



**U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION**  
Air Traffic Organization Policy

**ORDER  
JO 7110.308A**

Effective Date:  
June 1, 2015

**SUBJ:** Simultaneous Dependent Approaches to Closely Spaced Parallel Runways

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**1. Purpose of This Order.** This order provides the 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). Additionally, this order contains guidance for CSPR assessment requests to airports not listed in Appendices A and B.

**2. Audience.** This order applies to the Air Traffic Services Organization facilities at airports listed in Appendix A and Appendix B.

**3. Where Can I Find This Order?** This order is available on the MYFAA employee Web site at [https://employees.faa.gov/tools\\_resources/orders\\_notices/](https://employees.faa.gov/tools_resources/orders_notices/).

**4. What This Order Cancels.** FAA Order JO 7110.308, 1.5-Nautical Mile Dependent Approaches to Parallel Runways Spaced Less Than 2,500 Feet Apart, dated November 5, 2008, and all changes to it are canceled.

**5. Explanation of Changes.**

**a.** The title of the order was changed to reflect the operations addressed in the order.

**b.** Minor editorial Changes were made throughout the order.

**c.** References to wake categories were added for those facilities authorized to conduct operations in accordance with FAA Order JO 7110.659, Wake Turbulence Recategorization.

**d.** Clarification that the B757 is excluded from being the lead aircraft is provided for airports listed in Appendix A.

**e.** The order integrates The Wake Turbulence Mitigation for Arrivals–Procedure (WTMA–P) at airports listed in Appendix B.

**f.** The assessment process for a request for a specific airport analysis not included in Appendices A or B has been moved to its own paragraph and updated to the current Air Traffic Organization structure.

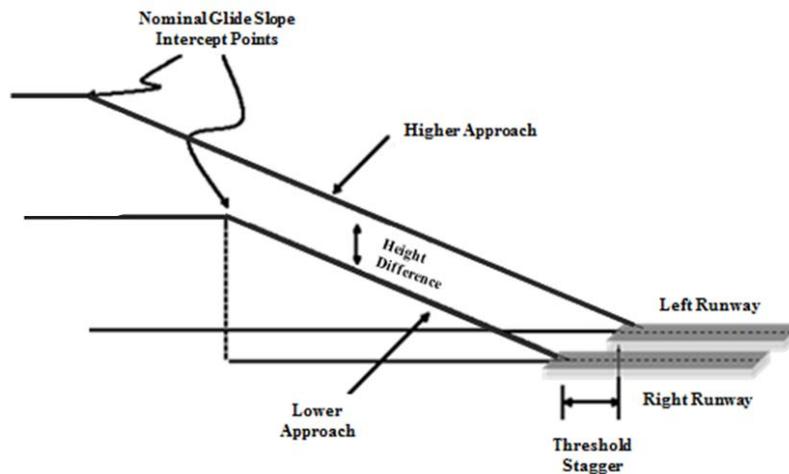
**6. Action.** At airports authorized by Appendices A or B, the air traffic manager must brief and train their personnel in the use of the procedures defined in this order and develop facility standard operating procedures for the use of the reduced separation minimums. Air traffic managers desiring to add their airports and associated CSPR to this order must follow the process described in Paragraph 8, Request for a Specific Airport Analysis.

**7. Procedures.**

**a. Airport Criteria Allowing Conduct of Simultaneous Dependent Approaches on CSPR.**

Appendix A, Authorized Runway Pairings, and Appendix B, Airport/Runway Geometries Approved for WTMA-P, present the airports and runway configurations for which reduced separation is permitted under this order. Glide slope height differences are achieved by using a common reference point from the lead aircraft runway threshold, threshold stagger, or small glide slope angle differences, thus yielding a higher and lower approach. The glide slope height differences provide wake encounter mitigation for the procedure at each airport. (See FIG 1.)

