PROPOSED AIRPORT PROJECT

The undersigned hereby certifies that this duplicated document is an exact and true copy of the original.
Jessica Dickala

KAKE AIRPORT
KAKE, ALASKA

October 22, 2018

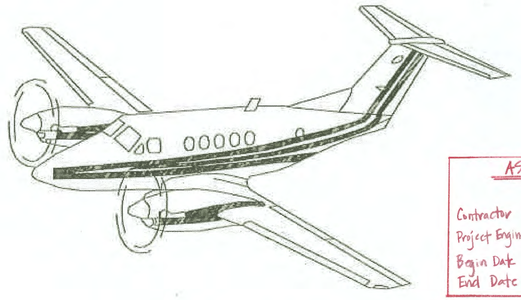
KAKE AIRPORT RUNWAY REHABILITATION

FINAL PS&E

PROJECT NO. SFAPT00078

AIP NO. 3-02-0398-~~XX~~-2018
007

2018



AS-BUILTS
Contractor - SECON
Project Engineer - VAL BEAN
Begin Date - MAY 23, 2019
End Date - SEPTEMBER 4, 2019

SPONSORED BY THE STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
SOUTHCOAST REGION

APPROVED BY: _____ DATE 7/17/18
L. PAT CARROLL, P.E., PRECONSTRUCTION ENGINEER, SOUTHCOAST REGION

ACCEPTED FOR CONSTRUCTION: _____ DATE 24 Jul 2018
D. LANCE MEARIG, P.E., REGIONAL DIRECTOR, SOUTHCOAST REGION

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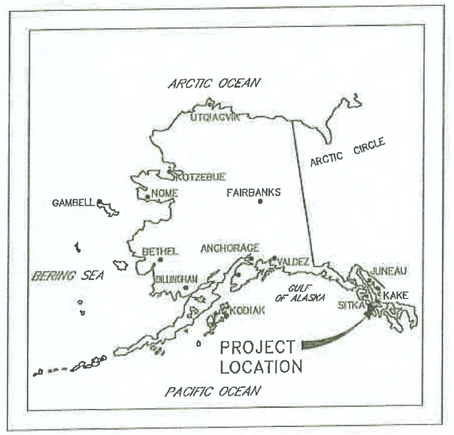
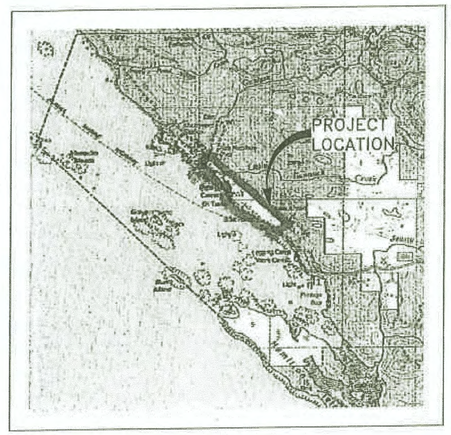


LOCATION MAP



VICINITY MAP

PROJECT DRAWINGS

SHEET NO.	SHEET TITLE
CIVIL	
1	COVER
2	ESTIMATED QUANTITIES AND ESTIMATING FACTORS
3	PROJECT LAYOUT
4	TYPICAL SECTIONS I
5	TYPICAL SECTIONS II
6	RUNWAY 11-29 PLAN AND PROFILE STA 10+00 TO 21+00
7	RUNWAY 11-29 PLAN AND PROFILE STA 21+00 TO 33+00
8	RUNWAY 11-29 PLAN AND PROFILE STA 33+00 TO 45+00
9	RUNWAY 11-29 PLAN AND PROFILE STA 45+00 TO 56+00
10	TEMPORARY RUNWAY 11-29 MARKING PLANS
11	TEMPORARY THRESHOLD MARKINGS
12	TEMPORARY MARKING DETAILS
13	PERMANENT RUNWAY 11-29 MARKING PLAN
14	PERMANENT MARKING DETAILS
ELECTRICAL	
E1	ELECTRICAL LEGEND
E2	ELECTRICAL SITE PLAN - DEMOLITION
E3	ELECTRICAL SITE PLAN - NEW WORK
E4	ELECTRICAL SITE PLAN - APRON ENLARGED PLANS
E5	ELECTRICAL DETAILS I
E6	ELECTRICAL DETAILS II
E7	ELECTRICAL DETAILS III
E8	ROTATING BEACON DETAILS

PROJECT DRAWINGS

SHEET NO.	SHEET TITLE
E9	EQUIPMENT BUILDING DETAILS I
E10	EQUIPMENT BUILDING DETAILS II
E11	CONTROL PANEL DETAILS
E12	FOUNDATION DETAILS
E13	ELECTRICAL SCHEDULES

APPENDIX DRAWINGS

SHEET NO.	SHEET TITLE
APPENDIX: APPENDIX A	
AA1	ESCP PROJECT LAYOUT PLAN
AA2	ESCP PROJECT PHASING
APPENDIX: APPENDIX B	
AB1	SURVEY CONTROL
APPENDIX: APPENDIX D	
AD1	CONSTRUCTION SAFETY AND PHASING PLAN OVERVIEW
AD2	CONSTRUCTION SAFETY AND PHASING PLAN PHASE 1 PLAN
AD3	CONSTRUCTION SAFETY AND PHASING PLAN PHASE 2 PLAN
AD4	CONSTRUCTION SAFETY AND PHASING PLAN PHASE 2 TURNAROUND PLAN
AD5	CONSTRUCTION SAFETY AND PHASING PLAN PHASE 3
AD6	CONSTRUCTION SAFETY AND PHASING PLAN PHASE 3 CROSSOVER PLAN
AD7	CONSTRUCTION SAFETY AND PHASING DETAILS I
AD8	CONSTRUCTION SAFETY AND PHASING DETAILS II

DAVID PYEATT, P.E., PROJECT MANAGER
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHCOAST REGION
6860 GLACIER HIGHWAY
JUNEAU, AK 99811
(907)465-4490

ESTIMATED QUANTITIES

ITEM NO.	SSAC 2018 ITEM NO.	PAY ITEM	PAY UNIT	QUANTITY
G100.010.0000	G-100a	MOBILIZATION AND DEMOBILIZATION	LUMP SUM	ALL REQUIRED
G115.010.0000	G-115a	WORKER MEALS AND LODGING, OR PER DIEM	LUMP SUM	ALL REQUIRED
G130.010.0000	G-130a	FIELD OFFICE	LUMP SUM	ALL REQUIRED
G130.020.0000	G-130b	FIELD LABORATORY	LUMP SUM	ALL REQUIRED
G130.060.0000	G-130g	NUCLEAR TESTING EQUIPMENT STORAGE SHED	EACH	1
G131.010.0000	G-131a	ENGINEERING TRANSPORTATION (TRUCK)	EACH	2
G131.020.0000	G-131b	ENGINEERING TRANSPORTATION (ATV)	EACH	1
G135.010.0000	G-135a	CONSTRUCTION SURVEYING BY THE CONTRACTOR	LUMP SUM	ALL REQUIRED
G135.020.0000	G-135b	EXTRA THREE PERSON SURVEY PARTY	HOUR	~~80~~ 0
G135.200.0000	G-135g	MONUMENT CASE	EACH	2
G135.210.0000	G-135h	ADJUST EXISTING MONUMENT CASE	EACH	2
G700.010.0000	G-700a	AIRPORT FLAGGER	CONTINGENT SUM	ALL REQUIRED
G710.010.0000	G-710a	HIGHWAY TRAFFIC MAINTENANCE	LUMP SUM	ALL REQUIRED
L100.020.0000	L-100b	REGULATOR, L-828	EACH	1
L100.030.0000	L-100d	MEDIUM INTENSITY RUNWAY EDGE AND THRESHOLD LIGHT, L-861 AND L-861E	EACH	63
L100.040.0000	L-100e	TAXIWAY EDGE LIGHT, L-861T	EACH	16
L100.070.0000	L-100h	REMOVE RUNWAY AND TAXIWAY LIGHT	EACH	~~69~~ 70
L100.130.0000	L-100n	AIRPORT SIGN, L-858	EACH	1
L100.150.0000	L-100p	HANDHOLE, L-867, SIZE B	EACH	12
L100.180.0000	L-100r	TEMPORARY RUNWAY LIGHTING SYSTEM	LUMP SUM	ALL REQUIRED
L100.170.0000	L-100ap	SPARE PARTS	CONTINGENT SUM	ALL REQUIRED
L101.020.0000	L-101b	ROTATING BEACON, MEDIUM INTENSITY, L-801A	EACH	1
L103.010.0030	L-103a	30-FOOT HINGED POLE BEACON TOWER	EACH	1
L107.010.0008	L-107a	8-FOOT LIGHTED WIND CONE, IN PLACE	EACH	2
L108.010.2008	L-108a	UNDERGROUND CABLE #8 AWG, COPPER, 5KV FAA TYPE C, L-824	LINEAR FOOT	~~9,800~~ 9,953
L108.030.0006	L-108c-06	#6 BARE COPPER GROUND CONDUCTOR	LINEAR FOOT	~~13,000~~ 13,082
L108.050.1008	L-108e	UNDERGROUND CABLE #8 AWG, COPPER, 600V, TYPE C, L-824	LINEAR FOOT	~~6,900~~ 6,903
L108.070.0000	L-108g	GROUND ROD	EACH	17

ESTIMATED QUANTITIES

ITEM NO.	SSAC 2018 ITEM NO.	PAY ITEM	PAY UNIT	QUANTITY
L109.030.0000	L-109c	ELECTRICAL ENCLOSURE AND FOUNDATION IN PLACE	EACH	1
L109.040.0000	L-109d	INSTALLATION OF ELECTRICAL EQUIPMENT IN NEW OR EXISTING STRUCTURE	EACH	1
L109.080.0000	L-109e	DEMOLITION OF ELECTRICAL EQUIPMENT	LUMP SUM	1
L110.030.1002	L-110a-2	RIGID STEEL CONDUIT, 2-INCH	LINEAR FOOT	430
L110.110.1002	L-110g-2	PE CONDUIT, 2-INCH	LINEAR FOOT	~~12,570~~ 11,569
P152.010.0000	P-152a	UNCLASSIFIED EXCAVATION	CUBIC YARD	~~12,400~~ 22,032.83
P153.200.0000	P-153a	GEOFOAM FILL	LUMP SUM	ALL REQUIRED
P154.020.0000	P-154b	SUBBASE COURSE	TON	~~3,750~~ 4,848.30
P156.010.0000	P-156a	EROSION, SEDIMENT AND POLLUTION CONTROL ADMINISTRATION	LUMP SUM	ALL REQUIRED
P156.030.0000	P-156b	TEMPORARY AIR AND WATER POLLUTION, SOIL EROSION, AND SILTATION CONTROL	LUMP SUM	ALL REQUIRED
P156.050.0000	P-156d	TEMPORARY AIR AND WATER POLLUTION, SOIL EROSION, AND SILTATION CONTROL BY DIRECTIVE	CONTINGENT SUM	ALL REQUIRED
P156.060.0000	P-156f	WITHHOLDING	CONTINGENT SUM	ALL REQUIRED
P161.010.0000	P-161a	RECYCLED ASPHALT PAVEMENT	SQUARE YARD	~~44,600~~ 44,818.95
	P-165a	REMOVAL OF STRUCTURES, CO 1	LUMP SUM	ALL REQUIRED
P209.020.0000	P-209b	CRUSHED AGGREGATE BASE COURSE	TON	~~7,000~~ 10,299.78
P401.010.0040	P-401a-2B	HOT MIX ASPHALT TYPE II, CLASS B	TON	~~7,900~~ 8,102.03
P401.080.0000	P-401b	HOT MIX ASPHALT PRICE ADJUSTMENT	CONTINGENT SUM	ALL REQUIRED
P401.020.5828	P-401c	ASPHALT BINDER, PG 58-28	TON	~~482~~ 441.80
P620.020.0000	P-620c	RUNWAY AND TAXIWAY PAINTING	LUMP SUM	ALL REQUIRED
P620.070.0000	P-620g	TEMPORARY RUNWAY & TAXIWAY PAINTING	LUMP SUM	ALL REQUIRED
P660.030.0000	P-660b	REFLECTIVE MARKER, TYPE II	EACH	12

ESTIMATING FACTORS

ITEM NO.	ITEM	FACTOR/QUANTITY
P-154b	SUBBASE COURSE	1.95 TON/CY
P-209b	CRUSHED AGGREGATE BASE COURSE	1.95 TON/CY
P-401a	HOT MIX ASPHALT, TYPE II, CLASS B	118 LBS/SY/ INCH
P-401c	ASPHALT BINDER PG 58-28	6.10% OF P-401a

Record Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.
PE _____ Date 10.24.19

DESIGN RPK
DRAWN ADC
CHECKED JGL

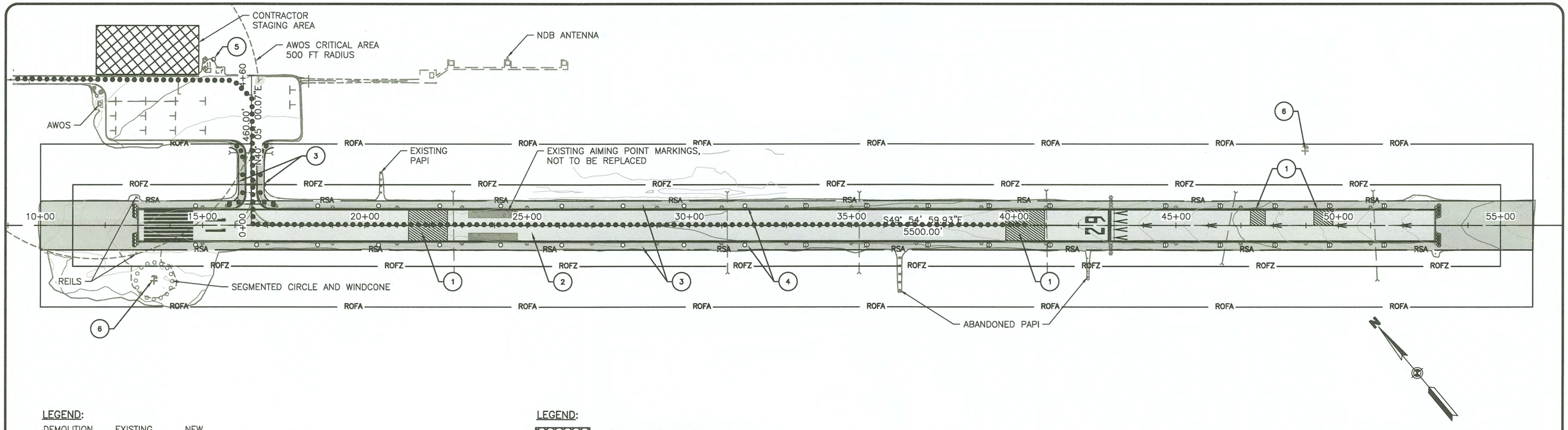
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
SOUTHCOAST REGION-DESIGN AND CONSTRUCTION-AVIATION

STATE OF ALASKA 49TH
Russell P. Kraemer
CE 10478
08/13/2018
REGISTERED PROFESSIONAL ENGINEER

BY	DATE	REVISIONS
RPK	7/9/2018	ADDED AASHTOWARE ITEM NUMBERS TO THE ESTIMATE.
RPK	8/13/2018	CHANGED L-109e PAY UNIT (2) ADDENDUM 2

KAKE AIRPORT
KAKE, ALASKA
RUNWAY REHABILITATION
AIP 3-02-0398-XX-2018/SFAPT00078
ESTIMATED QUANTITIES AND ESTIMATING FACTORS

SHEET 2 OF 27



0 75 150 300 450 600
SCALE IN FEET

LEGEND:

DEMOLITION	EXISTING	NEW	
	— - - —		PROPERTY LINE
	—UGE—		UNDERGROUND ELECTRIC
	-⊡-		UTILITY POLE
			TAXIWAY/RUNWAY LIGHT
			TAXIWAY LIGHT
			RUNWAY LIGHT – OMNI–DIRECTIONAL
			RUNWAY LIGHT – BI–DIRECTIONAL
			THRESHOLD LIGHT
			RUNWAY END LIGHT
			ANTENNA
			REIL
			HMA
			GRAVEL EDGE
			SIGN
			CULVERT
			DRAINAGE/SWALE
	5	5	CONTOUR LINES
	—ROFA—		RUNWAY OBJECT FREE AREA
	—ROFZ—		RUNWAY OBJECT FREE ZONE
	—RSA—		RUNWAY SAFETY AREA
	—TOFA—		TAXIWAY OBJECT FREE AREA
	—TSA—		TAXIWAY SAFETY AREA
			WIND CONE
			SEGMENTED CIRCLE AND WIND CONE
			FILL
			CUT
			HAUL ROUTE
	TH##		BOREHOLE
			CONSTRUCTION PHASE/WORK LIMITS

LEGEND:

- CONTRACTOR STAGING AREA
- RUNWAY REPAIR
- RAP
- HMA

ABBREVIATIONS:

AC	ADVISORY CIRCULAR
AIP	AIRPORT IMPROVEMENT PROGRAM
AWOS	AUTOMATED WEATHER OBSERVATION SYSTEM
BVCE	BEGIN VERTICAL CURVE ELEVATION
BVCS	BEGIN VERTICAL CURVE STATION
CABC	CRUSHED AGGREGATE BASE COURSE
℄	CENTERLINE
CF	CUBIC FOOT
CS	CONTINGENT SUM
CSPP	CONSTRUCTION SAFETY AND PHASING PLAN
CTAF	COMMON TRAFFIC ADVISORY FREQUENCY (122.9 MHz)
CY	CUBIC YARD
E	EAST
E	EASTING
ELEV	ELEVATION
EG	EXISTING GROUND
EPS	EXPANDED POLYSTYRENE (GEOFOAM)
EVCE	END VERTICAL CURVE ELEVATION
EVCS	END VERTICAL CURVE STATION
FAA	FEDERAL AVIATION ADMINISTRATION
FG	FINISHED GRADE
FOD	FOREIGN OBJECTS & DEBRIS
FT	FEET
HMA	HOT MIX ASPHALT
K	RATE OF VERTICAL CURVATURE
LB	POUND
L	LENGTH
LT	LEFT
LF	LINEAR FEET
LS	LUMP SUM
LVC	LENGTH OF VERTICAL CURVE
MAX	MAXIMUM
MIN	MINIMUM
N	NORTHING
NDB	NON–DIRECTIONAL BEACON
O.C.	ON CENTER
OFF	OFFSET
PAPI	PRECISION APPROACH PATH INDICATOR
PC	POINT OF CURVATURE
PT	POINT OF TANGENCY
PVI	POINT OF VERTICAL INTERSECTION
R	RADIUS
RAP	RECYCLED ASPHALT PAVEMENT
REIL	RUNWAY END IDENTIFICATION LIGHT(S)
ROFA	RUNWAY OBJECT FREE AREA
ROFZ	RUNWAY OBSTACLE FREE ZONE
RP	RADIUS POINT
RSA	RUNWAY SAFETY AREA
RT	RIGHT
RW	RUNWAY
S	SOUTH
SCS	SURVEY CONTROL SHEET
STA	STATION
SY	SQUARE YARD
TOFA	TAXIWAY OBJECT FREE AREA
TSA	TAXIWAY SAFETY AREA
TYP	TYPICAL
TW	TAXIWAY

GENERAL PROJECT NOTES:

1. NO UNCOVERED, STOCKPILED MATERIAL WILL BE PERMITTED WITHIN THE AIRPORT PROPERTY.
2. REFER TO THE CSPP AND PROJECT SPECIFICATIONS FOR CONSTRUCTION PHASING, AND SEQUENCING INFORMATION FOR LIMITATIONS ON CONSTRUCTION.
3. SEE SURVEY CONTROL FOR HORIZONTAL AND VERTICAL CONTROL, INCLUDED AS SUPPLEMENTAL INFORMATION.
4. CONTRACTOR IS RESPONSIBLE FOR PREPARING STAGING AREA.

PROJECT TASKS: (#)

(1) REPAIR RUNWAY DEPRESSIONS WITH GEOFOAM
(2) REHABILITATE RUNWAY PAVEMENT.
(3) RECONSTRUCT RSA AND TSA GRADES.
(4) REPLACE RUNWAY AND TAXIWAY LIGHTING SYSTEM.
(5) CONSTRUCT AIRPORT BEACON AND ELECTRICAL EQUIPMENT ENCLOSURE.
(6) REPLACE LIGHTED WIND CONES.

Record Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.
PE _____ Date 10.24.19

DESIGN RPK
DRAWN ADC
CHECKED JGL

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
SOUTHCOAST REGION–DESIGN AND CONSTRUCTION–AVIATION

STATE OF ALASKA 49TH — CE 11141 — 06/25/18 — REGISTERED PROFESSIONAL ENGINEER

BY	DATE	REVISIONS

KAKE AIRPORT
KAKE, ALASKA
RUNWAY REHABILITATION
AIP 3–02–0398–XX–2018/SFAPT00078
PROJECT LAYOUT

SHEET 3 OF 27

PLANS DEVELOPED BY: STANTEC CONSULTING SERVICES, INC. 725 EAST FIREWEED LANE, SUITE 200, ANCHORAGE, AK 99503–2245 907–276–4245 CERTIFICATE OF AUTHORIZATION #126386
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PLANS DEVELOPED BY: STANTEC CONSULTING SERVICES, INC. 725 EAST FIREWEED LANE, SUITE 200, ANCHORAGE, AK 99503-2245 907-276-4245 CERTIFICATE OF AUTHORIZATION #126386
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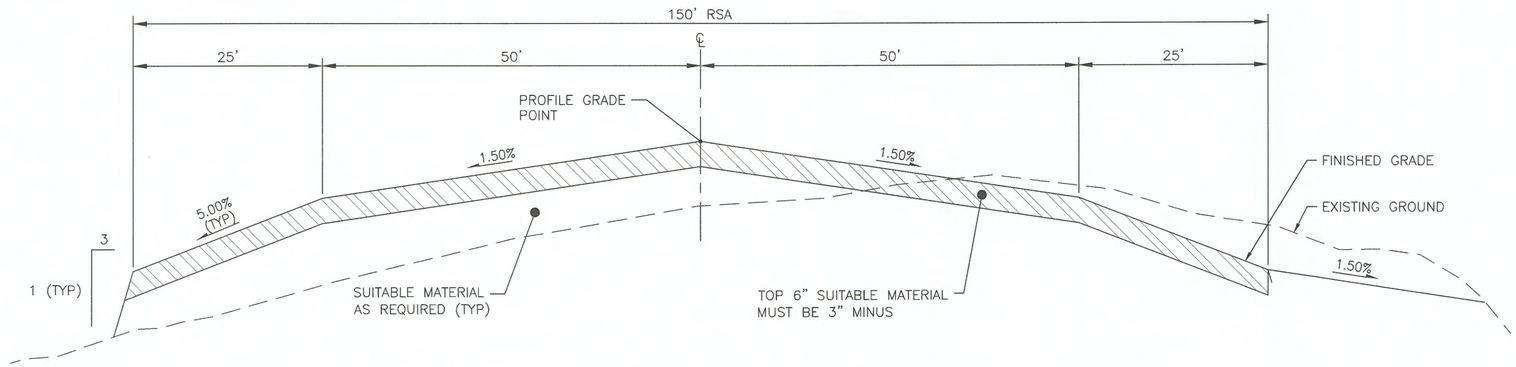
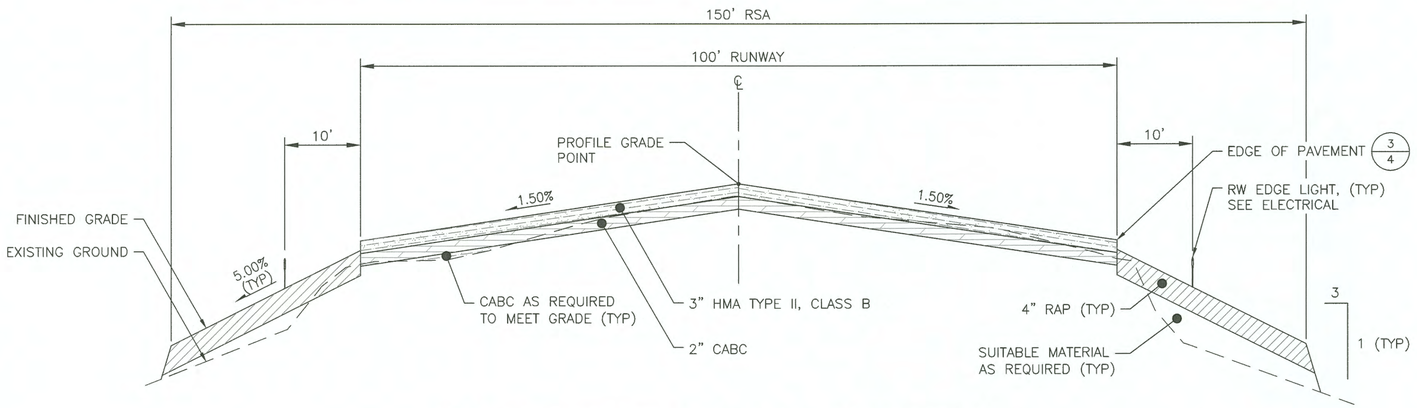


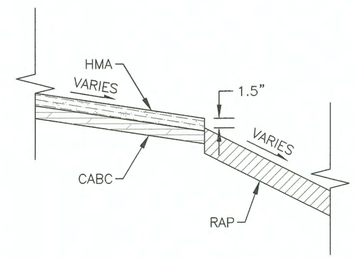
1/4 RSA TYPICAL SECTION

STA. 10+00 TO 13+00
STA 53+00 TO 56+00



2/4 RUNWAY TYPICAL PAVEMENT SECTION

STA. 13+00 TO STA 53+00 (EXCEPT FOR EPS REPAIR SECTIONS)



3/4 EDGE OF PAVEMENT

NTS

Record Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.
PE _____ Date 10.24.19

DESIGN RPK
DRAWN ADC
CHECKED JGL

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
SOUTHCOAST REGION–DESIGN AND CONSTRUCTION–AVIATION

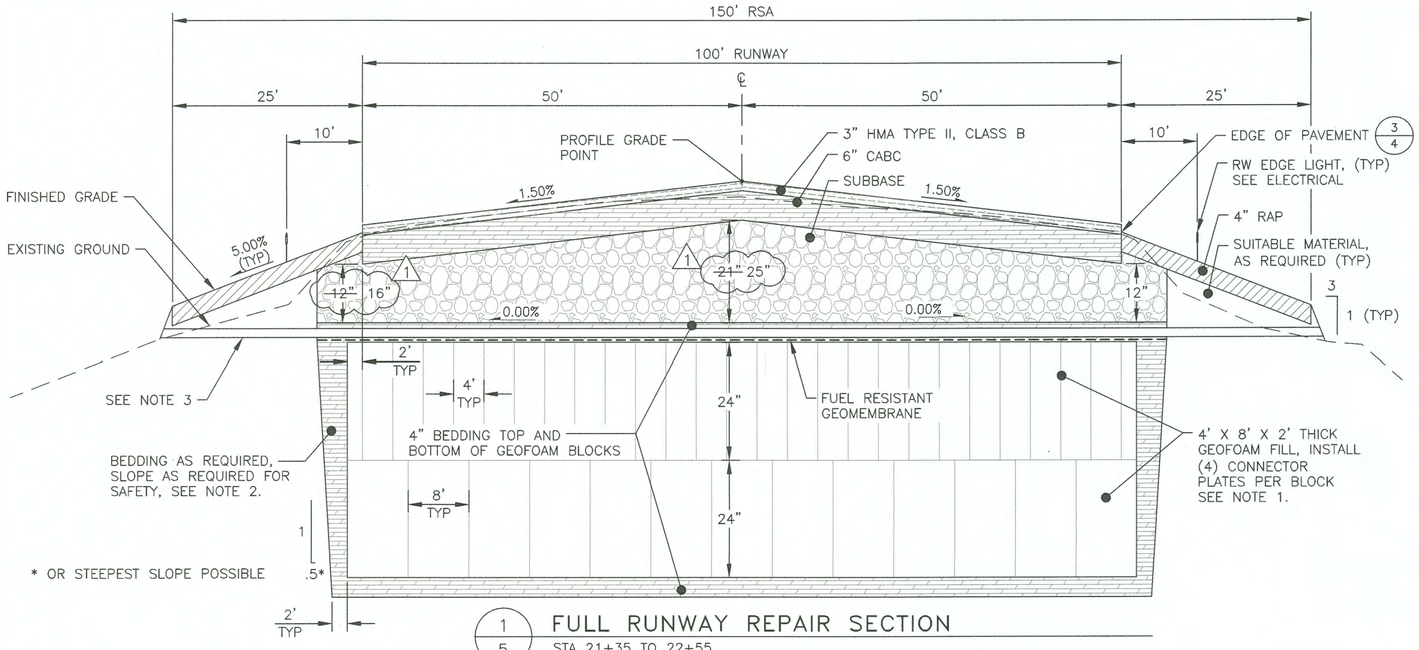
STATE OF ALASKA 49TH
CE 11140
06/25/18
REGISTERED PROFESSIONAL ENGINEER

BY	DATE	REVISIONS

KAKE AIRPORT
KAKE, ALASKA
RUNWAY REHABILITATION
AIP 3-02-0398-XX-2018/SFAPT00078

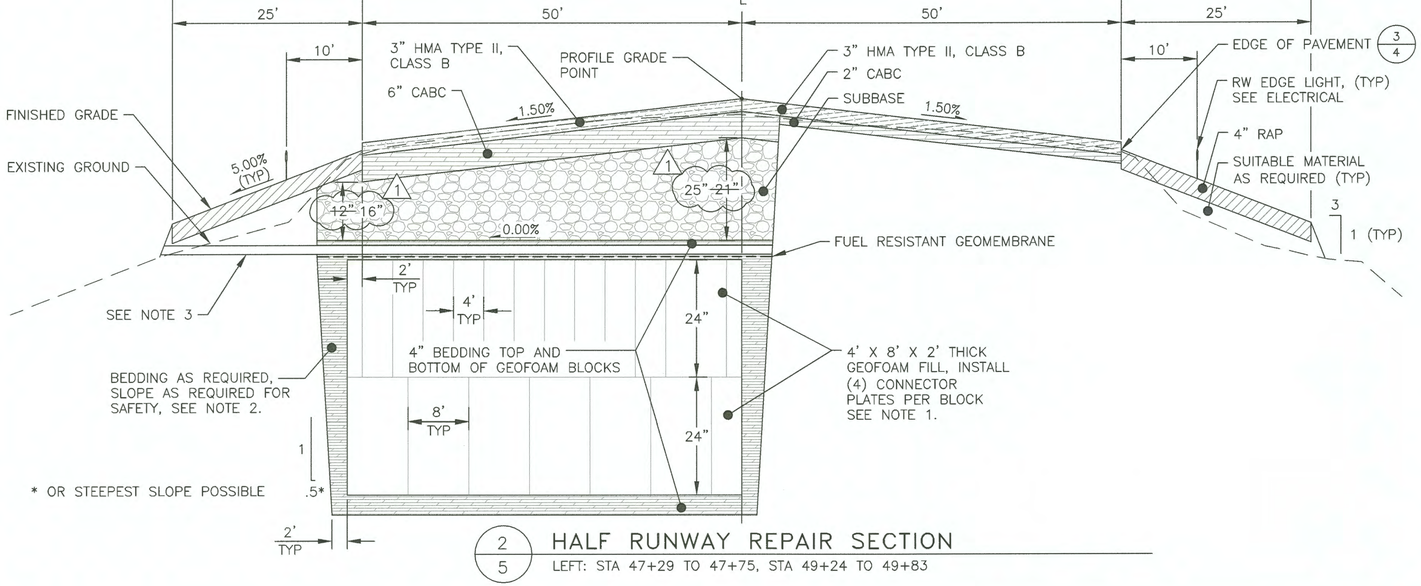
TYPICAL SECTIONS I

SHEET 4 OF 27



1/5 FULL RUNWAY REPAIR SECTION

STA 21+35 TO 22+55
STA 39+75 TO 40+95

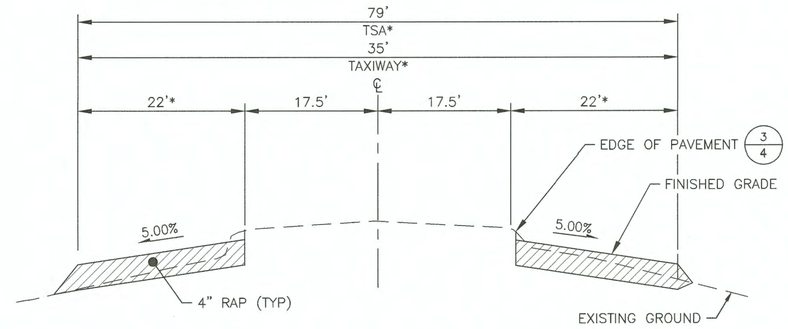


2/5 HALF RUNWAY REPAIR SECTION

LEFT: STA 47+29 TO 47+75, STA 49+24 TO 49+83

RUNWAY REPAIR SECTION NOTES:

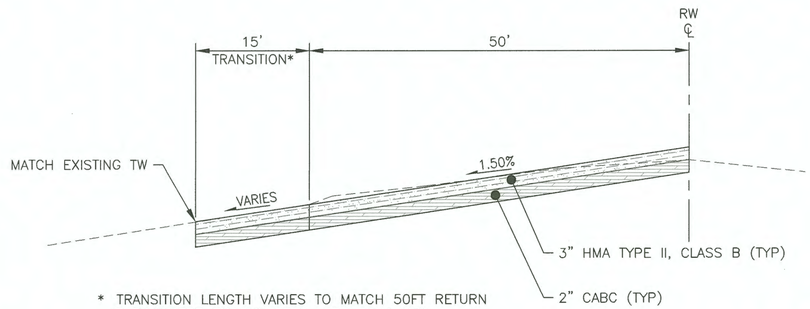
1. ORIENT SECOND LAYER OF GEOFOAM BLOCK 90° AND TO STAGGER JOINTS WITH A 50% OFFSET.
2. DO NOT USE RAP OR CABC MIXED WITH RAP AS BEDDING AGAINST THE GEOFOAM BLOCKS.
3. TRANSVERSE RUNS OF 2"ø PERFORATED PVC PIPE AT 15' O.C. DAYLIGHT TO EDGE OF EMBANKMENT.



