

State of Alaska

Department of Transportation and Public Facilities

Design and Engineering Services Division

KETCHIKAN AIRPORT

RUNWAY SAFETY AREA EXPANSION & RUNWAY OVERLAY

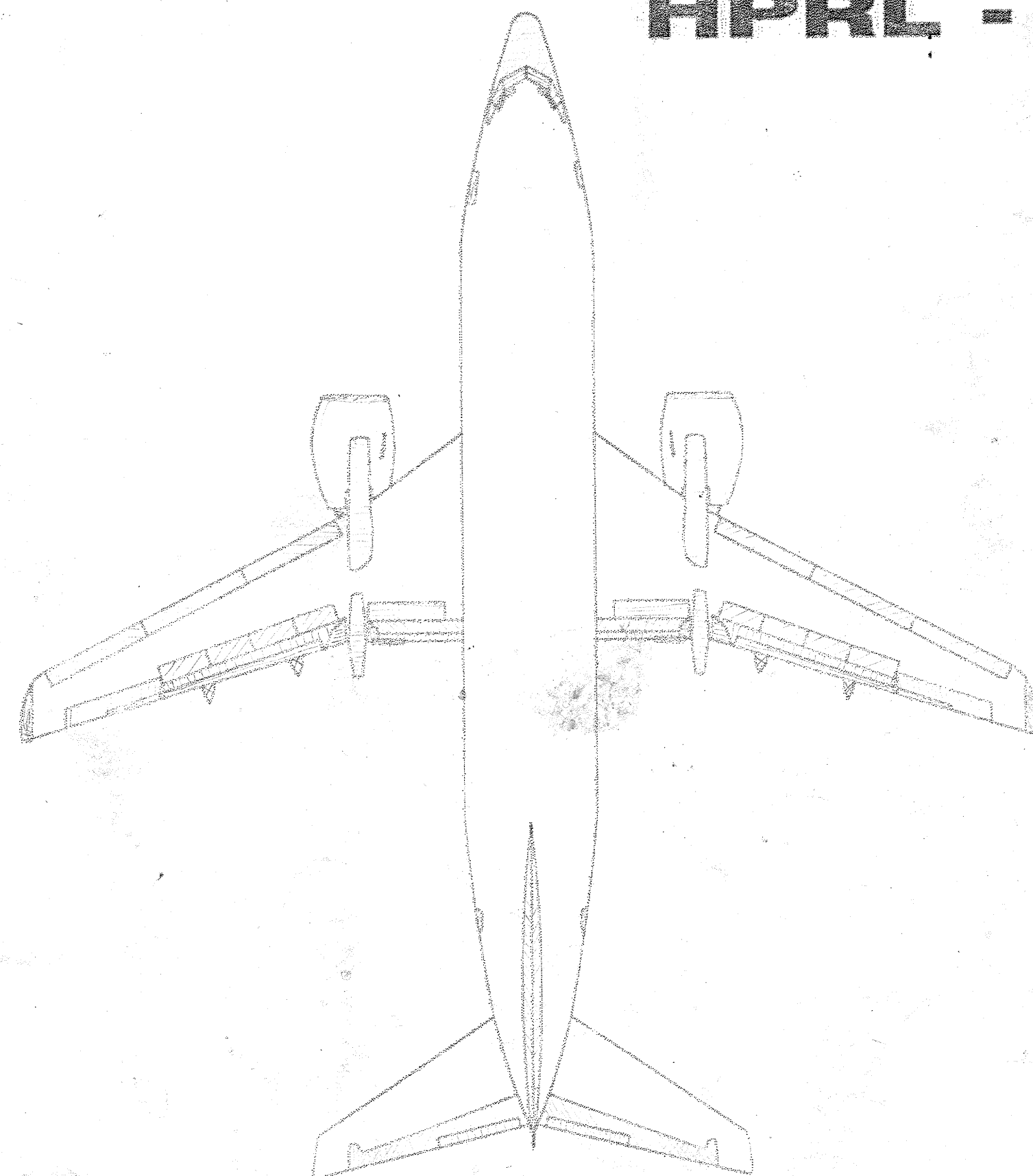
PROJECT No. 68306

AIP NO. 3-02-0144-1606

LEWIS REEF ROAD TUNNEL

PROJECT NO. 68456

HPRL - 0003 (122)



DESIGN DATA

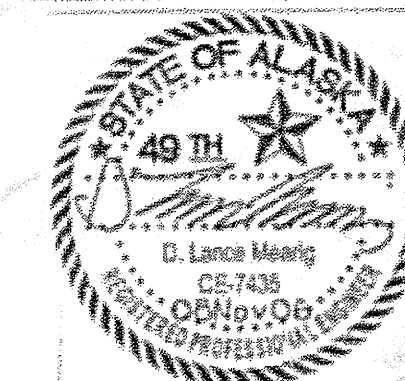
AIRPORT TYPE..... COMMERCIAL SERVICE
RUNWAY CATEGORY..... TRANSPORT
RUNWAY INSTRUMENTATION..... PRECISION
RUNWAY/TAXIWAY SURFACE..... ASPHALT CONCRETE
RUNWAY LIGHTING..... HIGH INTENSITY RUNWAY LIGHTING (HIRL)
AIRPORT REFERENCE CODE..... C-III
AIRPORT ELEVATION..... 88' (MSL) / 96' (MLLW)
AIRPORT REFERENCE POINT..... Latitude N 55° 21' 19.95"
(ARP COORDINATES -- NAD '83) Longitude W 131° 42' 49.46"
RUNWAY SAFETY AREA WIDTH..... 500'
RUNWAY OBJECT FREE AREA WIDTH..... 800'
DESIGN AIRCRAFT..... BOEING 737-900

As built's
Project Engineer:
Mark Figley
Start Date: 2/7/2007
End Date: 8/1/2009

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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
STATEWIDE DESIGN & ENGINEERING SERVICES DIVISION



RECOMMENDED FOR APPROVAL:

Jack D. Beedle
JACK D. BEEDLE, P.E.
REGIONAL PRE-CONSTRUCTION ENGINEER

11/15/06
DATE

APPROVED:
Malcolm A. Menzies
MALCOLM A. MENZIES, P.E., L.S.
REGIONAL DIRECTOR, SOUTHEAST REGION

11/17/06
DATE

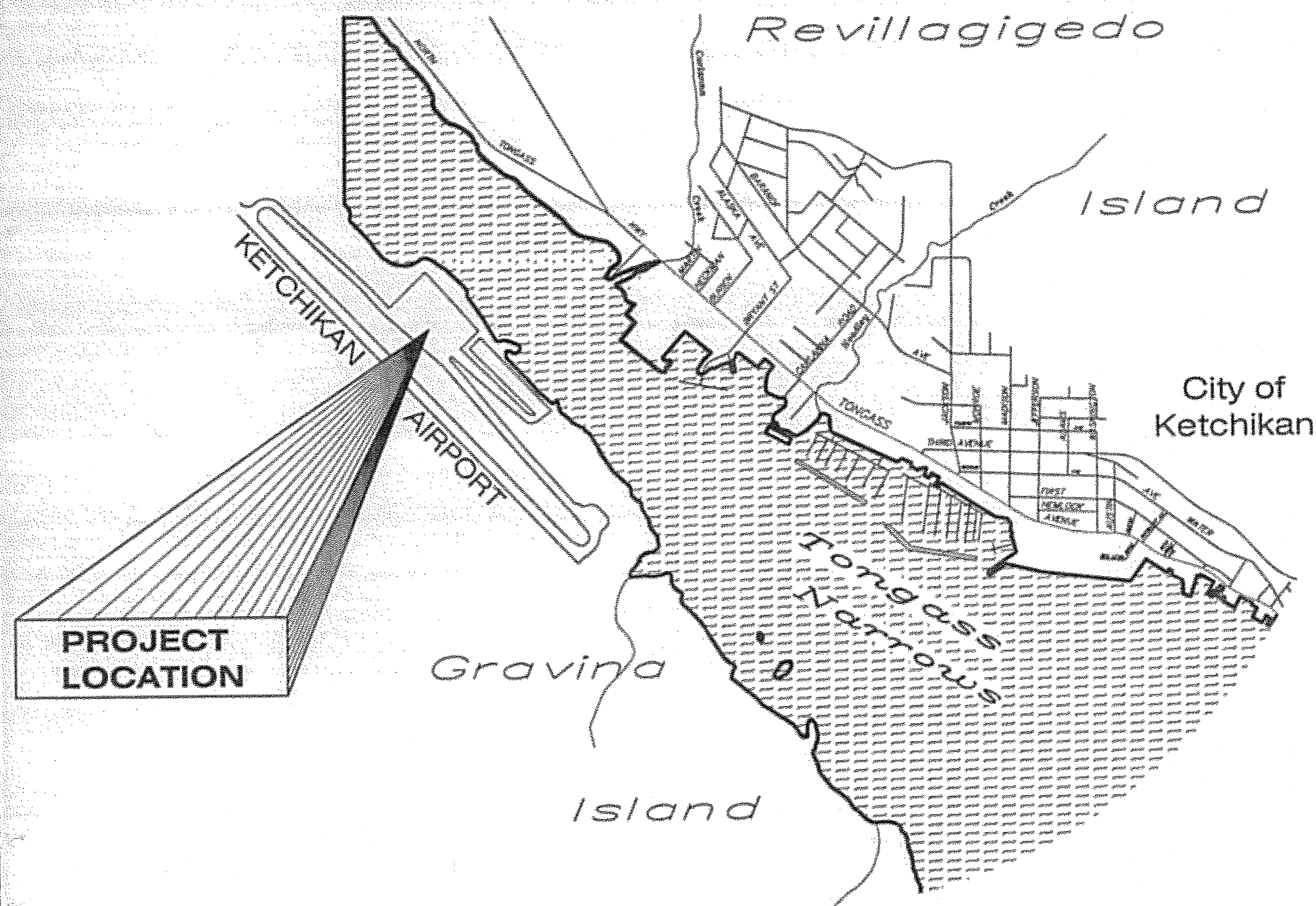
CERTIFIED TRUE & CORRECT AS-BUILT OF ACTUAL FIELD CONDITION:

CONSTRUCTION PROJECT MANAGER

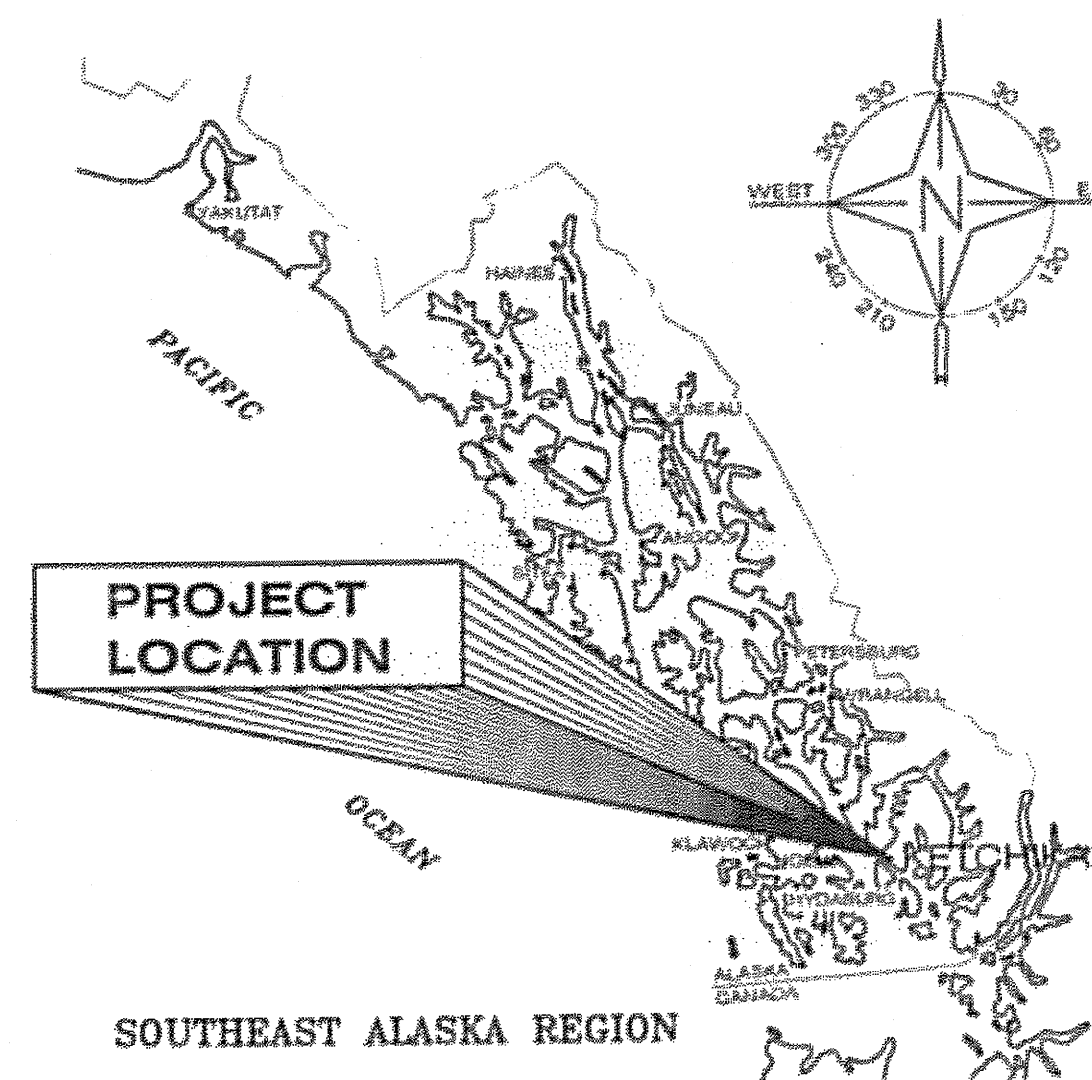
2/1/11
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STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	AIP NO. 3-02-0144-1606	2006	A1	131



VICINITY MAP



LOCATION MAP

LEGEND

EXISTING	NEW	
---	---	RUNWAY/TAXIWAY CENTERLINE
---	---	EDGE OF PAVEMENT
---	---	EDGE OF GRAVEL
---	---	HAUL ROUTE
---	---	CONTOUR
---	---	UNDERGROUND ELECTRIC LINE
---	---	DRAINAGE CONDUITS
---	---	SECURITY FENCE
---	---	CULVERT
---	---	NEW CULVERT NUMBER (SEE SUMMARY ON SHEET D1)
---	---	SHORELINE
---	---	STREAM/DITCH/SWALE
---	---	FISH IN STREAM/DITCH/SWALE
---	---	CUT SLOPE LIMITS
---	---	FILL SLOPE LIMITS
---	---	PERMIT BOUNDARY
---	---	ROCK FILL TOE
---	---	RIPRAP
---	---	NEW PAVEMENT
---	---	REMOVE EXISTING PAVEMENT OR ROAD
---	---	BRIDGE
---	---	STRUCTURE
---	---	DRAINAGE STRUCTURE
---	---	RUNWAY EDGE LIGHTING
---	---	TELEPHONE BOX
---	---	TELEPHONE MANHOLE
---	---	ELECTRICAL VAULT
---	---	ELECTRICAL MANHOLE
---	---	TEST HOLE LOCATION
---	---	NGS MONUMENT
---	---	GPS_CHK
---	---	2" ALCAP W/REBAR
---	---	CENTERLINE CASE MONUMENT
---	---	PRIMARY MONUMENT
---	---	P.K. NAIL

NOTE:
SEE SHEET G1 FOR ELECTRICAL LEGEND.

THE FOLLOWING STANDARD
DRAWINGS APPLY TO THIS PROJECT:

D-04.21 S-00.10 E-00.00 E-13.00 M-13.01 M-16.01

ABBREVIATIONS

AC	ASPHALT CONCRETE	GC	GOVERNMENT CREEK	O.D.	OUTSIDE DIAMETER
A.C.	ADVISORY CIRCULAR	GS	GLIDE SLOPE	OFA	OBJECT FREE AREA
A.F.F.	ABOVE FINISH FLOOR	HMA	HOT MIX ASPHALT	OFZ	OBSTACLE FREE ZONE
A.I.P.	AIRPORT IMPROVEMENT PROGRAM	HDPE	HIGH DENSITY POLYETHYLENE	OSAR	OVERSIZED ACCESS ROAD
AOA	AIRPORT OPERATIONS AREA	HR.	HOUR	PAPI	PRECISION APPROACH PATH INDICATOR
APPROX.	APPROXIMATE	HTL	HIGH TIDE LINE	PB	PERMIT BOUNDARY
ASOS	AUTOMATED SURFACE OBSERVING SYSTEM	ILS	INSTRUMENT LANDING SYSTEM	PE	POLYETHYLENE
ATB	ASPHALT TREATED BASE	IN.	INCHES	PST	POST
CL	CENTERLINE	LB	POUND	PVMT.	PAVEMENT
CA	CREEK ACCESS	L.F.	LINEAR FEET	R	RADIUS
C.F.	CUBIC FOOT	LOC	LOCALIZER	RCO	REMOTE COMMUNICATION OUTLET
CFR	CODE OF FEDERAL REGULATIONS	LRR	LEWIS REEF ROAD	RPZ	RUNWAY PROTECTION ZONE
CMP	CORRUGATED METAL PIPE	L.S.	LUMP SUM	RSA	RUNWAY SAFETY AREA
CPP	CORRUGATED POLYETHYLENE PIPE	LT.	LEFT	RT.	RIGHT
C.S.	CONTINGENT SUM	M	MALSR ACCESS ROAD	RVR	RUNWAY VISUAL RANGE
C.Y.	CUBIC YARD	MALSF	MEDIUM INTENSITY APPROACH LIGHTING SYSTEM SEQUENCED FLASHER	R/W	RUNWAY
DBH	DIAMETER AT BREAST HEIGHT	MALSR	MEDIUM INTENSITY APPROACH LIGHTING SYSTEM WITH RUNWAY ALIGNMENT INDICATOR LIGHTS	S.F.	SQUARE FEET
DIA.	DIAMETER	MAX.	MAXIMUM	SIDA	SECURITY IDENTIFICATION DISPLAY AREA
DME	DISTANCE MEASURING EQUIPMENT	MHW	MEAN HIGH WATER	SPP	STRUCTURAL PLATE PIPE
(E)	EXISTING	MIN.	MINIMUM	SREB	SNOW REMOVAL EQUIPMENT BUILDING
EHW	EXTREME HIGH WATER	MLLW	MEAN LOWER LOW WATER	STA.	STATION
ELEV.	ELEVATION	NDB	NON DIRECTIONAL BEACON	SWPPP	STORM WATER POLLUTION PREVENTION PLANS
ESCP	EROSION AND SEDIMENT CONTROL PLAN	NO.S	NUMBERS	S.Y.	SQUARE YARD
FAA	FEDERAL AVIATION ADMINISTRATION	NT	NORTH TRIBUTARY	TSA	TAXIWAY SAFETY AREA
FOD	FOREIGN OBJECTS AND DEBRIS	N.T.S.	NOT TO SCALE	TYP.	TYPICAL
FT.	FEET			T/W	TAXIWAY
GA.	GAUGE			VASI	VISUAL APPROACH SLOPE INDICATOR

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

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ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

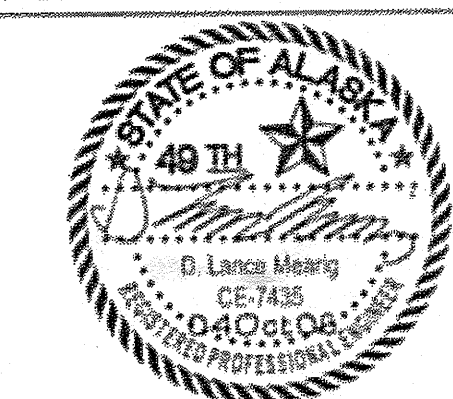
No.	DATE	DESCRIPTION

KETCHIKAN AIRPORT
RUNWAY SAFETY AREA EXPANSION
& RUNWAY OVERLAY
PROJECT NO. 68306

KEY MAP, LEGEND & ABBREVIATIONS

PREPARED BY: USKH INC.

