

# *Midair Collision Avoidance (MACA)*

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# ***Overview***

- **MACA Mission**
- **366th Fighter Wing**
- **What We Fly**
- **Where We Fly**
- **MACA Practices**
- **Lights-Out Operations**

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# ***MACA Mission***

- **Prevent Midair Collisions & Near Misses.**
- **Educate general aviation on who we are, where we train, and how we train.**

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# **366<sup>th</sup> FW (a.k.a. Gunfighters)**

- **Operational Combat Wing**
  - **3 Combat Fighter Squadrons (389 FS, 391 FS, 428 FS)**
  - **726 Air Control Squadron “Hardrock”**
  - **266 Range Squadron “Cowboy”**

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# ***F-15E Strike Eagle*** ***391 FS "Bold Tigers"***





**F-15E**

**389 FS**

**Thunderbolts**





**F-15SG**  
**428 FS**  
**Buccaneers**



# ***How We Train***

- **We need to train like we fight**
  - **Defend Against Threats**
    - Air-to-Air (BFM, ACM, DCA)...Dog Fighting
    - Surface-to-Air (Manpads, AAA, Surface-to-Air Missiles)
  - **Attack Targets**
    - From Medium and Low altitudes
    - Work w/ Friendlies on Ground (JTACS)
  - **Combine our skills with other players (Large Force Ex)**
  - **Night and IMC training**
- **Mountain Home has the best training area in the country to do this!**

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# Other Aircraft



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# ***MHAFB Airspace***

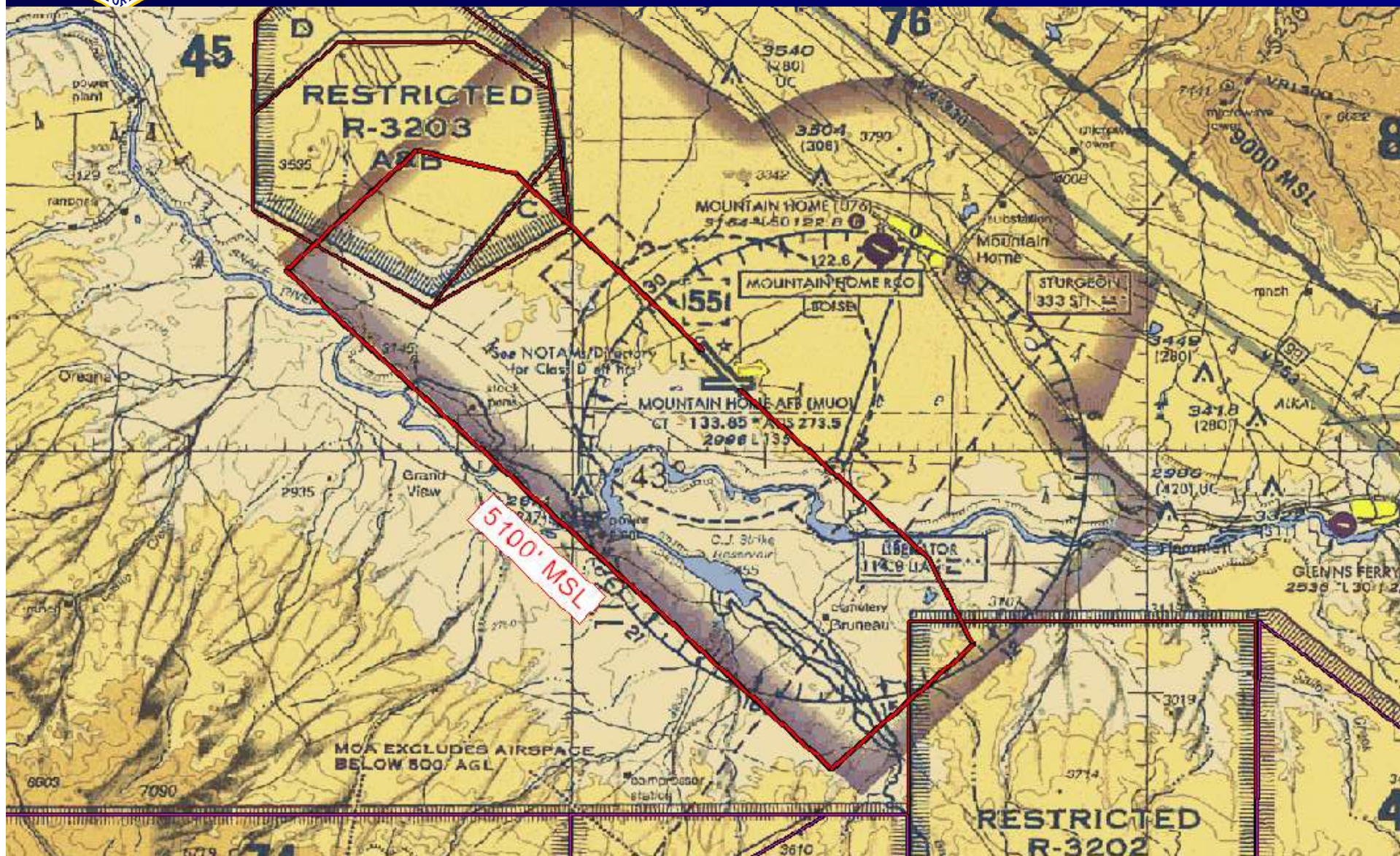
- **Local IFR & VFR Patterns**
- **Military Operating Areas (MOA)**
- **Restricted Areas (R)**
- **Military Training Routes (MTR)**
  - **Instrument Routes (IR)**
  - **Visual Routes (VR)**

