

MEMORANDUM

ROSEMARY A. VASSILIADIS
Director

DEPARTMENT OF AVIATION

TO: DISTRIBUTION

Digitally signed by George C. Sims

FROM: GEORGE C. SIMS, PLANNER

SUBJECT: APRIL THROUGH JUNE 2018 NOISE COMPLAINT REPORTS

DATE: JULY 20, 2018

Attached for your review are the Clark County Department of Aviation's (CCDOA) Monthly Noise Complaint Reports for April through June 2018. Please note the following airport abbreviations: **McCarran International Airport (LAS)**, **North Las Vegas Airport (VGT)**, and **Henderson Executive Airport (HND)**.

The following reports describe noise complaints and operational data regarding helicopter and fixed-wing aircraft operations at LAS, VGT, and HND. Aircraft noise complaints are received either through the CCDOA's Noise Hotline (702-261-3694), the Noise Office (702-261-5600), or calls forwarded from LAS's toll free number (1-800-261-5704). Nellis Air Force Base noise complaints are forwarded to the Nellis Public Affairs Office (702-652-2750), and noise complaints regarding aircraft operations from the Boulder City Airport are forwarded to the Boulder City Airport Coordinator (702-293-9405). Individuals who express concerns regarding aircraft operations originating from private facilities (i.e., Valley Hospital or the private helipad located near Las Vegas Blvd. and Larson Lane) are asked to contact the individual property owner directly.

Exhibit 1 of each Monthly Noise Complaint Report illustrates the number of calls received by community as well as the number of individual callers or households. **Exhibit 2** illustrates the primary nature of the disturbance as identified by the caller. The second page of each monthly report (**Exhibit 3**) graphically illustrates all known origins of the calls received that month. **Exhibits 4 and 5** summarize arrival and departure runway use for large and non-large air carrier aircraft. Arrival and departure corridor use for helicopters are summarized in **Exhibit 6**. **Exhibit 7** provides a complete arrival fleet mix of all aircraft landing at LAS and highlights the two noisier aircraft types, the Boeing 727 series and Boeing 737-100 and 737-200 series. **Exhibit 8** illustrates the general departure direction for large aircraft.

Lastly, **Exhibit 9** summarizes how well large aircraft and helicopters adhered to the preferred, non-regulated departure corridors. Adherence to preferred departure corridors is voluntary, and neither Clark County nor the State of Nevada regulates aircraft in flight. The FAA, through the discretion of Congress, has sole authority over the safe and efficient utilization of the nation's navigable airspace. Therefore, local and state authorities cannot legally enforce the use of these corridors, or impose penalties to pilots who opt not to comply with preferred procedures. "Compliance gates" are located along historical/fly-quietly routes. If all aircraft flew with advanced navigational technologies and operated under Required Navigational Precision (RNP) procedures, then it could be expected that up to 95% of all aircraft would be within 0.3 nautical miles (NM) of a fly-over point. Therefore, 0.3 NM is the threshold for compliance for large air carrier aircraft. The compliance threshold for helicopters is 500 feet.

The following provides a synopsis of each monthly noise complaint report and additional noise-related issues addressed during the reporting period. Please refer to each noise complaint report for more detailed information.

Monthly Noise Complaint Summaries

April 2018: 28 total complaints - a 39% decrease from 2017 and a 67% decrease from 2016. On average, each caller (or household) issued 2.3 calls. The most calls received from one household totaled 12.

Calls by Community - (Exhibits 1 and 3)

Majority (more than 50%):

Minority (between 10% and 50%): The **Paradise and Winchester** communities issued 14 calls (50%). These communities are typically impacted by aircraft departing to the north (from Runway 01R and Runway 01L) and aircraft arriving from the north (into Runways 19R and 19L).

The **Spring Valley** community issued 6 calls (21%). This community is typically impacted by aircraft departing to the west (from Runway 26R and Runway 26L) and by aircraft departing to the north (from Runway 01R and Runway 01L) that turn left (to the west and south).

Repeat Caller Impact: One household issued 43% (12 calls) of all the calls received in April 2018.

Calls by Operation - (Exhibit 2)

- LAS:** 79% of the total calls were due to **LAS** fixed-wing operations.
- 68% were due to departures to the north from Runways 01L and 01R (89% from two households).
- VGT:** 4% of the total calls were due to **VGT** fixed-wing operations.
- HND:** 4% of the total calls were due to **HND** fixed-wing operations.
- Helos:** 14% of the total calls were due to **helicopter** operations.

LAS Operations & Runway Use by Large Air Carriers - (Exhibit 4)

- Overall:** 510 daily *departures* – a 2% increase from 2017 and a 2% increase from 2016.
- 64% of departures were to the west, 26% north, 8% east, and 3% south.
- 518 daily *arrivals* – a 3% increase from 2017 and 4% increase from 2016.
- 75% of arrivals were from the east, 17% south, 8% north, and 1% west.
- Daytime:** 407 daily *departures* – a 1% decrease from 2017 and 2% increase from 2016.
- 61% of departures were to the west, 27% north, 10% east, and 3% south.
- 438 daily *arrivals* – a 1% increase from 2017 and a 2% increase from 2016.
- 74% of arrivals were from the east, 18% south, 7% north, and 1% west.
- Nighttime:** 102 daily *departures* – a 17% increase from 2017 and a 4% increase from 2016.
- 74% of departures were to the west, 21% north, 3% south, and 2% east.
- 80 daily *arrivals* – a 16% increase from 2017 and a 20% increase from 2016.
- 81% of arrivals were from the east, 10% south, and 9% from the north.

Daytime vs. Nighttime: Approximately 80% of all *departures* and 85% of all *arrivals* occurred during the daytime hours.

LAS Operations & Runway Use by **Non-Large Air Carriers** - (Exhibit 5)

Overall: 116 daily *departures* – a 24% increase from 2017 and a 19% increase from 2016.

- 55% of departures were to the south, 28% north, 10% west, and 7% east.

108 daily *arrivals* – a 24% increase from 2017 and 16% increase from 2016.

- 56% of arrivals were from the north, 28% south, 15% east, and 1% west.

Daytime: 103 daily *departures* – a 23% increase from 2017 and 18% increase from 2016.

- 54% of departures were to the south, 29% north, 9% west, and 8% east.

99 daily *arrivals* – a 23% increase from 2017 and a 14% increase from 2016.

- 56% of arrivals were from the north, 28% south, 15% east, and 1% west.

Nighttime: 12 daily *departures* – a 31% increase from 2017 and a 24% increase from 2016.

- 57% of departures were to the south, 22% north, 20% west, and 1% east.

9 daily *arrivals* – a 37% increase from 2017 and a 35% increase from 2016.

- 58% of arrivals were from the north, 26% south, and 15% east.

Daytime vs. Nighttime: Approximately 89% of all *departures* and 92% of all *arrivals* occurred during the daytime hours.

Operations by Corridor for **Helicopter Tours** - (Exhibit 6)

Tropicana: 76 daily *departures* - a 32% decrease from 2017 and 17% decrease from 2016.

Charleston: 73 daily *arrivals* - a 35% decrease from 2017 and an 18% decrease from 2016.

Strip: 65 daily *touch and go's* - an 8% decrease from 2017 and a 27% increase from 2016.

Daytime vs. Nighttime: Approximately 92% of all helicopter tour operations occurred during the daytime hours.

LAS Fleet Mix for All Aircraft Types - (Exhibit 7)

Heavies: **Very large** air carrier turbine-driven aircraft (those weighing 300,000 lbs. or more) accounted for 4% of the daily traffic.

Large: **Large** air carrier turbine-driven aircraft (those weighing more than 75,000 lbs. and less than 300,000 lbs.) accounted for 64% of the daily traffic.

Medium: **Medium** turbine-driven aircraft (those weighing more than 41,000 lbs. and less than 75,000 lbs.) accounted for 2% of the daily traffic.

Small: **Small** turbine-driven aircraft (those weighing 41,000 lbs. or less) accounted for 8% of the daily traffic.

Military: **Military** turbine-driven aircraft accounted for 0% of the daily traffic.

Non-Jet: **Piston-driven** aircraft and unassigned aircraft types accounted for 4% of the daily traffic.

Helos: **Touring helicopters** accounted for 18% of the daily traffic.

Noisier Aircraft Types: The hush-kitted Boeing 727 aircraft and Boeing 737 (100 & 200 series) aircraft accounted for 0% of the daily traffic.

LAS General Departure Direction for Large Aircraft - (Exhibit 8)

Primary: In 2018, 64% departed to the **west** (from LAS's primary departure runways). This figure was 62% in 2017 and 15% in 2016.

Secondary: In 2018, 3% departed to the **south** (from LAS's secondary departure runways). This figure was 4% in 2017 and 19% in 2016.

Alternate 1: In 2018, due to increased winds from the north, 26% departed to the **north** (from LAS's alternate departure runways). This figure was 26% in 2017 and 58% in 2016.

Alternate 2: In 2018, 8% departed to the **east** (from LAS's alternate departure runways). This figure was 8% in 2017 and 8% in 2016.

Gate Compliance for Large Aircraft and Helicopters - (Exhibit 9)

SVHS: In 2018, 98% of the large air carrier aircraft (excluding those destined to the Nevada National Security Site) that departed to the west from Runways 25L or 25R and made a left-hand turn were within 0.3 NM of **Sierra Vista High School** (SVHS). This figure was 97% in 2017 and 96% in 2016.

The SVHS "compliance gate" is located southwest of Warm Springs Rd. and Buffalo Dr., approximately 5 miles due west and 1.5 miles due south of the extended runway centerline of Runways 25L and 25R. This gate was established along an existing noise abatement flight track which requests pilots to proceed runway heading to 3 nautical miles from the Las Vegas very-high frequency omnidirectional range tactical air navigation (VORTAC) facility before turning left (or towards the south) - where large air carrier aircraft have historically been encouraged to operate. This noise abatement flight track avoids communities impacted by aircraft turning early along this corridor (like the Nevada Trails community) and aircraft turning late along this corridor (like the Rhodes Ranch community).

Peace: In 2018, 95% of the large air carrier aircraft (excluding those destined to the Nevada National Security Site) that departed to the west from Runways 25L or 25R and made a right-hand turn were within 0.3 NM of the intersection of **Peace Way & Summers Shade Street**. This figure was 94% in 2017 and 92% in 2016.

The Peace "compliance gate" is located northeast of Tropicana Ave. and I-215, approximately 6 miles due west and 2 miles due north of the extended runway centerline of Runways 25L and 25R. This gate was also established along an existing noise abatement flight track which requests pilots to proceed runway heading to 4 nautical miles from the Las Vegas VORTAC before turning right (or towards the north) - where large air carrier aircraft have historically been encouraged to operate. This noise abatement flight track avoids communities impacted by aircraft turning early along this corridor (like the Spanish Trail community) and aircraft turning late along this corridor (like the Summerlin South community).

Pebble: In 2018 95% of the large air carrier aircraft (excluding those destined to the Nevada National Security Site) that departed to the south from Runways 19L or 19R were within 0.3 NM of the intersection of *Pebble Road & Arville Street*. This figure was 97% in 2017 and 98% in 2016.

The Pebble “compliance gate” is located southeast of Blue Diamond Rd. and Decatur Blvd., approximately 4 miles due south by southwest of the extended runway centerline of Runways 19L and 19R. This gate was also established along an existing noise abatement flight track which requests pilots to proceed runway heading to 3 nautical miles from the Las Vegas VORTAC before turning - where large air carrier aircraft have historically been encouraged to operate. This noise abatement flight track avoids communities impacted by aircraft turning early along this corridor (like the Warm Spring Estates community) and aircraft turning late along this corridor (like the Southern Highlands community).

UNLV: In 2018, 92% of the large air carrier aircraft that departed to the north from Runways 01L or 01R were within 0.3 NM of the *UNLV sports complex*. This figure was 87% in 2017 and 91% in 2016.

The UNLV “compliance gate” is located southeast of Flamingo Rd. and Paradise Rd., approximately 1 mile due north by northeast of the extended runway centerline of Runways 01L and 01R. This gate was also established along an existing noise abatement flight track which requests pilots to proceed runway heading to 2 nautical miles from the Las Vegas VORTAC before turning - where large air carrier aircraft have historically been encouraged to operate. This noise abatement flight track avoids communities impacted by aircraft turning early along this corridor, located due east and due west of UNLV.

Boulder: In 2018, 99% of the large air carrier aircraft that departed to the north from Runways 07L or 07R were within 0.3 NM of the extended runway centerline, near *Boulder Highway*. This figure was 98% in 2017 and 97% in 2016.

The Boulder Hwy. “compliance gate” is located southeast of Russell Rd. and I-93/95, approximately 7 miles due east of the extended runway centerline of Runways 07L and 07R. This gate was also established along an existing noise abatement flight track which requests pilots to proceed runway heading to 7 nautical miles from the Las Vegas VORTAC before turning - where large air carrier aircraft have historically been encouraged to operate. This noise abatement flight track avoids communities impacted by aircraft turning early along this corridor (like the Green Valley community, located in the City of Henderson, and older neighborhoods located north of Patrick Ln.).

Hualapai: In 2018, only 70% of the large air carrier aircraft destined to the Nevada National Security Site that departed to the west were within 0.3 NM of the extended runway centerline, near *Hualapai Way*. This figure was 83% in 2017 and 88% in 2016. The CCDOA is aware of this decline in compliance, and will coordinate with pilots to address the noise abatement concerns of the impacted communities.

The Hualapai Way “compliance gate” is located northeast of Sunset Rd. and Hualapai Way, approximately 7 miles due west of the extended runway centerline of Runways 26L and 26R. This gate was established in May 2011 along a new noise abatement flight track which requests pilots of aircraft destined to the Nevada National Security Site to proceed runway heading to 7 nautical miles from the Las Vegas VORTAC before turning. This noise abatement flight track avoids communities impacted by aircraft turning early along this corridor (like the Spanish Trail community and the Summerlin South community).

Eastern: In 2018, 98% of the touring helicopters destined east of the Las Vegas Valley were within 500 feet of the intersection of *Tropicana Avenue & Eastern Avenue*. This figure was 98% in 2017 and 97% in 2016.

The Eastern Ave. “compliance gate” is located at Tropicana Ave. and Eastern Ave, approximately 2 miles due west of the their initial departure route. This gate was also established along an existing noise abatement flight track which requests helicopter pilots to proceed along the centerline of Tropicana Ave. until 10 nautical miles from the Las Vegas VORTAC before turning. This noise abatement flight track avoids communities impacted by helicopters located north and south of the corridor.

Hollywood: In 2018, 98% of the touring helicopters returning from areas east of the Las Vegas Valley were within 500 feet of the intersection of *Charleston Boulevard & Hollywood Boulevard*. This figure was 97% in 2017 and 97% in 2016.

The Hollywood Blvd. “compliance gate” is located at Charleston Blvd. and Los Feliz St., where their initial arrival route begins over the urbanized area of the Las Vegas Valley. This gate was also established along an existing noise abatement flight track which requests helicopter pilots to proceed along the centerline of Charleston Blvd. This noise abatement flight track avoids communities impacted by helicopters located north and south of the corridor.

Stratosphere: In 2018, 99% of the north-bound helicopters providing tours of the Las Vegas Strip were within 500 feet of the intersection of Oakey Boulevard & Las Vegas Boulevard, *northeast of the Stratosphere Tower*. This figure was 99% in 2017 and 56% in 2016.

The Stratosphere Tower “compliance gate” is located northeast of Sahara Avenue and Las Vegas Blvd., where an important turn in their fly-quietly routing structure begins near a historic portion of the urbanized area of the Las Vegas Valley.

The information denoted in this monthly summary represents **typical** residential complaints, flight activity, (with the exception of increased departures to the north, due to winds and weather), fleet mix, and gate compliance (with the exception of the noted decline for the Hualapai gate).

