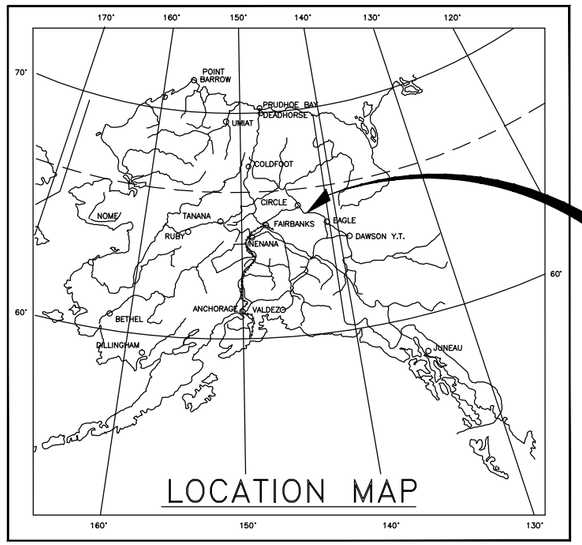
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	A1	149
CDS ROUTE: 190000	MILEPOINT: 353.6 TO 356.7			



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
&
PUBLIC FACILITIES

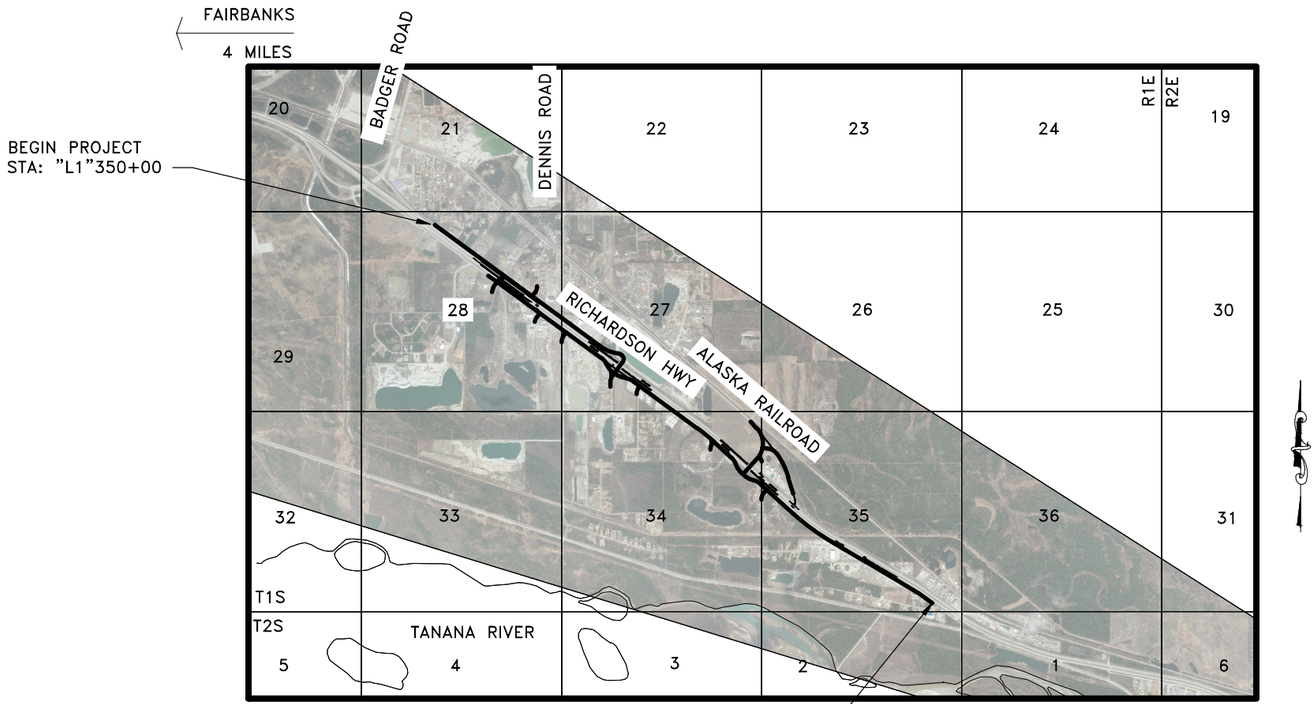
PROPOSED HIGHWAY PROJECT
0A24(019)/66148
RICHARDSON HIGHWAY MP 353 – 357
ACCESS IMPROVEMENTS

GRADING, DRAINAGE, PAVING & ILLUMINATION

INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
A1	TITLE SHEET
A2	LEGEND
A3	GENERAL NOTES
A4	VICINITY MAP
B1–B3	TYPICAL SECTIONS
C1	ESTIMATE OF QUANTITIES
D1–D2	SUMMARIES & NOTES
E1–E8	DETAILS
F1–F2	ALIGNMENT CONTROL PLAN
F3–F48	PLAN AND PROFILE
G1–G5	INTERSECTION PLAN
H1–H19	SIGNING AND STRIPING DETAILS AND PLAN
H20–H26	LIGHTING SUMMARIES & DETAILS
H27	LIGHTING DEMOLITION PLAN
H28–H31	LIGHTING PLAN
P1–P3	EROSION AND SEDIMENT CONTROL PLAN
P4–P16	EROSION CONTROL PLAN
S1–S31	TRAFFIC CONTROL PLAN

THE FOLLOWING STANDARD DRAWINGS APPLY TO THIS PROJECT:

C–04.12	C–05.20	D–01.02	G–10.01	D–06.10
D–24.00	D–30.01	G–00.02	G–04.10S	G–04.10S
G–20.11	G–24.06S	E–13.00	F–01.01	I–81.00
M–13.01	M–16.01	M–20.13	M–23.12	S–00.11
S–01.00	S–05.01	S–20.10	S–23.00	S–30.03
S–31.01	T–20.03	T–21.03	T–22.03	



DESIGN DESIGNATIONS

	RICHARDSON	FRONTAGE ROAD
ADT (2010)	14,000	675
ADT (2035)	23,000	1107
DHV (12%)	2760	133
PERCENT TRUCKS (T)	8%	8%
DIRECTIONAL SPLIT (D)	45 / 55	45 / 55
DESIGN SPEED (V)	70 MPH	40 MPH
DESIGN EAL'S (2035)	3,426,051	165,239

PROJECT SUMMARY

	RICH ACCEL/DECEL LANES	FRONTAGE ROADS
WIDTH OF SURFACE	18 FT	30 FT
LENGTH OF GRADING	–	–
LENGTH OF PAVING	3.1 MI	3.4 MI
LENGTH OF PROJECT	3.1 MI	3.4 MI

D.O.T. ENGINEER MANAGER: SARAH SCHACHER PE

PLANS DEVELOPED BY:
PDC, INC. ENGINEERS
UNDER THE SUPERVISION OF:

STATE OF ALASKA 49TH
DUSTIN CORY HANNAFIOUS
NO. CE14065
REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
&
PUBLIC FACILITIES

APPROVED BY:

_____ DATE _____
Ryan F. Anderson, P.E.
Preconstruction Engineer, Northern Region

ACCEPTED FOR CONSTRUCTION

_____ DATE _____
Robert A. Campbell, P.E.
Acting Regional Director, Northern Region

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STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	A2	A4

	RECOVERED	SET
BLM MONUMENT	✠	
GLO MONUMENT	✠	
USC&GS MONUMENT	▲	
PRIMARY MONUMENT	✠	✠
CENTERLINE MONUMENT IN CASING	⊕	◒
PRIMARY R.O.W. MONUMENT	⊕	◒
BEARING OBJECT	✳	
MISCELLANEOUS MONUMENT	⊗	
LINE OF SIGHT MONUMENT		⊕
CONCRETE R.O.W. MONUMENT	■	
BENCHMARK		BM
REBAR AND CAP	⊙	⊙
REBAR	⊕	●
IRON PIPE	◉	
PK NAIL		▽
SPIKE		×
HUB AND TACK		⊡

	EXISTING	PROPOSED
SANITARY SEWER (FLOW DIRECTION →)	SS	SS
FUEL LINE	O	O
GAS LINE	G	G
WATER LINE	W	W
METER, VALVE, FIRE HYDRANT	W	W
EXISTING STORM DRAIN (FLOW DIRECTION →)	SD	
PROPOSED STORM DRAIN		S–10, S–11, P–11, P–10, SD, MH
FIBER OPTIC LINE	FO	
DIRECT BURIAL TELEPHONE CABLE	T	T
DIRECT BURIAL ELECTRIC CABLE	E	E
ELECTRIC LINE (OVERHEAD)		
POWER POLE LINE		
JOINT USE POWER & TELEPHONE		
TELEPHONE POLE LINE		
POLE ANCHOR		
STUB POLE (POWER OR TELEPHONE)		
TELEPHONE DUCT	T	T
TELEPHONE PEDESTAL		
BURIED CABLE MARKER		
PIPELINE MARKER OR VALVE		
CATCH BASIN OR DROP INLET		
MANHOLE	MH	MH
SANITARY SEWER CLEAN OUT		

	EXISTING	PROPOSED
ROADWAY/PAVEMENT EDGE		
FENCE		
CURB AND GUTTER		
DETECTABLE WARNINGS		
GUARDRAIL		
CULVERT PIPE		
SIGN		
MAILBOX	MB	MB
RAILROAD TRACKS		
RAILROAD DEVICES	CROSS–BUCK, FLASHING LIGHT	CANTILEVER, SWITCH
TREE LINE		
WATER BOUNDARY		
ORDINARY HIGH WATER LINE		
FLOW CENTERLINE		
FLOW DIRECTION		
WETLANDS		
EXISTING BUILDINGS	H	H = HOUSE G = GARAGE M = MERCHANT/STORE B = BARN S = SHED P = PRIVY SS = SERVICE STATION W = WAREHOUSE
POST OR BOLLARD		
WELL OR MONITORING WELL	W, MW	
SEPTIC PIPE	S	
FUEL TANK FILL PIPE/VENT	F	
SATELLITE DISH	SAT. DISH	
TEST HOLE	TH	
CONIFER TREE		
DECIDUOUS TREE		
GRAVE		
THERMOSIPHON		
PARKING METER		
VEHICLE PLUG–IN		
DELINEATOR/GUIDE MARKER		

	EXISTING	PROPOSED
JUNCTION BOX, TYPE IA		5
JUNCTION BOX, TYPE II		6
JUNCTION BOX, TYPE III		3
SIGNAL FACE, VEHICULAR	42	42
SIGNAL FACE, BACKPLATE	42	42
SIGNAL FACE, LEFT TURN, BACKPLATE	43	43
SIGNAL FACE, PEDESTRIAN		
LOOP DETECTOR	33	73
VIDEO DETECTOR	2	2
OPTICOM DETECTOR	1	1
PEDESTRIAN PUSH BUTTON	1	1
SIGNAL POST W/O MAST ARM		1
SIGNAL POLE W/MAST ARM		4
SIGNAL CONTROLLER		
LOAD CENTER		
LUMINAIRE		122
RIGID METAL CONDUIT		

CONSTRUCTION CENTERLINE	5+00
MISCELLANEOUS CENTERLINE	10+00
STATION EQUATION	"L"48+97.23 POT BK= / "O"48+97.23 PC AHD
PROJECT RIGHT–OF–WAY LINE	R/W
EXISTING RIGHT–OF–WAY LINE	
EXISTING PROPERTY LINE	
CONTROLLED ACCESS LINE	C/A
EXISTING EASEMENT LINE	
PROPOSED EASEMENT LINE	
PROPOSED CUT SLOPE LIMIT	
PROPOSED FILL SLOPE LIMIT	
SECTION LINE	
1/4 SECTION LINE	
1/16 SECTION LINE	
TOWNSHIP & RANGE LINE	T. 2 N. / T. 1 N.; T. 1 E.; T. 2 E.
MEANDER LINE	M1, M2, M3

LEGEND AND NOTES

STATE OF ALASKA 49TH
DUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER

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STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	A3	A4

GENERAL NOTES:

1. GRADES AND ALIGNMENT ARE SUBJECT TO MINOR REVISIONS BY THE ENGINEER.
2. EXCESS MATERIAL MUST BE DISPOSED OUTSIDE PROJECT LIMITS. THE CONTRACTOR MUST OBTAIN WASTE DISPOSAL SITES AT AREAS APPROVED BY THE ENGINEER. THIS WORK WILL BE SUBSIDIARY TO 203(3A).
3. SAW CUT TRANSITION MATCH POINTS. APPLY STE–1 TACK COAT TO ALL SAW CUT FACES PRIOR TO PAVING. SAW CUTTING AND TACK COAT WILL NOT BE MEASURED OR PAID FOR DIRECTLY BUT ARE SUBSIDIARY TO OTHER 401 PAY ITEMS.
4. LOCATE AND PROTECT EXISTING UTILITIES PRIOR TO BEGINNING GROUND DISTURBING WORK. DAMAGE TO UTILITIES AS A RESULT OF CONSTRUCTION ACTIVITIES MUST BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
5. SEEDING MAY REQUIRE SEVERAL MOBILIZATIONS. ALL MOBILIZATIONS REQUIRED ARE SUBSIDIARY TO PAY ITEM 618(1).
6. PRESERVE EXISTING PRIMARY AND SECONDARY MONUMENTS TO THE EXTENT PRACTICABLE. DESTROY/ABANDON MONUMENTS WHICH ARE DISTURBED BY CONSTRUCTION ACTIVITIES, CONTRACTOR TO REPLACE DESTROYED MONUMENTS WITH 2 REFERENCE MONUMENTS OUTSIDE OF THE CONSTRUCTION FOOTPRINT. THIS WORK WILL NOT BE MEASURED OR PAID FOR DIRECTLY BUT IS SUBSIDIARY TO PAY ITEM 642(1).
7. ICE MAY BE PRESENT IN CULVERTS. IF CULVERTS ARE REPLACED WHILE CONTAINING ICE, ICE REMOVAL IS SUBSIDIARY TO OTHER 602 AND 603 PAY ITEMS.

LIST OF ABBREVIATIONS/SYMBOLS

ADT	AVERAGE DAILY TRAFFIC
AH	AHEAD
&	AND
BMP	BEST MANAGEMENT PRACTICE
B.O.P.	BEGINNING OF PROJECT
C	CROSS
CF	CUBIC FOOT
CGP	CONSTRUCTION GENERAL PERMIT
CRT	CONTROLLED RELEASE TERMINAL
CSP	CORRUGATED STEEL PIPE
ø	DIAMETER
D	DEGREE OF CURVATURE, DISTRIBUTION OF TRAFFIC, DIAMETER
Δ	DELTA ANGLE
DHV	DESIGN HOURLY VOLUME
DOT&PF	DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
E	EAST
E.G.	FOR EXAMPLE
ELEV	ELEVATION
E.O.P.	END OF PROJECT
ESAL	EQUIVALENT SINGLE AXLE LOAD
ESCP	EROSION AND SEDIMENT CONTROL PLAN
ETC.	ETCETERA
FT OR '	FOOT
HMCP	HAZARDOUS MATERIAL CONTROL PLAN
IN OR "	INCH
L	LENGTH OF CURVE
LBS	POUNDS
LHF	LEFT HAND FORWARD
LT	LEFT
LVC	LENGTH OF VERTICAL CURVE
N	NORTH
N/A	NOT APPLICABLE
NO.	NUMBER
NPS	NOMINAL PIPE SIZE
NTS	NOT TO SCALE
OG	ORIGINAL GROUND
%	PERCENT
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
P.O.S.	POINT ON CURVE
P.O.T.	POINT ON TANGENT
PST	PERFORATED STEEL TUBE
PT	POINT OF TANGENCY
PUE	PUBLIC UTILITY EASEMENT
R	RADIUS OF CURVE
RECP	ROLLED EROSION CONTROL PRODUCT
RHF	RIGHT HAND FORWARD
RT	RIGHT
ROW	RIGHT–OF–WAY
S	SOUTH
SPP	STRUCTURAL PLATE PIPE
SWPPP	STORM WATER POLLUTION PREVENTION PLAN
SY	SQUARE YARD
T	TANGENT DISTANCE, HEAVY VEHICLE PERCENTAGE
TCP	TEMPORARY CONSTRUCTION PERMIT
TS	TUBE STEEL
TYP.	TYPICAL
USACE	UNITED STATES ARMY CORP OF ENGINEERS
V	DESIGN SPEED
VPC	VERTICAL POINT OF CURVATURE
VPI	VERTICAL POINT OF INTERSECTION
VPT	VERTICAL POINT OF TANGENCY
W	WEST
W/	WITH

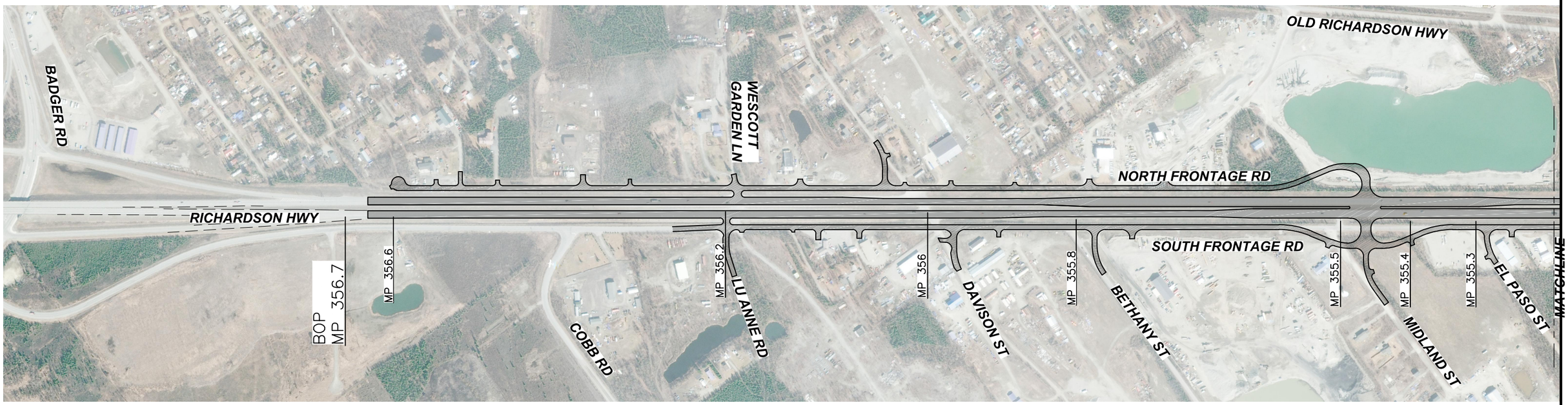
ROAD DEMOLITION NOTES:

1. DEMOLISH EXISTING ROAD TO OG WHERE INDICATED ON PLANS BY REMOVING EXISTING ROAD EMBANKMENT AND GRADE TO MATCH SURROUNDING TOPOGRAPHY. SCARIFY AND SEED WHEN FINISHED MATERIAL MAY NOT BE SUITABLE FILL AND MUST BE DISPOSED OF ACCORDING TO GENERAL NOTE 2.

STATE OF ALASKA 49TH
DUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER

GENERAL NOTES

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	A4	A4



VICINITY MAP

STATE OF ALASKA
49 TH
DUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER

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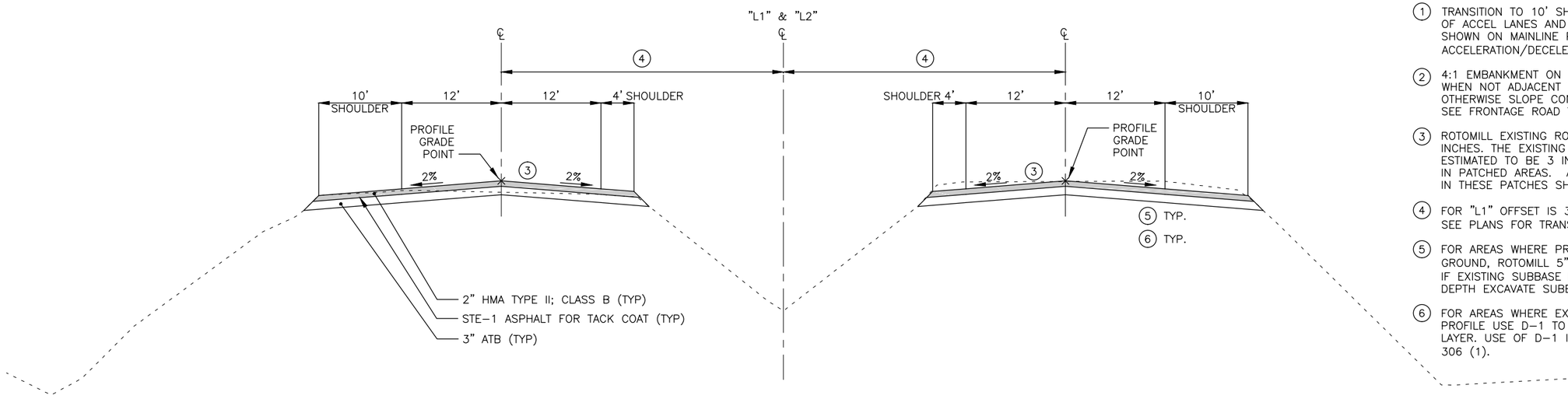
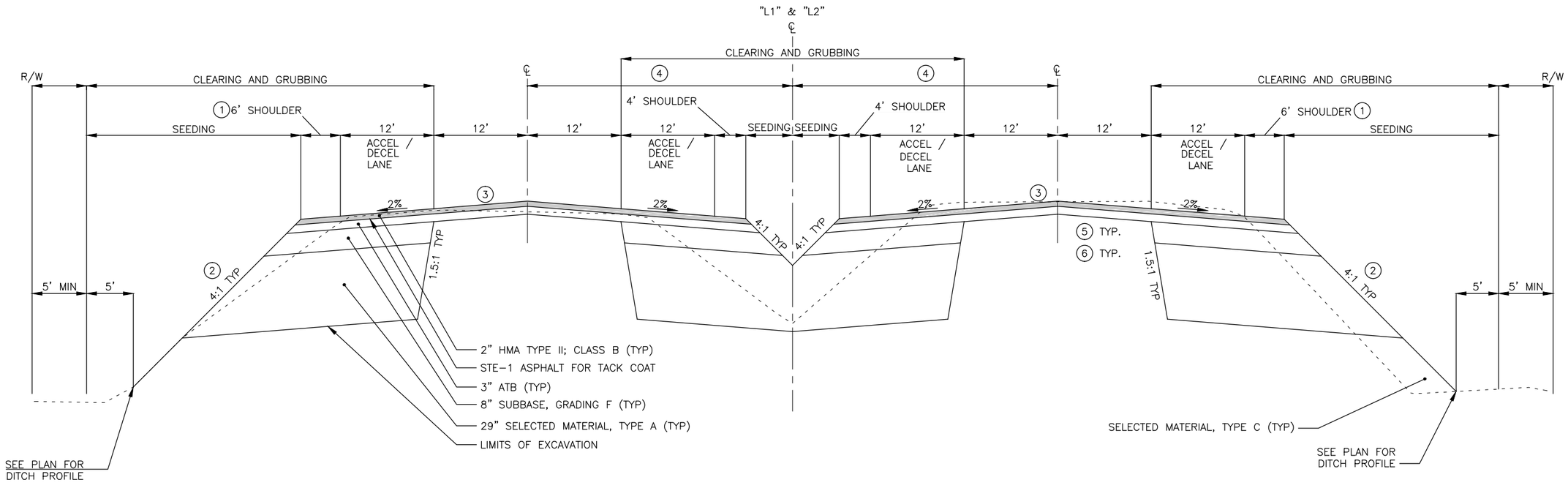
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	B1	B3



NOTES:

1. TRANSITION TO 10' SHOULDERS AT BEGINNING OF ACCEL LANES AND END OF DECEL LANES AS SHOWN ON MAINLINE PLAN & PROFILES AND ACCELERATION/DECELERATION SUMMARIES.
2. 4:1 EMBANKMENT ON THE RICHARDSON HIGHWAY WHEN NOT ADJACENT TO A FRONTAGE RD. OTHERWISE SLOPE CONTROLLED BY DITCH PROFILE. SEE FRONTAGE ROAD TYPICALS.
3. ROTOMILL EXISTING ROADWAY TO A DEPTH OF 5 INCHES. THE EXISTING PAVEMENT THICKNESS IS ESTIMATED TO BE 3 INCHES BUT MAY BE THICKER IN PATCHED AREAS. ALL PAVEMENT NOT ROTOMILLED IN THESE PATCHES SHALL BE EXCAVATED.
4. FOR "L1" OFFSET IS 35'. FOR "L2" OFFSET IS 43'. SEE PLANS FOR TRANSITION FROM "L1" TO "L2".
5. FOR AREAS WHERE PROFILE IS BELOW EXISTING GROUND, ROTOMILL 5" BELOW PROFILE GRADE POINT. IF EXISTING SUBBASE IS ENCOUNTERED WITHIN THE 5" DEPTH EXCAVATE SUBBASE INSTEAD OF ROTOMILL.
6. FOR AREAS WHERE EXISTING GROUND IS BELOW PROFILE USE D-1 TO BOTTOM OF PROPOSED ATB LAYER. USE OF D-1 IS SUBSIDIARY TO PAY ITEM 306 (1).

RICHARDSON HIGHWAY REPAVE



RICHARDSON HIGHWAY REPAVE WITH ACCELERATION/DECELERATION LANES

TYPICAL SECTIONS

STATE OF ALASKA 49TH
DUSTIN CORY HANNAFIOUS
NO. CE14065
REGISTERED PROFESSIONAL ENGINEER

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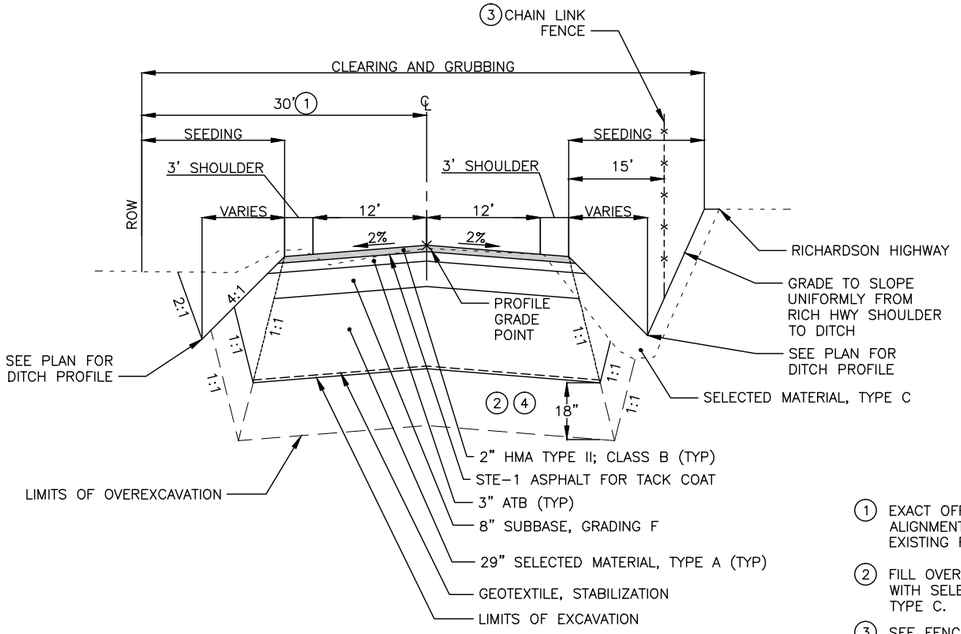
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	B2	B3

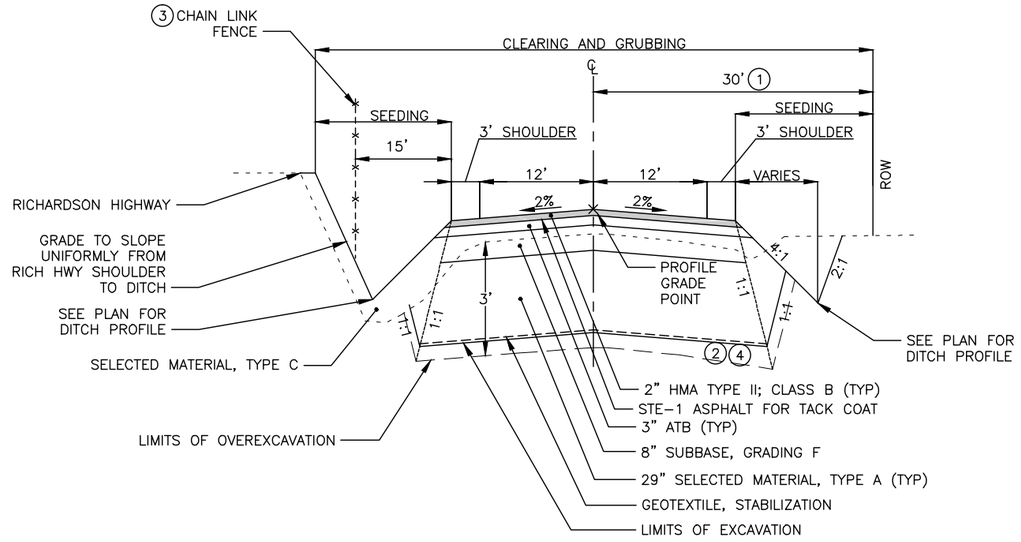


NORTH FRONTAGE ROAD

"NF" STA 353+25 – 409+00

EXCAVATE 18" BELOW BOTTOM OF PAVEMENT STRUCTURE FOR THE FOLLOWING STATION RANGES:
"NF" STA 378+00 – 388+00

1. EXACT OFFSETS FROM CENTERLINE ALIGNMENT TO BE DETERMINED FROM EXISTING RIGHT OF WAY MONUMENTS.
2. FILL OVEREXCAVATED AREAS WITH SELECTED MATERIAL, TYPE C.
3. SEE FENCE SUMMARY ON SHEET D2.
4. TRANSITION FROM OVEREXCAVATION DEPTH TO TYPICAL DEPTH AT A 4:1 SLOPE.



SOUTH FRONTAGE ROAD

"SF" STA 372+67 – 496+72
EXCAVATE 3' BELOW EXISTING GROUND FOR THE FOLLOWING STATION RANGES:
"SF" STA 407+00 – 420+00
"SF" STA 453+00 – 462+00
"SF" STA 465+00 – 470+00
"SF" STA 491+00 – 495+00

TYPICAL SECTIONS

STATE OF ALASKA 49TH
DUSTIN CORY HANNAFIOUS
NO. CE14065
REGISTERED PROFESSIONAL ENGINEER

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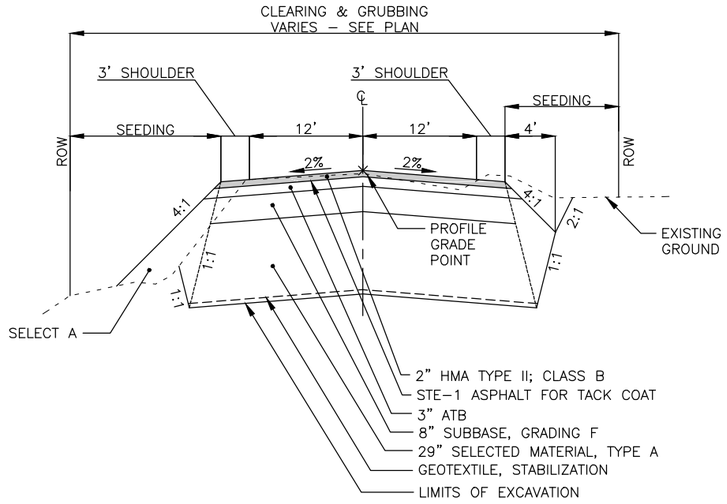
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	B3	B3

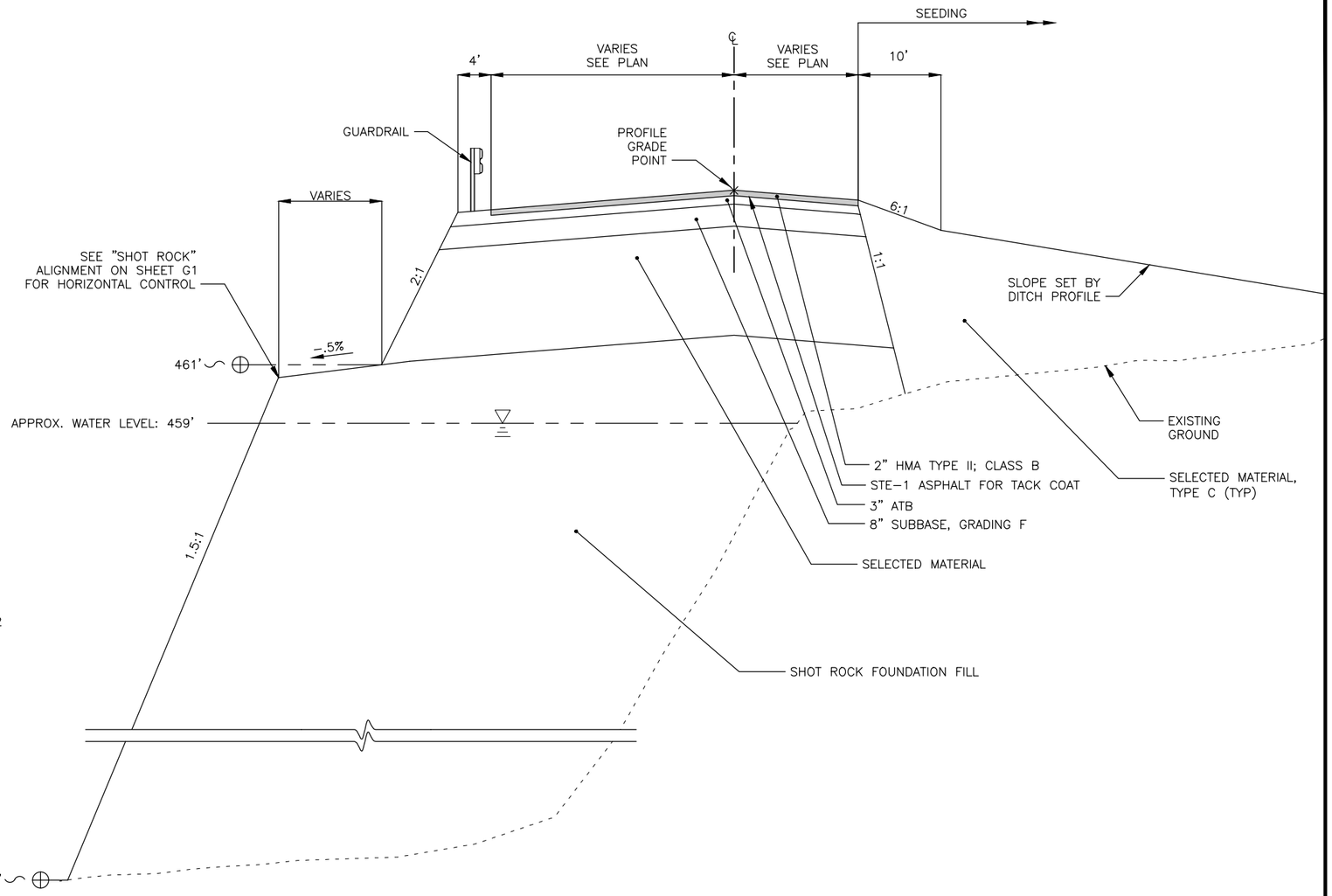


OLD RICHARDSON CONNECTOR
DOSCH AVENUE
SIDE STREETS

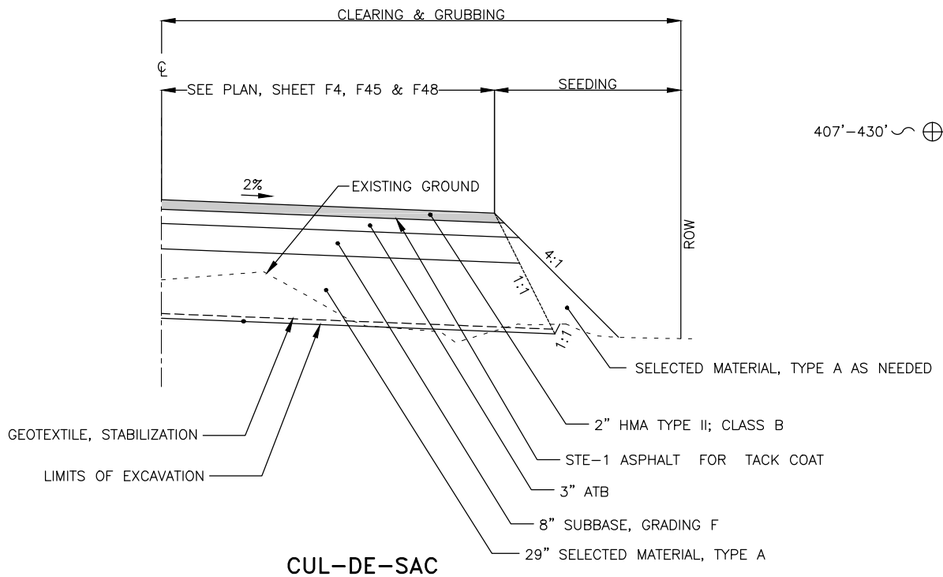
"MD" STA 418+21 – 421+45
"OR" STA 6+00 – 17+67
*"DH" STA 1+62 – 6+97
"LA" STA 0+00 – 2+42
"ND" STA 0+65 – 2+99
"SD" STA 0+00 – 1+78
"BY" STA 0+00 – 2+32
"EP" STA 0+00 – 1+60
"SR" STA 0+00 – 1+58
"RZ" STA 0+00 – 2+43
"RW" STA 0+68 – 1+52

EXCAVATE 3' BELOW EXISTING GROUND FOR THE FOLLOWING STATION RANGES:
"OR" STA 9+50 – 18+50
"DH" STA 1+00 – 5+00

* "DH" STA 6+97 – 15+26:
ROTOMILL EXISTING ROADWAY TO A DEPTH OF 5 INCHES. THE EXISTING PAVEMENT THICKNESS IS ESTIMATED TO BE 2 INCHES BUT MAY BE THICKER IN PATCHED AREAS. ALL PAVEMENT NOT ROTOMILLED IN THESE PATCHES SHALL BE EXCAVATED.



NORTH FRONTAGE ROAD AT POND
"NF" STA 409+00 – 413+00



CUL–DE–SAC

STATE OF ALASKA
49 TH
DUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER

TYPICAL SECTIONS

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STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	C1	C1

ESTIMATE OF QUANTITIES

ITEM NO.	ITEM	PAY UNIT	QUANTITY
201 (3A)	CLEARING AND GRUBBING	ACRE	66
202 (1)	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LUMP SUM	ALL REQUIRED
202(10)	SINGLE MAIL BOX INSTALLATION	EACH	5
202(12)	DOUBLE MAIL BOX INSTALLATION	EACH	31
202 (19)	REMOVAL OF PAVEMENT	LUMP SUM	ALL REQUIRED
203 (3A)	UNCLASSIFIED EXCAVATION	CUBIC YARD	181,200
203 (6)	BORROW	TON	370,000
203 (108)	OBLITERATION OF ROADWAY	SQUARE YARD	14,650
203 (120)	SHOT ROCK FOUNDATION FILL	CUBIC YARD	15,100
304 (1)	SUBBASE, GRADING F	TON	65,000
306 (1)	ATB	TON	44,500
306 (2)	ASPHALT BINDER, GRADE 52–28	TON	2,025
401 (1)	HMA, TYPE II; CLASS B	TON	28,600
401 (4)	ASPHALT BINDER, GRADE 52–40	TON	1,600
401 (8)	HMA PRICE ADJUSTMENT, TYPE II, CLASS B	CONTINGENT SUM	ALL REQUIRED
401 (12)	HMA, DRIVEWAY, TYPE II; CLASS B	TON	870
401 (15)	ASPHALT MATERIAL PRICE ADJUSTMENT	CONTINGENT SUM	ALL REQUIRED
402 (1)	STE–1 ASPHALT FOR TACK COAT	TON	64
603 (1–18)	18 INCH CSP	LINEAR FOOT	1,182
603 (1–24)	24 INCH CSP	LINEAR FOOT	1,674
603 (1–36)	36 INCH CSP	LINEAR FOOT	160
603 (1–72)	72 INCH CSP	LINEAR FOOT	480
603 (3)	END SECTION FOR 72 INCH CSP	EACH	3
606(1)	W–BEAM GUARDRAIL	LINEAR FOOT	403
606(13)	PARALLEL GUARDRAIL TERMINAL	EACH	2
607 (3)	CHAIN LINK FENCE	LINEAR FOOT	26,494
611 (2)	RIPRAP, CLASS I	TON	1,010
613 (2)	CULVERT MARKER POST	EACH	91
615 (1)	STANDARD SIGN	SQUARE FOOT	1250
616 (2)	1/2 INCH DIAMETER THAW PIPE	EACH	3
618 (2)	SEEDING	POUND	1200
630 (2)	GEOTEXTILE, STABILIZATION	SQUARE YARD	102,400
631 (2)	GEOTEXTILE, EROSION CONTROL, CLASS I	SQUARE YARD	635
639 (1)	RESIDENCE DRIVEWAY	EACH	7
639 (2)	COMMERCIAL DRIVEWAY	EACH	31
640 (1)	MOBILIZATION AND DEMOBILIZATION	LUMP SUM	ALL REQUIRED
641 (1)	EROSION, SEDIMENT AND POLLUTION CONTROL ADMINISTRATION	LUMP SUM	ALL REQUIRED
641 (3)	TEMPORARY EROSION, SEDIMENT AND POLLUTION CONTROL	LUMP SUM	ALL REQUIRED
641 (4)	TEMPORARY EROSION, SEDIMENT AND POLLUTION CONTROL ADDITIVES	CONTINGENT SUM	ALL REQUIRED
641 (6)	WITHHOLDING	CONTINGENT SUM	ALL REQUIRED
641 (7)	SWPPP MANAGER	LUMP SUM	ALL REQUIRED

ESTIMATE OF QUANTITIES

ITEM NO.	ITEM	PAY UNIT	QUANTITY
642 (1)	CONSTRUCTION SURVEYING	LUMP SUM	ALL REQUIRED
642 (3A)	THREE PERSON SURVEY PARTY	CONTINGENT SUM	ALL REQUIRED
642 (13)	CROSS SECTIONS	LUMP SUM	ALL REQUIRED
643 (2)	TRAFFIC MAINTENANCE	LUMP SUM	ALL REQUIRED
643 (3)	PERMANENT CONSTRUCTION SIGNS	LUMP SUM	ALL REQUIRED
643 (23)	TRAFFIC PRICE ADJUSTMENT	CONTINGENT SUM	ALL REQUIRED
643 (25)	TRAFFIC CONTROL	CONTINGENT SUM	ALL REQUIRED
643 (33)	PUBLIC INFORMATION	LUMP SUM	ALL REQUIRED
644 (1)	FIELD OFFICE	LUMP SUM	ALL REQUIRED
644 (2)	FIELD LABORATORY	LUMP SUM	ALL REQUIRED
644 (6)	VEHICLES	LUMP SUM	ALL REQUIRED
644 (15)	NUCLEAR TESTING EQUIPMENT STORAGE SHED	EACH	1
645 (1)	TRAINING PROGRAM, 3 TRAINEES/APPRENTICES	LABOR HOUR	1,500
646 (1)	CPM SCHEDULING	LUMP SUM	ALL REQUIRED
660 (3)	HIGHWAY LIGHTING SYSTEM COMPLETE	LUMP SUM	ALL REQUIRED
661 (1)	LOAD CENTER, TYPE 1	EACH	4
670 (100)	MMA PAVEMENT MARKINGS LONGITUDINAL SURFACE APPLIED	LINEAR FOOT	134,300
670 (106)	MMA PAVEMENT MARKINGS ONLY AND ARROW INLAID	EACH	63
670 (107)	MMA TRANSVERSE MARKINGS INLAID	SQUARE FOOT	675

ESTIMATING FACTORS

ITEM NUMBER	ITEM	FACTOR
203 (6)	BORROW	2 TONS / CUBIC YARD
304 (2)	SUBBASE, GRADING F	2 TONS / CUBIC YARD
306 (1)	ATB	2 TONS / CUBIC YARD
306 (2)	ASPHALT BINDER, GRADE 52–28	4.5% OF TOTAL WEIGHT OF 306 (1)
401 (1)	HMA, TYPE II; CLASS B	148 LBS / CUBIC FOOT
401 (4)	ASPHALT BINDER, GRADE 52–40	5.5% OF TOTAL WEIGHT OF 401 (1)
402 (1)	STE–1 ASPHALT FOR TACK COAT	.00024 TON/SY
611 (2–1)	RIPRAP, CLASS I	1.75 TONS / CUBIC YARD

ESTIMATED LUMP SUM QUANTITIES

ITEM NUMBER	ITEM	FACTOR
202(19)	REMOVAL OF PAVEMENT	182,000 SQUARE YARDS

STATE OF ALASKA 49TH
DUSTIN CORY HANNAFIOUS
NO. CE14065
REGISTERED PROFESSIONAL ENGINEER

QUANTITIES

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STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	D1	D2

SUPERELEVATION TABLE

	SUPERELEVATION RATE (%)	RADIUS OF CURVE (FT)	BEGIN TRANSITION	BEGIN FULL SUPERELEVATION	END FULL SUPERELEVATION	END TRANSITION
"NF"	6.0	510	404+49.56	406+12.23	407+31.78	408+94.45
"SF"	6.0	510	405+62.22	407+85.89	409+13.56	411+37.23
"SF"	6.0	510	414+65.79	416+89.45	418+17.13	420+40.80
"SF"	6.0	510	449+30.99	451+54.66	452+82.33	455+06.00
"SF"	6.0	510	458+34.56	460+58.23	461+85.90	464+09.57
"OR"	5.9	600	6+85.58	7+48.06	16+21.42	16+83.89
"DH"	5.8	350	1+47.13	2+88.34	5+26.07	6+67.27

DECELERATION LANE SUMMARY

LT	RT	BEGIN TAPER	BEGIN FULL WIDTH	END DECEL LANE	REMARKS
X		"L1" 381+61	"L1" 379+11	"L1" 373+11	ONE DECEL LANE
	X	"L1" 401+80	"L1" 404+30	"L1" 410+11	TWO DECEL LANES
X		"L1" 420+64	"L1" 416+14	"L1" 412+27	TWO DECEL LANES
	X	"L1" 445+23	"L1" 447+73	"L1" 453+54	TWO DECEL LANES
X		"L1" 464+07	"L1" 461+57	"L1" 455+62	TWO DECEL LANES
	X	"L1" 484+54	"L1" 487+04	"L2" 493+09	ONE DECEL LANE

ACCELERATION LANE SUMMARY

LT	RT	BEGIN ACCEL LANE	END FULL WIDTH	END TAPER	REMARKS
	X	"L1" 372+40	"L1" 388+43	"L1" 391+43	SINGLE ACCEL LANE
X		"L1" 410+17	"L1" 394+30	"L1" 391+30	TWO ACCEL LANES
	X	"L1" 412+33	"L1" 428+73	"L1" 431+14	TWO ACCEL LANES
X		"L1" 453+68	"L1" 437+39	"L1" 434+77	TWO ACCEL LANES
	X	"L1" 455+76	"L1" 471+57	"L1" 474+56	TWO ACCEL LANES
	X	"L1" 493+84	"L1" 509+94	"L2" 512+95	ONE ACCEL LANE

STATE OF ALASKA
49 TH
DUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER

SUMMARY SHEET (1 OF 2)

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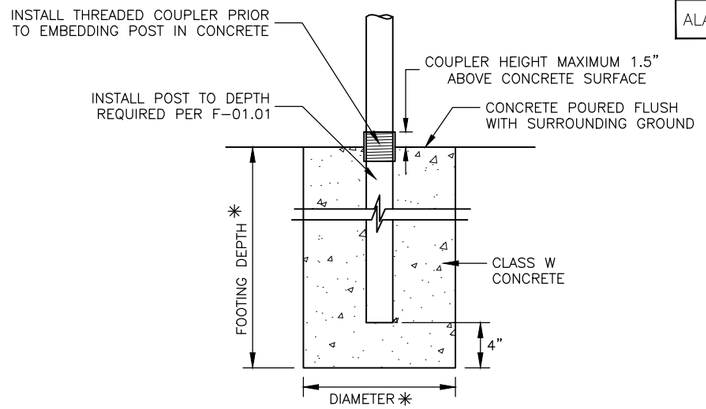
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	D2	D2

FENCE SUMMARY

	START		PI/PC/PT		END			
	STATION	OFFSET	STATION	OFFSET	STATION	OFFSET	LENGTH	REMARKS
NFR								
	"L1" 349+85	146.6' LT	PI "L1" 350+58	90.0' LT	"L1" 372+25	90.0' LT	2,259	
	"L1" 373+11	90.0' LT	PI "L1" 406+68	90.0' LT				
			PI "L1" 407+55	100.0' LT	"L1" 410+70	90.0' LT	3,761	
	"L1" 411+82	100.0' LT	PC "L1" 437+39	100.0' LT				R=5829.578'
			PT "L1" 443+42	100.0' LT	"L1" 454+15	100' LT	4,244	
	"L1" 455+25	100.0' LT			"L1" 470+58	100.0' LT	1,532	
SFR								
	"L1" 349+86	90.0' RT			"L1" 371+60	90.0' RT	2,174	
	"L1" 372+40	90.0' RT			"L1" 410+31	90.0' RT	3,790	
	"L1" 386+50	362.0' RT						
			PI/PC "L1" 386+52	361.1' RT				R=268.0'
			PT "L1" 386+29	251.2' RT				
			PC "L1" 386+29	190.0' RT				R=40.0'
			PT "L1" 386+69	150.0' RT				
			PI "L1" 386+94	150.0' RT				
					"L1" 386+94	149.2' RT		
	PC "L1" 406+76	171.1' RT						R=470.0'
			PT "L1" 407+81	201.0' RT				
			PC "L1" 409+01	180.9' RT				R=31.50'
					409+79	266.0' RT		
	"L1" 412+13	90.0' RT	PC "L1" 437+39	90.0' RT				R=5639.578'
			PT "L1" 443+42	90.0' RT	"L1" 453+74	90.0' RT	4,152	
	"L1" 455+56	90.0' RT	PC "L1" 471+64	90.0' RT				R=5819.578'
			PT "L1" 483+87	90.0' RT				
			PT "L1" 488+06	90.0' RT	"L1" 493+06	94.5' RT	3,769	
DH	"L1" 454+95	662.9' LT						
			PC "L1" 455+31	686.0' LT				R=317.0'
					"L1" 457+35	733.50' LT		
						TOTAL:	26,494	

MAILBOX SUMMARY

STATION	RT	LT	NUMBER OF MAILBOXES	REMARKS
"SF" 375+35		X	10	RELOCATE CLUSTER TO LU ANNE RD
"SF" 385+70		X	53	RELOCATE CLUSTER TO DAVISON ST
"SF" 461+80			14	RELOCATE CLUSTER TO ROZAK
"NF" 372+66		X	1	RELOCATE TO EDGE OF FRONTAGE RD
"L1" 457+70		X	3	RELOCATE CLUSTER TO THE NORTH



CONCRETE FENCE POST SETTING

SUBSTITUTE POST SETTING-THIS ALTERS STANDARD DRAWING F-01.01
✳ INFORMATION FOUND IN TABLE PER STANDARD DRAWING F-01.01

FENCE POST NOTES:

1. USE RIGID GALVANIZED THREADED PIPE OR CONDUIT COUPLER SIZED FOR POST BEING SET.
2. ATTACH COUPLER ONTO BOTTOM STUB AND TACK WELD TO REDUCE SPIN AND ENSURE BOTTOM STUB IS PLUMB, PRIOR TO EMBEDDING IN CONCRETE. THIS WORK IS SUBSIDIARY TO ITEM 607(3).
3. AFTER FOUNDATION HAS CURED, USE AN APPROVED ANTI-SEIZE LUBRICANT ON THREADS OF NEW FENCE POST INSTALLATION SUCH AS PERMATEX 80071

FENCE NOTES:

1. NEW CHAIN LINK FENCE SHALL HAVE A FABRIC HEIGHT OF 8 FEET WITH PIPE STYLE POSTS AS SHOWN IN STANDARD DRAWING F-01.01.
2. SUBSTITUTE CONCRETE POST FOUNDATIONS DETAIL ON STANDARD DRAWING F-01.01 WITH THE CONCRETE POST SETTING FOUNDATION DETAIL ON THIS SHEET. DO NOT INSTALL THE ¼" WEEP HOLE AS SHOWN IN STANDARD DRAWING F-01.01.
3. FOLLOW ALL OTHER REQUIREMENTS OF F-01.01, EXCEPT USE A FOOTING DEPTH OF 60" FOR BOTH END-CORNER-PULL AND LINE BRACE POSTS.
4. FENCE SHALL HAVE PRIVACY SLATS WITH A 75% PRIVACY FACTOR.
5. EXISTING CHAIN LINK FENCE SHALL BE REMOVED AND BECOMES PROPERTY OF THE CONTRACTOR, INCLUDING ALL POSTS, CONCRETE FOUNDATIONS, WIRE MESH AND ALL FITTINGS AND HARDWARE. THIS WORK IS SUBSIDIARY TO 607 ITEMS.
6. EXISTING FOUNDATIONS MAY NOT BE ABANDONED IN PLACE. BACKFILL REMOVED FOUNDATIONS AND GRADE TO MATCH SURROUNDING AREA.

STATE OF ALASKA 49TH
DUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER

SUMMARY SHEET (2 OF 2)

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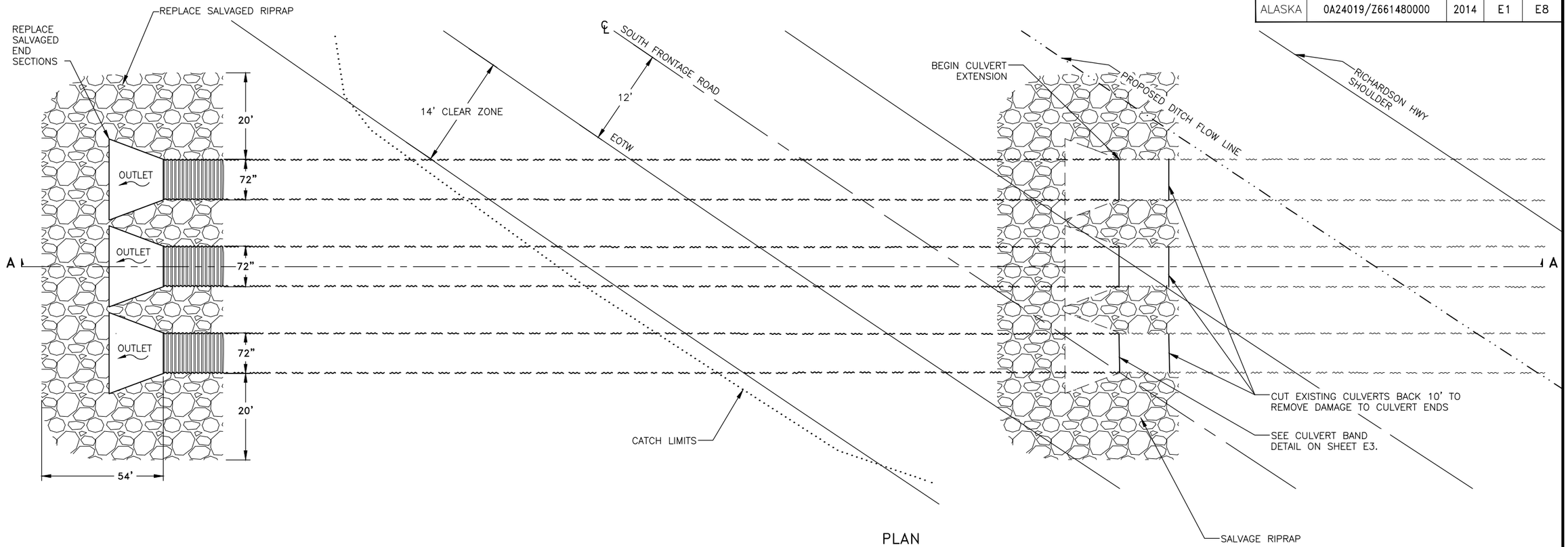
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	E1	E8



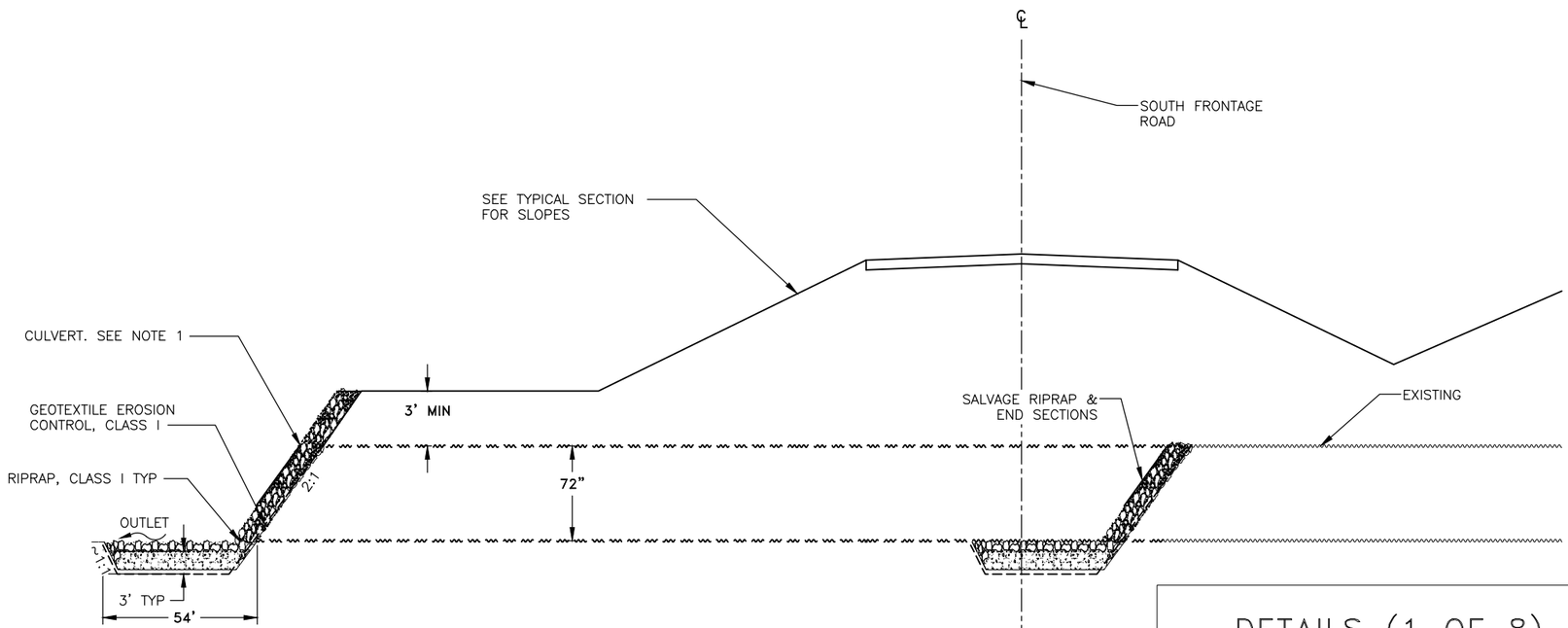
PLAN

NOTE:

SEE SHEET E3 FOR CULVERT BAND DETAIL

CHANNEL "B" CULVERTS

1. EXTEND RIPRAP, CLASS I 3' ABOVE CULVERT.
2. EXCAVATION TO INSTALL RIPRAP IS SUBSIDIARY TO PAY ITEM 611(2-1).
3. EXTEND EACH 72" CULVERT 160'.
4. TEMPORARY REMOVAL AND REINSTALLATION OF EXISTING RIP RAP AND ANY ADDITIONAL MATERIAL TO CONSTRUCT AS SHOWN IS SUBSIDIARY TO 611 PAY ITEMS.



SECTION A-A

STATE OF ALASKA 49TH
DUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER

DETAILS (1 OF 8)

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STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	E2	E8

CULVERT SUMMARY

PIPE NO.	STATION	LT/C/RT	18"	24"	36"	72"	INVERT IN	INVERT OUT	613(2) CULVERT MARKER POST	616(2) 1/2" DIAMETER THAW PIPE	SKEW ANGLE	REMARKS
1	"NF" 357+09	C	60				458.44	458.14	2			
2	"NF" 360+98	C	60				458.70	458.40	2			
3	"NF" 365+18	C	60				458.90	458.60	2			
4	"NF" 373+25	RT	60				459.36	459.06	2			
5	"NF" 374+50	C		60			459.75	459.75	2			
6	"NF" 379+66	C	60				459.76	459.46	2			
7	"NF" 387+61	C		64			460.08	459.76	2			
8	"NF" 394+06	C	62				460.36	460.05	2			
9	"NF" 396+75	C	60				461.67	461.38	2			
10	"NF" 412+67	C		70			461.34	460.99	2			
11	"SF" 373+61	LT		50			459.08	459.08	2			
12	"SF" 376+50	C		62			459.40	459.09	2			
13	"SF" 381+00	C	60				459.85	459.55	2			
14	"SF" 384+03	C	64				460.60	460.28	2			
15	"SF" 391+14	C	60				461.02	460.72	2			
16	"SF" 405+04	C		64			461.75	461.20	2			
17	"SF" 408+76	C	60				461.71	461.41	2			
18	"SF" 413+00	LT		76			462.15	461.77	2			
19	"SF" 417+26	C	58				462.57	462.44	2			
20	"SF" 423+92	C		60			463.00	462.68	2			
21	"SF" 429+51	C	56				463.18	462.90	2			
22	"SF" 434+65	C	60				464.20	463.90	2			
23	"SF" 439+55	C			74		461.59	461.23	2		27° LHF	
24	"SF" 448+48	C	60				466.45	466.15	2			
25	"SF" 456+69	LT		86			466.36	466.39	2			
26	"SF" 467+23	C	58				466.96	466.67	2			
27	"SF" 478+63	C	62				467.11	466.80	2			
28	"SF" 483+76	C				480	461.88 461.86 461.82		3	3	57° LHF	EXTEND (3) EXISTING 72" CULVERTS. REUSE RIP RAP. SEE SHEET E1 FOR CHANNEL B CULVERTS DETAIL.
29	"SF" 492+88	C	60				467.63	467.33	2			
30	"SF" 496+03	LT		82			470.45	471.39	2			
31	"OR" 12+44	C		62			466.50	466.36	2			
32	"OR" 12+50	C		62			466.41	466.22	2			
33	"OR" 15+25	C	52				467.06	466.80	2			
34	"OR" 15+68	LT	50				467.50	467.24	2			
35	"OR" 18+19	C			86		467.03	466.51	2			
36	"DH" 2+00	C		52			467.14	466.60	2			
37	"L1" 380+00	C		70			461.71	461.35	2			
38	"L1" 387+00	C		84			460.08	459.77	2		7° LHF	
39	"L1" 400+50	C LT		96			461.32	461.06	1		12° RHF	
40	"L1" 400+50	C RT		72			461.32	461.13	1		12° RHF	
41	"L1" 417+00	C LT		76			464.24	463.92	1		3° LHF	
42	"L1" 417+00	C RT		82			464.20	463.89	1		3° LHF	
43	"L1" 427+00	C LT		76			463.94	462.13	1		3° RHF	
44	"L1" 427+00	C RT		104			462.91	462.89	1		3° RHF	
45	"L1" 461+50	C LT		82			467.84	467.66	1		5° RHF	
46	"L1" 461+50	C RT		82			467.84	467.66	1		5° RHF	
		TOTAL:	1182	1674	160	480			91			

CULVERT NOTES:

1. CULVERT LENGTH, SKEW, AND LOCATION ARE SUBJECT TO MINOR REVISIONS BY THE ENGINEER.
2. MINIMUM ALLOWABLE CULVERT CROSS SLOPE IS 0.5%.
3. INSTALL NEW CULVERTS 60" IN DIAMETER AND SMALLER ACCORDING TO STANDARD DRAWING D-01.02 INSTALLATION TYPE "C" EXCEPT STRUCTURE EXCAVATION SHALL NOT BE MEASURED FOR PAYMENT AND IS SUBSIDIARY TO 203 AND 603 PAY ITEMS.
4. INSTALL CULVERT END SECTIONS PER STANDARD DRAWING D-06.10. TOE PLATE EXTENSIONS ARE NOT REQUIRED.
5. INSTALL THAW PIPES AT LOCATIONS SHOWN IN THE SUMMARY ACCORDING TO DETAILS ON SHEET E2.
6. NEW CULVERT MARKER POSTS MUST BE INSTALLED ON CULVERTS AS SHOWN IN THE SUMMARY.
7. REMOVAL OF EXISTING CULVERTS SHALL BE SUBSIDIARY TO 603 PAY ITEMS.
8. USE .064 GAGE STEEL FOR ALL 18", 24" AND 36" CULVERTS. USE .138" GAGE STEEL FOR ALL 72" CULVERTS.

STATE OF ALASKA 49TH
DUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER

DETAILS (2 OF 8)

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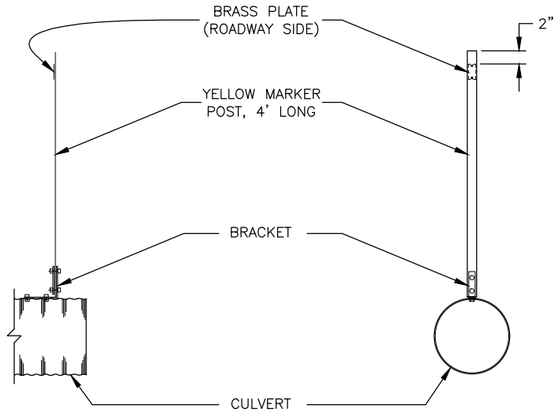
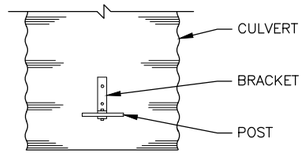
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	E3	E8



SIDE VIEW

END VIEW

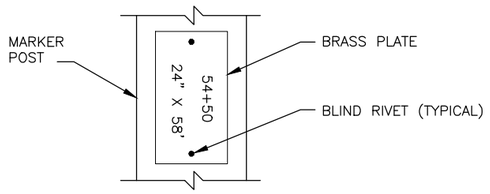


TOP VIEW

CULVERT MARKER POSTS NOTES:

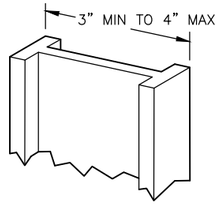
1. MARKER POSTS ARE TO BE INSTALLED ON CROSS CULVERTS ONLY.
2. IF CULVERTS ARE CLOSELY SPACED, MARK ONLY THE FIRST AND LAST CULVERT IN SERIES AS APPROVED BY THE ENGINEER.
3. DRILL ALL BOLT HOLES. COAT HOLES WITH ZINC RICH PAINT. FLAME CUTTING SHALL NOT BE PERMITTED.
4. GASKET MATERIAL SHALL BE PLACED BETWEEN DISSIMILAR METALS. GASKET MATERIAL SHALL BE APPROVED PRIOR TO INSTALLATION.
5. STATION STAMPS ON BRASS PLATES TO BE PER INSTALLED LOCATION AND NOT NECESSARILY THE LOCATION INDICATED ON THE PLANS.

CULVERT MARKER POST DETAIL

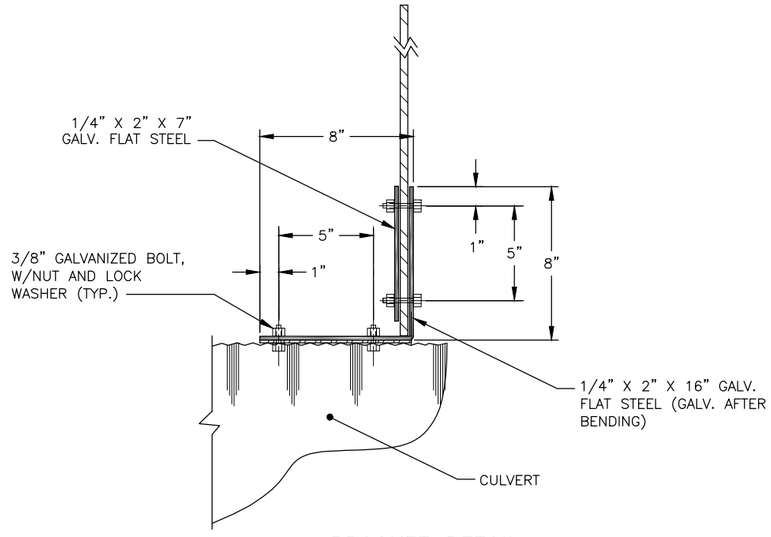


STAMP STATION AND PIPE SIZE, USING 3/8" HIGH MINIMUM LETTERS INTO A 2"X4"X 0.064" THICK BRASS PLATE. FASTEN PLATE TO THE SIDE FACING THE ROADWAY WITH TWO 1/8" DIAMETER BLIND RIVETS.

BRASS PLATE DETAIL

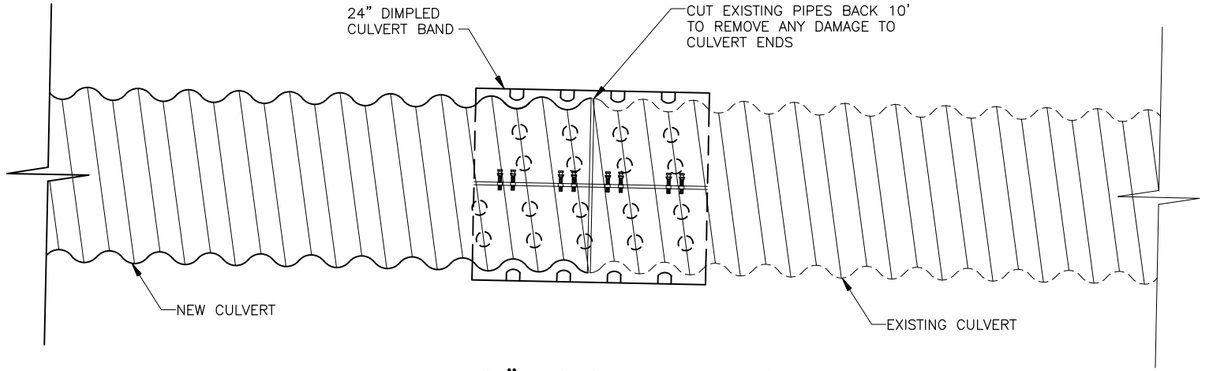


POST DETAIL



BRACKET DETAIL

CULVERT MARKER POST DETAILS



72" CULVERT BAND DETAIL

DETAILS (3 OF 8)

STATE OF ALASKA
49TH
DUSTIN CORY HANNAFIOUS
NO. CE14065
REGISTERED PROFESSIONAL ENGINEER

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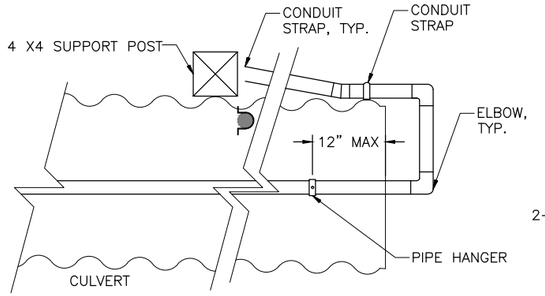
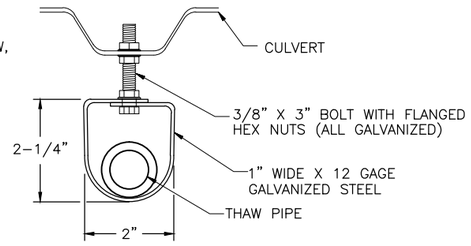
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	E4	E8

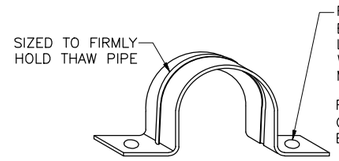


THAW PIPE TOP VIEW
N.T.S.

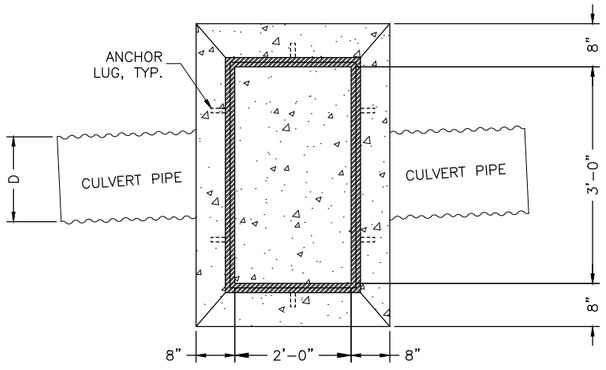


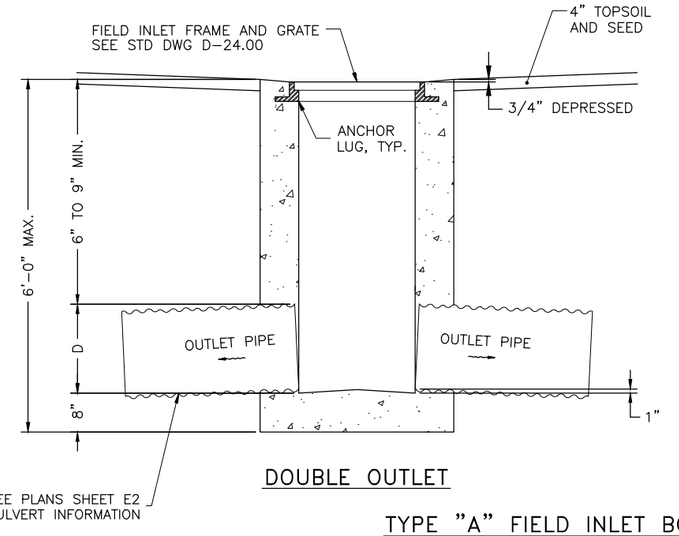
THAW PIPE HANGER DETAIL

TOP SUPPORT POST–ALIGN TOP WITH EDGE OF SHOULDER OR TO A MAXIMUM HEIGHT OF 5', WHICH EVER IS LESS.

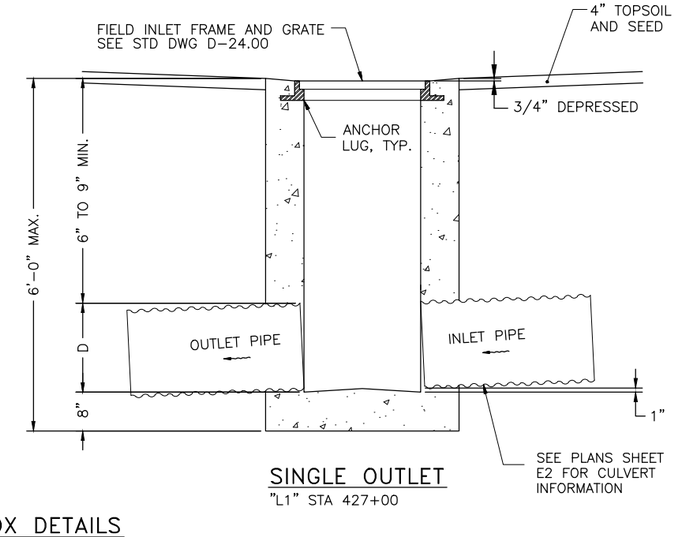


GALVANIZED RIGID CONDUIT STRAP DETAIL





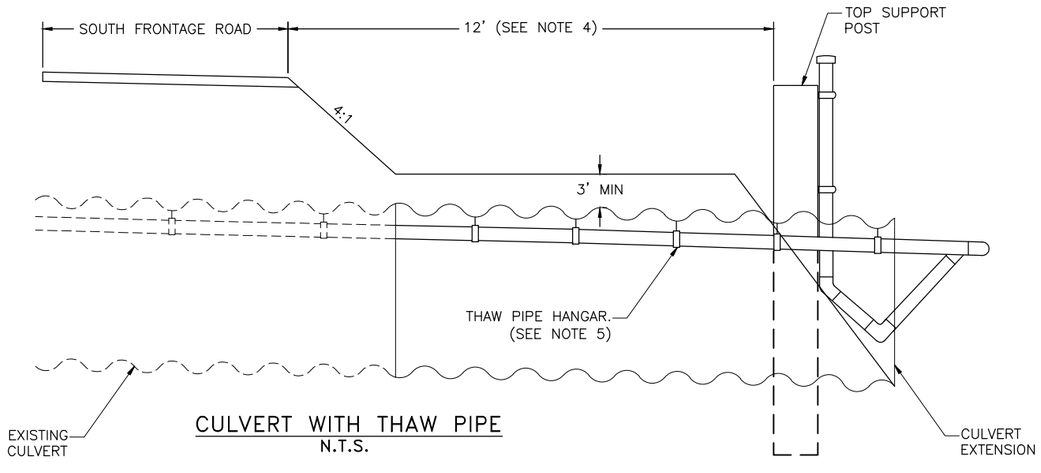
DOUBLE OUTLET



SINGLE OUTLET
"L1" STA 427+00

TYPE "A" FIELD INLET BOX DETAILS

* MAY BE PRECAST OR REINFORCED CAST–IN–PLACE BOX.



CULVERT WITH THAW PIPE
N.T.S.

THAW PIPE NOTES:

1. THAW PIPE TO BE PLACED ONLY ON CHANNEL B CULVERT EXTENSIONS.
2. THESE THAW PIPES ARE INTENDED FOR USE IN STEAM THAWING.
3. USE ½" I.D. ASTM A53 GALVANIZED PIPE AND FITTINGS TO MATCH.
4. WHEN THE HEIGHT OF FILL EXCEEDS 5' LOCATE THE SUPPORT POST ON THE SIDE SLOPE 12' FROM THE SHOULDER.
5. FASTEN THE THAW PIPE TO THE TOP OF THE CULVERT WITH THAW PIPE HANGERS ON 4' CENTERS MAX. THE MAXIMUM DISTANCE FROM END OF CULVERT TO FIRST PIPE HANGER IS 12 INCHES.
6. USE PRESSURE TREATED SUPPORT POSTS OF HEM–FIR, NO. 2 OR BETTER. USE AMMONIACAL COPPER ZINC ARSENATE (ACZA) OR CHROMATED COPPER ARSENATE (CCA) PRESERVATIVES ON SUPPORT POSTS. PRESSURE TREAT IN ACCORDANCE WITH AASHTO M133.
7. FASTEN THAW PIPE TO SUPPORT POSTS WITH GALVANIZED RIGID CONDUIT STRAPS AND 3" LONG GALVANIZED LAG SCREWS AT MAX. 12" CENTERS, IF MORE THAN ONE IS REQUIRED.
8. FILL THAW PIPE WITH A MINUS 60° FAHRENHEIT MIX OF RV ANTIFREEZE AND WATER, THEN CAP.

FIELD INLET BOX NOTES:

1. CAST IN PLACE CONCRETE INLET BOX SHALL BE CLASS "W" CONCRETE.
2. CONCRETE INLET BOX DEPTH AND LOCATION SHOWN ON PLAN SHEETS.
3. SHAPE FLOORS TO DRAIN.
4. CONCRETE INLET BOX SHALL BE PARALLEL TO ROADWAY CENTERLINE UNLESS DIRECTED OTHERWISE BY THE ENGINEER.

DETAILS (4 OF 8)

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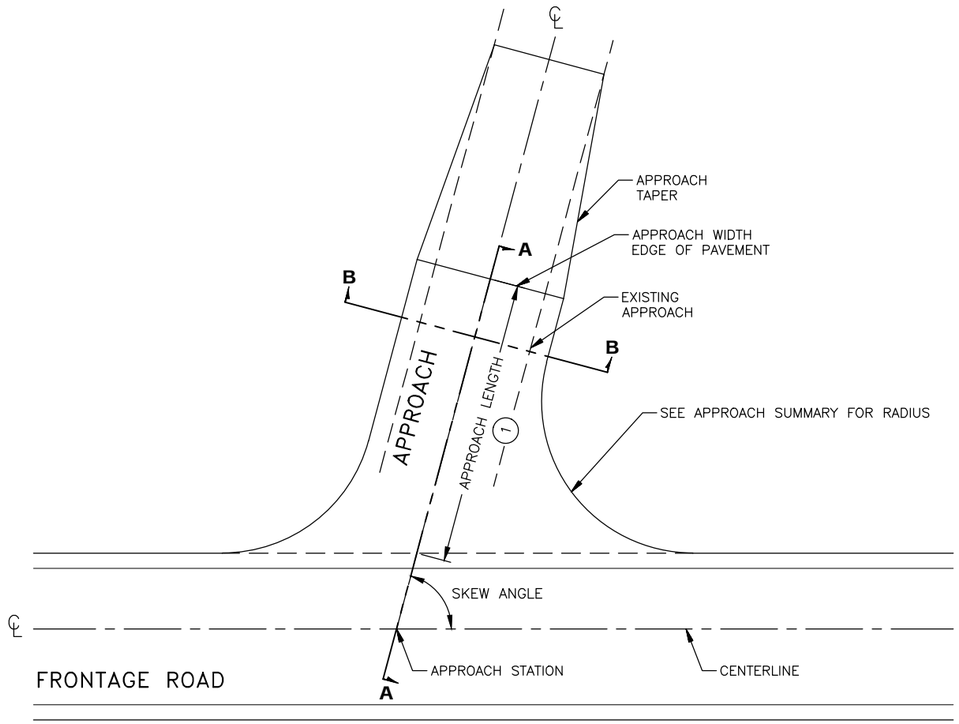
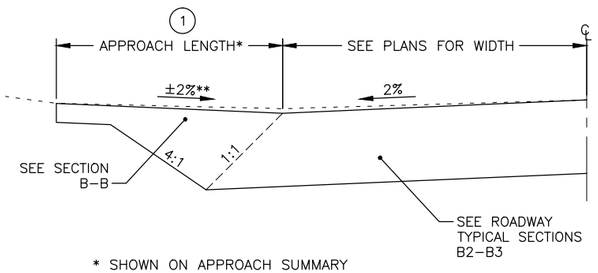
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	E5	E8

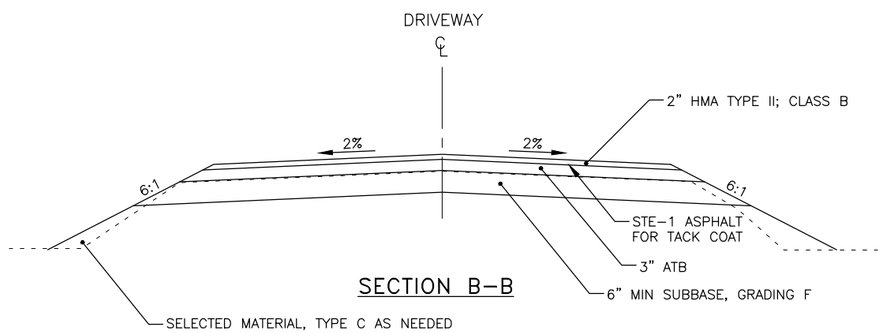




* SHOWN ON APPROACH SUMMARY

** APPROACH GRADE TO MATCH EXISTING, VARIES –2% TO 2%

SECTION A–A



SECTION B–B

APPROACH SUMMARY

SHEET	STATION	OFFSET	WIDTH (FT)	LENGTH (FT)	DESIGN RADIUS	SKEW ANGLE	REMARKS
F27	"NF" 352+10	10.2' LT	24'	15'	20'		COMMERCIAL
	"NF" 354+78	LT	24'	37'	20'		COMMERCIAL
	"NF" 356+26	LT	24'	86'	20'		COMMERCIAL
	"NF" 358+54	LT	24'	34'	20'		COMMERCIAL
	"NF" 363+78	LT	30'	67'	40'		COMMERCIAL
F28	"NF" 366+66	LT	20'	40'	20'		COMMERCIAL
	"NF" 373+20	LT	30'	70'	40'	11°	COMMERCIAL
F29	"NF" 377+10	LT	30'	40'	40'		COMMERCIAL
	"NF" 383+52	LT	20'	20'	20'		RESIDENTIAL
	"NF" 386+36	LT	24'	30'	20'		COMMERCIAL
F30	"NF" 390+26	LT	20'	20'	20'		RESIDENTIAL
	"NF" 394+84	LT	30'	40'	40'		COMMERCIAL
	"NF" 399+45	LT	30'	80'	50'		COMMERCIAL
F33	"SF" 374+55	RT	25'	16'	20'		COMMERCIAL
	"SF" 377+57	RT	18'	17'	10' LT, 20' RT	26°	COMMERCIAL
	"SF" 379+25	RT	30'	62'	25'		COMMERCIAL
	"SF" 381+76	RT	30'	53'	25'		COMMERCIAL
F34	"SF" 390+31	RT	24'	45'	25'		COMMERCIAL
	"SF" 398+49	RT	30'	56'	50'		COMMERCIAL
F35	"SF" 410+76	RT	24'	25'	25'		COMMERCIAL
F36	"SF" 415+80	RT	24'	32'	20'		RESIDENTIAL
	"SF" 422+16	RT	30'	44'	20'		COMMERCIAL
	"SF" 426+06	RT	20'	42'	20'		RESIDENTIAL
F37	"SF" 432+65	RT	30'	49'	25'		COMMERCIAL
	"SF" 436+43	RT	24'	43'	25'		COMMERCIAL
F38	"SF" 449+86	RT	30'	38'	25'		COMMERCIAL
	"SF" 456+70	RT	20'	37.5'	20'		RESIDENTIAL
F41	"SF" 493+94	RT	30'	95'	50'		COMMERCIAL
	"SF" 496+07	RT	30'	69'	50'		COMMERCIAL
F43	"MD" 419+24	LT	24'	24'	20'		RESIDENTIAL
F44	"OR" 12+88	RT	30'	74'	40'		COMMERCIAL
F45	"DH" 3+35	LT	34'	63'	40'	31'	COMMERCIAL
	"DH" 7+24	RT	14'	30'	20'		COMMERCIAL
	"DH" 16+02	RT	30'	33'	20'		COMMERCIAL
F46	"ND" 1+95	RT	20'	29'	20'		RESIDENTIAL
	"SD" 1+83	LT	24'	78'	40'	85.6'	COMMERCIAL
F47	"EP" 0+57	LT	20'	26'	20'		COMMERCIAL
	"SR" 0+34	LT	24'	31'	20' LT, 40' RT	6.5°	COMMERCIAL

NOTES:

(1) APPROACH LENGTH IS FROM PROJECTED ROAD SHOULDER TO EDGE OF PAVEMENT.

DETAILS (5 OF 8)

STATE OF ALASKA 49TH
DUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER

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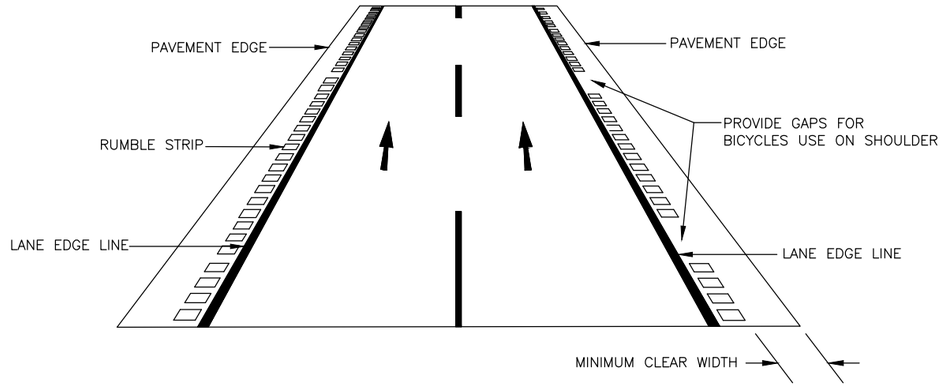
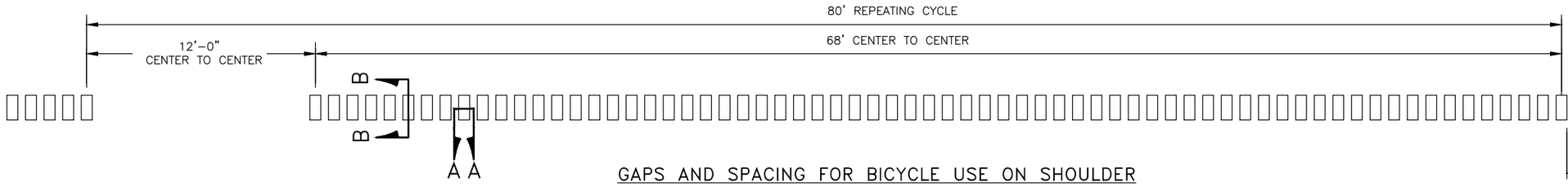
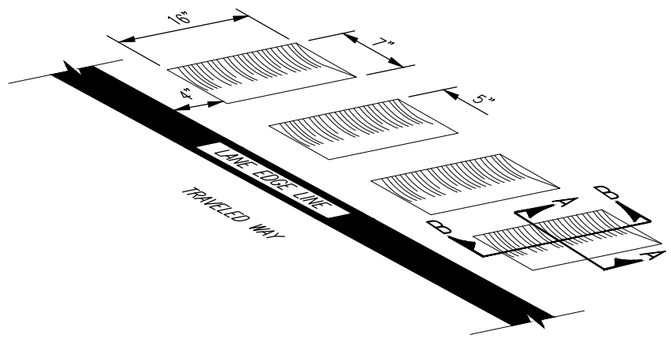
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	E6	E8

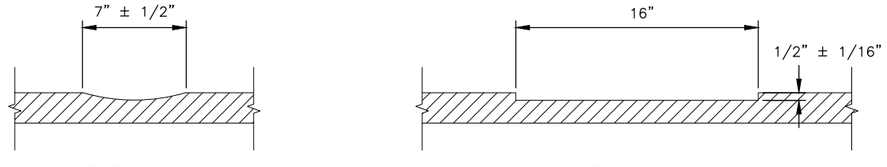


TYPICAL MAINLINE SHOULDER INSTALLATION
PERSPECTIVE VIEW



GAPS AND SPACING FOR BICYCLE USE ON SHOULDER





SECTION A–A SECTION B–B

TYPICAL SHOULDER INSTALLATION DETAIL

SHOULDER RUMBLE STRIP NOTES:

1. USE CENTERLINE, RATHER THAN LANE EDGE LINES, FOR RUMBLE STRIP ALIGNMENT CONTROL WHENEVER POSSIBLE. REMOVE EXISTING STRIPING AND RE–STRIPE ALL LOCATIONS WHERE THE RUMBLE STRIPS OVERLAP EXISTING STRIPING. RUMBLE STRIPS PROTRUDING INSIDE THE SHOULDER STRIPE WILL NOT BE ACCEPTED FOR PAYMENT.
2. ON DIVIDED HIGHWAYS, PROVIDE CONTINUOUS RUMBLE STRIP ON THE INSIDE (LEFT) SHOULDER.
3. CLEAR SHOULDER WIDTHS OUTSIDE OF RUMBLE STRIP AFTER INSTALLATION:
   A. AT LEAST 4' BETWEEN THE EDGE OF RUMBLE AND THE EDGE OF PAVEMENT IN AREAS WITHOUT GUARDRAIL.
   B. AT LEAST 5' (TO FACE OF GUARDRAIL) WHERE GUARDRAIL IS PRESENT (≥ 6.5' AT INITIAL SHOULDER WIDTH).
   C. NO MINIMUM WHERE BICYCLES ARE PROHIBITED.

