Sport Class
PRTC 2025 Brief

In-Brief and Differences Training

PRTC - Las Cruces Brief

- Objectives and Schedule Overview
- Part I: PRTC Training and Race SOP Review
  - I.A: Airport & Area Review
  - I.B: Race Course Review
  - I.C: Ground and Departure/Rejoin/Course Entry Procedures
  - 1.D: On-Course Procedures
  - I.E: Show Lines and Escape Maneuvers Review
  - I.F: Recovery Procedures
  - 1.G: Safety
- Part II: Wrap / Q & A with Racers, Class Leaders and ARO Leaders

PRTC - Objectives

- Refresher and LRU site differences training for a cadre of current Sport Class Racers
- 2024 Racer qualification and credentialing
- Demonstrate Safely Expanded Speed Envelope Air Racing Procedures and additional racecourse operations to FAA and event organizers
- Continue to set precedent for closed-course, wing-tip-to-wing-tip air racing outside of Reno
- Showcase SARC and Sport Class values and procedures to FAA and event organizers
- Exercise ARO FAA Accreditation and LOA

Sport Air Racing Council
Next Gen Air Racing

Sport Class Air Racing

Part I – Safety

Keys to Sport Class Success

- Balance on the interests of the 5 constituents:
  - The racers
  - The spectators
  - The Race Organizers
  - The FAA
  - Insurance
- Constant Focus on Safety/Risk Reduction and Excellence
  - Make it our Culture
  - Take Care of Each Other
  - Have Fun!

Risk Mitigation

- Identify hazardous conditions
- Standardization
  - Everyone doing the same thing the same wawy
  - Keeps people predicatable
  - Aids everyone's "Situational Awwareness"
- People demonstrating poor airmanship or discipline will not be tolerated in the class

Risk Mitigation

- IMSAFE, Aircraft Readiness, Aircraft Familiarity
- Build-Up Approach
  - Crawl, Walk, Run
  - ”Tunnel Vision”
- Start high, Work low
- The Build-Up
  - Identify Hazards, Find Pylons
  - Find additional visual cues
  - Work to a high race altitude
  - Develop line
  - Work up speed

On Course Hazards

- Turbulence
  - Difference wind direction makes the course fly differently
- Wing Tip Vortices / Prop Wash
  - Aspects that increase effect
    - Low aspect ratio wings
    - Highly wing loaded aircraft
    - Load factor
  - Strong though to dissimilar aircraft
  - Even similar aircraft can render another similar aircraft uncontrollable
- Power Lines
  - As briefed previously

Flight Discipline

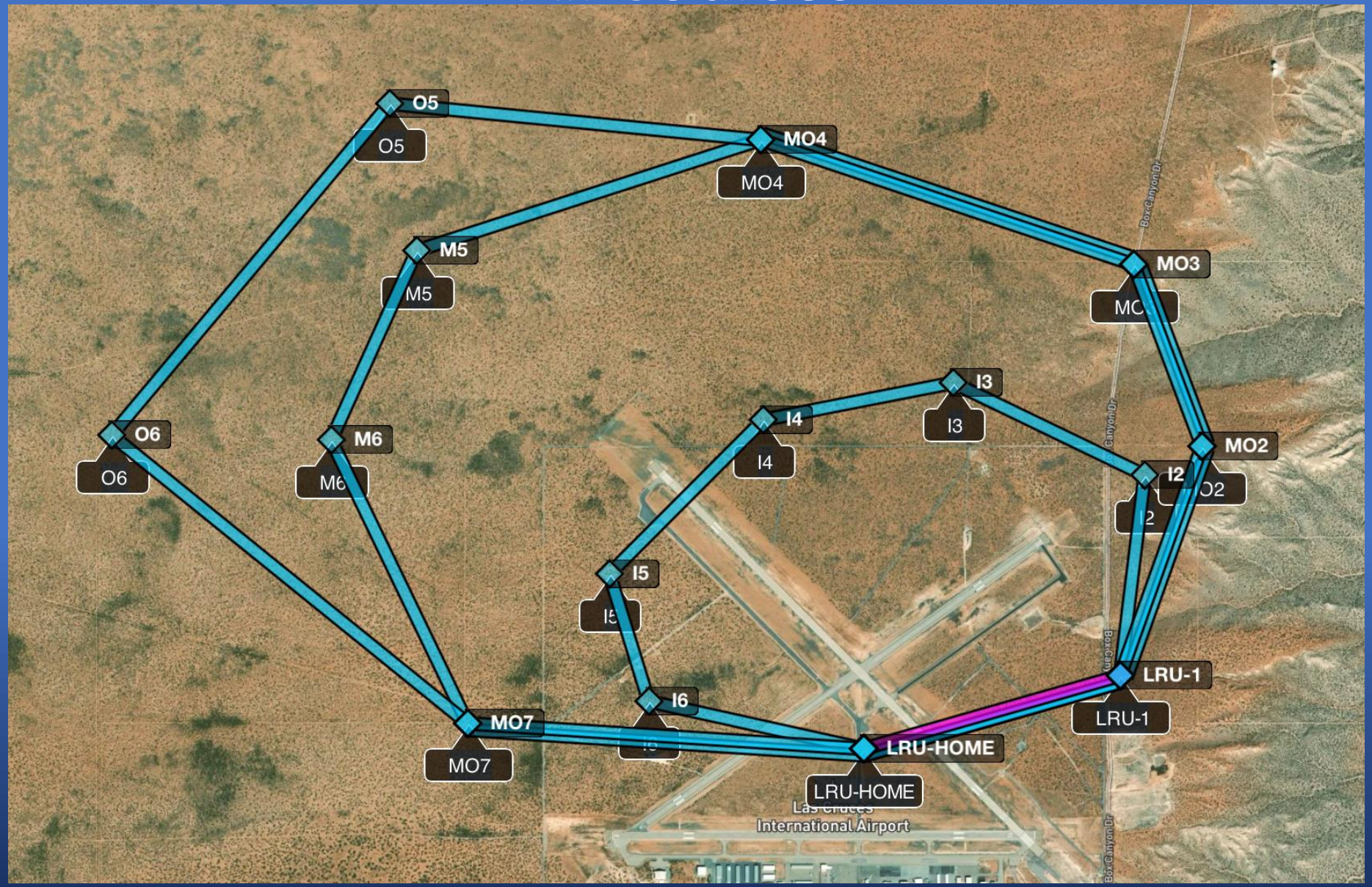
- Essential to Safety
  - Accurate reports
    - What you're actually doing, not what you think you should be doing…
  - Fulfill the formation "contract" at all times
  - Remain predictable
- Must be Standardized to avoid potential conflicts
  - Take-off with airplanes on course
  - Entering/exiting the course
  - Landing Pattern/Chute/Cool Down
- Must fly your plan!

Part 2 – LRU Airport & Area

- After our FWU – Any questions, comments, or concerns?

Part 3 – Race Course Overview

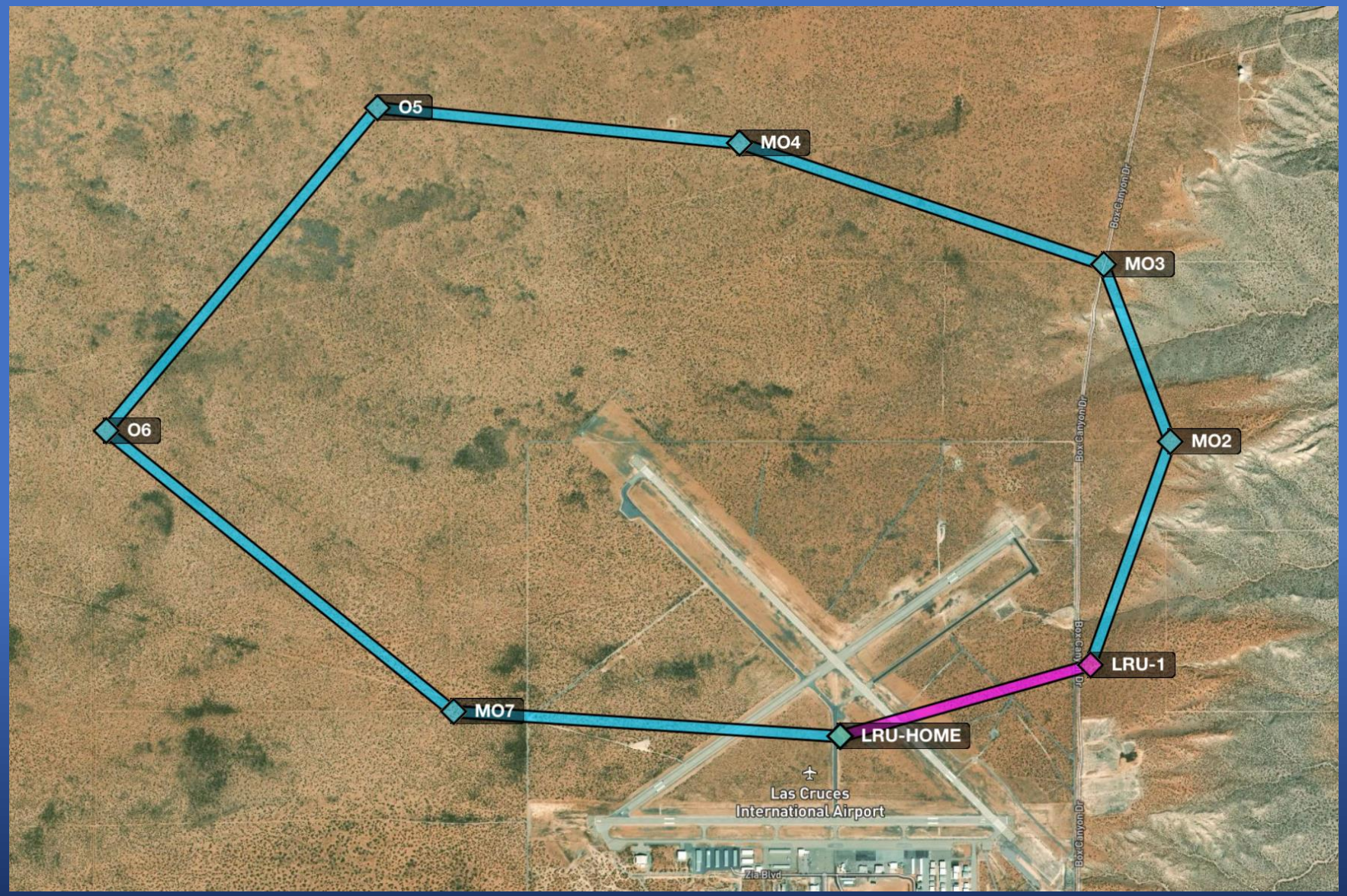
Las Cruces Course Overview
All Courses



Las Cruces Course Overview
Outer Course

- Max Speed
  - 425 MPH (369 Knots)
- Altimeters will be set to 4500’
  - All altitudes will be based on that setting
- Course Min Altitude
  - Pylon 3-6– 100’ AGL (4600’ MSL)
    - Power line @40’ AGL
  - Pylon 6-3 – 50’ AGL (4550’ MSL)
- Cool-Down – 7000’ MSL and ABV
- Pattern Altitude – 5500’ MSL