May 2018: 45 total complaints - a 27% decrease from 2017 and a 54% decrease from 2016. On average, each caller (or household) issued 2.4 calls. The most calls received from one household totaled 14.

Calls by Community - (Exhibits 1 and 3)

Majority (more than 50%): The *Spring Valley* community issued 24 calls (53%). (See April 2018 synopsis of typical aircraft overflight impacts on this community.)

Minority (between 10% and 50%): The *Paradise and Winchester* communities issued 9 calls (20%). (See April 2018 synopsis of typical aircraft overflight impacts on this community.)

The *City of Henderson* community issued 5 calls (11%). This community is typically impacted by aircraft departing to the east (from Runway 08R and Runway 08L), and helicopter tour operations operating from HND.

Repeat Caller Impact: One household issued 31% (14 calls) of all the calls received in May 2018.

Calls by Operation - (Exhibit 2)

- LAS:** 76% of the total calls were due to **LAS** fixed-wing operations.
- 50% were due to departures to the west from Runways 26L and 26R (86% from two households).
 - 24% were due to departures to the north from Runways 01L and 01R (73% from two households, which are also the same households that issued 50% of calls for LAS Runways 26L and 26R).
- VGT:** 7% of the total calls received were due to **VGT** fixed-wing operations.
- HND:** 9% of the total calls received were due to **HND** fixed-wing operations.
- Helis:** 9% of the total calls received were due to **helicopter** operations.

LAS Operations & Runway Use by **Large Air Carriers** - (Exhibit 4)

- Overall:** 506 daily *departures* – no change from 2017 and a 1% increase from 2016.
- 73% of departures were to the west, 15% east, 8% north, and 3% south.
- 516 daily *arrivals* – a 1% increase from 2017 and 4% increase from 2016.
- 74% of arrivals were from the east, 16% north, 6% west, and 4% south.
- Daytime:** 406 daily *departures* – a 3% decrease from 2017 and 1% decrease from 2016.
- 70% of departures were to the west, 19% east, 7% north, and 3% south.
- 434 daily *arrivals* – 2% decrease from 2017 and no change from 2016.
- 71% of arrivals were from the east, 17% north, 8% west, and 4% south.
- Nighttime:** 100 daily *departures* – a 13% increase from 2017 and a 10% increase from 2016.
- 84% of departures were to the west, 11% north, 4% south, and 1% east.
- 83 daily *arrivals* – a 21% increase from 2017 and a 33% increase from 2016.
- 88% of arrivals were from the east, and 8% north.
- Daytime vs. Nighttime:** Approximately 80% of all *departures* and 84% of all *arrivals* occurred during the daytime hours.

LAS Operations & Runway Use by **Non-Large Air Carriers** - (Exhibit 5)

- Overall:** 121 daily *departures* – a 7% increase from 2017 and an 18% increase from 2016.
- 62% of departures were to the south, 17% east, 12% west, and 10% north.
- 113 daily *arrivals* – a 7% increase from 2017 and 14% increase from 2016.
- 75% of arrivals were from the north, 11% east, 7% south, and 7% west.
- Daytime:** 109 daily *departures* – a 7% decrease from 2017 and 17% increase from 2016.
- 61% of departures were to the south, 18% east, 11% west, and 9% north.
- 104 daily *arrivals* – an 8% increase from 2017 and a 14% increase from 2016.
- 75% of arrivals were from the north, 10% east, 8% west and 6% south.
- Nighttime:** 13 daily *departures* – an 8% increase from 2017 and a 25% increase from 2016.
- 65% of departures were to the south, 18% west, 15% north, and 3% east.
- 9 daily *arrivals* – no change from 2017 and a 10% increase from 2016.
- 71% of arrivals were from the north, 15% south, 12% east, and 1% west.

Daytime vs. Nighttime: Approximately 89% of all *departures* and 92% of all *arrivals* occurred during the daytime hours.

Operations by Corridor for **Helicopter Tours** - (Exhibit 6)

Tropicana: 86 daily *departures* – a 19% decrease from 2017 and a 22% decrease from 2016.

Charleston: 82 daily *arrivals* - a 23% decrease from 2017 and a 24% decrease from 2016.

Strip: 106 daily *touch and go's* - a 31% increase from 2017 and a 54% increase from 2016.

Daytime vs. Nighttime: Approximately 82% of all helicopter tour operations occurred during the daytime hours.

LAS Fleet Mix for All Aircraft Types - (Exhibit 7)

Heavies: **Very large** air carrier turbine-driven aircraft (those weighing 300,000 lbs. or more) accounted for 4% of the daily traffic.

Large: **Large** air carrier turbine-driven aircraft (those weighing more than 75,000 lbs. and less than 300,000 lbs.) accounted for 60% of the daily traffic.

Medium: **Medium** turbine-driven aircraft (those weighing more than 41,000 lbs. and less than 75,000 lbs.) accounted for 1% of the daily traffic.

Small: **Small** turbine-driven aircraft (those weighing 41,000 lbs. or less) accounted for 8% of the daily traffic.

Military: **Military** turbine-driven aircraft accounted for less than 0% of the daily traffic.

Non-Jet: **Piston-driven** aircraft and unassigned aircraft types accounted for 4% of the daily traffic.

Helos: **Touring helicopters** accounted for 23% of the daily traffic.

Noisier Aircraft Types: The hush-kitted Boeing 727 aircraft and Boeing 737 (100 & 200 series) aircraft accounted for less than one operation per day.

LAS General Departure Direction for Large Aircraft - (Exhibit 8)

Primary: In 2018, 73% departed to the **west** (from LAS's primary departure runways). This figure was 65% in 2017 and 71% in 2016.

Secondary: In 2018, 4% departed to the **south** (from LAS's secondary departure runways). This figure was 4% in 2017 and 3% in 2016.

Alternate 1: In 2018, 8% departed to the **north** (from LAS's alternate departure runways). This figure was 18% in 2017 and 20% in 2016.

Alternate 2: In 2018, 15% departed to the **east** (from LAS's alternate departure runways). This figure was 14% in 2017 and 5% in 2016.

Gate Compliance for Large Aircraft and Helicopters - (Exhibit 9)

- SVHS:** In 2018, 98% of the large air carrier aircraft (excluding those destined to the Nevada National Security Site) that departed to the west from Runways 25L or 25R and made a left-hand turn were within 0.3 NM of **Sierra Vista High School** (SVHS). This figure was 97% in 2017 and 96% in 2016. (See April 2018 synopsis for specific location of the SVHS gate.)
- Peace:** In 2018, 95% of the large air carrier aircraft (excluding those destined to the Nevada National Security Site) that departed to the west from Runways 25L or 25R and made a right-hand turn were within 0.3 NM of the intersection of **Peace Way & Summers Shade Street**. This figure was 94% in 2017 and 93% in 2016. (See April 2018 synopsis for specific location of the Peace gate.)
- Pebble:** In 2018, 97% of the large air carrier aircraft (excluding those destined to the Nevada National Security Site) that departed to the south from Runways 19L or 19R were within 0.3 NM of the intersection of **Pebble Road & Arville Street**. This figure was 97% in 2017 and 97% in 2016. (See April 2018 synopsis for specific location of the Pebble gate.)
- UNLV:** In 2017, 96% of the large air carrier aircraft that departed to the north from Runways 01L or 01R were within 0.3 NM of the **UNLV sports complex**. This figure was 91% in 2017 and 91% in 2016. (See April 2018 synopsis for specific location of the UNLV gate.)
- Boulder:** In 2018, 99% of the large air carrier aircraft that departed to the north from Runways 07L or 07R were within 0.3 NM of the extended runway centerline, near **Boulder Highway**. This figure was 98% in 2017 and 97% in 2016. (See April 2018 synopsis for specific location of the Boulder Hwy. gate.)
- Hualapai:** In 2018, only 71% of the large air carrier aircraft destined to the Nevada National Security Site that departed to the west were within 0.3 NM of the extended runway centerline, near **Hualapai Way**. This figure was 83% in 2017 and 93% in 2016. The CCDOA is aware of this decline in compliance, and will coordinate with pilots to address the noise abatement concerns of the impacted communities. (See April 2018 synopsis for specific location of the Hualapai gate.)
- Eastern:** In 2018, 95% of the touring helicopters destined east of the Las Vegas Valley were within 500 feet of the intersection of **Tropicana Avenue & Eastern Avenue**. This figure was 97% in 2017 and 98% in 2016. (See April 2018 synopsis for specific location of the Eastern gate.)
- Hollywood:** In 2018, 97% of the touring helicopters returning from areas east of the Las Vegas Valley were within 500 feet of the intersection of **Charleston Boulevard & Hollywood Boulevard**. This figure was 97% in 2017 and 97% in 2016. (See April 2018 synopsis for specific location of the Hollywood gate.)
- Stratosphere:** In 2018, 99% of the north-bound helicopters providing tours of the Las Vegas Strip were within 500 feet of the intersection of Oakey Boulevard & Las Vegas Boulevard, **northeast of the Stratosphere Tower**. This figure was 98% in 2017 and 55% in 2016. (See April 2018 synopsis for specific location of the Stratosphere gate.)

The information denoted in this monthly summary represents **typical** residential complaints, (with the exception of the number of complaints tied to one household), flight activity, (with the exception of increased departures to the north), fleet mix, and gate compliance (with the exception of the noted decline for the Hualapai gate).

June 2018: 55 total complaints – a 112% increase from 2017 and a 224% increase from 2016. On average, each caller (or household) issued 9.2 calls. The most calls received from one household totaled 50.

Calls by Community - (Exhibits 1 and 3)

Majority (more than 50%): The **Spring Valley** community issued 51 calls (93%). (See April 2018 synopsis of typical aircraft overflight impacts on this community.)

Minority (between 10% and 50%): (Not applicable)

Repeat Caller Impact: One household issued 91% of the total calls.

Calls by Operation - (Exhibit 2)

LAS: 98% of the total calls received were due to **LAS** fixed-wing operations.
▪ 93% were due to departures to the west from Runways 26L and 26R (98% from one household).

VGT: 0% of the total calls received were due to **VGT** fixed-wing operations.

HND: 0% of the total calls received were due to **HND** fixed-wing operations.

Helis: 2% of the total calls received were due to **helicopter** operations.

LAS Operations & Runway Use by **Large Air Carriers** - (Exhibits 4)

Overall: 513 daily *departures* – a 1% decrease from 2017 and a 1% increase from 2016.
▪ 61% of departures were to the west, 32% east, 4% south, and 3% north.
529 daily *arrivals* – a 1% increase from 2017 and 5% increase from 2016.
▪ 57% of arrivals were from the east, 27% north, 12% west, and 4% south.

Daytime: 406 daily *departures* – a 2% decrease from 2017 and no change from 2016.
▪ 54% of departures were to the west, 39% east, 3% north, and 3% south.
435 daily *arrivals* – no change from 2017 and a 1% increase from 2016.
▪ 53% of arrivals were from the east, 27% north, 14% west, and 5% south.

Nighttime: 107 daily *departures* – a 5% increase from 2017 and a 4% increase from 2016.
▪ 84% of departures were to the west, 9% south, 5% east, and 2% north.
94 daily *arrivals* – a 10% increase from 2017 and a 25% increase from 2016.
▪ 72% of arrivals were from the east, 27% north, and 1% west.

Daytime vs. Nighttime: Approximately 79% of all *departures* and 82% of all *arrivals* occurred during the daytime hours.

LAS Operations & Runway Use by **Non-Large Air Carriers** - (Exhibit 5)

- Overall:** 98 daily *departures* – a 7% increase from 2017 and a 14% increase from 2016.
▪ 50% of departures were to the south, 35% east, 10% west, and 6% north.
96 daily *arrivals* – a 12% increase from 2017 and 21% increase from 2016.
▪ 71% of arrivals were from the north, 16% west, 7% east and 6% south.
- Daytime:** 88 daily *departures* – a 9% increase from 2017 and 14% increase from 2016.
▪ 47% of departures were to the south, 38% east, 9% west, and 6% north.
88 daily *arrivals* – a 12% increase from 2017 and a 23% increase from 2016.
▪ 71% of arrivals were from the north, 17% west, 6% east, and 6% south.
- Nighttime:** 11 daily *departures* – a 4% decrease from 2017 and a 10% increase from 2016.
▪ 75% of departures were to the south, 14% west, 6% east, and 5% north.
8 daily *arrivals* – a 17% increase from 2017 and a 4% increase from 2016.
▪ 78% of arrivals were from the north, 17% east, 4% west, and 1% south.

Daytime vs. Nighttime: Approximately 89% of all *departures* and 92% of all *arrivals* occurred during the daytime hours.

Operations by Corridor for **Helicopter Tours** - (Exhibit 6)

Tropicana: 80 daily *departures* – a 16% decrease from 2017 and a 27% decrease from 2016.

Charleston: 75 daily *arrivals* - a 22% decrease from 2017 and a 30% decrease from 2016.

Strip: 79 daily *touch and go's* - a 28% decrease from 2017 and a 21% decrease from 2016.

Daytime vs. Nighttime: Approximately 84% of all helicopter tour operations occurred during the daytime hours.

LAS Fleet Mix for All Aircraft Types - (Exhibit 7)

- Heavies:** **Very large** air carrier turbine-driven aircraft (those weighing 300,000 lbs. or more) accounted for 4% of the daily traffic.
- Large:** **Large** air carrier turbine-driven aircraft (those weighing more than 75,000 lbs. and less than 300,000 lbs.) accounted for 64% of the daily traffic.
- Medium:** **Medium** turbine-driven aircraft (those weighing more than 41,000 lbs. and less than 75,000 lbs.) accounted for 2% of the daily traffic.
- Small:** **Small** turbine-driven aircraft (those weighing 41,000 lbs. or less) accounted for 7% of the daily traffic.
- Military:** **Military** turbine-driven aircraft accounted for 0% of the daily traffic.
- Non-Jet:** **Piston-driven** aircraft and unassigned aircraft types accounted for 4% of the daily traffic.
- Helos:** **Touring helicopters** accounted for 20% of the daily traffic.

Noisier Aircraft Types: The hush-kitted Boeing 727 aircraft and Boeing 737 (100 & 200 series) aircraft accounted for zero operations per day.

LAS General Departure Direction for Large Aircraft - (Exhibit 8)

Primary: In 2018, 61% departed to the **west** (from LAS's primary departure runways). This figure was 71% in 2017 and 78% in 2016.

Secondary: In 2018, 4% departed to the **south** (from LAS's secondary departure runways). This figure was 3% in 2017 and 3% in 2016.

Alternate 1: In 2018, 3% departed to the **north** (from LAS's alternate departure runways). This figure was 1% in 2017 and 2% in 2016.

Alternate 2: In 2018, due to temperatures exceeding 100 degrees 23 out of 30 days, 32% departed to the **east** (from LAS's alternate departure runways). This figure was 25% in 2017 and 17% in 2016.

Gate Compliance for Large Aircraft and Helicopters - (Exhibit 9)

SVHS: In 2018, 98% of the large air carrier aircraft (excluding those destined to the Nevada National Security Site) that departed to the west from Runways 25L or 25R and made a left-hand turn were within 0.3 NM of **Sierra Vista High School** (SVHS). This figure was 97% in 2017 and 96% in 2016. (See April 2018 synopsis for specific location of the SVHS ate.)

Peace: In 2018, 96% of the large air carrier aircraft (excluding those destined to the Nevada National Security Site) that departed to the west from Runways 25L or 25R and made a right-hand turn were within 0.3 NM of the intersection of **Peace Way & Summers Shade Street**. This figure was 95% in 2017 and 94% in 2016. (See April 2018 synopsis for specific location of the Peace gate.)

Pebble: In 2018, 97% of the large air carrier aircraft (excluding those destined to the Nevada National Security Site) that departed to the south from Runways 19L or 19R were within 0.3 NM of the intersection of **Pebble Road & Arville Street**. This figure was 100% in 2017 and 96% in 2016. (See April 2018 synopsis for specific location of the Pebble gate.)

