

Flight Procedures Cover Page	Task Action: FLIGHT CHECK	Task Type: IAP	Estimated Chart Date: 05/19/2022	APWS Task ID: B257F081F43B4F638E59BE973808D457	APWS Project ID: EEB757C1A2274DE5A328AFC1972167B9
Procedure: RNAV (RNP) X RWY 28L AMDT 1		Enroute: NO	Specialist: Lindholm, Scott		Agreement Number:
Airport ID: KBOI			Airport City: BOISE		State: ID
Facility ID:	Facility Type:	Flight Inspection Remark Type: New FC Slot			
<p>Procedure Comments:</p> <p>FULL AMENDMENT FOR STAR CONNECTIVITY.</p> <p>AMENDMENT COMPLETED USING ACTIVE AIRPORT DATA.</p> <p>CONTACT DON LANIER (AJV-A431) 405-954-8242</p> <p>WAIVERS (1): CANCELLATION OF WAIVER NO LONGER NEEDED TO PUBLISH 0.15 RNP MINIMA WITHOUT 0.30 RNP MINIMA IAW 8260.19I para 8-6-11.I NOTE 1.</p>					

QUALITY
29
CHECKED

3/15/22 J. DuBois

QUALITY
38
CHECKED

1. FLIGHT PROCEDURE IDENTIFICATION:

Boise, ID
Boise Air Terminal/Gowen Fld (KBOI)
RNAV (RNP) X RWY 28L

2. WAIVER REQUIRED AND APPLICABLE STANDARD:

To publish a single line of minima of RNP 0.15, but not to include RNP 0.30 minima. FAAO 8260.58, Volume 5, Para 1.3, Published Minimums. "Evaluate the final segment for an RNP value of 0.3 and a standard RNP 1.0 or alternative RNAV MA, and publish the resulting minimums."

3. REASON FOR WAIVER (JUSTIFICATION FOR NONSTANDARD TREATMENT):

The approach requested by industry is to have the arrival route remain within the Boise Valley from the northwest. The intermediate segment required a maximum RNP value of 0.15 to remain clear of rising terrain north of the airport.

4. EQUIVALENT LEVEL OF SAFETY PROVIDED:

IAW 8260.58, Volume 5, Para 1.3, RNP values lower than 0.3 may be selected to satisfy operational needs other than reduction of minimums: to increase the evaluation area to RNP 0.30 would encompass excessively high terrain. Maximum bank angles were limited to 20 degrees in RF segments in intermediate and final. RNP 0.30 minimums are available on the RNAV (RNP) Z RWY 28L approach.

5. ALTERNATIVE ACTIONS DEEMED NOT FEASIBLE:

Completed evaluation using 25 degree bank angle to "tighten" the turn radius, but the larger evaluation area (RNP 1.0) continued to encompass excessively high terrain in the intermediate segment thereby, requiring a reduction of RNP values. By using an RNP value of 0.15, multiple step-down fixes, and keeping the bank angle equal to, or less than 20 degrees, the flight track was built to an acceptable course as requested by industry.

6. COORDINATION WITH USER ORGANIZATIONS (SPECIFY):

AJV-354 *g*

7. SUBMITTED BY:

DATE	OFFICE IDENTIFICATION	TITLE
JUL 30 2014	AJV-35	Manager

SIGNATURE

George E. Davis
George E. Davis

8. AFS ACTIONS:

☐ APPROVED ☐ DISAPPROVED ☐ NOT REQUIRED

COMMENTS:

DATE	ROUTING SYMBOL	SIGNATURE
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THIS WAIVER IS CANCELLED EFFECTIVE CONCURRENT
WITH PUBLICATION RNAV (RNP) X RWY 28L AMDT 1.
WAIVER NO LONGER REQUIRED, SEE 8260.19I PARA
8-6-11.I.NOTE 1.

