

MEMORANDUM

ROSEMARY A. VASSILIADIS
Director

DEPARTMENT OF AVIATION

TO: DISTRIBUTION Digitally signed by George C. Sims

FROM: GEORGE C. SIMS, PLANNER

SUBJECT: JANUARY THROUGH MARCH 2018 NOISE COMPLAINT REPORTS

DATE: APRIL 24, 2018

Attached for your review are the Clark County Department of Aviation's (CCDOA) Monthly Noise Complaint Reports for January through March 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 touring 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

January 2018: 47 total complaints - a 19% decrease from 2017 and a 32% decrease from 2016. On average, each caller (or household) issued 1.7 calls. The most calls received from one household totaled 8.

Calls by Community - (Exhibits 1 and 3)

Majority (more than 50%): (Not applicable.)

Minority (between 10% and 50%): The **City of Henderson** community issued 14 calls (30%). This community is typically impacted by aircraft departing to the east (from Runway 08R and Runway 08L), and helicopter tour operations operating from HND.

The **Spring Valley** community issued 12 calls (26%). 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).

The **Paradise and Winchester** communities issued 11 calls (23%). These communities are typically impacted by aircraft departing to the north (from Runway 01R and Runway 01L).

The **Enterprise** community issued 6 calls (13%). This community is typically impacted by aircraft departing to the south (from Runway 19L and Runway 19R).

Repeat Caller Impact: One household issued 17% (8 calls) of all the calls received in January 2018.

Calls by Operation - (Exhibit 2)

LAS: 57% of the total calls were due to **LAS** fixed-wing operations.

- 28% were due to departures to the west from Runways 26L and 26R (46% from one household).
- 23% were due to departures to the north from Runways 01L and 01R (36% from one household).

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

HND: 23% of the total calls were due to **HND** fixed-wing operations (55% from two households).

- The increase in calls were related to a single low-flying aircraft event.

Helos: 19% of the total calls were due to **helicopter** operations.

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

Overall: 481 daily *departures* – no change from 2017 and a 3% increase from 2016.
▪ 87% of departures were to the west, 9% north, and 4% south.
482 daily *arrivals* – a 1% increase from 2017 and 4% increase from 2016.
▪ 90% of arrivals were from the east, 6% from the north, and 4% south.

Daytime: 400 daily *departures* – a 2% decrease from 2017 and 3% increase from 2016.
▪ 86% of departures were to the west, 10% north, and 4% south.
417 daily *arrivals* – no change from 2017 and a 1% increase from 2016.
▪ 90% of arrivals were from the east, 6% north, and 4% south.

Nighttime: 82 daily *departures* – a 9% increase from 2017 and a 6% increase from 2016.
▪ 92% of departures were to the west, 5% south, and 3% north.
64 daily *arrivals* – a 15% increase from 2017 and a 25% increase from 2016.
▪ 91% of arrivals were from the east, 8% north, and 1% from the south.

Daytime vs. Nighttime: Approximately 83% of all *departures* and 87% of all *arrivals* occurred during the daytime hours.

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

Overall: 117 daily *departures* – no change from 2017 and a 19% increase from 2016.
▪ 75% of departures were to the south, 14% west, 10% north, and 1% east.
109 daily *arrivals* – a 3% increase from 2017 and 15% increase from 2016.
▪ 78% of arrivals were from the north, 14% east, 8% south, and 1% west.

Daytime: 108 daily *departures* – no change from 2017 and a 21% increase from 2016.
▪ 75% of departures were to the south, 14% west, 10% north, and 1% east.
103 daily *arrivals* – a 4% increase from 2017 and a 16% increase from 2016.
▪ 78% of arrivals were from the north, 14% east, and 8% south.

Nighttime: 10 daily *departures* – a 7% decrease from 2017 and a 2% decrease from 2016.
▪ 75% of departures were to the south, 16% west, and 9% north.
6 daily *arrivals* – a 13% decrease from 2017 and a 5% increase from 2016.
▪ 80% of arrivals were from the north, 11% east, 8% south, and 2% west.

Daytime vs. Nighttime: Approximately 92% of all *departures* and 94% of all *arrivals* occurred during the daytime hours.

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

Tropicana: 67 daily *departures* - a 2% decrease from 2017 and a 4% decrease from 2016.

Charleston: 65 daily *arrivals* - a 3% decrease from 2017 and a 7% decrease from 2016.

Strip: 57 daily *touch and go's* - a 25% increase from 2017 and a 47% increase from 2016.

Daytime vs. Nighttime: Approximately 98% 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 1% of the daily traffic.

Small: *Small* turbine-driven aircraft (those weighing 41,000 lbs. or less) accounted for 9% 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 5% of the daily traffic.

Helos: *Touring helicopters* accounted for 17% 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, 87% departed to the *west* (from LAS's primary departure runways). This figure was 60% in 2017 and 1% in 2016.

Secondary: In 2018, 4% departed to the *south* (from LAS's secondary departure runways). This figure was 3% in 2017 and 12% in 2016.

Alternate 1: In 2018, 9% departed to the *north* (from LAS's alternate departure runways). This figure was 33% in 2017 and 85% in 2016.

Alternate 2: In 2017, <1% departed to the *east* (from LAS's alternate departure runways). This figure was 4% in 2017 and 2% in 2016.

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

SVHS: In 2018, 97% of the large air carrier aircraft (excluding those destined to the Nevada National Security Site) that departed to the west from Runways 26L or 26R and made a left-hand turn were within 0.3 NM of *Sierra Vista High School* (SVHS). This figure was 98% in 2017 and 93% 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 26L and 26R. 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, 97% of the large air carrier aircraft (excluding those destined to the Nevada National Security Site) that departed to the west from Runways 26L or 26R and made a right-hand turn were within 0.3 NM of the intersection of *Peace Way & Summers Shade Street*. This figure was 96% in 2017, and 43% 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 26L and 26R. 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 96% 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 98% in 2017 and 99% 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 85% 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, 100% of the large air carrier aircraft that departed to the north from Runways 08L or 08R were within 0.3 NM of the extended runway centerline, near *Boulder Highway*. This figure was 99% in 2017 and 98% 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, 74% 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 76% in 2017 and 91% in 2016.

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, 99% 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 99% in 2016.

The Eastern Ave. “compliance gate” is located at Tropicana Ave. and Eastern Ave, approximately 2 miles due west of 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, 99% 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 98% 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, 97% 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 92% in 2017 and 97% 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, (with the exception of increased complaints from HND associated with single low-flying aircraft), flight activity, fleet mix, and gate compliance, (with the exception of a steep decrease in compliance with the GEEGS gate).

February 2018: 35 total complaints - a 44% decrease from 2017 and a 57% decrease from 2016. On average, each caller (or household) issued 1.8 calls. The most calls received from one household totaled 7.

Calls by Community - (Exhibits 1 and 3)

Majority (more than 50%): (Not applicable.)

Minority (between 10% and 50%): The **Paradise and Winchester** communities issued 16 calls (46%). (See January 2018 synopsis of typical aircraft overflight impacts on this community.)

The **Spring Valley** community issued 7 calls (20%). (See January 2018 synopsis of typical aircraft overflight impacts on this community.)

The **Enterprise** community issued 5 calls (14%). (See January 2018 synopsis of typical aircraft overflight impacts on this community.)

The **City of Henderson** community issued 4 calls (11%). (See January 2018 synopsis of typical aircraft overflight impacts on this community.)

Repeat Caller Impact: One household issued 20% (7 calls) of all the calls received in February 2018.

Calls by Operation - (Exhibit 2)

LAS: 89% of the total calls received were due to **LAS** fixed-wing operations.
▪ 66% were due to departures to the north from Runways 01L and 01R (65% from three households).

VGT: 0% 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: 3% of the total calls received were due to **helicopter** operations.

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

Overall: 476 daily *departures* – no change from 2017 and 1% increase from 2016.
▪ 69% of departures were to the west, 26% north, and 5% south.
473 daily *arrivals* – no change from 2017 and 1% increase from 2016.
▪ 81% of arrivals were from the east, 11% from the south, and 8% from the north.

Daytime: 394 daily *departures* – a 3% decrease from 2017 and a 1% decrease from 2016.
▪ 68% of departures were to the west, 27% north, 5% south, and 1% east.
409 daily *arrivals* – a 3% decrease from 2017 and a 3% decrease from 2016.
▪ 80% of arrivals were from the east, 12% from the south, and 8% from the north.

Nighttime: 82 daily *departures* – a 17% increase from 2017 and an 8% increase from 2016.
▪ 75% of departures were to the west, 21% north, and 4% south.
64 daily *arrivals* – a 26% increase from 2017 and 31% increase from 2016.
▪ 83% of arrivals were from the east, 9% north, and 8% south.

Daytime vs. Nighttime: Approximately 83% of all *departures* and 86% of all *arrivals* occurred during the daytime hours.

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

Overall: 119 daily *departures* – a 21% increase from 2017 and a 26% increase from 2016.
▪ 62% of departures were to the south, 28% north, 9% west, and 1% east.
113 daily *arrivals* – a 17% increase from 2017 and 21% increase from 2016.
▪ 65% of arrivals were from the north, 20% south, 15% east, and 1% west.

Daytime: 109 daily *departures* – a 23% increase from 2017 and a 27% increase from 2016.
▪ 61% of departures were to the south, 28% north, 9% west, and 1% east.
105 daily *arrivals* – a 17% increase from 2017 and a 22% increase from 2016.
▪ 65% of arrivals were from the north, 20% south, 15% east, and 1% west.

Nighttime: 11 daily *departures* – an 8% increase from 2017 and a 12% increase from 2016.
▪ 68% of departures were to the south, 22% north, and 10% west.
8 daily *arrivals* – a 13% increase from 2017 and a 7% increase from 2016.
▪ 61% of arrivals were from the north, 24% south, 14% east, and 2% west.

Daytime vs. Nighttime: Approximately 91% of all *departures* and 93% of all *arrivals* occurred during the daytime hours.

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

Tropicana: 58 daily *departures* – a 26% decrease from 2017 and a 20% decrease from 2016.

Charleston: 56 daily *arrivals* - a 28% decrease from 2017 and a 25% decrease from 2016.

Strip: 69 daily *touch and go's* - a 5% increase from 2017 and a 32% increase from 2016.

Daytime vs. Nighttime: Approximately 98% 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 1% of the daily traffic.

Small: *Small* turbine-driven aircraft (those weighing 41,000 lbs. or less) accounted for 9% 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 5% 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 less than one operation per day.

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

Primary: In 2018, 69% departed to the *west* (from LAS's primary departure runways). This figure was 73% in 2017 and 1% in 2016.

Secondary: In 2018, 5% departed to the *south* (from LAS's secondary departure runways). This figure was 4% in 2017 and 8% in 2016.

Alternate 1: In 2018, 26% departed to the *north* (from LAS's alternate departure runways). This figure was 19% in 2017 and 87% in 2016.

Alternate 2: In 2018, >1% departed to the *east* (from LAS's alternate departure runways). This figure was 4% in 2017 and 3% in 2016.

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

SVHS: In 2018, 97% of the large air carrier aircraft (excluding those destined to the Nevada National Security Site) that departed to the west from Runways 26L or 26R and made a left-hand turn were within 0.3 NM of *Sierra Vista High School* (SVHS). This figure was 98% in 2017 and 91% in 2016. (See January 2018 synopsis for specific location of the SVHS gate.)

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 26L or 26R 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 50% in 2016. (See January 2018 synopsis for specific location of the Peace gate.)

Pebble: In 2018, 96% 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 99% in 2017 and 99% in 2016. (See January 2018 synopsis for specific location of the Pebble gate.)

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 88% in 2017 and 90% in 2016. (See January 2018 synopsis for specific location of the UNLV gate.)

Boulder: In 2018, 98% of the large air carrier aircraft that departed to the north from Runways 08L or 08R were within 0.3 NM of the extended runway centerline, near *Boulder Highway*. This figure was 99% in 2017 and 97% in 2016. (See January 2018 synopsis for specific location of the Boulder Hwy. gate.)

Hualapai: In 2018, 72% 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 80% in 2017 and 87% in 2016. (See January 2018 synopsis for specific location of the Hualapai gate.)

Eastern: In 2018, 99% 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 96% in 2017 and 98% in 2016. (See January 2018 synopsis for specific location of the Eastern gate.)

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. (See January 2018 synopsis for specific location of the Hollywood gate.)

Stratosphere: In 2018, 98% 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 96% in 2016. (See January 2018 synopsis for specific location of the Stratosphere gate.)

The information denoted in this monthly summary represents **typical** residential complaints, flight activity, (with the exception of increased departures to the north), fleet mix, (with the exception of a reduction in helicopter operations), and gate compliance.

March 2018: 68 total complaints - a 5% increase from 2017 and a 13% increase from 2016. On average, each caller (or household) issued 1.7 calls. The most calls received from one household totaled 11.

Calls by Community - (Exhibits 1 and 3)

Majority (more than 50%): The *Paradise and Winchester* communities issued 39 calls (57%). (See January 2018 synopsis of typical aircraft overflight impacts on this community.)

