

Instrument Procedure Development Process



Federal Aviation
Administration



Presented to: WSCAA

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Part I

Instrument Flight Procedure (IFP) Process



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IFP Process

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

https://www.faa.gov/air_traffic/flight_info/aeronav/procedures/

Select IFP Request Form to request an IFP action

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Instrument Flight Procedures Information Gateway

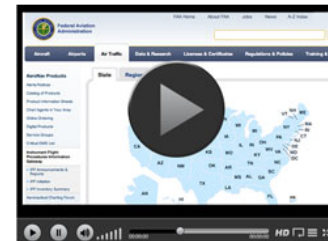
The **IFP Information Gateway** is your centralized instrument flight procedures data portal, providing a single-source for:

- **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.

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IFP Information Gateway Instructional Video



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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

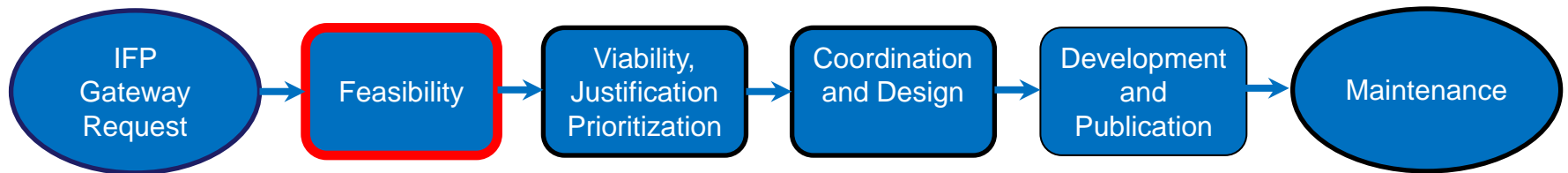
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The IFP request form will ask for different information depending on the type of request



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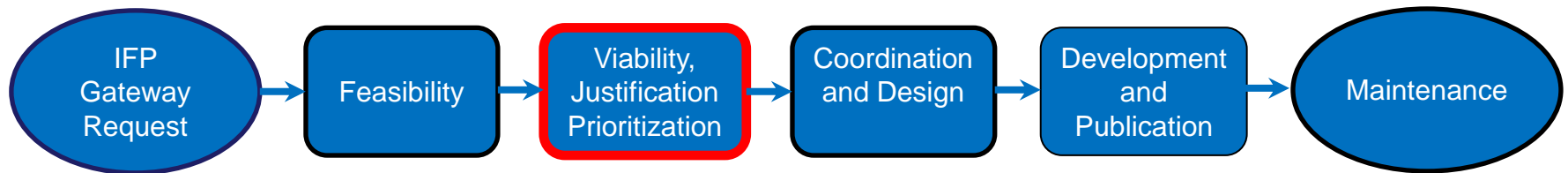
Feasibility: The Flight Procedures Team will perform an initial feasibility analysis to determine the feasibility of the request. Feasibility asks the question “can it be developed.”

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



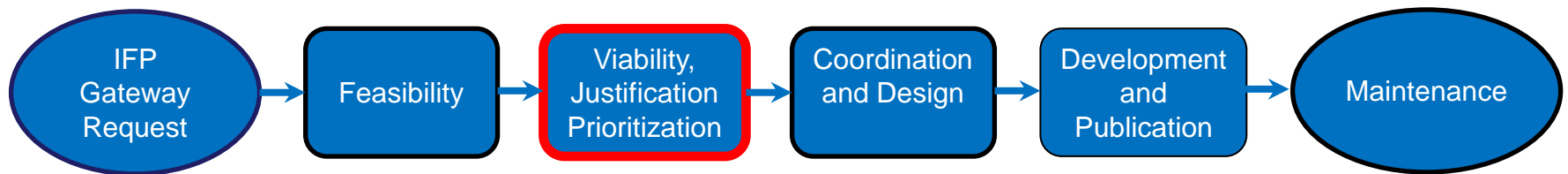
Viability, Justification, and Prioritization: The request will then be vetted for viability and justification and prioritized. Viability asks the question “should it be developed.”

