

## VOLUME 12 INTERNATIONAL AVIATION

### CHAPTER 4 PART 129 OPERATIONS

#### Section 4 Part 129 Part C Operations Specifications—Airplane Terminal Instrument Procedures and Airport Authorizations and Limitations

##### 4.1 GENERAL.

**4.1.1 Purpose.** This section provides the Federal Aviation Administration (FAA) policy requirements and aviation safety inspector (ASI) guidance associated with the standard Part C (Airplane Terminal Instrument Procedures and Airport Authorizations and Limitations) operations specifications (OpSpec) paragraphs and their templates available for issuance to each foreign air carrier or foreign person operating under Title 14 of the Code of Federal Regulations (14 CFR) part 129.

**4.1.2 Scope.** This section is applicable to all FAA Flight Standards Service (FS) personnel and International Field Offices (IFO) having responsibilities associated with part 129 foreign air carrier activities and international aviation operations.

**Note:** Advisory Circulars (AC) referenced throughout this section provide guidance for compliance with specific regulations. They define acceptable means, but not the only means, of accomplishing or showing compliance with regulations.

##### 4.1.3 Program Tracking and Reporting Subsystem (PTRS) Activity Codes.

- a) Operations: 1326, 1327.
- b) Maintenance: 3315, 3316.
- c) Avionics: 5315, 5316.

**4.1.4 Regulatory References.** All regulatory references in this section are found in 14 CFR unless otherwise indicated.

**4.2 DEFINITIONS.** See Volume 12, Chapter 1, Section 1, Definitions, Abbreviations, and Acronyms, for information associated with this section.

**4.3 PART C OPSPEC PARAGRAPHS.** The FAA issues Part C OpSpec paragraphs to foreign air carriers who conduct airplane operations under part 129.

a) The FAA does not issue Part C OpSpec paragraphs to foreign air carriers who conduct only helicopter operations. Instrument flight rules (IFR) part 129 helicopter operators are issued Part H OpSpec paragraphs.

b) The FAA does not usually issue Part C OpSpec paragraphs to part 129 on-demand foreign operators who are restricted to visual flight rules (VFR)-only operations.

**Note:** FAA policy associated with part 129 Part C OpSpec paragraphs may be immediately accessed by clicking on the appropriate following paragraph number: [C048](#), [C051](#), [C052](#), [C055](#), [C056](#), [C060](#), [C063](#), [C065](#), [C067](#), [C068](#), [C075](#), [C077](#), [C080](#), [C083](#), [C091](#), [C381](#), [C384](#).

#### **OPSPEC C048—ENHANCED FLIGHT VISION SYSTEM (EFVS) OPERATIONS.**

a) Purpose and Applicability. This section provides references, information, and guidance for principal inspectors (PI) and supporting ASIs to perform an evaluation of a foreign air carrier's application for the initial issuance or an amendment to OpSpec C048. An application is required for each foreign air carrier under part 129 seeking authorization to conduct EFVS operations under part 91, § 91.176.

b) Background. Regulations permit pilots to descend below decision altitude (DA)/decision height (DH) or Minimum Descent Altitude (MDA) using a certified EFVS to conduct an EFVS operation on certain instrument approach procedures (IAP). EFVS operations require FAA authorization, which begins with an FAA evaluation described in this section. Additional provisions provided through the authorization allow foreign air carriers operating under part 129 to begin the Final Approach Segment (FAS) when the current reported visibility is below the visibility minimums prescribed in the IAP.

c) General. The following describes the roles and responsibilities of FAA personnel and lists the references that must be used to complete a thorough evaluation.

##### 1) Responsibilities.

a. Principal Operations Inspectors (POI). POIs assigned to evaluate an EFVS application are responsible for managing the evaluation process, coordinating the review and evaluation of the submitted EFVS application with other assigned PIs and ASIs, initiating FAA internal coordination when required, and issuing the authorization.

b. The Flight Technologies and Procedures Division. The Flight Technologies and Procedures Division is responsible for providing the technical and policy support and consultation to the ASIs conducting the application evaluation and coordinating with other FAA divisions, as applicable.

##### c. IFOs.

1. IFOs must initiate coordination with the Flight Technologies and Procedures Division EFVS Focal Point when an applicant presents a means to obtain EFVS authorization that is not described in AC 90-106, Enhanced Flight Vision Systems.

2. IFOs must ensure that all information and documentation recommended in AC 90-106 are addressed in the foreign air carrier's submission.

2) Resources. The following are the primary references for ASIs conducting an EFVS application evaluation:

a. AC 90-106. AC 90-106 describes EFVS operations, information, and documentation. ASIs must use the AC as the primary reference to help determine if foreign air carriers have met FAA expectations during the evaluation of an application.

b. Volume 12, Chapter 4, Section 4. ASIs must use this as a general guideline for conducting the evaluation of an application.

c. International Civil Aviation Organization (ICAO) Annex 6, Part I, Attachment H, Automatic Landing Systems, Head-Up Display (HUD) or Equivalent Displays and Vision Systems (EVS). The attachment contains ICAO guidance for EFVS.

d. Airplane Flight Manual (AFM)/Rotorcraft Flight Manual (RFM) or AFM Supplement (AFMS)/RFM Supplement (RFMS). The AFM/RFM contains information pertaining to the certification of an EFVS.

e. The Flight Technologies and Procedures Division EFVS Focal Point. This is the policy division for EFVS and foreign air carrier authorizations. ASIs should contact the EFVS Focal Point listed on the following Flight Technologies and Procedures Division Flight Operations Group web page for technical support or when directed by guidance: [https://www.faa.gov/about/office\\_org/headquarters\\_offices/avs/offices/afx/afs/afs400/afs410/efvs/](https://www.faa.gov/about/office_org/headquarters_offices/avs/offices/afx/afs/afs400/afs410/efvs/).

d) Introduction. In order to obtain C048, authorization to conduct EFVS operations, a foreign air carrier must show it has been approved to conduct EFVS operations by the State of the Operator and that each foreign-registered airplane to be authorized is equipped with an EFVS that meets the appropriate airworthiness certification requirements. In addition, the EFVS-equipped, foreign-registered airplane must meet all of the requirements in § 91.176, including equipment requirements, in order to be used in EFVS operations in the United States. This requirement is consistent with ICAO standards. Article 11 of the Convention on International Civil Aviation requires airplanes subject to its provisions and operating within the territory of a Contracting State to comply with the applicable laws and regulations enacted by that State.

e) Application Components. The responsible IFO is responsible for authorizing foreign air carriers with foreign-registered airplanes to conduct EFVS operations in the United States. This bases C048 authorization primarily on an EFVS authorization from the State of the Operator. Documentation may include foreign-issued OpSpecs or an official letter from the State of the Operator's Civil Aviation Authority (CAA) stating that the foreign air carrier is approved for EFVS in accordance with XXXX (e.g., ICAO Doc XXX). The major components of the application to conduct EFVS operations in the United States should include:

- 1) An application letter.
- 2) A description of airplanes and equipment proposed to be used for EFVS operations.
- 3) Airworthiness documentation.

4) AFM(S)/RFM(S) provisions for EFVS. Foreign-registered airplanes used by a foreign air carrier for EFVS operations within the United States must have AFM(S) provisions reflecting an appropriate level of EFVS capability that meets the display, features, and requirements of § 91.176.

5) Minimum equipment list (MEL) approval, including any EFVS provisions (an FAA-approved MEL is required for a U.S.-registered airplane). In accordance with part 129, § 129.14(b), no foreign air carrier or foreign person may operate a U.S.-registered airplane with inoperable instruments or equipment unless a Master Minimum Equipment List (MMEL) exists for the airplane type, and the foreign air carrier submits for review and approval its airplane MEL, based on the MMEL, to the FAA. For EFVS operations, the foreign air carrier should take the EFVS system and components into consideration during MEL submission, review, and approval, if the foreign air carrier is seeking MEL relief for EFVS.

6) EFVS operational approval issued by the CAA of the State of the Operator.

7) EFVS training program approval issued by the CAA of the State of the Operator.

8) Maintenance program approval, including EFVS provisions (an FAA-approved maintenance program is required for a U.S.-registered airplane). In accordance with § 129.14, “Each foreign air carrier and each foreign person operating a U.S.-registered aircraft within or outside the United States in common carriage must ensure that each aircraft is maintained in accordance with a program approved by the Administrator.” This maintenance program must contain maintenance provisions for EFVS equipment. Field approvals are not authorized for EFVS.

9) OpSpecs and any proposed amendments the foreign air carrier is seeking.

f) Instructions for Table 1 (See Figure 4-4A, Sample C048 Table 1 – Authorized Airplanes, Equipment, and EFVS Operations). The following are instructions to ASIs for populating Table 1 in C048:

1) Authorization. The foreign air carrier is authorized to conduct the EFVS operations under § 91.176 specified in C048.

2) Authorized Airplanes, Equipment, and EFVS Operations. The foreign air carrier is authorized to conduct the EFVS operations specified under § 91.176 using the airplanes listed in C048 Table 1. The foreign air carrier’s airplane must be equipped with an EFVS that has either an FAA type design approval or, for a foreign-registered airplane, the EFVS complies with all of the EFVS requirements of § 91.176(a)(1) or (b)(1) applicable to the operation to be conducted and is approved by the State of the Operator.

**Figure 4-4A. Sample C048 Table 1 – Authorized Airplanes, Equipment, and EFVS Operations**

Airplane (M/M/S)	EFVS System/Sensor	EFVS Operation(s)	EFVS Operational Credit
[With sub-list attribute]	[Dropdown List]	[Dropdown List]	[Dropdown List]

3) Airplane (M/M/S). Select the make, model, and series (M/M/S) of the EFVS-equipped airplane(s) that the applicant is expecting to use to conduct EFVS operations. List airplane M/M/S with different EFVS installations in separate rows.

**Note:** Only airplanes from a foreign air carrier’s aircraft list in WebOPSS assigned an EFVS authorization will populate the dropdown list provided in the “Airplane (M/M/S)” column in Table 1. To add the EFVS authorization to an airplane, go to “CHDO” – “Maintain Operator Data” – “Aircraft,” select the foreign air carrier’s airplane to edit, and add “EFVS” to the “Authorizations” section.

4) EFVS System/Sensor. Select the EFVS and sensor combination installed on the airplane. The AFM should identify the EFVS as an approach system or a landing system. If the AFM does not identify the installed sensor, the applicant should ask the aircraft manufacturer for the information.

5) EFVS Operation(s). Select the EFVS operation authorized: § 91.176(a), § 91.176(b), or § 91.176(a) and (b).

6) EFVS Operational Credit. These selections are performance-based operational credits available to reduce visibilities for the purpose of a foreign air carrier to begin the FAS, or continue an IAP past the final approach fix (FAF), at an airport. The demonstrated performance of the EFVS determines the maximum operational credit. The Flight Technologies and Procedures Division must be consulted before selecting a choice other than “Not authorized” in this column.

7) Provisions: Minimum Visibility for Use With EFVS. This paragraph is a selectable paragraph with two alternatives. A foreign air carrier may request to use a performance-based operational credit in Table 1 (Minimum Visibility for Use With EFVS) to begin the FAS, or continue the IAP past the FAF, at an airport. To authorize this, select the paragraph containing the provisional text and Table 2A, Determining IAP Visibility Minimums With EFVS (RVR), and Table 2B, Determining IAP Visibility Minimums With EFVS (Statute Mile). The alternative paragraph states that the certificate holder is not authorized to reduce visibilities for the purpose of initiating an approach.

8) Pilot Training and Qualification Requirements. The use of EFVS as prescribed in C048 is authorized only for those pilots in command (PIC) and seconds in command (SIC) who have:

- a. Completed the foreign air carrier's approved EFVS training; and
- b. Been qualified for EFVS operations by one of the foreign air carrier's check pilots or a CAA inspector from the State of the Operator.

9) Airplane Maintenance Requirements. The foreign air carrier must maintain the airplane and equipment listed in Table 1 of C048 in accordance with its maintenance program approved by the State of the Operator.

10) Conditions and Limitations. This free text field allows the Flight Technologies and Procedures Division flexibility to accommodate unique authorizations. Use of this free text field is not authorized without coordinating with the Flight Technologies and Procedures Division.

**OPSPEC C051—TERMINAL INSTRUMENT PROCEDURES (REQUIRED FOR ALL AIR CARRIERS CONDUCTING IFR OPERATIONS).**

a) Purpose. The FAA issues OpSpec C051 to all foreign air carriers who operate airplanes and conduct any flight operations under IFR. C051 provides direction and guidance on acceptance of U.S. Terminal Instrument Procedures (TERPS). It also provides additional guidance to the foreign air carrier for:

1) Converting any takeoff and landing minimum expressed in the metric linear measurement system to the U.S. standard linear measurement system; and

2) Identifying the source of approved weather in the United States.

b) Continuing an Instrument Approach. The following minimum ICAO standards apply to continuing an instrument approach:

1) For airplanes, refer to Annex 6, Part I, Chapter 4, 4.4.1.2 and 4.4.1.3.

2) For helicopters, refer to Annex 6, Part III, Section II, Chapter 2, 2.4.1.2 and 2.4.1.3 and Section III, Chapter 2, 2.6.3.2 and 2.6.3.3.

**Note:** Each foreign air carrier operating within the United States in common carriage must ensure they are in compliance with all U.S. regulatory requirements, including more restrictive foreign air carrier operating requirements levied by the State of the Operator.

**OPSPEC C052—STRAIGHT-IN NON-PRECISION, APV, AND CATEGORY I PRECISION APPROACH AND LANDING MINIMA—ALL U.S. AIRPORTS (REQUIRED FOR ALL AIR CARRIERS CONDUCTING IFR OPERATIONS).**

a) Applicability. OpSpec C052 specifies the types of instrument approaches the foreign air carrier is authorized to conduct, prohibits the use of other types of instrument approaches, and authorizes the lowest straight-in nonprecision approach procedures with vertical guidance (APV), and Category (CAT) I precision approach and landing minima.

1) Before authorizing a type of IAP, the POI must ensure the foreign air carrier has established the aircraft system eligibility and that its manual, which the State of the Operator must have approved/accepted, includes both flightcrew training and procedures, as applicable, for the types of approaches authorized.

2) All of the approaches authorized by C052 must be published in accordance with part 97.

**Note:** Direct all questions regarding the issuance of C052 to the International Program Division or the Flight Technologies and Procedures Division.

b) Types of Instrument Approaches Authorized. In C052, Table 1 specifies the types of instrument approaches the foreign air carrier is authorized to conduct under IFR and prohibits the use of other types of instrument approaches (see Figure 4-4B, Sample C052 Table 1 – Authorized Instrument Approach Procedures). In WebOPSS, the POI will select the approaches that apply to the foreign air carrier. Refer to the Aeronautical Information Manual (AIM) for a detailed description of each approach.

1) Refer to AC 120-28, Criteria for Approval of Category III Weather Minima for Takeoff, Landing, and Rollout, and AC 120-29, Criteria for Approval of Category I and Category II Weather Minima for Approach, for applicable training and qualification recommendations.

2) All the approaches approved by C052 must be published in accordance with part 97.

3) If the foreign air carrier is authorized to conduct Global Positioning System (GPS) procedures as listed in C052, Table 1, the aircraft and equipment must also be listed in OpSpec B035, Table 1.

4) Required Navigation Performance (RNP) Approaches (APCH)—Area Navigation (RNAV) (RNP) approaches are different from RNAV (GPS) approaches in that a specific performance requirement is defined for the navigation system, and onboard performance monitoring and alerting is required.

a. An RNP APCH typically addresses only the requirement for the lateral navigation (LNAV) aspect (2D navigation) along straight segments. RNP APCHs that contain a curved segment (Radius to Fix (RF) leg), FAS specifying less than 0.3 nautical miles (NM) accuracy, or a Missed Approach Segment (MAS) that specifies less than 1.0 NM accuracy, require more rigorous equipment qualification and training so Special Authorization is required. These are referred to as RNAV RNP IAP with Authorization Required (AR) or RNP AR approaches.

b. C052 does not authorize RNP AR operations. Authorization for RNAV RNP AR approaches is through nonstandard OpSpec C384 (refer to AC 90-101, Approval Guidance for RNP Procedures With AR).

5) Three groups of IAPs may be authorized in Table 1 of C052:

a. Column One: Nonprecision Approach Procedures Without Vertical Guidance. Foreign air carriers must ensure the aircraft will not go below the MDA without the required visual references specified in § 91.175.

1. The ICAO term for an airport surveillance radar (ASR) approach is “surveillance radar approach (SRA).”

2. Belgium labels these approaches as “SRE.” Select “ASR/SRA/SRE” in column one to authorize these approaches.

b. Column Two: Approaches with Vertical Guidance (APV). Column two provides for the authorization of APV. These approaches provide vertical guidance, but do not meet the same standards as precision approach systems (e.g., instrument landing systems (ILS) and Ground Based Augmentation Systems (GBAS)). APVs are trained using an approved method that allows descent to a published DA.

1. APV approaches may contain localizer performance with vertical guidance (LPV) minima requiring wide area augmentation system (WAAS) and LNAV/vertical navigation (VNAV) minima. The approaches may be flown with either barometric vertical navigation (baro-VNAV) or WAAS-based VNAV (refer to C052 subparagraph c to determine applicable lines of minima). The AIM and the approach chart legend also have this information.

2. Aircraft accomplishing RNP APCHs (RNAV (GPS) or RNAV Global Navigation Satellite Systems (GNSS)) are required to monitor lateral and, if approved for operational credit, vertical guidance deviations. For baro-VNAV approach operations on an RNP APCH using the LNAV/VNAV minima, the current vertical deviation limits are +100/-50 feet (ft). Aircraft qualified using the deviation display requirements for navigation in AC 20-138, Airworthiness Approval of Positioning and Navigation Systems, may use a vertical deviation limit of  $\pm 75$  ft (or a smaller value). This information must be published in the AFM or a Supplemental Type Certificate (STC), or verified by the Aircraft Evaluation Group (AEG).

3. To authorize RNAV APVs, select “RNAV (GPS)” (for part 97 approaches) or “RNAV (GNSS)” (for foreign approaches) from the dropdown list in column two of the OpSpec C052 template Table 1.

c. Column Three: Precision Approach Procedures (ILS & GLS). Column three provides for the authorization of CAT I precision IAPs from an electronic glideslope (GS) (ILS or GBAS Landing System (GLS)).

1. “RNAV/ILS” in column three may be selected only if the foreign air carrier meets the requirements in OpSpec C063.

2. For pilot qualifications, the initial qualification segment of the foreign air carrier’s approved precision runway monitor (PRM) training program must be successfully completed prior to conducting PRM approach and landing operations. Initial training materials must include published PRM approach chart materials, the AIM, related Notices to Airmen

(NOTAM), and the latest available FAA-produced and approved PRM PowerPoint presentation entitled, “Precision Runway Monitor (PRM) Pilot Procedures,” that each pilot must view, and which appears on the FAA website at [http://www.faa.gov/training\\_testing/training/prm/](http://www.faa.gov/training_testing/training/prm/).

3. Pilots trained in PRM operations under previous guidance are not required to retrain using the new PRM PowerPoint training. However, pilots are required to know the change in the “Attention All Users Page” format, understand the flight management computer (FMC) coding of a simultaneous offset instrument approach (SOIA) RNAV and how that coding affects the conduct of a missed approach. Testing of knowledge objectives is required as part of initial and recurrent qualification training. See subparagraph i).

**Figure 4-4B. Sample C052 Table 1 - Authorized Instrument Approach Procedures**

<b>Nonprecision Approaches Without Vertical Guidance</b>	<b>Approaches With Vertical Guidance (APV)</b>	<b>Precision Approach Procedures (ILS &amp; GLS)</b>
ASR/SRA/SRE	LDA with glideslope	ILS
AZI	RNAV (GPS)	PAR
AZI/DME	RNAV (GNSS)	ILS/DME
AZI/DME/BC	SDF with glideslope	RNAV/ILS
GPS	LOC BC with glideslope	GLS
LDA		
LDA/DME		
LOC		
LOC BC		
LOC/DME		
NDB		
NDB/DME		
RNAV (GPS)		
VOR/DME RNAV		
SDF		
TACAN		
VOR		
VOR/DME		
LOC/BC/DME		

c) GPS Authorization. Volume 4, Chapter 1, Section 2 provides more extensive guidance on GPS and GPS WAAS equipment. The applicant must show that it has the ability to safely conduct GPS operations.

1) Background. GPS approach procedures have evolved from overlays of existing conventional approaches to standalone GPS approaches. (Overlay approaches are predicated upon the design criteria of the ground-based Navigational Aid (NAVAID) used as the basis of the approach and do not adhere to the design criteria for standalone GPS approaches.) This evolution is reflected by the revised titles of the approach procedures.

a. The titles of all remaining GPS overlay procedures have been revised on the approach charts to read "...or GPS" (e.g., "VOR or GPS RWY 24"). Therefore, all the approaches that can be used by GPS now contain "GPS" in the title (e.g., "VOR or GPS RWY 24," "GPS RWY 24," or "RNAV (GPS) RWY 24"). During these GPS approaches, underlying ground-based NAVAIDs are not required to be operational and associated aircraft avionics need not be installed, operational, turned on, or monitored (although monitoring of the underlying approach is suggested when equipment is available and operational).

b. Existing overlay approaches may be requested using the GPS title. For example, request "GPS RWY 24" to fly the very high frequency (VHF) omni-directional range (VOR) or GPS RWY 24 approach.

c. VOR/distance measuring equipment (DME) RNAV approaches will continue to be identified as VOR/DME RNAV RWY [Number] (e.g., VOR/DME RNAV RWY 24). VOR/DME RNAV procedures which can be flown by GPS will be annotated with "or GPS" (e.g., VOR/DME RNAV or GPS RWY 24).