* MATCH EXISTING RETURN RADII AT INTERSECTIONS, SEE PLAN VIEW.

3/5 TAXIWAY TYPICAL SECTION

STA. 0+75 TO 2+50



* TRANSITION LENGTH VARIES TO MATCH 50FT RETURN RADII WHERE ENCOUNTERED. SEE PLAN VIEW.

4/5 TAXIWAY TRANSITION SECTION

NTS

Record Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.
PE _____ Date 3.6.20

DESIGN RPK
DRAWN ADC
CHECKED JGL

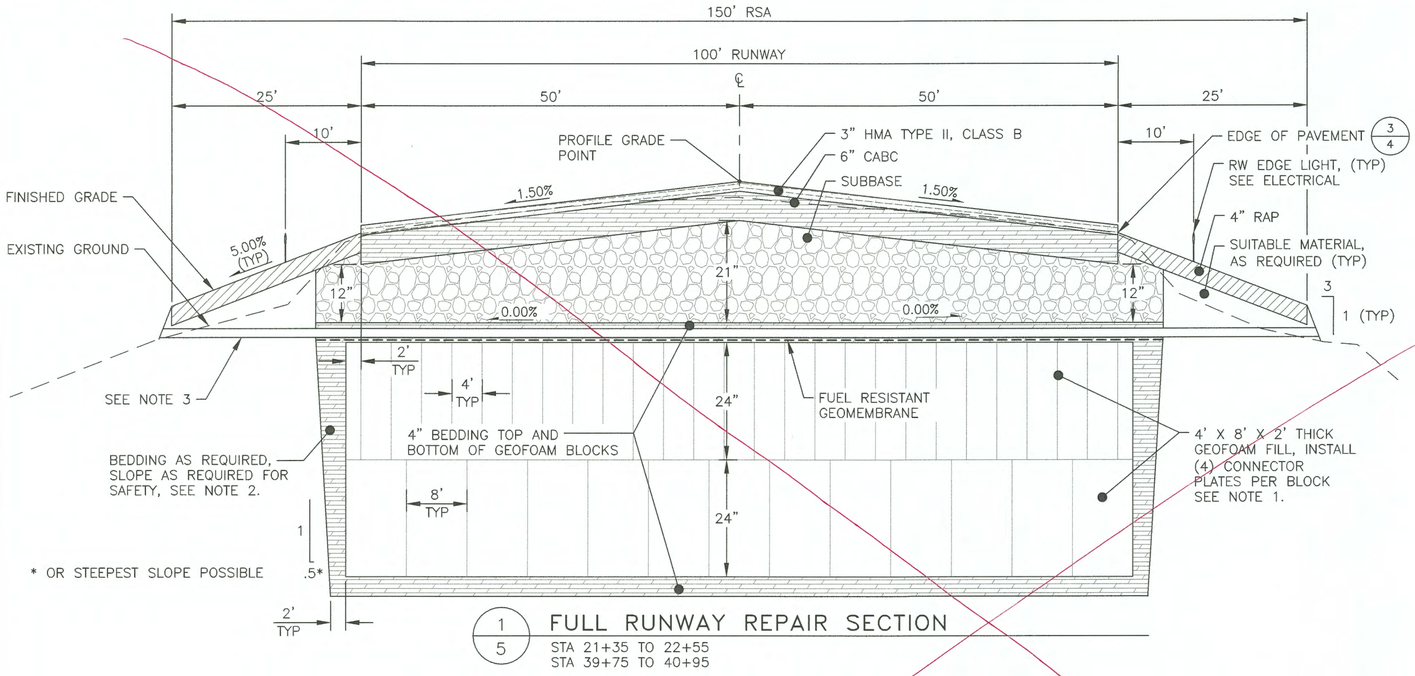
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
SOUTHCOAST REGION–DESIGN AND CONSTRUCTION–AVIATION

STATE OF ALASKA 49TH — Johnathan G. Limb CE 11243 06/25/19 — REGISTERED PROFESSIONAL ENGINEER

BY	DATE	REVISIONS
JGL	04/05/19	1 REVISED DEPTH OF GEOFOAM BELOW FG

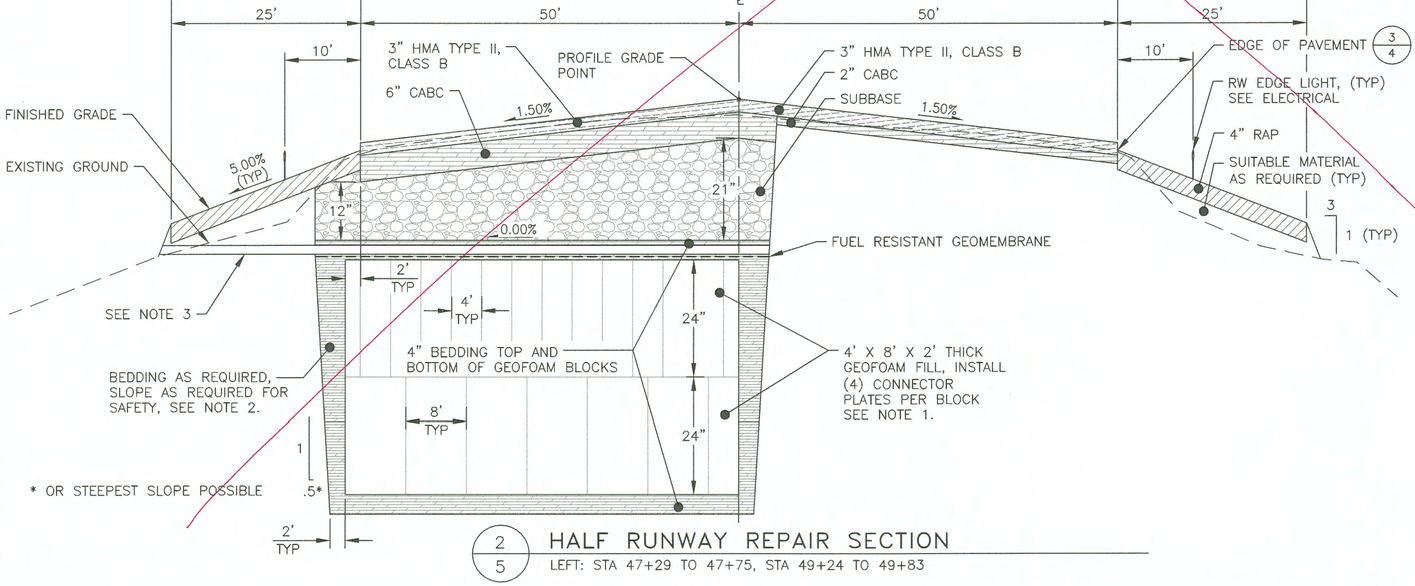
KAKE AIRPORT
KAKE, ALASKA
RUNWAY REHABILITATION
AIP 3-02-0398-XX-2018/SFAPT00078
TYPICAL SECTIONS II

SHEET 5 OF 27



1/5 FULL RUNWAY REPAIR SECTION

STA 21+35 TO 22+55
STA 39+75 TO 40+95

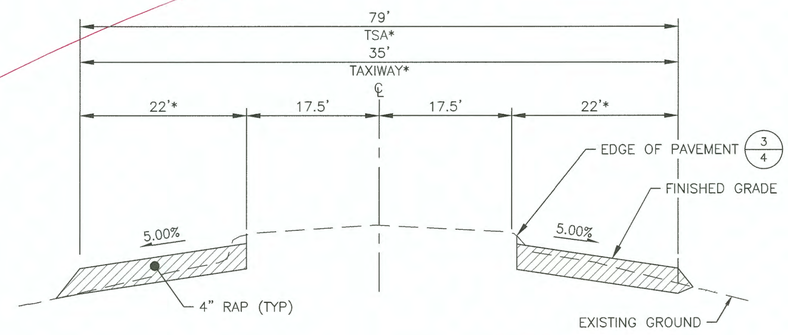


2/5 HALF RUNWAY REPAIR SECTION

LEFT: STA 47+29 TO 47+75, STA 49+24 TO 49+83

RUNWAY REPAIR SECTION NOTES:

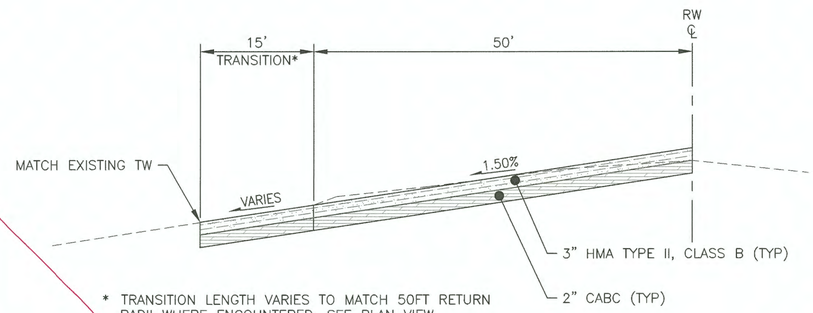
1. ORIENT SECOND LAYER OF GEOFOAM BLOCK 90° AND TO STAGGER JOINTS WITH A 50% OFFSET.
2. DO NOT USE RAP OR CABC MIXED WITH RAP AS BEDDING AGAINST THE GEOFOAM BLOCKS.
3. TRANSVERSE RUNS OF 2"ø PERFORATED PVC PIPE AT 15' O.C. DAYLIGHT TO EDGE OF EMBANKMENT.



* MATCH EXISTING RETURN RADII AT INTERSECTIONS, SEE PLAN VIEW.

3/5 TAXIWAY TYPICAL SECTION

STA. 0+75 TO 2+50



* TRANSITION LENGTH VARIES TO MATCH 50FT RETURN RADII WHERE ENCOUNTERED. SEE PLAN VIEW.

4/5 TAXIWAY TRANSITION SECTION

NTS

Record Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.
PE _____ Date 10.24.19

DESIGN RPK
DRAWN ADC
CHECKED JGL

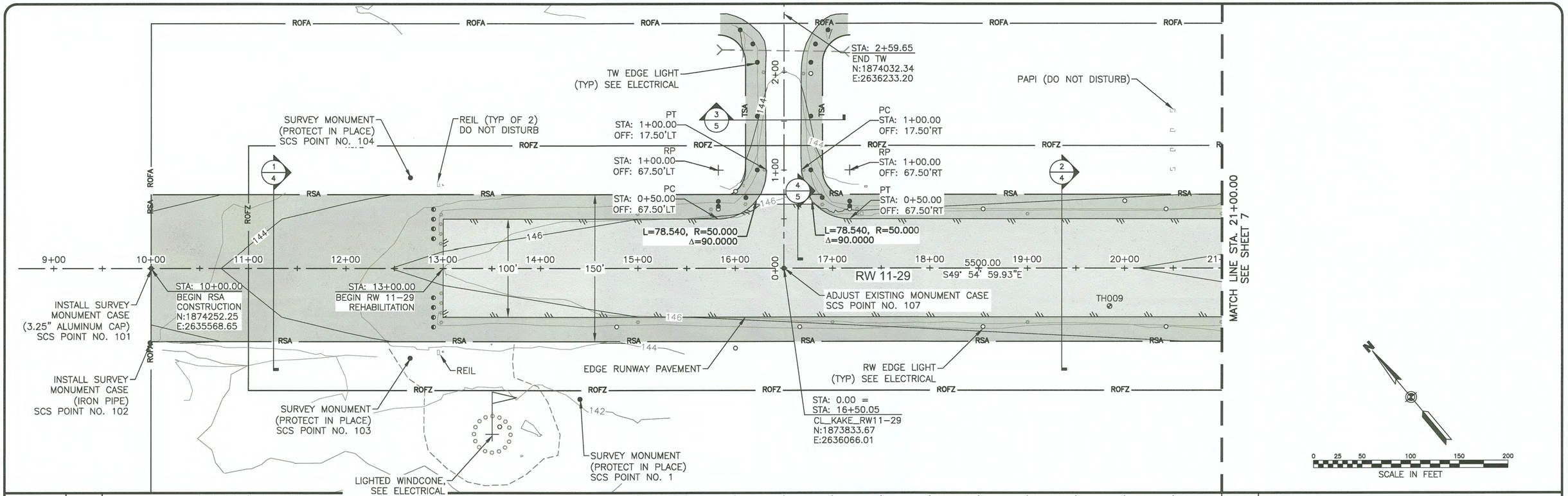
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
SOUTHCOAST REGION–DESIGN AND CONSTRUCTION–AVIATION

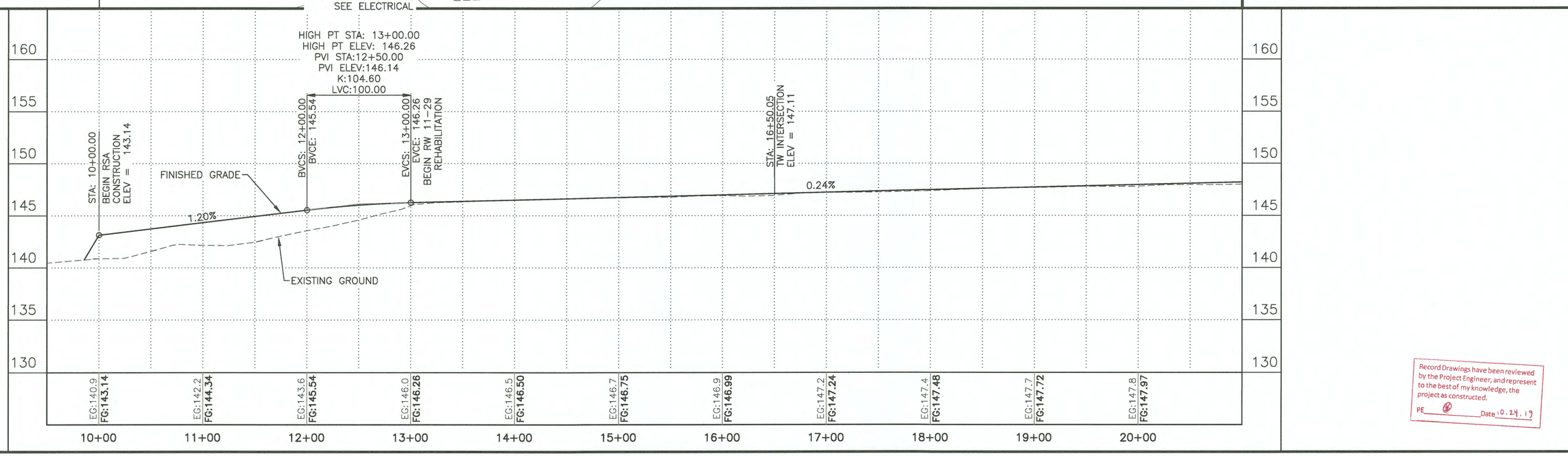
STATE OF ALASKA 49TH — Daniel G. Limi — CE 11140 — 06/25/18 — REGISTERED PROFESSIONAL ENGINEER

BY	DATE	REVISIONS

KAKE AIRPORT
KAKE, ALASKA
RUNWAY REHABILITATION
AIP 3-02-0398-XX-2018/SFAPT00078
TYPICAL SECTIONS II

SHEET 5 OF 27





Record Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.
PE _____ Date 10.24.19

PLANS DEVELOPED BY: STANTEC CONSULTING SERVICES, INC. 725 EAST FIREWEED LANE, SUITE 200, ANCHORAGE, AK 99503-2245 907-276-4245 CERTIFICATE OF AUTHORIZATION #126386
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DESIGN RPK
DRAWN ADC
CHECKED JGL

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
SOUTHCOAST REGION-DESIGN AND CONSTRUCTION-AVIATION

STATE OF ALASKA 49TH
Daniel G. Limi
OE 11 AK
06/25/18
REGISTERED PROFESSIONAL ENGINEER

BY	DATE	REVISIONS

KAKE AIRPORT
KAKE, ALASKA
RUNWAY REHABILITATION
AIP 3-02-0398-XX-2018/SFAPT00078
RUNWAY 11-29 PLAN AND PROFILE
STA 10+00 TO 21+00

SHEET 6 OF 27

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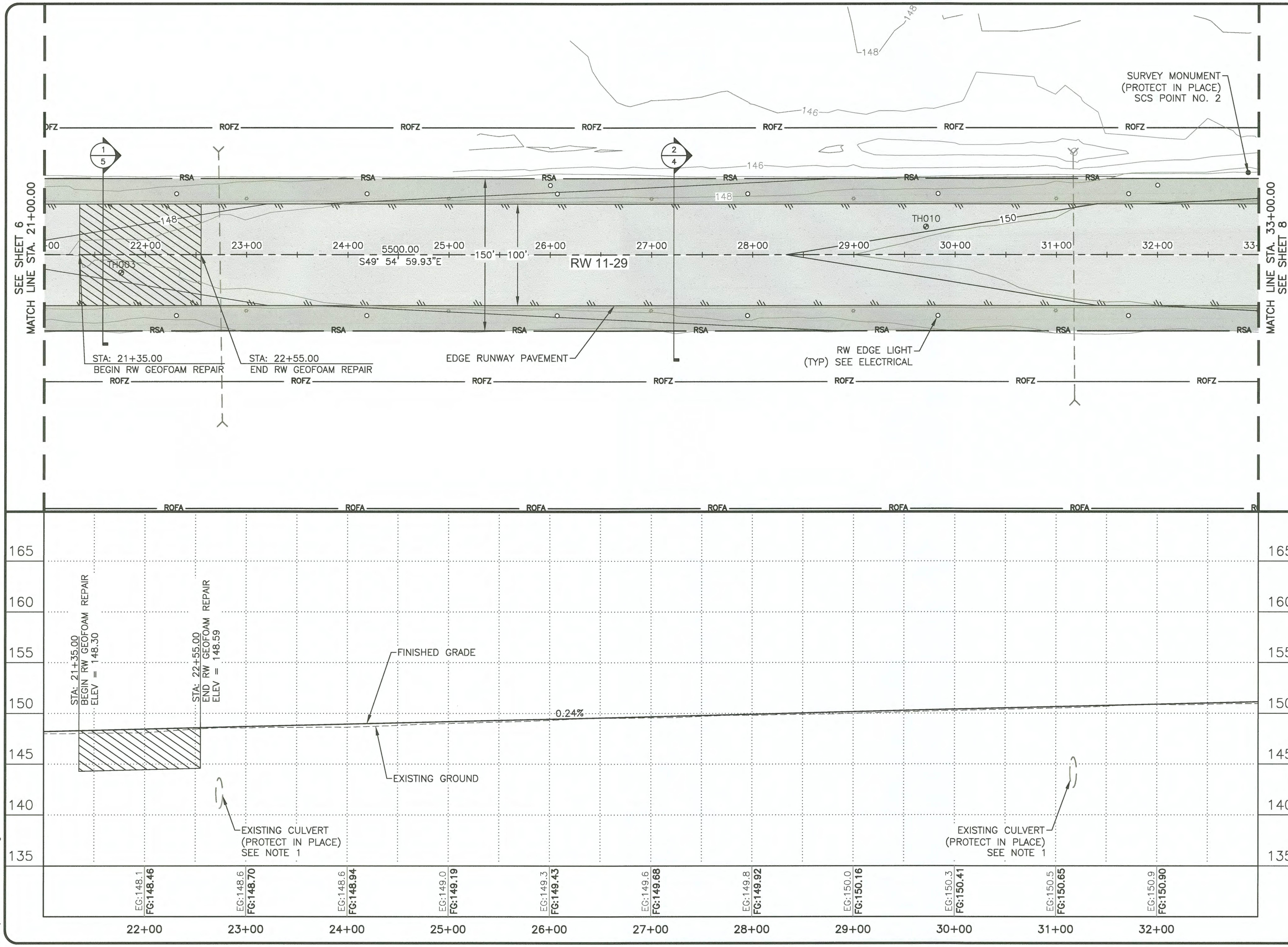

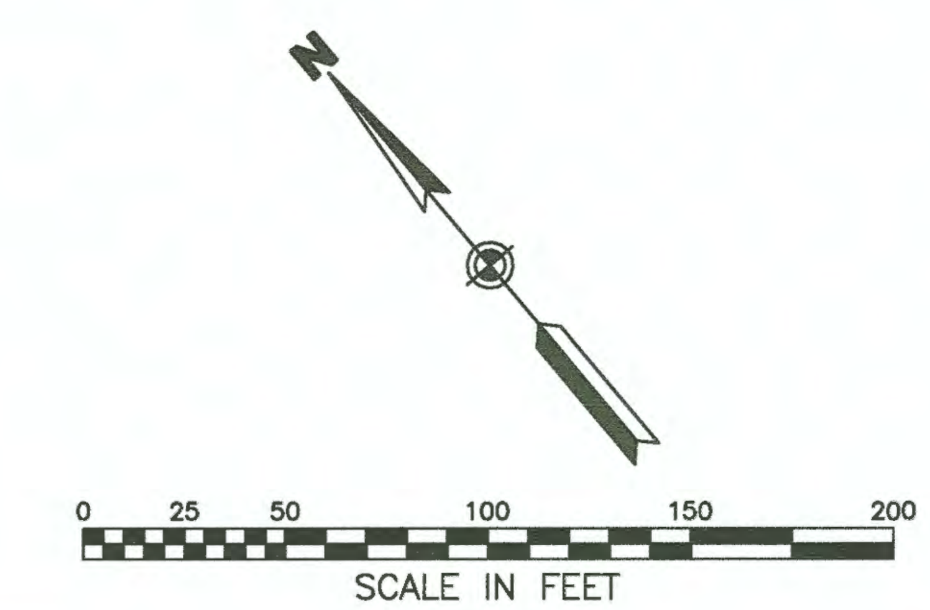

NOTES:

1. CULVERT INFORMATION IS FROM AS-BUILTS, FIELD VERIFY DEPTH AND LOCATION.

Record Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.
PE ______ Date 10.24.19

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DESIGN	RPK
DRAWN	ADC
CHECKED	JGL

STATE OF ALASKA
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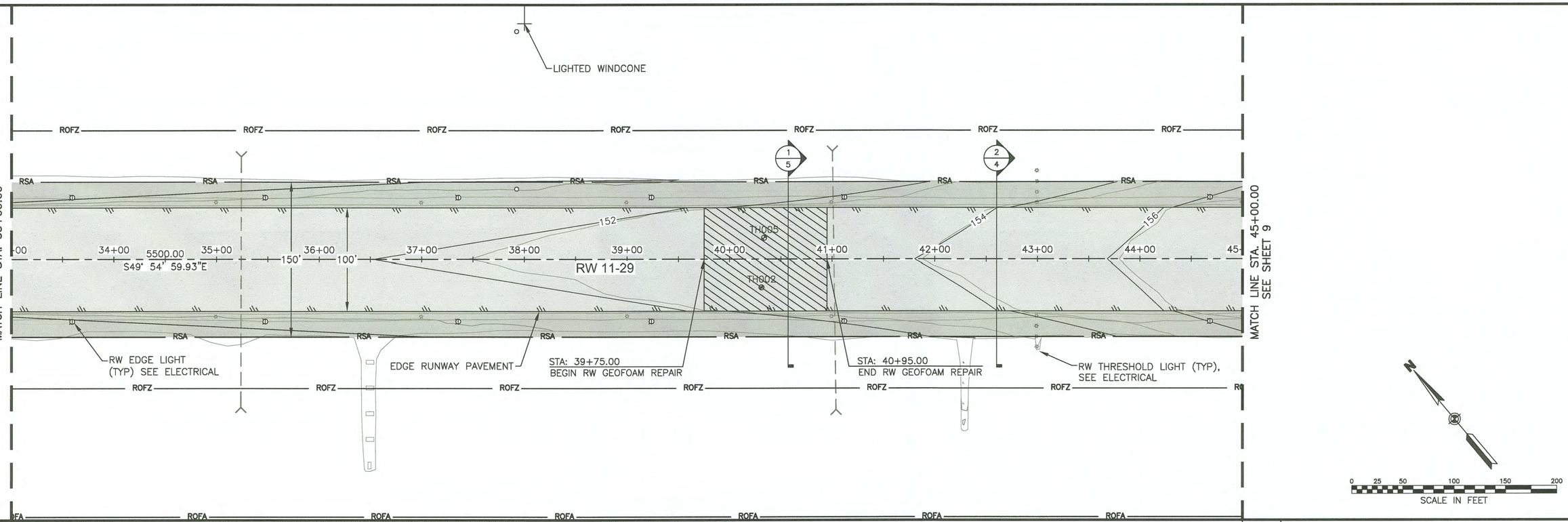
SOUTHCOAST REGION–DESIGN AND CONSTRUCTION–AVIATION

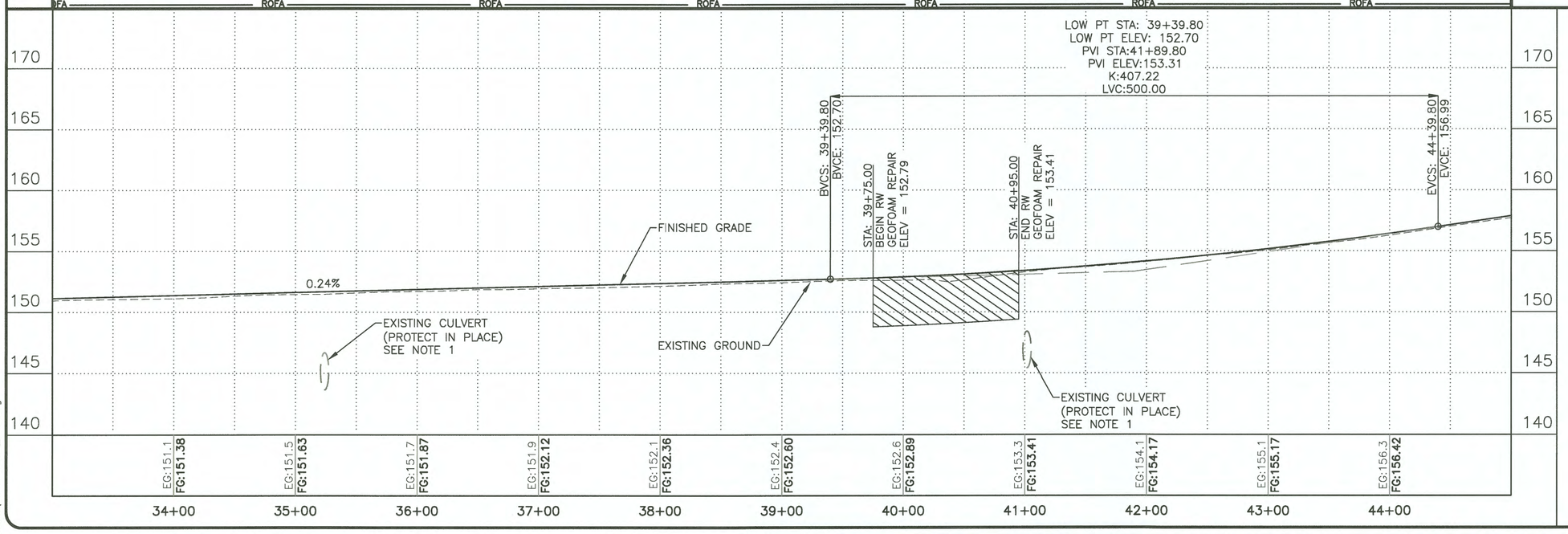
STATE OF ALASKA 49TH REGISTERED PROFESSIONAL ENGINEER CE 11140 06/25/18

BY	DATE	REVISIONS

KAKE AIRPORT
KAKE, ALASKA
RUNWAY REHABILITATION
AIP 3-02-0398-XX-2018/SFAPT00078
RUNWAY 11–29 PLAN AND PROFILE
STA 21+00 TO 33+00

