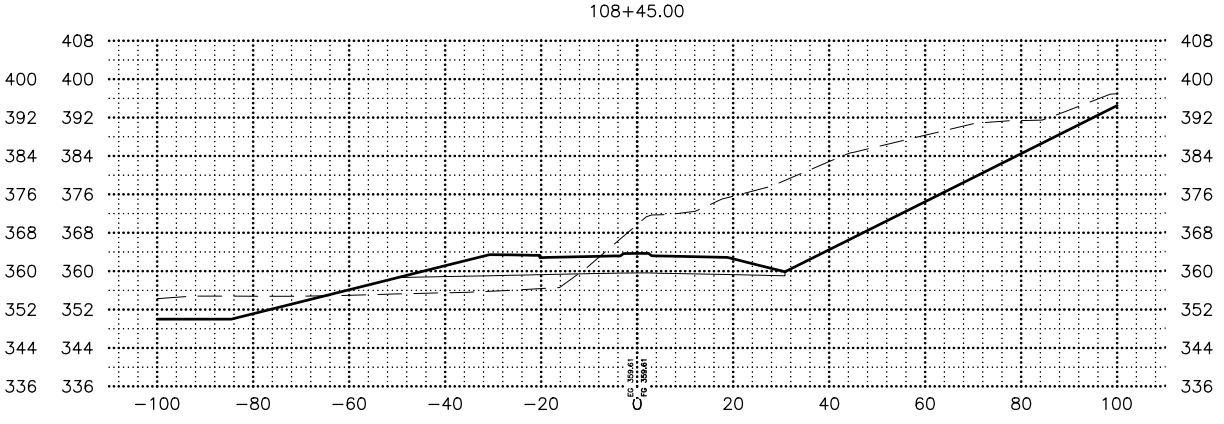
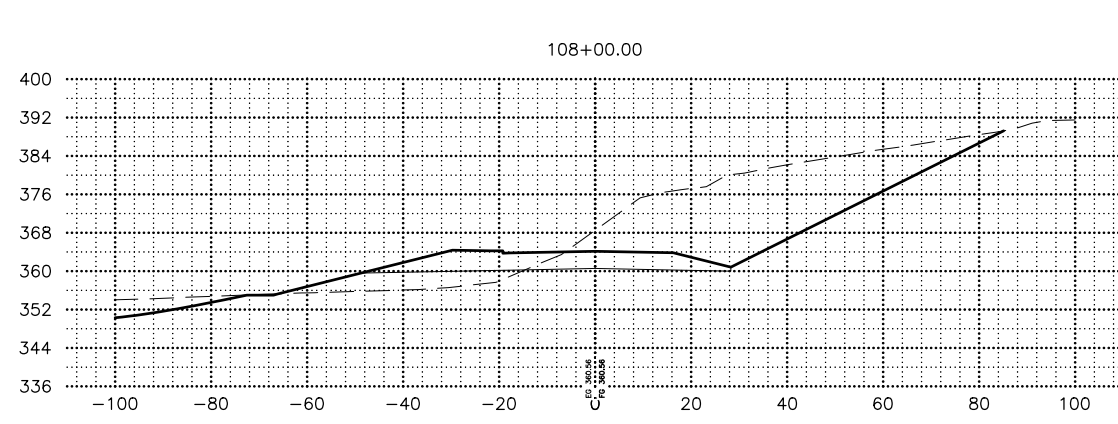
**GREEN FOREST DRIVE  
 CROSS SECTIONS**

DRAWING LOCATION: W:\PROJECTS\HSIP BOGARD ENGSTROM RA - CFHWY00453\SECTION\CIV3D\CIV3D\X-SECTION\00453-X-SECTIONS.DWG  
 DATE: 3/15/2023 12:42 PM  
 TIME: 12:42 PM  
 SCALE: 1" = 20'  
 DESIGNED BY: ZDK  
 CHECKED BY: KRV  
 DRAFTED BY: PGH