Digitally signed by
DONALD H LANIER
Mar 21, 2022

APP CRS	Rwy Idg	9763
282°	TDZE	2858
	Apt Elev	2871

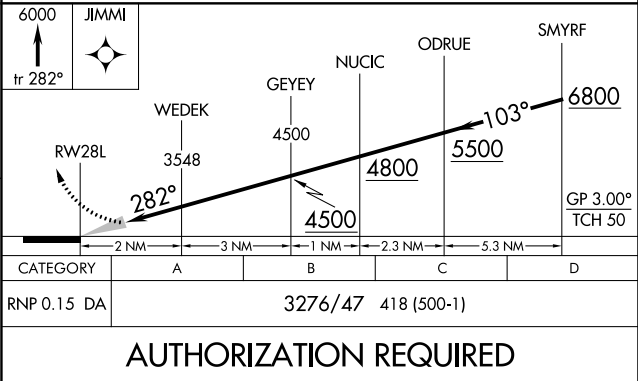
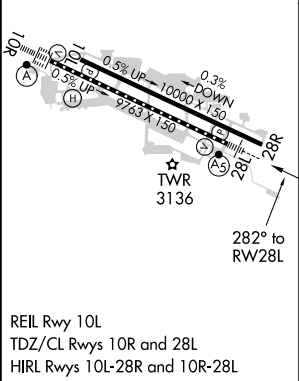
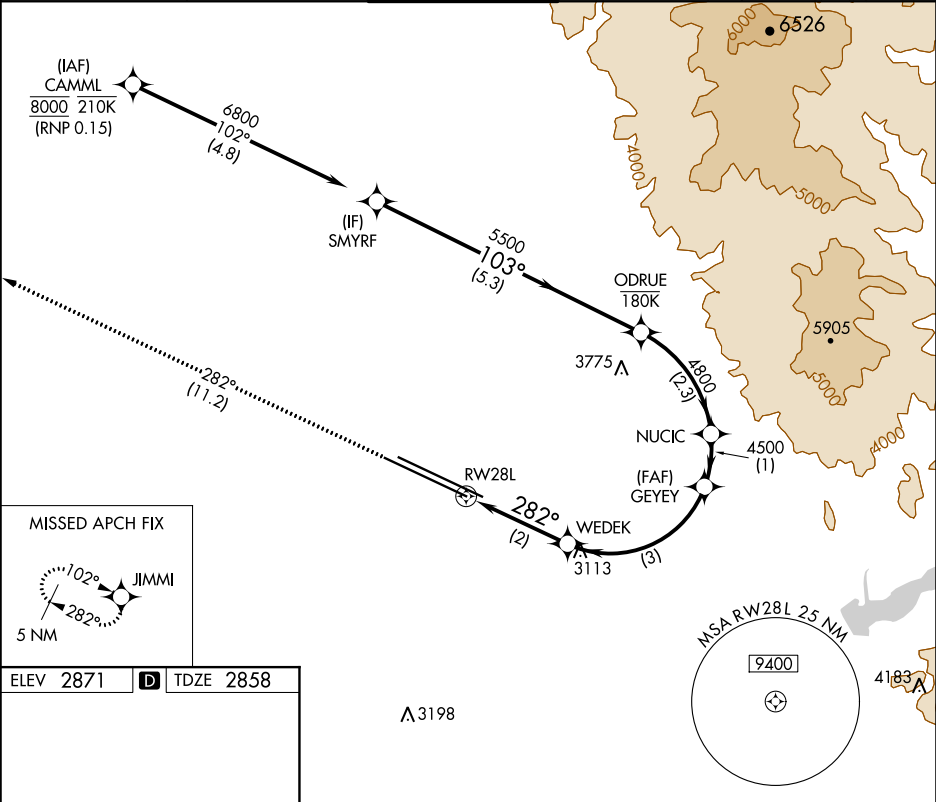
OLD

RNAV (RNP) X RWY 28L

BOISE AIR TRML/GOWEN FLD (BOI)

<div><div>▼</div><div>▲ NA</div></div>	For uncompensated Baro-VNAV systems, procedure NA below -14°C (7°F) or above 53°C (128°F). RF required. GPS required.	<div>MALSR</div> <div></div>	MISSED APPROACH: Climb to 6000 on track 282° to JIMMI and hold, continue climb-in-hold to 6000.
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D-ATIS	BIG SKY APP CON	BOISE TOWER	GND CON	CLNC DEL
123.9 290.4	119.6 269.4	118.1 257.8	121.7 348.6	125.9 323.2