SHEET 7 OF 27





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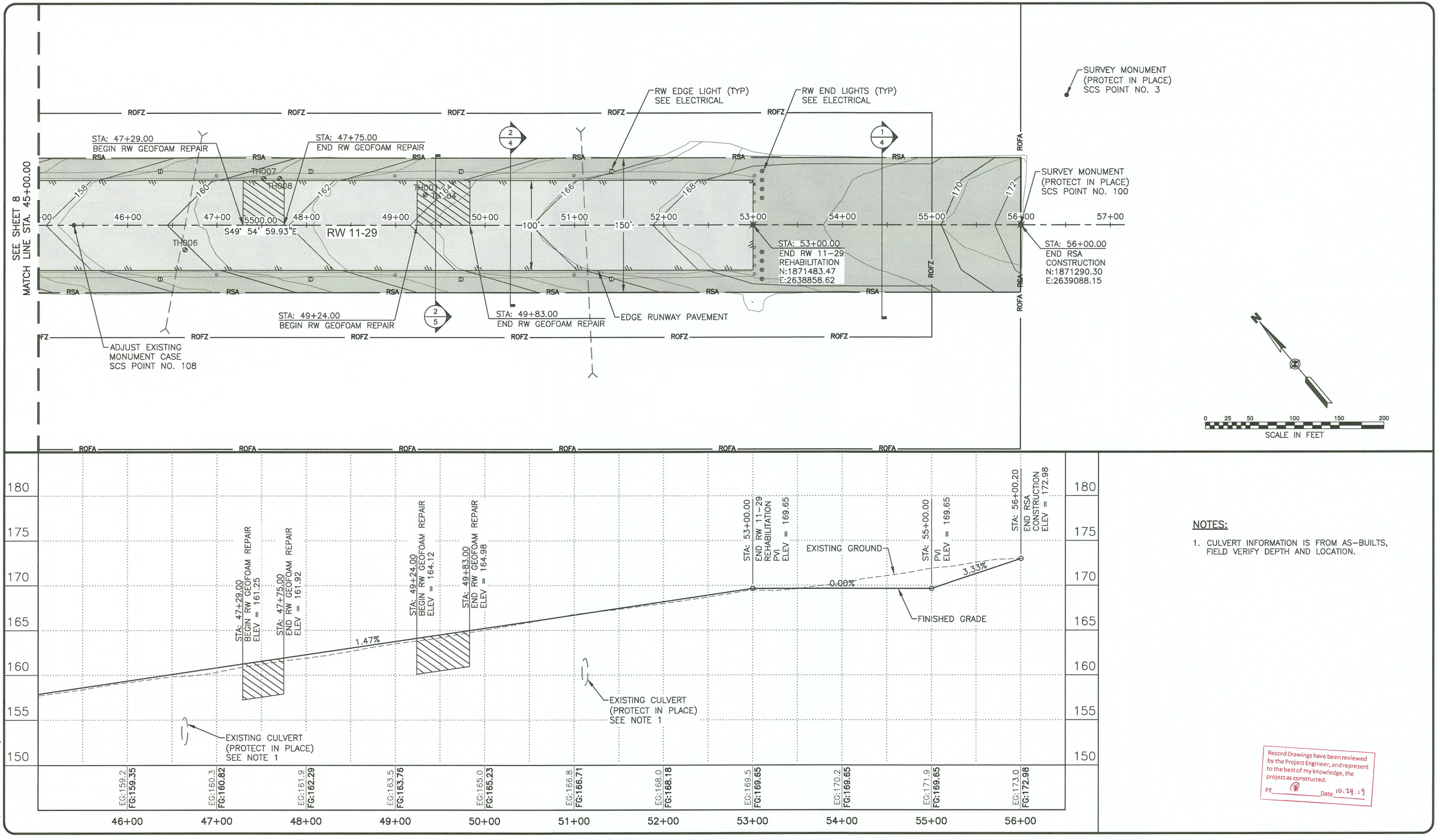
SOUTHCOAST REGION-DESIGN AND CONSTRUCTION-AVIATION

STATE OF ALASKA 49TH
[illegible] G. Limi
CE 11140
06/25/18
REGISTERED PROFESSIONAL ENGINEER

BY	DATE	REVISIONS

KAKE AIRPORT
KAKE, ALASKA
RUNWAY REHABILITATION
AIP 3-02-0398-XX-2018/SFAPT00078
RUNWAY 11-29 PLAN AND PROFILE
STA 33+00 TO 45+00

SHEET 8 OF 27



NOTES:

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Record Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.
PE _____ Date 10.24.19

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DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
SOUTHCOAST REGION-DESIGN AND CONSTRUCTION-AVIATION

STATE OF ALASKA 49TH
CE 11140
10/25/19
REGISTERED PROFESSIONAL ENGINEER

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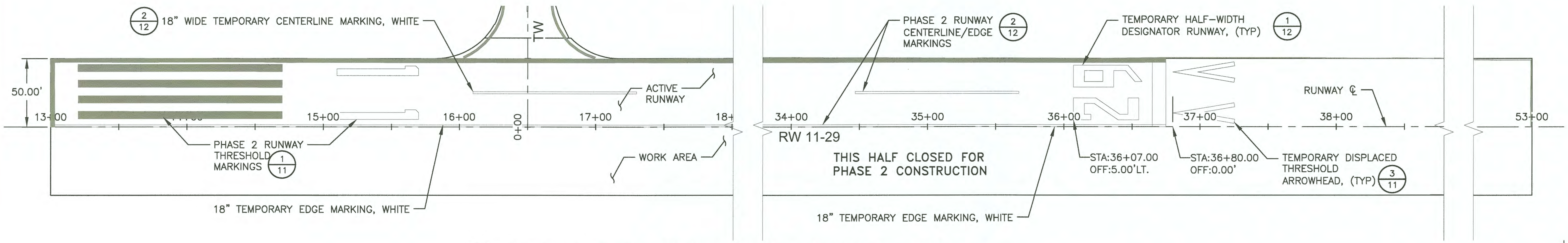
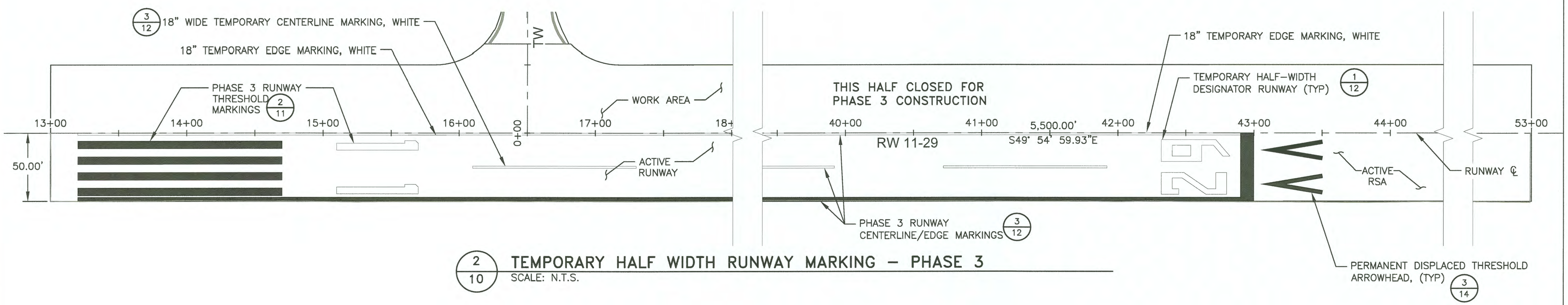
KAKE AIRPORT
KAKE, ALASKA
RUNWAY REHABILITATION
AIP 3-02-0398-XX-2018/SFAPT00078
RUNWAY 11-29 PLAN AND PROFILE
STA 45+00 TO 56+00

SHEET 9 OF 27



1/10 TEMPORARY HALF WIDTH RUNWAY MARKING – PHASE 2
SCALE: N.T.S.



2/10 TEMPORARY HALF WIDTH RUNWAY MARKING – PHASE 3
SCALE: N.T.S.

Record Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.
PE ______ Date 10.24.19

MARKING NOTES

1. TEMPORARY MARKINGS ARE SHOWN AS OUTLINED WHILE NEW PERMANENT MARKINGS TO REMAIN AFTER WORK IS COMPLETED ARE SHOWN AS SOLID BLACK ON THE TEMPORARY MARKING SHEETS. EXISTING STRIPES TO REMAIN DURING PHASE 2 ARE SHOWN AS DARK GRAY.
2. EXISTING RUNWAY AND TAXIWAY MARKINGS THAT CONFLICT WITH TEMPORARY RUNWAY MARKINGS OR ARE NOT SHOWN IN THE DETAILS SHALL BE REMOVED PRIOR TO OPENING THE HALF WIDTH RUNWAY TO AIRCRAFT OPERATIONS.
3. ALL TEMPORARY RUNWAY MARKINGS SHALL BE WHITE UNLESS OTHERWISE NOTED. TEMPORARY MARKINGS SHALL BE REMOVED AS PROJECT PHASING PROCEEDS.
4. THRESHOLD MARKINGS ARE INSTALLED AS IF THE FULL RUNWAY WERE OPEN, BUT ONLY HALF AT A TIME.
5. ALL TEMPORARY AND EXISTING MARKINGS SHALL BE REMOVED USING HIGH PRESSURE WATER IN RECTANGULAR BLOCKS TO OBSCURE ORIGINAL MARKING PATTERN.
6. OBLITERATE ALL MARKINGS BEYOND THE DISPLACED THRESHOLD ARROWHEADS SHOWN.

TEMPORARY MARKING LEGEND

- EXISTING MARKING
- TEMPORARY MARKING
- PERMANENT MARKING

6/25/2018, 3:53 PM

PLANS DEVELOPED BY: STANTEC CONSULTING SERVICES, INC. 725 EAST FIREWEED LANE, SUITE 200, ANCHORAGE, AK 99503-2245 907-276-4245 CERTIFICATE OF AUTHORIZATION #126386
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DESIGN RPK
DRAWN ADC
CHECKED JGL

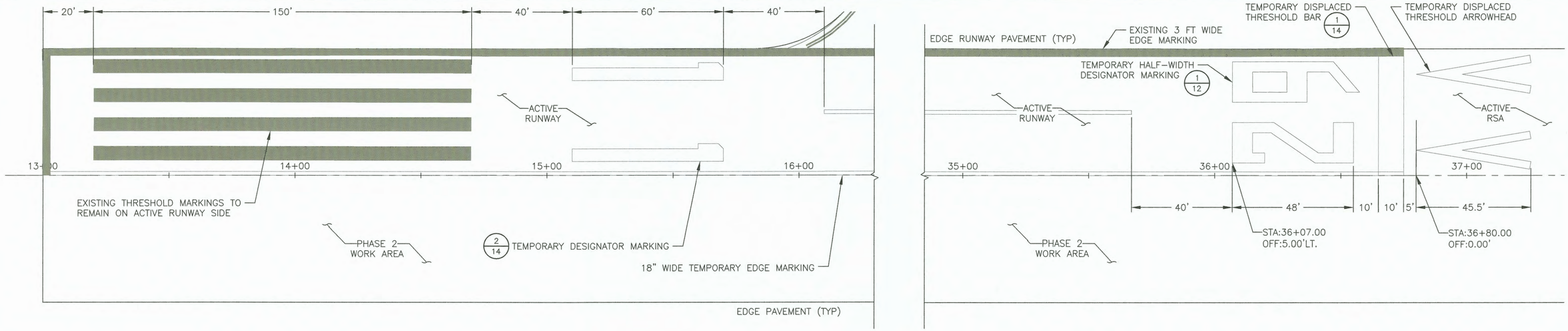
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
SOUTHCOAST REGION–DESIGN AND CONSTRUCTION–AVIATION

STATE OF ALASKA 49TH REGISTERED PROFESSIONAL ENGINEER CE 11141 06/25/18

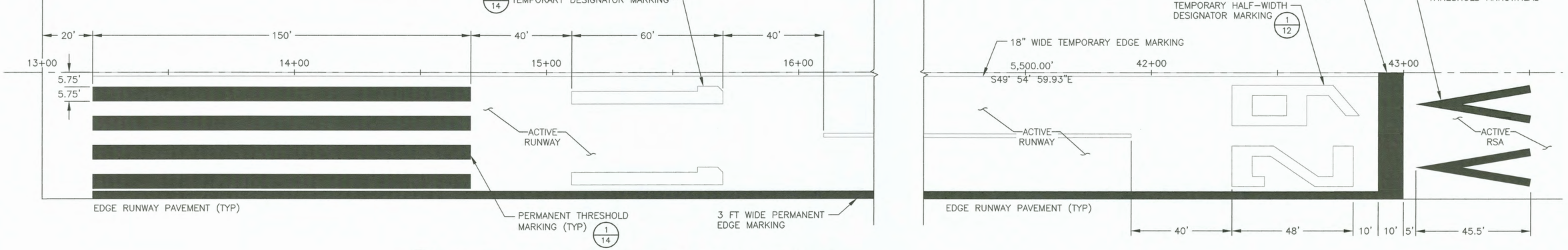
BY	DATE	REVISIONS

KAKE AIRPORT
KAKE, ALASKA
RUNWAY REHABILITATION
AIP 3-02-0398-XX-2018/SFAPT00078
TEMPORARY RUNWAY 11-29 MARKING PLANS

SHEET 10 OF 27



1/11 PHASE 2 TEMPORARY THRESHOLD MARKINGS
NTS



2/11 PHASE 3 TEMPORARY THRESHOLD MARKINGS
NTS

Record Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.
PE _____ Date 10.24.19

6/25/2018, 3:53 PM

PLANS DEVELOPED BY: STANTEC CONSULTING SERVICES, INC. 725 EAST FIREWEED LANE, SUITE 200, ANCHORAGE, AK 99503-2245 907-276-4245 CERTIFICATE OF AUTHORIZATION #126386
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DESIGN RPK
DRAWN ADC
CHECKED JGL

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
SOUTHCOAST REGION-DESIGN AND CONSTRUCTION-AVIATION

STATE OF ALASKA 49TH
[illegible] all at G. Limi
CE 11149
06/25/18
REGISTERED PROFESSIONAL ENGINEER

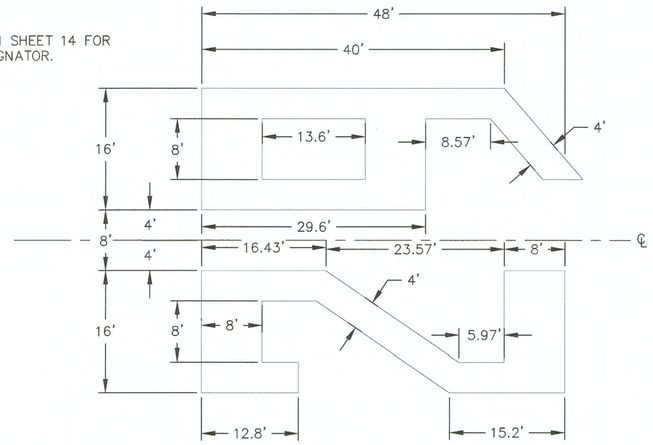
BY	DATE	REVISIONS

KAKE AIRPORT
KAKE, ALASKA
RUNWAY REHABILITATION
AIP 3-02-0398-XX-2018/SFAPT00078
TEMPORARY THRESHOLD MARKINGS

SHEET 11 OF 27

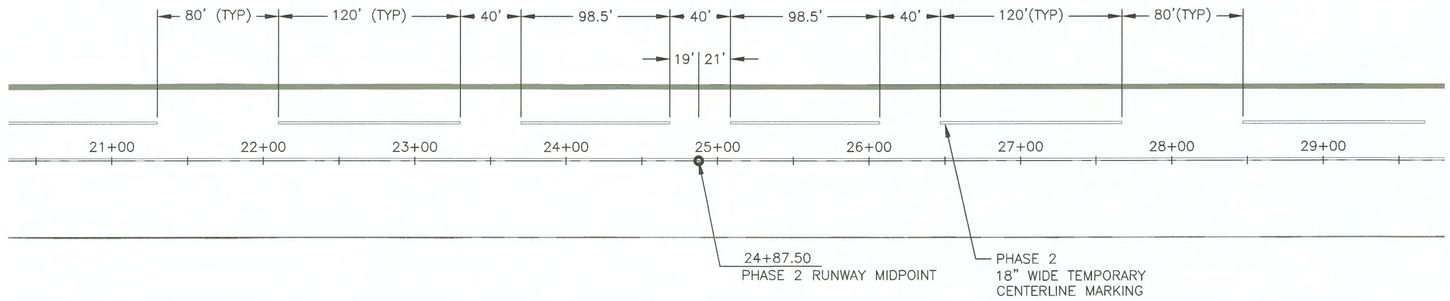
NOTE:

SEE DETAIL 2 ON SHEET 14 FOR 11 RUNWAY DESIGNATOR.



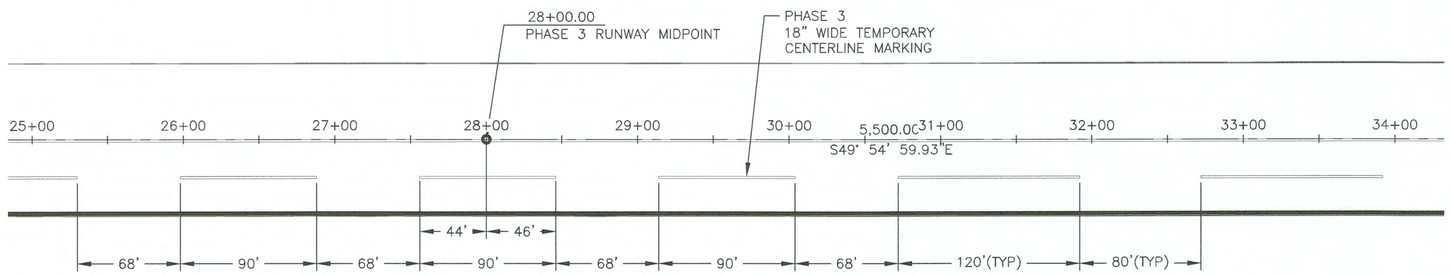
1/12 TEMPORARY HALF WIDTH RUNWAY DESIGNATOR DETAIL

NTS



2/12 PHASE 2 TEMPORARY HALF WIDTH CENTERLINE MARKING DIMENSION LAYOUT

NTS



3/12 PHASE 3 TEMPORARY HALF WIDTH CENTERLINE MARKING DIMENSION LAYOUT

NTS

NOTE:

1. THE TEMPORARY CENTERLINE MARKINGS ARE 120 FT LONG SPACED 80 FT APART EXCEPT WHERE SHOWN.

Record Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.

PE _____ Date 10.24.19

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DESIGN RPK

DRAWN ADC

CHECKED JGL

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
SOUTHCOAST REGION-DESIGN AND CONSTRUCTION-AVIATION

STATE OF ALASKA 49TH
REGISTERED PROFESSIONAL ENGINEER
CE 11140
06/25/18

BY	DATE	REVISIONS

KAKE AIRPORT
KAKE, ALASKA
RUNWAY REHABILITATION
AIP 3-02-0398-XX-2018/SFAPT00078
TEMPORARY MARKING DETAILS

SHEET 12 OF 27

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DESIGN	RPK
DRAWN	ADC
CHECKED	JGL

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
SOUTHCOAST REGION–DESIGN AND CONSTRUCTION–AVIATION

STATE OF ALASKA 49TH REGISTERED PROFESSIONAL ENGINEER CE 11141 06/25/18

BY	DATE	REVISIONS

KAKE AIRPORT
KAKE, ALASKA
RUNWAY REHABILITATION
AIP 3-02-0398-XX-2018/SFAPT00078
PERMANENT RUNWAY 11-29 MARKING PLAN

SHEET 13 OF 27

PLANS DEVELOPED BY: STANTEC CONSULTING SERVICES, INC. 725 EAST FIREWEED LANE, SUITE 200, ANCHORAGE, AK 99503-2245 907-276-4245 CERTIFICATE OF AUTHORIZATION #126386
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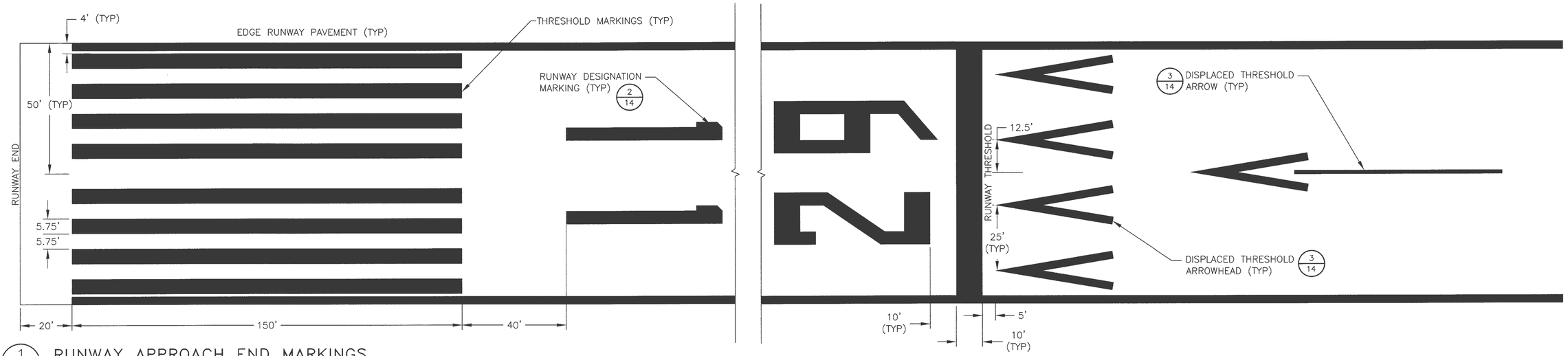
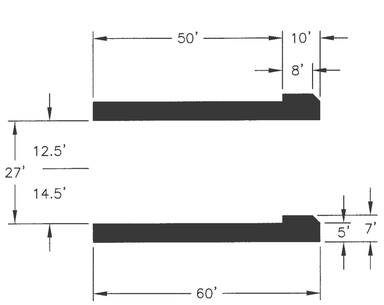
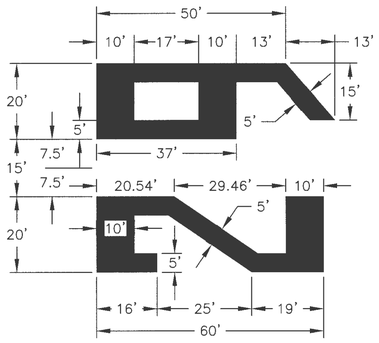


1/14 RUNWAY APPROACH END MARKINGS

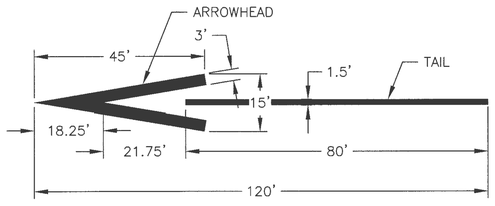
NTS





2/14 RUNWAY DESIGNATOR DETAIL

NTS

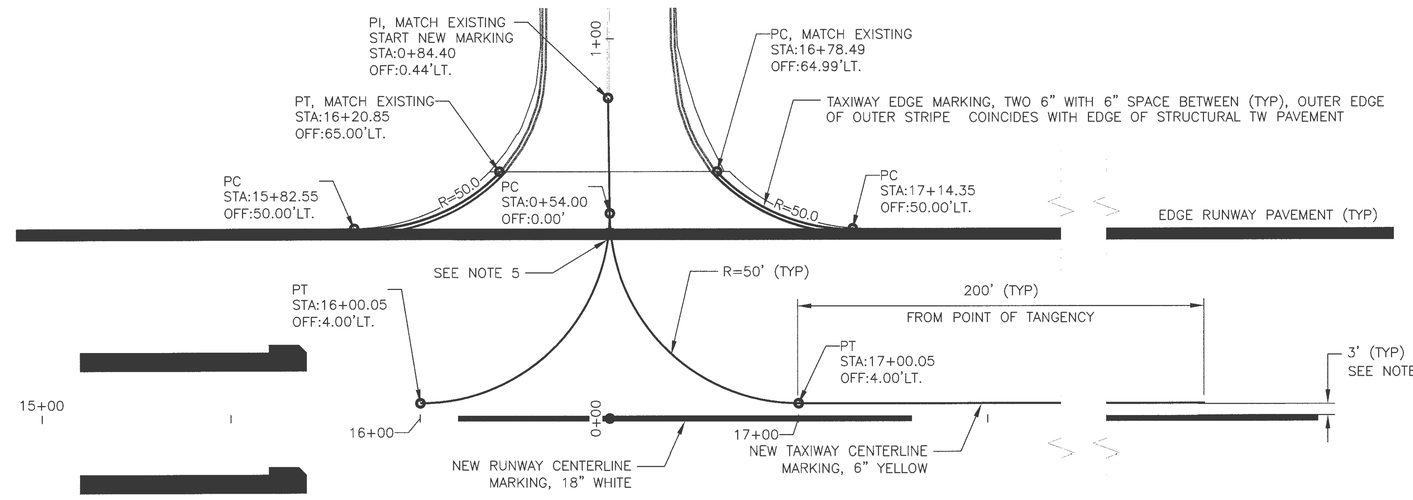


3/14 DISPLACED THRESHOLD ARROW AND ARROWHEAD

NTS

NOTES:

1. SEE PLAN VIEW FOR LOCATION OF MARKINGS BY STATION.
2. OUTER EDGE OF RUNWAY EDGE STRIPE IS 50' FROM RUNWAY CENTERLINE.
3. ALL RUNWAY MARKINGS ARE WHITE. ALL TAXIWAY & APRON MARKINGS ARE YELLOW UNLESS NOTED OTHERWISE.
4. LAYOUT TAXIWAY CENTERLINE TO CLEAR 3 FEET INSIDE EDGE TO INSIDE EDGE.
5. RUNWAY MARKINGS TAKE PRECEDENCE OVER TAXIWAY MARKINGS. BREAK TAXIWAY MARKINGS, OR PAINT RUNWAY MARKINGS OVER THE TOP OF TAXIWAY MARKINGS.



4/14 RUNWAY / TAXIWAY INTERSECTION MARKINGS

NTS

Record Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.
PE _____ Date 10.24.19

DESIGN RPK
DRAWN ADC
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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
SOUTHCOAST REGION–DESIGN AND CONSTRUCTION–AVIATION

STATE OF ALASKA 49TH — Daniel G. Lim — CE 11141 — 06/25/18 — REGISTERED PROFESSIONAL ENGINEER

BY	DATE	REVISIONS

KAKE AIRPORT
KAKE, ALASKA
RUNWAY REHABILITATION
AIP 3-02-0398-XX-2018/SFAPT00078
PERMANENT MARKING DETAILS

SHEET 14 OF 27

PLANS DEVELOPED BY: STANTEC CONSULTING SERVICES, INC. 725 EAST FIREWEED LANE, SUITE 200, ANCHORAGE, AK 99503–2245 907–276–4245 CERTIFICATE OF AUTHORIZATION #126386
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GENERAL ELECTRICAL NOTES:

1. LOCATIONS OF EXISTING EQUIPMENT, CONDUIT, ETC ARE TAKEN FROM ASBUILT DRAWINGS AND LIMITED SURVEY DATA AND SHALL BE FIELD VERIFIED. OBTAIN LOCATES OF EXISTING SYSTEMS AND EXCAVATE WITH CAUTION.
2. REMOVE LIGHTS AND OTHER EQUIPMENT AS INDICATED ON DEMOLITION PLANS. REMOVAL INCLUDES ALL ASSOCIATED CONDUIT, CONDUCTORS, LIGHT BASES, TRANSFORMERS, CONTROLLERS, DRAIN CONDUITS, FOUNDATIONS, AND CONCRETE, UNLESS OTHERWISE INDICATED. ALL REMOVED LIGHTS, BASEPLATES (INCLUDING BOLTS), TRANSFORMERS, WIND CONES, ROTATING BEACON, AND THE ELECTRICAL EQUIPMENT BUILDING WITH ALL CONTAINED EQUIPMENT SHALL BE OFFERED TO AIRPORT MAINTENANCE. DISPOSAL OF LIGHTING EQUIPMENT DEEMED NON-SALVAGABLE BY AIRPORT MAINTENANCE AND REMOVED CONDUIT, CONDUCTORS, LIGHT BASES, CONCRETE, AND OTHER MATERIAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE DISPOSED OF AT AN APPROVED SITE OFF OF AIRPORT PROPERTY IN ACCORDANCE WITH FEDERAL AND STATE REGULATIONS. DISPOSAL COSTS SHALL BE SUBSIDIARY TO THE CONTRACT.
3. COORDINATE ALL LIGHTING OUTAGES CAUSED BY DISCONNECTIONS, CIRCUIT CHANGES, OR OTHER WORK WITH THE PROJECT ENGINEER. SCHEDULE INSTALLATION OF CONDUCTORS AND OTHER EQUIPMENT TO MINIMIZE QUANTITY AND DURATION OF OUTAGES.
4. ALL AIRFIELD LIGHTING CONDUCTORS SHALL BE FAA TYPE C.
5. INSTALL A #6 BARE COPPER GROUNDING CONDUCTOR WITH ALL LIGHTING CIRCUIT CONDUCTORS.
6. INSTALL PULL ROPE IN ALL EMPTY CONDUITS.
7. COORDINATE ELECTRIC SERVICE DISCONNECTIONS, RECONNECTIONS, AND INSTALLATION WITH UTILITY (INSIDE PASSAGE ELECTRIC COOPERATIVE).
8. SEE CONSTRUCTION SAFETY AND PHASING PLANS FOR INFORMATION REGARDING TEMPORARY LIGHTING DURING PHASED CONSTRUCTION. TEMPORARY LIGHTING CONFIGURATIONS WILL UTILIZE A MIX OF TEMPORARY LIGHTS AND EXISTING OR NEW PERMANENT LIGHTS.
9. WIND CONES SHALL BE MAINTAINED IN OPERATION DURING PHASED CONSTRUCTION. OPERATIONAL WIND CONES MAY BE EXISTING AND/OR NEW.

SHEET NOTES: (X)

1. COORDINATE ELECTRICAL EQUIPMENT BUILDING REPLACEMENT WITH SCHEDULE OF RUNWAY CLOSURES. PREPARE EXISTING BUILDING FOR REMOVAL AND NEW BUILDING FOR INSTALLATION PRIOR TO RUNWAY CLOSURE. LIMIT REPLACEMENT WORK TO PERIOD OF FULL RUNWAY CLOSURE IN ORDER TO MAINTAIN OPERATIONAL LIGHTING SYSTEM DURING ACTIVE RUNWAY USE.
2. EXISTING CONDUIT ACROSS APRON TO BE REUSED. PROTECT FOR EXTENSION TO NEW WORK.
3. EXTEND EXISTING CONDUIT TO NEW HANDHOLE OR LIGHT BASE AND INSTALL CONDUCTORS AS INDICATED.
4. CONDUIT DRAIN TO DAYLIGHT, SEE DETAIL 5/E7. DRAIN LOCATION MAY BE ADJUSTED IN THE FIELD IN COORDINATION WITH THE ENGINEER. OMIT DRAINS AS DIRECTED BY THE ENGINEER IF EXISTING GRADES AND DRAINAGE DO NOT PROVIDE ADEQUATE DRAINAGE TO SUPPORT A CONDUIT DRAIN (DEPTH/GRADING OF NORTH SIDE DRAINAGE DITCH IS UNKNOWN).