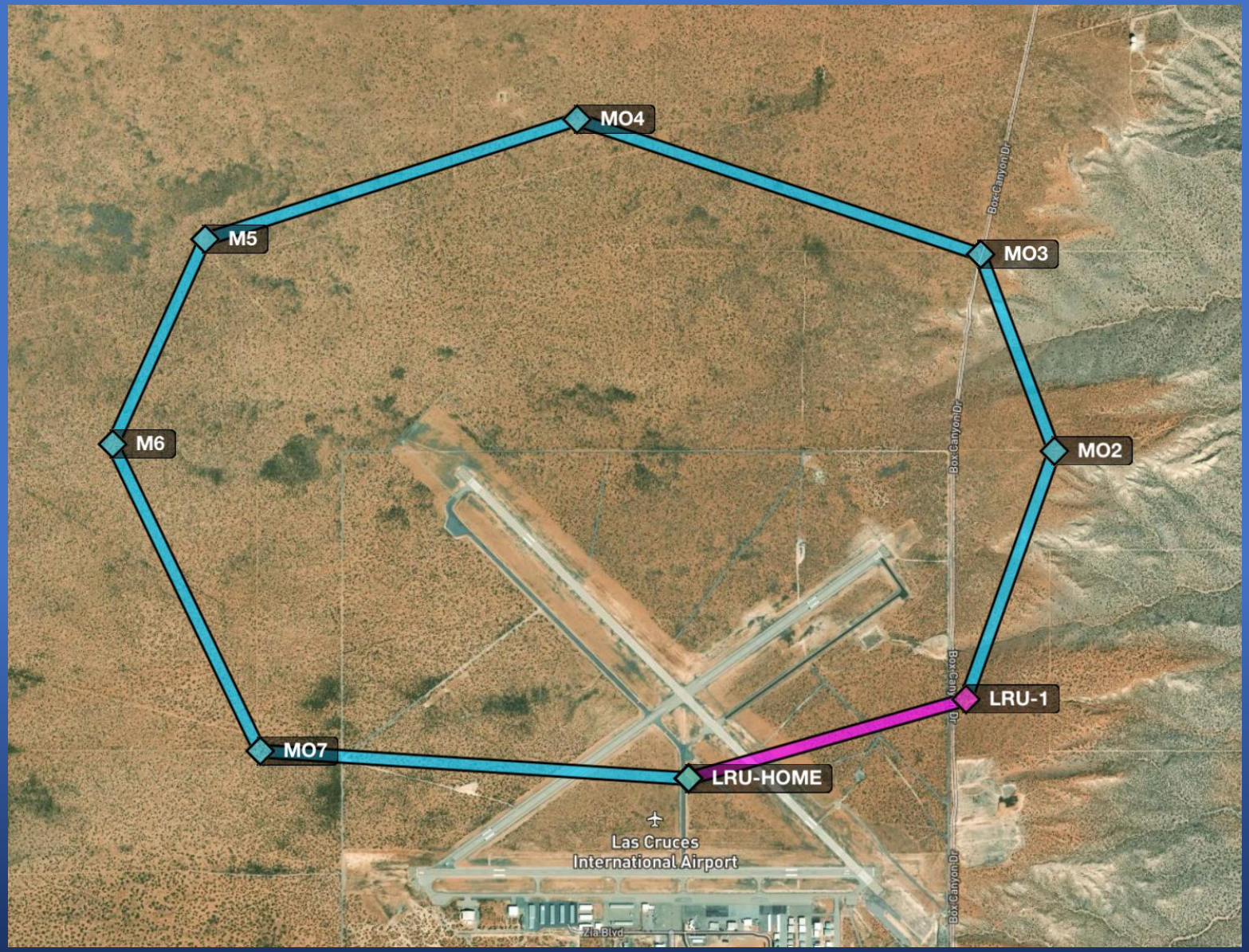
Las Cruces Course Overview
Outer Course



Las Cruces Course Overview
Middle Course

- Max Speed
  - 325 MPH (282 Knots)
- Altimeters will be set to 4500’
  - All altitudes will be based on that setting
- Course Min Altitude
  - Pylon 3-6– 100’ AGL (4600’ MSL)
    - Power line @40’ AGL
  - Pylon 6-3 – 50’ AGL (4550’ MSL)
- Cool-Down – 7000’ MSL and ABV
- Pattern Altitude – 5500’ MSL

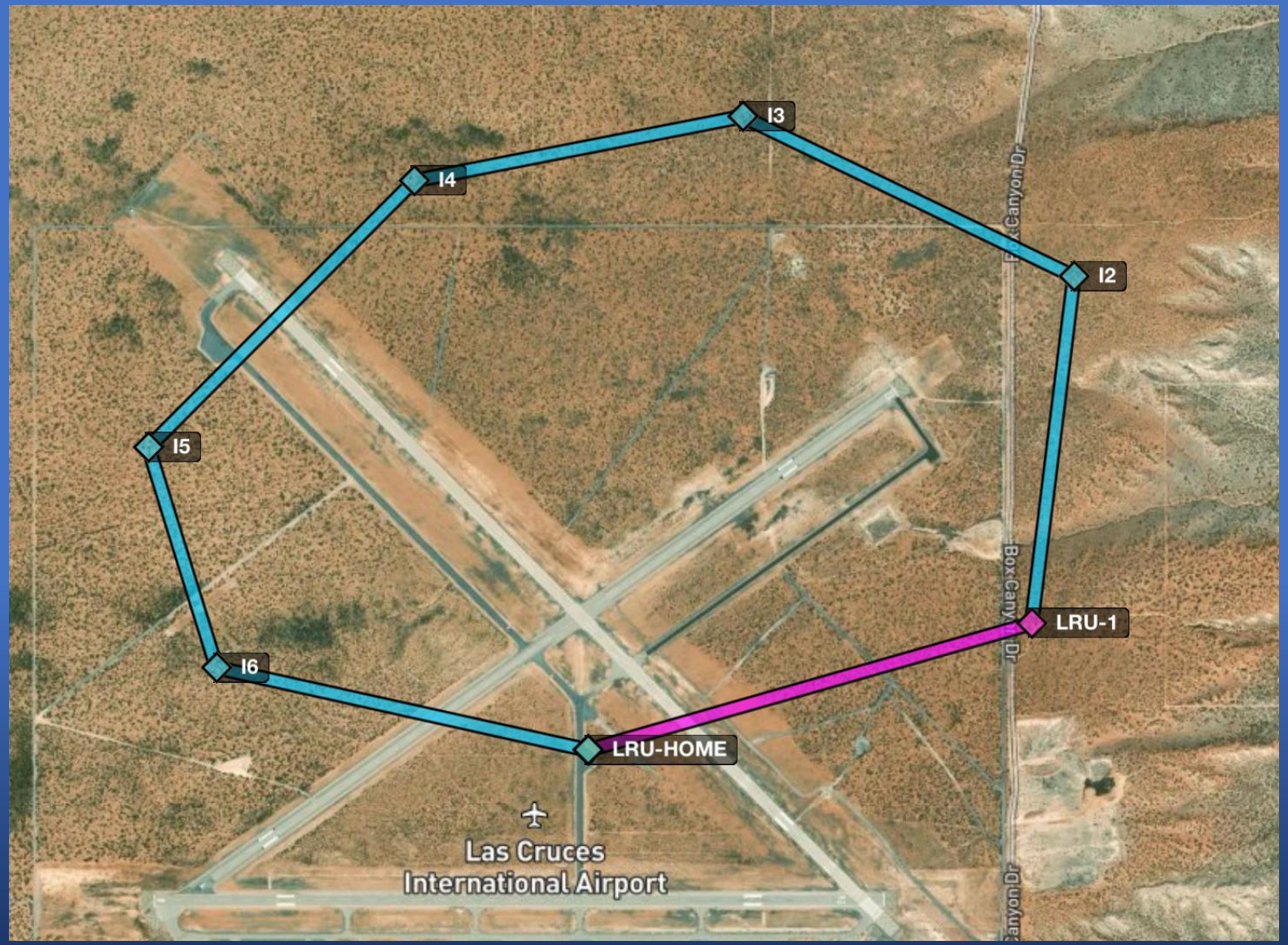
Las Cruces Course Overview
Middle Course



Las Cruces Course Overview
Inner Course

- Max Speed
  - 250 MPH (217 Knots)
- Altimeters will be set to 4500’
  - All altitudes will be based on that setting
- Course Min Altitude
  - 50’ AGL (4550’ MSL)
- Cool-Down – 7000’ MSL and ABV
- Pattern Altitude – 5500’ MSL

Las Cruces Course Overview
Inner Course



Part 4 – Course Details

Las Cruces Course Details
Turn Visual Cues

- 18-23 ft Tall
- 4ftx4ft Reflective Sign
- Color Coding
  - Outer – Lime Green
  - Middle – Orange
  - Inner - White
- All areas have 40ft diam. cleared area

Las Cruces Course Details
Other Visual Cues

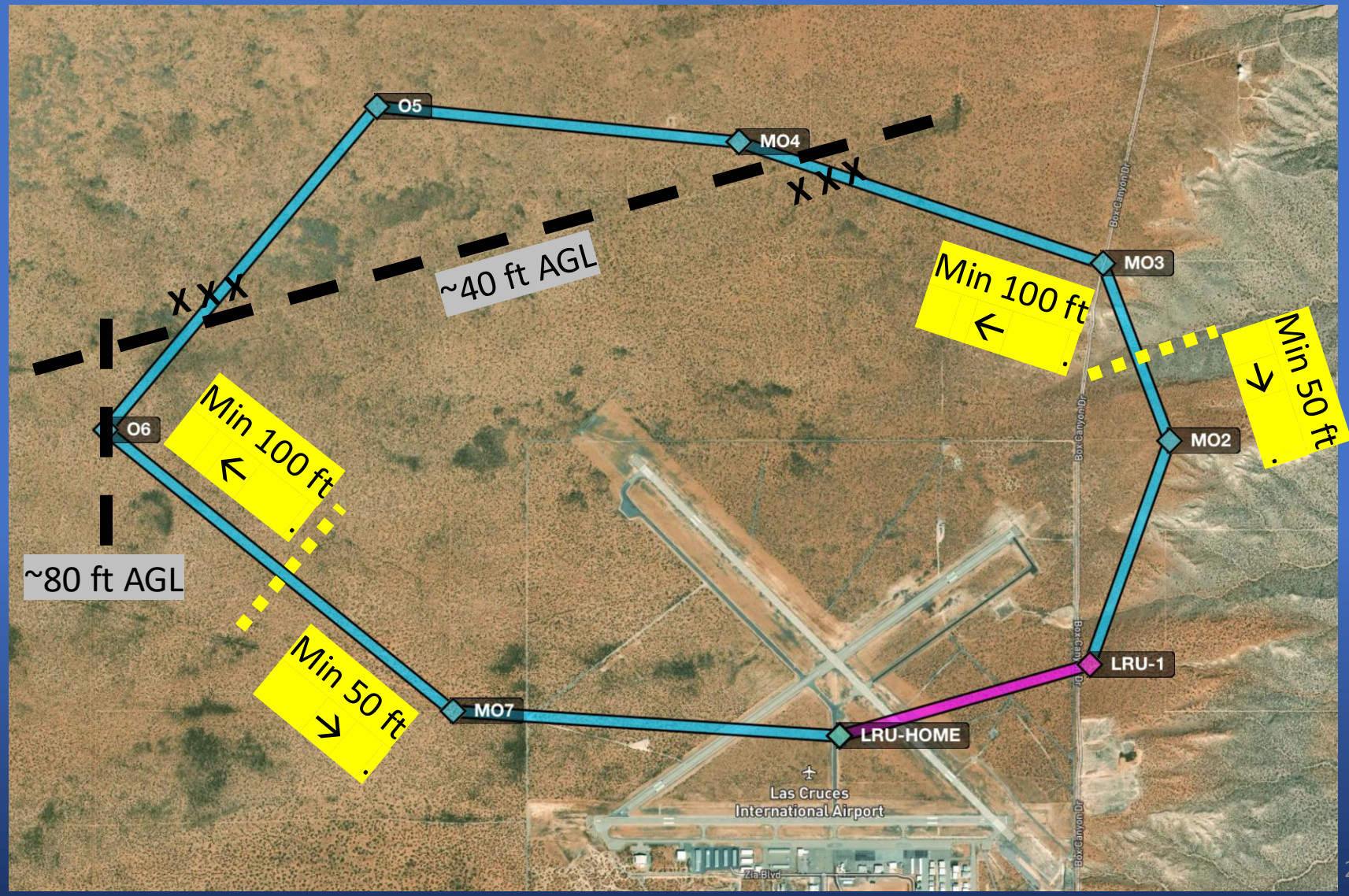
- 3x ”X” marking prior to power line crossings
  - Middle/Outer 3-4
  - Outer 5-6
  - Middle 5-6
- Guide Marks – Outer Course
  - Prior to and after Outer 6
  - Yellow ”X” marking
- Outer/Middle 2 is lighted for Guide/Start Pylon

Las Cruces Course Details
Power Lines

- 3 power line crossings
  - Middle/Outer 3-4
  - Outer 5-6
  - Middle 5-6
- 1 Spur-line
  - Outer 6
  - Has large power pole north of outer 6 visual cue

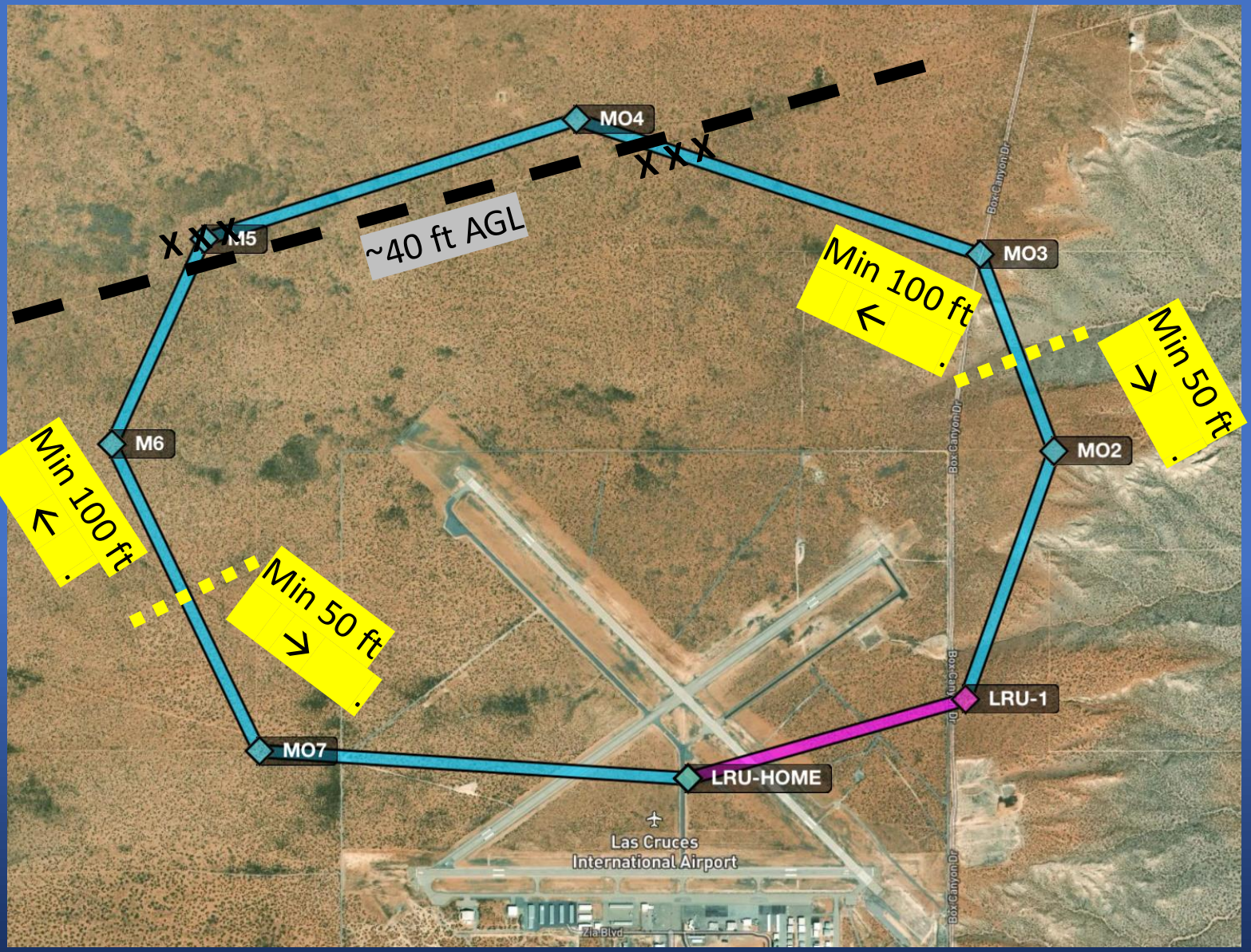
Las Cruces Course Details
Power Lines – Outer Course