CHECKED BY: DLM



DESIGNED BY: NCL

DRAWN BY: WJP

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
DESIGN & ENGINEERING SERVICES
DIVISION-SOUTHEAST REGION

KEY MAP,
LEGEND &
ABBREVIATIONS

PROJECT DESIGNATION

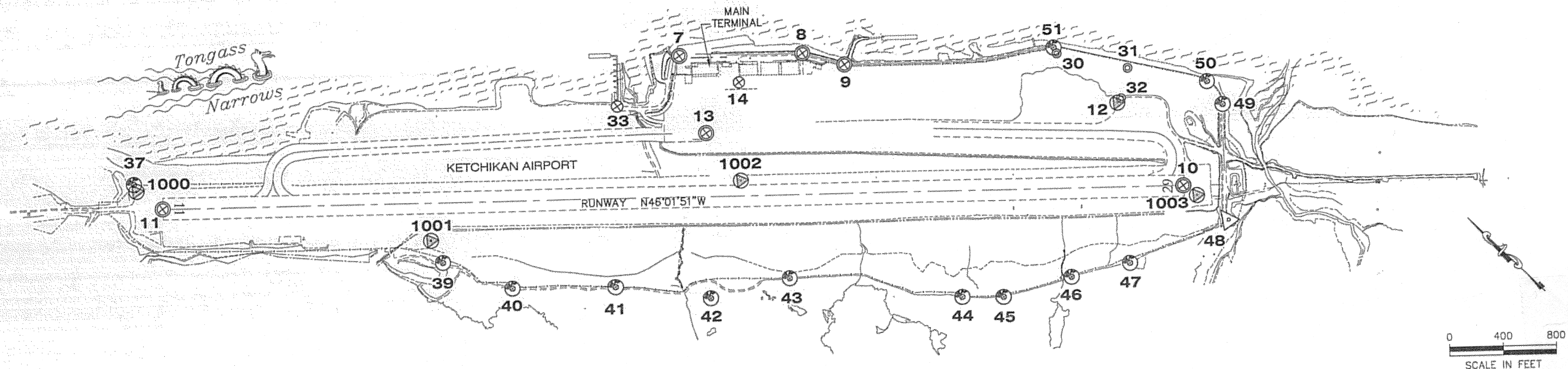
AIP NO. 3-02-0144-1606

STATE YEAR

ALASKA 2006

SHEET NUMBER TOTAL SHEETS

A2 131



HORIZONTAL CONTROL

This project was initially based on the Ketchikan Air 2000 Grid. See project #68035 for legacy details. To avoid negative Northing values as far south as the Gravina project, it was decided to transform all existing airport project information to the Tongass Avenue / Third Avenue coordinate system.

The basis of bearing for the Tongass Avenue / Third Avenue coordinate system is the record grid bearing of S 88°29'20\"/>

Subsequently, this project has been controlled by GPS, and transformation parameters developed to relate the project to NAD83(92) Alaska State Plane zone 1. Currently, the basis of bearing accepted for Ketchikan Airport is the bearing of N46°01'51\"/>

The Ketchikan Tongass Avenue / Third Avenue Grid is a local ground coordinate system based DOT Brass Cap TBM-66 located in bedrock near PC 62+23.46 of Third Avenue Extension. TBM-66 was established with two OPUS sessions on March of 2002. The Grid system relates to AKSPC zone 1 NAD83(92) through the following parameters:

Zone = NAD83 AKSPC ZONE 1
Grid Scale = 0.9999007
Convergence = -0°00'18\"/>

*please note that the convergence angle listed is 18 seconds of arc. That is not a true convergence angle, but it is the angle that relates NAD83 State Plane values to Local Grid values. This angle is quite small because the original local system was developed on NAD27 grid bearings.

Coordinates for this project established with SKI PRO static GPS processing and Starnet least squares adjustment.

Project Specific Horizontal Control

10 : 3\"/>

11 : 3\"/>

VERTICAL CONTROL

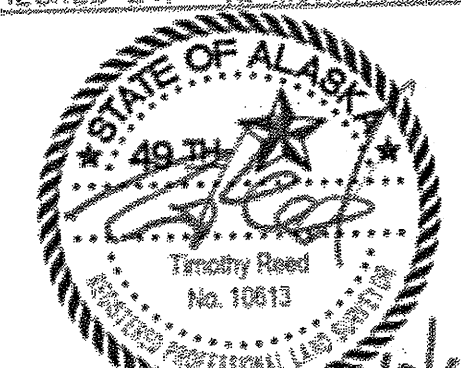
The basis of vertical control is the point number 7, PT mon at sta 234+94.89 of the airport road. The monument has an accepted elevation of 43.43' above MLLW. This elevation was established from a series of tidal observations on 10/29/86 and 10/30/86. The vertical control was checked with real time kinematic gps on 5/18/00. The basis of the vertical datum check was Ketchikan tidal benchmarks "BM No-34 1944" and "BM No-37 1956". The results of the vertical control check were height observations of 49.32' (published 49.32') at "BM No-34" and 34.94' (published 35.09') at "BM No-37". The published elevations to the tidal benchmarks are based on 1960 - 1978 tidal observations. www.co-ops.nos.noaa.gov/benchmarks/benchmarks_old/9450460.html

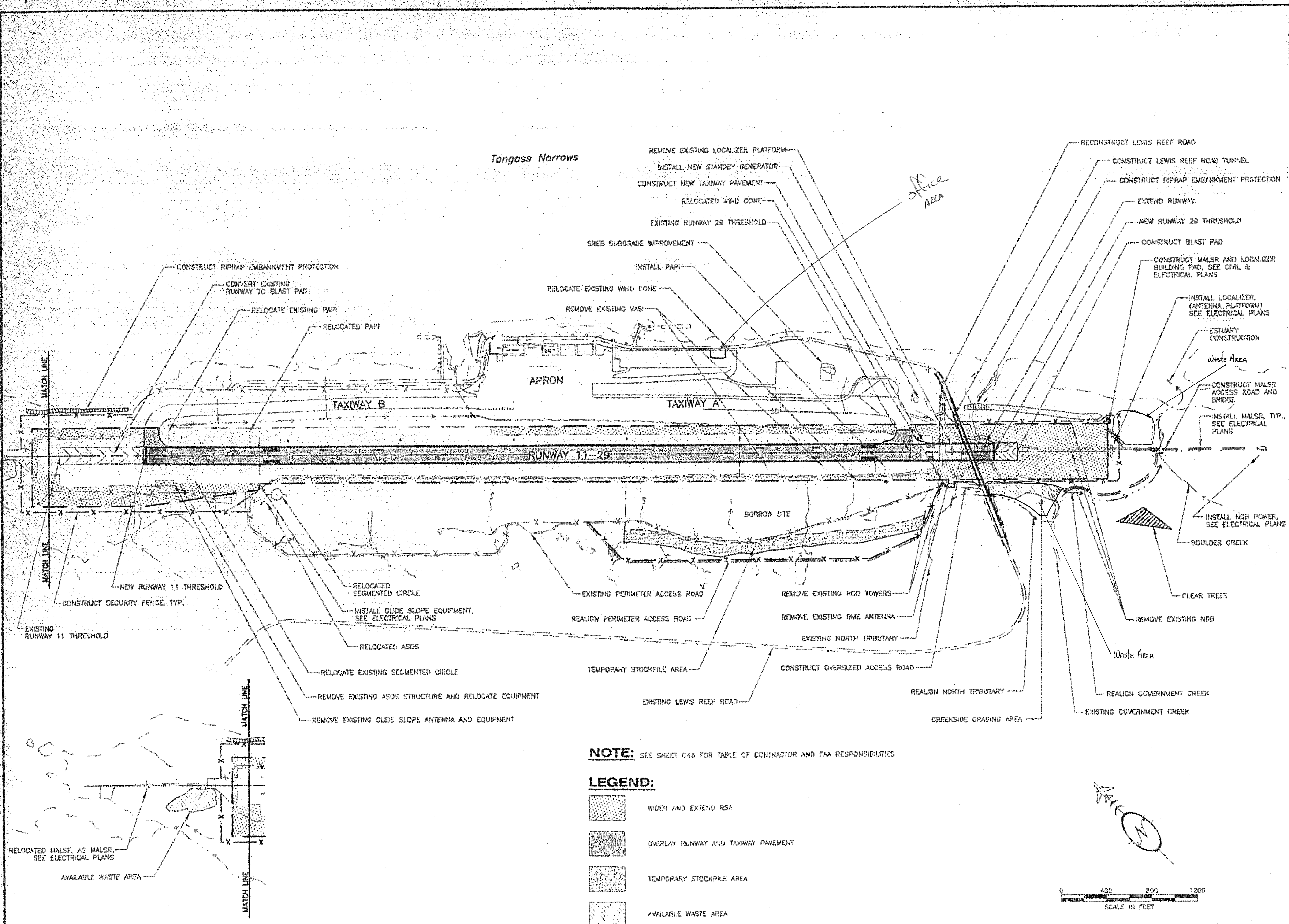
The Project Specific Basis of Vertical Control is threshold runway centerline monument #10 at sta 195+00 having an accepted elevation of 92.88 feet above MLLW.