ELECTRICAL PLAN LEGEND

- EXISTING LIGHT TO BE REMOVED
- RUNWAY EDGE LIGHT, OMNI-DIRECTIONAL
- RUNWAY EDGE LIGHT, BI-DIRECTIONAL
- RUNWAY THRESHOLD LIGHT, BI-DIRECTIONAL
- RUNWAY END LIGHT, OMNI-DIRECTIONAL
- TAXIWAY EDGE LIGHT, OMNI-DIRECTIONAL
- GROUND ROD, 3/4"x10' TYPICAL
- HANDHOLE (HH), TYPE I (LIGHT BASE WITH BLANK COVER)
- [E] JUNCTION BOX, TYPE II
- (M) METERBASE
- WIND CONE
- ROTATING BEACON
- LIGHTED AIRPORT SIGN - DEMOLITION
- LIGHTED AIRPORT SIGN - NEW WORK
- (X) REFERENCE TO SHEET NOTE
- X REFERENCE TO REVISION

EQUIPMENT NUMBER, SEE SCHEDULES ON SHEET E13

RX	RUNWAY EDGE LIGHT
TX	TAXIWAY EDGE LIGHT
HHX	HANDHOLE

LIGHT COLORS AND DISTRIBUTIONS

B	BLUE
Y	YELLOW/AMBER
G	GREEN
R	RED
W	WHITE
O	OBSCURED/BLANK
BI	BI-DIRECTIONAL
UNI	UNI-DIRECTIONAL
OMNI	OMNI-DIRECTIONAL

- --XXX-- EXISTING UTILITY LINE TO REMAIN, XXX DESIGNATES TYPE
- —XXX— NEW UTILITY LINE, XXX DESIGNATES TYPE
  UG = UNDERGROUND E = ELECTRIC
  OH = OVERHEAD T = TLEPHONE
  C = COMMUNICATIONS
- EXISTING CONDUIT TO REMAIN
- HDPE CONDUIT WITH CONDUCTORS AS INDICATED, 2" UNLESS OTHERWISE INDICATED
- RIGID STEEL CONDUIT WITH CONDUCTORS AS INDICATED, 2" UNLESS OTHERWISE INDICATED
- TEMPORARY JUMPER OR CIRCUIT, SURFACE LAID IN HDPE CONDUIT
- SERIES LIGHTING CIRCUIT, TICK MARKS INDICATE NUMBER OF 5KV SERIES CONDUCTORS IN CONDUIT (2 SHOWN), INCLUDE GROUND CONDUCTOR (NOT SHOWN), TICK MARKS NOT SHOWN ON SHORT SEGMENTS OR IN CONGESTED AREAS FOR CLARITY

ELECTRICAL ABBREVIATIONS

AWOS	AUTOMATED WEATHER OBSERVING SYSTEM
BC	BARE COPPER
C	CONDUIT
CB	CIRCUIT BREAKER
CF	CUBIC FOOT
DME	DISTANCE MEASURING EQUIPMENT
DOT	DEPARTMENT OF TRANSPORTATION
EMT	ELECTRICAL METALLIC TUBING
EXST	EXISTING
FAA	FEDERAL AVIATION ADMINISTRATION
GRD	GROUND
HDPE	HIGH DENSITY POLYETHYLENE
LFMC	LIQUIDTIGHT FLEXIBLE METALLIC CONDUIT
LFNC	LIQUIDTIGHT FLEXIBLE NONMETALLIC CONDUIT
LHA	LIGHT HOUSING ASSEMBLY
NDB	NON-DIRECTIONAL BEACON
NF	NON-FUSED
ODALS	OMNI-DIRECTIONAL APPROACH LIGHTING SYSTEM
PAPI	PRECISION APPROACH PATH INDICATOR
PE	PHOTOELECTRIC
PVC	POLYVINYL CHLORIDE
RCO	RADIO COMMUNICATIONS OUTLET
REIL	RUNWAY END IDENTIFIER LIGHTS
RMC	RIGID METALLIC CONDUIT (GALVANIZED STEEL)
RVR	RUNWAY VISUAL RANGE
SS	STAINLESS STEEL
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
VASI	VISUAL APPROACH SLOPE INDICATOR

Record Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.
PE _____ Date 10.24.19

DESIGN LPS
DRAWN LPS,JCA
CHECKED MXS

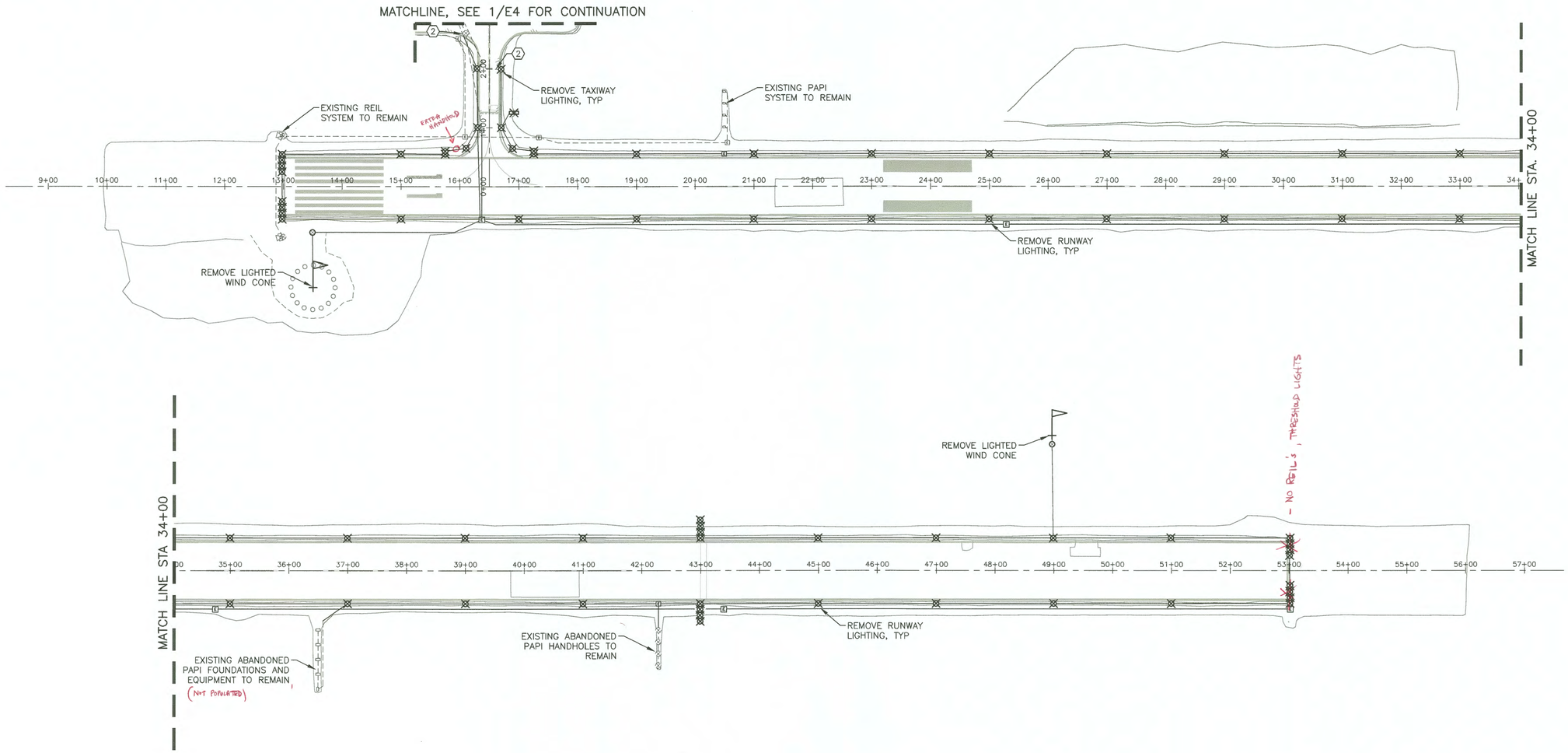
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
SOUTHCOAST REGION-DESIGN AND CONSTRUCTION-AVIATION

STATE OF ALASKA 49TH LUCAS SCHNELLER EE-11399 REGISTERED PROFESSIONAL ENGINEER 7/25/18

BY	DATE	REVISIONS

KAKE AIRPORT
KAKE, ALASKA
RUNWAY REHABILITATION
AIP 3-02-0398-XX-2018/SFAPT00078
ELECTRICAL LEGEND

SHEET E1 OF 27



Record Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.

PE _____ Date 10.24.19

DESIGN LPS

DRAWN LPS,JCA

CHECKED MXS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
SOUTHCOAST REGION-DESIGN AND CONSTRUCTION-AVIATION

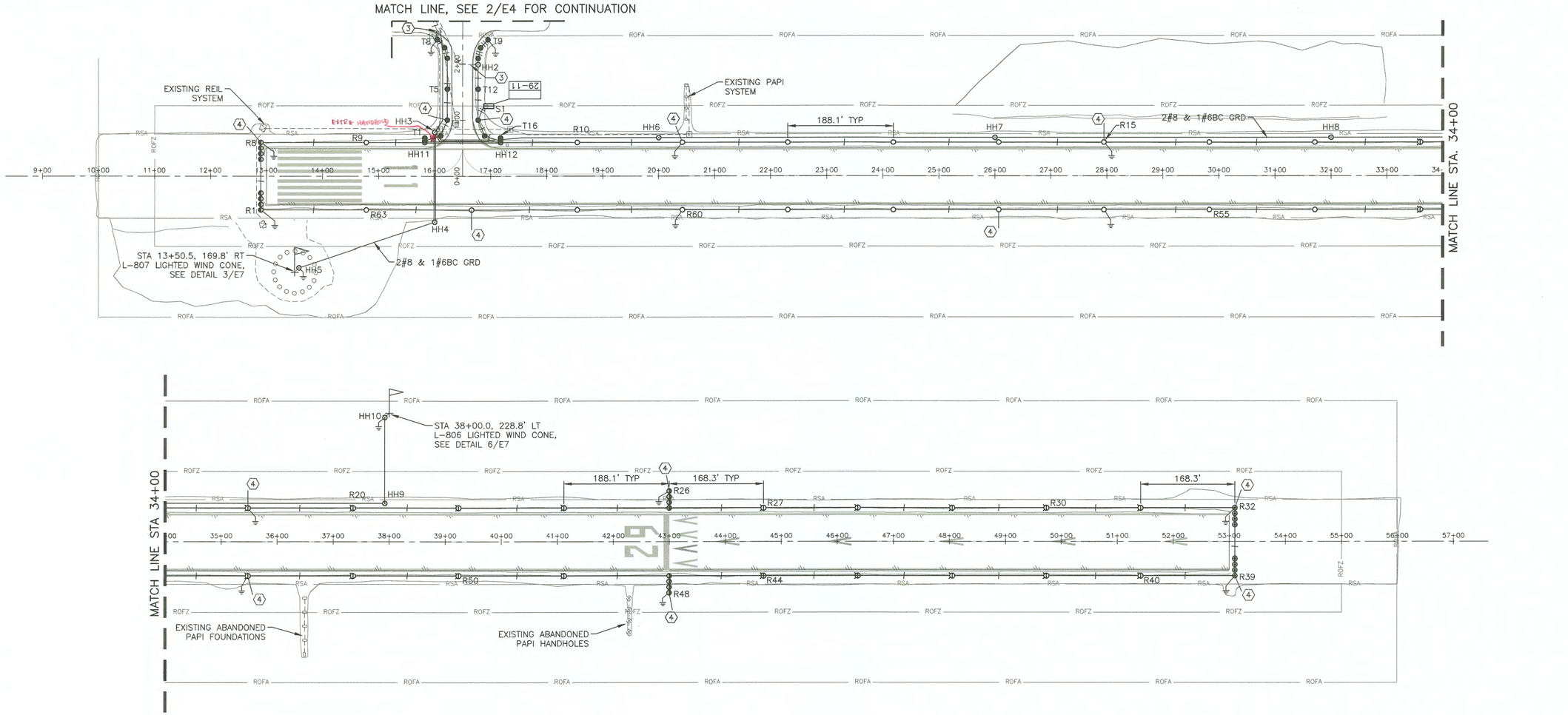
STATE OF ALASKA 49TH LUCAS SCHNELLER EE-11399 REGISTERED PROFESSIONAL ENGINEER 7/25/18

BY	DATE	REVISIONS

KAKE AIRPORT
KAKE, ALASKA
RUNWAY REHABILITATION
AIP 3-02-0398-XX-2018/SFAPT00078

ELECTRICAL SITE PLAN – DEMOLITION

SHEET E2 OF 27



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PE _____ Date 10.24.19

DESIGN LPS

DRAWN LPS,JCA

CHECKED MXS

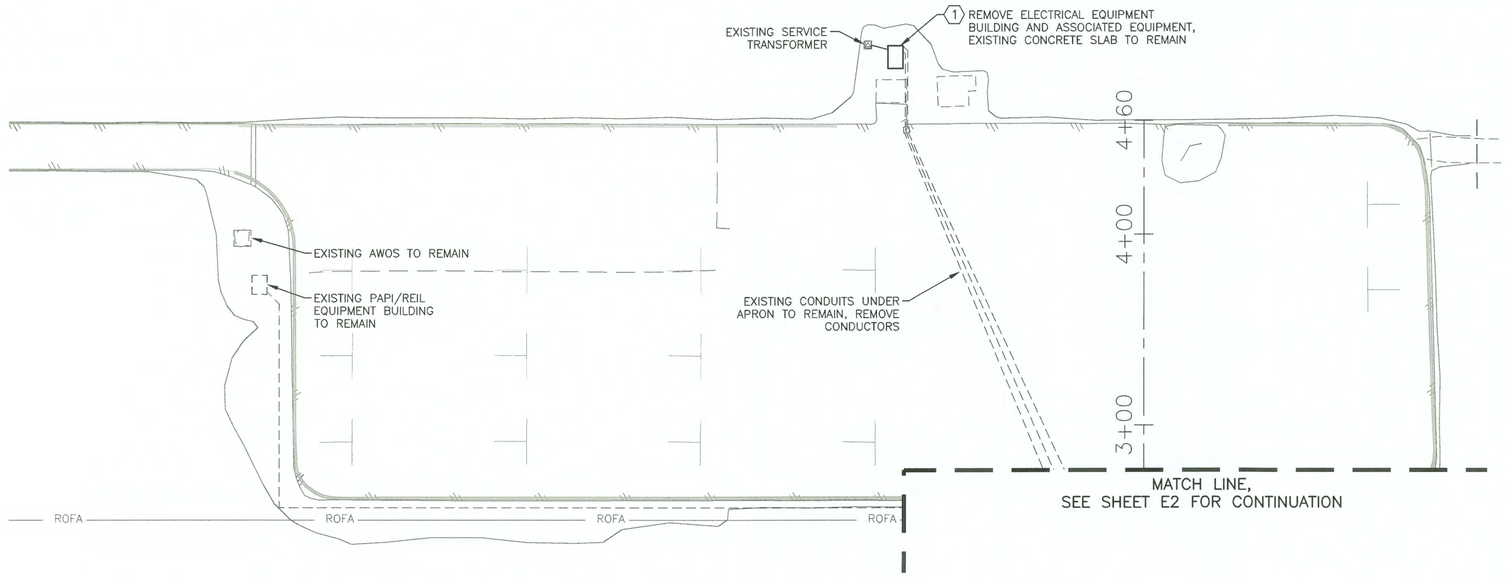
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
SOUTHCOAST REGION–DESIGN AND CONSTRUCTION–AVIATION

STATE OF ALASKA · 49 TH · LUCAS SCHNELLER · EE-11399 · REGISTERED PROFESSIONAL ENGINEER · 7/25/18

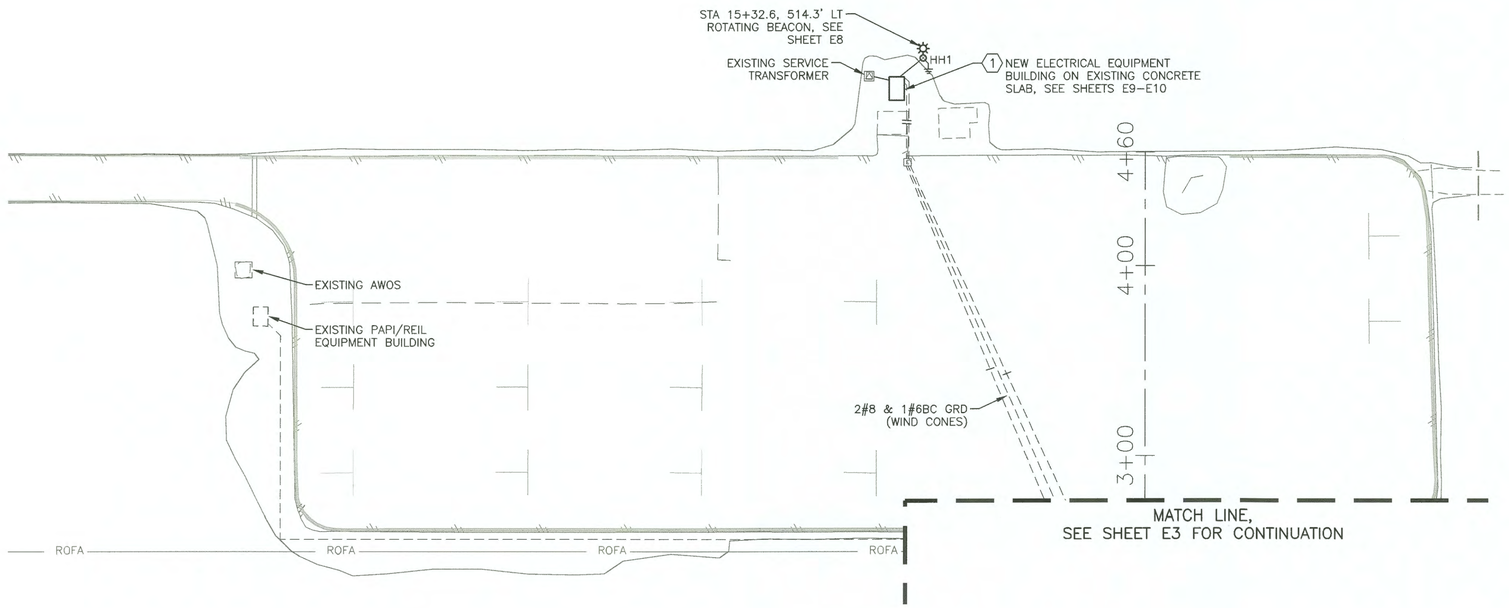
BY	DATE	REVISIONS

KAKE AIRPORT
KAKE, ALASKA
RUNWAY REHABILITATION
AIP 3-02-0398-XX-2018/SFAPT00078
ELECTRICAL SITE PLAN – NEW WORK

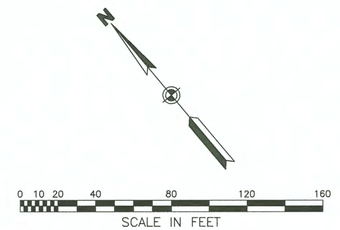
SHEET E3 OF 27



1 / E4 APRON ELECTRICAL PLAN – DEMOLITION



2 / E4 APRON ELECTRICAL PLAN – NEW WORK



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PE _____ Date 10.24.19

DESIGN LPS
DRAWN LPS,JCA
CHECKED MXS

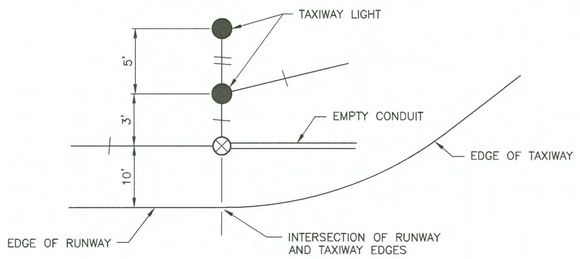
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
SOUTHCOAST REGION–DESIGN AND CONSTRUCTION–AVIATION

STATE OF ALASKA 49TH LUCAS SCHNELLER EE-11399 REGISTERED PROFESSIONAL ENGINEER 1/25/18

BY	DATE	REVISIONS

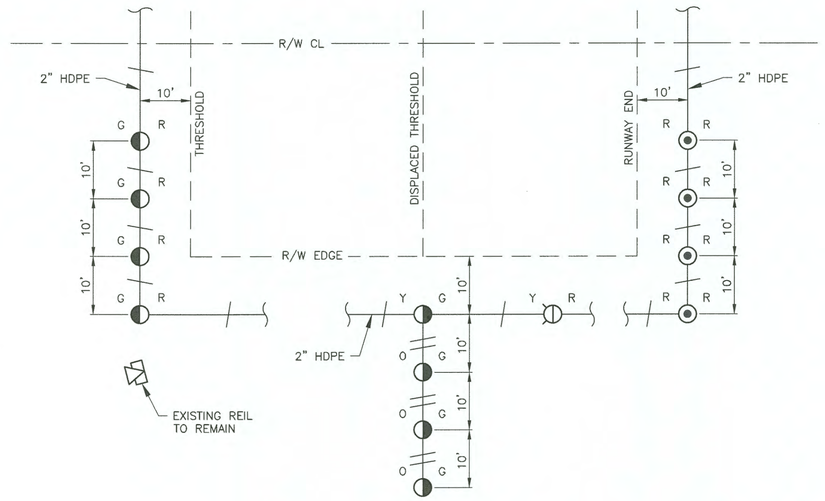
KAKE AIRPORT
KAKE, ALASKA
RUNWAY REHABILITATION
AIP 3-02-0398-XX-2018/SFAPT00078
ELECTRICAL SITE PLAN – APRON
ENLARGED PLANS

SHEET E4 OF 27



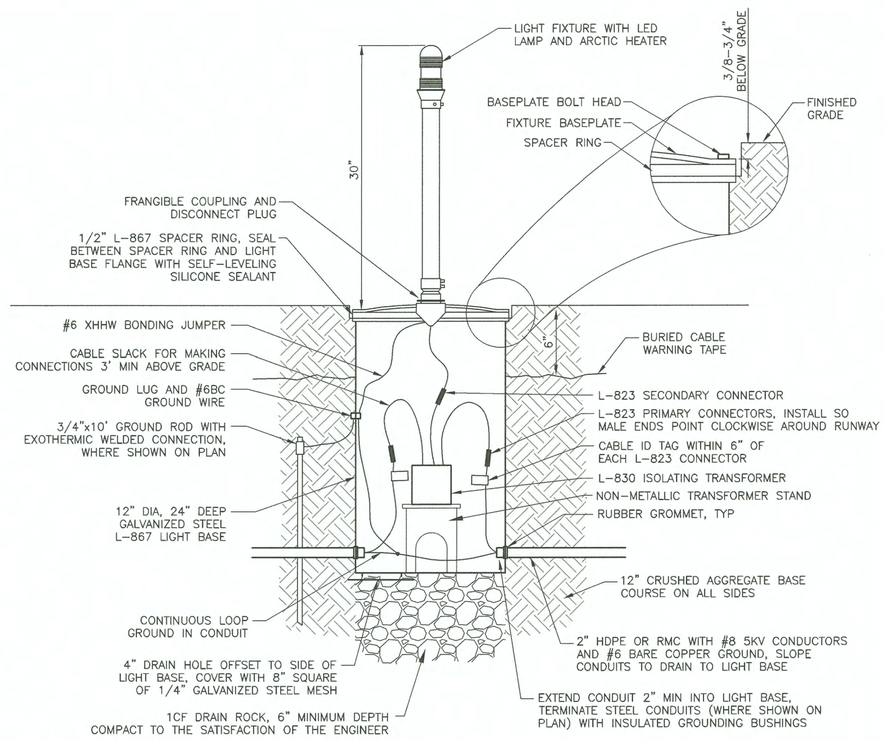
3 / E5 TYPICAL TAXIWAY ENTRANCE LIGHTS

SCALE: N.T.S.



2 / E5 THRESHOLD LIGHTING DETAIL

SCALE: N.T.S.



1 / E5 BASE MOUNTED LIGHT DETAIL

SCALE: N.T.S.

NOTE:
CIRCUIT GROUND WIRE ROUTED IN CONDUIT SHALL BE CONTINUOUS THROUGH LIGHT BASE OR JOINED USING IRREVERSIBLE COMPRESSION CONNECTORS AND SHALL NOT RELY ON LIGHT BASE GROUND LUG FOR CONTINUITY

Record Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.
PE _____ Date 10.24.19

DESIGN LPS
DRAWN LPS,JCA
CHECKED MXS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
SOUTHCOAST REGION-DESIGN AND CONSTRUCTION-AVIATION

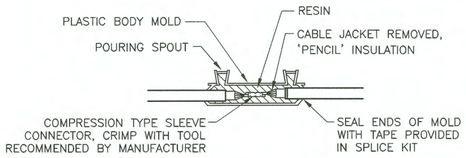
STATE OF ALASKA 49TH
LUCAS SCHNELLER
EE-11399
REGISTERED PROFESSIONAL ENGINEER
7/25/18

BY	DATE	REVISIONS

KAKE AIRPORT
KAKE, ALASKA
RUNWAY REHABILITATION
AIP 3-02-0398-XX-2018/SFAPT00078
ELECTRICAL DETAILS I

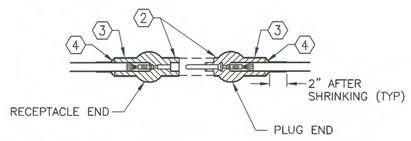
SHEET E5 OF 27

PLANS DEVELOPED BY: STANTEC CONSULTING SERVICES, INC. 725 EAST FIREWEED LANE, SUITE 200, ANCHORAGE, AK 99503-2245 907-276-4245 CERTIFICATE OF AUTHORIZATION #126386
U:\2047059100\drawing\E\sheets\2047059100_E5-E12_details.dwg
7/25/2018, 12:47 PM



TYPE A

FOR SPLICES IN HOMERUNS AND FOR EXTENSIONS TO EXISTING CABLES ONLY

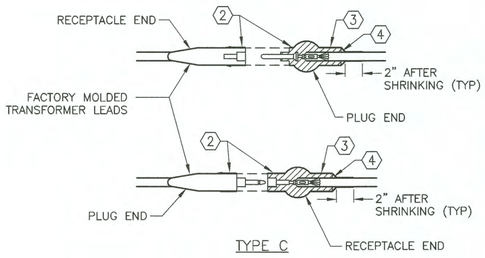


TYPE B

FOR SPLICES FOR USE AT JUNCTION OF HOMERUN WITH LOOP CIRCUIT

NOTES:

1. CABLE SHALL MEET SPECIFICATION L-824. INSIDE DIAMETER OF CONNECTOR SHALL PROPERLY MATCH THE OUTSIDE DIAMETER OF CABLE. CONNECTOR SHALL BE SUPPLIED TO MATCH CABLE PER MANUFACTURER'S INSTRUCTIONS.
2. WRAP WITH A MINIMUM OF ONE LAYER PLASTIC TAPE, ONE-HALF LAPPED, EXTENDING AT LEAST 1.5" ON EACH SIDE OF JOINT. COVER WITH HEAT SHRINK, SEE NOTE 3.
3. HEAT SHRINKABLE TUBING WITH INTERNAL ADHESIVE AT ENDS ONLY. CENTER PORTION AT SEPARABLE CONNECTOR POINT SHALL NOT HAVE INTERNAL ADHESIVE.
4. INSTALL ADDITIONAL ADHESIVE COMPOUND FILLER

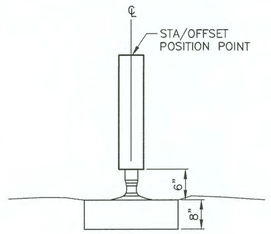


TYPE C

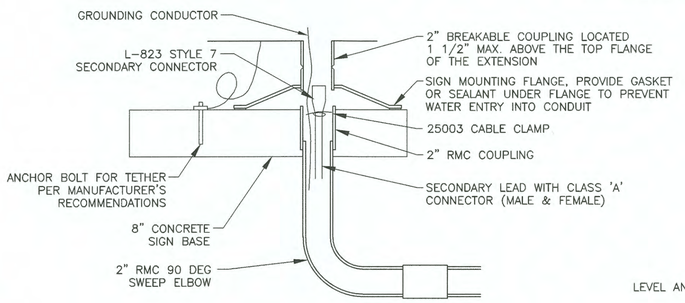
FOR SPLICES AT RUNWAY LIGHTS

2 E6 TYPICAL SPLICE DETAILS

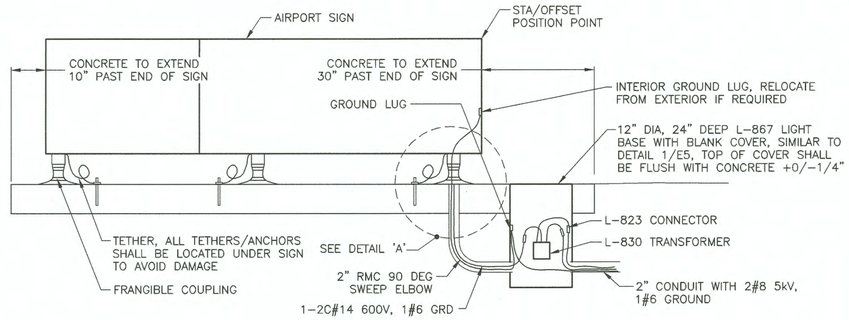
SCALE: N.T.S.



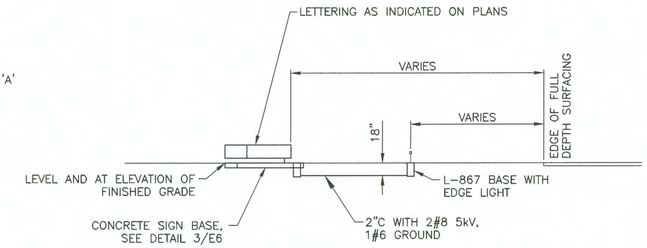
SIDE VIEW



DETAIL 'A'

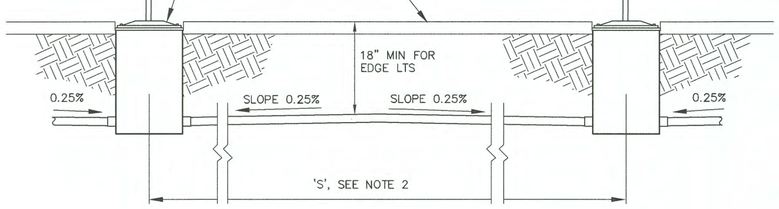


FRONT VIEW



1 E6 AIRPORT SIGN DETAILS

SCALE: N.T.S.

