

6.0 Operating Procedures for Individual Ranges/ Restricted Areas

This chapter discusses the operating procedures for the following restricted areas:

- 6.1 R-2502N, R-2502E, National Training Center, Fort Irwin
- 6.2 R-2505, Naval Air Warfare Center, Weapons Division, China Lake
- 6.3 R-2506, Naval Air Warfare Center, Weapons Division, China Lake
- 6.4 R-2524, Naval Air Warfare Center, Weapons Division, China Lake
- 6.5 R-2524, Superior Valley Tactical Training Range, Naval Air Warfare Center, Weapons Division, China Lake
- 6.6 R-2515, Air Force Flight Test Center, Edwards AFB

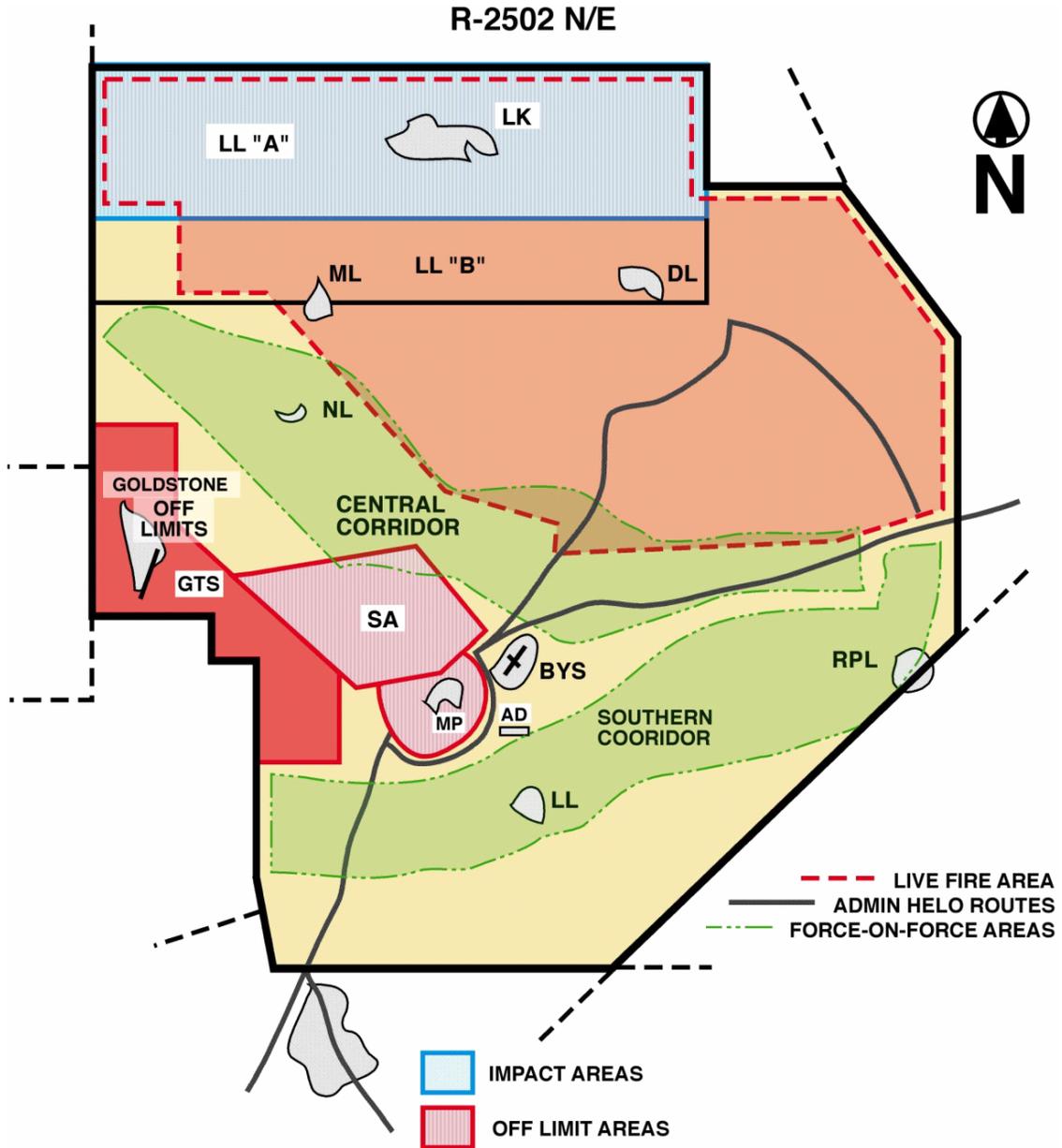
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6.1 R-2502N, R-2502E, National Training Center, Fort Irwin

R-2502N/R-2502E consists of five separate areas and purposes (see Figure 6-1):

