

# HELICOPTER TOUR OPERATORS ROUTE STANDARDIZATION AGREEMENT

EFFECTIVE: February 2016

1. **PURPOSE:** This agreement defines standardized helicopter flight altitudes, routes, and radio calls for tour flights in the Lake Mead National Recreation Area, the Hualapai Indian Reservation, and Grand Canyon National Park (GCNP). This will reduce radio frequency congestion, confusion, and enhance safety.
2. **SCOPE:** To describe for safety and standardization purposes the routes, altitudes, and radio calls used by helicopter operators conducting tour operations between Las Vegas, Nevada, and the west end of Grand Canyon National Park. This agreement does not constitute authorization to operate contrary to the requirements prescribed in Federal Aviation Regulations, in particular, the LAS FSDO Grand Canyon National Park Special Flight Rules Area (GCNP SFRA) Procedures Manual.
3. **REVISION:** This agreement is the 5th revision from the original agreement documented March 12, 2008. Any agreement dated prior to February 29th, 2016 is no longer in use and is considered obsolete. Any future revision's will be done using the same revision method which will include a list of effective pages, approval page from each operator, and a record of revision which will be documented on page 3 and 4 of this agreement.
4. **DEFINITIONS:** See Appendix A
5. **RESPONSIBILITIES:**
  - a. **Signatories shall:** Ensure that all pilots they employ, including any operating under subcontract, are familiar with and comply with the routes, altitudes, and radio calls contained herein.
  - b. **Pilots shall:**
    - 1) Adhere strictly to tour routes.
    - 2) Monitor correct radio frequencies.
    - 3) Make all required position reports.
    - 4) Adhere strictly to proper radio phraseology.
    - 5) Make no unauthorized calls. Unnecessary "chatter" **will not** be tolerated.
    - 6) Never harass any wildlife.

**Note.** Deviations are allowed for safety of flight. Additional radio calls are allowed for safety of flight.

# Table of Contents

<u>Tour Route 1. (ALL OPERATORS) - LAS VEGAS/BOULDER CITY TO THE HUALAPAI LANDING SITES</u>	Page 6 - 7
<u>Tour Route 2. RETURN LEG FROM LANDING SITES TO LAS VEGAS</u>	Page 8 - 9
<u>Tour Route 3. RETURN LEG FROM LANDING SITES TO BOULDER CITY</u>	Page 10
<u>Tour Route 4. RETURN LEG FROM COLORADO RIVER LANDING SITES TO LAS VEGAS VIA THE GREEN 4 (TO BE USED IN CASE OF INCLEMENT WEATHER).</u>	Page 11 - 12
<u>Tour Route 5. LAS VEGAS TO LAS VEGAS VIA AIR ONLY WEST END TOUR</u>	Page 13 - 14
<u>Tour Route 6. BOULDER CITY TO BOULDER CITY VIA AIR ONLY WEST END TOUR</u>	Page 15 - 16
<u>Tour Route 7. MAVERICK HELICOPTERS FLIGHT FROM LAS VEGAS TO THE GRAND CANYON.</u>	Page 17
<u>Tour Route 8. MAVERICK HELICOPTERS FLIGHT FROM LAS VEGAS TO THE GRAND CANYON VIA VALLEY OF FIRE (SUNSET DEPARTURES)</u>	Page 18
<u>Tour Route 9. MAVERICK HELICOPTERS FLIGHT FROM THE GRAND CANYON TO LAS VIA THE GRAND CANYON WEST AIRPORT</u>	Page 19 - 20
<u>Tour Route 10. MAVERICK HELICOPTERS FLIGHT FROM THE GRAND CANYON TO LAS VEGAS VIA THE NARROWS/BOWL OF FIRE</u>	Page 21 - 22
<u>Tour Route 11. MAVERICK HELICOPTERS FLIGHT FROM THE GRAND CANYON TO LAS VEGAS VIA THE HOOVER DAM (SUNSET ARRIVALS) OR HENDERSON</u>	Page 23 - 24
<u>Tour Route 12. MAVERICK AND SUNSINE HELICOPTERS FLIGHT FROM HENDERSON TO THE GRAND CANYON.</u>	Page 25

<u>Tour Route 13.</u> SUNDANCE HELICOPTERS RETURN LEG FROM LANDING SITES TO LAS VEGAS VIA THE GRAND CANYON WEST AIRPORT AND THE VALLEY OF FIRE.	Page 26 - 27
<u>Tour Route 14.</u> SERENITY HELICOPTERS RETURN FLIGHT FROM LANDING SITES TO BOULDER CITY	Page 28
<u>Tour Route 15.</u> SERENITY HELICOPTERS BOULDER CITY TO BOULDER CITY VIA GREEN 4 THEN NORTH 40.	Page 29 - 30
<u>Tour Route 16.</u> SERENITY HELICOPTERS BOULDER CITY TO BOULDER CITY VIA GRAND CANYON WEST.	Page 31 - 33
<u>Tour Route 17.</u> HIGHROLL AIR (5 STAR HELICOPTERS) BOULDER CITY TO BOULDER CITY VIA GRAND CANYON WEST.	Page 34 - 35
<u>Tour Route 18.</u> RESERVED FOR FUTURE USE	Page 35
Signatories	Page 36 - 37
Appendix A.	Page 38 - 40

# Revision Chart

<u>Revision Number</u>	<u>Revision Date</u>	<u>Inserted By</u>
<u>II</u>	<u>February 11, 2011</u>	<u>David Bales, Papillon</u>
<u>III</u>	<u>June 12, 2012</u>	<u>David Bales, Papillon</u>
<u>IV</u>	<u>August 6, 2013</u>	<u>David Bales, Papillon</u>
<u>V</u>	<u>February 29, 2016</u>	<u>Matt Binner, HighRoll Air</u>

# **Affected Pages/Summary of Changes**

Revision: 5

Revision Date: February 2016

Pages: ALL

Summary of Changes:

1. Added Global Aviation and Vertical Helicopters.
2. Changed named signatories of companies.
3. Changed exit points at the Guzzler.
4. Changed flights returning to LAS exit point at the back of Quartermaster.
5. Corrected various grammars and spelling errors.
6. Removed Heli-USA routes

### **Tour Route 1. (ALL OPERATORS)**

#### **LAS VEGAS/BOULDER CITY TO THE HUALAPAI LANDING SITES (RAMADA, BEACH, BLUFF, MAVERICK BASE, SERENITY BASE, QUARTERMASTER BASE)**

<b>POSITION</b>	<b>Freq</b>	<b>Radio Call</b>
1. Hacienda	120.65	"Hacienda, 3000, for the Dam."
1a. BC Merge	120.65	"1 mile South Hacienda, 3000, for the Dam"
1b. BC VOR Merge	120.65	"2 miles South of Boulder Beach, 3300, for the Dam"
2. Hoover Dam	120.65	"S" turn at the Dam, 3000."
<p>* Aim for HWY 93 and the distinct 2 peaks on ridgeline. Do not cross east of the river during the dam viewing S-Turn. No passing during the S-Turn.</p> <p>** Papillon on a Hoover Loop Tour will turn southbound after the S-turns and remain on the east side of the Colorado River until 5 miles south of the dam and then proceed back into Boulder City. Papillon will be responsible for communicating with any other traffic and give right of way to tour traffic on route to the Grand Canyon.</p>		
3. Indian Pass	120.65	"Indian Pass, 3800, east."
<p>* <u>Caution</u> for Westbound Fixed Wing (4500MSL) traffic. No over-flying Fortification Hill.</p>		
4. Bonelli Bay	120.65	"Bonelli Bay, 3500, east."
<p>* <u>Caution</u> for Maverick and Serenity low-level Eastbound and Northwest-bound traffic at southern Tip of Bonelli Bay (see Maverick Addendum), and Northwest-bound Heli-USA traffic operating at 4500MSL. Caution for various helicopter eastbound traffic during turbulent or warm weather days, 5500MSL.</p>		
5. Delmar Butte	120.65	"One mile north of Delmar Butte, 3500, east".
<p>* <u>Caution</u> Maverick Eastbound traffic over Delmar Butte from 3500MSL.</p> <p><u><i>Begin a slow climb from 3500MSL to 4000MSL @ west shoreline of Gregg Basin to obtain 4000MSL at Pearce Ferry Airport.</i></u> Sundance &amp; Papillon cross over mid-field Pearce Ferry airport, 5 Star crosses over south tip, Maverick crosses ½ mile south of Pearce Ferry airport.</p>		
6. Pearce Ferry Airport	120.65 121.95	"Pearce Ferry Airport, 4000, east." "Pearce Ferry Airport, 4000, east."
<p>* <u>Caution</u> Maverick Eastbound traffic merging 1 mile South of Pearce Ferry, at or above 3500MSL</p>		
7. West End	121.95	"West End, Green Four, 5000 east."

Cont'd:

**Tour Route 1. LAS VEGAS TO THE HUALAPAI LANDING SITES (RAMADA, BEACH, BLUFF, MAVERICK BASE, SERENITY BASE, QUARTERMASTER BASE).**

8. Bat Towers 121.95 "Bat Towers, departing the Green Four, 5000 descending for \_\_\_\_\_."

(Site name)  
(Ramada, Beach,  
Quartermaster Base,  
Quartermaster Bluff,  
Maverick Base or  
Serenity Base)

\* Descending traffic remains along river shoreline until Point Bravo. Traffic for GCW that descends to 3,500 will issue a radio call on 121.95 "Point Bravo at \_\_\_\_\_ for \_\_\_\_\_" and a courtesy call: "Descent Canyon at \_\_\_\_\_ for \_\_\_\_\_". (altitude) (destination)  
(altitude) (destination)

Note: All traffic descending for Canyon floor landings, except the Ramada and the Beach, shall cross the Colorado River abeam Point Bravo at 4000' MSL, and shall remain on the North side of the river at 3000' MSL until abeam Descent Canyon. Canyon landing traffic shall transition back across the river while on final approach to landing sites.