STATE OF ALASKA 49TH
DUSTIN CORY HANNAFIOUS
NO. CE14065
REGISTERED PROFESSIONAL ENGINEER

DETAILS (6 OF 8)

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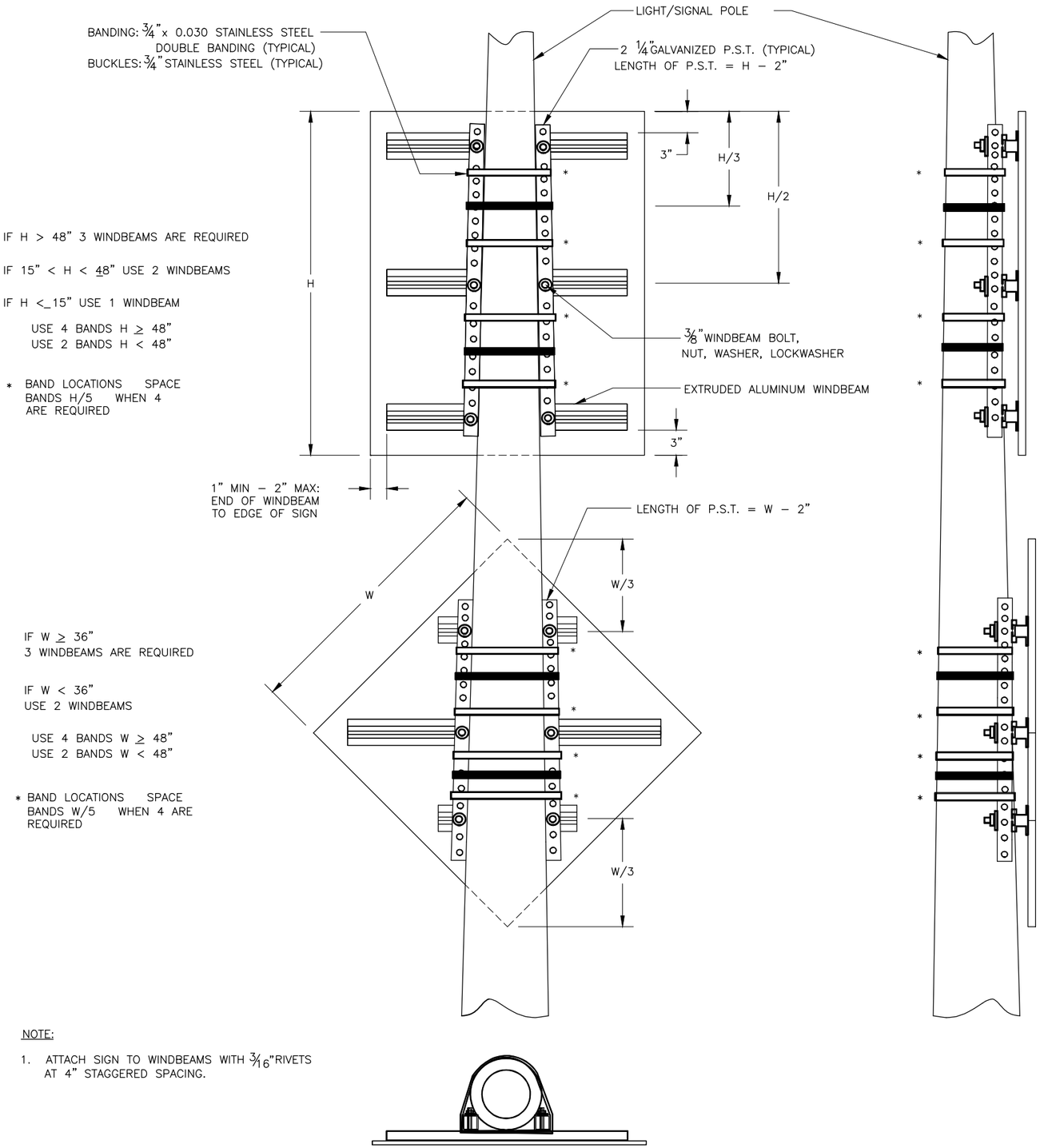
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	E7	E8



IF H > 48" 3 WINDBEAMS ARE REQUIRED

IF 15" < H < 48" USE 2 WINDBEAMS

IF H <_15" USE 1 WINDBEAM

USE 4 BANDS H ≥ 48"
USE 2 BANDS H < 48"

* BAND LOCATIONS SPACE BANDS H/5 WHEN 4 ARE REQUIRED

IF W ≥ 36"
3 WINDBEAMS ARE REQUIRED

IF W < 36"
USE 2 WINDBEAMS

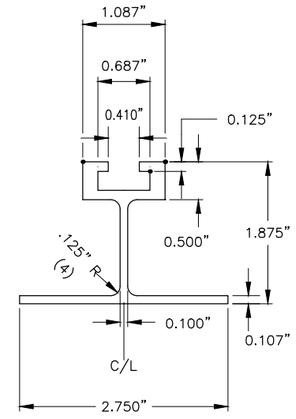
USE 4 BANDS W ≥ 48"
USE 2 BANDS W < 48"

* BAND LOCATIONS SPACE BANDS W/5 WHEN 4 ARE REQUIRED

NOTE:

1. ATTACH SIGN TO WINDBEAMS WITH 3/16" RIVETS AT 4" STAGGERED SPACING.

LIGHT / SIGNAL POLE SIGN FRAMING & MOUNTING DETAILS



NOTES:

1. ALUMINUM ALLOY 6061–T6 SHALL BE USED FOR EXTRUDED WINDBEAM AND RIVETS.
2. ATTACH SIGN TO WINDBEAM WITH 3/16" RIVETS AT 4" STAGGERED SPACING.

EXTRUDED ALUMINUM WINDBEAM

DETAILS (7 OF 8)

STATE OF ALASKA 49TH
DUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER

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STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	E8	E8

606 – GUARDRAIL SUMMARY

(1) BEGIN STATION	(1) END STATION	LT	RT	606 (1) W–BEAM GUARDRAIL (LINEAL FOOT)	606 (13) PARALLEL GUARDRAIL TERMINAL (EACH)
"NF" 408+37.50	"NF" 412+90.25	X		403.3	2
PAY ITEM TOTALS				403.3	2

GUARDRAIL SUMMARY NOTES:

(1) GUARDRAIL LENGTHS AND LOCATIONS ARE APPROXIMATE AND MAY BE ADJUSTED IN THE FIELD BY THE ENGINEER.

GUARDRAIL WIDENING AND INSTALLATION NOTES:

2. GUARDRAIL POSTS LENGTH WILL BE DETERMINED IN ACCORDANCE WITH STANDARD DRAWING G–10.01. ALL WORK AND MATERIALS REQUIRED TO INSTALL GUARDRAIL POSTS ARE SUBSIDIARY TO THE 606 PAY ITEMS.

3. ALL PARALLEL GUARDRAIL TERMINALS TO BE CONSTRUCTED IN ACCORDANCE WITH STANDARD DRAWING G–20.11. THE END OFFSET (X) SHALL BE 2 FEET.

4. USE ATB FROM THE FRONT FACE OF THE POST TO THE HINGE POINT BEHIND THE POST; COMPACT AND GRADE TO MATCH THE TOP SURFACE AND CROSS–SLOPE OF SHOULDER PAVEMENT.

GUARDRAIL MARKER NOTES:

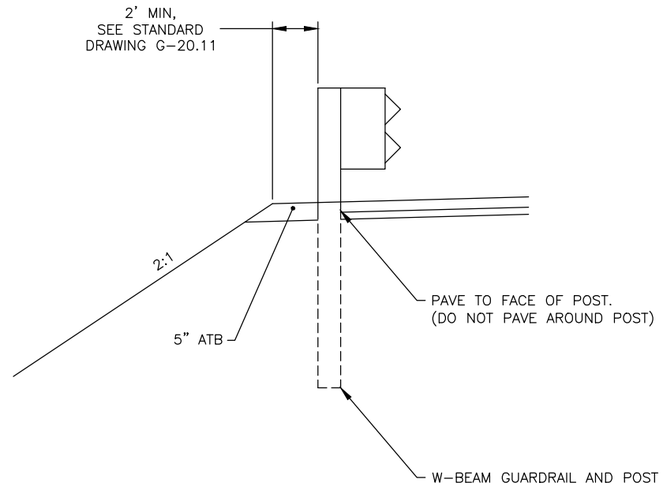
5. GUARDRAIL MARKER POSTS SHALL BE YELLOW, 3" MINIMUM TO 4" MAXIMUM WIDTH AND AT LEAST 78" LONG. POSTS SHALL BE CARSONITE CIB–380, TRAFFICWORKS TW–375, DAVIDSON FLEXI–GUIDE FG 500 FLEXIBLE MARKERS, OR APPROVED EQUAL

6. INSTALL A 3" X 10" PIECE OF HI–INTENSITY, OR BETTER, REFLECTIVE TAPE AT THE TOP OF THE GUARDRAIL MARKER POST. COLOR OF REFLECTIVE TAPE SHALL MATCH COLOR OF ADJACENT EDGE LINE STRIPE. PLACE REFLECTIVE TAPE ON SIDE OF MARKER POST FACING TRAFFIC IN ADJACENT LANE.

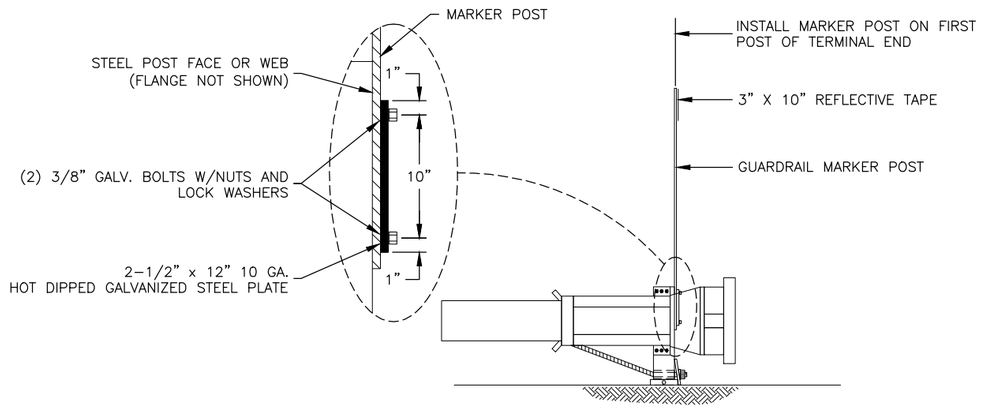
7. DRILL ALL BOLT HOLES. COAT HOLES WITH ZINC RICH PAINT. FLAME CUTTING SHALL NOT BE PERMITTED.

8. ON CONTROLLED RELEASE TERMINALS (CRT), ATTACH GUARDRAIL MARKER POST TO THE GUARDRAIL POST AT THE POINT OF TANGENCY (P.T.) SHOWN ON STANDARD DRAWING G–25.20W.

9. ALL WORK AND MATERIAL REQUIRED TO INSTALL GUARDRAIL MARKER POSTS IS SUBSIDIARY TO 606 PAY ITEMS.



GUARDRAIL WIDENING DETAIL
N.T.S.



GUARDRAIL MARKER POST ATTACHMENT DETAIL
PARALLEL GUARDRAIL TERMINAL
N.T.S.

DETAILS (8 OF 8)

STATE OF ALASKA 49TH
DUSTIN CORY HANNAFIOUS
NO. CE14065
REGISTERED PROFESSIONAL ENGINEER

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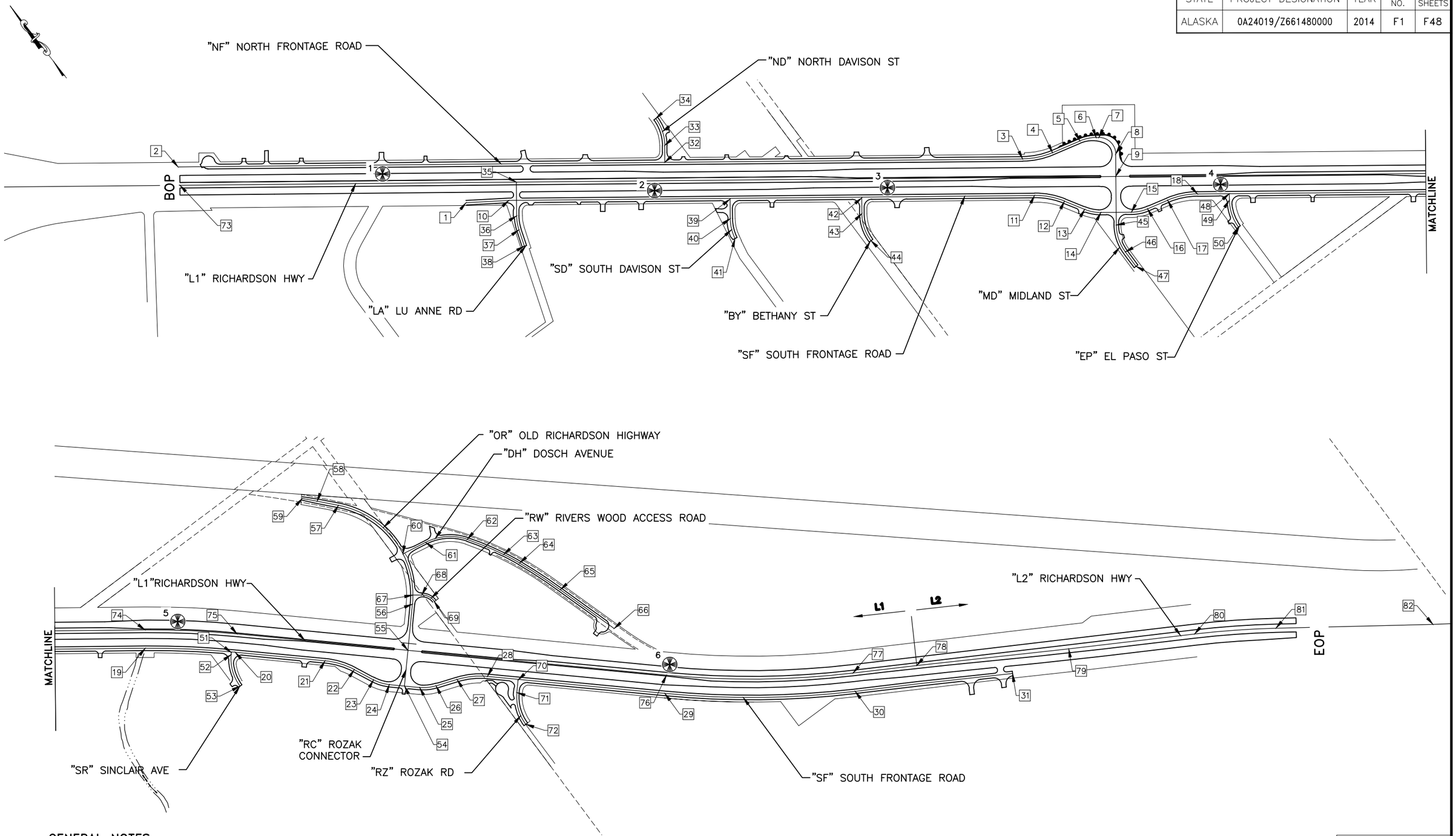
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	F1	F48



GENERAL NOTES

[1] CONTROL POINT, SEE SHEET F2 FOR ALIGNMENT CONTROL TABLES

0 300 600 900 1200 1500
SCALE 1"=300'

ALIGNMENT CONTROL PLAN

STATE OF ALASKA 49TH
DUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER

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STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	F2	F48

ALIGNMENT CONTROL TABLE

POINT #	DESCRIPTION	ALIGNMENT	STATION	NORTHING	EASTING
1	PI	"SF"	370+30.38	3950255.39	1397816.13
2	PI	"NF"	352+90.93	3951599.31	1396476.05
3	PC	"NF"	405+71.57	3948239.34	1400861.64
4	PT	"NF"	407+72.45	3948151.31	1401040.76
5	PC	"NF"	409+67.59	3948101.16	1401229.35
6	PT	"NF"	410+75.91	3948053.69	1401325.93
7	PC	"NF"	410+94.78	3948042.20	1401340.90
8	PT	"NF"	412+65.57	3947889.21	1401359.75
9	PT	"NF"	414+10.57	3947774.11	1401271.56
10	PT	"SF"	372+46.25	3950094.12	1398046.07
11	PC	"SF"	407+49.29	3948003.21	1400775.21
12	PT	"SF"	409+50.16	3947853.18	1400906.83
13	PC	"SF"	410+93.19	3947729.28	1400978.29
14	PT	"SF"	412+01.51	3947648.38	1401049.26
15	PC	"SF"	414+01.51	3947526.75	1401208.03
16	PT	"SF"	415+09.83	3947479.28	1401304.61
17	PC	"SF"	416+52.85	3947442.53	1401442.83
18	PT	"SF"	418+53.73	3947354.50	1401621.95
19	PC	"SF"	439+38.07	3946086.87	1403276.51
20	PT	"SF"	445+27.69	3945704.37	1403724.87
21	PC	"SF"	451+18.06	3945298.14	1404153.25
22	PT	"O2"	453+18.93	3945135.12	1404268.40
23	PC	"SF"	454+61.96	3945004.41	1404326.47
24	PT	"SF"	455+70.28	3944916.51	1404388.56
25	PC	"SF"	457+70.28	3944778.89	1404533.69
26	PT	"SF"	458+78.60	3944721.55	1404624.76
27	PC	"SF"	460+21.63	3944670.50	1404758.36
28	PT	"SF"	462+22.50	3944564.16	1404927.26
29	PC	"SF"	473+88.03	3943762.17	1405772.99
30	PT	"SF"	486+36.30	3943006.04	1406763.21

ALIGNMENT CONTROL TABLE

POINT #	DESCRIPTION	ALIGNMENT	STATION	NORTHING	EASTING
31	PT	"SF"	496+71.79	3942464.12	1407645.56
32	PT	"ND"	0+00.00	3949663.06	1399003.33
33	PC	"ND"	1+09.99	3949750.37	1399070.23
34	PT	"ND"	2+98.45	3949925.15	1399131.99
35	PT	"LA"	4+26.79	3950158.96	1398158.74
36	PC	"LA"	2+06.02	3949983.72	1398024.48
37	PT	"LA"	1+13.00	3949902.36	1397980.17
38	PT	"LA"	0+00.00	3949795.97	1397942.09
39	PT	"SD"	2+67.77	3949214.42	1399194.29
40	PC	"SD"	1+35.37	3949109.32	1399113.77
41	PT	"SD"	0+00.00	3948987.22	1399058.04
42	PT	"BY"	2+97.10	3948690.42	1399878.24
43	PC	"BY"	1+89.32	3948604.86	1399812.69
44	PT	"BY"	0+00.00	3948429.22	1399750.91
45	PC	"MD"	418+39.17	3947521.53	1401078.05
46	PT	"MD"	420+28.53	3947345.85	1401016.27
47	PT	"MD"	421+45.20	3947229.20	1401013.64
48	PT	"EP"	2+32.31	3947228.19	1401786.81
49	PC	"EP"	1+89.25	3947194.01	1401760.62
50	PT	"EP"	0+00.00	3947018.43	1401698.84
51	PT	"SR"	2+37.08	3945721.47	1403706.76
52	PC	"SR"	2+19.48	3945708.64	1403694.70
53	PT	"RC"	1+00.00	3945510.03	1403613.38
54	PT	"RC"	3+35.00	3944847.70	1404461.13
55	PT	"OR"	19+30.64	3945018.22	1404622.83
56	PC	"OR"	16+27.82	3945237.96	1404831.20
57	PT	"OR"	12+88.61	3945535.44	1404984.63
58	PT	"OR"	7+41.66	3946045.58	1404847.67
59	PT	"OR"	6+00.00	3946152.26	1404754.47
60	PT	"DH"	0+00.00	3946227.09	1404688.14

ALIGNMENT CONTROL TABLE

POINT #	DESCRIPTION	ALIGNMENT	STATION	NORTHING	EASTING
61	PC	"DH"	2+67.34	3945503.26	1405148.84
62	PCC	"DH"	5+47.07	3945351.03	1405374.67
63	PCC	"DH"	6+97.07	3945126.90	1405501.78
64	PCC	"DH"	9+23.60	3945018.26	1405549.52
65	PT	"DH"	12+41.76	3944717.27	1405652.31
66	EOP	"DH"	16+76.27	3944300.13	1405773.90
67	PT	"RZ"	0+00.00	3945283.37	1404870.15
68	PC	"RZ"	0+58.60	3945247.49	1404916.48
69	PT	"RZ"	0+00.00	3945165.87	1404955.21
70	PT	"SR"	3+07.52	3944425.04	1405073.97
71	PC	"SR"	2+20.72	3944362.06	1405014.25
72	PT	"SR"	0+00.00	3944162.56	1404932.01
73	BOP	"L1"	339+73.60	3951497.13	1396412.11
74	PC	"L1"	437+39.37	3946182.13	1403349.49
75	PT	"L1"	443+41.60	3945791.44	1403807.44
76	PC	"L1"	471+64.07	3943849.31	1405855.48
77	PT	"L1"	483+86.83	3943108.63	1406825.47
78	PI	"L1/L2"	488+06.30	3942891.00	1407184.07
79	PI	"L2"	498+05.56	3942364.41	1408034.55
80	PC	"L2"	506+32.67	3941935.34	1408741.66
81	PT	"L2"	511+67.44	3941637.00	1409185.25
82	EOP	"L2"	521+95.47	3941024.10	1410010.60

PRIMARY MONUMENTS

POINT #	STATION	OFFSET	NORTHING	EASTING
1	363+25.80	61.77 LT	3950739.34	1397502.32
2	381+03.61	64.46 RT	3949558.20	1398837.04
3	396+27.30	60.20 RT	3948635.16	1400049.33
4	418+06.84	59.17 RT	3947310.81	1401780.36
5	439+51.31	57.62 LT	3946094.81	1403552.98
6	471+78.66	71.59 LT	3943890.45	1405914.89

NOTES:

1. SEE RECORD OF SURVEY PLAT #2007-94-F.R.D. FOR BASIS OF CONTROL AND BEARINGS.

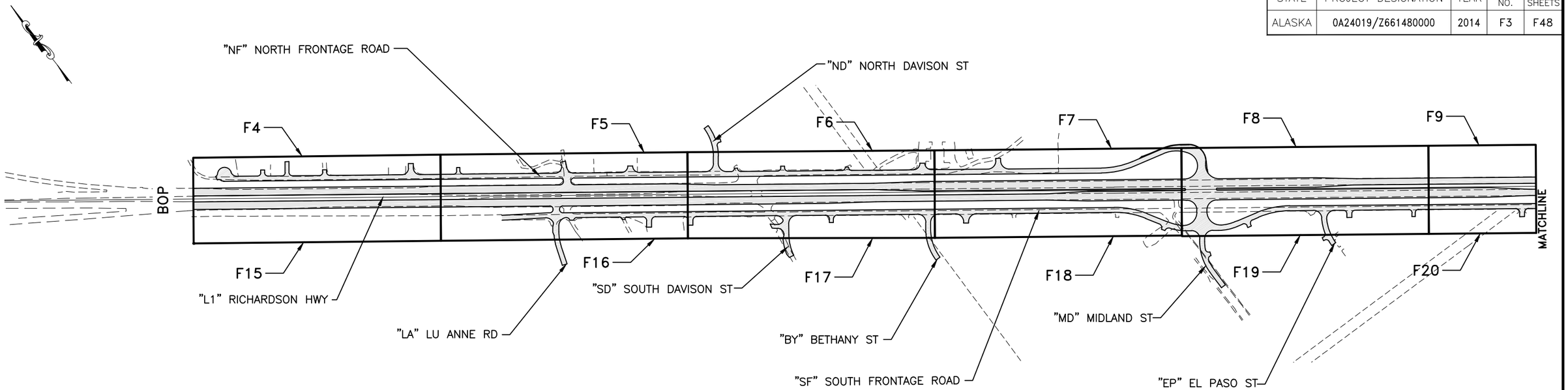
ALIGNMENT GUIDE

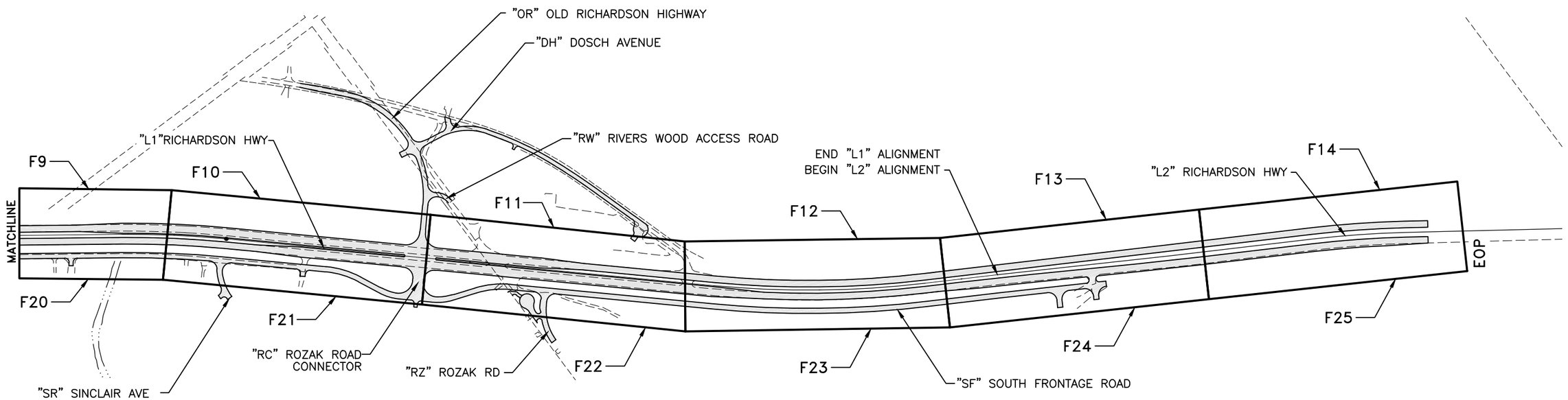
"NF"	NORTH FRONTAGE ROAD	"BY"	BETHANY STREET
"SF"	SOUTH FRONTAGE ROAD	"EP"	EL PASO STREET
"MD"	MIDLAND STREET	"SR"	SINCLAIR AVENUE
"OR"	OLD RICHARDSON HIGHWAY	"RC"	ROZAC CONNECTOR
"DH"	DOSCH AVENUE	"RZ"	ROZAK ROAD
"LA"	LU ANNE ROAD	"RW"	RIVERS WOOD ACCESS ROAD
"ND"	NORTH DAVISON STREET	"L1"	F-062-4(16)
"SD"	SOUTH DAVISON STREET	"L2"	F-062-4(20)

STATE OF ALASKA 49TH
DUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER

ALIGNMENT CONTROL TABLES

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	F3	F48





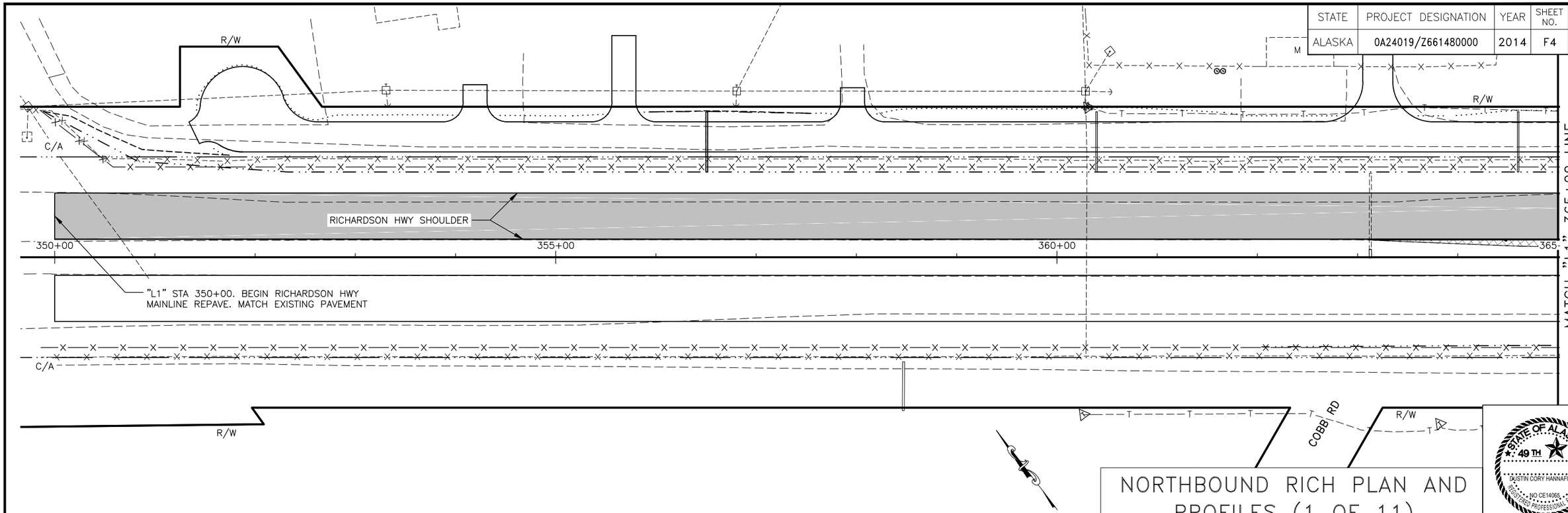
F4 SHEET REFERENCE

MAINLINE SHEET INDEX

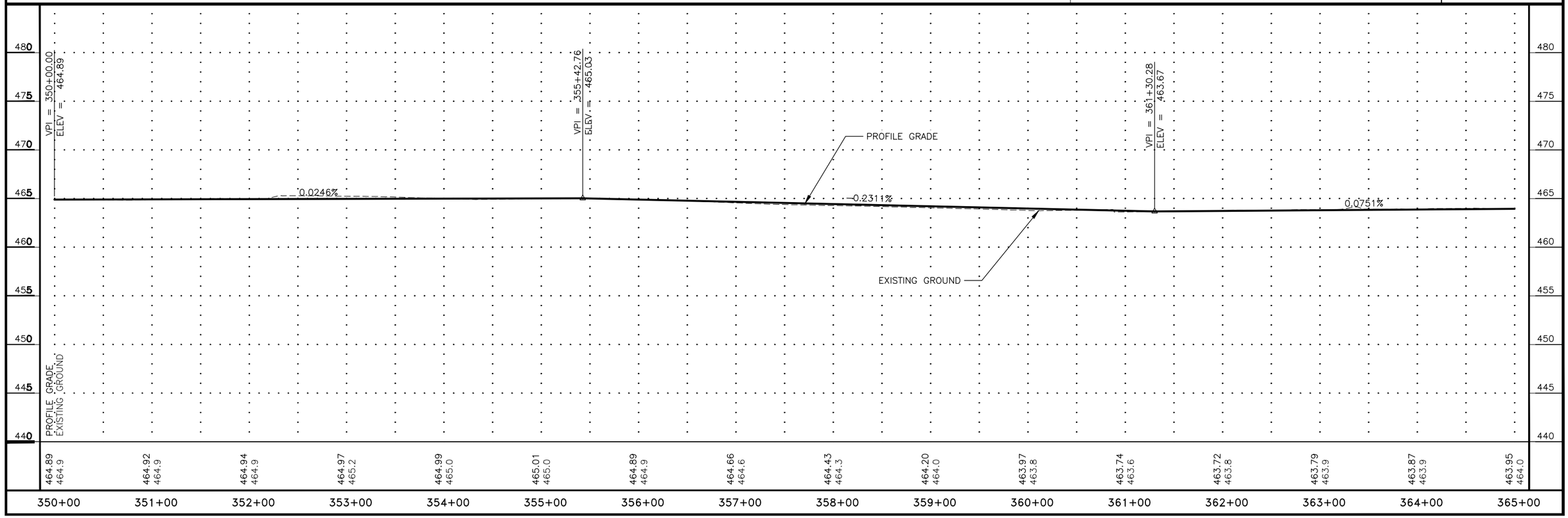
STATE OF ALASKA 49TH
DUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER

P:\2012\12009FB\C\C7001cnst12009-F1 Tue, Apr/05/16 01:16pm

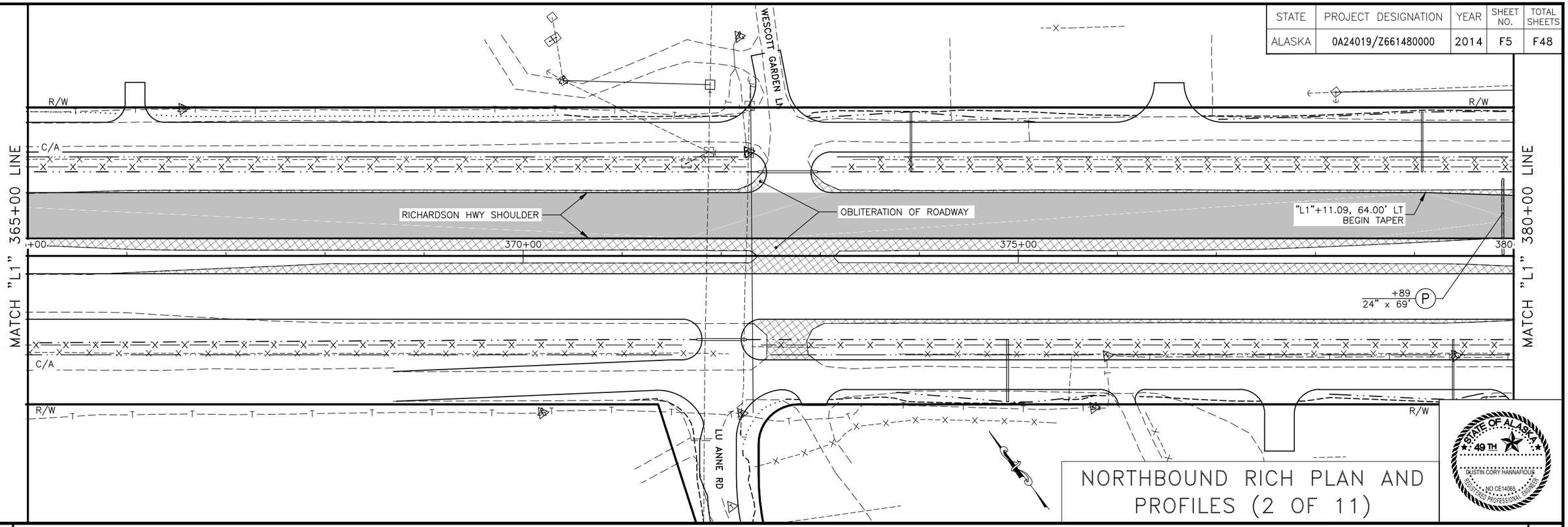
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	F4	F48



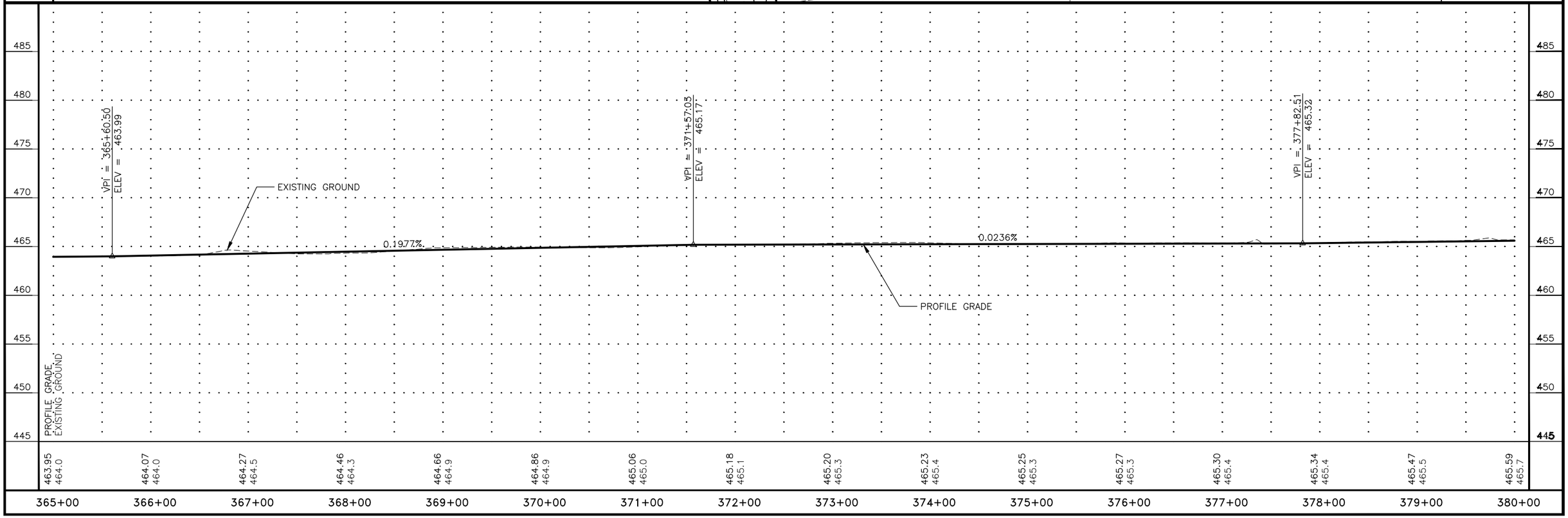
NORTHBOUND RICH PLAN AND PROFILES (1 OF 11)



STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	F5	F48

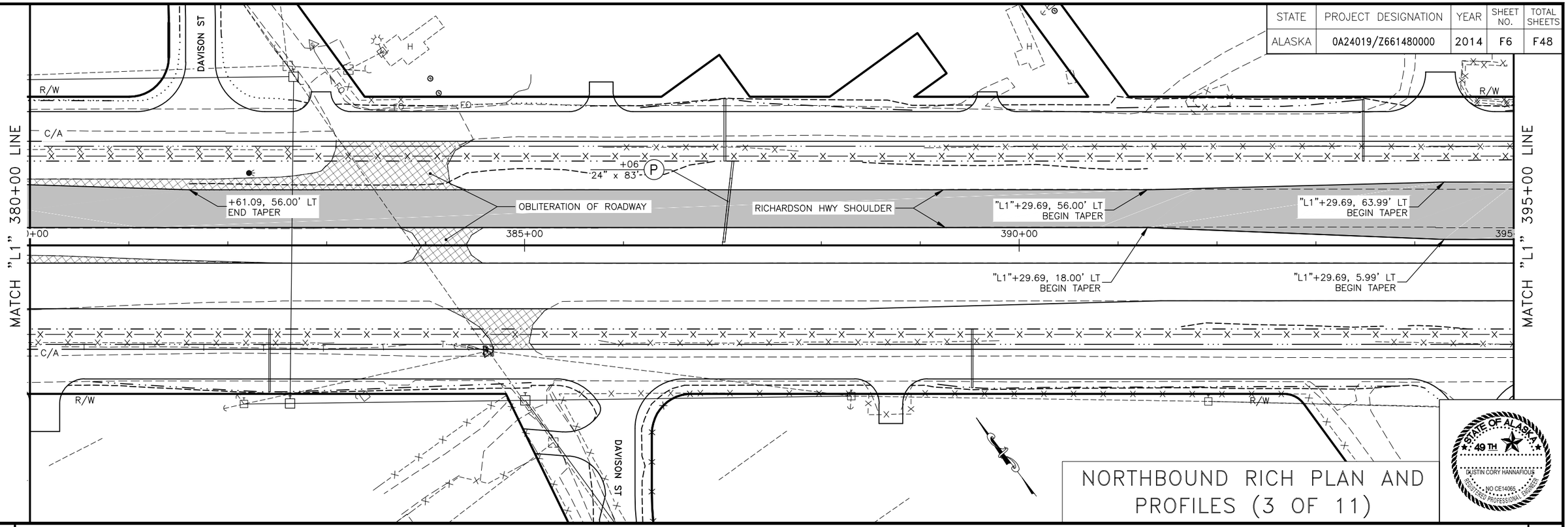


NORTHBOUND RICH PLAN AND PROFILES (2 OF 11)



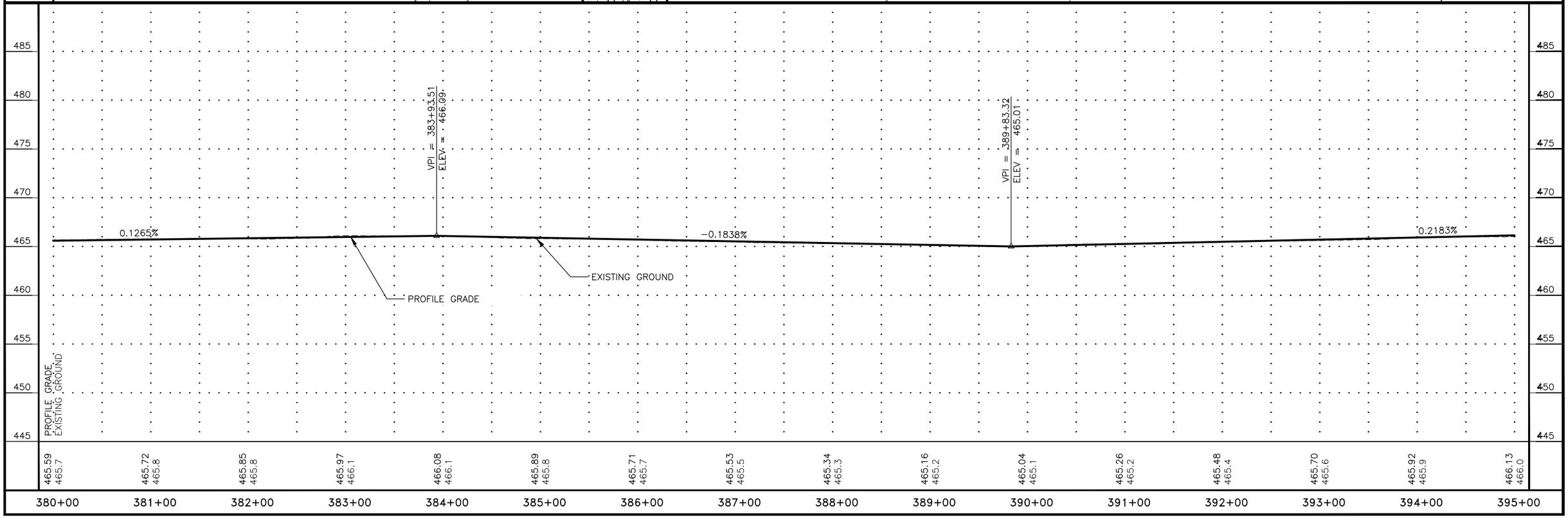
STATE OF ALASKA
49TH
DUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	F6	F48

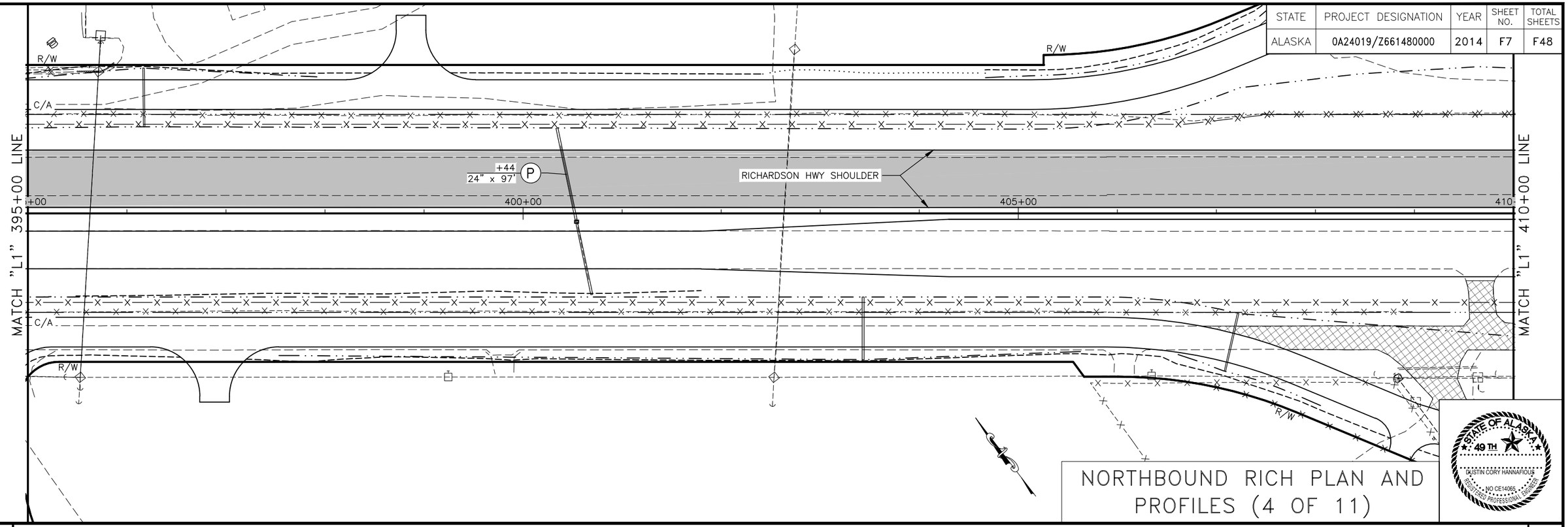


NORTHBOUND RICH PLAN AND PROFILES (3 OF 11)

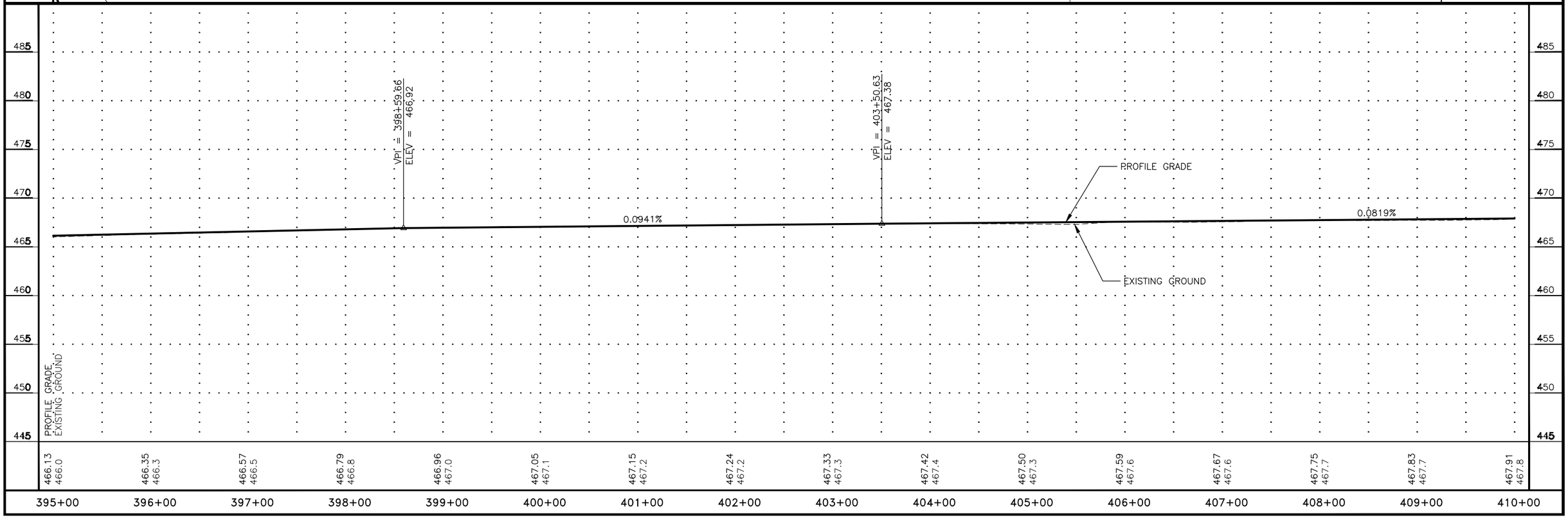
STATE OF ALASKA
49TH
DUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER



STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	F7	F48

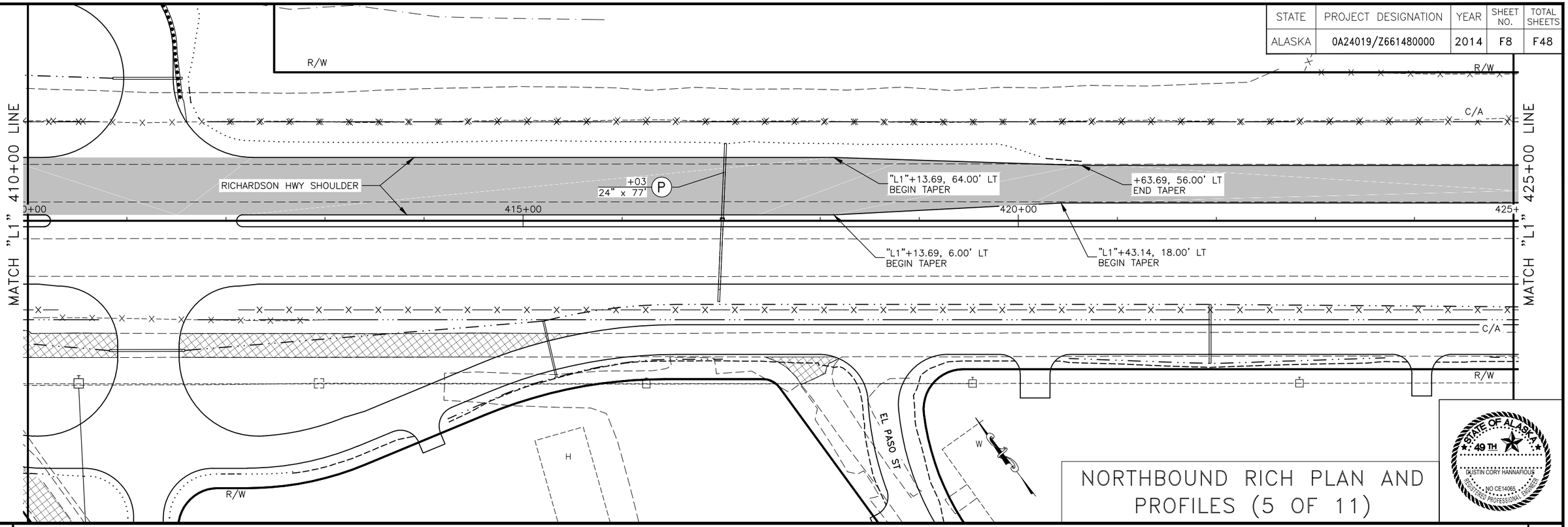


NORTHBOUND RICH PLAN AND PROFILES (4 OF 11)



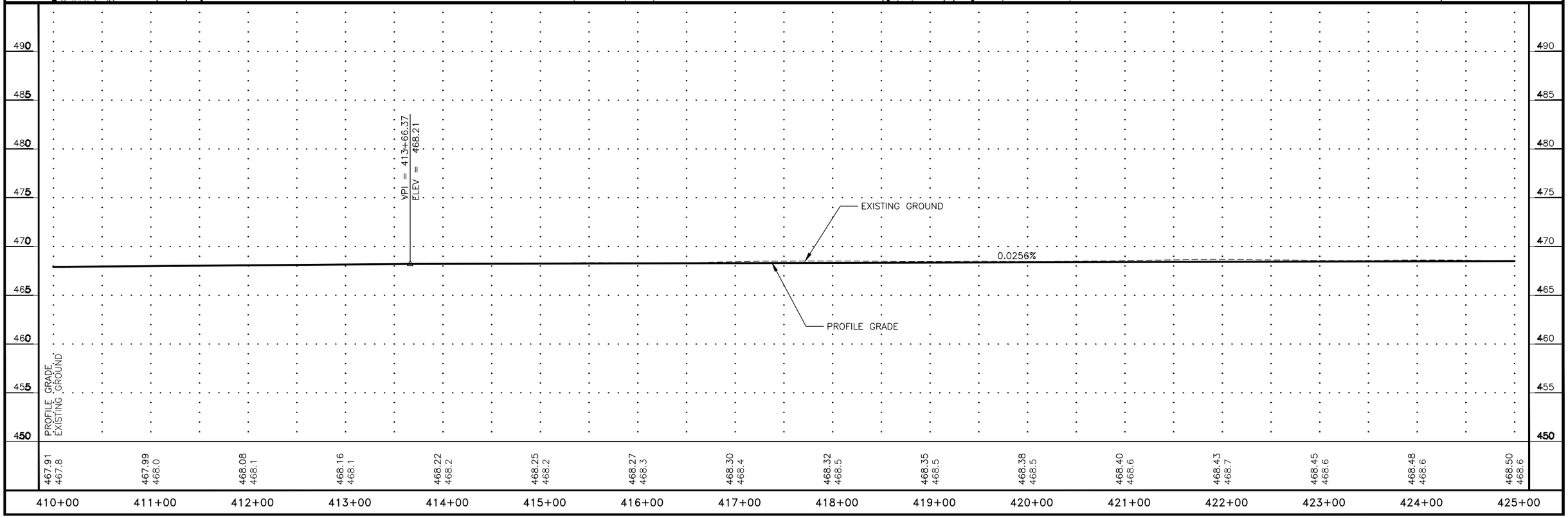
STATE OF ALASKA
49 TH
JUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	F8	F48

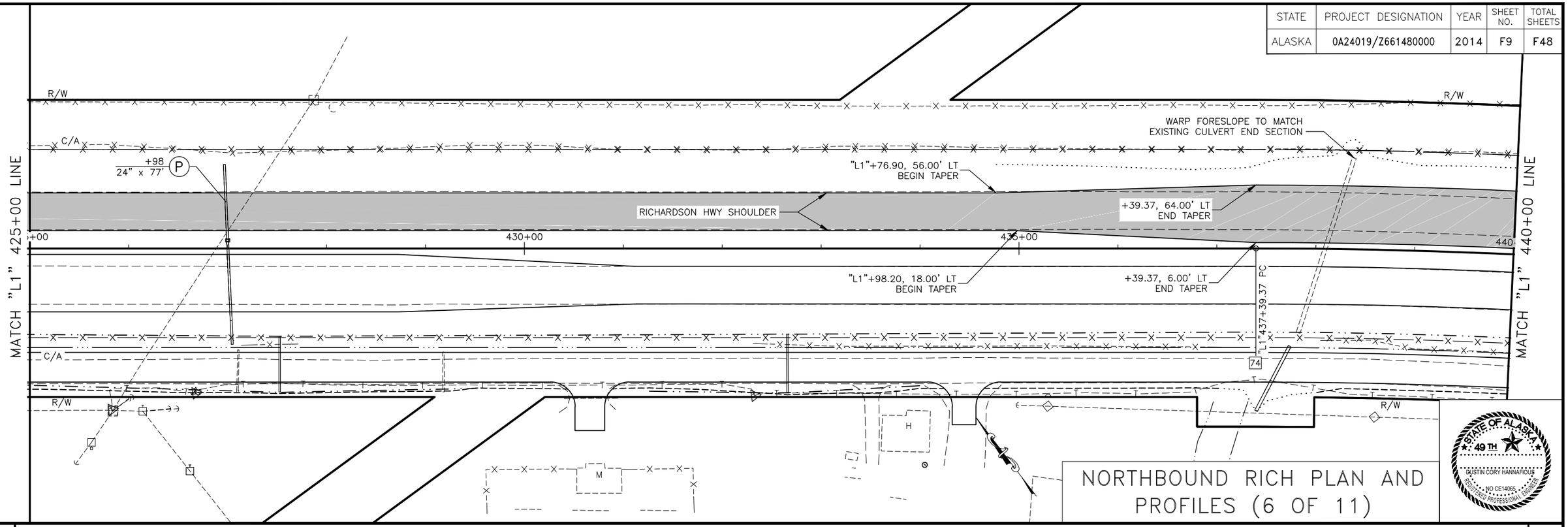


NORTHBOUND RICH PLAN AND PROFILES (5 OF 11)

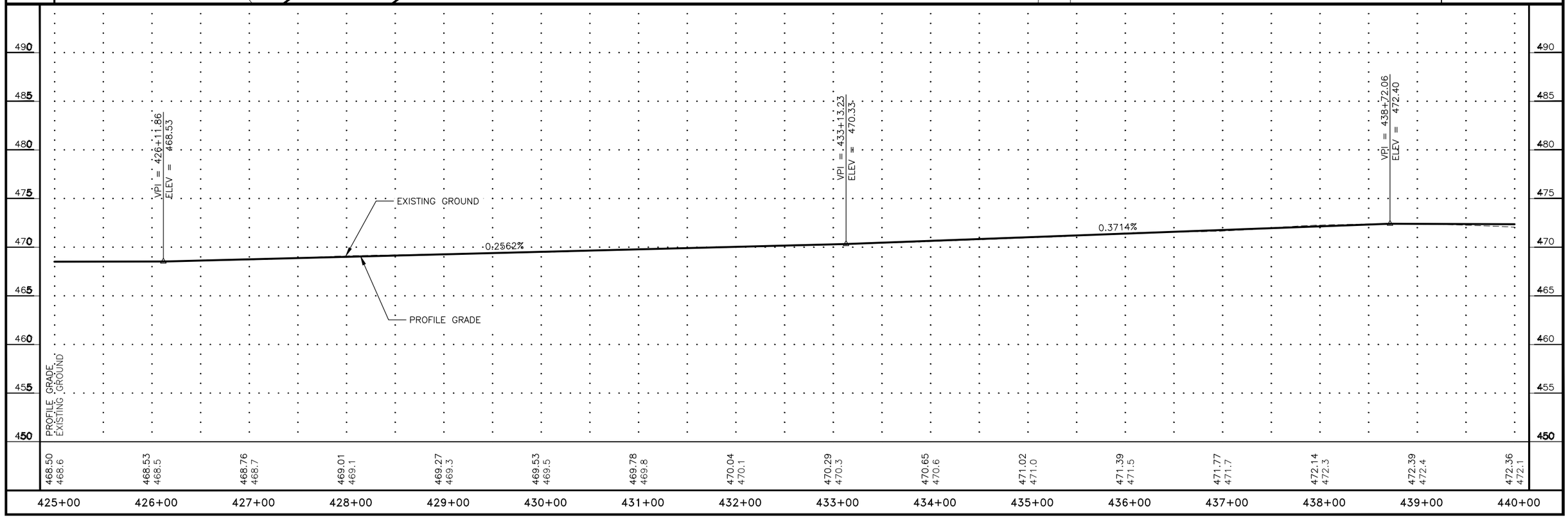
STATE OF ALASKA 49TH
JUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER



STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	F9	F48

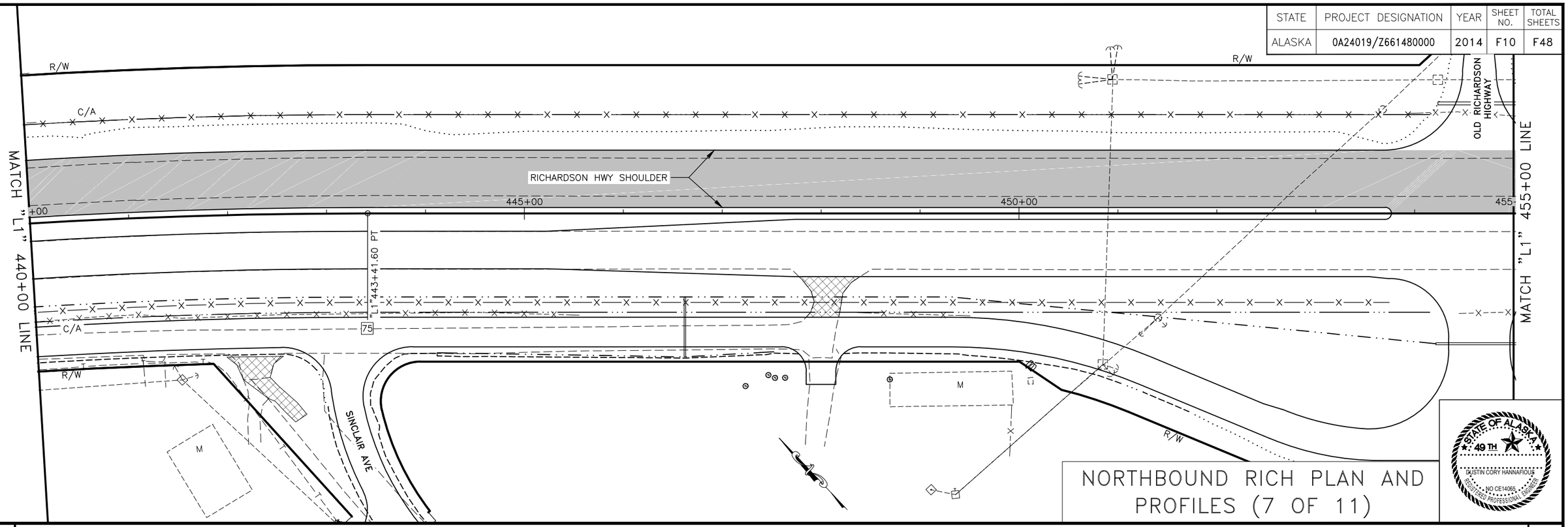


NORTHBOUND RICH PLAN AND PROFILES (6 OF 11)



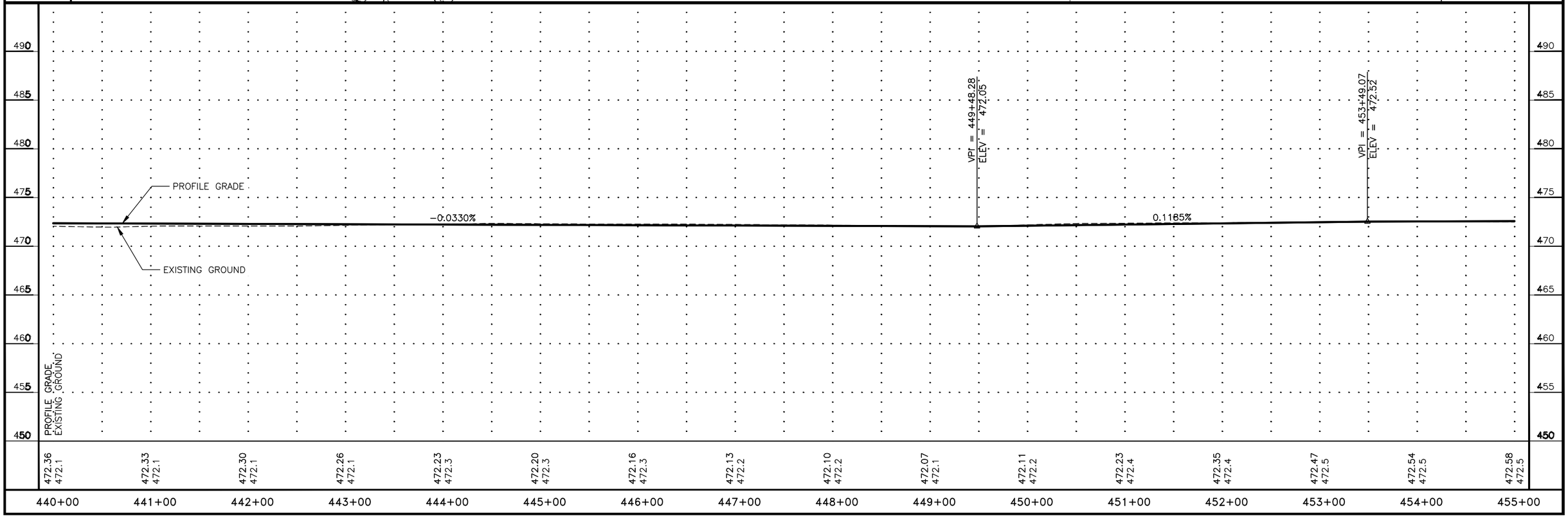
STATE OF ALASKA 49TH
JUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	F10	F48



NORTHBOUND RICH PLAN AND PROFILES (7 OF 11)

STATE OF ALASKA 49TH
JUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER



STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	F11	F48

MATCH "L1" 455+00 LINE

MATCH "L1" 470+00 LINE

R/W

C/A

FO

FIBER OPTIC VAULT

OBLITERATION OF ROADWAY

+29
24" x 81" (P)

"L1"+54.31, 64.00' LT
BEGIN TAPER

+07.31, 56.00' LT
END TAPER

RICHARDSON HWY SHOULDER

"L1"+54.31, 6.00' LT
BEGIN TAPER

+07.31, 18.00' LT
END TAPER

460+00

465+00

470+00

G

H

ROZAK RD

NORTHBOUND RICH PLAN AND PROFILES (8 OF 11)

STATE OF ALASKA
49TH
JUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER

VPI = 462+47.60
ELEV = 472.84

PROFILE GRADE

0.0350%

0.0242%

EXISTING GROUND

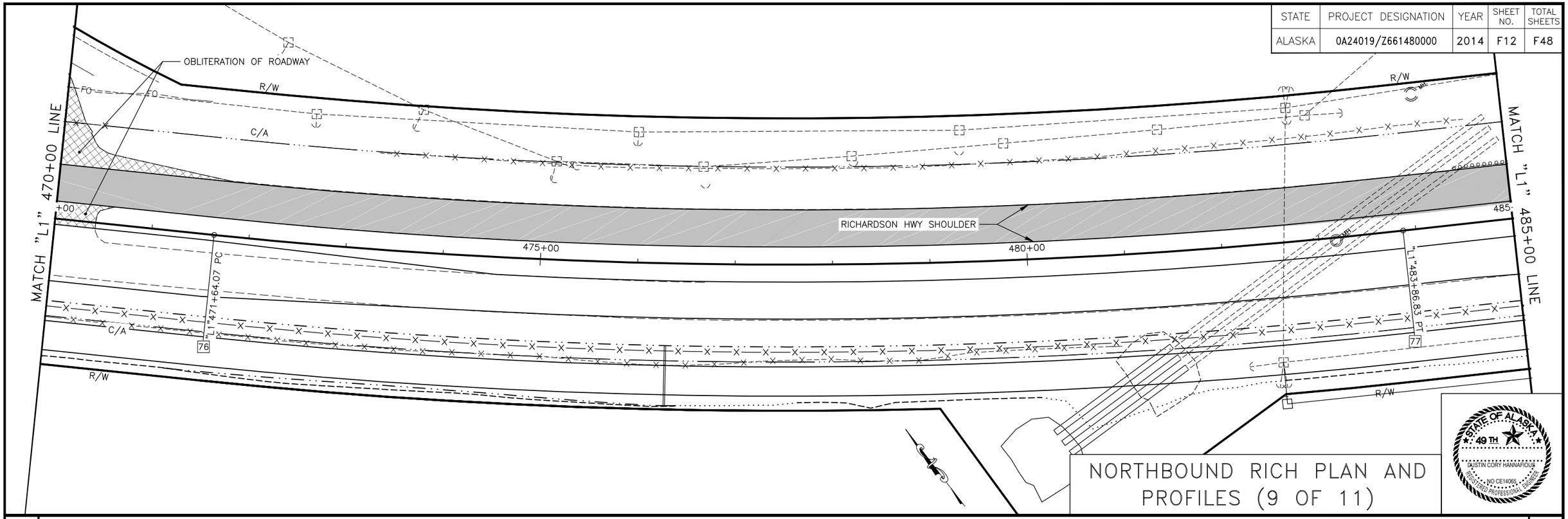
490
485
480
475
470
465
460
455
450

PROFILE GRADE
EXISTING GROUND

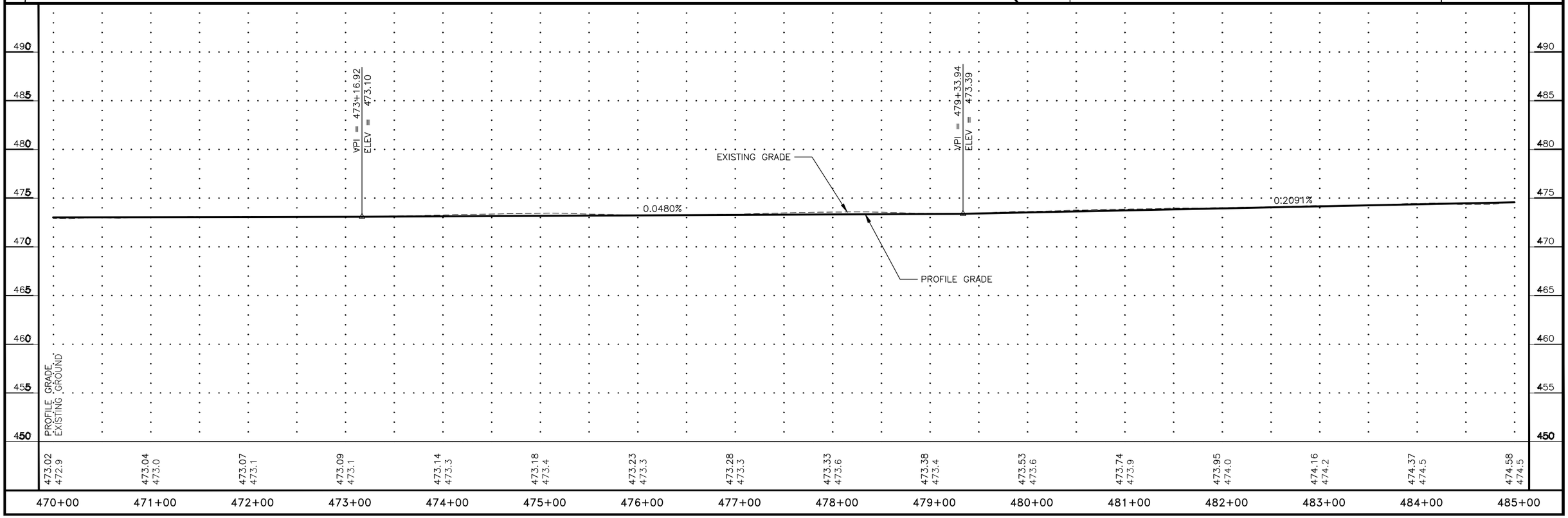
472.58	472.61	472.65	472.68	472.72	472.75	472.79	472.82	472.85	472.88	472.90	472.92	472.95	472.97	473.00	473.02
472.5	472.5	472.5	472.6	472.6	472.6	472.6	472.8	472.8	472.8	472.8	472.8	472.9	473.1	473.1	472.9

455+00 456+00 457+00 458+00 459+00 460+00 461+00 462+00 463+00 464+00 465+00 466+00 467+00 468+00 469+00 470+00

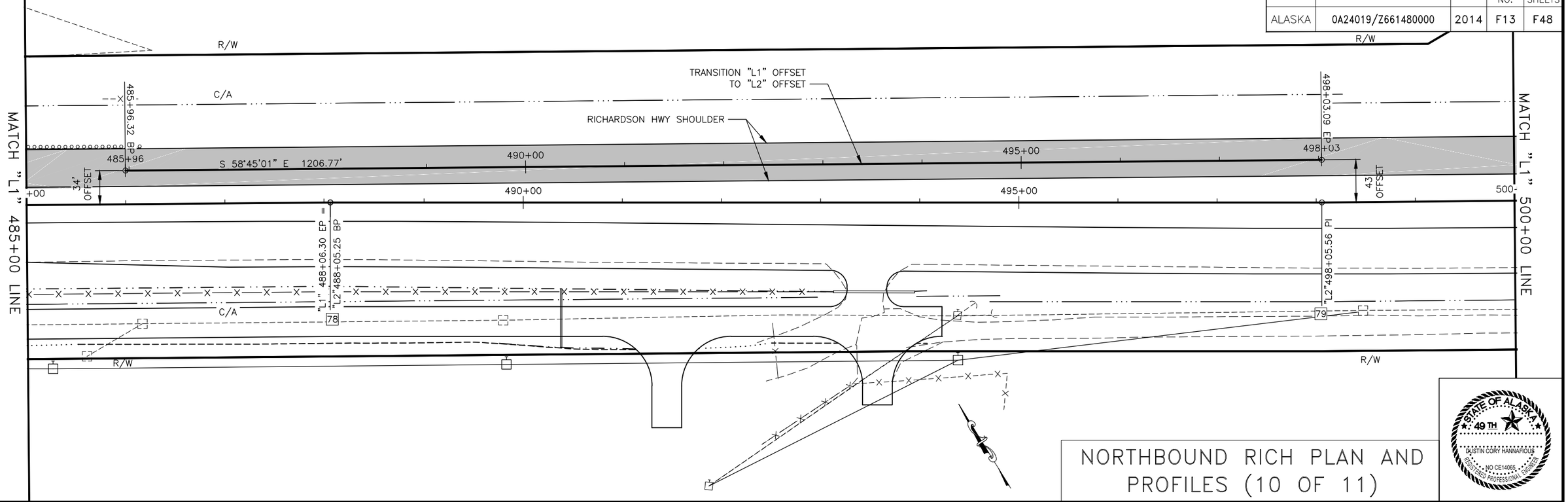
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	F12	F48



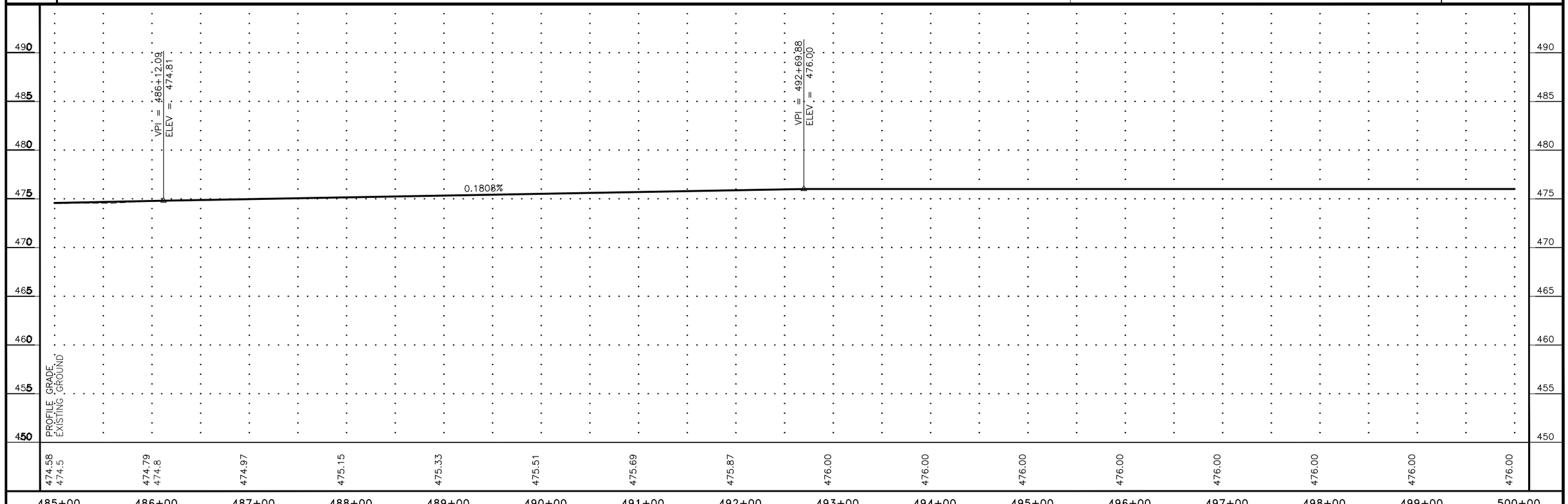
NORTHBOUND RICH PLAN AND PROFILES (9 OF 11)



STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	F13	F48

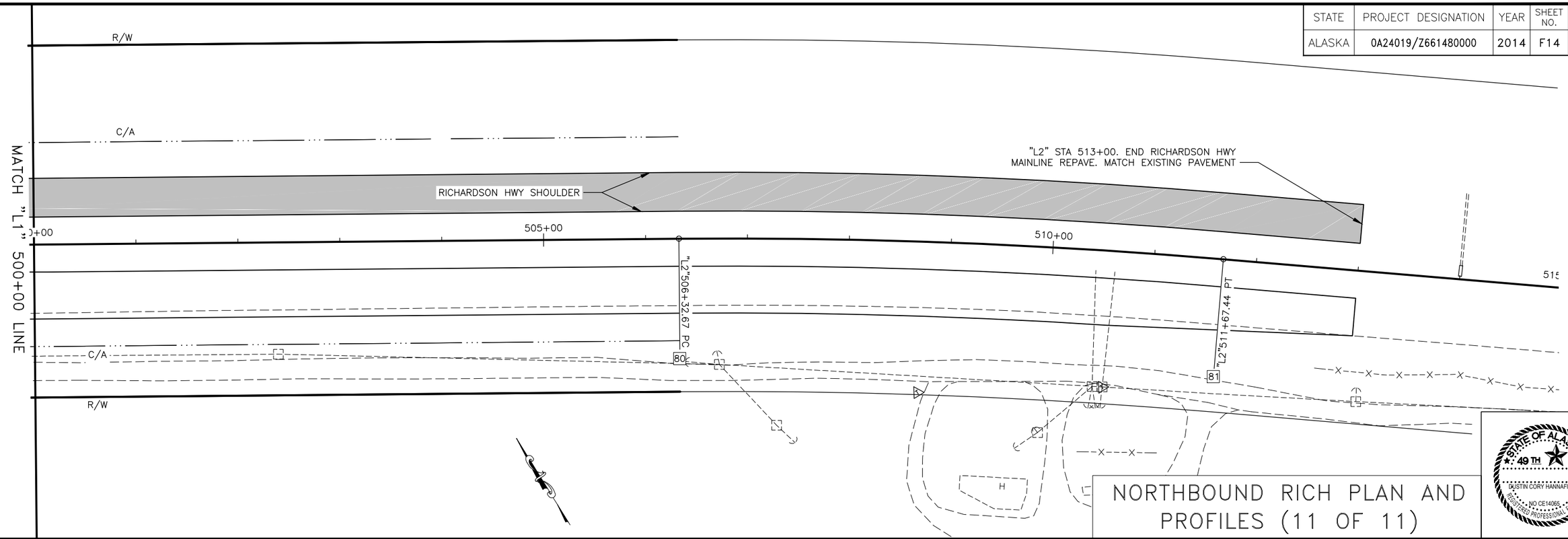


NORTHBOUND RICH PLAN AND PROFILES (10 OF 11)

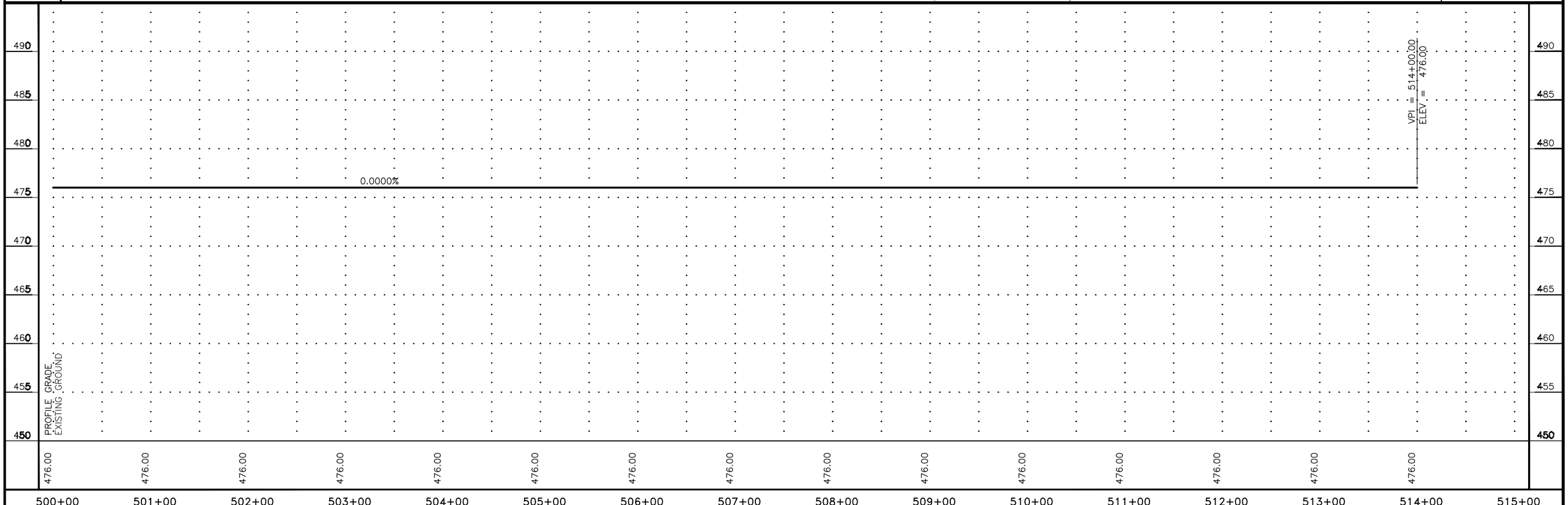


STATE OF ALASKA
49TH
JUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER

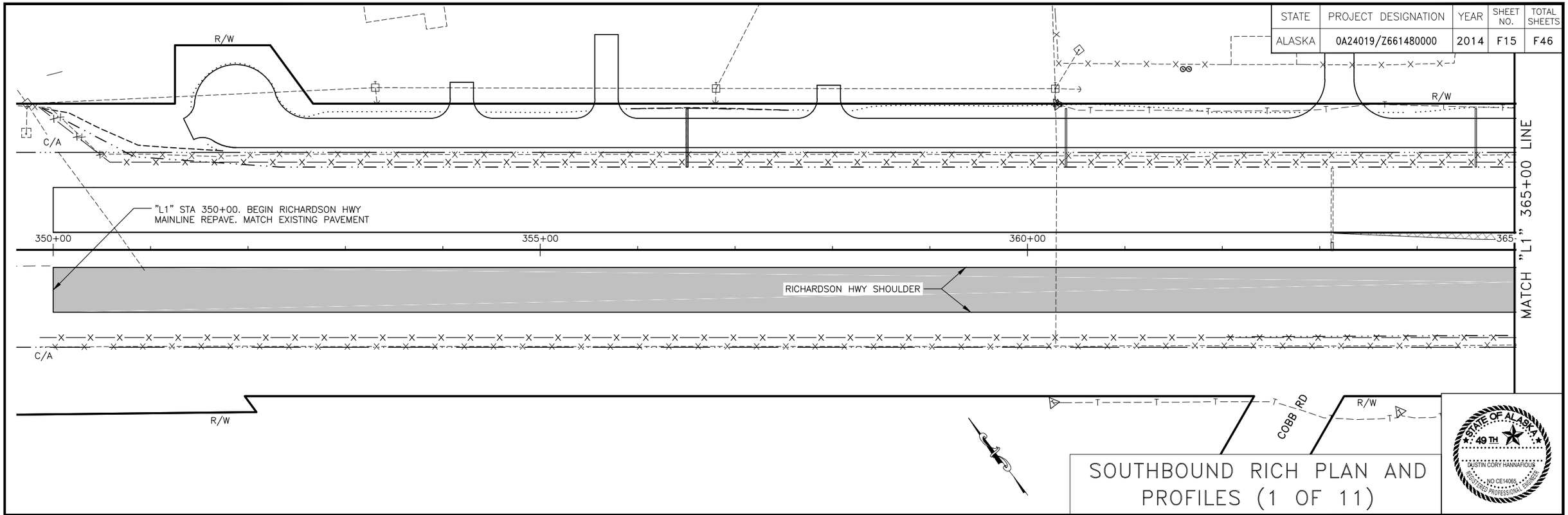
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	F14	F48



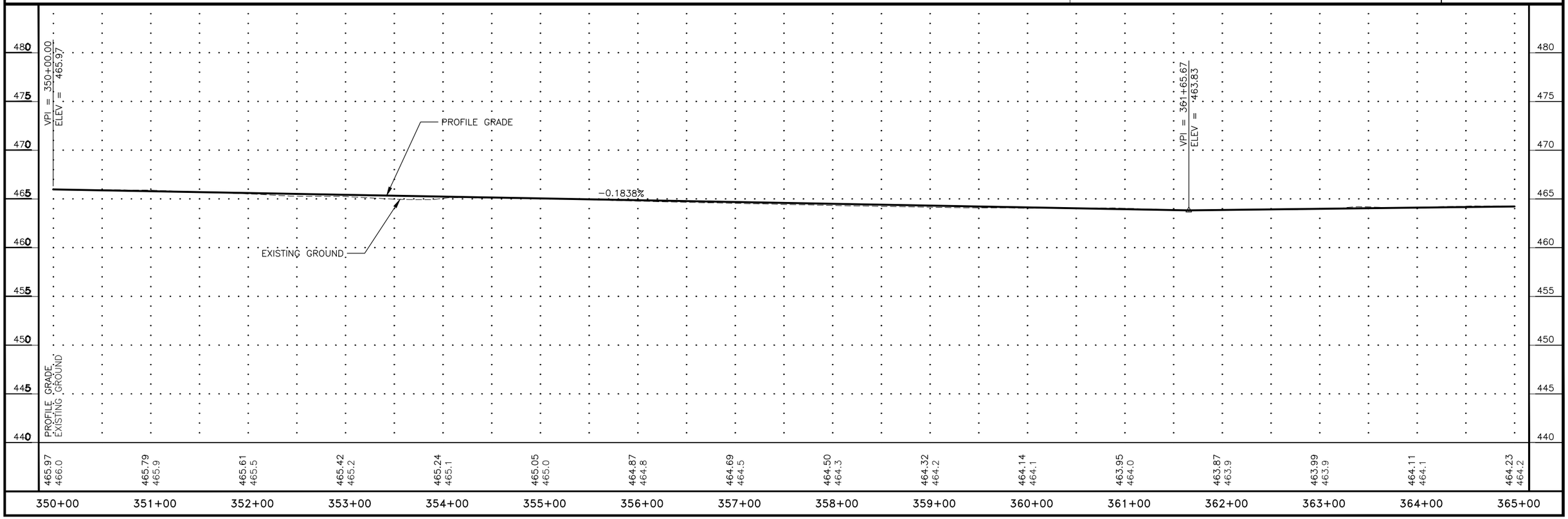
NORTHBOUND RICH PLAN AND PROFILES (11 OF 11)



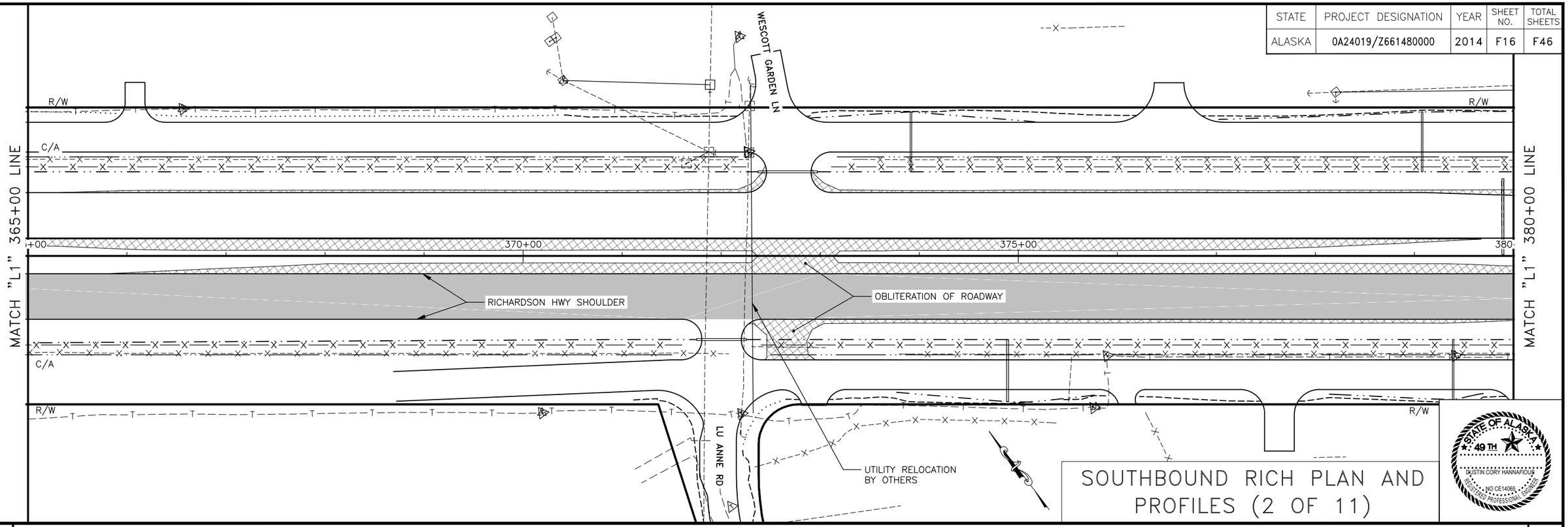
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	F15	F46



SOUTHBOUND RICH PLAN AND PROFILES (1 OF 11)

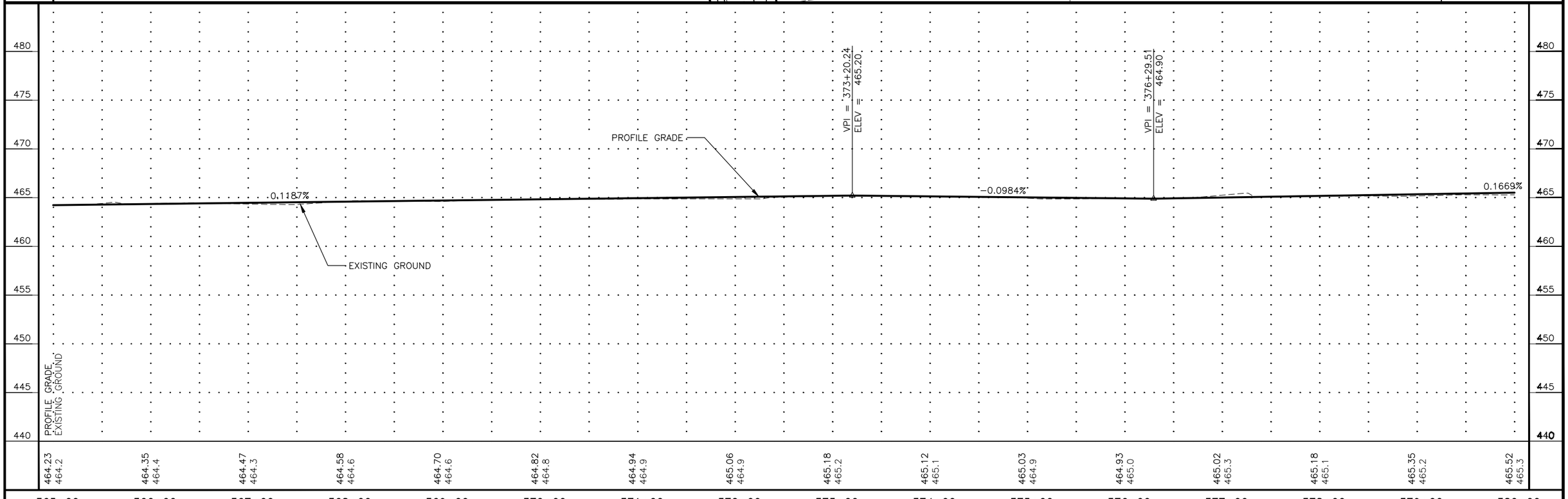


STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	F16	F46

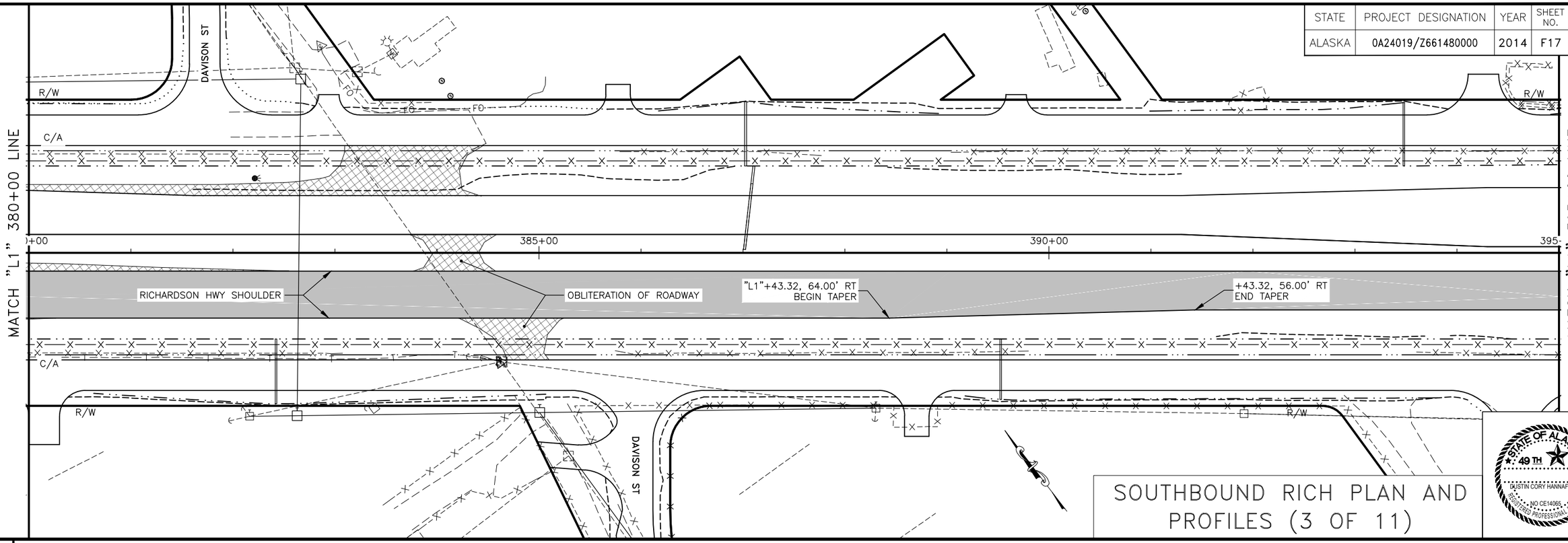


SOUTHBOUND RICH PLAN AND PROFILES (2 OF 11)

