Attachment 8

Heliport and Airways Committee

HSAC Meeting
Houston, TX
19 May 2016

API RP-L1 Status

- Meeting was held on 3 May 2016 in Houston
- The HSAC members of the WG reviewed and closed several of the comments (185 of 500) before the meeting.
- The group then categorized the remainder by priority, High, Medium, and low.
- It was decided to start with the High level comments to see if we could get consensus. After 5 hours we could not come to agreement.
- API then suggested that the WG remove the deck size requirements developed for L1 and insert what is in RP 2L.

HSAC WG's (plan forward)

- The WG proposed a compromise that would allow for less than .83D helidecks. For **Minimum Structures**, defined in the CFR's as; An Offshore facility that is located in 100 feet of water or less, and the work platform is less than 400 square feet.

- The WG agreed that there would be no obstacles above the helideck for 360 degrees. Also the dropdown below would contain no obstacles for 270 degrees

HSAC RP 2016-1
(Revision 1)

Helideck Design Guidelines
(New Builds)

Highlights

Largely aligned with existing FAA and International requirements for markings, lighting, and Fire Protection.- LOS, OFS, and dropdown protected areas are well defined, as well as the size of all markings.

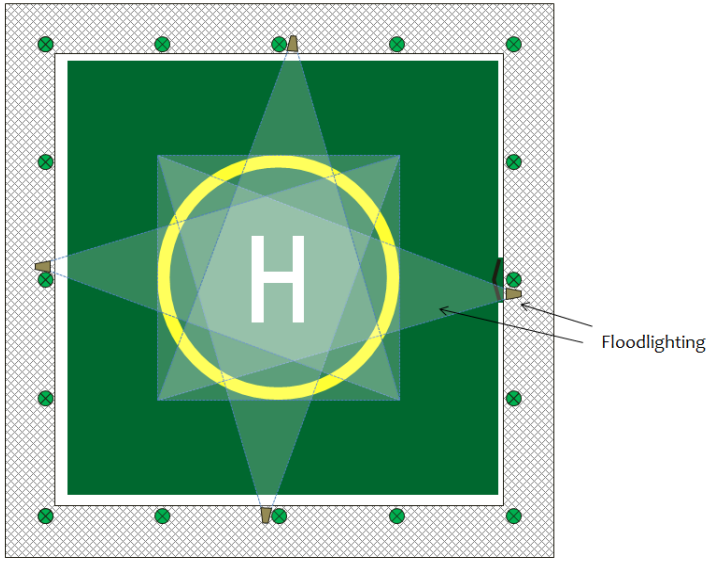
Minimum Deck size– For Helidecks that are designed to Rotor Diameter (RD) the helideck must have solid shelving. For One Diameter (1D) helidecks the helideck can have perimeter netting.

Helideck Floodlighting - Only change/addition to Rev. 1.

RP 2016-01 Overview

TLOF Flood Lighting

7.3.1 Flood lighting may be required to improve the ability of the pilot to see the Touchdown and Lift Off Area (TLOF) markings (TDPM, 'H', size/weight (mass) limits) during approach and landing and to illuminate the TLOF and surrounding area for helideck "ground" operations (passenger movements, refueling operations, freight handling etc.), Figure 33 below provides a typical flood lighting arrangement.