GCW traffic at 3500MSL remains "hugging" South canyon walls until Decent Canyon, and then proceeds along the shoreline. Traffic remains at cruise speed to Point Bravo, then reduces to 80KIAS at Descent Canyon, descending to 3500MSL. Traffic then departs area climbing through Quartermaster Canyon or rejoins the Green 4 via burnt springs canyon. Maverick/Mustang traffic remains at cruise speed over the shoreline from Point Bravo to Quartermaster Canyon.

Note: Traffic for the notch is one way only.

10. River Crossing 121.95 "River for \_\_\_\_\_,"  
(site name)  
(The notch, The Swamp,  
Quartermaster Base,  
Quartermaster Bluff,  
Maverick Base, Waterfall, or  
Serenity Base)

Note: Serenity will be crossing the river at 2400, Sundance crosses the river at 2000, Maverick crosses the river at 2500, and Papillon & Sunshine will cross below 2000.

**Tour Route 2.**  
**RETURN LEG FROM LANDING SITES TO LAS VEGAS**

POSITION	Freq	Radio Call
1. Landing Site	121.95	"Departing _____ for the back side of QM." (site name)
2. Quartermaster Notch	121.95	"Behind/Through the notch at _____ for the back side of QM." (altitude)

Note: At Quartermaster Canyon, all climbing traffic that does not intend to proceed to GCW airport via the Guzzler will depart to the backside of Quartermaster Canyon.

Papillon and Maverick direct return traffic will use the centerline area of Quartermaster Canyon, with the intended exit point of approx. : GPS N 35°55.74' / W 113°50.23'.

Serenity direct traffic will utilize the South Wall offset of Quartermaster Canyon, with the intended exit point of approx. : N 35°55.33' / W 113° 50.22'.

Traffic direct return to Las Vegas via the Grand Wash Cliffs will depart the backside of Quartermaster Canyon with the intended exit point of approx. : N 35°56.09' / W 113°50.12'

Traffic climbing from 3500MSL out of Quartermaster to GCW AND traffic proceeding to GCW from a landing site will exit approx.: N 35°56.62' / W 113°49.65. (1/2 mile SW of the Guzzler).

Up and Down traffic will exit over the Guzzler. Air only traffic remaining at 5000MSL will exit Quartermaster east (to the right side) of the Guzzler.

3. Quartermaster	121.95	"Exiting the backside of Quartermaster for Grand Wash _____." (altitude)
3a. Quartermaster	122.90	"Exiting the backside of Quartermaster for Grand Wash _____." (altitude)

3b. Guzzler	121.95	"Exiting Quartermaster at the Guzzler for GCW _____." (altitude)
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*\*Landing/Departing Grand Canyon West Airport procedures are laid out in the Grand Canyon West Helicopter Standardization Agreement.*

Note: Passing of aircraft is not allowed between the Quartermaster Canyon and the Grand Wash Cliffs. Use caution for aircraft joining the route from Grand Canyon West Airport for the Grand Wash.

**\* Do not switch frequency until crossing over the rim of Quartermaster Canyon**

*PLEASE MAINTAIN 300' AGL UNTIL CLEAR GCW TRAFFIC AIRSPACE SOUTH OF THE WATER TANK*

Note: Watch for traffic coming from GCW to Spirit Mountain and traffic coming from the Ranch to Eternity Canyon.

4. Grand Wash	120.65	"Grand Wash Cliffs, _____ descending west." (altitude)
5. North of Meadview	120.65	"One mile north of Meadview, 5000 descending west"



Cont'd:

**Tour Route 2.**

**RETURN LEG FROM LANDING SITES TO LAS VEGAS**

6. Joker Mine            120.65            "Joker Mine, 4500, west."  
Airstrip

(7. *Bonelli Peak*        120.65            "*South of Bonelli Peak, 4500, west.*") this is a courtesy call only when the pilot deems it necessary for safety or weather.

8a. Middle Point        120.65            "Middle Point for the Narrows, 4500, west"

8b. Middle Point        120.65            "Middle Point for Bowl of Fire, 4500, west"

*\* At Middle Point, communication for eventual inbound spacing for the Class B airspace of McCarran will begin to become apparent to all pilots by the means of this Middle Point radio call.*

9a. Bowl of Fire        120.65            "Bowl of Fire, 3000, west."

9b. Narrows            120.65            "South/North" of the narrows, 4500, west."  
(as appropriate)

10. Callville            120.65            "Callville, 3000, west."

*\* After McCarran ATIS has been established all traffic to switch to McCarran tower frequency will follow procedures laid out in the McCarran ATC letter of agreement.*

*\*\* Narrows traffic will yield to Bowl of Fire traffic at the Callville merge point ½ mile North of Callville Marina. All traffic will maintain a single file spacing of ½ mile between aircraft, to assist in providing a workable inbound flow of traffic for the LAS Tower controller.*

**\*\* In the event of the inability for ATC to provide immediate clearance into the McCarran Class B airspace, the following holding patterns will be adhered to:**

1a) All Westbound traffic that has not been granted a clearance by Lava Butte will initiate a climbing R/H turn to 4000MSL, and will perform an extended circling turn using the Gypsum Mine as the pinnacle point of this holding pattern. A radio call to re-establish with ATC will occur at the Gypsum Mine, and when clearance is granted, re-enter the standard inbound ground track at Lava Butte, 3000MSL.

2a) All North by Northwest bound traffic from Hoover Dam that has not been granted a clearance by the "Vegas Wash" will initiate a level L/H circling turn 3000MSL, and will perform this circling turn using the area between Lake Las Vegas and the Vegas Wash as the pinnacle point of this holding pattern. A radio call to re-establish with ATC will occur during this pattern, and when clearance is granted, re-enter the standard inbound ground track at Lava Butte, 3000MSL.

### Tour Route 3. RETURN LEG FROM LANDING SITES TO BOULDER CITY

POSITION	Freq	Radio Call
1. Landing Site	121.95	"Departing _____ for the notch." (Site name)
2. Quartermaster Notch	121.95	"Through/behind the notch at _____ for the backside of Quartermaster." (Altitude)

Note: At Quartermaster Canyon, all climbing traffic that does not intend to proceed to GCW airport via the Guzzler will depart to the backside of Quartermaster Canyon. Papillon and Maverick direct return traffic will use the centerline area of Quartermaster Canyon, with the intended exit point of approx. : GPS N 35°55.74' / W 113°50.23'. Serenity direct traffic will utilize the South Wall offset of Quartermaster Canyon, with the intended exit point of approx. : N 35°55.33' / W 113° 50.22'. Traffic direct return to Las Vegas via the Grand Wash Cliffs will depart the backside of Quartermaster Canyon with the intended exit point of approx. : N 35°56.09' / W 113°50.12'. Traffic climbing from 3500MSL out of Quartermaster to GCW AND traffic proceeding to GCW from a landing site will exit approx.: N 35°56.62' / W 113°49.65. (1/2 mile SW of the Guzzler). Up and Down traffic will exit over the Guzzler. Air only traffic remaining at 5000MSL will exit Quartermaster east (to the right side) of the Guzzler.

3. Quartermaster	121.95	"Backside of Quartermaster _____, climbing West." (Altitude)
	123.45	"Backside of Quartermaster _____, climbing West." (Altitude)

**\* Do not switch frequency until crossing over the rim of Quartermaster Canyon**

**PLEASE MAINTAIN 300' AGL WHEN CROSSING ABEAM THE EXTENDED CENTERLINE OF GCW RUNWAYS,  
UNTIL CLEAR GCW TRAFFIC AIRSPACE SOUTH OF THE WATER TANK**

4. Buck & Doe Quarry	123.45	"The Quarry, _____, climbing West." (Altitude)
5. Spirit	123.45	"Spirit Mountain, 6500, West.
6. Meadview Antennas	123.45	"Meadview antennas, 6500, west."
7. Fuel Farm	123.45 120.65	"1 South of the Fuel Farm, 6500, descending west." "1 South of the Fuel Farm, 6500, descending west."
9. Wilson Ridge	120.65	"South end of Wilson Ridge, 4500, west."
10. Colorado River	120.65	"2 North of Willow Beach, 3500 west."
<b>Freq. change to Boulder City CTAF</b>		
10a. Colorado River	122.70	"10 miles southeast over the river, 3500, for the Substation."
11. Substation	122.70	"South of the Substation, 2700, for the ponds."
<b>*USE CAUTION FOR MAVERICK AND SUNSHINE TRAFFIC EASTBOUND FROM HENDERSON TO JOIN THE POWER LINE DEPARTURE EAST OF BOULDER CITY</b>		
12. Ponds	122.70	"Over the ponds, crossing Rwy 9/27 for Heli-spot 1, 2, or 3"

**Tour Route 4. RETURN LEG FROM COLORADO RIVER LANDING SITES TO LAS VEGAS VIA THE GREEN 4 (TO BE USED IN CASE OF INCLEMENT WEATHER).**

<b>POSITION</b>	<b>Freq</b>	<b>Radio Call</b>
1. Landing Site	121.95	"Departing _____ for Quartermaster Canyon." (site name)
2. Quartermaster Notch	121.95	"The notch at _____ for Quartermaster Canyon." (altitude)
3. Gun sight	121.95	"Abeam the Gun sight, left turn in Quartermaster Canyon, ____." (altitude)
4. Quartermaster Canyon	121.95	"Quartermaster Canyon, rejoining the Green 4 for Burnt Spring Canyon, 5000."
5. West End	121.95	"Departing West End, Green Four, 5000."
6. North of Pearce Ferry Airport	121.95 120.65	"North of Pearce Ferry Airport, 5000, west." "North of Pearce Ferry Airport, 5000, west."
7. Bonelli Peak	120.65	"North of Bonelli Peak, 5000, west."
8a. Middle Point	120.65	"Middle Point for the Narrows, 4500, west."
8b. Middle Point	120.65	"Middle Point for Bowl of Fire, 4500, west."
9a. Narrows	120.65	"South/North" of the narrows, 4500, west." (as appropriate)
9b. Bowl of Fire	120.65	"Bowl of Fire, 3000, west."
10. Callville	120.65	"Callville, 3000, west."

