U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

Air Traffic Organization Policy

ORDER JO 7110.308D

Effective Date:
03/08/2022

SUBJ: Simultaneous Dependent Approaches to Closely Spaced Parallel Runways

1. Purpose of This Order. This order provides supplemental criteria to apply Federal Aviation Administration (FAA) Order JO 7110.65, Air Traffic Control, paragraph 5-9-6, Simultaneous Dependent Approaches, to parallel runways separated by less than 2,500 feet, also referred to as Closely Spaced Parallel Runways (CSPR). Guidance is included for facilities requesting a specific assessment for an airport that would like to participate in the CSPR pairing procedures.

2. Audience. This order applies to Technical Operations and Air Traffic Services facilities at airports listed in Appendices A and B.

3. Where Can I Find This Order? This order is available on the MyFAA employee website at https://employees.faa.gov/tools_resources/orders_notices/.

4. What This Order Cancels. FAA Order 7110.308C, Simultaneous Dependent Approaches to Closely Spaced Parallel Runways, dated January 26, 2018, is canceled.

5. Explanation of Changes.

a. The order is updated to include Consolidated Wake Turbulence (CWT) procedures.

b. Clarification that facility directives and letters of agreement must be in accordance with FAA Order JO 7110.65, paragraph 5-9-6, Simultaneous Dependent Approaches is added to paragraph 6.

c. A requirement is added to subparagraph 12g, Navigational Aids, that the Visual Glideslope Indicator (VGSI), if installed, and glideslope/glide path of each runway must match the angle identified in the approach chart for that runway.

d. Clarification of requirements for missed approach procedures is added to subparagraph 13a4.

e. Appendix B charts are updated to reflect separation minima contained in FAA Order JO 7110.126, Consolidated Wake Turbulence.

6. Action. At facilities authorized by Appendices A and B, all operational personnel must receive supplemental training in accordance with FAA Order JO 3120.4, Air Traffic Technical Training. Facility directives and letters of agreement must include procedures to apply the reduced separation minimums in accordance with FAA Order JO 7110.65, paragraph 5-9-6, Simultaneous Dependent Approaches. Air traffic managers desiring to add their airports and associated CSPR to this order must follow the process described in paragraph 13, Request for a Specific Airport Analysis.

7. Monitoring. Upon commencement of operations authorized by this order, facilities must submit a weekly report for the first eight weeks, a report at the six-month mark, and a report at the conclusion of one year of operations. The one-year report must be submitted on the form contained in Appendix C. All reports must include any Mandatory Occurrence Reports (MOR) involving the loss of required staggered separation and documented wake encounters on the final approach segment resulting from the use of procedures contained herein. Submit reports to the Group Manager, Standards and Procedures, AJV-P3, at 9-AJV-P-HQ-Correspondence@faa.gov. AJV-P31 will collaborate with Air Traffic Services (AJT), NextGen (ANG), and Flight Standards Service (AFS) to analyze the data, including pertinent Aviation Safety Reporting System (ASRS) reports that identify any additional safety concerns not recognized during the safety risk management process.

8. Distribution. This order will be distributed electronically.

9. Background. Increased airport capacity and reduced arrival delays under Instrument Meteorological Conditions (IMC) can be achieved by using the diagonal separation minima established in this order with successive pairs of arrivals to CSPR. This type of dependent instrument approach may be conducted at airports authorized under this order, taking into account the specific centerline separations, threshold staggers, and local winds. The lead aircraft of the dependent pair is restricted to being cleared for the lower approach, with the trailing aircraft assigned the higher approach. The geometry of the approach, as well as the lateral separation between the two approaches and prevailing local meteorological conditions, provide the wake turbulence avoidance necessary for reduced separation dependent approach operations. Additionally, depending on the local meteorological conditions, a small glidepath height difference may be necessary to ensure the trailing aircraft is at or above the height of the leading aircraft in the reduced separation pair. The required glidepath height can be achieved through displaced landing thresholds or small glidepath angle differences that are permitted within the constraints of precision approaches. Wake Turbulence Mitigation for Arrivals-Procedure (WTMA-P) permits heavy and B757 aircraft, in addition to small and large aircraft, to lead in the dependent pair. Super aircraft are not permitted to lead in the reduced separation dependent pair. Specific aircraft pair separation is provided for each CSPR. This separation is dependent on local winds, runway geometry including runway threshold offset, which provides vertical separation between the glidepaths. This separation is also dependent on runway centerline separation, which allows safe mitigation from both severity and likelihood of a wake encounter for the trailing aircraft.