2) WAAS. The WAAS was developed to improve the accuracy, integrity, and availability of GPS signals. WAAS receivers support all basic GPS approach functions and provide additional capabilities. One of the major improvements provided by the WAAS is the ability to generate an electronic glidepath, independent of ground equipment or barometric aiding. There are differences in the capabilities of the WAAS receivers.

a. Some approach-certified receivers will only support a glidepath with performance similar to baro-VNAV, and are authorized to fly the LNAV/VNAV line of minima on the RNAV (GPS) approach charts.

b. Receivers with additional capability, such as update rate and integrity limits, are authorized to fly the LPV or Localizer Performance (LP) line of minima. WAAS approach procedures may provide LPV, LNAV/VNAV, LP, and LNAV minimums and are charted as RNAV (GPS) RWY [Number] (e.g., RNAV (GPS) RWY 24). For further guidance, please refer to the AIM or contact the Flight Technologies and Procedures Division.

c. Some WAAS installations do not support approaches at all, while some do not support LPV or LP lines of minima.

3) Local Area Augmentation System (LAAS). An additional augmentation system, the LAAS was developed to provide precision approaches similar to ILS at airfields. These precise

approaches are based on GPS signals augmented by ground equipment. The international term for LAAS is GBAS and the approaches which use the equipment are referred to as GBAS Landing System (GLS) or GNSS Landing System (GLS) approaches. LAAS equipment consists of a GBAS Ground Facility (GGF) supported by a minimum of four accurately surveyed reference stations and an uplink antenna called the VHF Data Broadcast (VDB) antenna, as well as an aircraft LAAS receiver. The GGF can support multiple runway ends or landing areas served by procedures that are within the service coverage.

**Note:** Throughout this section, reference to a GLS approach indicates the use of a GBAS or GNSS Landing System, unless otherwise indicated.

a. Similar to LPV and ILS approaches, GLS provides lateral and vertical guidance. By design, LAAS was developed as an “ILS look-alike” system from the pilot perspective. Unlike WAAS, LAAS may support approaches to CAT III minimums in the future due to its nearly identical performance standards to ILS in terms of accuracy, integrity, availability, and continuity. Portions of the GLS approach prior to and after the FAS may be based on RNAV or RNP segments. Therefore, a switch transition between RNAV or RNP and GLS modes may be required. In the future, the GGF may be able to support portions of the procedure outside the FAS.

b. There are differences from LPV, GLS, and ILS approaches in terms of charting, procedure selection, and identification. The LAAS procedure is titled “GLS RWY XX” on the approach chart. In the aircraft, pilots select a five-digit GBAS channel number or associated approach within the flight management system (FMS) menu. Selection of the GBAS channel number by pilot or FMS also tunes the VDB. The VDB provides information to the airborne receiver where the guidance is synthesized. The LAAS procedure is identified by a four alpha-numeric character field referred to as the Reference Path Indicator (RPI) or approach ID. This identifier is analogous with the IDENT feature of the ILS. The RPI is charted. Following procedure selection, confirmation that the correct LAAS procedure is loaded is accomplished by cross-checking the charted RPI with the cockpit-displayed RPI or audio identification of the RPI with Morse code (for some systems). Once selected and identified, the pilot will fly the GLS approach using the same techniques as an ILS.

d) Authorized Criteria for Approved IAPs. For operations to all U.S. airports, foreign air carriers are authorized to execute instrument approach operations on IAPs that have been published:

- 1) Under part 97.
- 2) Under the criteria in FAA Order 8260.3, United States Standard for Terminal Instrument Procedures (TERPS).
- 3) Under any other criteria authorized by the Flight Technologies and Procedures Division.
- 4) By the U.S. military agency operating the U.S. military airport.

5) All published Standard Instrument Approach Procedures (SIAP) in the United States meet this requirement.

e) RVR. Touchdown zone (TDZ) RVR is controlling for all operations authorized in C052. All other RVR reports are advisory. A mid-field RVR report may substitute for an inoperative TDZ RVR report, except for Special Authorization CAT I operations as described in subparagraph h).

f) Continuous Descent Final Approach (CDFA) Technique. A CDFA is a specific technique for flying the FAS of an IAP as a continuous descent, without level-off, from an altitude at or above the FAF altitude, typically to a point approximately 50 ft above the runway threshold or the point where the flare will begin.

1) For approaches that do not use LNAV/VNAV, LPV, or an ILS/GLS glidepath, a CDFA technique is recommended.

a. When electronic or a pre-stored computed vertical guidance is not used, Vertical Speed (VS) or Flight Path Angle (FPA) may be used to achieve a CDFA profile.

b. Compared to the “step down” descent approach technique, where the aircraft descends step-by-step prior to the next minimum altitude, a CDFA technique has safety and operational advantages, such as standardization of procedures, simplification of the decision process (one technique and one decision at one point), and use of a stable flightpath. However, precision approach (ILS, GLS) obstacle penetration is not provided.

2) The CDFA technique can be flown on almost any published approach when VNAV or ILS/GLS is not available.

3) When using a CDFA technique, the decision point to determine if the flightcrew has the required visual references in sight to continue below the MDA may only be treated like a DA in reference to approach profiles and procedures. The foreign air carrier must add an altitude increment to the MDA (e.g., 50 ft) to determine the altitude at which the missed approach must be initiated in order to prevent descent below the MDA or flight beyond the missed approach point (MAP).

4) The foreign air carrier should ensure that, prior to conducting a CDFA, each flightcrew member intending to fly CDFA profiles undertakes training appropriate to the aircraft, equipment, and IAPs to be flown.

g) Reduced Precision CAT I Landing Minima. OpSpec C052 specifies the equipment usage requirements and part 97 SIAP depiction required for reduced CAT I landing minima. Credit is given for flight director (FD), autopilot, and HUD usage. The POI should allow the use of 1800 RVR minima to runways without centerline (CL) lighting or TDZ lighting, provided the SIAP contain a straight-in ILS minimum with the chart note, “RVR 1800 Authorized with use of FD or autopilot or HUD to DA.” Additionally, the foreign air carrier issued C052 is allowed to continue to use 1800 RVR line of minima on SIAPs without the above procedural note when the TDZ and/or CL lights are inoperative, if the approach is conducted in accordance with the

equipment requirements outlined in C052. This is reflected in the published inoperative components table for IAPs.

1) FAA Approval. Foreign air carriers may continue to use the standard CAT I minima based solely on ground lighting systems without alteration of current authorizations or procedures. Foreign air carriers can utilize reduced CAT I landing minima, provided the SIAP contains a straight-in ILS minimum with the chart note, "RVR 1800 Authorized with use of FD or autopilot or HUD to DA."

2) Conditions of Approval. Before issuing the C052 authorization to use CAT I minima based on aircraft equipment and operation, ASIs will ensure that each foreign air carrier meets the following conditions:

a. Aircraft and Associated Aircraft Systems. The authorized aircraft must be equipped with an FD, autopilot, or HUD that provides guidance to DA. The FD, autopilot, or HUD must be used in approach mode (e.g., tracking the Localizer (LOC) and the GS). ASIs must establish that the FD, autopilot, or HUD are certified for use down to an altitude of 200 ft above ground level (AGL) or lower.

b. Flightcrew Procedures.

1. The flightcrew must use the FD, autopilot, or HUD to DA or to the initiation of a missed approach, unless visual references with the runway environment are established, thus allowing safe continuation to a landing.

2. If the FD, autopilot, or HUD malfunctions or becomes disconnected, the flightcrew must execute a missed approach unless the runway environment is in sight.

c. Flightcrew Qualification. Each member of the flightcrew must have demonstrated proficiency using the FD, autopilot, or HUD (as appropriate) in the foreign air carrier's training program, which is approved by their CAA.

h) Special Authorization CAT I. OpSpec C052 contains selectable text, which authorizes Special Authorization CAT I ILS approaches to runways without TDZ or runway centerline (RCL) lights with a radio altimeter DH as low as 150 ft and a visibility minimum as low as RVR 1400 when using a HUD to DH. The foreign air carriers must meet all of the following requirements:

1) Eligibility Requirements. Before authorizing Special Authorization CAT I, the POI must ensure the foreign air carrier has established the aircraft system eligibility and that its manual, which the State of the Operator must have approved/accepted, includes both flightcrew training and procedures, as applicable.

2) Aircraft Requirements. To be approved for Special Authorization CAT I, each airplane must be authorized and maintained for CAT II operations. Those airplanes and equipment must be listed in Table 1 of OpSpec C060 (Rev 30 or later). The authorized airplane(s) must be equipped with a HUD, which is approved for CAT II or CAT III operations.

3) Training Requirements. The flightcrew must be current and qualified for CAT II operations. Each member of the flightcrew must have demonstrated proficiency using the HUD in the foreign air carrier's training program approved by their CAA. This requirement applies both to initial eligibility for Special Authorization CAT I as well as recurrent training.

4) Operational Requirements:

a. The flightcrew must use the HUD to DH in a mode used for CAT II or CAT III operations. This mode provides greater lateral and vertical flightpath accuracy and more sensitive alarm limits.

b. The flightcrew must use the HUD to DH, or to the initiation of missed approach, unless adequate visual references with the runway environment are established that allow safe continuation to a landing. Should the HUD malfunction during the approach, the flightcrew must execute a missed approach unless visual reference to the runway environment has been established.

c. The crosswind component on the landing runway must be 15 knots or less, unless the AFM's crosswind limitations are more restrictive.

d. The part 97 SIAP must have a published Special Authorization CAT I minimum.

e. Unlike the other approaches authorized in C052, the mid-RVR report may not be substituted for the TDZ RVR report when using Special Authorization CAT I minima.

i) PRM. The FAA began the Multiple Parallel Approach Program (MPAP) to research whether simultaneous ILS approaches to parallel runways would improve capacity. The objective was to achieve improvements in airport arrival rates through the conduct of simultaneous, closely spaced parallel approaches. That objective is being met using PRM.

1) ILS PRM, Localizer Type Directional Aid (LDA) PRM, and RNAV (GPS) PRM Approaches with Vertical Guidance.

a. Where parallel RCLs are less than 4,300 ft apart, but not less than 3,000 ft apart, simultaneous PRM approaches may be conducted. Similarly, where parallel RCLs are less than 3,000 ft apart, but no less than 750 ft, SOIA may be conducted using an ILS, LDA approach with GS, LNAV/VNAV, or LPV. Those approaches are labeled "ILS PRM" and "LDA PRM," respectively, on instrument approach charts. Air traffic control (ATC) provides one PRM monitor controller for each runway to provide intrusion protection for the no transgression zone (NTZ), located between the two final approach courses. Whenever the runway spacing (or in the case of SOIA the approach course spacing) is less than 3,600 ft and at least 3,000 ft, NTZ monitoring is accomplished using a special PRM radar.

b. Utilization of vertical guidance is required for all PRM approaches.

c. RNAV (GPS) PRM approaches may be substituted for the ILS PRM and/or the LDA PRM approach.

- d. Pilots must have completed PRM training prior to conducting any PRM approach.
- e. An ILS PRM and its overlaid RNAV (GPS) PRM approach are procedurally equivalent.
- f. LDA PRM and its overlaid RNAV (GPS) PRM approach are procedurally equivalent.
- g. Pilots may request the RNAV (GPS) PRM approach in lieu of the ILS PRM or LDA PRM approach; however, they may only conduct the approach when specifically cleared to do so by ATC.

2) The Breakout Maneuver. Working with industry, the FAA conducted extensive analysis of simulation data and determined that the implementation of PRM and SOIA approach operations to closely-spaced parallel runways requires additional crew training. The primary focus of this training is to raise each pilot's situational awareness in ILS PRM, LDA PRM, and RNAV (GPS) PRM operations. The breakout maneuver must be flown manually.

a. Traffic Alert. One important element of the additional training is the pilot understands the difference between a normal missed approach initiated by a pilot and a breakout initiated by a PRM final monitor controller. It must be clear to flightcrews that when the final monitor controller uses the words "Traffic Alert," the controller will then give critical instructions that the pilot must act on promptly to preserve adequate separation from an airplane straying into the adjoining approach path.

b. ATC Breakout Maneuver Command to Turn and Either a Climb or Descent. The flightcrew must immediately follow the final monitor controller's vertical (climb/descend/maintain altitude) and horizontal (turn) commands. If the flightcrew is operating the Traffic Alert and Collision Avoidance System (TCAS) in the Traffic Advisory (TA)/Resolution Advisory (RA) mode and receives a TCAS RA at any time while following the final monitor controller's command, the flightcrew will simultaneously continue to turn to the controller's assigned heading and follow the vertical guidance provided by the TCAS RA.

c. Time-to-Turn Standard. Regardless of airplane type, tests and data analysis revealed that pilots normally passed through an angle of bank of at least 3 degrees while rolling into a breakout turn within 10 seconds of receiving a breakout command. (Bank angles of between 20 and 30 degrees were normally achieved during the breakout.) The foreign air carrier must show that its CAA has determined that pilots can readily meet this time-to-initiate-turn standard prior to the POI authorizing ILS/PRM, LDA/PRM, or RNAV (GPS) PRM approaches in C052.

1. Flightcrews are required to manually fly the breakout maneuver unless otherwise approved.

2. The foreign air carrier should demonstrate its ability to meet this standard by having representative pilots perform the breakout maneuver while the POI or the POI's designated representative observes.

3. The demonstration should conform to procedures contained in the foreign air carrier's approved operating manual for its flightcrews.

4. The foreign air carrier should submit procedures to its POI for this authorization.

**Note:** In a breakout, ATC will never command a descent below the applicable minimum vector altitude (MVA), thus ensuring that no flight will be commanded to descend below 1,000 ft above the highest obstacle during a breakout.

3) ILS/PRM, LDA/PRM, RNAV (GPS) PRM and the Use of TCAS. TCAS may be operated in TA/RA mode while executing ILS PRM, LDA PRM, or RNAV (GPS) PRM approaches. However, when conducting these operations, pilots must understand that the final monitor controller's instruction to turn is the primary means for ensuring safe separation from another airplane. Pilots must bear in mind that the TCAS does not provide separation in the horizontal plane; the TCAS accomplishes separation by commands solely in the vertical plane. Therefore, during final approach, only the final monitor controller has the capability to command a turn for lateral separation. Flightcrews are expected to follow any ATC instruction to turn.

a. ATC Command to Turn With TCAS RA. In the unlikely event that a flightcrew should simultaneously receive a final monitor controller's command to turn and a TCAS RA, the flightcrew must follow both the final monitor controller's turn command and the TCAS RA's climb or descent command.

b. TCAS RA Alone. In the extremely unlikely event that an RA occurs without a concurrent breakout instruction from the final monitor controller, the pilot should follow the RA and advise the controller of the action taken as soon as possible. In this instance, it is likely that a breakout command would follow.

c. TCAS Not Required. An operator does not need an operative TCAS to conduct ILS/PRM, LDA/PRM, or RNAV (GPS) PRM approaches.

4) Required and Recommended Training for ILS/PRM, LDA/PRM, and RNAV (GPS) PRM Approaches. A foreign air carrier must include required training in its training program and the State of the Operator must approve that training before the FAA may authorize either or both PRM approaches in C052. Flightcrews must accomplish required ground training before conducting ILS/PRM, LDA/PRM, or RNAV (GPS) PRM approaches.

a. Initial ground training—required.

1. This training must include all elements of the "Attention All Users Page" of an ILS/PRM, LDA/PRM, or RNAV (GPS) PRM as authorized, along with viewing the latest version of the PRM training PowerPoint presentation. (For the most current version, visit [http://www.faa.gov/training\\_testing/training/prm/](http://www.faa.gov/training_testing/training/prm/).)

**Note:** The FAA does not require flightcrews trained previously in PRM operations under earlier guidance to requalify with each new version of the PRM training PowerPoint presentation.

2. The ground portion of the training program must support the following knowledge objectives. Each flightcrew member must:

- i. Describe the PRM system to include the meaning of “no transgression zones.”
- ii. Know that an airplane on an adjacent approach path may be less than 4,300 ft away and may be flying at a different speed.
- iii. Know that the Automated Terminal Information Service (ATIS) broadcasts a pilot advisory when ILS/PRM, LDA/PRM, or RNAV (GPS) PRM approaches are in progress.
- iv. Identify the differences between PRM approach charts and normal approach charts, including the special instruction pages for PRM.
- v. Explain the unique communication requirements (equipment and procedures) for ILS/PRM, LDA/PRM, and RNAV (GPS) PRM approaches.
- vi. Know that an unpublished missed approach instruction that ATC may issue prior to published MAPs is called a “breakout.”
- vii. Know that a breakout may include instructions to descend and that the descent will be to no lower than the MVA for the sector. The MVA guarantees 1,000 ft above the highest obstruction in that sector. The rate of descent that controllers expect is not more than 1,000 ft per minute.
- viii. Know that a pilot must initiate a breakout maneuver manually and immediately upon hearing the “Traffic Alert” command from ATC, and that adequate separation requires that the pilot establish a 3-degree-per-second rate of turn within 8 seconds.
- ix. Know that the three areas (ATIS, Dual VHF Comm. Required, and All “Breakouts”) in the “Attention All Users Page” must be briefed (in flight) prior to conducting an ILS/PRM, LDA/PRM, or RNAV (GPS) PRM approach.
- x. Know that flightcrews may operate the TCAS in the TA/RA mode when conducting PRM approaches, including the following points:
  - When an RA occurs with a concurrent ATC breakout command—follow the turn required in the ATC instructions; follow the climb or descent in the RA command (split commands);
  - When an RA occurs without a concurrent ATC breakout command—follow the RA and contact ATC as soon as practical;

- TCAS provides only vertical resolution to aircraft conflicts; and
- An operative TCAS is not required for PRM operations.

xi. Know procedures for SOIAs, including the following points:

- A visual segment of the LDA/PRM or the offset RNAV (GPS) PRM approach is established beginning at the offset approach MAP to permit;
- Visual acquisition of the traffic to the parallel runway and advising ATC;
- Visual acquisition of the runway environment;
- LDA PRM or the offset RNAV (GPS) PRM course is maintained until the MAP. At the MAP, the pilot must have the parallel traffic in sight and the runway environment in sight, or fly the missed approach;
- At the MAP with the parallel traffic and the runway in sight, the pilot may continue to a landing;
- Maneuver to align with the RCL;
- Stabilize on glidepath no lower than 500 ft above TDZ; and
- Avoid wake turbulence from the parallel runway traffic.

3. Testing of these knowledge objectives is recommended.

b. Initial flight training—required.

c. Breakout maneuver—required.

1. Initial breakout flight training must focus on the descending breakout.

2. Foreign air carriers applying for initial approval to conduct PRM approaches must complete breakout flight training by the end of the next full training cycle after receiving OpSpec approval. The FAA does not require duplicative flight training in breakout maneuvers between the types of PRM approaches. Breakout covered in flight training for one type of PRM satisfies the requirement for all other types of PRM approaches.

d. Recurrent ground training—required: Review of the ground training elements and the Precision Runway Monitor (PRM) Pilot Procedures slideshow (for additional details, see subparagraphs b)5)c3 and i)4)).

e. Recurrent flight training.

1. Required: None.

2. Recommended:

- ILS/PRM approach,
- LDA/PRM approach, and
- Breakout.

5) Authorizing ILS/PRM, LDA/PRM, and RNAV (GPS) PRM Approaches for Part 129 Foreign Air Carriers. A part 129 foreign air carrier operating in the United States may be authorized in C052 to conduct ILS/PRM, LDA/PRM, and/or RNAV (GPS) PRM approaches if:

- a. That foreign air carrier meets the ground and flight training requirements contained in subparagraph i)4); and
- b. The CAA for the foreign air carrier authorizes these types of approaches.

**Note:** A definition of RNAV (GPS) PRM has been added to the A002 template.

**OPSPEC C055—ALTERNATE AIRPORT IFR WEATHER MINIMUMS (OPTIONAL).**

a) Applicability. OpSpec C055 is an optional authorization available to all operators conducting airplane operations under part 129. C055 is approved by the Administrator as an alternative method of calculating alternate minimums to that specified in § 91.169(c).

1) C055 may be issued if the State of the Operator has approved the foreign air carrier for this alternative method.

2) C055 must not be issued if the State of the Operator has not approved the foreign air carrier for this alternative method.

3) Without C055, the foreign air carrier must comply with the highest minimums of the State of the Operator authorized method and § 91.169(c).

4) The relevant ICAO standards are found in ICAO Annex 6, Part I, 4.3.4 and 4.3.5 with additional guidance in ICAO Doc 9976, Flight Planning and Fuel Management (FPFM) Manual.

5) C055 provides a two-part table from which the foreign air carrier, during the initial dispatch or flight release planning segment of a flight, derives alternate airport IFR weather minimums in those cases where it has been determined that an alternate airport is required.