- Min Alt Change
  - ½ between Middle/Outer 3 -> 4
  - ½ between Outer 6 -> Middle/Outer 7

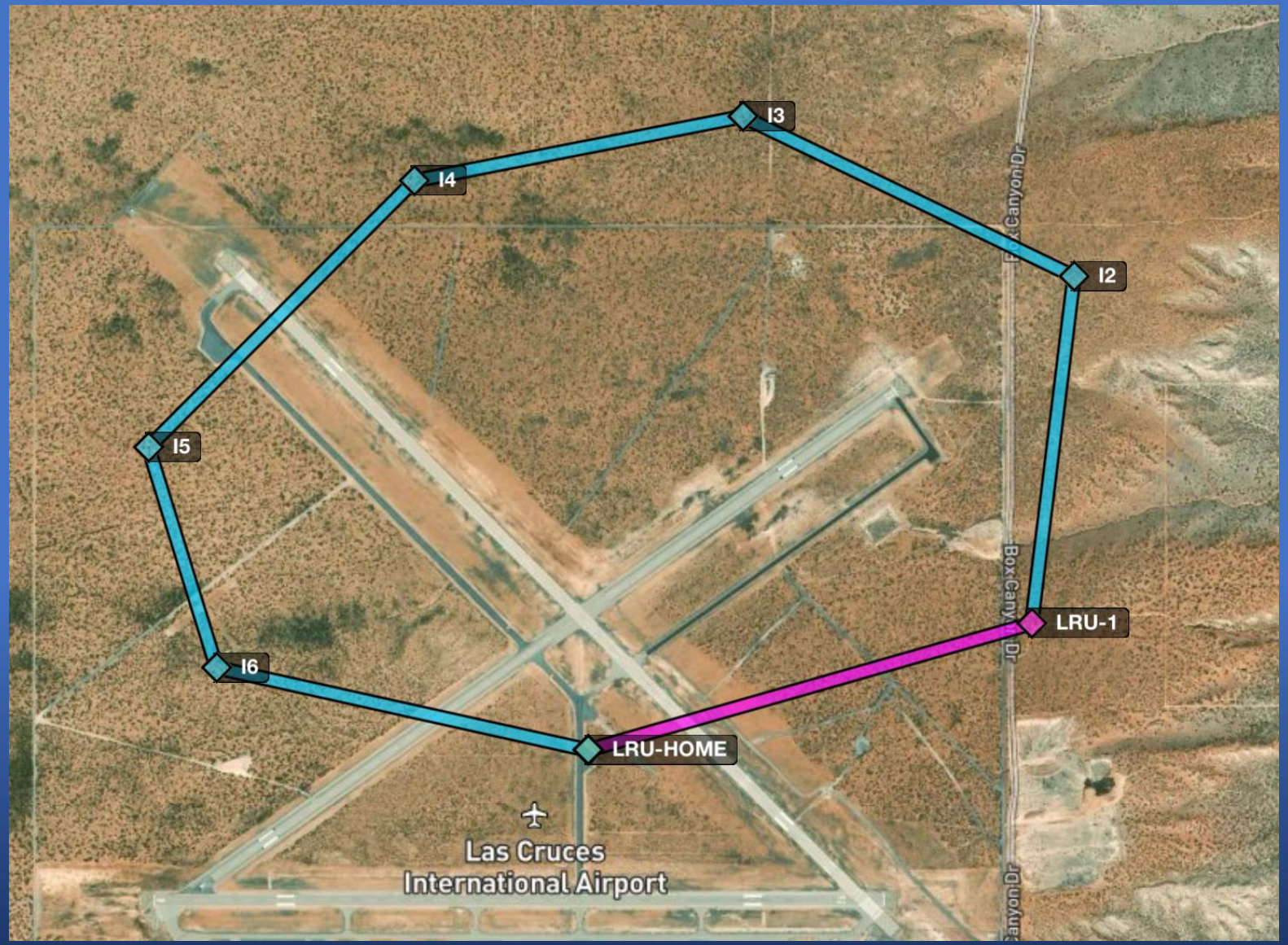


Las Cruces Course Details
Power Lines – Middle Course

- Min Alt Change
  - ½ between Middle/Outer 3 -> 4
  - ½ between Middle 5 -> 6



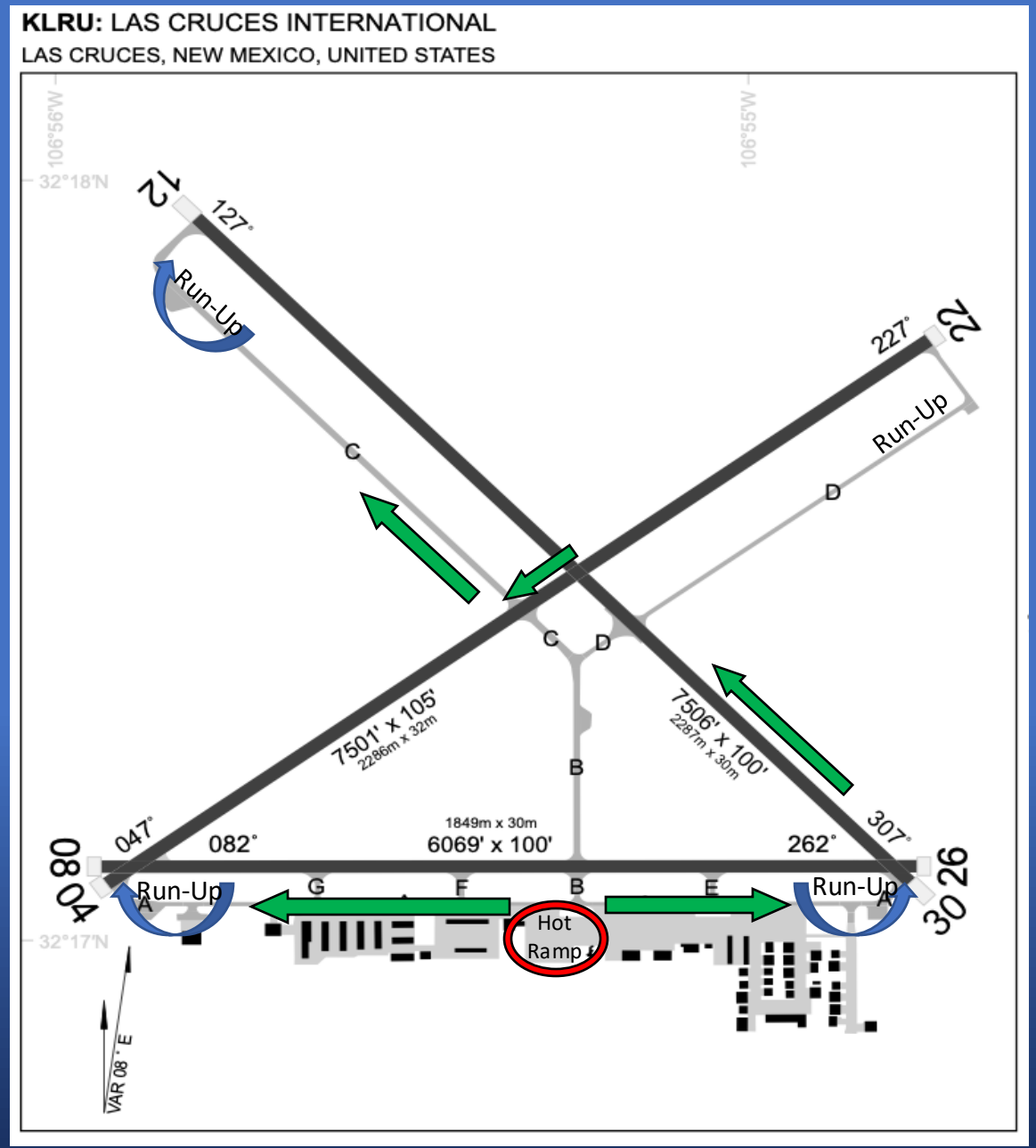
Las Cruces Course Details
Inner Course



Part 5 – Ground, Rejoin & Course Entry Procedures

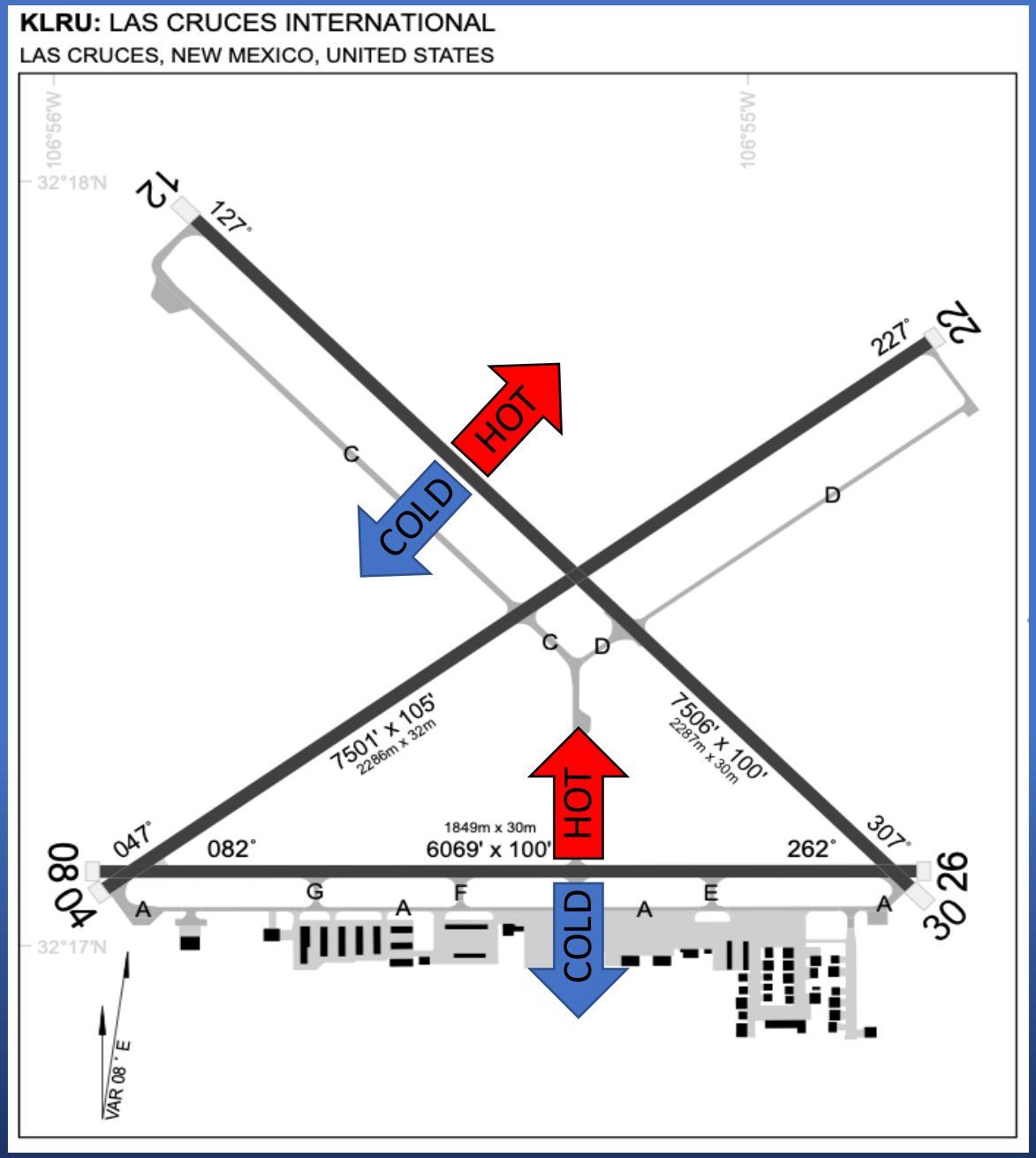
Taxi Out & Run Up

- Start & Check in on Ground: 123.6
- Taxi & Run-up on Ground
- Standard Race SOP taxi from Hot Ramp to Run-up
- Run-up Complete: Standard Race SOP ready call from -2
- Lead directs ”GO” to RC: 122.775
- Standard Race SOP Line-up and Launch