Area	Purpose
1. Southern Engagement Corridor	Force-on-Force battle simulation area
2. Central Engagement Corridor	Force-on-Force battle simulation area
3. Live Fire Exercise Corridor	Area contains computerized, pop-up, direct-fire artillery, and close-air-support (CAS) targets. During a live-fire exercise, actual battle conditions are closely simulated with artillery fire, tanks, and troops advancing against computerized arrays supported by attack helicopters and with jet aircraft CAS targets.
4. Leach Lake Air Gunnery Range (north portion of R-2502N) Beginning at 35°37'45"N/116°55'23"W, thence direct 35°37'45"N/116°29'43"W, thence direct 35°32'53"N/116°29'43"W, thence direct 35°32'53"N/116°55'23"W.	Maneuvering by Army, Air Force, and Navy flying units providing CAS during rotational periods. During non-rotational periods, overflight of Leach Lake must be scheduled as outlined in subsection 6.1.2.
5. Goldstone Deep Space Tracking Facility (western boundary of R-2502N)	Intense electromagnetic and other radiation hazards. Avoid overflight below 15,000 feet MSL. Overflight above 15,000 feet MSL must be coordinated with CCF. When Goldstone is making high-power transmissions or is involved in a critical/sensitive event, the area of avoidance is increased. During these times, information can be obtained from CCF. Real-time coordination can be accomplished by contacting JOSHUA, ASC, or SUNDANCE on UHF radio. Broadband jamming and aeronautical telemetry in the 2200–2290 MHz band are not allowed within line of sight of Goldstone without prior scheduling through the Western Area Frequency Coordinator, Point Mugu. Radio frequency emissions in the 2290–2300 MHz and 8400-8450 MHz bands are not allowed within line of sight of Goldstone.

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AD - AMMO DUMP
 BYS - BICYCLE LAKE
 DL - DRINKWATER LAKE
 GTS - GOLDSTONE AIRSTRIP
 LK - LEACH LAKE
 LL "A" - LEACH LAKE IMPACT

LL "B" - LEACH LAKE BRAVO
 ML - McLEAN LAKE
 MP - MAIN POST
 RPL - RED PASS LAKE
 SA - SMALL ARMS RANGES

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Figure 6-1. R-2502 Complex.

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6.1.1 Command and Control

Aircraft must be in contact with and under the control of one of the following agencies:

Army Flight Following Service (AFFS) Fort Irwin "DESERT RADIO"	<ul style="list-style-type: none"> AFFS is the primary control for R-2502N and R-2502E. AFFS is operational 24 hours/7 days. Frequencies: UHF 281.45; VHF 118.175; FM 41.50 Initial contact with DESERT RADIO is required prior to entering R-2502N or R-2502E.
NTC Airspace Control Center (NACC) Fort Irwin (NACC/SUNDANCE)	<ul style="list-style-type: none"> NACC/SUNDANCE is a multi-function Air Force element that serves as a focal point for close-air support activities. Functions include airspace procedural control and direct airspace coordination/deconfliction with Operations Group and AFFS. Manned 1 hour prior to the first take off time from Nellis AFB until 30 minutes past the last flight's departure from R-2502N/E, or as required. If a flight is approved and SUNDANCE is not operating, contact DESERT RADIO.

6.1.2 Scheduling

Requests for use of ranges and training areas will be submitted to Range Scheduling no later than 15 working days prior to the desired use date.

- All aircraft operations within R-2502N/E require coordination with Bicycle Lake Army Field.
- Contact CCF to schedule the MOAs for entry and exit.

Prior Permission Required (PPR) should be obtained from Bicycle Lake Army Air Field (AAF) 72 hours before operations to allow for required coordination.

Function	Hours of Operation	Contact Numbers
Scheduling (Bicycle Lake AAF)	24 hours/7 days a week	DSN 470-4320 / 6816 (760) 380-4320 / 6816 Fax: DSN 470-6368 (760) 380-5500
Installation Aviation Officer	0800–1600 M-F	DSN 470-4072 / 4167 (760) 380-4072 / 4167 Fax: DSN 470-6368 (760) 380-6368

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6.1.3 Special Procedures

Air Warrior aircrews deploying in support of NTC Fort Irwin exercises will receive a local orientation briefing before conducting NTC Fort Irwin operations. The briefing will be conducted by the 549 CTS at Nellis AFB (DSN 682-4262/4060/5561).

Familiarization rides in R-2502N/E will be flown in Southern/Central/Live-Fire Corridors before CAS missions are flown. All helicopter aircrews will be briefed by the NTC Installation Aviation Safety Officer (IASO) prior to flight in R2502N and R2502E.