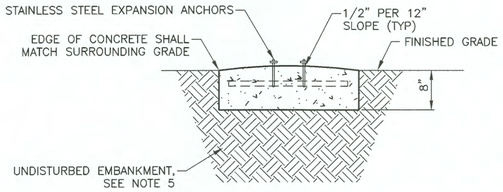


NOTES:

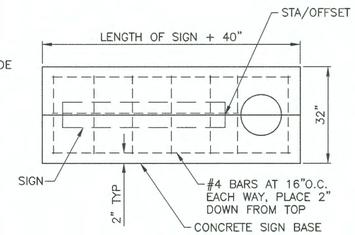
1. CONDUIT SHALL BE INSTALLED WITH CROWN TO DRAIN TO LIGHT BASES AS SHOWN.
2. IF 'S' IS LESS THAN 20', OR IF 0.25% SLOPE CAN BE MAINTAINED IN ONE DIRECTION DUE TO SLOPE OF GRADE, LAY CONDUIT STRAIGHT WITHOUT CROWN BETWEEN BASES/HANDHOLES. DUE TO GRADE OF RUNWAY AND TAXIWAY, THIS CONDITION WILL BE PRESENT AT NUMEROUS LOCATIONS, SEE PROFILE SHEETS FOR GENERAL GRADES.

5 E6 TYPICAL INTERCONNECTION DETAIL

SCALE: N.T.S.



SIDE VIEW



PLAN VIEW

NOTES:

1. MINOR GRADING OR FILL MAY BE REQUIRED AT SIGN LOCATION. THE GRADING AND EARTHWORK SHALL BE SUBSIDIARY TO OTHER PAY ITEMS AND NO SEPARATE PAYMENT WILL BE MADE.
2. ATTACH SIGN TO CONCRETE BASE USING STAINLESS STEEL EXPANSION ANCHORS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
3. CONCRETE SHALL MEET THE REQUIREMENTS OF SECTION P-610.
4. SET SIGN BASE ELEVATION AT FINISH GRADE ELEVATION AT END CLOSEST TO RUNWAY OR TAXIWAY EDGE. SIGN BASE SHALL BE LEVEL. ADJUST EMBANKMENT GRADING TO MEET EDGE OF OTHER SIDES OF FOUNDATION.
5. IF EXISTING EMBANKMENT MATERIAL IS DEEMED UNSUITABLE BY THE ENGINEER, REMOVE TO A DEPTH OF 24" BELOW FOUNDATION AND REPLACE WITH COMPACTED SUBBASE.

3 E6 CONCRETE SIGN BASE DETAIL

SCALE: N.T.S.

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PE _____ Date 10.24.19

DESIGN LPS
DRAWN LPS,JCA
CHECKED MXS

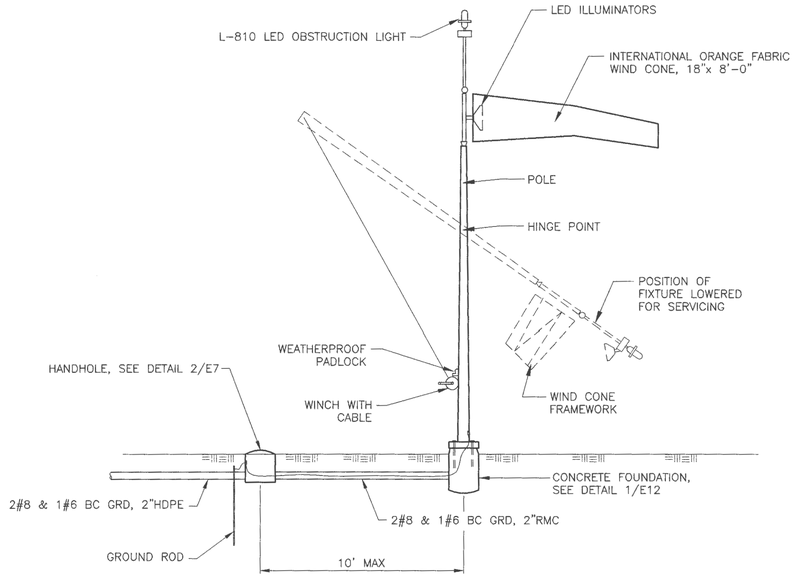
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
SOUTHCOAST REGION-DESIGN AND CONSTRUCTION-AVIATION

STATE OF ALASKA 49TH LUCAS SCHNELLER EE-11399 REGISTERED PROFESSIONAL ENGINEER 7/25/18

BY	DATE	REVISIONS

KAKE AIRPORT
KAKE, ALASKA
RUNWAY REHABILITATION
AIP 3-02-0398-XX-2018/SFAPT00078
ELECTRICAL DETAILS II

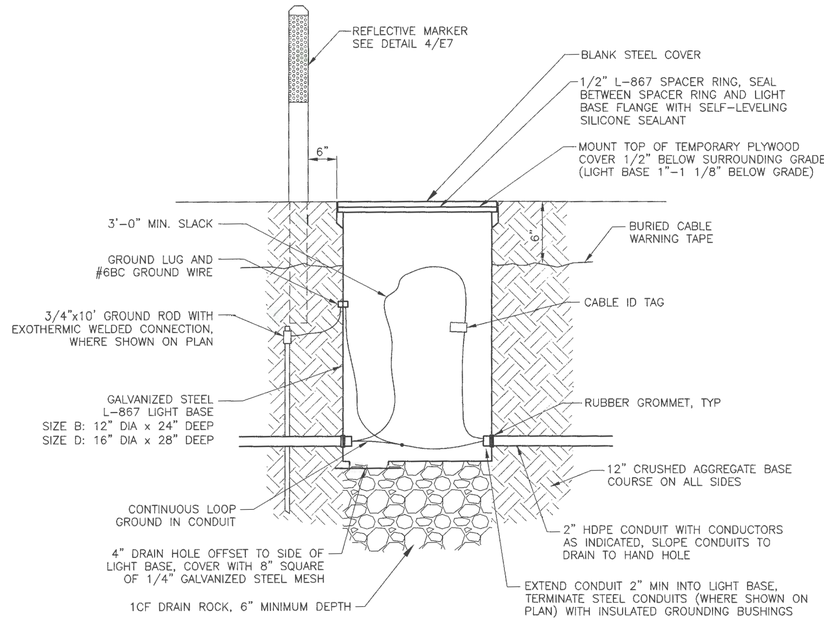
SHEET E6 OF 27



FAA TYPE L-807, STYLE-IB, SIZE 1, 120V WITH LED LAMPS

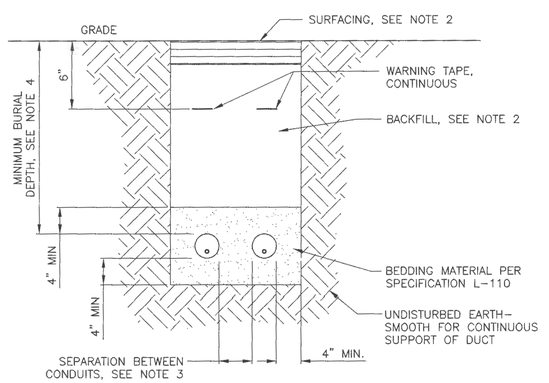
3/E7 L-807 WIND CONE DETAIL

SCALE: N.T.S.



2/E7 HANDHOLE DETAIL

SCALE: N.T.S.

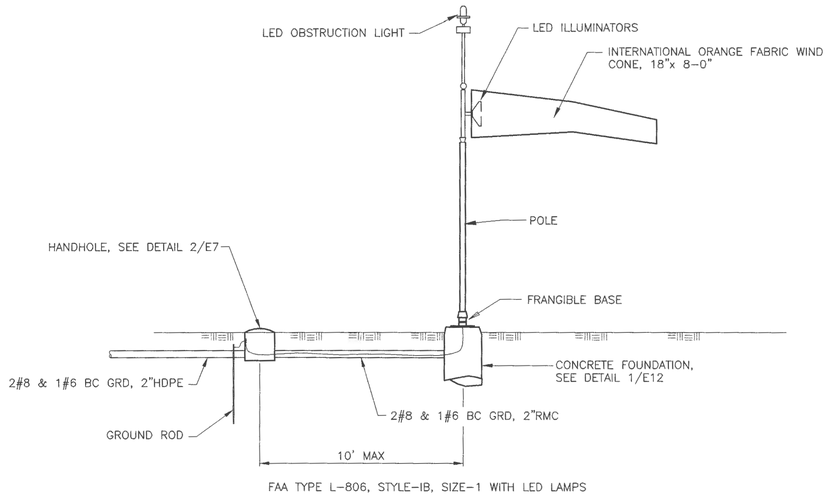


NOTES:

1. WIDTH OF TRENCH AND NUMBER OF CONDUITS PER TRENCH DETERMINED IN FIELD (2 SHOWN)
2. IN NEW PAVEMENT, SEE TYPICAL SECTIONS FOR SURFACING AND BACKFILL. IN EXISTING PAVEMENT, MATCH EXISTING SURFACING AND BACKFILL.
3. SEPARATION BETWEEN CONDUITS SHALL BE AS FOLLOWS:
   - CONDUITS OF SAME TYPE (POWER OR SIGNAL) UNDER SAME OWNERSHIP – 2" MIN
   - AIRPORT LIGHTING AND FAA NAVAID CONDUITS – 12" MIN
   - AIRPORT LIGHTING OR FAA NAVAID CONDUITS AND FAA POWER CONDUITS – 24" MIN
4. MINIMUM BURIAL DEPTH SHALL BE AS FOLLOWS:
   - AIRPORT LIGHTING CONDUITS – 18"
   - FAA NAVIGATION AID CONDUITS – 24"

1/E7 TYPICAL CONDUIT TRENCH DETAIL

SCALE: N.T.S.

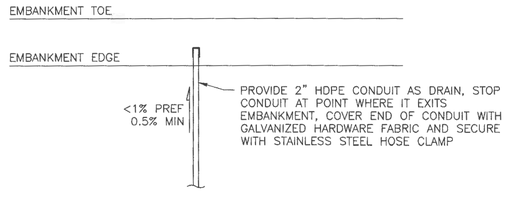


FAA TYPE L-806, STYLE-IB, SIZE-1 WITH LED LAMPS

6/E7 L-806 LIGHTED WIND CONE ASSEMBLY

SCALE: N.T.S.

NOTE:
CIRCUIT GROUND WIRE ROUTED IN CONDUIT SHALL BE CONTINUOUS THROUGH LIGHT BASE OR JOINED USING IRREVERSIBLE COMPRESSION CONNECTORS AND SHALL NOT RELY ON LIGHT BASE GROUND LUG FOR CONTINUITY



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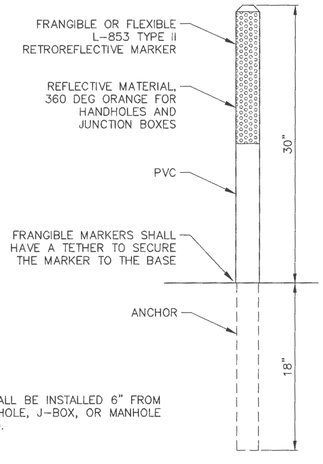
PE ② Date 10.24.19

5/E7 DRAIN TO DAYLIGHT DETAIL

SCALE: N.T.S.



NOTE:
MARKERS SHALL BE INSTALLED 6" FROM EACH HANDHOLE, J-BOX, OR MANHOLE AS INDICATED.

4/E7 REFLECTIVE MARKER DETAIL

SCALE: N.T.S.

DESIGN LPS
DRAWN LPS,JCA
CHECKED MXS

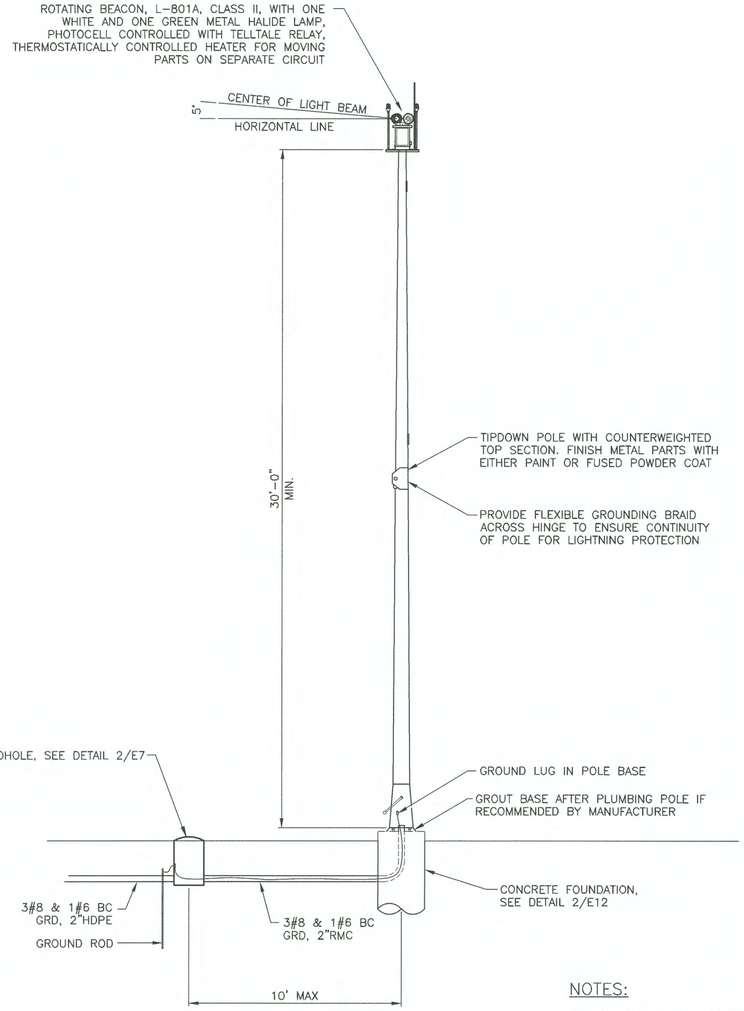
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
SOUTHCOAST REGION-DESIGN AND CONSTRUCTION-AVIATION

STATE OF ALASKA 49TH LUCAS SCHNELLER EE-11399 REGISTERED PROFESSIONAL ENGINEER 7/25/18

BY	DATE	REVISIONS

KAKE AIRPORT
KAKE, ALASKA
RUNWAY REHABILITATION
AIP 3-02-0398-XX-2018/SFAPT00078
ELECTRICAL DETAILS III

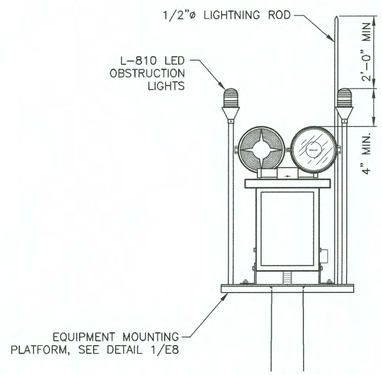
SHEET E7 OF 27



NOTES:

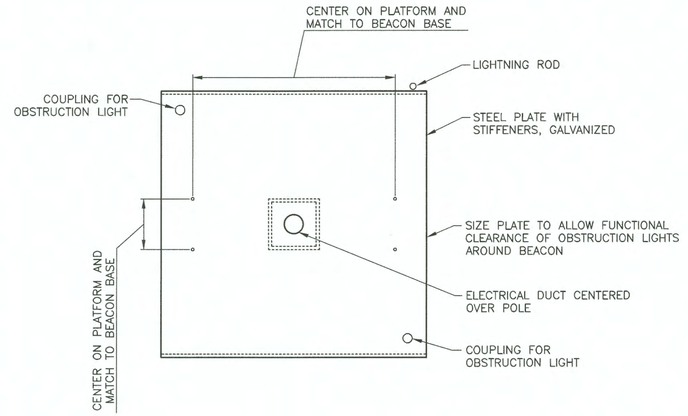
1. COMPONENTS AND ASSEMBLIES SHALL BE RATED FOR 120 MPH WINDS.
2. BEAM DEFLECTION AT 45 MPH SHALL BE LESS THAN 2 DEGREES.

3 / E8 BEACON POLE ASSEMBLY
SCALE: N.T.S.

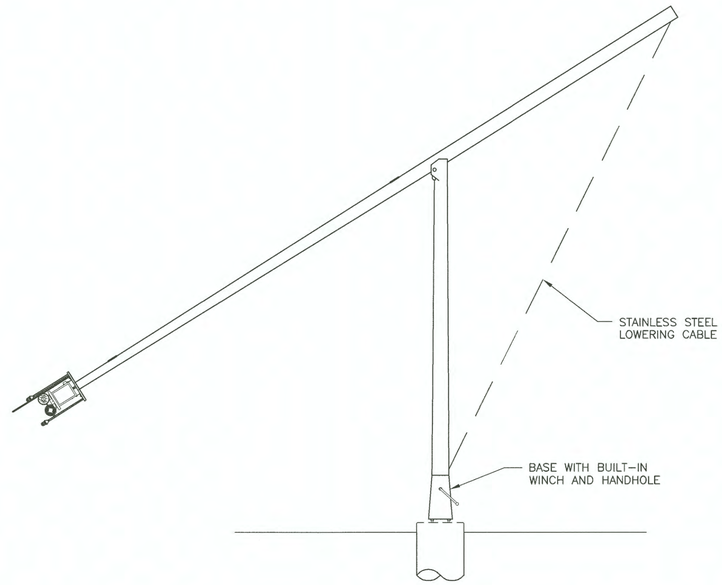


FRONT VIEW

2 / E8 BEACON ASSEMBLY DETAILS
SCALE: N.T.S.



1 / E8 EQUIPMENT MOUNTING PLATFORM DETAIL
SCALE: N.T.S.



4 / E8 BEACON POLE ASSEMBLY, SERVICE POSITION
SCALE: N.T.S.

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PE _____ Date 10.24.19

DESIGN LPS
DRAWN LPS,JCA
CHECKED MXS

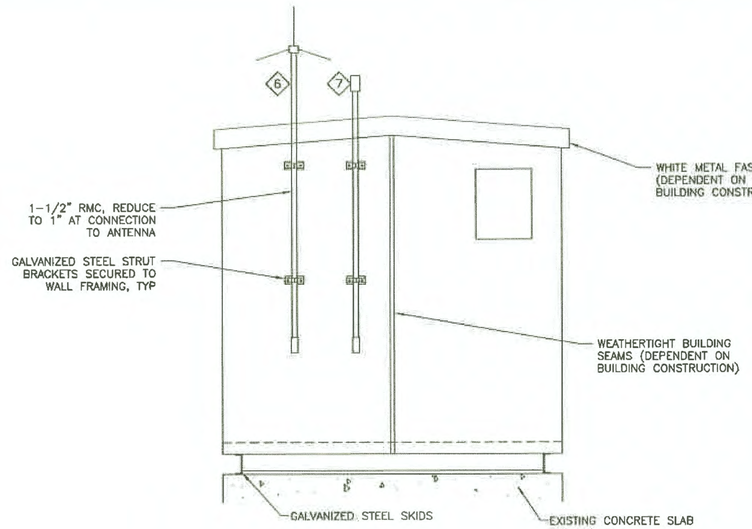
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
SOUTHCOAST REGION-DESIGN AND CONSTRUCTION-AVIATION

STATE OF ALASKA 49TH LUCAS SCHNELLER EE-11399 REGISTERED PROFESSIONAL ENGINEER 7/25/18

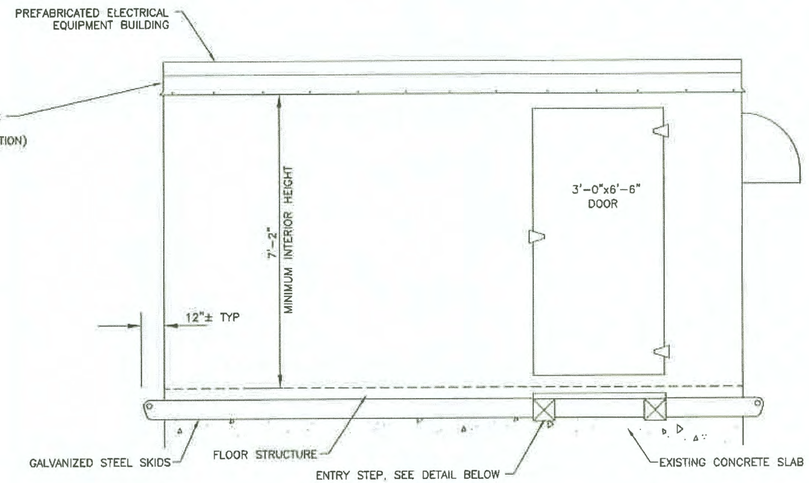
BY	DATE	REVISIONS

KAKE AIRPORT
KAKE, ALASKA
RUNWAY REHABILITATION
AIP 3-02-0398-XX-2018/SFAPT00078
ROTATING BEACON DETAILS

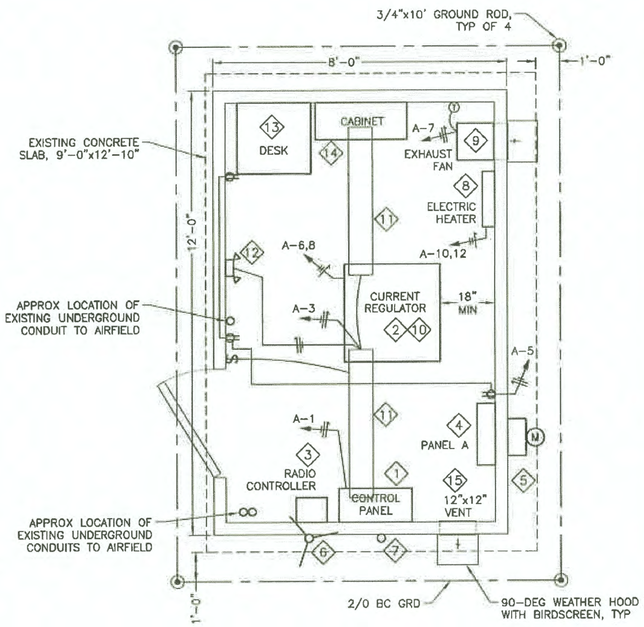
SHEET E8 OF 27



3/E9 TYPICAL BUILDING END ELEVATION
SCALE: N.T.S.



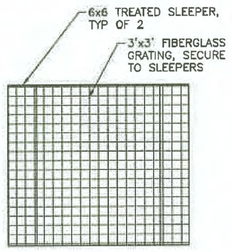
2/E9 TYPICAL BUILDING SIDE ELEVATION
SCALE: N.T.S.



1/E9 ELECTRICAL EQUIPMENT BUILDING PLAN
SCALE: N.T.S.

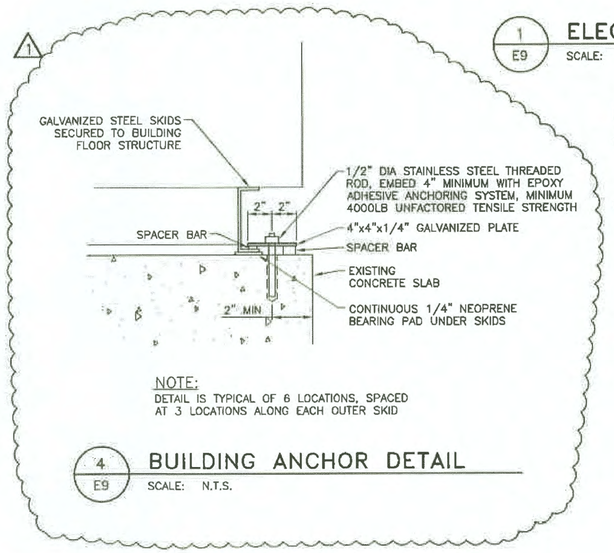
EQUIPMENT LIST

NO.	DESCRIPTION	NOTES
1	LIGHTING CONTROL PANEL	SEE SPECIFICATION L-109 AND SHEET E11
2	5KW REGULATOR, 3-STEP 240V INPUT, 6.6A OUTPUT	FERRORESONANT TYPE WITH DIGITAL METER AND INTEGRAL SERIES CUTOUT
3	ADJUSTABLE FREQUENCY RADIO CONTROLLER	SET FREQUENCY TO CTAF: 122.9MHZ, RELAYS SHALL OPERATE CUMULATIVELY
4	PANELBOARD	BOLT-ON CIRCUIT BREAKERS, SEE PANEL SCHEDULE FOR ADDITIONAL INFORMATION
5	METER/MAIN	100A/2-POLE MAIN BREAKER, KILOWATT-HOUR METER PROVIDED BY UTILITY
6	RADIO ANTENNA	
7	PHOTOELECTRIC CONTROL	
8	2000W ELECTRIC HEATER	INTEGRAL 40-85 DEG F THERMOSTAT
9	EXHAUST FAN, 150CFM MINIMUM AT 0.2 IN WG	WITH BACKDRAFT DAMPER AND WALL-MOUNTED 40-85 DEG F THERMOSTAT
10	PLUG CUTOUT, 5KV	MOUNT INTEGRAL TO REGULATOR, PROVIDE WITH SEPARATE GROUNDING COVER FOR TROUBLESHOOTING
11	INTERIOR LIGHT FIXTURE	4000LM OUTPUT, FROSTED LENS, 120V
12	EMERGENCY LIGHT	
13	METAL WALL DESK 24"x23"x12"	MOUNT TOP OF DESK AT 36"AFF
14	LOCKABLE WALL CABINET 30"x12"x26"	
15	12"x12" RELIEF AIR VENT	WITH WEIGHTED DAMPER AND DUST FILTER



NOTE:
INSTALL STEP IN FRONT OF DOOR TO ELECTRICAL EQUIPMENT BUILDING. GRADE AREA AS REQUIRED TO PROVIDE LEVEL, STABLE STEP APPROXIMATELY 7" HIGH.

5/E9 ENTRY STEP DETAIL
SCALE: N.T.S.



NOTE:
DETAIL IS TYPICAL OF 6 LOCATIONS, SPACED AT 3 LOCATIONS ALONG EACH OUTER SKID

4/E9 BUILDING ANCHOR DETAIL
SCALE: N.T.S.

ELECTRICAL EQUIPMENT BUILDING NOTES:

1. COORDINATE BUILDING CONSTRUCTION AND PLACEMENT WITH EXISTING CONDUITS TO ALLOW PENETRATION THROUGH THE FLOOR OR CUT AND REPAIR CONCRETE SLAB AS REQUIRED TO RELOCATE CONDUIT STUB UPS FOR FLOOR PENETRATION.
2. EXISTING EQUIPMENT BUILDING AND EQUIPMENT SHALL BE REMOVED AND SALVAGED OR DISPOSED OF IN ACCORDANCE WITH GENERAL NOTE 2 ON SHEET E1. REMOVAL IS PAID FOR UNDER ITEM L-109a AND INCLUDES ASSOCIATED UNDERGROUND CONDUIT AND ELECTRICAL SERVICE FEEDER.

BUILDING PLAN LEGEND

- DUPLEX RECEPTACLE
- SINGLE POLE SWITCH
- CEILING MOUNTED LIGHT FIXTURE
- EMERGENCY LIGHT WITH BATTERY BACKUP
- THERMOSTAT
- SEE EQUIPMENT LIST

Record Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.
PE _____ Date 10.24.19

DESIGN LPS
DRAWN LPS,JCA
CHECKED MXS

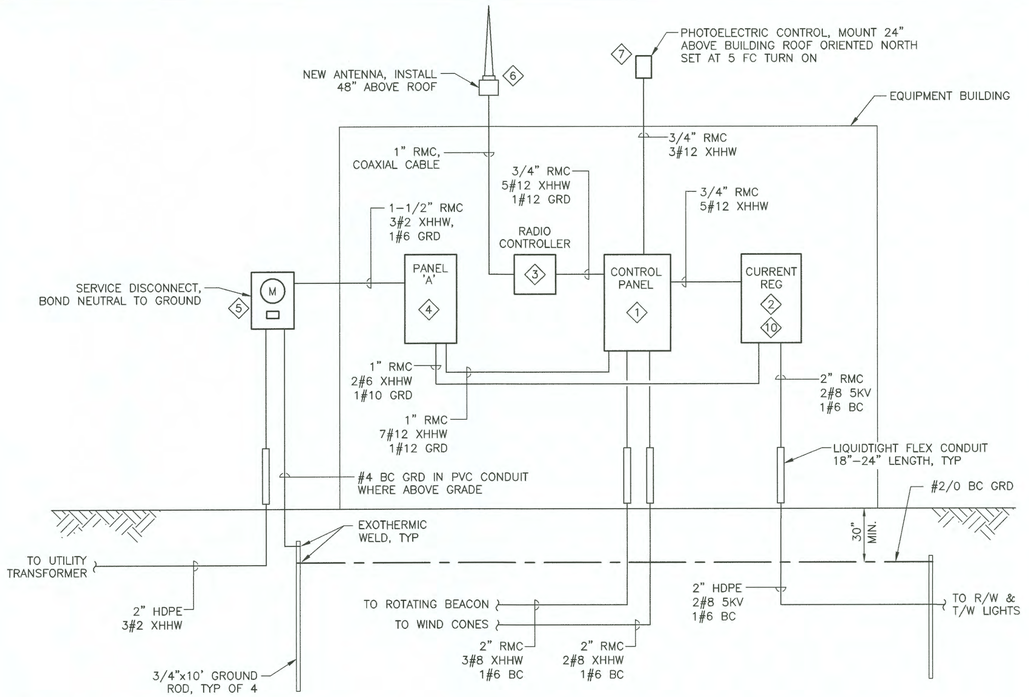
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
SOUTHCOAST REGION-DESIGN AND CONSTRUCTION-AVIATION

STATE OF ALASKA 49TH LUCAS SCHNELLER EE-11399 REGISTERED PROFESSIONAL ENGINEER 8/1/18

BY	DATE	REVISIONS
LPS	8/1/18	1 ADDENDUM 1

KAKE AIRPORT
KAKE, ALASKA
RUNWAY REHABILITATION
AIP 3-02-0398-XX-2018/SFAPT00078
EQUIPMENT BUILDING DETAILS I

SHEET E9 OF 27



1 / E10 ONE-LINE DIAGRAM

SCALE: N.T.S.

ELECTRICAL EQUIPMENT BUILDING NOTES:

1. ALL BUILDING PENETRATIONS SHALL GO THROUGH THE FLOOR OR WALLS. WALL PENETRATIONS SHALL BE MADE BELOW THE LEVEL OF THE INTERIOR EQUIPMENT THEY SERVE.
2. NO PENETRATIONS SHALL BE MADE THROUGH THE ROOF.
3. ALL PENETRATIONS SHALL BE SEALED WEATHERTIGHT WITH SILICONE SEALANT.
4. IMC OR EMT MAY BE USED FOR CONDUIT SECTIONS LOCATED ENTIRELY INTERIOR TO THE EQUIPMENT BUILDING.
5. GROUND RING AND RODS ARE SUBSIDIARY TO EQUIPMENT BUILDING INSTALLATION.

PANEL 'A'

CKT	LOAD	BRANCH BKR	BRANCH VA	CONN KVA A	CONN KVA B	BRANCH VA	BRANCH BKR	LOAD	CKT
1	LIGHTING CONTROL PANEL	20/1	600	1.1		470	20/2	ROTATING BEACON	2
3	ENCLOSURE LIGHTS	20/1	139		0.5	400		BEACON STRIP HEATER	4
5	RECEPTACLES - SEE NOTE 1	20/1	540	4.0		3504	40/2	5KW REGULATOR	6
7	EXHAUST FAN	20/1	75		3.6	3504		SEE NOTE 2	8
9				1.0		1000	20/2	ELECTRIC HEATER	10
11					1.0	1000			12
13				0.1		64	20/1	WIND CONES	14
15					0.0				16
17				0.0					18
19					0.0				20
21				0.0					22
23					0.0				24
25				0.0					26
27					0.0				28
29				0.0					30
	CONNECTED LOAD	11.3 KVA		6.2	5.1				
		47 AMPS		51	43				
	NEC DEMAND	13.4 KVA							
		56 AMPS							

PANEL NOTES
1. GFI CIRCUIT BREAKER
2. MAXIMUM INPUT LOAD SHOWN. ACTUAL LOAD WILL BE LESS.