Minority (between 10% and 50%): The *Spring Valley* community issued 13 calls (19%). (See January 2018 synopsis of typical aircraft overflight impacts on this community.)

The *City of Henderson* community issued 8 calls (12%). (See January 2018 synopsis of typical aircraft overflight impacts on this community.)

Repeat Caller Impact: One household issued 16% (11 calls) of all the calls received in March 2018.

Calls by Operation - (Exhibit 2)

- LAS:** 85% of the total calls received were due to **LAS** fixed-wing operations.
- 60% were due to departures to the north from Runways 01L and 01R (54% from three households).
- VGT:** 2% of the total calls received were due to **VGT** fixed-wing operations.
- HND:** 7% of the total calls received were due to **HND** fixed-wing operations.
- Helis:** 6% of the total calls received were due to **helicopter** operations.

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

- Overall:** 498 daily *departures* – no change from 2017 and a 1% increase from 2016.
- 65% of departures were to the west, 29% north, 3% south, and 2% east.
- 504 daily *arrivals* – a 2% increase from 2017 and 3% increase from 2016.
- 79% of arrivals were from the east, 12% south, 8% north, and 1% west.
- Daytime:** 398 daily *departures* – a 3% decrease from 2017 and no change from 2016.
- 63% of departures were to the west, 31% north, 3% south, and 2% east.
- 426 daily *arrivals* – no change from 2017 and no change from 2016.
- 79% of arrivals were from the east, 13% south, 8% north, and 1% west.
- Nighttime:** 100 daily *departures* – a 14% increase from 2017 and a 6% increase from 2016.
- 74% of departures were to the west, 22% north, 3% south, and 1% east.
- 79 daily *arrivals* – a 13% increase from 2017 and 21% increase from 2016.
- 83% of arrivals were from the east, 9% north, and 8% south.

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:** 119 daily *departures* – a 3% increase from 2017 and a 30% increase from 2016.
- 57% of departures were to the south, 32% north, 10% west, and 1% east.
- 109 daily *arrivals* – a 4% decrease from 2017 and a 20% increase from 2016.
- 64% of arrivals were from the north, 19% south, 16% east, and 1% west.
- Daytime:** 107 daily *departures* – a 2% increase from 2017 and a 31% increase from 2016.
- 56% of departures were to the south, 33% north, 10% west, and 2% east.
- 101 daily *arrivals* – a 6% decrease from 2017 and a 19% increase from 2016.
- 64% of arrivals were from the north, 19% south, 16% east, and 1% west.
- Nighttime:** 12 daily *departures* – a 7% increase from 2017 and a 26% increase from 2016.
- 66% of departures were to the south, 20% north, 14% west, and 1% east.
- 8 daily *arrivals* – a 17% increase from 2017 and a 27% increase from 2016.
- 66% of arrivals were from the north, 17% south, 15% east, and 2% west.

Daytime vs. Nighttime: Approximately 90% of all *departures* and 93% of all *arrivals* occurred during the daytime hours.

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

Tropicana: 69 daily *departures* – a 27% decrease from 2017 and a 22% decrease from 2016.

Charleston: 66 daily *arrivals* - a 28% decrease from 2017 and a 23% decrease from 2016.

Strip: 71 daily *touch and go's* - a 6% decrease from 2017 and a 18% increase from 2016.

Daytime vs. Nighttime: Approximately 95% 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 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 18% 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, 66% departed to the **west** (from LAS's primary departure runways). This figure was 60% in 2017 and 4% in 2016.

Secondary: In 2018, 3% departed to the **south** (from LAS's secondary departure runways). This figure was 3% in 2017 and 30% in 2016.

Alternate 1: In 2018, 29% departed to the **north** (from LAS's alternate departure runways). This figure was 34% in 2017 and 63% in 2016.

Alternate 2: In 2018, 2% departed to the **east** (from LAS's alternate departure runways). This figure was 3% in 2017 and 2% 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 26L or 26R and made a left-hand turn were within 0.3 NM of *Sierra Vista High School* (SVHS). This figure was 98% in 2017 and 95% in 2016. (See January 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 26L or 26R 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 9% in 2016. (See January 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 98% in 2017 and 99% in 2016. (See January 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 89% in 2017 and 91% in 2016. (See January 2018 synopsis for specific location of the UNLV gate.)
- Boulder:** In 2018, 94% of the large air carrier aircraft that departed to the north from Runways 08L or 08R were within 0.3 NM of the extended runway centerline, near *Boulder Highway*. This figure was 98% in 2017 and 98% in 2016. (See January 2018 synopsis for specific location of the Boulder Hwy. gate.)
- Hualapai:** In 2018, 72% 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 87% in 2017 and 84% in 2016. (See January 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 98% in 2017 and 98% in 2016. (See January 2018 synopsis for specific location of the Eastern gate.)
- 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 96% in 2017 and 97% in 2016. (See January 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 95% in 2016. (See January 2018 synopsis for specific location of the Stratosphere gate.)

The information denoted in this monthly summary represents **typical** residential complaints, flight activity, (with the exception of increased departures to the north), fleet mix, (with the exception of a reduction in helicopter operations), and gate compliance.

Other Notable Issues

Helicopter Operator Users Meeting: On March 22, 2018, CCDOA met with FAA, local helicopter tour operators, and Las Vegas Metropolitan Police to discuss noise complaints tied to helicopter operations, route compliance, and operational growth. Attendees reviewed the successful helicopter flights to and from the Las Vegas Motor Speedway for the annual NASCAR racing event. All helicopters maintained a high rate of route compliance resulting in zero noise complaints tied to this route for the event.

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

April 26, 2018

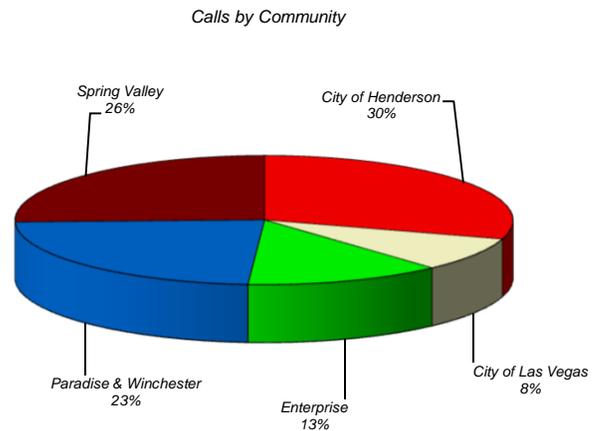
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Distribution:

Commissioner Sisolak, Chair	Sean Roebuck
Commissioner Giunchigliani, Vice-Chair	Bruce Daugherty
Commissioner Brager	Kelly Burns
Commissioner Brown	Sam Ingalls
Commissioner Kirkpatrick	Chris Jones
Commissioner Gibson	Christine Crews
Commissioner Weekly	Tina Frias
Donald G. Burnette	Jeff Jacquart
Rosemary Vassiliadis	Charlie Hall
James Chrisley	Tucker Field
Joseph Piurkowski	Scott Kichline
Sandra Cikity	Stephanie Garcia-Vause (COH)
Judy Villalta	Andrew Powell (COH)
Dennis Anderson	William Ruggiero (FAA TRACON)
Ben Czyzewski	Thomas Miller (Nellis AFB)
Donna Bergstrom	Michael Moorer (FAA ATCT)
Curtis Hedgepeth	James Erbeck (CLV)
John Howard (FAA TRACON)	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)
Josh Reid (COH)	Frank Iacovino (Mass Port Authority)
Elizabeth Fretwell (CLV)	Robert Butler (Papillon Helicopters)
Mayor Carolyn Goodman (CLV)	Christine Gerencher (American Airlines)
Councilman Bob Beers (CLV)	Bert Ganoung (SFO)
Councilman Bob Coffin (CLV)	San Diego Airport Noise Management
Councilwoman L. Tarkanian (CLV)	Jeannie Denham (Citizen)
Councilman S. Anthony (CLV)	Judge Bob Johnston (Citizen)
Councilman Ricki Barlow (CLV)	Roy Fuhrmann (Metro Airports Commission)
Mayor Pro Tem Steven Ross (CLV)	Tom Schaus (Sundance Helicopters)
Bradford Jerbic, (CLV)	Brooke Satern (Port of Portland)
Brok Armantrout (CBC)	Gary Brodt (Citizen)
David Parks (Nevada State Assembly)	James P. Callahan (Nellis AFB)
J. Gordon Arkin (Foley & Lardner)	Stan Shepherd (SEATAC)
John Williams (Ricondo)	Eric Sheng (Long Beach Airport)
Douglas Pomeroy (FAA ADO)	Jason Schwartz (Portland Airport)
La Nea M. Conner (Boeing)	Todd Lobato (Nellis AFB)
Mike Jeck (Metro Wash. Air Auth.)	Steven Peacock (Dallas City Hall)
Karen Everitt (Dallas City Hall)	John Dietz (FAA TRACON)
Samuel Carter (ITT)	William Olivieri (Citizen)

Exhibit 1: Noise Complaint Calls by Community* - January 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	14	9	6	
City of Henderson	4	1	4	4
City of Las Vegas				
City of North Las Vegas				
Enterprise	6	6	5	10
Lone Mountain				
Paradise & Winchester	11	7	14	46
Spring Valley	12	4	29	5
Summerlin South				
Sunrise Manor				3
Whitney				1
Location unknown				
Overall Total	47	27	58	69