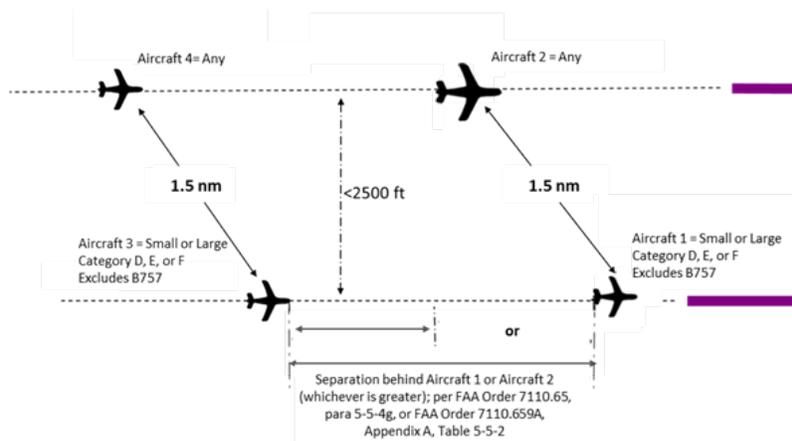
**FIG 1**  
Side View of Example CSPR Approach



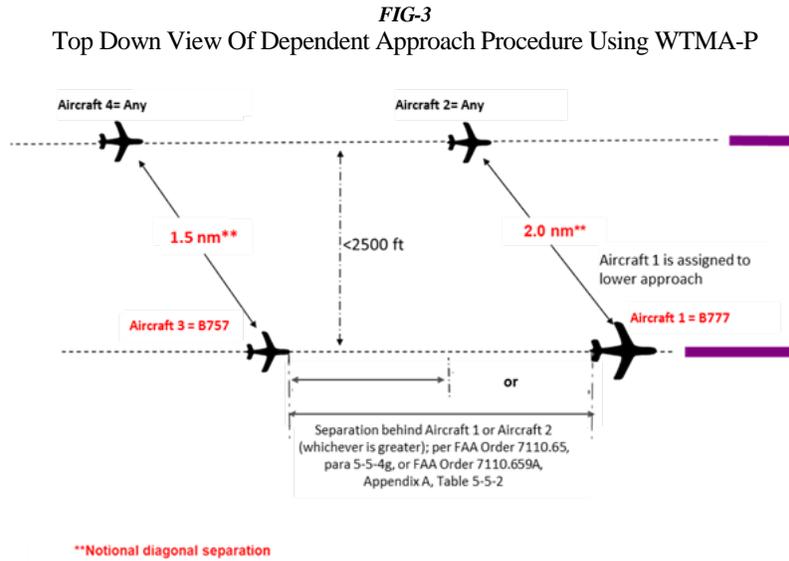
**b. Procedures for Dependent Approaches to CSPRs.**

(1) Figure 2 provides the depiction of the definitions provided in paragraph 11 of this order for airports listed in Appendix A. The lead aircraft is aircraft #1 and is assigned to the lower approach. The trailing aircraft is aircraft #2. The lead aircraft in the next pair of reduced separation is aircraft #3.

**FIG 2**



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



c. Conditions for Use. Parallel dependent approaches can be conducted under the following conditions:

(1) Provide a minimum of 1,000 feet vertical or the appropriate radar separation until both aircraft are established on the localizer and cleared for the approach. Visual separation is not authorized.

(2) The lead aircraft (acft 1) of the dependent separation pair must be assigned the lower approach.

(a) At airports listed in Appendix A, the lead aircraft must be a small or large weight class aircraft (except the B757) or a wake category D (except the B757), E, or F aircraft. 1.5NM staggered separation is authorized for the trailing aircraft (acft 2) on the parallel runway.

(b) At airports listed in Appendix B, the lead aircraft may be any aircraft excluding the A388 and A225, or a wake category A aircraft, and must capture the glideslope at an altitude no higher than 3,000 feet AGL.

(3) Any aircraft type may participate as the trailing aircraft in the dependent separation pair and must be assigned the higher approach.

(a) At airports listed in Appendix A separation may be reduced to 1.5NM.

(b) At airports listed in Appendix B the authorized separations are contained in the appropriate table for the airport and runway pair. Where no separation is shown, 1.5NM is authorized.

(4) Provide the appropriate 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 f and g or FAA Order JO 7110.659A, Appendix A, Table 5-5-2 at RECAT sites.

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

(6) If the lead aircraft executes a missed approach and is larger than the trailing aircraft in the pair, the trailing aircraft must be instructed to execute a missed approach.