**Note:** Questions regarding the issuance of C055 should be directed to the Flight Technologies and Procedures Division or the International Program Division. If the PI directs questions to the International Program Division, the PI should copy the Flight Technologies and Procedures Division and vice versa.

b) Airports With at Least One Operational Navigational Facility. The first part of the table in C055 is for airports with at least one operational navigational facility providing a straight-in

Nonprecision Approach (NPA) procedure, a straight-in precision approach procedure, or, when applicable, a circling maneuver from an IAP. Obtain the required ceiling and visibility by adding 400 ft to the MDA/minimum descent height (MDH) or, when applicable, the authorized DA/H and by adding 1 statute mile (sm) or 1,600 meters (m) to the authorized landing minimum.

c) Airports With at Least Two Operational Navigational Facilities. The second part of the table in C055 is for airports with at least two operational navigational facilities, each providing a straight-in NPA procedure or a straight-in precision approach procedure to different suitable runways. Obtain the required ceiling and visibility by adding 200 ft to the higher MDA/H or DA/H of the two approaches used and by adding 1/2 mile (mi) or 800 m visibility to the higher authorized landing minimum of the two approaches used.

d) Higher Alternate Minimums When Using Two Operational Navigational Facilities. In some cases, it is possible to have higher alternate minimums when using two operational navigational facilities than when using one. For example, an airport with one straight-in NPA procedure with a MDA/H of 400 ft and 1 mi visibility would have alternate minimums of 800 ft and 2 mi visibility (400 ft + 400 ft and 1 mi + 1 mi). An airport with two straight-in approaches, a straight-in precision approach with a DA/H of 200 ft and 1/2 mi visibility and a straight-in NPA with a MDA/H of 700 ft and 1 mi visibility, would have alternate minimums of 900 ft and 1 1/2 mi visibility (200 ft + 700 ft and 1/2 mi + 1 mi). Since C055 requires that the operator use the higher ceiling and visibility, the minimums for the airport with two straight-in approaches are higher than for the airport with only one straight-in approach. When this situation exists, the operator may elect to consider the airport as having only one straight-in approach procedure and may add the higher buffer requirement (400 ft and 1 mi) to whichever straight-in approach procedure provides for the lowest possible ceiling and visibility minimums.

e) Using Two Different Runways. Two different runways may be the different ends of the same physical runway surface (e.g., runway 4 and runway 22 are two different runways). When determining the suitability of a runway, wind plus gust must be forecast to be within operating limits, including reduced visibility and runway contamination limits, and should be within the manufacturer's maximum demonstrated crosswind. The operator should also take into account any other potential runway limitations, such as NOTAMs that may affect the landing at the estimated time of arrival (ETA).

f) Credit for Alternate Minimums. C055 allows credit for alternate minimums for airports with a published CAT II or CAT III approach based on engine inoperative CAT II or CAT III capability (see subparagraph i) for additional details). Flightcrews having that capability may take credit for engine inoperative CAT II/III qualified aircraft and adjust minimums accordingly. The alternate minimums are based on CAT III engine inoperative requirements. The ceiling and visibility required for CAT II procedures is a ceiling of at least 300 ft and a visibility of at least RVR 4000, or for CAT III procedures, a ceiling of at least 200 ft height above touchdown (HAT), and a visibility of at least RVR 1800. Foreign air carriers having that capability may take credit for CAT II/III-qualified aircraft and adjust minimums accordingly. The alternate minimums are based on CAT III engine inoperative requirements.

1) The following are some, but not all, of those requirements. Refer to the criteria in AC 120-28 for further requirements.

- a. The aircraft is capable of engine inoperative CAT III.
- b. The carrier has established appropriate procedures.
- c. Performance and obstruction clearance information has been provided to the flightcrew.
- d. Appropriate aircraft configuration, wind limits, and other appropriate information is provided to the flightcrew.

2) Before authorizing the additional selectable row(s) in Table 1 of C055, the POI will ensure through documentation that the foreign air carrier has provided that subparagraphs f)1) a through d above are met and the foreign air carrier's CAA authorizes it for CAT II/III alternate minimums. If the foreign air carrier does not meet the preceding conditions or equivalent conditions acceptable to the FAA, the PI must ensure that C055 does not contain any additional rows in Table 1 (should only have two rows).

**Note:** The ICAO equivalent to AC 120-28 is ICAO Doc 9365/AN910, Manual of All-Weather Operations.

g) Definition of "Two Operational Facilities." The FAA considers an ILS facility that contains a single transmitter frequency for an ILS, but with two different ILS identifications (depending on which runway is being used), as one navigational facility.

1) The words "two operational facilities" have always meant that in the event there is a single failure of one facility, the other would be operational. In the situation where both ILS facilities share a single transmitter, it is considered "one operational navigational facility," because both ILSs would become inoperative in the event of a single transmitter failure.

2) The two ILS identifiers would have to be different even though the ILS transmitter frequency is the same for both. The charts should tell pilots whether there is one frequency or two. Thus, one or two navigational facilities.

h) Use of RNAV GPS Minimums at a Destination Alternate.

1) Pilots may plan to use any instrument approach authorized for use with WAAS avionics at a required alternate if:

- a. The aircraft is suitably equipped with GPS WAAS equipment; and
- b. The foreign air carrier is authorized to conduct LPV and/or LP approach and landing operations by the State of the Operator.

2) When using WAAS at an alternate airport, flight planning must be based on flying the RNAV (GPS) LNAV minimums line, minimums on a GPS approach procedure, or conventional approach procedure with “or GPS” in the title.

**Note:** RNAV (GPS) (or RNAV GNSS) are based on a single navigational facility when determining the approach facility configuration in Table 1 of C055, even if there are two or more RNAV (GPS) approaches to different suitable runways.

3) Upon arrival at an alternate, when the WAAS navigation system indicates that LNAV/ VNAV or LPV service is available, vertical guidance may be used to complete the approach using the displayed level of service.

**Note:** The FAA is removing the “NA” (alternate minimums not authorized) symbol from select RNAV (GPS) and GPS approach procedures so they may be used by approach approved WAAS receivers at alternate airports. Some approach procedures will still require the NA for other reasons (e.g., no weather reporting); therefore, it cannot be removed from all procedures. Every procedure is individually evaluated for removal of NA from RNAV (GPS) and GPS procedures.

i) Selectable Text and Table 1. There are two selectable rows which can be loaded into Table 1 of C055 (Alternate Airport IFR Weather Minimums) and three selectable text options for additional limitations and provisions (C055 subparagraph b(6)).

1) Table 1. The two selectable rows in Table 1 authorize lower alternate minimums when planning to use either a CAT II or CAT III approach at the alternate airport. If authorized CAT II or CAT III credit, the first selectable text paragraph must be loaded as well.

2) Selectable Text Options. Selectable text options for additional limitations and provisions (C055 subparagraph b(6)):

a. The first selectable text option states requirements for CAT II and CAT III credit applicable to alternate airport flight planning, and must be loaded if the operator is authorized the CAT II or CAT III credit described in subparagraph i)1) above.

b. The second selectable text option authorizes operators equipped with WAAS to use GPS approaches when determining an alternate, and lists the restrictions associated with using GPS approaches in alternate planning.

c. The third selectable text option authorizes both (the air carrier is authorized CAT II or III and GPS/WAAS alternate minimums).

**Note:** Prior to issuing C055 to the foreign air carrier, the PI must ensure that the appropriate selectable text option is selected, if applicable. If none of the selectable text options applies, the PI must ensure that none of the selectable text options are selected.

**OPSPEC C056—IFR TAKEOFF MINIMUMS—AIRPLANES (OPTIONAL).**

a) General. The FAA issues OpSpec C056 to foreign air carriers who conduct airplane operations to the United States under IFR. C056 contains guidance regarding pilots, aircraft, and airports when lower minimums than those defined in § 91.175(f), hereinafter referred to as “standard takeoff minimums,” are used. Standard takeoff minimums are defined as 1 sm visibility or RVR 5000 for airplanes having two engines or less and 1/2 sm visibility or RVR 2400 for airplanes having more than two engines. C056 lists the lowest RVR in feet based on the authorized airplane type.

b) ASI Action/OpSpec Entry. When issuing C056, the POI must select, or fill-in, the following in the table in C065 subparagraph b (see Figure 4-4C, Sample C056 Table 1):

1) No lower than the lowest State of the Operator authorized RVR for each airplane type to be used to fly to the United States. Regardless of the particular authorizations of a foreign air carrier, the POI may not authorize minimums lower than RVR 300/300/300. The TDZ 5000 selectable in the lowest RVR column must be selected for each single engine M/M/S airplane with a seating configuration of 30 seats or less or a maximum payload capacity of 7,500 pounds or less, as the FAA does not permit such operations below standard (1 sm/RVR 5000).

2) Manually enter the appropriate HUD into the free test box for each type of aircraft to be used to fly to the United States, or select “N/A” if the HUD is not authorized by the State of the Operator.

3) Any additional limitations and provisions not specified in C056 and applicable to the lowest RVR for the type of aircraft to be used.

**Figure 4-4C. Sample C056 Table 1**

Lowest RVR in Feet (TDZ/MD/Rollout)	Airplane Type*	HUD System*	Additional Limitations and Provisions*
TDZ 1800 TDZ 1600 TDZ 2600 TDZ 5000 1200/1200/1200 1000/1000/1000 700/700/700 600/600/600 500/500/500 300/300/300	ALL**	N/A***	N/A****

\*The last three columns have space for manual entry.

\*\*If the foreign air carrier operates all M/M/S aircraft to the same RVR value, then select "ALL." Otherwise, identify each M/M/S for each RVR value in separate row(s), as appropriate. Examples:

- i. If the foreign air carrier operates all M/M/S aircraft to TDZ 1600, then select "TDZ 1600" in the "Lowest RVR" column and "ALL" in the "Airplane Type" column.
- ii. If the lowest RVR authorized for the foreign air carrier's aircraft is the same for all except one type, then select the RVR value that is common to all and in the "Airplane Type" column enter: "All airplane types except for [enter the M/M/S exception]." In a separate row, identify the lowest RVR value for the M/M/S exception.
- iii. If the foreign air carrier operates several M/M/S aircraft, each with a different RVR, then enter each M/M/S in its own separate row.

\*\*\*Select "N/A" if the HUD is not authorized for takeoff. If the HUD system is authorized, then type in the HUD system.

\*\*\*\*Select "N/A" if no limitations apply and use of the HUD is not authorized for takeoff. Select the blank space and type in any additional limitations not covered by C056.

**Note:** An example of a limitation: authorized for the B737-800 to 500/500/500, but when using the HUD on the B737-800 limited to 600/600/600. This may be a limitation provided by the CAA if the HUD is new.

4) Additionally, the POI must select:

a. The static text in C056 subparagraphs c(3) and e, if the foreign air carrier is operating airplanes with a seating configuration of 30 certificated seats or less or a maximum payload capacity of 7,500 pounds or less.

b. The radio button specifying the limitations and requirements applicable to the lowest RVR value selected in the table in C056 subparagraph b. Select the radio button that included all of the selectable text, up to and including the lowest RVR value based on the lowest RVR value selected in the table in subparagraph b. The POI must preview the template to ensure that they have selected the correct radio button. If the lowest RVR value in the table is less than 1800, then select as follows:

- The first radio button if in the table the lowest RVR selected is TDZ 1600. When previewing the template, the POI would see subparagraphs d(1) and d(2).
- The second radio button if in the table the lowest RVR selected is TDZ 1200. When previewing the template, the POI would see subparagraphs d(1), d(2), d(3), and d(4).
- The third radio button if in the table the lowest RVR selected is TDZ 1000. When previewing the template, the POI would see subparagraphs d(1), d(2), d(3), d(4), and d(5).
- The fourth radio button if in the table the lowest RVR selected is TDZ less than 1000 ft, up to and including 500 ft. When previewing the template, the POI would see subparagraphs d(1), d(2), d(3), d(4), d(5), and d(6).
- The fifth radio button if in the table the lowest RVR selected is TDZ less than 500 ft, up to and including 300 ft. When previewing the template, the POI would see subparagraphs d(1), d(2), d(3), d(4), d(5), d(6), and d(7).

**Note:** See Table 4-4A, Runway Equipment Requirements for Takeoff Minima, for a graphical presentation of requirements covered by C056.

**Table 4-4A. Runway Equipment Requirements for Takeoff Minima**

<b>Runway Visual Aid Required</b>	<b>Lowest Allowable Takeoff Minimum Authorization [visibility or RVR (TDZ/Mid/Rollout)]</b>
Adequate visual reference, <i>or</i> Any <i>one</i> of the following: - Centerline (CL) lighting - High Intensity Runway Light (HIRL) - Runway centerline marking (RCLM)	RVR not available; 1/4 mile (mi) (500 meters (m)); or RVR 1600 feet (ft) (500 m)/Not Required/Not Required. (Mid-point can substitute for an unavailable touchdown.)
<b>Note:</b> Below RVR 1600, two operating RVR sensors are required. All operating RVR sensors are controlling (except per the note below for far-end sensors). Extremely long runways (e.g., Denver International Airport (DEN) 16R) utilize four RVR sensors (i.e., TDZ, mid, rollout, and far-end). When a fourth far-end RVR value is reported, it is not controlling and is not to be used as one of the two required operative RVR sensors. Visual aids (CL lighting, RCLM) must be visible (e.g., not obstructed by snow).	
Day: CL lighting or HIRL or RCLM Night: CL lighting or HIRL	RVR 1200 ft (350 m)/1200 ft (350 m)/1000 ft (300 m)
RCLM and HIRL, or CL lighting	RVR 1000 ft/1000 ft/1000 ft (300 m)
HIRL and CL lighting	RVR 600 ft/600 ft/600 ft (175 m) or RVR 500 ft/500 ft/500 ft (150 m)
With an approved HUD takeoff guidance system, HIRL, and CL lighting	RVR 300 ft/300 ft/300 ft (75 m)
<b>Note:</b> Additionally, RVR 300 ft/300 ft/300 ft (75 m) takeoff is conducted on a runway with a published landing minimum of RVR 300 and Localizer (LOC) front course guidance displayed on the HUD.	

## c) Lights.

1) HIRL. If HIRL are operational but not at the required level to see them, then they are not serviceable.

2) Visible CL Lights. Need to see enough CL lights to maintain CL. Required runway length for your aircraft is the greater of accelerate stop, accelerate go, and normal takeoff to 35 ft. For additional references, refer to ICAO Annex 4, Aeronautical Charts; Annex 6, Operation of Aircraft; Annex 14, Aerodromes; and FAA Order 8260.3.

d) Comparable Values of RVR and Ground Visibility. Refer to § 91.175(h) for comparable values of RVR and ground visibility if the airport reports report visibility in miles and not RVR.

**OPSPEC C060—CATEGORY II AND CATEGORY III INSTRUMENT APPROACH AND LANDING OPERATIONS—U.S. AIRPORTS (OPTIONAL).** The FAA authorizes CAT II and CAT III operations by issuing OpSpec C060. Each airplane type M/M/S used in CAT II or CAT III operations must be listed in C060 Subparagraph b, Authorized Approach and Landing Minimums, along with the DH/alert height (AH), and lowest RVR authorized. Foreign air carriers requesting authorization for CAT II or CAT III operations at U.S. airports should meet the following criteria.

**Note:** The FAA evaluates CAT II and CAT III operations in accordance with AC 120-28, AC 120-29, equivalent European Aviation Safety Agency (EASA) criteria, or ICAO Doc 9365/AN910.

a) Using the C060 Template. The C060 template is organized into sections applying to CAT II operations, CAT III operations, and sections applying to both operations. Standard 1200 RVR CAT II authorization is assumed for all foreign air carriers receiving C060; 1000 RVR CAT II, Special Authorization CAT II, and CAT III authorizations are optional.

1) Begin the authorization by selecting either “Category II” or “Category II and III” in subparagraph a.

2) In subparagraph b, for CAT II/III operators, select option 1, “For all CAT III operations.” For CAT II-only operators, select option 2, “CAT III operations are not authorized.”

3) Fill in Table 1 and, if applicable, Table 2 of C060 in accordance with subparagraphs c), d), e), and f).

4) In Subparagraph d, Required RVR Reports, for CAT II/CAT III operators, select option 1, “For all CAT III operations.” For CAT II-only operators, select option 2, “CAT III operations are not authorized.”

5) For Subparagraph f, CAT II Operations, in addition to the standard text of 1200 RVR CAT II, there are three optional texts to consider for authorization. Select option 1 for TDZ 1000 RVR CAT II, option 2 for Special Authorization CAT II, or option 3 for both TDZ 1000 RVR CAT II and Special Authorization CAT II. Table 1 of C060 must contain appropriate selections for these additional CAT II authorizations. To authorize only standard CAT II at 1200 RVR, do not select any additional options. See subparagraph j) for further discussion.

6) In Subparagraph g, Operating Limitations, select subparagraph g(4) for CAT II/III foreign air carriers.

7) In Subparagraph h, Missed Approach Requirements, for CAT II/III operators, select option 1, “For all CAT III operations.” For CAT II-only operators, select option 2, “CAT III operations are not authorized.”

b) Approved Airplanes and Operations. A foreign air carrier’s particular airplanes and operational minimums are authorized by entering the following information in C060 Table 1 for CAT II and, if applicable, Table 2 for CAT III authorizations:

- CAT II or CAT II/III approved airplane M/M/S (see subparagraph c) below),
- Approach and landing systems used (see subparagraph d)),
- Operational minimums (see subparagraph e)), and
- Special equipment or limitations (see subparagraph f)).

**Note:** Figures 4-4D and 4-4E below illustrate the standard approach/landing system and landing minimums entries used in C060 Table 1 for CAT II and Table 2 for CAT III authorizations.

**Figure 4-4D. Sample C060 Table 1 – CAT II Airplane Systems and Landing Minimums**

Airplane M/M/S	Approach/Landing System*	DH	TDZ/Mid/RO RVR	Special Operational Equipment and Limitations
	Autopilot HUD FP HUD Autoland	150 DH 100 DH	1600/600/300 1200/600/300 1000/600/300	

**Note:** \* The term HUD assumes Manual HUD, HUD = CAT II certified Head-Up Display; FP HUD = CAT III certified Head-Up Display; FP = Fail Passive Landing or Rollout Control System; NA = Not Applicable.

**Figure 4-4E. Sample C060 Table 2 – CAT III Airplane Systems and Landing Minimums**

Airplane M/M/S	Approach/Landing System*	Rollout System*	DH/AH	TDZ/Mid/RO RVR	Special Operational Equipment and Limitations
	FP HUD FP Autoland FO Autoland	None FP FO	50 DH 30 DH 200 AH 100 AH 50 AH	700/700/300 600/600/300 600/400/300 400/400/300 300/300/300	

**Note:** \* FP HUD = CAT III certified Head-Up Display; FP = Fail Passive Landing or Rollout Control System; FO = Fail Operational Landing or Rollout Control System; NA = Not Applicable.

c) CAT II or CAT II/III Airplane Approval. Airplanes must have AFM provisions stating an acceptable level of CAT II or CAT III capability as demonstrated to the FAA, or demonstrate to an authority recognized by the FAA as having acceptable equivalent CAT II or CAT III airworthiness criteria (e.g., EASA CS-AWO, Transport Canada). The only acceptable method of

demonstrating that an airplane is airworthy for CAT II or CAT III operations is by approval under the type certificate (TC) or STC.

1) A foreign air carrier's airplane M/M/S will populate Table 1 of C060 for CAT II operations and, where authorized, Table 2 for CAT III operations based on the assignment of the CAT II and CAT III authorizations to specific airplanes in the Operator—Aircraft listing.

2) The approved AFM (or AFMS) typically contains a statement that the airborne systems and equipment meet performance requirements, a statement regarding reliability and/or redundancy, and affirmation that such systems and equipment have been demonstrated to be eligible for CAT II or CAT III operations.

a. CAT II airplanes typically have an AFM or AFMS statement showing compliance with the airworthiness performance and integrity criteria found in AC 120-29.

**Note:** Airplanes used for Special Authorization CAT II or 1000 RVR CAT II operations require guidance or flight control systems (fail passive (FP) HUD or autoland) showing compliance with the airworthiness and performance criteria found in AC 120-28.

b. CAT III airplanes typically have an AFM or AFMS statement showing compliance with the airworthiness performance and integrity criteria found in AC 120-28.

d) Approach/Landing Systems.

1) The CAT II approach/landing system must be specified for each airplane listed in Table 1 of C060.

a. Autopilot: autopilot approach coupler used to DH, followed by manual control landing.

b. HUD: CAT II certified HUD providing guidance to DH, flown under manual control.

c. FP HUD: CAT III certified FP HUD providing guidance at least to touchdown, flown under manual control.

d. Autoland: any certified autoland system.

e. Select the appropriate phrase for each M/M/S to place in the CAT II "Approach/Landing System" column: Autopilot, HUD, FP HUD, or Autoland. Any of the above approach/landing systems may be selected for 1600 RVR or 1200 RVR CAT II operations. If a foreign air carrier desires to use two systems during approach (e.g., HUD monitored autopilot), only the primary control system in use needs to be listed. "FP HUD" or "Autoland" must be selected if foreign air carriers conduct Special Authorization CAT II or 1000 RVR CAT II operations.