EXISTING CONTROL MONUMENTS

POINT	LOCAL NORTH	LOCAL EAST	ORTHO ELEV (MLLW)	DESC	LAT	LON	AKSPC NORTH	AKSPC EAST
					*LAT/LON values are DMS packed format			
7	93146.1529	93130.7817	43.44	CL_MON_PT_234+94.89	55.21267017	-131.42357656	1292614.6738	3093071.2126
8	92516.3127	93783.5225	45.60	CL_MON_PI_244+01.44	55.21203130	-131.42247882	1291984.8392	3093723.8335
9	92236.4095	93942.4766	33.77	CL_MON_PI-9	55.21175107	-131.42221776	1291704.9499	3093882.7475
10	89835.7293	95058.2039	92.88	CL_MON_RUNWAY_BC_195+00	55.20535447	-131.42040721	1289304.4108	3094998.1545
11	95042.7981	89660.3110	85.62	CL_MON_RUNWAY_BC_120+00	55.21463580	-131.43348564	1294511.4334	3089601.2519
12	90611.9051	95149.8731	80.76	NGS_DMA_3"-BC	55.21011658	-131.42021029	1290080.5015	3095089.8823
13	92604.2219	92865.4780	45.64	CL_MON_BC2.5" 60+00 TAXI/APRON	55.21214369	-131.42406206	1292072.8197	3092805.8879
14	92696.8360	93302.2976	45.29	BC2" L3/L4_BLK400	55.21222268	-131.42330210	1292165.3865	3093242.6722
30	91186.8171	95094.8670	31.67	ALCAP1.5" C4	55.21068454	-131.42027695	1290655.3611	3095034.9318
31	90740.0371	95385.1642	25.75	ALCAP1.5" C1	55.21023618	-131.41579712	1290208.6002	3095325.1612
32	90615.1019	95192.7987	80.43	ALCAP1.5" C2	55.21011852	-131.42013592	1290083.6942	3095132.8039
33	93204.7564	92547.0924	27.29	BC2"/CONC KIA-33	55.21274428	-131.42458309	1292673.3224	3092487.5863
37	95320.1162	89639.8800	70.73	ALCAP2"/REBAR KIA-37	55.21490958	-131.43350742	1294788.7258	3089580.8472
39	93297.4615	90826.4243	134.27	ALCAP2"/REBAR KIA-39	55.21288375	-131.43155425	1292766.1684	3090767.0972
40	92799.9047	91050.2255	157.17	ALCAP2"/REBAR KIA-40	55.21238730	-131.43119161	1292268.6415	3090990.8327
41	92266.6981	91590.8250	182.35	ALCAP2"/REBAR KIA-41	55.21184687	-131.43028290	1291735.4407	3091531.3320
42	91713.5427	92022.1544	177.69	ALCAP2"/REBAR KIA-42	55.21128982	-131.42556420	1291182.3026	3091962.5703
43	91406.2432	92535.7144	175.30	ALCAP2"/REBAR KIA-43	55.21097268	-131.42469126	1290874.9888	3092476.0525
44	90401.4201	93332.4562	198.81	ALCAP2"/REBAR KIA-44	55.20596036	-131.42336309	1289870.1959	3083272.6275
45	90190.6665	93542.7404	191.80	ALCAP2"/REBAR KIA-45	55.20574682	-131.42300990	1289659.4449	3093482.8724
46	89941.3762	93998.9398	168.20	ALCAP2"/REBAR KIA-46	55.20548839	-131.42223343	1289410.1396	3093939.0048
47	89707.9641	94374.7442	149.40	ALCAP2"/REBAR KIA-47	55.20524785	-131.42159520	1289176.7178	3094314.7515
48	89419.2365	95112.9901	88.42	PK KIA-48	55.20494259	-131.42033310	1288887.9545	3095052.8988
49	90054.8246	95688.2042	36.01	ALCAP2"/REBAR KIA-49	55.20555255	-131.41530710	1289523.4293	3095628.1113
50	90255.9322	95727.1681	30.29	ALCAP2"/REBAR KIA-50	55.20574958	-131.41522977	1289724.5135	3095667.0889
51	91234.0965	95111.0172	28.12	ALCAP2"/REBAR KIA-51	55.21073066	-131.42024668	1290702.6344	3095051.0845
1000	95270.0082	89616.5671	82.95	NGS_BC_KTN-A_RTK	55.21486087	-131.43355019	1294738.6248	3089557.5322
1001	93476.7387	90881.0051	99.37	NGS_BC_KTN-C_RTK	55.21305885	-131.43145107	1292945.4230	3090821.6882
1002	92174.2870	92796.9966	93.12	NGS_BC_KTN-ARP2_RTK	55.21172204	-131.42420165	1291642.9335	3092737.3758
1003	89713.5227	95077.7166	92.18	NGS_BC_KTN-B_RTK	55.20523352	-131.42037952	1289182.2145	3095017.6546

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CHECKED BY: R. MURPHY  DESIGNED BY: T. REED DRAWN BY: T.R./R.S. PATH: I:\B23400\Draws\C\Sheets\A03.dwg TAB: A3 Wed, 04/Oct/06 11:09AM bpaddock		STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES S.E. REGION DESIGN & ENGINEERING SERVICES DIVISION KETCHIKAN AIRPORT RUNWAY SAFETY AREA PROJECT #68306	
SURVEY CONTROL PLAN		PROJECT DESIGNATION AIP No. 3-02-D144-1606	YEAR 2006
REVISIONS NO. DATE DESCRIPTION	SHEET NO. A3	TOTAL SHEETS 131	



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ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION

KETCHIKAN AIRPORT
 RUNWAY SAFETY AREA EXPANSION
 & RUNWAY OVERLAY
 PROJECT NO. 68306

GENERAL LAYOUT PLAN

PREPARED BY: USKH INC.

CHECKED BY: DLM

STATE OF ALASKA

49TH

D. Lance Meier

CE-7435

04/Oct/06

REGISTERED PROFESSIONAL ENGINEER

DESIGNED BY: EJC

DRAWN BY: WJP

STATE OF ALASKA
 DEPARTMENT OF TRANSPORTATION
 & PUBLIC FACILITIES
 DESIGN & ENGINEERING SERVICES
 DIVISION-SOUTHEAST REGION

GENERAL LAYOUT PLAN

PROJECT DESIGNATION

AIP NO. 3-02-0144-1606

STATE	YEAR
ALASKA	2006

SHEET NUMBER	TOTAL SHEETS
A4	131

SEQUENCING NOTES:

1. STAGES 1 - 7 SHOW A SUGGESTED CONSTRUCTION SEQUENCE FOR WORK UNDER THIS CONTRACT. THE SAFETY PLANS AND SPECIFICATIONS PROVIDE ADDITIONAL GUIDANCE ON OPERATIONAL LIMITATIONS. STAGE CONSTRUCTION TO COMPLY WITH ALL CONDITIONS OF THE SAFETY PLAN, SUBSECTION 80-04 LIMITATION OF OPERATIONS, AND PROJECT PERMIT STIPULATIONS.
2. USE THESE STAGES, OR ALTERNATE STAGING APPROVED BY THE ENGINEER, AS A BASIS FOR PREPARING STORM WATER POLLUTION PREVENTION PLAN (SWPPP) MEASURES FOR EACH STAGE. THE PROJECT EROSION AND SEDIMENT CONTROL PLAN (ESCP) MEASURES APPLY TO ALL STAGES REGARDLESS OF ALLOWED, LIMITED OR RESTRICTED CONDITIONS. SUBMIT ALTERNATE SEQUENCING PLANS FOR APPROVAL FIVE DAYS BEFORE SWPPP SUBMITTAL. PROVIDE SWPPP UPDATES AS EACH STAGE PROGRESSES. SUBMIT SWPPP UPDATES FOR SUBSEQUENT STAGES AT LEAST 30 DAYS BEFORE PROCEEDING TO THE NEXT STAGE.
3. DEVELOP A CONSTRUCTION SCHEDULE BASED ON SEQUENCING SHOWN, OR AN APPROVED ALTERNATE. PROVIDE SUFFICIENT DETAIL TO ADDRESS REQUIRED SUBMITTALS, REVIEW PERIODS, PROCUREMENT OF MATERIALS, CONSTRUCTION WORK, AND COORDINATION REQUIREMENTS ASSOCIATION WITH ITEMS OF WORK.
4. THE GENERAL SCOPE OF WORK FOR EACH STAGE IS DESCRIBED BELOW. PARTICULAR RESTRICTIONS ARE NOTED IN THE PLAN VIEW FOR EACH STAGE. COMPLETE WORK IN NUMERICAL SEQUENCE SHOWN. DEVIATIONS FROM SEQUENCE SHOWN AND COMBINING OF STAGES SUBJECT TO APPROVAL BY THE ENGINEER.

STAGE 1 OPEN MATERIAL SITE. EXCAVATE AND CONSTRUCT NEW STREAM CHANNELS AND ESTUARY EXPANSION. EXCEPT DO NOT DISTURB EXISTING GROUND BELOW ORDINARY HIGH WATER IN EXISTING BOULDER CREEK CHANNEL. CONSTRUCT LEWIS REEF ROAD AND TUNNEL. CONSTRUCT MALSR ACCESS ROAD AND BRIDGE. CONSTRUCT NEW LOCALIZER (LOC) PLATFORM. PLACE NEW LOCALIZER EQUIPMENT BUILDING AND DME FOUNDATION.

STAGE 2 EXCAVATE NEW STREAM CHANNEL IN LOWER BOULDER CREEK. CONSTRUCT NEW STREAM CHANNELS AND ESTUARY EXPANSION. DIVERT STREAMS. CONSTRUCT RSA EMBANKMENT. CONSTRUCT LEWIS REEF ROAD AND TUNNEL. CONSTRUCT MALSR ACCESS ROAD AND BRIDGE. CONSTRUCT NEW LOCALIZER (LOC) PLATFORM. PLACE NEW LOCALIZER EQUIPMENT BUILDING AND DME FOUNDATION. INSTALL R/W 29 MALSR AND PAPI SYSTEMS.

STAGE 3 REMOVE EXISTING LOC PLATFORM. RELOCATE EXISTING LOCALIZER RF DISTRIBUTION/COMBINING UNIT. COMPLETE RSA GRADING IN NEW LOC CRITICAL AREA TO WITHIN ONE FOOT OF FINISHED GRADE. CONSTRUCT RSA EMBANKMENT. CONSTRUCT LEWIS REEF ROAD. INSTALL R/W 29 MALSR AND PAPI SYSTEMS. INSTALL CONDUIT AND LIGHT BASES FOR NEW EDGE AND THRESHOLD LIGHTS.

STAGE 4 OVERLAY NORTH HALF OF RUNWAY. REMOVE R/W 29 THRESHOLD AND MALSR THRESHOLD LIGHTS. PAVE R/W 29 EXTENSION. PROVIDE TEMPORARY THRESHOLD LIGHTS. CONSTRUCT RSA EMBANKMENT. COMPLETE FINAL RSA GRADING IN NEW LOC CRITICAL AREA. CONSTRUCT LEWIS REEF ROAD. CONSTRUCT MALSR ACCESS ROAD AND BRIDGE. CONSTRUCT NEW R/W 11 PAPI INFRASTRUCTURE.

STAGE 5 OVERLAY SOUTH HALF OF RUNWAY. GRADE RSA EMBANKMENT. CONSTRUCT LEWIS REEF ROAD. CONSTRUCT MALSR ACCESS ROAD AND BRIDGE. CONSTRUCT NEW GLIDE SLOPE ANTENNA FOUNDATION AND SET NEW GLIDESLOPE BUILDING. RELOCATE ASOS.