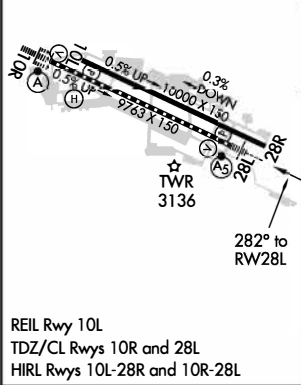
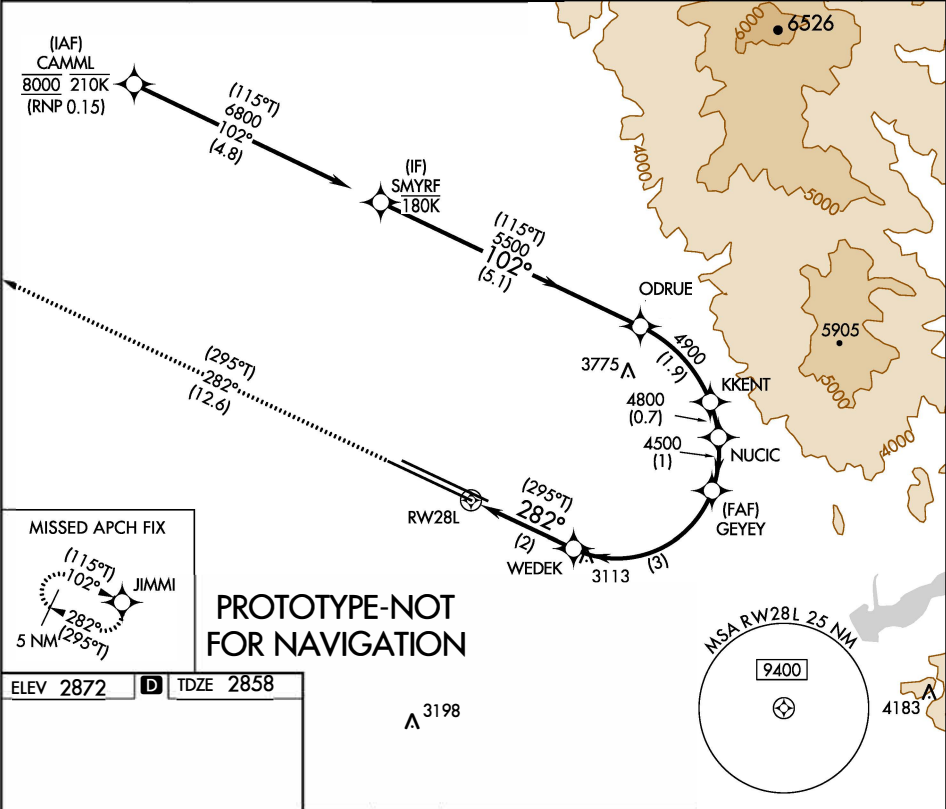




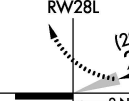
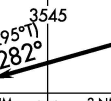
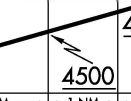
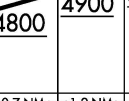
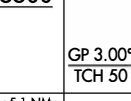

