

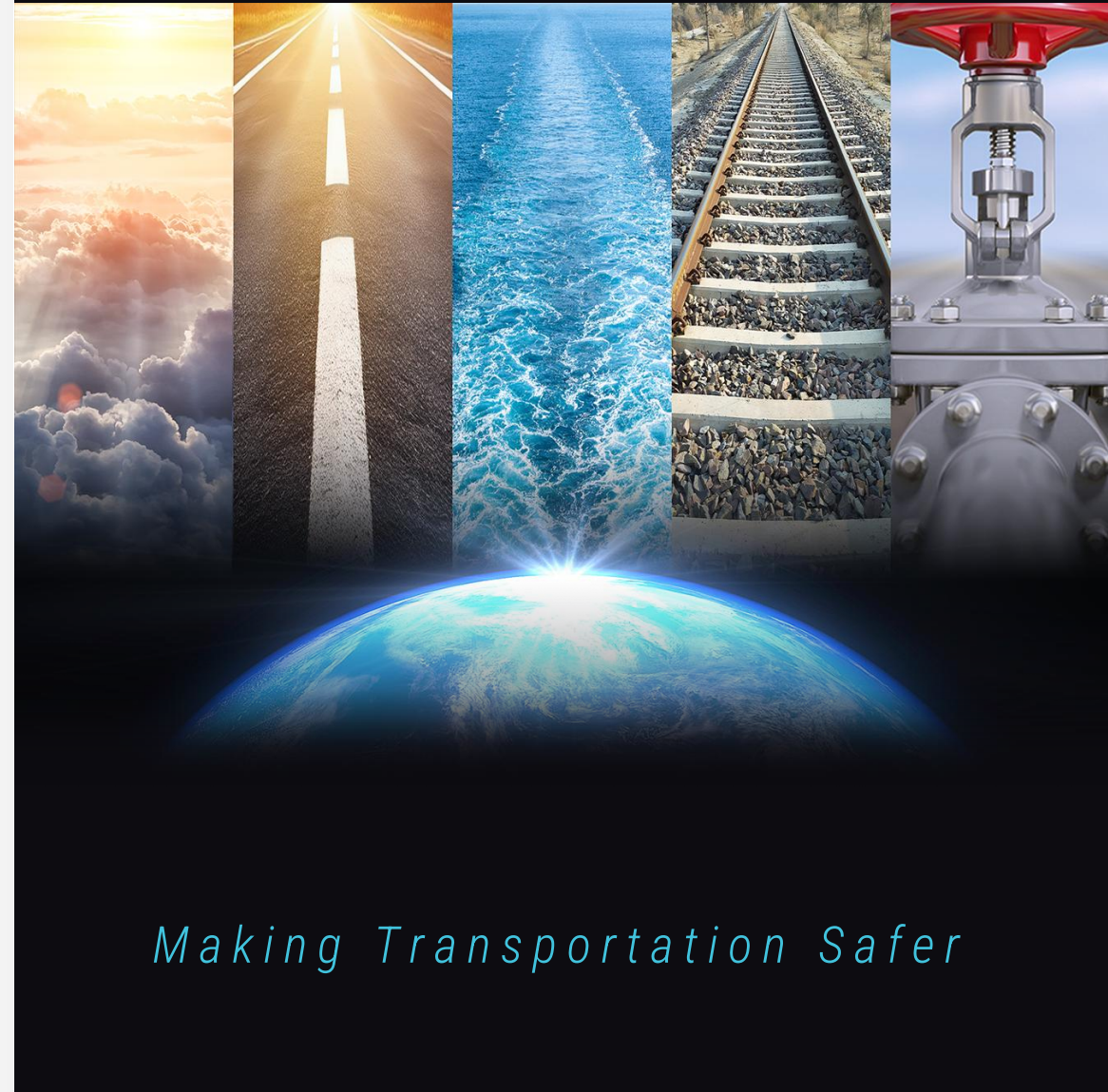


Captain John DeLeeuw (Retired)
NTSB Board Member



Honorable John DeLeeuw

Board Member



Making Transportation Safer

AVIATION • RAILROAD • TRANSIT • HIGHWAY • MARINE • PIPELINE • COMMERCIAL SPACE

NTSB At A Glance

- Independent federal agency
- Investigate civil aviation accidents in the U.S. and significant events in the other modes of transportation
- Determine probable cause and issue safety recommendations
- No regulatory authority
- Five Board Members nominated by the President and confirmed by the Senate to serve 5-year terms
- A staff of more than 400 investigators, analysts, researchers, and others support the mission



NTSB At A Glance (continued)

- Since 1967, the NTSB has investigated more than **150,000 aviation accidents** and thousands of significant events in other modes of transportation
- **More than 15,000 safety recommendations** resulting from NTSB investigations issued to almost 2,500 recipients in all transportation modes



President Johnson signs the Department of Transportation Act of 1966 that created the NTSB.