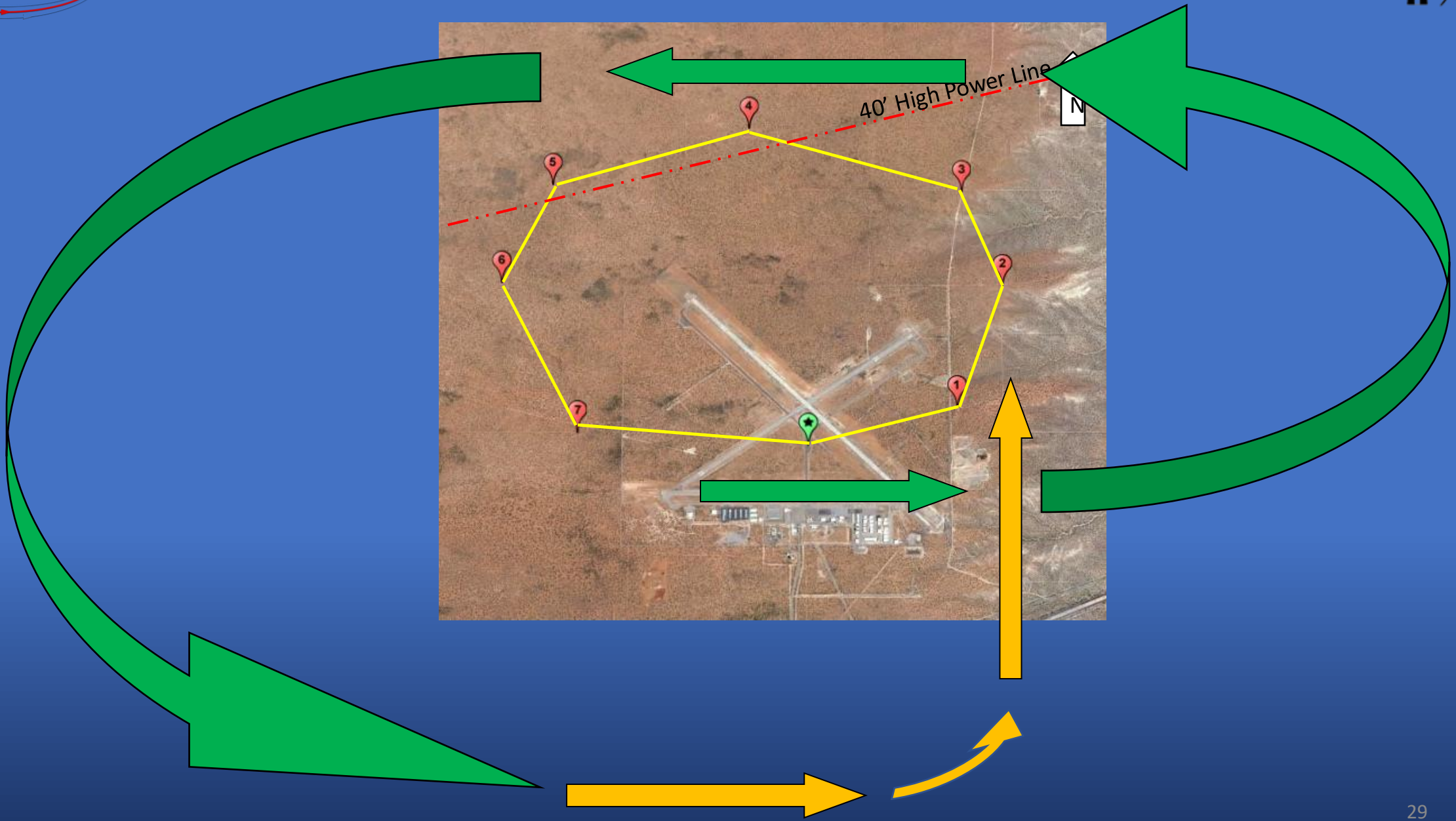


Hot Side – Cold Side

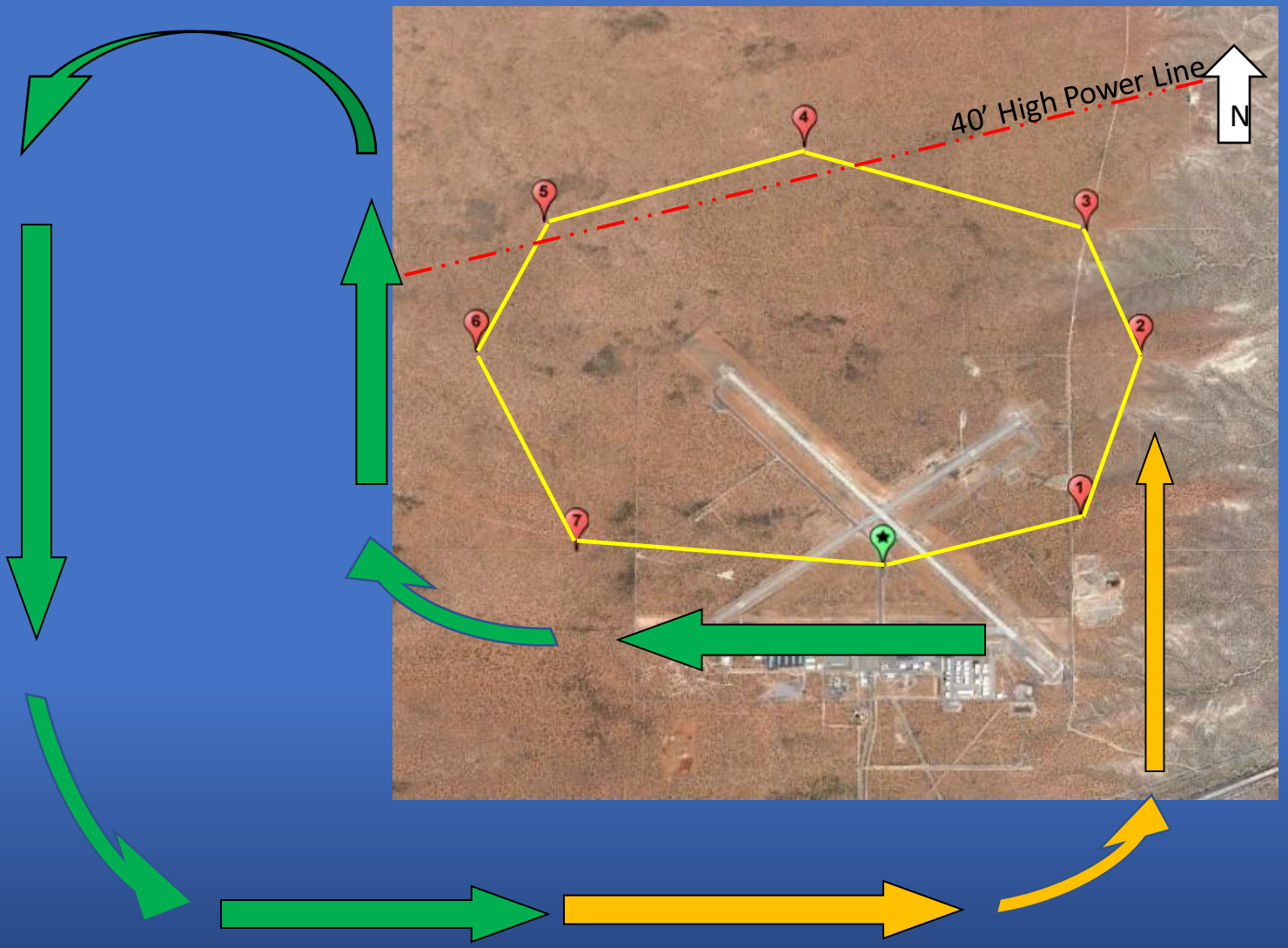
- Hot = N
- Cold = S



RWY 8 Departure – Rejoin Procedure

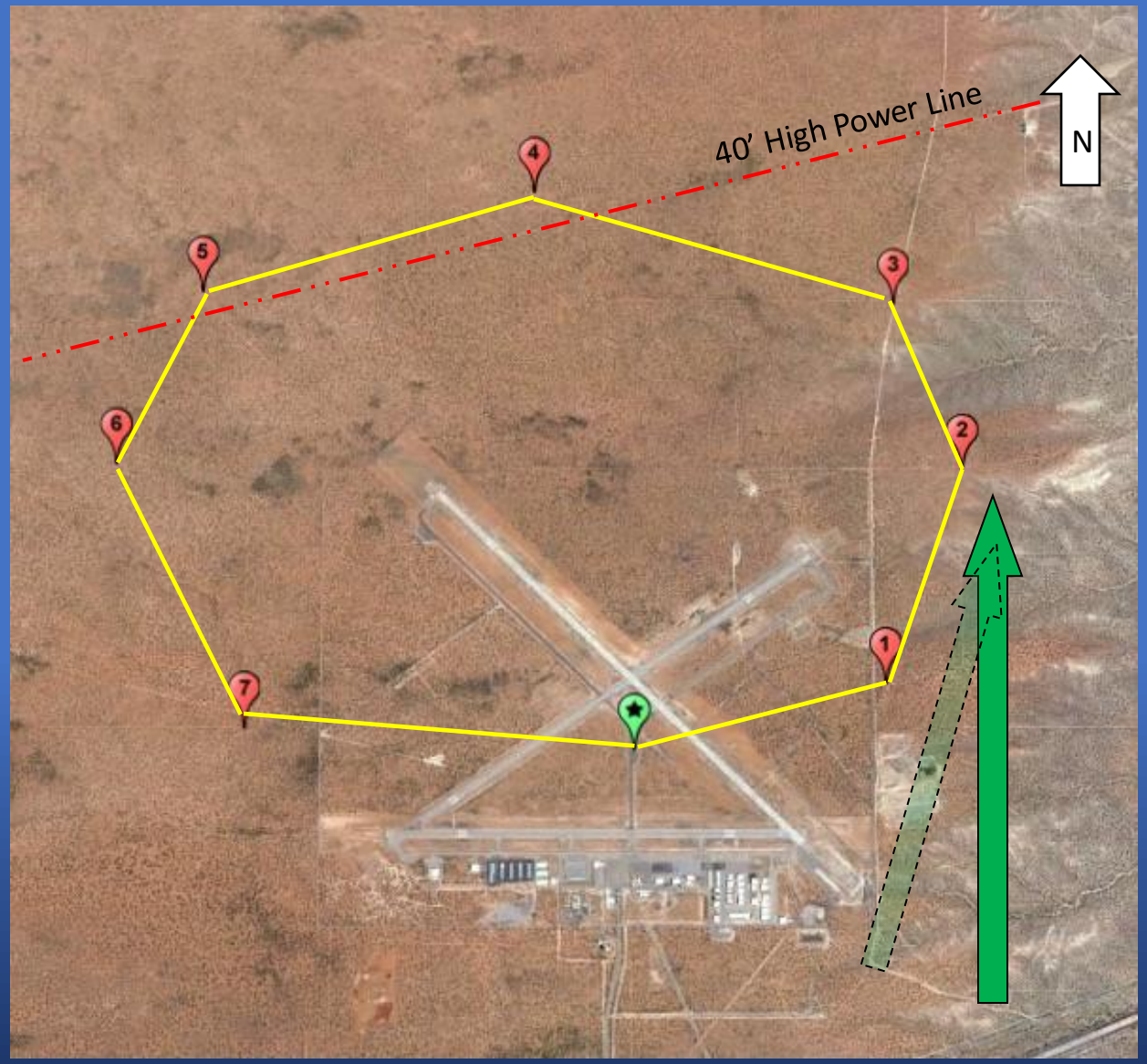


RWY 26 Departure – Rejoin Procedure



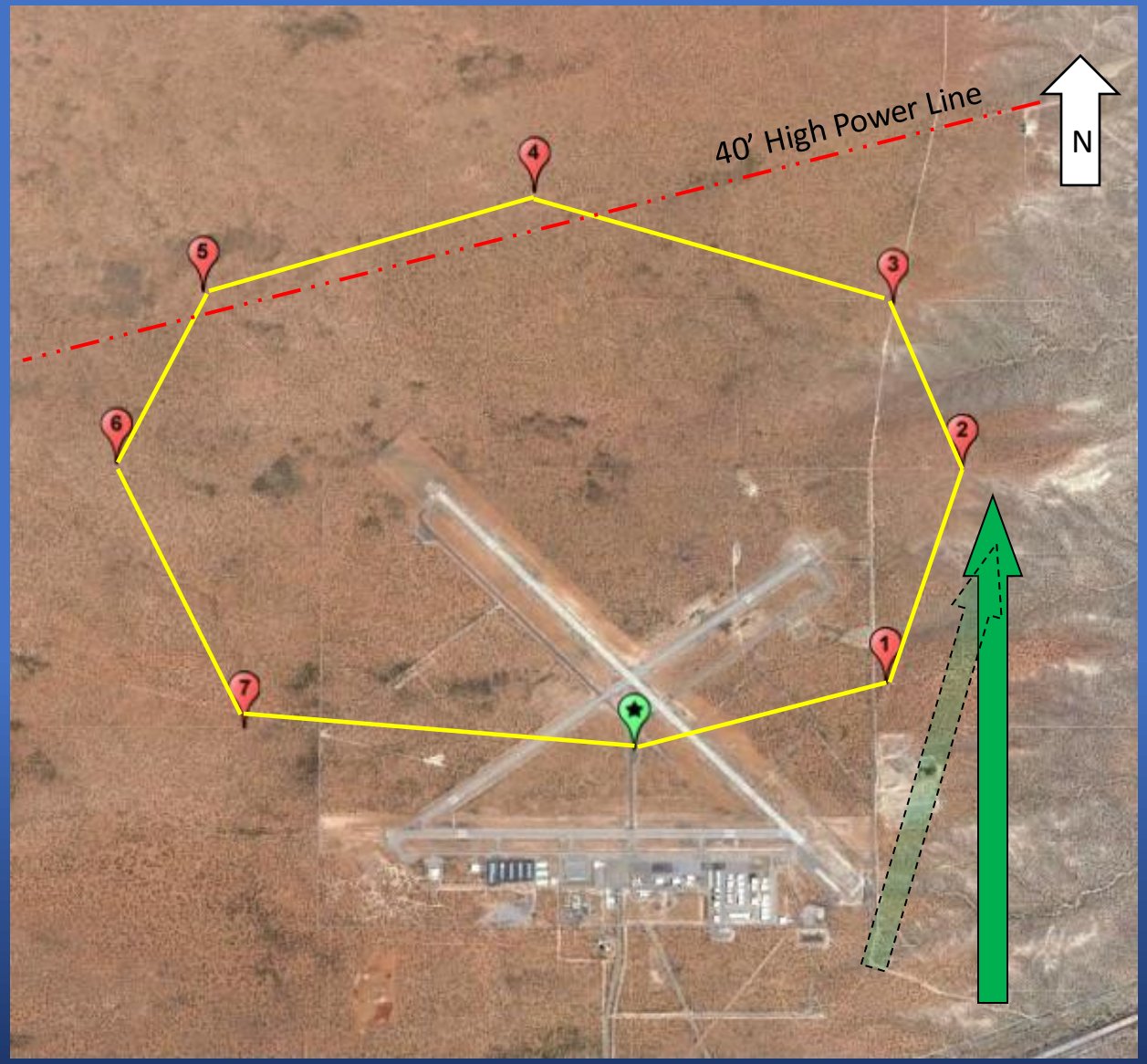
Course Details – Normal Start Chute Entry

- S to N