*\* At Middle Point, communication for eventual inbound spacing for the Class B airspace of McCarran will begin to become apparent to all pilots by the means of this Middle Point radio call.*

*\* After McCarran ATIS has been established all traffic to switch to McCarran tower frequency will follow procedures laid out in the McCarran ATC letter of agreement.*

*\*\* Narrows traffic will yield to Bowl of Fire traffic at the Callville merge point ½ mile North of Callville Marina. All traffic will maintain a single file spacing of ½ mile between aircraft, to assist in providing a workable inbound flow of traffic for the LAS Tower controller.*

**Cont.**

**Tour Route 4.** RETURN LEG FROM COLORADO RIVER LANDING SITES TO LAS VEGAS VIA THE GREEN 4 (TO BE USED IN INCLEMENT WEATHER).

**\*\* In the event of the inability for ATC to provide immediate clearance into the McCarran Class B airspace, the following holding patterns will be adhered to:**

1a) All Westbound traffic that has not been granted a clearance by Lava Butte will initiate a climbing R/H turn to 4000MSL, and will perform an extended circling turn using the Gypsum Mine as the pinnacle point of this holding pattern. A radio call to re-establish with ATC will occur at the Gypsum Mine, and when clearance is granted, re-enter the standard inbound ground track at Lava Butte, 3000MSL.

2a) All North by Northwest bound traffic from Hoover Dam that has not been granted a clearance by the "Vegas Wash" will initiate a level L/H circling turn 3000MSL, and will perform this circling turn using the area between Lake Las Vegas and the Vegas Wash as the pinnacle point of this holding pattern. A radio call to re-establish with ATC will occur during this pattern, and when clearance is granted, re-enter the standard inbound ground track at Lava Butte, 3000MSL.

## **Tour Route 5. LAS VEGAS TO LAS VEGAS VIA AIR ONLY WEST END TOUR**

<b>POSITION</b>	<b>Freq</b>	<b>Radio Call</b>
1. Hacienda	120.65	"Hacienda, 3000, for the Dam."
1a. BC Merge	120.65	"1 mile South Hacienda, 3000, for the Dam."
2. Hoover Dam	120.65	"S" turn at the Dam, 3000."
* Aim for HWY 93 and the distinct 2 peaks on ridgeline. Do not cross east of the Colorado River during the dam viewing S-Turn. No passing during the S-Turn.		
3. Indian Pass	120.65	"Indian Pass, 3800, east."
* <u>Caution</u> for Westbound Fixed Wing (4500MSL) traffic. No over-flying Fortification Hill.		
4. Bonelli Bay	120.65	"Bonelli Bay, 3500, east."
* <u>Caution</u> for Maverick and Serenity low-level Eastbound and Northwest-bound traffic at southern Tip of Bonelli Bay (see Maverick Addendum), and Northwest-bound Heli-USA traffic operating at 4500MSL. <u>Caution</u> for various helicopter Eastbound traffic during turbulent or warm weather days, 5500MSL.		
5. Delmar Butte	120.65	"One mile north of Delmar Butte, 3500, east".
* <u>Caution</u> Maverick Eastbound traffic over Delmar Butte from 3500MSL.		
6. Pearce Ferry Airport	120.65	"Pearce Ferry Airport, 4000, east."
	121.95	"Pearce Ferry Airport, 4000, east."
* <u>Caution</u> Maverick Eastbound traffic merging 1 mile South of Pearce Ferry, at or above 3500MSL		
7. West End	121.95	"West End, Green Four, 5000, east."
7a. Bat Towers	121.95	"Remaining on Green Four, 5000, east."

***Note: Per GCNP SFRA Procedures Manual the Bat Towers position report is not required unless descending for the Ramadas under Form 7711-1. Radio call 7a. will be a courtesy call***

\* Descending traffic remains along river shoreline until Point Bravo. Heli-USA ranch traffic and traffic for GCW that descended to 3,500 will issue a radio call on 121.95 "Point Bravo at \_\_\_\_\_ for \_\_\_\_\_" and "Descent Canyon at \_\_\_\_\_ for \_\_\_\_\_".  
(destination) (altitude) (altitude) (destination)

Cont'd:

**Tour Route 5. LAS VEGAS TO LAS VEGAS VIA AIR ONLY WEST END TOUR**

Note: All traffic descending for Canyon floor landings, except the Ramada and the Beach, shall cross the Colorado River abeam Point Bravo at 4000' MSL, and shall remain on the North side of the river at 3000' MSL until abeam Descent Canyon. Canyon landing traffic shall transition back across the river while on final approach to landing sites.

GCW traffic at 3500MSL remains "hugging" South canyon walls until Descent Canyon, and then proceeds along the shoreline. Traffic remains at cruise speed to Point Bravo, and then reduces to 80KIAS at Descent Canyon, descending to 3500MSL. Traffic then departs area climbing through Quartermaster Canyon or rejoins the Green 4 via burnt springs canyon.

Maverick/Mustang traffic remains at cruise speed over the shoreline from Point Bravo to Quartermaster Canyon.

8. Quartermaster Canyon."	121.95	"Quartermaster Canyon, Green Four, 5000 for Burnt Springs Canyon."
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9. Burnt Springs Canyon	121.95	"Burnt Springs Canyon, Green Four, 5000."
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10. West End	121.95	"Departing West End, Green Four, 5000, west."
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11. North of Pearce Ferry Airport	121.95 120.65	"Three North of Pearce Ferry Airport, 5000, west." "Three North of Pearce Ferry Airport, 5000, west."
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(12. Bonelli Peak 120.65 "North of Bonelli Peak, 5000, west.") this is a courtesy call only when the pilot deems it necessary for safety or weather.

13a. Middle Point	120.65	"Middle Point for the Narrows, 4500, west."
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13b. Middle Point	120.65	"Middle Point for Bowl of Fire, 4500, west."
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*\* At Middle Point, communication for eventual inbound spacing for the Class B airspace of McCarran will begin to become apparent to all pilots by the means of this Middle Point radio call.*

14a. Narrows	120.65	"South/North" of the narrows, 4500, west." (as appropriate)
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14b. Bowl of Fire	120.65	"Bowl of Fire, 3000, west."
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15. Callville	120.65	"Callville, 3000, west."
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*\* After McCarran ATIS has been established all traffic to switch to McCarran tower frequency will follow procedures laid out in the McCarran ATC letter of agreement.*

*\*\* Narrows traffic will yield to Bowl of Fire traffic at the Callville merge point ½ mile North of Callville Marina. All traffic will maintain a single file spacing of ½ mile between aircraft, to assist in providing a workable inbound flow of traffic for the LAS Tower controller.*

## **Tour Route 6. BOULDER CITY TO BOULDER CITY VIA AIR ONLY WEST END TOUR**

<b>POSITION</b>	<b>Freq</b>	<b>Radio Call</b>
1. Hacienda	120.65	"1 mile South Hacienda, 3000, for the Dam."
2. Hoover Dam	120.65	"S" turn at the Dam, 3000."
* Aim for HWY 93 and the distinct 2 peaks on ridgeline. Do not cross east of the Colorado River during the dam viewing S-Turn. No passing during the S-Turn.		
** <u>Caution</u> Heli-USA's A119 will <u>not</u> conduct S-turns at the dam, but will continue direct to Indian Pass and merge back into the tour traffic. Heli-USA will communicate with any merging traffic and give right of way to traffic climbing up to Indian Pass.		
3. Indian Pass	120.65	"Indian Pass, 3800, east."
* <u>Caution</u> for Westbound Fixed Wing (4500MSL) traffic. No over-flying Fortification Hill.		
4. Bonelli Bay	120.65	"Bonelli Bay, 3500, east."
* <u>Caution</u> for Maverick low-level Eastbound and Northwest-bound traffic at southern Tip of Bonelli Bay (see Maverick Addendum), and Northwest-bound Heli-USA traffic operating at 4500MSL. <u>Caution</u> for various helicopter Eastbound traffic during turbulent or warm weather days, 5500MSL.		
5. Delmar Butte	120.65	"One mile north of Delmar Butte, 3500, east."
* <u>Caution</u> Maverick Eastbound traffic over Delmar Butte from 3500MSL.		
6. Pearce Ferry	120.65	"Pearce Ferry Airport, 4000, east."
Airport	121.95	"Pearce Ferry Airport, 4000, east."
* <u>Caution</u> Maverick Eastbound traffic merging 1 mile South of Pearce Ferry, at or above 3500MSL		
7. West End	121.95	"West End, Green Four, 5000, east."
7a. Bat Towers	121.95	"Remaining on Green Four, 5000 east."

***Note: Per GCNP SFRA Procedures Manual the Bat Towers position report is not required unless descending for the Ramadas under Form 7711-1. Radio call 7a. will be a courtesy call***

\* Descending traffic remains along river shoreline until Point Bravo. Traffic for GCW that descends to 3,500 will issue a radio call on 121.95 "Point Bravo at \_\_\_\_\_ for \_\_\_\_\_" and a courtesy call: "Descent Canyon at \_\_\_\_\_ for \_\_\_\_\_". (altitude) (destination)  
(altitude) (destination)

**Cont'd:**

**Tour Route 6. BOULDER CITY TO BOULDER CITY VIA AIR ONLY WEST END TOUR**

Note: All traffic descending for Canyon floor landings, except the Ramada and the Beach, shall cross the Colorado River abeam Point Bravo at 4000' MSL, and shall remain on the North side of the river at 3000' MSL until abeam Descent Canyon. Canyon landing traffic shall transition back across the river while on final approach to landing sites.