Aircraft Builders Council, September 28, 2026





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Investigation Process



Our Mission

Making transportation safer. We carry out our mission by—

- **Maintaining** our congressionally mandated independence
- **Conducting** objective, thorough investigations and safety studies
- **Deciding**, fairly and objectively, appeals of enforcement actions by the FAA and US Coast Guard and certificate denials by the FAA
- **Advocating** implementation of safety recommendations
- **Assisting** victims and survivors of transportation disasters and their families

Insights from the DCA Midair Collision



History of Flight/Overview

- January 29, 2025 about 8:48pm local time
- US Army Black Hawk helicopter (PAT25) & PSA Airlines CRJ700 (Flight 5342) over the Potomac River
- 67 fatalities: 64 onboard the airplane, 3 onboard the helicopter
- PAT25 on a training mission for an annual proficiency and readiness test, traveling south along the Potomac River

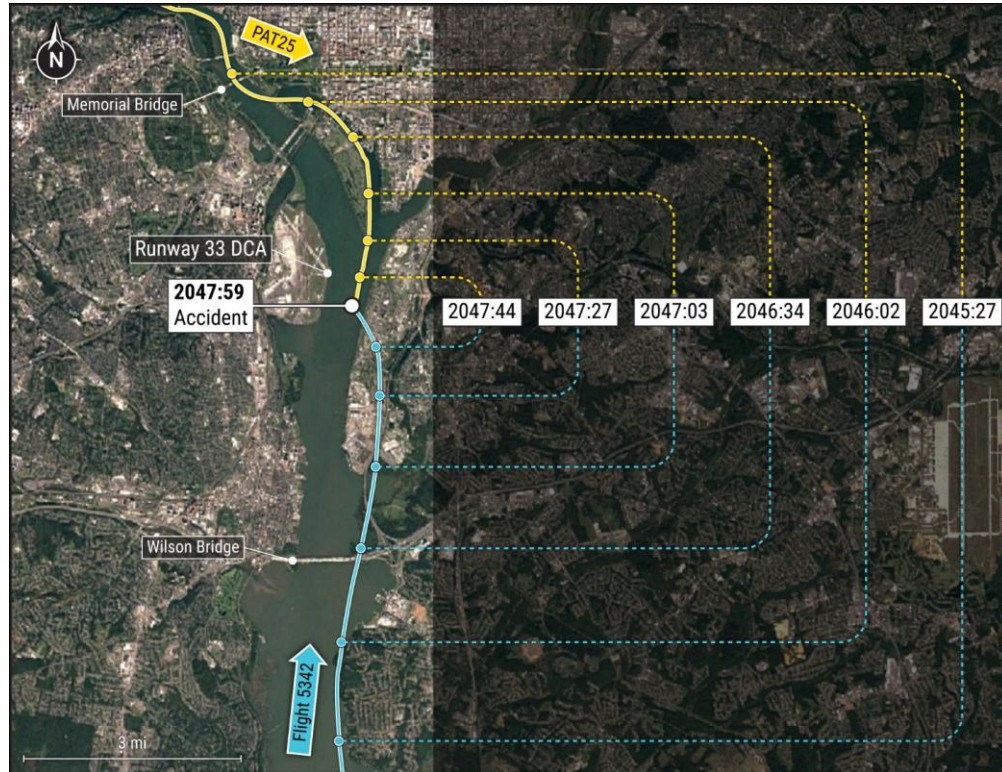


History of Flight/Overview

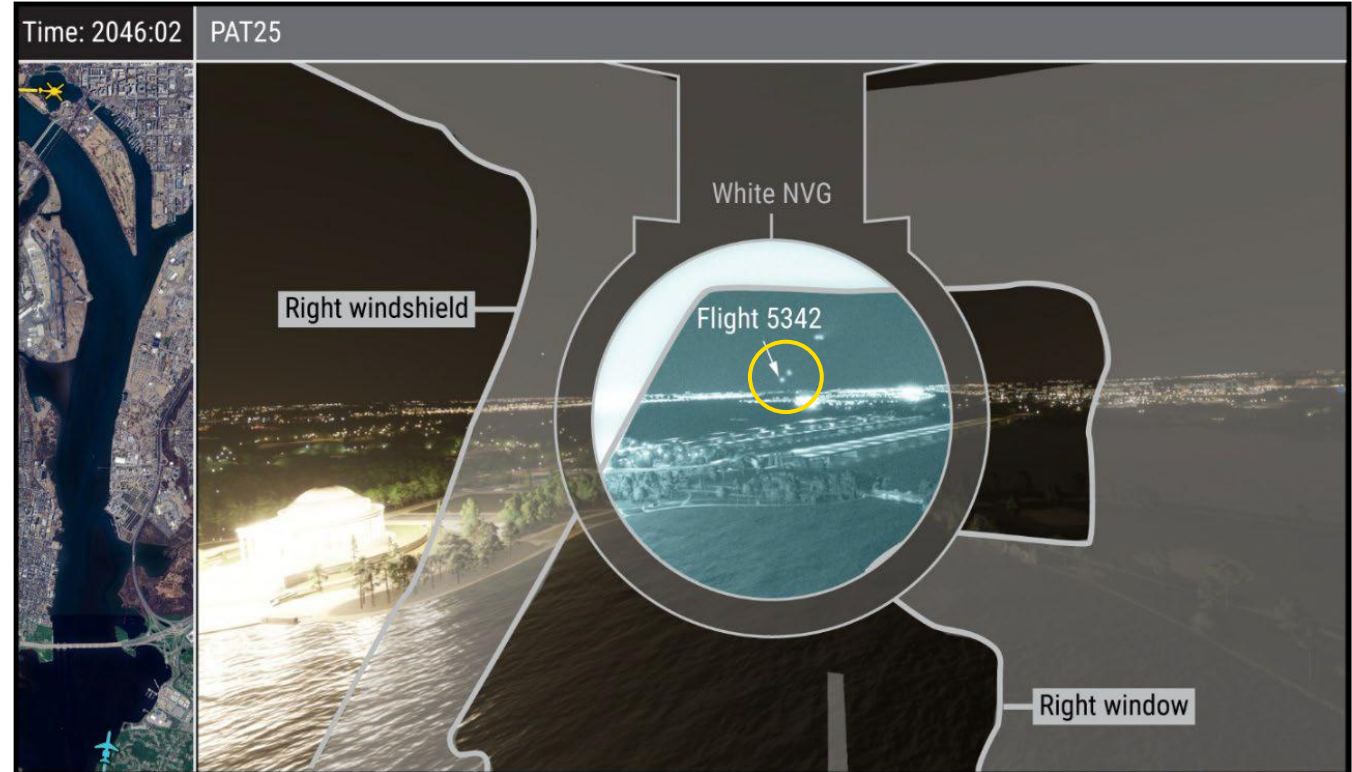
- Flight 5342 inbound from south visual RWY 1, asked if they could circle RWY 33
- One controller at DCA ATCT working combined helicopter and local controller
- PAT25 requested visual separation from Flight 5342, confirming aircraft in sight at two different points in flight



History of Flight/Overview



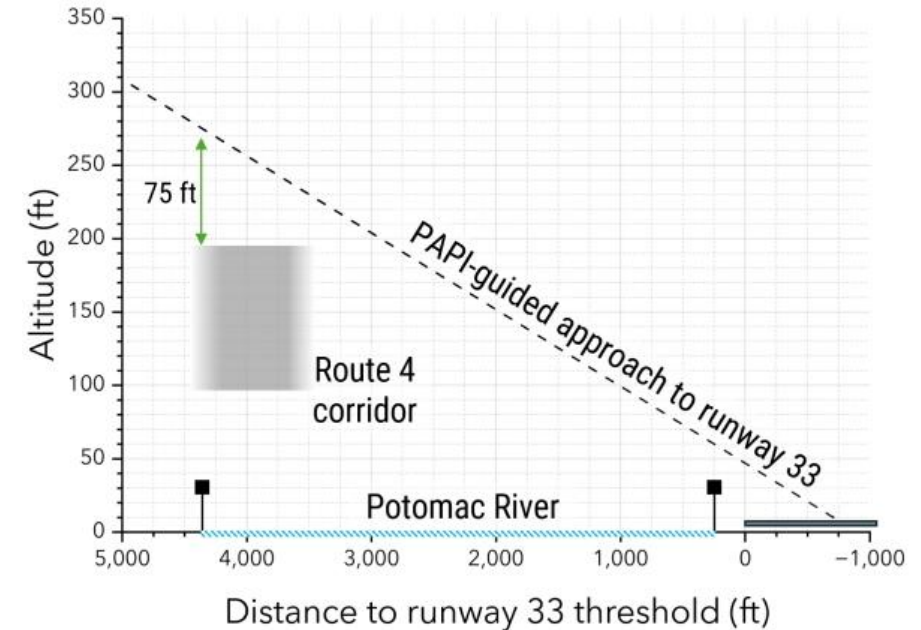
Locations of flight 5342 and PAT25 from 2045:27 through 2047:59