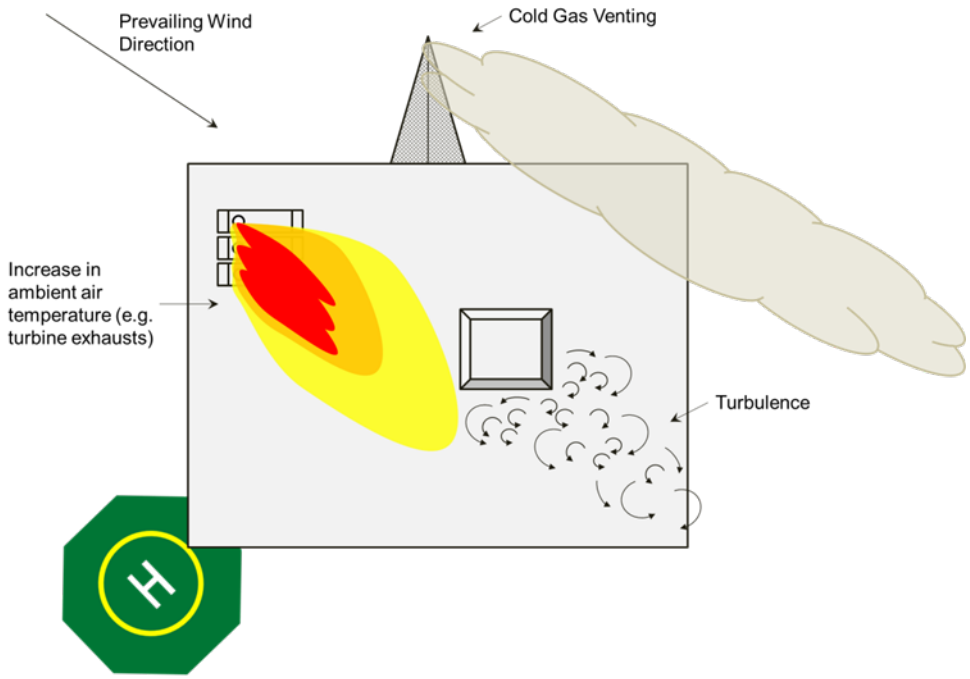
Design Helicopter Selection

Design criteria presented herein include operational requirements, safety considerations, and environmental aspects that can affect the design of the helideck. The following are considerations for selecting the helicopter for helideck design:

- distance from onshore staging areas or helicopter bases;
- proximity to other offshore helidecks, on either satellite structures or adjacent field structures;
- status as to whether the facility is manned or a normally unmanned installation (NUI) without living quarters;
- helicopter transportation requirements for the facility;
- crew change requirements;
- requirements for night operations, medical evacuation, or other emergency flights;
- environmental conditions.

Helideck Design considerations

Location:
The helideck should be located so that the TLOF and associated flight paths are as far as possible outside the influence of the hot and cold gas discharges, and turbulence effects in prevailing wind conditions.



Design Procedures for Offshore Helidecks

General:
The design procedures are limited to helidecks of steel or aluminum construction located on fixed and floating offshore platforms.

- Helideck Design Load
- Design Load Conditions
- Installation
- Material
- Helideck (TLOF) Surface
- Safety Nets and Safety Shelves
- Tie-down Points

Helideck Markings

General:

TLOF perimeter, touchdown/positioning and other markings for normal helicopter operations should be provided.

- TLOF Perimeter Marking
- Touchdown/Positioning Circle Marking
- “H” Marking
- Weight (Mass) and Size Limitation Markings
- Helideck Obstacle-free Sector (Chevron) Marking
- Parking Area and Parking Transition Area Markings
- Prohibited Landing Sector Markings
- Helideck Name and Radio Frequency Markings
- TLOF Surface Colors
- Exit markings
- Walkway markings

Lighting

General:

Lights shall be installed on manned facilities.

New technology lighting such as strip LEDs for the TLOF perimeter or TDPC should be considered as these become more available, reliability is proven, and they meet the equivalent lighting specifications for existing lighting systems.

- TLOF Perimeter Lighting
- Parking Area and Parking Transition Area Lights
- Status Light(s)
- Lighting of Obstructions
- Uninterrupted Power Supply

Fueling Stations

General:

Helicopter fueling stations and equipment should be located to avoid obstructing any personnel access or egress route serving the TLOF (helicopter flight deck) and should not infringe required obstacle-free surfaces.

- Fuel Tanks
- Fuel Transfer Equipment
- Marking of Fuel Systems

Weather Reporting Equipment

- Wind Sock
- Weather Measuring Equipment
- Floating Facilities additional reporting equipment

Annexes

- Guidance for Helideck Limited Parking Areas and Push-in
- Firefighting Foam Systems
- Commentary on Design Procedures
- Additional Helideck Tie-down Arrangements
- Helideck Text Fonts
- Perimeter Light Requirements