STAGE 6 REMOVE EXISTING GLIDE SLOPE ANTENNA. RELOCATE EXISTING GLIDE SLOPE BUILDING. COMPLETE FINAL GRADING IN NEW GLIDE SLOPE CRITICAL AREA. COMPLETE LIGHTING AND MARKING FOR THRESHOLD SHIFT. REMOVE EXISTING DME/LOC BUILDING. GRADE RSA EMBANKMENT. RELOCATE RUNWAY EDGE AND THRESHOLD LIGHTS. RELOCATE R/W 11 PAPI SYSTEM. REMOVE R/W 29 VASI SYSTEM. INSTALL R/W 29 MALSR SYSTEM. RELOCATE R/W 11 MALSR SYSTEM. ENGINEER WILL NOT AUTHORIZE SHIFTING THRESHOLDS UNTIL NEW ILS IS FULLY OPERATIONAL.

STAGE 7 COMPLETE FINAL RSA GRADING. GROOVE RUNWAY PAVEMENT. COMPLETE ELECTRICAL WORK. RECLAIM MATERIAL SITE. COMPLETE ANY NECESSARY REPAIRS OR MODIFICATIONS IN NEW STREAM CHANNELS, SUBJECT TO PERMIT CONDITIONS.

KEY TO CONSTRUCTION SEQUENCING COLORS:

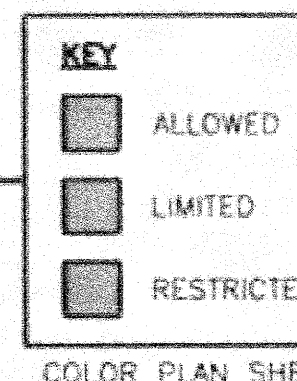
- ALLOWED:** PROCEED AT CONTRACTOR DISCRETION, SUBJECT TO CONDITIONS OF THE SAFETY PLAN, SUBSECTION 80-04 LIMITATION OF OPERATIONS, AND PROJECT PERMIT STIPULATIONS.
- LIMITED:** PROCEED AS APPROVED BY THE ENGINEER, SUBJECT TO CONDITIONS OF THE SAFETY PLAN, SUBSECTION 80-04 LIMITATION OF OPERATIONS, AND PROJECT PERMIT STIPULATIONS. THE ENGINEER MAY ORDER WORK STOPPED AT ANY TIME OR REQUIRE REMOVAL OF COMPLETED WORK TO RESTORE SAFE AIRFIELD OPERATIONS.
- RESTRICTED:** PROCEED AS DIRECTED BY THE ENGINEER. MOVE PERSONNEL, MATERIALS AND EQUIPMENT ON APPROVED HAUL ROUTES SUBJECT TO CONDITIONS OF THE SAFETY PLAN, SUBSECTION 80-04 LIMITATION OF OPERATIONS, AND PROJECT PERMIT STIPULATIONS.

NOTE:

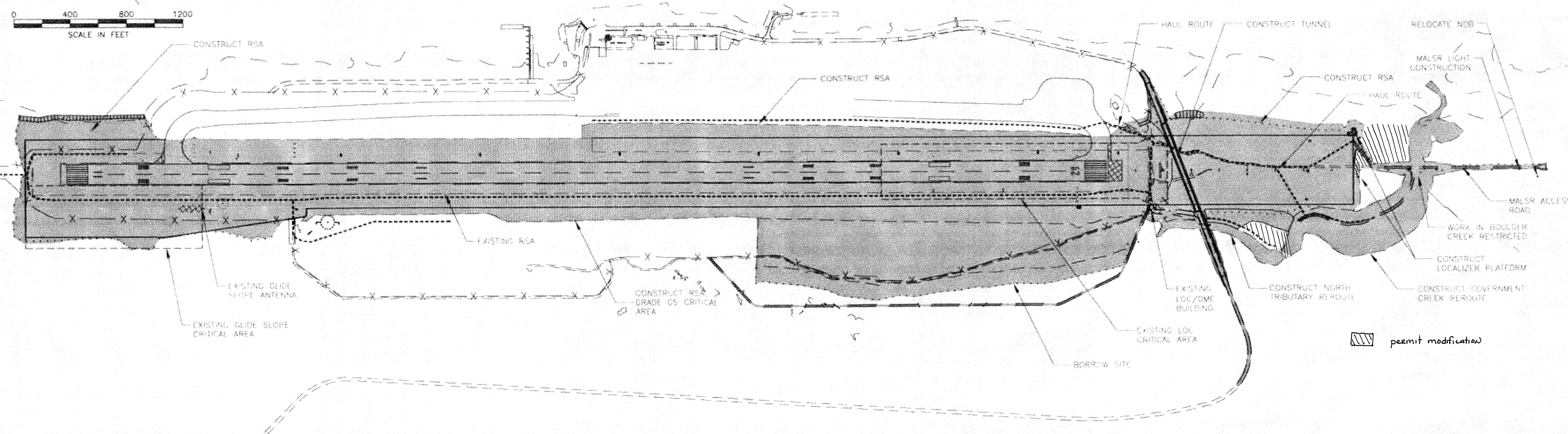
SHEETS A6 - A9 ARE INTENDED TO BE VIEWED IN COLOR. CONTACT THE ENGINEER FOR INSTRUCTION ON ACQUIRING COLOR COPIES.

RESTRICTIONS:

1. DO NOT EXCAVATE OR PLACE FILL IN THE EXISTING GLIDE SLOPE CRITICAL AREA.
2. PLACE FILL IN THE EXISTING LOC CRITICAL AREA BETWEEN STATION 179+00 AND 197+00 ONLY AS DIRECTED BY THE ENGINEER. DO NOT PLACE FILL IN THE EXISTING LOC CRITICAL AREA BETWEEN STATION 198+00 AND 199+00. DO NOT PLACE FILL IN REMAINING LOC CRITICAL AREA THAT INTERFERES WITH ILS OPERATIONS.
3. WORK BELOW ORDINARY HIGH WATER IN EXISTING ANADROMOUS STREAMS IS SUBJECT TO PERMIT STIPULATIONS AND TIMING WINDOWS.
4. WORK BELOW HIGH TIDE LINE IN TONGASS NARROWS IS SUBJECT TO PERMIT STIPULATIONS AND ENVIRONMENTAL COMMITMENTS.
5. DO NOT DAMAGE OR INTERRUPT POWER TO DME AND NDB.
6. MAINTAIN LOC/DME BUILDING IN ITS EXISTING CONDITION.



STAGE 1



DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

PATH:
I:\823400\Draws\C\Sheets\A06.dwg

Wed, 08/Nov/06 01:37PM bpdodack
TAB: A06

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION

KETCHIKAN AIRPORT
RUNWAY SAFETY AREA EXPANSION
& RUNWAY OVERLAY
PROJECT NO. 68306

SAFETY PLAN
CONSTRUCTION SEQUENCING
NOTE & STAGE 1

PREPARED BY: USKH INC.

CHECKED BY: DLM



DESIGNED BY: NCL

DRAWN BY: WJP

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
DESIGN & ENGINEERING SERVICES
DIVISION-SOUTHEAST REGION

SAFETY PLAN CONSTRUCTION SEQUENCING NOTES & STAGE 1

PROJECT DESIGNATION

AIP NO. 3-02-0144-1606

STATE	YEAR
ALASKA	2006
SHEET NUMBER	TOTAL SHEETS
A6	131

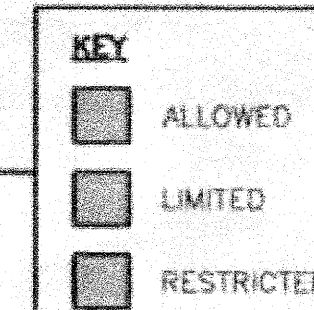
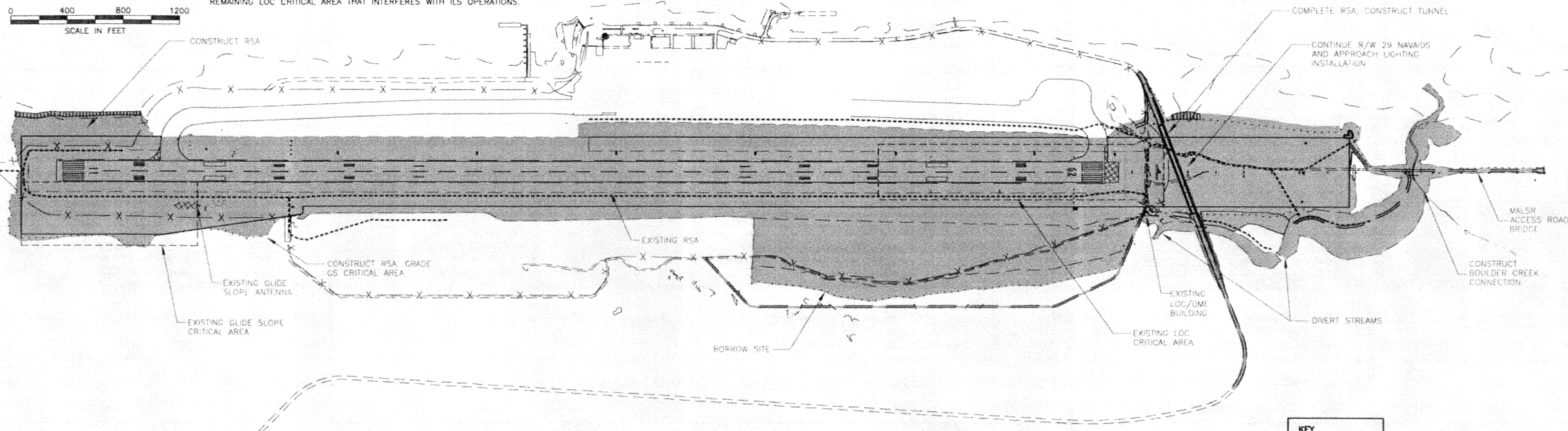
RESTRICTIONS:

1. WORK UNDER THIS STAGE WILL COINCIDE WITH THE GOVERNMENT CREEK PERMIT WINDOW. AFTER DIVERTING STREAMS, WORK UNDER THIS STAGE MAY CONTINUE SUBJECT TO NOTE 4 BELOW.
2. DO NOT EXCAVATE OR PLACE FILL IN THE EXISTING GLIDE SLOPE CRITICAL AREA.
3. PLACE FILL IN THE EXISTING LOCALIZER (LOC) CRITICAL AREA BETWEEN STATION 179+00 AND 197+00 ONLY AS DIRECTED BY THE ENGINEER. DO NOT PLACE FILL IN THE EXISTING LOC CRITICAL AREA BETWEEN STATION 198+00 AND 199+00. DO NOT PLACE FILL IN REMAINING LOC CRITICAL AREA THAT INTERFERES WITH ILS OPERATIONS.