STATE OF ALASKA 49TH
DUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER

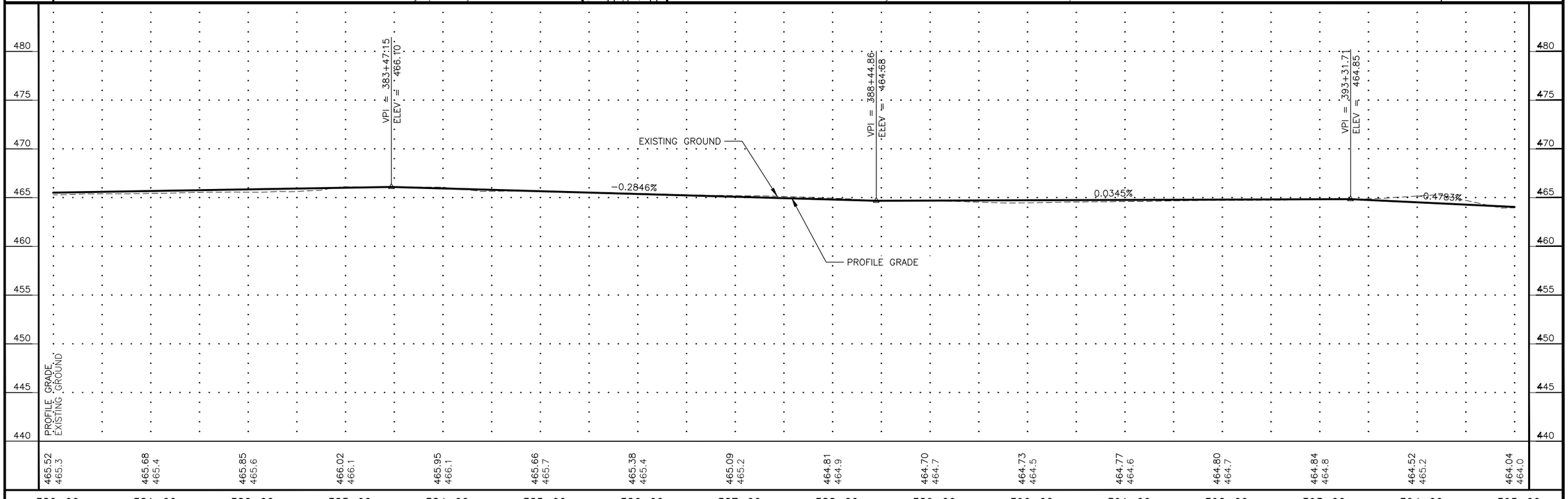


STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	F17	F46

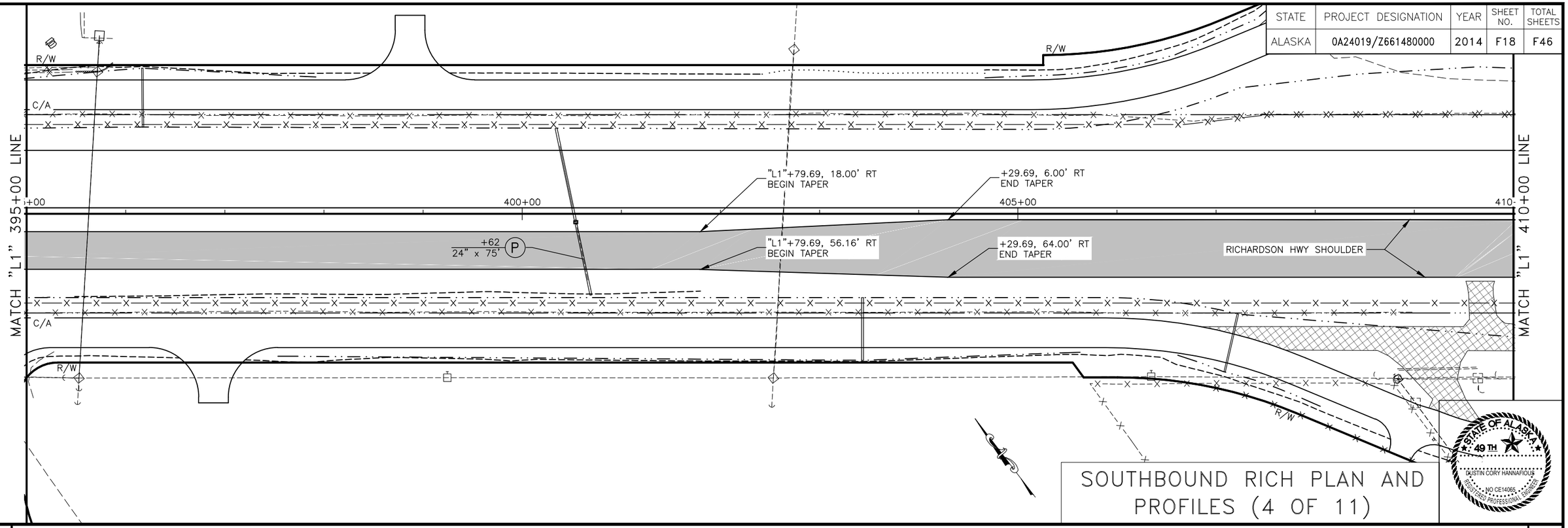


SOUTHBOUND RICH PLAN AND PROFILES (3 OF 11)

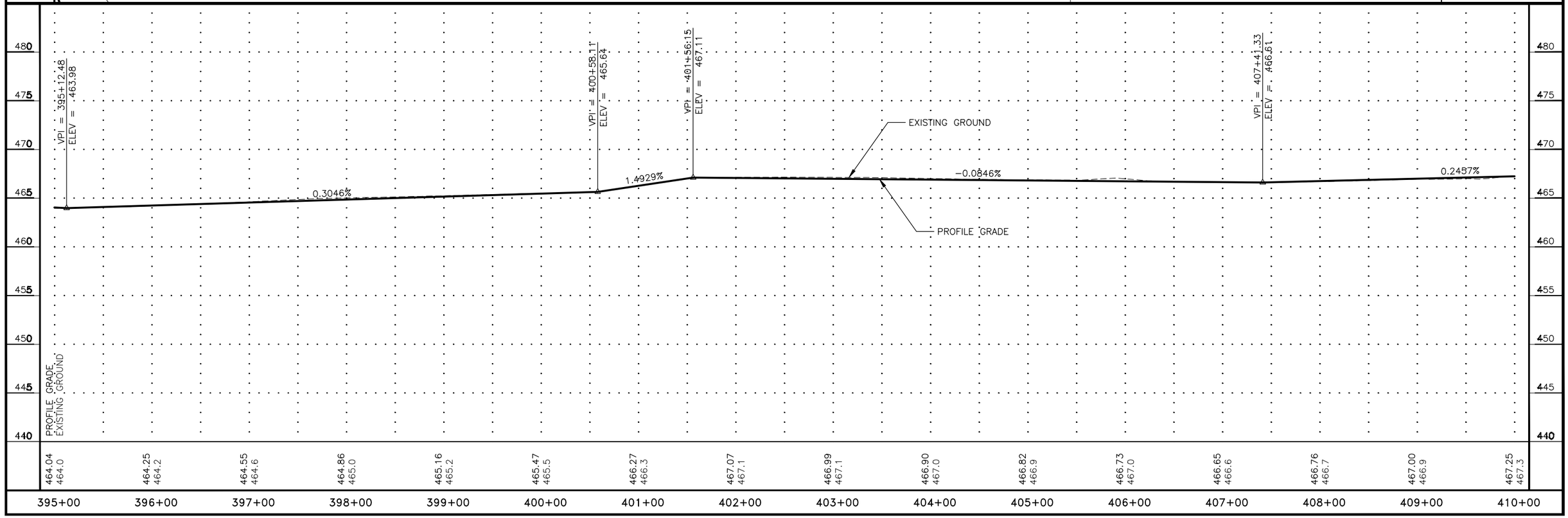
STATE OF ALASKA 49TH
DUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER



STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	F18	F46

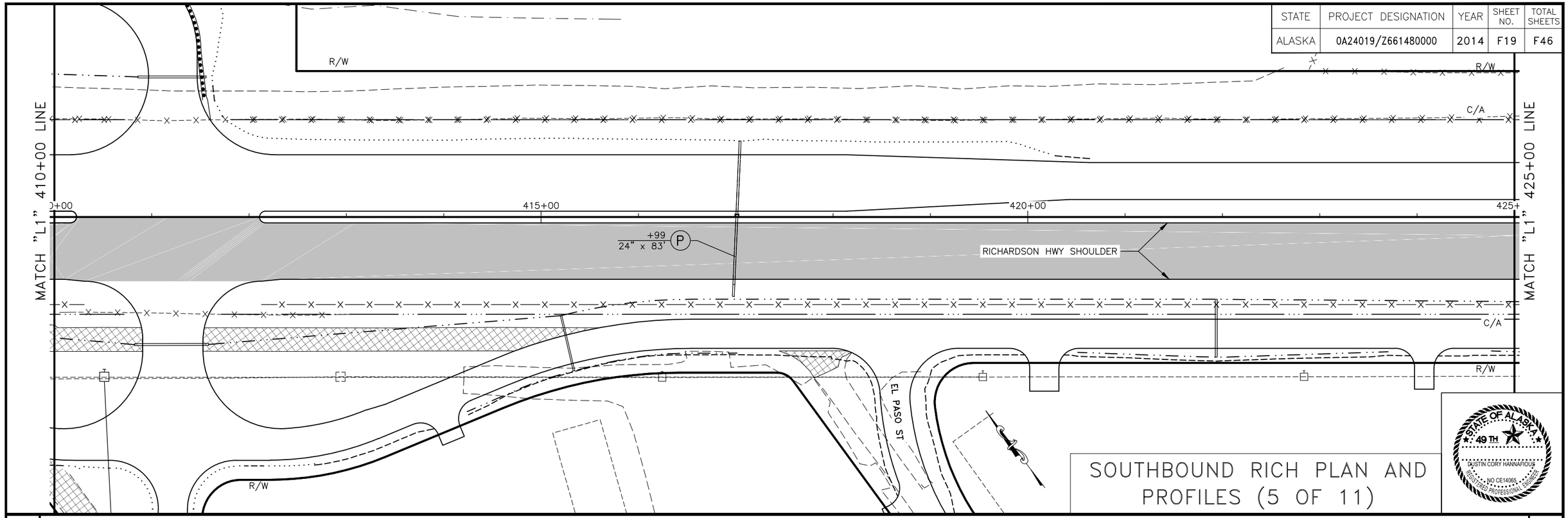


SOUTHBOUND RICH PLAN AND PROFILES (4 OF 11)



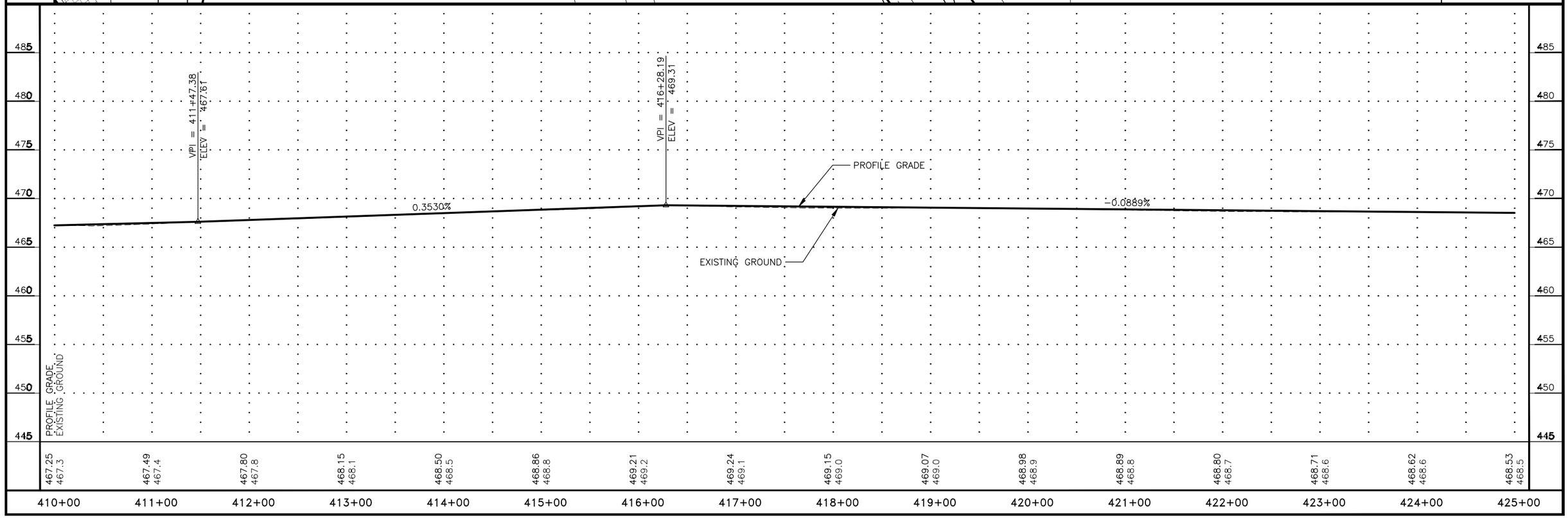
STATE OF ALASKA
49TH
DUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	F19	F46

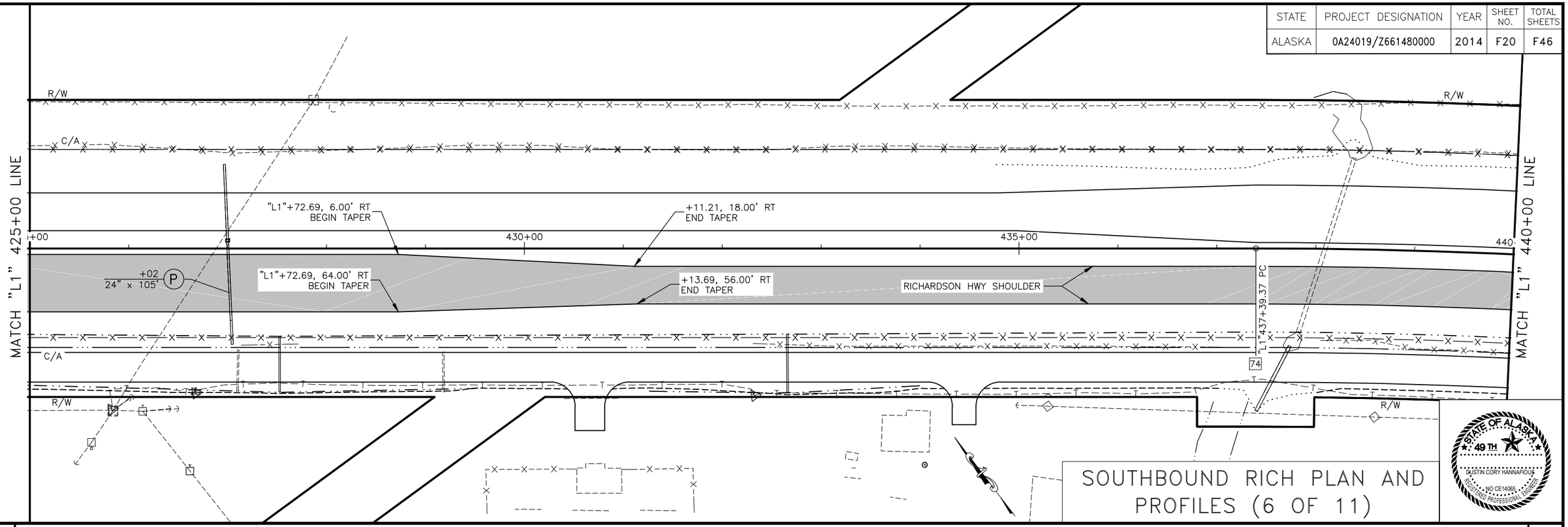


SOUTHBOUND RICH PLAN AND PROFILES (5 OF 11)

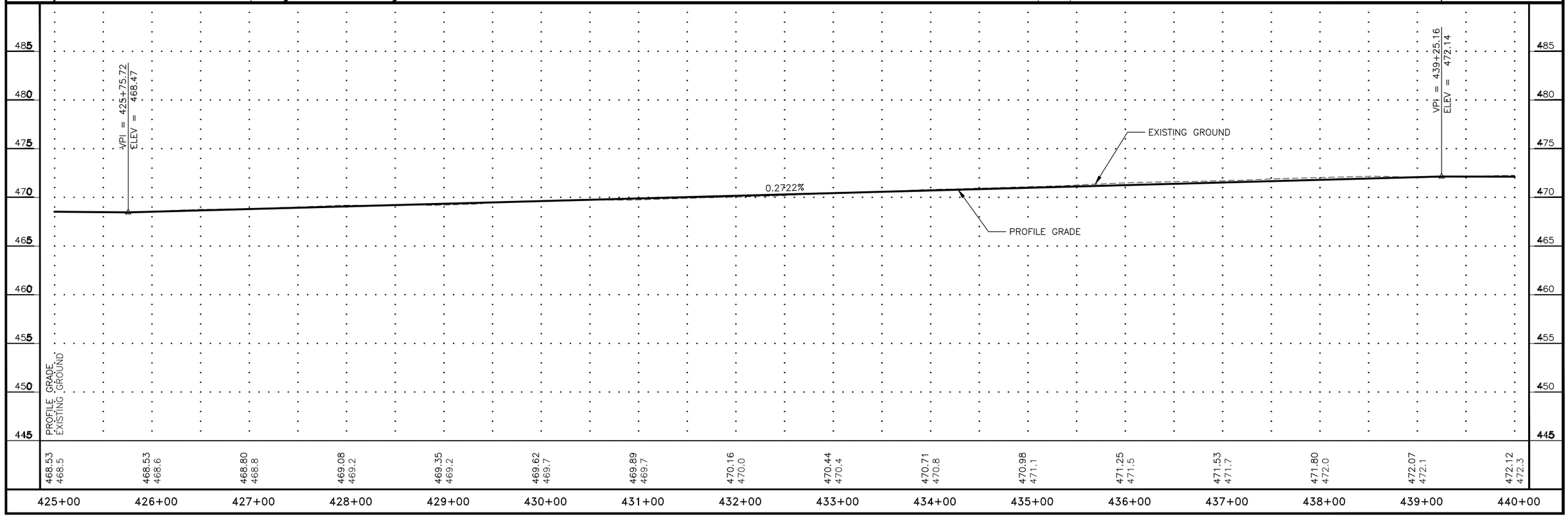
STATE OF ALASKA 49TH
DUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER



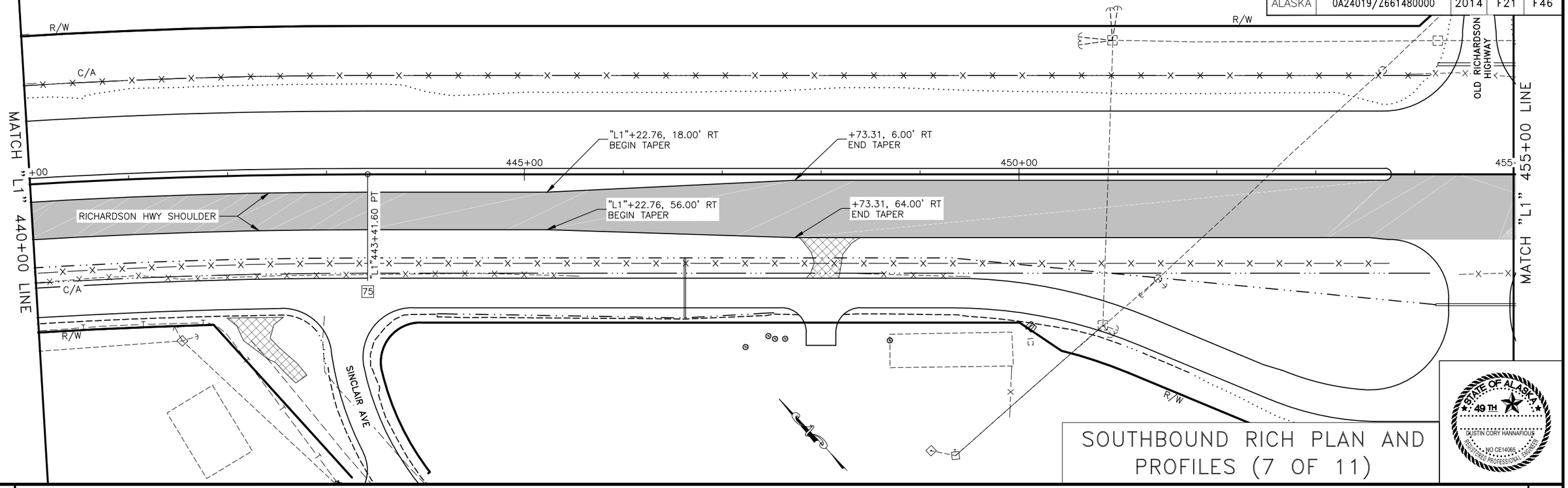
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	F20	F46



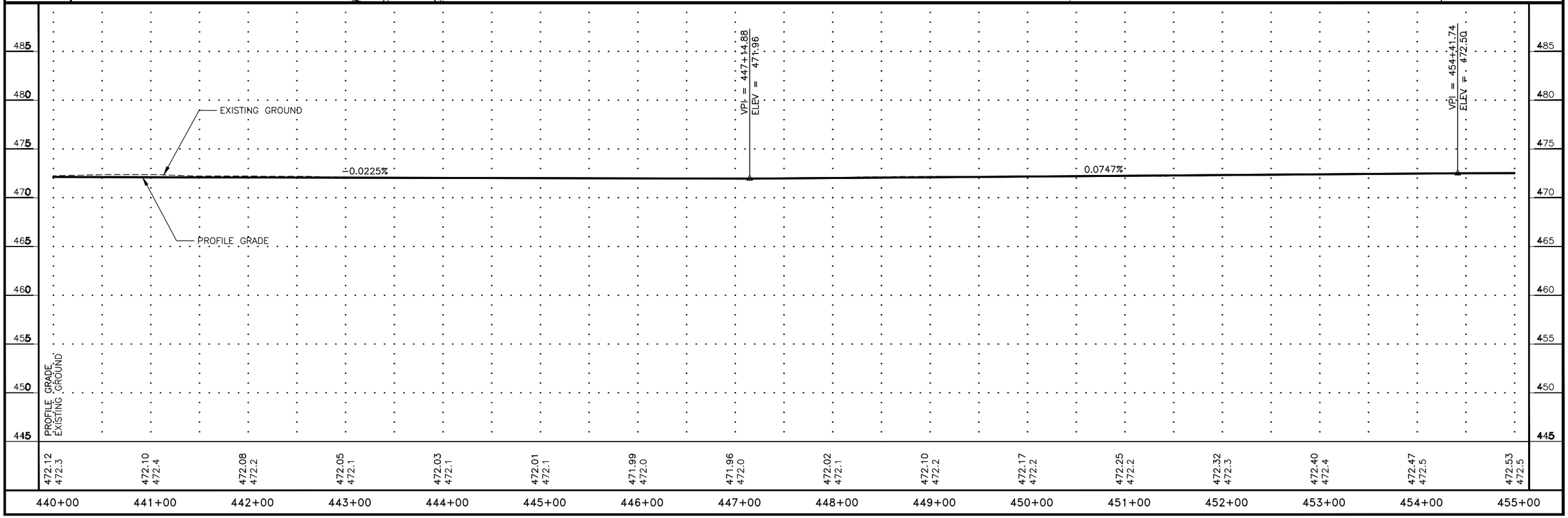
SOUTHBOUND RICH PLAN AND PROFILES (6 OF 11)



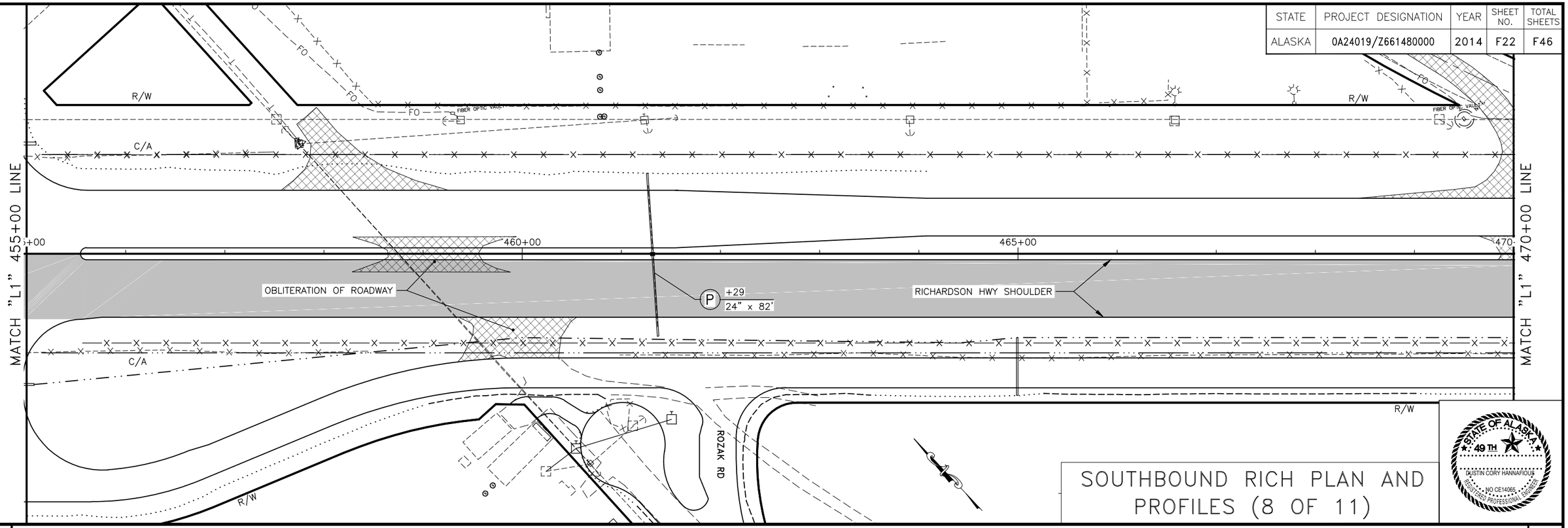
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	F21	F46



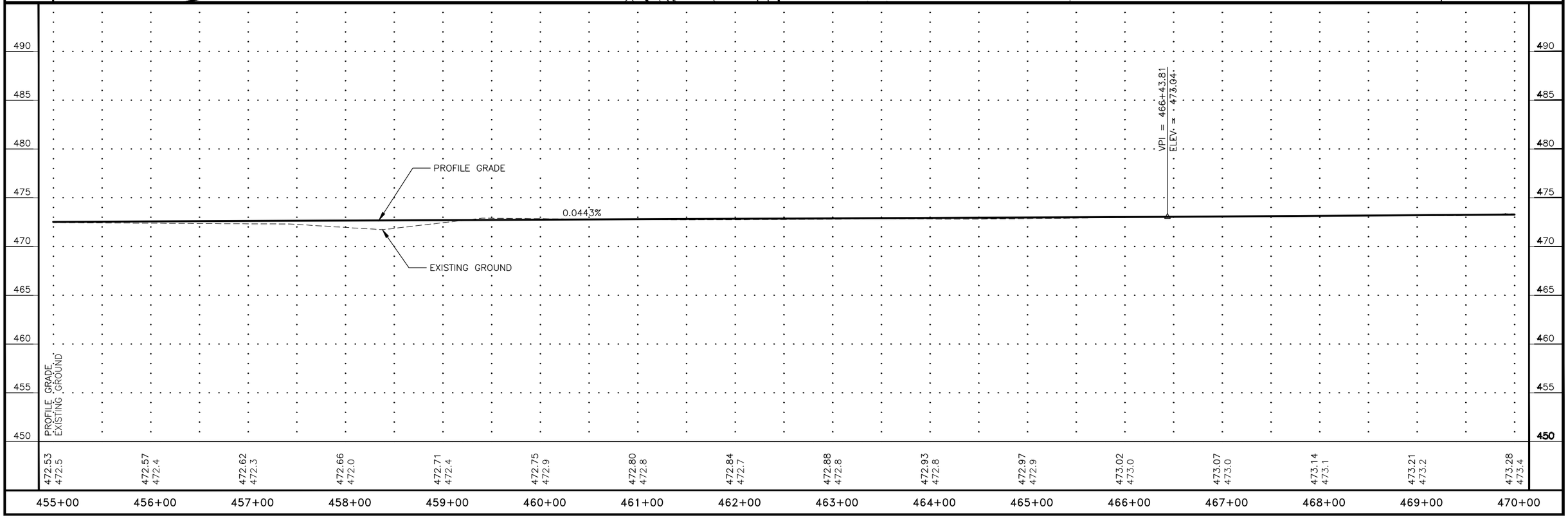
SOUTHBOUND RICH PLAN AND PROFILES (7 OF 11)



STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	F22	F46



SOUTHBOUND RICH PLAN AND PROFILES (8 OF 11)



STATE OF ALASKA 49TH
JUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	F23	F46

OBLITERATION OF ROADWAY
R/W
FO
FO
C/A
76
"L1"471+64.07 PC
MATCH "L1" 470+00 LINE
+00
"L1"+57.31, 6.00' RT
BEGIN TAPER
"L1"+57.31, 64.00' RT
BEGIN TAPER
+55.58, 18.00' RT
END TAPER
+55.58, 56.00' RT
END TAPER
475+00
480+00
RICHARDSON HWY SHOULDER
"L1"+86.83, 56.00' RT
BEGIN TAPER
R/W
77
"L1"483+89.83 PT
485+00
MATCH "L1" 485+00 LINE
C/A
R/W
R/W

SOUTHBOUND RICH PLAN AND PROFILES (9 OF 11)

STATE OF ALASKA
49TH
DUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER

490
485
480
475
470
465
460
455
450

VPI = 478+89.54
ELEV = 473.88

EXISTING GROUND

0.0678%

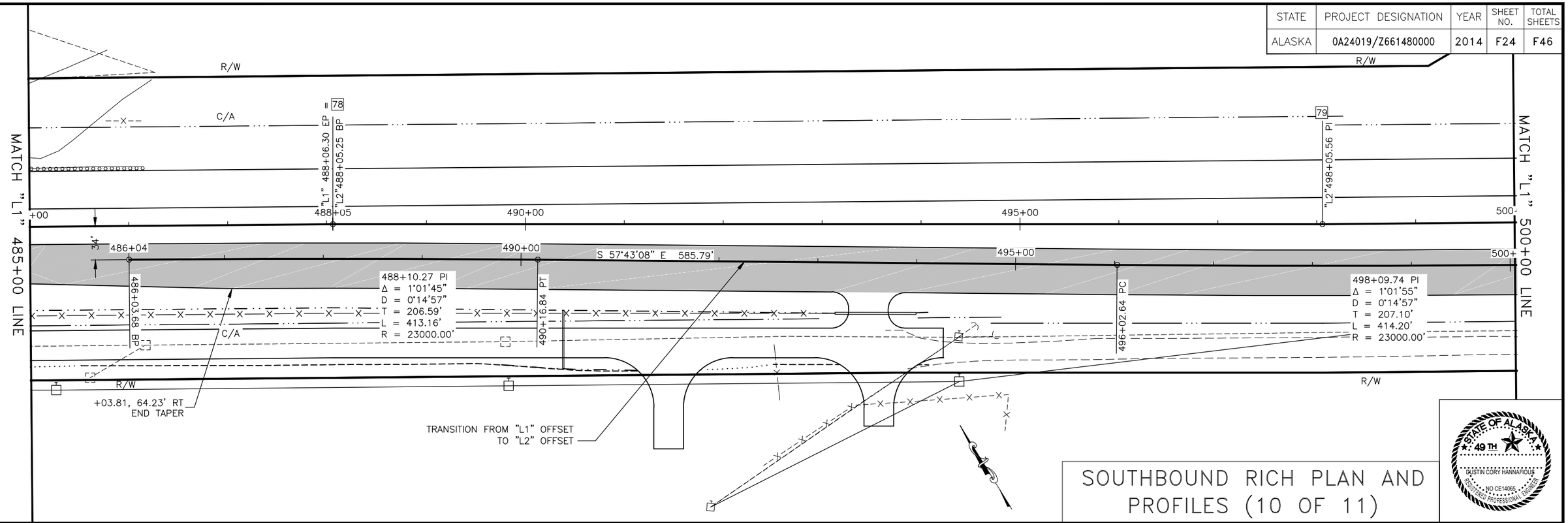
PROFILE GRADE

PROFILE GRADE
EXISTING GROUND

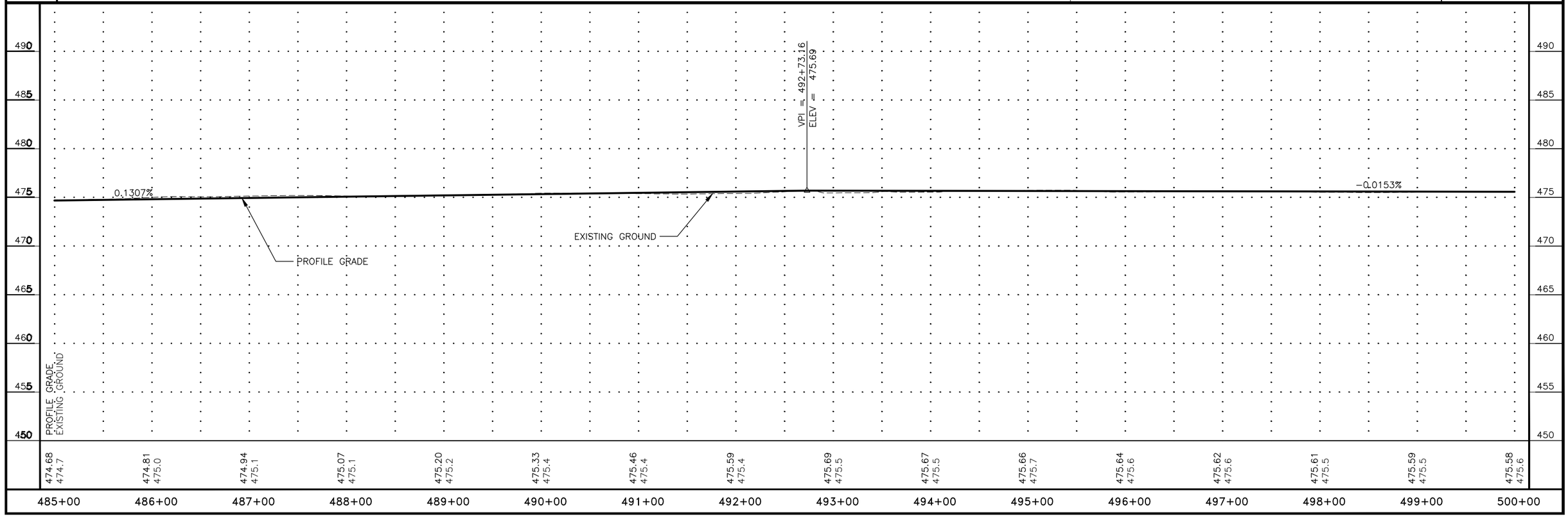
473.28	473.35	473.41	473.48	473.55	473.62	473.69	473.75	473.82	473.90	474.03	474.16	474.29	474.42	474.55	474.68
473.4	473.3	473.4	473.5	473.5	473.6	473.8	473.8	473.9	473.9	474.0	474.1	474.4	474.6	474.8	474.7

470+00 471+00 472+00 473+00 474+00 475+00 476+00 477+00 478+00 479+00 480+00 481+00 482+00 483+00 484+00 485+00

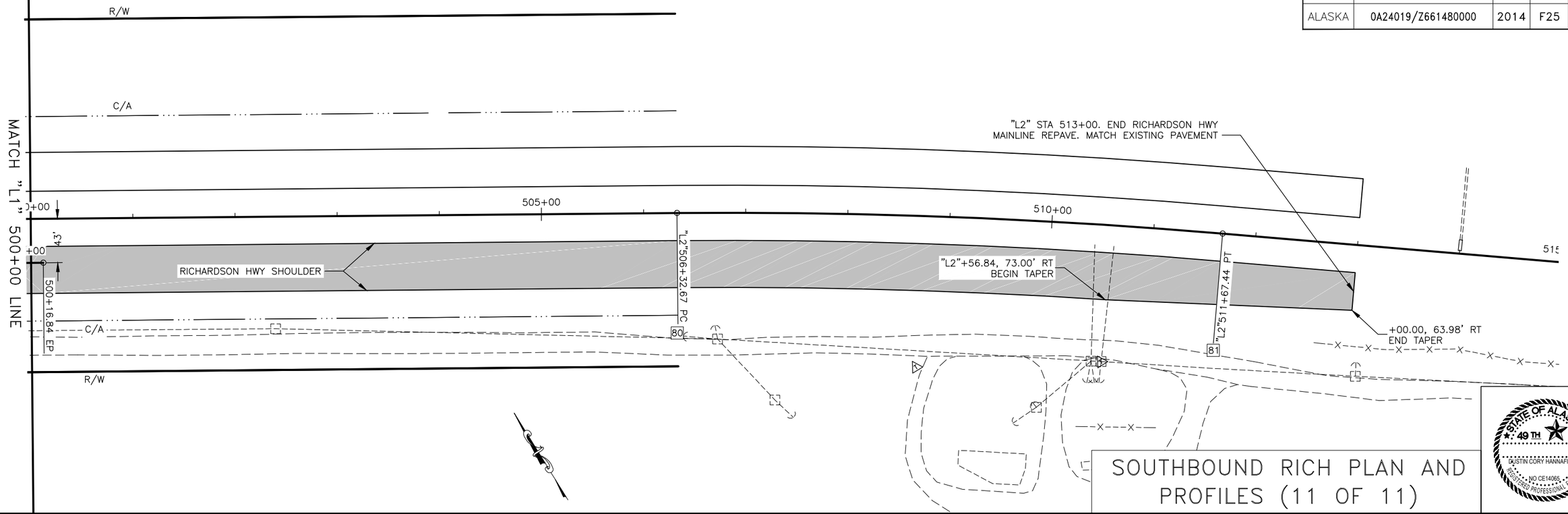
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	F24	F46



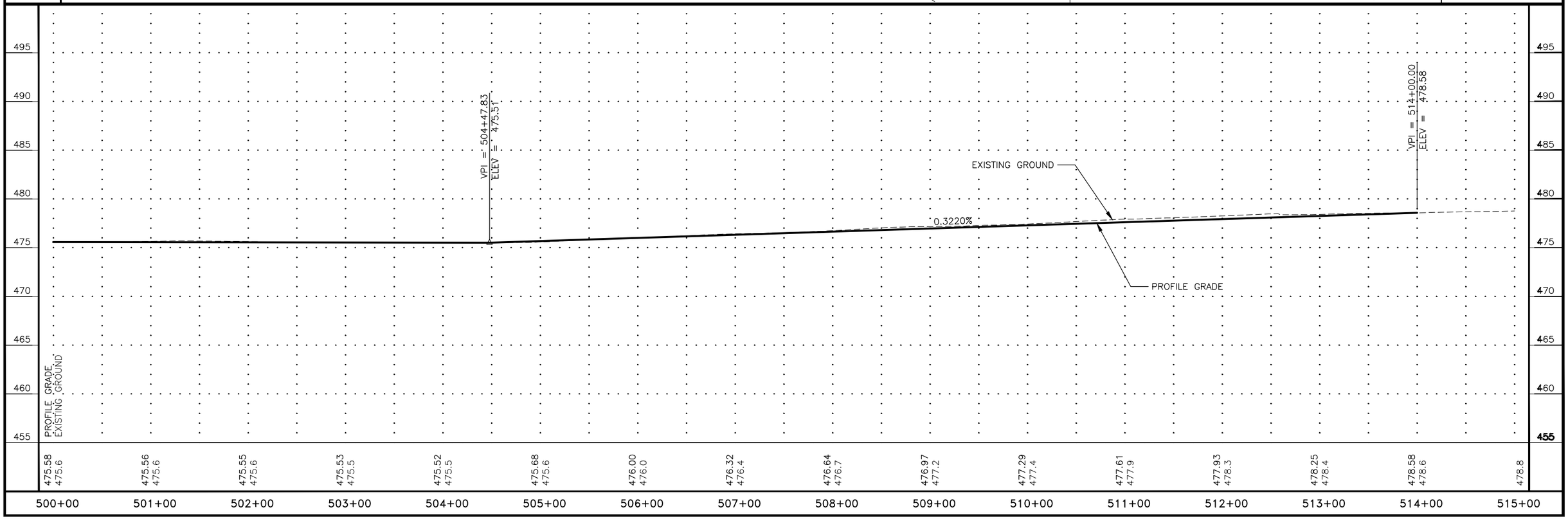
SOUTHBOUND RICH PLAN AND PROFILES (10 OF 11)



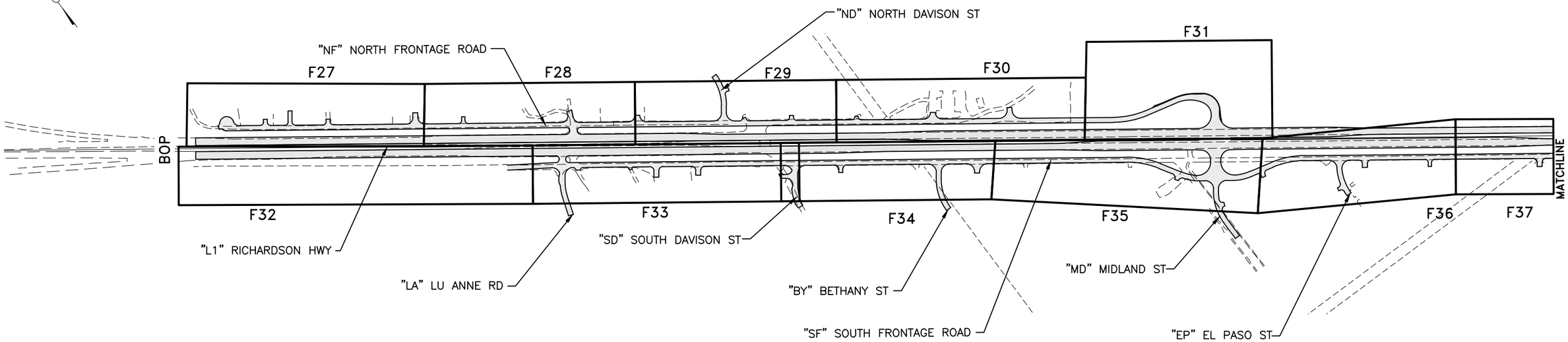
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	F25	F48

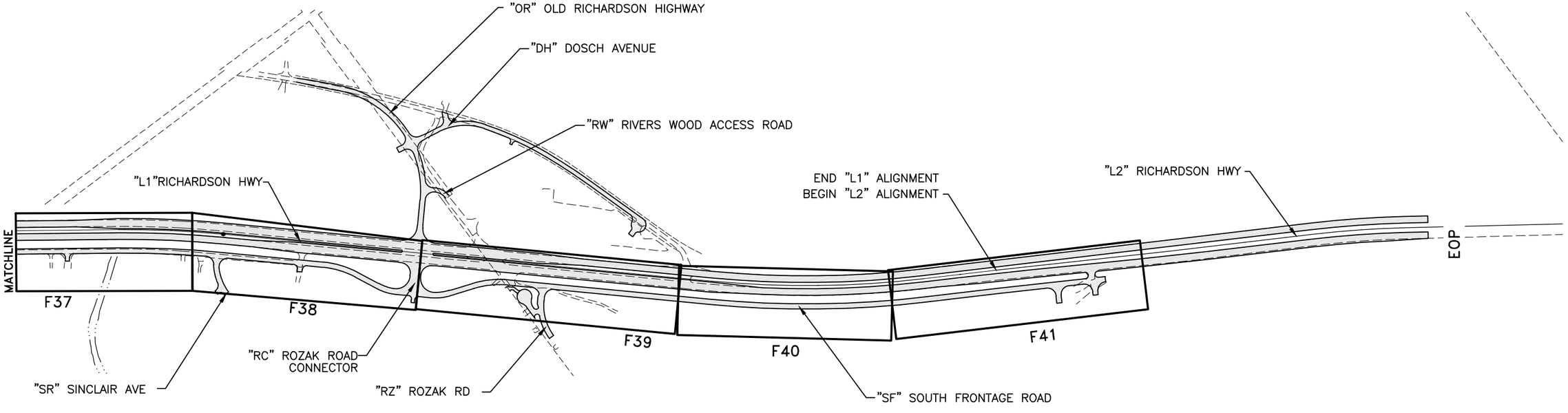


SOUTHBOUND RICH PLAN AND PROFILES (11 OF 11)



STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	F26	F48





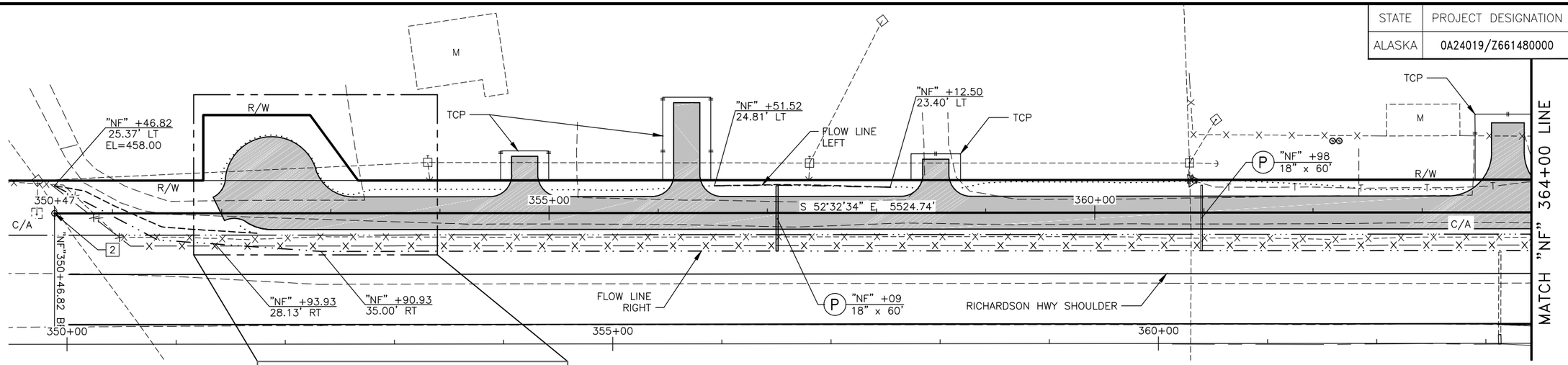
F26
SHEET REFERENCE

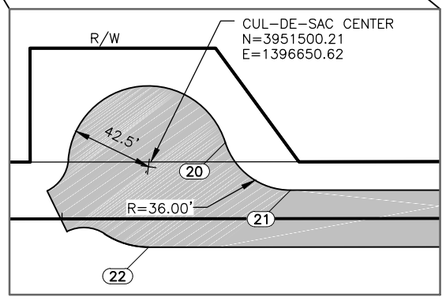
FRONTAGE ROAD SHEET INDEX

STATE OF ALASKA
49 TH
DUSTIN CORY HANNAFIOUS
NO. CE14065
REGISTERED PROFESSIONAL ENGINEER

P:\2012\12009FB\C\C7001cnst12009-F2 Tue, Apr/05/16 01:26pm

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	F27	F48



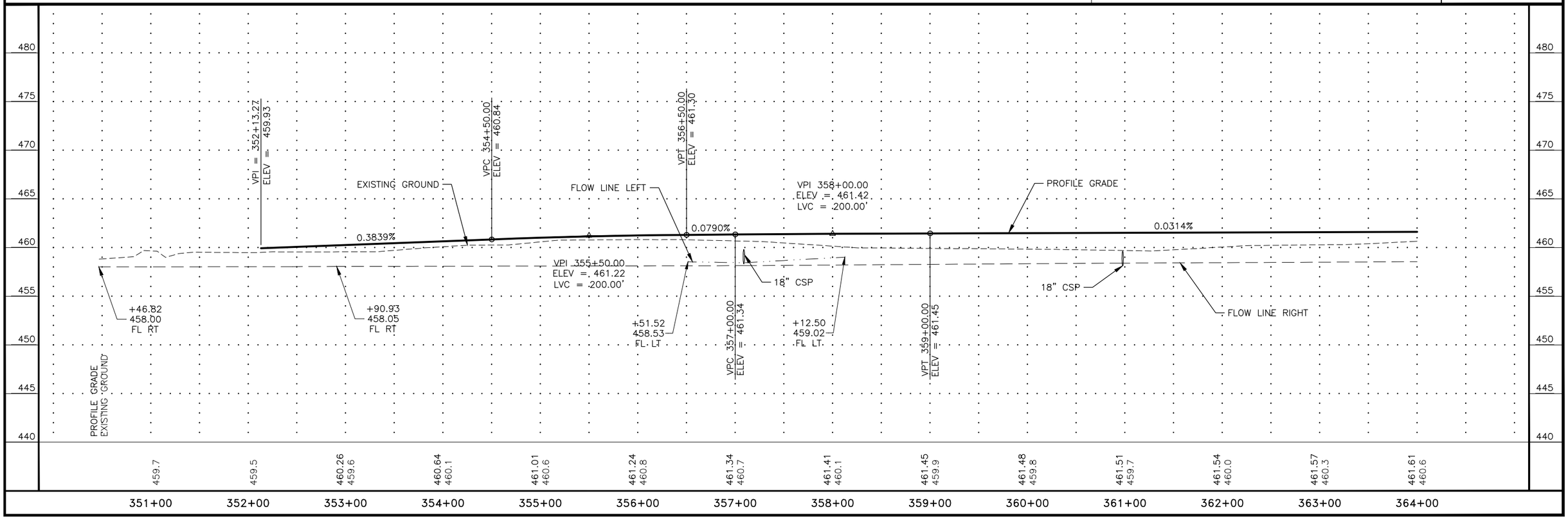


POINT TABLE

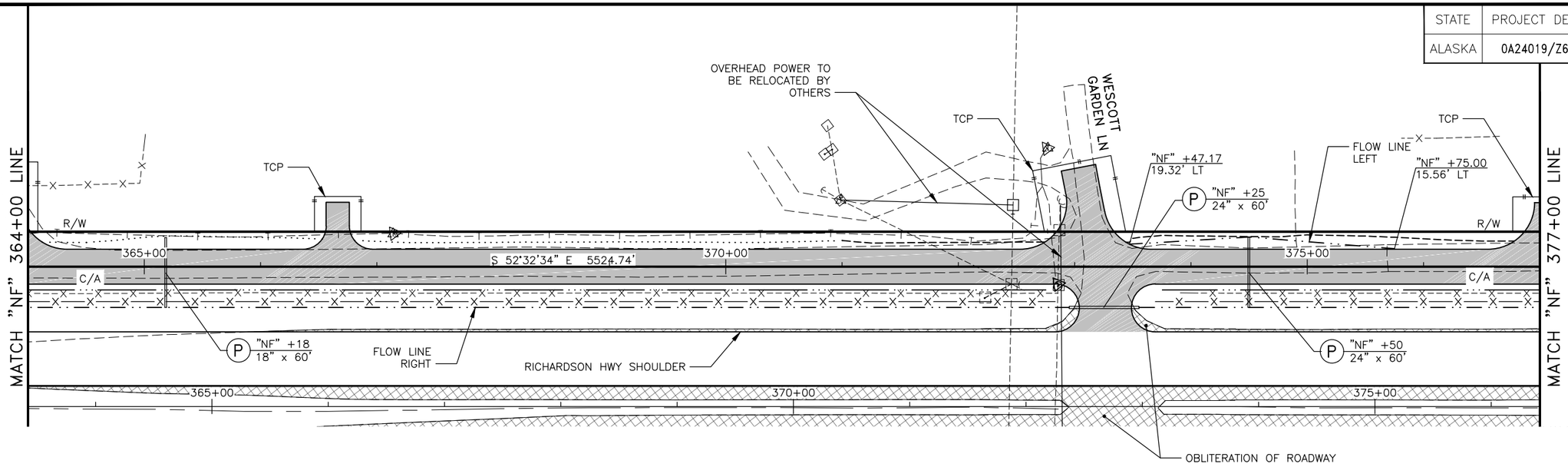
POINT #	DESCRIPTION	STATION	OFFSET
20	PRC	"NF" 352+86.22	−40.22
21	PT	"NF" 353+20.57	−15.00
22	PT	"NF" 352+45.67	15.00

NOTES:
1. EXISTING FENCE BETWEEN FRONTAGE ROADS AND RICHARDSON HIGHWAY TO BE REMOVED. INSTALL NEW FENCE, SEE SHEET D2 FOR FENCE SUMMARY.
2. SEE CULVERT SUMMARY FOR INVERTS.

NORTH FRONTAGE ROAD PLAN AND PROFILE (1 OF 5)

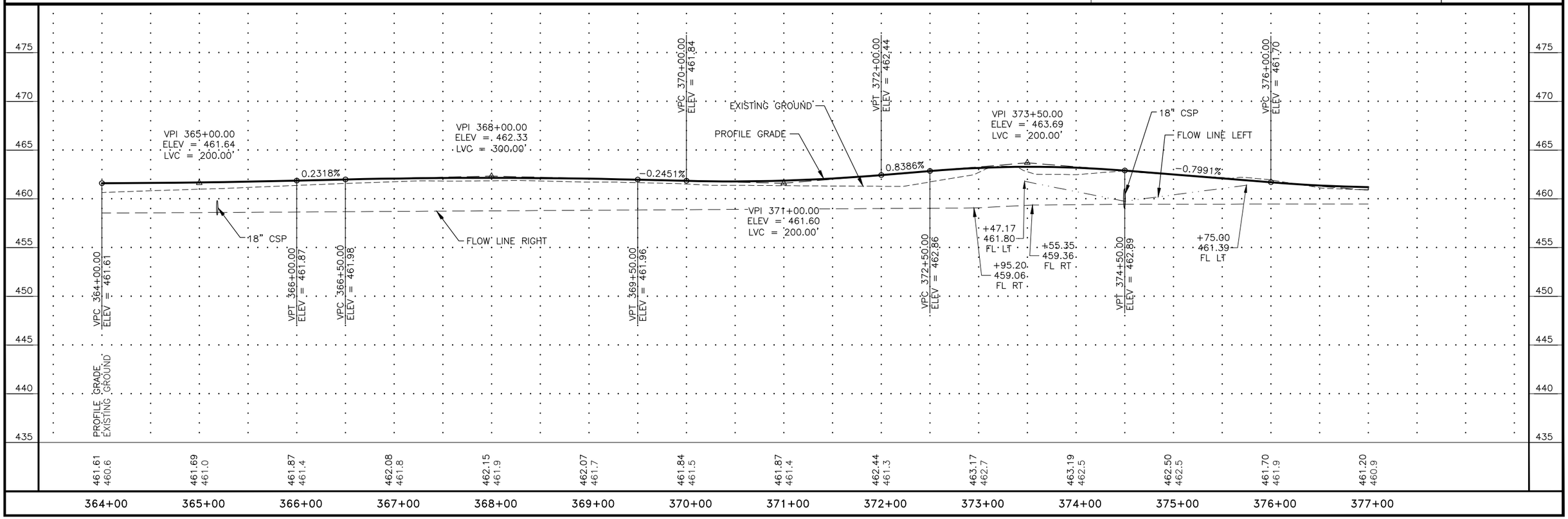


STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	F28	F48



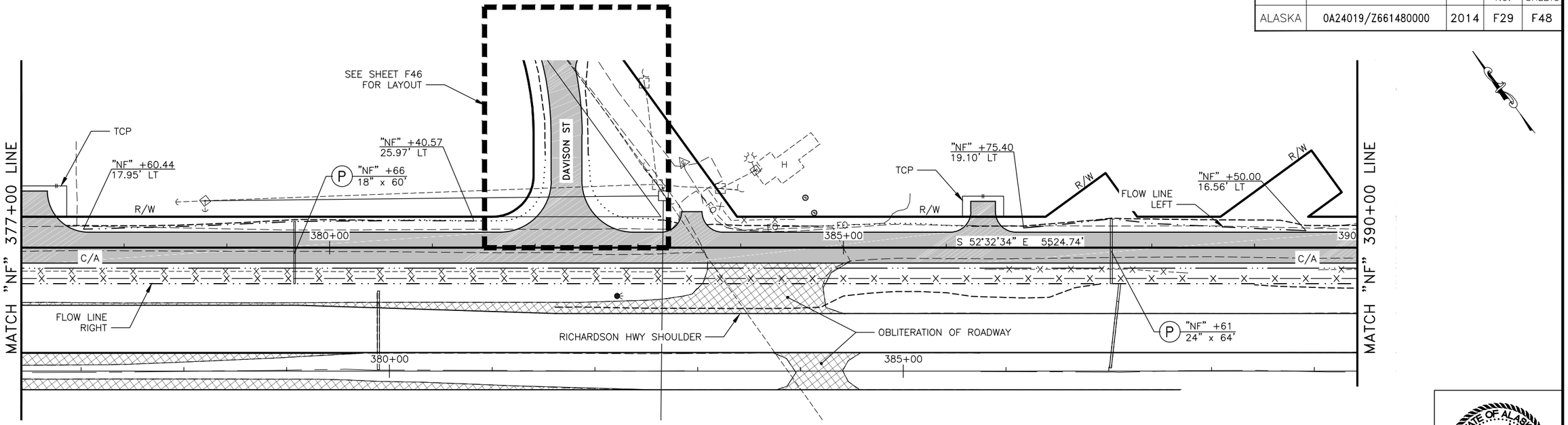
NOTES:
1. EXISTING FENCE BETWEEN FRONTAGE ROADS AND RICHARDSON HIGHWAY TO BE REMOVED. INSTALL NEW FENCE, SEE SHEET D2 FOR FENCE SUMMARY.

NORTH FRONTAGE ROAD PLAN AND PROFILE (2 OF 5)



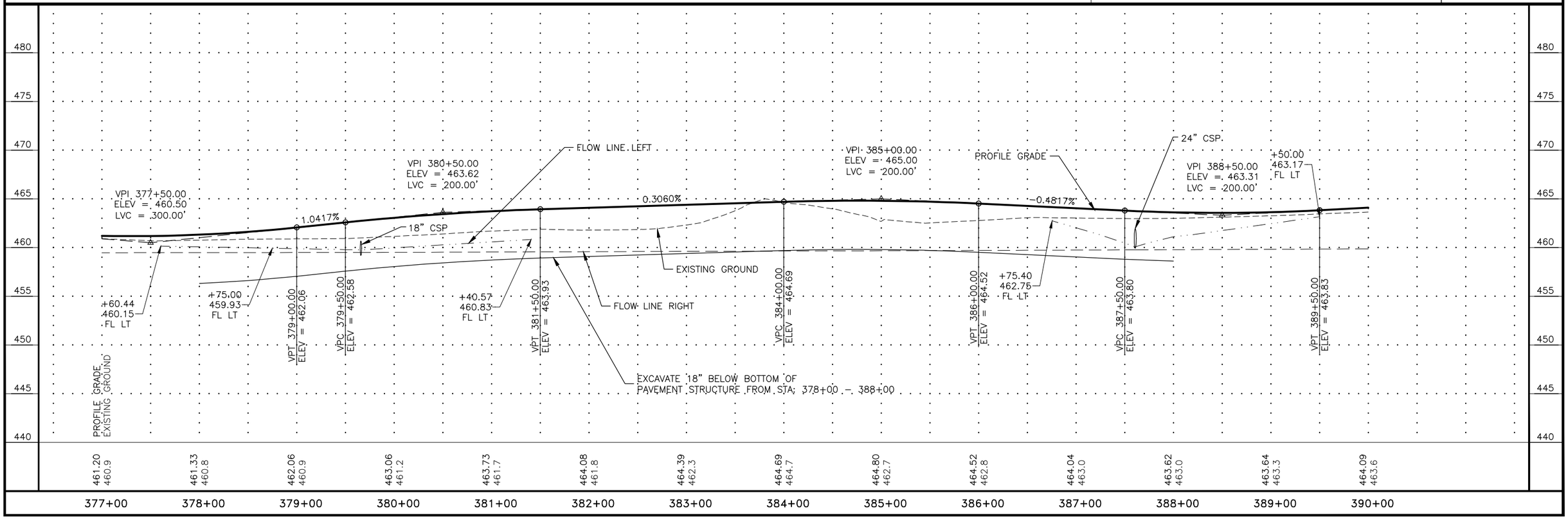
STATE OF ALASKA 49TH
JUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	F29	F48



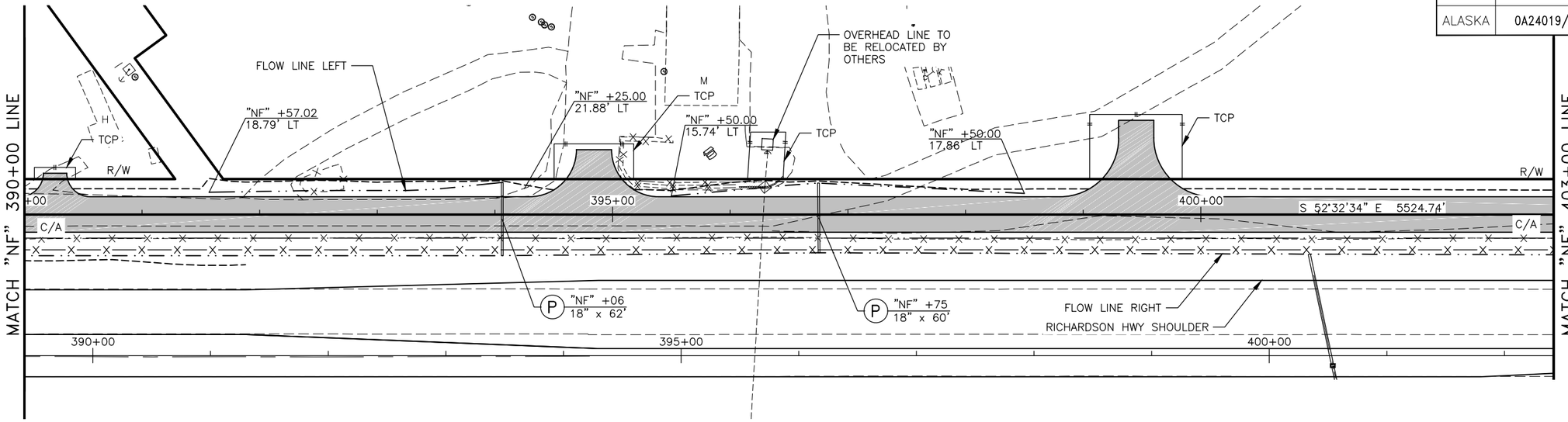
NOTES:
1. EXISTING FENCE BETWEEN FRONTAGE ROADS AND RICHARDSON HIGHWAY TO BE REMOVED. INSTALL NEW FENCE, SEE SHEET D2 FOR FENCE SUMMARY.

NORTH FRONTAGE ROAD PLAN AND PROFILE (3 OF 5)



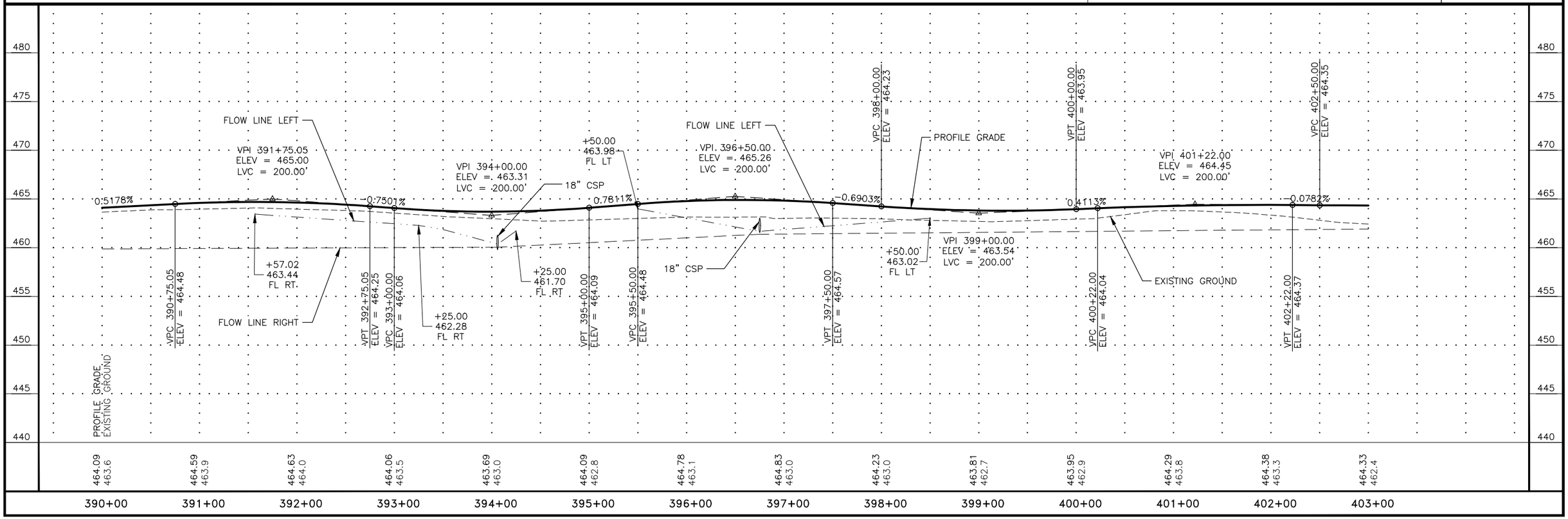
STATE OF ALASKA 49TH
DUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	F30	F48



NOTES:
1. EXISTING FENCE BETWEEN FRONTAGE ROADS AND RICHARDSON HIGHWAY TO BE REMOVED. INSTALL NEW FENCE, SEE SHEET D2 FOR FENCE SUMMARY.

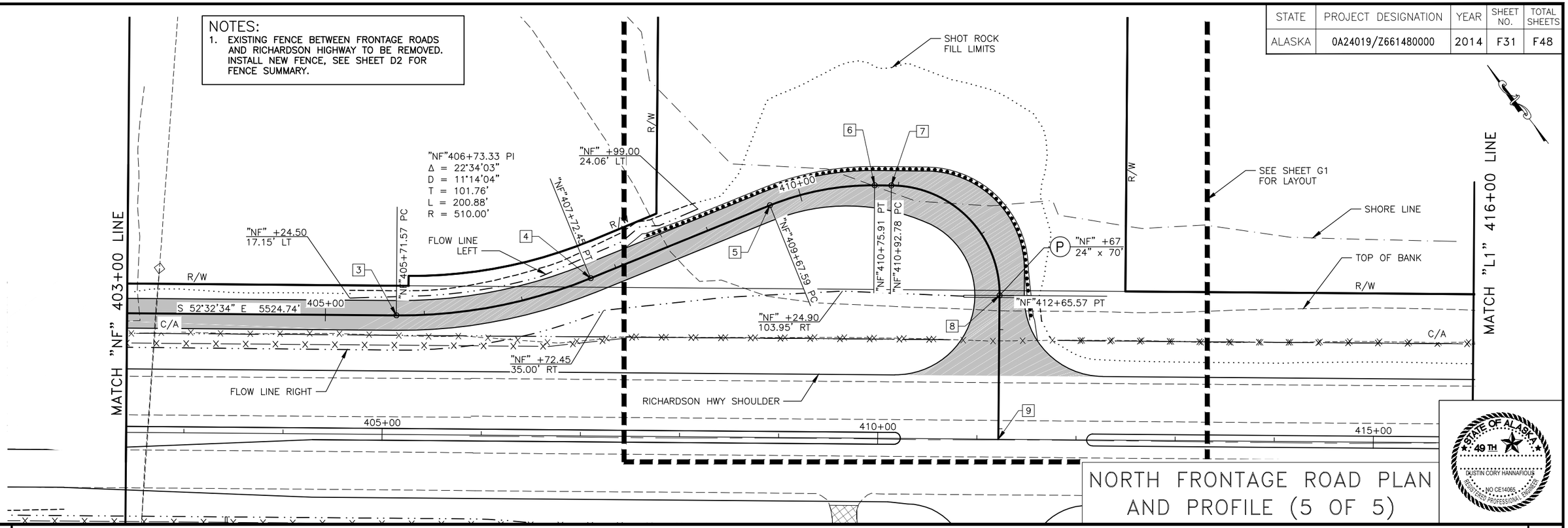
NORTH FRONTAGE ROAD PLAN AND PROFILE (4 OF 5)

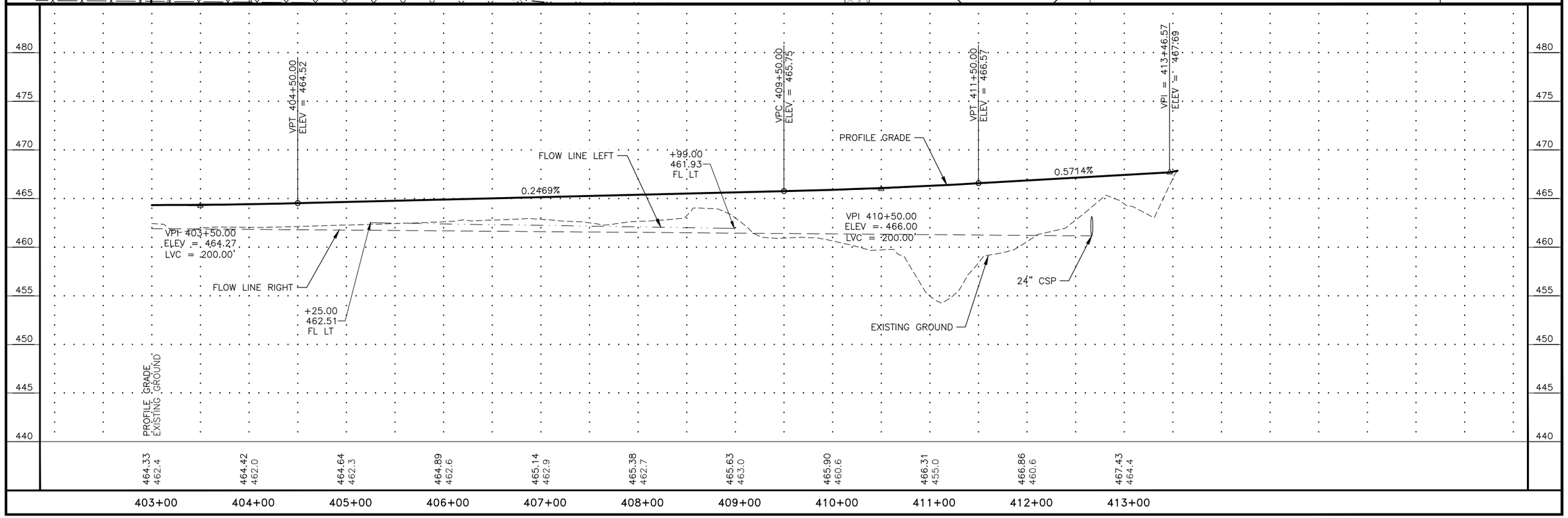


STATE OF ALASKA 49TH
DUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	F31	F48

NOTES:
1. EXISTING FENCE BETWEEN FRONTAGE ROADS AND RICHARDSON HIGHWAY TO BE REMOVED. INSTALL NEW FENCE, SEE SHEET D2 FOR FENCE SUMMARY.

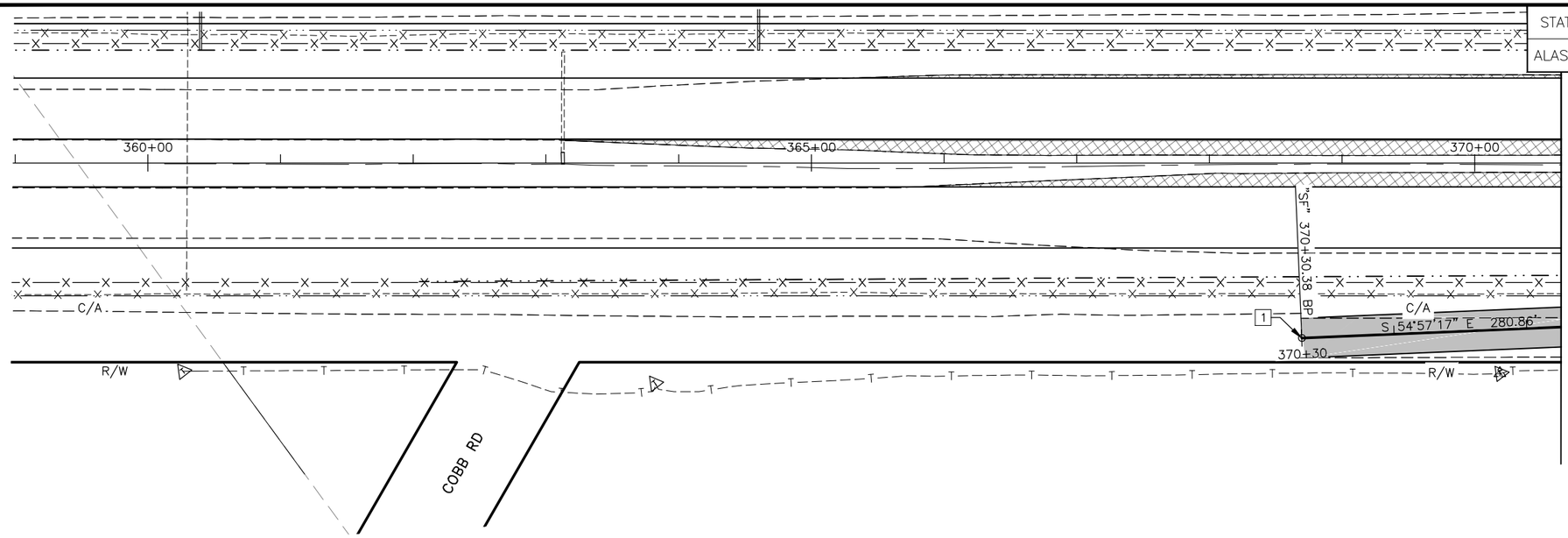




NORTH FRONTAGE ROAD PLAN AND PROFILE (5 OF 5)

STATE OF ALASKA 49TH
DUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER

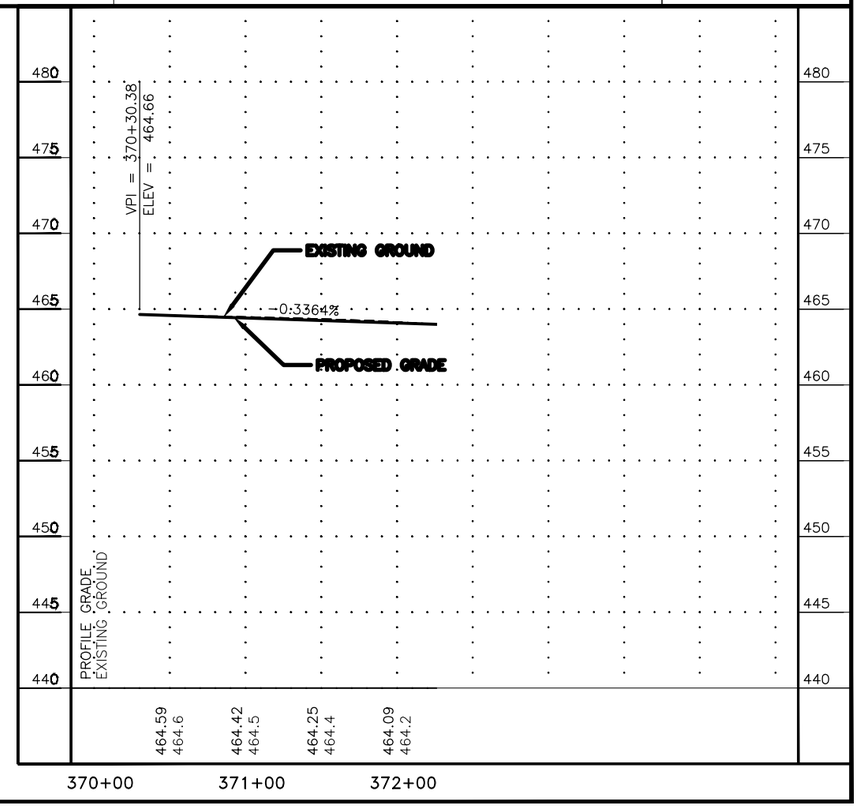
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	F32	F48



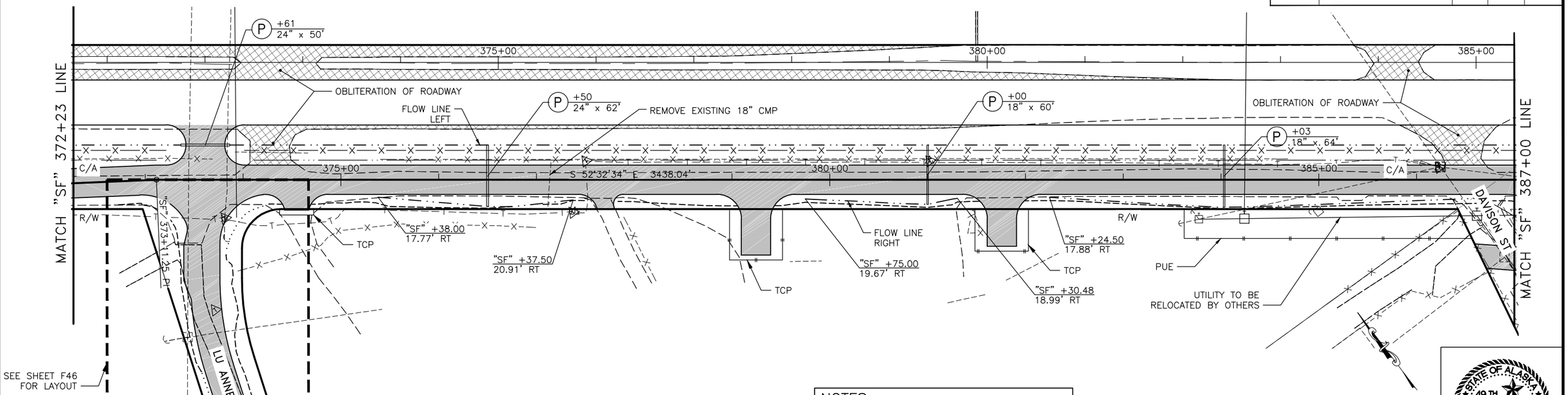
NOTES:
1. EXISTING FENCE BETWEEN FRONTAGE ROADS AND RICHARDSON HIGHWAY TO BE REMOVED. INSTALL NEW FENCE, SEE SHEET D2 FOR FENCE SUMMARY.
2. SEE CULVERT SUMMARY FOR INVERTS.

SOUTH FRONTAGE ROAD PLAN AND PROFILE (1 OF 10)

STATE OF ALASKA 49TH
DUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER



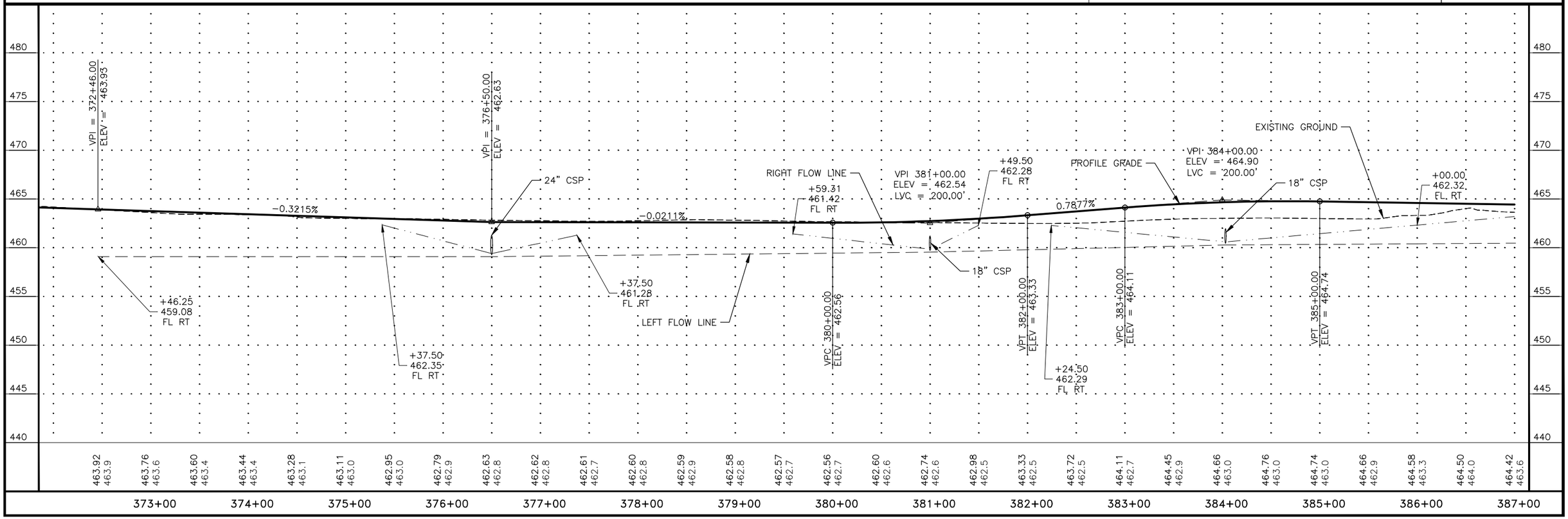
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	F33	F48



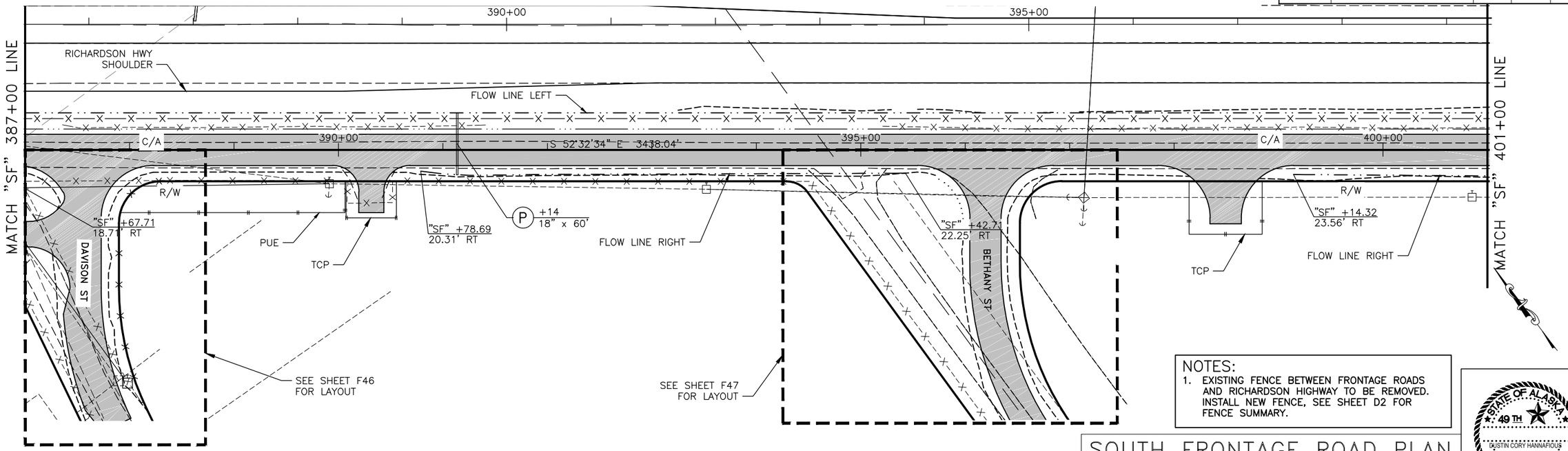
NOTES:
1. EXISTING FENCE BETWEEN FRONTAGE ROADS AND RICHARDSON HIGHWAY TO BE REMOVED. INSTALL NEW FENCE, SEE SHEET D2 FOR FENCE SUMMARY.

SOUTH FRONTAGE ROAD PLAN AND PROFILE (2 OF 10)

STATE OF ALASKA 49TH
JUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER



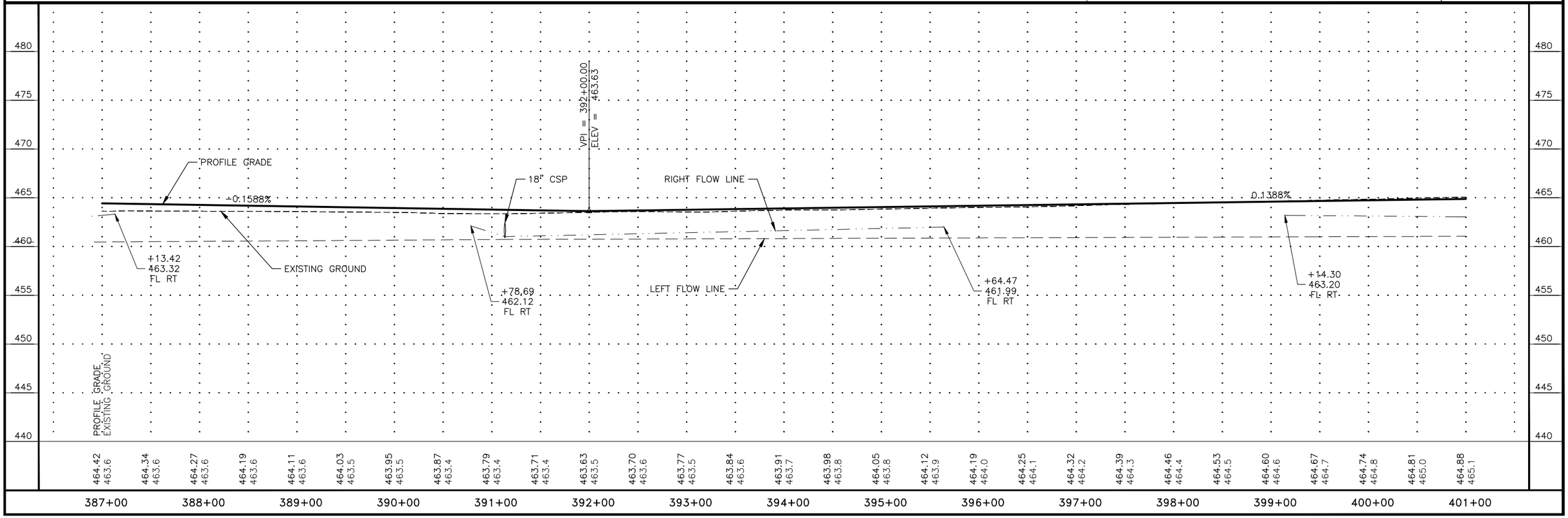
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	F34	F48



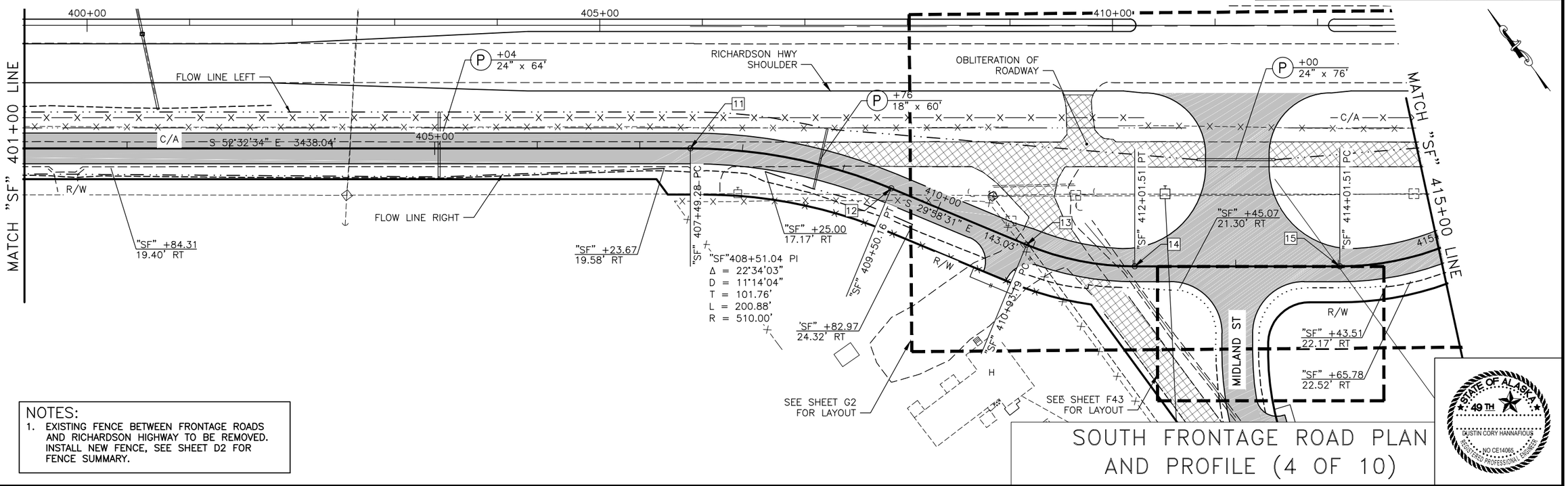
NOTES:
1. EXISTING FENCE BETWEEN FRONTAGE ROADS AND RICHARDSON HIGHWAY TO BE REMOVED. INSTALL NEW FENCE, SEE SHEET D2 FOR FENCE SUMMARY.

SOUTH FRONTAGE ROAD PLAN AND PROFILE (3 OF 10)

STATE OF ALASKA 49TH
JUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER



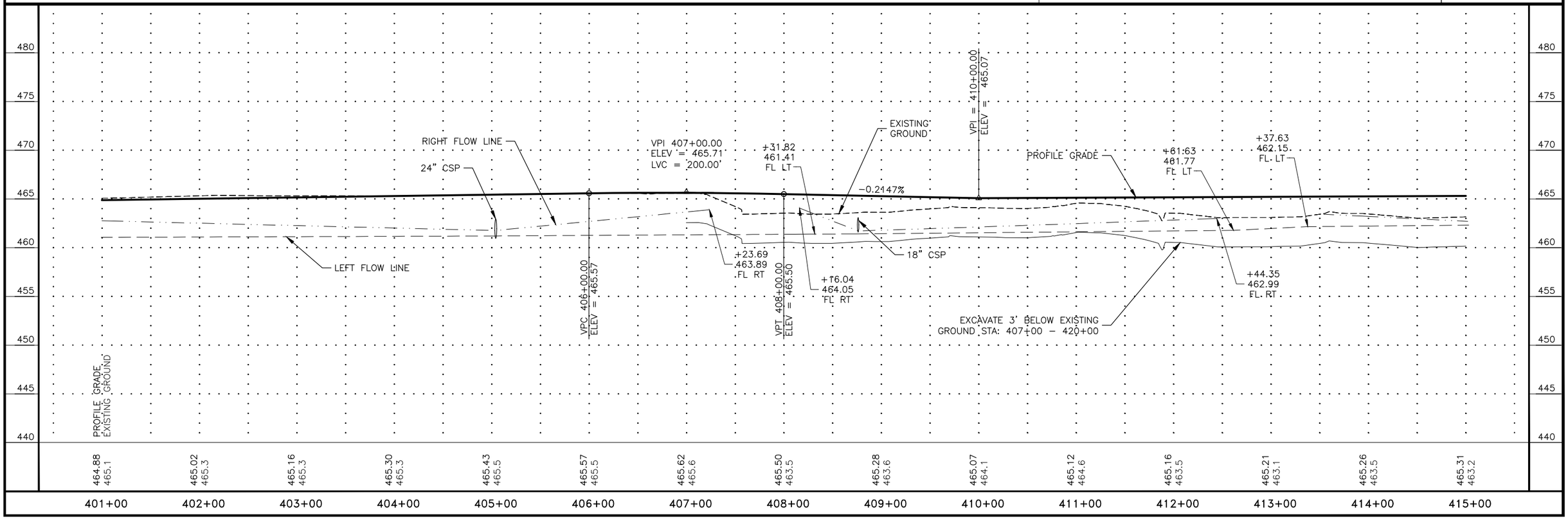
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	F35	F48



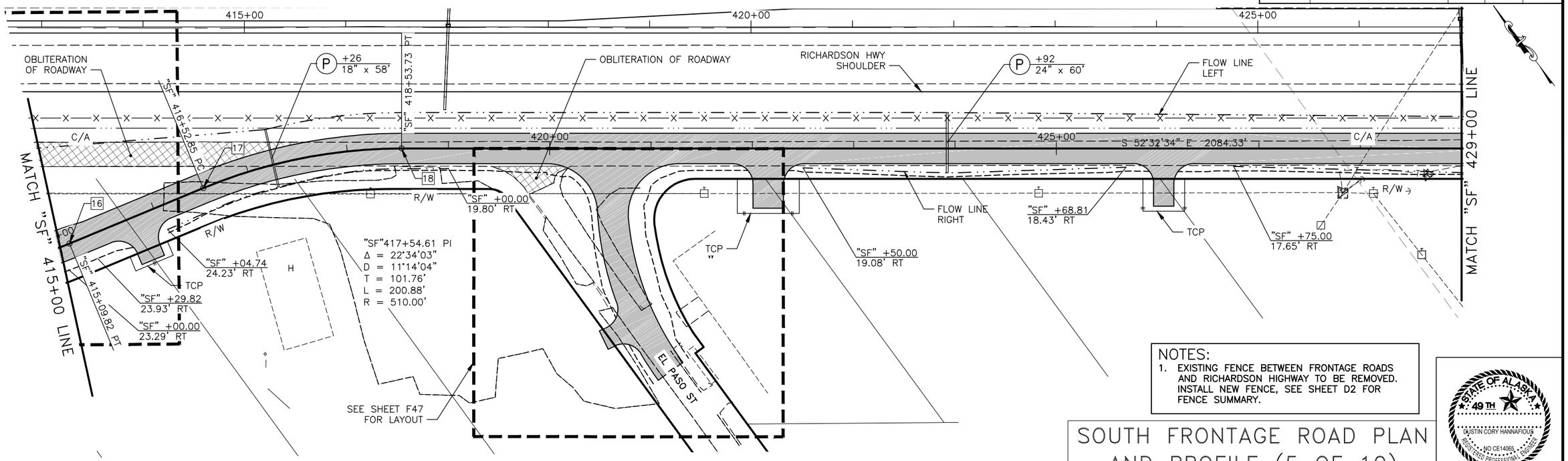
NOTES:
1. EXISTING FENCE BETWEEN FRONTAGE ROADS AND RICHARDSON HIGHWAY TO BE REMOVED. INSTALL NEW FENCE, SEE SHEET D2 FOR FENCE SUMMARY.