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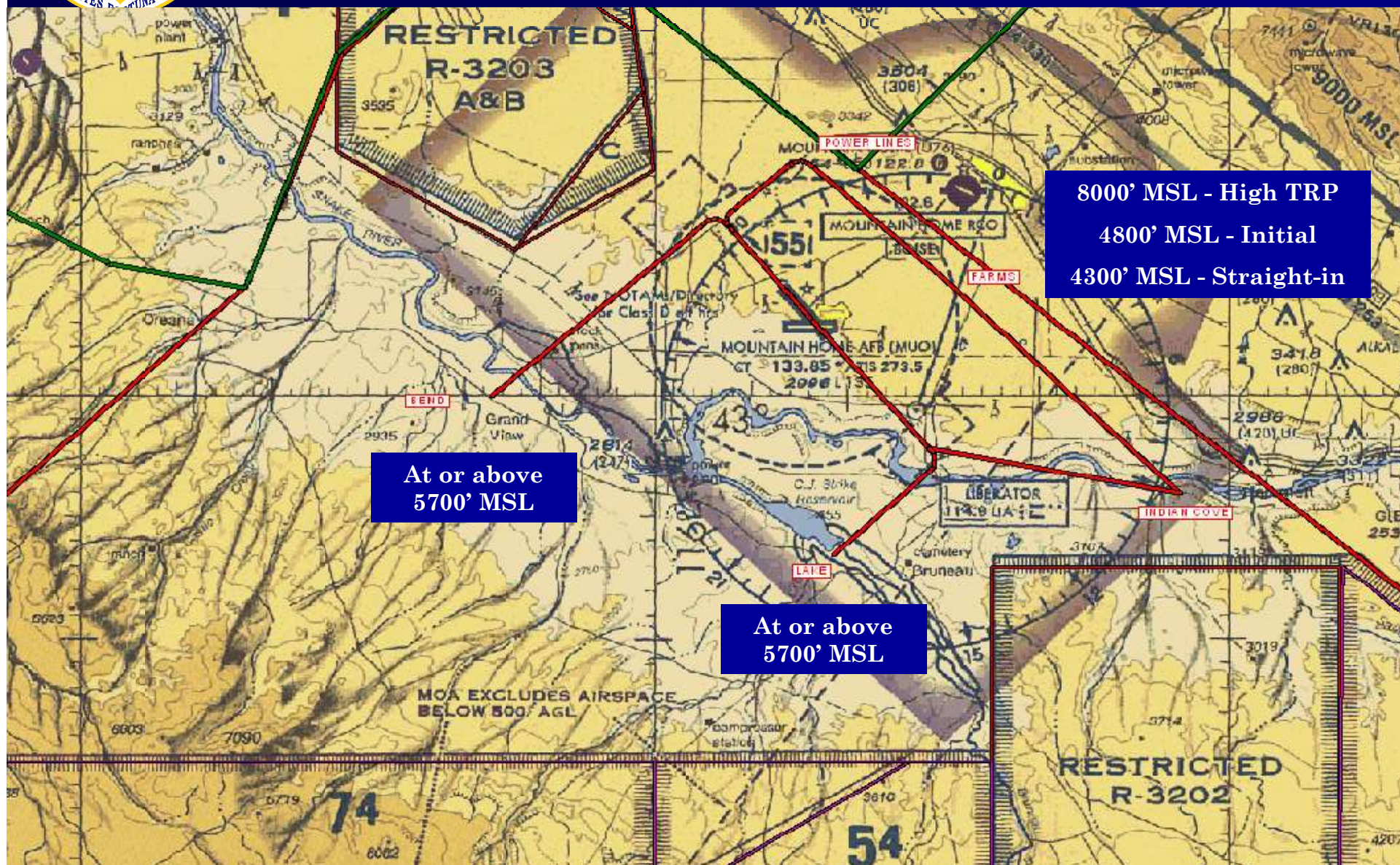
# IFR Pattern







