# R-2508 USER'S HANDBOOK

*28 May 2025*

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**COMPLIANCE WITH THIS PUBLICATION IS MANDATORY**

**ACCESSIBILITY:** Published on https://www.edwards.af.mil/About/R-2508/.

**RELEASABILITY:** There are no releasability restrictions on this publication.

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OPR: R-2508 Central Coordinating Facility (CCF) Certified By: Complex Control Board
Supersedes: R-2508 User's Handbook, 3 Apr 2025 Pages: 49

This handbook outlines standard operating procedures for all R-2508 Complex users. All airspace users must be familiar with this handbook and exercise good judgment for situations not covered. Direct recommended changes and questions to the Office of Primary Responsibility (OPR). The waiver authority for this handbook is the R-2508 Complex Control Board (CCB).

## SUMMARY OF REVISIONS

4.1., 4.6., 4.7., 5.8., 5.12., A5

# Table of Contents

CHAPTER 1
**Introduction**

1.1. **Background.** The R-2508 Complex was established in 1955, under a joint agreement between the Department of Defense (DoD) and the Federal Aviation Administration (FAA), to improve the safety of flight operations in the area and to de-conflict military, civilian, and commercial air traffic.

1.2. **Organization**. In 1975, the Joint Services and the Secretary of Defense created the Joint Policy and Planning Board (JPPB) to manage the daily operations of the R-2508 Complex. The JPPB is composed of the Commanders of the 412 Test Wing (412 TW), Naval Air Warfare Center Weapons Division (NAWCWD), and the Army National Training Center (NTC). The Complex Control Board (CCB) consists of one representative from the 412 TW, NAWCWD, and NTC who are intimately familiar with their organization. The Central Coordinating Facility (CCF) is a permanently staffed joint-DoD office managed by the CCB. The following provide advisory support services to the CCB: the Operations Working Group (OWG), the Technical Working Group (TWG), Program Analyst (PA), Resource Advisor (RA), and various subject specific working groups ((S)WG). The OWG is co-chaired by the 412 Operations Group Commander (412 OG/CC) and Commander, Naval Test Wing Pacific (NTWP).

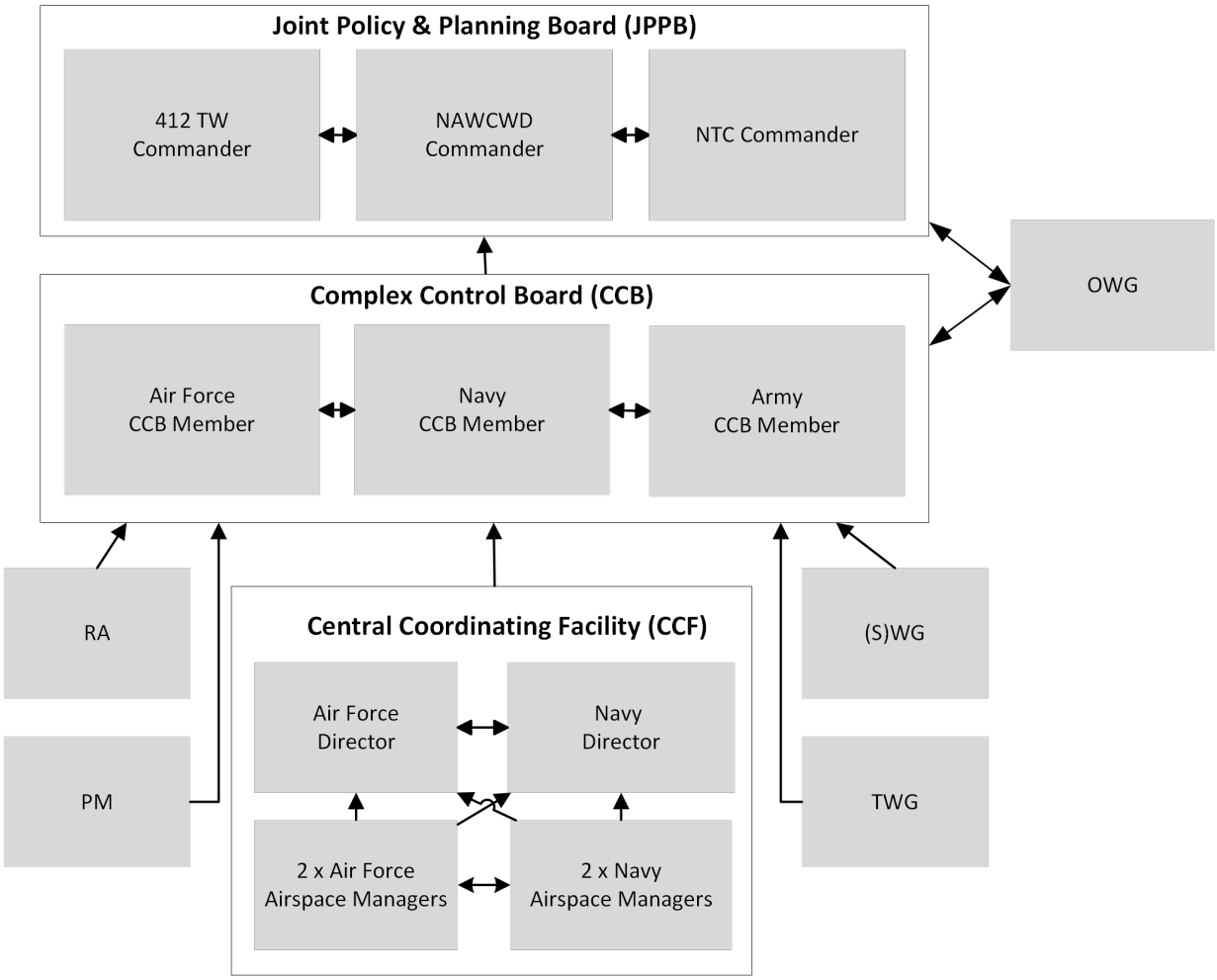


Figure 1. Organizational Chart

1.3. **Primary Activities.** The primary R-2508 Complex activities include aircrew training and readiness, and research, development, test and evaluation (RDT&E).

- **Non-Participating Aircraft**: Unscheduled civilian flights remaining below FL180 for the entire mission are considered non-participating aircraft. DoD sponsored aircraft transitioning directly to/from Edwards, Ft. Irwin, and/or China Lake (and are not loitering in the Complex for the purpose of training or test) are considered non-participating aircraft. Non-participating aircraft will be provided service on a noninterference basis.
- **Participating Aircraft:** Joint Policy Planning Board (JPPB) sponsored units (412 Test Wing, NAWCWD (includes China Lake, Lemoore, Pt Magu, & Fallon), Fort Irwin (NTC)) or R-2508 Letter of Agreement holders who have received the annual airspace briefing, who agree to operate within a "VFR, see & avoid, non-exclusive use" environment (unless established on a published IR route), and are scheduled to operate within the R-2508 Complex in accordance with this Handbook.

1.4. **Change Recommendations**. Recommended changes to this document should be forwarded to:

R-2508 Central Coordinating Facility (CCF)
100 East Sparks Drive
Edwards AFB, CA 93524-8090

Telephone: DSN 527-2508 / (661) 277-2508
Email: 2508CCF@us.af.mil

1.5. **Information Availability.**

- Public website: http://www.edwards.af.mil/About/R-2508
- SharePoint: https://intelshare.intelink.gov/sites/R-2508/SitePages/Home.aspx

1.6. **Situation Reports (SITREP).** SITREPs are for LOCAL USE ONLY and are a way to report issues, recommend improvements or report exceptional performance or support. SITREPs must be submitted within **10-days** of the incident if a RADAR/audio review is required. SITREPs do not replace Hazardous Air Traffic Report (HATR), Operational Hazard Report (OHR), Hazard Reports (HAZREPS) or Near Mid-Air Collision Reports (NMAC), etc. SITREPS are intended to be non-punitive.

Figure 2. SITREP QRC

1.7. **Airspace Description.** R-2508 Complex includes R-2508, MOAs, and ATCAAs.

- The R-2508 Complex excludes all internal restricted areas, e.g. R-2502, R-2515, R-2524, etc.
- The portion of R-2508 that overlays any internal restricted area is not available for use unless the restricted area has been specifically scheduled with the using agency.
- The R-2508 Complex excludes the Silver MOA. Contact Nellis (702-652-2040) for more information.
- The R-2508 Complex excludes the Foothills MOA. Contact Lemoore (559-998-1034) for more information.

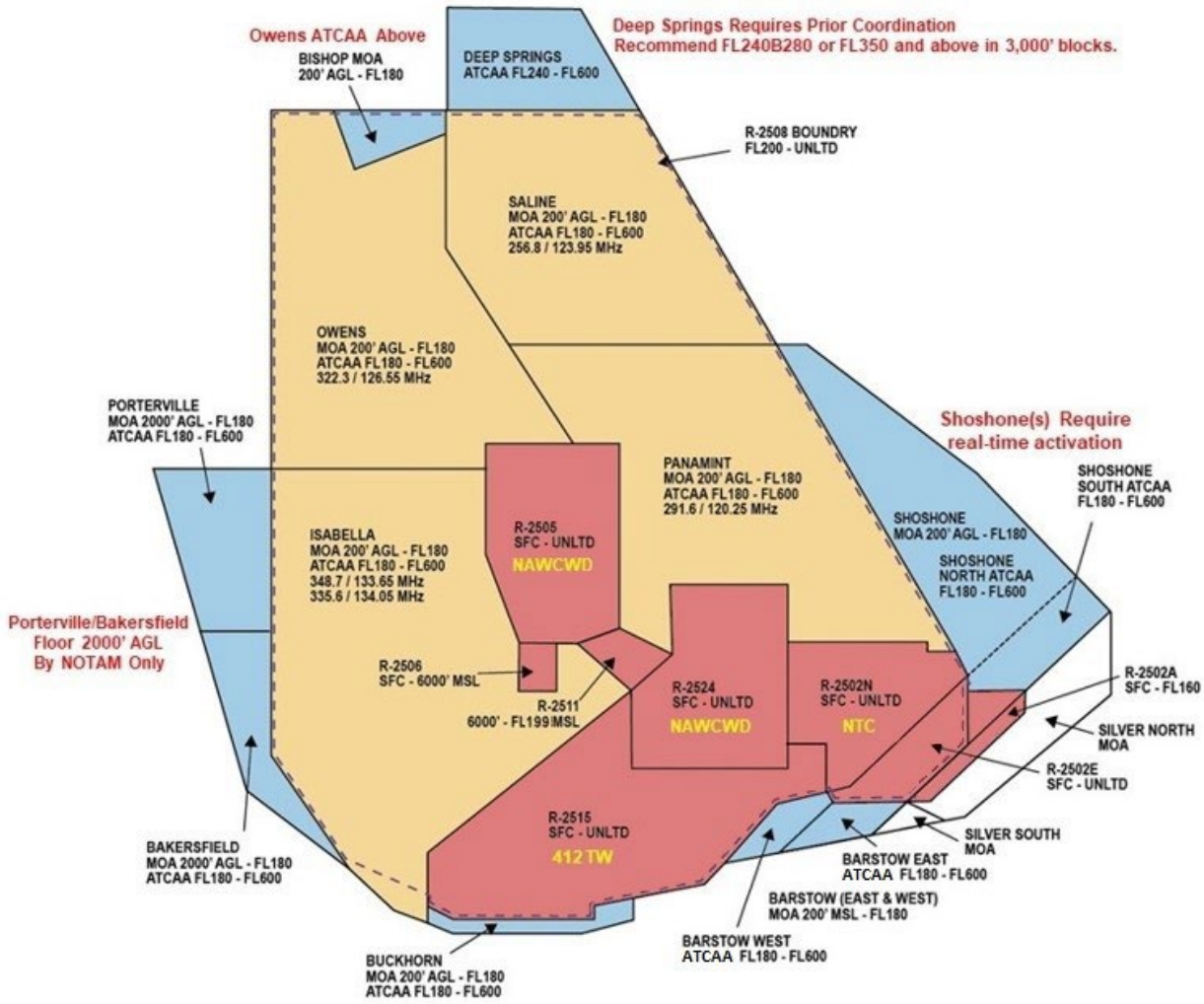


Figure 3. R-2508 Complex

CHAPTER 2
**Scheduling**

2.1. **Central Coordinating Facility (CCF).** The CCF is the scheduling agency for the R-2508 Complex. Office hours: Monday - Thursday, 0600-1700L and Friday, 0800-1630L. CCF will be closed, or have reduced hours, during federal holidays, e.g., Thanksgiving, Christmas, and New Year's. Email: 2508ccf@us.af.mil. DSN 257-2508 / (661) 277-2508. Direct after-hours *emergency* calls to 1-866-805-2851. CCF will direct non-emergency callers to call back during normal business hours.

2.2. **Pre-requisites.**

- Only JPPB (412 Test Wing, NAWCWD (China Lake, Lemoore, Pt Magu, & Fallon), Fort Irwin (NTC)) sponsored units, or R-2508 Letter of Agreement (LOA) holders, are authorized to schedule use of the Complex. JPPB sponsored units that host transient units are responsible for ensuring compliance with all Complex policies and procedures.
- All aircrew require the annual User's Briefing. All schedulers and other supporting agencies are highly encouraged to review the same briefing. The automated briefing is available on the public website and SharePoint. Additionally, CCF may provide virtual briefings, via MS Teams, by appointment. Contact CCF for more details.
- All support that is considered reimbursable must be negotiated in advance, e.g., operating outside published hours. Operations outside Military RADAR Unit (MRU) published hours require CCB approval and may incur costs associated with Command & Control (C2) support. Cancelations within 7 days up to 24-hours prior to the event may incur a 25% charge. Cancelations within 24-hours may incur a 100% charge. To request reimbursable support, contact CCF (2508ccf@us.af.mil ) **no later than 60 business days in advance.**

2.3. **Policy.** The following are scheduling "cut-offs" for the R-2508 Complex:

| | |
|---|---|
| Operations occurring 0700-2200L, Mon – Fri. | No later than (NLT) 1600L, **1**-business day prior. |
| To schedule DS/PV/BK airspace. | NLT 1600L, **3**-business days prior. |
| Large Force Exercise/Large Force Test Event | See Attachment 5. |
| Operations occurring other times or holidays. | NLT 1600L, **10**-business days prior. |

Figure 4. Cut-offs.

- **Unscheduled aircraft will be denied entry.** IFR aircraft, departing or arriving EDW, NID, NTC are exempt from this restriction. The pilot will be instructed to maintain VMC and proceed, without delay, to their destination or to the boundary exit point. Aircrew must avoid all internal restricted areas.
- After cut-offs, all cancellations, changes, or "add-ons" must be verbally coordinated with CCF.
  - "Add-ons" will not be accepted if the aircraft is already airborne.
- Aircraft that request to operate within the R-2508 Complex outside 0700-2200L, Mon-Fri (not including holidays) require prior coordination and scheduling.
- IFR aircraft landing NID or EDW, not loitering in the Complex, do not need to schedule with CCF.
- DoD helicopters operating entirely below 500' AGL do not need to schedule with CCF, but are still required to review the Daily Brief Sheet and the annual airspace briefing prior to operating in the Complex. For the purposes of this Handbook, tiltrotor aircraft (e.g. V-22) are considered fixed wing and must schedule with CCF.

- Internal restricted areas must be separately scheduled with the appropriate using agency.
- Military Training Routes (MTRs), except the SWLL, must be scheduled with the scheduling agency.
  - If transitioning the R-2508 Complex, scheduling must be accomplished with CCF separately.

2.4. **Procedures.**

- Aircraft departing EDW or Plant 42 must schedule via CSE – EDW.
- All others must schedule via CSE – CCF (Attachment 2 and 3).
- Schedulers who cannot access CSE – EDW or CSE – CCF must submit an airspace request form to CCF. The form is available on the public website (http://www.edwards.af.mil/About/R-2508).
- Schedule using approved abbreviations (Attachment 4).
- For flights originating from outside the Complex & not landing at an airport inside the Complex:
  - File two (2) legs. One to enter – one to depart the Complex.
  - Annotate "R2508" as the destination/departure point.
- Use Complex entry/exit points during flight planning.
- To schedule the Sidewinder Low Level, annotate "SWLL" is the remarks section.
- RAIDER / KNIGHT callsigns (of any spelling variation) must be scheduled using the following;

| NLC (VFA-125) | EDW (412 TW) | NKX (VMGR-352) |
|---|---|---|
| RADR 10-16 | RADR 17-19 | RADR 01-09 |
| RADR 20-26 | RADR 27-29 | |
| RADR 30-36 | RADR 37-39 | |
| RADR 40-46 | RADR 47-49 | |
| RADR 50-56 | RADR 57-59 | |
| RADR 60-66 | RADR 67-69 | |
| RADR 70-76 | RADR 77-79 | |
| RADR 80-86 | RADR 87-89 | |
| RADR 90-96 | RADR 97-99 | |
| (using second digit of 1-6) | (using second digit of 7-9) | |
| **NLC (VFA-154)** | **NKX (VMFA-314)** | **TNX (412 TW)** |
| NITE 10-69 | NITE 70-79 | NITE 01-09 |

Figure 5. RADR/NITE Callsigns

2.5. **Abbreviated Clearances.** In CSE-CCF, schedule one of the work areas using the abbreviated clearance. Then, add external airspace**,** e.g. SH/SHN/SHS/DS/PV/BK.

