VOLUME 12 INTERNATIONAL AVIATION

CHAPTER 2 FOREIGN AIR CARRIERS OPERATING TO THE UNITED STATES AND FOREIGN OPERATORS OF U.S.-REGISTERED AIRCRAFT ENGAGED IN COMMON CARRIAGE OUTSIDE THE UNITED STATES

Section 5 Part 129 Part C Operations Specifications—Airplane Terminal Instrument Procedures and Airport Authorizations and Limitations

12-214 PART C OPERATIONS SPECIFICATIONS (OPspecs). The Federal Aviation Administration (FAA) issues Part C Opspecs to foreign air carriers who conduct airplane operations under Title 14 of the Code of Federal Regulations (14 CFR) part 129. The FAA does not issue Part C Opspecs to foreign air carriers who conduct only helicopter operations. Instrument flight rules (IFR) helicopter operators are issued Part H Opspecs. The FAA does not usually issue Part C Opspecs to part 129 on-demand foreign operators who are restricted to visual flight rules (VFR)-only operations.

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 aviation safety inspectors (ASI) to perform an evaluation of an operator’s application for the initial issuance or an amendment to Opspec C048. An application is required for each operator under 14 CFR part 129 seeking authorization to conduct EFVS operations under 14 CFR 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 operators 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 and describes 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) Flight Technologies and Procedures Division. The Flight Technologies and Procedures Division is responsible for providing the technical and policy support and consultation to the inspectors conducting the application evaluation and coordinating with other divisions, as applicable.
c) International Field Offices (IFO).

I. 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 the current edition of Advisory Circular (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 operator’s submission.

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

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

b) Volume 12, Chapter 2, Section 5. Inspectors must use this as a general guideline for conducting the evaluation of an application.

c) International Civil Aviation Organization (ICAO) Annex 6, Part 1, Attachment, Head-Up Displays (HUD) and Enhanced Vision Systems (EVS). This attachment contains ICAO guidance for EFVS.

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

e) Flight Technologies and Procedures Division EFVS Focal Point. This is the policy division for EFVS and operator authorizations. Inspectors should contact the EFVS Focal Point listed on the following Flight Operations Branch’s website for technical support or when directed by guidance: https://www.faa.gov/about/office_org/headquarters_offices/avs/offices/afx/afs/afs400/afs410/efvs/.

D. Introduction. In order to obtain authorization to conduct EFVS operations (C048), an operator 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 operators of foreign-registered airplanes to conduct EFVS operations in the United States. This C048 authorization is based 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 EVFS 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 operator submits for review and approval its airplane MEL, based on the MMEL, to the FAA. For EFVS operations, the foreign operator should take the EFVS system and components into consideration during MEL submission, review, and approval, if the foreign operator 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, and no field approvals are authorized for EFVS.

9) OpSpecs and any proposed amendments the operator is seeking.

F. Instructions for Table 1 (Figure 12-15). The following are instructions to inspectors for populating Table 1 of the authorization:

1) Authorization. The foreign air carrier is authorized to conduct the EFVS operations under § 91.176 specified in this OpSpec.
2) **Authorized Airplanes, Equipment, and EFVS Operations.** The foreign air carrier is authorized to conduct EFVS operations specified under § 91.176 using the airplanes listed in 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 12-15. Sample C048 Table 1 – Authorized Airplanes, Equipment, and EFVS Operations**

<table>
<thead>
<tr>
<th>Airplane (M/M/S)</th>
<th>EFVS System/Sensor</th>
<th>EFVS Operation(s)</th>
<th>EFVS Operational Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>(With sub-list attribute)</td>
<td>(Drop Down)</td>
<td>(Drop Down)</td>
<td>(Drop Down)</td>
</tr>
</tbody>
</table>

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 an operator’s aircraft list in the Web-based Operations Safety System (WebOPSS) assigned an EFVS authorization will populate the drop-down 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 operator’s airplane to edit, and add “EFVS” to the “Authorization” section.

4) **EFVS System/Sensor.** Select the enhanced flight vision system 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. An operator 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 (Runway Visual Range (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 this OpSpec 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 this OpSpec 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 C050. DECOMMISSIONED.**

**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 instrument flight rules (IFR). This paragraph provides direction and guidance on acceptance of U.S. Terminal Instrument Procedures (TERPS). This OpSpec 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 International Civil Aviation Organization (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 all U.S. regulatory requirements are complied with, including all more restrictive State of the Operator requirements.
OPSPEC C052—STRAIGHT-IN NONPRECISION, APV, AND CATEGORY I PRECISION APPROACH AND LANDING MINIMA—ALL 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. Before authorizing a type of instrument approach procedure (IAP), the principal operations inspector (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. All of the approaches authorized by OpSpec C052 must be published in accordance with 14 CFR part 97.

NOTE: Questions regarding the issuance of OpSpec C052 should be directed to the Flight Technologies and Procedures Division (AFS-400) or the International Program Division (AFS-50).

B. Types of Instrument Approaches Authorized. In paragraph C052, Table 1 specifies the types of instrument approaches the operator is authorized to conduct under instrument flight rules (IFR) and prohibits the use of other types of instrument approaches. In the Web-based Operations Safety System (WebOPSS), the POI will select the approaches that apply to the operator. Refer to the Aeronautical Information Manual (AIM) for a detailed description of each approach.

1) Refer to the current editions of Advisory Circular (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 OpSpec 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 Table 1 of OpSpec C052, the aircraft and equipment must be listed in Table 1 of OpSpec B035.

4) Required Navigation Performance Approaches (RNP 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. An RNP APCH typically addresses only the requirement for the lateral navigation aspect (2D navigation) along straight segments. RNP approaches that contain a curved segment (Radius to Fix (RF) leg), Final Approach Segments (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. C052 does not authorize RNP AR operations. Authorization for
RNAV RNP AR approaches is through nonstandard OpSpec C384. (Refer to the current edition of AC 90-101, Approval Guidance for RNP Procedures with AR.)

5) Three groups of IAPs may be authorized in OpSpec C052:
   a) Column one specifies the Nonprecision Approaches (NPA) without vertical guidance that are authorized by OpSpec C052. Operators must ensure the aircraft will not go below the minimum descent altitude (MDA) without the required visual references specified in 14 CFR part 91, § 91.175.
      1. The International Civil Aviation Organization (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 of OpSpec C052 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 System (GBAS)). These APVs are trained using an approved method that allows descent to a published decision altitude (DA).
      1. APV approaches may contain Localizer Performance with Vertical Guidance (LPV) minima requiring wide area augmentation system (WAAS) and lateral navigation (LNAV)/vertical navigation (VNAV) minima which may be flown with either barometric vertical navigation (baro-VNAV) or WAAS-based VNAV and are authorized in column two of Table 1 of OpSpec C052. (See subparagraph C to determine applicable lines of minima.) The AIM and the approach chart legend also have this information.
      2. Aircraft accomplishing RNP approaches (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 approach using the LNAV/VNAV minimums, the current vertical deviation limits are +100/-50 feet. Aircraft qualified using the current edition of AC 20-138, Airworthiness Approval of Positioning and Navigation Systems, deviation display requirements for navigation, may use a vertical deviation limit of ±75 feet (or a smaller value). This information must be published in the Airplane Flight Manual (AFM), 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 selectable menu for column two of the OpSpec C052 template Table 1.
   c) Column three of OpSpec C052 provides for the authorization of CAT I precision IAPs from an electronic glideslope (ILS or GBAS Landing System (GLS)).
      1. “RNAV/ILS” in column three may only be selected in C052 if the operator meets the requirements in OpSpec C063.
2. For pilot qualifications, the initial qualification segment of the certificate holder’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/.

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 and understand the flight management computer (FMC) coding of a simultaneous offset instrument approach (SOIA) RNAV and how that coding impacts the conduct of a missed approach. Testing of knowledge objectives is required as part of initial and recurrent qualification training. See subparagraph I.

**Figure 12-3A. Sample C052 Table 1 – Authorized Instrument Approach Procedures**

<table>
<thead>
<tr>
<th>Nonprecision Approaches (NPA) Without Vertical Guidance</th>
<th>Approaches With Vertical Guidance (APV)</th>
<th>Precision Approach Procedures (ILS &amp; GLS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASR/SRA/SRE</td>
<td>LDA w/ glideslope</td>
<td>ILS</td>
</tr>
<tr>
<td>AZI</td>
<td>RNAV (GPS)</td>
<td>ILS/PRM</td>
</tr>
<tr>
<td>AZI/DME</td>
<td>RNAV (GNSS)</td>
<td>PAR</td>
</tr>
<tr>
<td>AZI/DME Back Course</td>
<td>LDA PRM</td>
<td>ILS/DME</td>
</tr>
<tr>
<td>GPS</td>
<td>LDA PRM DME</td>
<td>RNAV/ILS</td>
</tr>
<tr>
<td>LDA</td>
<td>SDF w/ glideslope</td>
<td>GLS</td>
</tr>
<tr>
<td>LDA/DME</td>
<td>LOC BC w/ glideslope</td>
<td></td>
</tr>
<tr>
<td>LOC</td>
<td>RNAV (GPS) PRM</td>
<td></td>
</tr>
<tr>
<td>LOC BC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LOC/DME</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NDB</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NDB/DME</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RNAV (GPS)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VOR/DME RNAV</td>
<td></td>
<td></td>
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<tr>
<td>SDF</td>
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<tr>
<td>TACAN</td>
<td></td>
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<tr>
<td>VOR</td>
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<tr>
<td>VOR/DME</td>
<td></td>
<td></td>
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<tr>
<td>LOC/BC/DME</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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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.) Due to this transition, the FAA has revised the titles of the approach procedures to reflect these upgrades. 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). Existing overlay approaches may be requested using the GPS title. For example, request “GPS RWY 24” to fly the very high frequency omnidirectional range (VOR) or GPS RWY 24 approach.

NOTE: 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. As the satellite navigation evolution continues, the WAAS has been developed to improve the accuracy, integrity, and availability of GPS signals. WAAS receivers support all basic GPS approach functions and will 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. 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. 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 see the AIM or contact AFS-400.

NOTE: 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 has been 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 very high frequency (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.

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 also a few 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 will 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 can be 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, operators are authorized to execute instrument approach operations on IAPs that have been published:

1) Under part 97.