# VFR Pattern

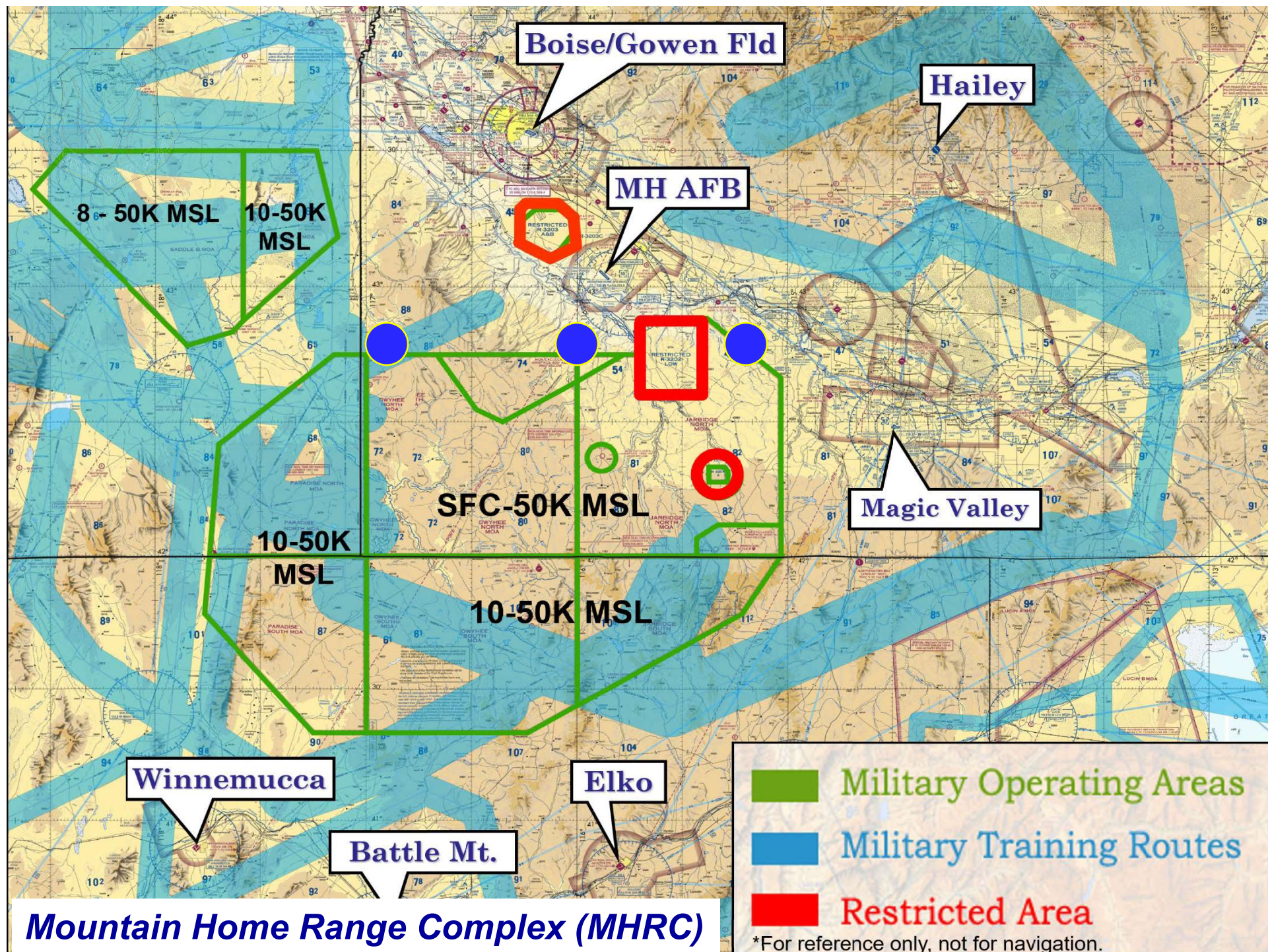




# ***Frequently Used Airspace***

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# ***Military Operating Areas***

**MOA -** Airspace designated for **non-hazardous\*** military activity such as acrobatics, air combat tactics, and formation training. The designation informs and segregates non-participating IFR aircraft from the activity.

**Aircraft operating VFR are not restricted from operating in military operations areas.**

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# ***Military Operating Areas***