APP CRS	Rwy Idg	9763
282°	TDZE	2858
	Apt Elev	2872

RNAV (RNP) X RWY 28L

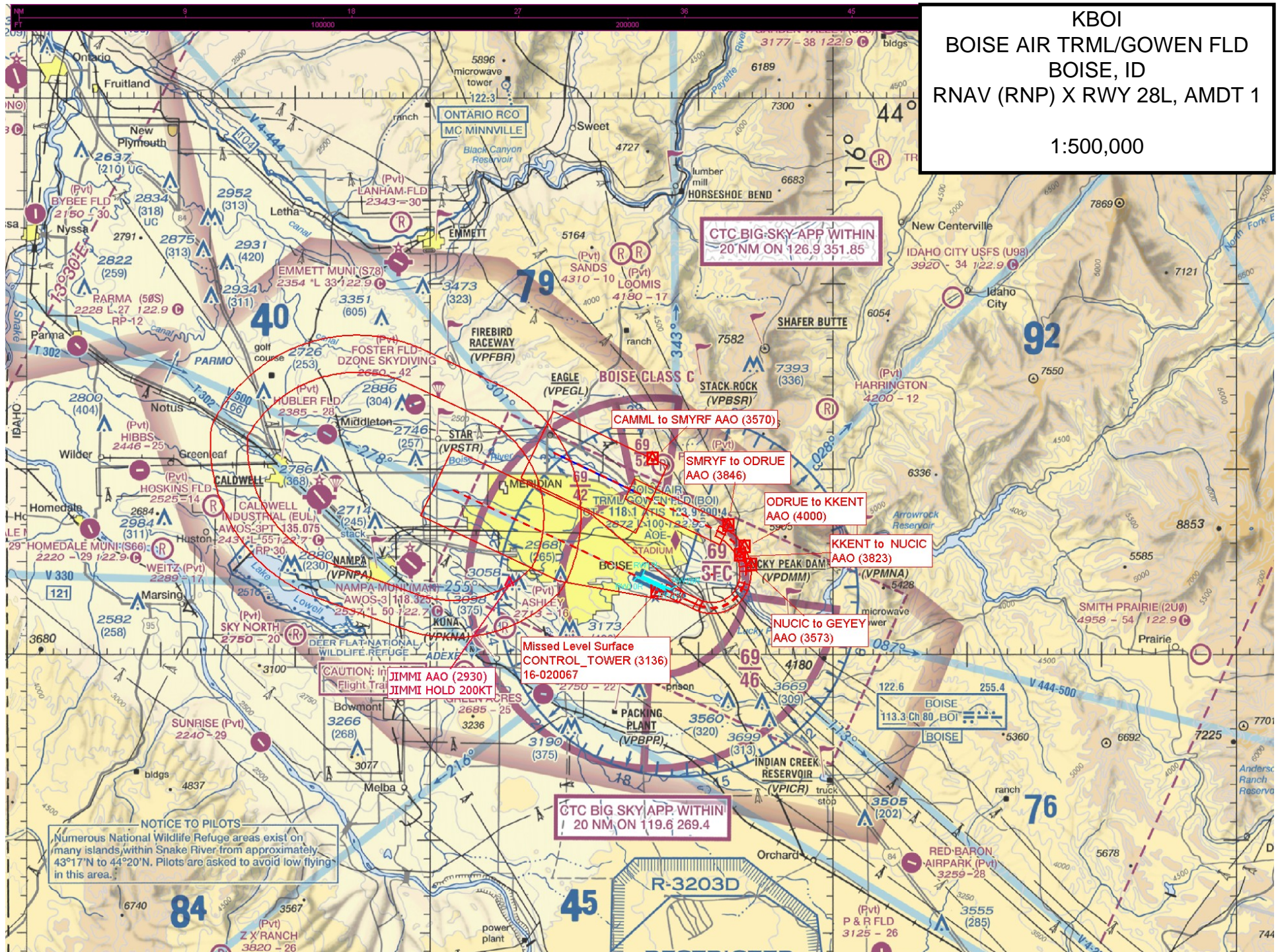
BOISE AIR TRML/GOWEN FLD (BOI)

RNP AR APCH - GPS.		MALSR	MISSED APPROACH: Climb to 6000 on track 282° to JIMMI and hold, continue climb-in-hold to 6000.	
For uncompensated Baro-VNAV systems, procedure NA below -14°C or above 54°C.				
D-ATIS	BIG SKY APP CON	BOISE TOWER	GND CON	CLNC DEL
123.9 290.4	119.6 269.4	118.1 257.8	121.7 348.6	125.9 323.2



6000 ↑ tr 282°		JIMMI 		VGSI and RNAV glidepath not coincident (VGSI Angle 3.00/TCH 50).					
RW28L 		WEDEK 3545 	GEYEE 4500 	NUCIC 4800 	KKENT 4900 	ODRUE 5500 	SMYRF 6800 		
CATEGORY		A		B		C		D	
RNP 0.15 DA		3229/35 371 (400-%)							
AUTHORIZATION REQUIRED									

