

Volpe LVO/SMGCS Symbol Study

**New! Improved! Charts
(maybe) headed your
way.**

Presented to: ACF Spring 2015

By: Bruce McGray, FAA AFS-410

Date: April 2015



Federal Aviation
Administration



We Want You!



The Volpe Center is looking for pilots to participate in an LVO/SMGCS Symbol Study

Qualification:
Airline Transport Pilot
CAT III experience

Survey Duration:
About 45 minutes to complete

All Pilots Interested, Please Contact

Andrea Sparko (617) 494-3363
andrea.sparko@dot.gov

OR

Stephanie Chase (617) 494-6348
stephanie.chase@dot.gov

50 Pilots who Complete the Survey will be Picked at Random for a **\$50 Gift Certificate to Amazon.Com**

Remember our request in Spring 2013?

\$50!

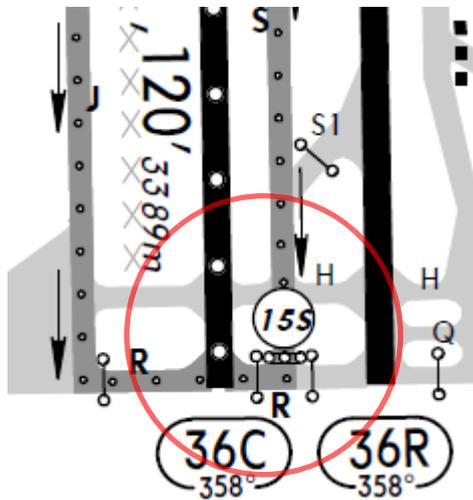
And if you call by midnight tonight.....



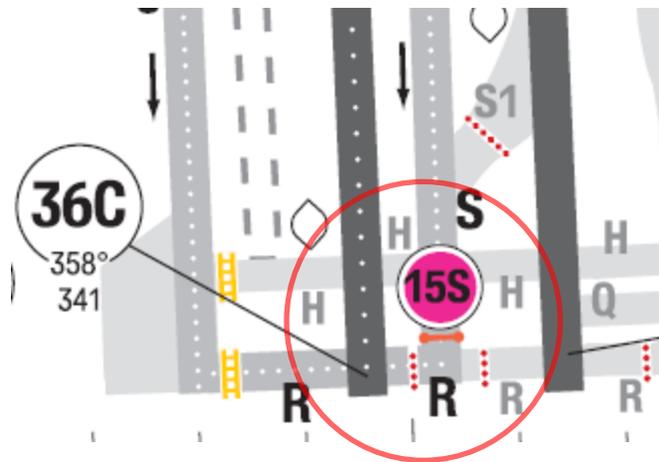
Federal Aviation
Administration

LVO/SMGCS Chart Symbols

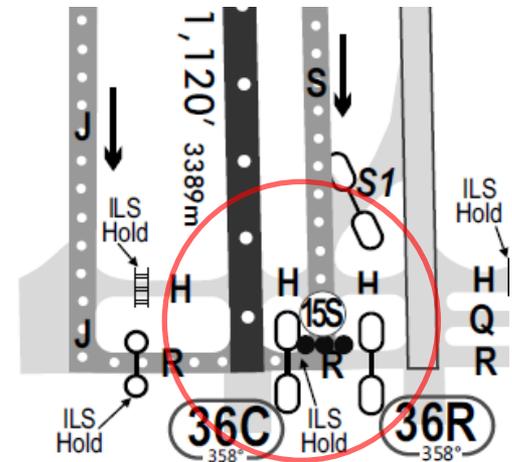
JEPPESEN



LIDO



FAA Prototype



South end of Runways 36C & 36R
Memphis, TN (KMEM)

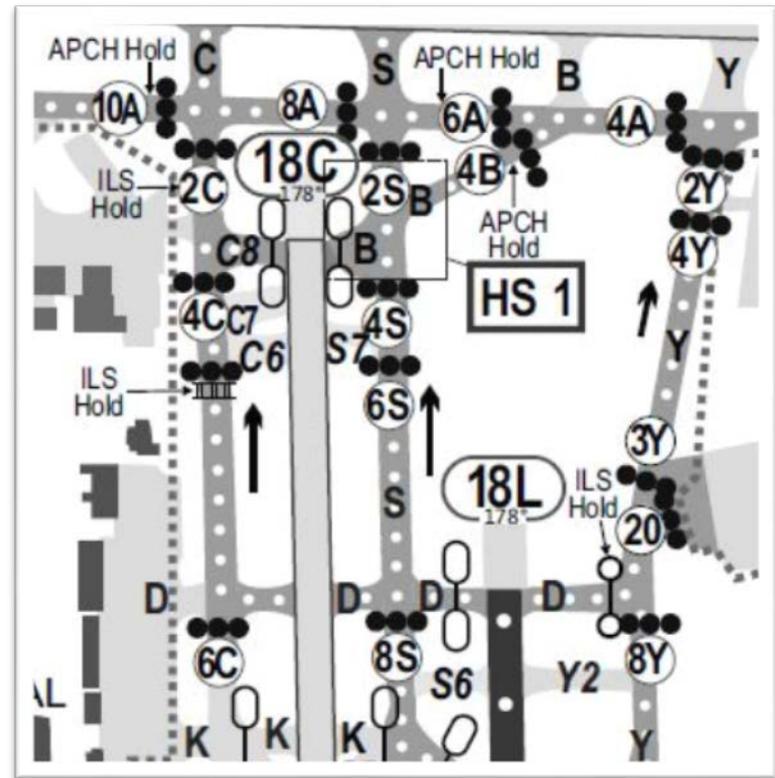


Background 1/2

Low Visibility Operations/Surface Movement Guidance and Control System (LVO/SMGCS)