10. Definitions. For the purpose of this order, the following definitions are provided:

a. Lead Aircraft – The lead aircraft in the pair of reduced separation aircraft authorized by this order. At airports listed in Appendix A, the lead aircraft is restricted to a small or large weight class aircraft (except the B752 and B753) or the corresponding wake category for small or large aircraft (except the B752 and B753). At airports listed in Appendix B, the lead aircraft may be any aircraft excluding supers.

REFERENCE-
FAA Order JO 7360.1, Aircraft Type Designators
FAA Order JO 7110.126, Consolidated Wake Turbulence.

b. Lead Approach – The approach assigned to the lead aircraft in a reduced separation pair. For each CSPR pair identified in Appendix A, the lead approach is listed first and is the lower approach.

c. Trailing Aircraft – The trailing aircraft in the pair of reduced separation aircraft that is not restricted by weight class or wake category.

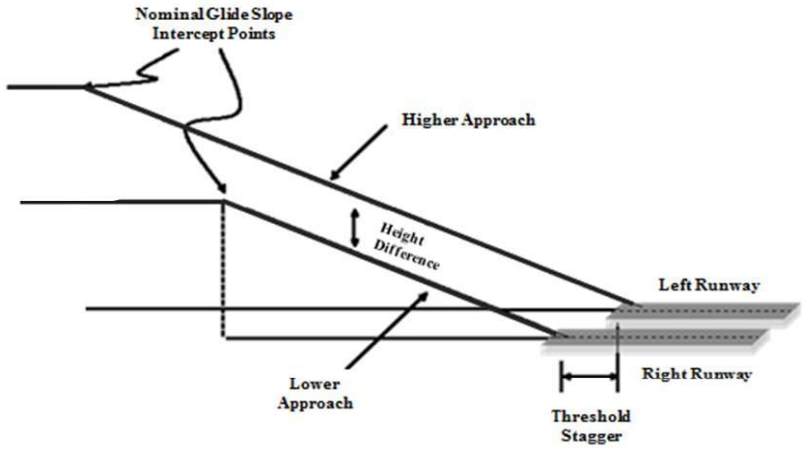
d. Trailing Approach – The approach assigned to the trailing aircraft in a reduced separation pair. For each CSPR pair, the trailing approach is listed second and is the higher approach.

11. Procedures.

a. Airport Criteria Allowing Simultaneous Dependent Approaches on CSPR.

Appendix A, Authorized Runway Pairings, and Appendix B, Airport/Runway Geometries Approved for WTMA-P, list the airports, runway configurations, and aircraft pairing for which reduced separation is permitted. Glidepath height differences are achieved by using a common reference point from the runway thresholds, threshold staggers, or small glidepath angle differences between the lead and trailing aircraft creating a higher and lower approach. The lateral separation and glidepath height differences provide wake encounter mitigation for the procedure at each airport. (See FIG 1.)