UNLV: In 2018, 93% of the large air carrier aircraft that departed to the north from Runways 01L or 01R were within 0.3 NM of the **UNLV sports complex**. This figure was 40% in 2017 and 83% in 2016. (See April 2018 synopsis for specific location of the UNLV gate.)

Boulder: In 2018, 99% of the large air carrier aircraft that departed to the north from Runways 07L or 07R were within 0.3 NM of the extended runway centerline, near **Boulder Highway**. This figure was 99% in 2017 and 97% in 2016. (See April 2018 synopsis for specific location of the Boulder Hwy. gate.)

Hualapai: In 2018, only 68% of the large air carrier aircraft destined to the Nevada National Security Site that departed to the west were within 0.3 NM of the extended runway centerline, near **Hualapai Way**. This figure was 84% in 2017 and 91% in 2016. The CCDOA is aware of this decline in compliance, and will coordinate with pilots to address the noise abatement concerns of the impacted communities. (See April 2018 synopsis for specific location of the Hualapai gate.)

Eastern: In 2018, 98% of the touring helicopters destined east of the Las Vegas Valley were within 500 feet of the intersection of *Tropicana Avenue & Eastern Avenue*. This figure was 97% in 2017 and 88% in 2016. (See April 2018 synopsis for specific location of the Eastern gate.)

Hollywood: In 2018, 85% of the touring helicopters returning from areas east of the Las Vegas Valley were within 500 feet of the intersection of *Charleston Boulevard & Hollywood Boulevard*. This figure was 97% in 2017 and 97% in 2016. (See April 2018 synopsis for specific location of the Hollywood gate.)

Stratosphere: In 2018, 99% of the north-bound helicopters providing tours of the Las Vegas Strip were within 500 feet of the intersection of Oakey Boulevard & Las Vegas Boulevard, *northeast of the Stratosphere Tower*. This figure was 99% in 2017 and 99% in 2016. (See April 2018 synopsis for specific location of the Stratosphere gate.)

The information denoted in this monthly summary represents **typical** residential complaints, (with the exception of the number of complaints tied to one household, otherwise very low number of complaints), flight activity, (with the exception of increased departures to the east, due to temperatures exceeding 100 degrees 23 out of 30 days), fleet mix, and gate compliance (with the exception of the noted decline for the Hualapai gate).

Other Notable Issues

Electric Daisy Carnival: On May 18 through 20, 2018, this concert event was held at the Las Vegas Motor Speedway, with an estimated total attendance of 411,400 people. Helicopter tour operators provided almost 900 passenger flights, ferrying approximately 5,500 passengers to and from the event over the three day period, resulting in one noise complaint issued.

Northbound Departure Increase: Weather data compiled for April reflected increased winds from the north resulting in the FAA utilizing Runway 01R for departures. Wind speed and direction typically determine runway use safety and efficiency.

Eastbound Departure Increase: With temperatures averaging and exceeding 100 degrees on a consistent basis, the FAA has increased use of Runway 08L for departures. Extreme temperatures and low humidity impact performance of larger aircraft, requiring additional runway distance for a safe departure. With an elevation difference of 142 feet between the opposite ends of LAS Runway 26R/08L, aircraft departing Runway 08L are placed on a downhill roll enabling a more efficient and safe departure roll.

Safety and Security Threats: Any threats to DOA staff or an aircraft in flight are taken seriously, and such threats will be forwarded to the appropriate law enforcement agencies.

GCS:jj

Attachments

Airport Noise Report

July 20, 2018

Page 14 of 29

Distribution:

Commissioner Sisolak, Chair	Sean Roebuck
Commissioner Giunchigliani, Vice-Chair	Bruce Daugherty
Commissioner Brager	Sam Ingalls
Commissioner Brown	Chris Jones
Commissioner Kirkpatrick	Christine Crews
Commissioner Gibson	Tina Frias
Commissioner Weekly	Jeff Jacquart
Donald G. Burnette	Charlie Hall
Rosemary Vassiliadis	Scott Kichline
James Chrisley	Stephanie Garcia-Vause (COH)
Joseph Piurkowski	Andrew Powell (COH)
Sandra Cikity	William Ruggiero (FAA TRACON)
Judy Villalta	Thomas Miller (Nellis AFB)
Ben Czyzewski	Michael Moorer (FAA ATCT)
Donna Bergstrom	James Erbeck (CLV)
Curtis Hedgepeth	Paul Alukonis (FAA FSDO)
Jon Holman (FAA ATC)	Sydney Lowe (University Libraries)
Charlie Halterman (HND Tower)	Lisa Butterfield (Reno-Tahoe Airport)
Richard Falcon (FAA FSDO)	Andrea Christensen (Denver Airport)
Bristol Ellington (COH)	Jennifer Lewis (Scottsdale Airport)
Elizabeth Fretwell (CLV)	Frank Iacovino (Mass Port Authority)
Mayor Carolyn Goodman (CLV)	Robert Butler (Papillon Helicopters)
Mayor Pro Tem Lois Tarkanian (CLV)	Christine Gerencher (American Airlines)
Councilman S. Anthony (CLV)	Bert Ganoung (SFO)
Councilman Bob Coffin (CLV)	San Diego Airport Noise Management
Councilman Steven S. Seroka (CLV)	Jeannie Denham (Citizen)
Councilwoman Michele Fiore (CLV)	Judge Bob Johnston (Citizen)
Councilman Cedric Crear (CLV)	Roy Fuhrmann (Metro Airports Commission)
Brok Armantrout (CBC)	Tom Schaus (Sundance Helicopters)
David Parks (Nevada State Assembly)	Brooke Satern (Port of Portland)
J. Gordon Arkin (Foley & Lardner)	Gary Brodt (Citizen)
John Williams (Ricondo)	James P. Callahan (Nellis AFB)
Douglas Pomeroy (FAA ADO)	Stan Shepherd (SEATAC)
La Nea M. Conner (Boeing)	Eric Sheng (Long Beach Airport)
Mike Jeck (Metro Wash. Air Auth.)	Jason Schwartz (Portland Airport)
Karen Everitt (Dallas City Hall)	Todd Lobato (Nellis AFB)
Samuel Carter (Harris)	Steven Peacock (Dallas City Hall)
Blanca Vazquez	John Dietz (FAA TRACON)
Susan Gersh	William Olivieri (Citizen)

Exhibit 1: Noise Complaint Calls by Community* - April 2018

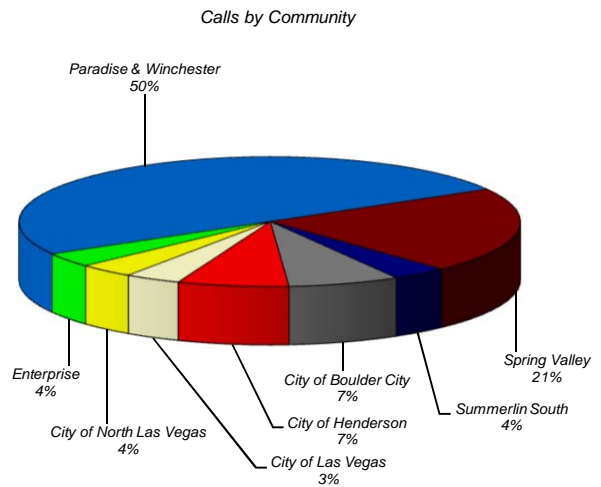
Community	No. of Calls in 2018	No. of Callers in 2018	No. of Calls in 2017	No. of Calls in 2016
City of Boulder City	2	1		
City of Henderson	2	2	3	7
City of Las Vegas	1	1	2	13
City of North Las Vegas	1	1		1
Enterprise	1	1	5	10
Lone Mountain			2	
Paradise & Winchester	14	3	26	40
Spring Valley	6	2	6	6
Summerlin South	1	1		
Sunrise Manor				7
Whitney			1	1
Location unknown			1	
Overall Total	28	12	46	85

Difference between 2018 and 2017 Total Calls: -39%

Difference between 2018 and 2016 Total Calls: -67%

Average Number of Calls per Caller: 2.3

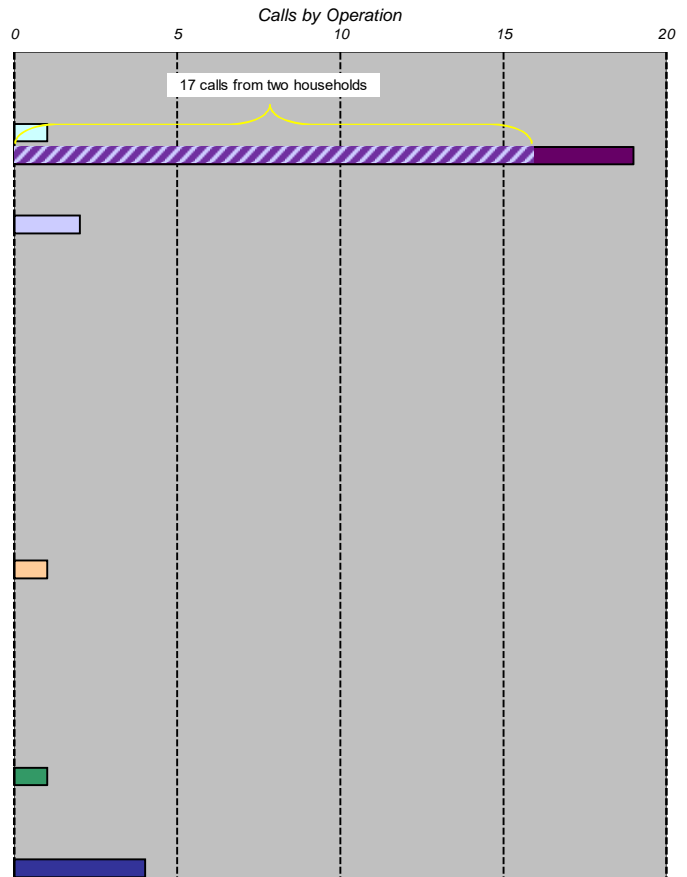
Most calls received from one household: 12



* See map on reverse side for community boundaries and location of known noise complaints.

Exhibit 2: Noise Complaint Calls by Type of Operation - April 2018

Operation	No. of Calls in 2018	Percent of Overall Total	No. of Calls in 2017	No. of Calls in 2016
LAS 01R/L Arrivals			1	1
LAS 08R/L Arrivals			2	1
LAS 19R/L Arrivals			1	
LAS 26R/L Arrivals	1	3.6%	1	
LAS 01R/L Departures	19	67.9%	30	54
LAS 08R/L Departures			1	2
LAS 19R/L Departures			1	8
LAS 26R/L Departures	2	7.1%	3	9
LAS Run-ups				
LAS GA				
LAS Other				
LAS Total	22	78.6%	39	75
VGT 07 Arrivals				
VGT 12R/L Arrivals				
VGT 25 Arrivals				
VGT 30R/L Arrivals				
VGT 07 Departures				
VGT 12R/L Departures				
VGT 25 Departures				
VGT 30R/L Departures				
VGT Run-ups				
VGT GA	1	3.6%	2	2
VGT Other				
VGT Total	1	3.6%	2	2
HND 17R/L Arrivals				
HND 35R/L Arrivals				
HND 17R/L Departures				
HND 35R/L Departures				
HND Run-ups				
HND GA	1	3.6%	1	4
HND Other				
HND Total	1	3.6%	1	4
Helicopters**	4	14.3%	4	4
Overall Total	28	100%	46	85



** Note that helicopter noise complaints are not tied to a specific facility since the operation cannot always be associated to a specific airport. Additionally, helicopter calls do not include those associated with operations conducted by the Metropolitan Police Department or those associated with operations conducted at non-DOA facilities.

Exhibit 3: Aircraft Noise Complaints by Community - Apr 2018

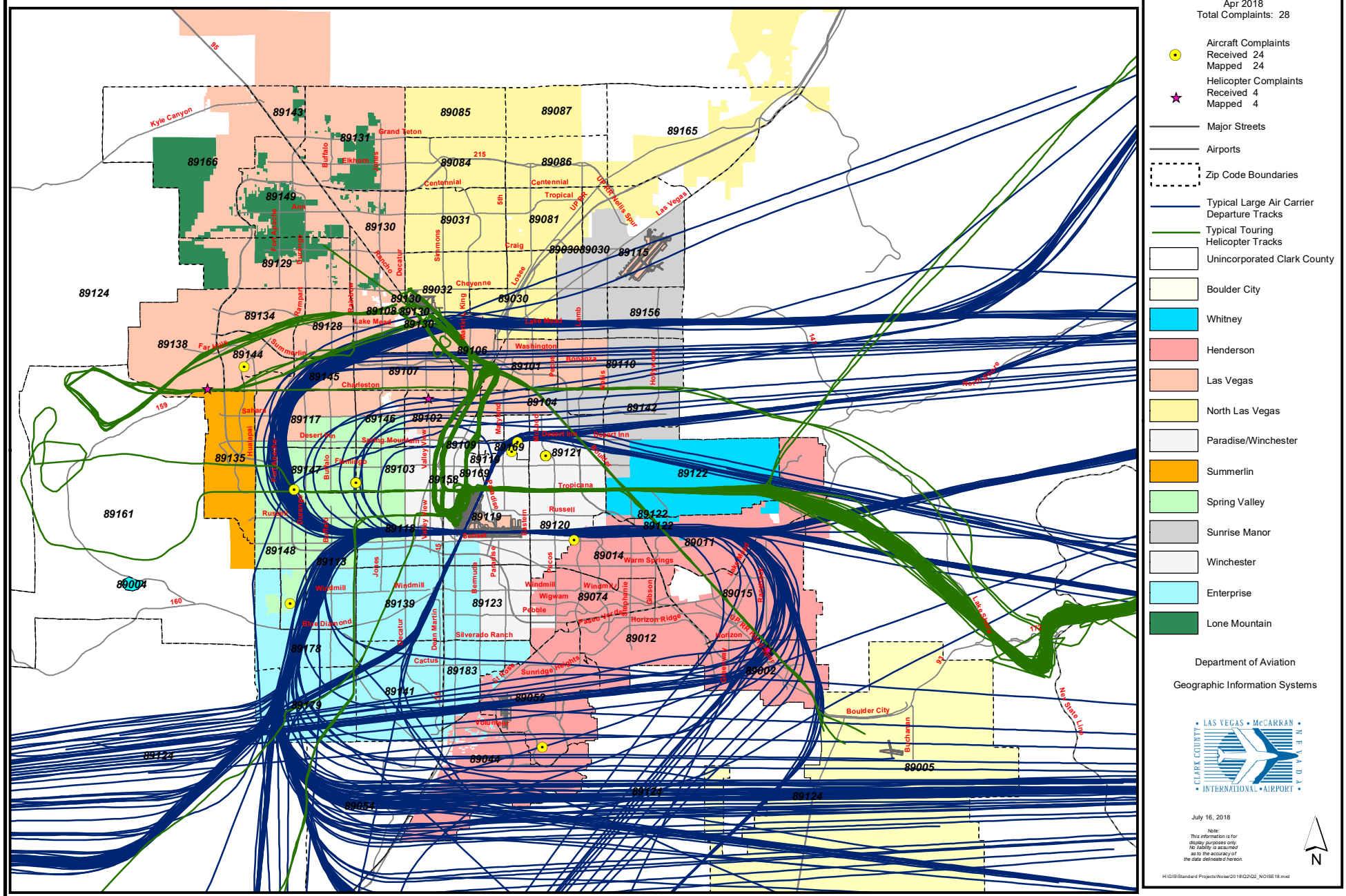
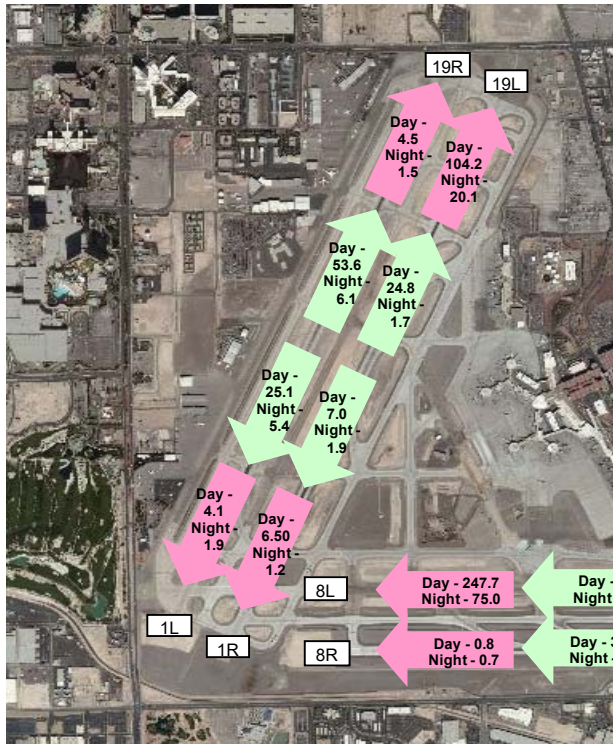