2) Under the criteria in the current edition of FAA Order 8260.3, United States Standard for Terminal Instrument Procedures (TERPS).

3) Under any other criteria authorized by AFS-400.

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

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 final approach fix (FAF) altitude, typically to a point approximately 50 feet above the runway threshold or the point where the flare will begin. For approaches that do not use LNAV/VNAV, LPV, or an ILS/GLS glidepath, a CDFA technique is recommended. 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. 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. The continuous descent approach technique can be flown on almost any published approach when VNAV or ILS/GLS is not available.

1) 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 operator must add an altitude increment to the MDA (e.g., 50 feet) 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).

2) The operator 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. Paragraph 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 Head-Up Display (HUD) usage. The POI should allow the use of 1800 RVR minima to runways without centerline (CL) lighting or TDZ lighting, 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.” 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 paragraph C052. This is also reflected in the published inoperative components table for IAPs.

1) FAA Approval. Operators may continue to use the standard CAT I minima based solely on ground lighting systems without alteration of current authorizations or procedures. Operators 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, inspectors shall ensure that each operator meets the following conditions:

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

b) Flightcrew Procedures. The flightcrew must use the FD, or 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.

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

2. Single pilot operators are prohibited from using the FD to reduced landing minima without accompanying use of an autopilot or HUD.

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 approved by their Civil Aviation Authority (CAA).

H. SA CAT I. OpSpec C052 contains selectable text which authorizes SA CAT I ILS approaches to runways without TDZ or runway centerline (RCL) lights with a radio altimeter decision height (DH) as low as 150 feet and a visibility minimum as low as RVR 1400 when using a HUD to DH. The operator must meet all of the following requirements:

1) Eligibility Requirements. Before authorizing SA CAT I, the POI must ensure that 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 SA 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 SA 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 SA CAT I minimum. The first procedures with these minimums will be published in 2010.

e) Unlike the other approaches authorized in C052, the mid-RVR report may not be substituted for the TDZ RVR report when using SA 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. Where parallel RCLs are less than 4,300 feet apart, but not less than 3,000 feet apart, simultaneous PRM approaches may be conducted. Similarly, where parallel RCLs are less than 3,000 feet apart, but no less than 750 feet, SOIA may be conducted using an ILS, LDA approach with glideslope, 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 feet and at least 3,000 feet, NTZ monitoring is accomplished using a special PRM radar. Utilization of vertical guidance is required for all PRM approaches. RNAV (GPS) PRM approaches may be substituted for the ILS PRM and/or the LDA PRM approach. Pilots must have completed PRM training prior to conducting any PRM approach. An ILS PRM and its overlayed RNAV (GPS) PRM approach are procedurally equivalent. LDA PRM and its overlayed RNAV (GPS) PRM approach are procedurally equivalent. 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 operator 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 OpSpec C052. Flightcrews are required to manually fly the breakout maneuver unless otherwise approved. The 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. The demonstration should conform to procedures contained in the air carrier’s approved operating manual for its flightcrews. The commercial operator 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 assuring that no flight will be commanded to descend below 1,000 feet 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 OpSpec 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/.)

   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:
   a. Describe the PRM system to include the meaning of “no transgression zones.”
   b. Know that an airplane on an adjacent approach path may be less than 4,300 feet away and may be flying at a different speed.
   c. 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.
   d. Identify the differences between PRM approach charts and normal approach charts, including the special instruction pages for PRM.
   e. Explain the unique communication requirements (equipment and procedures) for ILS/PRM, LDA/PRM, and RNAV (GPS) PRM approaches.
   f. Know that an unpublished missed approach instruction that ATC may issue prior to published MAPs is called a “breakout.”
   g. 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 feet above the highest obstruction in that sector. The rate of descent that controllers expect is not more than 1,000 feet per minute.
   h. 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.
i. 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.

j. 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.

k. 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 feet 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.

NOTE: Initial breakout flight training must focus on the descending breakout.

NOTE: 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 ILS/PRM Approach for Air Carriers video. (For additional details, see subparagraphs B5)c2 and I4).

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 14 CFR Part 129 Foreign Air Carriers. A part 129 foreign air carrier operating in the United States may be authorized in OpSpec 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 I4 above; 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 C053. RESERVED.

OPSPEC C054. DECOMMISSIONED.

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

A. Applicability. Paragraph C055 is an optional authorization available to all operators conducting airplane operations under 14 CFR part 129. The OpSpec is approved by the Administrator as an alternative method of calculating alternate minima to that specified in 14 CFR part 91, § 91.169(c). The OpSpec may be issued if the State of Operator has approved the foreign air carrier for this alternative method. The OpSpec must not be issued if the State of Operator has not approved the foreign air carrier for this alternative method. Without OpSpec C055, the foreign air carrier must comply with the highest minima of the State of Operator authorized method and § 91.169(c). The relevant International Civil Aviation Organization (ICAO) Annex 6 Part I, International Commercial Air Transport—Aeroplanes, standards are 4.3.4 and 4.3.5 with additional guidance in ICAO DOC 9976, Flight Planning and Fuel Management Manual. Paragraph C055 provides a two-part table from which the operator, 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 OpSpec/MSpec/LOA C055 should be directed to the Flight Technologies and Procedures Division (AFS-400) or the International Programs and Policy Division (AFS-50). If the PI directs questions to AFS-50, the PI should copy AFS-400 and vice versa.

B. Airports With At Least One Operational Navigation Facility. The first part of the table is for airports with at least 1 operational navigational facility providing a straight-in Nonprecision Approach (NPA) procedure, or a straight-in precision approach procedure, or, when applicable, a circling maneuver from an instrument approach procedure (IAP). The required ceiling and visibility is obtained by adding 400 feet (ft) to the minimum descent altitude/height (MDA/H) or, when applicable, the authorized decision altitude/height (DA/H) and by adding 1 statute mile (mi) or 1,600 meters (m) to the authorized landing minimum.

C. Airports With At Least Two Operational Navigation Facilities. The second part of the table 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. The required ceiling and visibility is obtained by adding 200 ft to the higher MDA/H or DA/H of the two approaches used and by adding 1/2 mi or 800 m visibility to the higher authorized landing minimum of the two approaches used.

D. Higher Alternate Minimums When Using Two Operational Navigation 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). On the other hand, an airport with two straight-in approaches, one which is a straight-in precision approach with a DA/H of 200 ft and 1/2 mi visibility and the other 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 the OpSpecs require 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 (such as, 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 Notices to Airmen (NOTAM) that may affect the landing at the estimated time of arrival (ETA).

F. Credit for Alternate Minimums. OpSpec C055 allows credit for alternate minimums for airports with a published Category (CAT) II or CAT III approach based on engine inoperative CAT II or CAT III capability. (See subparagraph I below 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. See the criteria in the current edition of Advisory Circular (AC) 120-28, Criteria for Approval of Category III Weather Minima for Takeoff, Landing, and Rollout—engine inoperative, 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 the OpSpec, the principal operations inspector (POI) shall ensure through documentation that the foreign air carrier has provided that subparagraphs F1)a) through d) above are met and the air carrier’s Civil Aviation Authority (CAA) authorizes it for CAT II/III alternate minimum. If the foreign air carrier does not meet the preceding conditions or equivalent conditions acceptable to the FAA, the PI must ensure that the issued OpSpec 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.” Question: “Does the FAA consider 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 or two navigational facilities?”

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 instrument landing system (ILS) facilities share a single transmitter, it would be 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 Area Navigation (RNAV) Global Positioning System (GPS) Minima at a Destination Alternate. Pilots may plan to use any instrument approach authorized for use with wide area augmentation system (WAAS) avionics at a required alternate if the aircraft is suitably equipped with GPS WAAS equipment and the foreign air carrier is authorized to conduct Localizer Performance with Vertical Guidance (LPV) and/or Localizer Performance (LP) approach and landing operations by the State of Operator. When using WAAS at an alternate airport, flight planning must be based on flying the RNAV (GPS) lateral navigation (LNAV) minimums line, or minimums on a GPS approach procedure, or conventional approach procedure with “or GPS” in the title. Also, RNAV (GPS) (or RNAV Global Navigation Satellite System (GNSS)) are based on a single navigational facility when determining the approach facility configuration in Table 1 of the OpSpec, even if there are two or more RNAV (GPS) approaches to different suitable runways. Upon arrival at an alternate, when the WAAS navigation system indicates that LNAV/vertical navigation (VNAV) or LPV service is available, vertical guidance may be used to complete the approach using the displayed level of service. The FAA has begun 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. Because every procedure must be individually evaluated, removal of NA from RNAV (GPS) and GPS procedures will take some time.

I. Selectable Text and Table 1. There are two selectable rows which can be loaded into Table 1 of the OpSpec (Alternate Airport IFR Weather Minimums) and three selectable text options for additional limitation and provisions (subparagraph b(5) of the OpSpec).

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 a CAT II or CAT III credit is authorized, the first selectable text paragraph must be loaded as well.

2) Selectable Text Options. Selectable text options for additional limitation and provisions (subparagraph b(5) of the OpSpec): 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 I1) above. 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. 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, principal inspectors (PI) must ensure that the appropriate selectable text option is selected, if applicable. If none of the selectable text options apply, 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 operations under instrument flight rules (IFR) with airplanes to the United States. This OpSpec contains guidance regarding pilots, aircraft, and airports when lower minimums than those defined in 14 CFR part 91, § 91.175(f), hereinafter referred to as standard takeoff minimums, are used. Standard takeoff minimums are defined as 1 statute mile visibility or Runway Visual Range (RVR) 5000 for airplanes having two engines or less and ½ statute mile visibility or RVR 2400 for airplanes having more than two engines. OpSpec C056 lists the lowest RVR in feet based on the authorized airplane type.

B. Inspector Action/Web-Based Operations Safety System (WebOPSS) Entry. When issuing OpSpec C056, the principal operations inspector (POI) must select the following in the table in subparagraph b of the OpSpec (see Figure 12-23, Sample C056 Table 1, below):

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 carrier, the POI may not authorize minima lower than RVR 300/300/300. The touchdown zone (TDZ) 5000 selectable in the lowest RVR column must be selected for each single engine make, model, and series (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 statute mile/RVR 5000).

