



Federal Aviation  
Administration

# Instrument Procedure Development Process

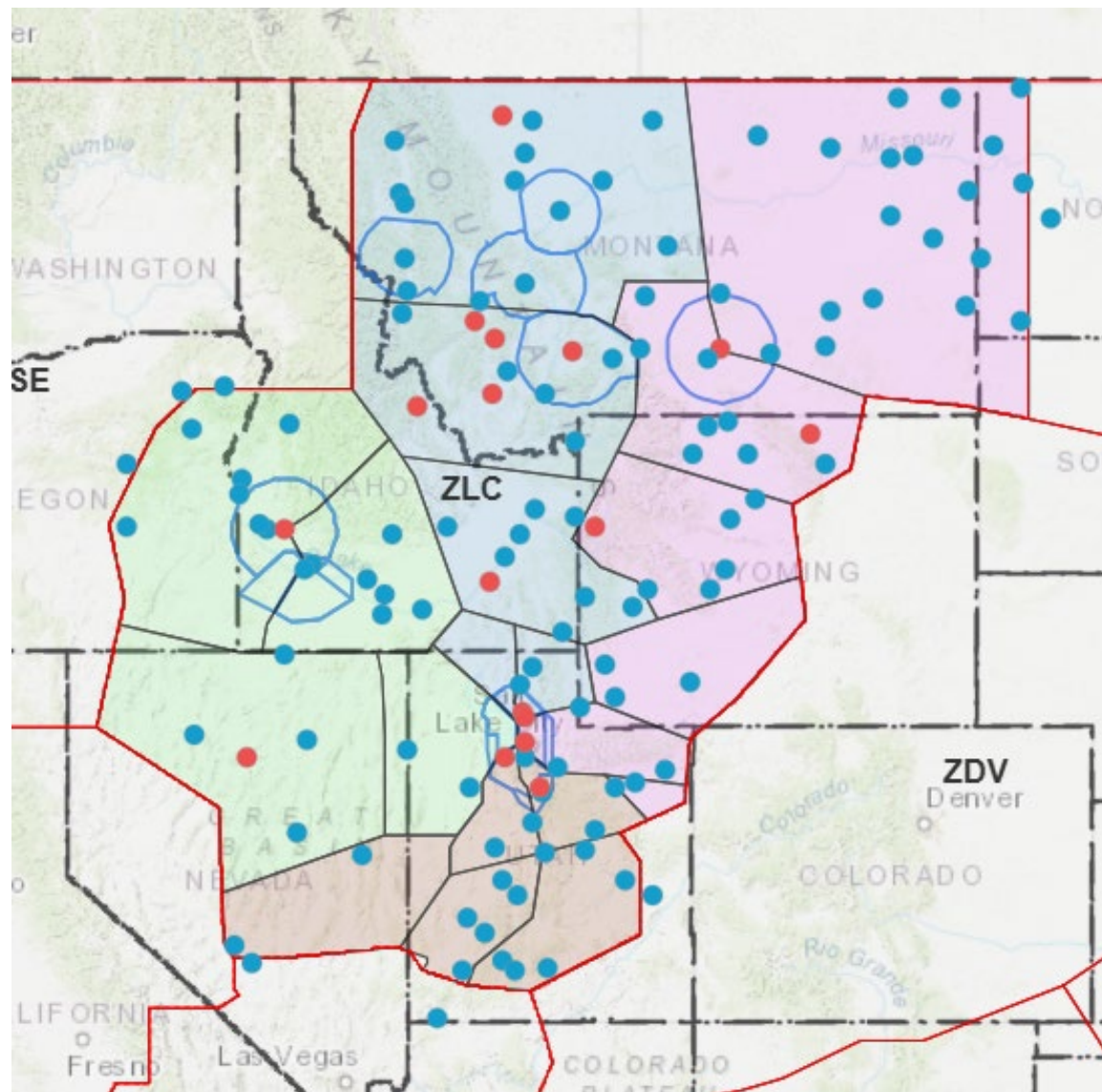
Presented to: Helena ADO Conference

By: Dale Sickels, *FAA Flight Procedures*

Date: October 30, 2024



## Salt Lake Center district



Federal Aviation  
Administration



[illegible]



Federal Aviation  
Administration

# Part I

## Instrument Flight Procedure (IFP) Process



Federal Aviation  
Administration



## IFP Process

- December 1, 2024, phase-out of FAA Order JO 7100.41, Performance Based Navigation Implementation Process
- Transition to new AJT IFP SOP and AJV OSG IFP SOP.
  - Air Traffic and OSG responsibilities
  - Working Groups mandatory but scalable
    - Core WG: OSG Specialists, AT Fac Mgt, NATCA reps
    - Full WG: add ECINA Specialists, SMEs, industry and primary airport owners/sponsors may be invited
  - OSG is responsible for facilitation of WGs





# IFP Process

All requests for Instrument Flight Procedure (IFP) Actions must be made via the IFP Gateway