Exhibit 4: LAS Daily Average Operations Runway for Large Air Carrier Aircraft* - April 2018



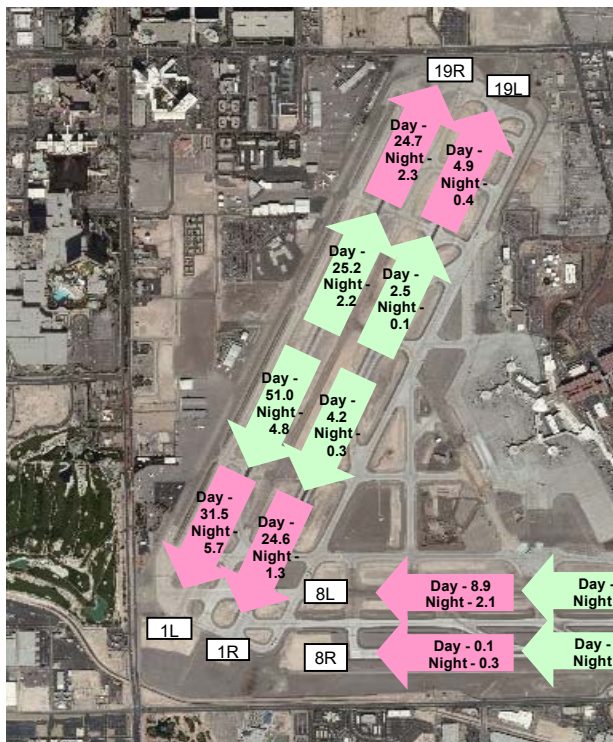
Year	2018	2017	2016
Daytime Departures	407 80%	411 82%	400 80%
Nighttime Departures	102 20%	88 18%	99 20%
Total Departures	510 100%	499 100%	499 100%

Daytime Arrivals	438 85%	434 86%	429 87%
Nighttime Arrivals	80 15%	69 14%	67 13%
Total Arrivals	518 100%	503 100%	496 100%

Growth	Overall	Daytime	Nighttime
Depts. 2018 vs 2017	2%	-1%	17%
Depts. 2018 vs 2016	2%	2%	4%
Arrivals 2018 vs 2017	3%	1%	16%
Arrivals 2018 vs 2016	4%	2%	20%

* Aircraft types: All aircraft with a maximum gross take off weight of at least 75,000 pounds, including but not limited to, A306, A310, A311, A318, A319, A320, A330, A340, B707, B717, B727, B737, B747, B757, B767, B777, CRJ7, CRJ9, DC8, DC9, DC10, E170, E190, HA4T, L1011, MD80, MD90, MD10, MD11, VC10.

Exhibit 5: LAS Daily Average Operations by Runway for Non-Large Air Carrier Aircraft** - April 2018



Year	2018	2017	2016
Daytime Departures	103 89%	84 90%	87 90%
Nighttime Departures	12 11%	10 10%	10 10%
Total Departures	116 100%	93 100%	97 100%

Daytime Arrivals	99 92%	81 93%	87 93%
Nighttime Arrivals	9 8%	7 7%	7 7%
Total Arrivals	108 100%	87 100%	93 100%

Growth	Overall	Daytime	Nighttime
Depts. 2018 vs 2017	24%	23%	31%
Depts. 2018 vs 2016	19%	18%	24%
Arrivals 2018 vs 2017	24%	23%	37%
Arrivals 2018 vs 2016	16%	14%	35%

** Aircraft types: All aircraft with a maximum gross take off weight less than 75,000 pounds, excluding helicopters.

Exhibit 6: LAS Daily Average Operations by Corridor for Helicopter Tours - April 2018

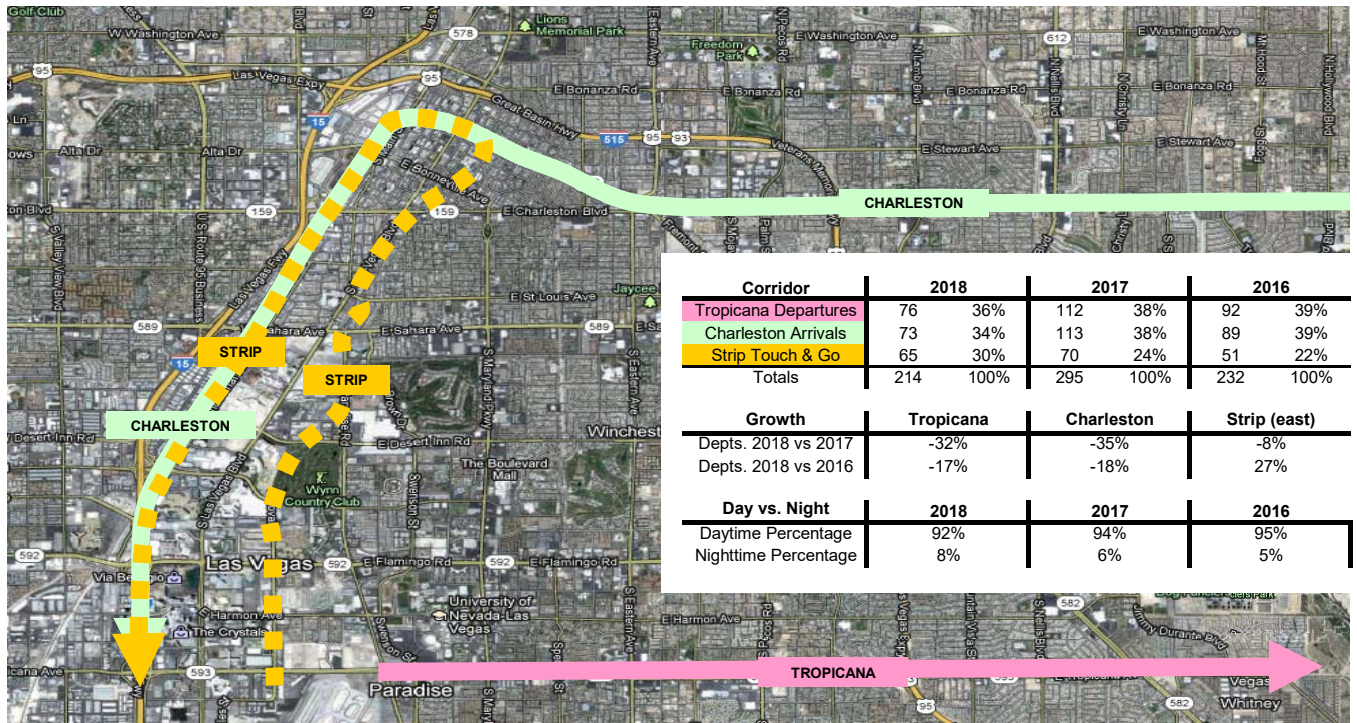
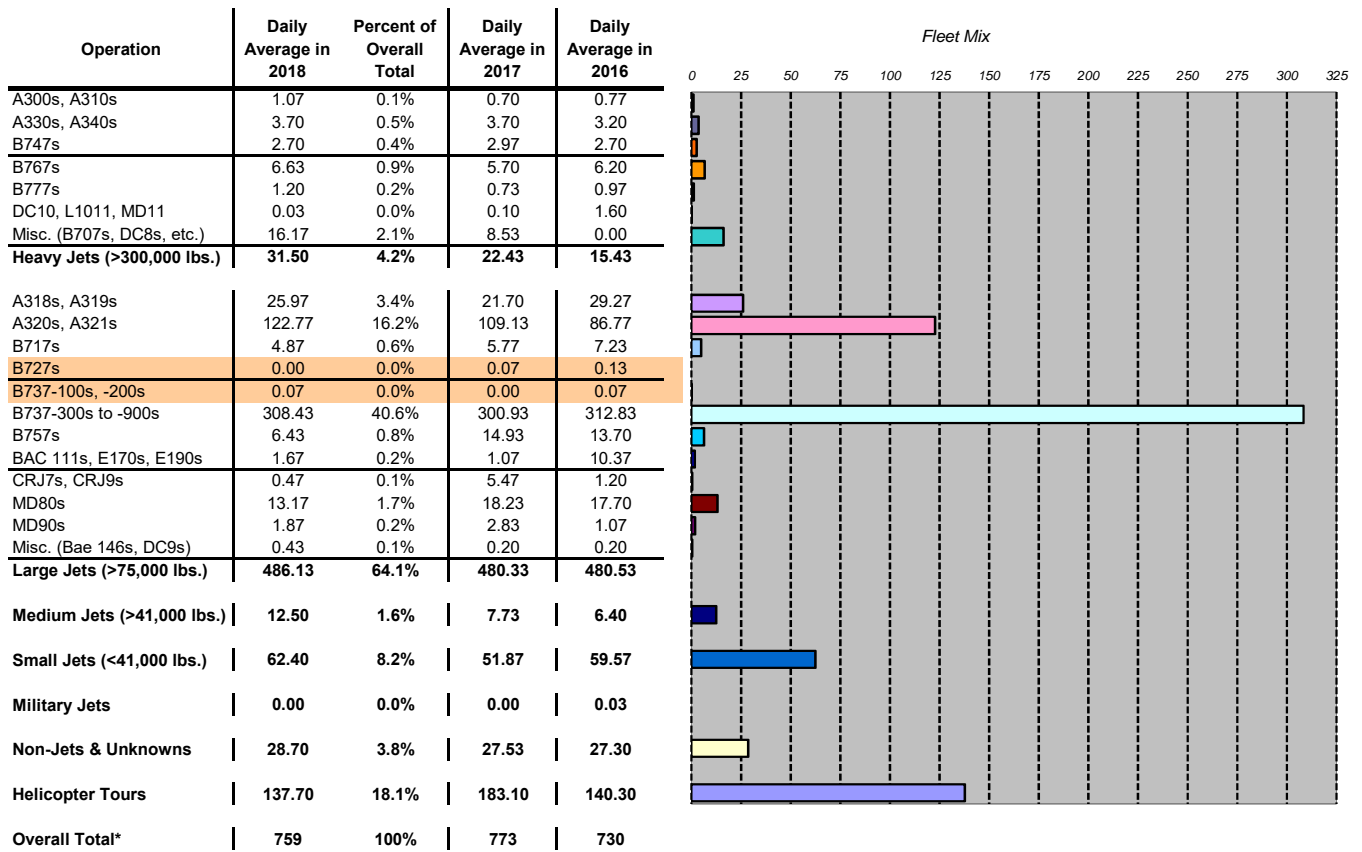


Exhibit 7: LAS Aircraft Arrival Fleet Mix** - April 2018



** Overall Total: Note that operation type and runway use counts are estimated by Harris Corp. EnvironmentalVue Noise and Monitoring Operations system based on radar data. Due to limitations of radar data, information for aircraft weighing less than 75,000 lbs is inexact.

Exhibit 8: LAS General Departure Direction for Large Air Carrier Aircraft* - April 2018 to 2016

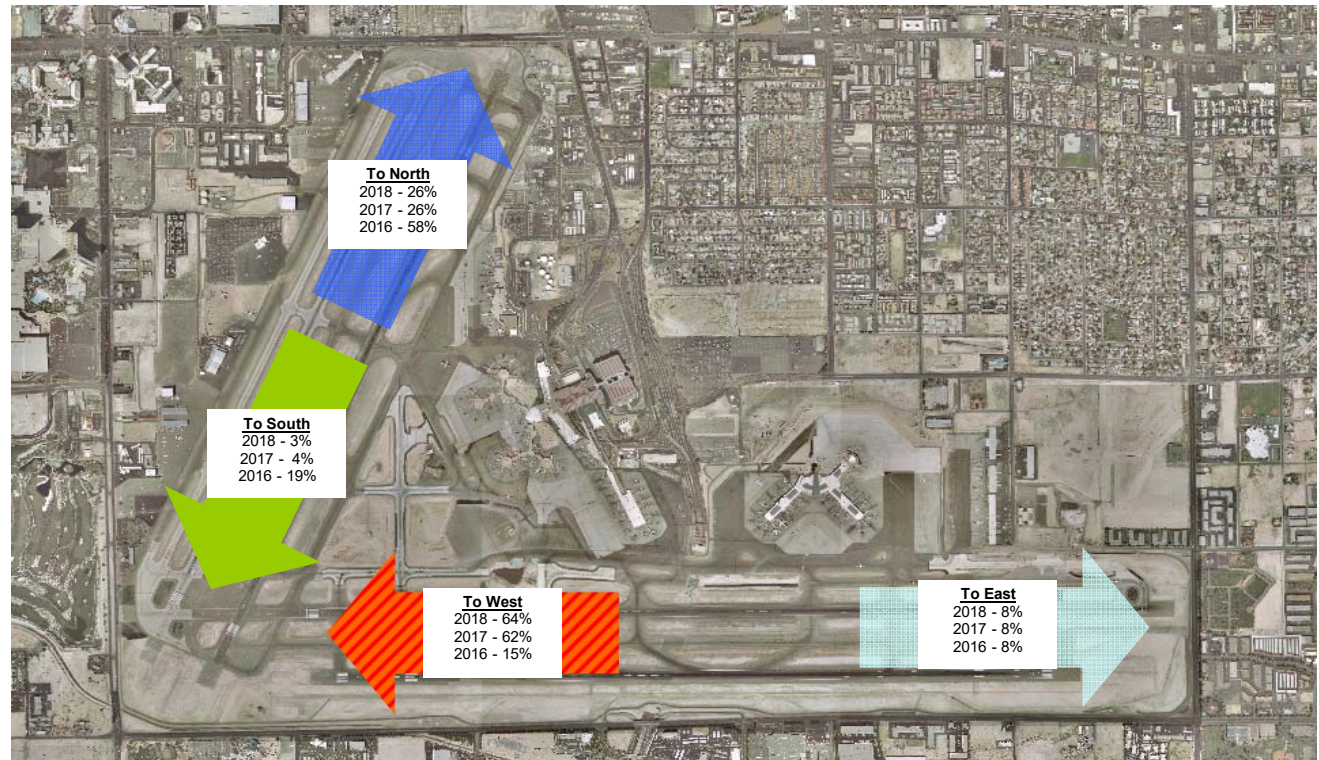
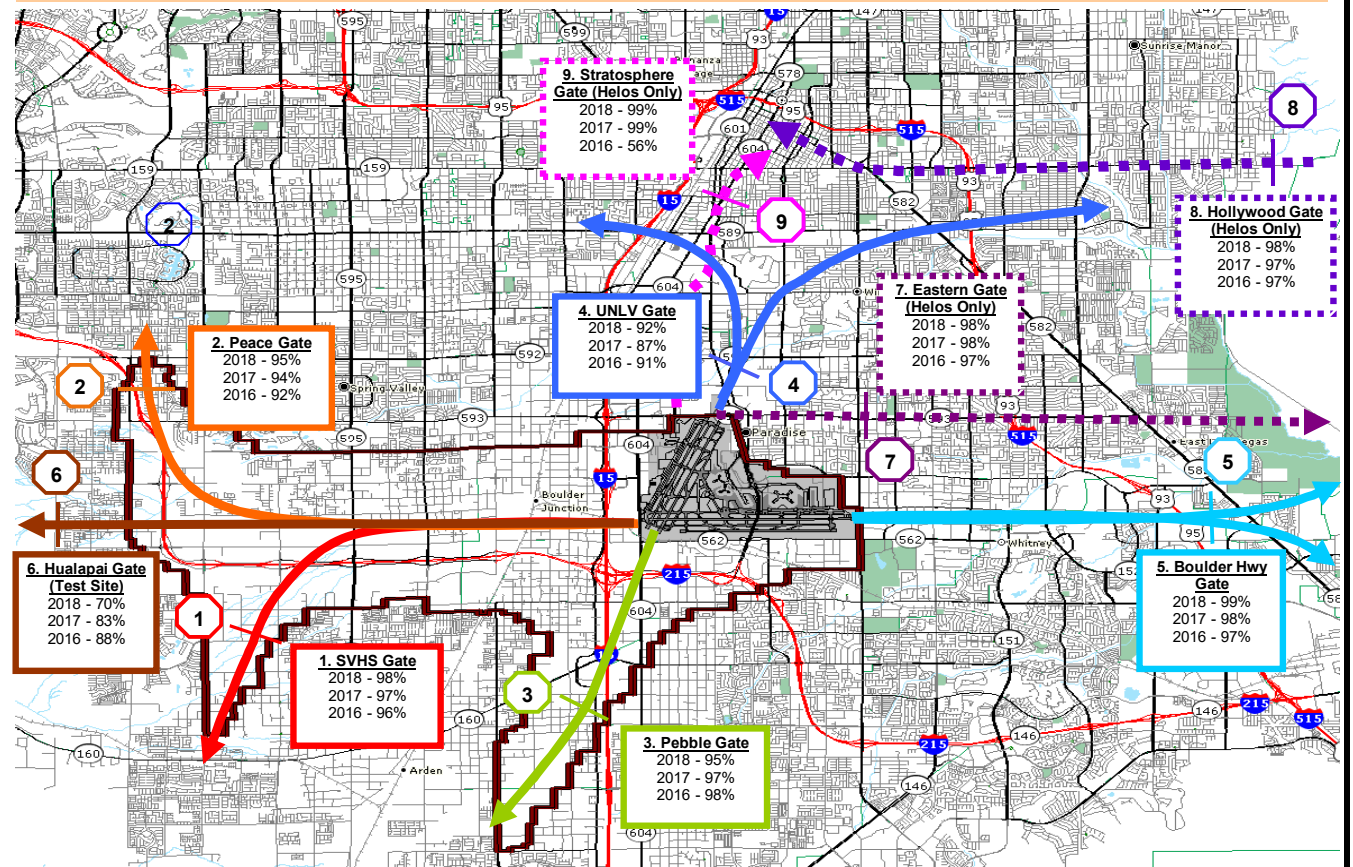