2) The free text box to manually enter the appropriate Head-Up Display (HUD) 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 the OpSpec and applicable to the lowest RVR for the type of aircraft to be used.
**Figure 12-23. Sample C056 Table 1**

<table>
<thead>
<tr>
<th>Lowest RVR in Feet (TDZ/MD/Runout)</th>
<th>Airplane Type*</th>
<th>HUD System*</th>
<th>Additional Limitations and Provisions*</th>
</tr>
</thead>
<tbody>
<tr>
<td>TDZ 1800</td>
<td>ALL**</td>
<td>N/A***</td>
<td>N/A****</td>
</tr>
<tr>
<td>TDZ 1600</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TDZ 2600</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TDZ 5000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1200/1200/1000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1000/1000/1000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>700/700/700</td>
<td></td>
<td></td>
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<tr>
<td>600/600/600</td>
<td></td>
<td></td>
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<tr>
<td>500/500/500</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>300/300/300</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*The last 3 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:

1) 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.

2) If the lowest RVR authorized for all of the foreign air carrier’s aircraft is the same except one type, then select the RVR value that is common to all and in 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.

3) 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 not authorized to use the HUD for takeoff. Select the blank space and type in any additional limitations not covered by the OpSpec. An example of a limitation could be if 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 Civil Aviation Authority (CAA) if the HUD is new.

4) Additionally, the POI must select:

   a) The static text in subparagraphs c(3) and e of the OpSpec 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 subparagraph b of the OpSpec. 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 feet, up to and including 500 feet. 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 feet, up to and including 300 feet. 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 12-4B, Runway Equipment Requirements for Takeoff Minima, for a graphical presentation of requirements covered by OpSpec C056.
Table 12-4B. Runway Equipment Requirements for Takeoff Minima

<table>
<thead>
<tr>
<th>Runway Visual Aid Required</th>
<th>Lowest Allowable Takeoff Minimum Authorization [visibility or RVR (TDZ/Mid/Rollout)]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adequate visual reference, or Any one of the following: Centerline (CL) lighting or HIRL or Runway centerline marking (RCLM)</td>
<td>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).</td>
</tr>
</tbody>
</table>

**Note:** 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 (for example not obstructed by snow).

Day: CL lighting or HIRL or RCLM Night: CL lighting or HIRL

RCLM and HIRL, or CL lighting

HIRL and CL lighting

With an approved HUD takeoff guidance system, HIRL, and CL lighting

**Note:** 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 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 Centerline Lights.** Need to see enough centerline lights to maintain centerline. Required runway length for your aircraft is the greater of accelerate stop, accelerate go, and normal takeoff to 35 feet. For additional references, see International Civil Aviation Organization (ICAO) Annex 4 (Charts), Annex 6, Annex 14 (Airports), and the Terminal Instrument Procedures (TERPS). ICAO Annex 6, Part I, Attachment B, Aeroplane Performance Operating Limitations, states as follows:

   “4.3 No aeroplane should commence a take-off at a mass which exceeds the mass at which, in accordance with the minimum distances for take-off schedules in the flight manual, compliance with 4.3.1 to 4.3.3 inclusive is shown.

   4.3.1 The take-off run required should not exceed the take-off run available.”
4.3.2 The accelerate-stop distance required should not exceed the accelerate-stop distance available.

4.3.3 The take-off distance required should not exceed the takeoff distance available.”

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 C057. DECOMMISSIONED.**

**OPSPEC C059. DECOMMISSIONED.**

**OPSPEC C060—CATEGORY II AND CATEGORY III INSTRUMENT APPROACH AND LANDING OPERATIONS (OPTIONAL).** The FAA evaluates Category (CAT) II and CAT III operations in accordance with the current editions of Advisory Circular (AC) 120-29, Criteria for Approval of Category I and Category II Weather Minima for Approach, and AC 120-28, Criteria for Approval of Category III Weather Minima for Takeoff, Landing, and Rollout; equivalent European Aviation Safety Agency (EASA) criteria; or the International Civil Aviation Organization (ICAO) Doc 9365/AN910, Manual of All-Weather Operations. The FAA authorizes CAT II and CAT III operations by issuing OpSpec C060. Each airplane type make, model, and series (M/M/S) used in CAT II or CAT III operations must be listed in OpSpec C060 subparagraph b, Authorized Approach and Landing Minimums, along with the decision height (DH)/alert height (AH), and lowest Runway Visual Range (RVR) authorized. Foreign air carriers requesting authorization for CAT II or CAT III operations at U.S. airports should meet the following criteria.

A. Using the OpSpec 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 (SA) 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, Authorized Approach and Landing Minimums, 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 OpSpec C060 in accordance with subparagraphs C, D, E, and F below.

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 SA CAT II, or option 3 for both TDZ 1000 RVR CAT II and SA 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 below 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. An operator’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),
- Approach and landing systems used (see subparagraph D),
- Operational minimums (see subparagraph E), and
- Special equipment or limitations (see subparagraph F).

NOTE: Figures 12-20 and 12-21 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 12-20. Sample C060 Table 1 – CAT II Airplane Systems and Landing Minimums

<table>
<thead>
<tr>
<th>Airplane M/M/S</th>
<th>Approach/ Landing System*</th>
<th>DH</th>
<th>TDZ/Mid/RO RVR</th>
<th>Special Operational Equipment and Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autopilot</td>
<td>150 DH</td>
<td>1600/600/300</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HUD</td>
<td>100 DH</td>
<td>1200/600/300</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FP HUD</td>
<td></td>
<td>1000/600/300</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Autoland</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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 12-21. Sample C060 Table 2 – CAT III Airplane Systems and Landing Minimums

<table>
<thead>
<tr>
<th>Airplane M/M/S</th>
<th>Approach/Landing System*</th>
<th>Rollout System*</th>
<th>DH/AH</th>
<th>TDZ/Mid/RO RVR</th>
<th>Special Operational Equipment and Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>FP HUD</td>
<td>None</td>
<td>50 DH</td>
<td>700/700/300</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FP Autoland</td>
<td>FP</td>
<td>30 DH</td>
<td>600/600/300</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FO Autoland</td>
<td>FO</td>
<td>200 AH</td>
<td>600/400/300</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>100 AH</td>
<td>400/400/300</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>50 AH</td>
<td>300/300/300</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>No DH</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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 Airplane Flight Manual (AFM) provisions stating an acceptable level of CAT II or CAT III capability as demonstrated to the FAA, or demonstrated 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 Supplemental Type Certificate (STC).

1) An operator’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 Airplane Flight Manual Supplement (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 SA CAT II or 1000 RVR CAT II operations require guidance or flight control systems (fail passive (FP) Head-Up Display (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 row: 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 an operator 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 SA 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 operator 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 fail passive autoland system.
   3. FO Autoland: fail operational autoland system.

c) Rollout systems:
   1. None: no rollout guidance or automatic rollout system.
   2. FP: any fail passive rollout system.
   3. FO: fail operational 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. Also select the appropriate rollout system: None, FP, or FO.

E. Operational Minimums.

1) CAT II Minimums. Table 12-3 below is a summary of the required RVR minimums for CAT II operations.
Table 12-3. Category II Operating Minimums

<table>
<thead>
<tr>
<th>Type of Operation</th>
<th>TDZ RVR</th>
<th>Mid RVR</th>
<th>Rollout RVR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard CAT II</td>
<td>1600 (500 m)</td>
<td>600 (175 m)#</td>
<td>300 (75 m)#</td>
</tr>
<tr>
<td>Standard CAT II</td>
<td>1200 (350 m)</td>
<td>600 (175 m)#</td>
<td>300 (75 m)</td>
</tr>
<tr>
<td>Standard CAT II to 1000 RVR</td>
<td>1000 (300 m)</td>
<td>600 (175 m)#</td>
<td>300 (75 m)</td>
</tr>
<tr>
<td>Special Authorization CAT II</td>
<td>1200 (350 m)</td>
<td>600 (175 m)#</td>
<td>300 (75 m)</td>
</tr>
</tbody>
</table>

Note: # = If available

a) Select Touchdown Zone (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 or as a final authorization if desired by the operator or the principal operations inspector (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 SA CAT II operations. SA CAT II minimums and DH are 1200 RVR and 100 ft.

2) CAT III Minimums. Table 12-4 below 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 12-4. Category III Operating Minimums

<table>
<thead>
<tr>
<th>Landing System</th>
<th>Rollout System</th>
<th>TDZ RVR</th>
<th>Mid RVR</th>
<th>Rollout RVR</th>
</tr>
</thead>
<tbody>
<tr>
<td>FP (CAT IIIa)</td>
<td>None</td>
<td>700 (200 m)</td>
<td>700 (200 m)</td>
<td>300 (75 m)</td>
</tr>
<tr>
<td>FP or FO</td>
<td>None</td>
<td>600 (175 m)</td>
<td>600 (175 m)</td>
<td>300 (75 m)</td>
</tr>
<tr>
<td>FP</td>
<td>FP or FO</td>
<td>600 (175 m)</td>
<td>400 (125 m)</td>
<td>300 (75 m)</td>
</tr>
<tr>
<td>FO</td>
<td>FP</td>
<td>400 (125 m)</td>
<td>400 (125 m)</td>
<td>300 (75 m)</td>
</tr>
<tr>
<td>FO</td>
<td>FO</td>
<td>300 (75 m)</td>
<td>300 (75 m)</td>
<td>300 (75 m)</td>
</tr>
</tbody>
</table>

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 operator’s airplanes have an AFM statement showing compliance with AC 120-28D criteria (or subsequent editions), or airplanes with flight operational (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 that is explicitly required by the 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, if applicable, Table 2 of C060 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 (that are 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, Operation of Aircraft, 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 unforecast adverse weather or failures 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 OpSpec 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 OpSpec C060 are authorized for only those pilots in command (PIC) and seconds in command (SIC) who have completed the foreign air carrier’s approved training program and who are qualified for the operations authorized in subparagraph a of C060 by one of the foreign air carrier’s check airmen or State of the Operator Civil Aviation Authority (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 14 CFR 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.
I. 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 SA CAT II, as described in subparagraph J2) below, may also be authorized to conduct approaches to standard CAT II facilities when the TDZ and/or centerline (CL) lights are inoperative or when the Approach Lighting System with Sequenced Flashing Lights (ALSF) is downgraded (such as 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 J2), using minimums appropriate to the RVR available and using autoland or manual (HUD) to touchdown.