Select IFP Request Form to request an IFP action

[https://www.faa.gov/air\\_traffic/flight\\_info/aeronav/procedures/](https://www.faa.gov/air_traffic/flight_info/aeronav/procedures/)

## Aeronautical Information Services

[Alerts/Notices](#)

[NOTAMs](#)

[Catalog of Products](#)

[Digital Products](#)

[Order FAA Products](#)

[Aeronautical Data](#)

[Obstruction Evaluation](#)

[Obstacle Data](#)

[Critical DME List](#)

## Instrument Flight Procedures Information Gateway

[IFP Request Form](#)

[IFP Announcements & Reports](#)

[IFP Initiation](#)

[IFP Inventory Summary](#)

[Aeronautical Charting Meeting](#)

[Air Transportation Information Exchange Conference \(ATIEC\)](#)

[FAQs](#)

[FAA Home](#) ▶ [Air Traffic](#) ▶ [Flight Information](#) ▶ [Aeronautical Information Services](#) ▶ Instrument Flight Procedures Information Gateway

## Instrument Flight Procedures Information Gateway

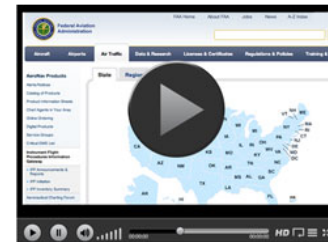
The **IFP Information Gateway** is your centralized instrument flight procedures data portal, providing a single-source for:

- **Charts** — All Published Charts, Volume, and Type.
- **IFP Production Plan** — Current IFPs under Development or Amendments with Tentative Publication Date and Status.
- **IFP Coordination** — All coordinated developed/amended procedure forms forwarded to Flight Check or Charting for publication.
- **IFP Documents - Navigation Database Review (NDBR)** — Repository and Source Documents used for Data Validation of Coded IFPs.

Search by

[Advanced Search](#)

[Sign in to Information Gateway](#)



IFP Information Gateway Instructional Video



Federal Aviation  
Administration

# IFP Process

## Instrument Flight Procedure (IFP) Request Process

Procedure Selection:

- ☐ Approach (Airport) ~ 26 questions
- ☐ DP/SID (Airport) ~ 23 questions
- ☐ STAR (Airport) ~ 17 questions
- ☐ Other (Airport) ~ 6 questions

[Back <<](#) [Next >>](#)

[Start Over](#)

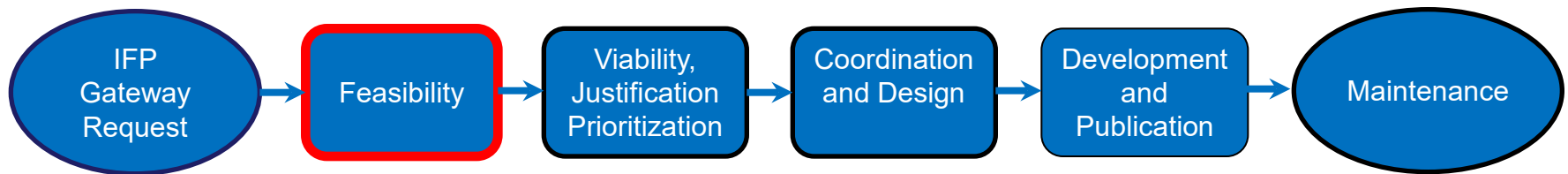
The IFP request form will ask for different information depending on the type of request



Federal Aviation  
Administration



## IFP Process



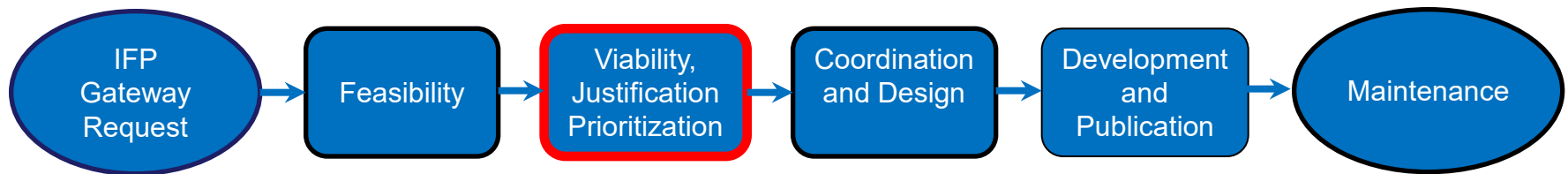
**Feasibility:** The Flight Procedures Team will perform an initial feasibility analysis to determine the feasibility of the request. Feasibility asks the question “can it be developed.”

Some items considered at this time are:

- Is it duplicate request
- Does it comply with current criteria
- Is the infrastructure in place to support the request
- Determine the full scope of work
- Should it be combined with another existing project



## IFP Process



**Viability, Justification, and Prioritization:** The request will then be vetted for viability and justification and prioritized. Viability asks the question “should it be developed.”