2) The CAT III approach/landing and rollout systems must be specified for each airplane listed in Table 2 of C060.

a. If the foreign air carrier is approved to conduct only CAT II operations (i.e., CAT III not authorized), the table will automatically populate with “NA.”

b. Approach/landing systems:

1. FP HUD.
2. FP Autoland: any FP autoland system.
3. FO Autoland: fail operational (FO) autoland system.

c. Rollout systems:

1. None: no rollout guidance or automatic rollout system.
2. FP: any FP rollout system.
3. FO: FO automatic rollout system.

d. Select the appropriate phrase for each M/M/S to place in the CAT III “Approach/Landing System” column: FP HUD, FP Autoland, or FO Autoland. Select the appropriate rollout system: None, FP, or FO.

e) Operational Minimums.

1) CAT II Minimums. Table 4-4B below is a summary of the required RVR minimums for CAT II operations.

**Table 4-4B. Category II Operating Minimums**

<b>CAT II RVR Minimums</b>			
<b>Type of Operation</b>	<b>TDZ RVR</b>	<b>Mid RVR</b>	<b>Rollout RVR</b>
Standard CAT II	1600 (500 m)	600 (175 m)#	300 (75 m)#
Standard CAT II	1200 (350 m)	600 (175 m)#	300 (75 m)
Standard CAT II to 1000 RVR	1000 (300 m)	600 (175 m)#	300 (75 m)
Special Authorization CAT II	1200 (350 m)	600 (175 m)#	300 (75 m)

# If available

a. Select TDZ/Mid/RO RVR CAT II minimums as follows:

1. Select 1600/600/300 for new CAT II foreign air carriers during the 6-month Operator Use Suitability Demonstration (OUSD) or as a final authorization if desired by the foreign air carrier or the POI.

**Note:** The POI should issue an initial, interim authorization using the higher minimums, and reissue C060 authorizing lower minimums upon completion of the approval demonstration phases. Foreign air carrier approval requirements are shown in Volume 4, Chapter 2, Section 8, Paragraph 4-365, Foreign Air Carrier CAT II/III Operations in the United States.

2. Select 1200/600/300 for a Standard CAT II authorization. A 100 ft DH should be selected.

3. Select 1000/600/300 for a Standard CAT II authorization to conduct 1000 RVR CAT II operations. A 100 ft DH should be selected in Table 1 of C060. This option requires an autoland or FP HUD to be flown to touchdown.

b. No additional lines of minimums need to be selected for the authorization of Special Authorization CAT II operations. Special Authorization CAT II minimums and DH are 1200 RVR and 100 ft.

2) CAT III Minimums. Table 4-4C is a summary of the lowest allowable RVR minimums associated with CAT III approach and landing systems. Foreign air carriers may elect to use higher values for any RVR minimum.

**Table 4-4C. Category III Operating Minimums**

Landing System	Rollout System	TDZ RVR	Mid RVR	Rollout RVR
FP (CAT IIIa)	None	700 (200 m)	700 (200 m)	300 (75 m)
FP or FO	None	600 (175 m)	600 (175 m)	300 (75 m)
FP	FP or FO	600 (175 m)	400 (125 m)	300 (75 m)
FO	FP	400 (125 m)	400 (125 m)	300 (75 m)
FO	FO	300 (75 m)	300 (75 m)	300 (75 m)

a. When the foreign air carrier's airplanes have FP landing systems, or have been demonstrated for CAT IIIa operations, with AFM statements describing compliance with only AC 120-28C criteria (or earlier editions):

1. Select 700/700/300; or

2. Select 600/600/300 for airplanes having FP landing systems that have been authorized RVR 600 minimums under AC 120-28D, Paragraph 4.3.7, Category IIIa.

b. When the foreign air carrier's airplanes have an AFM statement showing compliance with AC 120-28D criteria (or subsequent editions), or airplanes with FO landing and FO or FP rollout systems and an AFM statement showing compliance with AC 120-28C criteria (or earlier editions):

1. Select 600/400/300 for airplanes using FP landing and FP or FO rollout systems;
2. Select 400/400/300 for airplanes using FO landing and FP rollout systems; or
3. Select 300/300/300 for airplanes using FO landing and FO rollout systems.

f) Special Equipment or Limitations.

1) Equipment explicitly required by airplane certification regulations and/or the approved AFM or AFMS should not be listed in Table 1 or Table 2 of C060. The standard text of C060 requires that this equipment be installed and operational.

2) Enter into Table 1 and Table 2 of C060 (if applicable) all additional equipment for the M/M/S and kind(s) of CAT II/III operations authorized. Include additional equipment required by any of the following:

- AC 120-29,
- AC 120-28, and
- TC or STC.

3) If the AFM or AFMS describes acceptable performance both with and without certain items of equipment (not explicitly required by AC 120-29 or AC 120-28), it must be determined how the foreign air carrier manager intends to conduct CAT II/III operations and train flightcrews with those items of equipment. If the foreign air carrier proposes to conduct operations both with and without certain equipment (such as autothrottle, autopilot), flightcrews must be trained for both situations and the equipment does not need to be listed in Table 1 or Table 2 of C060.

g) Runway Field Length Requirements.

1) For all CAT II or CAT III operations, the required field length is 1.15 times the field length required by the provisions of ICAO Annex 6 or the State of the Operator performance requirements for runway field length, whichever is more restrictive.

2) Additional consideration of landing field length is not normally required after takeoff. If adverse weather (not forecasted) or an aircraft failure occur, the crew should consider any consequences that may result from a decision to make a CAT II or CAT III landing. The runway length needed in these changed circumstances must be determined considering the runway in use, runway conditions, current weather, AFM limitations, operational procedures, and airplane equipment status at the time of landing.

h) Airplane Maintenance. The foreign air carrier must maintain the airplanes and equipment listed in C060, Table 1, and if applicable, Table 2, in accordance with a lower landing minimums maintenance program approved by the State of the Operator.

i) Flightcrew Qualifications. The minimums prescribed in C060 are authorized for only those PICs and SICs who have completed the foreign air carrier's approved training program and who are qualified for the operations authorized in C060 subparagraph a by one of the foreign air carrier's check airmen or State of the Operator CAA inspector in accordance with State of the Operator requirements.

j) Authorized CAT II Approaches.

1) Standard CAT II. The foreign air carrier may be authorized for up to three different minimums for use with published part 97 approaches: 1600 RVR, 1200 RVR, and 1000 RVR. Allowable minimums depend on the availability of RVR sensors and availability and use of required airplane equipment.

a. Minimums of TDZ 1600 RVR and TDZ 1200 RVR require the flightcrew to use an approach coupler or to fly at least to DH under manual control using a HUD for flight guidance. A manually flown landing is assumed and need not be specified.

b. Minimums of 1000 RVR, as published via a chart note on the part 97 procedure, require the flightcrew to use autoland or to fly under manual control using an FP HUD to touchdown.

1. For manual control using a HUD to touchdown, the FP HUD must be flown in the AIII approach mode.

2. The flightcrew has been trained at the lower visibilities before they can be authorized. If the flightcrew is currently authorized CAT III operations, no further training is required for this authorization in C060.

c. Foreign air carriers authorized Special Authorization CAT II, as described in subparagraph j)2), may also be authorized to conduct approaches to standard CAT II facilities when the TDZ and/or CL lights are inoperative or when the Approach Lighting System With Sequenced Flashing Lights (ALSF) is downgraded. For example, no sequence flashing lights (SFL) or when operated as simplified short approach lighting system with runway alignment indicator lights (SSALR) or simplified short approach lighting system (SSALS). They must comply with all requirements in subparagraph j)2), using minimums appropriate to the RVR available and using autoland or manual HUD to touchdown.

2) Special Authorization CAT II. In addition to the standard CAT II operations authorized by C060, Special Authorization CAT II operations can be authorized to qualifying runways that do not meet the performance or ground equipment requirements normally associated with a compliant CAT II operation (e.g., TDZ lighting, CL lighting, or ALSF 1 and 2).

a. The ILS facilities used are CAT I ILS installations that meet the GS and LOC signal quality requirements of CAT II facilities. The required increase in airplane capabilities of HUD or autoland to touchdown mitigates the reduced-lighting requirements.

b. Special Authorization CAT II requires the flightcrew to use autoland or to fly under manual control using an FP HUD to touchdown. These minimums may be no lower than 1200 RVR.

k) Crosswind Limitations. The crosswind component on the landing runway must be 15 knots or less, unless the AFM's crosswind limitations are more restrictive. This should be reflected in the approved training program and flightcrew bulletins.

l) Authorized Restricted/Nonstandard U.S. CAT II or CAT III Airports and Runways. The U.S. ILS facilities provided in the Flight Technologies and Procedures Division Restricted U.S. Facilities Approved for Category II/III Operations list are approved only for the specific airplanes listed when conducting CAT III operations or CAT II operations using autoland or FP HUD to touchdown. The characteristics of the pre-threshold terrain, runway TDZ slope, or steep GS at these facilities may cause abnormal performance in flight control systems. Additional analysis and/or flight demonstrations are typically required for each airplane type before approval of CAT II/III minimums at each runway. Publication of a part 97 SIAP or additional operators and their airplanes may be approved by the Flight Technologies and Procedures Division as provided in AC 120-28, Appendix 8, Irregular Terrain Assessment. Approved airplanes are equipped with either autoland or FP HUD flight guidance equipment. The restrictions at U.S. facilities for the certificate holder are provided as selectables for listing in Table 3 of C060 (see Figure 4-4F below).

**Figure 4-4F. Sample C060 Table 3 – Restricted/Nonstandard U.S. Facilities**

Approach Category, Airport Name/Identifier, Runway(s)	Limitations
Pittsburgh/Greater Pittsburgh Intl, PA; KPIT RY10L; RVR 300	Airplanes approved: A319, A320, B757, and B767
Pittsburgh/Greater Pittsburgh Intl, PA; KPIT RY10R; RVR 600 and RVR 300	Restricted to 600 RVR until less than 600 RVR SMGCS operations are approved. Airplanes approved RVR 600: B757 and B767. Airplanes approved RVR 300: A319 and A330.

**OPSPEC C063—IFR RNAV 1 DEPARTURE PROCEDURES (DP) AND STANDARD TERMINAL ARRIVALS (STAR)—U.S. AIRPORTS (OPTIONAL).**

a) General. The FAA authorizes IFR RNAV 1 DP and Standard Terminal Arrival Route (STAR) to U.S. airports in accordance with § 129.17 by issuance of C063. Before the FAA issues C063, each foreign air carrier and each airplane type used by that foreign air carrier require approval by the State of the Operator.

1) OpSpec C063 authorizes foreign air carriers to conduct operations using part 97, Standard Instrument Procedures, U.S. IFR terminal RNAV 1 DP and RNAV 1 STAR in the U.S. National Airspace System (NAS). Foreign air carriers must be authorized to conduct RNAV 1

DPs and STAR operations by the State of the Operator CAA prior to applying to the FAA for issuance of C063.

2) The term RNAV 1 DPs includes Standard Instrument Departures (SID) and Obstacle Departure Procedures (ODP).

3) OpSpec C063 authorization must not be issued to a foreign air carrier unless the State of the Operator CAA has approved the foreign air carrier for RNAV 1 DPs and STARs (to include operations, procedures, aircraft and aircraft equipment, and flightcrew training to conduct RNAV 1 DP and STAR).

b) Criteria Acceptable to the FAA. The FAA issues C063 for RNAV 1 DPs and STAR operations in accordance with, but not limited to, the following:

1) ICAO Doc 9613, Performance-based Navigation (PBN) Manual.

2) Joint Aviation Authority (JAA) temporary guidance leaflet (TGL) No. 10, Airworthiness and Operational Approval for Precision RNAV Operations in Designated European Airspace.

3) If adopted by the CAA, equivalent standards to AC 90-100, U.S. Terminal and En Route Area Navigation (RNAV) Operations, or AC 90-105, Approval Guidance for RNP Operations and Barometric Vertical Navigation in the U.S. National Airspace System and in Oceanic and Remote Continental Airspace.

**Note:** PIs must coordinate all acceptable criteria other than these specified in subparagraph b) with the International Program Division who will coordinate with the Flight Technologies and Procedures Division, as appropriate.

c) RNAV 1 DPs and STARs. AC 90-100 provides detailed guidance for operations on RNAV 1 DPs and RNAV 1 STARs in U.S. airspace.

1) For current ACs, policy, guidance, and compliance tables, refer to [https://www.faa.gov/about/office\\_org/headquarters\\_offices/avs/offices/afx/afs/afs400/afs410/pbn/](https://www.faa.gov/about/office_org/headquarters_offices/avs/offices/afx/afs/afs400/afs410/pbn/). For further questions, contact the International Program Division who will coordinate with the Flight Technologies and Procedures Division Flight Operations Group, as appropriate.

2) Additional information may also be found in the WebOPSS guidance in association with C063 by clicking on the “Guidance” button.

d) Outlining Procedures Using This Approval. Procedures used under this approval should be outlined in the appropriate operations manual approved by the State of the Operator CAA or within the C063 template for foreign air carriers that do not have an operations manual. Foreign air carriers that do not have an operations manual must still have procedures using RNAV 1 or RNP 1 approved by the State of the Operator CAA.

e) Designation of RNAV 1. Part 97 U.S. RNAV DPs and STARs throughout the NAS are designated as RNAV 1 and published in accordance with part 97.

f) Definitions Related to This Authorization. Some important definitions as they relate to this authorization:

***Area Navigation (RNAV) 1 Departure Procedures (DP) and Standard Terminal Arrival***

***Routes (STAR).*** RNAV 1 terminal procedures require the aircraft's track-keeping accuracy remain bounded by +1 NM for 95 percent of the total flight time. RNAV 1 terminal procedures requiring, as a minimum, a DME/DME/Inertial Reference Unit (IRU)-based and/or GPS-based RNAV system satisfying the criteria of AC 90-100.

***Climb Via and Descent Via.*** Refer to Information for Operators (InFO) 14003, "Climb Via" Phraseology for Standard Instrument Departure (SID), Modification to "Descend Via" Phraseology for Standard Terminal Arrival (STAR), and Phraseology Associated with Speed Instructions.

***Flight Management System Procedure (FMSP).*** An RNAV arrival, departure, or approach procedure developed for use by aircraft equipped with an FMS.

**Note:** The number of FMSPs in the NAS is limited, and FMSP criteria are no longer preferred for the design of RNAV procedures.

***Instrument Departure Procedure (DP).*** Instrument DPs are published IFR procedures that provide obstruction clearance from the terminal area to the en route structure. There are two types of DPs: ODPs and SIDs.

***Obstacle Departure Procedure (ODP).*** An ODP is a published IFR DP that provides obstruction clearance via the least onerous route from the terminal area to the appropriate en route structure. ODPs are recommended for obstruction clearance unless an alternate DP (such as a SID or radar vector) has been specifically assigned by ATC. The RNAV 1 ODP must be retrievable from the FMS database and included in the filed flight plan.

***Standard Instrument Departure (SID).*** A SID is a published IFR ATC DP that provides obstacle clearance and a transition from the terminal area to the en route structure. SIDs are primarily designed for air traffic system enhancement to expedite traffic flow and to reduce pilot/controller workload.

***Standard Terminal Arrival Route (STAR).*** An RNAV STAR is a published IFR ATC arrival procedure that provides a transition from the en route structure to the terminal area.

***Tailored Arrivals.*** Tailored arrivals are preplanned fixed routes received via data link from the U.S. oceanic air traffic system to Future Air Navigation System 1/A (FANS 1/A)-equipped aircraft. Currently, tailored arrival models are limited. Except for the instrument approach portion of an arrival, tailored arrival routes are neither stored in the aircraft navigation database nor published.

g) Training. All foreign air carrier flightcrews must have successfully completed their State of the Operator CAA-approved IFR RNAV 1 DP or STAR training program prior to conducting IFR RNAV 1 DPs or STARs at U.S. airports.

h) Foreign Air Carrier Actions. A foreign air carrier applying to the FAA for the issuance of C063 must provide the responsible IFO with evidence that the State of the Operator has approved the foreign air carrier for this operation. The approval must include:

- Documentation (e.g., foreign-issued OpSpecs, official letter) from the State of the Operator's CAA stating that the foreign air carrier is approved for RNAV 1 DP and STAR in accordance with XXXX (e.g., ICAO Doc 9613) criteria that the aircraft and aircraft equipment are eligible and approved for RNAV 1 DP and STAR, and that the flightcrews are trained to conduct RNAV 1 DPs and STARS (see subparagraph b));
- RNAV system make, model, and part number(s) approved;
- Procedures using RNAV 1 DP and STAR (see subparagraph d)); and
- Any other pertinent information.

**Note:** The FAA and PIs are not responsible for evaluating a foreign air carrier's training program. Foreign air carrier training programs are evaluated and approved by the State of the Operator CAA. PIs may accept equipment eligibility that has been determined eligible and approved by a foreign air carrier's CAA, when it is also documented by the AFM/RFM or other FAA-recognized means.

i) PI Actions. Based on the information supplied by the foreign air carrier, POIs must coordinate with the Principal Avionics Inspector (PAI) to determine equipment eligibility in accordance with the RNAV 1 DPs and STARS compliance table. An aircraft equipment compliance table is available via the Flight Technologies and Procedures Division Flight Operations Group web page at [https://www.faa.gov/about/office\\_org/headquarters\\_offices/avs/offices/afx/afs/afs400/afs410/pbn/](https://www.faa.gov/about/office_org/headquarters_offices/avs/offices/afx/afs/afs400/afs410/pbn/).

1) The PAI determines the proper nomenclature of the equipment manufacturer's make, model, and software version, and that the RNAV equipment and system is installed in accordance with approved data and meets the criteria of AC 90-100 or AC 90-105. Although a column for part/version/revision number exists in Table 1 of C063, PIs are not required to populate that column prior to issuing C063.

2) As described in AC 90-100 and AC 90-105, the term "compliance" means meeting the operational and functional performance criteria. For the intended purpose of this policy, "compatible" means equipment and systems that perform their intended function and meet performance requirements for RNAV 1 operations, as determined to be in compliance for approval.

**Note:** Per AC 90-100 and AC 90-105, data suppliers and avionics data suppliers must have a Letter of Authorization (LOA) in accordance with AC 20-153, Acceptance of Aeronautical Data Processes and Associated Databases. It is the responsibility of the foreign air carrier to ensure that data supplier(s) are compliant.

3) RNAV 1 procedures require DME/DME/IRU sensors and/or GPS inputs. Due to gaps in the DME infrastructure of the NAS, "RNAV 1" procedures require IRU sensor inputs to augment DME/DME, often referred to as DME/DME/IRU.

**Note 1:** The ATC Flight Plan must contain information in item 18 of the International Flight Plan (FAA Form 7233-4, Pre-Flight Pilot Checklist and International Flight Plan) indicating the RNAV capabilities and include applicable descriptors.

**Note 2:** If the responsible IFO is unable to determine equipment eligibility for RNAV 1 DPs and STARs via the Flight Technologies and Procedures Division Flight Operations Group web page, contact the International Program Division, who will coordinate with the Flight Operations Group, as appropriate.

4) Some RNAV equipment and systems may not be able to perform multiple STAR runway transitions, sometimes known as “route Type 3,” because of database limitations. Foreign air carriers of such RNAV systems must procure a “tailored” database and charts to allow the use of multiple runway transitions in order to qualify for RNAV 1 approval.

5) After the POI and PAI agree that the foreign air carrier has been authorized to conduct RNAV 1 DPs and STAR operations (by the State of the Operator CAA) and that the foreign air carrier is eligible for RNAV 1 DPs and STAR operations in the U.S. NAS, the C063 template may be issued indicating the appropriate authorizations in Table 1.

6) If the foreign air carrier has requested to conduct tailored arrivals into a U.S. airport, then PIs will:

a. Add the following statement in C063 Table 1, “Limitations and Provisions” column for each M/M/S aircraft with documented FMS autoload/uplink function and approved for tailored arrival operations: “Tailored Arrivals (TA) authorized.”

b. Confirm that each of the operator’s M/M/S aircraft have been approved for data link communication via OpSpec A003.

j) References (current editions):

- Title 14 CFR Part 91, §§ 91.123, 91.205, and 91.503; Part 95; and Part 129, § 129.17.
- FAA Order 1050.1, Environmental Impacts: Policies and Procedures.
- FAA Order JO 7110.65, Air Traffic Control.
- FAA Order JO 7400.2, Procedures for Handling Airspace Matters.
- FAA Order 8260.3, United States Standard for Terminal Instrument Procedures (TERPS).
- FAA Order 8260.19, Flight Procedures and Airspace.
- AC 20-138, Airworthiness Approval of Positioning and Navigation Systems.
- AC 20-153, Acceptance of Aeronautical Data Processes and Associated Databases.

- AC 90-96, Approval of U.S. Operators and Aircraft to Operate Under Instrument Flight Rules (IFR) in European Airspace Designated for Basic Area Navigation (B-RNAV)/RNAV 5 and Precision Area Navigation (P-RNAV).
- AC 90-100, U.S. Terminal and En Route Area Navigation (RNAV) Operations.
- AC 90-105, Approval Guidance for RNP Operations and Barometric Vertical Navigation in the U.S. National Airspace System and in Oceanic and Remote Continental Airspace.
- ICAO Global Operational Data Link (GOLD) Manual.
- ICAO Doc 9613, Performance-based Navigation (PBN) Manual.