Difference between 2018 and 2017 Total Calls: -19%

Difference between 2018 and 2016 Total Calls: -32%

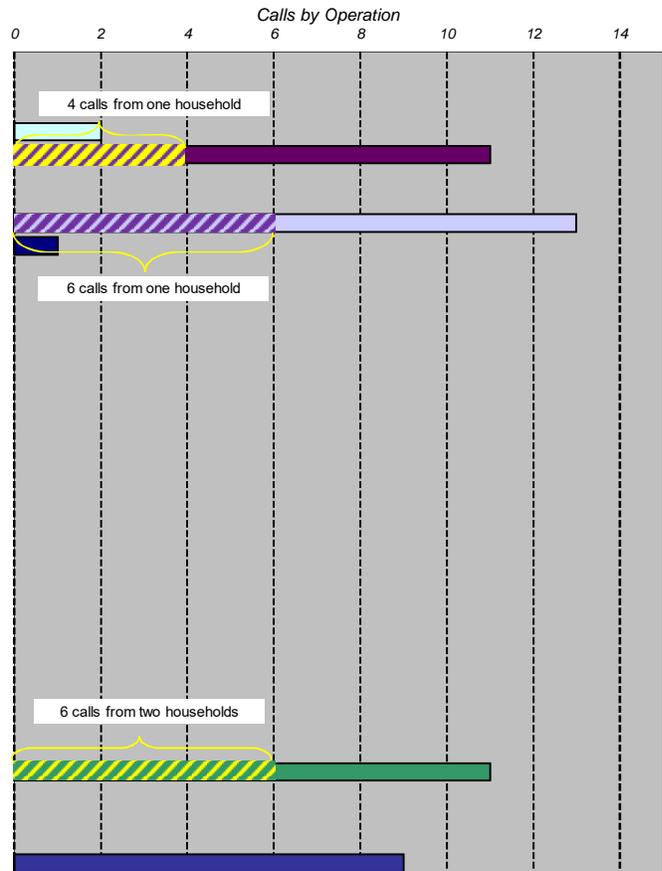
Average Number of Calls per Caller: 1.7

Most calls received from one household: 8

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

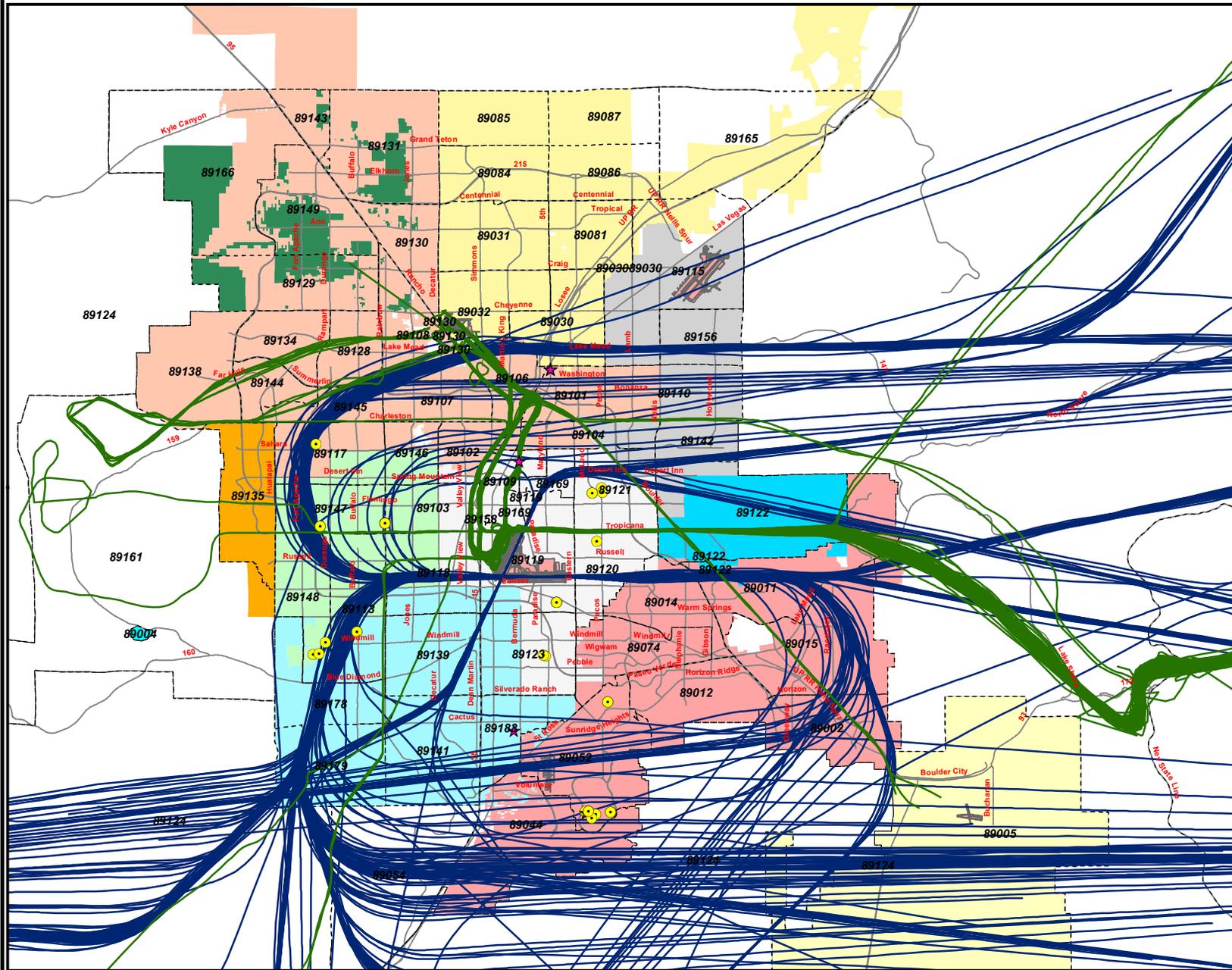
Exhibit 2: Noise Complaint Calls by Type of Operation - January 2018

Operation	No. of Calls in 2018	Percent of Overall Total	No. of Calls in 2017	No. of Calls in 2016
LAS 01R/L Arrivals			3	1
LAS 08R/L Arrivals				
LAS 19R/L Arrivals				
LAS 26R/L Arrivals	2	4.3%	1	
LAS 01R/L Departures	11	23.4%	38	51
LAS 08R/L Departures				
LAS 19R/L Departures				9
LAS 26R/L Departures	13	27.7%	9	
LAS Run-ups	1	2.1%		
LAS GA				
LAS Other				
LAS Total	27	57.4%	51	61
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				2
VGT Other				
VGT Total	0	0.0%	0	2
HND 17R/L Arrivals				
HND 35R/L Arrivals				
HND 17R/L Departures				
HND 35R/L Departures				
HND Run-ups				
HND GA	11	23.4%	4	
HND Other				
HND Total	11	23.4%	4	0
Helicopters**	9	19.1%	3	6
Overall Total	47	100%	58	69



** 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 - Jan 2018



Legend

Jan 2018
Total Complaints: 47

- Aircraft Complaints
Received 38
Mapped 38
- ★ Helicopter Complaints
Received 9
Mapped 9
- Major Streets
- Airports
- - - Zip Code Boundaries
- Typical Large Air Carrier Departure Tracks
- Typical Touring Helicopter Tracks
- Unincorporated Clark County
- Boulder City
- Whitney
- Henderson
- Las Vegas
- North Las Vegas
- Paradise/Winchester
- Summerlin
- Spring Valley
- Sunrise Manor
- Winchester
- Enterprise
- Lone Mountain

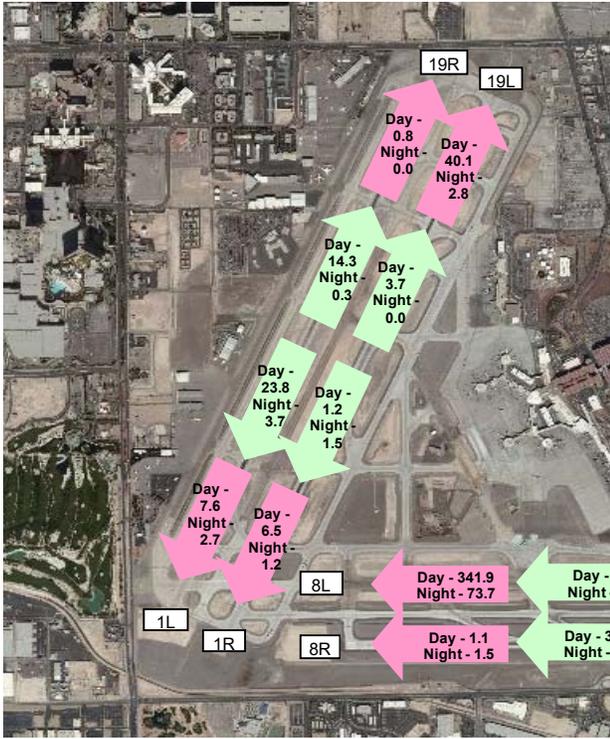
Department of Aviation
Geographic Information Systems

April 23, 2018

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



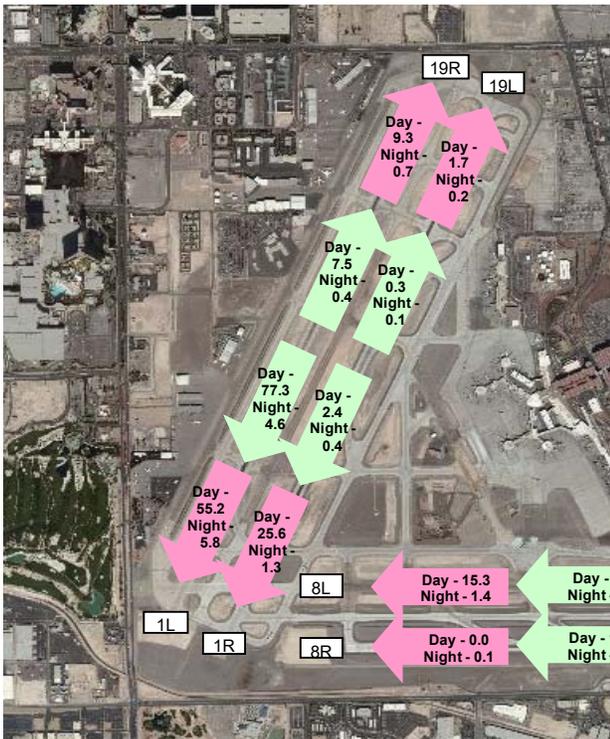
Year	2018		2017		2016	
Daytime Departures	400	83%	407	84%	389	83%
Nighttime Departures	82	17%	75	16%	77	17%
Total Departures	481	100%	482	100%	466	100%

Daytime Arrivals	417	87%	419	88%	411	89%
Nighttime Arrivals	64	13%	56	12%	52	11%
Total Arrivals	482	100%	475	100%	463	100%

Growth	Overall	Daytime	Nighttime
Depts. 2018 vs 2017	0%	-2%	9%
Depts. 2018 vs 2016	3%	3%	6%
Arrivals 2018 vs 2017	1%	0%	15%
Arrivals 2018 vs 2016	4%	1%	25%

* 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, 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** - January 2018



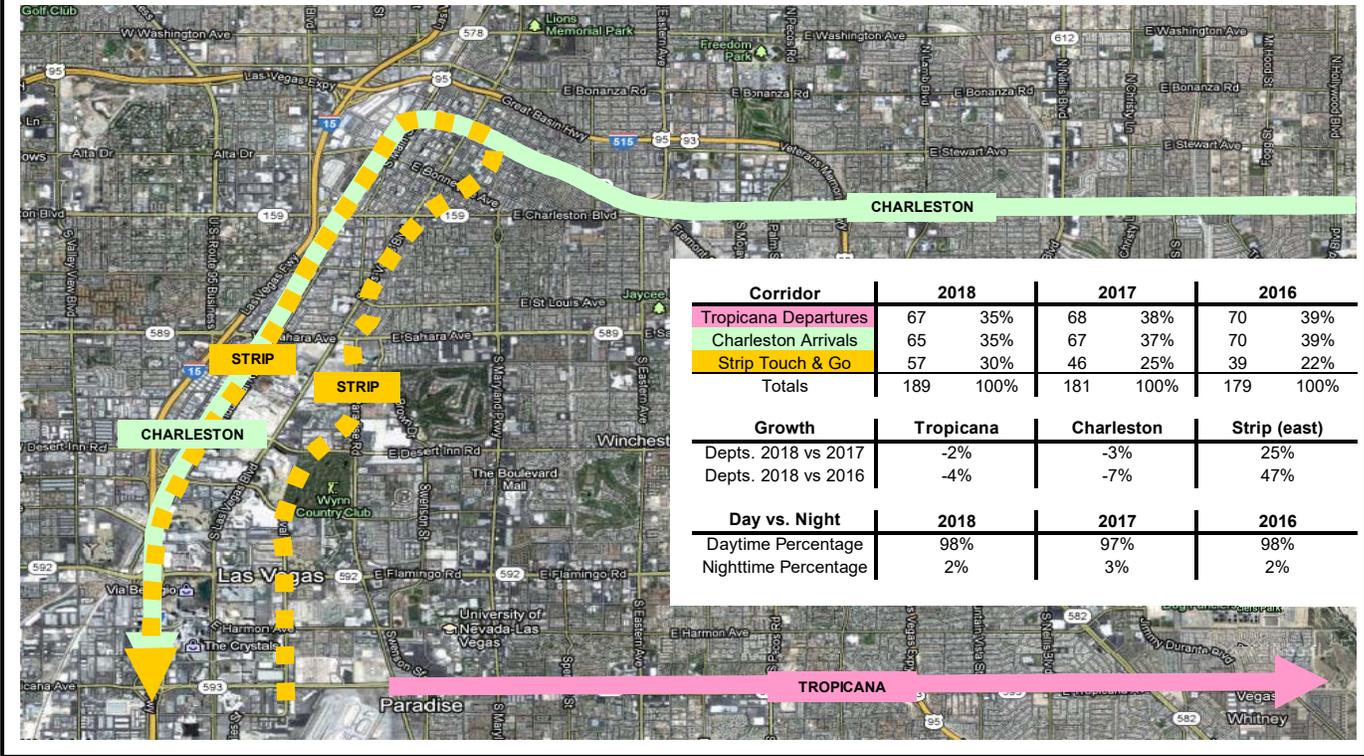
Year	2018		2017		2016	
Daytime Departures	108	92%	107	91%	89	90%
Nighttime Departures	10	8%	10	9%	10	10%
Total Departures	117	100%	118	100%	99	100%

Daytime Arrivals	103	94%	98	93%	89	94%
Nighttime Arrivals	6	6%	7	7%	6	6%
Total Arrivals	109	100%	106	100%	95	100%

Growth	Overall	Daytime	Nighttime
Depts. 2018 vs 2017	0%	0%	-7%
Depts. 2018 vs 2016	19%	21%	-2%
Arrivals 2018 vs 2017	3%	4%	-13%
Arrivals 2018 vs 2016	15%	16%	5%