- Pilots operating under VFR should exercise extreme caution while flying within a MOA
- MOA status changes frequently
- Contact FSS to obtain accurate hours of operations
- Contact the controlling agency for traffic advisories (Cowboy Control: 134.1 **for MHRC**)
- Wing Airspace Scheduling **208-828-2172/4607**

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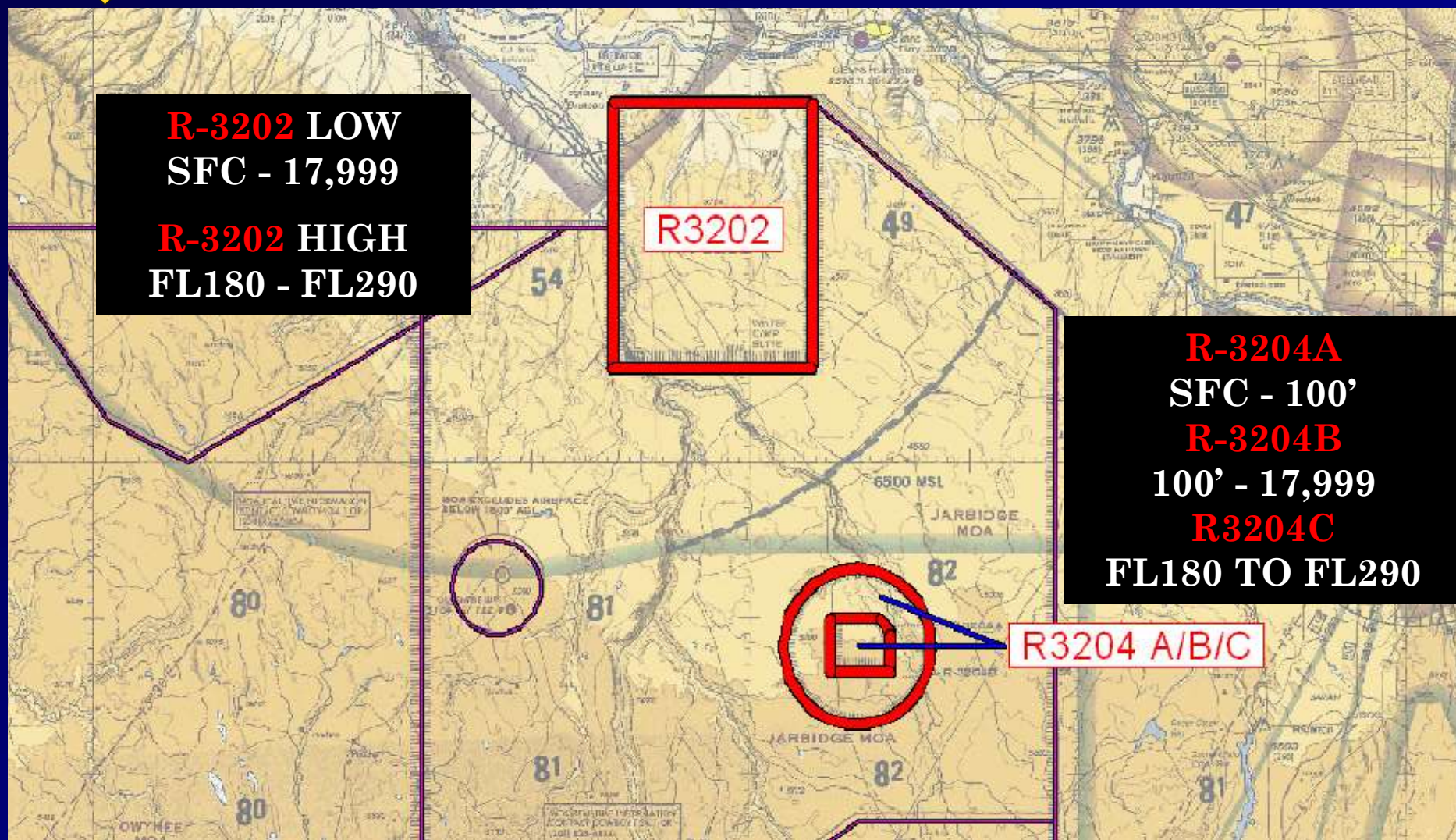
# ***Restricted Areas***