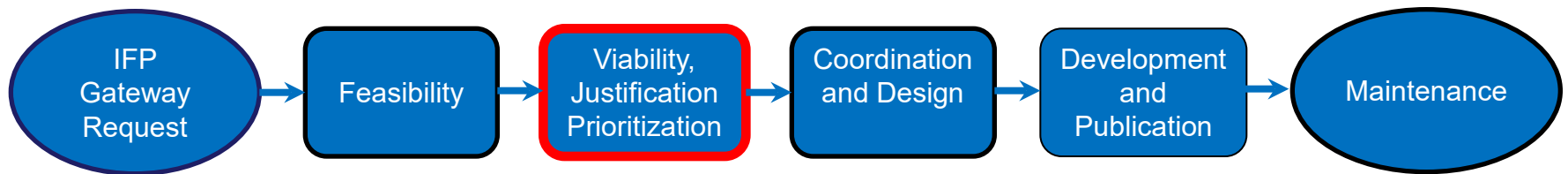
Numerous FAA Orders and national initiatives are used in this process including:

- 8260.43
- 7100.41
- VOR minimum Operations Network (MON)
- National Procedure Assessment (NPA)



Federal Aviation  
Administration

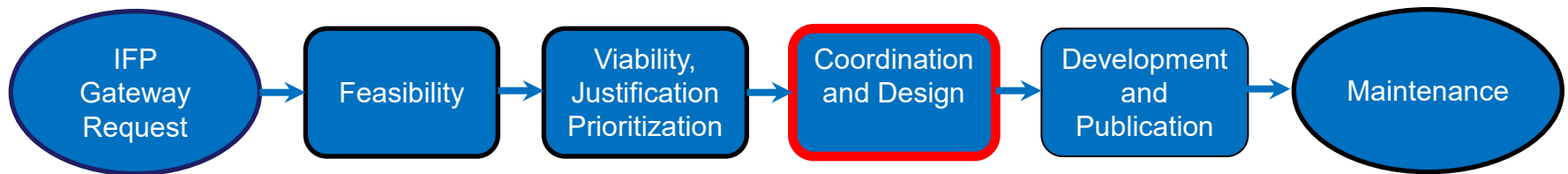
## IFP Process



If the project is approved to move forward, it will then be prioritized with other work in the NAS as appropriate. Prioritization and scheduling of procedures are no longer region specific.



## IFP Process



**Coordination and Design:** Once the project has an assigned publication date, coordination will be accomplished with all affected parties. Coordination requirements vary and may include:

- Air Traffic Control
- Other FAA Lines of Business
- Industry
- Airport Manager
- User Groups
- Community
- Airspace
- Environmental
- Existing/Spillover Req's
- Others as required





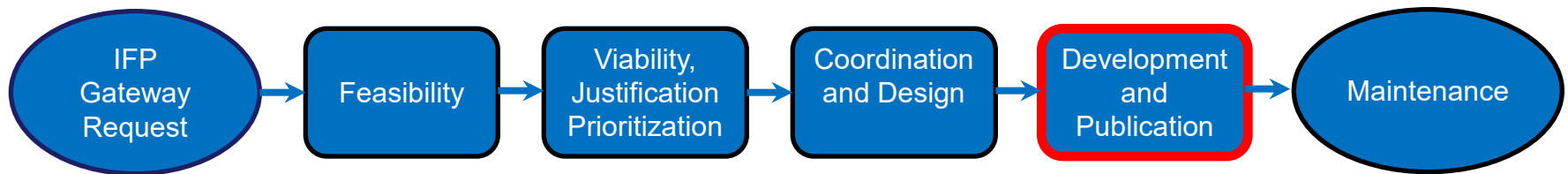
## DATA SUBMISSION AND PUBLICATION CUTOFF DATES

AIRAC EFFECTIVE DATE	PMT IRR Cutoff	Due to OSG Airspace	Due to ECINA	Due to FPT Leads	Due to AIS	Due to QC	Due to FIS	Due to Charting
Notes:								(1)
Days prior	444	365	339	219	205	170	140	90
12/25/2025								
1/22/2026	11/4/2024	1/22/2025	2/17/2025	6/17/2025	7/1/2025	8/5/2025	9/4/2025	10/24/2025
2/19/2026								
3/19/2026	12/30/2024	3/19/2025	4/14/2025	8/12/2025	8/26/2025	9/30/2025	10/30/2025	12/19/2025
4/16/2026								
5/14/2026	2/24/2025	5/14/2025	6/9/2025	10/7/2025	10/21/2025	11/25/2025	12/25/2025	2/13/2026
6/11/2026								
7/9/2026	4/21/2025	7/9/2025	8/4/2025	12/2/2025	12/16/2025	1/20/2026	2/19/2026	4/10/2026
8/6/2026								
9/3/2026	6/16/2025	9/3/2025	9/29/2025	1/27/2026	2/10/2026	3/17/2026	4/16/2026	6/5/2026
10/1/2026								
10/29/2026	8/11/2025	10/29/2025	11/24/2025	3/24/2026	4/7/2026	5/12/2026	6/11/2026	7/31/2026
11/26/2026								