**OPSPEC C065—POWERBACK OPERATIONS WITH AIRPLANES (OPTIONAL).**

OpSpec C065 authorizes the use of powerplant reversing systems for rearward taxi operations. Before issuing C065, the foreign air carrier must provide documentation to enable the POI to determine whether the carrier has established procedures for powerback operations that its CAA has accepted/approved. Airplane types M/M/S authorized for powerback operations must be listed in C065. Airports where powerback operations are authorized must also be listed. If the POI and/or foreign air carrier determine that restrictions to powerback operations are required at certain gates or ramp areas, the restrictions must be described (adjacent to the airport name) in the “Restrictions and Limitations” column.

**OPSPEC C067—SPECIAL AIRPLANE AUTHORIZATIONS, PROVISIONS, AND LIMITATIONS FOR CERTAIN AIRPORTS (OPTIONAL).**

a) General. Title 49 of the United States Code (49 U.S.C.) § 44701 and 14 CFR § 129.5 state that foreign air carriers must conduct their operations in accordance with OpSpecs issued by the Administrator. Foreign air carriers, prior to operation into any U.S. airport, must ensure that the airport is appropriate for the type of operation and aircraft. C067 authorizes and limits the foreign air carrier’s operation of airplanes into certain airports. These authorizations and limitations include the following types of operations:

- 1) Passenger-carrying operations into alternate airports that are not certificated (see subparagraph b)).
- 2) Operations at airports that require curfew limitations for flights into or out of specific airports.

**Note:** The FAA does not encourage foreign air carriers to list aircraft-specific limitations for airports with curfew hours in their OpSpecs. If an airport authority requires foreign air carriers to list such limitations in their OpSpecs, then they should be listed in Table 1 of C067. A sample of Table 1 shows an example of limitations for foreign air carrier operations into specific airports with curfew hours (see Figure 4-4G, Sample C067 Table 1 – Special Airplane Authorizations for Certain Airports).

- 3) Operations into airports that require special aircraft performance charts and equipment or special lighting (e.g., flare pots), or operate on unpaved runways.

4) Operations using the Reginald Bennett International Runway ReflectORIZATION System in Alaska.

5) Operations into a U.S. airport where the U.S. airport requires a special provision to be included in OpSpecs.

6) Operations to airports/runways where the Flight Technologies and Procedures Division has approved specific “special” instrument procedures for a foreign air carrier.

7) Operations within Class G airspace or at airports without an operating control tower.

8) Operations at alternate airports located in the United States for those scheduled regular airports located outside the United States. For example, a foreign air carrier conducts scheduled operations into the Vancouver International Airport (CYVR) in Canada, but uses the Seattle-Tacoma International Airport (KSEA) and Portland International Airport (KPDX) as alternate airports.

**Figure 4-4G. Sample C067 Table 1 – Special Airplane Authorizations for Certain Airports**

Airport (Airport Location/Identifier)	Airplane	Special Provisions/Limitations
KDCA, Ronald Reagan Washington National Airport, DC	Boeing 737-800	Limitations during the curfew hours. Max Takeoff—159,000 pounds Max Landing—137,600 pounds.
KEWR, Newark Liberty International Airport, NY	B747-8F	Limited to taxi speed restriction of 17 kt/20 mph. <sup>1</sup>

<sup>1</sup> Unless there exists a special provision or limitation (e.g., taxi restriction imposed by the State of the Operator), PI(s) do not need to list airports used by foreign air carriers operating Airplane Design Group VI (ADG-VI)/ICAO Group F aircraft (e.g., A380, B747-8, or AN-124) into a U.S. airport if the airport has a Modification of Standard (MoS) for that aircraft.

9) The OpSpec imposes restrictions on foreign air carriers operating aircraft with more than 9 passenger seats in scheduled passenger-carrying operations, or more than 30 passenger seats in nonscheduled passenger-carrying operations into U.S. land airports not certificated under part 139. The OpSpec may allow for authorization for such operations by the FAA if:

- a. The airport (military and non-military) is operated by the U.S. Government;
- b. The equivalent safety standards for airport(s) certificated under part 139 are met; and

c. The equivalent airport classification requirements under part 139 serve the types of airplanes and the types of operations to be conducted.

10) Foreign air carriers should obtain permission to operate from:

- a. The airport manager of non-military airports.
- b. The base operations of military airports.
- c. The designated airport manager for a joint-use civil and military airport.

**Note:** Refer to the U.S. Chart Supplements (airport database of every U.S. airport) for airport permission contact details.

b) Foreign Air Carrier Actions. Foreign air carriers applying to the FAA for authorization to operate into an airport within the United States must provide the responsible IFO with evidence that the State of the Operator has approved operation to the requested airport. The approval must include:

- 1) Documentation (e.g., a letter from the CAA or an excerpt from a CAA-approved manual if in English) that the flightcrews are trained.
- 2) A list of approved airports.
- 3) Any special limitations and provisions relating thereto.
- 4) M/M/S aircraft authorized for the proposed airport(s).
- 5) Any other pertinent information to include the following:
  - a. Line station office information:
    - Location(s).
    - Name of station manager or point of contact (POC).
    - Maintenance personnel information (or contractor information) and any other contractors (e.g., deicing or baggage/cargo handlers), including contact information (name, address, phone/fax numbers) for all contractors, and a list of which tasks are to be performed by each of the contractors.
  - b. Copy of U.S. economic authority (if required) issued by the Department of Transportation (DOT) to the foreign air carrier to assure that it reflects the addition of the requested airport.
  - c. Written documentation that the foreign air carrier has:

- Airport analysis for the aircraft it intends to operate into the new airport and its alternate airports (e.g., an excerpt from a CAA-approved manual if in English or a letter from a CAA).
- Properly trained the servicing personnel in accordance with the foreign air carrier's CAA-approved policies and procedures.
- Properly trained contract baggage and cargo handlers to the foreign air carrier's CAA-approved policies and procedures, which should include dangerous goods training (if applicable).
- Properly trained its aircraft maintenance personnel (or contractor maintenance personnel) to its CAA-approved policies and procedures.
- A copy of the State of the Operator required manuals (which should address the above-mentioned procedures) available at each new airport.

6) All of the foreign air carrier's personnel (including contractor personnel) must be able to read and understand the language that the manuals are written in or be provided by the operator with an English translation.

7) Procedures should be outlined in the appropriate operations manual approved by the CAA or within the OpSpec for operators without an operations manual.

8) If the CAA does not go into this level of detail, then it will be up to the PI to determine if additional clarification is needed.

c) Regulatory Compliance. Each foreign air carrier operating to the United States must comply with:

1) All applicable regulatory requirements found in 14 CFR, including, but not limited to, the following:

- a. Part 91 (in particular, §§ 91.13, 91.103, and 91.123).
- b. Part 93.
- c. Part 129.
- d. Part 139.
- e. Any other applicable regulations and laws of the United States.

2) Aeronautical Information Publication (AIP) of the United States of America.

**Note:** Foreign air carriers may find a link to the FSIMS list of U.S. special airports in the U.S. AIP. Refer to the U.S. AIP, page GEN 1.7-55.

3) ICAO Annex 6 standards (including, but not limited to, Part I, 4.2.3.2, 9.4.3.1, 9.4.3.2, 9.4.3.3, and 9.4.3.5).

4) Any regulations of the State of the Operator that are more restrictive than the equivalent U.S. regulations, as approved by the State of the Operator, for the foreign air carrier applying to operate to an airport within the United States. Examples:

- If the State of the Operator requires that to operate to XXX airport with the B777 all takeoffs and landings must be conducted by the PIC, then this limitation must be entered into C067 Table 1.
- If the State of the Operator requires that takeoffs and landings in the B747 into XXX airport may only be conducted between sunrise and sunset and the XXX airport limits B747 operations only between midnight and 6 a.m., then the more restrictive State of the Operator limitation must be entered into C067 Table 1.

**OPSPEC C068—NOISE ABATEMENT DEPARTURE PROFILES (OPTIONAL).**

a) General. OpSpec C068 authorizes foreign air carriers to conduct Noise Abatement Departure Profile (NADP) operations in accordance with the provisions of C068 and the procedures in the foreign air carrier's manuals that its CAA has accepted/approved. The foreign air carrier will use the approved NADPs for its turbojet airplanes, having a maximum certificated gross takeoff weight (GTOW) of more than 75,000 pounds, operating from a noise-sensitive airport within the United States. The foreign air carrier will conduct each NADP in accordance with the restrictions and limitations specified in C068 and will not conduct any other NADP operations.

1) The NADPs for any airplane type at any one time will be limited to a maximum of two profiles:

- Close-In NADP operations, and/or
- Distant NADP operations.

2) Only one NADP is designated for each runway at each airport. The foreign air carrier's NADPs must meet the following criteria:

a. For each NADP, the foreign air carrier will specify the altitude above field elevation (AFE) at which flightcrews will initiate thrust reduction from takeoff thrust (close-in profile) or airplane configuration change (distant profile), excluding gear retraction.

b. Close-in NADP. The foreign air carrier will use the following NADP criteria for individual airplane types intended to provide noise reduction for noise-sensitive areas located in close proximity to the departure end of the runway:

1. Initiate thrust cutback at an altitude of no less than 800 ft AFE and prior to initiation of flaps or slats retraction.

2. The thrust cutback may be made by manual throttle reduction or by approved automatic means. Flightcrews may arm the automatic means before takeoff for cutback at or above 800 ft AFE or it may be pilot-initiated at or above 800 ft AFE.

3. For airplanes without an operational automatic thrust restoration system, achieve and maintain no less than the thrust level necessary, after thrust reduction, to maintain the takeoff path engine-inoperative climb gradients specified in part 25, § 25.111(c)(3), with the flaps/slats configuration of the airplane, in the event of an engine failure.

4. For airplanes with an operational automatic thrust restoration system, achieve and maintain no less than the thrust level necessary, after thrust reduction, to maintain a takeoff path engine-inoperative climb gradient of zero percent. This climb gradient is contingent upon the ability of the automatic thrust restoration system to (at a minimum) restore sufficient thrust to maintain the takeoff path engine-inoperative climb gradients specified in § 25.111(c)(3), with the flaps/slats configuration of the airplane, in the event of an engine failure.

5. During the thrust reduction, coordinate the pitchover rate and thrust reduction to provide a decrease in pitch consistent with allowing indicated airspeed to decay no more than 5 knots below the all-engine target climb speed, and in no case to less than takeoff safety speed (multi) ( $V_2$ ) for the airplane configuration. The acceptable speed tolerances for automated throttle systems are found in AC 25-15, Approval of Flight Management Systems in Transport Category Airplanes.

6. Maintain the speed and thrust criteria as described in steps a)2)b2 through 5 to 3,000 ft AFE or above, or until the airplane has been fully transitioned to the en route climb configuration (whichever occurs first), then transition to normal en route climb procedures.

c. Distant NADP. The foreign air carrier will use the following NADP criteria for individual airplane types intended to provide noise reduction for all other noise sensitive areas.

1. Initiate flaps/slats retraction prior to thrust cutback initiation. Flightcrews should initiate thrust cutback at an altitude no less than 800 ft AFE.

2. Flightcrews may make the thrust cutback by manual throttle reduction or by approved automatic means. Flightcrews may arm the automatic means prior to takeoff for cutback at or above 800 ft AFE or the flightcrew may initiate it at or above 800 ft AFE.

3. Same as subparagraph a)2)b3.

4. Same as subparagraph a)2)b4

5. Same as subparagraph a)2)b5.

6. Same as subparagraph a)2)b6.

b) Airplane Vertical Departure Profiles. Before authorizing this paragraph, the POI must ensure that all airplane vertical departure profiles described in the certificate holder's operations and/or training manuals comply with the above criteria before authorizing C068 for the foreign air carrier.

1) Configuration changes necessary to meet regulatory performance or operations requirements will not be affected by this procedure.

2) For those airplanes that have a performance requirement to reduce takeoff flaps to an intermediate takeoff flap setting at 400 ft AFE or above, the next flap/slats retraction should be initiated at an altitude of no less than 800 ft AFE.

**OPSPEC C075—CIRCLING MANEUVERS AND/OR CONTACT APPROACHES AT U.S. AIRPORTS (OPTIONAL).**

a) Issuing OpSpec C075. The FAA issues C075 to foreign air carriers with fixed-wing airplanes who conduct either circling maneuvers, contact approaches, or both (circling maneuvers and contact approaches). OpSpec C075 specifies the lowest minimums that can be used.

**Note:** Do not issue C075 if the foreign air carrier is not authorized for either the circling maneuver or contact approach.

b) Before Issuing OpSpec C075. The foreign air carrier must submit documentation showing that their crewmember training program approved by their CAA provides the appropriate training and checking, and that the CAA authorized the maneuver and/or approach.

c) Drafting OpSpec C075. Within C075, there are two sets of selectable static text for circling maneuvers and contact approaches (one for each when authorized, and one for each when not authorized). The ASI must select the appropriate text based on what the foreign air carrier is authorized. For example, if the foreign air carrier is authorized for circling maneuvers and not for contact approaches, then select the text that states the limitations of circling maneuvers and the “not authorized” text for contact approaches.

d) Circling Maneuvers Terminology. In any weather condition, a foreign air carrier that permits its pilots to accept a “circle to land” or a “circle to runway (runway number)” clearance from ATC conducts circle-to-land maneuvers. The term “circle-to-land maneuver” includes the maneuver referenced in various regulations, publications, and documents as “circle-to-land maneuver,” “circling,” “circling maneuver,” “circle,” “circling approach,” and “circling approach maneuver.” With regard to pilots, conducting a circle-to-land maneuver means to act as the pilot flying (PF) when a circle-to-land maneuver is being conducted.

e) Aircraft Operating Under IFR During All Circle-To-Land Maneuvers. Aircraft operating under IFR during all circle-to-land maneuvers are required to remain clear of clouds. If a flightcrew loses visual reference to the airport while conducting a circle-to-land maneuver, they must follow the missed approach procedure specified for the applicable instrument approach, unless ATC specifies an alternate missed approach procedure.

f) Circling Landing Maneuver. When the ceiling is less than 1,000 ft and visibility is less than 3 sm, the foreign air carrier will not use any circling landing minimum lower than that prescribed for the applicable published instrument approach to be used.

**Note:** This does not authorize the pilots to go below the lowest minimum authorized by the State of the Operator.

g) Pilots Restricted to Circling in Visual Conditions. Any pilot who possesses a pilot certificate restricting circling approaches to visual meteorological conditions (VMC) is not eligible to conduct circle-to-land maneuvers except as provided:

1) The pilot must use the higher of the MDA of 1,000 ft height above airport (HAA) or the MDA of the published circling landing minimums for the instrument approach to be used.

2) The pilot remains under an IFR clearance and must comply with the procedures otherwise required for circle-to-land maneuvers. The foreign air carrier may conduct a circle-to-land maneuver when the reported ceiling is at least 1,000 ft and the visibility is at least 3 mi, or the reported weather is at least equal to the published circling landing minimums for the instrument approach to be used, whichever is higher.

**Note:** Foreign air carriers conducting circle-to-land maneuvers without training and checking are subject to the same provisions as pilots restricted to circling in visual conditions.

h) Contact Approach Criteria. The U.S. AIP provides further guidance on foreign air carriers operating contact approaches in the United States. Refer to the U.S. AIP, Part 2—En Route (ENR), ENR 1.1, paragraph 42.3 and ENR 1.5, paragraph 23, located at [https://www.faa.gov/air\\_traffic/publications/](https://www.faa.gov/air_traffic/publications/).

### **OPSPEC C077—TERMINAL VISUAL FLIGHT RULES, LIMITATIONS, AND PROVISIONS (REQUIRED FOR ALL CARRIERS CONDUCTING IFR OPERATIONS).**

a) Applicability. The FAA issues C077 to all foreign air carriers operating turbojet and large airplanes to the United States. Except as provided within C077, it restricts all operations to those conducted to IFR except in accordance with the provisions of part 93; part 136 Appendix A, Special Operating Rules for Air Tour Operators in the State of Hawaii; Special Federal Aviation Regulation (SFAR) 50-2, Special Flight Rules in the Vicinity of the Grand Canyon National Park, AZ; or OpSpec B051, if issued. C077 allows the foreign air carrier to conduct the following operations in the terminal area with the restrictions and limitations listed therein:

- 1) Terminal arrival IFR—visual approach or a charted visual flight procedure (CVFP).
- 2) Terminal arrival VFR.
- 3) Terminal departures VFR.
- 4) Terminal departures IFR.

b) CVFP. For a foreign air carrier conducting a CVFP, the weather minimums of part 91 prevail, except that the carrier will not use minimums lower than those established in the CVFP.

c) Uncontrolled Airports, C077 Subparagraph c(2)(b). Uncontrolled airports may be in Class G airspace. In order for the foreign air carrier to exercise this provision, OpSpec C080 must also be issued, allowing operation at airports without an operating control tower and/or operation in Class G airspace.

d) C077 Subparagraph c(3). In lieu of a CVFP, a charted visual procedure that the foreign air carrier's CAA approved is highly recommended for all terminal VFR departures/arrivals that fall under C077. The proximity of obstacles to the departure flightpath, visibility, the accuracy of the guidance and control systems, the pilot's proficiency, and the foreign air carrier's training should determine the size of the area in which obstacle clearance or avoidance must be considered.

e) C077 Subparagraph d(3). This subparagraph contains a requirement to obtain an IFR clearance no farther than 50 NM from the departure airport. However, this procedure may not be practical in all situations. If a greater distance is necessary, the foreign air carrier may apply for a nonstandard paragraph. If OpSpec B051 is issued for VFR en route operations, then for propeller-driven aircraft, except for certain en route VFR provisions in part 93, SFAR 50-2, or SFAR 71, the flightcrew may depart VFR under the provision of C077 subparagraph d, and the requirement to obtain an IFR clearance en route does not apply.

f) Terminal Departures IFR Requirements in C077 Subparagraph e. If ATC clears the flight, it is acceptable to execute a VMC takeoff and climb to a specified point in the clearance as part of an IFR clearance. However, the foreign air carrier must ensure they meet the obstacle performance requirements. Further, the flight must not depart on a VFR flight plan if the capability to go on an IFR flight plan is evident.

1) At certain airports, ATC may have established a "charted visual departure procedure" with a transition to IFR that permits aircraft to depart the airport under VFR and activate its IFR clearance at a designated point and/or altitude as published on the procedure.

a. Use of the charted visual DP requires that all of the conditions and limitations of C077 subparagraph d(1) through (4) be met. These procedures are established by the FAA and published in the FAA Chart Supplement as a Terminal Area Graphic Notice in the Special Notices section and may also be located online at the Aeronav products web page at [https://www.faa.gov/air\\_traffic/flight\\_info/aeronav/digital\\_products/dafd/](https://www.faa.gov/air_traffic/flight_info/aeronav/digital_products/dafd/).

b. Flightcrews must specifically request this type of procedure by name and ATC may issue a clearance for the aircraft to depart using the visual DP. In this instance, the flight will have an IFR flight plan filed and will have received its IFR clearance prior to departure. This will include a clearance to depart the airport under VFR using the procedure published in the Graphic Notice for the airport of departure. The IFR clearance is activated at the point and/or altitude described in the Graphic Notice.

c. Flightcrews must comply with flightpath/course to be flown, altitudes, and speed limitations published on the procedure, in addition to maintaining their own terrain and obstruction clearance until their IFR clearance is activated at a specific point and/or above a specific altitude as defined by the procedure.

2) Traffic separation with VFR aircraft when operating in VMC remains with the flightcrew. Flightcrews should advise ATC if a revised clearance or instruction is required to maintain VFR while on a charted visual DP.

g) Special Limitations and Provisions for VFR in C077 Subparagraph f. Subparagraph f provides special limitations and provisions for all VFR operations. This subparagraph is applicable to all of the provisions and limitations of C077.

1) C077 Subparagraph f(1). In order for the foreign air carrier to conduct VFR operations under C077, they must have in place either a procedure or program that can identify obstacles in the planned flightpath and the associated airport obstacle data, to ensure adequate information is available for arrival operations, takeoff, and departure performance requirements specified by operating rules and C077. The foreign air carrier must ensure that the flightcrew uses that information. The POI will request documentation from the foreign air carrier that this program is in place and that the foreign air carrier's CAA has approved VFR terminal operations.

2) C077 Subparagraph f(2). Although each subparagraph in C077 has specific details and minimums regarding VFR, the requirement for sufficient visibility to identify and avoid obstacles is required for all VFR operations.