Coordination Altitudes

- **Fixed-wing aircraft:** remain above 300 feet AGL unless they receive specific authorization from DESERT RADIO or SUNDANCE/NACC.
- **Helicopters:** remain below 200 feet AGL unless coordinated and approved by DESERT RADIO or SUNDANCE/NACC.

Additional restrictions as follows:

- Overflight of NTC Fort Irwin cantonment and Ammo Supply Point (NU 290 980) is prohibited.
- Overflight of Bicycle Lake AAF with ordnance is prohibited.
- Overflight of Bicycle Lake AAF by fixed-wing aircraft is restricted to above 5,500 feet MSL unless coordinated and approved by AFFS. Air Warrior aircraft may request approval through SUNDANCE.
- Overflight of Goldstone area must be coordinated with CCF.
- Scheduled fixed wing operations in Leach Lake allow aircraft operations down to the surface, **unless otherwise coordinated by AFFS.**

Helicopter Operations

Coordinate all helicopter entries by PPR. Schedulers will receive a briefing at that time on entry procedures. Coordinate and schedule the local area briefing at Bicycle Lake in advance. All helicopters will land at Bicycle Lake AAF for a local area briefing before further flight on the reservation.

Helicopters will monitor at least one AFFS radio frequency at all times and will be provided with current range and fixed-wing traffic information as well as flight following service.

6.2 R-2505, Naval Air Warfare Center, Weapons Division, China Lake

Restricted Area R-2505 is restricted from surface to unlimited on a continuous basis and is subdivided into five primary ranges (see Figure 6-2). The primary mission of these ranges is the Research, Development, Test, and Evaluation (RDT&E) of weapons and weapons systems.

Located within R-2505 are six bombing ranges, one guided-missile range, and numerous ground ranges and arenas. The six bombing ranges contain instrument targets for air-to-surface, air-to-air, and surface-to-air firings. Remotely piloted aircraft with No Live Operator On-board (NOLOs) are sometimes used as targets.

The target complex in the Coso and Baker Ranges contains targets for air-to-surface bombing and strafing by fleet and development activities. A rocket engine test complex and explosives test complex for experimental rocket engines and warheads occupies the southeast corner of the George Range complex. A test parachute drop area is also located in George Range.

Armitage Airfield is located within the southern part of the R-2505 ranges and requires specific entry and departure procedures (see FLIP-AP1) to avoid restricted range activities.

6.2.1 Command and Control

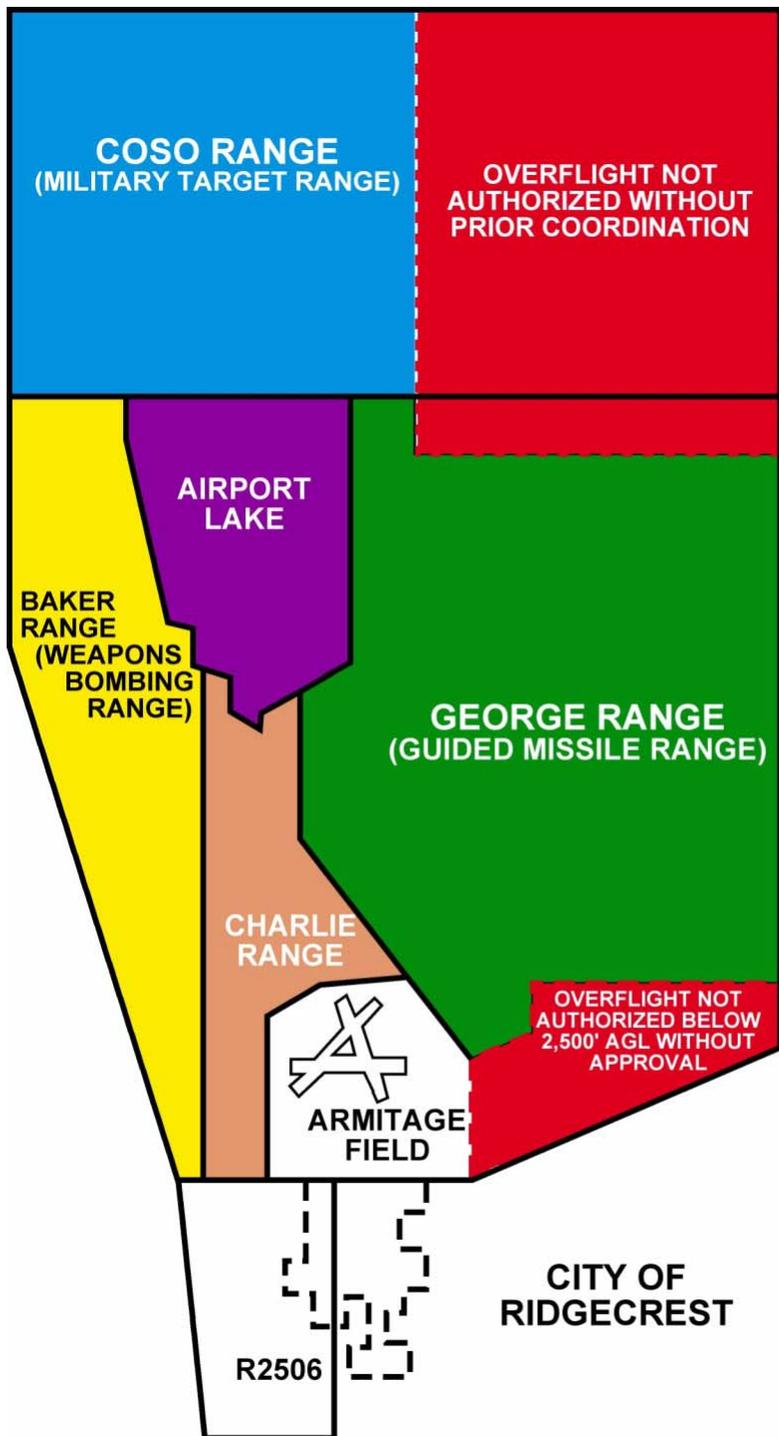
The separate ranges within R-2505 each have a designated mission frequency. Depending on the type of mission, range controllers will either monitor the mission or provide precision vectors and range asset coordination.