2) SA CAT II. In addition to the standard CAT II operations authorized by OpSpec C060, SA 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 instrument landing system (ILS) facilities used are CAT I ILS installations that meet the glideslope (GS) and Localizer (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) SA 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 (AFS-400) Restricted/Nonstandard U.S. Facilities Approved for Category II & Category 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 Standard Instrument Approach Procedure (SIAP) or additional operators and their airplanes may be approved by the appropriate Flight Standards office (AFS-400) 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 OpSpec C060 (see Figure 12-22 below).
### Figure 12-22. Sample C060 Table 3 – Restricted/Nonstandard U.S. Facilities

<table>
<thead>
<tr>
<th>Approach Category, Airport Name/Identifier, Runway(s)</th>
<th>Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pittsburgh/Greater Pittsburgh Intl, PA; KPIT RY10L; RVR 300</td>
<td>Airplanes approved: A319, A320, B757, and B767</td>
</tr>
<tr>
<td>Pittsburgh/Greater Pittsburgh Intl, PA; KPIT RY10R; RVR 600 and RVR 300</td>
<td>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.</td>
</tr>
</tbody>
</table>

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

#### A. General.
The FAA authorizes instrument flight rules (IFR) Area Navigation (RNAV) 1 departure procedures (DP) and Standard Terminal Arrivals (STAR) to U.S. airports in accordance with 14 CFR part 129, § 129.17 by issuance of OpSpec C063. Before the FAA issues OpSpec 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 14 CFR part 97 U.S. IFR terminal RNAV 1 DPs and RNAV 1 STARs 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 Civil Aviation Authority (CAA) prior to applying to the FAA for issuance of OpSpec 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 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 OpSpec C063 for RNAV 1 DPs and STAR operations in accordance with, but not limited to, the following:


2) Joint Aviation Authority (JAA) Temporary Guidance Leaflet (TGL) Number 10, Airworthiness and Operational Approval for Precision RNAV Operations in Designated European Airspace.

NOTE: Principal inspectors (PI) must coordinate all acceptable criteria other than these specified in subparagraph B with the International Program Division (AFS-50) who will coordinate with the Flight Technologies and Procedures Division (AFS-400), 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/. For further questions, contact AFS-50 who will coordinate with the Performance-Based Flight Systems Branch (AFS-470), as appropriate.

2) Additional information may also be found in the Web-based Operations Safety System (WebOPSS) guidance in association with OpSpec C063 by clicking on the “Guidance” tab.

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 OpSpec 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 Required Navigation Performance (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. The following are some important definitions as they relate to this authorization:

1) Climb Via and Descend 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.

2) Flight Management System Procedure (FMSP). An RNAV arrival, departure, or approach procedure developed for use by aircraft equipped with a flight management system (FMS).

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

   a) **Standard Instrument Departure (SID).** A SID is a published IFR air traffic control (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.

   b) **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.

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

5) **Area Navigation (RNAV) 1 Departure Procedures (DP) and Standard Terminal Arrivals (STAR).** RNAV 1 terminal procedures require the aircraft’s track-keeping accuracy remain bounded by +1 nautical mile (NM) for 95 percent of the total flight time. RNAV 1 terminal procedures requiring, as a minimum, a distance measuring equipment (DME)/DME/Inertial Reference Unit (IRU)-based and/or Global Positioning System (GPS)-based RNAV system satisfying the criteria of AC 90-100.

6) **Tailored Arrivals (TA).** TAs 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, TA models are limited. Except for the instrument approach portion of an arrival, TA 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 OpSpec C063 must provide the responsible International Field Office (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 and model (M/M) and part number(s) approved;
• Procedures using RNAV 1 DPs and STARs (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. 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 Aircraft Flight Manual (AFM) or other FAA-recognized means.

I. PI Actions. Based on the information supplied by the foreign air carrier, the principal operations inspector (POI) 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 AFS-470 website at https://www.faa.gov/about/office_org/headquarters_offices/avs/offices/afx/afs/afs400/afs470/pbn/.

1) The PAI determines the proper nomenclature of the equipment manufacturer’s M/M 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 OpSpec C063, PIs are not required to populate that column prior to issuing OpSpec 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: Aircraft compliant with the current edition of AC 90-45, Approval of Area Navigation Systems for Use in the U.S. National Airspace System, may not be compliant with the criteria in AC 90-100.

NOTE: Per AC 90-100 and AC 90-105, data suppliers and avionics data suppliers must have an LOA in accordance with the current edition of AC 20-153, Acceptance of Aeronautical Data Processes and Associated Databases. Operators must 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, which is often referred to as DME/DME/IRU.

NOTE: 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: If the responsible IFO is unable to determine equipment eligibility for RNAV 1 DPs and STARs via the AFS-470 website, contact AFS-50 who will coordinate with AFS-470, 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. Operators 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 OpSpec C063 template may be issued indicating the appropriate authorizations in Table 1.

6) If the foreign air carrier has requested to conduct TA into a U.S. airport, then PIs will:
   
a) Add the following statement in the OpSpec C063 Table 1, “Limitations and Provisions” column for each make, model, and series (M/M/S) aircraft with documented FMS autoload/uplink function and approved for TA 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 Parts 91, §§ 91.123, 91.205, and 91.503 (data currency); 95; and 129, § 129.17.
- FAA Order JO 7110.65, Air Traffic Control.
OPSPEC C064. DECOMMISSIONED.

OPSPEC C065—POWERBACK OPERATIONS WITH AIRPLANES (OPTIONAL).
OpSpec C065 authorizes the use of powerplant reversing systems for rearward taxi operations. Before issuing OpSpec C065, the foreign air carrier must provide documentation to enable the principal operations inspector (POI) to determine whether the carrier has established procedures for powerback operations that its civil aviation authority (CAA) has accepted/approved. Airplane types make, model, and series (M/M/S) authorized for powerback operations must be listed in OpSpec 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 part 129, § 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. OpSpec 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) Foreign air carriers conducting certain passenger-carrying operations into alternate airports that are not certificated (see subparagraph B).

2) Foreign air carriers conducting operations at airports that require curfew limitations for flights into or out of specific airports.

NOTE: The FAA does not encourage operators to list in their OpSpecs aircraft-specific limitations for airports with curfew hours. If an airport authority requires operators to list such limitations in their OpSpecs, then operators should list them in Table 1 of OpSpec C067. A sample of Table 1 below shows an example of limitations for air carrier operations into specific airports with curfew hours (see Figure 12-24, Sample C067 Table 1 – Special Airplane Authorizations for Certain Airports).

3) Foreign air carriers conducting operations into airports that require special aircraft performance charts and equipment or special lighting (e.g., flare pots), or operate on unpaved runways.

4) Foreign air carriers conducting operations using the Reginald Bennett International (RBI) Runway Reflectorization System in Alaska.

5) Foreign air carriers conducting operations into a U.S. airport where the U.S. airport requires a special provision to be included in OpSpecs.
NOTE: Principal inspectors (PI) must not list any “special PIC qualification airports” contained in the Special Pilot-In-Command Qualification Airport Assessment Aid in the Flight Standards Information Management System (FSIMS), except when there are additional special limitations and provisions required by the foreign Civil Aviation Authority (CAA) and associated with operations into a specific airport beyond those specified in International Civil Aviation Organization (ICAO) Annex 6, Operation of Aircraft, or on request by the U.S. airport authority, or when the PI determines it necessary in the interest of safety.

NOTE: The content entered into the “Special Provisions/Limitations” column of Figure 12-24 should specify the approved limitations and/or provisions for the designated airport and aircraft, or provide a manual reference from the foreign air carrier’s approved manual system.

6) Airports/runways where the Flight Technologies and Procedures Division (AFS-400) has approved specific “special” instrument procedures for a foreign air carrier.

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

8) Foreign air carriers that may conduct operations at alternate airports located in the United States for those scheduled regular airports which are located outside the United States. An example is when a foreign air carrier conducts scheduled operations into the Vancouver, Canada (CYVR) airport, but uses Seattle (KSEA) and Portland (KPDX) airports as alternate airports.

Figure 12-24. Sample C067 Table 1 – Special Airplane Authorizations for Certain Airports

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

¹ 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.
B. **Alternate Airports Operated by the U.S. Government.**

1) 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 14 CFR 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.

2) Operators 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.

C. **Foreign Air Carrier Actions.** A foreign air carrier applying to the FAA for authorization to operate into an airport within the United States must provide the responsible International Field Office (IFO) with evidence that the State of the Operator has approved it to operate 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) Make, model, and series (M/M/S) authorized for the proposed airport(s).

5) Any other pertinent information. For example:

   - Line station office 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.
• Copy of U.S. economic authority (if required) issued by the Department of Transportation (DOT) to the foreign air carrier to ensure that it reflects the addition of the requested airport.
• Written documentation (e.g., an excerpt from a CAA-approved manual if in English or a letter from a CAA) that the foreign air carrier has airport analysis for the aircraft it intends to operate into the new airport (and its alternate airports).
• Written documentation that the foreign air carrier has properly trained the servicing personnel in accordance with the foreign air carrier’s CAA-approved policies and procedures.
• Written documentation that the foreign air carrier’s contract baggage and cargo handlers have been properly trained to the foreign air carrier’s CAA-approved policies and procedures, which should include dangerous goods training (if applicable).
• Written documentation that the foreign air carrier has properly trained its aircraft maintenance personnel (or contractor maintenance personnel) to its CAA-approved policies and procedures.
• Written documentation that the foreign air carrier has a copy of the State of the Operator’s required manuals (which should address the above-mentioned procedures) available at each new airport.

NOTE: 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.

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

NOTE: 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.

D. Regulatory Compliance. Each foreign air carrier operating to the United States must comply with the current editions of:

1) All applicable regulatory requirements in 14 CFR and elsewhere, 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 (to include, but not limited to, paragraphs 4.2.3.2, 9.4.3.1 through 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. For example:

- If the State of the Operator requires that to operate to the San Francisco (KSFO) airport with the B777 all takeoffs and landings must be conducted by the pilot in command (PIC), then this limitation must be entered into the OpSpec table.
- 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 the OpSpec table.

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

A. The Intent of OpSpec C068. OpSpec C068 authorizes foreign air carriers to conduct Noise Abatement Departure Profile (NADP) operations in accordance with the provisions of OpSpec C068 and the procedures in the foreign air carrier’s manuals that its civil aviation authority (CAA) has accepted/approved. The foreign air carrier shall 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 shall conduct each NADP in accordance with the restrictions and limitations specified in OpSpec C068 and shall not conduct any other noise abatement departure profile operations.