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)



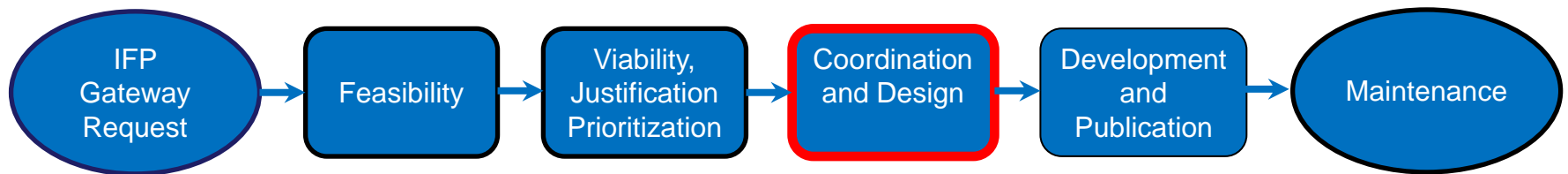
IFP Process



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

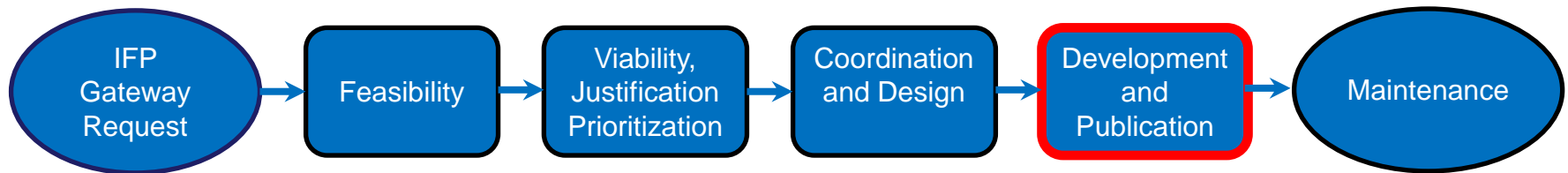


Coordination and Design: Once the project has an assigned publication date, coordination will be accomplished with all affected parties. Coordination requirements vary and may include:

- Air Traffic Control
- Other FAA Lines of Business
- Industry
- Airport Manager
- User Groups
- Community
- Others as required



IFP Process

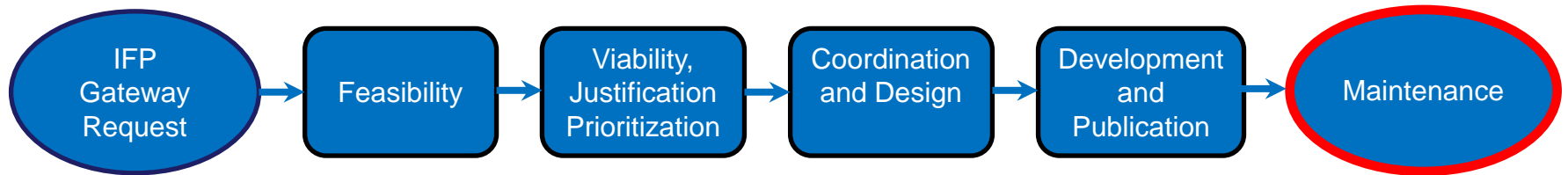


Development and Publication: The project is then forwarded to Aeronautical Information Services (AIS) for development and publication. This process includes:

- 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



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Feasibility

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

Airport Design Requirements

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

Standards ¹	Visibility Minimums ¹			
	< 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 ² ≥ 1 statute mile (1.6 km)
HAT ³	≤ 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 ⁴	Required	Required	Required	Required
Minimum Runway Length	4,200 ft	3,200 ft ⁵	3,200 ft ⁵	3,200 ft ⁵
Paved Surface	Required	Recommended ⁶	Recommended ⁶	Recommended ⁶
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 ⁶
Runway Edge Lights ⁷	HIRL or MIRL	HIRL or MIRL	MIRL or LIRL	MIRL or LIRL (Required only for night minimums)
Parallel Taxiway ⁸	Required	Required	Recommended	Recommended
Approach Lights ⁹	Required	Recommended ¹⁰	Recommended ¹⁰	Not Required
VGSI ¹¹	Recommended	Recommended	Recommended	Recommended
Applicable Runway Design Standards, (Reference online Runway Design Standards Matrix Tool or Appendix G)	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 Table 3-3 or Table 3-4	See Table 3-3 or Table 3-4	See Table 3-3 or Table 3-4	Table 3-3
Optimum Survey Type ¹²	VGS	VGS	NVGS	NVGS ¹³



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:

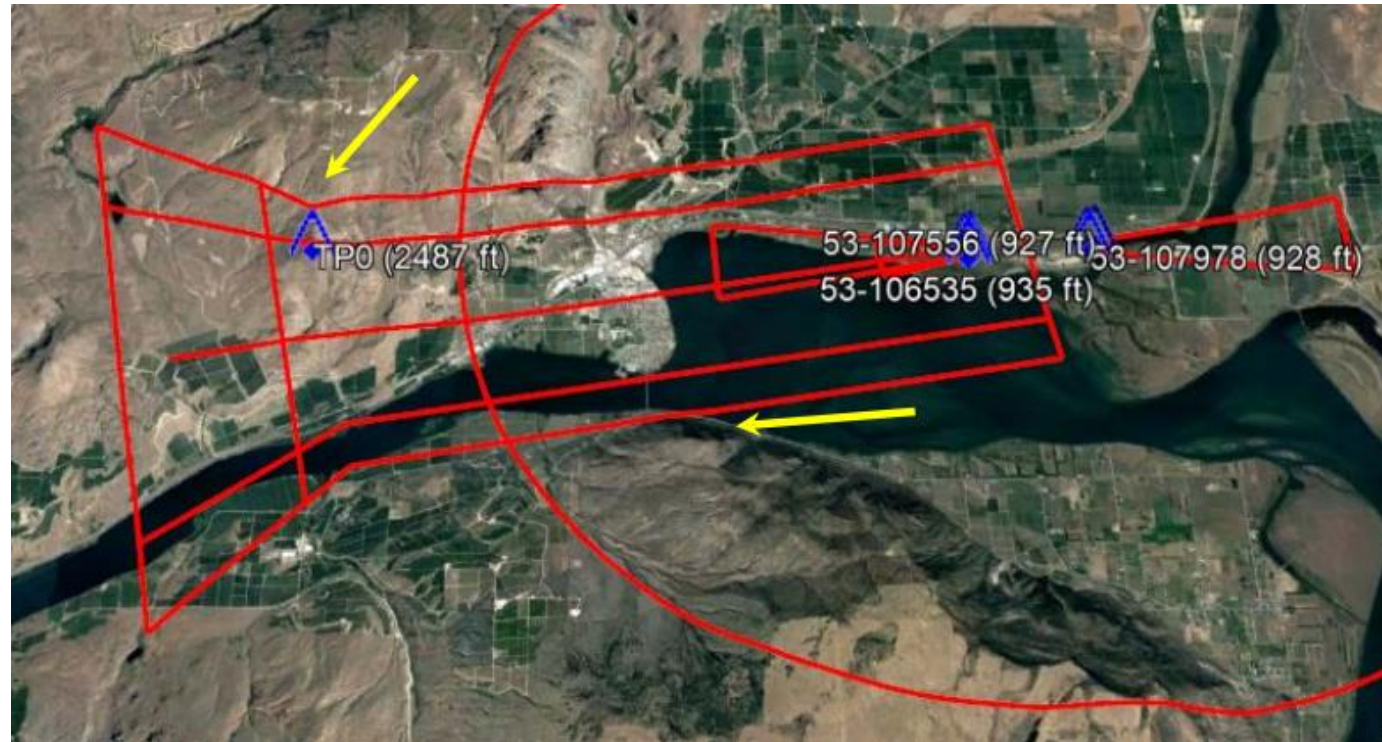
The feasibility analysis identified high terrain about 4 nm west of the airport that requires an almost 5° descent angle to clear.