  - Perpendicular to 26
  - No more acute than parallel to 1 to 2
- Release
  - Abeam Rwy 26 #’s to Abeam Home
  - ~ 5000-5500’ MSL
    - 500-1000’ AGL

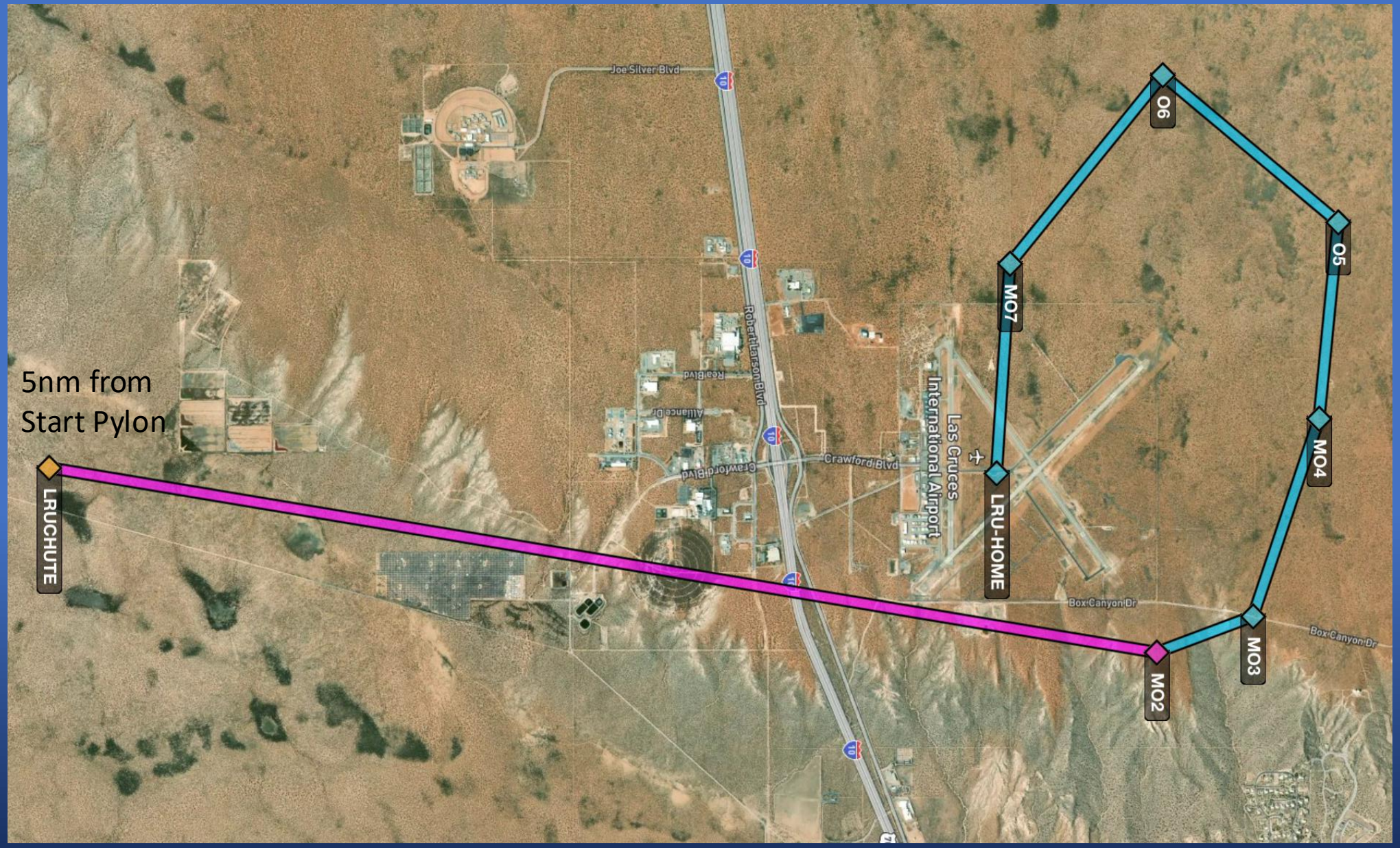


Course Details – Abnormal Chute

- Race Control can “spin flight” as late as top of chute
- If after top of chute, filter back to echelon, Climb north into Que