1) For the purpose of these OpSpecs, the NADPs for any airplane type at any one time shall be limited to a maximum of two profiles:

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

2) Only one NADP can be 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 shall 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 shall 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 feet (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 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, for the flaps/slats configuration of the airplane, the takeoff path engine-inoperative climb gradients specified in 14 CFR part 25, § 25.111(c)(3) 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, for the flaps/slats configuration of the airplane, a takeoff path engine-inoperative climb gradient of zero percent, provided that the automatic thrust restoration system will, at a minimum, restore sufficient thrust to maintain the takeoff path engine-inoperative climb gradients that § 25.111(c)(3) specifies 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 to no more than 5 knots below the all-engine target climb speed, and in no case to less than takeoff safety speed (multi) (V2) for the airplane configuration. For automated throttle systems, acceptable speed tolerances can be found in the current edition of Advisory Circular (AC) 25-15, Approval of Flight Management Systems in Transport Category Airplanes.

6. Maintain the speed and thrust criteria as described in steps A2)b)3 through A2)b)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 shall 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. For airplanes without an operational automatic thrust restoration system, achieve and maintain no less than the thrust level necessary after thrust reduction to maintain, for the flaps/slots configuration of the airplane, the takeoff path engine-inoperative climb gradients specified in § 25.111(c)(3) 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, for the flaps/slots configuration of the airplane, a takeoff path engine-inoperative climb gradient of zero percent, provided that the automatic thrust restoration system will, at a minimum, restore sufficient thrust to maintain the takeoff path engine-inoperative climb gradients specified in § 25.111(c)(3) 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 to no more than five knots below the all-engine target climb speed, and in no case to less than V2 for the airplane configuration. For automatic throttle systems, acceptable speed tolerances can be found in AC 25-15.

6. Maintain the speed and thrust criteria as described in steps A2)c)3 through A2)c)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.

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 OpSpec C068 for the foreign air carrier.

NOTE: Configuration changes necessary to meet regulatory performance or operations requirements shall not be affected by this procedure. 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/slots retraction should be initiated at an altitude of no less than 800 ft AFE.

OPSPEC C069–C074. RESERVED.

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

A. Issuing OpSpec C075. The FAA issues OpSpec 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 OpSpec 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 Civil Aviation Authority (CAA) provides the appropriate training and checking, and that the CAA authorized the maneuver and/or approach.

C. Drafting OpSpec C075. Within the OpSpec 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 inspector must select the appropriate text based on what the air carrier is authorized. For example, if the 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 air traffic control (ATC) conducts circle-to-land maneuvers. The term “circle-to-land maneuver” includes the maneuver that is 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 Instrument Flight Rules (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 feet and visibility is less than 3 statute miles, then the foreign air carrier shall 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 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 below:

1) He or she must use the higher of the minimum descent altitude (MDA) of 1,000 feet height above airport (HAA) or the MDA of the published circling landing minimums for the instrument approach to be used.

2) He or she 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 feet and the visibility is at least 3 miles, or the reported weather is at least equal to the published circling landing minimums for the instrument approach to be used, whichever is higher.

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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 Aeronautical Information Publication (AIP) of the United States provides further guidance on foreign operators operating contact approaches in the United States. See Part 2—En Route (ENR), ENR 1.1, paragraph 42.3 and ENR 1.5, paragraph 23 of the AIP of the United States, located at the following Web site: http://www.faa.gov/air_traffic/publications/atpubs/AIP/aip.pdf.

OPSPEC C076. DECOMMISSIONED.

OPSPEC C077—TERMINAL VISUAL FLIGHT RULES, LIMITATIONS, AND PROVISIONS (Required for All Carriers Conducting IFR Operations).

A. Applicability. The FAA issues OpSpec C077 to all foreign air carriers operating turbojet and large airplanes to the United States. Except as provided within OpSpec C077, it restricts all operations to those conducted to instrument flight rules (IFR) except in accordance with the provisions of 14 CFR part 93; Special Federal Aviation Regulation (SFAR) 50-2, Special Flight Rules in the Vicinity of the Grand Canyon National Park, AZ; SFAR 71, Special Operating Rules for Air Tour Operators in the State of Hawaii; or OpSpec B051, if issued. OpSpec 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 visual flight rules (VFR).

3) Terminal departures VFR.

4) Terminal departures IFR.

B. CVFP. For a foreign air carrier conducting a CVFP, the weather minimums of 14 CFR part 91 prevail, except that the carrier shall not use minimums lower than those established in the CVFP.

C. Uncontrolled Airports (OpSpec 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. OpSpec C077 Subparagraph c(3). In lieu of a CVFP, a charted visual procedure that the air carrier’s Civil Aviation Authority (CAA) approved is highly recommended for all terminal VFR departures/arrivals that fall under this OpSpec. The proximity of obstacles to the departure flightpath, the seeing conditions, 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. **OpSpec C077 Subparagraph d(3).** This subparagraph contains a requirement to obtain an IFR clearance no farther than 50 nautical miles (NM) from the departure airport. However, it is recognized that 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 OpSpec C077 subparagraph d, and the requirement to obtain an IFR clearance en route does not apply.

F. **Terminal Departures IFR Requirements in OpSpec C077 Subparagraph e.** If air traffic control (ATC) clears the flight, it is acceptable to execute a Visual Meteorological Conditions (VMC) takeoff and climb to a specified point in the clearance as part of an IFR clearance. However, the foreign air carrier must ensure that the obstacle performance requirements are met. 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 departure procedure requires that all of the conditions and limitations of C077 subparagraphs 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 website at 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 departure procedure. 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) Flightcrews are reminded that 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 departure procedure.

G. **Special Limitations and Provisions for VFR (OpSpec 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 OpSpec C077.

1) **Subparagraph f(1).** In order for the foreign air carrier to conduct VFR operations under OpSpec C077, they must have in place either a procedure or program that can identify

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obstacles in the planned flightpath and the associated airport obstacle data, to ensure adequate information is available for arrival operations and for the takeoff and departure performance requirements specified by operating rules and this OpSpec. Further, they must ensure that the flightcrew use that information. The principal operations inspector (POI) shall request documentation from the foreign air carrier that this program is in place and that the air carrier’s CAA has approved VFR terminal operations.

2) **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 C078. RESERVED.**

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

A. **Before Authorizing OpSpec C080.** Before authorizing OpSpec C080, the principal operations inspector (POI) must determine that the foreign air carrier’s civil aviation authority (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 instrument approach procedure (IAP) (and departure procedure, 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. Note that 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, or mechanical or air traffic control (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 Aeronautical Information Manual (AIM) (for operations in U.S. airspace) or equivalent Aeronautical Information Publications (AIP).

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

2) In those cases where two sources are listed at the same airport, inspectors 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 nautical miles (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 C081. RESERVED.

OPSPEC C083—IASA CATEGORY 2 SPECIAL OPERATIONAL RESTRICTIONS—SCHEDULED AND NONSCHEDULED OPERATIONS, ADDITIONAL AIRCRAFT, AND SPECIAL AUTHORIZATIONS (Required for All Carriers from International Aviation Safety Assessment (IASA) Category 2 Countries).

A. General. OpSpec C083 must be issued to any foreign air carrier conducting operations to the United States under 14 CFR 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 Category 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 Category 2 status. Issuance of OpSpec C083 must be coordinated with the International Program Division (AFS-50).

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 Category 2, the responsible International Field Office (IFO) should begin the process of withdrawing the carrier’s part 129 Op Specs instead of issuing this paragraph. That process should only begin after consultation with AFS-50.

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. carrier or a foreign air carrier from a Category 1 country that is authorized to serve the United States using its own aircraft under part 129. Those operations are not restricted by this OpSpec.

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D. Additional Aircraft and Special Authorizations. On or after the date that the State of the Operator for the foreign air carrier was determined to be Category 2, no additional aircraft (including substitution of aircraft) or special authorizations, such as CAT II/III, instrument landing system (ILS)/precision runway monitor (PRM), land-and-hold-short operations (LAHSO), Reduced Vertical Separation Minimum (RVSM), etc., that require approval, acceptance, or authorization by the State of the Operator’s Civil Aviation Authority (CAA) 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. carrier or foreign air carrier from a Category 1 country that is authorized to serve the United States using its own aircraft; or

2) With the written approval of the AFS-50 division manager.

NOTE: Aircraft must be for the same make, model, series (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 2, Section 1 for additional details.

E. Special Authorizations. Any existing special authorizations, such as CAT II/III, ILS/PRM, LAHSO, RVSM, etc., that require an initial approval, acceptance, or authorization and continuing oversight by the foreign air carrier’s CAA, must be reviewed to determine that adequate oversight by the foreign air carrier’s CAA is occurring on a continuous basis. If it is determined that such adequate oversight by the foreign air carrier’s CAA is not occurring on a continuous basis, the responsible IFO should consider an amendment to withdraw those special authorizations from the foreign air carrier’s OpSpecs. That amendment should be initiated only after consultation with and clearance by AFS-50.

NOTE: Additional information on the FAA’s IASA program, including a country’s IASA category, can be obtained on the FAA website at http://www.faa.gov/about/initiatives/iasa/.

F. Scheduled Operations. In order to maintain operations at current levels for these carriers, 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 OpSpec C083. (See Figure 12-2, Example Scheduled Operations Table, for an example of a city pairing and frequency restriction.) 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 Category 2, or for seasonal operators during the 12 calendar-months prior to the date their home country was announced to be Category 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 Category 2 announcement. OpSpec 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 Category 1 status, this OpSpec will be decommissioned (the city pair and frequency limitation removed).
G. Nonscheduled Operations. When a foreign air carrier’s home country is determined to be in IASA Category 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 Category 2 announcement. (See Figure 12-3, Example Nonscheduled Operations Table, for an example of a geographic area and frequency restriction.) 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. Principal inspectors (PI) must review the Department of Transportation’s (DOT) 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). If the carrier’s home country once again obtains IASA Category 1 status, this OpSpec 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:

1) First, obtain the “list of areas of en route operation.” The Web-based Operations Safety System (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.

2) Then select the individual areas of en route operations to be authorized. If the operator was not authorized for nonscheduled operations, then select “Not Authorized.”