PANEL SPECIFICATIONS
MAINS RATING AMPS - 100
MAIN CIRCUIT BREAKER AMPERES - MLO
CAPACITY ONE-POLE CIRCUITS - 30
SYSTEM VOLTAGE - 240/120
PHASE, NO. OF WIRES - 1 PH, 3 W
AIC RATING - 10,000
MOUNTING - SURFACE

EQUIPMENT LIST

NO.	DESCRIPTION	NOTES
1	LIGHTING CONTROL PANEL	SEE SPECIFICATION L-109 AND SHEET E11
2	5KW REGULATOR, 3-STEP 240V INPUT, 6.6A OUTPUT	FERRORESONANT TYPE WITH DIGITAL METER AND INTEGRAL SERIES CUTOUT
3	ADJUSTABLE FREQUENCY RADIO CONTROLLER	SET FREQUENCY TO CTAF: 122.9MHZ, RELAYS SHALL OPERATE CUMULATIVELY
4	PANELBOARD	BOLT-ON CIRCUIT BREAKERS, SEE PANEL SCHEDULE FOR ADDITIONAL INFORMATION
5	METER/MAIN	100A/2-POLE MAIN BREAKER, KILOWATT-HOUR METER PROVIDED BY UTILITY
6	RADIO ANTENNA	
7	PHOTOELECTRIC CONTROL	
8	2000W ELECTRIC HEATER	INTEGRAL 40-85 DEG F THERMOSTAT
9	EXHAUST FAN, 150CFM MINIMUM AT 0.2 IN WG	WITH BACKDRAFT DAMPER AND WALL-MOUNTED 40-85 DEG F THERMOSTAT
10	PLUG CUTOUT, 5KV	MOUNT INTEGRAL TO REGULATOR, PROVIDE WITH SEPARATE GROUNDING COVER FOR TROUBLESHOOTING
11	INTERIOR LIGHT FIXTURE	4000LM OUTPUT, FROSTED LENS, 120V
12	EMERGENCY LIGHT	
13	METAL WALL DESK 24"x23"x12"	MOUNT TOP OF DESK AT 36"AFF
14	LOCKABLE WALL CABINET 30"x12"x26"	
15	12"x12" RELIEF AIR VENT	WITH WEIGHTED DAMPER AND DUST FILTER

Record Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.
PE _____ Date 10.24.19

DESIGN LPS
DRAWN LPS,JCA
CHECKED MXS

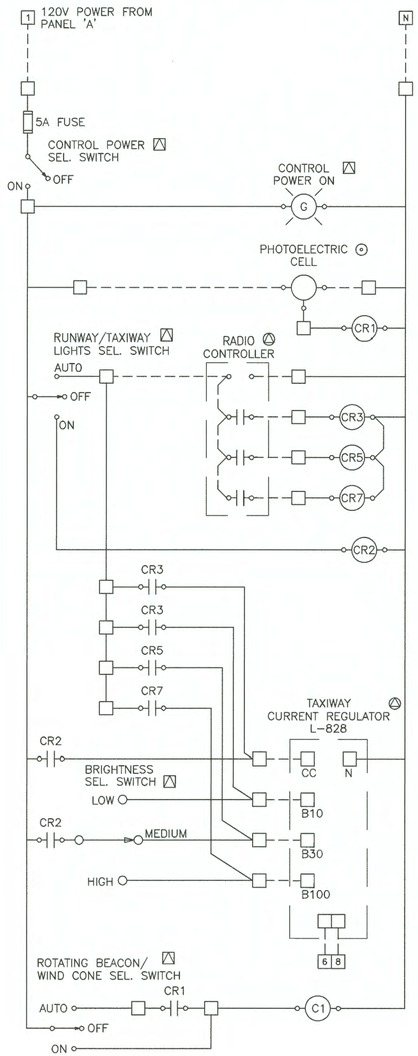
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
SOUTHCOAST REGION-DESIGN AND CONSTRUCTION-AVIATION

STATE OF ALASKA 49TH LUCAS SCHNELLER EE-11399 REGISTERED PROFESSIONAL ENGINEER 1/25/18

BY	DATE	REVISIONS

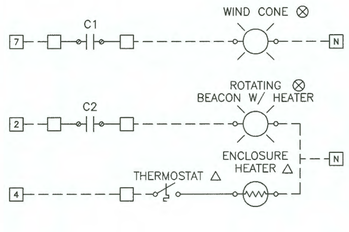
KAKE AIRPORT
KAKE, ALASKA
RUNWAY REHABILITATION
AIP 3-02-0398-XX-2018/SFAPT00078
EQUIPMENT BUILDING DETAILS II

SHEET E10 OF 27



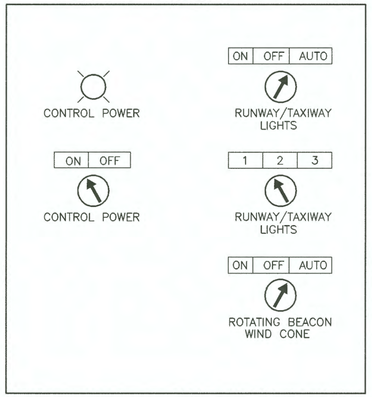
CONTROL DIAGRAM LEGEND

- DEVICE LOCATED ON FRONT OF CONTROL PANEL
- TERMINAL BLOCK LOCATED IN CONTROL PANEL
- DEVICE LOCATED ON BUILDING EXTERIOR
- DEVICE LOCATED INSIDE EQUIPMENT BUILDING
- FIELD WIRING
- [3] CIRCUIT BREAKER IN PANEL 'A'
- DEVICE LOCATED ON AIRFIELD
- DEVICE LOCATED IN OR NEAR ROTATING BEACON ENCLOSURE
- X NORMALLY OPEN CONTACT, X INDICATES ASSOCIATED COIL
- X NORMALLY CLOSED CONTACT, X INDICATES ASSOCIATED COIL
- (X) RELAY OR CONTACTOR COIL
- (TRX) TIMER COIL



2 / E11 CONTROL PANEL LADDER DIAGRAM

SCALE: N.T.S.



1 / E11 CONTROL PANEL DETAIL

SCALE: N.T.S.

CONTROL SEQUENCE DESCRIPTION

RUNWAY & TAXIWAY LIGHTS

ON – LIGHTS ON AT BRIGHTNESS SET BY MANUAL BRIGHTNESS SWITCH

OFF – LIGHTS OFF

AUTO – RADIO CONTROLLER ENABLED
3 CLICKS OF MIC TURNS ON RW/TW LIGHTS AT STEP 1,
2 ADDITIONAL CLICKS OF MIC TURNS RW/TW LIGHTS TO STEP 2,
2 ADDITIONAL CLICKS OF MIC TURNS RW/TW LIGHTS TO STEP 3,
LIGHTS REMAIN ON FOR 15 MINUTES AFTER LAST CLICK

ROTATING BEACON/WIND CONE

ON – BEACON ON

OFF – BEACON OFF

AUTO – PHOTOELECTRIC CONTROL ENABLED

Record Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.
PE _____ Date 10.24.19

DESIGN LPS
DRAWN LPS,JCA
CHECKED MXS

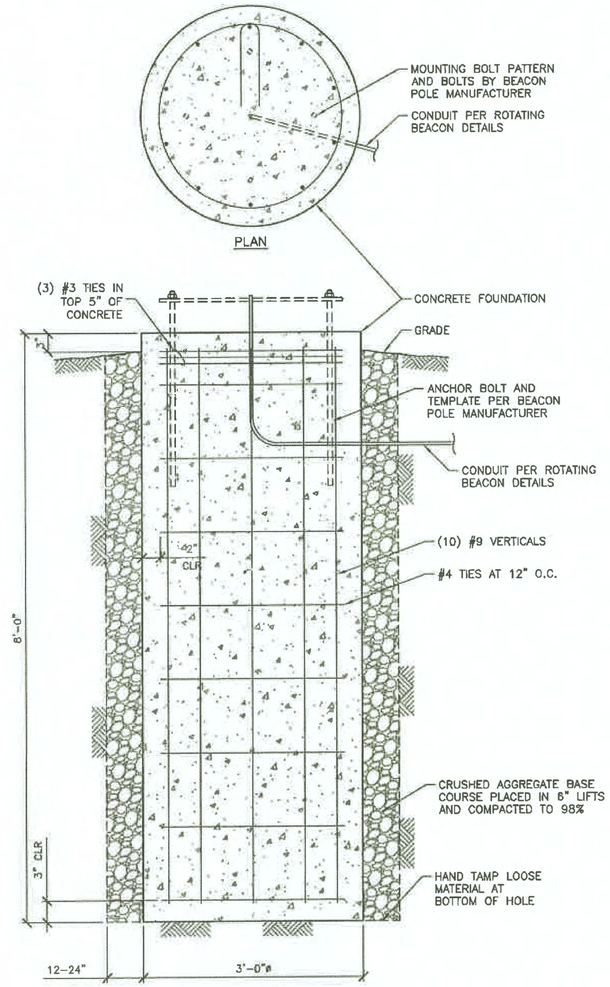
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
SOUTHCOAST REGION–DESIGN AND CONSTRUCTION–AVIATION

STATE OF ALASKA 49TH · LUCAS SCHNELLER · EE-11399 · REGISTERED PROFESSIONAL ENGINEER · 7/25/18

BY	DATE	REVISIONS

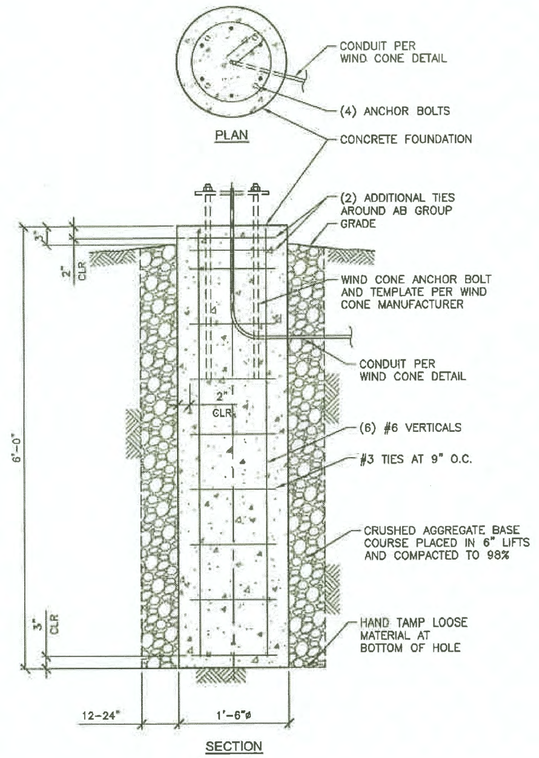
KAKE AIRPORT
KAKE, ALASKA
RUNWAY REHABILITATION
AIP 3-02-0398-XX-2018/SFAPT00078
CONTROL PANEL DETAILS

SHEET E11 OF 27



2 / E12 ROTATING BEACON FOUNDATION DETAIL

SCALE: N.T.S.



1 / E12 WIND CONE FOUNDATION DETAIL

SCALE: N.T.S.

NOTE:
IF BEDROCK IS ENCOUNTERED WITHIN THE DEPTH OF THE FOUNDATION AND IS DEEMED STRUCTURALLY ADEQUATE BY THE ENGINEER, THE FOUNDATION MAY BE PINNED OR DOWELED INTO THE BEDROCK FOR STABILITY AS DIRECTED BY THE ENGINEER AND EXTENDED ABOVE GRADE AS DETAILED

Record Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.

PE _____ Date 10.24.19

DESIGN SC
DRAWN LPS
CHECKED KR

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
SOUTHCOAST REGION–DESIGN AND CONSTRUCTION–AVIATION

STATE OF ALASKA 49 TH KEVIN J.H. ROSS CE-14896 REGISTERED PROFESSIONAL ENGINEER 8/1/18

BY	DATE	REVISIONS
KR	8/1/18	1 ADDENDUM 1 – ADD SHEET

KAKE AIRPORT
KAKE, ALASKA
RUNWAY REHABILITATION
AIP 3-02-0398-XX-2018/SFAPT00078
FOUNDATION DETAILS

SHEET E12 OF 27

PLANS DEVELOPED BY: STANTEC CONSULTING SERVICES, INC. 725 EAST FIREWEED LANE, SUITE 200, ANCHORAGE, AK 99503-2245 907-276-4245 CERTIFICATE OF AUTHORIZATION #126386
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RUNWAY EDGE LIGHT SCHEDULE

NUM	LENS COLOR	TYPE	WATTAGE LAMP	WATTAGE XFMR	STATION	OFFSET	REMARKS
R1	G/R	L861E	LED	30/45	RW STA: 12+90.0	60.0	INSTALL GROUND ROD
R2	G/R	L861E	LED	30/45	RW STA: 12+90.0	50.0	
R3	G/R	L861E	LED	30/45	RW STA: 12+90.0	40.0	
R4	G/R	L861E	LED	30/45	RW STA: 12+90.0	30.0	
R5	G/R	L861E	LED	30/45	RW STA: 12+90.0	-30.0	
R6	G/R	L861E	LED	30/45	RW STA: 12+90.0	-40.0	
R7	G/R	L861E	LED	30/45	RW STA: 12+90.0	-50.0	
R8	G/R	L861E	LED	30/45	RW STA: 12+90.0	-60.0	INSTALL GROUND ROD
R9	W	L861	LED	30/45	RW STA: 14+78.1	-60.0	
R10	W	L861	LED	30/45	RW STA: 18+54.4	-60.0	
R11	W	L861	LED	30/45	RW STA: 20+42.5	-60.0	INSTALL GROUND ROD
R12	W	L861	LED	30/45	RW STA: 22+30.6	-60.0	
R13	W	L861	LED	30/45	RW STA: 24+18.8	-60.0	
R14	W	L861	LED	30/45	RW STA: 26+06.9	-60.0	
R15	W	L861	LED	30/45	RW STA: 27+95.0	-60.0	INSTALL GROUND ROD
R16	W	L861	LED	30/45	RW STA: 29+83.1	-60.0	
R17	W	L861	LED	30/45	RW STA: 31+71.3	-60.0	
R18	Y/W	L861	LED	30/45	RW STA: 33+59.4	-60.0	
R19	Y/W	L861	LED	30/45	RW STA: 35+47.5	-60.0	INSTALL GROUND ROD
R20	Y/W	L861	LED	30/45	RW STA: 37+35.6	-60.0	
R21	Y/W	L861	LED	30/45	RW STA: 39+23.8	-60.0	
R22	Y/W	L861	LED	30/45	RW STA: 41+11.9	-60.0	
R23	Y/G	L861E	LED	30/45	RW STA: 43+00.0	-60.0	
R24	O/G	L861E	LED	30/45	RW STA: 43+00.0	-70.0	
R25	O/G	L861E	LED	30/45	RW STA: 43+00.0	-80.0	
R26	O/G	L861E	LED	30/45	RW STA: 43+00.0	-90.0	INSTALL GROUND ROD
R27	Y/R	L861	LED	30/45	RW STA: 44+68.3	-60.0	
R28	Y/R	L861	LED	30/45	RW STA: 46+36.7	-60.0	
R29	Y/R	L861	LED	30/45	RW STA: 48+05.0	-60.0	
R30	Y/R	L861	LED	30/45	RW STA: 49+73.3	-60.0	
R31	Y/R	L861	LED	30/45	RW STA: 51+41.7	-60.0	
R32	R	L861E	LED	30/45	RW STA: 53+10.0	-60.0	INSTALL GROUND ROD
R33	R	L861E	LED	30/45	RW STA: 53+10.0	-50.0	
R34	R	L861E	LED	30/45	RW STA: 53+10.0	-40.0	
R35	R	L861E	LED	30/45	RW STA: 53+10.0	-30.0	

RUNWAY EDGE LIGHT SCHEDULE

NUM	LENS COLOR	TYPE	WATTAGE LAMP	WATTAGE XFMR	STATION	OFFSET	REMARKS
R36	R	L861E	LED	30/45	RW STA: 53+10.0	30.0	
R37	R	L861E	LED	30/45	RW STA: 53+10.0	40.0	
R38	R	L861E	LED	30/45	RW STA: 53+10.0	50.0	
R39	R	L861E	LED	30/45	RW STA: 53+10.0	60.0	INSTALL GROUND ROD
R40	Y/R	L861	LED	30/45	RW STA: 51+41.7	60.0	
R41	Y/R	L861	LED	30/45	RW STA: 49+73.3	60.0	
R42	Y/R	L861	LED	30/45	RW STA: 48+05.0	60.0	
R43	Y/R	L861	LED	30/45	RW STA: 46+36.7	60.0	
R44	Y/R	L861	LED	30/45	RW STA: 44+68.3	60.0	
R45	Y/G	L861E	LED	30/45	RW STA: 43+00.0	60.0	
R46	O/G	L861E	LED	30/45	RW STA: 43+00.0	70.0	
R47	O/G	L861E	LED	30/45	RW STA: 43+00.0	80.0	
R48	O/G	L861E	LED	30/45	RW STA: 43+00.0	90.0	INSTALL GROUND ROD
R49	Y/W	L861	LED	30/45	RW STA: 41+11.9	60.0	
R50	Y/W	L861	LED	30/45	RW STA: 39+23.8	60.0	
R51	Y/W	L861	LED	30/45	RW STA: 37+35.6	60.0	
R52	Y/W	L861	LED	30/45	RW STA: 35+47.5	60.0	INSTALL GROUND ROD
R53	Y/W	L861	LED	30/45	RW STA: 33+59.4	60.0	
R54	W	L861	LED	30/45	RW STA: 31+71.3	60.0	
R55	W	L861	LED	30/45	RW STA: 29+83.1	60.0	
R56	W	L861	LED	30/45	RW STA: 27+95.0	60.0	INSTALL GROUND ROD
R57	W	L861	LED	30/45	RW STA: 26+06.9	60.0	
R58	W	L861	LED	30/45	RW STA: 24+18.8	60.0	
R59	W	L861	LED	30/45	RW STA: 22+30.6	60.0	
R60	W	L861	LED	30/45	RW STA: 20+42.5	60.0	INSTALL GROUND ROD
R61	W	L861	LED	30/45	RW STA: 18+54.4	60.0	
R62	W	L-861	LED	30/45	RW STA: 16+66.3	60.0	
R63	W	L-861	LED	30/45	RW STA: 14+78.1	60.0	

TAXIWAY EDGE LIGHT SCHEDULE

NUM	LENS COLOR	TYPE	WATTAGE LAMP	WATTAGE XFMR	STATION	OFFSET	REMARKS
T1	B	L-861T	LED	30/45	TW STA: 0+68.00	-67.5	
T2	B	L-861T	LED	30/45	TW STA: 0+63.00	-67.5	
T3	B	L-861T	LED	30/45	TW STA: 0+71.72	-39.2	
T4	B	L-861T	LED	30/45	TW STA: 1+00.00	-27.5	
T5	B	L-861T	LED	30/45	TW STA: 1+55.12	-27.5	
T6	B	L-861T	LED	30/45	TW STA: 2+10.24	-27.5	
T7	B	L-861T	LED	30/45	TW STA: 2+29.00	-32.2	
T8	B	L-861T	LED	30/45	TW STA: 2+43.38	-45.1	INSTALL GROUND ROD
T9	B	L-861T	LED	30/45	TW STA: 2+43.23	45.1	INSTALL GROUND ROD
T10	B	L-861T	LED	30/45	TW STA: 2+28.85	32.2	
T11	B	L-861T	LED	30/45	TW STA: 2+10.09	27.5	
T12	B	L-861T	LED	30/45	TW STA: 1+55.04	27.5	
T13	B	L-861T	LED	30/45	TW STA: 1+00.00	27.5	
T14	B	L-861T	LED	30/45	TW STA: 0+71.72	39.2	
T15	B	L-861T	LED	30/45	TW STA: 0+63.00	67.5	
T16	B	L-861T	LED	30/45	TW STA: 0+68.00	67.5	

HANDHOLE SCHEDULE

NUM	TYPE	SIZE	STATION	OFFSET	REMARKS
HH1	I	B	RW STA: 15+32.63	-509.3	INSTALL GROUND ROD
HH2	I	B	TW STA: 1+98.69	27.5	
HH3	I	B	RW STA: 16+00.26	-78.2	
HH4	I	B	RW STA: 16+00.26	81.8	
HH5	I	B	RW STA: 13+58.24	162.1	INSTALL GROUND ROD
HH6	I	B	RW STA: 20+00.00	-68.3	
HH7	I	B	RW STA: 26+00.00	-68.3	
HH8	I	B	RW STA: 32+00.00	-68.3	
HH9	I	B	RW STA: 37+92.28	-68.3	
HH10	I	B	RW STA: 37+92.28	-221.1	INSTALL GROUND ROD
HH11	I	B	RW STA: 15+82.55	-60.0	
HH12	I	B	RW STA: 17+17.55	-60.0	

SIGN SCHEDULE

NUM	SIDE	PANEL	LEGEND	TYPE	LEGEND COLOR	FACE COLOR	STATION	OFFSET	SIZE	STYLE	CLASS	MODE	REMARKS
S1	1	1	29-11	L-858R	WHITE	RED	TW STA: 1+25.0	37.5	2	2	2	2	
	2	-	-	-	-	-							

NOTES:
STATION AND OFFSET INDICATED IS AT CENTER OF SIGN DEPTH ON END NEAREST TO EDGE OF RUNWAY OR TAXIWAY UNLESS OTHERWISE INDICATED.
TRANSFORMERS SHALL BE SIZED AS RECOMMENDED BY THE SIGN MANUFACTURER.

Record Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.
PE _____ Date 10.24.19

PLANS DEVELOPED BY: STANTEC CONSULTING SERVICES, INC. 725 EAST FIREWEED LANE, SUITE 200, ANCHORAGE, AK 99503-2245 907-276-4245 CERTIFICATE OF AUTHORIZATION #126386
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DESIGN LPS
DRAWN LPS,JCA
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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
SOUTHCOAST REGION-DESIGN AND CONSTRUCTION-AVIATION

STATE OF ALASKA 49TH
LUCAS SCHNELLER
EE-11399
REGISTERED PROFESSIONAL ENGINEER
7/25/18

BY	DATE	REVISIONS

KAKE AIRPORT
KAKE, ALASKA
RUNWAY REHABILITATION
AIP 3-02-0398-XX-2018/SFAPT00078
ELECTRICAL SCHEDULES

SHEET E13 OF 27

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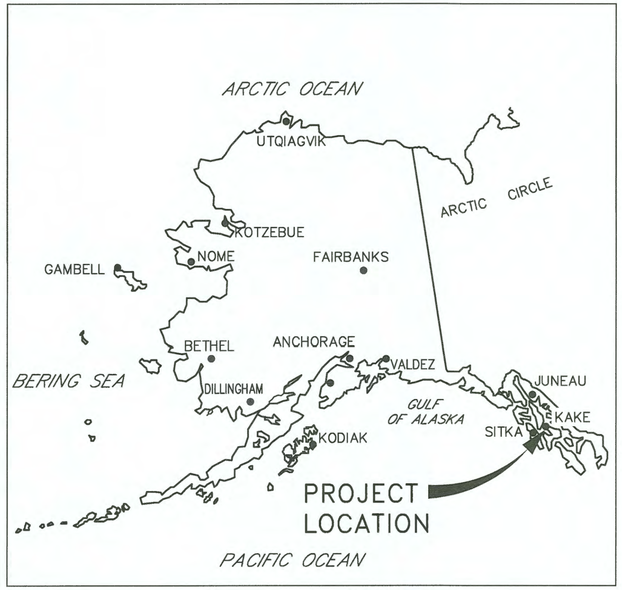
ESCP NOTES:

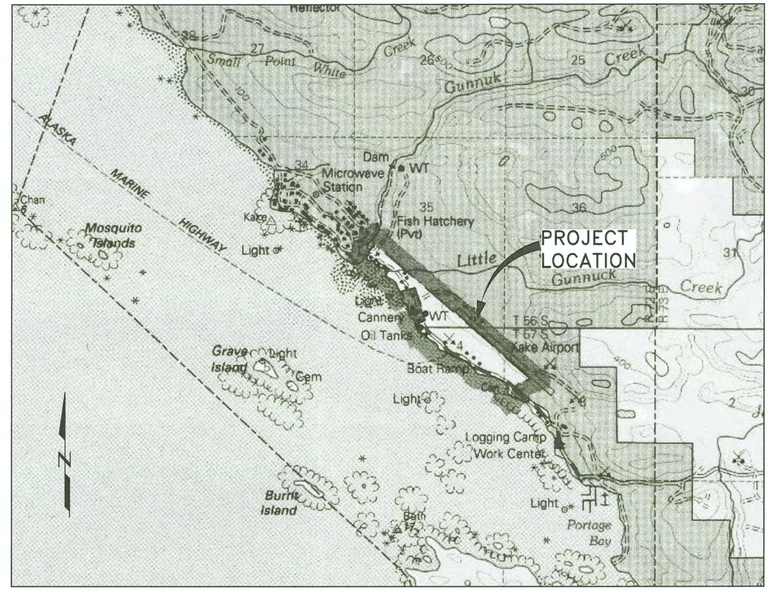
1. DEVELOP A SINGLE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) THAT COVERS CONSTRUCTION. THE PLAN SHALL COMPLY WITH THE ALASKA POLLUTION DISCHARGE ELIMINATION SYSTEM (APDES) REQUIREMENTS FOR STORM WATER DISCHARGE FROM THE PROJECT CONSTRUCTION SITE. SEE P-156 OF THE SPECIFICATIONS.
2. INSTALL EROSION AND SEDIMENT CONTROLS PRIOR TO ANY EARTH DISTURBING ACTIVITIES.
3. PROVIDE PERIMETER PROTECTION IN AREAS NOT SHOWN ON THE PLANS AS NEEDED TO PREVENT SEDIMENT FROM LEAVING THE PROJECT AREA.
4. STABILIZED CONSTRUCTION ENTRANCES AND EXITS SHALL BE INSTALLED AS DIRECTED BY THE ENGINEER.
5. THE CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS, INCLUDING DRAINAGE SWALES, DISTURBED BY CONTRACT ACTIVITIES TO PRECONSTRUCTION CONDITION.
6. PREPARE A HAZARDOUS MATERIAL CONTROL PLAN (HMCP) FOR PREVENTION OF POLLUTION FROM THE STORAGE, USE, CONTAINMENT, CLEANUP, AND DISPOSAL OF HAZARDOUS MATERIAL, INCLUDING PETROLEUM PRODUCTS RELATED TO CONSTRUCTION ACTIVITIES AND EQUIPMENT.
7. PROVIDE SEDIMENT CONTROL AS SHOWN ON PLANS, AND AS NECESSARY, TO PREVENT MIGRATION OF SEDIMENT USING SILT FENCE, FIBER ROLLS, OR OTHER APPROVED BMPS.

LEGEND:

- HAUL ROUTE/PROJECT ACCESS
- SC — PERIMETER CONTROL
- FLOW
- CONSTRUCTION WORK AREA
- CONTRACTOR STAGING AREA
- RUNWAY EXCAVATION AREA
- INLET/OUTLET PROTECTION
- DP# — DISCHARGE POINT

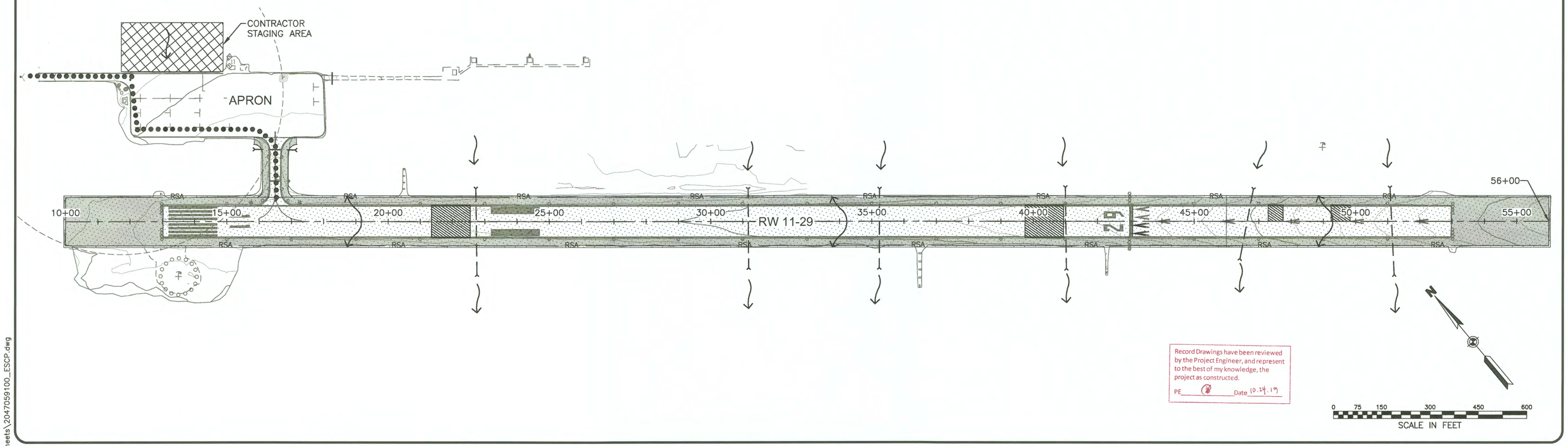


LOCATION MAP



VICINITY MAP

SCALE: 1" = 1/2 MILE



Record Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.