Exhibit 9: "Gate" Compliance for Large Aircraft* & LAS Helicopter Tours - April 2018



* Aircraft types: All aircraft with a maximum gross take of weight of at least 75,000 pounds, including but not limited to, A306, A310, A311, A318, A319, A320, A330, A B707, B717, B727, B737, B747, B757, B767, B777, CRJ7, CRJ9, DC8, DC9, DC10, E170, E190, HA4T, L1011, MD80, MD90, MD10, MD11, VC10.

Exhibit 1: Noise Complaint Calls by Community* - May 2018

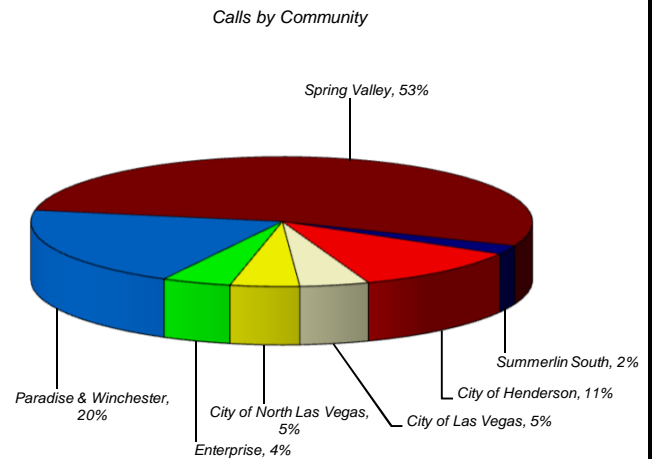
Community	No. of Calls in 2018	No. of Callers in 2018	No. of Calls in 2017	No. of Calls in 2016
City of Boulder City	5	4	9	5
City of Henderson	2	2	7	30
City of Las Vegas	2	2		
City of North Las Vegas	2	2		
Enterprise	2	2	7	9
Lone Mountain			11	
Paradise & Winchester	9	5	15	41
Spring Valley	24	3	12	8
Summerlin South	1	1		
Sunrise Manor				5
Whitney			1	
Location unknown				
Overall Total	45	19	62	98

Difference between 2018 and 2017 Total Calls: -27%

Difference between 2018 and 2016 Total Calls: -54%

Average Number of Calls per Caller: 2.4

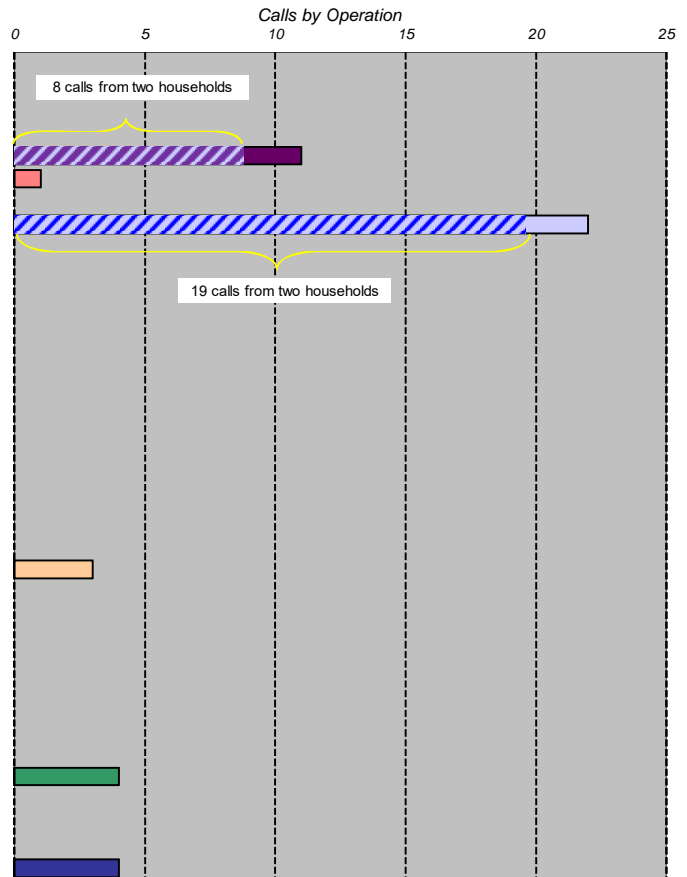
Most calls received from one household: 14



* See map on reverse side for community boundaries and location of known noise complaints.

Exhibit 2: Noise Complaint Calls by Type of Operation - May 2018

Operation	No. of Calls in 2018	Percent of Overall Total	No. of Calls in 2017	No. of Calls in 2016
LAS 01R/L Arrivals			1	1
LAS 07R/L Arrivals			1	
LAS 19R/L Arrivals				5
LAS 26R/L Arrivals				
LAS 01R/L Departures	11	24.4%	21	43
LAS 08R/L Departures	1	2.2%	2	
LAS 19R/L Departures			2	5
LAS 26R/L Departures	22	48.9%	13	38
LAS Run-ups				
LAS GA				
LAS Other				
LAS Total	34	75.6%	40	92
VGT 07 Arrivals				
VGT 12R/L Arrivals				
VGT 25 Arrivals				
VGT 30R/L Arrivals				
VGT 07 Departures				
VGT 12R/L Departures				
VGT 25 Departures				
VGT 30R/L Departures				
VGT Run-ups				
VGT GA	3	6.7%	12	
VGT Other				
VGT Total	3	6.7%	12	0
HND 17R/L Arrivals				
HND 35R/L Arrivals				
HND 17R/L Departures				
HND 35R/L Departures				
HND Run-ups				
HND GA	4	8.9%	6	
HND Other				
HND Total	4	8.9%	6	0
Helicopters**	4	8.9%	4	6
Overall Total	45	100%	62	98



** Note that helicopter noise complaints are not tied to a specific facility since the operation cannot always be associated to a specific airport. Additionally, helicopter calls do not include those associated with operations conducted by the Metropolitan Police Department or those associated with operations conducted at non-DOA facilities.

Exhibit 3: Aircraft Noise Complaints by Community - May 2018

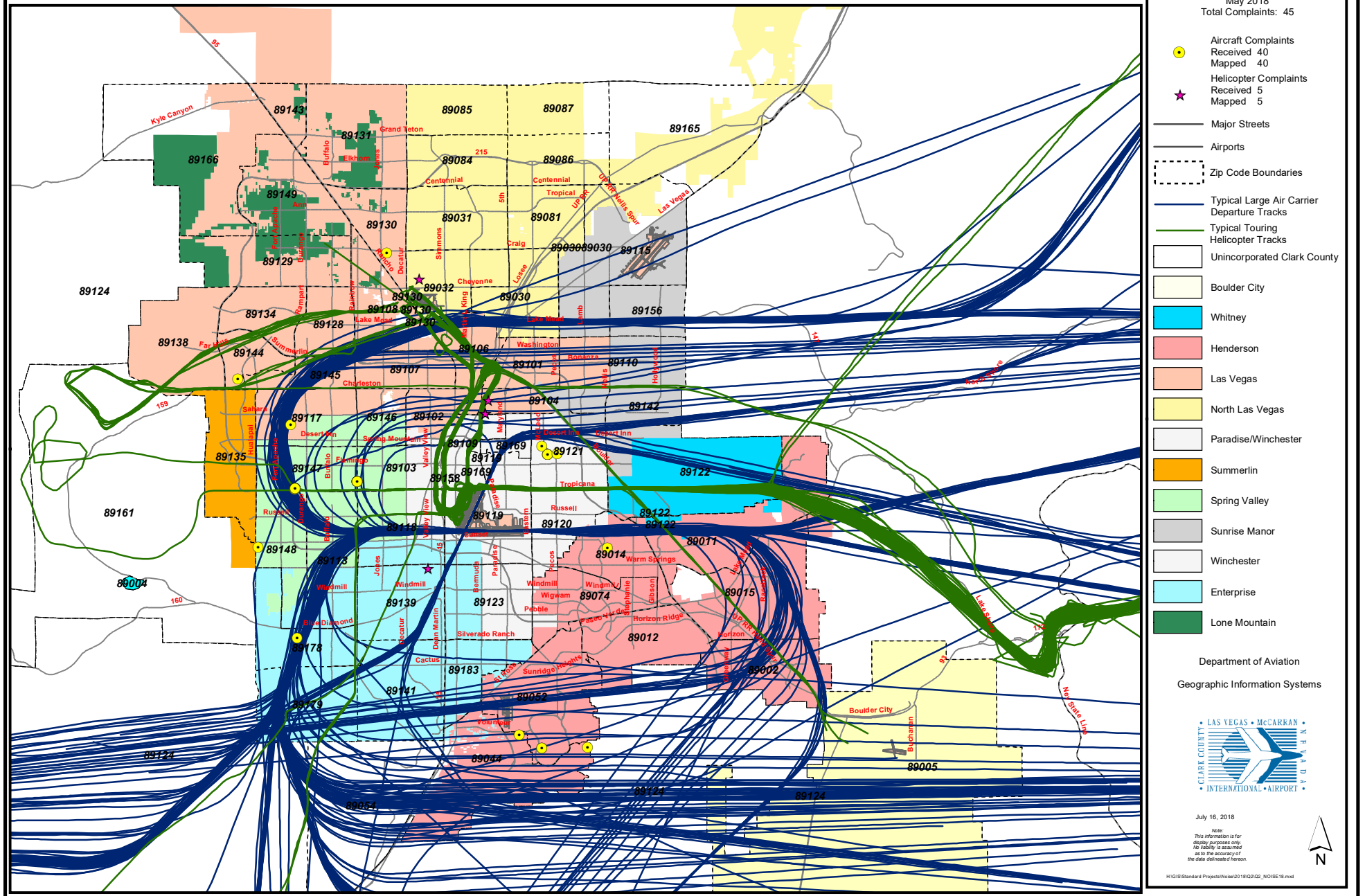
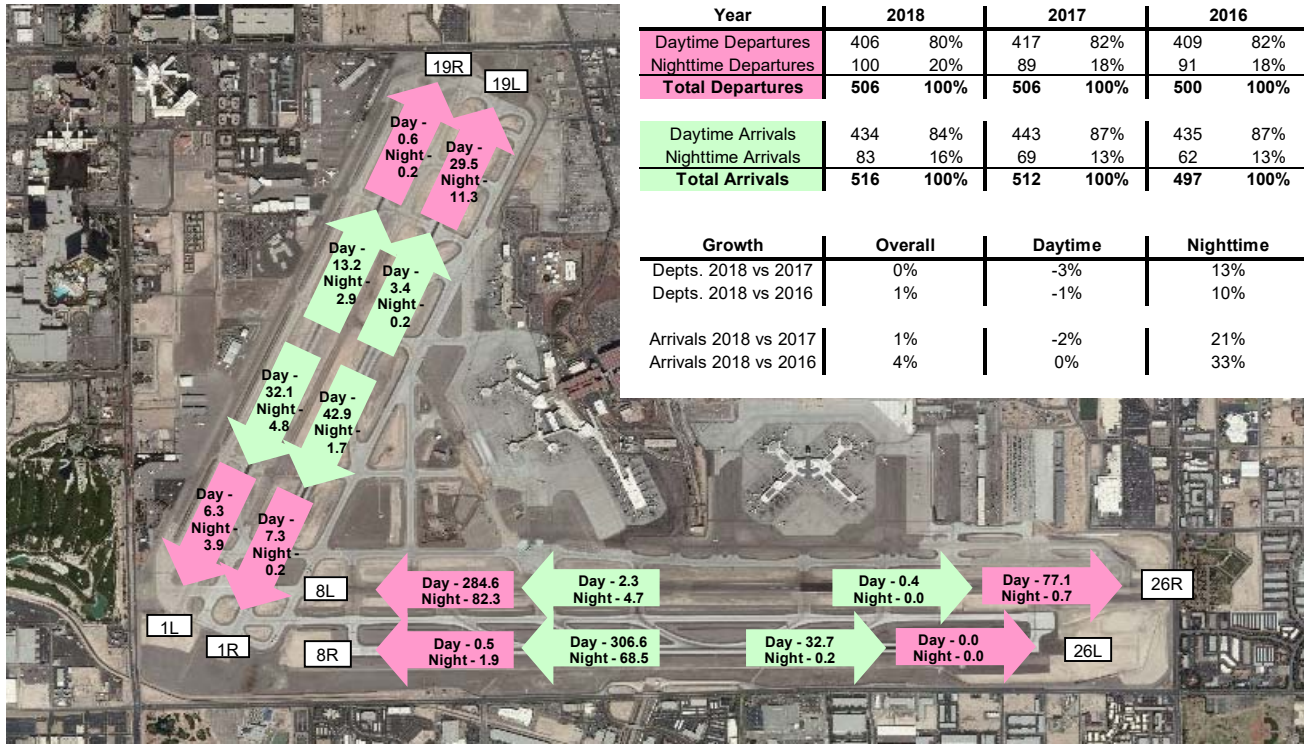
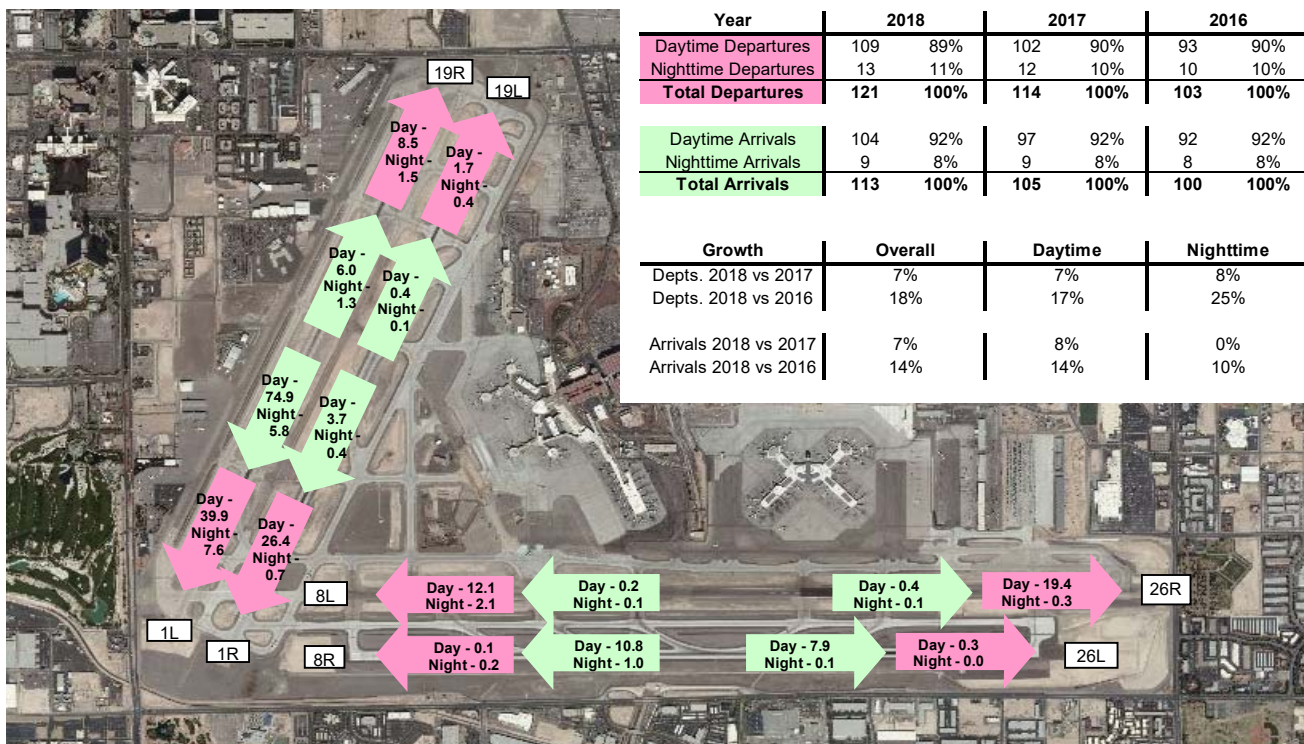