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

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

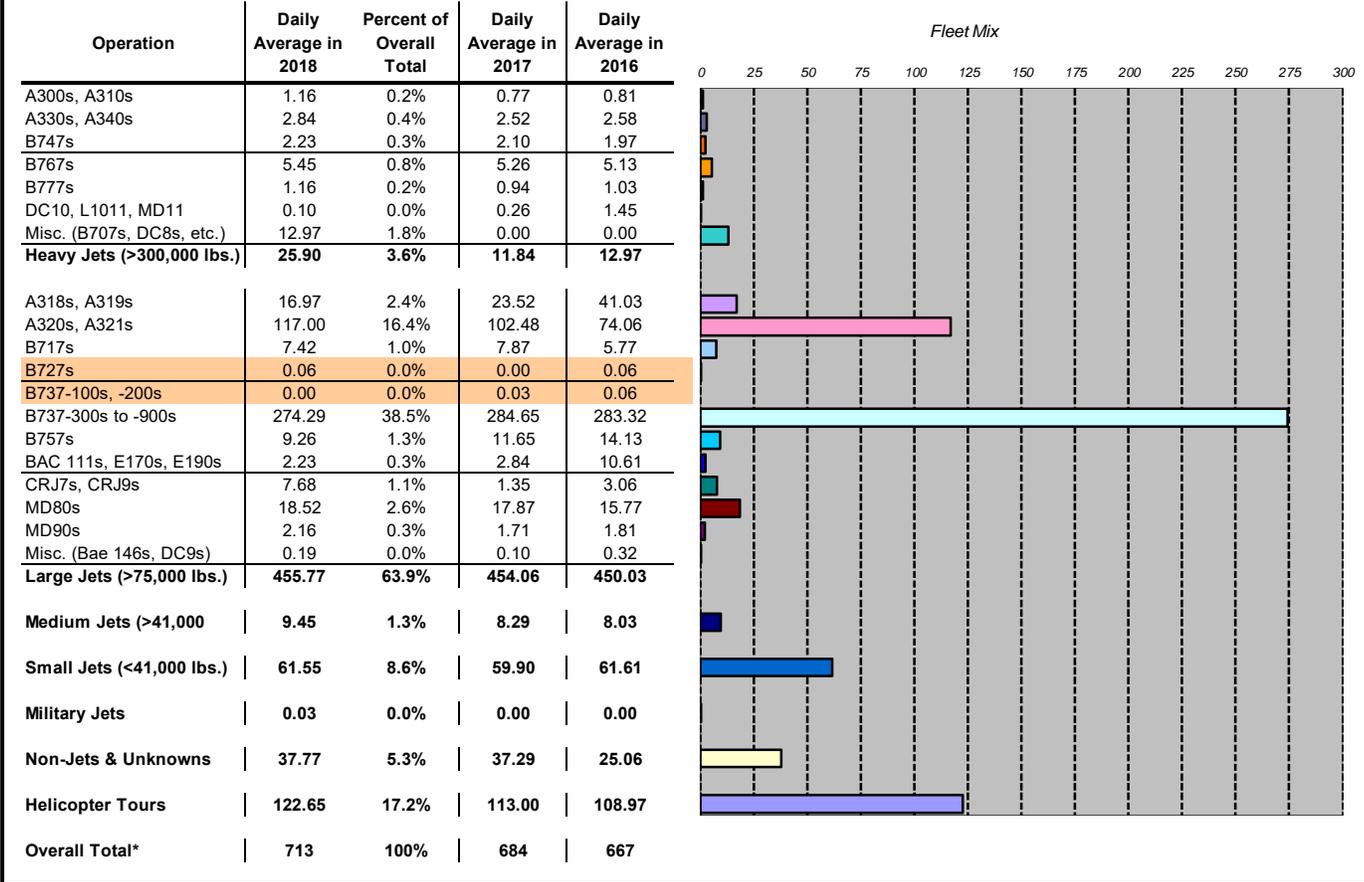


Corridor	2018	2017	2016
Tropicana Departures	67 35%	68 38%	70 39%
Charleston Arrivals	65 35%	67 37%	70 39%
Strip Touch & Go	57 30%	46 25%	39 22%
Totals	189 100%	181 100%	179 100%

Growth	Tropicana	Charleston	Strip (east)
Depts. 2018 vs 2017	-2%	-3%	25%
Depts. 2018 vs 2016	-4%	-7%	47%

Day vs. Night	2018	2017	2016
Daytime Percentage	98%	97%	98%
Nighttime Percentage	2%	3%	2%

Exhibit 7: LAS Aircraft Arrival Fleet Mix** - January 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* - January 2018 to 2016

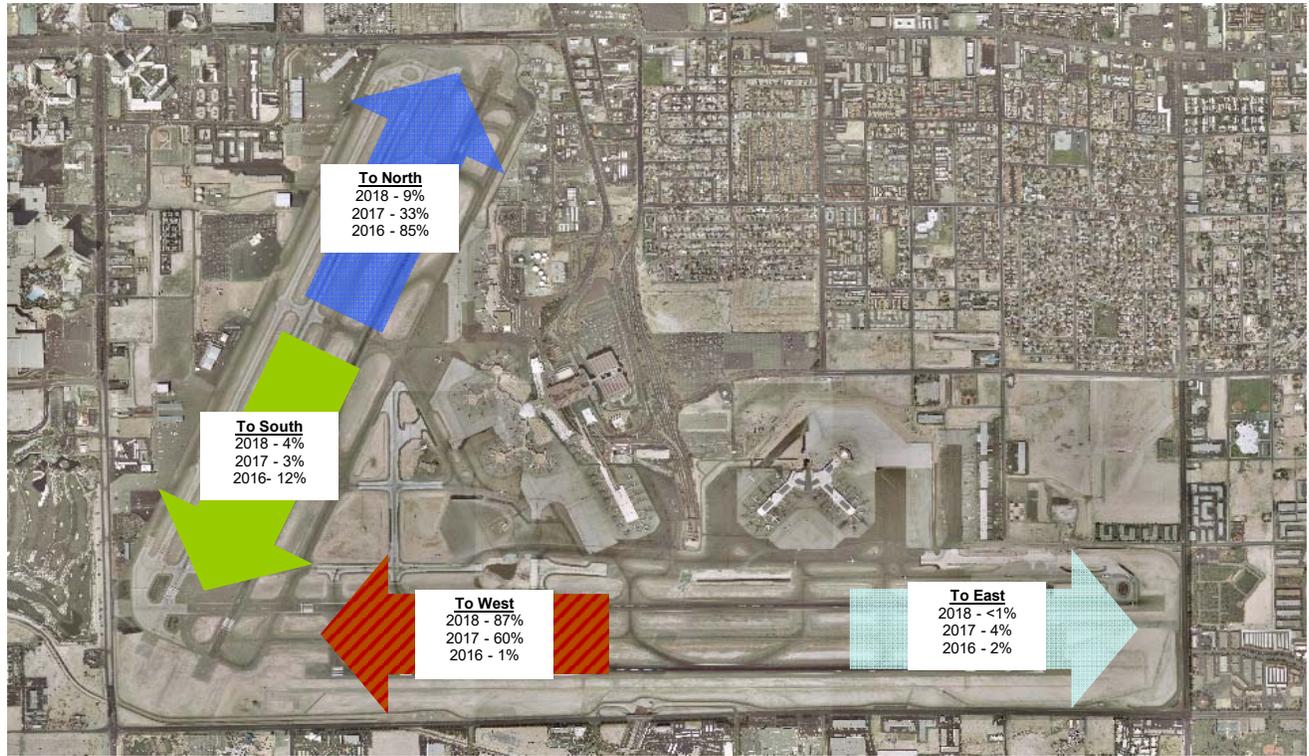
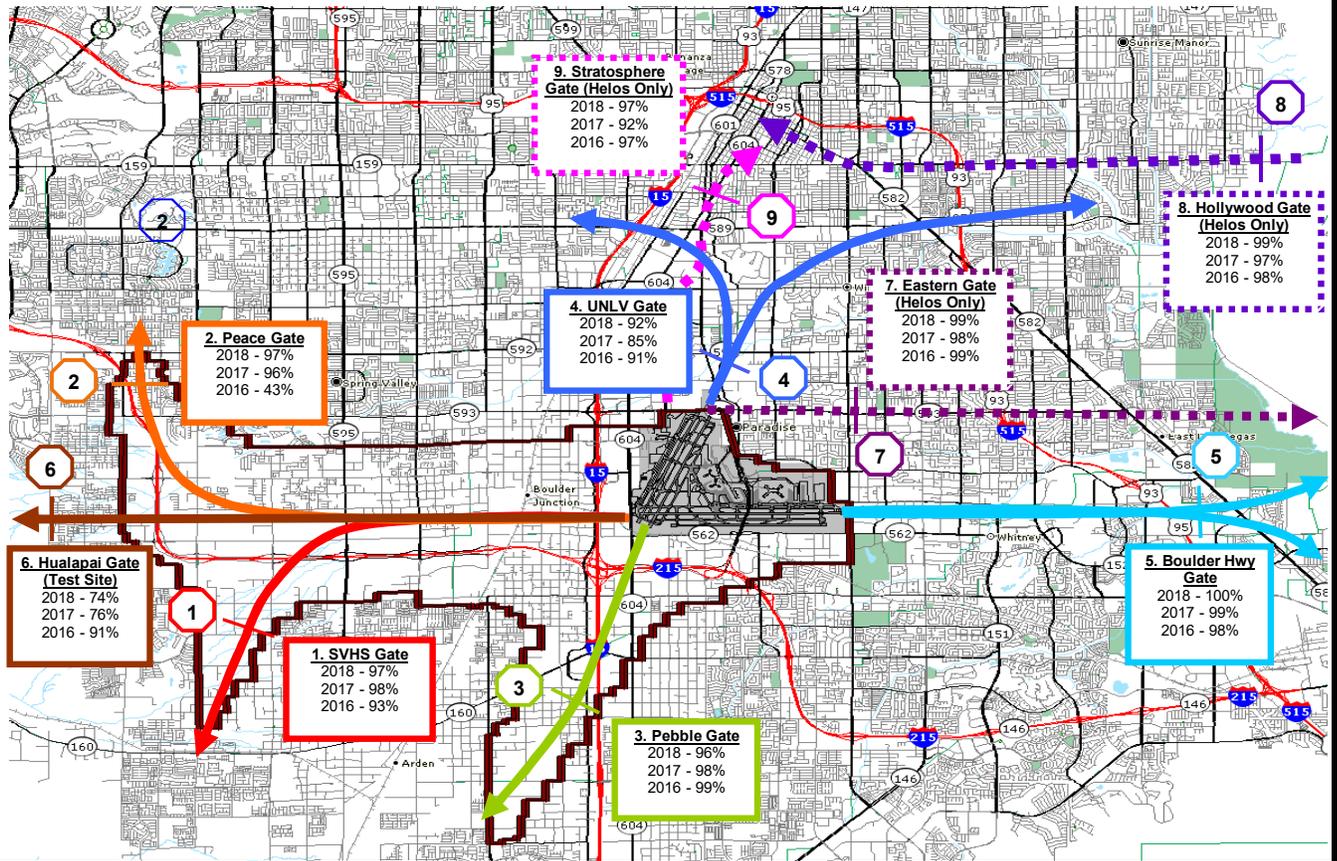


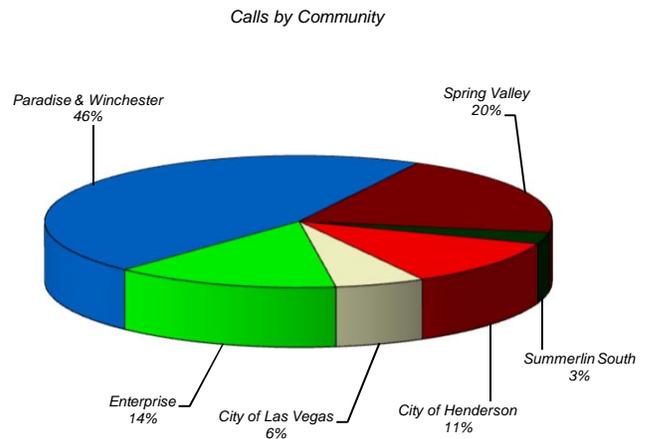
Exhibit 9: "Gate" Compliance for Large Aircraft* & LAS Helicopter Tours - January 2018



* 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, A370, 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* - February 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	4	4	10	4
City of Henderson	2	1	4	5
City of Las Vegas			3	
City of North Las Vegas				
Enterprise	5	5	1	1
Lone Mountain				
Paradise & Winchester	16	7	8	69
Spring Valley	7	1	35	2
Summerlin South	1	1		
Sunrise Manor			1	
Whitney				
Location unknown				
Overall Total	35	19	62	81