**Restricted Areas** - Airspace designated under FAR Part 73, within which the flight of aircraft, while not wholly prohibited, is subject to restrictions. Restricted Areas denote the existence of unusual, often invisible, hazards to aircraft such as the **live firing of weapons**. Restrictions are placed on all non-participating air traffic.

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## Mountain Home Restricted Areas



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***Things are not always as they appear...***



***Emergency airfield?***

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# Orchard Range

**A&B**

**C**

**R-3203 A**  
SFC – 15,000'

**R-3203 B**  
15,000' - FL220

**R-3203 C**  
SFC – 6000'





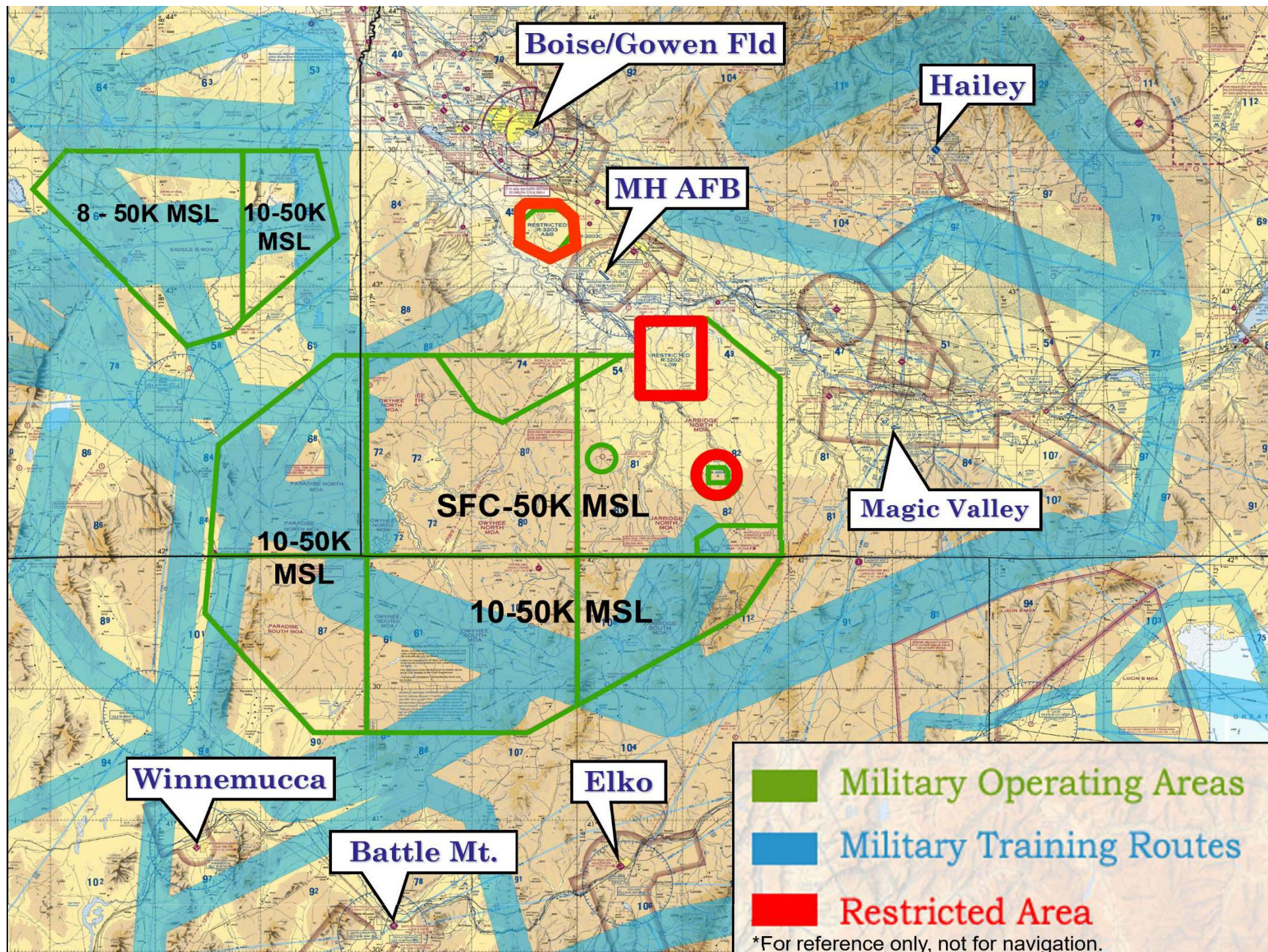
# ***Military Training Routes***

- **VR & IR Routes**
  - 100 AGL - up to 14K MSL
  - 8 - 16 NM wide
  - 250-540 knots



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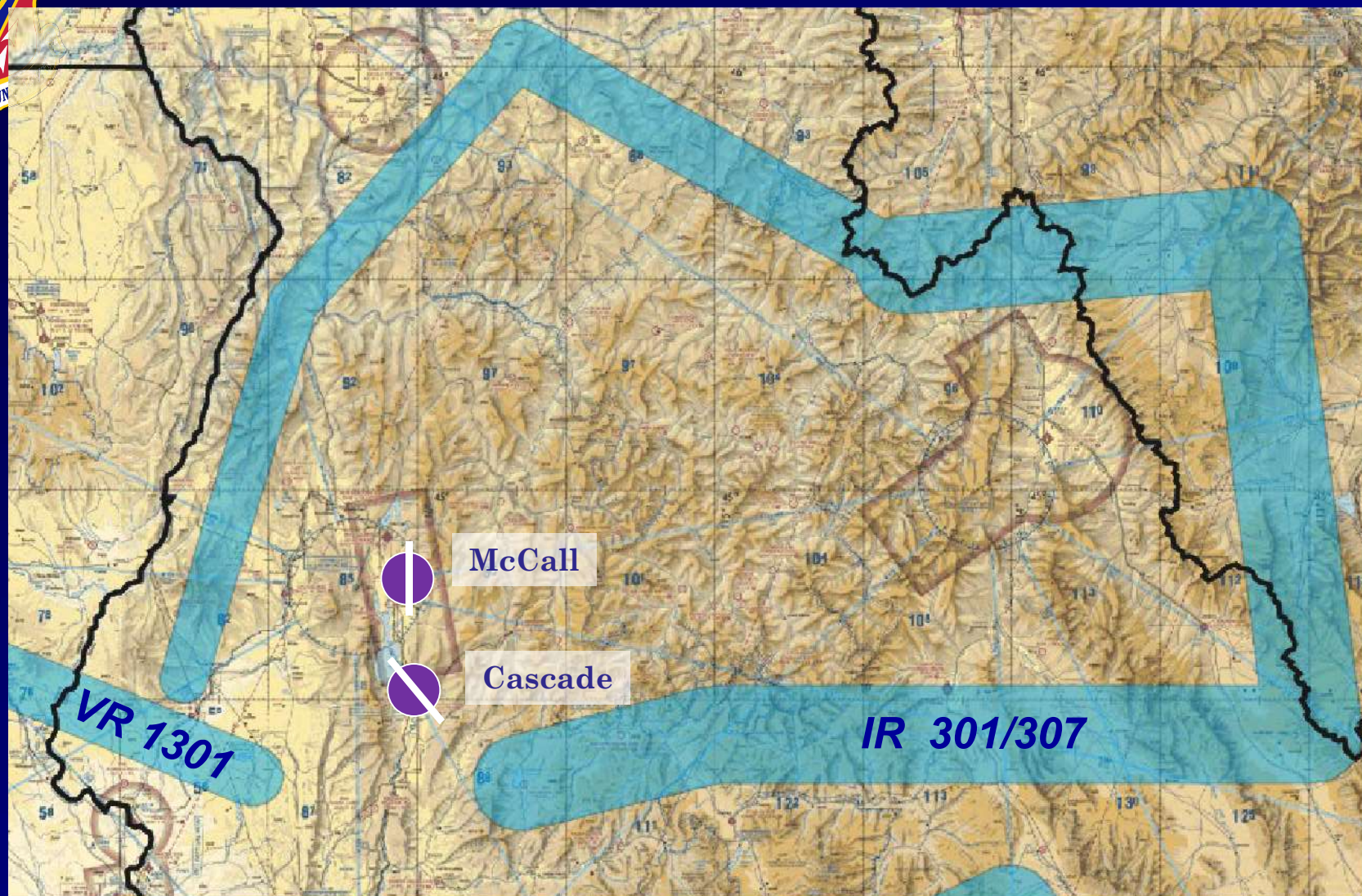