Figure 12-3. Example Nonscheduled Operations Table

<table>
<thead>
<tr>
<th>UNITED STATES GEOGRAPHIC AREA</th>
<th>FREQUENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA—The 48 Contiguous United States and the District of Columbia</td>
<td>6 flights per year</td>
</tr>
</tbody>
</table>
A. Applicability. OpSpec C091 must be issued to foreign air carriers who conduct takeoff and landing operations using Airplane Design Group VI (ADG-VI), International Civil Aviation Organization (ICAO) Group F, within the United States on runways as narrow as 150 feet (45 meters) wide.

B. Operational Requirements. OpSpec 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 feet (65 meters) up to 262 feet (80 meters). 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. The current edition of Advisory Circular (AC) 150/5300-13, Airport Design, establishes airport requirements for the different airplane design groups including runway width requirements, taxiway width requirements, OFZ dimensions, and other airport considerations. 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.

NOTE: In order to allow ADG-VI aircraft operations on existing infrastructure, U.S. Airplane Design Group V (ADG-V) airports accepting scheduled service of ADG-VI aircraft are required to undergo a special Modification of Standards (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 Principal Operations Inspector (POI) Actions. Prior to initiating service to any ADG-V/ICAO Group E airport with an aircraft designed for ADG-VI/ICAO Group F, the air carrier must supply the POI with the following:

- State of the Operator authorization;
- Evidence that the requirements of OpSpec 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., A380 or B747-8); and
- For alternate airports, the process the operator used to evaluate the airport to ensure it could accommodate the aircraft.
1) It is the air carrier’s responsibility to confirm that they can comply with the requirements of OpSpec C091 and to supply the POI sufficient documentation to verify their compliance. The air carrier is responsible for any necessary coordination and letters of understanding with applicable air traffic control (ATC) facilities and the airport operators to meet the requirements of OpSpec C091. For scheduled destination U.S. airports serving ADG-VI/ICAO Group F airplanes, taxi routes to be used and procedures to follow shall be established in a written Taxi Operational Plan approved by the airport operator, ATC, and local control. Taxi Operational Plans may be applicable to:

- A specific foreign air carrier;
- All operators of a specific type of ADG-VI/ICAO Group F airplane (e.g., all A380s serving that airport); or
- All ADG-VI/ICAO Group F airplanes serving the airport (e.g., all A380s and B747-8s).

2) The POI should provide the air carrier, ATC facility, or airport operator support, as necessary, to comply with the requirements of OpSpec C091. Information, to include a list of questions and answers, a list of points of contact (POC), and other helpful information, is located at https://www.faa.gov/about/office_org/headquarters_offices/avs/offices/afx/afs/afs050/afs052/. A list of airports with MoSs for the A380 and B747-8 is located at http://www.faa.gov/airports/engineering/nla_mos/.

NOTE: The air carrier’s compliance with the requirements of OpSpec C091 eliminates the air carrier from having to demonstrate its capability to operate to the lower criteria specified in OpSpec C091 prior to being issued OpSpec 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 feet (60 meters), while ADG-V/ICAO Group E specifies that the runway width be at least 150 feet (45 meters). Currently, the A380 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 takeoff 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. Operators of An-124 and An-225 aircraft must also be issued OpSpec C091.

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

1) Runways for takeoffs and landings shall be at least 150 feet (45 meters) wide;

2) Operators must comply with all limitations and procedures specified in the applicable B747-8 Airplane Flight Manual (AFM) for lightweight and aft center of gravity (CG) takeoffs.
NOTE: In accordance with FAA Airports Engineering Brief No. 74A, Use of 150-Foot (45-M) Wide Runways and Blast Pads for Boeing 747-8 Operations, the 35-foot standard stabilized runway shoulder width for ADG-V does not need to increase to the ADG-VI standard of 40 feet.

**F. A380 Limitations.** The following limitations apply to A380 operations:

1) The overall runway plus shoulder width is 280 feet (85 meters) for U.S. ADG-VI and 250 feet (75 meters) for ICAO Group F. In order to reduce the jet blast impact to 150 feet (45 meters) of runway surface, the FAA recommends stabilized shoulders beyond the runway edge. The FAA 150-foot runway (width) evaluation for the A380, along with the recommendations for these operations contained in ICAO Annex 14, Aerodromes, and the A380 AFM, has led to the following runway width authorization for A380 operation in the United States:

   a) Runways for takeoffs and landings shall be at least 150 feet (45 meters) wide with stabilized runway shoulders on both sides of the runway extending an additional 50 feet (15 meters) outward from the runway edge.

      NOTE: The additional safety width is prescribed because the standard ADG-V runway shoulder width is only 35 feet (10 meters).

   b) Runways as narrow as 150 feet (45 meters) wide with or without the 35 foot (10 meter) wide stabilized shoulders may be used for takeoffs and landings, provided applicable flight manual procedures for takeoffs on such a runway are followed and procedures are 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 air carrier should make sure, or have some documentation, that the airport operator will do it. The document is the Federally-required Airport Certification Manual under 14 CFR part 139.

2) The hold-short lines or hold position must expand outward from the 280 feet point by 1 foot for every 100 feet the runway threshold elevation is above sea level. (For example, a threshold elevation of 5,000 feet above mean sea level (MSL) requires an additional 50 feet. Thus, the hold-short lines or hold position can be no closer than 330 feet (280 feet + 50 feet) from the runway centerline (RCL).) This is to address the hold position of aircraft when an A380 is on final approach and is as required per AC 150/5300-13. Specifically, if the A380 has to go-around (balked landing), then the lateral area on both sides of the runway is clear of obstacles so that if the A380 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 or An-225 is limited to runways that are at least 150 feet (45 meters) 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 14 CFR part 129. OpSpec C381 authorizes special non-14 CFR part 97 Standard Terminal Arrivals (STAR), instrument approach procedures (IAP), departure procedures (DP), and Area Navigation (RNAV) Visual Flight Procedure (RVFP) operations.

NOTE: Currently, there is no method to authorize 14 CFR 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 instrument flight rules (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 air traffic control (ATC) communications, and to enhance safety by providing a stabilized approach to a designated runway.

C. General. C381 is a nonstandard authorization that requires joint, written International Program Division (AFS-50) manager’s and Flight Technologies and Procedures Division (AFS-400) manager’s concurrence, except as stipulated in subparagraph E below. See subparagraph G and Figure 12-14, Special Instrument and RNAV Visual Flight Procedures Process Flowchart.

1) The current editions of 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. This OpSpec C381 guidance will be used for the processing of the request from the initial intent expressed by the operator (verbally, via email, etc.) to OpSpec issuance/amendment. When there is a question, 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 points of contact (POC) and other helpful information, is located at https://www.faa.gov/about/office_org/headquarters_offices/avs/offices/afx/afs/afs050/afs052/.

2) The foreign air carrier’s Civil Aviation Authority (CAA) must approve the use of these special procedures and/or RVFPs. The carrier must be from an International Aviation Safety Assessment (IASA) program Category 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 principal inspector (PI) will not approve the operator’s request. When submitting the formal request, the PI must include the draft OpSpec and the approval documentation from the foreign air carrier’s CAA.

3) PIs must submit requests for the division managers’ concurrence via Next Generation Air Transportation System (NextGen) tracker or any method which supersedes the tracker after meeting the requirements in subparagraph D (i.e., expertise from the AFS-400
NextGen Branch has already been obtained and both the PI and the AFS-400 NextGen Branch concur that the operator meets the RVFP and/or special procedures requirements).

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

D. Process for Obtaining a Published Special or RVFP. The operator requesting the procedure must submit a written request to his or her PI at the responsible International Field Office (IFO). The responsible PI will then contact the AFS-400 NextGen Branch responsible for the physical landing area of the special or RVFP and request the procedure. (Physical landing area could be a destination airport, planned alternate, or other technical stop.) This request does not require a memo. The AFS-400 NextGen Branch will then provide the PI with the appropriate information.

1) FAA 8260 Forms. The AFS-400 NextGen Branch will email the PI the appropriate FAA 8260 forms for the requested procedure. The AFS-400 NextGen Branch 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 operator requirements (FAA Form 8260-7B, Special Instrument Approach Authorization). Below is an explanation of the forms available.

a) For new approaches: FAA Form 8260-7A, which defines the procedure, and FAA Form 8260-7B, which defines the operator requirements, with FAA Form 8260-7B, requiring PI and operator signatures.

b) For older approaches: FAA Form 8260-7, Special Instrument Approach Procedure, defines the procedure and FAA Form 8260-10, Standard Instrument Approach Procedure, defines the operator requirements, with FAA Form 8260-10 requiring PI and operator signatures.

c) For special non-part 97 DPs: FAA Form 8260-15A, Takeoff Minimums and Obstacle Departure Procedure (ODP); FAA Form 8260-15B, Graphic Departure Procedure (DP); and/or FAA Form 8260-15C, Departure (Data Record), which define the procedure; and FAA Form 8260-7B, which defines the operator requirements, with FAA Form 8260-7B requiring PI and operator signatures.

2) Form Review and Distribution. The responsible PI will provide the FAA 8260 forms to the operator. The PI will be the central POC for communications between the FAA and the operator. 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 operator.

a) The operator will provide their CAA with the forms for review. The CAA will review the operator’s existing procedures, documentation, equipment, manuals, and training to ensure any requirements specific to the procedure and listed on the FAA 8260 form are satisfactorily addressed. These requirements may require special aircraft performance, equipment, avionics/software, and/or crew training. If existing operator procedures do not address all requirements, the operator 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 make, model, and series (M/M/S) that they plan to use to fly the special. Once documentation is received from the CAA concurring with the implementation plan and usage of the procedure, the FAA PI reviews the implementation plan.

b) PIs and the operator’s representative will sign the FAA Form 8260-7B after the PI has discussed the procedure requirements with the operator and the operator has provided the PI with documentation showing compliance with procedure requirements (i.e., aircraft performance, aircraft equipment, or crew qualifications) or an implementation plan that shows a reasonable expectation that they will be able to safely meet all procedural requirements. The PI will give a signed copy of the FAA Form 8260-7B to the operator and maintain a signed copy in the office file in accordance with the record retention requirements. These forms allow the operator to receive customized charts and navigation database coding (if applicable) from chart vendors and training from most contract training vendors. It may take some time for the operator to fully implement their plan and qualify all relevant personnel to conduct the procedure(s). The OpSpec must not be authorized until the operator has implemented their plan and is fully prepared to fly the procedure. For additional detail/requirements, see subparagraphs D5)c) and D6) below.