PE _____ Date 10.24.19

0 75 150 300 450 600

SCALE IN FEET

DESIGN RPK

DRAWN ADC

CHECKED JGL

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
SOUTHCOAST REGION-DESIGN AND CONSTRUCTION-AVIATION

BY	DATE	REVISIONS

KAKE AIRPORT
KAKE, ALASKA
RUNWAY REHABILITATION
AIP 3-02-0398-XX-2018/SFAPT00078

ESCP PROJECT LAYOUT PLAN

SHEET AA1 OF AA2

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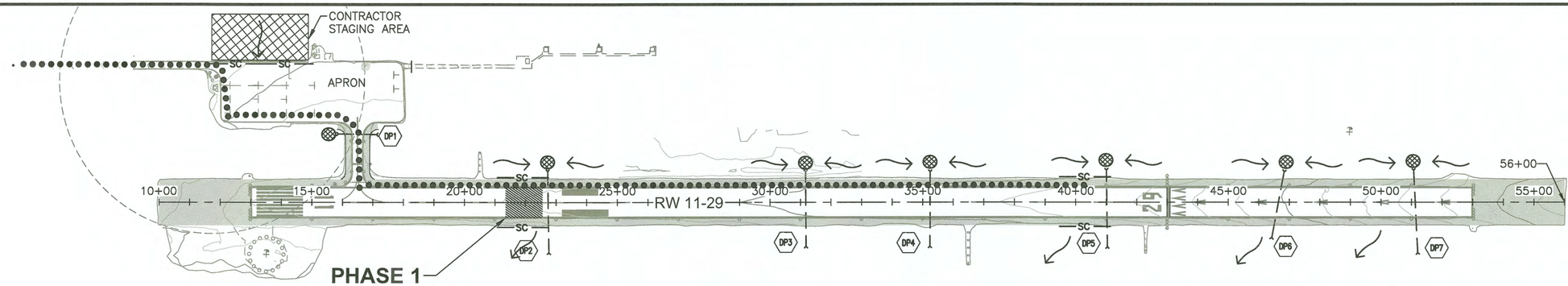

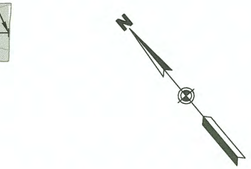

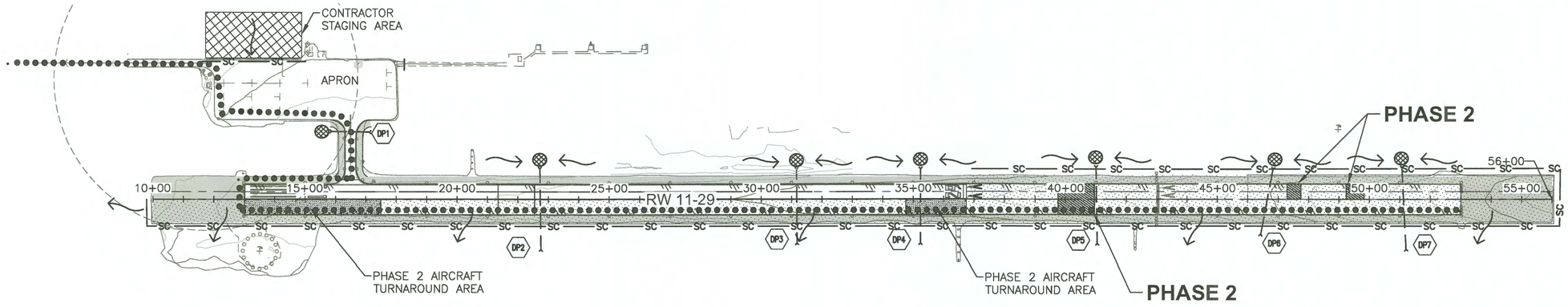

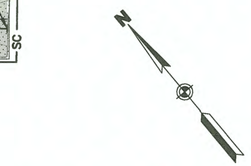

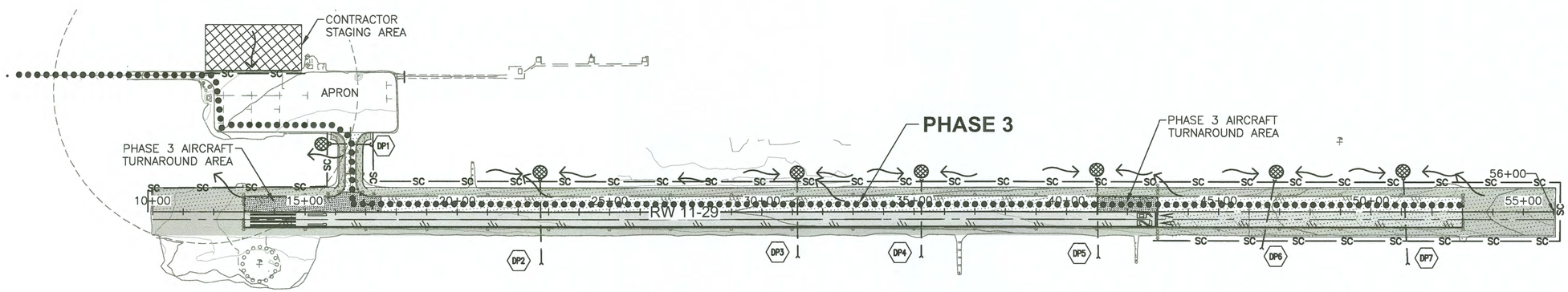

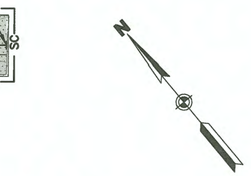

Record Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.

PE _____ Date 10.24.19

DESIGN	RPK	
DRAWN	ADC	
CHECKED	JGL	

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
SOUTHCOAST REGION–DESIGN AND CONSTRUCTION–AVIATION

BY	DATE	REVISIONS

KAKE AIRPORT
KAKE, ALASKA
RUNWAY REHABILITATION
AIP 3-02-0398-XX-2018/SFAPT00078
ESCP PROJECT PHASING

SHEET AA2 OF AA2

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	SFAPT00087	2015	AB-1	XX

DESIGNED C. IVANISZEK
CHECKED J. BROWN
DRAFTED R. GRANTHAM

VREFS

SCALE

LAYOUT
SCS

DATE TIME
2/13/2018 16:16

DRAWING LOCATION
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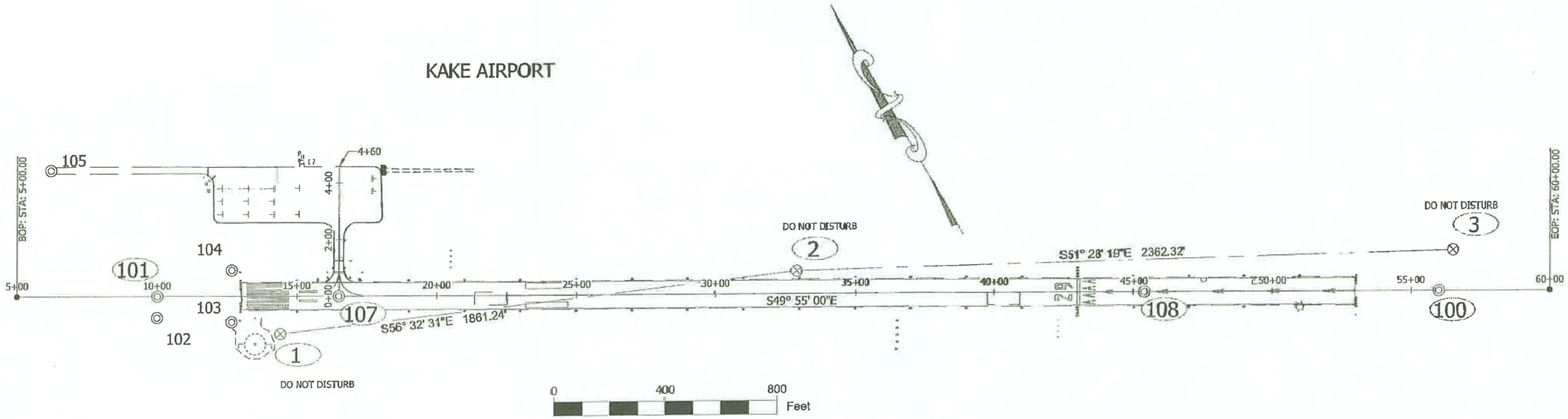
KAKE AIRPORT



All **PROPERTY & CENTERLINE MONUMENTS** in these tables shall be **preserved** in their original horizontal positions. If absolutely necessary then they will be referenced and then replaced in their original horizontal position and a corner monument record form shall be prepared and submitted to DOT for review by the the contracting professional land surveyor prior to recordation.

CONTROL MONUMENTS labeled 1 -3 in this table are high precision Primary and Secondary Airport control maintained by the FAA and shall be **preserved** in their original horizontal and vertical positions. They shall NOT be disturbed or destroyed.

PROPERTY MONUMENTS TO BE PRESERVED

Point #	Northing	Easting	Description	Station	Offset
102	1874194.56	2635518.73	IP	9+98.95	76.28R
103	1874010.53	2635713.03	SPINHOLE_5/8"REBAR	12+66.11	91.97R
104	1874151.35	2635831.76	SPINHOLE_5/8"REBAR	12+66.28	92.22L
105	1874837.97	2635565.37	ALCAP_3.25"_IN-MON-CASE	6+20.34	446.03L
106	1874761.08	2634565.03	ALCAP_3.25"_IN-MON-CASE	N\A	N\A

CENTERLINE MONUMENTS TO BE PRESERVED

Point #	Northing	Easting	Description	Station	Offset
100	1871290.61	2639087.77	ALCAP_2"-DOT/PF-CL_1994	55+99.51	0.00R
101	1874252.25	2635568.65	ALCAP_3.25"-DOT-CL_1986	10+00.00	0.00R
107	1873833.58	2636065.93	ALCAP_3.25"_IN-MON-CASE	16+50.05	0.12R
108	1871973.07	2638276.92	ALCAP_3.25"_IN-MON-CASE	45+39.69	0.04L

NGS CONTROL NOT TO BE DISTURBED

Point #	Northing	Easting	Elevation	Description	Station	Offset
1	1873866.07	2635819.54	142.68	BC_3.25"_AFE-A	14+40.62	133.92R
2	1872839.92	2637372.35	148.71	BC_3.25"_AFE-B	32+89.43	80.82L
3	1871368.43	2639220.40	175.07	BC_3.25"_AFE-C	56+50.88	144.94L

SURVEY CONTROL STATEMENT

This survey was performed in NAD83(2011) AK State Plane Zone 1 GRID. Elevations shown are referenced to NAVD88 using published ellipsoidal heights on PACS/SACS AFE A-C (Control Points 1-3) and Geoid 12B. Refer to National Geodetic Survey PID AI4909, AI4910, and AI4911. These monuments were re-tied this survey and were in good condition and fit well with each other.

All bearings and distances as shown are GRID. Convergence at Control Point 2 (AFE B) is -0° 12' 15". Combined Scale Factor is 0.99989555. To convert GRID distances to ground distances multiply by 1.00010446.

MONUMENT NOTES:

1. If any pair of control points disagrees from published value by more than 1:10,000 horizontally or vertically then a third network point must be tied to ascertain which point is in error or has been disturbed.

2. Whether listed or not, all monuments, property markers, or accessories that will be disturbed or buried shall be referenced prior to being disturbed, and re-established in their original position and a record of monument form in accordance with A.S.34.65.040 shall be submitted to the construction engineer for review prior to recording. Coordinate values listed are for informational purposes and should be used to reset monuments only as a last resort.

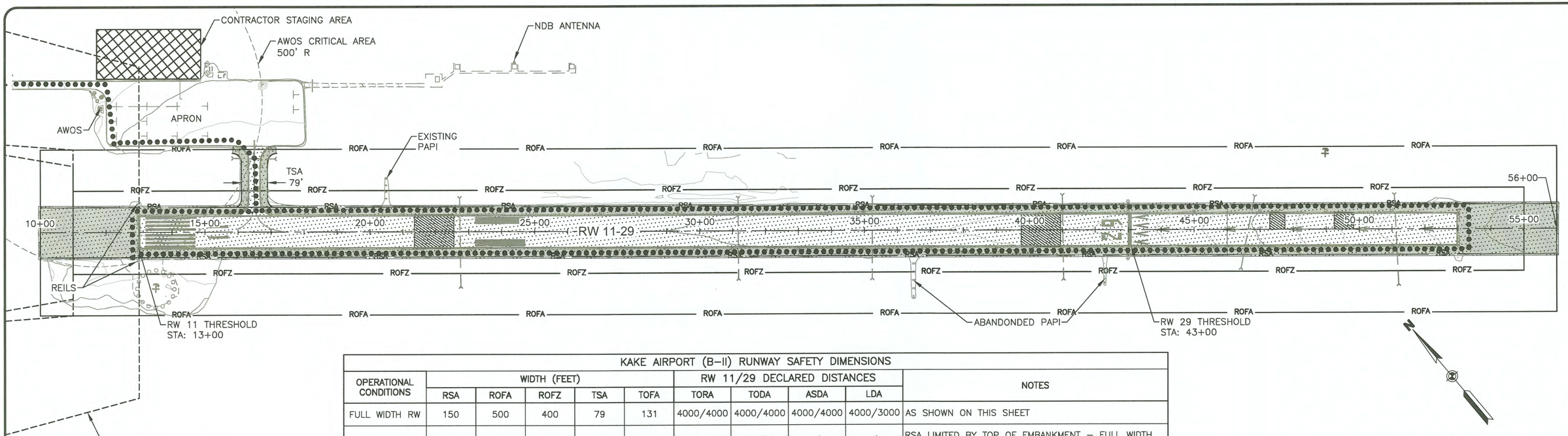
Record Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.
PE _____ Date 10.24.19

7-24-18
STATE OF ALASKA
49TH
Daniel M. Mielke
No. 11259
REGISTERED PROFESSIONAL LAND SURVEYOR

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

KAKE AIRPORT RUNWAY REHABILITATION
SFAPT00087

SURVEY CONTROL SHEET



KAKE AIRPORT (B–II) RUNWAY SAFETY DIMENSIONS										
OPERATIONAL CONDITIONS	WIDTH (FEET)					RW 11/29 DECLARED DISTANCES				NOTES
	RSA	ROFA	ROFZ	TSA	TOFA	TORA	TODA	ASDA	LDA	
FULL WIDTH RW	150	500	400	79	131	4000/4000	4000/4000	4000/4000	4000/3000	AS SHOWN ON THIS SHEET
PHASE 2	100	500	250	79	131	2375/2375	2375/2375	2375/2375	2375/2375	RSA LIMITED BY TOP OF EMBANKMENT – FULL WIDTH DISPLACED THRESHOLD IS CLOSED.
PHASE 3	100	500	250	79	131	3000/3000	3000/3000	3000/3000	3000/3000	RSA LIMITED BY TOP OF EMBANKMENT – FULL WIDTH DISPLACED THRESHOLD IS CLOSED.

NOTES:

1. SUBMIT A SAFETY PLAN COMPLIANCE DOCUMENT (SPCD) TO THE ENGINEER FOR REVIEW. DO NOT BEGIN CONSTRUCTION ACTIVITIES UNTIL THE ENGINEER APPROVES SPCD IN WRITING. ALLOW 30 DAYS FOR INITIAL REVIEW. INCLUDE CONSTRUCTION SEQUENCING AND HALF–WIDTH RUNWAY OPERATIONS. IF PLAN DIFFERS FROM WHAT IS SHOWN, OR IF SUBSEQUENT CHANGES ARE MADE, SUBMIT A REVISION TO THE ENGINEER FOR REVIEW AND APPROVAL. ALLOW 5 DAYS FOR REVIEW OF REVISED SAFETY AND SEQUENCING PLANS.
2. DEVELOP A CONSTRUCTION SCHEDULE BASED ON SEQUENCING SHOWN, OR SUBMIT AN ALTERNATE WORK SEQUENCE FOR APPROVAL. PROVIDE SUFFICIENT DETAIL TO ADDRESS REQUIRED SUBMITTALS, REVIEW PERIODS, PROCUREMENT OF MATERIALS, WORK, AND COORDINATION REQUIREMENTS.
3. THE CSPP AND SAFETY PLAN DRAWINGS DESCRIBE THE GENERAL SCOPE OF WORK FOR EACH PHASE. THIS SHEET SHOWS THE AIRPORT LAYOUT IN ITS EXISTING CONDITION. PARTICULAR RESTRICTIONS ARE NOTED ON THE SAFETY AND PHASING PLAN FOR EACH PHASE. ANY STATION AND OFFSETS REFERENCE THE RUNWAY ALIGNMENT AS DEFINED.
4. DURING CONSTRUCTION, THE ROFZ AND ROFA ARE CENTERED ON THE ACTIVE RUNWAY. THE RSA VARIES DEPENDING ON THE ACTUAL SURFACE AVAILABLE FOR EACH PHASE.
5. ALL WORK AND MATERIALS REQUIRED TO ADDRESS DIRECTIONS OR CONDITIONS OF THE CSPP, SPCD, CONSTRUCTION SAFETY PLAN DRAWINGS, AND OTHER REQUIREMENTS INCLUDING DIRECTION OF THE ENGINEER TO MAINTAIN THE SAFETY AND SECURITY OF THE AIRPORT, GENERAL PUBLIC, DOT&PF EMPLOYEES, CONTRACTOR, AND SUBCONTRACTOR EMPLOYEES WILL BE SUBSIDIARY AS SPECIFIED UNDER THE GENERAL CONTRACT PROVISIONS. REVIEW THE GENERAL CONTRACT PROVISIONS IN THEIR ENTIRETY AND NOTICE THE FOLLOWING GCP SECTIONS: 40–05, 40–07, 50–05, 50–13, 70–09, 70–11, AND SECTION 80.
6. CLEAR SAFETY AREAS OF PERSONNEL AND EQUIPMENT WHEN DIRECTED BY THE ENGINEER OR BY AIRPORT PERSONNEL.
7. DURING AIRCRAFT OPERATIONS, KEEP PERSONNEL AND EQUIPMENT OUTSIDE OF THE RSA AND ROFZ. KEEP CLEAR 15 MINUTES PRIOR TO ARRIVAL, AND AFTER DEPARTURE.
8. WORK OUTSIDE 200 FT OF EXISTING RUNWAY CENTERLINE AND BEYOND 300 FT OF RUNWAY ENDS MAY BE PERFORMED AT ANY TIME DURING THE CONTRACT, SUBJECT TO APPROVED SAFETY PLAN CONDITIONS, LIMITATIONS DESCRIBED IN GCP SECTION 80 OF THE GENERAL CONTRACT PROVISIONS, AND PERMIT CONDITIONS, IF ANY EXIST.
9. DO NOT STORE MATERIALS OR PARK EQUIPMENT WITHIN 250 FT OF ACTIVE RUNWAY CENTERLINE. USE THE CONTRACTOR STAGING AREA SHOWN TO STORE MATERIALS OR PARK EQUIPMENT.
10. SEE SHEET AD7 FOR ROFA VERTICAL CLEARANCES.
11. MARK OPEN TRENCHES WITH HAZARD MARKER BARRIERS. LIGHT WITH RED LIGHTS DURING HOURS OF RESTRICTED VISIBILITY OR DARKNESS. OPEN TRENCHES OR EXCAVATIONS ARE NOT PERMITTED WITHIN 200 FT OF THE RUNWAY CENTERLINE AND 300 FT OF THE RUNWAY THRESHOLDS WHILE THE RUNWAY IS OPEN. COVER OR BACKFILL OPEN TRENCHES OR EXCAVATIONS PRIOR TO OPENING RUNWAY TO AIRCRAFT. COVERS FOR TRENCHES OR EXCAVATIONS MUST BE OF SUFFICIENT STRENGTH TO SUPPORT THE WEIGHT OF THE HEAVIEST AIRCRAFT OPERATING ON THE RUNWAY.
12. ACCESS ROUTES AND HAULING ARE NOT ALLOWED TO CROSS AN ACTIVE RUNWAY, TAXIWAY, OR APRON. ACCESS AND HAUL ROUTES MUST USE THE UNPAVED RUNWAY AND TAXIWAY SAFETY AREAS AS SHOWN.
13. KEEP ALL ACTIVE HAUL ROUTES AND AIRPORT SURFACES CLEAN OF MATERIAL. REMOVE SPILLED OR TRACKED MATERIALS IMMEDIATELY TO AVOID DAMAGING AIRCRAFT.
14. CLEAN AIRPORT SURFACES AND CONDUCT FOD INSPECTION AT THE END OF EVERY WORK SHIFT. CLEANING IS SUBSIDIARY TO RELATED WORK. SEE GCP SECTION 40–05.
15. DURING APPROVED RUNWAY CLOSURES USE LIGHTED RUNWAY CLOSURE MARKERS AT THE LOCATIONS SHOWN, OR AS OTHERWISE DIRECTED. COORDINATE WITH AIRPORT MANAGEMENT TO REMOVE THE RUNWAY EDGE LIGHTS AND RUNWAY THRESHOLD LIGHTS FROM SERVICE DURING CLOSURES. SEE GCP SECTION 70–09.
16. HALF–WIDTH CLOSURES ARE REQUIRED TO COMPLETE THE PROJECT. REFER TO GUIDELINES IN THE DRAWINGS FOR IMPLEMENTING CLOSURES.
17. DURING HALF–WIDTH OPERATIONS, INSPECT TEMPORARY MARKINGS, BARRIERS, AND LIGHTING AT THE START AND END OF EACH WORK SHIFT. TAKE ACTION TO CORRECT DEFICIENCIES IMMEDIATELY UPON DISCOVERY OR NOTIFICATION.
18. PROVIDE SUFFICIENT BALLAST OR ANCHORING OF TEMPORARY LIGHTING AND BARRICADES TO WITHSTAND PROPELLER WASH. SAND BAGS OR OTHER BALLAST MATERIALS MUST MATCH COLOR OF PAVEMENT TO A SUFFICIENT DEGREE AS TO NOT INTERFERE WITH THE AIRPORT MARKING SYSTEM. WHITE OR YELLOW COLORED SAND BAGS WILL NOT BE ALLOWED.
19. MAINTAIN AIRCRAFT ACCESS TO TAXIWAY AND APRON DURING AIR OPERATIONS.
20. COORDINATE NAVAID OUTAGES WITH THE FAA THROUGH THE ENGINEER, AT LEAST 45 DAYS PRIOR TO OUT OF SERVICE DATE.
21. DAMAGE TO FAA FACILITIES INCLUDING POWER DISRUPTION MUST BE IMMEDIATELY REPAIRED IN A MANNER ACCEPTABLE TO THE FAA AND AT THE CONTRACTOR'S EXPENSE.
22. KAKE IS A UTILITY AIRPORT WITH AN APPROACH CATEGORY B, DESIGN GROUP II–SMALL WITH APPROACH VISIBILITY MINIMUMS NOT LESS THAN 1 MILE. AIRCRAFT OPERATING AT KAKE ARE 12,500 LBS OR LESS.
23. THE SPEED LIMIT WITHIN THE AIRPORT PROPERTY IS 25 M.P.H. SEE GCP SECTION 80–05, THIRD PARAGRAPH.

LEGEND:

- HAUL ROUTE
- CONSTRUCTION PHASE/WORK LIMITS
- CONSTRUCTION WORK AREA
- CONTRACTOR STAGING AREA
- RUNWAY EXCAVATION AREA
- TURNAROUND AREA
- TEMPORARY RUNWAY CLOSURE MARKING
- CONE

Record Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.
PE _____ Date 10.24.19

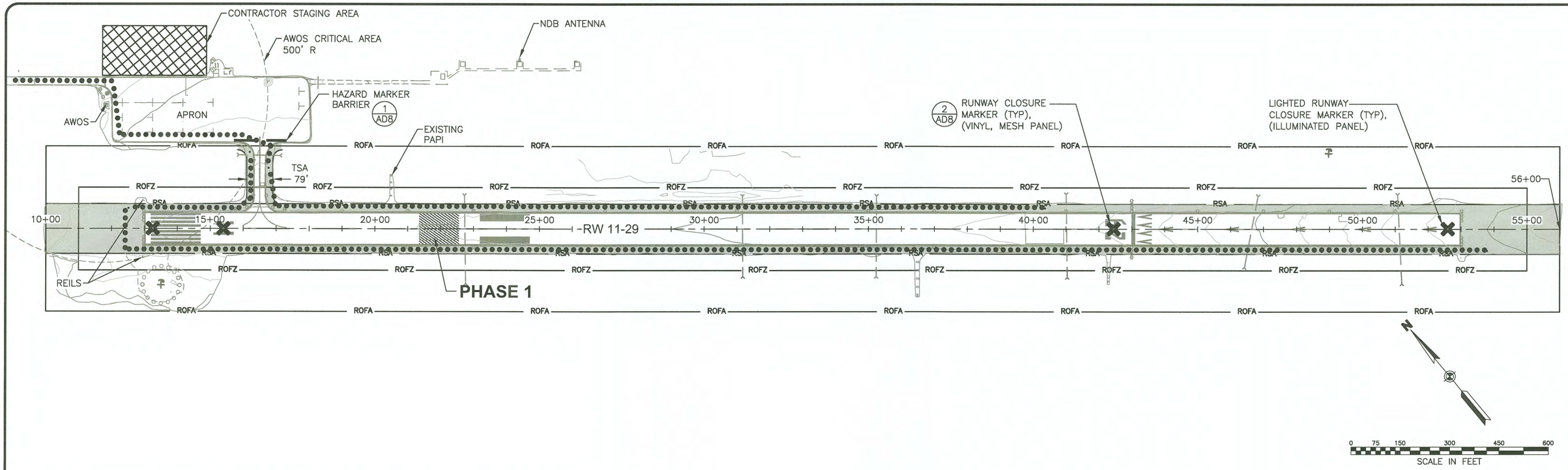
DESIGN RPK
DRAWN ADC
CHECKED JGL

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
SOUTHCOAST REGION–DESIGN AND CONSTRUCTION–AVIATION

BY	DATE	REVISIONS

KAKE AIRPORT
KAKE, ALASKA
RUNWAY REHABILITATION
AIP 3–02–0398–XX–2018/SFAPT00078
CONSTRUCTION SAFETY AND PHASING PLAN OVERVIEW

SHEET AD1 OF AD8



PHASE 1 SAFETY PLAN NOTES:

1. CLEANING OF THE HAUL ROUTES MUST BE CONTINUOUS TO PREVENT THE ACCUMULATION OR SPREAD OF FOD. AIRCRAFT DECLARING AN EMERGENCY MUST BE ALLOWED TO LAND. BE PREPARED TO EVACUATE THE ROFZ ON SHORT NOTICE. MONITOR THE CTAF RADIO FREQUENCY DURING ALL WORK SHIFTS, EVEN WHEN THE RUNWAY IS CLOSED.
2. NIGHTTIME CLOSURES OF THE RUNWAY WILL BE REQUIRED FOR PHASE 1 WITH COORDINATION MEASURES AS SPECIFIED IN THE CSPP DOCUMENT. A SINGLE 1–WEEK RUNWAY CLOSURE (AIRPORT CLOSURE) WILL BE ALLOWED FOR REPAIRING THE RUNWAY USING GEOFOAM.
3. DURING THE AIRPORT CLOSURE THE ROFA, ROFZ, RSA AND TSA RESTRICTIONS DO NOT EXIST. HOWEVER, HAUL ROUTES WILL STILL BE ENFORCED TO LIMIT DAMAGE TO AIRPORT SURFACES. DO NOT HAUL ACROSS PAVED SURFACES EXCEPT AS SHOWN ON THE APPROVED CSPP AND SPCD DOCUMENTS AND DRAWINGS. REPAIR ANY RUTTING OR OTHER DAMAGE TO AIRPORT SURFACES DUE TO HAULING AT THE CONTRACTOR'S EXPENSE. SEE SECTIONS 50–13, 70–11(B) & (G), AND 70–15.
4. LEAVE CLOSURE MARKERS IN PLACE AT ALL TIMES DURING AIRPORT CLOSURE. RELOCATE MARKERS AS REQUIRED OR AS DIRECTED.
5. MAINTAIN TAXIWAY EDGE LIGHTING FOR OPEN TAXIWAY. COVER OR OTHERWISE DISABLE EDGE LIGHTS FOR CLOSED AREAS. COORDINATE CLOSING AND OPENING OF AIR OPERATIONS AREAS WITH AIRPORT MANAGEMENT THROUGH THE ENGINEER. ALLOW FOR ISSUANCE OF NOTAMS BY AIRPORT MANAGEMENT TO KEEP ALL AIRPORT USERS INFORMED OF CLOSED AREAS AND APRON, TAXIWAY, AND RUNWAY STATUS.
6. CONDUCT AN INSPECTION WITH THE ENGINEER OF THE RUNWAY SURFACE, MARKINGS, AND LIGHTING SYSTEM PRIOR TO BEGINNING PHASE 2. CLEAN, REPAIR, AND REPLACE AIRPORT FACILITIES AS DIRECTED.

PHASE 1 WORK ITEMS:

1. CONSTRUCT ALL EROSION AND SEDIMENT CONTROL BMPs REQUIRED FOR THIS PHASE.
2. PLACE RW CLOSURE MARKERS AND TURN OFF AIRPORT LIGHTING SYSTEMS IMMEDIATELY AFTER BEING NOTIFIED BY THE ENGINEER THAT THE RUNWAY IS CLOSED.
3. SCOPE OF CONSTRUCTION FOR THIS PHASE:
   - REPAIR THE RUNWAY USING GEOFOAM AT THE LOCATION SHOWN.
   - REPLACE THE ELECTRICAL ENCLOSURE AND OTHER CRITICAL AIRPORT ELECTRICAL SYSTEMS.
   - PLACE TEMPORARY HOT MIX ASPHALT OR COLD PATCH OVER RUNWAY REPAIR LOCATIONS THAT WILL OPEN FOR AIRCRAFT OPERATIONS IN PHASE 2.
4. AT THE CONTRACTOR'S OPTION, THE FOLLOWING WORK CAN BEGIN IN PHASE 1 AND BE COMPLETED IN PHASE 2, WITH THE CONDITION THAT THIS WORK NOT EFFECT THE SCHEDULE OF, OR INTERFERE WITH THE WORK LISTED ABOVE.
   - REMOVAL AND REPLACEMENT OF EXISTING RUNWAY EDGE LIGHTS AND PAVEMENT REMOVAL ON THE SIDE TO BE CLOSED DURING PHASE 2.
   - RSA IMPROVEMENTS TO THE SIDE OF THE RUNWAY THAT WILL REMAIN CLOSED IN PHASE 2.
   - TSA IMPROVEMENTS. THIS WORK MAY BE CONDUCTED DURING ANY PHASE AT ANYTIME WHEN AIRCRAFT ARE NOT PRESENT. WORK WITHIN THE ROFZ IS LIMITED TO NIGHT TIME RUNWAY CLOSURES. THE CONTRACTOR MUST EVACUATE EQUIPMENT AND PERSONNEL FROM THE TOFA FOR ANY AIRCRAFT OPERATIONS AT ANY TIME.
5. PREPARE THE RUNWAY FOR TRANSITION TO PHASE 2 WHILE THE RUNWAY IS FULLY CLOSED IN PHASE 1. APPLY TEMPORARY MARKINGS AND INSTALL TEMPORARY LIGHTING SYSTEM. MAINTAIN RUNWAY CLOSURE MARKINGS AS DIRECTED.

