| Flight Procedures Cover Page  | Task Action:<br>FLIGHT CHECK                 | <b>Task Type</b> :<br>IAP             | Estimated Chart Date:<br>09/05/2024 | APWS Task ID:<br>07EB9F79DEAC426FA0FBC8EE8F1E12A8 | APWS Project ID:<br>10037E8365E8404587C8B09F16FF81E7 |  |
|---|--|---------------------------------------|-------------------------------------|---|--|--|
| Procedure:<br>ILS OR LOC RWY 12 AMDT 10                                     |  | Enroute:<br>NO                        | Specialist:<br>Smart, Phillip       |   | Agreement Number:                                    |  |
| Airport ID:<br>KBZN   |  | Airport City:<br>BOZEMAN              |                                     | State:<br>MT                                      |  |  |
| Facility ID:<br>BZN   | Facility Type:<br>ILS                        | Flight Inspection Rema<br>New FC Slot | к Туре:                             |   |  |  |
| Procedure Comments:<br>THIS AMENDMENT CANCELS T NOTAM                       | !FDC 3/9057                                  | •                                     |                                     |   |  |  |
| PFAF MANNI (BZ) LOM DECOMMISSIONED.   |  |                                       |                                     |   |  |  |
| KBZN MAGVAR E13/2010  |  |                                       |                                     |   |  |  |
| CONTACT MR. JOHN BORDY AT 405-954-0980. Federal Aviation Administration     |  |                                       |                                     |   |  |  |
| 7/26/24: THIS IS A CORRECTED COPY O<br>1. FORM 8260-3. ON PAGE 1 IN TERMINA | F THE FORM APPROVED<br>AL ROUTES SECTION, CH | ON 07/12/2024<br>IANGED ALL INSTANCES | OF "I-BZN" TO "BZN".                |   |  |  |

2. THROUGHOUT FORM 8260-3 AND 8260-9, CHANGED ALL INSTANCES OF "MANNI INT/I-BZN 9.06 DME" TO "MANNI INT/BZN 7.80 DME".

3. ON FORM 8260-2 FOR FIX MANNI ADDED FIX MAKEUP: ADDED BOZEMAN (BZN) AND ASSOCIATED DATA AND REMOVED DME DISTANCE OF 36.98 FROM FAC 2 (WHITEHALL) IN FIX MAKEUP





# Automated Al-59 ILS or Loc Rwy 12 Automated Al-59 ILS or Loc Rwy 12

NW-1 04-08-24 COMPILER: JUN REVIEWER: DBL CHKR: EFF: FIG



45°47'N-111°09'W

NW-1, 30 NOV 2023 ರ್ 28 DEC 2023

BOZEMAN, MONTANA

Amdt 9D 19MAY22

BOZEMAN YELLOWSTONE INTL (BZN) ILS or LOC RWY 12











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

### Bozeman Yellowstone International Airport Belgrade, Montana

### **Description of Action**:

The Federal Aviation Administration (FAA) is proposing to decommission the MANNI locator outer marker (LOM) and—to accommodate the decommissioning—amend Instrument Landing System (ILS) or Localizer (LOC) Runway (RWY) 12 at Bozeman Yellowstone International Airport (KBZN) in Belgrade, Montana. Amendments would include moving the initial arc from the Bozeman (BZN) very high frequency omnidirectional range (VOR)/distance measuring equipment (DME) 15 DME to 16 DME, and pushing the initial approach fix (IAF), intermediate fix (IF), and final approach fix (FAF) out one nautical mile (NM) further from the airport than their current positions.

The MANNI LOM is legacy equipment that is frequently out of service, recently failed flight inspection, and requires substantial funding to maintain and operate. Additionally, the shelter for the LOM has tested positive for asbestos and is subsequently inaccessible due to the health hazard. The decommissioning of this LOM will lower costs of maintaining equipment for both the FAA as well as the airport. A description of the proposed amendments to ILS or LOC RWY 12 is provided in **Table 1** below. The proposed amendments do not create a significant change in flight path, see **Figure 1**.

| Procedure Name               | Proposed Amended Procedure Description  |  |  |  |  |
|------------------------------|---|--|--|--|--|
| ILS or LOC RWY 12<br>(amend) | <ul> <li>Remove MANNI LOM</li> <li>All fixes/waypoints (WP) would<br/>move:<br/>BRIGR IAF 1 NM southwest<br/>FALIA IF/IAF 1 NM northwest<br/>ZOPKA WP 1 NM northeast<br/>KICDO IAF 1 NM north</li> <li>FAF added at 45°53'24.11"N/111°18'31.58"W with<br/>crossing altitude at or above 7,200 feet mean sea level<br/>(approximately 3,025 feet above ground level [AGL])</li> <li>Minimum enroute altitude (MEA) on the feeder segment<br/>between Bozeman very high frequency omnidirectional range<br/>(VOR)/distance measuring equipment (DME) (BZN) and<br/>FALIA fix would be raised from 8,100 feet mean sea level<br/>(MSL) to 8,400 feet MSL.</li> </ul> |  |  |  |  |

| Procedure Name | Proposed Amended Procedure Description  |  |  |
|----------------|---|--|--|
|                | • WP67734* step down fix (SDF) would be added 5.2 nautical miles (NM) southeast of FALIA fix with a crossing restriction of at or above (AOA) 7,200 feet MSL. |  |  |
|                | • MANNI compass locator outer marker (LOM) (BZ) would be removed.   |  |  |
|                | • MANNI final approach fix (FAF) would be added at  |  |  |
|                | 45°53'24.11"N/111°18'31.58"W with crossing restriction of   |  |  |
|                | AOA 6,800 feet MSL (approximately 2,625 feet above ground level [AGL]).   |  |  |
|                | • Missed approach would be changed to: Climb to 5,200   |  |  |
|                | feet MSL then climbing right turn to 9,000 feet MSL on  |  |  |
|                | heading 250° and on BZN VOR/DME radial (R)-223 to   |  |  |
|                | BRIGR INT/BZN 15 DME and hold. Continue climb in  |  |  |
|                | hold to 9,000 feet MSL.   |  |  |
|                | *Indicates fix to be named  |  |  |