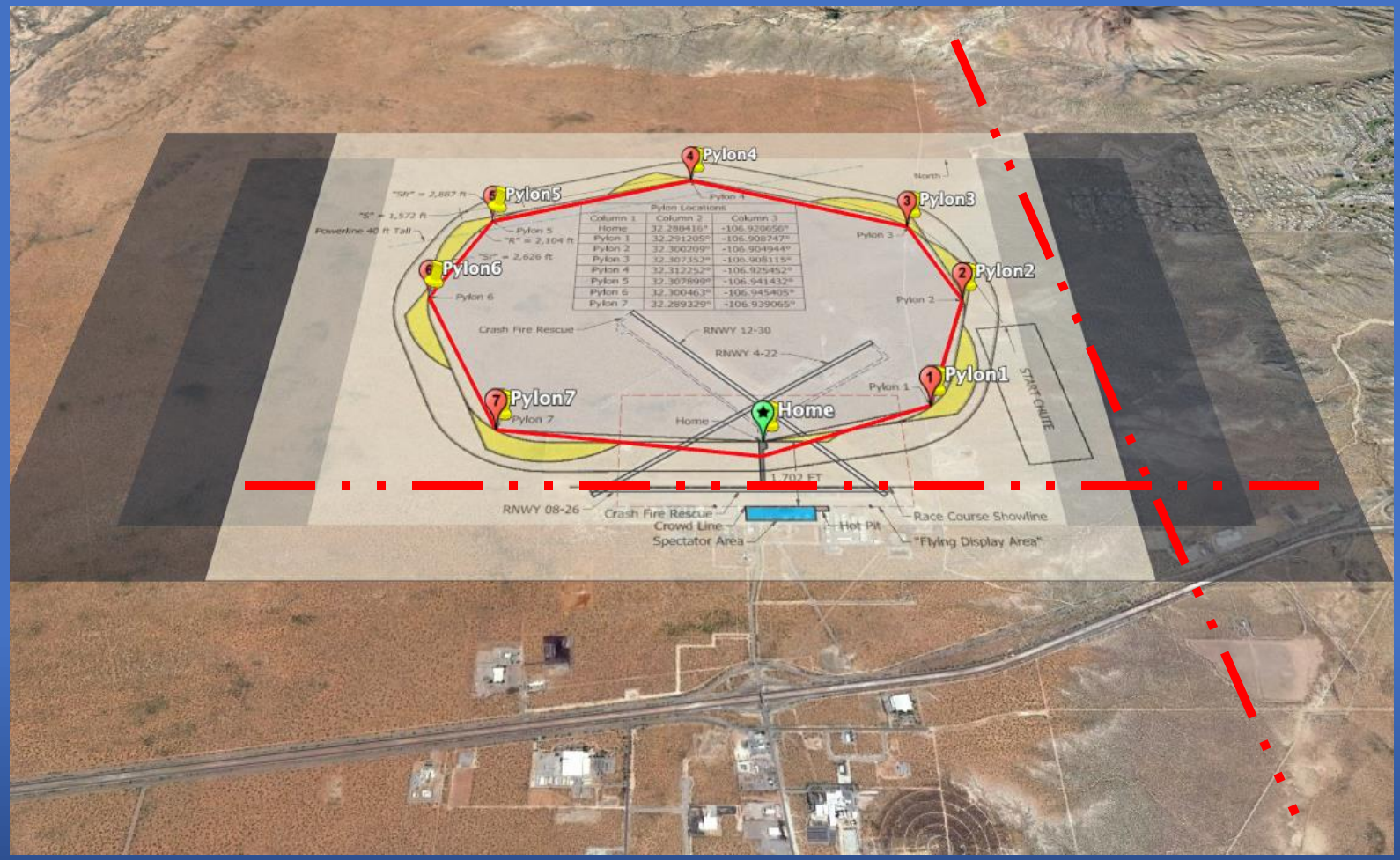
Course Details – Top of Chute to Entry



Part 6 – Show Lines and Escape Maneuvers

Show Lines

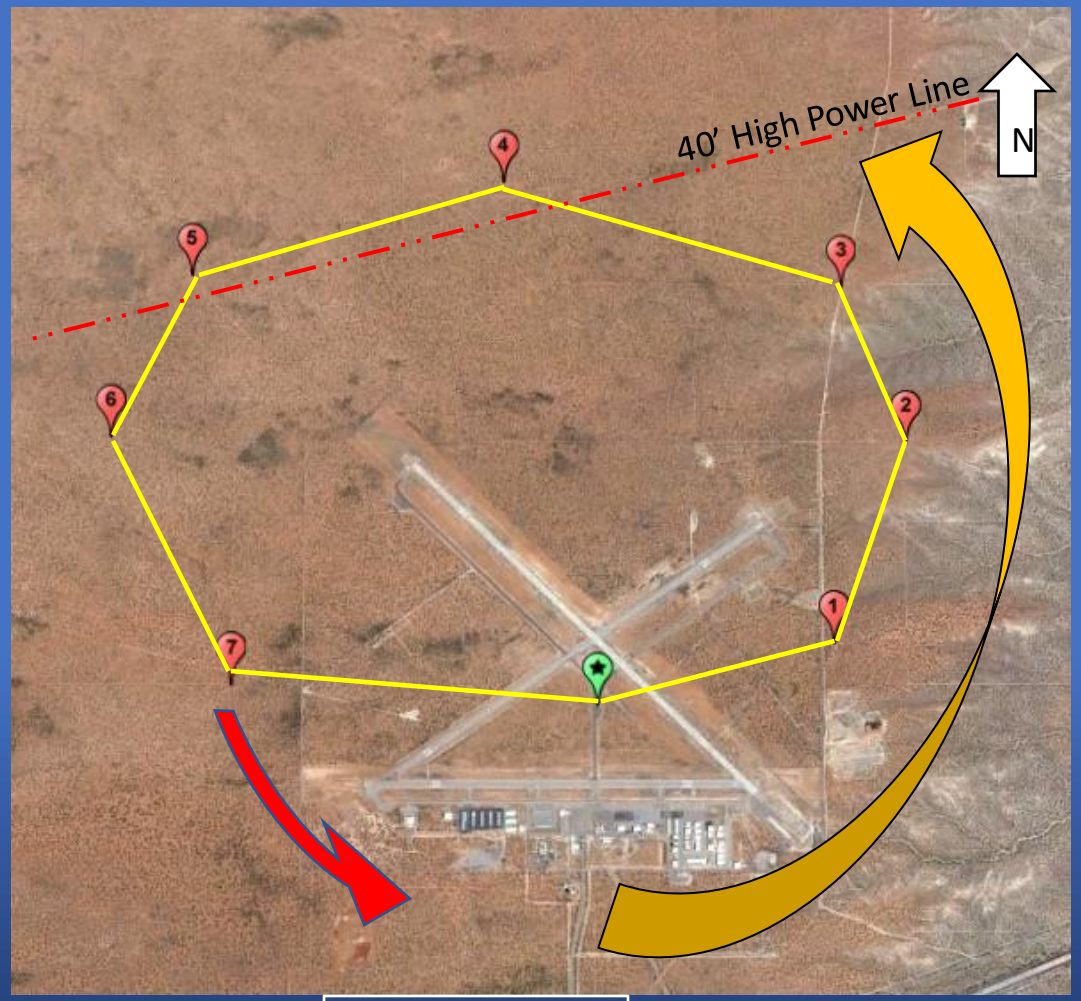
- S Show Line
- N edge of RWY 8/26



- E Show Line
- No Community Overflight

Escape Maneuvers – South Showline

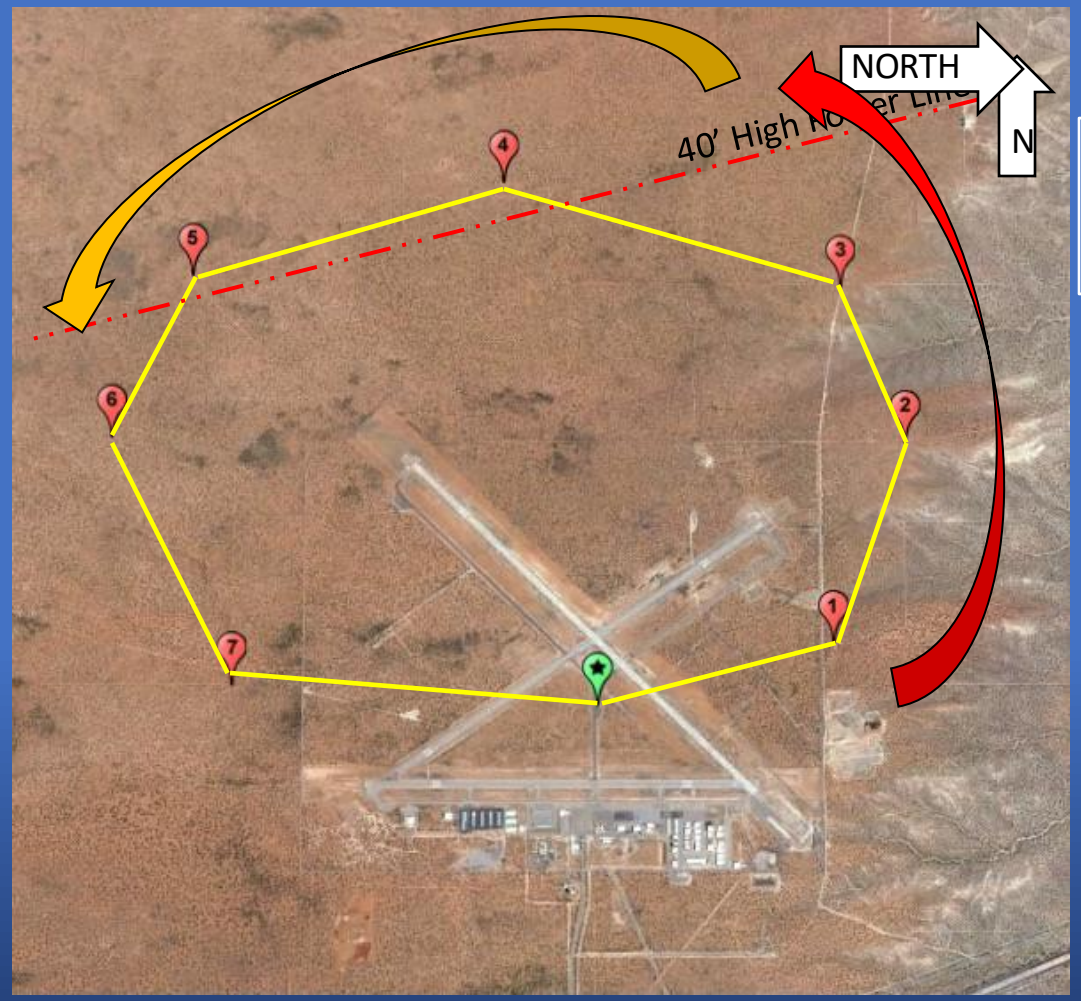
- Pylon 6 - 7 - Home
- Climb towards 6000’MSL (1500’ AGL)
- Transit behind ramp and hangar area
- Once clear of course and Crowd
  - Arc N
- Re-enter on N side of Course
- Rejoin course between Pylons 3-5



Climb toward 6000 MSL

Escape Maneuvers – East Show-line

- Pylons 1-3
  - If spit wide and will overfly community
- Climb towards 6000’MSL (1500’ AGL)
- Once clear of course, arc W
- Rejoin course between Pylons 5-7
  - Watch for subsequent S Show-line bust

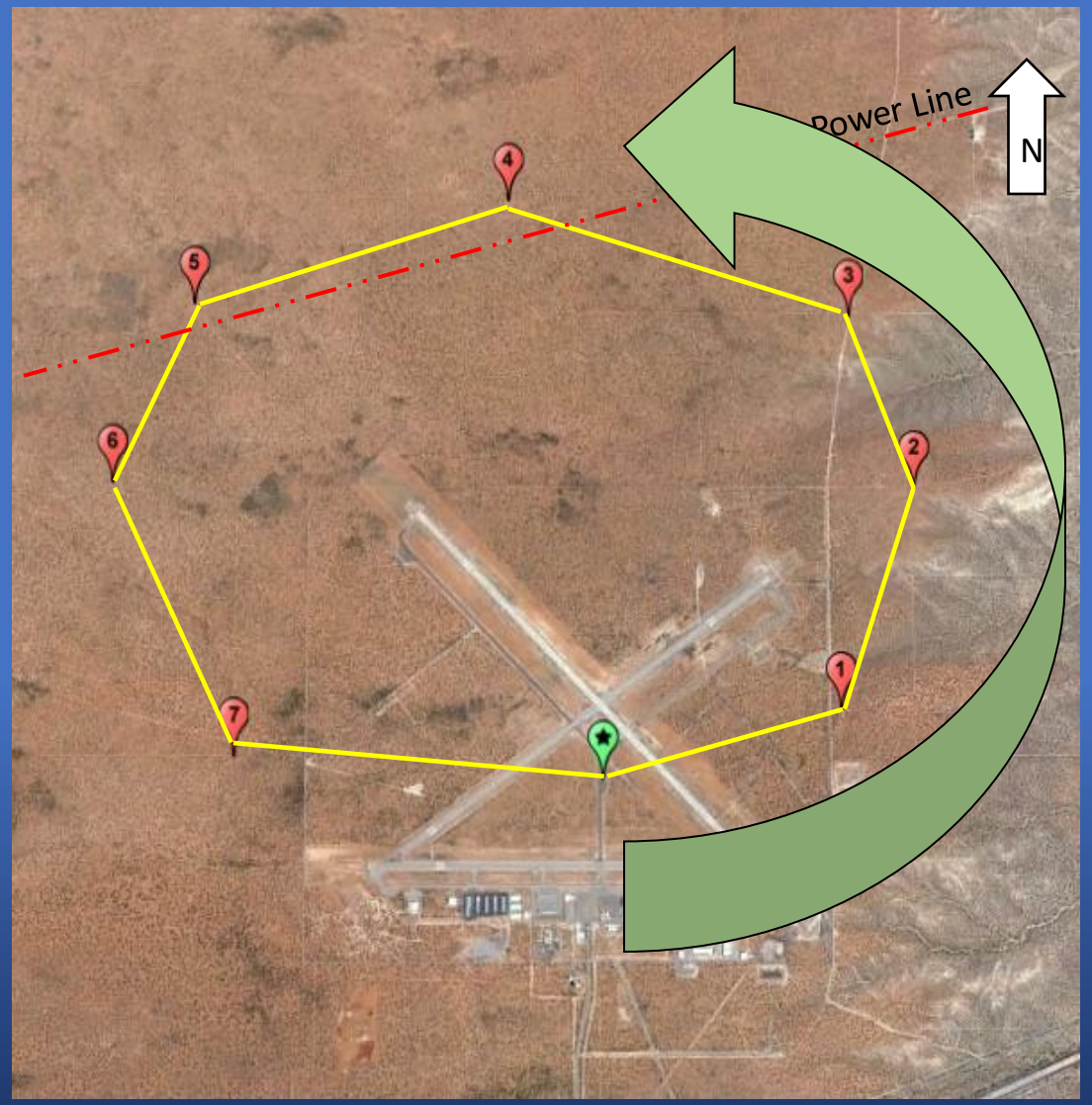


Climb toward 6000 MSL

Part 7 – Course Exit, Cool-Down & Recovery Procedures

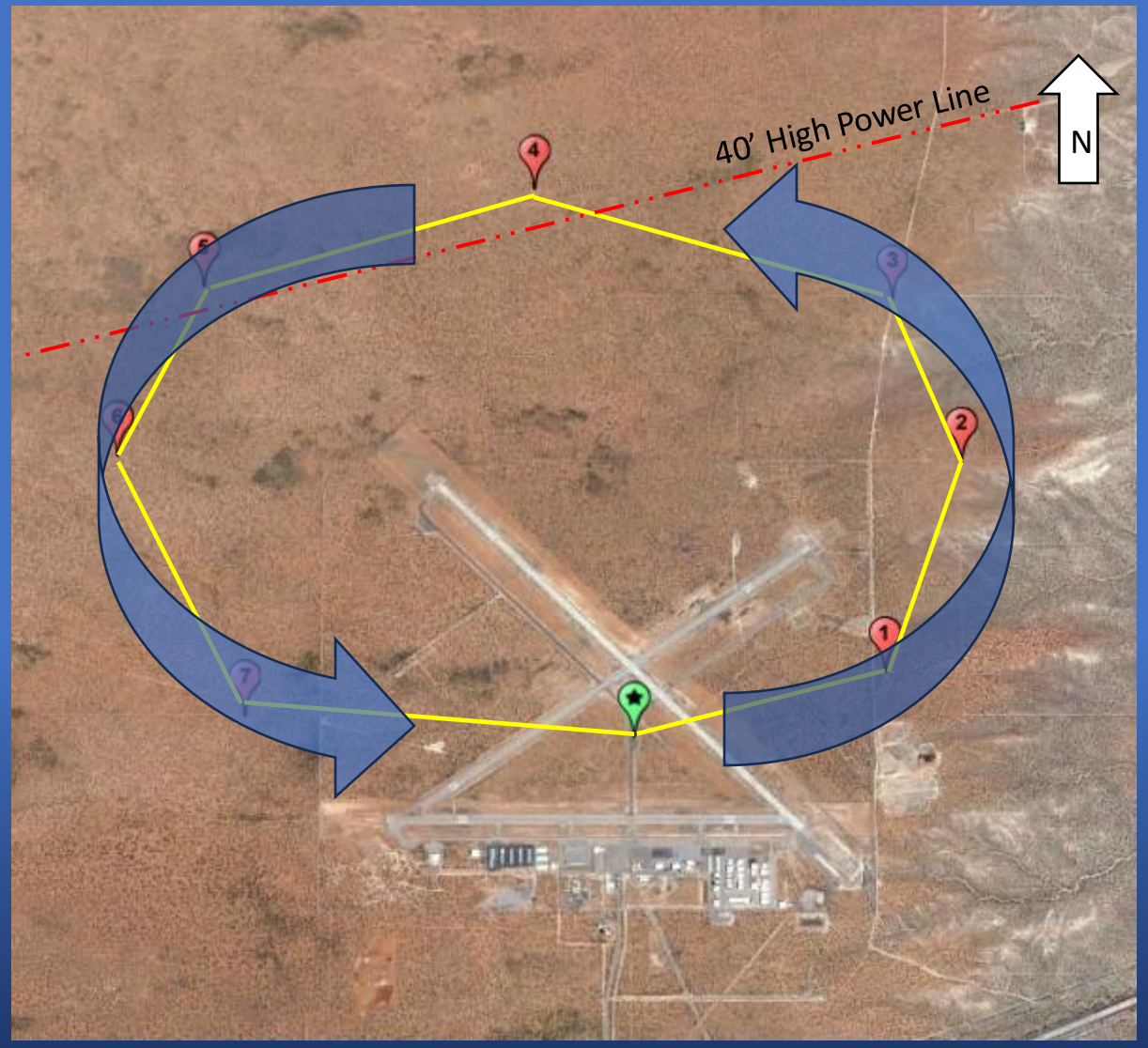
Course Details – Normal Exit

- Off at Home
- Climbing left turn to Cool Down: >6,500’ MSL (2,000’ AGL)
- Remain North 8/26