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. That is conveyed by the issuance of OpSpec C381.

c) 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 joint AFS-400 and AFS-50 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. An operator’s training program must include training on the procedure and equipment required to accomplish the procedure. An operator 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 operator 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 AFS-400 NextGen Branch will send the PI the FAA 8260 forms described above. These forms will be used by the operator to get a chart produced. The operator will submit a copy of the completed chart to their PI. Upon receipt, the PI will forward a copy of the chart to the AFS-400 NextGen Branch for review and distribution in accordance with...
Order 8260.60. The PI must not authorize operational implementation of the procedure until the chart is received by the AFS-400 NextGen Branch. In some cases, a third-party developer will create a chart for the operator and submit it to the AFS-400 NextGen Branch for distribution. The AFS-400 NextGen Branch will distribute this chart to the PI who, in turn, will give it to the operator.

5) **Demonstration Flights.** The FAA 8260 forms may require a demonstration flight for all applicants, to include foreign operators. PIs and joint AFS-400 and AFS-50 division management, at their discretion, may recommend that demonstration flights be accomplished to verify the suitability of the operator’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 foreign CAA, the FAA, or both before an operator can use a new or amended special Instrument Flight Procedure (IFP). Flight simulator and tabletop reviews are other ways a foreign CAA may confirm an operation can be conducted safely. The PI and (joint AFS-400 and AFS-50) division management should consider the operator’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 the PI or (joint AFS-400 and AFS-50) division management determine 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 AFS-400 and AFS-50) division management concurrence, may issue a provisional authorization allowing an operator to conduct a special IFP if the applicant’s CAA inspector will be observing the flight to evaluate that procedure during routine operations in visual meteorological conditions (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 OpSpec 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 OpSpec C381, as described below, once the following occur:

- The operator 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.
• AFS-400 and AFS-50 division management concurs with the authorization, if required.
• The operator documents to the responsible PI that they have signed, if required, a letter of agreement (LOA) with responsible Terminal Radar Approach Control (TRACON), or, if LOA not required, the AFS-400 NextGen Branch has notified, if required, the appropriate air traffic facility of the new operator prior to the operator flying the procedure.

NOTE: The FAA sets criteria for “special procedures” within U.S. airspace. There is no International Civil Aviation Organization (ICAO) standard for these procedures. To operate a special procedure at a private airport, the operator must get 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 AFS-400 NextGen Branch, add a reference to that effective date in the “Limitations and Provisions” column of Table 1 of OpSpec 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 AFS-400 NextGen Branch will notify the PI for each operator 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 AFS-400 NextGen Branch. The PI must remove the previously approved special or RVFP from the operator’s OpSpec.

c) Rescinding Concurrence. AFS-400 and AFS-50 division management has the authority to rescind their concurrence. The PI must rescind authorization for use of a procedure immediately upon written notification from AFS-400 and AFS-50 division management. Following is a list of examples for which AFS-400 and AFS-50 division management may rescind their concurrence:

• The operator deviates from the procedure requirements;
• AFS-400 and AFS-50 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 OpSpecs may be required for the authorization of specific procedures for OpSpec C381.

a) OpSpec C052. Part 129 operators must be issued C052. The “type” (e.g., RNAV, instrument landing system (ILS), and localizer type directional aid (LDA)) of instrument approach listed in C381 in Table 1 must be listed in the table of authorized approaches in C052. RVFP and Required Navigation Performance (RNP) Authorization Required (AR) procedures will not be listed in C052.
b) OpSpec C063. Part 129 operators 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 operators must be issued C077 if operating under IFR. C077 provides arrival and departure guidance for instrument and visual flight operations (e.g., visual flight rule (VFR) departure on an IFR clearance). C077 provides guidance on the use of a charted visual flight procedure (CVFP). Determine if a VFR operation into or out of an airport is part of the C381 authorization.

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

e) OpSpec C384. Part 129 operators 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 (joint AFS-400 and AFS-50) division management and documented on the 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 AFS-400 NextGen Branch 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 operator compliance with the amended procedure requirements, and the operator will be required to get a new chart, which they must submit to the PI. The PI will forward the new chart to the AFS-400 NextGen Branch for distribution. The AFS-400 NextGen Branch 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 Management Branch (AFS-54) on all procedure amendments or cancellations, required forms, and new charts. See subparagraph E below for additional details.

9) Cancellations. If an operator is no longer going to use a procedure, the PI must remove the procedure from the operator’s OpSpec and advise the AFS-400 NextGen Branch that the operator is no longer authorized to use that procedure. If the procedure is canceled, the AFS-400 NextGen Branch will notify the PI and the PI will remove the procedure from the operator’s OpSpec.

10) Notices to Airmen (NOTAM). 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 operators through their principal operations inspector (POI). Therefore, it is critical to record, maintain, and update operator contact data with the AFS-400 NextGen Branch.
11) **Adding an Aircraft.** If the operator 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 operator 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 operators who are addressed in National Work Programs for inspectors. PIs are requested to review the OpSpec for their assigned operators annually to ensure the currency of the special instrument procedures is maintained and disseminated. IFOs must maintain files for operators authorized to conduct special procedures in accordance with the recordkeeping requirements. For example:

- The documentary elements of the special instrument procedure (e.g., the FAA Form 8260 series, a copy of the current chart as issued to the operator, and related correspondences);
- The status of the special authority; and
- The AFS-400 NextGen Branch has the current operator contact data.

**E. Concurrence Exceptions.** PIs may issue the OpSpec at the field level (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 AFS-400 NextGen Branch notified the PI of an amendment and the operator documents to the PI: 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 AFS-400 NextGen Branch or division management SMEs’ assistance. The AFS-400 NextGen Branch and division management SMEs will assist, as appropriate. (Refer to the Title 14 CFR Part 129)

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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 AFS-400 NextGen Branch, the operator, and/or the foreign operator’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 12-14 starting with “See” refer to subparagraphs in the OpSpec C381 guidance in this section.
Figure 12-14. Special Instrument and RNAV Visual Flight Procedures Process Flowchart

- Operator interested in special or RVFP
  - Operator’s CAA IASA CAT I? (See C2)
    - Yes
      - PI advises operator may submit request
    - No
      - PI advises operator does not meet criteria
  - PI coordinated issuance of C052 for operator
    - No
      - Operator has C052 issued?
        - Yes
          - Are additional authorizations required? (See D7)
            - Yes
              - PI coordinates issuance of additional authorizations
            - No
              - Requesting to act as lead operator and develop procedure?
                - Yes
                  - Refer to FAA Order 8260.60 for specials or Order 8260.55 for RVFPs
                - No
                  - Page 2
        - No
          - Refer to FAA Order 8260.60 for specials or Order 8260.55 for RVFPs
Figure 12-14. Special Instrument and RNAV Visual Flight Procedures Process Flowchart (Continued)

Page 1

Operator submits request to PI for existing special or RVFP
See D

PI contacts AFS-400 NextGen Branch
See D

AFS-400 NextGen Branch emails PI
See D1)

PI emails form(s) to operator
See D2)

Operator coordinates with their CAA
See D2(a)

Operator and PI sign form(s)
See D2(b)

Operator submits copy of chart to PI
See D4)

PI submits copy of chart to AFS-400 NextGen Branch
See D4)

Page 3
Figure 12-14. Special Instrument and RNAV Visual Flight Procedures Process Flowchart (Continued)

- Check with FSIMS to verify current version before using.
OPSPEC C384—RNP AR—AREA NAVIGATION (RNAV) REQUIRED NAVIGATION PERFORMANCE (RNP) AUTHORIZATION REQUIRED (AR) (Optional for Foreign Air Carriers Operating to the U.S.).

A. General. The FAA authorizes RNP AR to U.S. airports in accordance with 14 CFR part 129, § 129.9 by issuance of OpSpec C384. OpSpec C384 is used to authorize foreign air carriers to conduct RNAV RNP instrument approach procedures (IAP), AR. These approaches have been published in accordance with 14 CFR 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. International Civil Aviation Organization (ICAO) documents and the U.S. advisory circular (AC) have already been harmonized with the new terminology and are using RNP AR.

B. Criteria Acceptable to the FAA. The FAA issues OpSpec 384 for RNP AR with Radius to Fix (RF) leg capability operations in accordance with one of the following, but not limited to:


3) If adopted by the Civil Aviation Authority (CAA), equivalent standards to the current edition of AC 90-101, Approval Guidance for RNP Procedures with AR.

NOTE: This is necessary so that the FAA has 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 operator’s OpSpecs for operations within U.S. airspace.

NOTE: Principal inspectors (PI) must coordinate all acceptable criteria other than subparagraphs B1) and 2) with the International Program Division (AFS-50) who will coordinate with the Flight Technologies and Procedures Division (AFS-400).

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 Approaches. RNP approaches provide an opportunity to improve safety, efficiency, and capacity. Safety is improved when RNP approaches replace visual or Nonprecision Approaches (NPA), 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 National Airspace System (NAS) concept. The performance requirements to conduct an approach are defined, and aircraft are qualified against these performance requirements. Obstacle evaluation areas 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 approaches include unique capabilities that require special aircraft and aircrew authorization similar to Category (CAT) II/III instrument landing system (ILS) operations. All RNP AR approaches have reduced lateral obstacle evaluation areas and vertical obstacle clearance surfaces predicated on the aircraft and aircrew performance requirements of equivalent standards of AC 90-101 and 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. In addition, there are two characteristics used for selected procedures, as necessary. Foreign air carriers can be authorized for any subset of these characteristics:

   • RNP AR RF leg capability, and
   • Reduced lateral obstacle evaluation area 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, appendices 6-3 and 6-4, #15 and 16. If the information is not in the foreign air carrier’s OpSpecs, then the PI must request that the operator 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 shall be included as part of the manual required by ICAO Annex 6, Part I, paragraph 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 CAA or within the OpSpec C384 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 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 G1)c) below.

G. Foreign Air Carrier Actions. Prior to submitting an application package requesting RNP AR/OpSpec C384, the operator must contact their PI to schedule a kick-off meeting. (See subparagraph H below for further detail.) A foreign air carrier applying to the FAA for the issuance of OpSpec C384 must provide the responsible International Field Office (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 the foreign air carrier:

a) 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 make, model, series (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 flight director required;
• Lowest RNP.

