???????Workshop

- Heliport Workshop: FAA/ICAO □□□□□

Heliport Workshop: FAA/ICAO ??????

06 Heliport Workshop?FAA / ICAO ????????

创建日期: 2026-05-29

1. ????

本地资料目录:

`/mnt/data/project/文件服务器/学术研究/0.通用航空论文撰写与发表/参考资料/Heliport Design Workshop/`

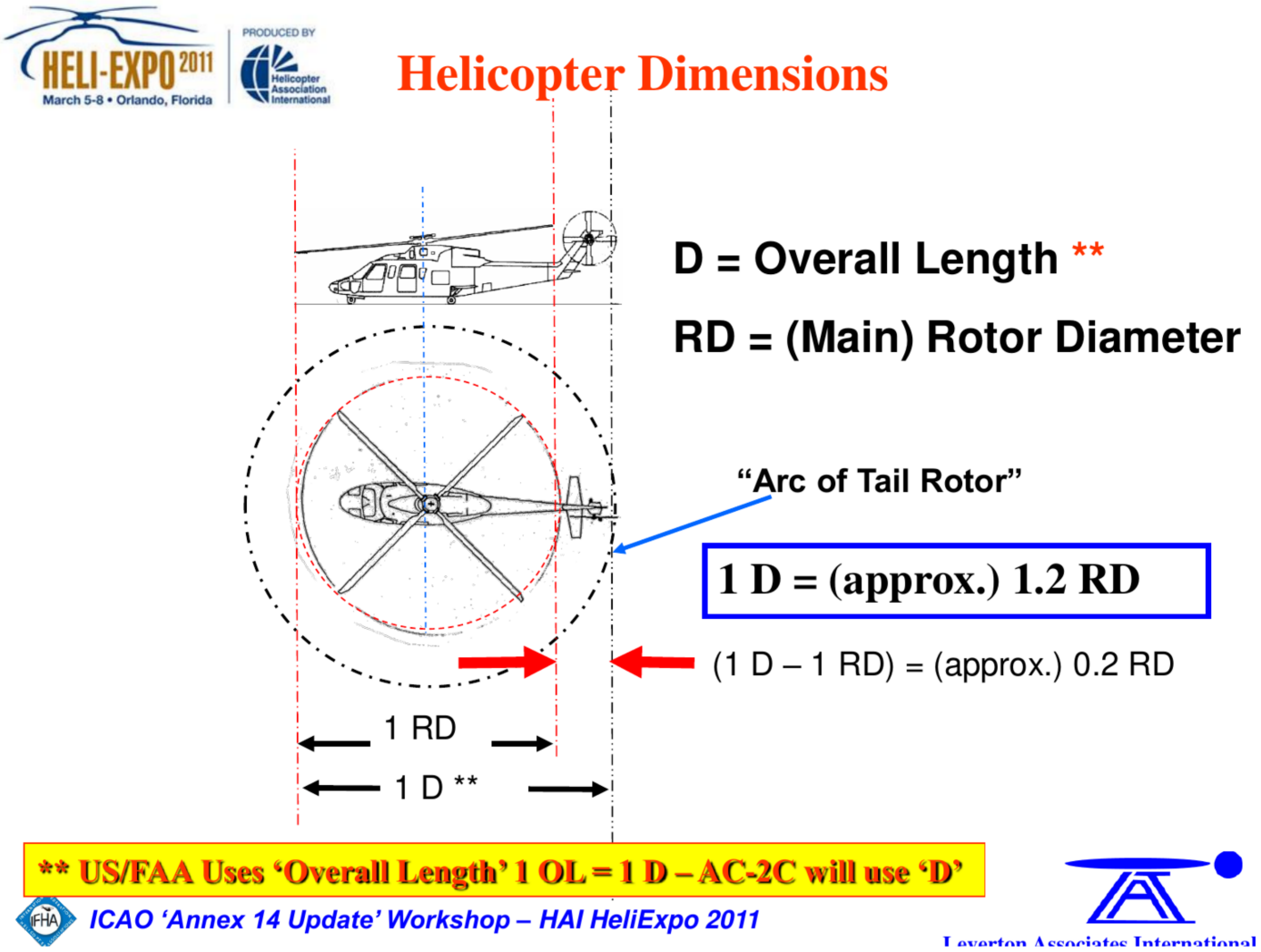
重点文件:

- `ICAO Annex 14 Heliport Design HeliExpo2_2011.pdf`
- `HELIPORT DESIGN WORKSHOP1_2012.pdf`
- `HELIPORT DESIGN WORKSHOP2_2012.pdf`
- `HELIPORT DESIGN WORKSHOP4_2012.pdf`

这些材料是早期 heliport 设计培训/研讨材料，专门对比 ICAO Annex 14 与 FAA AC 150/5390 系列在术语、尺寸、FATO/TLOF、Safety Area、OLS/airspace 等方面的差异。

2. ?????

2.1 FAA ?? OL/D?? ICAO ??????



备注: 材料中指出 US/FAA 使用 Overall Length, 1 OL = 1D, 反映 FAA 与 ICAO 在术语和控制尺寸表达上的差异。

2.2 ICAO / FAA ????

DIFFERENCES

AC-2B **ANNEX 14**

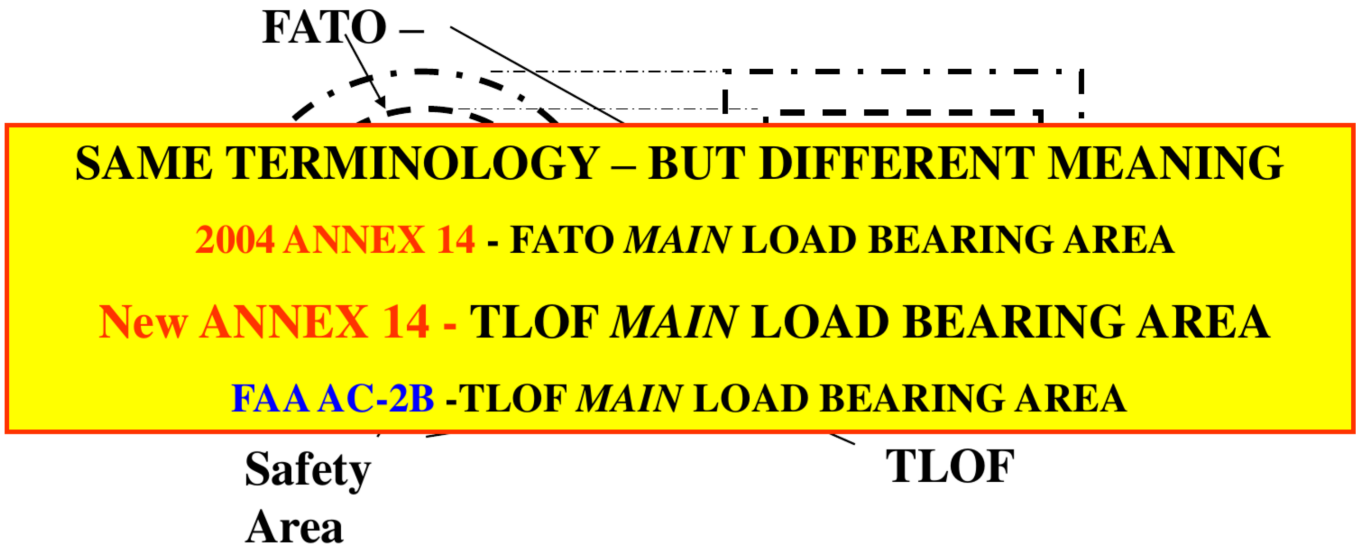
PARKING AREA = HELICOPTER STAND

HOVER TAXI = AIR TAXI

备注: 材料直接以 “DIFFERENCES” 对比 AC-2B 与 Annex 14, 说明两套标准在 heliport 阶段已经存在系统差异。

2.3 ?????????

HELIPORT TERMINOLOGY



FATO: Final Approach and Takeoff Area

TLOF: Touchdown and Liftoff Area

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备注: 该页明确提示 FATO / TLOF 等存在 "same terminology — but different meaning", 对理解 FAA 与 ICAO 的差异很重要。

2.4 ???????? FAA ???? ICAO

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LONDON BATTERSEA HELIPORT

'FAILS'

'Pre-tranche' 1 ICAO ANNEX 14

HELICOPTER TOO LARGE.