## ***Routinely used MTRS near McCall and Cascade***



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# ***Operating in or around MTRs***

- Altitudes range from 100' AGL to 15,000 MSL
- Aircraft types can range from UH-60s to C17s
- Airspeeds range from 200 knots to 540 knots.
- Aircrews are not sightseeing...usually. They are focused on a mission set (tgt attacks, timing, threat avoidance)
- Fighters have RADAR but your aircraft may be in the clutter. **Always squawk!**

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# ***Operating in or around MTRs***

- Assume MTRs are “HOT” or **ask the FSS**
- Don't expect aircraft to follow the centerline
- There may be two routes that coincide with each other and run opposite direction to each other
- If able, cross perpendicular to the route to minimize time in the route structure.

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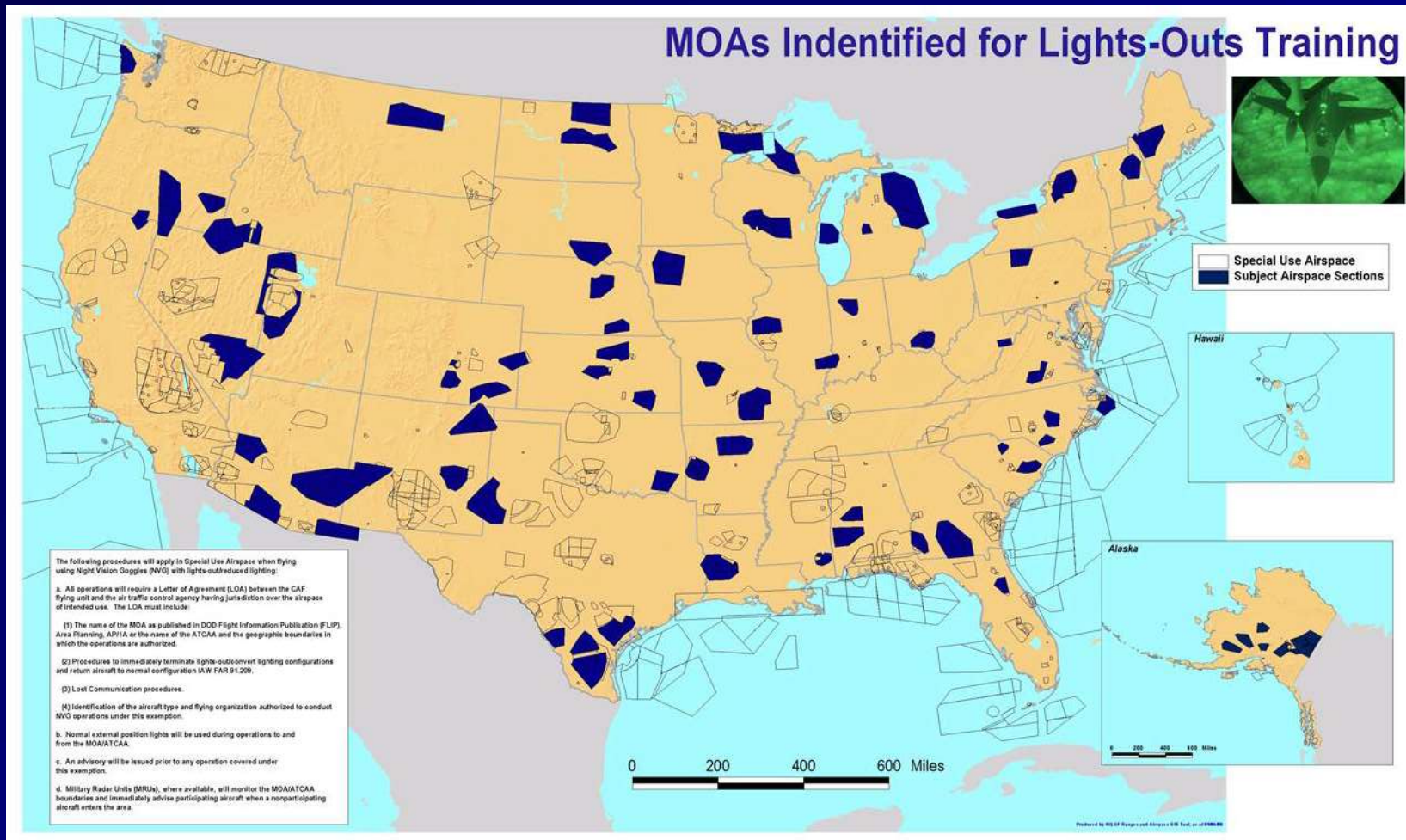
# ***MACA Tips***