1:500,000



FT 10000 20000 30000 40000 50000

South Ustick Cloverdale Settlers Beatty Meridian

Boise

Boise Air Terminal

Missed Level Surface CONTROL TOWER (3136) 16-020067

MISS TREE RX28L 2 (UD) 2969.0

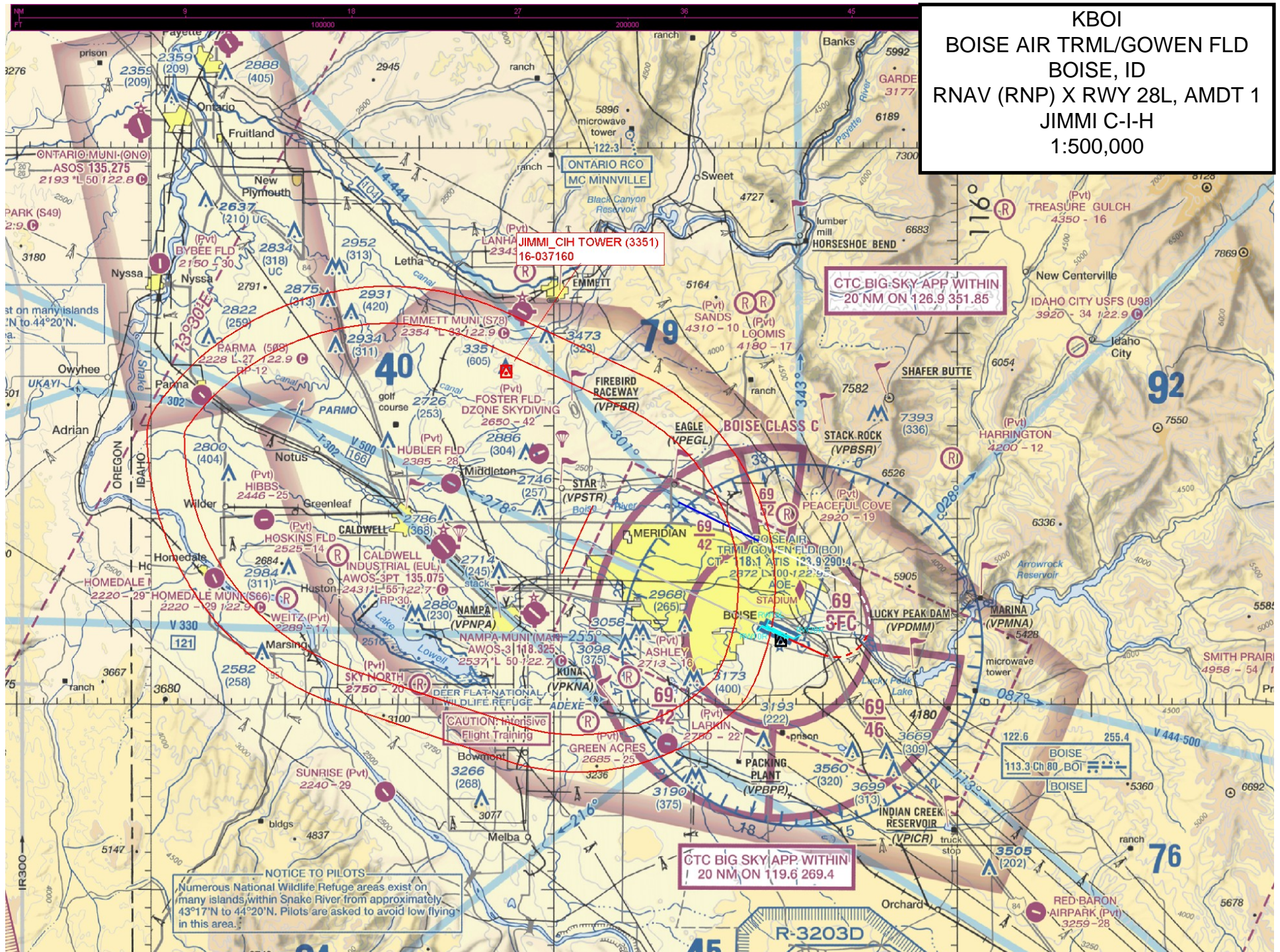
Hubbard Reservoir

State Penitentiary

Missed Level Surface
CONTROL_TOWER (3136)
16-020067

STATE PENITENTIARY

KBOI
BOISE AIR TRML/GOWEN FLD
BOISE, ID
RNAV (RNP) X RWY 28L, AMDT 1
JIMMI C-I-H
1:500,000



**U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
CATEGORICAL EXCLUSION DECLARATION**

**Boise Air Terminal/Gowen Field (KBOI)
Boise, ID**

The Boise Air Terminal/Gowen Field Airport (KBOI), located in Boise, Idaho, is requesting 19 amendments (four RNAV (RNP) procedures, three RNAV (GPS) procedures, one HI-ILS procedure, two HI-VOR/DME procedures, one ILS procedure, two VOR procedures, and four STAR procedures). The JIMMI Waypoint (WP) would require relocation 1.45 nautical miles (NM) west, resulting in more efficient and predictable operations for arrivals into KBOI. Moving the JIMMI WP would then require changes to the above-listed procedures to ensure connectivity.

Description of Action:

The Federal Aviation Administration (FAA) is proposing to amend 19 procedures at KBOI located in Boise, Idaho. The JIMMI waypoint (WP) requires relocation, resulting in a more efficient and predictable operation for arrivals into KBOI. The move requires changes to these procedures so they all have connectivity to a specific approach.