SOUTH FRONTAGE ROAD PLAN AND PROFILE (4 OF 10)

STATE OF ALASKA 49TH
JUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER



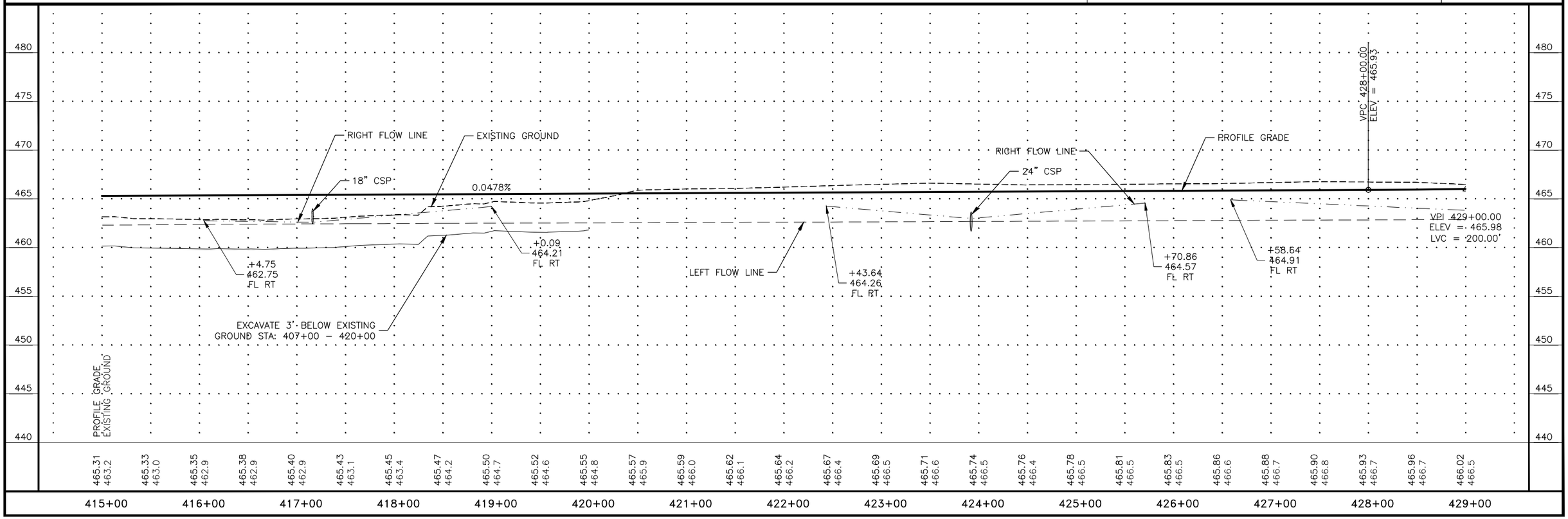
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	F36	F48



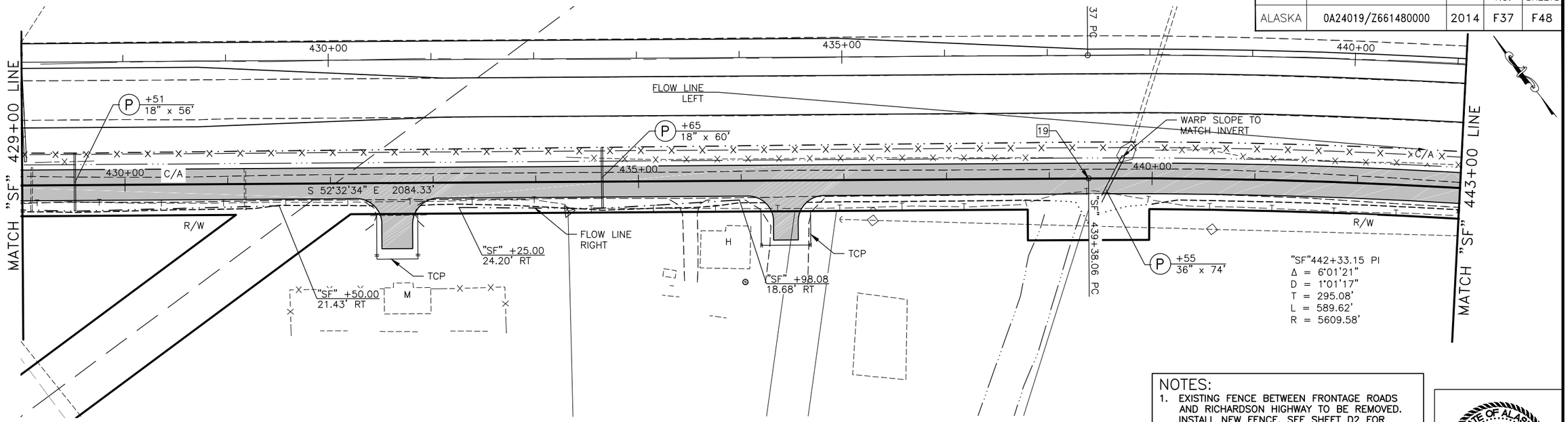
NOTES:
1. EXISTING FENCE BETWEEN FRONTAGE ROADS AND RICHARDSON HIGHWAY TO BE REMOVED. INSTALL NEW FENCE, SEE SHEET D2 FOR FENCE SUMMARY.

SOUTH FRONTAGE ROAD PLAN AND PROFILE (5 OF 10)

STATE OF ALASKA 49TH
JUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER



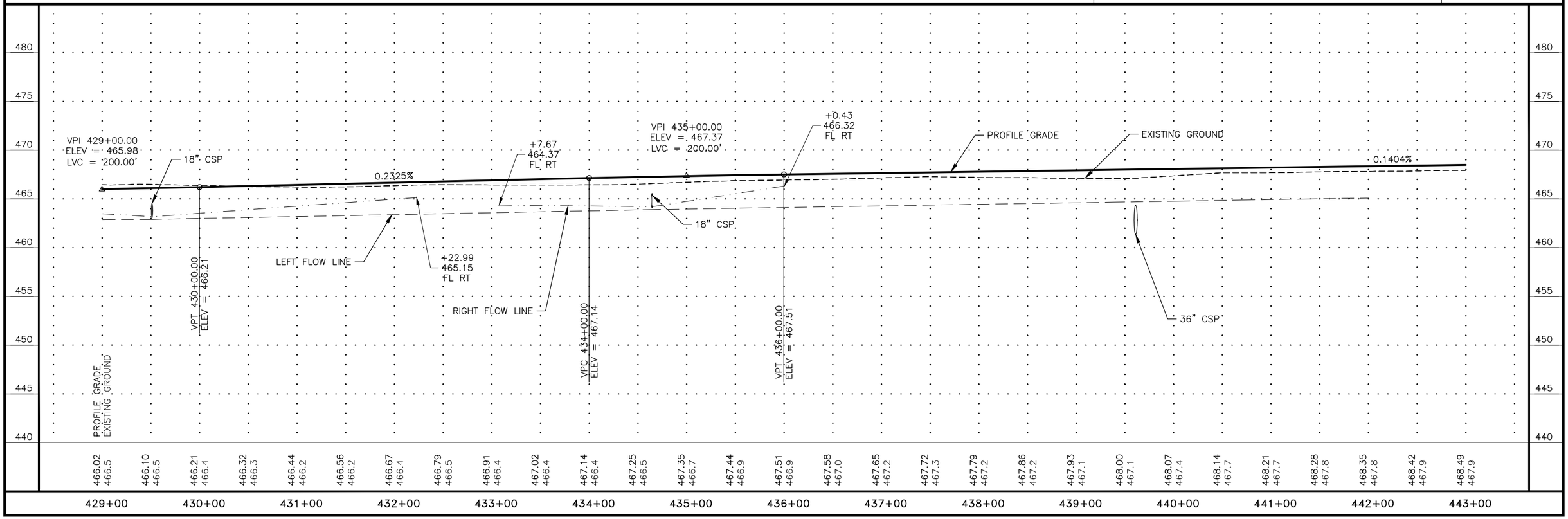
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	F37	F48



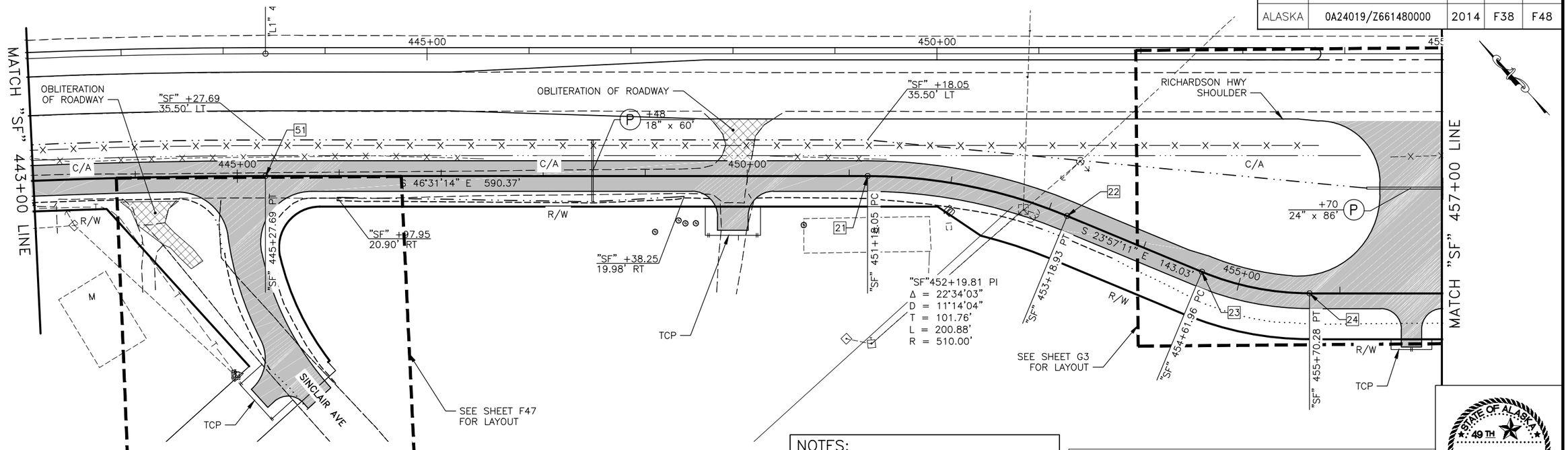
NOTES:
1. EXISTING FENCE BETWEEN FRONTAGE ROADS AND RICHARDSON HIGHWAY TO BE REMOVED. INSTALL NEW FENCE, SEE SHEET D2 FOR FENCE SUMMARY.

STATE OF ALASKA 49TH
DUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER

SOUTH FRONTAGE ROAD PLAN AND PROFILE (6 OF 10)

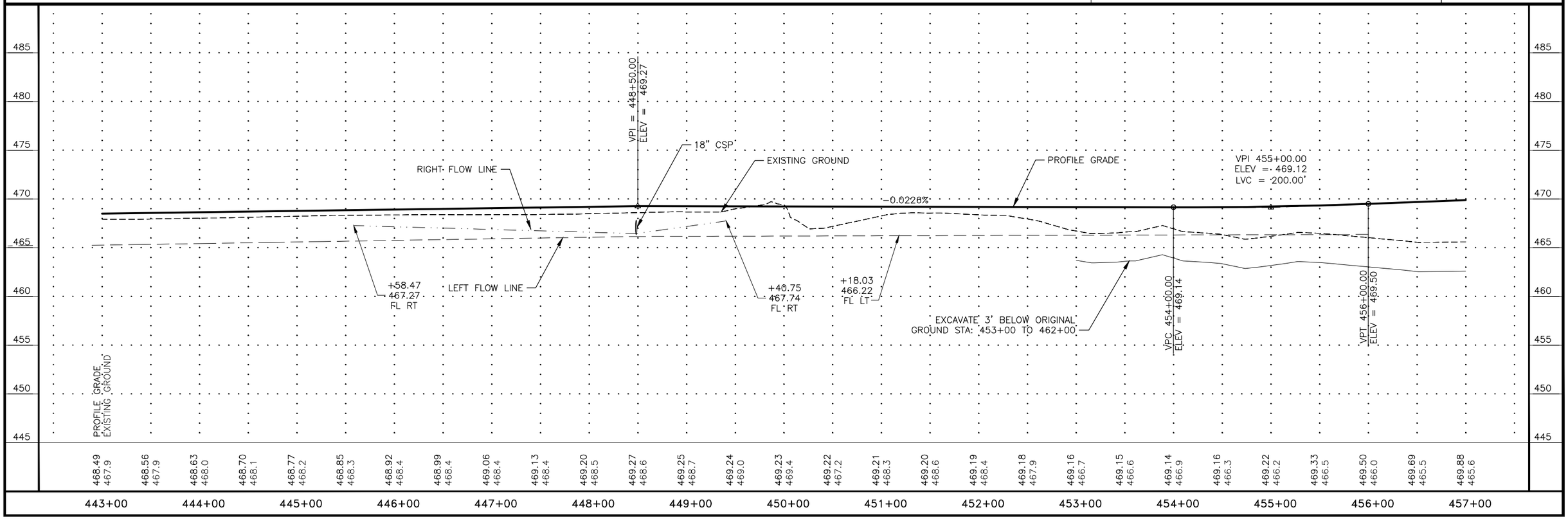


STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	F38	F48



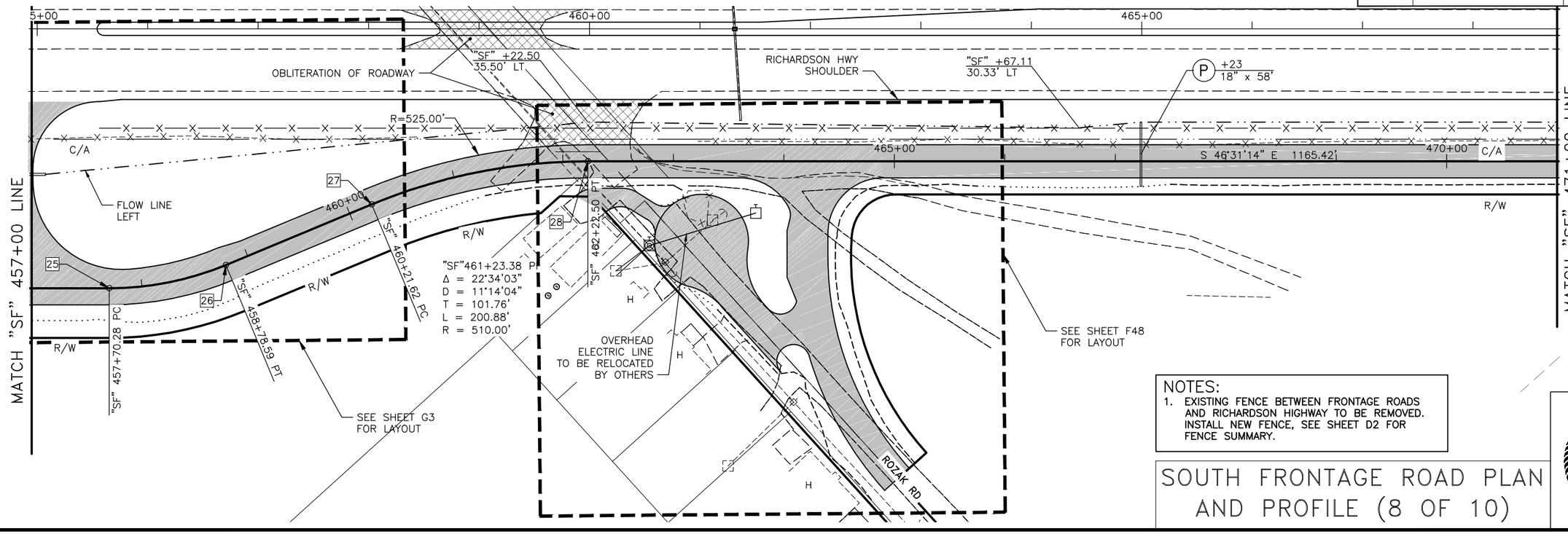
NOTES:
1. EXISTING FENCE BETWEEN FRONTAGE ROADS AND RICHARDSON HIGHWAY TO BE REMOVED. INSTALL NEW FENCE, SEE SHEET D2 FOR FENCE SUMMARY.

SOUTH FRONTAGE ROAD PLAN AND PROFILE (7 OF 10)



STATE OF ALASKA
49TH
JUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER

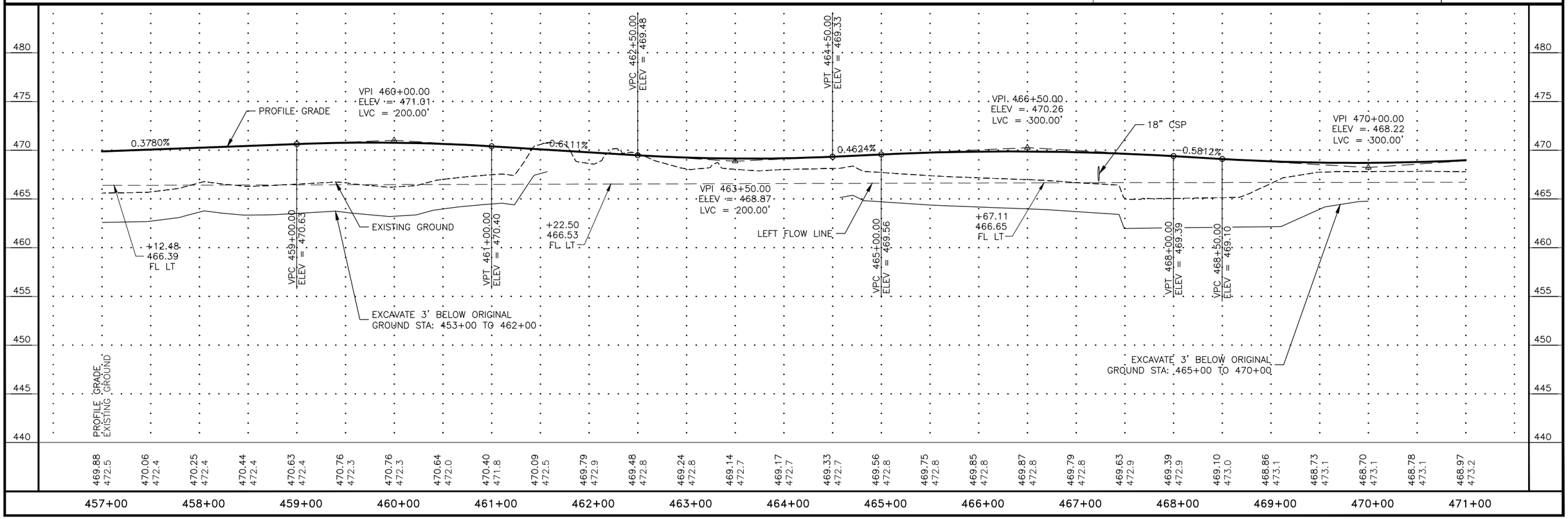
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	F39	F48



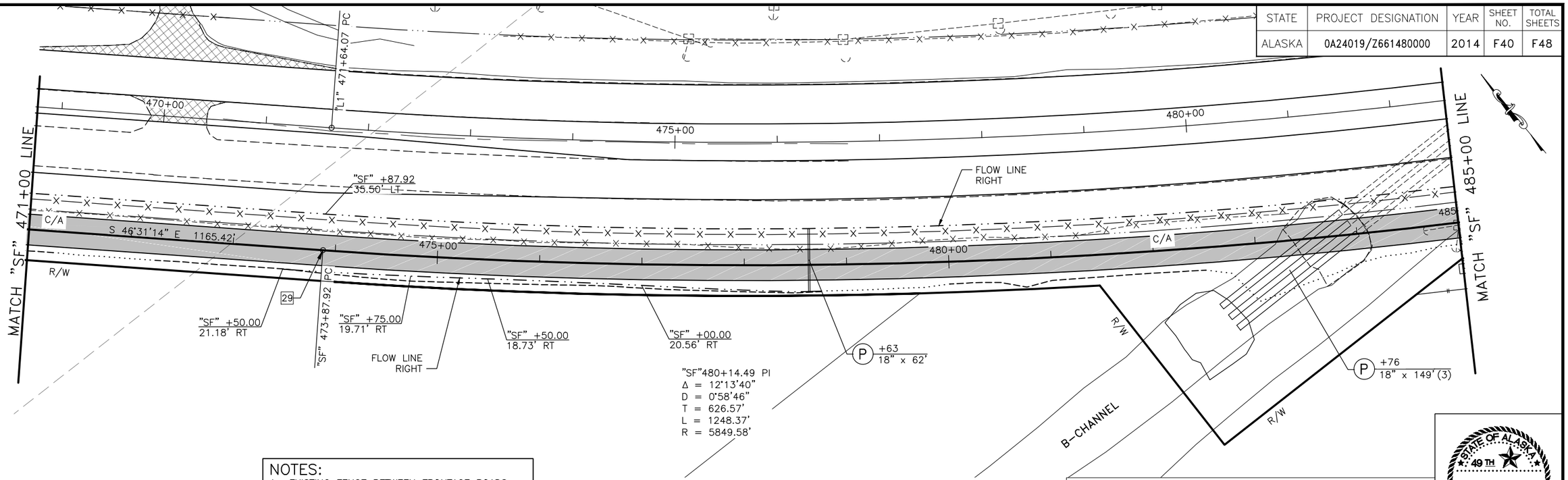
NOTES:
1. EXISTING FENCE BETWEEN FRONTAGE ROADS AND RICHARDSON HIGHWAY TO BE REMOVED. INSTALL NEW FENCE, SEE SHEET D2 FOR FENCE SUMMARY.

SOUTH FRONTAGE ROAD PLAN AND PROFILE (8 OF 10)

STATE OF ALASKA 49TH
JUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER



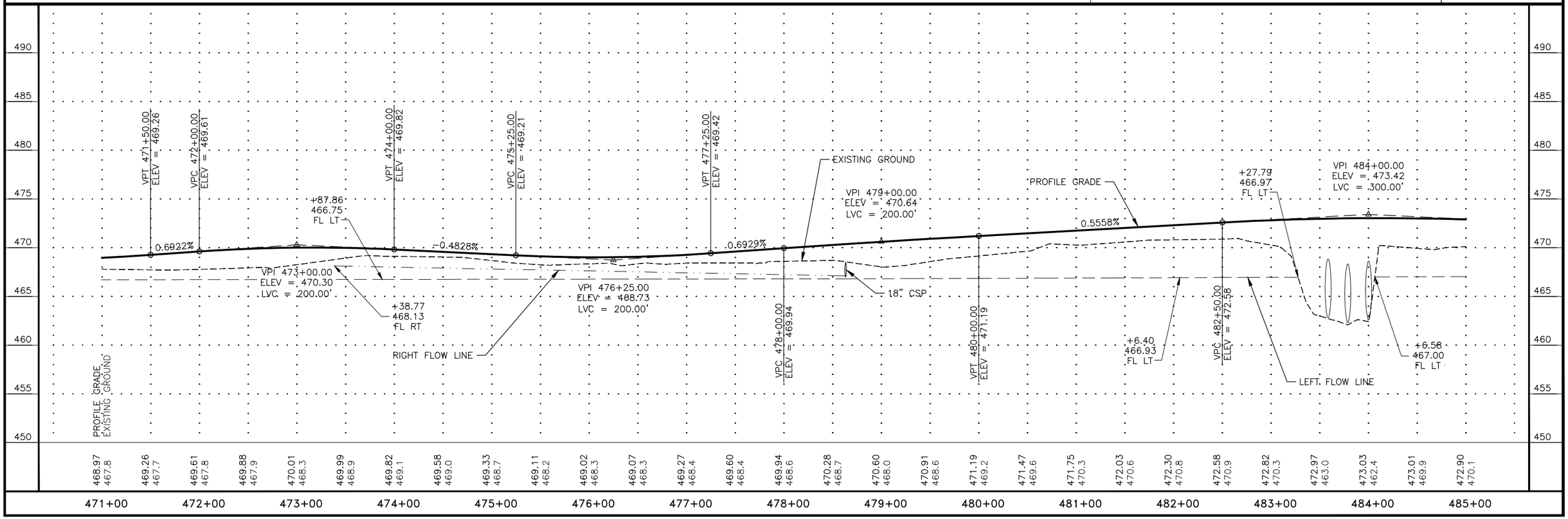
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	F40	F48



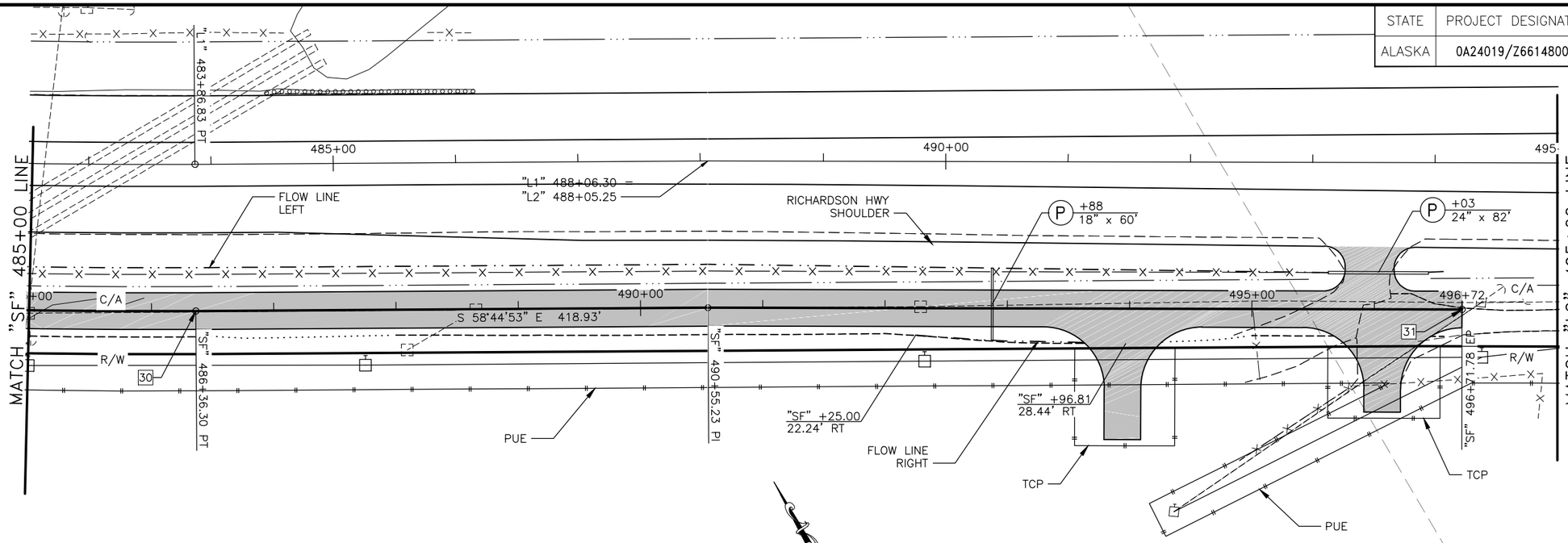
NOTES:
1. EXISTING FENCE BETWEEN FRONTAGE ROADS AND RICHARDSON HIGHWAY TO BE REMOVED. INSTALL NEW FENCE, SEE SHEET D2 FOR FENCE SUMMARY.

SOUTH FRONTAGE ROAD PLAN AND PROFILE (9 OF 10)

STATE OF ALASKA 49TH
DUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER



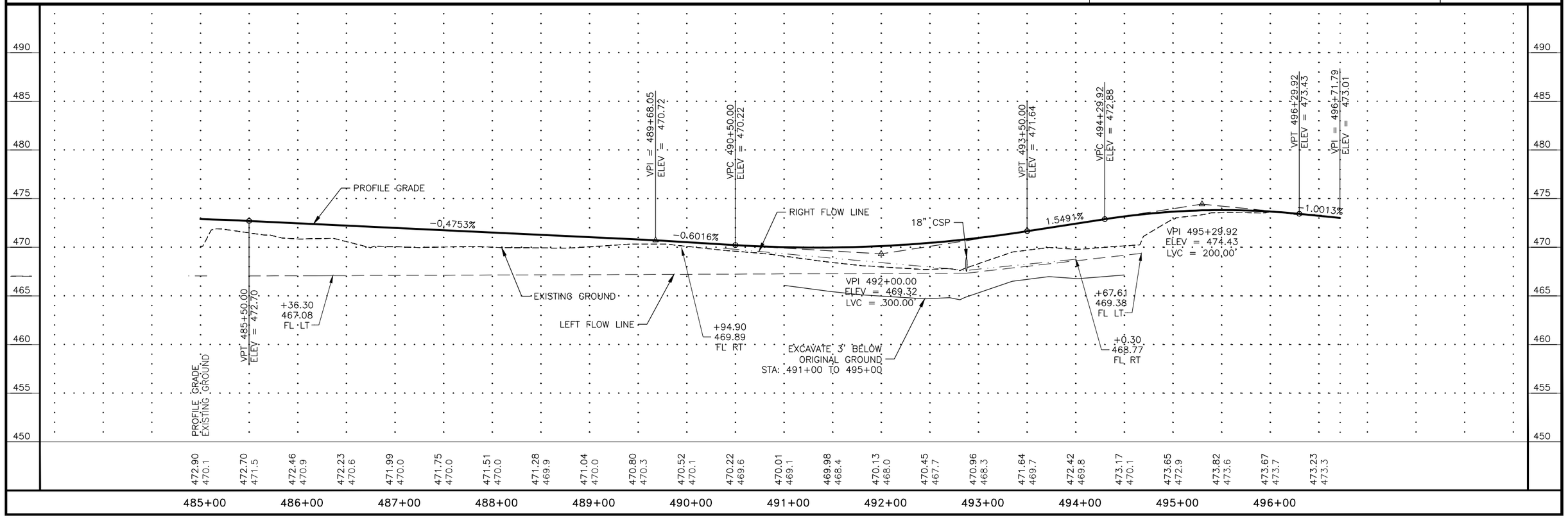
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	F41	F48



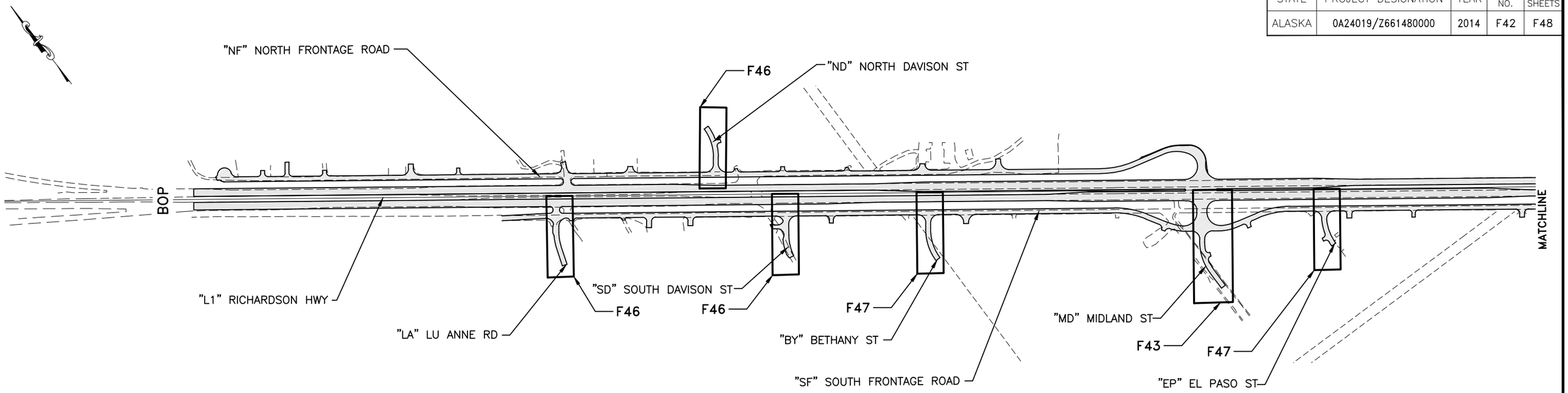
NOTES:
1. EXISTING FENCE BETWEEN FRONTAGE ROADS AND RICHARDSON HIGHWAY TO BE REMOVED. INSTALL NEW FENCE, SEE SHEET D2 FOR FENCE SUMMARY.

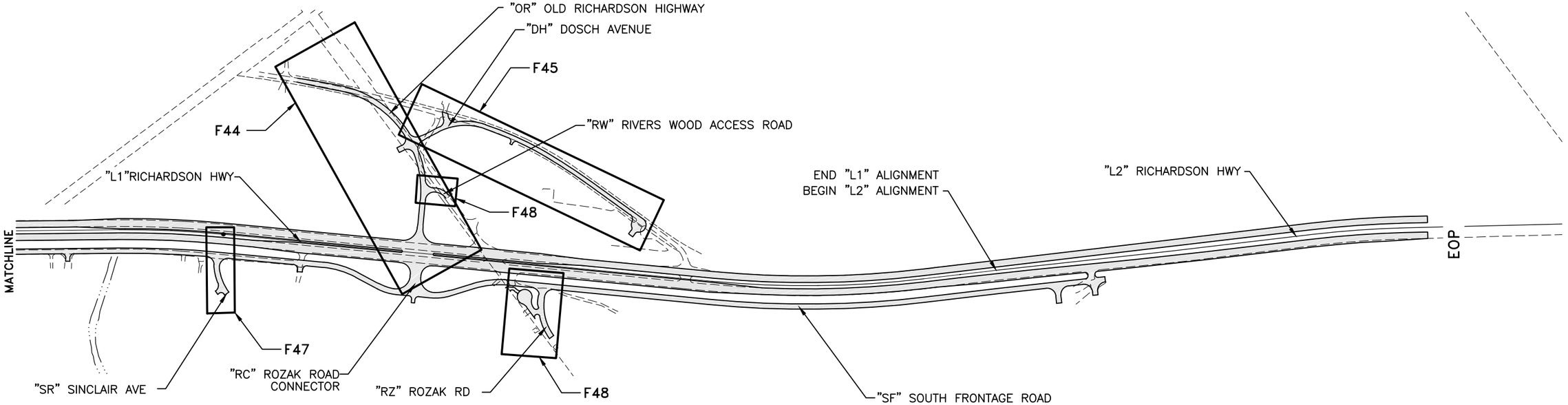
SOUTH FRONTAGE ROAD PLAN AND PROFILE (10 OF 10)

STATE OF ALASKA 49TH
JUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER



STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	F42	F48





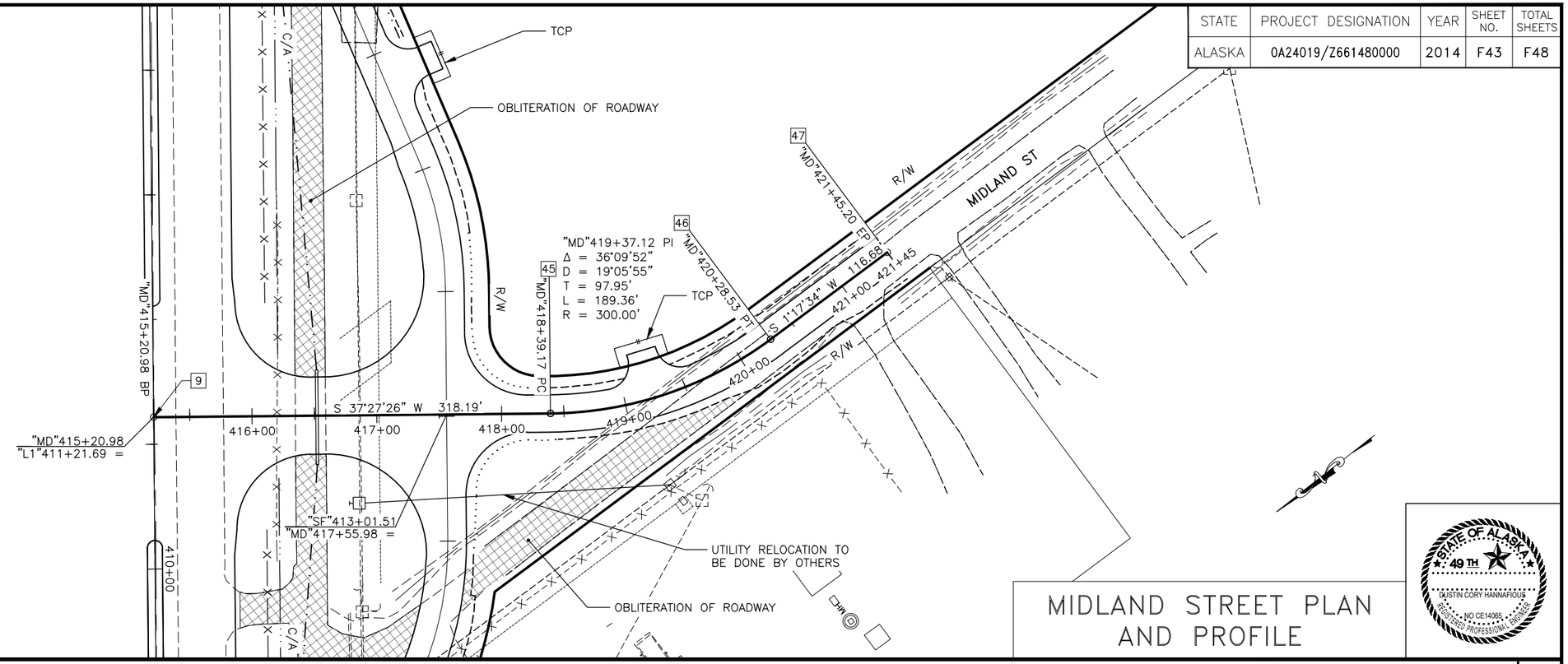
F44
SHEET REFERENCE

SIDE STREET SHEET INDEX

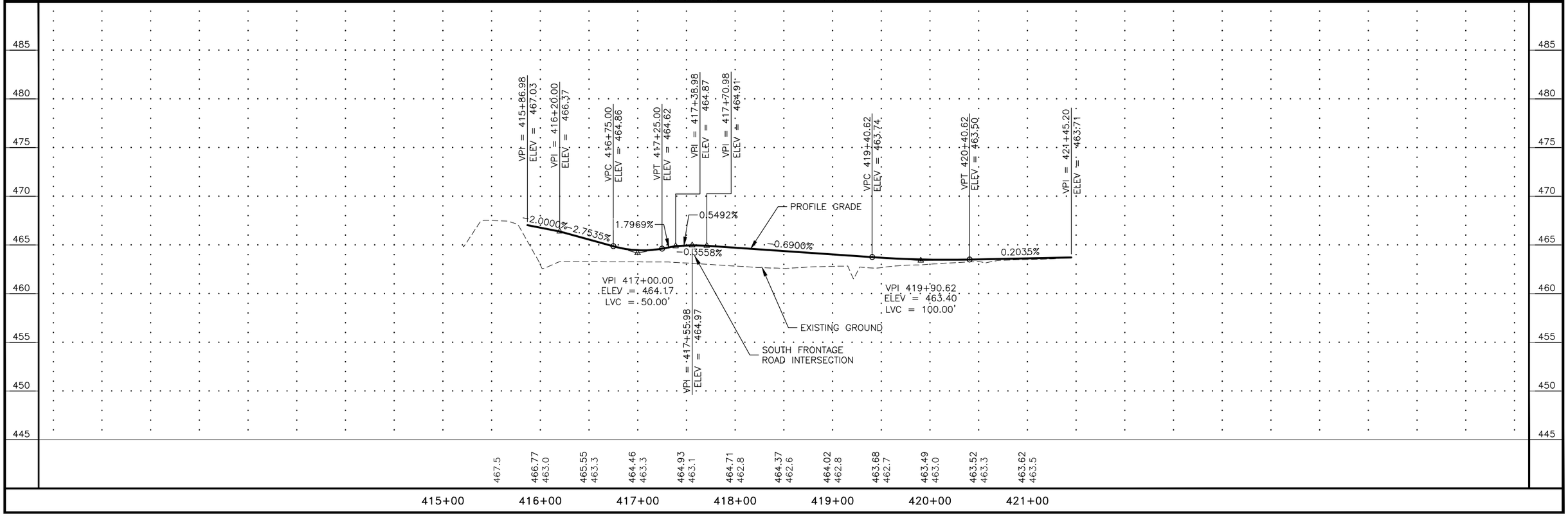
STATE OF ALASKA 49TH
DUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER

P:\2012\12009FB\C\C7001cnst12009-F3 Tue, Apr/05/16 01:35pm

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	F43	F48

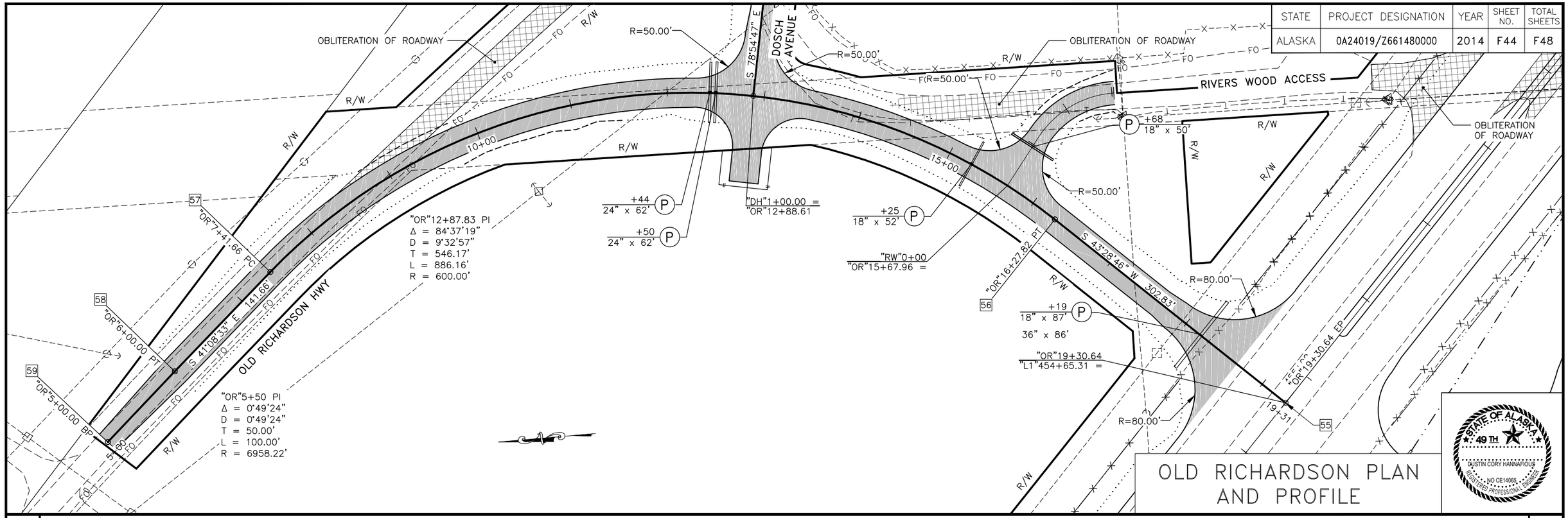


MIDLAND STREET PLAN AND PROFILE



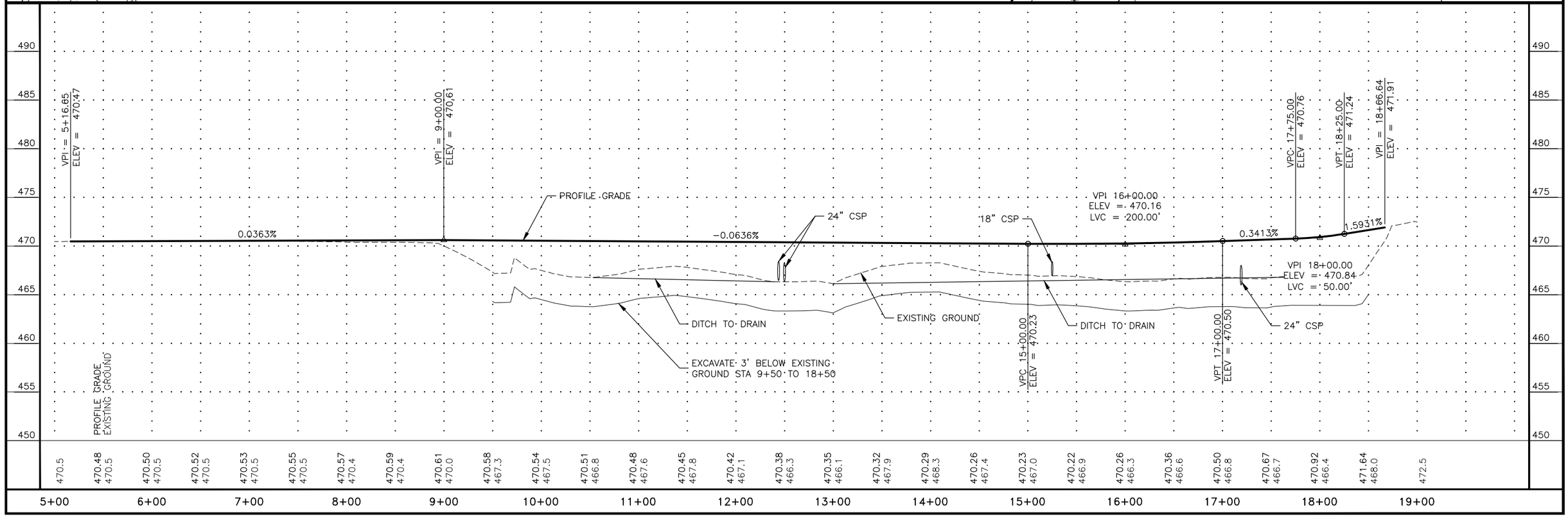
STATE OF ALASKA 49TH
JUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	F44	F48

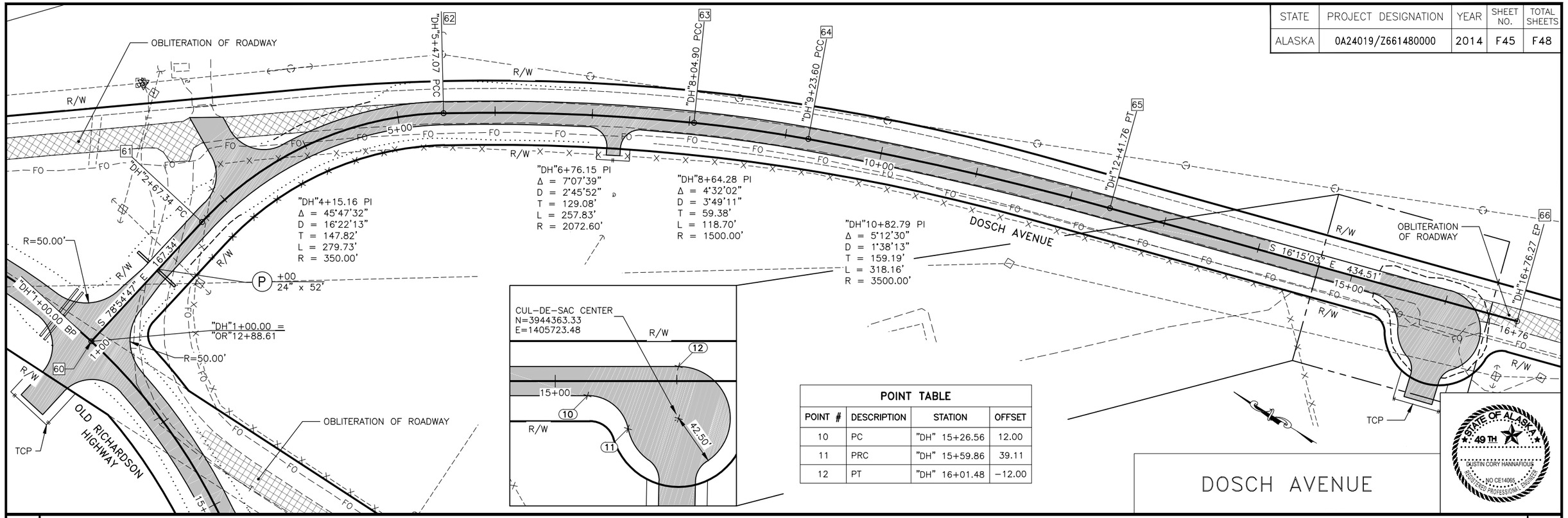


OLD RICHARDSON PLAN AND PROFILE

STATE OF ALASKA 49TH
JUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER



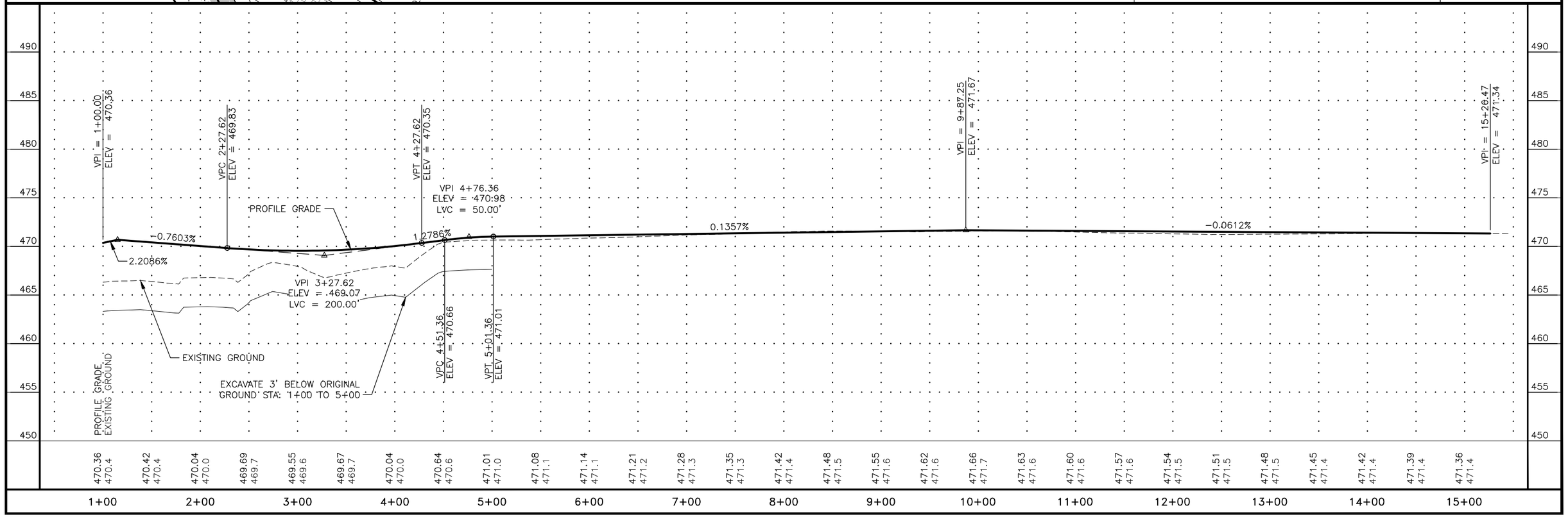
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	F45	F48



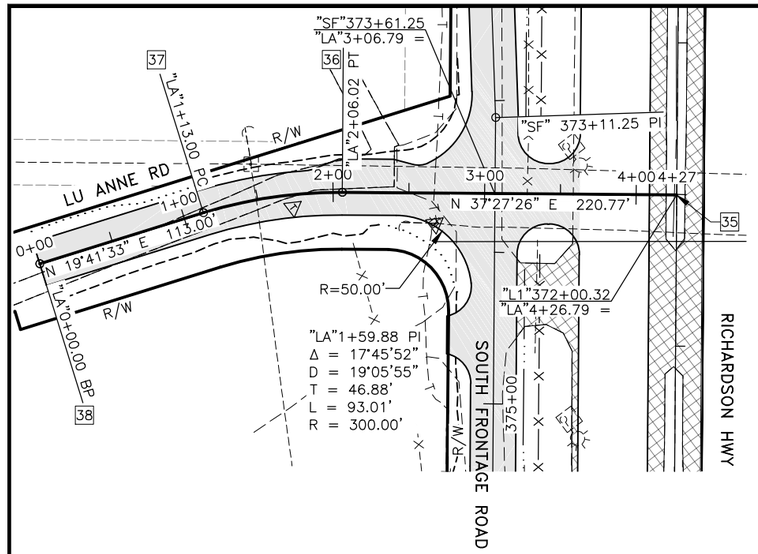
POINT TABLE			
POINT #	DESCRIPTION	STATION	OFFSET
10	PC	"DH" 15+26.56	12.00
11	PRC	"DH" 15+59.86	39.11
12	PT	"DH" 16+01.48	−12.00

DOSCH AVENUE

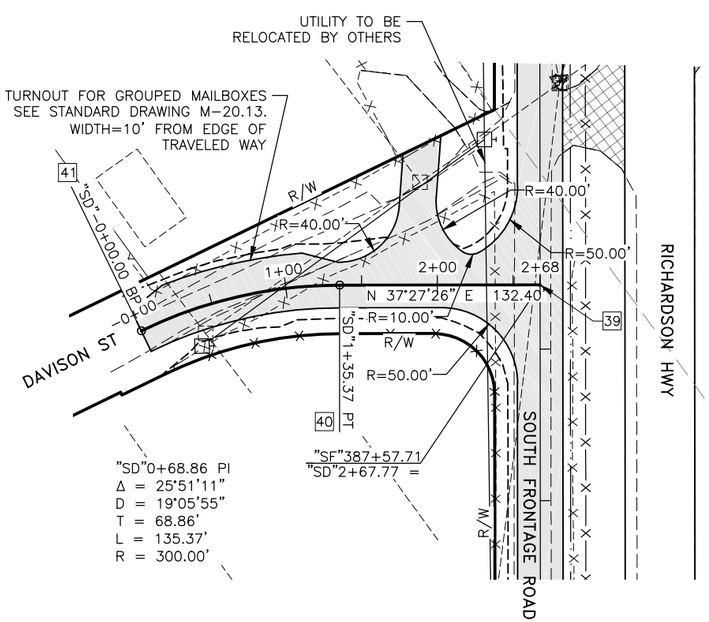
STATE OF ALASKA
49TH
JUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER



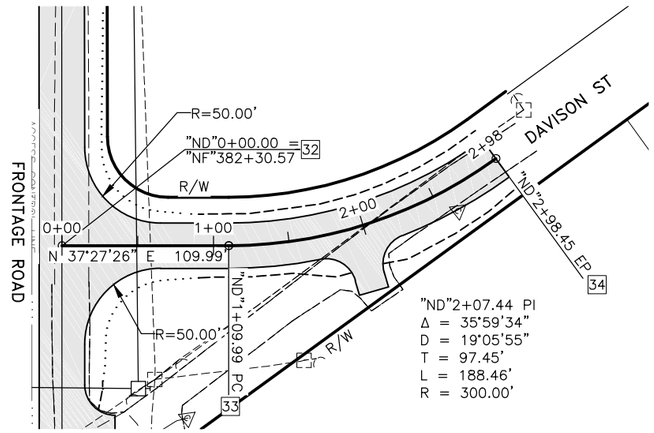
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	F46	F46



LU ANNE RD



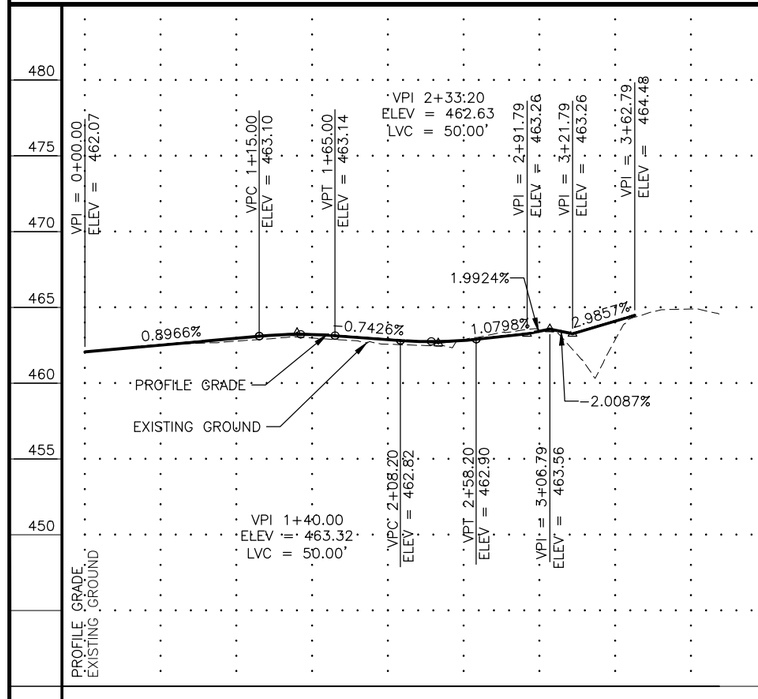
DAVISON ST SOUTH

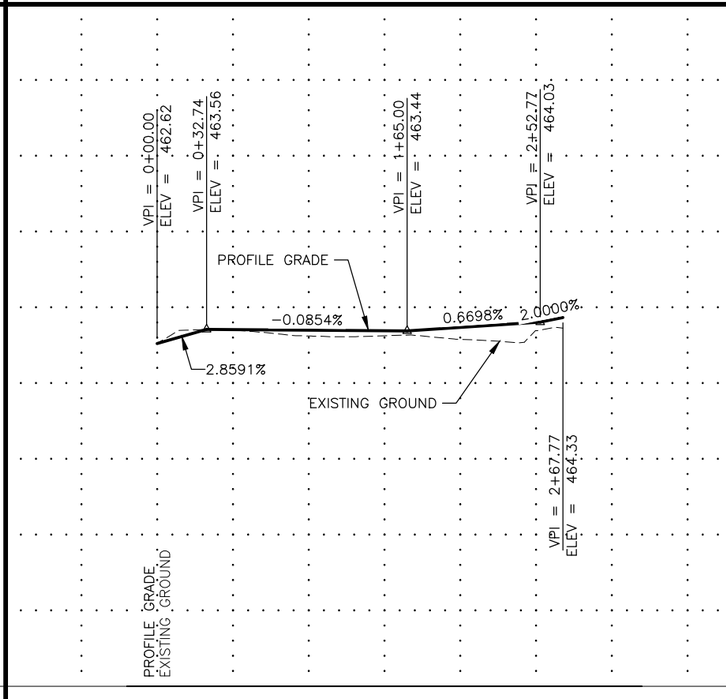


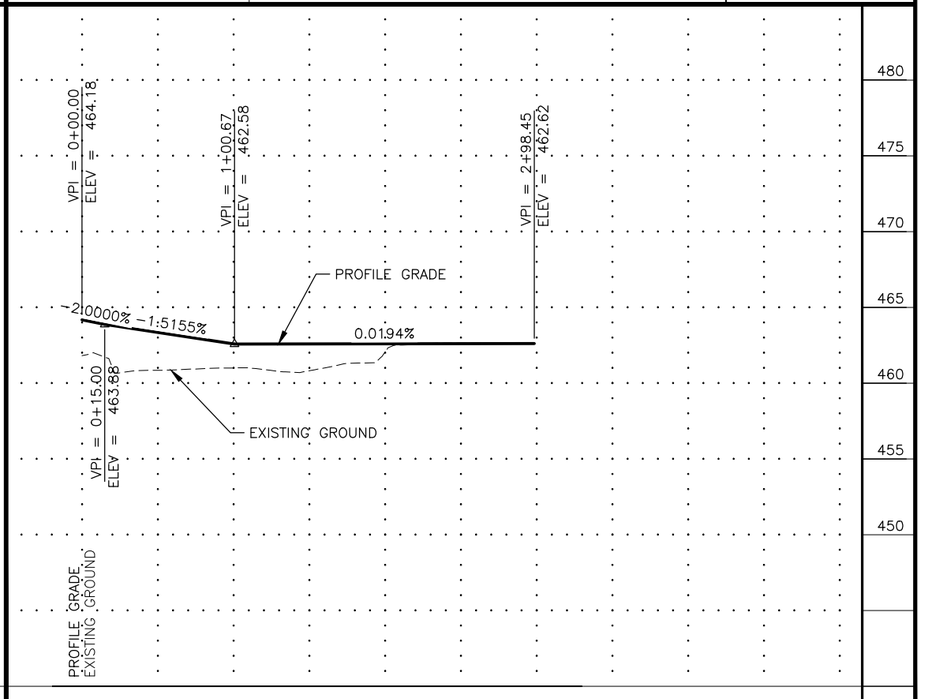
DAVISON ST NORTH

SIDE STREETS PLAN AND PROFILE (1 OF 3)

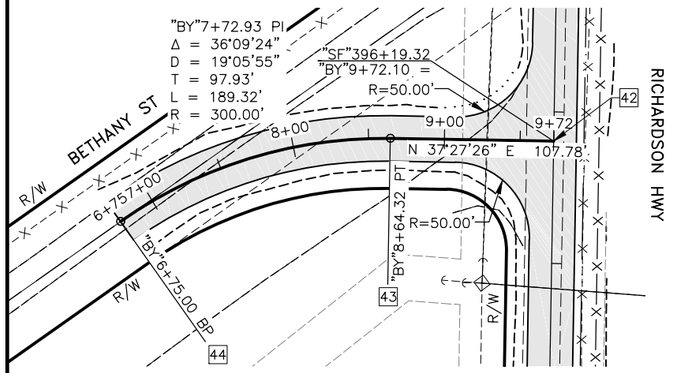
STATE OF ALASKA 49TH
JUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER



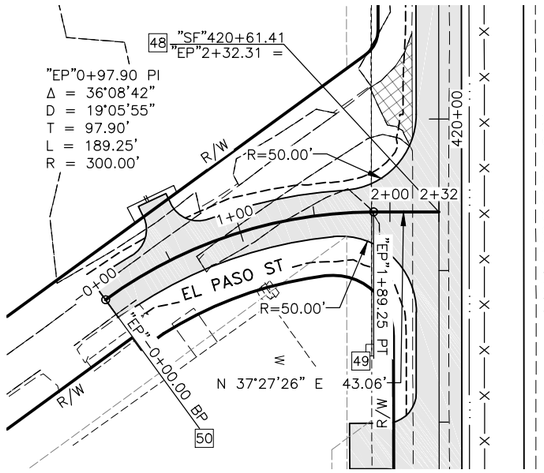




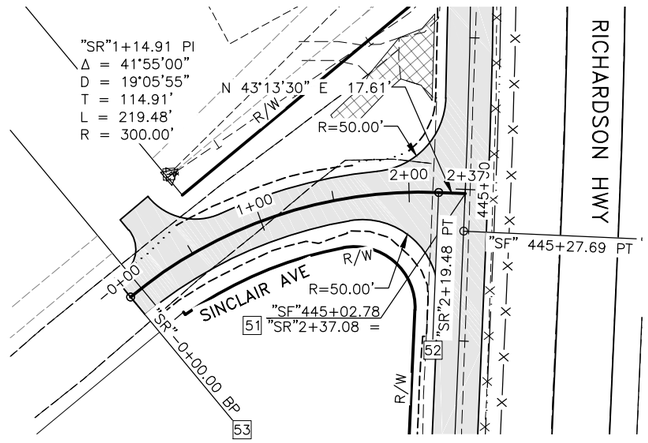
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	F47	F46



BETHANY ST



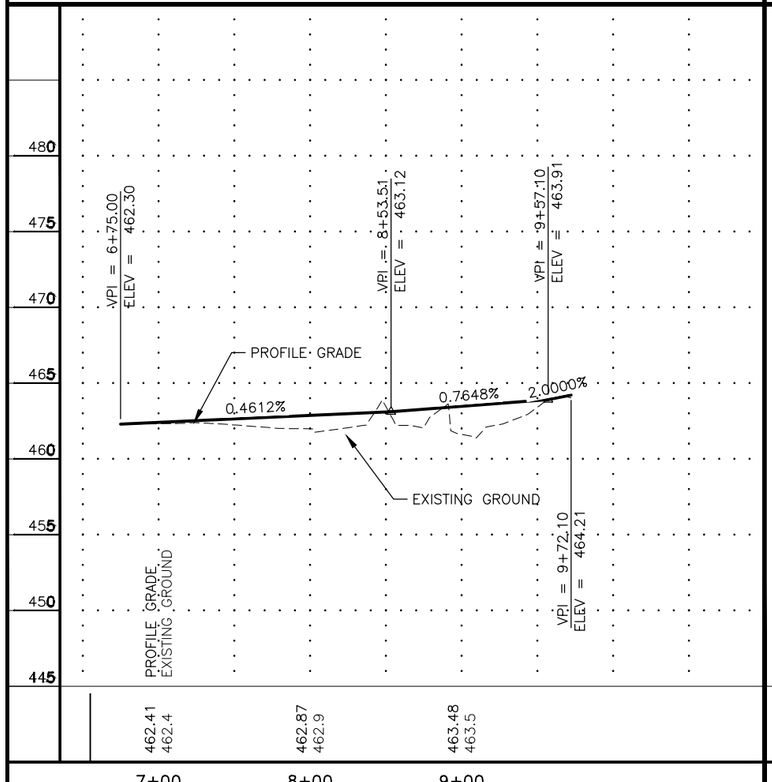
EL PASO ST

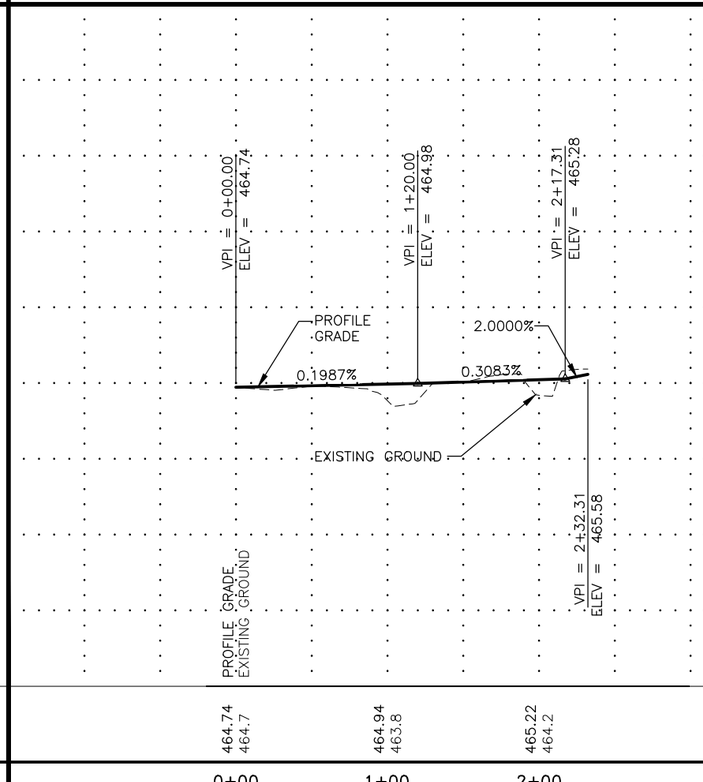


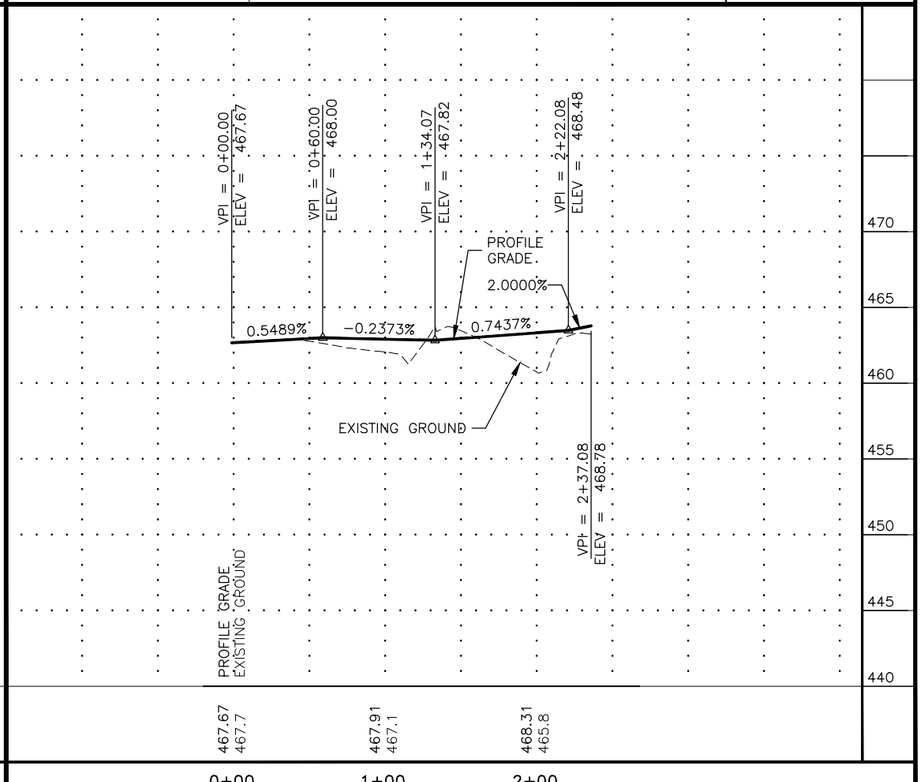
SINCLAIR AVE

SIDE STREETS PLAN AND PROFILE (2 OF 3)

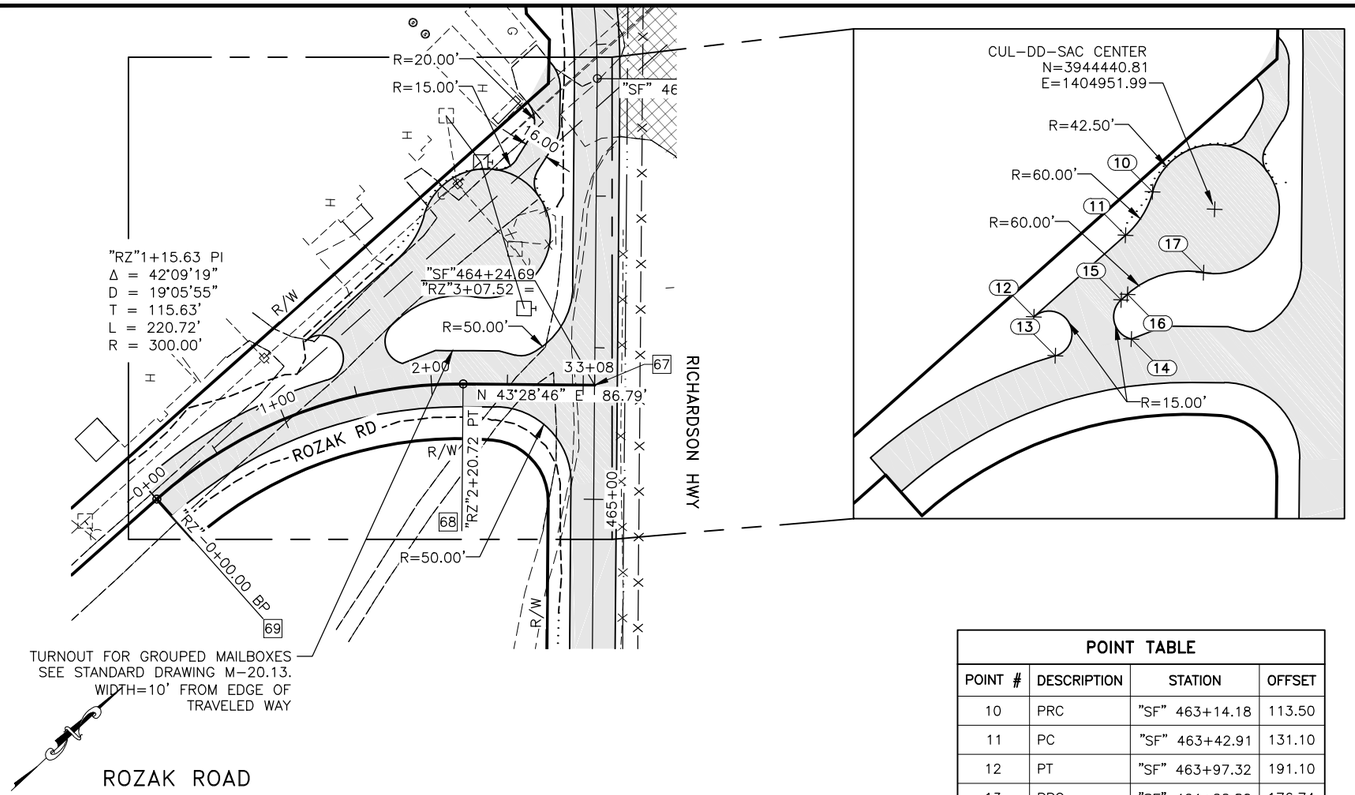
STATE OF ALASKA 49TH
DUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER



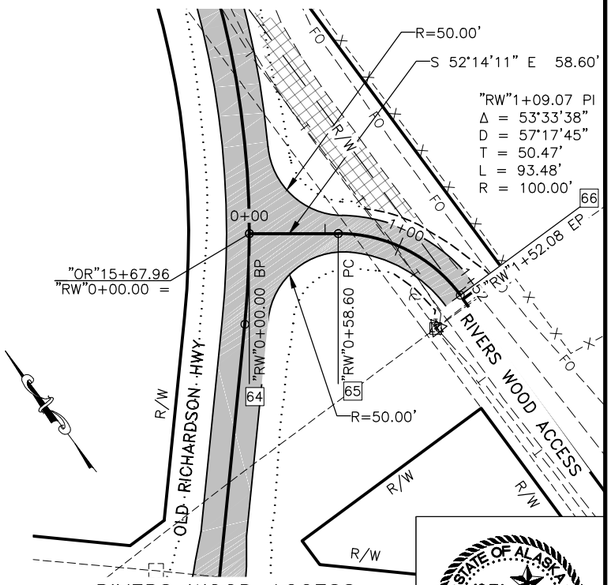




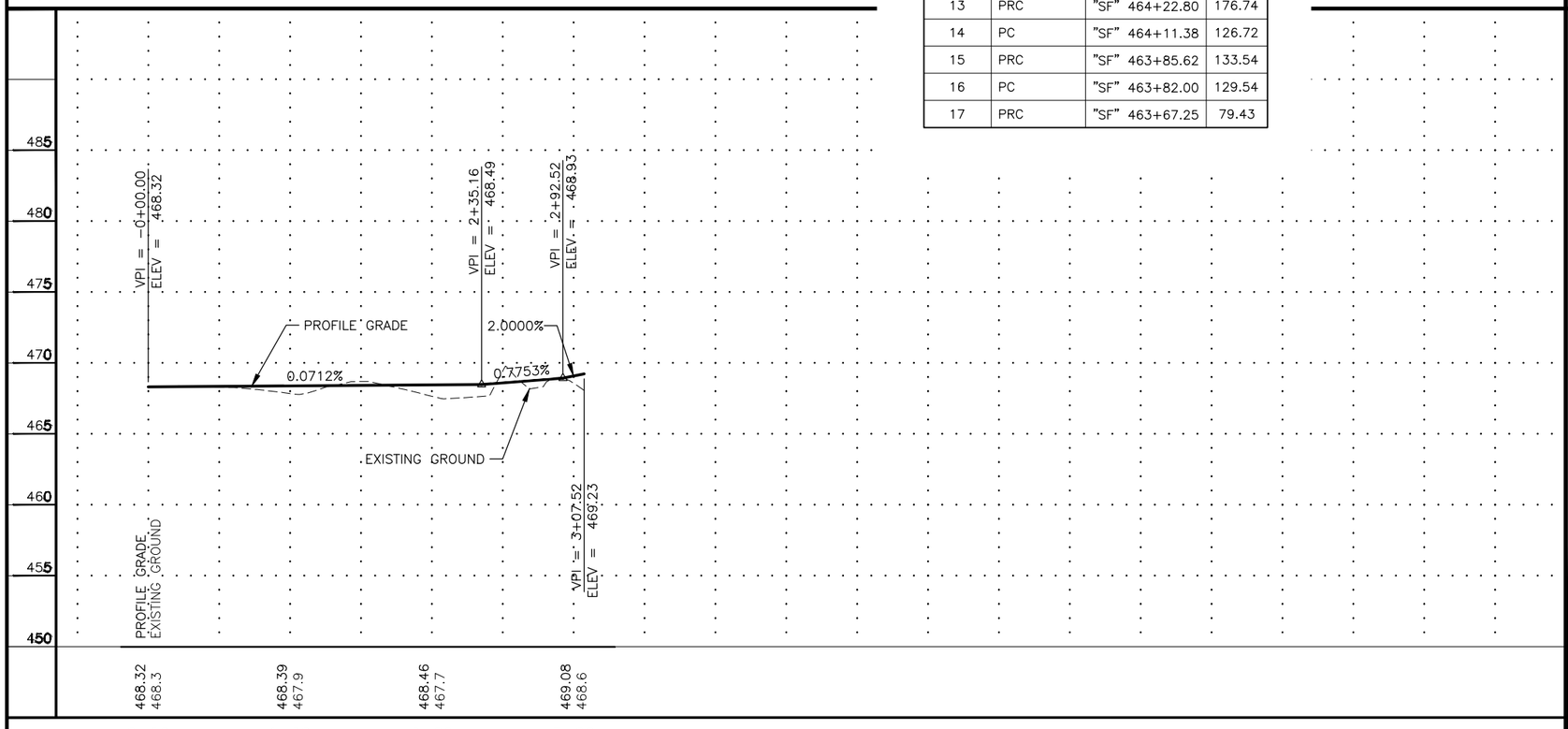
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	F48	F46

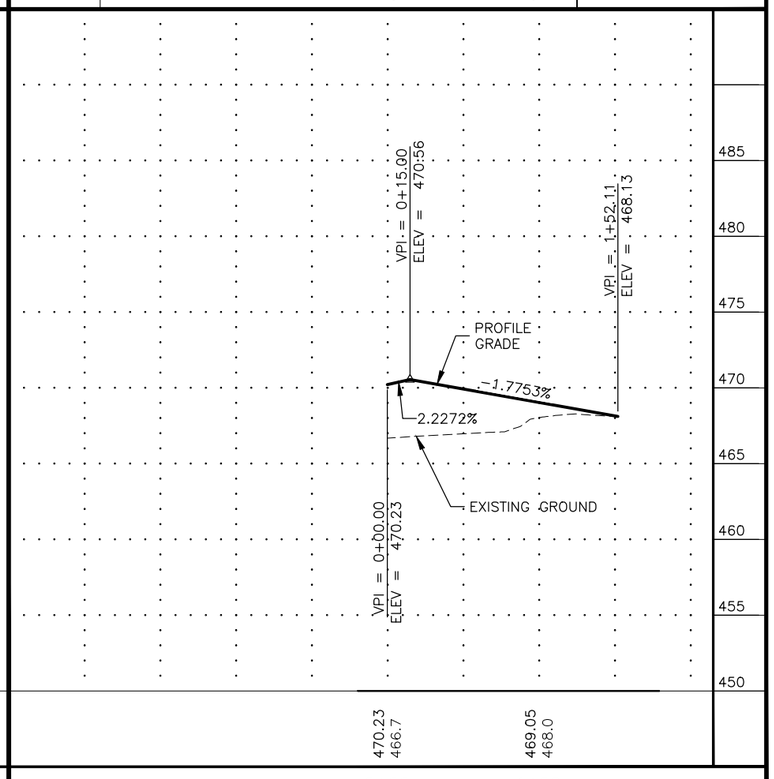


POINT TABLE			
POINT #	DESCRIPTION	STATION	OFFSET
10	PRC	"SF" 463+14.18	113.50
11	PC	"SF" 463+42.91	131.10
12	PT	"SF" 463+97.32	191.10
13	PRC	"SF" 464+22.80	176.74
14	PC	"SF" 464+11.38	126.72
15	PRC	"SF" 463+85.62	133.54
16	PC	"SF" 463+82.00	129.54
17	PRC	"SF" 463+67.25	79.43



SIDE STREETS PLAN AND PROFILE (3 OF 3)





STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	G1	G5

NOTE:

(1) FOR PARALLEL GUARDRAIL TERMINALS, CONSTRUCT THE GUARDRAIL TERMINAL WIDENING IN ACCORDANCE WITH THE "STANDARD DETAIL" ON STANDARD DRAWING G-20.11. THE END OFFSET (X) SHALL BE 2 FEET.

LINE TABLE

NO.	BEARING	DISTANCE
L1	S 67°04'49" E	72.87'
L2	S 51°00'21" E	44.23'
L3	S 36°17'00" E	35.99'
L4	S 1°17'37" W	13.60'
L5	S 28°03'15" W	11.62'

CURVE TABLE

NO.	P.I.	DELTA	D	T	L	R
C1	410+80.85	66°19'04"	286°28'44"	13.07'	23.15'	20.00'
C2	411+00.31	50°14'36"	286°28'44"	9.38'	17.54'	20.00'
C3	411+69.72	14°43'22"	43°29'22"	17.02'	33.85'	131.75'
C4	412+35.61	37°34'37"	149°05'56"	13.07'	25.20'	38.43'
C5	412+65.64	26°45'38"	317°09'23"	4.30'	8.44'	18.07'

"SR HINGE" STA 409+94.92 =
"NF" STA 409+94.49, 53.85' LT

"SR HINGE"409+94.92 BP
"SR HINGE"410+67.78 PC
"SR HINGE"411+08.47 PT
"SR HINGE"411+52.70 PC
"SR HINGE"411+86.55 PT
"SR HINGE"412+22.54 PC
"SR HINGE"412+47.74 PT
"SR HINGE"412+61.34 PC
"SR HINGE"412+69.78 PT
"SR HINGE"412+81.40 EP
"SR HINGE"410+90.93 PRC

R=290.00'
R=200.00'
R=80.00'
R=100.00'
R=6.00'

GUARDRAIL 151' LT
STA 408+87.50

PARALLEL GUARDRAIL TERMINAL (1)

S 52°32'34" E ~ 16.88'
S 75°06'38" E ~ 195.14'

"NF"410+22.46 PI
Δ = 22°34'03"
D = 20°50'05"
T = 54.87'
L = 108.32'
R = 275.00'

"NF"410+75.91 PT
"NF"410+92.78 PC
"NF"409+67.59 PC

"NF"412+02.78 PI
Δ = 90°00'00"
D = 52°05'13"
T = 110.00'
L = 172.79'
R = 110.00'

"NF"412+65.57 PT

GRAVEL "HINGE" POINT.
SEE STANDARD DRAWING G-20.11
FOR LAYOUT.