SHEET NO.	TOTAL SHEETS
X18	X23
STATE	YEAR
ALASKA	2024

PROJECT DESIGNATION  
**0001630/  
 CFHWY00453**

NO.	REVISION

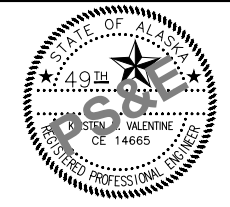
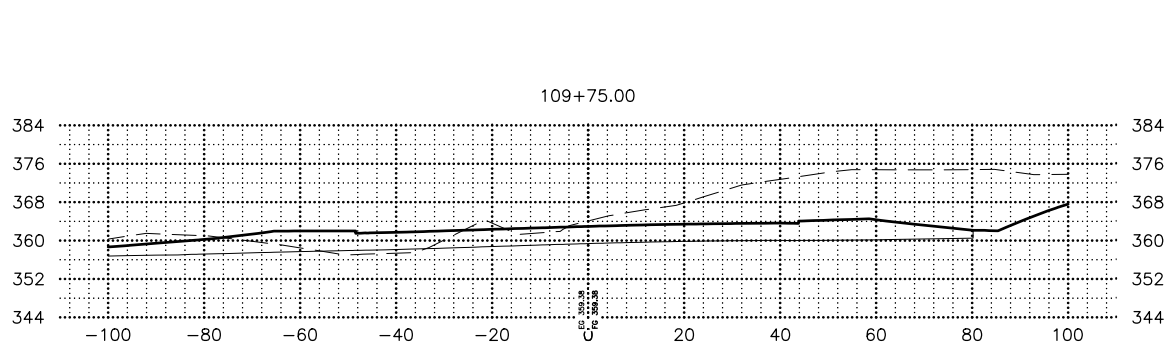
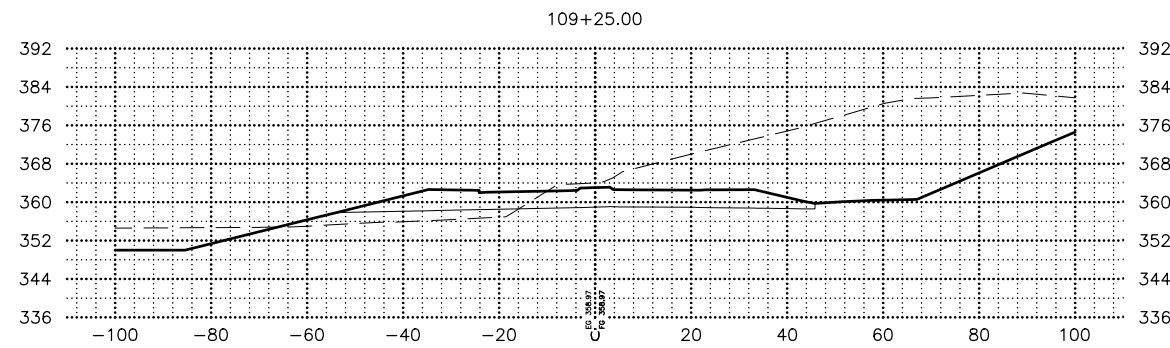
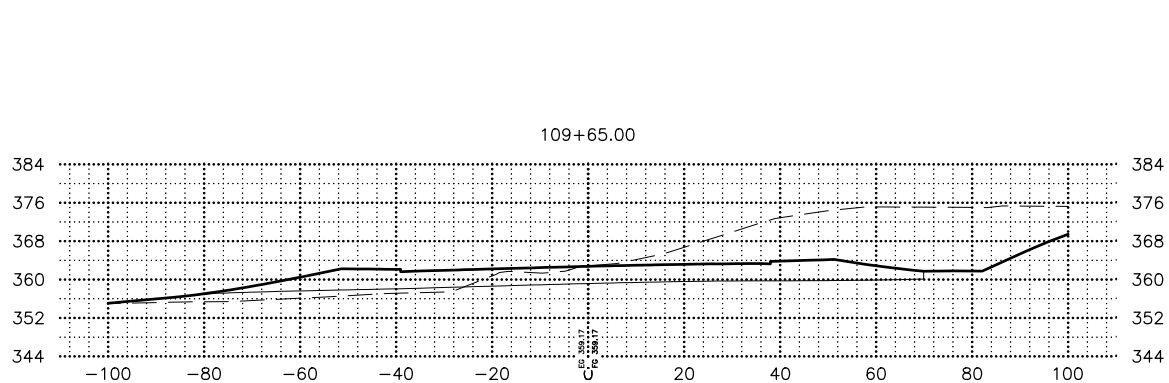
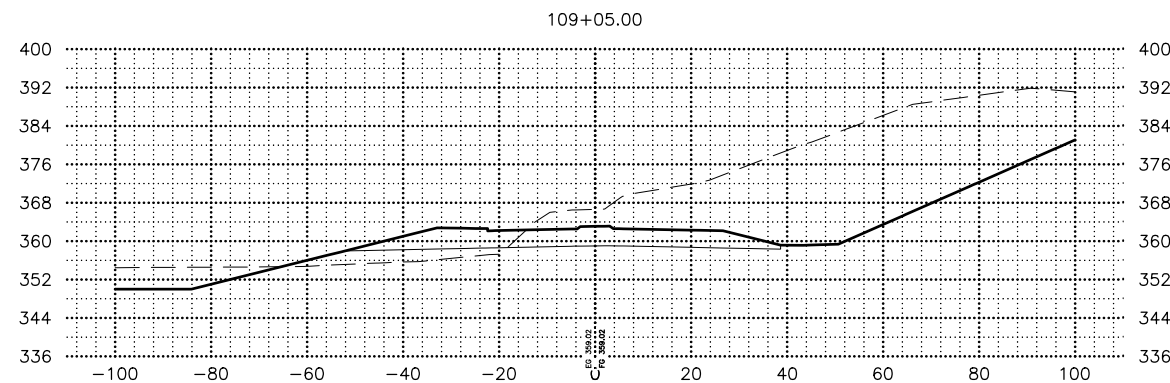
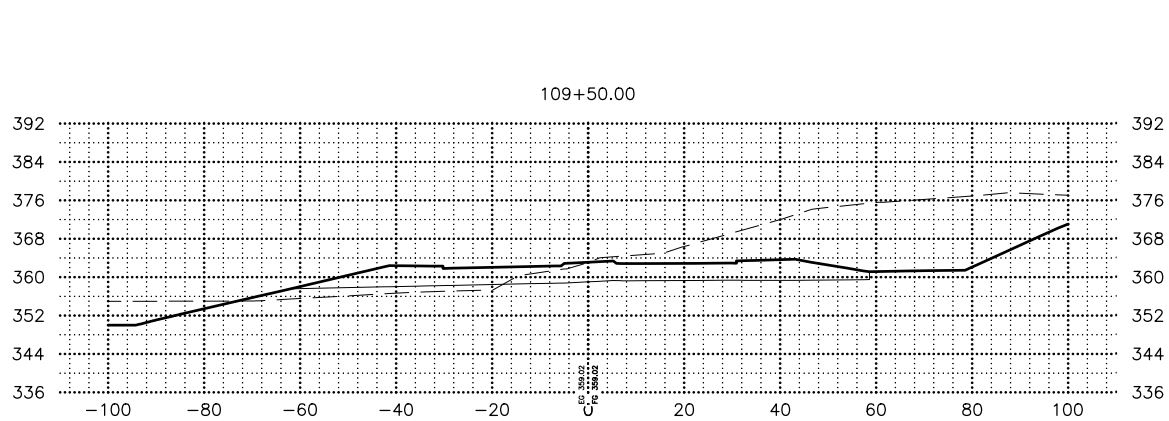
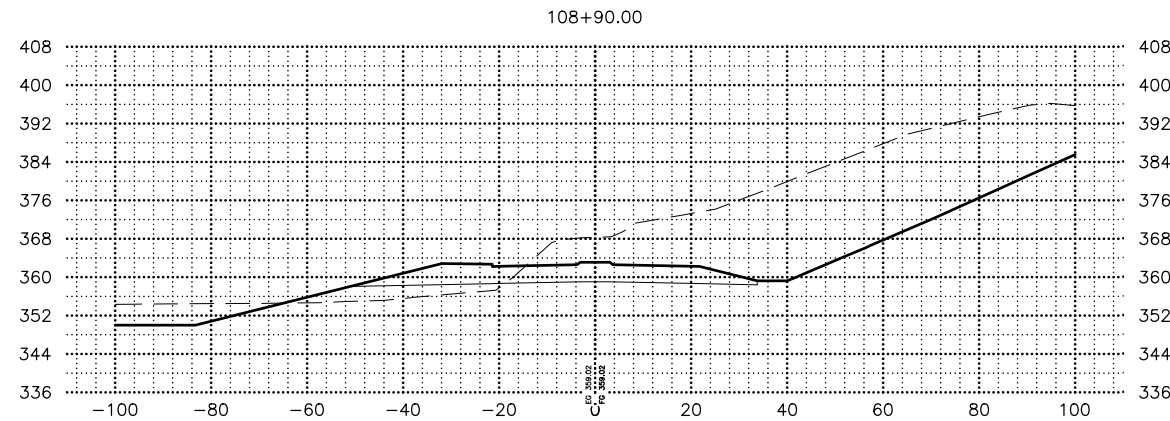


STATE OF ALASKA DOT&PF  
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STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 HSIP: BOGARD RD AT  
 ENGSTROM RD & GREEN  
 FOREST DR INT IMP  
**GREEN FOREST DRIVE  
 CROSS SECTIONS**

ZDK  
 KRV  
 PGH  
 DESIGNED BY  
 CHECKED BY  
 DRAFTED BY  
 SCALE  
 1" = 20'  
 DATE  
 3/15/2023 12:42 PM  
 TIME  
 DRAWING LOCATION  
 W:\PROJECTS\HSIP BOGARD\_ENGSTROM\_RA - CFHWY00453\CIV3D\CIV3D\X-SECTION\00453\_X-SECTIONS.DWG

SHEET NO.	TOTAL SHEETS
X19	X23
STATE	YEAR
ALASKA	2024
PROJECT DESIGNATION	
0001630/ CFHWY00453	
NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	



