

FPAW Summer 2012

RVR/Prevailing Visibility Conversion and Cat I Minimums

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Federal Aviation
Administration



Requirement

- Evaluate RVR values as compared to ground visibility (ASOS/AWOS) in 1/16 and 1/8 SM increments
- Establish confidence that demonstrated visibility measurements (ASOS/AWOS) are statistically equivalent to specific RVR values
- High quality visibility information will permit AFS to make critical safety of flight regulatory adjustments that effect operators and pilots
- Support AFS Next Gen Initiatives for Weather Technology in the Cockpit and Low Visibility Approach and Landing Operations



Category I Approach Minimums

Procedures		CAT I			
		Standard			Lower Than Standard
Authorized Minimums	TDZ Only	2400	1800	1800	1400
Operational Requirements				Autopilot or FD, or HUD to DA	HUD to DH
				Equipment note on approach plate	SAACR
Required ILS Classification		1 / C / -	1 / C / -	1 / C / -	1 / C / -
DH		200	200	200	150
Required Runway Lights		HIRL	HIRL, and TDZ, and CL	HIRL	HIRL
Required Approach Lights		SSALR or MALSR or ALSF			
Notes & Exceptions				Single-pilot must also use AP or HUD when on FD	Single-pilot NA



CFR § 91.175(h)(2)

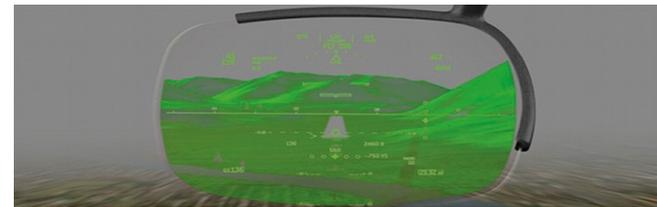
RVR (feet) Visibility (statute miles)

1,600.....	1/4
2,400.....	1/2
3,200.....	5/8
4,000.....	3/4
4,500.....	7/8
5,000.....	1
6,000.....	1 1/4



Next Gen Initiatives

- OI 103119, 103121, 103123 – support Next Gen Aviation Weather
- OI 107117, 107118, 107119 – Low visibility approach and landing operations and expanded low visibility operations using lower RVR minima
- 500 published LPV procedures with FAA goal of 300+ new procedures per year
 - Most of these airports do not have RVR transmissometers
 - Limits full capability of aircraft and flight crew



Research

- Determine new RVR to visibility equivalents in 1/16 and/or 1/8 SM increments
 - Evaluate RVR to ASOS/AWOS visibility
- Equate slant range visibility (pilot view) at decision altitude to RVR and automated visibility (ASOS/AWOS)

Measurement of Success

- Establish confidence that demonstrated automated visibility measurements are statistically equivalent to specific RVR values



Outcome

Use new visibility data to:

- Change CFR § 91.175(h)(2) to reflect 1/16 or 1/8 SM increments
- Revise OpSpec C051 and C052 and/or create a new OpSpec as necessary for Category I approach minimum using HGS or EFVS
- Revise FAA Order 8900.1
- Revise AIM

Or

- If visibility data does not support lowering visibilities, use data to inform air carriers why certain operations are not safe



Current Status

- Funded for FY 2013 and 2014
 - Anticipate start in 1/13
- Formal project plan – in progress
 - Meet standards of the FAA AWRP
- Working to determine Research Provider
 - DOT Volpe – Otis AFB
 - NCAR
 - FAA Tech Center