RNP	Required Navigation Performance
RNAV (RNP) Z RWY 28L	<ul style="list-style-type: none">- The missed approach holding fix at JIMMI WP would be relocated approximately (~) 1.45 NM to the northwest.- The following changes were amended for the September 9, 2020, chart cycle and have previously been processed:<ul style="list-style-type: none">o Relocated NEWKU WP ~0.5 NM west.o Relocated DIKAC WP ~3.26 NM southwest.- Altitude would increase at DIKAC from 6,000 feet (ft.) mean sea level (MSL) to at 7,000 ft. MSL.- Altitude would increase at CIPSA from at or above (AOA) 5,000 ft. MSL to AOA 5,300 ft. MSL.- The following changes would apply when the amended 15 procedures are published:<ul style="list-style-type: none">o Missed Approach holding fix at JIMMI WP would be relocated ~1.45 NM northwest.o All other flight tracks and altitudes would remain unchanged.
RNAV (RNP) X RWY 28L	<ul style="list-style-type: none">- JIMMI WP would be relocated ~1.45 NM to the northwest with an increase in altitude from 5,000 ft. MSL to AOA 6,000 ft. MSL.- ODRUE WP would be relocated ~0.2 NM to the northwest, but retain the same altitude restriction of AOA 5,500 ft. MSL.- A step-down fix (SDF) would be added between ODRUE WP and NUCIC WP, with a crossing altitude of AOA 4,900 ft. MSL.- All other flight tracks and altitudes remain unchanged.

RNAV (RNP) Z RWY 10L	<ul style="list-style-type: none"> - JIMMI intermediate fix (IF) would be relocated ~1.45 NM to the northwest with an increase in altitude from 5,000 ft. MSL to AOA 6,000 ft. MSL. - There would be an increase in altitude at LIBYY IF from 6,700 ft. MSL to 7,000 ft. MSL. - All other tracks/altitudes remain the same as original.
RNAV (RNP) Z RWY 10R	<ul style="list-style-type: none"> - JIMMI IF would be relocated ~1.45 NM to the northwest with an increase in altitude from 5,000 ft. MSL to AOA 6,000 ft. MSL. - There would be an increase in altitude at LIBYY (IF) from 6,700 ft. MSL to at 7,000 ft. MSL. - All other tracks/altitudes remain the same as original.
RNAV	Area Navigation
RNAV (GPS) Y RWY 10L	<ul style="list-style-type: none"> - MIGEE WP would move .65 ft. with no change in altitude/track/glideslope. - JIMMI WP would be relocated ~1.45 NM to the northwest with an increase in altitude from 5,000 ft. MSL to AOA 6,000 ft. MSL. - All initial segments removed, approach will be "RADAR REQUIRED."
RNAV (GPS) Y RWY 10R	<ul style="list-style-type: none"> - SITSE WP would move 2.27 ft. total with no change in altitude/track/glideslope. - JIMMI WP would be relocated ~1.45 NM to the northwest with an increase in altitude from 5,000 ft. MSL to AOA 6,000 ft. MSL - All initial segments removed, approach will be "RADAR REQUIRED."
RNAV (GPS) Y RWY 28L	<ul style="list-style-type: none"> - VUNCU WP would move 14.69 ft. total with no change in altitude/track/glideslope. - DUTME WP would move 0.50 NM to the southeast with an increase in altitude. Altitude would be raised to 4,920 ft. MSL. - SDFs would be added at 4,160 ft. MSL (~1,670 ft. AGL) (WP24) and 3,680 ft. MSL (~ 670 ft. AGL) (WP25). - JIMMI WP would be relocated ~1.45 NM to the northwest with an increase in altitude from 5,000 ft. MSL to AOA 6,000 ft. MSL.
HI-ILS Z or LOC Z RWY 10R	<ul style="list-style-type: none"> - SITSE WP would move 2.27 ft. with no change in altitude/track/glideslope. - JIMMI WP would be relocated approximately 1.45 NM to the northwest with an increase in altitude from 5,000 ft. MSL to AOA 6,000 ft. MSL.
HI-VOR/DME or TACAN RWY 10R	<ul style="list-style-type: none"> - JIMMI WP would be relocated ~1.45 NM to the northwest with an increase in altitude from 5,000 ft. MSL to AOA 6,000 ft. MSL.
HI-VOR/DME or TACAN RWY 28L	<ul style="list-style-type: none"> - EMAPE would become the final approach fix (FAF) and would increase in altitude to AOA 6,200 ft. MSL. The glideslope would be lowered to 3.10° with no change in track. - A SDF would be added at REWAY WP at 5,060 ft. MSL (~1,736 ft. AGL). The glideslope would be lowered to 3.10° with no change in track. - YODVU WP would move 0.88 NM to the southeast with an increase in altitude to AOA 4,260 ft. MSL. The glideslope would be lowered to 3.10° with no change in track. - A SDF would be added at 3,680 ft. MSL (~770 ft. AGL). The glideslope would be lowered to 3.10° with no change in track. - ZIBOR WP would move 0.59 NM to the northwest with no change in altitude or track.