All aircraft using R-2505 and R-2524 ranges will check in with the Airspace Surveillance Center (ASC), call sign "CHINA CONTROL," on the appropriate frequency.

CHINA CONTROL will:

- Issue all pertinent information
- Advise the aircraft to check in with the appropriate test conductor
- Continue to monitor mission frequency
- Provide radar advisory service.

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Figure 6-2. R-2505 Ranges.

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6.2.2 Scheduling

Request use of R-2505 through the Test Management Office or by message in accordance with current **Range Use and Deployment** directives.

Schedule required R-2508 Complex work areas (to access R-2505) with the CCF.

A Test Manager will be assigned to coordinate approval for the requested use. Test Manager support will include the following, as appropriate:

- Developing and approving a test plan
- Providing guidance about reimbursement costs for China Lake support
- Scheduling appropriate China Lake airspace and range assets
- Scheduling airspace, range, and course rules briefings, as required

If requesting airspace use only over R-2505, contact the Range Scheduling Office. All aircrews scheduled to operate in R-2505 must be briefed before operating in R-2505.

Function	Hours of Operation	Contact Numbers
Scheduling	0700–1700 M-TH 0700–1600 F (non-civilian payday)	DSN 437-6800 (760) 939-6800 Fax: DSN 437-6950 (760) 939-6950
Test Management Office	0700–1700 M-TH 0700–1600 F (non-civilian payday)	DSN 437-6807 (760) 939-6807 Fax: DSN 437-6950 (760) 939-6950
Airspace Surveillance Center (ASC) “China Control”	0700–1700 M-TH 0700–1600 F (non-civilian payday)	DSN 437-6808/9 (760) 939-6808/9 Fax: DSN 437-6927 (760) 939-6927

6.2.3 Special Procedures

PPRs are necessary to land at Armitage Field. To obtain a PPR and to arrange for transient support services, contact the Fleet Liaison Office (DSN 437-5523/5464).

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6.3 R-2506, Naval Air Warfare Center, Weapons Division, China Lake

R-2506 is restricted from the surface to 6,000 feet MSL (1,400–3,700 feet AGL from the highest and lowest obstructions, respectively) from sunrise to sunset, Monday through Friday (see Figure 6-2).

The primary mission is to provide airspace to maneuver for high-speed, low-altitude run-in flights to targets located within R-2505. This area is also used to route noise-abatement departures from Armitage Field on a non-interference basis.

6.3.1 Command and Control

Radar advisory service for R-2505 range activities utilizing R-2506 is provided by the China Lake ASC (CHINA CONTROL, 301.0 MHz).

6.3.2 Scheduling

R-2506 is scheduled using the same procedures as for R-2505.

6.3.3 Special Procedures

For real-time transit of R-2506, contact CHINA CONTROL on 301.0/128.25 MHz.

If unable to contact CHINA CONTROL, contact CHINA LAKE TOWER on 340.2/120.15 MHz.

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6.4 R-2524, Naval Air Warfare Center, Weapons Division, China Lake

R-2524 is restricted from surface to unlimited on a continuous basis and encompasses the Superior Valley and the Mojave B North target area (see Figure 6-3).

The Electronic Combat Range (ECR), with its complexes known as **ECHO Range**, is located throughout R-2524 and provides a simulated hostile land and sea surface-to-air weapons installation. The instrumented range supports RDT&E, Radar Warning Receiver (RWR) systems, Anti-Radiation Missile (ARM) systems, and electronic warfare training. Most ECHO missions require full use of R-2524.