STATE OF ALASKA DOT&PF  
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STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 HSIP: BOGARD RD AT  
 ENGSTROM RD & GREEN  
 FOREST DR INT IMP  
**GREEN FOREST DRIVE  
 CROSS SECTIONS**



DESIGNED BY: ZDK  
 CHECKED BY: KRV  
 DRAFTED BY: PGH

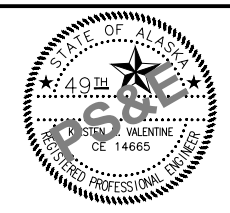
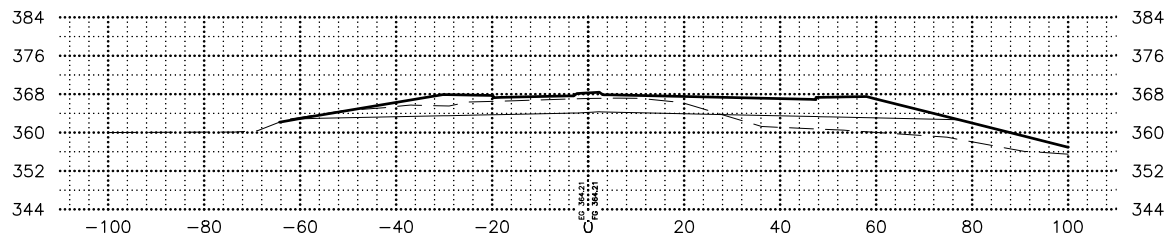
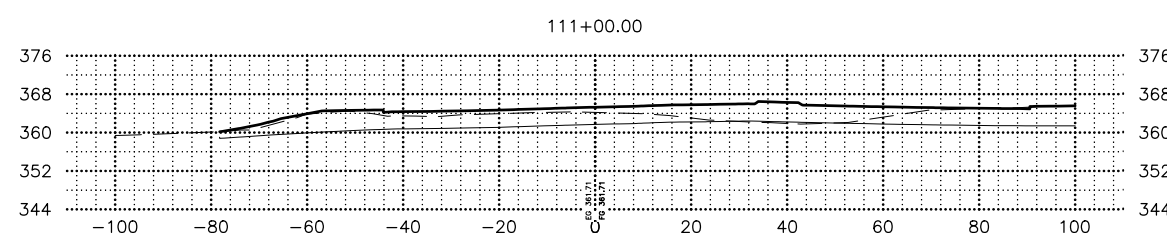
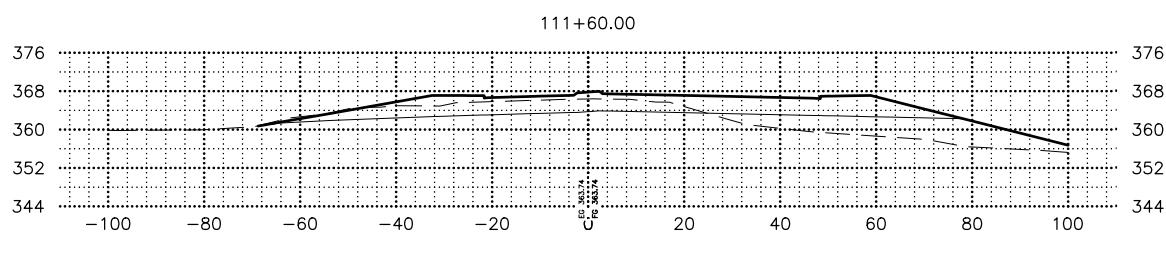
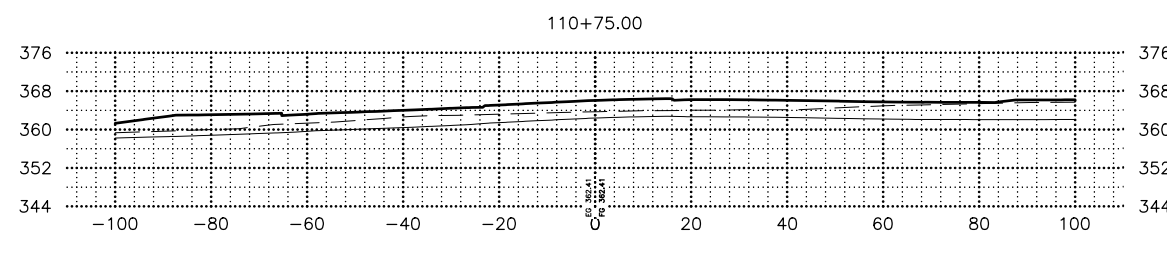
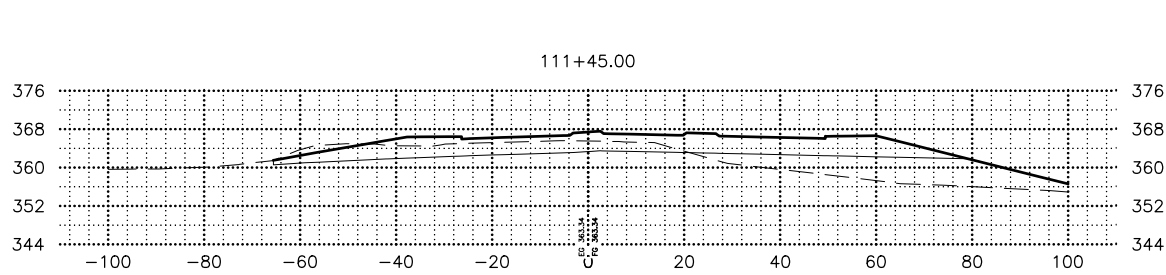
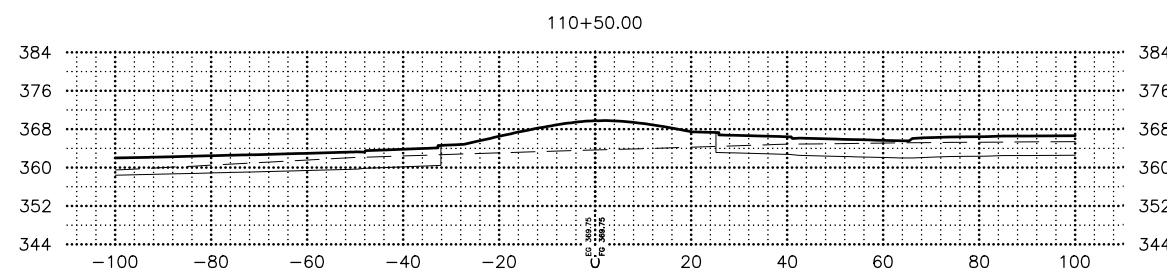
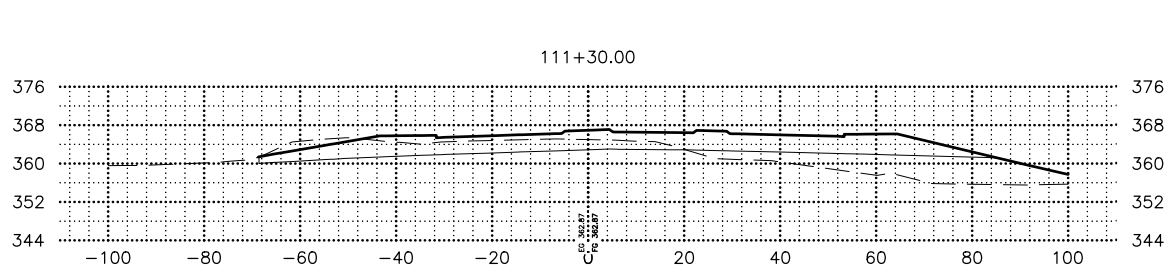
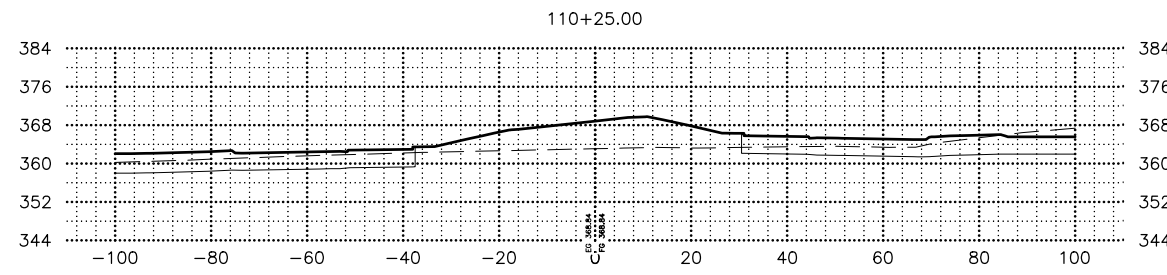
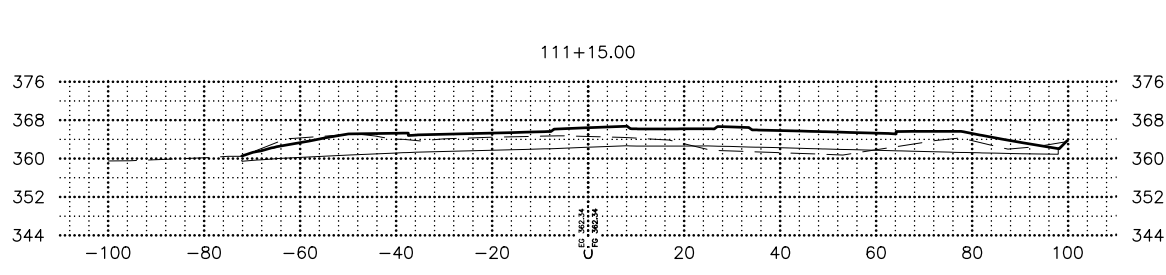
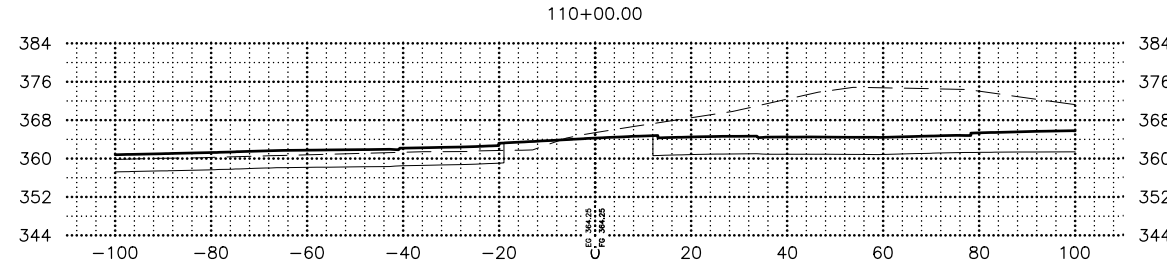
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SHEET NO.	TOTAL SHEETS
X20	X23
STATE	YEAR
ALASKA	2024