4. WORK BELOW ORDINARY HIGH WATER IN EXISTING OR NEW ANADROMOUS STREAMS IS SUBJECT TO ENVIRONMENTAL COMMITMENTS, PERMIT STIPULATIONS AND TIMING WINDOWS.
5. WORK BELOW HIGH TIDE LINE IN TONGASS NARROWS IS SUBJECT TO PERMIT STIPULATIONS.
6. DO NOT DAMAGE OR INTERRUPT POWER TO DME AND NDB.
7. MAINTAIN LOC/DME BUILDING IN ITS EXISTING CONDITION.

STAGE 2

0 400 800 1200
SCALE IN FEET



COLOR PLAN SHEET

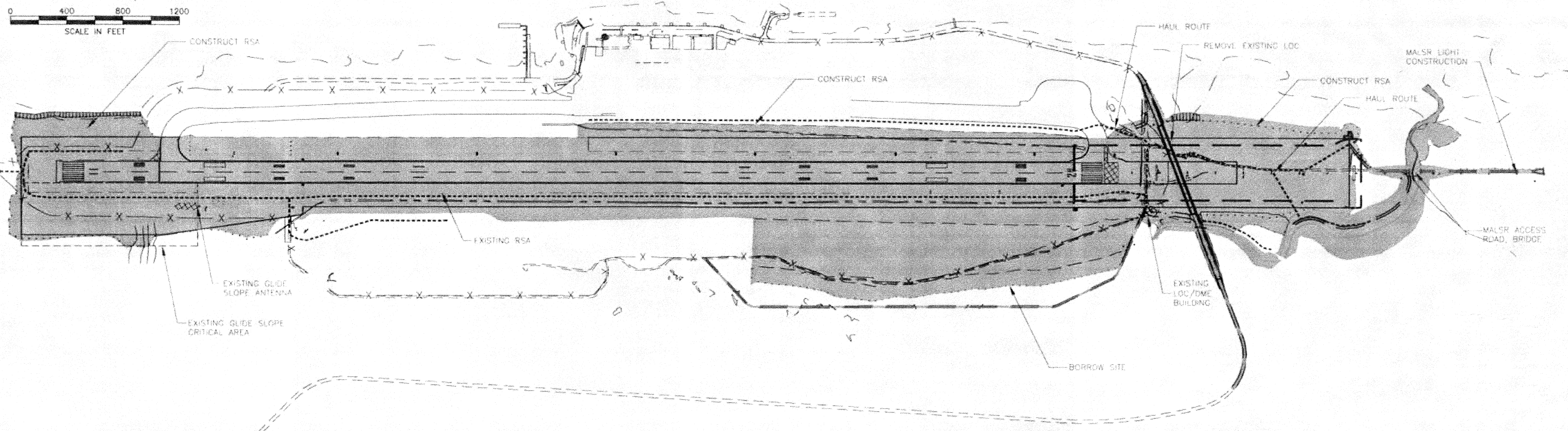
RESTRICTIONS:

1. WORK UNDER THIS STAGE WILL COINCIDE WITH THE LOC OUTAGE, WHICH MAY NOT OCCUR FROM THE MONDAY PRECEDING THE THANKSGIVING HOLIDAY UNTIL THE FRIDAY FOLLOWING THE CHRISTMAS HOLIDAY. THE LOC OUTAGE WILL BE LIMITED TO 10 CALENDAR DAYS AND TIMING WILL BE APPROVED BY FAA THROUGH THE ENGINEER.
2. WORK BELOW ORDINARY HIGH WATER IN ANADROMOUS STREAMS IS SUBJECT TO PERMIT STIPULATIONS AND TIMING WINDOWS.

3. WORK BELOW HIGH TIDE LINE IN TONGASS NARROWS IS SUBJECT TO PERMIT STIPULATIONS AND ENVIRONMENTAL COMMITMENTS.
4. DO NOT DAMAGE OR INTERRUPT POWER TO DME AND NDB.
5. MAINTAIN LOC/DME BUILDING IN ITS EXISTING CONDITION.

STAGE 3

0 400 800 1200
SCALE IN FEET



DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

PATH:
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Wed, 08/Nov/06 01:38PM bpadlock
TAB: A07

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

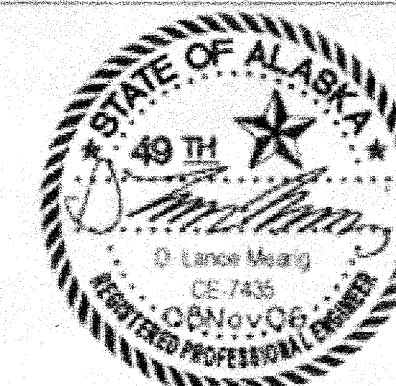
No.	DATE	DESCRIPTION

KETCHIKAN AIRPORT
RUNWAY SAFETY AREA EXPANSION
& RUNWAY OVERLAY
PROJECT NO. 68306

SAFETY PLAN
CONSTRUCTION SEQUENCING
STAGES 2 & 3

PREPARED BY: USKH INC.

CHECKED BY: DLM



DESIGNED BY: NCL

DRAWN BY: WJP

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
DESIGN & ENGINEERING SERVICES
DIVISION-SOUTHEAST REGION

SAFETY PLAN
CONSTRUCTION SEQUENCING
STAGES 2 & 3

PROJECT DESIGNATION

AIP NO. 3-02-0144-1606

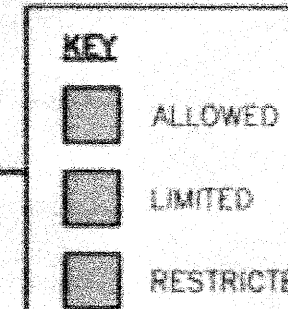
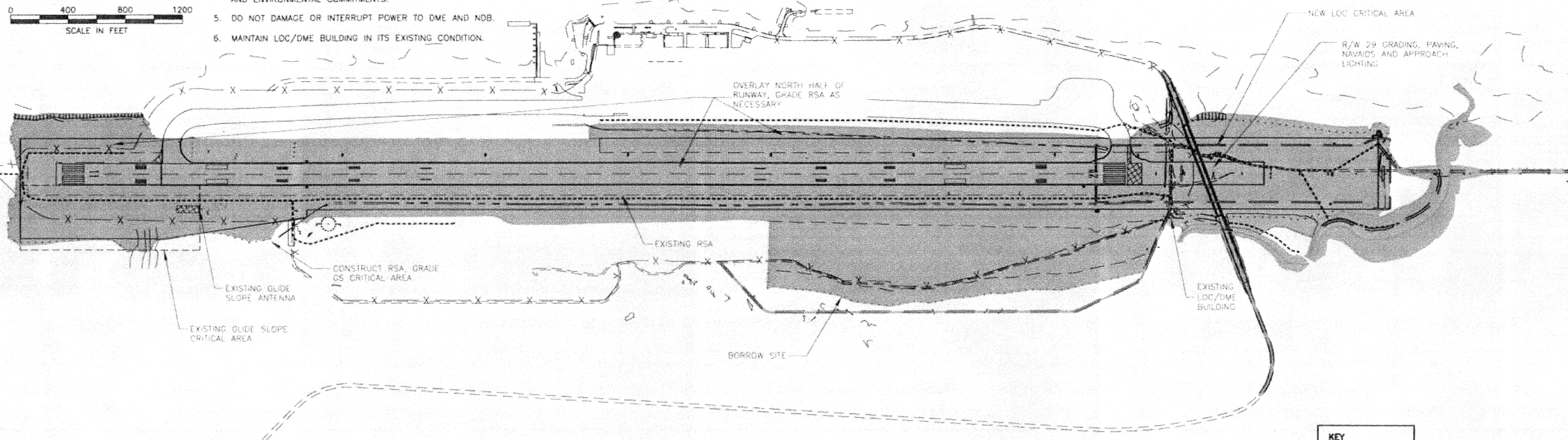
STATE	YEAR
ALASKA	2006

SHEET NUMBER	TOTAL SHEETS
A7	131

RESTRICTIONS:

1. WORK UNDER THIS STAGE WILL COINCIDE WITH HALF-WIDTH OPERATIONS ON THE SOUTH SIDE OF THE RUNWAY. COMPLY WITH SAFETY PLAN REQUIREMENTS.
2. DO NOT EXCAVATE OR PLACE FILL IN THE EXISTING GUIDE SLOPE CRITICAL AREA.
3. WORK BELOW ORDINARY HIGH WATER IN ANADROMOUS STREAMS IS SUBJECT TO PERMIT STIPULATIONS AND TIMING WINDOWS.
4. WORK BELOW HIGH TIDE LINE IN TONGASS NARROWS IS SUBJECT TO PERMIT STIPULATIONS AND ENVIRONMENTAL COMMITMENTS.
5. DO NOT DAMAGE OR INTERRUPT POWER TO DME AND NDB.
6. MAINTAIN LOC/DME BUILDING IN ITS EXISTING CONDITION.