	<ul style="list-style-type: none"> - ARYOT WP would move 0.02 NM to the southwest with an increase in altitude to AOA 10,500 ft. MSL, and no change to the track. - Missed approach changed to: Climb to 6000 on BOI very high frequency omnidirectional range tactical aircraft. control (VORTAC) R-278.14 to JIMMI WP (433851.20N/1162816.38W)/BOI 12.23 DME and hold, continue climb-in-hold to 6000.
ILS Y or LOC Y RWY 10R	<ul style="list-style-type: none"> - SITSE WP would move 2.27 ft. with no change in altitude/track/glideslope. - JIMMI WP would be relocated ~1.45 NM to the northwest with an increase in altitude from 5,000 ft. MSL to AOA 6,000 ft. MSL.
ILS Y RWY 10R (SA CAT I) ILS Y RWY 10R (CAT II & III)	<ul style="list-style-type: none"> - JIMMI WP would be relocated approximately 1.45 NM to the northwest with an increase in altitude from 5,000 ft. MSL to AOA 6,000 ft. MSL. - SITSE FAF would move 2.27 ft. with no change in altitude/track/glideslope.
VOR/DME or TACAN RWY 10L	<ul style="list-style-type: none"> - YARUL WP would move 0.03 NM to the northwest with no change in altitude/track/glideslope. - JIMMI WP would be relocated ~1.45 NM to the northwest with an increase in altitude from 5,000 ft. MSL to AOA 6,000 ft. MSL.
VOR/DME or TACAN RWY 28L	<ul style="list-style-type: none"> - EMAPE would become the FAF and would increase in altitude to AOA 6,200 ft. MSL. The glideslope would be lowered to 3.10° with no change in track. - A SDF would be added at REWAY AOA 5,060 ft. MSL (~1,736 ft. AGL), the glideslope would be lowered to 3.10° with no change in track. - YODVU WP would move 0.88 NM to the southeast, with an increase in altitude to AOA 4,260 ft. MSL. The glideslope would be lowered to 3.10° with no change in track. - A SDF would be added at 3,680 ft. MSL (~770 ft. AGL), the glideslope would be lowered to 3.10° with no change in track. - ZIBOR WP would move 0.59 NM to the northwest with no change in altitude or track. - ARYOT WP would move 0.02 NM to the southwest with an increase in altitude to 10,500 ft. MSL and no change in track. - Missed approach changed to: “Climb to 6000 on BOI VORTACV R-278.14 to JIMMI WP (433851.20N/1162816.38W W)/BOI 12.23 DME and hold, continue climb-in-hold to 6000.”
STAR	Standard Terminal Arrival
SPUUD	<ul style="list-style-type: none"> - The MEVLE and BSSMA transitions would be deleted as requested by air traffic control (ATC). - The altitude restrictions at BROPH WP (AOA FL220) and ORYDA WP (AOA FL190) would be deleted due to a lack of operational advantage. ATC states that aircraft. are typically below altitude restrictions when currently beginning this arrival route. - KOONA WP would be removed due to criteria. The STAR would terminate at common fix EKEME. - EKEME WP would change from flyby (FB) to fly over (FO) to match RNAV (RNP) Z 10L/R approaches.