MEETS US/FAA AC-2B REQUIREMENTS

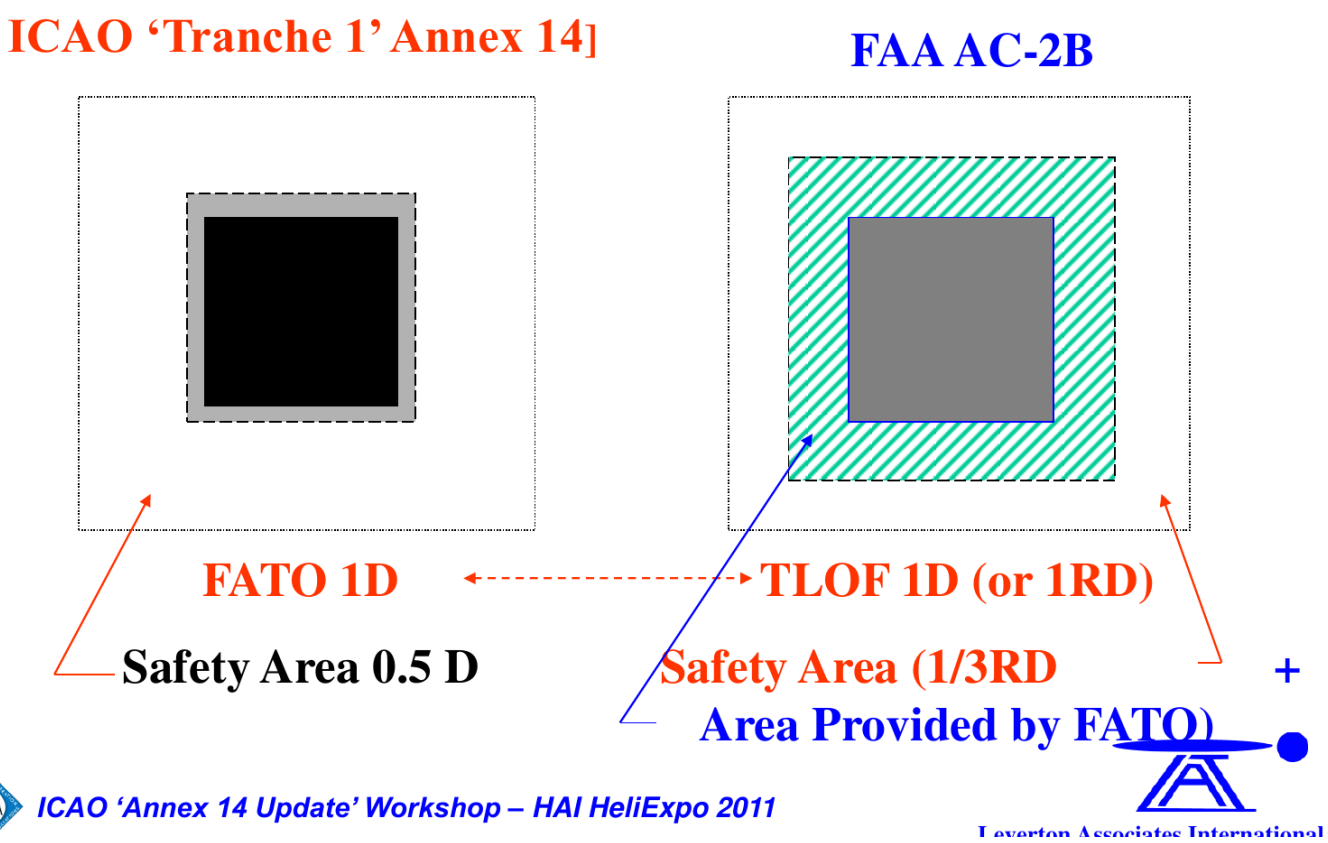
W30: RD= 44 ft (13 m)
D=53ft (16 m)

Helipad: Width 53 ft (16 m)
Length 125 ft (38 m)

Based on current Annex 14, R22 (RD - 26 ft/ 7.9 m: D – 29ft/ 8.8 m) would NOT be acceptable! Just OK if safety area assume not load bearing.