- **SAGE 2:** Isabella, Owens, Saline, and Panamint, FL290 and below.
- **PANCHO 3: (NID, EDW, NLC, and PMD only.)** Isabella and Panamint FL500 and below; Owens and Saline, FL290 and below.
- **WAR 2:** (**Green Flag Only**.) Saline and Panamint work areas FL290 and below, Shoshone MOA, and Shoshone North/South ATCAAs FL230 and below. Aircrew must request Shoshone North/South 'real-time' with JCF/ASC (as assigned) on initial check-in (there may be a delay).
- **COLLINS 1**: **(ER2/U2 only)** Isabella MOA and ATCAA, 200' AGL to unlimited, and within Owens, Panamint, and Saline ATCAAs above FL500.
  - Annotate "C1" in the remarks section of airspace request form.
  - Schedule internal restricted areas with the using agency. If scheduled, the aircrew may

operate within R-2502 N/E, R-2505, R-2515, and R-2524 above FL500.

- **LIBERTY 1 (LIB 1):** Authorizes UAS travel along the daytime (0600-2200L) transition route, FL190 or FL200 (right altitude for direction of flight). *See figure 21.*
- **LIBERTY 2 (LIB 2):** Authorizes UAS travel along the nighttime (2200-0600L) transition route, FL190 or FL200 (right altitude for direction of flight). *See figure 21.*

CHAPTER 3
**Course Rules**

3.1 **Airspace Management.**

- All R-2508 Complex operations are "non-exclusive use."
- All flights shall operate under "VFR - See and Avoid" criteria unless on a published IR route.
- All users must maintain VMC conditions. The only situations under which a participating aircraft will be issued a clearance to operate in IMC conditions is when an aircraft is about to encounter weather conditions that prevent VMC flight. In the event aircrew encounter IMC, they must notify the JCF/ASC immediately. The purpose of the IFR clearance is to:
  - Position the aircraft in weather conditions that permit VFR flight.
  - Exit the area or return to base.
  - Arrive/depart EDW or NID under an IFR clearance until reaching VMC.

3.2 **Joshua Control Facility (JCF)**. "Joshua Approach" is the FAA controlling agency for the R-2508 Complex. JCF provides separation services between IFR aircraft (participants and non-participants). JCF does not provide separation services between participating aircraft. When the Complex is not scheduled for DoD use, it is released to JCF for civil use. For ATC ALERT/ATC ZERO procedures, refer to attachment 6.

3.3. **Military RADAR Unit (MRU).** The DoD is working with the FAA to assume responsibility for Command & Control (C2) services within the R-2508 Complex. Services will remain the same until negotiations are complete. Updates will be provided via DBS and other DoD resources. Once negotiations are complete, aircrew can expect "China Control," the DoD Air Surveillance Center (ASC) MRU to provide C2 services throughout the R-2508 Complex in accordance with FAA JO 7610.14, chapter 8. Test missions departing EDW that require discrete mission frequency and are only operating in Isabella/Owens works areas may request to remain with SPORT MRU for C2 services. SPORT MRU will coordinate with ASC to determine the best facility to provide C2 services. SPORT/ASC cannot provide IFR services within the R-2508 Complex.

3.4. **Pilot Check-in Procedures.**

- Contact JCF or ASC (as assigned) prior to Complex entry & exit.
- Notify JCF or ASC (as assigned) of intentions, work area, and requested altitude.
- Obtain a work area clearance before conducting operations in the Complex.
- Maintain 2-way radio communications with JCF or ASC (as assigned).
- Intra-flight communication shall be done on a secondary frequency.
- Notify JCF or ASC (as assigned) prior to making rapid altitude or direction of flight changes.

3.5. **R-2508 Complex Entry/Exit points**. Refer to Figure 6.

3.6. **Altimeter Setting.** Remain on assigned altimeter (regardless of altitude).

3.7. **ADS-B / Mode 3A/C.**

- ADS-B or a transponder equipped with altitude readout is required to operate in the Complex.
- Remain on assigned beacon code unless otherwise directed by JCF or ASC (as assigned).

- Flight leads, for standard formation flights, shall squawk normal. Wingman should squawk standby.
- During flight split-up, notify JCF or ASC (as assigned) of call sign, number/type aircraft, and request beacon code assignment. Notify JCF or ASC (as assigned) if traffic calls are needed between elements.

3.8. **Transiting Across Work Areas**. Aircraft transiting across work areas shall avoid aircraft actively conducting test or training whenever possible. Transiting aircraft should plan on traveling around, over, or below other flights by flying near borders, or near the top of the area, or well below established flights at VFR hemispheric altitudes.

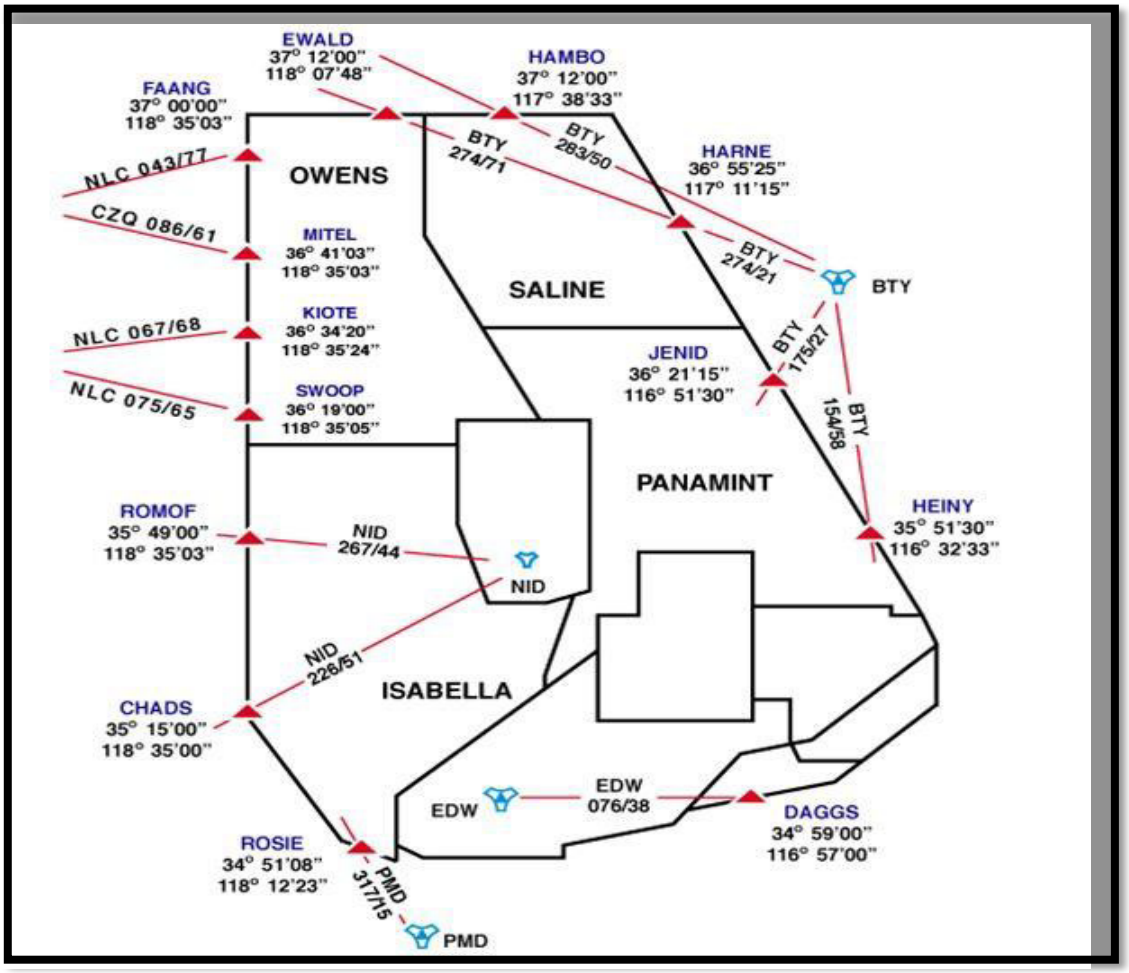


Figure 6. R-2508 Complex Entry & Exit Points

3.9. **Low-Level Operations.** Aircraft intending to conduct sustained operations at or below 3,000' AGL within the confines of the R-2508 Complex shall:

- Notify JCF or ASC (as assigned) of intentions and request frequency change to 315.9 (UNICOM and low level "pilot to pilot" communications frequency.
- JCF or ASC (as assigned) will issue traffic, terminate service, and approve frequency change.
- JCF or ASC (as assigned) will not provide services on 315.9.
- Announce on last assigned frequency "changing to 315.9."
- Firefighting aircraft may receive/transmit in-the-blind position/intentions over 315.9, where cross-talk

capability exists.

- There are three repeater locations for the crosstalk system: Mazurka Peak, Breckenridge Peak and Rodgers Peak. Coverage will vary and will be constantly changing due to many factors such as altitude of aircraft, antenna placement, weather, and repeater function.
- The Mazurka Peak repeater is triggered on/off by Owens Valley Interagency Communication Center during a wildland fire initial attack, due to lack of sustainable battery capabilities.
- Breckenridge and Rodgers Peaks are in continuous operation.
- Remain on assigned beacon code.

3.10. **Federal Agency Aircraft Operations.**

- Fixed and Rotary Wing aircraft from the Bureau of Land Management, the National Parks, and other Federal agencies operate primarily in the western portions of Isabella and Owens, and throughout the Panamint and Death Valley areas, 1500' AGL and below.

- FOREST FIRE SEASON-Beware of fire suppression activities occurring within Temporary Flight Restriction (TFR) areas. In many cases a NOTAM designating a temporary flight restriction area will be in effect for such areas when a fire exists. All aircrew should be alert for such areas whether designated or not and avoid such areas by at least 5 NM (AP1).

3.11. **GEO Reference Points**. Default common for the R-2508 Complex (a.k.a. the bullseye) is LAKE (China Lake - NID).

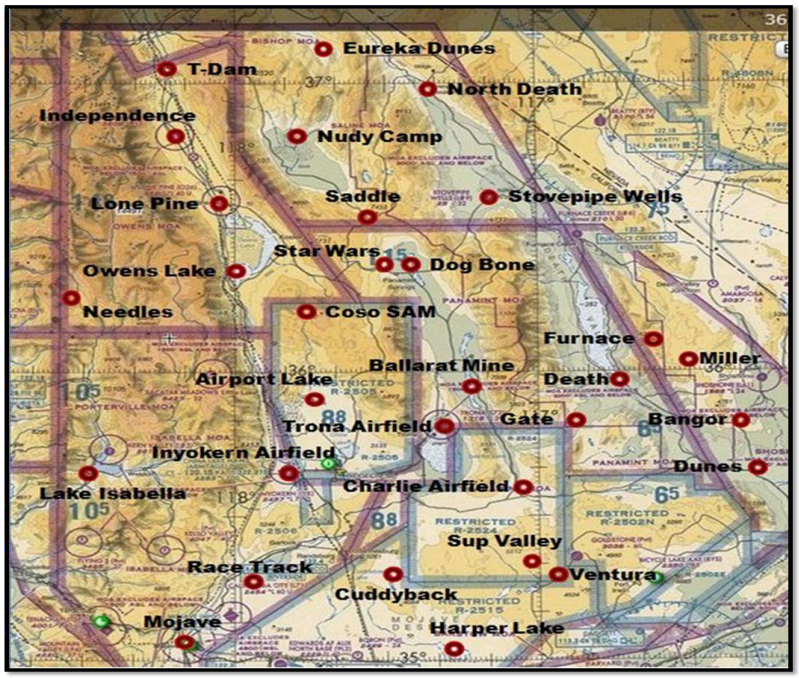


Figure 7. GEO Reference Points

3.12. **Noise Sensitive Areas.** All communities within the Complex are considered "noise sensitive areas" and must be avoided by 3,000' AGL or 3,000' laterally (unless on a **CCB** approved test plan). Kern River area is particularly sensitive during the summer months.

3.13. **National Parks & Wilderness Areas.** Maintain at or above 3,000' AGL and 3,000' laterally (approximately ½ mile) from Death Valley National Park (DEVA), Domeland, Manzanar, and John Muir, etc., unless established on a charted VR, IR, or the Sidewinder Low Level route. EXCEPTION: Altitude restrictions over DEVA only apply within the 1977 National Monument and Wilderness Area which may not be accurately reflected on sectional charts.

- **Sequoia and Kings Canyon National Parks.** The Kings Canyon National Park is in the western portion of the Owens MOA Maintain above FL180 unless lower is required. If FL180 or below is required, annotate "SEKI" in the remarks section of the airspace request.

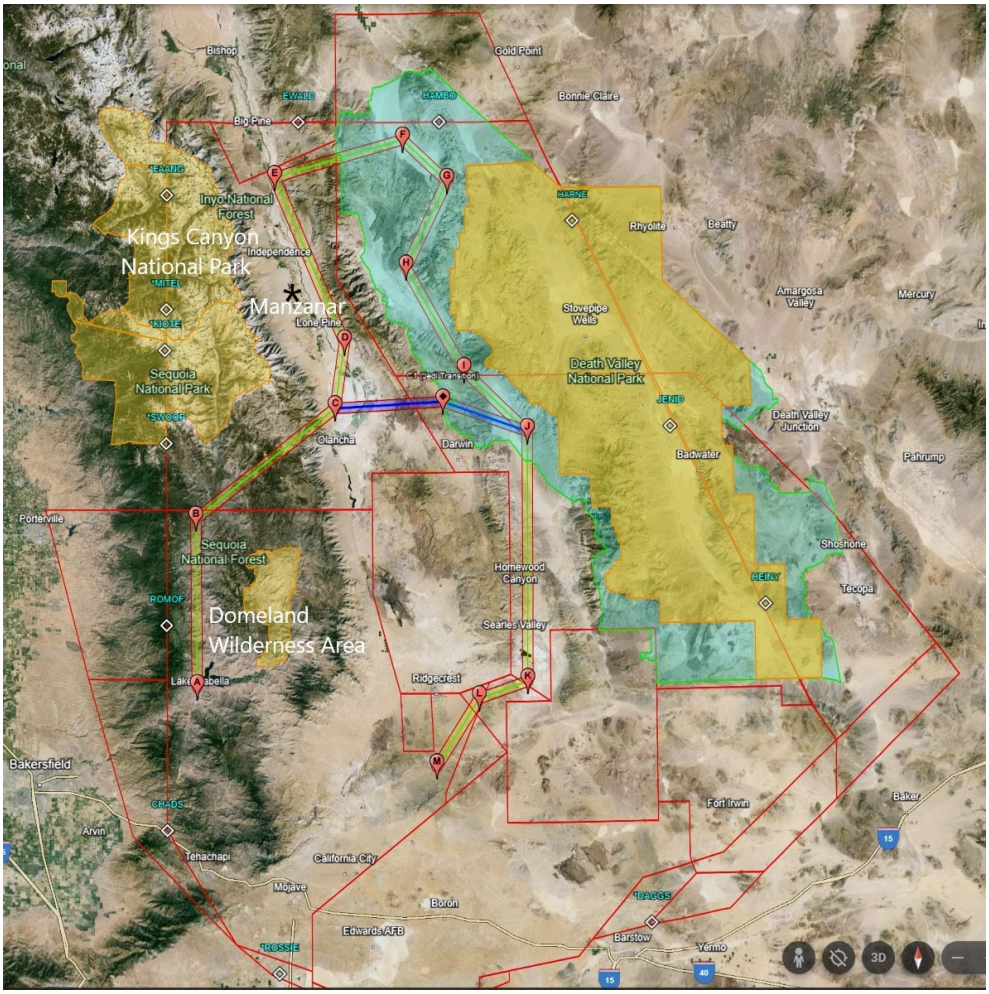

Figure 8. National Parks

3.14. **NASA Facility at Goldstone.** The Goldstone facility produces High Intensity Radiated Fields (HIRF) during high-power transmissions. The interruption of signal due to aircraft transitioning through the beam is rare and need not be considered. Goldstone is sensitive to transmissions at 2200-2300 MHz, 8400-8500 MHz, 25,000-27,000 MHz, and 31800-32300 MHz (bands allocated to Space Research Service). Broadband jamming and aeronautical telemetry in these bands are not allowed within line of sight without prior scheduling through the Western Area Frequency Coordinator. Coordinate spectrum

usage with Mojave Coordination Group (MCG) representative. Goldstone does not transmit in or near GPS bands.

- Remain above 5,000' MSL (approximately 2,000' AGL) and above 10,000' MSL within 1.5 km (horizontal) from antennas at Mars and Apollo. Flights below these altitudes require pre-approval of Goldstone Frequency and Airspace Coordination (760-255-8218).

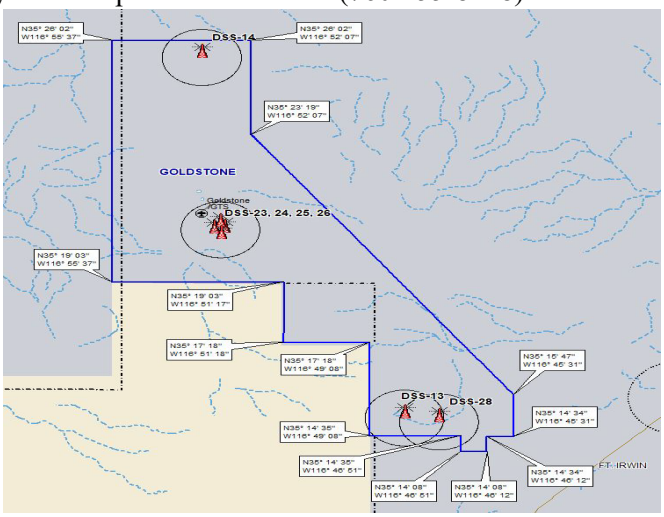


Figure 9. Goldstone Sites

- The NTC G3 Aviation Section is the coordinating authority for scheduling and coordinating all flight activities (e.g., fixed-wing assets flying in support of NTC rotations) over Goldstone airspace.
- Goldstone produces HIRF that could affect aircraft flying at less than 200 knots. If such slow aircraft need to enter the marked area, coordination with Goldstone Frequency and Airspace Coordination (760) 255-8218 is recommended.
- The probability of entering the beam is very low and the beam is narrow (cylinder diameter of 34m or 70m, depending on the transmitting antenna) and moves very slowly (at the rate of Earth's rotation).
- In general, the transmitters point south.
- Physiologic effects may occur for very slow aircraft, e.g., hovering helicopters in the beam for a long time. While unlikely, such aircraft are advised to stay below the transmitter beam.