PROJECT DESIGNATION  
**0001630/  
 CFHWY00453**

NO.	REVISION



STATE OF ALASKA DOT&PF  
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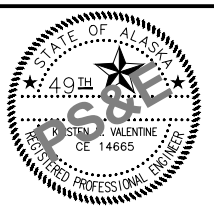
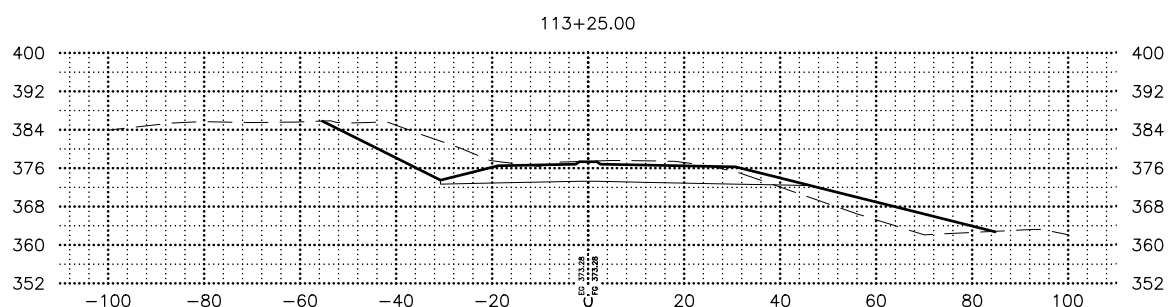
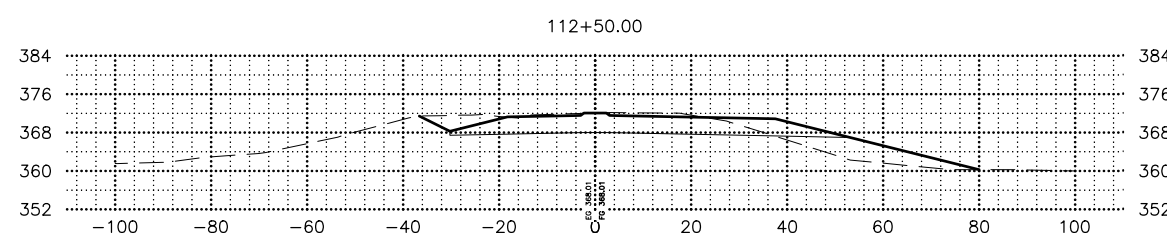
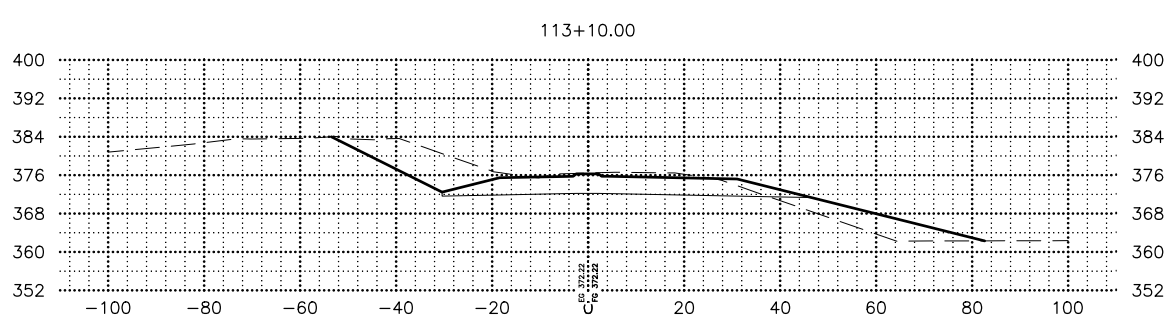
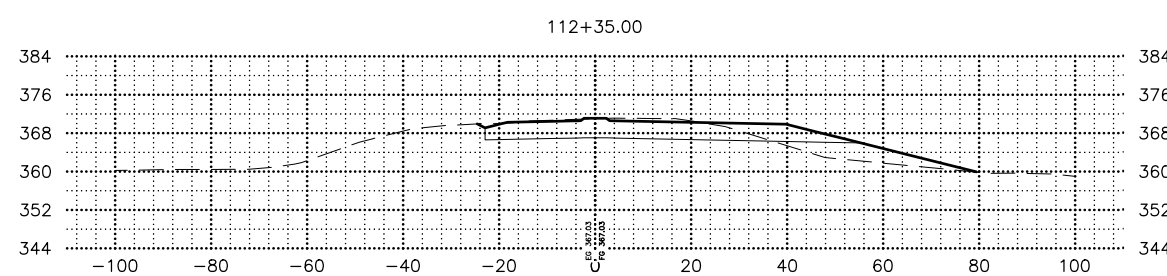
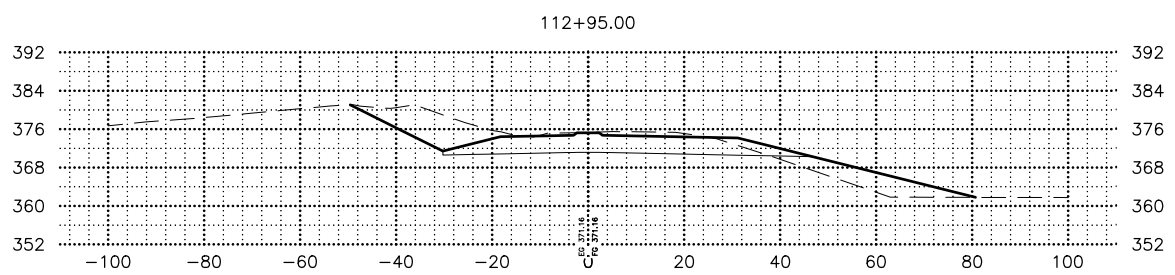