Differences with ICAO

HSAC

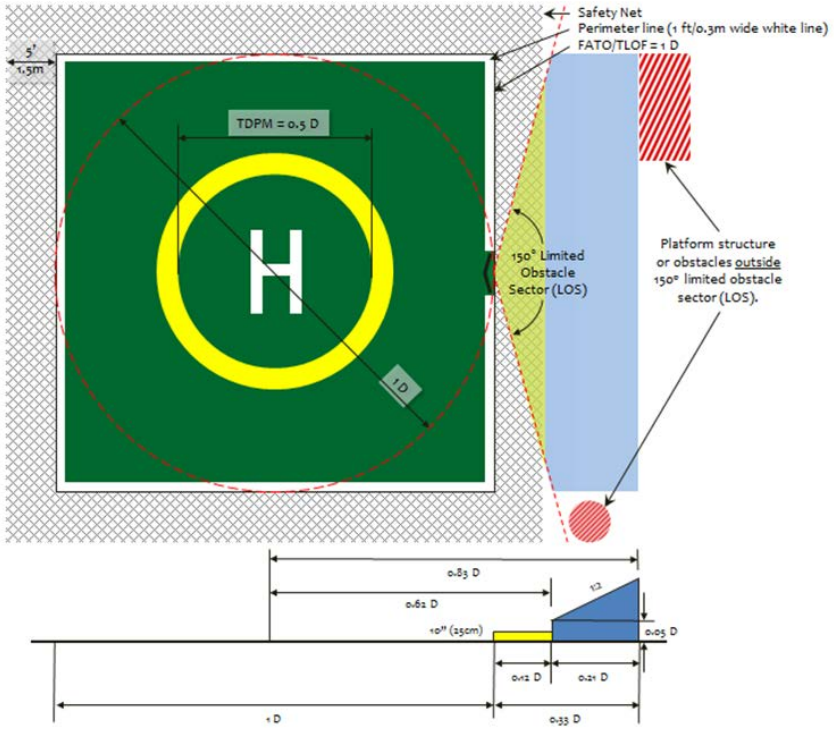
Minimum Deck size– For Helidecks that are designed to Rotor Diameter (RD) the helideck must have solid shelving. For One Diameter (1D) helidecks the helideck can have perimeter netting.

ICAO

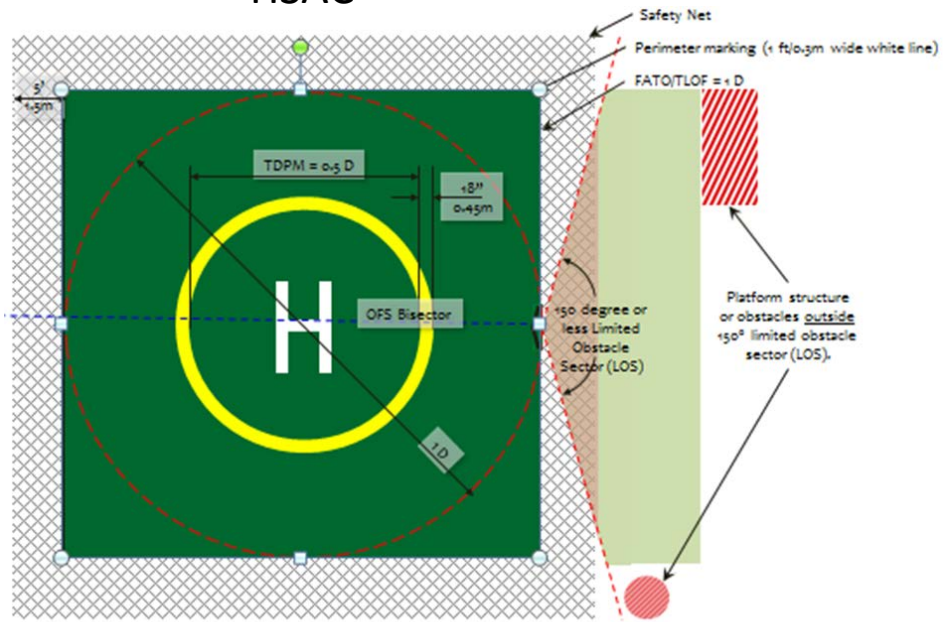
Minimum Deck size– Helidecks for Helicopters under 7000Lbs (3.2t) are designed to Rotor Diameter (RD) with solid shelving. For Helicopters weighting more than 7000Lbs. (3.2t) the helideck will be sized to One Diameter (1D).