0 400 800 1200
SCALE IN FEET



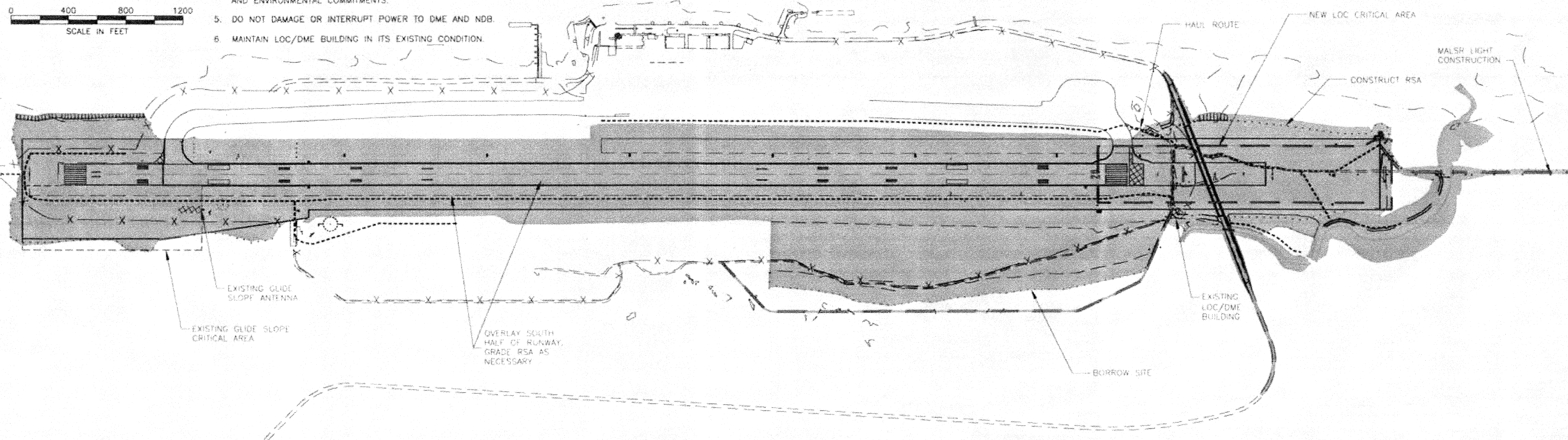
COLOR PLAN SHEET

STAGE 4

RESTRICTIONS:

1. WORK UNDER THIS STAGE WILL COINCIDE WITH HALF-WIDTH OPERATIONS ON THE NORTH SIDE OF THE RUNWAY. COMPLY WITH SAFETY PLAN REQUIREMENTS.
2. DO NOT EXCAVATE OR PLACE FILL IN THE EXISTING GUIDE SLOPE CRITICAL AREA.
3. WORK BELOW ORDINARY HIGH WATER IN ANADROMOUS STREAMS IS SUBJECT TO PERMIT STIPULATIONS AND TIMING WINDOWS.
4. WORK BELOW HIGH TIDE LINE IN TONGASS NARROWS IS SUBJECT TO PERMIT STIPULATIONS AND ENVIRONMENTAL COMMITMENTS.
5. DO NOT DAMAGE OR INTERRUPT POWER TO DME AND NDB.
6. MAINTAIN LOC/DME BUILDING IN ITS EXISTING CONDITION.

0 400 800 1200
SCALE IN FEET



STAGE 5

PATH:
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Wed, 08/Nov/06 01:39PM bpadock
TAB: A08

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

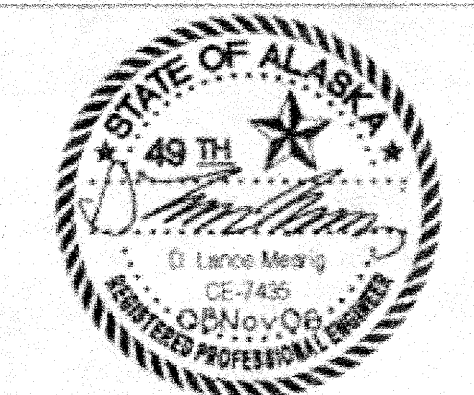
No.	DATE	DESCRIPTION

KETCHIKAN AIRPORT
RUNWAY SAFETY AREA EXPANSION
& RUNWAY OVERLAY
PROJECT NO. 68306

**SAFETY PLAN
CONSTRUCTION SEQUENCING
STAGE 4 & 5**

PREPARED BY: USKH INC.

CHECKED BY: DLM



DESIGNED BY: NCL

DRAWN BY: WJP

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
DESIGN & ENGINEERING SERVICES
DIVISION - SOUTHEAST REGION

**SAFETY PLAN
CONSTRUCTION SEQUENCING
STAGES 4 & 5**

PROJECT DESIGNATION
AIP NO. 3-02-0144-1606

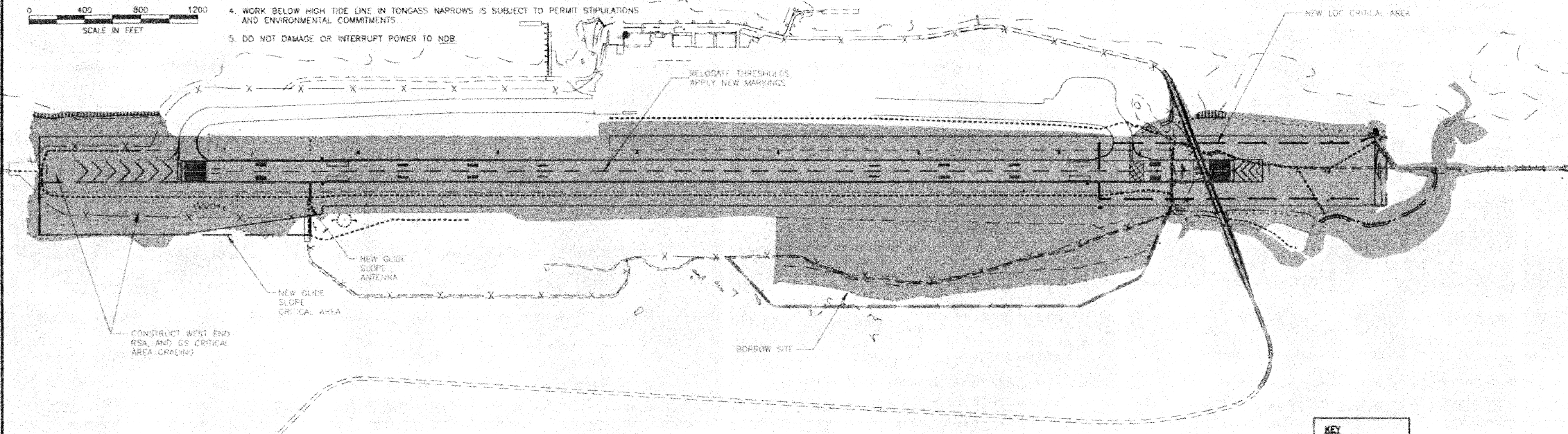
STATE	YEAR
ALASKA	2006
SHEET NUMBER	TOTAL SHEETS
A8	131

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

RESTRICTIONS:

1. WORK UNDER THIS STAGE WILL COINCIDE WITH THE GLIDE SLOPE OUTAGE, WHICH MAY NOT OCCUR FROM THE MONDAY PRECEDING THE THANKSGIVING HOLIDAY UNTIL THE FRIDAY FOLLOWING THE CHRISTMAS HOLIDAY. THE GLIDE SLOPE OUTAGE WILL BE LIMITED TO THREE (3) CALENDAR DAYS AND TIMING WILL BE APPROVED BY FAA THROUGH THE ENGINEER.
2. THE R/W 11 PAPI MUST REMAIN IN SERVICE DURING THE GLIDE SLOPE OUTAGE.
3. WORK BELOW ORDINARY HIGH WATER IN ANADROMOUS STREAMS IS SUBJECT TO PERMIT STIPULATIONS AND TIMING WINDOWS.
4. WORK BELOW HIGH TIDE LINE IN TONGASS NARROWS IS SUBJECT TO PERMIT STIPULATIONS AND ENVIRONMENTAL COMMITMENTS.
5. DO NOT DAMAGE OR INTERRUPT POWER TO NDB.

0 400 800 1200
SCALE IN FEET



STAGE 6

PATH:
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TAB: A09

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION

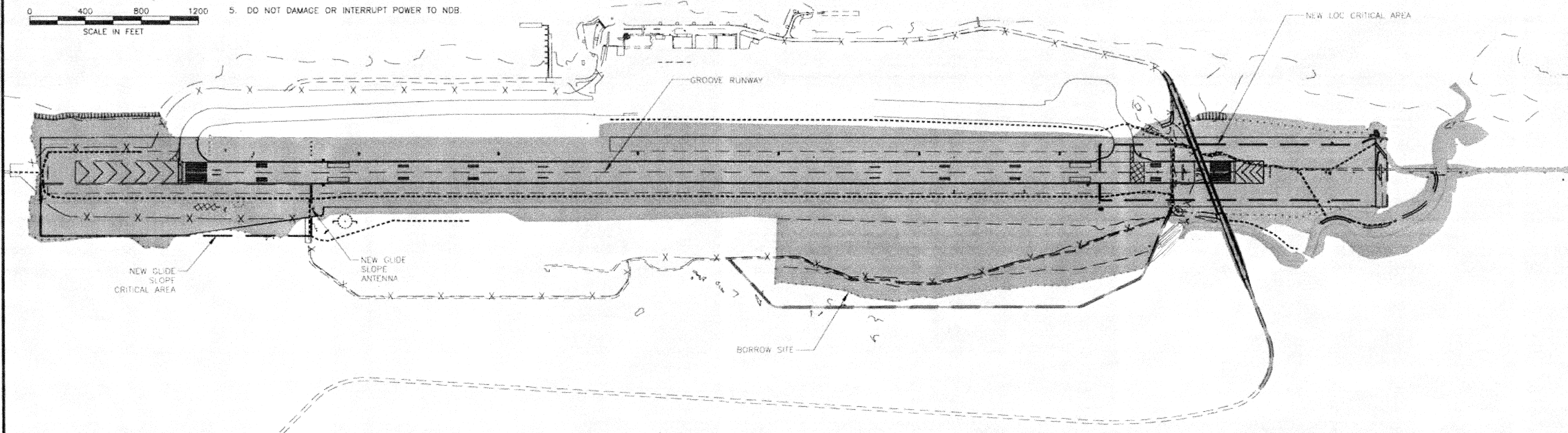
KETCHIKAN AIRPORT
RUNWAY SAFETY AREA EXPANSION
& RUNWAY OVERLAY
PROJECT NO. 68306

SAFETY PLAN
CONSTRUCTION SEQUENCING
STAGES 6 & 7

RESTRICTIONS:

1. DO NOT EXCAVATE OR PLACE FILL IN THE GLIDE SLOPE OR LOC CRITICAL AREAS.
2. DO NOT INTERFERE WITH ILS OPERATIONS.
3. WORK BELOW ORDINARY HIGH WATER IN ANADROMOUS STREAMS IS SUBJECT TO PERMIT STIPULATIONS AND TIMING WINDOWS.
4. WORK BELOW HIGH TIDE LINE IN TONGASS NARROWS IS SUBJECT TO PERMIT STIPULATIONS AND ENVIRONMENTAL COMMITMENTS.
5. DO NOT DAMAGE OR INTERRUPT POWER TO NDB.

0 400 800 1200
SCALE IN FEET



STAGE 7

KEY
■ ALLOWED
■ LIMITED
■ RESTRICTED
COLOR PLAN SHEET

PREPARED BY: USKH INC.