Federal Aviation  
Administration

## IFP Process

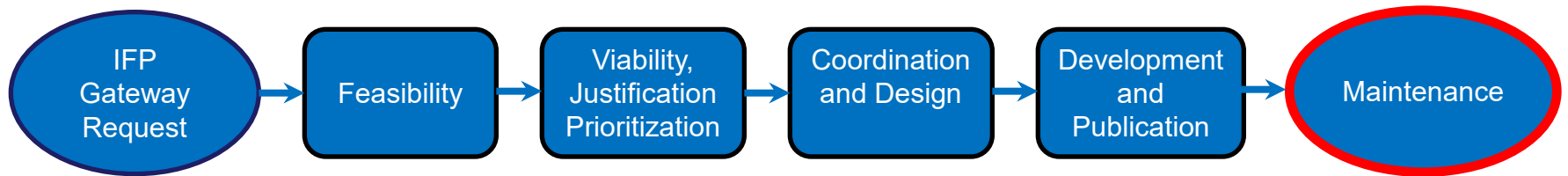


**Development and Publication:** The project is then forwarded to Aeronautical Information Services (AIS) for development and publication. This process includes:

- Developing the proposed procedures designs
- Quality Control (QC) review
- Coding
- Flight inspection
- Charting and publication.



## IFP Process



**Maintenance:** Active procedures are maintained by AIS and are reviewed biennially to ensure the designs meet current criteria and remain clear of obstructions. If any discrepancies are found, the procedure will be scheduled for amendment and a NOTAM may be issued if there is a safety concern (e.g. 20:1 visual surface penetration).



# Part II

## Feasibility Analysis



Federal Aviation  
Administration





# Feasibility

## Airport Design Considerations

AC 150/5300-13B Appendix K identifies airport design requirements for IFP development.

Circling only procedures may be authorized with no survey and basic (visual) markings. However, the minimums will be higher than could be achieved with a survey and/or with a straight-in procedure.

Straight-in procedures require at least:

- 3200' x 60' Rwy dimensions
  - Can be shorter with minimums adjustment
- NPI markings
- NPI FAR 77 Approach Type
- NVG Survey
- LIRL/MIRL/HIRL (as appropriate)
- Holding Position Signs/Markings

Table K-1. Criteria to Support Instrument Flight Procedure Development

Standards <sup>1</sup>	Visibility Minimums <sup>1</sup>			
	< 3/4 statute mile (1.2 km)	3/4 (1.2 km) to < 1 statute mile (1.6 km)	≥ 1 statute mile (1.6 km) straight-in	Circling <sup>2</sup> ≥ 1 statute mile (1.6 km)
HAT <sup>3</sup>	≤ 250 ft	≥ 250 ft	≥ 250 ft	≥ 350 ft
POFZ (PA and APV only)	Required	Not Required	Not Required	Not Required
IT-OFZ	Required	Not Required	Not Required	Not Required
ALP <sup>4</sup>	Required	Required	Required	Required
Minimum Runway Length	4,200 ft	3,200 ft <sup>5</sup>	3,200 ft <sup>5</sup>	3,200 ft <sup>5</sup>
Paved Surface	Required	Recommended <sup>6</sup>	Recommended <sup>6</sup>	Recommended <sup>6</sup>
Runway Markings (See AC 150/5340-1)	Precision	Non-precision	Non-precision	Visual
Holding Position Signs and Markings (See AC 150/5340-1, AC 150/5340-18)	Required	Required	Required	Required <sup>6</sup>
Runway Edge Lights <sup>7</sup>	HIRL or MIRL	HIRL or MIRL	MIRL or LIRL	MIRL or LIRL (Required only for night minimums)
Parallel Taxiway <sup>8</sup>	Required	Required	Recommended	Recommended
Approach Lights <sup>9</sup>	Required	Recommended <sup>10</sup>	Recommended <sup>10</sup>	Not Required
VGSI <sup>11</sup>	Recommended	Recommended	Recommended	Recommended
Applicable Runway Design Standards, (Reference online <a href="#">Runway Design Standards Matrix Tool</a> or <a href="#">Appendix G</a> )	Lower than 3/4 mile (1.2 km) visibility minimums	Not lower than 3/4 mile (1.2 km) visibility minimums	Not lower than 1 mile (1.6 km) visibility minimums	Not lower than 1 mile (1.6 km) visibility minimums
Approach or Departure Surface to be Met (Reference paragraph 3.6.1)	See <a href="#">Table 3-3</a> or <a href="#">Table 3-4</a>	See <a href="#">Table 3-3</a> or <a href="#">Table 3-4</a>	See <a href="#">Table 3-3</a> or <a href="#">Table 3-4</a>	<a href="#">Table 3-3</a>
Optimum Survey Type <sup>12</sup>	VGS	VGS	NVGS	NVGS <sup>13</sup>



# Feasibility

## Procedure Design Considerations

8260-series

-3 Terminal Procedures (TERPS)

-19 Flight Procedures and Airspace

-46 Departures

-58 PBN

Once the airport facilities are found to support the procedure, we determine what the larger environment can support.