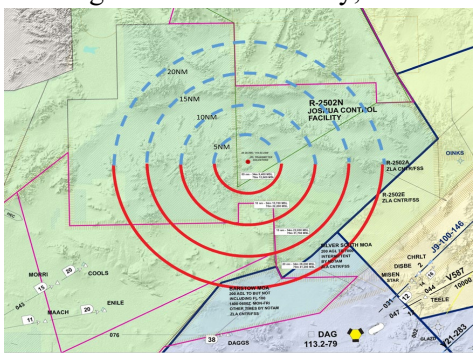


Figure 10. HIRF Potential Hazards

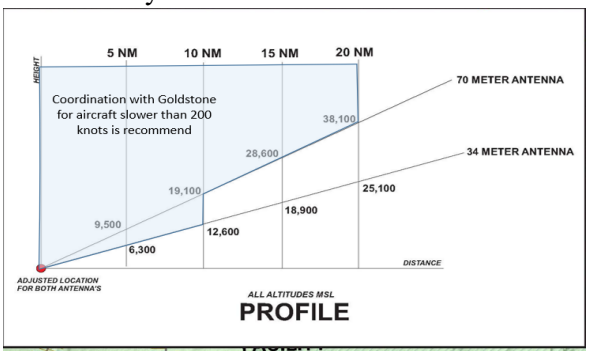


Figure 11. HIRF Potential Hazards

CHAPTER 4
**Airspace**

4.1. **Internal Restricted Areas.** Entry into the internal restricted areas require prior approval from the using agency. Scheduling internal restricted areas does not schedule R-2508.

- **R-2502N and R-2502E (NTC).** Desert Radio provides services on 267.275/126.2 (FM: 66.10).
  Hours / Contact Details:

| | | |
|---|---|---|
| **Desert Radio** | 24/7 | DSN 470-4320/7559 |
| **Range Scheduling** | M-F, 0800-1600L | DSN 470-4321/4059 |
| **Airspace Manager** | | DSN 470-5852/6156 |
| **Facility Manager** | | DSN 470-6369 |
| Commercial: 760-380-(last 4 above) | | |

NTC Airspace Control Center ("Sundance") directs CAS activities. Sundance is staffed 1-hour prior to first takeoff from Nellis AFB until 30-minutes past the last flight's departure from R-2502N/E. If Sundance is not operational, contact Desert Radio.

Submit scheduling request NLT 5 working days prior for standard ranges, and 14-days prior for non-standard ranges. All aircraft operations require coordination with Bicycle Lake Army Field. Prior Permission Required (PPRs) should be obtained from 3 working days before operations. Contact CCF to schedule MOAs for entry/exit.

- **R-2505, R-2506, R-2511, and R-2524 (NAWCWD)**. China Control provides advisories on 301.0/128.25.
  Hours / Contact Details:

| | | |
|---|---|---|
| **Airspace Manager** | M-Th (0700-1700L), non-civilian payday Friday (0700-1600L). | DSN 437-2750/5480 |
| **Scheduling** | | DSN 437-6800 |
| **China Control** | | DSN 437-6908/9<br>FAX DSN 437-6855 |
| Commercial: 760-939-(last 4 above) | | |

- **R-2511.** Previously known as the Trona Control Firing Area. Used for free flight weapon systems transiting from launch areas within R-2505 to target areas in R-2524, or vice versa. Other unproven or immature weapon systems or aviation platforms, in testing and development, may also use R-2511.
  - Activated altitudes will not exceed 6,000' MSL up to but not including FL200.
  - CCF will publish a notice on the Daily Brief Sheet (DBS).
  - The Echo Bypass may be used to transit between R-2515 and Panamint subject to China Control approval.
  - JCF and ASC will: Broadcast on all assigned frequencies (excluding Guard) a 15-minute, 5-minute and 1-minute warning that R-2511 will be active, e.g., "ATTENTION ALL AIRCRAFT, R-2511 ACTIVE FROM (time) to (time)." Broadcast on all assigned frequencies (excluding Guard) when R-2511 is no longer active, e.g., "ATTENTION ALL AIRCRAFT, R-2511 INACTIVE."
  - R-2511 may be scheduled no more than 36 times per year, no more than 2 times per day, with a maximum of a 2-hour blocks between 0700-1700L, Monday – Friday. Activation of R-2511 will be no more than 15-minutes prior to the transition.

- **R-2515 (412 TW)**. SPORT provides advisories on 343.7/132.75. Hours / Contact Details:

| **SPORT** | As Published | DSN 527-6184 |
|---|---|---|
| **R-2515 Webpage** | https://www.edwards.af.mil/About/R-2515-Airspace/ | |
| **Scheduling (ROC)** | M-F, 0630-1800L | DSN 527-4110 |
| **Real-Time** | M-F, 0630-1800L | DSN 527-3940 |
| **Airspace Manager** | M-F, 0800-1630L | DSN 527-2515 |
| Commercial: 661-277-(last 4 above) | | |

4.2. **Military Operating Areas (MOA) and Air Traffic Control Assigned Airspace (ATCAA).** R-2508, MOAs, and ATCAAs combine to form four work areas: Isabella, Owens, Saline, and Panamint. The ATCAAs fill the gap between the top of the MOAs (FL180) and the base of R-2508 (FL200). When R-2508 is not active, the ATCAA may extend upward to FL600. ATCAAs are located above the MOAs (exception: BISHOP MOA), beyond the lateral borders of R-2508, to provide additional work areas up to FL600. **USE CAUTION.** Several Military Training Routes cross all work areas.

- MOAs/ATCAAs are only available to civil/LOA holders when activated for military use.
- Work area frequencies will be assigned by JCF or ASC.
- MOA vertical limits exclude below 1,500' AGL within 3 miles of any charted airport. Exception: Mojave Airport's Class D.
- Portions of the MOAs overlay Sequoia/Kings Canyon National Parks, John Muir and Domeland Wilderness Areas, Manzanar, and Death Valley National Park. **NOTE:** Exclusion of MOA airspace above Death Valley National Park applies to the 1977 contours of the former National Monument. This difference may not be accurately reflected in Sectional Charts. Refer to the California Desert Protection Act of 1994.

4.3. **Isabella MOA/ATCAA**. Isabella is typically used for: armed/test aircraft holding, ACM, R-2505 arrivals/departures, refueling operations, and crossing of Military Training Routes (MTRs).

- USE CAUTION. The SE portion of Isabella (near Saltdale and Koehn's Dry Lake) is a high density traffic area with rapidly maneuvering aircraft at all altitudes (i.e., NID/EDW arrivals/departure, SWLL, ACM, refueling activities, crossing MTRs, amateur rocketry, etc.)

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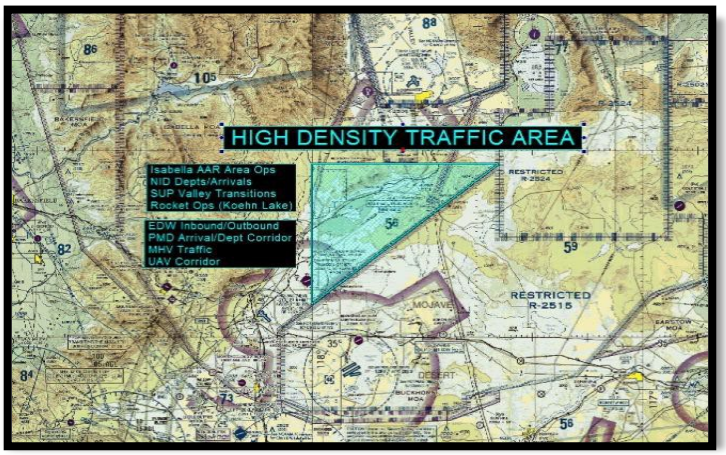


Figure 12. Isabella High Density Traffic Area

4.4. **Owens MOA/ATCAA.** Do not hold and/or conduct ACM over communities within the Owens Valley.

- **USE CAUTION:**
  - Bishop MOA is not part of the Owens work area, Sage 2, or Pancho 3 and must be scheduled separately. Be aware of the boundary difference between Owens MOA and Bishop MOA to prevent entering Oakland Air Route Traffic Control Center (ARTCC) airspace.
  - Use caution crossing Owens Valley east to west/west to east. Typical operations run north to south/south to north with multiple aircraft at varying altitudes.

4.5. **Bishop MOA**. Must be scheduled *3-business days* prior with CCF. The Bishop MOA covers 200' AGL to 17,999' MSL. Bishop MOA is located in the northeast corner of the Owens Work Area.

- Aircrew must 'real-time' request use with JCF or ASC (as assigned) and can expect a delay.
- Typical times of use are M-F, 0600-2200L. Other times by NOTAM.

4.6. **Saline MOA/ATCAA.** Do not descend below 3,000' AGL over Death Valley National Park.

- **USE CAUTION.** Pay specific attention to the ridge crossing at **Hunter Mountain** that divides the Panamint and Saline MOAs. The "saddle" on the ridgeline is a narrow passage between the MOAs and is serviced by VR-1205, which inherently possesses a high potential for a head-on collision. Pilots should fly to the right side when passing through the saddle area to prevent head-on collisions with aircraft passing in the opposite direction.
- Aircrew in Saline on 291.6, 120.25, and 122.2 below 5,000' AGL will have degraded service UFN.

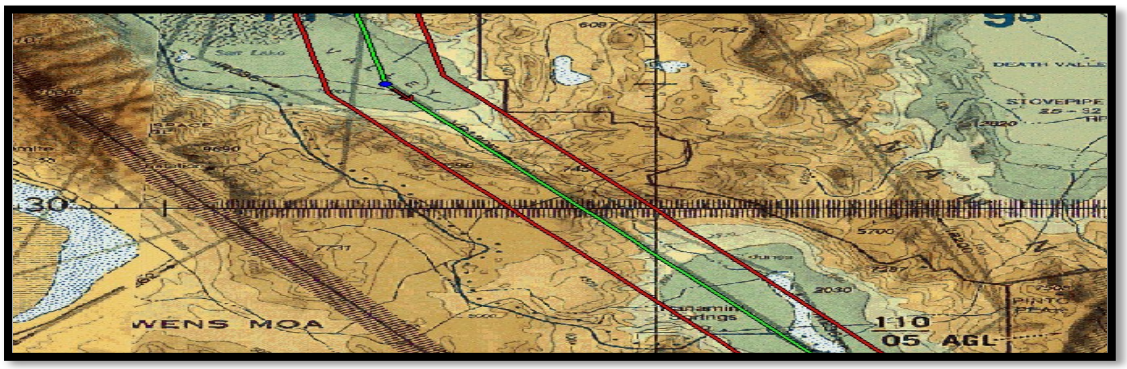


Figure 13. Hunter Mountain Saddle

4.7. **Panamint MOA/ATCAA**. USE CAUTION. Refer to note in 4.6. and Figure 13, regarding Hunter Mountain. Aircrew in Saline on 291.6, 120.25, and 122.2 below 5,000' AGL will have degraded service UFN.

4.8. **Bakersfield MOA/ATCAA.** This area is outside R-2508, but may be activated for military use in conjunction with Isabella.

- Must be scheduled at least *3-business days* in advance so CCF can coordinate with LA ARTCC.
- Aircrew must still make 'real-time' request to use this area with JCF or ASC (as assigned) and can expect a delay.

4.9. **Barstow MOA and East/West ATCAAs**. This area is typically used by Edwards AFB for flight test, aircraft entering/exiting/or awaiting entry into R-2502N/E, VR-1217/VR-1218 activity.

- M-F, 0600-2200L. Other times by NOTAM.
- Aircrew operating in Barstow must ensure that they request Barstow East/West in conjunction with the appropriate lower MOA airspace, as needed.
- Aircrew requiring FL240 and above in Barstow East ATCAA must request it 'real-time' with JCF or ASC (as assigned) and can expect a delay.
- **USE CAUTION.** The ATCAAs over the Barstow MOA have a different boundary than the airspace underneath. Aircrew must be aware of these differences to prevent spill-outs into the LA ARTCC airspace.
- Rotary wing aircraft entering or exiting R-2502E may transit Barstow MOA utilizing the following procedures.
    - Maintain VMC and squawk VFR (1200) with altitude encoding activated.
    - Aircraft shall not conduct mission activities during transition.
    - Avoid R-2515 during transition.
    - Aircraft are exempt from the following requirements of this LOA:
        - ATC clearance prior to entering Barstow MOA
        - Schedule Barstow MOA.
        - Remain on assigned beacon code.
        - Traffic advisories.

4.10. **Buckhorn MOA/ATCAA**. This area is typically used for test missions by Edwards AFB.

- M-F, 0600-2200L. Other times by NOTAM.
- **USE CAUTION.** Paradrop activities occur routinely within Buckhorn MOA.

4.11. **Deep Springs ATCAA.**

- Schedule at least *3-business days* in advance so that CCF can coordinate with Oakland ARTCC.
- Aircrew must also make a 'real-time' request for use of this area with JCF or ASC (as assigned).

4.12. **Porterville MOA/ATCAA**. This area is outside R-2508, but may be scheduled in conjunction with Isabella.

- Must be scheduled at least *3-business days* in advance so CCF can coordinate with LA ARTCC.
- Aircrew must still 'real-time' request use of this area with JCF or ASC (as assigned).

4.13. **Shoshone MOA and North/South ATCAAs**. This area is typically activated for military use for ACM, low-altitude training, large-scale exercises, low-altitude refueling, and several crossing MTRs.

- M-F, 0600-2200L. Other times by NOTAM.
- Aircrew must schedule and make a 'real-time' request with JCF or ASC (as assigned) and can

expect a delay.

- Aircrew operating in Shoshone must ensure they also schedule and request Shoshone North/South ATCAA in conjunction with the appropriate lower MOA airspace as needed.
- **USE CAUTION.** The ATCAAs have different boundaries than Shoshone MOA. Aircrew must be aware of these boundary differences to prevent spill-out into LA ATRCC airspace.

4.14. **General Aviation Routes.**

- Refer to Figure 14.
- General aviation aircraft fly VFR below FL180.

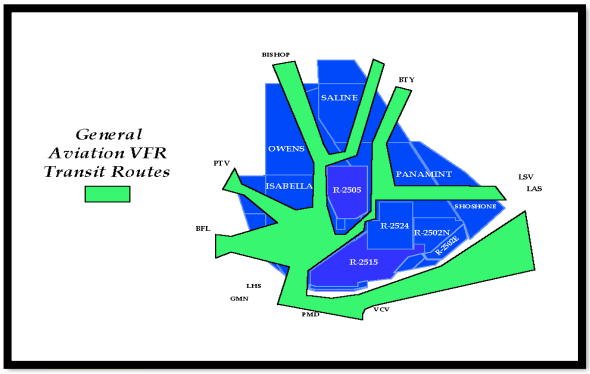


Figure 14. General Aviation Routes

4.15. **Golden Triangle.** Located inside R-2515 (not part of the R-2508 Complex). Direct questions to SPORT/ASC.

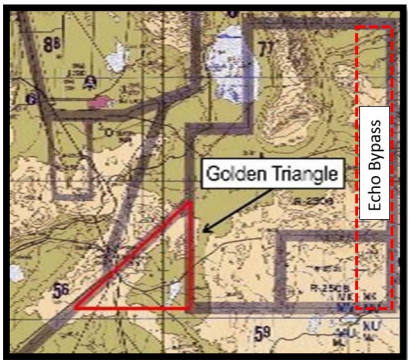


Figure 15. Golden Triangle/Echo Bypass

4.16. **Echo Bypass**. Located inside R-2524 (not part of the R-2508 Complex). Direct questions to SPORT/ASC.

CHAPTER 5
**Flight Operations**

**5.1. Targets of Opportunity.** Do not use low observable platforms as targets of opportunity. If any device tracks these platforms; the data is classified and must be safeguarded. Notify Edwards Command Post (DSN 527-3040/COMM: 661-277-3040).

**5.2. Lights-Out Operations.** Requires a CCB approved CONOP. Not authorized below FL200. Annotate "LIGHTS OUT" in the remarks section of the airspace request form.

**5.3. Electronic Counter Measures/Chaff.** Pre-coordinate, and obtain approval from, the following Base Spectrum Managers. CSE-CCF users must notify CCF via email of the intended activity, callsign, date, and time so ECM/CHAFF can be added to the remarks section of your request. For non-CSE-EDW users, annotate "ECM / CHAFF" in the remarks section of the scheduling request. NOTE: ECM/CHAFF in remarks is for flight strip purposes, only, and does not satisfy the requirement to contact the applicable spectrum office for approval.

- WAFB, Pt Mugu DSN 351-7983/COMM: 805-989-7983
- 412 TW DSN 527-2390/COMM: 661-277-2390
- NAWCWD DSN 437-6827/COMM: 760-939-6827
- NTC DSN 470-3043/COMM: 760-380-3043

**5.4. Flares.** Not authorized in R-2508 Complex. Flare use inside internal restricted areas must be coordinated with the scheduling agency.