Exhibit 4: LAS Daily Average Operations Runway for Large Air Carrier Aircraft* - May 2018



* Aircraft types: All aircraft with a maximum gross take off weight of at least 75,000 pounds, including but not limited to, A306, A310, A311, A318, A319, A320, A330, A340, B707, B717, B727, B737, B747, B757, B767, B777, CRJ7, CRJ9, DC8, DC9, DC10, E170, E190, HA4T, L1011, MD80, MD90, MD10, MD11, VC10.

Exhibit 5: LAS Daily Average Operations by Runway for Non-Large Air Carrier Aircraft** - May 2018



** Aircraft types: All aircraft with a maximum gross take off weight less than 75,000 pounds, excluding helicopters.

Exhibit 6: LAS Daily Average Operations by Corridor for Helicopter Tours - May 2018

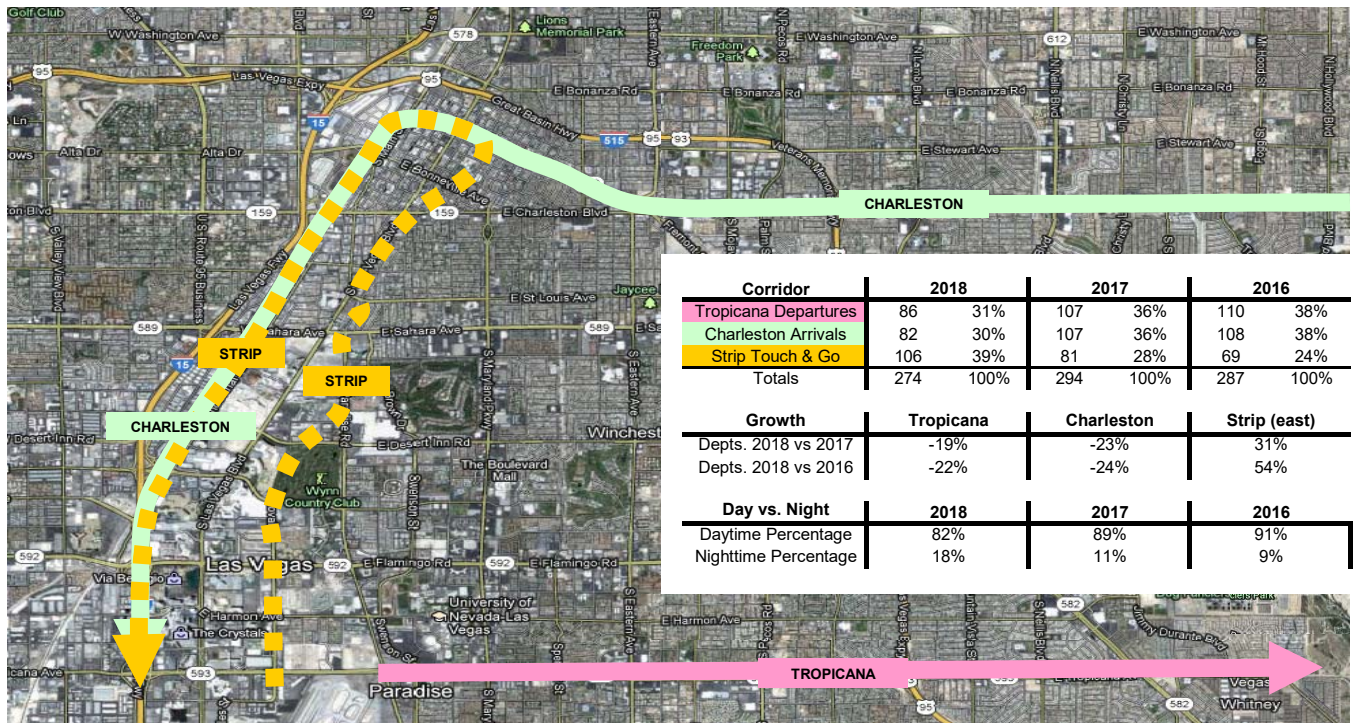
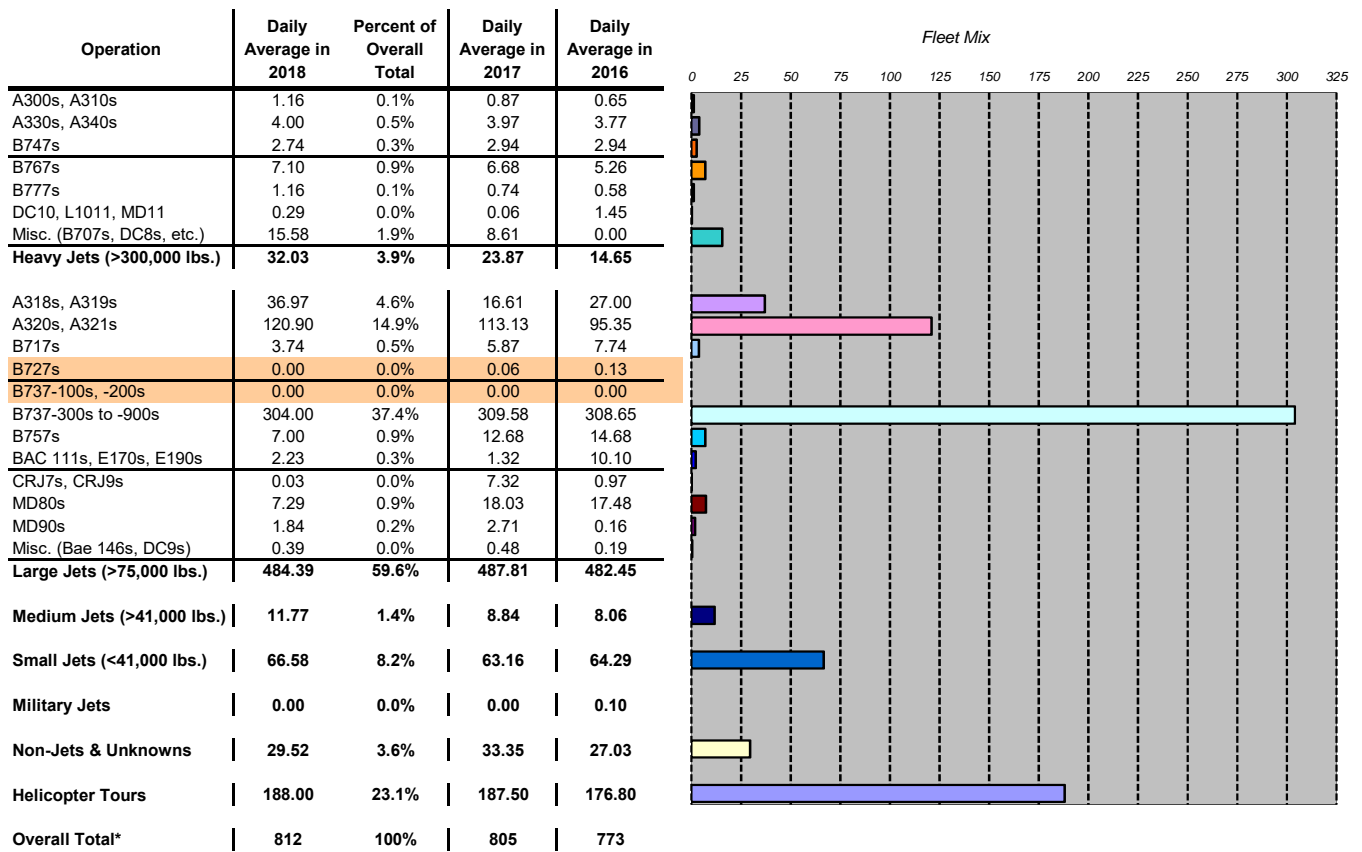


Exhibit 7: LAS Aircraft Arrival Fleet Mix - May 2018**



** Overall Total: Note that operation type and runway use counts are estimated by Harris Corp. EnvironmentalVue Noise and Monitoring Operations system based on radar data. Due to limitations of radar data, information for aircraft weighing less than 75,000 lbs is inexact.

Exhibit 8: LAS General Departure Direction for Large Air Carrier Aircraft* - May 2018 to 2016

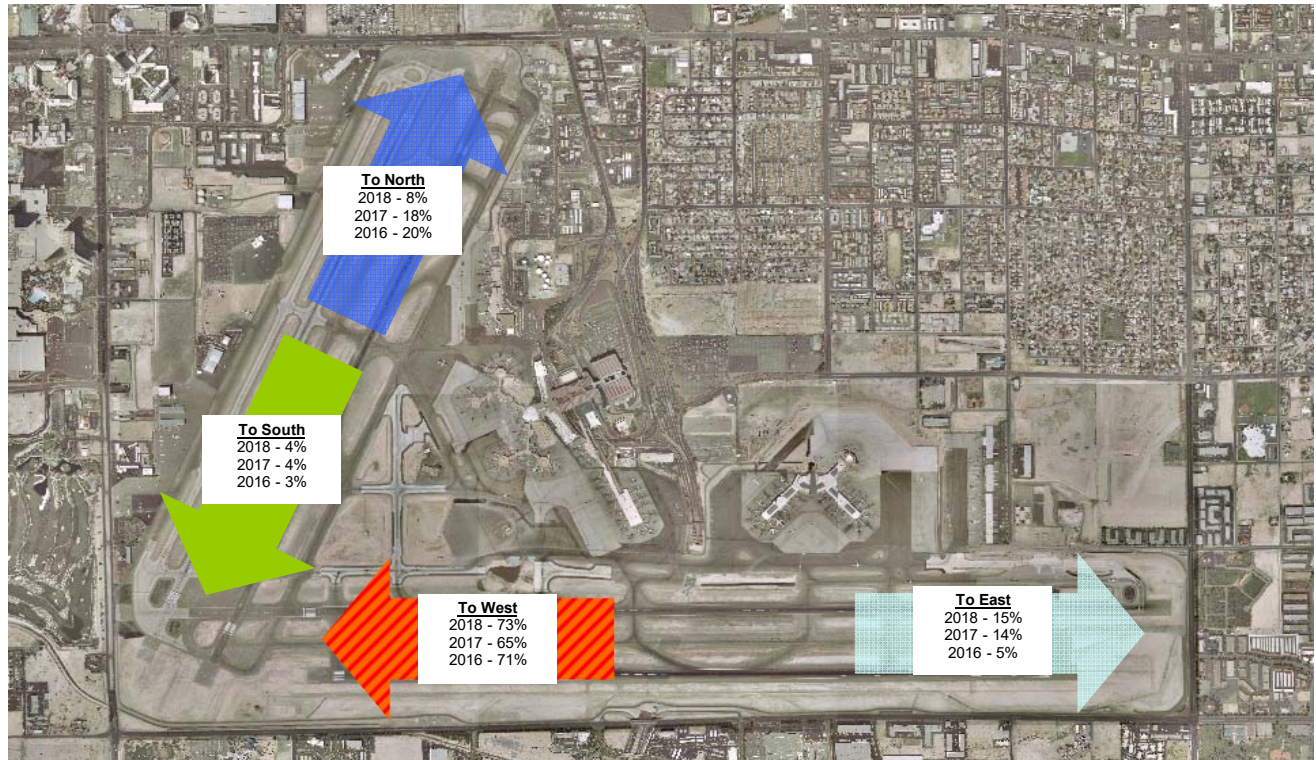
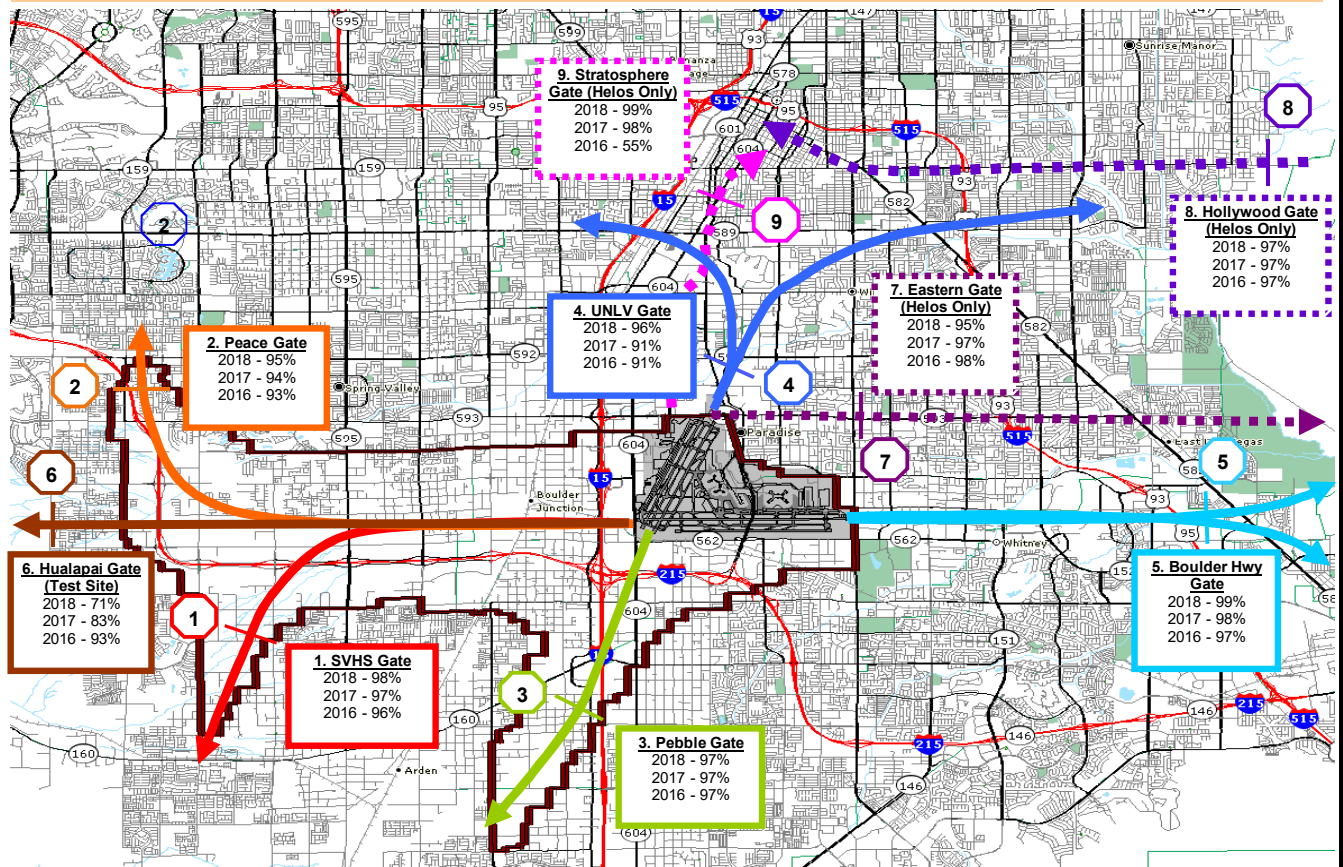