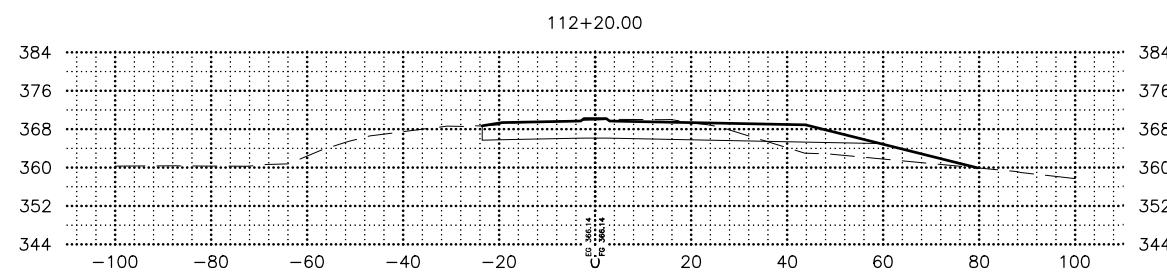
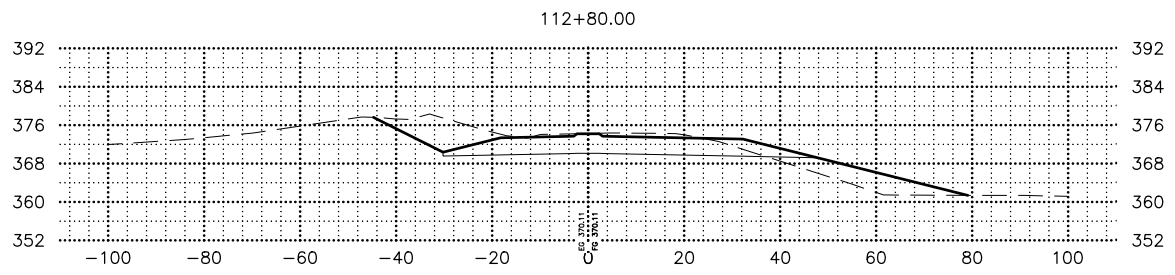
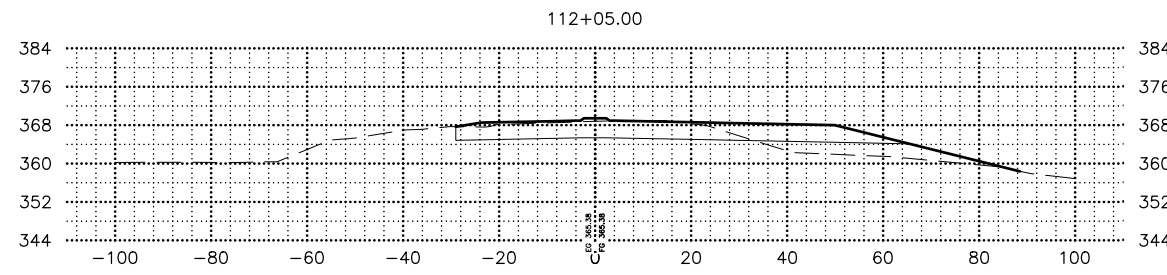
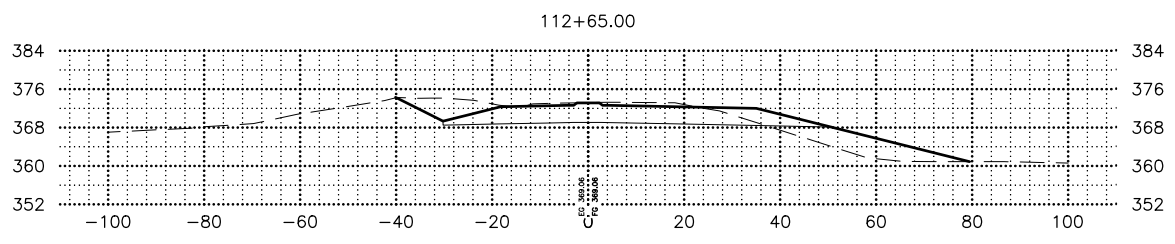
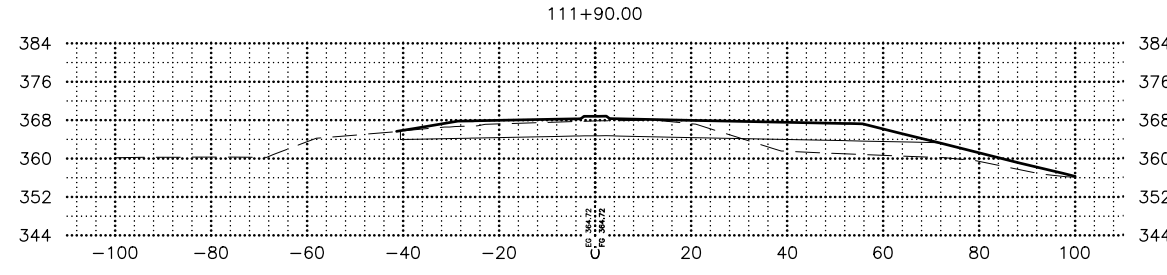
STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
**HSP: BOGARD RD AT  
 ENGSTROM RD & GREEN  
 FOREST DR INT IMP**  
**ENGSTROM ROAD  
 CROSS SECTIONS**