**5.5. Directed Energy.** OWG concurrence and CCB approval is required for Class 3b and Class 4 laser usage in R-2508. Submit a CONOP to the CCF, via email, at least 30-days in advance. User must confirm compliance from FAA Laser Clearance House and mitigation recommendations from the unit's internal Safety Review Board.

- **Class 1** lasers and laser systems cannot emit accessible levels of radiation that are capable of causing eye injury under any normal operating condition.
- **Class 2** lasers and laser systems are visible lasers with an accessible output > 1 mW. Class 2 lasers and laser systems are incapable of causing eye injury unless intentionally viewed directly for an extended period.
- **Class 3a** lasers and laser systems have an accessible output between 1-5 mW and do not pose a serious eye hazard unless viewed through optical instruments.
- **Class 3b** lasers and laser systems have an accessible output 5-500 mW for continuous wave lasers and < 0.125 J within 0.25 second for a pulsed laser.
- **Class 4** lasers and laser systems have an accessible output > 500 mW for a continuous wave laser and > 0.125 J within 0.25 second for a pulsed laser. Class 4 lasers and laser systems pose a serious eye hazard from viewing the direct beam, specular reelections, and diffuse reflections. Class 4 lasers and laser systems also pose skin and fire hazards.

**5.6. Air Combat Maneuvers (ACM).** Notify JCF or ASC (as assigned) when using areas for ACM.

- Avoid ACM over towns – especially Owens Valley (regardless of altitude).
- **USE CAUTION**, when conducting ACM below RADAR coverage and in radio blind spots.

**5.7. Large Force Exercise (LFE) / Large Scale Exercise (LSE) / Large Force Test Event (LFTE).** Defined as more than 10 fixed-wing aircraft operating in the Complex simultaneously. Planners shall use and comply with Attachment 5 - failure to meet requirements may result in denial. This special activity requires CCB approval. Requests to operate inside "core hours" (0900-1700L, Mon-Fri) requires OWG concurrence and CCB approval. Approval does not grant 'exclusive use' of the Complex; maintain "VFR-See & Avoid" at all times.

**5.8. Tow Operations.** Only authorized during VMC conditions.

- Category C (1 SM from tow aircraft):
  - Chase aircraft is required.
  - Night operations not authorized.
  - CCB approval is required.
  - Submit CONOP to CCF as soon as Safety Review Board (SRB) or Executive Review Board (ERB) has been accomplished.
  - Must be finalized and scheduled NLT 5 working days prior.
- Category B (500' – 1 SM from tow aircraft):
  - Chase aircraft is required.
  - Night operations not authorized.
  - Submit visual map of route to CCF.
- Category A (within 500' from tow aircraft):
  - Annotate in the remarks section of the airspace request form.
  - Submit visual map of route to CCF.
- Avoid populated areas while conducting tow operations.
- Pilot shall notify JCF/MRU when conducting tow operations.
- Notify JCF/MRU immediately if towed object is inadvertently released.

**5.9. Refueling. USE CAUTION.** *The R-2508 Complex is VFR – see and avoid. Refueling activities are **not** provided 'protected airspace' or 'exclusive use airspace.'*

- "Standard" refueling operations is defined as 1 refueler and receivers, co-located within an established track, and 3000' altitude block. If conducting "non-standard' refueling, to include formation tanking, a CONOP must be submitted to the CCF office at least 3 business days in advance..
- Non-participants should avoid refueling activities by 2,000' vertically and/or 5 miles laterally to the maximum extent possible.
- **Discrete Tanker Beacon Codes.** Active refueling tankers will be assigned the below beacon codes to provide enhanced situational awareness to other Complex users.
  - MODE 1: 0002
  - MODE 2: 7210
  - MODE 3:
    - Departing Edwards: 0064-0067
    - All others: 5253-5257
- There are four unpublished refueling areas:
  - Isabella (ARISB)
  - Coaldale (AROAL)

○ Shoshone (ARSHN)Linus (ARLNS)

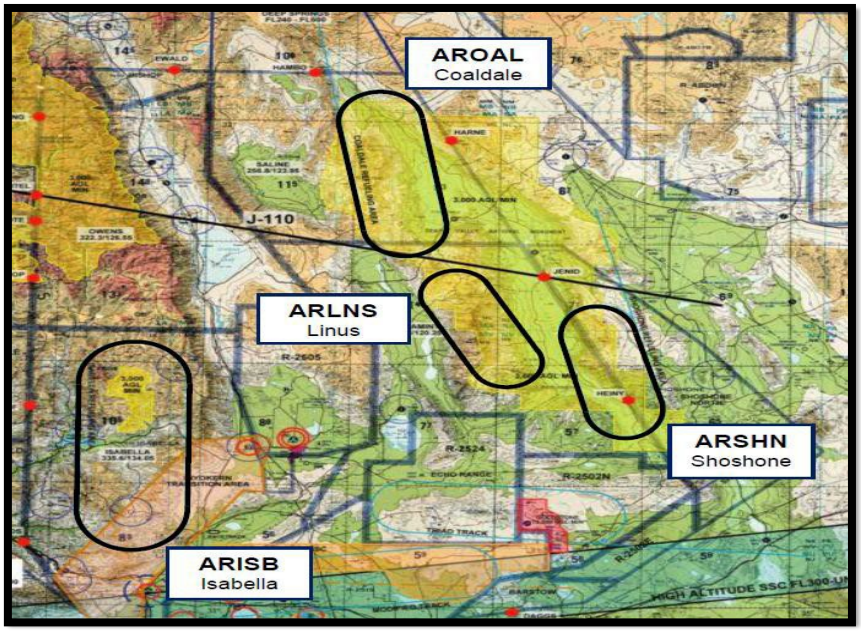


Figure 16. Refueling Areas

- The AR Tracks and Anchors below are provided to standardize procedures for Aerial refueling activities within the Complex. Refueling is not restricted to these non-published AR tracks.
  - ○ AR Default A/A TACAN settings: receivers just set tanker callsign #, tankers with callsigns 1-63 add 63 to callsign #. Tanker callsigns #64 and above subtract 63 from callsign #.

| Track | IP | CP | Altitude | Comm | Recommended Orbit |
|---|---|---|---|---|---|
| **Isabella** | PMD 345/35 | PMD 345/70 | AR >=FL210 | Tanker Common-363.425 | CRS 360 L:30 x W:18 |
| High | | | FL270B290 | Pri 349.3 Alt 354.4 | |
| Mid | | | FL240B260 | Pri 342.175 Alt 354.4 | |
| Low | | | FL210B230 | Pri 325.9 Alt 354.4 | |
| Remarks | High speed cross traffic FL200 and below. | | | | |
| | | | | | |
| **Track** | **IP** | **CP** | **Altitude** | **Comm** | **Recommended Orbit** |
| **Shoshone** | BTY 150/60 | BTY 150/40 | AR >=12,000MSL | Pri 272.125 | CRS 350 L:15 x W:15 |
| Remarks | No radar coverage below 10,000' MSL. Receivers remain above 3,000' AGL to avoid the park. | | | | |
| | | | | | |
| **Track** | **IP** | **CP** | **Altitude** | **Comm** | **Recommended Orbit** |
| **Coaldale** | OAL 155/60 | OAL 155/90 | AR >=10,000MSL | Pri 296.9 Alt 252.175 | CRS 170 L:25 x W:15 |

| | | | | |
|---|---|---|---|---|
| Remarks | No radar coverage below 10,000' MSL. Receivers remain above 3,000' AGL to avoid Death Valley park | | | |
| | | | | |
| **ANCHOR** | **Entry** | **NP** | **Altitude** | **Comm** |
| **Linus** | N35-57.53/ W117-02.81 | N36-02.15/ W116-51.46 | As Required | As Assigned |
| | | N36-19.88/ W117-03.45 | | |
| | | N36-15.35/ W117-14.59 | | |
| Remarks | Remain above 3000' AGL to avoid the park. **AVAILABLE TO GREEN FLAG ONLY.** | | | |
| | | | | |

Table 17. AR Track Information.

**5.10. Link 16**. Units desiring to participate in the Southwest LINK-16 situational awareness network should access the quick link available on the R-2508 Complex SharePoint.

**5.11. Military Training Routes (MTR).** Refer to the FLIP AP/1B for scheduling and special instructions. For cruise missiles, planners must submit a Cruise Missile Activity Request Form to CCF, via email, no later than 30-days prior to the projected activity. The form is available on the SharePoint (under quick links).

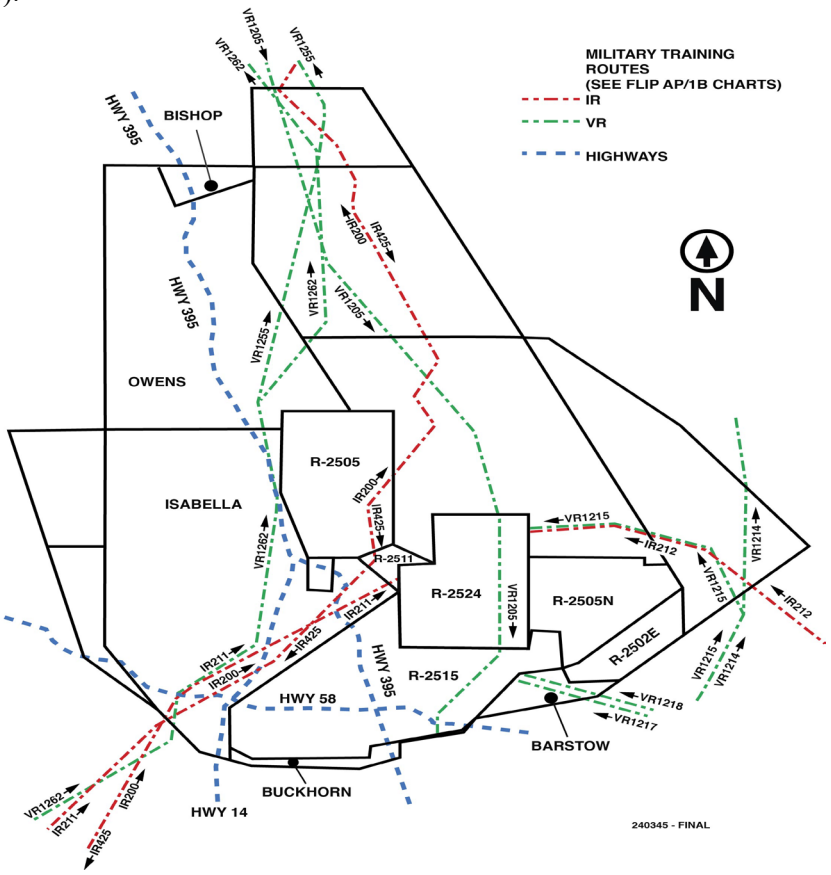


Figure 18. Military training Routes

**5.12. Sidewinder Low Level (SWLL).**

- Unpublished and for **LOCAL USE ONLY**.

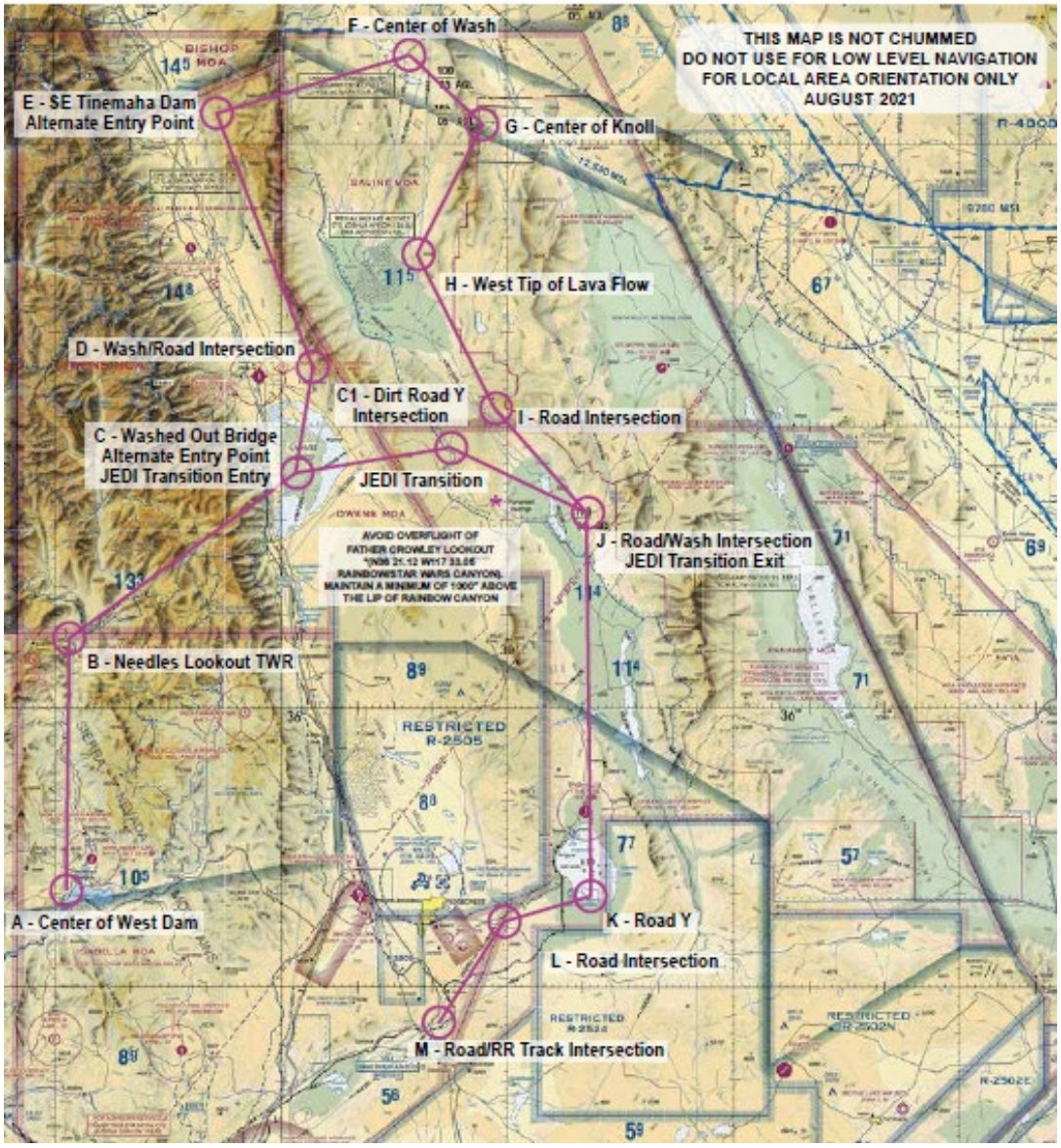


Figure 19. Sidewinder Low Level

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**SIDEWINDER LOW LEVEL**

**CAUTION:** These are R-2508 procedural controls for local use only. Points will be flown sequentially (i.e. A, B, C…M or C, J, K…M, etc). **OPPOSITE DIRECTION IS PROHIBITED.**

***Note:*** SIDEWINDER & JEDI are not published MTR.

**ROUTE DESCRIPTION:**

**PT Lat/Long Pt Description/Elevation**

A N 35 38.75 Ctr of West Dam/2575 W118 28.94
B N 36 06.60 Needles Lookout Twr/8107 W118 29.12
C N 36 24.74 Washed Out Bridge/3615 W118 00.57
C1 N 36 25.70 Dirt Road Y Int/5206
W 117 38.45 (Jedi Only)
D N 36 35.61 Wash/Road Int/3635
W117 58.53
E N 37 02.88 SE Tinemaha Dam/3894 W118 12.79
F N 37 09.18 Center of Wash/2956 W117 46.19
G N 37 02.17 Center of Knoll/4738 W117 37.09
H N 36 47.95 West Tip Lava Flow/1352 W117 45.69
I N 36 30.84 Road Int/6109
W117 34.05
J N 36 20.69 Road/Wash Int/2093
W117 21.08
K N 35 39.34 Road Y/1624
W117 21.62
L N 35 36.61 Road Int/2480
W117 31.56
M N 35 25.40 Road/RR Int/2785
W117 40.32

**ALTITUDE**: ALTITUDE: NLT 200' AGL to 3000' AGL (points A to B); NLT 200' AGL (points B to K); NLT 500' AGL (points K to M). Climb as required to avoid noise sensitive areas and airports (note 8).

**ROUTE WIDTH –** 2 NM either side of centerline.

**Special Operating Procedures:**

(1) Entry Procedure: Prior to entry notify Joshua of intentions and planned Entry/Exit point. Above 3000 AGL and prior to route entry make intentions call on Low Level Common (315.9). Give way to any traffic already established on the route prior to entry.

(2) Noise abatement procedures from A to B: Make a reduced throttle descent into point A to B. Remain above 3000' AGL until 3NM north of the Kernville airport (N 35 46.5 W 118 28.9) to avoid Lake Isabella, the town of Kernville, and surrounding communities. Points A-B afterburner is prohibited unless required for safety of flight. *(See figure 20.)*

(3) Alternate Entry: This is a procedural control and traffic may enter at any point. Preferred alternate entry are C and E.

(4) Alternate Exit: This is a procedural control and traffic may exit at any point. Preferred alternate exits are H and K.

(5) All aircraft operating on the Sidewinder/Jedi Transition will utilize the R-2508 low altitude common frequency 315.9. When entering low level environment transmit in the blind call sign, number and type of aircraft, and intentions. Monitor 315.9 until exiting low altitude regime. Repeat calls entering new areas or crossing ridge lines.

(6) Slower aircraft (i.e. C-12, T-34) may be on the route at same time. Use caution for airspeed variations that may exist between aircraft. Aircraft being overtaken has right of way.

(7) To mitigate the risk of opposite direction traffic, offset right of centerline when transiting saddles between valleys. Rising terrain may mask advisory calls.