Mojave B North target area (located in the northern part of R-2524) contains two convoy targets and a simulated airfield with aircraft targets that are for use with inert ordnance only.

6.4.1 Command and Control

ECHO Range provides a test team for control of test/mission aircraft and control of ground-based threat simulation in accordance with test parameters.

All aircraft using R-2524 ranges will check in with the Airspace Surveillance Center (ASC), call sign "CHINA CONTROL," on the appropriate frequency. CHINA CONTROL will:

- Issue all pertinent information
- Advise the aircraft to check in with the appropriate test conductor
- Continue to monitor mission frequency
- Provide radar advisory service

Additional control for Mojave B North consists of a ground or airborne safety observer.

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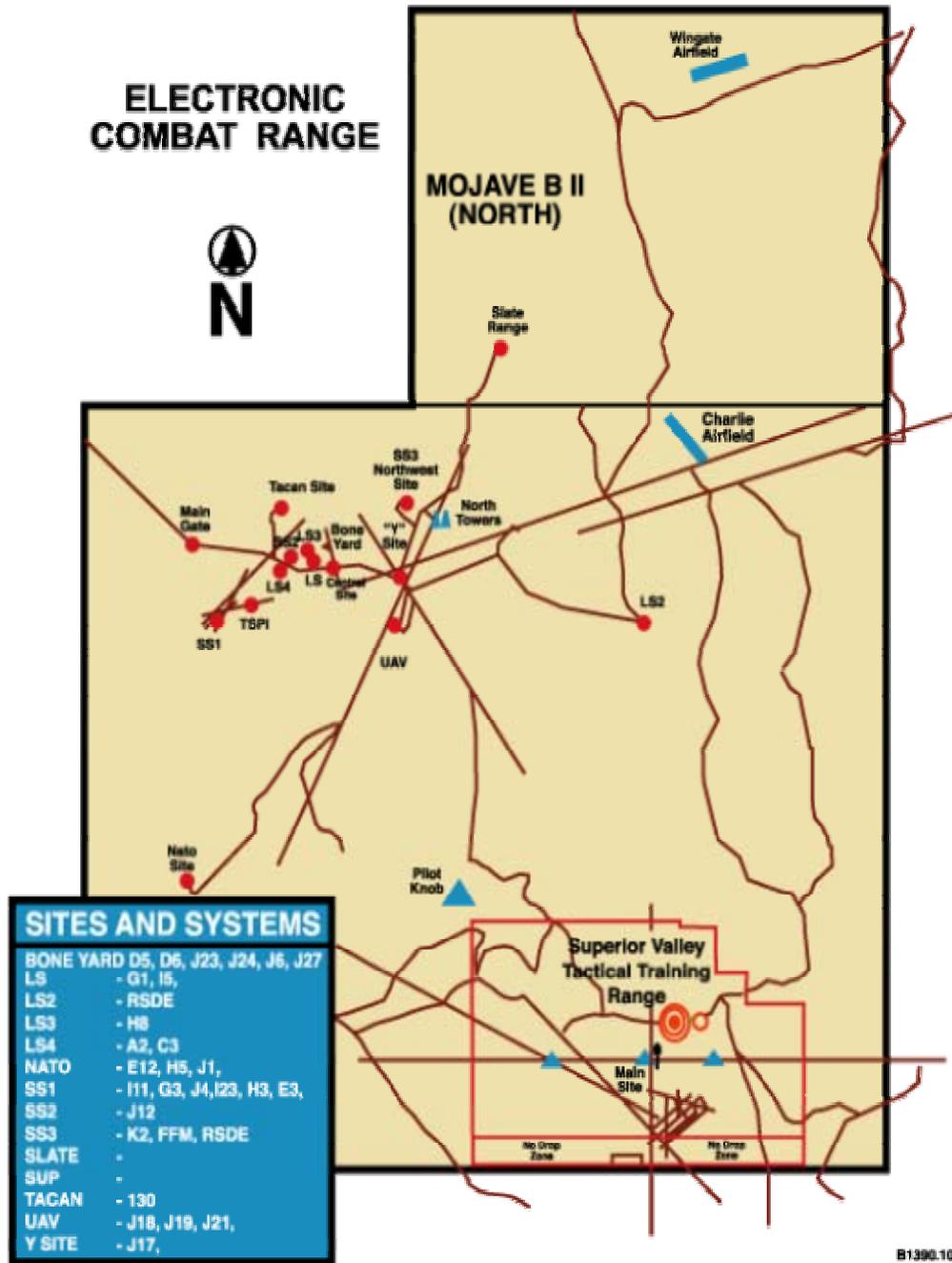


Figure 6-3. R-2524 ECR and Superior Valley Ranges.