Course Details – Queue & Cool Down

- Above Middle Course
- Queue
  - 6,500’ MSL
    - 2,000’ AGL
- Cool Down
  - >/=6,500’ MSL
    - ABV 2,000’



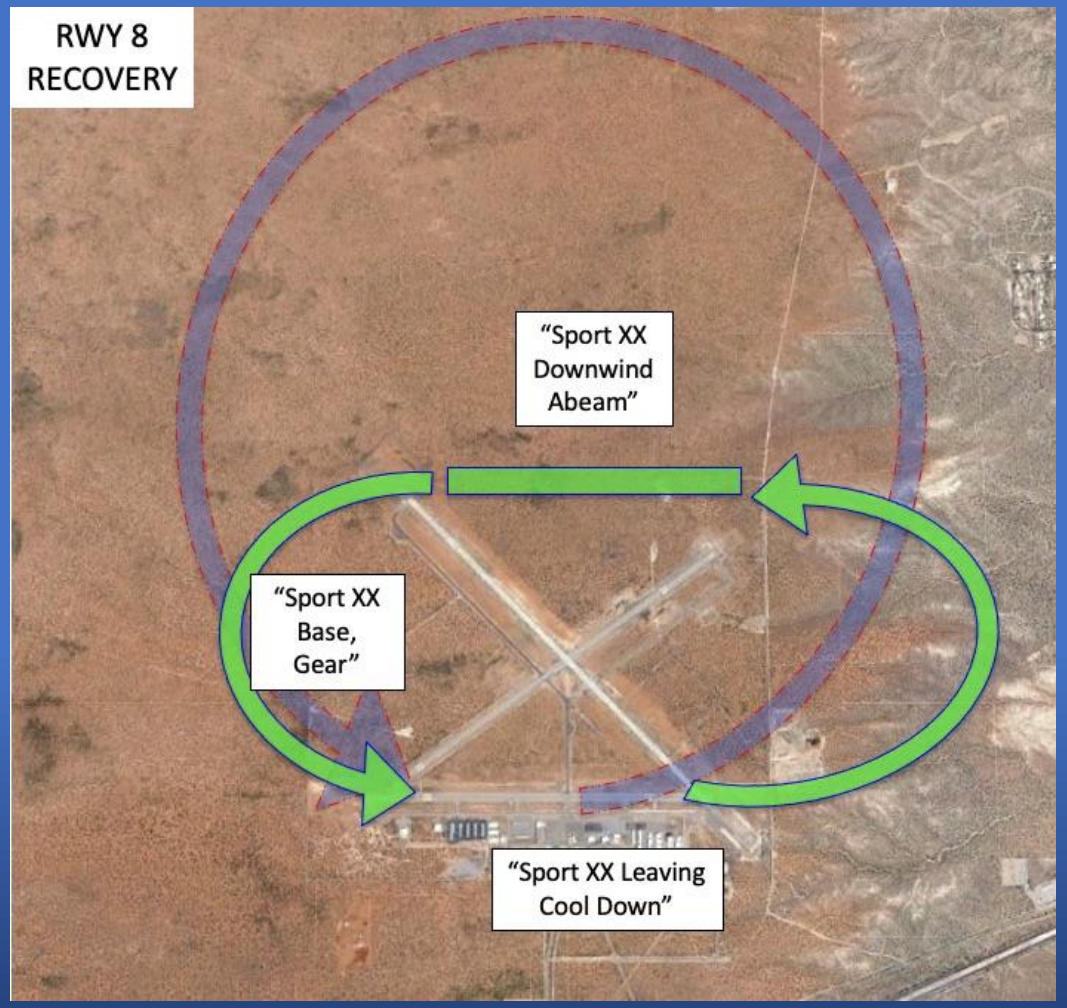
Course Details – Alternate Queue & Cool Down – Advanced Air Recoveries

- Used when Adv Air…
- Air Boss directs flight to Alternate Q
- Depart Q at west side
- Fly S to Alt Q
  - Left orbit
  - >/=6,500’ MSL
    - ABV 2,000’
- Remain S of I-10

- Course Re-entry
- Air Boss Clears flight on course
- Depart Alt Q at east side
- Fly S to enter course at pylon 3

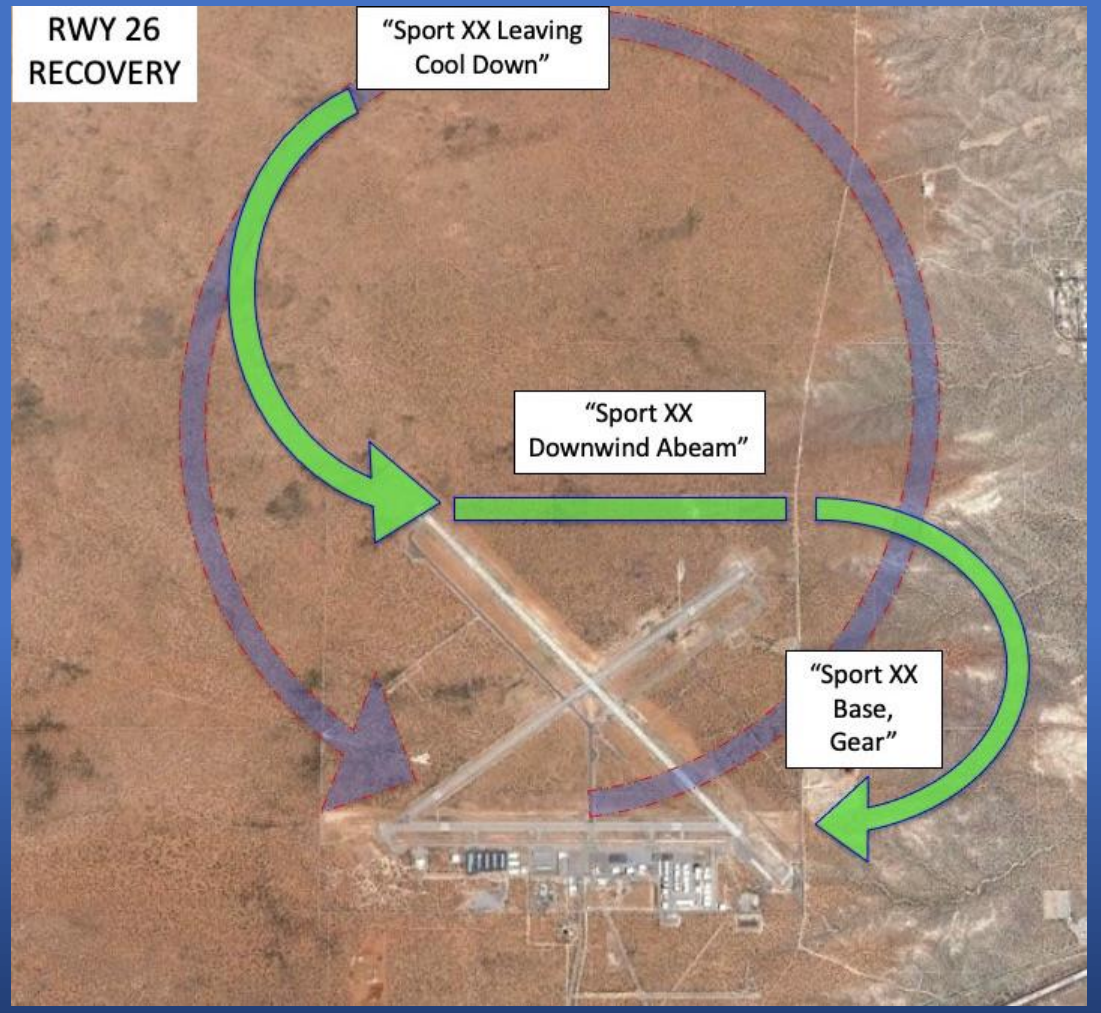
Recovery – RWY 8

- Exit Cool Down
  - Home Pylon
  - 6500 MSL
- Down Wind
  - 5500 MSL
  - Left Traffic
  - Standard Calls
    - Leaving Cooldown
    - Downwind Abeam
    - Base/Gear



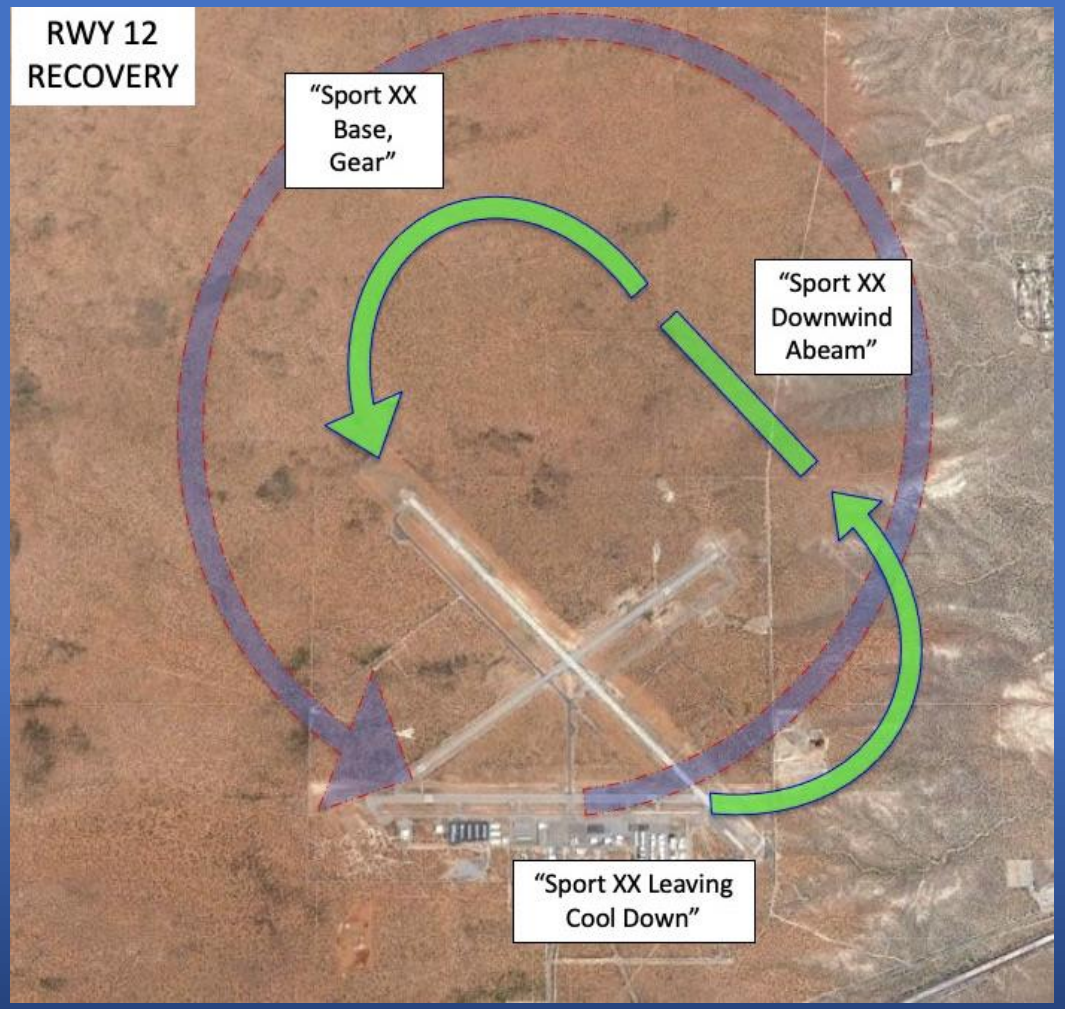
Recovery – RWY 26

- Exit Cool Down
  - Pylon 4-5
  - 6500 MSL
- Down Wind
  - 5500 MSL
  - Right Traffic
  - Standard Calls
    - Leaving Cooldown
    - Downwind Abeam
    - Base/Gear