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.

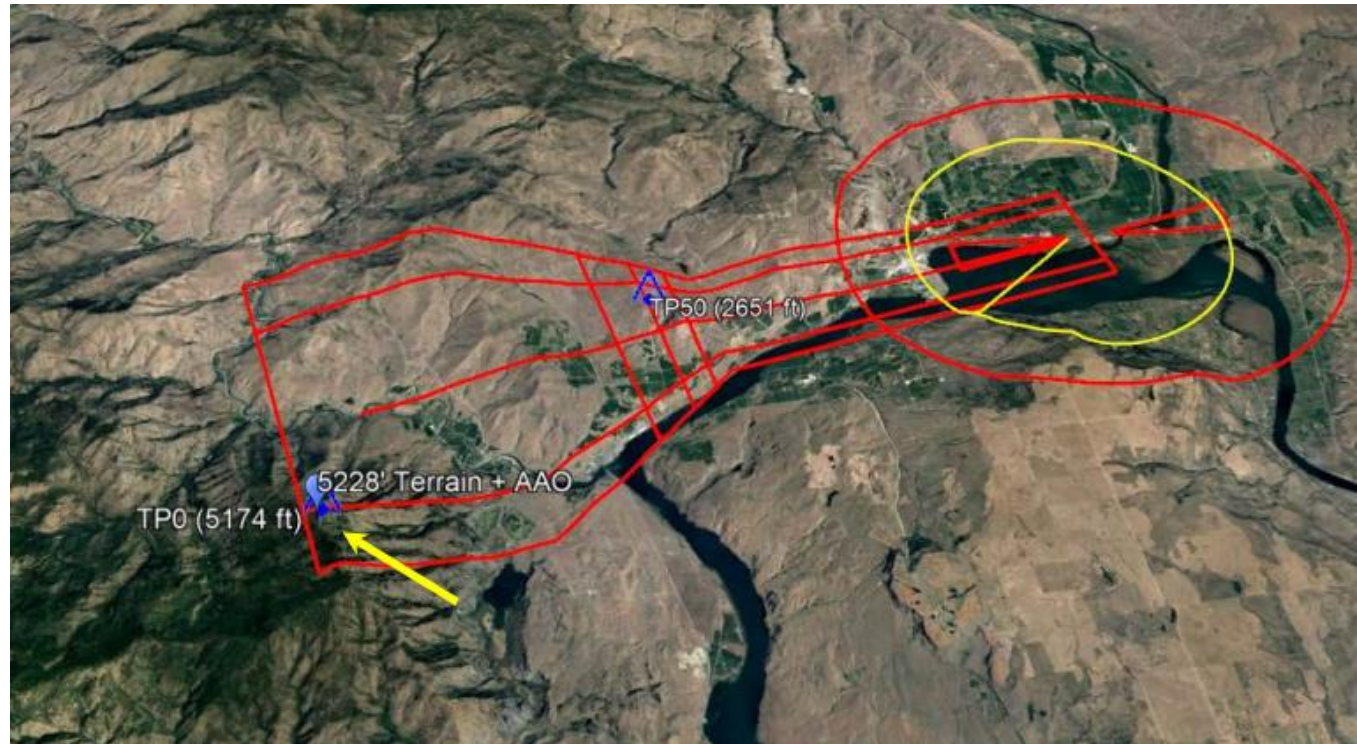


Feasibility

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.





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