This is where the coordination happens between what is possible to add and what types of minima are helpful/flyable at the airport.

**3-1-4. Intermediate.** Construct intermediate segments as described in Chapter 1 using one or more TF or RF legs. The NavSpec is RNP APCH (Intermediate flight phase with associated XTT of 1.00). Optional NavSpec may be A-RNP (Initial flight phase with associated XTT of 0.30) or RNP 0.3 for helicopters. Secondary areas apply, except for A-RNP. Paragraph 1-2-5.b(1)(d) applies except the ATT at the PFAF is based on the applicable final approach navigation accuracy from Table 1-2-1.

a. RF leg. Except when joining an ILS/GLS/LPV final (see Appendix C), an RF leg must end at least 2 NM prior to the PFAF.

b. Alignment (maximum course change at the PFAF). Offset alignment is only authorized when the PFAF is a FB fix.

(1) LNAV and LP. Align the intermediate course within 30 degrees of the final approach course.

(2) LNAV/VNAV. Align the intermediate course within 15 degrees of the final approach course.

a. Straight-in with offset alignment. When the **final course** must be offset, it may be offset up to 30 degrees (published separately from vertically guided) when the following conditions are met:

(1) Offset  $\leq 5$  degrees. Align the course through LTP.

(2) Offset  $> 5$  degrees and  $10 \leq$  degrees. The course must cross the runway centerline extended at least 1500 feet prior to LTP (5200 feet maximum).

(3) Offset  $> 10$  degrees and  $\leq 20$  degrees. The course must cross the runway centerline extended at least 3000 feet prior to LTP (5200 feet maximum). For offsets  $> 15$  degrees, CAT C/D minimum published visibility 1 SM, minimum height above touchdown (HAT) of 300 feet.

(4) Offset  $> 20$  to 30 degrees (CAT A/B only). The course must cross the runway centerline extended at least 4500 feet prior to the LTP (5200 feet maximum).



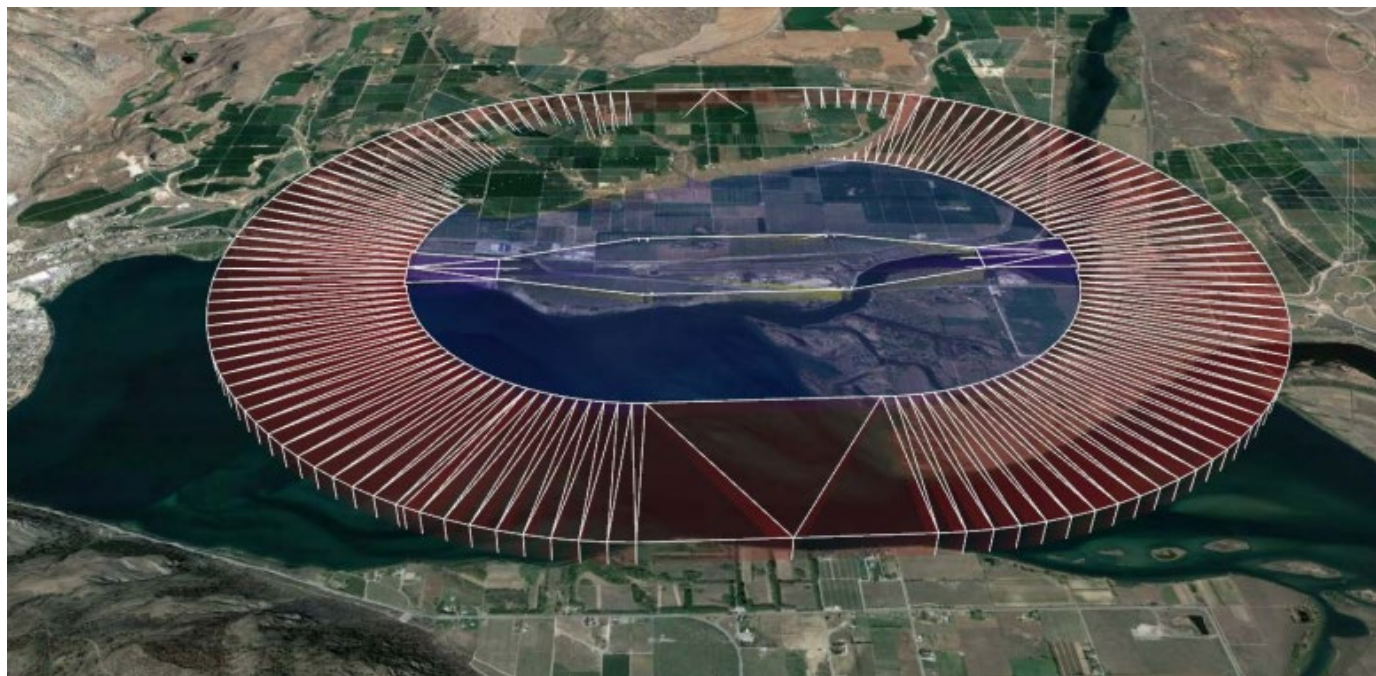
# Feasibility

An IFP is not always feasible

**Example:**

FAR 77 Surfaces at this airfield are contained in a fairly level river basin.