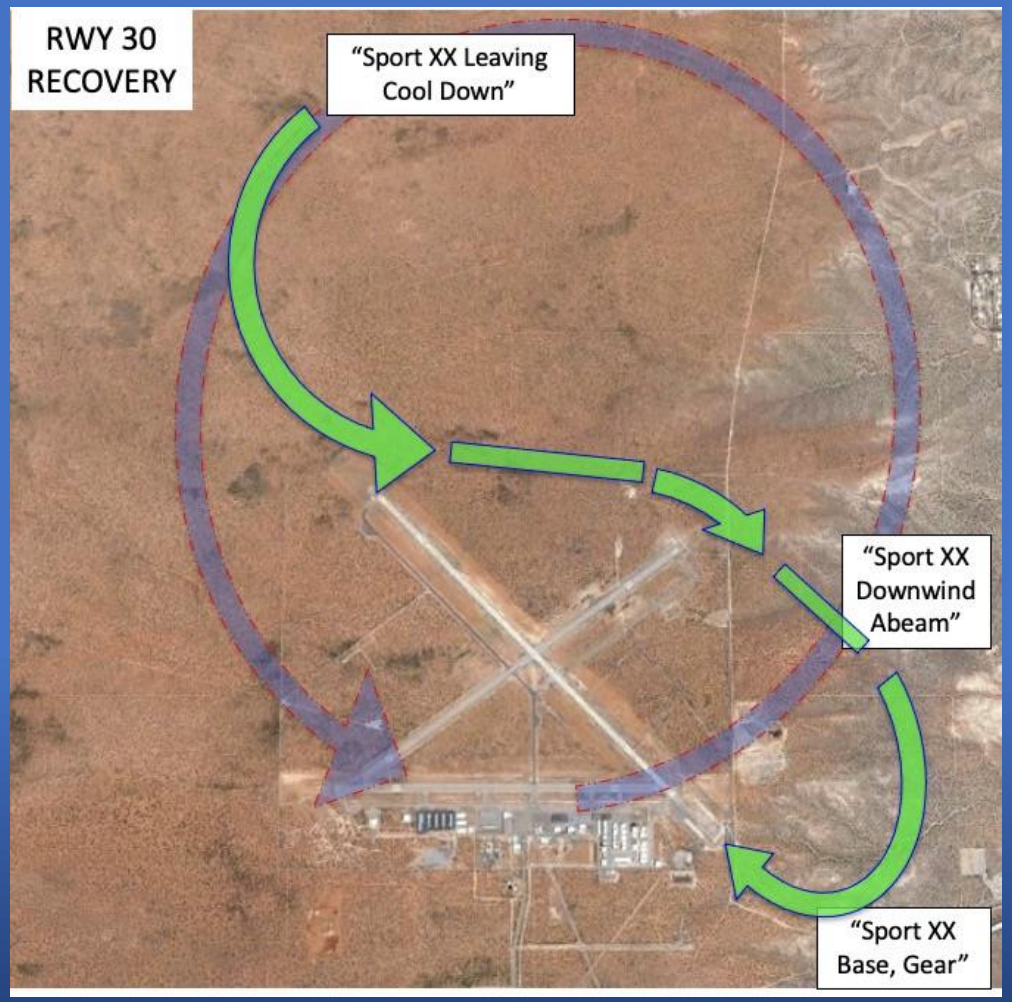
Recovery – RWY 12

- Exit Cool Down
  - Home Pylon
  - 6500 MSL
- Down Wind
  - 5500 MSL
  - Left Traffic
  - Standard Calls
    - Leaving Cooldown
    - Downwind Abeam
    - Base/Gear



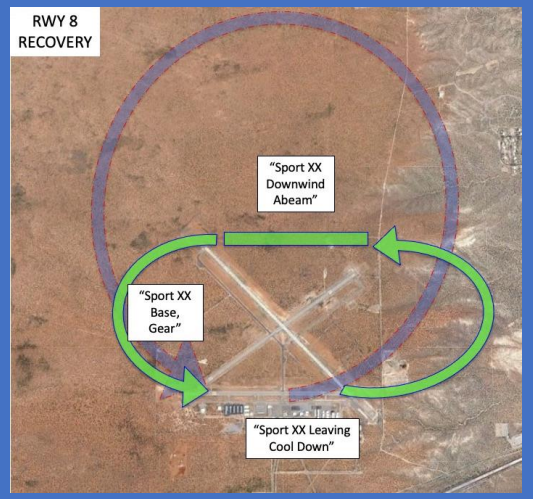
Recovery – RWY 30

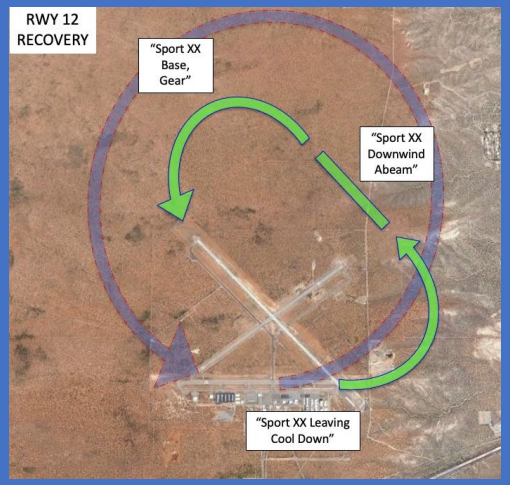
- Exit Cool Down
  - Pylon 4-5
  - 6500 MSL
- Down Wind
  - 5500 MSL
  - Right Traffic
  - Standard Calls
    - Leaving Cooldown
    - Downwind Abeam
    - Base/Gear

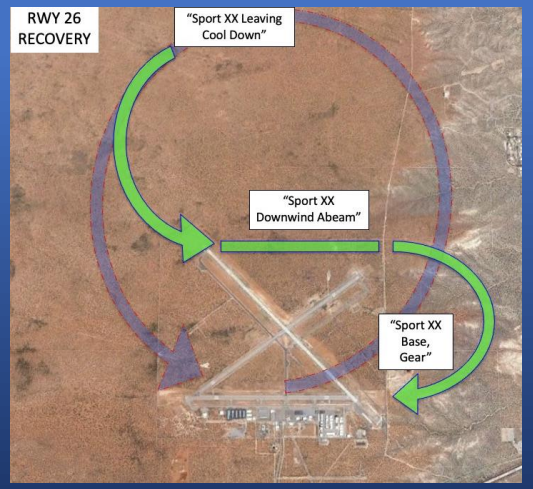


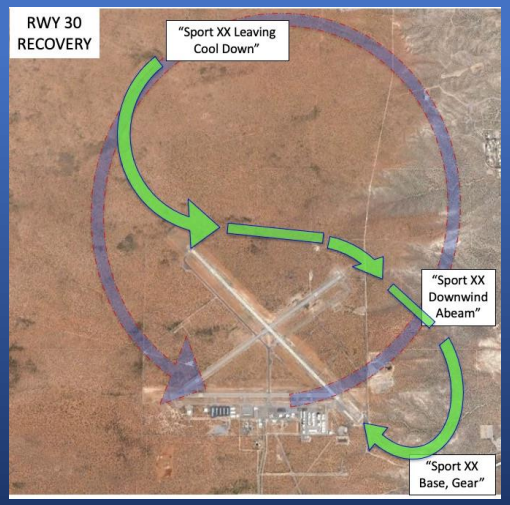
Recovery – Rule of Thumb

- Small Runway Numbers (Landing East) – Leave at Home, Left Traffic
- Large Runway Numbers (Landing West) – Leave at 4-5, S-turn, Right Traffic



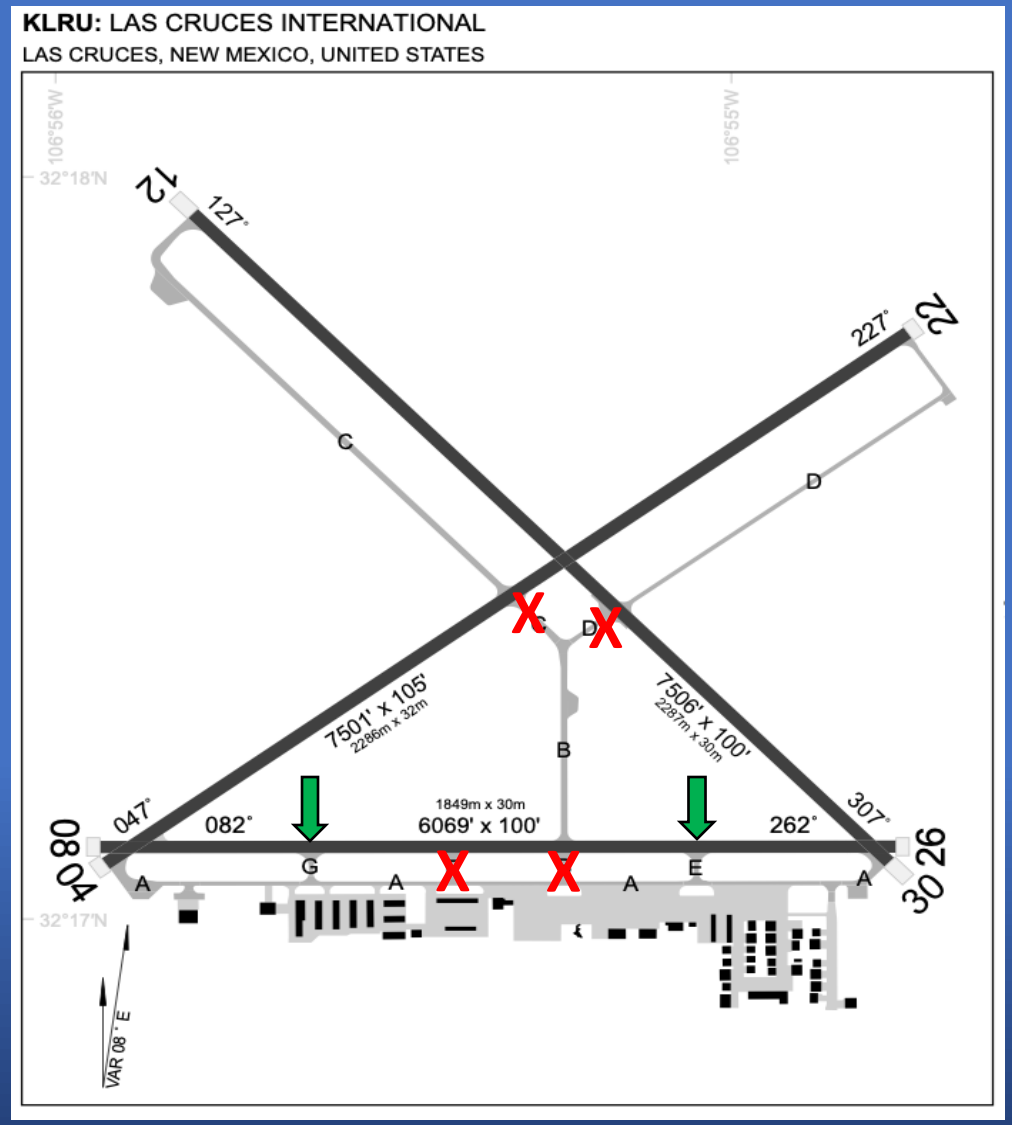






Roll Out & Taxi In

- No Early Turn-Offs
- Lead gather flight
- Auto-push Ground upon crossing hold short
- -Last call, “Sport XX Clear”
- Lead will taxi flight back to hot ramp



Part 8 – On-Course Procedures

Normal Entry

- Take-off on time
  - Racers will be on course
  - If departing 26 – Opposite direction traffic
    - Be mindful to deadline (southerly crosswind common)
- Transit to top of chute ~8 min
  - Flight on course, use takeoff as timing SA
- Flight entering – Announce top of chute
  - Flight on course: “Sport XX flight, next time past home, exit the course via the escape maneuver”
  - Exit course via South Show-line escape maneuver to cool down
  - SA note: Flight in chute has right of way

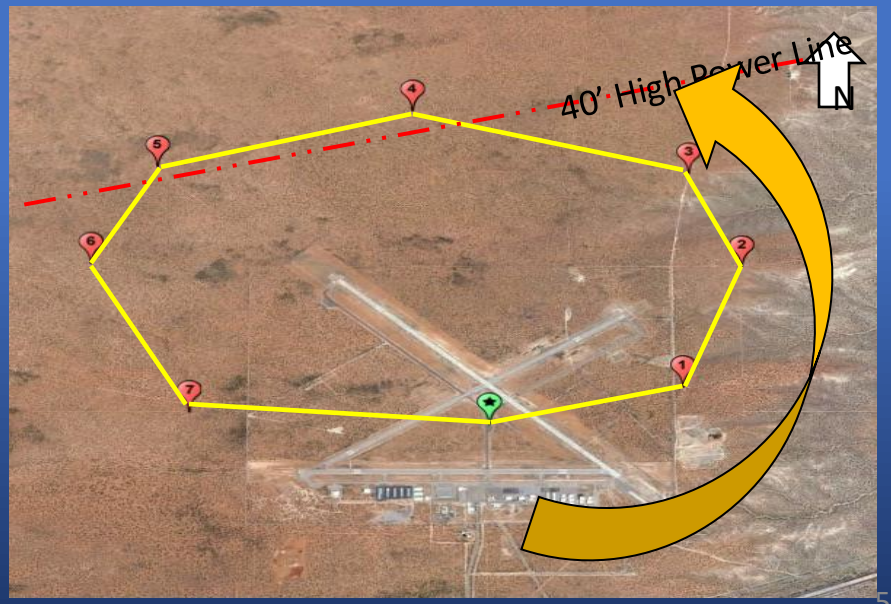
Normal Landing

- After exiting course – In cool down
- Wait until flight in chute is fully established on course
- Then and only then – Recover to runway in use
- For Deconfliction: Do not exit cool down if there is a flight in the chute

Abnormal Ops
Airline Departure

- 3 operations on Friday (none on Saturday)
  - 1045, 1421, 1500
  - Plan on on-time to 10-15 min late
  - Will effect: PRTC 1 (2), PRTC 13
- Air-Boss will call as late as possible to allow maximum course time
- Come off course in current position
  - Continue over course, in trail
  - Climb to cool down
  - DO NOT over-fly deadlines
- Once cleared on course, re-enter via

South Show-line re-entry procedure



Abnormal Ops
Airline Arrival

- Should be advised at 15 nm out
- At 10 nm out, call to come off course
- Off course via South Show-Line Escape
  - Climb to alternate cool down
- When cleared on course:
  - Exit alt cool down to enter at Pylon 3
  - “Short Chute”

Part II – Q&A

Sport Air Racing Council
Next Gen Air Racing

Let's Go Fly!

Sport Class Air Racing