Differences with ICAO TDPM/"H"

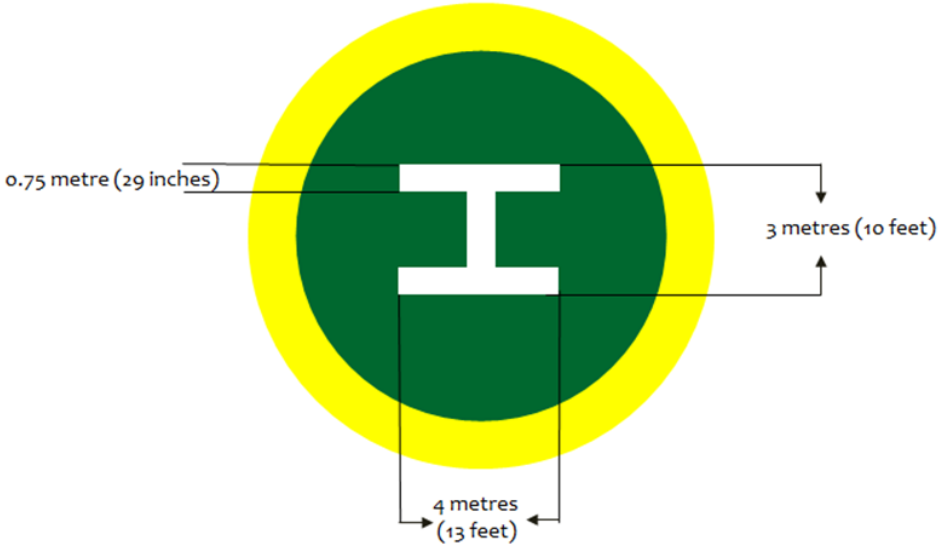
ICAO



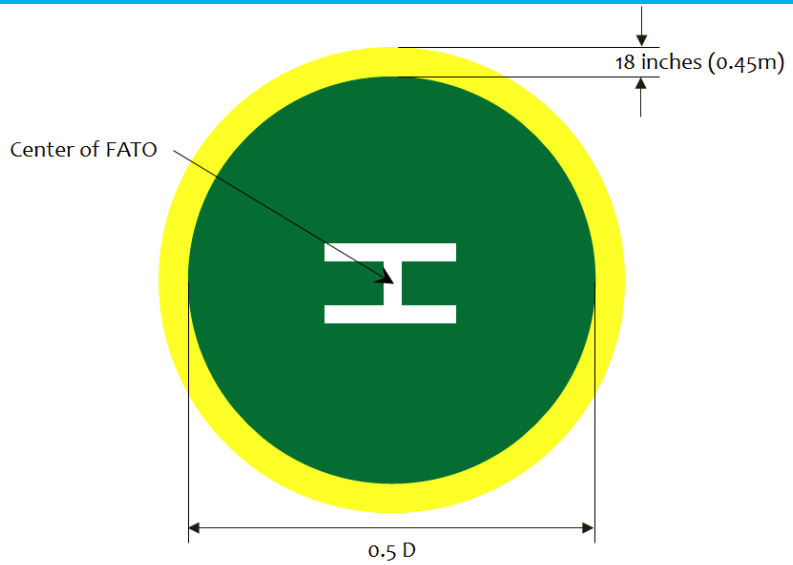
HSAC

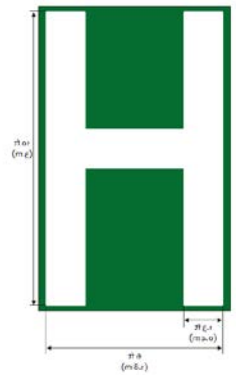


Differences with ICAO TDPM/"H"