Simulated view from right seat of PAT25

History of Flight/Overview

- As the flights converged, ~20 seconds before impact, controller asked PAT25 if they had the airplane in sight
- PAT25 again indicated they had the airplane in sight and requested visual separation
- The ATCT controller did not issue a safety alert to either aircraft
- Collided .5 miles from Ronald Reagan Washington Airport (DCA)



Cross section showing the notional separation between Route 4 and a PAPI-guided visual approach to runway 33, according to FAA charts and aerial photogrammetry analysis

What We Found: Indicators of Midair Collision Risk

- Safety data showed evidence of midair collision risk between airplanes and helicopters near DCA
- Stakeholders had limited awareness of data
 - Some systems not used to track aircraft close proximity encounters before accident
 - No standard definition of close proximity encounter
 - Delay in occurrence reviews
 - Helicopter operators not aware of involvement in TCAS events

50 Safety Recommendations

ADS-B In Requirement:

Require all aircraft operating in airspace where ADS-B Out is mandated to also equip ADS-B In with dynamic cockpit traffic displays and audible alerts. Simulations showed ADS-B In would have provided critical advance warnings to both crews prior to impact.







Aviation Safety Action Program (ASAP)



U.S. Department
of Transportation
Federal Aviation
Administration

Advisory Circular

Subject: Aviation Safety Action Program

Date: 3/31/20

AC No: 120-66C

Initiated by: AFS-200

Change:

History of ASAP

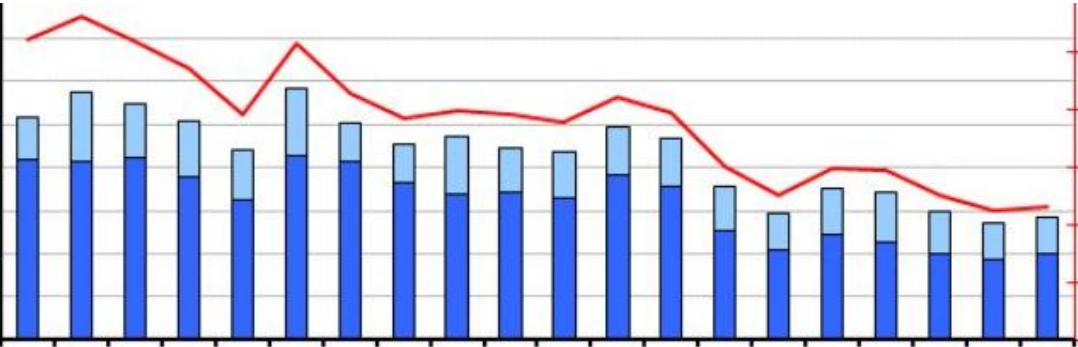
Program that encourages employees of airlines to report safety concerns and violations to the ASAP ERC, without fear that the FAA will use submitted ASAP reports to take legal enforcement action against them.