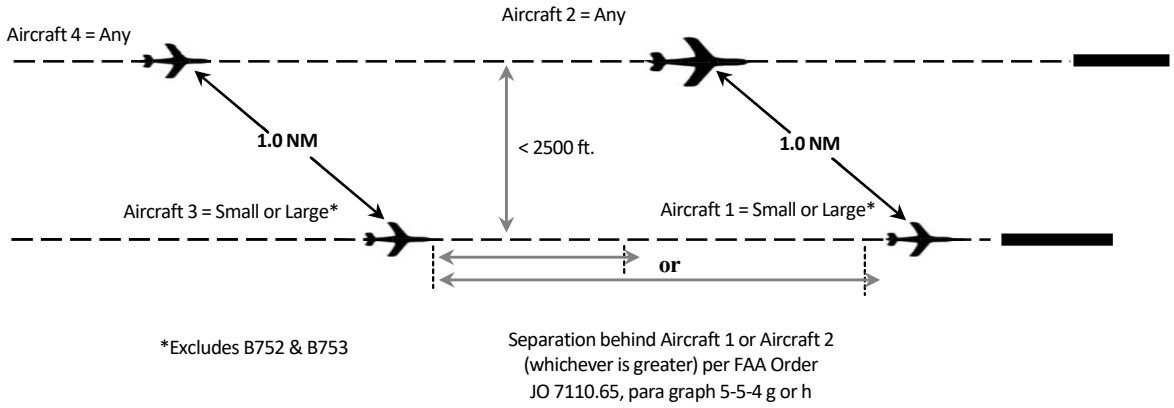
FIG 1
Side View of Example CSPR Approach



b. Procedures for Dependent Approaches to CSPRs.

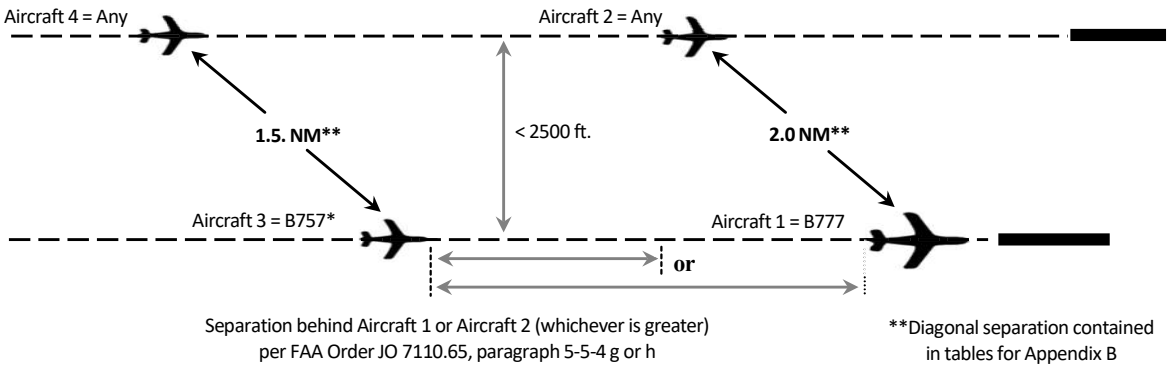
(1) FIG 2 provides a depiction of the procedures contained in this order for airports listed in Appendix A. Aircraft 1 is the lead aircraft and is assigned to the lower approach, and Aircraft 2 is the trailing aircraft. Aircraft 3 is the lead aircraft and Aircraft 4 is the trailing aircraft in the next pair of reduced separation aircraft.

FIG 2
Top-Down View of Example CSPR Approach



(2) FIG 3 provides a depiction for the use of WTMA-P for airports listed in Appendix B.

FIG 3
Top-Down View of Dependent Approach Procedure Using WTMA-P



12. Conditions for Use. Simultaneous dependent approaches may be conducted under the following conditions:

a. Provide a minimum of 1,000 feet vertical or the minimum approved radar separation until both aircraft are established on the localizer for ILS approaches or established on the approach procedure for RNAV approaches and cleared for the approach. Visual separation is not authorized until both aircraft are established on the localizer for ILS approaches or established on the approach procedure for RNAV approaches.

NOTE-
Visual separation may be applied on final approach when the aircraft are in VMC and there are no other obscurations to visibility.

b. The lead aircraft (Aircraft 1) of the dependent separation pair must be assigned the lead approach.

(1) At airports listed in Appendix A, the lead aircraft must be:

(a) A small or large weight class aircraft (except the B752 and B753) at non-RECAT facilities.