ICAO





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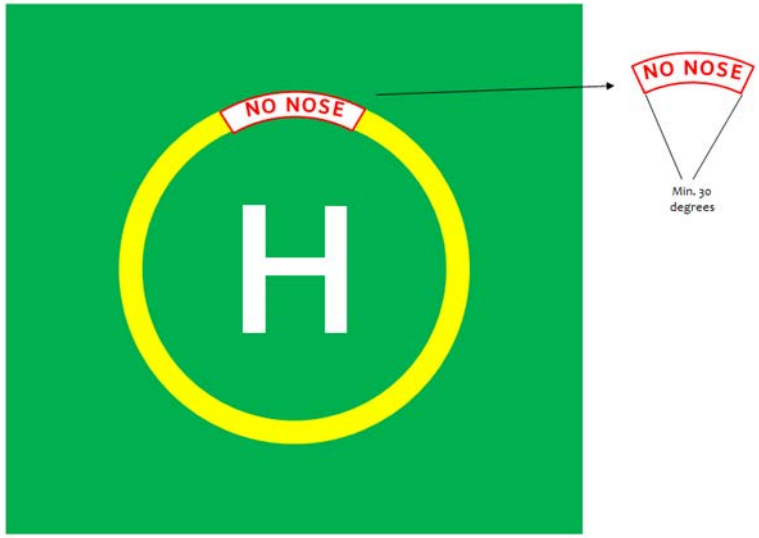
Differences with ICAO "No Nose Marking"

ICAO



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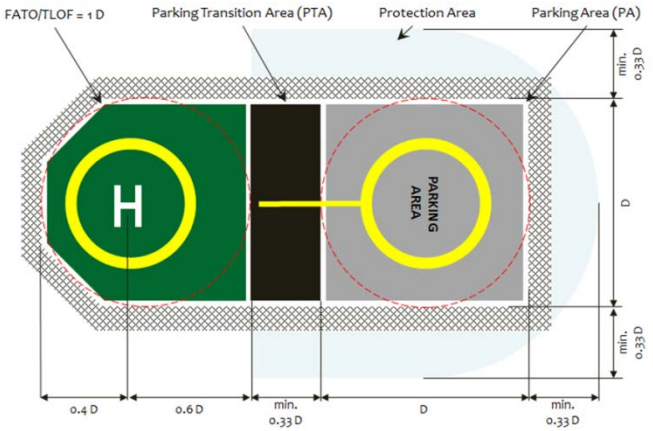
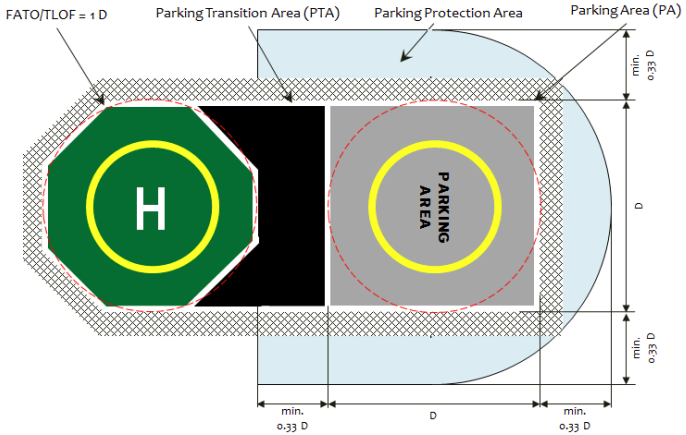
Differences with ICAO "Parking Area Taxi Line"