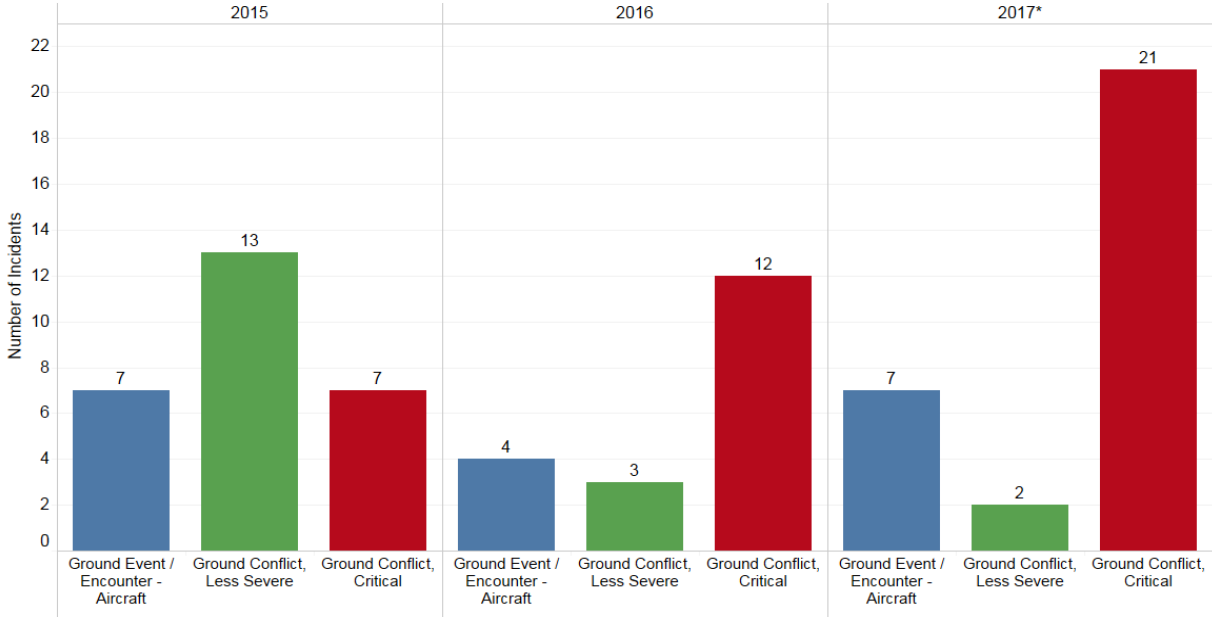
Under an ASAP, safety issues are resolved through corrective action rather than through punishment or discipline.



ASAP safety data, much of which would otherwise be unobtainable, is used to develop corrective actions for identified safety concerns, and to educate the appropriate parties to prevent a reoccurrence of the same type of safety event



Year and Specific Anomalies



In order to prevent accidents and incidents, two types of reports are considered for participation under ASAP:

(1) self-disclosure of a possible FAR deviation

(2) a general or specific flight safety concern.