(8) Avoid all noise sensitive/national park areas by 3000'AGL or 3000' laterally. Avoid all charted wilderness avoidance areas (unless on a charted VR or IR Route or the SWLL) by 3,000' AGL. Avoid all airports along route by 1500' AGL or 3 NM.

(9) Point B to C, avoid the extremely noise sensitive areas of Olancha and Cartago.

(10) Point C to D, and C1 to J avoid the extremely noise sensitive areas of Keeler and Lone Pine. Caution:

a. intensive hang glider activity in the vicinity of Dolomite and northeast shore of Owens Lake.
b. Skydiving activity in the vicinity of Lone Pine.

(11) **Caution:** high migratory bird activity between F and H during daylight hours.

(12) Point J to K – **Caution**: Possible merging traffic from aircraft on Jedi Transition (approaching from west via Point C1). Make mandatory radio calls on 315.9 approaching Point J "Call sign, Sidewinder, approaching Point Juliet". Low level and attack training may occur East of SWLL and in the vicinity of Ballarat radar site. Ballarat radar site is commonly used as a target for simulated bombing/strafing runs. The bomb runs generally terminate in pullouts above 3K AGL, but there will be vertical maneuvering going on; strafe patterns can very easily result in aircraft being very close to or intersecting with LL participant altitudes. route in Panamint. Make plain language positions calls ("CallSign northbound over Ballarat, 500 feet").

(13) Point J to K. 198' multi unlit towers N35°53.797 W117°17.558. Avoid Trona Airport by 1500' AGL or 3 NM.

(14) Point K to M. Watch for traffic northbound to China Lake initial at 4000' MSL.

(15) Point L to M, route transits underneath instrument procedure at NID (arc and final approach). Use caution if exiting route prior to point M.

(16) Conflicts: A to L: IR-236; B to D: VR-1255; E to I: VR-1205-1255-1262; I to L: VR-1262, IR-200; K to M: IR-200-211.

**JEDI TRANSITION:** At Point C proceed east to Point C1 and to Point J. **Avoid Overflight of Father Crowley Lookout (N36 21.12 W117 33.05 – Rainbow/Star Wars Canyon). Maintain a minimum of 1000' above the lip of Rainbow Canyon. CAUTION**: Possible merging Sidewinder traffic from the north via Point I. Jedi users offset west of Point J for de-confliction. Jedi users make mandatory radio call approaching Point J "Call sign, Jedi Transition, approaching Point Juliet". Make calls on 315.9.

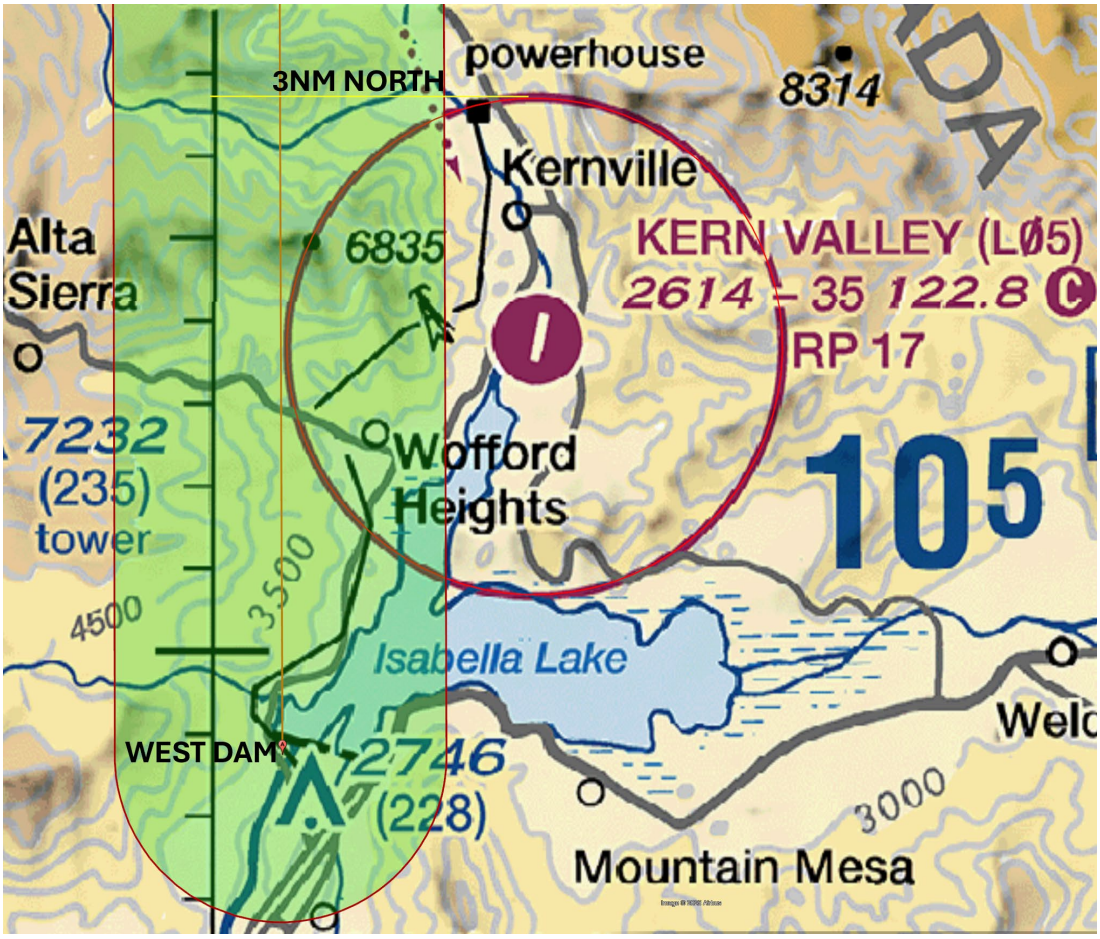


Figure 20: SWLL Point A. West Dam

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### 5.13. Remotely Piloted Aircraft (RPA) / Unmanned Aerial Systems (UAS).

- Chase aircraft are not required for operations FL400 and above.
- Chase aircraft are required for operations below FL400 EXCEPT when:
  - Operating along transit route.
  - Transiting between R2505 and R2524 above FL190.
- In the event of lost link, continue on filed routing at last ATC assigned altitude.
- Transit of the "Trona Gap" between R2505 and R2524 is not authorized when R2511 is active.
- Required R2508 Complex Transit Routings:
  - All routings must be filed/flown at FL190 or FL200 – depending on direction of flight.

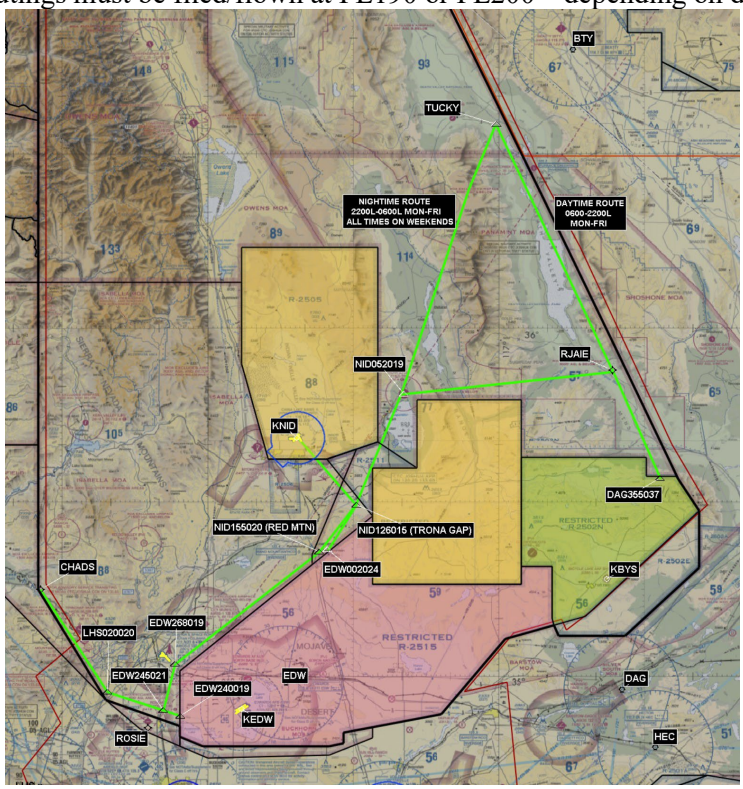


Figure 21. RPA / UAS Transitions

(1) **KBYS-CHADS:**

| Fixes/Waypoints | Lat/Longs |
|---|---|
| KBYS | 35° 16' 50" N / 116° 37' 48" W |
| DAG355037 | 35° 34' 14" N / 116° 26' 49" W |
| RJAIE | 35° 52' 52" N / 116° 36' 36" W |
| NID052019 | 35° 48' 59" N / 117° 20' 05" W |
| NID126015 (TRONA GAP) | 35° 29' 45" N / 117° 29' 37" W |
| NID155020 (RED MTN) | 35° 21' 30" N / 117° 37' 09" W |
| EDW268019 | 35° 02' 13" N / 118° 06' 45" W |
| EDW245021 | 34° 54' 14" N / 118° 09' 11" W |
| LHS020020 | 34° 57' 23" N / 118° 20' 40" W |
| CHADS | 35° 15' 00" N / 118° 34' 30" W |

***For return flight, file flight plan via reverse route as shown in table above.***

(2) **KNID-CHADS:**

| Fixes/Waypoints | Lat/Longs |
|---|---|
| KNID | 35° 41' 09" N / 117° 41' 32" W |
| NID126015 (TRONA GAP) | 35° 29' 45" N / 117° 29' 37" W |
| NID155020 (RED MTN) | 35° 21' 30" N / 117° 37' 09" W |
| EDW268019 | 35° 02' 13" N / 118° 06' 45" W |
| EDW245021 | 34° 54' 14" N / 118° 09' 11" W |
| LHS020020 | 34° 57' 23" N / 118° 20' 40" W |
| CHADS | 35° 15' 00" N / 118° 34' 30" W |

***For return flight, file flight plan via reverse route as shown in table above.***

(3) **KNID – R2515:**

| Fixes/Waypoints | Lat/Longs |
|---|---|
| KNID | 35° 41' 09" N / 117° 41' 32" W |
| NID126015 (TRONA GAP) | 35° 29' 45" N / 117° 29' 37" W |
| EDW002024 | 35° 21' 55" N / 117° 35' 23" W |

***For return flight, file flight plan via reverse route as shown in table above.***

(4) **R2515-CHADS:**

| Fixes/Waypoints | Lat/Longs |
|---|---|
| EDW240019 | 34° 53' 12" N / 118° 05' 39" W |
| LHS020020 | 34° 57' 23" N / 118° 20' 40" W |
| CHADS | 35° 15' 00" N / 118° 34' 30" W |

***For return flight, file flight plan via reverse route as shown in table above.***

(5) **R2515-TUCKY - Day Route - Authorized 0600L – 2200L, Mon-Fri:**

| Fixes/Waypoints | Lat/Longs |
|---|---|
| EDW002024 | 35° 21' 55" N / 117° 35' 23" W |
| NID126015 (TRONA GAP) | 35° 29' 45" N / 117° 29' 37" W |
| NID052019 | 35° 48' 59" N / 117° 20' 05" W |
| RJAIE | 35° 52' 52" N / 116° 36' 36" W |
| TUCKY | 36° 35' 14" N / 117° 00' 37" W |

***For return flight, file flight plan via reverse route as shown in table above.***

(6) **R2515-TUCKY – Night/Weekend Route - Authorized 2200L – 0600L, Mon-Fri, Weekends:**

| Fixes/Waypoints | Lat/Longs |
|---|---|
| EDW002024 | 35° 21' 55" N / 117° 35' 23" W |
| NID126015 (TRONA GAP) | 35° 29' 45" N / 117° 29' 37" W |
| NID052019 | 35° 48' 59" N / 117° 20' 05" W |
| TUCKY | 36° 35' 14" N / 117° 00' 37" W |

***For return flight, file flight plan via reverse route as shown in table above.***

(7) **TUCKY - KNID/CHADS - Day Route - Authorized 0600L – 2200L, Mon-Fri:**

| Fixes/Waypoints | Lat/Longs |
|---|---|
| TUCKY | 36° 35' 14" N / 117° 00' 37" W |
| RJAIE | 35° 52' 52" N / 116° 36' 36" W |
| NID052019 | 35° 48' 59" N / 117° 20' 05" W |
| NID126015 (TRONA GAP) | 35° 29' 45" N / 117° 29' 37" W |

| | |
|---|---|
| *(If landing/departing KNID, proceed direct)* | |
| NID155020 (RED MTN) | 35° 21' 30" N / 117° 37' 09" W |
| EDW268019 | 35° 02' 13" N / 118° 06' 45" W |
| EDW245021 | 34° 54' 14" N / 118° 09' 11" W |
| LHS020020 | 34° 57' 23" N / 118° 20' 40" W |
| CHADS | 35° 15' 00" N / 118° 34' 30" W |

***For return flight, file flight plan via reverse route as shown in table above.***

(8) **TUCKY- KNID/CHADS – Night/Weekend Route - Authorized 2200L – 0600L, Mon-Fri, Weekends:**

| Fixes/Waypoints | Lat/Longs |
|---|---|
| TUCKY | 36° 35' 14" N / 117° 00' 37" W |
| NID052019 | 35° 48' 59" N / 117° 20' 05" W |
| NID126015 (TRONA GAP)<br>*(If landing/departing KNID, proceed direct)* | 35° 29' 45" N / 117° 29' 37" W |
| NID155020 (RED MTN) | 35° 21' 30" N / 117° 37' 09" W |
| EDW268019 | 35° 02' 13" N / 118° 06' 45" W |
| EDW245021 | 34° 54' 14" N / 118° 09' 11" W |
| LHS022020 | 34° 57' 23" N / 118° 20' 40" W |
| CHADS | 35° 15' 00" N / 118° 34' 30" W |

***For return flight, file flight plan via reverse route as shown in table above.***

(9) **R2515 Entry/Exit points:**

| Fixes/Waypoints | Lat/Longs |
|---|---|
| EDW240019 | 34° 53' 12" N / 118° 05' 39" W |
| EDW002024 | 35° 21' 55" N / 117° 35' 23" W |

(10) **R-2502N Entry/Exit Point:**

| Fixes/Waypoints | Lat/Longs |
|---|---|
| DAG3255037 | 35° 34' 14" N / 116° 26' 49" W |

**5.14. Airborne Radar Unit (ARU) / Airborne Warning and Control Systems (AWACS).**

- Initiate radar correlation check with JCF or ASC (as assigned).
- Do not provide ATC services to mission aircraft.
- Do not change MODE 3 codes while inside the Complex.
- Notify JCF or ASC (as assigned) of:
  - Frequency for direct communication with mission aircraft.
  - An emergency or an aircraft that requires special handling.
  - 5-minute advance notice of mission completion.
  - Call sign of the first element that has completed mission.
  - Position of last element that will exit the Complex.
  - Advise when mission is complete.
  - Advise aircraft to remain in assigned airspace and contact JCF or ASC (as directed).
- JCF or ASC will:
  - Coordinate with ARTCC for inbound/outbound aircraft.
  - Issue a work area clearance & beacon code to mission aircraft.
  - Forward ACID/CODE to the AWACs/ARU.
  - Inactively monitor AWACs/ARU mission/tactical frequency.
  - Provide traffic advisories and alerts on non-mission aircraft.

- Provide boundary advisories on mission/tactical frequency.
- Issue departure clearances and perform ARTCC coordination.

**5.15. Supersonic Operations.** Only authorized within the Bell X-1 Supersonic Corridor (BX1SC). Operations within the BX1SC shall be IAW the Letter of Agreement maintained by CCF.

**5.16. Civil Activities.** Numerous types of civil flight activities occur within R-2508. The following are not DoD approved or sanctioned. This information is only provided to increase aircrew awareness of activities that may occur in the Complex. Updates will be posted on the Daily Brief Sheet.

- **Glider Activity.** Glider activity is routinely conducted along the Sierra Nevada Mountain range, along the west and northeastern shoreline of Owens Dry Lake, throughout the Owens Valley, and north along the Inyo Mountain range to Bishop, California, SFC – unlimited. Activity below FL180 is not scheduled via CCF. Activity above FL180 should be scheduled with CCF.

- **Sky Diving Activity.** Occurs, daily / sunrise – sunset, within 3 NMR of Lone Pine / Death Valley Airport. May occur throughout Owens MOA and in the vicinity of California City Airport.

- **Amateur Rocket Activity.** Surface to highest altitude will be listed on their COA. Activity may also involve sUAS filming in the same area.

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| **KOEHN DRY LAKE**<br>NM RADIUS 35° 21' 12" N/117° 48' 25.80" W (EDW 336023) |
| **AERIAL ACRES**<br>NM RADIUS OF 35° 06' 16" N / 117° 47' 42" W |
| **REACTION RESEARCH**<br>NM RADIUS OF 35° 20' 00" N / 117° 53' 00" W |

Figure 22. Amateur Rocket Activity

5.17. **Scheduling Complex Special Activities/Special Handling.** Desired activities that cannot be accommodated by current R-2508 doctrine, e.g., operational requests like non-eye safe lasing.

- Activities that require "special handing" are recommended to submit concept of operations proposal (CONOP must include map, flight profile, times, operating altitudes, flight restrictions, etc.) to CCF no later than 30-business days in advance.. Lead time is required to allow all necessary coordination/changes to be approved prior to the scheduled operation.
- Advanced notice is required to allow other complex users to be briefed on the operations (times, routes, altitudes, activities, etc.) and de-conflict the proposed operation from other activities within the R-2508 Complex. A statement will also be included on the R-2508 Daily Brief Sheet capturing the special activity operations.