Difference between 2018 and 2017 Total Calls: -44%

Difference between 2018 and 2016 Total Calls: -57%

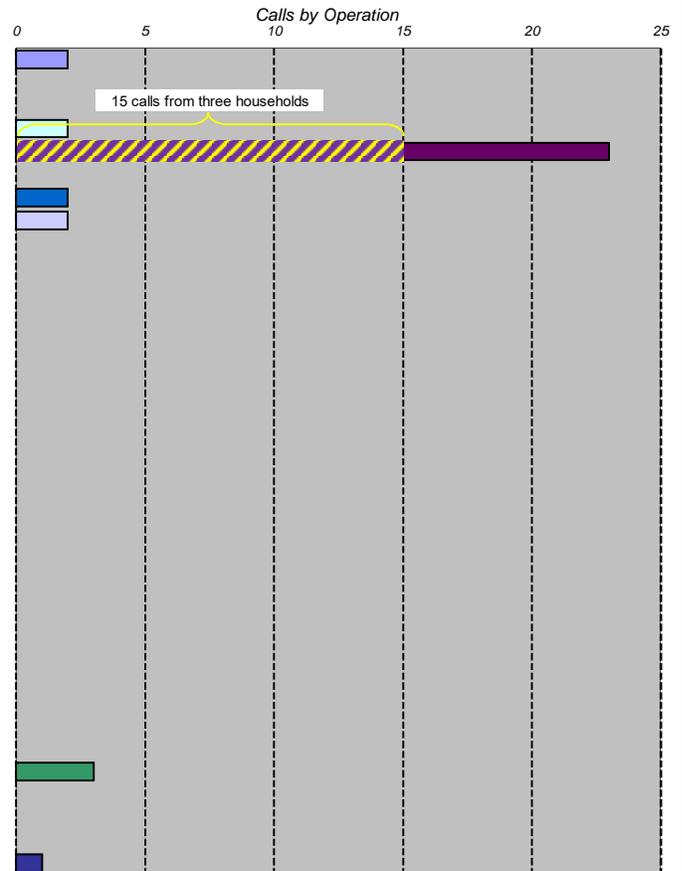
Average Number of Calls per Caller: 1.8

Most calls received from one household: 7

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

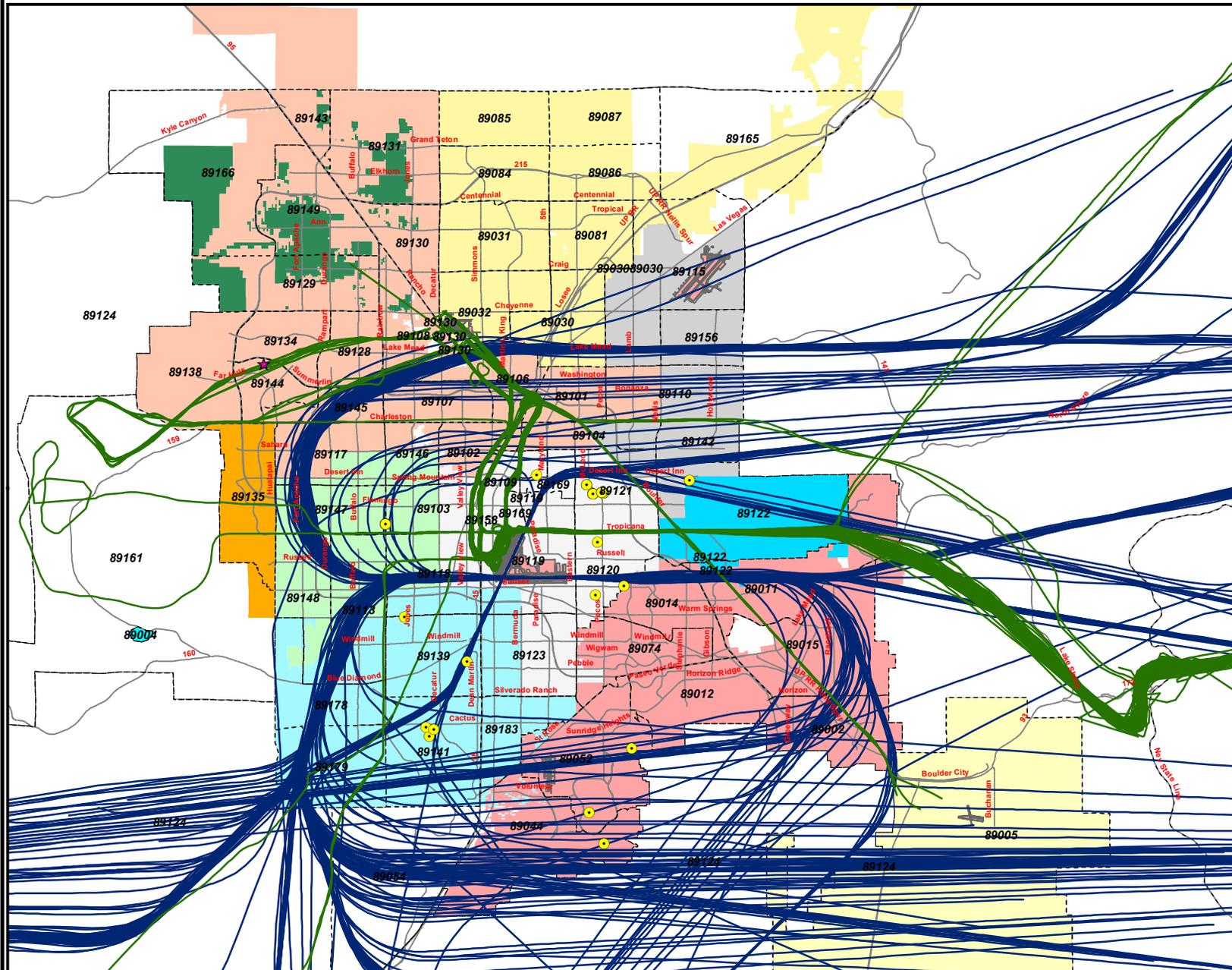
Exhibit 2: Noise Complaint Calls by Type of Operation - February 2018

Operation	No. of Calls in 2018	Percent of Overall Total	No. of Calls in 2017	No. of Calls in 2016
LAS 01R/L Arrivals	2	5.7%		
LAS 08R/L Arrivals			4	
LAS 19R/L Arrivals				
LAS 26R/L Arrivals	2	5.7%	5	1
LAS 01R/L Departures	23	65.7%	13	58
LAS 08R/L Departures			2	
LAS 19R/L Departures	2	5.7%		3
LAS 26R/L Departures	2	5.7%	31	
LAS Run-ups				
LAS GA				
LAS Other				
LAS Total	31	88.6%	55	62
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	
VGT Other				
VGT Total	0	0.0%	1	0
HND 17R/L Arrivals				
HND 35R/L Arrivals				
HND 17R/L Departures				
HND 35R/L Departures				
HND Run-ups				
HND GA	3	8.6%	3	
HND Other				
HND Total	3	8.6%	3	0
Helicopters**	1	2.9%	3	19
Overall Total	35	100%	62	81



** 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 - Feb 2018



Legend

Feb 2018
Total Complaints: 35

- Aircraft Complaints
Received 34
Mapped 34
- ★ Helicopter Complaints
Received 1
Mapped 1
- Major Streets
- Airports
- - - Zip Code Boundaries
- Typical Large Air Carrier Departure Tracks
- Typical Touring Helicopter Tracks
- Unincorporated Clark County
- Boulder City
- Whitney
- Henderson
- Las Vegas
- North Las Vegas
- Paradise/Winchester
- Summerlin
- Spring Valley
- Sunrise Manor
- Winchester
- Enterprise
- Lone Mountain

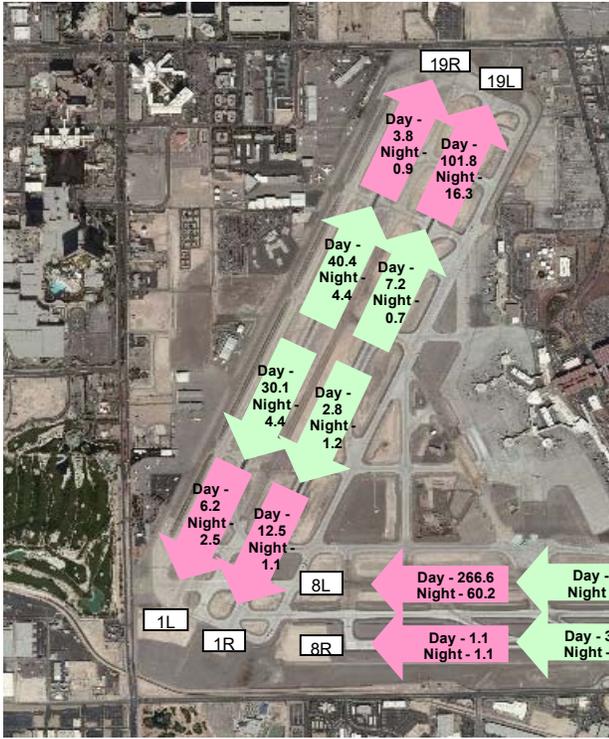
Department of Aviation
Geographic Information Systems

April 23, 2018

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



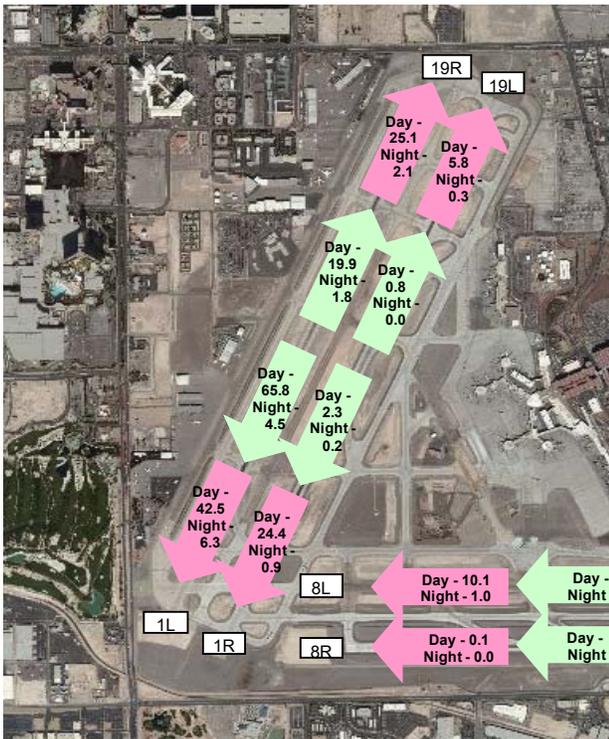
Year	2018		2017		2016	
Daytime Departures	394	83%	408	85%	397	84%
Nighttime Departures	82	17%	70	15%	76	16%
Total Departures	476	100%	478	100%	473	100%

Daytime Arrivals	409	86%	422	89%	421	90%
Nighttime Arrivals	64	14%	51	11%	49	10%
Total Arrivals	473	100%	473	100%	470	100%

Growth	Overall	Daytime	Nighttime
Depts. 2018 vs 2017	0%	-3%	17%
Depts. 2018 vs 2016	1%	-1%	8%
Arrivals 2018 vs 2017	0%	-3%	26%
Arrivals 2018 vs 2016	1%	-3%	31%

* 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, 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** - February 2018



Year	2018		2017		2016	
Daytime Departures	109	91%	89	90%	86	90%
Nighttime Departures	11	9%	10	10%	9	10%
Total Departures	119	100%	98	100%	95	100%

Daytime Arrivals	105	93%	90	93%	86	92%
Nighttime Arrivals	8	7%	7	7%	7	8%
Total Arrivals	113	100%	96	100%	93	100%

Growth	Overall	Daytime	Nighttime
Depts. 2018 vs 2017	21%	23%	8%
Depts. 2018 vs 2016	26%	27%	12%
Arrivals 2018 vs 2017	17%	17%	13%
Arrivals 2018 vs 2016	21%	22%	7%

