Minutes
Tempe Aviation Commission
February 21, 2017

Minutes of the Tempe Aviation Commission meeting held on February 21, 2017, 6:30 p.m., at the Public Works Conference Room, Garden Level, City Hall Complex, 31 E. Fifth Street, Tempe, Arizona.

(MEMBERS) Present:
Lane Carraway (Chair)
Robert Dixon
Shannon Dutton
Gordon Gauss (Vice-Chair)
David Naugle
John Q. Nunes
Mike Sonenberg

Guests Present
Don R. Curtis, *Assistant District Manager for Arizona, FAA*
Curt Faulk, *Staff Manger, FAA Phoenix TRACON*
Erik Bowring, Operations Support Manager, *FAA Phoenix TRACON*
Jordan Feld, *Deputy Aviation Director - Planning & Environmental, City of Phoenix*

Citizens Present
Merrill Darcey
Paul Dunham
Darlene Justus
Val Khaldarov
Tim Teserio

City Staff Present:
Cassandra Mac, *Management Assistant I*
Oddvar Tveit, *Environmental Quality Specialist*

Meeting convened at 6:30 p.m.
Chair Lane Carraway called the meeting to order.

Agenda Item 1 – Public Appearances
Mr. Merrill Darcey lives just outside the PHX 65 dB DNL noise contour. Mr. Darcy talked about the dramatic growth in airport operations alongside the growth of new multifamily housing and cultural and educational facilities in downtown Tempe over the last thirty years. The FAA seems to direct departures to the south runways over areas in downtown Tempe, and rarely to the north runway. No consideration is given to the numerous weekend events in Tempe that attract thousands of people to the downtown area. It is time for Tempe to become more aggressive in protecting citizens of Tempe, their health, and their properties by taking these actions:

- Make requests to have aircraft take-off towards the west during large downtown events.
- Hold the airport accountable. The airport receives subsidies that air travel provides, and operates largely disconnected from city government.
- Make airlines pay the full cost for air travel by removing federal subsidies and through litigation to increase landing fees to cover the cost to properly address environmental and health hazards at and around the airport.
- Work towards removal of FAA oversight over environmental quality and public health impacts associated airport operations and airport development, (deferring oversight to the Environmental Protection Agency).
- Involve the county and the ADEQ to assess air quality, with monitoring in Tempe Beach Park or at the Mill Avenue Bridge.

Agenda Item 2 – Consideration of Meeting Minutes (January 10, 2017)

Chair Lane Carraway asked for comments to the drafted minutes, and a motion to approve.

Motion: Mr. Robert Dixon moved to approve the drafted minutes. The motion was seconded by Ms. Shannon Dutton.

Action: The minutes from the January 10, 2017 meeting were approved by a unanimous vote.

Agenda Item 3 – PHX Operations

Chair Lane Carraway opened for questions by commissioners to the invited guests from the FAA.

Question: During good weather, planes that are separated visually to a final occasionally make last minute maneuvers off the glide path to reduce speed or to keep separation. Why is that and would it help to extend the approaches farther out, e.g. ten miles to avoid these types of late maneuvers that create more noise?

Answer:

1. The implementation of NextGen is dependent on how many of the planes fly the NextGen procedures and the implementation of ADS-B (Automatic Dependent Surveillance). Aircrafts have until 2020 to be equipped with satellite navigation to fly NextGen procedures.
2. The vast majority of airlines are already equipped to fly these procedures. PHX TRACON started developing NextGen arrival procedures in 2007. The top altitudes for these procedures have been raised to steepen the angle towards the downwind leg to enable airlines to have a less noisy, continuous and idle descent to PHX.
3. The majority of aircrafts are able to follow the procedure path from the top of descent. Planes power up on the approach typically to stay on the glide slope, which causes additional noise. The other reason is related to the task of conducting air traffic control during busy hours.
   Explanatory remarks:
   a. Air traffic controllers' are not only tasked with providing the required separation between planes, but they are also required to keep planes as close together as possible. This requires the controller to anticipate when a plane will get to the runway, considering type of aircraft, its weight and speed 30 miles out from the airport. The controllers give pilots speed and turn restrictions so a lot of things will change with the positioning of aircraft in PHX airspace within the timeframe an aircraft is sequenced by the PHX air traffic controllers.
   b. For the final segment of the approach the controller has the option of clearing the aircraft for:
      - Visual approach. The pilot maneuvers to keep separation to other aircrafts and to correctly intercept the runway glide slope. The pilot cannot maneuver below the glide slope.
      - Instrument approach. The aircraft is vectored to intercept the glide slope. The glide slope cannot be intercepted from above and the pilot needs to be able to fly into it at the correct altitude. The sequencing of the aircraft by vectoring, results in aircraft turns and speed reductions by pilots using flaps, speed brakes and power to keep a precise interval between the aircraft, which creates noise.
4. The Albuquerque Air Route Traffic Control Center established a program called TBFM (Time Based Flow Management) which enables the sequencing to PHX to start at 30,000 feet instead of inside PHX TRACON airspace at 10,000 feet. This has improved sequencing and maintains better intervals that result in less vectoring and speed control at lower altitudes.