GCW traffic at 3500MSL remains "hugging" South canyon walls until Descent Canyon, and then proceeds along the shoreline. Traffic remains at cruise speed to Point Bravo, then reduces to 80KIAS at Descent Canyon, descending to 3500MSL. Traffic then departs area climbing through Quartermaster Canyon or rejoins the Green 4 via burnt springs canyon.

Maverick/Mustang traffic remains at cruise speed over the shoreline from Point Bravo to Quartermaster Canyon.

8. Quartermaster Canyon	121.95	"Quartermaster Canyon, Green Four, 5000 for Burnt Springs."
9. Burnt Springs Canyon	121.95	"Burnt Springs Canyon, Green Four, 5000."
10. West End	121.95	"Departing West End, Green Four, 5000, southwest."
11. North of Pearce Ferry Airport	121.95 120.65	"One North of Pearce Ferry Airport, 5000, southwest." "One North of Pearce Ferry Airport, 5000, southwest."
12. Joker Mine	120.65	"Joker Mine, 5000, southwest."
13. Temple Bar	120.65	"Temple Bar, 4500, southwest."
14. Black Point	120.65	"Black Point, South end of Wilson Ridge, 4500, west."
15. Colorado River	120.65	"Over the river, 5 south of the dam, 3500 west."

***Freq. change to Boulder City CTAF***

16. Colorado River	122.70	"7 miles to the east, 3500, for the Substation."
17. Substation	122.70	"South of the Substation, 2700, for the ponds."

***\*USE CAUTION FOR MAVERICK AND SUNSHINE TRAFFIC EASTBOUND FROM HENDERSON TO JOIN THE POWER LINE DEPARTURE EAST OF BOULDER CITY***

18. Ponds	122.70	"Over the ponds, crossing Rwy 9/27 for Heli-spot 1, 2, or 3."
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**Tour Route 7. MAVERICK HELICOPTERS FLIGHT FROM LAS VEGAS TO THE GRAND CANYON.**

<b>POSITION</b>	<b>Freq</b>	<b>Radio Call</b>
1. Hacienda	120.65	"Hacienda, 3000, for the Dam."
2. Hoover Dam	120.65	"S" turn at the Dam, 3000."
* Aim for HWY 93 and the distinct 2 peaks on ridgeline. Do not cross east of the Colorado River during the dam viewing S-Turn. No passing during the S-Turn.		
3. Indian Pass	120.65	"Indian Pass, 3800, east."
* <u>Caution</u> for Westbound Fixed Wing (4500MSL) traffic. No over-flying Fortification Hill.		
4. Bonelli Bay	120.65	"Bonelli Bay, _____, east." (altitude) (No lower than 2,500)
5. Delmar Butte	120.65	"Delmar Butte, 3500, east."
6. Pearce Ferry Airport	120.65 121.95	"Pearce Ferry Airport, 4000, east." "Pearce Ferry Airport, 4000, east."
7. West End	121.95	"West End, Green Four, 5000, east."
8. Bat Towers	121.95	"Bat Towers, 5000, descending off of the Green 4 for Maverick Base/Swamp."
<b><i>Note 1: Minimum Crossing Altitude abeam Descent Canyon Ramada's is 3000 feet MSL.</i></b>		
10. River Crossing	121.95	"River for _____," ("The Notch" or "Maverick Base")
11. Notch	121.95	"Quartermaster notch, 2200, for the Swamp."

**Tour Route 8. MAVERICK HELICOPTERS FLIGHT FROM LAS VEGAS TO THE GRAND CANYON VIA VALLEY OF FIRE (SUNSET DEPARTURES)**

<b>POSITION</b>	<b>Freq</b>	<b>Radio Call</b>
1. Hidden Valley	120.65	"Entering Hidden Valley, 4300, Northeast."
2. Valley of Fire	120.65	"Southwest side of Valley of Fire, 3500 (or above), East."
3. Iceberg Canyon	120.65 121.95	"South-end of Iceberg Canyon, 3500, East." "South-end of Iceberg Canyon, 3500, East."
4. Pearce Ferry Airport	121.95	"2 miles North of Pearce Ferry Airport, 4000, climbing East."

**NOTE**

No higher than 4,000 feet MSL until past Pearce Ferry Airport, then a climb for traffic separation

5. West End	121.95	"Entering the West End, Green 4, 5000, east."
6. Bat Towers	121.95	"Bat Towers, 5000, descending off of the Green 4 for Maverick Base/Swamp."

***Note 1: Minimum Crossing Altitude abeam the Descent Canyon Ramada's is 3000 feet MSL.***

8. River Crossing	121.95	"River for _____," ("The Notch" or "Maverick Base")
9. Notch	121.95	"Quartermaster notch, 2200, for the Swamp."

## **Tour Route 9. MAVERICK HELICOPTERS FLIGHT FROM THE GRAND CANYON TO LAS VIA THE GRAND CANYON WEST AIRPORT**

<b>POSITION</b>	<b>Freq</b>	<b>Radio Call</b>
1. Maverick Base	121.95	"Departing Maverick Base for GCW."
2. Quartermaster Notch	121.95	"Backside of the notch at 2000 for GCW."
3b. Guzzler	121.95	"Exiting Quartermaster at the Guzzler for GCW _____." (altitude)

Note: At Quartermaster Canyon, all climbing traffic that does not intend to proceed to GCW airport via the Guzzler will depart to the backside of Quartermaster Canyon.

Papillon and Maverick direct return traffic will use the centerline area of Quartermaster Canyon, with the intended exit point of approx. : GPS N 35°55.74' / W 113°50.23'.

Serenity direct traffic will utilize the South Wall offset of Quartermaster Canyon, with the intended exit point of approx. : N 35°55.33' / W 113° 50.22'.

Traffic direct return to Las Vegas via the Grand Wash Cliffs will depart the backside of Quartermaster Canyon with the intended exit point of approx. : N 35°56.09' / W 113°50.12'

Traffic climbing from 3500MSL out of Quartermaster to GCW AND traffic proceeding to GCW from a landing site will exit approx.: N 35°56.62' / W 113°49.65. (1/2 mile SW of the Guzzler).

Up and Down traffic will exit over the Guzzler. Air only traffic remaining at 5000MSL will exit Quartermaster east (to the right side) of the Guzzler.

Note: Passing of aircraft is not allowed between the Quartermaster Canyon and the Grand Wash Cliffs. Use caution for aircraft joining the route from Grand Canyon West Airport for the Grand Wash.

**\* Do not switch frequency until crossing over the rim of Quartermaster Canyon**

*PLEASE MAINTAIN 300' AGL UNTIL CLEAR GCW TRAFFIC AIRSPACE SOUTH OF THE WATER TANK*

Note: Watch for traffic coming from GCW to Spirit Mountain and traffic coming from the Ranch to Eternity Canyon.

\*Landing/Departing Grand Canyon West Airport procedures are laid out in the Grand Canyon West Helicopter Standardization Agreement.\*

Land at GCW

Note: Use caution for traffic coming from Quartermaster Canyon and the Ranch.

4. Old Ranch	123.45	"Old Ranch 5700 for Spirit Mountain."
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Cont'd:

**Tour Route 9. MAVERICK HELICOPTERS FLIGHT FROM THE GRAND CANYON TO LAS VEGAS VIA THE GRAND CANYON WEST AIRPORT**

- |                         |                  |   |
|-------------------------|------------------|---|
| 5. Spirit Mountain      | 123.45           | "Spirit Mountain, _____ west."<br>(altitude)  |
| 6. Antenna              | 123.45           | "Meadview antennas, 5200, for Maverick Fuel."   |
| 7. Hualapai Wash        | 123.45           | "Hualapai Wash, 3500 (or below), for Maverick Fuel."  |
| 8. Maverick Fuel        | 123.45<br>120.65 | "Departing Maverick Fuel, West."<br>"One mile west of Maverick Fuel, Westbound at _____."<br>(altitude) |
| 9. Bonelli Bay          | 120.65           | "South tip of Bonelli Bay at <u>1700 OR 4500</u> Northwest."  |
| 10. East-end of Narrows | 120.65           | "Crossing the East side of The Narrows at 3200 for the Bowl of Fire."                                   |
| 11. Bowl of Fire        | 120.65           | "Bowl of Fire, 3000, West."   |

*\* After McCarran ATIS has been established all traffic to switch to McCarran tower frequency will follow procedures laid out in the McCarran ATC letter of agreement.*

*\*\* Narrows traffic will yield to Bowl of Fire traffic at the Callville merge point ½ mile North of Callville Marina. All traffic will maintain a single file spacing of ½ mile between aircraft, to assist in providing a workable inbound flow of traffic for the LAS Tower controller.*

**\*\* In the event of the inability for ATC to provide immediate clearance into the McCarran Class B airspace, the following holding patterns will be adhered to:**

1a) All Westbound traffic that has not been granted a clearance by Lava Butte will initiate a climbing R/H turn to 4000MSL, and will perform an extended circling turn using the Gypsum Mine as the pinnacle point of this holding pattern. A radio call to re-establish with ATC will occur at the Gypsum Mine, and when clearance is granted, re-enter the standard inbound ground track at Lava Butte, 3000MSL.

2a) All North by Northwest bound traffic from Hoover Dam that has not been granted a clearance by the "Vegas Wash" will initiate a level L/H circling turn 3000MSL, and will perform this circling turn using the area between Lake Las Vegas and the Vegas Wash as the pinnacle point of this holding pattern. A radio call to re-establish with ATC will occur during this pattern, and when clearance is granted, re-enter the standard inbound ground track at Lava Butte, 3000MSL.