Airport elevation is 919 MSL





# Feasibility

## Final Evaluation:

The feasibility analysis identified high terrain about 4 nm west of the airport that requires an almost 5° descent angle to clear.

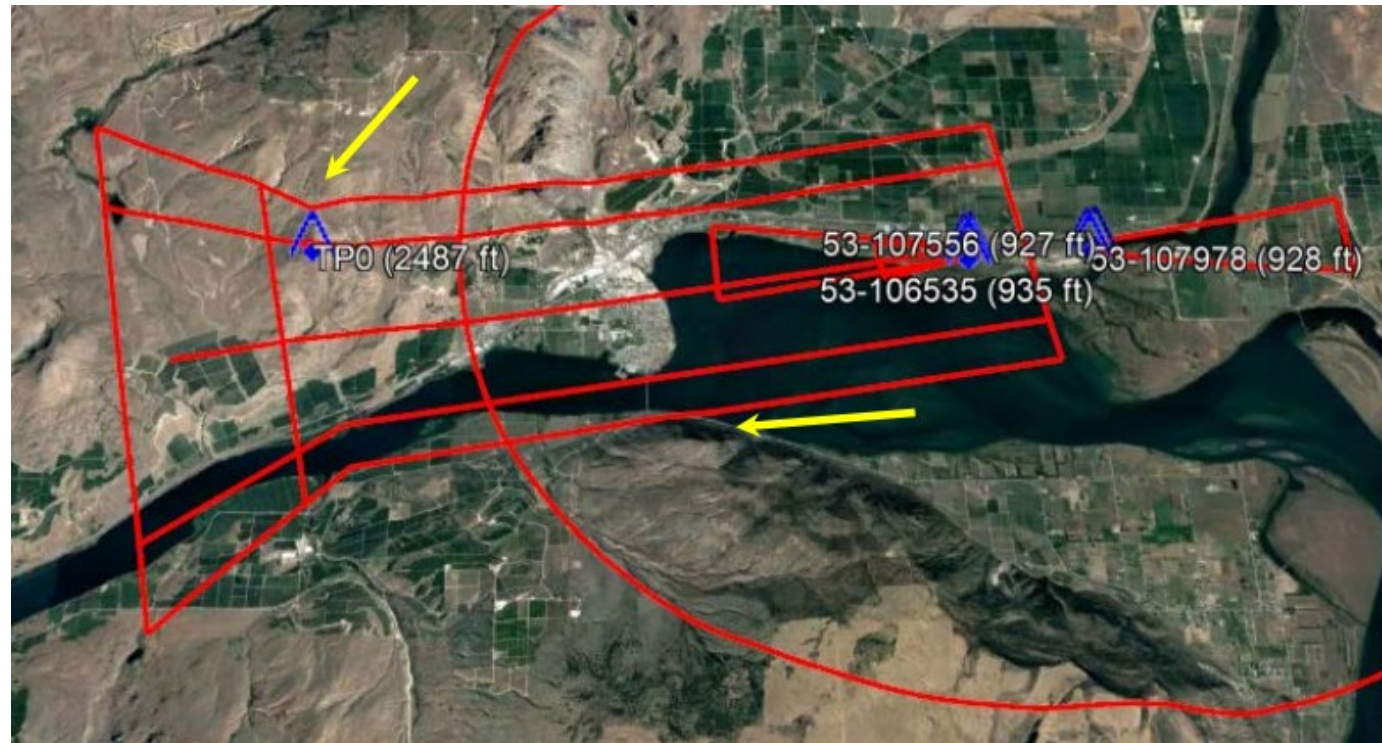




# Feasibility

## Final Evaluation:

Offsetting the final angle more to the north encounters higher terrain 4.2 nm west of the airport and offsetting more to the south encounters higher terrain 2.3 nm southwest of the runway.