(b) A wake category F, G, H, or I aircraft at CWT facilities.

(2) At airports listed in Appendix B, the lead aircraft may be any wake Category B through I aircraft, and must intercept the glideslope at an altitude no higher than 3,000 feet above the airport elevation.

c. Any weight class or wake Category A through I aircraft may participate as the trailing aircraft in the dependent separation pair and must be assigned the trailing approach.

(1) At airports listed in Appendix A, separation may be reduced to 1.0 nautical mile.

(2) At airports listed in Appendix B, the authorized separations are contained in the appropriate table for the airport and runway pair.

d. Provide approved radar separation between the trailing aircraft of one pair and the lead aircraft of the next pair in accordance with FAA Order JO 7110.65, paragraph 5-5-4, Minima, subparagraphs g and h.

NOTE-
At facilities authorized to conduct operations in accordance with FAA Order JO 7110.126, Consolidated Wake Turbulence, the applicable paragraphs of FAA Order JO 7110.65 are superseded by the corresponding paragraphs contained within the CWT order.

e. Reduced separation is not permitted if either of the aircraft in a reduced separation pair is conducting an instrument approach without vertical guidance.

f. If the lead aircraft executes a missed approach or is issued go-around instructions and is a larger weight class or wake category than the trailing aircraft in the pair, or is a heavy aircraft, the trailing aircraft must be instructed to execute a missed approach or issued go-around instructions.

REFERENCE-
P/CG Term – Go-Around
P/CG Term – Missed Approach.

g. Navigational Aids. For ILS approaches, the localizer and glideslope must be in service to both runways. For RNAV approaches, Lateral Navigation (LNAV) and Vertical Navigation (VNAV) must both be available. For all runway pairs, the VGSI (if installed) and glideslope/glide path of each runway must match the angle identified in the approach chart for that runway.

h. Radar Surveillance. Terminal Airport Surveillance Radar must be in service.

i. Weather Minimums. The reduced separation approaches authorized by this order may be conducted down to and including Category I minimums. For airports listed in Appendix B, Category II operations are authorized if the approaches are available for both runways.

j. Charting. Charting for approaches with modified glideslope angles must be published after the approach has been flight checked but before the implementation of the procedures authorized by this order.

k. Notification of Simultaneous Approaches. Ensure aircraft are informed that approaches to both runways are in use. This information may be provided through the Automatic Terminal Information Service (ATIS).

EXAMPLE-
"Simultaneous approaches ILS runway four right and RNAV runway four left in use."

13. Request for a Specific Airport Analysis. Written requests for an analysis of specific airport geometries must be made to the Policy Directorate (AJV-P) at 9-AJV-P-HQ-Correspondence@faa.gov through the requesting facility's managing Service Area. The following process must be used:

a. The facility must provide a written request to the managing Service Area for an analysis to be conducted. The request must include:

1. The runway pair and types of instrument approaches to be considered.

2. The centerline separation between the runway pair.

3. The latitude and longitude of the landing threshold of each runway.

4. Charted missed approach procedures for lost communications for the approach to each runway (new or existing runways). Missed approach procedures must not conflict.

REFERENCE-
FAA Order JO 7110.65, Para 5-9-6, Simultaneous Dependent Approaches, Subpara b3.
FAA Order JO 7210.3, Para 10-3-15, Go-Around/Missed Approach.

b. The Service Area must evaluate the request, validate it, and forward it to the Policy Directorate.

c. AJV-P must request a wake encounter risk assessment from the NextGen Portfolio Management & Technology Development (ANG-C) office.

d. ANG-C must conduct the wake encounter risk assessment, coordinate with the field facility as necessary, and forward the appropriate safety documentation to AJV-P.

e. AJV-P must coordinate the approval of the revised order with ATO Safety and Technical Training (AJI) and the Air Traffic Safety Oversight Service (AOV).