**Tour Route 10. MAVERICK HELICOPTERS FLIGHT FROM THE GRAND CANYON TO LAS VEGAS VIA THE NARROWS/BOWL OF FIRE**

POSITION	Freq	Radio Call
1. Maverick Base	121.95	"Departing Maverick Base for Quartermaster Climb."
2. Quartermaster Bluff	121.95	"Quartermaster Bluff 2000 for Quartermaster Climb."
3. Quartermaster Notch	121.95	"Backside Quartermaster notch at 2000 for backside of Quartermaster."

Note: At Quartermaster Canyon, all climbing traffic that does not intend to proceed to GCW airport via the Guzzler will depart to the backside of Quartermaster Canyon.

Papillon and Maverick direct return traffic will use the centerline area of Quartermaster Canyon, with the intended exit point of approx. : GPS N 35°55.74' / W 113°50.23'.

Serenity direct traffic will utilize the South Wall offset of Quartermaster Canyon, with the intended exit point of approx. : N 35°55.33' / W 113° 50.22'.

Traffic direct return to Las Vegas via the Grand Wash Cliffs will depart the backside of Quartermaster Canyon with the intended exit point of approx. : N 35°56.09' / W 113°50.12'

Traffic climbing from 3500MSL out of Quartermaster to GCW AND traffic proceeding to GCW from a landing site will exit approx.: N 35°56.62' / W 113°49.65. (1/2 mile SW of the Guzzler).

Up and Down traffic will exit over the Guzzler. Air only traffic remaining at 5000MSL will exit Quartermaster east (to the right side) of the Guzzler.

4. Exiting	121.95	"Exiting Quartermaster Canyon <u>5000 (or higher)</u> , West."
Quartermaster Canyon	123.45	"Exiting Quartermaster Canyon <u>5000 (or higher)</u> , West."

**\* Do not switch frequency until crossing over the rim of Quartermaster Canyon**

*PLEASE MAINTAIN 300' AGL WHEN CROSSING ABEAM THE EXTENDED CENTERLINE OF GCW RUNWAYS, UNTIL CLEAR GCW TRAFFIC AIRSPACE SOUTH OF THE WATER TANK*

5. Buck & Doe Quarry	123.45	"The Quarry, _____, climbing West." (Altitude)
6. Spirit Mountain	123.45	"Spirit Mountain, _____ West." (altitude)
7. Antenna	123.45	"Meadview antennas 5200 for Maverick Fuel."
8. Hualapai Wash	123.45	"Hualapai Wash, 3500 (or below), for Maverick Fuel."

Cont'd:

**Tour Route 10. MAVERICK HELICOPTERS FLIGHT FROM THE GRAND CANYON TO LAS VEGAS VIA THE NARROWS/BOWL OF FIRE**

9. Maverick Fuel	123.45 120.65	"Departing Maverick Fuel, West." "One mile west of Maverick Fuel, Westbound at _____." (altitude)
10. Bonelli Bay	120.65	"South tip of Bonelli Bay at <u>1700 OR 4500</u> Northwest."
11. East-end of Narrows	120.65	"Crossing the East side of The Narrows at 3200 for the Bowl of Fire."
12. Bowl of Fire	120.65	"Bowl of Fire, 3000, West."

*\* After McCarran ATIS has been established all traffic to switch to McCarran tower frequency will follow procedures laid out in the McCarran ATC letter of agreement.*

*\*\* Narrows traffic will yield to Bowl of Fire traffic at the Callville merge point ½ mile North of Callville Marina. All traffic will maintain a single file spacing of ½ mile between aircraft, to assist in providing a workable inbound flow of traffic for the LAS Tower controller.*

**\*\* In the event of the inability for ATC to provide immediate clearance into the McCarran Class B airspace, the following holding patterns will be adhered to:**

1a) All Westbound traffic that has not been granted a clearance by Lava Butte will initiate a climbing R/H turn to 4000MSL, and will perform an extended circling turn using the Gypsum Mine as the pinnacle point of this holding pattern. A radio call to re-establish with ATC will occur at the Gypsum Mine, and when clearance is granted, re-enter the standard inbound ground track at Lava Butte, 3000MSL.

2a) All North by Northwest bound traffic from Hoover Dam that has not been granted a clearance by the "Vegas Wash" will initiate a level L/H circling turn 3000MSL, and will perform this circling turn using the area between Lake Las Vegas and the Vegas Wash as the pinnacle point of this holding pattern. A radio call to re-establish with ATC will occur during this pattern, and when clearance is granted, re-enter the standard inbound ground track at Lava Butte, 3000MSL.

**Tour Route 11. MAVERICK HELICOPTER FLIGHTS FROM THE GRAND CANYON TO LAS VEGAS VIA THE HOOVER DAM (SUNSET ARRIVALS) OR HENDERSON**

<b>POSITION</b>	<b>Freq</b>	<b>Radio Call</b>
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\*Previous Routes and radio calls previous to Spirit Mountain are determined in other tour routes depending on operator

1. Spirit Mountain	123.45	"Spirit Mountain, _____ west." (altitude)
2. Antenna	123.45	"Meadview antennas, 5200, for Maverick Fuel."
3. Hualapai Wash	123.45	"Hualapai Wash, 3500 (or below), for Maverick Fuel."
4. Maverick Fuel	123.45	"Departing Maverick Fuel, West."
	120.65	"One mile west of Maverick Fuel, Westbound for Wilsons Ridge at _____. (altitude)"
5. Black Point	120.65	"Black Point, South end of Wilson's Ridge, 4500 west."
6. South of Dam	120.65	"1 South of the Hacienda for the Dam" (Make position report in relation to Hoover Dam)
7. Hacienda	120.65	"Hacienda, <u>3000 (or below)</u> , for the Dam"
8. Hoover Dam	120.65	"S" turns at the Dam, <u>3000 (or below)</u> ."
9. Hoover Dam	120.65	"Departing the Dam to the West along Boulder Beach"

\*10a – 13a is for traffic returning to Henderson Airport via Boulder City.

\*\* Pilot will state actual altitude if below 4500

10a. Wilson Ridge	120.65	"South end Wilson Ridge, 4500, West"
11a. Willow Beach	120.65	"Willow Beach, 4500, West"
	122.70	"Willow Beach, 4500, West for the dry lake bed"
12a. SE Boulder	122.70	"6 Southeast, 4500, West for the dry lake bed"
13a. Dry Lake Bed	122.70	"Dry Lake Bed, 4500, West for Henderson Ridge"

Cont'd:

**Tour Route 11. MAVERICK HELICOPTERS FLIGHT FROM THE GRAND CANYON TO LAS VEGAS VIA THE HOOVER DAM (SUNSET ARRIVALS) OR HENDERSON**

*\* After McCarran ATIS has been established all traffic to switch to McCarran tower frequency will follow procedures laid out in the McCarran ATC letter of agreement.*

*\*\* Narrows traffic will yield to Bowl of Fire traffic at the Callville merge point ½ mile North of Callville Marina. All traffic will maintain a single file spacing of ½ mile between aircraft, to assist in providing a workable inbound flow of traffic for the LAS Tower controller.*

**\*\* In the event of the inability for ATC to provide immediate clearance into the McCarran Class B airspace, the following holding patterns will be adhered to:**

1a) All Westbound traffic that has not been granted a clearance by Lava Butte will initiate a climbing R/H turn to 4000MSL, and will perform an extended circling turn using the Gypsum Mine as the pinnacle point of this holding pattern. A radio call to re-establish with ATC will occur at the Gypsum Mine, and when clearance is granted, re-enter the standard inbound ground track at Lava Butte, 3000MSL.

2a) All North by Northwest bound traffic from Hoover Dam that has not been granted a clearance by the "Vegas Wash" will initiate a level L/H circling turn 3000MSL, and will perform this circling turn using the area between Lake Las Vegas and the Vegas Wash as the pinnacle point of this holding pattern. A radio call to re-establish with ATC will occur during this pattern, and when clearance is granted, re-enter the standard inbound ground track at Lava Butte, 3000MSL.



**Tour Route 12. HELICOPTER FLIGHTS FROM HENDERSON TO THE GRAND CANYON.**

- |                          |        |  |
|--------------------------|--------|--|
| 1. North of Dry Lake Bed | 122.70 | “6 Southwest, 4000, descending East for the substation.”             |
| 2. Substation            | 122.70 | “Half mile south of substation, 2400, for the power line departure.” |

**\*Remainder of the route will be depicted on “Tour Route 1”**

**Tour Route 13. SUNDANCE HELICOPTERS RETURN LEG FROM LANDING SITES TO LAS VEGAS VIA THE GRAND CANYON WEST AIRPORT AND THE VALLEY OF FIRE.**

POSITION	Freq	Radio Call
1. Landing Site	121.95	"Departing _____ for the back side of Quartermaster," (site name)
2. Quartermaster Notch	121.95	"The notch at _____ for the back side of QM." (altitude)
<p>Note: At Quartermaster Canyon, all climbing traffic that does not intend to proceed to GCW airport via the Guzzler will depart to the backside of Quartermaster Canyon.</p> <p>Papillon and Maverick direct return traffic will use the centerline area of Quartermaster Canyon, with the intended exit point of approx. : GPS N 35°55.74' / W 113°50.23'.</p> <p>Serenity direct traffic will utilize the South Wall offset of Quartermaster Canyon, with the intended exit point of approx. : N 35°55.33' / W 113° 50.22'.</p> <p>Traffic direct return to Las Vegas via the Grand Wash Cliffs will depart the backside of Quartermaster Canyon with the intended exit point of approx. : N 35°56.09' / W 113°50.12'</p> <p>Traffic climbing from 3500MSL out of Quartermaster to GCW AND traffic proceeding to GCW from a landing site will exit approx.: N 35°56.62' / W 113°49.65. (1/2 mile SW of the Guzzler).</p> <p>Up and Down traffic will exit over the Guzzler. Air only traffic remaining at 5000MSL will exit Quartermaster east (to the right side) of the Guzzler.</p>		
3. 1 mi South of the Guzzler	121.95	"Exiting Quartermaster at Guzzler for Grand Wash _____." (altitude)
3a. 1 mi South of the Guzzler	122.90	"Exiting QM for the Grand Wash _____" (altitude)
* There shall be no passing allowed between the Guzzler and the Grand Wash cliffs.		
3b. Guzzler	121.95	"Exiting Quartermaster at the Guzzler for GCW _____." (altitude)
<p><i>*<u>Landing/Departing Grand Canyon West Airport procedures are laid out in the Grand Canyon West Helicopter Standardization Agreement.</u></i></p> <p><i>* <b>Do not switch frequency until crossing over the rim of Quartermaster Canyon</b></i>  PLEASE MAINTAIN 300' AGL UNTIL CLEAR GCW TRAFFIC AIRSPACE SOUTH OF THE WATER TANK</p>		
4. Grand Wash	120.65	"Grand Wash Cliffs, _____ west." (altitude)
5. North of Meadview	120.65	"One mile north of Meadview, 5000 descending, west.
6. Joker Mine Airstrip	120.65	"North of Joker Mine, 4500, northwest for valley of fire."