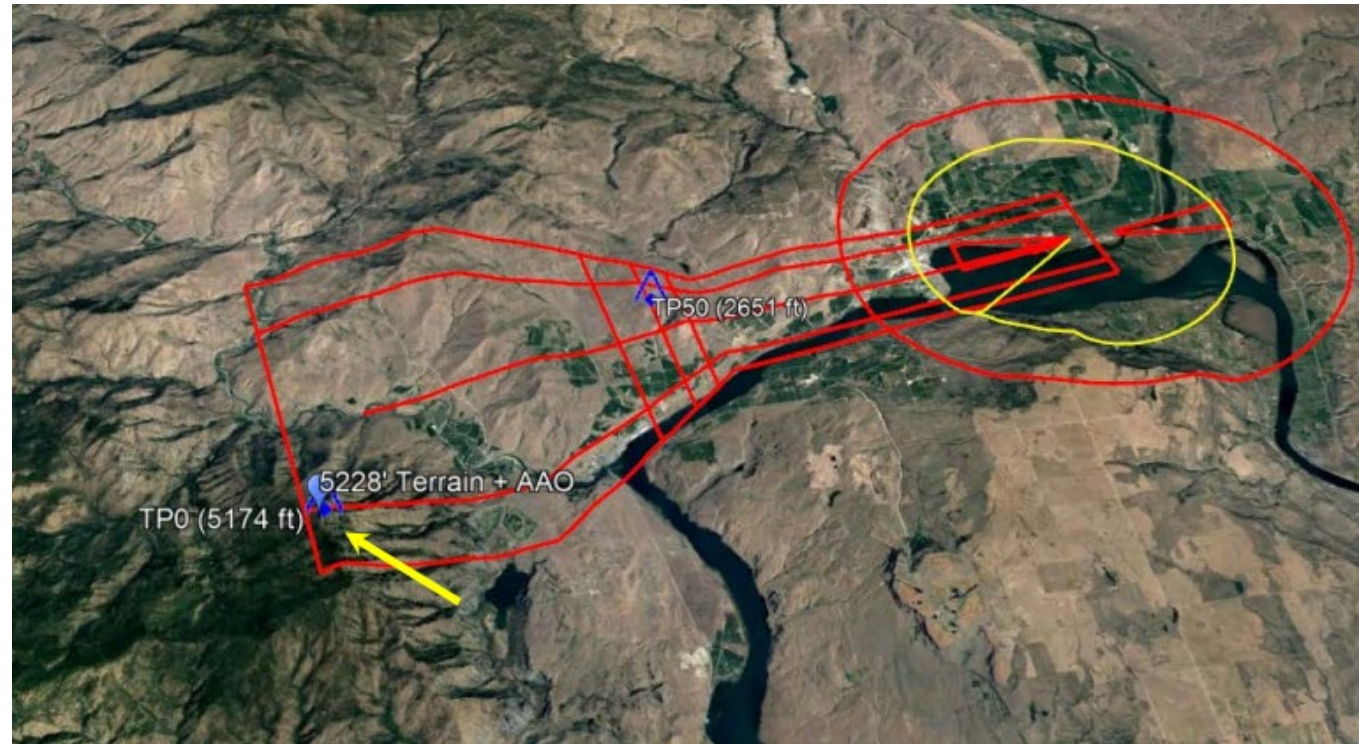


# Feasibility

## Intermediate Evaluation:

Although it could be feasible to restrict aircraft categories to mitigate the terrain in final, mountains 11 nm west of the airport cause an intermediate descent well in excess of what criteria allows. This area cannot be avoided by offsetting the intermediate segment.

Due to these issues, the procedure is deemed not to be feasible.





## Feasibility

AL-632 (FAA)

23362

LOC I-LOW <b><u>110.7</u></b>	APP CRS <b>012°</b>	Rwy Idg TDZE Apt Elev	<b>8400</b> <b>6649</b> <b>6649</b>
----------------------------------	------------------------	-----------------------------	---

ILS or LOC RWY 1  
YELLOWSTONE (WYS)

ADF required, DME required for MUPDE stepdown fix.

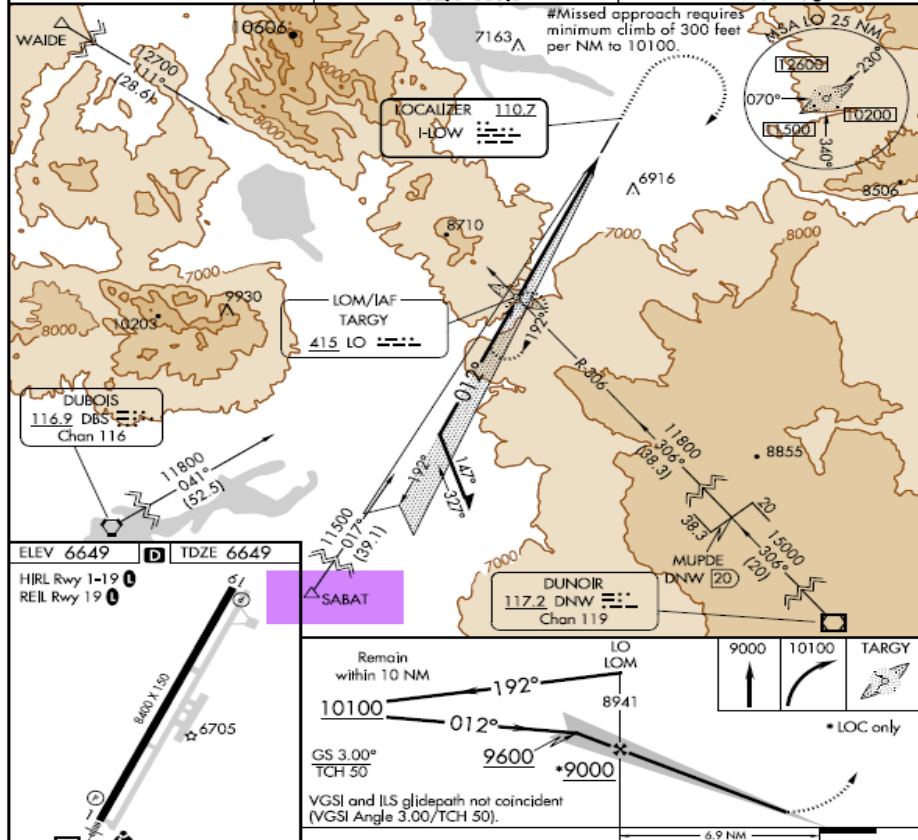
Obtain local altimeter setting on CTAF, when not received procedure NA. Inoperative table does not apply to S-LOC 1 Cat A. For inoperative MALSR, increase S-ILS 1 all Cats visibility to 2 3/4 mile.