Figure 1. Proposed Amended Procedure



The Proposed Action would not change existing tracks, create new tracks, change altitude, or change concentration of aircraft on these tracks. No new areas would be overflown as a result of the Proposed Action, and there would be no potential to affect Section 4(f) or Section 106 resources. Cumulative impacts are not anticipated because there would be no change to the use of

CATEX: Declaration: KBZN Belgrade, Montana Page 2 of 4 any flight procedures and routes. No extraordinary circumstances were identified during the course of this review.

### **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 FAAs Instrument Flight Procedures, Operations, and Airspace Analytics (IOAA) Tool was accessed 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.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)

### **Concurrence by**

### Western Service Area Environmental Protection Specialist

| Signature: | Date:  |
|------------|--|
| Name:      | Lonnie Covalt  |
|            | Lead Environmental Protection Specialist, Operations Support Group |
|            | Western Service Center   |
|            |  |
|            |  |

### Approval by

### Western Service Area Director or Designee Approval

Signature:

\_Date:\_\_\_\_\_

Name: B. G. Chew Group Manager, Operations Support Group Western Service Center

### 1. FLIGHT PROCEDURE IDENTIFICATION:

BOZEMAN, MONTANA BOZEMAN YELLOWSTONE INTL (KSLC) ILS OR LOC RWY 12

### 2. WAIVER REQUIRED AND APPLICABLE STANDARD:

2-9-8. Satisfactory Fixes.

### 2-9-8.c

PFAF. For a fix to be satisfactory for use as a PFAF, the fix error should not exceed plus-or-minus 1 NM. It may be as large as plus-or-minus 2 NM when:

2-9-8.c(3) Where DME is not required for identification of the MAP (FAF to MAP timing is either required or optional for identification of the MAP), a buffer of equal length to the excessive fix error after the PFAF is provided between the published MAP and the point where the missed approach surface begins.

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

Request to publish the ILS or LOC RWY 12 using a FAF intersection fix with a displacement error of 3.02 NM backwards and 3.41 NM forward. Here is the TARGETS evaluation results: GBAO585: [Warning] Fix error after the FAF exceeds 1 NM. A buffer of 2.41... NM is automatically applied to the missed approach unless a straight-to-fix subsegment is used and that subsegment is too short to accommodate the buffer.

The decommission of the Bozeman (BZN) Locator Outer Marker (LOM) also referred to as the (MANNI LOM) and Outer Marker (OM), Runway 12, near Bozeman, Montana is planned for removal on chart date October 05, 2023 and will leave a void in how the FAF is identified. It would be easy to replace MANNI LOM with a DME fix but that will change the requirement for this VOR MON safe procedure. FAF to MAP timing is currently used for identification of the MAP even though DME is documented on the procedure; radar is also documented as a requirement for procedure entry at BRIGR INT but both of the requirements does not currently hinder its MON safe requirements. The procedure IF/IAF uses the HIA VOR/DME to create an intersection fix, but the requirements are much different than the FAF requirements. The closest MON airport to BZN is HLN which 61 NM with some interesting terrain that normally hinders line of sight for navigation aids. The MANNI LOM must be decommissioned due to asbestos in the facility housing the equipment and poses a potential health risk to maintainers.

### 4. EQUIVALENT LEVEL OF SAFETY PROVIDED:

1. The highest terrain point within the fix error trapezoid is 4709 FT MSL (rounded 4800 FT MSL) located in the 7:1 area at the backwards edge of the segment starting at the intermediate. The 4800 FT MSL value is 2000 FT less than the FAF altitude of 6800 FT. A precipitous terrain evaluation was conducted with no adjustment required. There is no controlling obstacle for the ILS and the LOC controller is a 4549 FT MSL AAO from a map study located .7 NM from the front edge of the fix error trapezoid inbound towards the MAP that was accomplished and certified by flight inspection. The LOC MDA is 4860 MSL with added ROC and XL adjustment.

2. Replacing the MANNI LOM with a DME fix and implement a requirement to have ATC monitor non DME equipped aircraft on final and advise them when they are passing the FAF. Adding any additional equipment requirements will remove this procedure from the critical list of usable MON procedures.

### 5. ALTERNATIVE ACTIONS DEEMED NOT FEASIBLE:

Changing the FAF to a DME fix will leave a void in the 100 NM cone established by MON facilities and procedures. Additionally, it would be a hindrance to aircraft not DME equipped when critically required for safety while operating in the NAS.

### 6. COORDINATION WITH USER ORGANIZATIONS (SPECIFY):

Western Service Area NATCA leads. ZLC ARTCC. BIG SKY APP CON. BZN Tower. US Department of Transportation Federal Aviation Administration

FLIGHT STANDARDS USE ONLY CONTROL NO.

### 7. SUBMITTED BY:

# DATEOFFICE IDENTIFICATIONTITLEAJV-A431MGR

### SIGNATURE

8. AFS ACTIONS:

APPROVED DISAPPROVED NOT REQUIRED

COMMENTS:

DATE ROUTING SYMBOL SIGNATURE