**d. Navigational Aids.** Where applicable, the localizer and glide slope must be in service to both ILSs or WAAS must be in service for RNAV (GPS) precision approaches.

**e. Radar Surveillance.** Terminal approach radar services apply.

**f. Weather Minimums.** The reduced separation approaches authorized by this order may be conducted down to and including ILS Category I minimums, or the minimums depicted for an RNAV (GPS) approach.

**g. Charting.** Charting for ILS or RNAV (GPS) approaches with modified glide slope angles will be published after flight checking and before the implementation of the procedures authorized by this order.

**8. Request for a Specific Airport Analysis.** Written requests for analysis of specific airport geometries must be made to the Air Traffic Procedures office, AJV-8, through the managing service area for the requesting facility. The request will be addressed through the following process:

(1) The facility will provide a written request to the managing service area for an analysis to be conducted. The request will include:

(a) The runway pair and types of instrument approaches to be considered.

(b) The centerline separation between the runway pair.

(c) The latitude and longitude of the landing threshold of each runway.

(d) Charted missed approach procedures for lost communications for the approach to each runway (new or existing runways).

(2) The service area will evaluate the request and forward it to the Air Traffic Procedures office if the request is valid.

(3) The Air Traffic Procedures office will request a wake encounter risk assessment from ATO System Operations Services.

(4) The Air Traffic Procedures office will coordinate, for approval, the wake encounter risk assessment with ATO Safety Services and the Air Traffic Safety Oversight Service and amend Appendix F, Safety Analysis for CSPA Instrument Approach Procedure, of the national rule change safety risk management document (SRMD).

(5) The Air Traffic Procedures office will approve the risk assessment and amended SRMD (leading to steps 6 and 7 below) or communicate disapproval with proposed mitigations to the managing service area (leading to step 8 below).

(6) The approval will be coordinated through ATO Safety Services, Air Traffic Procedures, the managing service area, and to the requesting facility.

(7) The approval will be implemented by the requesting facility contingent on the provisions in this order.

(8) Disapprovals with proposed mitigations will be coordinated through ATO Safety Services, to Air Traffic Procedures and System Operations Services, to the managing service area, and to the requesting facility for further consideration.

**9. Distribution.** This order is distributed to the following Air Traffic Organization service units: System Operations; Mission Support; the Office of ATO Safety and Technical Training; NextGen and Operations Planning; the Air Traffic Safety Oversight Service; the William J. Hughes Technical Center; and the Mike Monroney Aeronautical Center.

**10. Background.** Dependent approaches to CSPR increases airport capacity, reduces arrival delays under Instrument Meteorological Conditions (IMC) including ILS CAT I minimums or the minimums depicted for an RNAV (GPS) approach. This is achieved using 1.5-NM diagonal separation within successive pairs of arrivals to CSPR. This type of dependent instrument approach can be conducted at airports with specific centerline separations, threshold staggers, and/or glide path height differences. 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, provides wake turbulence avoidance necessary for the reduced separation dependent approach operation. In addition, a small glide path 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 glide path height can be achieved through displaced landing thresholds or small glide path angle differences that are permitted within the constraints of precision approaches. WTMA-P permits Heavy (Except for A388 and A225, or wake category A aircraft) and B757 aircraft to lead in the dependent pair, in addition to small and large aircraft. Specific aircraft pair separation is provided for each CSPR. This separation is dependent on runway geometry, including runway threshold offset which provides vertical separation between the glidepaths and thus vertical separation from wake turbulence; and runway centerline separation, which allows wake vortices to decay before it can be transported into in the trailing aircraft's path. WTMA-P may be used at either Recat or non-Recat airports. Visual separation is not authorized as the procedures contained in this order are dependent on the smaller aircraft intercepting the localizer and glideslope above any larger aircraft.