**OPSPEC C080—TERMINAL AREA IFR OPERATIONS IN CLASS G AIRSPACE AND AT AIRPORTS WITHOUT AN OPERATING CONTROL TOWER (OPTIONAL).** The FAA issues C080 to authorize a foreign air carrier to conduct terminal area airplane IFR operations in Class G airspace or at airports without an operating control tower.

a) Before Authorizing C080. Before authorizing C080, the POI must determine that the foreign air carrier's CAA has authorized/approved it for these types of operations. The foreign air carrier must provide documentation to the POI showing that they have the required methods or procedures and arrangements in place for obtaining and disseminating necessary operational information and that their CAA has accepted/approved them. This operational information must include the following:

- 1) That the airport is served by an authorized IAP (and DP, when applicable).
- 2) Applicable charts for crewmember use.
- 3) Operational weather data from an approved source for control of flight movements and crewmember use. (For a list of examples, see Volume 3, Chapter 26, Section 4. The examples contained therein are not all-inclusive.)
- 4) Status of airport services and facilities at the time of the operation.
- 5) Suitable means for pilots to obtain traffic advisories (TA).
- 6) Sources of traffic and airport advisories.
- 7) Scheduled passenger operations. The POI must select the optional text for scheduled operations. The optional text specifies the following additional requirement: would it not have been for weather, mechanical, or ATC delays, the flight would have arrived at the scheduled time and the airspace would have been Class D.

b) Sources of Traffic and Airport Advisories. Foreign air carriers may be authorized to use any two-way radio source of air TA information listed in the AIM (for operations in U.S. airspace) or equivalent AIPs.

1) Sources include common traffic advisory frequencies (CTAF), Aeronautical Advisory Stations (UNICOM), Multicom, and Flight Service Stations (FSS).

2) When two sources are listed at the same airport, ASIs must ensure that the foreign air carrier's manuals have procedures that require pilots to continuously monitor and use the TA frequency when operating within 10 NM of the airport. The procedures should require communication concerning airport services and facilities to be completed while more than 10 NM from the airport.

3) At some airports, no public use frequencies may be available. In those cases, a foreign air carrier must arrange for radio communication of essential information, including surveillance of local or transient aircraft operations by ground personnel. Ground personnel who provide airport status and TA reports using a company radio must be able to view airspace around the airport.

**OPSPEC C083—IASA CATEGORY 2 SPECIAL OPERATIONAL RESTRICTIONS—SCHEDULED AND NON-SCHEDULED OPERATIONS, ADDITIONAL AIRCRAFT AND SPECIAL AUTHORIZATIONS (REQUIRED FOR ALL CARRIERS FROM INTERNATIONAL AVIATION SAFETY ASSESSMENT (IASA) CAT 2 COUNTRIES).**

a) General. OpSpec C083 must be issued to any foreign air carrier conducting operations to the United States under part 129, when the FAA determines under the IASA Program that the State of the Operator does not oversee civil aviation safety in accordance with minimum international standards. Such countries are placed in IASA CAT 2. Foreign air carriers with existing operations to the United States will be permitted to continue operations at current levels under heightened FAA surveillance. The FAA does not permit expansion or changes in services to the United States by such carriers while their home country is in CAT 2 status. Issuance of C083 must be coordinated with the International Program Division.

**Note:** Additional information on the FAA's IASA program, including a country's IASA category, is found on the FAA website at <http://www.faa.gov/about/initiatives/iasa/>. For FAA policy information, see Volume 12, Chapter 2, Section 1.

b) Recency of Operations. If no operations were conducted to the United States in the 6 calendar-months prior to the month in which their home country was determined to be CAT 2, the responsible IFO should begin the process of withdrawing the foreign air carrier's part 129 OpSpecs instead of issuing this paragraph. That process should only begin after consultation with the International Program Division.

c) New Services. The FAA will permit new services only if operated using aircraft wet-leased from a duly authorized and properly supervised U.S. air carrier or a foreign air carrier from a CAT 1 country that is authorized to serve the United States using its own aircraft under part 129. Those operations are not restricted by C083.

d) Special Authorizations. Foreign air carrier Special Authorizations include CAT II/III, ILS/PRM, land-and-hold-short operations (LAHSO), Reduced Vertical Separation Minimum (RVSM), etc. Special Authorizations requiring initial approval, acceptance, authorization, and/or continued oversight by the foreign air carrier's CAA must be reviewed by the responsible IFO. The review will determine if adequate oversight by the foreign air carrier's CAA is occurring on a continuous basis. If it is determined that adequate oversight is not occurring, the IFO should consider an amendment to withdraw those Special Authorizations from the foreign air carrier's OpSpecs. Initiate the amendment only after consultation and clearance by the International Program Division.

e) Additional Aircraft and Special Authorizations. On or after the date that the foreign air carrier's State was determined to be IASA CAT 2, no additional aircraft (including substitution of aircraft) or Special Authorizations may be added to these OpSpecs except as follows:

1) Through the issuance of OpSpec A028 that allows aircraft wet-leased from a duly authorized and properly supervised U.S. air carrier or foreign air carrier from an IASA CAT 1 country that is authorized to serve the United States using its own aircraft; or

2) With written approval from the International Program Division Manager or designated representative.

**Note:** Additional aircraft must be for the same M/M/S and configuration of aircraft, typically for inspection, maintenance, or alterations. The Special Authorization must be in the interest of safety. See Volume 12, Chapter 1, Section 2 for additional details.

f) Scheduled Operations. In order to maintain operations at current levels for foreign air carriers of CAT 2 countries, each foreign airport from which the foreign air carrier provides scheduled service to the United States must be listed in the scheduled operations table in C083. See Figure 4-4H, Example Scheduled Operations Table, for an example of a city pairing and frequency restriction.

1) The foreign air carrier must have provided scheduled service to the listed city pairs either at the time their home country was determined to be CAT 2, or for seasonal operators during the 12 calendar-months prior to the date their home country was announced to be CAT 2.

2) The foreign air carrier must also be limited to the frequency operated to those city pairs at the time of the announcement or for seasonal operators during the 12 calendar-months prior to the CAT 2 announcement.

3) C083 limits the foreign air carrier's scheduled operations to the United States to those city pairs and frequency. If the carrier's home country once again obtains IASA CAT 1 status, C083 will be decommissioned (the city pair and frequency limitation removed).

**Figure 4-4H.Example Scheduled Operations Table**

ROUTING INCLUDING CITIES AND ICAO AIRPORT ID(s)	FREQUENCY
KMIA Miami, Florida—MTPP Port au Prince, Haiti	Seven weekly

g) Nonscheduled Operations. When a foreign air carrier’s home country is determined to be in IASA CAT 2, the FAA restricts the foreign air carrier’s nonscheduled operations to the geographic areas to which operations were conducted and frequency of operation during the 12 calendar-months prior to the CAT 2 announcement. See Figure 4-4I, Example Nonscheduled Operations Table, for an example of a geographic area and frequency restriction.

1) Each U.S. geographic area to which the foreign air carrier provides nonscheduled service to the United States and the frequency of that nonscheduled service over the preceding 12 months must be listed in the operations table. The PI must review the DOT’s economic authority prior to counting operations between two U.S. cities toward frequency. Operations between two U.S. cities are considered cabotage and only permitted in certain circumstances (e.g., XXX cargo air carrier operates aircraft that provide a lift capacity that no U.S. certificate holder can provide).

2) If the carrier’s home country once again obtains IASA CAT 1 status, C083 will be withdrawn. The applicable geographic areas are only those that also are listed in OpSpec A001. To list the areas of geographic authorization, accomplish the following:

a. Obtain the “list of areas of en route operation.” The WebOPSS guidance subsystem contains detailed information on geographical areas. The areas authorized for issuance to a foreign air carrier in part 129 OpSpecs are:

- USA—The 48 Contiguous United States and the District of Columbia,
- USA—The Commonwealth of the Northern Mariana Islands,
- USA—The Commonwealth of Puerto Rico,
- USA—The State of Alaska,
- USA—The State of Hawaii,
- USA—The Territory of American Samoa,
- USA—The Territory of Guam, and
- USA—The Territory of the U.S. Virgin Islands.

b. Select the individual areas of en route operations to be authorized. If the foreign air carrier was not authorized for nonscheduled operations, then select “Not Authorized.”

**Figure 4-4I. Example Nonscheduled Operations Table**

UNITED STATES GEOGRAPHIC AREA	FREQUENCY
USA—The 48 Contiguous United States and the District of Columbia	6 flights per year

**OPSPEC C091—OPERATIONAL REQUIREMENTS AIRPLANE DESIGN GROUP VI (ICAO GROUP F) (OPTIONAL).**

a) Applicability. OpSpec C091 must be issued to foreign air carriers who conduct takeoff and landing operations using ADG-VI/ICAO Group F within the United States on runways as narrow as 150 ft (45 m) wide.

b) Operational Requirements. C091 specifies the runway width, Obstacle Free Zone (OFZ), and other airport requirements for these aircraft. ADG-VI are airplanes with a wingspan from 214 ft (65 m) up to 262 ft (80 m). It closely parallels ICAO Group F criteria. However, where the ICAO Code designation is also dependent on main gear track width, the FAA criteria is dependent on the wingspan of the aircraft and tail height. AC 150/5300-13, Airport Design, establishes airport requirements for the different ADGs including runway width requirements, taxiway width requirements, OFZ dimensions, and other airport considerations.

1) Historically, the FAA has authorized deviations from these established design standards on an air-carrier-by-air-carrier basis after evaluating the specific air carrier's operational procedures and flightcrew training program and standards. Operational limitations were typically part of the air carrier's operational authorization to operate as per the specific deviation granted to the air carrier.

2) In order to allow ADG-VI aircraft operations on existing infrastructure, U.S. ADG-V airports accepting scheduled service of ADG-VI aircraft are required to undergo a special MoS evaluation. The MoS evaluation applies to those portions of the airport that do not comply with ADG-VI standards. FAA issues approved MoSs for those portions of the airport deemed safe for ADG-VI operations. In many cases, approved MoSs include operational limitations to the ADG-VI airplane or the airport operation or both.

c) Foreign Air Carrier and POI Actions. Prior to initiating service to any ADG-V/ICAO Group F airport with an aircraft designed for ADG-VI/ICAO Group F, the foreign air carrier must supply the POI with the following:

- State of the Operator authorization;
- Evidence that the requirements of C091 were met for the proposed runway(s) of operations at those airports, including potential alternates;
- For destination airports, U.S. airport MoS approval for that make and model (M/M) (e.g., A-380 or B747-8); and
- For alternate airports, the process the foreign air carrier used to evaluate the airport to ensure it could accommodate the aircraft.

1) It is the foreign air carrier's responsibility to confirm that they can comply with the requirements of C091 and supply the POI sufficient documentation to verify their compliance. The foreign air carrier is responsible for any necessary coordination and letters of understanding with applicable ATC facilities and the airport operators to meet the requirements of C091. For scheduled destination U.S. airports serving ADG-VI/ICAO Group F airplanes, taxi routes used and procedures to follow will be established in a written Taxi Operational Plan approved by the airport operator, ATC, and local control. Taxi Operational Plans may be applicable to either:

- A specific foreign air carrier;
- All operators of a specific type of ADG-VI/ICAO Group F airplane (e.g., all A-380s serving that airport); or
- All ADG-VI/ICAO Group F airplanes serving the airport (e.g., all A-380s and B747-8s).

2) The POI should provide the foreign air carrier, ATC facility, or airport operator support, as necessary, to comply with the requirements of C091. Information, to include a list of questions and answers, a list of POCs, and other helpful information, is located at [https://www.faa.gov/about/office\\_org/headquarters\\_offices/avs/offices/afx/afs/afs050/afs052/](https://www.faa.gov/about/office_org/headquarters_offices/avs/offices/afx/afs/afs050/afs052/). A list of airports with MoSs for the A-380 and B747-8 is located at [http://www.faa.gov/airports/engineering/nla\\_mos/](http://www.faa.gov/airports/engineering/nla_mos/).

**Note:** The foreign air carrier's compliance with the requirements of C091 eliminates them from having to demonstrate their capability to operate to the lower criteria specified in C091 prior to issuing C091 for that aircraft and airport combination.

d) ADG-VI/ICAO Group F Aircraft. ADG-VI/ICAO Group F specifies that the required runway width be at least 200 ft (60 m), while ADG-V/ICAO Group E specifies that the runway width be at least 150 ft (45 m). Currently, the A-380 and the B747-8 are the only commercial aircraft in regular airline service that fit into the ADG-VI/ICAO Group F criteria, and are therefore subject to the C091 requirements to take off and land on ADG-V/ICAO Group E runways. Currently, AN-124 and AN-225 are the only ADG-VI/ICAO Group F aircraft used in nonscheduled cargo operations. Foreign air carriers of AN-124 and AN-225 aircraft must also be issued C091.

e) B747-8 Limitations. The following limitations apply to B747-8 operations:

- 1) Runways for takeoffs and landings will be at least 150 ft (45 m) wide.
- 2) Foreign air carriers must comply with all limitations and procedures specified in the applicable B747-8 AFM for lightweight and aft center of gravity (CG) takeoffs.

3) In accordance with FAA Airports Engineering Brief #74A, Use of 150-Foot (45-M) Wide Runways and Blast Pads for Boeing 747-8 Operations, the 35-ft standard stabilized runway shoulder width for ADG-V does not need to increase to the ADG-VI standard of 40 ft.

f) A-380 Limitations. The following limitations apply to A-380 operations:

1) The overall runway plus shoulder width is 280 ft (85 m) for U.S. ADG-VI and 250 ft (75 m) for ICAO Group F. In order to reduce the jet blast impact to 150 ft (45 m) of runway surface, the FAA recommends stabilized shoulders beyond the runway edge. The FAA 150 ft runway (width) evaluation for the A-380, along with the recommendations for these operations contained in ICAO Annex 14 and the A-380 AFM has led to the following runway width authorization for A-380 operation in the United States:

a. Runways for takeoffs and landings will be at least 150 ft (45 m) wide with stabilized runway shoulders on both sides of the runway extending an additional 50 ft (15 m) outward from the runway edge. The additional safety width is prescribed because the standard ADG-V runway shoulder width is only 35 ft (10 m).

b. Runways as narrow as 150 ft (45 m) wide, with or without the 35 ft (10 m) wide stabilized shoulders, may be used for takeoffs and landings provided applicable flight manual procedures for takeoffs on such runways are followed. Procedures must be implemented for the full length of the runway to be inspected by the airport operator for foreign object damage (FOD) after each takeoff prior to successive aircraft operations.

**Note:** Only the airport operator conducts runway inspections for FOD. Hence, the foreign air carrier should make sure, or have some documentation, that the airport operator will do it. The document is the required Federal Airport Certification Manual under part 139.

2) The hold-short lines or hold position must expand outward from the 280 ft point by 1 ft for every 100 ft the runway threshold elevation is above sea level. For example, a threshold elevation of 5,000 ft above mean sea level (MSL) requires an additional 50 ft. Thus, the hold-short lines or hold position can be no closer than 330 ft (280 ft + 50 ft) from the RCL. This is to address the hold position of aircraft when an A-380 is on final approach and is as required per AC 150/5300-13. Specifically, so that if the A-380 has to go-around (balked landing), then the lateral area on both sides of the runway is clear of obstacles so that if the A-380 deviates left or right during the go-around maneuver (balked landing), its wing tips will not strike anything.

g) AN-124 and AN-225 Limitation. Operation of the AN-124 and AN-225 is limited to runways that are at least 150 ft (45 m) wide.

### **OPSPEC C381—SPECIAL INSTRUMENT AND RNAV VISUAL FLIGHT PROCEDURES (OPTIONAL).**

a) Applicability. OpSpec C381 is an optional authorization applicable to all foreign air carriers conducting airplane operations under part 129. C381 authorizes special non-part 97 STARs, IAPs, DPs, and RNAV Visual Flight Procedure (RVFP) operations.

**Note:** Currently, there is no method to authorize part 375 operators to fly special instrument procedures or RVFPs due to tracking, notification, and coordination requirements associated with the authorization.

b) RVFP. An RVFP is an IFR procedure flown with an IFR-approved RNAV system in visual conditions. The procedure is selected from an approved database and must be flown as

published. RVFPs may have altitude and airspeed restrictions associated with a waypoint. RVFPs are designed to promote flightpath repeatability, to reduce ATC communications, and to enhance safety by providing a stabilized approach to a designated runway.

c) General. C381 is a nonstandard authorization that requires written concurrence from both the International Program Division and the Flight Technologies and Procedures Division managers, except as stipulated in subparagraph e). See subparagraph g) and Figure 4-4J, Special Instrument and RNAV Visual Flight Procedures Process Flowchart.

1) FAA Order 8260.55, Special Area Navigation Visual Flight Procedures, and FAA Order 8260.60, Special Instrument Procedures, will be used to create the procedure. C381 guidance will be used for the processing of the request from the initial intent expressed by the foreign air carrier (verbally, via email, etc.) to C381 issuance/amendment. For any questions, contact the subject matter expert (SME) listed in the “Title 14 CFR Part 129 OpSpec C381 Information” document and request clarification. Information, including a list of POCs) and other helpful information, is located at [https://www.faa.gov/about/office\\_org/headquarters\\_offices/avs/offices/afx/afs/afs050/afs052/](https://www.faa.gov/about/office_org/headquarters_offices/avs/offices/afx/afs/afs050/afs052/).

2) The foreign air carrier’s CAA must approve the use of these special procedures and/or RVFPs. The carrier must be from an IASA program CAT 1 State. The foreign air carrier’s training program must provide training in the equipment and special procedures, if required. If the special procedure requires training and the foreign air carrier’s training program does not address it, then the PI will not approve the foreign air carrier’s request. When submitting the formal request, the PI must include the draft C381 and the approval documentation from the foreign air carrier’s CAA.

3) PIs must submit requests for division managers’ concurrence via Next Generation Air Transportation System (NextGen) tracker or any method that supersedes the tracker. Submit the request only after meeting the requirements in subparagraph d) (i.e., expertise from the Flight Technologies and Procedures Division has already been obtained and both the Division and the PI concur that the operator meets the RVFP and/or special procedures requirements).

4) PIs must have written division managers’ concurrence before issuing C381, except as stipulated in subparagraph e).

d) Process for Obtaining a Published Special or RVFP. Foreign air carriers requesting the procedure must submit a written request to their PI at the responsible IFO. The PI will then contact the Flight Technologies and Procedures Division and request the procedure. This request does not require a memo. The Flight Technologies and Procedures Division will then provide the PI with the appropriate information.

1) FAA 8260 Forms. The Flight Technologies and Procedures Division will email the PI the appropriate FAA 8260 forms for the requested procedure. The Flight Technologies and Procedures Division will include a form that defines the procedure for charting purposes (FAA Form 8260-7A, Special Instrument Approach Procedure) and a form that describes any applicable foreign air carrier requirements (FAA Form 8260-7B, Special Instrument Procedure Authorization). Below is an explanation of the forms available.

a. For new approaches: FAA Form 8260-7A defines the procedure, and FAA Form 8260-7B defines the foreign air carrier requirements. FAA Form 8260-7B requires PI and foreign air carrier signatures.

b. For older approaches: FAA Form 8260-7 defines the procedure and FAA Form 8260-10, Standard Instrument Approach Procedure, defines the foreign air carrier requirements. FAA Form 8260-10 requires PI and foreign air carrier signatures.

c. For special non-part 97 DPs: FAA Form 8260-15A, Takeoff Minimums and Obstacle Departure Procedures (ODP); FAA Form 8260-15B, Graphic Departure Procedures (DP); and/or FAA Form 8260-15C, Departure (Data Record), defines the procedure; and FAA Form 8260-7B defines the foreign air carrier requirements. FAA Form 8260-7B requires PI and foreign air carrier signatures.

2) Form Review and Distribution. The responsible PI will provide the FAA 8260 forms to the foreign air carrier. The PI will be the central POC for communications between the FAA and the foreign air carrier. The responsible PI or his or her designee will also be present and participate by phone or in person for all meetings that may be between the FAA and the foreign air carrier.

a. The foreign air carrier will provide their CAA with the forms for review.

1. The CAA will review the foreign air carrier's existing procedures, documentation, equipment, manuals, and training to ensure any requirements specific to the procedure and listed on the 8260 forms are satisfactorily addressed. These requirements may require special aircraft performance, equipment, avionics/software, and/or crew training.

2. If existing foreign air carrier procedures do not address all requirements, the foreign air carrier must submit a plan to the CAA with the necessary changes needed to comply with the requirements of the special procedure. This plan must address any aircraft-specific requirements for each M/M/S that the foreign air carrier plans to use to fly the special.

3. Once documentation is received from the CAA concurring with the implementation plan and usage of the procedure, the PI reviews the implementation plan.

b. PIs and the foreign air carrier's representative will sign the FAA Form 8260-7B after the following:

1. The PI has discussed the procedure requirements with the foreign air carrier; and

2. The foreign air carrier has provided the PI with documentation showing compliance with procedure requirements (i.e., aircraft performance, aircraft equipment, crew qualifications, etc.) or an implementation plan that shows a reasonable expectation that they will be able to safely meet all procedural requirements.

c. The PI will give a signed copy of the FAA Form 8260-7B to the foreign air carrier and maintain a signed copy in the office file in accordance with the record retention requirements.

1. These forms allow the foreign air carrier to receive customized charts and navigation database coding (if applicable) from chart vendors and training from most contract training vendors.

2. It may take some time for the operator to fully implement their plan and qualify all relevant personnel to conduct the procedure(s).

3. The OpSpec must not be authorized until the foreign air carrier has implemented their plan and is fully prepared to fly the procedure. For additional detail/requirements, see subparagraphs d)5)c and d)6).