备注: 材料以 London Battersea Heliport 为例, 提示其在特定解释下可能 "fails ICAO" 但 "meets US/FAA AC-2B requirements"。这说明两套体系不是简单互换关系。

2.5 Safety Area ??



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SAFETY AREAS

ICAO 'Tranche 1' Annex 14]

FAA AC-2B

FATO 1D

TLOF 1D (or 1RD)

Safety Area 0.5 D

Safety Area (1/3RD +

Area Provided by FATO)

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备注：材料对比了 ICAO 与 FAA safety area 设置，进一步印证两套体系在保护区尺度上存在差异。

2.6 FAA alternate surfaces ??

USE OF "ALTERNATE SURFACES"

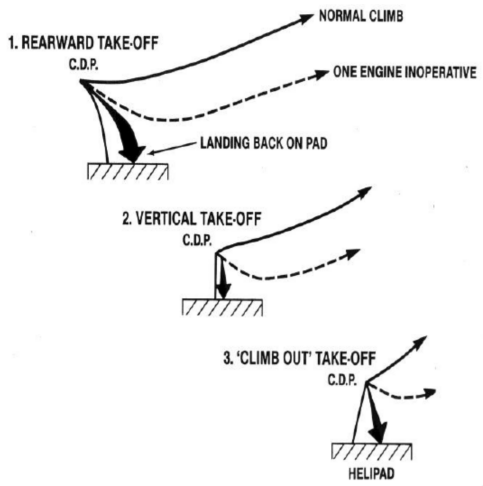
AC-2B 204 b – *removed from AC-2C*

NOTE: *When the standard surface is incompatible with the airspace available at the heliport site, no operations should be conducted unless helicopter performance data supports a capability to safely operate using an alternate approach/ departure surface. The site should be limited to those helicopters meeting or exceeding the required performance and approved by the FAA.*

HAI Proposed Text:
Alternative Approach/Departure Surface

When the standard surface is incompatible with the airspace available at the heliport site, no operations should be conducted unless helicopter performance data supports a capability to safely operate using an ~~alternate~~ alternative approach/ departure surface. The site should be limited to those helicopters meeting or exceeding the required performance and approved by the FAA.

USE OF “ALTERNATE SURFACES”



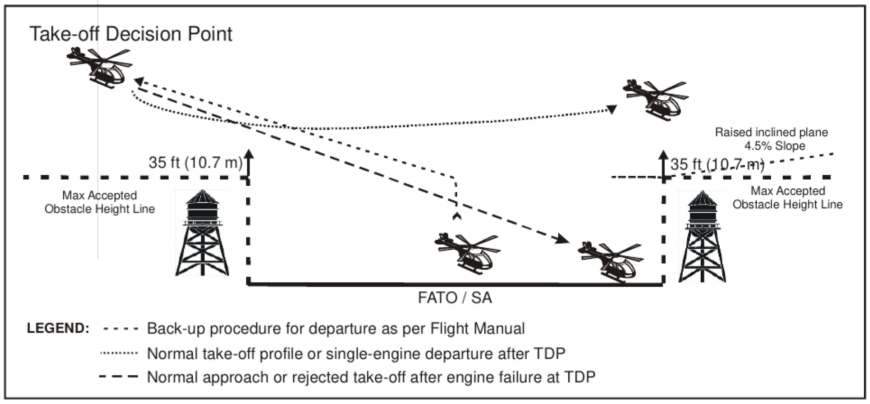


Figure 4-4 Example of Raised Inclined Plane During Operations in Performance Class 1

Heliport Design AC Workshop - HeliExpo 2012

备注: FAA workshop 资料中讨论 alternate surfaces 的调整和删除，说明 FAA 在空域面和替代面处理上有独立的美国本土逻辑。

3. ???????

1. FAA 与 ICAO 的差异不是 vertiport 阶段才出现，而是在 heliport 阶段已经存在。
2. 行业长期对 FAA / ICAO 两套标准进行比较、讨论和局部融合。
3. 中国作为 ICAO 系国家， vertiport 净空体系主线应延续 ICAO Annex 14 / Doc 9261 / MH5013。
4. FAA 体系仍有重要参考价值，尤其是 D/RD 区分、 Part 77 空域评价、 DCA 下洗 / 外洗风险控制等，但应明确为参考和补强，而非替代 ICAO 系主线。