NOTE: The PI when authorizing the foreign air carrier for RNP AR in U.S. airspace must not enter into Table 1 of OpSpec C384 any less limiting limitations, RNP values, etc., 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 air carrier to the FAA by providing the relevant copy of an Aircraft Flight Manual (AFM), if the AFM is in English.

c) Flightcrews are trained to conduct RNP AR and that 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.
NOTE: Relevant ICAO Standards to include Annex 6, Part I, paragraphs 3.1.4, 4.2.1, 9.3.1, 9.4.3, 9.4.3.5, and Attachment E (1.2, 3.3) and Annex 6, Part I, Chapter 10, paragraph 10.3.

d) Procedures for using RNP AR are included in the operator’s documentation (e.g., Operations Manual). Relevant ICAO Standards to include Annex 8, Airworthiness of Aircraft, chapter 7, paragraphs 7.2, 7.3, 7.4, 7.5, and 7.6.

NOTE: If the operator’s documentation (e.g., Operations Manual) is in English, then it may be used for documentation by the foreign air carrier.

e) Has an approved/accepted RNP monitoring program that collects data on RNP AR procedures conducted.

f) Has an approved/accepted Navigation Data Validation Program.

NOTE: Subsequent software updates need to be brought to the attention of the FAA for approval.

g) Has established maintenance procedures to include procedure for removing the aircraft from and returning the aircraft to RNP AR operational capability in which maintenance personnel is successfully trained.

h) Has an approved/accepted minimum equipment list (MEL) revised for RNP AR (as appropriate).

NOTE: 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.

i) 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.

NOTE: If the demonstrations are still ongoing, then provide details of any limitations relating to operations during the demonstration period.

j) 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/afs470/pbn/.

2) Specify that the State of the Operator RNP AR-approved operational procedures are to include the use of flight director 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 glide path intercepts at incorrect altitudes and prepare the part 129 operator for instrument approach procedures unique to the NAS.

4) Any other pertinent information.

H. PI Actions.

1) PIs must schedule a kick-off/preapplication meeting (i.e., video, teleconference, or face-to-face, if that is what works best for all parties, any acceptable means) between the operator/applicant, the PIs, the Performance-Based Flight Systems Branch (AFS-470), the Navigation and Flight Deck Technologies Section (AIR-6B1), and AFS-50 for each operator who wants to conduct RNP AR in U.S. sovereign airspace. The purpose of this meeting is to ensure that the operator has clarity on what must be included as part of their application package. The operator must come prepared to this meeting with what M/M/S aircraft the operator would like to operate in RNP AR. The PI must advise the operator that a person knowledgeable about the operation of aircraft in RNP AR such as the applicant’s chief pilot must be present at the kick-off and any follow-up meetings.

2) PIs must enter all RNP AR applications into the Headquarters NextGen Tracker and forward to AFS-50.

NOTE: AFS-50 will forward to AFS-470 for technical review as appropriate.

3) The principal avionics inspector (PAI) determines the proper nomenclature of the equipment manufacturer’s make, model, and software version, and that the RNP AR equipment and system is installed in accordance with approved data and meets the criteria equivalent to the current edition of AC 90-100, U.S. Terminal and En Route Area Navigation (RNAV) Operations. 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 OpSpec 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 Air Traffic Control Flight Plan must contain information in item 18 of the Flight Plan Form indicating the RNP AR capabilities and include applicable descriptors.
5) After the principal operations inspector (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 above.

b) The PI has written division management concurrence from AFS-400 and AFS-50.

NOTE: See Figure 12-4, 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 the current edition of AC 20-138, Airworthiness Approval of Positioning and Navigation Systems, 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 can 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 can be accepted by the Aircraft Evaluation Group (AEG) in coordination with AFS-400.

b) For existing aircraft for which there is a U.S. type certificate (TC), the aircraft manufacturer should submit the aircraft qualification and RNP AR operational documentation to AFS-400. AFS-400 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 operator must provide a copy of the aircraft manufacturer aircraft qualification and RNP AR operational documentation as part of their application package for OpSpec C384.
NOTE: Relevant ICAO references include: ICAO Doc 9613, Attachment C, paragraph 3.3, Aircraft Eligibility; ICAO Doc 9905, Required Navigation Performance Authorization Required (RNP AR) Procedure Design Manual, Chapter 1, paragraph 1.3, Aircraft Qualification; Chapter 6, paragraph 6.3.2.5, Aircraft Eligibility, 6.3.3, Aircraft Requirements; etc.

J. Aircraft Modification. If any aircraft system required for RNP AR is modified (e.g., software or hardware change/revision), the operator 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, AFS-400 and the AFS-50 division managers must provide a revised concurrence memo for the operator’s use of the aircraft with modifications for RNP AR operations. The IFO should coordinate with AFS-470 and AFS-50 division management SMEs to facilitate processing of the operator’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 Make and Model Aircraft. The POI/PAI must coordinate additions to existing C384 with AFS-50 division management SMEs, AFS-400, and AIR-6B1. During this initial consultation, the division management 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.

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 an operators 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.

L. Sample OpSpec C384 Table 1. Figure 12-25 below provides guidance on completing Table 1.
Figure 12-25. Sample C384 Table 1 – Aircraft and Navigation Systems Eligible for RNP AR

<table>
<thead>
<tr>
<th>Aircraft M/M/S</th>
<th>Navigation System</th>
<th>Limitations</th>
<th>Autopilot Coupled or Flight Director Required</th>
<th>Lowest RNP</th>
<th>Additional Aircraft Capabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M/M Software</td>
<td></td>
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<tr>
<td></td>
<td>Version</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Not authorized to use temperature compensation system. Not authorized procedures with missed approaches requiring RNP less than 1.0. None</td>
<td>Autopilot Coupled with Flight Director Autopilot and/or Flight Director Flight Director only</td>
<td>RNP</td>
<td>RF Legs Missed approach requiring less than RNP 1.0.</td>
</tr>
</tbody>
</table>

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

2 Enter navigation system make/model (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 operators that any change to the OpSpec (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.

3 Enter limitations in the column labeled “Limitations.” If there are no limitations, then select “None” from the dropdown menu; 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.

4 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. Select in Table 1, in the column labeled “Autopilot Coupled or Flight Director Required,” 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 headquarters concurrence was received and the operator will be training their flightcrews for both autopilot and FD to that RNP value.

5 Enter lowest authorized RNP Value in Table 1 of the OpSpec 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.

6 Since all operators in U.S. airspace must have RF leg capability, the “RF Legs” dropdown menu must be selected for all operators to whom C384 is issued. Any operator who does not have RF leg capability must not be issued C384.
**Figure 12-4. RNP AR Approval Checklist (Optional)**

### SECTION 1: OPERATOR DETAILS, DATE, TYPE OF REQUEST

*Enter* Operator Name: ____________________________________________________________

*Enter* Operator Point of Contact: _________________________________________________

*Select the applicable check box.*

- [ ] Initial RNP AR Application*
- [ ] C384 Amendment to RNP AR Request**  
  (Enter details)

*Enter***

<table>
<thead>
<tr>
<th>Aircraft M/M/S</th>
<th>Navigation System M/M/S</th>
<th>Software Version</th>
<th>Limitations</th>
<th>Autopilot Coupled or FD Required</th>
<th>RNP</th>
<th>Aircraft Capabilities</th>
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</table>

*Enter date of the application****  
month (MM)/day(DD)/year(YYYY)*

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## 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:
### SECTION 4: PI ACTIONS *(Select the applicable check boxes.)*

- [ ] Kick-off/preapplication meeting scheduled
- [ ] Completed kick-off/preapplication meeting
- [ ] PIs reviewed application and provided recommendation for operations approval as follows:
  - As authorized by CAA
  - With the following additional limitations:
    - __________________________________________
    - __________________________________________
    - __________________________________________
    - __________________________________________
    - __________________________________________
    - __________________________________________
- [ ] Recommend denial of request for the following reasons:
  - __________________________________________
  - __________________________________________
  - __________________________________________
  - __________________________________________
  - __________________________________________
  - __________________________________________
  - __________________________________________

- [ ] Front Line Manager’s (FLM) concurrence with PI recommendations.
  - FLM Name: ________________________________
  - FLM Signature: ____________________________

- [ ] PI entered the application into the Headquarters NextGen Tracker and forwarded to AFS-50 on the following date:
  - Enter MM/DD/YYYY

POI Name: ________________________________
POI Signature: ____________________________

PAI Name: ________________________________
PAI Signature: ____________________________
### SECTION 5: JOINT AFS-50 AND AFS-400 DIVISION MANAGEMENT APPROVAL/DISAPPROVAL

- [ ] Received written joint AFS-50 and AFS-400 division management concurrence
  - [ ] Concurrence date ____________
    - MM/DD/YYYY
  - [ ] Concurrence as requested
  - [ ] Concurrence with the following additional limitations and provisions:
    - _____________________________________
    - _____________________________________
    - _____________________________________
    - _____________________________________
    - _____________________________________
    - _____________________________________
    - _____________________________________
  - [ ] PI issued OpSpec C384 ______________
    - MM/DD/YYYY

- [ ] Received written joint AFS-50 and AFS-400 division management denial
  - [ ] Denial date ____________
    - MM/DD/YYYY
  - [ ] Joint AFS-50 and AFS-400 division management denial for the following reasons:
    - _____________________________________
    - _____________________________________
    - _____________________________________
    - _____________________________________
    - _____________________________________
    - _____________________________________
    - _____________________________________
  - [ ] PI notified operator of denial ____________
    - MM/DD/YYYY

*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 operator. For example, the operator completed the required demonstrations for a lower RNP value in U.S. airspace and is requesting an amendment to OpSpec C384 previously issued by the FAA.

NOTE: PIs do not need to request an amended joint AFS-50 and AFS-400 division management concurrence memo prior to amending the “Lowest RNP” value if the joint AFS-50 and AFS-400 division management concurrence memo authorized a lower RNP value at the end of a specified period or upon the operator’s completion of a number of RNP AR approaches.

***Entries in this block must reflect what the State of the Operator approved the operator for. They follow the layout of OpSpec 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.

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without this documentation to support the operator’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 an operator’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).

RESERVED. Paragraphs 12-215 through 12-268.