**Note:** Signing the back of FAA Form 8260-7 or FAA Form 8260-7B is not the formal issuance of the authority for use of a special procedure. Conveyance of authority is by the issuance of C381.

d. The PI should review the requirements contained in the procedure to ensure that the aircraft type(s) in question can perform the procedure before sending the application for both International Program Division and Flight Technologies and Procedures Division management review (if required). Some special instrument procedures require nonstandard/higher missed approach climb gradients and specific qualities or levels of avionics.

3) Training. A foreign air carrier's training program must include training on the procedure and equipment required to accomplish the procedure. The foreign air carrier must be proficient on the procedure and the equipment required to accomplish the procedure. All FAA Form 8260-7B and FAA Form 8260-10 training requirements must be met for all procedures. Training for specific procedures may be required if the performance, equipment, services, terrain effects, or a combination of factors is emphasized to ensure a safe operation. However, if the foreign air carrier is seeking authorization for multiple specials or RVFPs, training for each specific procedure may not be required if any of the following applies:

- The training is duplicative;
- The multiple specials are basic instrument approaches to a private-use landing area; or
- No additional performance or training requirements for a specific airfield are noted on forms.

4) Charts. The Flight Technologies and Procedures Division will send the PI the FAA 8260 forms described above. The foreign air carrier will use these forms to get a chart produced. The foreign air carrier will submit a copy of the completed chart to their PI. Upon receipt, the PI will forward a copy of the chart to the Flight Technologies and Procedures Division for review and distribution in accordance with Order 8260.60. The PI must not authorize operational implementation of the procedure until the Flight Technologies and Procedures Division receives

the chart. In some cases, a third-party developer will create a chart for the foreign air carrier and submit it to the Flight Technologies and Procedures Division for distribution. The Division will distribute this chart to the PI who, in turn, will give it to the foreign air carrier.

5) Demonstration Flights. The FAA 8260 forms may require a demonstration flight for all applicants, to include foreign air carriers. PIs, the International Program Division, and the Flight Technologies and Procedures Division management, at their discretion, may recommend that demonstration flights be accomplished to verify the suitability of the foreign air carrier's aircraft, equipment, procedures, and profiles as described in the subparagraphs below.

a. If a demonstration flight is not stipulated on FAA Form 8260-7B, a demonstration flight may still be required at the discretion of the CAA, the FAA, or both before a foreign air carrier can use a new or amended special Instrument Flight Procedure (IFP). Flight simulator and tabletop reviews are other ways a CAA may confirm an operation can be conducted safely. Consideration should be given to the foreign air carrier's experience at that airport, profiles and procedures, aircraft capabilities, deviation from IFP criteria, and local environmental considerations (e.g., terrain, radar and communications coverage, and obstacles) when determining if public interest necessitates that a flight demonstration, simulator, or tabletop review be accomplished by the applicant's CAA.

b. If it is determined that public interest necessitates a demonstration flight/simulator or tabletop review be accomplished, the FAA will dictate the requirements and criteria for satisfactorily completing the demonstration. The PI must then forward to the applicant those criteria. All demonstrations must be accomplished by the applicant's CAA. Once written documentation is received from the applicant verifying the satisfactory accomplishment, the PI may then continue to proceed with processing the application request.

c. The PIs, with joint division management concurrence, may issue a provisional authorization allowing a foreign air carrier to conduct a special IFP if the applicant's CAA inspector will be observing the flight to evaluate that procedure during routine operations in VMC. The provisional authorization should only be used after a careful evaluation has been made of the special IFP for safety-related factors. Issue this provisional authorization by adding the special IAP to the appropriate C381 with the provision that the authorization is only applicable to flights observed by the applicant's CAA inspector in VMC.

6) Authorization. PIs will issue the approved procedure via C381, as described below, once the following occur:

- The foreign air carrier has implemented their plan to address all of the FAA 8260 form requirements (including training, dispatch, equipment, performance, etc.) and has a chart, and the demonstration flight(s), if required, is completed satisfactorily.
- The International Program Division and the Flight Technologies and Procedures Division management concur with the authorization, if required.
- The foreign air carrier documents to the responsible PI that they have signed (if required) a letter of agreement with responsible Terminal Radar Approach

Control (TRACON). If a letter of agreement is not required, the Flight Technologies and Procedures Division has notified the appropriate air traffic facility of the new foreign air carrier prior to the foreign air carrier flying the procedure (if required).

**Note:** The FAA sets criteria for “special procedures” within U.S. airspace. There is no ICAO standard for these procedures. To operate a special procedure at a private airport, the foreign air carrier must attain written permission from the owner/manager of the airport.

a. **Effective Dates.** Procedure effective dates can be critical to flight safety. Procedures must not be used after the expired effective date. For example, some procedure amendments use the same fix names but with the fixes in a slightly different location, and those fix locations will change on the effective date, allowing the use of the expiring procedure until the effective date and the new procedure on and after the effective date. If the procedure has a specific effective date set by the Flight Technologies and Procedures Division, add a reference to that effective date in the “Limitations and Provisions” column of Table 1 of C381 for the new procedure, as well as the expiring procedure (if applicable).

b. **Amendments/Cancellations.** When an approved special or RVFP is amended or canceled, the Flight Technologies and Procedures Division will notify the PI for each foreign air carrier that is authorized to use the special or RVFP. For an amended special or RVFP, the amendment cancels the previously approved special or RVFP on the effective date set by the Flight Technologies and Procedures Division. The PI must remove the previously approved special or RVFP from the foreign air carrier’s C381.

c. **Rescinding Concurrence.** Both the International Program Division and the Flight Technologies and Procedures Division management have the authority to rescind their concurrence. The PI must rescind authorization for use of a procedure immediately upon written notification from division management. Following is a list of examples for which division management may rescind their concurrence:

- The foreign air carrier deviates from the procedure requirements;
- Division management becomes aware of any additional operational/training requirements; or
- Any other factors that affect the safe operation of the procedure.

7) **Additional Authorizations.** The following OpSpec paragraphs may be required for the authorization of specific procedures for C381.

a. **OpSpec C052.** Part 129 foreign air carriers must be issued C052. The “type” (e.g., RNAV, ILS, and LDA) of instrument approach listed in C381 in Table 1 must be listed in the table of authorized approaches in C052. RVFP and RNP AR procedures will not be listed in C052.

b. **OpSpec C063.** Part 129 foreign air carriers may require a C063 authorization. C063 authorizes RNAV 1, RNP 1, and other Performance-based Navigation (PBN) flight

operations and is required for certificate holders/operators/program managers authorized to conduct RNAV 1, RNP 1, or other PBN flight operations in C381.

c. OpSpec C077. Part 129 foreign air carriers must be issued C077 if operating under IFR. C077 provides arrival and departure guidance for instrument and visual flight operations (e.g., VFR departure on an IFR clearance). C077 provides guidance on the use of a CVFP. Determine if a VFR operation into or out of an airport is part of the C381 authorization.

d. OpSpec C080. Part 129 foreign air carriers may require a C080 authorization. Determine the type of airport and operation being conducted in association with C381 authorization.

e. OpSpec C384. Part 129 foreign air carriers should be issued C384 when an RNP AR-like special procedure, normally titled RNAV (RNP), is authorized in C381. Approval to fly an AR-like special without C384 will be granted by division management (the International Program Division and the Flight Technologies and Procedures Division) and documented on FAA Form 8260-7B. The authorization in C384 must contain the lowest RNP and additional aircraft capabilities meeting the requirements of the special procedure authorized in C381.

8) Amendments. The Flight Technologies and Procedures Division will notify the PI of procedure amendments and send the PI all of the new forms required for the amendment. In most cases, this entire process will need to be reviewed to ensure foreign air carrier compliance with the amended procedure requirements. The foreign air carrier will be required to get a new chart, which they must submit to the PI. The PI will forward the new chart to the Flight Technologies and Procedures Division for distribution. The Division will advise the PIs of changes or updates to the procedures and distribute such information in accordance with Order 8260.60.

**Note:** The PI will copy the responsible IFO manager and the International Field Office Management Branch on all procedure amendments or cancellations, required forms, and new charts. See subparagraph e) for additional details.

9) Cancellations. If a foreign air carrier is no longer going to use a procedure, the PI must remove the procedure from the foreign air carrier's C381 and advise the Flight Technologies and Procedures Division that the foreign air carrier is no longer authorized to use that procedure. If the procedure is canceled, the Division will notify the PI and the PI will remove the procedure from the foreign air carrier's C381.

10) NOTAMs. Special procedures exist outside of the normal notification system for standard instrument procedures. Many special procedures serve landing areas that are in the public NOTAM system, and public NOTAMs will be issued for specials whenever possible. However, sometimes it is not possible to issue a NOTAM for a special, which requires updates and changes to be issued to all authorized foreign air carriers through their POI. Therefore, it is critical to record, maintain, and update foreign air carrier contact data with the Flight Technologies and Procedures Division.

11) Adding an Aircraft. If the foreign air carrier requests to fly an authorized RVFP or special procedure in a new aircraft (i.e., one that they are not currently authorized to fly), the PI should review this entire process to ensure the suitability of the proposed aircraft.

12) Oversight and Auditing. Oversight management and guidance of foreign air carrier authority and use of special instrument procedures is not currently in the FAA automated work programs. It may occur under the initiative of planned activities by IFOs for those part 129 foreign air carriers who are addressed in National Work Programs for inspectors. PIs are requested to review the C381 for their assigned foreign air carriers annually to ensure the currency of the special instrument procedures is maintained and disseminated. IFOs must maintain files for foreign air carriers authorized to conduct special procedures in accordance with the recordkeeping requirements. For example:

- The documentary elements of the special instrument procedure (e.g., the 8260-series forms, a copy of the current chart as issued to the foreign air carrier, and related correspondences);
- The status of the special authority; and
- The Flight Technologies and Procedures Division has the current foreign air carrier contact data.

e) Concurrence Exceptions. PIs may issue the C381 at the IFO (no division manager's concurrence is required) when the foreign air carrier either:

1) Has already been authorized by the FAA via OpSpec or LOA to fly another RNAV visual or special procedure and is only requesting to use an existing RNAV visual procedure, and provides the PI with documentation that they can fly the procedure without any need for amendment to the RNAV visual procedure; or

2) Is already authorized by the FAA via OpSpec or LOA to fly that RNAV visual or special procedure:

a. In another M/M/S and is only requesting to add another aircraft, and provides the PI with documentation that they can fly the procedure without any need for amendment to the procedure; or

b. The Flight Technologies and Procedures Division notified the PI of an amendment and the foreign air carrier documents: CAA authorization and flyability if required. Some procedure amendments do not require flyability (e.g., renaming of a waypoint). All procedure amendments require a new chart. Flyability is typically conducted in a simulator and refers to:

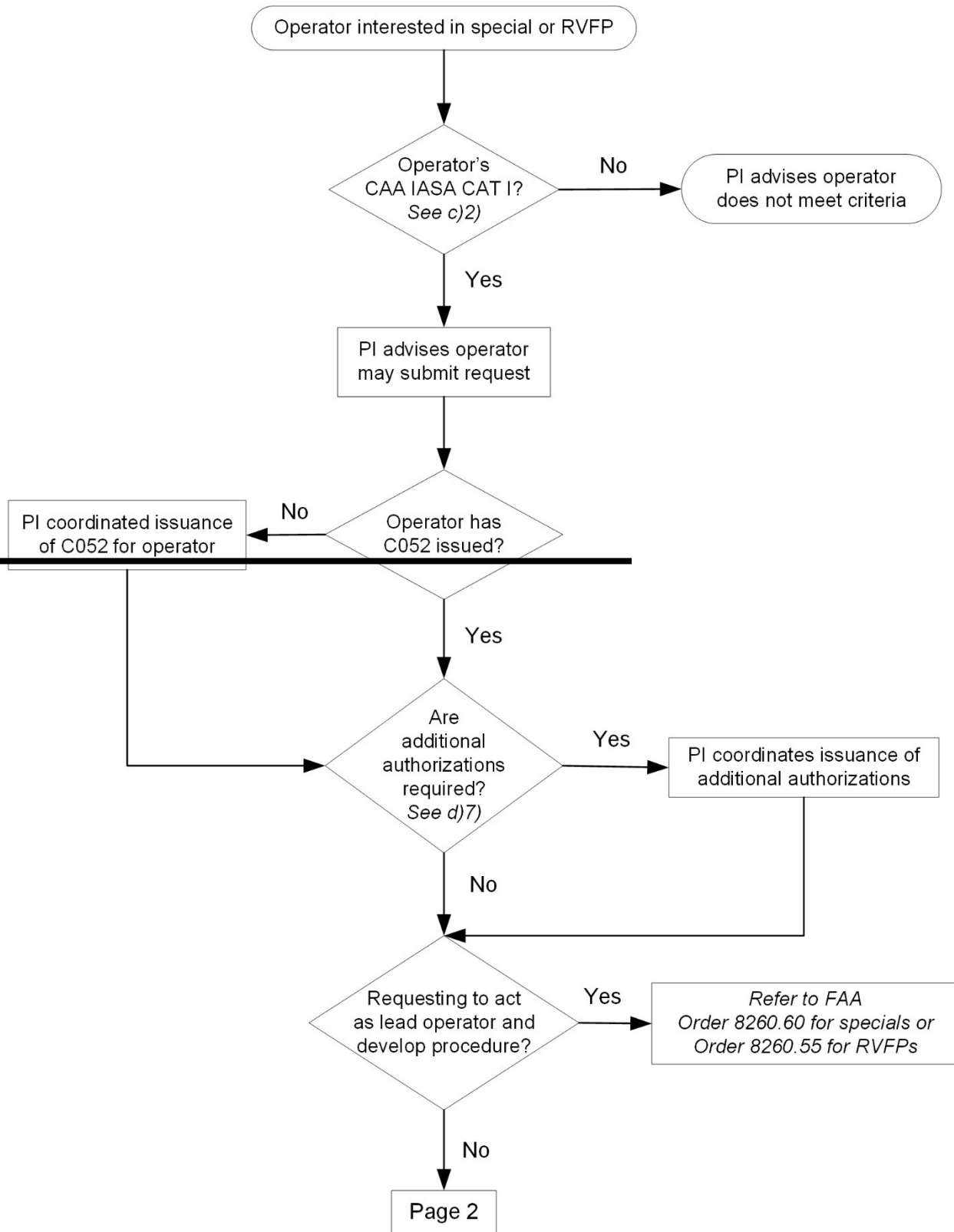
1. The capability to maintain track during a go-around or missed approach.
2. All published airspeeds and maneuvers required to emulate desired flightpaths (lateral and vertical) are flyable with the intended equipment.

**Note:** PIs who feel that the approval is beyond the scope of their training or experience may request the Flight Technologies and Procedures Division or division management SMEs' assistance. The Flight Technologies and Procedures Division and division management SMEs will assist, as appropriate. (Refer to the C381 information document for International Program Division and Flight Technologies and Procedures Division contacts.)

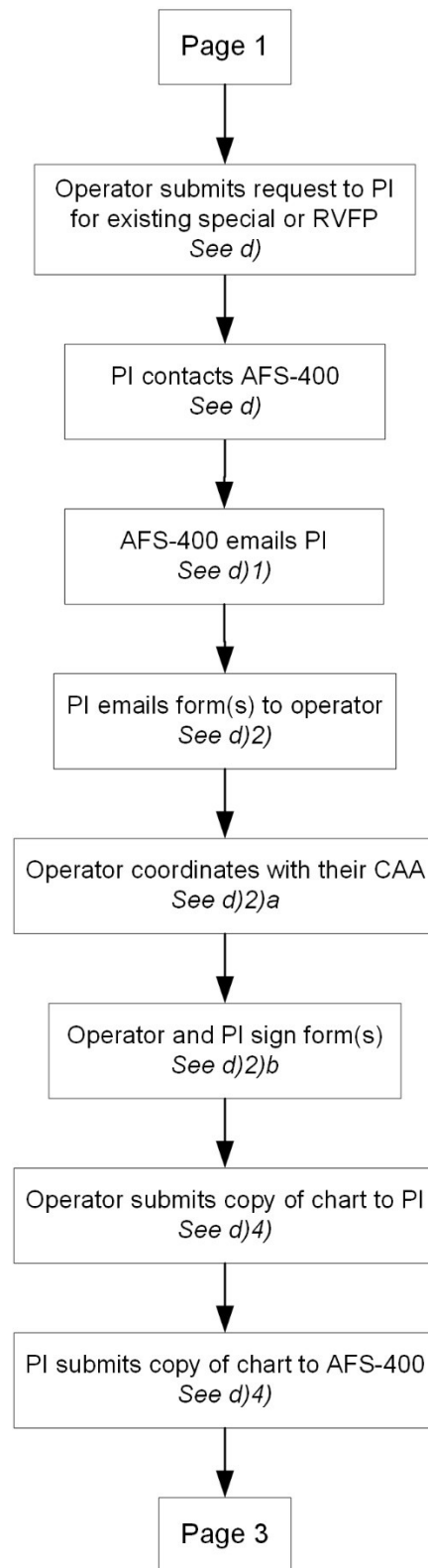
f) Informational Sharing. Certain specials (e.g., LOC/DME RWY 15 and RNAV (GPS) Z RWY 15 to Aspen, CO) allow access to challenging airports with steep, close terrain. Responsible PIs may find it helpful to set up an informational sharing meeting that includes the International Program Division, the Flight Technologies and Procedures Division, the foreign air carrier, or the foreign air carrier's CAA (operations representative or management personnel listed on the operator's OpSpec A006) to discuss FAA Form 8260-7B requirements and best practices.

g) Process Flowchart. All references within Figure 4-4J starting with "See" refer to subparagraphs in the C381 guidance in this section.

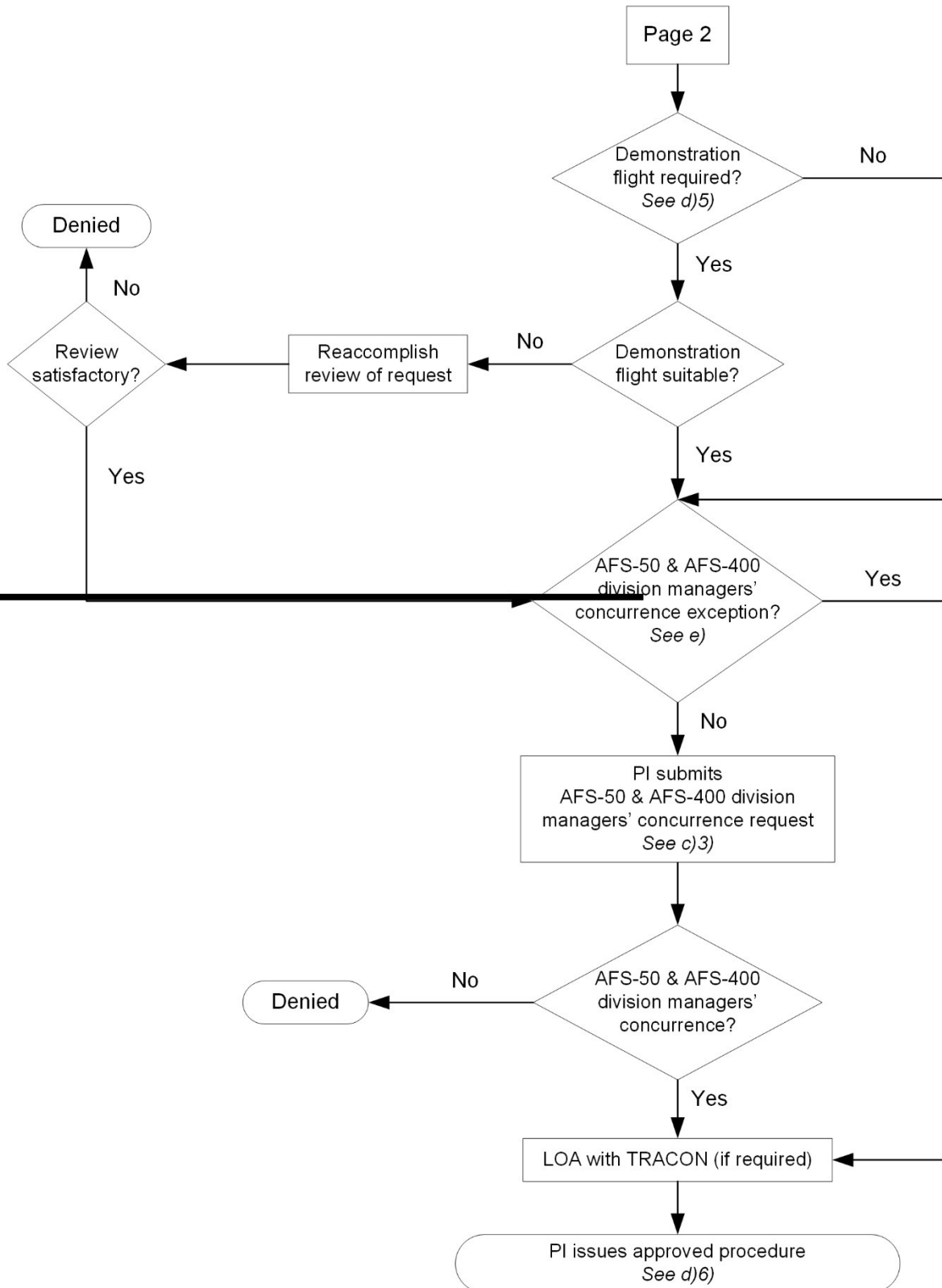
**Figure 4-4J. Special Instrument and RNAV Visual Flight Procedures Process Flowchart**



**Figure 4-4J. Special Instrument and RNAV Visual Flight Procedures Process Flowchart (Continued)**



**Figure 4-4J. Special Instrument and RNAV Visual Flight Procedures Process Flowchart (Continued)**



**OPSPEC C384—RNP AR—AREA NAVIGATION (RNAV) REQUIRED NAVIGATION PERFORMANCE (RNP) AUTHORIZATION REQUIRED (AR) (OPTIONAL FOR FOREIGN AIR CARRIERS OPERATING TO THE UNITED STATES).**

a) General. The FAA authorizes RNP AR to U.S. airports in accordance with § 129.9 by issuance of OpSpec C384. C384 is used to authorize foreign air carriers to conduct RNAV RNP IAP, AR. These approaches have been published in accordance with part 97 and are charted as “RNAV (RNP) RWY XX,” hereinafter referred to as RNP AR IAP.