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

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

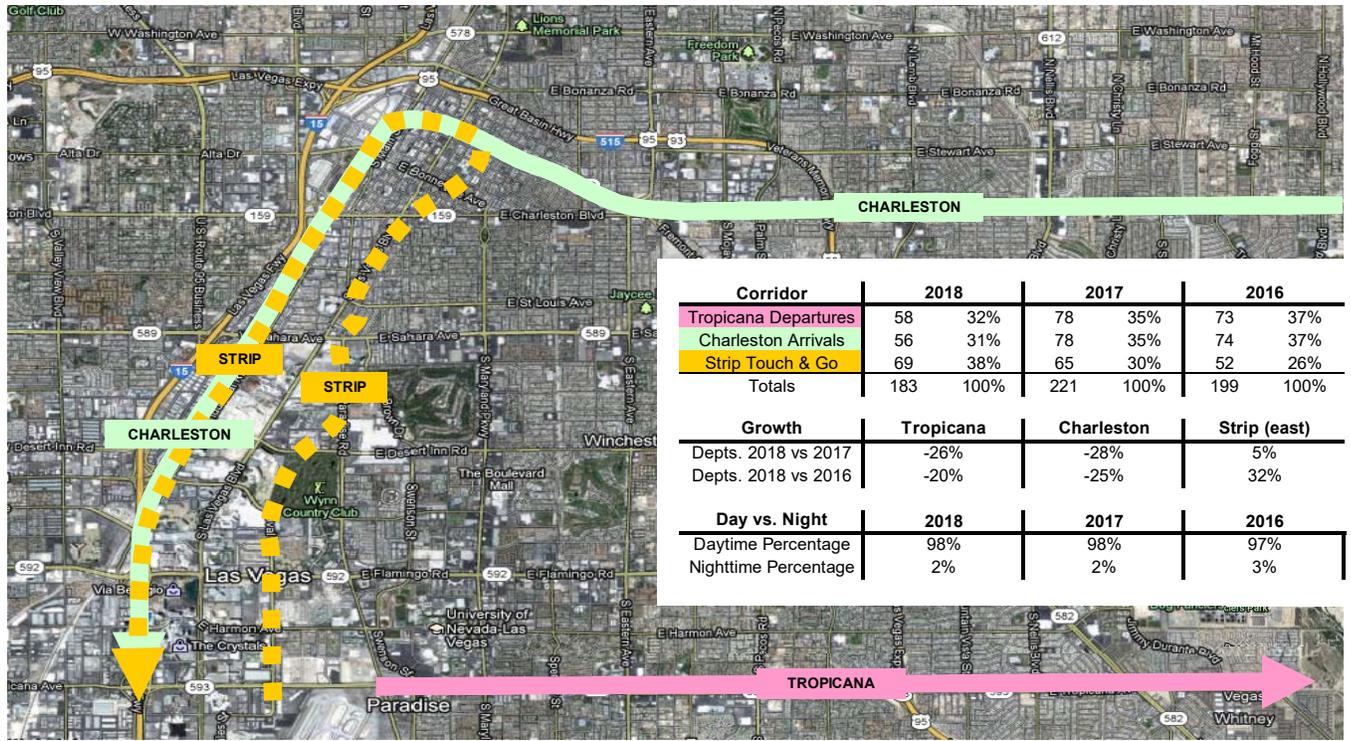
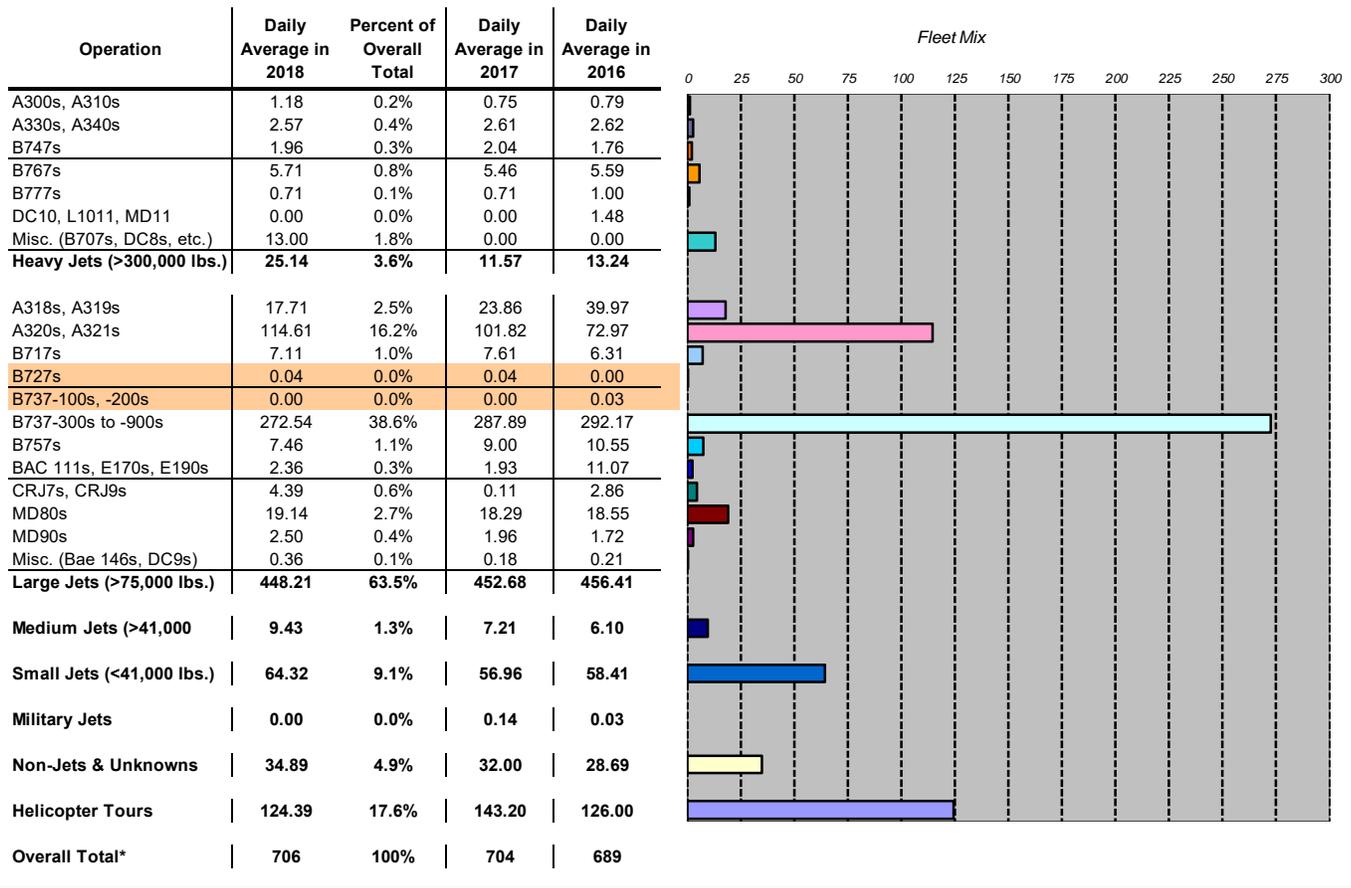


Exhibit 7: LAS Aircraft Arrival Fleet Mix** - February 2018



** 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* - February 2018 to 2016

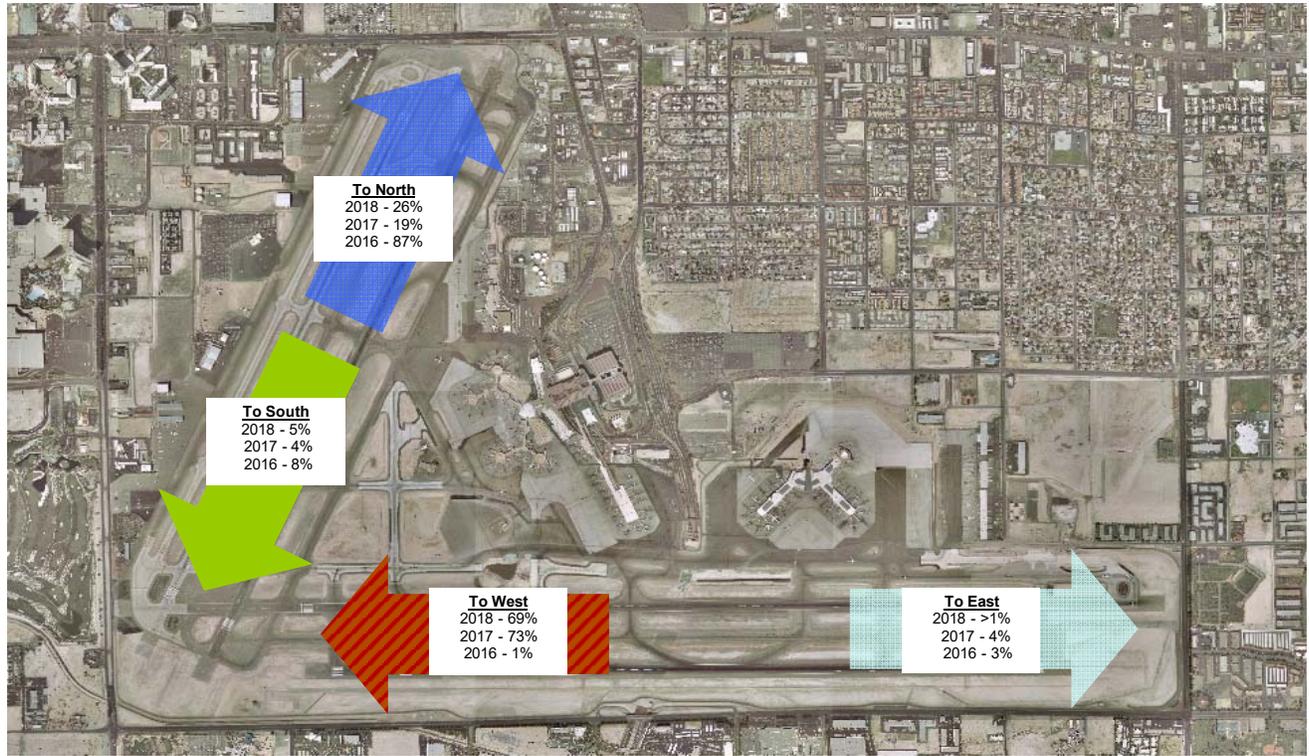
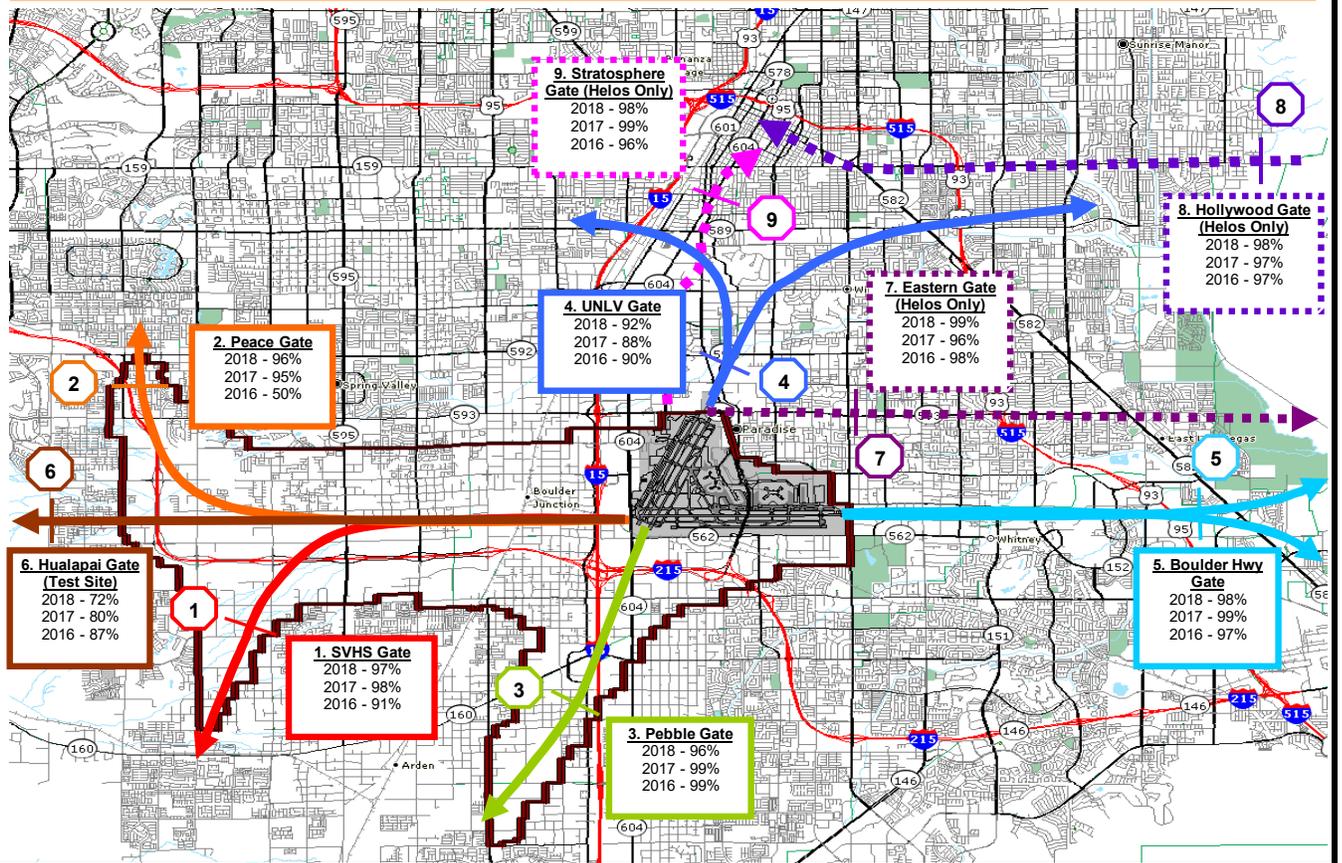


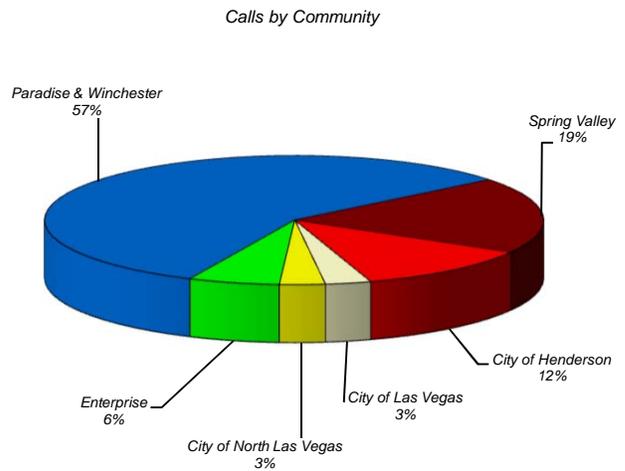
Exhibit 9: "Gate" Compliance for Large Aircraft* & LAS Helicopter Tours - February 2018



* 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, A370, 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* - March 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	8	6	3	3
City of Henderson	2	2	2	3
City of Las Vegas	2	2	2	3
City of North Las Vegas	4	3	4	13
Enterprise	39	20	22	37
Lone Mountain	13	6	34	1
Paradise & Winchester				3
Spring Valley				
Summerlin South				
Sunrise Manor				
Whitney				
Location unknown				
Overall Total	68	39	65	60