DESIGNED BY: ZDK  
 CHECKED BY: KRV  
 DRAFTED BY: PGH

DATE: 3/15/2023 12:43 PM  
 TIME: 12:43 PM  
 SCALE: 1" = 20'

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SHEET NO.	TOTAL SHEETS
X21	X23
STATE	YEAR
ALASKA	2024
PROJECT DESIGNATION	
0001630/ CFHWY00453	
NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	



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 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 HSIP: BOGARD RD AT  
 ENGSTROM RD & GREEN  
 FOREST DR INT IMP

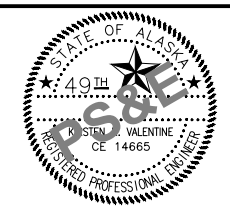
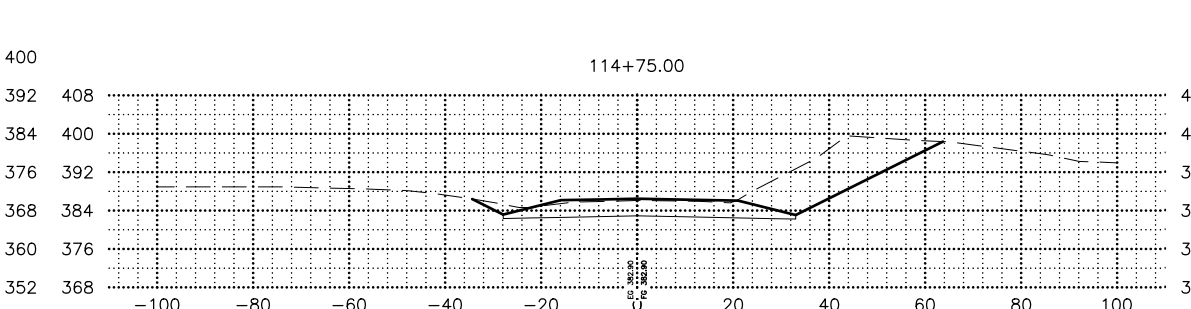
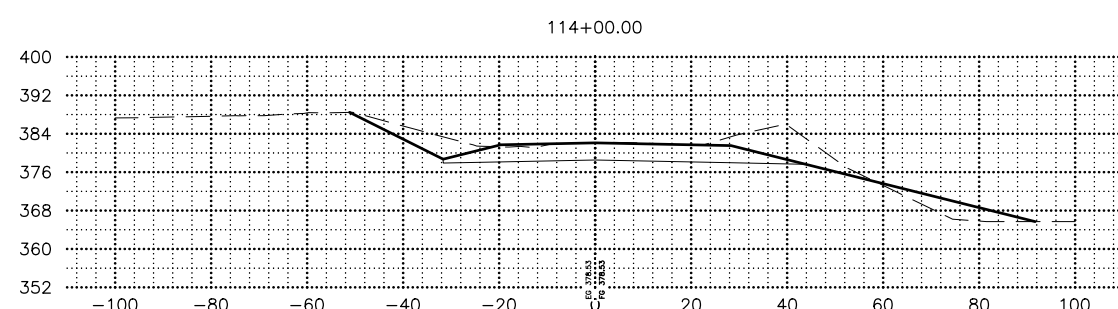
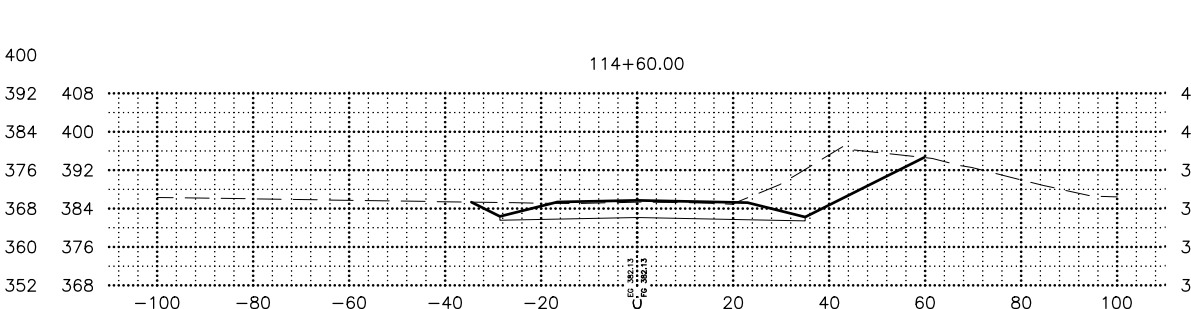
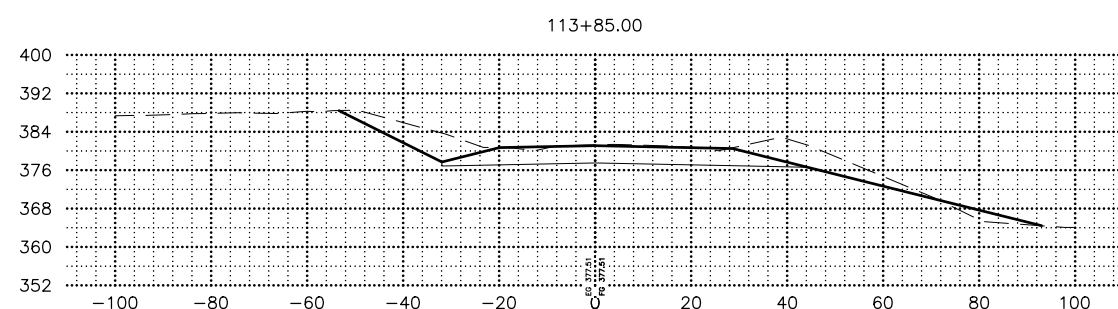
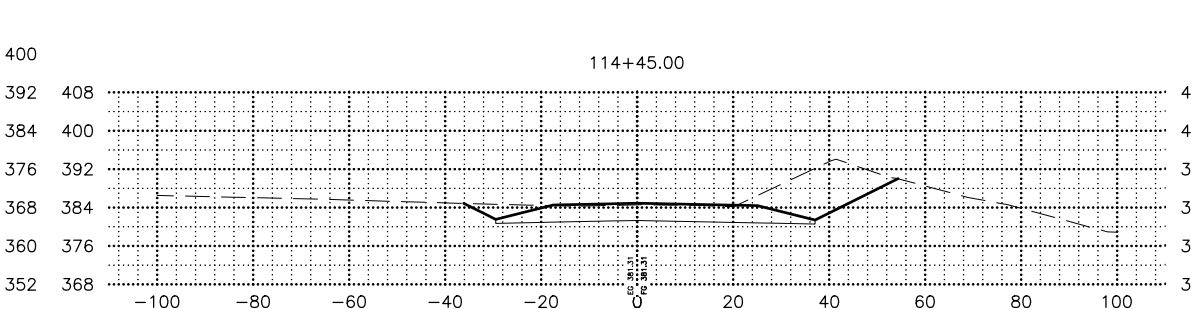
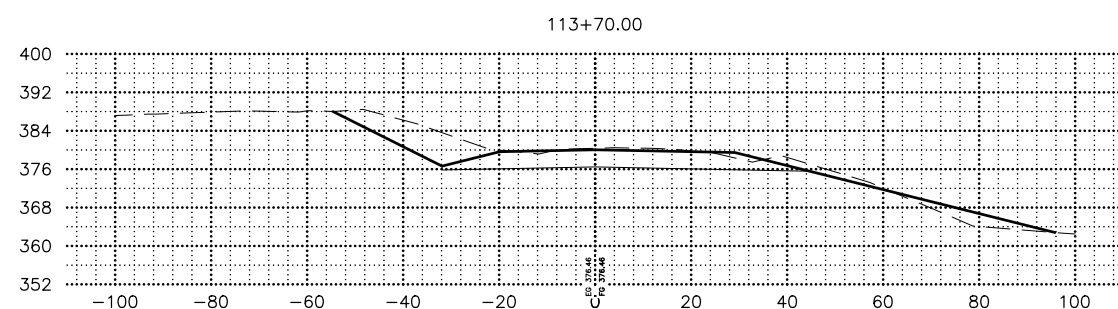
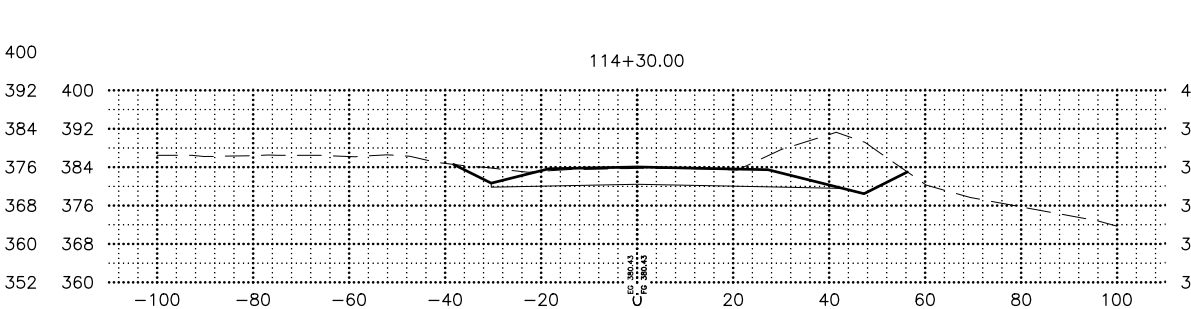
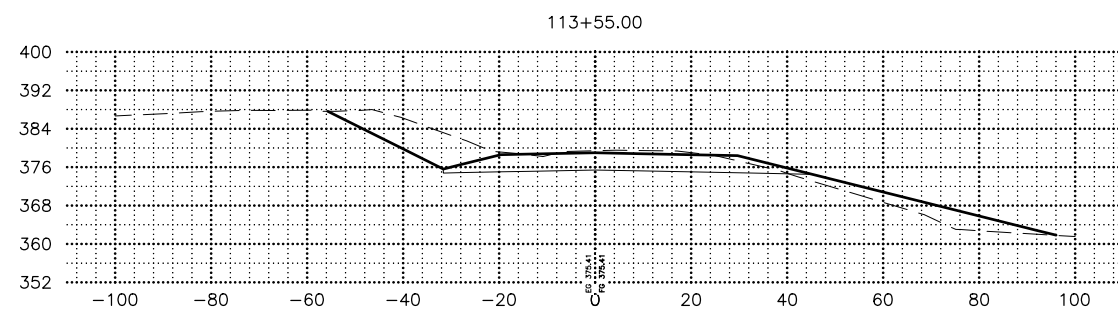
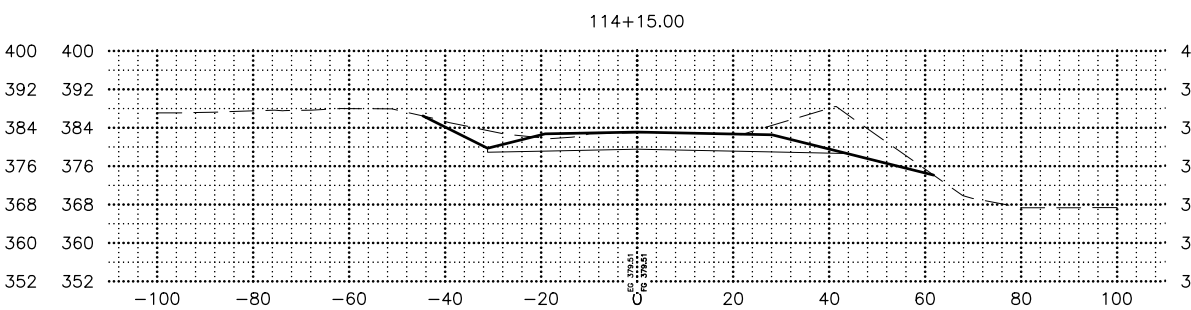
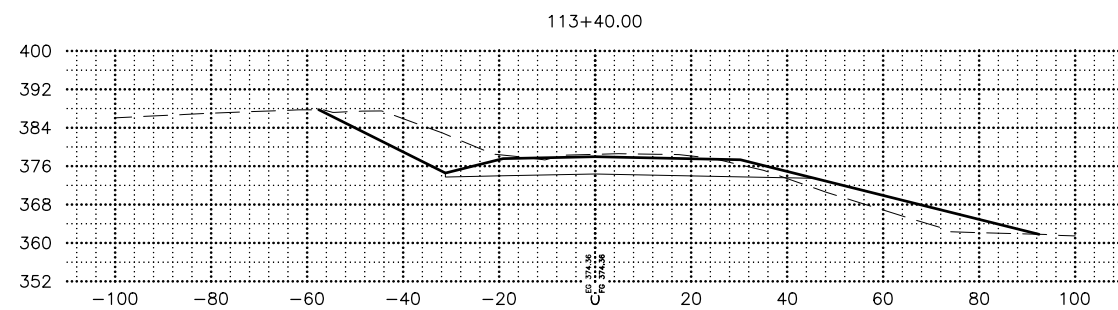
**ENGSTROM ROAD  
 CROSS SECTIONS**