Cont'd:

**Tour Route 13. SUNDANCE HELICOPTERS RETURN LEG FROM LANDING SITES TO LAS VEGAS VIA THE GRAND CANYON WEST AIRPORT AND THE VALLEY OF FIRE.**

POSITION	Freq	Radio Call
<i>*Caution, tours returning via north of Bonelli Peak will cross this route. Descend to 3500 as you turn north for Overton Arm.</i>		
7. Overton Arm	120.65	"Overton Arm for the Valley of Fire, 3500, west."
8. Valley of Fire	120.65	"Departing the Valley of Fire for the Bowl of Fire, 3500, south"
9. Bowl of Fire	120.65	"North of the Bowl of Fire, 4500, south."
10. Bowl of Fire	120.65	"Bowl of Fire, 3000 west."

*\* After McCarran ATIS has been established all traffic to switch to McCarran tower frequency will follow procedures laid out in the McCarran ATC letter of agreement.*

*\*\* Narrows traffic will yield to Bowl of Fire traffic at the Callville merge point ½ mile North of Callville Marina. All traffic will maintain a single file spacing of ½ mile between aircraft, to assist in providing a workable inbound flow of traffic for the LAS Tower controller.*

**\*\* In the event of the inability for ATC to provide immediate clearance into the McCarran Class B airspace, the following holding patterns will be adhered to:**

1a) All Westbound traffic that has not been granted a clearance by Lava Butte will initiate a climbing R/H turn to 4000MSL, and will perform an extended circling turn using the Gypsum Mine as the pinnacle point of this holding pattern. A radio call to re-establish with ATC will occur at the Gypsum Mine, and when clearance is granted, re-enter the standard inbound ground track at Lava Butte, 3000MSL.

2a) All North by Northwest bound traffic from Hoover Dam that has not been granted a clearance by the "Vegas Wash" will initiate a level L/H circling turn 3000MSL, and will perform this circling turn using the area between Lake Las Vegas and the Vegas Wash as the pinnacle point of this holding pattern. A radio call to re-establish with ATC will occur during this pattern, and when clearance is granted, re-enter the standard inbound ground track at Lava Butte, 3000MSL.

## **Tour Route 14. SERENITY HELICOPTERS RETURN FLIGHT FROM LANDING SITES TO BOULDER CITY**

<b>POSITION</b>	<b>Freq</b>	<b>Radio Call</b>
1. Serenity	121.95	"Departing Serenity for Quartermaster Climb."
2. Exiting	121.95	"Exiting Quartermaster Canyon <u>5000 (or higher)</u> , West."
Quartermaster Canyon	123.45	"Exiting Quartermaster Canyon <u>5000 (or higher)</u> , West."

\* At Quartermaster Canyon, all climbing traffic that does not intend to proceed to GCW airport via the Guzzler will depart to the backside of Quartermaster Canyon. Papillon and Maverick direct return traffic will use the centerline area of Quartermaster Canyon, with the intended exit point of approx. : GPS 35' 55' 44.44" N 113° 50' 13.31"W. Heli-USA and Serenity direct traffic will utilize the South Wall offset of Quartermaster Canyon, with the intended exit point of approx. : GPS 35' 55' 19.67"N 113° 50' 13.31"W. Traffic direct return to Las Vegas via the Grand Wash Cliffs will depart the backside of Quartermaster Canyon with the intended exit point of approx. : GPS 35°56'5.63"N 113°50'7.40"W

**\* Do not switch frequency until crossing over the rim of Quartermaster Canyon**

*PLEASE MAINTAIN 300' AGL WHEN CROSSING ABEAM THE EXTENDED CENTERLINE OF GCW RUNWAYS, UNTIL CLEAR GCW TRAFFIC AIRSPACE SOUTH OF THE WATER TANK*

3. South of Guzzler	122.90	"Clear of Quartermaster _____, West for Grand Wash." (altitude)
4. Old Heli Ranch	122.90	"Over Old Heli ranch, _____ clear west for Grand Wash."
5. Grand Wash	120.65	"Grand Wash Cliffs, _____, west." (actual altitude)
6. Temple Bar	120.65	"South of Temple bar, _____, west." (actual altitude)
7. East Shore Bonelli Bay	120.65	"East Shore Bonelli Bay, _____,west." (actual altitude)
8. South of Narrows	120.65	"South of Narrows 4000, west"
9. Boulder Beach	120.65	"Boulder Beach, 4000 West for Boulder City."

### **Freq. change to Boulder City CTAF**

10. Boulder Beach	122.70	"7 miles North East, 4000, inbound for Boulder City."
11. Abeam VOR	122.70	"West Abeam VOR, 3700, for left downwind or golf course arrival."
12. Left Downwind 33 Or Golf Course Arrival to BFE	122.70	"Actual arrival (left downwind or golf course arrival) for BFE "

**Tour Route 15. SERENITY HELICOPTERS BOULDER CITY TO BOULDER CITY VIA GREEN 4. AIR ONLY**

<b>POSITION</b>	<b>Freq</b>	<b>Radio Call</b>
-----------------	-------------	-------------------

- |                     |        |  |
|---------------------|--------|--|
| 1. SW Boulder Beach | 120.65 | "2 miles SW Boulder Beach, 3300, for the Hacienda" |
| 2. Hacienda         | 120.65 | "Over the Hacienda, 3000, East to join the tour"   |
| 3. Hoover Dam       | 120.65 | "S" turn at the Dam, 3000."                        |

\* Aim for HWY 93 and the distinct 2 peaks on ridgeline. Do not cross east of the Colorado River during the dam viewing S-Turn. No passing during the S-Turn.

\*\* On South wind days when runway 15 is in use at Boulder City, Serenity Helicopters will conduct the standard powerline departure, joining the tour 1 mile South of the Hacienda.

- |                |        |                            |
|----------------|--------|----------------------------|
| 4. Indian Pass | 120.65 | "Indian Pass, 3800, east." |
|----------------|--------|----------------------------|

\* Caution for Westbound Fixed Wing (4500MSL) traffic. No over-flying Fortification Hill.

- |                |        |  |
|----------------|--------|--|
| 5. Bonelli Bay | 120.65 | "Bonelli Bay, _____, east."<br>(altitude)<br>(No lower than 2,500) |
|----------------|--------|--|

\* Caution for Maverick low-level Eastbound and Northwest-bound traffic at southern Tip of Bonelli Bay (see Maverick Addendum), and Serenity Helicopters at East shore of Bonelli Bay Westbound. Caution for various helicopter Eastbound traffic during turbulent or warm weather days, 5500MSL.

- |                 |        |  |
|-----------------|--------|--|
| 6. Delmar Butte | 120.65 | "1/2 north of Delmar Butte, 3500, east". |
|-----------------|--------|--|

\* Caution Maverick Eastbound traffic over Delmar Butte 3500MSL

\* Caution Serenity Eastbound traffic over Delmar Butte 3500MSL on turbulent days.

- |                 |        |                                     |
|-----------------|--------|-------------------------------------|
| 7. Pearce Ferry | 120.65 | "Pearce Ferry Airport, 4000, east." |
| Airport         | 121.95 | "Pearce Ferry Airport, 4000, east." |

\* Caution Maverick Eastbound traffic merging 1 mile South of Pearce Ferry, at or above 3500MSL

\* Caution Serenity South of Pierce Fairy on turbulent days

- |             |        |                                     |
|-------------|--------|-------------------------------------|
| 8. West End | 121.95 | "West End, Green Four, 5000, east." |
|-------------|--------|-------------------------------------|

- |               |        |   |
|---------------|--------|---|
| 9. Bat Towers | 121.95 | "Departing the Green Four descending to 3500" |
|---------------|--------|---|

\* Traffic descending for Canyon floor landings remains along river shoreline. Traffic for GCW descending, remains "hugging" canyon walls until the Ramada's, and then proceeds along the shoreline .