Difference between 2018 and 2017 Total Calls: 5%

Difference between 2018 and 2016 Total Calls: 13%

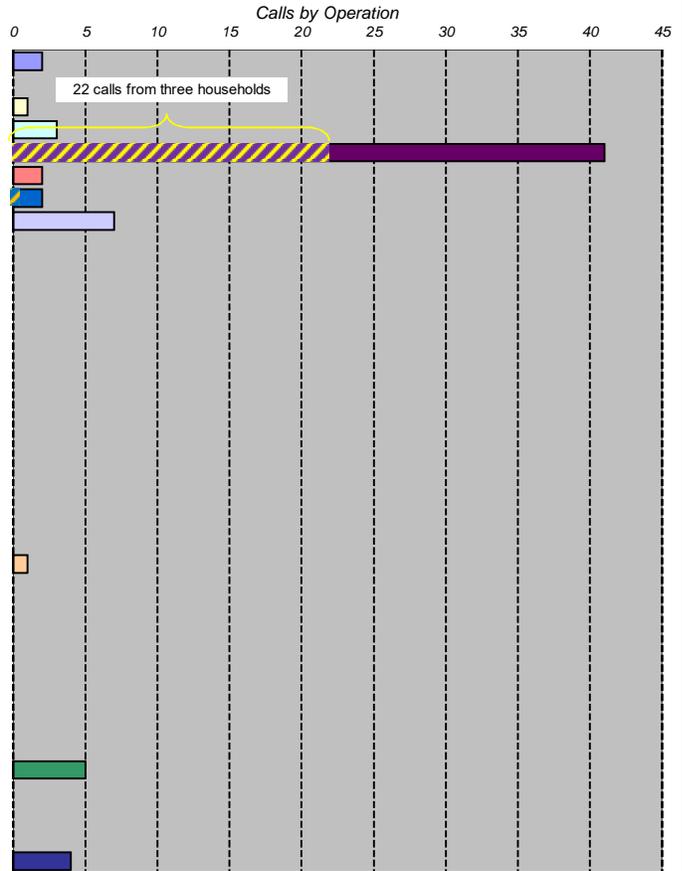
Average Number of Calls per Caller: 1.7

Most calls received from one household: 11

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

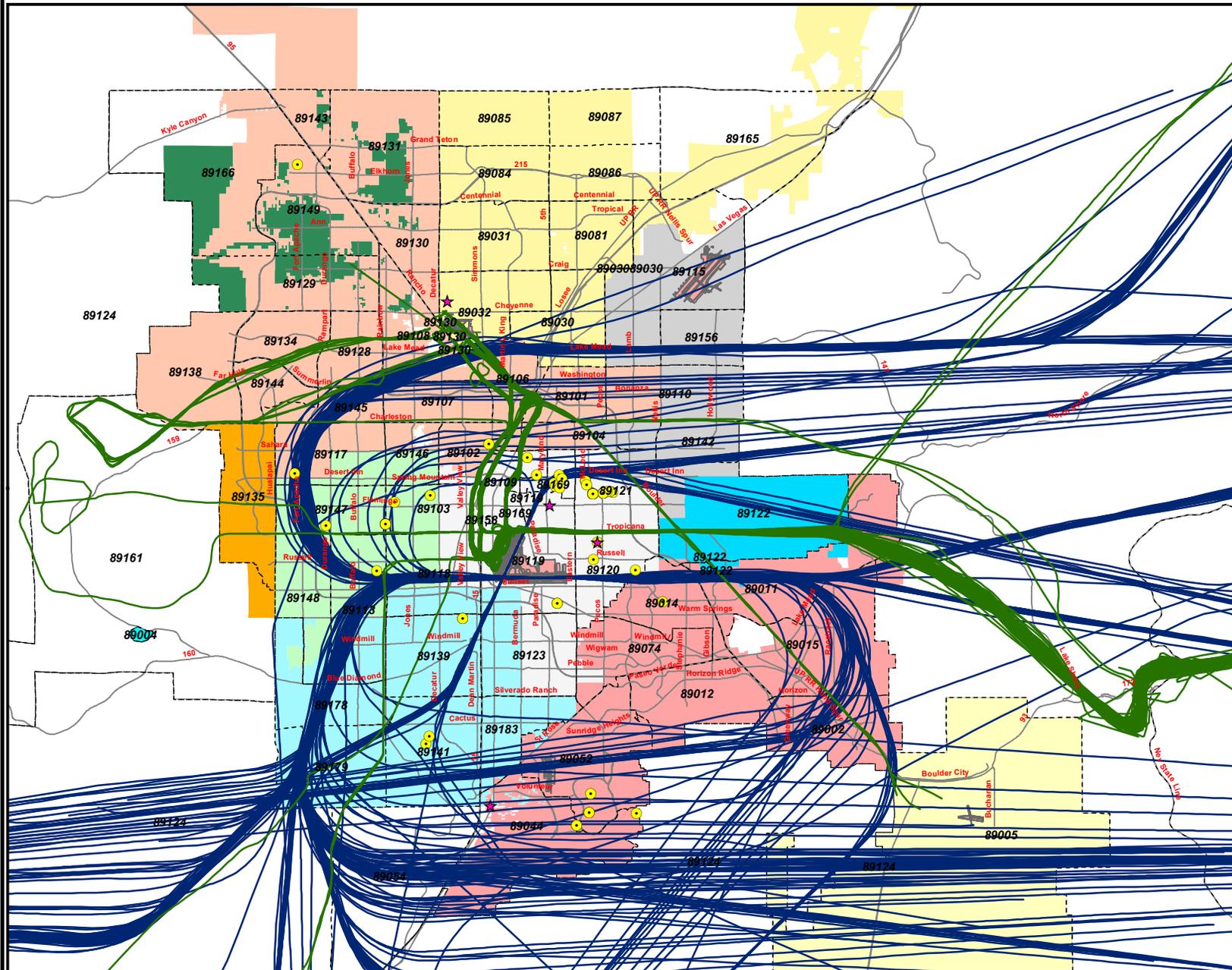
Exhibit 2: Noise Complaint Calls by Type of Operation - March 2018

Operation	No. of Calls in 2018	Percent of Overall Total	No. of Calls in 2017	No. of Calls in 2016
LAS 01R/L Arrivals	2	2.9%		
LAS 08R/L Arrivals				
LAS 19R/L Arrivals	1	1.5%	1	
LAS 26R/L Arrivals	3	4.4%	2	
LAS 01R/L Departures	41	60.3%	39	25
LAS 08R/L Departures	2	2.9%	1	2
LAS 19R/L Departures	2	2.9%		15
LAS 26R/L Departures	7	10.3%	19	
LAS Run-ups				1
LAS GA				
LAS Other				
LAS Total	58	85.3%	62	43
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	1.5%		
VGT Other				
VGT Total	1	1.5%	0	0
HND 17R/L Arrivals				
HND 35R/L Arrivals				
HND 17R/L Departures				
HND 35R/L Departures				
HND Run-ups				
HND GA	5	7.4%	2	1
HND Other				
HND Total	5	7.4%	2	1
Helicopters**	4	5.9%	1	16
Overall Total	68	100%	65	60



** 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 - Mar 2018



Legend

Mar 2018
Total Complaints: 68

- Aircraft Complaints Received 64 Mapped 63
- Helicopter Complaints Received 4 Mapped 4
- Major Streets
- Airports
- Zip Code Boundaries
- Typical Large Air Carrier Departure Tracks
- Typical Touring Helicopter Tracks
- Unincorporated Clark County
- Boulder City
- Whitney
- Henderson
- Las Vegas
- North Las Vegas
- Paradise/Winchester
- Summerlin
- Spring Valley
- Sunrise Manor
- Winchester
- Enterprise
- Lone Mountain

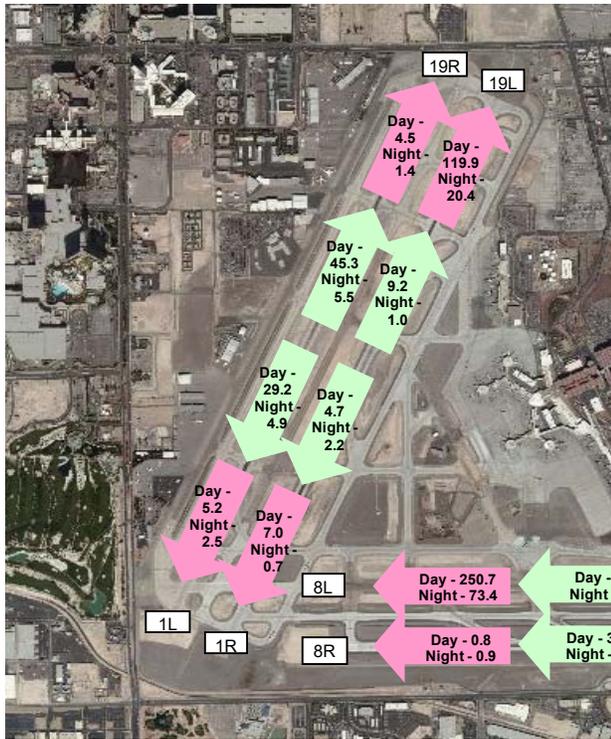
Department of Aviation
Geographic Information Systems

April 23, 2018

Note: This information is for display purposes only. No liability is assumed as to the accuracy of the data delineated hereon.

H:\GIS\Standard Projects\Noise\2018\1101_NOISE18.mxd

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



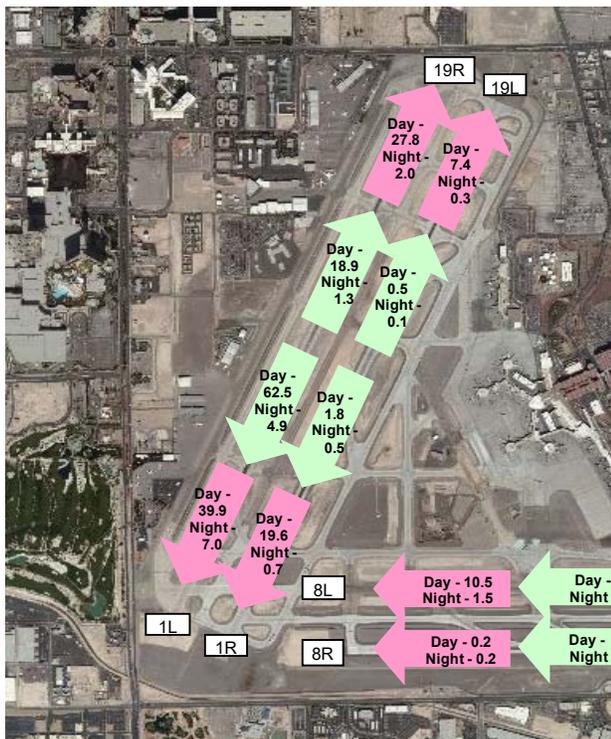
Year	2018		2017		2016	
Daytime Departures	398	80%	411	82%	399	81%
Nighttime Departures	100	20%	88	18%	94	19%
Total Departures	498	100%	499	100%	493	100%

Daytime Arrivals	426	84%	426	86%	426	87%
Nighttime Arrivals	79	16%	70	14%	65	13%
Total Arrivals	504	100%	496	100%	491	100%

Growth	Overall	Daytime	Nighttime
Depts. 2018 vs 2017	0%	-3%	14%
Depts. 2018 vs 2016	1%	0%	6%
Arrivals 2018 vs 2017	2%	0%	13%
Arrivals 2018 vs 2016	3%	0%	21%

* 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, 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** - March 2018



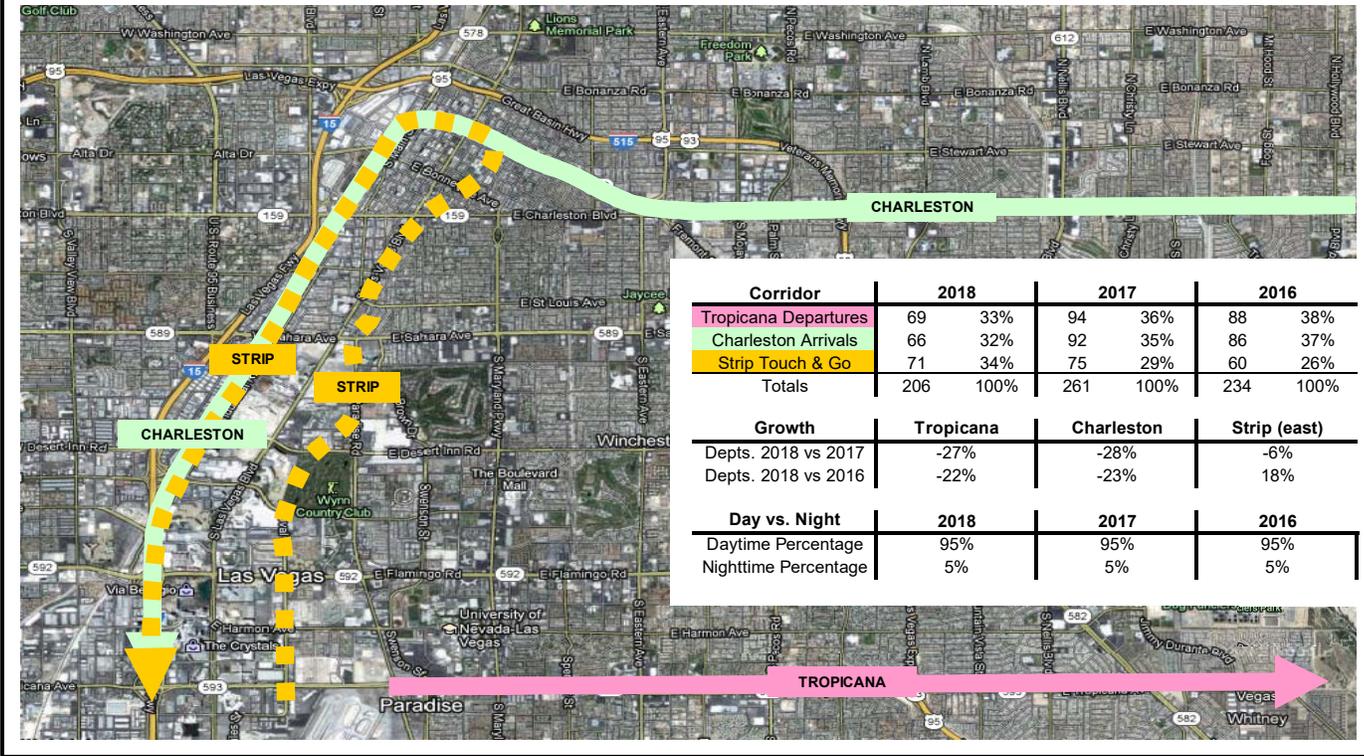
Year	2018		2017		2016	
Daytime Departures	107	90%	104	91%	82	90%
Nighttime Departures	12	10%	11	9%	9	10%
Total Departures	119	100%	115	100%	91	100%