	<ul style="list-style-type: none"> - FALDI WP would have a restriction of AOA 8,000 ft. MSL (~4,575 ft. AGL) for terrain. The minimum obstruction clearance altitude (MOCA) is 7,856 ft. MSL (~4,430 ft. AGL) at FALDI WP.
KOURT	<ul style="list-style-type: none"> - TESSA WP would be removed due to criteria. The STAR would terminate at common fix KOLKE. - KOLKE WP would be changed from FB to FO with a fix to a manual (FM) leg aligned with preceding leg to match RNAV (RNP) Z RWY 10L/R in conformance with criteria.
KYAAN	<ul style="list-style-type: none"> - JIMMI WP would move 1.45 NM northwest with an increase in altitude to match RNP and GPS approaches due to criteria. Additionally, ATC requested to increase the altitude at JIMMI WP in order to eliminate Traffic Alert and Collision Avoidance System (TCAS) resolution advisory events. - BEATR WP would be removed. - DYYLN WP and SMYRF WP would be removed because the STAR terminates at CAMML WP to match RNAV (RNP) X RWY 28L/R approaches in conformance with criteria.
BEWTE	<ul style="list-style-type: none"> - The altitude restriction of FL240 at SUMOQ WP would be removed due to a lack of operational advantage. ATC states that aircraft. are below FL240 when currently beginning this arrival route. - The altitude restriction at CUDDY WP would be changed from AOA 17,000 ft. MSL (~13,850 ft. AGL) to AOA 15,000 ft. MSL (~11,850 ft. AGL) for descent gradient criteria. - The altitude restriction at BEWTE WP would be changed from AOA 10,500 ft. MSL (~6,180 ft. AGL) to AOA 10,000 ft. MSL (~5,680 ft. AGL) for descent gradient criteria. - The speed restriction of 230 knots indicated airspeed (KIAS) would be removed at CHRIE WP for leg length and descent gradient criteria. - The altitude restriction at LIBYY WP would be changed from 6,700 ft. MSL (~3,815 ft. AGL) to 7,000 ft. MSL (~4,115 ft. AGL) to match RNAV (RNP) Z RWY 10L/R approaches in conformance with criteria.

Federal Aviation Administration (FAA) guidance for Noise Screening of Air Traffic Actions (December 2012) was used to complete the analysis of potential effects due to the change in aircraft noise exposure level as a result of the implementation of the proposed action. The Altitude/Operations Test (A/O Test) was utilized to conduct a noise prescreening evaluation of the proposed amendments to the arrival procedures. The results of the A/O Test indicated that no further noise screening is necessary based on the number of operations and altitude on the proposed procedures at KBOI.

Declaration of Exclusion:

The FAA has reviewed the above referenced proposed action and it has been determined, by the undersigned, to be categorically excluded from further environmental documentation according to FAA Order 1050.1F, "Environmental Impacts: Policies and Procedures." The implementation of this action will not result in any extraordinary circumstances in accordance with FAA Order 1050.1F.

Basis for this Determination:

The Aircraft Procedure Environmental Pre-Screening Filter was processed and reviewed by the Western Service Center. This review was conducted in accordance with policies and procedures in Department of Transportation Order 5610.1C, "Procedures for Considering Environmental Impacts" and FAA Order 1050.1F.


The applicable categorical exclusion is:

5-6.5.i. - Establishment of new or revised air traffic control procedures conducted at 3,000 feet or more above ground level (AGL); procedures conducted below 3,000 feet AGL that do not cause traffic to be routinely routed over noise sensitive areas; modifications to currently approved procedures conducted below 3,000 feet AGL that do not significantly increase noise over noise sensitive areas; and increases in minimum altitudes and landing minima. (ATO, AVS)

5-6.5.k – Publication of existing air traffic control procedures that do not essentially change existing tracks, create new tracks, change altitude, or change concentration of aircraft on these tracks. (ATO, AVS)

Recommended by:

Facility Manager Review/Concurrence


Signature: BRETT L WADDOUPS  Digitally signed by BRETT L WADDOUPS
Date: 2021.09.27 14:59:42 -06'00'

Name: Brett Waddoups
Air Traffic Manager
ZLC ARTCC

Date: _____

Concurrence by:

Service Area Environmental Specialist Review/Concurrence

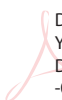
Signature: KAREN LYNN EVERITT  Digitally signed by KAREN LYNN EVERITT
Date: 2021.09.27 15:11:47 -07'00'

Name: Karen Everitt
Environmental Protection Specialist, Operations Support Group
Western Service Center, AJV-W25

Date: _____

Approval by:

Service Area Director Review/Concurrence, if necessary

Signature: BYRON G Y CHEW  Digitally signed by BYRON G Y CHEW
Date: 2021.09.28 10:13:45 -07'00'

Name: B. G. Chew
Acting Group Manager, Operations Support Group
Western Service Center, AJV-W2

Date: _____