Natasha A. Durkins
Digitally signed by Natasha A. Durkins
Date: 2022.02.04 14:12:06 -05'00'

Natasha A. Durkins
Director, Policy, AJV-P
Air Traffic Organization

Appendix A. Authorized Runway Pairings

Specific Airports/Runway Geometries Approved for Dependent Approaches to CSPRs

Airport	Runway Pair Lead / Trail	Centerline Separation (feet)	Navigation Type Lead / Trail	Glideslope Angle Lead / Trail	Glidepath Height Difference 7 NM From Lead Threshold
BOS	4R / 4L	1500	ILS / ILS	3.0 / 3.1	128 ft
	4R / 4L	1500	ILS / RNAV	3.0 / 3.1	128 ft
CLE	6L / 6R	1241	ILS / ILS	3.0 / 3.1	193 ft
	24L / 24R	1241	ILS / ILS	3.0 / 3.0	63 ft
EWR	4R / 4L	950	ILS / ILS	2.95 / 3.1	74 ft
	22L / 22R	950	ILS / ILS	3.0 / 3.1	74 ft
MEM	18C / 18L	927	ILS / ILS	3.0 / 3.1	185 ft
	36R / 36C	927	ILS / ILS	3.0 / 3.1	74 ft
PHL	9R / 9L	1400	ILS / ILS	3.0 / 3.0	316 ft
	27R / 27L	1400	ILS / ILS	3.0 / 3.0	263 ft
SEA	34C / 34L	1700	ILS / ILS	3.0 / 3.0	49 ft
	16C / 16R	1700	ILS / ILS	3.0 / 3.0	0 ft
	16L / 16C	800	ILS / ILS	3.0 / 3.0	0 ft
	34R / 34C	800	ILS / ILS	2.75 / 3.0	130 ft
SFO	28L / 28R	750	ILS / ILS	2.85 / 3.0	111 ft
	19L / 19R	750	ILS / RNAV	3.0 / 3.15	153 ft
STL	30R / 30L	1300	ILS / ILS	3.0 / 3.0	89 ft
	12R /12L	1300	ILS / ILS	3.0 / 3.0	159 ft

NOTE-

1. *Approaches must meet TERPS criteria as well as the glide path restriction necessary for wake mitigation and the chart notes must include those restrictions prior to implementation.*

2. *For those runway pairs that require a glideslope change, this procedure is not to be conducted until the approach is published.*

3. *SFO RWY 19R RNAV Approach is not authorized at temperatures less than 52 degrees F.*

4. *SEA RWY 34R currently has a 2.75-degree glideslope. The risk analysis was conducted using a 3-degree glideslope and the procedure is authorized at a 2.75-degree up to 3.0-degree glideslope.*

Appendix B. Airport/Runway Geometries Approved for WTMA-P

TBL B-1

WTMA-P Separations for PHL Runway 9R ILS Lead and Runway 9L ILS Trail

		Follower							
		B	C	D	E	F	G	H	I
Leader	B	1.5 NM	1.5 NM	1.5 NM	3 NM	3 NM	3 NM	3 NM	3 NM
	C	1.5 NM	1.5 NM	1.5 NM	1.5 NM	1.5 NM	1.5 NM	3 NM	3 NM
	D	1.5 NM	1.5 NM	1.5 NM	3 NM	3 NM	3 NM	3 NM	3 NM
	E	1.5 NM	1.5 NM	1.5 NM	1.5 NM	1.5 NM	1.5 NM	1.5 NM	1.5 NM
	F								
	G								
	H								
	I								

TBL B-2

WTMA-P Separations for PHL Runway 27R ILS Lead and Runway 27L ILS Trail

		Follower							
		B	C	D	E	F	G	H	I
Leader	B	1.5 NM	1.5 NM	1.5 NM	1.5 NM	1.5 NM	1.5 NM	2.5 NM	2.5 NM
	C	1.5 NM	1.5 NM	1.5 NM	1.5 NM	1.5 NM	1.5 NM	1.5 NM	1.5 NM
	D	1.5 NM	1.5 NM	1.5 NM	3 NM	3 NM	3 NM	2.5 NM	2.5 NM
	E	1.5 NM	1.5 NM	1.5 NM	1.5 NM	1.5 NM	1.5 NM	1.5 NM	1.5 NM
	F								
	G								
	H								
	I								