Record Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.
PE ____ Date 10.29.19

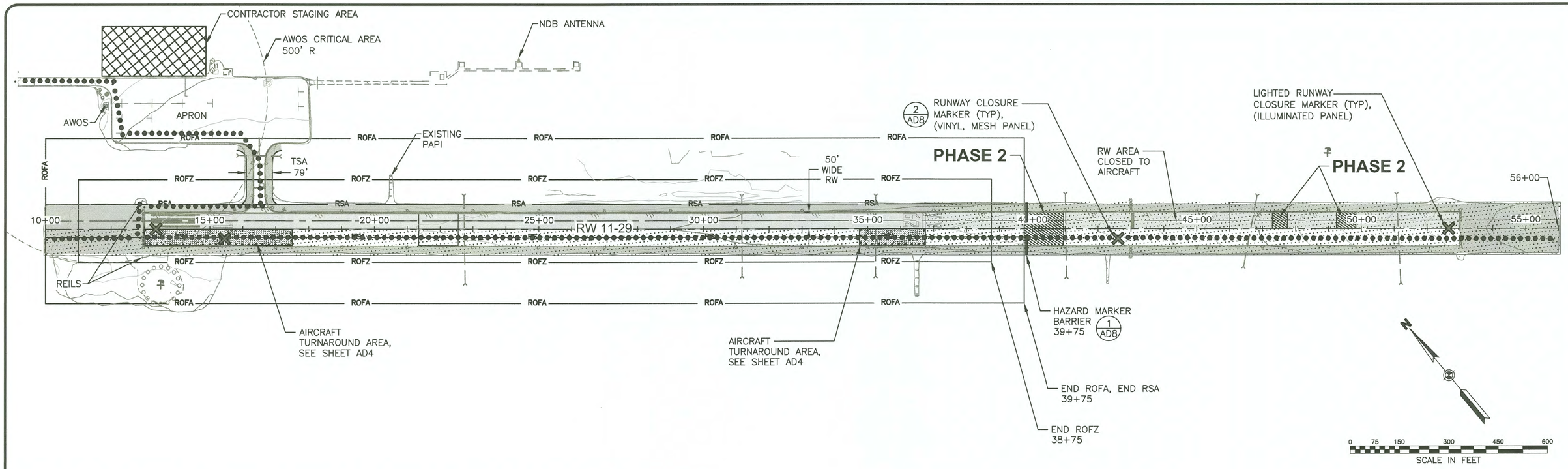
DESIGN RPK
DRAWN ADC
CHECKED JGL

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
SOUTHCOAST REGION–DESIGN AND CONSTRUCTION–AVIATION

BY	DATE	REVISIONS

KAKE AIRPORT
KAKE, ALASKA
RUNWAY REHABILITATION
AIP 3–02–0398–XX–2018/SFAPT00078
CONSTRUCTION SAFETY AND PHASING PLAN
PHASE 1 PLAN

SHEET AD2 OF AD8



PHASE 2 SAFETY PLAN NOTES:

1. ALL HAULING MUST TAKE PLACE ON THE CLOSED PORTION OF THE RUNWAY. CLEANING OF THE HAUL ROUTES MUST BE CONTINUOUS TO PREVENT THE ACCUMULATION OR SPREAD OF FOD.
2. NIGHT TIME CLOSURE OF THE RUNWAY WILL BE REQUIRED FOR PHASE 2 WITH PROPER COORDINATION AS SPECIFIED.
3. PROVIDE TEMPORARY RUNWAY EDGE LIGHTING FOR THE HALF WIDTH OPERATION OF RUNWAY 11–29, INCLUDING THRESHOLD LIGHTING. PROVIDE POWER, CABLING, AND ALL OTHER WORK REQUIRED FOR TEMPORARY LIGHTING. A COMBINATION OF TEMPORARY AND EXISTING LIGHTING MAY BE USED TO PROVIDE THE LIGHTING REQUIRED. RELOCATE TEMPORARY LIGHTING DURING NIGHT TIME CLOSURES TO ACCOMMODATE CONSTRUCTION, REPOSITION AND INSPECT TEMPORARY LIGHTING PRIOR TO DAILY OPENING OF HALF WIDTH RUNWAY FOR AIRCRAFT OPERATIONS.
4. THE WIDTH OF RUNWAY 11–29 WITH THE TEMPORARY EDGE LIGHTING IN PLACE IS 50 FEET FOR THIS PHASE. SEE DETAIL 1 ON SHEET AD7.
5. LEAVE PANEL TYPE CLOSURE MARKERS ON PORTION OF THE CLOSED HALF OF RUNWAY NOT ACTIVELY BEING WORKED ON IN PLACE AT ALL TIMES DURING PHASE 2.
6. PROVIDE AIRCRAFT TURNAROUNDS FOR THE DURATION OF THIS PHASE WHEN THE RUNWAY IS OPEN TO OPERATIONS. ACCOMPLISH WORK WITHIN THESE LIMITS DURING NIGHT TIME CLOSURES, AND RE–OPEN FOR AIRCRAFT OPERATIONS EVERY DAY, SEE SHEET AD4.
7. MAINTAIN TAXIWAY EDGE LIGHTING FOR OPEN TAXIWAY. COVER OR OTHERWISE DISABLE EDGE LIGHTS FOR CLOSED AREAS. COORDINATE CLOSING AND OPENING OF AIR OPERATIONS AREAS WITH AIRPORT MANAGEMENT THROUGH THE ENGINEER. ALLOW FOR ISSUANCE OF NOTAMS BY AIRPORT MANAGEMENT TO KEEP ALL AIRPORT USERS INFORMED OF CLOSED AREAS AND APRON, TAXIWAY, AND RUNWAY STATUS.
8. CONDUCT AN INSPECTION WITH THE ENGINEER OF THE RUNWAY SURFACE, MARKINGS, AND LIGHTING SYSTEM PRIOR TO BEGINNING PHASE 3. CLEAN, REPAIR, AND REPLACE AIRPORT FACILITIES AS DIRECTED.

PHASE 2 WORK ITEMS:

1. OPEN THE HALF WIDTH RUNWAY TO DAYTIME OPERATIONS AND BEGIN PHASE 2 ONLY WHEN APPROVED BY THE ENGINEER.
2. CONSTRUCT ALL EROSION AND SEDIMENT CONTROL BMPs REQUIRED FOR THIS PHASE.
3. SCOPE OF CONSTRUCTION FOR THIS PHASE:
   - REPAIR THE RUNWAY USING GEOFOAM AT THE THREE LOCATIONS SHOWN.
   - REMOVE EXISTING ASPHALT – HALF WIDTH OF RUNWAY
   - CONSTRUCT RSA EMBANKMENT IMPROVMENTS
   - CONSTRUCT RUNWAY EDGE LIGHTS WITHIN PHASE LIMITS
   - PLACE NEW HOT MIX ASPHALT
   - APPLY TEMPORARY MARKINGS AND INSTALL TEMPORARY LIGHTING SYSTEM IN PREPARATION FOR PHASE 3.

Record Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.
PE ____ Date 10.24.19

DESIGN RPK
DRAWN ADC
CHECKED JGL

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
SOUTHCOAST REGION–DESIGN AND CONSTRUCTION–AVIATION

BY	DATE	REVISIONS

KAKE AIRPORT
KAKE, ALASKA
RUNWAY REHABILITATION
AIP 3-02-0398-XX-2018/SFAPT00078
CONSTRUCTION SAFETY AND PHASING PLAN
PHASE 2 PLAN

SHEET AD3 OF AD8

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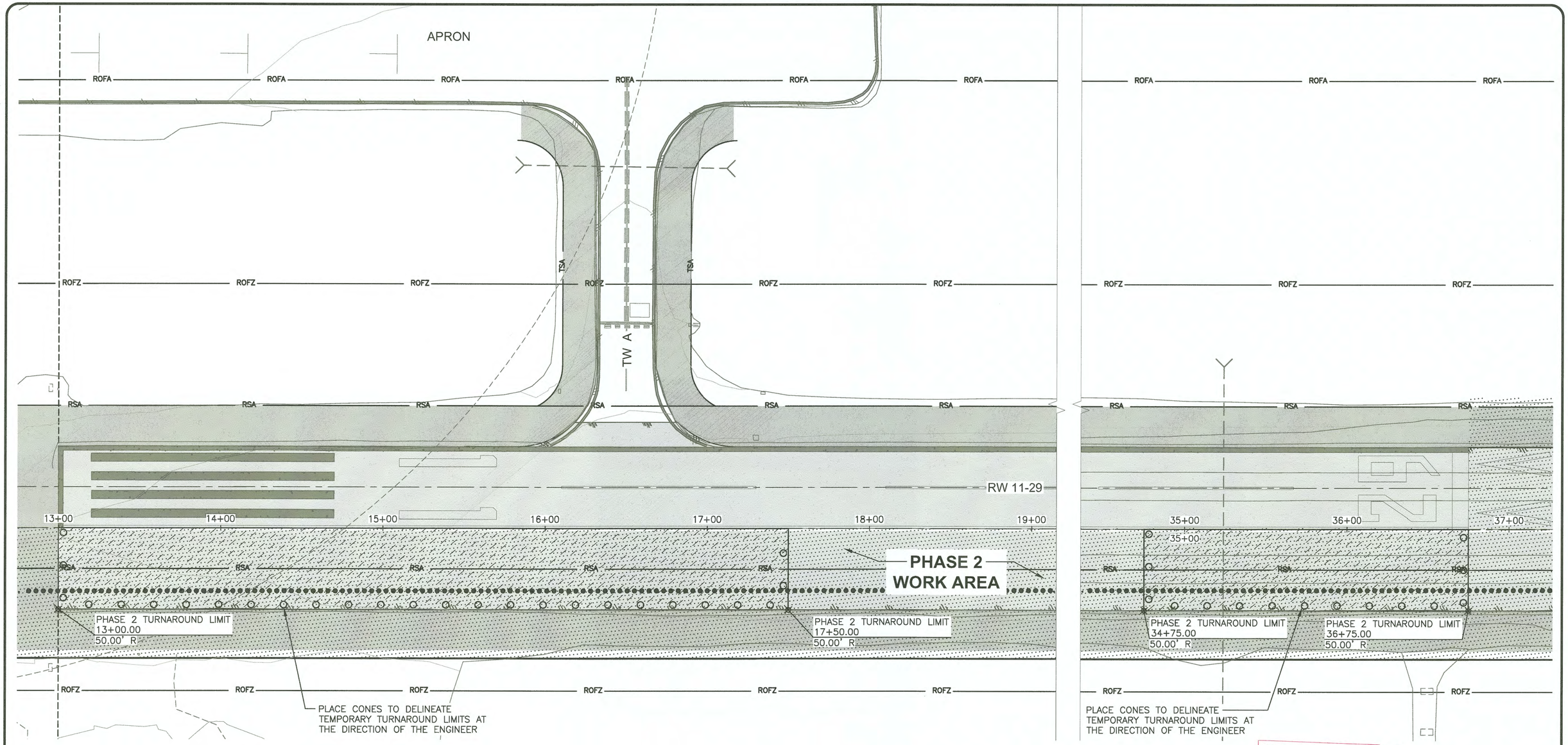

Record Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.
PE _____ Date 10.24.19

NOTES:

1. TURNAROUND SURFACE MUST BE COMPACTED CABC CAPABLE OF SUPPORTING AIRCRAFT DURING ALL WEATHER CONDITIONS, OR HMA. CONSTRUCT PAVEMENT TRANSITION WEDGE AS REQUIRED. SEE DETAIL 3 ON SHEET AD7.
2. TURNAROUND AREA MUST BE OPEN TO AIRCRAFT WHEN THE RUNWAY IS ACTIVE.

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SCALE IN FEET

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DESIGN RPK
DRAWN ADC
CHECKED JGL

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
SOUTHCOAST REGION–DESIGN AND CONSTRUCTION–AVIATION

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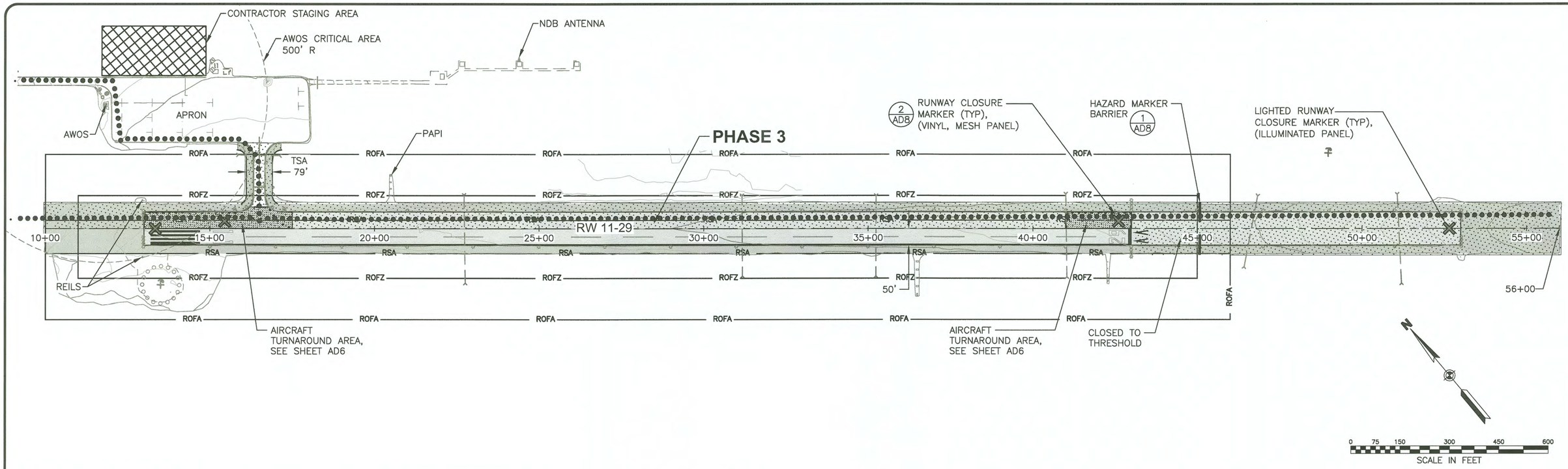
KAKE AIRPORT
KAKE, ALASKA
RUNWAY REHABILITATION
AIP 3-02-0398-XX-2018/SFAPT00078
CONSTRUCTION SAFETY AND PHASING PLAN
PHASE 2 TURNAROUND PLAN

SHEET AD4 OF AD8



PHASE 3 SAFETY PLAN NOTES:

1. ALL HAULING MUST TAKE PLACE ON THE CLOSED PORTION OF THE RUNWAY. CLEANING OF THE HAUL ROUTES MUST BE CONTINUOUS TO PREVENT THE ACCUMULATION OR SPREAD OF FOD.
2. NIGHT TIME CLOSURE OF THE RUNWAY WILL BE REQUIRED FOR PHASE 3 WITH PROPER COORDINATION AS SPECIFIED.
3. PROVIDE TEMPORARY RUNWAY EDGE LIGHTING FOR THE HALF WIDTH OPERATION OF RUNWAY 11–29, INCLUDING THRESHOLD LIGHTING. PROVIDE POWER, CABLING, AND ALL OTHER WORK REQUIRED FOR TEMPORARY LIGHTING. A COMBINATION OF TEMPORARY AND EXISTING LIGHTING MAY BE USED TO PROVIDE THE LIGHTING REQUIRED. RELOCATE TEMPORARY LIGHTING DURING NIGHT TIME CLOSURES TO ACCOMMODATE CONSTRUCTION, REPOSITION AND INSPECT TEMPORARY LIGHTING PRIOR TO DAILY OPENING OF HALF WIDTH RUNWAY FOR AIRCRAFT OPERATIONS.
4. THE WIDTH OF RUNWAY 11–29 WITH THE TEMPORARY EDGE LIGHTING IN PLACE IS 50 FEET FOR THIS PHASE. SEE DETAIL 1 ON SHEET AD7.
5. LEAVE PANEL TYPE CLOSURE MARKERS ON PORTION OF THE CLOSED HALF RUNWAY NOT ACTIVELY BEING WORKED ON IN PLACE AT ALL TIMES DURING PHASE.
6. PROVIDE AIRCRAFT TURNAROUNDS FOR THE DURATION OF THIS PHASE WHEN THE RUNWAY IS OPEN TO OPERATIONS. ACCOMPLISH WORK WITHIN THESE LIMITS DURING NIGHT TIME CLOSURES, AND RE–OPEN FOR AIRCRAFT OPERATIONS EVERY DAY, SEE SHEET AD6.
7. MAINTAIN TAXIWAY EDGE LIGHTING FOR OPEN TAXIWAY. COVER OR OTHERWISE DISABLE EDGE LIGHTS FOR CLOSED AREAS. COORDINATE CLOSING AND OPENING OF AIR OPERATIONS AREAS WITH AIRPORT MANAGEMENT THROUGH THE ENGINEER. ALLOW FOR ISSUANCE OF NOTAMS BY AIRPORT MANAGEMENT TO KEEP ALL AIRPORT USERS INFORMED OF CLOSED AREAS AND APRON, TAXIWAY, AND RUNWAY STATUS.

PHASE 3 WORK ITEMS:

1. OPEN THE HALF WIDTH RUNWAY TO DAYTIME OPERATIONS AND BEGIN PHASE 3 ONLY WHEN APPROVED BY THE ENGINEER.
2. CONSTRUCT ALL EROSION AND SEDIMENT CONTROL BMPs REQUIRED FOR THIS PHASE.
3. SCOPE OF CONSTRUCTION FOR THIS PHASE:
   - REMOVE REMAINING EXISTING ASPHALT WITHIN THE LIMITS SPECIFIED
   - COMPLETE RSA EMBANKMENT IMPROVEMENTS
   - COMPLETE TSA EMBANKMENT IMPROVEMENTS
   - PLACE NEW HOT MIX ASPHALT
   - COMPLETE RUNWAY EDGE LIGHTS
   - COMPLETE TAXIWAY EDGE LIGHTS AND AIRPORT SIGNS
   - COMPLETE ROTATING BEACON
   - COMPLETE LIGHTED WIND CONES
3. PREPARE THE RUNWAY FOR THE TRANSITION BACK TO FULL WIDTH OPERATIONS.
4. OPEN THE RUNWAY TO FULL WIDTH OPERATIONS WHEN APPROVED BY THE ENGINEER.
5. COMPLETE THE FULL WIDTH RUNWAY MARKINGS DURING SUBSEQUENT NIGHT TIME CLOSURES.

Record Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.
PE _____ Date 10.24.19

DESIGN RPK
DRAWN ADC
CHECKED JGL

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
SOUTHCOAST REGION–DESIGN AND CONSTRUCTION–AVIATION

BY	DATE	REVISIONS

KAKE AIRPORT
KAKE, ALASKA
RUNWAY REHABILITATION
AIP 3-02-0398-XX-2018/SFAPT00078
CONSTRUCTION SAFETY AND PHASING PLAN
PHASE 3

SHEET AD5 OF AD8

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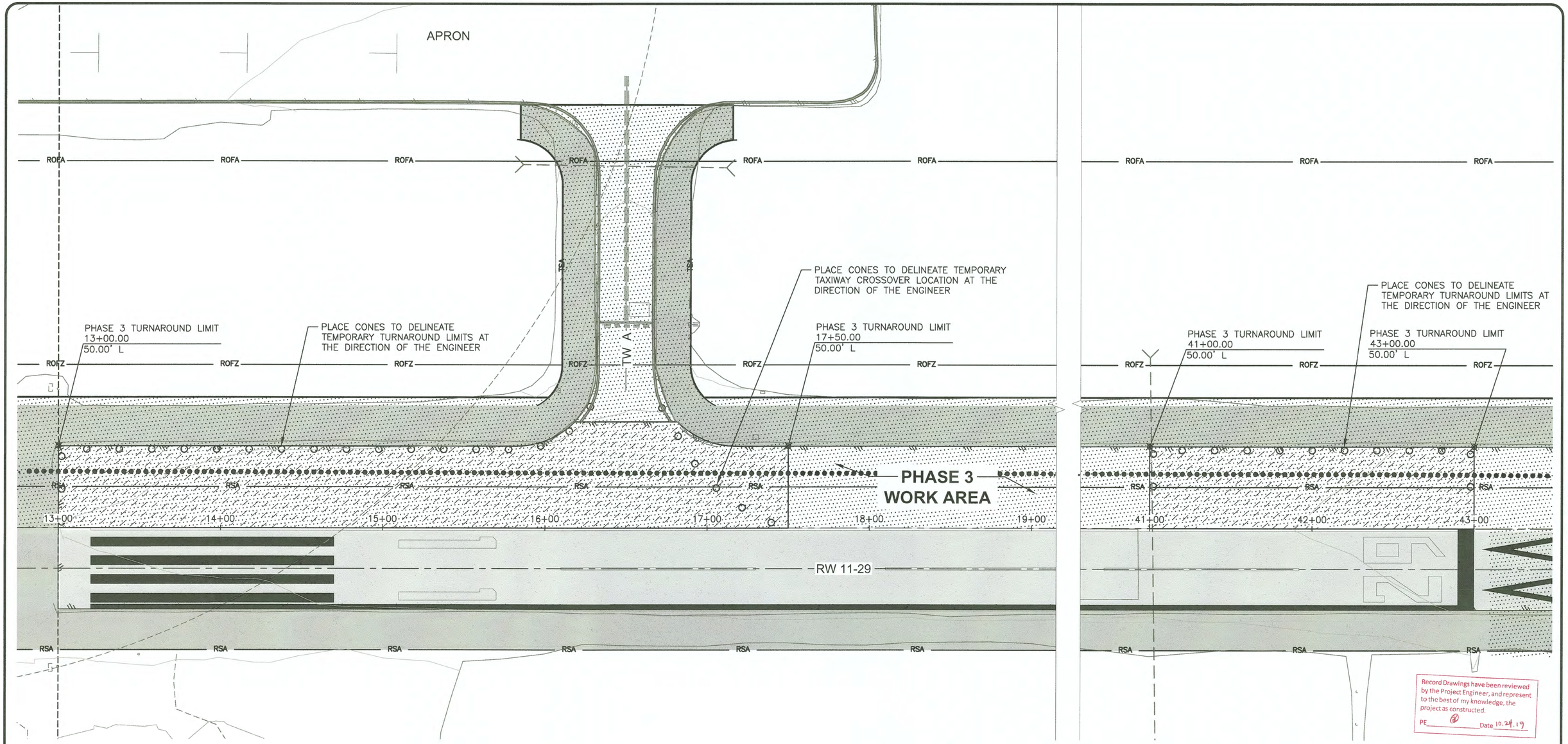

Record Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.

PE _____ Date 10.24.19

NOTES:

1. MAINTAIN ACCESS FROM THE RUNWAY TO THE TAXIWAY WHENEVER THE RUNWAY IS OPEN TO AIRCRAFT OPERATIONS.
2. CROSSOVER TAXIWAY AND TURNAROUND SURFACE MUST BE COMPACTED CABC CAPABLE OF SUPPORTING AIRCRAFT DURING ALL WEATHER CONDITIONS, OR HMA. CONSTRUCT PAVEMENT TRANSITION WEDGE AS REQUIRED. SEE DETAIL 3 ON SHEET AD7.
3. TURNAROUND AREA MUST BE OPEN TO AIRCRAFT WHEN THE RUNWAY IS ACTIVE.

0 10 20 30 60 90 120
SCALE IN FEET

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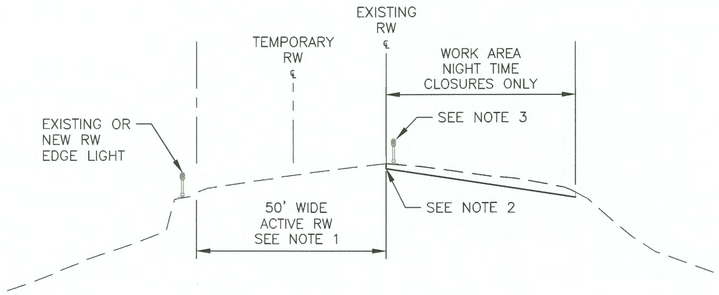
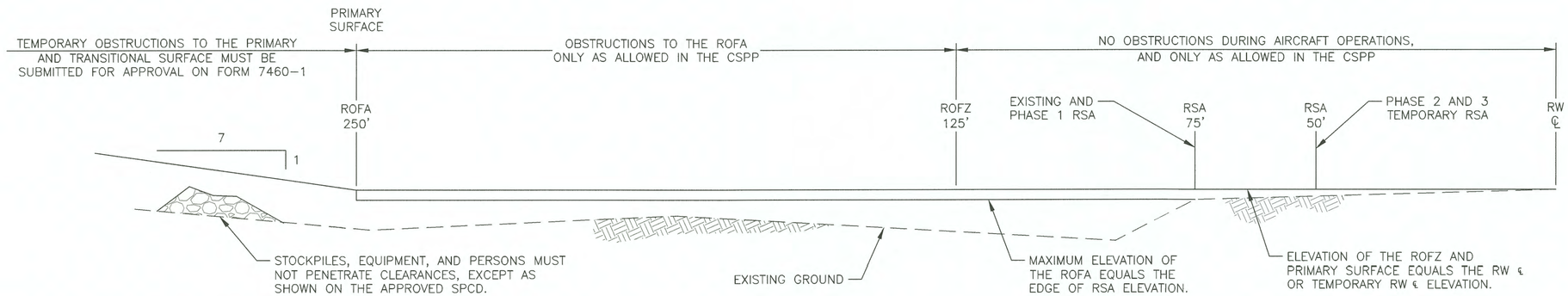
CONSTRUCTION SAFETY AND PHASING PLAN
PHASE 3 CROSSOVER PLAN

SHEET AD6 OF AD8



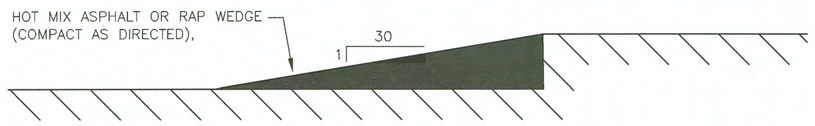
1 / AD7 HALF WIDTH RW TYPICAL SECTION

SCALE: N.T.S.



2 / AD7 VERTICAL RELATION OF THE RSA, ROFZ, AND ROFA

SCALE: N.T.S.



3 / AD7 TRANSITION WEDGE DETAIL

SCALE: N.T.S.

NOTES:

1. SECTION DEPICTS RW CONDITIONS WHEN HALF WIDTH RW IS ACTIVE DURING PHASE 2. COMPLETE WORK IN ACCORDANCE WITH THE APPROVED SAFETY AND STAGING PLANS. SECTION IS MIRRORED ABOUT EXISTING CENTERLINE FOR THE PHASE 3 HALF WIDTH RW CLOSURE.
2. ALL EXCAVATIONS MUST BE FILLED AND COMPACTED PRIOR TO THE END OF EACH SHIFT – VERTICAL FACE MUST NOT EXCEED 6 INCHES DURING AIRCRAFT OPERATIONS. CONSTRUCT PAVEMENT TRANSITION WEDGE WHERE AIRCRAFT MUST CROSS. SEE DETAIL 3 SHEET AD7.
3. TEMPORARY LIGHTING MUST BE PLACED A MINIMUM OF 2 FEET INSIDE THE WORK AREA DURING AIRCRAFT OPERATIONS. RELOCATE THE TEMPORARY LIGHTING DURING THE NIGHT TIME CLOSURES AS REQUIRED TO ACCOMMODATE CONSTRUCTION. REPLACE LIGHTING AND INSPECT PRIOR TO THE END OF EACH WORK SHIFT AND PRIOR TO OPENING RW TO AIRCRAFT OPERATIONS.

Record Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.
PE _____ Date 10, 24, 19

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CONSTRUCTION SAFETY AND PHASING
DETAILS I

SHEET AD7 OF AD8

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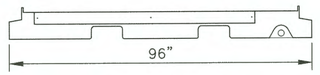
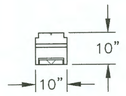


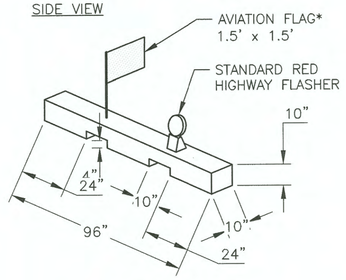
ELEVATION VIEW



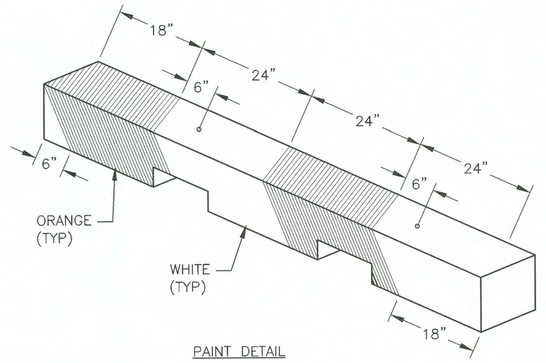
SIDE VIEW

HAZARD MARKER BARRIER NOTES

1. PLACE BARRIERS TO LIMIT ACCESS TO THE CLOSED RUNWAY. USE LOW STYLE BARRIERS (LESS THAN 12 INCHES HIGH) WHEN ADJACENT TO AN ACTIVE MOVEMENT AREA.
2. DISABLE AND PREVENT THE OPERATION OF RUNWAY EDGE LIGHTS AND RUNWAY THRESHOLD LIGHTS DURING CLOSURE OF THE RUNWAY.
3. HAZARD MARKER BARRIERS ARE NOT TO BE PLACED WITHIN THE OFZ OF THE ACTIVE RUNWAY. CONSIDER PROPELLER WASH WHEN PLACING BARRIERS.
4. SEE CSPP SECTION 16 FOR SPACING REQUIREMENTS.



PREPARATION OF
FLAG & FLASHER MOUNT DETAIL

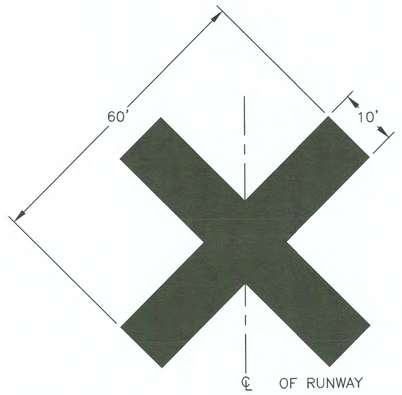


PAINT DETAIL

* FLAGS SHALL ALTERNATE COLOR (ORANGE/WHITE) ON EACH BARRIER AS THEY ARE PLACED IN THE AIRPORT OPERATIONS AREA.

1 / AD8 HAZARD MARKER BARRIER DETAIL
SCALE: N.T.S.

CONCEPTUAL DETAIL, SUBMIT ALTERNATE DESIGN OR COMMERCIAL PRODUCT FOR APPROVAL. COLOR MUST BE ALTERNATING ORANGE AND WHITE SIMILAR AS SHOWN.



RUNWAY CLOSURE MARKER NOTES

1. RUNWAY CLOSURE MARKER SHALL BE POSITIONED OVER RUNWAY DESIGNATION NUMERALS TO DENOTE A TEMPORARY CLOSED RUNWAY, OR AS DIRECTED.
2. RUNWAY CLOSURE MARKERS SHALL BE CONSTRUCTED OF VINYL MESH AND SHALL BE YELLOW IN COLOR.
3. PLACE LIGHTED RUNWAY CLOSURE MARKER AT EACH END OF THE CLOSED RUNWAY. ALIGN ON THE EXTENDED CENTERLINE, AND POSITION ON THE RSA EMBANKMENT TO AVOID CONFLICT WITH CONSTRUCTION ACTIVITY, OR AS OTHERWISE DIRECTED. SEE AC 150/5345-53, AND AC 150/5345-55 FOR ADDITIONAL REQUIREMENTS AND GUIDANCE FOR LIGHTED CLOSURE MARKERS.

2 / AD8 CLOSURE MARKER DETAIL
SCALE: N.T.S.

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PE _____ Date 10.24.19

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SHEET AD8 OF AD8