GUARDRAIL 27.3' LT
STA 412+45.43

"NF"414+10.57
"L1"411+21.69 =

"NF"414+10.57 EP

S 37°27'26" W ~ 145.00'

FRONTAGE ROAD
RICHARDSON HIGHWAY
MIDLAND ST
R/W
C/A

138 139 137 145 144 140 141 142 143 152 153 150 151

410+00 411+00 412+00 413+00 414+00

462 464 466

MIDLAND INTERSECTION
NORTH

STATE OF ALASKA 49TH
DUSTIN CORY HANNAFIOUS
NO. CE14065
REGISTERED PROFESSIONAL ENGINEER

P:\2012\12009FB\C\C2005cnst12009-G1 Tue, Apr/05/16 01:41pm

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	G2	G5

0 20 40 60 80 100
SCALE 1"=20'

410+00
"NF"414+10.57 EP
414+00
"MD"415+20.98
"L1"411+21.69 =
RICHARDSON HWY
101
102
R=60.00'
C/A
103
104
62.00'
116
115
117
118
R=60.00'
C/A
OBLITERATION OF ROADWAY
OBLITERATION OF ROADWAY
410+00
SOUTH FRONTAGE ROAD
S 29°58'31" E ~ 143.03'
107
106
411+00
"SF"410+93.19 PC
R/W
105
R=80.00'
148
417+00
149
R=80.00'
"SF"414+56.38 PI
Δ = 22°34'03"
D = 20°50'05"
T = 54.87'
L = 108.32'
R = 275.00'
113
108
114
416+00
415+00
S 75°06'38" E ~ 143.03'
"SF"415+09.82 PT
R/W
TCP
"SF"411+48.06 PI
Δ = 22°34'03"
D = 20°50'05"
T = 54.87'
L = 108.32'
R = 275.00'
412+00
"SF"412+01.51 PT
"SF"413+01.51 =
"MD"417+55.98
413+00
S 52°32'34" E ~ 200.00'
414+00
"SF"414+01.51 PC
109
R=50.00'
112
R=50.00'
MIDLAND ST
418+00
110
111
R/W
R/W

MIDLAND INTERSECTION SOUTH

STATE OF ALASKA
49TH
DUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER

P:\2012\12009FB\C\c2005cnst12009-G2 Tue, Apr/05/16 01:41pm

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	G3	G5

0 20 40 60 80 100
SCALE 1"=20'

155 154 R=6.00' 3+35 9+31 455+00 157 156 R=6.00'

"014"3+35.00 = "L1"454+65.31

3+00

RICHARDSON HWY

119 120 R=60.00' C/A

135 136 R=60.00' C/A

121 122 2+00 62.00' 134 133

R=80.00' "SF"455+16.83 PI
Δ = 22°34'03"
D = 20°50'05"
T = 54.87'
L = 108.32'
R = 275.00'

R=80.00' "SF"458+25.15 PI
Δ = 22°34'03"
D = 20°50'05"
T = 54.87'
L = 108.32'
R = 275.00'

N 43°28'46" E ~ 235.00'

SOUTH FRONTAGE ROAD

454+00 S 23°57'11" E ~ 143.03'

125 124 R=265.00' 123 146 147 R=265.00' 132 131 130

455+00 456+00 457+00 458+00 459+00 460+00

S 69°05'17" E ~ 143.03'

"SF"460+21.62 PC

"SF"458+78.59 PT

"SF"454+61.96 PC

"SF"455+70.28 PT

"SF"457+70.28 PC

"014"1+00.00 = "SF"456+70.28

1+00

S 46°31'14" E ~ 200.00'

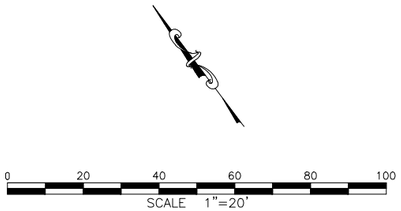
R/W R/W R/W R/W

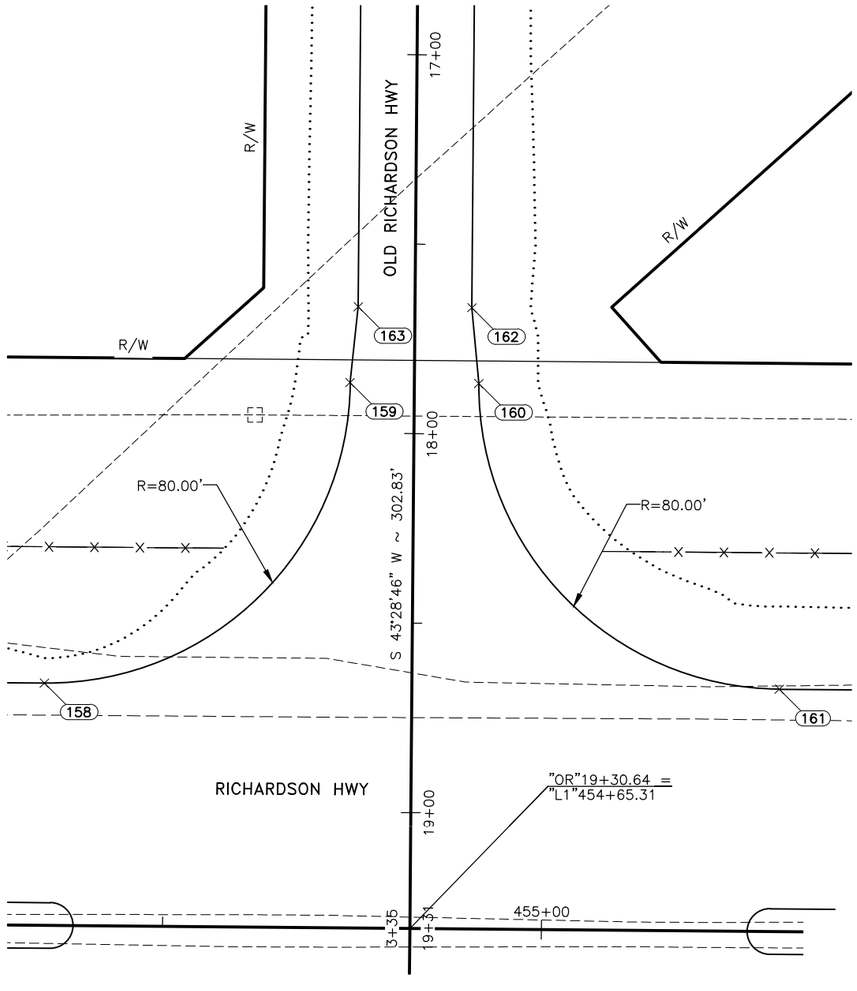
STATE OF ALASKA 49TH
DUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER

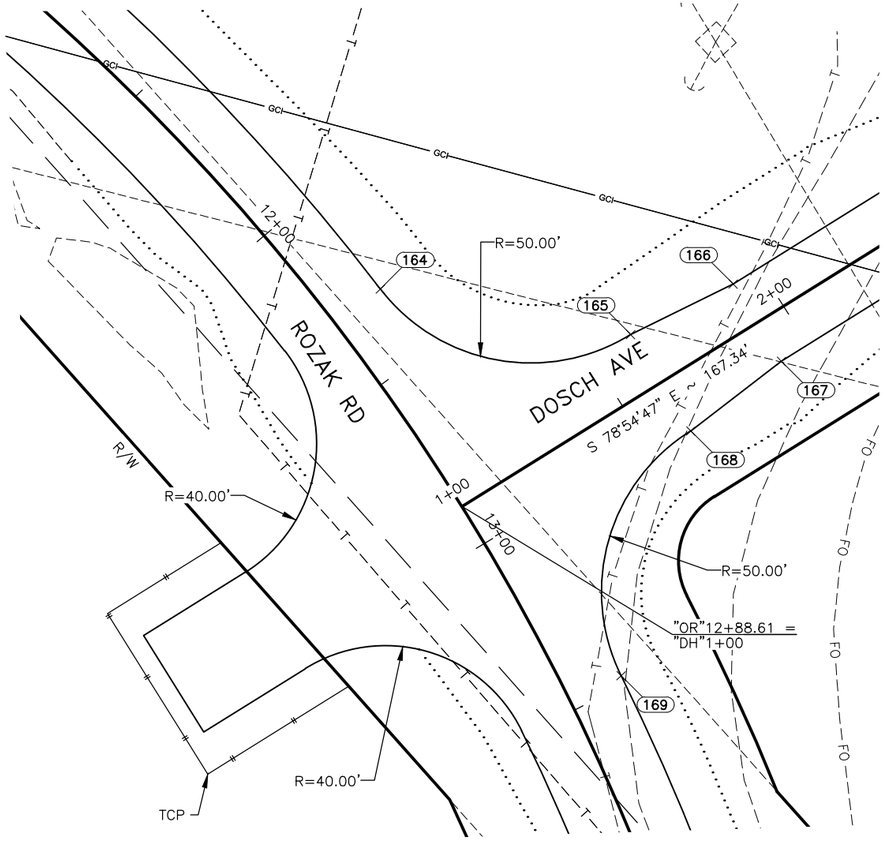
ROZAK INTERSECTION

P:\2012\12009FB\C\c2005cnst12009-G3 Tue, Apr/05/16 01:41pm

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	G4	G5







OLD RICHARDSON HWY INTERSECTION

P:\2012\12009FB\C\C2005cnst12009-G4 Tue, Apr/05/16 01:41pm

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	G5	G5

EDGE OF PAVEMENT SHEET G1

POINT #	NORTHING	EASTING	STATION	OFFSET	ELEVATION	DESCRIPTION
137	3948115.66	1401233.20	"NF"409+67.59	15.00 LT	465.50	PC
138	3948065.60	1401335.05	"NF"410+75.91	15.00 LT	465.89	PT
139	3948034.05	1401376.23	"NF"411+22.81	19.81 LT	466.03	PC
140	3947893.85	1401394.80	"NF"412+45.43	27.30 LT	466.57	PT
141	3947873.22	1401378.99	"NF"412+66.57	25.00 LT	466.45	PC
142	3947761.06	1401393.84	"L1"412+26.69	64.00 LT	467.76	PT
143	3947888.77	1401227.14	"L1"410+16.69	64.00 LT	467.59	PC
144	3947990.94	1401345.82	"NF"411+44.92	28.76 RT	465.56	PCC
145	3948087.56	1401222.13	"NF"409+64.11	15.00 RT	465.49	PT
150	3947721.10	1401350.62	"L1"412+16.69	6.00 LT	467.72	PT
151	3947711.57	1401343.33	"L1"412+16.69	6.00 RT	467.53	PC
152	3947842.73	1401191.86	"L1"410+16.69	6.00 LT	467.46	PC
153	3947833.21	1401184.56	"L1"410+16.69	6.00 RT	466.83	PT

EDGE OF PAVEMENT SHEET G2

POINT #	NORTHING	EASTING	STATION	OFFSET	ELEVATION	DESCRIPTION
101	3947790.81	1401144.53	"L1"410+10.69	64.00 RT	466.73	PT
102	3947777.06	1401159.19	"L1"410+30.69	66.00 RT	466.74	PC
103	3947692.94	1401170.33	"MD"416+46.98	31.00 RT	465.01	PT
104	3947683.69	1401163.24	"MD"416+58.64	31.00 RT	464.69	PC
105	3947671.97	1401047.25	"SF"411+84.50	17.00 LT	464.82	PCC
106	3947737.78	1400993.02	"SF"410+93.19	17.00 LT	464.74	PT
107	3947754.10	1400981.29	"SF"410+73.19	15.00 LT	464.83	PT
108	3947488.64	1401327.79	"SF"415+29.82	15.00 LT	465.04	PT
109	3947615.19	1401067.92	"SF"412+36.51	15.00 RT	464.88	PC
110	3947545.09	1401077.21	"SF"412+86.51	65.00 RT	464.27	PT
111	3947526.85	1401101.02	"SF"413+16.51	65.00 RT	464.27	PC
112	3947536.13	1401171.12	"SF"413+66.51	15.00 RT	464.94	PT
113	3947495.71	1401308.98	"SF"415+09.82	17.00 LT	464.92	PC
114	3947530.94	1401231.32	"SF"414+18.51	17.00 LT	464.93	PC
115	3947645.98	1401212.45	"MD"416+58.64	31.00 LT	464.69	PT
116	3947655.24	1401219.54	"MD"416+46.98	31.00 LT	465.01	PC
117	3947666.38	1401303.66	"L1"412+12.69	66.00 RT	467.40	PT
118	3947655.80	1401320.75	"L1"412+32.69	64.00 RT	467.50	PT
148	3947655.91	1401123.37	"SF"412+55.75	51.04 LT	463.91	EP
149	3947594.20	1401196.02	"SF"413+50.95	46.24 LT	463.86	EP

EDGE OF PAVEMENT SHEET G3

POINT #	NORTHING	EASTING	STATION	OFFSET	ELEVATION	DESCRIPTION
119	3945048.16	1404498.25	"L1"453+54.31	64.00 RT	471.81	PT
120	3945032.95	1404511.38	"L1"453+74.31	66.00 RT	471.78	PC
121	3944948.13	1404513.63	"O14"2+09.00	31.00 LT	469.78	PT
122	3944939.40	1404505.36	"O14"1+96.97	31.00 LT	469.45	PC
123	3944940.63	1404388.12	"SF"455+52.26	16.64 LT	469.01	PCC
124	3945011.31	1404342.01	"SF"454+61.96	17.00 LT	468.81	PT
125	3945028.78	1404332.06	"SF"454+41.96	15.00 LT	468.87	PT
130	3944728.43	1404648.79	"SF"458+98.59	15.00 LT	470.35	PT
131	3944737.43	1404630.82	"SF"458+78.59	17.00 LT	470.16	PC
132	3944779.72	1404557.79	"SF"457+88.30	16.64 LT	469.88	PCC
133	3944896.74	1404550.34	"O14"1+96.97	31.00 RT	469.45	PT
134	3944905.46	1404558.62	"O14"2+09.00	31.00 RT	469.78	PC
135	3944907.72	1404643.44	"L1"455+56.31	66.00 RT	471.64	PT
136	3944895.41	1404659.33	"L1"455+76.31	64.00 RT	471.64	PT
146	3944914.87	1404455.51	"SF"456+19.99	44.87 LT	468.53	EP
147	3944845.82	1404528.50	"SF"457+20.46	45.00 LT	468.76	EP
154	3945079.24	1404549.76	"L1"453+70.31	6.00 RT	471.86	PT
155	3945087.95	1404558.02	"L1"453+70.31	6.00 LT	471.96	PC
156	3944948.50	1404687.63	"L1"455+60.31	6.00 RT	471.81	PC
157	3944957.21	1404695.89	"L1"455+60.31	6.00 LT	471.93	PT

EDGE OF PAVEMENT SHEET G4

POINT #	NORTHING	EASTING	STATION	OFFSET	ELEVATION	DESCRIPTION
158	3945131.41	1404596.48	"L1"453+68.31	64.00 LT	471.96	PC
159	3945134.41	1404709.58	"OR"17+86.64	17.00 RT	470.48	PT
160	3945111.02	1404734.25	"OR"17+86.64	17.00 LT	470.48	PC
161	3944997.92	1404737.25	"L1"455+62.31	64.00 LT	471.85	PT
162	3945126.90	1404746.56	"OR"17+66.64	15.00 LT	470.43	PT
163	3945147.55	1404724.79	"OR"17+66.64	15.00 RT	470.43	PT
164	3945592.11	1405008.02	"DH"1+12.06	60.11 LT	0.00	PC
165	3945538.27	1405048.18	"DH"1+61.82	15.00 LT	0.00	PT
166	3945529.56	1405077.04	"DH"1+91.82	12.00 LT	0.00	PT
167	3945506.01	1405072.42	"DH"1+91.82	12.00 RT	0.00	PT
168	3945508.83	1405042.41	"DH"1+61.82	15.00 RT	0.00	PT
169	3945474.13	1404984.90	"DH"1+12.06	60.11 RT	0.00	PC

STATE OF ALASKA
49 TH
DUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER

INTERSECTION CONTROL TABLES

RICHARDSON HIGHWAY SIGNING SUMMARY

LOC. NO.	STATION	LOCATION LT.	LOCATION RT.	ASDS CODE	LEGEND	SIZE H X V (INCHES)	BRACING/FRAMING BRACED	BRACING/FRAMING FRAMED	AREA (SQ.FT.)	MTG. HGT. (FT.)	DIR.	POST TYPE	POST SIZE (INCHES)	POST NO.	REMARKS
1	"L1" 345+81	X		W13-2	EXIT 45 MPH										EXISTING TO REMAIN
2	"L1" 347+34	X		E3-11	Badger Rd										EXISTING TO REMAIN
3	"L1" 354+71	X		UNKNOWN											PRIVATE SIGN TO REMAIN
4	"L1" 357+60	X		UNKNOWN											PRIVATE SIGN TO REMAIN
151	"L1" 358+75		X	M3-3	SOUTH	15 X 30			3.13		W				MOUNT ON LUMINAIRE
				M1-5	HIGHWAY 2	36 X 36	X		9.00		W				MOUNT ON LUMINAIRE
5	"L1" 360+86	X		E1-31	Badger Rd 1/4 MILE	162 X 60		X	67.50		E		W6X9	2	SEE NOTE 21
120	"L1" 361+45		X	R2-1	SPEED LIMIT 60	36 X 48	X		12.00		W				MOUNT ON LUMINAIRE
9	"L1" 366+73		X	D3-2	Frontage Rd	228 X 36		X	57.00		W		W6X9	2	SEE NOTE 21
156	"L1" 368+00		X	W2-2	INTERSECTION WARNING	36 X 36	X		9.00		W	PST	2.5	1	
10	"L1" 368+27	X		EX-CAMP		X									PRIVATE SIGN TO REMAIN
93	"L1" 368+60		X	R5-1A	WRONG WAY	36 X 24	X		6.00		E	PST	2.5	1	
90	"L1" 368+60		X	R5-1A	WRONG WAY	36 X 24	X		6.00		E	PST	2.5	1	
13	"L1" 370+68		X	R2-1	SPEED LIMIT 40	30 X 36	X		7.50		W	PST	2.5	1	
94	"L1" 371+35		X	R1-1	STOP	30 X 30	X		6.25		W	PST	2.5	1	
				W4-4aP	TRAFFIC FROM LEFT	36 X 18	X		4.50						
92	"L1" 371+68		X	R5-1	DO NOT ENTER	36 X 36	X		9.00		E	PST	2.5	1	
100	"L1" 371+86	X		R1-1	STOP	30 X 30	X		6.25		N	PST	2.5	1	
				D3-100	Frontage Rd	30 X 8	X		1.67		N				
				D3-100	Wescott Garden Ln	48 X 8	X		2.67		E				
				D3-100	Frontage Rd	30 X 8	X		1.67		S				
				D3-100	Wescott Garden Ln	48 X 8	X		2.67		W				
				W4-4bP	ONCOMING TRAFFIC	36 X 18	X		4.50		N				
	"L1" 371+80	X		W14-1	DEAD END	36 X 36	X		9.00						
157	"L1" 372+00		X	R6-1R	ONE WAY (ARROW RT)	54 X 18		X	6.75		S	PST	2.5	2	
97	"L1" 372+23		X	R1-1	STOP	30 X 30	X		6.25		S	PST	2.5	1	
				D3-100	Frontage Rd	30 X 8	X		1.67		N				
				D3-100	Lu Anne Rd	30 X 8	X		1.67		E				
				D3-100	Frontage Rd	30 X 8	X		1.67		S				
				D3-100	Lu Anne Rd	30 X 8	X		1.67		W				
				W4-4bP	ONCOMING TRAFFIC	36 X 18	X		4.50						
99	"L1" 372+25	X		R1-1	STOP	30 X 30	X		6.25		W	PST	2.5	1	
				W4-4aP	TRAFFIC FROM LEFT	36 X 18	X		4.50						
95	"L1" 372+35		X	R1-1	STOP	36 X 36	X		9.00		S	PST	2.5	1	
				D3-100	Lu Anne Rd	42 X 12	X		3.50		E				
				D3-100	Richardson Hwy	48 X 8	X		2.67		N				
				D3-100	Lu Anne Rd	42 X 12	X		3.50		W				
				D3-100	Richardson Hwy	48 X 8	X		2.67		S				
98	"L1" 372+36	X		R1-1	STOP	36 X 36	X		9.00		N	PST	2.5	1	
				D3-100	Wescott Garden Ln	54 X 12		X	4.50		E				B SERIES
				D3-100	Richardson Hwy	36 X 8	X		2.00		N				
				D3-100	Wescott Garden Ln	54 X 12		X	4.50		W				B SERIES
				D3-100	Richardson Hwy	36 X 8	X		2.00		S				
									SUBTOTAL = 303.54						

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	H1	H18

SIGNING NOTES:

1. REMOVE AND DISPOSE OF ALL EXISTING SIGNS AND SIGN FOUNDATIONS WITHIN THE PROJECT LIMITS, EXCEPT THOSE DESIGNATED FOR REINSTALLATION, SALVAGE, OR OTHERWISE NOTED.
2. INSTALL MILEPOST SIGNS (D10 SERIES) IN ACCORDANCE WITH STANDARD DRAWING S-05.01, EXCEPT WITH A 15 TO 30 FOOT OFFSET. REDUCE THE OFFSET AS NECESSARY SO THE BOTTOM OF THE SIGN IS NO MORE THAN 15 FEET ABOVE THE GROUND. THE SIGN OFFSET SHALL NOT BE LESS THAN THE OFFSETS SHOWN ON S-05.01.
3. MOUNTING HEIGHTS ARE PER STANDARD DRAWING S-05.01 UNLESS OTHERWISE NOTED.
4. DETERMINE POST LENGTHS IN THE FIELD. DO NOT EXTEND POSTS ABOVE TOP OF SIGN.
5. INSTALL PST SIGN POSTS WITH SLEEVE TYPE CONCRETE FOUNDATION PER STANDARD DRAWING S-30.03. ATTACH THE SIGN POST TO THE SLEEVE USING GALVANIZED ⅜" BOLT, NUT, SPLIT LOCK WASHERS AND TWO FLAT WASHERS.
6. INSTALL "TUBE POST SIGN BRACING" AS SHOWN ON STANDARD DRAWING S-01.00 ON ALL SIGNS MOUNTED ON A SINGLE PST POST AND HAVING A HORIZONTAL DIMENSION OF 30 INCHES OR GREATER, EXCEPT D3-100 SERIES SIGNS. INSTEAD OF THE ⅝" GALVANIZED BOLTS AND NYLON LOCKING NUTS SHOWN ON STANDARD DRAWING S-01.00, USE GALVANIZED ⅜" BOLT, SPLIT LOCK WASHERS AND NUTS. STAINLESS STEEL FASTENER HARDWARE MAY BE USED INSTEAD OF GALVANIZED. ¼" X 1 ½" ALUMINUM ALLOY 6061-T6 MAY ALSO BE USED TO FABRICATE SIGN BRACES.
7. ATTACH ALL SIGNS TO THEIR SUPPORTS WITH ⅜" BOLTS, EXCEPT ATTACH UNFRAMED SIGNS TO PST POSTS WITH ALUMINUM DRIVE RIVETS. WIND WASHERS ARE NOT REQUIRED WITH DRIVE RIVETS. INCLUDE SPLIT LOCK WASHERS WHEN BOLTS ARE USED.
8. ALL FASTENER HARDWARE SHALL MEET THE REQUIREMENTS OF THE "FASTENER SPECIFICATION TABLE" ON SHEET H4.
9. SIGNS TO BE INSTALLED ON LIGHT POLES MAY REQUIRE TEMPORARY INSTALLATION ON 2-1/2 INCH PST UNTIL THE LIGHT POLES ARE IN PLACE. THIS WORK IS SUBSIDIARY TO PAY ITEM 615(1).
10. STOP (R1-1) SIGN LOCATIONS, ESPECIALLY THOSE AT LARGE RADIUS INTERSECTIONS, MAY NEED ADJUSTMENT IN THE FIELD. THE ENGINEER WILL APPROVE FINAL LOCATIONS.
11. INSTALL D3-100 SIGNS ABOVE THEIR RESPECTIVE STOP SIGNS. WHEN TWO D3-100 SERIES SIGNS ARE TO BE LOCATED ON THE SAME POST, INSTALL THE CROSS-STREET PANEL IN THE LOWER POSITION.
12. D3-100 SERIES SIGNS REQUIRE TWO SEPARATE SINGLE SIDED PANELS. END-BRACE PANELS PER SMALL STREET NAME SIGN BRACING DETAILS IN STANDARD DRAWING S-01.00. FOR THIS PROJECT, END BRACE BACK-TO-BACK R1-6 (ONE WAY) SIGNS IN THE SAME MANNER.
13. MAINTAIN EXISTING SIGNS UNTIL NEW SIGNS ARE INSTALLED. DO NOT LEAVE DUPLICATE OR CONFLICTING SIGNING UP AT ANY TIME.
14. USE SERIES C LETTERS FOR D3-100 SERIES SIGNS UNLESS OTHERWISE NOTED. USE 4.5" FOR DIMENSION "E" FOR 12" D3-100 SIGNS. THE LETTERING INDICATING THE TYPE OF STREET (SUCH AS ST, AVE, OR RD) WILL BE UPPER CASE AND LOWER CASE. THIS MODIFIES THE ASDS.
15. USE A 3" HORIZONTAL SPACING BETWEEN WORDS, BETWEEN CARDINAL DIRECTIONS AND WORDS, AND BETWEEN WORDS AND NUMBERS ON D3-100 AND D3-100A SIGNS UNLESS OTHERWISE NOTED.
16. ALL LETTERING THAT INCLUDES UPPER AND LOWER CASE LETTERS SHALL BE SERIES E-MODIFIED AS NOTED IN APPENDIX C OF THE ASDS, EXCEPT FOR D3-100 SIGNS WHICH ARE SERIES 2000 LETTERS.
17. LOCATE AND PROTECT ALL NEW AND EXISTING UNDERGROUND UTILITIES, INCLUDING BUT NOT LIMITED TO: PIPELINES, INTERCONNECT CABLES, SIGNAL SYSTEMS, LIGHTING SYSTEMS, STORM AND SANITARY SEWERS, WATER SYSTEMS, AND TELEPHONE AND ELECTRICAL CABLES, PRIOR TO INSTALLING SIGN POSTS. NOT ALL EXISTING UTILITIES MAY BE SHOWN ON THE PLANS.
18. DELIVER ALL SALVAGED SIGNS TO THE FAIRBANKS MAINTENANCE YARD LOCATED AT 2301 PEGER ROAD.
19. CLEARING MAY BE REQUIRED TO ENSURE ADEQUATE VISIBILITY OF SIGNS, THIS WORK IS SUBSIDIARY TO PAY ITEM 615(1).
20. INSTALL WEATHER TIGHT CAPS ON ALL PIPE AND TUBE POSTS, EXCEPT PERFORATED STEEL TUBE.
21. INSTALL FRANGIBLE COUPLING BASES IN ACCORDANCE WITH STANDARD DRAWING S-31.01.
22. HINGED JOINTS WITH FRANGIBLE FUSE PLATES ARE REQUIRED ON ALL MULTIPLE POST SIGNS WITH FRANGIBLE COUPLING SYSTEMS. THE HINGE LOCATION ON ALL POSTS SHALL BE THE SAME DISTANCE BELOW THE SIGN, INSTEAD OF THE 6" MINIMUM SHOWN ON STANDARD DRAWING S-31.01. MANUFACTURERS TYPICALLY SPECIFY THE HINGE LOCATION TO BE 3 ¼" BELOW THE BOTTOM OF THE SIGN.
23. THE 4" MOUNTING AREA ON MILEPOST SIGNS (D10-100 SERIES) SHALL BE BARE ALUMINUM. THIS ELIMINATES THE OPTION OF INSTALLING GREEN REFLECTIVE SHEETING IN THIS AREA AS NOTED IN THE ASDS.
24. USE 16" UPPERCASE & 12" LOWERCASE LETTERS ON ALL D3-2 & D3-2B SIGNS IN ACCORDANCE WITH ASDS.
25. CONTRACTOR RESPONSIBLE FOR REPLACING SIGNS BROKEN/DAMAGED DURING CONSTRUCTION ACTIVITIES.
26. DO NOT DISTURB SIGN NUMBERS 59 AND 60 DURING CONSTRUCTION. IF DISTURBANCE OF SIGNS IS UNAVOIDABLE SALVAGE AND REINSTALL WITH SLEEVED FOUNDATIONS.

POST TYPE LEGEND:

PST = PERFORATED STEEL TUBE
TS = TUBE STEEL (SQUARE STRUCTURAL STEEL TUBING)
W_X_ = WIDE FLANGE

STATE OF ALASKA 49TH
DUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER

SIGN SUMMARY
(1 OF 4)

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	H2	H18

RICHARDSON HIGHWAY SIGNING SUMMARY

LOC. NO.	STATION	LOCATION LT.	LOCATION RT.	ASDS CODE	LEGEND	SIZE H X V (INCHES)	BRACING/ FRAMING BRACED	BRACING/ FRAMING FRAMED	AREA (SQ.FT.)	MTG. HGT. (FT.)	DIR.	POST TYPE	POST SIZE (INCHES)	POST NO.	REMARKS
96	"L1" 372+40		X	R1-1	STOP	30 X 30	X		6.25		E	PST	2.5	1	
				W4-4aP	TRAFFIC FROM LEFT	36 X 18	X		4.50						
158	"L1" 372+68	X		R6-1R	ONE WAY (ARROW RT)	54 X 18		X	6.75		N	PST	2.5	2	
101	"L1" 373+18	X		R1-1	STOP	30 X 30	X		6.25		E	PST	2.5	1	
				W4-4aP	TRAFFIC FROM LEFT	36 X 18	X		4.50						
103	"L1" 373+31	X		R5-1	DO NOT ENTER	36 X 36	X		9.00		W	PST	2.5	1	
51	"L1" 375+23	X		UNKNOWN		X									PRIVATE SIGN TO REMAIN
30	"L1" 376+19		X	R5-1A	WRONG WAY	36 X 24	X		6.00		W	PST	2.5	1	
29	"L1" 376+21	X		R5-1A	WRONG WAY	36 X 24	X		6.00		W	PST	2.5	1	
159	"L1" 376+38	X		W2-2	INTERSECTION WARNING	36 X 36			9.00						
31	"L1" 378+15		X	PRIVATE		X									PRIVATE SIGN TO REMAIN
32	"L1" 378+74	X		D3-2	Wescott Garden Ln	198 X 60		X	82.50		E		W6X9	2	SEE NOTE 21
104	"L1" 381+45	X		R1-1	STOP	30 X 30	X		6.25		N	PST	2.5	1	
				D3-100	Frontage Rd	30 X 8	X		1.67		N				
				D3-100	Davison St	42 X 12	X		3.50		E				
				D3-100	Frontage Rd	30 X 8	X		1.67		S				
				D3-100	Davison St	42 X 12	X		3.50		W				
41	"L1" 385+37		X	D10-3	MILE 356	10 X 36			2.50		W	PST	2.5	1	SEE NOTE 23
				I-150	ADOPT A HIGHWAY	24 X 30			5.00		W				
					SPONSOR PLAQUE						W				REUSE EXISTING
38	"L1" 384+85	X		D10-3	MILE 356	10 X 36			2.50		E	PST	2.5	1	SEE NOTE 23
				I-150	ADOPT A HIGHWAY	24 X 30			5.00		E				
					SPONSOR PLAQUE						E				REUSE EXISTING
105	"L1" 386+23		X	R1-1	STOP	30 X 30	X		6.25		S	PST	2.5	1	
				D3-100	Frontage Rd	30 X 8	X		1.67		N				
				D3-100	Davison St	42 X 12	X		3.50		E				
				D3-100	Frontage Rd	30 X 8	X		1.67		S				
				D3-100	Davison St	42 X 12	X		3.50		W				
43	"L1" 386+49	X		R2-1	SPEED LIMIT 40	30 X 36	X		7.50		W	PST	2.5	1	
44	"L1" 387+17		X	R2-1	SPEED LIMIT 40	30 X 36	X		7.50		W	PST	2.5	1	
45	"L1" 391+96	X		PRIVATE		X									PRIVATE SIGN TO REMAIN
106	"L1" 394+87		X	R1-1	STOP	30 X 30	X		6.25		S	PST	2.5	1	
				D3-100	Frontage Rd	30 X 8	X		1.67		N				
				D3-100	Bethany St	42 X 12	X		3.50		E				
				D3-100	Frontage Rd	30 X 8	X		1.67		S				
				D3-100	Bethany St	42 X 12	X		3.50		W				
147	"L1" 401+22		X	D3-1C	< Frontage Rd Midland St >	114 X 42		X	33.25		W		W6X9	2	
49	"L1" 403+70	X		E1-31	BADGER RD 1 MILE	162 X 60		X	67.50		E		W6X9	2	SEE NOTE 21
161	"L1" 405+30	X		R2-1	SPEED LIMIT 60	30 X 36	X		7.50			PST	2.51	1	
160	"L1" 406+30		X	W2-1	INTERSECTION WARNING	36 X 36	X		9.00			PST	2.51	1	
									SUBTOTAL = 337.75						

RICHARDSON HIGHWAY SIGNING SUMMARY

LOC. NO.	STATION	LOCATION LT.	LOCATION RT.	ASDS CODE	LEGEND	SIZE H X V (INCHES)	BRACING/ FRAMING BRACED	BRACING/ FRAMING FRAMED	AREA (SQ.FT.)	MTG. HGT. (FT.)	DIR.	POST TYPE	POST SIZE (INCHES)	POST NO.	REMARKS
109	"L1" 410+08		X	R4-7	KEEP RIGHT	36 X 48	X		12.00		E	PST	2.5	1	MOUNT ON LUMINAIRE
114	"L1" 410+50	X		R1-1	STOP	36 X 36	X		9.00		N	PST	2.5	1	
				R6-1L	ONE WAY (ARROW LT)	54 X 18		X	6.75		N				
				R6-1R	ONE WAY (ARROW RT)	54 X 18		X	6.75		S				
				D3-100	Frontage Rd	42 X 12	X		3.50		E				
				D3-100	Richardson Hwy	36 X 8	X		2.00		N				
				D3-100	Frontage Rd	42 X 12	X		3.50		W				
				D3-100	Richardson Hwy	36 X 8	X		2.00		S				
110	"L1" 410+50		X	R6-1L	ONE WAY (ARROW LT)	54 X 18		X	6.75		N	PST	2.5	2	
111	"L1" 410+57		X	R1-1	STOP	30 X 30	X		6.25		W	PST	2.5	1	
				W4-4aP	TRAFFIC FROM LEFT	36 X 18	X		4.50						
122	"L1" 411+57		X	R1-1	STOP	30 X 30	X		6.25		S	PST	2.5	1	
				D3-100	Frontage Rd	30 X 8	X		1.67		N				
				D3-100	Midland St	30 X 8	X		1.67		E				
				D3-100	Frontage Rd	30 X 8	X		1.67		S				
				D3-100	Midland St	30 X 8	X		1.67		W				
				W4-4bP	ONCOMING TRAFFIC	36 X 18	X		4.50						
113	"L1" 411+79		X	R1-1	STOP	36 X 36	X		9.00		S	PST	2.5	1	
				R6-1L	ONE WAY (ARROW LT)	54 X 18		X	6.75		N				
				R6-1R	ONE WAY (ARROW RT)	54 X 18		X	6.75		S				
				D3-100	Midland St	42 X 12	X		3.50		E				
				D3-100	Richardson Hwy	36 X 8	X		2.00		N				
				D3-100	Midland St	42 X 12	X		3.50		W				
				D3-100	Richardson Hwy	36 X 8	X		2.00		S				
112	"L1" 412+02		X	R1-1	STOP	30 X 30	X		6.25		E	PST	2.5	1	
				W4-4aP	TRAFFIC FROM LEFT	36 X 18	X		4.50						
115	"L1" 412+10	X		R6-1R	ONE WAY (ARROW RT)	54 X 18		X	6.75		S	PST	2.5	2	
116	"L1" 412+25	X		R4-7	KEEP RIGHT	36 X 48	X		12.00		W	PST	2.5	1	
169	"L1" 416+27	X		W2-1	INTERSECTION WARNING	36 X 36	X		9.00		E	PST	2.5	1	
162	"L1" 418+00		X	R2-1	SPEED LIMIT 60	30 X 36	X		7.50		W	PST	2.5	1	
									SUBTOTAL = 159.92						

SIGN SUMMARY
(2 OF 4)

STATE OF ALASKA 49TH
DUSTIN CORY HANNAFOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER

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STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	H3	H18

RICHARDSON HIGHWAY SIGNING SUMMARY

LOC. NO.	STATION	LOCATION LT.	LOCATION RT.	ASDS CODE	LEGEND	SIZE H X V (INCHES)	BRACING/FRAMING BRACED	BRACING/FRAMING FRAMED	AREA (SQ.FT.)	MTG. HGT. (FT.)	DIR.	POST TYPE	POST SIZE (INCHES)	POST NO.	REMARKS
119	"L1" 418+90		X	R1-1	STOP	30 X 30	X		6.25		S	PST	2.5	1	
				D3-100	Frontage Rd	30 X 8	X		1.67		N				
				D3-100	El Paso St	36 X 12	X		3.00		E				
				D3-100	Frontage Rd	30 X 8	X		1.67		S				
				D3-100	El Paso St	36 X 12	X		3.00		W				
148	"L1" 421+23	X		D3-1C	Frontage Rd > < Midland St	114 X 42		X	33.25		E		W6X9	2	
58	"L1" 428+92		X	PRIVATE		X									PRIVATE SIGN TO REMAIN
60	"L1" 430+14	X		POST		X									SEE NOTE 26
59	"L1" 430+14	X		POST		X									SEE NOTE 26
123	"L1" 436+75	X		D10-3	MILE 355	10 X 36			2.50		E	PST	2.5	1	SEE NOTE 23
				I-150	ADOPT A HIGHWAY	24 X 30			5.00		E				
					SPONSOR PLAQUE						E				REUSE EXISTING
62	"L1" 436+81		X	D10-3	MILE 355	10 X 36			2.50		W	PST	2.5	1	SEE NOTE 23
				I-150	ADOPT A HIGHWAY	24 X 30			5.00		W				
					SPONSOR PLAQUE						W				REUSE EXISTING
124	"L1" 443+48		X	R1-1	STOP	30 X 30	X		6.25		S	PST	2.5	1	
				D3-100	Frontage Rd	30 X 8	X		1.67		N				
				D3-100	Sinclair Ave	42 X 12	X		3.50		E				
				D3-100	Frontage Rd	30 X 8	X		1.67		S				
				D3-100	Sinclair Ave	42 X 12	X		3.50		W				
125	"L1" 443+97		X	R2-1	SPEED LIMIT 40	30 X 36	X		7.50		E	PST	2.5	1	
149	"L1" 444+65		X	D3-1C	< Old Rich Hwy Frontage Rd >	120 X 42		X	35.00		W		W6X9	2	
163	"L1" 448+00	X		R2-1	SPEED LIMIT 60	30 X 36	X		7.50		E	PST	2.5	1	
164	"L1" 449+54		X	W2-1	INTERSECTION WARNING	36 X 36	X		9.00		W	PST	2.5	1	
128	"L1" 453+61		X	R4-7	KEEP RIGHT	36 X 48	X		12.00		E	PST	2.5	1	
134	"L1" 453+85		X	R1-1	STOP	30 X 30	X		6.25		W	PST	2.5	1	
				W4-4aP	TRAFFIC FROM LEFT	36 X 18	X		4.50						
129	"L1" 453+93		X	R6-1L	ONE WAY (ARROW LT)	54 X 18		X	6.75		N	PST	2.5	2	
130	"L1" 453+96	X		R1-1	STOP	36 X 36	X		9.00		N	PST	2.5	1	
				R6-1L	ONE WAY (ARROW LT)	54 X 18		X	6.75		N				
				R6-1R	ONE WAY (ARROW RT)	54 X 18		X	6.75		S				
				D3-100	Old Rich Hwy	42 X 12	X		3.50		E				
				D3-100	Richardson Hwy	36 X 8	X		2.00		N				
				D3-100	Old Rich Hwy	42 X 12	X		3.50		W				
				D3-100	Richardson Hwy	36 X 8	X		2.00		S				
171	"L1" 454+44	X		W14-1	DEAD END	36 X 36			9.00						

SUBTOTAL = 202.42

RICHARDSON HIGHWAY SIGNING SUMMARY

LOC. NO.	STATION	LOCATION LT.	LOCATION RT.	ASDS CODE	LEGEND	SIZE H X V (INCHES)	BRACING/FRAMING BRACED	BRACING/FRAMING FRAMED	AREA (SQ.FT.)	MTG. HGT. (FT.)	DIR.	POST TYPE	POST SIZE (INCHES)	POST NO.	REMARKS
133	"L1" 455+12		X	R1-1	STOP	36 X 36	X		9.00		S	PST	2.5	1	
				R6-1L	ONE WAY (ARROW LT)	54 X 18		X	6.75		N				
				R6-1R	ONE WAY (ARROW RT)	54 X 18		X	6.75		S				
				D3-100	Frontage Rd	42 X 12	X		3.50		E				
				D3-100	Richardson Hwy	36 X 8	X		2.00		N				
				D3-100	Frontage Rd	42 X 12	X		3.50		W				
				D3-100	Richardson Hwy	36 X 8	X		2.00		S				
135	"L1" 455+44		X	R1-1	STOP	30 X 30	X		6.25		E	PST	2.5	1	
				W4-4aP	TRAFFIC FROM LEFT	36 X 18	X		4.50						
131	"L1" 455+45	X		R6-1L	ONE WAY (ARROW LT)	54 X 18		X	6.75		S	PST	2.5	2	
146	"L1" 455+69		X	R4-7	KEEP RIGHT	36 X 48	X		12.00		W	PST	2.5	1	
165	"L1" 459+62		X	W2-1	INTERSECTION WARNING	36 X 36	X		9.00		E	PST	2.5	1	
166	"L1" 461+57		X	R2-1	SPEED LIMIT 60	30 X 36	X		7.50		W	PST	2.5	1	
138	"L1" 462+34		X	R1-1	STOP	30 X 30	X		6.25		S	PST	2.5	1	
				D3-100	Frontage Rd	30 X 8	X		1.67		N				
				D3-100	Rozak Rd	36 X 12	X		3.00		E				
				D3-100	Frontage Rd	30 X 8	X		1.67		S				
				D3-100	Rozak Rd	36 X 12	X		3.00		W				
150	"L1" 464+65	X		D3-1C	Old Rich Hwy > < Frontage Rd	120 X 42		X	35.00		E		W6X9	2	
154	"L1" 488+39		X	D10-3	MILE 354	10 X 36			2.50		E	PST	2.5	1	SEE NOTE 23
				I-150	ADOPT A HIGHWAY	24 X 30			5.00		E				
					SPONSOR PLAQUE						E				REUSE EXISTING
155	"L1" 488+40	X		D10-3	MILE 354	10 X 36			2.50		E	PST	2.5	1	SEE NOTE 23
				I-150	ADOPT A HIGHWAY	24 X 30			5.00		E				
					SPONSOR PLAQUE						E				REUSE EXISTING
168	"L1" 489+09		X	W2-2	INTERSECTION WARNING	36 X 36	X		9.00		W	PST	2.5	1	
140	"L1" 490+04		X	R5-1A	WRONG WAY	36 X 24	X		6.00		E				MOUNT ON LUMINAIRE
139	"L1" 490+05		X	R5-1A	WRONG WAY	36 X 24	X		6.00		E	PST	2.5	1	
141	"L1" 493+02		X	R5-1	DO NOT ENTER	36 X 36	X		9.00		E	PST	2.5	1	
142	"L1" 493+00		X	R1-1	STOP	30 X 30	X		6.25		W	PST	2.5	1	
				W4-4aP	TRAFFIC FROM LEFT	36 X 18	X		4.50						
167	"L1" 493+48		X	R6-1R	ONE WAY (ARROW RT)	54 X 18		X	6.75		S	PST	2.5	2	

SUBTOTAL = 192.58

SIGN SUMMARY
(3 OF 4)

STATE OF ALASKA 49TH
DUSTIN CORY HANNAFIOUS
NO. CE14065
REGISTERED PROFESSIONAL ENGINEER

P:\2012\12009FB\C\C0004cnst12009-H3 Tue, Apr/05/16 01:43pm

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	H4	H18

RICHARDSON HIGHWAY SIGNING SUMMARY

LOC. NO.	STATION	LOCATION LT.	LOCATION RT.	ASDS CODE	LEGEND	SIZE H X V (INCHES)	BRACING/FRAMING BRACED	BRACING/FRAMING FRAMED	AREA (SQ.FT.)	MTG. HGT. (FT.)	DIR.	POST TYPE	POST SIZE (INCHES)	POST NO.	REMARKS
144	"L1" 493+78		X	R1-1	STOP	30 X 30	X		6.25		E	PST	2.5	1	
				W4-4aP	TRAFFIC FROM LEFT	36 X 18	X		4.50						
143	"L1" 493+90		X	R1-1	STOP	36 X 36	X		9.00		S	PST	2.5	1	
				R6-1R	ONE WAY (ARROW RT)	54 X 18		X	6.75		S				
				D3-100	Frontage Rd	42 X 12	X		3.50		E				
				D3-100	Richardson Hwy	36 X 8	X		2.00		N				
				D3-100	Frontage Rd	42 X 12	X		3.50		W				
				D3-100	Richardson Hwy	36 X 8	X		2.00		S				
86	"L2" 521+38		X	R5-1	DO NOT ENTER	X									EXISTING TO REMAIN
87	"L2" 522+31		X	R6-1L	ONE WAY (ARROW LT)	X									EXISTING TO REMAIN
145	"OR" 12+55	X		R1-1	STOP	30 X 30	X		6.25		E	PST	2.5	1	
				D3-100	Old Rich Hwy	36 X 8	X		2.00		E				
				D3-100	Dosch Ave	36 X 12	X		3.00		N				
				D3-100	Old Rich Hwy	36 X 8	X		2.00		W				
				D3-100	Dosch Ave	36 X 12	X		3.00		S				
					SUBTOTAL = 53.75										

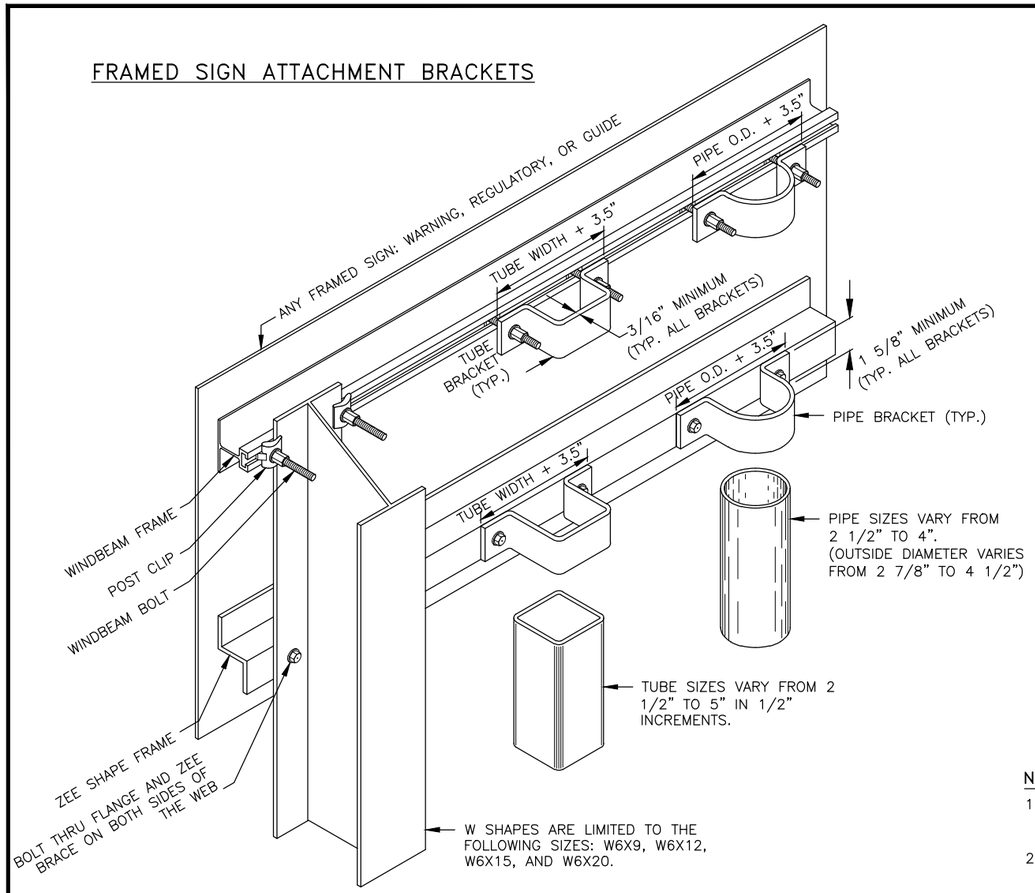
SIGN SUMMARY
(4 OF 4)

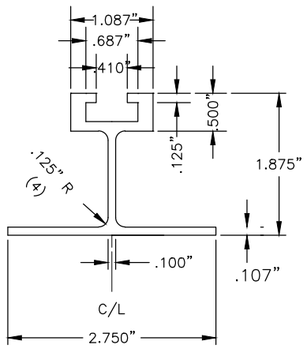
STATE OF ALASKA
49 TH
DUSTIN CORY HANNAFIOUS
NO. CE14065
REGISTERED PROFESSIONAL ENGINEER

P:\2012\12009FB\C\C0004cnst12009-H4 Tue, Apr/05/16 01:43pm

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	H5	H18

FRAMED SIGN ATTACHMENT BRACKETS

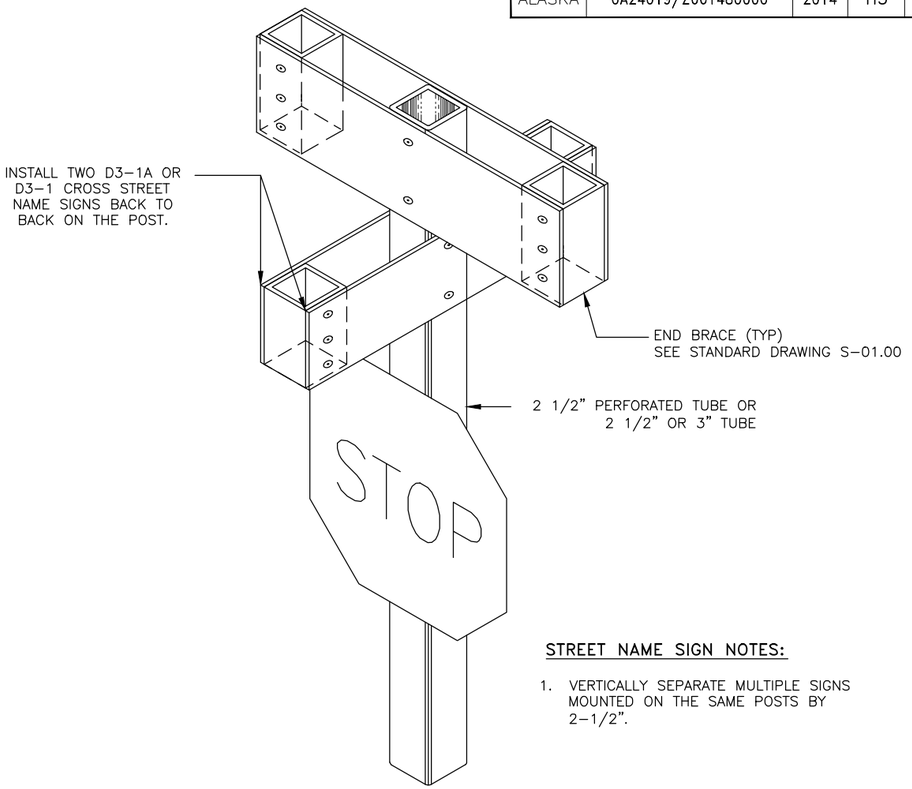




NOTES :

1. ALUMINUM ALLOY 6061–T6 SHALL BE USED FOR EXTRUDED WINDBEAM AND RIVETS.
2. ATTACH SIGN TO WINDBEAM WITH 3/16" RIVETS AT 4" STAGGERED SPACING.

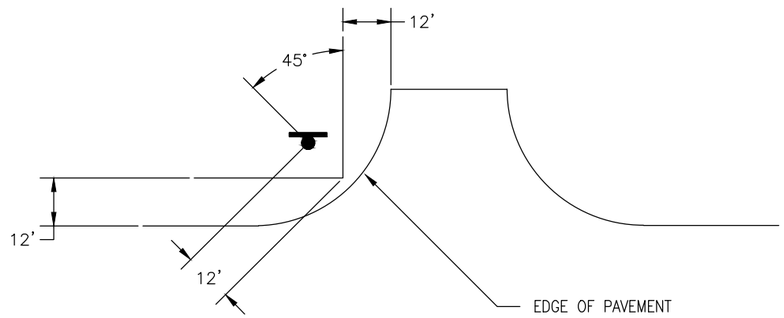
EXTRUDED ALUMINUM WINDBEAM

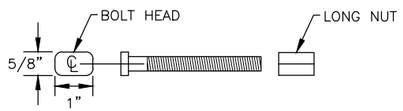


STREET NAME SIGN NOTES:

1. VERTICALLY SEPARATE MULTIPLE SIGNS MOUNTED ON THE SAME POSTS BY 2–1/2".

STREET NAME SIGN





3/8" WINDBEAM BOLT AND LONG NUT

FRAMED SIGN NOTES:

1. 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 OR A BRACKET WITH SQUARE CORNERS ON TUBES.
2. THE TUBE BRACKETS USED ON EVEN INCH SIZE TUBES MAY ALSO BE USED ON TUBES 1/2" SMALLER IN SIZE.
3. THE BRACKET DETAILS SHOWN INDICATE GENERAL DESIGNS ONLY. DESIGNS MAY VARY BY MANUFACTURER.
4. ALUMINIUM ALLOY 6061–T6 SHALL BE USED FOR TEE SHAPE FRAMING AND RIVETS.

FASTENER SPECIFICATION SUMMARY		
FASTENERS	STEEL	STAINLESS STEEL
BOLTS	ASTM A 307	ASTM F 593
NUTS	ASTM A 563	ASTM F 594
WASHERS	ASTM A 36	ASTM A 480

NOTE:

1. ATTACH ALL SIGNS TO THEIR SUPPORTS WITH 3/8" BOLTS. EXCEPT ATTACH UNFRAMED SIGNS TO PERFORATED STEEL TUBE POSTS WITH ALUMINUM DRIVE RIVETS. SEE "SIGN FASTENER SPECIFICATION TABLE"

STRIPING NOTES:

1. BREAK 4" WHITE EDGE LINE AND 4" YELLOW CENTERLINE(S) ALONG FRONTAGE ROADS AT THE RETURN RADII POINTS OF THE FOLLOWING APPROACHES:
   - LU ANNE ROAD
   - DAVISON STREET
   - BETHANY STREET
   - EL PASO STREET
   - SINCLAIR AVENUE
   - ROZAK ROAD
   - RIVERS WOOD ACCESS ROAD
2. CONTINUE 4" WHITE EDGE LINE THROUGH ALL OTHER APPROACHES NOT LISTED ABOVE.

STOP SIGN PLACEMENT DETAIL

SIGN DETAILS

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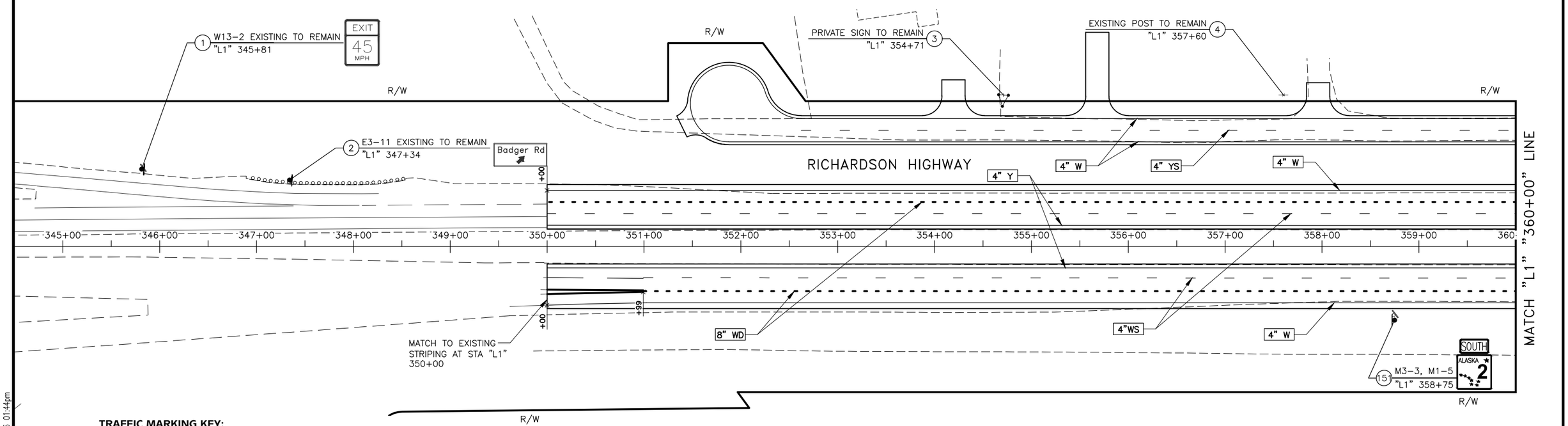
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	H6	H31

NOTES:

1. EXISTING SIGNS ARE SHOWN FOR REFERENCE. SEE SHEET H1 FOR REMOVAL REQUIREMENTS.

TRAFFIC MARKINGS SUMMARY

DESCRIPTION	QUANTITY	REMARKS
4" Y	31,900	
4" DY	13,300	
4" YS	2370	
4" W	79,600	
4" WD-2	2,400	
4" WS	7,710	
4" WD-1	576	
8" W	6,600	
8" WD	924	
24" W	675	STOP BARS
LANE REDUCTION ARROWS	30	
ONLY SYMBOLS AND ARROWS	33	



TRAFFIC MARKING KEY:

4" W	4" WHITE LINE
4" WS	4" WHITE SKIP LINE (10/30 SKIP PATTERN)
4" Y	4" YELLOW LINE
4" YS	4" YELLOW SKIP LINE (10/30 SKIP PATTERN)
4" DY	4" DOUBLE YELLOW LINE
4" WD-1	4" WHITE DASHED (2/6 SKIP PATTERN)
4" WD-2	4" WHITE DASHED (3/9 SKIP PATTERN)
8" W	8" WHITE LINE
8" WD	8" WHITE DOTTED LINE (3/9 SKIP PATTERN)
24"W	24" WHITE LINE

SIGN SYMBOL KEY:

(#) SIGN CODE(S) +STATION

SIGNING LOCATION #

SIGNING AND STRIPING PLAN (1 OF 14)

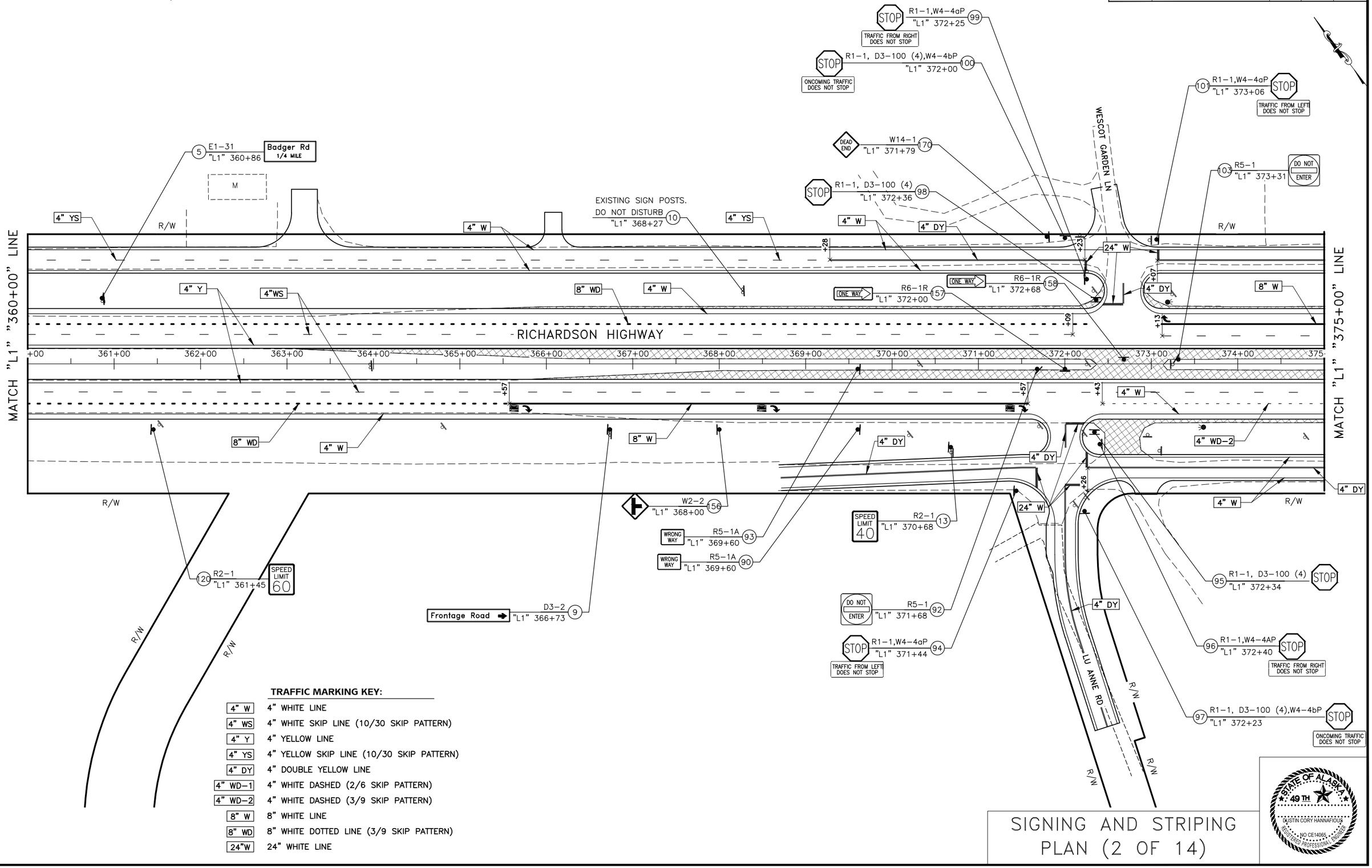
STATE OF ALASKA 49TH
DUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER

P:\2012\12009FB\C\c1004cnst12009-H1 Tue, Apr/05/16 01:44pm

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	H7	H31

NOTES:

1. EXISTING SIGNS ARE SHOWN FOR REFERENCE. SEE SHEET H1 FOR REMOVAL REQUIREMENTS.



TRAFFIC MARKING KEY:

4" W	4" WHITE LINE
4" WS	4" WHITE SKIP LINE (10/30 SKIP PATTERN)
4" Y	4" YELLOW LINE
4" YS	4" YELLOW SKIP LINE (10/30 SKIP PATTERN)
4" DY	4" DOUBLE YELLOW LINE
4" WD-1	4" WHITE DASHED (2/6 SKIP PATTERN)
4" WD-2	4" WHITE DASHED (3/9 SKIP PATTERN)
8" W	8" WHITE LINE
8" WD	8" WHITE DOTTED LINE (3/9 SKIP PATTERN)
24"W	24" WHITE LINE

SIGNING AND STRIPING PLAN (2 OF 14)

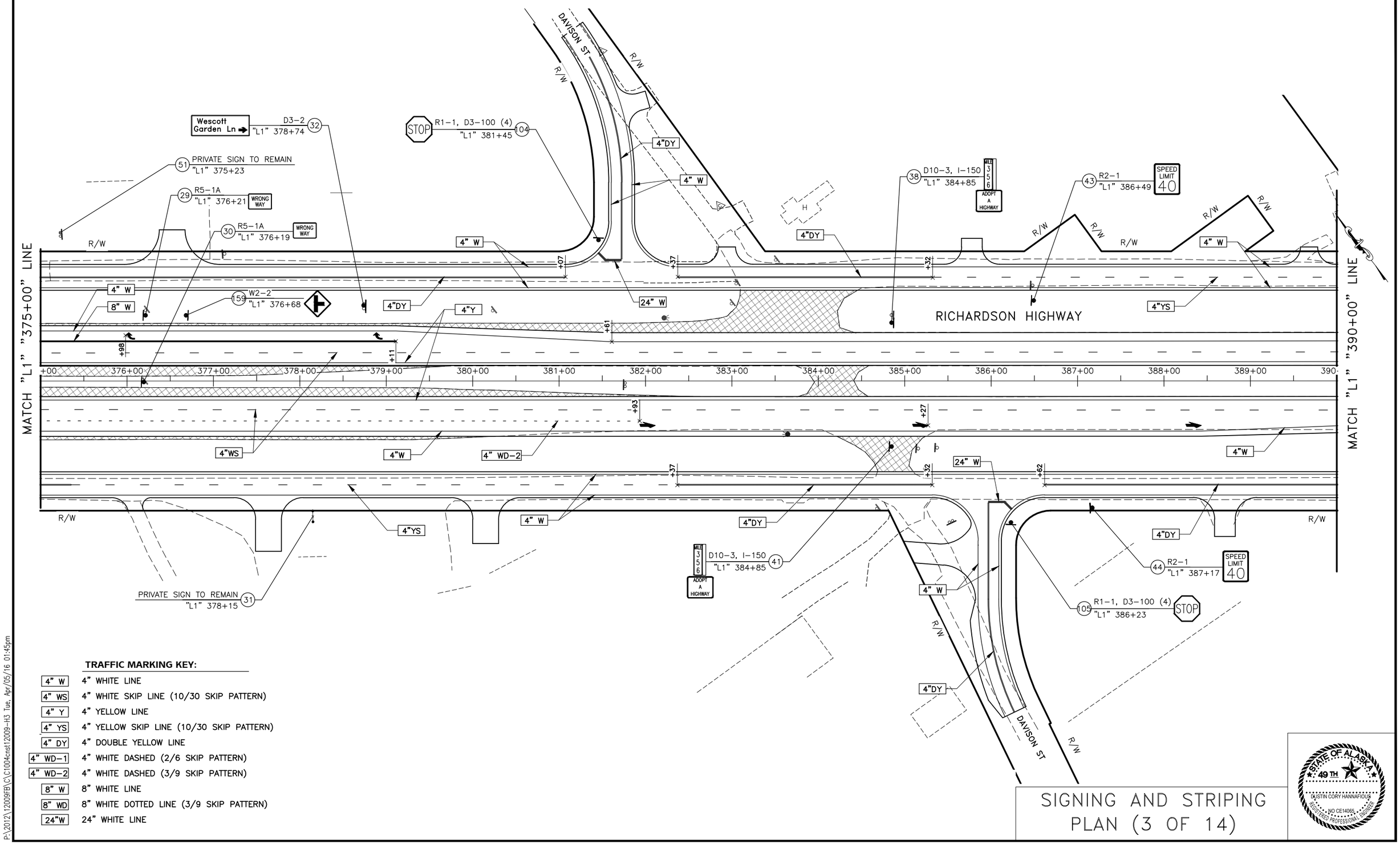
STATE OF ALASKA 49TH
DUSTIN CORY HANNAFIOUS
NO. CE14065
REGISTERED PROFESSIONAL ENGINEER

P:\2012\12009FB\C\C1004cnst12009-H2 Tue, Apr/05/16 01:44pm

NOTES:

1. EXISTING SIGNS ARE SHOWN FOR REFERENCE. SEE SHEET H1 FOR REMOVAL REQUIREMENTS.

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	H8	H31



TRAFFIC MARKING KEY:

4" W	4" WHITE LINE
4" WS	4" WHITE SKIP LINE (10/30 SKIP PATTERN)
4" Y	4" YELLOW LINE
4" YS	4" YELLOW SKIP LINE (10/30 SKIP PATTERN)
4" DY	4" DOUBLE YELLOW LINE
4" WD-1	4" WHITE DASHED (2/6 SKIP PATTERN)
4" WD-2	4" WHITE DASHED (3/9 SKIP PATTERN)
8" W	8" WHITE LINE
8" WD	8" WHITE DOTTED LINE (3/9 SKIP PATTERN)
24"W	24" WHITE LINE

SIGNING AND STRIPING PLAN (3 OF 14)

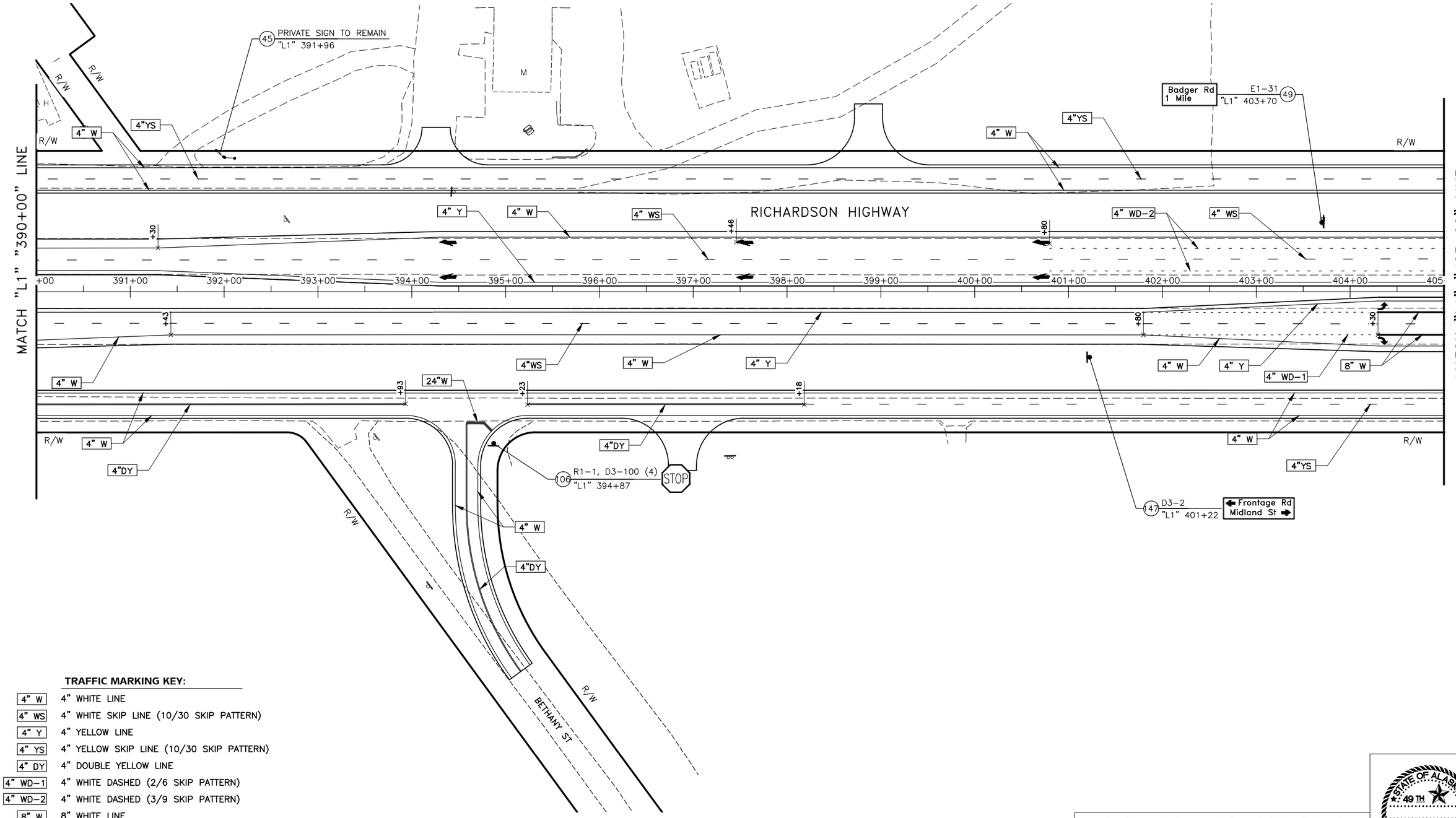
STATE OF ALASKA 49TH
DUSTIN CORY HANNAFIOUS
NO. CE14065
REGISTERED PROFESSIONAL ENGINEER

P:\2012\12009FB\C\C1004cnst12009-H3 Tue, Apr/05/16 01:45pm

NOTES:

1. EXISTING SIGNS ARE SHOWN FOR REFERENCE. SEE SHEET H1 FOR REMOVAL REQUIREMENTS.

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	H9	H31



TRAFFIC MARKING KEY:

4" W	4" WHITE LINE
4" WS	4" WHITE SKIP LINE (10/30 SKIP PATTERN)
4" Y	4" YELLOW LINE
4" YS	4" YELLOW SKIP LINE (10/30 SKIP PATTERN)
4" DY	4" DOUBLE YELLOW LINE
4" WD-1	4" WHITE DASHED (2/6 SKIP PATTERN)
4" WD-2	4" WHITE DASHED (3/9 SKIP PATTERN)
8" W	8" WHITE LINE
8" WD	8" WHITE DOTTED LINE (3/9 SKIP PATTERN)
24"W	24" WHITE LINE

SIGNING AND STRIPING PLAN (4 OF 14)

STATE OF ALASKA 49TH
DUSTIN CORY HANNAFIOUS
NO. CE14065
REGISTERED PROFESSIONAL ENGINEER

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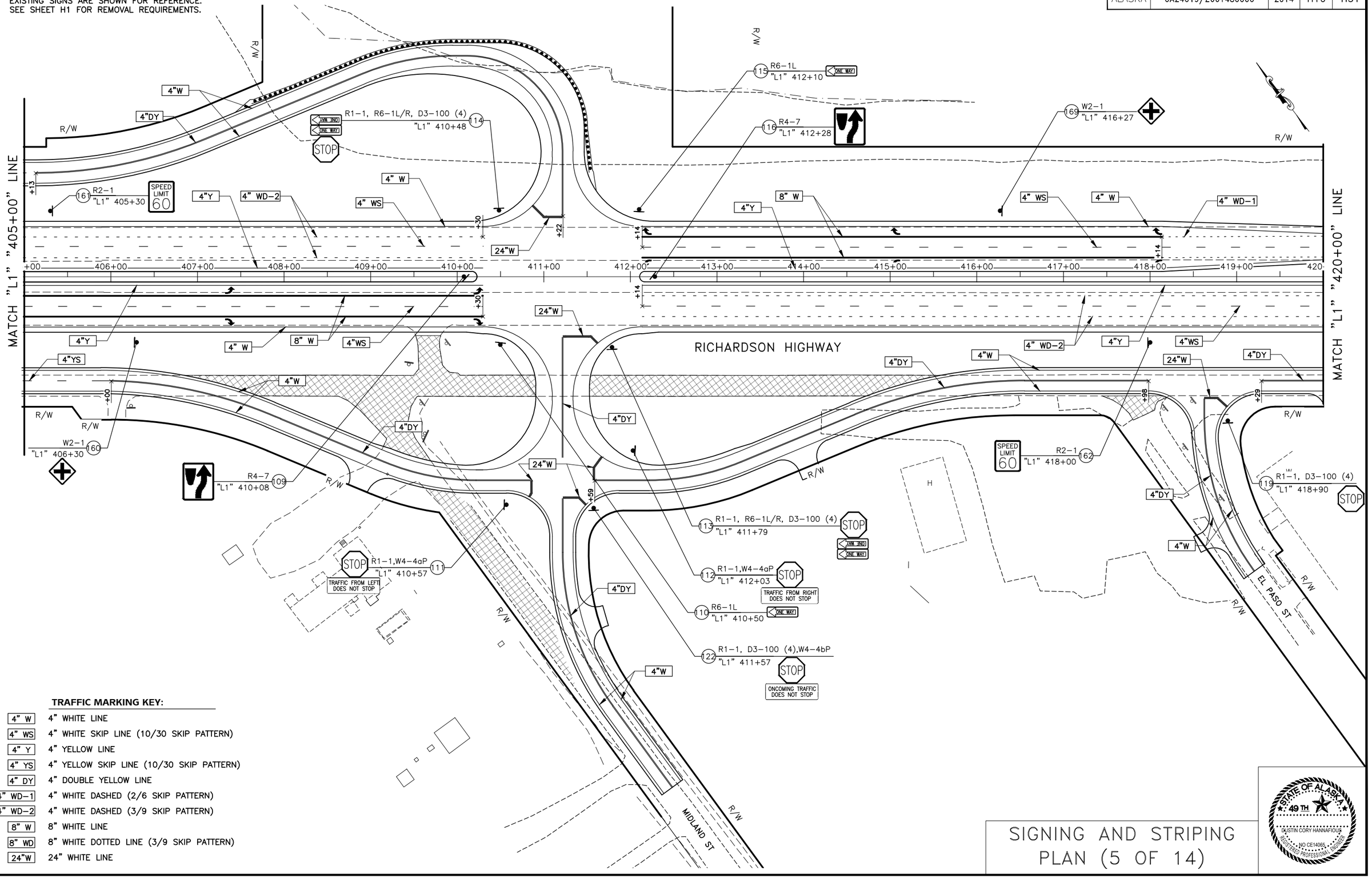
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	H10	H31

NOTES:

1. EXISTING SIGNS ARE SHOWN FOR REFERENCE. SEE SHEET H1 FOR REMOVAL REQUIREMENTS.



TRAFFIC MARKING KEY:

4" W	4" WHITE LINE
4" WS	4" WHITE SKIP LINE (10/30 SKIP PATTERN)
4" Y	4" YELLOW LINE
4" YS	4" YELLOW SKIP LINE (10/30 SKIP PATTERN)
4" DY	4" DOUBLE YELLOW LINE
4" WD-1	4" WHITE DASHED (2/6 SKIP PATTERN)
4" WD-2	4" WHITE DASHED (3/9 SKIP PATTERN)
8" W	8" WHITE LINE
8" WD	8" WHITE DOTTED LINE (3/9 SKIP PATTERN)
24"W	24" WHITE LINE

STATE OF ALASKA 49TH
DUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER

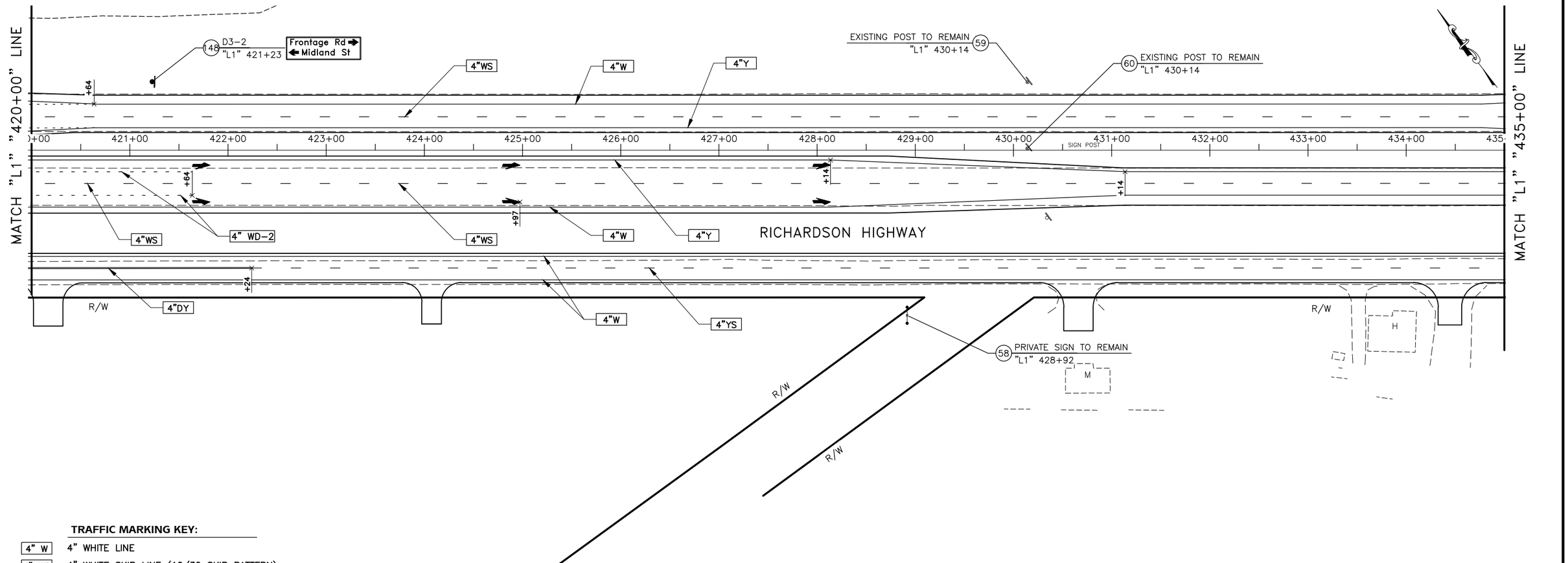
SIGNING AND STRIPING PLAN (5 OF 14)

P:\2012\12009FB\C\C100Acnst12009-H5 Tue, Apr/05/16 01:45pm

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	H11	H31

NOTES:

1. EXISTING SIGNS ARE SHOWN FOR REFERENCE. SEE SHEET H1 FOR REMOVAL REQUIREMENTS.



TRAFFIC MARKING KEY:

4" W	4" WHITE LINE
4" WS	4" WHITE SKIP LINE (10/30 SKIP PATTERN)
4" Y	4" YELLOW LINE
4" YS	4" YELLOW SKIP LINE (10/30 SKIP PATTERN)
4" DY	4" DOUBLE YELLOW LINE
4" WD-1	4" WHITE DASHED (2/6 SKIP PATTERN)
4" WD-2	4" WHITE DASHED (3/9 SKIP PATTERN)
8" W	8" WHITE LINE
8" WD	8" WHITE DOTTED LINE (3/9 SKIP PATTERN)
24"W	24" WHITE LINE

SIGNING AND STRIPING PLAN (6 OF 14)

STATE OF ALASKA 49TH
DUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER

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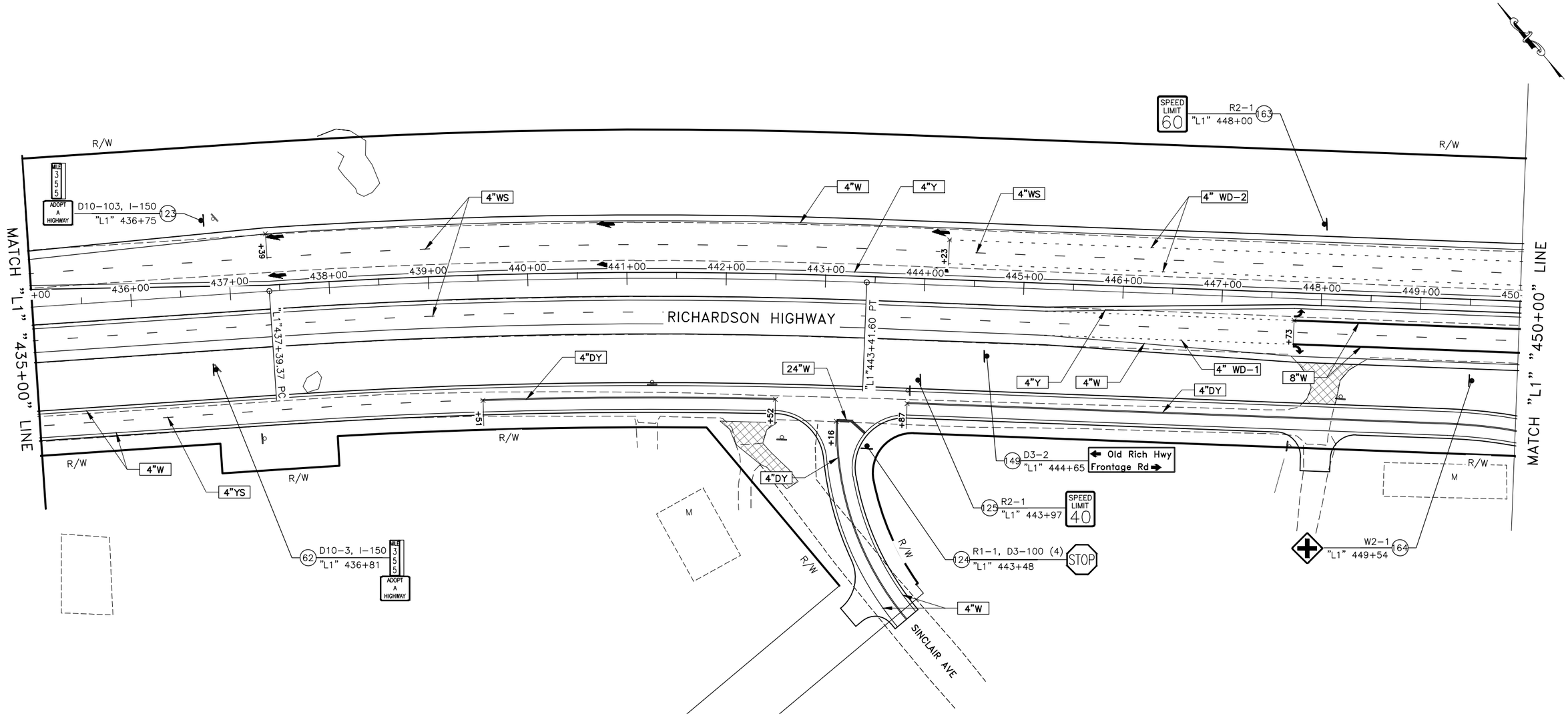
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	H12	H31

NOTES:

1. EXISTING SIGNS ARE SHOWN FOR REFERENCE. SEE SHEET H1 FOR REMOVAL REQUIREMENTS.



TRAFFIC MARKING KEY:

4" W	4" WHITE LINE
4" WS	4" WHITE SKIP LINE (10/30 SKIP PATTERN)
4" Y	4" YELLOW LINE
4" YS	4" YELLOW SKIP LINE (10/30 SKIP PATTERN)
4" DY	4" DOUBLE YELLOW LINE
4" WD-1	4" WHITE DASHED (2/6 SKIP PATTERN)
4" WD-2	4" WHITE DASHED (3/9 SKIP PATTERN)
8" W	8" WHITE LINE
8" WD	8" WHITE DOTTED LINE (3/9 SKIP PATTERN)
24"W	24" WHITE LINE

SIGNING AND STRIPING PLAN (7 OF 14)

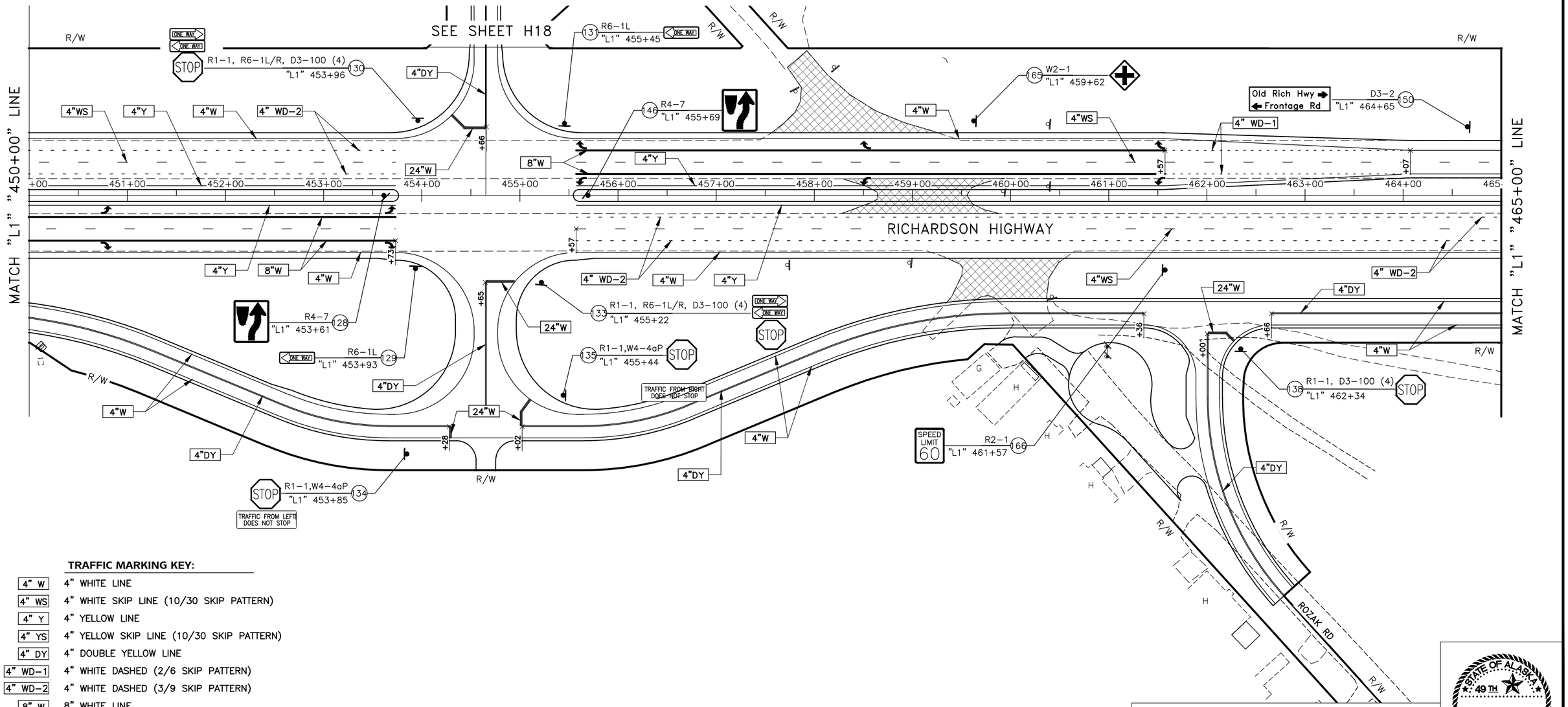
STATE OF ALASKA 49TH
DUSTIN CORY HANNAFIOUS
NO. CE14065
REGISTERED PROFESSIONAL ENGINEER

P:\2012\12009FB\C\C1004cnst12009-H7 Tue, Apr/05/16 01:46pm

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	H13	H31

NOTES:

1. EXISTING SIGNS ARE SHOWN FOR REFERENCE. SEE SHEET H1 FOR REMOVAL REQUIREMENTS.



TRAFFIC MARKING KEY:

4" W	4" WHITE LINE
4" WS	4" WHITE SKIP LINE (10/30 SKIP PATTERN)
4" Y	4" YELLOW LINE
4" YS	4" YELLOW SKIP LINE (10/30 SKIP PATTERN)
4" DY	4" DOUBLE YELLOW LINE
4" WD-1	4" WHITE DASHED (2/6 SKIP PATTERN)
4" WD-2	4" WHITE DASHED (3/9 SKIP PATTERN)
8" W	8" WHITE LINE
8" WD	8" WHITE DOTTED LINE (3/9 SKIP PATTERN)
24"W	24" WHITE LINE

SIGNING AND STRIPING PLAN (8 OF 14)

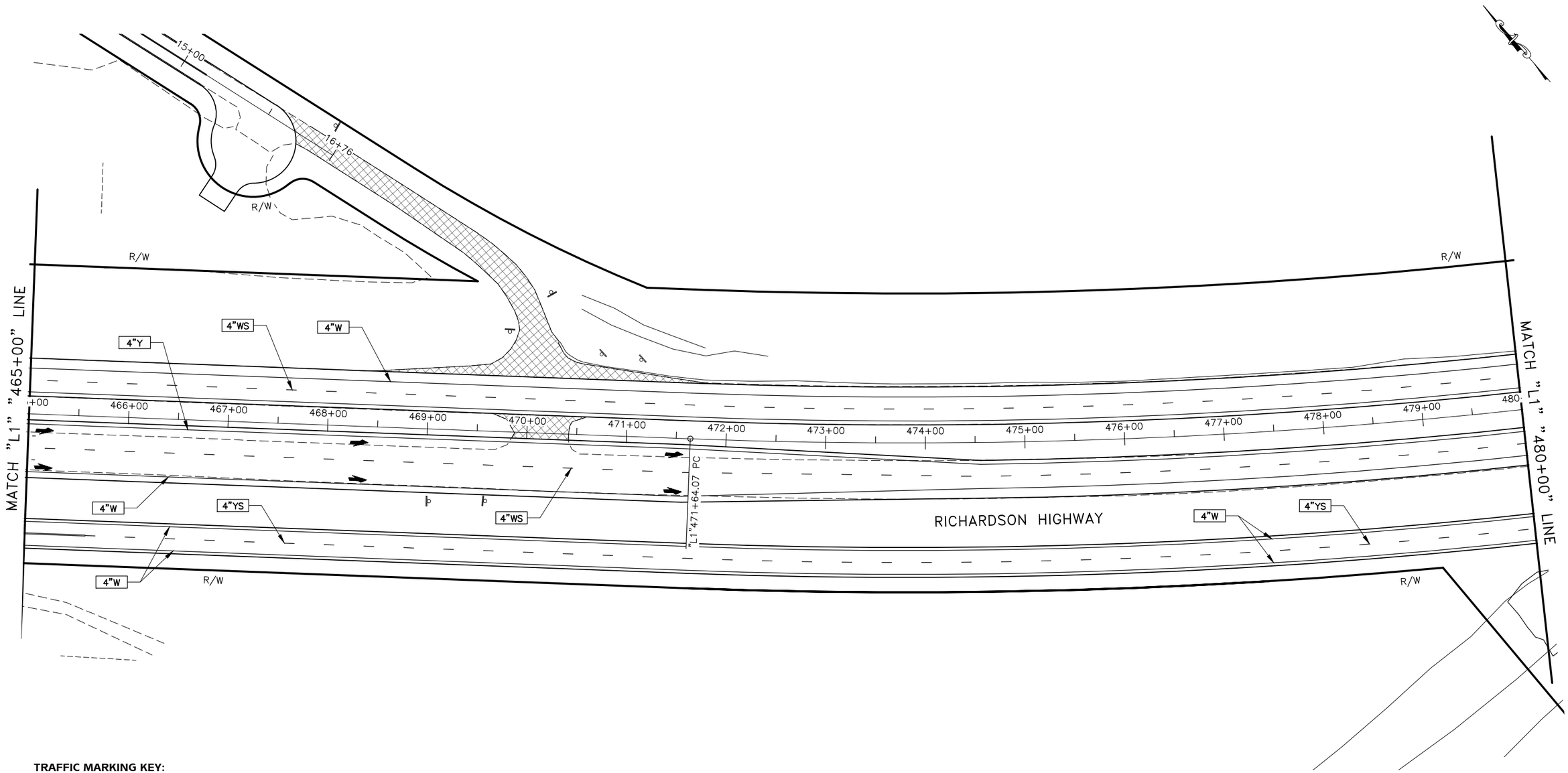
STATE OF ALASKA 49TH
DUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER

P:\2012\12009FB\C\C1004cnst12009-H8 Tue, Apr/05/16 01:46pm

NOTES:

1. EXISTING SIGNS ARE SHOWN FOR REFERENCE. SEE SHEET H1 FOR REMOVAL REQUIREMENTS.

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	H14	H31



TRAFFIC MARKING KEY:

4" W	4" WHITE LINE
4" WS	4" WHITE SKIP LINE (10/30 SKIP PATTERN)
4" Y	4" YELLOW LINE
4" YS	4" YELLOW SKIP LINE (10/30 SKIP PATTERN)
4" DY	4" DOUBLE YELLOW LINE
4" WD-1	4" WHITE DASHED (2/6 SKIP PATTERN)
4" WD-2	4" WHITE DASHED (3/9 SKIP PATTERN)
8" W	8" WHITE LINE
8" WD	8" WHITE DOTTED LINE (3/9 SKIP PATTERN)
24"W	24" WHITE LINE

SIGNING AND STRIPING PLAN (9 OF 14)

STATE OF ALASKA 49TH
DUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER

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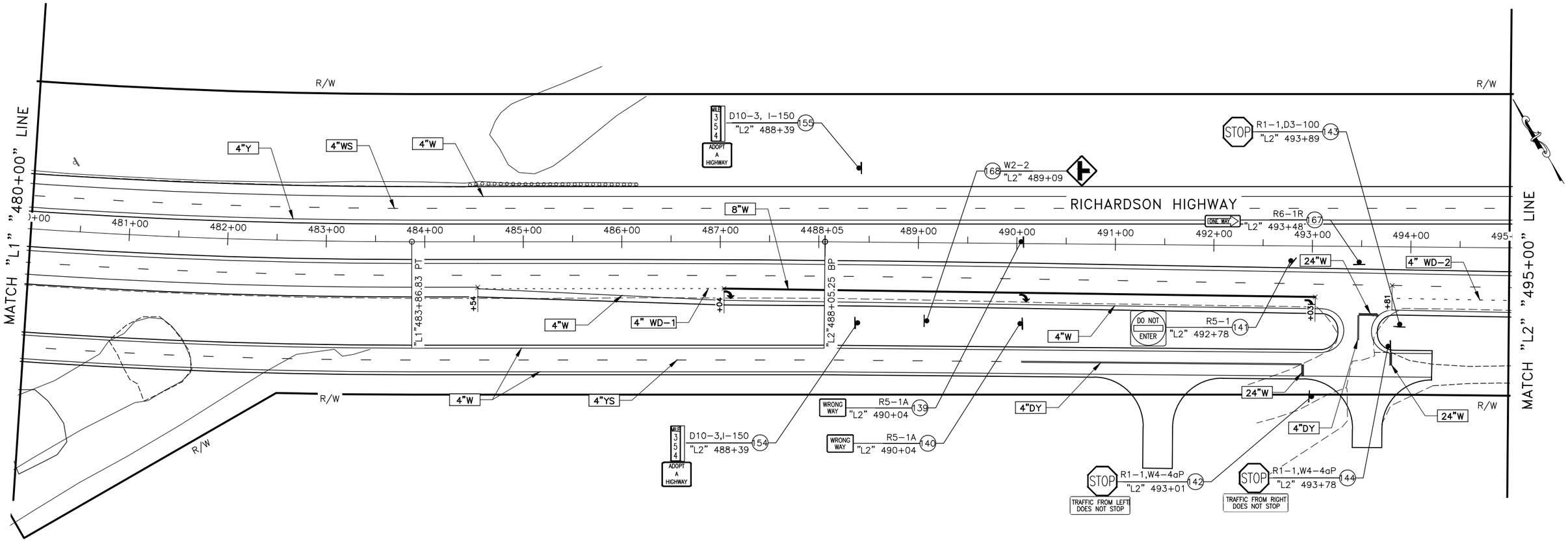
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	H15	H31

NOTES:

1. EXISTING SIGNS ARE SHOWN FOR REFERENCE. SEE SHEET H1 FOR REMOVAL REQUIREMENTS.



TRAFFIC MARKING KEY:

4" W	4" WHITE LINE
4" WS	4" WHITE SKIP LINE (10/30 SKIP PATTERN)
4" Y	4" YELLOW LINE
4" YS	4" YELLOW SKIP LINE (10/30 SKIP PATTERN)
4" DY	4" DOUBLE YELLOW LINE
4" WD-1	4" WHITE DASHED (2/6 SKIP PATTERN)
4" WD-2	4" WHITE DASHED (3/9 SKIP PATTERN)
8" W	8" WHITE LINE
8" WD	8" WHITE DOTTED LINE (3/9 SKIP PATTERN)
24"W	24" WHITE LINE

SIGNING AND STRIPING PLAN (10 OF 14)

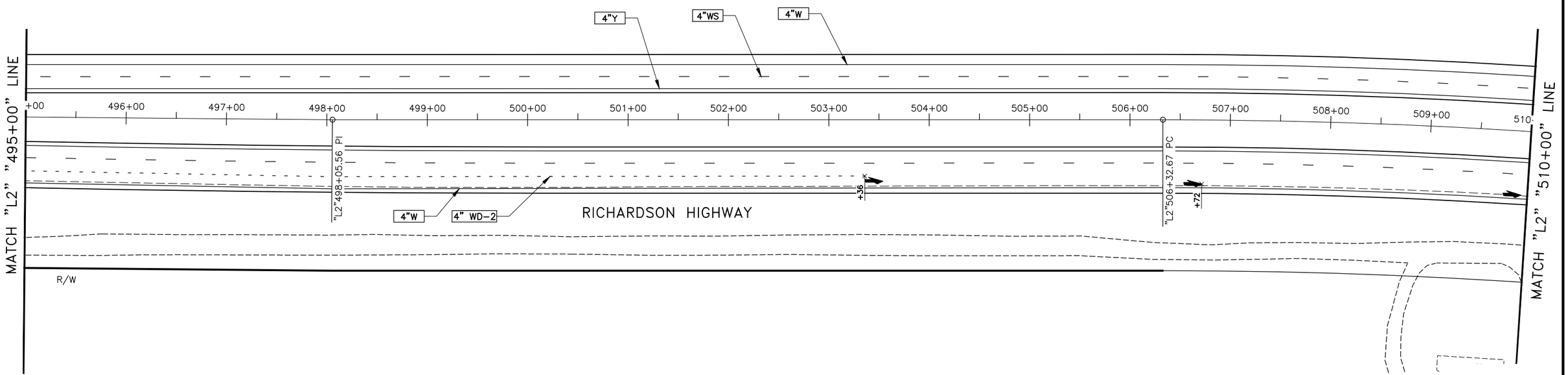
STATE OF ALASKA 49TH
DUSTIN CORY HANNAFIOUS
NO. CE14065
REGISTERED PROFESSIONAL ENGINEER

P:\2012\12009FB\C\C1004cnst12009-H15 Tue, Apr/05/16 01:46pm

NOTES:

1. EXISTING SIGNS ARE SHOWN FOR REFERENCE. SEE SHEET H1 FOR REMOVAL REQUIREMENTS.

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	H16	H31



TRAFFIC MARKING KEY:

4" W	4" WHITE LINE
4" WS	4" WHITE SKIP LINE (10/30 SKIP PATTERN)
4" Y	4" YELLOW LINE
4" YS	4" YELLOW SKIP LINE (10/30 SKIP PATTERN)
4" DY	4" DOUBLE YELLOW LINE
4" WD-1	4" WHITE DASHED (2/6 SKIP PATTERN)
4" WD-2	4" WHITE DASHED (3/9 SKIP PATTERN)
8" W	8" WHITE LINE
8" WD	8" WHITE DOTTED LINE (3/9 SKIP PATTERN)
24"W	24" WHITE LINE

SIGNING AND STRIPING PLAN (11 OF 14)

STATE OF ALASKA 49TH
DUSTIN CORY HANNAFIOUS
NO. CE14065
REGISTERED PROFESSIONAL ENGINEER

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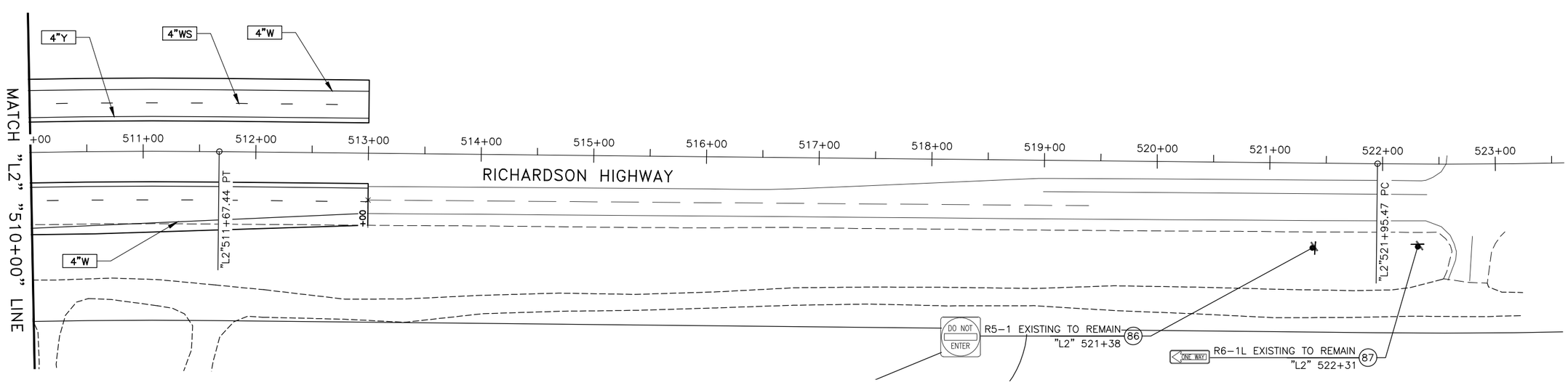
NOTES:

1. EXISTING SIGNS ARE SHOWN FOR REFERENCE. SEE SHEET H1 FOR REMOVAL REQUIREMENTS.

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	H17	H31



TRAFFIC MARKING KEY:

4" W	4" WHITE LINE
4" WS	4" WHITE SKIP LINE (10/30 SKIP PATTERN)
4" Y	4" YELLOW LINE
4" YS	4" YELLOW SKIP LINE (10/30 SKIP PATTERN)
4" DY	4" DOUBLE YELLOW LINE
4" WD-1	4" WHITE DASHED (2/6 SKIP PATTERN)
4" WD-2	4" WHITE DASHED (3/9 SKIP PATTERN)
8" W	8" WHITE LINE
8" WD	8" WHITE DOTTED LINE (3/9 SKIP PATTERN)
24"W	24" WHITE LINE

SIGNING AND STRIPING PLAN (12 OF 14)

STATE OF ALASKA 49TH
DUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER

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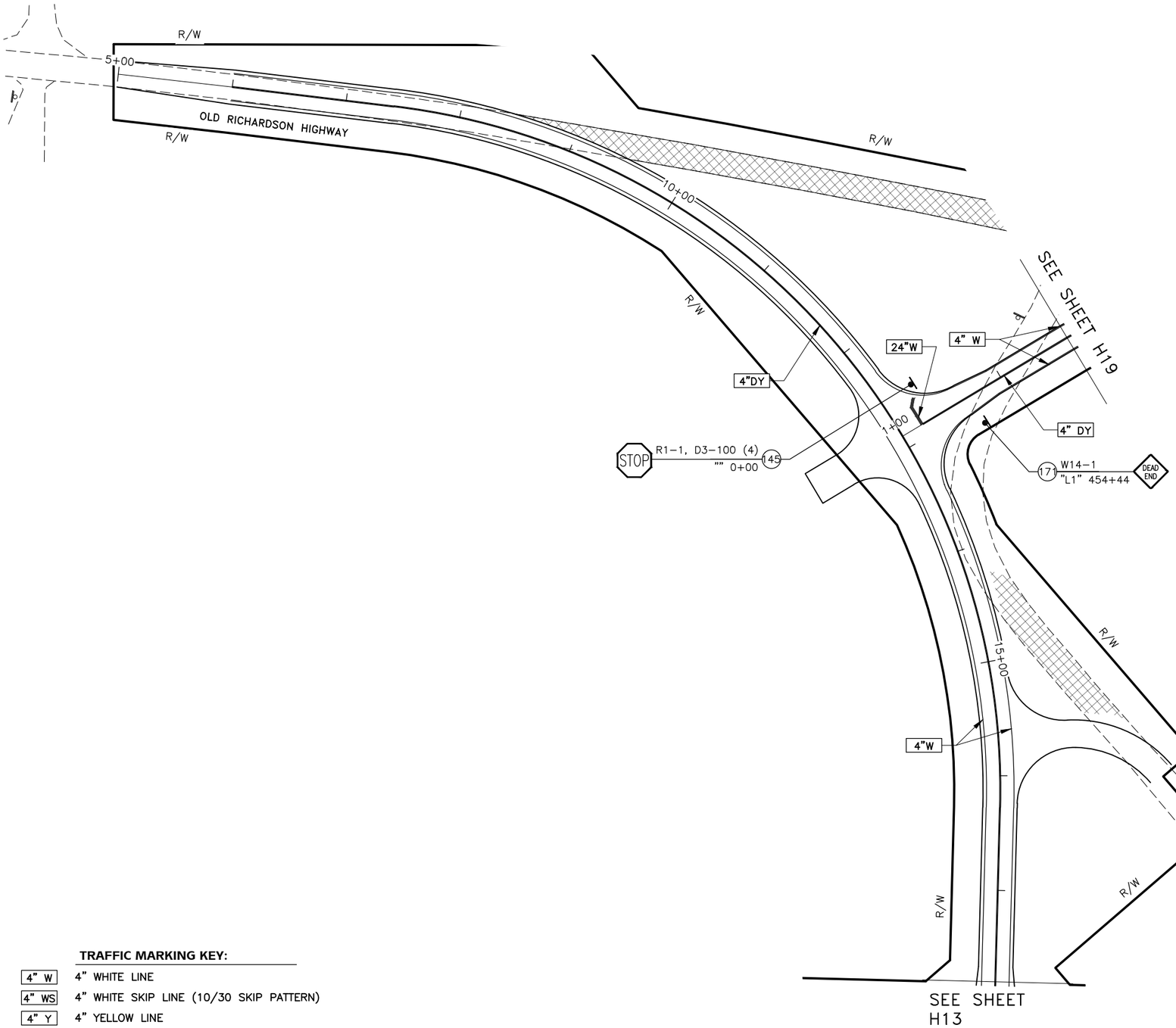
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	H18	H31



TRAFFIC MARKING KEY:

4" W	4" WHITE LINE
4" WS	4" WHITE SKIP LINE (10/30 SKIP PATTERN)
4" Y	4" YELLOW LINE
4" YS	4" YELLOW SKIP LINE (10/30 SKIP PATTERN)
4" DY	4" DOUBLE YELLOW LINE
4" WD-1	4" WHITE DASHED (2/6 SKIP PATTERN)
4" WD-2	4" WHITE DASHED (3/9 SKIP PATTERN)
8" W	8" WHITE LINE
8" WD	8" WHITE DOTTED LINE (3/9 SKIP PATTERN)
24"W	24" WHITE LINE

SIGNING AND STRIPING PLAN (13 OF 14)

STATE OF ALASKA 49TH
DUSTIN CORY HANNAFIOUS
NO. CE14065
REGISTERED PROFESSIONAL ENGINEER

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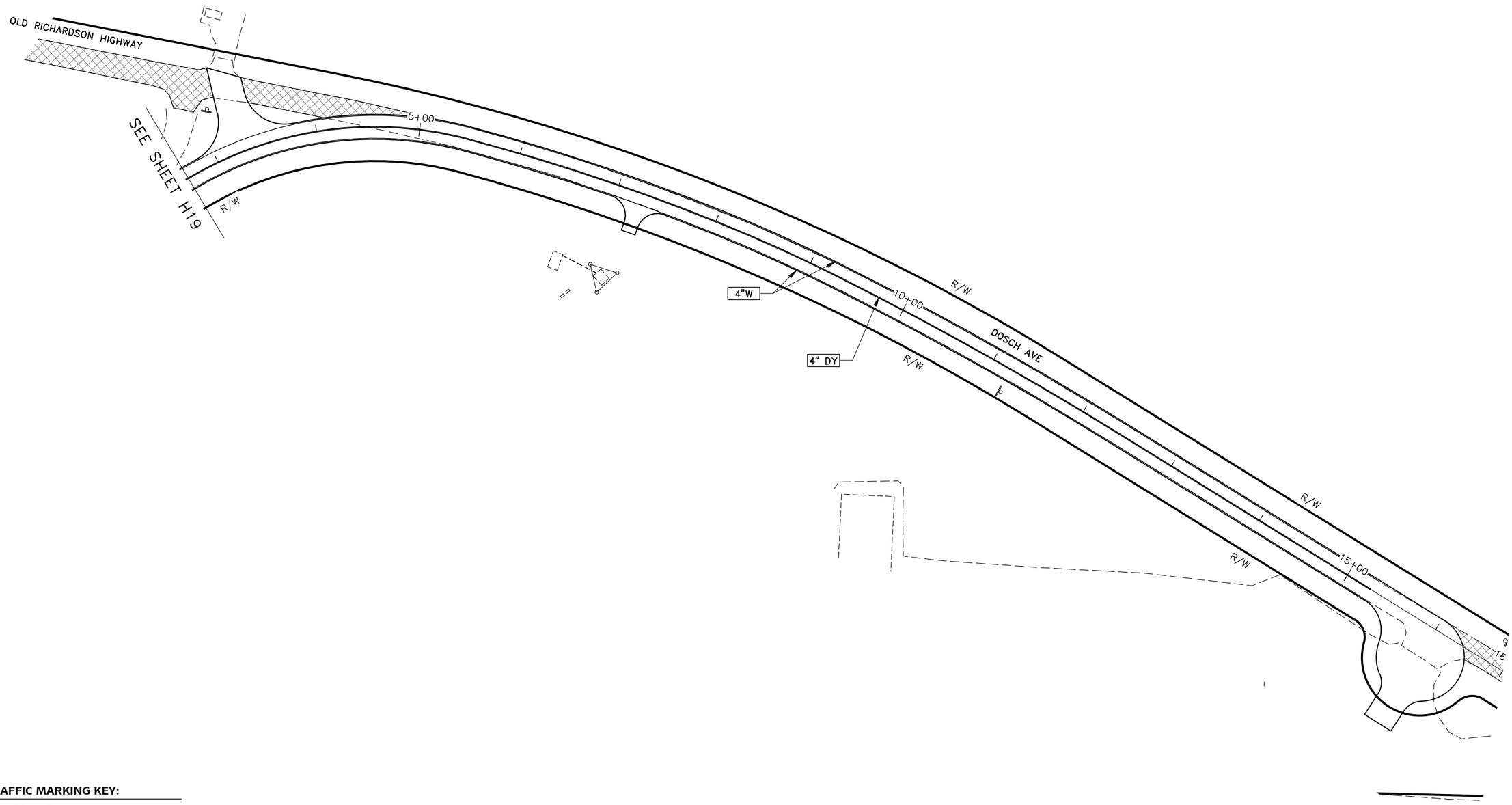
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	H19	H31



TRAFFIC MARKING KEY:

4" W	4" WHITE LINE
4" WS	4" WHITE SKIP LINE (10/30 SKIP PATTERN)
4" Y	4" YELLOW LINE
4" YS	4" YELLOW SKIP LINE (10/30 SKIP PATTERN)
4" DY	4" DOUBLE YELLOW LINE
4" WD-1	4" WHITE DASHED (2/6 SKIP PATTERN)
4" WD-2	4" WHITE DASHED (3/9 SKIP PATTERN)
8" W	8" WHITE LINE
8" WD	8" WHITE DOTTED LINE (3/9 SKIP PATTERN)
24"W	24" WHITE LINE

SIGNING AND STRIPING PLAN (14 OF 14)

STATE OF ALASKA 49TH
DUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER

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STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2016	H20	H31

ELECTROLIER SUMMARY

No.	STATION ALIGNMENT		OFFSET AND POLE WIDENING DETAIL		LUMINAIRE DATA		CIRCUIT	MOUNTING HEIGHT (NOTE 5)	POLE SHAFT LENGTH (NOTE 6)	MAST ARM LENGTH	REMARKS
			LT	RT	IES DISTRIBUTION TYPE	WATTS					
1	L1	371+33		C–13	MED. CUTOFF TYPE II	136	AB–1	45'	44' – 0"	18'	RICHARDSON HWY AT LU ANNE RD
2	L1	372+01	C–13		MED. CUTOFF TYPE II	136	AB–1	45'	44' – 0"	18'	RICHARDSON HWY AT LU ANNE RD
3	L1	372+67		C–13	MED. CUTOFF TYPE II	136	AB–1	45'	44' – 0"	18'	RICHARDSON HWY AT LU ANNE RD
4	L1	373+35	C–13		MED. CUTOFF TYPE II	136	AB–1	45'	44' – 0"	18'	RICHARDSON HWY AT LU ANNE RD
5	L1	410+06		C–13	MED. CUTOFF TYPE II	136	BB–1	45'	44' – 3"	15'	RICHARDSON HWY AT MIDLAND ST
6	L1	410+06	C–13		MED. CUTOFF TYPE II	274	BB–1	45'	44' – 3"	15'	RICHARDSON HWY AT MIDLAND ST
7	MD	416+32		C–12	MED. CUTOFF TYPE II	136	BB–1	45'	43' – 11"	15'	AIM OVER MIDLAND ST CONNECTOR
8	NF	412+99	C–12		MED. CUTOFF TYPE II	136	BB–1	45'	43' – 11"	15'	AIM OVER NORTH FRONTAGE ROAD
9	L1	412+38		C–13	MED. CUTOFF TYPE II	274	BB–1	45'	44' – 3"	15'	RICHARDSON HWY AT MIDLAND ST
10	L1	412+38	C–13		MED. CUTOFF TYPE II	136	BB–1	45'	44' – 3"	15'	RICHARDSON HWY AT MIDLAND ST
11	L1	453+49		C–13	MED. CUTOFF TYPE II	136	CB–1	45'	44' – 3"	15'	RICHARDSON HWY AT OLD RICH HWY
12	L1	453+49	C–13		MED. CUTOFF TYPE II	274	CB–1	45'	44' – 3"	15'	RICHARDSON HWY AT OLD RICH HWY
13	RC	2+24	C–12		MED. CUTOFF TYPE II	136	CB–1	45'	43' – 11"	15'	AIM OVER S. FRONTAGE RD CONNECTOR
14	OR	18+24	C–12		MED. CUTOFF TYPE II	136	CB–1	45'	43' – 11"	15'	AIM OVER OLD RICH HWY
15	L1	455+81		C–13	MED. CUTOFF TYPE II	274	CB–1	45'	44' – 3"	15'	AIM OVER OLD RICH HWY
16	L1	455+81	C–13		MED. CUTOFF TYPE II	136	CB–1	45'	44' – 3"	15'	RICHARDSON HWY AT OLD RICH HWY
17	L2	492+82		C–13	MED. CUTOFF TYPE II	136	DB–1	45'	45' – 0"	12'	MP 354 RICHARDSON HWY AT S FRONTAGE RD
18	L2	494+12		C–13	MED. CUTOFF TYPE II	136	DB–1	45'	45' – 0"	12'	MP 354 RICHARDSON HWY AT S FRONTAGE RD

LUMINAIRE PERFORMANCE CRITERIA

ROADWAY LUMINAIRE		
GENERAL DESCRIPTION:	LED HIGH OUTPUT STREETLIGHT, FULL CUTOFF OPTICS	
MANUFACTURER:	CREE OR APPROVED EQUAL	
MODEL:	STR–LWY–2ME–HT–X–F–UH–SV–A–40K OR APPROVED EQUAL	
MOUNTING:	HORIZONTAL	
HOUSING ENTRY TYPE:	TOOL–LESS	
FIXTURE FINISH COLOR:	SILVER	
PE CONTROL SOCKET PROVISIONS:	ANSI 7–PIN SOCKET WITH SHORTING CAP	
DIMMING PROVISIONS:	0–10V	
CORRECTED COLOR TEMP (CCT):	4000K	
COLOR RENDERING INDEX (CCI):	70 MINIMUM	
IESNA DISTRIBUTION TYPE	MED CUTOFF, TYPE 2	
BACKLIGHT SHIELD:	NO	
WARRANTY:	10–YEAR MINIMUM	
UL LISTED PRODUCT:	YES	
VOLTAGE:	480V	
POWER FACTOR:	>= 0.90	
LED LAMP SOURCE DESCRIPTION:	SINGLE MODULE, HIGH OUTPUT TYPE (10 LEDs)	DOUBLE MODULE, HIGH OUTPUT TYPE (20 LEDs)
WATTAGE:	136W	274W
INITIAL LUMEN OUTPUT:	14,255	26,596
IES FILE:	STR–LWY–2ME–xx–1–F–UL–A–40K_PL06677–001B.IES	STR–LWY–2ME–xx–2–F–UL–A–40K_CONFIGURED.ies

ROADWAY LIGHTING CRITERIA

ROADWAY CHARACTERISTICS	
ROADWAY CLASSIFICATION:	EXPRESSWAY
PEDESTRIAN CONFLICTS:	LOW
PAVEMENT CLASSIFICATION:	R3
TRAFFIC FLOW:	2–WAY
LANE WIDTH:	12 FT.
NO. OF LANES, LEFT / RIGHT:	3 OR 4 PER SIDE; SEE PLANS.
MEDIAN WIDTH:	SEE PLANS.
LIGHTING STANDARDS	
ROADWAY LIGHTING STANDARD:	ANSI / IESNA RP–8–2014
PARTIAL LIGHTING COVERAGE & CONFLICT AREAS:	ISOLATED INTERSECTIONS ONLY PER RP–8–14, ARTICLE 5.7
CALCULATION ZONE:	TO PAVEMENT EDGE IN CONFLICT AREA
LIGHT LOSS FACTOR (LLF):	0.85 FOR LED
INTERSECTION ILLUMINANCE CRITERIA	
AVERAGE MAINTAINED (Eavg):	>= 0.9 FC
MINIMUM MAINTAINED (Emin):	>= 0.3 FC
UNIFORMITY (Eavg/Emin), MAXIMUM:	<= 3.0

ELECTROLIER SUMMARY NOTES:

1. LUMINAIRES SHALL BE SUITABLE FOR 480V SUPPLY, AND COMPLY WITH SPECIAL PROVISIONS OF SECTION 740–2.18. LUMINAIRES SHALL PROVIDE THE AVERAGE INITIAL ILLUMINANCE AND UNIFORMITIES SPECIFIED IN THE PERFORMANCE CRITERIA SCHEDULES. PROVIDE LIGHTING CALCULATIONS USING THE MANUFACTURER'S CURRENT PUBLISHED PHOTOMETRIC DATA IN ACCORDANCE WITH SPECIAL PROVISIONS OF SECTION 740–2.18 FOR LED ROADWAY LUMINAIRES.
2. PRIOR TO INSTALLATION, CONTRACTOR SHALL REQUEST LOCATES FOR EXISTING UNDERGROUND UTILITIES, AND RECEIVE WRITTEN CONFIRMATION THAT ALL FACILITIES HAVE BEEN IDENTIFIED.
3. POLE LOCATIONS SHALL BE STAKED AND APPROVED BY THE ENGINEER PRIOR TO INSTALLATION. ADJUST POLE LOCATIONS AS DIRECTED BY THE ENGINEER. MINOR RELOCATIONS OF FOUNDATIONS, CONDUIT, AND JUNCTION BOXES SHALL BE CONSIDERED SUBSIDIARY TO THE SECTION 660(3) PAY ITEM.
4. JUNCTION BOXES AND CONDUIT RUNS SHOWN IN PLANS FOR THE LIGHTING SYSTEM ARE CONSIDERED SUBSIDIARY TO THE 660(3) HIGHWAY LIGHTING SYSTEM PAY ITEM.
5. DESIGN MOUNTING HEIGHT AS SCHEDULED SHALL BE MEASURED FROM THE FINISHED ROAD SURFACE TO THE LUMINAIRE. REFER TO STANDARD DRAWING L–03.10.
6. POLE SHAFT LENGTH AS SCHEDULED SHALL BE MEASURED FROM FINAL GRADE AT POLE BASE TO TOP OF POLE CAP. REFER TO STANDARD DRAWING L–03.10.
7. LIGHTING STANDARDS AND CONCRETE POLE FOUNDATIONS SHALL COMPLY WITH STANDARD DRAWINGS L–03.10 AND L–30.10, AND POLE OFFSET DETAILS.
8. AT NO ADDITIONAL COST TO THE STATE OF ALASKA, THE CONTRACTOR AS AN OPTION MAY PROVIDE DRIVEN STEEL PIPE PILE FOUNDATIONS AS DETAILED IN THESE PLANS IN LIEU OF CONCRETE POLE FOUNDATIONS.
9. ORIENT POLE WITH LUMINAIRE MAST ARMS AS INDICATED ON THE PLANS, TYPICALLY PERPENDICULAR TO THE ROADWAY CENTERLINE, UNLESS A SPECIFIC ORIENTATION IS OTHERWISE NOTED.

PLANS DEVELOPED BY:
KINNEY ENGINEERING, LLC

STATE OF ALASKA 49TH REGISTERED PROFESSIONAL ENGINEER William Kinney 12223 PE-P&E

ELECTROLIER SUMMARY (1 OF 1)

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	H21	H31

JUNCTION BOX SUMMARY

JUNCTION BOX NO.	STATION	LOCATION		TYPE	CIRCUITS	REMARKS
		LT	RT			
1	371+33		X	1A	AB–1	
2	372+01	X		1A	AB–1	
3	372+67		X	1A	AB–1	
4	373+35	X		1A	AB–1	
5	410+06		X	1A	BB–1	
6	410+06	X		1A	BB–1	
7	416+32		X	1A	BB–1	
8	412+99	X		1A	BB–1	
9	412+38		X	1A	BB–1	
10	412+38	X		1A	BB–1	
11	453+49		X	1A	CB–1	
12	453+49	X		1A	CB–1	
13	2+24	X		1A	CB–1	
14	18+24	X		1A	CB–1	
15	445+81		X	1A	CB–1	
16	455+81	X		1A	CB–1	
17	492+82		X	1A	DB–1	
17A	490+34		X	1A	DB–1	
18	494+12		X	1A	DB–1	

J–BOX SUMMARY

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	H22	H31

LOAD CENTER A

TYPE 1 LOAD CENTER
372+04 LT. 20' APPROX SERVICE DISTANCE
480/240V SINGLE PHASE SERVICE
100 AMP MAIN BREAKER, 22000 AIC
PANEL A CIRCUITS: 8 MINIMUM
PANEL B CIRCUITS: 12 MINIMUM

CIRCUIT	BRANCH BREAKER	PURPOSE	CONTACTOR	LOAD
AA–1	15 AMP 240V	PHOTOCONTROL	N/A	0.16 AMP
AA–2	20 AMP 480V	SPARE	N/A	
AA–3	20 AMP 480V	SPARE	N/A	
AB–1	15 AMP 480V	LIGHTING	YES	1.57 AMP
AB–2	20 AMP 480V	FUTURE LIGHTING	YES	
AB–3	20 AMP 480V	FUTURE LIGHTING	YES	
TOTAL LOAD				1.73 AMPS

LOAD CENTER B

TYPE 1 LOAD CENTER
409+92 RT. 30' APPROX SERVICE DISTANCE
480/240V SINGLE PHASE SERVICE
100 AMP MAIN BREAKER, 22000 AIC
PANEL A CIRCUITS: 8 MINIMUM
PANEL B CIRCUITS: 12 MINIMUM

CIRCUIT	BRANCH BREAKER	PURPOSE	CONTACTOR	LOAD
BA–1	15 AMP 240V	PHOTOCONTROL	N/A	0.16 AMP
BA–2	20 AMP 480V	SPARE	N/A	
BA–3	20 AMP 480V	SPARE	N/A	
BB–1	15 AMP 480V	LIGHTING	YES	3.16 AMP
BB–2	20 AMP 480V	FUTURE LIGHTING	YES	
BB–3	20 AMP 480V	FUTURE LIGHTING	YES	
TOTAL LOAD				3.32 AMPS

LOAD CENTER C

TYPE 1 LOAD CENTER
457+50 LT. 25' APPROX SERVICE DISTANCE
480/240V SINGLE PHASE SERVICE
100 AMP MAIN BREAKER, 22000 AIC
PANEL A CIRCUITS: 8 MINIMUM
PANEL B CIRCUITS: 12 MINIMUM

CIRCUIT	BRANCH BREAKER	PURPOSE	CONTACTOR	LOAD
CA–1	15 AMP 240V	PHOTOCONTROL	N/A	0.16 AMP
CA–2	20 AMP 480V	SPARE	N/A	
CA–3	20 AMP 480V	SPARE	N/A	
CB–1	15 AMP 480V	LIGHTING	YES	3.16 AMP
CB–2	20 AMP 480V	FUTURE LIGHTING	YES	
CB–3	20 AMP 480V	FUTURE LIGHTING	YES	
TOTAL LOAD				3.32 AMPS

LOAD CENTER D

TYPE 1 LOAD CENTER
490+40 RT. 60' APPROX SERVICE DISTANCE
480/240V SINGLE PHASE SERVICE
100 AMP MAIN BREAKER, 22000 AIC
PANEL A CIRCUITS: 8 MINIMUM
PANEL B CIRCUITS: 12 MINIMUM

CIRCUIT	BRANCH BREAKER	PURPOSE	CONTACTOR	LOAD
DA–1	15 AMP 240V	PHOTOCONTROL	N/A	0.16 AMP
DA–2	20 AMP 480V	SPARE	N/A	
DA–3	20 AMP 480V	SPARE	N/A	
DB–1	15 AMP 480V	LIGHTING	YES	0.79 AMP
DB–2	20 AMP 480V	FUTURE LIGHTING	YES	
DB–3	20 AMP 480V	FUTURE LIGHTING	YES	
TOTAL LOAD				0.95 AMPS

NOTES:

1. SERVING UTILITY IS GOLDEN VALLEY ELECTRIC ASSOCIATION LOCATED IN FAIRBANKS, ALASKA.
2. COORDINATE INSTALLATION OF SERVICE TO LOAD CENTER WITH GVEA. CONTACT GVEA FOR SERVICE REQUIREMENTS AND SPECIFICATIONS.
3. SERVICE CONDUCTORS ARE TO BE COPPER, TYPE XHHW–2.
4. PROVIDE INSULATED EQUIPMENT GROUNDING CONDUCTORS WITH ALL FEEDERS AND BRANCH CIRCUITS. TERMINATE EACH END ON SUITABLE LUG, BUS OR BUSHING. SIZE EQUIPMENT GROUND CONDUCTORS IN ACCORDANCE WITH NEC AND ADOT PROJECT SPECIFICATION SECTION 660, UNLESS OTHERWISE INDICATED, BUT NOT SMALLER THAN NO. 8 AWG.
5. LOAD AMPERAGE BASED ON 0.90 POWER FACTOR AND CODE DIVERSITY FACTOR OF 1.25

CIRCUIT IDENTIFICATION

TYPICAL CIRCUIT A A–1

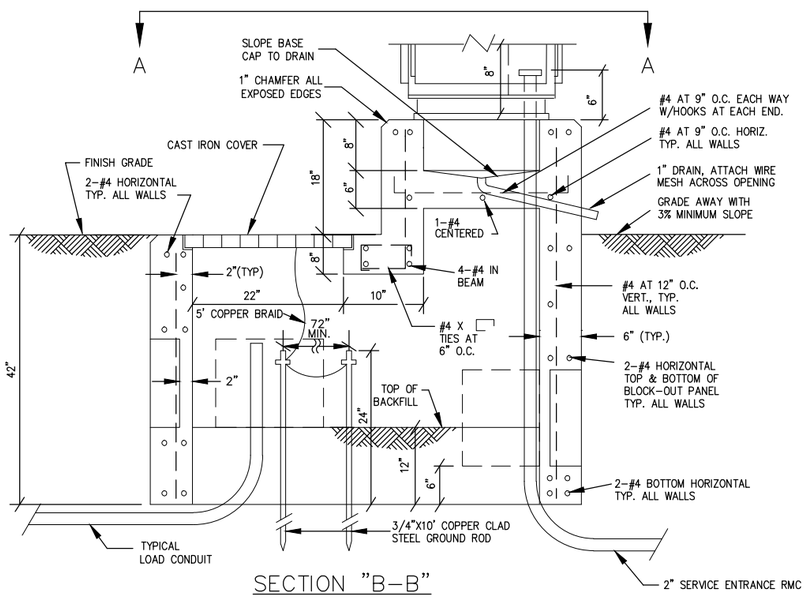
LOAD CENTER
A
B
C
D

PANEL
A
B

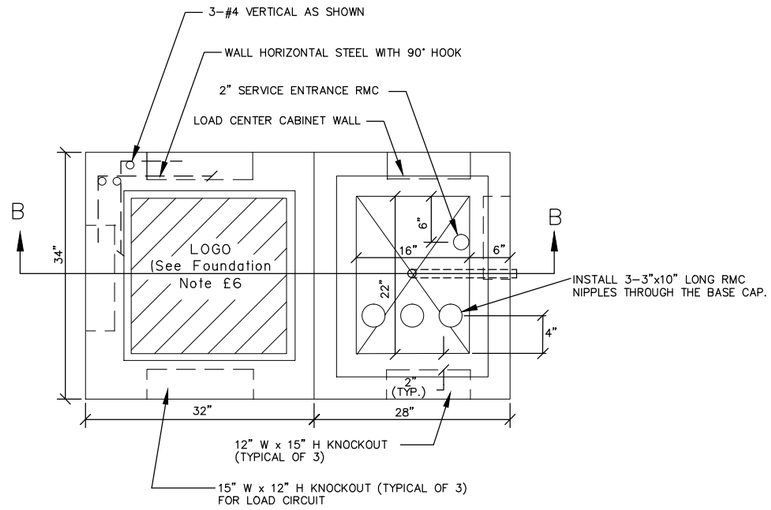
CIRCUIT NUMBER
1
2
3

LOAD CENTER SUMMARY AND LIGHTING DETAILS

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	H23	H31



SECTION "B-B"



VIEW "A-A"
(PLAN VIEW)

FOUNDATION NOTES:

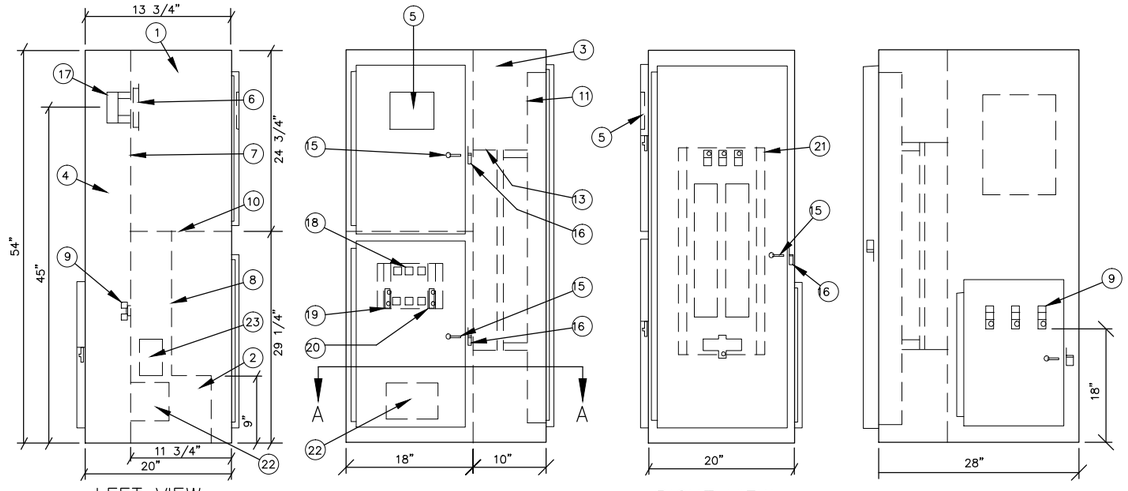
1. INSTALL THE SURFACE WITH CAST IRON COVER FLUSH WITH THE PAVEMENT, SIDEWALK, OR FINISHED GRADE. GRADE AWAY FROM THE BASE WITH A MINIMUM SLOPE OF 3%. USE A PRE-MOULDED BITUMINOUS JOINT BETWEEN THE BASE AND CONCRETE SIDEWALK OR PAVING.
2. WHEN INSTALLING THE BASE, EXCAVATE TO 60" BELOW FINISHED GRADE AND INSTALL A DRAIN CONSISTING OF 18" OF COARSE CONCRETE AGGREGATE APPROVED BY THE ENGINEER. BACKFILL AROUND THE BASE IN 6" LIFTS WITH SELECTED MATERIAL TYPE "A".
3. BACKFILL INSIDE THE FOUNDATION TO WITHIN 30" OF THE LID AFTER ALL CONDUITS ARE INSTALLED, USING COARSE AGGREGATE. TERMINATE THE ENDS OF ALL LOAD CONDUITS A MINIMUM OF 6" ABOVE THE COARSE CONCRETE AGGREGATE BACKFILL AND A MINIMUM OF 12" BELOW THE LID.
4. PROVIDE ANCHOR BOLTS OR EXPANSION ANCHORS IN THE BASE FOR MOUNTING THE CABINET PER THE MANUFACTURER'S SHOP DRAWINGS. ANCHOR BOLTS, NUTS, AND WASHERS SHALL CONFORM TO EITHER ASTM A307 OR A449 AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153.
5. USE GRADE 60 REINFORCING STEEL CONFORMING TO ASTM 615 AND CLASS "A" CONCRETE CONFORMING TO SECTION 501 OF THE SPECIFICATIONS WHEN CASTING THE BASE.
6. FINISH THE BASE ACCESS OPENING WITH A 24" SQUARE IRON FRAME AND COVER, WEIGHING APPROXIMATELY 280 LBS. PROVIDE COVERS INSCRIBED WITH THE LEGEND "LIGHTING" FOR THOSE LOAD CENTERS WITH STREET LIGHTING CIRCUITS ONLY, AND "TRAFFIC" FOR THOSE LOAD CENTERS WITH A TRAFFIC SIGNAL CIRCUIT.
7. IF THE BASE IS PRECAST, INSTALL TWO 3/4" FERRULE LOOP INSERTS IN TWO SIDES OPPOSITE ONE ANOTHER FOR LIFTING.
8. THE SUPPLEMENTAL GROUNDING ROD SHALL BE PERMITTED TO BE INSTALLED ON THE EXTERIOR OF THE LOAD CENTER VAULT.

TYPE 1 LOAD CENTER BASE

NOTE: STOP HORIZONTAL & VERTICAL STEEL AT BLOCK-OUT PANELS & OPTIONAL JOINT USING 90° HOOK. INSTALL 2 EXTRA #4 HORIZONTAL & VERTICAL BARS ON ALL SIDES OF EACH KNOCKOUT.

LOAD CENTER DETAILS (2 OF 2)

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	H24	H31



LEFT VIEW

RIGHT VIEW

REAR VIEW

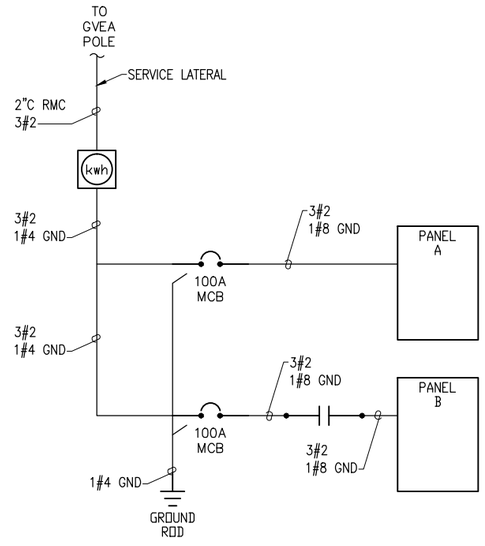
SECTION "A"

MOUNTING BASE

EQUIPMENT LEGEND

1. METER SECTION
2. LOAD SECTION (MAIN)
3. LOAD SECTION (DISTRIBUTION)
4. SERVICE PULL SECTION
5. METER READING WINDOW
6. METER SOCKET COVER
7. TEST SECTION COVER
8. DEAD FRONT
9. UTILITY LANDING LUGS
10. METER SECTION BARRIER
11. PANEL BOARD DEADFRONT
12. EQUIPMENT CHASSIS
13. MOUNTING PAN
14. STAINLESS STEEL PIN HINGE
15. COIN LATCH
16. HASP FOR PADLOCK
17. METER SOCKET KIT ASS'Y.
18. MAIN BREAKER(S)
19. NEUTRAL BAR
20. GROUND BAR
21. PANEL BOARD INTERIOR
22. ALTERNATE CONTACTOR LOCATION
23. CABLE OPENING

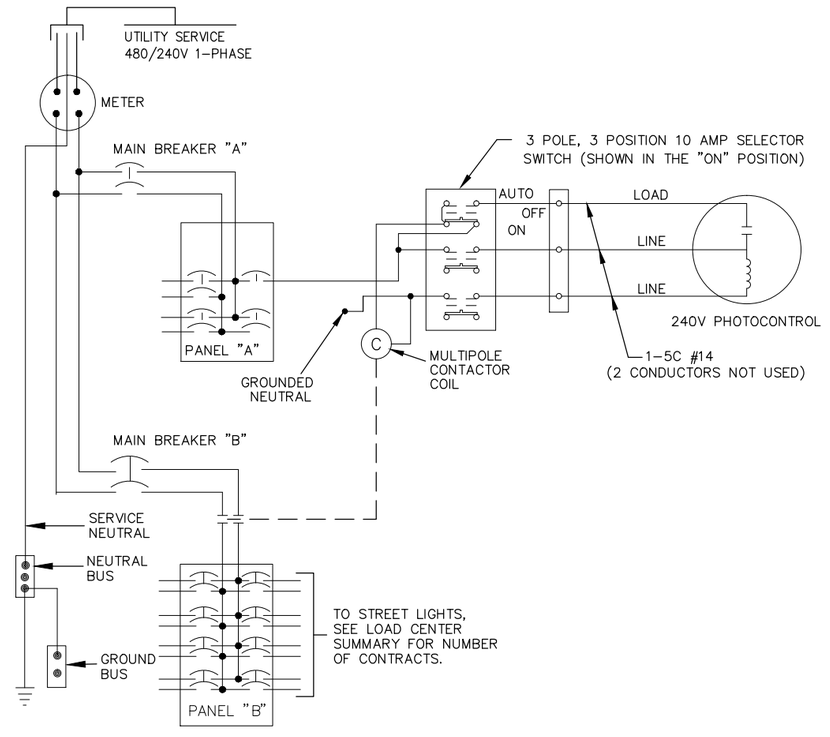
TYPE 1 LOAD CENTER CABINET SECTION / ELEVATION



ONE-LINE DIAGRAM

WIRING NOTES:

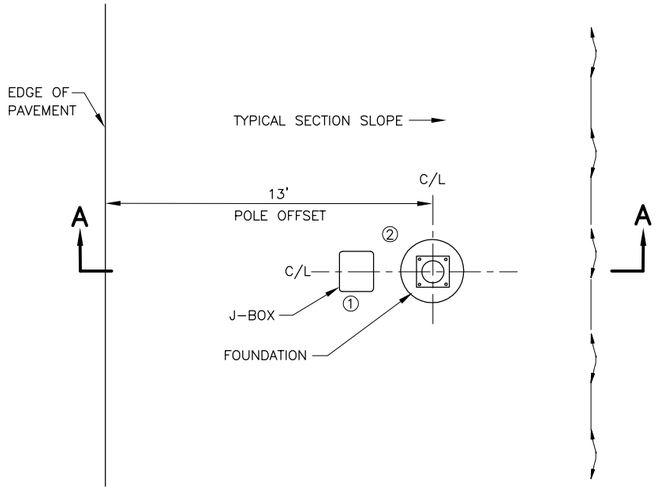
1. FURNISH ALL EQUIPMENT NOTED IN THE LOAD CENTER SUMMARY, PLUS TWO 20-AMP 2-POLE SPARE CIRCUIT BREAKERS, AND SPACE FOR A MINIMUM OF TWO ADDITIONAL 2-POLE CIRCUIT BREAKERS IN EACH LOAD PANEL. SEE THE LOAD CENTER SUMMARIES FOR LOAD PANEL VOLTAGES, CURRENT RATINGS, AND THE NAME OF THE SERVING UTILITY.
2. INSTALL GROUNDING HUBS THIRD PARTY CERTIFIED FOR WET LOCATIONS (MYERS TYPE), WHEN ATTACHING CONDUITS TO THE LOAD CENTER ENCLOSURE.
3. LABEL ALL CIRCUIT BREAKERS AS TO FUNCTION AND POSITION. LABEL THE SELECTOR SWITCH "LIGHTING" AND ITS POSITIONS "ON-OFF-AUTO".
4. METER BASES SHALL NOT BE MOUNTED ON MOVABLE PANELS OR DOORS.
5. THE LENGTH AND TYPE OF SERVICE ENTRANCE CONDUIT INSTALLED BY THE CONTRACTOR VARIES BY UTILITY. REGARDLESS OF ITS LENGTH, INSTALL A PULL ROPE IN THE SERVICE CONDUIT AND A CAP ON THE BURIED END: MARK THE BURIED END WITH A 2"X 6" STAKE. SEE THE LOAD CENTER SUMMARIES FOR THE FOLLOWING INFORMATION.
   A. STATION AND OFFSET OF THE LOAD CENTER AND POWER SOURCE.
   B. WHERE THE CONTRACTOR TERMINATES THE SERVICE ENTRANCE CONDUIT.
   C. THE TYPE OF SERVICE ENTRANCE CONDUIT (SUCH AS RIGID METAL CONDUIT OR LIQUID-TIGHT FLEXIBLE METAL CONDUIT).
6. STORE A SCHEMATIC DIAGRAM, A CIRCUIT DIRECTORY, AND A MATERIALS LIST THAT INCLUDES THE MANUFACTURER'S NAME AND PART/CATALOG NUMBERS, ALL LAMINATED IN PLASTIC, IN A METAL POCKET ATTACHED TO THE INSIDE OF THE LOAD CENTER. INSTALL THE POCKET ON THE LOAD CENTER DOOR, PROVIDING DRAIN HOLES TO PREVENT WATER ACCUMULATION.



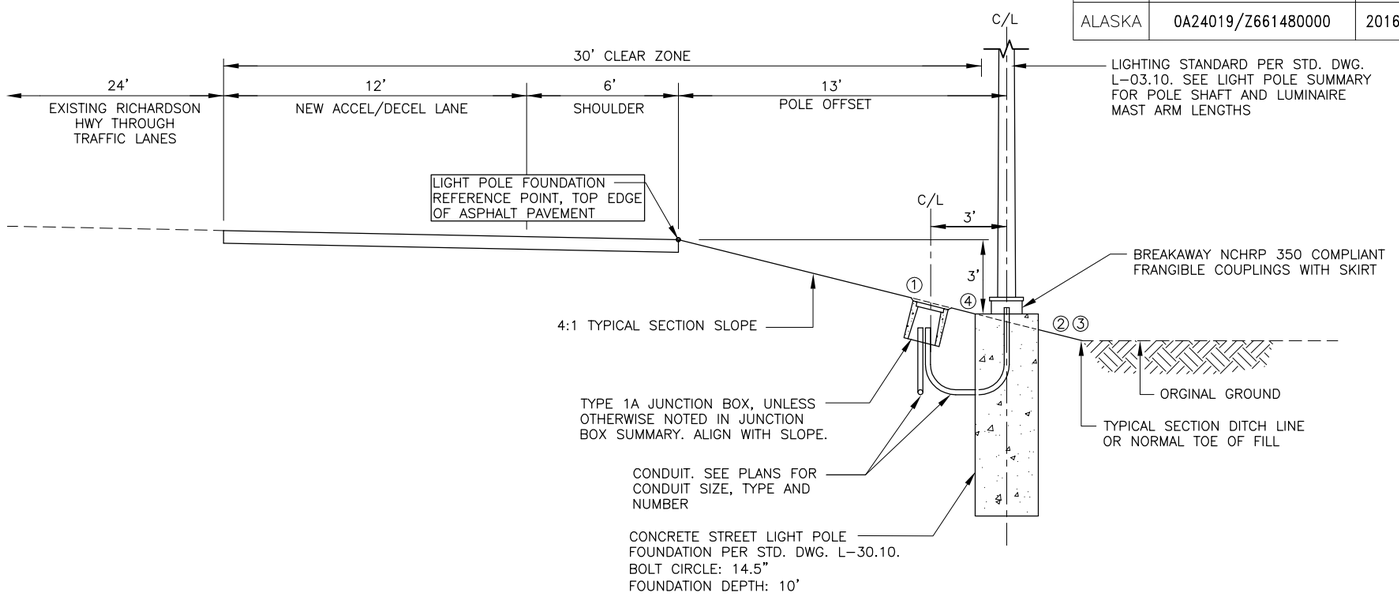
WIRING DIAGRAM

LOAD CENTER DETAILS (2 OF 2)

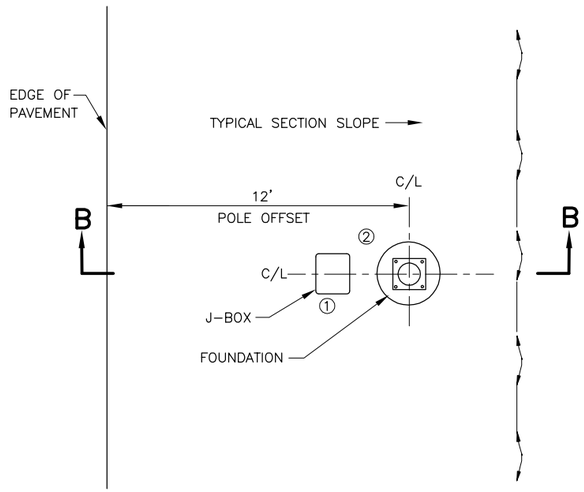
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2016	H25	H31



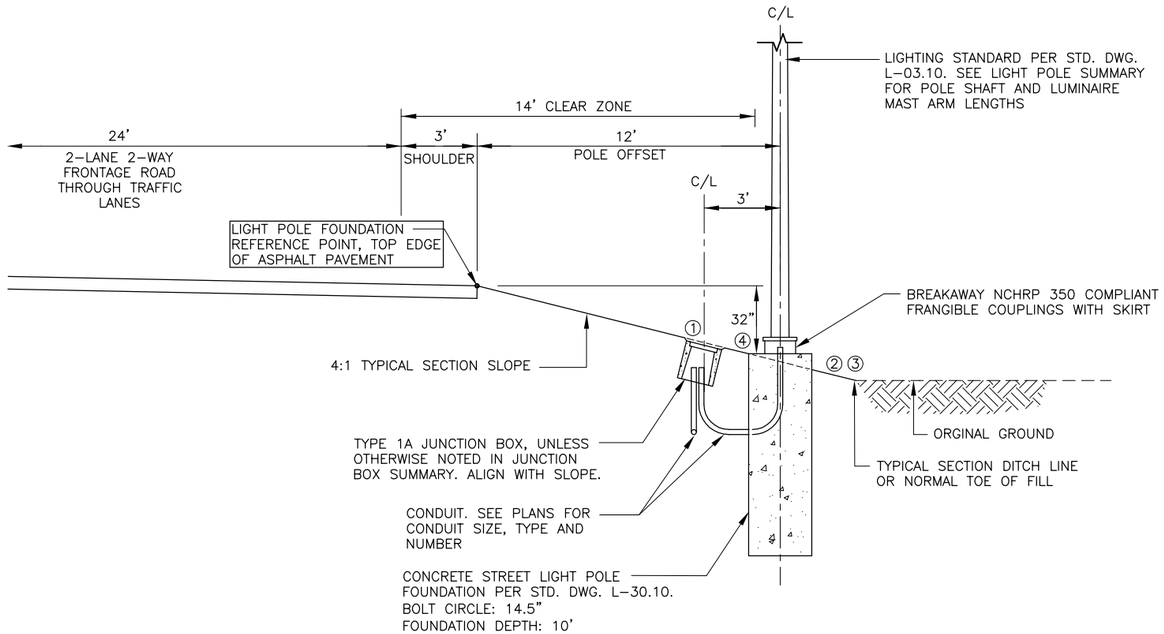
LIGHT POLE OFFSET DETAIL C-13
PLAN VIEW



LIGHT POLE OFFSET DETAIL C-13
SECTION A-A



LIGHT POLE OFFSET DETAIL C-12
PLAN VIEW



LIGHT POLE OFFSET DETAIL C-12
SECTION B-B

CONSTRUCTION NOTES:

① DEPRESS JUNCTION BOX 1" BELOW SURFACE IN SEEDING ONLY AREAS. DEPRESS 2" IN TOPSOIL AND SEEDING AREAS.

② UNLESS OTHERWISE NOTED, SEED ALL DISTURBED AREAS.

③ DO NOT PLACE JUNCTION BOXES AND LIGHT POLE FOUNDATIONS AT THE BOTTOM OF DRAINAGE COLLECTION AREAS. REGRADE DITCH AS NECESSARY TO MAINTAIN FLOWLINE.

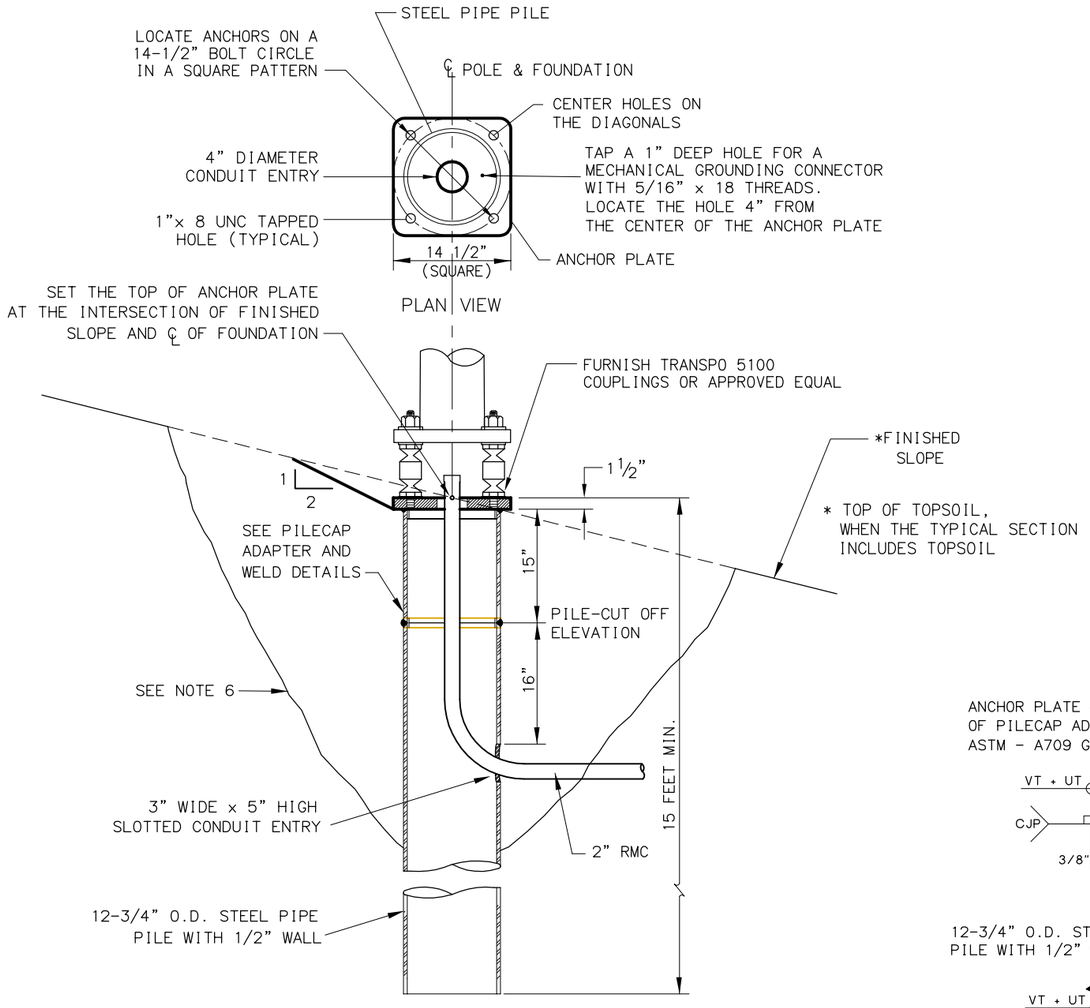
④ TOP OF FOUNDATION SHALL MATCH FINISH GRADE. WHEN DIRECTED BY THE ENGINEER, ADJUST TOP OF FOUNDATION TO MATCH FIELD CONDITIONS.

PLANS DEVELOPED BY:
KINNEY ENGINEERING, LLC

STATE OF ALASKA 49TH PROFESSIONAL ENGINEER WILLIAM KINNEY 12223

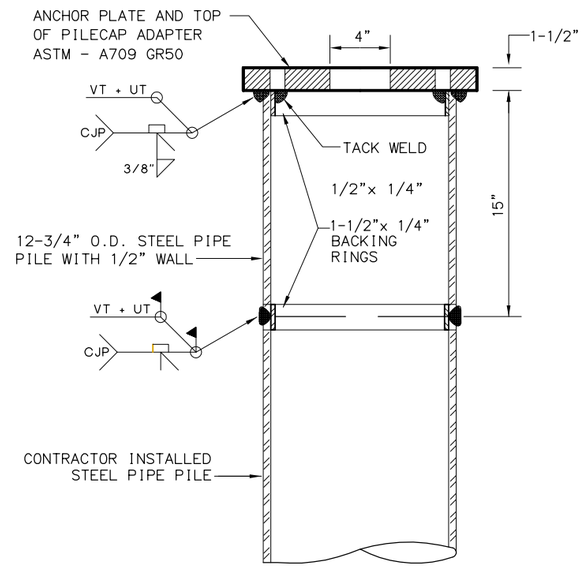
LIGHT POLE OFFSET DETAILS

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2016	H26	H31



PIPE PILE FOUNDATION

(SHOWN WITH FRANGIBLE COUPLINGS)



PILECAP ADAPTER AND WELD DETAILS

NOT TO SCALE

DESIGN NOTES:

DESIGN STANDARD: 2001 STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS WITH 2006 INTERIM.

DESIGN LOADS: 5-KIPS AXIAL, 7.5-KIPS SHEAR, 40-KIP-FT MOMENT.

CONSTRUCTION STANDARD: STATE OF ALASKA STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, 2015 EDITION WITH SPECIAL PROVISIONS.

MATERIAL REQUIREMENTS		
STRUCTURAL STEEL PLATE	ASTM A709 GRADE 50 T3	Fy = 50 ksi
STEEL PIPE PILE	ASTM A709, GRADE 50 T3	Fy = 50 ksi
	API 5L GRADE X42	Fy = 42 ksi

NOTES:

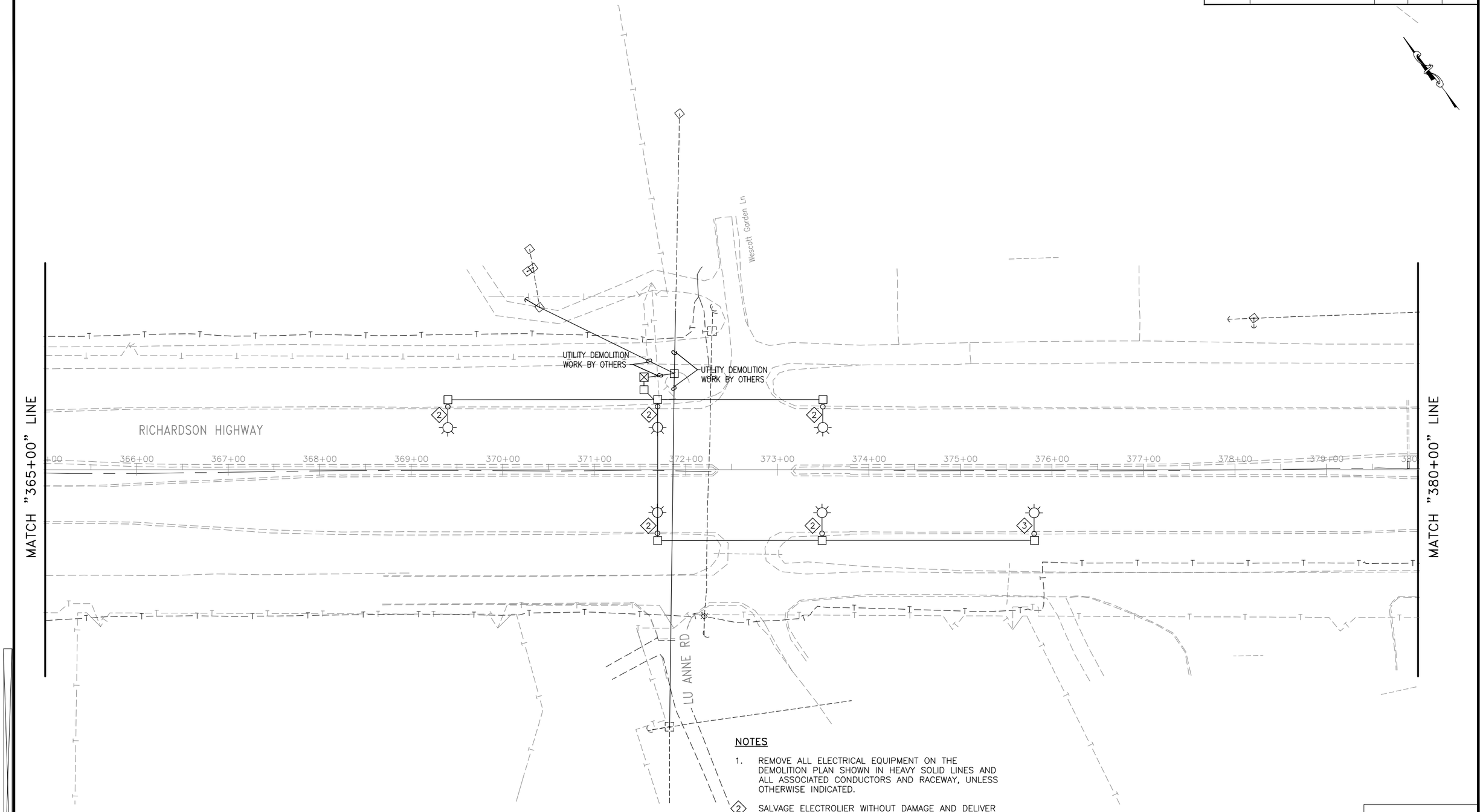
1. IN LIEU OF CONCRETE STREET LIGHT FOUNDATIONS SHOWN IN STANDARD DRAWING L-30.10, THE CONTRACTOR MAY PROVIDE STEEL PIPE PILE LIGHT POLE FOUNDATIONS IN ACCORDANCE WITH THIS DRAWING AND PROJECT SPECIFICATIONS AT NO ADDITIONAL COST TO THE STATE OF ALASKA.
2. FURNISH STEEL PIPE PILES THAT CONFORM TO THE MATERIAL REQUIREMENTS AND SECTION 660, 715 AND 740 OF THE SPECIFICATIONS. NO SPLICES ARE ALLOWED BELOW THE PILECAP ADAPTER.
3. 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.
4. 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.
5. 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.
6. AT EACH FOUNDATION, EXCAVATE A CONE SHAPED WORK HOLE 6.5' DIAMETER AT THE SURFACE DOWN TO 1-FOOT BELOW THE CONDUIT HOLE SUBJECT TO THE REQUIREMENTS AND RESTRICTIONS OF OSHA 1926.652. AFTER CUTTING THE CONDUIT ENTRANCE HOLE AND WELDING ON THE PILECAP ADAPTER, BACKFILL AND COMPACT THE WORK HOLE IN 8" LIFTS WITH A SOIL-CEMENT MIXTURE, CONSISTING OF 2 SACKS OF PORTLAND CEMENT PER CUBIC YARD OF SOIL. SUFFICIENT COMPACTIVE EFFORT WILL BE DETERMINED BY THE ENGINEER.
7. WAIT AT LEAST 3 DAYS AFTER BACKFILLING THE WORK HOLE BEFORE ERECTING THE LUMINAIRE POLE.
8. 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.

PLANS DEVELOPED BY:
KINNEY ENGINEERING, LLC

STATE OF ALASKA 49TH WARREN LUCAS 12912 REGISTERED PROFESSIONAL ENGINEER PRE-PS&E

PIPE PILE FOUNDATION DETAILS FOR LIGHT POLES

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	H27	H31



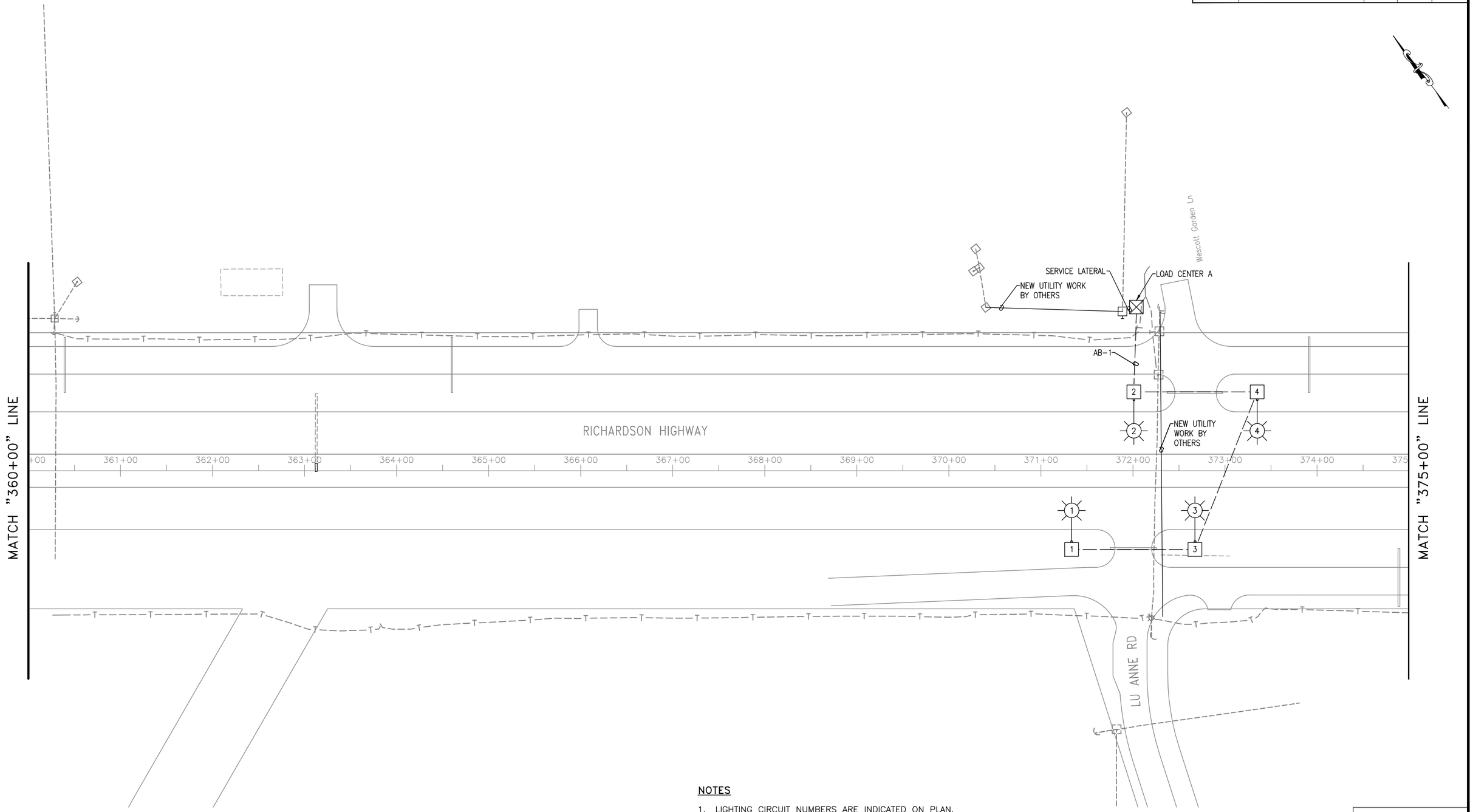
NOTES

1. REMOVE ALL ELECTRICAL EQUIPMENT ON THE DEMOLITION PLAN SHOWN IN HEAVY SOLID LINES AND ALL ASSOCIATED CONDUCTORS AND RACEWAY, UNLESS OTHERWISE INDICATED.

(2) SALVAGE ELECTROLIER WITHOUT DAMAGE AND DELIVER TO DOT.

LIGHTING DEMOLITION PLAN

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	H28	H31



NOTES

1. LIGHTING CIRCUIT NUMBERS ARE INDICATED ON PLAN. ALL UNDERGROUND CIRCUITING SHOWN THIS SHEET SHALL BE AS FOLLOWS UNLESS OTHERWISE INDICATED:
   1–2" RMC
   [1–3C #8]
   [1–1C #8] GND

LIGHTING PLAN
(1 OF 4)

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	H29	H31

MATCH "405+00" LINE

MATCH "420+00" LINE

RICHARDSON HIGHWAY

406+00 407+00 408+00 409+00 410+00 411+00 412+00 413+00 414+00 415+00 416+00 417+00 418+00 419+00 420

6 8 8 10

5 9

5 7 7 9

BB-1

LOAD CENTER B

SERVICE LATERAL

MIDLAND ST

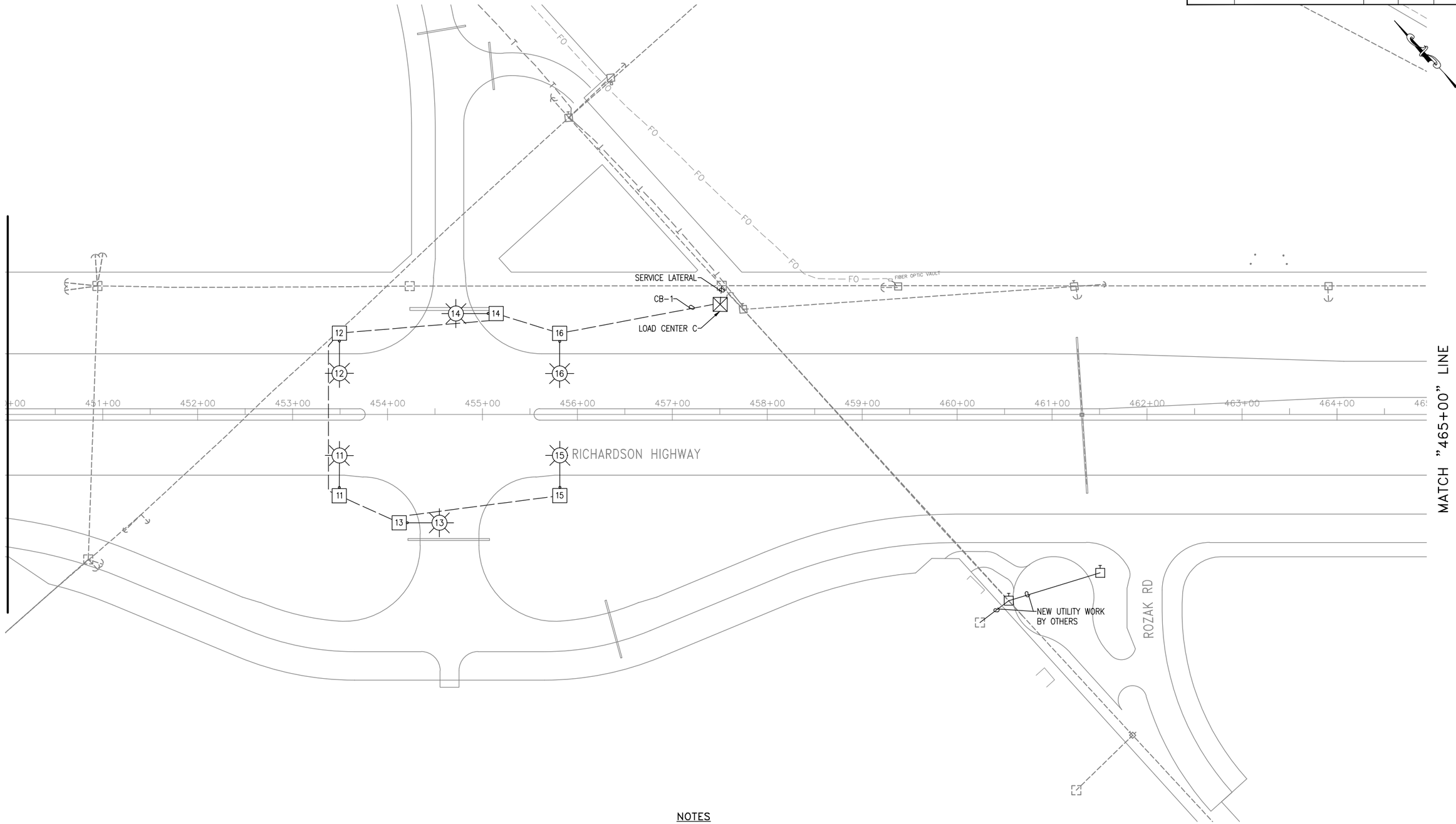
EL PASO ST

NOTES

1. LIGHTING CIRCUIT NUMBERS ARE INDICATED ON PLAN. ALL UNDERGROUND CIRCUITING SHOWN THIS SHEET SHALL BE AS FOLLOWS UNLESS OTHERWISE INDICATED:
   1-2" RMC
   [1-3C #8]
   [1-1C #8] GND

LIGHTING PLAN
(2 OF 4)

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	H30	H31

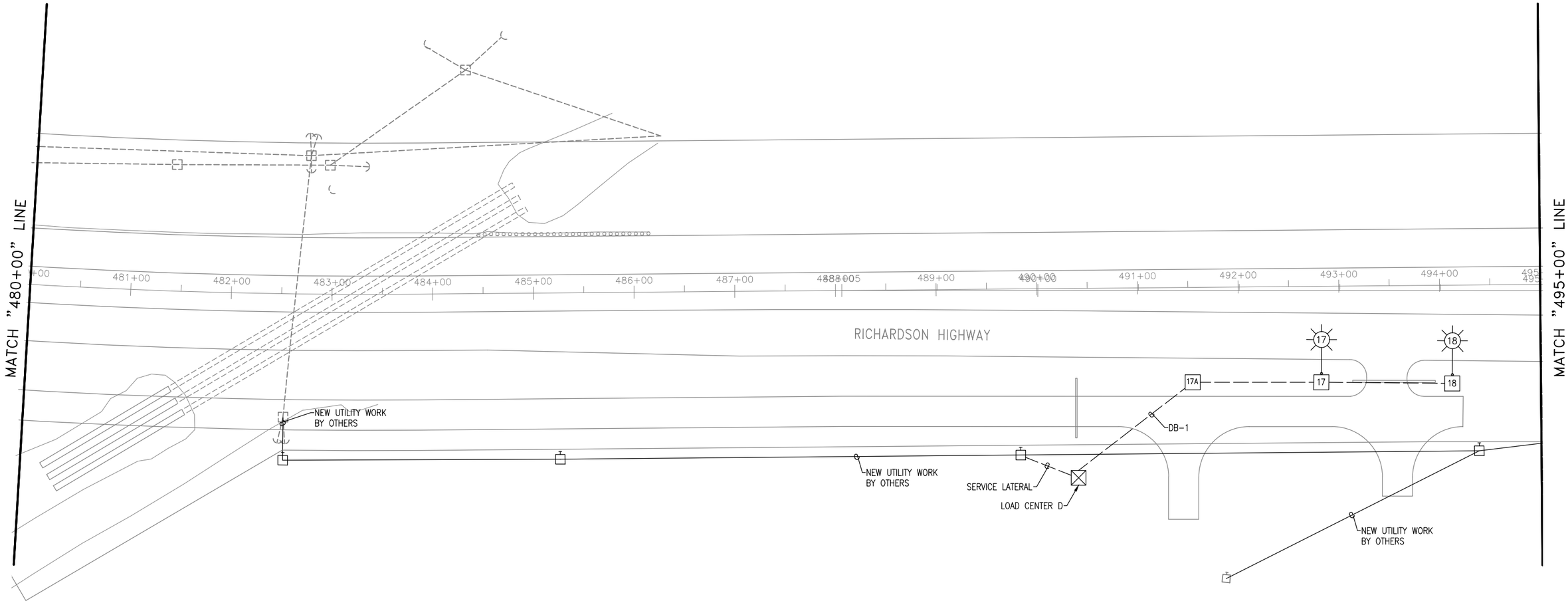


NOTES

1. LIGHTING CIRCUIT NUMBERS ARE INDICATED ON PLAN. ALL UNDERGROUND CIRCUITING SHOWN THIS SHEET SHALL BE AS FOLLOWS UNLESS OTHERWISE INDICATED:
   1-2" RMC
   [1-3C #8]
   [1-1C #8] GND

LIGHTING PLAN (3 OF 4)

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	H31	H31



NOTES

1. LIGHTING CIRCUIT NUMBERS ARE INDICATED ON PLAN. ALL UNDERGROUND CIRCUITING SHOWN THIS SHEET SHALL BE AS FOLLOWS UNLESS OTHERWISE INDICATED:
   1–2" RMC
   [1–3C #8]
   [1–1C #8] GND

LIGHTING PLAN (4 OF 4)

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	P1	P16

SITE INFORMATION:

1. SITE FUNCTION: ROAD
2. 2–YEAR, 24–HOUR RAINFALL EVENT: 1.10 INCHES (SOURCE: http://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_ak.html)
3. AVERAGE ANNUAL TOTAL PRECIPITATION: 13.59 INCHES (SOURCE: WESTERN REGIONAL CLIMATE CENTER) FOR FT. WAINWRIGHT
4. SEE SHEET A4 AND EROSION AND SEDIMENT CONTROL PLAN OVERVIEW FOR GENERAL PROJECT AREA MAP.
5. STOCKPILE AND STAGING AREAS: CONTRACTOR MUST SEEK LOCATIONS FOR STOCKPILING MATERIAL AND STAGING AND STORAGE OF EQUIPMENT. STOCKPILE AND EQUIPMENT STAGING AREAS MUST COMPLY WITH THE CGP, SWPPP, SECTION 641, SECTION 107–1.11 AND ALL PERMITS.
6. PROJECT AREAS ARE LISTED BELOW (MATERIAL SITES NOT INCLUDED):
7. SEE ESCP PLANS FOR TOPOGRAPHY AND DRAINAGE PATTERNS.

PROJECT INFORMATION TABLE	
PROJECT AREA (ACRE)	128
DISTURBED AREA (ACRE)	81
PRE–CONSTRUCTION IMPERVIOUS AREA (ACRE)	52
POST–CONSTRUCTION IMPERVIOUS AREA (ACRE)	69
PRE–CONSTRUCTION RUNOFF COEFFICIENT	0.55
POST–CONSTRUCTION RUNOFF COEFFICIENT	0.69

8. SOILS: THE FOLLOWING IS GENERALIZED SOIL INFORMATION. SEE ALSO THE GEOTECHNICAL REPORT.
   - EMBANKMENT FILL
   - SILT WITH ORGANICS
   - SILT WITH SAND
   - GRAVEL WITH SILT AND SAND
9. VEGETATION: INTERIOR BOTTOMLANDS. WETLANDS HAVE ALSO BEEN IDENTIFIED WITHIN THE PROJECT AREA.
10. GROWING SEASON: THE PROJECT IS WITHIN ECO REGION 106 AND THE GROWING SEASON IS MAY 2 THROUGH OCTOBER 4. (SOURCE: USACE WETLANDS DELINEATION MANUAL: ALASKA REGION (VERSION 2))

ENVIRONMENTAL INFORMATION:

1. RECEIVING WATERS: CHENA RIVER AND WETLANDS
   IMPAIRED WATER BODIES: CHENA APPROVED FOR SEDIMENT
2. TOTAL MAXIMUM DAILY LOADS (TMDLs): NONE
3. THREATENED AND ENDANGERED SPECIES: NONE
4. HISTORICAL & CULTURAL RESOURCE PRESENCE: NO KNOWN HISTORIC PROPERTIES
5. FISH & WILDLIFE HABITAT PRESENCE: NONE
6. CONTACT THE PROJECT ENGINEER WITH QUESTIONS/CONCERNS REGARDING ENVIRONMENTAL ISSUES OR PERMIT INFORMATION.

GENERAL:

1. READ AND COMPLY WITH THE CGP AND SECTION 641 OF THE PROJECT SPECIFICATIONS.
2. A SWPPP AND HMCP ARE REQUIRED FOR THIS PROJECT.
3. EROSION AND SEDIMENT CONTROL FEATURES MUST BE BASED ON THE DOT&PF MANUAL "ALASKA STORM WATER POLLUTION PREVENTION PLAN GUIDE" (FEBRUARY 2011 OR LATEST VERSION) AND LATEST BMPs.
4. DEVICES MAY NEED TO BE REMOVED AND REINSTALLED TO ALLOW CONSTRUCTION ACTIVITIES TO PROCEED. MAINTAIN ALL DEVICES DAILY INCLUDING, BUT NOT LIMITED TO REMOVAL AND DISPOSAL OF ACCUMULATED SOILS, CLEANING DEVICES AND REPLACEMENT OF DAMAGED DEVICES. ALL COSTS ASSOCIATED WITH THE MAINTENANCE, REMOVAL, AND REINSTALLATION ACTIVITIES ARE SUBSIDIARY TO PAY ITEM 641(3).
5. STOCKPILE AND STAGING LOCATIONS MUST BE RECLAIMED TO THEIR ORIGINAL CONDITION. STOCKPILES AND/OR STAGING AREAS ARE NOT ALLOWED IN WETLANDS.
6. ENSURE LOADS ARE STABLE OR COVERED SO NO MATERIAL ESCAPES DURING HAULING ACTIVITIES.
7. EMBANKMENT HEIGHT AND SIDESLOPES ARE SHOWN IN THE PROJECT CROSS SECTIONS AND ARE AVAILABLE FOR THE CONTRACTOR'S USE.

TIMING / PHASED CONSTRUCTION:

1	INSTALL PERIMETER CONTROLS AND BMPS.
2	CLEAR AND GRUB FOR CONSTRUCTION PHASE 1.
3	CONSTRUCT PHASE 1. SEE SHEET S1.
4	SEED AND MULCH ALL DISTURBED AREAS OF PHASE 1.
5	CLEAR AND GRUB FOR CONSTRUCTION PHASE 2.
6	CONSTRUCT PHASE 2. SEE SHEET S2.
7	SEED AND MULCH ALL DISTURBED AREAS OF PHASE 2.
8	CLEAR AND GRUB FOR CONSTRUCTION PHASE 3.
9	CONSTRUCT PHASE 3. SEE SHEET S3.
10	APPLY PAVEMENT SURFACE MATERIALS.
11	CULVERT INSTALLATIONS
12	SEED AND MULCH ALL DISTURBED AREAS.
13	FINAL STABILIZATION AND REMOVAL OF TEMPORARY EROSION AND CONTROL MEASURES

STATE OF ALASKA 49TH
DUSTIN CORY HANNAFOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER

EROSION AND SEDIMENT CONTROL PLAN NOTES & DETAILS (1 OF 3)

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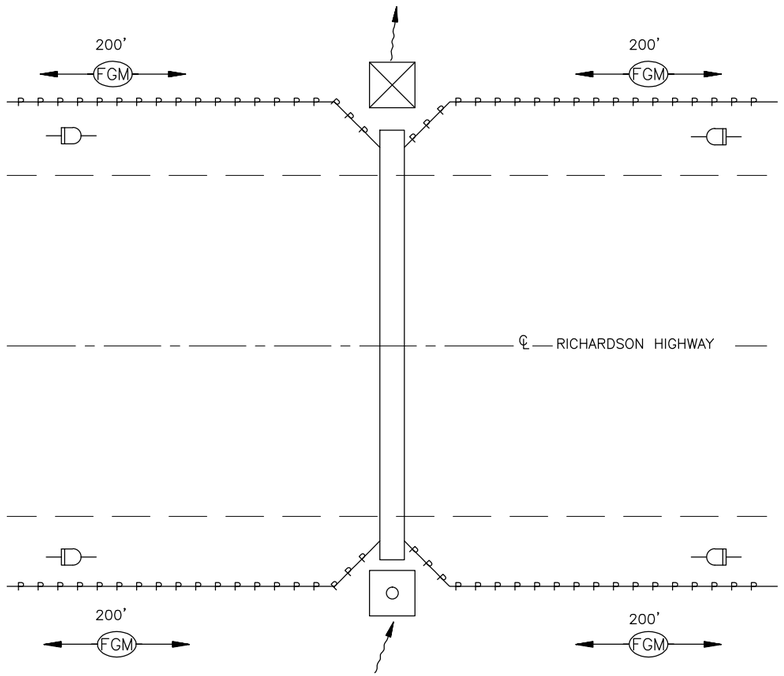
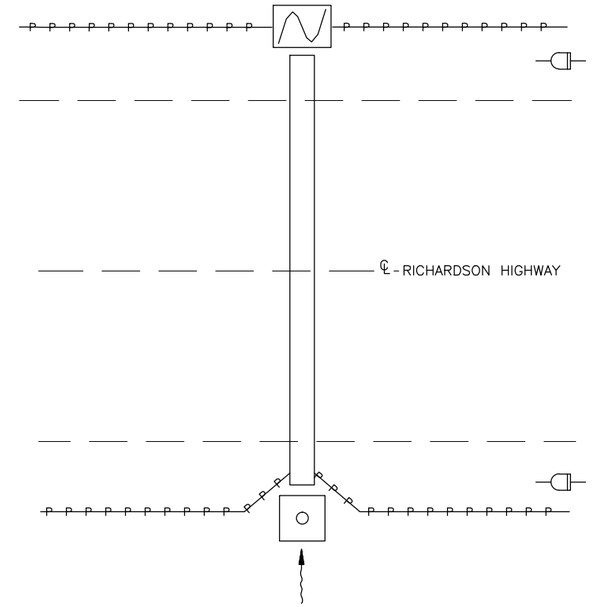
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	P2	P16

ESCP LEGEND:

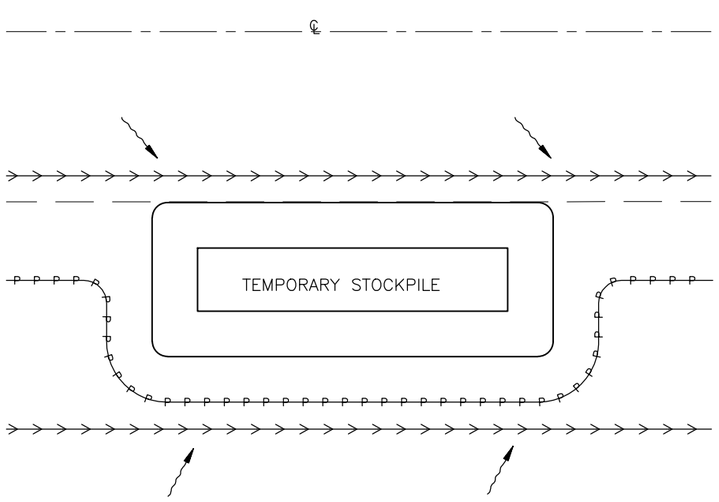
- RIGHT OF WAY
- SURFACE WATER FLOW DIRECTION
- TEMPORARY PERIMETER CONTROL – VEGETATIVE BUFFER OR FIBER FILLED TUBE BERMS (F–40, DOT&PF SWPPP GUIDE) OR FUNCTIONAL EQUIVALENT TO MANUFACTURER'S SPECIFICATIONS
- TEMPORARY INTERCEPTION / DIVERSION BERM (SEE PAGE F–3; DOT&PF SWPPP GUIDE, OR FUNCTIONAL EQUIVALENT)
- TEMPORARY SEDIMENT TRAP (SEE PAGE F–34 DOT&PF SWPPP GUIDE, BRUSH BUNDLES, OR FUNCTIONAL EQUIVALENT)
- OUTLET PROTECTION (SEE DOT&PF SWPPP GUIDE F–11)
- INLET PROTECTION
- VELOCITY DISSIPATOR (RIPRAP CLASS II OR FUNCTIONAL EQUIVALENT)
- VEHICLE TRACKING ENTRANCE/EXIT
- WETLANDS (DELINEATED)
- UPLANDS
- SILT CURTAIN
- EXISTING TOE OF EMBANKMENT
- PROPOSED TOP OF EMBANKMENT
- PROPOSED TOE OF EMBANKMENT
- INLET & OUTLET TYPICAL RIPRAP MEASURE
- OUTLET TYPICAL RIPRAP MEASURE
- EXISTING EMBANKMENT CATCHLINE (CUT OR FILL)
- P — PUMP
- PEM — PALUSTRINE EMERGENT WETLAND
- PFO — PALUSTRINE FORESTED WETLAND



CONTROL A: LARGE DIAMETER CULVERT
–SEE CONTROL F FOR DEWATERING CONTROLS–
NOT TO SCALE



CONTROL B: SMALL DIAMETER CULVERT
–INCLUDES APPROACH CULVERTS–
NOT TO SCALE



CONTROL C: MATERIAL STOCKPILES
NOT TO SCALE

EROSION AND SEDIMENT CONTROL PLAN NOTES & DETAILS (2 OF 3)

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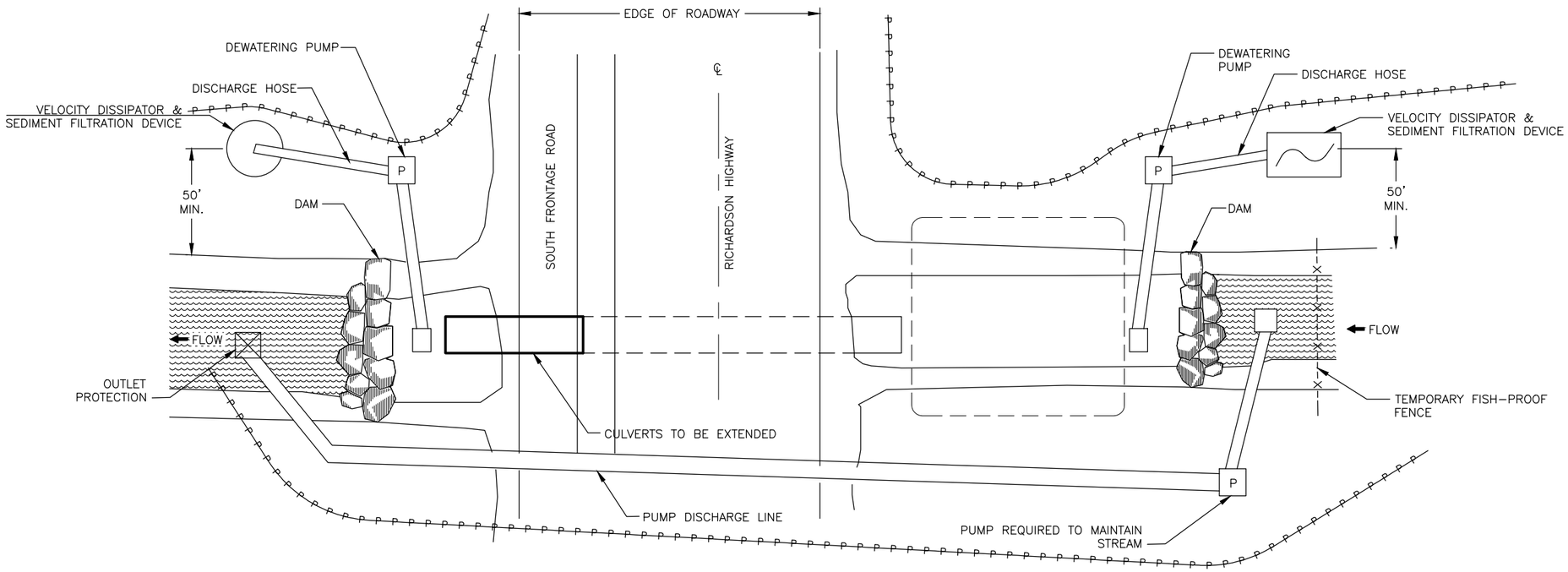
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	P3	P16

NOTES:

1. PUMPING OF WATER FROM ONE SIDE OF THE ROAD TO THE OTHER AS WELL AS DEWATERING WILL NOT BE MEASURED FOR PAYMENT.
2. THE BYPASS PUMP SHALL BE SIZED TO MAINTAIN THE Q2 FLOW RATE.
3. ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO CONSTRUCT TEMPORARY DIVERSION CHANNELS AND DETOURS SUBSIDIARY TO PAY ITEMS 643(44)A AND 643(44)–B.
4. INSTALL PERIMETER PROTECTION AS CONDITIONS WARRANT TO PREVENT SEDIMENT DISCHARGE.