ICAO

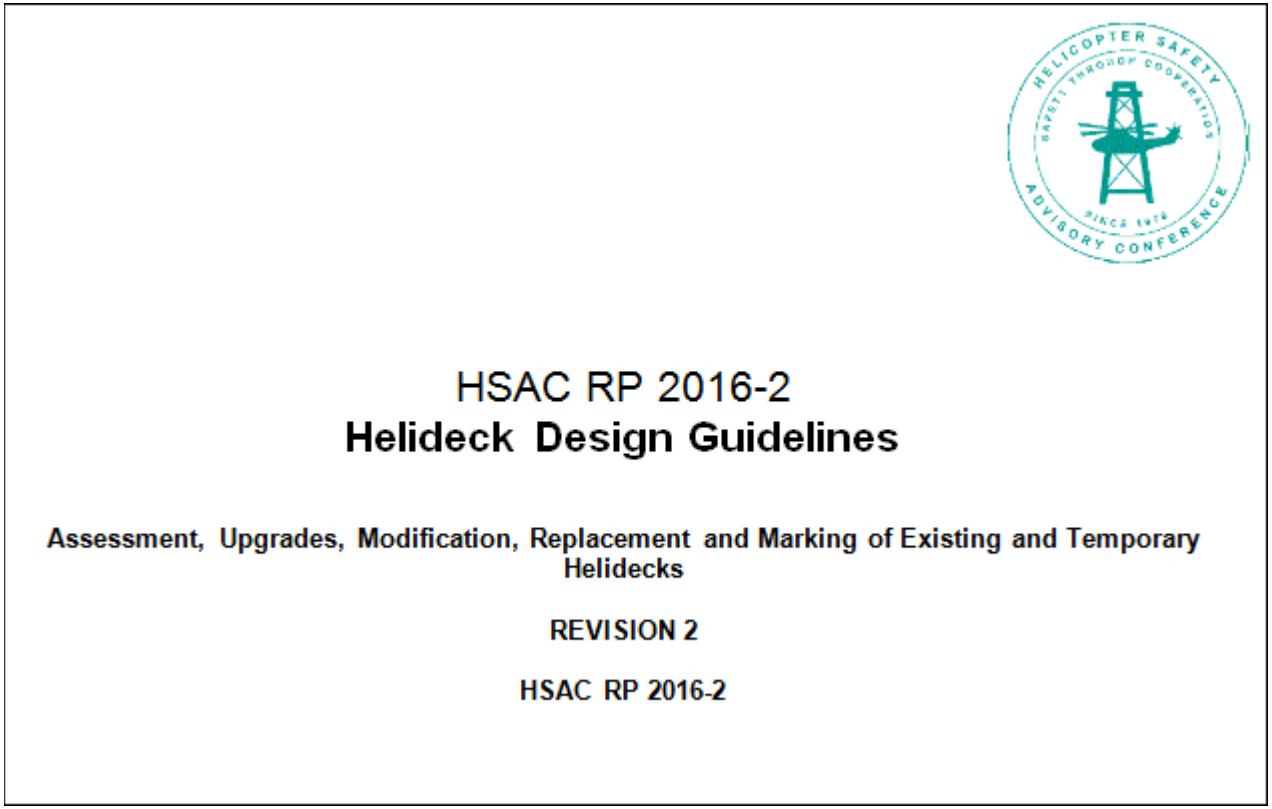


HSAC



HSAC RP 2016-2

Assessment, Upgrades, Modification, Replacement and Marking of Existing and Temporary



HSAC RP 2016-2

Helideck Design Guidelines

Assessment, Upgrades, Modification, Replacement and Marking of Existing and Temporary Helidecks

REVISION 2

HSAC RP 2016-2

HSAC RP 2008-1 "Helideck Markings"

Background

This RP was designed to give guidance to fixed platform owners and helicopter operators on an HSAC recommended practice for marking offshore helidecks.

The guidance has been based on the current ICAO International Standards and Recommended Practices Annex 14 Volume II (Heliports) and also takes best practice from CAP 437 and current practice in the Gulf of Mexico.

HSAC RP 2016-02 has considered all applicable guidance from 2008-1 and has been embedded in the document.