CHECKED BY: DLM



DESIGNED BY: NCL

DRAWN BY: WJP

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
DESIGN & ENGINEERING SERVICES
DIVISION-SOUTHEAST REGION

SAFETY PLAN
CONSTRUCTION SEQUENCING
STAGES 6 & 7

PROJECT DESIGNATION

AIP NO. 3-02-0144-1606

STATE	YEAR
ALASKA	2006
SHEET NUMBER	TOTAL SHEETS
A9	131

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

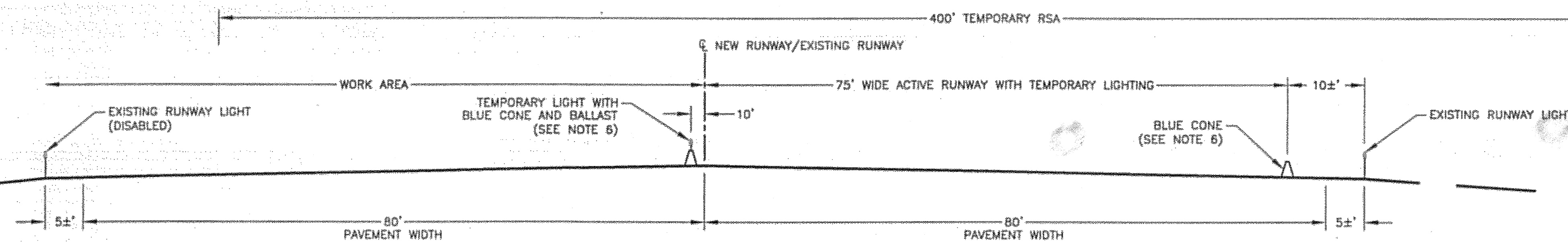
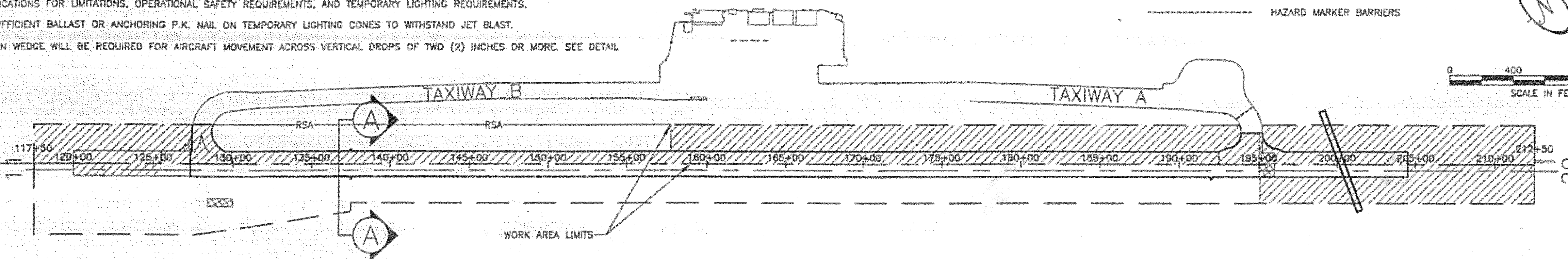
NOTES:

1. WHEN THE ACTIVE RUNWAY IS REDUCED TO HALF-WIDTH (75 FT.) THE CORRESPONDING RSA IS REDUCED TO 400 FT. WIDE CENTERED ON THE 75 FT. ACTIVE RUNWAY.
2. KEEP ALL PERSONNEL, EQUIPMENT AND MATERIALS OUTSIDE THE RUNWAY SAFETY AREA WHEN THE ACTIVE RUNWAY IS OPEN TO AIR OPERATIONS.
3. EQUIPMENT WILL ONLY BE PERMITTED INSIDE OF AOA AS APPROVED BY THE ENGINEER.
4. MAINTAIN AIRCRAFT ACCESS TO ONE TAXIWAY AT ALL TIMES.
5. SEE SPECIFICATIONS FOR LIMITATIONS, OPERATIONAL SAFETY REQUIREMENTS, AND TEMPORARY LIGHTING REQUIREMENTS.
6. PROVIDE SUFFICIENT BALLAST OR ANCHORING P.K. NAIL ON TEMPORARY LIGHTING CONES TO WITHSTAND JET BLAST.
7. A TRANSITION WEDGE WILL BE REQUIRED FOR AIRCRAFT MOVEMENT ACROSS VERTICAL DROPS OF TWO (2) INCHES OR MORE. SEE DETAIL.

NORTH HALF RUNWAY CLOSURE

ACTIVE RUNWAY
WORK AREA LIMITS
HAZARD MARKER BARRIERS

0 400 800 1200
SCALE IN FEET

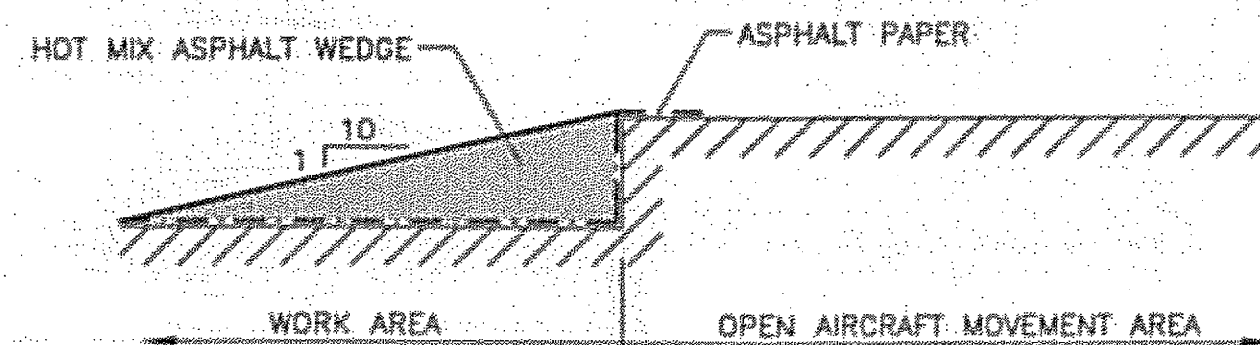


TYPICAL SECTION A-A

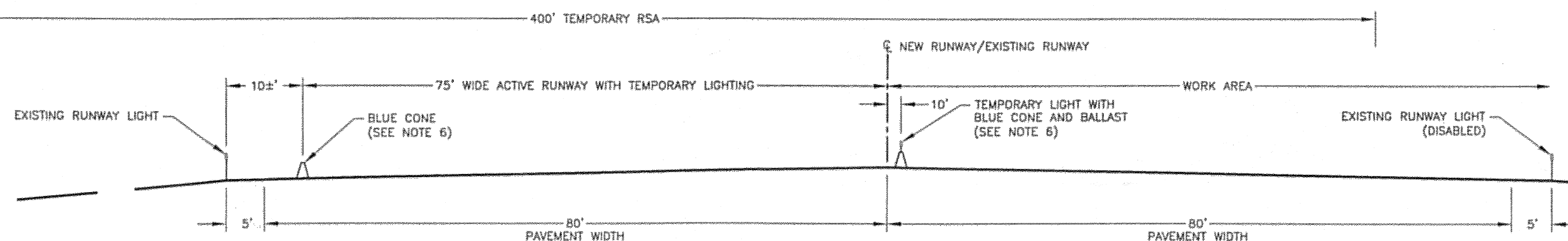
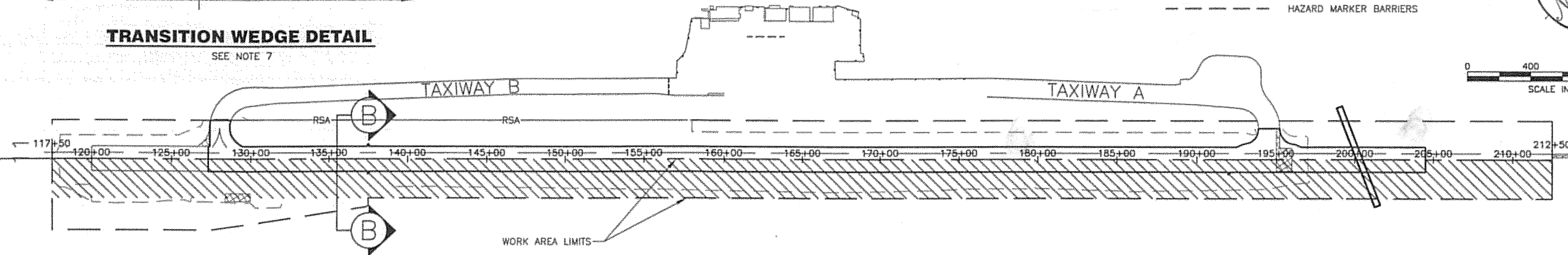
SOUTH HALF RUNWAY CLOSURE

ACTIVE RUNWAY
WORK AREA LIMITS
HAZARD MARKER BARRIERS

0 400 800 1200
SCALE IN FEET



TRANSITION WEDGE DETAIL
SEE NOTE 7



TYPICAL SECTION B-B

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

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ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

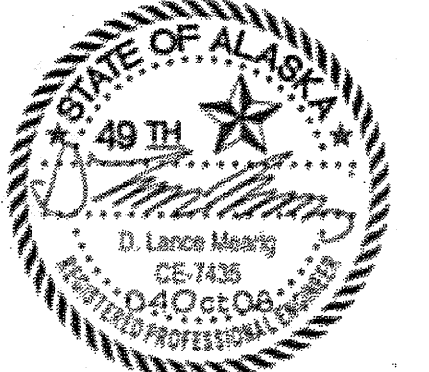
No.	DATE	DESCRIPTION

KETCHIKAN AIRPORT
RUNWAY SAFETY AREA EXPANSION
& RUNWAY OVERLAY
PROJECT NO. 68306

SAFETY PLAN HALF-WIDTH RUNWAY OPERATIONS

PREPARED BY: USKH INC.

CHECKED BY: DLM



DESIGNED BY: NCL

DRAWN BY: WJP

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
DESIGN & ENGINEERING SERVICES
DIVISION - SOUTHEAST REGION

SAFETY PLAN HALF-WIDTH RUNWAY OPERATIONS

PROJECT DESIGNATION
AIP NO. 3-02-0144-1606

STATE	YEAR
ALASKA	2006
SHEET NUMBER	TOTAL SHEETS
A10	131