TBL B-3

WTMA-P Separations for DTW Runway 3R ILS Lead and Runway 3L RNAV Trail

		Follower							
		B	C	D	E	F	G	H	I
Leader	B	1.5 NM	1.5 NM	1.5 NM	1.5 NM	1.5 NM	1.5 NM	3.5 NM	3.5 NM
	C	1.5 NM	1.5 NM	1.5 NM	1.5 NM	1.5 NM	1.5 NM	3 NM	3 NM
	D	1.5 NM	1.5 NM	1.5 NM	1.5 NM	1.5 NM	1.5 NM	3.5 NM	3.5 NM
	E	1.5 NM	1.5 NM	1.5 NM	1.5 NM	1.5 NM	1.5 NM	1.5 NM	1.5 NM
	F								
	G								
	H								
	I								

TBL B-4

WTMA-P Separations for DTW Runway 21R RNAV Lead Runway 21L ILS Trail (59º or Lower)

		Follower							
		B	C	D	E	F	G	H	I
Leader	B	1.5 NM	1.5 NM	1.5 NM	1.5 NM	1.5 NM	1.5 NM	1.5 NM	1.5 NM
	C	1.5 NM	1.5 NM	1.5 NM	1.5 NM	1.5 NM	1.5 NM	1.5 NM	1.5 NM
	D	1.5 NM	1.5 NM	1.5 NM	1.5 NM	1.5 NM	1.5 NM	1.5 NM	1.5 NM
	E	1.5 NM	1.5 NM	1.5 NM	1.5 NM	1.5 NM	1.5 NM	1.5 NM	1.5 NM
	F								
	G								
	H								
	I								

Appendix C. Monitoring Report for Operations Conducted Under FAA Order JO 7110.308

This checklist is designed to assist the air traffic facilities identified in this order to complete their one-year monitoring report. This checklist (and the information provided) will assist the Policy Directorate in meeting the monitoring requirements associated with the governing Safety Risk Management Document. Please forward this report by email to 9-AJV-P-HQ-Correspondence@faa.gov. If you have difficulties downloading the form, you may request the form from the same address.

Section 1: Background Information		
Facility	Facility name	
Runway Configuration(s)	Runway pairing	
	Runway pairing	
How often are CSPR operations, as defined in this order, utilized at your facility?	☐	Daily or almost daily (more than 3 times a week)
	☐	Often (several times a month)
	☐	Seldom (a few times a month)
	☐	Rarely (a few times a year)
What is the biggest determining factor for the utilization of this procedure at your facility?	☐	Weather or other seasonal factors
	☐	Runway availability
	☐	Noise or other environmental factors
	☐	Other
Section 2: Monitoring Activities Associated with Relevant Hazards		
When compared to other arrival flows (the SMS term is system state), has your facility experienced an increase in reported wake encounters on the final approach segment as a result of the utilization of CSPR?	☐	No
	☐	Yes (please provide an assessment in section 3 of the degree to which your facility noted this increase in reported wake encounters and the causal factors to which you attribute that increase)
	☐	Yes (please provide an assessment in section 3 of the degree to which your facility noted this increase in go-arounds and the causal factors to which you attribute that increase)
Mandatory Occurrence Reports (MORs) How many MORs associated with the loss of one mile diagonal separation did your facility have during the course of this past year?	Enter MORs data here	

Section 3: Facility Observations, Opportunities for Improvement, and Sharing of Lessons Learned
The SMS is the framework that the ATO uses to measure and help ensure the safety of its operations. In an evolving NAS, it is necessary to continuously seek improvement in ATO processes and policies that support ATO safety efforts and, by extension, support the SMS. Please share with us any information that you deem helpful regarding the implementation and operation of CSPR as defined in this order.
Additional comments.