**Attachment 1**
**Airspace & Geographic Waypoints**

| NAME | LAT (N) / LONG (W) | |
|---|---|---|
| **ISABELLA** | | |
| MOA<br>JO 7400.10 | Beginning at lat. 36°08'00"N., long. 118°35'03"W<br>to lat. 36°08'00"N., long. 117°53'03"W<br>thence south and east along the boundary of R-2505<br>to lat. 35°39'15"N., long. 117°29'26"W<br>to lat. 35°21'00"N., long. 117°38'33"W<br>to lat. 35°19'20"N., long.117°38'33"W<br>thence along the western boundary of R-2515<br>to lat. 34°49'40"N., long.118°05'48"W<br>to lat. 34°48'00"N., long. 118°05'48"W<br>to lat. 34°51'00"N., long. 118°14'03"W<br>to lat. 34°56'00"N., long. 118°21'03"W<br>to lat. 35°15'00"N., long. 118°35'03"W, to the point of beginning. | |
| ATCAA<br>JOINT USE LOA | Beginning at 36 08 00 North 118 35 03 West<br>thence direct 36 08 00 North 117 53 03 West<br>thence south and east along the boundary of R-2505<br>to 35 39 15 North 117 29 26 West<br>thence direct 35 21 00 North 117 38 33 West<br>thence direct 35 19 20 North 117 38 33 West<br>thence along the western boundary of R-2515<br>to 34 49 40 North 118 05 48 West<br>thence direct 34 48 00 North 118 05 48 West<br>thence direct 34 51 00 North 118 14 03 West<br>thence direct 34 56 00 North 118 21 03 West<br>thence direct 35 15 00 North 118 35 03 West, thence direct to point of beginning. | |
| Lake Isabella | 35-39-00 | 118-23-00 |
| Needles | 36-07-00 | 118-29-00 |
| Inyokern Airfield | 35-38-00 | 117-50-00 |
| Mojave | 35-03-00 | 118-08-00 |
| **OWENS** | | |
| MOA<br>JO 7400.10 | Beginning at lat. 37°12'00"N., long. 118°35'03"W<br>to lat. 37°12'00"N., long. 118°26'03"W<br>to lat. 37°02'00"N., long. 118°20'03"W<br>to lat. 37°09'00"N., long.118°00'03"W<br>to lat. 36°46'00"N., long. 118°00'03"W<br>to lat. 36°14'00"N., long. 117°36'03"W<br>thence along the northern and western boundaries of R-2505<br>to lat. 36°08'00"N., long. 117°53'03"W<br>to lat. 36°08'00"N., long. 118°35'03"W, to the point of beginning. | |
| ATCAA<br>JOINT-USE LOA | Beginning at 37 12 00 North 118 35 03 West<br>thence direct 37 12 00 North 118 26 03 West<br>thence direct 37 02 00 North 118 20 03 West<br>thence direct 37 09 00 North 118 00 03 West<br>thence direct 36 46 00 North 118 00 03 West | |

| | | |
|---|---|---|
| | thence direct 36 14 00 North 117 36 03 West<br>thence along the northern and western boundaries of R-2505<br>to thence direct 36 08 00 North 117 53 03 West<br>thence direct 36 08 00 North 118 35 03 West, thence direct to point of beginning. | |
| Tinemaha "T- Dam" | 37-03-41.50 | 118-13-10.80 |
| Independence | 36-48-54.79 | 118-12-15.41 |
| Lone Pine | 36-35-25.35 | 118-02-47.25 |
| Owens Dry Lake Bed | 36-21-32.90 | 118-57-46.90 |
| **SALINE** | | |
| MOA<br>JO 7400.10 | Beginning at lat. 37°12'00"N., long. 118°00'03"W<br>to lat. 37°12'00"N., long. 117°20'03"W<br>to lat. 36°30'00"N., long. 116°55'03"W<br>to lat. 36°30'00"N., long.117°48'03"W<br>to lat. 36°46'00"N., long. 118°00'03"W<br>to the point of beginning. Excluding that airspace 3000 feet AGL and below south and east of a line beginning at lat. 37°01'19"N., long. 117°13'39"W<br>to lat. 37°01'19"N., long. 117°13'50"W<br>at lat. 37°05'01"N., long. 117°18'54"W<br>at lat. 37°05'05"N., long. 117°33'47"W<br>at lat. 36°58'57"N., long.117°33'47"W<br>at lat. 36°58'56"N., long. 117°34'05"W<br>at lat. 36°53'55"N., long. 117°34'11"W<br>at lat. 36°53'51"N., long. 117°35'16"W<br>at lat. 36°51'10"N., long. 117°35'16"W<br>at lat. 36°51'08"N., long. 117°36'20"W<br>at lat. 36°47'58"N., long. 117°36'18"W<br>at lat. 36°47'51"N., long.117°37'07"W<br>at lat. 36°40'21"N., long. 117°37'08"W<br>at lat. 36°40'21"N., long. 117°36'03"W<br>at lat. 36°37'45"N., long. 117°36'05"W<br>at lat. 36°37'45"N., long. 117°31'44"W<br>at lat. 36°36'52"N., long. 117°31'44"W<br>at lat. 36°36'56"N., long. 117°30'53"W<br>at lat. 36°36'38"N., long. 117°30'36"W<br>at lat. 36°36'31"N., long. 117°29'54"W<br>at lat. 36°35'54"N., long. 117°29'43"W<br>at lat. 36°35'27"N., long. 117°28'59"W<br>at lat. 36°35'29"N., long. 117°28'41"W<br>at lat. 36°34'21"N., long. 117°28'32"W<br>at lat. 36°33'29"N., long. 117°28'45"W<br>at lat. 36°32'39"N., long. 117°30'16"W<br>at lat. 36°31'56"N., long. 117°30'08"W<br>at lat. 36°31'29"N., long. 117°28'20"W<br>at lat. 36°30'16"N., long. 117°25'34"W<br>at lat. 36°30'00"N., long. 117°25'35"W. | |
| ATCAA<br>JOINT USE LOA | Beginning at 37 12 00 North 118 00 03 West<br>thence direct 37 12 00 North 117 20 03 West | |

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| | thence direct 36 30 00 North 116 55 03 West<br>thence direct 36 30 00 North 117 48 03 West<br>thence direct 36 46 00 North 118 00 03 West, thence direct to point of beginning. | |
| Eureka Dunes | 37-05-58 | 117-40-22 |
| Nudy Camp | 36-47-17.80 | 117-46-25.20 |
| Saddle | 36-32-02.40 | 117-33-43.60 |
| **PANAMINT** | | |
| MOA<br>JO 7400.10 | Beginning at lat. 36°30'00"N., long. 117°48'03"W<br>to lat. 36°30'00"N., long. 116°55'03"W<br>to lat. 35°34'30"N., long. 116°23'33"W<br>thence along the northern boundary of R-2502N, the eastern, northern, and western boundaries of R-2524, and the northwestern boundary of R-2515<br>to lat. 35°19'20"N., long. 117°38'33"W<br>to lat. 35°21'00"N., long. 117°38'33"W<br>to lat. 35°39'15"N., long. 117°29'26"W<br>thence along the eastern and northern boundaries of R-2505<br>to lat. 36°14'00"N., long. 117°36'03"W<br>to the point of beginning. Excluding that airspace (1) 3000 feet AGL and below north and east of a line beginning<br>at lat. 36°30'00"N., long. 117°25'35"W<br>to lat. 36°29'46"N., long. 117°25'36"W<br>to lat. 36°27'14"N., long. 117°22'01"W<br>to lat. 36°25'41"N., long. 117°20'58"W<br>to lat. 36°25'34"N., long.117°20'29"W<br>to lat. 36°26'16"N., long. 117°19'11"W<br>to lat. 36°25'00"N., long. 117°18'36"W<br>to lat. 36°25'10"N., long. 117°17'57"W<br>to lat. 36°24'15"N., long. 117°17'23"W<br>to lat. 36°23'48"N., long. 117°15'36"W<br>to lat. 36°15'57"N., long. 117°15'33"W<br>to lat. 36°13'55"N., long. 117°09'09"W<br>to lat. 36°08'44"N., long. 117°09'04"W<br>to lat. 36°08'40"N., long. 117°04'39"W<br>to lat. 36°06'58"N., long. 117°03'47"W<br>to lat. 36°05'54"N., long. 117°04'33"W<br>to lat. 36°05'28"N., long. 117°03'54"W<br>to lat. 36°01'42"N., long. 117°02'34"W<br>to lat. 35°58'53"N., long. 117°04'31"W<br>to lat. 35°58'37"N., long. 117°05'17"W<br>to lat. 35°57'13"N., long. 117°06'45"W<br>to lat. 35°55'23"N., long. 117°06'35"W<br>to lat. 35°54'11"N., long. 117°05'24"W<br>to lat. 35°53'10"N., long. 117°01'39"W<br>to lat. 35°52'54"N., long. 116°55'21"W<br>to lat. 35°47'44"N., long. 116°55'22"W<br>to lat. 35°47'44"N., long. 116°36'05"W<br>to lat. 35°39'03"N., long. 116°36'01"W | |

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| | to lat. 35°39'03"N., long. 116°26'06"W<br>(2) 1500 feet AGL and below within a 3NM radius of the Trona airport. | |
| ATCAA<br>JOINT USE LOA | Beginning at 36 30 00 North 117 48 03 West<br>thence direct 36 30 00 North 116 55 03 West<br>thence direct 35 34 30 North 116 23 33 West<br>thence along the northern boundary of R-2502N, the eastern, northern, and western boundary of R-2524, and the northwestern boundary of R-2515<br>to 35 19 20 North 117 38 33 West<br>thence direct 35 21 00 North 117 38 33 West<br>thence direct 35 39 15 North 117 29 26 West<br>thence along the eastern and northern boundary of R-2505<br>to 36 14 00 North 117 36 03 West<br>thence direct to point of beginning. | |
| Starwars Canyon | 36-21-48.80 | 117-30-32.30 |
| Dogbone | 36-23-13.80 | 117-24-18.10 |
| Ballarat Mines | 35-56-43.30 | 117-12-02.05 |
| Trona Airfield | 35-48-44.20 | 117-19-37.70 |
| **SHOSHONE** | | |
| MOA<br>JO 7400.10 | Beginning at lat. 36°30'00"N., long. 116°55'03"W<br>to lat. 36°30'00"N., long. 116°47'03"W<br>to lat. 36°06'00"N., long. 116°18'03"W<br>to lat. 35°39'00"N., long. 115°53'03"W<br>to lat. 35°18'45"N., long. 116°18'48"W<br>to lat. 35°28'35"N., long. 116°18'48"W<br>to lat. 35°34'30"N., long. 116°23'33"W<br>to the point of beginning. Excluding that airspace (1) 3000 feet AGL and below north and west of a line from beginning<br>at lat. 35°39'03"N., long. 116°26'06"W<br>to lat. 35°39'03"N., long. 116°21'48"W<br>to lat. 35°48'14"N., long. 116°21'49"W<br>to lat. 35°48'11"N., long. 116°29'41"W<br>to lat. 35°52'17"N., long. 116°29'43"W<br>to lat. 35°52'18"N., long. 116°29'22"W<br>to lat. 35°58'22"N., long. 116°29'26"W<br>to lat. 35°58'23"N., long. 116°35'47"W<br>to lat. 36°10'08"N., long. 116°35'47"W<br>to lat. 36°10'11"N., long. 116°38'58"W<br>to lat. 36°17'57"N., long. 116°39'01"W<br>to lat. 36°17'58"N., long. 116°40'33"W<br>to lat. 36°18'30"N., long. 116°41'05"W<br>to lat. 36°24'54"N., long. 116°41'04"W<br>to lat. 36°24'54"N., long. 116°40'51"W<br>(2) 1500 feet AGL and below within a 3NM radius of the Shoshone airport. | |
| North ATCAA<br>JOINT USE LOA | Beginning at 36 30 00 North 116 55 03 West<br>thence direct 36 30 00 North 116 47 03 West<br>thence direct 36 06 00 North 116 18 03 West | |

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| | thence direct 35 44 15 North 115 57 48 West<br>thence direct 35 28 35 North 116 18 48 West<br>thence direct 35 34 30 North 116 23 33 West<br>thence direct to point of beginning. |
| South ATCAA<br>JOINT USE LOA | Beginning at 35 44 15 North 115 57 45 West<br>thence direct 35 39 00 North 115 53 00 West<br>thence direct 35 18 45 North 116 18 46 West<br>thence direct 35 28 35 North 116 18 46 West<br>thence direct to point of beginning. |
| **DEATH VALLEY** | |
| ***NOTE: Exclusion of MOA airspace above Death Valley National Park and Domeland Wilderness Area applies to the 1977 contours of the former National Monument and Wilderness Area. This difference in affected airspace may not be accurately reflected in Sectional Charts.*** | |
| Boundary of Death Valley National Park (Monument Boundaries) within **Saline**<br>R-2508 Handbook | Beginning at 36°30'00"N/117°25'35"W<br>thence direct 37°01'19"N/117°13'50"W<br>thence direct 37°05'01"N/117°18'54"W<br>thence direct 37°05'05"N/117°33'47"W<br>thence direct 36°58'57"N/117°33'47"W<br>thence direct 36°58'56"N/117°34'05"W<br>thence direct 36°53'55"N/117°34'11"W<br>thence direct 36°53'51"N/117°35'16"W<br>thence direct 36°51'10"N/117°35'16"W<br>thence direct 36°51'08"N/117°36'20"W<br>thence direct 36°47'58"N/117°36'18"W<br>thence direct 36°47'51"N/117°37'07"W<br>thence direct 36°40'21"N/117°37'08"W<br>thence direct 36°40'21"N/117°36'03"W<br>thence direct 36°37'45"N/117°36'05"W<br>thence direct 36°37'45"N/117°31'44"W<br>thence direct 36°36'52"N/117°31'44"W<br>thence direct 36°36'56"N/117°30'53"W<br>thence direct 36°36'38"N/117°30'26"W<br>thence direct 36°36'31"N/117°29'54"W<br>thence direct 36°35'54"N/117°29'43"W<br>thence direct 36°35'27"N/117°28'59"W<br>thence direct 36°35'29"N/117°28'41"W<br>thence direct 36°34'21"N/117°28'32"W<br>thence direct 36°33'29"N/117°28'45"W<br>thence direct 36°32'39"N/117°30'16"W<br>thence direct 36°31'56"N/117°30'08"W<br>thence direct 36°31'29"N/117°28'20"W<br>thence direct 36°30'16"N/117°25'34"W<br>thence direct 36°30'00"N/117°25'35"W |
| Boundary of Death Valley National Park (Monument Boundaries) within **Panamint**<br>R-2508 Handbook | Beginning at 36°30'00"N/117°25'35"W<br>thence direct 36°29'46"N/117°25'36"W<br>thence direct 36°27'14"N/117°22'01"W<br>thence direct 36°25'41"N/117°22'01"W<br>thence direct 36°25'34"N/117°20'58"W<br>thence direct 36°26'16"N/117°19'11"W |

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| | thence direct 36°25'00"N/117°18'36"W<br>thence direct 36°25'10"N/117°17'57"W<br>thence direct 36°24'15"N/117°17'23"W<br>thence direct 36°23'48"N/117°15'36"W<br>thence direct 36°13'57"N/117°15'33"W<br>thence direct 36°13'55"N/117°09'09"W<br>thence direct 36°08'44"N/117°09'04"W<br>thence direct 36°08'40"N/117°09'04"W<br>thence direct 36°06'58"N/117°03'47"W<br>thence direct 36°05'54"N/117°04'33"W<br>thence direct 36°05'28"N/117°03'54"W<br>thence direct 36°01'42"N/117°02'34"W<br>thence direct 35°58'53"N/117°04'31"W<br>thence direct 35°58'37"N/117°05'17"W<br>thence direct 35°57'13"N/117°06'45"W<br>thence direct 35°55'23"N/117°06'35"W<br>thence direct 35°54'11"N/117°05'24"W<br>thence direct 35°53'10"N/117°01'39"W<br>thence direct 35°52'54"N/116°55'21"W<br>thence direct 35°47'44"N/116°55'22"W<br>thence direct 35°47'44"N/116°36'05"W<br>thence direct 35°39'03"N/116°36'01"W<br>thence direct 35°39'03"N/116°26'06"W | |
| Boundary of Death Valley National Park (Monument Boundaries) within **Shoshone** R-2508 Handbook | Beginning at 35°39'03"N/116°26'06"W<br>thence direct 35°39'03"N/116°21'48"W<br>thence direct 35°48'14"N/116°21'49"W<br>thence direct 35°48'11"N/116°29'41"W<br>thence direct 35°52'17"N/116°29'43"W<br>thence direct 35°58'22"N/116°26'22"W<br>thence direct 35°58'23"N/116°35'47"W<br>thence direct 36°10'08"N/116°35'47"W<br>thence direct 36°10'11"N/116°38'58"W<br>thence direct 36°17'57"N/116°39'01"W<br>thence direct 36°17'58"N/116°40'33"W<br>thence direct 36°18'30"N/116°41'05"W<br>thence direct 36°24'54"N/116°41'04"W<br>thence direct 36°24'54"N/116°40'51"W | |
| Death | 36-58-00 | 117-21-00 |
| Stove Pipe | 36-36-23 | 117-08-47 |
| **BISHOP** | | |
| MOA<br>JO 7400.10 | Beginning at lat. 37°12'00"N., long. 118°26'03"W<br>to lat. 37°12'00"N., long. 118°00'03"W<br>to lat. 37°09'00"N., long. 118°00'03"W<br>to lat. 37°02'00"N., long. 118°20'03"W<br>to the point of beginning. | |
| **PORTERVILLE** | | |
| MOA<br>JO 7400.10 | Beginning at lat. 36°08'00"N., long. 119°00'03"W<br>to lat. 36°08'00"N., long. 118°35'03"W<br>to lat. 35°40'00"N., long. 118°35'03"W | |