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6.4.2 Scheduling

Requests for use of ECHO range will be made by contacting the ECR Test Management Branch or by message in accordance with current **Range Use and Deployment** directives. Request for use of R-2524 (airspace only) should be forwarded directly to the ECR Scheduling Office.

Real-time requests for overflight may be made through JOSHUA or CHINA CONTROL.

Function	Hours of Operation	Contact Numbers
ECR Scheduling	0630–1630 M-TH	DSN 437-9128 (619) 939-9128 Fax: DSN 437-9152 (619) 939-9152
Test Management Office	0630–1630 M-TH	DSN 437-9149 (619) 939-9149

In all cases, except requests for airspace only, a Test Manager will be assigned to coordinate and obtain approval, as appropriate. The Test Manager will aid in developing a test plan, providing range cost information, and coordinating scheduling of airspace and range assets.

NOTE: Transit to and from R-2524 and Arbitrage Field requires scheduling and a Work Area Clearance.
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6.4.3 Special Considerations

R-2524 is bordered on the south and east by other restricted areas and on the west and north by Panamint MOA/ATCAA. Normal transit to and from R-2524 through adjacent Complex airspace requires appropriate scheduling and approval in accordance with procedures outlined in Chapters 4, 5, and 6, depending on the area.

Aircrews must schedule the surrounding R-2508 Complex work areas with CCF.

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6.5 R-2524, Superior Valley Tactical Training Range, Naval Air Warfare Center, Weapons Division, China Lake

The Superior Valley Tactical Training Range (see Figure 6-3) is located within R-2524, about 41 miles southeast of the main Naval Air Weapons Station (NAWS) complex. The range is operated by the NAWCWD and has approximately 76 square miles of secluded land and airspace. The area is restricted from surface to unlimited on a continuous basis.

Superior Valley coordinates are:

Beginning at 35°15'56"N/117°12'27"W;
thence direct 35°25'00"N/117°12'27"W;
thence direct 35°25'00"N/116°55'23"W;
thence direct 35°15'56"N/116°55'23"W;
thence direct to the point of beginning.

The Superior Valley Tactical Training Range has over 60 diverse targets, including surface-to-air missiles (SAMs), anti-aircraft artillery (AAA), and convoy targets. All targets are available for inert ordnance delivery only.

The Range consists of a Range Operations Center, a main control tower, two flank towers, a photovoltaic power production facility, a helicopter pad, a target storage facility, and four main targeting areas:

- Northwest Target Complex
- Conventional and Alternate Bombing Circles
- Southeast Airfield Target Complex
- Low and High-Angle Strafe Pit

6.5.1 Command and Control

The Range Control Officer (RCO) controls range entry and departures, supervises air operations, monitors safety, and allocates the use of the target complexes within the range.

NOTE: CHINA CONTROL may use altitude restrictions to de-conflict other scheduled flights in R-2524.

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6.5.2 Scheduling

The Superior Valley Range Manager will schedule all daily activity at the Superior Valley Range. The normal working hours of the ECR are M-F, 0630 (LCL)–1630 (LCL).

Range scheduling for U.S. Navy Fleet users will be provided to the ECR Test Operations Branch **10 days** before the week requested by SFWSP, NAS Lemoore, CA. NAS Lemoore squadrons will have priority up to the 10-day deadline. Remaining range periods will be made available to other agencies after the 10-day deadline.

Cancellation should be made no later than 48 hours before the flight. Scheduling of Superior Valley does not include the remaining R-2524 airspace. Requests for use of R-2524 airspace will be coordinated on a not-to-interfere basis.

Request for use of R-2524 assets in conjunction with Superior Valley must be coordinated with an ECR Test Manager.