- **A - Avoid crowded airspace**  
**Announce Location and Intentions**
- **V - Visually scan (Glint, Movement, Contrast)**
- **O - Operate at VFR hemispheric altitudes**
- **I - Identify w/ squawk**
- **D - Don't assume we know you are there**

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# Lights Out MOA Operations



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# ***Lights Out MOA Operations***

- **Local Ranges**
  - **Mountain Home Range Complex**
  - **Utah Test & Training Range**
  - **Nellis Test & Training Range**
  - **Juniper Hart (Oregon)**

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# *Lights Out MOA Operations*

- Used to enhance NVG Training
- Reduced Lighting
  - Anti-collision and Strobe Lights off
  - Position lights minimum brightness
- Lights-Out
  - **ALL** exterior lights off



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# ***Lights Out MOA Operations USAF Requirements***

- Intent is to increase civil users awareness of Lights-Out-operations and facilitate communications
- Provide advisories to transient operators of the MOA used for Lights-Out operations
- Letter of Agreement with the responsible FAA ATC Facility
- Class "D" NOTAM 48 hours prior

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## ***Lights Out MOA Operations USAF Requirements***

- **Provide informational briefings to local flying organizations, businesses, and other civil users within 100 nm of the MOA**
- **Accomplish Annually**
- **Must be approved by the appropriate FSDO**

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# ***Lights Out MOA Operations***

## ***Conditions and Limitations***

- **FAA Exemption(7960)- 24 Jan 2003**
- **Must be NOTAMED 48 Hours in advance**
- **Must be coordinated with appropriate FAA ATC facility**
- **Have the capability of being monitored for non-participating aircraft**

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# ***Lights Out MOA Operations Conditions and Limitations Con't***

- **Operations must be continuously monitored by military personnel to detect all nonparticipating aircraft**
- **Must be accomplished by a radar capable of detecting nonparticipating aircraft. Including those without transponders and/or small radar cross-section**

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# ***Lights Out MOA Operations Conditions and Limitations Con't***

- **Military personnel will immediately advise all participants when a non-participating aircraft enters the area**
  - **Participants will maintain a continuous listening watch on a designated frequency.**
  - **If a nonparticipating aircraft is determined to pose a conflict all participating aircraft will immediately restrict their operations, return to normal lighting, and alter course to ensure the safety of the nonparticipating aircraft.**

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# ***Lights Out MOA Operations Conditions and Limitations Con't***

- **All participating pilots must be thoroughly familiar with provisions of the Exemption**

**FALURE TO COMPLY WITH THE  
PROVISIONS OF THE EXEMPTION CAN  
RESULT IN ITS CANCELLATION**

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## ***Additional Information***

**MUO Tower 133.85**

**MUO Approach 124.8**

**Cowboy Control 134.1**

**MH AFB Flight Safety 208-828-1573**

**Gowen Field AF Flight Safety 208-422-5600**

**Gowen Field Army Flight Safety 208-422-3970**

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# QUESTIONS ?



*...ride hard, shoot straight,  
and always speak the truth.*

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