CONTROL F: CULVERT INSTALLATION FLOW DIVERSION & DEWATERING PLAN – CHANNEL "B"

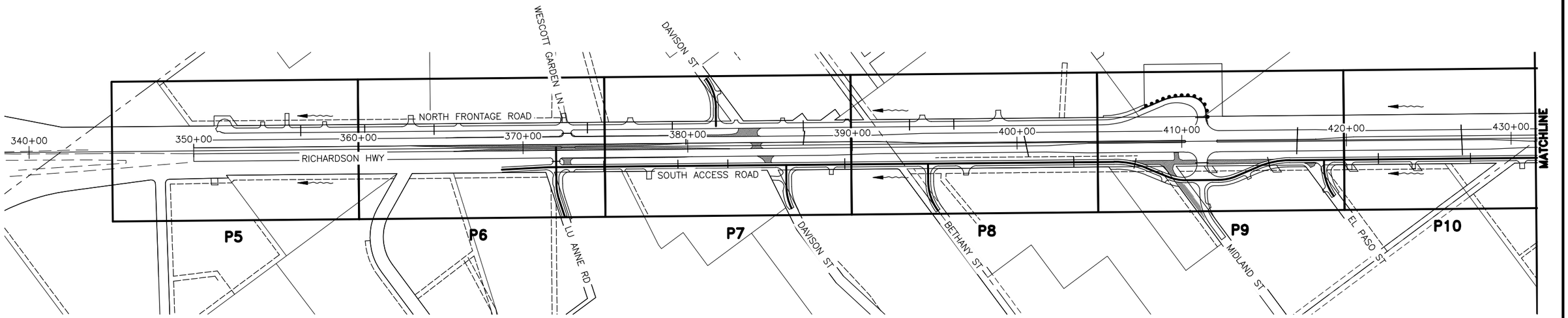
NOT TO SCALE

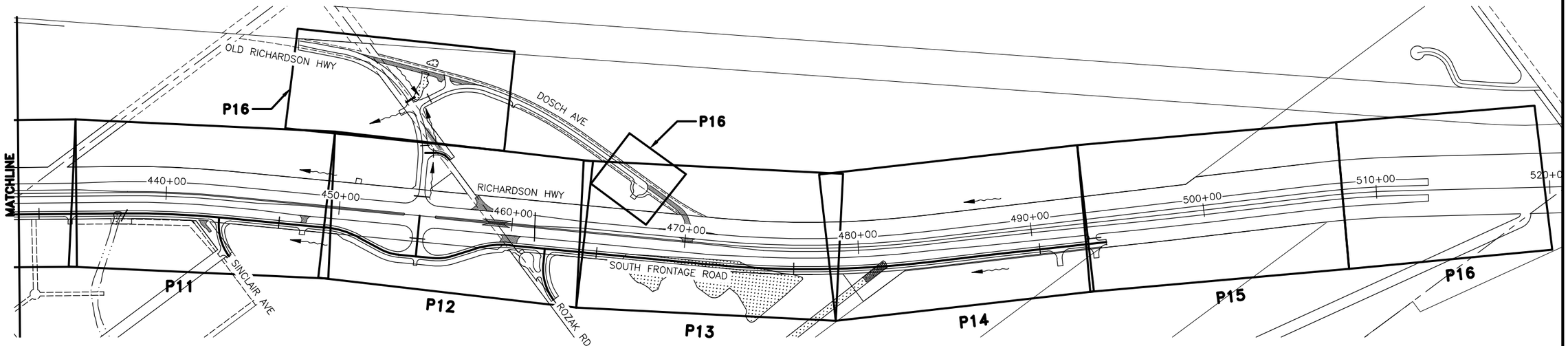
EROSION AND SEDIMENT CONTROL PLAN NOTES & DETAILS (3 OF 3)

STATE OF ALASKA 49TH
DUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER

P:\2012\12009FB\C\C600\cnst\2009-P3 Tue, Apr/05/16 01:48pm

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	P4	P16





EROSION AND SEDIMENT CONTROL PLAN OVERVIEW

STATE OF ALASKA
49TH
DUSTIN CORY HANNAFIOUS
NO. CE14065
REGISTERED PROFESSIONAL ENGINEER

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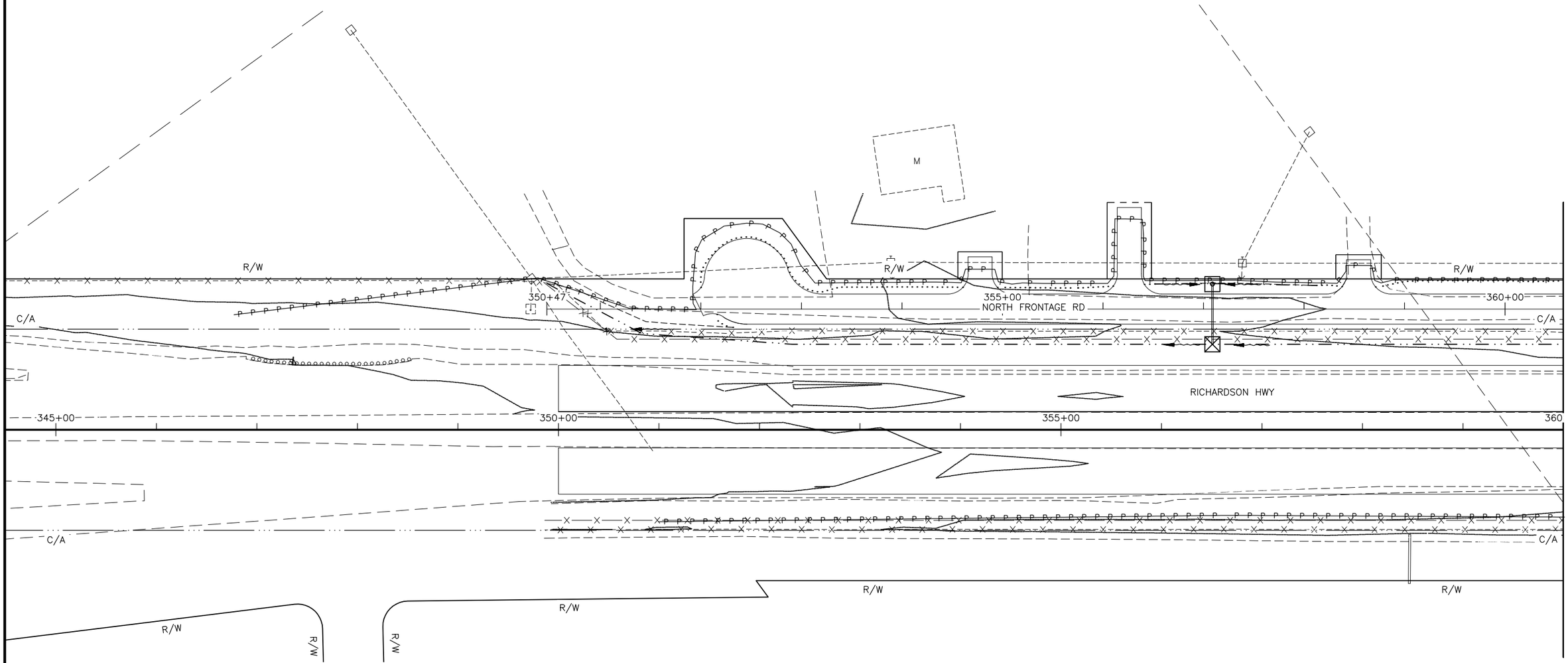
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	P5	P16



EROSION AND SEDIMENT CONTROL PLAN (1 OF 12)

STATE OF ALASKA
49 TH
DUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER

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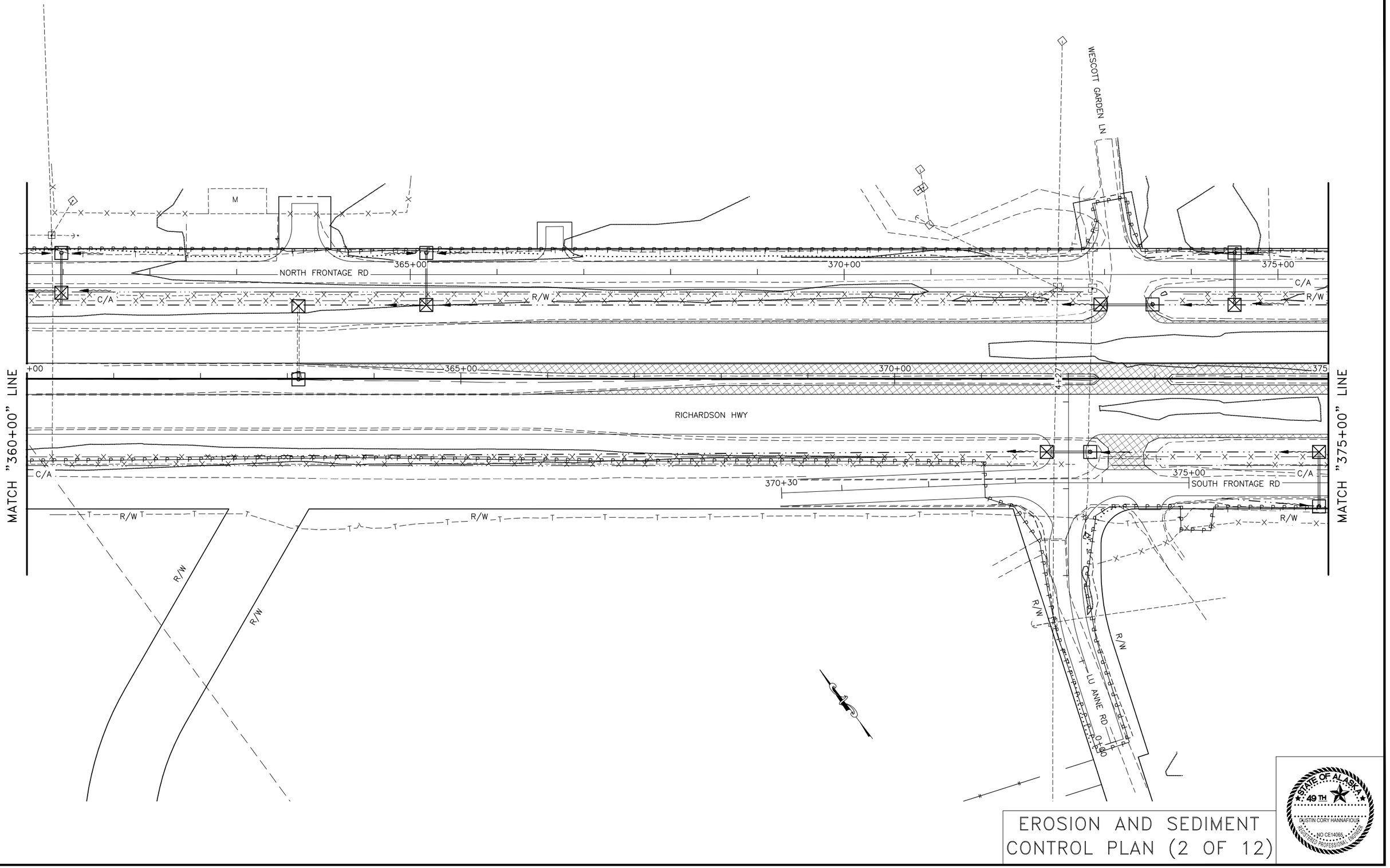
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	P6	P16



EROSION AND SEDIMENT CONTROL PLAN (2 OF 12)

STATE OF ALASKA
49 TH
DUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER

P:\2012\12009FB\C\C4002cnst12009-P5 Tue, Apr/05/16 01:49pm

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	P7	P16

MATCH "375+00" LINE

MATCH "390+00" LINE

DAVISON ST

NORTH FRONTAGE RD

SOUTH FRONTAGE RD

RICHARDSON HWY

R/W

C/A

380+00

385+00

390+00

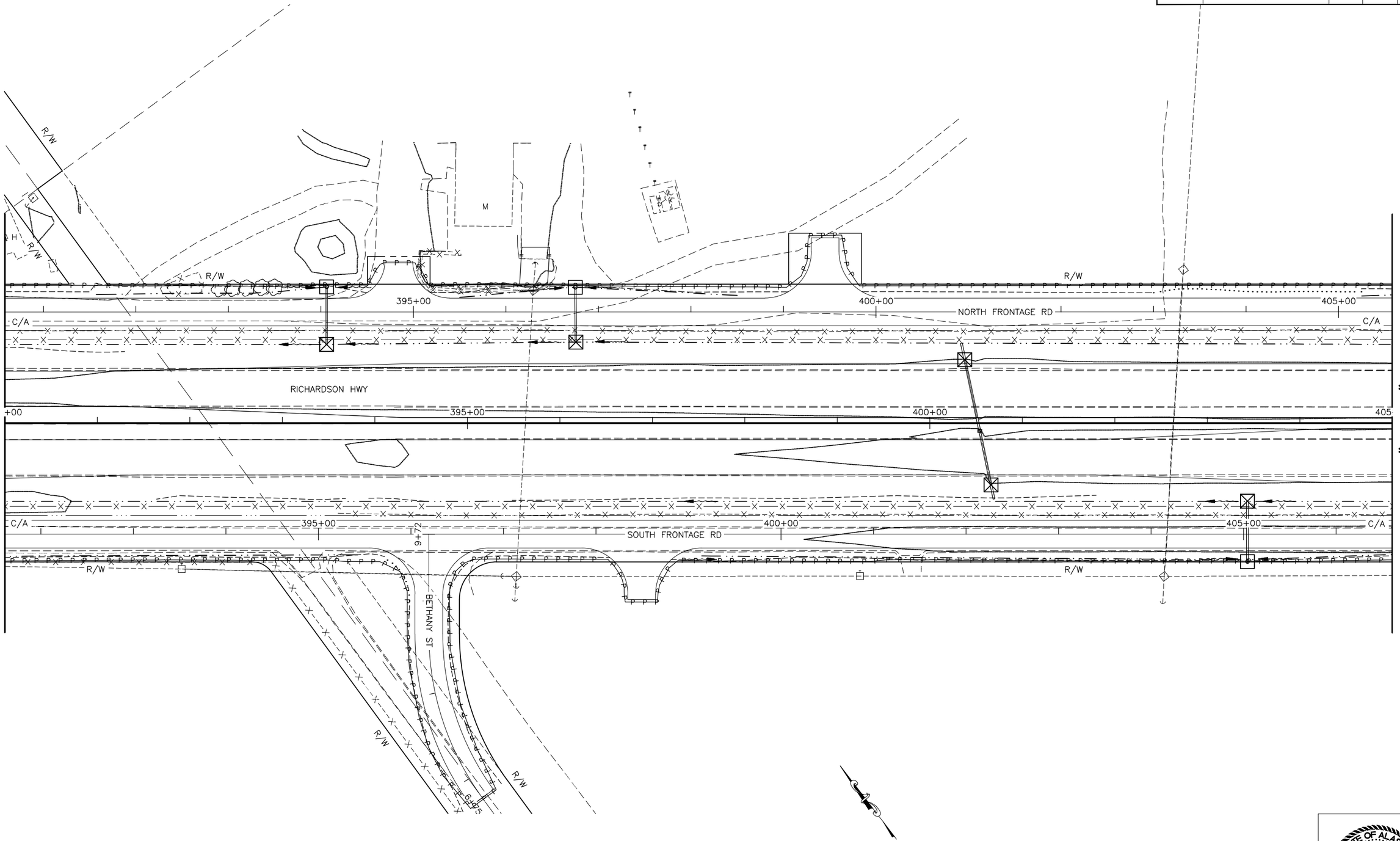
2+69

EROSION AND SEDIMENT CONTROL PLAN (3 OF 12)

STATE OF ALASKA
49 TH
DUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER

P:\2012\12009FB\C\C4002cnst12009-P6 Tue, Apr/05/16 01:50pm

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	P8	P16

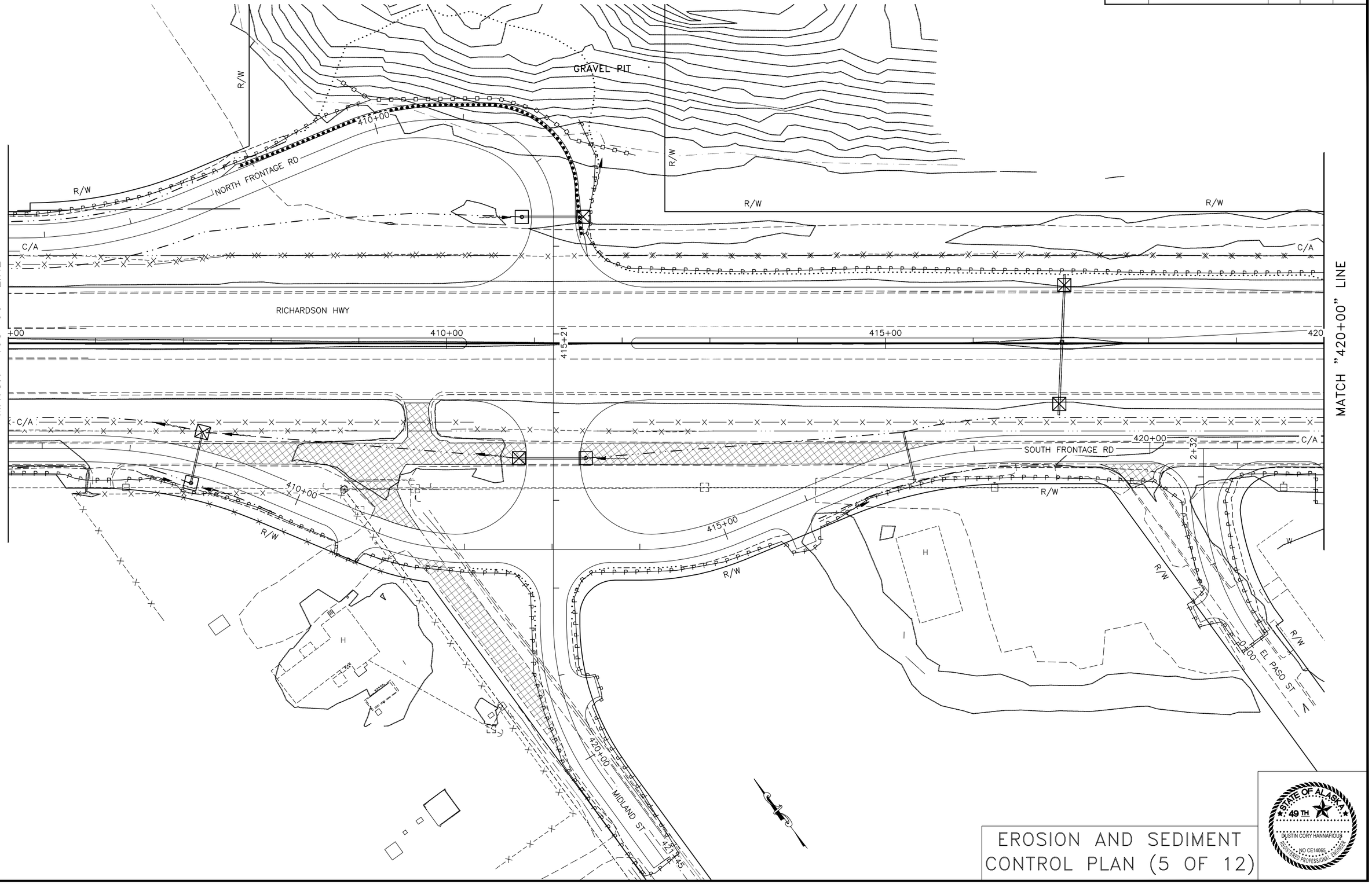


EROSION AND SEDIMENT CONTROL PLAN (4 OF 12)

STATE OF ALASKA
49 TH
DUSTIN CORY HANNAFOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER

P:\2012\12009FB\C\C4002const12009-P7 Tue, Apr/05/16 01:50pm

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	P9	P16

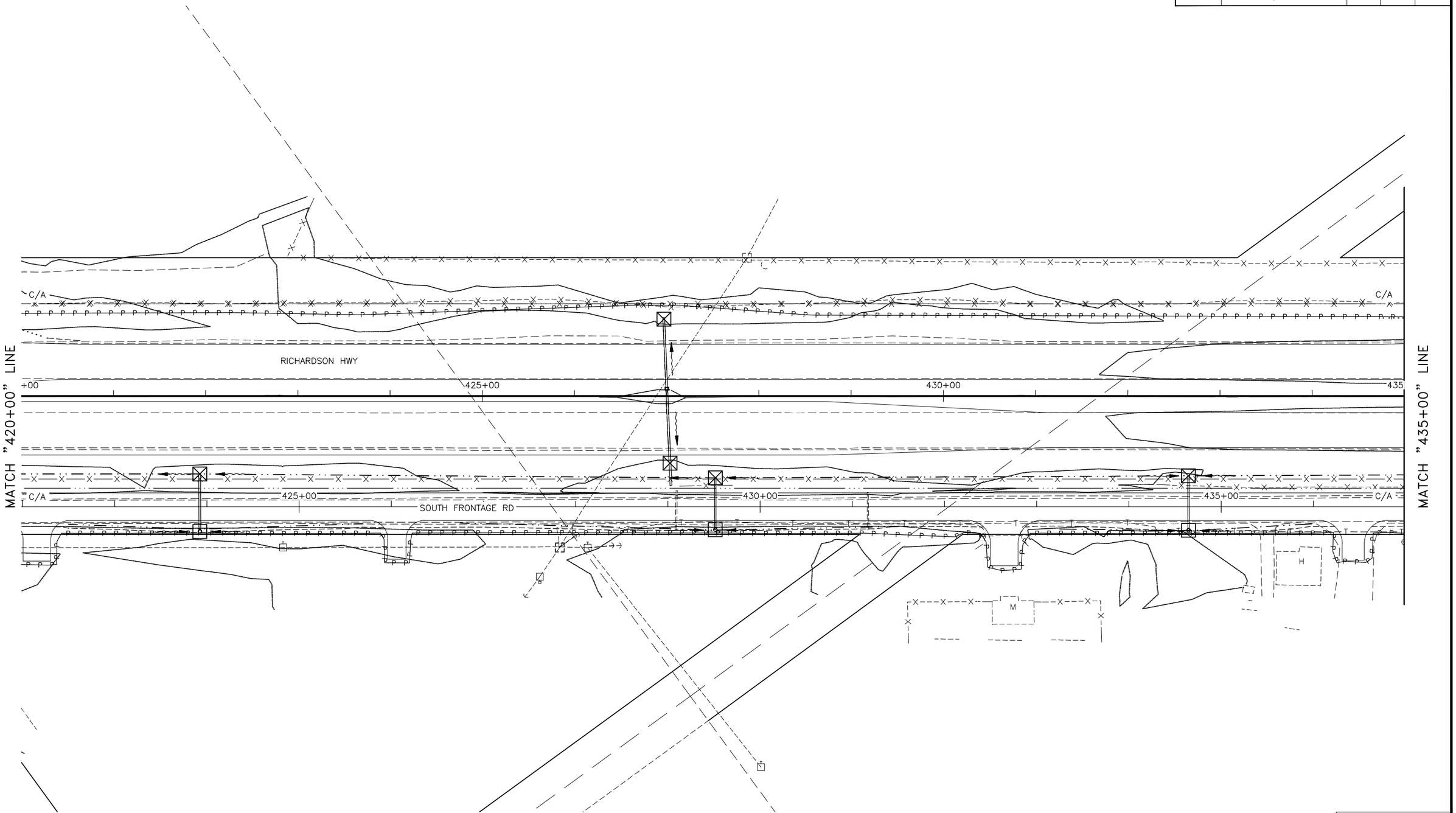


EROSION AND SEDIMENT CONTROL PLAN (5 OF 12)

STATE OF ALASKA 49TH
DUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER

P:\2012\12009FB\C\C4002cnst12009-P8 Tue, Apr/05/16 01:50pm

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	P10	P16

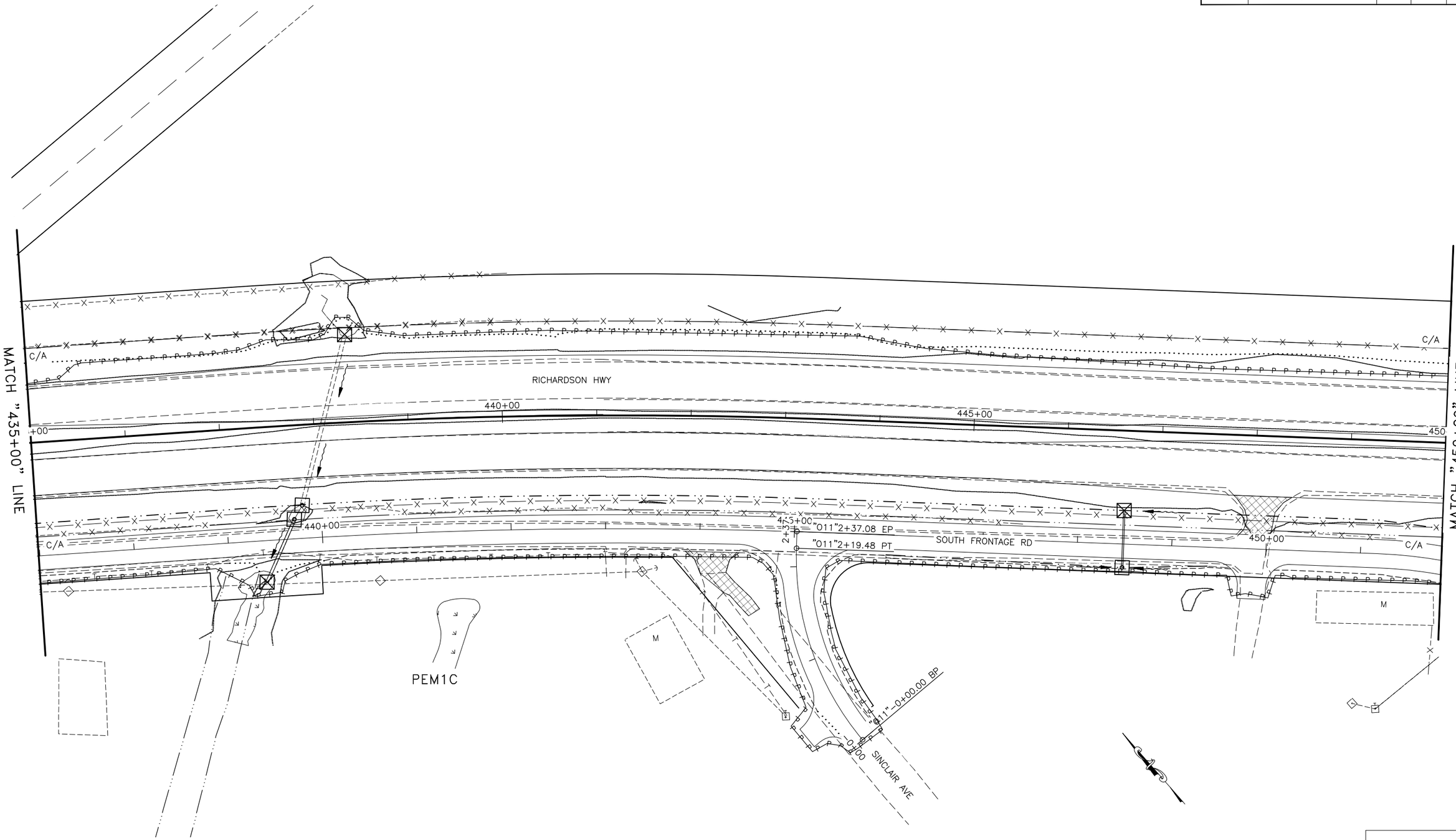


EROSION AND SEDIMENT CONTROL PLAN (6 OF 12)

STATE OF ALASKA 49TH
DUSTIN CORY HANNAFIOUS
NO. CE14065
REGISTERED PROFESSIONAL ENGINEER

P:\2012\12009FB\C\C4002cnst12009-P9 Tue, Apr/05/16 01:50pm

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	P11	P16



EROSION AND SEDIMENT CONTROL PLAN (7 OF 12)

STATE OF ALASKA 49TH
DUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER

P:\2012\12009FB\C\c4002cnst12009-P10 Tue, Apr/05/16 01:50pm

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	P12	P16

MATCHLINE SEE SHEET P16

MATCH "450+00" LINE

MATCH "465+00" LINE

OLD RICHARDSON HWY

RICHARDSON HWY

SOUTH FRONTAGE RD

ROZAK RD

C/A

+00

455+00

460+00

465

465+00

0+00

15+00

19+31

3+08

0+80

G

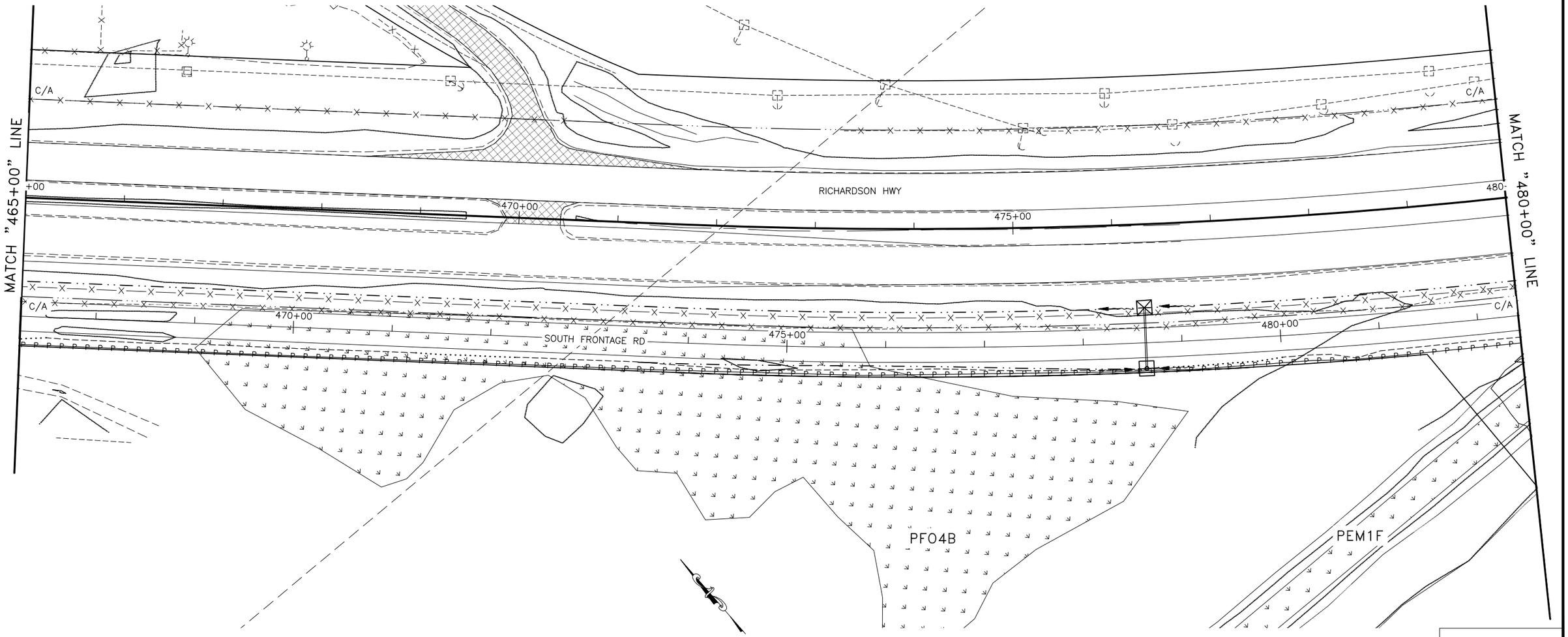
H

STATE OF ALASKA
49TH
DUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER

EROSION AND SEDIMENT CONTROL PLAN (8 OF 12)

P:\2012\12009FB\C\C4002cnst12009-P11 Tue, Apr/05/16 01:50pm

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	P13	P16

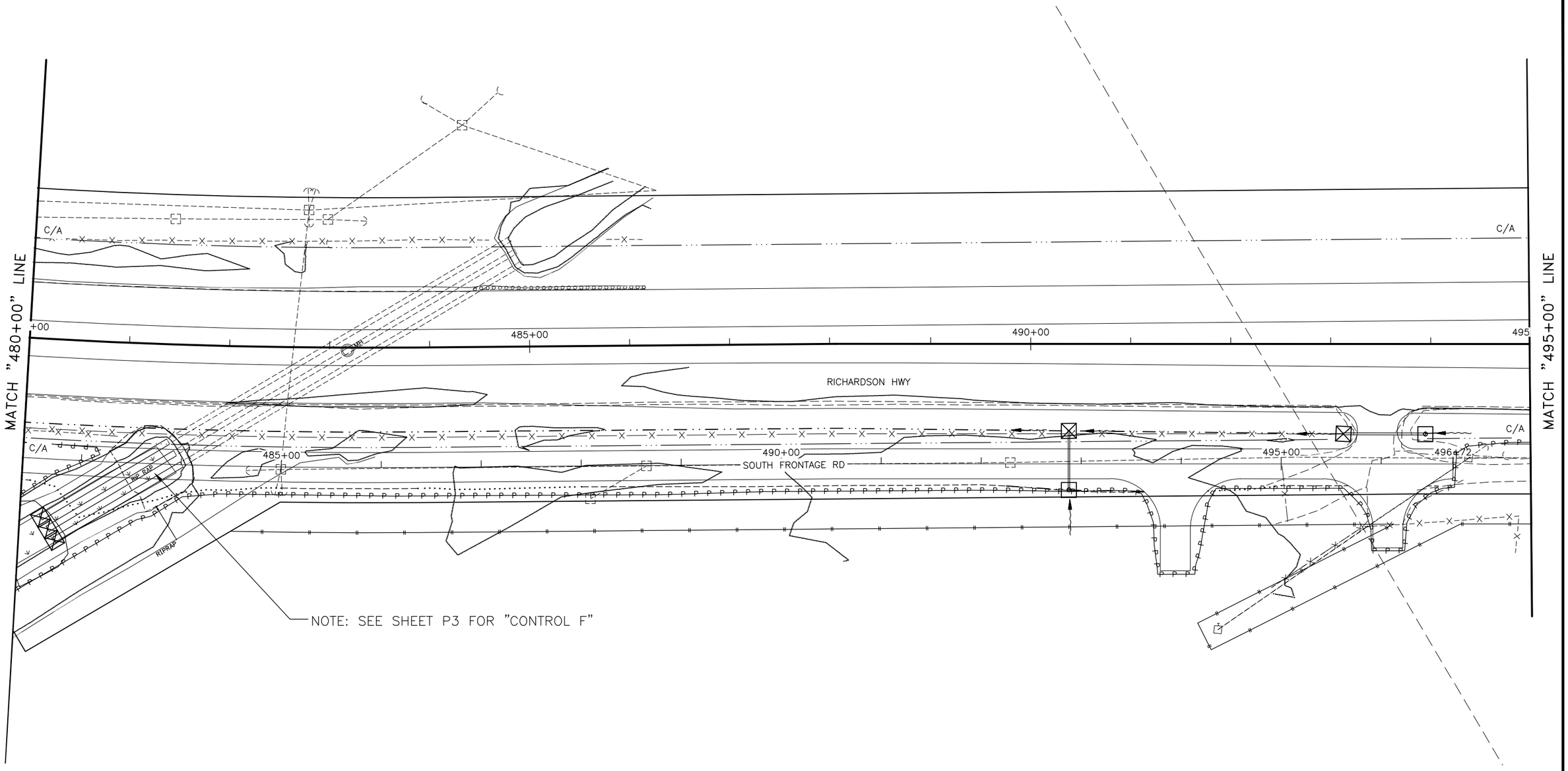


EROSION AND SEDIMENT CONTROL PLAN (9 OF 12)

STATE OF ALASKA
49 TH
DUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER

P:\2012\12009FB\C\c4002cnst12009-P12 Tue, Apr/05/16 01:51pm

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	P14	P16

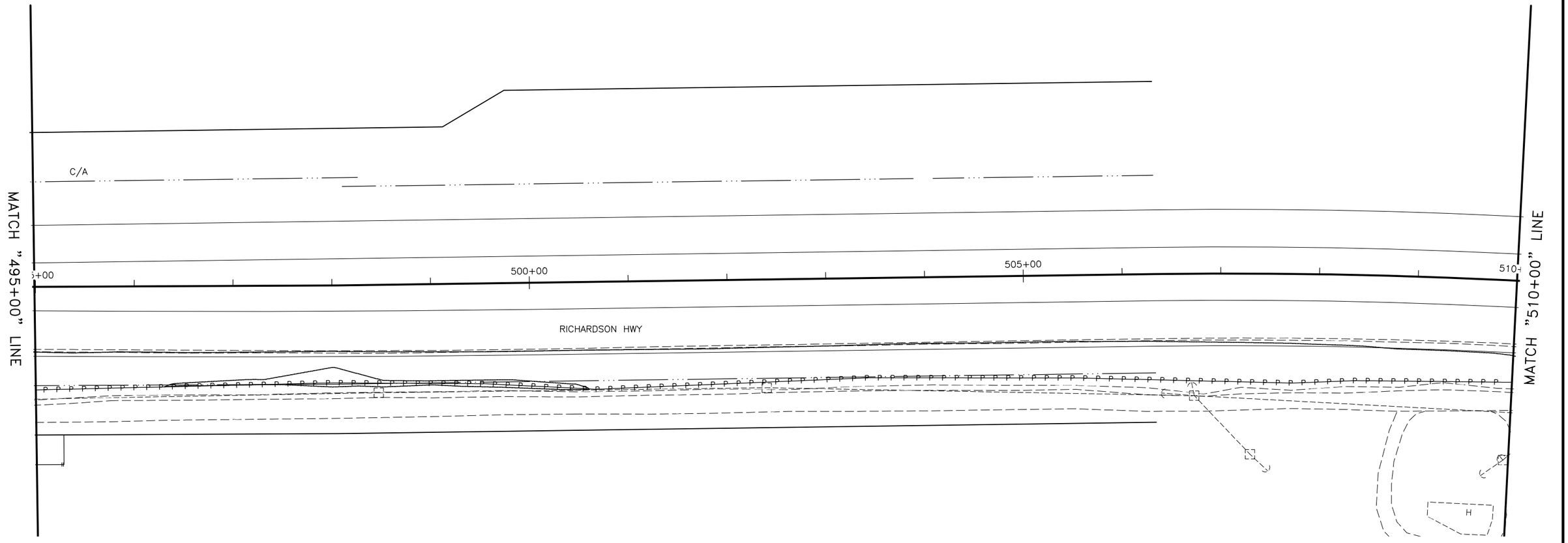


EROSION AND SEDIMENT CONTROL PLAN (10 OF 12)

STATE OF ALASKA
49TH
DUSTIN CORY HANNAFIOUS
NO. CE14065
REGISTERED PROFESSIONAL ENGINEER

P:\2012\12009FB\C\C4002cnst\12009-P13 Tue, Apr/05/16 01:51pm

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	P15	P16

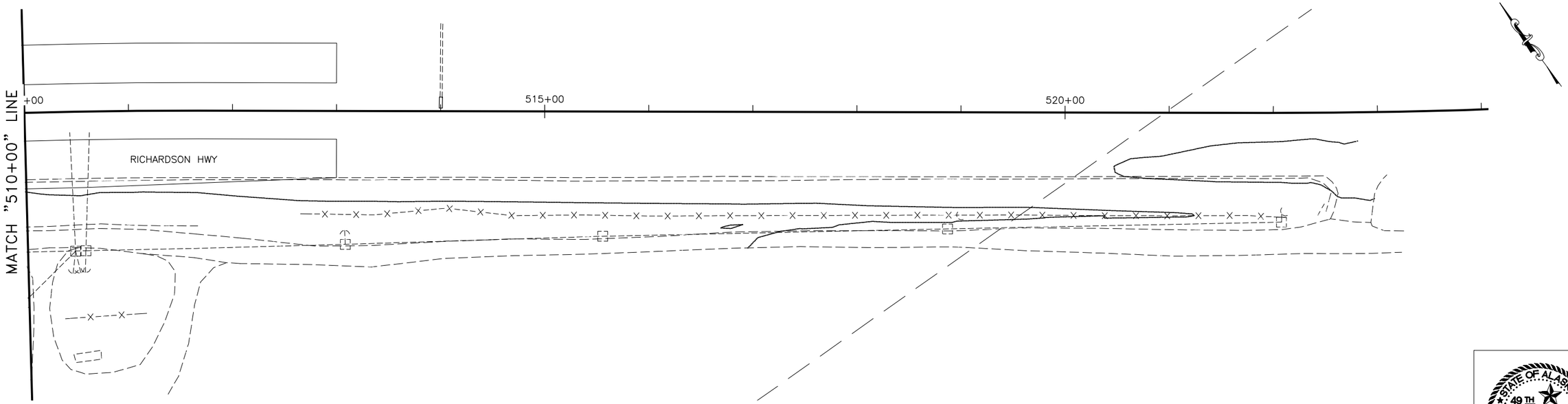


EROSION AND SEDIMENT CONTROL PLAN (11 OF 12)

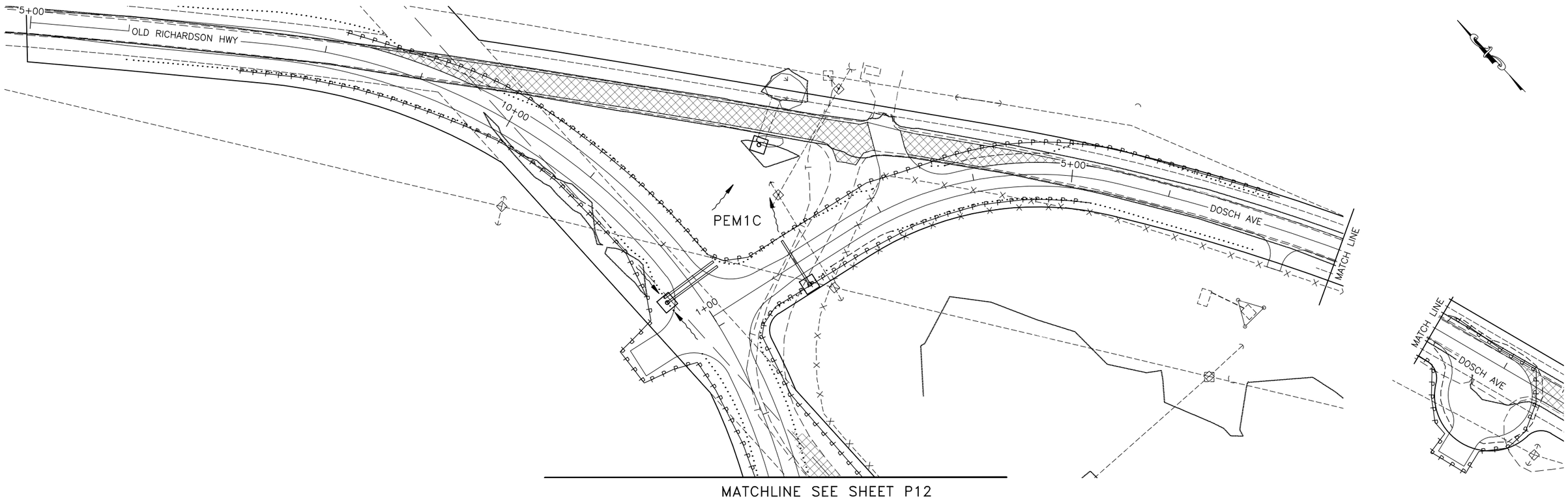
STATE OF ALASKA
49TH
DUSTIN CORY HANNAFIOUS
NO. CE14065
REGISTERED PROFESSIONAL ENGINEER

P:\2012\12009FB\C\C4002cnst12009-P14 Tue, Apr/05/16 01:51pm

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	P16	P16



EROSION AND SEDIMENT CONTROL PLAN (12 OF 12)



MATCHLINE SEE SHEET P12

STATE OF ALASKA 49TH
JUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2016	S1	S31

GENERAL TRAFFIC CONTROL NOTES

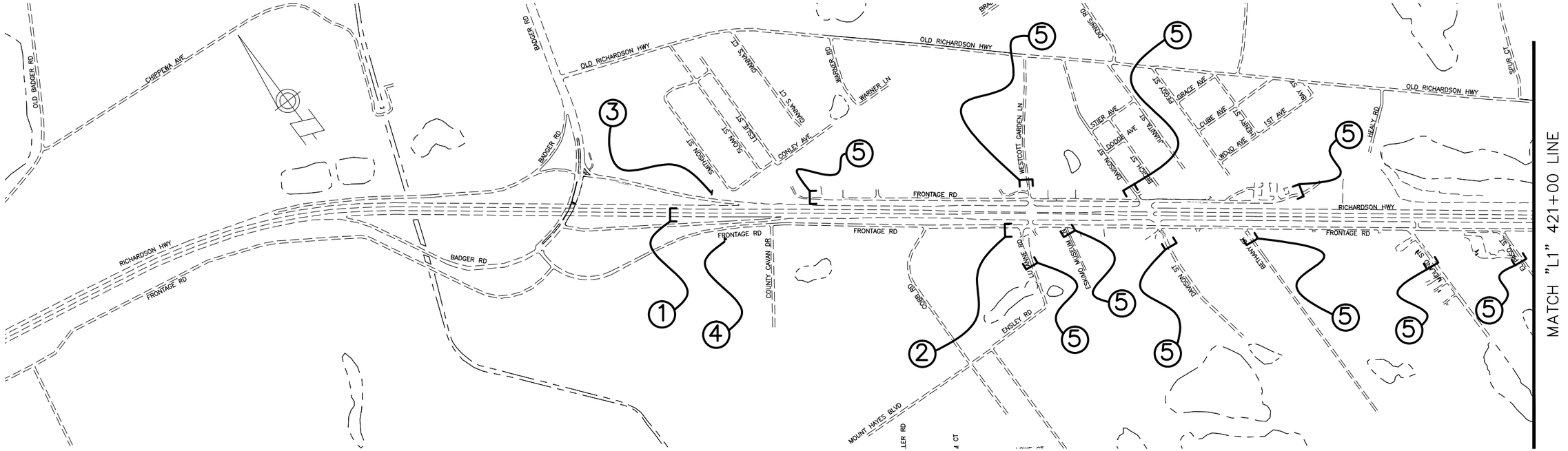
1. ALL TEMPORARY TRAFFIC CONTROL PLANS MUST BE IN ACCORDANCE WITH THE CURRENT ALASKA TRAFFIC MANUAL (ATM) COMPOSED OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND THE ALASKA TRAFFIC MANUAL SUPPLEMENT AND A TRAFFIC CONTROL PLAN SHALL BE SUBMITTED AND APPROVED PRIOR TO IMPLEMENTATION.
2. ALL SIGNS AND BARRICADES SHALL MEET REQUIREMENTS OF THE CURRENT ATM, WITH THE ALASKA SIGN DESIGN GUIDE(ASDS).
3. MAINTAIN EXISTING REGULATORY SIGNS WITHIN THE WORK ZONE. EXISTING SPEED LIMIT SIGNS MUST BE COVERED OR REMOVED WHERE SPEED REDUCTIONS ARE IN EFFECT.
4. INSTALL PERMANENT CONSTRUCTION SIGNS ON WOOD POSTS.
5. TRAFFIC CONTROL SIGNS MAY NOT BE PLACED ON PORTABLE SIGN SUPPORTS FOR MORE THAN THREE CONSECUTIVE CALENDAR DAYS. SIGNS INSTALLED FOR LONGER THAN THIS PERIOD MUST BE MOUNTED ON A PERMANENT SIGN POST. PEDESTRIAN TRAFFIC CONTROL SIGNS AND SIGNS MOUNTED ON A TYPE III BARRICADE ARE EXEMPT FROM THIS AND MAY BE INSTALLED ON PORTABLE SIGN SUPPORTS FOR THE DURATION OF THEIR INSTALLATION.
6. EXISTING SIGNS WHICH CONFLICT WITH CONSTRUCTION SIGNING SHALL BE COVERED.
7. ALL CHANNELIZING DEVICES SHALL HAVE OPERABLE FLASHING LIGHT EXCEPT IN A TAPER WHERE ONLY THE FIRST TWO LIGHTS SHALL FLASH (TYPE "A") AND THE REMAINDER SHALL BE STEADY BURN (TYPE "C").
8. WHEN STREETS ARE RESTRICTED TO ONE LANE, THE MINIMUM CLEAR WIDTH SHALL BE 12' UNLESS OTHERWISE SPECIFIED ON AN APPROVED TRAFFIC CONTROL PLAN (TCP) OR AS DIRECTED BY THE ENGINEER.
9. CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH THE POSTAL SERVICE TO ACCOMMODATE MAIL DELIVERIES.
10. IF ONE LANE, TWO-WAY TRAFFIC OPERATIONS ARE USED DURING FRONTAGE ROAD CONSTRUCTION, THEY REQUIRE ONE FLAGGER AT EACH END OF THE TRAFFIC CONTROL ZONE OR PILOT CAR OPERATION, UNLESS OTHERWISE APPROVED BY THE ENGINEER.
11. MAINTAIN ACCESS AT ALL TIMES FOR THE PASSAGE OF EMERGENCY VEHICLES THROUGH THE PROJECT.
12. ACCESS TO COMMERCIAL PROPERTIES SHALL REMAIN OPEN DURING NORMAL BUSINESS HOURS. ACCESS TO PRIVATE PROPERTIES SHALL REMAIN OPEN AT ALL TIME. TCPs WHICH REQUEST ACCESS CLOSURES SHALL BE SUBMITTED FOR APPROVAL A MINIMUM OF 10 DAYS PRIOR TO IMPLEMENTATION. ANY ACCESS CLOSURE SHALL NOT OCCUR WITHOUT PRIOR WRITTEN APPROVAL OF THE ENGINEER. THE ENGINEER AND CONTRACTOR WILL COORDINATE ACCESS CLOSURE PLANS WITH THE AFFECTED BUSINESS AND/OR PROPERTY OWNERS. THE CONTRACTOR SHALL NOTIFY OWNERS A MINIMUM OF 48 HOURS PRIOR TO IMPLEMENTATION OF AN APPROVED ACCESS CLOSURE.
13. TYPE "A" FLASHING WARNING LIGHTS SHALL BE USED TO MARK TYPE III BARRICADES, ROAD CLOSURES, AND ADVANCE DETOUR SIGNING AT NIGHT. FOR CHANNELIZING DEVICES, USE TYPE "C" STEADY BURN WARNING LIGHTS ON ALL TAPER CHANNELIZATION DEVICES AND TYPE "A" FLASHING WARNING LIGHTS ON ALL TANGENT CHANNELIZATION DEVICES.
14. PUBLIC NOTICE OF ROAD CLOSURES MUST BE MADE IN ACCORDANCE WITH SECTION 643.
15. ALL SIGNS SHALL BE SUPPLEMENTED WITH HIGH LEVEL WARNING DEVICES.
16. ALL SPECIAL CONSTRUCTION SIGNS SHALL BE FABRICATED OF MATERIALS CONFORMING TO SECTION 615 OF THE SPECIFICATIONS AND SHALL HAVE A BLACK LEGEND ON ORANGE BACKGROUND.
17. TEMPORARY STRIPING SHALL BE EITHER TEMPORARY RAISED PAVEMENT MARKERS OR PREFORMED PAVEMENT MARKING TAPE. SEE STANDARD DRAWING C-05.20 FOR INTERIM PAVEMENT MARKING APPLICATION GUIDELINES.
18. SEE SHEETS S7-S23 FOR CONSTRUCTION DETOUR SIGNING AND DEVICES ASSOCIATED WITH PROPOSED CONSTRUCTION PHASES.
19. SPECIAL SIGN 1 ON SHEET S29 SHALL BE POSTED ONLY WHEN A BUSINESS THAT WAS PREVIOUSLY EASILY VISIBLE FROM THE ROAD IS COMPLETELY HIDDEN BY ROAD CONSTRUCTION OR WHEN THE ROUTE TO A BUSINESS THAT WAS PREVIOUSLY READILY EVIDENT FROM THE ROAD IS HIDDEN BY ROAD CONSTRUCTION.
20. USE THE SAME DIMENSIONS BUT REVERSED FOR SPECIAL SIGN 1, WHEN THE ARROW DIRECTION IS TO BE OPPOSITE AS SHOWN (THE ARROW SHOULD BE ON THE SIDE OF THE TEXT FOR THE DIRECTION IN WHICH IT IS INDICATING).
21. TEMPORARY PEDESTRIAN ROUTES SHALL MEET THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT. WHEN EXISTING PEDESTRIAN FACULTIES ARE DISRUPTED, CLOSED, OR RELOCATED IN A TEMPORARY TRAFFIC CONTROL ZONE, THE TEMPORARY FACILITIES SHALL BE DETECTABLE AND INCLUDE ACCESSIBILITY FEATURES CONSISTENT WITH THE FEATURES PRESENT IN THE EXISTING PEDESTRIAN FACILITY.
22. THE SPACING BETWEEN CHANNELIZING DEVICES MUST NOT EXCEED A DISTANCE IN FEET EQUAL TO 1.0 TIMES THE SPEED LIMIT IN MPH WHEN USED FOR TAPER CHANNELIZATION, AND A DISTANCE IN FEET EQUAL TO 2.0 TIMES THE SPEED LIMIT IN MPH WHEN USED FOR TANGENT CHANNELIZATION.

TRAFFIC CONTROL PLAN SHEET INDEX

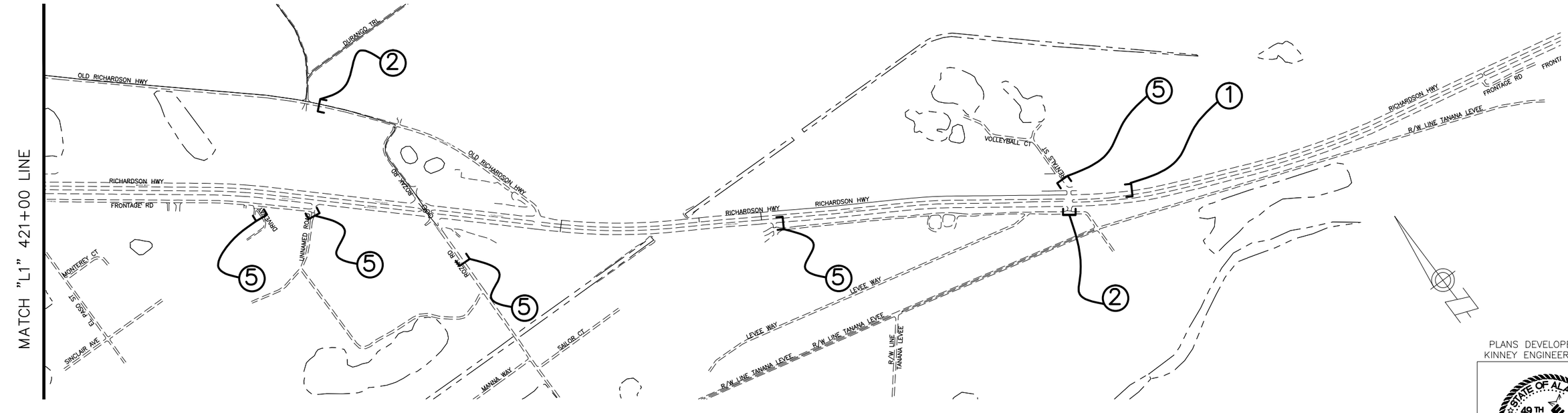
PLANS DEVELOPED BY:
KINNEY ENGINEERING,LLC

STATE OF ALASKA 49TH PS&E 04/05/2016 PROFESSIONAL ENGINEER

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2016	S2	S31



NOTE: SEE SHEET S3 FOR PERMANENT CONSTRUCTION SIGN PLACEMENT DETAILS



500 250 0 500 1000 1500 FEET

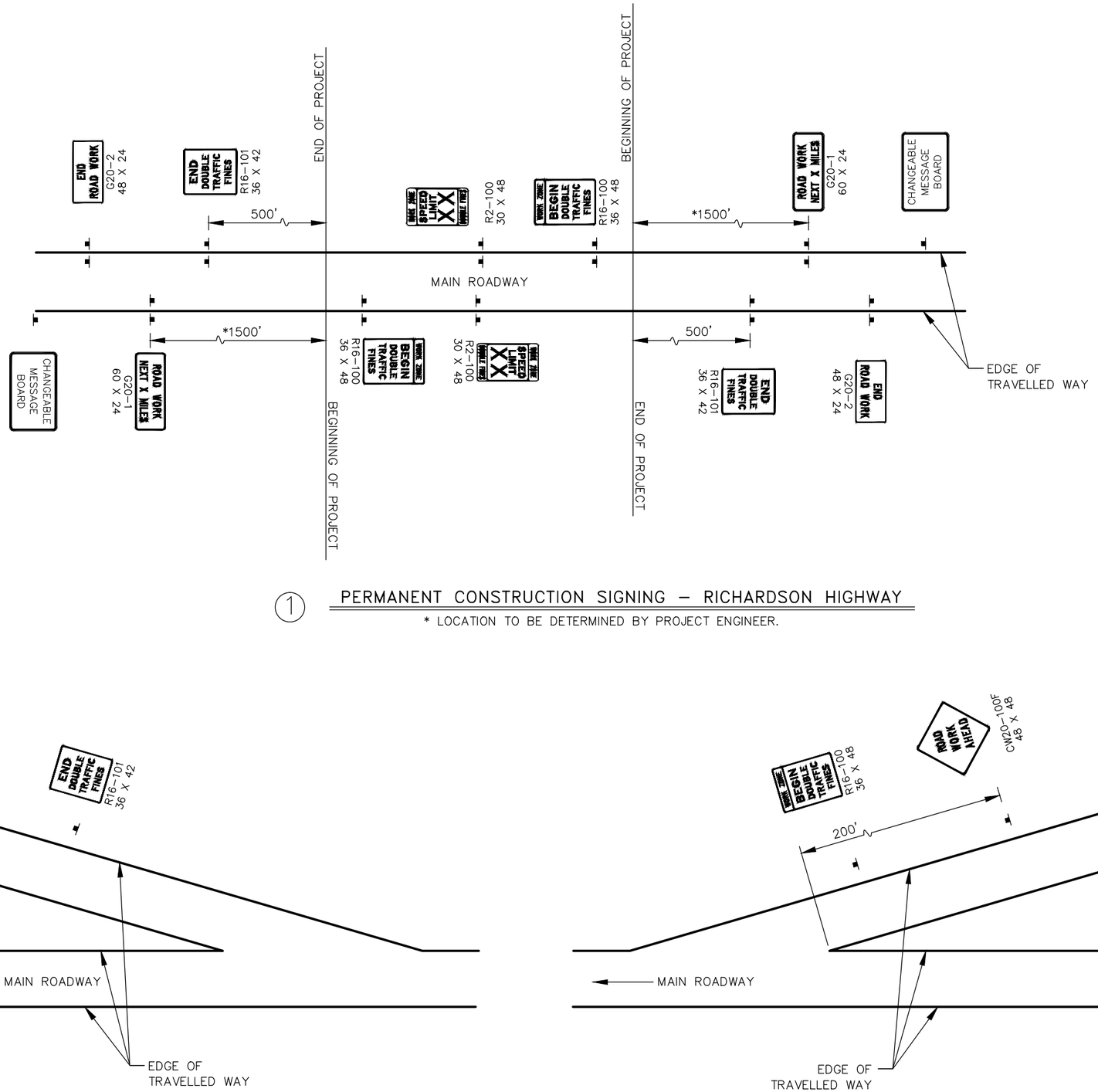
PLANS DEVELOPED BY:
KINNEY ENGINEERING,LLC

STATE OF ALASKA 49 TH PS&E 04/05/2016 PROFESSIONAL ENGINEER

PERMANENT CONSTRUCTION SIGN PLAN

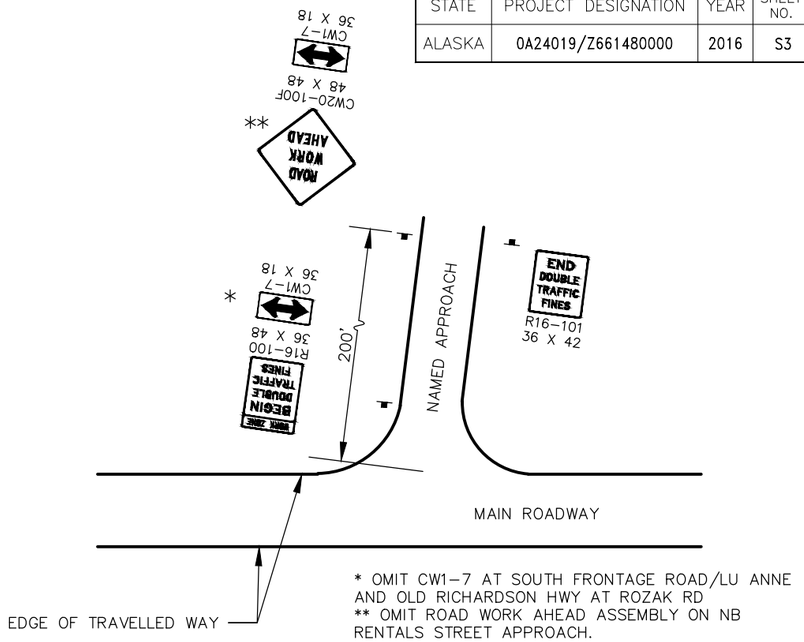
Z:\PROJECTS\PDC\Rich 353-357 Project File\DWGS\Plan Set\TCP\Perm Const Sign Plan_500 scale single sheet-Perm Const Sign Plan Tue, Apr/05/16 04:16pm

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2016	S3	S31



1 PERMANENT CONSTRUCTION SIGNING – RICHARDSON HIGHWAY

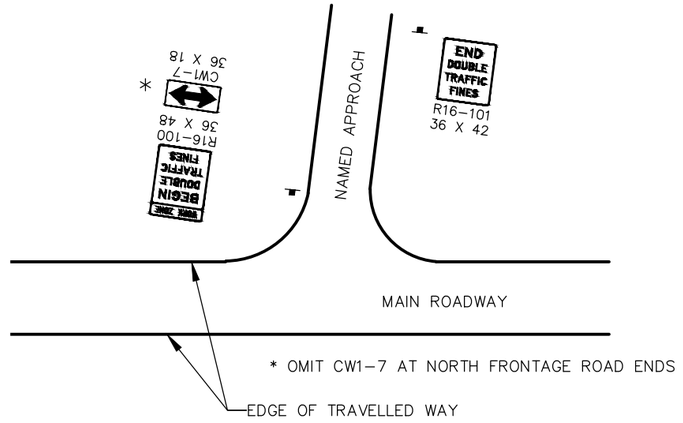
* LOCATION TO BE DETERMINED BY PROJECT ENGINEER.



* OMIT CW1-7 AT SOUTH FRONTAGE ROAD/LU ANNE AND OLD RICHARDSON HWY AT ROZAK RD
** OMIT ROAD WORK AHEAD ASSEMBLY ON NB RENTALS STREET APPROACH.

2 PERMANENT CONSTRUCTION SIGNING

MAJOR SIDE STREETS



* OMIT CW1-7 AT NORTH FRONTAGE ROAD ENDS

5 PERMANENT CONSTRUCTION SIGNING

MINOR SIDE STREETS

3 PERMANENT CONSTRUCTION SIGNING

OFF RAMPS

4 PERMANENT CONSTRUCTION SIGNING

ON RAMPS

NOTES:

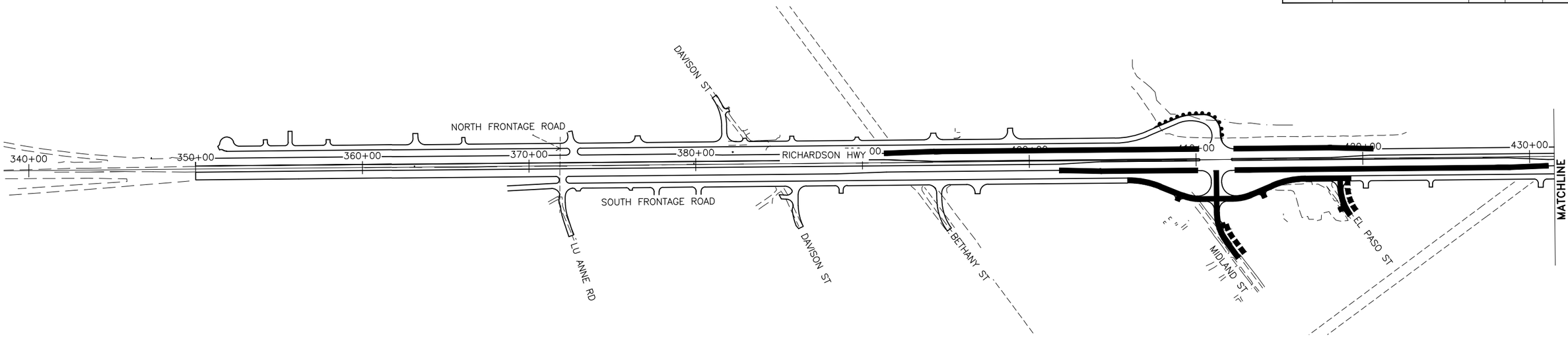
1. SPEED LIMIT SHALL BE AS POSTED, UNLESS DIRECTED BY THE PROJECT ENGINEER.
2. SEE STANDARD DRAWING C-04.12 FOR SPACING OF DOUBLE FINE SIGNS AND SPEED LIMIT SIGNS.
3. CHANGEABLE MESSAGE BOARD SHALL BE USED FOR ADVANCED NOTIFICATION. LOCATION OF CHANGEABLE MESSAGE BOARDS SHALL BE DETERMINED BY THE ENGINEER.
4. SPEED LIMIT REDUCTIONS MUST BE IN ACCORDANCE WITH ADOT&PF POLICY AND PROCEDURE NUMBER 05.05.2 IF USED.
5. INSTALL DOUBLE TRAFFIC FINE SIGNS IN ACCORDANCE WITH STANDARD DRAWING C-04.12. G20-1 AND G20-2A SIGNS AS SHOWN IN STANDARD DRAWING C-04.12 MUST BE USED AS SHOWN.

PLANS DEVELOPED BY:
KINNEY ENGINEERING,LLC

STATE OF ALASKA 49TH PSE 04/05/2016 PROFESSIONAL ENGINEER

PERMANENT CONSTRUCTION SIGN DETAILS

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	S4	S31



LEGEND

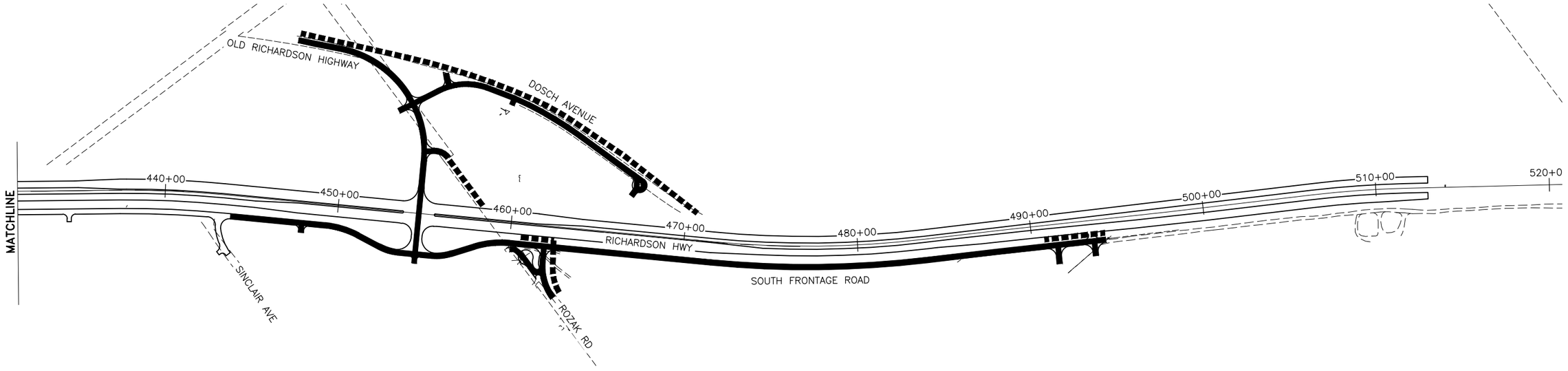
CONSTRUCTION

LOCAL TRAFFIC ON OR NEAR CONSTRUCTION

PHASE I

CONSTRUCTION PHASING (1 OF 3)

STATE OF ALASKA 49TH
DUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER



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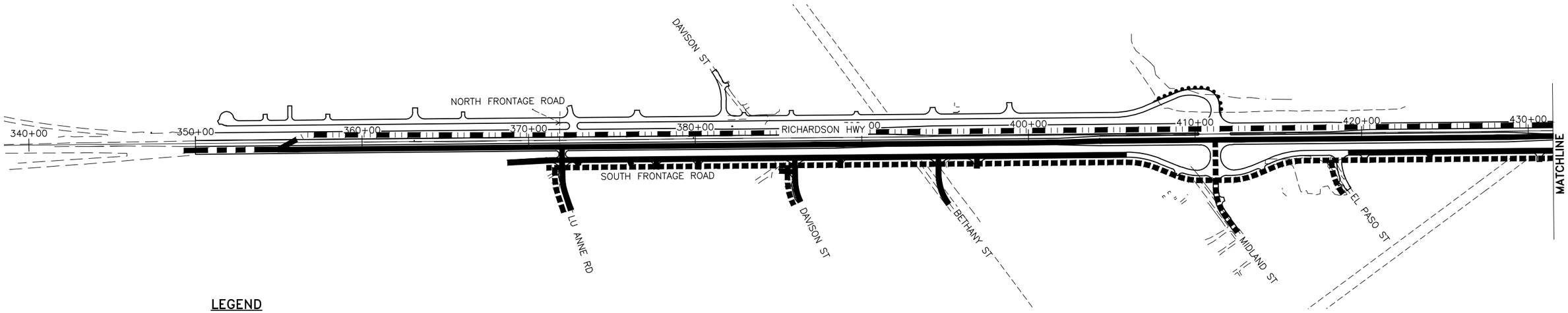
ALASKA	0A24019/Z661480000	2014	S5	S31



LEGEND

- TWO WAY SINGLE LANE DETOUR
- CONSTRUCTION
- LOCAL TRAFFIC ON OR NEAR CONSTRUCTION
- CONSTRUCTION UNDER TRAFFIC

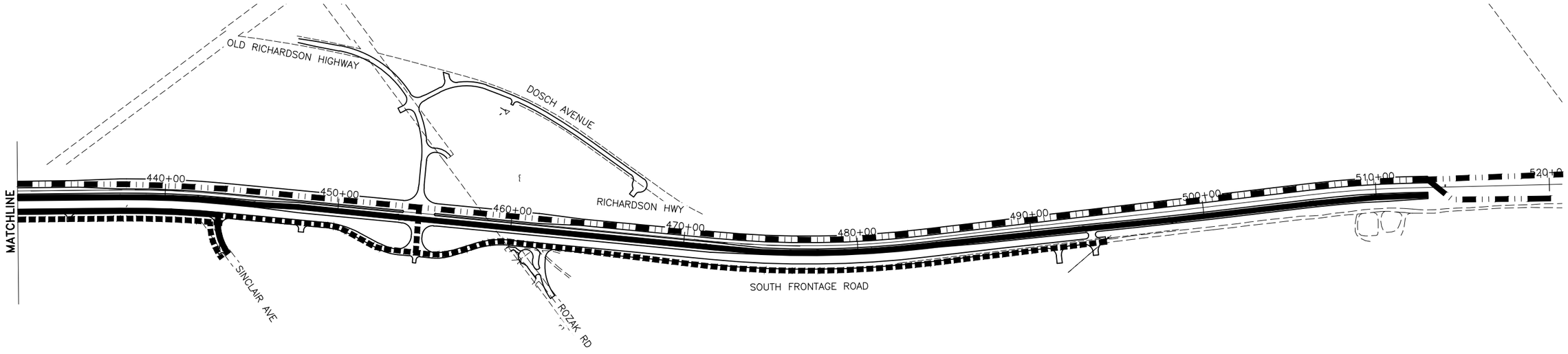
PHASE II

GENERAL NOTES

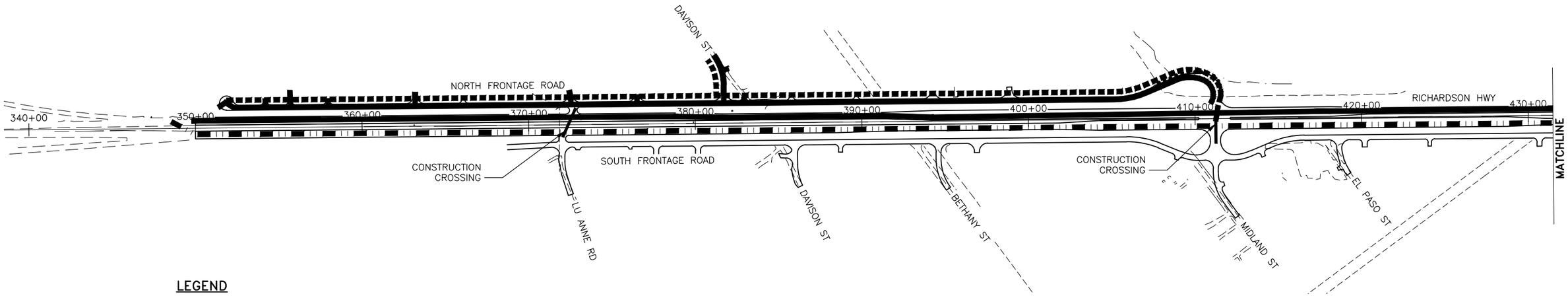
ALL SOUTH FRONTAGE ROAD TRAFFIC CARRIED ON CONSTRUCTION WITH ACCESS TO RICHARDSON HIGHWAY FROM BADGER ROAD INTERCHANGE, MIDLAND ST AND NEW ROZAK ROAD INTERSECTION.

CONSTRUCTION PHASING (2 OF 3)

STATE OF ALASKA 49TH
JUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER



STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2014	S6	S31



LEGEND

- TWO WAY SINGLE LANE DETOUR
- CONSTRUCTION
- LOCAL TRAFFIC ON OR NEAR CONSTRUCTION

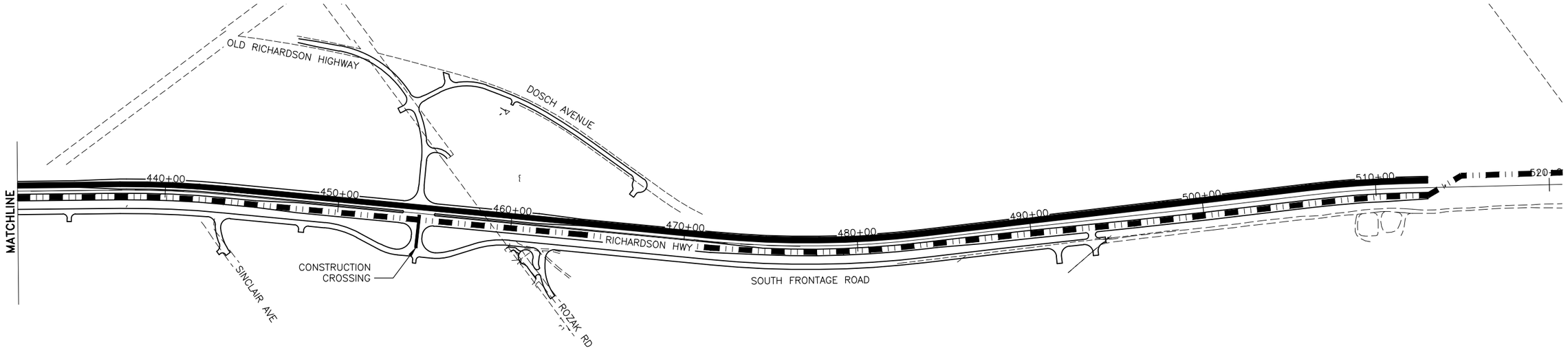
PHASE III

GENERAL NOTES

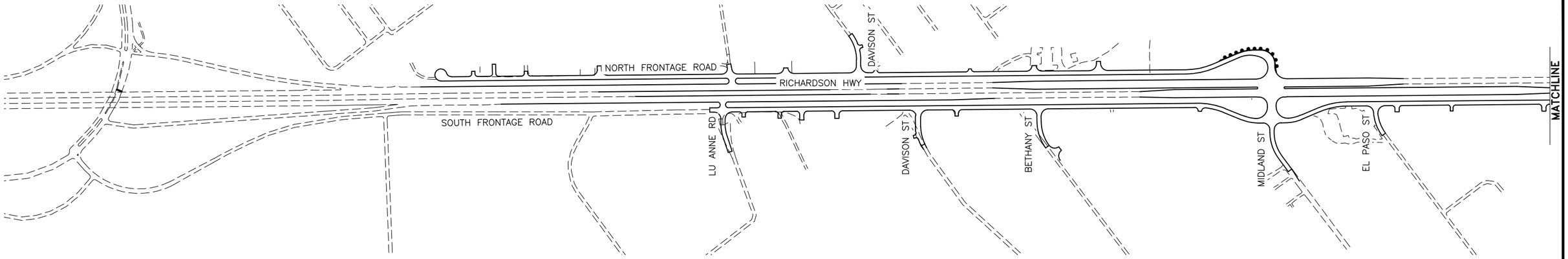
ALL NORTH FRONTAGE ROAD TRAFFIC CARRIED ON CONSTRUCTION WITH ACCESS TO RICHARDSON HIGHWAY FROM NEW ROZAK ROAD INTERSECTION AND WESCOTT GARDEN LANE.

CONSTRUCTION PHASING (3 OF 3)

STATE OF ALASKA 49TH
JUSTIN CORY HANNAFIOUS
NO CE14065
REGISTERED PROFESSIONAL ENGINEER



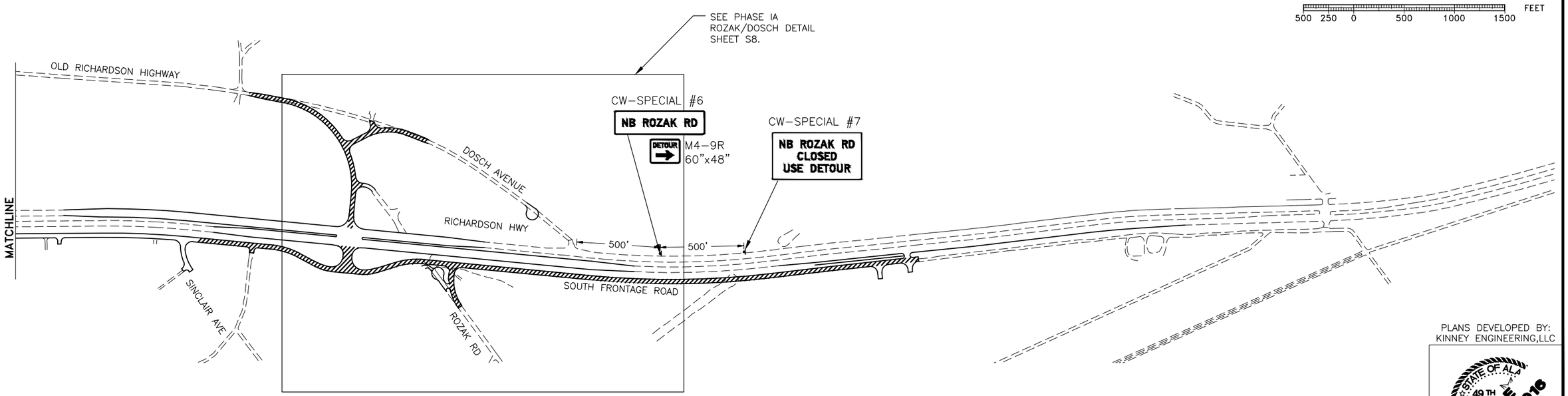
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2016	S7	S31



PHASE IA

LEGEND:

UNDER CONSTRUCTION AND/OR CLOSED



500 250 0 500 1000 1500 FEET

PLANS DEVELOPED BY:
KINNEY ENGINEERING,LLC

STATE OF ALASKA 49TH PS&E 04/05/2016 PROFESSIONAL ENGINEER

PHASE IA DETOUR PLAN

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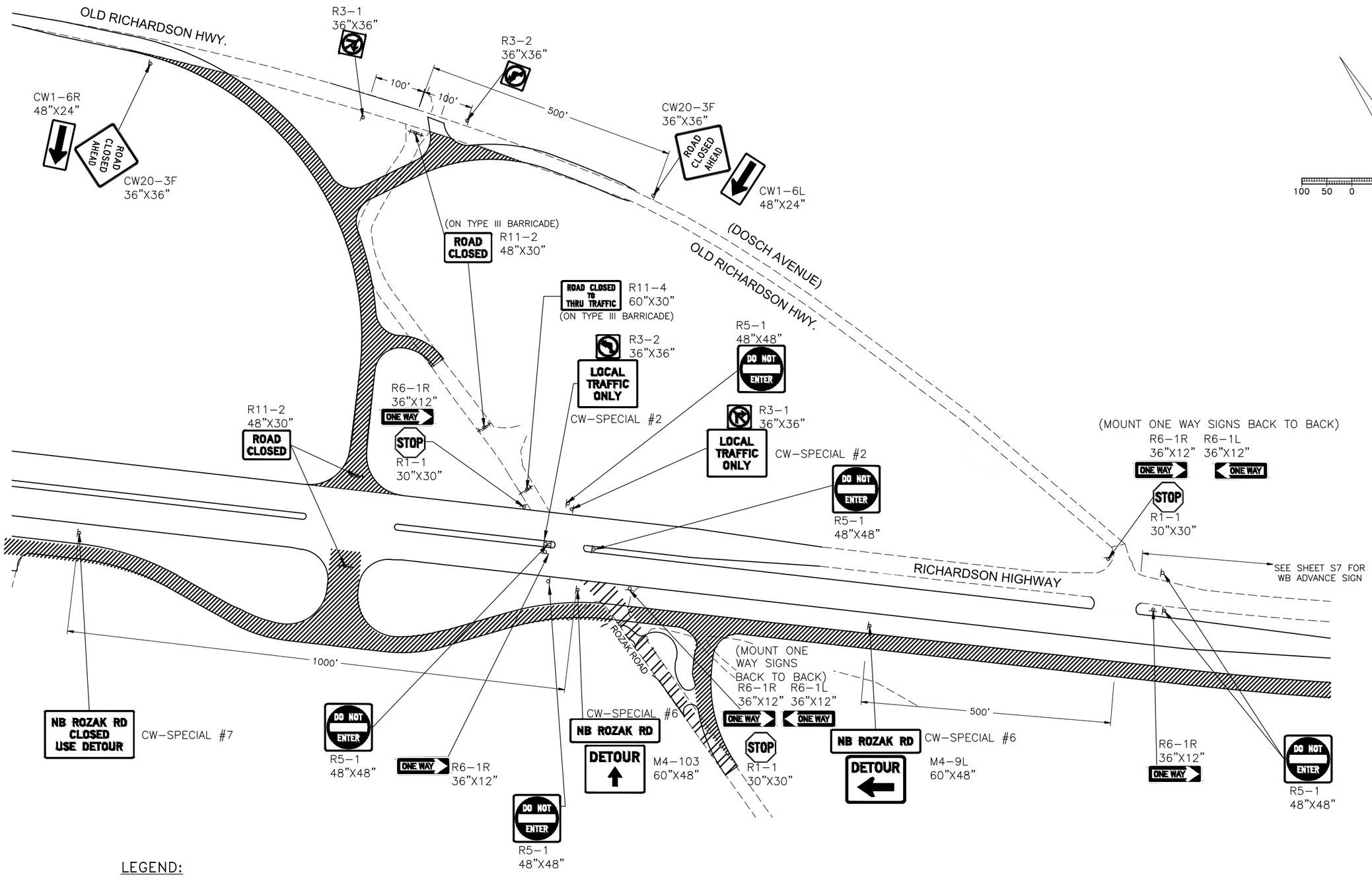
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2016	S8	S31



LEGEND:

UNDER CONSTRUCTION–CLOSED TO TRAFFIC

UNDER CONSTRUCTION–OPEN TO TRAFFIC

PHASE IA DETOUR ROZAK AND DOSCH

PLANS DEVELOPED BY:
KINNEY ENGINEERING,LLC

STATE OF ALASKA 49TH PS&E 04/05/2016 PROFESSIONAL ENGINEER

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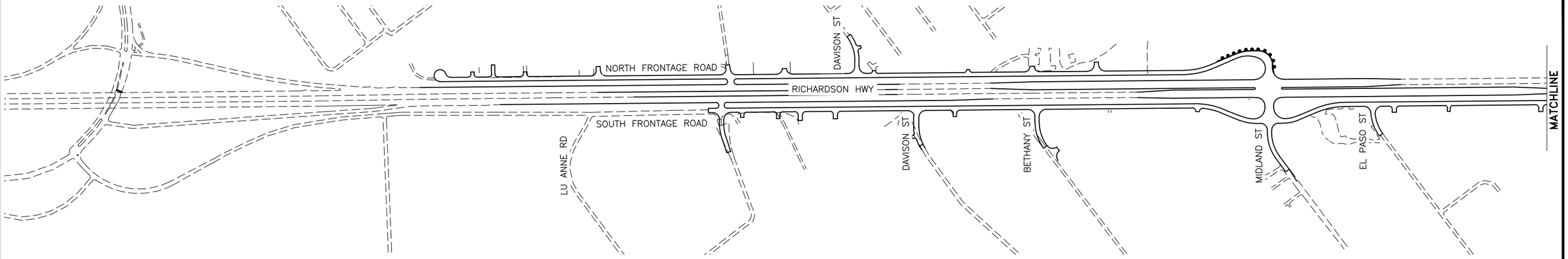
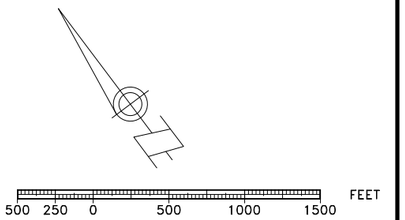
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2016	S9	S31

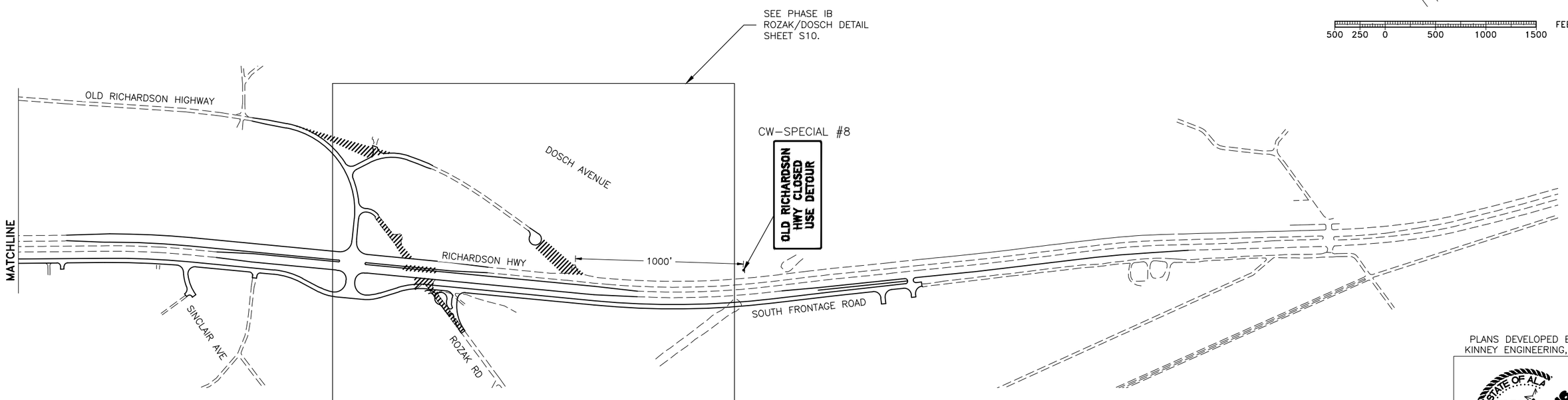


PHASE IB

LEGEND:

UNDER CONSTRUCTION AND/OR CLOSED





PLANS DEVELOPED BY:
KINNEY ENGINEERING,LLC

STATE OF ALASKA 49TH PS&E 04/05/2016 PROFESSIONAL ENGINEER

PHASE IB DETOUR PLAN

Z:\PROJECTS\PDC\Rich 353-357 Project File\DWGS\Plan Set\TCP\Phasing (14y11m17d)-Phasing - Phase IB Tue, Apr/05/16 04:17pm

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2016	S10	S31

OLD RICHARDSON HWY.