6.5.3 Special Considerations

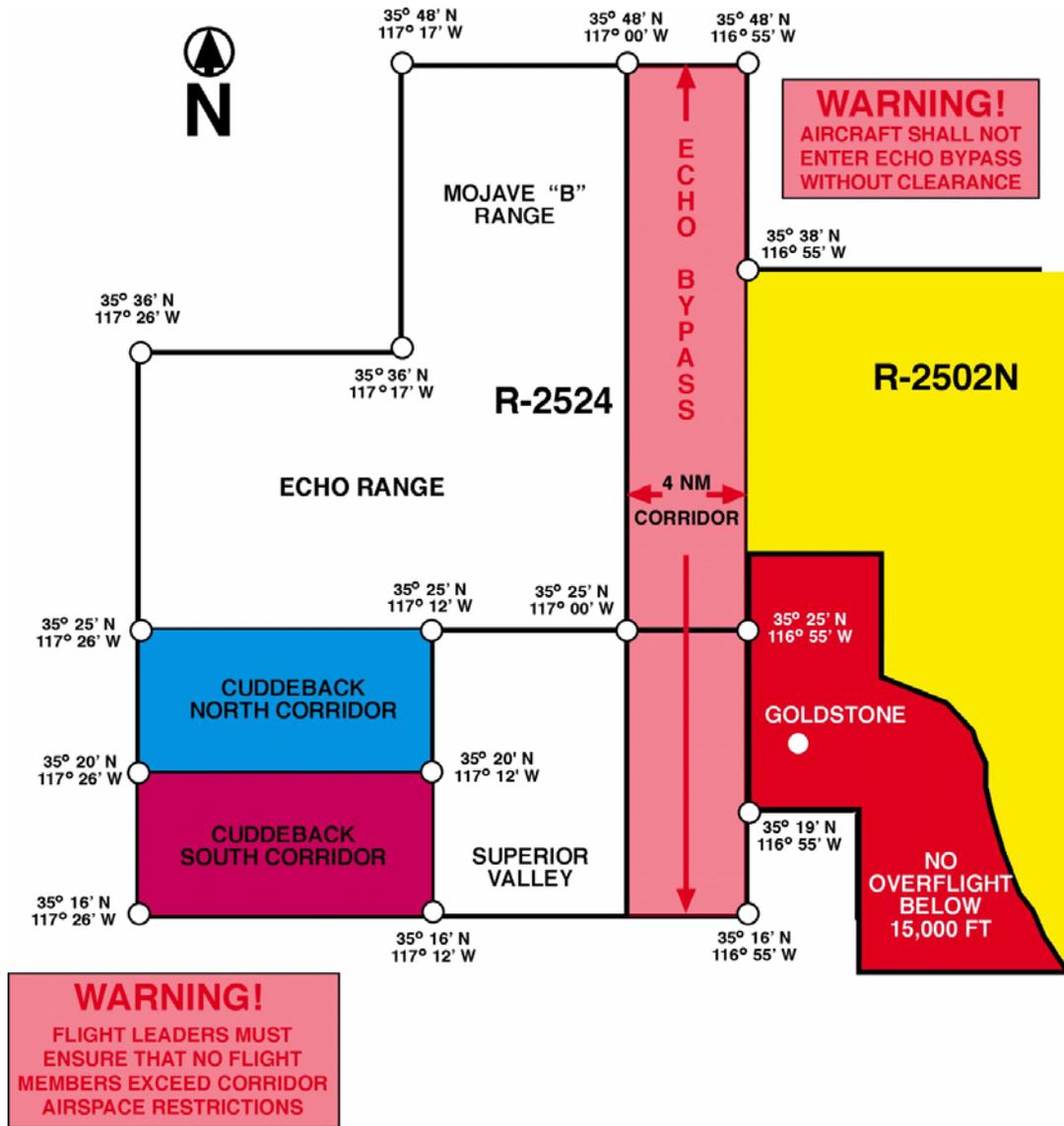
Superior Valley is bordered on the north and west by R-2524, on the east by R-2502N and on the south by R-2515.

Normal transit to Superior Valley through R-2524 is through either the Cuddeback North/South corridors or the Echo Bypass (see Figure 6-4).

Transit through adjacent Complex airspace and restricted areas requires appropriate scheduling and approval in accordance with procedures outlined in Chapters 4, 5, and 6.

<p>NOTE: Aircrews must coordinate non-standard ingress/egress routes when scheduling the ranges.</p>

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Figure 6-4. R-2524 Bypasses.

6.6 R-2515, Air Force Flight Test Center, Edwards AFB

R-2515 is restricted from the surface to unlimited on a continuous basis (see Figure 6-5). The area encompasses Edwards AFB and extends north and east to the borders of R-2524 and R-2502N. It also includes the “Golden Triangle.”

The Golden Triangle (see Figure 6-5) is a portion of R-2515 that extends north of the westerly extension of the southern boundary of R-2524. Units requiring this area for transition in and out of R-2524 will schedule the requirement with CCF.

Coordinates for the Golden Triangle are:

Beginning at 35°27'40"N/117°26'03"W
thence direct 35°15'56"N/117°26'03"W
thence direct 35°15'56"N/117°43'41"W
thence to the point of beginning.

R-2515 contains various instrument ranges and special-use areas (spin areas, supersonic corridors, drop zones, etc.). The area is used for a variety of flight test operations that require a high degree of eyes-in-the-cockpit flying. ROAs are also flown in the area.

Each aircrew is responsible for remaining clear of special-use areas. This requires detailed knowledge of the area and is the basis for outside users being briefed and scheduled.

Detailed descriptions of the various special-use areas are provided in AFFTC Instruction 11-1. Users can obtain a copy from the R-2515 Airspace Manager.

Special use areas within R-2515 may be scheduled for use by non-AFFTC aircraft. An airspace briefing from the Airspace Manager is required. Availability is based upon higher priority AFFTC missions. Some reimbursable costs may be imposed.