MALSR

**MISSED APPROACH:** Climb to 9000, then climbing right turn to 10100 direct TARGY LOM and hold.

AWOS-3P	118.1
---------	-------

SALT LAKE CENTER	
132.4	338.3

UNICOM  
123.0 (CTAF) **Q**

WEST YELLOWSTONE, MONTANA

AL-632 (FAA)

22251

WAAS CH <b>86916</b> <b>W01A</b>	APP CRS <b>012°</b>	Rwy Idg TDZE Apt Elev	<b>8400</b> <b>6649</b> <b>6649</b>
--	------------------------	-----------------------------	---

RNAV (GPS) RWY 1  
YELLOWSTONE (WYS)

  NA  -20	
--	--

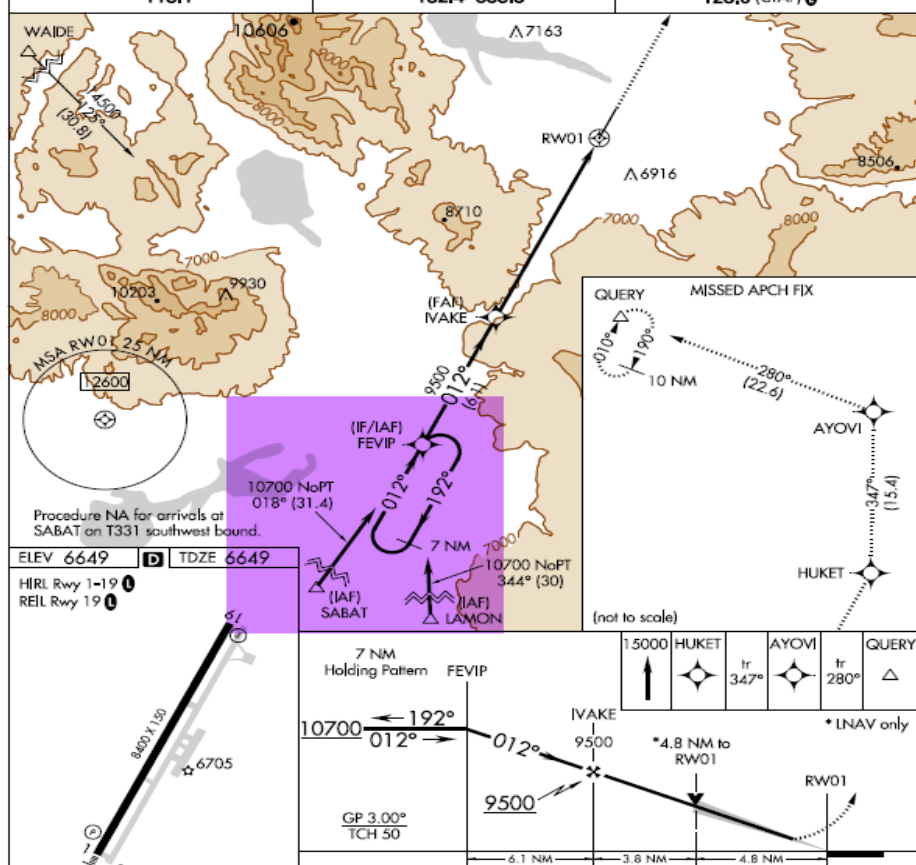
DME/DME RNP-0.3 NA. Obtain local altimeter setting on CTAF; when not received, procedure NA. Inop table does not apply to LNAV Cuts A and B.

MALSR  
A5

**MISSED APPROACH:** Climb to 15000 direct HUKET and on track 347° to AYQVI and on track 280° to QUERY and hold.

AWOS-3P  
118.1

SALT LAKE CENTER  
132.4 338.3

UNICOM  
123.0 (CTAF) 

**Federal Aviation  
Administration**

23



**Dale Sickels**  
**FAA Western Flight Procedures Office**  
**[dale.p.sickels@faa.gov](mailto:dale.p.sickels@faa.gov)**