Procedures & visual aids

Must be illustrated on charts



Federal Aviation
Administration

Background 2/2

FAA guidance does not contain recommendations specific to LVO/SMGCS charts

Symbology varies across airports & chart providers

Information Type	Chart Provider		
	Jeppesen	Lido	FAA prototype
Geographic position marking (GPM)			
Clearance bar			
ILS hold line			
Runway guard lights (RGL)			
Stop bar			
Combination of RGL and stop bar			
Non-movement area boundary			



Participants

144 air transport pilots with category (CAT) III qualification or LVO/SMGCS training

Flight Time	Mean (SD)
Total flight hours	11,691 (5,482)
Years CAT-III	14 (7)
LVO/SMGCS flight hours	102 (445)
LVO/SMGCS simulator hours	103 (263)

International experience

- 129 U.S. pilots (114 with international experience))
- 15 non-U.S. pilots

Charts used most

- 134 pilots Jeppesen
- 7 Lido
- 2 NavTech/AERAD
- 1 FAA



Symbol Shape Representativeness

Task

60 symbol shapes

- Symbols used on LVO/SMGCS charts
- “Foils”

Information Type	Symbols	Foils
Geographic position marking (GPM)		
Clearance bar		
ILS hold line		
Runway guard lights (RGL)		
Stop bar		
Combination RGL and stop bar		
Non-movement area boundary		



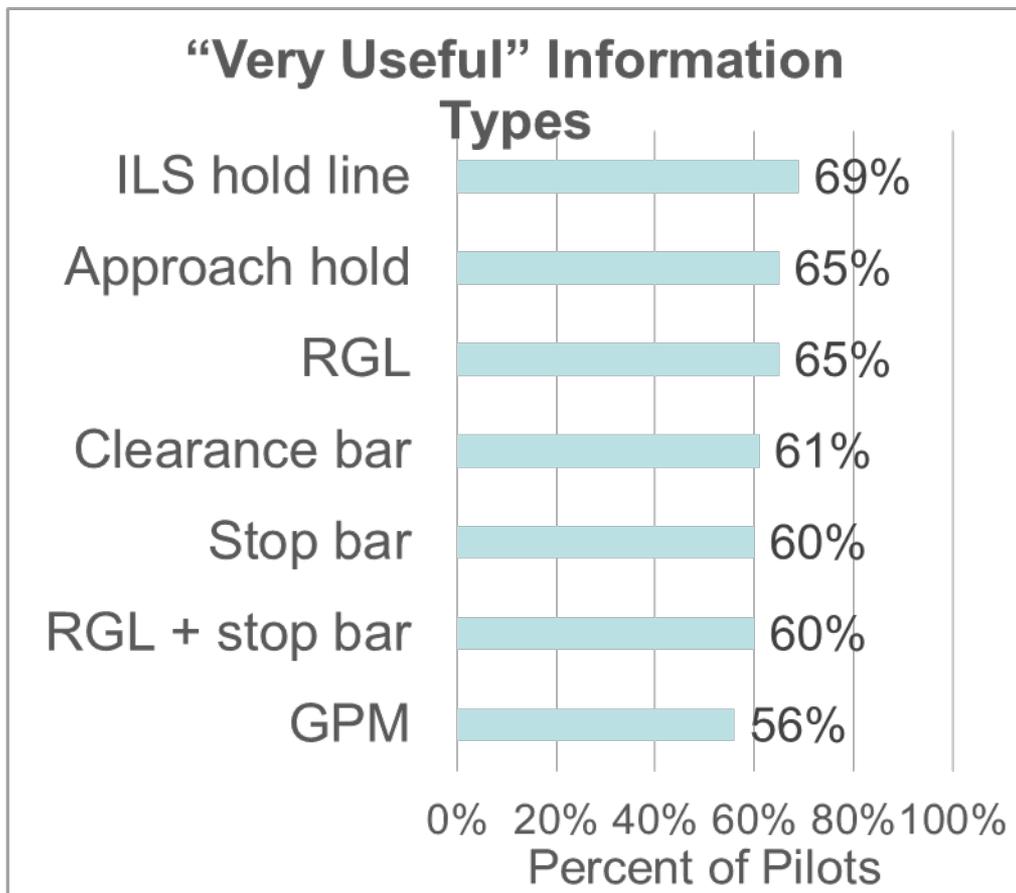
Information Type Usefulness Task

Rate the usefulness of the following information on LVO/SMGCS charts.

	Very Useful	Somewhat Useful	Not Very Useful
Approach Hold: Pavement marking indicating a holding position at the boundary of a protected approach containment area for a runway.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Apron Holding Point: Pavement marking indicating a holding position at the boundary of an apron.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Clearance Bar: Lights at the holding position of a taxiway/taxiway intersection.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Preliminary Results: Information Type Usefulness



Exceptions:

- Apron holding point rated equally
“very useful” (46%)
“somewhat useful” (37%)
- Non-movement area
“somewhat useful” (49%)



Questions?

Contact Information (AFS-410)

- **Bruce McGray [bruce.mcgray@faa.gov]**
- **Andrew Burns [andrew.ctr.burns@faa.gov]**
- **Philip Saenger [philip.ctr.saenger@faa.gov]**
- **Randy DeAngelis [randy.ctr.deangelis@faa.gov]**