Daytime Arrivals	101	93%	107	94%	85	93%
Nighttime Arrivals	8	7%	7	6%	6	7%
Total Arrivals	109	100%	114	100%	91	100%

Growth	Overall	Daytime	Nighttime
Depts. 2018 vs 2017	3%	2%	7%
Depts. 2018 vs 2016	30%	31%	26%
Arrivals 2018 vs 2017	-4%	-6%	17%
Arrivals 2018 vs 2016	20%	19%	27%

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

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

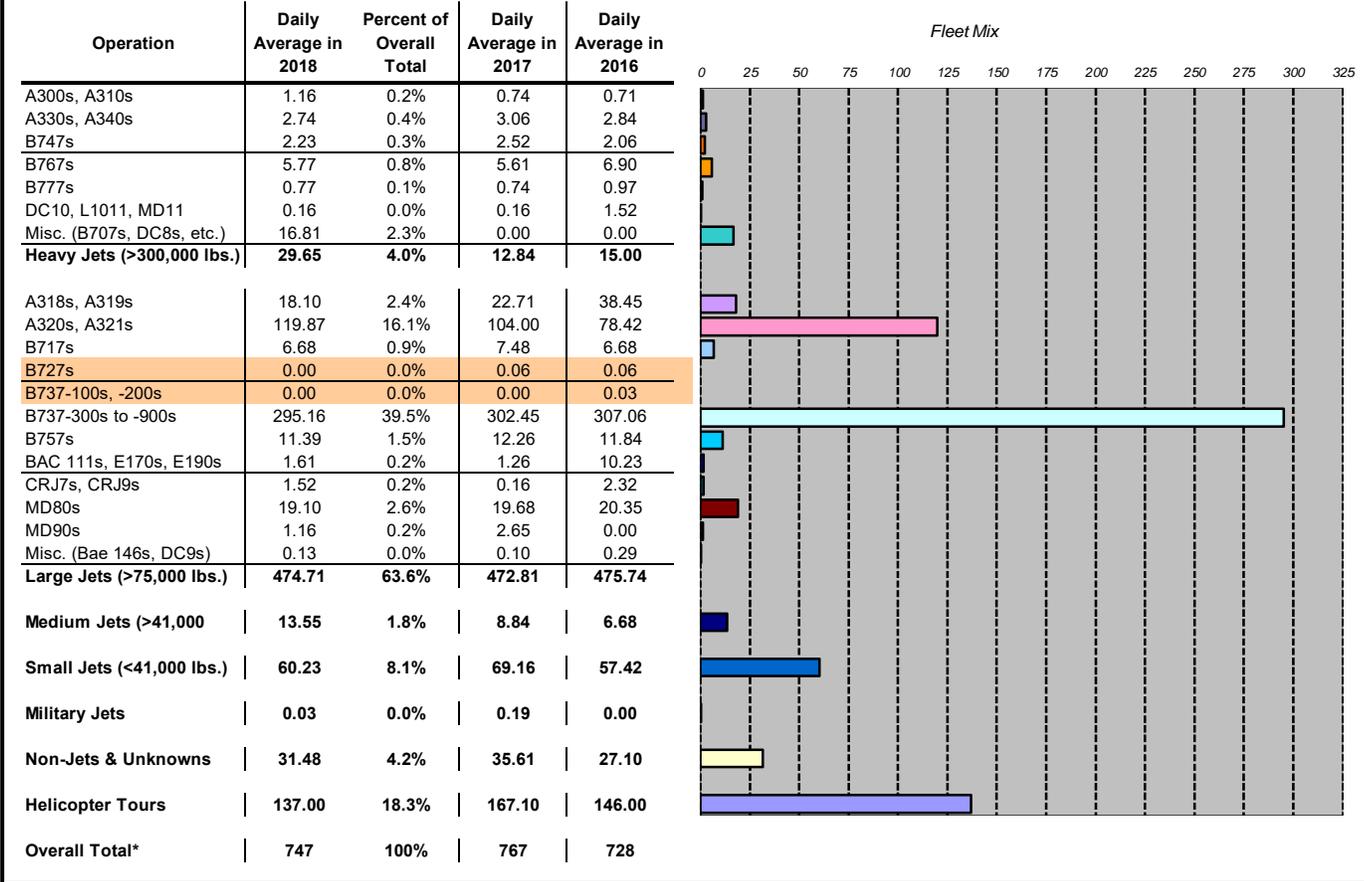


Corridor	2018	2017	2016
Tropicana Departures	69 33%	94 36%	88 38%
Charleston Arrivals	66 32%	92 35%	86 37%
Strip Touch & Go	71 34%	75 29%	60 26%
Totals	206 100%	261 100%	234 100%

Growth	Tropicana	Charleston	Strip (east)
Depts. 2018 vs 2017	-27%	-28%	-6%
Depts. 2018 vs 2016	-22%	-23%	18%

Day vs. Night	2018	2017	2016
Daytime Percentage	95%	95%	95%
Nighttime Percentage	5%	5%	5%

Exhibit 7: LAS Aircraft Arrival Fleet Mix* - March 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* - March 2018 to 2016

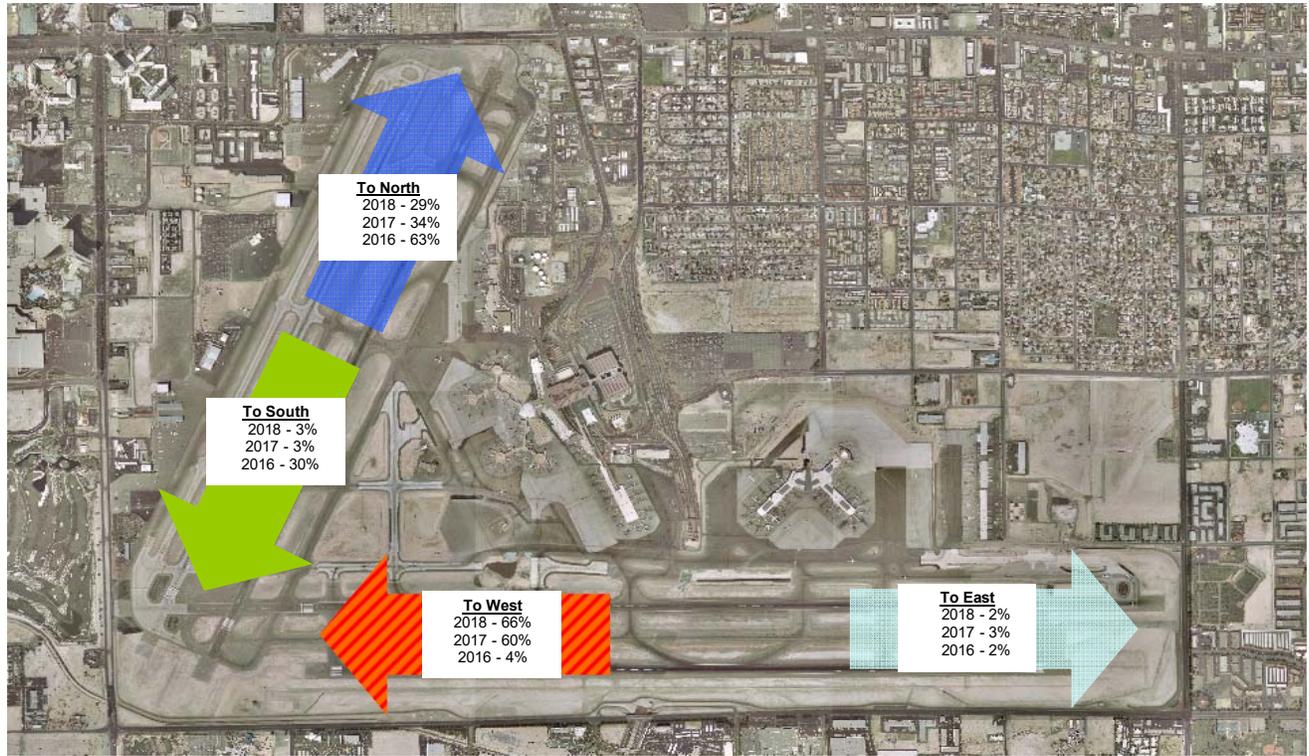
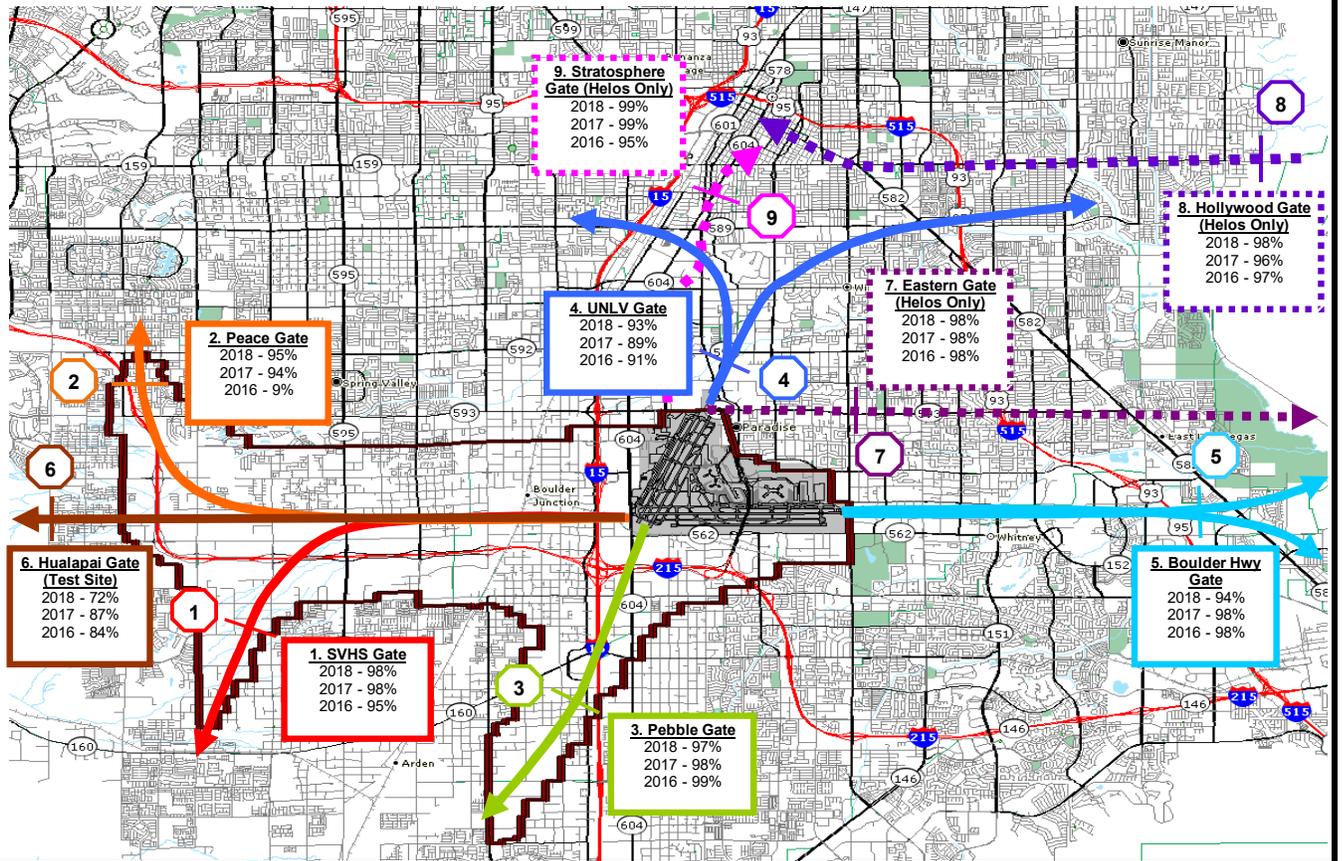


Exhibit 9: "Gate" Compliance for Large Aircraft* & LAS Helicopter Tours - March 2018



* 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, A370, B707, B717, B727, B737, B747, B757, B767, B777, CRJ7, CRJ9, DC8, DC9, DC10, E170, E190, HA4T, L1011, MD80, MD90, MD10, MD11, VC10.