**Note:** The U.S. approach plate terminology is changing from RNP special aircraft and aircrew authorization required (SAAAR) to RNP AR as the charts are revised or amended. ICAO documents and AC 90-101 have already been harmonized with the new terminology and are using RNP AR.

b) Criteria Acceptable to the FAA. The FAA issues C384 for RNP AR with RF leg capability operations in accordance with, but not limited to, one of the documents listed below. PIs must coordinate all acceptable criteria other than subparagraphs b)1) and b)2) with the International Program Division who will coordinate with the Flight Technologies and Procedures Division.

1) ICAO Doc 9613.

2) EASA Acceptable Means of Compliance (AMC) 20-26, Airworthiness Approval and Operational Criteria for RNP Authorisation Required (RNP AR) Operations.

3) If adopted by the CAA, equivalent standards to AC 90-101.

**Note:** The FAA must have confidence that the approval follows ICAO Doc 9613 guidance for State of Operation responsibilities. Without this information, the FAA would not be able to determine that safety in air commerce exists as prescribed by § 129.11 before amending the foreign air carrier’s OpSpecs for operations within U.S. airspace.

c) Alternative Method. AC 90-101 provides an acceptable method of compliance with public RNP AR IAP requirements. In lieu of following this method without deviation, foreign air carriers may elect to follow an alternative method, provided the alternative method is also found to be acceptable to the FAA.

d) RNP APCHs. RNP APCHs provide an opportunity to improve safety, efficiency, and capacity. Safety is improved when RNP APCHs replace visual approaches or NPAs, and efficiency is improved through more repeatable and optimum flightpaths. Capacity can be improved by deconflicting traffic during instrument conditions.

1) RNP AR approaches provide an unprecedented flexibility in construction of approach procedures. These operations are RNAV procedures with a specified level of performance and capability. RNP AR approach procedures build upon the performance-based NAS concept. The performance requirements to conduct an approach are defined. Aircraft are qualified against these performance requirements. Obstacle Evaluation Areas (OEA) for approaches using

conventional navigation aids are based on a predefined aircraft capability and navigation system. RNP AR criteria for obstacle evaluation are flexible and designed to adapt to unique operational environments. This allows approach-specific performance requirements, as necessary, for that approach procedure. The operational requirement can include avoiding terrain or obstacles, deconflicting airspace, or resolving environmental constraints.

2) RNP APCHs include unique capabilities that require special aircraft and aircrew authorization similar to CAT II/III ILS operations. All RNP AR approaches have reduced lateral OEAs and vertical obstacle clearance surfaces predicated on the aircraft and aircrew performance requirements of equivalent standards of AC 90-101 and AC 90-105. In addition, there are two characteristics used for selected procedures, as necessary. Foreign air carriers may be authorized for any subset of these characteristics:

- RNP AR RF leg capability, and
- Reduced lateral OEA on the missed approach (also referred to as a missed approach requiring RNP less than 1.0).

**Note:** Relevant ICAO Standards include Annex 6, Part I, Appendix 6, pages APP 6-3 and 6-4, items 15 and 16. If the information is not in the foreign air carrier's OpSpecs, then the PI must request that the foreign air carrier provide them with another form of documentation from the State of the Operator.

3) When conducting an RNP AR approach using a line of minima less than RNP 0.3 and/or a missed approach that requires RNP less than 1.0, the foreign air carrier must comply with equivalent standards of AC 90-101, appendix 2, paragraph 5 and/or 6.

4) The defining components of RNP capability is the ability of the aircraft navigation system to monitor its achieved navigation performance and to identify, display, and alert the pilot when the operational requirement is not being met during an operation.

e) Outlining Procedures Using This Approval. Procedures will be included as part of the manual required by ICAO Annex 6, Part I, 4.2.3, which is approved/accepted by the State of the Operator's CAA. Procedures used under this approval should be outlined in the appropriate operations manual approved by the State of the Operator's CAA or within C384 for foreign air carriers that do not have an operations manual. Foreign air carriers that do not have an operations manual must still have procedures using RNP AR approved/accepted by the State of the Operator's CAA.

f) Training. All foreign air carrier flightcrews must have successfully completed their State of the Operator's CAA-approved RNP AR training program prior to conducting RNP AR at U.S. airports. For relevant ICAO Standards, see subparagraph g)1)d below.

g) Foreign Air Carrier Actions. Prior to submitting an application package requesting RNP AR/C384, the foreign air carrier must contact their PI to schedule a kickoff meeting. (See subparagraph h) below for further detail.) A foreign air carrier applying to the FAA for the issuance of C384 must provide the responsible IFO with evidence that the State of the Operator has approved the foreign air carrier for this operation. The approval must include:

1) Documentation (e.g., foreign-issued OpSpecs and official letter) from the State of the Operator's CAA stating that:

a. The foreign air carrier is approved for RNP AR in accordance with certification (e.g., ICAO Doc 9613) criteria (see subparagraph b)).

b. Aircraft and aircraft equipment are eligible and approved for RNP AR. Additionally, for each approved aircraft M/M/S, the following information must be included:

- The navigation system M/M/S and software version;
- All applicable limitations, to include a list of approved airports;
- Identify if autopilot coupled or FD required; and
- Lowest RNP.

c. The PI must not enter into Table 1 of C384 any limitations, RNP values, etc., less than those authorized by the foreign air carrier's CAA. Only operations that are relevant to operations within U.S. airspace must be included in Table 1.

**Note:** CAA-approved equipment eligibility may be documented by the foreign air carrier by providing to the FAA the relevant copy of an AFM, if the AFM is in English.

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d. Flightcrews are trained to conduct RNP AR. The training program addresses the special characteristics of the proposed area of operation (within the United States) and all operational (navigation) practices and procedures associated with RNP AR. Flight operations officers/flight dispatchers are trained in dispatching or releasing a flight for RNP AR. Relevant ICAO Standards include Annex 6, Part I, 3.1.4, 4.2.1, 9.3.1, 9.4.3, 9.4.3.5, and 10.3, and Attachment E.

e. Procedures for using RNP AR are included in the foreign air carrier's documentation (e.g., operations manual). Relevant ICAO Standards include Annex 8, Airworthiness of Aircraft, Chapter 7, 7.2, 7.3, 7.4, 7.5, and 7.6. If the foreign air carrier's documentation (e.g., operations manual) is in English, it may be used for documentation by the foreign air carrier.

f. Has an approved/accepted RNP monitoring program that collects data on RNP AR procedures.

g. Has an approved/accepted Navigation Data Validation Program. Subsequent software updates need to be brought to the attention of the FAA for approval.

h. Has established maintenance procedures to include procedure for removing the aircraft from, and returning the aircraft to, RNP AR operational capability by trained maintenance personnel.

i. Has an approved/accepted MEL revised for RNP AR (as appropriate). For U.S.-registered aircraft to be used, the foreign air carrier must submit the MEL revision for approval to the FAA in accordance with § 129.14.

j. Has successfully completed all validations and demonstrations. Refer to AC 90-101 for acceptable number of validations and demonstrations when operating in U.S. airspace. If the demonstrations are still ongoing, then provide details of any limitations relating to operations during the demonstration period.

k. Has completed an RNP AR Compliance Traceability Matrix/RNP AR Compatibility Trace Matrix. All matrix items highlighted in yellow require a response. To assist the FAA in expeditious review of the application, the FAA recommends that the applicant provide detailed references in its responses (e.g., Boeing Aircraft Qualifications Document D6-83991, appendix B, pages 29–31). A copy of the compliance matrix, along with other educational materials, may be found at: [https://www.faa.gov/about/office\\_org/headquarters\\_offices/avs/offices/afx/afs/afs400/afs410/pbn/](https://www.faa.gov/about/office_org/headquarters_offices/avs/offices/afx/afs/afs400/afs410/pbn/).

2) Specify that the State of the Operator RNP AR-approved operational procedures are to include the use of FD with or without autopilot and practices.

3) Because of the unique nature of RNP AR approach procedures, simulator assessment of each procedure to be flown in the NAS should be accomplished to evaluate factors including basic flyability. This assessment will preclude errors found in FMS anomalies, such as altitude coding errors resulting in glidepath intercepts at incorrect altitudes, and prepare the part 129 foreign air carrier for IAPs unique to the NAS.

4) Any other pertinent information.

h) PI Actions.

1) PIs must schedule a kickoff/preapplication meeting (i.e., video, teleconference, or face-to-face, if that is what works best for all parties, any acceptable means). This meeting is between the foreign air carrier/applicant, PIs, the Flight Technologies and Procedures Division Flight Operations Group, the Navigation and Flight Deck Technologies Section (AIR-6B1), and the International Program Division for each foreign air carrier who wants to conduct RNP AR in United States sovereign airspace. The purpose of this meeting is to ensure that the foreign air carrier has clarity on what must be included as part of their application package. The foreign air carrier must come prepared to this meeting with what M/M/S aircraft they would like to operate in RNP AR. The PI must advise the foreign air carrier that a person knowledgeable about the operation of aircraft in RNP AR such as the applicant's chief pilot must be present at the kickoff and any followup meetings.

2) PIs must enter all RNP AR applications into the NextGen Tracker and forward to the International Program Division.

**Note:** The International Program Division will forward the application to the Flight Technologies and Procedures Division Flight Operations Group for technical review as appropriate.

3) The PAI determines the proper nomenclature of the equipment manufacturer's make, model, and software version. The PAI also determines that the RNP AR equipment and system is installed in accordance with approved data and meets the criteria equivalent to AC 90-100. To ensure the proper configuration control of the approved RNP AR operating system, it is required to list both the hardware and the software part numbers or version/revision numbers in Table 1 of C384.

4) As described in the AC 90-100, the term "compliance" means meeting the operational and functional performance criteria. For the intended purpose of this policy, "compatible" means equipment and systems that perform their intended function and meet performance requirements for RNP AR operations, as determined to be in compliance for approval.

**Note:** The ATC Flight Plan must contain information in item 18 of FAA Form 7233-4 indicating the RNP AR capabilities and include applicable descriptors.

5) After the POI and PAI agree on the following, they can issue C384 to the foreign air carrier:

a. The foreign air carrier provided the PI with all of the information in subparagraph g).

b. The PI has written division management concurrence from the International Program Division and the Flight Technologies and Procedures Division. See Figure 4-4L, RNP AR Approval Checklist (Optional).

i) FAA Acceptance of Aircraft Qualification and Operational Documentation. Before application, foreign air carriers and manufacturers should review all performance requirements. Installation of equipment by itself does not guarantee final approval for use.

1) Aircraft Qualification Documentation. Aircraft manufacturers should develop aircraft qualification documentation showing compliance with equivalent standards to AC 20-138 and AC 90-101, Appendix 2, Aircraft Qualification. This documentation identifies the optional capabilities (e.g., RF legs and RNP missed approaches), the RNP capability of each aircraft configuration, and the characteristics that may alleviate the need for operational mitigations. This documentation should also define the recommended RNP maintenance procedures.

2) RNP AR Operational Documentation. The FAA recommends that the aircraft manufacturer develop RNP AR operational documentation. The operational documentation consists of a recommended navigation data validation program (refer to AC 90-101, appendix 3) and operational considerations (refer to AC 90-101, appendix 4), training programs (refer to AC 90-101, appendix 5), and RNP monitoring programs (refer to AC 90-101, appendix 6).

3) FAA Acceptance.

a. For new aircraft, the aircraft qualification documentation may be approved as part of an aircraft certification project in coordination with AIR-6B1 and reflected in the approved flight manual and related documents. The RNP AR operational documentation may be accepted by the AEG in coordination with the Flight Technologies and Procedures Division.

b. For existing aircraft for which there is a U.S. TC, the aircraft manufacturer should submit the aircraft qualification and RNP AR operational documentation to the Flight Technologies and Procedures Division. The Flight Technologies and Procedures Division will coordinate with other FAA offices and may accept the package as appropriate for RNP AR operations. Acceptance will be documented in a letter to the aircraft manufacturer.

c. For foreign-registered aircraft for which there is no U.S. TC, the foreign air carrier must provide a copy of the aircraft manufacturer aircraft qualification and RNP AR operational documentation as part of their application package for C384.

**Note:** Relevant ICAO references include: ICAO Doc 9613, Attachment C, 3.3, Aircraft Eligibility; and ICAO Doc 9905, Required Navigation Performance Authorization Required (RNP AR) Procedure Design Manual, Chapter 1, 1.3, Aircraft Qualification, and Chapter 6, 6.3.2.5, Aircraft Eligibility, and 6.3.3, Aircraft Requirements.

j) Aircraft Modification. If any aircraft system required for RNP AR is modified (e.g., software or hardware change/revision), the foreign air carrier must obtain the manufacturer's updated aircraft qualification and operational documentation confirming continued suitability for RNP AR approach operations. Unless the manufacturer's documentation indicates the change/revision has no effect on RNP AR operations, the division managers from the International Program Division and Flight Technologies and Procedures Division must provide a revised concurrence memo for the foreign air carrier's use of the aircraft with modifications for RNP AR operations. The IFO should coordinate with the International Program Division and the Flight Technologies and Procedures Division Flight Operations Group SMEs to facilitate processing of the foreign air carrier's request for operational approval with the changed/revised equipment.

**Note:** Software or hardware changes must be supported by the manufacturer's updated aircraft qualification and operational documentation.

k) Additional Series of M/M Aircraft. The POI/PAI must coordinate additions to existing C384 with the International Program Division, the Flight Technologies and Procedures Division, and AIR-6B1. During this initial consultation, the division SMEs will determine if a full or tailored application is needed or will grant (verbal, followed by written) concurrence (which may be in the form of an email) for the PI to amend the C384 to add the additional series without further documentation. See Figure 4-4K, Sample C384 Table 1 – Aircraft and Navigation Systems Eligible for RNP AR, for guidance on completing Table 1.

**Note:** The multiple configurations of existing and new aircraft make it impossible to give a hard and fast rule. There are some situations where the proposed series has identical capabilities to a foreign air carrier's existing fleet and this addition provides flexibility to grant

the C384 amendment with minimal delay while providing appropriate levels of review for aircraft with differences.

**Figure 4-4K. Sample C384 Table 1 – Aircraft and Navigation Systems Eligible for RNP AR**

Aircraft <sup>1</sup> M/M/S	Navigation System <sup>2</sup>		Limitations <sup>3</sup>	Autopilot Coupled or Flight Director Required <sup>4</sup>	Lowest RNP <sup>5</sup>	Additional Aircraft Capabilities
	M/M	Software Version				
			Not authorized to use temperature compensation system. Not authorized procedures with missed approaches requiring RNP less than 1.0. None	Autopilot Coupled with Flight Director Autopilot and/or Flight Director Flight Director only	RNP	RF Legs <sup>6</sup> Missed approach requiring less than RNP 1.0.

<sup>1</sup> Select the aircraft M/M/S authorized for RNP AR into the United States.

<sup>2</sup> Enter navigation system M/M and software version. The specific M/M of navigation equipment, including the current software version installed on each associate aircraft M/M, must be entered in the column labeled “Navigation System.” The Navigation System column is further broken down into two columns: one for M/M and one for the software version. PIs should remind foreign air carriers that any change to C384 (e.g., a change in the software version) constitutes a change to the OpSpec and must be authorized prior to use in U.S. airspace.

<sup>3</sup> Enter limitations in the column labeled “Limitations.” If there are no limitations, then select “None” from the dropdown list; do not leave it blank. Enter all applicable limitations as follows:

- “Not authorized to use temperature compensation system.” Enter this limitation unless the aircraft has temperature compensation in accordance with AC 90-101, appendix 2, paragraph 3a(7), and the foreign air carrier provides pilot training on the use of the temperature compensation function.
- “Not authorized procedures with missed approaches requiring RNP less than 1.0.” Enter this limitation when the aircraft/navigation system does not meet AC 90-101, appendix 2 criteria—approaches with a missed approach less than RNP 1.0.

<sup>4</sup> Enter autopilot or FD requirement. RNP AR procedures with RNP values less than RNP 0.3 or with RF legs require the use of autopilot or FD driven by the RNAV system in all cases. In the column labeled “Autopilot Coupled or Flight Director Required,” select one of the following in accordance with the aircraft/navigation system qualification:

- “Autopilot Coupled with Flight Director,” or

- “Flight Director Only.”

**Note:** PIs may also select “Autopilot and/or Flight Director” if International Program Division concurrence was received and the foreign air carrier will be training their flightcrews for both autopilot and FD to that RNP value.

<sup>5</sup> Enter lowest authorized RNP value in the column labeled “Lowest RNP.” These values will vary depending on the M/M/S and navigation system combination.

**Note:** Many aircraft will have different RNP values associated with “Autopilot Coupled with Flight Director” or “Flight Director Only” operations.

<sup>6</sup> Since all operators in U.S. airspace must have RF leg capability, the “RF Legs” option on the “Additional Aircraft Capabilities” dropdown list must be selected for all foreign air carriers to whom C384 is issued. Any foreign air carrier who does not have RF leg capability must not be issued C384.



**Figure 4-4L. RNP AR Approval Checklist (Optional) (Continued)****SECTION 2: DOCUMENTATION\*\*\*\*\***

*Select the applicable check box.*

- Aircraft Qualification
- Navigation Data Validation Program
- Established Maintenance Procedures
- Training (e.g., flightcrew/dispatch)
- Minimum Equipment List (MEL) Revision (as required)
- Operational Procedures Requirements
- RNP Monitoring Program
- Conditions or Limitations for Approval
- Dispatch/Flight Following Procedures
- Validation Successfully Completed (as required)
- RNP AR Compliance Traceability Matrix/RNP AR Compatibility Trace Matrix

**SECTION 3: COMMENTS** *(Enter as applicable.)*

Remarks:



**Figure 4-4L. RNP AR Approval Checklist (Optional) (Continued)**

SECTION 5: JOINT AFS-50 AND AFS-400 DIVISION MANAGEMENT APPROVAL/DISAPPROVAL	
<input type="checkbox"/> Received written joint AFS-50 and AFS-400 division management concurrence  <input type="checkbox"/> Concurrence date _____ <span style="margin-left: 150px;">MM/DD/YYYY</span>  <input type="checkbox"/> Concurrence as requested  <input type="checkbox"/> Concurrence with the following additional limitations and provisions: _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ <input type="checkbox"/> PI issued OpSpec C384 _____ <span style="margin-left: 150px;">MM/DD/YYYY</span>	<input type="checkbox"/> Received written joint AFS-50 and AFS-400 division management denial  <input type="checkbox"/> Denial date _____ <span style="margin-left: 150px;">MM/DD/YYYY</span>  <input type="checkbox"/> Joint AFS-50 and AFS-400 division management denial for the following reasons: _____ _____ _____ _____ _____ _____ <input type="checkbox"/> PI notified operator of denial _____ <span style="margin-left: 150px;">MM/DD/YYYY</span>

\*Initial application must be checked when no C384 has been issued.

\*\*Amendment request must be checked when an amendment to the basis on which C384 has been issued has been requested by the foreign air carrier. For example, the foreign air carrier completed the required demonstrations for a lower RNP value in U.S. airspace and is requesting an amendment to C384 previously issued by the FAA.

**Note:** PIs do not need to request an amended joint International Program Division and Flight Technologies and Procedures Division management concurrence memo prior to amending the “Lowest RNP” value if the joint division management concurrence memo authorized a lower RNP value at the end of a specified period, or upon the foreign air carrier’s completion of a number of RNP AR approaches.

\*\*\*Entries in this block must reflect what the State of the Operator approved the foreign air carrier for. They follow the layout of C384 Table 1.

\*\*\*\*Application date refers to the date when all of the required documentation has been provided by the applicant to the PI (see subparagraph g) for details).

\*\*\*\*\*Airbus Compliance Documents (ACD) and the Boeing companion “RNP Capabilities Documents” are formal, controlled documents detailing the RNP capability of the aircraft and

supporting how the customer must operate the aircraft to safely conduct RNP AR approach operations. The FAA cannot determine aircraft eligibility for any Airbus or Boeing aircraft without this documentation to support the foreign air carrier's claim of eligibility. Due to the variety of Airbus and Boeing aircraft configurations for the various Airbus and Boeing type designs, the FAA cannot rely on a foreign air carrier's claims of compliance and performance; and, as a result, the FAA requires confirmation from Airbus through the ACD(s) and from Boeing through the RNP Capabilities Document(s).