Question: Why do some aircrafts make late turns over neighborhoods in north Tempe to a final approach?

Answer:

The point where an aircraft intercepts the glideslope from a base leg varies depending on where there is a gap in the traffic flow. As the point in the middle of the gap to which the aircraft is sequenced moves, the path that the aircraft has to take does not stay the same. It also varies from one aircraft to the next.

Question: Why do some Southwest aircrafts make faster, last minute turns to land than other airlines?

Answer:
Airlines have no say in how aircrafts are sequenced in the PHX airspace. The blend of airlines varies and all aircrafts need to meet altitude and speed restrictions. Some airlines prefer "pro parking," which means that they want to land on the runway that is closest to their gates. Controllers are trying to accommodate pilot's requests for preferred runways, to provide the best service they can give, however, the PHX TRACON discourages honoring these requests.

Years ago, TRACON implemented a safety restriction that limits turns to final approach to a maximum of 30º. TRACON has not proposed changes since January, 2011 with regard to approaches at PHX and how the aircraft are vectored in to final approach.

Question: Can citizens in downtown areas expect to see change under NextGen with regard to the vectoring to final approach and late maneuvers (specifically, S-turns) during busy hours to reduce speed or increase separation?
Answer:

1. RNP (Required Navigation Performance) approaches with radius to fix legs as implemented in Denver facilitates a controlled flow to final approach from the downwind legs to the outer runways. This is attributable to Denver's three landing runways, which eliminates the need to mix downwind approaches with straight in approaches. The controllers can sequence straight in approaches to the center runway. This would not work at PHX, because the airport does not have enough space between the parallel runways to accommodate similar approach procedures.
2. With continued automation of the fleet to make use of satellite navigation and the development of flow management tools including TBFM and TSS (Terminal Sequencing and Spacing), PHX has more accurate sequencing with less vectoring to get the arrivals to the final approach.
3. PHX air traffic flow is up to 78 operations per hour on a busy, clear day. As shown in simulator conditions, the mentioned air traffic control technology can, accommodate up to 130 operations an hour, which is far more than any foreseeable future demand at PHX.

Question: Do you see a way for residents in communities like Tempe to be informed and get the opportunity to be heard before new technology procedures are implemented or changes regarding the management of PHX airspace are made?
Answer:
The public involvement process is being revised and the PHX TRACON can only speculate what the outcome of this process will be, which will likely include more public involvement.

Question: What is the purpose of height and speed restrictions on area navigation (RNAV) departure routes like the IZZZO and JUDTH that have a tight turn back west with a waypoint over south Tempe, at which a speed restriction was raised from 210 to 220 knots in 2016?
Answer:

1. The previous procedure consisted of random vectoring of aircraft to separate the departures that were turned back west south of the airport. RNAVs replaced these procedures.
2. The implementation of a departure procedure with a sufficiently tight turn enabled the separation of incoming and outbound aircraft on separate routes.
3. Some of the heavier aircrafts were not able to fly slow enough to make the tight turn. Instead of the regular 99% cross wind factor at 7,000' MSL, a 95% wind factor was implemented through a routing design waiver. Raising the speed restriction to 220 knots enabled a reduction in requests by pilots for permission to exceed the 210 knots restriction.

4. The turn radius on the IZZZO was implemented to improve flight safety by establishing separate routes for outgoing and incoming traffic, not for the fuel savings.
5. If there is no incoming traffic, controllers may clear aircraft on the JUDTH to go south and southwest to avoid completion of the tight turn west on departure over the south Tempe waypoint.

Agenda Item 7 – Commissioners' Business

- Helicopter operations.
- Potential recommendation from the Noise Abatement Subcommittee.

Agenda Item 8 – Schedule Next TAVCO Meeting

Action: Staff was requested to arrange a tour of PHX TRACON/ATCT, preferably March 14, 2017 at 6:30 p.m. instead of having a meeting in March.

Agenda Item 9 – Adjournment

Motion: Ms. Shannon Dutton moved to adjourn the meeting. Mr. John Q. Nunes seconded the motion.
Action: The meeting was adjourned at 7:46 p.m. by a unanimous vote.

Prepared by: Oddvar Tveit and Cassandra Mac

Reviewed by: David McNeil