Exhibit 9: "Gate" Compliance for Large Aircraft* & LAS Helicopter Tours - May 2018



* Aircraft types: All aircraft with a maximum gross take off weight of at least 75,000 pounds, including but not limited to, A306, A310, A311, A318, A319, A320, A330, A350, B707, B717, B727, B737, B747, B757, B767, B777, CRJ7, CRJ9, DC8, DC9, DC10, E170, E190, HA4T, L1011, MD80, MD90, MD10, MD11, VC10.

Exhibit 1: Noise Complaint Calls by Community* - June 2018

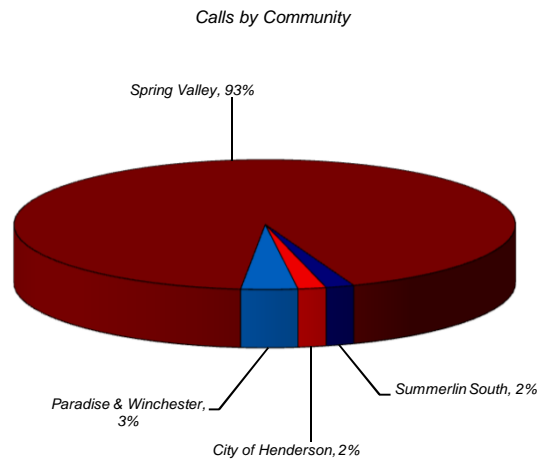
Community	No. of Calls in 2018	No. of Callers in 2018	No. of Calls in 2017	No. of Calls in 2016
City of Boulder City	1	1	1	1
City of Henderson			18	2
City of Las Vegas				1
City of North Las Vegas				
Enterprise			4	
Lone Mountain				
Paradise & Winchester	2	2	1	13
Spring Valley	51	2	2	
Summerlin South	1	1		
Sunrise Manor				
Whitney				
Location unknown				
Overall Total	55	6	26	17

Difference between 2018 and 2017 Total Calls: 112%

Difference between 2018 and 2016 Total Calls: 224%

Average Number of Calls per Caller: 9.2

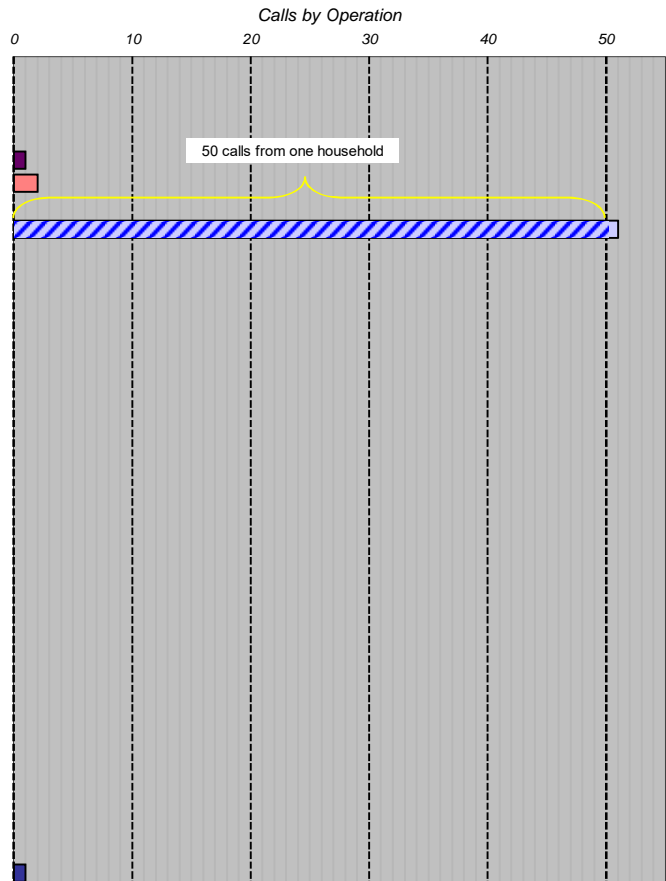
Most calls received from one household: 50



* See map on reverse side for community boundaries and location of known noise complaints.

Exhibit 2: Noise Complaint Calls by Type of Operation - June 2018

Operation	No. of Calls in 2018	Percent of Overall Total	No. of Calls in 2017	No. of Calls in 2016
LAS 01R/L Arrivals				1
LAS 08R/L Arrivals				1
LAS 19R/L Arrivals				1
LAS 26R/L Arrivals				
LAS 01R/L Departures	1	1.8%	1	
LAS 08R/L Departures	2	3.6%	1	5
LAS 19R/L Departures				
LAS 26R/L Departures	51	92.7%	5	3
LAS Run-ups				
LAS GA				
LAS Other				
LAS Total	54	98.2%	7	11
VGT 07 Arrivals				
VGT 12R/L Arrivals				
VGT 25 Arrivals				
VGT 30R/L Arrivals				
VGT 07 Departures				
VGT 12R/L Departures				
VGT 25 Departures				
VGT 30R/L Departures				
VGT Run-ups				
VGT GA				
VGT Other				
VGT Total	0	0.0%	0	0
HND 17R/L Arrivals				
HND 35R/L Arrivals				
HND 17R/L Departures				
HND 35R/L Departures				
HND Run-ups				
HND GA				
HND Other				
HND Total	0	0.0%	0	0
Helicopters**	1	1.8%	19	6
Overall Total	55	100%	26	17



** Note that helicopter noise complaints are not tied to a specific facility since the operation cannot always be associated to a specific airport. Additionally, helicopter calls do not include those associated with operations conducted by the Metropolitan Police Department or those associated with operations conducted at non-DOA facilities.

Exhibit 3: Aircraft Noise Complaints by Community - Jun 2018

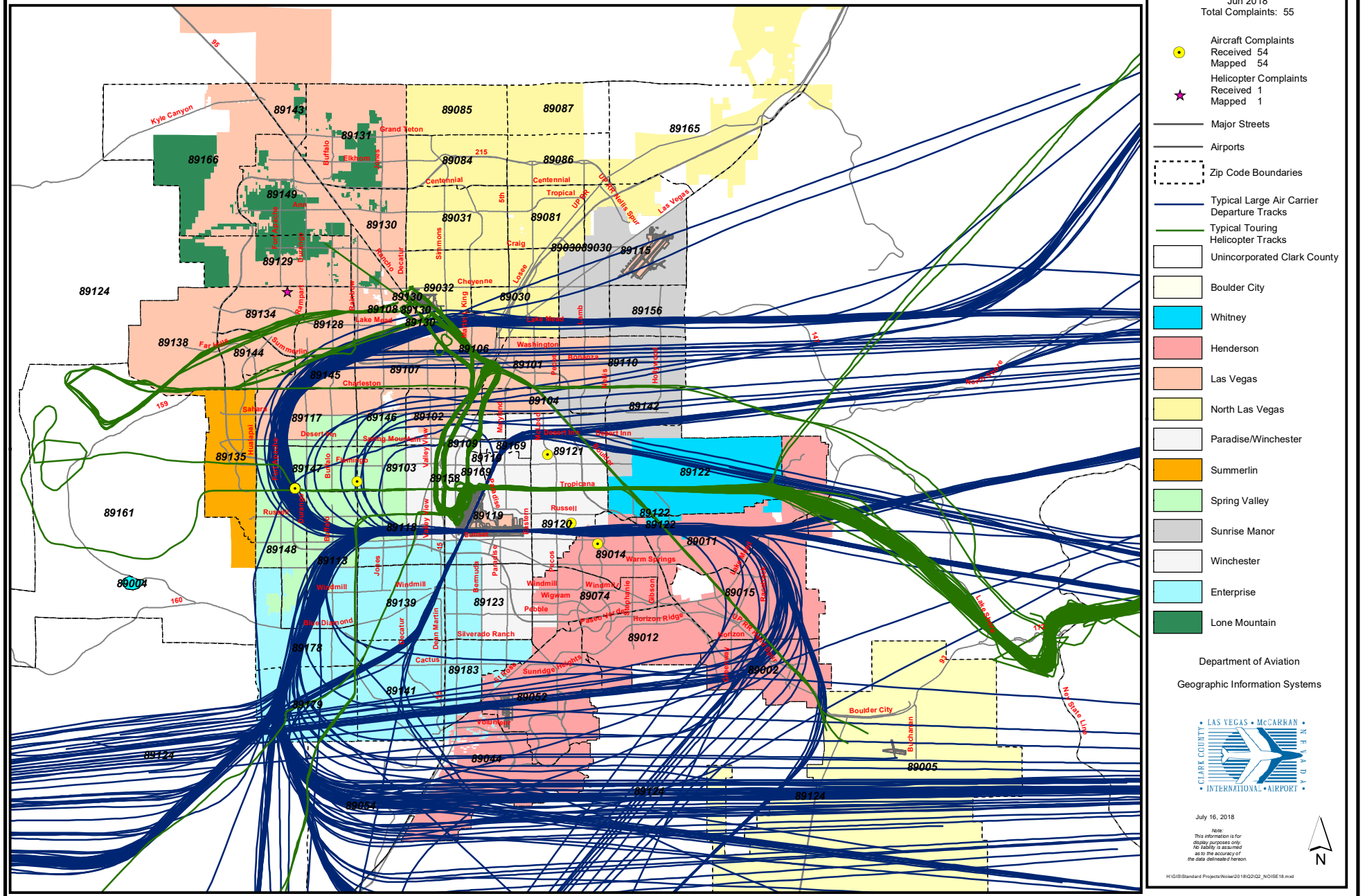
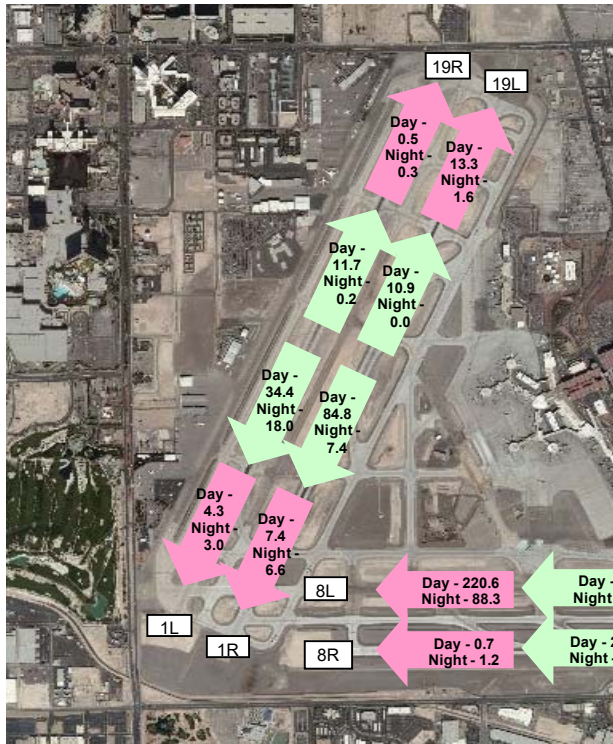


Exhibit 4: LAS Daily Average Operations Runway for Large Air Carrier Aircraft* - June 2018



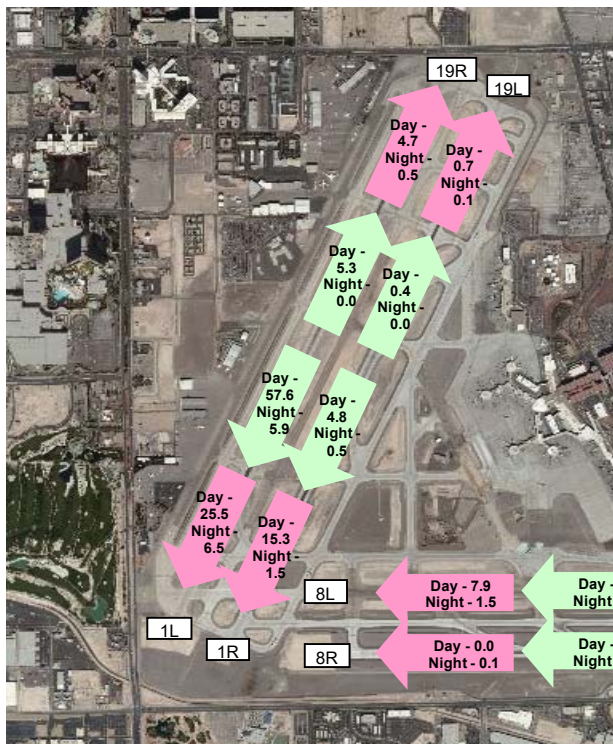
Year	2018		2017		2016	
Daytime Departures	406	79%	415	80%	407	80%
Nighttime Departures	107	21%	102	20%	103	20%
Total Departures	513	100%	516	100%	510	100%

Daytime Arrivals	435	82%	436	84%	430	85%
Nighttime Arrivals	94	18%	85	16%	75	15%
Total Arrivals	529	100%	521	100%	505	100%

Growth	Overall	Daytime	Nighttime
Depts. 2018 vs 2017	-1%	-2%	5%
Depts. 2018 vs 2016	1%	0%	4%
Arrivals 2018 vs 2017	1%	0%	10%
Arrivals 2018 vs 2016	5%	1%	25%

* Aircraft types: All aircraft with a maximum gross take off weight of at least 75,000 pounds, including but not limited to, A306, A310, A311, A318, A319, A320, A330, A340, B707, B717, B727, B737, B747, B757, B767, B777, CRJ7, CRJ9, DC8, DC9, DC10, E170, E190, HA4T, L1011, MD80, MD90, MD10, MD11, VC10.