\* Descending traffic remains along river shoreline. All departing GCW UP & Down traffic issue a radio call on 121.95 "Eternity Canyon at \_\_\_\_\_ for \_\_\_\_\_".  
(altitude) (destination)

Cont'd:

**Tour Route 15. SERENITY HELICOPTERS BOULDER CITY TO BOULDER CITY VIA GREEN 4  
AIR ONLY**

- |                                  |        |  |
|----------------------------------|--------|--|
| 10. Quartermaster Point          | 121.95 | "Quartermaster Canyon for the backside of Quartermaster 3500." |
| 11. Exiting Quartermaster Canyon | 121.95 | "Exiting Quartermaster Canyon <u>5000 (or higher)</u> , West." |
|                                  | 123.45 | "Exiting Quartermaster Canyon <u>5000 (or higher)</u> , West." |

\* At Quartermaster Canyon, all climbing traffic that does not intend to proceed to GCW airport via the Guzzler will depart to the backside of Quartermaster Canyon. Papillon and Maverick direct return traffic will use the centerline area of Quartermaster Canyon, with the intended exit point of approx. : GPS 35° 55' 44.44" N 113° 50' 13.31"W. Heli-USA and Serenity direct traffic will utilize the South Wall offset of Quartermaster Canyon, with the intended exit point of approx. : GPS 35° 55' 19.67"N 113° 50' 13.31"W. Traffic direct return to Las Vegas via the Grand Wash Cliffs will depart the backside of Quartermaster Canyon with the intended exit point of approx. : GPS 35°56'5.63"N 113°50'7.40"W

**\* Do not switch frequency until crossing over the rim of Quartermaster Canyon**

*PLEASE MAINTAIN 300' AGL WHEN CROSSING ABEAM THE EXTENDED CENTERLINE OF GCW RUNWAYS, UNTIL CLEAR GCW TRAFFIC AIRSPACE SOUTH OF THE WATER TANK*

- |                            |        |  |
|----------------------------|--------|--|
| 12. South of Guzzler       | 122.90 | "Clear of Quartermaster _____, West for Grand Wash."<br>(altitude) |
| 13. Old Heli Ranch         | 122.90 | "Over Old Heli ranch, _____ clear west for Grand Wash."            |
| 14. Grand Wash             | 120.65 | "Grand Wash Cliffs, _____, west."<br>(actual altitude)             |
| 15. Temple Bar             | 120.65 | "South of Temple bar, _____, west."<br>(actual altitude)           |
| 16. East Shore Bonelli Bay | 120.65 | "East Shore Bonelli Bay, _____,west."<br>(actual altitude)         |
| 17. South of Narrows       | 120.65 | "South of Narrows 4000, west"                                      |
| 18. Boulder Beach          | 120.65 | "Boulder Beach, 4000 West for Boulder City."                       |

**Freq. change to Boulder City CTAF**

- |  |        |   |
|--|--------|---|
| 19. Boulder Beach                                  | 122.70 | "7 miles North East, 4000, inbound for Boulder City."             |
| 20. Abeam VOR                                      | 122.70 | "West Abeam VOR, 3700, for left downwind or golf course arrival." |
| 21. Left Downwind 33 Or Golf Course Arrival to BFE | 122.70 | "Actual arrival (left downwind or golf course arrival) for BFE "  |

**Tour Route 16. SERENITY HELICOPTERS BOULDER CITY TO BOULDER CITY VIA GRAND CANYON WEST.**

<b>POSITION</b>	<b>Freq</b>	<b>Radio Call</b>
1. SW Boulder Beach	120.65	"2 miles SW Boulder Beach, 3300, for the Hacienda"
2. Hacienda	120.65	"Over the Hacienda, 3000, East to join the tour"
3. Hoover Dam	120.65	"S" turn at the Dam, 3000."
<p>* Aim for HWY 93 and the distinct 2 peaks on ridgeline. Do not cross east of the Colorado River during the dam viewing S-Turn. No passing during the S-Turn.</p> <p>** On South wind days when runway 15 is in use at Boulder City, Serenity Helicopters will conduct the standard powerline departure, joining the tour 1 mile South of the Hacienda.</p>		
4. Indian Pass	120.65	"Indian Pass, 3800, east."
<p>* <u>Caution</u> for Westbound Fixed Wing (4500MSL) traffic. No over-flying Fortification Hill.</p>		
5. Bonelli Bay	120.65	"Bonelli Bay, _____, east." (altitude) (No lower than 2,500)
<p>* <u>Caution</u> for Maverick low-level Eastbound and Northwest-bound traffic at southern Tip of Bonelli Bay (see Maverick Addendum), and Serenity Helicopters at East shore of Bonelli Bay Westbound. <u>Caution</u> for various helicopter Eastbound traffic during turbulent or warm weather days, 5500MSL.</p>		
6. Delmar Butte	120.65	"1/2 north of Delmar Butte, 3500, east".
<p>* <u>Caution</u> Maverick Eastbound traffic over Delmar Butte 3500MSL</p> <p>* <u>Caution</u> Serenity Eastbound traffic over Delmar Butte 3500MSL on turbulent days.</p>		
7. Pearce Ferry	120.65	"Pearce Ferry Airport, 4000, east."
Airport	121.95	"Pearce Ferry Airport, 4000, east."
<p>* <u>Caution</u> Maverick Eastbound traffic merging 1 mile South of Pearce Ferry, at or above 3500MSL</p> <p>* <u>Caution</u> Serenity South of Pierce Fairy on turbulent days</p>		
8. West End	121.95	"West End, Green Four, 5000, east."
9. Bat Towers	121.95	"Departing the Green Four descending to 3500"

***Note: Per GCNP SFRA Procedures Manual the Bat Towers position report is not required unless descending for the Ramadas under Form 7711-1. Radio call 7a. will be a courteous call***

**Cont'd**

**Tour Route 16. SERENITY HELICOPTERS BOULDER CITY TO BOULDER CITY VIA GRAND CANYON WEST.**

\* Traffic descending for Canyon floor landings remains along river shoreline. Traffic for GCW, remains "hugging" canyon walls until the Ramada's, and then proceeds along the shoreline.

\* Descending traffic remains along river shoreline. All departing GCW UP & Down traffic issue a radio call on 121.95 "Eternity Canyon at \_\_\_\_\_ for \_\_\_\_\_".  
(altitude) (destination)

10. Quartermaster Point 121.95 "Quartermaster Point for the Guzzler 3500."

11. Guzzler 122.90 "Exiting Quartermaster at the Guzzler for GCW \_\_\_\_\_."  
(altitude)

Note: Traffic proceeding to Grand Canyon West Heliport coming from a landing site shall exit on the left hand side of the Guzzler. Traffic proceeding to Grand Canyon West Transient Parking from 3,500ft MSL shall exit over the Guzzler. Traffic proceeding to Grand Canyon West via the Green 4 at 5,000ft MSL shall exit on the right hand side of the Guzzler. Use extreme caution for other traffic for GCW that will be operating near the Guzzler.

\*Landing/Departing Grand Canyon West Airport procedures are laid out in the Grand Canyon West Helicopter Standardization Agreement.\*

**Land at GCW**

Note: Use caution for traffic coming from Quartermaster Canyon and the Ranch.

12. Old Heli Ranch 122.90 "Over Old Heli ranch, \_\_\_\_\_ clear west for Grand Wash."

13. Grand Wash 120.65 "Grand Wash Cliffs, \_\_\_\_\_, west."  
(actual altitude)

14. Temple Bar 120.65 "South of Temple bar, \_\_\_\_\_, west."  
(actual altitude)

15. East Shore Bonelli Bay 120.65 "East Shore Bonelli Bay, \_\_\_\_\_,west."  
(actual altitude)

16. South of Narrows 120.65 "South of Narrows 4000, west"

17. Boulder Beach 120.65 "Boulder Beach, 4000 West for Boulder City."

**Freq. change to Boulder City CTAF**

18. Boulder Beach 122.70 "7 miles North East, 4000, inbound for Boulder City."

19. Abeam VOR 122.70 "West Abeam VOR, 3700, for left downwind or golf course arrival."

20. Left Downwind 33 122.70 "Actual arrival (left downwind or golf course arrival) for BFE "  
Or Golf Course Arrival to BFE



**Tour Route 17. HIGHROLL (5 STAR HELICOPTERS) BOULDER CITY TO BOULDER CITY VIA GRAND CANYON WEST.**

<b>POSITION</b>	<b>Freq</b>	<b>Radio Call</b>
1. BC Merge	120.65	"1 mile South Hacienda, 3000, for the Dam"
1a. BC VOR Merge	120.65	"2 miles West of Boulder Beach, 3300, for the Dam"
2. Hoover Dam	120.65	"S" turn at the Dam, 3000."
* Aim for HWY 93 and the distinct 2 peaks on ridgeline. Do not cross east of the Colorado River during the dam viewing S-Turn. No passing during the S-Turn.		
3. Indian Pass	120.65	"Indian Pass, 3800, east."
* <u>Caution</u> for Westbound Fixed Wing (4500MSL) traffic. No over-flying Fortification Hill.		
4. Bonelli Bay	120.65	"Bonelli Bay, 3500, east."
* <u>Caution</u> for Maverick low-level Eastbound and Northwest-bound traffic at southern Tip of Bonelli Bay. <u>Caution</u> , various helicopter Eastbound traffic during turbulent or warm weather days, 5500MSL.		
5. Delmar Butte	120.65	"One mile north of Delmar Butte, 3500, east".
* <u>Caution</u> Maverick Eastbound traffic over Delmar Butte from 3500MSL.		
6. Pearce Ferry	120.65	"Pearce Ferry Airport, 4000, east."
Airport	121.95	"Pearce Ferry Airport, 4000, east."
* <u>Caution</u> Maverick Eastbound traffic merging 1 mile South of Pearce Ferry, at or above 3500MSL. 5 Star will cross the south tip of Pearce Ferry Airport.		
7. West End	121.95	"West End, Green Four, 5000, east."
7a. Bat Towers	121.95	"Bat Towers 5000, descending 3500"

**Note: Per GCNP SFRA Procedures Manual the Bat Towers position report is not required unless descending for the Ramadas under Form 7711-1. Radio call 7a. will be a courtesy call**

Note: All traffic descending for Canyon floor landings, except the Ramada and the Beach, shall cross the Colorado River abeam Point Bravo at 4000' MSL, and shall remain on the North side of the river at 3000' MSL until abeam Descent Canyon. GCW traffic at 3500MSL remains "hugging" South canyon walls until Descent Canyon, and then proceeds along the shoreline. Traffic remains at cruise speed to Point Bravo, and then reduces to 80KIAS at Descent Canyon, descending to 3500MSL. Traffic then departs area climbing through Quartermaster Canyon or rejoins the Green 4 via burnt springs canyon. Maverick/Mustang traffic remains at cruise speed over the shoreline from Point Bravo to Quartermaster Canyon.