*Heather Hemdal* For Heather Hemdal

Heather Hemdal  
Director, Air Traffic Procedures

*5/1/15*

Date Signed

## Appendix A. Authorized Runway Pairings

### Specific Airports/Runway Geometries Approved for Dependent Approaches to CSPRs

Airport	RWY Pair	Centerline Separation (feet)	Runway (Lead/Trail)	Navigation Type	Glide Slope Angle (degrees)	Glide Path Height Difference 7NM from lead threshold
BOS	4R/4L	1500	4R (lead)	ILS	3.0	128 ft
			4L (trail)	ILS	3.1	
CLE	6L/6R	1241	6L (lead)	ILS	3.0	193 ft
	24L/24R	1241	6R (trail)	ILS	3.1	63 ft
			24L (lead)	ILS	3.0	
			24R (trail)	ILS	3.0	
EWR	4L/4R	950	4R (lead)	ILS	2.95	74 ft
	22L/22R	950	4L (trail)	ILS	3.1	74 ft
			22L (lead)	ILS	3.0	
			22R (trail)	ILS	3.1	
MEM	18C/18L	927	18C (lead)	ILS	3.0	185 ft
	36R/36C	927	18L (trail)	ILS	3.1	74 ft
			36R (lead)	ILS	3.0	
			36C (trail)	ILS	3.1	
SEA	34C/34L	1700	34C (lead)	ILS	3.0	49 ft
	16C/16R	1700	34L (trail)	ILS	3.0	0 ft
			16C (lead)	ILS	3.0	
	16L/16C	800	16R (trail)	ILS	3.0	0 ft
			16L (lead)	ILS	3.0	
	34R/34C	800	16C (trail)	ILS	3.0	130 ft
			34R (lead)	ILS	2.75	
	34C (trail)	ILS	3.0			
SFO	28L/28R	750	28L (lead)	ILS	2.85	111 ft
			28R (trail)	ILS	3.0	
STL	30R/30L	1300	30R (lead)	ILS	3.0	89 ft
	12R/12L	1300	30L (trail)	ILS	3.0	159 ft
			12R (lead)	ILS	3.0	
			12L (trail)	ILS	3.0	

**NOTE-**

For those runway pairs which require a 3.1 degree glide slope to the trailing approach, this procedure is not to be conducted until the 3.1 degree approach is established.

\*SEA 34R currently has a 2.75 degree glide slope. The risk analysis was conducted using a 3 degree glide slope and the procedure is authorized on SEA 34R at 2.75 and up to a 3.0 degree glide slope.

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

*TBL B-1*

PHL Runway 9R ILS (lead) and 9L ILS (trail)

Leader	Follower			
	Heavy	B757	Large	Small
Heavy	1.5 NM	3.0 NM	3.0 NM	3.5 NM
B757	1.5 NM	1.5 NM	1.5 NM	1.5 NM

Leader	Follower				
	B	C	D	E	F
B	1.5 NM	1.5 NM	3.0 NM	3.0 NM	3.0 NM
C	1.5 NM	1.5 NM	1.5 NM	1.5 NM	3.0 NM
D	1.5 NM	1.5 NM	1.5 NM	1.5 NM	1.5 NM

*TBL B-2*

PHL Runway 27R ILS (lead) and 27L ILS (trail)

Leader	Follower			
	Heavy	B757	Large	Small
Heavy	1.5 NM	2.0 NM	2.0 NM	3.0 NM
B757	1.5 NM	1.5 NM	1.5 NM	1.5 NM

Leader	Follower				
	B	C	D	E	F
B	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
D	1.5 NM	1.5 NM	1.5 NM	1.5 NM	1.5 NM

**TBL B-3**

DTW Runway 3R ILS (lead) and 3L RNAV (trail)

Leader	Follower			
	Heavy	B757	Large	Small
Heavy	1.5 NM	1.5 NM	1.5 NM	3.5 NM
B757	1.5 NM	1.5 NM	1.5 NM	1.5 NM

Leader	Follower				
	B	C	D	E	F
B	1.5 NM	1.5 NM	1.5 NM	1.5 NM	3.5 NM
C	1.5 NM	1.5 NM	1.5 NM	1.5 NM	3.0 NM
D	1.5 NM	1.5 NM	1.5 NM	1.5 NM	1.5 NM

**TBL B-4**

DTW Runway 21R RNAV (lead) and 21L ILS (trail)

Leader	Follower			
	Heavy	B757	Large	Small
Heavy	1.5 NM	1.5 NM	1.5 NM	1.5 NM
B757	1.5 NM	1.5 NM	1.5 NM	1.5 NM

Leader	Follower				
	B	C	D	E	F
B	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
D	1.5 NM	1.5 NM	1.5 NM	1.5 NM	1.5 NM