Exhibit 5: LAS Daily Average Operations by Runway for Non-Large Air Carrier Aircraft** - June 2018



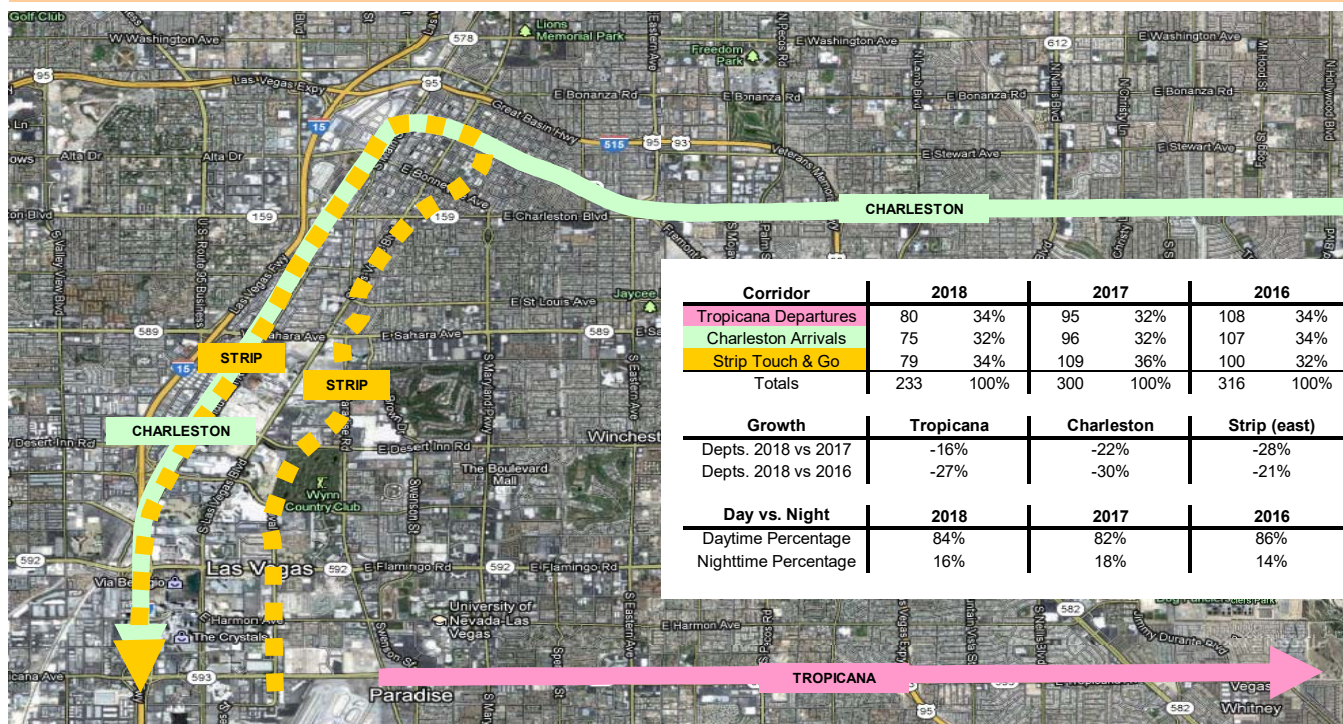
Year	2018		2017		2016	
Daytime Departures	88	89%	81	88%	77	89%
Nighttime Departures	11	11%	11	12%	10	11%
Total Departures	98	100%	92	100%	87	100%

Daytime Arrivals	88	91%	79	92%	72	90%
Nighttime Arrivals	8	9%	7	8%	8	10%
Total Arrivals	96	100%	86	100%	80	100%

Growth	Overall	Daytime	Nighttime
Depts. 2018 vs 2017	7%	9%	-4%
Depts. 2018 vs 2016	14%	14%	10%
Arrivals 2018 vs 2017	12%	12%	17%
Arrivals 2018 vs 2016	21%	23%	4%

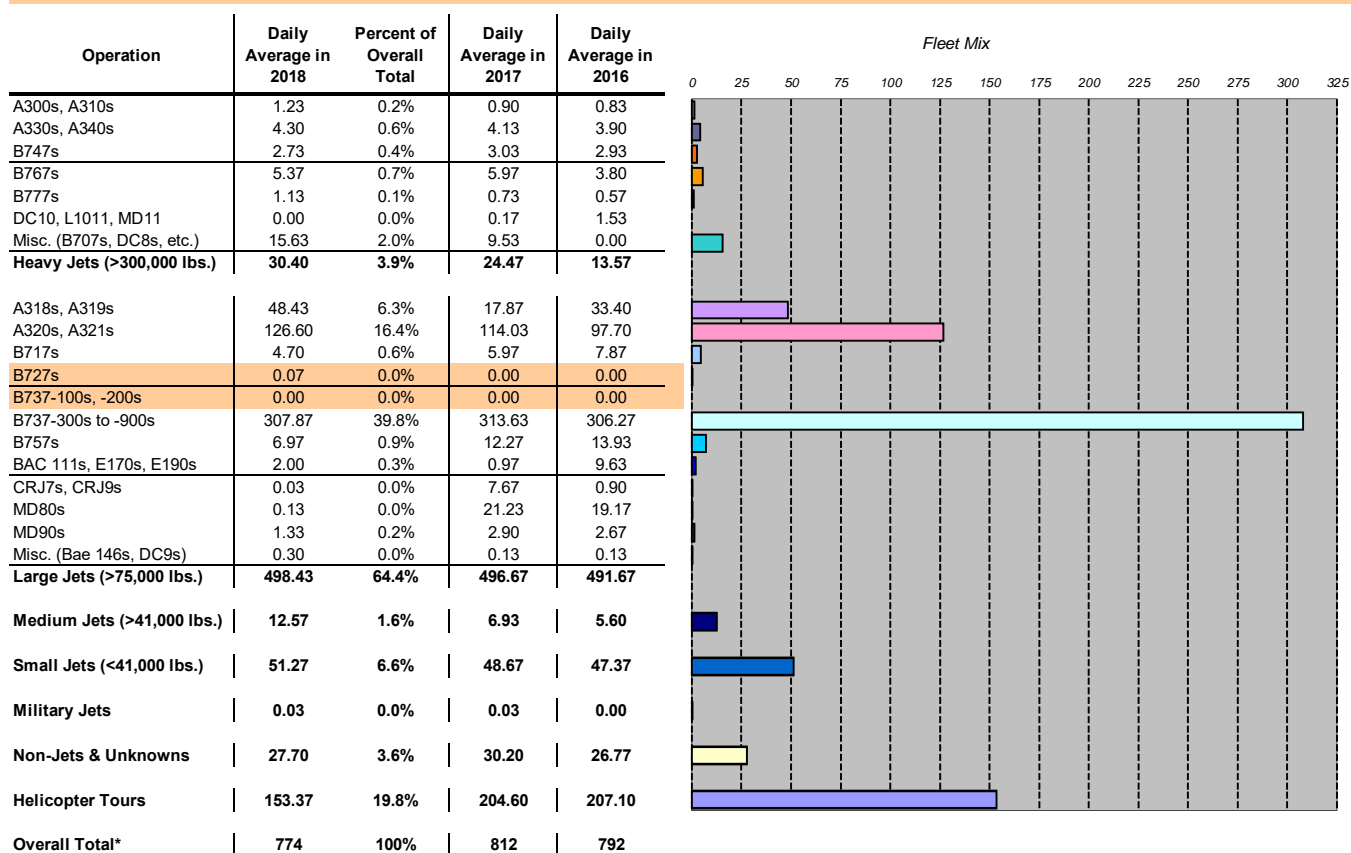
** Aircraft types: All aircraft with a maximum gross take off weight less than 75,000 pounds, excluding helicopters.

Exhibit 6: LAS Daily Average Operations by Corridor for Helicopter Tours - June 2018



* Helicopter Tours: Note that some operations may originate from facilities besides LAS.

Exhibit 7: LAS Aircraft Arrival Fleet Mix** - June 2018



** Overall Total: Note that operation type and runway use counts are estimated by Harris Corp. EnvironmentalVue Noise and Monitoring Operations system based on radar data. Due to limitations of radar data, information for aircraft weighing less than 75,000 lbs is inexact.

Exhibit 8: LAS General Departure Direction for Large Air Carrier Aircraft* - June 2018 to 2016

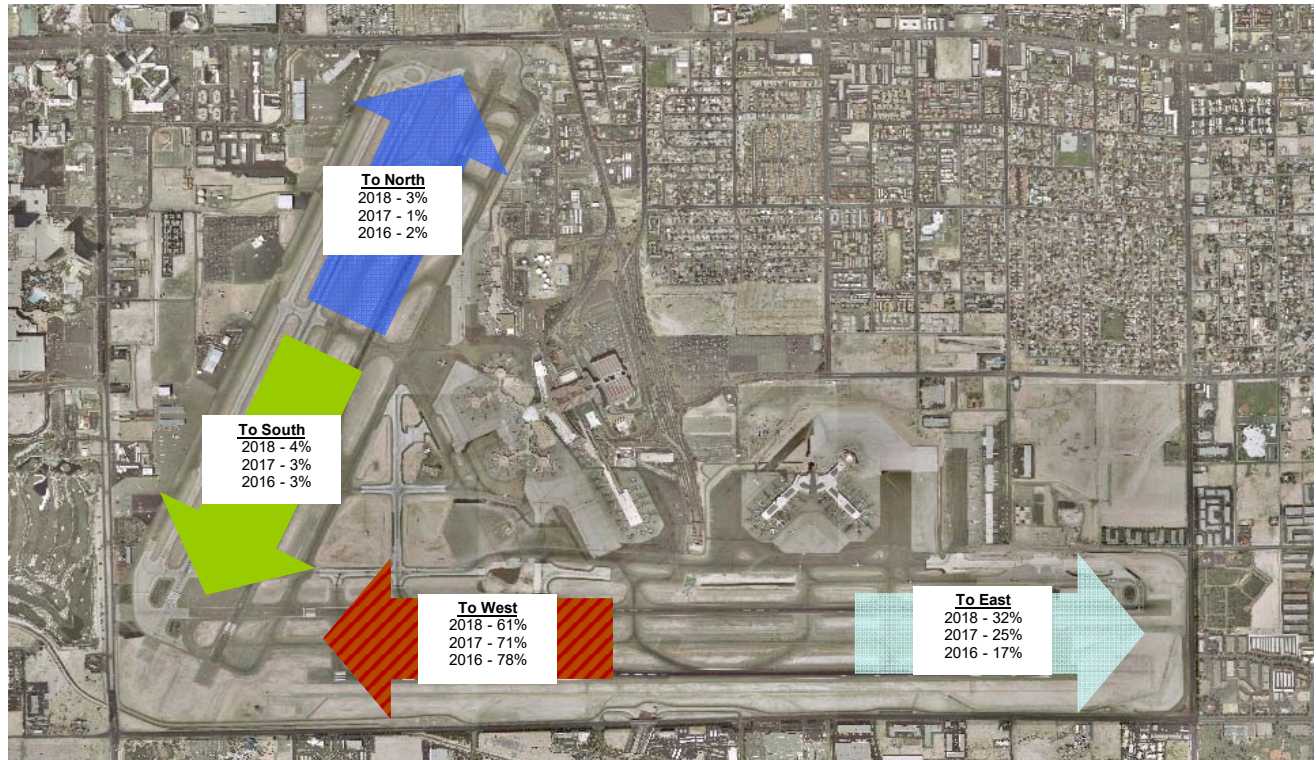
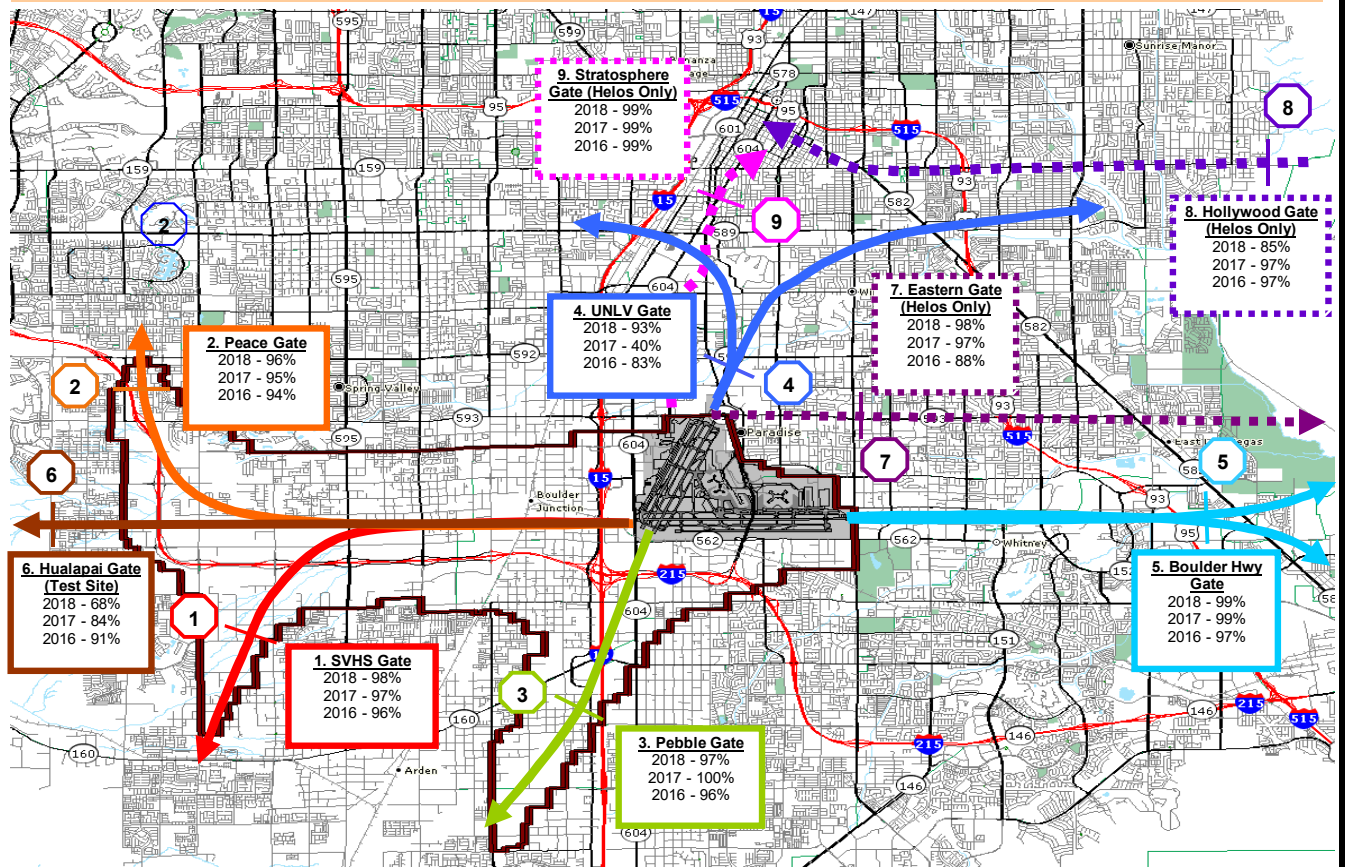


Exhibit 9: "Gate" Compliance for Large Aircraft* & LAS Helicopter Tours - June 2018



* Aircraft types: All aircraft with a maximum gross take off weight of at least 75,000 pounds, including but not limited to, A306, A310, A311, A318, A319, A320, A330, A350, B707, B717, B727, B737, B747, B757, B767, B777, CRJ7, CRJ9, DC8, DC9, DC10, E170, E190, HA4T, L1011, MD80, MD90, MD10, MD11, VC10.