\* Descending traffic remains along river shoreline until Point Bravo. Traffic for GCW that descends to 3,500 will issue a radio call on 121.95 "Point Bravo at \_\_\_\_\_ for \_\_\_\_\_" and as a courtesy call: "Descent Canyon at \_\_\_\_\_ for \_\_\_\_\_". (altitude) (destination)

**Cont'd**

**Tour Route 17. HIGHROLL AIR (5 STAR HELICOPTERS) BOULDER CITY TO BOULDER CITY VIA GRAND CANYON WEST.**

8. Quartermaster 121.95 "Abeam Quartermaster Point 3500 climbing for the Guzzler 3500."  
Canyon

*Courtesy call will be issued abeam the gunsight if traffic requires*

9. Guzzler 121.95 "Exiting Quartermaster at the Guzzler for GCW \_\_\_\_\_."  
(altitude)

Note: At Quartermaster Canyon, all climbing traffic that does not intend to proceed to GCW airport via the Guzzler will depart to the backside of Quartermaster Canyon. Papillon and Maverick direct return traffic will use the centerline area of Quartermaster Canyon, with the intended exit point of approx. : GPS N 35°55.74' / W 113°50.23'. Serenity direct traffic will utilize the South Wall offset of Quartermaster Canyon, with the intended exit point of approx. : N 35°55.33' / W 113° 50.22'. Traffic direct return to Las Vegas via the Grand Wash Cliffs will depart the backside of Quartermaster Canyon with the intended exit point of approx. : N 35°56.09' / W 113°50.12'. Traffic climbing from 3500MSL out of Quartermaster to GCW AND traffic proceeding to GCW from a landing site will exit approx.: N 35°56.62' / W 113°49.65. (1/2 mile SW of the Guzzler). Up and Down traffic will exit over the Guzzler. Air only traffic remaining at 5000MSL will exit Quartermaster east (to the right side) of the Guzzler.

\*Landing/Departing Grand Canyon West Airport procedures are laid out in the Grand Canyon West Helicopter Standardization Agreement.\*

Land at GCW

Note: Use caution for traffic coming from Quartermaster Canyon and the Ranch.

10. Old Ranch 123.45 "Old Ranch 5700 for Spirit Mountain

Note: will be right of old ranch at or below 5700.

11. Spirit 123.45 "Spirit Mountain, 6500, West.

12. Meadview Antennas 123.45 "Meadview antennas, 6500, west."

13. Fuel Farm 123.45 "1 South of Maverick Fuel, 6500, descending west."  
120.65 "1 South of Maverick Fuel, 6500, descending west."

14. Wilson Ridge 120.65 "South end of Wilson Ridge, 4500, west."

15. Colorado River 120.65 "2 North of Willow Beach, 3800 west."

**Freq. change to Boulder City CTAF**

15a. Colorado River 122.70 "10 miles to the southeast, 3500, for the Substation."

16. Substation 122.70 "South of the Substation, 2800, for the ponds."

**\*USE CAUTION FOR TRAFFIC FROM HENDERSON TO JOIN THE POWER LINE DEPARTURE**

17. Ponds 122.70 "Over the ponds, crossing Rwy 9/27 for BFE

## **SIGNATORIES.**

### A. Sundance Helicopters

_____ Print Name	_____ Signature	_____ Position
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### B. Papillon Grand Canyon Helicopters

_____ Print Name	_____ Signature	_____ Position
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### C. Maverick Helicopters

_____ Print Name	_____ Signature	_____ Position
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### D. Serenity Helicopters

_____ Print Name	_____ Signature	_____ Position
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### E. HighRoll Air (dba 5 Star Helicopters)

_____ Print Name	_____ Signature	_____ Position
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### F. Sunshine Helicopters

_____ Print Name	_____ Signature	_____ Position
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### G. All American Aviation Services

_____ Print Name	_____ Signature	_____ Position
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H. Global Air Support

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Position

I. Nyon Air

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Position

**DISTRIBUTION.**

- A. Sundance Helicopters
- B. Papillon Grand Canyon Helicopters
- C. Maverick Helicopters
- D. Serenity Helicopters
- E. HighRoll Air (dba 5 Star Helicopters)
- F. Sunshine Helicopters
- G. All American Helicopters
- H. Global Air Support (Vision Helicopters)
- I. Nyon Air
- J. NEV FSDO

## Appendix A. Definitions.

**Beach** A landing site along the south side of the Colorado River in the bottom of the Grand Canyon.

Latitude: N 35° 59.36' Longitude: W 113° 46.81'

**Black Point** A black colored volcano mountain approximately 6 miles south of Wilson's Peak

Latitude: N 35° 56.43' Longitude: W 114° 35.53'

**Bonelli Peak** A 5334 foot peak 9 nautical miles north east of the Temple Bar Airport (U30)

Latitude: N 36° 08.94' Longitude: W 114° 14.90'

**Bonelli Bay.** A bay in Lake Mead 7 nautical miles west of the Temple Bar Airport (U30).

Latitude: N 36° 04.65' Longitude: W 114° 27.34'

**Delmar Butte** A flat butte (Hill 1560) along the north side of Lake Mead, approximately 4 nautical miles northeast of the Temple Bar Airport.

Latitude: N 36° 03.82' Longitude: W 114° 17.2'

**Descent Canyon.** The helicopter crossing point on the top side of Descent Canyon when preparing to land at the Grand Canyon Airport.

Latitude: N 35° 58.67' Longitude: W 113° 48.42'

**Eternity Canyon** The canyon just west of the Bat Towers which is;

--entered into while descending for the Ramadas or the Beach,

--used to intercept the Green 4, or

--used to cross the Colorado River from south to north while on the Green 4 route. .

Latitude: N 36° 01.06' Longitude: W 113° 50.42'

**GCW.** The Grand Canyon West Airport located on the northeastern edge of the Hualapai Indian Reservation.

Latitude: N 35° 59.42' Longitude: W 113° 48.99'

**Gunsight** A notch in the north face of Quartermaster Canyon.

Latitude: N 35° 57.07' Longitude: W 113° 47.88'

**Guzzler** A watering hole at the northwest corner of Quartermaster Canyon.

Latitude: N 35° 56.93' Longitude: W 113° 49.42'

**Hacienda.** The last resort on Highway 95 between Boulder City and the Hoover Dam

Latitude: N 36° 00.62' Longitude: W 114° 47.15'

**Hidden Valley**

Latitude: N 36° 19.65' Longitude: W 114° 42.64'

**Indian Pass** A saddle between Wilson Ridge and Canyon Ridge.

Latitude: N 36° 04.18' Longitude: W 114° 38.25'

## Appendix A. Definitions.

### Middle Point

Latitude: N 36° 10.00' Longitude: W 114° 26.00'

**Maverick Base** A landing site near the bottom of the Grand Canyon overlooking the Colorado River.

Latitude: N 35° 57.52' Longitude: W 113° 44.70'

**Maverick Fuel Farm (The Fuel Farm)** A fuel tank that Maverick helicopter lands to refuel approximately 11 miles south east of Temple Bar Airport (U30)

Latitude: N 35° 53.76 Longitude: W 114° 12.43

**Narrows.** A narrow channel 29 nautical miles east of the LAS VOR, between Guardian Peak and Arch Mountain.

Latitude: N 36° 09.00' Longitude: W 114° 33.50'

**North 40** A fuel tank that Serenity helicopters lands to refuel approximately .....

Latitude: N 35° 54.14' Longitude: W 114° 11.95'

**Notch.** A saddle on the northwest end of Quartermaster Canyon.

Latitude: N 35° 57.80' Longitude: W 113° 46.04'

**Point Bravo.** A point inside the Grand Canyon approximately 1 mile east of the Bat Towers and 2 1/2 miles west of the Ramada's.

Latitude: N 36° 01.34' Longitude: W 113° 47.43'

**Quartermaster Bluff.** A flat shelf on the northeast corner of Quartermaster canyon.

Latitude: N 35° 57.84' Longitude: W 113° 45.32'

**Quartermaster Base.** A Ramada on the west side of the mouth of Quartermaster Canyon.

Latitude: N35° 58.00' Longitude: W 113° 46.00'

**Quartermaster Notch.** Same as the "Notch"

Latitude: N 35° 57.80' Longitude: W 113° 46.04'

**Ramadas** Landing sites at the bottom of the Grand Canyon by the Colorado River.

Latitude: N 35° 59.72' Longitude: W 113° 46.88'

**Serenity Base.** A flat shelf on the northeast corner of Quartermaster canyon.

Latitude: N 35° 57.66' Longitude: W 113° 45.78'

**Valley of Color** Valley of red rocks just east of the Bowl of Fire

Latitude: N 36° 10.70' Longitude: W 114° 33.22'

## **Appendix A. Definitions.**

### **1 Mile South of Hacienda at saddle**

35°59'41.36"N

114°47'14.47"W

### **BC Sub-Station**

35°55'59.74"N

114°50'7.22"W

### **Quartermaster Exit Point for Las Vegas via the Grand Wash Cliffs**

35°56'5.63"N

113°50'7.40"W

### **Quartermaster Exit Point for Maverick, Papillon**

35°55'44.44"N

113°50'13.92"W

### **Quartermaster Exit Point for Heli-USA, Serentiy**

35°55'19.67"N

113°50'13.31"W

### **Buck & Doe Road**

35°54'52.28"N

113°53'40.32"W

### **Spirit Mountain**

35°53'25.73"N

113°59'12.62"W

### **Antennae South Meadview**

35°51'49.68"N

114° 5'46.71"W

### **1 mile South of Maverick Fuel Farm**

35°52'54.35"N

114°12'22.02"W

### **South Side Wilson Ridge**

35°54'24.60"N

114°35'46.54"W

### **Grand Wash Westbound point**

35°58'25.65"N

113°56'7.23"W