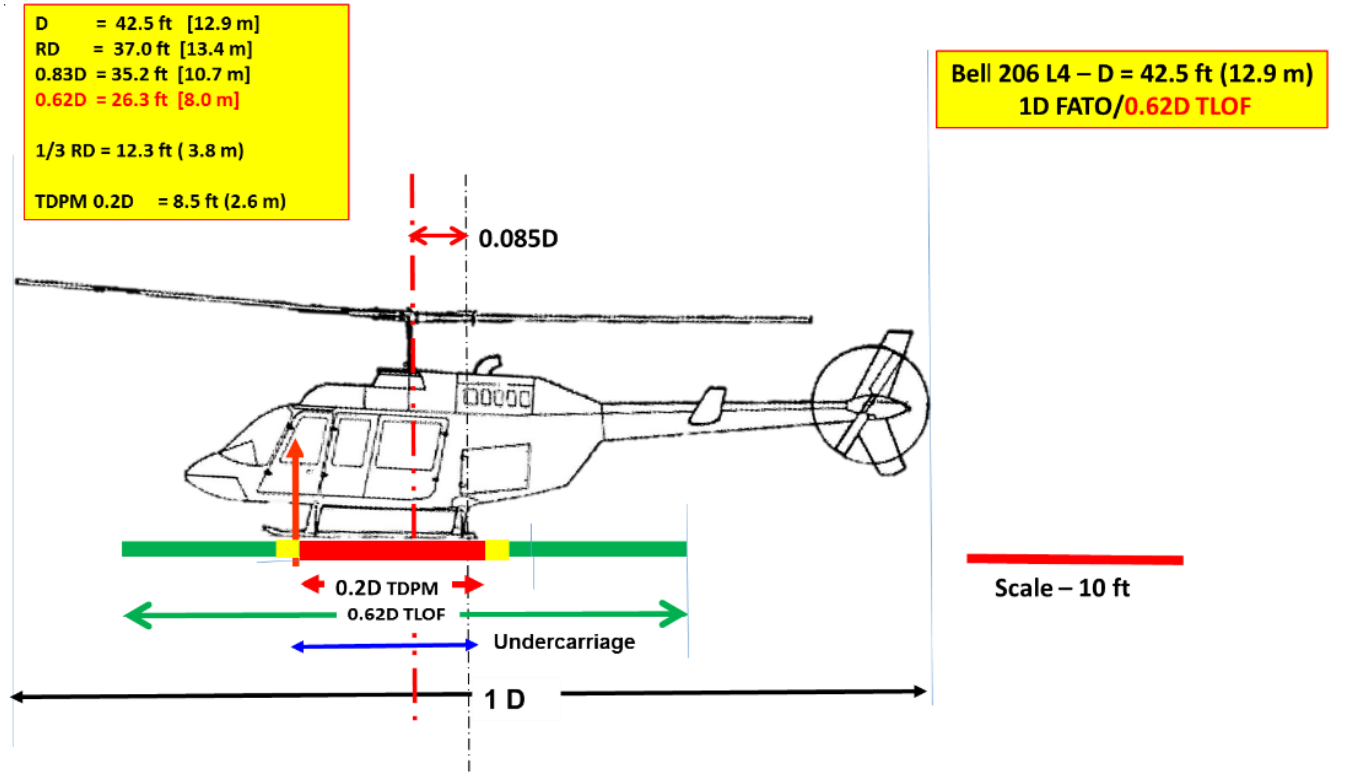
HSAC RP 2016-2
“Legacy Helidecks”

Background

The aim of the study reported in this Note was to develop a Touchdown Position Marking (TDPM) for helidecks with a TLOF of 0.62D i.e. a TLOF of sufficient size to contain a circle of 0.62D of the largest helicopter that will use the helideck. It is proposed that this marking should apply to all helidecks with a TLOF between 0.62D and 0.82D.1

HSAC RP 2016-2 (<0.83D Helideck)

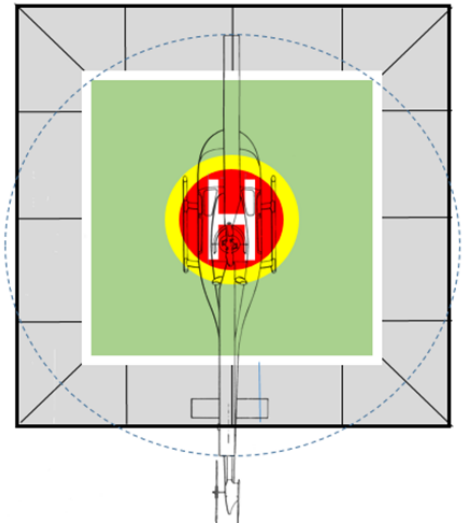
The structure owners, with operator agreement wanted a more manageable TDPM for the smaller helidecks.



Undercarriage locations for the Bell 206 L4 with 0.2D TDPM

HSAC RP 2016-2 (revision)

360 Degree OFS



Bell 206 with the D and RD dimension adjusted to be approximately the same as the Bell 206 L4
D = 42.5 ft (12.9 m)
1D FATO/0.62D TLOF

D = 42.5 ft [12.9 m]
RD = 37.0 ft [13.4 m]
0.83D = 35.2 ft [10.7 m]
TLOF 0.62D = 26.3 ft [8.0 m]

1/3 RD = 12.3 ft (3.8 m)

TDPM 'Circle' 0.2D = 8.5 ft (2.6 m)

TLOF + Safety Shelf = 26.3 + 10 ft = 36.3 ft

Scale – 10 ft.