ROAD CLOSED R11–2 48"X30"
DETOUR M4–10R 48"X18"

STOP R1–1 30"X30"

ROAD CLOSED R11–2 48"X30"
DETOUR M4–10L 48"X18"

END ROAD 1000 FT CW14–101 36"X36"

CW–SPECIAL #5
RICHARDSON HWY
DETOUR M4–103 48"X36"

NO OUTLET CW14–2 36"X36"

DO NOT ENTER R5–1 48"X48"

(DOSCH AVENUE)
OLD RICHARDSON HWY.
1000'

(MOUNT ONE WAY SIGNS BACK TO BACK)
R6–1L 36"X12" R6–1R 36"X12"
ONE WAY ONE WAY

DO NOT ENTER R5–1 48"X48"

STOP R1–1 30"X30"

R6–1R 36"X12"
ONE WAY

(ON TYPE III BARRICADE)
ROAD CLOSED R11–2 48"X30"

ROZAK RD
OLD RICHARDSON HWY
CW–SPECIAL #9

500'

(ON TYPE III BARRICADE)
ROAD CLOSED R11–2 48"X30"

(ON TYPE III BARRICADE)
END CW14–100 30"X30"
OM–1 18"X18"

ROAD CLOSED R11–2 48"X30"
(ON TYPE III BARRICADE)

R3–1 36"X36"

RICHARDSON HIGHWAY

100' 100'

OLD RICHARDSON HWY
ROZAK RD
CW–SPECIAL #10

CW–SPECIAL #5
RICHARDSON HWY
DETOUR M4–9L 48"X36"

500' 100'

STOP R1–1 30"X30"

CW1–7 48"X24"

CW–SPECIAL #5
RICHARDSON HWY
DETOUR M4–9R 48"X36"

STOP R1–1 30"X30"

R6–1R 36"X12"
ONE WAY

ROZAK ROAD

STOP R1–1 30"X30"

CW–SPECIAL #5
RICHARDSON HWY
DETOUR M4–9L 48"X36"

CW1–7 48"X24"

R3–2 36"X36"

100' 50' 0 100' 200' 300' FEET

LEGEND:

UNDER CONSTRUCTION–CLOSED TO TRAFFIC

UNDER CONSTRUCTION–OPEN TO TRAFFIC

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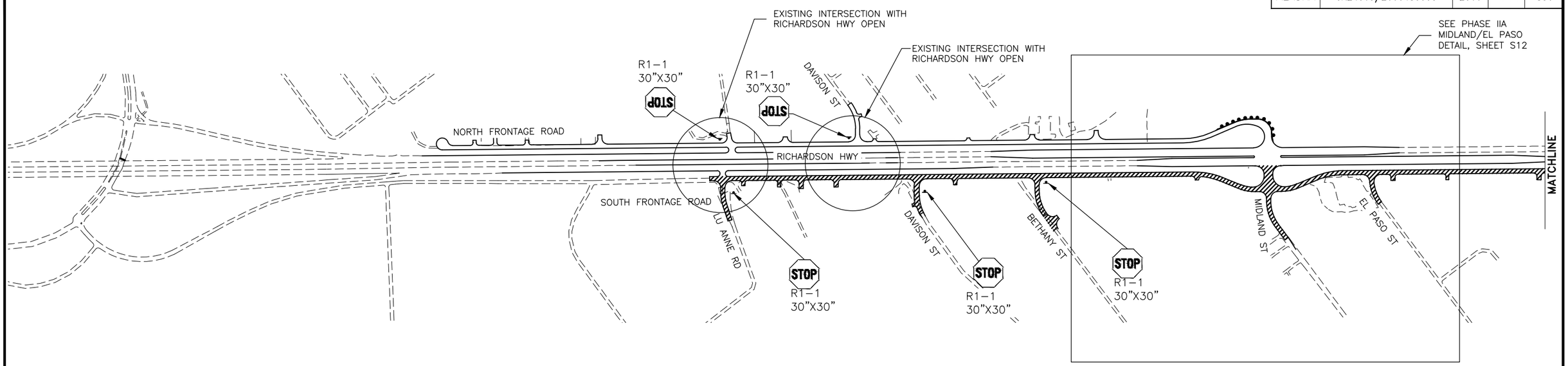
PHASE IB DETOUR ROZAK AND DOSCH

Z:\PROJECTS\PDC\Rich 353-357 Project File\DWGS\Plan Set\TCP\Phase 1 Detours-Phase 1B Detours - ROZAK-DOSCH Tue, Apr/05/16 04:17pm

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2016	S11	S31



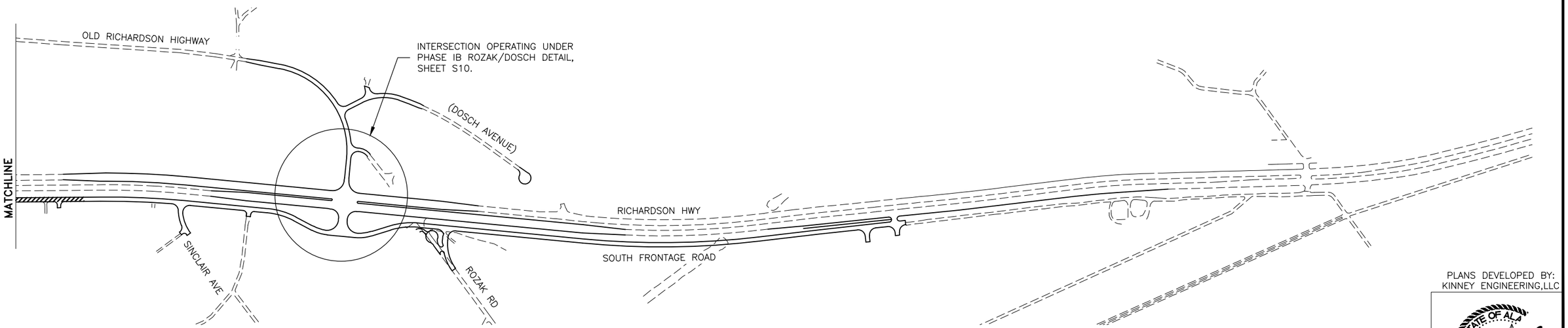
PHASE IIA

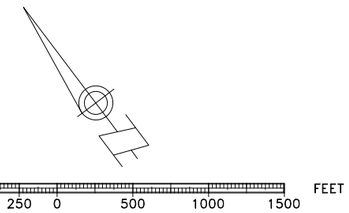
PHASE IIA CONSTRUCTION PHASING NOTES

1. SOUTH FRONTAGE ROAD TO REMAIN OPEN TO TRAFFIC DURING CONSTRUCTION

LEGEND:

UNDER CONSTRUCTION AND/OR CLOSED





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49TH
PS&E
04/05/2016
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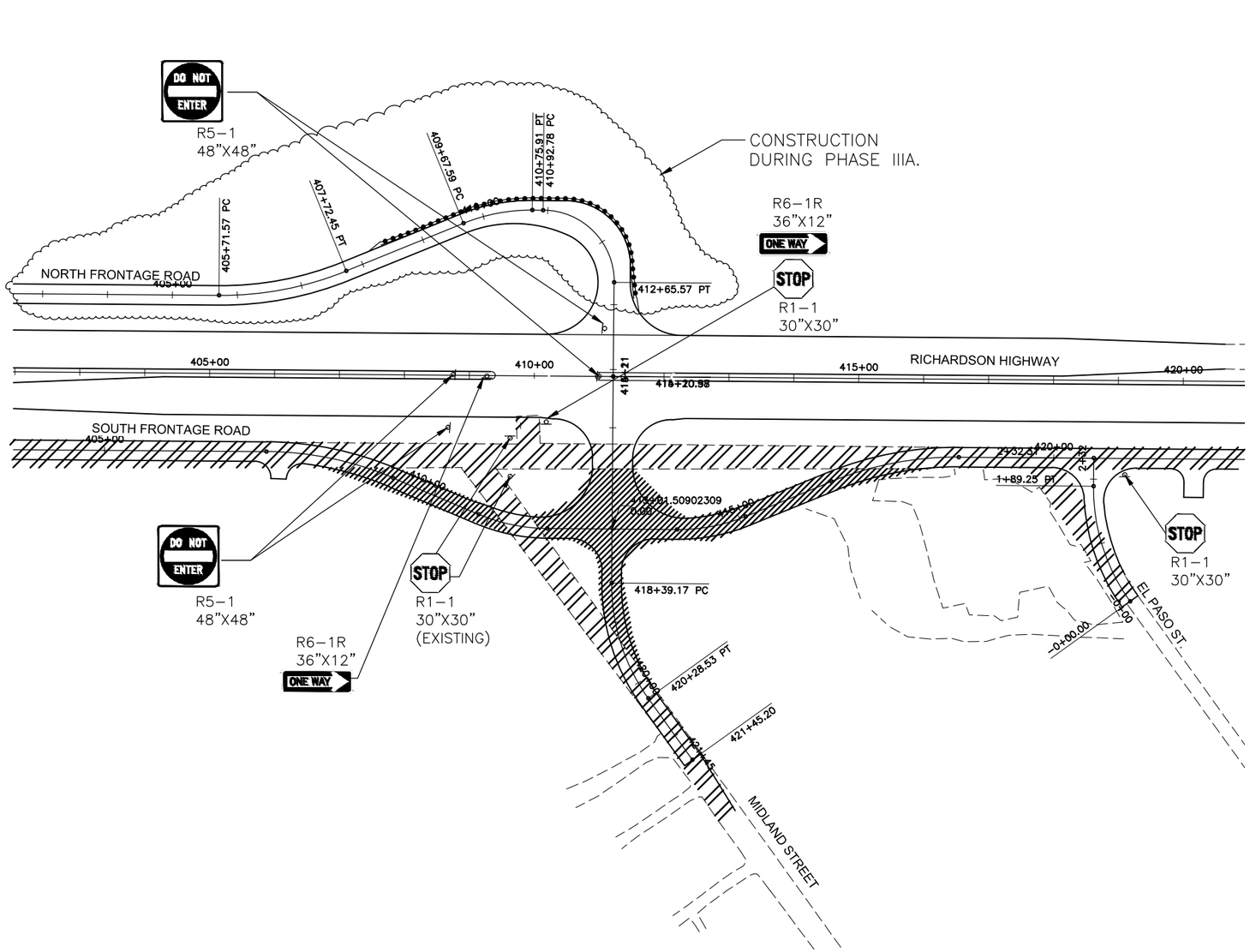
PHASE IIA DETOUR PLAN

Z:\PROJECTS\PDC\Rich 353-357 Project File\DWGS\Plan Set\TCP\Phasing (14y11m17d)-Phasing - Phase IIA Tue, Apr/05/16 04:17pm

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2016	S12	S31



NOTE:

1. SOUTH FRONTAGE ROAD AND MIDLAND STREET TO REMAIN OPEN TO TRAFFIC DURING CONSTRUCTION.

LEGEND:

UNDER CONSTRUCTION–CLOSED TO TRAFFIC

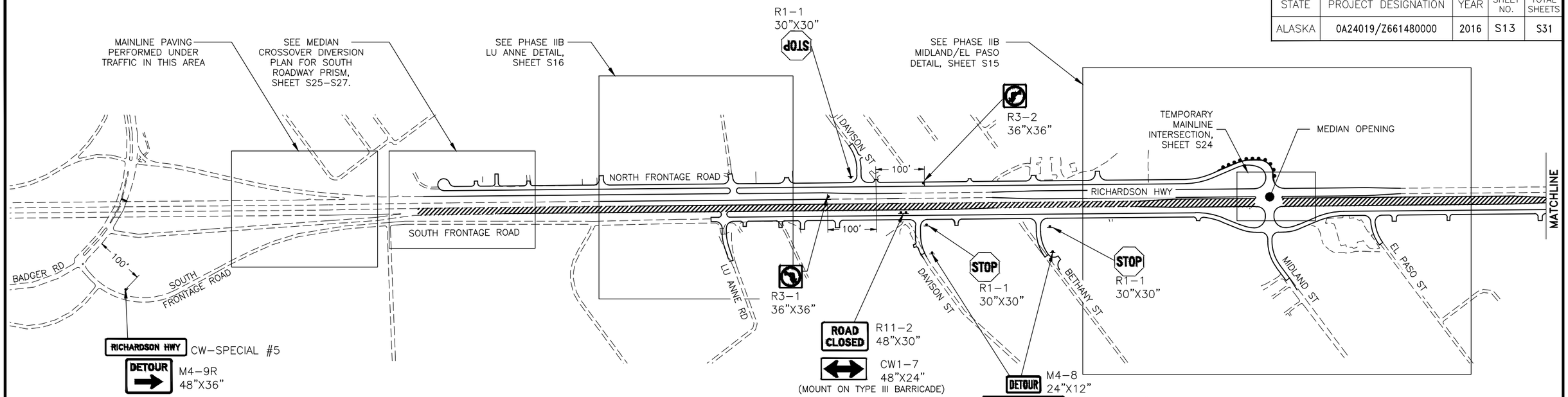
UNDER CONSTRUCTION–OPEN TO TRAFFIC

PLANS DEVELOPED BY:
KINNEY ENGINEERING,LLC

STATE OF ALASKA
49 TH
PS&E
04/05/2016
PROFESSIONAL ENGINEER

PHASE IIA DETOURS
MIDLAND AND EL PASO

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2016	S13	S31



LEGEND:

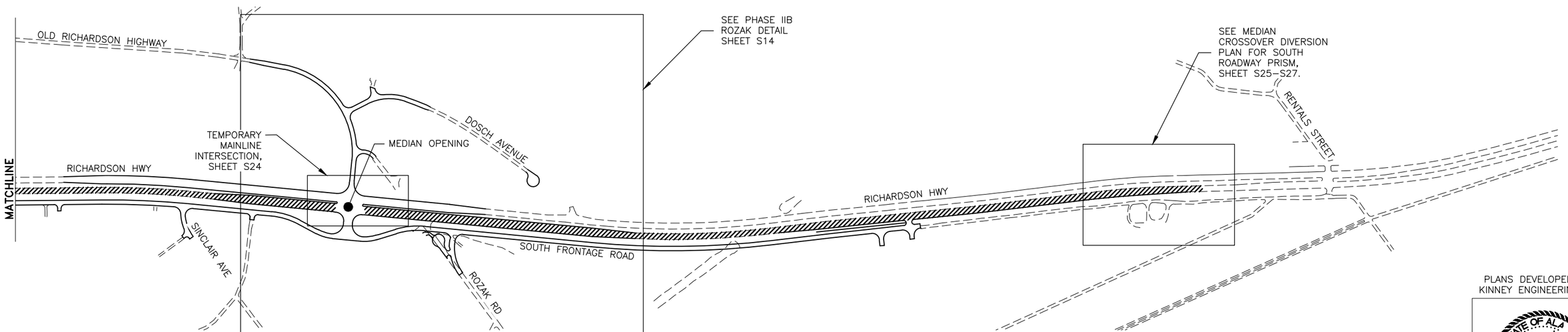
UNDER CONSTRUCTION

PHASE IIB

PHASE IIB CONSTRUCTION PHASING NOTES

1. LOCATE NORTHERN MEDIAN CROSSOVER SO THAT BADGER ROAD ON RAMP REMAINS OPEN THROUGHOUT CONSTRUCTION.

400 200 0 400 800 1200 FEET



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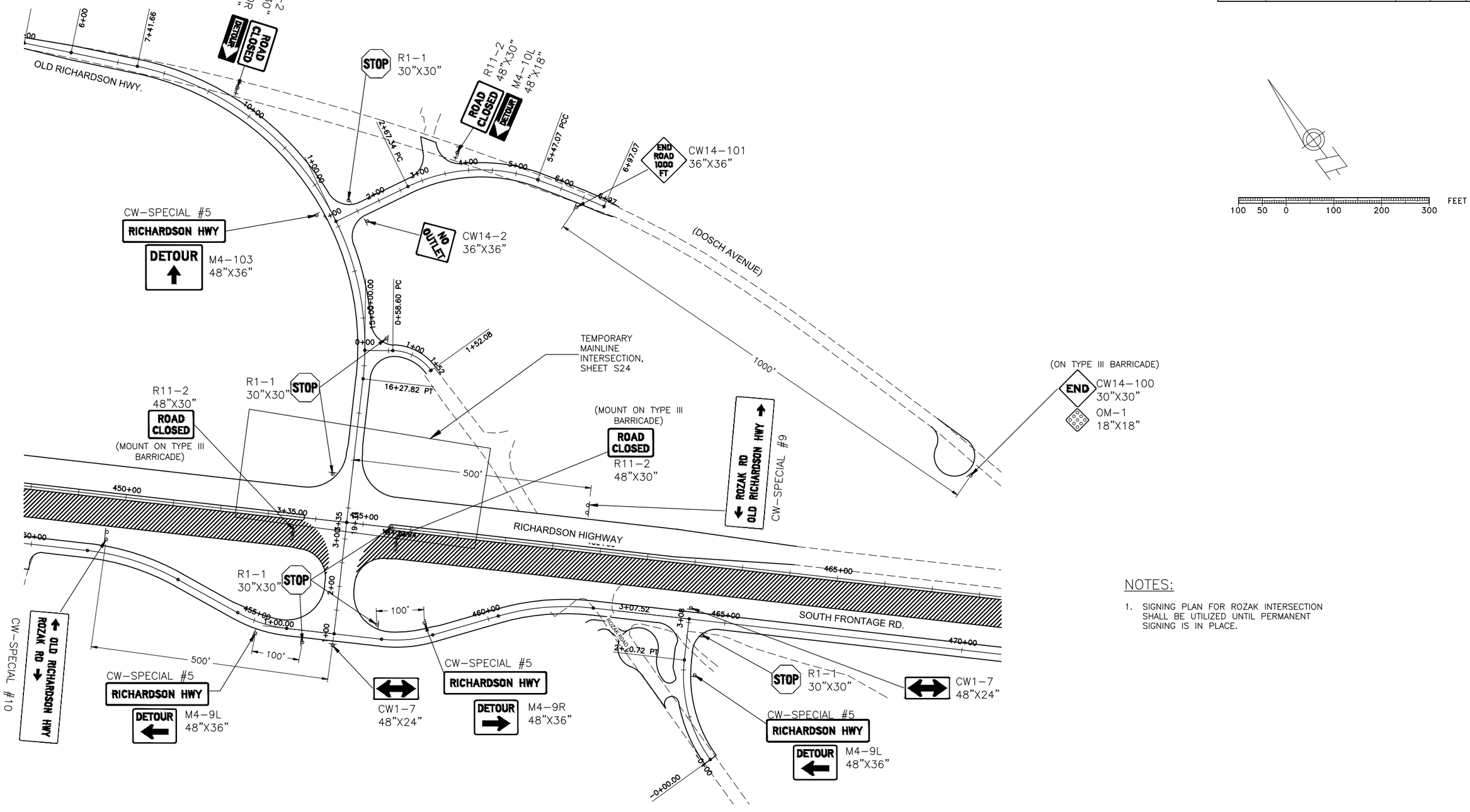
PHASE IIB DETOUR PLAN

Z:\PROJECTS\PDC\Rich 353-357 Project File\DWGS\Plan Set\TCP\Phasing (14y11m17d)-Phasing - Phase IIB Tue, Apr/05/16 04:17pm

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2016	S14	S31



NOTES:

1. SIGNING PLAN FOR ROZAK INTERSECTION SHALL BE UTILIZED UNTIL PERMANENT SIGNING IS IN PLACE.

LEGEND:

UNDER CONSTRUCTION–CLOSED TO TRAFFIC

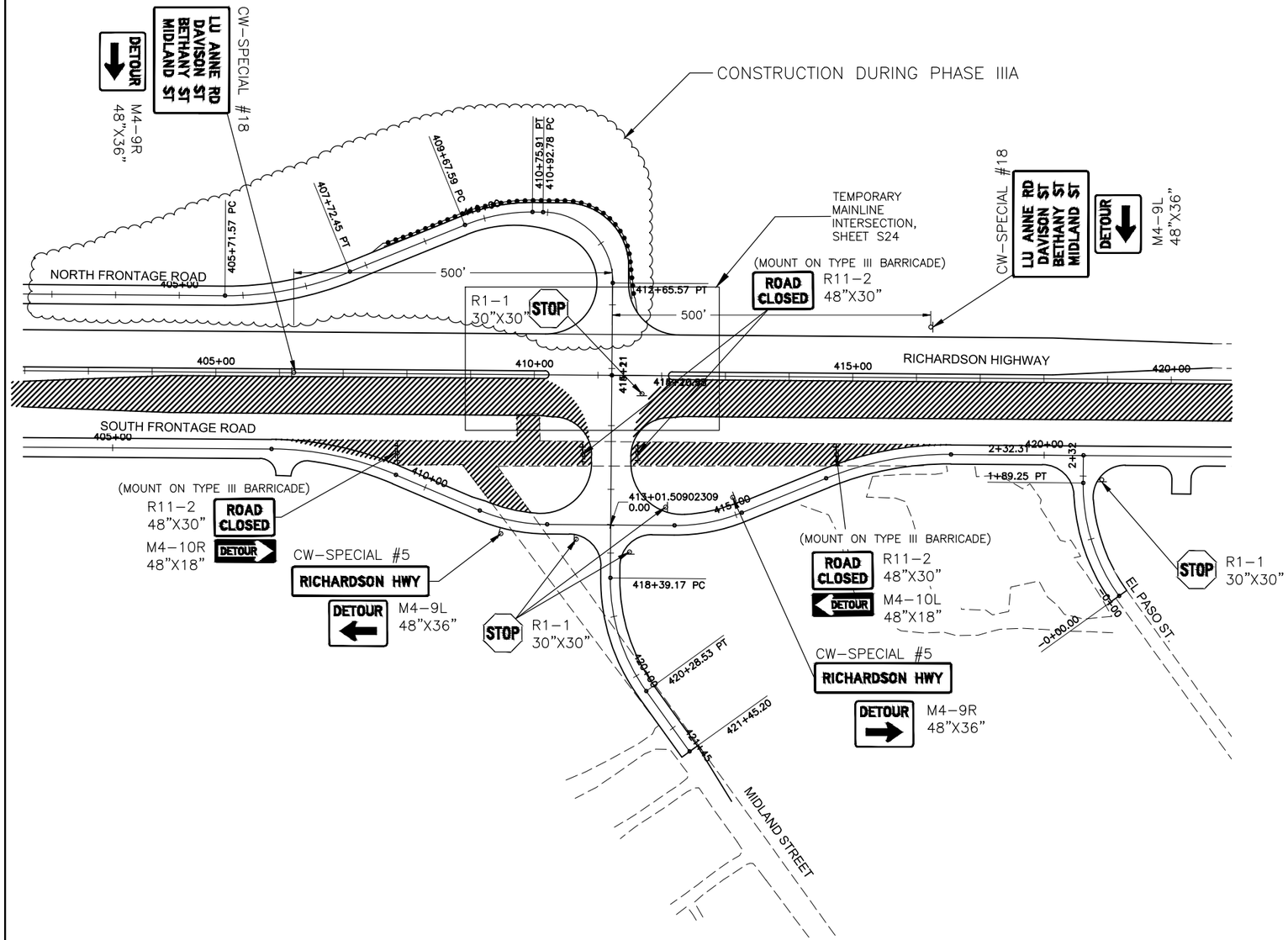
UNDER CONSTRUCTION–OPEN TO TRAFFIC

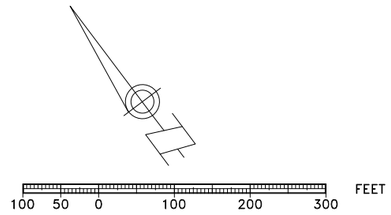
PLANS DEVELOPED BY:
KINNEY ENGINEERING,LLC

STATE OF ALASKA 49TH PSE 04/05/2016 PROFESSIONAL ENGINEER

PHASE IIB DETOURS
ROZAK

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2016	S15	S31





LEGEND:

UNDER CONSTRUCTION–CLOSED TO TRAFFIC

UNDER CONSTRUCTION–OPEN TO TRAFFIC

PLANS DEVELOPED BY:
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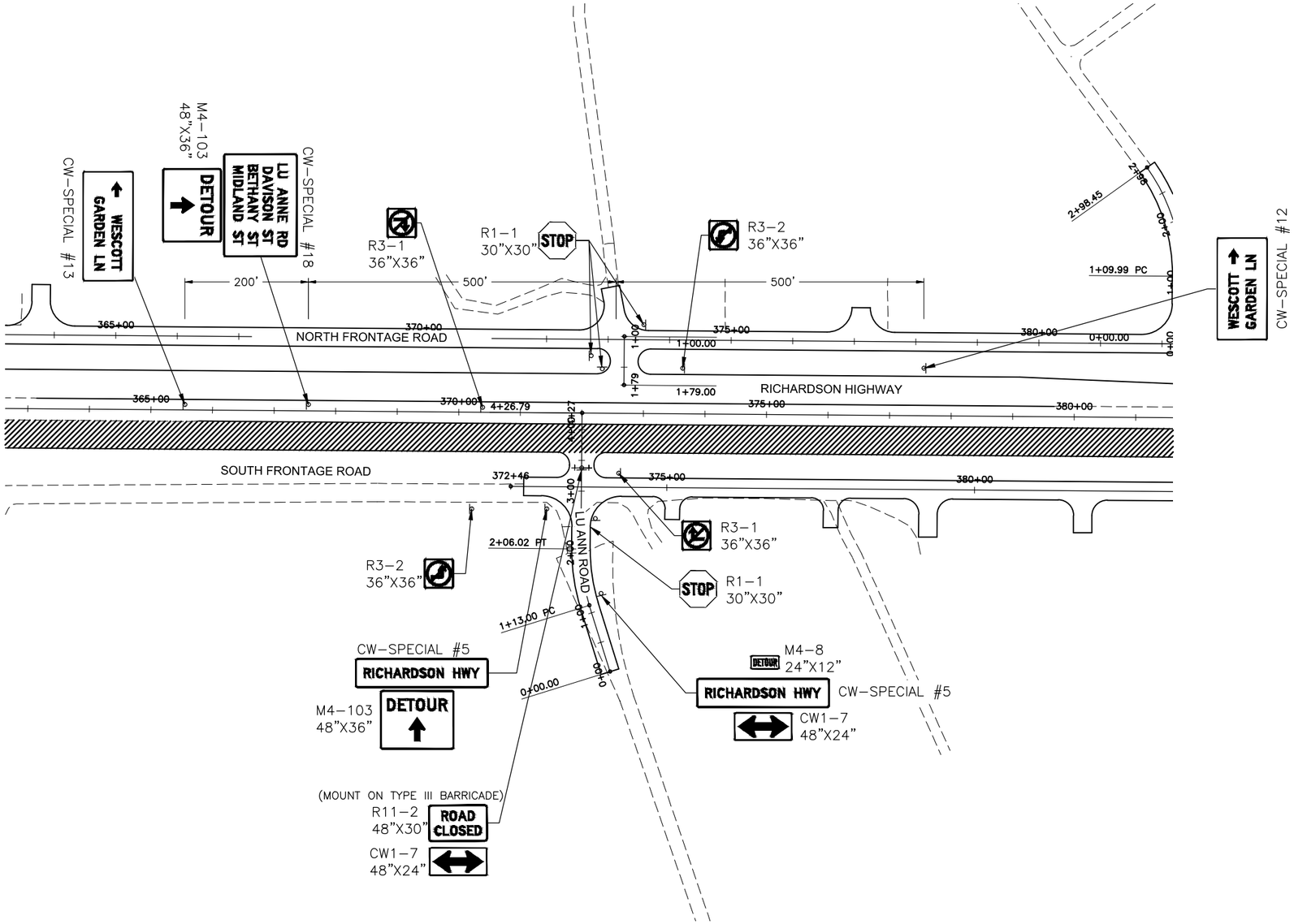
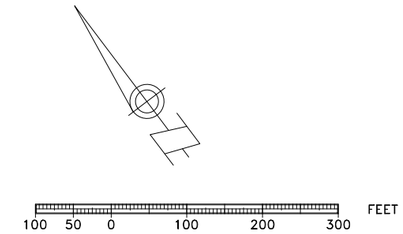
STATE OF ALASKA
49 TH
PSE
04/05/2016
REGIONAL ENGINEER

PHASE IIB DETOURS MIDLAND AND EL PASO

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2016	S16	S31





LEGEND:

UNDER CONSTRUCTION–CLOSED TO TRAFFIC

UNDER CONSTRUCTION–OPEN TO TRAFFIC

PLANS DEVELOPED BY:
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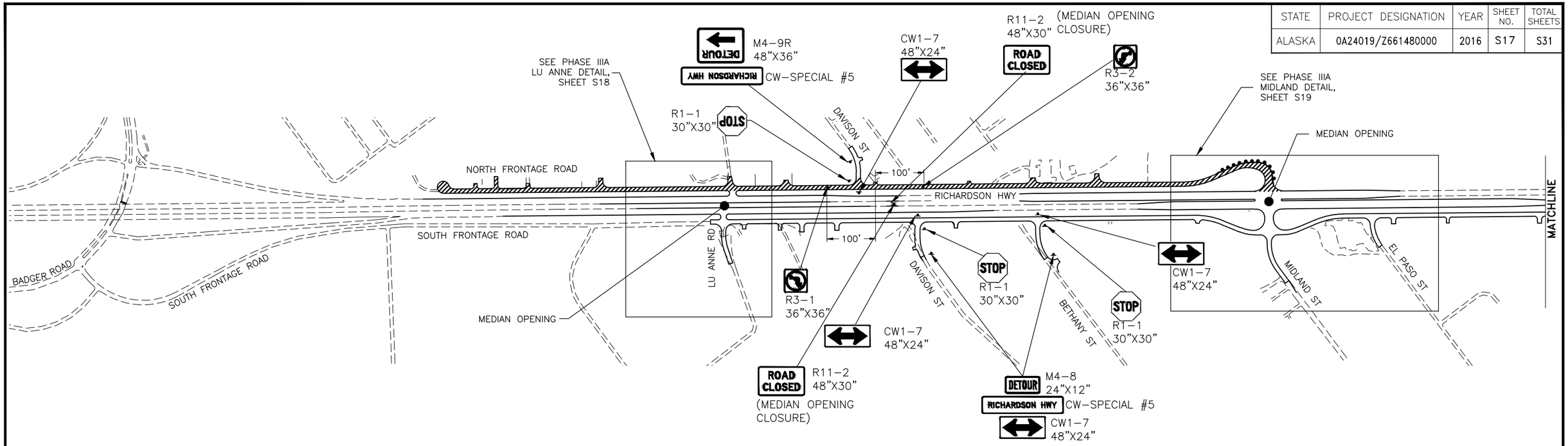
49 TH
PS&E
04/05/2016
PROFESSIONAL ENGINEER

PHASE IIB DETOURS
LU ANNE

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2016	S17	S31



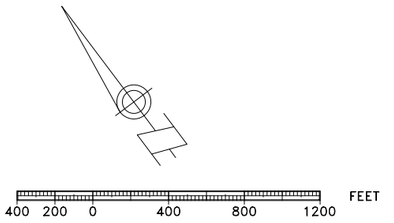
PHASE IIIA

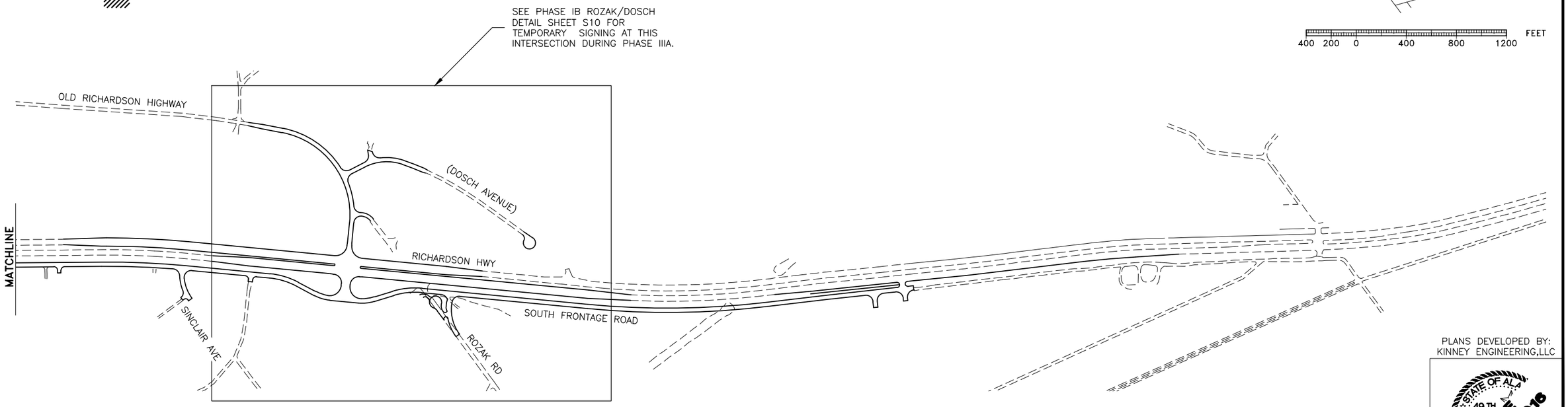
LEGEND:

UNDER CONSTRUCTION

PHASE IIIA CONSTRUCTION PHASING NOTE:

1. NORTH FRONTAGE ROAD TO REMAIN OPEN TO TRAFFIC DURING CONSTRUCTION





PLANS DEVELOPED BY:
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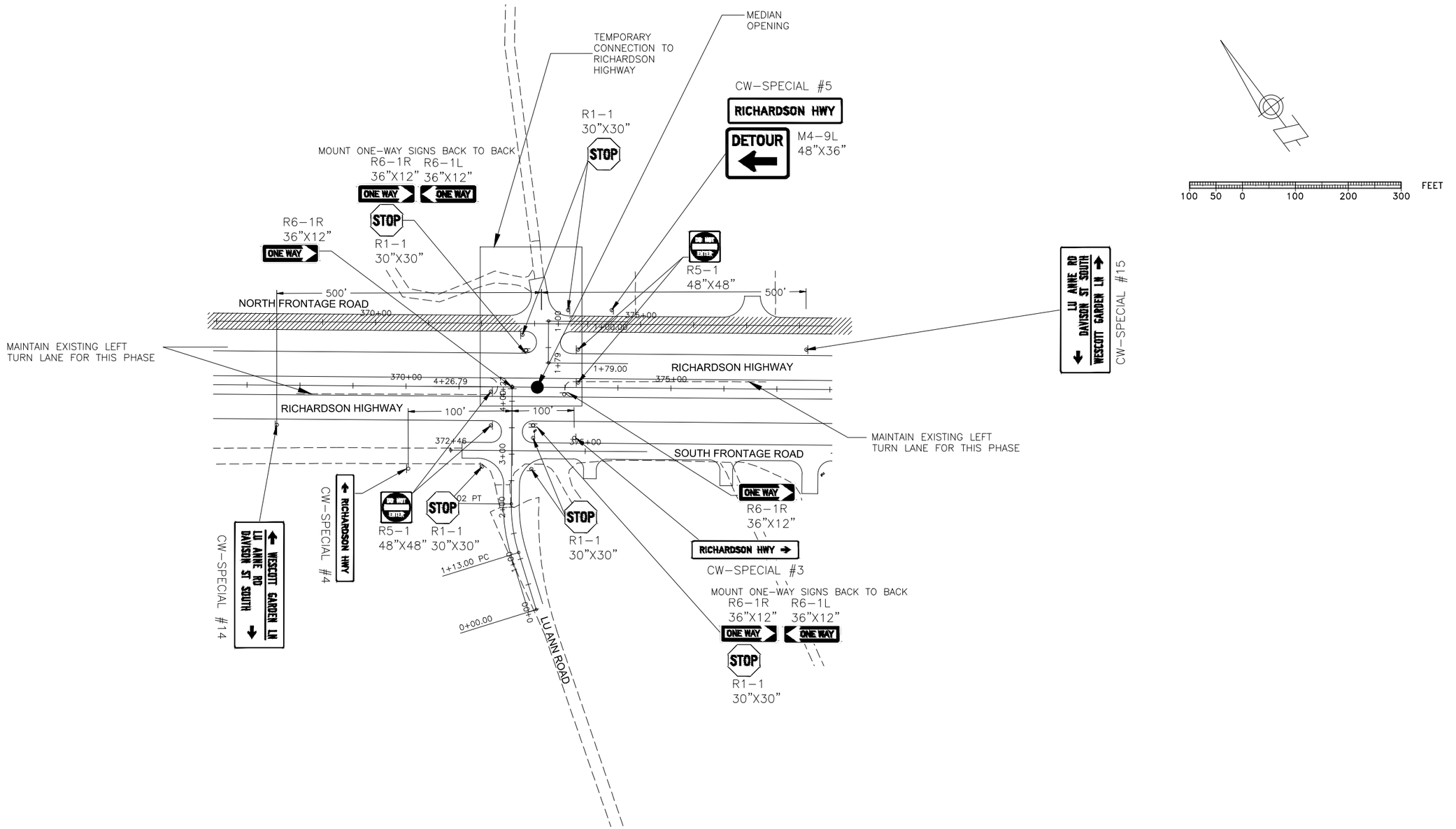
49 TH
PB&E
04/05/2016
PROFESSIONAL ENGINEER

PHASE IIIA DETOUR PLAN

Z:\PROJECTS\PDO\Rich 353-357 Project File\DWGS\Plan Set\TCP\Phasing (14y11m17d)-Phasing - Phase IIIA Tue, Apr/05/16 04:18pm

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2016	S18	S31



LEGEND:

UNDER CONSTRUCTION–CLOSED TO TRAFFIC

UNDER CONSTRUCTION–OPEN TO TRAFFIC

PLANS DEVELOPED BY:
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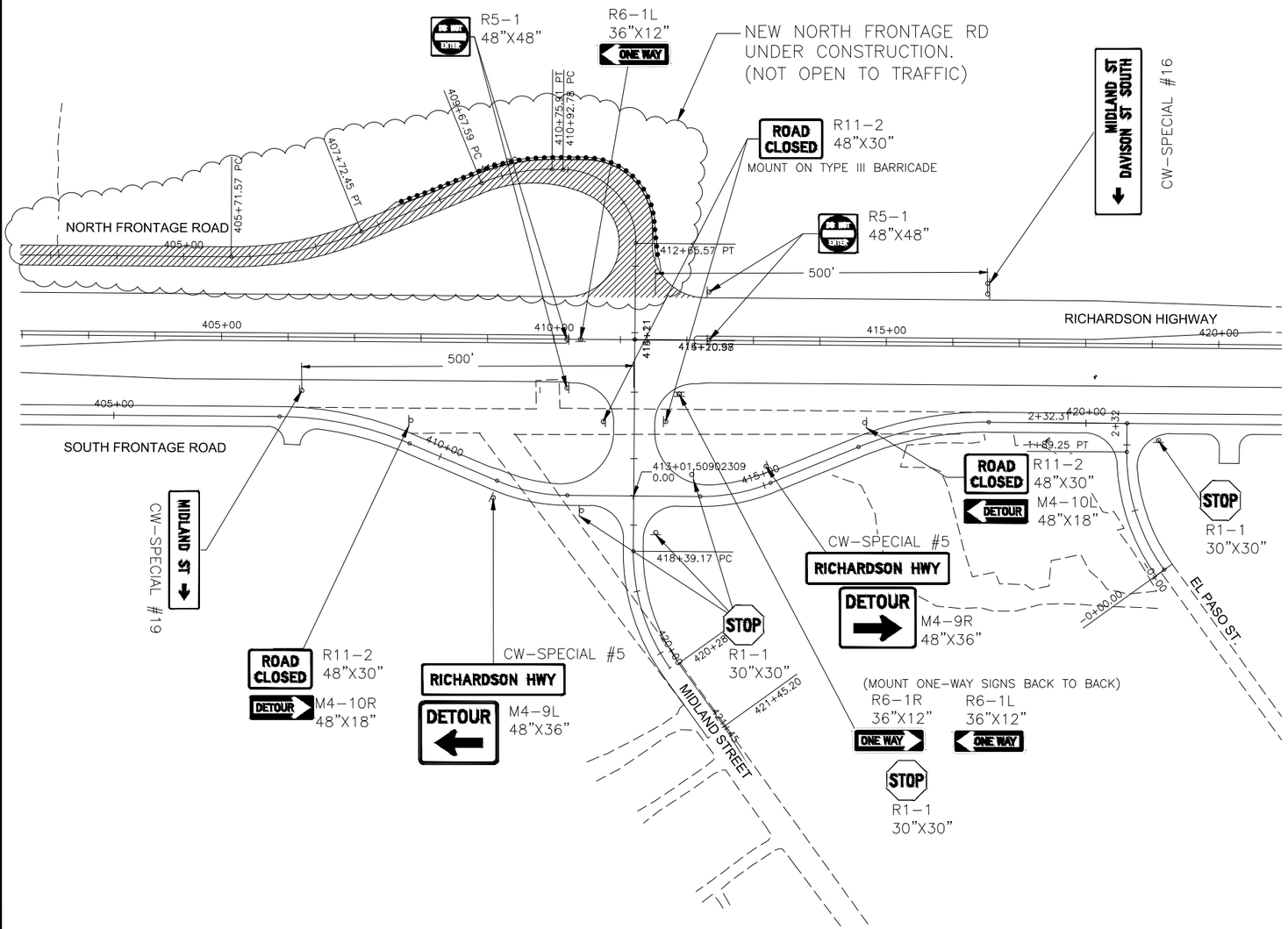
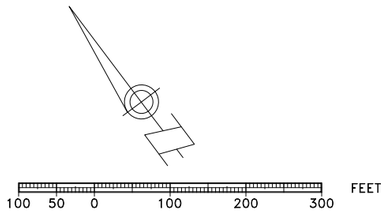
STATE OF ALASKA 49 TH PS&E 04/05/2016 PROFESSIONAL ENGINEER

PHASE IIIA DETOURS
LU ANNE RD

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2016	S19	S31





LEGEND:

UNDER CONSTRUCTION–CLOSED TO TRAFFIC

UNDER CONSTRUCTION–OPEN TO TRAFFIC

PLANS DEVELOPED BY:
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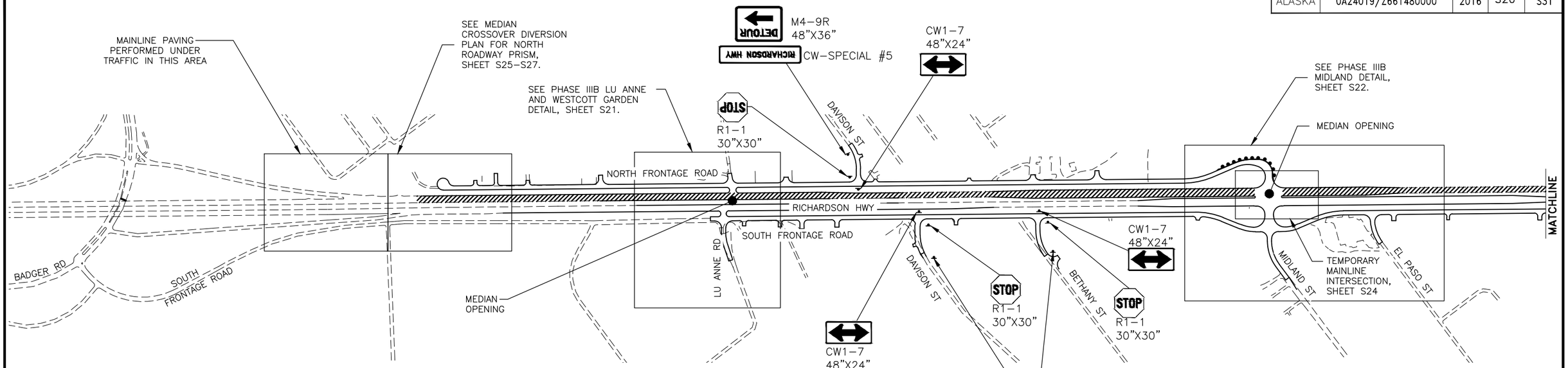
STATE OF ALASKA
49TH
PS&E
04/05/2016
PROFESSIONAL ENGINEER

PHASE IIIA DETOURS
MIDLAND ST

Z:\PROJECTS\PDC\Rich 353-357 Project File\DWGS\Plan Set\TCP\Phase 3A Detours-Phase IIIA Detours - MIDLAND Tue, Apr/05/16 04:18pm

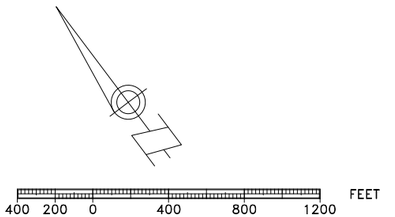
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2016	S20	S31



PHASE IIIB

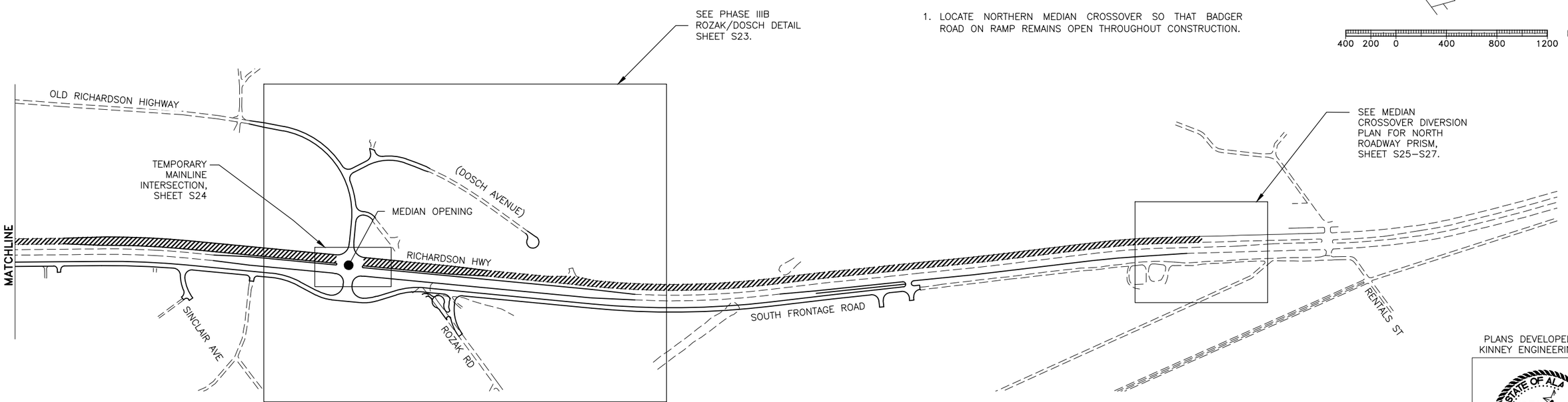
LEGEND:

UNDER CONSTRUCTION



PHASE IIB CONSTRUCTION PHASING NOTES

1. LOCATE NORTHERN MEDIAN CROSSOVER SO THAT BADGER ROAD ON RAMP REMAINS OPEN THROUGHOUT CONSTRUCTION.



PLANS DEVELOPED BY:
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49 TH
PS&E
04/05/2016
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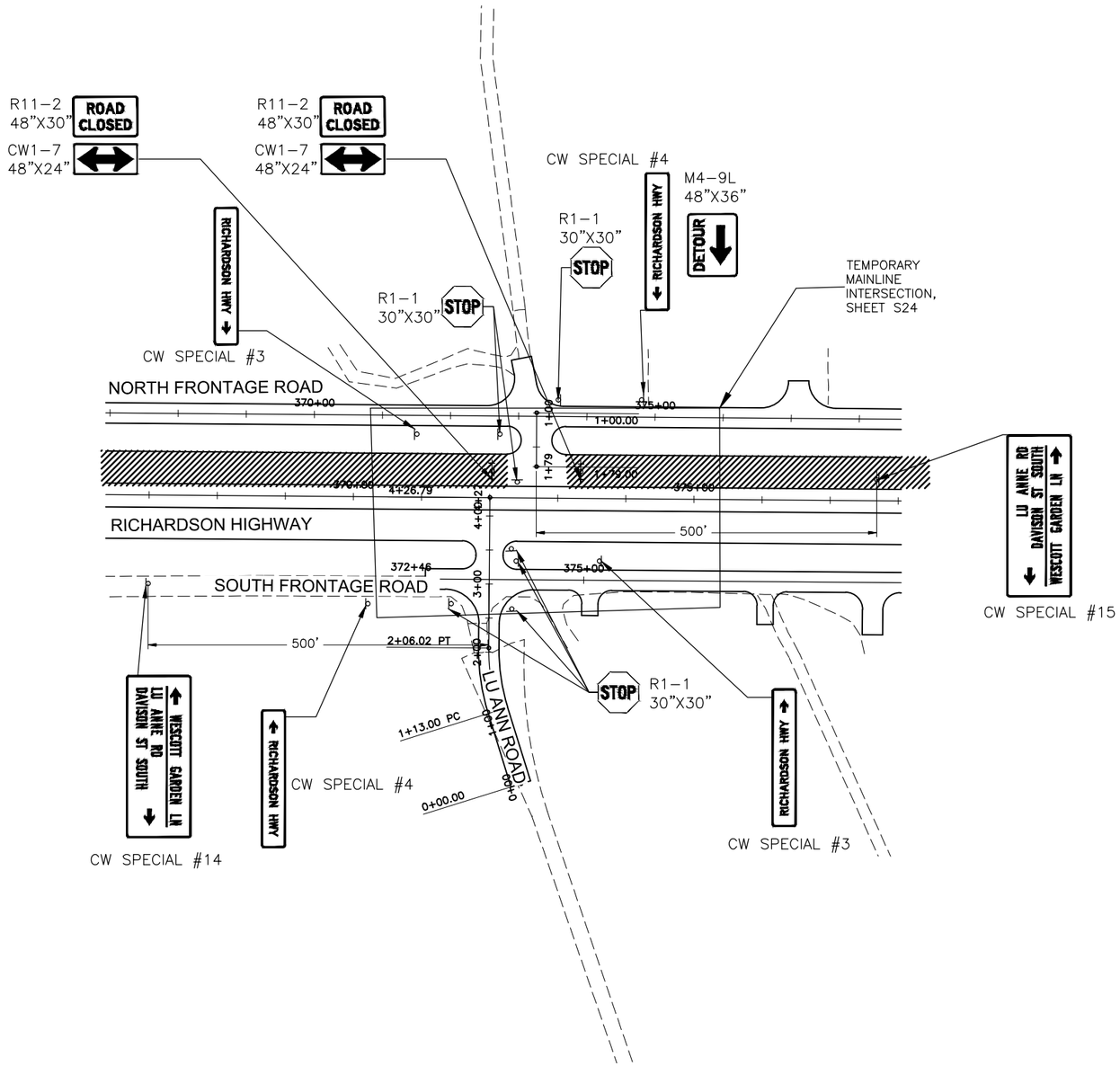
PHASE IIIB DETOUR PLAN

Z:\PROJECTS\PDC\Rich 353-357 Project File\DWGS\Plan Set\TCP\Phasing (14x11mr176)-Phasing - Phase IIIB Tue, Apr/05/16 04:18pm

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2016	S21	S31



LEGEND:

UNDER CONSTRUCTION–CLOSED TO TRAFFIC

UNDER CONSTRUCTION–OPEN TO TRAFFIC

PLANS DEVELOPED BY:
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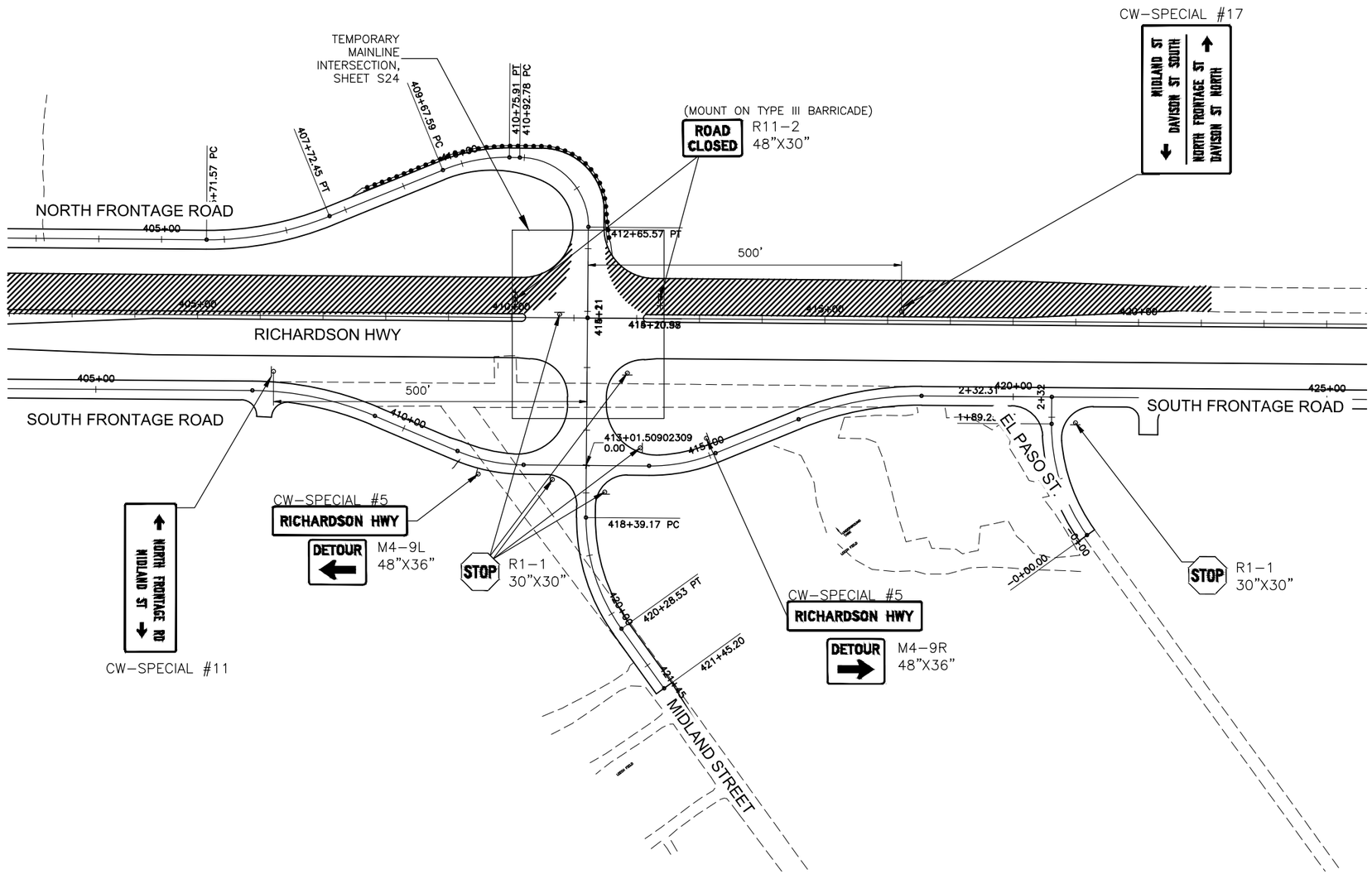
STATE OF ALASKA 49TH PS&E 04/05/2016 REGIONAL ENGINEER

PHASE IIIB DETOURS–LU ANNE RD AND WESCOTT GARDEN LN

Z:\PROJECTS\PDC\Kitch 353-357 Project File\DWGS\Plan Set\TCP\Phase 3 Detours-Phase IIIB Detours - LU ANNE Tue, Apr/05/16 04:18pm

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2016	S22	S31



NOTES:

1. SIGNING PLAN FOR MIDLAND INTERSECTION SHALL BE UTILIZED UNTIL PERMANENT SIGNING IS IN PLACE.
2. SIGNING PLAN ASSUMES EXISTING FRONTAGE ROAD ALIGNMENT TO BE ABANDONED HAS BEEN OBLITERATED.

LEGEND:

UNDER CONSTRUCTION–CLOSED TO TRAFFIC

UNDER CONSTRUCTION–OPEN TO TRAFFIC

PLANS DEVELOPED BY:
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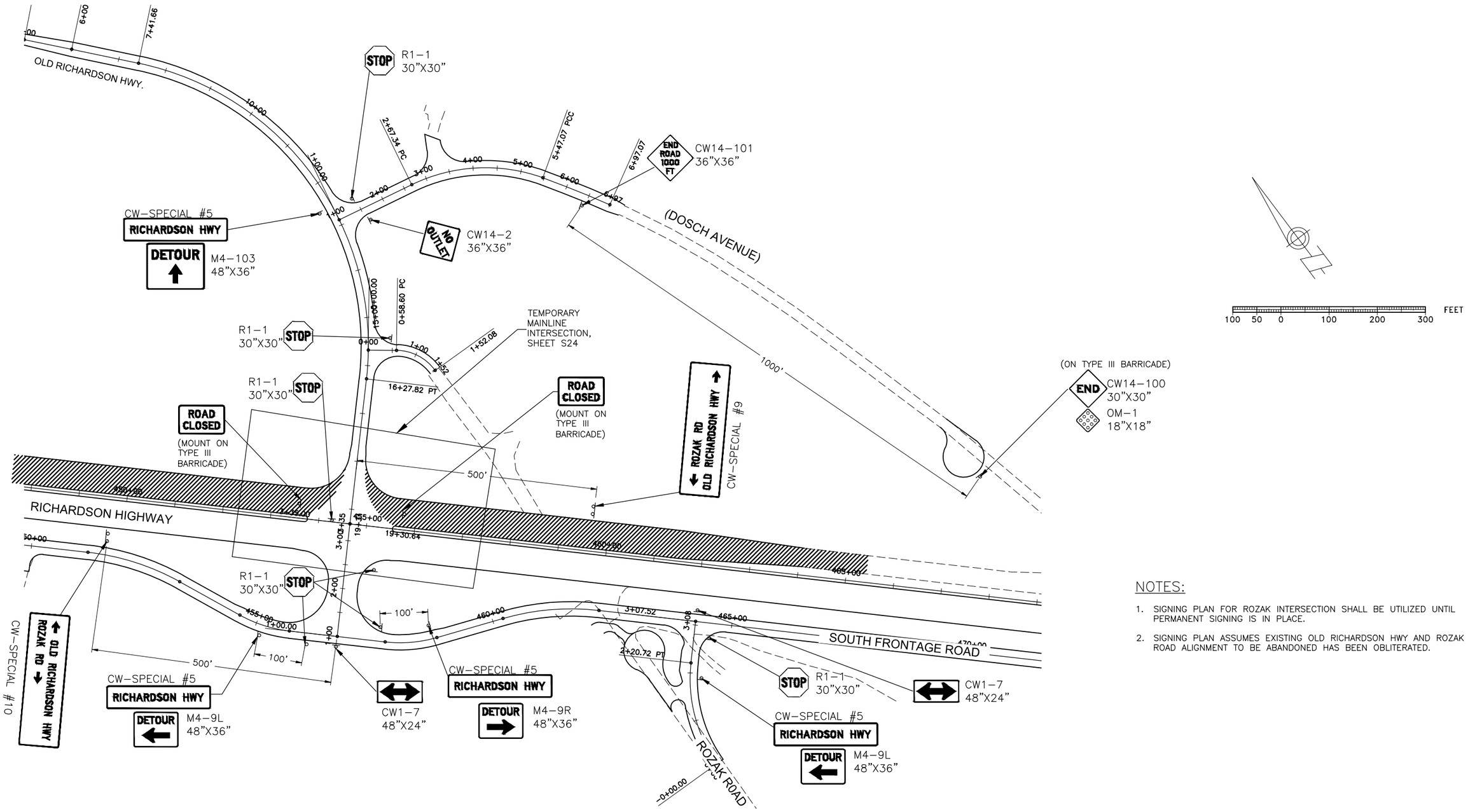
STATE OF ALASKA
49 TH
PS&E
04/05/2016
PROFESSIONAL ENGINEER

PHASE IIIB DETOURS
MIDLAND RD

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2016	S23	S31



NOTES:

1. SIGNING PLAN FOR ROZAK INTERSECTION SHALL BE UTILIZED UNTIL PERMANENT SIGNING IS IN PLACE.
2. SIGNING PLAN ASSUMES EXISTING OLD RICHARDSON HWY AND ROZAK ROAD ALIGNMENT TO BE ABANDONED HAS BEEN OBLITERATED.

LEGEND:

UNDER CONSTRUCTION–CLOSED TO TRAFFIC

UNDER CONSTRUCTION–OPEN TO TRAFFIC

PLANS DEVELOPED BY:
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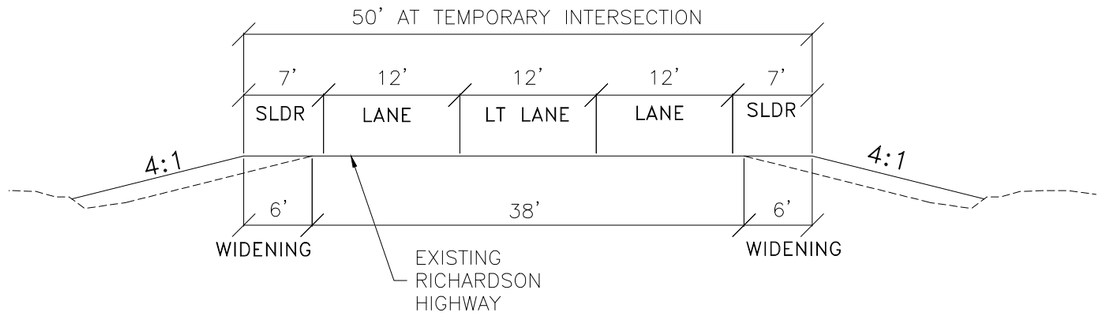
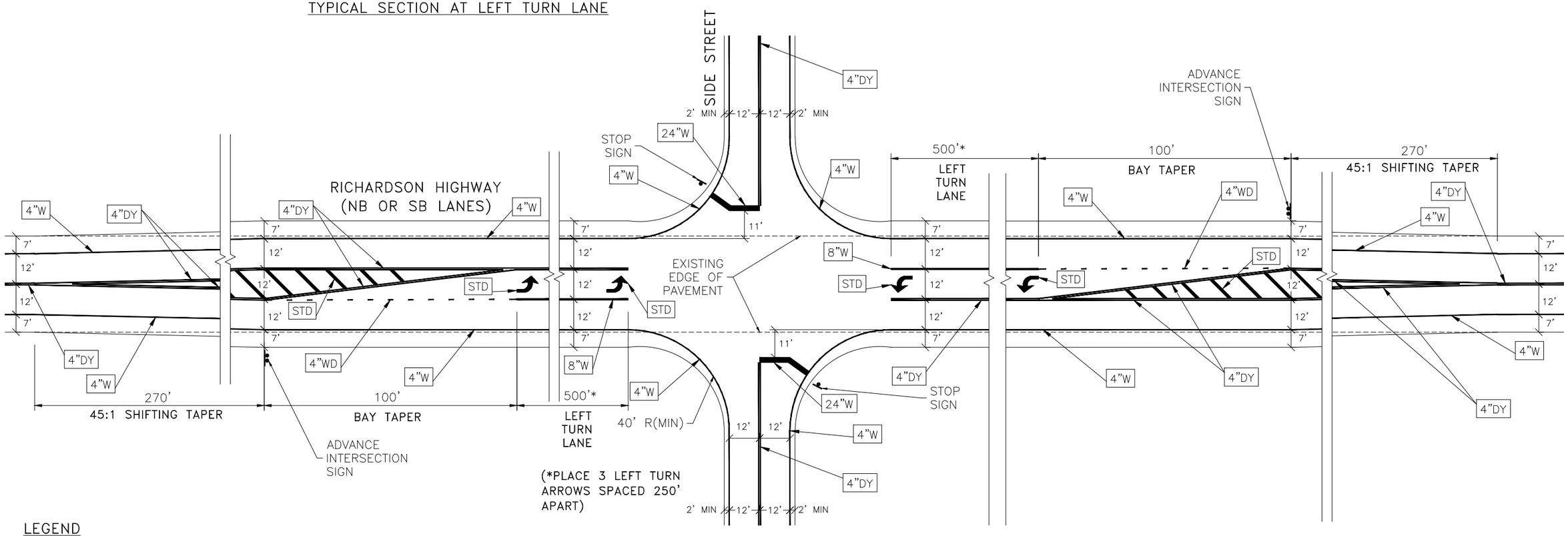
STATE OF ALASKA 49TH PS&E 04/05/2016 PROFESSIONAL ENGINEER

PHASE IIIB DETOURS
ROZAK RD

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2016	S24	S31



TYPICAL SECTION AT LEFT TURN LANE



LEGEND

4"Y	4" YELLOW TEMPORARY PAVEMENT MARKINGS
4"W	4" WHITE TEMPORARY PAVEMENT MARKINGS
4"WD	4" WHITE SKIP LINE(2' STRIPE–6' SKIP) TEMPORARY PAVEMENT MARKINGS
4"DY	4" DOUBLE YELLOW TEMPORARY PAVEMENT MARKINGS
8"W	8" WHITE TEMPORARY PAVEMENT MARKINGS
24"W	24" WHITE TEMPORARY PAVEMENT MARKINGS

TEMPORARY MAINLINE INTERSECTION
PHASE II (NB LANES)
PHASE III (SB LANES)

PLANS DEVELOPED BY:
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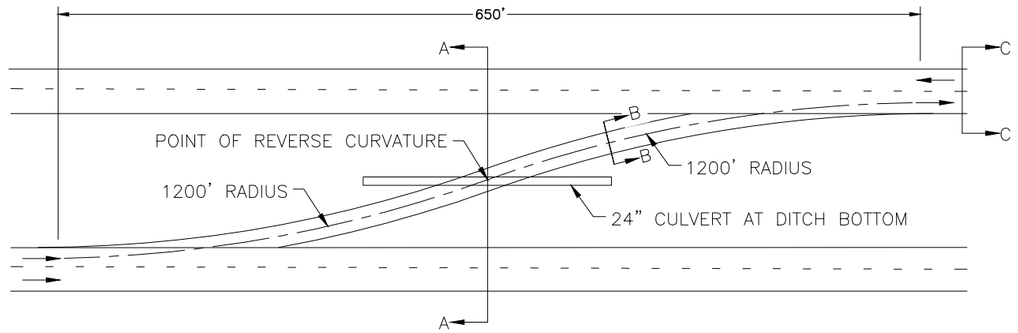
STATE OF ALASKA 49TH PS&E 04/05/2016 PROFESSIONAL ENGINEER

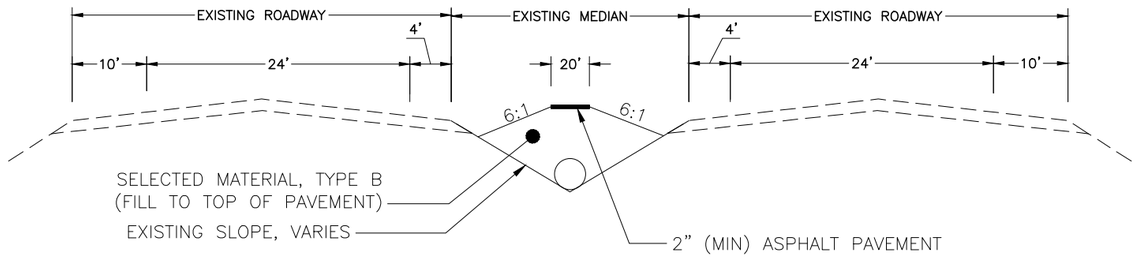
TEMPORARY MAINLINE INTERSECTION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2016	S25	S31

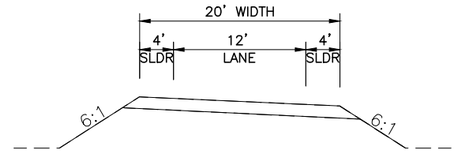


MEDIAN CROSSOVER PLAN VIEW

USE REVERSE OF THIS DETAIL FOR WORK ON THE NORTH ROADWAY PRISM

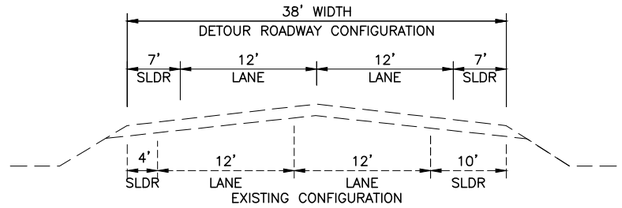


SECTION A–A



SECTION B–B

CROSSOVER ROADWAY



SECTION C–C

NB OR SB LANES DETOUR ROADWAY

MEDIAN CROSSOVER DIVERSION DETAIL

DESIGN SPEED: 45MPH

NOT TO SCALE

TRAFFIC MAINTENANCE SETUP NOTES:

1. THIS DRAWING IS A GRAPHICAL REPRESENTATION ONLY. AND NOT ALL DEVICES ARE SHOWN. INSTALL ALL NECESSARY DEVICES ACCORDING TO THE ATM.
2. CROSS OVERS SHALL BE DESIGNED TO 45 MPH DESIGN SPEED.
3. DO NOT ROUTE TRAFFIC OVER RUMBLE STRIPS. REMOVE AND RE–PAVE AS NEEDED TO ACCOMMODATE TRAFFIC.
4. USE HIGH LEVEL WARNING FLAGS ON ALL SIGNS.
5. REMOVE, PROTECT AND REPLACE SIGNS AS NECESSARY TO PLACE FILL FOR INSTALLATION OF MEDIAN CROSSOVER DIVERSION.
6. REMOVE OR COVER CONFLICTING OR NON–APPLICABLE PAVEMENT MARKINGS. REMOVAL OF PERMANENT PAVEMENT MARKINGS ON THE FINAL PAVED SURFACE WILL NOT BE ALLOWED. CONFLICTING OR NON–APPLICABLE PAVEMENT MARKINGS INCLUDE, BUT ARE NOT LIMITED TO, YELLOW LINES TO THE RIGHT OF TRAFFIC, WHITE SKIP LINES BETWEEN TWO WAY TRAFFIC AND AUXILLIARY LANE MARKINGS.
7. REMOVE TEMPORARY PAVEMENT, BORROW AND CULVERTS WHEN THE CROSSOVER IS NO LONGER NEEDED. ALL MATERIALS USED FOR THE CROSSOVERS AND TEMPORARY ACCESESES BECOMES THE PROPERTY OF THE CONTRACTOR, DISPOSE OF OFF–SITE ACCORDING TO LOCAK REGULATIONS. RESTORE THE MEDIAN TO ITS ORIGINAL CONDITION. RESTORE ORIGINAL PAVEMENT MARKINGS AS NECCESSARY.
8. USE DRUMS IN TAPERS AND TUBULAR MARKERS IN TANGENTS, TUBULAR MARKERS PLACED BETWEEN TRAFFIC ON OPPOSING DIRECTIONS SHALL BE AFFIXED TO THE PAVEMENT.
9. PORTIONS OF THE DIVERSION ARE OUTSIDE THE PAVING LIMITS. PREFORMED MARKING TAPE IS REQUIRED FOR TEMPORARY PAVEMENT MARKINGS OUTSIDE OF PAVING LIMITS.

PLANS DEVELOPED BY:
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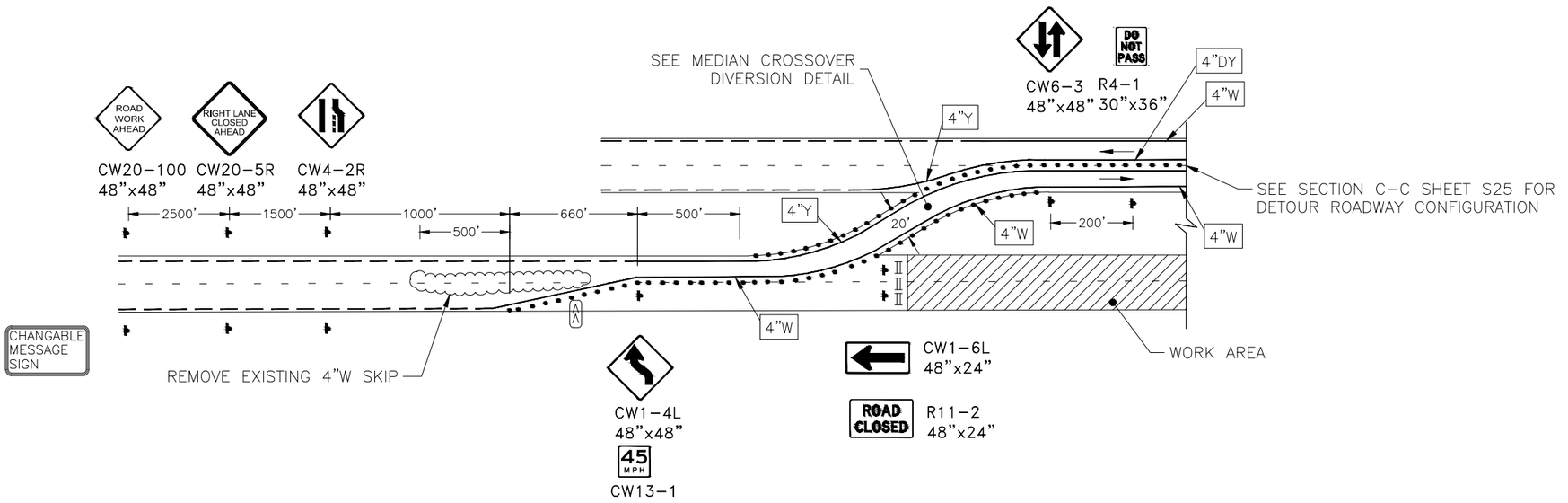
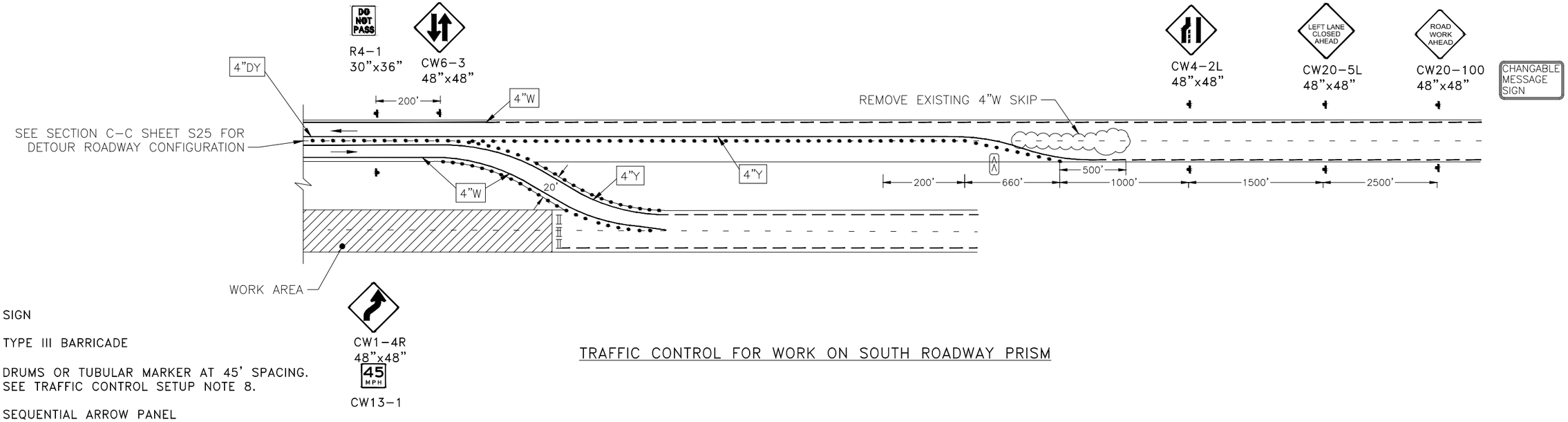
STATE OF ALASKA 49TH PS&E 04/05/2016 PROFESSIONAL ENGINEER

TRAFFIC MAINTENANCE SET UP
CROSSOVER DIVERSION (1 OF 3)

Z:\PROJECTS\PDC\Rich 353-357 Project File\DWGS\Plan Set\TCP\Median Crossover1of3_2012–Median Crossover1of3_2012_2_TCP1 Tue, Apr/05/16 04:21pm

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2016	S26	S31





LEGEND

⊦	SIGN
II	TYPE III BARRICADE
∘	DRUMS OR TUBULAR MARKER AT 45' SPACING. SEE TRAFFIC CONTROL SETUP NOTE 8.
⍓	SEQUENTIAL ARROW PANEL
4"Y	4" YELLOW TEMPORARY PAVEMENT MARKINGS
4"W	4" WHITE TEMPORARY PAVEMENT MARKINGS
4"DY	4" DOUBLE YELLOW TEMPORARY PAVEMENT MARKINGS
CHANGABLE MESSAGE SIGN	PORTABLE CHANGEABLE MESSAGE BOARD SIGN

TRAFFIC CONTROL FOR WORK ON SOUTH ROADWAY PRISM

PLANS DEVELOPED BY:
KINNEY ENGINEERING,LLC

STATE OF ALASKA 49 TH PS&E 04/05/2016 PROFESSIONAL ENGINEER

TRAFFIC MAINTENANCE SET UP CROSSOVER DIVERSION (2 OF 3)

Z:\PROJECTS\PDC\Rich 353-357 Project File\DWGS\Plan Set\TCP\Median Crossover2of3_2012-Median Crossover2of3_2012 - TCP2 Tue, Apr/05/16 04:21pm

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
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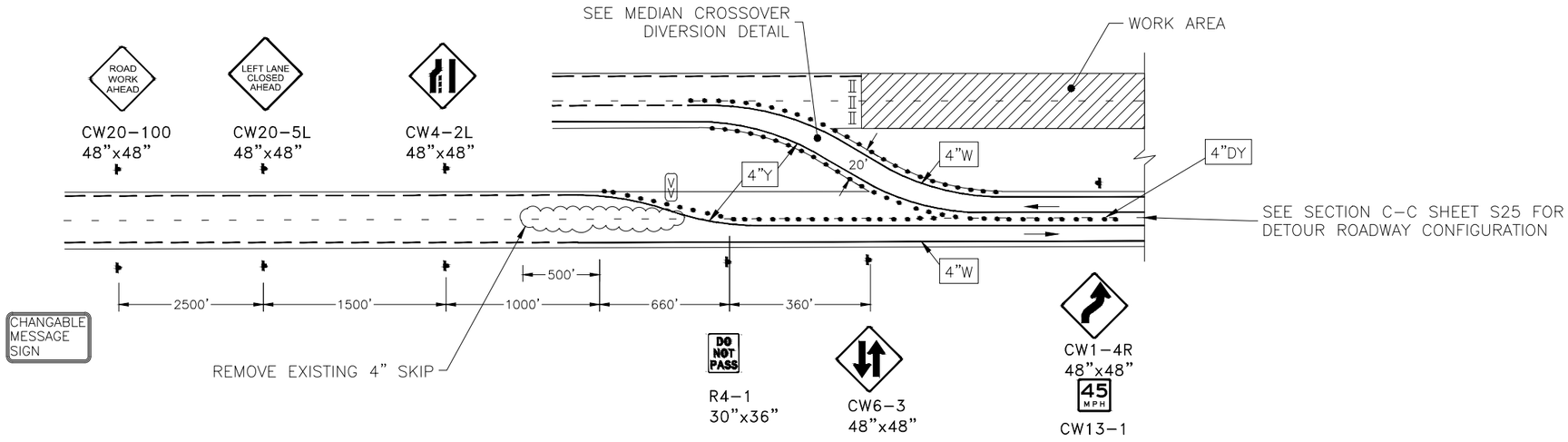
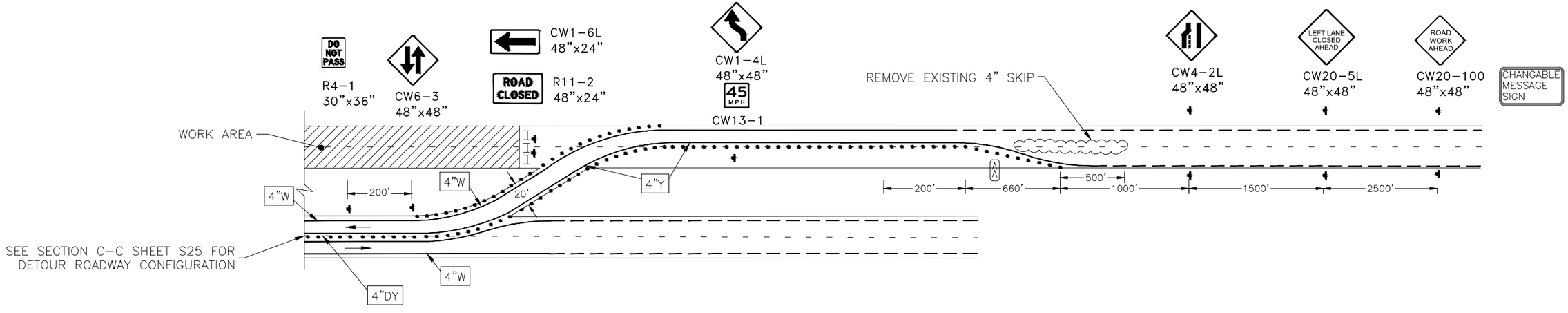




LEGEND

⊢	SIGN
II	TYPE III BARRICADE
∘	DRUMS OR TUBULAR MARKER AT 45' SPACING. SEE TRAFFIC CONTROL SETUP NOTE 8.
⟨⟩	SEQUENTIAL ARROW PANEL
4"Y	4" YELLOW TEMPORARY PAVEMENT MARKINGS
4"W	4" WHITE TEMPORARY PAVEMENT MARKINGS
4"DY	4" DOUBLE YELLOW TEMPORARY PAVEMENT MARKINGS
CHANGABLE MESSAGE SIGN	PORTABLE CHANGEABLE MESSAGE BOARD SIGN

TRAFFIC CONTROL FOR WORK ON NORTH ROADWAY PRISM

PLANS DEVELOPED BY:
KINNEY ENGINEERING,LLC

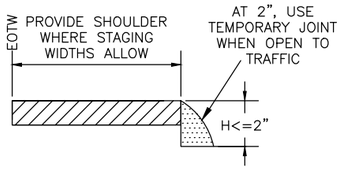
STATE OF ALASKA 49 TH PS&E 04/05/2016 PROFESSIONAL ENGINEER

TRAFFIC MAINTENANCE SET UP CROSSOVER DIVERSION (3 OF 3)

Z:\PROJECTS\PDC\Rich 353-357 Project File\DWGS\Plan Set\TCP\Median Crossover3of3_2012-Median Crossover3of3_2012 - TCP3 Tue, Apr/05/16 04:21pm

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2016	S28	S31

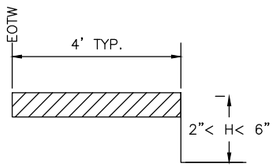
VERTICAL DROP-OFFS



CASE A

DROP-OFFS <2 INCHES
(PAVED SURFACES ONLY)

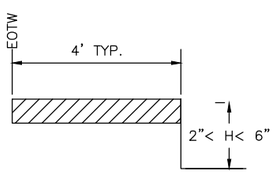
1. USE "UNEVEN LANES" (CW8-11) SIGNS FOR ALL DROP-OFFS IN BETWEEN TRAFFIC LANES.
2. LEAVE NO DROP-OFFS > 1.5" IN THE TRAFFIC LANE OR ACTIVE WHEEL TRACK.



CASE B

2"< DROP-OFFS < 6"
(ALL ROADWAY SURFACES)

1. PLACE CONES OR CANDLES FOR DROP-OFFS > 4 FEET AND ≤ 30 FEET FROM THE EOTW.
2. USE DRUMS OR TYPE II BARRICADES FOR DROP-OFFS ≤ 4 FEET FROM THE EOTW.

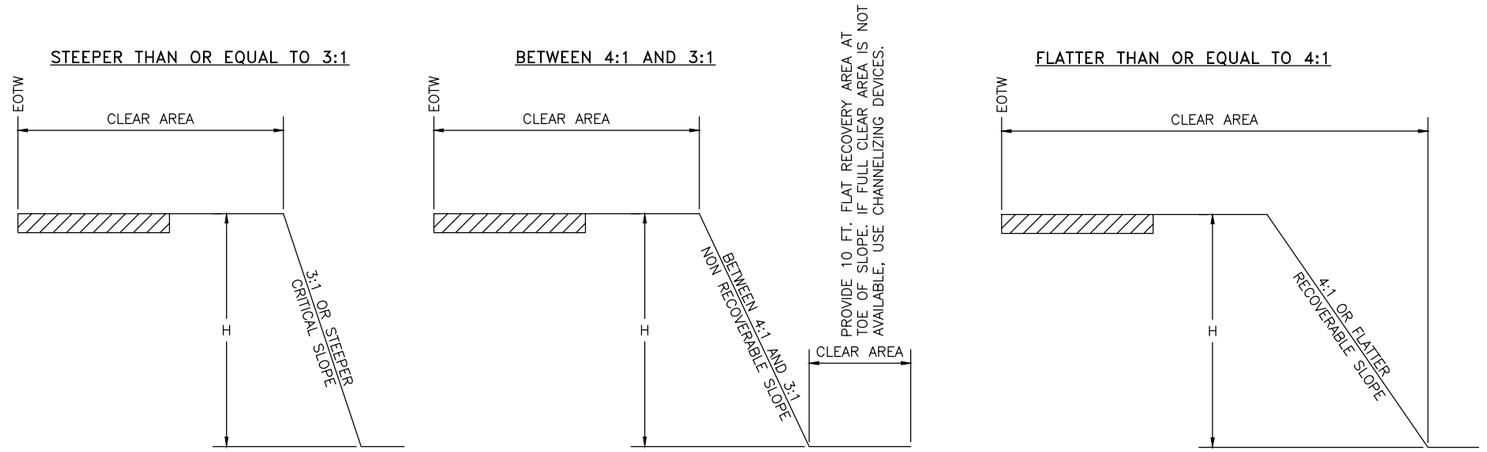


CASE C

DROP-OFFS >6"
(ALL ROADWAY SURFACES AND ROADSIDE SLOPES)

1. PLACE DRUMS OR TYPE II BARRICADES FOR DROP-OFFS < 24" WITHIN THE CLEAR AREA.
2. PROVIDE PORTABLE CONCRETE BARRIER FOR DROP-OFFS >24" WITHIN 15 FEET OF THE EOTW. USE DRUMS OR TYPE II BARRICADES IF BEYOND 15 FEET.

FILL SLOPES



CLEAR AREA REQUIREMENTS

	LOW SPEED < = 35 MPH	INTERMEDIATE SPEED 40 MPH TO 45 MPH	HIGH SPEED ≥ 50 MPH
RURAL	15'	24'	30'
URBAN	10' DITCH SECTION, OR 2' BEHIND CURB	15' DITCH CONDITIONS, OR 2' BEHIND CURB	15' DITCH SECTIONS, OR 2' BEHIND CURB

CHANNELIZING DEVICE REQUIREMENTS FOR SLOPES 3:1 OR STEEPER WITHIN THE CLEAR AREA

	H <= 15'	H > 15'
< 2000 VPD LOW VOLUME	CANDLES OR CONES	TYPE II BARRICADES OR DRUMS
> 2000 VPD	TYPE II BARRICADE OR DRUMS	PORTABLE CONCRETE BARRIER OR TEMPORARY GUARDRAIL

TRAFFIC CONTROL NOTES:

1. USE THE EXISTING CROSS-SECTION (PRIOR TO CONSTRUCTION) AS A BASIS FOR DETERMINING WHEN CHANNELIZING DEVICES ARE NEEDED.
2. INSTALL CHANNELIZING DEVICES WHEN THE HORIZONTAL OR VERTICAL CURVATURE IS MADE MORE SEVERE.
3. INSTALL FLEXIBLE DELINEATORS WHEN ALL VEGETATION OVER 4 FEET HIGH IS CLEARED FROM FILL SLOPES THAT ARE 3:1 OR STEEPER IN THE CLEAR AREA.
4. USE PORTABLE CONCRETE BARRIER FOR WARRANTING CONDITIONS WHICH LAST LONGER THAN 3 DAYS. FOR CONDITIONS LASTING LESS THAN 3 DAYS, OTHER CHANNELIZING DEVICES MAY BE INSTALLED.
5. TERMINATE RUNS OF PORTABLE CONCRETE BARRIER USING THE FOLLOWING METHODS:
   - A) CONNECT TO A PORTABLE CRASH CUSHION, OR
   - B) PROVIDE A CONCRETE BARRIER WITH THRIE BEAM TRANSITION TO W-BEAM GUARDRAIL, TREATED WITH A PARALLEL GUARDRAIL TERMINAL (SEE SECTION 710).
   - C) FLARE THE ENDS OF THE PORTABLE CONCRETE BARRIER AWAY FROM THE ROADWAY AT A RATE OF 7:1 ON A COMPACTED SLOPE OF 6:1 OR FLATTER, OUTSIDE OF THE CLEAR AREA. INSTALL A SLOPING PORTABLE CONCRETE BARRIER END TREATMENT, OR
   - D) BURY IN THE BACKSLOPE.
6. TERMINATE THE RUNS OF TEMPORARY W-BEAM GUARDRAIL USING THE FOLLOWING METHODS.
   - A) PROVIDE A PARALLEL GUARDRAIL TERMINAL TO W-BEAM GUARDRAIL (SEE SECTION 710).
   - B) FLARE THE ENDS OF THE TEMPORARY GUARDRAIL AWAY FROM THE ROADWAY AT A RATE OF 6:1 ON A COMPACTED SLOPE OF 6:1 OR FLATTER OUTSIDE OF THE CLEAR AREA, TERMINATE WITH A STANDARD W-BEAM END SECTION, OR
   - C) BURY IN THE BACKSLOPE.

EQUIPMENT NOTES:

1. WHEN THERE IS ACTIVE, NONMOBILE CONSTRUCTION EQUIPMENT WITHIN THE CLEAR AREA, DELINEATE THE ROADSIDE WITH TRAFFIC CONES.
2. SEPERATE PROCEDURES ARE REQUIRED FOR MOBILE WORK ZONE OPERATIONS AND SHORT DURATION WORK OF LESS THAN 12 HOURS.

WINTER SHUTDOWN NOTES:

1. WHEN REQUIRED, USE CHANNELIZING DEVICES WHICH CAN BE MAINTAINED OVER WINTER.
2. NO CHANNELIZING DEVICES ARE REQUIRED IF:
   - A) CONSTRUCTION SLOPES ARE RECOVERABLE, AND
   - B) SLOPES ARE SMOOTH AND COMPACTED, AND
   - C) REQUIRED CLEAR AREA IS PROVIDED

PLANS DEVELOPED BY:
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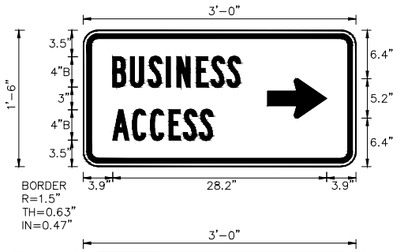
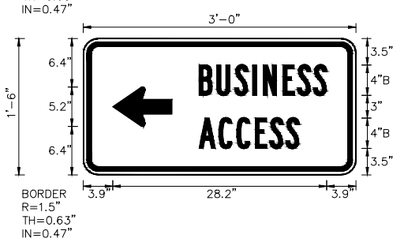
TRAFFIC CONTROL - FILL SLOPES

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2016	S29	S31





CW-SPECIAL #1

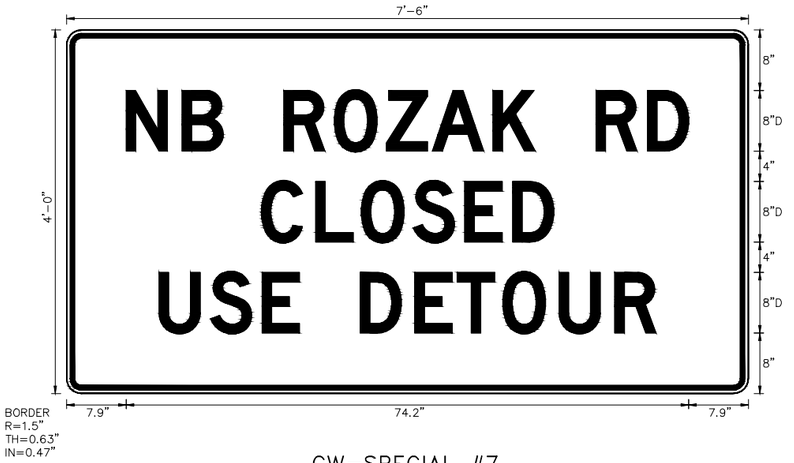
CW-SPECIAL #2

CW-SPECIAL #3

CW-SPECIAL #4

CW-SPECIAL #5

CW-SPECIAL #6



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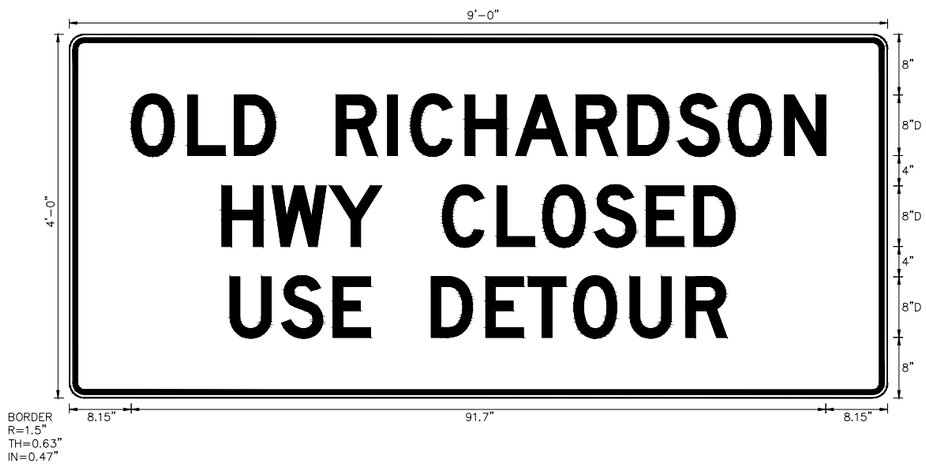

CW-SPECIAL #8

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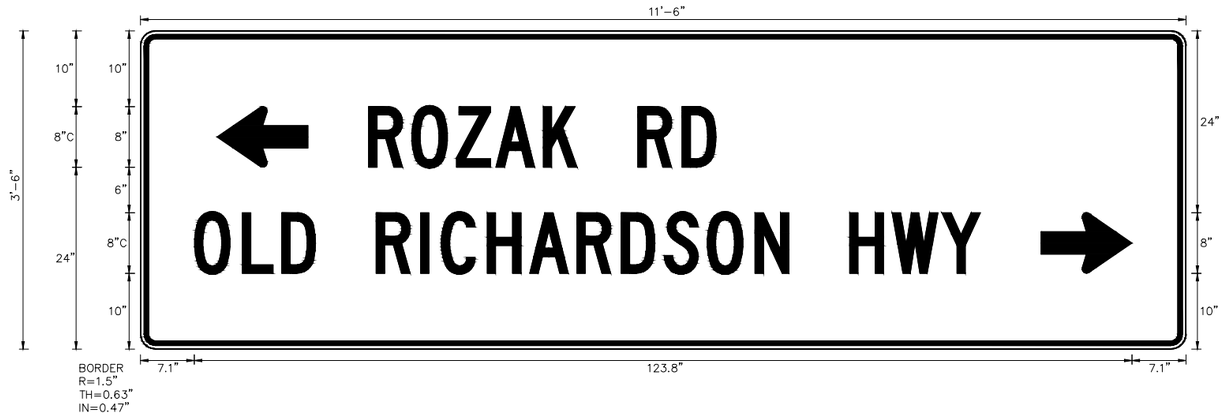
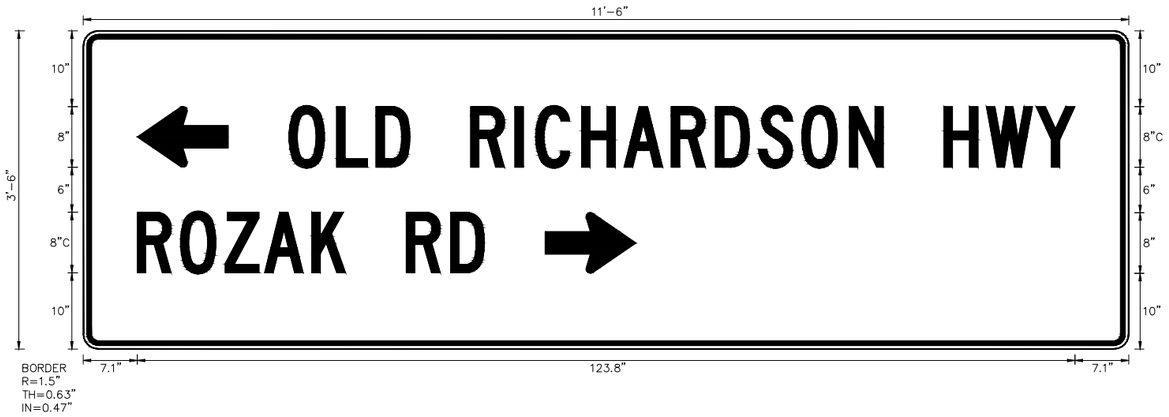
SPECIAL CONSTRUCTION SIGNS (1 OF 3)

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2016	S30	S31



CW-SPECIAL #9

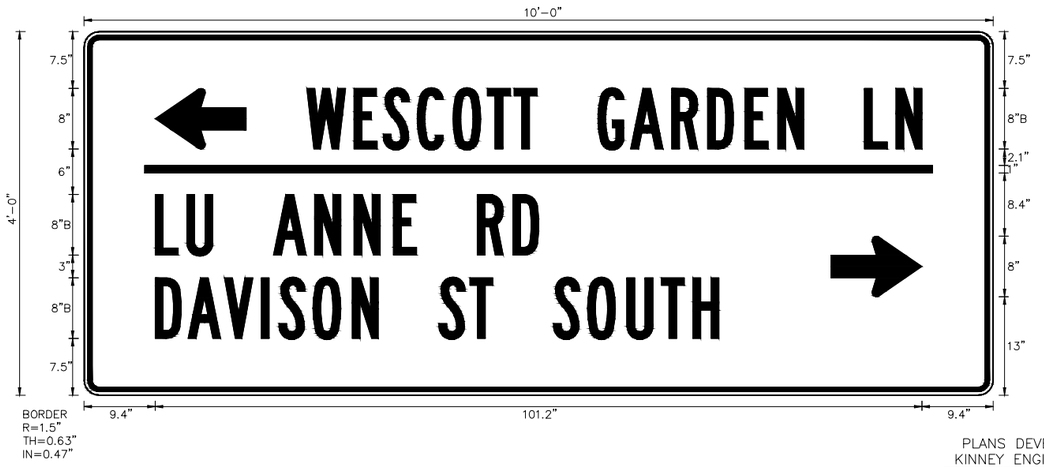
CW-SPECIAL #12



CW-SPECIAL #10

CW-SPECIAL #13

CW-SPECIAL #11



CW-SPECIAL #14

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SPECIAL CONSTRUCTION SIGNS (2 OF 3)

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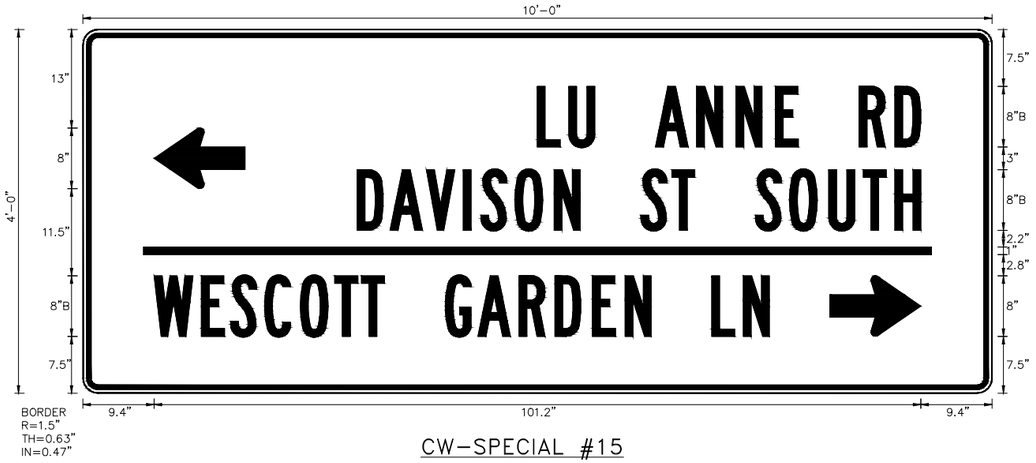
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24019/Z661480000	2016	S31	S31



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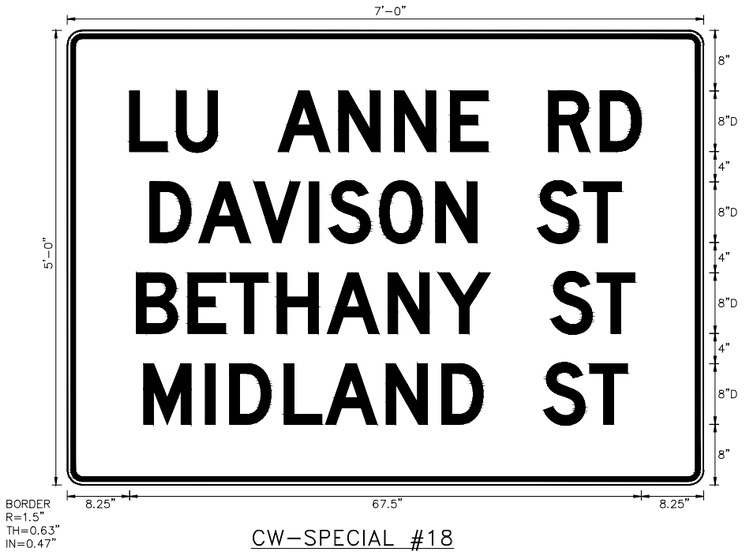

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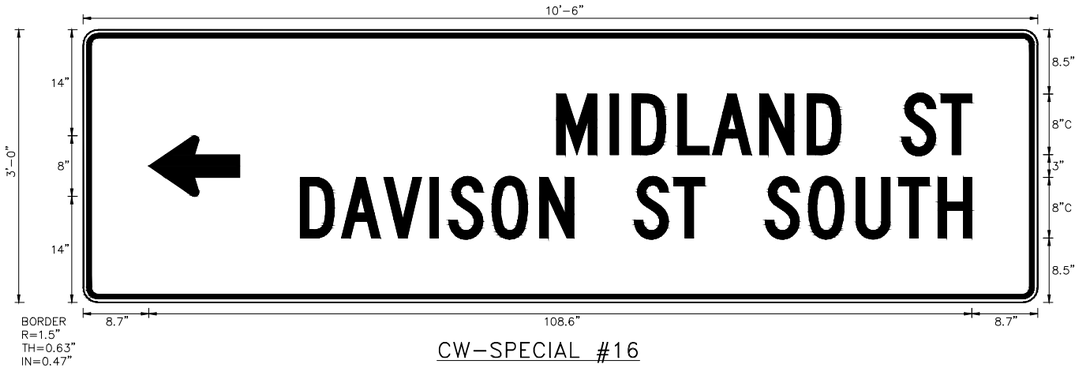

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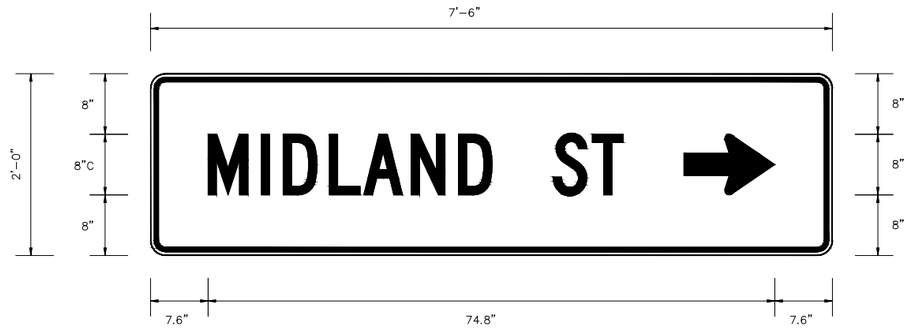

CW-SPECIAL #19

CW-SPECIAL #17

PLANS DEVELOPED BY:
KINNEY ENGINEERING,LLC

STATE OF ALASKA
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SPECIAL CONSTRUCTION SIGNS (3 OF 3)

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