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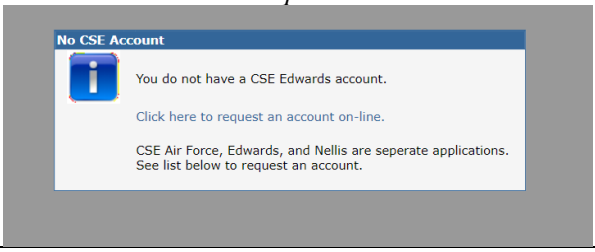
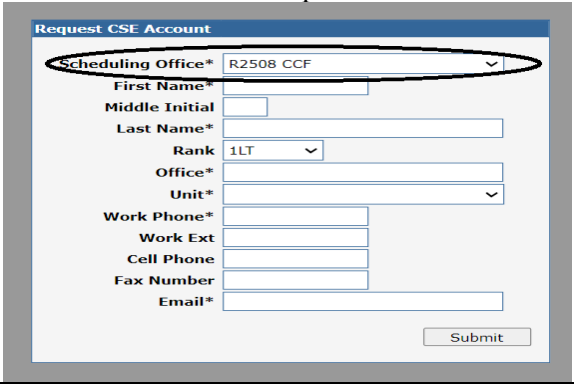
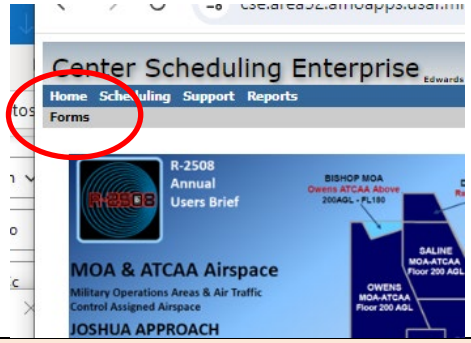
|---|---|
| | to lat. 35°40'00"N., long. 118°51'03"W, to the point of beginning. |
| ATCAA<br>JOINT USE LOA | Beginning at 36 08 00 North 119 00 03 West<br>thence direct 36 08 00 North 118 35 03 West<br>thence direct 35 40 00 North 118 35 03 West<br>thence direct 35 40 00 North 118 51 03 West, thence direct to point of beginning. |
| **BAKERSFIELD** | |
| MOA<br>JO 7400.10 | Beginning at lat. 35°40'00"N., long. 118°51'03"W<br>to lat. 35°40'00"N., long. 118°35'03"W<br>to lat. 35°15'00"N., long. 118°35'03"W<br>to lat. 34°56'00"N., long. 118°21'03"W<br>to lat. 35°14'00"N., long. 118°42'03"W, to the point of beginning. |
| ATCAA<br>JOINT USE LOA | Beginning at 35 40 00 North 118 51 03 West<br>thence direct 35 40 00 North 118 35 03 West<br>thence direct 35 15 00 North 118 35 03 West<br>thence direct 34 56 00 North 118 21 03 West<br>thence direct 35 14 00 North 118 42 03 West, thence direct to point of beginning. |
| **BUCKHORN** | |
| MOA<br>JO 7400.10 | Beginning at lat. 34°49'40"N., long. 118°05'48"W<br>thence along southern boundary of R-2515<br>to lat. 34°51'17"N., long. 117°26'03"W<br>to lat. 34°49'30"N., long. 117°26'03"W<br>to lat. 34°46'30"N., long. 117°35'03"W<br>to lat. 34°46'00"N., long. 118°00'03"W<br>to lat. 34°48'00"N., long. 118°05'48"W, to the point of beginning. |
| ATCAA<br>JOINT USE LOA | Beginning at 34 49 40 North 118 05 48 West<br>thence along the southern boundary of R-2515<br>to 34 5117 North 117 26 03 West<br>thence direct 34 49 30 North 117 26 03 West<br>thence direct 34 46 30 North 117 35 03 West<br>thence direct 34 46 00 North 118 00 03 West<br>thence direct 34 48 00 North 118 05 48 West, thence direct to point of beginning. |
| **BARSTOW** | |
| MOA<br>JO 7400.10 | Beginning at lat. 35°07'00"N., long. 116°34'03"W<br>to lat. 35°01'20"N., long. 116°41'03"W<br>to lat. 34°56'20"N., long. 117°09'03"W<br>thence along the eastern border of R-2515 and the southern boundary of R-2502E to the point of beginning. |
| East ATCAA<br>JOINT USE LOA | Beginning at 35 07 00 North 116 47 48 West<br>thence direct 35 07 00 North 116 34 03 West<br>thence direct 35 01 20 North 116 41 03 West<br>thence direct 34 58 19 North 116 58 02 West<br>thence direct to point of beginning. |
| West ATCAA<br>JOINT USE LOA | Beginning at 35 06 30 North 116 58 43 West<br>thence direct 35 08 50 North 116 48 43 West<br>thence direct 35 07 00 North 116 47 48 West<br>thence direct 34 58 19 North 116 58 02 West |

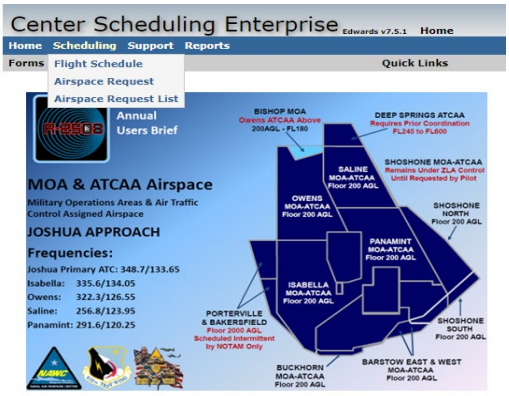
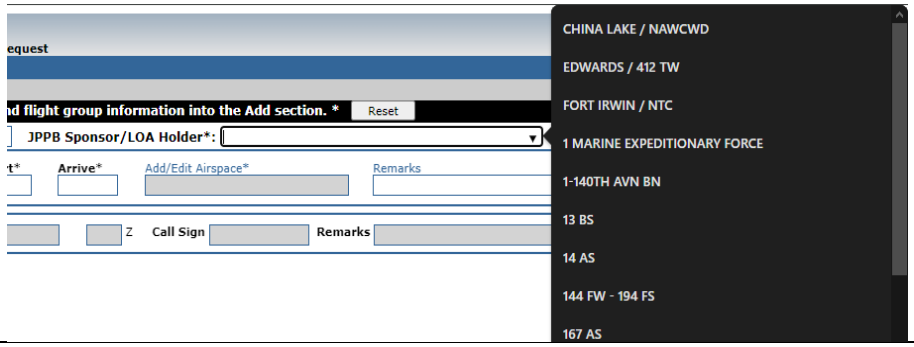
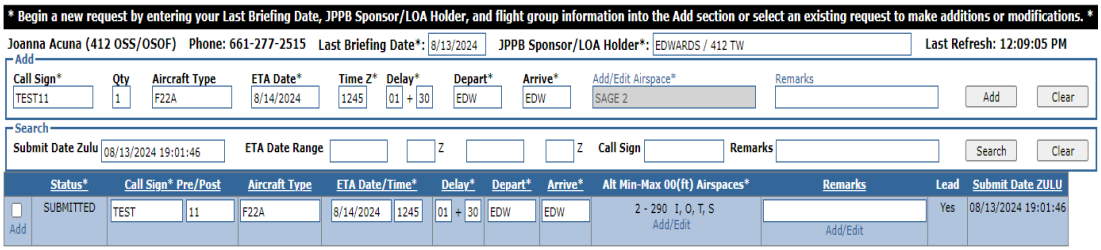
| | | |
|---|---|---|
| | thence direct 34 56 20 North 117 09 03 West<br>thence direct to point of beginning. | |
| **DEEP SPRINGS** | | |
| ATCAA<br>JOINT USE LOA | Beginning at 37 12 00 North 118 00 03 West<br>thence direct 37 30 00 North 118 00 03 West<br>thence direct 37 30 00 North 117 30 03 West<br>thence direct 37 12 00 North 117 20 03 West<br>thence direct to point of beginning. | |
| **R-2502 N/E** | | |
| East<br>JO 7400.10 | Beginning at lat. 35°28'35"N., long. 116°18'48"W<br>to lat. 35°18'45"N., long. 116°18'48"W<br>to lat. 35°07'00"N., long. 116°34'03"W<br>to lat. 35°07'00"N., long. 116°47'48"W<br>to lat. 35°08'50"N., long. 116°48'43"W<br>to lat. 35°10'25"N., long. 116°42'18"W, to the point of beginning. | |
| North<br>JO 7400.10 | Beginning at lat. 35°37'45"N., long. 116°29'43"W<br>to lat. 35°34'30"N., long. 116°29'43"W<br>to lat. 35°34'30"N., long. 116°23'33"W<br>to lat. 35°28'35"N., long. 116°18'48"W<br>to lat. 35°10'25"N., long. 116°42'18"W<br>to lat. 35°08'50"N., long. 116°48'43"W<br>to lat. 35°10'00"N., long. 116°49'03"W<br>to lat. 35°19'00"N., long. 116°49'03"W<br>to lat. 35°19'00"N., long. 116°55'23"W<br>to lat. 35°37'45"N., long. 116°55'23"W, to the point of beginning. | |
| **R-2505** | | |
| JO 7400.10 | R-2505 China Lake, CA Boundaries.<br>Beginning at lat. 36°14'00"N., long. 117°53'03"W<br>to lat. 36°14'00"N., long. 117°25'03"W<br>to lat. 35°40'30"N., long. 117°25'03"W<br>to lat. 35°37'30"N., long. 117°35'33"W<br>to lat. 35°37'30"N., long. 117°47'33"W<br>to lat. 35°54'00"N., long. 117°53'03"W, to the point of beginning. | |
| Coso Sam | 36-12-24.37 | 117-21-00 |
| Airport Dry Lake | 35-54-06.66 | 117-42-57.01 |
| **R-2506** | | |
| JO 7400.10 | Beginning at lat. 35°37'30"N., long. 117°41'23"W<br>to lat. 35°28'00"N., long. 117°40'53"W<br>to lat. 35°28'00"N., long. 117°47'03"W<br>to lat. 35°37'30"N., long. 117°47'33"W<br>to the point of beginning. | |
| **R-2508** | | |
| JO 7400.10 | Beginning at lat. 37°12'00"N., long. 117°20'03"W<br>to lat. 35°34'00"N., long. 116°23'03"W<br>to lat. 35°28'35"N., long. 116°18'48"W<br>to lat. 35°18'45"N., long. 116°18'48"W<br>to lat. 35°07'00"N., long. 116°34'03"W<br>to lat. 35°07'00"N., long. 116°47'48"W<br>to lat. 35°08'50"N., long. 116°48'43"W | |

| | |
|---|---|
| | to lat. 35°06'30"N., long. 116°58'43"W<br>to lat. 34°53'30"N., long. 117°11'53"W<br>to lat. 34°50'20"N., long. 117°32'03"W<br>to lat. 34°48'30"N., long. 117°32'03"W<br>to lat. 34°48'00"N., long. 117°35'03"W<br>to lat. 34°48'00"N., long. 118°01'03"W<br>to lat. 34°49'40"N., long. 118°05'48"W<br>to lat. 34°51'30"N., long. 118°05'48"W<br>to lat. 34°56'00"N., long. 118°21'03"W<br>to lat. 35°15'00"N., long. 118°35'03"W<br>to lat. 37°12'00"N., long. 118°35'03"W, to the point of beginning. |
| **R-2515** | |
| JO 7400.10 | R-2515 Muroc Lake, CA Boundaries.<br>Beginning at lat. 35°19'00"N., long. 116°49'03"W<br>to lat. 35°10'00"N., long. 116°49'03"W<br>to lat. 35°08'50"N., long. 116°48'43"W<br>to lat. 35°06'30"N., long. 116°58'43"W<br>to lat. 34°53'30"N., long. 117°11'53"W<br>to lat. 34°50'20"N., long. 117°32'03"W<br>to lat. 34°48'30"N., long. 117°32'03"W<br>to lat. 34°48'00"N., long. 117°35'03"W<br>to lat. 34°48'00"N., long. 118°01'03"W<br>to lat. 34°49'40"N., long. 118°05'48"W<br>to lat. 35°01'00"N., long. 118°05'48"W<br>to lat. 35°27'40"N., long. 117°26'03"W<br>to lat. 35°15'56"N., long. 117°26'03"W<br>to lat. 35°15'56"N., long. 116°55'23"W<br>to lat. 35°19'00"N., long. 116°55'23"W, to the point of beginning. |
| **R-2524** | |
| JO 7400.10 | R-2524 Trona, CA Boundaries.<br>Beginning at lat. 35°47'46"N., long. 116°55'23"W<br>to lat. 35°15'56"N., long. 116°55'23"W<br>to lat. 35°15'56"N., long. 117°26'03"W<br>to lat. 35°36'00"N., long. 117°26'03"W<br>to lat. 35°36'00"N., long. 117°16'55"W<br>to lat. 35°47'46"N., long. 117°16'55"W, to the point of beginning. |
| **R-2511** | |
| JO 7400.10 | Beginning at lat. 35°37′30″ N; long. 117°35′33″ W<br>to lat. 35°40′30″ N; long. 117°25′03″ W<br>to lat. 35°36′00″ N; long. 117°16′55″ W<br>to lat. 35°36′00″ N; long. 117°26′03″ W<br>to lat. 35°27′40″ N; long. 117°26′03″ W; to the point of beginning. |

## Attachment 2

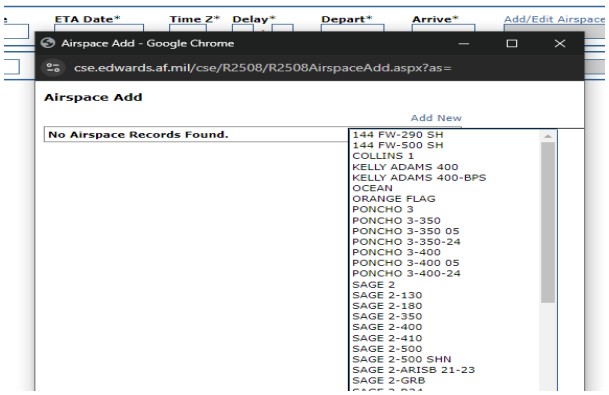
| ACCESS TO CSE – CCF CHECKLIST | |
|---|---|
| **1** | Navigate to Center Scheduling Enterprise (CSE) - CCF:<br>- AFNET: https://cse.edwards.af.mil/cse/home.aspx<br>- NON-AFNET: https://cse.edwards.af.mil/cse/ |
| **2** | Select "*Click here to request an account on-line.*"<br>  |
| **3** | Select "*R2508 CCF*." Populate the rest of the form then select "*Submit.*"<br>  |
| **4** | This window will pop up, but **still** send an email to 2508ccf@us.af.mil advising that you have submitted a request for CSE-CCF access so our office can finalize the activation process.<br>  |
| **5** | Once you have access to CSE-CCF, review the R2508 Airspace Handbook & Airspace Request checklist located under "Forms" on the Home page.<br>  |
| **END OF CHECKLIST** | |

## Attachment 3

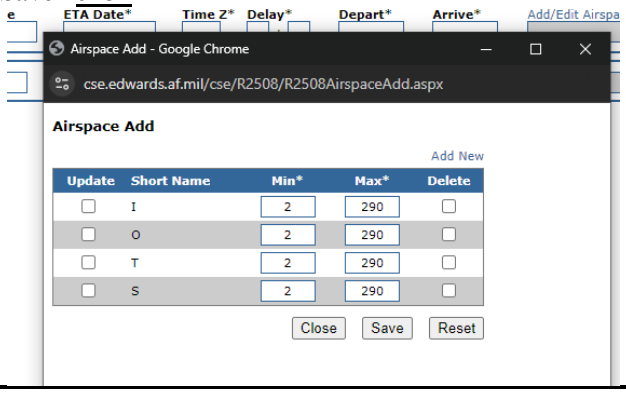
| AUTOMATED AIRSPACE REQUEST CHECKLIST | |
|---|---|
| **1** | Select "*Airspace Request*" from the Scheduling tab.<br>  |
| **2** | Verify that the aircrew's Last Briefing Date is accurate and within 1 year. |
| **3** | Using the dropdown menu, select the applicable "*JPPB Sponsor/LOA Holder.*"<br>- Do not type in the unit's name (the system will not accept it).<br>- If you cannot locate your sponsor/unit, select "*Other*" & notify the CCF office (2508ccf@us.af.mil).<br>  |
| **4** | Enter Flight Details:<br>  |

| | |
|---|---|
| Qty | The number of aircraft |
| ETA Date | Estimated time of arrival date |
| Time Z | Estimated arrival time (in ZULU) |
| Delay | Estimated delay within the Complex. *Must be 15-minute increments, e.g. 2+15, 0+45, or 1+30. |
| Depart | Departure airport 3-letter identifier. |
| Arrive | Arrival airport 3-letter identifier. |
| Add/Edit Airspace | Enter requested airspace:<br>1. In the pop-up window, select "*Add New.*" |

2. Schedule one of the work areas using the abbreviated clearance. Then add additional airspace from the dropdown menu.

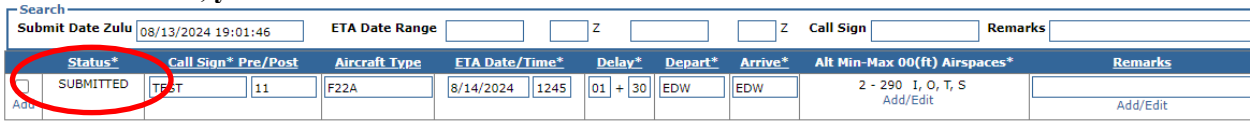



3. Click "*Add*" **then** click "*Save*." At this point, you can amend the altitude, if necessary.
4. Select *"Save"* **then** select "Close."