HSAC RP 2016-2 (revision)

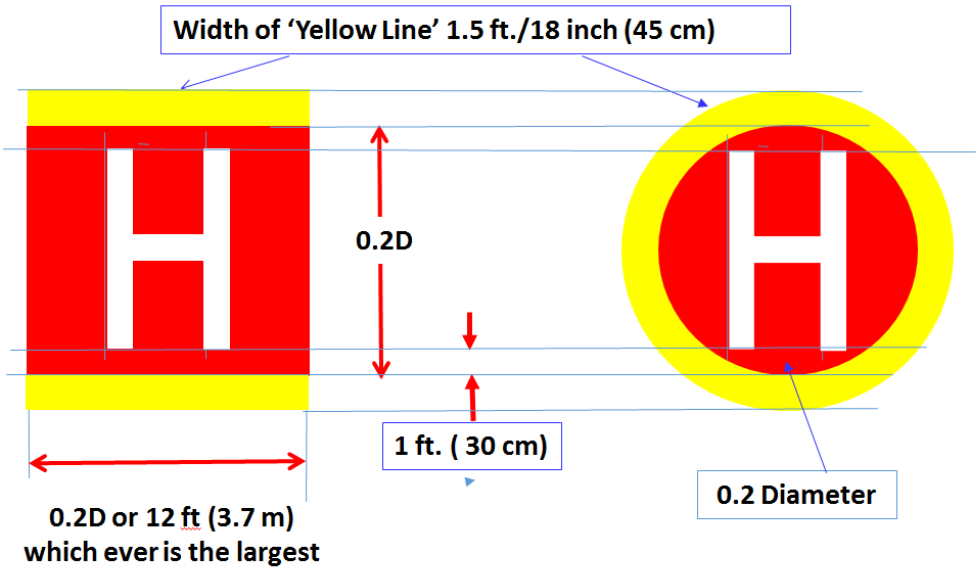


Figure 6.4 TDPM and H Marking for Helidecks less than 0.83D

HSAC WG's (plan forward)

- **<u>HSAC RP 2016-1 rev 1</u>- Helideck Design Guidelines (New Builds) -** Completed May 2016

- **<u>HSAC RP 2016-2</u>- Assessment, Upgrades, Modification, Replacement and Marking of Existing and Temporary Helidecks-** WG is in place and Richard Landrum is the lead. In Progress

- **<u>HSAC RP 2016-3</u>- Inspection, Maintenance and Management of Offshore Helidecks-** Align the RP with current industry best practices. Bill Schroeder (Chevron) and Patrick Bosman (Shell) are co-chairs.
Pending

WORKGROUP HSAC RP 2016-04

STANDARDIZATION OF HELIDECK INFORMATION PLATES

Workgroup Members

- Patrick Bosman - Chair (Shell)
- Bill Schroeder (Chevron)
- Eric Shores (PHI)
- Jeff Goyer (HESS)
- Stewart Soirez (Era)
- Adam Coe (eni)
- Steve Wernecke (ExxonMobil)
- Bob Hall (BP)
- Gary Tucker (Island Operating)
- Jose Jaramillo (Chevron)



Purpose

This Recommended Practice (RP) was developed to describe best practices for standardized provision of important offshore helicopter landing area information to air operators by offshore helicopter landing area owners.

RP Development

- Start 1st week of Feb 2016
- 30 min teleconference every 14 days (6 total)
- Finalizing today for approval

Review RP text

Adobe Acrobat Document

Full RP

Adobe Acrobat Document

Example Info Plate

Way forward

- Approved by HSAC Steering Committee
- HSAC RP to be published on HSAC Website
- Centralized repository for Helideck Info Plates
  - Start on HSAC website
  - Future developments regarding integration with EFBs (ForeFlight, etc.)
- Oil&Gas Companies to build & publish plates
- Available for every Air Operator
- New Workgroup needed?

Questions?