DESIGNED BY: ZDK  
 CHECKED BY: KRV  
 DRAFTED BY: PGH

DATE: 3/15/2023 12:43 PM  
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 SCALE: 1" = 20'

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SHEET NO.	TOTAL SHEETS
X22	X23
STATE	YEAR
ALASKA	2024
PROJECT DESIGNATION	
0001630/ CFHWY00453	
NO.	REVISION
DATE	
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DATE	
NO.	REVISION
DATE	

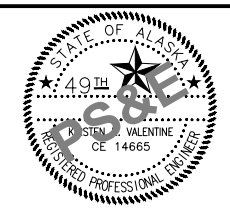
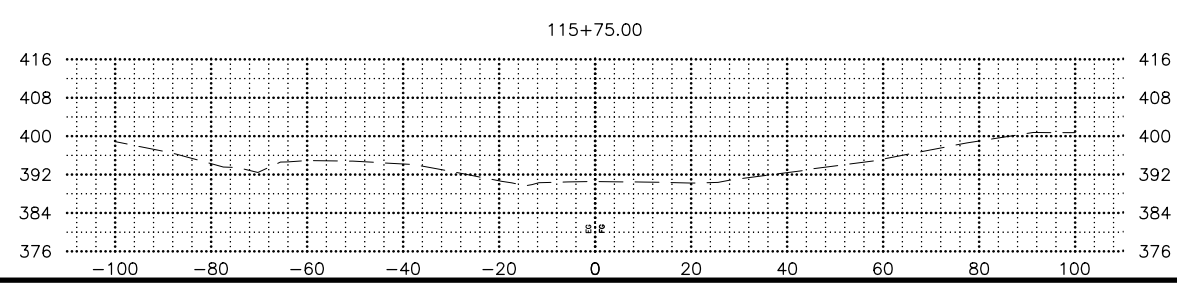
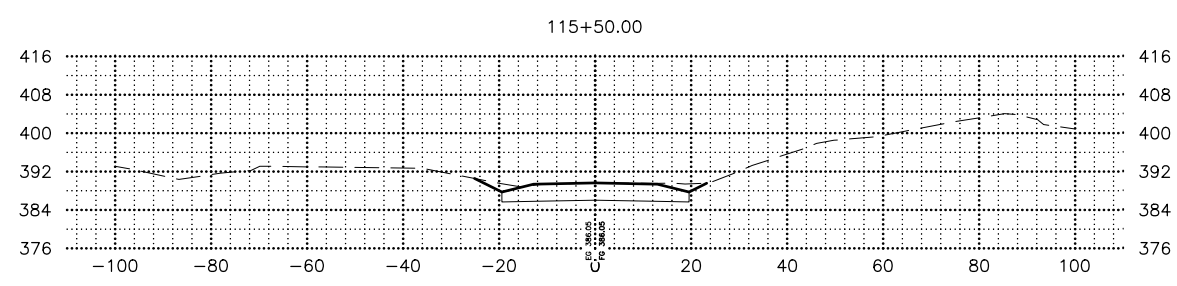
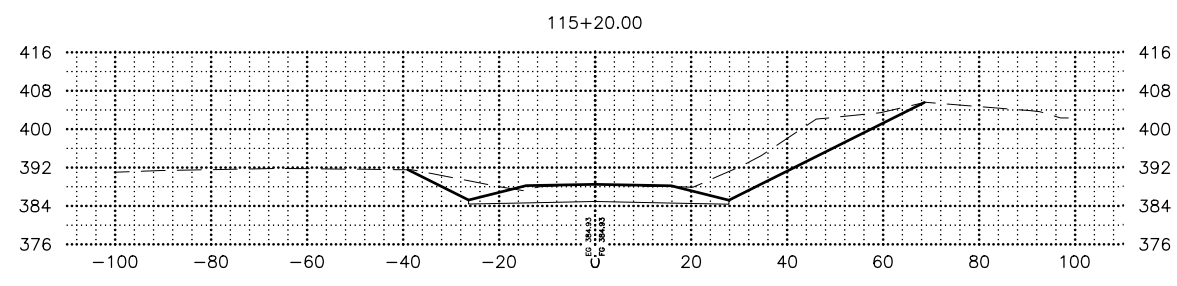
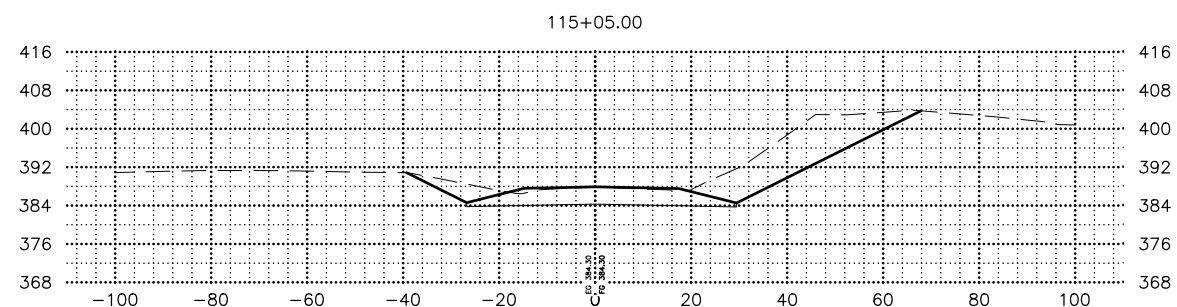
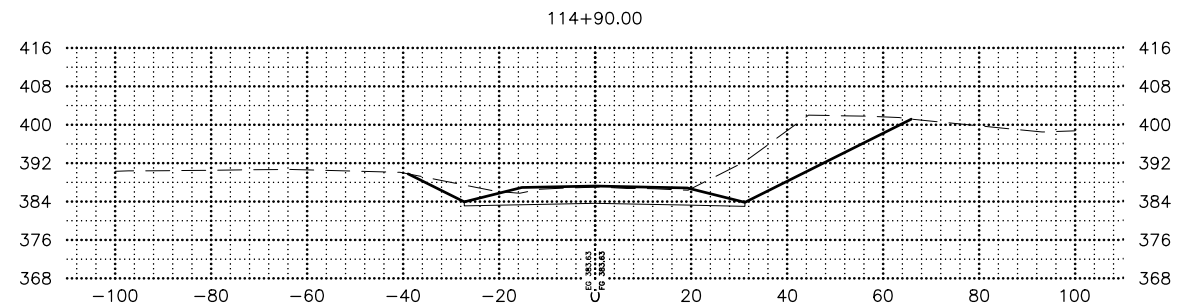


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 HSIP: BOGARD RD AT  
 ENGSTROM RD & GREEN  
 FOREST DR INT IMP  
**ENGSTROM ROAD  
 CROSS SECTIONS**

DRAWING LOCATION: W:\PROJECTS\HSIP\BOGARD\_ENGSTROM\_RA - CFHWY00453\CIV3D\CIV3D\X-SECTION\00453\_X-SECTIONS.DWG  
 DATE: 3/15/2023 12:43 PM  
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SHEET NO.	TOTAL SHEETS
X23	X23
STATE	YEAR
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