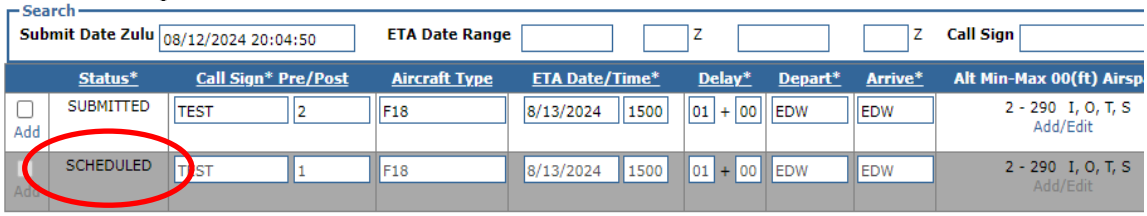



**5** After ensuring accurate data has been provided in all fields, select "*ADD.*" At this point, you can review & amend your data. Once you are satisfied, select "SUBMIT."

**6** **Once submitted, you should see "SUBMITTED" in the status field.**




**7** Ensure all requests have been "SCHEDULED" IAW the R-2508 Handbook.




**CALL / EMAIL CCF FOR CHANGES AFTER "CUT-OFF" or WHEN STATUS IS "SCHEDULED."**

**END OF CHECKLIST**

Direct questions and/or feedback to CCF (661-277-2508 or 2508ccf@us.af.mil).

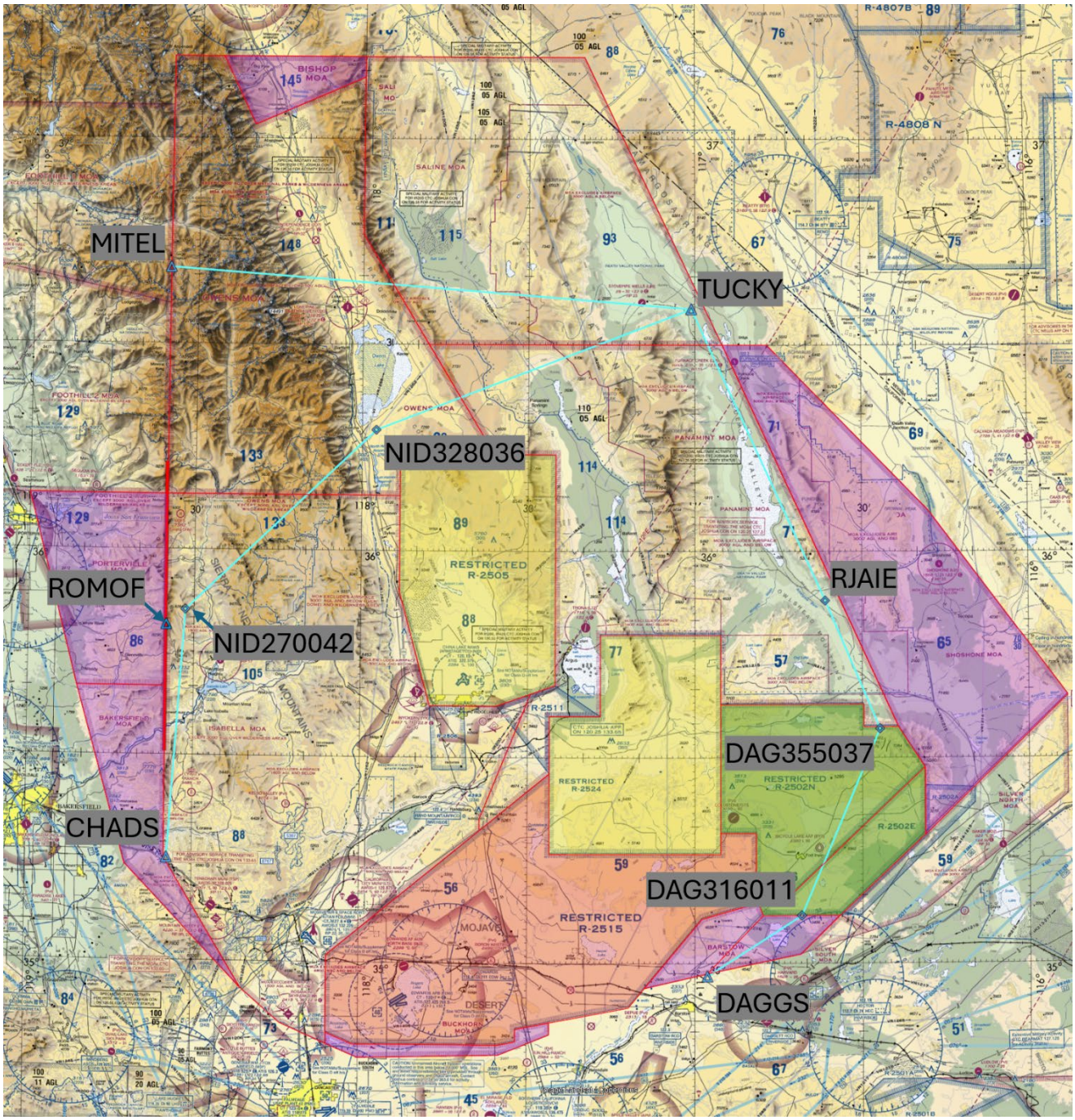
**Attachment 4**
Scheduling Abbreviations

| MOAs / ATCAAs | |
|---|---|
| Bakersfield | **BK** |
| Barstow MOA | **BA** |
| Barstow East ATCAA | **BAE** |
| Barstow West ATCAA | **BAW** |
| Bishop | **BI** |
| Buckhorn | **BH** |
| Deep Springs ATCAA | **DS** |
| Isabella | **I** |
| Owens | **O** |
| Panamint | **T** |
| Porterville | **PV** |
| Saline | **S** |
| Shoshone MOA | **SH** |
| Shoshone North | **SHN** |
| Shoshone South | **SHS** |
| **Restricted Areas** | |
| R-2502E | **02E** |
| R-2502N | **02N** |
| R-2505 | **05** |
| R-2506 | **06** |
| R-2508 | **08** |
| R-2511 | **11** |
| R-2515 | **15** |
| R-2524 | **24** |
| **Refueling Areas (AR)** | |
| Coaldale RA | **AROAL** |
| Isabella RA | **ARISB** |
| Linus RA | **ARLNS** |
| Shoshone RA | **ARSHN** |
| **Miscellaneous Abbreviations** | |
| Bell X-1 Supersonic Corridor | **BX1SC** |
| Collins 1 | **C1** |
| Directed Energy | **LASING** |
| Electronic Counter Measures / Chaff | **ECM/CHAFF** |
| Large Force Exercise / Large Force Test Event | **NAME (e.g. GRAY FLAG)** |
| Liberty 1 | **LIB 1** |
| Liberty 2 | **LIB 2** |
| Lights-out Operations | **LIGHTS OUT** |
| Non-standard Aerial Refueling | **NSAR** |
| Pancho 3 | **P3** |
| Sage 2 | **S2** |
| Sidewinder Low Level | **SWLL** |
| Sequoia & Kings Canyon National Parks, FL180 & below | **SEKI** |
| War 2 | **W2** |
| Waiver | **NAME (e.g. LIVE FIRE)** |

**Attachment 5**

| Large Force Exercise (LFE) / Large Force Test Event (LFTE) Checklist | |
|---|---|
| 1 | **No later than 90-calendar days prior to event** submit the following to CCF (2508ccf@us.af.mil):<br>- CONOP. **Must** use the template provided via SharePoint under "Guidance."<br><br>**NOTES:**<br>- Use of the Complex is contingent on "real-time" non-interference from other RDT&E activities.<br>- Once approved, ADD ONS beyond what is in the CONOP will not be approved.<br>- Ops not included in the CONOP will not be approved, e.g. use of the SWLL, conducting "extra testing while we are here," unit training beyond LFE scope, etc.<br>- **Avoid "core hours"** (M-F, 0900-1700L). Exceptions require OWG concurrence & CCB approval.<br>- **Avoid all day**. Give other users "white space," e.g. before 0900, after 1700, but not both.<br>- Maximize use of nights, down days, and/or weekends.<br>- Scenario slides must paint the specific picture; avoid "all work areas" "all altitudes."<br>- Plan to meter flow into/in the Complex to mitigate ATC/MRU saturation.<br>- Prior agreements and/or CONOPs do not carry over to the next event.<br>- Review the Handbook!<br>- Do not place refueling or anchor/orbit points close to boundaries or areas of concentrated activities.<br>- Do not conduct unrestricted ACM. |
| 2 | **No later than 30-calendar days prior to event** send airspace planning **& hot wash** meeting invitations to<br>o JCF (9-awp-e10-tmu@faa.gov)<br>o ATREP (Steven.M.York@faa.gov)<br>o R-2515 Airspace Management Office (412OSS.OSO.R-2515AirspaceMgr@us.af.mil)<br>o ASC<br>▪ Rose, John A CIV USN (USA) john.a.rose1.civ@us.navy.mil<br>▪ Sawitski, Brian T CIV (USA) brian.t.sawitski.civ@us.navy.mil<br>▪ Battung, Bradley C CIV (USA) bradley.c.battung.civ@us.navy.mil<br>o CCF (2508ccf@us.af.mil)<br>o ZLA (9-awp-zla-sua@faa.gov)<br>o ZOA (9-awp-zoa-mos@faa.gov) |
| 3 | **No later than 15-calendar days prior to event** notify CCF (2508ccf@us.af.mil) of the status of:<br>- Reimbursable requirements (if needed) |
| 4 | **No later than 1600 PST, 1-business day prior to event, planners shall**<br>- Submit **all** scheduling requests, via CSE-CCF.<br>o Include squawk codes (if pre-coordinated & approved by ATC/MRU).<br>- Advise participants not to change squawk codes from what was directed by ATC/MRU.<br>- Advise participants to maintain 2-way communication with ATC/MRU at all times.<br>- Advise participants they must notify ATC/MRU prior to entering **and exiting** the Complex.<br>- Ensure participants have reviewed the airspace briefing.<br>- Ensure participants review the Daily Brief Sheet posted on SharePoint.<br>- Ensure 1801s have **2** legs; an inbound & a outbound; use "R-2508" as the arrival & departure airport.<br><br>**NOTES:**<br>- No change requests (other than cancellations) will be accepted after 1600 PST.<br>- Ops must be IAW the CONOP, e.g. if SWLL is not in the CONOP, use of SWLL is not authorized.<br>- Unscheduled (to include use of incorrect callsigns) **will** be denied entry into the Complex. |
| **END OF CHECKLIST** | |

LFE "VFR" TRANSIT CORRIDORS



(1) **LFE T1: TUCKY – MITEL**

| Fixes/Waypoints | Lat/Longs |
|---|---|
| TUCKY | 36° 35' 14.00" N / 117° 00' 37.00" W |
| MITEL | 36° 41' 03.00" N / 118° 35' 03.00" W |

***Return Flights shall be flown in reverse from the route above.***

(2) **LFE T2: TUCKY – ROMOF or CHADS**

| Fixes/Waypoints | Lat/Longs |
|---|---|
| TUCKY | 36° 35' 14.00" N / 117° 00' 37.00" W |
| NID328036 | 36° 17' 32.05" N / 117° 57' 26.18" W |
| NID270042 | 35° 51' 10.79" N / 118° 31' 33.03" W |
| ROMOF (ALT EXIT) | 35° 49' 00.00" N / 118° 34' 58.00" W |
| CHADS | 35° 15' 00.00" N / 118° 34' 30.00" W |

***Return Flights shall be flown in reverse from the route above.***

(3) **LFE T3: TUCKY – DAGS**

| Fixes/Waypoints | Lat/Longs |
|---|---|
| TUCKY | 36° 35' 14.00" N / 117° 00' 37.00" W |
| RJAIE | 35° 52' 52.00" N / 116° 36' 36.00" W |
| DAG355037 | 35° 34' 14.00" N / 116° 26' 49.00" W |
| DAG316011 | 33° 07' 00.00" N / 116° 40' 53.13" W |
| DAGGS | 34° 58' 07.00" N / 116° 57' 43.44" W |

***Return Flights shall be flown in reverse from the route above.***

NOTE: CCF will not schedule the overflight of R-2502 N/E. Scheduling R-2502 can be done via DESERT RADIO (760-380-4320 / 7559).

**PROCEDURES**:

1. To the maximum extent possible, planners should avoid the R-2508 Complex.
2. If unable to navigate around the R-2508 Complex, submit a CONOPIAW the checklist requesting one of these corridors.
    a. LFE T1 is the preferred corridor during 'core hours.'
    b. LFE T2 is not available during 'core hours.'
    c. LFE T3 requires advanced coordination with NTC.
3. Expect to comply with these additional instructions:
    a. Maintain "VFR – see & avoid" at all times IAW the Handbook.
    b. Avoid all observed tanking operations IAW the Handbook.
    c. Maintain 2NM either side of centerline.
    d. Transition altitude:
        - LOW: FL250 (eastbound) or FL260 (westbound)
        - HIGH: FL400 (westbound) or FL410 (eastbound)

**Attachment 6**
**ATC ZERO / ATC ALERT Guidance**

**Background:** JCF may use the following terms when communicating with aircrew:

- **ATC ALERT:** This term has multiple meanings to JCF. Aircrew should refer to the R-2508 Daily Brief Sheet (DBS) for clarification and/or query JCF using plain language, e.g. *Are you providing (type) service to me?* **Do not assume!**

- **ATC ZERO:** JCF is not available to provide **ANY** services within the R-2508 Complex. MRUs *may* (or may not) be providing services to DoD aircraft in the Complex.

**WHAT TO EXPECT WHEN JCF IS ATC ZERO:**

1. Review the DBS for guidance that may modify and/or supplement the below.

2. **JCF SERVICES.** No service will be provided by JCF. This means, no IFR handling, no flight clearances or modifications, no traffic advisories, etc.

3. **Military RADAR UNITS (MRUs).** MRUs *may* provide service within the Complex. For example, SPORT may extend services beyond R-2515 to the Isabella work area, *and/or*, China Control may extend services to include Owens, Saline, and/or Panamint. When available, the MRUs *may* provide traffic and boundary advisories workload permitting. MRUs will not provide IFR handling, services, or clearances.

4. Remain VMC, "See & Avoid" at all times.
   a. The Complex is normally busiest between 0900-1500L, Monday-Friday.
   b. Assume a defensive mindset.
   c. Maximize use of lookout, sensors, Link 16, etc.
   d. Minimize altitude/direction changes.
   e. Broadcast intentions in the blind, e.g., CALLSIGN, aircraft type, number in flight, working altitude, work area, description of activity, duration, etc.

5. **Apply ORM.** Assess and make appropriate risk decision to
   a. continue the mission,
   b. make use of alternate range/airspace options, or
   c. return to base (RTB).

6. Airspace:
   a. The four main MOAs/ATCAAs (Isabella, Owens, Panamint, Saline) (SFC-FL200) and R-2508 (FL200-FL600) are activated and available for DoD use (as scheduled). Work area frequencies:

   - Isabella 348.7 / 133.65
   - Owens 322.3 / 126.55
   - Saline 256.8 / 123.95
   - Panamint 291.6 / 120.25

   b. Bishop, Shoshone, Deep Springs, Buckhorn, Barstow, Bakersfield, and Porterville **are not** available for DoD use. *Even if previously scheduled,* these areas are **not** available for DoD use.

c. Avoid all internal restricted areas, surface to unlimited, unless you specifically scheduled them via the scheduling agency. **AVOID** if not scheduled.

7. **Altimeter.** Remain on assigned local altimeter (regardless of altitude).

8. **MODE 3C.** Remain on assigned Squawk. If no squawk was assigned, squawk 4000.

9. **RTB OR EXITING THE COMPLEX:** Correctly filing inbound and outbound flight legs will assist ATC workload and ensure a quicker processing of your request.

10. Exiting the Complex:
a. Proceeding to airfields located within the Complex: proceed VFR to Tower.
b. Proceeding to airfields outside the Complex: depart VFR, below FL 180, using established exit fixes, ***or***, pick up IFR clearance from FAA ARTCC (LA or Oakland as appropriate for location).

EXAMPLE SCENARIOS

1. Departing from airfield within the Complex:
a. Request departure from Tower (NID or EDW).
b. Tower has approval to depart fixed wing aircraft. **PHRASEOLOGY:** *"Joshua has released the R- 2508 Complex for DoD use, expect no ATC services. Cleared VFR into the R-2508 complex as scheduled, squawk 4000."*
c. Launch VFR and proceed with use of airspace as scheduled.
d. Remain VMC, "See & Avoid."
e. Use assigned work area frequency as outlined above.
f. When ready to RTB (inside the Complex): proceed VFR to tower.

2. Inbound to Complex from external airfield:
a. If previously scheduled, proceed to the Complex IFR (or VFR).
b. Cancel IFR no later than the border. **Do no enter IFR!**
c. Do not change assigned squawk. If no assigned squawk, squawk 4000
d. Remain VMC, "See & Avoid."
e. Use assigned work area frequency as outlined above.
f. When ready to RTB (exit the complex):
i. Depart VFR, **below FL180**, using established entry/exit fixes.
*Or*
ii. Request IFR from FAA ARTCC, staying VFR until crossing the Complex border and receiving IFR clearance from ATC.