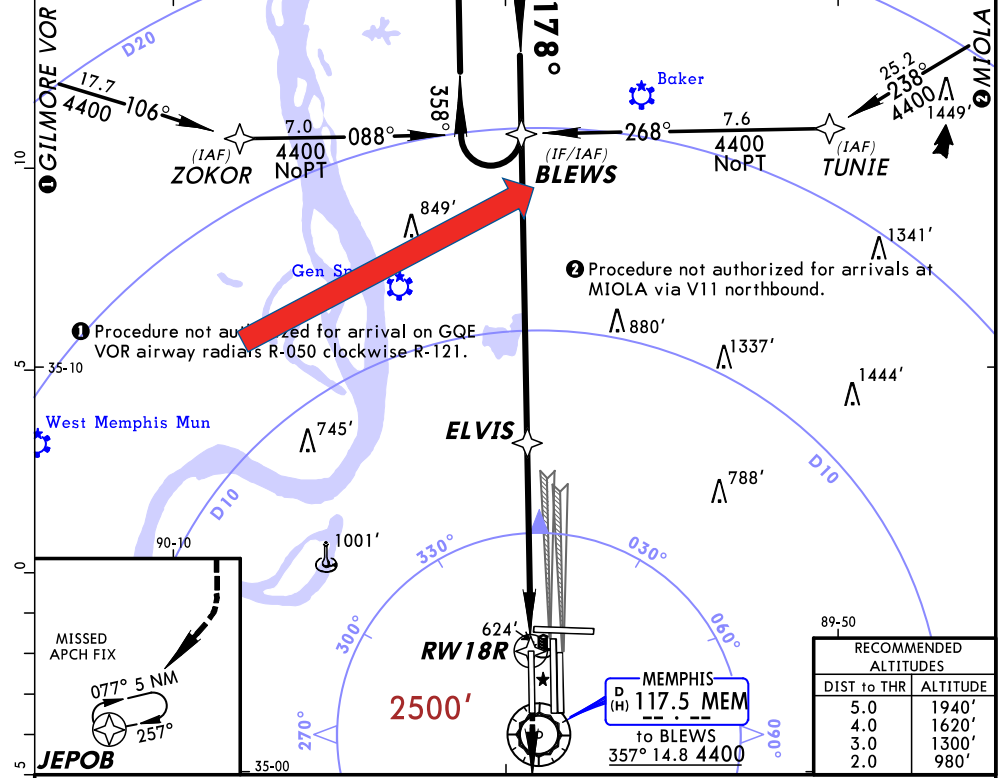
MEMPHIS, TENN
RNAV (GPS) Z Rwy 18R

RNAV	Final ApcH Crs 178°	Minimum Alt ELVIS 2000' (1705')	LNAV/VNAV DA(H) 874' (579')	Apt Elev 341' TDZE 295'	
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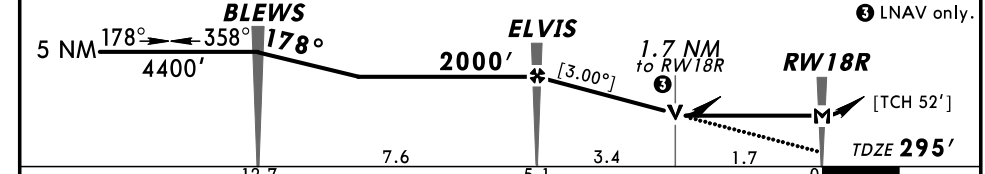
2500'

MSA RW18R

Alt Set: INCHES	Trans level: FL 180	Trans alt: 18000'
1. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -15°C (5°F) or above 48°C (118°F). 2. DME/DME RNP-0.30 not authorized. 3. Simultaneous approach authorized with Rwy 18C/L. 4. LNAV procedure not authorized during simultaneous operations. 5. Use of Flight Director or Autopilot providing RNAV track guidance required during simultaneous operations.		
		MSA RW18R



RECOMMENDED ALTITUDES	
DIST to THR	ALTITUDE
5.0	1940'
4.0	1620'
3.0	1300'
2.0	980'



12.7					5.1		0			
Gnd speed-Kts	120	140	160	180	MALSR 	900'	5000'		JEPOB	
Descent angle	[3.00°]	637	743	849		955				
MAP at RW18R										

KMEM/MEM
MEMPHIS INTL

JEPPESSEN
11 AUG 17 12-4

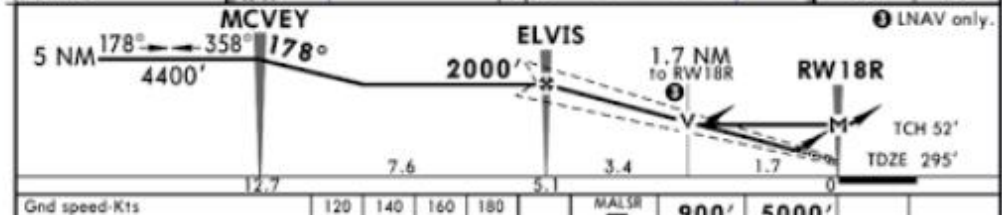
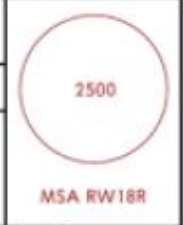
MEMPHIS, TENN
RNAV (GPS) Z Rwy 18R

D-ATIS	MEMPHIS Approach (R)		MEMPHIS Tower			Ground		
	356°-175°	176°-355°	Rwys 18R-36L	Rwys 9-27	Rwys 18C-36C, 18L-36R	Rwys 18R-36L	Rwys 9-27	Rwys 18C-36C, 18L-36R
127.75	125.8	119.1	128.42	118.3	119.7	121.65	121.0	121.9

WAAS Ch 56606 W-18A	Final Apch Crs 178°	Minimum Alt ELVIS 2000' (1705')	LPV DA(H) 495' (200')	Apt Elev 341' TDZE 295'
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MISSED APCH: Climb to 900' then climbing RIGHT turn to 5000' direct JEPOB and hold.

Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'
1. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -15°C (5°F) or above 48°C (118°F). 2. DME/DME RNP-0.30 not authorized. 3. Simultaneous approach authorized with Rwy 18C/L. 4. LNAV procedure not authorized during simultaneous operations. 5. Use of Flight Director or Autopilot providing RNAV track guidance required during simultaneous operations.



Questions?

Thank you

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