6.6.1 Command and Control

SPORT (272.0/132.75 MHz) provides boundary calls, radar traffic, and safety advisories to all participating aircraft within R-2515. Pre-mission briefing is required with SPORT (DSN 527-3928/3931) prior to flying test missions or using special-use areas within R-2515.

Mission details must be thoroughly coordinated to ensure adequate briefings are obtained concerning airspace use and scheduled mission profiles.

Repeated use of R-2515 airspace to conduct flight operations or transit requires a LOA with AFFTC. Limited periods of use may be permitted without formal written agreement when deemed appropriate by AFFTC. The R-2515 Airspace Manager is the initial coordination POC.

All non-AFFTC sponsored aircraft, military or civilian, that have a requirement to operate from Edwards AFB on any type of support mission—regardless of agency or project being supported—must contact the 412TW/RMX by message or phone (DSN 525-9245 or 661-275-9245) at least **20 days before** the mission for approval and assignment of a sponsor or project officer.

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6.6.2 Scheduling

Scheduling information is as follows:

Function	Hours of Operation	Contact Numbers
AFFTC Resource Operations Center	0600–1700 M-F	DSN 527-3940 / 4110 (661) 277-3940 / 4110 Fax: DSN 527-9785 (661) 277-9785
Airspace Management Office	0600–1730 M-F	DSN 527-2446 / 4453 (661) 277-2446 / 4453 Fax: DSN 527-4462/5544 (661) 277-4462/5544

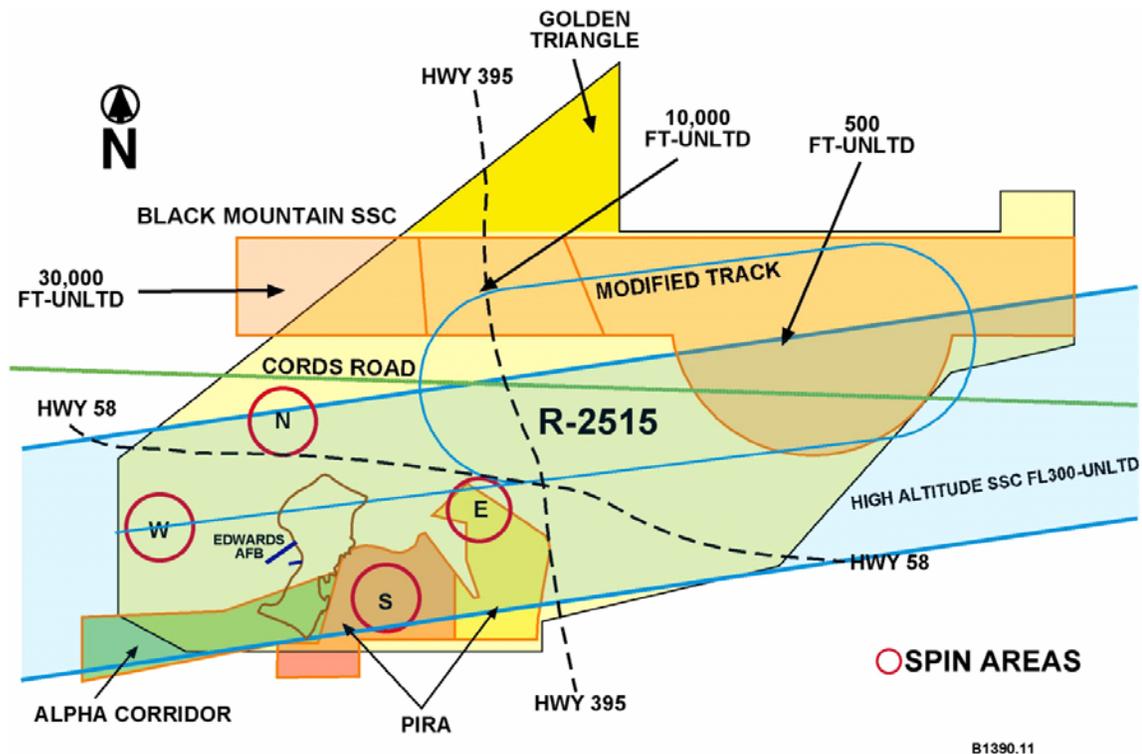


Figure 6-5. R-2515.

6.6.3 Special Procedures

Participating aircraft are VFR crossing the R-2515 boundary.

A PPR is required for landing at Edwards AFB. To obtain a PPR and airspace briefing, contact Edwards AFB Base Operations (DSN 527-2222 or 661-277-2222). Consult FLIP AP1 for further restrictions and information for landing at Edwards AFB. Also, an R-2508 Complex briefing may be obtained from the CCF (DSN 527-2508 or 661-277-2508).